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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 222 - 223

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UNITED STATES PATENT OFFICE.

VOLUME CCXXII.

JANUARY.

1916.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1916

ERRATA.

1,166,860, page 157, first claim, line 3, strike out the word "and."
1,167,101, page 239, fourth claim, line 3, strike out the word "change."
1,167,587, page 464, fifth claim, line 5, for the word "point" read *portion*.
1,168,231, page 685, fourth claim, line 8, strike out the word "means."
1,168,305, page 746, second claim, line 2, after the word "disposed" insert the words *substantially in a plane*.
1,168,393, page 778, in heading, name of assignee, before the word "Interwoven" insert the word *The*.
1,168,660, page 874, in claim, line 2, for the word "embodied" read *embedded*.
1,169,341, page 1143, in heading, name of second-mentioned patentee, for "Otto Chrzesciuski" read *Otto Chrzescinski*.
1,169,536, page 1213, heading, assignment, name of assignee, for "New-Metals and Process Company" read *Neu-Metals and Process Company*.
1,169,562, page 1222, fourth claim, line 6, after the word "respond" insert the words *to pressure*.
1,169,662, page 1259, claim 2, line 4, for the word "its" read *the*.
1,169,721, page 1277, in heading, assignment, State of incorporation, for "New Jersey" read *Delaware*.
1,169,740, page 1284, in heading, after residence of patentee insert *assignor of one-half to Charles Dick*.
108,231, (Trade-Mark,) page 1052, name of registrant, for "Roy M. Thompson" read *Ray M. Thompson*.

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THE

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OF THE

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Trade-Marks	131—No.	107,875 to No.	108,005, inclusive.
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Prints	1—No.	4,167.	
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Total	1165		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels and Prints.
Alabama	1	1	**North Carolina**	2	1
Arizona	3	....	**North Dakota**	3	....
Arkansas	2	....	**Ohio**	101	10
California	40	4	**Oklahoma**	7	....
Colorado	7	....	**Oregon**	6	1
Connecticut	30	2	**Pennsylvania**	96	11
Delaware	3	....	**Rhode Island**	8	2
Florida	2	....	**South Carolina**	1	....
Georgia	3	....	**South Dakota**	2	....
Idaho	2	....	**Tennessee**	6	1
Illinois	84	14	**Texas**	17	5
Indiana	20	1	**Utah**	4	....
Iowa	22	3	**Vermont**	4	1
Kansas	11	....	**Virginia**	14	1
Kentucky	9	....	**Washington**	15	1
Louisiana	3	2	**West Virginia**	8	1
Maine	1	....	**Wisconsin**	16	4
Maryland	14	2	**Wyoming**	2	....
Massachusetts	49	17			
Michigan	27	3	**Alaska, District of**	....	....
Minnesota	13	4	**Canal Zone**	....	....
Mississippi	3	3	**District of Columbia**	6	....
Missouri	27	4	**Hawaii Territory**	1	1
Montana	4	....	**Philippine Islands**	....	....
Nebraska	8	1	**Porto Rico**	....	....
Nevada	1	....	**U. S. Army**	....	....
New Hampshire	3	....	**U. S. Navy**	....	....
New Jersey	60	4			
New Mexico	2	....	**Total to residents of the United States**	932	133
New York	159	28			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	3	....	New South Wales	1	....
Belgium	....	....	New Zealand	1	....
Brazil	....	....	Norway	2	....
British West Indies	....	....	Peru	....	....
Canada	12	....	Portugal	....	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	....	....
Cuba	....	....	Scotland	1	....
Denmark	1	....	South Australia	....	....
England	19	2	Straits Settlements	....	....
Finland	....	....	Sweden	5	....
France	12	....	Switzerland	3	....
Germany	28	1	Transvaal, South Africa	....	....
Guatemala	....	....	Victoria	....	....
India	....	....	Wales	....	....
Ireland	1	....	Western Australia	1	....
Italy	3	....			
Japan	1	....			
Luxemburg	....	....	Total to residents of foreign countries	94	3
Mexico	....	....			

Delayed Patents.

(ORDER No. 2,210.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 28, 1915.

After January 1, 1916, all applications which have been pending for more than three years or which have an effective filing date running more than three years shall be made special and any amendment or other action therein by or on behalf of the applicant which does not put the application in condition for allowance or final rejection shall be submitted to a Law Examiner for his approval of its entry.

THOMAS EWING,
Commissioner.

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 30, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended.	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Oct. 21	Oct. 8	339
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	June 19	Nov. 1	846
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Dec. 13	Dec. 20	39
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Sept. 9	Dec. 11	407
167	5. Bookbinding; Harvesters; Jewelry; Music.	Sept. 13	Nov. 9	287
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	May 8	Nov. 12	476
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Sept. 22	Nov. 26	385
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Sept. 7	Nov. 4	1166
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	May 22	Dec. 6	531
235	10. Carriages and Wagons	Aug. 9	Dec. 24	692
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Nov. 13	Dec. 15	139
322	13. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 5	Dec. 3	440
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Sept. 30	Nov. 3	407
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 18	Dec. 6	187
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Sept. 16	Dec. 26	381
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Aug. 3	Dec. 3	454
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Oct. 7	Nov. 27	134
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Oct. 22	Dec. 2	225
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Nov. 5	Oct. 18	178
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 1	Dec. 8	176

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 16	Nov. 16	266
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 18	Nov. 24	319
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 14	Nov. 13	413
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Aug. 16	Nov. 12	403
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 1	Dec. 13	130
106	26. Electricity, Generation; Motive Power.	May 13	Sept. 9	518
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 3	Nov. 29	207
65	28. Internal-Combustion Engines	Sept. 10	Oct. 25	424
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Sept. 9	Dec. 1	359
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 20	Dec. 8	280
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 8	Dec. 1	266
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	June 3	Dec. 10	653
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Aug. 20	Nov. 3	373
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Sept. 20	Nov. 27	227
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 8	Dec. 18	569
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Aug. 24	Oct. 22	716
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	June 1	Oct. 19	624
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Aug. 11	Dec. 2	246
321	39. Water Distribution	Sept. 1	Nov. 2	361
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 14	Oct. 25	1033
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 17	Nov. 30	370
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 22	Aug. 14	889
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 20	Nov. 2	189

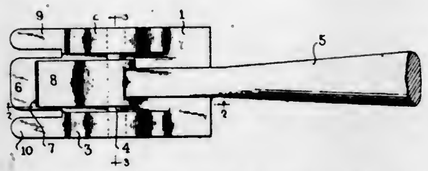
Oldest new case, May 8; oldest amended, Aug. 14.
Total number of applications awaiting action..... 17,772

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 2	Dec. 9	1075
	Designs	Aug. 14	Nov. 20	579
	Labels and Prints	Dec. 7	Dec. 4	105

PATENTS

GRANTED JANUARY 4, 1916.

1,166,419. STAPLE-PULLER. EDWARD THOMAS ALLAN, Cincinnati, Ohio. Filed Dec. 16, 1914. Serial No. 877,524. (Cl. 254—28.)



1. A staple puller comprising a base, a tongue carried by one end of the base and having a recess in its upper face, and a lever pivoted to the base and having a forwardly extending claw within the recess.

2. A staple puller of the character described comprising an enlongated base, a tongue at one end of the base and of a width less than that of the base and having a recess in its upper face, outwardly extending members carried by the base on each side of the tongue and spaced therefrom, and a lever pivoted to the base in rear of the tongue, and having a forwradly extending claw within the recess in the base.

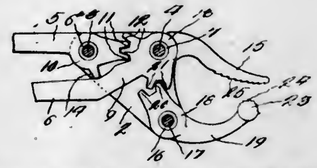
3. A staple puller of the character described comprising a flat base, a tongue carried by one end of the base, a lever pivoted to the base and having a forwardly extending claw above the tongue, and outwardly extending members carried by the base and extending parallel with the tongue and spaced therefrom.

4. A staple puller of the character described comprising an elongated base, a tongue carried by one end of the base and of a width less than that of the base and having a recess in its upper face, outwardly extending members carried by the end of the base on each side of the tongue and spaced therefrom, upwardly extending ears carried by the base in rear of the tongue, and a lever pivoted between the ears and having a forwardly extending claw within the recess in the tongue.

5. A staple puller of the character described comprising a base, a tongue carried by one end of the base, a staple pulling member carried by the base, and outwardly extending members carried by the base and extending parallel with the tongue and spaced therefrom, for the purpose described.

[Claim 6 not printed in the Gazette.]

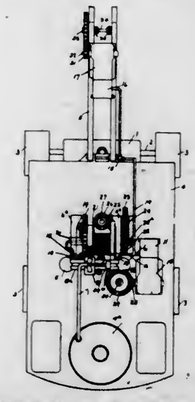
1,166,420. CLENCH-PINCERS. JENS P. ANDERSON, Jamestown, Kans. Filed Oct. 20, 1915. Serial No. 56,903. (Cl. 168—49.)



1. In combination, a pair of oppositely disposed correspondingly shaped plates, a pair of levers, one having a head pivoted between said plates and having teeth substantially alined with the lever, the other lever having an angular portion overlying the head of the other lever and terminating in a head pivotally mounted between said plates and alined with the first head, the head of the angular portion having teeth meshing with the teeth of the first head and having an elongated partially compound curved jaw offset from alinement with the lever of the angular portion and being substantially alined with the opposite lever, a jaw member pivoted between said plates and having gear connections with the head of the angular portion and terminating in a cylindrical jaw, said jaws having ratchet teeth upon their adjacent faces.

2. In combination, a pair of oppositely disposed correspondingly shaped plates, a pair of levers, one having a head pivoted between said plates and having teeth substantially alined with the lever, the other lever having an angular portion overlying the head of the other lever and terminating in a head pivotally mounted between said plates and alined with the first head, the head of the angular portion having teeth meshing with the teeth of the first head and having an elongated partially compound curved jaw offset from alinement with the lever of the angular portion and being substantially alined with the opposite lever, a jaw member pivoted between said plates and having gear connections with the head of the angular portion and terminating in a cylindrical jaw, said jaws having ratchet teeth upon their adjacent faces, and a single tooth on the first head to contact with the opposite lever to limit the levers in their movements toward each other, which correspondingly limits the movement of the jaws.

1,166,421. LUBRICATING SYSTEM FOR STEAM-ENGINES. EDWIN J. ARMSTRONG, Erie, Pa., assignor to Ball Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1915. Serial No. 3,373. (Cl. 121—115.)



1. In a lubricating system for steam engines, the combination of a first engine having a cylinder, steam chest and engine valve; means for conveying steam to said first engine; a second engine; mechanism connected with said means for supplying steam to the second engine by way of the steam chest of the first engine by passing the cylinder of said first engine; and devices for delivering lubricant to said means and retaining a portion of the lubricant delivered while the first engine is in motion for use in the second engine.

2. In a lubricating system for steam engines, the combination of a first engine having a cylinder, steam chest and engine valve; means for conveying steam to said first engine; a second engine; mechanism connected with

said means for supplying steam to the second engine by way of the steam chest of the first engine by passing the cylinder of said first engine; a pump driven by one of said engines; and a connection between said pump and said means, said means having devices for retaining a portion of the lubricant delivered while the engine driving the pump is in motion for use with the other engine.

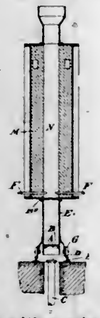
3. In a lubricating system for steam engines, the combination of a first engine having a cylinder, steam chest and engine valve; means for conveying steam to said first engine; a second engine; mechanism connected with said means for supplying steam to the second engine by way of the steam chest of the first engine by passing the cylinder of said first engine; a pump driven by the first of said engines; and a connection between said pump and said means, said means having devices for retaining a portion of the lubricant delivered while the first engine is in motion for use in the second engine.

4. In a lubricating system for steam engines, the combination of a first engine having a cylinder, steam chest and engine valve; a controlling valve chest connected with said engine; a controlling valve in said controlling chest controlling the steam passing to said first engine; a second engine; a connection between said controlling chest and said second engine; and devices for delivering a lubricant to said controlling valve chest and retaining a portion of the lubricant delivered to said chest while one engine is in motion for use with the other of said engines.

5. In a lubricating system for steam engines, the combination of a first engine having a cylinder, steam chest and engine valve; a controlling valve chest connected with said engine; a controlling valve in said chest controlling the steam passing to said first engine; a second engine; a connection between said controlling chest and said second engine; and devices for delivering a lubricant to said controlling valve chest adjacent to said controlling valve in the path of the steam to both of said engines, said devices being adapted to retain a portion of the lubricant delivered while one of said engines is in motion for use with the second of said engines.

[Claims 6 to 13 not printed in the Gazette.]

1,166,422. APPARATUS FOR THE MANUFACTURE OF COKE. JOHN ARMSTRONG, London, England. Filed Jan. 22, 1912. Serial No. 672,694. (Cl. 202—5.)



1. The combination with a coke oven open at the lower end, and having sides substantially parallel and vertical; means for temporarily holding the contents of the oven in position; and a receptacle for receiving the coke from the lower end of the oven when said means are withdrawn from the supporting position, said receptacle fitting closely to said lower end, the receptacle and the oven being of substantially the same cross-section, whereby when the means for holding the coke are withdrawn or removed, the coke falls into the receptacle without being exposed to the air, and without fracture, all arching, such as is occasioned when the lower end of the oven is contracted, being prevented.

2. In combination with a coke oven, a series of receptacles for removing the coke discharged from the lower end of the oven, said receptacles being internally of similar horizontal cross-section to that of the lower end of the oven, and making a relatively close fit with said lower end; a movable bottom in each receptacle capable of closing the bottom of the oven; and means for raising and lowering said bottom.

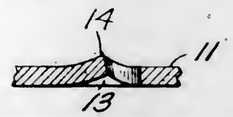
3. In combination with a coke oven; a series of carriage-like receptacles adapted to be moved beneath the same and into which the coke is discharged, said receptacles each having an internal cross-section substantially conforming in shape to the lower discharge end of the oven; a movable bottom carried in each receptacle; and means for raising and lowering said bottoms.

4. In combination with a coke oven, a plurality of bars located at the lower end thereof and adapted to be projected inwardly into the coke therein, a plurality of carriage-like receptacles adapted to receive successive masses of coke discharged from the oven, said receptacles having an internal cross-section substantially the same as that of the discharge end of the oven; a movable bottom located in each receptacle; and means for raising and lowering said bottom.

5. In combination with a coke oven, a receptacle adapted to receive coke discharged therefrom; means for sustaining the undischarged coke in the oven; and means carried by the receptacle for sustaining the discharged coke and lowering the same away from the oven and thereby permitting the coke in the receptacle to clear the lower end of the oven.

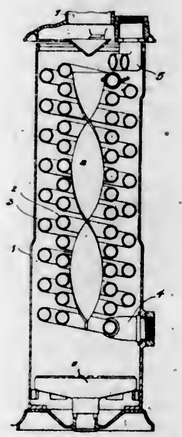
[Claims 6 and 7 not printed in the Gazette.]

1,166,423. TREAD-SURFACE. WILLIAM S. ATWOOD, Montreal, Quebec, Canada. Filed Nov. 17, 1914. Serial No. 872,584. (Cl. 20—79.)



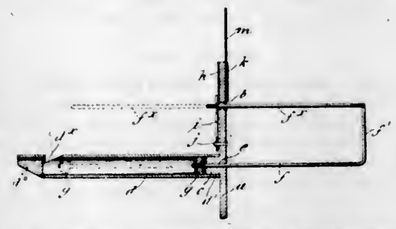
A metal tread comprising a plate having apertures therein, the axes of which are normal to the surface of the plate, the edge of the apertures being forced back in such proportion to the thickness of the material and the size of the apertures as to form burs having an edge, the portion of the edge of said burs above the surface of the plate circumscribing said apertures.

1,166,424. WATER-HEATER. CHARLES A. BACKSTROM, Crafton, Pa., assignor to Pittsburg Water Heater Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 19, 1914. Serial No. 846,003. (Cl. 122—250.)



In combination in a water heater, a vertical casing, a burner at the lower end thereof, a vertical helical coil in the casing above the burner with its coils spaced apart to permit the passage of gases laterally therebetween, and a helical baffle plate having a relatively steep pitch extending upward through the coil and adapted to retard the upward movement of the gases and deflect a portion thereof laterally across the turns of the coil.

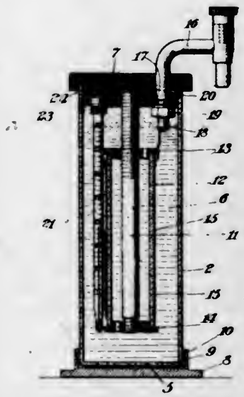
1,166,425. MUSICAL INSTRUMENT. WILLIAM BARTHOLOMAE, New York, N. Y. Filed Feb. 2, 1915. Serial No. 5,626. (Cl. 84—43.)



1. A mouth wind instrument having mounted therein a piston for varying the mass of the vibrating air; a piston-rod fastened to said piston; a scale-board mounted on the instrument; a scale on said scale-board and an indicating device arranged to move relatively to said scale and thereby to indicate thereon the note corresponding to the position of said piston, said device being connected to and driven by said piston-rod.

2. A mouth wind instrument having mounted therein a piston for varying the mass of the vibrating air; a piston-rod fastened to said piston; a scale-board mounted on the instrument; a scale on said scale-board and a pointer arranged to move relatively to said scale and thereby to indicate thereon the note corresponding to the position of said piston; said pointer being connected to and driven by said piston-rod.

1,166,426. ELECTRICAL TESTING-STANDARD. CHARLES B. BECK and JOSEPH M. BECK, Philadelphia, Pa. Filed Feb. 8, 1912. Serial No. 676,372. (Cl. 219—63.)



1. In a resistance standard, the combination of a sealed casing forming an oil chamber, a resistance coil within said chamber and having terminal parts leading to the exterior of the chamber, a thermometer within said chamber, and means to permanently support said coil and said thermometer within said chamber and adjacent to each other, said coil and said thermometer being immersed in oil within said chamber, and said casing having a transparent wall exposing said thermometer to view.

2. In a resistance standard the combination of a transparent casing having a closed bottom and forming an oil chamber, a cap sealing the top of said casing, a support fixed to said cap and projecting therefrom into said chamber, a resistance coil within said chamber and carried by said support and having terminal parts leading through said cap to the exterior of said chamber, and a thermometer fixed to said cap and projecting therefrom into said chamber adjacent to said coil, said coil and said thermometer being immersed in oil within said chamber, and said thermometer being exposed to view through the transparent wall of said casing.

3. In a resistance standard, the combination of a sealed casing forming an oil chamber, a tube sealed within said chamber and having its interior communicating with the chamber, and a resistance coil surrounding and supported by said tube and immersed in oil within said chamber and having terminal parts leading to the exterior of said chamber.

4. The combination of a casing forming an oil chamber, a cap closing the top of said casing, a rod projecting from said cap and into said chamber, a tube supported by and surrounding said rod in spaced relation thereto and having the interior thereof in communication with said chamber, and a resistance coil surrounding and supported by said tube and immersed in oil within said chamber and having terminal parts leading through said cap to the exterior of said chamber.

5. In a resistance standard the combination of a casing forming an oil chamber, a sealing cap therefor, a terminal part extending through said cap and having a shoulder formed thereon within the body of the cap, and a nut screwed on to the terminal part and clamping a part of the cap between said shoulder and said nut.

[Claim 6 not printed in the Gazette.]

1,166,427. SHOVEL FOOT-REST. MICHAEL T. BRADLEY, Spokane, Wash. Filed Jan. 25, 1915. Serial No. 4,259. (Cl. 55—115.)

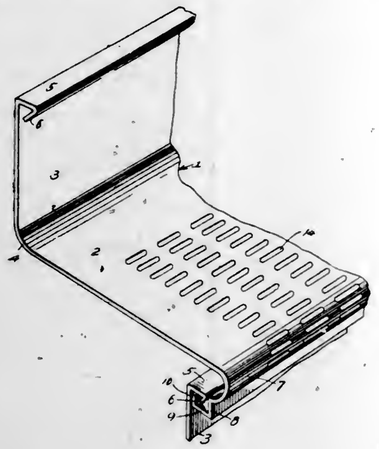


In a foot rest or guard for shovels, a guard body having a top foot rest portion adapted to engage the upper edge of the shovel blade and having a rear attaching portion for flat abutting relation against the rear face of said scoop, said body having a resilient front attaching portion provided with an indented end presenting a convex boss for contact with the front face of the shovel to localize the area of contact and thereby hold the guard body firmly in place on the blade irrespective of lack of conformity in contour of the back attaching portion with respect to the contour of the blade, substantially as described.

1,166,428. PRESSED-STEEL STAIR. GEORGE W. BROOKS, Topeka, Kans. Filed Jan. 12, 1915. Serial No. 1,742. (Cl. 189—43.)

1. A pressed steel tread and riser complete in a single integral element, the tread being formed with a curved

nose and a rearward trough-shaped extension beneath said nose and the riser terminating in a forward extension with rearwardly angularly extended lip.

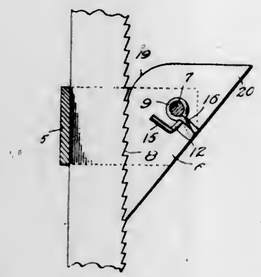


2. A pressed steel tread and riser complete in a single integral element, the tread being formed with a curved nose and a riser terminating in an angularly extended lip, and the tread having a trough-shaped portion extended rearwardly from the nose at a distance from the surface of the tread for coöperation with the lip of an adjoining riser.

3. A pressed steel tread and riser in a single integral element, the riser having at its upper end a horizontal extension and an inclined terminal forming a lip and the tread having a rounded nose terminating in a trough shaped portion with one wall of which the inclined lip of an adjacent riser is designed to coöperate.

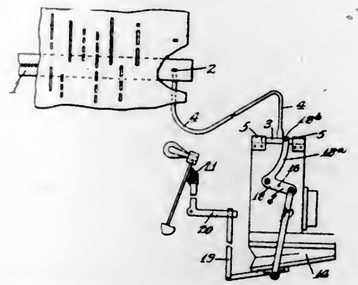
4. A pressed steel tread and riser in a single integral element, the riser having at its upper end a horizontal extension and a downwardly extended terminal, and the tread having a rounded nose terminating in a trough-shaped portion in which the depending portion of an adjacent riser is received and with which it is designed to coöperate, one of the coöperating portions being inclined.

1,166,429. WRENCH. JAMES L. BROOKS, Douglas, Ariz., assignor of one-half to Lewis M. Ball, Douglas, Ariz. Filed Apr. 3, 1915. Serial No. 18,986. (Cl. 81—147.)



A wrench of the class described comprising a shank, said shank provided with a plurality of ratchet teeth formed upon one side thereof, a yoke plate slidably mounted upon said shank, an adjustable jaw pivotally secured to said yoke plate, teeth formed upon said adjustable jaw and shank, a pivot pin for supporting said adjustable jaw, a coil spring mounted upon said pivot pin, said yoke plate provided with a transversely extending aperture formed therein, said aperture terminating in a laterally extending socket, said coil spring having one end projecting through said aperture and fitting snugly within said socket for holding the outer end of said spring out of engagement with foreign objects, said adjustable jaw provided with a socket adjacent said socket for receiving the coils of said coil spring, said adjustable jaw also provided with a pocket having a narrow mouth for receiving the free end of said coil spring, and the free end of said coil spring being adapted to force said adjustable jaw into firm engagement with said shank.

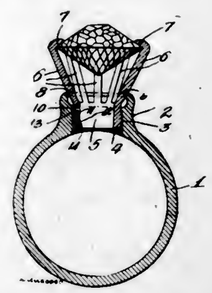
1,166,430. PNEUMATIC SHIFTING DEVICE FOR MOVABLE MEMBERS OF AN AUTOMATIC MUSICAL INSTRUMENT. CHARLES S. BURTON, Oak Park, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1914. Serial No. 872,334. (Cl. 84—160.)



1. In an automatic playing device for a musical instrument having a motor pneumatic for operating a movable part of the mechanism, in combination with the motor pneumatic, primary pneumatics for controlling the same, and connections by which the control is effected adapted to cause the motor pneumatic to be collapsed when one of said primary pneumatics is expanded, and to be inflated when the other of the primary pneumatics is inflated; a valve device having a port adapted to be in communication alternatively with said two primary pneumatics; a tracker having a duct provided with connections leading to said valve device port, and mechanical connections by which the motor pneumatic shifts said valve device port for establishing communication with one of the primary pneumatics when said motor pneumatic is collapsed, and with the other of said primary pneumatics when the motor pneumatic is inflated.

2. In an automatic playing device for a musical instrument having a motor pneumatic for operating a movable part of the mechanism, in combination with the motor pneumatic, primary pneumatics for controlling the motor pneumatic, and connections by which such control is effected, adapted to cause the motor pneumatic to be collapsed when one of said primary pneumatics is inflated, and to be inflated when the other of said primary pneumatics is inflated, the primary pneumatic whose inflation operates to cause collapse of said motor pneumatic, having a supplementary air supply port; a valve controlling such port, and connections from the moving wall of the motor pneumatic for opening said valve by the collapsing movement of the motor pneumatic, a valve device having a port adapted to be in communication alternately with either of said primary pneumatics; a tracker having a duct provided with communication leading to said valve device port, the connections which operate the valve for controlling said supplementary air supply port being connected for operating said valve device to shift the tracker duct connections thereof from one primary pneumatic to the other when the supplementary air supply port valve is operated.

1,166,431. DETACHABLE SETTING FOR PRECIOUS STONES. VERNON L. CAPWELL, Dorranceton, Pa. Filed Mar. 20, 1915. Serial No. 15,786. (Cl. 63—15.)



An article of jewelry comprising a finger ring having a gem holder receiving ring provided with interior threads, a gem holder consisting of a hollow cylindrical part having upwardly and outwardly extending yieldable arms and provided with exterior threads to coöperate with the threads of the holder receiving ring, said holder having a pocket in the cylindrical part and an opening adjacent said pockets, a spring-tensioned securing dog having a nose rectangular in cross section penetrating through the opening and biting into the interior threads of the holder receiving ring, said arms having gem engaging fingers, said holder receiving ring having an annular extension wall surrounding the lower parts of said arms and having an interior beveled edge to be engaged by the arms whereby the arms are forced toward the gem as the holder is screwed home.

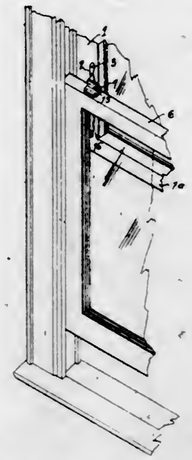
1,166,432. CONDUIT FOR ELECTRIC WIRES. RAYMOND S. CASE, Unionville, Conn. Filed Aug. 4, 1911. Serial No. 642,264. (Cl. 247—4.)



A flexible conduit for electric wires comprising a tube formed from a strip of material and an inner layer consisting of at least three independent piles of spirally wound strips of thin paper of uniform thickness in each strip, all being of even width throughout and having their joints arranged in the same plane, said strips being connected by an adhesive, plastic during the winding and thereinafter setting whereby the strips may be simultaneously wound and yield longitudinally with respect to each other.

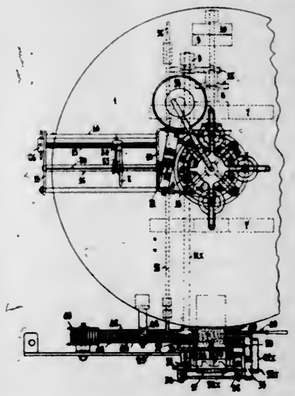
1,166,433. WINDOW-FASTENER. FRANK B. CHAPMAN, Columbus, Ohio. Filed Dec. 18, 1914. Serial No. 877,918. (Cl. 16—146.)

A window fastener comprising a latch bar adapted to be fastened to the stile of the upper sash and extending upwardly from the lower cross rail, said bar being formed along one longitudinal edge with a series of scallops, an L-shaped locking bolt supporting member adapted to be attached to the cross rail of the lower sash by its horizontal leg, the vertical leg being formed with a cutout portion into which said latch bar slidably fits, a locking bolt pivoted in said member in a manner to lie in a plane parallel with the face of said stile to which said latch bar is attached, said bolt being formed with a portion to have wedging engagement with the



scallops of said latch bar, and spring means for normally pressing said bolt into engagement with said scallops.

1,166,434. CIRCULAR-KNITTING MACHINE. CHARLES Claringburn, Hyson Green, Nottingham, England. Filed Mar. 3, 1915. Serial No. 11,781. (Cl. 66—12.)

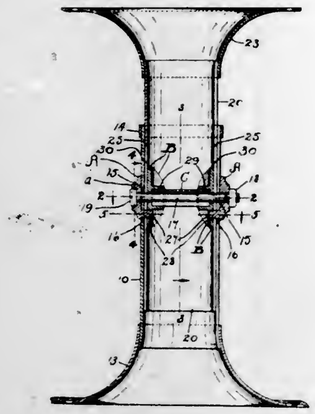


1. In a circular rib knitting machine as used for making seamless knitted elastic stockings and the like, in combination, a circular feed table, a disk rolling thereon at varying diameters and elastic thread feed rollers driven therefrom at varying speeds for the purpose herein described.

2. In a circular rib knitting machine as used for making seamless knitted elastic stockings and the like, in combination, a feed table, a disk rolling thereon at varying speeds, an automatic means for positioning said disk radially on said table.

3. In a circular rib knitting machine as used for making seamless knitted elastic stockings and the like, in combination, a circular feed table, a disk rolling thereon at varying speeds, a frame carrying said disk revolving around said table, a disk shaft, elastic thread rollers driven therefrom, and automatic means including a regulating screw for positioning said disk radially on said table.

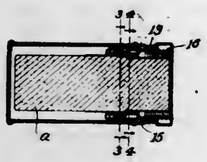
1,166,435. ADJUSTABLE PEDESTAL. WILLIAM B. COGGER, Cleveland, Ohio, assignor to Theodor Kundtz, Lakewood, Ohio. Filed Feb. 19, 1915. Serial No. 9,287. (Cl. 155—40.)



1. In an adjustable pedestal, the combination, with a vertically arranged tubular member provided with a base, and a vertically arranged and vertically adjustable tubular member extending into the first-mentioned tubular member from above, of two clamping plates arranged at opposite sides respectively and externally of the first-mentioned tubular member, two abutment-plates arranged internally of the aforesaid adjustable member at opposite sides respectively of said adjustable member and opposite the aforesaid clamping plates, a cross-bar interposed between the abutment-plates, and means for causing the aforesaid clamping plates to clamp the adjacent portions of both tubular members to the abutment-plates, each clamping plate having a lug projecting into the adjacent abutment-plate.

2. In an adjustable pedestal, the combination, with a vertically arranged tubular member provided with a base, and a vertically arranged and vertically adjustable tubular member extending into the first-mentioned tubular member from above, of two clamping plates arranged at opposite sides respectively and externally of the first-mentioned tubular member, two spaced abutment-plates arranged internally of the aforesaid adjustable member and opposite the clamping plates, a cross-bar interposed between the abutment-plates, and means for causing the clamping plates to clamp the adjacent portions of both tubular members to the abutment-plates, each clamping plate being provided with a lug projecting into the adjacent abutment-plate and the abutment plates having their top edges rounded.

1,166,436. CONTAINER FOR SHAVING-STICKS. HENRY A. COLGATE, Orange, N. J. Filed Apr. 10, 1915. Serial No. 20,381. (Cl. 206—56.)



1. A container for a shaving stick comprising a body portion threaded at one end, a cover comprising a flange threaded externally to engage said body portion and threaded internally to engage and support a clamping device, a clamping device supported in said cover comprising at one end a threaded portion adapted to engage and be supported by the cover, and at the other end a split ring adapted to receive and support a shaving stick, a plurality of cam surfaces on the outside of said split ring, and a rotatably movable ring encircling said split ring and bearing cam surfaces adapted to engage the cam surfaces on the split ring, for the purpose described.

2. A container for a shaving stick comprising a body portion threaded at one end, a cover comprising a flange threaded externally to engage said body portion and threaded internally to engage and support a clamping device, a clamping device supported in said cover comprising at one end a threaded portion adapted to engage and be supported by the cover, and at the other end a split ring adapted to receive and support a shaving stick, a plurality of cam surfaces on the outside of said split ring, and a rotatably movable ring encircling said split ring and bearing cam surfaces adapted to engage the cam surfaces on the split ring, said split ring being provided on the interior thereof with teeth adapted to grip the stick when the split ring is contracted, substantially as described.

1,166,437. PLANE. HERBERT G. COLLINS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 12, 1913. Serial No. 800,561. (Cl. 145—14.)



1. In a plane, the combination of a stock having a cutter seat opening outwardly at one side of the plane, a cutter in said seat, a clamp for the cutter, a lengthwise adjusting screw for said cutter at the opposite side of the plane socketed in the stock, at one side of, and approximately parallel to said cutter, and a shoulder on said screw directed axially of the latter and engaging a shoulder at the upper portion of the cutter, whereby said screw prevents lateral displacement of the cutter relative to said cutter seat, as the cutter is adjusted by the screw; substantially as described.

2. In a plane, a cutter seat, a cutter having a notch at one side edge, and a notch at the top edge, in combination with a lengthwise adjusting screw, having a perpendicular shoulder to engage with the first named notch, and an axial shoulder to engage with the second named notch, the cutter seat opening out at the side of the plane opposite the adjusting screw, substantially as described.

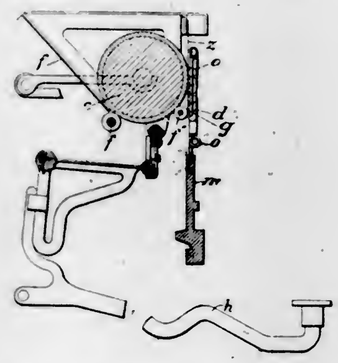
3. In a plane, the combination of a stock having a cutter seat at one side, a cutter in said seat, having a notch at the top edge and a notch in the side edge toward the stock, a clamp for the cutter, a lengthwise adjusting screw for said cutter, socketed in the stock at one side of, and approximately parallel to said cutter, a shoulder on said screw, engaging the notch in the side edge of the cutter to provide for the upward and downward adjustment of the latter, and a second shoulder on said screw directed axially of the screw and engaging the notch at the upper edge of the cutter, whereby said screw prevents lateral displacement of the cutter relative to its seat, as the cutter is moved up and down by said screw, the cutter seat opening out at the side of the plane opposite the adjusting screw; substantially as described.

4. In a plane, the combination with a stock, of a cutter mounted therein, and means for adjusting the cutter longitudinally including an adjusting screw operatively mounted on the stock, said screw having a projecting portion extending axially thereof and the cutter having a slot extending longitudinally thereof in which said projecting portion may fit for rotation and interlock to prevent lateral displacement of the cutter in either direction edgewise thereof.

5. In a plane, the combination with the stock having a cutter receiving portion opening outwardly at one side of the plane, of a cutter mounted therein, and means located at the opposite side of the plane for adjusting the cutter having a part adapted to engage a complementary part of the cutter to project the cutter with reference to the stock, and having another part adapted to engage another complementary part of the cutter to prevent lateral displacement of the cutter.

[Claims 6 and 7 not printed in the Gazette.]

1,166,438. ATTACHMENT FOR TYPE-WRITING MACHINES. THOMAS J. COO, Toronto, Ontario, Canada, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 21, 1913. Serial No. 802,250. (Cl. 197—135.)



1. In a typewriting machine, the combination with a carriage and a platen rotatably mounted thereon, of a card-holder comprising a stationary support and a series of sets of movable anti-friction elements bearing against a work-piece on the platen and preventing the work-piece from slipping on the platen as the platen moves for letter-spacing and line-spacing of the written matter; said anti-friction elements rolling on the work-piece in a direction transversely of the platen.

2. In a typewriting machine, the combination with a platen shiftable to upper and lower case positions, of a card-holder comprising a stationary support and a series of sets of anti-friction elements bearing against a work-piece on the platen and holding the work-piece against slipping on the platen during the case-shifting of the platen; said anti-friction elements being free to move over the surface of the work-piece in the direction of the case-shifting movement of the platen, thereby permitting the work-piece to be frictionally held against the platen by said elements and moved with the platen without being dragged or retarded by the card-holder.

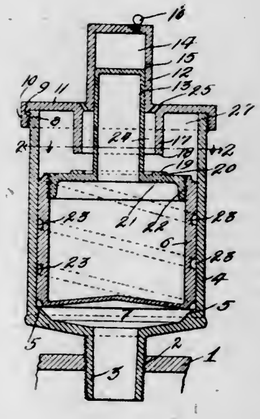
3. In a typewriting machine, the combination with a carriage and a rotatable platen thereon, said platen shiftable to upper and lower case positions, of a card-holder comprising a stationary casing or support and a series of columns of rotatable anti-friction elements mounted on said casing and holding a work-piece against the platen, and preventing slipping of the work-piece on the platen during the letter-feed travel and case-shifting movements of the platen; said columns extending in the direction of the case-shifting movements of the platen, and said elements arranged to permit the work-piece to move freely relatively to the card-holder during both the letter-feeding movements and the case-shifting movements of the platen.

4. In a typewriting machine, the combination of a platen shiftable to different case positions, and a card-holder comprising a casing or support and a series of columns of anti-friction elements rotatably mounted on said support; said elements positioned to bear against a work-piece on the platen and prevent the work-piece from slipping on the platen, said elements free to roll on their support and on the work-piece in the direction of the case-shifting movement of the platen, and thereby permitting the work-piece to have an unrestricted movement with the platen.

5. In a typewriting machine, the combination with a carriage and a platen rotatably mounted thereon and shiftable to upper and lower case positions, of a card-holder comprising a stationary support mounted on the machine frame, a set of anti-friction elements mounted for rotation on said support, and means to cause said elements to bear with a yielding pressure on a work-piece on the platen, and thereby prevent slipping of the work-piece on the platen during the letter-feeding and line-spacing movements of the platen; said elements free to roll on the work-piece in the direction of the case-shifting movement of the platen.

[Claims 6 to 41 not printed in the Gazette.]

1,166,439. AIR-RELIEF VALVE FOR WATER-MAINS AND THE LIKE. JUSTUS N. COMBIN, Fruita, Colo. Filed Apr. 8, 1915. Serial No. 20,002. (Cl. 137—69.)



1. An air relief valve for fluid mains comprising an outer casing connected to the main and having an extension cylinder, an inner cylinder casing movable vertically in the first casing and provided with a cylinder piston operable in the extension cylinder, said first casing having air compression and air relief chambers above the inner cylinder and provided with a downwardly extending valve seat flange, the seat of which is designed to be closed by the inner cylinder, a chamber below the inner cylinder, an air compression chamber in the extension cylinder above the piston, and means of communication between the space below the inner cylinder and the air relief and air compression chambers above the inner cylinder.

2. An air relief valve for fluid mains comprising an outer casing connected to the main and having an extension cylinder, an inner cylinder casing movable vertically in the first casing and provided with a cylinder piston operable in the extension cylinder, said first casing having air compression and air relief chambers above the inner cylinder and provided with a downwardly extending valve seat flange, the seat of which is designed to be closed by the inner cylinder, a chamber below the inner cylinder, an air compression chamber in the extension cylinder above

the piston, and means of communication between the space below the inner cylinder and the air relief and air compression chambers above the inner cylinder, said extension cylinder having means to permit of a partial sudden rise of the inner cylinder and piston, but to drain off fluid that may arise above the piston in the extension cylinder.

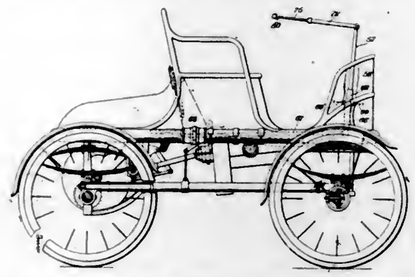
3. An air relief valve for fluid mains comprising an outer casing connected to the main and having an extension cylinder, an inner cylinder casing movable vertically in the first casing and provided with a cylinder piston operable in the extension cylinder, said first casing having air compression and air relief chambers above the inner cylinder and provided with a downwardly extending valve seat flange, the seat of which is designed to be closed by the inner cylinder, a chamber below the inner cylinder, an air compression chamber in the extension cylinder above the piston, and means of communication between the space below the inner cylinder and the air relief and air compression chambers above the inner cylinder, said extension cylinder having means to permit of a partial sudden rise of the inner cylinder and piston, but to drain off fluid that may arise above the piston in the extension cylinder, and an adjustable device carried by the extension cylinder to permit of a gradual rise of the piston and the inner cylinder subsequently to the partial sudden rise thereof.

4. An air relief means for fluid mains comprising an outer cylinder connected to the main and having an extension cylinder provided with an air compression chamber, the outer cylinder having an inner annular extension wall provided with a valve seat and dividing the upper portion of the outer cylinder into air relief and air compression chambers, the air relief chamber having communication with the atmosphere, an inner valve cylinder having a valve seat to coöperate with the first valve seat to cut off communication with the air relief cylinder and a chamber below the valve cylinder, and to close communication between the compression chamber of the outer cylinder and the air relief chamber, said valve cylinder having a piston operable in the chamber of the extension cylinder, the outer cylinder having an air chamber below the valve cylinder in communication with the fluid main, said valve cylinder having exterior grooves forming communications with the air chamber below the valve cylinder and the air relief chamber when the valve cylinder is in its downward position, said grooves forming continuous communication between the air chamber below the valve cylinder and the air compression chamber of the outer cylinder regardless whether the valve cylinder is up or down, the rising of the fluid in said grooves causing a fluid packing.

5. An air relief means for fluid mains comprising an outer cylinder connected to the main and having an extension cylinder provided with an air compression chamber, the outer cylinder having an inner annular extension wall provided with a valve seat and dividing the upper portion of the outer cylinder into air relief and air compression chambers, the air relief chamber having communication with the atmosphere, an inner valve cylinder having a valve seat to coöperate with the first valve seat to cut off communication with the air relief cylinder and a chamber below the valve cylinder, and to close communication between the compression chamber of the outer cylinder and the air relief chamber, said valve cylinder having a piston operable in the chamber of the extension cylinder, the outer cylinder having an air chamber below the valve cylinder in communication with the fluid main, said valve cylinder having exterior grooves forming communications wth the air chamber below the valve cylinder and the air relief chamber when the valve cylinder is in its downward position, said grooves forming continuous communication between the air chamber below the valve cylinder and the air compression chamber of the outer cylinder regardless whether the valve cylinder is up or down, the rising of the fluid in said grooves causing a fluid packing, said extension cylinder having means to permit of a partial sudden rise of the valve cylinder and piston, and to drain off fluid that may arise above the piston in the extension cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,166,440. MOTOR-VEHICLE. EDWARD P. COWLES, Sparta, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Sept. 6, 1901, Serial No. 74,497. Divided and application filed Aug. 9, 1912, Serial No. 714,297. Divided and this application filed Apr. 8, 1914. Serial No. 830,462. (Cl. 21—90.)



1. In a motor vehicle, the combination with an axle, steering wheels supported at the ends of the axle, and means for adjusting said wheels, of a shaft mounted in suitable bearings having movement relatively to the axle and vehicle body, said shaft being connected with said adjusting means and adapted to accommodate both the lateral movement of the body and vertical motion of the axle.

2. In a motor vehicle, the combination of an axle, steering wheels supported at the ends of the axle, adjusting devices extending inwardly from said wheels, and vertically arranged actuating shaft connected to said devices, said shaft consisting of two telescoping members one of which is mounted in a bearing having movement on the vehicle body and the other of which is mounted in a bearing having movement relatively to the axle.

3. In a motor vehicle, the combination with an axle, steering wheels mounted at the ends of the axles, a vertical actuating shaft having its ends mounted in bearings movable relatively to the axle and vehicle body, respectively, said shaft consisting of two freely telescoping sections, one having a plurality of longitudinal ribs and the other a corresponding series of longitudinally extending grooves into which the ribs on the first said member extend, connections between the lower end of the said shaft and the steering wheels, and a steering lever connected with said shaft.

4. In a motor vehicle, the combination of an axle, steering wheels mounted at the ends of the axle, devices for adjusting said steering wheels to control the direction of movement of the vehicle, a stering lever, and a shaft between and connected to both said wheel adjusting devices and the steering lever, said shaft being connected to both the running gear and vehicle body by ball and socket joints.

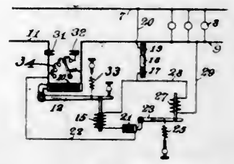
5. In a motor vehicle, the combination with steering wheels, adjusting devices therefor mounted on the running gear of the vehicle, a steering lever mounted in the body of the vehicle, a shaft arranged between and connected to both said steering lever and wheel adjusting devices, and consisting of two freely telescoping parts, and a sleeve arranged about the telescopic connection between said shaft members to exclude dust from said joint.

[Claims 6 to 13 not printed in the Gazette.]

1,166,441. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Mar. 27, 1911. Serial No. 617,020. (Cl. 171—229.)

1. The combination with an electric circuit having a regulator therein, means for operating the regulator, and means for controlling the operating means, of means for rendering the regulator substantially ineffective and the operating means and controlling means substantially inoperative, while at the same time maintaining the operative condition of the circuit.

2. The combination with an electric circuit having a regulator therein, means for operating the regulator, and means for controlling the operating means, of means for rendering the operating and controlling means substantially inert and shunting the regulator means while maintaining the operative condition of the circuit.



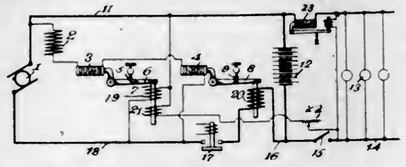
3. The combination with a circuit having a regulator therein, operating means for the regulator, and means for controlling the operating means, of means for cutting out said regulator and said operating means and said controlling means while at the same time maintaining the operative condition of the circuit.

4. The combination with a circuit containing a regulator, means in connection with the circuit for operating the regulator, and means for controlling said operating means, of means for disconnecting the operating and controlling means, and shunting out the regulator while maintaining the operative condition of the circuit.

5. The combination with an electric circuit containing a generator and a regulator, of means for operating the regulator, means for rendering the regulator and operating means substantially inoperative while maintaining connection between the circuit and the generator, and independent means for regulating said circuit only when the abovementioned regulator and operating means are inoperative.

[Claims 6 to 9 not printed in the Gazette.]

1,166,442. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed June 21, 1911. Serial No. 634,492. (Cl. 171—313.)



1. The combination with a generator, and a translation circuit, of means for regulating the generator responsive to voltage fluctuations, means for regulating the generator responsive to current fluctuations and means for affecting the voltage-responsive means affected by making and breaking of the translation circuit.

2. The combination with a generator, and a translation circuit, of means for making and breaking the translation circuit, means for regulating the generator in response to voltage fluctuations, means for regulating the generator in response to current fluctuations and means whereby the voltage-responsive means is affected by the operation of the means for making and breaking the translation circuit.

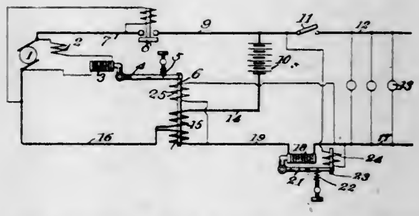
3. The combination with a generator, and a translation circuit, of means for governing the generator to prevent a predetermined voltage from being exceeded, means for governing the generator to prevent a predetermined current from being exceeded and means for varying the value of the predetermined voltage affected by establishing and breaking of the translation circuit.

4. The combination with a generator, a translation circuit and means for making and breaking said circuit, of means for regulating the generator to hold constant voltage thereupon throughout speed changes, means for regulating the generator to hold a given current constant throughout speed changes and means for adjusting the voltage to be held constant throughout speed changes dependent upon making and breaking of the translation circuit.

5. The combination with a generator, a translation circuit and means for making and breaking the same, of means for regulating the generator to hold constant voltage thereupon throughout speed changes, means for regulating the generator to hold a given current constant throughout speed changes and means for adjusting the voltage to be held constant throughout speed changes dependent upon making and breaking the translation circuit independent of current consumption in the translation circuit.

[Claims 6 to 15 not printed in the Gazette.]

1,166,443. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 29, 1911. Serial No. 651,893. (Cl. 171—313.)



1. The combination with a generator, a storage battery, a translation circuit and a regulator for the translation circuit, of means for regulating the generator, means controlling said regulating means responsive to battery current fluctuations, means for controlling said regulating means responsive to translation circuit current fluctuations, means for modifying the effect of the current responsive means affected by the operation of the translation circuit regulator.

2. The combination with a generator, a storage battery, a translation circuit and a regulator for the translation circuit, of a generator regulating means, means for operating the said regulating means responsive to battery current fluctuations, means for operating said regulating means responsive to translation circuit current fluctuations, and means for modifying the effect of the current responsive means affected by voltage variation upon the translation circuit.

3. The combination with a generator, a storage battery, a translation circuit and a regulator for the translation circuit, of a regulating element for controlling the generator, battery current responsive means for controlling said regulating element, translation circuit current responsive means for controlling said regulating element and means for adjusting the effect of the current responsive means affected by the operation of the translation circuit regulator.

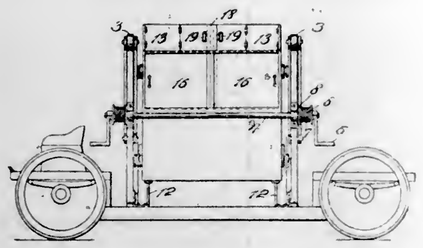
4. The combination with a generator, a storage battery, a translation circuit and a regulator for the translation circuit, of a means for controlling the electro-motive force of said generator, means for operating said controlling means for preventing the battery current of said generator from exceeding a predetermined limit, means for operating said controlling means for preventing the translation circuit current supplied by said generator from exceeding a predetermined limit and means whereby the value of the current held from being exceeded by the current responsive means is adjusted by the operation of the translation circuit regulator.

5. The combination with a generator having a field winding, a storage battery, a translation circuit and a translation circuit regulator, of means for controlling the generator comprehending a variable resistance in circuit with the field winding, means for controlling said variable

resistance responsive to battery current fluctuations, means for controlling said variable resistance responsive to translation circuit current fluctuations and means for modifying the effect of the current responsive means in response to operation of the translation circuit regulator.

[Claims 6 to 11 not printed in the Gazette.]

1,166,444. DUMP-CART. JEREMIAH CROWLEY, New York, N. Y. Continuation of application Serial No. 680,726, filed Feb. 29, 1912. This application filed Apr. 29, 1914. Serial No. 835,067. (Cl. 21—20.)



1. In combination with a wagon frame, a movable body, means for normally retaining the same in an upright position, means for supporting the same, said means including an arm eccentrically and pivotally attached to said body, a trackway, means for controlling the movement of said last-mentioned means on said trackway, whereby said body may be carried to assume a dumping position on the releasing of said retaining means.

2. In combination with a wagon frame, a body movable relatively thereto, arms pivotally and eccentrically attached to said body, means for retaining the latter normally in upright position, means carried by said wagon frame for movably supporting said body, and means for controlling the movement of said body whereby the latter may be permitted to assume a dumping position automatically upon the release of said retaining means.

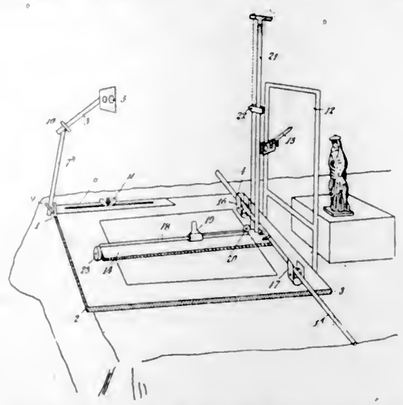
3. In combination with a wagon frame, a receptacle, arms pivotally and eccentrically attached to said receptacle, an inclined trackway, means carried by said arms in engagement with said trackway for movably supporting said receptacle, releasable means for retaining said receptacle in an upright position, means for controlling the movement of said body and means adapted to release said retaining means whereby said receptacle may automatically assume a dumping position at a predetermined point in its travel.

4. In combination with a wagon frame, a body, arms pivotally and eccentrically attached to said body, rollers carried by said arms, an inclined trackway transverse of said wagon frame, said rollers being in egagement with said trackway to support said body, auxiliary rollers mounted on said body normally in engagement with trackways, means for retaining said body in upright position, comprising a hook pivotally mounted on said arms, adapted to engage with a stud on said body, a projection carried by said first-mentioned trackway for tripping said hook at a predetermined point in the travel of said body, permitting said body to assume a dumping position, whereby the contents are thrown out and away from said wagon frame.

5. In combination with a wagon frame, a body movable relatively thereto, arms pivotally and eccentrically attached to said body, means for retaining the latter normally in upright position, means carried by said wagon frame for movably supporting said body, and means for controlling the movement of said body whereby the latter may be permitted to assume a dumping position automatically upon the release of said retaining means and means pivoted to said wagon frame for maintaining the same in its normal position during the dumping operation.

[Claim 6 not printed in the Gazette.]

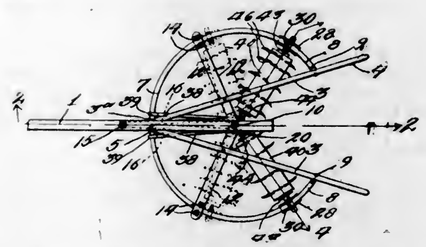
1,166,445. DRAWING APPARATUS. ALEXANDRE CUVELIER, Paris, France. Filed Apr. 30, 1913. Serial No. 764,486. (Cl. 33—20.)



1. In an apparatus for drawing with precision what is seen from a fixed point the combination of an adjustable eye plate, an observation frame located opposite to said eye-plate and an adjustable pointer carried on said frame substantially as described.

2. In an apparatus for drawing with precision what is seen from a fixed point, the combination of a drawing board, a ruler adapted only to move transversely to its length, an upright rod attached to one end of said ruler, a cursor carried by said rod, a tension member attached to said cursor and to the top of said rod, a guide member attached to said ruler, a pencil-cursor sliding on said guide member, means connecting the pencil-cursor to the aforesaid cursor adapted to move the same when the pencil is moved, an eye plate, adjustable means connecting said eye-plate to the aforesaid board, and a rectangular frame also attached to said board and carrying an adjustable arm or pointer for the purpose specified, all substantially as described.

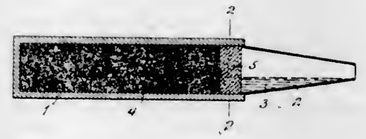
1,166,446. CULTIVATOR. FRANK A. DAVIS, Sr., Blountstown, Fla. Filed Aug. 2, 1915. Serial No. 43,320. (Cl. 55—11.)



1. In a cultivator, a frame, a substantially circular rod mounted on the frame, rods pivotally connected to the forward part of the frame and having rearwardly and downwardly extending parts, shafts pivoted upon the lower ends of said downwardly extending parts, brackets in which the outer ends of the shafts have bearings, cultivating rollers mounted upon the shafts, said bracket having adjustable connections to the curved rod whereby the brackets may be adjusted, so that the shafts may be adjusted angularly toward the rear and laterally or angularly forwardly and laterally, said adjustable connections of the bracket comprising plates semi-circular in cross section and curved to correspond with and fit the curved rod, and staples and means to secure the curved plates to the curved rod adjustably.

2. In a cultivator, a frame, a substantially circular rod mounted on the frame, rods pivotally connected to the forward part of the frame and having rearwardly and downwardly extending parts, shafts pivoted upon the lower ends of said downwardly extending parts, brackets in which the outer ends of the shafts have bearings, cultivating rollers mounted upon the shafts, said bracket having adjustable connections to the curved rod whereby the brackets may be adjusted, so that the shafts may be adjusted angularly toward the rear and laterally or angularly forwardly and laterally, said adjustable connections of the bracket comprising plates semi-circular in cross section and curved to correspond with and fit the curved rod, and staples and means to secure the curved plates to the curved rod adjustably, and means whereby the rearwardly extending rods of the frame may be adjusted laterally.

1,166,447. ORE CHARGES FOR RETORTS AND METHOD OF TREATING THE SAME. CHARLES A. H. DE SAULLES, New York, N. Y. Filed Mar. 8, 1915. Serial No. 12,822. (Cl. 75—153.)



1. The method consisting in employing in a retort or muffle a front briqueted charge of ore low in a substance which it is desired to filter from a rear charge of ore which is being treated in the retort or muffle.

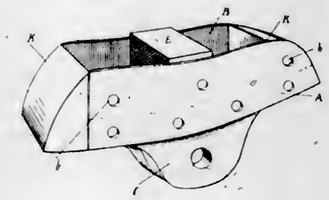
2. The method consisting in employing in a retort or muffle a front briqueted charge of ore containing a reducing agent and low in a substance which it is desired to filter from a rear charge of ore which is being treated in the retort or muffle.

3. The method consisting in employing in a retort or muffle a front charge briquet of ore low in iron and containing a reducing agent.

4. The method consisting in employing in a retort or muffle a front charge briquet of ore low in lead and containing a reducing agent.

5. The method consisting in employing in a retort or muffle a front charge briquet of ore low in iron and lead and containing a reducing agent.

1,166,448. BRAKE-SHOE. BRADFORD H. DIVINE, Utica, N. Y. Filed Jan. 18, 1912. Serial No. 671,974. (Cl. 188—27.)



1. A brake shoe embodying a holder, said shoe comprising a friction surface exposed for engagement with the opposing body and consisting of a surface of nonmetallic thread ends composed of layers of woven fabric compressed together into a hard homogeneous compact mass and a permanent binder therefor, substantially as described.

2. In brake shoes and the like, and in combination therewith, a block consisting of layers of woven nonmetallic fabric cut on the bias and compressed into a hard compact mass and having an exposed friction surface composed of thread ends, substantially as described, and a permanent binder holding said block compressed.

1,166,449. WRENCH. THOMAS L. DENNIS, Jr., Prince Bay, N. Y. Filed May 19, 1915. Serial No. 29,144. (Cl. 81—143.)



1. A wrench including a fixed jaw, a shoulder extending at an approximate right angle to the fixed jaw, a movable jaw, coacting teeth formed on the shoulder and movable jaw, and yieldable means connecting the movable jaw and shoulder for maintaining the teeth in engagement, whereby the movable jaw is held in adjusted position.

2. A wrench including a fixed jaw, a shoulder extending at an approximate right angle to the fixed jaw, a movable jaw, coacting teeth formed on the shoulder and movable jaw, yieldable means connecting the movable jaw and shoulder for maintaining the teeth in engagement, whereby the movable jaw is held in adjusted position, and means for releasing the yieldable means whereby the movable jaw may be adjusted with respect to the fixed jaw.

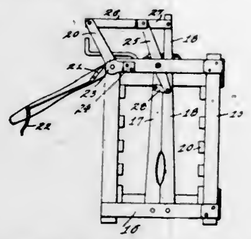
3. A wrench including a fixed jaw, a shoulder extending at an approximate right angle to the fixed jaw, a movable jaw, coacting teeth formed on the shoulder and movable jaw, yieldable means for maintaining the teeth in engagement, whereby the movable jaw is held in adjusted position, and rotatable means carried by the movable jaw for releasing the yieldable means whereby the movable jaw may be adjusted with respect to the fixed jaw.

4. A wrench including a fixed jaw, a shoulder formed integrally therewith and extending from the inner end thereof, said shoulder being provided with a longitudinal groove, and teeth upon each side of the groove, a movable jaw mounted on the shoulder and provided with teeth which are engageable with the teeth of the shoulder for holding the movable jaw in adjusted position, a spring connected to the movable jaw and movable therewith, lateral lugs formed on the spring for engagement in the groove, and a cam mounted in the movable jaw and engageable with the spring, whereby the teeth of the jaw and shoulder are held in engagement, said cam being rotatable for releasing the spring whereby the teeth of the jaw and shoulder may be disengaged for the adjustment of the movable jaw.

5. A wrench including a fixed jaw, a shoulder extending laterally from the inner end of the fixed jaw, said shoulder being provided with a longitudinal, substantially T-shaped groove, a movable groove provided with teeth adapted to engage with the teeth of the shoulder for holding the movable jaw in adjusted position with respect to the fixed jaw, there being a longitudinal groove formed in the toothed portion of the movable jaw, a key driven into the groove, said key being arranged for movement through the narrow portion of the T-shaped groove in the shoulder, a substantially L-shaped spring member secured to the key and provided with lateral lugs which are movable through the wide portion of the T-shaped groove, said movable jaw being provided with a recess adapted to receive one arm of the spring, and a cam traversing the last mentioned recess and engageable with the arm of the spring for locking the teeth of the movable jaw in engagement with the teeth of the shoulder for releasing the arm of the spring, whereby the teeth of the movable jaw may be disengaged from the teeth of the shoulder to permit the adjustment of the jaw.

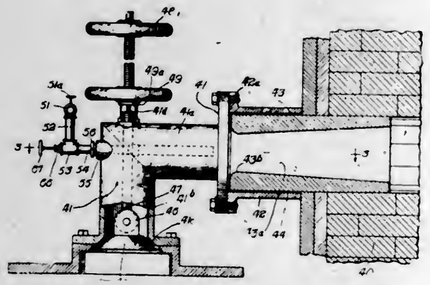
[Claims 6 to 9 not printed in the Gazette.]

1,166,450. HOG-RINGING CHUTE. WALLACE D. DOLAN, Linn township, Cedar county, Iowa. Filed May 7, 1915. Serial No. 26,619. (Cl. 119—99.)



In a hog ringing chute, a pen having a horizontally swinging exit door at one end, means for opening and closing the door, a pair of vertically disposed stanchion bars pivotally mounted in the lower portion of the door, one of the stanchion bars extending above the top of the door, a centrally pivoted vertical lever mounted on the upper end of the door and having its lower end pivotally connected to the other stanchion bar, a bell crank lever pivoted to the upper corner of the free edge of the door, a link connected to one arm of the bell crank and to the upper end of the vertical lever, and a second link pivotally connected to the upper end of the other stanchion bar above the door and to the upper end of the vertical lever.

1,166,451. BURNER CONSTRUCTION. HENRY A. DREFFEIN and MELVILLE S. FLINN, Chicago, Ill. Filed May 3, 1913. Serial No. 765,333. (Cl. 158—109.)



1. In combination with a fuel duct, an inducing member located therein, and means associated with said member to vary the induction effect thereof without affecting the flow of inducing medium therethrough.

2. In combination, a fuel duct, an induction member located therein, and means to vary the induction effect of said member without varying the flow of inducing medium through said member.

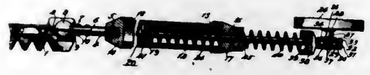
3. In combination, a fuel supply duct, a tube located in said duct and arranged to supply an inducing medium to induce fuel through said duct, and means associated with said tube operable to vary the induction of said fuel without varying the flow of inducing medium through said tube.

4. In combination, a fuel supply duct, a tube extending into said duct, a nozzle located in said tube, said nozzle comprising an apertured collar having rearwardly extending arms, and means to vary the position of said nozzle in said tube.

5. In combination, a fuel supply duct, a tube extending into said duct, a nozzle located in said tube, said nozzle comprising an apertured collar having rearwardly extending arms, and means to vary the position of said nozzle in said tube, said means comprising a rod pivotally attached to said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,166,452. PITMAN. JOHN P. GARDNER, San Francisco, Cal. Filed Apr. 11, 1914. Serial No. 831,347. (Cl. 74—48.)



In combination, a reciprocating member, a tubular casing having a rod at one end, said rod having a ball pivotal joint with the reciprocating member, one end of the casing having a cap having a pocket at its outer end and a central opening concentric with the contour of the pocket, a piston rod extending through the central opening and provided with a piston reciprocating in the casing, a coil spring interposed between the cap and the piston, a revoluble member having a wrist pin, said piston rod having a disk head at one end, said disk head having a central opening, and an enlargement provided with a pocket, a coil spring on the piston rod interposed between the pocket of the cap and the pocket of the enlargement, roller bearings in the central opening of the disk head and engaging antifrictionally with the wrist pin, and means upon each face of the disk head to prevent displacement of the disk head and the roller bearing, the means upon the outer face of the disk head being secured to the wrist pin.

1,166,453. FILM-DRIVING DEVICE. LÉON GAUMONT, Paris, France, assignor to Société des Etablissements Gaumont, Paris, France. Filed Sept. 10, 1913. Serial No. 789,167. (Cl. 74—41.)



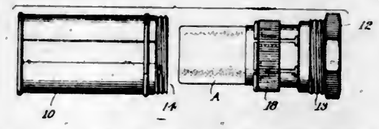
1. A Geneva movement for driving a film in cinematographic apparatus, comprising a Geneva wheel having slots therein at 90° apart, and a driving plate having a driving finger adapted to enter and leave the slots in said Geneva wheel at a tangent, said finger being transversely movable in said plate, and a cam for displacing said finger for a predetermined interval so as not to act on said Geneva wheel.

2. A Geneva movement for driving a film in cinematographic apparatus, comprising a Geneva wheel having slots therein at 90° apart, and a driving plate having a driving finger adapted to enter and leave the slots in said Geneva wheel at a tangent, said finger being movable across the face of said plate, and means for displacing said finger for a predetermined interval so as not to act on said Geneva wheel.

3. A Geneva movement for driving a film in cinematographic apparatus, comprising a Geneva wheel having slots therein at 90° apart, and a driving plate having a driving finger adapted to enter and leave the slots in said Geneva wheel at a tangent, and means for displacing said finger for a predetermined interval so as not to act on said Geneva wheel, and a sector wheel, moving independently of said driving plate adapted to immobilize said Geneva wheel during the interval that said finger is displaced.

4. A Geneva movement for driving a film in cinematographic apparatus, comprising a Geneva wheel having slots therein at 90° apart, and a driving plate having a driving finger adapted to enter and leave the slots in said Geneva wheel at a tangent, and means for displacing said finger once in every two revolutions of said driving plate, whereby at alternate revolutions the finger does not act on said Geneva wheel, and a sector wheel adapted to turn once in every two revolutions of the driving plate and adapted to immobilize said Geneva wheel during the interval that said finger is displaced.

1,166,454. CONTAINER FOR SHAVING-STICKS. GEORGE M. GREENE, South Somerville, N. J. Filed Apr. 9, 1915. Serial No. 20,156. (Cl. 206—56.)



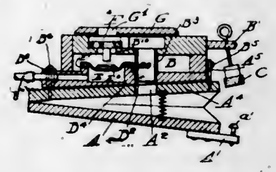
1. A container for a shaving stick comprising a body portion closed at one end and open at the other, a cover therefor, and releasable means carried by said cover for securing a shaving stick to said cover in a variety of adjusted positions by bearing upon and clamping different parts of the end of said shaving stick according to the relative lengthwise adjustment of said shaving stick and cover, said cover acting as a closure for the open end of said body portion and said body portion and cover having means for securing them removably together and telescoping when said container is closed.

2. A container for a shaving stick comprising a body portion closed at one end and open at the other, a flanged cover therefor having a releasable clamping sleeve constituting an open end for the cover and adapted to receive the end of a shaving stick and to bear upon and clamp different parts of said end according to the relative lengthwise adjustment of the shaving stick and clamping sleeve, and thus secure the shaving stick adjustably within the open end of the cover, said cover acting as a closure for the open end of said body portion and said body portion and cover telescoping and being removably secured together when said container is closed.

3. A container for a shaving stick, comprising a body portion threaded at one end, a cover comprising a flange threaded externally to engage said body portion and threaded internally to engage and support a clamping device, a clamping device supported in said cover, comprising at one end a threaded portion adapted to engage and be supported by the cover and at the other end a split ring adapted to receive and support a shaving stick.

4. A container for a shaving stick, comprising a body portion threaded at one end, a cover comprising a flange threaded externally to engage said body portion and threaded internally to engage and support a clamping device, a clamping device supported in said cover, comprising at one end a threaded portion adapted to engage and be supported by the cover and at the other end a split ring adapted to receive and support a shaving stick, a plurality of cam surfaces on said split ring, and a longitudinally movable ring encircling said split ring and adapted to engage said cam surface for the purpose described.

1,166,455. PNEUMATIC ACTION FOR PIANO-PLAYERS. ARCHIE N. GRIMES, Chicago, Ill. Filed Nov. 10, 1913. Serial No. 800,060. (Cl. 84—178.)



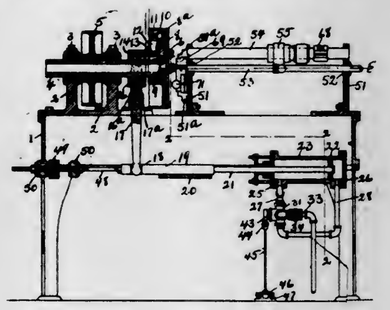
1. In a pneumatic action for piano players, in combination with an exhaust chamber, a primary pneumatic therein, a motor pneumatic mounted upon one wall of the exhaust chamber, a valve chamber in the opposite wall and a valve therein operated by the primary pneumatic, and a tube connecting the valve chamber with the motor pneumatic extending through the exhaust chamber.

2. In a pneumatic action for piano players, an exhaust chamber, a motor pneumatic mounted upon one wall thereof, a valve chamber communicating with the exhaust chamber through its opposite wall, a valve controlling such communication, and a tube extending through the exhaust chamber affording communication between said motor pneumatic and the valve chamber.

3. In a penumatic action for piano players, a pneumatic tension chamber, pneumatic devices positioned at opposite sides of said chamber, and a tube extending through said chamber and connecting the said devices at opposite sides thereof to afford communication between them independently of the chamber.

4. In a pneumatic action, in combination with a ported duct board, motor penumatics having their fixed walls mounted against the surface of such board, having ports for registering with the ports of the board, said surface of the board being slightly convex longitudinally of the pneumatics, and devices securing the pneumatics to the board at the ends of the fixed walls of said pneumatics respectively, said fixed walls having their surfaces which seat upon the board normally straight longitudinally whereby they are sprung slightly upon being drawn to their seats on the board.

1,166,456. PIPE-CUTTING MACHINE. HOWARD J. HAMER, Erie, Pa., assignor to Jarecki Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Aug. 28, 1914. Serial No. 859,051. (Cl 81—190.)



1. In a pipe cutting machine, the combination of a rotating head; movable cutters mounted on said head; mechanism for actuating said cutters, said mechanism exerting a uniform pressure on said cutters; and a manually controlled device for feeding the pipe forward.

2. In a pipe cutting machine, the combination of a rotating cutting head; movable cutters mounted on the head; foot controlled mechanism for actuating said cutters, said mechanism exerting a uniform pressure on said cutters; and a hand controlled device for feeding pipe forward.

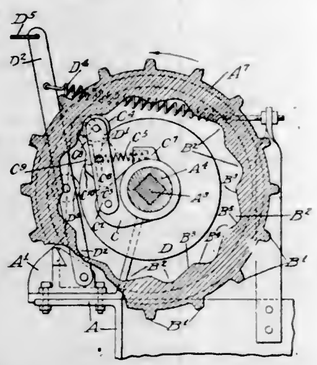
3. In a pipe cutting machine, the combination of a rotating cutting head; movable cutters mounted on the head; foot controlled mechanism for actuating said cutters; a hand controlled device for feeding pipe forward; and a hand controlled device for locking the pipe against turning during the cutting action.

4. In a pipe cutting machine, the combination of a rotating cutting head; a device for actuating the cutting head and adapted to exert uniform pressure on said head; a pedal controlling said actuating device; a gripping device for locking pipe against turning; a hand lever for controlling said gripping device; a feeding device for feeding pipe forward; and a hand lever for actuating the feeding device.

5. In a pipe cutting machine, the combination of a rotating cutting head; a fluid actuated device for actuating the cutting head; a pedal controlling the fluid actuated device; a gripping device for locking the pipe against turning; a hand lever for controlling said gripping device; a feeding device for feeding the pipe forward; and a hand lever for actuating the feeding device.

[Claim 6 not printed in the Gazette.]

1,166,457. CLUTCH. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor to M. Rumely Co., Laporte, Ind., a Corporation of Indiana. Filed Oct. 28, 1914. Serial No. 869,035. (Cl. 192—20.)



1. A clutch comprising a ring, a driving connection therefor, a shaft about which the ring is mounted free to rotate, an arm on the shaft, a link pivoted thereon, yielding means for forcing the free end of the link against the inner periphery of the ring, automatic means for disengaging the end of the link and the ring at the end of each revolution of the shaft.

2. A clutch comprising a ring, a driving connection therefor, a shaft about which the ring is mounted free to rotate, an arm on the shaft, a link pivoted thereon, yielding means for forcing the free end of the link against the inner periphery of the ring, automatic means for disengaging the end of the link and the ring at the end of each revolution of the shaft, said means comprising a control member and yielding means for forcing it against the link.

3. A clutch comprising a ring, a driving connection therefor, a shaft about which the ring is mounted free to rotate, an arm on the shaft, a link pivoted thereon, yielding means for forcing the free end of the link against the inner periphery of the ring, a disk notched adjacent to the link mounted on the shaft and a control member riding upon said disk in the path of said link to throw the link out of engagement with the ring.

4. A clutch comprising a ring, a driving connection therefor, a shaft about which the ring is mounted free to rotate, an arm on the shaft, a link pivoted thereon, yielding means for forcing the free end of the link against the inner periphery of the ring, a disk notched adjacent to the link mounted on the shaft and a control member riding upon said disk in the path of said link to throw the link out of engagement with the ring and yielding means for forcing said control member into said notch to rotate the link and complete the disengagement of the link and collar.

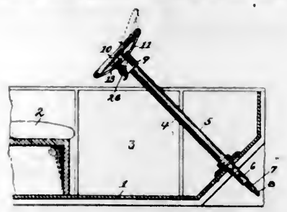
5. A clutch comprising a ring having a notched inner periphery, a driving connection therefor, a shaft about which the ring is mounted free to rotate, an arm on the shaft, a link pivoted thereon, yielding means for forcing the free end of the link against the inner periphery of the ring, automatic means for disengaging the end of the link and the ring at the end of each revolution of the shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,166,458. ADJUSTABLE STEERING-WHEEL FOR MOTOR-VEHICLES. BRAMWELL C. HOLWICK, Canton, Ohio. Filed Aug. 30, 1913. Serial No. 787,425. (Cl. 74—33.)

1. An adjustable steering wheel for motor vehicles, comprising a steering shaft and a steering wheel provided with downwardly surved spokes directly slidably connected to said shaft, whereby, when said wheel is transversely slidably moved with relation to said shaft, it will pass through a curved course determined by the curvature of said spokes.

2. An adjustable steering wheel for motor vehicles, comprising a steering shaft provided with a head having parallel, curved grooves, and a steering wheel provided with parallel, curved spokes extending from the hub to the rim thereof seated in said grooves and slidable therein.



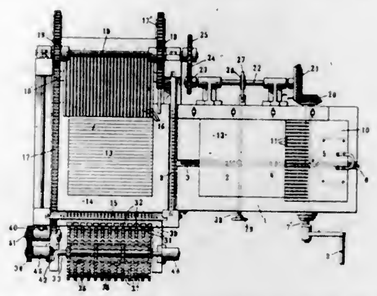
3. An adjustable steering wheel for motor vehicles, comprising a steering shaft provided with a head having parallel portions, a steering wheel provided with a rim portion, a hub portion, and spaced, parallel, curved spokes extending from said hub portion to said rim portion, said parallel spokes slidably engaging the parallel portions of said head, wheel retaining means connected to said head and adapted to retain said wheel in operative connection with said head while permitting sliding movement of said wheel from the normal position in which said head is arranged concentrically with reference to said rim, to the adjusted position in which said rim lies closely adjacent said head and releasable locking means for locking said wheel in said normal position.

4. A device of the character described comprising, in combination with the steering shaft of a motor vehicle, a steering wheel provided with downwardly dished spokes, two of said spokes extending parallel with each other from the rim of said wheel to approximately the hub thereof, and means engaging said steering shaft and parallel spokes for slidably connecting said spokes to said shaft, whereby said wheel may be moved through a curved course to bring the rim or the hub thereof adjacent said steering shaft.

5. A device of the character described comprising, in combination with the steering shaft of a motor vehicle, a steering wheel provided with downwardly dished, curved spokes, connecting means connecting said wheel to said shaft and provided with spoke engaging portions curved to the same radius as said spokes and adapted to permit said wheel to be slidably moved with reference to said shaft through a curved course, whereby to bring said wheel into position with its hub or its rim adjacent said steering shaft, as desired.

[Claims 6 to 13 not printed in the Gazette.]

1,166,459. SOAP CUTTING AND SEPARATING MACHINE. ERNEST A. HOUCHIN, New York, N. Y. Filed Dec. 20, 1911. Serial No. 666,996. (Cl. 25—106.)



1. In combination, a table, a holding bar above the table for holding a slab of longitudinally and transversely subdivided material down on the table, means for separating the slab into sections including supporting fingers projecting beyond the end of the table, slab engaging separating fingers beyond the said holding bar and independent therefrom and means for operating said separating fingers down past the supporting fingers at the end of the table.

2. In a separating machine, means for supporting alternate sections of a row of slab sections, means for separating the unsupported sections of said row of sections from the other sections, means for then feeding the remaining sections of said row and means for separating the said remaining sections of said row of sections from the succeeding row of sections.

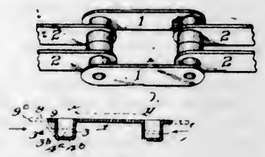
3. In a separating machine, spaced apart supporting fingers engaging and supporting the alternate sections of a row of slab sections, movable separating fingers spaced apart to engage the unsupported slab sections and means for operating the separating fingers in a plane at an angle to the plane of the supporting fingers.

4. In a separating machine, the combination of a table for supporting a slab of material divided longitudinally and transversely into rows of slab sections, means at the end of said table for supporting diagonally adjoining slab sections in two adjacent transverse rows of the sections, movable separating fingers arranged to engage the diagonally adjoining slab sections adjoining the said supported slab sections, and means for operating said separating fingers down past the end of the table whereby to engage and shift the said diagonally adjoining unsupported slab sections.

5. In a separating machine, the combination with relatively stationary spaced fingers arranged to support alternate slab sections of a sub-divided slab of material, of a series of movable separating fingers disposed opposite the supporting fingers and a second series of separating fingers disposed to pass between said supporting fingers and means operating said separating fingers to carry the respective fingers down past the ends of the supporting fingers and in the spaces between the supporting fingers to thereby strip off the slab sections which are in advance of the sections supported on the spaced supporting fingers and the slab sections lying in between the sections so supported on the spaced supporting fingers.

[Claims 6 to 12 not printed in the Gazette.]

1,166,460. METHOD OF MAKING CHAIN-LINKS. JAMES W. HUGHES, Narberth, Pa. Filed Dec. 9, 1913. Serial No. 805,500. (Cl. 59—8.)

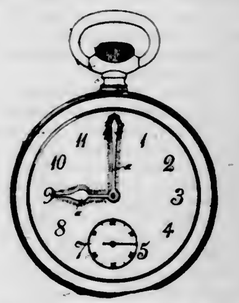


1. The hereindescribed method of forming a link member for a chain from sheet metal, consisting in holding a given length of the sheet metal in quiescent and non-stretchable state, and simultaneously therewith stamping and drawing at opposite ends of the said quiescent metal extended portions of said sheet metal and drawing the mass of the metal toward the quiescent portion of the sheet to produce transverse tubular hub portions wholly to one side of the plane of the quiescent portion, the metal forming the said hub portions being drawn from the portions of the sheet surrounding the hubs except on the side adjacent to the quiescent portion of the sheet, whereby the bar between the hubs is maintained in normal condition without stretching to provide the maximum thickness and tensile strength, and the metal of the hub portions is stretched, drawn and compressed to densify the metal to increase the wearing and torsional resistance of the metal.

2. The herein described method of forming the end of a sheet metal link member for a chain, consisting in holding a given length of sheet metal in a quiescent and non-stretchable state and simultaneously therewith stamping and drawing the metal of the sheet immediately beyond the portion held in quiescent non-stretchable state into a transversely arranged tubular hub portion adjacent to the end of said quiescent non-stretchable portion, the metal forming the said hub portion drawn from the portion of the sheet wholly beyond the quiescent non-stretchable portion, whereby the metal of the link up to the transverse hub portion is maintained in normal condition without stretching to retain its full tensile strength and the metal of the hub portion is stretched, drawn and compressed to densify the metal to increase the wearing and torsional resistance of the metal.

3. A link section for a chain consisting of a side bar of sheet metal in natural unstretched condition throughout its entire length and having at its ends an outwardly extending annular integral flange in the plane of the bar and a lateral tubular hub, the latter consisting wholly of metal of stretched and densified structure and directly connected integral with the flange and unstretched and undensified bar, the metal of the hubs and flanges being alone stretched and densified.

1,166,461. INDICATOR CONSISTING OF A STATIONARY PART AND ONE OR MORE MOVABLE PARTS. OSKAR JUNGHANS, Schramberg, Germany, assignor to The American Radium Company, a Corporation of New York. Filed May 19, 1911. Serial No. 628,275. (Cl. 58—50.)



1. An indicator hand having a radio-active luminous compound on its underside, said compound having a surface greater in area than the flat surface of the hand.

2. An indicator hand having a radio-active luminous compound on its underside, said compound having a surface projecting downwardly from the underside of said hand.

3. An indicator hand having a radio-active luminous compound on its underside, said compound having an inclined surface projecting downwardly from the underside of said hand.

4. An indicator hand having a downwardly projecting face on its underside and having a radio-active luminous compound on said face.

5. An indicator hand having a downwardly projecting inclined face on its underside and having a radio-active luminous compound on said face.

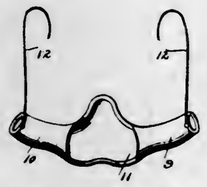
[Claims 6 and 7 not printed in the Gazette.]

1,166,462. BREATH-DEFLECTOR. THOMAS JOEL KING, Richmond, Va. Filed Nov. 29, 1910. Serial No. 594,721. (Cl. 128—13.)

1. A breath deflector comprising an anchor shaped member formed of a one piece shell, said member consisting of an enlarged central portion from each side of which extend upwardly curved arms each being approximately one third the length of said deflector and a central nose inclosing portion extending upwardly from said central portion above the extremities of said arms and an attaching

means, said member having inturned edges shaped to the contour of a person's face.

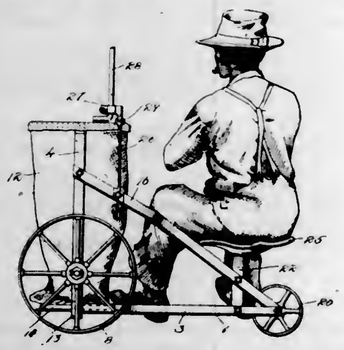
2. A breath deflector comprising an anchor shaped member formed of a one piece shell, said member consisting of an enlarged central portion from each side of which extend upwardly curved arms each being approximately one third the length of said deflector and a central nose inclosmg portion extending upwardly from said central portion above the extremities of said arms and an attaching means, said member having inturned edges shaped to the contour of a person's face, said arms being semi-cylindrical whereby in conjunction with a wearer's cheeks air passages are formed.



3. A breath deflector comprising an anchor shaped member formed of a one piece shell, said member consisting of an enlarged central portion from each side of which extend upwardly curved arms each being approximately one third the length of said deflector and a central nose inclosing portion extending upwardly from said central portion above the extremities of said arms and an attaching means, said member having inturned edges shaped to the contour of a person's face, said arms being semi-cylindrical whereby in conjunction with a wearer's cheeks air passages are formed, certain of said edges having a layer of fibrous material thereon.

4. A breath deflector comprising an anchor shaped member formed of a one piece shell, said member consisting of an enlarged central portion from each side of which extend upwardly curved arms each being approximately one third the length of said deflector and a central portion above the extremities of said arms and an attaching means, said member having inturned edges shaped to the contour of a person's face, said arms being semi-cylindrical whereby in conjunction with a wearer's cheeks air passages are formed, certain of said edges having a layer of fibrous material thereon, said means projecting from the central portion of said enlargement.

1,166,463. TRUCK FOR COTTON-PICKERS. THOMAS J. KING, Richmond, Va. Filed Jan. 21, 1915. Serial No. 3,596. (Cl. 21—65.)



1. A device of the kind described comprising opposing wheels, an axle mounted on each wheel, upright supports mounted on said axles, means at the upper end of said supports for suspending a bag, means at the lower end of said supports for supporting the bottom of said bag, a frame extending rearwardly from said support and connected thereto, and a wheel carried by said frame.

2. A device of the kind described comprising a horizontal frame, opposing uprights connected to said frame, a bag supported between said uprights, an umbrella supported laterally of said bag, wheels mounted alongside said bag having their axles above said horizontal frame, and a wheel trailing at the end of said horizontal frame opposite with respect to said bag support.

3. A device of the kind described comprising a frame, two wheels connected to said frame at one end, a single wheel carried by said frame at its opposite end, upright supports connected to said frame between said first-named wheels, means for suspending a bag between said upright supports, and means for steadying the under side of said bag.

4. A device of the kind described comprising a horizontal frame, a pair of wheels having short axles, a pair of uprights supported upon said axles, said frame being secured to and between said uprights, a trailing wheel carried by said horizontal frame at its rear end, a bag sustaining ring carried at the upper end between said uprights, and a bottom support for said bag carried by said horizontal frame.

5. A device as described consisting of a horizontally disposed frame, an upright frame and an oblique frame, all of said frames being secured together, large wheels mounted at the forward end of said horizontal frame, a small trailing wheel mounted at the opposite end of said horizontally disposed frame, and a bag sustaining support carried between said upright frame.

[Claims 6 to 8 not printed in the Gazette.]

1,166,464. METHOD OF MAINTAINING THE EFFICIENCY OF METALLIC-FILAMENT LAMPS. ALFRED J. LIEBMANN, New York, N. Y., assignor to Nathan Hofheimer, New York, N. Y. Filed Oct. 25, 1913. Serial No. 797,171. (Cl. 176—7.)

1. The method of healing metallic filaments in incandescent lamps and simultaneously restoring the vacuum to its normal height during manufacture and use which consists in spontaneously volatilizing some contact or catalytic substance within the lamp, forming temporary compounds of the substance of which the filament is composed and the said contact substance, decomposing the temporary compounds by the abnormal heat existing in the thin defective filament portions, and depositing the substance of the filament on the hottest and thinest filament portions whereby said sections are built up and the original vacuum restored.

2. The method of maintaining the efficiency of metallic filament lamps consisting in healing metallic filaments in incandescent lamps and simultaneously restoring the vacuum to its normal height by volatilizing some contact or catalytic substance within the lamp by excessive heat produced at a critical moment when the filament or defective portions of the same burn at an abnormal voltage, building up defective filament portions by catalytic reaction and restoring the vacuum to its normal height.

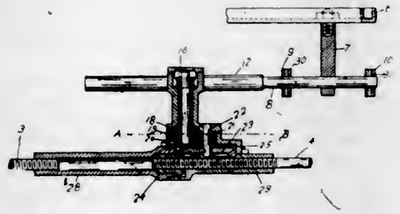
3. The method of maintaining the efficiency of a tungsten lamp consisting in building up defective portions of the tungsten filament by contact or catalytic reaction which consists in vaporizing spontaneously at a critical moment during the burning of the lamp at an abnormal voltage some catalytic substance whereby temporary compounds are formed and decomposed, the hottest filament portions built up and the vacuum restored to its normal height.

4. The method of maintaining the efficiency of a tungsten lamp consisting in building up defective portions of the tungsten filament by contact or catalytic reaction when infinitesimal particles of the defective filament portions volatalize at excessive heat in said portions, volatalizing spontaneously some of the contact or catalytic substance within the lamp by such excessive heat, forming temporary compounds with the volatilized tungsten, decomposing same, depositing spontaneously the tungsten on the thinnest and hottest filament portions and restoring the vacuum to its normal height.

5. The method of maintaining the efficiency of a tungsten lamp consisting in building up defective filament portions by a contact or catalytic reaction when infinitesimal particles of the defective filament portions volatalize at excessive heat in said portions, volatilizing spontaneously some barium-fluorid within the lamp by such excessive heat, forming temporarily tungsten fluorid and barium, decomposing the temporary product, depositing the liberated tungsten on the defective filament portions and restoring the vacuum to its normal height.

[Claims 6 to 8 not printed in the Gazette.]

1,166,465. SLACK-ADJUSTER. ELLSWORTH NELSON LUBURG, Baltimore, Md. Filed Mar. 11, 1912. Serial No. 682,910. (Cl. 188—51.)



1. In a slack adjuster, a brake rod, a rotative member having a screw-threaded engagement therewith, means for rotating said member during the release movements of the brake rod with reference to the brake, said means including an adjusting bar moving with said brake rod during the normal braking movements of the brake rod and stationary with reference to the brake rod during abnormal movements thereof.

2. In a slack adjuster, a sectional brake rod, a casing uniting the ends thereof, a rotary member engaging one section of the brake rod and held against longitudinal movement with reference to the casing, an actuating rack bar, a gear train intermediate said rack bar and rotary member, clutch devices permitting a free movement of said gear train relatively to the rotary member during a movement of the sectional brake rod in one direction and imparting movement of said gear train to said rotary member during a movement of the brake rod in the opposite direction, a fixed abutment and adjustable stops adapted to engage said abutment and determine the movement of the rack bar.

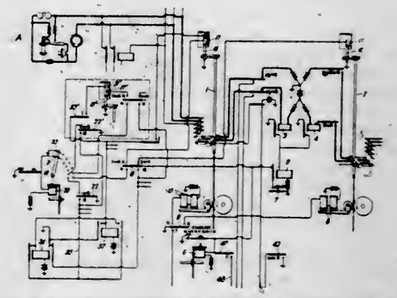
3. In a slack adjuster, a sectional brake rod, a casing joining the adjacent ends of said rod, a rotary member having a thread engagement with one section of the brake rod, said rotary member held against longitudinal movement with reference to the casing, a rack bar moving with said casing and brake rod and adapted to be held against movement during certain movements of the brake bar and casing, a gear train connecting said rack bar and rotary member, a fixed abutment engaging the rack bar and adjustable stops adapted to engage said abutment and determine the movement of the rack bar.

4. In a slack adjuster, a sectional brake rod, rotary means intermediate the adjacent ends of said rod for adjusting one section relatively to the other, means for rotating said member, said means including a gear train and rack bar, a fixed abutment and stops for adjusting the position of the rack bar with reference to the movements of the brake rod and clutch devices intermediate the rack bar and rotary member for imparting the movements of the rack bar to the rotary member during certain movements of the brake rod and permitting free movement of the rack bar during certain other movements of the brake rod.

5. In a slack adjuster, a rack bar having limited longitudinal movement, a pinion meshing with said rack bar, a fixed abutment and stops for determining the movement of the rack bar and pinion, a brake rod, a rotary member operating to adjust said rod, connections intermediate said rotary member and rack pinion, permitting relative movement thereof during a relative difference of movement of the rack bar and brake rod and imparting movement to the rotary member during certain other relative movements of the rack bar and brake rod.

[Claims 6 to 9 not printed in the Gazette.]

1,166,466. AUTOMATIC TELEPHONE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 19, 1915. Serial No. 15,437. (Cl. 179—18.)



1. In a telephone exchange system, a group of lines, a plurality of connecting circuits for use with said lines, automatic switches for extending said connecting circuits, a plurality of central office sending devices for controlling said switches, automatic means for preselecting a plurality of said connecting circuits, and automatic means for definitely associating a sending device with each of said circuits when it is preselected.

2. In a telephone exchange system, a group of lines, a plurality of connecting circuits for use with said lines, automatic switches for connecting said circuits with said lines, switches for extending said connecting circuits to a wanted subscriber, central station sending devices for controlling the opertaion of said last mentioned switches, means for preselecting a plurality of said first mentioned switches, and automatic means for definitely associating a sending device with each preselected switch.

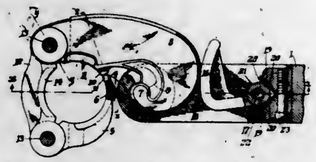
3. In a telephone exchange system, a group of lines, a plurality of connecting circuits, line finder switches in which said connecting circuits terminate, selector switches for extending said connecting circuits to a wanted subscriber's line, a plurality of central station sending devices for controlling the operation of said selector switches, means for preselecting a plurality of said finder switches, and connecting circuit finder switches for automatically associating a sending device with the connecting circuit of a finder switch when it is preselected.

4. In a telephone exchange system, a group of lines, a plurality of connecting circuits, line finder switches in which said circuits terminate, selector switches for extending said connecting circuits to a wanted subscriber's line, a plurality of central station sending devices for controlling the operation of said selector switches, means for preselecting a plurality of said finder switches, and connecting circuit finder switches for automatically associating a sending device with the connecting circuit of each preselected finder switch.

5. In a telephone exchange system, a group of lines, a plurality of connecting circuits, line finder switches in which said circuits terminate, selector switches for extending said connecting circuits to a wanted subscriber's line, a plurality of central station sending devices for controlling the operation of said selector switches, means for causing a plurality of said line finder switches to be preselected, an allotter associated with said finder switches for determining the order in which they shall be operated, and connecting circuit finder switches for automatically associating the sending device with the connecting circuit of each preselected finder switch.

[Claim 6 not printed in the Gazette.]

1,166,467. COMPRESSION-WRENCH. WILLIAM H. LUTZ, Philadelphia, Pa. Filed May 4, 1914. Serial No. 836,077. (Cl. 81—67.)



1. In a device of the character stated, a handle, a yoke formed on said handle having a pair of seats adjacent one end thereof, a bridge piece for said yoke located between said seats and forming a fulcrum bearing, a body part adapted to interfit with said yoke and engage said bearing, a girth member connected to said body part, and lugs or teeth on said girth member adapted in operative condition to straddle said bridge piece and engage the respective seats.

2. In a device of the character stated, a handle, a yoke formed on said handle having a pair of seats adjacent one end thereof, a bridge piece for said yoke located between said seats and forming a fulcrum bearing, a body part adapted to interfit with said yoke and provided with trunnions for engaging said bearing, a girth member connected to said body part, and lugs or teeth integral with said girth member and located respectively at each side of the free end of said girth member in juxtaposed relation to the respective seats, said lugs or teeth being adapted in operative condition to straddle said bridge piece and engage the respective seats, whereby the applied force acting on the girth members operates in close proximity to the fulcrum of the device.

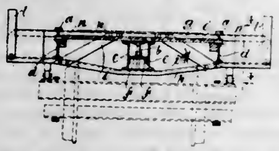
3. In a device of the character stated, a handle, a yoke formed on said handle, a bridge piece for said yoke forming a fulcrum bearing, a body part adapted to interfit with said yoke and engage said bearing, a girth member connected to said body part, and means adapted to straddle said bridge piece for removably connecting said girth member to said handle whereby the operative force applied to said girth member acts at a point or points in close proximity to the fulcrum of the device.

4. In a device of the character stated, the combination of a handle, a plurality of girth members carried thereby, a latch for maintaining operative relation between one of said members and said handle, means to movably connect the free end of another of said members to said handle, a friction device for controlling said latch, and means for regulating the degree of friction of said friction device.

5. In a device of the character stated, the combination of a handle, a plurality of girth members carried thereby, a latch pivoted to said handle for maintaining operative relation between one of said members and said handle, means to movably connect the free end of another of said members to said handle, a spring suitably mounted to bear against said latch to control the movement thereof, and means for varying the pressure of said spring upon said latch.

[Claims 6 to 8 not printed in the Gazette.]

1,166,468. LOGGING-CAR. BASIL MAGOR, New York, N. Y., assignor to Magor Car Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 6, 1912, Serial No. 688,857. Renewed June 1, 1915. Serial No. 31,637. (Cl. 105—76.)

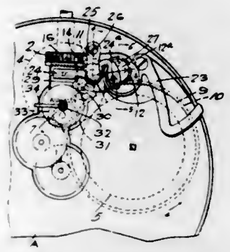


1. The combination to form a logging car, of a frame including a pair of side sills, a plurality of bunks each having a top member and a bottom member laid across the tops and bottoms respectively of the side sills so as to embrace the same and extending beyond the side sills on each side, the said top member providing a support above the level of the frame to receive logs, means to connect the top and bottom members of each bunk both within the side sills and at the ends where they project beyond the side sills, and means provided at each end of the bunks to retain the logs.

2. The combination to form a logging car, of a rectangular frame having a pair of end sills, a pair of side sills and a center sill, a plurality of bunks each having a top channel plate and a bottom channel plate laid across the tops and bottoms respectively of the center and side sills and united to the frame, the said top and bottom plates extending substantially beyond the side sills on each side, and the top plates providing a support above the level of the frame to receive logs, side plates to unite the extending end portions of the top and bottom plates of the bunks, and stanchions pivoted at these end portions to retain the logs.

3. The combination to form a logging car, of a frame including a pair of side sills, a plurality of bunks each having a top member and a bottom member laid across the tops and bottoms respectively of the side sills so as to embrace the same and extending beyond the side sills, the said top members providing a support above the level of the frame to receive logs, a pair of rails supported on the frame directly above the respective side sills, means to unite the top and bottom members of the bunks both within and beyond the side sills, and stanchions at the ends of the bunks to retain the logs.

1,166,469. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Mar. 1, 1913. Serial No. 751,473. (Cl. 58—85.)



1. In winding indicator mechanism, the combination of a spring-barrel, a main wheel, winding mechanism including a ratchet-wheel, a rotary-post, a gear-wheel encircling said post, connections between said gear-wheel and said main wheel, said gear wheel having a recess, a pinion in said recess connected to said gear-wheel, a cup-shaped member encircling said post and forming with said gear-wheel a chamber, a gear-wheel connected to said cup-shaped member, connections between said last named gear-wheel and said ratchet-wheel, a pinion on the inside of said cup-shaped member and connected thereto, a planet-gear meshing with said pinions and loosely mounted on said post, a pinion on said post, an indicator hand, and connections between said pinion and said indicator hand.

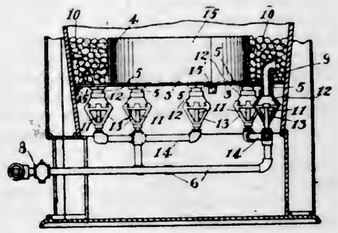
2. In winding indicator mechanism, the combination of a spring barrel, a main-wheel, winding mechanism including a ratchet wheel, a rotary post, a gear-wheel encircling said post, connections between said gear-wheel and the main-wheel, a second gear wheel parallel with said first gear-wheel encircling said post, connections between said second gear-wheel and said ratchet-wheel, a double convex planet-gear engaging said gear-wheels and loosely mounted on said post, a pinion on said post, an indicator hand, and connections between said pinion and said indicator hand.

3. In winding indicator mechanism, the combination of a spring barrel, a main-wheel, winding mechanism including a ratchet-wheel, a rotary post, a gear-wheel encircling said post, connections between said gear-wheel and the main-wheel, a second gear wheel parallel with said first gear-wheel encircling said post, connections between said second gear wheel and said ratchet-wheel, a planet-gear meshing with said gear-wheels, a stud on said planet-gear entering an opening in said post, a pinion on said post, an indicator hand, and connections between said pinion and said indicator hand.

4. In winding indicator mechanism, the combination of a safety main spring barrel, a main-wheel, winding mechanism including a ratchet-wheel, a dial-plate, a hub formed on said dial-plate, a double ring gear encircling said hub, connections between one set of the teeth of said double ring gear and the ratchet-wheel, planetary gear-wheels forming part of a reversing mechanism, connections between the other set of teeth of said ring-gear and one of said planetary wheels, connections between the other planetary wheel and the main-wheel, and an indicator hand operated thereby.

5. In winding indicator mechanism, the combination with the vibrating arm of the set-lever arrangement, of a dial-plate, a plate secured in the dial-plate holding said vibrating arm in position, a pinion beneath said vibrating arm, and means for rotating said pinion.

1,166,470. GAS-FURNACE. ROBERT A. MERRILL, Cincinnati, Ohio, assignor to The Eagle White Lead Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 29, 1914. Serial No. 869,178. (Cl. 158—106.)



1. In a heating furnace, the combination of a fire pot, and a series of burner sections located within and secured to the inner walls of the fire pot, said sections forming an annular ring adapted to receive incombustible fuel, each of said sections comprising an angle plate, and a series of burners secured to and extending above the fuel supporting surface of said angle plate, said burners being adapted to project flame into the fuel and against the walls of said fire box.

2. In combination in a heating furnace, a firepot, angle plates located in said fire pot and adapted to support incombustible fuel, burners secured to said angle plates and projecting into the fuel located on said angle plates, said burners comprising a mixing tube secured to the angle plates and having a flared discharge aperture, a gas nozzle located at the inlet end of the mixing tube, and a hood surrounding the nozzle and adapted to direct air into the mixing tube.

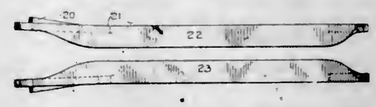
3. An attachment for heating furnaces comprising a series of heating sections adapted to fit together to form an annular incombustible fuel holder within the furnace fire pot, and a series of burners secured to the bottom of said fuel holders and extending therethrough, each of said burners comprising a mixing tube having a flared discharge end turned to discharge flame through the incombustible fuel and against the inner wall of the furnace fire pot.

4. A gas burner attachment for heating furnaces comprising a series of angle plate sections adapted to be secured to the walls of the furnace fire pot, said sections forming an annular incombustible fuel container, with a centrally disposed air passage, a series of burners secured to each angle plate, said burners communicating with separate fuel supply pipes, and consisting of a gas nozzle, an air intake hood surrounding the gas nozzle, and a mixing tube secured to the hood, said mixing tube having its discharge end turned toward the wall of said fire pot and flared to produce a relatively wide flame.

5. In combination in a heating furnace, an ash pit, a fire pot mounted on the ash pit, angle plates located within said fire pot to leave a centrally disposed air passage, a series of burners disposed about the air passage and secured to said angle plates, separate gas supply pipes located in said ash pit and communicating with said burners, and incombustible fuel located on said angle plates between said plates and said fire pot, said burners being adapted to discharge flame through the incombustible fuel located on said angle plates to render said fuel incandescent.

[Claim 6 not printed in the Gazette.]

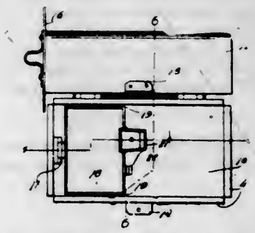
1,166,471. PROCESS FOR MANUFACTURING DRAFT-YOKES FOR RAILWAY-CAR DRAFT-RIGGING. WILLIAM H. MINER, Chazy, N. Y. Filed Apr. 6, 1914. Serial No. 829,796. (Cl. 29—167.)



1. The herein described process of manufacturing yokes for railway draft riggings which includes, cutting sections from a blank to form a key slot near one end thereof and an elongated rectangular opening at the rear of the key slot, then bending the cut blank along lines paralleling the longest edges of said rectangular opening to thereby provide flanges substantially at right angles to the main portion of the blank.

2. The herein described process of manufacturing yokes for railway draft riggings which includes, cutting sections from a blank to form a tapered key slot near one end of the blank, the tapered slot having its narrowest portion near the front end of the blank, cutting an enlarged rectangular opening in the blank at the rear of the key slot, bending the cut blank along lines paralleling the longest edges in said rectangular opening to thereby provide flanges, and forging the metal around the key slot to thereby open up the same and form the key slot of uniform width throughout and provide a strengthening rib around the forward portions of the key slot.

1,166,472. MAIL-BOX. MARTIN NEIDERMEYER, Herndon, Kans. Filed June 25, 1914. Serial No. 847,248. (Cl. 232—33.)

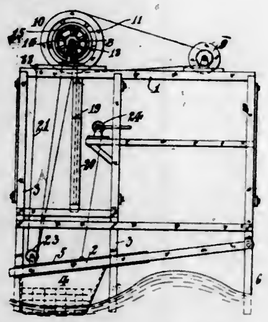


A mail box comprising a box proper, a movable cover for the box, a letter receptacle pivotally supported within the box, a pivoted coin tray mounted on the receptacle, and means mounted on the receptacle adjacent the tray for supporting the unstamped letters.

1,166,473. WAVE-MOTOR. EZRA NICHOLSON, Cleveland, Ohio. Filed Oct. 22, 1913. Serial No. 796,551. (Cl. 253—11.)

1. In a wave motor, the combination with a supporting frame having a float pivoted thereto and pulleys on a movable portion of said float, of a driven shaft having a wheel fixed thereto, hubs loosely mounted on said shaft and on opposite sides of said wheel, pulley drums affixed to said hubs, a vertically movable weight, means for guid-

ing said weight, flexible connections passed about said pulleys and drums and affixed to said weight, and spring pressed dogs pivoted to each of said hubs and adapted to clutch said wheel to drive the shaft when actuated by said float or weight.

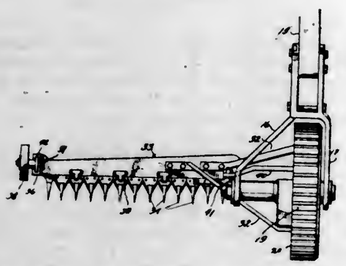


2. In a wave motor, the combination with a wave actuated member, of a driven shaft, a pair of clutch members operatively connected with said shaft when driven in opposite directions, a shaft driving weight, a connection between said member, clutch members and weight for simultaneously driving said shaft and moving said weight into a raised position during the movements of the member in one direction and a connection between said clutch members and said weight when falling for continuing the rotation of the shaft while the member is moving in the other direction.

3. In a wave motor, the combination with a wave actuated member and a shaft adapted to be driven thereby, of a raised weight capable of positively driving said shaft while falling, a driving connection between said falling weight and shaft operable on the upward movement of said member, said connection comprising a one-way clutch having one element fixed to the shaft, said clutch constituting means for disconnecting said member during its upward movements from its operative connection with said shaft.

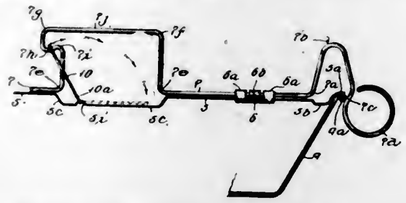
4. In a wave motor, the combination of a wave actuated member having a pair of pulleys mounted thereon, a driven shaft, a vertically movable weight, a pair of clutch members, each operatively connected to the shaft to drive the shaft in the same direction, a pair of flexible connections each having one end fixed and the other end attached to the weight, said connections each passed about one of said pulleys and about one of said clutch members in opposite directions whereby the falling of the wave-actuated-member will actuate the shaft while raising the weight and the falling weight will actuate the shaft while the wave member is being lifted by the waves.

1,166,474. LAWN-MOWER. RICHARD OTERS, Ossining, N. Y. Filed Mar. 30, 1914. Serial No. 828,315. (Cl. 56—19.)



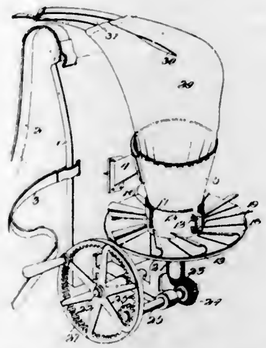
In a lawn mower, the combination of a handle, bracket arms secured to said handle, an axle having its ends supported by said bracket arms respectively, a traction wheel rotatably mounted on the axle and having a laterally directed peripheral flange suitably stepped on its under side to form shoulders, an annular rack formed on one of said shoulders, a disk fixed on said axle and provided with a peripheral flange forming a bearing for the peripheral flange of the traction wheel, a shaft rotatably mounted on said disk, a pinion fixed on said shaft and meshing with said rack, a second shaft rotatably mounted in the axle, connection between the first and second shafts, a crank arm on the second shaft, a guard bar supported from the axle, a sickle bar mounted for reciprocation on the guard bar, and a pitman connecting the sickle bar and said crank arm.

1,166,475. COVER FOR COOKING UTENSILS. HERMAN A. PAQUETTE, Chicago, Ill. Filed Mar. 21, 1913. Serial No. 755,887. (Cl. 53—8.)



A receptacle cover consisting of a metal disk, a handle therefor comprising a wire bent substantially U-shape mediate its ends, and having an offset and shoulder on one of the legs of the U, each respective end of said wire being bent to form a ring that is adapted to engage the rim of the receptacle, the portion of said wire adjacent said ring provided with a hump that rises above the plane of the upper segment of said ring, means for rotatably mounting said wire upon said disk at points mediate said hump and said U-shaped bend, and a link pivoted to said cover at right angles to said wire and adapted to engage said shoulder of the U-shaped member whereby the handle will be held in operative position.

1,166,476. HAND FERTILIZER AND SEED BROADCAST DISTRIBUTER. WASHINGTON B. PARRISH, Kenbridge, Va. Filed Mar. 16, 1915. Serial No. 14,685. (Cl. 111—39.)



1. In a device of the character specified, the combination of a hopper having a lateral discharge, a regulating sleeve fitted upon the hopper and having an opening in register with the discharge and adjustable to any angular position, and a cut-off for regulating the effective size of the outlet opening of the sleeve mounted upon the latter and movable therewith.

2. In a device of the character specified, the combination of a hopper having a discharge, a sleeve provided with an opening in register with the discharge and adjustable circumferentially about the hopper to throw the outlet in any angular position according to the desired delivery of the material from the hopper, and a cut-off mounted upon the sleeve and adjustable vertically to vary the effective size of the outlet.

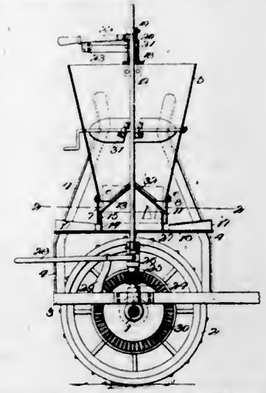
3. A device of the character specified comprising a hopper having a lateral discharge, a cone disposed within the lower portion of the hopper for directing the contents therefrom through the discharge, and a regulating sleeve having an opening in register with the discharge of the hopper and adjustable to throw the opening to any angular position.

4. In a device of the character specified, the combination of a hopper having a lateral discharge, a cone disposed within the hopper for directing the contents therefrom through the lateral discharge, a cone disposed within the hopper for directing the contents therefrom through the lateral discharge, a sleeve adjustable circularly about the hopper and having an opening in register with the discharge thereof to admit of controlling the direction of delivery and a rotary spreader for scattering the material broadcast in the required direction.

5. In a device of the character specified, the combination of a hopper having a circular neck portion at its lower end and in which is formed a lateral discharge, a sleeve fitted upon the neck portion and adjustable thereabout circularly and formed with an opening in register with the discharge of the hopper, a cut-off movable upon the sleeve lengthwise thereof to regulate the outlet of the discharge opening, and a rotary spreader for distributing broadcast the material delivered from the hopper.

[Claim 6 not printed in the Gazette.]

1,166,477. SEED AND FERTILIZER DISTRIBUTER. WASHINGTON B. PARRISH, Kenbridge, Va. Filed Mar. 16, 1915. Serial No. 14,686. (Cl. 111—38.)



1. In a machine of the character described, the combination of a hopper provided with a lateral discharge of tapering form, a cone disposed within the lower portion of the hopper for directing the contents outwardly through the lateral discharge, and means for adjusting one of the parts vertically to cover the discharge more or less and regulating the delivery according to the amount to be supplied to a given area.

2. In a machine of the character described, the combination of a hopper, a section fitted to the lower end of the hopper and provided with a lateral discharge and adapted to be turned to effect delivery in any direction and a cone arranged within the hopper with its lower portion in the plane of the said section to direct the contents of the hopper laterally through the discharge of such section.

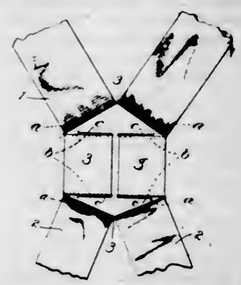
3. In a machine of the character specified, the combination of a hopper provided at or near its lower end with an outwardly projecting part, a section fitted to the lower end of the hopper and having a portion grooved to receive the outwardly projecting part of the hopper, said section having a lateral discharge, means for securing the section to the hopper in the adjusted position, and a cone arranged within the hopper and having its lower portion in the plane of the said section and adapted to direct the contents of the hopper through the lateral discharge thereof.

4. In a machine of the character set forth, the combination of a hopper, studs projecting outwardly from the lower end of the hopper, a section fitted to the lower portion of the hopper and having a portion grooved to receive the studs, said section having a lateral discharge, means for securing the section in the adjusted position, and a cone arranged within the hopper with its lower portion in the plane of the said section and adapted to direct the contents of the hopper through the discharge thereof.

5. In a machine of the character specified, the combination of a vertically disposed fixed hopper, a vertically adjustable shaft passing through the hopper, a member arranged within the hopper and connected with the shaft for movement therewith, a rotatable shaft in line with the adjustable shaft, a clutch member carried by the rotatable shaft, a second clutch member splined to the said adjustable shaft, and means for moving the second clutch member upon the adjustable shaft independently of the movement of said adjustable shaft.

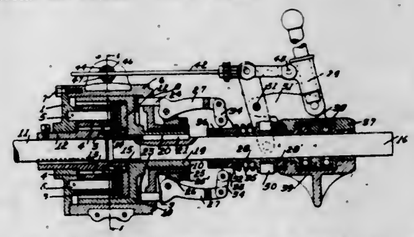
[Claims 6 to 10 not printed in the Gazette.]

1,166,478. SUSPENDER ATTACHMENT. ELMER E. PECK, Hugo, Okla. Filed Jan. 4, 1915. Serial No. 377. (Cl. 241—21.)



In a garment suspender comprising shoulder straps, suspender ends and a pair of intermediate elastic bands arranged parallel to each other with a space between the adjacent edges thereof, two members arranged in reverse relation, having inclined portions to support the diverging shoulder straps and suspender ends, and horizontal portions extending inwardly for supporting the elastic bands, and means to hold the bands in place, substantially as described.

1,166,479. REVERSE-GEAR MECHANISM. HARRY J. PERKINS, Grand Rapids, Mich. Filed Mar. 15, 1915. Serial No. 14,363. (Cl. 74—34.)



1. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by said driving shaft with toothed extension at the inner end, a gear cage with pinions meshing with said spur gear, a ring

carried by the said gear cage at its inner end, a case or drum one end of which is closed by the said gear cage and the opposite end closed and extended into a hub provided with a journal bearing for the internal gear hub, an internal gear with teeth longer than the said pinions disposed to mesh therewith, the crown of which is extended in a hub embracing the driven shaft and having a bearing within the case and with a key seat within, a key on said driven shaft engaging said key seat whereby the internal gear is movable axially, a plate within the crown of the internal gear parallel to the gear cage ring, clutch disks toothed to alternately engage the internal gear teeth and the toothed extension of the spur gear, a bearing plate within the casing with axially disposed thrust pins extending beyond the casing, an adjustable collar on the hub of said casing with laterally projecting ears, levers pivoted in said ears disposed to act upon the thrust pins, a sliding sleeve with toggle connections disposed upon the driven shaft to actuate said levers, a suitable control lever connected to said clutch, a brake band around said casing, and connections from the control lever for controlling said brake band, as specified.

2. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by said driving shaft with toothed extension at the inner end, a gear cage with pinions meshing with said spur gear, a ring carried by the said gear cage at its inner end, a case or drum one end of which is closed by the said gear cage and the opposite end closed and extended into a hub provided with a journal bearing for the internal gear hub, an internal gear with teeth longer than the said pinions disposed to mesh therewith, the crown of which is extended in a hub embracing the driven shaft and having a bearing within the case and with a key seat within, a key on said driven shaft engaging said key seat whereby the internal gear is movable axially, clutch disks toothed to alternately engage the internal gear teeth and the toothed extension of the spur gear, a bearing plate within the casing with axially disposed thrust pins extending beyond the casing, an adjustable collar on the hub of said casing with laterally projecting ears, levers pivoted in said ears disposed to act upon the thrust pins, a sliding sleeve with toggle connections disposed upon the driven shaft to actuate said levers, a suitable control lever connected to said clutch, a brake band around said casing, and connections from the control lever for controlling said brake band, as specified.

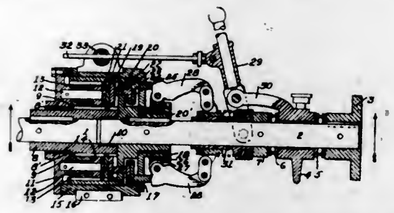
3. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by said driving shaft with toothed extension at the inner end, a gear cage with pinions meshing with said spur gear, a ring carried by the said gear cage at its inner end, a case or drum one end of which is closed by the said gear cage and the opposite end closed and extended into a hub provided with a journal bearing for the internal gear hub, an internal gear with teeth longer than the said pinions disposed to mesh therewith, the crown of which is extended in a hub embracing the driven shaft and having a bearing within the case and with a key seat within, a key on said driven shaft engaging said key seat whereby the internal gear is movable axially, a plate within the crown of the internal gear parallel to the gear cage ring, clutch disks toothed to alternately engage the internal gear teeth and the toothed extension of the spur gear, a suitable control lever connected to said clutch, a brake band around said casing, and connections from the control lever for controlling said brake band, as specified.

4. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by said driving shaft with toothed extension at the inner end, a gear cage with pinions meshing with said spur gear, a ring carried by the said gear cage at its inner end, a case or drum one end of which is closed by the said gear cage and the opposite end closed and extended into a hub provided with a journal bearing for the internal gear hub, an internal gear with teeth longer than the said pinions disposed to mesh therewith, the crown of which is extended in a hub embracing the driven shaft and having a bearing within the case and with a key seat within, a key on said driven shaft engaging said key seat whereby the internal gear is movable axially, clutch disks toothed to alternately engage the internal gear teeth and the toothed extension of the spur gear, a suitable control lever connected to said clutch, a brake band around said casing, and connections from the control lever for controlling said brake band, as specified.

5. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by said driving shaft with suitable toothed extension, a gear cage with pinions meshing with said spur gear, a clutch ring at the inner end of said cage, an internal gear with teeth extending beyond the said pinions with its crown extended into a hub having sliding engagement with the said driving shaft, clutch disks disposed within the internal gear between the crown thereof and the gear cage, connections to the control lever for actuating said clutch, and a brake mechanism coöperating with said clutch to control the operation of said gearing, as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,166,480. REVERSE-GEAR MECHANISM. HARRY J. PERKINS, Grand Rapids, Mich. Filed Mar. 27, 1915. Serial No. 17,305. (Cl. 74—34.)



1. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear with a shouldered journal hub and with elongated teeth, carried by said driving shaft, a gear cage journaled on the spur gear hub with comparatively short pinions meshing with said spur gear, a clutch ring carried by said gear cage at its inner end, a case or drum, one end of which is closed by said gear cage and the opposite end closed and extended into a hub provided with a journal bearing for the internal gear hub, an internal gear with teeth longer than the said pinions disposed to mesh therewith and disposed to form a chamber for the clutch at the inner end of said cage, the crown of which gear is extended into a shouldered hub fixed to the driven shaft and being perforated for the passage of thrust pins, the internal gear being of such dimensions as to form a chamber between the gear and said casing, contact rings disposed in said chamber, the inner one of which is provided with thrust pins to act upon the clutch and the outer of which is provided with axially disposed thrust pins extending through the head of the case, and toggle lever connections for acting upon the said clutch pins, coacting as specified.

2. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear carried by one of said shafts, an internal gear carried by the other shaft, a gear cage with planetary pinions disposed to mesh between the said gears and disposed within the internal gear to form a clutch chamber at its inner end, a casing surrounding the internal gear of such dimension as to form a chamber between the crown of said gear and the said casing, clutch disks disposed within the clutch chamber, the alternate disks of which engage the internal and external gears, contact rings disposed with bearing surfaces toward each other in the chamber within the case, the inner of which is provided with thrust pins which extend through the crown of the gear to the clutch and the outer of which is provided with thrust pins which extend beyond the outer end of the case, and lever connections for acting upon the said pins to actuate the said clutch, as specified.

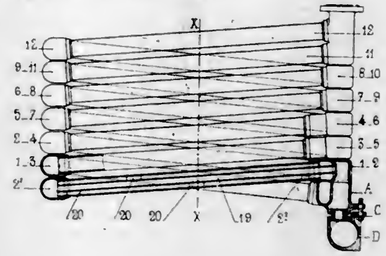
3. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear on the driving shaft with an extension containing a bearing for the end of the driven shaft, an internal gear, the crown of which is extended in a hub and fixed to the driven shaft, disposed to surround the spur gear of the driving shaft, a planetary gear cage with pinions disposed between the said internal and spur gears, a reverse brake band for the planetary gear, and a clutch for direct connection between the said driving and driven shafts, as specified.

4. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear on the driving shaft having a shouldered hub, with an extension containing a bearing for the end of the driven shaft, an internal gear, the crown of which is extended in a shouldered hub and fixed to the driven shaft, disposed to surround the spur gear of the driving shaft, a planetary gear cage with pinions disposed between the said internal and spur gears, a casing with journal bearings at each end engaging the shouldered hub of said gears to retain them in fixed longitudinal relation, a reverse brake band for the planetary gear, and a clutch for direct connection between the said driving and driven shafts, as specified.

5. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a spur gear on the driving shaft, an internal gear extended into a hub and fixed to the driven shaft having an outer cylindrical bearing surface, a casing with an internal bearing surface to coact with the outer surface of said internal gear, and clutch means for connecting and controlling the parts, coacting as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,166,481. WATER-TUBE BOILER. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed June 21, 1915. Serial No. 35,294. (Cl. 122—235.)



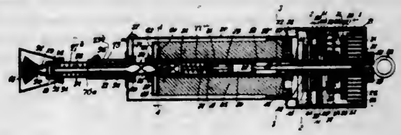
1. The combination with a boiler element comprising two coils, the lowermost tubes of which are superposed and inclined upwardly from front to rear, of an additional tube communicating at its forward end with the first tube of the second coil and being inclined downwardly from front to rear with the same inclination as the first tube of the first coil.

2. The combination with a boiler element comprising at least one set of coils with two coils to a set and in which the lowermost tubes of the coils are superposed and inclined upwardly from front to rear, of an additional tube for the highest coil of the set, said additional tube communicating at its forward end with the first tube of said highest coil and being inclined downwardly from front to rear with the same inclination as the first tube of the lowest coil of the set.

1,166,482. FOUNTAIN-BRUSH. HERMANN REICHE, Millstone, N. J. Filed Aug. 12, 1909. Serial No. 512,543. (Cl. 15—37.)

1. In a device of the class described; a brush; a motor; and operative connections for effecting the vibration and rotation of the brush and delivering a material thereto.

2. In a device of the class described; a brush; a handle therefor; a spring motor within said handle at the outer end thereof; a support for material within said handle and intermediate said motor and said brush; and means operated by said motor for delivering said material to said brush.



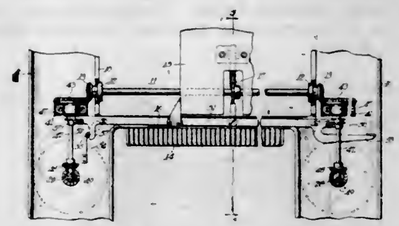
3. In a device of the class described; a brush; a hollow shaft connected therewith; a motor for rotating said shaft; a holder for material concentric with said shaft; and means comprising a cutter and a conveyer for delivering said material through said shaft to said brush.

4. In a device of the class described; a motor; a brush; a conduit operatively connected therewith; a threaded shaft; a holder for material engaging the threads on said shaft; and means, comprising a rotary weighted member attached to said holder; a lock nut operatively connected with said holder and engaging the threads on said shaft, for advancing said holder by the momentum of said weighted member during a change in the speed of said motor.

5. In a device of the class described; a casing; a hollow shaft having a threaded section and a smooth section terminating in a flange and having passages through said smooth section; a holder engaging said threaded section; a cutting device comprising a hub, a clutch member, an annular chamber surrounding and communicating with said passages, radially-disposed cutters, and curved conveyer blades, loosely embracing said smooth section; a motor for rotating said shaft; and a clutch member operatively connected with said casing and adapted to engage the clutch member on said cutting device.

[Claims 6 and 7 not printed in the Gazette.]

1,166,483. RIBBON-REVERSE MECHANISM. ALVAH C. ROEBUCK, Woodstock, Ill. Filed Mar. 23, 1914. Serial No. 826,571. (Cl. 197—160.)



1. In a typewriter, automatic ribbon reversing mechanism comprising ribbon spool shafts, a longitudinally fixed but rotatable feeding shaft therefor, intermediate longitudinally movable shafts each having one end in fixed driving engagement with the said feeding shaft and the other end provided with a gear movable into and out of driving engagement with the ribbon spool shafts, and means in connection with each ribbon spool shaft for moving the intermediate shafts longitudinally to reverse the driving connection when the ribbon is nearly unwound from one of the ribbon spool shafts.

2. In a typewriter, automatic ribbon reversing mechanism comprising ribbon spool shafts, a longitudinally fixed but rotatable feeding shaft therefor, intermediate longitudinally movable shafts each having one end in fixed driving engagement with the said feeding shaft and the other end provided with a gear movable into and out of driving engagement with the ribbon spool shafts, only one of the ribbon spool shafts being in engagement with the feeding shafts, and means for reversing the connection for rotating the ribbon spool shafts comprising an actuating means in connection with each spool shaft, and a bar pivoted intermediate the longitudinally movable shafts for moving one of the said shafts oppositely to the other.

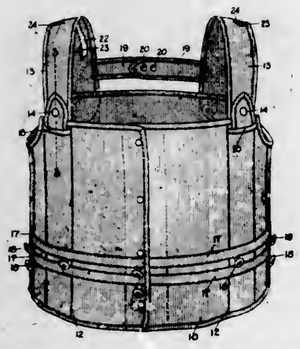
3. In automatic ribbon reversing mechanism, rotatable ribbon spool shafts, a gear mounted on each shaft, driving mechanism therefor comprising a longitudinally movable shaft, a gear carried thereby adapted to be moved into and out of mesh with the gear on one of the shafts, a threaded member on the movable shaft, a driving shaft with which both movable shafts are rotatably connected, a lever pivoted to the ribbon spool shaft adapted to be engaged by the ribbon when it is wound on the shaft, and a rod connected to the lever and moved by it into and out of engagement with the threaded member on the movable shaft to move the latter and its gear into driving position with respect to its ribbon spool shaft.

4. In automatic ribbon reversing mechanism, rotatable ribbon spool shafts, a gear mounted on each shaft, driving mechanism therefor comprising a longitudinally movable shaft, a gear carried thereby adapted to be moved into and out of mesh with the gear on one of the shafts, a threaded member on the movable shaft, a driving shaft with which both movable shafts are rotatably connected, a lever pivoted to the ribbon spool shaft adapted to be engaged by the ribbon when it is wound on the shaft, a rod connected to the lever and moved by it into and out of engagement with the threaded member and the movable shaft, and a bar connecting the longitudinally movable shafts and pivoted between them whereby the engagement of the rod with one of the threaded members will operate both longitudinally movable shafts to reverse the driving connection.

5. In automatic ribbon reversing mechanism, rotatable ribbon spool shafts, driving means therefor comprising a shaft, parallel longitudinally movable shafts connected for rotation with the driving shaft and movable into and out of driving connection with the ribbon spool shafts, a reciprocable universal bar, means for transmitting the reciprocating movement of the universal bar to rotate the driving shaft, and a reversing bar connected to the movable shafts for holding one but not both of them in driving engagement with the ribbon spool shafts at the same time.

[Claims 6 to 10 not printed in the Gazette.]

1,166,484. CHILD'S WAIST. TILLIE ROSENBAUM, New York, N. Y. Filed Dec. 23, 1914. Serial No. 878,694. (Cl. 2—98.)



1. A waist as characterized, comprising a plurality of vertically-disposed suspender straps, said straps being arranged in coöperative pairs; a plurality of shoulder-straps, one end of each shoulder-strap being permanently attached to the upper end of one member of each of said pairs of suspender straps; a plurality of fasteners on said shoulder-straps adjacent the free ends thereof, said fasteners being arranged in series for forming loops adjustable for varying the service length of said shoulder-straps; means on the other member of each of said pairs of suspender straps for operatively engaging the loops formed at the free ends of said shoulder-straps; and a plurality of normally-open, collapsible loops mounted on said shoulder-straps for engaging the shoulder-straps of a nether garment.

2. A waist as characterized, comprising a plurality of vertically-disposed suspender straps, said straps being arranged in coöperative pairs; a plurality of shoulder-straps, one end of each shoulder-strap being permanently attached to the upper end of one member of each of said pairs of suspender straps; a plurality of fasteners on said shoulder-straps adjacent the free ends thereof, said fasteners being arranged in series for forming loops adjustable for varying the service length of said shoulder-straps; means on the other member of each of said pairs of suspender straps for operatively engaging the loops formed at the free ends of said shoulder-straps; a plurality of short loop members permanently secured at the center of each of said shoulder-straps, said loop members being provided at the free ends thereof with a fastening button for engaging a suitable corresponding fastening device on each of said shoulder-straps after being passed under and around the shoulder-straps of a nether garment.

1,166,485. TOOL-HANDLE. HENRICK SALZ, Hoboken, N. J., assignor of one-half to Charles R. Gracie, Rutherford, N. J. Filed Apr. 21, 1914. Serial No. 833,344. (Cl. 145—61.)



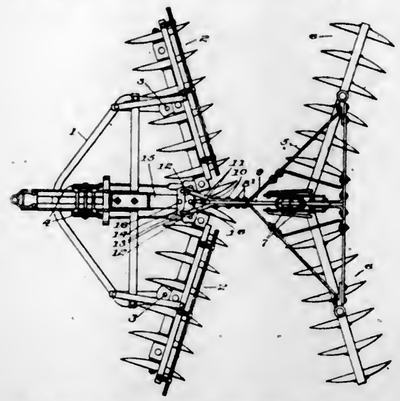
1. As an article of manufacture, a tool handle provided with a central counterbore, a plug of penetrable material adapted to grip a forcibly inserted tool shank, said plug fitting said counterbore, a ferrule on the lower end of and of the same outside diameter as said plug, said plug being provided with a central hole while the lower end of said handle beyond the counterbore is provided with a hole of less diameter than the counterbore and coaxial with the hole in said plug, the shank of the tool being adapted to pass through the hole in the lower end of the handle and enter the hole in said plug.

2. As an article of manufacture, a tool handle provided with a central counterbore, a plug of penetrable material adapted to grip a forcibly inserted tool shank, said plug fitting said counterbore, a ferrule on the lower end of the plug, said plug being provided at its lower end with a central hole, a ferrule on the lower end of the handle which is provided with a hole of smaller diameter than the counterbore and coaxial with the hole in said plug, a larger ferrule on the upper end of the handle, said last named ferrule being internally screw-threaded, and a cap externally screw-threaded and adapted to be secured to the handle by screwing it into said last named ferrule, the cap being adapted to hold said plug in place and to receive hammer blows, the shank of the tool being adapted to be inserted in the holes in said handle and plug said ferrules being adapted to prevent splitting of the handle at either end and at the middle.

3. As an article of manufacture, a tool handle provided with a central bore, a plug adapted to fit said bore, a ferrule of the same diameter as the bore secured to the end of said plug, a ferrule secured to the upper end of said handle and internally screw-threaded, a flanged cap having its body portion screw-threaded to fit the threaded ferrule, and an elastic disk within the ferrule between said cap and the end of the handle and plug.

4. As an article of manufacture, a tool handle provided with an interior bore extending axially into the handle, a plug member of soft wood fitting said bore and extending to within a short distance of the lower end of said handle, a ferrule surrounding the lower end of said plug and fitting said bore, a ferrule on the upper end of the handle provided with internal screw-threads, a top cap having a flange extending over the top of said ferrule, the body portion being threaded and screwed into said ferrule and an elastic shock absorbing member between said cap and the top end of said handle.

1,166,486. TANDEM HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 29, 1913. Serial No. 787,366. (Cl. 55—83.)



1. In a double harrow, the combination of a front and rear frame, each carrying earth working devices, arms connecting said frames at each side of the line of draft, said arms each having a pivotal and sliding connection with one of said frames to permit said last mentioned frame to swing toward the other frame on either of said connections.

2. In a double harrow, the combination of a front and rear frame, each carrying earth working devices, arms rigidly connected to one of said frames at each side of the line of draft, said arms being pivotally and slidably connected to the other of said frames to permit said last mentioned frame to swing toward the other frame on either of said connections, substantially as described.

3. In a harrow of the class described, a front harrow section and a rear harrow section, the rear harrow section having a pair of reaches rigid therewith and the front harrow section having a plate with a pair of slots therein to receive the respective ends of the reaches.

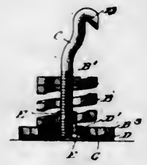
4. In a tandem harrow, a front harrow, a rear harrow, one of said harrows having a plurality of arcuate slots therein, and a plurality of draft members carried by the other of said harrows having their free ends loosely engaged in said slots to permit movement of said members in intersecting planes.

5. In a tandem harrow, a front harrow, a rear harrow, one of said harrows having a plurality of oppositely disposed arcuate slots therein, and a plurality of longitudinally extending draft links carried on the other harrow having their free ends loosely engaged in said slots to permit movement of said members in horizontal and vertical planes.

[Claims 6 to 14 not printed in the Gazette.]

1,166,487. CUSHIONING-SUPPORT FOR TYPE-WRITING MACHINES. EMMA SHERWOOD, New York, N. Y. Filed Jan. 27, 1915. Serial No. 4,683. (Cl. 155—33.)

1. In a support for typewriting machines, the combination with a machine-supporting spring coil having its constituent bar carried inward at the upper end of the coil and formed into an axial, internally threaded eye and carried outward at the lower end of the coil and forming an external annular flange to serve as a plane spiral base for the coil, of a vertical threaded bolt engaged in and extending to some distance below said eye and provided above with a hook to engage the frame of the machine and means for holding the lower portion of the rod in the line of the coil's axis.

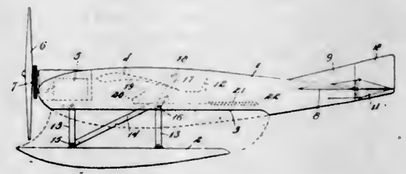


2. In apparatus of the class described, the combination with a cushioning spring coil adapted to bear at its upper end against the lower surface of the frame, of a bolt in threaded engagement with the upper end of the coil, extending nearly to the lower end of the coil, and adapted to engage the frame at some distance above the coil, and a nut in engagement with the lower end of the coil and arranged to draw the lower end of the coil upward, to increase the coil's tension.

3. In a cushioning support of the class described, the combination with a spring coil having at its upper end an axial threaded eye and near its lower end a nut rotating in the coil in a fixed plane below that upper end, of a bolt in threaded engagement with said eye and nut and having above the coil a hook for engaging a machine frame gripped between the hook and coil, whereby rotation of the nut with respect to the coil adjusts the length and tension of the latter.

4. The combination with a spring coil having an axial threaded eye at its upper end and an external annular flange at its lower end, of a metal plate resting against the lower end of the coil and provided with an axial centrally perforated upwardly extending portion and with a pad upon its lower face, and a bolt in threaded engagement with both said eye and a nut lying in said upwardly extending portion, and provided, above the coil, with a hook to engage a frame resting upon the coil.

1,166,488. AEROPLANE. REXFORD M. SMITH, Washington, D. C. Filed Dec. 27, 1912. Serial No. 738,896. (Cl. 244—2.)



1. In air craft of the character specified, a closed nacelle having a relatively movable supporting base portion forming a complementary part thereof and movable up and down with relation thereto.

2. In air craft of the character specified, a closed nacelle having a supporting undercarriage, and means for adjusting said undercarriage upwardly against the bottom and within the stream line thereof.

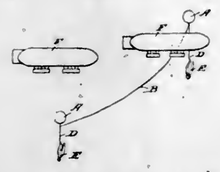
3. In craft of the character specified, a closed nacelle embodying an undercarriage comprising fore and after members adapted to be moved into such relation to the nacelle as to form in connection therewith a stream line body.

4. In craft of the character specified, a closed stream line nacelle having a separable supporting bottom section forming a launching and alighting base, said base being movable up and down relatively to the upper section and adapted to be housed within the stream line thereof.

5. In craft of the character specified, a nacelle having a bottom section forming a complementary part thereof, said bottom section being movable downwardly in spaced relation to the body of the nacelle to provide an undercarriage for said body of the nacelle.

[Claims 6 to 26 not printed in the Gazette.]

1,166,489. AERIAL AIRCRAFT-DESTROYER. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed June 3, 1915. Serial No. 31,896. (Cl. 244—1.)



1. The method of defending against hostile dirigible balloons, or the like, which consists in attaching suitable torches to widely separated small balloons connected in sets by wire and allowing the set to ascend to the plane of the hostile craft.

2. The method of protecting a town against destruction by dirigible balloons which consists in providing the town with numerous sets of small wire-connected widely separated balloons each bearing a suspended torch, releasably securing the sets in widely scattered positions, and lighting the torches and releasing the sets when it is desired to bring the torches into action.

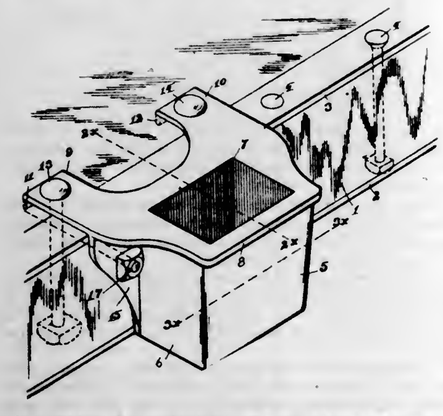
3. The combination with a plurality of widely separated small balloons, of a wire connecting the balloons, and torches adapted to be carried upward by the connected balloons and suspended from the latter, respectively, by incombustible cables.

4. The combination with a set of widely separated, wire-connected, small balloons, of a set of incendiary torches suspended from the balloons by incombustible cables, and a contact bomb carried by the connected balloons at a distance from said torches.

5. The combination with a set of small balloons connected by cable, of wires depending from the unit so made up, devices suspended by said wires and adapted to exert a destructive force when dropped, and devices interposed in said wires and adapted to release the suspended devices at the expiration of a time fixed as desired.

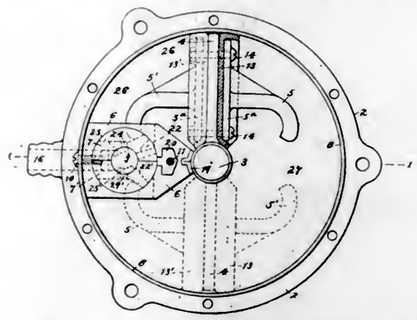
[Claim 6 not printed in the Gazette.]

1,166,490. WAGON-BED AND PIN-SOCKET THEREFOR. CHARLES W. SWAYZE, Canandaigua, N. Y. Filed Feb. 18, 1915. Serial No. 9,168. (Cl. 21—54.)



In a wagon the combination of a sill having reinforcing strips along the top and bottom edge thereof, a socket having a body portion with a flange extending horizontally around the top thereof and to one side thereof, said flange ending in two forked projecting ends having downturned terminal portions adapted to engage with said sill, a bolt passing through each projecting end between the downturned end and the reinforcing strips, vertical flanges extending outwardly along the rear side of the body portion at right angles to the first named flange and being adapted to be fastened to the sill.

1,166,491. HYDRAULIC MOTOR. LOUIS SWENINGSON and WILLIAM H. WOODWARD, Cleveland, Ohio. Filed Sept. 14, 1914. Serial No. 861,566. (Cl. 138—1.)



1. In a hydraulic motor, a valve mechanism comprising a casing having inlet and outlet chambers and side openings into the motor chambers, and a valve in said casing consisting of two oscillating side members and an oscillating member therebetween, the side members having ports communicating respectively with said openings, and the intermeditae member having recesses adapted to connect said ports and the outlet chamber, and the said members being movable to alternately connect the inlet chamber and said openings, and means to oscillate said members.

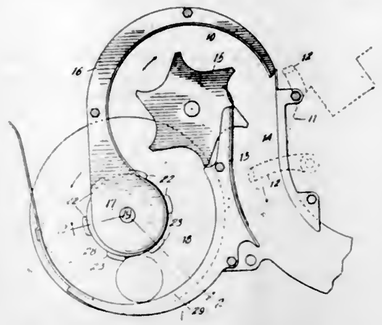
2. A reversing valve for hydraulic motors, comprising a valve casing having inlet and outlet passages, and an opening at each side communicating with separate motor chambers, a pair of oscillating valve members located across said openings respectively, at opposite sides of the casing, one end of each member being movable to uncover one of said openings and connect same with the inlet passage, and each of said members having a through port communicating with one of said openings, and a middle oscillating member located between said members and having recesses at opposite sides adapted to connect said ports alternately with the said outlet passage, and also having a projecting tongue movable across the inlet passage.

3. A reversing valve for hydraulic motors, comprising a valve casing having inlet and outlet chambers, and openings at opposite sides communicating with separate motor chambers, a pair of segmental oscillating valve members located at opposite sides of said casing and extending across said openings respectively, one end of each member being movable to connect said inlet chamber and said openings respectively, and each of said members having an outlet port communicating with one of said openings, and a middle oscillating controlling member located between said members and having a recess at each side adapted to connect one of said ports and the outlet chamber, and also having a tongue projecting between the said ends of the said side members and movable across the inlet chamber, the tongue being spaced from said ends to form inlet pressure chambers.

4. In a hydraulic motor, the combination of a cylinder, an oscillating piston therein having projecting arms at opposite sides, a valve casing extending partly across the cylinder and having openings at opposite sides and inlet and outlet passages, a pair of oscillating valve members in the casing, extending respectively across said openings and

adapted to alternately connect same with the inlet passage, and having outlet ports communicating with said openings, and an intermediate oscillating valve member located between the said members and controlling said ports and having a part exposed to pressure at the inlet passage and movable across the same, the said members being located in position to be alternately struck and moved by said arms entering said openings.

1,166,492. CAN FEEDING AND TIMING MECHANISM. SWAN TEVANDER, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 9, 1914. Serial No. 817,496. (Cl. 113—113.)



1. Article feeding and timing mechanism of the character described including, in combination: a movable member having a plurality of yieldably mounted, spaced elements thereon adapted to engage against or between the articles being fed; and a relatively stationary member on which the articles are adapted to roll, and disposed adjacent said movable member and forming a guideway therewith for the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

2. Article feeding and timing mechanism of the character described including, in combination: a rotatable member having a plurality of yieldably mounted, spaced elements thereon and carried thereby; and a relatively stationary member on which the articles are adapted to roll, and arranged concentrically with said rotatable member and forming therewith a guideway for the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

3. Article feeding and timing mechanism of the character described including, in combination: a movable member having a plurality of yieldingly controlled, slidably mounted elements mounted thereon and carried thereby; and a relatively stationary member on which the articles are adapted to roll, and located adjacent said movable member and forming with the latter a guideway therebetween for the articles being fed and timed, said spaced elements being yieldable from said stationary member; substantially as specified.

4. Article feeding and timing mechanism of the character described including, in combination: a rotatable member having a plurality of outwardly spring-pressed, radially slidable elements mounted thereon and rotatable therewith; and a relatively stationary curved member arranged concentrically with the rotatable member and forming with the latter a guideway for the articles being fed, substantially as specified.

5. An article feeding and timing mechanism having a relatively movable member and a relatively stationary member on which the articles are adapted to roll, and forming therebetween a guideway for the articles being advanced, one of said members having a plurality of yieldably mounted members thereon automatically adapted to uniformly space and time the articles being fed, said spaced elements being yieldable from said stationary member; substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,166,493. EYE-SHADE. PRESSLEY C. THOMPSON, Bristol, Tenn. Filed Oct. 20, 1914. Serial No. 867,682. (Cl. 2—149.)



1. In a device of the class described, a shade, a supporting member extending longitudinally beneath the shade, and means upon said member constructed for slidable and adjustable engagement with a support.

2. In a device of the class described, a shade, and a support therefor comprising a strip of pliable material to which the shade is secured, the strip extending longitudinally of the shade and the shade being adjustable upon the strip transversely of the length of the strip.

3. In a device of the class described, a shade, a support therefor including a pliable strip, the shade being provided with a series of apertures, and a securing element fastened through the strip and selectively through the apertures.

4. In a device of the class described, a shade, a pliable strip disposed against the under side of the shade and secured thereto and adapted to be bent to determine the transverse curvature of the shade, and means supporting said strip.

5. In a device of the class described, a shade, a pliable strip disposed against the under side of the shade, the strip extending longitudinally beneath the shade and being adjustable in a direction from front to rear of the shade, and means for supporting said strip.

[Claims 6 and 7 not printed in the Gazette.]

1,166,494. POLISHING COMPOSITION FOR FURNITURE AND PIANOS. HARRY S. THORPE, Norfolk, Nebr. Filed June 24, 1914. Serial No. 847,019. (Cl. 134—24.)

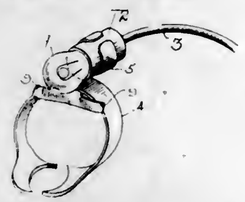
1. A polishing composition consisting of vinegar, paraffin oil, kerosene oil, alcohol, glycerin, butter of antimony and oil of mirbane, substantially as described and for the purposes set forth.

2. A polishing composition comprising the admixture in proportions of the ratio of one gallon of vinegar to one half gallon of paraffin oil to one half gallon of kerosene oil to one half gallon of alcohol to eight fluid ounces of glycerin to eight fluid ounces of butter of antimony to eight fluid ounces of oil of mirbane, substantially as described and for the purposes set forth.

1,166,495. SURGICAL INSTRUMENT. EDWIN B. TIZZARD, Dayton, Ohio. Filed May 17, 1911. Serial No. 627,695. (Cl. 32—27.)

1. A dental appliance comprising a tooth clamp to be engaged with a tooth of the patient, and an electric lamp

secured to the tooth clamp affording a source of light located within the mouth of the patient.



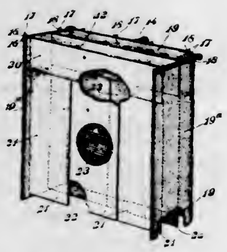
2. A dental appliance comprising, a tooth clamp to be engaged with a tooth of the patient, a socket member carried thereby, and a lamp detachably engaged within the socket affording a source of illumination located within the mouth of the patient.

3. In an appliance of the character described, a lamp support adapted to be positioned within the mouth of a patient, and a lamp carried by the support within the mouth of the patient affording an original source of illumination therein.

4. In a surgical instrument, a dental tooth clamp, an illuminating member, a securing member comprising a receiver for the illuminating member projecting above the arch of the tooth clamp, a lateral projecting T shaped tongue carried by the receiver projecting beneath the arch of the clamp, angular tips on the extremities of the head of the T shaped tongue engaging the exterior of the arch at the edge opposite the receiver.

5. A dental appliance comprising an arch shaped tooth clamp and a substantially U shaped spring lamp clip, said arch shaped clamp and spring clip being engaged one with the other in reversed relation.

1,166,496. BALL-STOP FOR INDOOR GOLF. LEWIS H. TORREY, Worcester, Mass. Filed Feb. 23, 1915. Serial No. 9,922. (Cl. 46—59.)



1. A ball stop, for indoor golf practice, comprising a curtain-support having a suitable base, a rear flexible stop or curtain, means for removably attaching said stop or curtain to said support, and one or more flexible retarding curtains in front of said rear stop or curtain.

2. A ball stop, for indoor golf practice, comprising a curtain-support having a suitable base, a rear flexible stop or curtain, means for removably attaching said stop or curtain to said support, and one or more flexible retarding curtains in front of said rear stop or curtain, said retarding curtains having depending, separated lower portions.

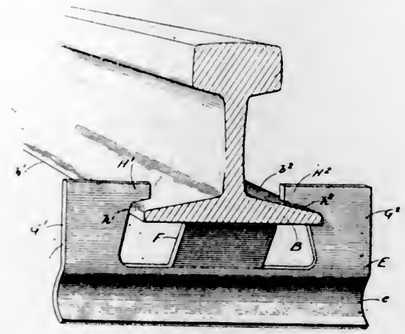
3. A ball stop, for indoor golf practice, consisting of a curtain-support comprising a suitable base, a standard removably mounted on said base, a curtain support removably connected with the top of said standard and comprising a back bar and forwardly extending bars or arms removably attached to said back bar, back, side and front curtains, and means for removably attaching said curtains to said back bar and arms.

4. A ball stop, for indoor golf practice, consisting of a curtain-support comprising a suitable base, a standard removably mounted on said base, a curtain support removably connected with the top of said standard and comprising a back bar and forwardly extending bars or arms removably attached to said back bar, back, side and front curtains, and means for removably attaching said curtains to said back bar and arms, said means consisting of hooks on said back bar and arms and loops or eyelets on said curtains.

5. A ball stop, for indoor golf practice, consisting of a curtain-support comprising a suitable base, a standard removably mounted on said base, a curtain support removably connected with the top of said standard and comprising a back bar and forwardly extending bars or arms removably attached to said back bar, back, side and front curtains, and means for removably attaching said curtains to said back bar and arms, the said front curtain being partly divided vertically.

[Claim 6 not printed in the Gazette.]

1,166,497. ANTICREEPER FOR RAILS. EUGENE W. VOGEL, Chicago, Ill., assignor to Chicago Railway Signal & Supply Co., a Corporation of Illinois. Filed Jan. 9, 1915. Serial No. 1,379. (Cl. 238—4.)



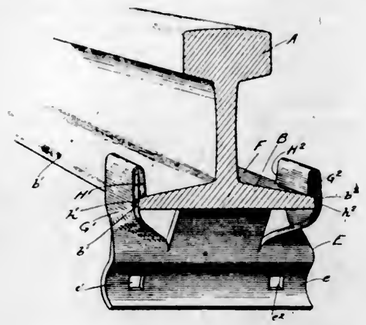
1. A rail anchor comprising a member to engage a tie, a pair of members to resiliently grip in a transverse direction the opposite sides of the base of a rail and having inwardly projecting lugs overlying the rail base, and a member to engage the under-surface of the rail base at a point farther from the engaged tie than the engagement of said lugs with the rail base.

2. A rail anchor formed of a single piece of plate metal and comprising a pair of transversely resilient members to engage the opposite sides of a rail base, a tie-abutting member, and a central member engaging the under-surface of the rail base at a point farther from the tie than the engagement of said pair of members with the rail base.

3. An integral rail anchor formed of a single piece of plate metal and comprising a tie-abutting member, a pair of spaced members directly secured to and projecting upwardly from the opposite ends of said tie-abutting member to extend around the opposite side edges of the rail base, and a central member projecting upwardly from said tie-abutting member and directly secured thereto intermediate of the connections therewith of the members of said pair to engage the under-surface of the rail base at a point farther from the tie than the engagement of said pair of members with the rail base.

4. A rail anchor formed of a single piece of plate metal and comprising a tie-abutting member, a pair of spaced members projecting upwardly directly from the opposite ends of said tie-abutting member to extend around the opposite side edges of the rail base, and a central member projecting upwardly from said tie-abutting member intermediate of and in an inclined direction with respect to the members of said pair, the upper horizontal edge of said central member being adapted to engage the base of the rail in a transverse plane, farther from the tie than the plane of engagement of said pair of members with the rail base.

1,166,498. ANTICREEPER FOR RAILS. EUGENE W. VOGEL, Chicago, Ill., assignor to Chicago Railway Signal & Supply Co., a Corporation of Illinois. Filed Jan. 9, 1915. Serial No. 1,380. (Cl. 238—4.)



1. A rail anchor comprising a member to engage a tie, a pair of members projecting upwardly from said tie-engaging member to extend around and transversely grip the base of a rail, one member of said pair having its greatest dimension extending longitudinally of the rail base, and a member projecting upwardly from said tie-engaging member intermediate of and disconnected from the members of said pair to engage the under surface of the rail base at a point farther from the engaged tie than the engagement of said pair of members with the rail base.

2. A rail anchor comprising a member to engage a tie, a pair of members projecting upwardly from said tie-engaging member to resiliently grip in a transverse direction the opposite sides of the base of a rail and having inwardly projecting flanges overlying the rail base, the greatest dimension of one member of said pair extending longitudinally of the rail base, and a member projecting upwardly in an inclined direction from said tie-engaging member intermediate of the connections therewith of the members of said pair to engage the under surface of the rail base at a point farther from the engaged tie than the engagement of said flanges with the rail.

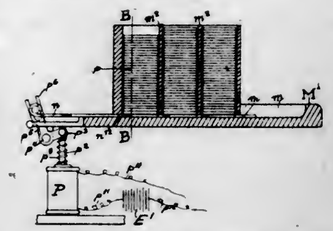
3. A rail anchor comprising a fulcrum member to bear against a tie, a pair of spaced members directly secured to and projecting upwardly from said fulcrum member to engage the opposite sides of the rail base, the greatest dimension of the members of said pair extending longitudinally of the rail base, and a member projecting upwardly from said fulcrum member intermediate of and spaced apart from the members of said pair to engage the under surface of the rail base.

4. A rail anchor comprising a fulcrum member to bear against a tie, a pair of spaced resilient members projecting upwardly from said fulcrum member to transversely grip and extend over the opposite sides of the base of a rail, the portions of said pair of members which engage the rail base projecting in planes parallel to the edges of the rail base, and a member projecting upwardly from said fulcrum member intermediate of the members of said pair and in an inclined direction away from the tie into engagement with the under surface of the rail base.

5. A rail anchor formed of a single piece of plate metal and comprising a pair of transversely resilient members to engage the opposite sides of a rail base, the plane of one member of said pair extending longitudinally with respect to the side edges of the rail base, a tie-abutting member at the lower ends of said pair of members, and a central member projecting upwardly in an inclined direction from said tie-abutting member intermediate of and disconnected from the members of said pair, with its upper edge engaging the under surface of the rail base at a point farther from the tie than the engagement of said pair of members with the rail base.

[Claims 6 to 8 not printed in the Gazette.]

1,166,499. COIN OR CHANGE DELIVERY MACHINE. ARTHUR VON BARTH, Perth Amboy, N. J. Original application filed Mar. 10, 1911, Serial No. 613,638. Divided and this application filed Jan. 30, 1914. Serial No. 815,435. (Cl. 133—4.)



1. A machine of the kind described, embodying therein a series of coin containers, each comprising a plurality of members having connecting open bottoms, and adapted to hold horizontally a vertical column of coins, vertical partitions separating the members of each series, said partitions having a space below the same sufficiently large to permit the passage of a coin and means simultaneously forcing a coin from one member to the next adjoining member beneath said partition, and delivering a coin from the last member to the operator, and a controller whereby said last named means may be selectively operated.

2. A machine of the kind described embodying therein a series of coin containers each comprising a plurality of members having connecting open bottoms and adapted to hold horizontally a vertical column of coins, vertical partitions separating the members of each series, said partitions having a space below the same sufficiently large to permit the passage of one coin and means simultaneously forcing a coin from one member to the next adjoining member beneath said partition, and delivering a coin from the last member to the operator, comprising a reciprocating pusher common to all members of each container, and a controller whereby said last named means may be selectively operated.

3. In a machine of the kind described, the combination of a coin container embodying therein a series of vertical containers each having a plurality of columns therein, vertical partitions separating said columns, said partitions being spaced above the bottom of the container sufficiently to permit the passage of one coin, a pusher common to all columns of a container and moving in the bottom of said container, permanently adapted to engage and to feed out coin, from any column next to the last exhausted, said pusher constructed to simultaneously move forward the bottom coins of all the columns so as to feed out the foremost coin, and to permit the rearmost column to feed downwardly to replace a coin in the vacant space.

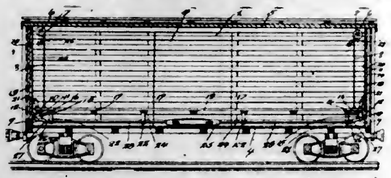
4. In a machine of the kind described, the combination of a coin container embodying therein a series of vertical containers each having a plurality of columns therein, vertical partitions separating said columns, said partitions being spaced above the bottom of the container sufficiently to permit the passage of a coin, a backwardly and forwardly moving pusher common to all columns in a container and moving in the bottom of said container, permanently adapted to engage and to feed out coin, from any column next to the last exhausted, said pusher constructed to simultaneously move forward the bottom coins of all the columns so as to feed out the foremost coin and to permit the rearmost column to feed downwardly to replace a coin in the vacant space, and means whereby the pusher may return backward without moving coins backward.

5. A coin container comprising a plurality of alined coin columns of equal diameter, division walls therebetween having cut away portions at the bottom thereof to permit coins to be pushed below said walls from one column to the adjacent column, a reciprocating pusher common to all of said columns for feeding coins from said

columns, one at a time, upon one reciprocation thereof, and latches in said division walls whereby coins are prevented from being fed upon the return reciprocation of said pusher.

[Claim 6 not printed in the Gazette.]

1,166,500. CATTLE-CAR. ISAAC R. WASDEN, Hardin, Mont. Filed June 18, 1913, Serial No. 774,409. Renewed Aug. 2, 1915. Serial No. 43,342. (Cl. 119—9.)



In combination with a stock car, a false bottom arranged therein, hoisting means comprising drums and cables connected to the false bottom for raising and lowering said false bottom, ratchet rack bars arranged perpendicularly in the corners of said car, dogs on the false bottom adapted to engage the teeth of said bars for holding the false bottom in adjusted positions, guide means for the false bottom, and devices comprising sectional rods and turn buckles adapted to be operated for actuating the dogs synchronously for lowering the false bottom instantaneously.

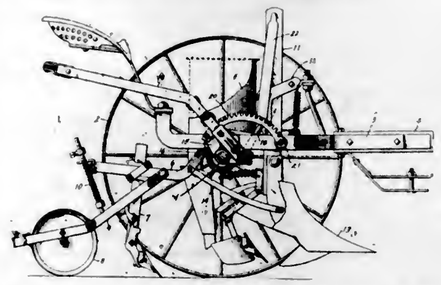
1,166,501. MEASURING INSTRUMENT. CHARLES L. WATKINS, Rock Hall, Md. Filed Jan. 25, 1913. Serial No. 744,121. (Cl. 33—75.)



A device to be used in connection with marine charts for finding the course and distance to be traveled by a vessel at sea consisting of a graduated protractor disk having an opening at its center, a tubular member fitting the opening to act as a sight tube and a pivot pin, a movable sectional protractor arm bifurcated at one end to straddle the disk, the respective arm extensions formed by the bifurcation aforesaid being laterally offset and engageable with the respective tubular member terminals to dispose one edge of said arm radially relatively to the center of the disk, and means within the tubular member to indicate the exact center of said disk, as and for the purpose set forth.

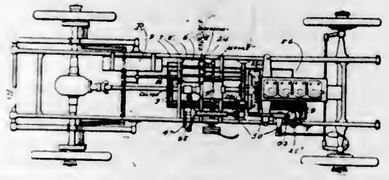
1,166,502. PLANTER. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Dec. 19, 1911. Serial No. 666,861. (Cl. 111—6.)

1. In a lister, the combination, with a frame, of a middle-bursting furrow opener standard mounted vertically adjustable on the frame, means for raising and lowering the standard, a covering-shovel supporting frame pivotally mounted at its forward end on the frame in proximity to said standard, and means pivotally connecting the shovel frame with the standard at the lower portion of the same whereby the shovel frame will be raised and lowered by the standard but through a vertical range of movement different from that of the standard.



2. In a lister, the combination with a frame, of a middle-bursting furrow opener standard mounted vertically adjustable on the frame, means for raising and lowering the standard, a covering-shovel supporting frame pivotally mounted at its forward end on the frame, and means pivotally connected to the lower portion of the standard and to the rear portion of the shovel frame whereby the shovel frame will be raised and lowered by the standard through a range of vertical movement different from that of the standard.

1,166,503. AIR-VALVE. CLAYTON WEAVER, Phalanx, Ohio. Filed Jan. 26, 1912. Serial No. 673,582. (Cl. 188—3.)



1. In a motor vehicle the combination of a brake mechanism; a clutch mechanism; a rod for operating each of said mechanisms; manually controlled means for operating each of said rods; an air cylinder for said brake mechanism; an air cylinder for said clutch mechanism; a piston in each of said cylinders; means for admitting compressed air behind each of said pistons; and a sliding connection between each of said rods and said pistons adapted to permit the manual operation of said brake and clutch mechanisms without affecting said pistons and to also permit the operation of said brake and clutch mechanisms by admitting compressed air behind said pistons, substantially as described.

2. In a motor vehicle the combination of a plurality of brake mechanisms; a clutch mechanism; a rod for operating each of said mechanisms; manually controlled means for operating each of said rods; an air cylinder for each of said brake mechanisms; an air cylinder for said clutch mechanism; pistons in each of said cylinders; means comprising a manually controlled valve for admitting compressed air behind each of said pistons at will; and a sliding connection between each of said rods and said pistons adapted to permit the independent manual operation of said brake and clutch mechanisms without affecting said pistons and to also permit the independent operation of said brake and clutch mechanisms by admitting compressed air behind said pistons, substantially as described.

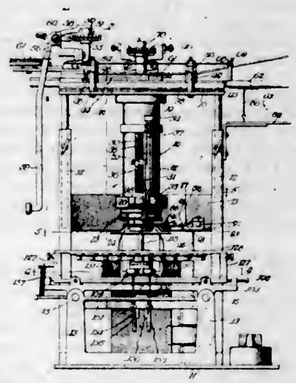
3. In a motor vehicle provided with a control mechanism; a rod for operating said control mechanism; a manually operated member for moving said rod; an air cylinder provided with a piston having a guide stem; a tube slidingly fitting said stem; a connection between said tube and said rod; means to admit compressed air behind said piston to move said tube and rod; means to return said piston without moving said tube and rod; a valve mechanism for controlling the admission of air to said piston and cylinder; and means under the control of the operator for moving said valve, substantially as described.

4. In a motor vehicle provided with a plurality of control mechanisms; an operating rod for each mechanism; a manually operable member for each rod; an air cylinder having a piston for each rod; a tube connected to each rod and slidingly connected to each piston; means to admit compressed air behind each piston for moving said tube and rod; means for returning each piston without moving its tube and rod; a valve having a plurality of ports adapted to govern independently the admission of air to said cylinders and pistons; and means under control of the operator for controlling said ports at will, substantially as described.

5. In a motor vehicle provided with a plurality of control mechanisms provided with pistons, the combination of an operating rod for each mechanism; a manually operable member for each rod; a tube connected to each rod and slidingly connected to each piston; means to admit compressed air behind each piston for moving said tube and rod, comprising an independent pipe leading into the base of each cylinder; means comprising a spring for returning each piston without moving its tube and rod; a valve comprising a pair of disk like members each having a plurality of ports adapted to govern independently the admission of air to said cylinders and pistons; and means comprising an arc like member and a lever coacting therewith under the control of the operator for controlling said ports at will, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,166,504. TYPOGRAPHICAL COMPOSING-MACHINE. HOWARD M. WEBSTER, Chicago, Ill. Filed Feb. 3, 1912. Serial No. 675,128. (Cl. 95—4.5.)



1. In combination with a camera, a holder adapted to contain a photographically sensitized sheet, a plurality of characters, electrically controlled means exposing a portion of a sheet within the holder to photograph a desired character, and separate electrically controlled means for presenting successive portions of the said sheet to be exposed in alinement.

2. In combination with a camera, a holder adapted to contain a sheet of sensitized material, a plurality of characters, means for directing a ray of light into the camera, means for interposing a character across said ray of light in position to be photographed by said camera, and means disposed between said character when in position to be photographed and said holder for exposing a desired portion of a sheet within the holder to photograph said character.

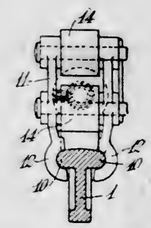
3. In combination with a camera, a holder adapted to contain a sheet of sensitized material, a plurality of characters, means for directing a ray of light into the camera, means for interposing a character across said ray of light in position to be photographed by said camera, means disposed between said character when in position to be photographed and said holder for exposing a desired portion of a sheet within the holder to photograph said character, and electrically controlled means for positioning successive portions of the sheet in position to be exposed.

4. In combination with a camera, a holder adapted to contain a sheet of sensitized material, a plurality of characters, a source of light, means directing a ray from the said source of light into the camera, means interposing in said ray of light a character, electrically controlled means for exposing to a portion of the sheet within the holder to photograph thereon the character exposed, and separate electrically controlled means for exposing successive portions of the said sheet.

5. In combination with a camera, a holder adapted to contain a photographically sensitized sheet, means yieldingly pulling said holder across the rear of the camera, a device for restraining movement of said holder, electrically controlled means for exposing a portion of the sheet within the holder, and separate electrically controlled means to release said restraining means, whereby said holde. is forwarded a predetermined step after each exposure.

[Claims 6 to 28 not printed in the Gazette.]

1,166,505. PIPE-CUTTER. FREDERIC E. WELLS, Greenfield, Mass. Filed July 29, 1915. Serial No. 42,563. (Cl. 81—192.)

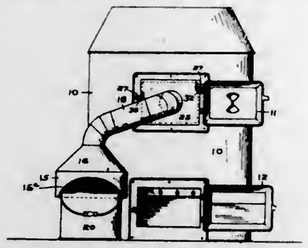


The described method of forming and assembling the carrying elements of a pipe-cutter which comprises forming (1) a guideway, T-shaped in cross section and having convex side edges, and (2) a slide for carrying rollers having spaced depending inwardly concave extensions; bringing the guideway and slide into the required relative positions and interposing a spacing block of the required shape and size; and finally, forcing the depending extensions toward each other and into gripping and sliding engagement with the side edges of the guideway.

1,166,506. ASH-DUST GATHERER AND CONVEYER. WILLIAM P. WIDDRINGTON, Indianapolis, Ind., assignor of one-half to George E. Fiscus, Indianapolis, Ind. Filed Feb. 13, 1915. Serial No. 8,111. (Cl. 126—242.)

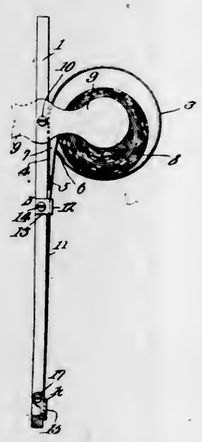
1. In a device for gathering and conveying ash dust, the combination, with a heating apparatus provided with a feed opening, of a receptacle for receiving the burnt products of combustion, a hood adapted to fit down over the open end of said receptacle and supported by the latter, said hood being provided with an entrance opening, a closure-plate for closing said feed opening in the apparatus, plate supporting brackets extending laterally beyond the side edges of said plate, means for adjustably securing said brackets to said plate, and a pipe communicating with said hood and discharging through said closure-plate into said heating apparatus.

2. In a device for gathering and conveying ash dust, the combination, with a heating apparatus provided with a feed opening, of a receptacle for receiving the burnt products of combustion, a hood adapted to fit down over the open end of said receptacle and supported by the latter, a closure-plate for closing said feed opening in



the apparatus, plate supporting brackets extending laterally beyond the side edges of said plate, means for adjustably securing said brackets to said plate, means for positively holding said brackets at right angles to said plate, and a pipe communicating with said hood and discharging through said closure-plate into said heating apparatus.

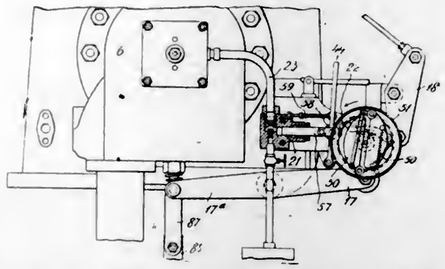
1,166,507. NOTE-PAPER HOLDER. REUBEN D. WIRT, Philadelphia, Pa. Filed Aug. 12, 1915. Serial No. 45,202. (Cl. 11—22.)



A paper holder comprising a base, and a plate having one end portion secured upon the base, the plate being curled to provide a roll holder for holding a roll of paper, there being a slot between the free end of the plate and the base for the passage of the paper across the base from the roll holder, and arms attached to the edges of the base and extending across the ends of the roll holder for holding the roll of paper therein, one of said arms being pivoted so that it can be swung out of the way to allow a roll of paper to be inserted into the roll holder, said arm having its lower end normally flush with the lower surface of the base to hold the arm in place when the base is seated on a support.

1,166,508. VALVE-GEAR AND INJECTION-TIMING MECHANISM. LEON WYGODSKY, New York, N. Y., assignor to Wygodsky Engine Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 26, 1913. Serial No. 808,899. (Cl. 123—104.)

1. Injection timing mechanism for internal combustion engines, comprising in combination driving and driven shafts arranged in line; a fuel pump, operating means for said pump operated by said driven shaft, a sleeve surrounding the driven shaft and in driving connection with the driving-shaft and forming an extension thereof, said driven shaft and sleeve having keyways, the keyway of one such member being helical and the keyway of the other such member having a pitch different from the pitch of said helical keyway, a feather member movable longitudinally with respect both to said driven shaft and to said sleeve and having feather portions movable in the keyways of said driven shaft and sleeve, and means for moving longitudinally such longitudinally movable feather member.



2. Injection timing mechanism for internal combustion engines, comprising in combination driving and driven shafts arranged in line, a fuel pump, operating means for said pump operated by said driven shaft, a sleeve surrounding the driven shaft and in driving connection with the driving shaft and forming an extension thereof, said driven shaft and sleeve having keyways, the keyway of one such member being helical and the keyway of the other such member being straight, a feather member movable longitudinally with respect to both said driven shaft and to said sleeve and having feather portions movable in the key-ways of said driven shaft and sleeve and means for moving longitudinally such longitudinally movable feather member.

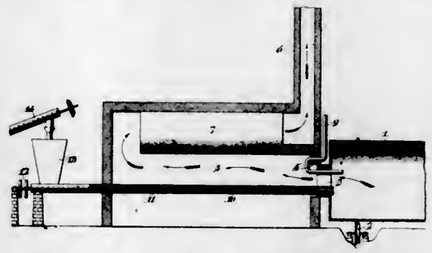
3. Injection timing mechanism for internal combustion engines, comprising in combination driving and driven shafts arranged in line, a fuel pump, operating means for said pump operated by said driven shaft, a sleeve surrounding the driven shaft and in driving connection with the driving shaft and forming an extension thereof, said driven shaft and sleeve each having keyways, the keyways of one such member being helical and the keyways of the other such member having a pitch different from the pitch of such helical keyways, a feather ring surrounding said sleeve and having feather portions movable in the keyways of such sleeve and other feather portions, projecting from the first-mentioned feather portions, and movable in the keyways of said driven shaft, and means for moving longitudinally such longitudinally movable feather ring.

4. Injection timing mechanism for internal combustion engines, comprising in combination driving and driven shafts arranged in line, a fuel pump, operating means for said pump operated by said driven shaft, a sleeve surrounding the driven shaft and in driving connection with the driving shaft and forming an extension thereof, said driven shaft and sleeve having keyways, the keyway of one such member being helical and the keyway of the other such member having a pitch different from the pitch of said helical keyway, a feather member movable longitudinally with respect both to said driven shaft and to said sleeve and having feather portions movable in the keyways of said driven shaft and sleeve, and means for moving longitudinally such longitudinally movable feather member comprising an externally threaded sleeve mounted to slide longitudinally upon said first mentioned sleeve, and connected to said feather member to move same longitudinally in both directions, a screw-threaded nut mounted on said threaded sleeve and arranged to be rotated, and means for holding such nut against longitudinal motion.

5. Injection regulating and timing mechanism for internal combustion engines, comprising in combination driving and driven shafts, a fuel pump, a speed governor driven by said driven shaft and comprising means arranged to operate such pump at a predetermined point in the rotation of such driven shaft and to vary the extent of operation of the pump in accordance with the operation of said governor, and means drivingly connecting said driving and driven shafts comprising means which holds the driving and driven shafts in fixed relation during their rotation or, at will, rotates the driven shaft with respect to the driving shaft, thereby varying the time of operation of the pump.

[Claims 6 to 11 not printed in the Gazette.]

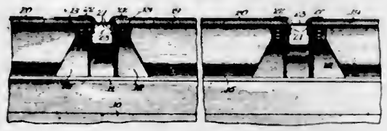
1,166,509. PROCESS OF RECOVERING SOLID BY-PRODUCTS FROM WOOD-PULP LIQUOR. AMBROSE B. AYERST and CHARLES N. WAITE, Wilmington, Del. Filed July 7, 1911. Serial No. 637,359. (Cl. 23—22.)



1. The hereinbefore described improvement in the process of recovering alkali from wood pulp black-liquor, which consists in, thickening the black-liquor by partial evaporation; commingling the thickened black-liquor with granular charcoal in such relative proportions as to permit diffusing under agitation; directly calcining the commingled black-liquor and charcoal while subjecting them to agitation, and leaching the calcined product for the removal of the alkali, substantially as set forth.

2. The hereinbefore described improvement in the continuous process of recovering alkali from wood pulp black-liquor, which consists in thickening the black-liquor by partial evaporation; commingling the thickened black-liquor with granular charcoal, derived from similar treatment of a preceding amount of black-liquor, the relative proportions of the two ingredients being such as to permit diffusion under agitation; directly calcining the commingled black-liquor and charcoal while subjecting them to agitation; leaching the calcined product for the removal of the alkali; and drying the residual charcoal in preparation for its re-commingling with thickened black-liquor, substantially as and for the purposes specified.

1,166,510. CAR-ROOF. CHRISTY BROWN, Wilmette, Ill., assignor to American Car Roof Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 21, 1915. Serial No. 57,053. (Cl. 108—5.4.)



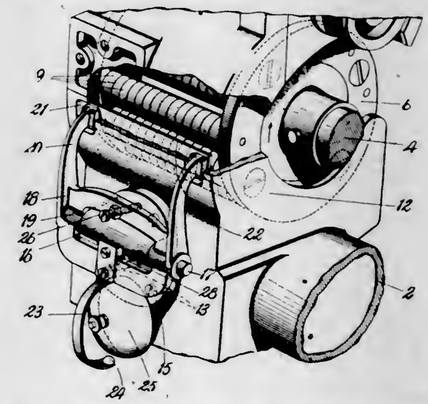
1. In a railway-car roof construction of the character described, the combination of metal carlines, heat-insulating members disposed lengthwise of the car, resting on and supported by said carlines, and each extending only from one carline to the next, said heat-insulating members unitedly forming a roof lining, flanged, metal roof-sheets above said members and having their flanges extended downwardly across the ends of said members, the latter being restrained from lengthwise movement solely by such flanges, substantially as described.

2. In a railway-car roof construction of the character described, the combination of channel metal carlines disposed trough side upward and having oppositely-extended flanges at their top edges, boards disposed lengthwise of the car resting on and supported by said carline flanges, and each extending only from one carline to the next, and metal roof-sheets covering said boards and having marginal flanges projecting into the troughs of said carlines and coöperating with the ends of the boards to prevent substantial displacement of the latter, substantially as described.

3. In a railway-car roof construction of the character described, the combination of channel metal carlines, disposed trough side upward and having oppositely-extended flanges at their top edges, equipped with stops near their ends, boards disposed lengthwise of the car resting on and supported by said carline flanges and each extending only from one carline to the next, the outermost boards bearing against said stops, and metal roof-sheets covering said boards and having marginal flanges projecting into the troughs of said carlines and coöperating with the boards to prevent substantial displacement of the latter, substantially as described.

4. In a railway-car roof construction of the character described, the combination of flanged channel carlines, disposed trough side upward, wooden boards supported on said carline flanges, metal roof-plates having marginal flanges holding said boards against substantial displacement and projecting downwardly into the carline troughs, and cap strips above said carlines having portions extended between the roof-plate flanges and holding them separated, substantially as described.

1,166,511. SHOE-BEATING MACHINE. ALFRED THOMAS CHAPLIN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 21, 1913. Serial No. 762,590. (Cl. 12—51.)



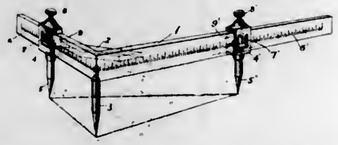
1. A machine of the class described having in combination, a rotary carrier, a plurality of annular series of independently rotatable beating elements disposed about the periphery of the carrier, and an indicating device comprising a gong and a rocker frame the upper end of which is yieldingly held in such proximity to said annular series of beating elements that it is vibrated mechanically to engage said gong when any one of said beating elements departs from its normal path of movement.

2. In a machine of the class described, a rotary shoe beater comprising a carrier and a plurality of annular series of independently rotatable beating elements disposed about the periphery of the carrier, a bar extending adjacent to said annular series of beating elements in position to be engaged by any one of the beating elements

which for any reason departs from its normal path of operation, a gong, a clapper, a rocker connecting the bar and the clapper, means for yieldingly returning the bar into the path of a beating element which has engaged and displaced it, and means for adjustably limiting the approach of the bar to the normal path of the beating elements.

3. In a shoe finishing machine, a rotary carrier, a series of rods extending endwise of the carrier, ring-shaped shoe finishing devices loosely mounted on the rods for movement radially thereof whereby they are normally held outwardly by centrifugal force while the carrier is in motion, a bar extending adjacent to said finishing devices in position to be engaged by any one of the devices which departs from its normal path of operation, a gong, and a clapper connected with the bar and extending into position to engage the gong when the bar is displaced by the passing of a finishing device which is out of its normal path, said parts being constructed and arranged to maintain the bar yieldingly in and return it automatically to its normal position after displacement by a finishing device whereby the bar and clapper are vibrated mechanically while a finishing device remains out of its normal path of movement.

1,166,512. MEASURING INSTRUMENT OR TOOL. FREDERICK M. DANNENFELSER, Muskegon, Mich. Filed Mar. 20, 1915. Serial No. 15,699. (Cl. 33—112.)



1. In an instrument, the combination of two arms at right angles to one another, a point adjacent to the junction of said arms and projecting at right angles from the plane common to said arms and two movable points, one on each arm also projecting at right angles from said plane, so related that the lines connecting the point at the junction of the two arms with the other two points always form a right angle.

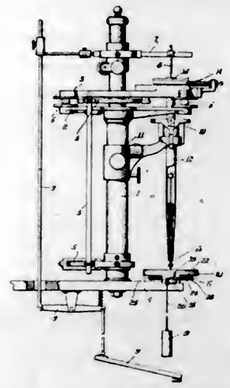
2. In an instrument, the combination of two arms at right angles to one another, a point fixed in a position adjacent to the junction of said arms and projecting at right angles from the plane common to said arms and two movable points, one on each arm also projecting at right angles from said plane, so related that the lines connecting the point at the junction of the two arms with the other two points always form a right angle, said arms being provided with graduation marks.

3. In an instrument, the combination of two arms at right angles to one another, a point fixed adjacent to the junction of said arms and projecting at right angles from the plane common to said arms and two movable points, one on each arm also projecting at right angles from said plane, so related that the lines connecting the point at the junction of the two arms with the other two points always form a right angle, and an angle brace at the junction of the two arms connecting the extended flat sides thereof.

1,166,513. GEOMETRICAL MACHINE. WILLIAM S. EATON, Sag Harbor, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed Feb. 20, 1913. Serial No. 749,616. (Cl. 33—24.)

1. A geometrical machine embodying therein an elementary outline, character or base, means adapted to follow said elementary outline, character or base and successively describe a plurality of similar outlines upon a work plate or sheet, and means adapted to vary the relative position of said elementary outline, character or base and said work plate or sheet following each actuation of said first named means.

2. A geometrical machine embodying therein an elementary outline, character or base, a support for the work plate or sheet, supporting means for a work point in operative relation to said support, means adapted to follow said elementary outline, character or base and successively cause a similar relative movement of said support and said supporting means, and means for varying the operative relation of said supporting means and said work plate or sheet to create an intricate geometrical design.



3. A geometrical machine embodying therein a work bed, supporting means for a work point in operative relation to the work surface upon said bed, a support for an elementary outline, character or base, means adapted to impart relative movement of said work bed and the supporting means for said work point, and means whereby the relative position of said support and said work bed may be varied independently of said last named means.

4. A geometrical machine embodying therein a work bed, supporting means for a work point in operative relation to the work surface upon said bed, a support for an elementary outline, character or base, means adapted to impart relative movement of said work bed and the supporting means for said work point, and means acting independently of said last named means adapted to simultaneously vary the relative position of said support and said work bed in two directions.

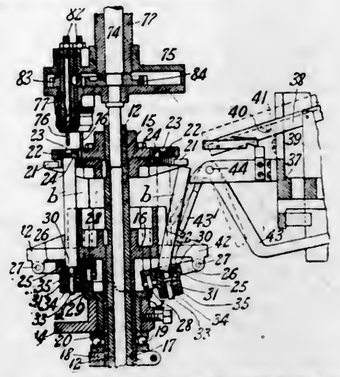
5. A geometrical machine embodying therein a work bed, supporting means for a work point in operative relation with the work surface upon said bed, a support for an elementary outline, character or base, means carried thereby wherein the elementary outline, character or base may be set to define a "simple" design, a design composed of superimposed designs, or designs of varying outlines, bodies or centers, means adapted to impart relative movement of said work bed and the supporting means for said work point, and means whereby the relative position of said support and said work bed may be varied independently of said last named means.

[Claims 6 to 22 not printed in the Gazette.]

1,166,514. DRILLING-MACHINE. JAMES A. EDEN, Jr., Springfield, Mass., assignor to Bausch Machine Tool Company, a Corporation of Massachusetts. Filed May 27, 1914. Serial No. 841,220. (Cl. 77—23.)

1. In a machine of the class described a blank carrier including a pair of clamping devices adapted to engage the opposite ends of a blank and to exert a pressure toward each other so as to hold the blank, at least one of said clamping devices having an inner face which is partly cylindrical and partly conical so as to center the blank when the clamping devices are pressed against it.

2. In a machine of the class described a blank carrier including a pair of clamping devices adapted to engage the opposite ends of a blank and to exert a pressure toward each other so as to hold the blank, at least one of said clamping devices being apertured to admit a drill to engage the end of the blank and having an inner face which is partly cylindrical and partly conical so as to center the blank with respect to the drill.



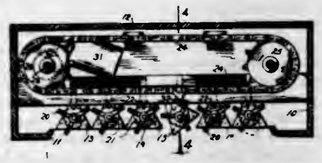
8. In a machine of the class described a head and a series of blank holders carried thereby, each of said blank holders comprising a pair of opposed cup-members, and means for automatically causing approach and recession of the cup-members to engage and release the blanks, one of the cup-members having a spring plunger at the center arranged to press the blank toward the other cup-member.

4. In a machine of the class described a head and a series of blank holders carried thereby, each of said blank holders comprising a pair of opposed cup-members, and means for automatically causing approach and recession of the cup-members to engage and release the blanks, one of the cup-members having a spring plunger at the center arranged to press the blank toward the other cup-member, and having also a spring supported socket portion arranged to press the blank toward the opposed cup-member.

5. In a machine of the class described a vertical shaft having a cam thereon, a head rotatable on a vertical axis, a series of blank holders equally spaced on the head, means connecting said cam with said head to turn the head at each rotation of the cam shaft a distance equal to the distance apart of said holders on the head, a carrier on the machine arranged above the head and movable to and from the head, a set of tools on the carrier positioned corresponding to the arrangement of the holders on the head, a second cam on the said vertical shaft, a slide guided on the machine to reciprocate to and from the latter cam, a lever connecting the slide with the carrier, one or more springs connected with the carrier to retract it from the head and to retain the slide in engagement with said cam, whereby the carrier is reciprocated from the cam shaft between successive turning movements of the head.

[Claims 6 to 9 not printed in the Gazette.]

1,166,515. ADVERTISING DEVICE. WILHELM FREDERICK FLOESSELL, Sydney, New South Wales, Australia. Filed Jan. 15, 1914. Serial No. 812,310. (Cl. 40—33.)



1. In an advertising device, the combination of a series of rotatably-mounted, tri-lateral units arranged in juxtaposed, parallel relation; a disk secured to one end of each unit and provided with a plurality of radial projections and with a series of three equidistantly-spaced, V-shaped peripheral recesses; a movable operating element having projecting means thereon for engagement with the projections on said units, to rotate the latter through one-third of a revolution; and a spring-controlled detent engageable in the recesses in each disk at the conclusion of each rotary movement, while permitting rotation of the units in either direction upon their axes.

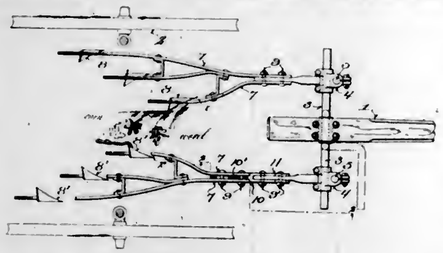
2. In an advertising device comprising, in combination, a series of rotatably mounted, prism-shaped units arranged in juxtaposed, parallel relation, each unit having its side faces provided with movable panels; a disk secured to one end of each unit and provided with a plurality of radial projections and with a series of three equidistantly-spaced, V-shaped peripheral recesses independently separate of said recesses formed by said projections, means to engage with the projections for imparting a step-by-step rotary movement to each unit in succession and to successively display each panel thereof; a spring-pressed detent movable longitudinally of itself into and out of engagement with said V-shaped recesses to yieldingly lock the units in position at the conclusion of each rotary movement thereof, while permitting rotation of the units in opposite directions on their axes; and means for adjustoing the spring tension of said detent.

3. An advertising device comprising, a casing formed with a display opening in one wall thereof and having an opposite wall in hinged relation therewith, a plurality of rotatably mounted, trilateral units arranged to have their edges in juxtaposed, parallel relation and adapted to close said display opening, spindles formed on the ends of said units, bearings for said spindles secured to the casing and disposed adjacent said display opening, the upper end of said units being formed with a circular reduced portion having a series of three equidistantly-spaced, V-shaped recesses therein, a disk secured to the upper end of each unit and provided with a plurality of radial projections, vertically-disposed shafts journaled in the casing at the ends thereof provided on their upper ends with sprocket wheels, a sprocket chain adapted to pass over said sprocket wheels, a worm gear formed on one of said shafts and having suitable connection with a motor disposed in the casing, idle rollers disposed in the casing and adapted to support the sprocket chain intermediate said sprocket wheels, projecting means carried by the chain for successive engagement with the projections on said units to rotate the latter through one-third of their revolution to successively display each side of the units, a supporting bar secured in the casing and adapted to extend transversely of said units, a plurality of hollow members supported on said bar and opposite each unit, a detent for each hollow member having slidable engagement therewith and adapted to engage with the V-shaped recesses in said unit for locking the same position at the conclusion of each rotary movement thereof, while permitting rotation of the units in either direction upon their axes, spring means in said hollow members for yieldingly holding said detents in engagement with said recesses, and adjustable means carried by said hollow members for varying the tension of said spring means upon said detent.

1,166,516. CULTIVATOR. ERNEST F. GENRICH, Oconomowoc, Wis. Filed July 16, 1914. Serial No. 851,247. (Cl. 97—35.)

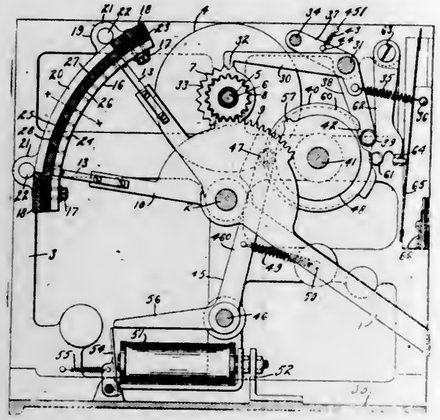
In a cultivator having a draft pole, a draft neck carried thereby having bolt-receiving apertures at its lower end, and a cultivator tooth-carrying draft beam comprising spaced members having apertures at their ends one of which is elongated; the combination of a lengthening device for interposition between the draft neck and draft beam, comprising an auxiliary link having a shank adapted to fit between the spaced ends of said draft beam members, the link shank being provided with apertures, one of which is elongated for registration with

the apertures of the draft beam members, a head portion extending from the shank of the link having spaced tongue members provided with alined apertures, sets of which tongue apertures are elongated to register with



the draft neck apertures, and bolts passing through the several alined sets of apertures for securing the shank and tongue portions of the link to the draft neck and draft beam, whereby said draft beam is dropped back of its normal position with relation to the draft neck.

1,166,517. DISTANT ACCOUNTING MECHANISM. MAXIMILIAN M. GOLDBERG, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Apr. 11, 1914. Serial No. 831,313. (Cl. 235—3.)



1. In a machine of the class described, the combination with an accounting device; of an actuator for operating the same; a driving member for said actuator normally connected thereto; a magnet mounted independently of said actuator for disconnecting said driving member from said actuator after the actuator has been moved to any desired position by the driving member; and means for energizing said magnet.

2. In a machine of the class described, the combination with an accounting device; of an actuator for operating the same; a driving member for said actuator, normally connected thereto; a magnet mounted independently of said actuator for controlling the disconnecting of said driving member from said actuator after the actuator has been moved to any desired position; a projection operable to stop said actuator in its desired position and controlled by said magnet; and means for energizing said magnet.

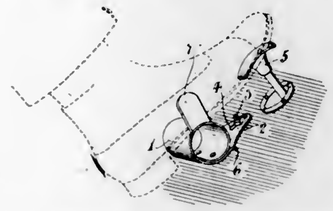
3. In a machine of the class described, the combination with an accounting device; of an actuator for operating said device and having a normal position; an operating member for positively driving said acutator to differential extents; an electromagnet mounted independently of said actuator; devices actuated thereby for causing obstruction of said actuator; contact means moved by said actuator; a plurality of stationary contacts with all of which said contact means may engage; and a circuit for said contact means and including said magnet.

4. In a machine of the class described, the combination with an accounting device; of an actuator therefor; a segment gear having an invariable extent of movement for driving said actuator and normally in engagement therewith; a lever for carrying said segment gear; a magnet having an armature normally supporting said lever; and means for controlling the energizing of said magnet so that the armature may be disabled as a support for said lever to effect the disengagement of said segment gear from said actuator at different points in the movement of said segment gear.

5. In a machine of the class described, the combination with an accounting device; of an actuator therefor; a segment gear having an invariable extent of movement for driving said actuator and normally in engagement therewith; a lever for carrying said segment gear; a magnet having an armature normally supporting said lever; means for controlling the energizing of said magnet so that the armature may be disabled as a support for said lever to effect the disengagement of said segment gear from said actuator at different points in the movement of said segment gear; and a spring operated locking pawl operated, when said armature is disabled, to lock said actuator in its differential position.

[Claims 6 to 34 not printed in the Gazette.]

1,166,518. FOOT SUPPORT AND GUIDE. GEORGE H. HARMAN, Glen Ridge, N. J. Filed Oct. 23, 1914. Serial No. 868,184. (Cl. 74—81.)

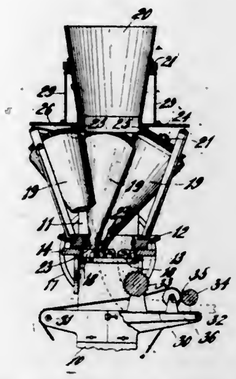


1. A foot support for use with the power control mechanism of an automobile or the like, comprising a rigid foot supporting member having an arch engaging portion adapted to contact with the arch of a driver's foot across its entire width and to provide a curved bearing surface, whereby, in changing the angular position of the foot in a vertical plane, the arch may uninterruptedly traverse the arch engaging portion along a succession of transverse lines of contact.

2. A foot support for use with the power control mechanism of an automobile or the like, comprising a rigid foot supporting member having an arch engaging portion adapted to contact with the arch of a driver's foot across its entire width and to provide a curved bearing surface, whereby, in changing the angular position of the foot in a vertical plane, the arch may uninterruptedly traverse the arch engaging portion along a succession of transverse lines of contact, and means for limiting movement of the foot longitudinally with respect to said arch engaging portion.

3. A foot support for use with the power control mechanism of an automobile or the like, comprising a rigid foot supporting member having an arch engaging portion adapted to contact with the arch of a driver's foot across its entire width and to provide a curved bearing surface, whereby, in changing the angular position of the foot in a vertical plane, the arch may uninterruptedly traverse the arch engaging portion along a succession of transverse lines of contact, means for limiting movement of the foot longitudinally with respect to said arch engaging portion, and means for attaching said spacing member to the floor of an automobile or the like.

1,166,519. DOUGH-FEEDING MACHINE. HERMAN HAYSSEN and ARTHUR H. HAYSSEN, Sheboygan, Wis. Original application filed May 25, 1910, Serial No. 563,296. Divided and this application filed Apr. 10, 1912. Serial No. 689,740. (Cl. 107—10.)



1. A dough feeding machine, comprising a revoluble cylindrical hopper, a revoluble spout provided with a discharge opening and positioned beneath the hopper and consisting of a plurality of conical rollers extending upwardly and outwardly at an angle and also at a tangent with relation to the discharge opening and having enlargements at their lower ends.

2. A dough feeding machine, comprising a revoluble cylindrical hopper, a revoluble spout provided with a discharge opening and positioned beneath the hopper and consisting of a plurality of conical rollers extending upwardly and outwardly at an angle and also at a tangent with relation to the discharge opening, and having enlargements at heir lower ends and means for rotating the spout and independently rotating the rollers.

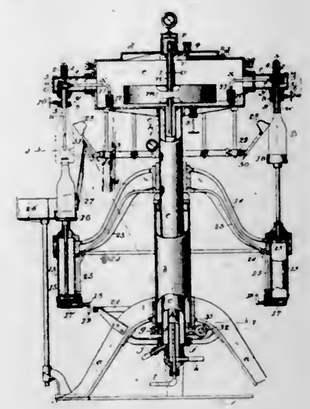
3. A dough feeding machine, comprising a revoluble cylindrical hopper, a revoluble frame positioned beneath the hopper and provided with a gear having an opening, a plurality of conical rollers journaled in the frame and extending upwardly and outwardly at an angle and also positioned at a tangent with relation to the opening of the gear, the said rollers having enlargements formed on their lower ends means for rotating the frame, and means for rotating the rollers.

4. A dough feeding machine, comprising a revoluble cylindrical hopper, a revoluble frame positioned beneath the hopper and provided with a gear having an opening, a plurality of conical rollers journaled in the frame and extending upwardly and outwardly at an angle and also positioned at a tangent with relation to the opening of the gear, the said rollers having enlargements formed on their lower ends means for rotating the frame, gears carried by the rollers, and a stationary gear with which the roller gears are in mesh.

5. A dough feeding machine, comprising a revoluble cylindrical hopper, a revoluble spout provided with a discharge opening and positioned beneath the hopper and consisting of a plurality of conical rollers extending upwardly and outwardly at an angle, and having enlarged lower ends means for rotating the spout and independently rotating the rollers, an endless belt positioned beneath the revoluble spout to move the cylindrically formed stream of dough discharged from the spout, and a roller for flattening the cylindrical form of dough.

[Claims 6 and 7 not printed in the Gazette.]

1,166,520. BOTTLE-FILLING MACHINE. JOHN E. HENES, Menominee, Mich., assignor to Henes & Keller Company, Menominee, Mich., a Copartnership composed of John Henes, Alfred A. Henes, and John E. Henes. Filed Aug. 10, 1908, Serial No. 447,669. Renewed Mar. 6, 1914. Serial No. 822,957. (Cl. 226—15.)



1. In a bottle filling machine, the combination with a stand or support, of a closed liquid receptacle rotatably mounted thereon and having a number of filling siphons, liquid and gas supply connections and a gas waste passage, a valve controlling said waste passage, a vertically movable float adapted to operate said valve, and means accessible outside of said receptacle for lifting said float to operate said valve in starting the machine.

2. In a bottle filling machine, the combination with a stand or support, of a closed liquid receptacle rotatably mounted thereon and having a number of filling siphons, a liquid supply connection and gas supply and waste connections, valves controlling said gas supply and waste connections, a vertically movable float adapted to operate said valves, and means for manually lifting said float to operate said valves in starting the machine, substantially as described.

3. In a bottle filling machine, the combination with a stand or support, of a closed liquid receptacle rotatably mounted thereon and having a number of tubular heads and vertically movable filling siphons having their longer legs guided and movable lengthwise in said heads and provided at their inner ends with automatic valves adapted to close when the siphons descend to their lower positions, and to remain closed when the siphons are elevated until a certain counter-pressure is established in the bottle to be filled, substantially as described.

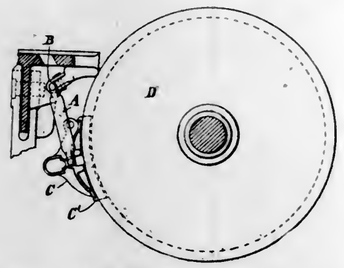
4. In a bottle filling machine, the combination with a stand or support, of a closed liquid receptacle rotatably mounted thereon and having a number of tubular heads, and vertically movable filling siphons guided in said heads parallel with the axis of said receptacle and each provided with a bottle sealing cap and a gas passage extending from the interior of the head through said cap and with a valve controlling said passage and adapted to be opened by the upward movement of the siphon, substantially as described.

5. In a bottle filling machine, the combination with a stand or support, of a closed liquid receptacle rotatably mounted thereon and having tubular filling heads, vertically movable siphons guided in said heads parallel with the axis of said receptacle and each provided with a bottle sealing cap, and a gas passage leading through said cap from the interior of the head and provided with a valve adapted to be opened by the upward movement of the siphons, and automatic valves adapted to close the inner ends of the siphons when they are lowered, and to remain

closed when the siphons are elevated until a certain counterpressure is established in the bottles to be filled, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,166,521. BRAKE-HANGER. HARRY A. HOKE, Altoona, Pa. Filed Nov. 4, 1915. Serial No. 59,505. (Cl. 188—70.)



1. A railway brake hanger comprising depending side portions and an integral portion connecting one end of each side portion to the corresponding end of the other side portion and having said side portions more flexible than said connecting portion to permit said side portions to bend readily in a direction transverse to their length and parallel to their common plane.

2. A railway brake hanger comprising depending side portions and an integral portion connecting one end of each side portion to the corresponding end of the other side portion and having said side portions flattened to make them flexible in a direction transverse to their length and parallel to their common plane.

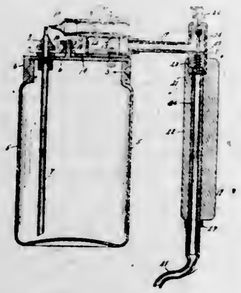
3. A brake hanger comprising a stiff brake head engaging portion and integral side portions flattened between their ends to make them flexible in a direction transverse to their length and parallel to the plane of the link.

4. A railway brake hanger of the integral link type having rigid end and corner portions and side portions flexible in a direction transverse to their length and parallel to the plane of the link.

5. A railway brake hanger of the integral link type having side portions flattened to make them flexible in a direction transverse to their length and parallel to the plane of the link.

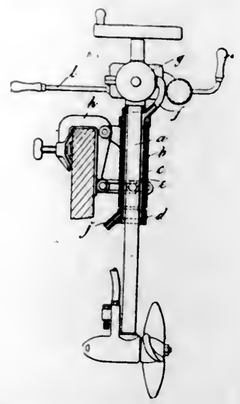
[Claim 6 not printed in the Gazette.]

1,166,522. AIR-BRUSH. BIRCHARD E. HOLTON, Los Angeles, Cal. Filed Feb. 12, 1915. Serial No. 7,875. (Cl. 91—45.)



An air brush comprising a container, a cover therefor, a duct to convey lacquer from the container, said duct carried by the cover and having a nozzle thereon, an air chamber provided with a nozzle thereon having its mouth disposed adjacent to the mouth of the first mentioned nozzle, said air chamber being provided with a base plate, said base plate having a notch in one end portion thereof, a post mounted on the cover and adapted to fit in said notch, a thumbnut fitted on said post, and guide posts on the cover adapted to engage the sides of the base plate and hold it in position.

1,166,523. OUTBOARD MOTOR. CARL ALRIK HULT and OSCAR WALFRID HULT, Stockholm, Sweden. Filed Nov. 23, 1914. Serial No. 873,442. (Cl. 115—18.)



1. In an outboard motor, the combination of a boat, a motor support carried thereby, a motor loosely carried in said support, whereby said motor may itself be manipulated to reverse the direction of motion of the boat or to steer the latter when traveling in either direction, and a plurality of tillers carried by said motor for reversal and steering of the boat.

2. In a device of the character specified, the combination of an outboard motor, having an extended motor shaft, a propeller connected to said motor shaft, a sleeve surrounding said motor shaft and connected to the motor and to the propeller, and a second sleeve surrounding the first mentioned sleeve whereby the motor can be turned for the reversal of the direction of motion of the boat and for the steering of the boat when going ahead or astern.

3. In a device of the character specified, the combination of an outboard motor, having an extended motor shaft, a propeller connected to said motor shaft, a sleeve surrounding said motor shaft and connected to the motor and to the propeller, a second sleeve surrounding the first mentioned sleeve whereby the motor can be turned for the reversal of the direction of motion of the boat and for the steering of the boat when going ahead or astern, and a plurality of tillers carried by said motor for reversal and steering of the boat.

4. In a device of the character specified, the combination of an outboard motor having an extended motor shaft, a propeller connected to said motor shaft, a sleeve surrounding said motor shaft and connected to the motor and to the propeller, a second sleeve connected with and non-rotatable in respect to said first named sleeve, and means for rotatably supporting said motor and the parts carried thereby from a boat.

5. In a device of the character specified, the combination of an outboard motor having an extended motor shaft, a propeller connected to said motor shaft, a sleeve surrounding said motor shaft and to the propeller, a second sleeve connected with and non-rotatable in respect to said first named sleeve, and a third sleeve embracing said second named sleeve and in which third sleeve said motor and the parts carried thereby may be rotatably supported from a boat.

[Claim 6 not printed in the Gazette.]

1,166,524. PROCESS OF PURIFYING ELECTROLYTIC CHLORIN. UICHIRO ISHIKAWA, Tokyo, Japan. Filed Apr. 6, 1915. Serial No. 19,620. (Cl. 23—10.)

1. A process of eliminating hydrogen from chlorin gas, which comprises causing at least the major portion of the hydrogen to unite with chlorin and produce hydrochloric acid, and reacting upon said hydrochloric acid with an oxidizing agent capable of producing free chlorin and water.

2. A process of eliminating an impurity from a gas containing relatively large amounts of chlorin, which comprises causing at least a portion of said impurity to react with chlorin to produce a chlorin-containing body; reacting upon said chlorin-containing body wth an agent capable of setting free at least the major portion of the chlorin content thereof, and of leaving in the gas under treatment a material more easily removed than the original impurity, and thereafter removing said material from the chlorin-containing gas.

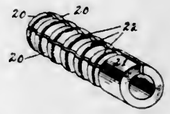
3. In the treatment of chlorin gas containing a small amount of hydrogen, the step of passing the gas in contact with a mass of material which is capable of effecting the union of the hydrogen with chlorin to produce hydrochloric acid, and then into contact with a cooler mass of said material, to oxidize the hydrochloric acid to free chlorin and water.

4. In the removal of impurities comprising free hydrogen from chlorin gas, the step of passing the chlorin gas under treatment, into contact with a catalyst capable of aiding the union of hydrogen with chlorin, and simultaneously subjecting the said gas to the action of light containing actinic rays, to supplement the action of the catalyst.

5. A process which comprises passing chlorin gas containing hydrogen in contact with a catalytic agent capable of causing the union of at least the major portion of the hydrogen with chlorin to form hydrochloric acid, and thereafter oxidizing the hydrochloric acid to produce free chlorin and water.

[Claim 6 not printed in the Gazette.]

1,166,525. BOLT-ANCHOR BLANK. CARL JOSEPH, Bayonne, N. J. Filed Dec. 4, 1914. Serial No. 875,408. (Cl. 85—2.4.)



1. A blank adapted to be formed into a bolt anchor constituting a substantially flat slab comprising a plurality of sections, each transversely corrugated on both sides and each substantially trapezoidal in cross section, all united at one end to a common transverse band and which band is not corrugated.

2. A blank adapted to be formed into a bolt anchor constituting a substantially flat slab comprising a plurality of sections, each transversely corrugated on both sides and each substantially trapezoidal in cross section, all united at one end to a common transverse band, whereby when the sections are curved around a cylinder they form a tubular body spirally corrugated, internally and externally.

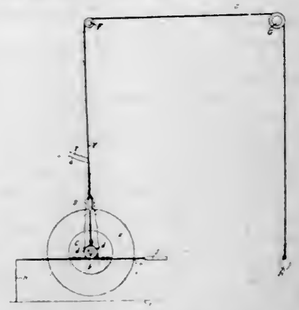
3. A blank adapted to be formed into a bolt anchor constituting a substantially flat slab comprising a plurality of sections, each transversely corrugated on both sides and each substantially trapezoidal in cross section and decreasing in cross sectional area from one end to the other, all united at their smaller ends by a common transverse strip.

4. A blank adapted to be formed into a bolt anchor constituting a substantially flat slab comprising a plurality of sections, each transversely corrugated on both sides, and each substantially trapezoidal in cross section, the surface of the corrugations on each side lying substantially in a plane, and all of the sections being united at one end by a transverse integral strip.

5. A blank out of which to form a bolt anchor comprising a plurality of sections, each transversely corrugated on both sides, and each substantially trapezoidal in cross section and decreasing in cross sectional area from one end to the other, all united at their smaller ends by a common transverse strip, the surfaces of one side of the sections lying substantially in one plane and the surfaces of the opposite side of the sections lying substantially in another plane.

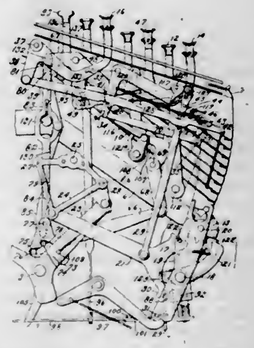
[Claims 6 to 15 not printed in the Gazette.]

1,166,526. ELECTRICALLY-OPERATED SAW. FRANK KAZLOW, Schenectady, N. Y. Filed Apr. 14, 1915. Serial No. 21,398. (Cl. 143—47.)



The combination of a saw; a motor connected with and adapted to rotate the saw; suspended means for suspending the saw and motor; means for guiding and holding the saw against lateral movement when in operation, comprising two metallic strips between which the saw rotates, each of said strips provided with a standard adapted to rest on a table; said strips at their ends opposite the standards adapted to be directed for causing the holding of the saw against lateral displacement when in operation.

1,166,527. REGISTERING MECHANISM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Jan. 25, 1908. Serial No. 412,544. (Cl. 235—60.)



1. In an accounting machine the combination with a plurality of accumulating devices, of means for rotating said devices in both directions, carrying members arranged to carry units of movement from an accumulating device of lower order to an accumulating device of higher order, lugs carried by the accumulating devices and arranged to trip the carrying members in both directions of rotation of the accumulating devices, and means for locking the carrying members against movement when engaged by said lugs.

2. In an accounting machine the combination with actuating mechanism, of accumulating devices, carrying members for the accumulating devices, means under the control of the accumulating devices for partly actuating the carrying members in a carrying operation, and cams, one for each carrying member and operated only when the corresponding carrying member is partially actuated, to complete the actuation of such carrying members as have been partly actuated.

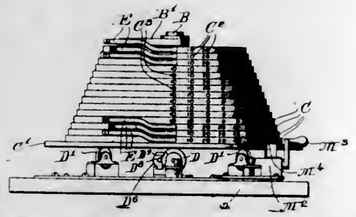
3. In an accounting machine the combination with actuating devices of a plurality of sets of counters mounted in axial alinement, means for moving said counters in an axial direction, so as to bring different sets of counters into operative relation with the actuating devices, said means being actuated by the main operating shaft of the machine, and a manipulative device for determining the direction of movement of said means.

4. In an accounting machine the combination with actuating devices of a plurality of sets of counters, means for bringing different sets of counters into operative relation with the actuating devices, said means being actuated by the main operating shaft of the machine, and a manipulative device for determining the direction of movement of said means.

5. In an accounting machine, the combination with multiple counters of actuating devices, counter shifting mechanism for moving different counters into operative relation with the actuating devices, said actuating devices being differentially movable and normally engaging the counters in one direction of movement only, a subtraction key for causing the actuating devices to engage the counters in the opposite direction, and means under the control of the subtraction key for preventing operation of the counter shifting mechanism.

[Claims 6 to 23 not printed in the Gazette.]

1,166,528. CALCULATOR. PAUL F. W. C. KRIPPENDORF, Lynn, Mass., assignor to Krippendorf Kalculator Company, Portland, Me., a Corporation of Maine. Filed Mar. 7, 1908, Serial No. 419,650. Renewed Oct. 18, 1909. Serial No. 523,298. (Cl. 235—61.)



1. A calculating apparatus comprising a registering device adapted to indicate a calculated total area, in combination with actuting means therefor, and a plurality of indicators each movable by one, or progressively by more than one, unit of movement for operating the actuating means, the units of movement of the several indicators being different and respectively proportional to the different parts subjected to calculation.

2. A calculating apparatus comprising a registering device adapted to indicate a calculated total, in combination with an actuating means therefor, a plurality of indicators each movable by units of movement for operating said actuating means, the units of movement of the several indicators being respectively proportional to the different parts subjected to calculation, and adjustable connections between said actuating means and the registering device to vary the effect of the former upon the registering device.

3. A calculating apparatus comprising separate measurement indicating devices each bearing a predetermined relation to the corresponding part subjected to calculation and being progressively movable in accordance with the number of said parts, means for totalizing the movements of all the indicating devices, means for multiplying the result by a constant, and a registering device for indicating the final product.

4. A calculating apparatus comprising, in combination, means movable to express mechanically the total of a number of measurements based upon units which are proportional respectively to the different parts subjected to calculation, means for multiplying said total by a constant, means for carrying said constant, and a registering device adapted to indicate the final result.

5. A calculating apparatus comprising a registering device, an actuator for said device, and a series of indicators each corresponding to a part to be subjected to calculation and each being movable progressively through a plurality of unit movements dependent in number upon the number of said corresponding parts for determining mechanically the extent of movements of the actuator.

[Claims 6 to 45 not printed in the Gazette.]

1,166,529. FISH-HOOK GUARD. JULIUS H. KRUSE, Chicago, Ill. Filed July 27, 1914. Serial No. 853,430. (Cl. 43—7.)



1. A guard for fish hooks, comprising a plate having a cross bar at one end thereof for engagement with the barb of a hook, and having an opening for receiving the point of the hook, said plate being bent toward the shank of the hook, and a resilient member adapted to connect between the inner end of the bent portion and the shank of the hook for normally holding the cross bar in engagement with the barb and adapted to pull the plate toward the shank when the plate is released.

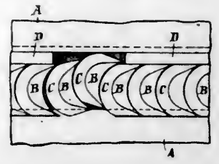
2. The combination with a fish hook, of a guard having a member for engagement with the barb of the hook, said guard extending forwardly having a flat surface to protect the point, and a resilient connection between the guard and the eye of the hook for holding said guard in engagement with the barb, and for pulling said guard forwardly when the guard is disengaged from the barb.

3. The combination with a fish hook, of a metallic plate having a hole therein for reciving the point of the hook, and having a downwardly bent cross bar for engagement with the hook above the barb, said plate being bent toward the shank of the hook, and a rubber band connecting between the forward end of the plate and the eye of the hook, the arrangement being such that the band will hold the guard with the bent portion extending outwardly beyond the point of the hook when in adjusted position.

4. A hook guard comprising a plate bent at about the center thereof, with a hole in one end, and a rectangular opening in the opposite end, with a cross bar at the end having the rectangular opening, said cross bar being bent to form a groove in the upper surface thereof, and being adapted to engage with the barbed portion of a fish hook, substantially as described.

1,166,530. TURBINE-BLADING AND METHOD OF ASSEMBLING SAME. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Apr. 28, 1914. Serial No. 834,889. (Cl. 253—77.)

1. The method of securing turbine blades to a blade holding element, which consists in providing the latter with a circumferential groove having both side walls undercut; and in forming the blades and separate interposed distance pieces, if any, and the locking ring segments so that each segment, and the blades and distance pieces alongside the segment, will fill the space between the side walls of the groove, with the ring segment engaging one of said side walls and the blades and distance pieces the other, and with the joint between the assembled segments, and the blades and distance pieces a surface of revolution; and in inserting each segment and the corresponding group of blades and distance pieces in longitudinally displaced portions of the said groove, and then moving the segment relative to the corresponding group of blades and distance pieces in the direction of the length of the groove to bring the group of blades and distance pieces along side of the segment.



2. The method of securing turbine blades to a blade holding element, which consists in providing the latter with a circumferential groove having both side walls undercut; and in forming the blades and separate interposed distance pieces, if any, and the locking ring segments so that each segment, and the blades and distance pieces along side the segment, will fill the space between the side walls of the groove, with the ring segment engaging one of said side walls and the blades and distance pieces the other, and with the joint between the assembled segments, and the blades and distance pieces a surface of revolution; and in inserting each segment and the corresponding group of blades and distance pieces in longitudinally displaced portions of the said groove, and then moving the segment relative to the corresponding group of blades and distance pieces in the direction of the length of the groove to bring the groups of blades and distance pieces along side of the segment, and after sufficient segments and distance pieces have been inserted to form a complete ring of blades and distance pieces and a nearly but not quite complete ring formed of said segments, inserting in the gap a calking strip or strips and calking the same.

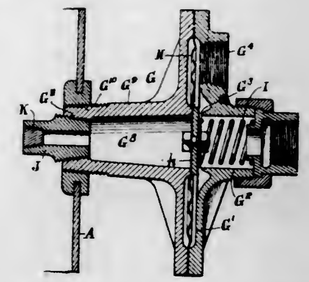
3. A turbine blade holder formed with a circumferential blade receiving groove having both side walls undercut, a ring of blades and interposed distance pieces inserted in said groove and shaped to fit against one of said side walls and to leave an annular space of uniform cross section between the other side wall of the groove and the adjacent edges of the blades and distance pieces, a plurality of similar locking ring segments inserted end to end in said space and uniting to form an elongated segment of nearly but not quite the circumferential length of said groove, each segment being made of steel or like material and being shaped prior to its insertion in said space to have practically the same cross section as said space, and a calking strip or strips inserted in said space in the gap between the adjacent ends of said elongated segment and upset after insertion to fill the gap.

4. A turbine blade holder formed with a circumferential blade receiving groove having both side walls undercut, a ring of blades and interposed distance pieces inserted in said groove and shaped to fit against one of said side walls and to leave an annular space of uniform cross section between the other side wall of the groove and the adjacent edges of the blades and distance pieces, a plurality of similar locking ring segments inserted end to end in said space and uniting to form an elongated segment of nearly but not quite the circumferential length of said groove, each segment being shaped prior to its insertion in said space to have practically the same cross section as said space, and other locking means inserted in said space in the gap between the adjacent ends of said elongated segment.

5. A turbine blade holder formed with a circumferential blade receiving groove having both side walls undercut, a ring of blades and interposed distance pieces inserted in said groove and shaped to fit against one of said side walls and to leave an annular space of uniform cross section between the other side wall of the groove and the adjacent edges of the blades and distance pieces, a plurality of similar locking ring segments inserted end to end in said space and uniting to form an elongated segment of nearly but not quite the circumferential length of said groove, each segment being shaped prior to its insertion in said space to have practically the same cross section as said space, and a calking strip or strips inserted in said space in the gap between the adjacent ends of said elongated segment and upset after insertion to fill the gap.

[Claim 6 not printed in the Gazette.]

1,166,531. WATER-HEATER. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed Mar. 10, 1915. Serial No. 13,336. (Cl. 236—16.)



1. In a water heater of the kind comprising a water space containing the heated water and normally filled with water under pressure, means for heating the water contained in said space by the combustion of fluid fuel, a normally open fluid pressure motor valve adapted when closed to interrupt the fuel supply to said heater and comprising a motor chamber, the latter being connected to said space by a passage, and a fusible obstruction normally closing said passage and subjected to the temperature of the water in said space and adapted to yield and permit the passage of water from said space into the said motor chamber of said valve, whereby the latter is closed, on a predetermined rise of temperature of the water in said storage space.

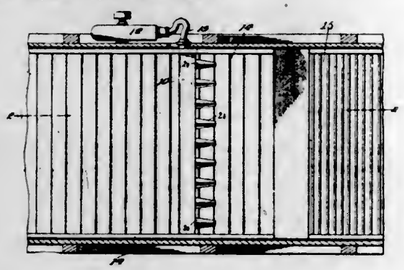
2. In a water heater of the kind comprising a water storage space containing the heated water and normally filled with water under pressure, means for heating the water contained in said space by the combustion of fluid fuel, a normally open fluid pressure motor valve adapted when closed to interrupt the fuel supply to said heater and comprising a motor chamber, the latter being connected by a passage to said storage space at the upper end of the latter, and a fusible obstruction normally closing said passage and subjected to the temperature of the water in said space and adapted to yield and permit the passage of water from said space into the said motor chamber of said valve, whereby the latter is closed, on a predetermined rise of temperature of the water in said storage space.

3. In a water heater of the kind comprising a water space containing the heated water and normally filled with water under pressure, and a fluid burner for heating the water, and in combination therewith, means controlling the supply of fuel to said burner comprising a thermostatic valve mechanism normally regulating the supply of fuel to the burner and normally adapted to interrupt the fuel supply when the water in said space reaches a predetermined temperature, and a normally open fluid pressure motor valve adapted, when closed, to interrupt the fuel supply to said motor and comprising a motor chamber, the latter being connected to said water space by a passage, and a fusible obstruction normally closing said passage and subjected to the temperature of the water in said space and adapted to yield and permit the passage of water from said space into the said motor chamber of said valve, whereby the latter is closed, when

the water in said water space rises to a predetermined temperature higher than the first mentioned temperature.

4. In a water heater of the kind comprising a water space containing the heated water and normally filled with water under pressure and a gas burner for heating the water contained in said space, and in combination therewith, means for controlling the fuel supply to said burner comprising a fluid pressure motor valve formed with a diaphragm chamber, a diaphragm mounted in said valve and dividing said chamber into a gas compartment and a water compartment, a normally open gas inlet to said compartment, a gas supply pipe connected thereto, a connection leading from said gas compartment to the burner, said water compartment being connected to said water space by a passage, and a fusible obstruction normally closing said passage and subjected to the temperature of the water in said space but adapted to yield and permit the passage of water from said space into said water compartment to thereby cause said diaphragm to seal said gas inlet on a predetermined rise of temperature of the water in said water space.

1,166,532. ATTACHMENT FOR GRAIN-SEPARATORS. JOHN LUNZ, Belpre, Kans. Filed Apr. 1, 1915. Serial No. 18,559. (Cl. 130—2.5.)



1. The combination with a grain separator, of a wind trunk having a plurality of air orifices in one side, and a plurality of guard fingers coacting with the orifices.

2. The combination with a grain separator, of a wind trunk having a plurality of air orifices in one side, and a plurality of guard fingers extending from the trunk and located above the spaces between the orifices.

3. The combination with the grain pan of a grain separator, of a wind trunk carried by the grain pan and partaking of its motion and provided with a plurality of air escape orifices, a plurality of fingers extending from the trunk substantially in parallel relation to the longitudinal plane of the grain pan, and means for causing induced air currents to pass through said trunk.

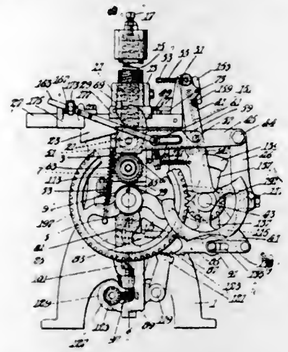
4. In an apparatus of the class described including a separating mechanism, a main air current producing means, means for agitating the product of the separating mechanism located between the separating mechanism and the main air current producing means, and means for supplying preliminary air currents to the products of the separating mechanism while being agitated.

5. In an apparatus of the class described including a separating mechanism, a main air current producing means, and means for agitating the product of the separating mechanism located between the separating mechanism and the main air current producing means, and a wind trunk having a plurality of orifices and associated with said agitating means and partaking of its motion, whereby preliminary air currents are supplied to the products of the separating mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,166,533. SKIVING-MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 16, 1910. Serial No. 577,395. (Cl. 69—13.)

1. A machine of the class described having, in combination, skiving mechanism and means operatively connected therewith and arranged to be operated during the passage of a piece of stock for setting said mechanism to cause it to remove a skiving from each piece of stock fed to said machine irrespective of the original thickness of said piece.



2. A machine of the class described, having, in combination, mechanism adapted to cut a skiving progressively from a piece of stock, and automatic means operatively connected therewith for setting said mechanism to remove a skiving of predetermined thickness at the end where the cut commences from each piece of stock fed to said machine irrespective of the original thickness of said piece.

3. A machine of the class described having, in combination, skiving mechanism and automatic means operatively connected therewith and actuated by the passage of the piece of stock for setting said mechanism to remove a skiving from each piece of stock fed to said machine irrespective of the original thickness of said piece.

4. A machine of the class described having, in combination, skiving mechanism and means operatively connected therewith and arranged to be operated during the passage of a piece of stock for setting said mechanism to remove a skiving of predetermined thickness from each piece of stock of uniform thickness fed to said machine irrespective of the original thickness of said piece.

5. A machine of the class described having, in combination, a skiving knife, feeding mechanism arranged to seize the end of a piece of stock and feed it to said knife, and means constructed and arranged to be operated between the time the stock is seized by the feed-mechanism and the time the forward end of the stock reaches the knife for setting said feed mechanism so as to cause said knife to remove a skiving of predetermined thickness from each piece of stock of uniform thickness irrespective of the original thickness of said piece.

[Claims 6 to 65 not printed in the Gazette.]

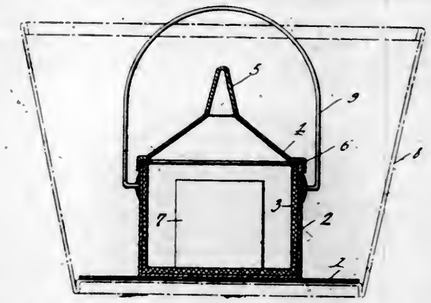
1,166,534. POULTRY DRINKING VESSEL. FRANK C. MOSIER, Pittston, Pa. Filed Mar. 12, 1915. Serial No. 13,889. (Cl. 126—367.)

1. A heating attachment for receptacles, comprising a bottom plate constituting a centering means, a casing thereon, a closure at the top of the casing, and a heat retaining object removably mounted within the casing.

2. As an article of manufacture, a heater for receptacles, comprising a bottom plate, a casing, a lining within the casing, an object removably mounted in the casing and consisting of heat retaining material, and a closure detachably engaging the casing and having an upstanding tubular stem closed at its upper end.

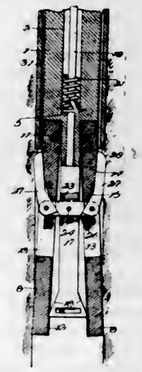
3. As an article of manufacture, a heater for receptacles, comprising a bottom plate, a casing thereon, a lining within the casing, an object removably mounted in the casing and consisting of heat retaining material, and a closure detachably engaging the casing and having the form of an inverted funnel.

4. The combination with a receptacle, of a combined centering and bottom plate removably mounted therein, a



casing fixed on the plate, a closure at the top of the casing, and a heating medium within the casing.

1,166,535. UNDERREAMER. CHARLES L. MUNSINGER, Lima, Ohio. Filed Dec. 23, 1914. Serial No. 878,768. (Cl. 255—76.)



1. A tool of the character set forth comprising a stock, laterally movable cutters connected with the stock and formed with longitudinal slots, an expander arranged between the cutters, a cross bar movable with the expander and having its end portions entering the slots of the cutters and riders pivotally connected to the projecting ends of the cross bar.

2. In a tool of the character specified, the combination of a stock, cutters connected with the stock and adapted to be spread by a lateral movement, each of the cutters being formed with a longitudinal slot, a longitudinal movable expander arranged between the cutters, and riders having pivotal connection with the said expander and arranged to operate in the slots of the cutters and having a limited longitudinal and lateral pivotal movement.

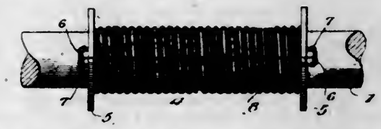
3. A tool of the character specified comprising a stock, cutters connected with the stock and adapted to move laterally, each of the cutters being formed with a longitudinal slot, a longitudinally movable expander arranged between the cutters, riders having their lower ends inclined inwardly and pivotally connected with the expander and adapted to operate in the longitudinal slots of the cutters.

4. In a tool of the character specified, the combination of a stock, cutters having connection with the stock and movable laterally, each of such cutters being formed with a longitudinal slot and a recess in its outer side in communication with the slot, the inner wall of such recess being inclined and vanishing at its upper end into the outer side of the cutter, a longitudinally movable expander arranged between the cutters, and riders having their lower ends pivotally connected with the expander and adapted to operate in the longitudinal slots of the cutters and having their upper ends adapted to operate in the recesses of the cutters and to travel upon the inclined walls of such recesses.

5. In a tool of the character specified, the combination of a stock, cutters connected with the stock and movable laterally, each of such cutters being formed with a longitudinal slot and a longitudinally extending recess in its outer face in line with the slot, the inner wall of such recess being inclined throughout its length, the lower portion being more rapidly inclined than the upper portion and the latter vanishing into the outer side of the cutter, a longitudinally movable expander arranged between the cutters, and riders having pivotal connection with the expander at their lower ends and adapted to operate in the longitudinal slots and recesses of the cutters, said riders having their upper ends beveled.

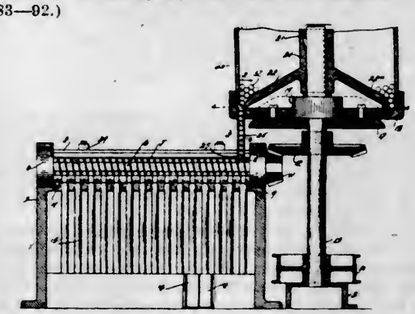
[Claims 6 to 9 not printed in the Gazette.]

1,166,536. WIRE-SPOOL CLAMP. CHARLES L. MUNSINGER, Lima, Ohio. Filed Feb. 15, 1915. Serial No. 8,346. (Cl. 242—117.)



A spool for increasing the diameter of a shaft, the same comprising similar longitudinal sections which are provided at their ends with outwardly extending lugs disposed about in line with the meeting edges of the sections and fastenings passing through the lugs for drawing the sections together and clamping them about a shaft, said spool having a helical groove in the outer side of its body or drum portion and having an inwardly extending annular rib and formed with outwardly extending flanges to form heads or end pieces.

1,166,537. BALL-GAGING MACHINE. ELMER E. NEAL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed July 12, 1911. Serial No. 638,072. (Cl. 83—92.)



1. In a device of the character indicated, in combination, a gaging guideway presenting a gaging slot along which articles to be gaged are adapted to travel in contact with the sides thereof, said slot having relatively fixed sides at different distances from each other, and means for at all times partially supporting each of said articles during its entire travel along said guideway; substantially as described.

2. In a device of the character indicated, in combination, a gaging guideway presenting a gaging slot having thick, relatively fixed wearing and gaging sides at different distances from each other and along which the articles to be gaged are adapted to travel in contact therewith, and means for at all times partially supporting each of said articles during its entire travel along said guideway; substantially as described.

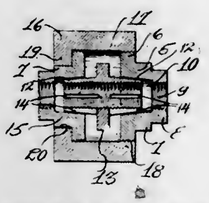
3. In a device of the character indicated, in combination, a gaging guideway presenting a gaging slot along which the articles to be gaged are adapted to travel in contact with the sides thereof, said slot having relatively fixed sides at different distances from each other, and means for causing the articles to travel under control, such means constructed and positioned to at all times partially support each of said articles during its entire travel along said guideway; substantially as described.

4. In a machine for gaging and separating balls, in combination, a slotted guideway along which said balls are adapted to travel in contact therewith, said slot having fixed sides gradually diverging along their length whereby balls of different sizes are adapted to pass through said slot at different points along the same, and means for propelling said balls along said guideway while at the same time continually acting to offset the tractional effect of gravity on said balls during their travel; substantially as described.

5. In a machine for gaging and separating balls, in combination, a slotted guideway along which said balls are adapted to travel, said slot having fixed sides gradually diverging along their length, whereby balls of different sizes are adapted to pass through said slot at different points along the same, a feeding hopper containing a supply of balls and having a stationary unobstructed outlet extending to said guideway large enough for one ball at a time to pass therein, said hopper being moved bodily to keep said balls in continual agitation over said outlet, whereby said balls are continually and in closely adjacent relationship fed through said outlet and means for preserving said relationship and causing the balls to travel under control along said guideway; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,166,538. NUT-LOCK. JOSEPH N. G. NESBIT, Atlanta, Ga. Filed Sept. 11, 1914. Serial No. 861,239. (Cl. 151—19.)



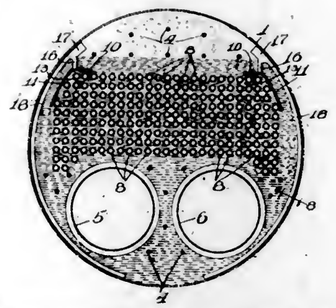
1. A nut lock comprising a pair of similarly constructed nuts, said nuts being provided with a smooth tapering bore, a gripping member having oppositely disposed smooth external tapering portions, and a member engageable with said nuts to draw the same in binding engagement with said gripping member.

2. A nut lock comprising a gripping member having a threaded bore and oppositely disposed smooth external tapering portions, nuts having a tapering bore for engagement with each of said tapering portions, flanges formed on said nuts, and a member engageable with said flanges to draw the nuts in binding engagement with said gripping member.

3. A nut lock comprising a gripping member having a threaded bore and oppositely disposed smooth external tapering portions, said portions being split longitudinally, a nut having a tapering bore for engagement with each of said tapering portions, flanges formed on said nuts, and a member engageable with said flanges to draw the nuts in binding engagement with said gripping member.

4. A nut lock comprising a gripping member having a threaded bore and oppositely disposed smooth external tapering portions, a nut having a tapering bore for engagement with each of said tapering portions, said nut being further provided with a threaded bore, flanges formed on said nuts, said flanges being threaded upon their peripheral edges, a member engageable with said flanges to draw the nuts in binding engagement with said gripping member, said member being provided with threads whereby the same is engageable with either of said nuts.

1,166,539. BOILER ATTACHMENT. ALFRED A. OLSON, Riverside, Ill. Filed Dec. 9, 1914. Serial No. 876,195. (Cl. 122—410.)



1. The combination of a Scotch marine type of boiler, of a baffle plate attached to the outermost tubes therein, causing the heated water around the tubes to flow inwardly and upwardly within the boiler, and the water adjacent the shell to flow downwardly to the bottom thereof.

2. In a device of the class described the combination with a marine boiler and its tubes, of baffle plates secured over the outermost rows of tubes, said baffle plates having a flat horizontal portion and a downwardly curved portion, acting to cause the heated water around the tubes to flow inwardly and upwardly within the boiler shell and the water adjacent the boiler shell and between the same and the baffle plates to flow downwardly to the bottom of the boiler, and hooked means to hold said baffle plates faced from said tubes.

3. In a device of the class described a baffle plate secured over the tubes in a boiler, of a long pipe connection communicating through said baffle plate and leading downwardly to the bottom of the boiler around and adjacent the shell thereof to cause a thermo-siphon flow of water to take place upwardly through the tubes and downwardly through said pipes to the bottom of the boiler.

4. In a device of the class described a pipe secured over the upper tubes of a boiler to extend along the shell thereof from the upper side of the boiler to near the bottom thereof, and means coacting therewith to set up a thermo-siphon flow within the boiler, the cooler water flowing downwardly through said pipe.

5. In a device of the class described the combination with a Scotch marine type of boiler, of baffle plates secured detachably over certain of the tubes therein and extending downwardly therearound, and a pipe connected through said baffle plate and extending downwardly within the boiler constraining a thermo-siphon flow to take place upwardly through the boiler and downwardly through said pipes.

[Claim 6 not printed in the Gazette.]

1,166,540. SENSITIZED FILM FOR PROCESS PRINTING. LOUIS A. ORANS, New York, N. Y. Filed May 20, 1914. Serial No. 839,855. (Cl. 95—9.)



1. A dry photographic film consisting of a base of substantially transparent material having projections upon the surface thereof and a sensitizing coating on said surface.

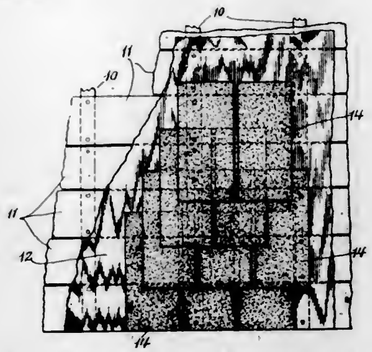
2. A dry photographic film having a base of soft comparatively tough material which is sufficiently transparent for purposes of printing, said base having projections on the surface thereof, the crests of which projections are abradable to form a grain of varying density and a sensitized coating on said surface.

3. A photographic film comprising a base of material which is sufficiently transparent for purposes of printing, said base having projections on the surface thereof corresponding to the dots on a Levy screen, and a sensitized coating on said surface.

4. A dry photographic film consisting of a base of translucent material having projections upon the surface thereof and a sensitizing coating on said surface, and an arc with angular divisions on it impressed thereon.

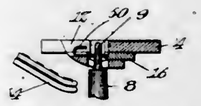
5. A dry photographic film consisting of a base of abradable material sufficiently transparent for purposes of printing, said base having projections formed on the surface thereof to form a grain suitable for photo mechanical printing, and a sensitized coating on said surface.

1,166,541. ROOF. FREDERICK C. OVERBURY, Montclair, N. J. Filed Jan. 19, 1915. Serial No. 3,048. (Cl. 108—6.5.)



In a roof structure, the combination with the roof boards, and an outer covering of prepared roofing material consisting of a fibrous foundation impregnated or coated with a waterproofing hydrocarbon compound, of an interposed coating of a fire resistant substance which is impermeable to and not affected by the resinous content of the boards or by the said impregnating compound, substantially as set forth.

1,166,542. FASTENER-SETTING MACHINE. JAMES PICKLES, Ansonia, Conn., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 7, 1913. Serial No. 759,480. (Cl. 218—17.)



1. A fastener setting machine having, in combination, a movable setting die, a work plate apertured for the passage of the setting die and recessed to receive a hook having a laterally extending perforated shank with its perforation in the path of the die, the recess in said plate being so shaped as to prevent angular displacement of the hook, and an upsetting die arranged to coöperate with said setting die.

2. A fastener setting machine having, in combination, a movable setting die having a center spindle, a work plate apertured for the passage of the setting die and recessed to receive a hook with the eye of the hook surrounding the spindle, means for supporting the hook within the recess and below the surface of the plate, and a coöperating upsetting die.

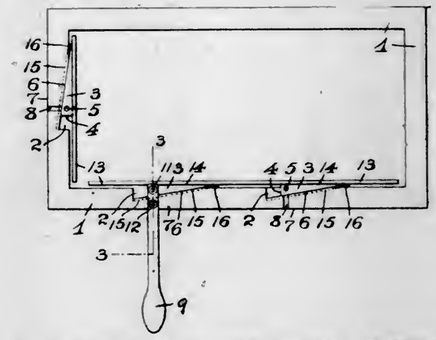
3. A fastener setting machine having, in combination, a setting die, a stationary work plate having a smooth face over which the work may be moved, a recess for receiving a hook entirely below said surface, means for raising a hook into engagement with the lower side of the work supported on the plate and for clenching an eyelet through the hook and work, and automatic work feeding means.

4. A fastener setting machine having, in combination, a movable setting die having a center spindle, a work plate surrounding the die and having a recess for a hook, means for supporting the hook at points on opposite sides of the die with the eye of the hook surrounding the spindle, and a coöperating upsetting die.

5. A fastener setting machine having, in combination, a reciprocatory setting die, a work plate independent of said die apertured for the passage of the die and having a recess for a hook, and a support for the hook located beneath the surface of the work plate and laterally movable from operative to inoperative position, responsive to the movement of the reciprocatory die.

[Claims 6 to 17 not printed in the Gazette.]

1,166,543. PRINTER'S CHASE. STANISLAUS PIWONSKI, Newark, N. J. Filed May 26, 1915. Serial No. 30,559. (Cl. 254—42.)



1. A printer's chase comprising a frame, said frame being formed in the inner marginal portion of one of its sides with a quoin-receiving cut-away portion or depression, a wedge-shaped quoin slidably disposed in said quoin-receiving cut-away portion or depression, and the said side of the frame and the said quoin being provided with registering members to prevent displacement of the quoin, substantially as and for the purpose set forth.

2. A printer's chase comprising a frame, said frame being formed in the inner marginal portion of one of its sides with a quoin-receiving cut-away portion or a depression, a wedge-shaped quoin slidably disposed in said quoin-receiving cut-away portion or depression, the said side of the frame being provided at the point of said quoin-receiving cut-away portion with a channel, and a rib-like member or tongue extending from said quoin and in registration with said channel, substantially as and for the purposes set forth.

3. A printer's chase comprising a frame, said frame being formed in the inner marginal portion of one of its sides with a quoin-receiving cut-away portion or a depression, a wedge-shaped quoin slidably disposed in said quoin-receiving cut-away portion or depression, and the said side of the frame and the said quoin being provided with registering members to prevent displacement of the quoin, the said quoin being provided with a pin-receiving socket and the frame being provided with a pin-receiving groove for the reception of pins extending from a manipulating lever, substantially as and for the purposes set forth.

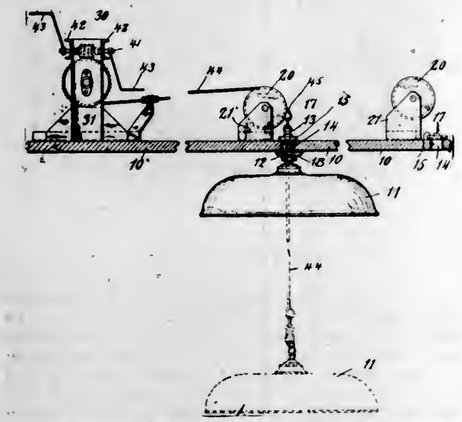
4. A printer's chase comprising a frame, said frame being formed in the inner marginal portion of one of its sides with a quoin-receiving cut-away portion or depression, a wedge-shaped quoin slidably disposed in said quoin-receiving cut-away portion or depression, the said

side of the frame being provided at the point of said quoin-receiving cut-away portion with a channel, and a rib-like member or tongue extending from said quoin and in registration with said channel, the said quoin being provided with a pin-receiving socket and the frame being provided with a pin-receiving groove for the reception of pins extending from a manipulating lever, substantially as and for the purposes set forth.

5. A printer's chase consisting of an open frame comprising longitudinally extending side-members and laterally extending end-members, one of said side-members and one of said end-members being provided in their inner marginal portions with quoin-receiving cut-away portions or depressions of triangular conformation, triangularly shaped quoins slidably disposed in said quoin-receiving cut-away portions or depressions, the said cut-away portions or depressions and the said quoins being disposed in opposing directions, and means detachably connected with said quoins for sliding said quoins in said opposing directions, substantially as and for the purposes set forth.

[Claim 6 not printed in the Gazette.]

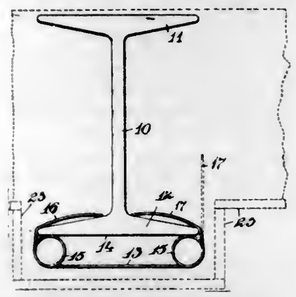
1,166,544. CHANDELIER-HOIST. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y., a Corporation of New York. Filed Oct. 2, 1912. Serial No. 723,485. (Cl. 254—145.)



1. In combination with a horizontal supporting surface having a plurality of holes, a plurality of sheaves distributed thereon and respectively adjacent to the holes, chains extending through the holes and cross pins adapted to coöperate with the chains for adjustably supporting the chain upon the surface, a single hoist adapted to raise any one of the chains to permit the resetting of its cross pins and comprising a stationary standard, a winding drum rotatively supported thereon, a crank and interposed gearing for rotating the drum, a cable adapted to be wound on the drum and to be connected to one of the chains, said standard having relatively stationary pulleys spaced apart for guiding the cable onto and off of the drum from any angle determined by the position of the chain which it is desired to adjust, and each of said chains being adapted to support a chandelier.

2. In combination with a horizontal supporting surface having a plurality of holes, a plurality of sheaves distributed thereon and respectively adjacent to the holes, a pair of brackets located on opposite sides of each hole, a chain extending through each hole and a cross pin extending through a link of each chain and seated in a pair of said brackets, whereby the chains are supported from the surface; a single hoist adapted to raise any one of the chains and its attachments and comprising a standard, a winding drum rotatively supported thereon, a worm gear wheel affixed to the drum, a worm gear meshing with the wheel, a crank or lever for turning the worm gear and a cable adapted to be wound on the drum and to be connected to any one of said chains, said standard having relatively stationary means for guiding the cable onto or off of the drum from any angle, and said chains being adapted to support chandeliers.

1,166,545. REINFORCING MEMBER FOR CONCRETE STRUCTURES. GEORGE H. REED, Newark, N. J., assignor to Reed Metal Lath Co., Newark, N. J. Filed Nov. 9, 1914. Serial No. 870,942. (Cl. 72—109.)



1. A reinforcing means for concrete structures and the like comprising a longitudinal tie wire, transverse reinforcing members rigidly secured to and spaced along said tie wire and being formed with spacing loops thereon to hold said transverse members on the tie wire at a distance from an element to which the reinforcing means is secured, the transverse members having bendable projecting ends for securing the reinforcing means to an element.

2. A reinforcing means for concrete structures comprising tie wires spaced apart, transverse reinforcing members rigidly secured to and spaced along the tie wires whereby the tie wires are held apart and the reinforcing members are held apart, and bendable projections on said reinforcing means for securing said reinforcing means to an element.

3. A reinforcing means for concrete structures and the like comprising spaced tie wires, and reinforcing members rigidly secured to and spaced along said tie wires and acting to hold them apart and in turn being held apart thereby, the reinforcing members having spacing loops thereon and being formed on the side of said loops opposite the tie wires with bendable projections.

4. A reinforcing member for concrete structures consisting of substantially parallel tie wires, and spacing members secured at intervals to said tie wires, said spacing members comprising a strip of soft metal forming a connecting strand having separated closed loops, said closed loops surrounding the tie wires and being secured thereto, the ends of the loops projecting from the loops in a direction away from the connecting strand, said ends forming bendable festening means.

5. A reinforcing strip for concrete structures comprising a series of soft metal strips bent into loops near the ends and forming beyond said loops bendable fastening means, and a tie wire extending across and joining said above described members and being secured thereto to space them apart.

1,166,546. PROCESS OF PRODUCING A LIQUID EXPLOSIVE. OTTO REUTER, Schlebusch-Manfort, Germany, assignor, by mesne assignments, to Dynamit-Actien-Gesellschaft, Hamburg, Germany. Filed July 27, 1912. Serial No. 711,859. (Cl. 52—3.)

1. The process of producing an explosive which comprises nitrating toluene beyond the dinitrotoluene stage so as to produce mainly trinitrotoluene, crystallizing out solid trinitrotoluene from a solution of the nitrotoluenes in a solvent, evaporating the solvent and nitrating the residues thus obtained.

2. The process of producing an explosive which comprises nitrating toluene beyond the dinitrotoluene stage so as to produce mainly trinitrotoluene, crystallizing out solid trinitrotoluene from a solution of the nitrotoluenes in alcohol, evaporating the alcohol and nitrating the residues thus obtained.

1,166,547. METHOD OF OBTAINING TITANIC OXID AND THE RESULTING PRODUCT. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Apr. 18, 1914. Serial No. 832,747. (Cl. 23—13.)

1. The process of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid which comprises melting said substance together with oxid of an alkali metal; digesting the resulting melt by hydrochloric acid in substantially the proper amount to combine only with alkali metal and iron present; and then adding to the product of digestion water in such quantity, and of temperature so low, as to promote settling therein of titanic, while retaining in solution other compounds.

2. The process of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid which comprises melting said substance together with oxid of an alkali metal; digesting the resulting melt by hydrochloric acid in substantially the proper amount to combine only with alkali metal and iron present; adding to the product of digestion water in such quantity, and of temperature so low, as to promote settling therein of titanic, while retaining in solution other compounds, withdrawing the liquor and calcining the residual product.

3. The process of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid which comprises melting said substance together with oxid of an alkali metal; digesting the resulting melt by hydrochloric acid; adding water to the product of digestion in such quantity, and of temperature so low, as to promote settling therein of titanic, while retaining in solution other, compounds; and incorporating enough chlorid of sodium to accelerate such settling.

4. The process of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid which comprises melting said substance together with oxid of an alkali metal; lixiviating the resulting melt to remove excess soda; digesting the residue by hydrochloric acid in substantially the proper amount to combine only with alkali metal and iron present; and then adding to the product of digestion water in such quantity, and of temperature so low, as to promote settling therein of titanic, while retaining in solution other compounds.

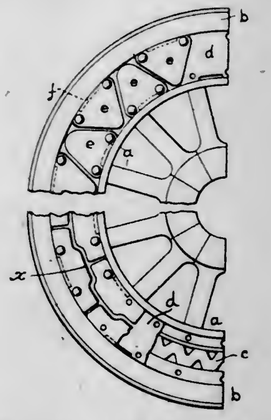
5. The process of obtaining titanic oxid (TiO_2) from a substance containing it and iron oxid which comprises melting said substance together with oxid of an alkali metal; lixiviating the resulting melt to remove excess soda; digesting the residue by hydrochloric acid in substantially the proper amount to combine only with alkali metal and iron present; adding to the product of digestion water in such quantity, and of temperature so low, as to promote settling therein of titanic, while retaining in solution other, compounds; withdrawing the liquor, and calcining the residual product.

[Claims 6 to 10 not printed in the Gazette.]

1,166,548. CUSHION-WHEEL. HERBERT J. SEWELL, Highland Park, Mich. Filed Aug. 22, 1914. Serial No. 858,011. (Cl. 152—36.)

1. A resilient wheel, having in combination, an inner wheel part, an outer wheel part, cushioning devices spacing the two wheel parts, shield plates disposed in substantially the same plane, some being fastened to only one wheel part and some fastened to only the other wheel part, the said shield plates fastened to one wheel part extending beyond but spaced from the shield plates fastened to the other wheel part and the said shield plates engaging against the cushioning devices and serving to prevent lateral displacement of the two wheel parts, substantially as described.

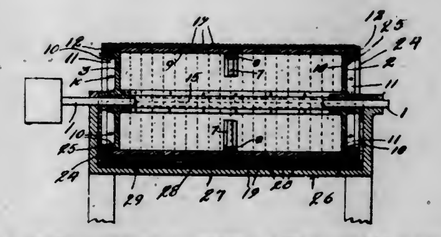
2. A resilient wheel, having in combination, an inner wheel part, an outer wheel part, cushioning devices spacing the two wheel parts, a plurality of shield plates disposed in substantially the same plane, each shield plate secured to only one wheel part and the shield plates alternating in being secured to the one wheel part and the other wheel part, the alternating shield plates extending radially beyond each other and spaced from each other to allow relative movement of the two wheel parts and engaging against the cushioning devices to prevent lateral displacement of the two wheel parts, substantially as described.



3. A resilient wheel, having in combination, an inner wheel part, an outer wheel part, cushioning devices spacing the two wheel parts, shield plates disposed in substantially the same plane and at the side of the cushioning devices, some being fastened to only one wheel part and some being fastened to only the other wheel part, the said shield plates fastened to the one wheel part extending to overlapping relation with the other wheel part and the shield plates fastened to the latter wheel part extending into overlapping relation with the former wheel part, the individual shield plates fastened to one wheel part being spaced from the individual shield plates fastened to the other wheel part, substantially as described.

4. A resilient wheel, having in combination, an inner wheel part, an outer wheel part, cushioning devices spacing the two wheel parts, triangular shield plates located in substantially the same plane at each side of the cushioning devices and alternately inverted, each shield plate secured to only one wheel part at its base but overlapping the other wheel part at its apex, the said shield plates being spaced from each other to allow relative movement between the wheel parts, substantially as described.

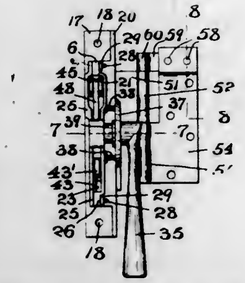
1,166,549. HULLING-CYLINDER FOR CLOVER AND ALFALFA HULLERS. FREDERICK E. SHAFER, Idaville, Ind. Filed Mar. 4, 1915. Serial No. 12,158. (Cl. 130—2.)



A hulling cylinder comprising cylinder heads having laterally extending annular flanges, said flanges being constructed to form transverse channels being alined, said

channels having adjoining recesses, an elongated strip being bent to form a longitudinally extending channel and having longitudinally extending flanges to seat in said recesses, said channeled strip engaging the channels of the flanges and connecting said heads, a sheet metal cylinder wall having its adjacent longitudinal edges spaced apart and partially overlying the channel in the strip, a plurality of rasping bands fitting the exterior of the cylinder wall and having angular adjacent ends extending between the longitudinal adjacent edges of the wall and engaging under the portions of the wall which overlie the channel of the strip, and means bolted to the cylinder heads to prevent endwise movement of the rasping band.

1,166,550. SASH HINGE-FIXTURE. CEPHAS I. SHIRLEY, Glen Ridge, and FREDERICK WALTER MUELLER, Newark, N. J., assignors to Tabor Sash Fixture Co., a Corporation of New Jersey. Filed Oct. 1, 1913. Serial No. 792,727. (Cl. 16—106.)



1. A hinge-fixture for windows having a sash which is mounted in the frame to move vertically and also swing horizontally comprising an element adapted to be secured to the frame, a slide movably connected with said fixed element, said slide being made in the manner of a hinge-leaf, a hinge-leaf secured to the window sash and pivotally connected with said slide, a cam or eccentric rotatably connected with said fixed element, a spindle and lever for operating said cam or eccentric, and a link interposed between said cam or eccentric and said slide for reciprocally moving said slide and the hinge-leaf pivotally connected with said slide.

2. A hinge-fixture for windows having a sash which is mounted in the frame to move vertically and also swing horizontally comprising a plate-like element adapted to be secured to the frame, said plate-like element having a slide-receiving depression and an elongated opening, a slide arranged in said depression, said slide being made in the manner of a hinge-leaf, a flange-like member extending rearwardly from said plate-like element, a guide-plate also provided with a rearwardly extending flange-like element, secured to said first-mentioned flange-like element so as to provide a space between said flange-like elements, a guide-post connected with said slide, said post extending through said elongated opening and coöperating with a rib on said guide-plate, a hinge-leaf secured to the window sash and pivotally connected with said slide.

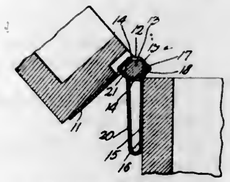
3. A hinge-fixture for windows having a sash which is mounted in the frame to move vertically and also swing horizontally comprising a plate-like element adapted to be secured to the frame, said plate-like element having a slide-receiving depression and an elongated opening, a slide arranged in said depression, said slide being made in the manner of a hinge-leaf, a flange-like member extending rearwardly from said plate-like element, a guide-plate also provided with a rearwardly extending flange-like element, secured to said first-mentioned flange-like element so as to provide a space between said flange-like elements, a guide-post connected with said slide, said post extending through said elongated opening and coöperating with a rib on said guide-plate, a hinge-leaf secured to the window sash and pivotally connected with said blade, said flange-like elements being provided with bearing-portions, a spindle rotatably mounted in said bearing-portions, and a lever connected with said spindle, and means interposed between said spindle and said slide for reciprocally moving said slide and the hinge-leaf pivotally connected with said slide.

4. A hinge-fixture for windows having a sash which is mounted in the frame to move vertically and also swing horizontally comprising a plate-like element adapted to be secured to the frame, said plate-like element having a slide-receiving depression and an elongated opening, a slide arranged in said depression, said slide being made in the manner of a hinge-leaf, a flange-like member extending rearwardly from said plate-like element, a guide-plate also provided with a rearwardly extending flange-like element, secured to said first-mentioned flange-like element so as to provide a space between said flange-like elements, a guide-post connected with said slide, said post extending through said elongated opening and coöperating with a rib on said guide-plate, a hinge-leaf secured to the window sash and pivotally connected with said slide, said flange-like elements being provided with bearing-portions, a spindle rotatably mounted in said bearing-portions, and a lever connected with said spindle, and a cam or eccentric mounted upon said spindle, and a link interposed between said cam or eccentric and said slide for reciprocally moving said slide and the hinge-leaf pivotally connected with said slide.

5. A hinge-fixture for windows having a sash which is mounted in the frame to move vertically and also swing horizontally comprising a plate-like element adapted to be secured to the frame, said plate-like element having a slide-receiving depression and an elongated opening, a slide arranged in said depression, said slide being made in the manner of a hinge-leaf, a flange-like member extending rearwardly from said plate-like element, a guide-plate also provided with a rearwardly extending flange-like element, secured to said first-mentioned flange-like element so as to provide a space between said flange-like elements, a guide-post connected with said slide, said post extending through said elongated opening and coöperating with a rib on said guide-plate, a hinge-leaf secured to the window sash and pivotally connected with said slide, said flange-like elements being provided with bearing-portions, a spindle rotatably mounted in said bearing-portions, and a lever connected with said spindle, a stirrup extending rearwardly from said slide, through said elongated opening and into the space between said flange-like elements, a pivot-pin connected with said stirrup, and means interposed between said spindle and said pivot-pin for reciprocally moving said slide and the hinge-leaf connected with said slide.

[Claims 6 and 7 not printed in the Gazette.]

1,166,551. HINGE. PARKER T. SIMMONS, Attleboro Falls, Mass. Filed Dec. 21, 1914. Serial No. 878,379. (Cl. 16—104.)



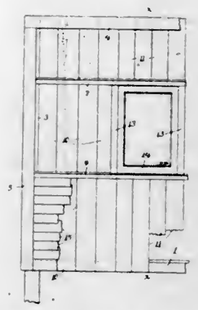
1. A hinge of the class described comprising two leaf members, an angular pintle fixed to one, the other having an ear on its inner edge engaging the pintle and a spring extension on its outer edge extended inwardly over the leaf and having its extremity engaged with the pintle in opposition to the ear, the ear and spring being shaped to engage flatly against opposed faces of the pintle, and having biased engaging edge portions for the purpose described.

2. A hinge of the character described comprising a pintle member having at least a portion angular in cross

section, a supporting member fixed thereto, a member pivoted thereon comprising a plate of resilient sheet metal having an inner edge portion bent to form an offset bearing to engage flatly on the pintle, and an outer edge portion bent inwardly over the leaf and its outer part disposed to engage the pintle in opposition to the inner edge portion, at least one of the engaging portions last named being shaped to engage more than one side of the pintle, and each having biased edge portions for the purpose mentioned.

3. In a hinge of the class described a leaf stamped from resilient sheet metal and comprising a body portion for attachment to a support an inner edge portion shaped to engage an angular pintle, and an outer edge portion recurved over the body with its extremity shaped and disposed to engage the pintle in opposition to the inner edge portion.

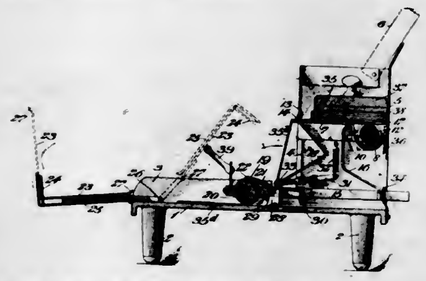
1,166,552. BUILDING. GEORGE B. SINCLAIR, Georgetown, Me. Filed May 5, 1915. Serial No. 26,090. (Cl. 20—1.)



1. A building comprising sills, top plates, corner-boards, horizontal girts extending from corner-boards to corner-board, one along the window-tops and the other along the window-sills, and composing parts of the window-frames, and vertical boards fastened side by side to the outer surfaces of the sills and the inner surfaces of the girts and the inner surfaces of the boards forming the inner surfaces of the walls.

2. A building comprising sills, top plates, corner-boards, two horizontal girts extended from corner to corner of each wall, each having a vertical inner surface and a slanting upper surface, window frames of which said girts form the tops and sills, and vertical boards fastened side by side to the outer surfaces of the sills, and to the inner surfaces of the girts and top plates.

1,166,553. ENVELOP-SEALING DEVICE. JAMES SLAYBAUGH, Philadelphia, Pa., assignor of one-half to Edwin A. Newton, Philadelphia, Pa. Filed Oct. 14, 1914. Serial No. 866,584. (Cl. 120—6.)



1. In a device of the character stated, a support, a container for the envelops with their flaps open, a reciprocating feeder to withdraw the lowermost envelop, means for reversing the envelop to deposit the same upon the support with the flap uppermost, means for moistening the flap, and means movable with said feeder to seal the flap in one movement and in another movement to remove the sealed envelop from its position on the support.

2. In a device of the character stated, a support, a container for the envelops with their flaps open, a moistening device, means for removing the lowermost envelop and for causing the gummed portion of the flap to contact with the moistening device, means for holding the envelop in a substantially upright position, means on said removing means for releasing said envelop, whereby the same will fall upon said support with the flap thereof uppermost, and means movable with said removing means for sealing said flap.

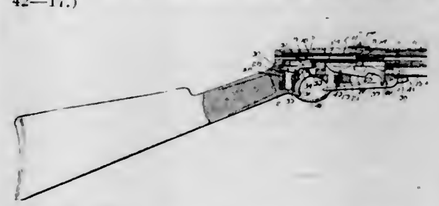
3. In a device of the character stated, a support, a container for the envelops with their flaps open, a moistening device, a reciprocating feeder for removing the lowermost envelop and drawing the gummed portion of the flap into contact with the moistening device, means for holding said envelop in a substantially upright position upon the return movement of said feeder, means on said feeder adapted on the next forward movement thereof to release said envelop from said holding means, whereby the same will fall upon said support with the flap uppermost, and means movable with said feeder for engaging said flap to seal the same.

4. In a device of the character stated, a support, a container for the envelops with their flaps open, a moistening device, a reciprocating feeder for removing the lowermost envelop and drawing the gummed portion of the flap into contact with the moistening device, means for holding said envelop in a substantially upright position upon the return movement of said feeder, means on said feeder adapted on the next forward movement thereof to release said envelop from said holding means, whereby the same will fall upon said support with the flap uppermost, means movable with said feeder for engaging said flap to seal the same, on one movement of said feeder and to remove the sealed envelop from its position upon said support, on the reverse movement of said feeder.

5. In a device of the character stated, a support, a container for the envelops with their flaps open, a moistening device, a reciprocating feeder for removing the lowermost envelop and drawing the gummed portion of the flap thereof into contact with the moistening device, means for holding said envelop in a substantially upright position upon the return movement of said feeder, means on said feeder adapted on the next forward movement thereof to release said envelop from said holding means whereby the same will fall upon said support with the flap uppermost, means with which the lower portion of the envelop is adapted to engage to insure the proper tilting of the envelop, and means, movable with said feeder, for thereafter engaging said flap to seal the same.

[Claims 6 to 14 not printed in the Gazette.]

1,166,554. FIREARM. MORRIS FORD SMITH, Philadelphia, Pa. Filed Dec. 10, 1909. Serial No. 532,408. (Cl. 42—17.)



1. In a gun the combination of a frame having an abutment for the receiver, a receiver adapted to slide longitudinally upon the frame when assembling and to engage with said abutment, easily releasable means for locking the receiver to the frame, a breech bolt mounted to reciprocate in said receiver and to revolve therein for locking and unlocking, the barrel being secured to said receiver, a

slide embracing said receiver and a slot in the slide through which the slide controls the breech bolt.

2. In a take down fire arm having a frame and a rotary unlocking and reciprocating opening and closing breech bolt, the combination with a stationary receiver for said breech bolt, an abutment 4 on the frame for rigidly engaging with the rear end of said receiver, easily releasable means for locking the receiver to the frame, a firing hammer in said breech bolt, and an external breech slide embracing said receiver and having movement relatively to the breech bolt and also with the breech bolt and means whereby the breech slide rotates the breech bolt unlocking it from the receiver.

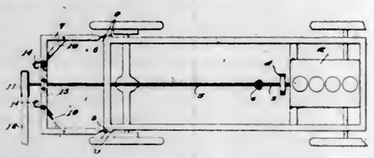
3. In a take down fire arm, having a frame with an upward projection, a rotary unlocking and reciprocating opening and closing breech bolt, a firing hammer in said breech bolt, a receiver for said breech bolt rigidly engaging said projection upon said frame, easily releasable means for locking said receiver to said frame, and an external breech slide embracing said receiver, an opening through the receiver, a projection on the breech bolt by means of which the breech slide is adapted to unlock said breech bolt from the receiver, said projection extending through said opening in the receiver.

4. In a take down fire arm having a frame with an upward projection, a rotary unlocking and reciprocating opening and closing breech bolt, and a firing hammer in said breech bolt, the combination with a receiver for said breech bolt rigidly engaging said projection, upon the frame, easily releasable means for locking said receiver to said frame, and an external breech slide adapted to slide longitudinally upon the receiver embracing the same, and a projection on the breech bolt projecting through and engaging said receiver and engaging a cam groove in the slide whereby the breech bolt actuated by said slide is adapted to be unlocked from the receiver.

5. In a gun, the combination of a frame having an abutment for the receiver, a receiver adapted to slide longitudinally upon the frame when assembling and to engage with said abutment, a breech bolt having rotary locking and unlocking and longitudinally opening and closing movements in said receiver, a sleeve surrounding the receiver, a slot in the sleeve, through which the sleeve controls the bolt.

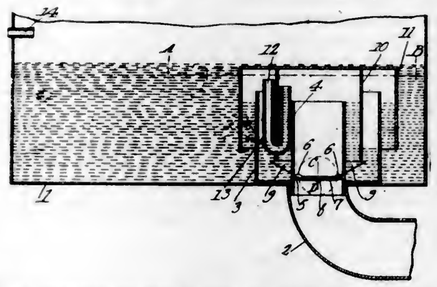
[Claims 6 to 26 not printed in the Gazette.]

1,166,555. POWER TRANSMISSION. MATHIAS T. SPRANGERS, Sauk Rapids, Minn. Filed June 21, 1913. Serial No. 775,078. (Cl. 21—90.)



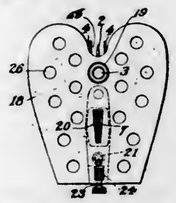
The combination with a motor vehicle of a U-shaped frame formed of a continuous strip of metal, the strip comprising said frame being bent adjacent each end at ninety degrees to engage the vertical sides of the frame of the vehicle, means to secure the ends of said frame to the frame of the vehicle to retain the same in a rigid position, a bearing carried by said frame and located at the approximate center of the central extent of said U-shaped frame, a shaft journaled in said bearing to receive power motion from the power unit of the vehicle, means carried by the outer end of said shaft to permit the transmission of motion therefrom, the inner end of said shaft extended to a point approximate the power shaft of the vehicle and provided with a universal joint whereby motion generated by the power unit of the vehicle is transmitted to said shaft, and hooks carried by said frame on either side of said bearing mounted thereon to be engaged to secure the frame and maintain the vehicle in a position with the power transmitting means carried by the shaft in proper relation.

1,166,556. AUTOMATIC FLUSHING TANK OR RESERVOIR. EMIL P. STARY, Cedar Rapids, Iowa. Filed May 19, 1914. Serial No. 839,554. (Cl. 137—106.)



The combination with a tank or reservoir of relatively small capacity having an outlet pipe of large capacity extending from the bottom thereof, of a container, a discharge pipe extending through the bottom of the container and of relatively large capacity, said discharge pipe opening into the outlet pipe to form the long leg of a siphon, inner and outer bells, the said container being extended upwardly between the bells, an air pipe extending downwardly along the outer side of the inner bell and upwardly along the inner side of said bell, supports rediating from the lower portion of the discharge pipe and above and close to the bottom of the container, the inner bell being mounted on said supports, a disk pivotally mounted within the discharge pipe substantially in the same plane with the bottom of the container, one side portion of said disk being weighted, and means for supporting the weighted portion of the disk to limit its downward movement, said disk being normally in position to choke the discharge pipe but being adapted to open automatically when subjected to a predetermined weight of liquid.

1,166,557. SMALL FIREARM. DEMETRIOS STERGIANOPULOS, Wilmington, Del. Filed May 21, 1915. Serial No. 29,476. (Cl. 42—1.)



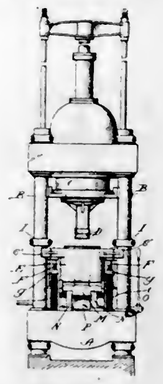
1. In a rifle, a fore sight, and a guard in advance thereof, disposed transversely of the rifle barrel and provided with an opening opposite the top edge of the sight.

2. In a rifle, a fore sight, and a guard in advance thereof, disposed transversely of the rifle barrel, said guard being extended for a considerable extent beyond all sides of the rifle and having an opening opposite the upper edge of the sight.

3. In a rifle, a fore sight, and a guard in advance thereof, disposed transversely of the rifle barrel, said guard being extended for a considerable extent beyond all sides of the rifle and having an opening opposite the upper edge of the sight and openings disposed throughout its area.

1,166,558. PRESS. FRANCIS E. STEVENSON and HARRY C. LITTLE, Mount Gilead, Ohio, assignors to The Hydraulic Press Manufacturing Company, Mount Gilead, Ohio. Filed July 3, 1915. Serial No. 38,009. (Cl. 25—84.)

1. A press comprising a floating chambered die, an upper die coöperating therewith and which when it descends lowers the floating die, a lower die extending into the chamber of the floating die, means for withdrawing the floating die from the lower die and for moving the lower die laterally to one side of the press.

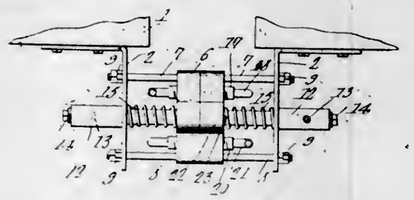


2. A press comprising a floating chambered die, springs on which it is supported, an upper die coöperating with the floating die and which when it descends lowers the floating die, a lower die extending into the chamber of the floating die, means for lifting the floating die above the plane of the lower die and means for moving the lower die laterally to one side of the press.

3. A press comprising a floating chambered die, an upper die coöperating therewith and which when it descends lowers the floating die, a lower die extending into the chamber of the floating die, a die-carrier on which the lower die is mounted, means for raising the floating die above the plane of the lower die, means for moving the lower die laterally, and means on the die-carrier for supporting the floating die when the lower die is moved to one side of the chamber of the floating die.

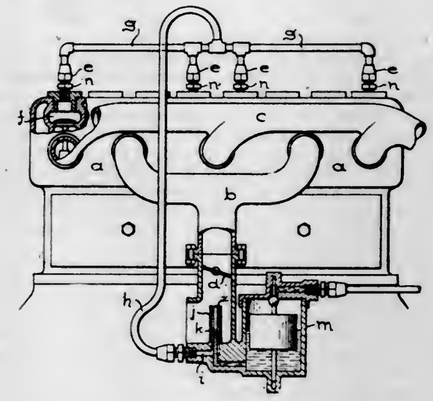
4. A press comprising a floating chamber die, an upper die coöperating therewith and which when it descends lowers the floating die, a lower die extending into the chamber of the floating die, a die-carrier for the lower die, an apron carried thereby for pushing the compressed material to one side of the press, means for raising the floating die above the plane of the lower die, and means for moving the lower die and its carrier sidewise relatively to the vertical axis of the floating die.

1,166,559. TRAIN-PIPE CONNECTOR. JOSIAH SULLIVAN, McCook, Nebr., and CHARLES E. SULLIVAN, Pueblo, Colo. Filed Sept. 11, 1913. Serial No. 789,356. (Cl. 188—13.)



In a device of the class described, a support having upper, lower and intermediate openings; a coupling head; arms projecting rearwardly from the head and loosely received in the upper and lower openings; a pipe projecting rearwardly from the head and loosely received in the intermediate opening; a spring interposed between the support and the head and surrounding the pipe; an extension threaded onto the pipe and engaging the rear face of the support to limit the forward movement of the pipe under the action of the spring, the extension being rotatable on the pipe to adjust the compressive effort of the spring on the head; a closure for the rear end of the extension; and a nipple projecting laterally from the extension, the nipple constituting at once a pipe connection and a means whereby the extension may be rotated to adjust the compressive effort of the spring; and nuts on the ends of the arms at the rear of the support, the nuts being adjustable to bear on the rear face of the support when the arms are slid rearwardly due to a longitudinal adjustment of the pipe by means of the extension.

1,166,560. CARBURETER. PERCIVAL S. TICE, Detroit, Mich. Filed Oct. 4, 1912. Serial No. 723,822. (Cl. 123—132.)

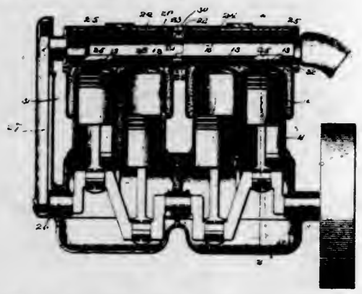


1. In an internal combustion engine, a working cylinder having a combustion chamber, a conduit for delivering liquid fuel, a passage communicating with said combustion chamber and so located that it shall project a jet of gas past the delivery end of said conduit so as to spray the liquid therefrom, said passage being unobstructed throughout its length and in uninterrupted connection with said combustion chamber by an aperture of such a size that the gas shall be impelled through said passage by a pressure which is the algebraic sum of the pressures in said combustion chamber.

2. In an internal combustion engine, the combination of a plurality of cylinders, each of said cylinders having a combustion chamber, a manifold, means for placing said manifold in uninterrupted connection with the combustion chamber of each of said cylinders, a conduit for liquid fuel and a passage continuously open throughout its length leading from said manifold and so located that it shall project a jet of gas past the delivery end of said conduit so as to spray the liquid fuel from said conduit, the connection between said passage and combustion chamber being such that the gases shall be impelled through said passage by a pressure which is the algebraic sum of the pressures in the combustion chamber.

3. In an internal combustion engine, a working cylinder having a combustion chamber, a conduit for delivering liquid fuel, a passage communicating with said combustion chamber and so located that it shall project a jet of gas past the delivery end of said conduit so as to spray the liquid therefrom, said passage being unobstructed throughout its length and in uninterrupted connection with said combustion chamber, the opening from said passage into said combustion chamber and the opening from said passage through which the jet is delivered having their areas proportioned to each other so that the proper rate of delivery of fuel shall be secured under different conditions of the operation of the engine.

1,166,561. INTERNAL-COMBUSTION ENGINE. WILLIAM DOLLY TIPTON, Baltimore, Md. Filed Oct. 19, 1912, Serial No. 726,836. Renewed May 3, 1915. Serial No. 25,632. (Cl. 123—59.)



1. The combination with an internal combustion cylinder, of a valve rotating adjacent the cylinder and provided with an inner and an outer chamber, a valve casing inclosing the valve and comprising two sections spaced apart, means including an independent annular member having an inner annular channel disposed between said sections to supply explosive mixture to the outer chamber, said outer chamber being provided with diametrically disposed ports adapted to communicate at times with the cylinder and the inner chamber being provided with other ports disposed diametrically and positioned to register at other times with the cylinder.

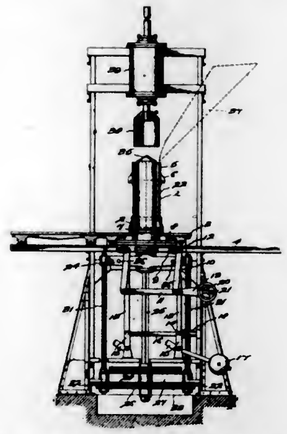
2. The combination with an internal combustion cylinder, having passages leading therefrom and terminating in spaced ports, of a valve rotating between the ports and comprising inner and outer chambers, a valve casing inclosing the valve and comprising two sections spaced apart, means including an independent annular member having an inner annular channel disposed between said sections to supply explosive mixture to the outer chamber, said outer chamber having ports positioned to at times register with the passages of the cylinder and the inner chamber having ports positioned to at other times register with the passages of the cylinder.

3. The combination with an internal combustion cylinder, having passages leading therefrom terminating in spaced ports, of a cylindrical valve mounted to rotate between the ports and embodying an inner exhaust chamber and an outer inlet chamber, a valve casing inclosing the valve and comprising two sections spaced apart, means including an independent annular member having an inner annular channel disposed between said sections to supply an explosive mixture to the inlet chamber, said chamber having diametrically spaced ports positioned to at times register with the passages of the cylinder and an exhaust conduit having diametrically disposed ports positioned to at other times register with the passages of the cylinder, the casing for the valve including a partition wall between the spaced ports, one port of each chamber being simultaneously cut off by said partition wall.

4. The combination with a plurality of internal combustion chambers and pistons reciprocating therein, of a cylindrical valve mounted to rotate across and in communication with the several cylinders, a casing for the valve formed in sections spaced apart, a filler member located between said sections and formed with a channel admitting gas to the valve, a furrow formed in the casing along the under side of the valve, and means to pass a lubricant through the furrow, the filler member having a passageway for the lubricant.

1,166,562. MOLDING-MACHINE. ARTHUR C. TUNISON, Salt Lake City, Utah, assignor to Atlas Concrete Pipe Machinery Company, Salt Lake City, Utah, a Corporation of Utah. Filed July 7, 1913, Serial No. 777,797. Renewed May 17, 1915. Serial No. 28,770. (Cl. 25—30.)

1. In a molding machine, the combination of a mold, an auxiliary mold section thereon, means for supplying material to one end of said mold section, a plunger, means for forcing said plunger through said section for compressing the material in said mold, a reciprocating member extending within the opposite end of said mold, and means for reciprocating said member during the actuation of said plunger.



2. In a molding machine, the combination of a pipe mold provided with a flaring bell end, a detachable auxiliary mold section thereon, means for supplying material to said mold and section, a plunger, means for forcing said plunger through said section for compressing the material in said mold, a bell ring extending within the flaring end of said mold, and means for reciprocating said bell ring during the actuation of said plunger.

3. In a molding machine, the combination of a pipe mold, a detachable auxiliary mold section thereon, an apertured supporting bed therefor, a bell ring adapted to extend through said apertured bed, means for reciprocating said bell ring, a core, means for shifting said core through said bell ring into and out of said mold, means for rotating said core independently of such shifting thereof, and means for withdrawing said bell ring from the mold.

4. In a pipe molding machine, the combination of a mold, a reciprocatingly mounted pipe core, means for inserting and withdrawing said core from said mold, means for rotating said core in its several shifted positions, a bell ring slidably mounted on said core, means for shifting said bell ring into and out of said mold, and means for reciprocating said bell ring for tamping the material in said mold.

5. In a pipe molding machine, the combination of a mold, a core, means for shifting said core into and out of said mold, a bell ring slidably mounted on said core, weights for normally maintaining said bell ring within said mold, and means for withdrawing said bell ring from said mold.

[Claims 6 to 18 not printed in the Gazette.]

1,166,563. METALLIC SHEET-PILING. JULIUS R. WEMLINGER, Brooklyn, N. Y. Filed Oct. 1, 1912. Serial No. 723,306. (Cl. 189—22.5.)



1. A sheet pile formed of a metallic plate having edge corrugations of substantially semi-circular cross section, and intermediate corrugations composed of segmental curves joined by straight portions arranged diagonally of the medium plane of the pile, a longitudinally extending hook, the end portion of which is spaced apart from and curves substantially parallel to the edge corrugation of the piling.

2. A metallic sheet piling section composed of a plate, one edge of which is formed into a curved tongue and the other edge of which is curved and provided with a clip, the end spaced apart therefrom, and substantially parallel thereto, thereby forming a corresponding curved groove.

3. A metallic pile formed of a plate provided with a pair of oppositely disposed semi-circular corrugations at each edge, one of the extreme edge corrugations being of a radius less than the other by the thickness of said plate, a clip secured to the convex portion adjoining the edge corrugation of larger radius, spaced apart therefrom and adapted to overlap a considerable length of the inner concave surface thereof.

4. Sheet metal piling formed in sections and having longitudinal interlocking edges comprising a flange on the edge of one section, and a plurality of hooks in the edge of the adjacent section, the ends spaced apart therefrom and substantially parallel thereto and inclosing a longitudinal channel adapted to receive said flange, said interlocking edges adapted to be engaged by a lateral entrance.

5. Sheet metal piling formed in sections and having longitudinal interlocking edges adapted to engage by lateral entrance, said interlocking edges comprising engaging locking flanges on the mating edges of adjacent sections, and one of said edges in each joint having a retaining hook having its edge projecting inwardly toward the edge of the locking flange but separated therefrom sufficiently to permit the entrance of the opposite flange, and said retaining hook being curved in substantially the arc describing the opposite locking flange in entering so as to form a tight joint.

[Claims 6 to 8 not printed in the Gazette.]

1,166,564. SPRING. FRANK E. WILCOX, Mechanicsburg, Pa. Filed Aug. 22, 1913. Serial No. 786,114. (Cl. 267—32.)



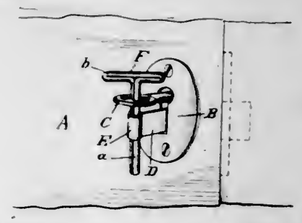
1. The combination of a main semi-elliptical shaped spring, a lever having three pivotal points, a supplemental leaf spring facing the concave surface of the said main semi-elliptic spring; the said lever being pivoted intermediate its ends to the end of the main spring, its outer end extending outside of and beyond the main spring and its inner end overlapping the spring; and a support of greater length than the length of either of the two springs pivoted to said outer end of the lever, and the inner end of the lever pivoted to the end of the supplemental spring; means being provided in connection with the lever to permit the elongation of the supplemental spring when being flexed.

2. The combination of a main semi-elliptic shaped spring, two levers each having three pivotal points, a supplemental leaf spring facing the concave surface of the semi-elliptic spring; said levers being pivoted each intermediate its ends to opposite ends of the semi-elliptic spring, the outer end of each lever extending outwardly and exterior to the end of said semi-elliptic spring and the inner end overlapping the spring; and a support of greater length than the length of each of the two springs pivoted to the extreme outer ends of the levers, and the inner ends of the levers pivoted to opposite ends of the supplemental leaf spring; means being provided in connection with the levers to permit the elongation of the supplemental spring when being flexed.

3. The combination of a main semi-elliptic shaped spring, a lever having three pivotal points, a supplemental leaf spring of less capacity than said semi-elliptic spring facing the concave surface of the said main semi-elliptic spring; the said lever being pivoted intermediate its ends to the end of the main spring, its outer end extending outside of and beyond the main spring and its inner end overlapping the spring; and a support of greater length than the length of either of the two springs pivoted to said outer end of the lever, and the inner end of the lever pivoted to the end of the supplemental spring; means being provided in connection with the lever to permit the elongation of the supplemental spring when being flexed.

4. The combination of a main semi-elliptic shaped spring, two levers each having three pivoted points, a supplemental leaf spring of less capacity than said semi-elliptic spring facing the concave surface of the semi-elliptic spring; said levers being pivoted intermediate its ends to opposite ends of the semi-elliptic spring, the outer end of each lever extending outwardly and exterior to the end of said semi-elliptic spring and the inner end overlapping the spring; and a support of greater length than the length of each of the two springs pivoted to the extreme outer ends of the levers, and the inner ends of the levers pivoted to opposite ends of the supplemental leaf spring; means being provided in connection with the levers to permit the elongation of the supplemental spring when being flexed.

1,166,565. DOOR-KEY-HOLDING DEVICE. EDWARD A. WILDT, Scranton, Pa. Filed Nov. 8, 1913. Serial No. 799,834. (Cl. 70—65.)



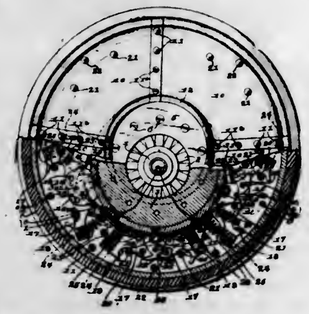
A key fastener comprising the combination of a strip of sheet metal of uniform cross-section throughout having the metal at one end thereof curled to form an eye extending in the direction of the width of the strip, said strip being adapted to have the straight end thereof inserted in a key hole and to have the eye vertically disposed when the strip is so positioned in a key hole, and a pin having an enlarged head of too great size to pass through the hole in the finger piece of a key and having a split shank, the shank of the pin being adapted to pass through the hole in the key and to enter and coact with the walls of the eye in said strip; substantially as described.

1,166,566. RESILIENT WHEEL. WILLIAM W. WILLSON, Gahanna, Ohio. Filed Aug. 5, 1915. Serial No. 43,757. (Cl. 152—37.)

1. In combination with the inner portion and the outer portion of a resilient wheel, a series of cam-levers carried by said inner portion and approximately in line with the direction of rotation of the wheel when under pressure, each lever having a curvilinear recess in its outer side, a series of parts carried by the outer portion of said wheel and arranged for contact with the parts of the levers thus recessed, to turn said levers on their pivots inward toward the hub, a series of springs arranged between said levers and the inner portion of the wheel and resisting said parts by radial outward action on said levers.

2. In combination with the inner portion and the outer portion of a resilient wheel, a series of cam-levers carried by said inner portion, each lever having a curvilinear recess in its outer side, a series of rollers movable with the outer portion of the wheel, in contact with the re-

cessed parts of said levers and traveling along the curves of the latter to turn said levers inward toward the hub, and a series of springs interposed between the inner portion of the wheel and said levers, each spring having its outer end set into a recess in the inner side of the proximate lever and acting radially outward thereon in opposition to the action of said rollers.



3. In combination with the inner portion and the outer portion of a resilient wheel, a series of cam-levers carried by said inner portion and having curvilinear recesses in their outer sides, a series of springs interposed between said inner portion and said levers and acting radially outward on the latter, but adapted to be compressed and to permit the levers to lie approximately in line with the direction of rotation of the wheel, a casing carried by said outer portion and overlapping the sides of said inner portion and rollers carried by said casing and in contact with the curvilinearly recessed parts of the levers to turn them inward toward the hub against the resistance of the springs as described.

4. In combination with the inner portion and the outer portion of a resilient wheel, a series of yoke plates fixed flat upon the periphery of the rim of said inner portion, each yoke plate being constructed to hold a pair of springs, a series of radially operating helical springs arranged in pairs and held by said yoke plates, a series of pairs of levers carried by the rim of said inner part, each pair of said levers being adapted to engage and be acted on by one of said pairs of springs, and parts carried by said outer portion of the wheel for contact with said levers to act against the resistance of said springs.

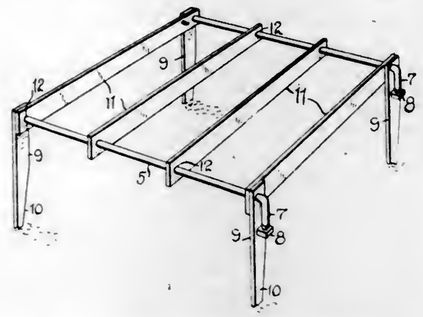
5. In combination with the outer portion and the inner portion of a resilient wheel, a series of brackets and a series of yoke plates, carried by said inner portion in alternate arrangement and adapted to have a pair of levers mounted in each bracket and a pair of springs on each yoke plate, a series of levers pivoted in said brackets and consisting of pairs extending in opposite directions, a series of pairs of helical springs, each pair being based on one of said plates and acting radially on the proximate ends of two levers of different pairs and a series of parts carried by said outer portion of the wheel and acting on said levers to compress said springs.

[Claims 6 to 14 not printed in the Gazette.]

1,166,567. CAMPING-STOVE. CLIFTON C. WILSON, Eureka, Cal. Filed May 22, 1915. Serial No. 29,856. (Cl. 126—30.)

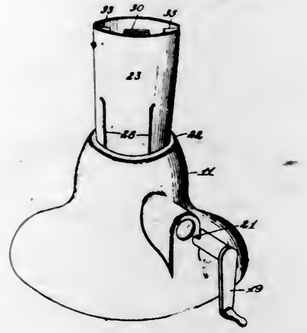
1. A camping stove including a pair of supporting rods, a plurality of legs loosely engaged at one of their ends upon each of said rods, a series of grate bars loosely engaged at their ends upon the respective supporting rods, said legs and grate bars being adapted to be moved along the supporting rods in superimposed relation to each other and the rods folded inwardly and disposed in the plane of said legs and grate bars.

2. A camping stove including a pair of supporting rods having angularly disposed end portions, a plurality of supporting legs loosely engaged at their ends upon each of said rods, a series of grate bars loosely engaged at their opposite ends upon the respective rods between the supporting legs thereon, said legs and the grate bars being adapted to be moved along the rods upon the angular



portions thereof and into superposed relation to each other and said rods then swung inwardly and disposed in the plane of the grate bars and supporting legs, and nuts threaded upon the angular ends of the supporting rods.

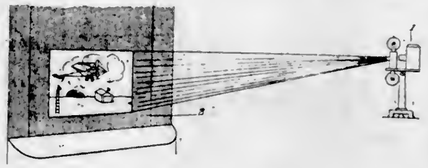
1,166,568. MIXING-MACHINE. RALPH P. WILTON, Wrightsville, Pa. Filed Oct. 30, 1914. Serial No. 869,355. (Cl. 31—63.)



1. In a mixing device; a base; a vertical shaft rising centrally from the base; a momentum wheel secured to the lower end of the shaft above the base; a pinion on the shaft; a radially disposed operating shaft; a gear on said operating shaft meshing with said pinion; a handle for operating said shaft; a casing carried by the base inclosing said shaft, gears and momentum wheel, and having a flat top providing a table on the upper end of the casing; a receptacle adapted to seat on said table; an agitator in said receptacle, and a separable connection between said vertical shaft and the receptacle.

2. In a mixing device; an inclosing casing having a flat top; a vertical shaft in the casing; a momentum wheel on the shaft; an operating shaft in one side of the casing; gears connecting the operating shaft to the vertical shaft; a handle projecting into the side of the casing; a one-way clutch between the handle and the operating shaft whereby to admit the free turning of the operating shaft subsequent to being set in motion; a receptacle detachably resting on the flat top of the casing; an agitator in the receptacle, a separable connection between the vertical shaft and the agitator, and guides projecting from the flat top of the casing to engage the receptacle and direct it into position over the vertical shaft.

1,166,569. PICTURE-SCREEN. ARTHUR WRIGHT, New York, N. Y., assignor to The Luna-Lite Company of America, Dover, Del., a Corporation of Delaware. Filed May 29, 1913. Serial No. 770,578. (Cl. 88—24.)



1. A projection screen provided with an image-display surface adapted to become luminescent under excitation of a light-emitting body, substantially as and for the purposes described.

2. A motion picture screen having a phosphorescent light-receiving surface.

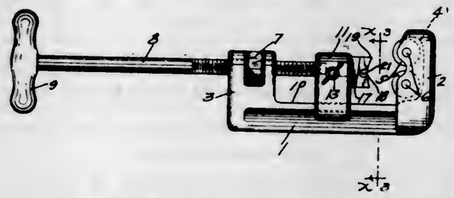
3. A motion picture screen having a surface comprising willemite.

4. A motion picture screen having a surface comprising willemite held in place by a transparent binder.

5. A motion picture screen having a phosphorescent light-receiving surface comprising willemite held in place by varnish.

[Claim 6 not printed in the Gazette.]

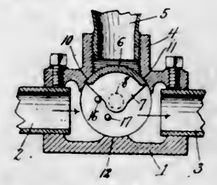
1,166,570. PIPE-CUTTER. ANDREW F. ANDERSON and ED W. OLSON, Minneapolis, Minn. Filed May 28, 1915. Serial No. 30,902. (Cl. 81—192.)



A pipe cutter comprising a yoke-like body, having guide rollers journaled on one of its end portions and having its other end portion bifurcated, with perforations extending axially through the prongs thereof, a feed nut mounted between the prongs of the bifurcated end member, a feed screw, having screw threaded engagement with the feed nut and loosely working through the perforations in the prongs of the bifurcated end portion, a two-part tool carrier slidably mounted on the intermediate portion of the body for movement toward and from the guide rollers, said feed screw being swiveled to the tool carrier, a cutting tool removably mounted on the tool carrier, and a clamp for holding the members of the tool carrier assembled and interlocked to the body with the cutting tool clamped therebetween, said feed screw and cutting tool having shoulders which bear against opposite faces of the tool carrier.

1,166,571. VALVE DEVICE. GEORGE M. BARD, Chicago, Ill., assignor to Barco Brass & Joint Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 13, 1911. Serial No. 602,406. (Cl. 137—26.)

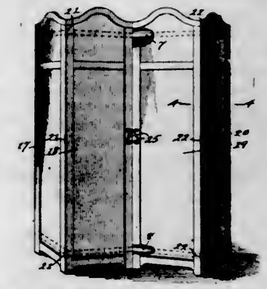
1. A valve device comprising a casing provided with three openings, and having a passageway therethrough with which said openings communicate, a movable valve piece for controlling two of said openings, said valve piece at one side of said passageway when closing one of said openings so as to leave the passageway unobstructed, and extending across said passageway when closing the other opening, a handle outside of said casing and connected with said movable valve piece, and two stops projecting into said passageway, both of said stops located on the same side of a plane passing through the axis of the valve and the center of the opening closed by the valve piece when at one side of said passageway.



2. A valve device comprising a casing, provided with three openings, and having a passageway therethrough, a movable valve piece provided with laterally projecting parts extending toward the middle of said casing, connecting pieces pivotally connecting said laterally projecting pieces with the casing, so that said valve piece may be moved to alternately open and close two of said openings, one of said connecting pieces projecting through the casing, a controlling device connected therewith, and stop devices near the middle of said passageways for stopping the movable valve piece when moved to close either opening, said stop devices consisting of two separated projections on the bottom of said casing and on the same side of a plane at right angles to said passageway and passing through the axis of said valve.

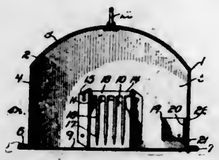
3. A valve device comprising a casing, provided with three openings, and having a passageway therethrough, a movable valve piece provided with laterally projecting pieces extending toward the middle of said casing, connecting pieces integral with said laterally projecting pieces pivotally connecting said laterally projecting pieces with the casing, so that said valve piece may be moved to alternately open and close two of said openings, one of said connecting pieces projecting through the bottom of the casing, a removable piece having a smooth peripheral edge removably connected with said casing and through which the other said connecting piece passes, and a controlling device engaging said removable piece and connected with said connecting piece on the outside of said removable piece so as to hold the movable piece and valve together, whereby when the removable piece is removed the valve piece is removed from the casing.

1,166,572. WARDROBE. FRANCIS NEWTON BARDWELL, Passaic, N. J. Filed Aug. 19, 1914. Serial No. 857,510. (Cl. 45—118.)



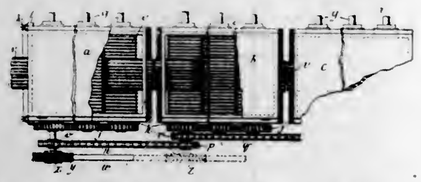
As a new article of manufacture, a wardrobe, comprising central and outer screen sections adapted to be folded upon each other, a central section being hinged to one outer section and latched to the adjacent section at its other edge, an upper frame and a lower frame in detachable connection with said outer screen sections and the side edges of which serve to dispose the outer screen sections rearwardly at an angle to each other and to the central section, and a back in detachable connection with said frames and with said outer sections, said central, latched, section constituting a door for the wardrobe.

1,166,573. ANIMAL-TRAP. JAMES A. BEVERLY, Topeka, Kans. Filed Sept. 19, 1914. Serial No. 862,504. (Cl. 43—24.)



A trap comprising a metallic hood having outturned flanges at its lower edge and having end openings therein, a bottom plate having inturned edges to form inwardly opening sockets to slidably engage said outturned hood flanges, inwardly projecting flanges secured at the sides of said hood openings and having oppositely disposed apertures at their upper ends, a crossbar having a downturned outer end revolubly mounted in said apertures, downwardly projecting prongs secured to said crossbar and having inwardly curved and sharpened lower ends, a bait box mounted within said hood, and a handle on said hood, for the purpose set forth.

1,166,574. MACHINE FOR MANUFACTURING BELTS. JOHN W. BLODGETT, Chicago, Ill., assignor, by direct and mesne assignments, to John Howard McElroy, trustee, Chicago, Ill. Original application filed Sept. 9, 1905, Serial No. 277,766. Divided and this application filed Feb. 23, 1907. Serial No. 358,830. (Cl. 91—46.)



1. In an apparatus of the class described, the combination with the trough adapted to contain a liquid filling composition, of the adjustable bearing boxes mounted therein in horizontal alinement below the top of the trough, the rollers mounted in said boxes, and gearing for connecting and driving the rollers.

2. In an apparatus of the class described, the combination with the trough adapted to contain a liquid filling composition, of the adjustable bearing boxes mounted therein in horizontal alinement below the top of the trough, the rollers mounted in said boxes, and gearing for connecting and driving the rollers in unison.

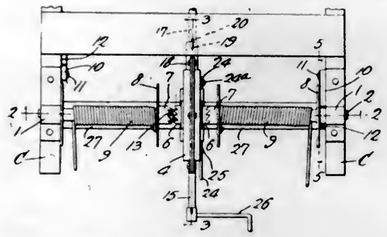
3. In an apparatus of the class described, the combination with the trough adapted to contain a liquid filling composition, of the adjustable bearing boxes therein in horizontal alinement below the top of the trough, the hollow rollers mounted in said boxes, means for applying heat to the interior of the rollers, and gearing for connecting and driving the rollers.

4. In an apparatus of the class described, the combination with the plurality of troughs, of the adjustable bearing boxes mounted in each of said troughs, and means for driving the rollers of one of said troughs at a higher peripheral velocity than the others.

5. In an apparatus of the class described, the combination with the frame work, of the ways for bearing boxes on the sides thereof, the bearing boxes located in said ways, means for adjuating said bearing boxes to and from each other, and three or more rollers journaled in said bearing boxes in substantial alinement with each other, so that a belt may be not only gripped between the adjacent rollers but also stretched tightly about one half of the periphery of each of the intermediate rollers.

[Claims 6 to 17 not printed in the Gazette.]

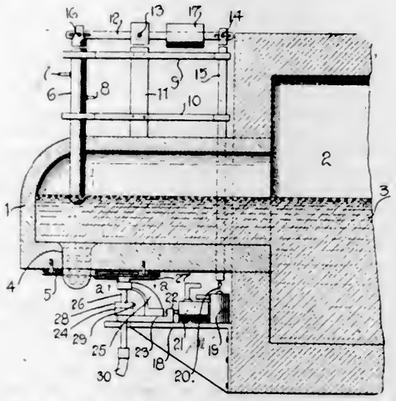
1,166,575. AUTOMOBILE ATTACHMENT. OSCAR T. BOTTS, Brookfield, Mo. Filed July 14, 1915. Serial No. 39,856. (Cl. 21—90.)



1. The combination with the chassis and crank shaft of a motor vehicle, of a transverse shaft carried by the forward end of the chassis, a reel slidable upon said shaft, a worm wheel carried by said shaft, the worm wheel and reel having coöperating clutch portions, a member pivoted to the chassis to swing between the chassis and reel for holding the reel in engagement with the worm wheel, a shaft alining with the crank shaft and having a worm meshing with said worm wheel, and means for connecting and disconnecting the last named shaft with the crank shaft.

2. The combination with the chassis and crank shaft of a motor vehicle, of a transverse shaft carried by the chassis adjacent the forward end, a reel slidable upon said shaft, a case, a worm wheel mounted upon said shaft and disposed within the said case, the worm wheel having a clutch hub engaged through the case, the reel having a clutch portion engageable with said clutch hub, means for holding the reel in engagement with said clutch hub, a worm shaft journaled through the case in alinement with the crank shaft and having a worm meshing with said worm wheel, a clutch member slidable upon the worm shaft and engageable with the crank shaft to connect the same, and an operating lever fulcrumed to said case and operatively connected to said sleeve for sliding it.

1,166,576. GLASS-FURNACE. SAMUEL B. BOWMAN, Blackwell, Okla. Filed Aug. 1, 1914. Serial No. 854,489. (Cl. 49—55.)



1. In a glass furnace, the combination with a snout having a delivery opening, of a vertically reciprocatable hollow fluid cooled plug disposed in alinement with the opening, the plug for a length from its lower end greater than the thickness of the wall of the delivery opening having a diameter less than that of the opening whereby chilled glass may gather upon the plug to form a part thereof.

2. In a glass furnace, the combination with a snout having a downwardly extending delivery opening, of a vertically reciprocatable hollow metallic plug disposed in alinement with the opening, said plug for a distance upward from its lower end greater than the thickness of the wall of said delivery opening having a uniform diameter less than the diameter of the delivery opening, and means for circulating cooling fluid within the plug whereby to cause the gathering of chilled glass upon the plug.

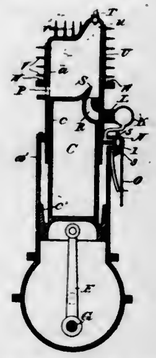
3. In a glass furnace, the combination with a snout having a vertically extending delivery opening, the upper end of the delivery opening being flared, of a vertically reciprocatable hollow plug disposed in alinement with the opening, said plug having a rounded lower end and the lower end of the plug for a distance equal to the thickness of the wall of said delivery opening having a uniform diameter less than the delivery opening, and means for circulating cooling water within the plug whereby to cause the gathering of chilled glass upon the plug.

4. In a glass furnace, the combination with a snout having a discharge opening and a flat reciprocating knife disposed exteriorly to the snout, of a water cooled plate disposed against the snout, said plate having a flat under surface with which the flat upper surface of the knife contacts and having an opening registering with the opening in the snout, that portion of the plate to one side of said opening having an area equal to that of the knife, and means for reciprocating the knife across the face of the plate to first sever the glass passing through the opening of the plate and then close said opening to retain the glass within the snout, the knife at all times being in contact with the water cooled plate.

5. In a glass furnace, a snout having a delivery opening and a plug controlling the flow of glass through said opening, a lever pivoted at one end to the plug and at the opposite end to a vertically reciprocating bar, a weight intermediate the ends of the lever, and a compressed air cylinder connected with the lower end of the reciprocating bar whereby to adjust said lever.

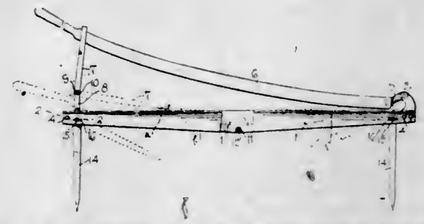
[Claim 6 not printed in the Gazette.]

1,166,577. GAS-ENGINE. JOHN F. BUTLER and HARRY F. MCCRAY, Reno, Nev., assignors of one-third to William A. Massey, Reno, Nev. Filed Feb. 16, 1914. Serial No. 818,948. (Cl. 123—59.)



In an internal combustion engine, the combination with two cylinders, each having a pumping section and a combustion section, of pistons to work in the cylinders, a storage tank for the mixed fuel having ports leading to the combustion sections of the two cylinders, a valve seat having six ports arranged in parallel rows and columns, the two middle ports leading to the pumping sections of the cylinders, two of the other ports leading to the storage tank, and the remaining two ports leading to a source of fuel supply, one of the ports leading to the fuel supply and one of the ports leading to the storage tank being arranged at either side of the middle row of ports leading to the pumping sections of the cylinders, and one of the ports leading to the storage tank being arranged in each column, a valve having two grooves each adapted to cover two of the three ports, in each column, said valve also having flanges for closing the end ports in each column when the other ports in the valve seat are covered by the grooves, and means for sliding said valve on the seat whereby the source of fuel supply may be placed in communication with the pumping section of one cylinder while the pumping section of the other cylinder is placed in communication with the storage tank.

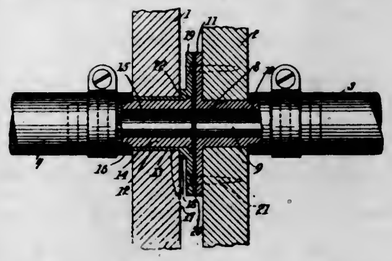
1,166,578. CUTTING DEVICE. JOSIAH FRANKLIN CLARK, Republic, Pa. Filed Apr. 12, 1915. Serial No. 20,920. (Cl. 125—5.)



1. A device of the class described comprising spaced elongated jaws, a cutting blade pivotally supported by said jaws, a guiding yoke pivotally engaged with the jaws and through which the cutting blade projects, and means for locking said yoke against pivotal movement, said yoke when at the limit of its inward movement serving to hold the cutting blade against pivotal movement.

2. A device of the character described comprising spaced elongated jaws, a cutting blade in pivotal engagement with said jaws, brackets projecting upwardly from the jaws, a yoke pivotally engaged with the brackets and through which the cutting blade extends, said brackets being of a length to overlie the cutting blade when at the limit of its inward movement, and means for locking the yoke against pivotal movement.

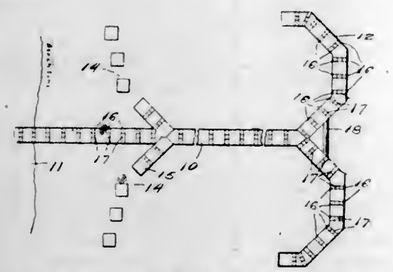
1,166,579. SWIVEL-JOINT FOR HOSE-REELS. SAMUEL CLAY, Hanover, Pa., assignor of one-half to Harry E. Hoke and Ralph H. Hoke, Hanover, Pa. Filed Oct. 1, 1912. Serial No. 723,287. Renewed May 19, 1915. Serial No. 29,215. (Cl. 137—34.)



A coupling especially adapted for use in connection with hose reels, comprising two parts movable with respect to one another, the first part consisting of an elongated member adapted for connection to a hose at one end and having a passage-way extending therethrough, and a flange at its opposite end, and another elongated member adapted to extend through a reel support and also having a passage-way extending therethrough and provided with a flange at one end and with an annular spacing shoulder adjacent said flange, packing material between the flanges of the said elongated members, fas-

tening members for connecting said flanges and securing the same to a reel, the second part of the coupling comprising an elongated member extending through the second member of the first coupling part and having a passage-way and adapted for connection at one end to a hose, a beveled peripheral shoulder adjacent the flanged end of the said second member of the first coupling part, said second member of the first coupling part being provided with a counter-sunk portion into which the said shoulder engages, whereby when the members of the first part are secured to a reel, and the hose is placed in communication with the coupling parts, movement thereof is permitted whereby water may be conducted through the coupling, irrespective of the movement of the reel within its support.

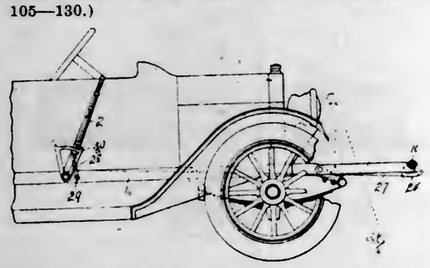
1,166,580. GROIN. THOMAS DAVIES, Toronto, Ontario, Canada. Filed Oct. 29, 1914. Serial No. 869,297. (Cl. 61—30.)



1. A device of the class described comprising a bulkhead wall, lateral extensions formed thereon projected obliquely toward the shore adjacent its inner part, and including each a terminal openwork portion.

2. In a device of the class described a bulkhead wall comprising a multiplicity of piles driven in close parallel relation, their tops being alined, an angle iron extended transversely thereof having one side disposed closely over the tops of the piles and another side engaged against the sides of the piles, means to secure the iron to the piles including bolts, and yoke members having an intermediate portion engaged over the first named side of the iron, and arms at each side of the wall engaged with the bolts.

1,166,581. VEHICLE-FENDER. IRA O. DENMAN, Toledo, Ohio. Filed Feb. 5, 1915. Serial No. 6,242. (Cl. 105—130.)



1. A fender having two hingedly connected frames adapted to automatically open when released, an apron connection between the outer end portions of said frames, releasable means for holding the frames in closed relation, and means operable by opening movements of the frames when released to accelerate such opening movement.

2. A fender having two frames connected for opening and closing jaw-like movements and normally operable to have opening movements, an apron connecting said frames, releasable means for holding the frames in closed position, connection between said frames for causing them to have opposed movements in unison, and spring means for urging quick initial opening movements of the frames when released.

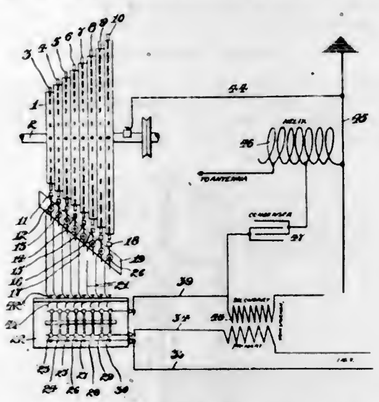
3. A fender having pivotally connected upper and lower frames, the lower frame having gravity lowering movements, an apron connection between the outer end portions of said frames, releasable means for holding the frames in closed relation, means operable to effect a raising of the upper frame when the lower frame is lowered, and means operable to urge a quick opening of the frames when released for such purpose.

4. A fender having a main frame, a second frame hinged to said main frame, means coöperating with the swinging movements of the main frame to cause the second frame to have opposed swinging movement, a flexible apron connecting the outer ends of said frames, releasable means for holding the frames in closed relation, and spring means connecting said first-mentioned means and one of said frames for effecting a quick opening movement of the frames when released for such purpose.

5. The combination with the side frame bars of an automobile chassis, of a fender having a main frame pivoted for vertical swinging movements to the forward ends of said bars, a second frame hinged to said main frame, means coöperating with the main frame to cause the second frame to swing upward upon a downward swinging of the main frame, an apron connecting the outer ends of said frames, means for holding the frames in closed relation, and means operable to effect a quick initial opening of the frames when released.

[Claims 6 to 18 not printed in the Gazette.]

1,166,582. WIRELESS APPARATUS FOR PRODUCING AND TRANSMITTING MUSICAL SOUNDS. GEORGES DESILETS, Nicolet, Quebec, Canada. Filed June 29, 1914. Serial No. 848,017. (Cl. 250—17.)



1. In a means for producing and transmitting musical sound by a wireless apparatus, the combination with an antenna and current supplying means, of a plurality of keys controlling both primary and secondary current of a transformer and means whereby the operation of any one of said keys produces sparks at a predetermined frequency different than that of the adjacent keys.

2. In a means for producing and transmitting musical sounds by a wireless apparatus, the combination with an antenna and current supplying means, of a plurality of rotary spark gaps, a circuit for said gaps directly associated with said antenna, controlling keys, and means for producing sparks in said spark gaps consequent upon the operation of said keys.

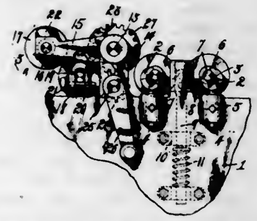
3. In a means for producing and transmitting musical sounds by a wireless apparatus, the combination with an antenna and current supplying means, of a plurality of rows of rotating spark gaps, a circuit for said gaps directly associated with said antenna, a controlling key for each of said rows, means for producing sparks in each row separately consequent upon the operation of its particular controlling key and means whereby the operation of any one key controls sparks of different frequency to those created by the operation of the other keys.

4. In a means for producing and transmitting musical sounds by a wireless apparatus, the combination with an antenna and current supplying means, of a plurality of annular rows of spark gaps, a circuit for said gaps directly associated with said antenna, a fixed pole for each of said rows, a key controlling the supply of current to each of said fixed poles individually and means whereby said rows of spark gaps produce each a series of sparks of different frequency to the other rows.

5. In a means for producing and transmitting musical sounds by a wireless apparatus, the combination with an antenna and current supplying means, of a plurality of annular rows of rotating sparks gaps, a circuit for said gaps directly associated with said antenna, each row being of different diameter to the others and means for producing sparks in said gaps.

[Claims 6 to 11 not printed in the Gazette.]

1,166,583. ROLL-SEPARATING MEANS FOR PRINTING-PRESSES. MICHAEL A. DROITCOUR, Delphos, Ohio. Filed Nov. 21, 1914. Serial No. 873,300. (Cl. 101—71.)



1. In combination, a set of form-rolls, means normally supporting said rolls in inoperative position, a separate roll, a frame carrying said separate roll and movable to place it in coaction with said form-rolls and to coact with said means to lower the form-rolls to operative position.

2. In combination, a set of form-rolls, a raising frame for said form-rolls, means urging a movement of said frame to place the form-rolls in inoperative position, and means operable to effect a lowering of said frame against the action of said urging means.

3. In combination, a set of form-roll shafts, a T-frame having its cross-arms in supporting coaction with said shafts, a spring urging an upward movement of said frame, and means operable to effect a lowering of said frame against the action of said spring.

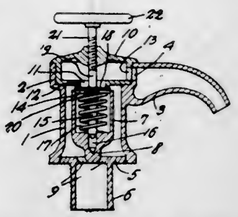
4. In combination, a form roll, a rider-roll therefor, means normally urging a movement of the form roll to inoperative position, and means carrying said rider-roll and operable to swing it into or out of operative relation to the form-roll and to coact with said first means to hold it in position for the form roll to have contact with a form.

5. In combination, a form roll, a rider roll for the form roll, means carrying said rider roll and operable to swing it into and out of operative relation to said form roll, and spring urged means automatically operable to move said form roll into and out of operative position when said first means has predetermined movements.

[Claims 6 to 20 not printed in the Gazette.]

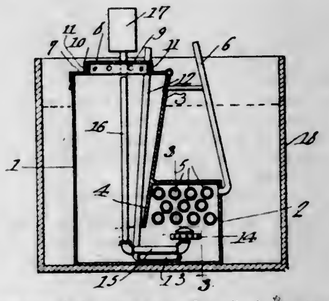
1,166,584. VALVE. WILLIAM G. ESTEP, Duquesne, Pa. Filed Mar. 24, 1915. Serial No. 16,649. (Cl. 137—4.)

1. A valve comprising a casing having a partition therein provided with a central opening and an annular rib surrounding said opening, a plug engaged within the casing and forming an inlet thereto and having a cup whose mouth is arranged adjacent said rib, the bottom of the cup having a bore, a valve disk slidable within the mouth portion of the cup and having an integral stem slidable in said bore, a coiled expansion spring within the cup between the bottom thereof and the valve disk, a packing disk upon the valve disk and seatable against said rib, and a member forming an extension of said stem projecting through said opening and having a reduced end threaded into the valve disk and stem and clamping the packing disk against the valve disk.



2. A valve comprising a casing, a chambered member engaged within one end of the casing, the inner wall of said member providing a partition within the casing and having an opening, said member having an opening at one side, and the casing having an outlet registering with said second mentioned opening, a plug engaged within the other end of the casing and forming an inlet thereto and having a cup, a valve head slidable within the cup and seatable against said partition to close the first mentioned opening, and a valve unseating member engaged through the outer portion of said member.

1,166,585. TANK-HEATER. LEWIS V. FELDMAN, Trosky, Minn. Filed Apr. 13, 1915. Serial No. 21,087. (Cl. 126—360.)



In a device of the character described, an upright casing having an angularly projecting extension at its lower end, and a depending apron between the chambers within the casing and extension, water circulating flues engaged through the sides of said extension above the plane of the lower edge of said apron, the extension being adapted to hold a burner below said flues, a discharge pipe projecting upwardly from the upper portion of said extension, a downwardly projecting fresh air pipe within the casing extended to a point within the lower portion of said extension, a cover for the upper end of the casing having a raised portion provided with apertures in its side walls, and an annular damper rotatable upon said raised portion and having apertures to be brought into and out of registration with the aforesaid apertures.

1,166,586. FRUIT-PICKER. OBADIAH M. GARRISON, Lutesville, Mo. Filed Jan. 13, 1915. Serial No. 2,013. (Cl. 56—99.)

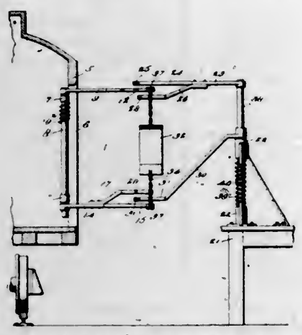
1. A fruit picker comprising a hollow body portion having a flared upper end the edge wall of which is inclined,

said edge wall having a plurality of projections thereon to guide the fruit into said flared end, a staff engaged with and supporting said body portion, an interiorly extending bead at the lower end of said body, a tube extending into said body, and a ring the outer circumference of which is greater than the inner circumference of said bead adapted to be introduced into the end of the tube and impinge the tube against said bead and hold the tube in engagement with the body.



2. A fruit picker comprising a hollow body portion having a flared inclined upper end, a plurality of spaced projections integral with the upper edge of the body, a socket carried by the body, a staff engaged with said socket, a stationary blade projecting over the upper end of the body, a movable blade pivoted thereto, a bell-crank lever pivoted to the socket and having one of its arms engaged with the end of the movable blade, a cable attached to the opposite arm of said bell-crank lever, a lever pivoted to said staff, an arm fixed to said lever to which the lower end of said cable is attached, whereby when the lever is rocked on its pivot the movable blade will be moved into engagement with the fixed blade to sever an object between the blades, a spring having one of its ends attached to said socket and its free end engaged with the movable blade to return said movable blade to its open position and an eye on said socket surrounding said spring between its ends.

1,166,587. MAIL-BAG-DELIVERING APPARATUS. FRANK WILLIAM HIGGINS, Spokane, Wash. Filed July 13, 1914. Serial No. 850,718. (Cl. 258—17.)



1. In combination, a railway car, a shaft secured in said car, a pair of spaced arms projecting radially from said shaft, pairs of outwardly diverging forks projecting laterally from the outer extremity of the upper arm, the outer forks of said pairs being notched at their free extremities, and a pair of outwardly diverging forks having notches in their free extremities projecting from the lower arm.

2. In combination, a railway car, a shaft rotatably supported in said car, spaced arms secured to said shaft, means carried by said shaft normally retaining said arms in extended position, pairs of outwardly diverging forks projecting laterally from the outer end of the upper arm, the outer forks of the pairs having notches in their free extremities, a pair of outwardly diverging forks carried by the lower arm and having notches in their free extremities, an arm secured to and extending above in spaced relation to said lower arm, and pairs of outwardly diverging forks projecting laterally from the outer extremity of said arm.

3. In combination, a railway car, a shaft supported in said car, spaced arms secured to said shaft, pairs of outwardly diverging arms projecting laterally from the outer extremity of the upper arm and having recesses formed at the intersection of the forks of the pairs, outwardly diverging forks on the lower arm, and an intermediate arm secured to said lower arm having pairs of outwardly diverging forks projecting laterally from the free ends thereof.

4. In combination, two stationary bearings, a vertical shaft, an arm secured adjacent the upper end of said shaft, outwardly diverging forks carried by said arm having the outer extremities notched, an intermediate arm secured to said arm and projecting parallel in spaced relation under said fork, pairs of forks projecting laterally from the outer extremity of said intermediate arm, a railway car, a shaft journaled in said car, an arm secured adjacent the upper end of said shaft, pairs of forks projecting laterally from the outer extremities of said arm adapted to pass between the upper and lower forks supported by said shaft, the outer forks of the pairs carried by said car being notched, an arm secured to said shaft adjacent the lower arm thereof, pairs of forks projecting laterally from the outer extremity of said arm and being diverged outwardly of the latter, a lower arm secured to said shaft, outwardly diverging forks having the outer ends notched adapted to pass under the lower arm, and an intermediate arm secured to the lower car carried arm and extending parallel in spaced relation thereto, and pairs of laterally projecting forks on said intermediate arm adapted to pass over the lower arm.

1,166,588. PROCESS OF PRESERVING FRUIT. ADDISON F. HOFFMAN, New Cumberland, W. Va. Filed Nov. 27, 1912. Serial No. 733,894. (Cl. 99—8.)

1. The process of preserving fruit consisting in chilling the fruit in a bath of a temperature lower than the temperature of the fruit to offset the injurious effect of heat from an enveloping coating to be applied thereto, and in rendering the fruit antiseptic, and thereafter applying an enveloping coating at a temperature normally injurious to the fruit.

2. The process of preserving fruit consisting in chilling the fruit to offset the injurious effect of heat from an enveloping coating to be applied thereto, and in sterilizing the fruit, and thereafter applying to the fruit an enveloping coating at a temperature normally injurious to the fruit.

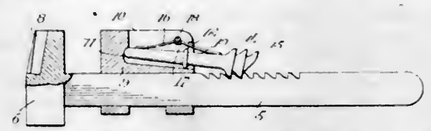
3. The process of preserving fruit consisting in subjecting the fruit to the action of a bath at a temperature lower than the temperature of the fruit to chill the fruit to offset the injurious effect of heat from an enveloping coating to be applied thereto, rendering the fruit antiseptic while in said bath, and thereafter applying to the fruit an enveloping coating at a temperature normally injurious to the fruit.

4. The process of preserving fruit consisting in subjecting the same to the action of a cooling medium of a temperature approximately as low as 35° F., to chill the fruit, then rendering the fruit antiseptic, afterward coating the fruit with a soluble coating while in a heated and molten state, and then permitting the coating to be chilled by contact with the air to thereby form a hermetic envelop or coating on the fruit.

5. The process of preserving fruit consisting in placing the same in a water bath of a temperature lower than the temperature of the fruit, sterilizing the fruit while in such bath through the action of oxygen, and afterward applying an envelop thereto.

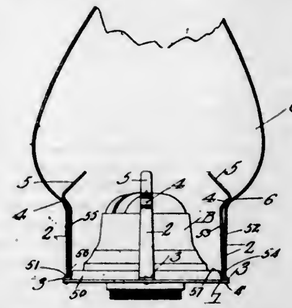
[Claim 6 not printed in the Gazette.]

1,166,589. WRENCH. JOSEPH P. HOLMES, Casper, Wyo. Filed May 2, 1914. Serial No. 835,992. (Cl. 81—158.)



A wrench including a shank, a portion of which is provided with teeth, an outer jaw, integral with the shank, an inner jaw, slidably mounted on the shank and having a slot opening on the front and inner faces of the jaw, a circular depression formed in the end wall of said slot, the bottom wall of the slot being inclined toward the inner face of the jaw, parallel flanges on the opposite inner faces of the walls of the slot, a spindle mounted in said slot, the inner end thereof provided with teeth to engage the teeth on the shank, and the opposite end engaged in the recess, a flange intermediate its ends engaging with the parallel flanges and acting as a pivot for the spindle, a bar extending across the slot, and a spring passing under the bar and bearing against the front side of the spindle to normally hold the teeth thereon in engagement with the teeth on the shank.

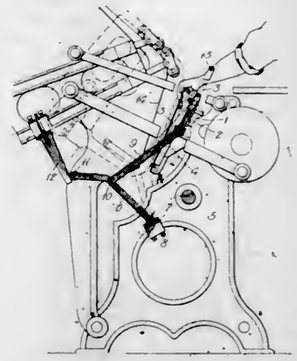
1,166,590. LAMP-BURNER. BENJAMIN S. HYATT, Vinita, Okla., assignor of one-half to John F. Watkins, Vinita, Okla. Filed Mar. 9, 1914. Serial No. 823,611. (Cl. 240—[illegible])



In a device of the class described, a burner embodying a base and a flange outstanding from the base; chimney holding arms each having an outstanding foot superposed upon the flange and terminated on top of the flange adjacent the outer edge of the flange; and securing elements uniting the feet with the flange, the arms engaging the perimeter of the base to prevent a rotation of the arms with the securing elements as centers.

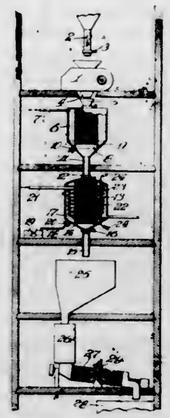
1,166,591. GUARD FOR PRESSES. ROY F. IDE and ROBERT M. WEST, Detroit, Mich. Filed Mar. 7, 1914. Serial No. 823,070. (Cl. 101—13.)

1. A guard for presses and similar machines that have coöperating members reciprocable toward and from each other comprising guides adapted to be secured to one of the coöperating members, an arm lifting guard bar, members reciprocating in the guides and carrying the guard bar, members adapted to be pivotally attached adjustably to a press or the like and articulated to the reciprocating members, and knock off members adjustably secured to the other coöperating member and adapted to intermittently move the members articulated to the reciprocating members.



2. The combination with a machine having coöperating members that move to and from each other on a main frame with guides adapted to be secured to one of the coöperating members, an arm lifting guard bar, members reciprocating in the guide and carrying the guard bar, pivot blocks adapted to be adjustably secured to a stationary part of the machine, lever arms pivoted at their inner ends to said blocks, links connecting the reciprocating members each with a companion lever, antifriction rollers adjustably mounted on the outer ends of the levers, and knock off arms carried by the other reciprocating member adapted to intermittently oscillate the levers simultaneously.

1,166,592. PROCESS OF TREATING GRAINS. ADOLPH JAEGER, Jackson, Mo., assignor of twenty-two and one-half one-hundredths to Arthur O. Knight and twenty-two and one-half one-hundredths to Harry A. Knight, St. Louis, Mo. Filed Feb. 4, 1911. Serial No. 606,463. (Cl. 83—28.)



1. The process of treating grain adulterated with onions which consists in dehydrating the mass in a vacuum before the onions are broken, and in subsequently breaking up and removing the dried onions.

2. The process of treating grain which consists in subjecting the grain to a vacuum and in heating said grain while in the vacuum without introducing a vacuum-breaking medium.

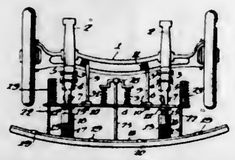
3. The process consisting in subjecting a mass of grain adulterated with wild onions to a steaming action and in subsequently dehydrating the mass in a vacuum until the onions are deodorized.

4. The process consisting in subjecting a mass of soil products adulterated with odoriferous impurities to dehydration in a vacuum until said impurities are deodorized.

5. The process consisting in subjecting a mass of soil products adulterated with injurious volatile portions to dehydration in a vacuum until said impurities are eliminated from the mass.

[Claims 6 to 10 not printed in the Gazette.]

1,166,593. FENDER FOR AUTOMOBILES. MARTIN JELALIAN, Cranston, R. I. Filed Oct. 4, 1915. Serial No. 53,923. (Cl. 105—33.)



1. In combination with the front main springs and axle of an automobile, forwardly-projecting supports secured to said springs, slidable shafts having flattened portions secured to said supports, a horizontal bar mounted on the flattened portions of said shafts, brackets whose ends are secured to the axle and to said bar, a fender having integral tubes slidably mounted on said shafts, coil springs in expansible contact upon said fender and said shafts, three rod connections carried by the fender and passing loosely through said bar and the central rod connection having an integral crank rod on its free end, and coil springs having one of their ends attached to the said bar and their other ends attached to the free ends of the rod connections and to the crank rod of the central rod connection, substantially as set forth.

2. In combination with the front main springs and axle of an automobile, forwardly-projecting supports secured to said springs, brackets secured to the axle, a horizontal bar forwardly of the axle and carried by said brackets, shafts slidable through said bar and secured to said supports, a fender having integral tubes inclosing said shafts and also carrying rod connections movable through said bar, coil springs in the tubes and in expansible contact with the fender and said shafts, coil spring connections between said bar and the free ends of the rod connections, a removable pad of yielding material secured along the front face of the fender, and strap connections from the latter to the vehicle, substantially as set forth.

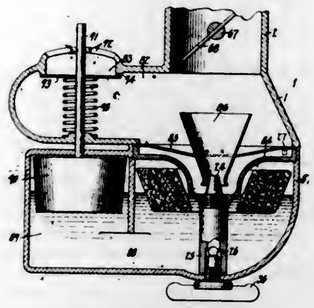
3. In combination with the front main springs and axle of an automobile, forwardly-projecting supports secured to said springs, a horizontal bar carried by said supports in front of the axle and said bar having integral shafts, a fender having tubes secured thereto and slidable on the shafts of said bar, expanding coil springs within the tubes, a pad of yielding material secured along the front face of said fender and wire screen carried by the latter and depending therefrom, substantially as set forth.

1,166,594. HAY-UNLOADER. CHARLES K. JOHNSON, Kossuth county, Iowa. Filed Nov. 10, 1914. Serial No. 871,351. (Cl. 57—11.)



In combination with a hay sling, a locking casing, a spring pressed plunger carried by said locking casing, a head carried by the outer end of said spring pressed plunger, a latch pivotally secured to said casing and provided with a laterally projecting finger, a stop carried by said casing and adapted to engage said laterally projecting finger for permanently limiting the swing of said latch in one direction, a rearwardly extending shoulder formed upon said latch, a laterally extending spur extending parallel with said laterally extending finger and spaced from said finger, a locking tongue provided with a book engaging said spur and held in said casing thereby, said casing provided with spaced projecting portions upon one end thereof, and constituting guiding means for said locking tongue at the entrance of said casing.

1,166,595. CARBURETER. CHESTER F. JOHNSON, Detroit, Mich. Filed Nov. 5, 1914. Serial No. 870,348. (Cl. 48—155.2.)



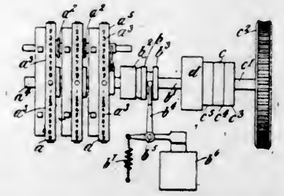
1. A carbureter comprising in combination, a mixing chamber, a fuel passage for discharging fuel into the mixing chamber, a fuel reservoir, means for maintaining a predetermined level of fuel in the reservoir, a float arranged to rest on the liquid in the reservoir and to be projected thereinto, a throttle valve, an air inlet valve, means connecting the air inlet valve and the float so that movement of one is communicated to the other, the arrangement being such that when the throttle valve is being opened and the engine is running, the air valve is opened and the float projected into the reservoir to cause the fuel mixture delivered to the carbureter to be temporarily enriched.

2. A carbureter comprising in combination, a mixing chamber, a fuel passage for discharging fuel into the mixing chamber, a fuel reservoir comprising a main chamber and an auxiliary chamber in free communication with each other, means for maintaining a predetermined level of fuel in the reservoir, a float arranged to rest on the liquid in the auxiliary chamber and to be projected thereinto, a throttle valve, an air inlet valve, means connecting the air inlet valve and the float so that movement of one is communicated to the other, the arrangement being such that when the throttle valve is being opened and the engine is running, the air valve is opened and the float projected into the reservoir to cause the fuel mixture delivered to the carbureter to be temporarily enriched.

3. A carbureter comprising in combination, a mixing chamber, a fuel passage for discharging fuel into the mixing chamber, a fuel reservoir, means for maintaining a predetermined level of fuel in the reservoir, a float arranged to rest on the liquid in the reservoir and to be projected thereinto, a throttle valve, an air inlet valve, a seat for the air inlet valve, a spring tending to hold the valve on its seat, means connecting the air inlet valve and the float so that movement of one is communicated to the other, the arrangement being such that when the throttle valve is being opened and the engine is running, the air valve is opened and the float projected into the reservoir to cause the fuel mixture delivered to the carbureter to be temporarily enriched.

4. A carbureter comprising in combination, a mixing chamber, a fuel passage for discharging fuel into the mixing chamber, a fuel reservoir comprising a main chamber and an auxiliary chamber in free communication with each other, means for maintaining a predetermined level of fuel in the reservoir, a float arranged to rest on the liquid in the auxiliary chamber and to be projected thereinto, a throttle valve, an air inlet valve, a seat for the air inlet valve, a spring tending to hold the valve on its seat, means connecting the air inlet valve and the float so that movement of one is communicated to the other, the arrangement being such that when the throttle valve is being opened and the engine is running, the air valve is opened and the float projected into the reservoir to cause the fuel mixture delivered to the carbureter to be temporarily enriched.

1,166,596. SPEED INDICATING AND RECORDING APPARATUS OF THE PERIODIC-COUNTER TYPE. FREDERICK GEOFFREY LEES JOHNSON, Chelsea, London, England. Filed Apr. 26, 1915. Serial No. 24,147. (Cl. 234—33.)



1. In a speed indicating and recording apparatus of the periodic-counter type, the combination with a driving shaft, of a plurality of type wheels, a sectional spring coupling for connecting said wheels to the driving shaft, and means for temporarily holding a section of said spring coupling stationary to enable the recording of the indications of the type wheels to be effected, the spring coupling adapted when said section is released by said means to cause the wheels to over-run the driving shaft and assume that position with respect to the driving shaft that they would have naturally assumed if the wheels were not held stationary by said means.

2. In a speed indicating and recording apparatus of the periodic counter type the combination with a driving shaft of a number of counting or type wheels, a sectional spring coupling for connecting said wheels to the driving shaft and an electromagnet for temporarily holding a section of said spring coupling stationary to enable the recording of the indications of the counting or type wheels to be effected, the spring coupling adapted when the electromagnet is deenergized to cause the wheels to over-run the driving shaft and assume that position with respect to the driving shaft which they would have naturally assumed if the wheels were not held stationary by said electro-magnet.

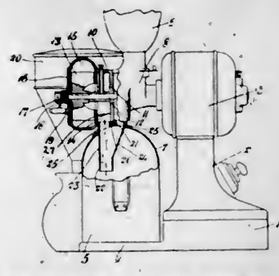
3. In a speed indicating and recording apparatus of the periodic counter type the combination with a driving shaft of two co-axial shafts, a number of counting or type wheels carried by the co-axial shafts remote from the driving shaft, a sectional spring coupling for connecting the intermediate co-axial shaft to the driving shaft, an electromagnet for temporarily holding a section of said spring coupling stationary, a clutch for connecting the intermediate shaft to the shaft carrying the counting or type wheels and means for operating said spring coupling and clutch in sequence to enable the recording of the speed and the zeroizing of the counting wheels to be effected.

4. In a speed indicating and recording apparatus of the periodic counter type the combination with a driving shaft of two co-axial shafts, a number of counting or type wheels carried by the co-axial shaft remote from the driving shaft, a sectional spring coupling between the intermediate shaft and the driving shaft, an electromagnet for temporarily holding a section of said spring coupling stationary, an electrically operated clutch between the intermediate shaft and the shaft carrying the counting or type wheels, a band of paper or the like arranged in proximity to said wheels, an electrically controlled hammer which presses the paper against said wheels to effect the record, mechanism for imparting longitudinal movement to the said band of paper after the record has been made, electrically operated mechanism for releasing and zeroizing said wheels and an electric contact making device for controlling and operating the various electrically operated members in proper sequence.

5. In a speed indicating and recording apparatus of the periodic counter type the combination with a driving shaft of two co-axial shafts, a number of counting or type wheels carried by the co-axial shaft remote from the driving shaft, equally spaced sets of type characters on said wheels, a sectional spring coupling between the intermediate shaft and the driving shaft, an electromagnet for temporarily holding a section of said spring coupling stationary, an electrically operated clutch between the intermediate shaft and the shaft carrying the counting or type wheels, a band of paper or the like arranged in proximity to said wheels, an electrically controlled hammer which presses the paper against said wheels to effect the record, mechanism for imparting longitudinal movement to the said band of paper after the record has been made, electrically operated mechanism for releasing and zeroizing said wheels and an electric contact making device for controlling and operating the various electrically operated member in proper sequence.

[Claim 6 not printed in the Gazette.]

1,166,597. GRINDING AND REFINING MILL. HERBERT L. JOHNSTON, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed May 27, 1915. Serial No. 30,718. (Cl. 130—17.)



1. In a device of the character described, the combination with a grinding mechanism having an outlet, a suction mechanism having an inlet, said inlet and outlet being adjacent to each other, and a receiving can freely removable from said device, said can having a passageway forming member therein to register with the outlet and inlet of the said two mechanisms, for the purpose described.

2. In a device of the character described, the combination with a grinding mechanism having an outlet, a suction mechanism having an inlet, said inlet and outlet being adjacent to each other, and a receiving can freely removable from said device, said can having a passageway forming member therein to register with the outlet and inlet of the said two mechanisms, and a neck portion for said can to fit said outlet and inlet, for the purpose described.

3. In a device of the character described, the combination with a grinding mechanism having an outlet, a suction mechanism having an inlet, a receiving can, a neck portion for the can to fit said outlet and inlet, and a passageway forming member in the can communicating with the neck whereby the ground material will enter said can at one point and be subjected to a current of air from the suction device at another.

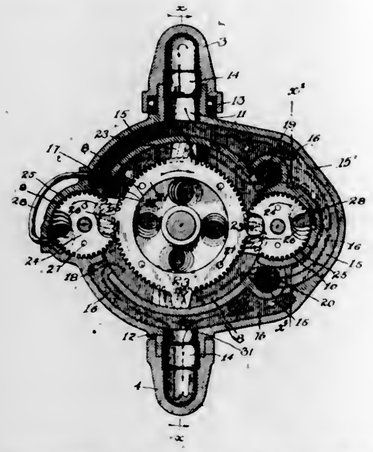
4. In a device of the character described, the combination with a grinding mechanism having an outlet, a suction mechanism having an inlet, a receiving can, a neck portion for the can to fit said outlet and inlet, and a

passageway forming member in the can communicating with the neck whereby the ground material will enter said can at one point and be subjected to a current of air from the suction device at another, said can having a series of apertures for the admission of air.

5. In a device of the character described, the combination with a grinding mechanism and a suction mechanism, an outlet and an inlet for the two mechanisms respectively, a receiving can freely removable from said device, means on the can for fitting the said inlet and outlet, and a passageway forming member in the can communicating with the neck, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,166,598. ROTARY MOTOR. ARCHIBALD T. KEENE, Chicago, Ill., assignor, by direct and mesne assignments, to Keene Hydraulic Transmission Company, a Corporation of Arizona. Filed Mar. 30, 1914. Serial No. 828,330. (Cl. 138—3.)



1. In combination, a vehicle axle, a pivot yoke on said axle formed with diametrically opposed tubular bearings, motive fluid supply and return connections associated with said tubular bearings, a motor casing provided with tubular trunnions engaging the aforesaid tubular bearings, the motor casing being formed with supply and return passages and ports, and a rotor arranged in said motor casing, substantially as set forth.

2. In combination, a vehicle axle, a pivot yoke on said axle formed with diametrically opposed tubular bearings, motive fluid supply and return connections associated with said tubular bearings, a motor casing provided with tubular trunnions engaging the aforesaid tubular bearings, the motor casing being formed with a plurality of supply and return passages and ports, and a rotor arranged in said motor casing and provided with a plurality of peripheral piston ribs, substantially as set forth.

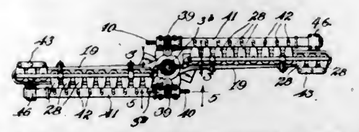
3. A rotary fluid motor comprising, a motor casing formed with supply and return passages and ports and with central and side chambers, a rotor disposed in said central chamber and formed with a toothed periphery and peripheral piston ribs, and a rotary abutment member disposed in an aforesaid side chamber and formed with a toothed periphery adapted to mesh with the toothed periphery of the rotor and with peripheral recesses adapted to receive the piston ribs of the rotor, the toothed peripheries of the rotor and rotary abutment member having an oblique arrangement with relation to the axis of rotation of the parts, substantially as set forth.

4. A rotary fluid motor comprising, a motor casing formed with supply and return passages and ports and with central and side chambers, a rotor disposed in said central chamber and formed with a toothed periphery and peripheral piston ribs, and a rotary abutment member disposed in an aforesaid side chamber and formed with a toothed periphery adapted to mesh with the toothed periphery of the rotor and with peripheral recesses adapted to receive the piston ribs of the rotor, the teeth, ribs and recesses of the rotor and rotary abutment member being obliquely arranged in relation to the axis of rotation of the parts, substantially as set forth.

5. A rotary fluid motor comprising, a motor casing formed with supply and return passages and ports and with central and side chambers, a rotor disposed in said central chamber and formed with a toothed periphery and peripheral piston ribs, and a rotary abutment member disposed in an aforesaid side chamber and formed with a toothed periphery adapted to mesh with the toothed periphery of the rotor and with peripheral recesses adapted to receive the piston ribs of the rotor, the teeth, ribs and recesses of the rotor and rotary abutment member having stepped formations providing oblique arrangements with relation to the axis of rotation of the parts, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,166,599. MASH AND STRAINER TANK MACHINE. ANDREAS R. KELLER, Chicago, Ill. Filed June 25, 1914. Serial No. 847,175. (Cl. 195—30.)



1. In a machine of the class described, a tank, a vertical rotary shaft in said tank, a horizontal frame mounted on said shaft, and rotatable in unison with said shaft, said frame being vertically adjustable longitudinally of said shaft, hydraulic mechanism for adjusting said frame, said frame including a central sleeve through which the vertical shaft passes, and horizontal arms extending therefrom in opposite directions and in slightly different but parallel planes, a series of agitators hung from said arms; each of said agitators being provided with a passage for fluid, an adjustment bar extending parallel with one arm, cranks extending from the agitators and connecting to the said adjusting bar, a second adjustment bar extending parallel with the other arm, cranks extending from the agitators of said arm and connecting to said second adjustment bar, said adjustment bars being located on opposite sides of the arms and being entirely independent of each other, means for moving said arms lengthwise to adjust the agitators, and means for supplying fluid to the passages in said agitators irrespective of the adjustment of the agitators.

2. In a machine of the class described, a tank, a vertical rotary shaft in said tank, a horizontal frame mounted on said shaft, and rotatable in unison with said shaft, said frame being vertically adjustable longitudinally of said shaft, said frame including a central sleeve through which the vertical shaft passes, and horizontal arms extending therefrom in opposite directions and in slightly different but parallel planes, a series of agitators hung from said arms, an adjustment bar extending parallel with one arm, cranks extending from the agitators and connecting to the said adjusting bar, a second adjustment bar extending parallel with the other arm, cranks extending from the agitators of said arm and connecting to said second adjustment bar, said adjustment bars being located on opposite sides of the arms and being entirely independent of each other and means for moving said arms lengthwise to adjust the agitators.

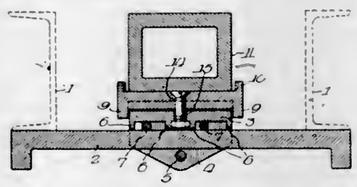
3. In a machine of the class described, a tank, a vertical rotary shaft in said tank, a horizontal frame mounted on said shaft, and rotatable in unison with said shaft, said frame being vertically adjustable longitudinally of said shaft, said frame including a central sleeve through which the vertical shaft passes, and horizontal arms extending therefrom in opposite directions and in slightly different but parallel planes, a series of agitators hung from said arms, an adjustment bar extending parallel with one arm, cranks extending from the agitators and connecting to the said adjusting bar, a second adjustment bar extending parallel with the other arm, cranks extending from the agitators of said arm and connecting to said second adjustment bar, said adjustment bars being located on opposite sides of the arms and being entirely independent of each other and screw means for moving said arms lengthwise to adjust the agitators.

4. In a machine of the class described, a tank, a vertical rotary shaft in said tank, a horizontal frame mounted on said shaft and rotatable in unison with said shaft, said frame being vertically adjustable longitudinally of said shaft, said frame including a central sleeve through which the vertical shaft slidably fits, and horizontal arms extending therefrom in opposite directions and in slightly different but parallel planes, a series of agitators hung from each of said arms, an adjustment bar extending parallel with each arm, cranks extending from the agitators and connecting to the adjusting bars, and two manually operated screws located at the inner end of the adjusting bars and adjacent to and on opposite sides of the sleeve for longitudinally adjusting said bars, said adjustment bars and adjusting screws being independent of each other.

5. The combination with a tank of a shaft concentrically arranged therein, having a water feed passage in its upper terminal, a sleeve keyed to and slidable upon said shaft, a casing surrounding said shaft, a hydraulic piston within said casing and arranged to act upon said sleeve for moving the latter longitudinally upon said shaft, a frame keyed to said sleeve, a series of agitators mounted on said frame adapted to act as injectors, supply pipes extending from said sleeve and connected with said agitators, said sleeve having connections with the water feed passage of the shaft, and means for rotating the shaft and sleeve thereby rotating said frame within the tank.

[Claims 6 and 7 not printed in the Gazette.]

1,166,600. ANTIFRICTION COUPLING-CARRIER. DANIEL P. KELLOGG and HENRY W. WATKINS, Los Angeles, Cal. Filed Feb. 18, 1915. Serial No. 9,001. (Cl. 213—42.)



1. In a device of the character described, the combination of a carrier iron, a coupler shank, and an antifriction carrier supported on said carrier iron and comprising a pair of superposed plates and anti-friction means disposed between said plates and between the lower of said plates and said carrier iron.

2. In a device of the character described, the combination of a carrier iron, a coupler shank, and an anti-friction carrier, supported on said carrier iron and comprising a pair of superposed plates, antifriction rollers disposed between the lower of said plates and said carrier iron with their longitudinal axes normal to the longitudinal axis of said carrier iron and anti-friction rollers disposed between said plates with their longitudinal axes normal to the longitudinal axes of said first-mentioned rollers.

3. In a device of the character described, the combination of a carrier iron, a coupler shank, and an anti-friction carrier, supported on said carrier iron and comprising a pair of superposed plates, anti-friction rollers disposed between said plates and between the lower of said plates and said carrier iron, and means to maintain said plates in coöperative relation and said lower plates in coöperative relation with said carrier iron.

4. In a device of the character described, the combination of a carrier iron, a coupler shank, and an anti-friction carrier, supported on said carrier iron and comprising a pair of superposed plates, anti-friction rollers disposed between said plates and between the lower of said plates and said carrier iron, and means to limit the movement of said plates with respect to each other and said carrier iron.

5. In a device of the character described, the combination of a carrier iron, a coupler shank, and an anti-friction carrier, supported on said carrier iron and comprising a pair of superposed plates, anti-friction rollers disposed between said plates and between the lower of said plates and said carrier iron, means to maintain said plates in coöperative relation and said lower plates in coöperative relation with said carrier iron, and means to limit the movement of said plates with respect to each other and said carrier iron.

[Claim 6 not printed in the Gazette.]

1,166,601. SELF FILLING AND CLEANING SCRAPER OR EXCAVATION-BUCKET. HERMANN KENDLE, Eatonville, Wash. Filed Aug. 13, 1914. Serial No. 856,559. (Cl. 37—19.)



1. An excavating device comprising vertical side members, a curved rear portion at one end of the side members and secured thereto, said rear portion having slots therethrough, a curved cleaning member slidably mounted on the inner curved face of the rear portion, a reversible fender hingedly secured to the outer face of the rear portion levers carried by said fender adapted to project through said slots and move said cleaning member upwardly and downwardly when the fender is swung on its pivot point, and means to operate said fender.

2. An excavating device comprising a pair of side walls, a curved rear end portion having slots arranged in pairs therethrough, each pair being adjacent one edge of the rear portion, a cutting member at each edge of the rear portion, a curved cleaning member slidably mounted over the inner face of the curved rear wall, a fender adapted to be pivoted to the outer face of the curved rear wall and at either edge thereof, levers carried by the pivoted edge of said fender adapted to extend through said slots and reciprocate the cleaning device over the inner face of the rear curved member, a reversible bracket connecting the forward ends of the side members, operating cables, and rollers supporting certain of said cables.

3. An excavating device comprising a pair of side walls, a curved wall at one end thereof and connected to the side walls, said curved wall having slots therethrough arranged in pairs, a fender pivoted to said curved wall, a curved cleaning member movably mounted over the inner face of the curved wall, levers carried by the fender extending through said slots adapted to move the cleaning device over the face of the curved wall when the fender is raised or lowered, a curved bracket at the forward end of said side walls, sockets carried by the side walls to receive the ends of the curved brackets, a cable extending over the curved bracket and curved rear walls, and rotating members over which said cable travels when moved lengthwise.

1,166,602. SOUND-BOX. ALEXANDER S. KESZTHELYI and FRANK HOUSE, Los Angeles, Cal., assignors, by mesne assignments, to said Keszthelyi. Filed Sept. 22, 1913, Serial No. 791,260. Renewed June 2, 1915. Serial No. 31,661. (Cl. 181—11.)



1. In a recording or reproducing sound box, three vibratory members in equal angular relation each to the others, and positive means of connection between said vibratory members.

2. In a recording or reproducing sound box, three vibratory members in equal angular relation each to the others, and positive means of connection between said vibratory members; said means of connection being adapted for the accommodation of a motion producing or translating element.

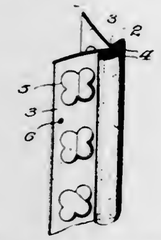
3. In a recording or reproducing sound box, three vibratory members in equal angular relation each to the others, and means of rigid connection among the members.

4. In a recording or reproducing sound box, three vibratory members in equal angular relation each to the others, and means of positive connection among the members, all of said vibratory members being similarly constructed and having equal freedom of motion.

5. In a recording or reproducing-sound box, three vibratory members in equal angular relation each to the others, and rigid connections between said vibratory members rectangularly springing from the central portions thereof.

[Claims 6 to 15 not printed in the Gazette.]

1,166,603. CORNER-BEAD. THOMAS H. KINSMAN, St. Louis, Mo. Filed Mar. 19, 1912. Serial No. 684,831. (Cl. 72—121.)

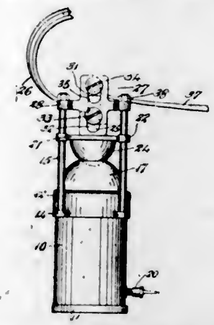


1. In a device of the class described, a tubular bead having an open seam extending the length of the bead, a pair of pliant sheet metal wings, each wing having at one of its side margins an integral coil extending throughout the length of the wing and which coils fit within the bead and substantially fill the space therein, and said wings extending outwardly through the seam, whereby said wings are hingedly connected with the bead and the bead is reinforced throughout its length by said coils.

2. An adjustable metal corner bead comprising a tubular bead portion having a rounded front side and an open slit extending lengthwise of its back side, a pair of complementary sheet metal strips each having a rounded beaded edge, said strips being arranged in said slit with their beaded edges within said tubular bead portion and their opposite edges diverging outward, the beaded edges of said strips being in all angular positions of said wings in contact with each other and with the front and back sides of said tubular bead portion, whereby said strips are hingedly connected to said tubular bead portion and serve to stiffen the latter.

3. In a device of the class described, the combination with a tubular bead and a supporting wing for the bead, which wing is perforated at intervals, of an extension bracket constructed of sheet metal and provided with ears which extend over the edges of adjacent perforations and engage with the metal of the wing, and a third ear which engages the margin of the wing, substantially as shown and for the purposes stated.

1,166,604. SHOCK-ABSORBER FOR VEHICLES. MAURICE J. KIRBY, Cincinnati, Ohio, assignor of one-half to Anthony M. Sauer, Cincinnati, Ohio. Filed June 22, 1914. Serial No. 846,413. (Cl. 267—22.)

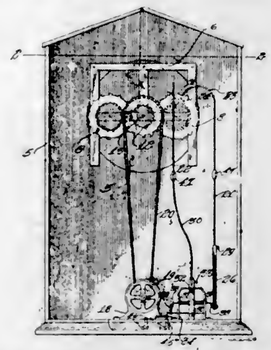


1. A shock absorber comprising an air cylinder closed at one end, an elastic hemispherical member adapted to close the opposite end of the cylinder, guide bars secured to the cylinder and extending to a point beyond the hemispherical member, a compression plate reciprocally mounted on the rods in contact with the member and adapted to be reciprocated thereon to compress the member, plates having slots formed therein mounted on the rods with their lower ends normally in contact with the compression plate, a second set of plates having slots formed therein, located adjacent to the plates of the first set, with the slots of both sets in registration, and means engaging the slots of both sets operatively connected with the relatively movable vehicle running gear and body, adapted to cause relative movement of the plates, whereby the compression plate will be caused to compress the hemispherical member upon relative movement in either direction of the vehicle running gear and body.

2. In a shock absorber for vehicles, the combination of a resilient member, a support for said resilient member, guide bars extending from the support to a point above the resilient member, a compression plate reciprocally mounted on the guide bars in contact with the resilient member, a set of plates connected with the guide rods and normally having their ends in engagement with the compression plate, each of said plates having two elongated superimposed slots, a second set of plates located adjacent to the plates of the first set, with their lower ends engaging the compression plate, each plate of said second set having an elongated slot formed therein at its lower end, adapted to register with the elongated slot at the lower end of its coöperating plate of the first set, and at its upper end having a circular aperture adapted to register with the elongated slot at the upper end of its coöperating plate of the first set, a bolt engaging the slots formed at the lower ends of the plates of both sets and connected with either the running gear portion or the body portion of the vehicle, and a bolt engaging the slots and circular apertures formed at the upper ends of the plates of both sets and connected with the other portions of the vehicle, whereby relative movement of the positions in either direction will cause the second set of plates to be moved to compress the resilient member.

1,166,605. AUTOMATIC ELECTRIC-WINDING CLOCK. UCAL S. KREIDER, Arcanum, Ohio. Filed Sept. 1, 1914. Serial No. 859,702. (Cl. 58—41.)

1. In combination with a plurality of clock springs, an automatic electric winding clock including a plurality of rods pending from said springs and weighted to hold the rods snugly in engagement with the springs at all times, mechanism in connection with said rods and operated by the movement of the latter, means operable by the movement of the mechanism, to close an electrical circuit, a power element in the circuit, and means for operatively connecting the power element with said springs, for rewinding the latter when the circuit is closed.



2. A device as specified, including a housing a clock mechanism mounted in the housing comprising the usual train of gears and springs, a power element carried by the housing and in connection with said mechanism, rods, one end of each of which is in engagement with one of said springs, a frame arranged in the housing and in proximity to said power element, a shaft revolubly mounted in said frame and being in connection with said rods, and an arm carried by said shaft to close the electrical circuit for operating the power element for winding said springs.

3. An automatic electric winding clock including a clock frame; springs mounted in said frame, mechanism for rewinding said springs after a predetermined amount of energy has been expended therefrom including, in combination with a power element, a pair of rods in engagement with one of said springs and being vertically movable when the latter is expanded, a drum in connection with said rods adapted to be rotated when the latter are raised by the expansion of the spring, an arm carried by said drum for closing an electrical circuit to operate said power element, when said rods are elevated a predetermined distance, and means associated with said drum for limiting the upward movement of said rods.

4. An automatic electric winding clock including a clock frame, springs mounted in said frame, a power element arranged in proximity to said springs and being in connection with the latter to simultaneously rewind the same when the power element is operated, rods, one end of each of which is in connection with one of said springs, means detachably connected with the opposite end of each of said rods adapted to be actuated by the movement of the latter, an electrical circuit adapted to be closed by the operation of said means when said rods are raised for operating said power element, and a trigger carried by said means and automatically actuatable by the initial movement of said rods to limit the subsequent movement of the latter.

5. An automatic electric clock winding mechanism including a clock frame, springs mounted in said frame, a power element in connection with said springs for simultaneously rewinding the latter, means for operating said power element whereby said springs are periodically rewound, including a pair of rods, one end of each of which is in engagement with one of said springs, a drum rotatably mounted in proximity to said power element, and associated therewith to operate the latter at times by the movement of said drum, the opposite ends of said rods being in engagement with said drum one of which operates the latter by the expansion of the spring and means carried by said drum for engagement with the other of said rods to limit the upward movement of both of the latter, and being automatically disengaged therefrom when said rods are lowered, substantially as specified.

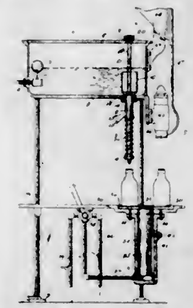
1,166,606. FLY-KILLER. EMANUEL KROMER, Spokane, Wash. Filed May 25, 1914. Serial No. 840,908. (Cl. 43—22.)



1. A fly killer comprising, in combination with a screen having an aperture therein large enough to permit the passage of a fly therethrough, a cover member adapted to be attached to said screen over said aperture, said cover member having an open bottom and having a central opening in its face, spurs projecting inwardly from the edge of said face opening, and a killer bait adapted to be supported from said spurs.

2. A fly killer comprising in combination with a screen having an aperture therein large enough to permit the passage of a fly therethrough, a cover member adapted to be attached to said screen over said aperture, a killer bait disposed in the space between said screen and said cover, and a receptacle carried by said cover adapted to be filled with some killing preparation and disposed, with respect to said bait, that a portion of the bait is immersed.

1,166,607. BOTTLE-FILLING MECHANISM. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Mar. 29, 1911. Serial No. 617,603. (Cl. 226—17.)



1. In a liquid filling mechanism, the combination of a tank, a measuring receptacle located in the tank for measuring out a predetermined quantity of liquid, a sleeve on which the measuring receptacle is mounted, said sleeve extending through the bottom of the tank, and a filling conduit in the sleeve provided with filling openings, the sleeve being movable to cause the measuring receptacle to deliver its liquid to the filling openings of the conduit.

2. In a filling mechanism, the combination of a tank, a measuring receptacle located in the tank for measuring out a predetermined quantity of liquid, a sleeve on

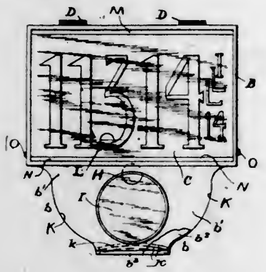
which the measuring receptacle is mounted, a filling conduit in the sleeve provided with filling openings, a support for the article to be filled, and means for moving the support to cause an article thereon to move the sleeve to bring the measuring receptacle into position to deliver its liquid to the filling opening of the conduit and through it to the article.

3. In a filling mechanism, the combination of a source of liquid supply, a measuring receptacle for measuring out a predetermined quantity of liquid from the source of supply, a stationary filling conduit to which the measuring receptacle is arranged to deliver, a support for the article to be filled, and means for moving the support so that the movement of the support acts to introduce the filling conduit into the article carried by the support and causes the article to move the receptacle into position to deliver its contents to the filling conduit.

4. In a filling mechanism, the combination of a source of liquid supply, a measuring receptacle for measuring out a predetermined quantity of liquid from the source of supply, a stationary filling conduit to which the measuring receptacle is arranged to deliver, a support for the article to be filled and means for moving it, and connections whereby the movement of the article introduces the filling conduit into the article and actuates the measuring receptacle to cause it to deliver the liquid to the filling conduit.

5. In a filling mechanism, the combination of a tank for holding liquid, a measuring receptacle located in the tank and normally held below the surface of the liquid, a stationary filling conduit to which the measuring receptacle is arranged to deliver, a support for the article to be filled, means for moving the support to introduce the filling conduit into the article and to cause the article to actuate the measuring receptacle to cause it to deliver its liquid to said filling conduit and to move the filled article away from the conduit, and a spring for returning the measuring receptacle to normal position when the filled article is moved away from the conduit.

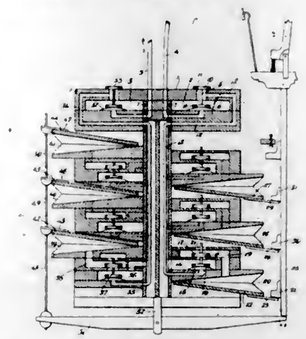
1,166,608. NUMBER AND LAMP BOX. LARS A. LARSON, Elgin, Ill. Filed Aug. 13, 1914. Serial No. 856,613. (Cl. 40—132.)



1. A number and lamp box, comprising an upright base, a box frame, means to pivotally attach the upper side of said box frame to the upper edge of said base, a flange extending longitudinally along the upper side of said box frame and a flange extending longitudinally along the inner face of said base, adjacent to the lower edge thereof, a number plate on said last named flange, said first named flange adapted to hold the upper edge of said number plate in a determined position when said box frame is closed against said base, colored glass secured in the sides of said box frame, and in the front of the lower part thereof.

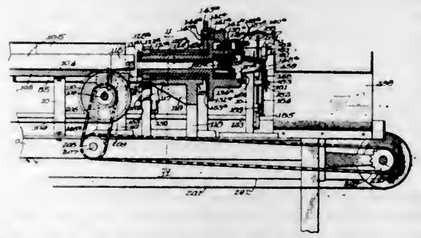
2. A number plate and lamp box comprising an upright base, a box frame, hinges pivotally attaching the one side of said box frame to the corresponding edge of said base, said box frame provided with a clear glass front in the part thereof before said base and adjacent to said attached edge, and with a sheet of colored glass in the remaining part of said front, reflectors in the sides and bottom of said remaining part of said box frame, a lamp in said remaining part, and flanges respectively positioned on the front of said base, near the edge thereof opposite said hinges, and on the inner face of the hinged side of said box frame, adjacent to the edge thereof which rests against said base.

1,166,609. PLAYER-PIANO. JOSEPH LEISCH, Tryon, N. C., assignor to The John Church Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 16, 1911. Serial No. 660,588. (Cl. 84—160.)



In an arrangement of parts in a player piano in combination with the piano action, a main system, comprising a series of primary pneumatics set in staggered relation in a horizontal plane, a series of power pneumatics, secondary pneumatics for each power pneumatic mounted together with and ajacent to the fixed members thereof, the power penumatics set in staggered relation in a vertical plane, and a complete auxiliary system set back to back with the main system throughout and comprising primary pneumatics in like relation and back to back with those of the main set, secondary pneumatics, and power pnuematics mounted together in like relation to those of the main system and set in vertical staggered relation back to back with those of the main system, said auxiliary power pneumatics being positioned so that their movable members move in the opposite direction to those of the main system, whereby each main power pneumatic is back to back and parallel with an auxiliary power pneumatic, and operative connection from each power pneumatic of the main system and its parallel and back to back power pneumatic of the auxiliary system to a separate member of the piano action, whereby a compact and accessible player chest is provided.

1,166,610. CANDY-MACHINE. FREDERICK W. LOVELADY, Saginaw, and BERNARD J. KENNEDY, Detroit, Mich., assignors of one-third to George F. Dice, Saginaw, Mich. Filed Dec. 9, 1912. Serial No. 735,646. (Cl. 107—4.)



1. In a candy machine having removable reducing rollers provided with shafts journaled at their rearward ends in a continuous supporting bracket, the combination of a plurality of separate removable supporting brackets in which are journaled the forward ends of said shafts.

2. In a candy machine having a frame, roller shafts and removable rollers upon said roller shafts, the combination of means for removing said rollers from said roller shaft comprising a plurality of separate supporting brackets in which are journaled the forward ends of said shafts, said brackets being removable from said shafts.

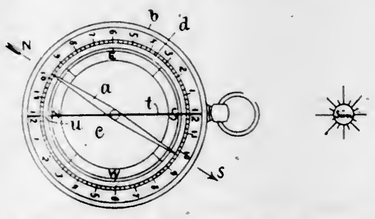
3. In a candy machine having reducing rollers, means adjacent said rollers for heating a bar of candy passing therebetween comprising a box adjacent said rollers adapted to convey a heating fluid, and valve-controlled intake and outlet pipes communicating with said box.

4. In a candy machine, the combination of reducing rollers; heating elements under and near the reducing rollers; heating fluid intake and outlet pipes connected with the heating elements; and valves in said pipes controlling the flow of fluid through the latter.

5. In a candy machine having a frame, reducing rollers, and a cutter, means interposed between the reducing roller and the cutter for cooling candy passing therethrough comprising a carrier belt adapted to convey the candy, an inclosure for said carrier belt, and means for forcing a blast of air upon the candy in said inclosure.

[Claims 6 to 19 not printed in the Gazette.]

1,166,611. MAGNETIC SUN-DIAL. JOHAN HENRIK L'ABÉE LUND, Christiania, Norway. Filed June 8, 1915. Serial No. 32,818. (Cl. 33—62.)



1. A magnetic sun dial, comprising a compass case provided with an adjustable glass cover having a non-transparent line disposed diametrically, so as to cause a shadow to be thrown on the bottom of the casing.

2. In a magnetic sun dial, the combination with a compass case of an adjustable glass cover carrying a non-transparent line which terminates a short distance frome the periphery of the glass cover for the purpose described.

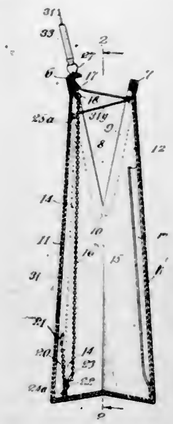
3. In a magnetic sun dial the combination with a compass case having an adjustable glass cover with a non-transparent line which terminates a short distance from the periphery of the glass cover, of an indicator near the bottom of the compass lying in the same axial plane as the non-transparent line.

1,166,612. HAND-BAG. GEORGE MACAULAY, Brooklyn, N. Y. Filed May 11, 1914. Serial No. 837,634. (Cl. 150—33.)

1. A hand bag having relatively moving closing members, and an interior pocket formed by looping the bottom of the material at the bottom of the bag and connecting the top of the material permanently to the top of the bag, and means for closing the bag and connected to the material of the pocket so as to prevent entry into the latter without strain upon the closing means.

2. A bag having relatively moving closing members, and an interior pocket formed by connecting the material thereof along its top to the top of the bag at one side of the latter, and turning the bottom of said pocket material inwardly to form a loop, and permanently securing the said material to the bag at the top of the inturned portion, and means for holding the material of the pocket taut within the bag so as to prevent entry into the pocket without detection.

3. A bag having relatively moving closing members, and an interior pocket, and a single means for drawing the closing members together and simultaneously putting stress upon the pocket so as to prevent entry thereinto without detection.

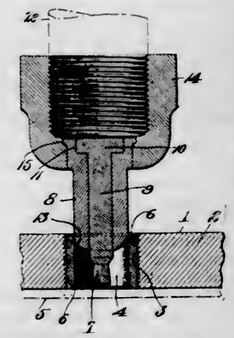


4. A bag having relatively moving closing members, and an interior pocket, and means for holding the interior pocket under stress and connected with the said closing members so as to close the bag at the same time stress is put upon the pocket, the said means being extended outside the bag, and a handle arranged in coöperative relation to the said means.

5. A bag having relatively moving closing members, and an interior pocket, a handle carried by one of the closing members, and means coöperating with the handle and extending through its connected closing member and into engagement with the opposite closing member, and also connected with the said pocket, whereby the bag may be closed and strain put upon the pocket to prevent entry thereinto without detection.

[Claims 6 to 9 not printed in the Gazette.]

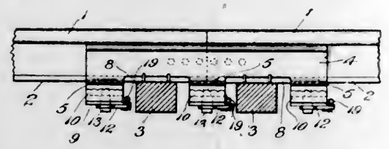
1,166,613. PUNCH. WILLIAM J. MACKLE, St. Louis, Mo. Filed July 6, 1915. Serial No. 38,048. (Cl. 164—124.)



1. The combination with a punch stock and threaded coupling nut, a hollow shank secured at one end to the punch stock by said nut and terminating at the outer end in an inward taper, a solid punch comprising an elongated body portion, a head, and a perforating end, said body portion extending continuously throughout the hollow shank while said head is adapted to abut the punch stock, whereby a rigid structure is provided without joints between the said nut and the punching end portion of the punch.

2. The combination with a punch stock and threaded coupling nut, a hollow elongated shank secured at one end to said stock by said nut, a recess in said secured end of the shank, a solid punch comprising an elongated body portion, a head and a punching end, said body portion extending continuously throughout the hollow shank while its head is firmly seated in said recess and held therein by said nut against the said stock, whereby a rigid structure is provided without transverse joints between the said nut and the work end portion of the punch.

1,166,614. RAILWAY-RAIL JOINT. IGNAC MAJCHEREK, Detroit, Mich. Filed Nov. 28, 1914. Serial No. 874,459. (Cl. 239—6.)



1. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having a plurality of spaced apart extensions turned around and under the rail flanges, a connecting means joining said extensions, and means to force the said extensions outwardly against the said connecting means to thereby secure the extensions and connecting means together.

2. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, ridges formed on said extensions, a connecting device lying between and engaging the said ridges to thereby connect the said plates together, and means to force the extensions against the connecting device.

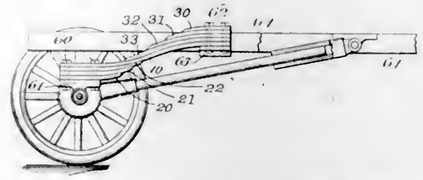
3. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and means passing through the connecting device to force the said ribs against the upturned edges of the connecting device.

4. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and means located between and bearing against the lower portions of said extensions for forcing said ridges against the upturned edges, substantially as described.

5. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and a stud having a wedge-shaped end rotatably mounted in the plate, and said end lying between the said extensions and serving to force them apart on rotation of the stud, substantially as described.

[Claim 6 not printed in the Gazette.]

1,166,615. SPRING. ARTHUR C. MASON and ALFRED T. STURT, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 14, 1914. Serial No. 877,008. (Cl. 267—33.)



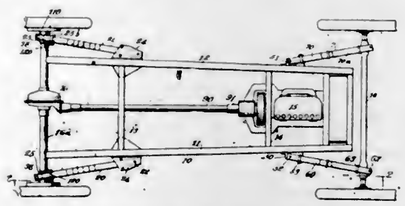
1. A spring consisting of a plate running through its entire length, each end of said plate being curved in opposite directions and provided at each end and at opposite sides thereof with reinforcing spring plates receding toward the ends thereof.

2. A spring consisting of a main plate running through its entire length, each end of said plate being curved in opposite directions and provided at each end and at opposite sides thereof with reinforcing spring plates receding toward the ends thereof, the reinforcing plates at each end being secured together and to the main plate.

3. A spring construction consisting of a main plate running from end to end, shorter plates on opposite sides of each end of the main plate constructed to take deflections in opposite directions, the main plate having a neutral point intermediate the ends thereof.

4. A spring plate reinforced at each end on its opposite sides having the greatest bending moments near each end and provided with a neutral point between the points of greatest bending moments.

1,166,616. SPRING SUSPENSION. ARTHUR C. MASON and ALFRED T. STURT, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 9, 1915. Serial No. 1,270. (Cl. 261—30.)



1. In an automobile, an axle, a frame over the axle, a sinuous spring fixedly secured at one end to the frame and rotatably secured at the other end to the axle casing.

2. In an automobile, a front axle and a rear axle, a frame over the axles, a housing for the rear axle, a rotatable sleeve mounted on the axle housing near the ends thereof, a telescopic rod connecting the axle housing to the frame, springs on each side of the frame, one end of each spring being fixedly secured to the frame and the other end fixedly secured to a rotatable sleeve, the position of the under side of each rear spring being so related to the position of the telescopic rod that the point of load and point of resistance will act in substantially parallel

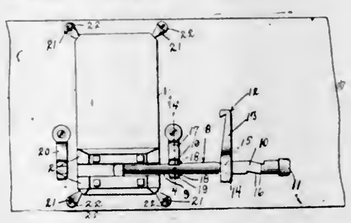
planes, springs fixedly secured at one end to the frame and at the other end to the front axle, as and for the purpose set forth.

3. In an automobile, the combination of an axle having a housing, a spring seat rotatably mounted in fixed positions on the axle housing, a supporting frame over the axle, a spring rigidly secured at each of its ends respectively to the frame and to the spring seat.

4. In an automobile, the combination of front and rear axles, a frame over the axles, a housing for the rear axle, a telescopic rod secured to the housing and frame, spring seats rotatably mounted on the axle housing, rearwardly projecting springs on each side of the frame fixedly secured at each end thereof, to the frame and a spring seat respectively, forwardly projecting springs, the ends of the springs of each pair being rigidly secured respectively to the frame, and to the front axle, as and for the purposes described.

5. The combination with an axle tube or housing, a spring seat rotatably mounted upon said housing and held from movement in the direction of its axis, a spring plate fixedly secured to the spring seat, a superposed spring plate held at one end to the first mentioned spring plate but adapted to slide thereon at the other end, secondary spring plates also adapted to have a sliding movement at one end with respect to the first mentioned spring plates and combined clamping and guiding means to clamp the first mentioned spring plate to the spring seat and to form guides for the other spring plates.

1,166,617. HOLDER FOR TROLLEY-POLES. HARRY E. MATTOX, Sherman, Cal. Filed Mar. 24, 1914. Serial No. 826,940. (Cl. 191—50.)

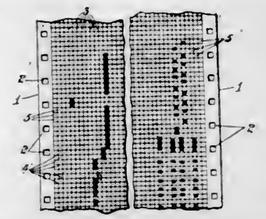


1. A holder for trolley poles comprising a base adapted to be secured to the roof of a car, a bar swivelly connected to the base, a hook slidably mounted on the bar, clamping jaws mounted upon the roof of the car to engage the bar when in its lowered position.

2. A holder for trolley poles comprising a base adapted for attachment to the roof of a car, a bracket supported by the roof and adjacent the base, resilient jaws carried by the bracket, a bar having one end swivelly connected to the base, said bar having diagonally disposed notches formed therein, a hook having an enlargement, said enlargement having a bore formed therein, certain walls of which engage the notches when the hook is tilted, thereby preventing the hook from sliding upon the bar.

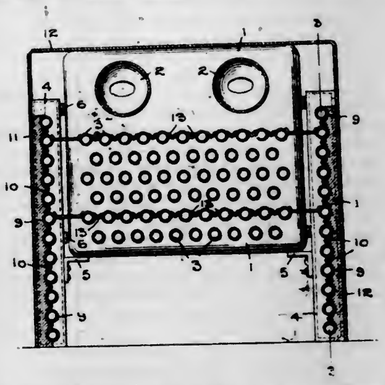
1,166,618. METHOD OF MAKING PERFORATED MUSIC-SHEETS. PHILIP J. MEAHL, Summit, N. J. Filed Aug. 18, 1914. Serial No. 857,331. (Cl. 164—114.)

1. The method of making copies of automatically recorded music sheets for automatic musical instruments, consisting in producing automatically a record of manual playing on a key instrument; manually making corrections on the automatically produced record sheet as are required for proper bridges, sustenuto and the elimination of false notes; making a copy of the so corrected sheet so as to give the beginnings of the note slots the proper relation to the steps of a mechanical reproducing machine having step by step selectors and a step by step feed and using the so corrected sheet as a master sheet in a mechanically or electrically operating duplicating machine having step by step selectors and a step by step feed to obtain an enlarged copy of the original sheet and using this sheet just produced as a master sheet in a mechanically or electrically operating duplicating machine for making sheets commercially, substantially as set forth.



2. The method of making copies of automatically recorded music sheets for automatic musical instruments, consisting in producing automatically a record of manual playing on a key instrument; then correcting and adjusting the positions of those record marks thus produced requiring correction or change as to their position in the direction of the length of the sheet or the length of such record marks so that said record marks will coincide with the positions which they must have in order to enable them to control the operations of punches in a machine having mechanical punch controlling means which are operated at regular intervals in a unit of time and have a fixed relation to the steps for the feed of the paper; and then making an enlargement of the so adjusted or corrected record and finally using this enlarged copy of the record as a master sheet in a perforating machine having a mechanically operated punch controlling or selecting means, which operates a definite number of times in each time unit and for a determined feed of the paper, substantially as set forth.

1,166,619. BOILER. EDWARD C. MEIER, Phoenixville, Pa. Filed Apr. 30, 1915. Serial No. 24,900. (Cl. 122—297.)

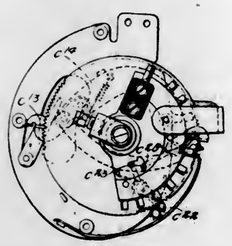


1. A boiler, comprising boxes spaced apart, tubes connecting the boxes, water legs at the ends of the boxes, said water legs extending below the boxes and supporting the latter at an elevation, brackets secured to the legs and supporting the boxes, couplings connecting the legs and the boxes, and water tubes connecting the legs and forming a vertical series of tubes operating as a wall support, substantially as described.

2. A boiler, comprising boxes spaced apart, tubes connecting the boxes, water legs at the ends of the boxes, said water legs extending below the boxes and supporting the latter at an elevation, brackets secured to the legs and supporting the boxes, couplings connecting the legs and the boxes, water tubes connecting the legs and forming a

vertical series of tubes operating as a wall support, tile between said last-mentioned tubes, and a plastic wall formed against said tile and tubes, substantially as described.

1,166,620. TELEPHONE CALLING MECHANISM AND SYSTEM. JOHN H. MELVIN, Columbus, Ohio, assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 20, 1909. Serial No. 473,272. (Cl. 179—90.)



1. In a telephone system, a line circuit, means including a rotary impulse wheel for transmitting one or more impulses over one side of the line circuit and a single impulse over the other side thereof, a gear wheel, a governor engaged by said gear wheel to regulate the operation of said impulse wheel, means for preventing the gear wheel from rotating in one direction, a rotary dial for operating said impulse wheel, means for locking the dial and impulse wheel to the gear wheel when the dial is released after being given a forward rotation, and means for automatically unlocking the same when the dial and impulse wheel reach the limit of their backward rotation, whereby the full backward rotation of the dial must always take place before it can again be given a forward rotation.

2. In a telephone system, a line circuit, and means for transmitting impulses over said line circuit, said means comprising a rotary impulse wheel, a rotary dial for operating said impulse wheel, automatic means for preventing initial forward rotation of the dial from any position except normal, and a stop for variably limiting the rotation of said dial.

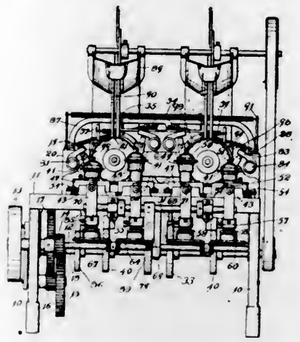
3. In a telephone system, a line circuit, and means for transmitting impulses over said line circuit, said means comprising a rotary dial provided with a series of holes, an impulse wheel operated by said dial, a governor for regulating the operation of the impulse wheel, a gear wheel for operating the governor, a dog carried by the impulse wheel to engage the gear wheel, another dog carried by the impulse wheel, said dogs having coöperating portions whereby the impulse wheel is locked to the gear wheel during backward rotation of the dial, means engaging the said last-mentioned dog to unlock the impulse wheel from the gear wheel when the dial reaches the limit of its backward rotation, and means for preventing rotation of the gear wheel in one direction.

4. In a telephone system, a subscriber's rotary calling dial, a rotary impulse wheel operated thereby, a gear wheel, means for preventing rotation of the gear wheel in one direction, means by which the backward rotation of the dial rotates the impulse wheel in the other direction, and means including coöperating locking portions, together with slots, for keeping the impulse wheel locked to the gear wheel during transmission of the impulses, and means automatically operating to separate said locking portions when the dial reaches the limit of its backward rotation.

5. In a telephone system, a line circuit, a calling mechanism including a rotary calling dial adapted for forward and backward rotation and provided with finger holds for controlling the same, means controlled by said dial for transmitting a plurality of series of impulses over one side of the line during the backward rotation of said dial, each series being followed by a single impulse over the other side of the line, and means for preventing a second series of impulses being transmitted until said single impulse has been transmitted.

[Claim 6 not printed in the Gazette.]

1,166,621. SLOTTING-MACHINE. JAMES MONKS, Hartford, Conn. Filed Dec. 30, 1911. Serial No. 668,600. (Cl. 10—6.)



1. A carrier having means to receive blanks, a single feed device for feeding blanks to the carrier, tools positioned to operate simultaneously each upon a blank different from that operated upon by another tool, and means for operating the carrier to receive a plural number of blanks at each operation of the feeding means.

2. A carrier having means to receive blanks, means for feeding blanks to the carrier, a pair of tools positioned each to operate upon a blank different from that acted on by the other tool, and means for operating the carrier at each step a distance twice that between each of the blank receiving means to receive a plural number of blanks at each operation of the feeding means.

3. A carrier having means to receive blanks, a plural number of tools positioned each to operate upon a blank different from that acted upon by another tool, means for operating the carrier at each step a distance equal to that between each of the blank receiving means multiplied by the number of tools, and a single feed device for delivering blanks into each blank receiving means as it passes the feeding device, whereby a number of blanks equal to the number of tools are placed in the carrier at each movement of feed thereof.

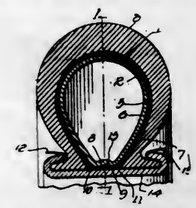
4. A carrier having means spaced to receive blanks, means for feeding blanks to the carrier, a plural number of tools positioned to operate upon blanks in the carrier, means to move the carrier at each single feeding movement a distance equal to that between a plural number of blank receiving means, and means to cause a dwell in the movement of the carrier between the starting and stopping of each feeding movement thereof.

5. A carrier having means evenly spaced to receive blanks, means for feeding blanks to the carrier, a tool positioned to operate upon a blank in the carrier, means to move the carrier at each single feed movement a distance equal to that between a plural number of blank receiving means, and means to cause a dwell in the movement of the carrier for the feed of a blank to each of the blank receiving means.

[Claims 6 to 28 not printed in the Gazette.]

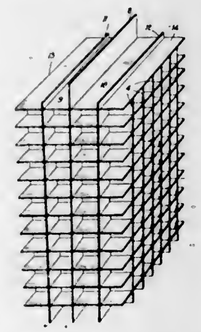
1,166,622. BLOW-OUT PATCH. EARL H. MOSEHOUSE, Culver City, Cal. Filed Mar. 15, 1915. Serial No. 14,314. (Cl. 152—24.)

1. A blow out patch, comprising an inner section of fabric shaped to fit within a tire casing and having intermeshing bearings extending integrally from its meeting edges, an outer section of fabric fitting around the first section to near the bearings and then extending outwardly in loose flaps, and a pin for holding the bearings together.



2. A blow out patch, comprising an inner section of fabric shaped to fit within a tire casing and having intermeshing bearings extending integrally from its meeting edges, an intermediate section of fabric fitting around the inner section to near the bearings, an outer section of fabric fitting around the intermediate section and extending outwardly in loose flaps, and a pin for holding the bearings together.

1,166,623. ICE-CAN. THOMAS M. MYERS, New York, N. Y., assignor to Audiffren Refrigerating Machine Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 21, 1914. Serial No. 826,252. (Cl. 62—111.)



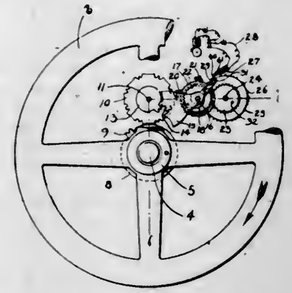
1. An ice can having a flat central partition loosely mounted therein, and a cellular structure on each side of said partition separate therefrom, and making connection therewith so loose that when the water in the cellular structure is being frozen, leakage of water between the partition and the cellular structure may compensate for expansion.

2. An ice freezing can having a flat metal partition loosely positioned near the center thereof, and cellular structures on each side of said partition and separate therefrom for dividing the ice into blocks, said partition plate and cellular structures being removable from the can with the ice after completion of the freezing operation, and said cellular structures being then separable from said partition to release the blocks of ice.

3. An ice freezing can having a metal partition loosely positioned therein near the middle of the can, a plurality of metal plates on each side of said partition having their edges loosely abutting against said partition and forming cellular structures on each side thereof wherein water may be frozen in small blocks, said partition and cellular structures being removable with the ice from the can on completion of the freezing operation and said cellular structures being separable from said partition to release the blocks of ice.

4. An ice freezing can having a partition loosely positioned therein near the middle of the can, metal plates loosely abutting against said partition and separable therefrom, said plates forming cells in which the water may be frozen into small blocks and from which water may pass upward between the edges of said plates and said central partition to compensate for expansion on freezing, dividing plates forming the outer face of the cells and separable from said cellular structures with provision for leakage of water along the face of the dividing plates, and supplementary cellular structures between said dividing plates and the walls of the can and separable from both, all of said cellular structures and plates being removable from the can when the water has been frozen, the cellular structures being separable one from another to release the blocks of ice; substantially as described.

1,166,624. ALARM DEVICE FOR VALVES. JAMES D. NELSON, Cincinnati, Ohio. Filed Feb. 9, 1911. Serial No. 607,537. (Cl. 177—382.)



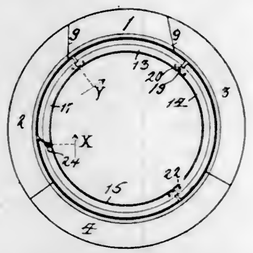
1. In combination with a valve, an alarm mechanism comprising a make and brake device located in an alarm circuit, a signal wheel provided with stops for actuating said device, a clock mechanism for actuating said wheel, a segment movable from a normal to an alarm position for winding said clock mechanism and controlling the operation of said wheel, and means actuated by said valve for moving said segment on the first closing motion of the valve to wind said clock and to cause said wheel to actuate said device to transmit an alarm, and for moving the segment on the last opening motion of the valve from said alarm position to the normal position, and causing said device to be actuated by said wheel to transmit an all right signal.

2. In combination with a valve, an alarm mechanism comprising a make and break device, an alarm circuit in which said device is located, a signal wheel provided with two sets of stops for engaging said device and thereby transmitting distinctive signals, a clock mechanism for actuating said wheel, means actuated by the valve for winding the clock mechanism and for controlling the operation of the wheel whereby one set of stop engages the make and break device when the valve is closed and the other set engages it when the valve is open.

3. In combination with a valve, an alarm mechanism comprising a make and break device, an alarm circuit including said device, a signal wheel provided with two sets of stops for engaging said device, and a segment actuated by the valve for controlling the operation of the wheel whereby one set or the other of the stops on the wheel engage the make and break device when the valve is moved.

4. In combination with a valve, an alarm mechanism comprising a make and break device, an alarm circuit including said device, a signal wheel provided with two sets of signal stops for engaging the device, a clock mechanism for actuating the wheel, a segment movable from a normal to an abnormal position for winding the clock mechanism and sending an alarm signal and movable from the alarm position to the normal position for sending all right signals, a stop carried by the wheel for engaging the segment when it is in the normal position, a second stop carried by the wheel for engaging the segment when it is in the alarm position, said stops being so located with relation to the signal stops that said wheel moves to transmit a distinctive signal when each stop is released from the segment, and means actuated by the valve for actuating the segment.

1,166,625. COLLAPSIBLE CORE. HARRY E. NYE, Akron, Ohio. Filed May 24, 1915. Serial No. 30,132. (Cl. 18—45.)



1. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, and a plurality of segment-shaped locking members having peripheral grooves adapted to simultaneously receive said flanges and said ring.

2. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, and a plurality of segment-shaped locking members hinged together and provided with grooves in their peripheral face adapted to simultaneously receive said flanges and said ring.

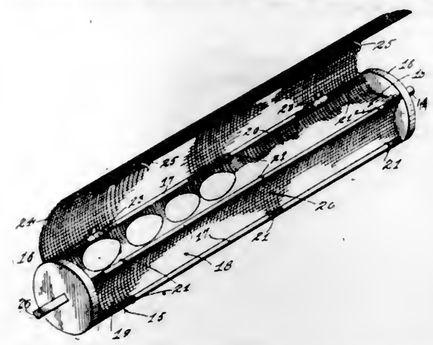
3. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces adapted to receive said flanges and said ring, and means for forcing said members outwardly to thereby force the beads on the flanges into snug engagement with the bead on said ring.

4. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces adapted to receive said flanges and said ring, means for forcing said members outwardly to thereby force the beads on the flanges into snug engagement with the bead on said ring, and means to hinge said sections together.

5. A core of the character described comprising a plurality of separable sections having inwardly-extending flanges, said flanges each provided on one face with a lateral bead and having the opposite face inclined, a ring having a lateral bead locking over the beads on the flanges, a plurality of segment-shaped locking members having grooves in their outer faces to simultaneously receive said flanges and said ring, and a detachable member adapted to shift all of said members outwardly for forcing said locking members against said separable sections and lock said locking members against independent movement.

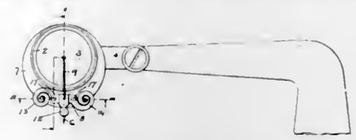
1,166,626. COMBINED EGG TRAY AND TURNER. BENJAMIN C. OESTREICH, Bellingham, Minn. Filed May 28, 1915. Serial No. 31,042. (Cl. 119—44.)

In a combined egg tray and turner, a frame, a plurality of cylindrical containers mounted to turn within the frame, said containers each comprising a shaft, disks fixed adjacent the ends of the shafts, rods connecting said disks, a continuous strip of reticulated material passed about and secured to said rods, with those portions between the rods pressed inwardly to provide egg receiving spaces, and semi-cylindrical closure members of reticulated material hinged



to inclose said egg receiving spaces and firmly hold the eggs in position therein.

1,166,627. SOUND-BOX. JOHN S. OSTROM, San Francisco, Cal. Filed Nov. 30, 1914. Serial No. 874,790. (Cl. 181—11.)



1. In a sound box, a casing, a diaphragm arranged in said casing, a stylus bar attached to said diaphragm, a bar to which said stylus bar is attached, said last named bar being provided at its ends with flat spiral portions, and means for supporting said last named bar at its ends.

2. In a sound box, a casing, a diaphragm arranged in said casing, a stylus bar attached to said diaphragm, and a flat bar having flat spiral ends supported at its ends on said casing and to which said stylus bar is attached, the stylus bar lying at a right angle to a line through the points of support of the flat bar.

3. In a sound box, a casing, a diaphragm arranged in said casing, a stylus bar attached to said diaphragm, a flat bar having flat spiral ends to which the stylus bar is attached intermediate said spiral ends, pins engaging the casing and the center of said spirals, and screws passing through the flat bar intermediate the spirals and engaging the casing adapted to press the bar firmly against the pins.

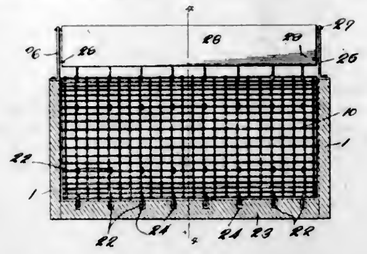
4. In a sound box, a stylus bar, a stylus bar mounting comprising a flat bar having spiral ends, means for supporting the flat bar at its ends, and means arranged intermediate the ends for pressing the bar against said supporting means, the pressing means and the supporting means being alined and being disposed in a plane at right angles to the stylus bar.

5. In a sound box, a stylus bar, a flat bar having flat spiral ends to which the stylus bar is attached intermediate said ends, supporting pins engaging the center of the said spiral ends and tension screws passing through the flat bar intermediate the spirals, said supporting pins and tension screws being in alinement.

[Claims 6 and 7 not printed in the Gazette.]

1,166,628. REVOLVING FISH-SCREEN. WALTER L. PARSONS, Fort Bidwell, Cal. Filed July 18, 1913. Serial No. 779,699. (Cl. 61—5.)

1. In a fish screen, a box, a shaft journaled in said box, a water wheel rotatably mounted upon said shaft, a cylindrical screen rotatably mounted upon said shaft and encompassing said water wheel, an internal gear carried on the inner surface of one end of said screen, a gear mounted upon said shaft, an arm loosely mounted upon said shaft and positioned within the screen, a gear carried by the free end of said arm and meshing with said internal gear and said first named gear for operating said screen in an opposite direction to the rotation of said wheel, said arm supported gear being movable in an arc incident to the rotation of said screen for facilitating the effective operation of the screen.



2. In a fish screen, a box, a shaft journaled in said box, a water wheel rotatably mounted upon said shaft, a cylindrical screen rotatably mounted upon said shaft and encompassing said water wheel, an internal gear carried on the inner surface of one end of said screen, a gear mounted upon said shaft, an arm loosely mounted upon said shaft and positioned within the screen, a gear carried by the free end of said arm and meshing with said internal gear in said first named gear for operating said screen in an opposite direction to the rotation of said wheel, said arm supported gear being movable in an arc incident to the rotation of said screen for preventing the teeth of said gears from becoming clogged, means carried by said screen for conveying drift wood or the like thereover, angle irons upon the upper edge of said box, and a plate swingably mounted upon said rod, said plate forming means for preventing fish from jumping over said screen.

1,166,629. BRACELET. HENRY B. PRATT, St. Paul, Minn. Filed Mar. 3, 1915. Serial No. 11,863. (Cl. 63—3.)



1. In a bracelet a series of oblong metal plates, each plate being formed with a transverse rectilinear slot at each end thereof, and a band passing through all of said slots for uniting said plates.

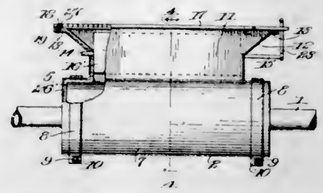
2. In a bracelet a plurality of oblong plates curved longitudinally, each of said plates being formed with a transverse slot near each end and with a panel on the convex side thereof between said slots, and a flat band passing through said slots and joining said plates in a series.

3. In a bracelet a plurality of plates curved longitudinally, each of said plates being formed with a transverse slot near each end and with a panel on the convex side thereof between said slots, and a flexible band passing through said slots and behind said panels.

4. In a bracelet a plurality of oblong metal plates, each plate being curved longitudinally and perforated at its ends, and a flat flexible band passing through said perforations and extending along the inner or concave sides of the plates.

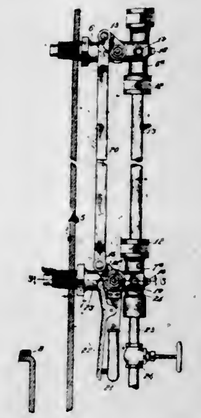
5. In a bracelet, an endless series of oblong plates, severally formed with a central panel and a transverse slot near each end, and a flexible band woven in and out through said slots to connect said plates, said band being arranged to line the inner sides of the panels and overlap the portions of the links between the slots and the ends of the links.

1,166,630. MOTOR-VEHICLE HEATING DEVICE. WILLIAM H. PRETTYMAN, Hyannis, Nebr. Filed June 22, 1915. Serial No. 35,525. (Cl. 237—21.)



In combination with the exhaust pipe of an internal combustion engine, a split drum through which the pipe passes, air inlet means for the drum, a hood of less length than the drum extending therefrom, an asbestos envelop covering the drum and hood and being turned inwardly at the upper edge of the hood, a grate resting on the hood and inturned asbestos, clamping members, one surrounding the drum and asbestos adjacent each end of the drum beyond the hood, said grate being provided with a transversely elongated slot, lugs integral with the grate extending into said slot, a damper within the hood, a trunnion pivotally mounting the damper extending exteriorly of the hood, a crank connected to said trunnion and passing through said slot, and said crank being yieldable to coöperate with said lugs.

1,166,631. WATER-GLASS GAGE. JOHN PURCELL, Topeka, Kans. Filed Feb. 27, 1913. Serial No. 751,003. (Cl. 73—54.)

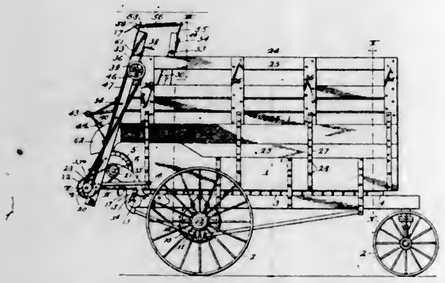


1. A water glass gage for boilers, comprising a pair of cocks spaced apart and arranged one above the other, a rotatable plug-valve extending transversely through each of said cocks, members secured to the onter ends of said valves, a link pivotally connected to the free end of each member whereby movement of one valve will be imparted to the other, a lever connected with one of said valves, a spring-controlled latch-member secured to said lever whereby the latter may be locked in its adjusted position, and means mounted on said lever whereby the position of the valves may be determined.

2. A water glass gage for boilers, comprising a pair of cocks spaced apart, one above the other, the lower cock

being provided with circumferentially arranged stops or notches, both of said cocks being provided with longitudinal passages extending therethrough, while the outer ends of the cocks are provided with off-set passages disposed perpendicular to the longitudinal passages and with transversely disposed passages for establishing communication between the longitudinal and the perpendicular passages, removable means for closing the outer ends of the longitudinal and transverse passages, a rotatable tapered plug valve in each of said cocks arranged transversely of the longitudinal passages and each having an opening of greater diameter than the longitudinal opening with which it is adapted to register, members secured to the outer ends of the valve, a link pivotally connected to the free end of each member whereby movement of one valve will be imparted to the other, a lever connected with one of said valves, a spring-controlled latch-member secured to said lever and adapted to engage said stops or notches on the lower cock whereby the lever is locked in its adjusted position, and means on said lever whereby the position of the valves may be determined.

1,166,632. STRAW-SPREADING ATTACHMENT FOR MANURE-SPREADER. BENEDICT F. REICHENBERGER, Purcell, Kans. Filed Mar. 7, 1913. Serial No. 752,631. (Cl. 111—40.)



1. In combination with a manure spreader having a cylinder and an apron, an attachment consisting of a container placed upon said manure spreader to increase the load capacity thereof, picker bars at the delivery end of said container, means on said picker bars to carry the material at the top of the load downward to the cylinder, a counter shaft adjacent said cylinder, gearing whereby said counter shaft is driven from the cylinder, gearing driven by said counter shaft for actuating the picker bars, and gearing driven by the counter shaft for actuating the apron.

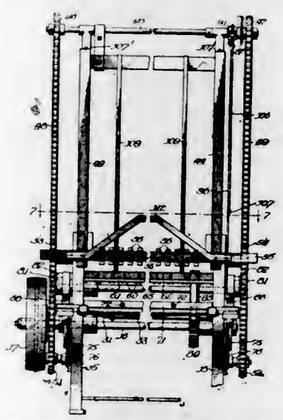
2. In combination with a manure spreader having a cylinder, an attachment consisting of a container placed upon said manure spreader to increase the load capacity thereof, means at he delivery end of said container to carry the material at he top of the load downward to the cylinder, a cross bar pivotally-mounted in advance of said means, strips depending from said cross bar to regulate the passage of the material to said means, resilient fingers depending from the cross bar in advance of said strips to assist the latter in controlling the passage of the material to said means, and resilient members controlling said strips and fingers so that the same will offer resistance to the passage of the material to said means.

3. In combination with a manure spreader having a cylinder, an attachment consisting of a container placed upon said manure spreader to increase the load capacity thereof, a picker at he delivery end of said container to carry the material at the top of the load downward to the cylinder of the manure spreader, a yoke secured to the container, a short distance in advance of said picker, a cross bar operably-mounted in said yoke, strips depending from said cross bar in advance of the picker, resilient fingers depending from the cross bar in advance of said strips, arms extending upward from the cross bar, springs secured to said arms to normally hold the same against the top of the yoke and cause the strips and the fingers to offer resistance to the passage of the material to the picker, and means for tensioning said springs.

4. In combination with a manure spreader having a cylinder, an apron provided with an end gate, an attachment consisting of a container placed upon said manure spreader to increase the load capacity thereof, and fingers extending upward into said container from the end gate to move the load in said cotnainer toward the cylinder, and means for actuating said fingers.

5. In combination with a manure spreader having a cylinder, an apron provided with an end gate, at attachment consisting of a container placed upon said manure spreader to increase the load capacity thereof, means at the delivery end of said container to carry the material at the top of the load downward to the cylinder, a retarder in advance of said means, and means secured to the end gate, said means extending upward into the container to move the load therein toward the cylinder.

1,166,633. WIRE-LINK-FABRIC-CLOSING MACHINE. ANTHONY RHENSTROM, Kenosha, Wis., and HENRY F. HAGER, Chicago, Ill., assignors to Lippert & Rhenstrom, a Copartnership consisting of Aloystus C. Lippert and Anthony Rhenstrom, Kenosha, Wis. Filed Nov. 7, 1914. Serial No. 870,773. (Cl. 140—3.)



1. In a wire fabric link closing machine, the combination of means for suspending a row of fabric links in a substantially vertical plane with their hooked ends depending in position to receive a second row of links, and means for automatically closing at one operation all the hooks of said first-mentioned row of links.

2. In a wire fabric link closing machine, the combination of means for suspending from their apices a plurality of substantially V-shaped fabric links having hooked ends, and a single means for automatically closing all the hooks of said links simultaneously when in suspended position.

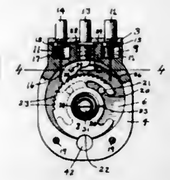
3. In a wire fabric link closing machine, the combination of means for supporting a row of fabric links with their hooked ends in position to receive a second row of links, means for alining the hooks of said links, and means for subsequently closing said hooks.

4. In a wire fabric link closing machine, the combination of means for supporting a row of hooked links, means for alining said hooks, means for closing the hooks, and means for moving the row of links a distance equal to the length of a link.

5. In a wire fabric link closing machine, the combination of means for supporting a row of hooked links, means for alining and closing the hooks around a second row of links engaged therewith, and means for automatically advancing said link-supporting means the length of a link after each closing operation.

[Claims 6 to 38 not printed in the Gazette.]

1,166,634. LOCK. DARREL D. ROCK, Detroit, Mich. Filed Nov. 30, 1914. Serial No. 874,597. (Cl. 70—54.)



1. In a lock, the combination of a flat body having a transverse passage, two tumbler-disks revolubly mounted therein, each having peripheral teeth and a notch, a pin on which both of the disks are mounted, push-buttons for said disks mounted parallel to each other and to the disks in one edge of the body, a tongue on each push-button adapted to engage the peripheral teeth of one of the disks to turn the same step by step, a spring for each disk to return it to normal position, a pawl to prevent the return movement of each disk, a push-button in line with the other two adapted to engage the pawls to release the disks, and a bolt movable in the transverse passage when the notches in the disks are in alinement therewith, said bolt having transverse notches into which the edges of the disks extend when the notches are out of alinement with said passage.

2. In a lock, the combination of a body having a transverse passage, a bolt slidable in the passage and having transverse notches, a pin within the body, a plurality of flat tumbler disks mounted on the pin and each having a notch through which said bolt is slidable, a push-button adapted to turn one disk step-by-step until its notch is in alinement with the passage, and a second push-button adapted to turn the other disk step-by-step in the opposite direction from the first until its notch is also in alinement with said passage, and means to return the disks into the notches in the bolt.

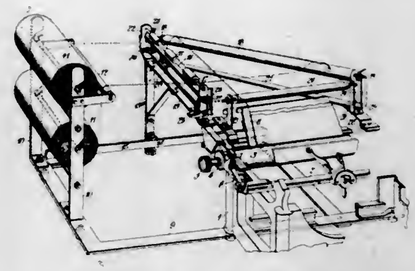
3. In a lock, the combination of a body having a transverse passage, a bolt slidable in the passage and having transverse notches, a pin within the body, a plurality of flat tumbler disks mounted on the pin and each having a notch through which said bolt is slidable, a push-button adapted to turn one disk step-by-step until its notch is in alinement with the passage, and a second push-button adapted to turn the other disk step-by-step in the opposite direction from the first until its notch is also in alinement with said passage, means to return the disks into the notches in the bolt, pawls for preventing the return movement of the disks, and independently operable means for disengaging said pawls.

4. In a lock, the combination of a body having a transverse passage, a bolt slidable in the passage and having transverse notches, a pin within the body, a plurality of flat tumbler disks mounted on the pin and each having a notch through which said bolt is slidable, a push-button adapted to turn one disk step-by-step until its notch is in alinement with the passage, and a second push-button adapted to turn the other disk step-by-step in the opposite direction from the first until its notch is also in alinement with said passage, means to return the disks into the notches in the bolt, pawls for preventing the return movement of the disks, and a push-button mounted between the other two and operable independent thereof for disengaging said pawls.

5. In a lock, the combination of a body having a transverse passage, a bolt slidable in the passage and having transverse notches, a plurality of disks revolubly mounted in said body in alinement with each other and each having a notch through which the bolt is slidable, and a series of teeth in its outer edge, a push-button provided with a flexible tongue adapted to engage in the teeth of one disk to turn the disk step-by-step until its notch is in alinement with said passage, and a second push-button provided with a flexible tongue adapted to turn the other disk step-by-step in the opposite direction until its notch is also in alinement with said passage, and means to turn the disks into the notches in the bolt.

[Claim 6 not printed in the Gazette.]

1,166,635. TYPE-WRITING MACHINE. VICTOR B. ROUILLOT, Haddonfield, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 6, 1914. Serial No. 843,333. (Cl. 197—133.)



1. In a web-feeding device for typewriting machines, the combination with a stationary roll holder, of a platen, a carriage therefor movable at an angle to said roll holder, angle-changing means upon said carriage to direct a web from said roll holder transversely to said platen, and means to keep the web taut behind the platen in the movement of the carriage.

2. The combination with a typewriting machine having a revoluble platen and a carriage therefor, of a stationary roll holder to supply a web at an angle to said platen, angular means upon said carriage to direct the web in line-spacing direction to said platen, and means preventing slackening of the web between said directing means and the platen in the letter-feeding movement of the carriage.

3. The combination with a typewriting machine having a carriage and a revoluble platen, of a stationary roll holder supporting a roll at right angles to said platen, the path of the direction of the web from said roll lying behind the carriage, means supported by said carriage to turn the web into line-spacing direction relatively with the platen and enabling carriage movement away from said roll holder to draw a web supply from the roll, and means to keep the web taut in its line-spacing direction during the letter-feeding movement of the carriage.

4. The combination with a typewriting machine having a carriage and a revoluble platen, of a stationary roll support arranged at right angles with the carriage to supply a web in a direction lengthwise of the carriage, a gripping device upon the carriage to receive the web from said support, and means also upon the carriage to change the angle of the web and direct it in line-spacing direction toward the platen.

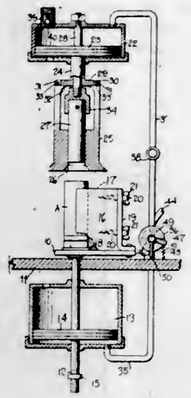
5. In a typewriting machine having a movable carriage with a revoluble platen and a stationary web supply therefor at an angle thereto, web gripping means upon said carriage, and means upon said carriage changing the angle of direction of the web to supply it in line-spacing direction to said platen; said web gripping means arranged at the intake side of said carriage between said direction changing means and said supply.

[Claims 6 to 17 not printed in the Gazette.]

1,166,636. SHELL-CRIMPER. JAMES B. RUSSELL, Sinnamahoning, Pa. Filed July 3, 1915. Serial No. 37,934. (Cl. 86—39.)

1. A shell closer including a vertically movable shell holder, fluid operated means controlling the shell holder,

a vertically movable crimper engageable with the shell for crimping the upper terminal thereof, fluid operated means controlling the crimper, said holder and crimper being adapted to relatively move in opposite directions, and a fixed folding pin disposed within the crimper.



2. A shell closer including a vertically movable shell holder, fluid operated means controlling the shell holder, a vertically movable crimping sleeve, fluid operated means controlling the sleeve, and a fixed folding disposed within the crimping sleeve, said sleeve being adapted to crimp the upper terminal of a shell mounted in the holder, said folding pin being adapted to fold the crimped portion of the shell inwardly, subsequent to the crimping operation.

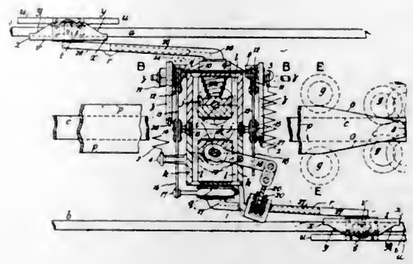
3. A shell closer including a fixed folding pin, a vertically movable crimping sleeve slidable upon the pin, means controlling the movement of the crimping sleeve, a shell holder, and means controlling the movement of the shell holder, said shell holder and crimping sleeve being relatively movable in opposite directions for crimping the upper terminal of a shell mounted within the holder, and means for lifting said shell holder subsequent to the crimping of the upper terminal of the shell by the sleeve member to engage the crimped portion of the shell with the folding pin, whereby the crimped portion is folded inwardly.

4. A shell closer including a vertically movable shell holder, a member extending upward from the holder and normally disposed below the upper end of a shell supported upon the helder, a shell crimping sleeve disposed above the holder having a portion thereof disposed in the path of travel of said upwardly extending member and also having a crimping face disposed in the path of travel of the shell, means exerting a predetermined force upon the sleeve to hold it in a depressed position but yielding upon the upward movement of the sleeve under the action of a greater force, a shell folding member disposed within the sleeve and fixed from longitudinal movement therewith, and means for moving the shell holder and shell supporting member upward relative to the sleeve and folding member.

5. A shell closer comprising a vertically movable shell holder, a piston connected thereto, a cylinder within which the piston operates, a folding pin mounted above the shell holder and fixed from longitudinal movement, a crimping sleeve surrounding the folding pin, a piston connected to said crimping sleeve, a cylinder within which the piston operates, a relief valve on the cylinder opening when the pressure within the cylinder increases beyond a predetermined amount, a member mounted upon the shell holder and extending upward to a point below the upper end of the shell supported upon the member and adapted to engage the crimping sleeve upon the upward movement of the holder, means for admitting fluid under pressure to the cylinder controlling the crimping sleeve or for cutting off the pressure to said cylinder and admitting pressure to the first named cylinder below the piston thereof to cause the elevation of the shell holder.

[Claims 6 to 12 not printed in the Gazette.]

1,166,637. COLLECTOR FOR ELECTRIC TRACTION. ROBERT COOKE SAYER, Redland, near Bristol, England. Filed July 12, 1912. Serial No. 709,110. (Cl. 191—51.)



1. A trolley for electric connection comprising in combination a framework, wheels on said framework adapted to run on a guide rail, a collector wheel adapted to run on conductor wires, a reversely curved guide rail section pivotally mounted on said frame, means for adjusting the position of said curved guide rail section including a flexible electric conductor from the trolley to the vehicle.

2. In a collecting system for electric traction in combination, a guide rail, a conductor wire, and a plurality of trolleys mounted to run on said guide rail, each of said trolleys comprising a framework, wheels on said framework adapted to run on said guide rail, a collector wheel supported from said framework running on the conductor, a reversely curved guide rail section pivotally mounted on said trolley frame, means for swinging said guide rail section into position whereby another trolley may pass thereon including a flexible electric conductor from the trolley to the vehicle.

3. In a collecting system for electric traction in combination, a positive conductor rail, a negative conductor rail, spacers between said conductor rails, supports on said rails, insulation between the rails and the said rail support and spacers, a guide rail, and a plurality of trolleys, each of said trolleys comprising a frame, flanged guide wheels carried by said trolley frame and adapted to run on said guide rail, flanged connecting wheels supported from said trolleys and adapted to run against said conductor rails, means for conducting the current from said collector wheels through the trolley to and from the vehicle, and means carried by the trolley for allowing another trolley to pass the first trolley without interrupting the circuit of either trolley.

4. In a collecting system for electric traction in combination, a main rail, a plurality of trolleys having flanged wheels adapted to run above and below said rail and make electric contact therewith, reversely curved rails adjustably mounted on said trolleys and adapted to move into contact with said main rail, a flexible electric cable connected with said reversely curved rail, springs on said trolley acting normally to hold said reversely curved rail away from the main rails; and means adapted to adjust the length and lateral position of said flexible cable and thereby put a strain on the curved rail to move the same into contact with the main rail, whereby one trolley is enabled to leave the main rail, pass over the curved rail of another trolley and return to the main rail after passing around it, without either of the trolleys stopping, when either are running in either direction, or when one is stopped, together with means for the cable to pass without either meeting any part of a trolley.

1,166,638. BLOW-OFF VALVE FOR STEAM-BOILERS. JOSEPH F. SCHILLER, Philadelphia, Pa. Filed May 17, 1915. Serial No. 28,566. (Cl. 137—4.)



1. A blow off valve for steam boilers, comprising a body having a cylindrical bore, said body having an inlet and an outlet, a piston valve fitting the bore and having a stem projecting above the body, a yoke secured to the upper end of the body and having a recess in its lower end, said body having a recess in its upper end communicating with the recess in the yoke, and having a passage connecting said recess in the body with the inlet of the body, a packing ring around the stem in the recess of the yoke, a shield around the stem in the recess of the yoke, a packing ring around the stem against the end of the valve, a shield around the stem against the last-mentioned packing ring, and elastic means holding both of said shields against their packing rings, substantially as described.

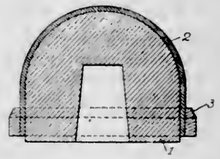
2. A blow off valve for steam boilers, comprising a body having a cylindrical bore, said body having an inlet and an outlet, a piston valve fitting the bore and having a stem projecting above the body, a yoke secured to the upper end of the body and having a recess in its lower end, said body having a recess in its upper end communicating with the recess in the yoke, and having a passage connecting said recess in the body with the inlet of the body, a packing ring around the stem in the recess of the yoke, a shield around the stem in the recess of the yoke, a packing ring around the stem against the end of the valve, a shield around the stem against the last-mentioned packing ring, elastic means holding the last-mentioned shield against its packing ring, and a spring located in the recess in the upper end of the body and exerting pressure on the first-mentioned shield, substantially as described.

3. A blow off valve for steam boilers, comprising a body having a cylindrical bore, said body having an inlet and an outlet, a piston valve fitting the bore and having a stem projecting above the body, a yoke secured to the upper end of the body and having a recess in its lower end, said body having a recess in its upper end communicating with the recess in the yoke, and having a passage connecting said recess in the body with the inlet of the body, a packing ring around the stem in the recess of the yoke, a shield around the stem in the recess of the yoke, a packing ring around the stem against the end of the valve, a shield around the stem against the last-mentioned packing ring, and respective coiled springs exerting constant pressure on said shields, substantially as described.

4. A blow off valve for steam boilers, comprising a body having a cylindrical bore, said body having an inlet and an outlet, a piston valve fitting the bore and having a stem projecting above the body, a yoke secured to the upper end of the body and having a recess in its lower end, said body having a recess in its upper end communicating with the recess in the yoke, and having a passage connecting said recess in the body with an inlet of the body, a packing ring around the stem in the recess of the yoke, a shield around the stem in the recess of the yoke, a packing ring around the stem against the end of the valve, a shield around the stem against the last-mentioned packing ring, respective coiled springs exerting constant pressure on said shields, said shields and packing rings having beveled and flat faces, the upper shield tending to press its packing around the stem, and the lower shield tending to force its packing ring outward against the bore of the body, substantially as described.

5. A blow off valve for steam boilers, comprising a body having a cylindrical bore, and an annular recess in its upper end communicating with the bore, said body having an inlet in its side, an outlet in its end, and a passage connecting the inlet with the upper recessed portion of the body, a yoke secured on the upper end of the body and having an opening therein, a piston valve fitting the bore of the body and having a stem projecting through the opening in the yoke, packing rings around the stem adjacent the piston and the opening in the yoke respectively, shields around the stem against the packing rings, nuts screwed onto an intermediate portion of the stem, a coiled spring around the stem between the nuts and the piston packing ring shield, a second spring located in the recess in the body bearing at one end against the end wall of said recess and at its other end against the stem packing ring shield, means for preventing rotary movement of the valve, and means for moving the valve longitudinally, substantially as described.

1,166,639. LENS-POLISHING MACHINE. HARRY W. HILL, Southbridge, Mass. Filed June 3, 1914, Serial No. 842,575. Renewed Dec. 8, 1915. Serial No. 65,865. (Cl. 51—1.)



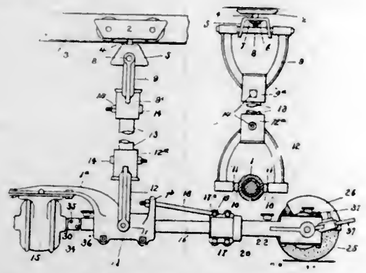
1. The process of forming a polisher consisting in shaping a foundation lap to the desired curve, cutting covering therefor to size, clamping the edges of the material between a pair of clamping frames, mounting a locking member on the frames, and forcing the lap through the locking member and frame, whereby the material is tightly drawn over the lap and automatically secured in position thereon, substantially as described.

2. The process of forming a polisher consisting in shaping a lap, placing a covering thereover, and forcing the lap and covering through a ring to cause the covering to smoothly fit the lap and leaving the ring surrounding the base of the lap to secure the parts together.

3. The process of forming a polisher consisting in shaping a lap to the desired curve, cutting a covering material to approximate size, employing a pair of clamping members for engaging the material, securing the material therebetween for gradual sliding movement, forcing the clamping members onto the polisher to tightly stretch the material thereover, and forcing a ring over the lap and material for securing the parts together.

4. The process of forming a polisher, consisting in shaping a lap to the desired curvature, employing an apertured clamping frame of size to fit over the lap, employing a second frame of slightly greater size than the lap, clamping a piece of covering material between the two frames, forcing the two frames downward over the lap, whereby the first frame serves to center and guide the lap while the second frame smooths, presses and stretches the material over the lap, and forces a locking member over the lap and stretched material to retain the material in stretched position covering the lap.

1,166,640. GRINDING-MACHINE. GEORGE S. SHAW, Springfield, Ohio. Filed Aug. 25, 1913. Serial No. 786,506. (Cl. 51—12.)

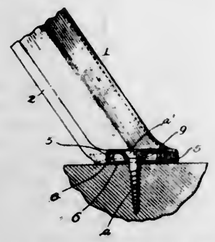


1. In a grinding machine, a support, a hanger, said hanger consisting of two connected yokes, one of said yokes being swiveled to a point of suspension and the other yoke pivotally connected with said support, a driving shaft and a grinding wheel carried by said support, together with means for oscillating said wheel about the longitudinal axis of said shaft, and a motor for said shaft also carried by said support on the opposite side thereof from said wheel.

2. In a grinding machine, a pivotally and swivelly mounted support, a motor mounted on one side of the pivotal point of said support and a grinding wheel on the other side thereof, said wheel being so arranged as to be capable of an oscillatory movement about said support, a drive shaft journaled in said support and operatively connected with the motor and also with said grinding wheel, the connection between said shaft and grinding wheel being such as to permit an oscillatory movement of said wheel about the longitudinal axis of said shaft.

3. In a grinding machine, a pivotally and swivelly mounted support, a motor mounted on one side of the pivotal point of said support and a grinding wheel on the other side, a drive shaft journaled in said support and operatively connected with said motor, and a driving connection between said shaft and wheel comprising bevel gears whereby said wheel may be oscillated about the longitudinal axis of said shaft.

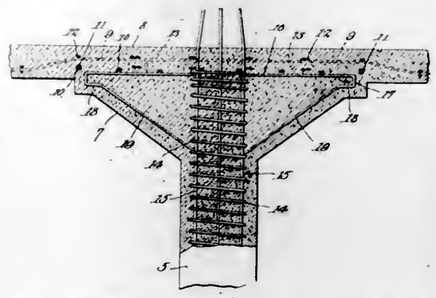
1,166,641. FOOT FOR FURNITURE-STANDARDS. RAYMOND H. SOPER, Muskegon, Mich., assignor to Superior Seating Company, Muskegon, Mich., a Corporation of Michigan. Filed Dec. 5, 1913. Serial No. 804,810. (Cl. 155—33.)



1. A sheet metal furniture standard saving an integral foot, said foot comprising a top wall, a downwardly extending perimetral flange, a reinforcing plate within the space bounded by the flange, said plate having a perimetral upwardly extending flange, the first flange being bent into contact with the second flange to hold the reinforcing plate in place, and a downwardly extending flange on the top wall, defining a screw-hole in said wall, said last mentioned flange bearing against a portion of the plate, the portions of said plate which are adjacent to said upwardly extending flange being arranged to lie in contact with the floor.

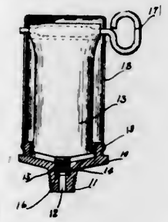
2. A standard formed of sheet metal, the lower end of said standard being broadened to form a foot, a downwardly extending flange surrounding said foot, a reinforcing plate within said downwardly extending flange, said reinforcing plate having a perimetral upwardly extending flange in contact with substantially the entire inner side of the said downwardly extending flange, the lower edge of said downwardly extending flange being bent inwardly to clasp said upwardly extending flange, and registering screw-holes through said foot and said reinforcing plate.

1,166,642. CONCRETE CONSTRUCTION. SAMUEL J. SPROL, Baltimore, Md. Filed June 19, 1914. Serial No. 846,008. (Cl. 72—15.)



A reinforced concrete construction, comprising a flat floor slab and integral supporting columns having heads at their upper ends, horizontal reinforcing rods in said floor slab, each of which extends from column to column and across the vertical axis of the columns and with their ends terminating and anchored within the peripheral contour of said heads, vertical reinforcing rods in said columns, a spiral reinforcement around said vertical rods, and a plurality of radially extending triangular brackets secured to said column reinforcements, the horizontal portions of said brackets having inner bent ends to engage said column reinforcement and said horizontal portions together with the column reinforcements forming continuous tension members in the slab above the column heads and below the terminals of said horizontal reinforcing rods, and the inclined portions of said brackets being projected below said floor slab and serving as reinforcements for said column heads.

1,166,643. LUBRICATOR. JACOB LLOYD WAYNE, 3d, Indianapolis, Ind. Filed Apr. 27, 1914 Serial No. 834,583. (Cl. 184—38.)



1. The combination of a grease cup and a collapsible tube containing lubricant, said cup and tube having interfitting parts whereby the tube may be removably attached to the cup, a slotted cap for said grease cup, and a key for compressing said tube, said key being guided by the slots in the cap and projecting through one of such slots for external manipulation.

2. The combination of a grease cup and a collapsible tube containing lubricant, said cup and tube having interfitting parts together providing a grease-tight joint whereby the tube may be removably attached to the cup, and a removable cap for said grease cup, said cap when removed exposing the tube for manual grasping.

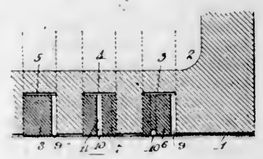
3. The combination of a grease cup and a collapsible tube containing lubricant, said cup and tube having interfitting parts together providing a grease-tight joint with the tube exposable for manual grasping, whereby the tube may be removably attached to and detached from the cup.

4. In combination, a grease cup and a lubricant container having interfitting parts together forming a grease-tight joint with the lubricant container exposable for manual grasping, whereby the lubricant container may be removably attached to the grease cup, said lubricant container being tightly sealed save at the discharge opening, and means for forcing the grease out of said grease container.

5. In combination, a grease cup and a lubricant container having interfitting parts together forming a grease-tight joint with the lubricant container exposable for manual grasping, whereby the lubricant container may be removably attached to the grease cup, said lubricant container being tightly sealed save at the discharge opening.

[Claims 6 to 9 not printed in the Gazette.]

1,166,644. PISTON-PACKING. EDWIN F. WILLIAMS, Erie, Pa.; Evelyn Williams executrix of said Edwin F. Williams, deceased. Filed Apr. 30, 1914. Serial No. 835,357. (Cl. 121—108.)



1. The combination with a cylinder and piston, the latter having an annular groove in its periphery, of an expansion ring located within the groove, said ring having a single annular recess in its outer face, said recess being located at a point removed from that edge of the ring which is subjected to the pressure of fluid, said recess being narrow relatively to the width of the ring, so that the wearing surface thereof is not materially reduced, means for admitting fluid into the annular recess, whereby the pressure of the fluid on the outer face of the ring between the edge subjected to the pressure of fluid and the annular recess will be balanced, and means for admitting fluid into the piston groove under the ring to force the same outward.

2. The combination with a cylinder and piston, the latter having an annular groove in its periphery, of an expansion ring located within the groove, said ring having a single annular recess in its outer face, said recess being located at a point removed from that edge of the ring which is subjected to the pressure of fluid and nearer the other side of the ring, said recess being narrow relatively to the width of the ring so that the wearing surface thereof is not materially reduced, means for admitting fluid into the annular recess, whereby the pressure of fluid on the outer face of the ring between the edge subjected to the pressure of fluid and the annular recess will be balanced, and a port located at the joint between the piston groove and the ring for admitting fluid into the piston groove under the ring to force the same outward.

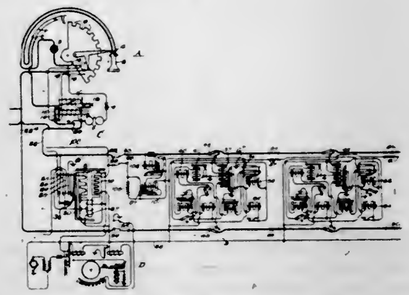
3. A piston ring having a single annular recess in its outer face located at a point removed from one edge of the ring, said annular recess being of narrow width compared with the width of the ring, so that the wearing surface of the ring is not materially reduced, a radial port connecting the annular recess with the underside of the ring, and a radial notch at one side of the ring extending from the outer to the inner face thereof.

4. In combination with a cylinder and piston, the latter having a plurality of annular grooves in its periphery, of an expansion ring located within each groove, at least two of said rings each having a single annular recess in its outer face, each recess being located at a point removed from that edge of the ring which is subjected to the pressure of fluid, said recess being of narrow width compared with the width of the ring so that the wearing surface thereof is not materially reduced, the recess in the ring subjected to the greater pressure being farther removed from that edge of the ring which is subjected to the pressure of fluid than is the recess in the other ring, means for admitting fluid into the annular recess in each ring whereby the pressure on the outer faces of the rings between each edge subjected to the pressure of fluid and the annular recess will be balanced, and means for admitting fluid into the piston grooves under the rings to force the same outward.

5. In combination with a cylinder and piston, the latter having at least two annular grooves in its periphery, an expansion ring located within each groove, that ring which is first subjected to the high pressure of fluid having a single annular recess in its outer face, said recess being located at a point removed from the edge of the ring which is subjected to the pressure of fluid, said recess being narrow relatively to the width of the ring so that the wearing surface thereof is not materially reduced, means for admitting fluid into the annular recess, whereby the pressure of the fluid on the outer face of the ring between the edge subjected to the pressure of fluid and the annular recess will be balanced, and radial notches for admitting fluid into the piston grooves under both of the rings to force the same outward.

[Claims 6 and 7 not printed in the Gazette.]

1,166,645. LOCK-OUT PARTY-LINE TELEPHONE SYSTEM. BERNARD D. WILLIS, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 29, 1912. Serial No. 680,576. (Cl. 179—17.)



1. In a telephone system, a party-line, a plurality of telephone stations thereon, a relay at each of said stations, means for energizing said relay when said line is taken for use at any station, means controlled by said relay for preventing any other subscriber from coming in on said line when said line is busy, an electromagnet, and means controlled by said electromagnet for returning said relay to normal position.

2. In a telephone system, a party-line, a plurality of substations thereon, a relay at each of said substations, means for energizing the corresponding relay when a receiver is removed from the hook at a substation, means for locking said relay in an energized position, means controlled by the energization of said relay for preventing any other subscriber from coming in on said line while the same is in use, an electromagnet, and means controlled thereby for unlocking said relay.

3. In a telephone system, a party-line, a plurality of substations thereon, a relay at each of said substations,

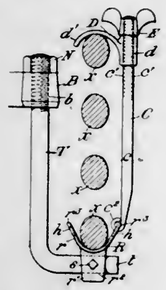
means for energizing the corresponding relay when a receiver is removed from the hook at a substation, means for locking said relay in an energized position, means controlled by the energization of said relay for preventing any other subscriber from coming in on said line while the same is in use, an electromagnet, means controlled thereby for unlocking said relay, and means for energizing said electromagnet when the receiver is replaced upon the hook.

4. In a telephone system, a party-line having a plurality of substations thereon, a relay bridged across the line at each of said stations, means for energizing one of said relays upon the removal of the corresponding receiver from its hook, means controlled by said relay for closing the talking circuit, means for preventing said relay from energizing when a receiver is removed from the hook and said line is busy, means for locking said relay in an energized position, and an electromagnet for unlocking said relay.

5. In a telephone system, a party-line having a plurality of substations thereon, a relay bridged across the line at each of said stations, means for energizing one of said relays upon the removal of the corresponding receiver from its hook, means controlled by said relay for closing the talking circuit, means for preventing said relay from energizing when a receiver is removed from the hook and said line is busy, means for locking said relay in an energized position, an electromagnet for unlocking said relay, and means for energizing said electromagnet when the receiver is replaced upon the hook.

[Claims 6 to 15 not printed in the Gazette.]

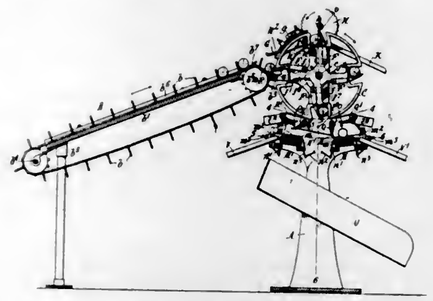
1,166,646. VEHICLE-TOP-BOW CLAMP. THOMAS F. WILSON, Cranston, R. I. Filed July 12, 1915. Serial No. 39,219. (Cl. 21—61.)



1. In a bow-clamp for vehicle-tops, the combination of a rod formed with a hook at its lower end adapted to hook into the strap-hole of the usual top-rest of an automobile, an arm mounted to slide on the rod to adapt it to hook over a fixed support on the body of the automobile when the top is raised, or to embrace the upper bow of the top when the latter is in lowered position, and a thumb-nut adjustable on the rod to clamp the arm in either position in the manner and for the purpose substantially as described.

2. In a bow-clamp for vehicle-tops, the combination with the usual automobile top-iron secured in place with a nut on its upper end and a bow-rest on the iron having strap-holes in its side, of a clamp-member provided with a connecting-hinge at its lower end adapted to hook through one of the strap-holes in the rest, an arm projecting from the clamp-member to adapt it to hook over the nut on the top-iron when the top is raised and to embrace the upper bow when the top is lowered into closed position on the bow-rest, and manually-operable means for drawing said arm downwardly toward the bow-rest to secure the clamp in inoperative position against the top-iron or to clamp the top-bows in closed relation on the rest.

1,166,647. CORN-HUSKING MACHINE. ARTHUR P. WOLFE, Buffalo, N. Y., assignor to Huntley Manufacturing Company, Silver Creek, N. Y. Filed Nov. 5, 1907. Serial No. 400,871. (Cl. 130—5.)



1. In a corn husking machine, the combination of a traveling feed conveyer on which the ears of corn are adapted to be placed by hand and which is provided with means for supporting the ears of corn transversely of the direction of movement of the conveyer, a rotary carrier arranged at the delivery end of said feed conveyer to turn in a plane parallel with the plane of movement of said feed conveyer and having holders for the ears of corn constructed to hold the ears in fixed position on the rotary carrier, a transfer device which delivers the ears of corn singly from said feed conveyer to the holders of said carrier, means which operate upon the ears of corn and to which the ears of corn are carried by said rotary carrier, and means for releasing the ears of corn from the holders of said rotary carrier.

2. In a corn husking machine, the combination of an endless traveling feed conveyer provided with means for supporting the ears of corn transversely to the direction of movement of the conveyer, a rotating carrier arranged at the delivery end of the feed conveyer to turn in the plane of movement of the latter and having holders to receive the ears of corn, an intermittently operating transfer device which delivers the ears of corn singly from said feed conveyer into the holders of said rotary carrier, husking means arranged below said rotary carrier, and means for releasing the ears of corn from said rotary carrier for delivery to said husking means, substantially as set forth.

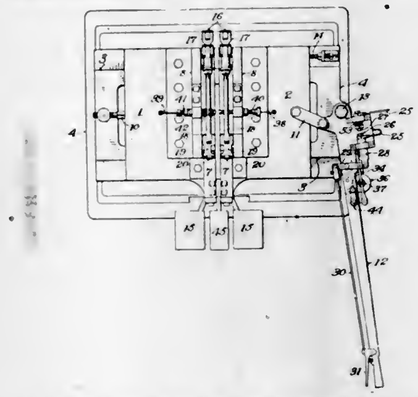
3. In a corn husking machine, the combination of a traveling feed conveyer provided with means for supporting the ears of corn transversely to the direction of movement of said conveyer, a rotary carrier arranged at one end of said feed conveyer to turn in the plane of movement of said feed conveyer and having means for receiving the ears of corn, an oscillating transfer device arranged between said feed conveyer and said carrier, means for operating said transfer device to deliver the ears of corn singly from said feed conveyer to said carrier, and husking instrumentalities to which the ears of corn are delivered from said carrier, substantially as set forth.

4. In a corn husking machine, the combination of a rotary wheel carrier arranged to turn about a horizontal axis, peripheral holders on said carrier having movable members actuated by the rotation of said carrier for grasping and firmly holding the ears of corn parallel with the axis of the carrier, husking rolls arranged below said carrier parallel with the axis thereof, and positively actuated means for operating said holders when they are brought to a position over said husking rolls to release the ears of corn for delivery to said husking rolls.

5. In a corn husking machine, the combination of a rotary wheel carrier provided with depressed peripheral transverse pockets for receiving the ears of corn, clamps movable in said pockets of said carrier for holding the ears of corn stationary in said pockets, husking rolls arranged below said carrier parallel with the axis thereof, and means for operating said clamps when said pockets are brought to a position directly over said husking rolls to release the ears of corn for delivery to said husking rolls.

[Claims 6 to 13 not printed in the Gazette.]

1,166,648. ELECTRIC WELDING-MACHINE. CLAIR M. AGNEW, Milwaukee, Wis. Filed May 4, 1914. Serial No. 836,070. (Cl. 219—4.)



1. In an electric welding machine the combination of clamping members, one of which is movable toward and from the other, provided with insulated cut-out contact pieces one of which is adjustable relative to the member on which it is mounted toward and from the other, a source of current connected with the clamping members and with said contact pieces, a lever connected with the movable clamping member for applying pressure to a weld, circuit controlling mechanism comprising normally separated closing contact pieces one of which is movable and has an operating connection with said lever, a spring actuated latch for holding said closing contact pieces in engagement with each other, and a magnet in circuit with the cut-out contact pieces adapted when said contact pieces are brought together to retract said latch and break the circuit.

2. In an electric welding machine the combination with clamping members, one of which is movable toward and from the other, having electric-circuit connections, of a lever for applying pressure to a weld connected with the movable member and provided with a pivoted handle and with stops for limiting the independent movement of the handle, circuit controlling mechanism comprising contact pieces one of which is movable toward and from the other, a lever connected with the movable contact piece, a spring tending to retract the movable contact piece and to break the circuit, a rod connected with the contact lever and guided on the clamping lever, a dog connected with the pivoted lever handle and adapted by engagement with said rod to close the circuit during the initial advance movement of the handle, a spring tending to hold the handle in its initial position, and a trip on the handle adapted to disengage the dog from said rod and release the movable contact piece at a predetermined point in the independent advance movement of the handle.

3. In an electric welding machine the combination with clamping members, one of which is movable toward and from the other, having electric circuit connections, of a lever for operating the movable member and applying pressure to a weld and provided with a pivoted handle and with stops for limiting the independent movement of the handle, circuit controlling mechanism comprising contact pieces one of which is movable toward and from the other, a lever connected with the movable contact piece, a spring tending to retract the movable contact piece and to break the circuit, a rod guided on the clamping lever and connected with the contact lever, a dog connected with the pivoted lever handle and adapted by engagement with said rod to close the circuit during the initial advance movement of the handle, an adjustable spring tending to hold the handle in its initial position and offering variable resistance to its advance movement, and an adjustable trip on the handle adapted to disengage the dog from said rod and release the movable contact piece when the handle is subjected to a predetermined pressure.

4. In an electric welding machine the combination with clamping members having electric circuit connections, one of the members being movable toward and from the other, of a lever for operating the movable member and applying pressure to a weld, provided with a pivoted handle and with stops for limiting the independent movement of the handle, circuit closing contact pieces, one of which is movable toward and from the other, a lever connected with the movable contact piece, a spring tending to retract the movable contact piece and to break the circuit, a rod guided on the clamping lever and having a slotted connection with the contact lever, a spring tending to retract said rod to its initial position, a dog connected with the pivoted handle and adapted by engagement with said rod to close the circuit, a spring tending to hold the handle in its initial position, a trip on the handle adapted to disengage the dog from said rod at a predetermined point in the independent advance movement of the handle, an automatic latch for holding the movable closing contact piece in engagement with the other contact piece, cut-out contact pieces mounted on the clamping members, and a magnet in circuit with the cut-out contact pieces and adapted when they are brought together to retract said latch and release the movable closing contact piece.

5. In an electric welding machine the combination with clamping members, one of which is movable toward and from the other, having electric circuit connections, of a lever connected with the movable member for applying pressure to a weld and provided with a pivoted handle capable of limited movement independently thereof, contact pieces one of which is movable toward and from the other, mounted on said lever, one of said contact pieces being yieldingly mounted, a lever fulcrumed on the clamping lever transversely thereto and connected with the movable contact piece, a rod connected with the contact lever and guided on the clamping lever, a dog connected with the pivoted lever handle and adapted by engagement with said rod to close the circuit during the initial advance movement of the handle, a spring tending to hold the pivoted handle in its initial position and resisting its advance movement relative to the clamping lever, and a trip adapted to disengage the dog from said rod and to release the movable contact piece when the handle is turned to a predetermined extent relative to the clamping lever.

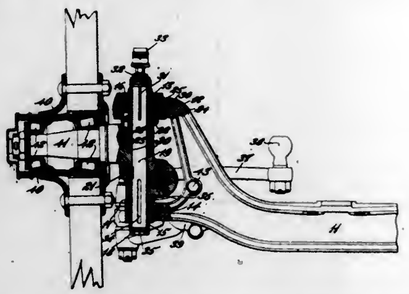
[Claims 6 and 7 not printed in the Gazette.]

1,166,649. AUTOMOBILE-STEERING-AXLE HEAD. HERBERT W. ALDEN and ALANSON P. BRUSH, Detroit, Mich., assignors to The Timken-Detroit Axle Company, Detroit, Mich., a Corporation of Ohio. Filed June 28, 1915. Serial No. 36,816. (Cl. 21—141.)

1. An axle steering head and pivoted steering knuckle construction comprising a forked axle, bushings arranged in axial alinement in said forks, a pivot pin rotatably mounted in said bushings, said pivot pin being secured in the axle knuckle, and a cup shaped thrust bearing member secured on said pivot pin between said knuckle and the upper one of said bushings, the rim of said bearing member inclosing the lower end of said bushing and with a space between it and said bushing constituting an oil reservoir.

2. An axle steering head and pivoted steering knuckle construction comprising a forked axle, the upper fork having a hole through it, the lower end of said hole being counterbored to a larger diameter, a bushing arranged in said hole, the lower end of said bushing constituting a thrust bearing, a bushing in the lower fork of said axle in axial alinement with said first mentioned bushing, a

pivot pin rotatably mounted in said bushings, said pivot pin being secured in the axle knuckle, and a cup shaped thrust bearing member secured on said pivot pin between said knuckle and the upper one of said bushings, the rim of said bearing member projecting into the enlarged lower end of said hole and inclosing the lower end of said bushing with a space between it and said bushing constituting an oil reservoir, and a washer between the upper edge of said rim and the inner wall of the enlarged portion of said hole.



3. An axle steering head and pivoted steering knuckle construction comprising a forked axle, the upper fork having a hole through it, the lower end of said hole being counterbored to a larger diameter, a bushing arranged in said hole, the lower end of said bushing constituting a thrust bearing, a bushing in the lower fork of said axle in axial alinement with said first mentioned bushing, a pivot pin rotatably mounted in said bushings, said pivot pin being secured in the axle knuckle, and a cup shaped thrust bearing member secured on said pivot pin between said knuckle and the upper one of said bushings, the rim of said bearing member projecting into the enlarged lower end of said hole and inclosing the lower end of said bushing with a space between it and said bushing constituting an oil reservoir, a washer between the upper edge of said rim and the inner wall of the enlarged portion of said hole, and means for supplying lubricant to said oil reservoir.

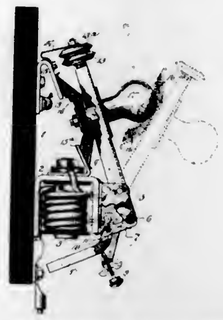
4. An axle steering head and pivoted steering knuckle construction comprising a forked axle, bushings arranged in axial alinement in said forks, a pivot pin rotatably mounted in said bushings, said pivot pin being secured in the axle knuckle, and a cup-shaped thrust bearing member secured on said pivot pin between said knuckle and the upper one of said bushings, the rim of said bearing member inclosing the lower end of said bushing and with a space between it and said bushing constituting an oil reservoir, the upper end of said pin having a longitudinal oil groove therein extending below the top edge of said rim, and a wick in said groove for conducting oil to the upper end of said bushing from said reservoir.

5. An axle steering head and pivoted steering knuckle construction comprising a bushing fixed in the end of said axle, a pivot pin fixed in said knuckle, a thrust bearing surface movable with said knuckle and bearing against the end of said bushing, a cup formed in one of said members and surrounding said thrust bearing surface and projecting above the latter, means coöperating with the rim of said cup for keeping dirt out of said cup, and means for supplying lubricant to said cup whereby said thrust bearing surface may be kept submerged in oil.

[Claims 6 to 8 not printed in the Gazette.]

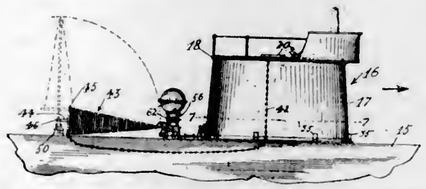
1,166,650. AUTOMATIC CIRCUIT-BREAKER. CHARLES C. BADEAU, Winthrop, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Feb. 17, 1911. Serial No. 609,131. (Cl. 175—268.)

1. An automatic circuit breaker comprising a trip coil mounted with its magnetic axis parallel to the supporting board, a U-shaped frame embracing and supporting said coil, one side of said frame being secured to the supporting board, the other side extending outwardly from the supporting board, a switch arm pivoted on said frame, a laminated bridging member carried by said switch arm on one side thereof, a handle stationarily carried by said switch arm on the opposite side thereof, a contact fixed to said frame and having its engaging surface inclined to the face of the supporting board, a second contact fixed to the supporting board and having its engaging surface in substantially the same plane as the engaging surface of said first named contact, said contacts coöperating with said laminated bridging member, a spring pressed latch pivotally supported by said frame, and a pivoted gravity armature in the magnetic field of the coil and carried by said frame.



2. A circuit breaker provided with a switch arm, a laminated brush, and a stiff leaf in the brush adapted in full closing position of the circuit to form a stop to prevent the brush being strained and arrest the breaker in latching position.

1,166,651. SUBMARINE. CHARLES E. BECK and HAROLD E. BECK, El Monte, Cal. Filed May 8, 1915. Serial No. 26,694. (Cl. 114—16.7.)



1. In a submarine, a detachable superstructure, a cable attached thereto, a reel on the submarine around which said cable is wound, a float attached to said cable, and means for detachably connecting said float to the submarine.

2. In a submarine, a detachable superstructure, a cable attached thereto, a reel on the submarine around which said cable is wound, a float attached to said cable, means for detachably connecting said float to the submarine, and means for automatically releasing said float when the submarine has been submerged to a predetermined depth.

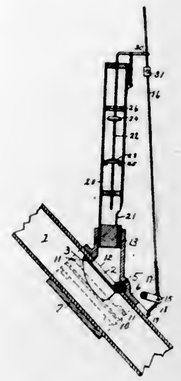
3. In a submarine, a superstructure thereon, means for detachably connecting the superstructure to the submarine substructure, a cable attached to the superstructure, a reel on which said cable is wound, a float connected to said cable, means for detachably connecting the float to the submarine, and means adapted to be operated by water pressure for automatically releasing the float when the submarine has been submerged to a predetermined depth.

4. In a submarine, a detachable superstructure, a cable connected thereto, a reel mounted against rotation on which said cable is wound, a float to which said cable is attached, and means for detachably mounting the float.

5. In a submarine, a detachable compartment thereon, a float, a reel mounted to have universal pivotal movement without rotary movement, and a cable wound on said reel with one end connected to the float and its other end connected to the detachable compartment.

[Claims 6 to 15 not printed in the Gazette.]

1,166,652. MOTOR-CYCLE SIGNAL. EMIL A. BECKER, Milwaukee, Wis. Filed Apr. 8, 1912. Serial No. 689,137. (Cl. 116—59.)



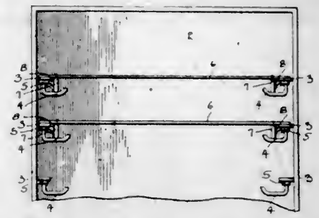
1. The combination with an apertured exhaust pipe of an internal combustion motor, of a set of clamping members adapted to cover the apertured portion of the exhaust pipe and having a branch pipe in position to receive vapor discharged through said aperture, a valve pivotally connected with one of the clamping members and adapted to be manipulated through the exhaust pipe aperture and to close with the pressure upon the inner face of the pipe adjacent to the margin of said aperture, said valve being shaped to fit the curved inner face of the wall of said pipe which serves as a seat, and a signal mounted on said branch pipe.

2. The combination with an exhaust pipe of an internal combustion motor, of a set of semi-cylindrical clamping members embracing said pipe, one of said clamping members being provided with a branch duct and said exhaust pipe being apertured to afford communication with said branch duct, a spoon-shaped valve pivoted to said last named clamping member and located within the exhaust pipe with its margins seating with the pressure upon the wall of the exhaust pipe at the margins of said aperture, a valve operating lever, a flexible actuating connection therefor, and a signal connected with said exhaust duct; said valve being adapted to be manipulated into position in the exhaust pipe through said aperture.

3. The combination with an exhaust pipe of an internal combustion motor, of a set of semi-cylindrical clamping members embracing said pipe, one of said clamping members being provided with a branch duct and said exhaust pipe being apertured to afford communication with said branch duct, a valve pivoted to said last named clamping member and adapted to close the exhaust pipe aperture, said valve being located in said pipe, a valve operating lever, a flexible actuating connection therefor, and a signal connected with said exhaust duct, said signal comprising a whistle tube provided with a vent, a set of valves mounted in said whistle tube and adapted to be adjusted to lengthen or shorten the air column in said tube, a valve actuating stem for the whistle valves, and a device secured to the actuating connections of the exhaust pipe valve in a position to engage and actuate the stem of the whistle valves, substantially as described.

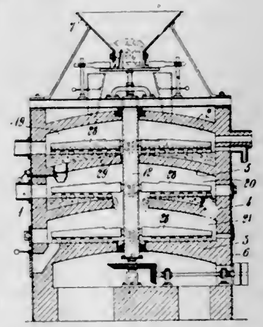
1,166,653. SHELF-SUPPORT FOR OVENS. HERBERT CHARLES BENDALL, Montreal, Quebec, Canada. Filed Dec. 14, 1914. Serial No. 877,263. (Cl. 126—339.)

A shelf support for ovens, including racks upon the inner walls of the oven, terminating inwardly a short distance from the back wall of the oven, said racks having secured to and depending from their undersides at the forward ends, rests withoutwardly and upwardly extending free ends, and a shelf having depending from its underside vertical longitudinal slides with their bottom edges



resting upon the outwardly extending portions of said rests, said slides having at their inner or rear ends flanges for engagement with said racks to prevent the upward tipping of the inner or rear end of said shelf when the latter is slid outwardly.

1,166,654. MECHANICAL ROASTING-FURNACE. KNUT JAKOB BESKOW and ARTHUR RAMÉN, Helsingborg, Sweden. Original application filed Aug. 18, 1910, Serial No. 577,845. Divided and this application filed Oct. 17, 1912. Serial No. 726,248. (Cl. 75—143.)



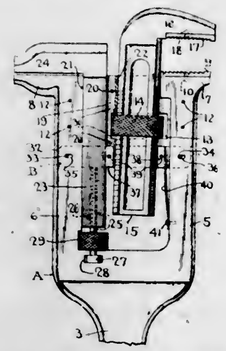
1. In a roasting furnace of the class described, a vertical shaft having downwardly and inwardly inclined sockets opening through its outer periphery, and angularly bent arm holders adapted to have the inner depending shanks of the same inserted into corresponding pockets in the shaft, the angle of inclination of each socket being such that the corresponding arm holder will be maintained by gravity in engagement therein.

2. In a roasting furnace of the class described, a vertical shaft, an arm holder projecting radially from the shaft and having a reduced outer end, a stirring arm having a longitudinal bore open through its ends, one end of the said arm being adapted to fit over the arm holder to be supported thereby, the furnace being provided in its side wall with an opening with which the stirring arm may register, and a tubular member adapted to be inserted through the said furnace opening and the stirring arm bore for engagement with the reduced end of the arm holder.

1,166,655. WRENCH. ALBERTO BRANDETTI, Medina, N. Y. Filed Mar. 29, 1915. Serial No. 17,857. (Cl. 81—101.)

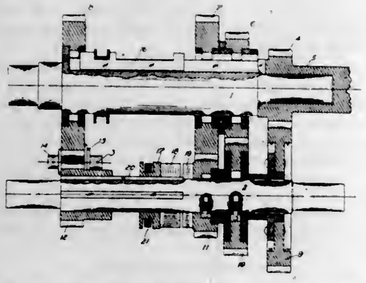
1. In a wrench, a head having a recess and provided with a shank and a fixed jaw, a movable jaw coöperating with said fixed jaw and provided with a shank having slidble and rocking movement in said recess of the head, spaced plates mounted for transverse sliding movement on opposite sides of the head, strips located in the recess of the head, and at opposite ends connected to the afore-

said plates between which plates and strips the shank of the movable jaw operates, and a spring confined wholly within the recess of the head and at one end connected to the head and at its opposite end engaging one of said strips to hold said plates at one limit of their sliding movement and thereby hold the shank of the movable jaw normally in tilted position against rocking movement.



2. In a wrench, a head having a recess and provided with a shank and a fixed jaw, a head having alining relatively short slots therein on opposite sides of said recess, a movable jaw coöperating with said fixed jaw and provided with a shank having slidable and rocking movement in said recess of the head, plates mounted on opposite sides of the head, connections between said plates which operate in said relatively short slots in the head on opposite sides of the recess, whereby said plates may have transverse sliding movement with relation to the head, and whereby the sliding movements of the plates are limited by said slots, strips located in the recess of the head and at opposite ends connected to the aforesaid plates between which plates and strips the shank of the movable jaw operates, and a spring located in the recess of the head and at one end connected to the head and at its opposite end engaging one of sand strips to hold said plates at one limit of their sliding movement and thereby hold the shank of the movable jaw normally in tilted position against rocking movement.

1,166,656. VARIABLE-SPEED MECHANISM. JAMES H. BRIMSON, Saginaw, Mich., assignor of one-half to William H. Hart, Saginaw, Mich. Filed Apr. 23, 1915. Serial No. 23,340. (Cl. 74—58.)



1. In combination with a change speed mechanism comprising a main shaft, a driving gear and a plurality of speed gears mounted thereon, keys for locking said gear respectively to said shaft, a counter shaft, gears carried thereby, certain of said gears adapted to revolve freely in one direction on said counter shaft, a slidable sleeve on said counter shaft, and a clutch member carried by said sleeve and adapted to engage one of the gears on said counter shaft and lock said gear to said shaft, for the purposes set forth.

2. In combination with a change speed mechanism comprising a main shaft, a driving gear and a plurality of speed gears mounted thereon, keys for locking said gears respectively to said shaft, a counter shaft, gears carried thereby, certain of said gears adapted to revolve freely in one direction on said counter shaft, a slidable sleeve on said counter shaft, and a clutch member carried by said sleeve and adapted to engage one of the gears on said counter shaft and lock said gear to said shaft, a fork engaging said sleeve, a push-rod, and means operatively connecting said push-rod and fork, adapted to move said fork lengthwise the shaft when the push-rod is raised and lowered, for the purposes set forth.

3. In combination with a change speed mechanism comprising a main shaft, a driving gear and a plurality of speed gears mounted thereon, means for locking said gears respectively to said shaft, a counter shaft, gears carried thereby, certain of said gears adapted to revolve freely in one direction only on said counter shaft, a slidable sleeve on said counter shaft, and a clutch member carried by said sleeve and adapted to engage one of the gears on said counter shaft and lock said gear to said shaft, for the purposes set forth.

1,166,657. SELF-LOCKING CAR-SEAL. WINFRED MUDGE BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,589. (Cl. 70—98.)



1. A self-fastening seal having in combination a shackle having transverse nicks cut into the face thereof, a flattened and embossed portion adjacent to and integral with one end of said shackle, a loop catch bent from the other end of said shackle adapted to engage the other shackle end and having a transverse nick cut into the inner side of said bend.

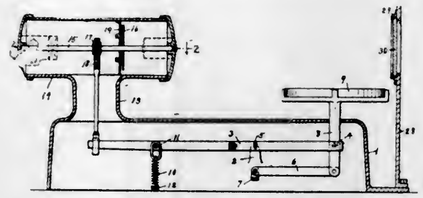
2. A self-fastening seal having in combination a shackle having transverse nicks cut in the face thereof, a flattened and embossed portion adjacent to and integral with said shackle at one end, a loop catch bent from the other end of said shackle in a plane perpendicular thereto adapted to engage the other end of the shackle and having a transverse nick cut into the inner side of said bend.

3. A self-fastening seal having in combination a shackle having transverse nicks cut in the face thereof, a flattened and embossed portion adjacent to and integral with the end of said shackle and a loop catch bent from the other end of said shackle in a plane perpendicular thereto having a relatively small mouth adjacent the bend from the shackle and a transverse nick cut into the inner side of said bend, all substantially as hereinbefore set forth.

1,166,658. SCALE. FREMONT H. BUCKINGHAM, Detroit, Mich., assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Filed Oct. 21, 1911. Serial No. 655,879. (Cl. 73—104.)

1. In a scale, the combination with the base, lever, load-receiver and counterbalancing means, of a case

mounted on the base, said case having an opening therein, a shaft revolubly mounted therein, a transparent disk mounted on the shaft and having a series of figures thereon, arranged in concentric rings, a source of light within the case, means to project light through the disk and out through the opening in said case, means connecting said shaft and lever to cause the shaft to revolve as the load on the scale increases, a screen upon which said figures on the disk may be projected, and a shutter within the case for determining the group of figures on the disk thus projected.



2. In a scale the combination with the base, lever, load-receiver and counterbalancing means, a case having an opening therein through which light may pass, a transparent revoluble disk within the case, said disk having figures thereon representing weights and values, means connecting the disk and the lever whereby the disk is caused to rotate in one direction when the load on the lever is increased, means to project light through the disk, a shutter within the case for determining the figures on the disk thus projected, and means for receiving said light.

3. Means for indicating weight or values consisting of a scale mechanism, a case, a movable plate of transparent material bearing figures within the case, means connected to said plate and scale mechanism whereby movement of the scale mechanism will change the position of the plate, a screen, means to project light through the plate onto the screen, and a shutter within the case for determining the figures on the plate thus projected.

4. In a scale, the combination with a base, lever, load-receiver and counterbalancing means, of a case mounted on the base, a shaft revolubly mounted therein, a disk mounted on the shaft and having figures thereon arranged in concentric rings, a source of light within the case which falls on said disk and proceeds therefrom, a lens to project said light, means to receive said light, a shutter within the case to determine the group of figures on the disk thus projected, and means to operatively connect the shaft and scale lever.

5. In a scale, the combination with a base, lever, load-receiver, and counterbalancing means, of a case mounted on the base, a shaft revolubly mounted therein, means for operatively connecting the shaft and lever, a transparent member on said shaft and having a series of graduations arranged in concentric rings, a source of light, means to project the light through the transparent member and out of the case, a screen to receive the light thus projected, and a shutter within the case for determining the graduation thus projected.

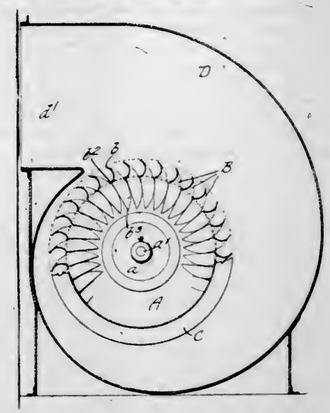
[Claims 6 to 12 not printed in the Gazette.]

1,166,659. CENTRIFUGAL FAN. WILLIS H. CARRIER, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed Feb. 7, 1914. Serial No. 817,151. (Cl. 230—11.)

1. A centrifugal fan wheel having a plurality of propelling blades each having a concaved front face and an angle of discharge at the tip of the blade which increases from the inlet end toward the opposite end of the blade.

2. A centrifugal fan wheel having a plurality of propelling blades each having a concaved front face and an angle of discharge at the tip of the blade and an angle of incidence at the heel of the blade each of which increases from the inlet end toward the opposite end of the blade.

3. A centrifugal fan wheel having a plurality of propelling blades each having substantially the form of a portion of the surface of a cone and being arranged with its tip edge lying substantially in a cylindrical surface co-axial with the axis of the wheel.

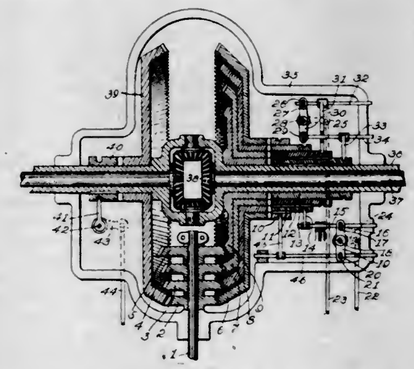


4. A centrifugal fan wheel having a plurality of propelling blades each having substantially the form of a portion of the surface of a cone and being arranged with its tip edge substantially coplanar with the axis of the wheel.

5. A centrifugal fan wheel having a plurality of propelling blades each having substantially the form of a portion of the surface of a cone and being arranged with its tip edge lying substantially in a cylindrical surface co-axial with the axis of the wheel and extending at an angle to the elements of the cone intersecting said edge.

[Claims 6 to 21 not printed in the Gazette.]

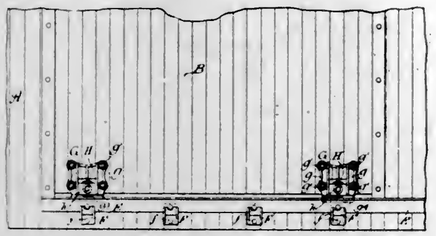
1,166,660. POWER-TRANSMISSION DEVICE. GIFFORD W. CHESTER, Waterloo, Iowa. Filed Oct. 13, 1914. Serial No. 866,434. (Cl. 74—59.)



In combination, a driving-shaft, a driven shaft, a plurality of sleeves mounted nonslidably and rotatably upon each other and with the innermost sleeve non-slidably and rotatably mounted upon said driven-shaft, said sleeves having on their adjacent ends clutch-faces, another plurality of sleeves mounted slidably and non-rotatably upon each other and with the innermost sleeve slidably and non-rotatably mounted on said driven-shaft and having clutch-faces on adjacent ends adapted to be detachably engaged respectively with the clutch-faces on said first-mentioned sleeves which are alined therewith, said first-mentioned sleeves having fixed thereon gear-wheels differing in their diameters, a like number of pin-

ions of differing diameters fixed on said driving-shaft and being in mesh with said gear-wheels to effect different speeds of rotation of said driven-shaft, means for shifting either of said second-mentioned sleeves into or out of mesh with said first-mentioned sleeves, a gear-wheel rotatably non-slidably mounted upon said driven-shaft and having a clutch face on its reverse face, a sleeve slidably non-rotatably mounted on the driven-shaft and having a clutch-face adapted to be engaged detachably with said last-mentioned gear-wheel clutch-face, said gear-wheel being in mesh with one of the gear-wheels on said driving-shaft, and independent means for shifting said last mentioned clutch-sleeve into or out of mesh with the clutch-face on said last-mentioned gear-wheel.

1,166,661. CAR-DOOR HANGER. JOSEPH F. COMEE, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation. Filed May 10, 1915. Serial No. 27,252. (Cl. 16—7.)



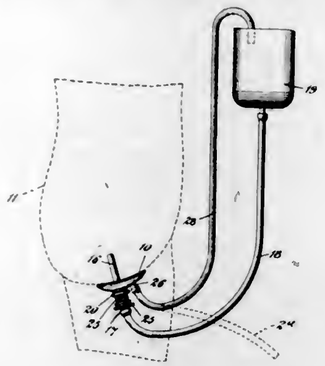
1. The combination with a car body having a doorway and with a sliding door for closing said doorway, of a track bar secured to and spaced from the side wall of the car in proximity to and beneath the bottom edge of the dor, said door having a recess in its bottom edge, a casing setting within said recess, said casing being flanged for bolting to the door and having a downwardly projecting member extending into the space between said track bar and the side wall of the car, and a bearing roller within said casing having its lower portion projecting slightly below the bottom edge of the door and resting upon said track bar.

2. The combination with a car body having a doorway and with a sliding door for closing said doorway, of a track bar secured to and spaced from the side wall of the car and beneath the bottom edge of the door, a casing bolted to the door and having at its bottom an inwardly extending horizontal member provided with a downwardly projecting member extending into the space between said track bar and the side wall of the car, and a bearing roller within said casing and resting upon said track bar.

3. The combination with a car body having a doorway and having a floor projecting beyond the side wall of the car and with a sliding door for closing said doorway, of a track bar secured to and spaced from the side wall of the car in proximity to and beneath the bottom edge of the door, the bottom of said door being formed with a recess, a casing setting within said recess, said casing having its outer portion flanged to overlap the outer face of the door and provided at its bottom with a horizontal member extending inwardly beneath the projecting portion of the floor, and a vertical member extending into the space between the track bar and the side wall of the car, and a bearing roller within said casing and resting upon said track bar.

4. The combination with a car body having a doorway and with a sliding door for closing said doorway, of a track bar secured to and spaced from the side wall of the car beneath the bottom edge of the door, a bracket for sustaining said track bar having its upper portion formed with a cam-shaped surface, a casing secured to the lower portion of the door, said casing being provided with a vertical, downwardly projecting member extending into the space between said track bar and the side wall of the car, said member having beveled ends to engage the cam surfaces of said bracket, and a bearing roller within said casing and resting upon said track bar.

1,166,662. NOZZLE FOR SYRINGES. ROBERT B. CRUMP, Hoboken, N. J., and JOSEPH BERNSTEIN, New York, N. Y.; said Bernstein assignor to said Crump. Filed Jan. 27, 1915. Serial No. 4,670. (Cl. 128—25.)



1. In a nozzle for syringes, a cup-shaped keeper having a plurality of orifices therethrough, a tubular nipple projecting from the concavity of the keeper, the passage through the nipple being in register with one of the orifices of the keeper, a second tubular nipple on the convex side of the keeper at its registered orifice whereby the pipe of a receptacle for containing liquid may be attached thereto, and a regulator on the second nipple for controlling the passages of the other orifices through the keeper, for the purpose specified.

2. In a nozzle for syringes, a substantially elliptic cup-shaped keeper having a plurality of orifices therethrough, an extension projecting upwardly from the concavity of the keeper, a tubular nipple projecting from the concavity of the keeper, the passage through the nipple being in register with one of the orifices of the keeper, a second tubular nipple on the convex side of the keeper at its registered orifice whereby the pipe of a receptacle for containing liquid may be attached thereto, and a regulator on the second nipple for controlling the passages of the other orifices through the keeper, for the purpose specified.

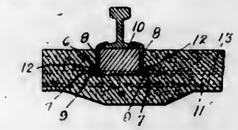
3. In a nozzle for syringes, a cup-shaped keeper having a plurality of orifices therethrough, a tubular nipple projecting from the concavity of the keeper, the passage through the nipple being in register with one of the orifices of the keeper, a second tubular nipple on the convex side of the keeper at its registered orifice whereby the pipe of a receptacle for containing liquid may be attached thereto, and a spring actuated valve on the second nipple for controlling the passages of the other orifices through the keeper, for the purpose specified.

4. In a nozzle for syringes, a substantially elliptic cup-shaped keeper having a plurality of orifices therethrough, an extension projecting upwardly from the concavity of the keeper, a tubular nipple projecting from the concavity of the keeper, the passage through the nipple being in register with one of the orifices of the keeper, a second tubular nipple on the convex side of the keeper at its registered orifice whereby the pipe of a receptacle for containing liquid may be attached thereto, and a spring actuated valve on the second nipple for controlling the passages of the other orifices through the keeper, for the purpose specified.

5. In a nozzle for syringes, a cup-shaped keeper having a plurality of orifices and an outlet therethrough, a tubular nipple projecting from the concavity of the keeper, the passage through the nipple being in register with one of the orifices of the keeper, a second tubular nipple on the convex side of the keeper at its registered orifice whereby the pipe of a receptacle for containing liquid may be attached thereto, a regulator on the second nipple for controlling the passages of the other orifices through the keeper, and means on the convex side of the keeper at its outlet for controlling the volume of liquid to be retained and also for controlling the exhaust of the liquid when the nozzle is in use, substantially as set forth and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,166,663. RAILROAD-TIE. CARL A. DANZ, Tonica, Ill. Filed Sept. 22, 1915. Serial No. 52,112. (Cl. 238—3.)



1. The combination with a railway tie provided with openings in its end portions, of rail securing members interlockingly secured in the openings and rail cushion blocks disposed in the openings and holding said members in such interlocking position.

2. The combination with a railway tie having openings in the tops of its end portions, of rail securing members interlockingly disposed in the end portions of the openings and blocks disposed in said openings for holding the rail securing members in such interlocking position.

3. The combination with a railway tie having longitudinally extending openings in its end portions extended longitudinally at the lower end portions to provide sockets, of rail securing members disposed in the ends of the openings and projecting thereabove to be bent over a rail extended across the opening, lateral extensions at the lower ends of said members extending into the sockets and retaining blocks disposed in the openings between the members.

4. The combination with a railway tie having longitudinally extending openings in its end portions extended longitudinally at the lower end portions to provide sockets, of rail securing members disposed in the ends of the openings and projecting thereabove to be bent over a rail extended across the opening, lateral extensions at the lower ends of said members extending into the sockets and retaining blocks disposed in the openings between the members, said retaining blocks also forming cushions for the rails.

1,166,664. CURBING-BLOCK. LOUIS DARGENTO, Rochester, N. Y. Filed Mar. 16, 1915. Serial No. 14,652. (Cl. 94—2.)

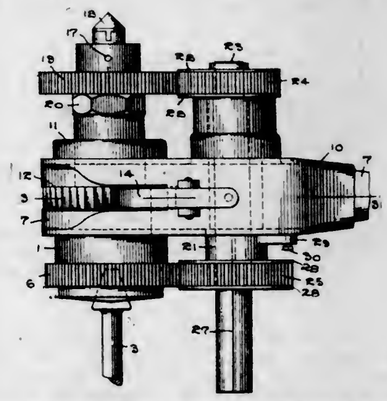


1. A curbing block having opposite ends provided with projections coextensive in width with the block, the projection at one end extending from the upper part of the block and the projection at the other end extending from the lower part of the block and the two projections being coextensive with the height of the block, the vertical face of the upper projection and the vertical end face of the block above the lower projection being provided one with a tongue and the other with a recess so that when two blocks are placed end to end, the tongue of one block will enter the recess of the other block to prevent lateral movement between the blocks, the recess being open at its lower end so that the block may slide vertically on another block and being closed at its upper end so that the block will not be weakened along its upper edge.

2. A curbing block having opposite ends provided with projections coextensive in width of the block, the projection at one end extending from the upper part of the block and the projection at the other end extending from the lower part of the block, and the two projections being coextensive with the height of the block; the upper face of the lower projection and the under face of the upper projection being provided, one with a recess and the other with a tongue so that, when the two blocks are placed end to end, the tongue of one will enter the recess of the other to prevent lateral movement between the blocks, the recess being open at its outer end so that the block may slide longitudinally on another block; and the vertical face of the upper projection and the vertical end face of the block above the lower projection being provided, one with the tongue and the other with a recess, so that, when two blocks are placed end to end, the tongue of one block will enter the recess of the other block to prevent lateral movement between the blocks, said recess being open at its lower end so that the block may slide vertically on another block.

3. A curbing block having opposite ends provided with projections coextensive in width with the block, the projection at one end extending from the upper part of the block and the projection at the other end extending from the lower part of the block, and the two projections being coextensive with the height of the block, the vertical end face of the lower projection and the end face of the block below the upper projection, each being flat; and the under face of the upper projection and the upper face of the lower projection, being provided one with a tongue and the other with a groove, the groove being open at its outer end so that one block may slide longitudinally on the other block.

1,166,665. RATCHET-DRILL. PAUL F. ELLMER, Philadelphia, Pa. Filed July 1, 1915. Serial No. 37,482. (Cl. 77—54.)



1. In a ratchet drill, the combination with a spindle having a ratchet wheel thereon, of a lever mounted to oscillate on the spindle and having a pawl engaging the ratchet wheel, a handle supported on the spindle and having a pawl engaging the ratchet wheel, an operating screw engaging the upper end of the spindle, and transmission mechanism carried by the lever and transmitting rotary motion from the spindle to the screw, substantially as described.

2. In a ratchet drill, the combination with a spindle having a ratchet wheel thereon, of a lever mounted to oscillate on the spindle and having a pawl engaging the ratchet wheel, a handle having a bifurcated end pivotally mounted on the spindle, and having a pawl engaging the ratchet wheel, an operating screw engaging the upper end of the spindle, and transmission mechanism carried by the lever and transmitting rotary motion from the spindle to the screw, substantially as described.

3. In a ratchet drill, the combination with a spindle having a ratchet wheel thereon, of a lever mounted to

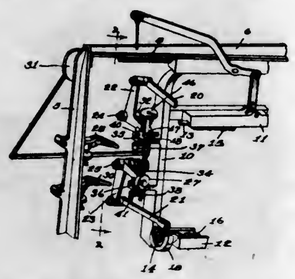
oscillate on the spindle and having a pawl engaging the ratchet wheel, a handle supported on the spindle and having a pawl engaging the ratchet wheel, a shaft supported in the lever, gear wheels keyed to said shaft, a gear wheel on the spindle engaging with one of said gear wheels, a feed screw operatively engaging the spindle, and a gear wheel on the feed screw meshing with the other of said first-mentioned gear wheels, substantially as described.

4. In a ratchet drill, the combination with a spindle having a ratchet wheel thereon, of a lever mounted to oscillate on the spindle and having a pawl engaging the ratchet wheel, a handle having a bifurcated end pivotally mounted on the spindle, and having a pawl engaging the ratchet wheel, a shaft supported in the lever, gear wheels keyed to said shaft, a gear wheel on the spindle engaging with one of said gear wheels, a feed screw operatively engaging the spindle, and a gear wheel on the feed screw meshing with the other of said first-mentioned gear wheels, substantially as described.

5. In a ratchet drill, the combination with a spindle having a ratchet wheel thereon, of a lever mounted to oscillate on the spindle and having a pawl engaging the ratchet wheel, a handle supported on the spindle and having a pawl engaging the ratchet wheel, said handle of general U-shape in cross section and adapted to lie smoothly against the side of the lever, a shaft supported in the lever, gear wheels keyed to said shaft, a gear wheel on the spindle engaging with one of said gear wheels, a feed screw operatively engaging the spindle, and a gear wheel on the feed screw meshing with the other of said first-mentioned gear wheels, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,166,666. DEVICE FOR ADJUSTING THE FEED MECHANISM OF SHINGLE-MACHINES. ENOS EVANS, Edmonds, Wash. Filed Apr. 26, 1915. Serial No. 24,119. (Cl. 143—12.)



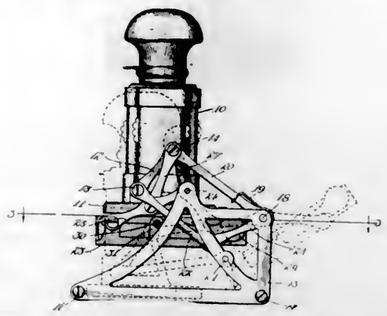
1. A device of the class described comprising lever arms, a threaded shaft, supports for said shaft, arms adapted to screw onto said shaft and stud pins disposed to project upwardly from said arms to engage with said lever arms to limit the downward movement thereof.

2. A device of the class described comprising a shingle machine that is provided with bell crank levers a threaded shaft disposed in brackets on said shingle machine, arms adapted to screw onto said threaded shaft and having stud pins disposed to project upwardly through said brackets to limit the movement of said bell crank levers, said arms being adapted to be moved vertically by rotation of said shaft, a collar provided on said shaft and adapted to engage with one of said brackets to support said shaft and a spring pressed friction member to engage with said collar to resist turning of said shaft.

3. A device of the class described comprising a shingle machine that is provided with bell crank levers, a threaded shaft secured in brackets on said shingle machine, arms screwed onto said shaft, and set screws adapted to project upwardly from said arms and to engage with said bell crank levers to limit the movement thereof said set screws being adapted to be moved vertically by rotation of said threaded shaft.

4. A device of the class described comprising elements adapted for limited movement, and devices for varying the limit of movement of said elements said devices consisting in a threaded shaft that is supported in brackets, arms screwed on said brackets and adapted to be moved vertically by rotation of said threaded shaft and means associated with said arms and engaging with said movable elements whereby the limit of movement of all said elements may be changed simultaneously.

1,166,667. SELF-INKING HAND-STAMP. HARRY S. FOLGER and CASPER L. REDFIELD, Chicago, Ill.; said Redfield assignor to said Folger. Filed May 23, 1914. Serial No. 840,423. (Cl. 101—161.)



1. The combination with a hand stamp, a frame, and parallel motion links connecting the stamp to the frame, of a pad, links of unequal length connecting the pad to the frame, and connections for moving the pad on its supporting links to and from a position under the stamp when said stamp rises and falls in the frame.

2. The combination with a hand stamp, a frame, and a spring for supporting said stamp at an elevated position in said frame, of a pad, links of unequal length connecting the pad to the frame and so arranged that the pad will be tilted when said links swing on their pivotal supports, and connections for causing the stamp and pad to move simultaneously in the frame.

3. The combination with a hand stamp, a frame, parallel motion links connecting the stamp to the frame, and a spring for supporting said stamp in an elevated position in said frame, of a pad, long and short links connecting the front and rear portions of the pad to the pivoting points on the frame, and connections for moving the pad to and from a position under the stamp when said stamp rises and falls in the frame.

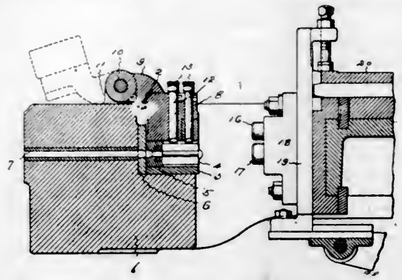
4. A frame consisting of two side plates connected together by ties, a stamp having one pivotal support on one of said ties and a second pivotal support on said side plates, a pad similarly supported on one of said ties and on said side plates, and connections between the stamp and pad and so arranged as to cause the pad to move to and from a position under said stamp when said stamp rises and falls in said frame.

5. Two similar side plates, two lower tie rods and one upper tie rod connecting said side plates together to form a frame, a stamp pivoted at one point on the upper tie rod and at another point on the frame, a pad similarly pivoted on the upper rod and the frame, and connections between the stamp and the pad for moving said pad to and from the face of the stamp.

[Claims 6 to 9 not printed in the Gazette.]

1,166,668. SWINGING DIE-CAP FOR HEADING-MACHINES. ALBERT H. GAESS, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 17, 1914. Serial No. 862,236. (Cl. 10—24.)

1. The combination with the frame of a heading machine having a die pocket in one end, of the dies located in said pocket, and a cap hinged to the frame and adapted to be swung down and fastened in said pocket over the dies, or to be unfastened and swung back out of the pocket so as to free the dies.

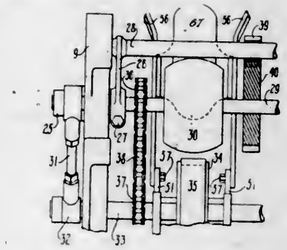


2. The combination with the frame of a heading machine having a die pocket in one end, of dies located in said pocket, a cap for covering said dies, means for securing the cap over the dies, and an arm projecting from the cap and hinged to the frame.

3. The combination with the main frame of a heading machine having a die pocket with stationary walls, of a cap adapted to swing into and out of said pocket, said cap being connected with the top of the frame in front of the die pocket by a horizontal hinge pin and connected with the frame at the bottom of the pocket by bolts that extend vertically through the cap.

4. The combination with the frame of a heading machine having a die pocket in one end, of dies located in said pocket, a cap covering said dies, an arm extending from the cap, ears projecting from the frame, a pin hinging said arm to said ears, and bolts passing vertically through the cap into the frame.

1,166,669. FABRIC FOR MAKING TIRES. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 2, 1909, Serial No. 531,045. Divided and this application filed Feb. 7, 1914. Serial No. 817,219. (Cl. 154—52.)



1. A flexible band for use in forming tires comprising a series of strips of tire making material and leaders connecting said strips.

2. A flexible band for use in making tires comprising a series of strips of bias tire forming fabric and leaders connecting the adjacent ends of said strips.

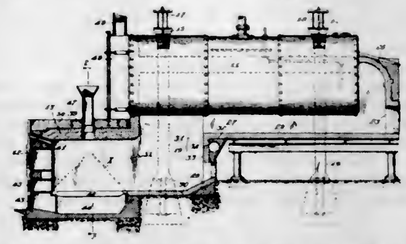
3. A flexible band for use in making tires comprising a series of strips of tire forming material and leaders connecting the adjacent ends of said strips, said leaders being formed of material having substantially the same coefficient of elasticity as that of the tire forming material.

4. A band of flexible material for use in making tires comprising a series of strips of bias tire forming fabric and leaders of similar bias fabric connecting the adjacent ends of said strips.

5. A band for use in making tires comprising a series of strips of bias gummed tire forming fabric, and leaders connecting the adjacent ends of said strips, said leaders being made of bias fabric impregnated with a rubber compound and vulcanized.

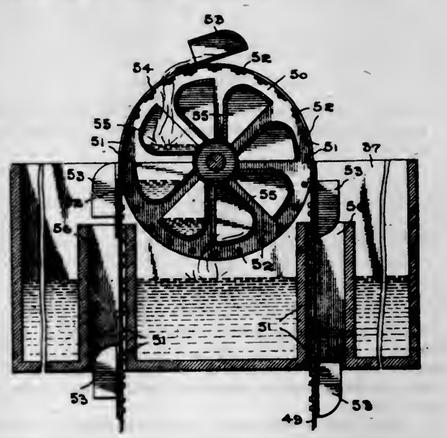
[Claims 6 to 13 not printed in the Gazette.]

1,166,670. STEAM-BOILER FURNACE. WILLIAM A. GILCHRIST, Memphis, Tenn. Filed Apr. 17, 1911. Serial No. 621,726. (Cl. 110—7.)



A steam boiler for the use of saw dust and the like as fuel comprising, in combination, a fire box having a grate on which an ignited heap of the fuel is maintained and constituting a retort chamber, the rear end of the fire box being open for substantially its entire width and height, means for supplying air for combustion through the grate and fuel heap, a commodious combustion chamber located immediately in rear of the fire box and communicating directly with the chamber thereof through the said open rear end of the fire box, said combustion chamber being constructed to retain the gases delivered to it from the chamber of the fire box within the zone of combustion until their combustion is substantially complete and the rear wall of the said combustion chamber being of refractory material and being located adjacent the fire box and having a surface which directly faces the chamber of the fire box through its said open rear end, whereby the combustion of the gases within the said combustion chamber, by direct reaction of heat upon the fuel heap and by radiation and reflection of heat from the said wall upon the heap, facilitates the drying and destructive distillation of the fuel, and a heating flue leading out of the said combustion chamber.

1,166,671. WATER-ELEVATING APPARATUS. SAMUEL B. GOFF, Camden, N. J. Filed Dec. 18, 1914. Serial No. 877,854. (Cl. 103—6.)



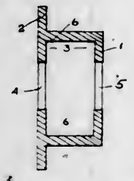
1. The combination with an elevated tank having tubes extending upwardly from the bottom thereof, a water wheel supported in the tank between the tubes and having

a circular series of radially positioned buckets, an endless conveyer, the runs of which extending through the tubes, and buckets on the conveyer adapted to discharge into the buckets of the water wheel, substantially as described.

2. The combination with an elevated tank having tubes extending upwardly from the bottom thereof, a water when supported in the tank between the tubes and having a circular series of radially positioned buckets, an endless conveyer, the runs of which extending through the tubes, said water wheel having a circular series of transverse rods, slats on the conveyer engaging opposite sides of the rods, and buckets on the conveyer discharging through openings in the conveyer into the buckets of the water wheel, substantially as described.

3. The combination with a well, a tank, and a tower supporting the tank above the well, of a water wheel in the tank, a drum in the well, an endless conveyer connecting the drum and the water wheel, buckets in the water wheel, buckets on the conveyer emptying into the buckets of the water wheel, and means for transmitting motion to the drum, substantially as described.

1,166,672. REVERSIBLE WALL-TILE. HARRY N. GOLDSMITH, Philadelphia, Pa. Filed Mar. 2, 1915. Serial No. 11,513. (Cl. 211—29.)

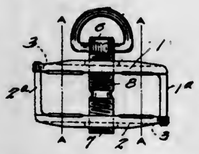


1. A one piece reversible tile in combination a flat member with a relatively smaller laterally extending member thereto adapted to be used with the said flat member as a dispensing feature or in a reverse position with the said laterally extending member presenting a dispensing feature, all as set forth.

2. A one piece tile in combination a flat member maintaining a rear member, said rear member adapted to be used in a reverse position, said flat member presenting a dispensing feature and said rear member when used in a reverse position presenting a dispensing feature, all as shown and described.

3. A one piece reversible tile in combination a flat member adaptable as a front member or a rear member, a relatively smaller member extending from said flat member adaptable to be used as a front member of a rear member, each of said members presenting a dispensing feature, all as before shown and described.

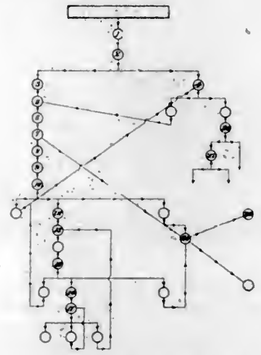
1,166,673. ROPE-CLAMP. SAMUEL ELNO GOODFELLOW, Columbus, Ohio. Filed Nov. 7, 1914. Serial No. 870,805. (Cl. 24—135.)



1. The combination with a right and left hand screw bar of a pair of clamp plates one having an angular tongue and the other having an end opening for said tongue forming guiding means for holding the plates in parallelism.

2. The combination with a pair of co-acting clamp plates having threaded openings and each formed with an end slot and a tongue in engagement, of a screw bar having right and left hand threads engaged in said threaded openings.

1,166,674. UTILIZATION OF WASTE FROM PINEAPPLE. RALPH A. GOULD and CHARLES S. ASH, San Francisco, Cal. Filed Feb. 8, 1915. Serial No. 6,886. (Cl. 99—11.)



1. The process of treating pineapple, waste pineapple, and pineapple waste for the recovery of its cellulose, albumin, acid and sugar values, which comprehends comminuting the material, pressing the comminuted material, and diffusing the pressed comminuted material by the use of a diffusion battery with water at approximately 160° F. and 20 pounds per square inch pressure, and recovering the cellulose values as dried exhausted pulp.

2. The process of treating pineapple, waste pineapple, and pineapple waste for the recovery of its cellulose, albumin, acid and sugar values, which comprehends comminuting the material, pressing the comminuted material to remove juice from the pulp, straining the pressed juice, removing from the pulp the juice remaining therein by diffusion, mixing the pressed and diffused juice, heating the mixed juices to approximately 180° F. to coagulate and precipitate the albumin, aid recovering the albumin as vegetable albumin.

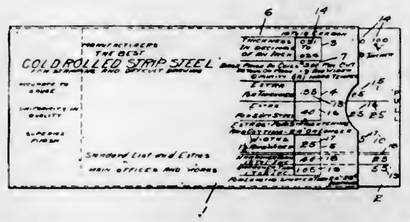
3. The process of treating pineapple, waste pineapple and pineapple waste for the recovery of its cellulose, albumin, acid and sugar values, which comprehends comminuting the material, pressing the comminuted material to remove juice from the pulp, straining the pressed juice, removing from the pulp the juice remaining therein by diffusion, mixing the pressed and diffused juice, heating the mixed juices to approximately 180° F. to coagulate and precipitate the albumin, separating the said albumin, treating the resulting juices with a neutralizing agent, which will produce an insoluble compound with citric acid, in such quantity as to reduce the acidity of the juice to an amount approximately equal to N/100 acid, and recovering the citric acid in the form of insoluble citrate.

4. The process of treating pineapple, waste pineapple and pineapple waste for the recovery of its cellulose, albumin, acid and sugar values, which comprehends comminuting the material, pressing the comminuted material to remove juice from the pulp, straining the pressed juice, removing from the pulp the juice remaining therein by diffusion, mixing the pressed and diffused juice, heating the mixed juices to approximately 180° F. to coagulate and precipitate the albumin, separating the said albumin, treating the resulting juices with a neutralizing agent, which will produce an insoluble compound with citric acid, in such quantity as to reduce the acidity of the juice to an amount approximately equal to N/100 acid, separating the insolube citrate, concentrating the resulting filtered juice under diminished pressure, and separating the resulting precipitated insolube citrate.

5. The process of treating pineapple, waste pineapple and pineapple waste for the recovery of its cellulose, albumin, acid and sugar values, which comprehends comminuting the material, pressing the comminuted material to remove juice from the pulp, straining the pressed juice, removing from the pulp the juice remaining therein by diffusion, mixing the pressed and diffused juice, heating the mixed juices to approximately 180° F. to coagulate and precipitate the albumin, separating the said albumin, treating the resulting juices with a neutralizing agent, which will produce an insoluble compound with citric acid, in such quantity as to reduce the acidity of the juice to an amount approximately equal to N/100 acid, separating the insoluble citrate, concentrating the resulting filtered juice under diminished pressure, separating the resulting precipitated insoluble citrate, heating the resulting filtered syrup to approximately 160° F., decolorizing by a proper decolorizing agent such as animal or vegetable charcoal, and recovering the sugar value in the form of a sugar syrup suitable for canning purposes.

[Claims 6 to 18 not printed in the Gazette.]

1,166,675. TABLET FOR A PLURALITY OF TABLES. JAMES B. GRIFFIN, Erie, Pa., assignor to Griffin Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed June 24, 1914. Serial No. 846,996. (Cl. 235—85.)

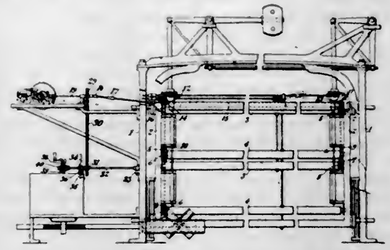


1. In a tablet for a plurality of tables, the combination of a cover sheet having a designation thereon indicating a base price and an opening adjacent to said designations for revealing variations in the article and corresponding variations in price and a card arranged to slide past said opening and having a series of tables thereon adapted to be brought into and out of the opening, the correlating elements of the table being adapted to be brought into view simultaneously and comprising indicia as to variations in the article and correlating indicia as to variations in price corresponding to such variations in the article, such variations in price correlating with the base price on the cover sheet whereby varying prices in varying articles may be readily determined by a correlation of the base price with the article and the corresponding variation in price.

2. In a tablet for a plurality of tables, the combination of an inclosing envelop having an opening across the envelop and having a designation thereon adjacent to the opening indicating a base price, said opening revealing variations in the article and variations in price corresponding thereto correlating with the base price and a card arranged to slide in and out of the envelop and having a series of tables thereon adapted to be brought into and out of the opening, the correlating elements of the tables being adapted to be brought into view simultaneously and comprising indicia as to variations in the article and indicia as to corresponding variations in price correlating with the base price on the envelop, whereby variations in price may be readily computed by correlating the variations brought to view with the base price.

3. In a tablet for a plurality of tables, the combination of an inclosing envelop having a series of openings across the envelop; a space between two of the openings having a designation indicating a base price, said openings being adapted to reveal indicia indicating a variation in an article and indicia indicating a variation in price corresponding to such variation in the article, the base price and variation in price being brought into alinement when the variation in price is brought to view; and a card arranged to slide in and out of the envelop and having a series of tables thereon adapted to be brought into and out of the openings, the correlated elements of the tables being adapted to be brought into view simultaneously and comprising indicia as to variations in the article and corresponding indicia as to variations in price whereby as the variations in the article are brought to view the price tables are brought into alinement for footing the price corresponding thereto.

1,166,676. EMBROIDERING-MACHINE. JOSEPH A. GROEBLI, New York, N. Y. Filed Feb. 9, 1915. Serial No. 7,103. (Cl. 112—7.)



1. The combination, in an embroidering machine of a tambour frame provided with fabric carriers, means for actuating the fabric carriers to shift the fabric, means for actuating the tambour frame in a direction reverse to the shift of the fabric, and intermediate means for causing the carrier actuating means to govern the movement of the tambour frame actuating means.

2. The combination, in an embroidering machine of a tambour frame provided with fabric carriers, means for actuating the fabric carriers to transfer fabric from one to another, means for moving the tambour frame vertically and intermediate means for detachably connecting the fabric carrier actuating means with the tambour frame moving means.

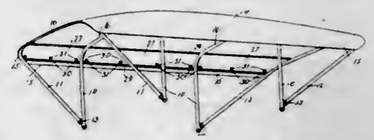
3. The combination, in an embroidering machine, of a tambour frame, fabric transferring means mounted therein, and interconnected means for moving the tambour frame and fabric transferring means relatively and simultaneously in opposite directions in the same line.

4. The combination, in an embroidering machine, of a tambour frame, fabric transferring means mounted therein and optionally interconnectible means for moving the tambour frame and fabric transferring means relatively and simultaneously, so as to return the tambour frame each time to the same initial position coincidently with the shifting of the fabric.

5. The combination, in an embroidering machine, of a tambour frame, fabric transferring means mounted therein, interconnectable means for causing the fabric transferring means to shift the fabric in one direction while the tambour frame is returned in the opposite direction to an initial position.

[Claims 6 to 10 not printed in the Gazette.]

1,166,677. ATTACHING AND CONCEALING MEANS FOR VEHICLE-CURTAINS. FRANK GRUNDY, Jersey City, N. J. Filed Aug. 25, 1913. Serial No. 786,416. Renewed Nov. 20, 1915. Serial No. 62,641. (Cl. 21—62.)



1. The combination with the spaced bows forming the frame of an automobile top and a covering therefor; of pads arranged between the covering and bows at the side portions thereof, flaps secured to the upper edges of the pads between the bows, flaps secured to the lower edges

of the pads between the bows, means to detachably connect the flaps, curtains carried by the pads to be inclosed within pockets formed by said flaps, and means to secure the upper flaps against the pads when the curtains are lowered.

2. The combination with a vehicle top including a frame and a covering and curtains removably carried therebeneath; of flaps arranged beneath the covering and designed to overlap each other to inclose and retain the curtains therein, means to detachably connect the flaps, and means to detachably connect certain of the flaps to the covering above the curtains so as to hold said flaps toward the covering when the curtains are lowered.

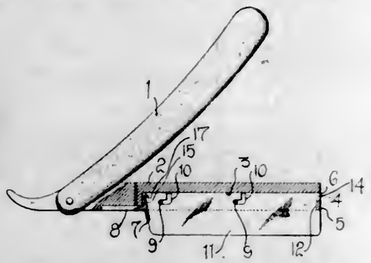
3. The combination with a vehicle top and narrow padded sections attached thereto adjacent their longitudinal edges to contact with the usual bows; of curtains attached to said padded sections near their lower edges, flaps carried by the longitudinal edges of said sections to form narrow pockets terminating short of the transverse center of the top, and means to connect said flaps to inclose the curtains when folded, said means being located at points in horizontal alinement with the points of attachment of the curtains to the padded sections near the lower edges of the pockets whereby said curtains will form additional pads.

4. The combination with a vehicle top and padded casing sections secured to the inner faces thereof; of bows having transverse depending portions providing curved corners adapted to contact with the padded sections, curtains comprising foldable sections attached to said padded sections and divided by longitudinal folding lines with lights arranged within the area of said folds and spaced apart longitudinally on opposite sides of the bows, flaps carried by said sections along the edge portions of the latter and adapted when connected to form compartments of a width substantially equal to the normal width of the sections of the curtains when folded so as to receive the latter and preclude them from view between the bows at the corners of the top and spaced from the center thereof.

5. An attaching and concealing means for vehicle curtains embodying compartment-forming members coöperative with the vehicle cover, narrow pads longitudinally of the curved portions of the cover for attachment of the curtains at their upper edges to the lower edges of the pads, and means for closing said compartments to contain the curtains therein, said means embodying flexible strips forming flaps carried by the cover short of its longitudinal edges to detachably engage said compartment-forming members.

[Claims 6 to 16 not printed in the Gazette.]

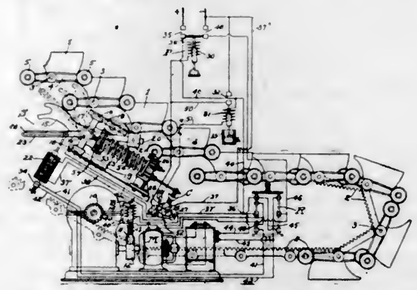
1,166,678. RAZOR. EDWARD M. HALL, Vian, Okla. Filed Feb. 18, 1915. Serial No. 9,071. (Cl. 30—12.)



1. A razor including a stock provided with a longitudinally disposed groove, a blade insertible within the groove, the inner end of said blade being beveled, coacting locking means carried by the blade and the stock for maintaining the same within the groove, a substantially T-shape latch member, the stem of said member being pivotally engaged with the stock at a point inwardly of the inner end of the groove, a portion of the head of the member being adapted to extend within the groove, the free extremity of said portion being provided with a forwardly directed extension, the adjacent portion of the beveled end of the blade being provided with a notch to receive said extension, the opposite end portion of the head being provided with a groove to receive the adjacent portion of the beveled end of the blade.

2. A razor including a stock provided with a longitudinally disposed groove, a blade insertible within the groove, the inner end of said blade being beveled, coacting locking means carried by the blade and the stock for maintaining the same within the groove, a substantially T-shape latch member, the stem of said member being pivotally engaged with the stock at a point inwardly of the inner end of the groove, a portion of the head of the member being adapted to extend within the groove, the free extremity of said portion being provided with a forwardly directed extension, the adjacent portion of the beveled end of the blade being provided with a notch to receive said extension, the opposite end portion of the head being provided with a groove to receive the adjacent portion of the beveled end of the blade, said stock having an opening disposed therethrough at a point below the stem of the latch member when in locking adjustment.

1,166,679. SAFETY DEVICE FOR CONVEYERS. ARTHUR E. HANDY, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 12, 1913. Serial No. 806,199. (Cl. 104—165.)



1. The combination with an inclined electrically driven reversible conveyer, an electrically operated buffer device adapted to be put under pressure by the conveyer for effecting the retardation of the latter when the latter tends to run away, and automatic means for preventing the operation of the conveyer in a descending direction unless said device is in normal inoperated position.

2. The combination with an inclined electrically driven reversible conveyer, an electrically operated buffer device adapted to be put under pressure by the conveyer for effecting the retardation of the latter when the latter tends to run away, and automatic means actuated by said electrically controlled yielding means for preventing the operation of the conveyer in a descending direction unless said device is in normal inoperated position.

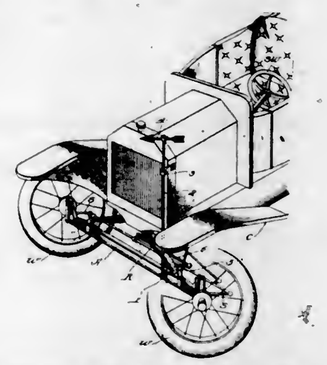
3. The combination with an inclined electrically driven reversible conveyer, an electrically operated buffer device adapted to be put under pressure by the conveyer for effecting the retardation of the latter when the latter tends to run away, the circuit to said buffer device being automatically broken when the buffer device is operated, thereby preventing the operation of the conveyer in a descending direction unless said buffer device is in normal inoperated position.

4. The combination with an inclined conveyer, an electric power unit for driving the same, a source of current supply therefor, a main line potential switch, electrically controlled yielding means for effecting the retardation of the conveyer when the latter tends to run away, and means for automatically effecting the opening of the potential switch simultaneously with the operation of said yielding means.

5. The combination with an inclined conveyer, an electric power unit for driving the same, a source of current supply therefor, a main line potential switch, electrically controlled yielding means for effecting the retardation of the conveyer when the latter tends to run away, and means actuated by said electrically controlled yielding means for automatically effecting the opening of the potential switch simultaneously with the operation of said yielding means.

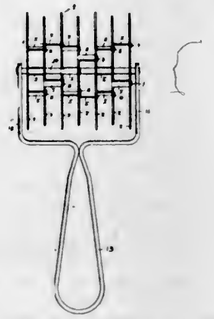
[Claims 6 to 9 not printed in the Gazette.]

1,166,680. WHEEL-POSITION INDICATOR. LEWIS P. HANSON, London, Minn. Filed May 10, 1915. Serial No. 27,177. (Cl. 116—31.)



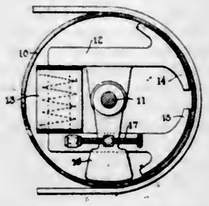
The combination with an automobile, of a bearing spaced in advance of one end of the front axle thereof, a clamp securing the bearing to the axle, an upright shaft having its lower end rotatably mounted in said bearing, its upper end being positioned in a plane above the body of the machine, an indicator secured to said upper end of the shaft, an additional bearing projecting forwardly from the body of the automobile and receiving the intermediate portion of the shaft revolubly and slidably, a crank arm projecting rearwardly from the lower end of the shaft and disposed substantially parallel to the steering arms of the automobile, and a link connecting said crank arm to the transverse steering rod of said automobile.

1,166,681. MEAT-TENDERER. EDWARD W. HECK, Toledo, Ohio. Filed Nov. 16, 1914. Serial No. 872,396. (Cl. 17—29.)



A meat-tenderer, a rotor comprising a plurality of spacer disks, each being provided with radial cutter-bars and integral arms adapted to axially space and so couple to a successive disk, that the cutter-bars of the successive disk are disposed opposite the gap between the bars of the coupling disk and an end disk coupled to the last of the spacer disks, being provided with radial cutter-bars, and a bail provided with a handle and a shaft for rotatable mounting of the rotor.

1,166,682. ELECTROMAGNETIC SEPARATOR. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 5, 1915. Serial No. 12,279. (Cl. 83—71.)



1. An electromagnetic separator pulley provided with movable pole pieces to be moved by magnetic attraction and having means biasing the same toward a definite position.

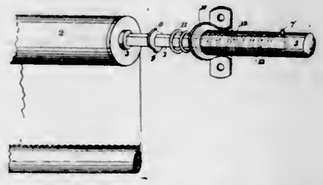
2. In an electromagnetic separator, in combination, a shaft, a pulley wheel rotatable thereon, an electromagnet supported on said shaft independently of said wheel and having free pivotal movement, and a counter-weight associated with said electromagnet for balancing the same.

3. In an electromagnetic separator, in combination, a shaft, a pulley wheel rotatable thereon, an electromagnet supported on said shaft independently of said wheel and having free pivotal movement, a counter-weight associated with said electromagnet to balance the same, and means to shift said counter-weight relatively to said electromagnet for varying the balanced position of the latter.

4. An electromagnetic separator pulley having freely shiftable parts effecting increased magnetic field in a defined region normally circumferentially stationary, said parts automatically shifting to compensate for variations in the character of the magnetic material acted upon.

5. An electromagnetic separator pulley having freely shiftable parts effecting a dense magnetic field in a normally fixed region, said parts automatically shifting to compensate for temporary variations of a predetermined character in the magnetic material acted upon, and means to adjust said parts at will to compensate for continued variations of a predetermined character in the magnetic material acted upon.

1,166,683. SHADE, CURTAIN, OR AWNING ROLLER. GEORGE D. HILL, Louisville, Ky. Filed Jan. 4, 1915. Serial No. 442. (Cl. 156—24.)



1. In shade, curtain or awning fixtures, in combination, a roller, a roller bracket consisting of a tubular boxing within which is fitted and fastened by suitable means a coiled spring having near its inner end a loop or bend, a thin circular metallic disk with external projections and a central hole of other than cylindrical cross section, and a journal of similar transverse cross section to that adopted for the cross section of the central hole in the thin metallic disk fitted and fastened to one end of a roller, substantially as and for the purpose described.

2. In shade, curtain or awning fixtures, in combination, a roller, a roller bracket consisting of a tubular boxing in the side of which near its inner end is a hole adapted to receive and fasten the inner end of a suitably coiled spring, a coiled spring having near its inner end a loop or bend, the inner end being adapted to fasten and fit in said hole inside of the tubular boxing, a thin circular me-

tallic disk with external projections and a central hole of other than cylindrical cross section, and a journal or spindle of similar transverse cross section to that adopted for thec ross section of the central hole of the thin metallic disk, fitted and fastened to one end of a roller, substantially as and for the purpose described.

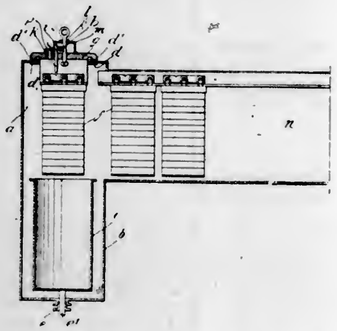
3. In shade, curtain or awning fixtures, in combination, a roller, a roller bracket having a tubular boxing, a coiled spring having near its inner end a loop or bend in the coil adapted to engage with one of the external projections on the circumference of a thin circular metallic disk having a central hole of other than cylindrical cross section, and a journal of transverse cross section similar to that adopted for the central hole in the thin circular metallic disk, fitted and fastened to one end of a roller and adapted to turn therewith, substantially as and for the purpose described.

4. In shade, curtain or awning fixtures, in combination, a roller, a roller bracket having a tubular boxing within which is mounted and fastened a coiled spring having near its inner end a loop or bend adapted to engage with the external projections on the circumference of a thin circular metallic disk and to stop said disk, a journal or spindle of other than cylindrical transverse cross section, a thin circular metallic disk with a central hole of cross section similar to the transverse cross section of the journal or spindle upon which the thin circular metallic disk is adapted to fit, revolve with and move upon longitudinally, substantially as and for the purpose described.

5. In shade, curtain or awning fixtures, in combination, a roller, a roller bracket having a tubular boxing within which is mounted and fastened a coiled spring having near its inner end a loop or bend adapted to engage with the external projections on the circumference of a thin circular metallic disk and to stop said disk, a journal or spindle of other than cylindrical transverse cross section, a thin circular metallic disk with a central hole of cross section similar to the transverse cross section of the journal or spindle upon which the thin circular metallic disk is adapted to fit, revolve with and move upon longitudinally; said journal or spindle being provided with a hinged portion adjacent the roller, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,166,684. ANNEALING-FURNACE. HERMANN HILLEBRAND, Werdohl, Germany. Filed June 6, 1914. Serial No. 843,376. (Cl. 148—16.)



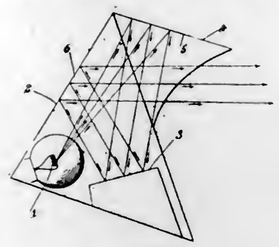
1. An annealing furnace comprising a retort, a chamber communicating therewith and having one end provided with a charging opening, a bell movable within the chamber and adapted to close against the inner face of said end, a lid adapted to close against the outer face of said end, and a carrier adapted to be suspended from the lid and to be moved through the ante-chamber into the retort.

2. An annealing furnace comprising a retort, a communicating chamber having one end provided with a charging opening, said chamber being extended vertically beyond said opening, a vertically movable bell inclosed within the chamber, a lid, a carrier adapted to be suspended from the lid, and to be moved through the ante-chamber into the retort, an interior packing on the chamber-end adapted to be engaged by the bell, and an exterior packing on said end adapted to be engaged by the lid.

3. An annealing furnace comprising a retort, a chamber communicating therewith and having one end provided with a charging opening, a bell movable within the chamber, and adapted to close against the inner face of said end, a lid adapted to close against the outer face of said end, a carrier, a vertically movable suspending shank carried by the lid, and a bolt operably connected to said shank and adapted to engage the carrier.

4. An annealing furnace comprising a retort, a chamber communicating therewith and prolonged vertically beyond the retort, a charging opening in one end of the chamber, a bell movable within the chamber and adapted to close against the inner face of said end, a lid adapted to close against the outer face of said end, and a carrier adapted to engage the lid and to be moved from the chamber into the retort.

1,166,685. AUTOMOBILE-HEADLIGHT. WILLIAM W. HOLLAND and GEORGE H. SNYDER, Baltimore, Md. Filed Aug. 16, 1915. Serial No. 45,769. (Cl. 240—41.)



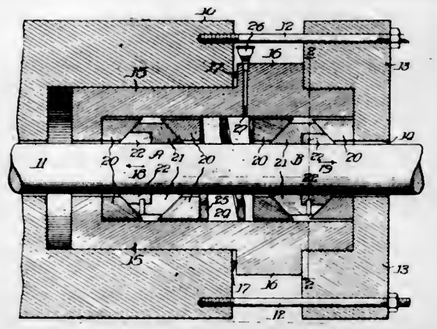
1. In an automobile head-light, a source of illumination, a vizor with an internal reflecting surface, an upwardly disposed reflector in front of the source of illumination, and a forwardly and downwardly disposed inclined reflector above the upwardly disposed reflector.

2. In an automobile head-light, a source of illumination, a vizor to intercept the upwardly and forwardly directed rays, the vizor having an internal reflecting surface to project the rays downward, an upwardly disposed reflecting surface to receive the rays from the vizor and project them upward and backward, and an inclined reflector in the path of the rays from the latter-named reflector to receive the rays from that reflector and project them forward.

3. In an automobile head-light, a source of illumination, a vizor to intercept the upwardly and forwardly directed rays, the vizor having an internal reflecting surface to project the rays downward, an upwardly disposed reflecting surface to receive the rays from the vizor and project them upward and backward, an inclined reflector in the path of the rays from the latter-named reflector to receive the rays from that reflector and project them forward, and a curved reflecting surface in the rear of the source of illumination to project the rays directly forward.

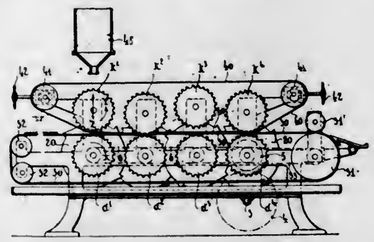
4. In an automobile head-light, a source of illumination, a vizor to intercept the upwardly and forwardly directed rays, the vizor having an internal reflecting surface to project the rays downward, an upwardly disposed reflecting surface to receive the rays from the vizor and project them upward and backward, an inclined reflector in the path of the rays from the latter-named reflector to receive the rays from that reflector and project them foward, and a curved reflecting surface extending beneath and slightly in the rear of the source of light shaped to project the rays received thereby on to the reflecting surface of the vizor causing them to follow substantially the same path as that followed by the direct rays which fall upon the vizor.

1,166,686. METALLIC PACKING. WILLIAM H. HOLMES, Blue Island, Ill., assignor of one-half to Thomas J. Holmes, Chicago, Ill. Filed Feb. 16, 1914. Serial No. 818,838. (Cl. 137—116.)



In a pressure and vacuum packing for rods the combination with an auxiliary stuffing box having flat inside end faces through which the rod passes loosely, of two spaced sets of packing members each comprising a pair of pressing rings fitting the rod loosely and with beveled countersunk inside faces and flat outside faces, the outside ring of each set making contact with the inside end face of the stuffing box, and segmental packing rings between the pressing rings, the packing rings consisting of segmental recessed members on one side and staggered segmental members fitting the recesses on the other side, both sets of members having beveled faces corresponding to the countersunk pressing members, the recessed packing members of the two sets being oppositely disposed on the rod, and a spring between the sets to hold said sets against the flat end faces of the stuffing box, and to hold the packing rings in engagement with the rod, the recessed packing members being oppositely disposed to pack the rod for pressure and exhaust.

1,166,687. APPARATUS FOR IMPREGNATING LAUNDRIED ARTICLES AND LIKE FABRICS WITH FLUID OR PASTY SUBSTANCES. ROBERT HÖNIGSBERG and GEORG EDELMANN, Vienna, Austria-Hungary. Filed Aug. 7, 1913. Serial No. 783,455. (Cl. 68—28.)



1. Apparatus for mechanically impregnating laundried articles and the like fabrics with fluid or pasty substances comprising a frame, one set of rollers being arranged rotatably in said frame, another set of rollers mounted rotatably in said frame, means for causing said second set of rollers to rise and fall, two endless aprons arranged between said sets of rollers, means for driving the two sets of rollers and the two aprons and means for supplying the goods arranged between said aprons with the impregnating fluid.

2. Apparatus for mechanically impregnating laundried articles and the like fabrics with fluid or pasty substances comprising a frame, one set of rollers being arranged rotatably in said frame, another set of rollers which is mounted in said frame so as to rotate and at the same time to rise and fall, two endless aprons arranged between said sets of rollers, means for driving the two sets of rollers and the two aprons and means acting upon the apron stretched over the transporting rollers, through which the goods impregnated are freed from any impregnating material still adhering.

3. Apparatus for mechanically impregnating laundried articles and the like fabrics with fluid or pasty substances comprising a frame, a set of striking rollers and a set of transporting rollers mounted in said frame, means for supplying impregnating fluids between the rollers, said rollers being provided with ribs.

4. Apparatus for mechanically impregnating laundried articles and the like fabrics with fluid or pasty substances comprising a frame, a set of striking rollers and a set of transporting rollers mounted in said frame, means for supplying impregnating fluids between the rollers, said rollers being provided with ribs, circumferentially displaced with regard to one another.

5. Apparatus for mechanically impregnating laundried articles and the like fabrics with fluid or pasty substances comprising a frame, a set of striking rollers and a set of transporting rollers mounted in said frame, means for supplying impregnating fluids between the rollers, said rollers being composed of a number of ribbed disks, secured removably to the shafts of said rollers.

1,166,688. TOY OR WORKING MODEL. FRANK HORNBY, Liverpool, England, assignor to Meccano Limited, Liverpool, England, a Corporation of Great Britain. Filed Feb. 28, 1914. Serial No. 821,740. (Cl. 46—35.)



1. The combination, in a working model, toy or the like, of rods, shafting, or the like of the same cross-section with a longitudinally perforated element provided with pinching screws at each end, said element also having a transverse perforation intersecting the longitudinal perforation and being arranged in a plane passing through one of said pinching screws, and a second transverse perforation intermediate the end pinching screws, said intermediate perforation being also provided with a pinching screw.

2. The combination, in a working model, toy or the like, of rods, shafting, or the like of the same cross-section, with a longitudinally perforated element provided with pinching screws at each end, said element also having a transverse perforation intersecting the longitudinal perforation and being arranged in a plane passing through one of said pinching screws, and a second transverse perforation intermediate the end pinching screws, said intermediate perforation being also provided with a pinching screw, the longitudinal and transverse perforations being of the same cross-section to receive the said rods, shafting or the like.

3. The combination, in a working model, toy or the like, of rods, shafting or the like of the same cross-section, with a longitudinally perforated element, retaining means intersecting said perforation and provided at each end of said element, said element also having a transverse perforation intersecting said longitudinal perforation and being arranged in a plane passing through one of said retaining means, said element also having intermediate said retaining means a second transverse perforation intersecting said longitudinal perforation and arranged at right

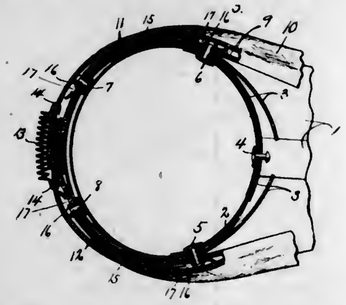
angles to said first-mentioned transverse perforation, and retaining means associated with said second transverse perforation.

4. The combination, in a working model, toy or the like, of rods, shafting or the like of the same cross-section, with a longitudinally perforated element, retaining means intersecting said perforation and provided at each end of said element, said element also having a transverse perforation intersecting said longitudinal perforation and being arranged in a plane passing through one of said retaining means, said element also having intermediate said retaining means a second transverse perforation intersecting said longitudinal perforation and arranged at right angles to said first-named transverse perforation, and retaining means associated with said second transverse perforation, said longitudinal and transverse perforations being of the same cross-section to receive said rods, shafting or the like.

5. The combination, in a working model, toy or the like, of rods, shafting or the like of the same cross-section, with a longitudinally perforated element, retaining means intersecting said perforation and provided at each end of said element, said element also having a transverse perforation intersecting said longitudinal perforation and arranged in a plane passing through one of said retaining means, said element also having a second transverse perforation intersecting said longitudinal perforation, and retaining means associated with said second transverse perforation, all of said perforations being of the same cross-section.

[Claims 6 to 10 not printed in the Gazette.]

1,166,689. GARMENT. GEORGE A. HOUGH, Oneida, N. Y. Filed May 20, 1915. Serial No. 29,329. (Cl. 2—89.)



1. A garment comprising a shirt, a shirt collar connected thereto and adapted to carry securing elements, a coat having its collar split vertically at the rear to form side portions, said side portions engaged with said securing elements, and means for resiliently connecting the split portions of said coat collar to hold the side portions of said collar under tension and in engagement with said securing elements.

2. A garment comprising a shirt, a shirt collar connected thereto and adapted to carry buttons projecting outwardly from the surface thereof, a coat having its collar split vertically at the rear to form side portions, said side portions having openings in which said buttons are adapted to be seated, and spring means for connecting said side portions at the rear of the shirt collar to hold said portions under tension.

3. A garment comprising a shirt, a shirt collar removably connected thereto and adapted to carry a plurality of buttons having enlarged heads projecting outwardly from the collar, a coat having the collar thereof secured to said buttons, and a plurality of members, each provided with a slot having an enlarged portion adapted to engage said buttons to prevent removal of the coat collar.

4. A burial garment comprising a shirt, a shirt collar connected thereto, securing elements projecting outwardly from the collar, a coat, said securing elements extending through said coat and exposed beneath the coat collar, and a member provided with a slot having an enlarged portion engaged with each of said securing elements to prevent removal of the coat therefrom.

5. A burial garment comprising a shirt, a shirt collar connected thereto, securing elements carried by said collar, a coat split vertically at the rear thereof, said securing elements extending through a portion of the coat, means for preventing removal of the coat from said securing elements, and a removable spring clip connecting the split portions of said coat at the rear.

1,166,690. VALVE FOR FLUID-CONTAINERS. WALTER D. KAHN, New York, N. Y., assignor to Import Sales Company, a Corporation of New York. Filed Mar. 27, 1915. Serial No. 17,311. (Cl. 150—3.)

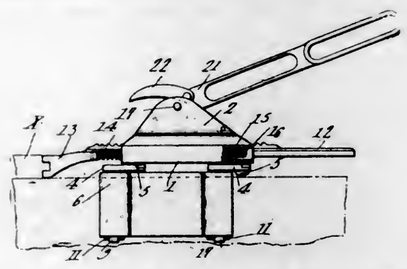


1. A valve for the orifice of a fluid container, comprising a disk to which the material of the container adjacent the orifice is adapted to be connected, whereby the material may be twisted to close the orifice and a second disk adapted to be interposed between the first disk and the container for retaining the material in twisted condition.

2. A valve for the orifice of a fluid container comprising a disk which is provided with a central opening for the passage of the material of the container adjacent the orifice and which is adapted to be substantially inclosed by said material and a second disk adapted to be interposed between the first disk and the container and also provided with a central opening for the passage of such material.

3. A valve for the orifice of a fluid container comprising a relatively stiff disk, provided with an opening for the passage of the material of the container adjacent its orifice, and a flexible disk interposed between the stiff disk and the container and also provided with an opening for the passage of such material.

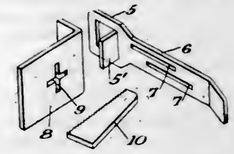
1,166,691. FLOOR-JACK. BERT E. KELLER, Toledo, and JOHN W. FLATT, West Toledo, Ohio. Filed Mar. 18, 1915. Serial No. 15,326. (Cl. 254—14.)



1. A floor jack including opposed angular jaws, means upon the inner faces of the sides and tops of the jaws for biting into a support therebetween, a base overhanging the tops of the jaws, links interposed between and connecting the tops of the jaws and the base, said links constituting means for drawing the jaws toward each other when the base is thrust in one direction, a jaw movably mounted upon the base, and means for actuating the jaw relative to the base.

2. A floor jack including opposed angular jaws, means upon the inner faces thereof for biting into a support therebetween, a base, link connections between the jaws and base, said connections constituting means for drawing the jaws toward each other when the base is thrust in one direction, a rack slidably mounted on the base and having a jaw at one end, an actuating lever pivotally mounted above the base, means operated by the lever for shifting the rack in one direction, means for holding the rack against return movement, means operated by the lever when moved in the opposite direction for releasing the rack from its holding means, and means for automatically returning the released rack to its initial position.

1,166,692. DOOR-SECURER. WILLIAM D. KENNEDY, Oakland, Cal., assignor of one-third to Jacob W. Simons and one-third to William E. Simons, Oakland, Cal. Filed Apr. 17, 1915. Serial No. 22,013. (Cl. 16—8.)

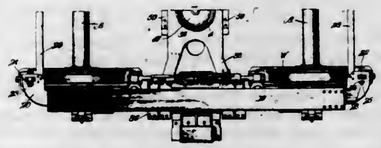


1. A device for securing doors closed upon their jambs, comprising a hook engageable with a keeper in the jamb and having a shank with a plurality of apertures disposed parallel with relation to each other, said shank when in position projecting beyond the side of the door, an abutment plate reversible side for side and slidably adjustable on and being transverse to the plate, and a wedge key insertible through one of the apertures of the shank and reactive against the latter to pull its hook up tight on the jamb, and against the plate to force it toward the contiguous door and jamb structure, the plate overlapping the door and preventing its moving open.

2. A door securing device comprising a shank member having a plurality of elongated parallel slots formed therein disposed lengthwise of the shank, a hook member formed on the inner end of the shank insertible in the keeper of the door, an abutment plate having a cruciform slot formed therein slidably mounted on the shank, and a wedge key insertible through one of the slots in the shank and reactive upon the abutment plate to force it toward the contiguous door structure.

3. A door securing device comprising a shank member having a plurality of elongated parallel slots formed therein disposed lengthwise of the shank, a hook member formed on the inner end of the shank insertible in the keeper of the door, an abutment plate having a cruciform slot formed therein slidably mounted on the shank, a flange on the plate disposed at right angles to the main surface of the plate, and a wedge key insertible through one of the slots in the shank and reactive upon the abutment plate to force it toward the contiguous door structure, said wedge having one edge serrated to prevent slippage upon the plate.

1,166,693. CAR-TRUCK. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed July 2, 1914. Serial No. 848,612. (Cl. 105—239.)



1. In a car truck, the combination of side frame members, and pedestals mounted at the ends thereof, said pedestals having jaw members connected by parts integral therewith, said pedestals also having parts integral therewith and turned to provide brake hanger supporting portions.

2. In a car truck, the combination of an integral pedestal comprising jaw members capable of fitting opposite side of an axle box of the truck, a side frame member to which the pedestal is secured, said pedestal having an integral part extending laterally of the side frame member and in line with a wheel of the truck to provide a support for a brake head.

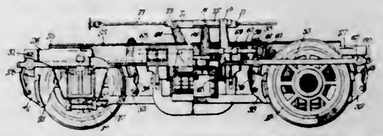
3. In a car truck, the combination of axles, wheels mounted on the axles, a pair of frame members extending along the outer sides of the truck and the wheels thereof, and pedestals at the ends of said frame members, said pedestals having parts which extend inwardly and in a position to support brake heads in line with the wheels.

4. In a car truck, a pedestal having jaw portions capable of fitting a part of the truck, portions to which a side frame member of the truck may be secured, and a portion to which a brake hanger may be secured.

5. In a car truck, a pedestal comprising a single casting having jaws capable of fitting a part of the truck, portions to which a frame member may be secured, and an elbow constituting a brake hanger support and having recesses therein to receive the brake hanger and to receive a pin for securing the brake hanger in place.

[Claims 6 to 16 not printed in the Gazette.]

1,166,694. CAR-BRAKE. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed July 2, 1914. Serial No. 848,614. (Cl. 188—24.)



1. In a car brake, the combination of a pair of brake hangers and a tension device connecting said hangers, said device comprising a pair of bars, one on each side of said pair of hangers, said bars being secured to said hangers intermediate their ends.

2. In a car brake, the combination of a pair of brake hangers and a tension device connecting said hangers, said device comprising a pair of bars, one on each side of said pair of hangers, said bars being pivoted to said hangers, and having extensions which are connected together outside the pivotal connections of said bars with the hangers.

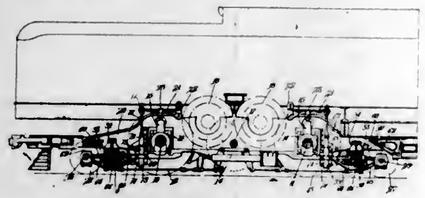
3. In a car truck, the combination of axles, wheels fixed on the axles, side frame members carried by the axles, brake heads having shoes capable of engaging the treads of said wheels on opposite sides of the centers thereof, hangers for said heads suspended from said frame members and in line with said wheels, and tension bars located above the axles and connecting in pairs the brake hangers associated with the brake heads on opposite sides of each wheel.

4. In a car truck, the combination of axles, wheels fixed on the axles, side frame members carried by the axles, brake heads having shoes capable of engaging the treads of said wheels on opposite sides of the centers thereof, hangers for said heads suspended from said frame members and in line with said wheels, and tension bars connecting in pairs the brake hangers associated with the brake heads on opposite sides of each wheel, said tension bars having pivotal connection with their respect hangers and having their ends beyond the pivotal connections secured together.

5. In a car truck, the combination of axles, wheels fixed on the axles, a brake head having a shoe adapted to engage the tread on each side of each wheel, a hanger for each brake head, and means for connecting the hangers of each pair of brake heads, said means comprising bars pivotally secured to said brake hangers and forming frames which surround the brake hangers in pairs.

[Claims 6 to 11 not printed in the Gazette.]

1,166,695. LOCOMOTIVE. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Aug. 20, 1914. Serial No. 857,719. (Cl. 105—226.)



1. In a locomotive, the combination of a main driver axle, wheels thereon, a pony truck axle, wheels thereon, and a frame supported at two points by said pony truck axle and between the wheels thereon, said frame having flexible connection with a support on the main drive axle, said frame also having outwardly extending portions providing brake hanger supports in line with said wheels.

2. A truck comprising two axles and wheels thereon, a frame located in the space between the wheels on said axles and extending longitudinally of the truck, said frame being supported by said axles at its ends only, a spring extending transversely of said frame between the supporting means thereof, and hangers for suspending said spring at its ends from said frame.

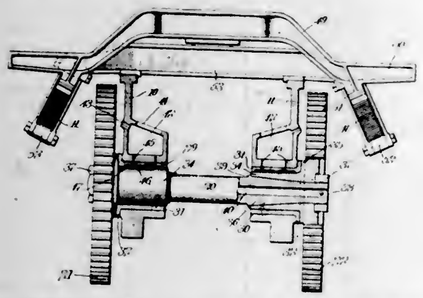
3. In a locomotive, the combination of a main driver axle, springs supported thereby, a pony truck axle, a frame having one end supported by the pony truck axle and having its opposite end hung from said springs on the driver axle.

4. In a locomotive, the combination of a pony truck axle, wheels thereon, a driver axle, wheels thereon, and a frame having brackets thereon for supporting braking means in line with the wheels on said pony truck axle and in the space between the pony truck wheels and driver wheels.

5. In a locomotive, the combination of a pony truck axle, wheels thereon, a frame supported by said axle between the wheels thereon, said frame having brackets formed integral therewith and extending outwardly opposite said wheels for supporting brake levers in line with the wheels on said axle.

[Claims 6 to 17 not printed in the Gazette.]

1,166,696. LOCOMOTIVE. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Aug. 20, 1914. Serial No. 857,720. (Cl. 105—220.)



1. In a locomotive, the combination of a truck having side frame members, bearing sleeves carried by said side frame members, a jack shaft, gears at the opposite ends of said shaft, hubs for said gears having bosses extending into the bearing sleeves in the side frame members, and lubricant containers on said frame members adjacent said bearing sleeves.

2. In a locomotive, the combination of a truck having side frame members, bearing sleeves carried by said side frame members, a jack shaft having tapering portions near its ends, a gear mounted on each end of said shaft, hubs for said gears having bosses extending into said sleeves and provided with tapering axial openings fitting the tapering portions of said jack shaft, and nuts at the outer ends of said shaft for securing the gears thereon.

3. In a locomotive, the combination with a frame having openings therein, of sleeves fitting said openings, a shaft having tapering portions extending through said openings, and gears mounted on the outer ends of said shaft and having bosses fitting in said sleeves and surrounding the tapering portions of said shaft.

4. In a locomotive, the combination with a frame having openings therein, of sleeves fitting said openings, a jack shaft, and gears fitting the ends of the jack shaft and having hub portions journaled in said sleeves.

5. In a locomotive, the combination with a frame having openings therein, of sleeves fitting said openings, a jack shaft extending through said sleeves, and gear wheels on the outer ends of said jack shaft, said gear wheels having hubs provided with bosses which extend into said sleeves.

[Claims 6 to 17 not printed in the Gazette.]

1,166,697. SPRING-WHEEL. CHARLES H. LIKELY, Woody, Cal. Filed Oct. 27, 1915. Serial No. 58,184. (Cl. 152—38.)



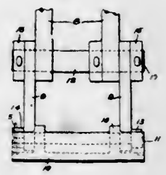
1. A spring wheel including inner and outer rims and cushioning means interposed therebetween, radially disposed diametrically opposed power transmission equalizing levers arranged upon one side of the wheel, links connecting the inner ends of the opposed levers, an additional series of radially disposed pivotally mounted levers on the opposite side of the wheel body, and means connecting the outer ends of the two series of levers to the outer wheel rim.

2. A spring wheel including inner and outer rims and cushioning means interposed therebetween, radially disposed diametrically opposed power transmission equalizing levers arranged upon one side of the wheel, links connecting the inner ends of the opposed levers, an additional series of radially disposed pivotally mounted levers on the opposite side of the wheel body, means connecting the outer ends of the two series of levers to the outer wheel rim, and means acting to yieldingly prevent movement of said levers from their normal positions.

3. A spring wheel including a body having a rim, an outer rim normally disposed in concentric relation to said inner rim, cushioning means arranged between said inner and outer rims, said inner rim being provided with spaced recesses in its opposite edges, a series of equalizing levers fulcrumed intermediate of their ends upon the wheel body and arranged in diametrically opposed relation, links connecting the inner ends of the opposed levers to each other, a second series of levers pivotally mounted upon the opposite side of the wheel body, said levers being movable in the recesses of the inner rims, bars pivotally connected to the outer ends of the levers and to said outer rim, and springs extending into said recesses and bearing against the opposite edges of the levers to yieldingly hold said levers against movement in either direction from a central position in the recesses.

4. A spring wheel including a body provided with a rim projecting from opposite sides thereof, an outer rim arranged normally in concentric relation to the inner rim, spaced cushioning springs fixed to the inner and outer rims, a series of transversely disposed bolts fixed in the wheel body, equalizing levers fulcrumed intermediate of their ends upon said bolts on one side of the wheel body and arranged in diametrically opposed relation, links connecting the inner ends of the opposed levers to each other, a second series of levers pivotally mounted upon said bolts on the opposite side of the wheel body, said inner rim being provided in its opposite edges with spaced recesses to accommodate said levers and having lugs centrally formed upon the base wall of said recesses, bars pivotally connected to the outer ends of said levers and to the outer wheel rim, and springs arranged upon the opposite ends of said bolts, each spring having spaced arms extending into one of the recesses and bearing against the opposite edges of the lever therein and contacting with said lug, said spring arms yieldingly holding the levers against movement in either direction in the recesses from a normal position.

1,166,698. ROTARY IMPACT-PULVERIZER. CHARLES S. LINCOLN, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Sept. 15, 1913. Serial No. 790,366. (Cl. 83—11.)



1. In a pulverizer, a casing, a rotatable shaft within said casing, radial arms spaced longitudinally of said shaft, means for suspending said arms from said shaft, a longitudinally recessed cross-bar, and means located entirely within the recess of said cross-bar for detachably securing said bar to said arms.

2. In a pulverizer, a casing, a rotatable shaft within said casing, and a bail suspended from said shaft, said bail comprising a plurality of spaced radial arms and a longitudinally flanged cross-bar detachably secured to the ends of said arms.

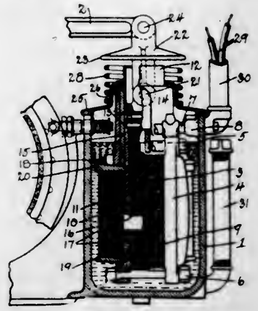
3. In a pulverizer, a casing, a rotatable shaft within said casing, and a bail suspended from said shaft, said bail comprising a plurality of spaced radial arms and a cross-bar longitudinally flanged to form an intermediate recess, detachably secured to said arms.

4. In a pulverizer, a casing, a rotatable shaft within said casing, radial arms spaced longitudinally of said shaft, a recessed cross-bar, means for detachably securing said arms to said cross-bar within said recess, and means for suspending said arms from said shaft and for locking said securing means.

5. In a pulverizer, a casing, a rotatable shaft within said casing, and a bail suspended from said shaft, said bail comprising a plurality of spaced arms, a cross-bar longitudinally flanged to form an intermediate recess, transverse projections spanning said recess, and means for securing said arms to said projections.

[Claims 6 to 9 not printed in the Gazette.]

1,166,699. ALTERNATING-CURRENT MAGNET. WILLIAM D. LUTZ, Allendale, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Mar. 20, 1912, Serial No. 685,112. Divided and this application filed July 31, 1913. Serial No. 782,164. (Cl. 175—21.)



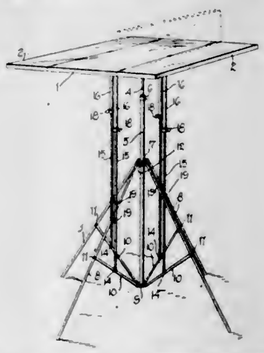
1. The combination with an electro-responsive device, of a movable core, a guide for said core, and means for supplying oil to both ends of said guide.

2. In an electro-responsive device, the combination with a solenoid magnet, of a movable magnet core, a casing containing fluid surrounding said magnet and core, a partition dividing said casing into two parts, and a valve in said partition for regulating the passage of fluid displaced by said magnet core.

3. In an electro-responsive device, the combination with a solenoid magnet, of a movable magnet core, a casing containing fluid surrounding said magnet and core, a partition dividing said casing into two parts, a valve in said partition for regulating the passage of fluid displaced by the magnet core, and means for limiting the movement of said valve toward closed position.

4. In an electro-responsive device, the combination with a solenoid magnet, of a movable magnet core, a casing containing fluid surrounding said magnet and core, a horizontal partition dividing said casing into two parts, a valve in said partition for regulating the passage of fluid displaced by the magnet core, and means for limiting the movement of said valve toward closed position.

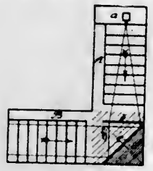
1,166,700. TABLE. OMAR MCDANIEL, Sedalia, Mo. Filed Jan. 25, 1915. Serial No. 4,285. (Cl. 45—117.)



A device of the character described comprising a leaf, an elongated member operatively engaged with said leaf at substantially the axial center thereof, a sleeve slidably mounted upon the elongated member, locking means carried by the sleeve for maintaining the same against movement independently of the elongated member, legs operatively engaged with the sleeve, brace links operatively en-

gaged with the legs and with the outer extremity of the elongated member, additional elongated members operatively engaged with the bracing links and with the leaf, and rings in swivel connection with the last named elongated members and through which the legs are directed.

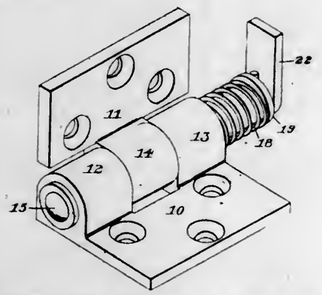
1,166,701. CINEMATOGRAPHIC DISPLAY APPARATUS. VICTOR LUDWIG PHILIPP AUGUST MAXIMILIAN MANSFELD, Berlin-Steglitz, Germany. Filed Nov. 26, 1913. Serial No. 803,182. (Cl. 88—16.)



1. Means for exhibiting pictures by projection, comprising a plurality of audience rooms contiguous to each other, a translucent screen at the end of one audience room and reflecting means associated with said screen, whereby the images appearing on the backside thereof may be seen in another audience room.

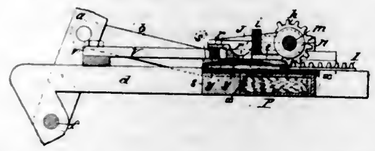
2. In an apparatus for displaying cinematographic pictures to be visible in two audience rooms arranged at right angles, the combination of one single projection apparatus *a*, located in the rear part of the one audience room, a translucent screen *b*, arranged at right angles to this said audience room and in line with the other audience room, and a non-transparent plane-mirror *c* arranged at an angle of 45° to and behind the translucent screen, substantially as described.

1,166,702. HINGE. JOHN S. MARDON and LOUIS D. FAY, Loyalton, Cal. Filed Sept. 8, 1915. Serial No. 49,434. (Cl. 16—110.)



In a hinge, a hinge plate having a bearing box provided with a perforation of an angular section, a second hinge plate having spaced bearing boxes between which the first bearing box is received, one box of the second hinge plate being provided with a perforation of similar section as that of the first bearing box, and the other box of the second plate being provided with a perforation of larger diameter extending through the ends of said other box, a pintle having a portion of angular section slidably engaged in the box perforations of angular section and a cylindrical portion adapted for sliding movement in the first bearing box and being normally disposed in and extending beyond the aforesaid other box of the second hinge plate, a coiled spring surrounding the cylindrical portion of the pintle and extending with the other box of the second plate, a stationary abutment on the outer end of the pintle on which the adjacent end of the spring seats, and a washer slidably mounted on the cylindrical portion of the pintle and seating against the first bearing box, the inner end of the spring bearing on the slidable washer and holding it seated.

1,166,703. MOLDING-MACHINE FOR LEADS OF NETS, &c. ERIK MAUNULA, Astoria, Oreg. Filed Mar. 16, 1914. Serial No. 824,891. (Cl. 22—59.)



1. In a casting machine, the combination of coöperating mold sections, one of said sections forming a quarter of the mold chamber and including a core, another forming an ejector and a second quarter of the mold chamber, and a third coöperating with the other two sections and forming a half of the mold chamber to supplement the two quarter sections and complete the chamber.

2. In a casting machine, the combination of coöperating mold sections, one of said sections forming a core, another forming an ejector, and a third coöperating with the other two to inclose a mold chamber and a trough, with means for moving it toward and from the mold sections accordingly as the sections are closed or opened.

3. The combination in a casting machine, of a sectional mold, comprising a core member, a complementary mold section having limited movement independent of the core member, a second mold section coöperating with the core member and with the first-named section to inclose a mold chamber, and means for coördinating the movements of the sections so that in opening the mold the second-named section moves first to clear it of the cast, and subsequently, the first-named mold section moves to act as an ejector to the cast.

4. In a casting machine, the combination of a core member, a plurality of movable mold sections coöperating with the core member to inclose a mold chamber, means for giving the mold sections independent but coördinate movement in opening and closing, a water jacket in connection with the core member, and a hinged trough with means for giving it coördinate movement with the mold sections.

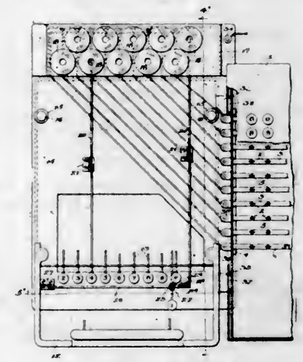
5. The combination in a casting machine, of a stationary mold section with matrix chambers, a plurality of movable mold sections coöperating with the stationary mold sections to complete the matrix chamber, an operating lever, means actuated by the lever for moving the movable mold sections into closed molding position, and a sprue trough movable by one of said mold sections through the instrumentality of said lever into and out of engagement with the sections.

[Claims 6 to 22 not printed in the Gazette.]

1,166,704. MECHANISM FOR OPERATING A TYPEWRITER FROM A CALCULATING-MACHINE. JAMES F. MAYS, Birmingham, Ala., assignor to Mays Accounting Machine Company, Asheville, N. C., a Corporation of Nevada. Filed Nov. 12, 1914. Serial No. 871,756. (Cl. 235—59.)

1. In mechanism of the class described, the combination with a supporting base, of a typewriter removably supported upon said base, a series of magnets mounted on said base, means to operatively connect said magnets to the printing mechanism of said typewriter, a calculating machine placed alongside said supporting base and having a plurality of rows of calculating keys, each row containing a series of keys corresponding to the same numeral, a series of electrical conductors individual respectively to said rows of keys and operatively associated therewith to close each an individual electric circuit, and a series of electrical circuits each including an energizing coil of one of said magnets and one of said conductors.

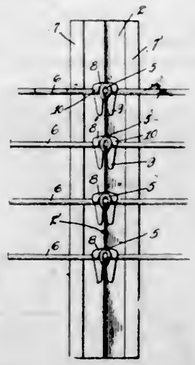
2. In mechanism of the class described, a calculating machine having a plurality of rows of calculating keys, each row containing a series of keys corresponding to the same numeral, and a series of electrical conductors individual respectively to said rows of keys and operatively associated therewith, each to close an electric circuit individual to each of said conductors on the operation of any key of a row corresponding thereto, a typewriter supporting base, a series of magnets mounted on said base, means to effect operative connection between said magnets and the printing mechanism of a typewriter placed upon said base, a series of electrical contacts located upon said base adjacent one of its side edges and forming individual terminal connectors for said magnets, said magnet terminal contacts and said conductors being so arranged as to be brought into electrical contact respectively with each other when the said calculating machine and typewriter base are placed side by side.



3. In mechanism of the class described, the combination with a calculating machine having a plurality of rows of calculating keys, each row containing a series of keys corresponding to the same numeral, of a series of insulated metal bars individual respectively to said rows of keys, a series of yielding contact members carried by and in electrical engagement with each of said bars and operatively connected with said keys to close an electric circuit through the individual bars on the operation of any key of a row corresponding thereto, a typewriter supporting base, a series of magnets mounted thereon, means to effect operative connection between the said magnets and the printing mechanism of a typewriter placed upon said base, a series of electrical contacts located upon said base adjacent one of its side edges and forming individual terminal connectors for said magnets, and means to effect electrical connection between said insulated metal bars and said magnet terminal contacts individually by placing the calculating machine and typewriter side by side.

4. Mechanism for operating a typewriter from a calculating machine having a plurality of rows of keys each row containing a series of keys of the same numeral, and the numerals of the keys of any row differing from those of any other row, said mechanism comprising in combination with said keys a series of electrical conductors individual respectively to the said rows of keys and arranged to be brought into electrical connection with any key in its corresponding row when actuated to perform a calculating operation, a typewriter supporting base, a series of magnets supported thereon, a series of levers operated individually by the respective magnets, means to effect operative connection between said levers and the key levers of a typewriter placed upon said base, a series of electrical contacts located upon said base adjacent one of its side edges and forming individual terminal connectors for said magnets, and means to effect electrical connection between said electric conductors associated with the calculating machine keys and said contacts when the calculating machine and typewriter are placed side by side, a source of electricity and means for connecting said source in circuit with the energizing coils of said magnets and the said keys.

1,166,705. FENCE-POST. ELIZABETH A. MORDEN and ROBERT B. MORDEN, Jefferson, Iowa. Filed June 12, 1914. Serial No. 844,818. (Cl. 256—51.)



1. A composition fence post having a longitudinally extending recess of substantially V-shaped configuration in a face thereof, wire reinforcing means being provided at various points with integrally formed wire retaining members, said members extending from the post and positioned in the recess, and means detachably associated with said wire retaining members and coating with said groove for locking a wire thereon.

2. A composition fence post having a longitudinally extending V-shaped recess in a face thereof, a reinforcing element in said post, said reinforcing element having wire holding hooks integrally formed therewith and extending from said post within the recess, clips adapted to engage the said wire holding hooks, the edges of said clips contacting with the divergent walls of the said V-shaped recess, whereby to retain the said clips on the said wire holding hooks and prevent disengagement of the wire from the hooks.

3. A composition fence post having a longitudinally extending recess of substantially V-shaped configuration in a face thereof, wire reinforcing means in said post, said reinforcing means being offset and twisted to provide at predetermined points integral wire retaining hooks, said hooks extending from the post and positioned in the V-shaped recess, a plurality of clips associated with each hook and adapted to co-act with the faces of the longitudinally extending recess so as to retain a wire in the hook.

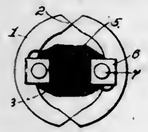
4. A composition fence post having a longitudinally extending V-shaped groove in a face thereof, a reinforcing element in the post having a plurality of offset portions twisted to provide retaining hooks, said hooks disposed in the groove, and means engageable over the hooks adapted to engage the divergent walls of the groove to retain a wire.

5. A composition fence post having a longitudinally extending V-shaped groove in a face thereof, a reinforcing element longitudinally disposed in said post and having offset portions twisted to provide wire retaining hooks at predetermined points, said hooks being disposed in the groove, and retaining clips associated with the divergent walls of the groove and the hooks to retain a wire.

1,166,706. ELECTROMAGNET. THOMAS W. MORGAN, Waterloo, Iowa, assignor to Wilbur W. Marsh, Waterloo, Iowa. Filed Apr. 19, 1915. Serial No. 22,373. (Cl. 175—356.)

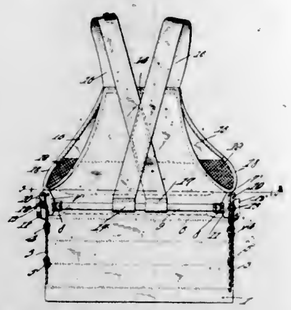
1. In an electromagnet, a core, a winding thereon, the core being formed with branches carried about the winding, the branches having diminished abutting poles.

2. In an electromagnet, a core, a winding thereon, the core being formed of abutting sections, each section having



its outer end projected to form branches carried about the winding, the branches having diminished abutting poles.

1,166,707. FRUIT-PICKING SACK. WILLIAM MUNROE, Hood River, Oreg. Filed Nov. 23, 1914. Serial No. 873,551. (Cl. 150—2.)



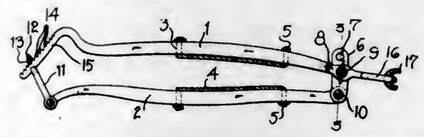
1. In a device of the class described, a sack embodying front and rear walls, the sack being open at its lower end and being closed along its upper end, the sack being provided with opposed side openings disposed close to its upper end; a reinforcing member encircling the sack partially, the reinforcing member being disposed close to the side openings to form at once a means for distending the side openings and a means for bulging the front wall outwardly; belt receiving means assembled with the ends of the reinforcing member; supporting means carried by the lower end of the sack; and elements on the reinforcing member adjacent its ends, adapted to receive the supporting means detachably.

2. A fruit picker's sack, having one opening at one end and two angularly disposed openings at the opposite end, a reinforcing member partially encircling the sack intermediate of its ends, two strap carrying members carried by the reinforcing member, coöperating means carried by the single open end of the sack and the strap carrying members for holding the open end upwardly, means connected to the sack adjacent to the opposite end of the sack for extending the same to hold the remaining two openings extended, and an interlining of a soft material to receive the fruit.

3. A fruit picker's sack, having one opening at one end and two angularly disposed openings at the opposite end, a reinforcing member partially encircling the sack intermediate of its ends, two strap carrying members carried by the reinforcing member, coöperative means carried by the single open end of the sack and the strap carrying members for holding the open end upwardly, means connected to the sack adjacent to the opposite end of the sack for extending the same to hold the remaining two openings extended, a shoulder strap attached to the sack at a point adjacent the end provided with the two openings, a belt forming strap attached to the strap engaging members and to the shoulder strap, and an interlining of a soft material to receive the fruit.

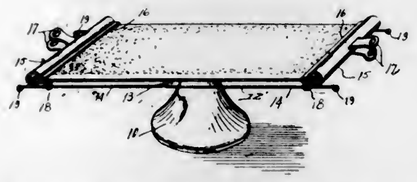
4. A fruit picker's sack, having one opening at one end and two angularly disposed openings at the opposite end, a reinforcing member partially encircling the sack intermediate of its ends, two strap carrying members carried by the reinforcing member, coöperative means carried by the single open end of the sack and the strap carrying members for holding the open end upwardly, and means connected to the sack adjacent to the opposite end of the sack for extending the same to hold the remaining two openings extended, and said last means including two pieces of relatively stiff material adjacent the lower edges of each of the two openings.

1,166,708. ANIMAL-CONTROL DEVICE. HENRY MURRAY, Virginia, Ill. Filed Jan. 27, 1915. Serial No. 4,695. (Cl. 119—96.)



A device of the class described including spaced bars having openings therein, friction creating pad members having their ends secured within said openings, means for pivotally connecting the bars at one of their ends, and means for detachably and adjustably connecting the other ends of said bars, as and for the purpose set forth.

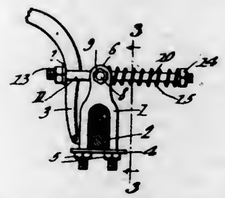
1,166,709. FLY-PAPER HOLDER. GUY H. MYERS, Arcadia, Ind. Filed Oct. 19, 1914. Serial No. 867,487. (Cl. 43—22.)



1. A fly paper holder comprising a base, spaced intermediately supported guide members extending at opposite sides of the base, and in substantially parallel relation, and relatively adjustable paper engaging members connecting corresponding ends of said guide members.

2. A fly paper holder comprising a base, substantially parallel guide members arranged at opposite sides of the base, each including a pair of mutually connected wires, secured to and extending laterally from the base, and having their free end portions oppositely directed, and paper engaging clips connecting corresponding free end portions of said guide members and relatively adjustable longitudinally thereof.

1,166,710. BUGGY-SHAFT HOLDER AND ANTIRATTLER. OSCAR A. NELSON, Mora, Minn. Filed Apr. 30, 1915. Serial No. 24,987. (Cl. 21—108.)



In a vehicle shaft holder, a pair of clips adapted to straddle a vehicle axle and having upstanding ears, a bearing between said ears having trunnions journaled therein, a stem slidable through said bearing and having a fork at its forward end for receiving a vehicle shaft, means engageable with the arms of said fork for holding the shaft therein, and in expansion spring between the rear end of the stem and said bearing.

1,166,711. RIVETING-MACHINE. GUY W. OSBORNE, Massillon, Ohio. Filed Aug. 5, 1914. Serial No. 855,258. (Cl. 78—52.)



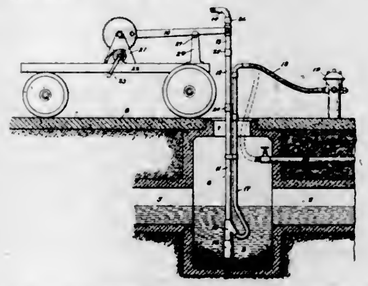
1. An upsetting die for riveting machines provided with a tapered end, and a spring-pressed work-clamping member on said die having a tapered portion through which the tapered part of said die projects slightly during the riveting operation, said coöperating tapered portions limiting the movement of said work clamping member in one direction with respect to said die.

2. An upsetting die for riveting machines consisting of a cylindrical-shaped member, a tubular-shaped work-clamping member reciprocatingly mounted on said die and provided at its front end with a plurality of spaced work-engaging jaws, the spaces between said jaws being of a width slightly greater than the diameter of a finished rivet head, and a coiled compression spring surrounding said tubular-shaped member and bearing against a shoulder thereon.

3. An upsetting die for riveting machines consisting of a cylindrical-shaped member provided with a tapered end, a tubular-shaped work-clamping member reciprocatingly mounted on said die and provided at its front end with a plurality of work-engaging jaws whose inner sides are beveled so that they will conform to the tapered portion of said die, a compression spring surrounding said tubular-shaped member and bearing against a shoulder thereon, and means adjacent the rear end of said die for holding said spring spaced away from the shank thereof.

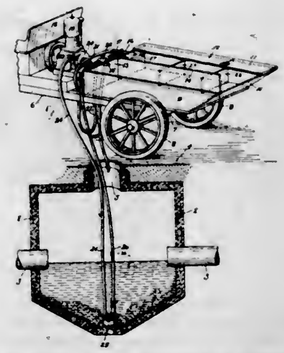
4. In a riveting machine, a rigid support; an upsetting die comprising a cylindrical member having a tapered portion at its front end, and an integral collar adjacent its rear end; a cylindrical work-gripping member slidably mounted on said die and provided at its front end with inturned tapered portions that limit the rearward movement of said member on said die; and a coiled expansion spring interposed between said support and a shoulder on said member so as to normally tend to force said member forwardly on said die, said spring surrounding the collar on said die at its rear end.

1,166,712. APPARATUS FOR REMOVING SEDIMENT FROM SUMPS AND CATCH-BASINS. GEORGE W. OTTERSON, Seattle, Wash. Filed Oct. 24, 1914. Serial No. 868,380. (Cl. 37—9.)



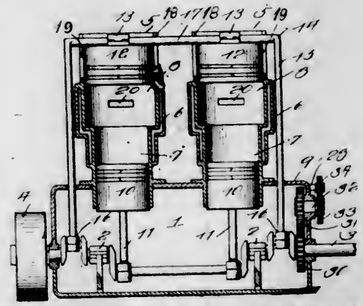
In a device of the kind described, a vehicle including a platform, a horizontal shaft supported from and spaced transversely above the platform, means to rotate the shaft, releasable means arranged to stop movement of the shaft in one direction, combined guides and supports mounted at one end of the platform, a removable pin connecting the guides, a rigid arm fixed to the shaft and movable to rest on the pin when the device is in operative position, and a carrier member pivoted to the free end of the arm and arranged to lie in transport position flat on the platform with its free end between the guides and beneath the pin.

1,166,713. SETTLING-TANK. GEORGE W. OTTERSON, Seattle, Wash. Filed May 17, 1915. Serial No. 28,788. (Cl. 210—5.)



In apparatus of the class described, a portable settling tank consisting of a body of rectangular form having a slanting rear wall, a rectangular partition extending from the front wall of the body to the junction of the bottom and rear walls to leave a triangular space, baffles vertically disposed between the partition and one side wall and being of less height than the partition, an inlet tube on the front wall on the baffle provided side of the partition and an outlet tube on the opposite side of the front wall.

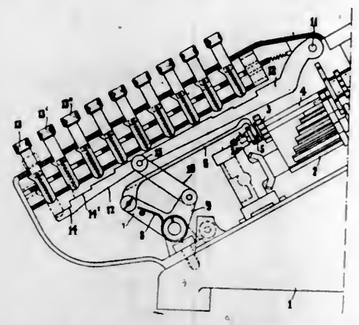
1,166,714. EXPLOSIVE-ENGINE. MATTHEW J. RAMESH, Kewaunee, Wis. Filed Nov. 19, 1912. Serial No. 732,342. (Cl. 123—51.)



In an engine, the combination of twin cylinders, each open at both ends, each cylinder comprising two sections of relatively different diameters, the larger sections of the cylinders having parallel guide slots formed in the walls thereof, a short stroke secondary piston moving in the larger section of each cylinder, a long stroke primary piston moving in the smaller section of each cylinder, a cross rod connecting the secondary pistons of the engine, said rod moving in the parallel guide slots in the cylinders, a crank shaft, piston rods connecting the primary pistons with the crank shaft, piston arms each connected at one end with the crank shaft, the opposite end of each piston arm being bent laterally and connected to the adjacent secondary piston, the lateral portions of the arms moving in the slotted guideways in the en-

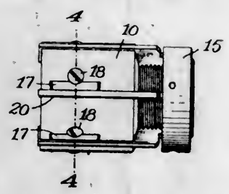
larged sections of the cylinders, said cylinders being each provided with a port at an intermediate section, a valve control passage way for conducting gas to the port, and a valve control passage way for conducting exploded gas from the port.

1,166,715. CALCULATING-MACHINE. ROBERT REIN, Berlin, Germany, assignor to Ludwig Spitz & Co. G. M. B. H., Berlin, Germany. Filed July 28, 1913. Serial No. 781,565. (Cl. 235—82.)



In a calculating machine of the Thomas type, in combination with the setting wheel and setting keys thereof, a movable rod or lever mounted below said keys and adapted to be moved upon the depression of the keys through a distance corresponding to the value of the depressed key, a pivot on said lever, a bell crank lever having one arm connected to the pivot on said lever, a rod controlling the movements of the setting wheel to which the second arm of said bell crank lever is connected.

1,166,716. REAMER. FREDERICK RILEY and CHARLES A. O'CONNOR, Worcester, Mass., assignors to Morse Twist Drill & Machine Company, New Bedford, Mass., a Corporation of Massachusetts. Filed Aug. 20, 1912. Serial No. 716,006. (Cl. 77—75.)



1. In a device of the class described, the combination of a body portion provided with longitudinal slots therein, cutting blades in each of said slots, the portion of one side wall of each of said slots being being flat and inclined inwardly toward the blade therein, a wedge member in each of said slots coacting between the inclined wall of the slot and said blade to lock the blade in said slot when said member is forced downwardly therein and screw members operatable from the periphery of said body portion coacting with each of said wedge members to force said wedge members downwardly in said slots.

2. In a device of the class described, the combination of a cylindrical body portion provided with longitudinal slots therein, cutting blades in each of said slots, the portion of one side wall of each of said slots being flat and inclined inwardly toward the blade therein, a wedge member in each of said slots coacting between the inclined wall of the slot and said blade to lock said blade in said slot when said member is forced downwardly therein, and screw members each provided with a head coacting with corresponding shoulders on said blocks to force these blocks downwardly in their respective slots.

3. In a device of the class described, the combination of a body portion provided with longitudinal slots therein, cutting blades in each of said slots, a portion of one side wall of each of said slots being flat and inclined inwardly toward the blade therein, a wedge member in each of said slots coacting between the inclined wall of the slot and said blade to lock said blade in said slot when said member is forced downwardly therein, and screws seated in threaded recesses in said body portion adjacent to each of said slots with the axis of the screw parallel to the inclined face of the slot and the head of each screw projecting into its corresponding slot to engage a shoulder on the block therein to force said block downwardly in said slot.

1,166,717. LIQUID-SAMPLER. WILLIAM ROBRISON, Los Angeles, Cal., assignor to The Braun Corporation, Los Angeles, Cal., a Corporation of California. Filed Mar. 7, 1914. Serial No. 823,150. (Cl. 137—18.)



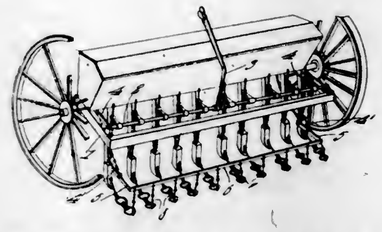
1. In an apparatus of the character described, a glass cylinder, metal ends arranged at the top and bottom of said cylinder, tie rods extending through and connecting said ends, supporting means attached to the upper end, a transversely movable valve bearing a slotted lug arranged on the lower end of said cylinder, a lever adapted to engage said slotted lug when said valve is in the open position, a vertically movable rod carried in said metal ends and a collar on said rod adapted to engage said lever and move it out of said slotted lug.

2. In an apparatus of the character described, a glass cylinder, a transversely movable valve pivoted to said lower end, a slotted ear on said valve, a lever pivoted to the lower end arranged to seat in said slot to hold the valve in the open position, a vertically movable rod and a collar on said rod adapted to engage said lever and release the valve.

3. In an apparatus of the character described adapted to take liquid from containers, a transparent cylinder, metal ends on said cylinder, a valve swinging transversely upon a stem, said valve bearing a slotted lug and adapted to be pressed into its closed position by a spring disposed on the said stem, a lever adapted to engage said slotted lug when said valve is in its open position, an actuating rod slidable in said metal ends and adapted to contact with the bottom of the container, and a collar on said rod adapted to engage and trip said lever to release said valve.

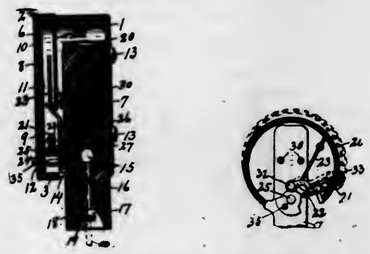
1,166,718. CHAIN COVERER FOR DRILLS. GEORGE H. SAMLOW, Napoleon, Ohio. Filed Nov. 7, 1914. Serial No. 870,819. (Cl. 111—11.)

1. The combination with a drill, and a plurality of chain coverers therefor, of manually controlled means connected to all of the chain coverers and attached to the drill for raising and lowering the chain coverers to and upon the ground, said latter means including a rearwardly extending frame swingingly attached to the rear of the drill and overhanging the covers, a plurality of attaching means carried thereby and engaging the rear ends of the chain coverers, and manually controlled means carried by the drill and connected to the frame for swinging the frame to and from the ground to cause the consequent raising or lowering of the chain coverers.



2. The combination with a drill and a plurality of chain coverers, of means for raising and lowering the chain coverers, including a U-shaped frame having its terminals swingingly attached to the drill, said frame being extended rearwardly of the frame for movement to and from the ground, a plurality of flexible connections disposed equidistantly upon the frame and attached to the respective chain coverers, two flexible connections connected to the sides of the frame and extended upwardly to the drill, and a manually controlled oscillatory shaft journaled in the drill and attached to the last named flexible connections.

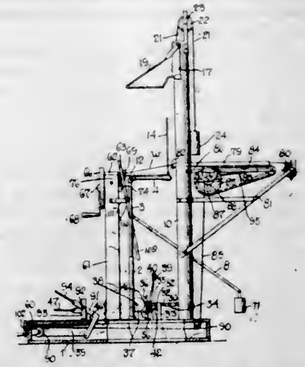
1,166,719. FLUID-PRESSURE GAGE. JOSEPH SHEBOL and WILLIAM F. ALBRECHT, Syracuse, N. Y. Filed Dec. 31, 1912. Serial No. 739,460. (Cl. 73—109.)



1. In a fluid pressure gage of the character described, the combination with a Bourdon tube, a dial, a pivoted index finger movable around the dial, coöperative friction members concentric with the pivot for holding said finger to any position of adjustment, and a link having one end pivoted to the finger between its pivot and point, and its other end connected with a lost motion to the free end of the tube to actuate the finger when the tube is under pressure and to permit said tube to return independently of the finger when such pressure is reduced.

2. In a fluid pressure gage of the character described, the combination with a Bourdon tube, a dial, a pivoted index finger movable around the dial, coöperative friction members concentric with the pivot for holding said finger to any position of adjustment, and a link having one end pivoted to the finger between its pivot and point, and its other end connected with a lost motion to the free end of the tube to actuate the finger when the tube is under pressure and to permit said tube to return independently of the finger when such pressure is reduced, said finger having an exposed hand-piece thereon by which the index finger may be returned at will.

1,166,720. BUNDLE-TYING MACHINE. ABNER BYRON SMITH and HENRY JAMES GOFF, McCloud, Cal. Filed Mar. 6, 1915. Serial No. 12,662. (Cl. 100—20.)



1. A bundle tying machine comprising a movable bundle support, means adapted to engage the bundle upon the support for imparting movement to the support in one direction.

2. A bundle tying machine comprising a movable bundle support, a bundle engaging member adapted to engage the bundle upon the support for imparting movement to the support in one direction, positive means for imparting movement to the engaging member toward the bundle support, and means for imparting movement to the engaging member in an opposite direction.

3. In a machine of the character described, a movable bundle support, automatic means coacting therewith for normally maintaining the support at the limit of its movement in one direction, a bundle engaging member movable relative to the support and adapted to engage the bundle thereon for moving the support in an opposite direction, driven means for imparting movement to the engaging member toward the support, and automatic means for imparting movement to the bundle engaging means in an opposite direction.

4. In a machine of the character described, a movable bundle support, automatic means coacting therewith for normally maintaining the support at the limit of its movement in one direction, a bundle engaging member movable relative to the support and adapted to engage the bundle thereon for moving the support in an opposite direction, driven means for imparting movement to the engaging member toward the support, automatic means for imparting movement to the bundle engaging member in an opposite direction, and means for maintaining the bundle engaging member against return movement under the influence of the automatic means.

5. A device of the character described comprising a tubular post, a rod telescopically engaged with said post and provided at its outer extremity with supporting means, a rock lever operatively engaged with the rod, means coacting with the rock lever for automatically imparting movement to the rod in one direction, and a bundle engaging member movable relative to the supporting means of the rod.

[Claims 6 to 16 not printed in the Gazette.]

1,166,721. METHOD OF TREATING IMPURE BISMUTH METAL. WALTER C. SMITH, Chrome, N. J., assignor to United States Metals Refining Company, Chrome, N. J., a Corporation of New Jersey. Filed May 12, 1914. Serial No. 838,167. (Cl. 75—17.)

1. The method of treating impure bismuth metal or metals containing a high percentage of busmuth, comprising subjecting the molten metal to the action of sulfur and removing the impurities separated thereby, subjecting the molten metal to the action of an alkali as caustic

soda and removing the impurities separated thereby, dissolving zinc in the molten metal and removing the impurities separated thereby, bringing the metal to a molten condition, then lowering the temperature until crystallization begins, and removing the crystals of purified bismuth thus formed.

2. The method of trating impure bismuth metal or metals containing a high percentage of bismuth consisting in subjecting the molten metal to the action of sulfur and removing the impurities separated thereby, subjecting the molten metal to the action of an alkali and removing the impurities separated thereby, dissolving zinc in the molten metal and removing the impurities separated thereby, bringing the metal to a molten condition and terating with an alkali and removing the impurities separated thereby, then lowering the temperature of the molten mass until crystallization takes place, and removing the crystals of purified bismuth thus formed.

3. The method of treating impure bismuth metal or metals containing a high percentage of bismuth, consisting in subjecting the molten metal to the action of an alkali and removing the impurities separated thereby.

4. The method of treating a high percentage bismuth metal carrying impurities of copper, lead, tellurium, silver, gold, arsenic and antimony, etc., comprising melting the metal, treating with sulfur and skimming to eliminate the greater portion of the arsenic, antimony and copper, maintaining the residue in a molten state, treating with caustic soda and skimming to eliminate the tellurium, arsenic, antimony and sulfur remaining from the prior teratment, maintaining the resulting residue in a molten state, dissolving zinc therein, cooling and skimming to eliminate copper, gold and silver, melting the gold-free residue, treating with caustic soda and skimming to eliminate any remaining zinc and melting and then cooling the residue to crystallize the substantially free bismuth and separate it from the lead.

5. The method of treating impure bismuth metal or metals containing a high percentage of bismuth consisting in bringing the metal to a molten condition, lowering the temperature until the material begins to crystallize, and removing from the molten mixture the crystals of bismuth so formed.

[Claims 6 to 18 not printed in the Gazette.]

1,166,722. SAFETY ATTACHMENT FOR SHAFTS AND MANDRELS. FRANK C. STANLEY, Syracuse, N. Y. Filed July 27, 1914. Serial No. 853,488. (Cl. 74—52.)



1. In combination with a mandrel having a clamping collar on one end of a safety cap loosely journaled on the outer end of the collar to permit the latter to turn with the mandrel independently of said cap.

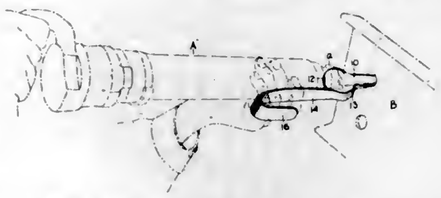
2. The combination with a mandrel having a threaded end, and a nut secured thereon and provided with an annular bearing, of a cap loosely journaled on said bearing and inclosing said threaded end.

3. In combination with a mandrel, a collar secured to one end of the mandrel to rotate threwith and a safety cap journaled on the collar and covering the end of the mandrel and permitting the mandrel with the collar thereon to rotate independently of the cap.

4. In combination with a mandrel, a collar secured to one end of the mandrel to rotate therewith and provided with a reduced annular bearing, and a safety cap journaled in said bearing and covering the end of the mandrel to permit said mandrel with the collar thereon to rotate independently of the cap.

5. In combination with a mandrel, a collar secured to one end of the mandrel to rotate therewith, a cap journaled on the collar to permit the mandrel and collar to rotate independently of the cap, said cap being extended some distance beyond the end of the mandrel and collar to allow a limited axial adjustment of said collar without disturbing its relation to the cap.

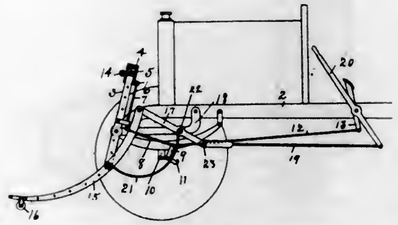
1,166,723. ATTACHMENT FOR PNEUMATIC MACHINE-RIVETERS. WILEY STARK, Devils Slide, Utah. Filed Jan. 14, 1915. Serial No. 2,236. (Cl. 78—46.)



1. As an article of manufacture, a tool for use on machine riveters, the tool presenting a head to be introduced between the riveter set and the work, and means independent of the said riveter set whereby said head may be held in position on the riveter in position for use.

2. An attachment for pneumatic machine riveters, comprising a tool having a front working face and formed at the rear end to receive the front end of a riveter set, and an elongated handle on the tool, said handle being offset from the tool and ranging rearwardly therefrom to lie alongside a riveter, the said handle having a lateral member presenting a forward face against which the hand of the operator may bear in gripping the handle and riveter set.

1,166,724. FENDER FOR MOTOR-VEHICLES. WILLIAM H. H. STINEMAN, Baltimore, Md., assignor to Edward P. Hill and Luther G. Gadd. Filed Apr. 17, 1915. Serial No. 21,954. (Cl. 105—268.)



1. The combination with a motor vehicle of a buffer pivoted to the front of said vehicle, a fender pivoted to said buffer, means to hold the fender to its normal raised position, and means to automatically lower the fender and raise the buffer simultaneously when the latter comes in contact with an object.

2. The combination with a motor vehicle of a buffer pivoted to the front of said vehicle, a fender pivoted to said buffer, means to hold the fender to its normal raised position, and means projecting into the vehicle for raising the buffer and lowering the fender simultaneously.

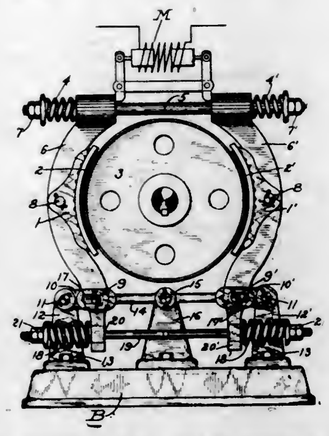
3. The combination with a motor vehicle of a buffer pivoted to the front of said vehicle, a fender pivoted to said buffer, means to hold the fender to its normal raised position, means to automatically lower the fender and raise the buffer simultaneously when the latter comes in contact with an object, and means projecting into the vehicle to raise the fender and lower the buffer.

4. The combination with a motor vehicle of a buffer pivoted to the front of said vehicle, a fender pivotally connected to the said vehicle, a latch to hold the fender in the raised position, and means connecting the buffer with said latch whereby the latch will be released and the fender lowered and the buffer raised simultaneously when the buffer comes into contact with an object.

5. The combination with a motor vehicle of a buffer pivoted to the front of the vehicle frame and having a yielding rod across the front thereof, a fender pivoted to said buffer, and means whereby when the said yielding rod comes into contact with an object the fender will be lowered and the buffer raised simultaneously.

[Claim 6 not printed in the Gazette.]

1,166,725. BRAKE. ARTHUR R. TREZISE, Sr., Brooklyn, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 24, 1913. Serial No. 808,551. (Cl. 74—70.)



1. The combination with a moving member, of a brake therefor, comprising shoes on opposite sides of said moving member; means for applying the brake, and means dependent on the friction between the movable member and brake shoes for effecting a variation in the amount of effective braking power of the brake applying means.

2. The combination with a moving member, of a brake therefor, comprising shoes on opposite sides of said moving member; means for applying the brake shoes, and means for automatically releasing the latter simultaneously when the friction between the moving member and brake exceeds a predetermined amount.

3. The combination with a brake pulley, brake shoes on opposite sides of said brake pulley, means for applying the shoes to the pulley, and means dependent on the friction between the pulley and shoe for releasing the latter simultaneously.

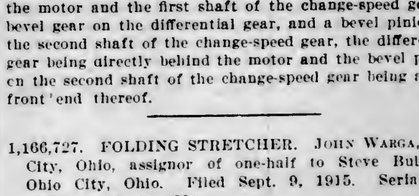
4. The combination with a brake pulley, a pair of brake shoes on opposite sides of said brake pulley, means for applying the shoes to the pulley, and automatically operated adjustable means for momentarily releasing the pair of shoes simultaneously from the pulley when the friction between said shoes and pulley exceeds a predetermined amount.

5. The combination with a moving member, brake apparatus therefor, comprising shoes on opposite sides of said moving member; means for applying the brake, said brake apparatus being constructed and arranged to effect a momentary decrease in the amount of effective braking power of the brake applying means when the friction between the moving member and brake shoes exceeds a predetermined amount.

[Claims 6 to 11 not printed in the Gazette.]

1,166,726. MOTOR-VEHICLE. MAURICE WALTER, New York, N. Y. Filed Dec. 20, 1913. Serial No. 807,855. (Cl. 21—90.)

1. In a motor vehicle, the combination with a motor, front drive and steering wheels, Cardan shafts for the wheels, a differential gear between the Cardan shafts, and universal couplings between the differential gear and the Cardan shafts, of a change-speed gear directly behind the differential gear with its axes longitudinally disposed and its first shaft in line with the motor shaft and operatively connected therewith, and a single set of intermediate gears between the second shaft of the change-speed gear and the differential gear.



2. In a motor vehicle, the combination with a motor, front drive and steering wheels, Cardan shafts for the wheels, a differential gear between the Cardan shafts, and universal couplings between the differential gear and the Cardan shafts, of a change-speed gear directly behind the differential gear with its axes longitudinally disposed, a driving connection between the motor and the first shaft of the change-speed gear, a bevel gear on the differential gear, and a bevel pinion on the second shaft of the change-speed gear and in mesh with said bevel gear.

3. In a motor vehicle, the combination with a motor, front drive and steering wheels, Cardan shafts for the wheels, a differential gear between the Cardan shafts, and universal couplings between the differential gear and the Cardan shafts, of a change-speed gear with its axes longitudinally disposed, operative connections between the motor and the change-speed gear, and a single set of intermediate gears between the change-speed gear and the differential gear, the differential gear being directly behind the motor and engaged at the front end of the change-speed gear.

4. In a motor vehicle, the combination with a motor, front drive and steering wheels, Cardan shafts for the wheels, a differential gear between the Cardan shafts, and universal couplings between the differential gear and the Cardan shafts, of a change-speed gear with its axes longitudinally disposed and its first shaft in line with the motor shaft and operatively connected therewith, and a single set of intermediate gears between the second shaft of the change-speed gear and the differential gear, the differential gear being directly behind the motor and connected at the front end of the change-speed gear.
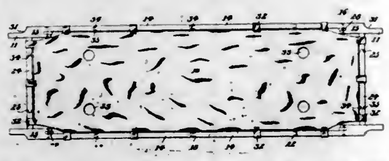
5. In a motor vehicle, the combination with a motor, front drive and steering wheels, Cardan shafts for the wheels, a differential gear between the Cardan shafts, and universal couplings between the differential gear and the Cardan shafts, of a change-speed gear with its axes longitudinally disposed, a driving connection between the motor and the first shaft of the change-speed gear, a bevel gear on the differential gear, and a bevel pinion on the second shaft of the change-speed gear, the differential gear being directly behind the motor and the bevel pinion on the second shaft of the change-speed gear being at the front end thereof.

1,166,727. FOLDING STRETCHER. JOHN WARGA, Ohio City, Ohio, assignor of one-half to Steve Bubenko, Ohio City, Ohio. Filed Sept. 9, 1915. Serial No. 49,700. (Cl. 21—80.)

1. A rectangular stretcher frame comprising side rails and hinged end bars, tapered blocks centrally carried by the said rails and projecting lugs also carried by the same side thereof, the said side rails being transversely severed through the said blocks and lugs, hinged connections between the severed portions of the said blocks and lugs, and foldable sectional supporting legs arranged at the opposite ends of the said frame.

2. A rectangular stretcher frame comprising side rails and hinged end bars, tapered blocks centrally carried by

the said rails and projecting lugs also carried by the same side thereof, the said side rails being transversely severed through the said blocks and lugs, hinged connections between the severed portions of the said blocks and lugs, foldable sectional supporting legs arranged at the opposite ends of the said frame, the said blocks being of greater height than the said lugs, and terminal handles upon the said rails having cut-away outer portions adapted for the reception of the opposite ends of the said blocks when the device is in its folded formation.

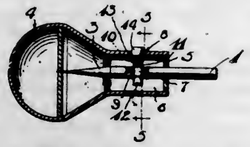


3. A stretcher comprising a rectangular frame having opposite side rails and end bars, yoke-shaped legs formed in hinged sections pivoted between the said rails, a flexible covering secured to the said rails and bars and provided with accommodating openings therein arranged adjacent the hinging points of the said legs, the said rails being formed in four substantially equal portions, hinged connections between the said rail portions, the said end bars being divided into three portions, and hinged connections between the said rail portions.

4. A stretcher comprising a rectangular frame having side rails divided into four sections and end rails divided into three sections, hinges upon the lower side of the said frame connecting the said sections together, inwardly foldable leg yokes pivotally attached adjacent the corners of the said frame and having connecting bars divided into three portions substantially corresponding to the portions of the said end bars of the frame, hinged connections between the said connecting bar portions, and a flexible covering carried by the said frame and provided with accommodating openings therethrough positioned adjacent the said hinges of the connecting bars when the device is in its folded position.

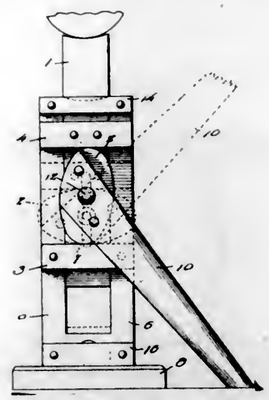
5. A stretcher comprising a rectangular frame having side rails divided into four sections and end rails divided into three sections, hinges upon the lower side of the said frame connecting the said sections together, inwardly foldable leg yokes pivotally attached adjacent the corners of the said frame and having connecting bars divided into three portions substantially corresponding to the portions of the said end bars of the frame, hinged connections between the said connecting bar portions, a flexible covering carried by the said frame and provided with accommodating openings therethrough positioned adjacent the said hinges of the connecting bars when the device is in its folded position, corner handles upon the said frame having cut-away portions upon their outer sides coöperating in the formation of notches when the side rails are folded together, and tapered blocks carried by the said side rails positioned within the said notches when the device is in its folded position.

1,166,728. HAT-PIN GUARD. WILLIAM AUGUST WEGENER, Beiseker, Alberta, Canada. Filed June 10, 1915. Serial No. 33,411. (Cl. 24—155.)



A guard of the class described comprising a casing, one end of which is reduced to form a housing, the latter being square-shaped in cross section and provided with a bore extending longitudinally thereof, a pin extending transversely across said bore, a straight shank extending transversely across the latter in a plane at right angles to said pin and having a longitudinally extending slot for slidable engagement with said pin, one end of said shank being provided with a head extending through said housing, the other end of said shank being bent in the form of a U to form a hook, and a coiled spring disposed around said shank between the head thereof and said pin, substantially as and for the purpose set forth.

1,166,729. LIFTING-JACK. EDWARD A. WENGLER, Glasgow, Mo. Filed June 3, 1915. Serial No. 31,866. (Cl. 254—114.)



1. A lifting jack comprising a frame, a lifting bar guided for movements therein and having a lateral projection, a cam arranged to act on the bar through said projection and supported at its lower edge upon a rigid projection from the frame, a floating pivot connecting said cam and bar and means for operating said cam to raise the bar.

2. A lifting jack comprising a frame, a track rigidly supported thereon, a lifting bar guided for movements in said frame and having a lateral projection, an oval cam supported by said track and acting upon said projection to raise the lifting bar, a pin carried by said cam and projecting through a slot in said bar, and operating means for the cam.

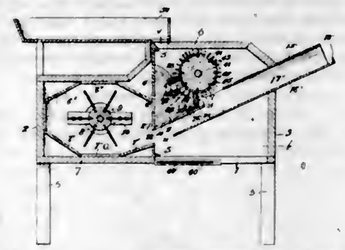
3. A lifting jack comprising a frame provided with a lateral projection forming a track, an oval cam sustained by said track and having an operating handle, a lifting bar guided in the frame, a lateral strip carried by the bar and resting upon said cam, and a floating pivot connecting the cam and bar, said cam being adapted to raise the bar by movement of its handle either in an upward or a downward direction.

4. A lifting jack having, in combination, a frame comprising two spaced uprights connected by a transverse strip having a plane upper face, an oval cam resting on said face, a lifting bar guided in the space between said uprights and having two parallel, transverse strips movable upon the opposite faces of said uprights, one of said strips resting upon said cam, an operating handle, a pin securing said cam and handle together and extended to pass through a slot in said bar, and retaining means to secure the pin to the bar, said pin constituting a floating pivot for the cam.

1,166,730. PEA AND BEAN THRESHER. HORACE L. WILLIAMS, Dyersburg, Tenn. Filed Apr. 24, 1911. Serial No. 622,973. (Cl. 130—30.)

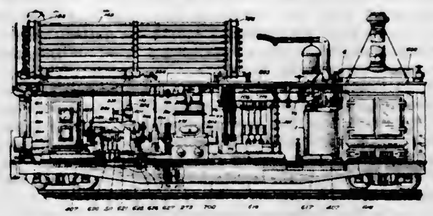
A device of the type described, including a concave of plastic material having a recurved working face with a plurality of spaced rough-surfaced cleats forming retarding surfaces and provided with openings extending transversely therethrough, said cleats being embedded in said plastic material with their outer rough-surfaces alining

the working face of the concave, said cleats having pins extending through their openings, said pins having bent



stems with their inner bent terminals also embedded in said plastic material.

1,166,731. PROCESS OF MAKING EXPLOSIVE POWDER. JOHN N. WINGETT, Wilmington, Del. Filed Mar. 25, 1907. Serial No. 364,411. (Cl. 52—4.)



1. The step in the method of making explosive powder, which includes mixing the constituents while the normally crystallizable ingredients are in solution, and then subjecting the mixture to the action of heat in a sealed receptacle while maintaining in motion the soluble ingredients which are normally crystalline, thereby to prevent normal crystallization.

2. The step in the method of making explosive powder, which includes agitating the mixed normally crystallizable ingredients in a sealed receptacle while in a fluid condition to prevent crystallization, and subjecting them during such agitation to any predetermined degree of heat whereby to control the physical characteristics of the desired ultimate mixture.

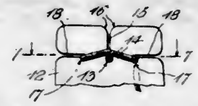
3. The step in the method making explosive powder, which includes mixing the constituents in a sealed receptacle while the normally crystallizable ingredients are in a fluid condition, and at the same time subjecting the mixture to any predetermined degree of heat whereby to determine the physical characteristics of the desired ultimate mixture, said mixture being maintained in solution during such heating to prevent normal crystallization of the ingredients.

4. The step in the method of making explosive powder which includes mixing the constituents while certain of the ingredients are in solution, subjecting the mixture while in a sealed receptacle to the action of a practically unvarying degree of heat necessary to determine the physical characteristics of the ultimate mixture, maintaining the mixture in a fluid state during such heating by preventing the normal crystallization of the ingredients, and partially evaporating the solvent.

5. The step in the method of making explosive powder which includes mixing the constituents while certain of the ingredients are in solution, subjecting the mixture while in a sealed receptacle to the action of a degree of heat necessary to determine the physical characteristics of the ultimate mixture, maintaining the mixture in a fluid state during such heating by preventing the normal crystallization of the ingredients and partially evaporating the solvent while the mixture is in motion.

[Claims 6 to 49 not printed in the Gazette.]

1,166,732. DENTAL-FLOSS HOLDER. DENIS K. WOODHOUSE, Chicago, Ill. Filed Feb. 17, 1915. Serial No. 8,766. (Cl. 132—12.)



A device of the character described, comprising a handle having its end forked for providing spaced arms, each arm being provided at its free end with a substantially centrally arranged slot extending longitudinally of the arm for a substantial distance and passing through the free end whereby a flexible element may be quickly and conveniently moved into and out of the slot, each arm being provided upon opposite sides of the longitudinal slot with slots extending transversely of the arm and passing through the edges thereof and projecting inwardly for a substantial distance with their inner ends arranged near and spaced a substantial distance from the inner end of the longitudinal slot; and a flexible cleaning element adapted to be passed through the central longitudinal slot with its end passed across the material thereof and extending through the transverse slots; substantially as described.

1,166,733. PROCESS OF MAKING BUTTONS FROM IVORY-NUTS AND THE LIKE. JOSEPH ZULEG, Hoboken, N. J., assignor to Button Machinery Company, New York, N. Y., a Corporation. Filed Nov. 21, 1914. Serial No. 873,290. (Cl. 79—1.)



1. As an article of manufacture, a duplex button blank comprising a piece of suitable material of the thickness of two buttons and having its opposite faces fashioned into the form of two button faces, the rear sides of the individual blanks being integrally joined, and openings extending into the duplex blank from its opposite faces, said openings being disposed in angular relation.

2. As an article of manufacture, a duplex button blank comprising a piece of suitable material of the thickness of two buttons to be made therefrom and having their opposite faces fashioned into the form of two button faces, back to back, the outside periphery of each face being of a different radius.

3. As an article of manufacture, a duplex button blank comprising a piece of suitable material having a cylindrical edge, concave on each face and provided with transverse holes.

4. As an article of manufacture, a duplex button blank comprising a piece of suitable material having a cylindrical edge, concave on each face and provided with transverse holes, the edge being stepped down on one side to a smaller diameter than the body of the blank.

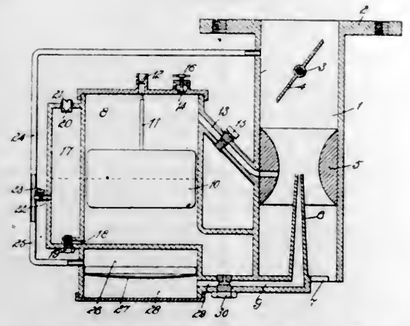
5. The process of simultaneously forming a duplex button blank out of which to cut two buttons out of ivory nut or other suitable material, which consists in subjecting a suitable slab to the action of suitable facing tools, and thereby producing opposite faces, to the action of suitable drilling tools to form openings therein, and cutting away the edges around the faces from the slab to sever the duplicate blank from said slab.

[Claims 6 to 16 not printed in the Gazette.]

1,166,734. CARBURETER. RAYMOND M. ANDERSON, Chicago, Ill., assignor to Stromberg Motor Devices Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 16, 1912. Serial No. 678,071. (Cl. 48—150.1.)

1. In a carbureter, a carbureting passage, a throttle valve in said passage, a main reservoir having an independent opening to the atmosphere, an auxiliary reservoir connected therewith at the bottom, said auxiliary reservoir

being otherwise closed except for a restricted connection to the carbureting passage and an independently restricted connection with the atmosphere whereby different pressures may be maintained in the respective reservoirs, and a nozzle in said passage connected with said main reservoir.



2. In a carbureter, a carbureting passage, a throttle in said passage, a fuel feed jet above said throttle, a reservoir for said jet, a fuel feed jet below said throttle, a reservoir for said second jet, a restricted passage between said reservoirs and an air passage between said second-named reservoir and said carbureting passage.

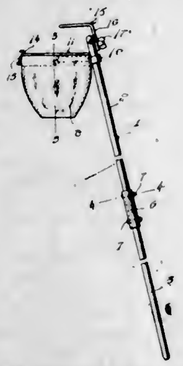
3. In a carbureter, a carbureting passage, a throttle in said passage, a fuel feed jet above said throttle, a reservoir for said jet, a fuel feed jet below said throttle, a reservoir for said second jet, a restricted passage between said reservoirs, and connection between the top of said last named reservoir and the carbureting passage below the throttle.

4. In a carbureter, a carbureting passage, a throttle in said passage, a fuel feed jet above said throttle, a reservoir for said jet, a fuel feed jet below said throttle, a reservoir for said second jet, a restricted passage between said reservoirs, connection between the top of said last named reservoir and the carbureting passage below the throttle, and a restricted atmosphere connection for said last named reservior.

5. In a carbureter, a reservoir, a carbureting passage, a throttle in said passage, a jet in said passage connected with said reservoir, a well with a diaphragm wall connected with said reservoir, said well being connected with said jet, and a diaphragm chamber over said diaphragm connected with said passage beyond said throttle.

[Claims 6 to 15 not printed in the Gazette.]

1,166,735. FRUIT-PICKER. FERN E. ANNIS, Mattoon, Ill. Filed Nov. 4, 1913. Serial No. 799,176. (Cl. 56—99.)



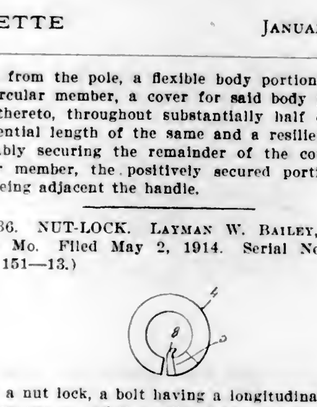
In a fruit picker, the combination with a pole, of a receptacle secured to the upper end thereof, said receptacle including a rigid circular member extending outwardly from the pole, a flexible body portion encircling said circular member, a cover for said body portion secured thereto, throughout substantially half of the circumferential length of the same and a resilient clip for detachably securing the remainder of the cover to the circular member, the positively secured portion of the cover being adjacent the handle.

1,166,736. NUT-LOCK. LAYMAN W. BAILEY, Warrensburg, Mo. Filed May 2, 1914. Serial No. 836,021. (Cl. 151—13.)

1. In a nut lock, a bolt having a longitudinal inwardly curved groove, one of the walls of which is concaved and the other convexed, a locking member fitting upon the bolt, a lug integral with the locking member, the lug being shaped to fit the curved groove, the biting edge formed by the lug formation being adapted for engagement with the wall of the groove, and a nut adapted for engagement with the locking member, the formation of the groove and lug adapted to cause the latter, upon a reverse rotation of the nut, to lodge itself deeper into the groove, as and for the purpose set forth.

2. In a nut lock, a bolt having a longitudinal laterally curved groove formed therein, one wall of the groove being concaved and the other convexed, a locking member, a lug integral with the locking member, the lug being shaped to fit the curved groove, a nut, and means on the nut to engage the locking member for the purpose specified.

1,166,737. MAGAZINE-WRAPPING MACHINE. DANIEL S. BAIRD, Toronto, Ontario, Canada, assignor of one-half to Thomas P. Bowen, Toronto, Canada. Filed Aug. 12, 1912, Serial No. 714,687. Renewed Sept. 1, 1915. Serial No. 48,579. (Cl. 101—46.)



1. In wrapping apparatus the combination of magazine feeding means; wrapper feeding means; rotatable means for grasping the magazine by the ends near one edge; means for imparting a continuous rotary movement to the grasping means till the magazine and wrapper are rolled up together; means for withdrawing the grasping means from engagement when the rolling movement is completed; and means adapted to engage the magazine between the ends adjacent to the aforesaid side to take out any buckle therein and start the curvature at the beginning of the rolling movement.

2. In wrapping apparatus the combination of magazine feeding means; wrapper feeding means; rotatable means for grasping the magazine by the ends near one edge; means for imparting a continuous rotary movement to the grasping means till the magazine and wrapped are rolled up together; means for withdrawing the grasping means from engagement when the rolling movement is completed; a pressure bar parallel to the axis of the rolled magazine; means for yieldingly pressing the said bar against the magazine and wrapper during the rolling operation; and means adapted to engage the magazine between the ends adjacent to the aforesaid side to take out any buckle therein and start the curvature at the beginning of the rolling movement.

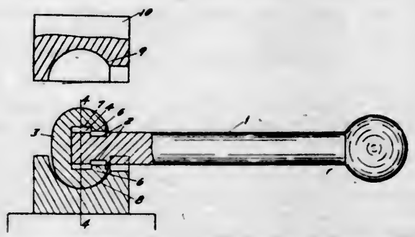
3. In wrapping apparatus the combination of magazine feeding means; wrapper feeding means; rotatable means for grasping the magazine by the ends near one edge; means for imparting a continuous rotary movement to the grasping means till the magazine and wrapper are rolled up together; means for withdrawing the grasping means from engagement when the rolling movement is completed; a pressure bar parallel to the axis of the rolled magazine; means for yieldingly pressing the said bar against the magazine and wrapper during the rolling operation; means adapted to engage the magazine between the ends adjacent to the aforesaid side to flatten out any buckle therein and start the curvature at the beginning of the rolling movement; and means for imparting an ejecting kick to the wrapped magazine.

4. In wrapping apparatus the combination of magazine feeding means; wrapper feeding means; rotatable means for grasping the magazine by the ends near one edge; means for imparting a continuous rotary movement to the grasping means till the magazine and wrapper are rolled up together; means for withdrawing the grasping means from engagement when the rolling movement is completed, a pivoted finger adapted to engage the magazine between the ends adjacent the aforesaid edge; and means for depressing the finger at the beginning of the rolling operation to flatten out any buckle in the magazine and start the curvature.

5. In wrapping apparatus the combination of magazine feeding means; wrapper feeding means; rotatable means for grasping the magazine by the ends near one edge; means for imparting a continuous rotary movement to the grasping means till the magazine and wrapper are rolled up together; means for withdrawing the grasping means from engagement when the rolling movement is completed; a pressure bar parallel to the axis of the rolled magazine; means for yieldingly pressing the said bar against the magazine and wrapper during the rolling operation; a pivoted finger adapted to engage the magazine between the ends adjacent the aforesaid edge; and means for deprissing the finger at the beginning of the rolling operation to flatten out any buckle in the magazine and start the curvature.

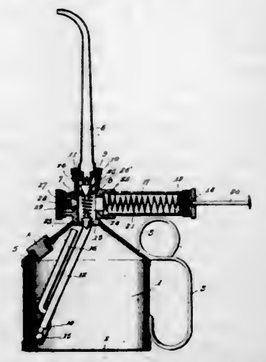
[Claim 6 not printed in the Gazette.]

1,166,738. HEADED ROD. ALBERT BAYTON, Erie, Pa., assignor to Reed Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed July 31, 1914. Serial No. 854,288. (Cl. 81—33.)



An article of manufacture consisting of a rod having a transverse slot therein and a head having an opening with an internal transverse shoulder engaging said slot, the walls of the opening engaging the rod outside the slot, the metal of the head being compressed transversely thereby securing a close fit of the shoulder in the slot and of the walls of the opening in the head on the rod.

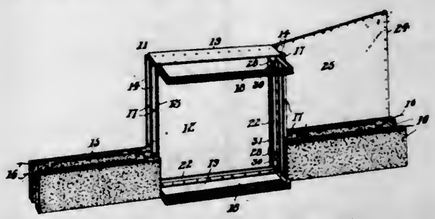
1,166,739. OIL-CAN. ARCHIBALD W. BELL, Springfield, Ill., assignor to The Bell Supply Company, Fort Madison, Iowa, a Corporation of Illinois. Filed Aug. 4, 1913. Serial No. 782,945. (Cl. 221—51.)



1. In an oil can, a body, a hollow casing in communication with said body, said hollow casing having outlet openings formed therein, a detachable spout adapted to be arranged over any one of said openings, a removable cap adapted to be arranged over the other of said openings, spring controlled valve means operable within the casing to open and close said outlet openings, spring controlled valve means operable within said casing to open and close communication therebetween and said body, and means operable to suck the contents of said body into said casing and force said contents out of said spout, operation of said last mentioned means being adapted to automatically actuate said valve means against tension of the respective springs therefor, as and for the purpose set forth.

2. In an oil can, a body, a hollow casing mounted exteriorly of and in communication with said body, said hollow casing having two outlet openings formed therein, a detachable spout adapted to be arranged over either of said outlet openings, a removable cap adapted to be arranged over the other of said openings, the openings being so formed relatively to the casing as to dispose the longitudinal axis of the spout when arranged over one of the openings at a right angle to its longitudinal axis when arranged over the other of the said openings, spring controlled valve means operable within said casing to open and close said outlet openings, spring controlled valve means operable within said casing to open and close communication therebetween and said body, and means operable to suck the contents of said body into said casing and force said contents out of said spout, operation of said last mentioned means adapted to automatically actuate said valve means against tension of the respective springs therefor, as and for the purpose set forth.

1,166,740. SILO-DOOR CONSTRUCTION. ADOLPH N. BRAGSTAD, Canton, S. D. Filed Aug. 18, 1914. Serial No. 857,376. (Cl. 189—46.)

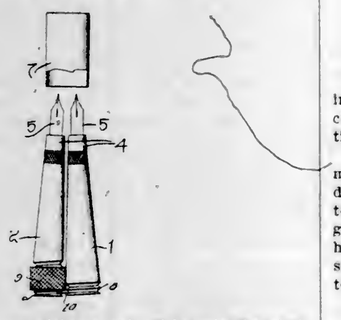


1. The combination with a metallic door frame having a flange projecting inwardly therefrom in spaced relation to the outer edge of the frame whereby to form a door

receiving rabbet; of a door fitted within the rabbet; and hinges connecting the door and frame, each consisting of four leaves, the intermediate leaves being free from the frame and door and the terminal leaves so connected respectively, to the frame and door as to cause the intermediate leaves to lie in a plane parallel to the door when the door is closed, whereby said hinges permit direct lineal movement of the door into and out of the frame and permit of close seating of the door through its periphery.

2. The combination with a metallic door frame having a flange projecting inwardly therefrom in spaced relation to the outer edge of the frame whereby to form a door receiving rabbet, of a door fitted within the rabbet, and hinges connecting the door and frame, each consisting of four leaves, the intermediate leaves being free from the frame and door and the terminal leaves so connected, respectively, to the frame and door as to cause the intermediate leaves to lie in a plane parallel to the door when the door is closed, whereby said hinges permit direct lineal movement of the door into and out of the frame and permit of close seating of the door through its periphery, said hinges being further so arranged, as to permit folding of the door flatly against a structure carrying the frame, when the door is open.

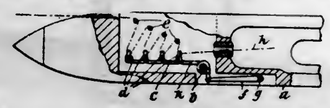
1,166,741. DUPLEX FOUNTAIN-PEN. AMADIO BROCHETTI and JOSEPH FAMILET, Dunkirk, N. Y. Filed Aug. 19, 1914. Serial No. 857,545. (Cl. 120—42.)



A fountain pen comprising a pair of barrels the abutting ends of which are correspondingly recessed, a hinged member disposed in the recesses and less in width than the depth of the recesses, the hinged member being pivotally connected at its ends to the adjacent wall of each barrel, the abutting ends of the barrels having flat end faces and both of the barrels at their abutting ends being exteriorly screw threaded, and a sleeve having screw threaded engagement with the barrels, the screw threaded portion of one barrel being greater in length than the sleeve whereby the sleeve may be moved upon the last named barrel to permit the barrels to break at the joint, the screw threaded portion of the other sleeve being approximately one-half of the length of the sleeve whereby to limit the movement of the sleeve upon said last named barrel to a position where the sleeve shall overlap equally on both barrels,

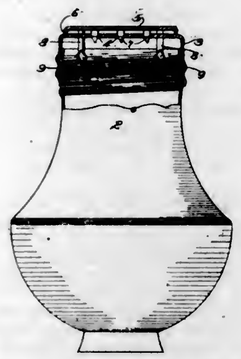
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1,166,742. SHUTTLE. MARIO CAMAGNI, Paterson, N. J. Filed Apr. 8, 1915. Serial No. 19,873. (Cl. 139—46.)



In a shuttle, the combination of a spring-pressed lever having a series of alined thread eyelets arranged in planes transverse to the lever, and coöperating devices around which to extend the thread alternating with said eyelets, each eyelet having substantially equidistant from the point of connection thereof with the shank of the lever relatively sharp thread-receiving bends, and the eyelet-including portion of the lever being adapted to be twisted to bring the corresponding bends at the one or the other side of the series of eyelets next to the fixed thread-guiding devices.

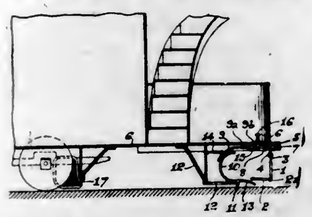
1,166,743. SALT-SHAKER. EDWARD A. COCHRAN, San Francisco, Cal., assignor of one-third to George M. Davis, San Francisco, Cal. Filed Nov. 14, 1914. Serial No. 872,099. (Cl. 65—57.)



1. The combination with an open mouth container having a removable perforated cap, of a reciprocable valve closure for the cap having an annular knife edge operative to cut and keep a clean seat on the cap.

2. In a salt shaker of the character described, a removable perforated flat top, a guided disk valve having downturned peripheral knife edges closable against the top, and having spurs fixed and movable therewith, and guides extending through the top into the container and having the inner ends formed with flattened darts which serve to contact with the cap when the valve opens and to break up lumps of contained material.

1,166,744. GUARD FOR TRAM-CARS AND OTHER VEHICLES. SAMUEL CROMARTY, Aberdeen, Scotland, assignor to Joseph M. Stuart, Aberdeen, Scotland. Filed Aug. 11, 1914. Serial No. 856,207. (Cl. 105—130.)



1. In a wheel guard for cars, a bracket member depending from the under side of the car, a curved scoop member pivotally connected to the bracket adjacent the center of the scoop, a guard member pivotally supported in front of the scoop, elastic means for connecting the scoop and guard, elastic means adapted to normally overcome the tension of the first mentioned elastic means for holding the scoop in a raised position.

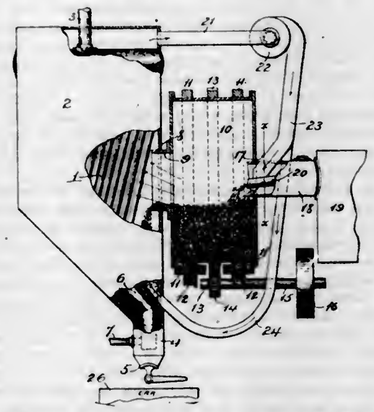
2. In a wheel guard for cars, a bracket depending from the underside of the car, a curved scoop mounted adjacent the central portion thereof, a front guard pivotally supported adjacent the scoop, means for connecting the scoop and guard, whereby movement of the guard produces a relative movement of the scoop, an extension

frame pivotally connected to one end of the guard, said frame adapted to fall into engagement with the scoop when the scoop is operated, and resilient means for returning the scoop to its normal position.

3. In a wheel guard, a bracket supported under the car, a scoop pivotally supported on the bracket, an arm having one of its ends connected to the scoop, its opposite end extending under the upper edge of the scoop, a guard pivotally supported under the forward portion of the car, resilient means for connecting the guard and arm, and manually operated means for releasing the guard at the will of the operator.

4. In a wheel guard, a bracket supported under the car, a scoop pivotally supported on the bracket, a front guard supported adjacent the scoop, a rod having one of its ends connected to the scoop adjacent the upper edge thereof, the opposite end of the said rod extending beyond the upper edge of the scoop, resilient means for connecting one end of the said rod to the guard, and resilient means connecting said rod and said bracket member.

1,166,745. APPARATUS FOR UTILIZING HEAT FROM HOT SLAG. WILLIAM H. DAILY, Tucson, Ariz. Filed Nov. 7, 1914. Serial No. 870,814. (Cl. 122—27.)



1. The combination of a boiler, a housing for the same, and a revoluble drum having a constantly open discharge outlet leading to said housing and a constantly open inlet through which slag may be continuously fed into said drum.

2. The combination with a boiler and a housing inclosing the same, of a revoluble drum communicating with said housing, means for discharging molten slag into said drum, and means for forcing air through the drum in contact with the slag and into said housing.

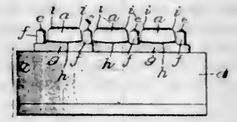
3. The combination with a boiler, of a housing inclosing the same, a revoluble drum communicating with the housing, means for discharging molten slag into said drum, means for conducting air under pressure from said housing into and through said drum in contact with the slag therein and into said housing.

4. The combination with a boiler and a housing inclosing the same, of a revoluble drum communicating with said housing and adapted to discharge thereinto, of means for discharging molten slag into said drum, means for forcing air through the drum in contact with the slag therein and into said housing, and means for discharging air into the lower portion of the housing in contact with slag discharged thereinto from said drum.

5. The combination with a boiler, of means for agitating molten slag with chilled slag, whereby the molten slag is chilled and crushed, and means for passing air in contact with the agitated slag and then in contact with the boiler.

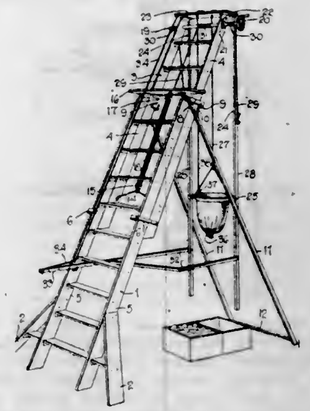
[Claims 6 to 8 not printed in the Gazette.]

1,166,746. MUSICAL BARS. JOHN C. DEAGAN, Chicago, Ill. Filed Oct. 2, 1911. Serial No. 652,409. (Cl. 84—31.)



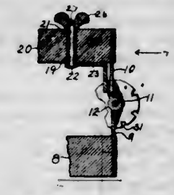
A musical instrument including a sound-producing bar and a support therefor, the bar being substantially oblong in cross section and having one of its two broader longitudinal faces convex and resting upon said support, while the longitudinal corners adjacent the opposite broad longitudinal face are rounded.

1,166,747. LADDER. NOBLE E. DEARDORFF, Wenatchee, Wash. Filed Mar. 3, 1915. Serial No. 11,813. (Cl. 228—15.)



In combination, a ladder, guides depending therefrom and pivotally engaged therewith, a carrier slidably engaged with the guides, connected members pivotally engaged with the guides, one of said members being provided with an extension, means carried by the ladder and the extension for holding the guides against swinging movement, and a flexible member secured to the free extremity of the extension and disposed upwardly of the ladder and affording a means whereby swinging movement to the guides may be created in one direction.

1,166,748. SHUTTER HINGE AND FASTENER. PETER DEVLIN, deceased, by Mary E. Devlin, administratrix, Baltimore, Md., assignor of one-half to J. Harry Seipp, Baltimore, Md. Filed Apr. 3, 1915. Serial No. 19,003. (Cl. 16—110.)

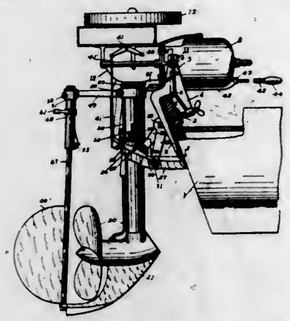


1. In a shutter fastener, the combination of a hinge member provided with a slot and having a single knuckle provided with a pintle fixed therein, a slotted plate

mounted in the slot in the said hinge member and held in fixed relation to said hinge member, said slotted plate being mounted upon said pin and resting against the upper face of said knuckle, a second hinge member having a slot to clear said plate and having a single knuckle revolubly mounted on said pintle and resting against said slotted plate, and a locking arm mounted to move with said second hinge member adapted to coöperate with the slots of said plate to lock said hinge members in fixed relation.

2. The combination with a hinge, of a locking plate in permanent engagement with one member thereof, a locking arm supported on a pintle and coöperating with said locking plate to hold said hinge members in fixed relation, a stop on the end of said locking arm coöperating with said locking plate to limit the movement of said locking arm in one direction, and a pin to limit the movement of said locking arm in the opposite direction.

1,166,749. MARINE MOTOR. LEWIS A. DOUGHERTY, Elkhart, Ind. Filed June 20, 1914. Serial No. 846,335. (Cl. 115—18.)



1. In a structure of the class described, the combination of a supporting bracket adapted for attachment to a boat, a horizontally disposed engine journaled on said bracket, a propeller, driving connections between said propeller and said engine, a tubular housing for said driving connections, said housing constituting a support for said propeller, a sleeve provided with flanges at its upper and lower ends clamped upon the upper end of said housing, a supporting bracket on said engine engaging the flange at the upper end of said sleeve whereby the housing is rotatably supported, a shoe on said housing extended below and to the rear of the propeller, a collar rotatably engaging the flange at the lower end of said bracket, a pair of rearwardly projecting spaced arms on said bracket, said housing being adapted to swing between said arms, a pair of links U-shaped in cross section pivotally connected to each other to collapse one within the other, one of said links being pivotally connected to said collar on said housing and the other to a clamp member adjustably mounted on said rearwardly projecting arms on said bracket, the connecting pivot for said links to each other and to said collar and clamp member being disposed so that the links when extended constitute a locking toggle, a friction spring interposed between said links, stops for limiting the movement of said links, a trip means for said links, a bifurcated catch embracing said collar and pivotally mounted thereon to engage the pivots connecting the link to said clamp member, and means for operating said catch.

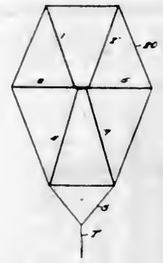
2. In a structure of the class described, the combination of a supporting bracket adapted for attachment to a boat, a horizontally disposed engine journaled on said bracket, a propeller, driving connections between said propeller and said engine, a tubular housing for said driving connections, said housing constituting a support for said propeller, a sleeve provided with flanges at its upper and lower ends clamped upon the upper end of said housing, a supporting bracket on said engine engaging the flange at the upper end of said sleeve whereby the housing is rotatably supported, a shoe on said housing extended below and to the rear of the propeller, a collar rotatably engaging the flange at the lower end of said bracket, a pair of rearwardly projecting spaced arms on said bracket, said housing being adapted to swing between said arms, and a pair of links U-shaped in cross section pivotally connected to each other to collapse one within the other, one of said links being pivotally connected to said collar on said housing and the other to a clamp member adjustably mounted on said rearwardly projecting arms on said bracket, the connecting pivot for said links to each other and to said collar and clamp member being disposed so that the links when extended constitute a locking toggle.

3. In a structure of the class described, the combination of a supporting bracket adapted for attachment to a boat an engine journaled on said bracket, a propeller, driving connections between said propeller and said engine, a housing for said driving connections, said housing constituting a support for said propeller, said housing being rotatably supported, a shoe on said housing, a collar mounted on said housing, a pair of rearwardly projecting spaced arms on said bracket, said housing being adapted to swing between said arms, a pair of links U-shaped in cross section pivotally connected to each other to collapse one within the other, one of said links being pivotally connected to said collar on said housing and the other to a clamp member adjustably mounted on said rearwardly projecting arms on said bracket, the connecting pivot for said links to each other and to said collar and clamp member being disposed so that the links when extended constitute a locking toggle, stops for limiting the movement of said links, a trip means for said links, and a bifurcated catch embracing said collar and pivotally mounted thereon to engage the pivots connecting the link to said clamp member.

4. In a structure of the class described, the combination of a supporting bracket adapted for attachment to a boat, an engine journaled on said bracket, a propeller, driving connections between said propeller and said engine, a housing for said driving connections, said housing constituting a support for said propeller, said housing being rotatably supported, a shoe on said housing, a collar mounted on said housing, a pair of rearwardly projecting spaced arms on said bracket, said housing being adapted to swing between said arms, and a pair of links U-shaped in cross section pivotally connected to each other to collapse one within the other, one of said links being pivotally connected to said collar on said housing and the other to a clamp member adjustably mounted on said rearwardly projecting arms on said bracket, the connecting pivot for said links to each other and to said collar and clamp member being disposed so that the links when extended constitute a locking toggle, a friction spring interposed between said links, a stop for limiting the movement of said links, and a catch pivotally mounted on said collar to engage the pivot connecting the link to said clamp member.

[Claims 6 to 15 not printed in the Gazette.]

1,166,750. KITE. MARCUS P. EXLINE, Dallas, Tex., assignor to Carrie L. Lobdell, Dallas, Tex. Filed Apr. 9, 1915. Serial No. 20,300. (Cl. 244—22.)



1. The herein-described coffin-shaped kite-skeleton comprising three wire members whereof the first consists of two upstanding arms and an interposed stretch and each of the others consists of a lateral strut, and a depending leg, and means for connecting the inner portion of both struts with said stretch, for the purpose set forth.

2. The herein-described kite comprising a frame and a skeleton, the latter made up of a plurality of members whereof each includes two radial stretches united by an interposed stretch, the interposed stretches being coiled into and around each other at approximately the center of the kite.

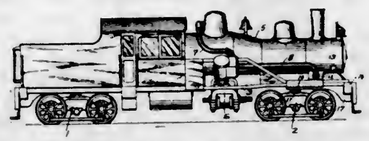
3. The herein-described kite comprising a frame and a skeleton, the latter made up of a plurality of members whereof each includes two radial stretches standing at an angle to each other and integrally connected by an interposed stretch, all of said interposed stretches crossing each other and standing approximately at the center of the kite, and a joint for connecting them.

4. The herein-described kite comprising a frame and a skeleton, the latter made up of a plurality of members whereof each includes two radial stretches standing at an angle to each other and integrally connected by an interposed stretch, all of said interposed stretches standing approximately at the center of the kite and one of them being straight while the others are formed into open coils adapted to be twisted into each other and around said straight stretch, substantially as set forth.

5. The herein-described kite comprising a face, and a skeleton supporting the face and composed of three wire members whereof each comprises two radial stretches and an interposed stretch integrally connecting their inner ends, said interposed stretch of one member being straight and those of the other members being formed into open coils adapted to be twisted into each other and around said straight stretch, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,166,751. LOCOMOTIVE. WILLIAM M. FAWCETT, Erie, Pa., assignor to Heisler Locomotive Works, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1915. Serial No. 23,052. (Cl. 105—227.)



1. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box in front of the boiler; a bolster on the frame resting on the truck; and a saddle carrying the boiler off-set in front of the bolster.

2. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box in front of the boiler; a bolster on the frame resting on the truck; and a saddle secured to the smoke box for carrying the boiler, said saddle being off-set in front of the bolster.

3. In a locomotive, the combination of a front truck; a frame formed of two parts separated through the central portion and brought together along the forward end of the frame; a boiler; a smoke box in front of the boiler; a bolster on a portion of the frame in which the bars are together, said bolster resting on the truck; and a saddle carrying the boiler and secured to the frame in front of the bolster.

4. In a locomotive, the combination of a front truck; a frame; a boiler; a smoke box in front of the boiler; a bolster on the frame resting on the truck; a saddle carrying the boiler off-set in front of the bolster; and a bumper bar extending centrally from the bolster under the saddle to the forward end of the frame.

1,166,752. BALL-JOINT FOR LAMP-SUPPORTS AND THE LIKE. THOMAS D. FINIZIO, New York, N. Y., assignor to Kurz Electrical Company, Inc., New York, N. Y., a Corporation of New York. Filed May 10, 1915. Serial No. 27,280. (Cl. 248—8.)



1. In combination with a tubular neck-member, a rotatable sleeve carried by said neck, at its outer end, said sleeve extending, for the greater part of its length, over the end of said neck, an angularly adjustable bushing located in said sleeve, a pressure exerting device arranged to hold said bushing in an adjusted position, and a lamp socket or other supporting means carried by said bushing at its free end.

2. In combination with a tubular neck-member, a rotatable sleeve carried by said neck, at its outer end, said sleeve being rounded at its free end, a ball located within the rounded end of said sleeve, a bushing carried by said ball, said sleeve, at its rounded end being provided with a slot to permit of the angular adjustment of said bushing, a lamp socket or the like carried by said bushing at its outer end, and means carried by said bushing and located between the lamp socket and rounded end of said sleeve to force said ball firmly into contact with the rounded end of said sleeve.

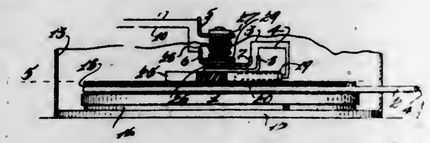
3. In combination with a tubular neck-member, a rotatable sleeve carried by said neck, at its outer end, said sleeve being rounded at its free end, a ball located within the rounded end of said sleeve, a bushing carried by said ball, said sleeve, at its rounded end being provided with a slot to permit of the angular adjustment of said bushing, a lamp socket or the like carried by said bushing at its outer end, and a spring carried by said bushing and located between the lamp-socket and rounded end of said sleeve to force said ball firmly into contact with the rounded end of said sleeve.

4. In combination with a tubular neck-member, a rotatable sleeve carried by said neck, at its outer end, said sleeve being rounded at its free end, a ball located within the rounded end of said sleeve, a bushing carried by said ball, said sleeve, at its rounded end being provided with a slot to permit of the angular adjustment of said bushing, a lamp socket or the like carried by said bushing at its outer end, a washer carried by said bushing contacting with the outer surface of the rounded end of said sleeve, and a spring carried by said sleeve and bearing against said washer at one end thereof and against the lamp socket at the other end thereof.

5. In combination with a tubular neck-member, a rotatable sleeve located on the outer surface and at the outer end of said neck-member, said sleeve being mounted for

rotation only, a carrier of insulating material mounted for rotation within said sleeve, a tubular bushing carried by said carrier, said bushing being out of contact with said sleeve, and a lamp socket or other supporting means carried by said bushing at its free end.

1,166,753. BRACKET FOR ELECTRIC LAMPS AND THE LIKE. THOMAS D. FINIZIO, New York, N. Y., assignor to Kurz Electrical Company, Inc., New York, N. Y., a Corporation of New York. Filed May 10, 1915. Serial No. 27,282. (Cl. 173—367.)



1. In a lamp-bracket, a casing, a reel within said casing, an electric cable carried by said reel, the inner end of said cable passing upwardly through said reel, a plurality of rotatable metallic connectors carried by said reel and insulated one from the other, the wires within said cable being connected to some of said conductors, auxiliary conducting wires connected to the remaining conectors, and a pressure-exerting medium interposed between said connectors.

2. In combination with a rotatable reel, a cable carried thereby, said cable passing upwardly through said reel, a bushing of insulating material secured to said reel, a plurality of metallic connectors carried by said bushing, the endmost connectors being electrically connected, the intermediate connectors being also electrically connected but insulated from the endmost connectors, one wire within said cable being connected to the lowermost connector, the other wire being connected to one of the intermediate connectors, and an auxiliary circuit consisting of two wires one of which is connected to the uppermost connector, the other being connected to the remaining intermediate connector.

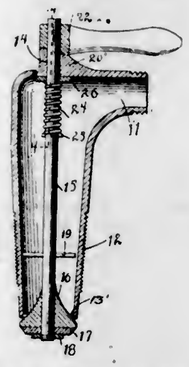
3. An electrical conducting device consisting of a plurality of rotatable arms, a carrier, of insulating material, for said arms, a metallic support for said carrier passing therethrough, the said support electrically connecting the endmost arms, the intermediate arms being in contact one with the other, and a spring to keep said intermediate arms in contact, said spring acting to also keep the uppermost arm in circuit with said carrier support, said intermediate arms being insulated from the endmost arms.

4. The combination of a rotatable reel, a cable, consisting of a plurality of wires, carried by said reel, the inner end of said cable passing upwardly through said reel, a plurality of auxiliary stationary circuit wires, a rotary carrier carried by said reel, a plurality of connectors carried by said carrier but free to move thereupon, one set of said connectors being connected to the auxiliary circuit wires, the other set being connected to the cable wires, and to each other, said sets of connectors being insulated from each other and the said reel.

5. The combination of a rotatable reel having a recess in the bottom thereof, a base for said reel, a coil spring within said recess, one end of said spring being connected to said reel, the other end being connected to said base, said reel being provided with a notch in the periphery thereof, a releasable pawl to engage said notch, a spring to keep said pawl in engagement with said reel, said reel being provided with an annular groove, a coiled cable, consisting of a plurality of wires, located in said groove, the inner end of said cable passing upwardly through said reel, a plurality of rotatable arms, a carrier of insulating material for said arms carried by said reel, a metallic support for said carrier passing therethrough, the said support electrically connecting the endmost arms, the intermediate arms being in contact one with the other, and a spring to keep said intermediate arms in contact, said spring acting to also keep the uppermost arm in circuit with said carrier support, said intermediate arms being insulated from the endmost arms.

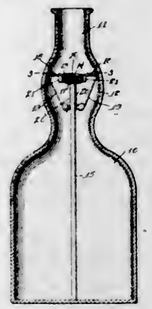
[Claim 6 not printed in the Gazette.]

1,166,754. VALVE. CHARLES FISHER, Bloomingdale, N. J. Filed Apr. 25, 1913. Serial No. 763,650. (Cl. 137—4.)



A valve of the class described, comprising a substantially cylindrical casing closed at one end, a tubular lateral extension at said end of the casing, the other end of the casing being open and provided with a valve seat, a stem having one end slidably passed through the closed end of the casing, and extended outwardly of the open end of the casing, a valve head on said stem outwardly of the casing and adapted to close on said seat, a boss on the closed end of the casing having its end face beveled and provided with a bore slidably receiving said stem, a handle provided with a transverse bore for receiving the stem, the bored portion of the handle having a beveled face to engage the beveled face of the boss, a pin passed through said handle and stem, and a spring surrounding the stem and bearing at one end against the closed end of the casing and acting on the stem to move said valve away from its seat.

1,166,755. NON-REFILLABLE BOTTLE. OVEDIA B. FORTNEY, Stratford, Wis. Filed Dec. 26, 1914. Serial No. 879,170. (Cl. 215—78.)



1. A bottle provided with an outlet neck having an enlargement formed intermedinte its length, a supporting rod extending through said bottle into the neck thereof, a disk secured to the outer end of said rod, springs positioned beneath said disk and having their inner arms secured to said rod and having their outer arms extending toward the sides of the bottle neck, and leaves secured to the free ends of the outer arms of said springs and resting upon the outer face of said disk when said closure is in set position.

2. A bottle having an outlet neck, a supporting rod extending through said bottle into said outlet neck, a disk secured to the outer end of said rod and having its periphery provided with oppositely disposed cutouts, springs including inner and outer arms, the iner arms being secured to said rod beneath said disk and the outer arms extending toward the side walls of the bottle neck and passing through the cutouts of said disk when said closure is in an inoperative position, and leaves secured to the outer ends of the outer arms of said springs and resting upon the outer face of said disk when said closure is in a set position.

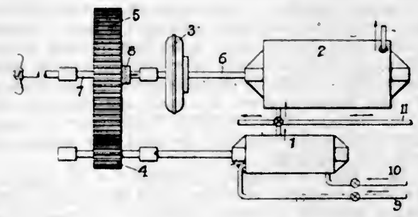
3. A bottle provided with an outlet neck, a rod extending through said bottle and into said neck, a disk carried by said rod, springs carried by said rod, and leaves carried by said springs and resting upon said disk when said closure is in a closed position.

4. A closure of the character described comprising a supporting rod, a disk carried by said rod, springs including inner and outer arms, the inner arms being secured to said rod and the outer arms extending in diverging relation to the inner arms, and leaves carried by the free end portions of the outer arms of said spring and extending in overlapping relation to said disk.

5. A closure of the character described comprising a supporting rod having one end portion reduced to form a neck, a collar mounted upon said neck, a disk mounted upon said neck, the outer end portion of the neck being formed into a head to clamp the disk against said collar, springs carried by said rod, and leaves carried by said springs and extending in overlapping relation to said disk.

[Claims 6 and 7 not printed in the Gazette.]

1,166,756. TURBINE POWER PLANT. HERMANN FÖTTINGER, Zoppot, near Danzig, Germany. Filed Apr. 28, 1914. Serial No. 834,907. (Cl. 121—58.)



1. A turbine plant including in combination a high pressure, high speed turbine, a low pressure, low speed turbine mounted for independent rotation, a driven shaft, mechanical gearing for transmitting power from said high pressure turbine to said shaft and a hydraulic power transmitter for delivering power from said low pressure turbine to said shaft.

2. A turbine plant including a high pressure, high speed turbine, a low pressure, low speed turbine, a driven shaft, means including mechanical gearing for transmitting power to said driven shaft from said high pressure turbine, and means including a hydraulic power transmitter for delivering power from said low pressure turbine to said driven shaft.

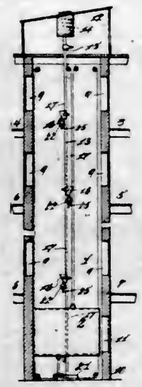
3. A turbine plant including two independently operable turbines, a driven shaft, means including mechanical gearing for transmitting power to said driven shaft from one of said turbines, and means including a hydraulic power transmitter for delivering power from the other of said turbines to said driven shaft.

4. A turbine plant including a high presure turbine, a shaft driven thereby and provided with a pinion, a low pressure turbine, a shaft driven thereby and provided with a gear meshing with said pinion, and a hydraulic power transmitter connected to said last-mentioned shaft.

5. A turbine plant including a high presure turbine, a low pressure turbine, a propeller shaft, separate gearings for transmitting power to said shaft from said turbines, the gearing between said low pressure turbine and said propeller shaft comprising a hydraulic power transmitter.

[Claims 6 and 7 not printed in the Gazette.]

1,166,757. MEANS FOR DISINFECTING DUMB-WAITER SHAFTS AND THE LIKE. DANIEL FRAAD, Brooklyn, N. Y. Filed July 22, 1915. Serial No. 41,323. (Cl. 187—1.)



1. A disinfecting apparatus, consisting of a pipe arranged to receive a disinfecting medium, said pipe being provided with openings, and a catch basin adjacent said openings.

2. A disinfecting device, consisting of a pipe provided with perforations, a basin adjacent thereto and in communication with said pipe, and means to force air into said basin.

3. A disinfecting device consisting of a receptacle provided with openings at intervals throughout its length, an auxiliary receptacle adjacent each set of openings, and means to force air into said auxiliary receptacles.

4. In combination with a dumb-waiter, a shaft therefor, a receptacle within said shaft arranged to receive a disinfectant, an auxiliary receptacle also arranged to receive a disinfectant, and means operable by the movement of the dumb-waiter to force air into the auxiliary receptacle.

5. In combination with a dumb-waiter, a shaft therefor, a stand-pipe within said shaft extending through substantially the length thereof, a supply tank for said pipe, a plurality of groups of alternately positioned openings in said pipe, an absorbent material in said pipe, means to introduce a liquid disinfecting medium into said pipe, and a catch-basin adjacent each set of openings arranged to receive any of the liquid disinfectant that may drip through said openings, there being a duct leading from said basin to said pipe.

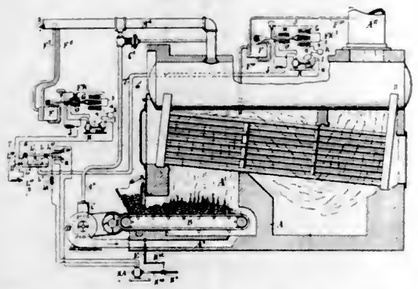
[Claims 6 to 10 not printed in the Gazette.]

1,166,758. FLOW-CONTROLLING APPARATUS. GEORGE H. GIBSON, Montclair, N. J. Filed June 1, 1914. Serial No. 842,306. (Cl. 110—54.)

1 The combination with a steam generating boiler, of means responsive to the amount of steam being withdrawn from the boiler, means responsive to the volume of draft through the furnace, and means controlled jointly by the two first mentioned means for regulating said volume of draft.

2. Means for maintaining a desired ratio between two fluid rates of flow, comprising in combination, means for opposing a force which is a function of one of the rates of flow by a force which is a function of the other rate of flow, and means actuated by the differential of said forces, when one overbalances the other, for adjusting one of said rates of flow to bring about an equilibrium between said forces.

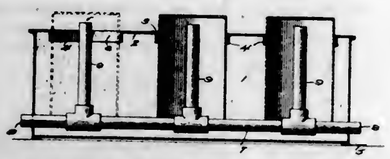
3. The combination with a steam generating boiler, of pressure differential controlled means for maintaining an electric current proportional in strength to the rate at which steam is withdrawn from the boiler, pressure differential controlled means for maintaining an electric current proportional in strength to the volume of draft through the furnace, a draft regulating device, and electro-magnetic means jointly controlled by said currents for maintaining a volume of draft proportional to the rate at which steam is withdrawn from the boiler.



4. Means for maintaining a desired ratio between two fluid rates of flow, comprising in combination, means for maintaining an electric current proportional in strength to one rate of flow, means for maintaining a second electric current proportional in strength to the other rate of flow, and electro-magnetic means jointly controlled by said currents for adjusting one of said rates of flow to maintain a predetermined ratio between the two rates of flow as the other of said rates of flow varies.

5. The combination with two closed conduits, of means for maintaining a desired ratio between the fluid rates of flow therethrough comprising in combination, a differential pressure mechanism including four chambers each with a movable wall portion, pressure transmitting connections between two of said chambers and two points respectively, in one of said conduits between which a pressure differential exists which is a function of the fluid rate of flow through the conduit, and similar connections between the other two chambers and the other conduit, and means connected to, and acted upon by the movable wall portions of said four chambers for adjusting the flow through one of said conduits as the flow through the other varies.

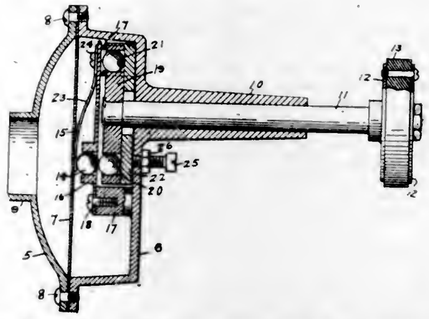
1,166,759. ASEPTIC DRINKING-CUP HOLDER. JOHN B. HALLIGAN, Smoky Ordinary, Va. Filed July 23, 1914. Serial No. 852,734. (Cl. 167—3.)



1. The herein described drinking glass holder comprising a substantially rectangular casing having a flat bottom with ears extending from its ends and pierced for the reception of fastening screws, converging side walls and upright end walls, and a flat top provided with a series of holes; a main air pipe extending along the length of said casing on a line nearer said top than the height of the usual glass and opening at its ends through said end walls, and a series of upright pipes rising from said main pipe through said holes, for the purpose set forth.

2. The herein described drinking glass holder comprising a substantially rectangular water-tight casing having a flat top provided with a hole surrounded by a flange, means for securing said casing upon a support, and an air pipe leading from a point above the level of said top downward, through the center of said hole, and thence horizontally through the side wall of said casing, the horizontal portion of said pipe being nearer the top of the casing than the height of the usual glass, for the purpose set forth.

1,166,760. HORN. REUBEN H. HELSEL, New York, N. Y., assignor of one-half to Jesse Morgenthau, New York, N. Y. Filed Dec. 23, 1913. Serial No. 808,331. (Cl. 116—1.)



1. In a horn, a diaphragm supported at its edges; a ball slidably supported centrally of the diaphragm; a resilient finger interposed between the ball and diaphragm; a series of circularly arranged balls; and a rotatable carrier for said balls to cause them to successively engage with the first ball and intermittently force it against and vibrate the diaphragm.

2. In a horn, the combination with a diaphragm supported at its edge, of a ball slidably supported independently of and adjacent to the diaphragm; a disk having a series of circularly arranged openings; a ball of greater diameter than the thickness of the disk in each of said openings; a rotatable shaft to which the disk is fixed; an adjustable raceway for the balls below the ball carrying disk; and means to rotate the shaft and connected ball carrying disk to cause the balls to successively engage with and intermittently force the first ball against and vibrate the diaphragm.

3. In a horn, a diaphragm supported at its edges; a ball slidably supported centrally of the diaphragm; a disk having a series of circularly arranged openings; a ball of greater diameter than the thickness of the disk in each of said openings; a rotatable shaft to which the disk is fixed to rotate the disk and cause the balls to successively engage with the first ball and intermittently force it against and vibrate the diaphragm; a raceway for the balls interposed between the carrier for the balls and the casing below the ball carrying disk; and means to adjust the said raceway, substantially as and for the purpose specified.

4. In a horn, a casing consisting of a pair of axial separable sections, one section having an opening for the application of an amplifier: a diaphragm clamped at its edges between said casing sections; a ball to strike against and vibrate the diaphragm; a plate fixed within the other casing section to slidably carry said ball; a series of circularly disposed balls: a carrier for said balls of less thickness than the diameter of the balls; a rotatable shaft to which the said carrier is fixed; and an adjustable raceway for the circularly disposed balls interposed between the carrier for said balls and the casing, substantially as and for the purpose specified.

1,166,761. AMPOULE. ARTHUR C. HIGGINS, Philadelphia, Pa., assignor to H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 27, 1915. Serial No. 10,939. (Cl. 128—28.)

1. The combination of an ampoule having a frangible portion, absorbent material lying thereover, and an imperforate casing for the absorbent material embracing the material and compressing the same and having an opening through which the material protrudes.



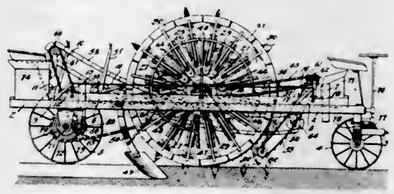
2. The combination of an ampoule having a frangible neck, absorbent material lying thereover, and an open ended tubular casing of imperforate material disposed directly around and embracing the absorbent material and the neck and carried by the ampoule.

3. The combination of an ampoule having an attenuated frangible neck, absorbent material covering the neck and extending beyond the end of the same as a substantially cylindrical swab, and a tubular band of imperforate material fitting snugly over the absorbent material and embracing the same and the neck and having one edge resting on the shoulder of the ampoule, the cylindrical portion of absorbent material protruding beyond the other end of the band.

4. The combination of an ampoule having a frangible neck formed with a bulge, absorbent material lying thereover, and an elastic tubular band disposed directly around the absorbent material and embracing and compressing the same and tapered interiorly to coöperate with the bulge and retain the material in place.

5. The combination of an ampoule having an attenuated frangible neck formed with a bulge, absorbent material covering the neck and lying around the bulge and extending beyond the end of the neck as a substantially cylindrical swab, a rubber tubular band tapered interiorly to embrace and grip yieldingly the absorbent material and the bulge and resting at one end against the shoulder of the ampoule, the cylindrical swab of absorbent material protruding beyond the other end of the band, and a frangible tip formed in the ampoule to admit atmospheric pressure during application of the medication.

1,166,762. BEET-HARVESTING MACHINE. HENRY HOLUB, Louise, Tex., assignor of one-third to Ignatz H. Vyvial, Louise, Tex. Filed May 3, 1915. Serial No. 25,545. (Cl. 55—108.)



1. In a beet harvester, the combination with a wheeled frame, of a rotatable extractor adapted to successively clamp, draw and release the beets and including a circular series of pairs of beet top engaging jaws, the jaws of each pair having outwardly and medially extending prongs adapted to raise the fallen leaves of the beet top into position to be engaged by the jaws.

2. The combination with a wheeled frame, of a rotatable beet extractor adapted to successively clamp, draw and release the beets, and a ground engaging member having the form of a shovel plow disposed below and rearward of the lowest point of travel of the extractor and in alinement with the extractor whereby the ground beneath the beets may be loosened and the beets raised as they are lifted.

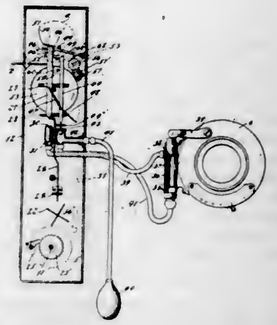
3. A beet harvester including a rotatable element having a plurality of pairs of jaws movable in a closed path, means for closing and opening the jaws at separated points in the path of movement, and a ground engaging member operating in conjunction with said jaws disposed below and rearward of the lowest point of travel of said jaws and in alinement therewith whereby to loosen the ground beneath the beet and raise the beet at the time that the beet is engaged and lifted by the jaws.

4. A harvesting machine including a rotatable element having a plurality of independent disconnected pairs of jaws, means for closing and opening the jaws at separate points in their path of movement, and a knife disposed adjacent to the path of movement of the jaws.

5. In a beet harvester, the combination with a wheeled frame, of a rotatable extractor adapted to successively clamp, draw and release the beets and including a drum, a plurality of pairs of oppositely disposed radially directed arms operatively supported on the drum for pivotal movement in a plane transverse to the plane of rotation of the drum and carrying beet gripping jaws, a shiftable actuating member operatively mounted upon the drum in conjunction with each pair of jaws and operatively engaged with the arms thereof to cause an oscillation of the arms into or out of a gripping position, and a cam operatively mounted upon the frame and disposed in a plane parallel to the plane of rotation of the drum and engaging said actuating members.

[Claims 6 to 12 not printed in the Gazette.]

1,166,763. REPEATING CAMERA. JOHN N. JOHNSON, Albuquerque, N. Mex. Filed Feb. 7, 1914. Serial No. 817,132. (Cl. 95—34.)



1. In a camera, a shutter, mechanism for advancing the film, fluid pressure operated pistons and connections for the same for actuating the shutter and for controlling the mechanism for advancing the film, and a normally closed valve disposed in the connections to the piston for actuating the shutter and means controlled by the mechanism for advancing the film to open said valve to prevent a second actuation of the shutter until the mechanism has been operated.

2. In a camera, a shutter, motor operated mechanism for advancing the film, means including two fluid pressure operated pistons for respectively actuating the shutter and controlling the starting of the motor, a roller over which the film passes, and means associated with said roller for controlling the stopping of the motor.

3. In a camera, a shutter, motor operated mechanism for advancing the film, means including two fluid pressure operated pistons for respectively actuating the shutter and controlling the starting of the motor, and means for preventing a second operation of the piston for actuating the shutter until the motor operated mechanism has advanced the film.

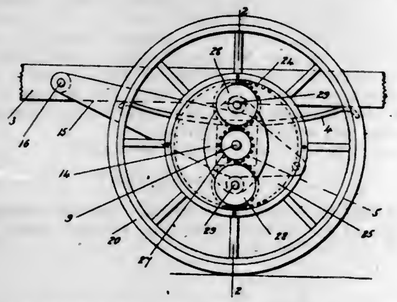
4. In a camera, a shutter, motor operated mechanism for advancing the film, fluid pressure operated pistons and connections for the same for successively actuating the shutter and controlling said mechanism, and means interposed in said connections for opening the same after the

actuating of the shutter and maintaining said connections open until the motor operated mechanism has advanced the film.

5. In a camera, a motor operated mechanism for advancing the film, a movable member for controlling the starting and stopping of the motor, manually operable means for moving said member to permit said motor to start, and means including two rotatable rollers between which the film passes for controlling the movement of said member to stop the motor when a determined length of film has passed between said rollers, said rollers being arranged to bend the film as it passes therebetween.

[Claims 6 to 17 not printed in the Gazette.]

1,166,764. DRIVING MECHANISM. HERMAN KAISER, East Oakland, Cal. Filed July 13, 1915. Serial No. 39,635. (Cl. 21—90.)



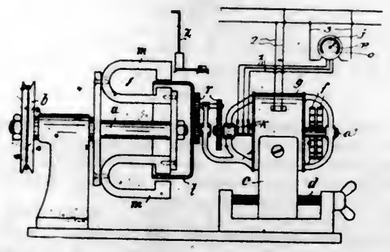
1. In a driving mechanism, a car frame, a non-revoluble tubular axle, a spring interposed between the said axle and frame, a driving shaft journaled concentric with the axle, a radius link pivoted at one end to the car frame and operatively connected with the tubular axle, a road wheel journaled concentric with the axle, an internal toothed wheel secured to the road wheel, a toothed pinion secured on the driving shaft, and idle toothed wheels operatively connected with the radius link and gearing into the said internal wheels and the said pinion.

2. In a driving mechanism, a car frame, a non-revoluble tubular axle, a spring interposed between the said axle and frame, a driving shaft journaled concentric with the axle, a sleeve mounted to oscillate on the tubular axle and having a plate on its outer end, a radius link pivoted at one end to the car frame and having an eye which is secured to the inner end portion of the said sleeve, a road wheel journaled concentric with the axle and sleeve, an internal toothed wheel secured to the road wheel, a toothed pinion secured on the driving shaft, and idle toothed wheels supported by the said plate and gearing into the said internal wheel and the said pinion.

1,166,765. APPARATUS FOR INDICATING AT A DISTANCE THE SPEEDS OF SHAFTS OR THE LIKE. PAUL KAMINSKI, Spandau, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed Jan. 13, 1912. Serial No. 671,103. (Cl. 175—183.)

1. The combination, with a speed indicating instrument, of a synchronous electric motor provided with an armature having a predetermined normal position and being free to rock to a limited extent from said normal position, a generator electrically connected with said armature to cause the same to rock, and mechanism adapted to be connected to the revoluble shaft whose speed is to be measured for actuating the rotor of the generator by variations in speed of said shaft.

2. The combination, with an indicating instrument, a synchronous electric motor for actuating the same, and an electric generator for supplying currents to said motor, of a revoluble disk connected to the armature of said generator, a magnet disposed adjacent to said disk and movable for the purpose of exposing said disk to a rotating magnetic field in order to turn said disk, a spring for retracting said disk, and rotating connections adapted to connect said magnet and the shaft the speed of which is to be indicated.



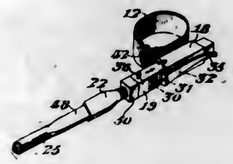
3. The combination, with a speed indicating instrument, of a synchronous electric motor connected with said instrument for actuating the same, an electric generator for supplying current to said motor, gearing including a magnetic coupling for causing changes in speed of the shaft whose speed is to be measured to shift the position of the rotor of said generator, and means independent of the rotation of said shaft for supplying alternating currents of constant frequency to the fields of said generator and said motor.

4. The combination with a speed indicating instrument, of an electric motor connected with said instrument for actuating the same, an alternating current generator synchronously connected to said motor, and magnetic means independent of the generator and controllable by changes in speed of the revoluble shaft whose speed is to be measured for shifting the rotor of said generator into different positions.

5. In apparatus for indicating at a distance the speed of revolving parts of machines the combination with a shaft adapted to be connected to said parts, and an electric transmitter, comprising an A. C. generator, of an electric indicating device having its armature connected in opposition to the armature of the generator, both adapted to move in similar alternating current fields, and an eddy-current coupling adapted to connect the generator with said shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,166,766. ORTHODONTIC APPLIANCE. HARRY E. KELSEY, Baltimore, Md. Filed Jan. 15, 1914. Serial No. 812,185. (Cl. 32—19.)



1. In a tooth-regulating appliance comprising an arch-bow having adjustable means and an anchorage therefor, the combination with an anchor member, of an adjustable abutment for the adjustable means on said arch-bow, and a detent arranged to retain said abutment in different adjusted longitudinal positions with respect to said anchor member.

2. In a tooth-regulating appliance comprising an arch-bow having adjustable means, the combination with an anchor member having a guide, of an adjustable abutment for the adjustable means on said arch-bow, said abutment being mounted to slide in said guide and having a plurality of depressions, and a spring detent on said guide yieldingly engageable with said depressions to retain said abutment in different adjusted positions with respect to said anchor member.

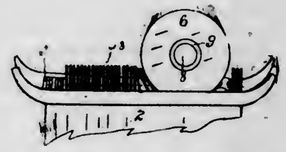
3. In a tooth-regulating appliance comprising an arch-bow having adjustable means, the combination with an anchorage having a member serving as a guide, of an adjustable abutment for the adjustable means on said arch-bow, said abutment being mounted to slide in said guide and having a plurality of ratchet teeth, and a pawl on said guide yieldingly engageable with said teeth to retain said abutment in different adjusted positions.

4. In a tooth-regulating appliance for use in connection with an arch-bow, the combination with an anchorage having a member serving as a guide, of an adjustable abutment mounted for reciprocation in said guide and arranged to receive the end of said arch-bow, and a detent on said guide detachably engaged with said abutment, and having means tending to permit the longitudinal movement of said arch-bow in one direction and prevent such movement in the other direction.

5. A tooth-regulating appliance to be used in connection with an arch-bow having adjustable means thereon, an anchor member having a sleeve provided with a recess, an abutment for the adjustable means on said arch-bow, slidably mounted in said sleeve, means for retaining said abutment in variably adjusted positions in said sleeve, and a projection on said abutment engageable with a suitable tool for manually shifting said abutment longitudinally in said sleeve, said projection being arranged to enter said recess in the retracted position of said abutment.

[Claims 6 to 10 not printed in the Gazette.]

1,166,767. MAILING DEVICE. MICHAEL P. KENNA, Dubuque, Iowa. Filed Sept. 3, 1913, Serial No. 787,878. Renewed Nov. 2, 1914. Serial No. 869,983. (Cl. 101—1.)



1. In a device of the character described, a galley, type adapted to be inked forming addresses set in the galley with spaces between the addresses in which spaces are set the cards or other matter to be printed in an upright position, and means adapted to force down the matter to be printed on the inked type.

2. In a device of the character described, a galley, type adapted to be inked set in the galley forming addresses with spaces between the addresses in which spaces the matter to be printed in held, a press provided with a roller adapted to roll over the matter to be printed and press it upon the inked addresses, and means for adjusting the pressure upon the matter to be printed upon the addresses.

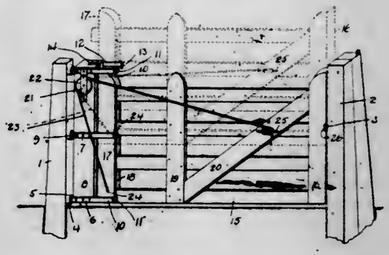
3. In a device of the character described, a galley, type adapted to be inked forming addresses set in the galley at a predetermined distance apart, means for holding the matter to be printed between the addresses in the galley, and means adapted to travel over the galley and force down the matter to be printed upon the inked addresses.

4. In a device of the character described, a galley, type adapted to be inked forming addresses set in the galley at a predetermined distance apart, means for holding the matter to be printed between the addresses in the galley, a roller adapted to travel over the galley and force down the matter to be printed on the inked addresses, and means for adjusting the pressure of the roller upon the matter to be printed.

5. In a device of the character described, a galley, type adapted to be inked forming addresses set in the galley at a predetermined distance apart, means for holding and locking the matter to be printed between the addresses in the galley in an upright position, and means adapted to bend down the matter to be printed upon the inked addresses.

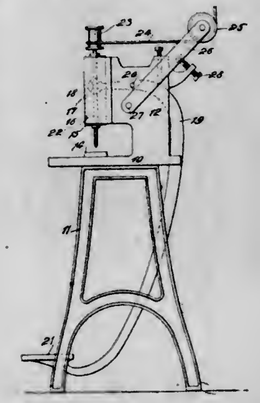
[Claim 6 not printed in the Gazette.]

1,166,768. GATE-OPERATING-MECHANISM. WILLIAM JAMES KING, Bulger, Pa. Filed Mar. 28, 1914. Serial No. 827,853. (Cl. 39—81.)



In a gate of the class described, the combination with a hinged post and hook members carried thereon forming pintles; of a gate body consisting of a hinged section provided with a vertical slot in the outer side edge thereof, an adjustable section including a vertically slotted inner end post abutting the hinged section, an outer end post, horizontal gate bars secured between said end and having their inner ends extending through the slot in the inner post whereby to project thereby beyond, the projecting portions of said gate bars operating in the slot of said hinged section, pairs of horizontal straps secured to the side faces of said hinged section and projecting beyond the outer side edge thereof, the extreme free ends of the same being inturned to engage the edges of the slotted inner post of the gate body, whereby to form a guide for the latter as the same is raised and lowered, the inner end of said strap on each pair being also extended beyond the inner side edge of the hinged section and designed to form a knuckle for engagement with an adjacent pintle on the hinged post, and means for raising and lowering the gate body and retaining the same in any adjusted position.

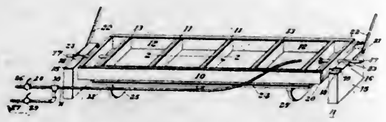
1,166,769. BORING-MACHINE. WILLIAM J. KOENIG, New York, N. Y. Filed Feb. 8, 1913. Serial No. 747,065. (Cl. 77—30.)



In a boring machine the combination with a framing having means to support the work and a bracket overhanging the same, a vertically reciprocal slide in said bracket over the work supporting means and provided

with a transverse opening, a treadle lever fulcrumed on the framing and one end thereof engaged with the slide in the opening thereof to operate the same, a rotary boring tool mounted in the slide extending through the lever and slide, and means continuously to rotate said tool.

1,166,770. APPARATUS FOR MOLDING ICE CAKES. WARREN LATHAM, Spokane, Wash. Filed Dec. 21, 1914. Serial No. 878,278. (Cl. 62—110.)

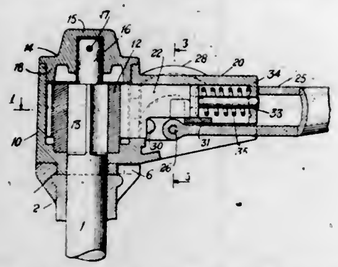


1. An apparatus for freezing ice cakes by natural temperature comprising a frame having open top and bottom, partitions across the frame, pans having closed sides and bottom and open top set into the frame between the partitions, a filler of corrugated material between the frame and partitions and the pans, said frame mounted on shafts adapted to rotate and means for elevating and rotating the frame.

2. An apparatus for freezing ice cakes by natural temperature comprising a frame having open top and bottom, partitions across the frame, pans having closed sides and bottom and open top set into the frame between the partitions, a filler of corrugated material between the frame and partitions and the pans, said frame mounted on shafts adapted to rotate, means for elevating and rotating the frame and means for filling said pans with water and means for applying steam to the surface of said pans to loosen frozen ice cakes therein.

3. An apparatus for freezing ice cakes by natural temperature comprising a frame having open top and bottom, partitions across the frame, pans having closed sides and bottom and open top set into the frame between the partitions, a filler of corrugated material between the frame and partitions and the pans, said frame mounted on shafts adapted to rotate, means for elevating and rotating the frame, a removable table underneath said frame, means for filling said pans with water and means for applying steam to the surface of said pans to loosen frozen cakes of ice therein.

1,166,771. BRAKE-ACTUATING MECHANISM. CHARLES A. LINDSTRÖM, Allegheny, Pa., assignor to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Original application filed June 21, 1912, Serial No. 704,992. Divided and this application filed Nov. 23, 1914. Serial No. 873,446. (Cl. 188—57.)



1. In a brake handle, the combination of a clutch mechanism comprising opposing clutch members one of which is continuously spring-pressed and is slidingly movable into engagement with the other of said members or into a disengaging position with relation thereto, a rotatable member exterior to said movable clutch member and rotatable therewith, and a drop lever pivotally mounted upon said exterior rotatable member to fulcrum thereon and have engagement with said movable clutch member for moving the same into a disenagaging position with relation to said other clutch member upon the dropping of said lever.

2. In a brake handle, the combination of an exterior rotary member, means for supporting said member, a clutch mechanism comprising opposing clutch members one of which, a slidingly movable member, rotates with said exterior rotary member to have engagement with the other of said clutch members, said movable clutch member being continuously urged toward the other and being movable also into a disengaging position with relation to said other clutch member, and a drop lever secured to said exterior rotary member for rotating the same and said movable clutch member as said lever is turned, said lever being pivotally mounted upon said exterior rotary member to fulcrum thereon to engage said movable clutch member and to move the same into a disengaging position upon the dropping of said lever.

3. In a brake handle, the combination of a rotary member, a spring bearing against said member, clutch mechanism comprising opposing clutch members, one of which, a slidingly movable member, rotates with said rotary member and may have spring pressed engagement with the other of said clutch members, said movable clutch member being movable also into a position of disengagement with relation to said other clutch member, and a brake lever pivotally mounted upon said first-named rotary member to turn thereon and occupy either an out-turned position or a down-turned position, said lever having a part engaging said movable clutch member and maintaining the same in a disenagaging position when said lever is occupying its down-turned position.

4. In a brake handle, the combination of an exterior member, means for supporting said member to rotate without endwise displacement, a clutch mechanism comprising opposing clutch members of which one is a slidingly movable member rotatable with said exterior rotary member to have engagement with the other of said clutch members, said movable clutch member being continuously urged toward the other clutch member but being displaceable into a disengaging position with relation to said other of the clutch members, and a lever pivotally mounted upon said exterior rotary member for rotating the same and said movable clutch member as said lever is turned, said lever having also an operative engagement with said movable clutch member for moving the same into a disengaging position upon the pivotal turning of said lever on said exterior rotary member.

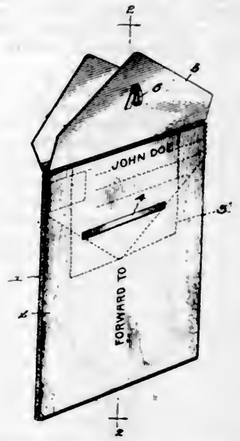
5. In a brake handle, the combination of a clutch mechanism comprising opposing clutch members one of which members is slidingly movable to have engagement with the other of said members or into a disengaging position with relation thereto, a rotary casing rotatable with said movable clutch member, a spring bearing against said casing and permitting one of said clutch members to shift backward over the other and a drop lever pivotally mounted upon said casing for rotating the same and said movable clutch member as said lever is turned laterally said lever being adapted also to have engagement with said movable clutch member and move the same into a disengaging position away from said other clutch member upon the dropping of said lever.

[Claims 6 to 17 not printed in the Gazette.]

1,166,772. ENVELOP. ALEXANDER M. LOCKHART, Pittsburgh, Pa. Filed Oct. 10, 1914. Serial No. 866,046. (Cl. 229—73.)

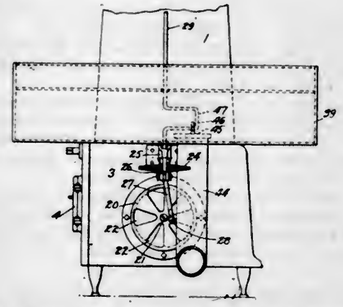
An envelop of the class described comprising a body consisting of a front and rear wall secured together and open at one end to form an entrance opening therefor, said walls each having a transverse slit therein, strips secured to the inner faces of said walls and forming internal pockets thereon, said strips terminating at their one end in the aforesaid slits whereby to provide entrance openings for said pockets, the opposite ends of said strips terminating flush with the end edges of said walls, a substantially triangular covering flap formed on the edge of each portion

of the body at the open end thereof, said flaps being adapted to contain a forwarding and return address thereon and further adapted for folding together over the open



end of the body to be received in one of said slits and form a closure for said body, and finger pieces carried on said flaps for the operation thereof.

1,166,773. BROODER. JOHN F. MACKAY, Bordentown, N. J. Filed Mar. 31, 1914. Serial No. 828,518. (Cl. 237—3.)



1. In a brooder, the combination with a fire-box, of a downwardly-flaring hood surrounding the same to form a brooder chamber, a circular drum surrounding the fire box inside of the hood and having openings communicating with the interior of the hood, means for introducing cold air into the interior of the drum, a valve therefor, a vertically movable damper at the top of the fire box, and a thermostatic device under the hood for operating the cold air valve and the fire box damper.

2. In a brooder, the combination with a fire box, of a downwardly-flaring hood surrounding the same to form a brooder chamber, a drum surrounding the fire box inside of the hood and having communicating compartments, one of which is apertured to deliver heated air into the interior of the hood, a damper device for the fire box, an ash pit below the fire box, a damper device therefor, and a thermostatic device under the hood for operating the dampers automatically.

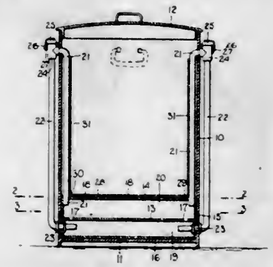
3. In a brooder, the combination with a combustion chamber, of a downwardly-flaring hood supported thereon and surrounding the same to form a brooder chamber, a drum surrounding the combustion chamber within the hood and divided into inter-communicating compartments, the upper of said compartments being perforated to allow the exit of the air to the interior of the hood, an ash pit, below the combustion chamber, a damper therefor, a cold air inlet for introducing outside air into the lower of the compartments of the drum, a valve for said inlet, and a thermostat which automatically operates the damper and valve.

4. In a brooder, the combination with a stove device, of a downwardly-flaring hood supported thereon, a drum surrounding the stove device within the hood and having openings for the outlet of hot air into the interior of the hood, means for delivering fresh air into the said drum, a damper for said means, a top draft damper above the stove device, and a lower draft damper near the bottom, a check damper at the upper part of the stove device, a thermostat, and leverage means whereby the latter operates all four dampers.

5. In a brooder, the combination with a fire box, of a downwardly-flaring hood supported thereon and surrounding it so as to form a brooder chamber, a vertically movable damper operating in connection with an opening at the top of the fire box, lever devices for actuating said damper, an ash pit beneath the fire box, a circular damper therefor, a hot air drum surrounding the fire box and having perforations for allowing air to pass into the interior of the brooder chamber, a pipe for conveying cold air into said drum, a valve for said pipe consisting of a plate covering the end of the same, a thermostat together with connections between it and the ash pit damper, the cold air valve and the lever devices for actuating the damper at the top of the fire box.

[Claims 6 to 10 not printed in the Gazette.]

1,166,774. SANITARY VENTILATED GARBAGE-CAN. EMANUEL MAYER and MAX E. WOLFF, New York, N. Y. Filed Dec. 16, 1914. Serial No. 877,493. (Cl. 220—115.)



1. The combination with a receptacle; of an auxiliary member mounted in the bottom thereof to provide a pair of chambers having an intermediate partition and a top portion with openings therethrough, means for supplying a disinfectant to the lower chamber, said means having communication with the upper chamber, a foraminous member supported on said top portion and means to cut off communication of said chambers with the supply means or to open the same as desired.

2. The combination with a receptacle body having a removable cover and a closed bottom; of perforated partitions mounted in spaced relation above the bottom portion of said body, one of said partitions forming a disinfectant chamber in conjunction with the bottom of the body and an air chamber in conjunction with the other partition, pipes communicating with said chambers and closures for said pipes.

3. The combination with a receptacle body having a removable cover and a closed bottom; of perforated partitions mounted in spaced relation above the bottom portion of said body, one of said partitions forming a disinfectant chamber in conjunction with the bottom of the body and an air chamber in conjunction with the other partition, pipes communicating with said chambers and having a common connection with each other exteriorly of the can whereby disinfectant may be discharged into the disinfectant chamber through certain of the pipes while the other pipes coöperate therewith and the can to pro-

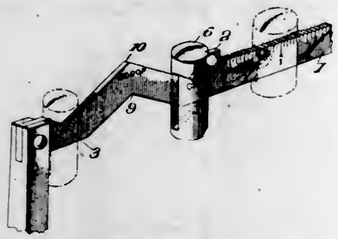
duce circulation and caps for said pipes to open or close the same.

4. A sanitary ventilated garbage can, comprising a can proper having a closed bottom and open top, a cover for said can, an auxiliary part fitted in the bottom of the can and having a horizontal partition and a top portion, forming a disinfectant chamber beneath said partition and an air chamber between said partition and top portion, said partition having perforations near its edge portion and the top portion having perforations inwardly of the first named perforations, a pipe adjacent to the lateral section of the can and leading into the disinfectant chamber and a closure for the upper end of said pipe.

5. A sanitary ventilated garbage can, comprising a can proper having a closed bottom and open top, a cover for said can, an auxiliary part fitted in the bottom of the can and having a horizontal partition and a top portion, a disinfectant chamber beneath said partition and an air chamber between said partition and top portion, said partition having perforations near its edge portion and the top portion having perforations inwardly of the first named perforations, a pipe exteriorly of the can adjacent to the lateral section thereof and leading into the disinfectant chamber, a second pipe communicating with the first named pipe and leading into the air chamber and a closure carried by said pipe.

[Claim 6 not printed in the Gazette.]

1,166,775. SCOOP-BALANCE FOR WEIGHING-SCALES. CHARLES F. MOORE and HIRAM E. BROWN, Bennington, Vt., assignors to Bennington Scale Company, Bennington, Vt., a Corporation of Vermont. Filed Sept. 9, 1914. Serial No. 860,898. (Cl. 73—30.)



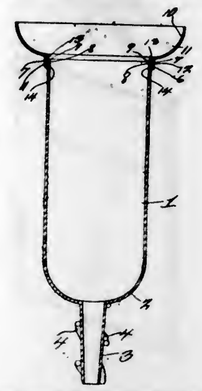
1. A scoop balance for weighing scales, comprising a horizontally disposed beam having at the fulcrum end thereof, a pair of spaced seats separated by oppositely inclined portions terminating in an apex portion, in a plane above the horizontally disposed portion of said beam, a counter-balancing poise slidably mounted upon said inclined portions and capable of being held only in either one or the other of said seats, and means for limiting the movement of said poise.

2. A notched beam for weighing scales having an enlarged apex shaped portion adjacent the fulcrum end thereof forming oppositely inclined portions terminating in spaced seats, and a counter-balancing poise slidably mounted upon said apex-shaped portion and capable of being seated only in either of said seats for counter-balancing the beam with the scoop off of or the scoop on, the same.

3. A scoop balance for weighing scales, comprising a notched beam having a compound angled smooth portion adjacent the fulcrum end thereof and spaced from the notched portion by a stop, said angled portion forming oppositely disposed inclines terminating in substantially V-shaped seats, and a counter-balancing poise slidably mounted upon the angled portion of said beam having a knife edge capable of seating itself in either of said seats.

1,166,776. FUNNEL. GILBERT G. MOORE, Bryn Mawr, Pa. Filed Aug. 8, 1914. Serial No. 855,774. (Cl. 226—33.)

A funnel comprising a hollow body having a hollow stem at its lower portion, and a receiving bowl, curved in cross section and provided with a detachable connection with the upper edge of the body, said detachable connection comprising an annular channel including an outer flange and an inner flange, said inner flange having an outwardly extending peripheral portion, said receiving bowl having a downwardly extending portion provided upon the interior surface with an annular recess to receive the outwardly bent portion of the first inner flange, the inner face of the downwardly extending portion of the receiving bowl adjacent its lower edge being beveled, to be engaged by the outwardly bent portion, thereby allowing the receiving bowl to be united to said body, said receiving bowl being designed to be nested with similar bowls of larger diameter.



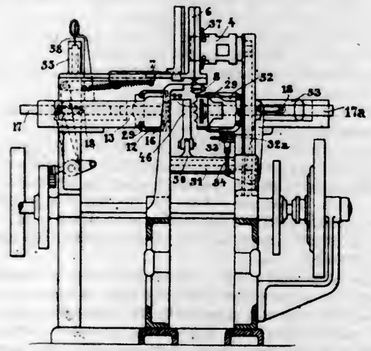
1,166,777. PROCESS OF VULCANIZING RUBBER, RUBBER-LIKE, OR SIMILAR MATERIALS. PAUL I. MURRILL, New York, N. Y., assignor to Revere Rubber Company, a Corporation of Rhode Island. Filed Feb. 9, 1915. Serial No. 6,981. (Cl. 18—53.)

1. A vulcanizing agent consisting of sulfur monochlorid and gasolene characterized by the absence of olefins.

2. A vulcanizing agent consisting of sulfur monochlorid and a gasolene distillate of a solution of gasolene with suitable chemicals to remove the olefins.

3. The method of cold curing vulcanizable rubber, rubber-like or similar materials consisting of subjecting the same to the action of sulfur monochlorid and gasolene characterized by the absence of olefins.

1,166,778. PAPER OR LIKE BOX MACHINE. DAVID NYLANDER and RICHARD HÖGFELDT, Strömsfors, Sweden. Filed Oct. 7, 1915. Serial No. 54,673. (Cl. 93—36.)



1. In a machine for manufacturing of boxes of paper or similar material comprising a mandrel for forming the side walls of the box, means for bending the strips of which the side walls are to be built up around said mandrel, means for surrounding said side wall strips with a joint strip, means for inserting the bottom and cover sheets into the shell inside the projecting edges of said joint strip, means for bending down said joint strip toward the bottom and cover sheets, and means for cutting through three sides of said joint strip leaving the fourth side uncut to serve as a hinge for the cover.

2. In a machine for manufacturing paper boxes comprising an up and down reciprocating mandrel for forming the side walls of the box, magazines for storing the strips to form the side walls, reciprocating pliers to feed the strips in position to be caught by the mandrel when descending, molding edges through which the mandrel descends, thereby causing said strips to be bent along three sides of the mandrel, means to bend down on to the mandrel the fourth side of the side walls, means for inserting the bottom and cover sheets, means for fastening said sheets to the shell by a joint strip and means to cut through the joint strip on three sides.

3. In a machine for manufacturing paper boxes comprising an up and down reciprocating mandrel for forming the side walls of the box, means for bending the strips to form the side walls around three sides of the mandrel, reciprocating pushers adapted to bend down the strip on to the fourth side of the mandrel, means for inserting the bottom and cover sheets and for attaching them to the shell by means of a joint strip and means to cut through said joint strip.

4. In a machine for manufacturing paper boxes comprising an up and down reciprocating mandrel for forming the side walls of the box, means for bending down the strips for the side walls around the mandrel, means for surrounding the shell with a joint strip, means for inserting the bottom and cover sheets between the projecting edges of the joint strip, means to expand said edges to allow sufficient clearance for the inserting of said sheets, means for bending down on to the rear side of said sheets the horizontal edges of said joint strip, means for bending down on to the same rear sides the vertical edges of the joint strip, and means for cutting through said joint strip.

5. In a machine for manufacturing paper boxes comprising an up and down reciprocating mandrel for forming the side walls of the box, means for bending the side wall strips around said mandrel, means for surrounding the shell with a joint strip, means for inserting the bottom and cover sheets between the projecting edges of said joint strip, means to expand said projecting edges of the joint strip to facilitate the inserting of the sheets, means to slightly bend the sheets when they pass the expanded strip ends, to prevent the injuring thereof, means to fasten the bottom and cover sheets by bending down the projecting edges of the joint strip on to the rear sides of the sheets and means to cut through the joint strip.

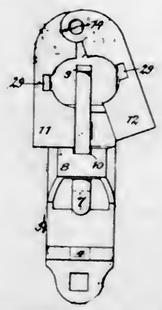
[Claim 6 not printed in the Gazette.]

1,166,779. SEAL-LOCK. CHARLES OISHEI, Buffalo, N. Y., assignor of one-half to Henry V. Conover, Buffalo, N. Y. Filed Apr. 6, 1914. Serial No. 829,820. (Cl. 70—23.)

1. A seal lock comprising a movable locking bolt, two locking arms one of which is movable relatively to the other and to be arranged in the path of the locking bolt when in their operative positions, and seal controlled means for holding one of said locking arms in its operative position.

2. A seal lock comprising a movable locking bolt, two locking arms one of which is movable relatively to the other and to be arranged in the path of the locking bolt when in their operative positions, and seal controlled means for holding one of said locking arms in its operative position, comprising a bodily fixed catch mounted on one of said arms and adapted when free to be moved into its inoperative position and to be moved into an operative position by a seal adapted to be placed between said locking arms, and a bodily movable catch mounted on the other locking arm and adapted to engage the bodily fixed catch.

3. A seal lock comprising a movable locking bolt, two locking arms which are movable one relatively to the other and one of which is adapted to be arranged in the path of said locking bolt when in their operative positions and the opposing edges of said arms being provided with seats for the reception of a seal, a bodily fixed catch movably mounted on one of said locking arms and adapted to be shifted into its operative position by said seal, and a bodily movable catch mounted on the other locking arm and adapted to engage with the bodily fixed catch when the latter is in its operative position.



4. A seal lock comprising a movable locking bolt, two locking arms which are movable one relatively to the other and one of which is adapted to be arranged in the path of said locking bolt when in their operative positions and the opposing edges of said arms being provided with seats for the reception of a seal, a bodily fixed catch movably mounted on one of said locking arms and adapted to be shifted into its operative position by said seal, a bodily movable catch mounted on the other locking arm and adapted to engage with the bodily fixed catch when the latter is in its operative position, a spring for yieldingly holding the bodily fixed catch in its inoperative position, and a spring for yieldingly holding the bodily movable catch in its operative position.

5. A seal lock comprising a movable locking bolt, two locking arms which are movable one relatively to the other and one of which is adapted to be arranged in the path of said locking bolt when in their operative positions and the opposing edges of said arms being provided with seats for the reception of a seal, a bodily fixed catch movably mounted on one of said locking arms and adapted to be shifted into its operative position by said seal, a bodily movable catch mounted on the other locking arm and adapted to engage with the bodily fixed catch when the latter is in its operative position, a spring for yieldingly holding the bodily fixed catch in its inoperative position, and a spring for yieldingly holding the bodily movable catch in its operative position, each of said arms being provided with a pocket for the reception of the catch mounted thereon and the spring associated therewith.

[Claims 6 to 11 not printed in the Gazette.]

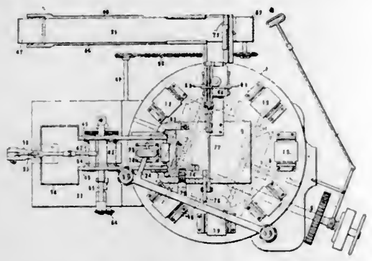
1,166,780. LABELING-MACHINE. LYNDON CONSTANTINE PALMER, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Canada. Original application filed Dec. 17, 1910, Serial No. 597,914. Divided and this application filed Dec. 30, 1911. Serial No. 668,690. (Cl. 91—47.)

1. In an apparatus of the character described, in combination, a glue supply, a glue pad, means adapted to roll on the pad to apply glue thereto, and means to insure rolling motion of the last-mentioned means on the pad.

2. In an apparatus of the character described, in combination, a glue supply, a glue pad, roller means adapted to transfer glue from the supply to the pad, and means to govern the rotation of the roller.

3. In an apparatus of the character described, in combination, a glue supply, a glue pad, roller means adapted to transfer glue from the supply to the pad, and means to direct the rotation of the roller.

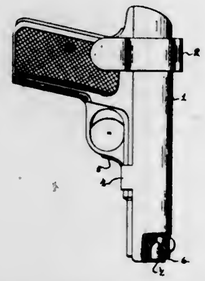
4. In an apparatus of the character described, in combination, a glue supply comprising a delivery roller, means to rotate the delivery roller, a glue pad spaced from the delivery roller, means adapted to transfer glue from the delivery roller to the pad comprising a glue-applying roller, and friction means to direct the rotation of the glue-applying roller in contact with the pad.



5. In an apparatus of the character described, in combination, a glue supply comprising a delivery roller, means to rotate the delivery roller, a glue pad spaced from the delivery roller, means adapted to transfer glue from the delivery roller to the pad comprising a glue-applying roller, a friction wheel on the glue-applying roller, and a plate in the path of the wheel adapted to contact therewith prior to contact of the applying roller and pad.

[Claims 6 to 17 not printed in the Gazette.]

1,166,781. PISTOL-HOLSTER. BYRON B. PARRISH, Mineral Wells, Tex. Filed Jan. 2, 1915. Serial No. 79. (Cl. 224—2.)

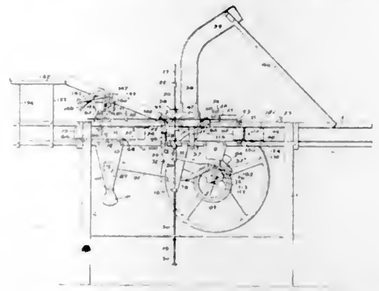


1. A gun-holster comprising a metallic shield comprising two side pieces for the sides of the gun barrel, metallic strips secured at one end to the shield to embrace and support the sides and top of the breech of the gun, and a lip secured to the shield to receive and support the trigger guard, said strips and lip constituting the means for connecting the side pieces of the shield.

2. A gun-holster comprising a metallic shield comprising two side pieces for the sides of the gun barrel, metallic strips secured at one end to the shield to embrace and support the sides and top of the breech of the gun, and a lip secured to the shield to receive and support the trigger guard, said strips and lip constituting the means for connecting the side pieces of the shield in combination with a clasp secured to the shield opposite to said strips and adapted to be traversed by a belt securing the holster to the person.

1,166,782. CARTON-WRAPPING MACHINE. CLARENCE A. PETTERSON, San Anselmo, Cal., assignor to Philip I. Jacoby, San Francisco, Cal. Filed June 29, 1914. Serial No. 848,058. Renewed Nov. 30, 1915. Serial No. 64,331. (Cl. 93—2.)

1. In a carton wrapping machine, a feed chute, a carriage to push the cartons out of the feed chute, means to support the cartons by the ends after being pushed out of the feed chute, means on the carriage to draw a wrapper under the cartons, plungers to move a carton downwardly against said wrapper to fold the same across the bottom and two sides thereof, a plate on the carriage adapted to fold one edge of the wrapper across the top of the carton, means on the carriage to push the carton into the discharge chute thereby folding the remaining edge of the wrapper across the top of the carton, and means to fold the ends of the wrapper across the ends of the carton as the same is being pushed through the discharge chute.



2. A carton wrapping machine comprising two pairs of rails, a two part movable carriage mounted upon said rails, a feed chute, means whereby one part of said carriage will push the cartons out of the feed chute, and means whereby the other part of the carriage will push the carton into the discharge chute after the wrapper has been partially placed therearound.

3. In a carton wrapping machine, a carton feed chute, rails upon which said feed chute is mounted, a two part carriage movable on said rails, one part of said carriage having means to push the cartons out of the feed chute, and means to draw a wrapper under the carton and the other part of the carriage having a plate to push one edge of the wrapper across the top of the carton, blocks at opposite sides of that part of the carriage to push two edges of the wrapper across the ends of the carton and means to push said carton into the discharge chute.

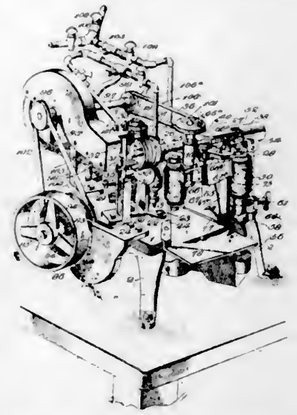
4. A carton wrapping machine comprising a feed chute, means to fold a wrapper around the carton, a discharge chute through which said carton is pushed, means in the discharge chute to fold the ends of the wrapper across the ends of the carton, rolls carrying end seals adjacent each end of the carton passing through said discharge chute, and means to cause said strips of end seals to adhere to the folded wrapper ends on the ends of the cartons as successive cartons are pushed through the discharge chute.

5. In a carton wrapping machine, a feed chute, means to remove the cartons therefrom one at a time, means to fold a wrapper around said carton, a discharge chute into which said cartons are forced, means to fold the ends of the wrappers across the ends of the cartons, rolls carrying strips of end seals at each end of the cartons passing through said chute, and means to cause the strips of end seals to adhere to the end of the cartons as they are pushed through said discharge chute.

[Claims 6 to 14 not printed in the Gazette.]

1,166,783. COLLAR FOLDING AND SHAPING MACHINE. CHARLES J. FRANKARD, Jr., Troy, N. Y. Filed Sept. 10, 1908. Serial No. 452,423. (Cl. 68—9.)

1. In a collar folding and shaping machine, the combination with an iron, preliminary folding and shaping rolls, subsequent folding and shaping means, a guiding chamber interposed between the preliminary folding and shaping rolls and the subsequent folding and shaping means, said chamber being wider and deeper than a collar to permit the latter to curl vertically and horizontally, that portion of the preliminary folded collar which has passed the preliminary folding rolls being free in the chamber, a main guide in advance of the preliminary folding and shaping rolls, a spring member on one side of said guide, and a supplemental guide on the opposite side of said main guide and spaced therefrom.



2. In a collar folding and shaping machine, the combination with an iron, a pair of folding rolls, one of said rolls having a shoulder, the other said roll having its periphery padded, yielding means for normally pressing the padded roll against the shouldered roll, a main guide in advance of said rolls, a supplemental guide adjacent the main guide, a guiding chamber adjacent the rolls, said chamber being wider and deeper than a collar to permit the latter to curl vertically and horizontally, that portion of the collar which passes from between the aforesaid rolls being free in the guiding chamber, and means for drawing a collar from the guiding chamber before being released from said rolls.

3. In a collar folding machine, the combination with a vertically disposed main guide, an inclined supplemental guide spaced from the vertically disposed main guide, and located to one side thereof, a revolving iron provided with a groove to receive the edge of the vertically disposed main guide, a pair of folding rolls adjacent the guides, a guiding chamber adjacent the rolls, means for drawing a collar from the guiding chamber, and means including an inclined guide engaging the top of the fold of the collar for directing and turning the end of said collar downwardly below the portion of the band leaving the means which draw said collar from the guiding chamber.

4. In a collar folding and shaping machine, the combination with movable means for ironing the folded edge of a collar, means for folding and curling the collar, a chamber for allowing the collar to expand while being curled, means for further curling the collar, means pressing against the top of the fold of the collar located adjacent the last mentioned folding and curling means for directing the end of the folded and curled collar out of line with the plane of the top of the portion of the band thereof passing from said latter curling means, and a pair of rolls for drawing the collar from the means pressing against the top of the collar, said latter rolls being spaced from the last mentioned curling means.

5. In a collar folding and shaping machine, the combination with a vertically disposed guide, a revolving iron operating in conjunction with the edge of the vertically disposed guide, means permitting the revolving iron to be raised vertically upon the insertion of the collar between it and the guide, means permitting lateral movement of the revolving iron when a collar is inserted between the revolving iron and the upper edge of the guide, a pair of folding rolls adjacent the guide, a guiding chamber adjacent said rolls, said guiding chamber having a reduced end, means for heating the guiding chamber, and a pair of folding rolls located adjacent the reduced end of the guiding chamber.

[Claims 6 to 19 not printed in the Gazette.]

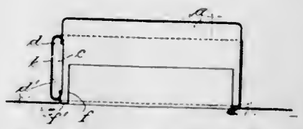
1,166,784. REVULCANIZING RUBBER. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Jan. 25, 1913. Serial No. 744,255. (Cl. 18—52.)

1. The process of revulcanizing rubber, which consists in exhausting, heating, and compressing the material under compacting pressure in excess of that required for consolidating the mass, and finally subjecting the same to a vulcanizing heat.

2. The process of revulcanizing rubber, which consists in exhausting and compressing the same under excessive compacting pressure in the presence of heat below the raised fusing point of rubber under said pressure, and then subjecting the material so treated to a vulcanizing heat.

3. The process of revulcanizing rubber, which consists in exhausting, heating, and compressing the same under excessive compacting pressure to minimize destructive distillation, then subjecting the same to vulcanizing heat, and finally quickly cooling the same to check surface vulcanization.

1,166,785. HAT. OTTMAR REICH, Jr., Lindenberg, Germany. Filed June 2, 1914. Serial No. 842,453. (Cl. 2—114.)

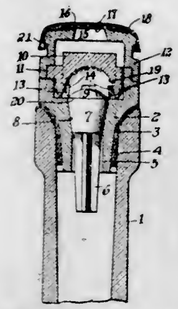


1. The combination with a hat having ventilating communication between the exterior and interior under the bow of the hat band, of means for distending said band to form a through passage from front to rear of said bow.

2. The combination with a hat having ventilating communication between the exterior and interior under the bow of the hat band, of means for distending said band to form a through passage from front to rear of said bow, and a sweat band fitted to form a space between the hat and sweat band having air openings.

3. The combination with a hat having ventilating communication between the exterior and interior under the bow of the hat band, of a bent metal plate forming a through passage from front to rear of said bow under the bow and a sweat band fitted to form a space between the hat and said band and air openings in the lower edge of said sweat band.

1,166,786. NON-REFILLABLE BOTTLE. HARRY W. RIES, Collingswood, N. J. Filed Feb. 8, 1915. Serial No. 6,728. (Cl. 215—63.)



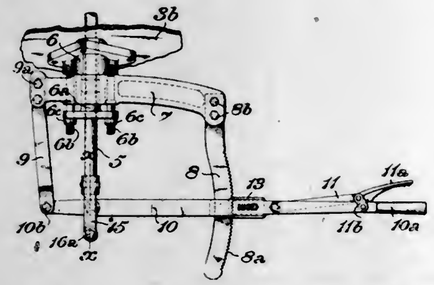
1. In a device of the character stated, a structure adapted to be secured to the neck of a bottle and having an irregularly shaped chamber terminating at the top in a discharge orifice and at the bottom in a conical valve seat, and having within the chamber a shielding central portion in alinement between the discharge orifice and the conical valve seat, and having its under side recessed and

the recessed portion flaring outwardly toward the conical valve seat and providing an annular guide surface, combined with a conical valve having a shank at the bottom extending through the conical valve seat and loosely guided thereby and having its upper or head portion made heavy and bounded by an annular guiding edge adapted to coöperate with the annular flaring guide surface for automatically causing the weighted head portion of the valve piece to slide by gravity and the valve piece to move longitudinally of its length into seating position when the structure and the bottle attached thereto is in substantially a horizontal position.

2. In a device of the character stated, a structure adapted to be secured to the neck of a bottle and having an irregularly shaped chamber terminating at the top in a discharge orifice and at the bottom in a conical valve seat, and having within the chamber a shielding central portion in alinement between the discharge orifice and the conical valve seat, said portion having its under side recessed and the recessed portion flaring outwardly toward the conical valve seat and providing an annular guide surface and in which the outer part of the shielding central portion has a plurality of radial lugs which extend toward the valve seat and have their inner surfaces inclined and continuous with the flaring portion of the under recessed surface, combined with a conical valve having a shank at the bottom extending through the conical valve seat and loosely guided thereby and having its upper or head portion made heavy and bounded by an annular guiding edge adapted to coöperate with the annular flaring guide surface for automatically causing the weighted head portion of the valve piece to slide by gravity and the valve piece to move longitudinally of its length into seating position when the structure and the bottle attached thereto is in substantially a horizontal position.

3. In a device of the character stated, a body adapted to be fixedly secured to the neck of a bottle and having a passage therethrough having its outer end portion outwardly flared to form a substantially conical valve seat, a cap secured to said body provided with a discharge outlet, a valve piece freely movable in said passage and having a stem extending into the portion of the passage beyond the valve seat and said valve piece provided with a substantially conical upper part to form a weighted head adapted to coact with said valve seat to close said passageway in certain positions, said head also having a circumferential edge, a control member fixed between said body and the cap provided with longitudinally arranged ports for the passage of liquid and having a recessed chamber of curved contour inclosing the end of the head of the valve piece in all positions and having its walls outwardly flared to form an inclined part upon which the circumferential edge of the head is adapted to slide and return the valve piece by gravity to its closed position.

1,166,787. THROTTLE-LEVER MECHANISM. FRANK E. RUSSELL, Alameda, Cal. Filed Sept. 9, 1915. Serial No. 49,793. (Cl. 74—39.)



1. In a throttle lever mechanism, the combination of a longitudinally movable throttle stem, a fixed yoke extending transversely thereto, a fulcrum bar secured to one end of said yoke, a segment secured to the opposite end of said yoke, and a throttle lever pivoted to the fulcrum bar and working over the segment.

2. In a throttle lever mechanism, the combination of a longitudinally movable throttle stem, a stuffing box surrounding said stem, a yoke detachably secured to said stuffing box and extending transversely to said stem, a fulcrum bar secured to one end of said yoke, a segment secured to the opposite end of said yoke, and a throttle lever pivoted to the fulcrum bar and working over the segment.

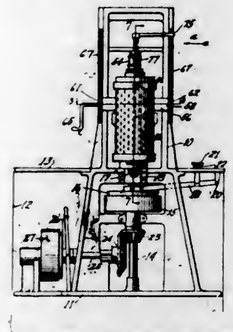
3. In a throttle lever mechanism, the combination of a longitudinally movable throttle stem, a stuffing box surrounding said stem, a gland fitting in the stuffing box, bolts connecting said gland to the stuffing box, a yoke detachably connected to said bolts and extending transversely to the throttle stem, a fulcrum bar secured to one end of said yoke, a segment secured to the opposite end of said yoke, and a throttle lever pivoted to the fulcrum bar and working over the segment.

4. In a throttle lever mechanism, the combination of a longitudinally movable throttle stem, a stuffing box surrounding said stem, a yoke fitting around the stuffing box and extending transversely to the stem, a segment fixed to one end of the yoke, and a throttle lever coupled to the opposite end of the yoke and to the throttle stem.

5. In a throttle lever mechanism, the combination of a longitudinally movable throttle stem, a fixed yoke extending transversely thereto, a fulcrum bar secured to one end of said yoke, a segment secured to the opposite end of said yoke, a throttle lever pivoted to the fulcrum bar and working over the segment, a yoke fixed to the throttle stem, and a link coupled to said yoke and to the throttle stem.

[Claim 6 not printed in the Gazette.]

1,166,788. MACHINE FOR MANUFACTURING CONCRETE PIPE. LEONARD J. SANKER, Los Angeles, Cal. Filed Mar. 30, 1914. Serial No. 828,120. (Cl. 25—30.)



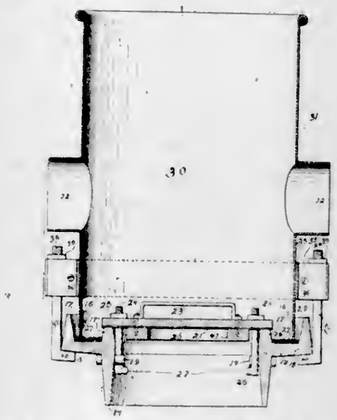
1. A centrifugal molding machine for forming tubular bodies of plastic material, comprising a revoluble base, a divided centrifugal mold member formed with apertured walls having one portion rigidly affixed to said base and the other portion pivotally connected thereto, a mold bottom rigidly attached to the hinged portion of the cylindrical mold body, a reciprocal and non-rotatable core adapted to be positioned in the mold body, a mold top slidably mounted on the core, means for reciprocating said mold top independent of the core, and means for locking the mold members together.

2. In a centrifugal machine for forming tubular bodies of plastic material, a revoluble base, a pivoted cylindrical mold member formed with apertured walls, one portion of which is rigidly affixed to the base and the other portion hingedly connected thereto, a mold bottom secured to the hinged portion of the mold body for shaping the end of the tubular body, a tubular core adapted to be inserted in the mold member, means for slidably engaging the lower end of said core with the mold bottom, a mold top slidable mounted on the core for forming the opposite end of the mold body, means for reciprocating the mold top independent of the core, hinged walls on said core, and manually operated means for rocking said walls to expand the core.

3. In a centrifugal machine for forming tubular bodies of plastic material, a revoluble base, a pivoted cylindrical mold member formed with apertured walls, one portion of which is rigidly affixed to the base and the other portion hingedly connected thereto, a mold bottom secured to the hinged portion of the mold body for shaping the end of the tubular body, a tubular core adapted to be inserted in the mold member, means for slidably engaging the lower end of said core with the mold bottom, a mold top mounted on the core for forming the opposite end of the mold body, means for reciprocating the mold top independent of the core, hinged walls on said core, manually operated means for rocking said walls to expand the core, comprising a rock shaft extending longitudinally of the core, and link connections between said rock shaft and the hinged walls of the core.

4. A machine for forming tubular bodies of plastic material, comprising a revoluble base, a pivoted cylindrical body member formed of apertured walls having one portion rigidly affixed to said base and the other portion hingedly connected thereto, a mold bottom attached to the hinged portion of the mold body, a perforated casing adapted to be encompassed by the mold body, a reciprocal non-rotatable core, hinged walls on said core, a shaft extending into the core, linked connections between the shaft and the hinged portions thereof by which the latter may be rocked to expand the core by actuating the shaft, and a closure for the upper end of the mold body slidably mounted on the core.

1,166,789. IRRIGATING DEVICE. LEONARD SCHLEGEL, Los Angeles, Cal. Filed Mar. 13, 1914. Serial No. 824,410. (Cl. 137—13.)



1. In a low pressure irrigating system a duct terminal having a manually operated removable closure, a portable hydrant constructed and adapted to be fixed on the terminal around the closure, means to so fix the hydrant, said hydrant comprising a central tubular body open clear at each end and having an intermediate outlet close above the ground level, said body being of a length to admit the hand and arm of an operator for the removal of the closure, and to form a water column to prevent overflow at the top.

2. A hydrant of the class described comprising a stationary terminal member having an annular channel concentric therewith, gasket material therein, said terminal member including a peripheral shoulder, a hydrant member comprising a duct member constructed and shaped to set in the channel, having diametrically opposed lateral members, clamping devices slidable therein longitudinally of the duct member and having laterally extended head portions, said clamping members being revoluble, and means for securing the members in clamped engagement with the shoulder of the terminal member as described.

3. In a connection of the class described, an annular seat member having a peripheral shoulder, a tubular duct member having an end portion constructed to set upon the seat, and having opposed ring sections coengaged therewith close to said end, each section having an out turned flange member with inturned ends, the opposed inturned ends being constructed for coëngagement with a bolt member, a bolt member engaged therebetween, means to clamp the flanges against the bolt, said bolt having a head portion to engage said peripheral shoulder, and means to draw the bolt into clamping engagement with the shoulder as described.

1,166,790. LIQUID COMPOSITION FOR LACQUERING PURPOSES. OTTO SCHMIDT, Ludwigshafen-on-the-Rhine, THEODOR EICHLER, Mannheim, and OTTO ALLEMANN, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the Rhine, Germany, a Corporation of Baden. Filed June 5, 1913. Serial No. 771,897. (Cl. 134—79.)

1. As a new composition of matter which is suitable for lacquering purposes, a liquid solution containing a monocyclic ketone possessing more than four and less than seven carbon atoms in the ring.

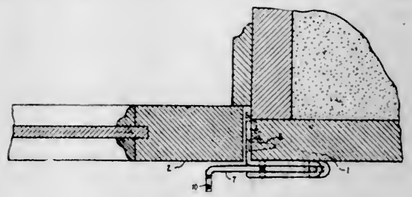
2. As a new composition of matter which is suitable for lacquering purposes, a liquid solution containing nitrocellulose and a monocyclic ketone possessing more than four and less than seven carbon atoms in the ring.

3. As a new composition of matter which is suitable for lacquering purposes, a liquid solution containing nitrocellulose, a hydrocarbon and a monocyclic ketone possessing more than four and less than seven carbon atoms in the ring.

4. As a new composition of matter which is suitable for lacquering purposes, a liquid solution containing nitrocellulose and methyl cyclohexanone.

5. As a new composition of matter which is suitable for lacquering purposes, a liquid solution containing nitrocellulose, methyl cyclohexanone and benzone.

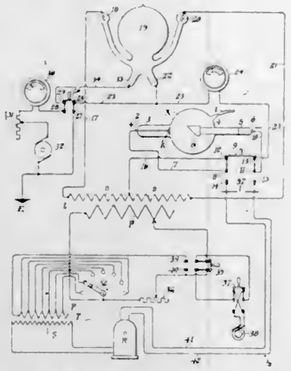
1,166,791. DOOR-FASTENER. FRED SCROGGINS, Browndel, Tex., assignor of forty-nine one-hundredths to J. E. Allison, Harris county, Tex. Filed Feb. 12, 1915. Serial No. 7,696. (Cl. 16—8.)



1. A door fastener comprising a U shaped casing formed of two prongs and having a recess therein, one prong being longer than the other, the elongated prong being bent at a right angle to the casing and having barbs projecting therefrom, a latch whose inner end is provided with a slot, and whose other end is bent at a right angle thereto, a pin passing through this slot, whose ends are fixed to said casing, said latch being adapted to be swung upon said pin into alinement with said recess and its inner end moved into the recess and thereby locked into fixed position relative to said casing.

2. A device of the character described comprising a U shaped casing formed of two prongs and having a recess between said prongs, one of the prongs being elongated beyond the other, the extending part being bent at right angles to the casing, engaging means carried by the bent over portion, a latch, whose inner end is provided with a slot, a bearing member passing through said slot and fixed to the casing, said latch being adapted to be swung around upon its bearing into alinement with said recess and its inner end moved into the recess and thereby locked into fixed position relative to the casing.

1,166,792. EVACUATION PROCESS. HOMER CLYDE SNOOK, Cynwyd, Pa. Filed Oct. 8, 1912. Serial No. 724,557. (Cl. 176—2.)



1. As an improvement in the art of exhausting bulbs, the method which consists in partially exhausting a bulb, passing energy through the remanent atmosphere between an anode and cathode, heating said cathode by said energy, and further exhausting said bulb during passage of energy until the cathode glow fills said bulb and acts upon the inner walls thereof.

2. As an improvement in the art of exhausting bulbs, the method which consists in partially exhausting a bulb, passing energy through the remanent atmosphere between an anode and cathode, heating said cathode by said energy, further exhausting said bulb during passage of energy until the cathode glow fills said bulb and acts upon the inner walls thereof, interrupting exhaustion for a period during which said bulb filling glow continues, and thereafter resuming exhaustion until said glow is reduced.

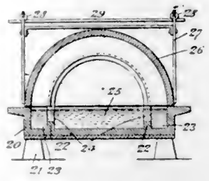
3. As an improvement in the art of exhausting bulbs, the method which consists in partially exhausting a bulb, passing energy through the remanent atmosphere between an anode and cathode, heating said cathode by said energy, further exhausting said bulb during passage of energy until the cathode glow fills said bulb and acts upon the inner walls thereof, interrupting exhaustion for a period during which said bulb filling glow continues, and thereafter resuming exhaustion until said glow disappears.

4. As an improvement in the art of exhausting bulbs, the method which consists in partially exhausting a bulb, passing energy through the remanent atmosphere between an anode and cathode, heating said cathode by said energy, further exhausting said bulb during passage of energy until the cathode glow fills said bulb and acts upon the inner walls thereof, interrupting exhaustion for a period during which said bulb filling glow continues, thereafter resuming exhaustion until said glow is reduced, and exteriorly heating said bulb.

5. As an improvement in the art of exhausting bulbs, the method which consists in impressing electrical potential of three hundred volts or more upon electrodes separated in the atmosphere of a bulb, and reducing the pressure within said bulb to the order of one millimeter of mercury until said potential produces at the cathode a glow substantially one-sixteenth of an inch in thickness for heating said cathode, and thereafter further exhausting said bulb.

[Claims 6 to 23 not printed in the Gazette.]

1,166,793. GLASS-WORKING APPARATUS. ARTHUR E. SPINASSE, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 2, 1909. Serial No. 520,703. (Cl. 49—56.)



1. In a glass furnace structure, a tank for molten glass and a hood for retaining heat above the glass in said tank, said tank and hood being relatively movable and so constructed relatively as to subject all of the glass in the bath to the heated gases in the tank when in operative heating position and to uncover determinate sections of said tank when shifted.

2. In a glass furnace structure, a tank for molten glass, and a hood for retaining a depth of heated gas substantially equal to the depth of the glass above practically all the glass in said tank when in operative position, said tank and hood being relatively movable and so constructed relatively as to uncover determinate sections of said tank and still preclude material escape of heat from the furnace structure.

3. In a glass furnace structure, a tank for molten glass and a heat retaining hood constructed to subject the entire surface of the glass to heated gases within the tank when the hood is in heating position, said tank and hood being relatively movable to uncover a determinate section of said tank, and flanged shelves on the edges of said tank for coaction with the relatively movable edges of said hood to preclude material escape of heat from the furnace.

4. In a glass furnace structure, a tank for molten glass and a traveling heat retaining hood element constructed to maintain heated gases above the entire surface of the glass in the said tank when the hood is in heating position and permitting exposure of certain parts thereof.

5. In a glass furnace structure, a tank for molten glass, a traveling heat retaining hood element constructed to maintain heated gases above all the glass in the tank when in heating position and permitting exposure of certain parts thereof, and track and roller structure for said hood element.

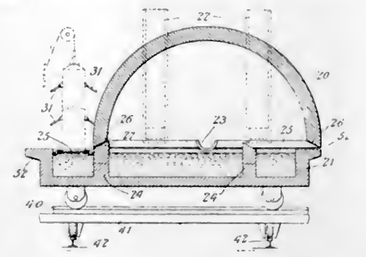
[Claims 6 to 15 not printed in the Gazette.]

1,166,794. GLASS-WORKING APPARATUS. ARTHUR E. SPINASSE, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 30, 1909. Serial No. 525,428. (Cl. 49—56.)

1. In a glass working apparatus, the combination with a tank, of a hood, said tank and hood being relatively movable, partitions in said tank forming a main and drawing compartments, said partitions being extended upward to overlap the end walls of said hood when in certain positions of adjustment.

2. In a glass working apparatus, the combination with a tank, of a hood, said tank and hood being relatively movable, partitions in said tank forming a main and drawing tanks, said partitions being extended upwardly and mitered, the walls of said hood having their edges mitered to overlap said mitered partitions.

3. In a glass working apparatus, the combination with a tank having a main and drawing compartments, of a hood, said tank and hood being relatively movable to alternately expose said drawing compartments, inclined edges on the walls of said hood, and complemental overlapping inclined terminations for directing heat from within said hood downwardly into said drawing compartments.

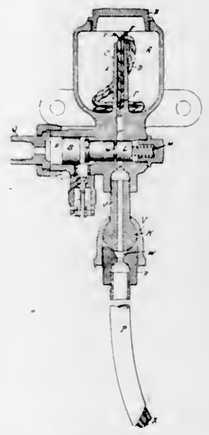


4. In a glass working apparatus, the combination with a tank having a plurality of drawing compartments, a hood, and means constructed to provide for relative movement between the tank and the hood to expose said compartments; the engaging walls of said hood and said tank being constructed with inclined surfaces to deflect the flow of heat toward the surface of the glass within the compartment when the tank and hood are separated.

5. In a glass working apparatus, the combination with a laterally movable tank having dividing walls separating the tank into drawing compartments, of a hood surmounting said tank; means constructed to provide for the lateral movement of the tank beneath the hood to expose said drawing compartments in turn; the engaging walls of said hood and said tank dividing walls having inclined surfaces directed downward to deflect the flow of heat toward the surface of the glass within the compartment when said walls are separated.

[Claims 6 to 14 not printed in the Gazette.]

1,166,795. LUBRICATING DEVICE. JOHN H. VAN SINDEREN, Albany, N. Y. Filed May 18, 1915. Serial No. 28,850. (Cl. 184—3.)



1. In a lubricating device, a receptacle adapted to hold a lubricant; a passageway leading from the upper portion of said receptacle; a pipe registering with said passageway; a delivery pipe; a universal coupling uniting said pipes; a valve adapted to close said passageway; means for operating said valve by the pressure of steam; a spring adapted to operate said valve when the pressure of the steam is reduced; means for causing the lubricant to enter said passageway from said receptacle; with means for delivering the lubricant from said delivery pipe to the part to be lubricated.

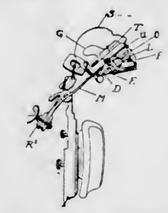
2. A lubricating device comprising a casting in which is an oil receptacle, a passageway leading therefrom, a steam operated valve for opening said passageway, means for closing said passageway by the operation of said valve when steam is shut off; with a delivery pipe; a universal coupling connecting said delivery pipe to said casting; and means for delivering the lubricant from said delivery pipe to the part to be lubricated.

3. A lubricating device comprising a casting in which is an oil receptacle, a passageway leading therefrom, a steam actuated valve adapted to close said passageway, a steam chamber into which said valve projects, a spring impinging on the end of said valve opposite that projecting into the steam chamber, a drain valve connected with said steam chamber; with a delivery pipe; and a universal coupling between said delivery pipe and said casting.

4. A device adapted to lubricate the flange of a wheel, comprising a receptacle for holding a lubricant; a passageway leading therefrom; a steam actuated valve for closing said passageway; a drain valve; means for causing said drain valve to be closed when the passageway is open and to be opened when the passageway is closed; a delivery pipe; a rope of wick contained in and having one end projecting from said delivery pipe; means for holding said wick in the delivery pipe; and means for supporting said delivery pipe in position to have the wick projecting therefrom engage the flange of the wheel.

5. A lubricating device for oiling the flange of a wheel, comprising a casting containing an oil cup, a passageway leading therefrom, a steam actuated valve for opening said passageway, means for closing said passageway by the operation of said valve when the steam is reduced in pressure, a drain valve for removing the condensation of steam; with a delivery pipe; a universal coupling connecting said delivery pipe to said casting; a rope of wick in said delivery pipe; means for holding said wick in place in said pipe, comprising a wire bent about the wick and extending into the pipe beyond the wick; and a screw passing through said delivery pipe and engaging the wire for holding it in the desired position therein.

1,166,796. ANATOMICAL MANIKIN-HEAD. FANEUIL D. WEISSE, New York, N. Y., assignor to Dental Manikin Head Co., Inc., a Corporation of New York. Filed Oct. 1, 1912. Serial No. 723,276. (Cl. 35—16.)



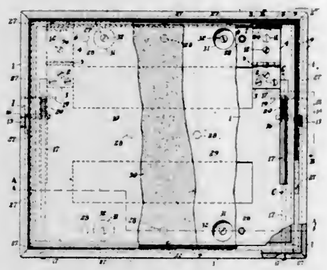
1. In a manikin head of the class described the combination of a skull plate, a head base, artificial jaws, a movable tongue, and a face mask; said mask made of flexible material being attached to the head base and lower jaw and having a mouth opening; said tongue made of flexible material and connected with one of the jaws; said head base covered by said skull plate and said face mask.

2. In a manikin head of the class described the combination of a skull plate, a head base, artificial jaws, a movable tongue, and a face mask; said mask made of flexible material being attached to the head base and lower jaw and having a mouth opening; said head base consisting of light material and said skull consisting of aluminum; said jaws consisting of a metallic casing representing the maxillary bones to which an artificial alveolar process with gums is fastened.

3. In a manikin head of the class described the combination of a skull plate, a base, an articulator, an upper

jaw, a lower jaw, and a tongue; said skull plate helmet like covering the top of the base; said base carrying on top a double ended spring within the skull cavity for locking the jaws and balancing the lower jaw; said articulator consisting of an upper tray and a lower tray provided with receding undercuts in the posterior ends and a horizontally directed set screw in the anterior end for the adjustment of the exchangeable jaw bone parts which lodge teeth, the upper tray firmly attcahed to the base, the lower tray hinged to the upper in an anatomical manner allowing up and down, forward and lateral movements of the lower jaw, the movements controlled by the locking ends of the spring which is attached to the top of the base in sagittal (before-backward) direction; said jaws secured in the articulator trays by means of the undercut in the posterior part and the horizontally directed set screw in the anterior part of the articulator trays, said lower jaw tray having a posterior extension to meet the engaging posterior end of the lock spring which is fastened upon the base, the central part of the lower jaw tray connected with the anterior end of the lock spring by a connecting bar; said tongue fastened to the posterior extension of the lower jaw tray substantially as described and shown.

1,166,797. PHOTOGRAPHIC-PLATE HOLDER FOR USE WITH X-RAYS. GEORGE H. WHITE, Haverford, Pa. Filed June 21, 1913. Serial No. 774,949. (Cl. 250—34.)



1. In an X-ray plate holder, the combination with a base, of a cover, a pressure plate resiliently mounted on said base, a member pivoted to said base between said base and said pressure plate, and a pivotal connection between said cover and said member.

2. A holder for exposing a sensitized member to X-rays comprising the combination with a base, of a cover, said cover and base excluding ordinary light from a sensitized member held between them, a plurality of hinges connecting an edge of said cover and base, each of said hinges comprising members secured respectively to said base and cover and an intermediate member pivoted to said members, a torsion spring whose one end bears against said cover and whose other end bears against the intermediate member of one of said hinges, and a spring intervening between the intermediate member of another of said hinges and said base.

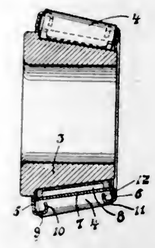
3. In an X-ray plate holder, the combination with a base, of a light proof cover having an inturned marginal flange, and light proofing material resiliently mounted upon said base adapted to be engaged by said flange.

4. In an X-ray plate holder, the combination with a base, of a cover having an inturned flange, said base having a slot communicating with a narrower slot, and resiliently mounted light proofing material disposed in said slot, said flanges adapted to extend through said narrower slot into engagement with said material.

5. In an X-ray plate holder, the combination with a base, of a cover having an inturned flange, and light proofing material resiliently mounted in a slot in said base and engaged by said flange.

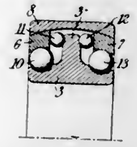
[Claims 6 to 9 not printed in the Gazette.]

1,166,798. ROLLER-BEARING. ARTHUR K. WHITMER, Canton, Ohio. Filed June 28, 1915. Serial No. 36,603. (Cl. 64—62.)



An integral pressed steel cage for a roller bearing, comprising two annular portions, a series of cross-bars formed integral with said annular portions and connected thereto at their inner diameters, downwardly and outwadly extending flanges provided upon said cross bars forming an inwardly tapered roller pocket between each adjacent pair of cross bars, wings formed upon the peripheries of said rings adjacent each extremity of each of said cross bars and adapted to be bent into a position parallel with said cross bars after the rollers have been inserted in the pockets, and an inwardly disposed, tapered retaining portion formed upon each of said wings and adapted to terminate adjacent the outer face of the adjacent cross bar.

1,166,799. BALL-BEARING. SVEN GUSTAF WINGQUIST, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Original application filed Mar. 18, 1911, Serial No. 615,339. Divided and this application filed Sept. 17, 1914. Serial No. 862,181. (Cl. 64—36.)



1. In a ball bearing the combination of four sets of balls, an inner bearing ring for the balls sets, two of the said sets being located on each side of the equatorial center plane of the ring, two outer bearing rings forming races for each pair of ball sets, and an integral outer sleeve, inclosing the said outer bearing rings, there being spherical contact surfaces provided between the said sleeve and outer bearing rings and the sleeve being so shaped with relation to the outer bearing rings, that the latter, forming an angle with the sleeve, can be inserted into and withdrawn from the same, substantially as described and shown in the drawings.

2. In a ball bearing the combination of an inner bearing ring, four sets of balls bearing against the said ring, two of the said sets being subjected substantially to a pressure longitudinally of the shaft and bearing against outer rings respectively, and the other two ball sets subjected substantially to a radial pressure and also bearing against the said outer rings respectively, and an outer integral sleeve inclosing the said outer bearing rings, there being spherical contact surfaces provided between the outer rings and the sleeve and the latter being so shaped that the outer bearing rings located at an angle to the sleeve can be inserted into or withdrawn from the same, substantially as described and shown in the drawings.

3. In a ball bearing the combination of two ball sets, one subjected substantially to the pressure longitudinally of the shaft and the other to the radial pressure, bearing rings for the said ball sets, and an outer, integral sleeve inclosing the said outer bearing rings, there being spheri

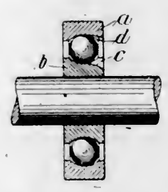
cal contact surfaces provided between the sleeve and the bearing rings and the sleeve being so shaped, that the outer bearing rings, located at an angle to the sleeve can be inserted onto or withdrawn from the same, substantially as described and shown in the drawings.

4. In a self-contained and self-adjusting ball bearing for receiving radial load and axial thrust, the combination with an inner member having a portion provided with an outwardly directed track face for engaging balls sustaining radial load, and a portion provided with a laterally directed track face for engaging balls sustaining axial thrust, a set of balls on each such face, and an outer member having faces for engaging each such ball set, and provided with an outer spherical face, and an integral container for said members having an inner spherical face mating with the outer spherical face thereof, the center point of such spherical faces being located on the axis of the bearing and within the bearing.

5. In a self-contained and self-adjusting ball bearing for receiving radial load and axial thrust, the combination with an inner member having portions provided with outwardly directed track faces for engaging balls sustaining radial load, and a portion provided with opposite laterally directed track faces for engaging balls sustaining axial thrust, a set of balls on each such face, and an outer member having faces for engaging each such ball set, and provided with an outer spherical face, and an integral container for said members having an inner spherical face mating with the outer spherical face thereof, the center point of such spherical faces being located on the axis of the bearing and within the bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,166,800. BALL-BEARING. SVEN GUSTAF WINGQUIST, Gottenborg, Sweden, and EBHARD JUNGHANS, Cannstatt-Stuttgart, Germany; said Wingquist assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Joint-Stock Company of Sweden. Filed Jan. 6, 1915. Serial No. 755. (Cl. 64—36.)

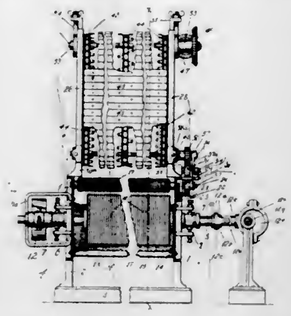


1. A ball bearing having bearing rings formed with grooves the bottoms of which constitute ball-tracks and recesses in the bearing rings forming a side fill-passage, each of said recesses sloping outwardly from the side of the ball-track toward the axis of rotation of the bearing, the bottom of each of said recesses extending to the said bottom of the ball-track groove and being connected thereto so as to maintain the continuity of the bottom of the latter, substantially as and for the purpose set forth.

2. A ball bearing having bearing rings formed with grooves the bottoms of which constitute ball-tracks and recesses in the bearing rings forming a side fill-passage each of said recesses sloping outwardly from the side of the ball-track toward the axis of rotation of the bearing, the bottom of each of said recesses extending to the said bottom of the ball-track groove and being connected thereto so as to maintain the continuity of the bottom of the latter, the curvature of the fill-passage being slighter than the said curvature of the ball-tracks, substantially as and for the purpose set forth.

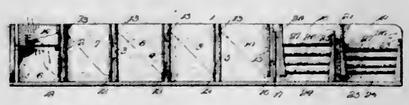
1,166,801. COTTON-REGINNING MACHINE. JOHN W. WRIGHT, Dallas, Tex. Filed Feb. 17, 1913. Serial No. 748,845. (Cl. 13—9.)

1. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of means for communicating a longitudinal reciprocating motion to the gin saw cylinder, a pair of saw cylinders having a comparatively small diameter spaced vertically above the gin saw cylinder and horizontally from each other, a hopper mounted above said smaller cylinders, and adapted to discharge material between the same, the inclined walls of said hopper being formed by downwardly traveling aprons, and means for communicating rotation to the brush cylinder, gin saw cylinder, and two small saw cylinders.



2. In a device of the character described, the combination with a gin saw cylinder and a brush cylinder mounted in the usual coöperative relation, of means for subjecting the saw cylinder to a longitudinal reciprocating motion, a pair of saw cylinders of comparatively small diameter mounted above the first named saw cylinder and spaced horizontally from each other, a hopper mounted above the two small saw cylinders and adapted to discharge material between the same, and means for communicating rotation to the brush cylinder, gin saw cylinder and two small saw cylinders.

1,166,802. FILTERING APPARATUS. JACOB P. ALBERT, Warren, and NATHAN R. BULLER, Harrisburg, Pa. Filed Apr. 21, 1915. Serial No. 22,886. (Cl. 210—5.)



1. A filtering apparatus, comprising a series of tanks separated by detachable hollow partitions, one wall of each partition having inlets adjacent its lower end, and the opposite wall having outlets adjacent its upper end.

2. A filtering apparatus, comprising a series of communicating tanks formed by spaced detachably mounted hollow partitions and the series of filtering chambers arranged in tandem, said hollow partitions having openings adjacent their upper and lower edges communicating respectively with said tanks, two of the opposing walls of the filtering chamber being provided with shelves and a series of foraminated supports arranged upon said shelves, filtering beds carried by said supports, one of said tanks being provided with an initial straining device, and one of said filtering chambers being provided with an outlet.

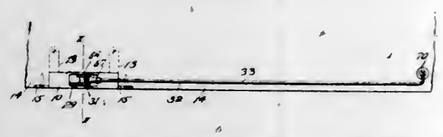
3. A filtering apparatus comprising a trough having a series of detachable hollow partitions forming a plurality of settling tanks and filtering chambers, said tanks and chambers being in communication with each other adjacent their upper and lower edges, the partitions forming the filtering chambers being stepped, a series of superposed supports mounted upon said steps, and a series of superposed filtering beds arranged upon said supports.

4. A filtering apparatus, comprising a trough having a series of detachable hollow partitions forming a plurality of settling tanks, and a series of staggeredly arranged partitions forming filtering chambers, said hollow partitions being provided with openings adjacent their top and bottom communicating with the respective tanks, the other partitions of said trough forming zig-zag passageways for conveying the fluid upwardly through the superposed filtering beds.

5. A filtering apparatus comprising a trough having spaced vertically disposed cleats secured to the inner face of the walls thereof, hollow partitions having their ends arranged over said cleats, the walls of said partitions being provided with spaced openings in different horizontal planes, and a series of filtering chambers arranged in line with said trough and communicating therewith, said filtering chambers carrying superposed foraminated supports, each support having a filtering bed mounted thereon.

[Claim 6 not printed in the Gazette.]

1,166,803. LEAF-TURNER. JOHN B. ALBERT, Danbury, Conn., assignor of one-half to Harris Botler, Danbury, Conn. Filed Sept. 30, 1914. Serial No. 864,279. (Cl. 84—17.)



1. In a device of the character described, the combination of a casing, a carrier supported to swing on said casing, means for rotating said carrier, a pump having an operating arm and connected to said carrier, a latch adapted to hold the arm in one position, and means for releasing the latch and for moving the operating arm during the same movement thereof.

2. In a device of the character described, the combination of a casing, a pneumatic carrier supported to swing horizontally on said casing, a pump having an operating arm and connected to said carrier, a latch adapted to hold the arm in one position, and means for releasing the latch and for moving the operating arm as well as moving the carrier.

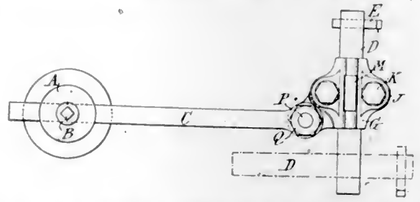
3. In a device of the character described, the combination of a pivotally held carrier, means for moving said carrier, a pump having an operating arm and connected to said carrier, means adapted to hold the arm in one position, and means for releasing said first-mentioned means and for moving the operating arm simultaneously with the movement of the carrier.

4. In a device of the character described, the combination of a casing, a carrier pivotally supported to swing horizontally on said casing, a pump having a cylinder, a piston, and an operating arm and connected to said carrier, a latch adapted to hold the arm in one position, and means for releasing the latch and for moving the operating arm downwardly as well as moving the carrier and during the same movement of said means.

5. In a device of the character described, the combination of a support, a carrier movably held on said support to swing horizontally in the arc of a circle, a mutilated gear mounted on the support and having teeth adapted to mesh with a part movable with the carrier, a drum forming a part of the gear, a spring located in the drum having one end held to the drum and its other end held to a part fixed relatively to the drum, said spring having its tension increased during the movement of said gear and tending normally to force the gear in one direction, a lever having teeth to engage the teeth of the mutilated gear to move the same, means for moving said lever, and means forming a part of the carrier for engaging a leaf and causing the same to move therewith.

[Claims 6 to 17 not printed in the Gazette.]

1,166,804. BAR-HOLDER FOR LATHES. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Feb. 12, 1912. Serial No. 677,158. (Cl. 29—98.)

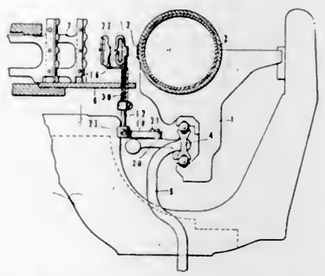


1. A bar holder for lathes having a shank adapted for attachment to the lathe post and a clamping device including jaws and means for clamping the bar between said jaws, said clamping device being adjustable angularly relatively to the shank, and means for fastening said clamping device in such angular positions on the shank, said fastening means serving independently of the clamping means for positively locking the clamping device against the strains of use.

2. A bar holder for lathes having a shank adapted for attachment to the lathe post and a clamping device for clamping the bar, said clamping device comprising a pair of grooved jaws extending laterally beyond the bar at both sides and bolts at opposite sides of the bar engaging said lateral extensions for clamping said jaws together on the bar, and additional means for fastening one of said jaws in different angular positions on the shank.

3. A bar holder for lathes having a shank adapted for attachment to the lathe post and a clamping device for clamping the bar, said clamping device comprising a pair of grooved jaws extending laterally beyond the bar at both sides and bolts at opposite sides of the bar engaging said lateral extensions for clamping said jaws together on the bar, one of said jaws being fastened by a hinge joint to the shank so as to be adjustable angularly, and means for fastening said clamping device in such angular positions on the shank, said fastening means serving independently of the clamping means for positively locking the clamping device against the strains of use.

1,166,805. TYPE-WRITING MACHINE. NILS H. ANDERSON, Middletown, Conn., assignor to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Mar. 29, 1913. Serial No. 757,487. (Cl. 197—170.)



1. In a typewriting machine, in combination, a platen, a type carrier adapted to coact therewith, ribbon supporting means located at opposite sides of the printing point, ribbon guides mounted upon the ribbon supporting means adapted to swing about vertical axes toward and from the printing point, and spring means interposed between the ribbon supporting means and the ribbon guides for yieldingly holding said guides in normal position.

2. In a typewriting machine, in combination, a shiftable platen carriage, a shift rail along which said carriage is adapted to travel, supporting means mounted upon said shift rail, and ribbon guides rotatable about vertical axes mounted upon said supporting means.

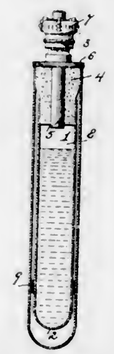
3. In a typewriting machine, in combination, a shiftable platen carriage, a shift rail along which said carriage is adapted to travel, supporting means mounted upon said shift rail, and independently operating ribbon guides mounted at opposite sides of the printing point upon said supporting means.

4. In a typewriting machine, in combination, a shiftable platen and platen carriage, a shift rail along which said carriage is adapted to travel, a bracket projecting from said shift rail, upwardly projecting posts on said bracket, and ribbon guides mounted upon said posts adapted to swing toward and from the platen.

5. In a typewriting machine, in combination, a shiftable platen and platen carriage, a shift rail along which said carriage is adapted to travel, a bracket projecting from said shift rail, upwardly projecting posts on said bracket, and ribbon guides mounted thereon to swing independently of each other toward and from the printing line.

[Claims 6 to 25 not printed in the Gazette.]

1,166,806. CONTAINER FOR PERFUME AND THE LIKE. LOUIS V. ARONSON, Newark, N. J. Filed Oct. 20, 1913. Serial No. 796,102. (Cl. 215—71.)



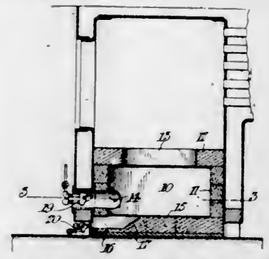
1. In a device of the character described, the combination of a protector casing, a bottle within said casing located in close proximity thereto, an apertured cork secured to the open end of the bottle, whereby said bottle is held circumferentially free within said casing, and a tubular, heated springling device secured to said cork, said sprinkling device being provided with an annular flange adapted to form a closure for the open end of said casing.

2. In a device of the character described, the combination of a protector casing, a bottle within said casing located in close proximity thereto, a rubber band fitted over said bottle and acting as a buffer between said bottle and said casing, an apertured cork secured to the open end of the bottle, whereby said bottle is held circumferentially free within said casing, and a tubular headed sprinkling device secured to said cork, said sprinkling device being provided with an annular flange adapted to form a closure for the open end of said casing.

1,166,807. FURNACE. WILLIAM N. BEST, New York, N. Y. Filed Feb. 17, 1915. Serial No. 8,967. (Cl. 158—1.)

1. A furnace having a substantially round combustion chamber, a passage extending tangentially through the side wall thereof, a second passage constituting in part a groove within the bottom wall thereof, said groove at its inner end having an inclined wall for deflecting gases entering said second mentioned passage into the path from the first mentioned passage, and separate burners for delivering atomized liquid fuel through said passages.

2. A furnace having a substantially round combustion chamber, a passage extending tangentially through the side wall thereof, a second passage constituting in part a groove within the bottom wall thereof and disposed directly beneath said first mentioned passage and substantially parallel thereto, said groove at its inner end having an inclined wall for deflecting gases entering said second mentioned passage into the path from the first mentioned passage, and separate burners for delivering atomized liquid fuel through said passages.

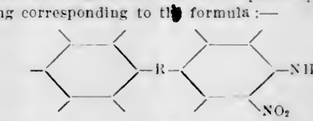


3. A furnace having a combustion chamber, two passages leading in the same general direction through the wall thereof to said chamber, a main burner delivering atomized liquid fuel through one of said passages, an auxiliary burner for delivering atomized liquid fuel through the other of said passages, and a baffle presenting an inclined surface closely adjacent to said wall at the inner end of the last mentioned passage for deflecting the flame from the auxiliary burner into the path of the flame from the main burner closely adjacent to the inner surface of said wall at the inner end of said first mentioned passage.

4. A furnace having a main liquid atomizing burner and an auxiliary atomizing burner operating to deliver fuel through the wall thereof into the combustion chamber and a baffle presenting an inclined surface adjacent to the inner surface of said wall for deflecting the flame from the auxiliary burner into the path from the main burner closely adjacent to the inner surface of said wall at the inlet from said main burner.

1,166,808. PIGMENT. LOUIS BLANGEY, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Feb. 26, 1914. Serial No. 821,205. (Cl. 8—1.)

1. The new composition of matter containing a metal compound as substratum and a compound possessing a grouping corresponding to the formula :—



in which R is a polyatomic group containing oxygen and also containing less than 4 atoms, which composition of matter is adapted for use as a pigment, has a clear yellow shade, possesses good coloring power and is fast against the action of water, lime, alcohol and light.

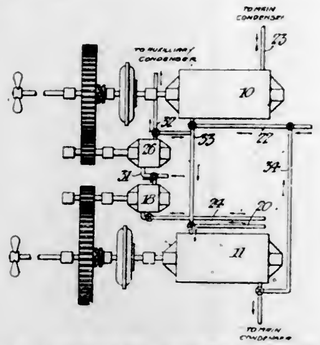
2. The new composition of matter containing 3.3'-dinitro-4.4'-diamino-sulfobenzid and a metal compound as substratum, adapted for use as a pigment, having a yellow shade, possessing good coloring power and being fast against the action of water, lime, alcohol and light.

3. The new composition of matter containing 3.3'-dinitro-4.4'-diamino-sulfobenzid and aluminium hydrate, adapted for use as a pigment, having a yellow shade, possessing good coloring power and being fast against the action of water, lime, alcohol and light.

1,166,809. TURBINE POWER PLANT. HEINRICH ADAM BÖHM, Hamburg, Germany. Filed June 20, 1914. Serial No. 846,385. (Cl. 121—58.)

1. A power plant including two driven members, two main turbines, two hydraulic power transmitters each serving to transmit power from a turbine to its corresponding driven member, an auxiliary turbine, means for transmitting the power from said last mentioned turbine to one

driven member and means for delivering the exhaust from said last mentioned turbine to the main turbine of the other shaft.



2. A power plant for ships including a plurality of propellers, a corresponding number of main turbines, a plurality of hydraulic power transmitters each serving to transmit power from a turbine to its corresponding propeller, an auxiliary turbine, means for transmitting the power from said last mentioned turbine to one propeller and means for delivering the exhaust from said last mentioned turbine to the main turbine of the other shaft.

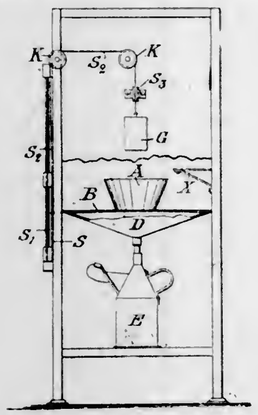
3. A power plant for ships, including a plurality of propellers, a corresponding number of independently operable main turbines, a corresponding number of hydraulic power transmitters each being disposed between a turbine and its corresponding propeller, an auxiliary turbine, and detachable driving connections for transmitting the power from asid last mentioned turbine to one of said propellers.

4. A power plant for ships, including two propellers, two main turbines, and two hydraulic power transmitters each serving to transmit power from a turbine to its corresponding propeller, an auxiliary turbine, and detachable power connections for said last mentioned turbine whereby one of said propellers may be driven by either its main turbine or by said auxiliary turbine, or both.

5. A power plant including two driven members, two main turbines, each delivering its power to the corresponding driven member, an auxiliary turbine, and detachable power connections for operatively connecting said last mentioned turbine to drive one of said driven members.

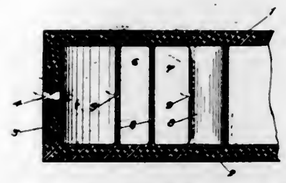
[Claims 6 to 14 not printed in the Gazette.]

1,166,810. WASHSTAND WITH FIRE-EXTINGUISHER. ROBERT BOSCH, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed July 19, 1911. Serial No. 639,392. (Cl. 169—13.)



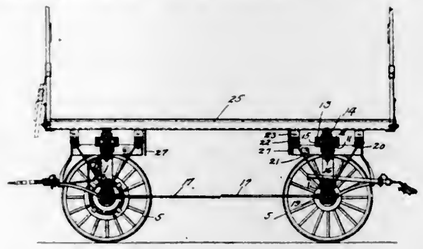
In a washstand, in combination, a washing compartment having an opening at the front thereof for affording access to the compartment, guides positioned on opposite sides of the opening, a door slidingly engaging the guides and adapted to slide upwardly thereon to close the opening to thereby render the compartment substantially airtight, pulleys secured to the washstand above the opening, supporting members secured to the door and passing over the pulleys, weights secured to the supporting member and tending to fall to raise the door to its closed position, and easily ignitible means extending through the compartment and normally supporting the weights so as to restrain them from closing the door, until the ignitible means is burned by flames within the compartment.

1,166,811. LANDING-MAT. WILLIAM F. BOWERS, San Francisco, Cal. Filed Mar. 10, 1915. Serial No. 13,537. (Cl. 5—1.)



A rubber landing mat comprising top, bottom and side walls, one of said walls having a vent, the top and bottom walls being spaced from one another, and a series of tubular members interposed between the top and bottom walls and united at opposite ends to the same, whereby any lateral yielding of the tubular member at the top and bottom is resisted, and said tubular members having intermediate the ends thereof a vent.

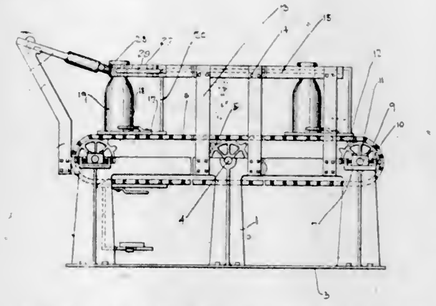
1,166,812. TRUCK. FRANK V. CARMAN, Oakland, Cal. Filed Aug. 24, 1914. Serial No. 858,243. (Cl. 21—24.)



1. In a truck of the class described, the combination with a body, of wheeled supporting trucks therefor, a bolster arranged on one of said trucks, a pivotal connection between the bolster and the body comprising coöperating members carried by the bolster and body, a race-way arranged in one of the coöperating members, roller bearings in said race-way, a continuous annular bearing ring having a relatively broad smooth bearing surface and a downwardly projecting peripheral flange constituting a strengthening means therefor, entirely encircling the connecting members and spaced therefrom, brace rods secured to the truck and extending upwardly to a plane substantially the same as the bolster adapted to be secured to the bearing ring to provide a support for the weaker portion of the said ring, and to leave the relatively wide surface of the bearing ring smooth, and a series of spaced brackets depending from the body for engagement with the smooth surface of the bearing ring adapted to provide a stabilizer for the body.

2. In a truck of the class described, in combination with the body of wheeled supporting trucks therefor, a bolster arranged on one of said trucks, a pivotal connection between said bolts and body comprising coöperating members carried by the bolster and body, a race-way in one of said members, antifriction rollers in said race-way, a continuous bearing ring spaced from said connecting members and entirely encircling the same, said bearing member being of substantially an inverted L shaped formation and having a relatively broad bearing surface and a downwardly projecting peripheral flange constituting a strengthening means therefor, bracing means for said bearing member comprising brace rods attached to each side of the truck and inclining upwardly, and being secured at their free ends to the bearing ring, members connected by the body adapted to engage the relatively broad bearing surface of the ring to provide a stabilizer for the said body and an outwardly extending stop rigidly fastened to a peripheral flange of the bearing ring, and a vertically extending bearing projecting from the body and engaging the stop to limit the turning movement of the stop.

1,166,813. WIRE-TWISTER MACHINE. CHARLES W. CASTO, Washington, Pa., assignor of one-third to Henry Finkel and one-third to Abraham Goldfarb, Washington, Pa. Filed Feb. 3, 1915. Serial No. 5,830. (Cl. 140—94.)



1. A neck wire twister machine comprising a carrier including a spring-controlled means constituting a seat for a neck wire, said carrier further having means for securing a bottle thereto, a conveyer for shifting said carrier, and a spring-controlled pivoted wire twister element arranged in the path of said carrier and receiving the free ends of the neck wire for twisting it during the travel of the carrier.

2. A neck wire twister machine comprising a carrier including a spring-controlled means constituting a seat for a neck wire, said carrier further having means for securing a bottle thereto, a conveyer for shifting said carrier, and a spring-controlled pivoted wire twister element arranged in the path of said carrier, and receiving the free ends of the neck wire for twisting it during the travel of the carrier, and spring-controlled deflector arms arranged in the path of the carrier and constituting means for projecting the ends of a neck wire in said twister element.

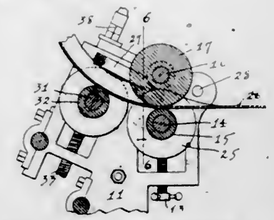
3. A neck wire twister machine comprising a carrier including a spring-controlled means constituting a seat for a neck wire, said carrier further having means for securing a bottle thereto, a conveyer for shifting said carrier, and a spring-controlled pivoted wire twister element arranged in the path of said carrier and receiving the free ends of the neck wire for twisting it during the travel of the carrier, said twister element including a longitudinal shiftable and spring-controlled rotatable twister having notches for the reception of the ends of the neck wire.

4. A neck wire twister machine comprising a carrier including a spring-controlled means constituting a seat for a neck wire, said carrier further having means for securing a bottle thereto, a conveyer for shifting said carrier, and a spring-controlled pivoted wire twister element arranged in the path of said carrier, and receiving the free ends of the neck wire for twisting it during the travel of the carrier, and spring-controlled deflector arms arranged in the path of the carrier and constituting means for projecting the ends of a neck wire in said twister element, said twister element including a longitudinal shiftable and spring-controlled rotary twister having notches for the reception of the ends of the neck wire.

5. A neck wire twister machine comprising a carrier including a spring-controlled means constituting a seat for a neck wire, said carrier further having means for securing a bottle thereto, a conveyer for shifting said carrier, and a spring-controlled pivoted wire twister element arranged in the path of said carrier and receiving the free ends of the neck wire for twisting it during the travel of the carrier, said twister element capable of being shifted out of the path of the carrier, and means for returning said twister element to a position in the path of a carrier.

[Claims 6 to 10 not printed in the Gazette.]

1,166,814. METAL-FORMING MACHINE. WILLIAM CLEESATTEL, Buffalo, N. Y. Filed Mar. 9, 1915. Serial No. 13,150. (Cl. 153—58.)



1. In a machine of the type described, in combination with positively and equally driven male and female roll-dies, end-flanges upon said female die overlapping the ends of the male die with sufficient intervening space only for the side flanges of the metal plate and flange bars pivotally secured to a fixed portion of the machine having their free ends riding upon the flange ends of said female roll-die and spaced equidistantly with said end flanges, to insure the perfect formation of the side flanges of the plate.

2. In a machine of the type described, the combination of positively and equally-driven male and female roll-dies, said female die having end flanges overlapping the ends of the male die with sufficient intervening space only for the side flanges of the metal plate and flange bars pivotally secured to a fixed portion of the machine, said parts coacting to produce the transverse shaping, with means for curving the plate longitudinally immediately following the transverse shaping comprising an idler-roll mounted in adjustable bearings to project said idler roll to a greater or less degree into the path of travel of the plate through said dies and means for adjusting said idler-roll.

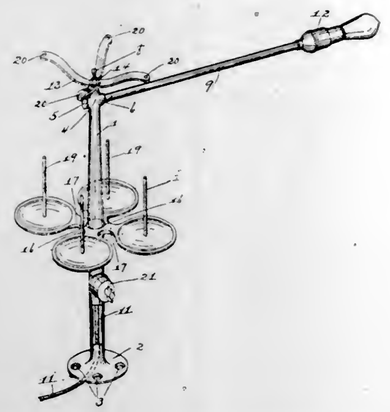
1,166,815. ELECTRIC-LAMP FIXTURE. ORVILLE E. COOK, Troy, N. Y., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed May 5, 1915. Serial No. 25,880. (Cl. 240—2.)

1. A device of the class described comprising a hollow post having a base provided with means whereby it can be attached to a sewing-machine table and having a head provided with a lateral opening, and an offset located intermediately of said base and head, a spool-stand mounted upon said offset on the post, an electric-lamp-supporting pipe mounted in said lateral opening in the head of the post in communication with the hollow interior thereof, and a thread-guide mounted upon the head of the post.

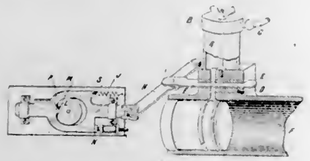
2. A device of the class described comprising a hollow post having a base provided with means whereby it can be attached to a sewing-machine table, a head provided with a lateral opening, and, intermediately of said base and head, a shelf, and adjacent to said shelf an offset, a spool-stand apertured to receive the offset-portion of said post and adapted to rest upon said shelf, an electric-lamp-supporting pipe secured in said lateral opening in the head of the post in communication with the hollow interior thereof, and a thread-guide mounted upon the head of the post.

3. A device of the class described comprising a hollow post having a base provided with means whereby it can be attached to a sewing-machine table, a head formed

by oppositely disposed hollow lateral projections on the post, one of said projections being open, said head being provided with a screw-threaded aperture in its top, said post having intermediately of its base and head a shelf and adjacent thereto oppositely disposed offsets in line with the respective offsets forming the head, a spool-stand adapted to rest upon said shelf and apertured to fit the offset-portion of the post adjacent thereto, an electric-lamp-supporting pipe mounted in the hollow projections in the head of the post and projecting out through said open projection, the inner end of said pipe being provided with a lateral wire-receiving opening communicating with the hollow interior of the post, a set-screw fitting the screw-threaded aperture in the top of the post engageable with the inner end of said pipe, a lock-nut on said set-screw, and a thread-guide apertured to receive said set-screw and clamped between said lock-nut and the top of the head.



1,166,816. APPARATUS FOR LUBRICATING INTERNAL-COMBUSTION ENGINES. CHARLES HAMLET COOPER, Wimbledon, England. Filed June 19, 1915. Serial No. 35,147. (Cl. 184—18.)

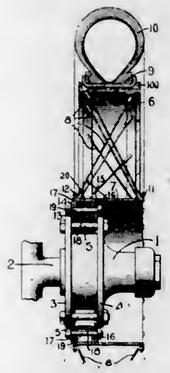


1. In apparatus for lubricating the cylinders of internal combustion engines; a reservoir containing lubricant under pressure, said reservoir having a passage therefrom communicating with the interior of the cylinder, a valve to control said passage, a shaft receiving rotary motion from the engine, a rotary cam fixed on said shaft, means coacting between said cam and said valve to operate said valve in order to admit lubricant to the cylinder intermittently at a predetermined position in the cycle of movements of the piston, and means for regulating the extent of movement of said valve to control the quantity of lubricant admitted.

2. In apparatus for lubricating the cylinders of internal combustion engines; a reservoir containing lubricant under pressure, said reservoir having a passage therefrom communicating with the interior of the cylinder, a valve to control said passage, a shaft receiving rotary motion from the engine, a rotary cam fixed on said shaft, means coacting between said cam and said valve to operate said valve in order to admit lubricant to the cylinder intermittently at a predetermined position in the cycle of movements of the piston, a spring to move said valve in one direction against the action of said cam, and an adjustable abutment to limit the motion of said valve to control the quantity of lubricant admitted.

3. In apparatus for lubricating the cylinders of internal combustion engines; a reservoir containing lubricant under pressure, said reservoir having a passage therefrom communicating with the interior of the cylinder, a valve to control said passage, a shaft receiving rotary motion from the engine, a rotary cam fixed on said shaft, a slide moved in one direction by said cam, a spring to hold said slide against said cam, an adjustable abutment to regulate the extent of movement of said slide, and means coacting between said slide and said valve to operate said valve in order to admit lubricant to the cylinder intermittently at a predetermined position in the cycle of movements of the piston.

1,166,817. WHEEL. WALTER E. COPITHORN, Natick, Mass. Filed Jan. 11, 1915. Serial No. 1,512. (Cl. 21—31.)



1. In a wheel, the combination with a wheel hub having rigid therewith two separated flanges, of a wheel body detachably secured to both of said flanges.

2. In a wheel, the combination with a wheel hub having two separated flanges, of a wheel body provided with a hub portion, presenting an interior rib and a laterally-projecting flange and means to detachably secure said rib to both of said flanges.

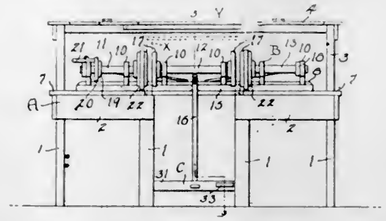
3. In a wheel, the combination with a wheel hub having two separated flanges, of a wheel body presenting a hub portion provided with an interior rib encircling the space between said flanges, and means to detachably connect said rib to both of said flanges.

4. In a wheel, the combination with a wheel hub having two separated flanges, of a wheel body presenting a hub portion provided with an interior rib, connecting rings secured to the flanges of the hub and to said rib and securing the wheel body to the hub.

5. In a wheel, the combination with a wheel hub having two separated flanges, of two annular plates overlying and secured to said flanges, a wheel body provided with a portion received between said plates, and means for clamping said portion to said plates.

1,166,818. BOX-MAKING MACHINE. GEORGE A. COX, Brewster, Wash. Filed Apr. 21, 1915. Serial No. 22,829. (Cl. 144—295.)

1. A box making machine including a stand provided with a box end supporting sill, a swinging frame mounted upon the stand, a clamping head carried by the swinging frame, a shaft mounted upon the swinging frame to have both a rotary and a longitudinal movement, a clamping head carried by the shaft and arranged for cooperation with the before mentioned clamping head to grip a box end resting upon the supporting sill of the stand, means for moving the shaft longitudinally to bring the clamping head into operative position, and means for rotating the shaft to turn the box ends when the swinging frame is manipulated to move the same away from the supporting sill.



2. A box making machine including a stand provided with a box end supporting sill, a swinging frame mounted upon the stand, a clamping head rotatably mounted upon the swinging frame, a shaft mounted upon the swinging frame to have both a sliding and a rotary movement, a clamping head carried by the shaft and arranged for cooperation with the before mentioned clamping head to grip a box end resting upon the supporting sill of the stand, means for moving the shaft to bring the clamping heads into operative position, means for swinging the frame to move the box end away from the supporting sill, and means actuated by the swinging of the frame to rotate the box end into a different position.

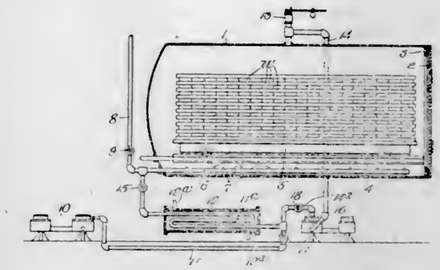
3. A box making machine including a stand provided with a box end supporting sill, a swinging frame mounted upon the stand, a pair of rotatably mounted clamping heads carried by the swinging frame and arranged to grip a box end resting upon the supporting sill of the stand, means for swinging the frame to move the box end away from the supporting sill, and means actuated by the swinging of the frame to rotate the clamping heads and turn the box ends into a different position.

4. A box making machine including a supporting frame formed with a box end supporting sill, a swinging frame mounted thereon, a pair of rotatably mounted clamping heads carried by the swinging frame and arranged to grip a box end resting upon the supporting sill of the stand, means for swinging the frame to move the box end away from the supporting sill, a drum carried by the swinging frame and having a pawl and ratchet connection with one of the clamping heads, and a flexible cable wound upon the drum and connected to the stand so that the swinging movement of the frame operates to rotate the clamping heads and turn the box ends into a different position.

5. A box making machine including a stand provided with a box end supporting sill, a swinging frame mounted upon the stand, a rotatably mounted clamping head carried by the swinging frame, a shaft mounted upon the swinging frame to have both a rotary and a sliding movement, a clamping head applied to the shaft and arranged for coöperation with the clamping head of the frame to grip a box end resting upon the supporting sill of the stand, means for sliding the shaft to bring the clamping heads into operative position, means for swinging the frame to move the box end away from the supporting sill, a drum loosely mounted upon the shaft, a pawl and ratchet connection between the drum and the clamping head of the shaft, a flexible cable wound upon the drum and connected to the stand so that the swinging movement of the frame operates to unwind the cable from the drum and rotate the clamping heads to bring the box end into a different position, and means for causing the drum to rotate and take up the slack in the flexible cable upon the return movement of the swinging frame.

[Claims 6 to 9 not printed in the Gazette.]

1,166,819. METHOD OF TREATING WOOD AND OTHER POROUS MATERIALS. ASHTON P. DERBY and JAMES H. DARGIE, Gardner, Mass., assignors to P. Derby & Company, Inc., Gardner, Mass., a Corporation of Massachusetts. Filed June 11, 1915. Serial No. 33,621. (Cl. 99—12.)



1. The method of seasoning wood, which consists in subjecting the wood in a closed chamber to mixed air and steam in heated condition, alternately and repeatedly raising and lowering the pressure of said mixed hot air and steam, and thereafter discontinuing the supply of steam and finishing the drying by subjecting the wood to a treatment of hot air.

2. The method of seasoning wood, which consists in subjecting the wood in a closed chamber to mixed air and steam in heated condition, alternately and repeatedly raising and lowering the pressure of said mixed, hot air and steam, and thereafter discontinuing the supply of steam and introducing into said chamber hot air, and alternately and repeatedly raising and lowering the pressure of said hot air.

3. The method of seasoning wood, which consists in subjecting the wood in a closed chamber to mixed air and steam in heated condition, alternately and repeatedly raising the pressure of said mixed hot air and steam and suddenly blowing off, and thereafter discontinuing the supply of steam and continuing the drying by subjecting the wood to a treatment of hot air.

4. The method of seasoning wood, which consists in subjecting the wood in a closed chamber to mixed air and steam in heated condition, alternately and repeatedly raising the pressure of said mixed hot air and steam and suddenly blowing off, and thereafter discontinuing the supply of steam and introducing into said chamber hot air, and alternately and repeatedly raising the pressure of said hot air and suddenly blowing off.

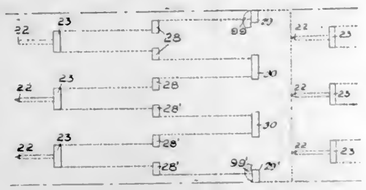
5. The method of seasoning wood, which consists in subjecting the wood in a closed chamber to mixed air and steam in heated condition, alternately and repeatedly raising the pressure of said mixed hot air and steam and suddenly blowing off, and thereafter discontinuing the supply of steam and introducing into said chamber hot air, and alternately and repeatedly raising the pressure of said hot air and suddenly blowing off, and maintaining a forced circulation of the air and the progressively diminishing residue of steam, during said air pressure and blowing off treatment.

[Claim 6 not printed in the Gazette.]

1,166,820. METHOD OF EXCAVATING EARTH. HENRY L. DOHERTY, New York, N. Y. Filed May 15, 1911. Serial No. 627,132. (Cl. 37—24.)

1. The process of excavating earth which comprises first forming an overhanging working face; then making a longitudinal cut in said face; then making a cut along lines each side and parallel to the first cut and also a cut parallel to the working face between the said lines whereby the first cut is widened into a groove; then further widening the groove by making a vertical cut along a line on each side of the groove in the working face and by making cut each at an angle to said last line and extend-

ing to the first two lines; and collecting and conveying away the earth thus severed from said working face.



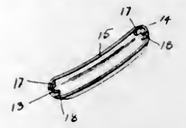
2. The process of excavating earth which comprises first forming an overhanging working face; then making a longitudinal cut in said face; then making a cut along lines each side and parallel to the first cut and also a cut parallel to the working face between the said lines whereby the first cut is widened into a groove; then further widening the groove by making a vertical cut along a line on each side of the groove in the working face and by making cuts each at an angle to said last line and extending to the first two lines; then paring the earth from the opposite walls of said further widened groove; and collecting and conveying away the earth thus severed from said working face.

3. The process of excavating earth which comprises first forming a cut with an overhanging working face; then making a plurality of furrows to a predetermined depth in said face; then forming grooves by making a plurality of pairs of cuts each parallel to said first furrows and to substantially the same depth, the cuts of each pair straddling one of said first furrows; severing the earth substantially parallel to the working face between the cuts of each pair by cutting on a line extending inwardly from each of last said cuts toward the straddled furrow and substantially parallel with the working face; then widenings the so-made grooves by cutting away portions of opposite walls, thus leaving on said overhanging working face a plurality of downwardly projecting longitudinal ribs; then eliminating such ribs by cutting the earth at a depth substantially equal to the depth of first said furrows and parallel to the working face; and collecting earth thus severed and conveying it from under said face outside of said cut.

4. The process of excavating earth which comprises forming a cut with an overhanging working face; then making a plurality of longitudinal furrows to a predetermined depth in said face; then making a cut on each side of the said first furrow and simultaneously cutting away said earth between said last two cuts leaving parallel to the working face grooves having opposite walls; then vertically making a cut in the said face to one side of each of said walls of each groove and simultaneously cutting the earth between said last cuts and said walls leaving wider channels than said grooves, then cutting parallel to and from said face the remaining earth between said channels and at the same time cutting and inwardly directing the earth from said face and the outer walls left by the elimination of the earth in said channels, and collecting and conveying the earth from said face outside of the cut.

5. The process of excavating earth which comprises forming a cut with an overhanging working face; making a plurality of longitudinal furrows to a predetermined depth in said face; making a cut on each side of the said first furrows to substantially the same depth as the first furrows and simultaneously cutting away the earth between said last two cuts parallel to the working face, thus leaving in said face a plurality of grooves having opposite walls; then vertically making cuts to substantially the same depth as said furrows in said face to one side of each of the said walls of each groove and simultaneously cutting away the earth between the last two cuts parallel to the working face, thus leaving channels wider than said grooves; then cutting parallel to and from the said face the remaining earth between said wider channels and at the same time cutting from and inwardly directing the earth from said face and the outer walls which are left by said channels; and collecting and conveying the earth thus severed from said face outside of the cut.

1,166,821. BRACELET-LINK. ALEXANDER EKLUND, Attleboro, Mass., assignor to Sturdy-Cummings Company, Attleboro Falls, Mass., a Corporation of Massachusetts. Filed Aug. 23, 1915. Serial No. 46,987. (Cl. 59—80.)



1. In a bracelet, a guide link comprising two oppositely disposed spaced apart parallel members, each of said members being provided with an integral extension whose ends when the members are assembled abut and provide a spacer for said members, and a locking bar around which a portion of the extension of both members is folded to secure said members together.

2. In a bracelet, a guide link comprising two oppositely disposed spaced apart parallel members, each of said members being provided with an integral extension each of a length substantially one-half the distance of the space between said members, the ends of said extensions abutting to provide a spacer for said members, and a locking bar around which the extensions of both members are folded to secure said members together.

3. In a bracelet, a guide link comprising two oppositely disposed spaced apart trough-shaped members, each being provided at its ends with integral extensions whose ends abut and provide a spacer for said members, each of said extensions having wing members, and a lock bar at each end around which the corresponding extension wings are folded to secure said members together.

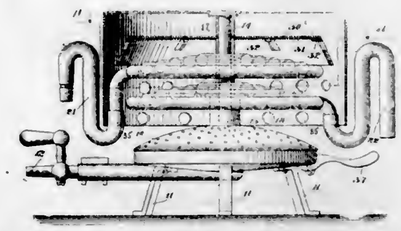
4. In a bracelet, a guide link comprising two oppositely disposed spaced apart trough-shaped members, each being provided at one of its ends with an integral extension whose ends abut and provide a spacer for said members, each of said extensions having wing members, and a lock bar at each end on the inner side of said extensions around which the corresponding extension wings are folded to secure said ends together, and a link slidably mounted in the space between said guide link members, said folded extension members also serving to guide said slide link.

5. In a bracelet, a guide link comprising two oppositely disposed spaced apart trough-shaped members, each being provided at one end with an integral extension whose ends when the members are assembled abut and provide a spacer for said members, each of said extensions having wing members, and a lock bar at each end on the inner side of said extensions around which the corresponding extension wings are folded to secure said members together, said bars being enlarged at the ends to positively prevent separation of the parts after said wings have been folded about the same, and a link slidably mounted in the space between said guide link members, said folded extension members also serving to guide said slide link.

1,166,822. WATER-HEATER AND COOKER. ARTHUR ENGERT, Brooklyn, N. Y. Filed May 12, 1915. Serial No. 27,499. (Cl. 122—250.)

1. The combination with a source of heat, of a plurality of rotatable liquid containers located above said source, and having an inlet and outlet, a support for said containers and carried by said source, and a rotatable hood on said support and surrounding said containers.

2. The combination with a source of heat, of a plurality of rotatable liquid containers, located above said source and having an inlet and outlet, a support for said containers and carried by said source, a rotatable hood on said support and surrounding said containers, and a rotatable heat deflector between said containers and the top of said hood.

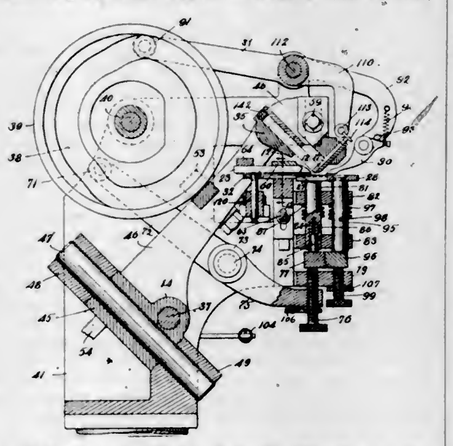


3. The combination with a source of heat, of one or more coils, located above said source adapted to contain liquid and having an inlet and outlet, and a hood surrounding the top and sides of said containers and rotatable therewith whereby the inlet of said containers may be connected to any suitably located supply of liquid.

4. The combination with a source of heat, of one or more coils, located above said source, adapted to contain liquid and having an inlet and outlet, a hood surrounding the top and sides of said containers, and a heat deflector between said coils and the top of said hood and rotatable with said coils and said hood, for permitting connection of said coil inlet with any suitably located supply of liquid.

5. The combination with a source of heat, of a support, a rotatable sleeve on said support, one or more coils carried by said sleeve and adapted to contain liquid, a hood on said sleeve surrounding the top and sides of said coil, and a heat deflector on said sleeve and located between said coil and said hood.

1,166,823. CRIMPING OR CORRUGATING MACHINE. ANALDO M. ENGLISH, Brookline, and HOWARD W. GIBBS, Boston, Mass., assignors to J. Spaulding & Sons Co., Rochester, N. H., a Copartnership comprising Emma C. Spaulding and Marion L. Spaulding, Boston, Mass., Roland H. Spaulding and Huntley N. Spaulding, Rochester, N. H., and Leon C. Spaulding, Buffalo, N. Y. Filed Aug. 9, 1915. Serial No. 44,392. (Cl. 12—30.)



1. In a machine of the character described, in combination, crimping tools constructed and arranged for forming a transverse crimp in the lip of an insole, and means for bodily moving said tools while engaged with said lip to feed said insole.

2. In a machine of the character described, in combination, crimping tools constructed and arranged for forming a transverse crimp in the lip of an insole, means for bodily moving said tools while engaged with said lip to feed said insole, and means for turning an uncrimped portion of said lip into position to be crimped.

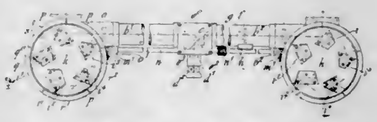
3. In a machine of the character described, in combination, crimping tools constructed and arranged for forming a transverse crimp in the lip of an insole, means for moving one of said tools toward the other to effect a transverse crimp in said lip and for disengaging said tool from said lip, means for moving said tools while engaged with said lip to effect the feed of said insole, and means for gripping the insole while the lip is released by said crimping tools.

4. In a machine of the character described, in combination, crimping tools constructed and arranged for forming a transverse crimp in the lip of an insole, and a movable lip turning tool to act on an uncrimped portion of the lip and turn it into position to be crimped by said crimping tools.

5. In a machine of the character described, in combination, crimping tools constructed and arranged for forming a transverse crimp in the lip of an insole, and a lip turning tool movable toward and from one of said crimping tools.

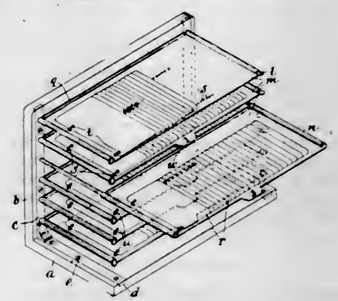
[Claims 6 to 21 not printed in the Gazette.]

1,166,824. HORIZONTAL TELEMETER. OTTO EPPENSTEIN, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Aug. 30, 1915. Serial No. 48,129. (Cl. 88—2.7.)



In a horizontal telemeter a base-line within the instrument, a measuring device, an ocular system, an ocular reflecting system, at either side of the said ocular reflecting system an objective lens system, at either end of the said base-line a group of objective reflecting systems, means for bringing the said reflecting systems one after another into the path of the rays, each such system having a different deflection to the others and the sum derived from the angle of deflection of an objective reflecting system at one end of the base-line and the angle of deflection of the objective reflecting system belonging to it at the other end of the base-line being the same for all pairs of objective reflecting systems.

1,166,825. FILING SYSTEM. GARABED ESMARIAN, Paterson, N. J. Filed June 23, 1915. Serial No. 35,855. (Cl. 129—16.)



1. A filing means comprising a flat plate, a series of leaves arranged flatwise thereon and overlapping each other substantially uniformly, and flexible devices threaded through the leaves and plate and affording individual pivotal connections between the leaves and plate.

2. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on and movable longitudinally of said rods, and a series of overlapping leaves resting upon and pivotally attached to each plate.

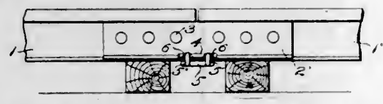
3. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on and movable longitudinally of said rods, and a series of overlapping leaves resting upon and pivotally attached to each plate, said plates and rods having coacting stops limiting the movement of said plates in one direction.

4. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, horizontal plates slidably supported on said rods and having rebent portions receiving the rods, and a series of overlapping leaves resting upon and pivotally attached to each plate.

5. In combination, a frame comprising an upstanding member, pairs of horizontal rods projecting from said member at different elevations, one above another, said rods being revoluble on their own axes in said member and having hooked free ends, horizontal plates slidably supported on said rods and having rebent portions receiving the rods, and slots in said rebent portions extending to the ends thereof adjoining the free ends of the rods, and a series of overlapping leaves resting upon and pivotally attached to each plate, said rods being adapted to be turned in said member to bring their hooked ends into and out of registry with the slots.

[Claim 6 not printed in the Gazette.]

1,166,826. RAIL-JOINT BOND. HARRY ETHERIDGE, Zellenople, Pa. Filed Mar. 24, 1914. Serial No. 826,877. (Cl. 173—262.)



1. An initially self-supporting electric rail bond formed of one piece of metal the extreme end portions thereof, forming the connecting terminals, being each turned backwardly in a plane above the body portion and in the same direction.

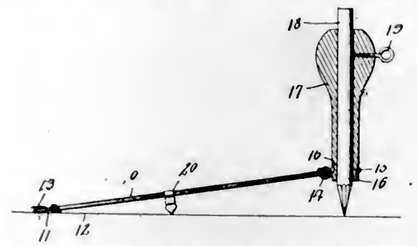
2. An electric rail bond formed of one piece of metal having its body portion, from terminal to terminal, of substantially U shape, the ends of the U forming the terminals being each turned over toward and above the body in hook form.

3. An electric rail bond formed of a rod the body portion thereof, from terminal to terminal, being of substantially U shape, the ends thereof forming the terminals being each turned over toward and above the body portion in substantially hook form.

4. The combination with the parted end portions of rails connected to one another by fish-plates, of a bond having connecting terminals of substantially hook form each engaging over the edge of and upon the flanged base portions of the rails, at each side of the parting, and united to said rail base by brazing, the body portion of said bond, between its terminals, being bent and disposed below the rails, the fish plate having a clearance space formed therein for the bond terminal.

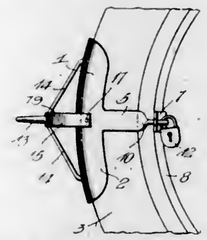
1,166,827. PANTOGRAPH. GEORGE FENSKE, Walsenburg, Colo. Filed May 4, 1915. Serial No. 25,765. (Cl. 33—23.)

A pantograph comprising a tubular member formed with an external surface providing a handle, a marking element slidable in the tubular member, a set screw threaded in the tubular member for engaging the element to lock the same therein, the said tubular member being formed with an annular groove near its lower end, a ring swiveled in said groove and having an offset eye extension, an elastic



cord fastened to the eye extension and having a ring at its free end adapted for connection with a permanent fastener, and a pointer having a sleeve portion frictionally embracing the said cord.

1,166,828. CHOCK FOR VEHICLE-WHEELS. CHARLES D. GILLESPIE, Oakland, Cal. Filed June 7, 1915. Serial No. 32,642. (Cl. 70—90.)



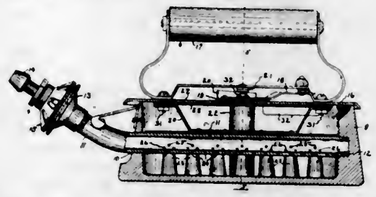
1. A chock with a body adapted to releasably engage the tread of the tire of a wheel, a centrally disposed spur projecting radially from said body, a longitudinally extending arch-shaped brace bar secured at its ends to said body and having its crown projecting through the spur, and a transversely extending arch-shaped brace bar secured at its ends to the body and having its crown apertured to receive the said spur.

2. A chock with a body adapted to releasably engage the tread of a tire of the wheel, a centrally disposed spur projecting radially from said body, a longitudinally extending arch-shaped metallic rod secured at its ends to said body adjacent the ends of the same, a transversely extending arch-shaped metallic strap having its ends secured to said body adjacent the sides of the same, and a crown portion of the rod engaging the spur at a point intermediate its ends and spaced from the body portion.

3. A chock with a body adapted to releasably engage the tread of the wheel, a spur having a contracted inner end rigidly secured in a centrally disposed aperture in the body and projecting radially therefrom, a longitudinally extending arch-shaped metallic rod secured at its ends to said body adjacent the ends of the same, the crown portion of said rod projecting through the opening in the spur intermediate its ends, a transversely extending metallic strap having its ends secured to said body adjacent the sides of the same and its crown portion apertured to allow the spur to project therethrough, and the crown portion of the rod and strap engaging the spur at a point intermediate its ends and spaced from the body portion.

1,166,829. GAS-HEATED SAD-IRON. ALEXIS F. GILLET, Omaha, Nebr., assignor to Jubilee Manufacturing Company, Omaha, Nebr., a Corporation. Filed May 17, 1915. Serial No. 28,537. (Cl. 158—23.1.)

1. In a gas heated sad iron, the combination of a container having upright prongs on its bottom arranged in rows, a cover for said container, a fuel supply pipe traversing one wall of the container and having a perforated part disposed adjacent to its bottom between two rows of prongs, and a deflecting plate carried by the cover, said plate having an imperforate part disposed above the pipe and having apertured parts disposed intermediate the ends of the prongs to form a web therebetween.



2. In a gas heated sad iron, an elongated container having prongs therein arranged in rows and projecting upwardly from its bottom, a tubular burner traversing one of the ends and disposed midway between the sides of the container equi-distant from the prongs of each row, a cover for said container, a deflecting plate connected with the cover and having wings provided with apertures arranged to receive the prongs while disposed intermediate the ends of said prongs with their edges adjacent to the wall of the container, said tubular burner being provided with numerous discharge ports between the deflecting plate and bottom of the container adjacent to said prongs.

3. In a gas heated sad iron, a container formed with prongs projecting upwardly from its bottom in parallel rows and provided with a recess opening inwardly thereof, a fuel supply pipe traversing the wall and engaging in said recess and having a part provided with numerous discharge ports disposed midway between the rows of prongs, a removable cover for said container, a deflecting plate connected with the cover, said plate consisting of a pair of apertured, parallel wings and an intermediate curved ridge, and adapted to be disposed with its ridge overhanging said pipe with its wings engaging between the ends of the prongs, above the discharge ports of said pipe.

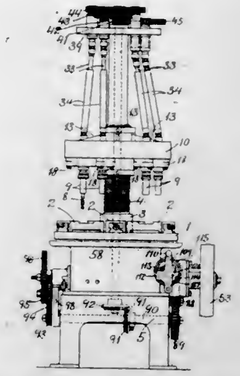
4. In a gas heated said iron, an elongated container having prongs therein arranged in rows and projecting upwardly from its bottom, said container being formed with upright, convexed, imperforate sides and having an aperture formed in one of its ends, its opposite end being provided with a recess opening inwardly thereof, a fuel supply tube traversing said aperture and engaging in said recess and having a perforated part disposed adjacent to the bottom of the container midway between the rows of prongs, a cover for the container, a deflecting plate having a curved part and opposed wings with apertures formed therein, said plate being adapted to be disposed with its curved part above said tube, its wings being traversed by said prongs while projecting outwardly from the sides of said tube.

5. In a gas heated sad iron, a container having upright, convexed sides and a flat bottom provided on its inner side with upright prongs, a tubular burner traversing the container and having a perforated part disposed between the prongs, a cover for the container, a deflecting plate movable with the cover and provided with apertured wings, said plate normally being disposed above the tubular burner with its wings interposed between the ends of said prongs.

1,166,830. MULTIPLE-SPINDLE MACHINE. GEORGE O. GRIDLEY, Windsor, Vt. Filed Dec. 15, 1911. Serial No. 666,066. (Cl. 77—24.)

1. A machine tool comprising a tool holder, a plurality of tools supported by said holder, a work holder, means for producing relative indexing and feeding movements between said holders to cause action of the tools successively on a work piece, and means whereby said tools may be adjusted in any direction transverse to the direction of feeding movement.

2. A machine tool comprising a tool holder, a plurality of tools supported by said holder, a work holder, means for producing relative indexing and feeding movements between said holders to cause action of the tools successively on a work piece, and means whereby one of said tools may be adjusted transversely with respect to the direction of feeding movement to act either at the same point of the work piece as another tool, or at a different point.



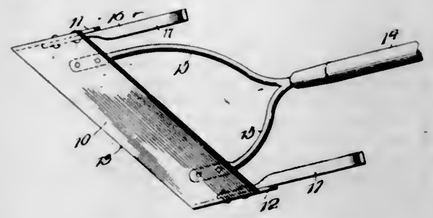
3. A machine tool comprising a tool holder, a plurality of tools supported by said holder, a work holder, means for producing relative indexing and feeding movements between said holders to cause action of the tools successively on a work piece, and means whereby the tools may be set to act all on the same point or center of the work piece, or at different points.

4. A multiple spindle machine including a central column, a work-holding table movable rotatably about such column and also longitudinally of the same, a head mounted upon the column, a plurality of tool spindles secured to said head and extending toward the work table, mechanism for so moving said table as to put the same work piece in position to be acted on by the several tools successively, and provisions whereby each of said tool spindles may be adjusted toward and from the column.

5. A multiple spindle machine including a central column, a work-holding table movable rotatably about such column, and also longitudinally of the same, a head mounted upon the column, a plurality of tool spindles secured to said head and etxending toward the work table, mechanism for moving said table step by step around the column to bring the work successively to the several tools, and provisions whereby each of said tool spindles may be adjusted around the column.

[Claims 6 to 30 not printed in the Gazette.]

1,166,831. WEED-CUTTER. HUGO GROTZKY, Chapman, Nebr. Filed Aug. 5, 1915. Serial No. 43,816. (Cl. 55—41.)

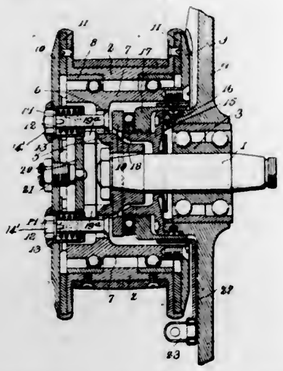


1. An implement of the class described comprising a body extending obliquely to the line of travel and having a rearwardly and upwardly inclined upper face and depend-

ing ends, said ends being directed in parallel relation and with their lower edges oblique to the inclined face of the body, and bearing arms connected to said depending ends and extending rearwardly of said body.

2. An implement of the class described comprising a blade having downturned ends, an operating handle, and arms connected to said downturned ends and extending rearwardly of the blade.

1,166,832. FRICTION-CLUTCH. CARL JOHAN GUSTAFSON, Springfield, Mass., assignor, by mesne assignments, to Hendee Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed Dec. 9, 1911. Serial No. 664,902. (Cl. 192—7.)



1. The combination of a driving shaft, a pulley support connected to said shaft, a driving pulley mounted to rotate freely on said support, clamping plates mounted to turn with said support, said clamping plates being located on opposite sides of the pulley and the bearing therefor, means for causing said clamping plates to frictionally engage said pulley, and means for causing the clamping plates to release said pulley, including a fixed cam member, a movable cam member, and means intermediate said movable cam member and one of said clamping plates.

2. The combination of a driving shaft, a pulley support connected to said shaft, a driving pulley mounted to rotate freely on said support, clamping plates mounted to turn with said support, said clamping plates being located on opposite sides of the pulley and the bearing therefor, springs for normally moving one of said clamping plates toward the other, for causing said plates to frictionally grip said pulley, and means for disengaging said clamping plate from said pulley, including a fixed cam member, a movable cam member, and means intermediate said movable cam member and the movable clamping plate.

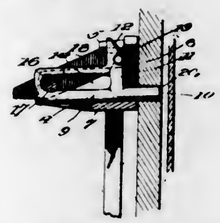
3. The combination of a driving shaft, a pulley support connected to said shaft, a driving pulley mounted to rotate freely on said support, ball bearings between said pulley and said support, clamping plates mounted to turn with said support, said clamping plates being located on opposite sides of the pulley and the bearing therefor and adapted to frictionally engage said pulley, a plurality of springs normally operating to hold said plates in frictional engagement with the pulley, and means for releasing the plates from said pulley, including a fixed sleeve having a cam thread thereon, a movable sleeve having a coöperating thread engaging the thread on the fixed sleeve, and devices intermediate said movable sleeve and one of said clamping plates, including a thrust bearing.

4. The combination of a driving shaft, a pulley support connected to said shaft, a pulley mounted to rotate freely on ball bearings carried by said pulley support, and also free to move laterally on said bearings, a clamping plate connected to said pulley support and adapted to engage one side of the driving pulley, said clamping plate being held from lateral movement, a movable clamping plate carried by said pulley support and adapted to engage the other side of said pulley, springs for moving said movable clamping plates toward the other, a sleeve having a thread and means coöperating with said thread whereby the sleeve is moved endwise, and means intermediate the sleeve and one of the clamping plates for causing said movable clamping plates to be moved away from the other.

5. The combination of a driving shaft, a pulley support connected to said shaft, a pulley mounted to rotate freely on ball bearings carried by said pulley support and also free to move laterally on said bearings, a clamping plate rigidly connected to said pulley support and disposed at one side of said pulley, a movable clamping plate carried by said pulley support, said movable plate being held from rotation relative to said support and free to move laterally thereon, said movable plate being adapted to engage the other side of said pulley and move said pulley into friction gripping contact with the other clamping plate, springs for moving said movable plate into gripping contact with the pulley, a fixed threaded member, a rotating sleeve having a thread to engage said threaded member, a thrust bearing engaging said sleeve, and means between said thrust bearing and said movable clamping plate whereby a rotation of said sleeve will cause said clamping plate to be moved, compressing the springs so as to release the driving pulley, said sleeve and thrust bearing being located within the pulley support.

[Claims 6 and 7 not printed in the Gazette.]

1,166,833. STAND FOR CRATED BOTTLES. JAMES S. HAZARD, Newport, R. I. Filed Mar. 31, 1915. Serial No. 18,371. (Cl. 248—16.)



1. A device for the purpose set forth comprising a supporting frame, and heads secured to the upper end of the frame at the opposite sides thereof, said heads being provided with vertical notches having open upper ends and horizontally disposed webs bridging the lower ends of said notches.

2. A device for the purpose set forth comprising a supporting frame, heads secured to the upper end of the frame at the opposite sides of the same and provided with notches having open upper ends, and webs closing the lower ends of said notches and pivot bolts loosely mounted in the heads and adapted to rest upon said webs and project inwardly beyond the same to engage a crate.

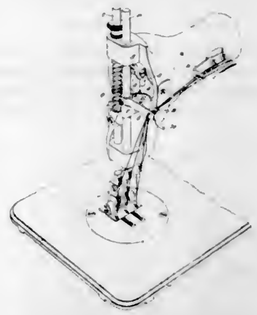
3. In a device for the purpose described, the combination of a supporting frame, heads secured to the frame at the opposite sides of the same and having recesses or notches provided with open upper ends and webs bridging the lower ends of said notches, and pivot bolts slidably mounted in the heads and adapted to rest upon said webs.

4. A device for the purpose set forth comprising a frame, heads secured to the frame at the upper end of the same and at the opposite sides thereof, said heads being provided with pivot receiving openings, and pivot bolts slidably mounted in the heads to project through the said pivot receiving openings and pivotally mounted in the heads to depend therefrom when withdrawn from said openings.

5. In a device for the purpose set forth, the combination of a supporting frame, heads secured to the sides of the said frame and having pivot-receiving openings, wings projecting laterally outward from the heads, and spaced lugs above said wings, pivot bolts slidably and pivotally mounted between the said wings and adapted to extend through the pivot-receiving opening and provided with lateral projections to engage between the said wings and the said lugs, and means for holding the said pivot bolts projected through the pivot receiving openings.

[Claims 6 to 10 not printed in the Gazette.]

1,166,834. TAKE-UP MECHANISM FOR SEWING-MACHINES. MARTIN HEMLEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 16, 1913. Serial No. 767,976. (Cl. 112—26.)



1. In combination with stitch-forming mechanism, including a needle bar, a driving shaft, a link connecting said shaft and the needle bar, a take-up arm carried by said needle bar comprising means for guiding thread across the operative path of a slack-thread controller, and a slack-thread controller carried by said link to move downward with said take-up arm but at differential speed, whereby the thread below said take-up arm is maintained free from slack during the descent of the needle bar.

2. In combination with stitch-forming mechanism, including a needle bar, and a driving shaft, a take-up arm carried by said needle bar comprising means for guiding thread across the path of a slack-thread controller, a link connecting said shaft and the needle bar, and a slack-thread controller carried by said link normally above the take-up arm and having an operative movement downward with said take-up arm during the descent of the needle bar.

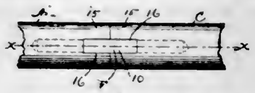
3. In combination with stitch-forming mechanism, including a needle bar and a driving shaft, a take-up arm carried by said needle bar comprising means for guiding thread across the path of a slack-thread controller, a link connecting said shaft and the needle bar, and a slack-thread controller carried by said link to move in a downward operative path simultaneously with the descent of said take-up arm and co-acting with the latter to maintain the thread below the same free from slack during the descent of the needle bar.

4. The combination with stitch-forming mechanism, including a needle bar and a driving shaft, of a link connecting said needle bar and shaft, a take-up arm carried by said needle-bar and having its free end inturned and provided with thread-eyes serving to guide thread across the path of a slack-thread controller, and a slack-thread controller rigidly secured to said link and having a downward operative movement for coaction with said take-up arm simultaneously with the descent of the needle-bar.

5. In combination with stitch-forming mechanism, including a needle bar, a driving shaft, a link connecting said shaft and the needle-bar, a take-up arm carried by said needle-bar, and a vibratory slack-thread controlling element connected with said shaft and coöperating with said take-up arm to maintain the thread below said take-up arm taut throughout the descent of the needle-bar.

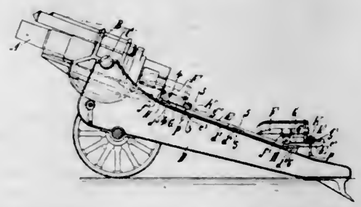
[Claims 6 and 7 not printed in the Gazette.]

1,166,835. SHAFT-COUPLING. JOHN J. HOGAN, West Haven, Conn., assignor to Joseph E. Hubinger, New Haven, Conn. Filed Jan. 25, 1912. Serial No. 673,478. (Cl. 64—13.)



The combination of two alined shafts having diametrical slots and axial holes at their opposed ends, with a shaft coupling therefor, said coupling comprising a rectangular plate having axial guide pins extending from the ends thereof of a diameter substantially equal to the thickness of the plate, the plate fitting into the diametrical slots in the shafts and the pins fitting into the axial holes in the shafts.

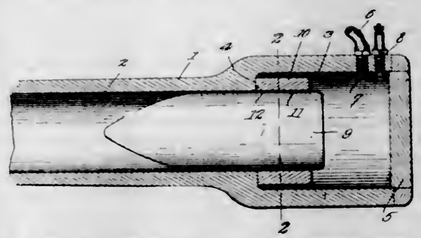
1,166,836. AMMUNITION-HOISTING DEVICE. ALFRED KÄSTNER and FRIEDRICH STOCK, Essen-on-the-Ruhr, Germany, assignors to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Oct. 12, 1911. Serial No. 654,341. (Cl. 89—46.)



1. An ammunition hoisting device for mobile artillery, comprising a loading tray; a wagon for said loading tray; driving pinions and cranks on said wagon, a track for said wagon mounted on the body of the carriage and adapted to be easily detachable therefrom, a plurality of apertures along said track forming teeth meshing with said driving pinions for the purpose of shifting said wagon along said track, stops at the rear end of said track coöperating with projections on the wagon for limiting the movement of the latter in one direction; similar projections on the loading tray coöperating with the breech end of the gun barrel for limiting the movement of the wagon in the opposite direction.

2. In a wheeled gun carriage the combination of the gun and the trail with rails supported by the side walls of said trail, and an ammunition hoisting device comprising a loading tray and a wagon for said loading tray, said rails forming the track for said wagon and having their rear ends in the vicinity of the trail spade and their front ends in the vicinity of the gun breech, and driving means for said wagon; said driving means comprising pinions and cranks on said wagon, and a series of apertures in said track adapted to mesh with the teeth of said pinions.

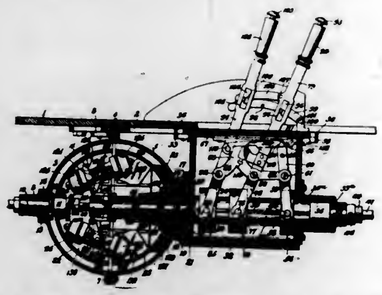
1,166,837. GUN. PATRICK J. KELLY, Elizabeth, N. J. Filed Jan. 6, 1913. Serial No. 740,496. (Cl. 89—9.)



In a gun, a barrel having a bore and provided with an enlarged breech chamber defining a shoulder; means for

conducting an explosive charge to the chamber; means for igniting the charge; a projectile in the bore and extended into the chamber; a single ring surrounding the projectile and frictionally held thereon, the ring engaging the shoulder, the periphery of the ring being spaced from the wall of the chamber to admit gas onto the periphery of the ring, thereby to compress the ring onto the projectile, the rear face of the ring being directly subjected to gas pressure when said ring is in abutment with the shoulder.

1,166,838. VARIABLE-SPEED POWER-TRANSMITTING MEANS. ANDREW KLAY, Bluffton, Ohio. Filed Nov. 11, 1914. Serial No. 871,594. (Cl. 74—26.)



1. A variable speed power transmission means comprising a drive shaft, a driven shaft, two alined, opposed and substantially semispherical friction members between and in alinement with the shafts and connected each to a respective one of the shafts, connected friction wheels within and in position to engage said friction members, means for adjusting the friction wheels axially of the friction members, and means for moving the friction wheels into and out of frictional engagement with said friction members.

2. A variable speed power transmission means comprising rotatable drive and driven members, alined, opposed and substantially semispherical friction members on the respective shafts, connected friction devices within the friction members, and means movable axially of the friction members for adjusting the friction devices and moving them into and out of engagement with the friction members.

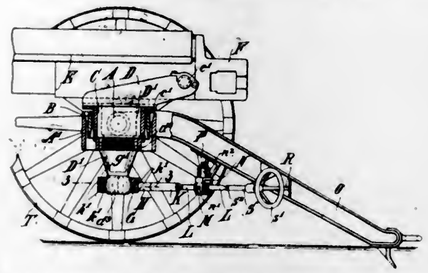
3. A variable speed power transmission means comprising a rotatable friction drive member and a rotatable friction driven member, connected friction devices in coactive relation to the two friction members for transmitting power from one to the other, means movable axially of the drive and driven friction members for moving the friction devices into different speed relations thereto, and means for moving the friction devices into and out of frictional engagement with the friction members.

4. A variable speed power transmission means comprising a friction drive member of substantially hemispherical form, a friction driven member of substantially hemispherical form in opposed alined relation to the first member, a circular series of connected pairs of friction devices within the friction members with one friction device of each pair individual to one of the friction members and the other friction device individual to the other friction member, a carrier for the series of friction devices movable in the axis of rotation of the friction members for in turn moving the friction devices into different positions of speed relation to the friction members, and other means also movable in the axis of rotation of the friction members for moving the friction devices into and out of frictional engagement with said friction members.

5. A variable speed power transmission means comprising a friction drive member of substantially hemispherical form, a friction driven member of substantially hemispherical form in opposed alined relation to the first member, a circular series of connected pairs of friction devices within the friction members with one friction device of each pair individual to one of the friction members and the other friction device individual to the other friction member, a carrier for the series of friction devices movable in the axis of rotation of the friction members for in turn moving the friction devices into different positions of speed relation to the friction members, other means also movable in the axis of rotation of the friction members for moving the friction devices into and out of frictional engagement with said friction members, one of the friction members being provided with an axial friction extension in position to be engaged by the friction devices individual to said member, and an idler abutment for said friction devices.

[Claims 6 to 23 not printed in the Gazette.]

1,166,839. WHEELED GUN-CARRIAGE. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed June 9, 1915. Serial No. 33,113. (Cl. 89—40.)



1. A wheeled gun carriage having a trail, a pivot member carrying the gun-barrel and enabling training thereof, means for oscillating said pivot member around either of two intersecting axes, running at oblique angles relative to the axis of revolution of the carriage wheels, whereby said pivot may always be adjusted into vertical position irrespective of the condition of the ground, said means comprising systems of rods forming force-closing connections between said pivot and said trail.

2. In a wheeled gun carriage having spread-apart trail sides mounted to oscillate independently of each other on the wheel axle, a top carriage mounted in universal bearings on the wheel axle, said universal bearings having journals the axes of which intersect at right angles relatively to each other and at oblique angles relative to the axis of revolution of said trail sides, and means for oscillating the top carriage relatively to the trail sides, said means comprising a ball joint on the top carriage, two independent rings in said ball joint, one of said rings having threaded telescopic connection with one of the trail sides, and the other of said rings having similar connection with the other trail side, whereby said top carriage may be adjusted by said connections around one or the other of the intersecting axes of said journal pins, and the recoil shock transmitted through said connections to the trail sides.

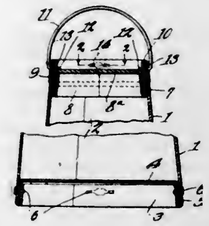
1,166,840. PROCESS FOR THE PRODUCTION OF PRINTING-BLOCKS OF SLIGHT WEIGHT. SIGVALD ALFRED CHRISTIAN KRISTENSEN, Copenhagen, Denmark. Filed Feb. 27, 1914. Serial No. 821,566. (Cl. 41—25.)



1. Process for the production of printing plates of insignificant weight by the use of an auxiliary block; said process consisting of the following steps: first, producing a negative by pressing said auxiliary block against the form to be reproduced; second, providing a second block in the form of a flong of unsized paper; third, coating one of said blocks with a paste of metallic powder and water-glass; fourth, pressing the two blocks against each other with the coated side between them; fifth, drying the blocks in a hot drying press; and sixth, removing the second block with the adhering coating, which now constitutes the printing plate.

2. Process for the production of printing plates of insignificant weight by the use of an auxiliary block; said process consisting of the following steps: first, producing a negative by pressing said auxiliary block against the form to be reproduced; second, providing a second block in the form of a flong of unsized paper; third, coating said second block with a paste of metallic powder and water-glass; fourth, pressing the coated side of the second block against the auxiliary block; fifth, drying the blocks in a hot drying press; and sixth, removing the second block with the adhering coating, which now constitutes the printing plate.

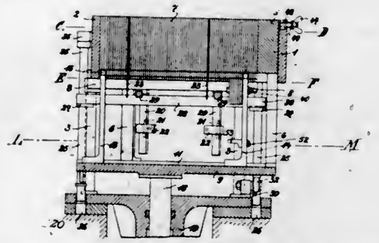
1,166,841. PAPER RECEPTACLE. CHARLES A. LEECH, Kewanee, Ill. Filed Mar. 16, 1915. Serial No. 14,698. (Cl. 229—12.)



1. A receptacle comprising a tapered paper body having an integral reëntrant fold at its small end fitting snugly against the body, said fold having a second fold therein terminating short of said end of the body to form a seat for a closure disk.

2. A paper receptacle having a reëntrant fold at one end, said fold having a second fold therein terminating short of the said end of the body to form a seat for a closure, a bail having terminal portions engageable through the first mentioned fold at points spaced from the second mentioned fold and arranged to hold the closure in place.

1,166,842. MOLDING APPARATUS. HERMANN LEHMANN, Magdeburg, Germany, assignor to Fried. Krupp, Aktiengesellschaft, Grusonwerk, Magdeburg-Buckau, Germany. Filed Mar. 22, 1913. Serial No. 756,155. (Cl. 22—10.)



1. In an apparatus for molding cores of sector-shape; two radial plates rigidly connected and situated at a permanent angle, a plurality of concentrically curved plates fitting between said radial plates, each of said curved plates constructed to be lowered into the molding table; said radial plates and a selected pair of said curved plates of different radii, together forming the side faces of the core.

2. In an apparatus for molding cores of sector-shape; two radial plates rigidly connected and situated at a permanent angle, a plurality of concentrically curved plates fitting between said radial plates, each of said curved plates constructed to be lowered into the molding table; and adjustable stops for said curved plates limiting the vertical position of the curved plates according to the thickness of the core; said radial plates and a selected pair of said curved plates of different radii, together forming the side faces of the core.

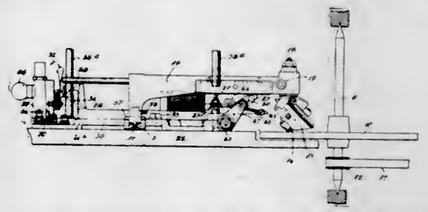
3. In an apparatus for molding cores of sector-shape; two radial plates rigidly connected and situated at a permanent angle, a plurality of concentrically curved plates fitting between said radial plates, each of said curved plates constructed to be lowered into the molding table; and adjustable stops for said curved plates limiting the vertical position of the curved plates according to the thickness of the core; said radial plates and a selected pair of said curved plates of different radii, together forming the side faces of the core; and means for raising the four plates together with said stops relatively to the molding table.

4. In an apparatus for molding cores of sector-shape; two radial plates rigidly connected and situated at a permanent angle, a plurality of concentrically curved plates fitting between said radial plates, each of said curved plates constructed to be lowered into the molding table; said radial plates and a selected pair of said curved plates of different radii, together forming the side faces of the core; and means for lifting the finished core from the table after the plates have been lowered.

5. In an apparatus for molding cores of sector-shape; two radial plates rigidly connected and situated at a permanent angle, a plurality of concentrically curved plates fitting between said radial plates, each of said curved plates constructed to be lowered into the molding table; said radial plates and a selected pair of said curved plates of different radii, together forming the side faces of the core; an auxiliary frame to be used in conjunction with said plates for molding complex shaped cores.

[Claims 6 to 17 not printed in the Gazette.]

1,166,843. APPARATUS FOR GRINDING PRECIOUS STONES. ERNEST LOESSER, Glen Ridge, N. J., assignor to New Diamond Polishing Tool Company of America, Inc., New York, N. Y., a Corporation of New York. Filed July 13, 1914. Serial No. 850,655. (Cl. 51—11.)



1. A precious stone grinding and polishing machine, comprising a lap on which the stone bears, a bed-plate, a tong having one end resting on the bed-plate and having at its opposite free end a movement toward and from the lap, a stone holding device connected with the free end of the tong to move gradually therewith toward the lap as the grinding operation proceeds and to move quickly with the tong away from the lap when the grinding operation is completed, normally inactive means for raising the free end of the tong and the stone holding device simultaneously away from the lap and devices operating automatically on completion of a facet-forming operation to bring said lifting means into active operation.

2. A precious stone grinding and polishing machine, comprising a lap on which the stone bears, a tong or support, one end of which has a free movement toward and from the lap, a stone-holding device connected to move coincidentally with the free end of the tong toward and from the lap, normally inactive means for raising the free end of the tong and the stone-holding device away from the lap and devices operating automatically on the completion of a facet-forming operation to bring said raising

means into active operation to raise the free end of the tong and thus withdraw the stone from the lap.

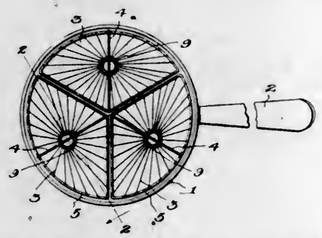
3. A precious stone grinding and polishing machine, comprising a movable support, a stone holding device carried by the support, a lap on which the stone bears, means for automatically raising the support to move the stone vertically away from the lap upon the completion of a facet forming operation and a signal device operated in conjunction with the support raising means.

4. A precious stone grinding and polishing machine, comprising a lap, a tong having a free end adapted to move toward and from the lap, a stone-holding device carried by the free end of the tong and adapted to move coincidentally therewith; a swinging arm having a part acting on the under side of the tong to raise the latter, normally inactive means for actuating said arm to raise the tong and a tripping device engaging the tong and operating when the latter has been depressed to a sufficient extent to bring the raising means into active operation.

5. A precious stone grinding and polishing machine, comprising a lap on which the stone bears, a movable support mounted in the frame of the machine, a stone-holding device carried by the support, means operating to raise the support and to move the stone vertically away from the lap upon the completion of a facet-forming operation, normally inactive electromagnetic devices for operating said raising means and devices operated by the descent of the support to bring said electromagnetic devices into active operation when the facet is completed.

[Claims 6 to 22 not printed in the Gazette.]

1,166,844. COOKING UTENSIL. CLARA L. MACKENZIE, Providence, R. I. Filed Nov. 6, 1914. Serial No. 870,593. (Cl. 220—136.)



A basket of segmental cross-section having a hinged handle which is of inverted U-form connected at one end to the apex of the basket and at its opposite end to a peripheral point on the basket central of the sides of the basket, whereby a series of baskets may be arranged to have their peripheries conjointly define a circle and be carried when so related by use of but one hand by grasping the inner sides of the handles at the tops thereof which inner sides are each located at the center of the circle, said handle extending entirely across the basket and being hinged thereto at the top edge of the basket so that when the handle is moved to lie in horizontal position same will be supported on the top edge of the basket.

1,166,845. PROCESS OF TREATING LEATHER AND PRODUCT THEREOF. ROBERT ATHELSTAN MARR, Norfolk, Va., assignor to General Waterproofing Co., Incorporated, Norfolk, Va., a Corporation of Virginia. Filed Jan. 14, 1914. Serial No. 812,026. (Cl. 149—6.)

1. A process of treating skins and leather, which comprises immersing the same in a molten bath, maintained at a temperature not materially below the boiling point of water, said bath comprising a preservative, water-proof, impermeabileizing agent, comprising diatomaceous earth, and a water-insoluble fluent carrier comprising a hydrocarbon body which is liquid at a temperature of 212° F. and rosin.

2. A process of treating skins and leather, which comprises immersing the same in a bath comprising a preservative, water-proof, impermeabileizing agent, comprising diatomaceous earth, paraffin and rosin, said bath being maintained at a temperature not materially below the boling point of water.

3. A process of treating hide products which comprises impregnating the same with a material including paraffin, rosin, and diatomaceous earth said material being at a temperature of about 213° F.

4. A process of treating hide products which comprises impregnating said product by immersing the same in a bath comprising paraffin, rosin, and diatomaceous earth at a temperature of about 213° F., and decreasing the temperature of the impregnating material during the process.

5. A process which comprises immersing hide products in a bath comprising diatomaceous earth, paraffin and rosin at a temperature above 212° F., and thereafter subjecting said materials to a bath having a lower temperature thn that employed in said first step.

[Claims 6 to 16 not printed in the Gazette.]

1,166,846. IMPREGNATED LEATHER AND METHOD OF MAKING SAME. ROBERT ATHELSTAN MARR, Norfolk, Va., assignor to General Water-Proofing Co., Incorporated, Norfolk, Va., a Corporation of Virginia. Filed Jan. 13, 1914. Serial No. 811,913. (Cl. 149—6.)

1. A process of treating leather and skins which comprises impregnating the same with a filling and impermeablizing agent comprising diatomaceous earth, paraffin, and naphthalene.

2. A process of treating leather and skins which comprises impregnating the same with a filling and impermeablizing agent comprising diatomaceous earth, paraffin, naphthalene and rosin.

3. A process of treating leather and skins which comprises immersing the same in a bath comprising paraffin, naphthalene, and a solid material of sufficient hardness to increase the wear-resisting qualities of leather and of sufficient fineness to enter the pores, at a temperature somewhat above 212° F.

4. A process of treating leather and skins which comprises immersing the same in a bath comprising paraffin, naphthalene, rosin and a solid silicious material of sufficient fineness to enter the pores, at a temperature somewhat above 212° F.

5. A process of treating leather and skins which comprises submerging the same in a bath comprising paraffin, naphthalene and diatomaceous earth at a temperature above 212° F., then lowering the temperature of the bath to below 212° F., and removing the articles from the bath when sufficiently impregnated with the filling material.

[Claims 6 to 8 not printed in the Gazette.]

1,166,847. IMPREGNATED FABRICS AND METHOD OF PRODUCING SAME. ROBERT ATHELSTAN MARR, Norfolk, Va., assignor to General Water-Proofing Co., Incorporated, Norfolk, Va., a Corporation of Virginia. Filed Nov. 12, 1914. Serial No. 871,813. (Cl. 99—12.)

1. A process of treating a textile material which comprises impregnating the same with a homogeneous, molten mixture, solid at ordinary temperature, said mixture containing paraffin and a relatively small amount of naphthalene, and being free from hard materials.

2. A process of treating textile materials which comprises subjecting the same to the action of a bath containing paraffin and naphthalene, maintained at a temperature above 212° F., and thereafter subjecting the same to the action of a bath containing paraffin and naphthalene at a temperature below 212° F., the amount of naphthalene in both these baths being much less than the amount of paraffin, and both baths being free from hard materials.

3. A process of treating rope which comprises subjecting the same to the action of a bath containing paraffin and naphthalene, maintained at a temperature above 212° F., and thereafter subjecting the same to the action of a bath containing paraffin and naphthalene at a temperature

below 212° F., the amount of naphthalene in both these baths being much less than the amount of paraffin, and both baths being free from hard materials.

4. A process of treating textile materials which comprises subjecting the same to the action of a bath containing paraffin and a relatively small amount of naphthalene, said bath being free from hard materials, at a temperature of from 240 to 260° F., removing the materials from the bath when the temperature has fallen somewhat.

5. Textile material impregnated with a homogeneous mixture of paraffin and naphthalene, said mixture being solid at ordinary temperature and being free from hard materials, the proportion of naphthalene being relatively small.

[Claim 6 not printed in the Gazette.]

1,166,848. PROCESS OF MAKING PULP AND PAPER. ROBERT ATHELSTAN MARR, Norfolk, Va., assignor to General Fibre Co., Incorporated, Norfolk, Va., a Corporation of Virginia. Filed Jan. 6, 1915. Serial No. 839. (Cl. 92—9.)

1. A process of making pulp or paper, which comprises digesting organic materials containing cellulose, with a solution containing zinc sulfate.

2. A process of making pulp or paper, which comprises digesting organic materials containing cellulose, with a solution containing zinc sulfate and zinc chlorid.

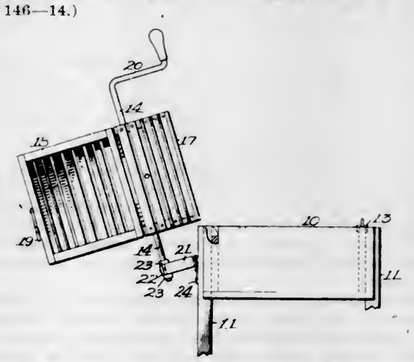
3. A process of making pulp or paper, which comprises digesting organic materials containing cellulose, with a solution containing zinc sulfate, zinc chlorid, and a small proportion of tannic acid.

4. A process of making pulp or paper, which comprises digesting organic materials containing cellulose, with a solution containing zinc sulfate, zinc chlorid, and small amounts of tannic acid and glycerin.

5. A process of making pulp or paper, which comprises digesting organic materials containing cellulose, with a solution containing about 2% to 4% of zinc sulfate.

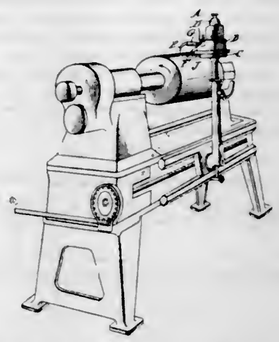
[Claims 6 to 9 not printed in the Gazette.]

1,166,849. ROOT-WASHER. EDGAR J. MATTHEWS, Paxton, Mass. Filed Feb. 8, 1915. Serial No. 6,713. (Cl. 146—14.)



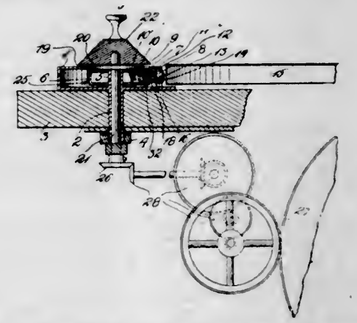
In a machine of the class described, a tank, a plate hinged at its lower edge at one end of the tank and having its upper edge provided with a bearing, another bearing at the opposite end of the tank, a shaft journaled in said two bearings and carrying an open drum which dips into the tank, said drum consisting of a main section affixed to the shaft and a swinging section pivoted to the main section along one longitudinal edge thereof and on an axis parallel to the shaft, said main section having an end wall adjacent to said plate, whereby the drum may be bodily tilted endwisely out of and away from the tank and whereby when so tilted the swinging section will gravitate laterally to open position and said end wall will incline downwardly away from the tank to thereby insure the washed articles being discharged off the edge of said end wall at a point distant from the rank.

1,166,850. APPARATUS FOR VARNISHING ROLLER-SHAPED BODIES. EDUARD MERTENS, Freiburg, Germany. Filed Jan. 13, 1910. Serial No. 537,830. (Cl. 91—43.)



Apparatus for varnishing roller-shaped bodies by means of a fine jet of liquid varnish applied spirally to the body, comprising in combination with a turning lathe adapted to rotate the body on its longitudinal axis and having a traveling saddle which moves parallel to the said axis, a varnish reservoir mounted on a standard carried by the said saddle, a bearing block pivoted on the said standard and capable of swinging in a plane at right angles to the said axis, a nozzle carried by the said bearing block and pressed thereby with a constant pressure against the periphery of the roller-shaped body, and a flexible tube connecting the said nozzle to the varnish reservoir.

1,166,851. STOP FOR TALKING-MACHINES. ROY H. MORRIS, Los Angeles, Cal. Filed July 7, 1914. Serial No. 850,824. (Cl. 74—46.)



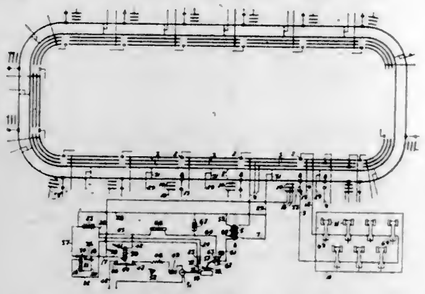
1. In combination with the turntable and motor of a talking machine, a housing having a series of indicating marks, an opening therein, and a hollow stem, a stop carrying member on said stem, a shaft extending through said stem, means to transmit power from the motor to said shaft, and a member on said plate having an indicator operable over the face of said housing, and an arm depending from said member to operate said stop carrying member.

2. A brake for a talking machine, comprising a housing having a hollow stem arranged to extend through the top of a talking machine, a portion of said stem extending within said housing, a stop carrying member in said housing and loosely mounted on said stem, a shaft extending through said stem, means to transmit power from the

motor of a talking machine to said shaft, a plate on said shaft and resting on said stem, a weight on said plate having an indicator, and a means on said weight for actuating said stop carrying member.

3. A brake for a talking machine, comprising a housing having an opening in the top and side thereof, and indicating marks on the top, and provided with a stem arranged to extend through the top of a talking machine, a portion of said stem extending within said housing, a member within said housing and loosely mounted on said stem, a stop carried by said member for engaging the turntable of a talking machine, a shaft extending through said stem and having operative connection with the motor of a talking machine, a table on said shaft and resting on said stem, and a weight loosely mounted on said table and provided with an indicator and an operating arm for said stop carrying member.

1,166,852. PHONOGRAPH SYSTEM FOR REVOLVING AUDITORIUM. LOUIS E. MYERS, Chicago, Ill. Filed June 12, 1915. Serial No. 33,852. (Cl. 179—6.)



1. The combination of a track, a series of cars traveling on said track, telephone receivers carried by the cars, a series of talking machines, records thereon descriptive of facts appropriate to successive portions of the track, a corresponding series of telephone transmitters operatively connected with the reproducers of said talking machines, and means whereby a telephone receiver on each car can be successively included in the circuits of the successive telephone transmitters of the series.

2. The combination of an endless track, a series of cars traveling on said track, telephone receivers carrier by the cars, a series of talking machines, records thereon descriptive of facts appropriate to successive portions of the track, a corresponding series of telephone transmitters operatively connected with the reproducers of said talking machines, and means whereby a telephone receiver on each car can be successively included in the circuits of the successive telephone transmitters of the series.

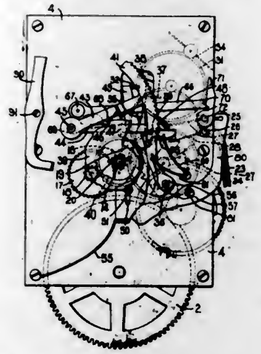
3. The combination of a track, a series of cars traveling on said track, telephone receivers carried by the cars, a series of talking machines, records thereon descriptive of facts appropriate to successive portions of the track, a corresponding series of telephone transmitters operatively connected with the reproducers of said talking machines, means whereby a telephone receiver on each car can be successively included in the circuits of the successive telephone transmitters of the series, and means whereby each talking machine is automatically started rotating when a car arrives at a definite portion of the track.

4. The combination of an endless track, a series of cars traveling on said track, telephone receivers carried by the cars, a series of talking machines, records thereon descriptive of facts appropriate to successive portions of the track, a corresponding series of telephone transmitters operatively connected with the reproducers of said talking machines, means whereby a telephone receiver on each car can be successively included in the circuits of the successive telephone transmitters of the series, and means whereby each talking machine is automatically started rotating when a car arrives at a definite portion of the track.

5. The combination of an endless track, a series of cars traveling on said track, telephone receivers carried by the cars, a series of talking machines, records thereon descriptive of facts appropriate to successive portions of the track, a corresponding series of telephone transmitters operatively connected with the reproducers of said talking machines, means whereby a telephone receiver on each car can be successively included in the circuits of the successive telephone transmitters of the series, and means whereby the several talking machines are started rotating upon the arrival of the car at said portions of the track respectively.

[Claims 6 to 9 not printed in the Gazette.]

1,166,853. CLOCK. JOSEPH PETRILLO, Meriden, Conn., assignor to The Ideal Clock Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 14, 1914. Serial No. 831,841. (Cl. 58—8.)



1. In a clock, the combination with two hammers, of a hammer-actuating wheel for actuating both hammers, means to render said wheel operative at each quarter hour interval, and means controlling the operation of the hammers by which both hammers are operative to strike the quarter hour and one hammer only is operative to strike the hour.

2. In a clock, the combination with a hammer-actuating wheel, of two hammers actuated thereby, means to operate said wheel at quarter hour intervals, and means to lock one hammer against operation after the quarter hour has been struck thereby leaving the other hammer to strike the hour.

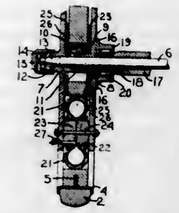
3. In a clock, the combination with two hammers, of hammer-actuating mechanism, means to render said mechanism operative at quarter hour intervals to actuate both hammers to strike the quarter hour and to actuate one hammer to strike the hour, and means to lock the other hammer against movement during the striking of the hour.

4. In a clock, the combination with hammer-actuating means, of a stop wheel, a stop member normally restraining said wheel from operation, time-controlled means to move the stop member into inoperative position and to bring a second stop member into operative position whereby the stop wheel is partially released and subsequently to cause the return of the second stop member to its normal position whereby the stop wheel is entirely released and the hammer-actuating mechanism operated, and a manually-operable repeating member operative to release the stop wheel at any time regardless of the position of the stop members.

5. In a clock, the combination with spring-actuated hammer-actuating means, of a stop wheel connected to said means, a stop member normally restraining said wheel from operation, a releasing member, time-controlled means to actuate the releasing member and through the latter the stop member to carry the stop member into inoperative position and the releasing member into operative position to restrain the movement of the stop wheel and thereafter to release the releasing member thereby permitting the stop wheel to be operated, and a repeating member adapted to engage the releasing member and actuate the latter to release the stop wheel in either of the positions of said releasing member.

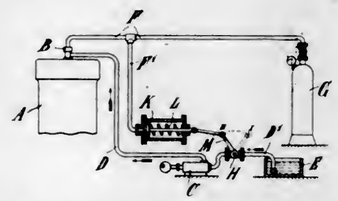
[Claims 6 to 8 not printed in the Gazette.]

1,166,854. PNEUMATIC WHEEL. JOSEPH O. RAYMOND, Concord, N. H. Filed Jan. 16, 1915. Serial No. 2,747. (Cl. 21—90.)



In a wheel, the combination with an axle, of a wheel comprising a body portion and a hub portion, said hub portion presenting two connected side members between which the body portion is received, means for rigidly securing each of said side members to the axle, means connecting the body portion and hub portion, a housing inclosing the axle, a bearing flange integral with and extending laterally from one of the side members and encircling one end of the housing, and an anti-friction bearing between said flange and housing end.

1,166,855. SAFETY DEVICE AGAINST EXPLOSIONS IN THE AIR-PIPES OF INTERNAL-COMBUSTION ENGINES. CONRAD C. REGENBOGEN, Kiel-Gaarden, and PAUL A. RITTER, Kiel, Germany, assignors to Fried. Krupp Aktiengesellschaft Germaniawerft, Kiel-Gaarden, Germany. Filed Sept. 19, 1914. Serial No. 862,618. (Cl. 123—142.)

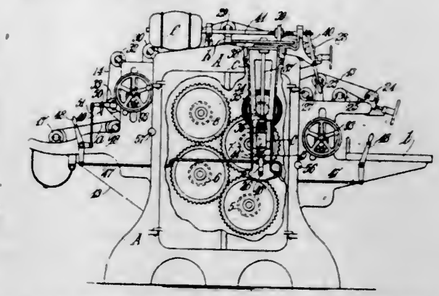


1. A safety device against explosions in the air pipes of internal combustion engines, comprising means for shutting off the fuel supply, directly the pressure in the air pipes sinks below a certain amount, said means having a cylinder of constant volume, a reciprocating member therein, a normally open valve in the fuel conduit of the engine, said cylinder and said valve forming separate units, connection between said member and said valve, one end of said cylinder having a pipe connection with said air pipes, and pressure means for holding said member against said end of the cylinder.

2. A safety device against explosions in the air pipes of internal combustion engines, comprising means for shutting off the fuel supply, directly the pressure in the air pipes sinks below a certain amount, said means having a cylinder of constant volume, a reciprocating member therein, a normally open valve in the fuel conduit of the engine, said cylinder and said valve forming separate units, connection between said member and said valve, one end of said cylinder having a pipe connection with said air pipes, and pressure means for holding said member against said end of the cylinder, said pressure means having a conduit connecting the compression chamber of the engine with the opposite end of said cylinder.

3. A safety device against explosions in the air pipes of internal combustion engines, comprising means for shutting off the fuel supply, directly the pressure in the air pipes sinks below a certain amount, said means having a cylinder of constant volume, a reciprocating member therein, a normally open valve in the fuel conduit of the engine, said cylinder and said valve forming separate units, connection between said member and said valve, one end of said cylinder having a pipe connection with said air pipes, and pressure means for holding said member against said end of the cylinder, said pressure means having a conduit connecting the compression chamber of the engine with the opposite end of said cylinder and a non-return valve in said conduit.

1,166,856. IRONING-MACHINE. CHARLES W. SADLER, Windsor Locks, Conn. Filed June 4, 1915. Serial No. 32,073. (Cl. 68—9.)



1. An ironing machine comprising in combination, a plurality of crescent shaped ironing members, feeding and guiding aprons passing around said members, said aprons arranged to feed articles to said members and from one member to another, means to cause a relative movement between the aprons and said members together with a device comprising a plurality of belts arranged yieldingly to independently force said aprons against said members, pressure rollers over which the belts pass, and means comprising, cylinders, pistons therein, and connecting means between the rollers and pistons.

2. An ironing machine comprising in combination, a plurality of parallel rows of stationary ironing members, an independent apron for each of said rows, means to drive said aprons, together with means for causing the article being ironed to be transferred from the first member of one row to the first member of the second row and thence to the second member of the first row to the second member of the second row and so on through the entire machine, all constructed and arranged so that the article is engaged alternately on opposite sides by said members.

3. An ironing machine, comprising, a plurality of rows of stationary ironing members, means to heat said members, an apron for each of said rows each arranged to carry the goods to be ironed around the members in one row and to transfer the goods to the apron for the other row, means to drive said aprons, a series of traveling tapes for each of said rows, means to drive said tapes and means to force said tapes yieldingly against the apron and the goods to be ironed, all constructed and arranged so that goods of varying thickness may be ironed simultaneously and goods with buttons may be ironed without breaking the buttons.

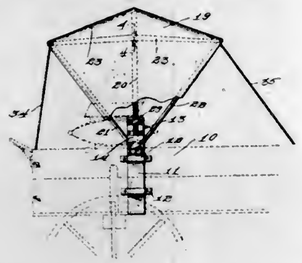
4. An ironing machine, comprising a plurality of ironing members, feeding aprons arranged to convey articles to be ironed to and around each of said members, means

to drive said aprons to cause a relative movement between the articles and said members, yieldable means comprising a plurality of independent belts traveling with said aprons to force the latter and the goods against some of said members, and means to place tension on said aprons, said aprons arranged alternately to present opposite sides of the articles to be ironed to said members.

5. An ironing machine comprising a plurality of stationary ironing members, feeding aprons arranged to convey articles to be ironed to and around each of said members, means to drive said aprons, independent yieldable means to force the aprons against said members with the articles therebetween and automatic means to guide and aline said aprons relative to said members.

[Claims 6 to 8 not printed in the Gazette.]

1,166,857. FOLDING WAGON-TOP. EDWARD B. SAFFORD, Carmona, Tex. Filed Feb. 9, 1915. Serial No. 7,046. (Cl. 21—62.)



1. A wagon cover provided with a supporting yoke and supporting bows, standards, housings connected with said standards and having their side walls provided with slots leading from the upper edges thereof, pins extending through said housings, and straps carried by said standards, the arms of said yoke extending through the straps of said standards into said housings and the ends of said bows extending through said slots in said housings and having their inner end portions provided with hooks engaging said pins to pivotally and removably mount said bows.

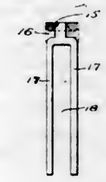
2. A cover provided with a supporting yoke and supporting bows, standards, housings carried by said standards, pins passing through said housings, the arms of said yoke being removably connected with said standards and extending into said housings, and the ends of said bows being provided with hooks engaging said pins to removably and pivotally mount said bows.

3. In a device of the character described a cover comprising a yoke, bows, stretchers pivotally connected with said bows and having their inner end portions hingedly connected, latches pivotally connected with said yoke and provided with heels to limit their swinging movement in one direction, and means for yieldably holding said latches in a position for normally engaging said stretchers to releasably hold the same in an extended position.

1,166,858. METHOD OF FORGING BRAKE-FULCRUMS. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. Filed June 8, 1915. Serial No. 32,947. (Cl. 29—164.)

1. A method of forging brake fulcrums, consisting in first welding together a block and a bar, at the center of said bar; second, in impressing a recess on said block which forms the head of the fulcrum, and lastly, in bending the shanks back until they extend in a parallel direction beneath said head, leaving a suitable space between them.

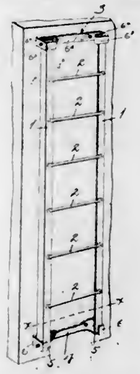
2. A method of forging brake fulcruma, consisting in first welding together a block and a flat bar at the center of said bar; second, in impressing a recess on said block which forms the head of the fulcrum and lastly, in bending the shanks back until they extend in a parallel direction beneath said head, leaving a suitable space between them.



3. A method of forging brake fulcrums, consisting in first welding together a block with parallel sides and a flat bar at the center of said bar; second, in impressing a recess on said block which forms the head of the fulcrum and lastly, in bending the shanks back until they extend in a parallel direction beneath said head, leaving a suitable space between them.

4. A method of forging brake fulcrums, consisting in first welding together a block with parallel sides and a flat bar at the center of said bar, said block being set diagonally on said bar; second, in impressing a recess on said block which forms the head of the fulcrum, and lastly, in bending the shanks back until they extend in a parallel direction beneath said head, leaving a suitable space between them.

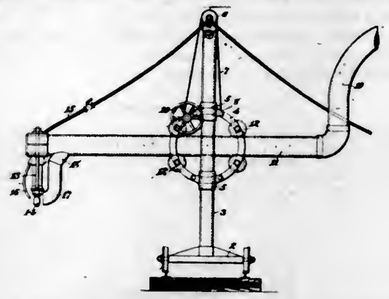
1,166,859. FREIGHT-CAR LADDER. FREDERICK J. SCHROEDER, Cleveland, Ohio, assignor to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. Filed July 8, 1915. Serial No. 38,739. (Cl. 228—1.)



1. A ladder for railway cars comprising stiles with suitable rungs connected thereto, a supporting bracket having embracing seats adapted to receive and confine the lower ends of the ladder stiles on the inside of the bracket, said bracket comprising vertical and horizontal flanges, the horizontal flange being cut away to leave supporting ledges restricted to the vicinity of the stile ends and the ends of the vertical flange being bent across the ends of the supporting ledges and operating to confine the ends of the stiles to the seats provided by said ledges.

2. A car ladder comprising vertical stiles having side and front flanges and rungs, means affording vertical support for said stiles, and a bracket for the ladder comprising a base-plate having its ends bent to provide surrounding and embracing clips that extend outwardly across the side flanges of the stiles, and thence across the front flanges and terminate in return-bends that extend across the free edges of said front flanges and underlie their inner faces, said clips thereby confining said stiles in both lateral directions and spacing them from the wall upon which the bracket is mounted, while permitting vertical movement of the stiles in the bracket.

1,166,860. STONE-DRESSING MACHINE. RAYMOND E. SHAW, Boston, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 11, 1915. Serial No. 50,146. (Cl. 125—6.)



1. A stone dressing machine, having, in combination, an operating tool, means for supporting the tool including a tubular member and adapted for connection to suction means, a suction mouth-piece arranged in proximity to the tool and connected with said tubular member, the latter forming a flue for conveying away the dust drawn into the mouth-piece, substantially as described.

2. A stone dressing machine, having, in combination, a stone dressing tool, a support for said tool including a vertical column and an arm extending therefrom, one of the members being tubular to act as a dust conveyer, and a mouth piece located in operative relation to the tool and connected with the tubular member, substantially as described.

3. A stone dressing machine, having, in combination, a vertical column, a frame rotatably mounted on the column and vertically adjustable thereon, a hollow horizontal member mounted on the frame and adjustable transversely of the column, an operating tool mounted on the horizontal member, and a suction mouth-piece arranged adjacent the tool and carried by and connected with the hollow horizontal member, said member forming a flue for carrying away the dust produced by the tool, substantially as described.

4. A stone dressing machine, having, in combination, a vertical column, a hollow horizontal member movably mounted on the column and adapted to be connected to a suction device, a pneumatically operated tool mounted on said member, a suction mouth-piece arranged adjacent the tool and connected with the horizontal member, and an exhaust pipe for the tool having its exhaust opening adjacent the tool and opposite the suction mouth-piece, substantially as described.

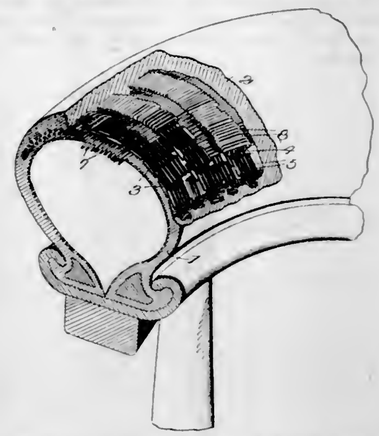
1,166,861. TIRE-ARMOR. FRANK W. SIMONS, Vallejo, Cal. Filed Feb. 4, 1915. Serial No. 6,100. (Cl. 152—18.)

1. Tire armor including a series of armor strips, each comprising a series of overlapped armor plates, flexible strands interwoven with the plates, and flexibly connecting the same, and means flexibly connecting the strips of the series.

2. Tire armor including a series of armor strips, each strip comprising a series of armor plates arranged in staggered relation with their adjacent edge portions spaced and overlapped, flexible elements extending between the sets of armor plates, flexible elements interwoven with the armor plates of the series, and means flexibly connecting the strips of the series.

3. Tire armor including a series of armor strips, each strip comprising a series of armor plates arranged in staggered relation with their adjacent edge portions spaced and overlapped, flexible elements extending between the sets of armor plates, flexible elements interwoven with the armor plates of the series, and flexible elements interwoven with the strips and flexibly connecting the strips in the series.

4. Tire armor including a series of armor members arranged in sets in staggered overlapped relation, flexible elements extending between the sets of the series, flexible elements interwoven with the members in the sets, and a cushioning substance filling the spaces and interstices between the plates and the said flexible elements.



5. Tire armor including a series of armor strips, each strip comprising a series of armor plates, flexible elements interwoven with the armor plates of each series and at their ends extending beyond the series of armor plates, means flexibly connecting the armor strips of the series, and flexible elements connecting the projecting ends of the first mentioned flexible elements at each side of the armor.

[Claim 6 not printed in the Gazette.]

1,166,862. POWDER-FLASK. SAMUEL B. SMOOT, Dimmock, W. Va., assignor of one-half to W. E. Deegans, Mount Hope, W. Va. Filed Mar. 27, 1915. Serial No. 17,396. (Cl. 150—0.5.)

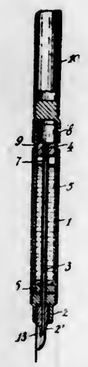


A powder flask consisting of a flexible rubber body portion having a contracted upper portion, a hard rubber neck, exteriorly reduced at its lower end and rounded at the lower end on the interior, thereby forming a flange adapted to enter and be secured to the contracted portion of the body, a gum cloth lining for said body portion, a rubber cap threading on the neck, and a waterproofed cord handle secured respectively to the neck and body portion.

1,166,863. FOUNTAIN-PEN. HUGO STEIN, Vienna, Austria-Hungary. Filed Nov. 13, 1913. Serial No. 800,832. (Cl. 120—46.)

1. A fountain pen, comprising in combination, a tubular member, a pen carried at one end thereof, an ink tube

also carried by said member and forming therewith an annular chamber, a closure member at the outer end of said ink tube serving to close the outer end of said chamber, a second movable closure member closely fitting the exterior of said ink tube and the interior of said tubular member and serving to close the inner end of said chamber, said ink tube having an orifice communicating with said chamber and means for moving the second closure member relatively to the tubular member and ink tube, for the purpose described.



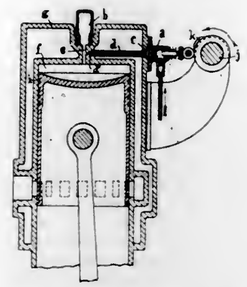
2. A fountain pen, comprising in combination, a pair of tubular members, one fitting within the other, a closure member carried by the inner tubular member, a second closure member arranged within the inner tubular member and connected with the outer tubular member, said closure members and the inner tubular member forming between them an ink chamber, a pen carried by one of said tubular members, and an ink tube also carried by said member, opening at one end adjacent said pen and communicating through an orifice with said chamber, said tubular members being relatively movable for the purpose described.

3. A fountain pen, comprising in combination, a pair of tubular members one fitting within the other, a closure member carried by the inner tubular member, a second closure member arranged within the inner tubular member, and connected with the outer tubular member, said closure members and the inner tubular member forming between them an ink chamber, a pen carried by one of said tubular members, and an ink tube also carried by said member, said tube opening at one end adjacent said pen and being closed at the other end, but having an aperture adjacent said end and communicating with said ink chamber, said tube passing through both of said closing members, said tubular members being relatively movable for the purpose described.

4. A fountain pen comprising in combination, a holder, a pen at one end thereof, a casing within the holder and projecting beyond one end thereof, a closing member integral with the casing, a closing member extending across and tightly fitting the casing, both members being normally spaced apart to form a closed ink chamber, a stationary ink tube within and in communication with the ink chamber by means of an orifice, the tube being secured to the closing member which fits within the casing and passing tightly through the integral closing member and having its end adjacent the pen in the holder, and a knob on the end of the casing which projects from the holder, whereby the integral closing member and sleeve are moved relatively to the ink tube and the other closing member to vary the capacity of the ink chamber for the purpose described.

5. A fountain pen comprising in combination, a casing, a pen at one end thereof, a closing member integral with the casing, a closing member extending across and tightly fitting the casing, both members being normally spaced apart to form a closed ink chamber, a stationary ink tube within and in communication with the ink chamber by means of an orifice, the tube being secured to the integral closing member, and passing tightly through the closing member which fits within the casing and having its end adjacent the pen in the casing, a sleeve surrounding the casing, and means on the sleeve for moving it and the tightly fitting closing member relatively to the ink tube and the integral closing member, to vary the capacity of the ink chamber for the purpose described.

1,166,864. MEANS FOR SUPPLYING FUEL TO INTERNAL-COMBUSTION ENGINES. KARL STEINBECKER, Charlottenburg, Germany. Filed Aug. 5, 1913. Serial No. 783,012. (Cl. 123—32.)



1. In an internal combustion engine of the character described, the combination of a cylinder, a piston movable therein, an auxiliary chamber, a duct connecting said chamber with the cylinder, a fuel pump, and a short water-cooled rigid pipe having a very small cubic content connecting the fuel pump with said duct, for the purpose specified.

2. In an internal combustion engine of the character described, the combination of a cylinder, a piston movable therein, an auxiliary chamber, a duct connecting said chamber with the end of the working cylinder, a water jacket surrounding said end of the cylinder, a fuel pump, and a rigid pipe of very small cubic contents passing through the water jacket and connecting the fuel pump with said duct, for the purpose specified.

3. In an internal combustion engine of the character described, the combination of a cylinder and a piston movable therein, a retort, a duct connecting the retort with the cylinder, a main fuel pump, an auxiliary fuel pump, and pipes connecting the pumps with said duct, each of said pipes being of very small cubic content, for the purpose specified.

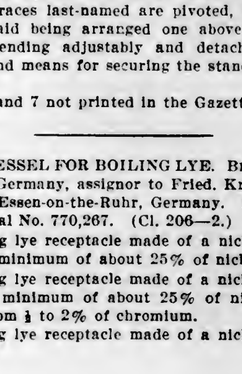
4. In an internal combustion engine of the character described, the combination of a cylinder and a piston movable therein, a retort, a duct connecting the retort with the cylinder, a main fuel pump, an auxiliary fuel pump, and pipes connecting the pumps with said duct, each of said pipes being uniformly cooled and of very small cubic content, for the purpose specified.

5. In an internal combustion engine of the character described, the combination of a cylinder, and a piston movable therein, a retort, a duct connecting the retort with the cylinder, a main fuel pump, an auxiliary fuel pump, and pipes connecting the pumps with said duct, each of said pipes being very rigid and of very small cubic content, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,166,865. FOLDING TABLE. HARRY A. STONE, New York, N. Y. Filed Mar. 28, 1913. Serial No. 757,310. (Cl. 45—117.)

1. In a folding table, the combination of a plurality of relatively bodily shiftable legs, outer foldable braces directly connecting the legs together, and foldable upper and lower inner braces independent of the outer braces aforesaid, said upper and lower inner braces connecting the legs together and being circumscribed by the outer braces aforesaid, the inner braces being arranged, respectively, in upwardly and downwardly converging relation and forming independent skeleton pyramidal trusses.



2. In a folding table, the combination of a plurality of relatively bodily shiftable legs, outer foldable braces directly connecting the legs together, downwardly extending braces pivoted to the legs and to each other, and forming a skeleton pyramidal truss, upwardly extending braces pivoted to the legs and to each other, and forming a skeleton pyramidal truss, the downwardly extending braces being arranged to coöperate with the upwardly extending braces, whereby said sets of braces interbrace each other, said downwardly extending and upwardly extending braces being circumscribed by the outer braces aforesaid.

3. In a folding table, the combination with upright foldable legs, of downwardly extending braces arranged in pairs which are pivoted to the legs and to each other, and upwardly extending braces arranged in pairs which are pivoted to the legs and to each other, the pairs of upwardly and downwardly extending braces straddling and bearing against each other, whereby they are interbraced.

4. In a folding table, the combination of foldable legs, a set of downwardly extending braces pivoted to the legs, a head to which said braces are pivoted, a set of upwardly extending braces pivoted to the aforesaid legs, a head to which said braces last-named are pivoted, the respective heads aforesaid being arranged one above the other, and a standard extending through said heads.

5. In a folding table, the combination of foldable legs, a set of downwardly extending braces pivoted to the legs, a head to which said braces are pivoted, a set of upwardly extending braces pivoted to the aforesaid legs, a head to which said braces last-named are pivoted, the respective heads aforesaid being arranged one above the other, a standard extending adjustably and detachably through said heads, and means for securing the standard to one of the heads.

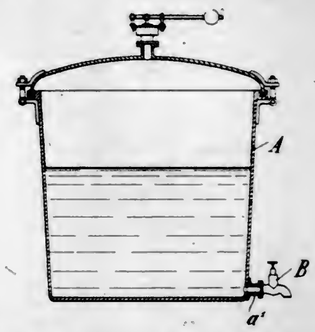
[Claims 6 and 7 not printed in the Gazette.]

1,166,866. VESSEL FOR BOILING LYE. BENNO STRAUSS, Bredeney, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed May 27, 1913. Serial No. 770,267. (Cl. 206—2.)

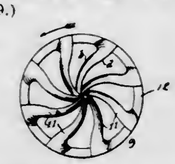
1. A boiling lye receptacle made of a nickel steel alloy containing a minimum of about 25% of nickel.

2. A boiling lye receptacle made of a nickel steel alloy containing a minimum of about 25% of nickel and also containing from ½ to 2% of chromium.

3. A boiling lye receptacle made of a nickel steel alloy containing a minimum of about 25% of nickel, and having the surface of the alloy coated with a thin film of oxid developed from metal contained in the alloy of which the receptacle is made.



1,166,867. APPARATUS FOR SEPARATING JUICE FROM CITRUS FRUIT. JOKICHI TAKAMINE, New York, N. Y. Filed Feb. 16, 1914. Serial No. 819,074. (Cl. 100—49.)



1. In an apparatus for the purpose described, comprising an extractor head, said head composed of a ring member and a series of longitudinally curved blades connected to the ring and extending therefrom, the said blades being connected to each other at their outer ends.

2. The combination in an apparatus for the described purpose, of a fruit extractor comprising a substantially cone-shaped head formed of a series of united circumferentially disposed upwardly extended curved spiral ribs, spaced one from the other, and the bearing face of each being gradually curved from its lower front edge to its upper rear edge.

3. In an apparatus for the purpose described comprising an extractor head, said head composed of a ring member, and a series of longitudinally curved blades connected to the ring and extending therefrom, said blades being connected at their other end and having rounded fruit engaging surfaces.

4. In an apparatus for the purpose described comprising an extractor head composed of a hollow annular ring member, series of blades leading from said ring and the terminals of said blades remote from said ring being connected, the said blades having rounded fruit engaging surfaces.

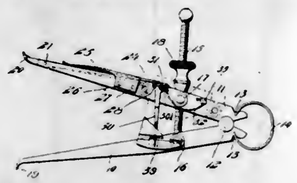
5. In an apparatus for the purpose described comprising an extractor head composed of an annular ring, a series of blades connected to the ring and extending therefrom to present a substantially cone shaped surface, said blades being curved longitudinally and substantially triangular in cross section to present rounded fruit engaging surfaces.

[Claim 6 not printed in the Gazette.]

1,166,868. CALIPERS. WILLIAM H. TONG, Elmira Heights, N. Y. Filed Oct. 28, 1913. Serial No. 797,878. Renewed June 4, 1915. Serial No. 32,243. (Cl. 33—148.)

1. A caliper comprising a caliper leg, a member pivoted near the end of said leg and extending longitudinally of the leg and having a part capable of engaging the article to be calipered, a scale mounted on the caliper, a pivoted

pointer having a part movable over the scale and controlled by said pivoted member, a spring tending to retain the pivoted member and the pointer in a predetermined position, a second spring acting on said pointer in opposition to the first mentioned spring and tending to move the said part of the pointer over the scale and a companion leg for the said caliper leg.



2. In a caliper, the combination of a pair of caliper legs pivotally connected together, one of said legs comprising a main part, and a toe lever pivotally mounted thereon and having a portion extending beyond said main part, said main part having a slot along one edge into which the other portion of the toe lever fits, yielding means for normally maintaining said toe lever in the slot, an indicating device comprising a pivoted pointer having a part disposed in contact with said pivoted toe lever, a scale over which the free end of said pointer is movable, and means tending to turn the pointer on its pivot and over said scale, said lever normally holding the pointer in position at one end of the scale and arranged to permit the movement of the pointer when the outer end of the same is rocked on its pivot.

3. In a caliper, the combination of a pair of caliper legs pivotally connected together, one of said legs comprising a main part, and a lever pivoted to the main part and having a toe portion extending beyond the end thereof, said main part having a slot extending along one edge to which the inner end of the lever fits, said main part of the leg having a notch therein extending across said slot and deeper than the latter, yielding means for normally maintaining the inner end of said lever in the slot, an indicating device comprising a pointer pivoted adjacent said notch and having a part which extends into the notch and beneath said lever, a scale over which said pointer is movable and disposed substantially longitudinally of the caliper, and means tending to turn said pointer on its pivot, said lever normally holding the pointer in position at one end of the scale and arranged to release the pointer so that it may move over the scale to indicate slight differences of measurements when the toe portion of the lever is rocked.

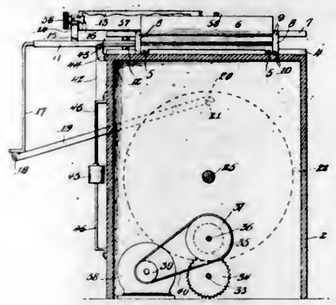
4. In a caliper, the combination of a pair of pivotally connected caliper legs, one of said legs comprising a truncated portion having a groove extending along one edge and a lever pivoted in said groove near the end of the truncated portion, a scale plate mounted on the caliper, a pivoted pointer extending substantially transversely of the caliper legs, a spring tending to move one end of the pointer over the scale divisions, said lever engaging the pointer, and a spring tending to maintain part of the lever in the groove and said pointer at one end of said scale.

5. In a caliper, the combination of a pair of pivotally connected caliper legs, one of said legs comprising a truncated portion having a groove extending along one edge and a lever pivoted in said groove, a scale on the caliper, a pivoted pointer controlled by said lever, and means whereby the free end of said pointer is caused to move over the scale divisions when said lever is rocked on its pivot.

[Claim 6 not printed in the Gazette.]

1,166,869. COPY HOLDER AND DISPLAY APPARATUS. ANDREW E. VANCE and OLIVER C. MORTRUDE, Sioux City, Iowa. Filed Mar. 27, 1913. Serial No. 757,205. (Cl. 120—32.)

1. In a copy-holder, a carriage, a drive member, projections on said member arranged on opposite sides of the axis thereof, a pitman connected to said carriage alternately engaging one of said projections and tripped by the other of said projections, and return means for said carriage.



2. In a copy-holder a casing, a driving disk carried by said casing, a carriage member mounted upon said casing, an arm connected with said carriage, a pitman pivotally connected with said arm and releasably connected with said driving disk, means carried by said disk for disconnecting said pitman from said disk when said carriage reaches the extremity of its movement in one direction, means for returning said carriage to its original position when said pitman is released from said disk, and means for rotating said disk.

3. In a copy-holder a casing, a carriage slidably connected with said casing, a roller rotatably supported by said carriage, an escapement for turning said roller including an operating lever, means carried by said casing for engaging said lever to move said lever and rotate said roller when said carriage reaches the extremity of its movement in one direction, driving mechanism carried by said casing, means releasably connecting said carriage with said driving mechanism, and means for returning said carriage to its normal position when said first-mentioned means is released from said driving mechanism.

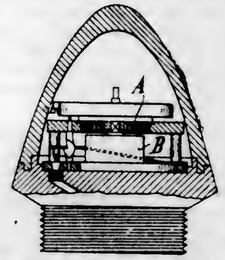
4. In a copy holder a movably mounted carriage, a rotary drive member, a pitman connected with said carriage, means for yieldably holding said carriage in a normal position, means carried by said rotary drive member for engaging said pitman to move said carriage out of its normal position, and means carried by said rotary drive member for moving said pitman out of engagement with the engaging means carried by said rotary drive member.

5. In a copy holder a movably mounted carriage, means for yieldably holding said carriage in a normal position, a rotary drive member, means for automatically connecting said carriage with said drive members to permit said drive member to move said carriage out of its normal position, and means for releasing said carriage from said drive member to permit said first mentioned means to return said carriage to its normal position.

[Claim 6 not printed in the Gazette.]

1,166,870. METHOD OF PRODUCING SPRINGS FOR MECHANICAL TIME-FUSES. KARL WIESER, Bredeney, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Oct. 28, 1909. Serial No. 525,066. (Cl. 29—173.)

Method of producing spiral springs that will withstand sudden shock without deformation or breaking after having been kept under tension for a considerable time, said method consisting in taking cold drawn steel wire and subjecting said wire to an additional cold treatment for the purpose of increasing its elasticity, said treatment comprising cold working of the wire, changing its section from a round to an elongated cross section and coiling



the wire thus flattened into a spring, with the greater dimension of the wire parallel to the axis of the spring coil.

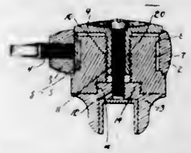
1,166,871. DRY BATTERY-CELL. HENRY WILHELM and HAROLD OLANETA, Brooklyn, N. Y. Filed Nov. 3, 1914. Serial No. 870,001. (Cl. 204—38.)



4. The method of making a battery cell, which consists in forming an embryo cartridge having a negative electrode therein forming a center or core, then wrapping it with one or more layers of solution-softened porous material, and then pressing said completely formed cartridge into a metal cup forming a positive electrode thereby to bring the porous material into intimate contact with the cup and embryo cartridge while preserving the moisture in the porous material.

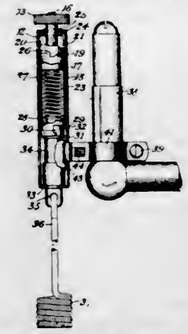
2. The method of making a battery cell, which consists in forming an embryo cartridge having a negative electrode therein forming a center or core, then wrapping it with one or more layers of solution-softened blotting paper, and then pressing said completely formed cartridge into a metal cup forming a positive electrode thereby to bring the blotting paper into intimate contact with the cup and embryo cartridge while preserving the moisture in the blotting paper.

1,166,872. LOCK-JOINT. GORDON WILLIAMS, New Haven, Conn., assignor to The English & Mersick Co., New Haven, Conn., a Corporation. Filed Nov. 23, 1914. Serial No. 873,567. (Cl. 21—148.)



A lock joint comprising a supporting member formed with a recess and a hub member adapted to enter said recess, a screw entering said recess through one side of the support, and a dog in the path of said screw and adapted to be forced thereby into engagement with said hub, the face of the dog being convex lengthwise and curved transversely.

1,166,873. LIGHTING DEVICE. MILTON E. WINANS, Newark, N. J., assignor to Oxweld Acetylene Company, Chicago, Ill., a Corporation of West Virginia. Filed May 12, 1915. Serial No. 27,501. (Cl. 67—20.1.)



1. In a lighting device of the kind described, a tubular outer casing, a tubular member fitted in the upper end of the casing and non-rotatable therein, an inwardly extending flange integral with said member at the outer end thereof, a tubular neck integral with the flange and extending outwardly therefrom, a carrier for a sparking body fixed to the outer end of the tubular member, a stem rotatable in said neck and extending through said tubular member, and abrading disk fixed on the stem in position to operate on a sparking body in the aforesaid carrier, and means projecting from the lower end of the outer casing to rotate the said stem.

2. In a lighting device of the kind described, a tubular outer casing, having a bayonet slot at its top, a tubular member arranged in the top of the casing and having a lug engaging the same in said bayonet slot, a stem rotatable in the tubular member and removable therewith, actuating mechanism connected with the stem to rotate the same and removable therewith, an abrading disk on the outer end of the stem, and means carried by the tubular member to hold a sparking body in contact with the abrading disk.

3. In a lighting device of the kind described, a tubular member having at one end an integral inwardly extending flange and a tubular neck integral with the flange, a stem rotatable in the neck, an abrading disk on the outer end of the stem, a collar encircling the neck and rigidly fixed on the tubular member, a carrier connected with the collar to hold a sparking body in contact with the abrading disk, and means to rotate the stem and disk.

4. In a lighting device of the kind described, a rotary abrading disk, means for holding a sparking body in contact with the disk, and manual means to rotate the disk and adapted to impart an axial movement to the disk relatively to the sparking body.

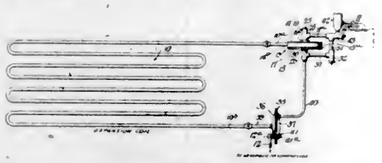
5. In a lighting device of the kind described, a rotary abrading disk capable of a limited axial movement, means for holding a sparking body in contact with the disk, and manual means to rotate the disk and to shift the same axially relatively to the sparking body at the beginning of the disk's rotary movement.

[Claim 6 not printed in the Gazette.]

1,166,874. VALVE-CONTROL MECHANISM FOR REFRIGERATING APPARATUS. FRED W. WOLF, Jr. and HARRISON H. SOUTHWORTH, Cleveland, Ohio, assignors, by mesne assignments, to The Iceless Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 16, 1912. Serial No. 671,446. (Cl. 62—8.)

1. A device for controlling the flow of a refrigerant to a refrigerating coil, comprising a casing having an inlet and an outlet, said refrigerating coil being connected to said outlet, a differential pressure member in said casing adapted to open and close said inlet, means coöperating with said pressure member to constitute therewith a thermo-

stat adapted to produce a pressure acting through said differential pressure member to open said inlet, said thermostat having two parts, the first part adapted to be subjected to the cooling effect of the refrigerant in or near the casing, and the second part adapted to be subjected to the heating effect of the fluid to be refrigerated.



2. A device for controlling the flow of a refrigerant to a refrigerating coil, comprising a casing having an inlet and an outlet, said refrigerating coil being connected to said outlet, a differential pressure member in said casing adapted to control the passage of refrigerant therethrough and subjected on one side to the pressure of the refrigerant in the casing, means coöperating with said pressure member to constitute therewith a thermostat adapted to produce a pressure on the opposite side of said differential pressure member, said thermostat having two parts, the first adapted to be subjected to the cooling effect of the refrigerant in or near the casing and the second adapted to be subjected to the heating effect of the fluid to be refrigerated.

3. A device for controlling the flow of a refrigerant to a refrigerating coil, comprising a casing having an inlet and an outlet, said refrigerating coil being connected to said outlet, a motor in said casing adapted to open and close said inlet, means adapted to cause said motor to operate either in a direction to cease said inlet or in a direction to open said inlet, the action of said means being controlled by the combined cooling effect of the refrigerant in or near the casing and by the heating effect of the fluid to be refrigerated and by the heating or cooling effect of the refrigerant in the coil at a place distant from the casing.

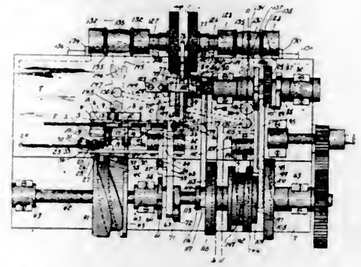
4. A device for controlling the flow of a refrigerant to a refrigerating coil, comprising a casing having an inlet and an outlet, said refrigerating coil being connected to said outlet, a motor in said casing adapted to open and close said inlet, and to be operated by the pressure of the refrigerant in the casing in a direction to close the inlet, means adapted to cause said motor to operate either in a direction to close said inlet or in a direction to open said inlet, the action of said means being controlled by the combined cooling effect of the refrigerant in or near the casing and by the heating effect of the fluid to be refrigerated and by the heating or cooling effect of the refrigerant in the coil at a place distant from the casing.

5. A device for controlling the flow of a refrigerant to a refrigerating coil, comprising a casing having an inlet and an outlet, said refrigerating coil being connected to said outlet, a differential pressure member in said casing adapted to open and close said inlet, means coöperating with said pressure member to constitute therewith a thermostat adapted to produce a pressure member to open said inlet, said thermostat having three parts, the first part adapted to be subjected to the cooling effect of the refrigerant in or near the casing, the second part adapted to be subjected to the heating effect of the fluid to be refrigerated, and the third part adapted to be subjected to the heating effect or cooling effect of the refrigerant in the coil at a place distant from the casing.

[Claims 6 to 20 not printed in the Gazette.]

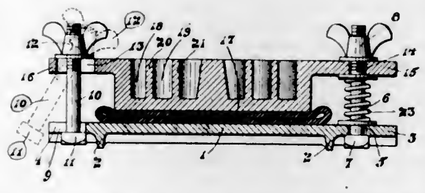
1,166,875. MACHINE FOR CUTTING AND GRINDING HELICAL COMPRESSION-SPRINGS. HENRY C. WRIGHT and JOHN ERNEST ANDREW, Bristol, Conn., assignors to The Wallace Barnes Co., Bristol, Conn., a Corporation. Filed Nov. 2, 1914. Serial No. 869,886. (Cl. 29—33.)

1. In a machine for cutting helical springs from long lengths of spring stock and grinding the end-coils of such springs, the combination with automatic feeding mechanism adapted to enter between the open coils of the spring stock for feeding the same step-by-step for a distance predetermined by the number of coils desired in the finished springs, cutting mechanism for cutting springs containing the predetermined number of coils from the fed-end of the stock during the interval of rest between its step-by-step feeding movement, and grinding mechanism for grinding the end-coils of the springs.



2. In a machine for cutting helical springs from long lengths of spring stock and grinding the end-coils of such springs, the combination with automatic feeding mechanism for feeding the stock step-by-step for a distance predetermined by the number of coils desired in the finished springs, means for gripping the fed-end of the stock after it has been fed, cutting mechanism for cutting off the fed-end of the stock after it has been so fed and gripped, centering means for positively centering the severed springs after they have been cut off and released by the said gripping means, and grinding means for grinding the end-coils of the springs after they have been centered and re-gripped.

1,166,876. VULCANIZER. JOHN YEMIKER and WALTER S. VOSBURGH, Akron, Ohio; said Vosburgh assignor to said Yemiker. Filed Jan. 25, 1915. Serial No. 4,153. (Cl. 18—18.)



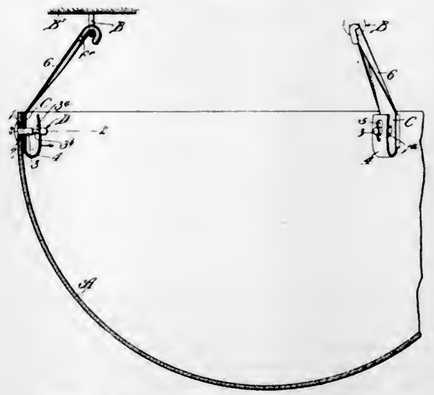
In a vulcanizer of the class described, the combination of a base and a combined cup and vlucanizing plate, the base provided with apertured and slotted extensions, the combined cup and vulcanizing plate provided with apertured extensions and bolts located diametrically opposite the vulcanizing plate, said bolts provided with clamping nuts, and a spring located around one of the bolts and intermediate the extensions carrying said bolt.

1,166,877. CONVERTIBLE HAY-RACK. ELIAS F. YOUNCE, Union, Ohio. Filed Sept. 8, 1914. Serial No. 860,520. (Cl. 21—74.)



A convertible hay-rack comprising a bottom member, a pair of side members, a hinge connection comprising two parallel parts, one attached to the bottom member and the other secured to a side member, means for pivotally securing the last named part to the first named one, lugs on the first named part to limit the movement of the second named part in one direction, and a single slot, pin and shoulder mechanism for limiting the movement of the last named part in the opposite direction, substantially as described.

1,166,878. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed July 23, 1915. Serial No. 41,520. (Cl. 240—115.)



1. A device for the purpose described, comprising a member that is adapted to be arranged on one side of the object with which the device coöperates, said member having a supporting portion that projects into an opening in said object, and a clamping member arranged on the opposite side of said object and provided with a shank that projects through the opening in said object.

2. A device for the purpose described, comprising a member that is adapted to be arranged on one side of the object with which the device coöperates, said member having a supporting portion that projects into an opening in said object, a clamping member arranged on the opposite side of said object and provided with a shank that projects through the opening in said object, and resilient means that coöperates with said shank to hold said members in engagement with said object.

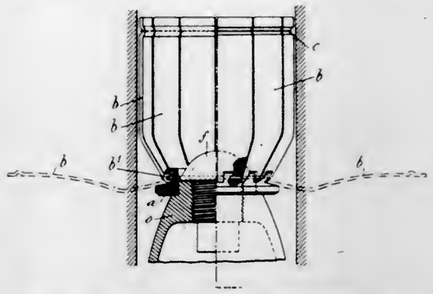
3. A device for the purpose described, comprising two members that are adapted to be arranged on opposite sides of the object with which the device coöperates, one of said members having a resilient arm that is provided with a substantially key-hole-shaped opening and the other member having a shank that passes through the object and which is provided intermediate its ends with a reduced portion that normally lies in a contracted part of said key-hole-shaped opening and thus serves to connect said shank and resilient arm together.

4. A device for the purpose described, comprising two members that are adapted to be arranged on opposite sides of the object with which the device coöperates, one of said members having a resilient arm that is provided with a substantially key-hole-shaped opening and the other member having a shank that passes through the object and which is provided with a reduced portion that normally lies in a contracted part of said key-hole-shaped opening, and a supporting portion on the member that has the arm which sustains the weight of the object.

5. A device for the purpose described, comprising a member that is adapted to be arranged on the inner side of the object with which the device coöperates, said member being provided with a laterally-projecting supporting portion that enters an opening in said object, an integral device at the upper end of said member for connecting it to a sustaining means, a spring arm attached to the lower end of said member and extending approximately parallel to same, and a clamping member arranged on the outer side of the object and provided with a shank that projects inwardly through the object and which is provided with a shoulder that is engaged by the spring arm on the inner member.

[Claims 6 and 7 not printed in the Gazette.]

1,166,879. APPARATUS FOR MODIFYING THE TRAJECTORY OF A PROJECTILE. LOUIS ALARD, Paris, France. Filed Jan. 27, 1914. Serial No. 814,639. (Cl. 102—26.)



1. Apparatus for modifying the trajectory of a projectile, comprising a braking device adapted to be mounted concentrically and symmetrically on the projectile, with means for fixing it on the projectile in such a manner as to transform the trajectory of the latter making it equivalent to that secured heretofore with a field howitzer only.

2. Apparatus for modifying the trajectory of a projectile, comprising a braking device composed of a base-piece encircling the projectile and a plurality of strips connected to and extending annularly from said base-piece and normally, located close together longitudinally around the projectile, means for rigidly connecting said base-piece to the projectile and means for temporarily retaining said strips in their normal position, and adapted to be operated by centrifugal force to release said strips and allow them to open outward and thus exert a braking action upon the flight of the projectile.

3. Apparatus for modifying the trajectory of a projectile, comprising a braking device composed of a base-piece encircling the projectile and a plurality of strips connected to and extending annularly from said base-piece and normally, located close together longitudinally around the projectile, means for rigidly connecting said base-piece to the projectile, means for temporarily retaining said strips in their normal position, and adapted to be operated by centrifugal force to release said strips and allow them to open outward and thus exert a braking action upon the flight of the projectile and means carried by the projectile for regulating the braking action of the braking device.

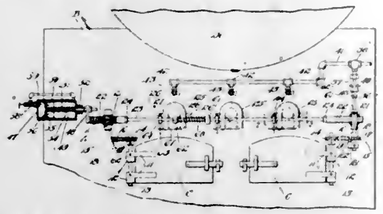
4. Apparatus for modifying the trajectory of a projectile, comprising a braking device composed of a base-piece encircling the projectile and a plurality of strips extending annularly from said base-piece and normally located close together longitudinally around the projectile, means for rigidly connecting said base-piece to the projectile, means for temporarily retaining said strips in their normal position, and adapted to be operated by centrifugal force to release said strips and allow them to open outward and thus exert a braking action upon the flight of the projectile and a movable ring surrounding the strips and adapted to be adjusted at a variable distance from the free ends of said strips, thereby regulating the braking action of the braking device.

5. Apparatus for modifying the trajectory of a projectile, comprising a braking device composed of a base-piece encircling the projectile and a plurality of strips connected to and extending angularly from said base-piece and normally located close together longitudinally around the projectile, means for rigidly connecting said

base-piece to the projectile, means for temporarily retaining said strips in their normal position and adapted to be operated by centrifugal force to release said strips and allow them to open outward and thus exert a braking action upon the flight of the projectile, and an auxiliary braking device mounted on the said braking device to increase the braking area of the latter.

[Claim 6 not printed in the Gazette.]

1,166,880. SMOKE-PREVENTER. BRADFORD L. AMES, Boston, Mass. Filed Mar. 20, 1914. Serial No. 826,118. (Cl. 110—55.)



1. In a smoke preventer, the combination of a furnace door, a valve for controlling the supply of steam, a sprocket operatively connected with the valve member of said valve and with said door by which the valve is caused to open by opening the door, said sprocket being loosely mounted to freely rotate without moving said valve member while said door is being closed, and automatic means for closing said valve.

2. In a smoke preventer, the combination of a furnace door, a valve for controlling the supply of steam, a pair of connecting sprockets, one rotatably mounted in connection with the valve member of said valve, the other rotatably mounted in connection with the door, one of said sprockets being arranged to actuate the valve member while being rotated in one direction and to move freely, relatively thereto while being rotated in the opposite direction, and automatic means for actuating the valve member in the opposite direction.

3. In a smoke preventer the combination of a furnace door, a valve for controlling the supply of steam, a slide rod operatively connected with the valve, a sprocket connection by which the slide rod is moved in one direction by opening the door, said sprocket being loosely mounted to freely rotate without moving said rod while said door is being closed, and automatic means for moving said rod in the opposite direction.

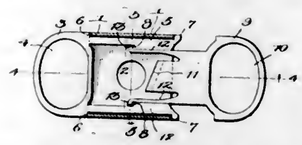
4. In a smoke preventer the combination of a furnace door, a valve for controlling the supply of steam, a slide rod operatively connected with said valve, a pair of connecting sprockets one rotatably mounted in connection with the rod and the other rotatably mounted in connection with the door, one of said sprockets being arranged to move with the rod in one direction and freely relatively thereto in the opposite direction, and automatic means for moving the slide rod in the opposite direction.

5. In a smoke preventer the combination of a furnace door, a valve controlling the supply of steam, a slide rod operatively connected with said valve, a sprocket connecting the slide rod with the door by which the slide rod is moved in one direction by opening the door, said sprocket being loosely mounted to freely rotate without affecting said rod while said door is being closed, and automatic means for moving said rod in the opposite direction.

[Claims 6 to 9 not printed in the Gazette.]

1,166,881. CIGAR-CUTTER. EDWARD L. ANDERSON, Attleboro, Mass. Filed Apr. 17, 1915. Serial No. 22,065. (Cl. 131—38.)

1. A cigar cutter composed of a hollow housing having open ends and cigar tip receiving apertures, a member having a finger receiving opening and legs with shoulders at the inner ends of the legs, the legs being received in the housing and the shoulders abutting one end of the latter, the free ends of the legs having outward projections adapted to spring outwardly and engage the opposite end of the housing, said legs having stop shoulders on their side edges, and a second member having a finger receiving opening, a cutter, and fingers on opposite sides of the cutter spaced therefrom, said fingers riding on the inner side edges of the legs and having outward projections which are adapted to engage the stop shoulders to limit the extent of outward movement of the last named member.



2. In a cigar cutter, a hollow housing having cigar tip receiving openings, a pair of finger engaging members, means to automatically and rigidly lock one of the members to the housing upon insertion into the latter, and means to automatically and movably connect the other member to the first named member so as to allow same to have restricted sliding movement upon insertion into the housing.

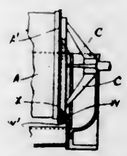
3. In a cigar cutter, a hollow housing, a finger engaging member having spring means which upon insertion in the housing is automatically locked thereto and a cutter bearing member having spring means to automatically lock the same within the housing upon insertion in the latter but to allow same to have a restricted sliding movement.

4. A cigar cutter composed of a housing and two finger engaging members one of which has a cutter, and means to automatically connect both of the members relative to the housing upon insertion in the latter and to allow the cutter bearing member to have restricted sliding movement when in the housing.

5. A cigar cutter composed of a housing, a finger engaging member having means which upon insertion in the housing is automatically locked thereto and a second finger engaging element having means associated with the first named element restricting the sliding movement of the second element.

[Claims 6 to 10 not printed in the Gazette.]

1,166,882. MACHINE FOR STRAINING PAPER-PULP. WILLIAM WORBY BEAUMONT, Westminster, London, England. Filed July 23, 1914. Serial No. 852,696. (Cl. 92—35.)

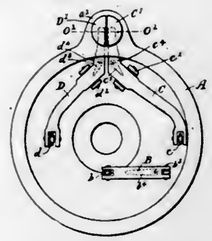


1. In a paper pulp straining machine wherein a rotating and laterally vibrating drum is partly immersed in the pulp contained in the pulp-vat, a substantially water-tight face-joint formed between the terminal face of the straining drum and the face of the stationary outlet therefrom; substantially as set forth.

2. In a paper pulp straining machine wherein a rotating and laterally vibrating drum is partially immersed in the pulp contained in the pulp-vat, a face-joint comprising a yielding and self-adjusting packing adapted to form a substantially water-tight closure between the terminal face of the straining drum and the face of the stationary outlet therefrom while permitting the free vibration and rotation of the said drum, substantially as set forth.

3. In a paper pulp straining machine wherein a rotating and laterally vibrating drum is partly immersed in the pulp contained in the pulp-vat, a spring-auspended flexible packing of wedge-shaped section bearing on its outer side against a conical surface formed on the stationary outlet and on its inner side against a radial surface presented by the extremity of the vibrating and rotating drum, substantially as set forth.

1,166,883. DIAL FOR COMBINATION-LOCKS. WILLIAM T. BENHAM, Norwood, Ohio. Filed June 26, 1915. Serial No. 36,549. (Cl. 70—56.)



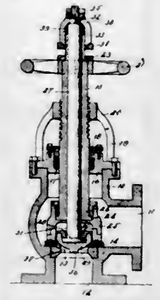
1. In a combination lock, a rotatable dial having gage notches arranged in concentric circles, representing respectively, single units, uniform groups of units, and the starting point at each revolution of the dial in either direction; an indicator for the starting point notch, constantly in contact with the circle on which said notch is; an indicator normally out of contact with the units gage notch circle; an indicator normally out of contact with the group gage notch circle; and a separate lever and operating button for each of said two last mentioned indicators for pressing said indicators into position to contact with their respective notches.

2. In a combination lock, a rotatable dial having gage notches arranged in concentric circles, representing, respectively, single units, uniform groups of units, and the starting point at each revolution of the dial in either direction; an indicator for the starting point notch, constantly in contact with the circle on which said notch is; an indicator normally out of contact with the units gage notch circle; an indicator normally out of contact with the group gage notch circle, and a separate lever for the units indicator and the group indicator, with an operating button for each of said levers placed in close proximity to each other, for pressing either the units or group indicators into position to contact with their respective notches at the will of the operator.

3. In a combination lock, a chambered dial-casing, a rotatable dial constituting a face plate for the casing chamber, a gage having notches arranged in concentric circles, representing respectively, single units, uniform groups of units, and the starting point at each revolution of the dial in either direction; an indicator within the dial chamber for the starting point notch, constantly capable of contacting with said notch; separate indicators within said dial chamber for the units and group notches, respectively, normally out of contact therewith, but each capable by manipulation of its button of being brought into contact with the circle on which its notches are, and a button for manipulating each of said two last named indicators.

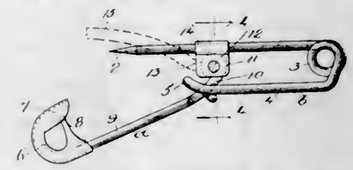
1,166,884. BLOW-OFF VALVE. OTTO J. BERGO, Norfolk, Va., assignor of one-half to Thomas J. White, Norfolk, Va. Filed June 1, 1914. Serial No. 842,093. (Cl. 137—4.)

In a blow-off valve the combination with a hollow stem, a valve on said stem, a second stem within said first stem, and a second valve on said second stem, of adjustable means between said stems, comprising a cap adapted to be secured on the end of said second stem and adapted to engage for relative movement with said first stem, means



for locking said cap against movement on said second stem, and a packing within said cap between said stems.

1,166,885. SELF-CLOSING SAFETY-PIN. JULIUS J. BRELL, New York, N. Y. Filed Mar. 11, 1915. Serial No. 13,589. (Cl. 24—158.)



1. In an article of the class described, the combination with two sections, one carrying an inserting pin and a guide, the other carrying a guard and being pivotally secured to the guide and slidably connected to the other section.

2. In an article of the class described, a guard section and an inserting pin section, a slidable guide on the pin section pivotally connected to the guard section and another guide on the pin section through which a portion of the guard section slides.

3. In an article of the class described, the combination with a member having a guard and shield and a curved arm, a guide pivoted to said curved arm, and another section comprising an inserting pin on which said guide is movable and a loop on said pin section through which the guard section is adapted to be moved.

4. In an article of the class described, the combination of two sections, one comprising an inserting rod and a substantially parallel loop rod, a loop formed on the end of the latter, the other section comprising a rod with a guard and shield on one end adapted to be alined with the inserting rod, said guard and shield carrying rod passing through the loop of the first section, and movably engaging a guide movable on the inserting rod of the first mentioned section.

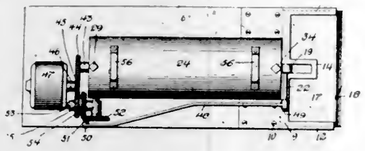
5. In an article of the class described, the combination of two sections, one comprising an inserting rod and a substantially parallel extending rod having a loop at its end, the other section comprising a rod, said rod passing through the loop of the first section and having a guard and shield on its outer or free end and a flattened curved section on its other end, a movable guide on the inserting rod of the first-mentioned section and means for pivoting the curved end of the rod to said guide.

[Claims 6 and 7 not printed in the Gazette.]

1,166,886. WALL-PAPER-SCRAPING MACHINE. WILLIAM J. BROWN, Pittsburgh, Pa., assignor of one-fourth to Roy S. Kahl, Oakdale, Pa. Filed Nov. 12, 1913. Serial No. 800,651. (Cl. 145—47.)

1. A wall paper scraping machine comprising a body, a scraper mounted on one end of the body, a rotary

scraper mounted on the body, the plane of rotation of the latter being transverse to the line of the cutting edge of the first mentioned scraper.



2. A wall paper scraping machine comprising a body, a scraper mounted on one end of the body to reciprocate longitudinally thereof, a rotary scraper mounted on the body, the plane of rotation of the latter being transverse to the line of the cutting edge of the first mentioned scraper.

3. A wall paper scraping machine comprising a body, a scraper mounted on one end of the body to reciprocate longitudinally thereof, a rotary scraper mounted on the body, the plane of rotation of the latter being transverse to the line of the cutting edge of the first mentioned scraper and a single means mounted on the body to operate both scrapers.

1,166,887. SAUCE-POWDER. MATIAS CHILA, Whiting, Ind. Filed Mar. 12, 1915. Serial No. 13,933. (Cl. 99—11.)

The process of making a seasoning powder which comprises subjecting garlic stalks to air drying, raising the temperature artificially until the stalks are thoroughly dried allowing the vapors to escape and then grinding to a fine powder.

1,166,888. METAL-WORKING. NORRIS ELMORE CLARK, Plainville, Conn. Filed Jan. 14, 1909. Serial No. 472,260. (Cl. 164—6.6.)



1. The method of forming reticulated metal which includes indenting a sheet in staggered arrangement while hot, fracturing the webs at the bottom of the indentations and expanding the sheet.

2. The method of forming reticulated metal which includes indenting and fracturing a sheet in staggered arrangement and expanding it while hot by stretching.

3. The method of forming reticulated metal which includes indenting a sheet in staggered arrangement, rolling it down and thereby fracturing the webs at the base of the indentations and then expanding the sheet.

4. The method of producing expanded metal, comprising rolling indentations in a metal sheet while hot and by further rolling, reducing and expanding said indented sheet.

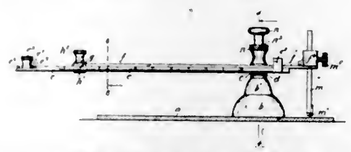
5. The method of forming reticulated metal which comprises indenting a sheet and thereby forming strands between the indentations thicker than the original sheet, fracturing the web of metal at the bottom of the indentations and separating the thickened strands.

[Claims 6 to 8 not printed in the Gazette.]

1,166,889. SUCTION-BASE CIRCLE MARKING AND CUTTING INSTRUMENT. PAUL CRUTCHFIELD, Portland, Oreg. Filed Mar. 4, 1914. Serial No. 822,534. (Cl. 33—158.)

1. In a device of the character described, a pivot element comprising a suction base, a standard thereon mounted, a post journaled in the standard, a nut threaded on the upper end of the post, and a piece providing a hand-hold rotatably secured on the nut.

2. In a device of the character described, a pivot element comprising a suction base, a standard thereon mounted, a post journaled in the standard, said post made with a peripheral flange, ball-bearings between such flange and the top of the standard, a nut threaded on the upper end of the post, and a piece providing a hand-hold rotatably secured on the nut.



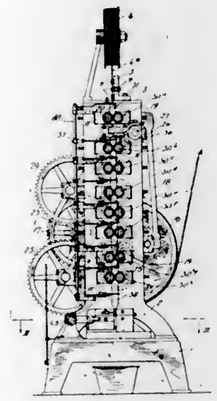
3. In a device of the character described, a pivot element comprising a hemispheric cup-like resilient base, a standard thereon mounted, a post journaled in the standard, a nut threaded on the upper end of the post, and a piece providing a hand-hold rotatably secured on the nut.

4. In a device of the character described, a pivot element comprising a hemispheric cup-like resilient base, a standard thereon mounted, a post journaled in the standard, said post made with a peripheral flange, ball-bearings between such flange and the top of the standard, and a cap providing a hand-hold rotatably secured on the nut and inclosing the upper end of the post.

5. In a device of the character described, the combination of a standard, a beam adjustably supported by the standard, a slide bar longitudinally adjustable on the beam, said bar provided on one end with a cutting or marking instrument, and means for locking the bar and beam in any position to which they have been adjusted.

[Claims 6 and 7 not printed in the Gazette.]

1,166,890. HORSE-NAIL MACHINE. SOLOMON M. CUTTER, Hartford, Conn., assignor to The Capewell Horse Nail Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 21, 1911. Serial No. 609,979. (Cl. 10—66.)



1. A horsenail machine comprising a main frame having mounted and organized therein in combination, a series of pairs of die-rolls, the terminal pair thereof having full-sized nail cavities, a trimming seat, means for conducting the nail from said terminal die-rolls and placing it upon the seat, and one or more trimming tools coöperating with said seat to finish the nail thereon.

2. A horsenail machine comprising a main frame having mounted and organized therein a series of pairs of die-rolls the terminal pairs thereof having fullsized nail-head cavities formed therein, and the initial pair thereof being adapted to operate on continuous nail-stock having substantially the cross-sectional size of the said nail-head cavities, in combination with a trimming seat, means for conducting the nail from the terminal die-rolls to said seat, and a trimming tool acting on the seated nail to finish the same.

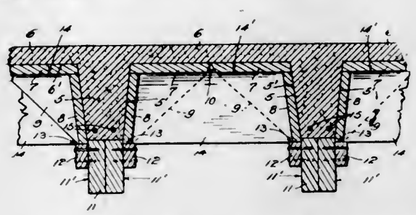
3. A horsenail machine comprising a vertical series of die-rolls and means for delivering continuous nail stock from above downwardly through said die-rolls, in combination with nail-conducting means below the lowermost die-rolls, a stationary trimming seat to which the nail is conducted by such means, and means coöperating with said seat for finishing the nail thereon.

4. A horsenail machine comprising a main frame having mounted therein a series of die-rolls, the initial rolls thereof being adapted to operate on nail-stock of a cross-sectional size not less than that of the nail head and the terminal rolls having fullsized nail cavities, in combination with shearing means for trimming the heads and points of the nails and means for conducting nails from said terminal die-rolls to said shearing means.

5. A horsenail machine comprising the frame and the series of die-rolls mounted therein, having the initial rolls adapted to operate on nail stock of a cross-sectional size not less than that of the nail head and the terminal roll provided with full sized nail cavities, in combination with a setting tool operative to clamp and set the nail delivered by said terminal rolls and shearing means simultaneously operative thereon for trimming the head and point of the nail while the same is held stationary by the setting tool.

[Claims 6 to 40 not printed in the Gazette.]

1,166,891. CONCRETE CONSTRUCTION. WILLIAM H. FEIGENSON, Seattle, Wash., assignor to Feigenson Engineering Co., Seattle, Wash., a Corporation of Washington. Filed Jan. 16, 1915. Serial No. 2,528. (Cl. 25—131.5.)



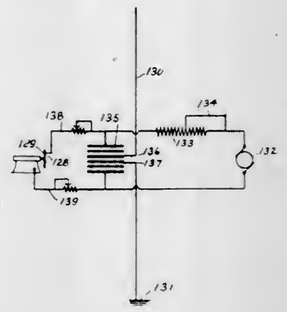
1. In apparatus of the class described, the combination with the supporting joists, and ledges provided at the sides thereof at a short distance below the upper surfaces of the respective joists, of a form comprising two rigid complementary frame members each having a side element and a shelf element, said shelf element being adapted to rest on said ledges and contact with the joists, and an integral brace for each pair of frame-members, said brace resting upon said ledges to removably maintain the frame-members in operative positions.

2. In apparatus of the class described, the combination with the supporting joists, and ledges provided at the sides thereof at a short distance below the upper surfaces of the respective joists, of a form comprising two rigid complementary frame members, each of said members being provided with a substantially upright side piece and a shelf-piece of approximately one-half the width of the space between two floor beams, bracket-pieces rigidly connecting the upright and shelf-pieces of each of said members, and an integral brace fitted to contact with the underside of the shelf pieces and with the inner faces of the upright pieces of both of said frame members, and being supported upon said ledges, serves for detachably supporting the frame-members in operative positions.

3. A form and support for a concrete floor in process of construction, comprising a pair of complementary frame-members each having a side and shelf-piece rigidly connected, and an integral brace to fit directly against the inner faces of the side pieces and the under faces of the shelf-pieces, and removable means for supporting said brace which in turn supports the frame-members in position to maintain the shelf pieces of both in a horizontal plane.

4. In apparatus of the class described, the combination of a two-part form, each part thereof being comprised of an approximately upright side piece and a horizontal shelf piece rigidly connected to angular relations, said shelves being formed at their sides remote from their connections with edges which meet at the top of the shelves and diverge downwardly, and a brace formed to fit into the space within the form and of a depth equal to the vertical distance between the underside of the shelf pieces and the lower edges of the side pieces, with removable means to support both the form and said brace and also serving to prevent the separation of the form parts with respect to the brace.

1,166,892. APPARATUS FOR PRODUCING HIGH-FREQUENCY OSCILLATIONS. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Original application filed Mar. 22, 1905, Serial No. 251,538. Divided and this application filed Oct. 11, 1909. Serial No. 522,092. (Cl. 250—18.)



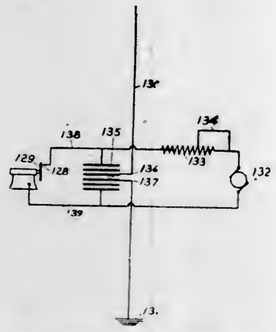
1. A transmitter for wireless telegraph apparatus comprising a tuned antenna-to-ground circuit containing a condenser, and a local generating circuit also containing said condenser and containing a plurality of metallic bodies forming a spark gap and means for causing relative movement of said bodies at high velocity whereby to prevent the formation of an arc, substantially as described.

2. Apparatus for wireless signaling comprising a continuous current generator, a high frequency oscillatory circuit containing a capacity, a disruptive discharge gap in said circuit, an inductance, an antenna connected to said circuit and discharge gap, said discharge gap having a fixed electrode and a disk electrode in relative movement therewith at such high frequency as to prevent arcing, and means for producing such movement of said electrodes, substantially as described.

3. Apparatus for wireless signaling comprising an electric generator, a high frequency oscillatory circuit connected thereto, including a discharge gap, a capacity, and an inductance in said circuit, an antenna connected to said circuit and discharge gap, said discharge gap comprising electrodes of which one presents a continuous surface to the other and means for relatively moving said electrodes at such high velocity as to prevent arcing and means for regulating the flow of current from the generator across the spark gap.

4. A generating apparatus for wireless telegraphy comprising an oscillatory circuit containing a condenser, and a disruptive discharge gap comprising a fixed electrode and closely contiguous thereto a moving disk, and means to rotate said disk at very high frequency to avoid arcing, substantially as described.

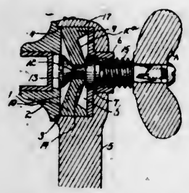
1,166,893. METHOD FOR PRODUCING HIGH-FREQUENCY OSCILLATIONS. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Original application filed Mar. 22, 1905, Serial No. 251,538. Divided and this application filed Oct. 11, 1909. Serial No. 522,093. (Cl. 250—37.)



1. In wireless telegraphy, the method of generating oscillating currents for producing radiated waves, which comprises rapidly varying conditions of a gap in a closed oscillating circuit by rapidly moving a continuous surface and thereby continuously presenting a new surface of one of the electrodes in the gap with respect to the other.

2. In wireless telegraphy, the method of generating oscillating currents for producing radiation, which comprises varying the conductive condition of the gap in an oscillatory circuit by rapidly moving a continuous surface and thereby continuously presenting a new surface of one of the electrodes with respect to the other, whereby the discharge may take place on a continually cooled surface with every alternation of current.

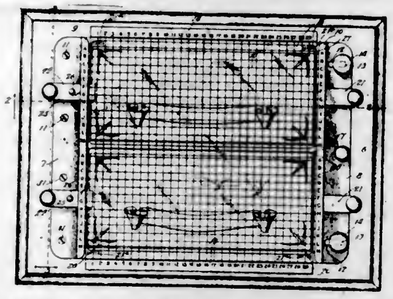
1,166,894. LOCK-JOINT. GEORGE W. FINK, New Haven, Conn., assignor to The English & Mersick Co., New Haven, Conn., a Corporation. Filed Nov. 23, 1914. Serial No. 873,562. (Cl. 21—148.)



1. A lock joint comprising a support having a smooth face recessed, a member having a hub adapted to enter said recess, said hub formed with an outwardly projecting internally threaded lug, a screw engaging with said lug and formed with a shoulder and with a stem, the dogs mounted in the hub and formed at their outer ends with gripping surfaces, the inner ends of the dogs inclined with relation to the face and bearing against said stem, the inner ends engaged by said shoulder, whereby in the movement of the screw the outer ends of the dogs are forced into or out of engagement with the support.

2. A lock joint comprising a member having a recess, a second member having a hub adapted to enter said recess, said hub formed with an outwardly projecting lug which extends through an opening formed for it in the recessed member, said hub formed with radial openings, dogs mounted in said openings, a screw in engagement with said lug, said screw formed with a head and a shoulder, the inner ends of the dogs engaging with the screw between the head and shoulder whereby by the movement of the said screw the said dogs are moved radially.

1,166,895. DEVICE FOR DETECTING COUNTERFEIT ARTICLES. ELLSWORTH E. FLORA, Chicago, Ill., assignor, by mesne assignments, to Porter Counterfeit Detector Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 7, 1915. Serial No. 19,719. (Cl. 33—1.)



1. A device of the character set forth comprising a base, a gaging member thereon and adapted to expose to view therethrough an article beneath it, and an article-supporting member shiftable along said base beneath said gaging member.

2. A device of the character set forth comprising a base, a gaging member thereon and adapted to expose to view therethrough an article beneath it, means on said base engaging the edge portions of said member to hold it in position on said base, and an article-supporting member shiftable along said base beneath said gaging member.

3. A device of the character set forth comprising a base, a gaging member thereon and adapted to expose to view therethrough an article beneath it, relatively movable members on said base adapted to releasably engage edge portions of said gaging member to hold it in position on said base, and an article-supporting member shiftable along said base beneath said gaging member.

4. A device of the character set forth comprising a base, a gaging member thereon and adapted to expose to view therethrough an article beneath it, relatively movable flanged members on said base adapted to releasably engage edges of said gaging member and hold it in position on said base, and an article-supporting member shiftable along said base beneath said gaging member.

5. A device of the character set forth comprising a base, a gaging member thereon and adapted to expose to view therethrough an article beneath it, members on said base engaging edge portions of said member to hold it in position on said base, one of said members containing a slot, and an article-supporting member on said base beneath said gaging member and having a portion extending through said slot and by which said article-supporting member may be shifted.

[Claims 6 to 12 not printed in the Gazette.]

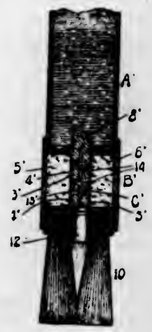
1,166,896. FOUNTAIN-BRUSH. CHRISTOPHER A. GARVEY, St. Louis county, Mo. Filed Sept. 2, 1915. Serial No. 48,621. (Cl. 15—49.)

1. In a fountain brush, a reservoir, a discharge tube for conducting liquid from said reservoir, a wick arranged within and closely fitted to said discharge tube, said discharge tube being ported for the admission of liquid to the wick, and absorbent material fitted to the outer face of said discharge tube so as to retard the flow of liquid through the ported portion of said tube.

2. In a fountain brush, a reservoir, a wick for conducting liquid from said reservoir, and a body of absorbent material whereby the flow of liquid from the reservoir to the wick is retarded.

3. In a fountain brush, a reservoir provided with a packing chamber at its lower end, a tube in said packing chamber, a wick arranged in and closely fitted to said tube, absorbent material arranged in the packing chamber

and around the tube, said tube being ported for the admission of liquid to the wick and the absorbent material being arranged to receive the liquid flowing to the ported portion of the tube.

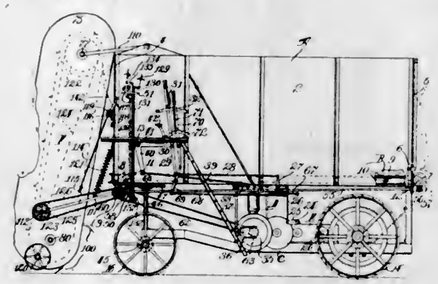


4. In a fountain brush, a reservoir, a packing chamber detachably secured to the lower end of said reservoir, a ported tube in said packing chamber, a wick for conducting liquid from said packing chamber, said wick being closely fitted to the inner face of said ported tube and extended therefrom to serve as a marking device, the upper end of said wick being exposed to the liquid in said reservoir, and absorbent material arranged in said packing chamber around the ported portion of the tube so as to retard the flow of liquid from said reservoir to said wick.

5. In a fountain brush, a reservoir, a wick for conducting liquid from said reservoir, said wick being extended from the reservoir to serve as a marking device, and a wick holding tube surrounding and closely fitted to said wick, said wick holding tube being provided with ports for admission of liquid to the wick and also with prongs formed at said ports and bent inwardly to engage the wick so as to prevent the latter from being forced backwardly in the wick holder.

[Claims 6 and 7 not printed in the Gazette.]

1,166,897. LOADING-MACHINE. DAVID F. GEIGER, Fargo, N. D., assignor of one-third to E. C. Wingire, Fargo, N. D. Filed May 5, 1913. Serial No. 765,452. (Cl. 56—61.)



1. In a machine of the class set forth, the combination of a vehicle body, a bundle pick up frame swung freely from an end of said body in substantially upright position to move up and down, a hoist for lifting said frame and holding it in selected elevation, a spring connected with said frame and body for lifting part of the load of said frame to relieve said hoist, bundle pick up mechanism carried by said frame adapted to deliver the bundles from the upper end of said frame into said body, and means for driving said pick up mechanism.

2. In a machine of the class set forth, the combination of a vehicle body, a bundle pick up frame swung freely from an end of said body in substantially upright position to move up and down, a hoist for lifting said frame and holding it in selected elevation, a spring connected with said frame and body for lifting part of the load of said frame to relieve said hoist, an elevating belt carried by said frame, a plurality of forks movably carried by said belt to move outwardly into bundle engaging position at the lower end of said frame and withdrawing from engagement with the bundles at the upper end of said frame to deposit the bundles in said body and means for moving the forks outwardly into bundle engaging position at the lower end of said frame and inwardly at the upper end, for the purposes specified.

1,166,898. FROG FOR TROLLEY-WIRES. CHARLES E. GIERDING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Feb. 26, 1912. Serial No. 679,827. (Cl. 191—38.)



1. In apparatus of the class described, the combination of a body member having a wire receiving channel open at its top, and a removable cam detachably interlocked with said body member rotatable to clamp the trolley wire in the bottom of the channel.

2. In apparatus of the class described, the combination of a body member having a wire receiving groove with upstanding walls and open at its top, hook portions formed on said walls and a cam member removably positioned between said walls and adapted to clamp the trolley wire firmly against the bottom of said groove.

3. In a trolley frog of the class described, the combination of a metal casting having upstanding walls forming an open top wire receiving the channel, integral hook members formed on said walls, and a removable rotary clamp engaging said hooks adapted to firmly clamp the trolley wire in said channel.

4. In a device of the class described, the combination of a metal casting having upstanding walls forming a wire-receiving groove therebetween, integral hook members formed on said walls, and a rotatable clamp adapted to be removably placed into engagement with said members and actuated to clamp the trolley wire in said groove.

5. In a device of the class described, the combination of a metal casting having upstanding walls forming a wire-receiving groove therebetween, integral hook members formed on said walls, and a clamping device adapted to be placed in pivotal engagement with said hook members and rotated to clamp the trolley wire in said groove.

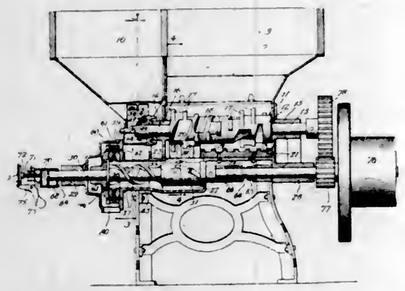
[Claims 6 to 22 not printed in the Gazette.]

1,166,899. FEED-GRINDING MECHANISM. JAMES E. GOODHUE, St. Charles, Ill., assignor to United States Wind Engine & Pump Company, Batavia, Ill., a Corporation of Illinois. Filed July 6, 1915. Serial No. 38,153. (Cl. 83—8.)

1. In a machine of the character set forth, the combination of a chamber, and rotary means for agitating the material supplied to said chamber and tending to throw the material out of the chamber in a direction radially of said rotating means, the top wall of said chamber presenting offset plate sections, affording between their adjacent ends an opening disposed tangentially to said rotary means and at one side of the center of said rotary means and forming an inlet to said chamber, one of said plate-sections inclining downwardly from one side of said chamber to said opening and directly above said means.

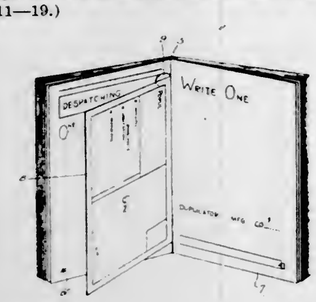
2. In a machine of the character set forth, the combination of a chamber for receiving ear-corn, means in said chamber for removing the kernels from the cobs

and breaking up the cobs, a chamber located below said first-named chamber and communicating therewith, means in said second-named chamber for further breaking up the cobs to reduce them to particles about the size of



kernels of corn, means for agitating the corn and particles of cob, and means for introducing smaller grain into the mixture of corn and cobs during agitation of the latter by said agitating means, for the purpose set forth.

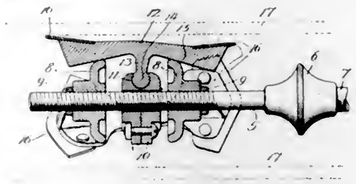
1,166,900. ADVERTISING MEDIUM. HAROLD P. GOULD, Chicago, Ill. Filed Nov. 13, 1913. Serial No. 800,728. (Cl. 11—19.)



1. A publication having leaves bearing printed data constituting advertising matter of different advertising concerns, and a part on which is a list of said advertisements adapted to be checked by the reader to indicate the advertisements in which he is interested, the part being detachably carried by the publication and bearing an address of a common point of distribution to which it is to be returned when removed irrespective of the special checking of the list, and said list having its items designated by numerals indicative of the page numbers of the publication on which said items are located so that said list normally constitutes the publication index for its advertisements.

2. A publication having leaves bearing printed data constituting advertising matter of different advertising concerns, and a part on which is a list of said advertisements adapted to be checked by the reader to indicate the advertisement in which he is interested, a supplemental list on said part indicating the subjects matter of articles constituting other portions of the contents of the publication adapted to be checked to indicate the preference of the reader, and said part being detachably carried by the publication and bearing an address of a common point of distribution to which it is to be returned when removed irrespective of the special checking of the list, both said first mentioned and supplemental lists having their items designated by numerals indicative of the page numbers of the publication on which said items are located so that said list normally constitutes the publication index for its advertising and subject matter contents.

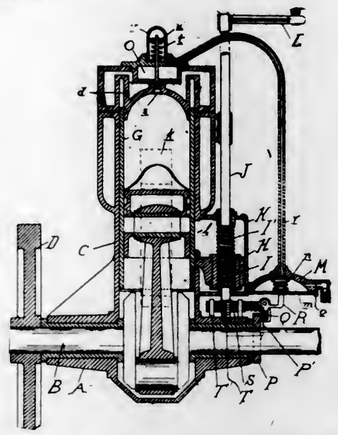
1,166,901. FLUE-CLEANER. MATHIAS A. GROBL, Brookfield, Ill., assignor of one-half to George Schlitt, Chicago, Ill. Filed Oct. 20, 1915. Serial No. 56,917. (Cl. 83—64.)



1. A flue-cleaner comprising, in combination, a threaded stem, a pair of disk-like cams relatively adjustable on the stem-thread, a head loosely supported on the stem to slip between the cams and provided with a circumferential series of sockets, arms having necks between their ends terminating in heads confined in said sockets to permit rocking movement of the arms, fingers on and extending lengthwise along the inner faces of the arms and presenting inwardly tapering edges to the outer cam-peripheries, and blades on the outer ends of the arms.

2. In a flue-cleaner, the combination of a threaded stem, a pair of cams relatively adjustable on the stem-thread, a head loosely supported on the stem to slip between the cams and provided with a circumferential series of sockets, arms having offset end-sections and necks between their ends terminating in heads confined in said sockets to permit rocking movement of the arms, tapered fingers extending lengthwise of the arms along their inner faces at both sides of said necks, and blades secured to the arms at said offset sections.

1,166,902. EXPLOSIVE-ENGINE. JERVIS R. HARBECK, Detroit, Mich. Filed June 11, 1909. Serial No. 501,609. (Cl. 123—32.)



1. In a two cycle internal combustion engine, the combination with a cylinder, of means for scavenging the cylinder with air and for leaving a residual charge of air therein, a piston acting to periodically compress the residual charge of air, means for injecting a hydrocarbon into the compressed charge of air, and a normally stationary member manually adjustable to vary the amount of air to be compressed by the piston.

2. In a two-cycle internal combustion engine, the combination with a cylinder, of means for scavenging the same with air and for leaving a residual charge of air therein, a normally stationary member manually adjustable during the running of the engine to vary the amount of air to be compressed by the piston, means for injecting

a hydrocarbon into the compressed air charge in the cylinder, and means for effecting a variation in the hydrocarbon charge complementary to the variation of the air compressed.

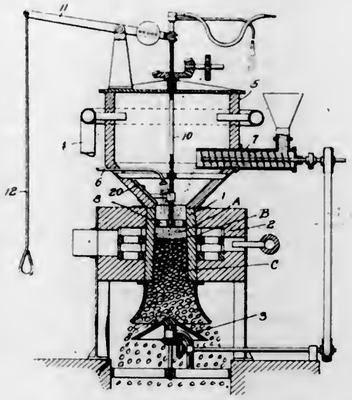
3. In a two-cycle internal combustion engine, the combination of means for scavenging the cylinder with air, means for injecting a hydrocarbon into the compressed air charge, and a normally stationary mechanism rotatively adjustable for effecting a complementary variation in the amount of air compressed and in the hydrocarbon injected.

4. In a two-cycle internal combustion engine, the combination of means for scavenging the cylinder with air and for leaving a residual charge of air therein, means for injecting a hydrocarbon into the compressed air charge in the cylinder, and a normally stationary member manually rotatively adjustable to effect a complementary variation in the amount of air compressed and in the hydrocarbon injected.

5. In a two-cycle internal combustion engine in which the piston controls the exhaust port the combination with means for scavenging the cylinder with air and means for injecting hydrocarbon into the compressed air charge in the cylinder, of an element carrying the exhaust port, means for adjusting said element and with it the exhaust port longitudinally of the cylinder and means for varying amount of hydrocarbon injected.

[Claims 6 to 13 not printed in the Gazette.]

1,166,903. METHOD OF AGGLOMERATING ORES. PHILIP O. HARDING, Pittsburgh Pa. Filed June 12, 1915. Serial No. 33,767. (Cl. 75—73.)



1. The method of ore agglomeration herein described which consists in subjecting a body of material to a progressive combustion, breaking into fragments the agglomerated portion of such body left behind as combustion advances, and causing a gaseous stream to flow to the point of combustion through such agglomerated and fragmented portion of the body.

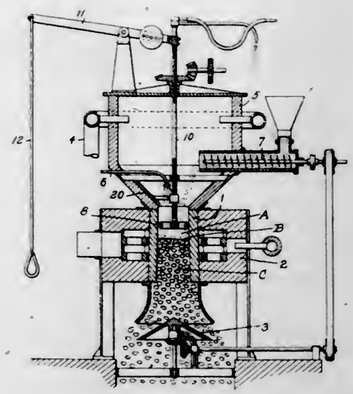
2. The method of ore agglomeration herein described which consists in subjecting a body of material to a progressive combustion, breaking into fragments the agglomerated portion of such body left behind as combustion advances, and causing a stream of combustible gas to flow to the point of combustion through such agglomerated and fragmented portion of the body.

3. The method of ore agglomeration herein described which consists in causing the body of material under treatment to advance by continuous feed through a zone of high temperature, breaking into fragments the agglomerated portion of said body advancing from such zone, and causing a current of combustion-sustaining gas to flow to such zone of high temperature through the portion of the body of material agglomerated and fragmented as above indicated.

4. The method of ore-agglomeration herein described which consists in causing the body of material under treatment to advance by continuous feed through a zone of combustion, subjecting such body of material to a spray of water in the rear and to a current of air flowing through it from front to rear and in breaking and spreading the fragmented mass of material as it advances beyond said zone of combustion.

5. The method of ore-agglomeration herein described which consists in causing the body of material under treatment to descend through a vertically arranged and downwardly flaring passageway and in such progress to pass through a zone of combustion, causing an ascending stream of air to penetrate said descending body of material, and causing such descending mass of material to be broken up and subjected to a more searching penetration of the said ascending stream of air as it descends beyond said zone of combustion.

1,166,904. MACHINE FOR AGGLOMERATING ORES. PHILIP O. HARDING, Pittsburgh, Pa. Original application filed June 12, 1915, Serial No. 33,767. Divided and this application filed July 3, 1915. Serial No. 37,922. (Cl. 75—73.)



1. In a machine for agglomerating ore the combination of means for causing the gradual advance of a process of combustion through the body of material under treatment, means for breaking into fragments such portions of said body as have been subjected to the said process of combustion, and means for maintaining a gaseous stream flowing through that portion of the said body which has been subjected to combustion and fragmentation and from such portion to the point where combustion is in progress.

2. In a machine for agglomerating ore the combination of a vertically arranged downwardly flaring passageway, means for heating from outside said passageway, means for feeding material to be treated to the upper end of said passageway, and means for drawing combustion sustaining gas upward through said passageway.

3. In a machine for agglomerating ore the combination of a vertically arranged downwardly flaring passageway, an upwardly flaring exhaust chamber continuous therewith, means for feeding material for treatment to said passageway, and means for exhausting air from said exhaust chamber.

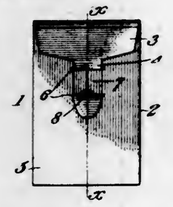
4. In a machine for agglomerating ore the combination of a hopper, a downwardly flaring passageway continuous with said hopper, a load sustaining member arranged beneath the lower end of said passageway, a closure for said hopper above, and means for exhausting air from such closed-in hopper.

5. In a machine for agglomerating ore the combination of a vertically arranged downwardly flaring passageway,

and a spreader and pusher arranged in said passageway, rotatable therein and movable longitudinally in said passageway.

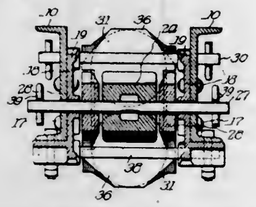
[Claim 6 not printed in the Gazette.]

1,166,905. MAILING-ENVELOP. WILLIAM H. HART, Jr., Philadelphia, Pa. Filed Apr. 14, 1915. Serial No. 21,354. (Cl. 229—77.)



In an envelop composed of a body, a closing flap, a tongue on the latter, the rear wall of said body having therein a plurality of slits forming a cross bar, and a lip on said tongue, the latter being adapted to pass through the upper slit behind said cross bar, and through the lower slit, and present said lip on the exterior of said cross bar and overlap the lower edge thereof on said exterior, the front wall of said body being of greater length than the rear wall of said body, whereby said lip, after being passed fully through said cross bar, will spring back into engagement with the latter on the exterior thereof, and the top portion of said front wall may be turned downwardly over the top portion of said rear wall and overlap the same preparatory to the disengagement of said lip from said cross bar.

1,166,906. DRAFT-RIGGING. GEORGE LYON HARVEY, Chicago, Ill. Filed Feb. 3, 1912. Serial No. 675,228. (Cl. 213—42.)



1. In a draft rigging, the combination with a draw-bar and yoke, of means for operatively connecting the draw-bar and yoke, a follower, and endwise movable follower stops comprising keys arranged transversely of the draw-bar and above and below the shank thereof and engaging the draft members, substantially as described.

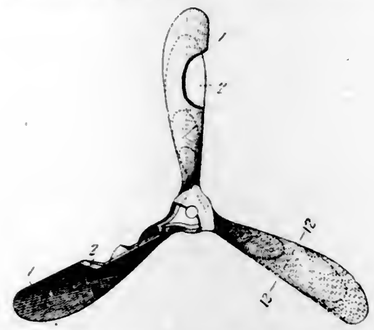
2. In a draft rigging, a pair of members secured to and having portions projecting below the sills and a transverse abutment supported at each end in the underhung portions of said members, said abutment acting as a stop for a draft rigging front follower, substantially as described.

3. In a draft gear, the combination of a horizontal yoke, a front follower slidably mounted in said yoke, and a pair of front stops in the form of removable keys, one positioned above and the other below said horizontal yoke, substantially as described.

1,166,907. PROPELLER. SPENCER HEATH, Washington, D. C. Filed Apr. 23, 1912. Serial No. 692,684. (Cl. 170—159.)

1. A propeller formed of assembled laminations, the face lamination of each blade being extended beyond the center portion to form a back lamination for the adjacent blade.

2. A propeller formed of assembled laminations, the face lamination of each blade being extended beyond the center portion to form the outermost back lamination of the adjacent blade and similar interior laminations intervening between the face lamination and the outermost back lamination of each blade.



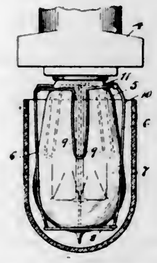
3. A propeller having similar sets of assembled laminations for the several blades, the laminations forming the several blades being joined at the center portion of the propeller to form the hub and the laminations of each blade being extended beyond the center to strengthen and reinforce the adjacent blade, hub-forming fillers inserted between the laminations where the several sets join and keys inserted transversely through the laminations adjacent the hub fillers to insure against separation of the laminations in this part.

4. A propeller formed of assembled laminations, the face laminations of each blade being extended beyond the center portion to form the outermost back lamination of the adjacent blade and similar interior laminations intervening between the face lamination and the outermost back lamination of each blade, said interior laminations being formed of less durable material than the face laminations.

5. A propeller formed of assembled laminations, the laminations in any portion lying in a position substantially parallel to the face of the blade and the face lamination of each blade being extended beyond the center portion to form the outermost back lamination of the adjacent blade.

[Claims 6 to 22 not printed in the Gazette.]

1,166,908. GLOBE-HOLDER. ELWIN K. HILL, Cleveland, Ohio, assignor to The A. & W. Electric Sign Company, Cleveland, Ohio, a Corporation. Filed Apr. 13, 1915. Serial No. 21,077. (Cl. 240—111.)



1. A globe holder for incandescent lamps, comprising a cage adapted to fit between the globe and the lamp bulb, said cage having longitudinal spring arms adapted to press outwardly against the inside of the globe and longitudinal spring fingers adapted to press inwardly against the outside of the bulb.

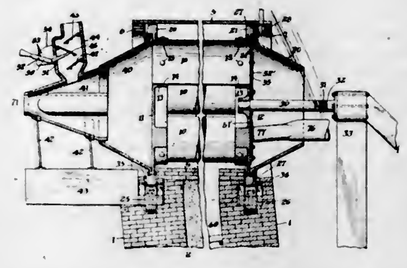
2. The combination with a lamp bulb and a globe inclosing the same, of a holder fitting between the bulb and globe, said holder having spring arms extending lengthwise of and pressing against the inside of the globe and spring fingers extending lengthwise of and pressing against the outside of the bulb.

3. A globe holder for incandescent lamps, comprising inner and outer end frames, the former being expansible to slip over the lamp bulb and having spring fingers adapted to press against the bulb, and longitudinal spring bars connecting said frames and bowed outwardly to press against the inside of the globe.

4. A globe holder for incandescent lamps, comprising an outer end frame, spring arms projecting therefrom, expansible spring fingers spaced circumferentially between the arms, and connections between the inner ends of the fingers and the inner ends of the arms.

5. A globe holder for incandescent lamps, comprising a wire cage having an outer end frame 8, spring arms 6 projecting inwardly therefrom, V shaped fingers 9 located circumferentially between the arms, and connections 11 between the branches of said fingers and the inner ends of the arms.

1,166,909. ORE-DRYING APPARATUS. JOHN Q. A. HOUGHTON, Lowell, Vt. Filed Oct. 19, 1914. Serial No. 867,408. (Cl. 34—6.)



1. In a drying apparatus, the combination of a series of tubes, heads having flanged openings therethrough through which the opposite ends of the said tubes project and to the flanges of which the said tubes are secured, the said heads being provided with rims, trucks upon which the said rims are supported, means for causing revolution of the said heads and the said tubes, means for supplying material to be dried to the said tubes, and power means for removing vapors and gases from the said tubes.

2. In a drying apparatus, the combination of a series of tubes, heads having flanged openings into which the opposite ends of the said tubes project and in which openings the said tubes are secured, the said heads having circular rims, trucks upon which the said rims revolve, one of the said rims being provided with gear teeth, a driving gear in engagement with the gear teeth upon the said rim, whereby revolution of the said heads and the said tubes may be caused, means for feeding material to be dried to the said tubes, and means for removing moisture from the said material to dry the same.

3. In a drying apparatus, the combination of a plurality of drying tubes, heads having flanged openings extending therethrough into which the opposite ends of the said tubes project and in which openings the said tubes are secured and the said heads being provided with rims, wheels situated within the region of the opposite ends of the said tubes upon which the rims rest whereby the said heads and the parts of the structure supported thereby are supported, one of the said rims being provided with gear teeth upon one side, a driving gear in engagement with the said teeth for driving the said head and the parts of the structure rigidly connected therewith, means for feeding material to be dried to the said tubes, means for supplying heat to the exteriors of the said tubes, and power means for removing vapor from the said tubes to facilitate the drying of the material therein.

4. In a drying apparatus, the combination of a tube or tubes said tubes being supported at an acute angle to a horizontal plane, heads connected to the opposite ends of the said tube or tubes, the said heads being provided with rims, trucks upon which the said rims rest and by which the said heads and the tube or tubes carried thereby are supported, a shaft connected with the lower end of the said tube or tubes, an abutment in alinement with the said shaft for resisting the downward pressure of the drying tubes and parts rigidly connected therewith, and friction reducing means interposed between the said abutment and the said shaft.

5. In a drying apparatus, the combination of a tube or tubes supported at an acute angle to a horizontal plane, means for supplying material to said tube or tubes to be dried, means for supplying heat to said tube or tubes for drying the material therein, means for causing revolution of said tube or tubes, a member projecting from the lower end of said tube or tubes, an abutment for resisting the thrust of said member, and friction reducing means interposed between said member and said abutment.

[Claims 6 to 8 not printed in the Gazette.]

1,166,910. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 2, 1915. Serial No. 59,318. (Cl. 42—75.)

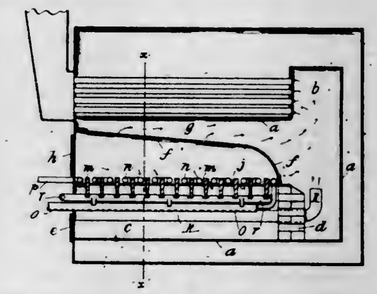


1. In a military shoulder-arm, the combination with the receiver thereof, of a forestock, means for supporting the forward end of the forestock with reference to the barrel, and a retaining-rod connecting the forward end of the forestock with the receiver, whereby it is prevented against forward longitudinal displacement.

2. In a military shoulder-arm, the combination with the receiver, barrel and bayonet-band thereof, of a forestock supported at its rear end by the receiver and at its forward end by a bayonet-band, and a retaining-rod extending throughout the length of the forestock and having its rear end connected with the receiver.

3. In a military shoulder-arm, the combination with a receiver and receiver-extension thereof, of a barrel, a forestock, means for supporting the forward end of the forestock from the barrel, and a retaining-rod extending throughout the length of the forestock and having its rear end entered into the said receiver-extension.

1,166,911. BOILER AND OTHER FURNACE. DAVID JONES, Whareora, New Zealand. Filed July 1, 1913. Serial No. 776,740. (Cl. 110—84.)



1. In boiler and other furnaces the combination with a cylindrical furnace box, of an ash pit, a bridge at the rear end of said ash pit, a hood concentrically arranged within said furnace box so as to leave an annular space between its top and sides and the inner wall of said furnace box, said hood being supported with its sloping rear end upon

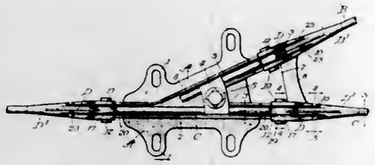
said bridge and fastened at its forward end to the boiler shell.

2. In boiler and other furnaces the combination with a cylindrical furnace box, of an ash pit, a bridge at the rear end of said ash pit, a hood concentrically arranged within said furnace box so as to leave a space between its top and sides, and the inner wall of said furnace box, said hood being supported with its sloping rear end upon said bridge, and air supply pipes within said ash pit extending from the front end of said furnace box and through the bridge at the rear of the ash pit.

3. In boiler and other furnaces the combination with a cylindrical furnace box, of an ash pit, a bridge at the rear end of said ash pit, a hood concentrically arranged within said furnace box so as to leave a space between its top and sides, and the inner wall of said furnace box, said hood being supported with its sloping rear end upon said bridge, and a fire grate supported by the sides of the hood and composed of alternately arranged solid and hollow grate bars, said hollow bars being connected together at their ends to form a continuous water passage.

4. In boiler and other furnaces the combination with a cylindrical furnace box, of an ash pit, a bridge at the rear end of said ash pit, a hood concentrically arranged within said furnace box so as to leave a space between its top and sides, and the inner wall of said furnace box, said hood being supported with its sloping rear end upon said bridge, and a fire grate supported by the sides of the hood and composed of alternately arranged solid and hollow grate bars, said hollow bars being connected together at their ends to form a continuous water passage, and a notched bar engaging with the bottom edges of the solid grate bars and capable of longitudinal reciprocating movement.

1,166,912. TROLLEY-WIRE APPARATUS. WILLARD H. KEMPTON, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Apr. 8, 1912. Serial No. 689,219. (Cl. 191—38.)



1. In a device of the class described, the combination of a body member adapted for attachment to a trolley wire and having a channel therein for the wire, a separate detachable wear extension adapted to be positioned on the trolley wire on the end of the said body member, and a rotary wedge formed on said wear member and pivotally mounted on said body member for clamping the wire in its channel.

2. In a device of the class described, a body member having a wire receiving channel, in combination with a rotary member pivoted on said body member for clamping the wire in its channel, and having an extension projecting beyond the end of said body member and adapted to be secured to the wire after the rotary member has been rotated to its clamping position.

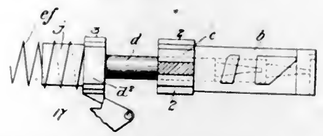
3. In a device of the class described, a body member having an open-top wire-receiving channel, in combination with a rotary clamp detachably mounted on said body member and adapted to clamp the trolley wire in its channel when rotated to a given position, and an extension on said rotary clamp arranged to be secured to the trolley wire and hold said clamp in its clamping position.

4. In a device of the class described, a body member having an open-top, wire-receiving channel, in combination with a rotary clamp detachably mounted on said body member and adapted to clamp the trolley wire in its channel after being rotated to a given position, and a wear extension member arranged to embrace and to be secured to the trolley wire adjacent the end of said body member for locking said clamping member in its clamping position and for taking up the wear on said device.

5. In a device of the class described, the combination of a body member having a wire-receiving channel, a clamping member eccentrically pivoted on said body member and adapted to be rotated to clamp the wire firmly in said channel, and means carried by said clamping member for direct attachment to the trolley wire to lock said clamping member in its clamping position.

[Claims 6 to 29 not printed in the Gazette.]

1,166,913. AUTOMATIC FIREARM. KARL KENKA, Hirtenberg, Austria-Hungary. Filed Aug. 8, 1913. Serial No. 783,691. (Cl. 42—3.)

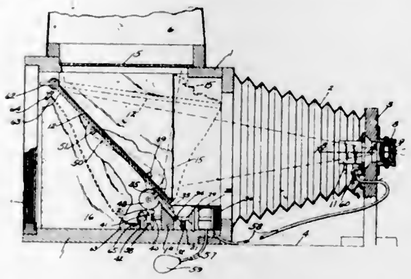


1. In firearms, in combination, a breech casing provided with longitudinally extending grooves having laterally extending locking grooves communicating therewith, and a breech bolt rotatable within said casing and provided with front and rear lugs adapted to engage said locking grooves, said lugs having impact surfaces co-acting with the rear walls of said locking grooves when the firearm is discharged, said impact surfaces differing from one another in pitch or inclination.

2. In firearms, in combination, a breech casing provided with longitudinally extending grooves having laterally extending locking grooves communicating therewith, and a breech bolt rotatable within said casing and provided with front and rear lugs adapted to engage said locking grooves, said lugs having impact surfaces co-acting with the rear walls of said locking grooves when the firearm is discharged, the pitch or inclination of the impact surface of the rear lug being greater than the pitch or inclination of the impact surface of the front lug.

3. In firearms, in combination, a breech casing provided with longitudinally extending grooves having laterally extending locking grooves communicating therewith, and a breech bolt rotatable within said casing and provided with front and rear lugs adapted to engage said locking grooves, said lugs having impact surfaces co-acting with the rear walls of said locking grooves when the firearm is discharged there being a space between the impact surface of the front lug and the rear wall of its corresponding locking groove when the breech block is in firing position, said impact surfaces differing from one another in pitch or inclination.

1,166,914. CAMERA. JOHN FREDRICK KROST, Mankato, Minn. Filed Nov. 27, 1914. Serial No. 874,116. (Cl. 95—42.)



1. A camera having a negative holder, a pivoted mirror located in front of said plate holder, a focusing screen above said mirror, and a shutter in front of said mirror, combined with connections for opening said shutter when said mirror is in position to reflect onto said screen, and for closing said shutter while said mirror is in an inoperative position.

2. A camera having a negative holder, a pivoted mirror located in front of said plate holder, a focusing screen above said mirror, a shutter in front of said mirror, combined with connections for opening said shutter when said mirror is in position to reflect onto said screen, and for closing said shutter while said mirror is in an inoperative position, and connections including an adjustable timed retarding device.

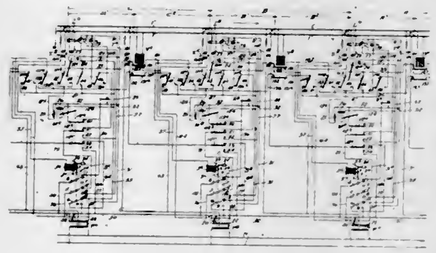
3. A camera having a negative holder, a pivoted mirror located in front of said plate holder, a shutter in front of said mirror, and pneumatic mirror actuated connections for operating said shutter.

4. In a camera, the combination with a focusing screen and a mirror mounted for angular movements in respect to said screen, of a lens and shutter in front of said mirror, a spring tending to move said mirror into an inoperative position, a latch normally holding said mirror in an operative position, means for tripping said latch, and pneumatic shutter actuating connections controlled by movements of said mirror and arranged to open said shutter when said mirror is in an operative position, and to close said shutter when said mirror is in an inoperative position.

5. In a camera, the combination with a plate holder focusing screen and pivoted mirror coöperating with the latter, of a spring tending to move said mirror into an inoperative position, a latch for holding said mirror in an operative position, a shutter in front of said mirror, and pneumatic shutter actuating connections controlled by movements of said mirror and arranged to hold said shutter opened when said mirror is in an operative position, to close said shutter while said mirror is moving from its operative into its inoperative position, and to release and permit the closing of said shutter while said mirror is in an inoperative position.

[Claims 6 to 12 not printed in the Gazette.]

1,166,915. RAILWAY SIGNALING. CHARLES H. LAY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Nov. 21, 1914. Serial No. 873,255. (Cl. 246—30.)



1. In railway signaling, a plurality of successive block sections, track circuits for the sections each including a track relay responsive to reversals of current, a line relay for each section, means for controlling each line relay by the track relay for the same section and by the track relay for a section in advance, means controlled by each line relay for supplying current of one polarity or the other to the track circuit for the section in the rear according as said relay is closed or open, and a signal for each section controlled by the track relay and line relay for the section.

2. In railway signaling, a plurality of successive block sections, track circuits for the sections each including a track relay responsive to reversals of current, a line relay for each section, means for controlling each line relay by the track relay for the same section and by the track relay for a section in advance, the line relay being energized only when the track relays by which it is controlled are energized, means controlled by each line relay for supplying current of one polarity or the other to the track circuit in the rear according as the line relay is energized or deënergized, a signal for each section adapted to indicate clear and caution, a clear indication circuit and a caution indication circuit for each signal which circuits are controlled by the line relay and the track relay for the same section, and one or the other of said signal circuits being closed according as the track relay is energized in one direction or the other.

3. In railway signaling, a plurality of successive block sections, track circuits for the sections including track relays, an automatic stop for each section located at the entrance end of the section and capable of an operative and an inoperative position, a circuit for each stop for holding the stop in inoperative position and controlled by the track relay for the same section, said circuit being closed when the track relay is energized, and a branch circuit for each stop independent of said latter track relay and controlled by a track relay for the section in the rear, said branch circuit being closed when the track relay in the rear is deënergized, whereby the stop is held in the inoperative position until a train entering the section for which the stop is provided has passed entirely out of the section in the rear.

4. In railway signaling, a plurality of successive block sections, track circuits for the sections including track relays, a line relay for each section controlled by the track relay for the section and by the track relay for a section in advance, said line relay being energized when said track relays by which it is controlled are energized, an automatic stop for each section capable of an operative and an inoperative position, a circuit for each stop for holding it in the inoperative position and controlled by the track relay and the line relay for the same section, said stop circuit being closed when both of said relays are energized, a contact operated by each stop and closed when the stop is in the inoperative position, and a branch for each stop circuit around the line relay contact and including said stop-operated contact.

5. In railway signaling, a plurality of successive block sections, track circuits for the sections including track relays, a line relay for each section controlled by the track relay for the section and by the track relay for a section in advance, said line relay being energized when said track relays by which it is controlled are energized, an automatic stop for each section capable of an operative and an inoperative position, a circuit for each stop for holding it in the inoperative position and controlled by the track relay and the line relay for the same section, said stop circuit being closed when both of said relays are energized, a manually operable circuit controller for each stop, and a branch for each stop circuit around the line relay contact and including said manually operable circuit controller, whereby the stop circuit may be closed by hand when the line relay is deënergized.

[Claims 6 to 13 not printed in the Gazette.]

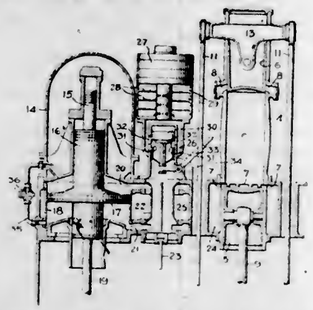
1,166,916. VARIABLE-OUTPUT TWO-CYCLE ENGINE. HERMANN LEMP, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed June 18, 1914. Serial No. 845,936. (Cl. 123—51.)

1. The combination in an internal combustion engine, of a cylinder, two pistons moving therein, exhaust and scavenging ports controlled by the pistons, the piston controlling the exhaust port leading the other, a scavenging pump for supplying air to the scavenging port, and means for varying the output of said pump.

2. The combination with a two-cycle internal combustion engine having two pistons which move substantially in unison and control the exhaust and scavenging ports, the piston controlling the exhaust port leading the other, of a scavenging pump for supplying air to the scavenging port, and means for varying the output of said pump.

3. The combination with a two-cycle internal combustion engine having two pistons which move substantially in unison and control the exhaust and scavenging ports, the

piston controlling the exhaust port leading the other, of a scavenging pump for supplying air to the scavening port, a suction conduit therefor, and valve means for throttling the passage through the conduit.

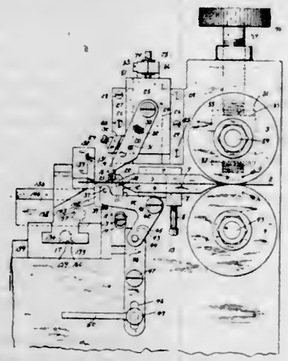


4. The combination with a two-cycle internal combustion engine having two pistons which move substantially in unison and control the exhaust and scavenging ports, the piston controlling the exhaust port leading the other, of a scavenging pump for supplying air to the scavenging port, a waste pipe connected with the cylinder of the pump, and an adjustable valve in said pipe.

5. The combination with a two-cycle internal combustion engine having two pistons which move substantially in unison and control the exhaust and scavenging ports, the piston controlling the exhaust port leading the other, of a scavenging pump for supplying air to the scavenging port, a suction conduit therefor, valve means for throttling the passage through the conduit, a waste pipe connected with the cylinder of the pump, and an adjustable valve in said pipe.

[Claims 6 to 9 not printed in the Gazette.]

1,166,917. AUTOMATIC SPRING-MAKING MACHINE. ADOLPH B. L. LINBERG, JOHN ERNEST ANDREW, and HENRY C. WRIGHT, Bristol, Conn., assignors to The Wallace Barnes Co., Bristol, Conn., a Corporation. Filed Mar. 12, 1915. Serial No. 13,844. (Cl. 140—103.)



1. A machine of the character described, comprising means for feeding the wire, coil-forming tools, and means for automatically altering the co-acting relationship of the said tools to permit the straight travel of the wire in forming offsetting ends upon the ends of the spring coils.

2. A machine of the character described, comprising means for feeding the wire, coil-forming tools including a deflecting tool, and means for moving the said tool to alter the co-acting relationship of the tools to permit the straight travel of the wire for forming offsetting ends upon the ends of the spring coils.

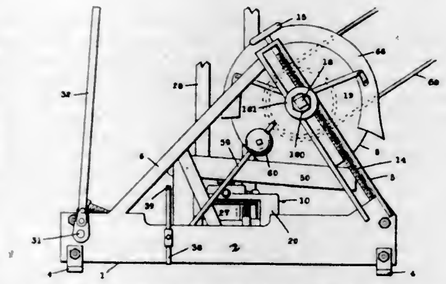
3. A machine of the character described, comprising means for feeding the wire, coil-forming tools, means for altering the co-acting relationship of the said tools to permit the straight travel of the wire for forming offsetting ends upon the ends of the spring coils, and means for changing the pitch of the coils.

4. A machine of the character described comprising means for feeding the wire, coil-forming tools including an anvil, means for shifting the anvil with respect to the other tools to permit the straight travel of the wire for forming offsetting ends upon the ends of the spring coils, and means for adjusting the anvil to change the pitch of the coils.

5. A machine of the character described, comprising means for feeding the wire, and coil-forming tools including a wire-guide, a former and an anvil which latter effects the deflection of the wire around the former, and means for automatically altering the co-acting relationship of the said tools to permit the straight travel of the wire in forming offsetting ends upon the ends of the spring coils.

[Claims 6 to 18 not printed in the Gazette.]

1,166,918. BEVELING-MACHINE. CHARLES F. LINDEBURG, Newark, N. J. Filed May 1, 1915. Serial No. 25,133. (Cl. 51—11.)



1. In a machine of the character described, the combination of a supporting frame providing slideways, bearings in said slideways, means for adjusting said bearings, pivot screws having pointed ends extending through said bearings toward each other, a shaft having recessed ends to receive said pointed ends of the pivot screws, a grinding stone mounted on said shaft, and means for driving said shaft, whereby the bearings at the ends of the shaft are protected from water following said shaft outward from the grinding stone.

2. In a machine of the character described, the combination with a grinding stone, of a rotatable work-table, a carriage for said table adapted to move toward and away from said grinding stone, a rock shaft having an arm, means connecting said arm to said carriage, and means for rocking said shaft to move the work-table toward and away from the grinding stone.

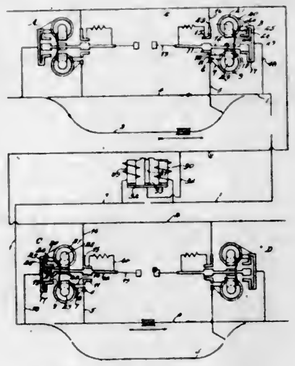
3. In a machine of the character described, the combination with a grinding stone, of a rotatable work-table, a carriage for said table adapted to move toward and away from said grinding stone, a rock shaft having an arm, means connecting said arm to said carriage, and means for rocking said shaft to move the work-table toward and away from the grinding stone, said arm adapted to lie substantially in alinement with the connecting means when the work-table is nearest the grinding stone and at an angle thereto when the work-table is away from the grinding stone, whereby the work is brought against the grinding stone slowly.

4. In a machine of the character described, the combination with a grinding stone, of a rotatable work-table, a carriage for said table adapted to slide toward and away from said grinding stone, a rock shaft transverse to the path of movement of said carriage and having an arm, an adjusting screw connecting said arm to said carriage, and a hand lever for rocking said shaft to move the work-table toward and away from the grinding stone.

5. In a machine of the character described, the combination with a grinding stone, of a rotatable work-table, a carriage for said table adapted to slide toward and away from said grinding stone, a rock shaft transverse to the path of movement of said carriage and having an arm, an adjusting screw connecting said arm to said carriage, a hand lever for rocking said shaft to move the work-table toward and away from the grinding stone, and an adjustable stop for said hand lever.

[Claims 6 to 20 not printed in the Gazette.]

1,166,919. ELECTRIC-TRACTION-CONTROL SYSTEM. SAMUEL DENNY MCCALEB, Louisville, Ky. Filed July 29, 1912. Serial No. 712,013. (Cl. 246—36.)



1. In a single-track electric railway with turn-outs, the combination of a working conductor, a feeding conductor and control switches at the turn-outs, and means for controlling the admission of current to the single-track sections and turn-outs, said means consisting of the said working conductor, the said feeding conductor, the said control switches and the car having the right of way on said railway.

2. A single-track electric railway, with turn-outs, two main control switches at each turn-out, one for controlling the admission of current to one turn-out track and the single track section to the right, and one for controlling the admission of current to the other turn-out track and the single track section to the left, such switches being operated in accordance with the position of the car having the right of way to protect such car from rear-end and head-on collisions.

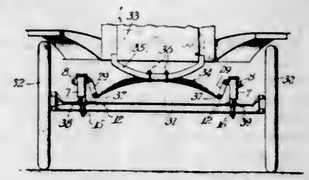
3. In an electric railway system the combination of single track sections and turn-outs, instrumentalities for supplying power to a single track section and means controlled by such instrumentalities for taking away electric current from one side of each of the turn-outs at the ends of the single track section.

4. In an electric railway system the combination of single track sections and turn-outs, a working conductor divided into sections corresponding to the single track sections and turn-outs, and means for depriving conductor sections of two sidings of electric current when power is being taken from the single track conductor section between them.

5. A single track electric railway system with turn-outs, the combination of a working conductor divided into sections, electro-magnetic switches at the ends of a single track conductor section, having two operating positions, one for supplying power to said section and simultaneously depriving the turn-outs at each end thereof of power, and the other for supplying power to either of said turn-outs and simultaneously depriving the other turn-out of power.

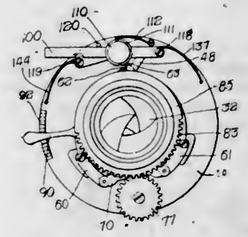
[Claims 6 to 16 not printed in the Gazette.]

1,166,920. SHOCK-ABSORBER. ALLAN L. MCGREGOR. Chicago, Ill. Filed June 1, 1914. Serial No. 842,016. (Cl. 267—19.)



A shock absorber comprising a housing, a spring therein, a saddle secured to said spring and having a curved seat, separated lugs on said saddle, a lever pivotally connected to said housing and adapted to rest on said curved seat between said lugs, and a slot in said housing through which said lever projects.

1,166,921. PHOTOGRAPHIC SHUTTER. ALLEN R. MCPHEE, Chicago, Ill. Filed Jan. 10, 1913. Serial No. 741,363. (Cl. 95—63.)



1. In a photographic shutter, overlapping blades each having a fixed center of oscillation and means for oscillating such blades, such means engaging each blade on opposite sides of its center of oscillation.

2. In a photographic shutter, overlapping shutter blades adapted to oscillate and with their centers of oscillation lying in a circle, an inner and an outer rotative ring, and means for rotating such rings in each operation of the device through equal angular distances and in opposite directions.

3. In a photographic shutter, two rotative rings of unequal diameter, over-lapping shutter blades pivoted to said rings, and means for rotating said rings in each operation of the device through equal angular distances and in opposite directions.

4. In a photographic shutter, a flat plate having a circular opening therethrough, and circular grooves surrounding such opening, rotative rings lying in such grooves, overlapping shutter blades each pivoted to both of said rings, and means for rotating said rings in each operation of the device through equal angular distances and in opposite directions.

5. In a photographic shutter, a swinging shutter lever and means for arresting it in its movement, such means including a lever forked at one end, having a projection at its other end, and pivoted at a point close to its forked end.

[Claims 6 to 12 not printed in the Gazette.]

1,166,922. METHOD AND BATCH OR MIXTURE FOR MAKING ILLUMINATING-GLASS. JAMES O. MEARA, Philadelphia, Pa., assignor to Gill & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 19, 1914. Serial No. 862,472. (Cl. 49—90.)

1. The herein described method of manufacturing illuminating glass, which consists in fusing together a foundation mixture capable of making substantially colorless clear glass, said mixture comprising sand, alumina, oxid

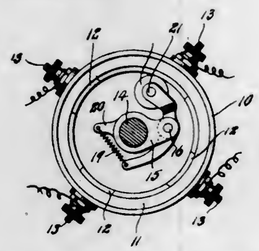
of lead, silex, soda, borax, oxid of arsenic, oxid of antimony, common salt, salt cake, crystallized Glauber salts and gypsum, and the heating operation being stopped at such a period that the specks in the glass are substantially eliminated.

2. The hereindescribed method of manufacturing illuminating glass, which consists in fusing together a foundation mixture capable of making substantially colorless clear glass, said mixture comprising sand, alumina, oxid of lead, silex, soda, borax, oxid of arsenic, oxid of antimony, common salt, salt cake, crystallized Glauber salts and gypsum, and the heating operation being stopped before the glass returns to a clear glass stage and at such a period that the specks in the glass are substantially eliminated.

3. The hereindescribed mixture for manufacturing illuminating glass, composed of sand, alumina, oxid of lead, silex, soda, borax, oxid of arsenic, oxid of antimony, common salt, salt cake, crystallized Glauber salts and gypsum, fused together.

4. The hereindescribed mixture for manufacturing illuminating glass, composed of sand, 100 lbs.; alumina, 30 lbs.; oxid of lead, 22 lbs.; silex, 12 lbs.; soda, 37 lbs.; borax, 6 lbs.; oxid of arsenic, 3 lbs.; oxid of antimony, 1½ lbs.; common salt, 1½ lbs.; salt cake, 1½ lbs.; crystallized Glauber salts, 2 lbs.; and gypsum, 1½ lbs., fused together.

1,166,923. COMMUTATOR-BRUSH. GEORGE S. NEELEY, St. Louis, Mo., assignor of one-half to Thomas O. Moloney, St. Louis, Mo. Filed Jan 21, 1915. Serial No. 3,498. (Cl. 123—167.)



1. In a commutator, a rotating member, an arm having an axis on said member, a roller having an axis on said arm, and means independent of said member, arm, and roller for forming a positive electric connection between the axes of said arm and roller.

2. In a commutator, the combination with a rotating member, of an arm having an axis on said member, a brush roller having an axis on said arm, and a flexible metallic conductor connected directly to the axes of said roller and arm.

3. In a commutator, a rotating member, a pin seated therein, an arm pivotally mounted on said pin, a pin carried by said arm, a brush roller journaled on said last mentioned pin, and a flexible metallic conductor connecting said pins.

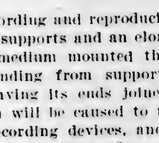
4. In a commutator, a pivoted arm, a pin seated in said arm, a roller journaled on said pin, and a resilient member arranged between the pin and roller.

5. In a commutator, a pivoted arm, a pin seated in said arm, a roller journaled on said pin, and yielding pressure means located between said pin and roller.

[Claims 6 to 9 not printed in the Gazette.]

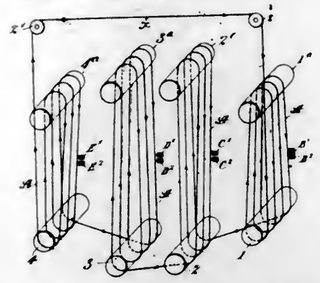
1,166,924. RUBBER-DAM CLAMP. FREEMAN H. NEWLIN, Huntingdon, Pa., assignor to James W. Ivory, Philadelphia, Pa. Filed Apr. 20, 1915. Serial No. 22,555. (Cl. 32—20.)

1. In a rubber dam clamp, a tooth clamping jaw, and an arm extending outwardly from the terminal of said jaw, said arm having on its outer end a downwardly-extending shoulder, and an upwardly extending hook, which latter extends from the base of said shoulder with a depression between said shoulder and hook, the base of said depression being adapted to receive the relative portion of the dam.



2. In a rubber dam clamp, a jaw member thereof having an opening therein, and an arm adapted to extend from said member and have its inner terminal enter said opening, the face of said member having a recess therein extending from said opening adapting a portion of said arm to be seated therein, and a terminal thereof to occupy said opening.

1,166,925. APPARATUS FOR RECORDING AND REPRODUCING SOUND. FRANK SOMES OBER, New York, N. Y.; Josephine R. Ober and Ernest I. Ober administrators of said Frank Somes Ober, deceased. Filed Jan. 8, 1908. Serial No. 409,744. (Cl. 181—1.)



1. In sound recording and reproducing machines, an elongated flexible record medium of paramagnetic material arranged in a series of loops and having its ends joined together, means for moving said medium in the direction of its length, magnetic recording and reproducing devices, and means whereby a record may be effected at any one of a definite selected number of predetermined points.

2. In sound recording and reproducing machines, a plurality of rotating supports and an elongated flexible paramagnetic record medium mounted thereon in successive convolutions extending from support to support; said record medium having its ends joined together whereby any point thereon will be caused to travel in an endless path, magnetic recording devices, and means for rendering said devices effective to produce a record at any one of a number of predetermined points.

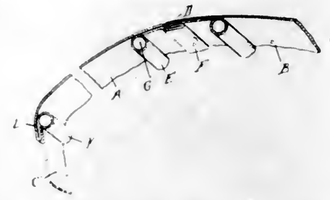
3. In recording machines, rollers arranged in a series of pairs, an elongated flexible record medium wound back and forth from roller to roller of each of said pairs successively and having its ends joined together, means for moving said medium in the direction of its length, a plurality of reproducers, and means for shifting from one reproducer to another reproducer by which the record end has yet to pass.

4. In recording machines, supporting rollers spaced apart, and an elongated flexible record medium arranged thereupon in zig-zag fashion from roller to roller, means for moving said medium in the direction of its length, and means for advancing the effective record-receiving point on the medium at the will of the operator.

5. In recording machines, an endless flexible traveling record medium arranged in a series of loops, coöperating recording devices, and means whereby such devices may be caused to become active and effect a record on the medium at any one of a definite selected number of predetermined points.

[Claims 6 to 16 not printed in the Gazette.]

1,166,926. AUTOMOBILE-HOOD. JAMES F. O'NEILL, Detroit, Mich., assignor to Michigan Stamping Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 14, 1914. Serial No. 861,587. (Cl. 74—56.)



1. An automobile hood, comprising complementary hinged top sections engaging each other, with a flush joint on the upper surface thereof.

2. An automobile hood, comprising a frame and complementary top sections independently hinged to said frame, and having a flush meeting joint on the top surface thereof.

3. An automobile hood, comprising a frame, and complementary top sections independently hinged to and removable from said frame.

4. An automobile hood, comprising a frame, and complementary top sections having a central joint flush with the upper surface thereof, each of said sections being independently hinged to and removable from said frame.

5. An automobile hood, comprising a frame, complementary top sections return bent at their meeting edges to form coils on the under surface thereof, and a pivotal connection between each of said coils and the frame.

[Claims 6 to 10 not printed in the Gazette.]

1,166,927. PROCESS OF RECOVERING FLUE-DUST. SAMUEL W. OSGOOD, Chicago, Ill., assignor of one-half to A. J. Jewell, Chicago, Ill. Filed June 22, 1914. Serial No. 846,438. (Cl. 75—73.)

1. The process of sintering flue dust, consisting in making pellets or globules of said dust, and subjecting said pellets or globules to a reducing flame.

2. The process of sintering flue dust, consisting in making a paste of the flue dust with a binding material, forming pellets or globules of the paste, drying said pellets or globules, and subjecting said pellets or globules to a temperature sufficient to sinter the same.

3. The process of sintering flue dust, consisting in making a paste of the flue dust with a binding material, forming pellets or globules of the paste, drying said pellets or globules, and subjecting said pellets or globules to a reducing flame.

4. The process of sintering flue dust, consisting in making a paste of the flue dust with a binding material, forming pellets or globules of the paste, drying said pellets or globules, and placing said pellets or globules in molten slag delivered from a furnace.

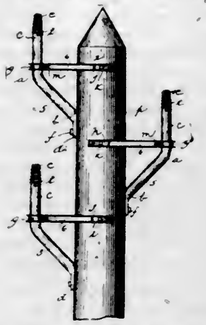
5. The process of sintering flue dust, consisting in forming pellets or globules from said dust and placing said pellets or globules in molten slag delivered from a furnace.

[Claims 6 to 17 not printed in the Gazette.]

1,166,928. INSULATOR-SUPPORTING BRACKET. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa. Filed May 4, 1914. Serial No. 836,117. (Cl. 173—321.)

1. An insulator supporting bracket structure comprising a bracket member reversely bent and shaped at one end to form a supporting base and shaped at the other end to receive an insulator or insulator support, and a V-shaped brace receiving the bracket member at its bend and adapted at its ends to be secured against the opposite sides of a support.

2. An insulator supporting bracket structure comprising a bracket member reversely bent and having one end flattened to form a base adapted to be secured directly to a pole and at its other end being shaped to receive an insulator or insulator support, and a V-shaped brace having a loop at its bend for receiving the bracket member, and having its ends curved to fit the opposite rounded sides of the supporting pole, said ends being provided with bolt holes by means of which they may be secured to the pole.



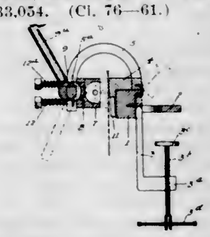
3. An insulator supporting bracket structure comprising a bracket part reversely bent and flattened at one end to form a base adapted to be secured directly to a pole and shaped at its other end to receive an insulator or insulator support, and a V-shaped brace member bent from a single length of metal, said brace member being looped at its bent to receive the insulator supporting end of the bracket member and having its ends curved to fit the opposite sides of the pole, and said ends being provided with bolt holes by means of which the brace may be secured to the pole.

4. An insulator supporting bracket structure comprising a bracket member in the form of a length of pipe reversely bent and having one end flattened to form a base adapted to be secured to a pole and having its other end shaped to receive an insulator or insulator support, and a V-shaped brace member bent from a single piece of channel bar, said brace member having a loop provided in its bend for receiving the insulator supporting end of the bracket member, the limbs of the brace member being each provided with a plurality of bolt holes whereby such limbs may be secured to the opposite sides of a pole.

5. An insulator supporting bracket structure comprising a bracket member in the form of a length of pipe reversely bent and having one end flattened to form a base adapted to be secured to a pole and having its other end shaped to receive an insulator or insulator support, and a V-shaped brace member bent from a single length of channel bar, said brace member having a loop provided in its bend for receiving the insulator supporting end of the bracket member, the limbs of the brace member being each provided with a plurality of bolt holes whereby such limbs may be secured to the opposite sides of a pole, said ends being rounded to more accurately fit the pole surface.

[Claims 6 to 8 not printed in the Gazette.]

1,166,929. COMBINED SAW SET AND CLAMP. WALTER E. PETERSON, San Diego, Cal. Filed Apr. 20, 1914. Serial No. 833,054. (Cl. 76—61.)



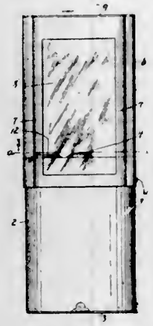
1. In a device of the class described, the combination of a supporting frame consisting of a bar, another bar mounted adjacent thereto and adapted to be moved to said

bar, eccentric means engaging therewith adapted to move the same, means mounted in said movable bar adapted for engaging with a plurality of teeth of a saw for bending the same, and a bar hinged on said first mentioned bar adapted to engage with said movable bar for clamping a saw blade.

2. In a device of the class described, the combination of a frame, a clamping member hinged thereto, a movable member adapted to engage with said hinged member, a saw set roller adapted for setting the teeth in a variety of kinds of saws detachably mounted in said movable member, means for holding it in certain position therein, and eccentric means for moving said movable member.

3. In a device of the class described, the combination of a frame, a clamping member hinged thereto, a movable member adapted to engage with said hinged member, a saw set roller adapted for setting the teeth in a variety of kinds of saws detachably mounted in said movable member, means for holding it in certain position therein, eccentric means for moving said movable member, and means for clamping said frame to a bench or the like.

1,166,930. TELESCOPIC COMBINED PORTABLE FLASH-LIGHT AND WRITING-PAD. JOHN A. PETRIE, Westville, Conn. Filed July 6, 1915. Serial No. 38,338. (Cl. 240—8.4.)



1. A telescopic combined portable flashlight and writing-pad, comprising a flash-light, and a telescoping shell applied over the same and furnished with a transparent writing-plate.

2. A telescopic combined portable flash-light and writing-pad, comprising a flash-light, and a telescoping shell applied thereto, and adapted to be furnished with interchangeable transparent writing-plates.

3. A telescopic combined portable flash-light and writing-pad, comprising a flash-light, and a telescoping shell applied over the same and furnished with a transparent writing-plate and provided at its outer end with a cover.

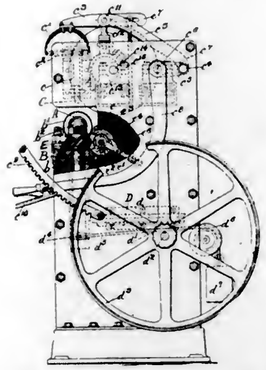
4. A telescopic combined portable flash-light and writing-pad, comprising a flash-light, and a telescoping shell applied over the same, furnished with a transparent writing-plate and formed with a slot for the clearance of the push-button of the flash-light.

5. A telescopic combined portable flash-light and writing-pad, comprising a flash-light, and a telescoping shell applied over the same and formed with off-setting guideways for the reception of a transparent writing-plate.

[Claims 6 to 8 not printed in the Gazette.]

1,166,931. MACHINE FOR HAMMERING WIRE-DRAWING DIES. JOHN HENRY FINDER, Cleckheaton, England, assignor of one-half to S. Haley and Son Limited, Cleckheaton, England. Filed May 19, 1915. Serial No. 29,170. (Cl. 76—4.)

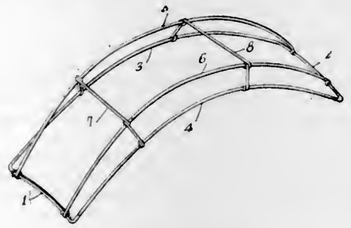
1. In a die hammering machine, a supporting frame, a crank having its shaft portions pivoted in the frame, a socket journaled in the middle part of the crank, a die anvil secured to the said socket and arranged between the shaft portions of the crank, driving mechanism for moving the socket and crank pivotally, a reciprocatory hammer arranged over the die anvil, and driving devices operating automatically to revolve the said socket and die anvil step by step as the hammer is reciprocated.



2. In a machine for hammering wire drawing dies provided with a reciprocating hammer, a die anvil rotatable about its own axis and arranged to be moved into and out of line with the hammer, the combination of a toothed wheel rigidly connected with the die anvil, another wheel gearing therewith, a ratchet wheel arranged in rigid connection with the last mentioned wheel, a slotted arm loosely mounted in relation to such ratchet wheel and carrying a spring pressed detent to engage therewith, an oscillatory lever operatively connected with the die hammer, and a rod connecting such lever with the slotted arm.

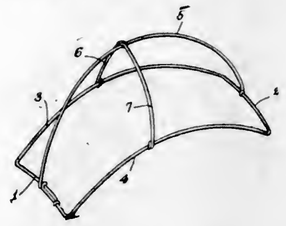
3. In a machine for hammering wire drawing dies provided with a vibratory hammer, a die anvil rotatable on its own axis, a socket carrying such anvil and arranged to be swiveled about an axis at right angles thereto; the combination of a sliding rack mounted in guides, a pinion gearing with such rack, a hand wheel rigidly connected with the pinion and means for retaining the socket in contact with the rack during the backward and forward movement of the latter.

1,166,932. HAIR-DRESSING FOUNDATION. CHARLES F. PORTER, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,412. (Cl. 132—23.)



A hair frame comprising an elongated base including long side members and shorter end members, said side members being bent to permit the base to fit the head of the wearer and lying respectively in planes perpendicular to a plane passing through the ends of the base, a plurality of secondary side members having a greater rate of curvature than the first named side members and located in planes substantially parallel to those of the side members and extending from one end member to the other, hair supporting and bracing members extending from said side members to said secondary members and spacing and hair supporting members extending between said secondary members, all of said members forming a frame adapted to be rolled with a part of the hair of the wearer thereon to form a long narrow roll of greater volume than that part of the hair.

1,166,933. HAIR-DRESSING FOUNDATION. CHARLES F. PORTER, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,413. (Cl. 132—23.)



A hair frame comprising an elongated base, including spaced side members and end portions, said side members being bent to permit said base to fit the head of the wearer and lying substantially within planes perpendicular to a plane passing through the ends of the base, a hair supporting member having a greater rate of curvature than the side members and lying in a plane substantially parallel with the planes of the side members and extending from one end portion to the other, and hair supporting and bracing members extending from said side members to said hair supporting member intermediate the ends thereof, all of said members forming a frame adapted to be rolled with the hair of the wearer thereon, to increase the volume thereof.

1,166,934. METHOD OF MAKING MOLDS. ARTHUR S. REEDER, Knoxville, Pa. Filed Aug. 17, 1915. Serial No. 45,949. (Cl. 29—148.)

1. The method herein described of making cast iron molds which consists in casting the mold, subjecting the mold when cast to a strain-relieving temperature, gradually attained and gradually diminished, and finally, after it has been so formed and treated, shaping the mold minutely for its intended use.

2. The method herein described of making cast-iron molds which consists in casting the mold, subjecting the mold repeatedly when cast to a strain-relieving temperature gradually attained and gradually diminished, and finally, after it has been so formed and treated, shaping the mold minutely for its intended use.

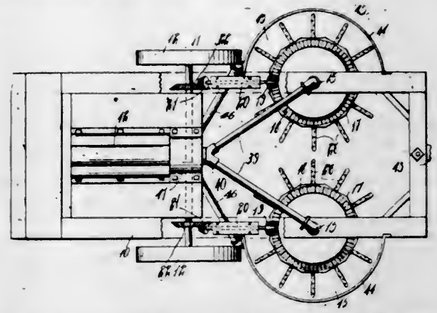
3. The method herein described of making cast-iron molds which consists in casting the mold, subjecting the mold when cast to a minimum temperature of 1400° F., gradually attained and gradually diminished, and finally, after it has been so treated, shaping the mold minutely for its intended use.

1,166,935. COTTON-PICKER. CLYDE RHODES, Cooledge, Tex. Filed Nov. 3, 1913. Serial No. 799,015. (Cl. 56—117.)

1. A cotton harvester comprising a wheeled frame, hollow perforated rotating drums, rotating picker stems on the drums and open to the interiors thereof, means for creating suction in the drum, and means for closing the stems successively during a part of the rotation of the drums.

2. A cotton harvester, rotating drums, radially extending hollow and perforated picker stems mounted on the drums and open to the interiors thereof, means for creating a constant suction in the drums, means for rotating the stems independently of the drums, and means for closing the stems against the suction as said stems pass a predetermined point.

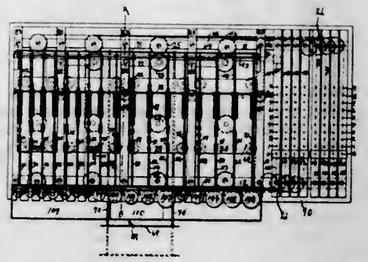
3. A cotton harvester, rotating drums, radially extending hollow and perforated picker stems mounted on the drums and open to the interiors thereof, means for creating a constant suction in the drums, means for rotating the stems independently of the drums, valves seated in the inner ends of the stems, means holding the valves normally seated, and means for forcing the valves to be seated during a part of the rotation of the drums.



4. In a cotton harvester, a rotating drum, hollow perforated picker stems mounted on the drum, means for rotating the stems independently of the drum, the inner ends of the stems being open and formed with valve seats, valves for the seats, resilient means for holding the valves normally away from the seats, and means for seating the valves during a part of the rotation of the drum.

5. In a cotton harvester, a rotating drum, a suction means, a pipe connected to the suction means and extending into the drum, the portion of the pipe within the drum being perforated, a plurality of hollow perforated stems extending radially from the drum and open to the interiors thereof, means for rotating the drum and stems independently, valves for closing the inner ends of the stems, means for holding the valves normally open, and means carried by the perforated portion of said pipe for seating the valves during a portion of the rotation of the drum.

1,166,936. CHANGE MAKING, COMPUTING, AND PAYING MACHINE. GUSTIN A. ROBERTS, Portland, Oreg. Filed Apr. 16, 1913. Serial No. 761,488. (Cl. 133—2.)



1. In a change making machine, a frame, a plurality of selector plates movably mounted on said frame, means for pre-determining the position of each of said selector plates, said means comprising two members adjustably positioned on said frame and flexibly interconnected with each other and with a selector plate; registering means on each of said selector plates, a movably mounted cam controlled carrier, a plurality of ejectors pivotally mounted on said carrier, ejector positioning means which co-act with said registering means, and means for moving said carrier.

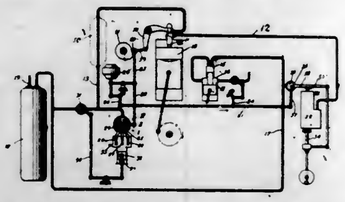
2. In a change making machine, a frame, a plurality of selector plates movably mounted on said frame, means for pre-determining the position of each of said selector plates, said means comprising two members adjustably positioned on said frame and flexibly interconnected with each other and with a selector plate; registering means

on each of said selector plates, a movably mounted cam controlled carrier, a plurality of ejectors pivotally mounted on said carrier, ejector positioning means which co-act with said registering means, coin retaining means and means to bring the ends of said ejector beyond the coin retaining means.

3. In a change making machine, a frame, a plurality of selector plates movably mounted on said frame, means for pre-determining the position of each of said selector plates, said means comprising two members adjustably positioned on said frame and flexibly interconnected with each other and with a selector plate; registering means on each of said selector plates, a movably mounted cam controlled carrier, a plurality of ejectors pivotably mounted on said carrier, ejector positioning means which co-act with said registering means, coin retaining means and means for moving said carrier so that the ends of said ejectors will remove coins from said coin retaining means.

4. In a change making machine, a frame, a plurality of selector plates movably mounted on said frame, means for pre-determining the position of each of said selector plates, said means comprising two members adjustably positioned on said frame and flexibly interconnected with each other and with a selector plate; registering means on each of said selector plates, a movably mounted cam controlled carrier, a plurality of ejectors pivotably mounted on said carrier, ejector positioning means which co-act with said registering means, coin retaining means, means for moving said carrier so that the ends of said ejectors will remove coins from said coin retaining means, and means for collecting the coins so removed and discharging them at a common point.

1,166,937. MEANS FOR REGULATING COMBUSTION-ENGINES. PAUL G. ROESTI, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed June 1, 1912. Serial No. 700,948. (Cl. 123—97.)



1. The combination with an internal combustion engine of the Diesel type having a cylinder, means for injecting fuel into air previously compressed therein, and fuel and high pressure air lines leading to said means, of variable relief provisions in said air line, and means to control said provisions in accordance with varying loads.

2. In an internal combustion engine of the Diesel type, the combination with an engine cylinder having fuel injection means, a pump for compressing air for injecting fuel into the cylinder, and a high pressure air line for conducting the air thus compressed to the injection means, of means for regulating the output of said pump, and a variable relief device in the injection air line between the pump and the cylinder.

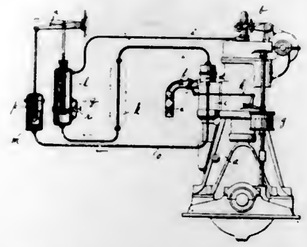
3. The combination with an engine of the type described having fuel injection means and a high pressure air line leading thereto, of a variable relief valve device connected with said line.

4. The combination with an engine of the type described, having fuel injection means and a high pressure air line leading thereto, of a plurality of graduated relief valves and means for connecting any one of them with said line.

5. The combination with a cylinder of a Diesel type engine having fuel injection means, a high pressure air line leading to said means and an air compressor connected with said line, of means for varying the output of said air compressor, a variable flow controller in said line, and variable relief provisions connected with said line.

[Claims 6 to 24 not printed in the Gazette.]

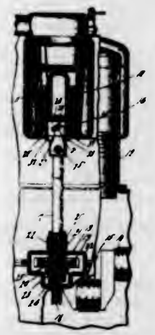
1,166,938. METHOD OF REGULATING COMBUSTION-ENGINES. PAUL G. ROESTI, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed June 6, 1912. Serial No. 701,994. (Cl. 123—97.)



1. A method of operating internal combustion engines which comprises introducing air or gas into the engine cylinder, compressing the same therein, injecting fuel by means of air under pressure into the body of air or gas previously compressed in the cylinder, and compensating for load variations by simultaneously and similarly varying the duration of the period of fuel injection and the tension of the fuel injection air.

2. A method of operating internal combustion engines which comprises introducing air or gas into the engine cylinder, compressing the same therein, injecting fuel by means of air under pressure into the body of air or gas previously compressed in the cylinder, and compensating for load variations by simultaneously and similarly varying the duration of the period of fuel injection and the tension of the fuel injection air within certain limits and above or below such limits varying the duration of the period of fuel injection only.

1,166,939. VALVE FOR INTERNAL-COMBUSTION ENGINES AND DRIVING MEANS THEREFOR. EDWIN L. RUSSELL, Cleveland, Ohio. Filed Dec. 18, 1911. Serial No. 666,477. (Cl. 136—7.)



1. In an internal combustion engine, having a driven shaft capable of rotation in either direction, of a valve structure comprising a seat member and a seated member movable toward and from the seat member and also movable along the seat member, and a driving connection between said shaft and the seated member, said driving connection comprising a spring connection between the driver and the seated member, interengaging members carried by the seated member and driver whereby movement of the driver in either direction will cause corresponding movement of the seated member, said connection permitting movement of the driver in either direction relative to the seated member and consequent movement of the seated member away from its seat.

2. In an internal combustion engine having a driven shaft capable of rotation in either direction, of a valve structure comprising a seat member and a seated member movable toward and from the seat member and also movable along the seat member, and a driving connection between said shaft and the seated member, said driving connection comprising a torque-applying spring connecting the seated member and the shaft, interengaging members carried by the shaft and the seated member and interacting under normal stress of the spring to drive the seated member toward its seat and, under resistance of the seated member to movement on its seat by the shaft, to drive the seated member initially from its seat upon movement of the shaft in either direction.

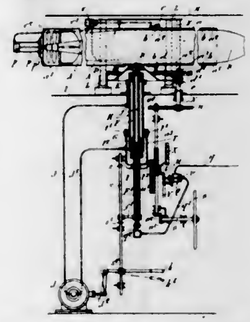
3. In an internal combustion engine having a driven shaft capable of rotation in either direction, of an axially tapered valve seat, an axially tapered rotatable valve seated therein, a torque-applying spring connecting the said shaft and valve, a helical double-acting cam-connection between the shaft and valve, and a second oppositely acting helical cam-connection between the shaft and valve, one of said cam-connections having a limited range of movement relative to the shaft.

4. The combination of an axially tapered seat, an axially tapered member seated in the seat and both rotatably and axially movable, a driver, a torque-applying spring connecting the driver and seated member, a helical double-acting cam-connection between the shaft and valve, and a second oppositely acting helical cam-connection between the driver and valve, one of said cam-connections having a limited range of movement relative to the driver, and the other being directly carried by the driver.

5. The combination of an axially tapered seat, an axially tapered member seated in the seat and both rotatably and axially movable, a driver, a torque-applying spring connecting the driver and seated member, a helical double-acting cam-connection between the shaft and valve, and a second oppositely acting helical cam-connection between the driver and valve, one of said cam-connections having a limited range of movement relative to the driver.

[Claims 6 to 20 not printed in the Gazette.]

1,166,940. TORPEDO-LAUNCHING APPARATUS FOR SUBMARINE VESSELS. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed June 15, 1914. Serial No. 845,138. (Cl. 114—17.)



1. In a submarine vessel, a torpedo holding frame within said vessel, means for vertically moving and training said frame, and means for launching a torpedo from said frame.

2. In a submarine vessel having a torpedo compartment, a torpedo carrying frame adapted to be moved into and out of said compartment, and means for moving said frame to firing position.

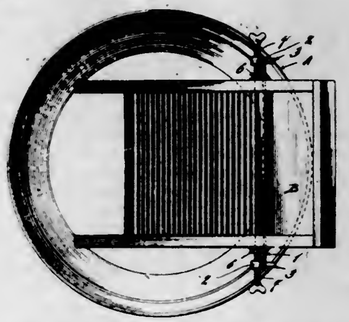
3. In a submarine vessel, the combination of a movable supporting frame, a torpedo launching mechanism carried by said frame, and means for operating said mechanism, means for moving said frame clear of the submarine deck, mechanism for training said frame, and means for normally locking said launching mechanism.

4. In a submarine vessel, the combination of a movable supporting frame, a torpedo launching mechanism carried thereby, means for operating said mechanism, means for moving said frame clear of the submarine deck, mechanism for training said frame and released by movement of said frame, and means for normally locking said launching mechanism.

5. In a submarine vessel provided with a torpedo compartment, the combination of a reciprocating support in said compartment, a rotatable torpedo carrying frame revolubly mounted in said support, and means for moving said frame into and out of said compartment.

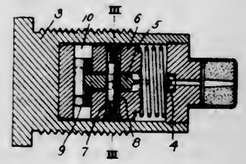
[Claims 6 to 12 not printed in the Gazette.]

1,166,941. ATTACHMENT FOR WASHBOARDS. WILLIAM SEAGER, St. Louis, Mo. Filed June 7, 1915. Serial No. 32,596. (Cl. 68—29.)



In a device of the character described, a yoke comprising a body, hanger-arms integral with said body, binder screws arranged in said hanger-arms, heads rotatably mounted upon the forward ends of said screws, and fulcrum arms integral with and extending laterally from said hanger-arms.

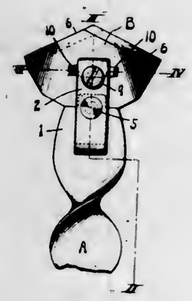
1,166,942. FUSE. JOHN B. SEMPLE, Sewickley, Pa. Filed Feb. 10, 1915. Serial No. 7,267. (Cl. 102—39.)



1. The combination in a percussion fuse of a supporting body, a firing-pin movable in said body from an unarmed to armed position, a pair of yieldingly-held centrifugally-opening locking-blocks abutting one upon another in a passageway extending without interruption through the body of the plunger and through the unarmed firing-pin, and a pair of centrifugally-operating firing-pin-arming and supporting bolts.

2. In a percussion fuse, the combination of a supporting body, a longitudinal runway therein, two transverse runways intersecting said longitudinal runway, a firing-pin movable in said longitudinal runway and provided with a recess registering in the range of firing-pin movement with one of said transverse runways, a pair of centrifugally-opening locking-bolts in one of said transverse runways, and a pair of centrifugally acting arming-bolts in the other of said transverse runways.

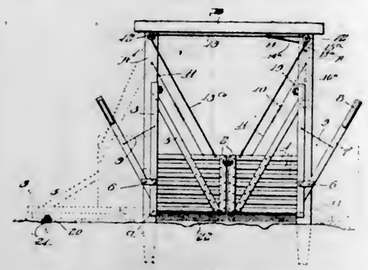
1,166,943. DRILL. SAMUEL T. SKEEN, Sandoval, Ill. Filed Feb. 24, 1915. Serial No. 10,195. (Cl. 255—69.)



1. A drill having a stem provided with an aperture near one of its ends, a blade holder comprising a single piece of metal passing through said aperture and secured to said stem to provide a pair of jaws which project from an end of the stem, and a blade detachably secured to said jaws.

2. A drill having a stem provided with an aperture near one of its ends, a blade holder comprising a single piece of metal passing through said aperture and folded onto said stem to provide a pair of jaws which project from an end of the stem, a rivet passing through said stem and jaws, and a blade detachably secured to said jaws.

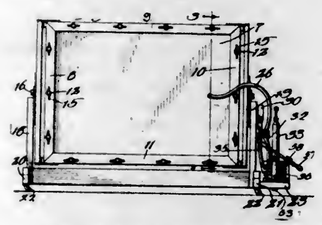
1,166,944. FARM-GATE. ALBERT M. STORK, Riverton, Wyo. Filed June 25, 1914. Serial No. 847,183. (Cl. 39—61.)



1. A device of the kind specified comprising a post, a gate pivoted at its lower corner thereto and having one of its uprights elongated, a counterbalance beam pivoted to said elongated upright, a pulley on said post, an operating cable engaging said pulley having one end secured to the end of said gate opposite said beam and adapted to elevate said gate upon its pivot, and a cushion on said post against which said elongated upright rests when said gate is closed.

2. A device of the kind specified comprising supporting posts each consisting of two spaced vertical members, a pintle for each post extending through the lower portions of said members, gates pivotally mounted on said pintles and adapted to be moved between said members, counterbalanced beams carried by said gates and inclined therefrom on the side of said posts opposite said gates, yielding means connecting the outer ends of said gates to the upper portions of their respective posts, a pull cable mounted on said posts and having free ends that are connected to said gates adjacent their abutting edges that is adapted to raise the free ends of said gates through their respective post members, and cushions on said posts against which portions of said gates rest in closed positions.

1,166,945. PNEUMATIC PRINTING-FRAME. EMANUEL W. SWEIGARD, Chicago, Ill. Filed Sept. 4, 1914. Serial No. 860,155. (Cl. 95—76.)



1. The combination with a printing frame, of means for producing a vacuum between the front and back of said frame, and automatic means for prolonging said vacuum.

2. The combination with a printing frame, of means for exhausing air from between the front and back of said frame, and a self-expanding vacuum chamber connected with the vacuum space in said frame.

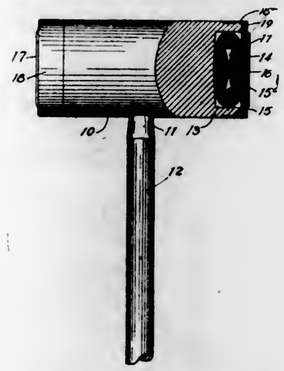
3. The combination with the back and front of a printing frame, of means for pumping out air from between said front and back, and an auxiliary vacuum chamber connected with the space between said front and back, said chamber being contractible and expansible.

4. The combination with the back and front of a printing frame, with means for making a substantially air-tight juncture between the edges of said back and said front, an auxiliary vacuum chamber communicating with the vacuum space between said front and back, means for temporarily contracting said vacuum chamber, and means for expanding same to absorb leakages of air into said frame.

5. The combination with a printing frame operated by vacuum or atmospheric pressure, of an auxiliary vacuum chamber having a conduit connected with the vacuum space in said frame, and means causing said auxiliary chamber to automatically sustain or prolong the vacuum in said frame.

[Claims 6 to 11 not printed in the Gazette.]

1,166,946. CROQUET-MALLET AND THE LIKE. THOMAS TAYLOR, Jr., Hubbard Woods, Ill. Filed Dec. 20, 1913. Serial No. 807,834. (Cl. 46—15.)



1. In a device of the character described, the combination with a stock provided with a socket at one of its ends, and filling located in said socket and consisting of a core and filaments of rubber wound thereon in a high state of tension.

2. In a device of the character described, the combination with a stock provided with a socket at one of its ends, and filling located in said socket and consisting of a hollow core and filaments of rubber wound thereon in a high state of tension.

3. In a device of the character described, the combination with a stock provided with a socket at one of its ends, and filling located in said socket and consisting of a ring core and filaments of rubber wound thereon in a high state of tension.

4. In a mallet, the combination with the mallet stock or head provided with a socket in at least one of its ends, filling located in said socket and consisting of a core and filaments of rubber wound thereon in a high state of tension, and an impact piece located over the outer portion of said filling and secured to said stock.

5. In a device of the character described, the combination with a stock provided with a socket at one of its ends, of filling located in said socket and consisting of a core having an open cavity and filaments of rubber wound thereon in a high state of tension.

1,166,947. HOSIERY-FINISHING APPARATUS. CHARLES G. TENGDIN, Kankakee, Ill., assignor, by mesne assignments, to Paramount Hosiery Form Drying Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 5, 1914. Serial No. 865,168. (Cl. 223—17.)



1. A hosiery drying apparatus comprising a conduit provided with a series of pairs of spaced apart inlet and outlet apertures, and a series of deflectors disposed within the conduit, each deflector being interposed between the apertures of a pair and in close proximity to one of said apertures so as to deflect fluid directly therethrough, each of said deflectors being provided with an aperture of diametral dimensions relatively different from that of a proximate deflector.

2. Hosiery drying apparatus comprising a conduit provided with a series of pairs of spaced apart inlet and outlet apertures, a series of drying forms mounted on the conduit and each provided with an inlet and an outlet registering with the inlet and outlet apertures in the conduit, and a series of fluid-deflecting and controlling members disposed within the conduit, one between each pair of apertures therein, and in close proximity to one of said apertures thereof so as to deflect fluid directly therethrough, the successive deflectors being provided with passages of graduated diametral dimensions.

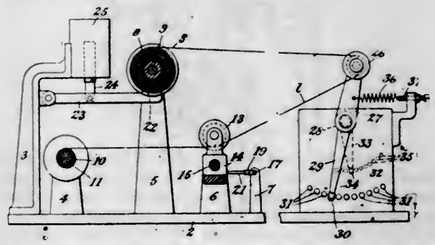
3. Hosiery drying apparatus comprising a series of hollow heating forms, each provided with an inlet and outlet, a conduit communicating with the forms, having an inlet and an outlet aperture in register with the inlet and outlet in the form, and a series of fluid-directing and controlling members arranged in said conduit in spaced relation and each in juxtaposition to said inlet in the conduit so as to arrest and direct a predetermined volume of fluid therethrough, and provided with a fluid-controlling passage of diametral dimensions relatively different from those of proximate members, whereby a predetermined and relatively smaller volume of fluid is permitted to flow through the passages of the successive controlling members.

4. Hosiery drying apparatus comprising a series of hollow heating forms, each provided with an inlet and outlet, a conduit communicating with the forms and provided with apertures spaced apart to register with said inlet and outlet, and a series of fluid-directing and controlling members arranged in said conduit in spaced relation and each in close proximity to said inlet and outlet in each form, and each member being provided with an aperture formed therein remote from said aperture in the conduit and of relatively smaller dimensions than those of a proximate member, whereby a predetermined and relatively decreased volume of fluid may flow through the apertures of the successive controlling members.

5. Hosiery drying apparatus comprising a series of hollow heating forms, each provided with an inlet and outlet, a conduit communicating with the forms and provided with apertures spaced apart to register with said inlet and outlet, and a series of fluid-directing and controlling members arranged in said conduit in spaced relation and each in close proximity to said inlet and outlet in each form, the series of members being provided with apertures having their walls at a distinct angle to the walls of the apertures in the conduit and of progressively increased dimensions, whereby a predetermined and relatively decreased volume of fluid may flow through the apertures of the successive controlling members.

[Claims 6 to 11 not printed in the Gazette.]

1,166,948. WINDING-MACHINE. CHARLES R. UNDERHILL, New Haven, Conn., assignor to The Acme Wire Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 17, 1913. Serial No. 795,623. (Cl. 242—25.)



1. In a winding machine, the combination with a winding mandrel, of a motor normally operative for turning said mandrel, and electrical means coöperating with the strand at a point between the point of supply and the mandrel and controlled by the tension of the strand being wound for varying the rate of travel of the turning mandrel.

2. In a winding machine, the combination with a winding mandrel, of a motor normally operative for turning said mandrel, and electrical controlling means coöperative with the strand at a point between the point of supply and the mandrel for regulating the rate of travel of the turning mandrel.

3. In a winding machine, the combination with a winding mandrel, of a motor normally operative for turning said mandrel, and electrical controlling means for regulating the rate of travel of the strand at the turning mandrel said means embodying an element coöperative with the strand at a point between the point of supply and the mandrel and controlled by the tension of the strand.

4. In a winding machine, the combination with a winding mandrel, of a motor for turning said mandrel, and electrical controlling means for regulating the rate of travel of the strand said means embodying an element coöperative with the strand at a point between the point of supply and the mandrel and controlling said rate of travel and controlled by the tension of the strand.

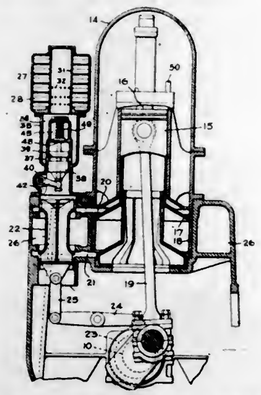
5. In a winding machine, the combination with a winding mandrel, of a motor normally operative for turning said mandrel, and electrical controlling means for regulating the rate of travel of the strand at the turning mandrel said means embodying an element controlling said rate of travel and a second element controlled by the tension of the strand.

[Claims 6 to 38 not printed in the Gazette.]

1,166,949. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Mar. 12, 1914. Serial No. 824,294. (Cl. 123—179.)

1. An internal combustion engine, a scavenging pump driven by the engine shaft, and valve means for the pump controlling the admission of air to the pump cylinder and the discharge therefrom, in combination with a suc-

tion silencer, a valve for shutting off the normal admission port from the silencer to the pump, and a second valve actuated by the stem of the first for admitting fluid under pressure to the pump valve means to drive the pump as a fluid motor to start the engine.



2. An internal combustion engine, a scavenging pump driven by the engine shaft, and valve means for the pump controlling the admission of air to the pump cylinder and the discharge therefrom, in combination with a silencer, a valve for shutting off the normal admission port from the silencer to the pump, a second valve actuated through the stem of the first for admitting fluid under pressure to the pump valve means to drive the pump as a fluid motor to start the engine, and means for reducing the compression pressure in a working cylinder of the engine.

3. An internal combustion engine, a scavenging pump driven by the engine shaft, and valve means for the pump controlling the admission of air to the pump cylinder and the discharge therefrom, in combination with a valve for shutting off the admission of atmospheric air to the pump, a supply valve to admit fluid under pressure to the pump valve, a compression reducing valve for an engine cylinder, a lever which when moved to one position closes the shut-off valve and opens the supply valve and when moved in the same direction by a greater amount also opens the relief valve.

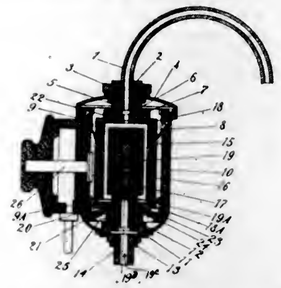
4. An internal combustion engine, a scavenging pump driven by the shaft of the engine, valve means for the pump controlling the admission of air to the pump cylinder and the discharge therefrom, in combination with a tubular and ported slide valve for shutting off the normal atmospheric admission port to the pump, and a second valve actuated by the stem of the first and timed to open after the first valve has been shut to admit air under pressure to the piston of said pump.

5. An internal combustion engine, a scavenging pump and a multi stage compressor driven by the shaft of the engine, valve means for the pump controlling the admission of air to the pump cylinder and the discharge therefrom, in combination with a valve which is open while the engine is running and through which atmospheric air is admitted to the pump, a receiving vessel connected to an intermediate stage of the compressor, a supply valve that is seated while the engine is running and controls the passage of air from the vessel, a means acting successively on the valves to first close the atmospheric valve and open the supply valve, and a compression reducing valve for an engine cylinder.

[Claims 6 to 9 not printed in the Gazette.]

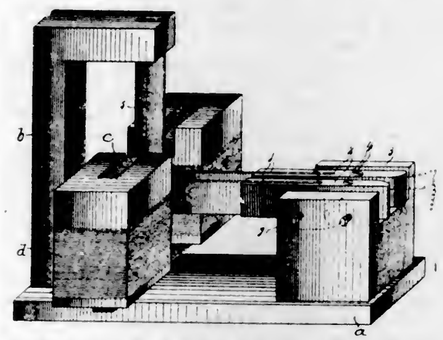
1,166,950. ELECTRICAL HOT-WATER APPARATUS. JOHANN VON HENTZEL, New York, N. Y. Filed Dec. 16, 1914. Serial No. 877,533. (Cl. 219—39.)

Apparatus for heating liquids by electricity, comprising an outer casing, closure caps at each end of said casing, inlet and outlet liquid connections for said closure caps, arranged centrally thereof, a detachable electrode member within the casing, comprising an inner casing open at both ends, of smaller size than the outer casing, an electrode therein having, at the lower end and centrally thereof an opening for the passage of liquids, in direct communication with the inlet connection of one of



the closures, a hollow cylindrical electrode spaced outwardly around the inner electrode for forming a conduit for the liquid and having an opening in the upper end thereof in direct communication with the outlet of one of the closure caps, means supporting the said electrodes, and insulating means insulating the electrodes from the outer casing.

1,166,951. RESONATING RELAY. HANS VON KRAMER and GISBERT KAPP, Edgbaston, Birmingham, England. Filed June 4, 1913. Serial No. 771,778. (Cl. 175—323.)



1. In a relay contact device operated by feeble alternating currents for the purpose of establishing a local circuit, the combination of a permanent magnet; a reed tuned to the periodicity of the alternating current in the controlling circuit and having its one end firmly fixed to one pole of said magnet and forming part of the local circuit to be established; symmetrical polar extensions on the second pole of said magnet terminating on either side of the free end of said reed; coils around said polar extensions forming part of the controlling circuit; and two spring flanking members having a natural frequency greater than that of said reed, mounted on either side of said reed, normally out of contact with the said reed but alternately adapted to make contact with the said reed when it vibrates, and to form alternative paths for the passage of the current in the local circuit thereto.

2. In a relay contact-making device for the purpose of completing a local circuit, the combination of a permanent magnet; a reed forming part of the local circuit tuned to the periodicity of the alternating current in the controlling circuit and having its one end firmly fixed to one pole of said magnet; symmetrical polar extensions on the second pole of said magnet terminating on either side of the free end of said reed; coils around said polar extensions forming part of the controlling circuit; and

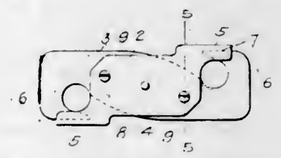
two spring flanking members having a natural frequency very much greater than that of said reed, mounted on either side of said reed, normally out of contact with the said reed but alternately adapted to make contact with the said reed when it vibrates, and to form alternative paths for the passage of the current in the local circuit thereto.

3. In a relay contact-making device for the purpose of completing a local circuit, the combination of a vibrating reed; poles of an electromagnet terminating one upon either side of said reed; spring-mounted contact members upon either side of said reed adapted to make electrical contact therewith when the said reed vibrates; means for adjusting the air gaps between said poles and said reed; and means for adjusting the air gaps between said contact members and said reed.

4. In a relay contact-making device, the combination of a permanent magnet; laminated cores pivotally connected near one end of said magnet and forming one pole of said magnet; coils wound upon said cores in series with each other, and forming part of the controlling circuit; a reed forming part of the controlled circuit and having its free end situated between the free ends of said cores; a member fixed relatively to the magnet; and a pair of links pivotally connected to said laminated cores and adjustable relatively to said fixed member in order that the extremities of the cores may be adjusted in relation to the reed so as to vary the air gap between said cores and the reed.

5. In a relay contact-making device for the purpose of completing a local circuit, the combination of a vibrating reed; laminated cores forming the poles of an electromagnet and terminating one upon either side of said reed; a member fixed relatively to said reed; a pair of links and nuts connected to said laminated cores and to said fixed member substantially as and for the purpose set forth.

1,166,952. CHAIN-LINK. OSCAR W. WAHLSTROM, Boulder, Colo. Filed Apr. 14, 1915. Serial No. 21,324. (Cl. 59—89.)



1. A chain-link comprising a sheath-member having interiorly shoulders at diagonally opposite points, a member pivoted at a central point within said sheath-member and having at its ends, reversedly curved hooks the points of which engage said shoulders, and means for locking the two members against movement about their pivot.

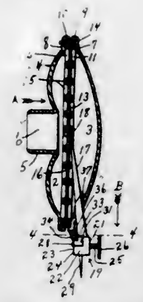
2. A chain-link comprising a sheath member composed of side plates connected at diagonally opposite points by edge-parts, a member pivoted between said side-plates and having at its ends reversedly curved hooks the points of which engage said edge-parts, and a screw extending through an aperture in one of said side plates for locking the inner member against movement about its pivot.

3. A chain link comprising a sheath-member composed of side plates connected at diagonally opposite points by edge-parts, a member pivoted between said side-plates and having at its ends reversedly curved hooks the points of which engage said edge parts, the said inner member and one of the side plates of the sheath member having registering apertures, and a screw in said apertures for locking the inner member against movement about its pivot.

4. A chain link comprising a sheath member composed of spaced side plates connected only at diagonally opposite points, a member pivoted at a central point between the side plates and having at its ends reversedly curved hooks the outer edges of which normally engage the interior surfaces of the said connections of the plates, and means for locking the members against movement about their pivot.

5. A chain link comprising a sheath member composed of spaced side plates connected only at diagonally opposite points, the said connections being interiorly, substantially parallel to the longituuinal axis of the member, a member pivoted between the side plates and having at its ends reversedly curved hooks the outer edges of which normally engage along the inner surfaces of the said connections, and means for locking the members against movement about their pivot.

1,166,953. PHONOGRAPH SOUND-BOX. CHARLES W. WALLER, Chicago, Ill. Filed Apr. 30, 1915. Serial No. 24,859. (Cl. 181—11.)

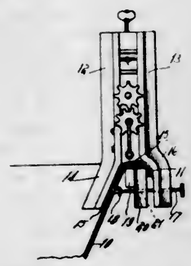


1. In a sound box, the combination of a diaphragm, a covering for the outside or inoperative side of the diaphragm, the lower portion being provided with an opening, a stylus arm passing through said opening, and a yieldable pastelike or jellylike material closing said opening between said covering and stylus arm, whereby the sounds from the outside or inoperative side of the diaphragm will be prevented from reaching the outside air.

2. In a sound box, a casing, a pair of downwardly extending end portions formed on said casing, a stylus arm and head, a piece of flexible material between each of said end portions and stylus head, said stylus head having fingers passing through openings in said end portions, and a screw passing through said end portions, whereby the degree of pressure may be regulated between said stylus head, flexible material and end portions.

3. In a sound box, a stylus head having a front, rear, and side walls, said front wall having a threaded opening, said rear wall having a smooth opening, and a thumb screw provided with a threaded and unthreaded portion, said threaded and unthreaded portions being inserted in said threaded and smooth openings, respectively, and said unthreaded portion having its end provided with a head.

1,166,954. CLOTHES-WRINGER. EMIL WEISS, Union Hill, N. J. Filed Nov. 2, 1915. Serial No. 59,163. (Cl. 68—32.)



A clothes wringer for use in connection with a laundry tub having a rolled rim, comprising uprights, each formed

at the lower end with a foot, the foot of one upright being inclined to correspond to the inclination of the side of the tub, clamping screws in the other foot, and a spacing and guiding member for the screws consisting of a board disposed under the rolled rim, and depending members having threaded openings for the reception of the said screws, said feet and inner ends of the screws being provided with protective coverings.

1,166,955. SUSPENDER-BUCKLE. GEORGE A. WELD, Boston, Mass. Filed Nov. 29, 1909. Serial No. 530,369. (Cl. 24—184.)



1. A buckle comprising a frame, and a clamp lever pivoted thereto, said frame having a bottom grip adapted to yield and permit said clamp lever to pass over it and the interposed webbing, and having also a back grip on the other side of said clamp lever from said bottom grip when the clamp lever is in closed or gripping position, arranged to take the rearward thrust applied by the clamp lever to the webbing and to separate from the front clamp in response to such thrust, whereby the portion of webbing engaged by the clamp lever is held between said grips.

2. A buckle consisting of a frame formed of looped wire, the central part of which is straight and forms a yielding back gripper and the ends of which are bent toward each other parallel to and at a distance from said gripper, forming a pintle, and a clamp lever pivoted to said pintle and forming one boundary of a space for webbing the wire between said back gripper and the pintle ends being looped to form a bottom gripper parallel with the back gripper and at a greater distance than the latter from the pivot of said clamp lever, and to provide resilience, whereby the bottom gripper is enabled to yield as the clamp lever passes over it, and the back gripper is enabled to separate from the bottom gripper in response to the rearward pressure applied thereon by the clamp lever through the interposed webbing, to receive that portion of the webbing which is engaged by the clamp lever and to grip the same on each side of the bite of the clamp lever.

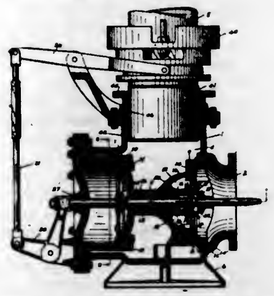
3. A buckle comprising a swinging clamp and a frame member having two grippers coöperating with said clamp in securing webbing, one of said grippers being resiliently supported in rear of the other with relation to the movement of said clamp, and nearer to the axis about which said clamp swings, whereby it is pressed backward in the course of clamping the webbing and caused to exert a forward gripping pressure on the webbing when the clamp is in closed, or clamping position.

4. A buckle comprising a frame and an operating member having coactive connecting hinge portions, said operating member having a gripping edge and said frame having a yielding portion arranged to coact with said edge to grip an interposed strip of webbing, said frame having another yielding portion arranged to hold the strip of webbing against said operating member with yielding pressure, said two yielding portions being arranged to exert their yielding forces in directions substantially at right angles to each other.

5. The combination of a buckle and a strip of webbing; said buckle comprising a frame having a pintle portion and gripping members, and a clamp lever pivoted to said pintle portion; the webbing having its end bent around the said gripping members and its running part passed between its end and said clamp lever, whereby the entire buckle is backed by the webbing, and said gripping members being relatively separable yieldingly and so arranged that the clamp lever in closing is caused to pass over one of said members and to crowd the webbing between the members.

[Claim 6 not printed in the Gazette.]

1,166,956. VALVE MECHANISM. FREDERICK N. WHITESELL, Chicago, Ill., assignor to Sheffield Car Company, Three Rivers, Mich. Filed Aug. 3, 1914. Serial No. 854,653. (Cl. 137—93.)



1. The combination of a valve casing provided with a main valve seat and an auxiliary valve seat disposed centrally of the main valve seat, a cylinder, a piston having an exhaust port therein, a main valve having a chamber therein open to the casing inlet, a barrel connecting said main valve and piston having a cylinder supply passage therein and provided with an extension projecting into said chamber in said main valve, said extension having a control valve seat therein, a tubular auxiliary valve slidably mounted on said extension to coact with said auxiliary valve seat, said auxiliary valve being provided with a by-pass, an adjusting valve for said by-pass, a spring yieldingly supporting said auxiliary valve, a tappet for said auxiliary valve carried by said main valve and disposed to permit said auxiliary valve to seat prior to the seating of said main valve, a control valve for said cylinder supply passage coacting with said control valve seat, a stem therefor arranged through said main valve barrel, and an exhaust valve mounted on said control valve stem to coact with said exhaust port, said exhaust valve being opened by the closing of the control valve and vice versa.

2. The combination of a valve casing provided with a main valve seat and an auxiliary valve seat disposed centrally of the main valve seat, a cylinder, a piston having an exhaust port therein, a main valve having a chamber therein open to the casing inlet, a barrel connecting said main valve and piston having a cylinder supply passage therein and provided with an extension projecting into said chamber in said main valve, said extension having a control valve seat therein, a tubular auxiliary valve slidably mounted on said extension to coact with said auxiliary valve seat, said auxiliary valve being provided with a by-pass, a spring yieldingly supporting said auxiliary valve, a tappet for said auxiliary valve carried by said main valve and disposed to permit said auxiliary valve to seat prior to the seating of said main valve, a control valve for said cylinder supply passage coacting with said control valve seat, a stem therefor arranged through said main valve barrel, and an exhaust valve mounted on said control valve stem to coact with said exhaust port, said exhaust valve being opened by the closing of the control valve and vice versa.

3. The combination of a valve casing provided with a main valve seat and an auxiliary valve seat disposed centrally of the main valve seat, a cylinder, a piston having an exhaust port therein, a main valve having a chamber therein open to the casing inlet, a barrel connecting said main valve and piston having a cylinder supply passage therein and provided with an extension projecting into said chamber in said main valve, said extension having a

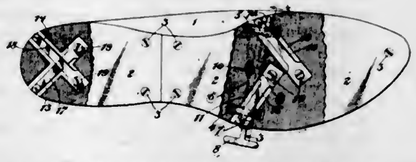
control valve seat therein, a tubular auxiliary valve slidably mounted on said extension and adapted to seat on said auxiliary valve seat prior to the seating of said main valve, said auxiliary valve being provided with a by-pass, an adjusting valve for said by-pass, a control valve for said cylinder supply passage coacting with said control valve seat, a stem therefor arranged through said main valve barrel, and an exhaust valve mounted on said control valve stem to coact with said exhaust port, said exhaust valve being opened by the closing of the control valve and vice versa.

4. The combination of a valve casing provided with a main valve seat and an auxiliary valve seat disposed centrally of the main valve seat, a cylinder, a piston having an exhaust port therein, a main valve having a chamber therein open to the casing inlet, a barrel connecting said main valve and piston having a cylinder supply passage therein and provided with an extension projecting into said chamber in said main valve, said extension having a control valve seat therein, a tubular auxiliary valve slidably mounted on said extension and adapted to seat on said auxiliary valve seat prior to the seating of said main valve, said auxiliary valve being provided with a by-pass, a control valve for said cylinder supply passage coacting with said control valve seat, a stem therefor arranged through said main valve barrel, and an exhaust valve mounted on said control valve stem to coact with said exhaust port, said exhaust valve being opened by the closing of the control valve and vice versa.

5. The combination of a main valve, a cylinder, a piston having an exhaust port therein, a barrel connecting said main valve and piston having a cylinder supply passage therein, and an extension having a control seat therein, a tubular auxiliary valve slidably mounted on said extension, said auxiliary valve being provided with a by-pass, an adjusting valve for said by-pass, a spring yieldingly supporting said auxiliary valve, a tappet for said auxiliary valve carried by said main valve and disposed to permit said auxiliary valve to seat prior to the seating of said main valve, a control valve for said cylinder supply passage coacting with said control valve seat, a stem therefor arranged through said main valve barrel, and an exhaust valve mounted on said control valve stem to coact with said exhaust port said exhaust valve being opened by the closing of the control valve and vice versa.

[Claims 6 to 10 not printed in the Gazette.]

1,166,957. DEVICE FOR PLACING AND RETAINING INSOLES ON LASTS. LEONARD S. WIGNOT, St. Charles, Mo., assignor of one-half to Lucy Marie Wignot, St. Charles, Mo. Filed June 30, 1915. Serial No. 37,348. (Cl. 12—141.)



1. A last having a plurality of sole-retaining clamps disposed adjacent to the edge of the bottom thereof.

2. A last having a plurality of resilient sole-retaining clamps disposed adjacent to the edge of the bottom thereof.

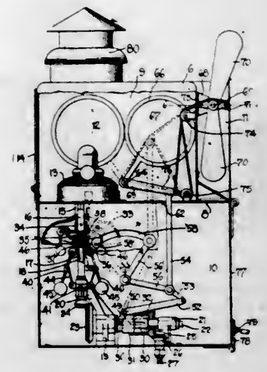
3. A last having a metal plate provided with marginal recesses; affixed upon the bottom thereof, and a plurality of sole-retaining clamps projecting through said recesses from beneath said plate.

4. A last having a metal plate provided with marginal recesses; affixed upon the bottom thereof, and a plurality of resilient sole-retaining clamps projecting through said recesses from beneath said plate.

5. A last having a metal plate affixed upon the bottom thereof, a plurality of sole-retaining clamps disposed beneath said plate extending over the edge thereof, means for retaining the gripping portion of said clamps against said plate, and mechanism for raising said clamps to permit the insertion of an insole between said gripping portion and said plate.

[Claims 6 to 8 not printed in the Gazette.]

1,166,958. ALARM MECHANISM. ROBERT B. WILCOX, Honolulu, Hawaii. Filed July 6, 1914. Serial No. 849,258. (Cl. 116—65.)



1. The combination with a motor vehicle, of an alarm mechanism having a housing mounted upon the body of the vehicle remote from the driver's seat, visual signaling means mounted on said housing, operating means for said mechanism, and manually operable means arranged within the housing for coöperatively connecting said operating means with the alarm mechanism and simultaneously actuating said signaling means.

2. The combination with a motor vehicle, of an alarm mechanism and housing therefor mounted upon the vehicle body remote from the driver's seat, operating means for said alarm mechanism, manually operable means mounted within the housing to establish a positive driving connection between said operating means and the alarm mechanism, visual signaling means, and mechanical connections between said signaling means and said manually operable means to indicate the existence or non-existence of a driving connection between the operating means and the alarm mechanism.

3. An alarm mechanism and housing therefor, operating means for said mechanism, a shiftable element mounted within the housing to establish or destroy the driving connection between the operating means and the alarm mechanism, visual signaling means mounted on the housing, manually operable means for actuating said shiftable element, and mechanical connections between the signaling means and said manually operable means whereby the signal is actuated simultaneously with said shiftable element to indicate the existence or non-existence of a driving connection between the operating means and the alarm mechanism.

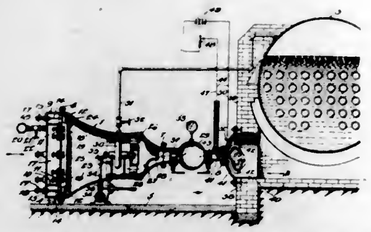
4. In an alarm device for vehicles, an alarm mechanism including a shaft, a bell bowl arranged in concentric relation to said shaft, a clutch disk fixed upon the shaft, a second clutch disk longitudinally shiftable upon said shaft and provided with bell hammers to engage said bowl, a governor on said shaft including a sliding collar, means geared to one of the vehicle wheels to rotate said shaft, and means connected to said collar to actuate the shiftable clutch disk and engage the same with the fixed disk for rotation with the shaft whereby the alarm is sounded when the vehicle attains a predetermined speed.

5. In an alarm device for vehicles, an alarm mechanism including a shaft having a hollow portion, an alarm device proper comprising a shiftable element mounted upon said shaft and provided with means for sounding the alarm, a centrifugal governor mounted upon said

shaft and including a sliding collar, means geared to one of the vehicle wheels for rotating said shaft, and means operating in the hollow portion of the shaft and connected to said sliding collar to actuate the shiftable member and sound the alarm when the vehicle attains a predetermined speed.

[Claims 6 to 9 not printed in the Gazette.]

1,166,959. AIR, OIL, AND GAS BURNER. GEORGE M. WOLVERTON, Elton, La. Filed Nov. 25, 1914. Serial No. 874,091. (Cl. 158—73.)

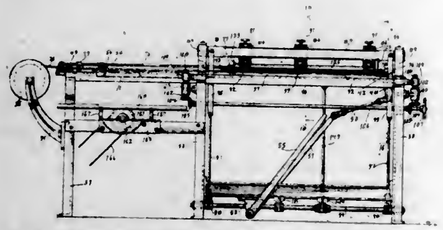


1. A gaseous fuel burner comprising a casing, an oil supply device, an air supply means, a mixing device within said casing and adjacent the air and oil supply means, a mixing and storing chamber, a pressure producing means within said mixing chamber, a compression chamber communicating with said mixing chamber and a plurality of burners communicating with said compression chamber.

2. A gaseous fuel burner comprising in combination with a casing forming a mixing chamber, an oil supply reservoir arranged in one end thereof and having an annular series of oil feed valves arranged adjacent the edge of one face thereof, an annular series of air valves arranged in said casing and adjacent said oil feed valves, a mixing screen arranged in front of said oil valves, a pressure producing gas compressor supported within said casing, a compression chamber in communication with said mixing chamber, a fire drum connected with said compression chamber and a plurality of arcuate burner tubes mounted in said drum and communicating with said compression chamber.

3. A gaseous fuel burner comprising in combination with a fuel supply and mixing means, a gas pressure producing means, a chamber for receiving and holding the gases compressed thereby, a fire drum, a plurality of burners mounted therein and in communication with said gas holding chamber, an ignition point connected with each of said burners and insulated therefrom, and an ignition circuit for producing an igniting spark at the tips of said burners for starting the burner.

1,166,960. MACHINE FOR INSERTING BINDING MATERIAL IN SASH. WILLIAM H. WYMAN, Oshkosh, Wis. Filed Sept. 14, 1914. Serial No. 861,679. (Cl. 153—25.)



1. A machine for inserting binding material in grooved pieces of sash-frame comprising means for grasping a strip of binding material, and means for forcing the strip edgewise into the groove in the piece of sash-frame, while said strip is held in the plane of the groove, to insert a portion of said strip in said groove.

2. A machine for inserting binding material in grooved pieces of sash-frame, comprising reciprocating mechanism for directly inserting a portion of the binding material within the groove in a piece of the sash-frame, and bending over the other portion upon said piece adjacent the groove.

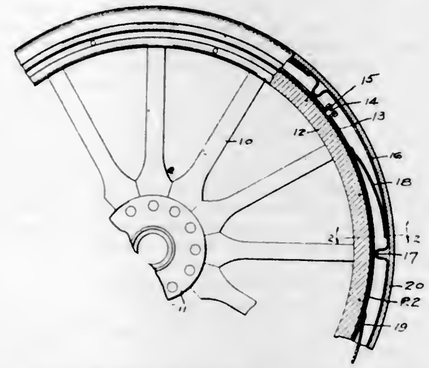
3. A machine for inserting binding material in grooved pieces of sash-frame, comprising means for cutting a strip of binding material to a predetermined length, and mechanism for inserting a portion of the strip of material so cut within the groove in the grooved piece of the sash-frame.

4. A machine for inserting binding material in grooved pieces of sash-frame, comprising means for cutting a strip of binding material to a predetermined length, and reciprocating mechanism for inserting a portion of the strip of material so cut within the groove in the grooved piece of the sash-frame.

5. A machine for inserting binding material in grooved pieces of sash-frame, comprising mechanism for cutting a strip of binding material to a predetermined length, and mechanism for inserting a portion of the strip so cut within the groove in the grooved piece of the sash-frame, and bending over the other portion upon said piece.

[Claims 6 to 62 not printed in the Gazette.]

1,166,961. VEHICLE-WHEEL. JAMES AITKEN, Indianapolis, Ind., assignor of one-half to Robert Steven, Indianapolis, Ind. Filed Aug. 16, 1915. Serial No. 45,725. (Cl. 152—8.)

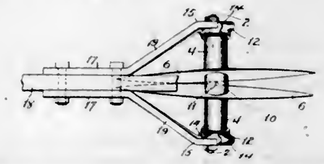


1. A vehicle wheel having a felly, a tire rim, a removable band secured on said tire rim, raised portions in said band, slots in said raised portions, an outer casing adapted to be secured to said tire rim, a spring member within said casing and surrounding said wheel, and springs between said band and spring member each having one end thereof inserted in one of said slots and the other end thereof resting against said spring member.

2. A vehicle wheel having a felly, a tire rim with outturned flanges, an outer casing, means for securing said outer casing to said tire rim, a spring member within said outer casing having inwardly turned portions adapted to be held between said out-turned flanges, a removable band adapted to be secured around said tire rim and having slots therein, and springs having reduced and curved ends adapted to be inserted in said slots for securing said springs to said band without the use of bolts or other means passing through, the other ends of said springs being adapted to rest against said spring member.

1,166,962. PLANTER. RUDOLPH J. ALTGELT, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed June 4, 1915. Serial No. 32,179. (Cl. 97—64.)

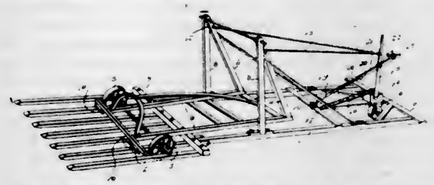
1. The combination with a bent axle, of bearing sleeves mounted thereon, disks secured to said bearing sleeves, a tapering spacing collar secured to the inner ends of the axle between the disks and bearing sleeves, dust caps on the ends of the bearing sleeves and secured to the axle and having recessed seats, and supporting arms secured to respective ends of the axle and in the respective seats of the respective dust caps.



2. The combination with a bent axle, of bearing sleeves thereon having annular shoulders at their inner ends, mounted on said axle, disks secured to said bearing sleeves and having central openings receiving said annular shoulders, a tapering spacing collar secured to the central portion of the axle and constituting abutments for the annular shoulders at the inner ends of the bearing sleeves, and supporting arms secured to respective ends of the axle.

3. The combination with a bent axle, having angular portions and threaded portions near its ends, of bearing sleeves mounted on said axle, disks secured to the inner end portions of said sleeves, a spacing collar secured to the central portion of the axle, dust caps mounted on the outer ends of the bearing sleeves and having angular holes to receive the angular portions of the axle, parallel ribs on each of said dust caps, supporting arms having their lower portions disposed between said parallel ribs and provided with holes for the passage of the threaded ends of the axle, and nuts on said threaded ends of the axle.

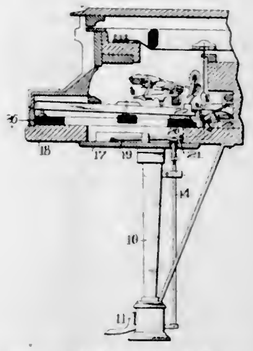
1,166,963. ATTACHMENT FOR HAY-RAKES. ALFRED G. ARGO, Kenesaw, Nebr. Filed Dec. 15, 1914. Serial No. 877,303. (Cl. 56—137.)



1. The combination in a hay rake, of a pusher frame mounted above the teeth of the said rake, a hand lever pivotally supported on the frame of the rake, a pair of rods operatively connected to the said pusher frame and to the hand lever, a locking rod pivotally secured to the said frame and having a resilient hook on one end thereof, a foot lever pivotally connected to said locking rod and to said hand lever and terminating in a foot piece, a projection on said foot lever adapted to be engaged by said resilient hook, and a coil spring secured to the said hand lever and to the frame of the rake.

2. In combination, a rake comprising a frame and forwardly extending teeth, wheels secured to said frame and to said teeth for supporting the frame, a pusher frame mounted above the said teeth and having wheels for independently supporting the same, upwardly extending standards secured to the said frame, rods pivotally secured to the upper ends of the standards and to the rear end of the supporting frame, a hand lever pivotally supported at the rear end of the rake frame, rods connecting the said first mentioned rods and said hand lever, a locking rod pivotally connected to said first mentioned frame and having a resilient hook on the end thereof, a foot lever pivotally connected to said locking rod and said hand lever and having a projection thereon, the said resilient hook adapted to engage said projection to maintain the parts in their locked positions, and resilient means for returning the aforementioned parts to their initial position upon the disengagement of the resilient hook from the projection on the foot lever.

1,166,964. PEDAL CONNECTION FOR GRAND PIANOS. LEOPOLD AVISUS, New York, N. Y., assignor to Brambach Piano Company, New York, N. Y., a Corporation of New York. Filed Nov. 1, 1912. Serial No. 728,974. (Cl. 84—25.)



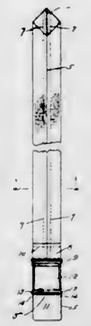
1. A grand piano having, in combination, an inclosing casing, expression-controlling connections located entirely within the casing, pedals below the casing, and rods extending upwardly from the pedals to said connections within the casing and effective to operate said expression-controlling connections.

2. A grand piano having, in combination, a key bed, a key frame mounted on the key bed, said key bed having an opening therein under the key frame, a set of pedals below said opening, rods extending upwardly from said pedals into said opening, and expression-controlling connections located in said opening and operable by said rods.

3. A grand piano having, in combination, a key bed having a passage therethrough, a plate on the bottom of the key bed covering said passage, pedals located below said plate, expression-controlling connections supported on said plate in said passage, and rods extending upwardly from the pedals through the plate and effective to operate said expression-controlling connections.

4. A grand piano having, in combination, an inclosing casing comprising a key bed having an opening therein, a plurality of expression controlling devices, connecting members for actuating said devices mounted in said opening and above the plane of the lower surface of said key bed, a plurality of pedals, and connections from said pedals to said members.

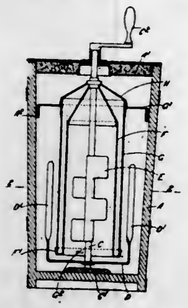
1,166,965. FABRIC BELT FOR TROUSERS OR THE LIKE. MAX BOWMAN, Cincinnati, Ohio. Filed July 1, 1915. Serial No. 37,575. (Cl. 241—8.)



As an article of manufacture, a garment fabric-belt comprising an elongated strip of material having two or more longitudinal folds made along its opposite edges with the first folds brought together in the center of the

belt, a pointed outer insertion-end having a triangular back-turned portion that is stitched together along its meeting edges from the apex or tip to the transverse base thereof, a loop at the inner end, and a clamping-buckle projecting from said loop and adapted to slidingly-secure said pointed outer end.

1,166,966. ICE-MAKING MACHINE. WILLIAM EDWARD BROWNING, London, England, assignor to Hampdens Limited, London, England. Filed May 21, 1914. Serial No. 840,117. (Cl. 62—106.)



1. In a machine for making ice, the combination of a casing, an annular mold having a central chamber removably supported within the casing, and comprising separable inner and outer walls, the casing and mold being of such relative dimensions that spaces are provided for a freezing mixture within the central chamber of the mold and between its outer wall and the casing, a rotatable shaft mounted centrally within the casing, and paddles operatively connected to said shaft and contained in each of the spaces for the freezing mixture.

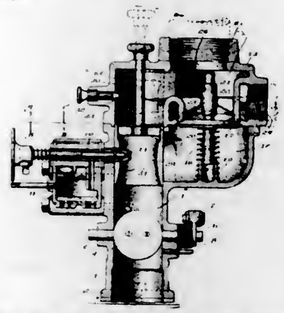
2. In a machine for making ice, the combination of a casing, an annular mold having a central chamber removably supported within the casing and comprising separable inner and outer walls, means for locking said walls against unintentional separation, the casing and mold being of such relative dimensions that spaces are provided for a feezing mixture within the central chamber of the mold and between its outer wall and the casing, a rotatable shaft mounted centrally within the casing and paddles operatively connected to said shaft and contained in each of the spaces for the freezing mixture.

3. In a machine for making ice, the combination of a casing having a space for a freezing mixture, an annular mold having a central chamber and comprising separable inner and outer walls, supporting arms mounted on said outer wall, brackets connected to the inner wall of the casing engaged by the outer ends of said arms, the casing and mold being of such relative dimensions that spaces are provided for a freezing mixture around the mold and within its central chamber, a rotatable shaft mounted centrally within the casing and paddles operatively connected to said shaft and contained in each of the spaces for the freezing mixture.

4. In a machine for making ice, the combination of a casing, having a space for a freezing mixture, an annular mold having a central chamber and comprising separable inner and outer walls, arms mounted on said outer wall, brackets secured to the inner wall of the casing engaged by said arms, a flanged base carried by the inner wall of the mold and adapted to embrace the lower end of the outer wall, means for locking the said base and outer wall against unintentional separation and means for agitating a freezing mixture within the casing.

5. In a machine for making ice, the combination of an insulated casing adapted to contain a freezing mixture, an insulated cover for said casing, an annular mold having a central chamber for the freezing mixture and comprising separable inner and outer walls, means for locking said walls against unintentional separation, arms carried by the outer wall of the mold, brackets secured to the inner wall of the insulated casing engaged by said arms, the casing and mold being of such relative dimensions that an annular space is provided for a freezing mixture around the mold, a central shaft extending through the cover and rotatably mounted within the casing, stirring arms radiating from the lower end of said shaft adpated to agitate the freezing mixture in the annular space around the mold, paddles mounted on the shaft adapted to agitate the freezing mixture within the central chamber of the mold and means outside the casing for simultaneously rotating the stirring arms and paddles.

1,166,967. FUEL-FEED MECHANISM FOR INTERNAL-COMBUSTION ENGINES. LEOPOLD F. BURGER, Beloit, Wis., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Jan. 20, 1913. Serial No. 743,150. (Cl. 48—150.1.)



1. A fuel feed mechanism for internal combustion engines having, in combination, a primary mixing chamber, a constant level fuel feed cup having valve controlled ports communicating with said chamber, a supplemental mixing chamber at one side of said primary chamber and having communication therewith, an air chamber, an opening between said air chamber and said primary mixing chamber, a port for the admission of air from said air chamber to said supplemental mixing chamber, a gas supply chamber having a series of ports communicating with said supplemental mixing chamber, a valve controlling both the admission of gas and air to said supplemental mixing chamber, and a tubular shell valve slidably mounted in said mixing chamber and adapted to close either the opening for air or the opening for air and gas thereto.

2. A fuel feed mechanism for internal combustion engines having, in combination, a vertically arranged tubular mixing chamber, a constant level fuel feed cup secured to one side of said chamber and having valve controlled ports and nozzles communicating therewith, a supplemental mixing chamber arranged upon the opposite side of said tubular chamber and having communication therewith, an air chamber arranged above said supplemental chamber, an annular gas receiving chamber at the base of said air chamber and provided with ports for the admission of gas to said supplemental chamber, a spring-pressed valve seated upon the lower wall of said annular chamber and controlling the admission of air and gas to said supplemental chamber, a passageway for air from said air chamber to said tubular mixing chamber, a tubular shell valve slidably mounted within said tubular chamber and provided with an open-ended slot adapted to receive the fuel feed nozzles, and means whereby said shell valve may be adjusted in a manner to close said air passageway or the opening between said tubular mixing chamber and said supplemental chamber.

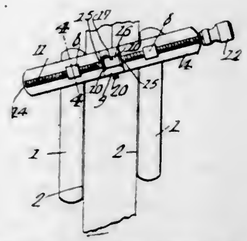
3. In a fuel feed mechanism for internal combustion engines, the combination of a primary mixing chamber, a supplemental mixing chamber adapted to communicate therewith, and means for controlling communication between said chambers, said means having two operative positions, one in which it is suspended and the other in which it is positively locked.

4. In a fuel feed mechanism for internal combustion engines, the combination of a source of air supply, two mixing chambers, and a valve for controlling the flow of air from said source to one of said chambers in one position, and a fuel mixture from the second chamber to the first in another position.

5. In a fuel feed mechanism for internal combustion engines, the combination of a source of air supply, a plurality of mixing chambers, and means for controlling the flow of air from said source to one of said chambers either directly or indirectly through another of said chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,166,968. CENTER-GAGE. JAMES E. CARTER, Morrow, La. Filed June 29, 1915. Serial No. 37,020. (Cl. 33—42.)

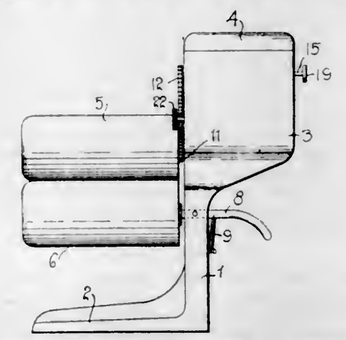


1. In a device of the class described, a connection; a pair of opposed members each pivoted at a single point to the connection; and a scriber mounted on the connection and located between the said opposed members.

2. In a device of the class described, a connection; a pair of pivot elements mounted to move longitudinally of the connection; means for operatively connecting the pivot elements to move the same longitudinally of the connection; a pair of opposed members mounted on the pivot elements; and a scriber carried by the connection and located between the said opposed members.

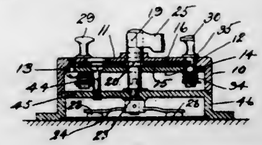
3. In a device of the class described, a connection; a pair of pivot elements mounted to move longitudinally of the connection; a scriber carried by the connection; a pair of opposed members mounted on the pivot elements and disposed upon opposite sides of the scriber; a screw threaded in opposite directions into the pivot elements; an abutment on the screw; and means carried by the connection for holding the abutment against movement longitudinally of the connection.

1,166,969. FABRIC-MEASURING DEVICE. ALEXANDER COLIN CHISHOLM, Antigonish, Nova Scotia, Canada. Filed Apr. 26, 1915. Serial No. 24,080. (Cl. 33—134.)



A device of the character described comprising a pedestal, a roller carried by the pedestal and projecting laterally therefrom, a registering mechanism carried by the pedestal and operatively engaged with the roller, a spindle pivotally engaged intermediate its length with the pedestal and disposed below the roller and in the same general direction as the roller, said spindle extending beyond opposite faces of the pedestal, a second roller loosely carried by the spindle and disposed below the first named roller, and a retractable member interposed between the pedestal at a point below the spindle and the opposite extremity of the spindle for normally maintaining the rollers in contact, said second extremity serving as a handle whereby the spindle may be moved relative to the first roller.

1,166,970. PERMUTATION-LOCK. BERT V. CLARK, Providence, R. I., assignor to Amasa St. Onge, Providence, R. I. Filed Feb. 20, 1915. Serial No. 9,752. (Cl. 70—53.)



1. A lock of the character described comprising a casing, a rotatable operating stud supported thereby, a locking plate rotatable with said stud, movable locking pins engaging said locking plate, and a master pin controlling said locking plate, said master pin being capable of rotary and longitudinal movements.

2. A lock of the character described comprising a casing, a rotatable operating stud supported thereby, a locking plate rotatable with said stud, locking pins having portions for providing clearance for the periphery of said locking plate, said pins being rotatable, whereby movement of the locking plate may be prevented and a master pin controlling said locking plate, said master pin being capable of rotary and longitudinal movements.

3. A lock of the character described comprising a casing, a rotatable operating stud supported thereby, a locking plate rotatable with said stud, movable locking pins engaging said locking plate, a master pin controlling said locking plate, said master pin being capable of rotary and longitudinal movements, and means for yieldingly maintaining said master pin at the inner limit of its longitudinal movement.

4. A lock of the character described comprising a casing, a rotatable operating stud supported thereby, a locking plate for preventing rotation of said stud, rotatable locking pins provided with cut away portions to permit rotation of said locking plate, each locking pin having a head and means for yieldingly holding the heads of said locking pins against said casing to normally prevent rotation of said pins.

5. A lock of the character described comprising a casing, a rotatable operating stud supported thereby, a locking plate for preventing rotation of said stud, rotatable locking pins provided with annular shoulders, and having cut away portions to permit rotation of said locking plate, and springs encircling the respective pins and acting to maintain a frictional engagement between said shoulders and said casing.

[Claims 6 to 8 not printed in the Gazette.]

1,166,971. REED MUSICAL INSTRUMENT. CHARLES G. CONN, Elkhart, Ind. Filed Oct. 22, 1913. Serial No. 796,680. (Cl. 84—7.)

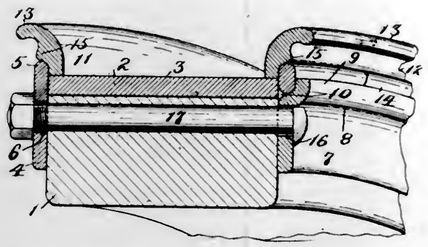


1. A wind musical instrument comprising a mouth piece with a single reed, a tube having a bore adapted at its

upper end to receive the single-reed mouth piece and extending conically therefrom to its lower end, and providing a straight and relatively large conical bore, and a bulbous lower end.

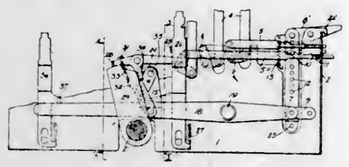
2. A wind musical instrument comprising a mouth piece with a single reed, a tube having a bore adapted at its upper end to receive the single-reed mouth piece and extending conically therefrom to its lower end, and providing a straight and relatively large conical bore, and a bulbous lower end; said bulbous lower end being provided with a circumferential series of relatively small perforations located in advance of the crest of the bulb.

1,166,972. VEHICLE-WHEEL RIM. BURGESS DARROW, Akron, Ohio, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 12, 1914. Serial No. 818,248. (Cl. 152—21.)



A wheel rim comprising in combination with a felly, a felly-band seated on the periphery of the felly, a side ring on one side of the felly having its outer edge projecting beyond the felly-band to form an abutment, a side ring on the opposite side of the felly also having its outer edge projecting beyond the felly and said projecting portion laterally offset from the felly band to provide a channel between the offset portion of the ring and the adjacent edge of the felly-band, the outer edge of said offset portion being substantially flush with the outer face of the felly-band, a split locking ring seated in said channel and of a width to form an abutment, and tire holding elements loosely seated upon the felly-band and engaging said abutments formed by the locking ring and side ring respectively.

1,166,973. KEYBOARD CONTROL FOR CALCULATORS. WITSEL R. DE CAMP, Roseland, N. J., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed Nov. 27, 1914. Serial No. 874,145. (Cl. 235—60.)



1. In an adding machine, the combination with a key board including keys connected with stop bars, and latch bars controlled by the stop bars, and a rock shaft, of means for shifting the latch bars to restore the stop bars and keys, comprising a pivoted bar, means connected with the bar arranged to shift all of the latch bars, a link having at one end a stationary pivot, a second link pivoted by one end to said pivoted bar and pivotally connected with said link, a lever pivotally mounted on the second link and provided with an ear, and an arm carried by said rock shaft arranged to strike said ear and shift the lever to move the links toward alinement and thereby swing the said pivoted bar to restore the latch bars.

2. In an adding machine, the combination with a key board including keys connected with stop bars, and latch bars controlled by the stop bars, and a rock shaft, of means for shifting the latch bars to restore the stop bars and keys, comprising a pivoted bar, means connected with the bar arranged to shift all of the latch bars, a link having at one end a stationary pivot, a second link pivoted by one end to said pivoted bar and pivotally connected with said link, a lever pivotally mounted on the second link and provided with an ear, an arm carried by said rock shaft arranged to strike said ear and shift the lever to move the links toward alinement and thereby swing the said pivoted bar to restore the latch bars, an arm on said lever, and a stop positioned to be engaged by said latter arm when the swinging arm has shifted the lever, to cause the lever to swing and move its ear out of engagement with the arm.

3. In an adding machine, the combination with a key board including keys connected with stop bars, and latch bars controlled by the stop bars, and a rock shaft, of means for shifting the latch bars to restore the stop bars and keys, comprising a pivoted bar, means connected with the bar arranged to shift all of the latch bars, a link having at one end a stationary pivot, a second link pivoted by one end to said pivoted bar and pivotally connected with said link, a lever pivotally mounted on the second link and provided with an ear, an arm carried by said rock shaft arranged to strike said ear and shift the lever to move the links toward alinement and thereby swing the said pivot bar to restore the latch bars, and a repeat key having an abutment arranged to engage said lever when the key is shifted to shift the lever to hold its ear out of position for engagement with said arm on the rock shaft.

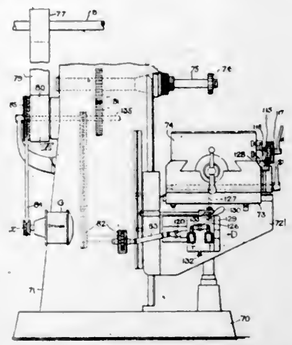
4. In an adding machine, the combination with a key board including keys connected with stop bars, and latch bars controlled by the stop bars, and a rock shaft, of means for shifting the latch bars to restore the stop bars and keys, comprising a pivoted bar, means connected with the bar arranged to shift all of the latch bars, a link having at one end a stationary pivot, a second link pivoted by one end to said pivoted bar and pivotally connected with said link, a lever pivotally mounted on the second link and provided with an ear, an arm carried by said rock shaft arranged to strike said ear and shift the lever to move the links toward alinement and thereby swing the said pivoted bar to restore the latch bars, a repeat key provided with a shoulder arranged to be engaged by said lever, and a spring connected between the lever and second link to draw the ear thereon against the rock shaft arm.

5. In an adding machine, the combination with a key board including keys connected with stop bars, and latch bars controlled by the stop bars, and a rock shaft, of means for shifting the latch bars to restore the stop bars and keys, comprising a pivoted bar, means connected with the bar arranged to shift all of the latch bars, a link having at one end a stationary pivot, a second link pivoted by one end to said pivoted bar and pivotally connected with said link, a lever pivotally mounted on the second link and provided with an ear, an arm carried by said rock shaft arranged to strike said ear and shift the lever to move the links toward alinement and thereby swing the said pivoted bar to restore the latch bars, a repeat key provided with a shoulder arranged to be engaged by said lever, a spring connected with said lever to draw the ear thereon against the rock shaft arm and to shift the lever to engage the key shoulder when the arm is swung away from the ear to limit the movement of the arm at said time, said key and shoulder when advanced serving to swing and hold the lever with its ear out of position for engagement with the rock shaft arm.

[Claims 6 to 22 not printed in the Gazette.]

1,166,974. MACHINE-TOOL CONTROL. ADOLPH L. DE LEEUW, Plainfield, N. J., assignor to The Cincinnati Milling Machine Company, Oakley, Cincinnati, Ohio, a Corporation of Ohio. Original application filed Feb. 19, 1913, Serial No. 749,292. Divided and this application filed Jan. 5, 1915. Serial No. 555. (Cl. 172—240.)

1. A control-system of the nature disclosed combining a traveling support, a cutter spindle, power-driven means for simultaneously rotating said spindle and slowly feeding said support in a direction transverse to the axis of said cutter-spindle, and means coöperative at a predetermined station in the travel of said support automatically to disconnect said power-driven means from said spindle and enable the direction of travel of said support to be reversed to return it to its initial position without setting said spindle in motion.



2. A control-system of the nature disclosed combining a traveling support, a spindle, a power-driven means for simultaneously rotating said spindle and slowly feeding said support, an auxiliary motor adapted to feed said support rapidly, means operative at a predetermined station in the travel of said support automatically to disengage said power-driven means from both said spindle and said support, and for then establishing a propelling relation between said motor and said support whereby said support will return to its initial position while said spindle is idle.

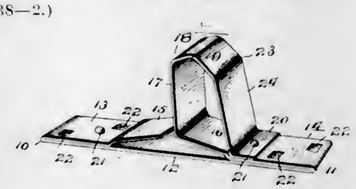
3. A control system of the nature disclosed combining a traveling support; a revolving spindle, power-driven means for actuating both said spindle and said support, an auxiliary motor adapted to actuate only said support, and clutch mechanism for disengaging said means from both said spindle and support for enabling said motor alone to propel said support.

4. A control system of the nature disclosed combining a traveling support, a spindle, a power-driven member, a magnetic-clutch for establishing a driving connection between said member and both said support and spindle, an electric motor, and a circuit-controller operated by said support for rendering said clutch inoperative and for simultaneously energizing said electric motor.

5. A control-system of the nature disclosed combining a traveling support, a spindle, a power-driven member, a magnetic-clutch for establishing a driving connection between said member and both said support and spindle, an electric motor, a clutch for connecting said support with said member, and a circuit controller operated by said last-mentioned clutch for deënergizing said motor when said member is connected with said support.

[Claims 6 to 8 not printed in the Gazette.]

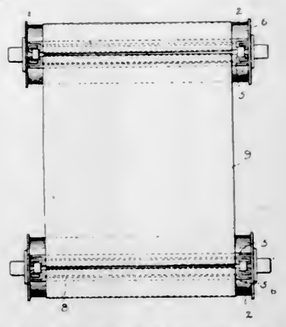
1,166,975. RAIL-FASTENER. CLYDE B. ENLOE, Judson, N. C. Filed Jan. 8, 1915. Serial No. 1,178. (Cl. 238—2.)



1. A rail-brace formed of a single strip of metal and bent upon itself to provide two inturned rail-base engaging members one of which is extended upward and bent to furnish rail-web and rail-tread engaging members, and then bent downward and secured to the bottom member of the brace.

2. A rail brace formed of a single length of rolled material having an extremity adapted to engage on top of a rail base flange, said strip being bent and continued outwardly, rebent upon itself to form a base, again rebent upwardly and inwardly upon itself, bent upward at an obtuse angle to engage the top of the other base flange, bent upwardly to engage the rail web, outwardly to engage beneath the rail head, bent downwardly and finally bent outwardly to rest on the second rebent portion.

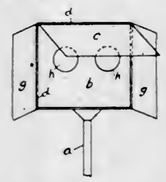
1,166,976. SIGN-HOLDER. ALFRED J. FAIRBANKS, San Francisco, Cal. Filed Nov. 18, 1914. Serial No. 872,805. (Cl. 40—86.)



1. In a device of the character described, a strip composed of a plurality of sections, means for attaching said sections together including flexible members arranged in pairs and having longitudinally elongate openings securing the ends of the sections, and endless flexible and elastic connections between the outer ends of each pair of members.

2. In a device of the character described a strip composed of a plurality of sections, means for securing the sections together including a plurality of flexible members arranged in pairs and having longitudinally elongated openings receiving the ends of the sections and having angular slots in the ends thereof, and elastic endless connections engaged within said slots and securing the members of each pair together.

1,166,977. PORTABLE PROTECTOR. ETHELBERT FAVARY, New York, N. Y. Filed Nov. 21, 1913. Serial No. 802,317. (Cl. 2—119.)



1. In a portable protector for use in vehicles, a face shield having a permanently closed sight portion of transparent material, and a substantially non-transparet portion to protect the face from the sun, and a handle fastened to the shield, said shield being backwardly inclined to divert the wind currents from a major portion of the face.

2. In a portable protector for use in vehicles, a face shield having a transparent sight portion and a substantially non-transparent portion to protect the face from the sun, a backwardly directed top portion extending from the shield and constructed and arranged to lie over the

head of the user and a handle fastened to the shield, and being designed to be held by the user.

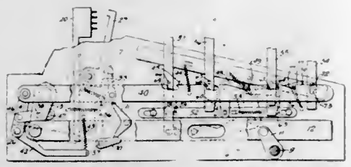
3. In a portable protector for use in vehicles, a face shield having a permanently closed transparent portion for vision, and a substantially non-transparent portion to protect the face from the sun, said shield having side portions constructed and arranged to extend backwardly toward the side of the face, and a handle fastened to the shield.

4. In a portable protector for use in vehicles a handle designed to be held by the user, a shield carried by the handle, a backwardly directed top portion extending from the top of the shield and being inclined downwardly.

5. In a portable protector for use in vehicles, a handle designed to be held by the user, a shield carried by the handle and comprising a portion of translucent material, and a sight portion of transparent material, said shield being backwardly inclined to divert the wind currents from a major portion of the face, and having a backwardly directed top portion inclined downwardly toward the sides, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,166,978. SIGNAL-PRINTING MEANS FOR CALCULATORS. WARREN FUHRMANN, Newark, N. J., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed Mar. 26, 1915. Serial No. 17,104. (Cl. 235—60.)



1. In a calculating machine, a platen, a signal printing member shiftable to print a plurality of signals on the platen, a bar connected with the signal printing member and arranged to shift the member to different printing positions, means for advancing the bar to shift said member, a latch arranged to hold the bar against movement by said means, a set of keys, means for shifting said latch by the initial movement of each of said keys to thereby release the bar, means for controlling the movement of the bar when released according to the key depressed, and means for causing the operation of the printing member by the final movement of each key when depressed.

2. In a calculating machine, a platen, a signal printing member shiftable to print a plurality of signals on the platen, a bar connected with the signal printing member and arranged to shift the member to different printing positions, means for advancing the bar to shift said member, a latch arranged to hold the bar against movement by said means, a set of keys, means for shifting said latch by the initial movement of each of said keys to thereby release the bar, means for controlling the movement of the bar when released according to the key depressed, said bar being swung by each of the keys, and means for causing the operation of the printing member from the swing of the bar at the final movement of the key.

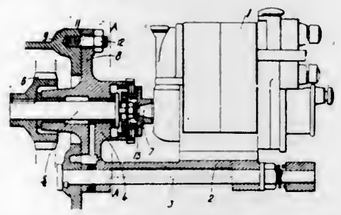
3. In a calculating machine, a platen, a signal printing member shiftable to print a plurality of signals on the platen, a bar connected with the signal printing member and arranged to shift the member to different printing positions, means for advancing the bar to shift said member, a latch arranged to hold the bar against movement by said means, a set of keys, means for shifting said latch by the initial movement of each of said keys to thereby release the bar, means for controlling the movement of the bar when released according to the key depressed, said bar being engaged by each of the keys at the latter portion of their movement to swing the bar and means for operating the printing means by the swing of the bar.

4. In a calculating machine, a platen, a signal printing member shiftable to print a plurality of signals on the platen, a bar connected with the signal printing member and arranged to shift the member to different printing positions, means for advancing the bar to shift said member, a latch arranged to hold the bar against movement by said means, a set of keys, means for shifting said latch by the initial movement of each of said keys to thereby release the bar, means for controlling the movement of the bar when released according to the key depressed, a hammer for the printing member, a trigger arranged to hold the hammer cocked, means for swinging the trigger from the swinging of said bar at the latter portion of the movement of each of the keys.

5. In a calculating machine, a platen, a signal printing member shiftable to print a plurality of signals on the platen, a bar connected with the signal printing member and arranged to shift the member to different printing positions, means for advancing the bar to shift said member, a latch arranged to hold the bar against movement by said means, a set of keys, means for shifting said latch by the initial movement of each of said keys to thereby release the bar, means for controlling the movement of the bar when released according to the key depressed, means for causing the operation of the printing member by the final movement of each key when depressed, and a second latch connected with said latch and arranged to engage the bar when the first latch is held tripped by a depressed key, whereby to engage the bar when returned to normal position, said second latch being released from the bar by the return to normal position of said first latch when the keys are restored.

[Claims 6 to 18 not printed in the Gazette.]

1,166,979. STRETCHING DEVICE FOR DRIVING-CHAINS FROM MAGNETOS OR LIGHTING-DYNAMOS IN INTERNAL-COMBUSTION ENGINES. HENRI GALLET, Puteaux, France, assignor to Etablissements De Dion-Bouton (Société Anonyme), Puteaux, France, a Corporation of France. Filed Dec. 9, 1914. Serial No. 876,331. (Cl. 64—52.)

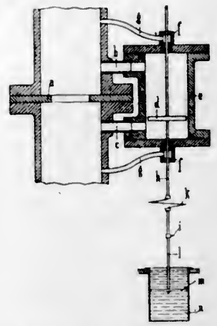


The combination with a magneto and a motor from which the magneto is adapted to be driven, of a bracket having a laterally-extending portion on which the magneto is supported, a sprocket connected with the magneto and adapted to be driven from the motor, means for pivotally supporting the bracket on the frame of the motor below the magneto and sprocket so that they may be adjusted as a unit about the pivotal support of the bracket, an upwardly-extending portion on the bracket adapted to slide over a portion of the motor frame, and means associated with said upwardly projecting portion of the bracket to clamp the bracket in its adjusted positions.

1,166,980. DEVICE FOR MEASURING STEAM AND OTHER FLUIDS. MAX GEHRE, Dusseldorf-Rath, Germany. Filed Dec. 8, 1910. Serial No. 596,312. (Cl. 73—167.)

1. In a device for measuring steam and other fluids, an adjusting member under the control of the difference of pressures in front and in the rear of a throttled portion in the conduit conveying the medium to be measured, an indicating member, and a strainless yielding or resilient connection between said adjusting member and said indicating member.

2. In a device for measuring steam and other fluids, an adjusting member under the control of the difference of pressures in front and in the rear of a throttled portion in the conduit conveying the medium to be measured, an indicating member, a strainless yielding or resilient connection between said adjusting member and said indicating member, and a damping device adapted to damp the movements of the indicating member communicated to it by the yielding device.



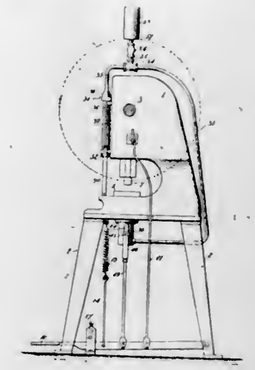
3. In a device for measuring steam and other fluids, a cylinder, a pistonlike body adjustably mounted within said cylinder leaving free a portion of the cross section of said cylinder and forming an adjusting member, a piston rod connected to said piston and passing through the end walls of said cylinder, means for preventing leakage of fluid from the interior of said cylinder along the piston rod, an indicating member and connecting means between said adjusting and said indicating member, said cylinder communicating at opposite ends with the conduit conveying the medium to be measured at points positioned on opposite sides of a throttled portion, so as to bring said adjusting member under the control of the difference of pressures on opposite sides of the throttled portion within the medium conveying conduit.

4. In a device for measuring steam and other fluids, a cylinder, a pistonlike body adjustably mounted within said cylinder leaving free a portion of the cross section of said cylinder and forming an adjusting member, an indicating member, a strainless yielding or resilient connection between said adjusting member and said indicating member, said cylinder containing the adjusting member communicating at opposite ends with the conduit conveying the medium to be measured at points positioned on opposite sides of a throttled portion, so as to bring said adjusting member under the control of the difference of pressures on opposite sides of the throttled portion within the medium conveying conduit.

5. In a device for measuring steam and other fluids, a cylinder, a pistonlike body adjustably mounted within said cylinder leaving free an annular space between its periphery and the cylinder wall and forming an adjusting member, a piston rod connected to said piston and passing through the end walls of said cylinder, means for preventing leakage of fluid from the interior of said cylinder along the piston rod, an indicating member, a strainless yielding or resilient connection between said adjusting member and said indicating member, and a damping device adapted to damp the movements of the indicating device communicated to it by the yielding device, said cylinder communicating at opposite ends with the conduit conveying the medium to be measured at points positioned on opposite sides of a throttled portion, so as to bring said adjusting member under the control of the difference of pressures on opposite sides of the throttled portion within the medium conveying conduit.

1,166,981. SAFETY DEVICE FOR PUNCH-PRESSES. BENJAMIN J. GRAHAM, Beverly, Mass., assignor of one-half to Charles H. Sherburne, Boston, Mass. Filed Jan. 23, 1915. Serial No. 4,054. (Cl. 164—107.)

1. In a safety device of the character specified, the combination with a movable guard, of means for controlling the open and closed positions thereof, the same comprising a movable fluid-operated piston connecting with said guard, a fluid-operating piston, connections within which said pistons operate and providing also a closed passage between said pistons adapted to contain a substantially non-compressible fluid column, and means for operating said fluid-operating piston.



2. In a safety device of the character specified, the combination with a movable guard, of means for controlling the open and closed positions thereof, the same comprising a movable fluid-operated piston connecting with said guard, a fluid-operating piston, connections within which said pistons operate and providing also a closed passage between said pistons, a column of substantially non-compressible fluid contained within and filling the passage between said pistons, and means for operating said fluid-operating piston.

3. In a safety device of the character specified, a movable guard and means for controlling the open and closed positions thereof, said means comprising a fluid-operated piston connecting with said guard, a fluid-operating piston, cylinders containing said pistons, a pipe connecting said cylinders, said cylinders and pipe in the space inclosed thereby lying between said pistons being adapted to contain a substantially non-compressible fluid, and means for operating said fluid-operating piston.

4. In a safety device of the character specified, a movable guard and means for controlling the open and closed positions thereof, said means comprising a fluid-operated piston connecting with said guard, a fluid-operating piston, cylinders containing said pistons, a pipe connecting said cylinders, a column of some substantially non-compressible fluid contained within the cylinders and pipe connection lying between said pistons and movable therewith, and means for operating said fluid-operating piston.

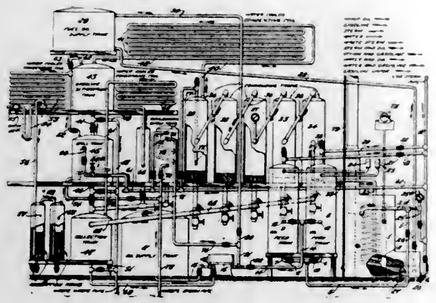
5. In a safety device of the character specified, the combination with a movable guard, of means for controlling the open and closed positions thereof, the same comprising a piston having a piston rod connecting with said guard whereby said guard may be moved to occupy open and closed positions commensurate with positions occupied by said piston, a cylinder containing said piston, means for holding said guard in a normally open position with said piston occupying a position commensurate therewith, and a fluid-actuating means operable from a distance for operating said piston.

[Claims 6 to 18 not printed in the Gazette.]

1,166,982. APPARATUS FOR TREATING OIL. CHARLES J. GREENSTREET, Webster Groves, Mo. Filed Apr. 13, 1912. Serial No. 690,483. (Cl. 196—26.)

1. An apparatus for treating oil which comprises a furnace, a coil of pipe therein exposed directly to the heat of said furnace, the inner surface of said coil being free from abrupt changes, a source of steam pressure and a source of oil supply communicating with the inlet

end of said coil, and a condenser communicating with the outlet end of said coil, whereby the oil is forced through the coil under pressure, said furnace being adapted to heat said coil to a cherry red heat and said coil being capable of withstanding the internal pressure caused therein by such heat in the normal operation of the apparatus.



2. An apparatus for treating oil which comprises a furnace, a long helical coil of uniform cross-section therein and exposed directly to the heat of said furnace, said coil being free from obstructions and abrupt angles, an oil supply tank communicating with the inlet end of said coil, a source of steam supply communicating with said inlet end and also with said tank, and a condenser communicating with the outlet end of said coil, said furnace being adapted to heat said coil to a cherry red heat and said coil being capable of withstanding the internal pressure caused therein by such heat in the normal operation of the apparatus.

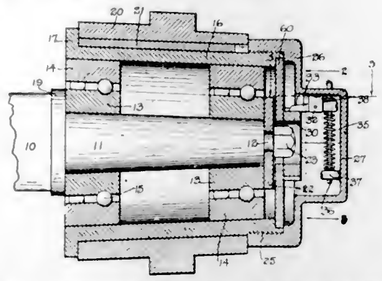
3. An apparatus for treating oil which comprises a furnace, a long continuously coiled pipe in said furnace and exposed directly to the heat thereof and free from obstructions and abrupt changes of cross-sectional area, an injector communicating with said coil on the inlet side thereof, a source of steam pressure and a source of oil supply communicating with said injector and a condenser communicating with the outlet end of said coil, said furnace being adapted to heat said coil to a cherry red heat and said coil being capable of withstanding the internal pressure caused therein by such heat in the normal operation of the apparatus.

4. An apparatus for treating oil which comprises a furnace, a coil of continuous pipe therein exposed directly to the heat thereof and having a single inlet and a single outlet, an injector communicating with said coil on the inlet side thereof, a source of steam supply and a source of oil supply communicating with said injector, a condensing tank communicating with the outlet end of said coil, a condensing coil communicating with said condensing tank, a separation tank communicating with said condensing coil, and a collection tank communicating with said condensing tank and with said separation tank, said furnace being adapted to heat said coil to a cherry red heat and said coil being capable of withstanding the internal pressure caused therein by such heat in the normal operation of the apparatus.

5. An apparatus for treating oil which comprises a furnace, a coil of continuous pipe therein exposed directly to the heat thereof and having a single inlet and a single outlet, an injector communicating with said coil on the inlet side thereof, a source of steam supply and a source of oil supply communicating with said injector, condensing tanks communicating serially with the outlet end of said coil, a condensing coil communicating with said condensing tanks, a separation tank communicating with said condensing coil, a collection tank communicating with said condensing tanks and with said separation tank, and a communication between the source of steam supply and the last of the condensing tanks, said furnace being adapted to heat said coil to a cherry red heat and said coil being capable of withstanding the internal pressure caused therein by such heat in the normal operation of the apparatus.

[Claims 6 to 17 not printed in the Gazette.]

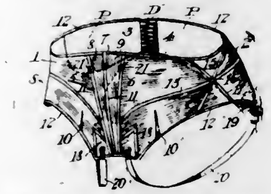
1,166,983. HUB-CAP LOCK FOR VEHICLE-WHEELS. GEORGE G. GRIFFIN, Indianapolis, Ind. Filed Nov. 6, 1913. Serial No. 799,617. (Cl. 21—31.)



1. The combination of the hub of a vehicle wheel suitably threaded, a cap arranged to screw on said hub, a ratchet disk secured centrally in connection with said hub, bearing means extending inwardly from said cap, a pawl lever pivoted in said bearing means between its ends parallel with the axis of the ratchet disk and with the inner end thereof adapted to enter a notch in the ratchet disk, a rod mounted radially in said cap with one end projecting outwardly therefrom so as to be longitudinally movable, and a stop on said rod for engaging one end of said pawl lever and releasing the same when the rod is actuated in one direction.

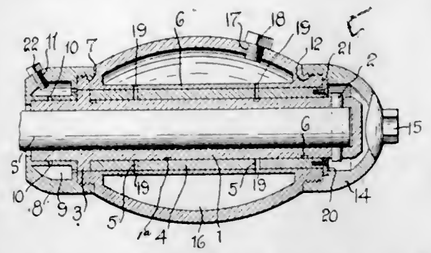
2. The combination of the hub of a vehicle wheel suitably threaded, a cap arranged to screw on said hub, a ratchet disk secured centrally in connection with said hub, bearing means extending inwardly from said cap, a pawl lever pivoted in said bearing means between its ends with the inner end thereof adapted to enter a notch in the ratchet disk, a rod mounted in said cap with one end projecting outwardly therefrom and so as to be longitudinally movable, a stop on said rod for engaging the end of said pawl lever and releasing the same when the rod is actuated in one direction, and a spring surrounding said rod acting against said pawl lever for forcing it in the other direction and into locking engagement.

1,166,984. SURGICAL BANDAGE. ESTHER GULACSHI, Youngstown, Ohio. Filed June 19, 1914. Serial No. 846,058. (Cl. 2—188.)



A bandage of the class described including a plurality of cloth sections having their warp threads arranged to assume the greatest supporting stress, said sections being stitched together at their meeting edges to form opposite non-elastic hip sections, an intermediate gore section located at the front of the bandage and connecting the hip sections, said gore section including a plurality of members, means for adjustably connecting the rear edges of the hip sections, pads also carried by the hip sections, non-elastic tapes coöperating with said gore and hip sections to prevent stretching, and elastic leg attaching straps connecting the front and rear extremities of the hip sections.

1,166,985. HUB. ROSCOE L. HAYTON, Milton, Oreg. Filed Mar. 15, 1915. Serial No. 14,446. (Cl. 64—26.)



1. A hub structure of the character described comprising a sleeve adapted to be fixed to the spindle of an axle and provided adjacent one extremity with an annular flange, a boxing surrounding the sleeve and provided with ports, a hub shell surrounding the boxing, an inner cap detachably engageable with the adjacent extremity of the hub shell, an annular member carried by the outer extremity of the boxing and overlapping the adjacent extremity of the hub shell, said hub shell being provided with an annular chamber adapted to contain lubricant, said shell being provided with ports in communication with the ports of the boxing.

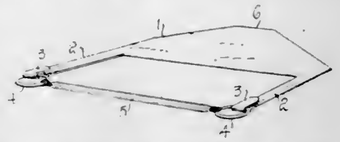
2. A hub structure of the character described comprising a sleeve adapted to be fixed to the spindle of an axle and provided adjacent one extremity with an annular flange, a boxing surrounding the sleeve and provided with ports, a hub shell surrounding the boxing, an inner cap detachably engageable with the adjacent extremity of the hub shell, an annular member carried by the outer extremity of the boxing and overlapping the adjacent extremity of the hub shell, said hub shell being provided with an annular chamber adapted to contain lubricant, said shell being provided with ports in communication with the ports of the boxing, and an outer cap engageable with the outer extremity of the hub shell and inclosing the outer end of the hub structure.

3. A hub structure of the character described comprising a sleeve adapted to be fixed to the spindle of an axle and provided adjacent one extremity with an annular flange, a boxing surrounding the sleeve and provided with ports, a hub shell surrounding the boxing, an inner cap detachably engageable with the adjacent extremity of the hub shell, an annular member carried by the outer extremity of the boxing and overlapping the adjacent extremity of the hub shell, said hub shell being provided with an annular chamber adapted to contain lubricant, said shell being provided with ports in communication with the ports of the boxing, the inner cap member being also provided with an annular chamber adapted to contain lubricant and having ports in communication with the adjacent periphery of the boxing.

4. A hub structure of the character described comprising a sleeve adapted to be fixed to the spindle of an axle and provided adjacent one extremity with an annular flange, a boxing surrounding the sleeve and provided with ports, a hub shell surrounding the boxing, an inner cap detachably engageable with the adjacent extremity of the hub shell, an annular member carried by the outer extremity of the boxing and overlapping the adjacent extremity of the hub shell, said hub shell being provided with an annular chamber adapted to contain lubricant, said shell being provided with ports in communication with the ports of the boxing, said boxing being provided with a spiral groove disposed longitudinally thereof.

1,166,986. CLEANING DEVICE. MARIA F. HEATHCOCK, Princeton, Ill. Filed Oct. 20, 1915. Serial No. 56,946. (Cl. 132—17.)

1. As a new article of manufacture, a comb cleaner comprising a body provided with a cutting edge and with arms disposed in a direction away from the cutting edge, a flexible member, and coacting means carried by the flexible member and the arms for detachably connecting the flexible member with the arms.

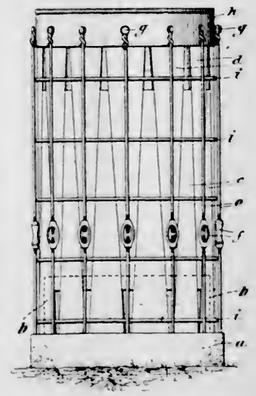


2. As a new article of manufacture, a comb cleaner comprising a body provided with a cutting edge and with spaced arms, a flexible member, and coacting means carried by the flexible member and the arms for detachably connecting the flexible member with the arms.

3. As a new article of manufacture, a comb cleaner comprising a body having its end walls arranged on forward and inward inclines, the margin of the body between the forward ends of the end walls being formed with cutting edge, arms projecting from the body in a direction away from the cutting edge, and a flexible member engaged with the arms.

4. As a new article of manufacture, a comb cleaner comprising a body having its end walls arranged on forward and inward inclines, the margin of the body between the forward ends of the end walls being formed with cutting edge, arms projecting from the body in a direction away from the cutting edge, the free extremities of the arms being returned to afford hook members, a flexible member, and rings secured to the extremities of the flexible member and detachably engaged with the hook members of the arms.

1,166,987. SILO. CLARENCE ELLIOTT HEDRICK, Newton, Kans. Filed Mar. 5, 1915. Serial No. 12,464. (Cl. 217—4.)

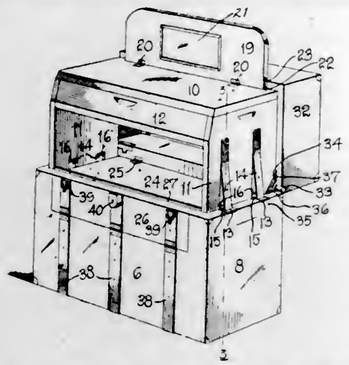


A silo having wedge shaped staves and a concrete foundation, a number of said staves standing vertically with their butts resting on the concrete foundation, the remainder of the staves being supported between the first named staves so that the butts of the second named staves extend some distance above the upper points of the first named staves, and means for drawing the staves together in a longitudinal direction whereby the longitudinal joints are tightened.

1,166,988. COMBINATION TRUNK AND DRESSING-TABLE. DANIEL HINKSON, Moody, N. Y. Filed Aug. 5, 1915. Serial No. 43,846. (Cl. 190—11.)

1. The combination with a trunk, of a dressing table and support mounted within the trunk for vertical movement, and means carried by the dressing table and auto-

matically operating to coöperatively engage with the trunk walls and support the table in its elevated position.



2. The combination with a trunk, of a dressing table including vertical supports slidably mounted between the ends of the trunk body, and a resilient supporting element secured to each of the table supports and adapted to engage over the upper edges of the end walls of the trunk body to sustain the table in an elevated position.

3. The combination with a trunk, of a dressing table including vertical supports slidably mounted between the ends of the trunk body, a pair of longitudinally disposed leaf springs fixed to the outer face of each of said supports and having their free ends laterally offset, said offset ends being adapted for engagement over the upper edges of the end walls of the trunk body to sustain the table in an elevated position.

4. The combination with a trunk, of a dressing table including vertical supports slidably mounted between the ends of the trunk body, resilient means carried by each of the supports for engagement over the upper edges of the end walls of the trunk to sustain the dressing table in an elevated position, and a false top for the trunk hinged upon the rear wall thereof and provided with means coöperating with one of the table supports for holding the top in a raised position when the table is elevated and permitting of access to the interior of the trunk.

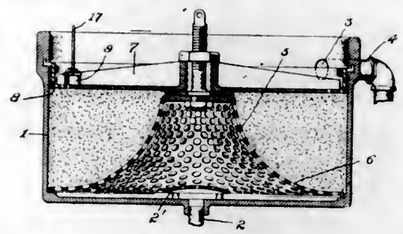
5. The combination with a trunk, of a dressing table including vertical supports slidably mounted between the ends of the trunk body, resilient means carried by each of the supports for engagement over the upper edges of the end walls of the trunk to sustain the dressing table in an elevated position, a false top for the trunk arranged between the table supports and hingedly mounted upon the rear wall of the trunk body, a plate fixed to the inner face of one of the supports and having an opening therein, and a fastening pin carried by the false top adapted for insertion in said opening to support said top in a raised position when the dressing table is elevated and permit of access to the interior of the trunk.

[Claims 6 to 10 not printed in the Gazette.]

1,166,989. DYEING APPARATUS. WILLIAM INMAN, Milwaukee, Wis., assignor to The Psarski Dyeing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 24, 1913. Serial No. 750,261. (Cl. 8—19.)

1. In dyeing apparatus, a tank, a liquor distributing member, a cover for said tank having an upwardly extending portion, one of said portions having a discharge and a test device mounted in said portion having communication with the interior at a point near the discharge and also having a discharge for producing circulation of dye liquor through the test device.

2. In dyeing apparatus, a tank, a liquor distributing member, a cover for said tank having an upwardly extending cylindrical portion, one of said portions having a discharge and a test device mounted in said cylindrical portion having communication with the interior at a point near the discharge and also having a discharge for producing circulation of dye liquor through the test device.



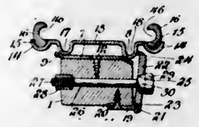
3. A test device for dyeing machines comprising a supporting member mounted in the cover of the dyeing machine, and a removable test box mounted in said support and having discharge openings, and a yielding retaining means secured to said box for holding the mass within the same.

4. A test box for dyeing machines comprising a yielding retaining device for the sample or mass to be tested.

5. In combination with a dyeing machine comprising a tank, a distributing member, a cover, a supporting member carried by the cover adjacent to the main discharge therein, a test device removably mounted in said support and comprising an inverted box having discharge openings in its bottom, and a yielding retaining portion extending into the dyeing chamber of the dyeing machine.

[Claims 6 to 8 not printed in the Gazette.]

1,166,990. WHEEL-RIM. FRANK P. JOHNSON, Danville, Pa. Filed Feb. 23, 1915. Serial No. 10,069. (Cl. 152—21.)



1. A wheel rim for pneumatic tires having an outer transversely flat cylindrical tire receiving surface with marginal circumferential grooves therein and circumferential beads on the face of the rim opposite to that receiving the tire, said beads being located between the circumferential mid line of the rim and the marginal grooves and of greater radial extent than the marginal grooves.

2. A wheel rim for pneumatic tires having marginal circumferential grooves in its tire receiving face and intermediate beads on the face of the rim opposite to that receiving the tire, and the tire receiving face being substantially cylindrical throughout its width.

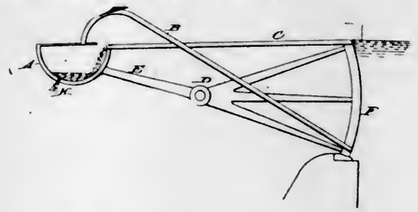
3. A demountable rim structure for tires comprising a rim having means for supporting it upon and spacing it from the peripheral portion of a wheel, tire retaining split ring means adapted to the rim, and locking means for the split ring means provided with manipulating means movable into the space between the rim and peripheral portion of the wheel.

4. A demountable rim structure for pneumatic tires comprising a rim having wheel engaging parts spacing the rim from the peripheral portion of the wheel, split-ring tire-retaining means on the rim, and locking means for the split ring means provided with manipulating and retaining means movable into the space between the rim and peripheral portion of the wheel and located with reference to the valve nipple of the inner tube of the pneumatic tire to be engaged by the clamp nut of said nipple.

5. A demountable rim structure for pneumatic tires comprising a rim having circumferential beads on its inner face for engaging the peripheral portion of the wheel, said beads spacing the rim from the peripheral portion of the wheel, removable split rings carried by the rim at opposite sides thereof, and locking means for and individual to the rings, each locking means having a manipulating member movable into the space between the rim and peripheral portion of the wheel, the locking means being displaced circumferentially to be moved into engaging relation to opposite sides of the valve nipple of the inner tube of the tire in the path of the clamp nut of said nipple.

[Claims 5 to 8 not printed in the Gazette.]

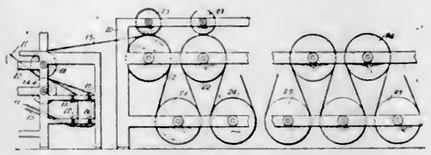
1,166,991. WATER-CONTROLLING DEVICE. VINCENT K. JONES, East Las Vegas, N. Mex. Filed Mar. 12, 1915. Serial No. 14,042. (Cl. 61—47.)



1. A radial gate structure comprising a lever system journaled between the ends and having a gate at one end and an apertured counterbalance tank at the other, a conduit connecting the body of water to be controlled with the tank, the entrance to said conduit being in the upper portion of the gate and arranged to deliver water at a given level in the body of water to be controlled when the gate is closed, and a conduit similarly arranged in the lower portion of the gate to deliver water to the tank from a lower level when the gate is open.

2. A radial gate structure comprising a lever system journaled between the ends and having a gate at one end and an apertured counterbalance tank at the other, a conduit connecting the body of water to be controlled with the tank, the entrance to said conduit being in the upper portion of the gate and arranged to deliver water at a given level in the body of water to be controlled when the gate is closed, a conduit similarly arranged in the lower portion of the gate to deliver water to the tank from a lower lever when the gate is open, and a stop to limit the opening movement of the gate.

1,166,992. MACHINE FOR MAKING CORRUGATED PAPER. JOHN E. KIEFFER, Ewing, Ind. Filed Jan. 13, 1915. Serial No. 1,920. (Cl. 92—39.)

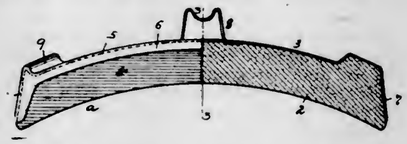


1. A paper making machine having a section for forming the wet web, a series of drying rolls having smooth surfaces, and means between the web forming section and the smooth drying rolls for simultaneously and gradually corrugating and partially drying the wet web as it comes from the web forming section and before it reaches any smooth drying rolls.

2. A paper making machine having a section for forming the wet web, a series of smooth drying rolls, and a pair of corrugating rolls between the web forming section and the series of smooth drying rolls and through which the wet web passes from the web forming means to the smooth drying rolls, one of said corrugating rolls being a drying roll and the other being a cold roll.

3. A paper making machine having a section for forming the wet web, a series of smooth drying rolls, a pair of corrugating rolls between the web forming section and the series of smooth drying rolls and through which the wet web passes from the web forming means to the smooth drying rolls, one of said corrugating rolls being a drying roll and the other being a cold roll, and one or more additional corrugated drying rolls over which the corrugated web passes before reaching the smooth drying rolls.

1,166,993. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 25, 1915. Serial No. 47,253. (Cl. 188—25.)



1. A brake-shoe having an inclosing casing and a filling material, said casing comprising a cap and separate side plates formed of a soft material and supported by said cap and filling material.

2. A brake-shoe having an inclosing casing and a filling material, said casing comprising a cap and separate side plates formed of a fibrous material and supported by said cap and filling material.

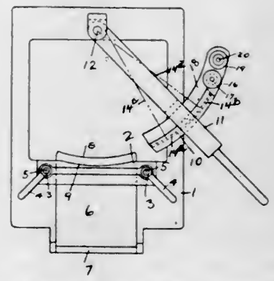
3. A brake-shoe having an inclosing casing and filling material, said casing comprising a cap having an integral back, ends and side lips, and separate side plates formed of a soft material supported by said lips and filling material.

4. A brake-shoe having an inclosing casing and a filling material, said casing comprising a cap having an integral back, ends and side lips, and separate side plates formed of a fibrous material and supported by said lips and filling material.

5. A brake-shoe having an inclosing casing and a filling material, said casing comprising a supporting member, and separate side plates supported by said member and filling material.

[Claims 6 and 7 not printed in the Gazette.]

1,166,994. SHEET-METAL-EDGE-ROLLING MACHINE. ADOLPH G. KLING, Erie, Pa., assignor to Erlez Stove & Manufacturing Company, Erie, Pa., a Corporation of Pennsylvania. Filed Nov. 9, 1914. Serial No. 870,996. (Cl. 153—46.)



1. In a sheet metal edge rolling machine, the combination of means for securing the sheet; a roll forming die comprising a body having a roll forming bore curved axially and forming a mandrel in said bore curved axially and forming with the die a forming slot around the mandrel, the slot extending to the edge of the die; and devices for moving the die and edge of the sheet relatively to each other and endwise of the die, the path of move-

ment having the same general curve as the mandrel, the mandrel of the die being arranged at an angle to the unformed edge of the sheet.

2. In a sheet metal edge rolling machine, the combination of means for securing the sheet; a roll forming die comprising a roll forming mandrel having its axis convex in the direction of the sheet, said mandrel forming with the die a forming slot around the mandrel, the slot extending to the edge of the die; and devices for moving the die and edge of the sheet relatively to each other, the path of movement approximating the curve of the die and having a direction endwise of the die with the die at an angle to the unformed edge of the sheet.

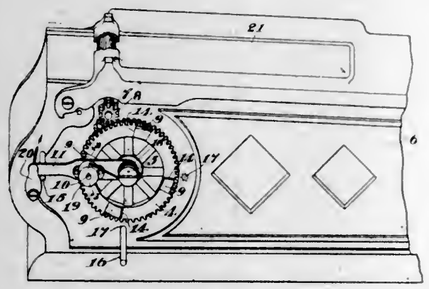
3. In a sheet metal edge rolling machine, the combination of means for securing the sheet; a roll forming die comprising a roll forming mandrel, said mandrel being curved axially and convex in the direction of the sheet, said mandrel forming with the walls of the die a forming slot around the mandrel, the slot extending to the edge of the die; and a pivotal mounting for the die, the mandrel approximating an arc of a circle with the axis of the mounting as a center, the mandrel of the die being set at an angle to the unformed edge of the sheet, the angularity of the mandrel varying the location of the axis of the mandrel at the front and rear of the mandrel relatively to the axis of the mounting a distance approximating the circumference of the roll to be formed.

4. In a sheet metal edge rolling machine, the combination of a clamp for securing the sheet, said clamp paralleling the edge of the sheet; a roll forming die comprising a roll forming mandrel forming with the walls of the die a forming slot around the mandrel; and devices for moving the die and the edge of the sheet relatively to each other and endwise of the die parallel to the edge of the clamp with the mandrel at an angle to the unformed edge of the sheet.

5. In a sheet metal edge rolling machine, a roll forming die comprising a body of a die having a slot extending to the edge and an opening extending therethrough approximating the outer surface of the roll to be formed; a roll forming mandrel arranged in said opening and leaving a surrounding slot approximating in cross dimension the cross dimension of the sheet to be formed; and a plate on which said mandrel is mounted secured to the body of the die along the slot, said plate forming one wall of the slot in the assembled die.

[Claims 6 to 12 not printed in the Gazette.]

1,166,995. AUTOGRAPHIC REGISTER. HARRY KONERMAN, Newport, Ky., assignor, by mesne assignments, to The Globe Autographic Register Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 20, 1915. Serial No. 15,706. (Cl. 11—36.)



1. In combination in a feed mechanism for autographic registers, a feed roll, a gear for operating the feed roll, ratchet teeth secured at distances apart on the gear, a pawl located adjacent to the gear engaging with the ratchet teeth to rotate the gear, and a lever carrying the pawl and mounted to move concentrically with the gear.

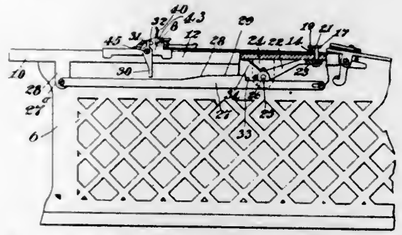
2. A feed mechanism for autographic registers comprising a feed roll, a gear for operating the feed roll, ratchet teeth spaced apart on the gear, a lever rotatively mounted with relation to the gear, a pawl mounted on the lever and engaging with the ratchet teeth to operate the gear, and an adjustable stop for limiting the motion of the lever.

3. A feed mechanism for autographic registers, comprising a feed roll, a pinion mounted on the feed roll, a gear located adjacent to and in mesh with the pinion, ratchet teeth located on the gear, an operating lever located adjacent to and rotatively mounted with relation to the gear, means for returning the lever to its normal position after movement thereof, a pawl mounted on the lever for engaging the ratchet teeth when the lever is operated, and an adjustable stop for limiting the motion of the lever.

4. In an autographic register the combination of a feed roll, a gear for operating the feed roll, ratchet teeth secured at distances apart on the gear, a pawl located adjacent to the gear engaging with the ratchet teeth, and a lever for carrying the pawl and mounted to move concentrically with the gear, said pawl and said teeth having straight faces for abutting one another to move the gear upon operative movement of the lever, and having inclined faces for permitting the pawl to ride over the teeth upon return movement of the lever.

5. In combination in a feed mechanism for auotgraphic registers, a feed roll, a gear operatively connected with the feed roll, ratchet teeth spaced apart on the gear, a lever rotatively mounted adjacent to the gear, a pawl mounted on the lever to engage the teeth to rotate the gear when the lever is moved in one direction, means for returning the lever to its normal position, and an adjustable stop for limiting the motion of the lever.

1,166,996. MEASURED-DELIVERY AUTOGRAPHIC REGISTER. HARRY KONERMAN, Newport, Ky., assignor, by mense assignments, to The Globe Autographic Register Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 28, 1915. Serial No. 24,583. (Cl. 11—36.)



1. A manifolding autographic register adapted for use with record sheets having a series of apertures and comprising a frame, a table mounted on the frame, a stationary pin mounted in the table, and means adapted to move the sheets to engage the apertures with the pin.

2. In a manifolding autographic register adapted for use with form printed record sheets having a series of apertures, a frame having a sheet supporting table mounted thereon, a stationary pin mounted on the table, and means adapted to move the sheets to engage the apertures with the pin whereby the forms on the sheets will be alined.

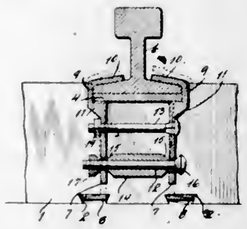
3. In combination in a manifolding autographic register adapted for use with record sheets having a series of apertures, a frame adapted to support the record sheets, a stationary pin mounted on the frame, a carriage movably mounted on the frame and adapted to move the record sheets across the pin to bring the apertures in alinement therewith, and a mechanism adapted to engage the apertures with the pin.

4. An autographic register adapted for use with record sheets having a series of apertures, comprising a frame adapted to support the record sheets, a stationary pin mounted on the frame, a carriage movably mounted on the frame and adapted to move the record sheets across the pin to bring the apertures in alinement therewith, mechanism adapted to engage the apertures with the pin and means adapted to remove the sheets from the pin.

5. In an autographic register adapted for use with record sheets having apertures formed therein, the combination of a frame adapted to support the record sheets, a stationary pin mounted on the frame, a carriage movably mounted on the frame and adapted to move the record sheets across the pin to bring the apertures in alinement therewith, mechanism adapted to engage the apertures with the pin, means adapted to remove the sheets from the pin to permit subsequent movement of the sheets, and a device adapted to maintain the sheets in alinement after they have been removed by said means from the pin.

[Claims 6 to 8 not printed in the Gazette.]

1,166,997. RAILROAD-TIE. FRED LANDRETH, Arcola, Ill. Filed May 15, 1915. Serial No. 28,377. (Cl. 238—4.)



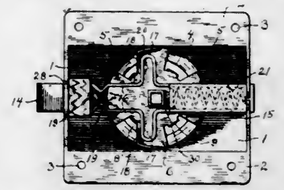
1. A rail fastener of the class described comprising a plurality of yoke-shaped bodies, each yoke-shaped body provided with vertically extending arms, each arm provided with a substantially U-shaped pocket extending at right angles to said arm and adapted to fit over the face of a rail and firmly support the same, a spacing member spaced between the adjacent vertically extending arms of said rail fasteners, and means for drawing said vertically extending arms in firm engagement with the rail adapted to be supported thereby.

2. A device of the class described comprising a plurality of rail fasteners, each rail fastener comprising a pair of vertically extending arms, each vertically extending arm provided with a pocket upon the upper end thereof, spacing members between the respective vertically extending arms of the opposite yoke-shaped members, and constituting a fulcrum therefor, and means passing through the upper ends of said arms for drawing the upper ends of said arms toward each other.

3. A device of the class described comprising a plurality of rail fasteners constituting yoke-shaped body portions, each yoke-shaped body portion provided with a plurality of vertically extending ends, rail engaging means formed upon the ends of said yoke-shaped body portions, a spacing bolt passing through the opposite arms of the opposite fasteners, a sleeve carried by said spacing bolt and provided with tapering ends, said tapering ends constituting a fulcrum for said vertically extending arms, a binding bolt passing through the upper ends of the oppositely disposed arms of the opposite rail fasteners for drawing said arms toward each other near the upper ends thereof.

1,166,998. LATCH. JOHN H. LAWRENCE, Sterling, Ill. Filed June 18, 1915. Serial No. 34,928. (Cl. 70—42.)

1. In a device of the class described, a casing adapted to be secured to the face of a door and provided with a central circular opening; a handle-plate having a suitable handle and provided with a circular depressed portion rotatable in said opening and a plurality of radial perforations; a plate on the inside of said casing provided with a pair of inwardly projecting lugs and having a plurality of ears adapted to engage said perforations and lock said plates together; a latch slidable in said casing comprising a bolt at one end thereof and a housing at the opposite end, united by a pair of plates; a pair of loops struck laterally from said last-named plates adapted to be engaged by said lugs to operate said latch; and means for holding said latch in extended position.



2. In a device of the class described, a casing adapted to be secured to the face of a door and provided with a central circular opening; a handle-plate having a suitable handle and provided with a circular depressed portion rotatable in said opening and a plurality of radial perforations; a plate on the inside of said casing provided with a pair of angular projections and a plurality of ears adapted to engage said perforations and lock said plates together; a latch slidable in said casing comprising a bolt and a pair of parallel plates struck outwardly into a pair of loops provided with rounded ends having a rocking engagement with said projections and inwardly bent portions to accommodate the movement of said projections; and means for holding said latch in extended position.

3. In a device of the class described, a casing adapted to be secured to the face of a door and provided with a central circular opening, a handle-plate having a suitable handle and provided with a circular depressed portion rotatable in said opening; a plate on the inside of said casing rigidly attached to said handle-plate and provided with a pair of inwardly extending projections; a latch slidable in said casing comprising a bolt at one end thereof and a housing at the opposite end, united by a pair of plates, said housing being operable partially within and partially without said casing; a pair of loops formed laterally from said plates and adapted to be engaged by said projections; a spring in said housing adapted to hold said latch normally in extended position; and means on the outer end of said housing for engagement with said handle to lock the same from movement.

4. In a device of the class described, a latch adapted to be formed from one piece of sheet metal, comprising a bolt at one end thereof and a housing at the opposite end and a pair of plates uniting said bolt and housing and bent laterally at a central point to form a pair of loops with rounded engaging ends, and inwardly at a point between said bolt and loops to form a pair of angular recesses.

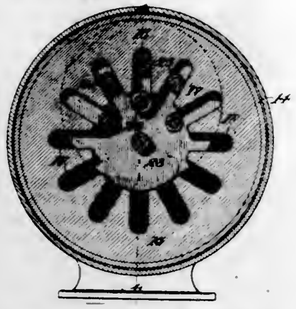
5. In a device of the class described, a casing adapted to be secured to the face of a door; a handle rotatably mounted in said casing and provided with an opening in one of its ends; latch-operating means connected with said handle; a latch slidable in said casing and provided with means coöperating with said latch operating mechanism; means for holding said latch normally in extended position; and a tongue projected from said latch on the outside of the casing, and provided with an opening normally in register with the opening in said handle, whereby said parts may be locked from movement.

[Claims 6 and 7 not printed in the Gazette.]

1,166,999. EXPLOSIVE-ENGINE. THOMAS J. LOFTUS, Castella, Cal., assignor of one-half to Harmon Bell, Oakland, Cal. Filed July 12, 1915. Serial No. 39,281. (Cl. 123—12.)

1. A motor of the successive impulse type, comprising a circumscribing gear provided with internal teeth forming between them parallel-faced, elongated slots constituting compression chambers, a lantern pinion within said gear having its pin teeth in mesh with said slots and its face-plates inclosing the sides of adjacent slots, means for conducting a charge of explosive mixture to said chambers to be compressed by the pistons, and means for ex-

ploding said charge to drive the parts, said means including ports contiguous to the pin teeth between the face plates, and a cover plate with successive inlet ignition and exhaust ports with which the face plate ports successively register.



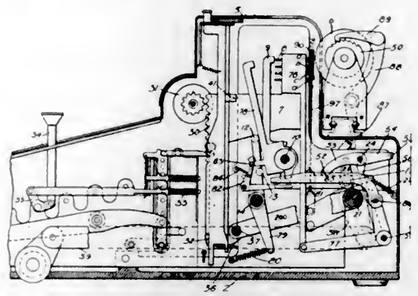
2. A motor of the successive explosion type, comprising a circumscribing, rotatable member provided with a plurality of internal, radially disposed, parallel-faced, elongated slots constituting compression chambers, an inscribed rotatable member mounted eccentric to said circumscribing member, and comprising a pair of spaced face-plates inclosing the sides of adjacent slots, transverse pins between said face-plates, rollers on said pins, said rollers forming pistons to enter the slots, means for conducting a charge of explosive mixture to said chambers to be compressed by the pistons, said means including ports in the face plate contiguous to the pins, and inlet and exhaust ports in the cover plate, with which the face plates successively register during revolution, and means for exploding said charge to drive the parts.

3. A motor of the successive explosion type, comprising a circumscribing, rotatable member provided with a plurality of internal, radially disposed, parallel-faced, elongated slots constituting compression chambers, an inscribed rotatable member mounted eccentric to said circumscribing member, and comprising a pair of spaced face-plates inclosing the sides of the adjacent slots and carrying transverse pins to mesh with said slots, a casing for said rotatable members, ignition, inlet and exhaust ports arranged in said casing, a port in the adjacent face-plate of the inscribed member for each pin to register with the ignition port when the pin is near the limit of its compression movement, and a second port in said face-plate adjacent to each pin to register with the inlet port at the entrance of said pin into the slot and with the exhaust port at the withdrawal thereof.

4. A motor of the successive explosion type, comprising a circumscribing, rotatable member provided with a plurality of internal, radially disposed, parallel-faced, elongated slots constituting compression chambers, an inscribed rotatable member mounted eccentric to said circumscribing member carrying a plurality of perpendicularly arranged pins constituting pistons and arranged to operate in said slots, means for conducting a charge of explosive mixture to said chambers to be compressed by the pistons, a relief valve adapted to communicate with each of said slots near the point of greatest compression, said valve being in communication with the source of fuel supply, and means for exploding the compressed charge to drive the parts.

5. A motor of the successive explosion type, comprising a circumscribing, rotatable member provided with a plurality of internal, radially disposed, parallel-faced, elongated slots constituting compression chambers, an inscribed rotatable member mounted eccentric to said circumscribing member, and comprising a pair of spaced face-plates inclosing the sides of the adjacent slots and carrying transverse pins to mesh with said slots, a casing for said rotatable members, relief, ignition, inlet and exhaust ports arranged in said casing, a port in the adjacent face-plate of the inscribed member in radial alinement with each pin to register with the relief and ignition ports in said casing when the pin is near its limit of movement within a slot and a second port adjacent to the first mentioned port to register with the inlet and exhaust ports in said casing near the beginning and end of travel of such pin within a slot.

1,167,000. SIGNAL-PRINTING MEANS FOR CALCULATING-MACHINES. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed May 1, 1914. Serial No. 835,630. (Cl. 235—60.)



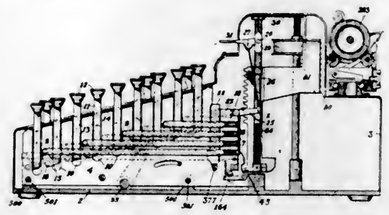
1. In a calculator having the usual accumulating and printing means, a main operating device for said means arranged to set up selected items upon the normal operation of such device, and special keys adapted to cause special operations of the accumulating or printing means, or of both on operation of the main operating device, the combination of signal printing means connected with the special keys and organized and constructed to be operated to print a signal at once upon the depression of the special key and previous to the operation of the said main operating device that effects the special operation of the machine according to the special key depressed, a two-color ribbon device, and means for automatically controlling the ribbon device to cause the said signal characters to be printed in one color and to cause the ribbon to move to have the said adjacent special matter printed in another color by said printing means.

2. In a calculator having the usual accumulating and printing means, a main operating device for said means arranged to set up selected items upon the normal operation of such device, and special keys adapted to cause special operations of the accumulating or printing means, or of both on operation of the main operating device, the combination of signal printing means connected with the special keys and organized and constructed to be operated to print a signal at once upon the depression of the special key and previous to the operation of the said main operating device that effects the special operation of the machine according to the special key depressed, a two-color ribbon device, and means for automatically controlling the ribbon device to normally hold the ribbon in a position to cause the signal characters to be printed in one color and to cause the ribbon to move automatically upon movement of said main actuating member whereby to have the adjacent special matter printed in another color by said printing means.

1,167,001. KEY MECHANISM FOR CALCULATORS. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Original application filed Feb. 24, 1908, Serial No. 417,352. Divided and this application filed Feb. 16, 1915. Serial No. 8,474. (Cl. 235—60.)

1. In combination, a key provided with a depending stem, a plate provided with a recess in which the stem is adapted to move and which serves to limit its movement, a bar adapted to move alongside of the plate, and a crank pivoted to the plate, the key stem and the bar.

2. In a machine of the character described, a key stem, a bar adapted to be moved thereby and having two adjacent notches on its upper edge, a support for the bar, and a latch provided with a stud adapted to engage in either notch of the bar.



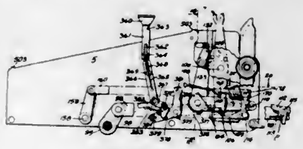
3. In a machine of the character described, a key, a depending stem, a substantially horizontal bar, a jointed connection between the bar and the stem, a support and a guide for the bar, and means for retracting the bar to its original position, comprising a spring acting against the guide and support.

4. In a machine of the character described, a key supporting plate, a transverse guide plate having staggered apertures, a series of stop bars alternately arranged on opposite sides of the plate and the ends of which are adapted to engage in said staggered apertures, means for reciprocating the bars comprising keys, one for each bar, and means for retracting the bars to postion after such reciprocation, comprising a spring on each bar interposed between the transverse guide and a part of the bar.

5. In a machine of the character described, a key supporting plate, a transverse guide plate having staggered apertures, a series of stop bars alternately arranged on opposite sides of the plate and the ends of which are adapted to engage in said staggered apertures, means for reciprocating the bars comprising keys, one for each bar, and means for limiting the movement of the keys, consisting of stems on the keys and recesses in the plate on the bottoms of which the stems are adapted to impinge at the end of their stroke.

[Claims 6 to 23 not printed in the Gazette.]

1,167,002. ADDING-MACHINE. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Original application filed Feb. 24, 1908, Serial No. 417,352. Divided and this application filed Feb. 16, 1915. Serial No. 8,475. (Cl. 235—60.)



1. A series of numeral wheels and an oscillatory arm on which each wheel is mounted to revolve, in combination with separate means whereby the arms may be oscillated separately, or in unison.

2. A series of numeral wheels and an oscillatory arm on which each wheel is mounted to revolve, in combination with means whereby the arms may be oscillated in unison as a system, and other means whereby they may be oscillated separately as separate units.

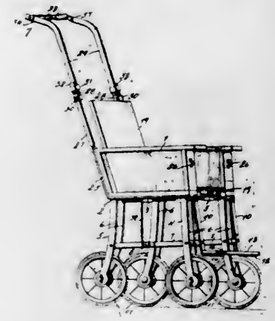
3. In a machine of the character described, a series of numeral wheels, and an oscillatory arm on which each wheel is mounted to revolve, in combination with means whereby the arms may be oscillated in unison as a system in the accumulation of an item, and other means whereby they may be oscillated separately in the carrying of a ten.

4. In a calculating machine, the combination with actuating devices, of independently movable supports mounted on pivots to have oscillatory movement only, a totalizer having register wheels which are operated by said actuating devices and carried by said supports, and means for moving said supports and their carried register wheels, substantially as described.

5. In a calculating machine, the combination with actuating devices, of independently oscillating supports, totalizer wheels operated by said actuating devices and carried by said supports, tripping projections on said totalizer wheels, and means under control of said tripping projections for effecting the movement of said supports and their carried wheels in the arc of a circle in performing the operation of carrying, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

1,167,003. BABY-CARRIAGE. AMOS W. MCDEVITT, Washington, D. C. Filed Dec. 14, 1914. Serial No. 877,230. (Cl. 21—83.)



1. A device of the class described comprising a collapsible carriage, said carriage comprising a pair of similarly constructed side members, means for collapsibly connecting said side members together, a seat hingedly secured to one of said side members and adapted to be thrown into engagement with the other side member for holding said side members in spaced relation, a foot rest comprising a pair of hanger members, one hanger member being secured to each side member, a rest board hingedly secured to one of said hanger members, and a spring pressed knob carried by said board and engaging the other hanger member for facilitating the holding of said board in a firm extended position and in engagement with the other hanger member.

2. A device of the class described comprising a pair of similarly constructed side members, a seat hinged to one of said side members, a back hinged to one of said side members, means for collapsibly connecting said side members together, each side member provided with a front and a rear leg, a brace connecting said front and rear legs, said brace projecting in front of said front leg, a foot rest carried by said side members and comprising hanger members, and said hanger members engaging the front ends of said braces for facilitating the bracing of said hanger members.

3. A device of the class described comprising a collapsible carriage, said carriage comprising a pair of side members, means for collapsibly connecting said side members together, a seat hingedly secured to one of said side members, said seat adapted to be thrown into engagement with the inner face of the opposite side portion, for holding said side members in spaced relation, and a back hingedly secured to one side member and adapted to be thrown into engagement with the inner face of the opposite side member for bracing said side members and holding the same in rigid spaced relation.

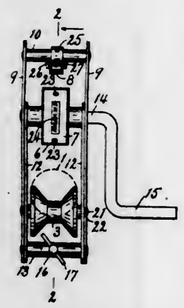
4. A device of the class described comprising a collapsible carriage, said carriage comprising a pair of side

members, means for collapsibly connecting said side members together, a seat hingedly secured to one of said side members, said seat adapted to be thrown into engagement with the inner face of the opposite side portion, for holding said side members in spaced relation, and a back hingedly secured to one side member and adapted to be thrown into engagement with the inner face of the opposite side member for bracing said side members and holding the same in rigid spaced relation, and latch means carried by said back and seat for holding said back and seat in an extended position.

5. A device of the class described comprising a collapsible carriage, said carriage comprising a plurality of similarly constructed side members, a back carried by one side member, a seat carried by one side member, and interlocking means carried by said back and seat and the opposite side member for automatically locking said back and seat in an extended position.

[Claims 6 to 13 not printed in the Gazette.]

1,167,004. BALL-MARKER. RUSSELL W. MAGNA, Holyoke, Mass. Filed Feb. 20, 1915. Serial No. 9,629. (Cl. 101—83.)



1. In a ball marker, impression means, and cupped means to support a ball, with its center fixed in space, in operative position relative to said impression means, said supporting means having axes apart from the ball center, and permitting said ball to roll freely therein, when subjected to the action of said impression means.

2. A ball marker comprising an impression member mounted to describe an arcuate path, and a cupped rolling support adapted to receive a ball loosely and permit the same to roll therein, such support being adjacent to said path and adapted to retain a ball in operative position relative to said impression means, with the center of said ball fixed in space and apart from the axes of said support.

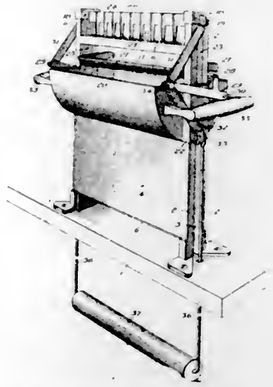
3. A ball marker comprising an impression member mounted to describe an arcuate path, cupped means to support a ball with its center fixed in space, and means so to adjust said supporting means that a ball thereon shall be presented with the part of its surface that is most remote from said supporting means in the aforesaid path, such adjusting means consisting in part of a screw.

4. The combination, in a ball marker, with a frame, of a pair of flanged rolls forming a cupped support for a ball, and loosely mounted in said frame, a shaft journaled in said frame, and an impression segment secured to said shaft and adapted to traverse a path above said rolls.

5. The combination, in a ball marker, with a frame comprising pivotally-connected adjustable sections, and means to adjust such sections, of a pair of flanged rolls forming a cupped support for a ball, each of such rolls being loosely mounted in one of said sections, a shaft journaled in said frame, and an impression segment secured to said shaft and adapted to traverse a path above said rolls.

[Claims 6 to 12 not printed in the Gazette.]

1,167,005. CHERRY-PITTING MACHINE. CHARLES H. MARSHALL, Omaha, Nebr. Filed Oct. 13, 1915. Serial No. 55,638. (Cl. 146—5.)



1. A cherry pitting machine comprising in combination a perforated punching block having an inclined surface between its perforations, a series of reciprocating pitting plungers adapted to enter said perforations, and means for actuating said plungers in both directions.

2. A cherry pitting machine comprising in combination a perforated punching block having a convex surface between its perforations, a series of reciprocating pitting plungers adapted to enter said perforations, and means for actuating said plungers in both directions.

3. A cherry pitting machine comprising in combination a perforated punching block having a convex surface between its perforations, means for automatically positioning unpitted cherries over the perforations of said punching block, a series of reciprocating pitting plungers adapted to enter said perforations, and means for actuating said plungers in both directions.

4. A cherry pitting machine comprising in combination a perforated punching block and a supply hopper reciprocally associated with relation to each other, the latter adapted to deposit unpitted cherries upon the former at the completion of each reciprocating movement, a series of pitting plungers in alinement with the perforations in said block, and means for actuating said plungers in reverse directions.

5. A cherry pitting machine comprising in combination a perforated punching block, a supply hopper reciprocally mounted with relation to said block, means for elevating the supply hopper and causing it to deposit unpitted cherries in predetermined positions upon said punching block, a series of pitting plungers in alinement with the perforations in said block, and means for actuating said plungers in reverse directions.

[Claims 6 to 15 not printed in the Gazette.]

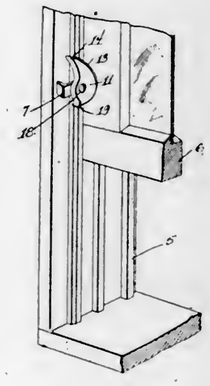
1,167,006. PROCESS OF EXHAUSTING UNFERMENTED GRAPES OR BERRIES. EUDO MONTI, Turin, Italy. Filed Mar. 5, 1914. Serial No. 822,763. (Cl. 99—11.)

1. A process for exhausting unfermented berries, particularly grapes, consisting in straining the juice from crushed and pressed berries; thereupon fermenting the juice at a temperature not above 15° C.; then soaking the pomace in warm water so that the mixture attains a temperature between 50° and 60° C.; adding water and maintaining said temperature until the pomace has been exhausted; then pressing the pomace and straining the liquid; then similarly soaking a fresh supply of pomace with the said liquid, still retaining the same temperature.

2. A process for exhausting unfermented berries, particularly grapes, consisting in soaking the pomace from crushed and pressed berries in warm water so that the mixture attains a temperature of between 50° and 60° C.; adding water and maintaining said temperature until the pomace has been exhausted; then pressing the pomace and straining the liquid; then similarly soaking a fresh supply of pomace with the said liquid, still retaining the same temperature; thereupon cooling the resulting juice to about 0° C. and ultimately concentrating it.

3. A process for exhausting unfermented berries, particularly grapes, consisting in soaking the pomace from crushed and pressed berries in warm water so that the mixture attains a temperature of between 50° and 60° C.; adding water and maintaining said temperature until the pomace has been exhausted; then pressing the pomace and straining the liquid; then similarly soaking a fresh supply of pomace with the said liquid, still retaining the same temperature; thereupon cooling the resulting juice to about 0° C. and ultimately concentrating it; thereby obtaining an extract containing from 66% to 80% of sugar and solid matter.

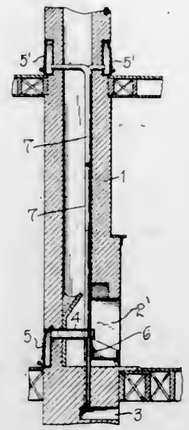
1,167,007. COMBINED SASH HOLDER AND LOCK. HANS J. MORTENSEN, Spanish Fork, Utah, assignor of one-half to Lee H. Brimhall, Spanish Fork, Utah. Filed June 4, 1914. Serial No. 843,077. (Cl. 16—120.)



In a window securing device, the combination with a cam pivotally secured to a window frame engaging member, said cam being provided with a circumferential recess, a window casing engaging pad secured in said recess, said window engaging member being bent at right angles intermediate its ends, one end tapered to penetrate the window frame and the other end being provided with an aperture to receive the pivot pin of the cam, of an abutment transversely adjustable on said window casing, said abutment being provided with a flat side to engage with said cam.

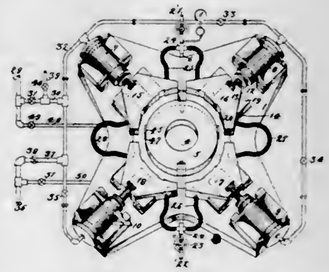
1,167,008. HEATING SYSTEM. WILLIAM L. MURRAY, McKenzie, Tenn. Filed Jan. 16, 1915. Serial No. 2,685. (Cl. 126—121.)

A heating system comprising in combination with a fireplace, a chimney flue communicating therewith and an air receiving chamber below the fireplace; a horizontally disposed drum mounted in the chimney wall and having an open end communicating with an adjacent apartmet, the other end of said drum being closed and projecting into the fireplace centrally thereof, a plurality of cold air pipes in the wall having their lower ends in communication with said air chamber and extending upwardly into the fireplace and secured to the closed end of said drum to constitute supports therefor, and additional air conducting pipes communicating at their lower ends with said air chamber and extending upwardly through the closed end of the drum and through the chimney flue, said pipes above and below the drum being exposed to the flame from the fireplace and having their upper ends extended through the



chimney wall and opening into separate apartments of the building.

1,167,009. VULCANIZER. EDWARD NALL, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Dec. 10, 1914. Serial No. 876,602. (Cl. 18—17.)



1. A vulcanizer comprising a supporting frame, a fixed member of cylindrical contour secured to said frame the outer face of said member being adapted to receive and support an annular drum having a layer of unvulcanized rubber thereon, a plurality of power-actuated radially-movable members having concave inner faces the curvature of which approximates that of the cylindrical member, and a broken ring interposed between said fixed and said movable members and adapted to tightly clamp the layer of rubber on the drum when the movable members are moved to their inner or operative positions.

2. A vulcanizer comprising a supporting frame, a fixed member of cylindrical contour secured to said frame the outer face of said member being adapted to receive and support an annular drum having a layer of unvulcanized rubber thereon, a plurality of power-actuated radially-movable members having concave inner faces, the curvature of which approximates that of the cylindrical member, a broken ring interposed between said fixed member and said movable members and adapted to be clamped tightly about the layer of rubber when the movable members are moved to their inner or operative positions, and an ejector adapted to shift said drum from said cylindrical member.

3. A vulcanizer comprising a supporting frame, a fixed member of cylindrical contour secured to said frame the outer face of said member being adapted to receive and sup-

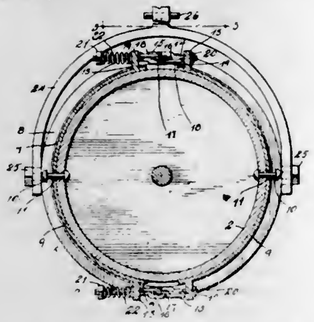
port an annular drum having a layer of unvulcanized rubber thereon, a plurality of power-actuated movable members adapted to move radially toward and away fom said fixed member the inner faces of which are fashioned to correspond in curvature to the peripheral face of said member, a broken ring interposed between said fixed and said movable members and adapted to be clamped tightly about the layer of rubber when the movable members are moved to their inner or operative positions, and means for independently heating both said fixed and each of said movable members.

4. A vulcanizer comprising a supporting frame, a fixed member of cylindrical contour secured to said fram the outer face of said member being adapted to receive and support an annular drum having a layer of unvulcanized rubber thereon, a plurality of power-actuated movable members adapted to move radially toward and away from said fixed member the inner faces of which are fashioned to correspond in curvature to the peripheral face of said fixed member, a broken ring interposed between said fixed and said movable members and adapted to be clamped tightly about the layer of rubber when the movable members are moved to their inner or operative positions, means for independently heating both said fixed and each of said movable members, and means for loosely connecting said ring and movable members whereby when the latter are moved to their outer or inoperative position said ring is withdrawn from engagement with said rubber layer.

5. A vulcanizer comprising a supporting frame, a fixed member of cylindrical contour secured to said frame the outer face of said member being adapted to receive and support an annular drum having a layer of unvulcanized rubber thereon, a plurality of power-actuated movable members adapted to move radially toward and away from the fixed member, the faces of said members which oppose the fixed member corresponding in curvature therewith, a broken ring interposed between said fixed and said movable members and adapted to be clamped tightly about the layer of rubber when the movable members are moved to their inner or operative positions, and means capable of operating said movable members either simultaneously or successively.

[Claims 6 to 12 not printed in the Gazette.]

1,167,010. BAND-CLUTCH. ALLEN A. P. NEEL, Marshall, Va. Filed Nov. 6, 1914. Serial No. 870,687. (Cl. 192—14.)



1. A clutch mechanism of the class described comprising a driving shaft, a driven shaft, a drum carried by each shaft, a plurality of segmental clutch bands carried by one of said drums and adapted to engage the other drum, means for normally urging said segmental bands in frictional engagement with said drums, and means for throwing said bands out of frictional engagement with said drums.

2. A clutch mechanism of the class described comprising a driving shaft, a driven shaft, a drum carried by each shaft, a plurality of segmental bands carried by one of said drums and adapted to engage the other drum, means for holding said segmental bands in frictional engagement with said drums, and means for forcing said bands to an inoperative position relative to the drum carried by said driven shaft.

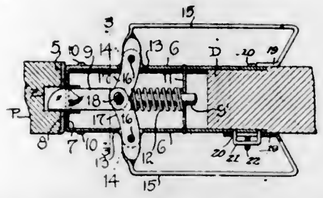
3. A clutch mechanism comprising a driving shaft, a driven shaft, a drum carried by each shaft, a plurality of segmental bands carried by the drum carried by said driving shaft and adapted to engage the other drum, means for yieldably drawing said segmental bands together, and a toggle mechanism interposed between the adjacent ends of said bands for facilitating the moving of said bands to an inoperative position relative to said drum carried by said driven shaft.

4. A clutch of the class described comprising a driving shaft, a driven shaft, a drum carried by each shaft, a plurality of segmental bands secured to one of said drums and adapted to engage the other drum, means for yieldably holding said bands togther and in frictional engagement with the other drum, toggle means for facilitating the spreading of said segmental bands apart, and a laterally slidable ring engaging said toggle mechanism for actuating said toggle mechanism.

5. A device of the class described comprising a driving shaft, a driven shaft, a drum carried by each shaft, a plurality of segmental bands carried by one of said drums and adapted to engage the other drum, each band provided with a laterally extending flange at each end thereof, bolts carried by said flanges and extending therethrough, compression springs carried by one end of each bolt and engaging one of said flanges for yieldably forcing said bands together, and a toggle mechanism for facilitating the spreading of said bands apart.

[Claims 6 to 8 not printed in the Gazette.]

1,167,011. DOOR-LOCK. WILLIAM J. NELSON, Brandon, S. D. Filed June 12, 1915. Serial No. 33,774. (Cl. 70—42.)

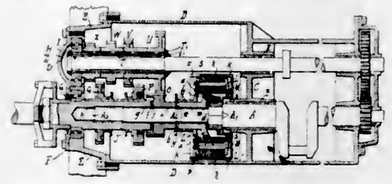


A lock of the character described including an elongated U-shaped body plate adapted to inclose a mortise in a door, the parallel side portions of the plate being secured to the opposite faces of the door, a transversely disposed bearing plate having its extremities engaged in the parallel portions of the body plate and constituting a brace between said parallel portions of the plate, a spring pressed bolt having a cylindrical end portion slidably engaged in the bearing plate and a rectangular end portion slidably engaged in the intermediate portion of said body plate, handle members having portions normally disposed in parallel relation to the ends of the body plate and spaced therefrom, each of the handle members also having an angular end portion extending through the body plate and pivotally mounted therein, the extremities of the angular portions of the handle members being operatively connected to said bolt.

1,167,012. CLUTCH. BOUDEWIJN B. NEUTEBOOM, Detroit, Mich. Filed Mar. 11, 1912. Serial No. 682,973. (Cl. 192—10.)

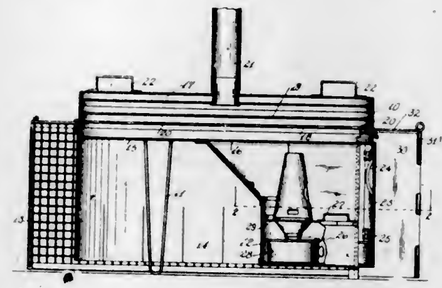
A clutch having an outer and an inner drum-like part, annular presser plates located between the peripheries of said drums and adapted to form a frictional engagement between the same, a presser disk forming substantially the end of said outer drum, its periphery engaging against said presser plates, and a tension spring located within

the inner drum, one end engaging said presser plate and the other end engaging a portion of the inner drum, and



means for preventing relative angular movement between said inner drum and said presser plate.

1,167,013. POULTRY-BROODER. LUCIAN R. OAKES, Tipton, Ind. Filed Jan. 16, 1915. Serial No. 2,629. (Cl. 119—34.)



1. A brooder, including a hover, a heating chamber extending in said hover, means for heating said chamber, and a radiating plate extending directly over both hover and heating chamber, having a passageway communicating with said heating chamber to one side of said heating means, said passageway having suitable communication with a vertical flue above it, to induce a draft through said heating chamber and heating means.

2. A brooder, including a hover, a heating chamber extending in said hover, two semicircular movable walls surrounding said hover and hinged to said heating chamber, and a member insertible between said walls for enlarging the area contained therein when said walls are parted.

1,167,014. VETERINARY SURGICAL INSTRUMENT. WILLIAM R. O'BRIEN, Peosta, Iowa. Filed June 25, 1915. Serial No. 36,173. (Cl. 128—27.)



1. In a device of the character described, a head smaller at its outer end, a cutting edge on the opposite end, a handle attached to the head, a tube adapted to slide on said handle, and means for compressing the teat.

2. In a device of the character described, a head of cone shape at one end and provided with a circular cutting edge on the opposite end, a handle attached to the head within the circle of the cutting edge, a tube adapted to slide on said handle, and means for compressing the teat against the handle.

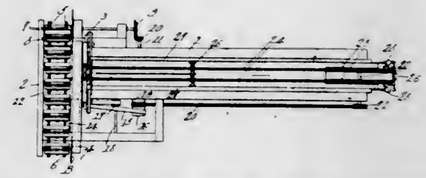
3. In a device of the character described, a head of cone shape at one end and of cup shape at the opposite end and provided with a cutting edge around the edge of the cup, a handle attached to the head within the cup, a tube adapted to slide on said handle, and means for compressing the teat upon the handle.

4. In a device of the character described, a head of cone shape at one end and having a circular cutting edge on the opposite end, a handle attached to the head within the circle of the cutting edge, a tube adapted to slide on said handle and of substantially the same circumference as the inside of the cutting edge of the head, and means for compressing the teat upon the handle.

5. In a device of the character described, a head of cone shape at one end, cup shape at the opposite end and provided with a cutting edge around the edge of the cup, a handle attached in the cup to the head, a tube adapted to slide on said handle and form a cutting block for said cutting edge, and means for compressing the teat against the handle between the cutting edge and the end of the tube.

[Claim 6 not printed in the Gazette.]

1,167,015. WILLOW-TWIG-PEELING MACHINE. ALBERT O. POWELL, Reedsburg, Wis. Filed Oct. 8, 1914. Serial No. 865,695. (Cl. 144—207.)



1. A machine of the character described, including a supporting structure, an endless conveyer mounted transversely at the forward end of the machine, a plurality of twig grippers and scrapers carried thereby, a second conveyer disposed at right angles to the first conveyer and intermediate of the ends of the first conveyer, and a plurality of butt end grippers carried thereby and disposed to operate in consonance with the grippers and scrapers to receive and pull the twigs therefrom during the gripping of the twig therewithin.

2. A machine of the character described, including a supporting structure, an endless conveyer mounted transversely at the forward end of the machine, a plurality of twig grippers and scrapers carried thereby, each of the latter comprising two longitudinally spaced sections flexibly connected together and disposed to be separated during the passage at the respective ends of the conveyer, a second conveyer disposed at right angles to the first conveyer and intermediate of the ends of the first conveyer, and a plurality of butt end grippers carried thereby and disposed to operate in consonance with the grippers and scrapers to receive and pull the twigs therefrom during the gripping of the twig therewithin.

3. A machine of the character described, including a supporting structure, an endless conveyer mounted transversely of and at the forward end of the machine, a plurality of twig grippers and scrapers carried thereby, a second conveyer disposed at right angles to the first conveyer and intermediate of the ends of the first conveyer, a plurality of butt end grippers carried thereby and disposed to operate in consonance with the grippers and scrapers to receive and pull the twigs therefrom during the gripping of the twig therewithin, and two toothed rollers journaled in the supporting structure and parallel to the path of travel of the first conveyer for receiving the butt ends of the twigs to lacerate the bark and remove the same therefrom preparatory to the delivery thereof to grippers of the second conveyer.

4. A machine of the character described, including a supporting structure, an endless conveyer mounted transversely at the forward end of the machine, a plurality of twig grippers and scrapers carried thereby, each of the latter comprising two longitudinally spaced sections flexibly connected together and disposed to be separated during the passage at the respective ends of the conveyer, a second conveyer disposed at right angles to the first conveyer and intermediate of the ends of the first conveyer, a plurality of butt end grippers carried thereby and disposed to operate in consonance with the grippers and scrapers to receive and pull the twigs therefrom during

the gripping of the twigs therewithin, and auxiliary bark removing means disposed to engage the twigs simultaneously with the scraping operation.

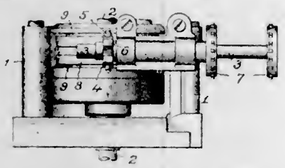
5. A machine of this character, having an endless conveyer, a plurality of twig grippers and scrapers carried thereby, each of the latter including two gripping members, a resilient twig contact member carried by one of said members, and coöperative means carried by both of said members for engaging the twig at opposite sides.

[Claim 6 not printed in the Gazette.]

1,167,016. PROCESS OF REDUCING IRON ORES AND OTHER METALLIC OXIDS TO THE METALLIC STATE. EMIL BRUCE PRATT, Lakewood, Ohio. Filed Dec. 24, 1913. Serial No. 808,576. (Cl. 75—14.)

The process of reducing iron ores to the metallic state consisting of heating said ores within a furnace to the necessary temperature in the presence of hydrogen as the reducing agent, excluding all oxidizing gases, admitting to the furnace only such amounts of carbon as shall give to the reduced metal the desired amount of carbon content, and regulating the temperature of all parts of the charge to cause the desired amount of silica in the ore and in the fluxing material to be reduced and as silicon to combine with the iron, then withdrawing the metal from the furnace in the desired condition.

1,167,017. MECHANISM FOR CONVERTING MOTION. JOHN PROKSA, Chicago, Ill. Filed May 27, 1914. Serial No. 841,254. (Cl. 74—36.)



1. In a mechanism for converting motion, the combination of a driven shaft, a pinion carried by said shaft and formed with flat portions on its perimeter, a cam disk formed with a pair of oppositely inclined holding faces disposed in separated relation and with a spiral operating face intermediate of and connecting said holding faces and adapted for operative engagement with the aforesaid pinion, and a driving shaft carrying said cam disk, the said cam disk having flat circular faces adjacent to its inclined holding faces for bearing engagement with the flat portions of the pinion aforesaid, substantially as set forth.

2. In a mechanism for converting motion, the combination of a driven shaft, a star-wheel carried by said shaft, a cam disk formed with a pair of holding grooves disposed in separated relation and with a spiral operating groove intermediate of and connecting said holding grooves and adapted for operative engagement with the prongs of the star-wheel aforesaid, the holding grooves having lateral passages, and a driving shaft carrying said cam disk, substantially as set forth.

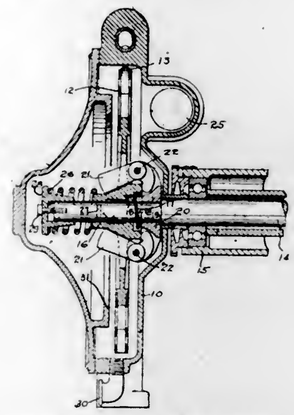
3. In a mechanism for converting motion, the combination of a driven shaft, a star wheel carried by said shaft, a cam disk formed with a pair of peripheral holding grooves disposed in separated relation and with a peripheral spiral operating groove intermediate of and connecting said holding grooves and adapted for operative engagement with the prongs of the star-wheel aforesaid, and driving shaft carrying said cam disk, substantially as set forth.

4. In a mechanism for converting motion, the combination of a driven shaft, a star-wheel carried by said shaft, a cam disk formed with a pair of oppositely inclined holding grooves disposed in separated relation and with a spiral operating groove intermediate of and connecting said holding grooves and adapted for operative engagement with the prongs of the star-wheel aforesaid, and a driving shaft carrying said cam disk, substantially as set forth.

5. In a mechanism for converting motion, the combination of a driven shaft, a star wheel carried by said shaft a cam disk formed with a pair of oppositely inclined peripheral holding grooves disposed in separated relation and with a peripheral spiral operating groove intermediate of and connecting said holding grooves and adapted for operative engagement with the prongs of the star-wheel aforesaid, and a driving shaft carrying said cam disk, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,167,018. TURBINE. ROBERT H. PYLE, Indianapolis, Ind., assignor of one-half to Arthur R. Baxter, Indianapolis, Ind. Filed Aug. 9, 1915. Serial No. 44,636. (Cl. 253—52.)



1. A turbine including a wheel adapted to be driven by steam or other fluid under pressure directed to the periphery thereof and said wheel being mounted so as to be laterally slidable, a nozzle for directing steam or other fluid under pressure tangentially to the periphery of the wheel when in normal position for driving the same, rotatable nonslidable means mounted near the wheel and so as to be rotated coaxially therewith, weighted levers mounted on said means in position to engage the side of the wheel and to be actuated by centrifugal force and when so actuated to give the wheel sliding movement and thus reduce the extent of registry of the periphery of the wheel with the nozzle, and yielding means for returning the wheel to normal position.

2. A turbine including a shaft, a wheel mounted concentric with said shaft and adapted to be driven by steam or other fluid under pressure directed to the periphery thereof and said wheel being mounted so as to be laterally slidable along said shaft, a nozzle for directing steam or other fluid under pressure tangentially to the periphery of the wheel when in normal position for driving the same, means for transmitting power from the wheel to the shaft which permits the sliding movement of the wheel with reference to the shaft, a frame secured on the shaft beside the wheel, governor weighted levers fulcrumed between their ends to said frame and arranged so as to be actuated by centrifugal force and when so actuated to engage and move the wheel slidably along the shaft, and yielding means for returning the wheel to its normal position in opposition to the action of the governor weighted levers.

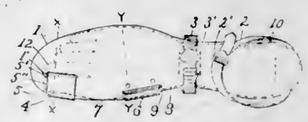
3. A turbine including a shaft to be driven, a turbine wheel adapted to be driven by steam or other fluid under pressure being directed to its periphery and mounted on said shaft so as to be laterally slidable, a nozzle for directing the steam or other fluid under pressure to the periphery of said wheel when in normal position, governor weights adapted to be centrifugally operated for moving said wheel under high speed laterally out of registry with said nozzle, yielding means for resisting such movement of the wheel, and spring means for the transmission of power from the wheel to the shaft which permits such lateral movement of the wheel.

4. A turbine including a shaft to be driven, a turbine wheel adapted to be driven by steam or other fluid under pressure directed to its periphery and mounted on said shaft so as to be laterally slidable, a frame secured to said shaft near said wheel, a nozzle for directing the steam or other fluid under pressure to the periphery of said wheel when in normal position, governor weights carried by said frame so that when actuated they will engage the wheel and slide it laterally out of registry with said nozzle, a spring secured at one end to said frame and extending circumferentially of said shaft and secured at the other end of said wheel for transmitting power from the wheel to the shaft, and a spring for resisting the sliding movement of the wheel.

5. A turbine including a casing, a nozzle in the periphery of the casing for the admission of steam or other fluid under pressure, a turbine wheel within the casing adapted to be driven by steam or other fluid directed to the periphery so as normally to be in registry with said nozzle, speed influenced means for laterally moving said turbine wheel out of registry with said nozzle, a spring tending to resist such sliding movement of the wheel, and a brake connected with the casing in position to be engaged by the wheel when it has been moved laterally out of registry with the nozzle for checking its rotation.

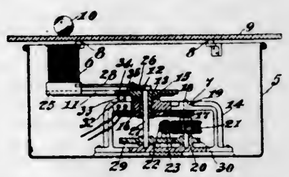
[Claim 6 not printed in the Gazette.]

1,167,019. SURGICAL SANDAL FOR TREATMENT OF BUNIONS. ADAM REED, Bozeman, Mont. Filed Oct. 31, 1914. Serial No. 869,601. (Cl. 128—28.)



A surgical sandal, comprising a sole adapted to cover the entire bottom of the foot of a person, said sole being formed of sole leather and the like; securing means detachably secured on said sole whereby the latter is detachably secured on said foot; a rigid sleeve secured to the toe portion of said sole said sleeve being adapted to receive and hold the great toe of said foot in natural alinement with said sole; holding means for holding said foot against lateral movement on said sole; and changeable pads of varying thicknesses detachably secured on the operative surfaces of said holding means for laterally adjusting the position of said foot.

1,167,020. MAGNETIC DISPLAY DEVICE. WILLIAM G. REUTER, Cincinnati, Ohio. Filed May 18, 1915. Serial No. 29,006. (Cl. 46—49.)



1. In an advertising device the combination of a table, a revolving member beneath the table, a magnet mounted upon the revolving member, means for moving the magnet upon the member and for rotating the member.

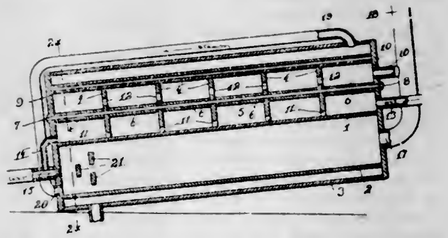
2. In an advertising device the combination of an electromagnet, a follower, a table interposed between the magnet and the follower, a rotatively mounted arm adapted to movably mount the magnet and mechanism adapted to rotate the arm and to move the magnet on the arm, whereby the follower will be caused to move in a circuitous path.

3. In combination in an advertising device, a magnet, a follower, a table interposed between the magnet and the follower, an arm adapted to mount the magnet, a crank arm operatively connected with the magnet and adapted to be rotated relatively to the magnet carrying arm, and means adapted to move the magnet along the arm when the crank arm is rotated with relation to the magnet carrying arm, and means adapted to rotate the arms with relation to each other, whereby the magnet and the follower will be given a circuitous path of travel.

4. An advertising device comprising a magnet, a rotatively mounted arm having guides adapted to reciprocally mount the magnet, a crank arm operatively connected with the magnet and adapted to be rotated relatively to the magnet carrying arm to reciprocate the magnet on the magnet carrying arm, and mechanism adapted to rotate the arms at different speeds.

5. In an advertising device the combination of a magnet, a rotatively mounted arm having ways adapted to reciprocally mount the magnet, a crank arm mounted to rotate concentrically with the magnet carrying arm and operatively connected with the magnet, mechanism adapted to rotate the magnet carrying arm, mechanism adapted to rotate the crank arm at a rate of speed different from that of the magnet carrying arm, and means adapted to drive the mechanisms.

1,167,021. APPARATUS FOR PRODUCING GASEOUS FUEL. FRANCIS M. RITES, Ithaca and Slaterville Springs, N. Y., by Charles H. Gallagher, executor, Ithaca, N. Y., assignor to Perle Clapp Rites, guardian of Marian B. Rites. Original application filed Feb. 5, 1913, Serial No. 746,295. Divided and this application filed May 27, 1915. Serial No. 30,851. (Cl. 48—102.)



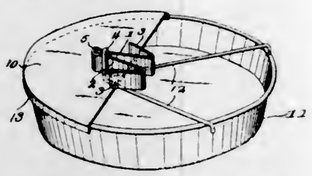
1. An apparatus for producing gaseous fuel from crude oil, consisting of an inclined tube, having a series of parallel partitions extending across it dividing it into chambers, said partitions each having an opening at the bottom to permit the oil to flow downwardly through the chambers, successively from one end of the tube to the other, an opening in the top of each partition to permit the product of distillation to flow upwardly through the chambers from one end of the tube to the other and means for heating the apparatus and means for supplying crude oil thereto, a lower opening at the upper end of the tube for feeding oil and a higher opening at the same end for drawing off the gas.

2. An apparatus for producing gaseous fuel from crude oil, consisting of an inclined tube, having a series of parallel partitions extending across it dividing it into chambers, said partitions each having an opening at the bottom to permit the oil to flow downwardly through the chambers, successively from one end of the tube to the other, an opening in the top of each partition to permit the product of distillation to flow upwardly through the chambers from one end of the tube to the other, means for draining the residue from the tube and burning it under the tube to furnish the heat for vaporizing the oil.

3. An apparatus for producing gaseous fuel from crude oil, consisting of an inclined tube, having a series of parallel partitions extending across it dividing it into chambers, said partitions each having an opening at the bottom to permit the oil to flow downwardly through the chambers, successively from one end of the tube to the other, an

opening in the top of each partition to permit the product of distillation to flow upwardly through the chambers from one end of the tube to the other, means for draining the residue from the tube and burning it under the tube to furnish the heat for vaporizing the oil, said tube being surrounded by a water jacketed cover capable of furnishing steam, means for conducting said steam to the burning means.

1,167,022. TOBACCO-USER'S APPLIANCE. IRVIN RITTENHOUSE, Washington, D. C. Filed Jan. 9, 1915. Serial No. 1,377. (Cl. 131—59.)



1. A cigarette extinguisher comprising a fixed support having a passage therethrough, two normally diverging plates mounted for movement through said passage and stops upon the diverging ends of the plates adapted to be engaged by the fingers holding the end of a cigarette between the plates to move the plates through the support whereby the sides of the passage draw the plates together to extinguish the cigarette.

2. A cigarette extinguisher comprising a fixed support having a passage therethrough, and two normally diverging plates mounted for movement through said passage, said plates having a stop at their apex and stops upon the diverging ends to engage the support and maintain the plates within the passage.

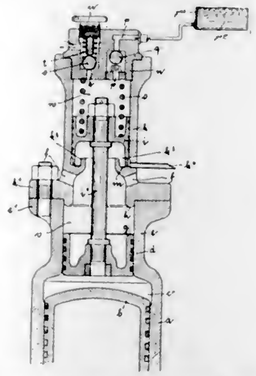
3. A cigarette extinguisher comprising a fixed support having a passage therethrough, and a reciprocal extinguishing member mounted in said passage formed from a strip of resilient metal bent centrally upon itself forming two normally diverging plates, the free ends of the plates bent outward to form stops to be engaged by the fingers holding the end of a cigarette between the plates to move the plate through the support.

4. A cigarette extinguisher comprising a fixed support having a passage therethrough and a reciprocable extinguishing member mounted in said passage formed from a strip of resilient metal bent centrally upon itself forming two normally diverging plates having an enlargement at the bend of the plates and the free ends of said plates bent outward to form stops to engage the support and maintain the plates within the passage.

1,167,023. DEVICE FOR REGULATING THE COMPRESSION-SPACE OF INTERNAL-COMBUSTION ENGINES. WILHELM SCHMIDT, Wernigerode, Germany. Filed Nov. 2, 1915. Serial No. 59,266. (Cl. 123—78.)

1. In an internal combustion engine, in combination with the working cylinder, a regulating piston which constitutes a wall thereof at the compression space, an auxiliary cylinder opening into the compression space and containing the regulating piston, a spring acting upon the regulating piston tending to move said piston toward the working cylinder, a pair of channels opening from the end of the cylinder space benind the regulating piston, one of said channels being connected with a receptacle which contains a liquid and said channel itself containing a non-return valve, and an over-pressure valve in the other channel.

2. In an internal combustion engine, in combination with the working cylinder, a regulating piston which constitutes a wall thereof at the compression space, an auxiliary cylinder opening into the compression space and containing the regulating piston, means for limiting the movement of the regulating piston within its cylinder, a spring acting upon the regulating piston tending to move said piston toward the working cylinder, a pair of channels opening from the end of the cylinder space behind the regulating piston, one of said channels being connected with a receptacle which contains a liquid and said channel itself containing a non-return valve, and an over-pressure valve in the other channel.



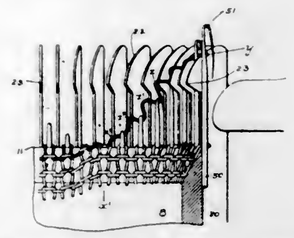
3. In an internal combustion engine, in combination with the working cylinder, a regulating piston which constitutes a wall thereof at the compression space, an auxiliary cylinder opening into the compression space and containing the regulating piston, a control cylinder, a control piston within the control cylinder, means connecting the regulating and control pistons so that they move simultaneously, a spring acting upon the control piston so that the regulating piston tends to move toward the working cylinder, a pair of channels opening from the end of the control cylinder behind the control piston, a non-return valve in one of said channels, an over-pressure valve in the other channel, and a receptacle containing liquid into which the channel containing the non-return valve opens.

4. In an internal combustion engine, in combination with the working cylinder, a regulating piston which constitutes a wall thereof at the compression space, an auxiliary cylinder opening into the compression space and containing the regulating piston, a control cylinder, a control piston within the control cylinder, means connecting the regulating and control pistons so that they move simultaneously, a spring acting upon the control piston so that the regulating piston tends to move toward the working cylinder, an opening from the atmosphere to the rear surface of the regulating piston, a pair of channels opening from the end of the control cylinder behind the control piston, a non-return valve in one of said channels, an over-pressure valve in the other channel, and a receptacle containing liquid into which the channel containing the non-return valve opens.

1,167,024. CIRCULAR SPRING-NEEDLE KNITTING-MACHINE. ROBERT W. SCOTT and ALBERT E. PAGE, Boston, Mass., assignors to Scott & Williams, Incorporated, Philadelphia, Pa., a Corporation of New Jersey. Filed Aug. 14, 1912. Serial No. 715,042. (Cl. 66—21.)

1. In a knitting machine, a needle-carrier and independently movable spring-beard needles therein, means to press the needle beards, a cam carrier, and needle cams thereon, in combination with yarn positioning and sinking instruments fixed with respect to the needle carrier standing between the needles and having downwardly and inwardly sloping faces and inwardly pointed noses projecting between the needles and separated from the verge of the needle carrier by a space greater than that between adjoining needles, and means to supply yarn against the shanks of projected needles.

2. In a knitting machine having independently movable spring-beard needles, needle and cam carriers and knitting cams, a yarn guide, and means to press the needle beards, fixed instruments mounted on the needle carrier having notches wider than the space between said instruments, terminating in noses standing between each pair of needles, and terminal faces sloping toward said noses for guiding and sinking the yarn under the beards and against the shanks of the needles.



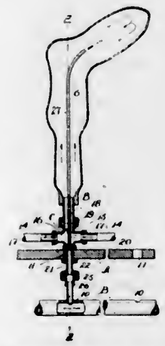
3. In a knitting machine having independently movable spring-beard needles, needle and cam carriers and knitting cams, a yarn guide, and means to press the needle-beards, fixed instruments mounted on the needle carrier, said instruments having notches terminating in noses standing between the needles, and terminal faces sloping toward said noses for sinking and guiding the yarn against the shanks and under the beards of the needles, the said noses being separated from the verge of the needle carrier by a distance greater than the space between said instruments.

4. In a circular knitting machine having independently movable spring-beard needles, needle and cam cylinders and knitting cams, a yarn-guide, and means to press the needle-beards, fixed instruments mounted on the needle carrier, said instruments having internal notches wider than the space between adjacent instruments terminating in noses standing between the needles, and terminal faces sloping inwardly toward said noses for sinking and guiding the yarn against the shanks and under the beards of the needles.

5. In a knitting machine, in combination, a needle-carrier and needles, means to move the needles up and down, a yarn-guide, means to support the yarn against the shanks of the needles, independent beard-pressers, and means to advance said pressers at an angle to the direction of motion of the needles, during the descent of said needles, and means to release said pressers before the needle-beards have completely passed their working faces.

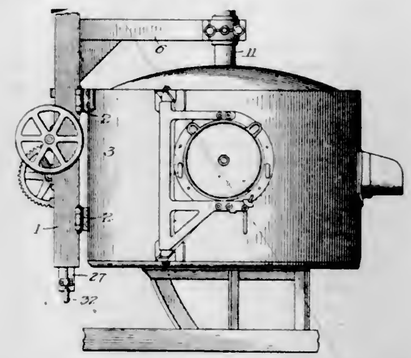
[Claims 6 to 16 not printed in the Gazette.]

1,167,025. HOSIERY-DRYING MECHANISM. DANIEL W. SNYDER, Reading, Pa., assignor to Snyder Metal Drying Form Company, Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 18, 1915. Serial No. 15,269. (Cl. 223—17.)



In a device of the character described, the combination of a hollow former comprising a single piece of thin metal and having a contracted base portion, a cross-shaped fitting provided with an exhaust chamber, exhaust pipes communicating with the oppositely arranged horizontal members of said cross fitting, a ground joint union forming a communication between the fitting and the former, a supporting table having an aperture to which the fitting is attached, a feed pipe for supplying a heating medium to the former, a coupling tube communicating with the feed pipe and the fitting and a separately formed tube extension attached to said coupling tube and passing through the fitting and extending into the former whereby the heating medium may be supplied to the whereby the heating medium may be supplied to the hollow former and exhausted therefrom through the fitting.

1,167,026. ELECTRIC FURNACE. FREDERICK T. SNYDER, Oak Park, Ill. Filed Jan. 19, 1914. Serial No. 812,876. (Cl. 204—64.)



1. The combination with an electric furnace, of an electrode supporting-crane, hinges connecting said crane and furnace and providing two axes of rotation for said crane, said hinges normally holding the crane against rotation, but permitting the crane to be rotated on one of said axes when the hinge mechanism which provides the other axis is rendered inoperative.

2. The combination with an electric furnace, of an electrode supporting-crane, and two independent sets of hinges connecting said crane and furnace, whereby the crane may be swung upon one set of hinges when the other set is disconnected.

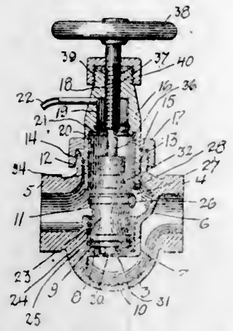
3. In an electric furnace, the combination of a pair of oppositely disposed vertical channel bars constituting guides, an upper and a lower traveler slidably mounted therein, a pair of vertical conductor bars of U-shaped cross-section secured to said travelers, horizontal conductor arms of U-shaped cross-section forming a continuation of said vertical conductor bars, and electrode clamping means carried upon the ends of said vertical arms.

4. In an electric furnace, the combination of a pair of oppositely disposed vertical channel bars constituting guides, slides comprising approximately rectangular shaped loops having their ends fitting in the channels of said guides, rigid conductors secured to said slides, said conductors extending from the bottom to the top of said furnace, and means for raising and lowering said slides.

5. In a tilting electric furnace, the combination with a water-cooled electrode holder at the top of the furnace, said holder being provided with a chamber for the circulation of water, of channel bars constituting conductors mounted to move with said furnace, rigid water pipes extending from the bottom of the furnace to said electrode holder and located within the channel of said conductors, and flexible hose connected to the lower ends of said rigid pipes.

[Claims 6 to 8 not printed in the Gazette.]

1,167,027. DRAIN-VALVE. GEORGE E. STEPHENSON, Selo, Ohio. Filed Feb. 25, 1914. Serial No. 821,000. (Cl. 137—4.)

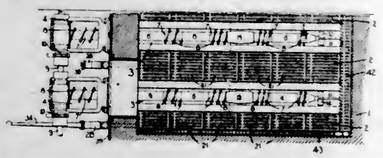


1. In a drain valve, the combination of a casing having an apertured partition, and a cylinder arranged concentrically with the aperture in the partition, a supplemental cylinder in the casing spaced from but alined with said first cylinder, and having at its end a valve seat and beyond this a waste port, a valve comprising two pistons adapted to fit respectively in said alined cylinders and provided with valve washers adapted to alternately engage the partition opening and the upper valve seat, whereby the high pressure fluid is prevented from reaching said waste port in either opening or closing the valve.

2. A drain valve comprising a casing having a perforated dividing partition with a valve seat, and a waste port communicating with the outlet side of the casing, a pair of cylinders below the waste port spaced apart and alined concentrically with said partition valve seat, a valve provided with a contact seat washer and with two postons adapted to fit alternately in said cylinders, and a valve stem attached to the valve by a swivel joint, whereby the valve is adapted to move without revolution into and out of said cylinders, substantially as described.

3. A drain valve comprising a casing provided with a dividing partition having a port and a valve seat and a cylinder concentric with the port, a supplemental casing fitted in said main casing and having a cylinder and valve seat alined with the first named cylinder, and an outlet port above said last named valve seat, a double piston valve having seat contact washers above and below the pistons, and an operating screw stem attached to the valve by a swivel joint, substantially as described.

1,167,028. STOKER. GEORGE E. STEVENS, Everett, Mass., assignor to Clarence E. Alderman, trustee, Newton, Mass. Filed Apr. 29, 1914. Serial No. 835,331. (Cl. 110—44.)



1. In a stoker, the combination with separated grate areas, of coal-delivery troughs between said areas, a non-circular shaft extending longitudinally of each trough, a plurality of sleeves removably mounted thereon, each provided with a screw blade, and plain spacing members on said shaft interposed between said sleeves, the blades of said sleeves having a progressively decreasing pitch from one end to the other of the shaft.

2. In a stoker, the combination with separated grate areas, of coal-delivery troughs between said areas, a shaft extending longitudinally of each trough, a plurality of sleeves on each shaft spaced from each other and provided with screw blades and removably mounted on the shaft, plain spacing members on said shafts interposed between said sleeves, and a center bearing for each shaft secured to the bottom of the trough and free and spaced therefrom at the sides whereby it forms no obstruction to the passage of the coal, said center bearing forming a plain spacing member.

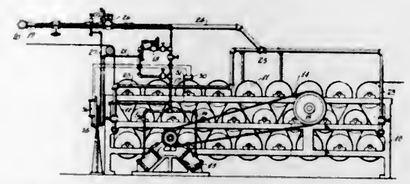
3. In a stoker, the combination with separated grate areas, of troughs between said areas, each having a non-circular opening in its rear end, a screw feed shaft in each trough, and a rear bearing for each shaft loosely fitting the non-circular opening in the trough.

4. In a stoker, the combination with separated grate areas, of troughs between said areas, each having a non-circular opening in its rear end, a screw feed shaft in each trough, a rear bearing for each shaft loosely fitting the non-circular opening in the trough, and a retaining plate secured to the rear end of the trough but spaced therefrom and preventing the bearing block from rearward movement.

5. In a grate structure, the combination with separated grate areas, of troughs between said areas, feed screws in said troughs for feeding coal to the grate areas, side members at each side of the grate structure, and a rear grate extending from one side member to the other, each side member having a seat and an undercut portion, and the rear grate resting on said seat and having a nose to enter the undercut portion.

[Claim 6 not printed in the Gazette.]

1,167,029. REGULATING APPARATUS FOR DRYING SHEETS OF PAPER, CLOTH, AND THE LIKE. COLE STICKLE, Indianapolis, Ind. Filed Oct. 16, 1914. Serial No. 866,989. (Cl. 34—48.)



1. The combination of a machine having steam supply apparatus for simultaneously drying a plurality of sheets of paper, cloth or the like, and means controlled by the temperature of each of said plurality of sheets for regulating the steam pressure in the drying apparatus.

2. The combination of a machine having a steam supply apparatus for simultaneously drying a plurality of sheets of paper, cloth or the like, a thermostat located adjacent each of said plurality of sheets, and means controlled by said thermostat for regulating the steam pressure in the drying apparatus.

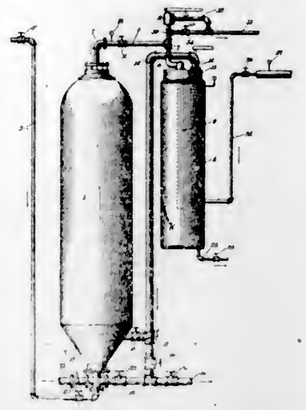
3. The combination of a machine having steam supply apparatus for simultaneously drying a plurality of sheets of paper, cloth or the like, and means controlled by a plurality of thermostats located adjacent said sheets and in parallel, and means controlled by said thermostats for regulating the steam pressure in the drying apparatus.

4. The combination of a machine having steam supply apparatus for simultaneously drying a plurality of sheets of paper, cloth or the like, a thermostat located adjacent each of said plurality of sheets, and a single means controlled by all of said thermostats for regulating the steam pressure in the drying apparatus.

5. A machine for simultaneously drying a plurality of sheets of paper, cloth or the like including a frame, drying cylinders over which said plurality of sheets may pass, means for supplying steam to said drying cylinders, a thermostat secured to the frame over one of said drying cylinders and adjacent to each of said plurality of sheets as it passes over said cylinder, and means controlled by all of said thermostats for regulating the supply of steam to said cylinders.

[Claims 6 to 19 not printed in the Gazette.]

1,167,030. DIGESTER AND PROCESS OF COOKING FIBROUS MATERIAL. JOHN D. TOMPKINS, Valatie, N. Y. Filed Sept. 16, 1913. Serial No. 789,981. (Cl. 92—7.)



1. The combination of a digester, a closed vapor circulating system, and means for positively effecting a circulation of vapors therein.

2. The combination of a digester, a closed vapor circulating system leaving the top of the digester and entering the bottom thereof, and means for causing a positive circulation of vapors therein.

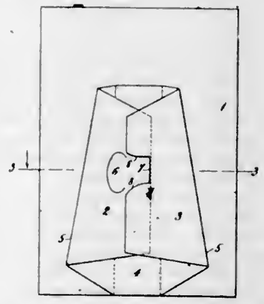
3. The combination with a digester of a closed vapor circulating system leaving the top of the digester above the level of the cooking liquor, and entering the bottom of the digester, and means for producing a positive circulation of vapors therein.

4. The combination with a digester, a closed vapor circulating system leaving the top of the digester and entering the bottom thereof, means for causing a positive circulation of vapors therein, and means for heating vapors while passing through said system.

5. The combination with a digester, a closed vapor circulating system leaving the top of the digester and entering the bottom thereof, means for causing a positive circulation of vapors therein, and means for heating vapors while passing through said system, and means for removing water from said vapors while passing through said system.

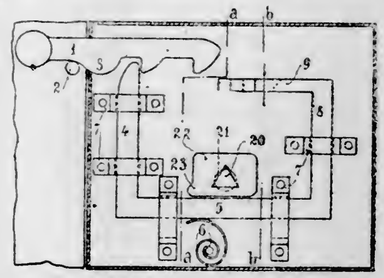
[Claims 6 to 18 not printed in the Gazette.]

1,167,031. DISPLAY-STAND. SIMON B. ULLRICH, Malden, Mass., assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 3, 1913. Serial No. 804,348. (Cl. 40—150.)



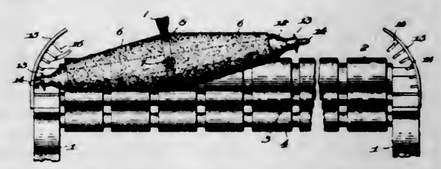
A display stand having a display front, supporting members carried thereby and movable to occupy a rearwardly extending upright position angularly disposed with relation to one another and meeting along their rear edge portions, or a collapsed position with relation to one another and to said front, one of said members having a laterally-yielding, inwardly-extending tongue struck therefrom at a point inwardly removed from the rear edge of said member, the other of said members having in it a slot with inward and side edges, said slot being so located that when the members are occupying their extended upright position the tongue will bear frictionally against the outer side of the slotted member forward of the slot in it, the inward edge of the slot will bear against the under side of the tongue and the side edges of the slot against the respective sides of the tongue, substantially as described.

1,167,032. SLIDING-DOOR LOCK. FRANCESCO VITALI and GIOVANNI PIZZORNO, Olgiate Olona, Italy. Filed Aug. 28, 1913. Serial No. 787,068. (Cl. 70—23.)



A seal lock for cars comprising the combination of a latch on the door, with a lock including a spring controlled frame positively guided within a casing and having two suitably shaped free ends which engage the latch of the door and the latch of a hinge cover, respectively, a cam adapted to move the frame, means for operating said cam, a key hole in said casing, pins on said casing to receive a keyhole cover and penetrating holes in the cover substantially as described.

1,167,033. CLEARER FOR DRAWING-ROLLS. PHILIP C. WARE, ALBERT GASTONGUAY, CHARLES J. LINDERSON, JAMES E. FARRELL, and WILLIAM SANFORD WOODBURY, Newburyport, Mass. Filed Jan. 9, 1915. Serial No. 1,423. (Cl. 118—26.)



1. In a machine of the class described, the combination of the rolls, a double cone clearer adapted to rest upon and travel longitudinally of said rolls, a member secured to the clearer for rotative movement therewith, and means engaged by said member at the end of the longitudinal movement of the clearer and effective by rotation of said member to positively change the inclination of the clearer.

2. In a machine of the class described, the combination of the rolls, a double cone clearer provided with a weight movable longitudinally of the clearer, a toothed device secured to the clearer to rotate therewith and means engaged by the rotating toothed device at the end of the clearer travel to reverse the inclination of the clearer.

3. In a machine of the class described, the combination of the rolls, a double cone clearer provided with a weight adapted to gravitate toward the lower end of the clearer and hold said end depressed while the clearer travels

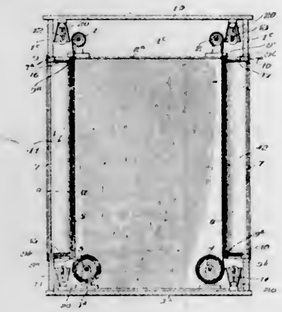
longitudinally of the rolls in one direction, a member secured to rotate with the clearer, and a device at the end of the clearer travel to be engaged by said member and by its rotative movement to positively lift the depressed end of the clearer and cause the weight to gravitate toward the opposite end of the clearer.

4. In a machine of the class described, the combination of the rolls, a double cone clearer provided with a shiftable weight adapted to maintain the clearer in tilted position, a pin or spur wheel carried at each end of the clearer, and means adapted to be engaged by the pin or spur wheel at the end of its travel and by rotative movement of said pin or spur wheel reverse the tilted position of the clearer.

5. In a machine of the class described, the combination of the rolls, a double cone clearer therefor, a pin wheel mounted at each end of the clearer, and a ladder device mounted for engagement by said pin wheel as the latter rotates at each end of the clearer travel to effect a reversal in the tilted position of the clearer.

[Claims 6 to 11 not printed in the Gazette.]

1,167,034. ADVERTISING-SIGN. ALBERT E. WHITCOMB, Rochester, N. Y. Filed Dec. 11, 1912. Serial No. 736,186. (Cl. 40—130.)



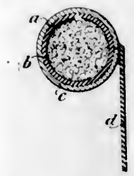
1. An illuminated sign comprising a chamber having a view opening, a sign element through which light cannot pass arranged in said chamber and visible through the view opening, a light deflecting prism glass arranged between the view opening and the sign element to throw light rays on the face of the sign exposed through the view opening, and a lamp arranged to throw its rays on the prism glass.

2. An illuminating sign comprising a wall provided with an opening spaced from the top and the bottom of the wall, a chamber supported on the wall to project inwardly and provided with openings in its top and bottom, a sign element closing the inner side of the chamber, light deflecting prism glasses closing the openings in the top and the bottom of the chamber and throwing light rays on the sign, and lamps arranged above and below the chamber on the inner side of the wall.

3. A sign comprising a wall provided with an opening, a frame arranged about the opening to provide a chamber, said frame being provided with openings in its top and its bottom wall, a glass panel closing the outer side of the chamber, a sign element at the inner side of the chamber, light deflecting prism glasses arranged to close the openings in the top and the bottom wall of the frame and to deflect light onto the sign, and lamps arranged above and below the frame to direct light onto the prism glasses.

4. An illuminated sign comprising a wall provided with an opening, a frame surrounding the opening and having openings in its top and its bottom wall, a sign element at the inner part of the frame, light deflecting prism glasses closing the frame openings, lamps above and below the frame, and concave plates arranged within the frame at opposite vertical sides of the sign element.

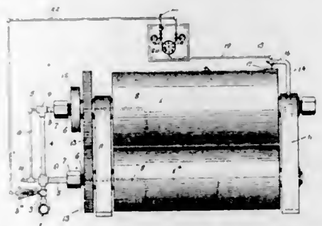
1,167,035. CONSTRUCTION OF THE BODIES OF MOTOR-CARS AND OTHER VEHICLES. ALFRED WILKINSON, Ilkley, England. Filed May 4, 1915. Serial No. 25,871. (Cl. 21—7.)



1. In tubular metal frames for vehicle bodies, the combination of relatively hard tubes, relatively soft sheathing thereon, and relatively soft panels attached to the sheathing.

2. In tubular metal frames for vehicle bodies, the combination of relatively hard metal tubes, relatively soft metal sheathing thereon, and relatively soft metal panels attached to the sheathing by fusion of metals.

1,167,036. THERMOSTATIC REGULATION FOR HEATED ROLLERS. GEORGE S. WITHAM, Sr., Hudson Falls, and ALFRED ROESCH, Brooklyn, N. Y., assignors to Charles J. Tagliabue Manufacturing Co., Brooklyn, N. Y., a Corporation of New York. Original application filed Jan. 15, 1913, Serial No. 742,119. Divided and this application filed Aug. 11, 1914. Serial No. 856,178. (Cl. 236—8.)



1. In a device for the purpose specified a revoluble calender roller, means for heating the same, a sensitive thermostatic member adapted to be affected by the temperature of said roller, means for supporting said sensitive member at or near the surface of said roller, said support being adapted to prevent rotation of the sensitive member with said roller, and means controlled by said sensitive member for controlling the flow of heat to said roller.

2. In a device for the purpose specified a revoluble calender roller, supports therefor, means for heating said roller, a sensitive thermostatic member adapted to be affected by the temperature of said roller, means connected with said supports for supporting said sensitive member at or near the surfaces of said roller, and for preventing the rotation thereof with said roller, and means controlled by said sensitive member for controlling the flow of heat to said roller.

3. In a device for the purpose specified a revoluble calender roller, means for heating the same with a fluid, a sensitive thermostatic member in a fixed position substantially in contact with the surface of said roller and adapted to be affected by the temperature thereof and means controlled by said sensitive member for controlling the flow of heating fluid to said roller whereby the roller is maintained at a uniform temperature.

4. In a device for the purpose specified a revoluble calender roller, means for heating the same with a fluid, a sensitive thermostatic member adapted to be affected by the temperature of the roller, means for supporting said sensitive member in a fixed position adjacent to the surface of said roller and means controlled by said sensitive member for controlling the flow of heating fluid to said roller whereby the roller is maintained at a uniform temperature.

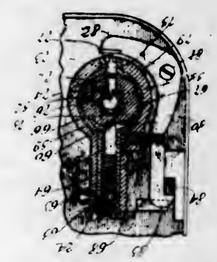
5. In a device for the purpose specified, a revoluble calender roller, bearing blocks therefor, means for heating said roller with a fluid, a sensitive thermostatic member adjacent to and adapted to be affected by the temperature of the roller at its surface, means secured to one of said bearing blocks for supporting said sensitive member in position to be affected by the surface temperature of the roller and adapted to prevent rotation thereof with the roller and means controlled by said sensitive member for controlling the flow of heating fluid to said roller, whereby the roller is maintained at a uniform temperature.

1,167,037. SOCKET-SHELL. LAURITZ W. ANDERSEN, Waterbury, Conn. Filed Feb. 24, 1915. Serial No. 10,320. (Cl. 173—362.)



A socket shell comprising a cap having an annular reentrant portion adapted to provide a seat for fiber insulation, a body portion into which the lower end of the cap fits and a clamping ring adapted to connect the cap and body portions together.

1,167,038. CIRCUIT-CONTROLLER SWITCH AND CASING THEREFOR. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed May 19, 1914. Serial No. 839,579. (Cl. 175—282.)



1. A controller, comprising a base part; a removable hood, therefor; a switch, therein; a second switch; a removable operating handle, therefor; means, for locking the first mentioned switch and hood; and means, operated by said removable handle for disabling said locking means.

2. A controller, comprising a base part; a removable hood, therefor; a switch, therein; a second switch; a removable handle, therefor; means, for locking the first mentioned switch to prevent its movement; and means, operated by the attachment of said removable handle for disabling said locking means.

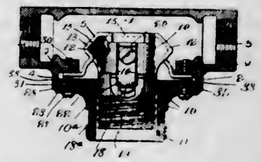
3. A controller, comprising a base part; a switch, carried by said base part; a second switch; a removable handle, therefor; means, for locking the first mentioned switch to prevent its movement; and means, operated by the attachment of said removable handle to disable said locking means.

4. The combination with a base part; of a controller, carried thereby; a second controller, concentric therewith; a spindle, for operating said second controller positioned concentrically within the first mentioned controller; a handle, for operating the first mentioned controller; a removable handle, positioned concentrically within the first mentioned handle for operating said second controller; means, when the first mentioned controller is in "off" position for locking the same against oscillation; and means, operated by said removable handle for disabling said locking means.

5. The combination with a base part; of a removable hood, therefor; a controller drum, carried thereby; a second controller drum, concentric therewith; a spindle, for operating said second controller drum positioned concentrically within the first mentioned controller drum; a handle, for operating the first mentioned controller drum; a removable handle, positioned concentrically within the first mentioned handle for operating said second controller drum; means, for locking the first mentioned controller drum against oscillation and said hood from removal; and means, operated by said removable handle for disabling said locking means.

[Claims 6 and 7 not printed in the Gazette.]

1,167,039. ELECTRIC-CONDUIT FITTING AND ELECTRICAL APPLIANCE. CARL H. BISSELL, Syracuse, N. Y., and DANIEL C. GIDLEY, Boston, Mass., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 28, 1911. Serial No. 657,377. (Cl. 173—331.)



1. The combination of an electric conduit fitting comprising a hollow body having an opening in one side thereof, a support extending across the opening and secured to the fitting at opposite sides of such opening, and having its intermediate portion formed with resilient clamping means, and an electrical appliance comprising a base extending through the opening and being detachably engaged by said resilient clamping means, substantially as and for the purpose described.

2. The combination with a body having an opening, of an electrical appliance comprising a base extending through the opening and out of holding engagement therewith, and a support extending crosswise of the opening, and including a bottom against which the base rests, the support also having resilient clamping means for engaging the sides of the base, substantially as and for the purpose specified.

3. The combination with a body having a chamber therein and an opening through one side leading to the chamber, of an electrical appliance extending through said opening and into the chamber and provided at opposite sides with outwardly facing shoulders, a support including ends for engaging with the body at opposite sides of said opening and an intermediate portion within the chamber and adapted to be sprung over said shoulders for securing the support to the appliance, and means for securing the ends of the support to the body, substantially as and for the purpose specified.

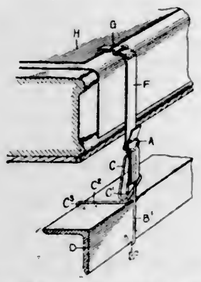
4. The combination with a body having a chamber therein and an opening through one side leading through the chamber, of an electrical appliance including a base of insulation and a metallic receiving shell mounted on the outer side of said base, and means for supporting the base in suspended position within the chamber, said means comprising an intermediate part sprung over the bottom portion of the base, and ends engaging the body at opposite sides of said opening, and means for retaining the ends in place, substantially as and for the purposes set forth.

5. The combination with a body having an opening, and an electrical appliance carried by the body and including a base extending into the opening, and a support secured to the body and extending diametrically crosswise of the opening and secured at its opposite ends to the body, the intermediate portion of the support being depressed

forming a bottom against which the base rests, and resilient side portions for engaging opposite sides of the base, substantially as and for the purpose specified.

[Claims 6 to 21 not printed in the Gazette.]

1,167,040. BEDCLOTHES-CLAMP. RALPH V. BLAKE, Yonkers, N. Y. Filed Mar. 25, 1915. Serial No. 16,891. (Cl. 5—22.)



1. A bedclothes clamp, comprising a pair of shanks, a loop connecting the shanks with each other at their upper ends, and clamping arms at the lower ends of the shanks and extending approximately at a right angle to each other, the clamping arms having angular terminals and being adapted to clampingly engage a bedstead rail, a ring adapted to draw said clamping arms into clamping position and engaging the said shanks, and a strap attached at one end to the said ring and extending through the said loop.

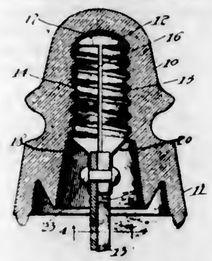
2. A bedclothes clamp made of a single piece of resilient material bent to form a loop, shanks extending integrally from the ends of the said loop, one of the said shanks being straight and the other being inclined relatively to the straight shank and being provided with a return bent member, clamping arms extending integrally, one forming the lower portion of the said straight shank and the other extending from the said return bent member, the said arms being disposed approximately at a right angle one relative to the other, a ring engaging the said straight shank and the said return bent member, and a strap attached to the said ring and extending through the said loop.

3. A bedclothes clamp comprising a pair of flexibly connected shanks arranged in an angle to each other to engage a bed rail, a ring engaging both of said shanks and arranged when tilted at one angle relatively thereto to draw said shanks into the bed rail clamping position, a strap arranged to pass through said ring and between it and one of said shanks whereby a strain on said strap will draw said ring into the aforesaid angular position for the aforesaid purpose, said ring also frictionally engaging said strap to hold the same adjustably in position against slippage between it and said shank.

4. A bedclothes clamp comprising a pair of shanks with means for connecting the shanks with each other at their upper ends whereby said shanks may be moved to and fro relatively to each other, bed rail clamping arms at the lower ends of said shanks, said arms extending at an angle to each other and arranged to engage a bed rail, a ring surrounding said shanks and adapted when tilted at an angle thereto to draw said clamping arms into clamping position, said ring also providing a strap passage between it and one of the adjacent shanks, whereby said ring may also operate as a frictional retaining means for a strap.

1,167,041. INSULATOR-SUPPORT. RALPH C. BOOZER, Chicago, Ill., assignor to Joslyn Manufacturing & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 8, 1914. Serial No. 843,717. (Cl. 173—321.)

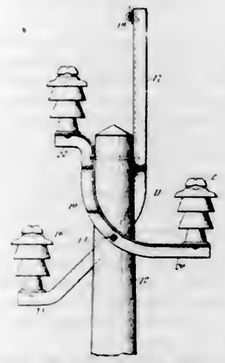
1. An insulator support, comprising a supporting channel shaped post, two independent semi-cylindrical threaded sections, the lower ends of the said sections being formed inwardly to contact with opposite sides of the channel post, lips formed on the edges of the inwardly extending ends of the said sections, and means for rigidly connecting the lower ends of said sections in spaced relation to an end of the supporting post, the upper ends of the said sections being spaced away from each other, substantially as and for the purpose set forth.



2. An insulator support, comprising a supporting channel shaped post, two independent semi-cylindrical threaded sections, the lower ends of the said sections being formed inwardly to contact with opposite sides of the channel post, lips formed on the edges of the inwardly extending ends of the said sections, a tab formed on the lower end of one of the said sections and extending into the channel of the said post and means for rigidly connecting the lower ends of said sections in spaced relation to an end of the supporting post, the upper ends of the said sections being spaced away from each other, substantially as and for the purpose set forth.

3. An insulator support, comprising a supporting channel shaped post, two independent semi-cylindrical threaded sections, the lower ends of the said sections being transversely arched and formed inwardly to contact with opposite sides of the channel post, lips formed on the edges of the inwardly extending ends of the said sections, a tab formed on the lower end of one of the said sections and extending into the channel of the said post and means for rigidly connecting the lower ends of said sections in spaced relation to an end of the supporting post, the upper ends of the said sections being spaced away from each other, substantially as and for the purpose set forth.

1,167,042. INSULATOR-SUPPORT. RALPH C. BOOZER, Chicago, Ill., assignor to Joslyn Manufacturing & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 11, 1914. Serial No. 850,335. (Cl. 173—321.)



1. An insulator support comprising a member having a horizontal part at each of its ends for reception of an insulator pin, and an intermediate diagonal part for attachment to a pole, and another member having a horizontal part for reception of an insulator pin, a diagonal part for attachment to a pole and a vertical part for extension above the pole.

2. An insulator support comprising a member having a horizontal part at each of its ends for reception of an insulator, and an intermediate diagonal part for attachment to a pole, and another member having a horizontal part for reception of the insulator pin, a diagonal part for attachment to a pole, and a vertical part for extension above the pole, said members being perforated through said diagonal parts whereby both members may be secured to a pole by a single bolt.

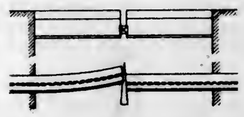
3. An insulator support comprising a member having an intermediate diagonal part, the terminal ends whereof are adapted to receive an insulator pin, and a J-shaped member, the lower terminal end whereof is adapted to receive an insulator pin, the upper vertical end of the latter being adapted to extend above the pole, said members adapted to cross on the pole and to be secured thereto by a single bolt.

4. An insulator support comprising a member having a horizontal part at each end, for reception of an insulator pin, and an intermediate, diagonal part for attachment to a pole and another member having a horizontal part for reception of an insulator pin, a diagonal part for attachment to a pole and a vertical part for extension above the pole, said members being perforated through said diagonal parts whereby both members may be secured to a pole by a single bolt, and both members laterally deflected above said attaching parts toward the center of the pole at right angles to the said point of attachment and perforated, whereby another bolt, taking through the pole at substantially 90 degrees from the first mentioned bolt, will secure both members to the pole at the latter point of attachment.

5. A device of the character described comprising a pair of insulator supporting members, one having an intermediate diagonal portion, said members adapted to be positioned on opposite sides of a pole and attaching means for securing the members to the pole at the point of their intersections.

[Claims 6 to 8 not printed in the Gazette.]

1,167,043. PROCESS OF WELDING RAILS OR THE LIKE. WALTER BREWITT, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 8, 1913. Serial No. 799,892. (Cl. 78—92.)

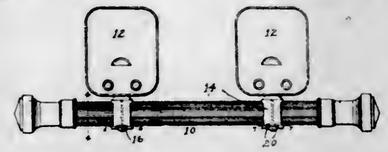


1. A process of welding rails or the like consisting in pressing the ends of unmovably held rails back for an amount corresponding to their contraction after welding, inserting a piece of metal into the space, allowing the rail-ends to return sufficiently to grip said piece of metal owing to their elastic tension and then welding the rail-ends together.

2. A process of welding rails or the like consisting in pressing the ends of unmovably held rails back for an amount corresponding to their contraction after welding by forcing a wedge into the space, applying suitable means for producing a straight-line movement of the tread of the rails, inserting a piece of metal above the wedge, allowing the rail-ends to return sufficiently to grip said piece of metal owing to their elastic tension by loosening the wedge and then welding the rail-ends together.

3. The process of welding rails or the like, consisting in pressing the ends of the rails back for an amount corresponding to their contraction after welding and holding the rails in such position by means of a piece of metal inserted between the rail ends, and then welding said piece of metal together with the rail ends.

1,167,044. CASKET-HANDLE. JULIUS E. BROOKS, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 30, 1914. Serial No. 864,276. (Cl. 16—103.)



1. In a casket handle, the combination of a member having a socket of polygonal outline, a polygonal bar extending into said socket, and a fastening device driven through one wall of said socket and interposed between another wall of said socket and the opposing portion of the bar, said fastening device having spaced bearing portions engaging the bar at different points; substantially as described.

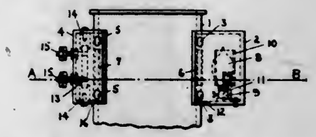
2. In a casket handle, the combination of an arm having a socket of polygonal outline, a polygonal bar in said socket, and a fastening device interposed between one wall of the socket and the opposing wall of the bar and having portions bearing on the bar at different points in the length of the latter; substantially as described.

3. In a casket handle, the combination of an arm having a socket of polygonal outline, a polygonal bar in said socket, and a fastening device interposed between one wall of the socket and the opposing wall of the bar and having portions bearing on the bar at different points in the length of the latter, said fastening device being directed transversely to the bar; substantially as described.

4. In a casket handle, the combination of a supporting arm having a polygonal socket, said socket constructed of soft metal with a central reinforce embedded therein, a sheet metal bar or tube of polygonal cross-section extending through the socket of the arm, and a staple for securing the bar to the arm, driven through one wall of the polygonal socket with its leg portions disposed on opposite sides of said central reinforcing piece, said staple extending substantially across said socket opening and engaging the bar at different points in the length of the latter; substantialy as described.

5. In a casket handle, the combination of a member having a polygonal socket, a polygonal bar entering said socket, and a staple driven through one wall of the socket and having its arms or branches extending across and frictionally engaged with one wall of the bar; substantially as described.

1,167,045. ELECTRICAL OPERATING AND INDICATING MEANS. HOWARD E. CADE, Pencoyd, and WILLIAM F. COCHRANE, Philadelphia, Pa., assignors to Pioneer Smoke Indicator Company, Wilmington, Del., a Corporation of Delaware. Filed June 17, 1914. Serial No. 845,548. (Cl. 177—351.)



1. An apparatus for indicating the density of smoke including an electric indicator device showing a plurality of indications proportionate to the different density of the smoke, a stack having oppositely located registering openings, a source of light adjacent one of said openings, a device sensitive to varying light rays projected from said source of light, and electrical connections, including a source of electrical energy, between said indicator, cell and source of light.

2. An apparatus for indicating the density of smoke including an electric indicator device showing a plurality

of indications proportionate to the different density of the smoke, a stack having oppositely located registering openings, a light projecting device located adjacent one of said openings, a selenium cell located adjacent the other of said openings, and adapted to receive light rays from said light projecting device, and electrical connections, including a source of electrical energy, between said indicator, cell and source of light.

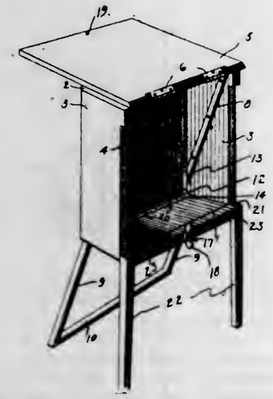
3. An apparatus for indicating the density of smoke including an electric indicator device showing a plurality of indications proportionate to the different density of the smoke, a stack having oppositely located registering openings, a lamp housing adjacent one of said openings, and a cell housing located diametrically opposite said lamp housing and over the other opening, a source of light in said lamp housing, a selenium cell in said cell housing, and electrical connections, including a source of electrical energy, between said indicator, cell and source of light.

4. An apparatus for indicating the density of smoke including an electric indicator device showing a plurality of indications proportionate to the different density of the smoke, a stack having oppositely located registering openings, a lamp housing adjacent one of said openings, and a cell housing located diametrically opposite said lamp housing and over the other opening, each of said housings having openings in their bottom wall to provide a draft therein and thereby prevent smoke entering the same, a source of light in said lamp housing, a reflector for projecting light from said lamp through the openings in the stack, a selenium cell adapted to receive light rays projected from said reflector, and electrical connections, including a source of electrical energy, between said indicator, cell, and lamp.

5. An apparatus for indicating the density of smoke including an electric indicator device showing a plurality of indications proportionate to the different density of the smoke, a stack having oppositely located registering openings, a boxing located at one of said openings, a lamp in said boxing, a reflector for projecting light rays from said lamp across the stack to the opposite opening, another boxing located opposite said first boxing and adjacent one of said openings, a selenium cell in said second boxing and located before the opening in the stack to receive light rays projected from the reflector, and electrical connections including a source of electrical energy, between said indicator, cell, and lamp.

[Claims 6 and 7 not printed in the Gazette.]

1,167,046. CONVERTIBLE CASE OR STAND. JAMES WINTHROP CAMPBELL, South Kingston, R. I. Filed Mar. 25, 1915. Serial No. 17,033. (Cl. 190—11.)



1. In a convertible device of the class described, a containing structure, and a supporting structure therefor including a section operatively connected to move into and out of said container and a section operatively connected with said container and movable thereagainst to form a continuation of certain walls thereof.

2. In a convertible device of the class described, a containing structure, and a supporting structure therefor including a section operatively connected with said container and movable thereagainst to form a part of certain walls thereof.

3. In a convertible device of the class described, a containing structure, a supporting structure therefor including a section having an effective supporting position and having a non-supporting position against said container and forming a continuation of certain walls thereof, and a cover section movably connected with said container and having a supported position when open and a covering position over said supporting section when closed whereby to hold said section in its non-supporting position.

4. In a supporting structure for a convertible case of the class described, a section having an effective supporting position relative to said case and having a non-supporting position substantially wholly inclosed in said case, and a section operatively connected with said case and having an effective supporting position and having a non-supporting position closely adjacent certain walls of said case and forming a continuation of said walls, and a cover section for said case movably connected thereto and having a supported position on said case when open and having an operative covering position over said last named supporting section when closed whereby to hold said section in non-supporting position.

5. In a combined carrying case and stand, a containing structure, comprising top, bottom, side, and front and rear walls, said front wall movably connected to an adjacent wall and providing a cover section arranged to be supported upon said top wall when open, and a supporting structure for said container including a section having a guided travel in said coutainer and substantially wholly inclosed therein when in non-supporting position and a section operatively connected with said container and arranged to be held in non-supporting position by said cover when said cover is closed and the device is converted into a carrying case.

[Claims 6 to 18 not printed in the Gazette.]

1,167,047. PUMP. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Feb. 19, 1914. Serial No. 819,697. (Cl. 103—43.)



1. In a pump, the combination of a pipe, a shaft therein, a plurality of runners mounted on said shaft at intervals therealong adapted to rotate therewith, and a plurality of bearings between said runners for said shaft mounted in said pipe, lubricating passages being provided through the casing surrounding the shaft between the runners and through that part of the shaft passing through the runners for the purpose of conducting lubricant to the bearings.

2. In a pump, the combination of a pump casing for conducting water out of a well, a shaft, pump runners mounted on said shaft, bearings for said shaft, and a casing surrounding the shaft for conducting lubricant to the shaft bearings, those parts of the shaft passing through the bearings being provided with openings therethrough communicating with the casing on the exterior of the shaft at opposite sides of the bearings.

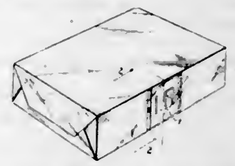
3. In a pump, the combination of a pump casing for conducting water out of a well, a shaft, pump runners mounted on said shaft, bearings for said shaft, and means for conducting lubricant to the bearings, comprising a casing for conducting the lubricant about the shaft for a portion of its length, and an opening or openings through the shaft for conducting the lubricant the remainder of the distance.

4. In a pump, the combination of a pump casing for conducting water out of a well, a shaft, pump runners mounted on said shaft, bearings for said shaft, and means for conducting lubricant to the bearings, comprising longitudinally-extending openings through the shaft at the bearings, and a casing about said shaft with which said openings communicate at opposite sides of the bearings for conducting the lubricant the remainder of the distance.

5. In a pump, the combination of a pipe, a shaft therein, a plurality of runners mounted on said shaft, bearings for said shaft mounted in said pipe, casings surrounding said shaft between said runners, and means for conducting a lubricant supply from the casing above each runner to the casing below said runner, comprising a longitudinal passage extending through the runner communicating with the interior of said casings.

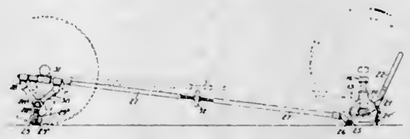
[Claims 6 to 13 not printed in the Gazette.]

1,167,048. MOISTURE-PROOF PACKAGE. BASIL A. CONDAX, New York, N. Y. Filed May 25, 1914. Serial No. 840,830. (Cl. 229—87.)



In a moisture proof package an inner container, a stamp thereon, a carton surrounding the inner container on all sides provided with an aperture the same size as and registering with the stamp and an outer wrapper of transparent water-proof material through which the stamp is visible.

1,167,049. AUTOMOBILE-JACK. FRED O. COOLEY and ALFRED J. MILLIGAN, Duluth, Minn. Filed Nov. 27, 1914. Serial No. 874,196. (Cl. 254—89.)



1. In a jack of the character described, rear jack stands spaced transversely, a shaft having bearings in said stands, eccentric disks on said shaft, means for turning the shaft, plungers engaging the eccentric disks, and rising or falling with the turning of the latter, front jack elements adapted to be tilted in the vertical plane, rods connected with said elements to tilt the same, and means to actuate the rods in unison with the turning of the eccentric disks and the raising and lowering of the plungers.

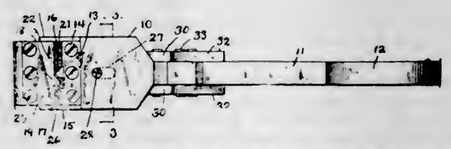
2. In a jack of the character described, means for jacking one axle of a vehicle, comprising vertically slidable elements, tiltable elements for jacking the other axle of the vehicle, means for raising and lowering the said vertically slidable elements, and co-acting connections to tilt said tiltable elements in unison with the said vertically slidable elements.

3. In a jack of the character described, means for jacking one axle of a vehicle, comprising a vertically movable plunger, a rock shaft, means for raising or lowering the plunger by the turning of said shaft, a rockable element rocking in response to the turning of said shaft, a tiltable co-acting element for the other axle of the vehicle, and a rod connecting the said tiltable element and said rockable element.

4. In a jack of the character described, means for jacking one axle of the vehicle, an arm mounted to rock when the said jacking means are actuated, a rod connected at one end with said rock arm, means for jacking the other end of the vehicle, said latter means comprising a wheeled structure carried by the rod at the end opposite the rock arm to be rocked therewith, and an axle rest on said wheeled structure and slidable relatively thereto in a direction toward or from the rocker arm.

5. In a jack of the character described, jacks for one axle, a shaft extending between the jacks, means for actuating the said jacks by the turning of the shaft, front jacks, means for actuating the front jacks in unison with the rear jacks, and means for turning the said shaft, said means comprising a ratchet wheel on the shaft, a lever loose on the shaft, a pawl on the lever adapted to engage the ratchet wheel, and a holding dog adapted also to engage the ratchet wheel.

1,167,050. WIRE-TIGHTENER. ABRAHAM B. COX, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,278. (Cl. 140—106.)



1. A device of the kind described comprising opposed jaws moving back and forth with relation to each other and shaped to impart a crimp or corrugation to a wire, the crimping means being constructed so as to permit the slipping of the wire during the crimping operation, and the sliding of the tool along the wire as it is operated, and means for opening and closing the jaws.

2. A device of the kind described comprising opposed jaws slidable with relation to each other and adapted to impart a lateral crimp or corrugation to a wire, said crimping means being disposed so as to permit the sliding of the tool along the wire, and means operating in connection with the crimping device to act on the formed crimps or corrugations to regulate their height.

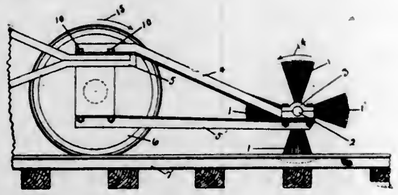
3. A device of the kind described comprising opposed jaws slidable with relation to each other, and having loosely intermeshing bosses to crimp a wire, said bosses being shaped to permit the wire to slip between them as they close upon it, means for operating the jaws, and means operating in conjunction with the jaws and following the crimping means whereby the height of the crimps or corrugations is determined.

4. A device of the kind described comprising opposed jaws sliding back and forth with relation to each other, said jaws having loosely intermeshing bosses or projections and opposed walls following the bosses to engage the crimps previously made by the bosses, and means for operating the jaws.

5. A device of the kind described comprising a fixed jaw having projecting bosses and an abutting wall at one side of the bosses, a sliding jaw opposite the fixed jaw, having bosses loosely intermeshing with the bosses of the fixed jaw and a crimp engaging wall opposite the corresponding part of the fixed jaw, and means for operating the fixed jaw.

[Claims 6 and 7 not printed in the Gazette.]

1,167,051. GRASS-CUTTER. JOHN S. DOAK, Fort Worth, Tex. Filed July 18, 1913. Serial No. 779,790. Renewed Sept. 13, 1915. Serial No. 50,524. (Cl. 104—65.)

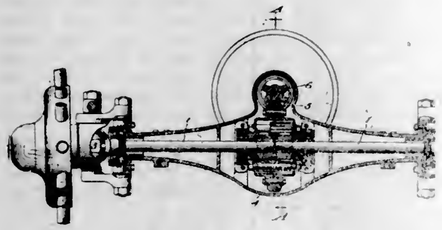


1. The combination with a railway car truck, of a grass cutter carried thereby, said cutter comprising a rotary shaft extending horizontally at substantial right angles to the track and projecting beyond the same at each side thereof, bearings in which said shaft is journaled, arms attached to the upper and lower sides of the truck frame for positioning said bearings in front of the truck and over the track, a plurality of tufts of stiff radially disposed wires carried by said shaft on each side of said bearings and striking on each side of the rails, and projecting below the tops of the railway rails, and a crossed belt directly connecting said shaft with a truck axle, whereby the former is driven by the latter.

2. A grass cutter comprising a shaft, tufts of stiff wire projecting radially therefrom and permanently secured to said shaft and bearings for said shaft, arms for carrying said bearings attached to a railway truck and offset inwardly to bring said bearings directly over the rails of the track and means for driving said shaft consisting of a pulley rigid with said shaft, a pulley rigid with the car axle and a belt running on said pulleys.

3. The combination with a railway car truck, of a grass cutter carried thereby, said cutter comprising a rotary shaft, bearings for said shaft, arms attached to the upper and lower sides of the truck and off-set inwardly for carrying said bearings directly over the railway rails, a plurality of tufts of relative stiff resilient radially disposed wires carried by said shaft on each side of said bearings and reaching below the tops of the rails of the railway track, and means for driving said shaft in front of the truck consisting of a pulley rigid with a car axle, a pulley rigid with said shaft, and a crossed belt engaging said pulleys and driven by the pulley on the car axle.

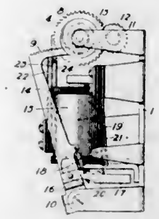
1,167,052. POWER-TRANSMISSION MECHANISM FOR VEHICLES. WILLIAM H. DOUGLAS, Belleville, N. J., assignor to Healey & Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1911. Serial No. 654,998. (Cl. 21—90.)



1. An axle housing, a differential gearing therein including a power transmission shaft journaled in the housing, a centrally located hollow lug projecting rearwardly from the bottom of said housing, a motor supporting bar inserted in said lug, a motor strapped to and above said bar, a motor shaft in alinement with the power transmission shaft, and a rotatably yielding driving connection between the two shafts.

2. An axle housing, a differential gearing therein including a worm shaft having fixed and thrust antifriction bearings at its rear end and an antifriction bearing at its front end, said front bearing being adapted to slide longitudinally in the housing, a centrally located hollow lug projecting rearwardly from the bottom of said housing, a motor supporting bar inserted in said lug, a motor strapped to and above said bar, a motor shaft in alinement with the worm shaft, and a rotatably yielding driving connection between the two shafts.

1,167,053. TELEPHONE SYSTEM. ALFRED H. DYSON, Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 31, 1914. Serial No. 828,585. (Cl. 179—18.)



1. In a telephone system, the combination with a telephone line, of an interrupter mechanism at the subscriber's station of said line, a switch at the central office, a controlling relay for said switch under the control of said substation interrupter and a circuit changing device acting at a predetermined lapse of time after the first deënergization of said controlling relay to change the circuit controlled by said relay.

2. In a telephone system, the combination with a telephone line, of an interrupter mechanism at the subscriber's station of said line, a switch at the central office, a primary controlling magnet, a secondary controlling magnet for said switch, a controlling relay for said magnets under the control of said substation interrupter and a circuit changing device acting at a predetermined time after the first deënergization of said controlling relay to switch the circuit controlled by said relay from one of said controlling magnets to the other.

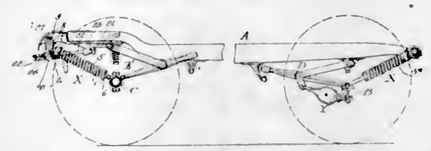
3. In a telephone system, the combination with a selector switch, a set of movable contacts for said switch and a plurality of sets of stationary contacts, an electromagnet for causing the step-by-step movement of the movable contacts to various sets of stationary contacts, a relay for controlling said electromagnet, and a circuit changer including an escapement mechanism also controlled by said relay and adapted to remove said electromagnet from the control of said relay at a predetermined time after the first control of said magnet by said relay.

4. In an automatic telephone system, the combination with a selector switch, of a primary controlling magnet and a secondary controlling magnet for said switch, a relay for controlling said primary magnet, a circuit changing device for bringing the secondary magnet into action at a predetermined time after the first action of the primary magnet.

5. In an automatic telephone system, the combination with a selector switch, of a primary controlling magnet and a releasing magnet for said switch, a relay initially causing the completion of the circuit of the primary magnet each time it releases its armatures, and a switching device acting after a predetermined time from the first release of the armatures of said relay to place the releasing magnet under the control of said relay so as to return the selector switch to its normal position if said relay is at that time in its unactuated condition.

[Claim 6 not printed in the Gazette.]

1,167,054. SPRING SUSPENSION FOR VEHICLES. WILLIAM E. EASTMAN, Winchester, Mass. Filed Feb. 2, 1915. Serial No. 5,783. (Cl. 267—43.)

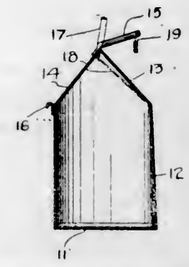


1. In a vehicle having a compensating spring such as described: a depending arm pivoted to the vehicle, and through suitable means pivotally connected one end of said coil spring; an abutment fixed in relation to the vehicle body; a threaded tension rod whose longitudinal movement in one direction is limited by said abutment and whose rotary movement causes the arm and hence the coil-spring to become more or less compressed.

2. In a vehicle having a compensating spring such as described:—a depending arm pivoted to the vehicle, and, through suitable means, pivotally connected with one end of said coil spring; a stop block fixed to the vehicle body and having a spherical abutting surface; a threaded tension rod pivotally connected with said arm and passing through said stop block, a head fixed to the end of said tension rod and abutting said spherical surface on said block; whereby the desired minimum amount of tension may be given to said spring and maintained.

3. In a vehicle having an axle movable toward and away from the body of the vehicle, and held transversely of the body:—a compensating spring comprising a socket member, a plunger member longitudinally and movably mounted in the socket member; and a compressible coil spring supported by said members; and pivotal means for connecting said socket member and the plunger member respectively to the axle and the vehicle; said socket member serving as an oil receptacle, and said plunger member having a longitudinal channel connecting said receptacle, and an opening which is on the surface of said plunger, but which always lies within the socket member; all designed to insure perfect lubrication between the plunger, and socket members.

1,167,055. RECEPTACLE FOR REFUSE AND THE LIKE. ALBERT EDWARDS, New York, N. Y., assignor, by direct and mesne assignments, of one-half to Reginald C. Tuffin and one-half to James J. McDermott, Jr. Filed Dec. 15, 1914. Serial No. 877,347. (Cl. 220—115.)



1. In a receptacle for refuse and the like adapted to be tilted to empty the same, the combination with a body portion, of an inwardly opening closure pivotally secured to said body portion, and a counterweight rigidly secured to said closure above its pivotal point, said counterweight being adapted when said receptacle is held in one position to hold said closure in its closed position, and when said receptacle is held in another position to hold said closure in its open position.

2. In a receptacle for refuse and the like adapted to be tilted to empty the same, the combination with a body portion, of an inwardly opening closure pivotally secured to said body portion, and a counterweight rigidly secured to said closure above its pivotal point, said counterweight being provided with a hanging weight and being adapted when said receptacle is held in one position to hold said closure in its closed position, and when said receptacle is held in another position to hold said closure in its open position.

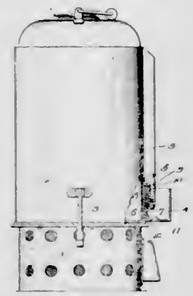
3. In a receptacle for refuse and the like adapted to be tilted to empty the same, the combination with a body portion, provided with a flat surface, of an inwardly opening closure pivotally secured to said body portion near said flat surface, and adapted when in its open position to rest against the inner side of said surface, said closure being provided with a counterweight rigidly secured thereto, said counterweight being adapted when said receptacle is held in one position to hold said closure in its closed position, and when said receptacle is held in another position to hold said closure in its open position.

4. In a receptacle for refuse and the like adapted to be tilted to empty the same, the combination with a body portion, provided with a flat surface, of an inwardly opening closure pivotally secured to said body portion near said flat surface, and adapted when in its open position to rest against the inner side of said surface, said closure being provided with a counterweight rigidly secured thereto, said counterweight being provided with a hanging weight and being adapted when said receptacle is held in one position to hold said closure in its closed position, and when said receptacle is held in another position to hold said closure in its opon position.

5. In a receptacle for refuse and the like adapted to be tilted to empty the same, the combination with a body portion, of an inwardly opening closure pivotally secured to said body portion, and a counterweight rigidly secured to said closure, said counterweight being adapted when said receptacle is held in one position to hold said closure in its closed position and when said receptacle is held in another position and said counterweight moved forward to hold said closure in its open position.

[Claims 6 to 10 not printed in the Gazette.]

1,167,056. DRINKING-FOUNTAIN FOR POULTRY. FRANK ENOS, Jr., Norwich, Conn., assignor to The Norwich Automatic Feeder Company, New London, Conn., a Corporation of Connecticut. Original application filed Aug. 12, 1914, Serial No. 856,465. Divided and this application filed Jan. 4, 1915. Serial No. 439. (Cl. 119—77.)

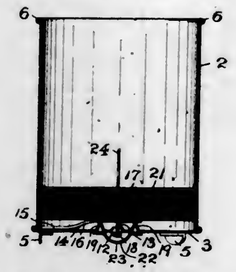


1. In combination with a water tank having a base rib, a drinking cup which seats on the rib, a duct leading from said tank into the cup and reduced at its lower end to provide a narrow space between said tank and duct, and a spring secured within this space to the wall of the duct and having oppositely disposed free parts which engage the rear wall of the cup to press the latter against the tank and hold the cup on the rib.

2. In combination with a water tank having a seat, a drinking cup engaged with said seat, a spring to engage the cup to force the same against the tank, said spring having a central tongue and end tongues at its top, and

means to engage the end tongues so as to allow the central tongue and the lower end of the spring to engage the cup.

1,167,057. EGG BOILING OR CODDLING UTENSIL. FREDERICK A. FELDKAMP, Newark, N. J. Filed June 24, 1913. Serial No. 775,459. (Cl. 161—16.)



1. An egg-boiling or coddling utensil comprising a receptacle adapted to receive a graduated quantity of boiling water, an outflow opening in the bottom of said receptacle, said opening being formed with a valve-seat, a valve-disk normally seated upon said valve-seat, a valve-stem extending from said valve-disk, a spring connected with said valve-stem for seating said valve-disk, means coöperating with said spring-controlled valve-stem for unseating the normally closed valve-disk, and a cup-shaped flow-regulating element upon the outer surface of the bottom of said receptacle, said regulating element being provided with a perforation.

2. An egg-boiling or coddling utensil comprising a receptacle adapted to receive a graduated quantity of boiling water, an outflow opening in the bottom of said receptacle, said opening being formed with a valve-seat, a valve-disk normally seated upon said valve-seat, a valve-stem extending from said valve-disk, a spring connected with said valve-stem for seating said valve-disk, an egg-receiving tray coöperating with said spring-controlled valve-stem for unseating the normally closed valve-disk, and a cup-shaped flow-regulating element upon the outer surface of the bottom of said receptacle, said regulating element being provided with a perforation.

3. An egg-boiling or coddling utensil comprising a receptacle adapted to receive a graduated quantity of boiling water, an opening in the bottom of said receptacle, a tubular outflow element within said receptacle having its one end-portion extending into and secured in said opening, and formed in said end-portion with a valve-seat, a valve-disk normally seated upon said valve-seat, a valve-stem extending from said valve-disk into and through the said tubular outflow element, a spring encircling a portion of said tubular element and the valve-stem for seating said valve-disk, means coöperating with said spring-controlled valve-stem for unseating the normally closed valve-disk, and a cup-shaped flow-regulating element upon the outer surface of the bottom of said receptacle, said regulating element being provided with a perforation.

4. An egg-boiling or coddling utensil comprising a receptacle adapted to receive a graduated quantity of boiling water, an opening in the bottom of said receptacle, a tubular outflow element within said receptacle having its one end-portion extending into and secured in said opening, and formed in said end-portion with a valve-seat, a valve-disk normally seated upon said valve-seat, a valve-stem extending from said valve-disk into and through the said tubular outflow element, a spring encircling a portion of said tubular element and the valve-stem for seating said valve-disk, an egg-receiving tray coöperating with said spring-controlled valve-stem for unseating the normally closed valve-disk, and a cup-shaped flow-regulating element upon the outer surface of the bottom of said receptacle, said regulating element being provided with a perforation.

1,167,058. CAPE. ISAAC FINBERG, West Kensington, London, England, assignor to Joseph Bloom, New York, N. Y. Filed Feb. 15, 1915. Serial No. 8,183. (Cl. 2—60.)



1. A cape consisting of a body portion formed out of a single sheet of material having extensions at each end thereof, said extensions being cut or slit adjacent the body portion, thereby forming wings arranged to be turned under and secured together along the edges thereof to form sleeves, said body portion being also provided with a cut out portion to receive the neck, securing devices carried by said body portion and located adjacent said cut out portion, and a hood secured to the said body portion and provided with securing devices arranged in line with those already mentioned to permit the opening of said hood below the face aperture of the latter and thus facilitate the turning back of said hood.

2. A cape consisting of a body portion formed out of a single sheet of material and adapted to protect the wearer's back as well as the corresponding front portion of his body, the said sheet having extensions at each end thereof, said extensions being cut or slit adjacent the body portion, thereby forming wings arranged to be turned under and secured together along the edges thereof to form sleeves, a hood consisting of a plurality of sections or members secured together throughout a portion of adjacent edges, the remainder of said edges being secured to said cape at the cut out portion, the free edges of said hood members being arranged to form an opening for the face, and fastening devices carried by each hood member.

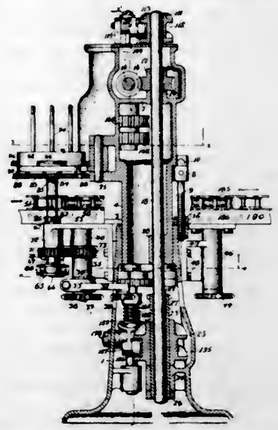
3. A cape provided with arms consisting of a single piece of material and adapted to protect the upper part of the wearer's back, in combination with a hood attached thereto about the neck, said cape and hood being provided with a continuous line of opening and fastening devices extending from the lower edge of the face aperture of the hood to the lower edge of the front part of the cape.

1,167,059. CAN-END CURLING, CAN ASSEMBLING AND SEAMING MACHINE. CHARLES E. FORRY, Oakland, Cal., assignor, by mesne assignments, to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed July 11, 1910. Serial No. 571,315. (Cl. 113—1.)

1. A machine of the character described, comprising upper and lower frame sections, means supported by said upper section for curling can ends and for seaming said can ends on to can bodies, and means supported by said lower section for transporting can bodies, for clamping said can bodies for bringing said can bodies into assembled relation with said can ends, and for releasing and discharging the seamed cans, said upper section being vertically adjustable with reference to said lower section, substantially as described.

2. A machine of the character described, comprising upper and lower frame sections, means supported by said upper section for curling can ends and for seaming said can ends on to can bodies, and means supported by said lower section for clamping said can bodies, said upper section being vertically adjustable with reference to said lower section, substantially as described.

3. In a machine of the character described, the combination of a lower frame section having suitable guideway, an upper frame section slidable vertically in said guideway, means supported by the lower frame section for conveying can bodies to the place to be seamed, means supported by said upper frame section for curling can ends and seaming said can ends upon said can bodies, and means for adjustably supporting said upper frame section in said guideway, substantially as described.

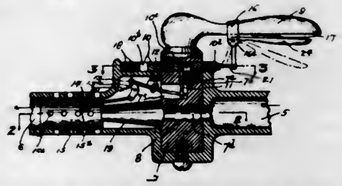


4. In a machine of the character described, the combination of upper and lower frame sections, the upper section being adjustable vertically relative to the lower section, a lifting device for can bodies, supported by the lower section, a plate pivotally attached to the upper section having an aperture adapted to register vertically with said can lifting device, and means affixed to said plate for curling can ends, substantially as described.

5. In a machine of the character described, the combination of upper and lower frame sections, the upper section being adjustable vertically relative to the lower section, a lifting device for can bodies, supported by the lower section, a plate pivotally attached to the upper section having an aperture adapted to register vertically with said can lifting device, means rotatably affixed to said plate for curling can ends, and a pusher actuated by said means adapted to seat a curled can end in said aperture, substantially as described.

[Claims 6 to 89 not printed in the Gazette.]

1,167,060. GAS-VALVE. JULIEN A. GEHRUNG, New York, N. Y. Filed Apr. 22, 1915. Serial No. 23,041. (Cl. 158—119.)



1. In a device of the class described, a gas supply means, an air supply means, a valve controlling the supply of gas, a valve controlling the supply of air, said last mentioned valve being normally open, a manually operable locking means for said gas supply control valve, and means effecting an operative connection between said manually operable locking means and air supply control valve whereby release of the locking means will cause a closing of the air supply valve.

2. In a device of the class described, a gas supply means, an air supply means, a valve controlling the supply of gas, said valve having an offset handle, a normally open valve controlling the supply of air, locking means for said gas supply control valve, a lever for operating such locking means, such lever being fulcrumed upon the said handle, and means effecting an operative connection between said locking means and air supply control valve whereby release of the locking means will cause a closing of the air supply valve.

3. In a device of the class described, a gas supply means, an air supply means, a valve controlling the supply of gas, a normally open valve controlling the supply of air, means for locking said gas supply control valve in different supply positions, and means effecting an operative connection between the said locking means and air control valve irrespective of the supply position of the latter whereby release of the locking means will cause a closing of the air supply valve.

4. In a device of the class described, a gas supply means, an air supply means, a valve controlling the supply of air, a rotary valve controlling the supply of gas, such valve having a slot therein, a cam-bar slidably mounted in said slot, a device with which said cam-bar is adapted to engage to lock said gas supply valve against rotation, means whereby said cam-bar may be reciprocated to lock or release said rotary valve and means effecting an operative connection between said cam-bar and air supply valve whereby the latter is caused to open or close upon reciprocation of the cam-bar in opposite directions.

5. In a device of the class described, a gas supply means, an air supply means, a valve controlling the supply of air, a rotary valve controlling the supply of gas, such valve having a transverse slot and an axial hole therein, a cam-bar slidably mounted in said transverse slot, a device with which said cam-bar is adapted to engage to lock said gas supply valve against rotation, means whereby said cam-bar may be reciprocated to lock or release said rotary valve, and means effecting an operative connection between said cam-bar and air supply valve whereby the latter is caused to open or close upon reciprocation of the cam-bar in opposite directions, including a thrust rod slidable in said axial hole and engaging the cam portion of said cam-bar.

[Claims 6 to 13 not printed in the Gazette.]

1,167,061. PROCESS OF MANUFACTURING BARIUM CHLORID. EINAR VANG GRANÖ, Leonia, N. J. Filed May 4, 1915. Serial No. 25,700. (Cl. 23—13.)

1. The process which consists in subjecting a solution of barium sulfid to the action of chlorin gas conducted into said solution from an external source, then permitting the same to react while constantly removing from the zone of influence of said chlorin gas, the sulfur resulting from said reaction, and then separately recovering the barium chlorid and sulfur from said mixture.

2. In the process of making barium chlorid and sulfur the steps which consist in conducting chlorin gas into a concentrated solution of barium sulfid while maintaining the solution at a temperature sufficiently high to prevent crystallization of the barium hydroxid from said solution.

1,167,062. DENTAL SALIVA-EJECTOR. FERDINAND GROSHANS, Baltimore, Md. Filed Oct. 21, 1914. Serial No. 867,752. (Cl. 32—33.)

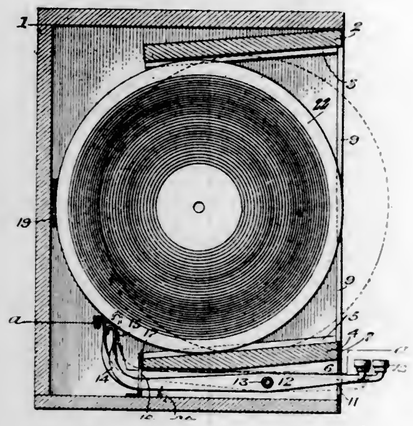


1. In a saliva ejector for the mouth the combination with a tube having a passage therethrough said tube

having a bend therein of a hollow body detachably connected to the bent end of the tube said body flaring in a direction away from its attaching end and provided with circumferential perforations around its larger end and a head detachably connected to the larger flared end of the hollow body beneath the perforations.

2. In a saliva ejector for the mouth, the combination with a tube having a bend at one end and a passage therethrough, of a hollow bell-shaped body having its wall flaring outwardly and at the smaller end said body having interior screw-threads to detachably connect with the bent-end of the tube and at the larger end said body having exterior screw-threads and perforations which latter are immediately above the exterior screw-threads, and a head having a cavity in its upper side with an upwardly-curved annular guard rim that terminates just beneath the perforations in the body said guard rim of the head being provided with interior screw-threads to detachably engage the exterior threads on the larger end of the body.

1,167,063. PHONOGRAPHIC-DISK-RECORD CABINET. ALFRED H. HAAG, Newport News, Va. Filed Apr. 22, 1915. Serial No. 23,022. (Cl. 211—16.)



1. A phonographic disk record cabinet, comprising a casing provided with tracks for the reception of the disk records, a front plate having slots in alinement with said tracks to permit the insertion and removal of the records and a plurality of one piece arms each of which is pivotally mounted in suitable relation to its superimposed track, with its fulcrum in advance of its center of gravity and the center of its record when the latter is in its rearmost position whereby each of said arms drops by gravity upon being released and each arm having one end projecting forwardly through its slot in said plate and its opposite inner terminal extended upwardly and juxtaposed to and in alinement with the record to be ejected.

2. A phonographic disk record cabinet, comprising a casing provided with upper and lower tracks for the reception of the disk records, a front plate provided with a series of slots, a plurality of arms each having an end projecting through one of said slots, a rod suitably supported upon a fulcrum within the casing beneath the lower tracks and in advance of its center of gravity and the center of the records and upon which fulcrum said arms are pivoted whereby said arms drop by gravity upon being released and a rear plate within the casing having a series of alining slots through each of which one of the arms extends and is guided, the inner terminal of each of said arms being deflected upwardly and juxtaposed to and in alinement with the record to be ejected.

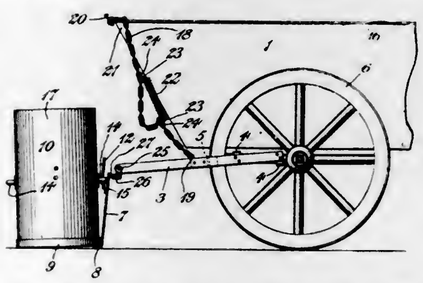
3. A phonographic disk record cabinet, comprising a casing provided with a plurality of tracks for the reception of the disk records, a front plate having slots in alinement with said tracks, the edges of the metal at the slots being bent inwardly to form stiffening flanges, and the distance between the walls of the slots at their centers being greater than at the upper and lower portions, and means for ejecting a record from said tracks.

4. A phonographic disk record cabinet, comprising a casing provided with lower, inclined tracks for the reception of the disk records, and a plurality of unitary ejector levers, each of which is pivotally mounted below said tracks, and each of said levers having its fulcrum in advance of its center of gravity, whereby said ejector levers drop by gravity upon being released, and each of said levers having one end projecting forwardly from said casing for convenient manipulation and having its opposite inner rear terminal deflected toward and juxtaposed to the record to be ejected.

5. A phonographic disk record cabinet, comprising a casing provided with lower, inclined tracks for the reception of the disk records, and a plurality of unitary ejector levers, each of which is pivotally mounted below said tracks, and each of said levers having its fulcrum in advance of its center of gravity, whereby said ejector levers drop by gravity upon being released, and each of said levers having one end projecting forwardly from said casing for convenient manipulation and having its opposite inner rear terminal deflected toward and juxtaposed to the record to be ejected, the front portion of said casing being provided with a plurality of stationary slots which are in alinement with the record tracks, the distance between the walls of the slots at their centers being greater than at the upper and lower portions of said slots, whereby marring of the record grooves is prevented.

[Claim 6 not printed in the Gazette.]

1,167,064. LIFTING DEVICE. JOHN HARRIGAN, New York, N. Y. Filed Aug. 8, 1913. Serial No. 783,671. (Cl. 214—1.)



1. In combination with a receptacle having a handle, of a member capable of detachable engagement with the spokes of a vehicle wheel, and means carried by the member to engage the base of the receptacle and the handle thereof.

2. A device of the character described comprising a lever, reversely arranged members adapted to engage the spoke of a wheel of a vehicle, and engaging means carried by the lever.

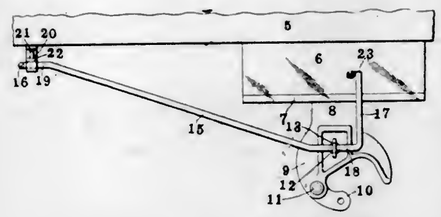
3. A device of the character described having a member provided with spaced oppositely arranged jaws adapted, when said member is adjusted in one position, to be freely engaged at opposite sides of a part of a vehicle wheel, one of said jaws having an overhanging angular portion adapted, when said member is turned, for clamping engagement over such part of the wheel to lock the member in place thereon, and load supporting means carried by said member.

4. A device of the character described having a member provided with means for detachable engagement with the spokes of a vehicle wheel, and a load supporting member pivotally mounted upon said first-named member.

5. A device of the character described having a member provided at one end with means for detachable engagement with the spokes of a vehicle wheel, and having its opposite end extended and adapted to project beyond the wheel rim, and a load supporting member pivotally mounted upon said first-named member.

[Claims 6 to 14 not printed in the Gazette.]

1,167,065. RELEASING DEVICE FOR CAR-COUPLINGS. EDWARD W. HARTOUGH, St. Louis, Mo. Filed Jan. 16, 1915. Serial No. 2,510. (Cl. 213—59.)

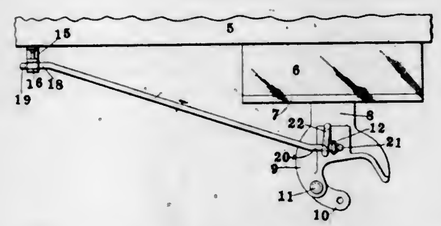


1. A releasing device for car couplers, comprising a bearing adjacent to the side of the car, a bearing independent of the coupler head, a rod extending directly from said first named bearing to the locking pins of the coupler and unsupported between said points, and an arm extending to said second bearing from a portion of the rod beyond said pin.

2. A releasing device for car couplers, comprising a rod bent at one end to form a handle and at the other to form a fulcrum arm, said rod engaging with the releasing pin at a point between said handle and arm and having bearings independent of the coupler head.

3. The combination with coupler releasing mechanism, of an actuating device therefor, said device comprising a rod having a bent portion to which the coupler releasing mechanism is connected, and a support for the rod on each side of said bent portion, both of said supports being independent of the coupler head, said rod being free to move transversely with relation to one of said supports.

1,167,066. RELEASING DEVICE FOR CAR-COUPLINGS. EDWARD W. HARTOUGH, St. Louis, Mo. Filed Jan. 25, 1915. Serial No. 4,104. (Cl. 213—59.)

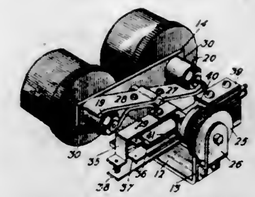


1. In a releasing device for car couplers, the combination with a rod pivotally attached to the car, of a cam located on said rod and coöperating with the upper face of the coupler between the coupler pin and the outer bearing, said cam being actuated by said rod for lifting the locking pin of the coupler.

2. In a releasing device for car couplers, the combination with a rod pivotally attached to the car, of a cam formed of a bent portion of the rod, said cam being located between the coupler pin and the outer bearing, said cam being adapted to lift the locking pin of the coupler.

3. In a releasing device for car couplers, the combination with a rod pivotally attached to the car and engaging with the locking pin of the coupler, of a cam formed by a substantially circular loop of the rod adjacent to the releasing pin, said cam operating to raise said pin.

1,167,067. ELECTROMAGNETIC DEVICE. RALPH NADING HILL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 12, 1913. Serial No. 806,250. (Cl. 175—336.)



1. In an electromagnetic device, the combination of an electromagnet having a polar extension on the core thereof, a pivoted armature mounted adjacent one side of said polar extension, a non-magnetic stop bar mounted on said armature and extending along the other side of said polar extension, and a spring normally holding said armature away from and said stop bar against said polar extension.

2. In an electromagnetic device, the combination of an electromagnet having a polar extension on the core thereof, an armature pivotally mounted in operative relation to said polar extension, a spring normally holding said armature away from said polar extension whereby an air-gap is formed therebetween, and an adjustable eccentric collar encircling said polar extension for varying the air-gap between said extension and said armature including means for holding said collar in adjusted position.

3. In an electromagnetic device, the combination of a pair of energizing windings, cores therefor each having a polar extension, an S-shaped armature pivotally mounted between said polar extensions, a spring normally holding said armature away from said polar extensions whereby air gaps are formed between said armature and said polar extensions, an adjustable eccentric collar encircling each of said polar extensions for varying the air gaps between said extensions and said armature, and means for holding said collars in adjusted position.

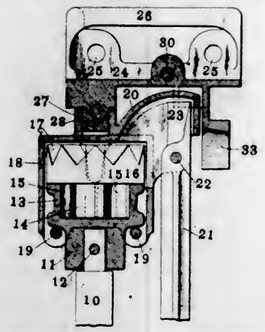
4. In an electromagnetic device, the combination of a pair of energizing windings, cores therefor each having a polar extension, an S-shaped armature pivotally mounted between said polar extensions, a spring normally holding said armature away from said polar extensions whereby air gaps are formed between said armature and said polar extensions, an adjustable eccentric collar encircling each of said polar extensions for varying the air gaps between said extensions and said armature, means for holding said collars in adjusted position, and a stop bar mounted on said armature and normally held against one of said collars to control the distance at which said armature is normally held from said polar extensions.

1,167,068. BRAKE MECHANISM. LOUIS A. HOERR, St. Louis, Mo. Filed Dec. 18, 1913. Serial No. 807,413. (Cl. 188—57.)

1. In a brake mechanism, the combination with a brake staff, of a wheel for actuating said staff, and an operative handle movable by a single continuous movement through an angle of substantially 90° to establish operative connection directly between it and the wheel, the engaging surfaces connecting the handle and the wheel being so arranged as to move into operative position as the handle moves to operative position regardless of the relative position of the surfaces when disengaged.

2. In a brake mechanism for railway cars, the combination with a brake staff, of a toothed wheel for actuating said staff, and a pivoted operative handle adapted to engage directly with the wheel by a pivotal movement of the handle through an angle of substantially 90°, the coöperative surfaces of said handle and wheel being so arranged as to be capable of being brought into engagement with any relative position of the wheel and handle.

3. In a brake mechanism for railway cars, the combination with a brake staff, of a toothed wheel for actuating said staff and provided on its face with upwardly projected teeth, and a lever having an end adapted to be moved into engagement with the teeth on the said wheel by a movement through an angle of substantially 90°.

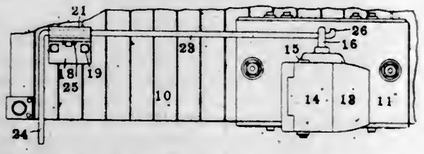


4. In a brake mechanism for railway cars, the combination with a brake staff, of a wheel for actuating said staff and provided with upwardly extending V-shaped teeth, and a lever having a V-shaped end adapted to be moved into and out of engagement with the teeth of said wheel.

5. In a brake mechanism for railway cars, the combination with a brake staff, of a wheel for actuating said staff, said wheel being provided on its face with teeth, the sides of which are inclined in opposite directions to a transverse horizontal plane passing through the axis of the staff, said sides intersecting in said plane.

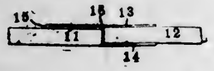
[Claims 6 to 18 not printed in the Gazette.]

1,167,069. RELEASING DEVICE FOR CAR-COUPLINGS. LOUIS A. HOERR, St. Louis, Mo. Filed Feb. 3, 1915. Serial No. 5,837. (Cl. 43—59.)



In a releasing device for car couplers, the combination with a rod normally connected with the locking pin of the coupler, of a bearing in which said rod is pivoted, said bearing forming a fulcrum for lifting the pin by the rotation of the rod on its longitudinal axis, said bearing also permitting movement of the rod in a substantially horizontal plane to compensate for the relative movement of the coupler and the car, said rod being arranged to allow lateral movement of the coupler.

1,167,070. HINGE OF FLEXIBLE MATERIAL. LOUIS A. HOERR, St. Louis, Mo. Filed Feb. 13, 1915. Serial No. 8,095. (Cl. 16—11.)

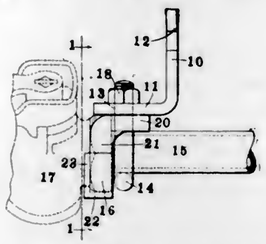


1. A hinge comprising two members to be connected, and two ply of flexible material secured to said members, one of said members having its edge and both sides adjacent thereto covered by said flexible material.

2. A hinge comprising two members to be connected, and two ply of flexible material secured together along the line of flexure of the hinge, said flexible material covering the edges of each of said members and the sides adjacent thereto.

3. A hinge comprising two members to be connected, two ply of flexible material stitched together along the line of flexure of the hinge, and nails securing said textile material to two sides and one edge of one of said members.

1,167,071. ANGLE-COCK HOLDER. LOUIS A. HOERR, St. Louis, Mo. Filed May 28, 1915. Serial No. 30,904. (Cl. 188—8.)



1. In an angle cock holder, the combination of a base plate, with a member engaging said base plate and the train pipe to hold one face of the angle cock adjacent to the base plate, and a filler block arranged between said base plate and train pipe.

2. In an angle cock holder, the combination with a base plate, of a U-bolt adapted to surround the train pipe and hold one face of the angle cock adjacent to said base plate, and a filler block arranged between the train pipe and the base plate.

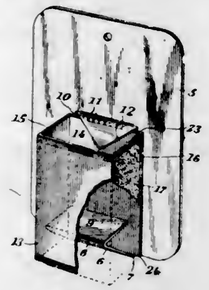
3. In an angle cock holder, the combination with a base plate, of a member engaging with said base plate and the train pipe, a filler block arranged between said base plate and the train pipe, and means carried by said filler block for engaging the head of the angle cock to prevent its rotation.

4. In an angle cock holder, the combination with a base plate, of a member engaging said base plate and the train pipe, a filler block arranged between said base plate and train pipe, and a pocket for the head of the angle cock carried by said filler block.

5. In an angle cock holder, the combination with a base plate, of a U-bolt adapted to surround the train pipe, a filler block arranged between the train pipe and the base plate, and a pocket for the head of the angle cock carried by said filler block.

[Claims 6 to 8 not printed in the Gazette.]

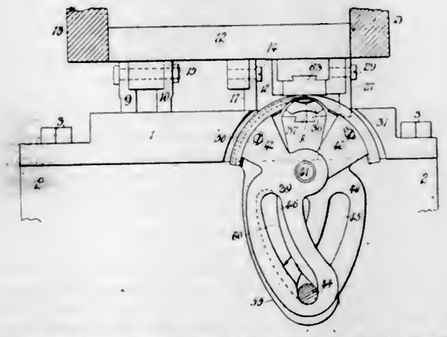
1,167,072. MATCH-BOX HOLDER. HOLDEN RINGWALT HOUGHTON, Baltimore, Md. Filed June 10, 1914. Serial No. 844,148. (Cl. 206—31.)



1. A holder for a two part match box which latter has an outer inclosing casing and a slidable match receptacle that slides longitudinally in the casing,—said holder comprising a base plate against which the rear wall of the casing of the box may seat and provided with a downwardly-projecting clip between its upper and lower edges to engage the upper edge of the rear wall of the match-box casing, said base plate also having a movable tongue formed at its lower edge and extending in an upwardly and outwardly inclined direction from said lower edge said movable tongue being foldable up into the box casing and having its upper end inturned to form a ledge inside of the box casing on which the end of the match receptacle may seat.

2. A match box holder comprising a plate having a yielding clip projecting therefrom and at its lower edge said plate being provided with a flexible tongue that projects upwardly and outwardly and is provided at its upper end with a flange that extends inwardly toward the plate to form a ledge in a plane between the yielding clip and the lower edge of the plate.

1,167,073. MECHANISM FOR MAKING SHEET-METAL LINKS. HENRY A. HOUSE, Bridgeport, Conn. Filed Apr. 8, 1913. Serial No. 759,624. (Cl. 113—116.)



1. Mechanism for making sheet metal links, a movable arbor, comprising dies and punches for piercing openings in a metal strip and forming fingers on one end of the strip bending the fingers at an angle and means for severing a link blank preparatory to forming a completed link over the movable arbor.

2. Mechanism for making sheet metal links, comprising a movable arbor shaped to conform to the required form of the link, an opposed chair for supporting a link blank, said blank having openings near its ends and upturned fingers on one end, means for actuating the arbor toward the chair to give an initial bend to an interposed blank, jaws adapted to embrace the arbor to form the link and force the fingers of the blank into the openings at the opposite end of said blank, and clenchers located on one of the jaws to clench said fingers and interlock the ends of the blank.

3. Mechanism for forming sheet metal links, comprising a movable arbor, movable jaws adapted to embrace the arbor, and independently operated clenchers carried by the jaws.

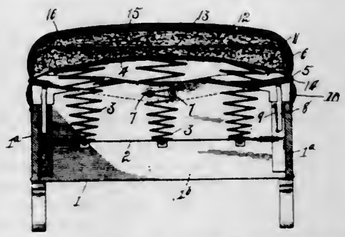
4. Mechanism for forming sheet metal links, comprising a movable arbor about which a link is formed, movable jaws adapted to embrace the arbor, and independently operated clenchers carried by the jaws for interlocking the ends of a link.

5. Mechanism for forming links from a sheet metal blank having fingers on one end and openings in the opposite end, comprising a movable arbor, movable jaws adapted to fold the blank into link form about the arbor, and independently operated clenchers carried by the jaws for interlocking the fingers of the blank within the said blank openings.

[Claims 6 to 10 not printed in the Gazette.]

1,167,074. SPRING-SEAT. JOHN P. HURLEY, Toledo, Ohio. Filed Feb. 10, 1915. Serial No. 7,274. (Cl. 155—25.)

1. In combination, a seat frame, a second frame vertically movable relative to the seat frame and forming an edge bar over an edge portion of the seat frame, a spring set mounted within said seat and second frames in disconnected relation to the latter and having coiled springs projecting thereabove, and means fixed to the seat and second frames and drawn over the spring set and also over said second frame and coöperating with the spring set to normally retain the edge bar of said second frame in vertically spaced relation to the seat frame.



2. In combination, a seat frame, a spring set mounted therein and having coiled springs extending above the upper edge of said frame, upholstering means drawn over said spring set and secured at its edges to said seat frame, and means vertically movable to the seat frame and holding the front edge portions of the upholstering against rearward collapsing movements, said means being disposed below the top of the spring set and disconnected therefrom except through the upholstering.

3. In combination, a seat frame, a spring set mounted within said frame and having coiled springs rising above the upper edge of the frame, a frame having a cross-bar at the front edge of the seat and legs projecting rearward from the ends thereof and pivoted to the seat frame, said pivoted frame being free from said springs and vertically spaced from the top thereof, and means attached to the edges of said seat frame and extending over said springs and said pivoted frame and coöperating with the seat frame to limit the movements of said pivoted frame and connecting said springs and the pivoted frame for relative movements.

4. In combination, a seat frame, a second frame pivotally carried by said seat frame and having its free edge portion disposed at the front edge of the seat frame in normally vertical spaced relation thereto, means yieldingly spacing the free edge of said second frame above the seat frame, spring means carried by the said frame and having coiled springs disconnected from and rising above the second frame and transversely spaced therefrom, and upholstering secured at its edges to the seat frame and extending over said springs and said second frame and cooperating with the second frame to confine said springs and coöperating with the seat frame to limit the movements of said second frame.

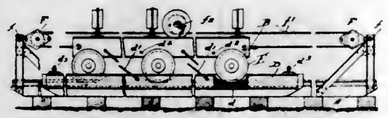
5. In combination, a seat frame, U-frames pivotally carried at the free ends of their legs by said seat frame and projecting outward in opposed relation, a spring set carried by said seat frame and having springs rising above the U-frames, and upholstering secured at its edges to said seat frame and being drawn over said springs and U-frames to coöperate with the U-frames to confine the upward movements of the springs and coöperating with the said frame to limit the movements of the U-frames relative thereto, said U-frames serving to hold the opposite edge portions of the upholstering against inward collapsing, the springs being disconnected from the U-frames whereby the spring set may collapse and expands independenly thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,167,075. TRACK-SHIFTING APPARATUS. CHARLES C. JACOBS, Amboy, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 10, 1912. Serial No. 670,466. (Cl. 21—114.)

1. A track shifting apparatus comprising a track, a wheeled body mounted to travel thereon in either direction,

mechanism for removing the weight of the body from said track, and means for shifting the track endwise while thus relieved of the weight of said body, said mechanism comprising ground supports having inclines therein, wheels engaging said inclines to lift the body when the latter moves in one direction, connections for shifting said supports when the body moves in the opposite direction, and means for reversing said connections to permit reverse travel of said body on said track.



2. A track shifting apparatus comprising a track, a wheeled body mounted to travel thereon, mechanism for removing the weight of the body from said track, and means for shifting the track endwise while thus relieved of the weight of said body, and means serving also to propel said body along said track, and said mechanism including supports which slide on the ground, means having wheels for engaging said supports, and connections between said supports and body, entirely separate from and independent of said last mentioned means.

3. A track shifting apparatus comprising a track, a wheeled body mounted to travel thereon, mechanism for removing the weight of the body from said track, and means for shifting the track endwise while thus relieved of the weight of said body, said means comprising flexible connections from the body to each end of said track, and said mechanism including supports which slide on the ground, means having wheels for engaging said supports, and connections between said supports and body, entirely separate from and independent of said last mentioned means.

4. A track shifting apparatus comprising a track, a wheeled body mounted to travel thereon in either direction, mechanism for removing the weight of the body from said track, means for shifting the track endwise while thus relieved of the weight of said body, said mechanism comprising ground supports, inclines disposed at opposite angles between said supports and body, and means for engaging said inclines to lift the body by movement of the latter in either direction on the track.

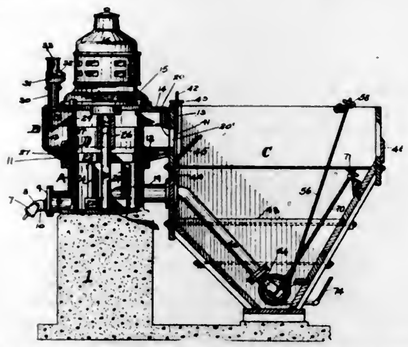
5. In a track shifting apparatus, a track, a wheeled body movable in either direction thereon, mechanism for raising the body, means on the body for pulling on the end of said track to operate said mechanism and shift the track, means for pulling on the other end of the track to move the body forward on the track, and means for reversing said mechanism to permit reversal of travel of said body on said track.

1,167,076. ORE-CONCENTRATING APPARATUS. THOMAS A. JANNEY, Garfield, Utah. Filed Aug. 10, 1914. Serial No. 856,092. (Cl. 83—85.)

1. In a device of the class described, an agitation vessel, a separating box having admission and discharge chambers provided with admission and discharge ports respectively, admission chamber and discharge chamber circulation ports connecting said chambers respectively with the lower part of said agitation vessel, and means for moving an ore pulp upwardly in said vessel and into said box.

2. In a device of the class described, an agitation vessel, a separating box having admission and discharge chambers provided with admission and discharge ports respectively, admission chamber and discharge chamber circulation ports connecting said chambers respectively with the lower part of said agitation vessel, said separating box having an overflow lip, a duct connecting said vessel and box at a point above said overflow lip, and means for impelling an ore pulp upwardly in said vessel.

3. In a device of the class described, an agitation vessel, a separating box having admission and discharge chambers provided with valved admission and discharge ports respectively, admission chamber and discharge chamber circulation ports connecting said chambers respectively with the lower part of said agitation vessel, valves in said ports, said separating box having an overflow lip, a duct connecting said vessel and box at a point above said overflow lip, and means for impelling an ore pulp upwardly in said vessel.

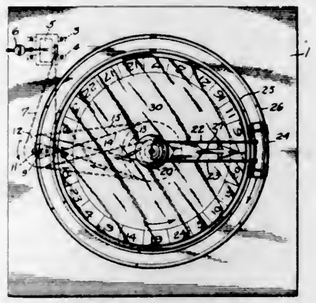


4. In a device of the class described, an agitation vessel, a separating box adjacent said vessel and communicating therewith through two ducts adjacent the bottom thereof, a baffle extending upward from the bottom of said box between said ducts to a point above the same, admission and discharge ports communicating with said box on opposite sides of said baffle, and means for moving an ore pulp upwardly in said vessel and into said box.

5. In an apparatus of the class described, a series of separating boxes and agitation vessels, each of said separating boxes having communication adjacent its lower end with an adjoining agitation vessel, and each box having communication adjacent its lower end with the next succeeding box, a duct extending from each agitation vessel above the liquid level in the adjoining separating box and opening into said box, means for forcing an ore pulp upwardly in said agitation vessels, and means for compelling pulp entering each box to pass through the adjoining vessel before passing to the next box.

[Claims 6 to 10 not printed in the Gazette.]

1,167,077. AMUSEMENT DEVICE. CHARLES C. JESSEN, San Francisco, Cal., assignor to John C. Rane, San Francisco, Cal. Filed May 25, 1915. Serial No. 30,321. (Cl. 46—56.)

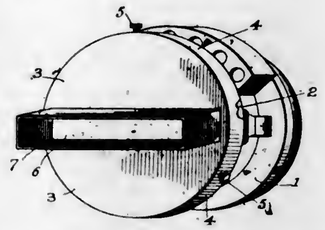


1. In an amusement device, a table, a track thereon, a carriage running on said track, a numbered wheel revoluble on the table, means to rotate the wheel, and means to cause the carriage to travel around the table in an opposite direction from the direction of movement of the wheel.

2. In an amusement device, a table, a track thereon, a carriage on said track, a revoluble wheel on the table, a revoluble figure at the center of the wheel, means to cause the carriage to travel around the track in one direction, and means to rotate the wheel and figure in different directions and at different rates of speed.

3. An amusement device comprising a table, a motor suspended in a frame below said table, a revoluble wheel on the table, tracks on the table, a carriage on said tracks, a revoluble figure at the center of the wheel, means to rotate the carriage in one direction, and means to rotate the wheel and figure in different directions and at different speeds.

1,167,078. COMBINED MASK AND LIGHT-CONCENTRATOR FOR AUTOMOBILE-HEADLIGHTS. ISAAC L. JONES, Bridgeport, Conn. Filed Sept. 25, 1915. Serial No. 52,611. (Cl. 240—48.4.)



1. In an automobile head lamp, an opaque mask having a highly polished rear face and provided with a central, elongated and horizontally disposed light-emitting opening, and a forwardly and downwardly inclined box-like structure closed completely at its sides, top and bottom, said structure having its interior highly polished.

2. In an automobile head lamp, a mask comprising a flat disk-shaped plate having a diametrical elongated opening and a rearwardly extending peripheral flange adapted to receive the forward part of the lamp, radially disposed series of set screws carried by the flange for securing the mask to the lamp, and a forwardly and downwardly inclined box-like structure open at each end and having its sides, top and bottom completely closed, said structure being secured to the mask in coincidence with the opening thereof and having its sides parallel and the top parallel with the bottom.

3. An automobile head lamp whose front face portion is masked throughout its entire horizontal width above and below a light emitting opening which extends horizontally throughout substantially the entire width of said face portion, and a downwardly deflected box-like structure completely closed except at the ends and projecting from said opening for concentrating and directing the light from the latter.

4. In an automobile head lamp, a mask applied to the front face portion of said lamp and having a horizontally disposed light emitting opening whose medial horizontal line substantially coincides with the diameter of said face portion, and a downwardly inclined box-like structure closed at the sides and open at the ends and coincidently projecting from said opening.

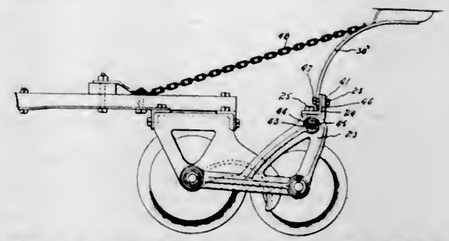
5. In an automobile head lamp, a mask applied to the front face portion of said lamp, a light emitting opening extending throughout the horizontal medial portion of said mask which latter covers the entire area of said front face except that part which coincides with said opening, and a light concentrator and directer comprising a deflected box-like structure completely closed at the sides, top and bottom and open at the ends and projecting from said mask in coincidence with said opening.

1,167,079. LAND-PULVERIZER. GEORGE E. KARL, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed Mar. 17, 1915. Serial No. 15,020. (Cl. 55—77.)

1. In a land-pulverizer, the combination of a frame; an upwardly projecting elastic seat-support having an axis of flexure and also an independent axis of oscillation; and a collapsible member having its ends respectively secured to said frame and seat-support.

2. In a land-pulverizer, the combination of a frame; an upwardly projecting elastic seat-support having an axis of flexure and also an independent axis of oscillation; and a collapsible member inextensible when taut, having its ends respectively secured to said frame and seat support.

3. In a land-pulverizer, the combination of a frame including side-frame members and a cross-bar connecting same; said cross-bar being oscillatorily mounted on said side-frame members; a spring seat-support having its lower end rigidly secured to said cross bar; and a member having its ends respectively secured to said frame and seat-support.

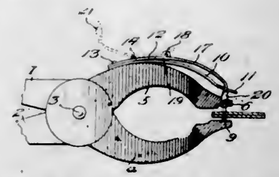


4. In a land-pulverizer, the combination of a frame including side-frame members and a cross-bar connecting same; said cross-bar and side-frame members respectively being provided with coöperating journals and bearings; a spring seat-support having its lower ends rigidly secured to said cross-bar; and a member having its ends respectively secured to said frame and seat-support.

5. In a land-pulverizer, the combination of a frame including side-frame members each provided with an upwardly projecting portion formed with a bearing; a cross-bar having each end provided with a journal mounted in one of said bearings, said bearings being arranged so that said journals will have a limited oscillation therefor; a spring seat-support having its lower end rigidly secured to said cross-bar; and a chain connecting said seat-support and said frame.

[Claim 6 not printed in the Gazette.]

1,167,080. STAPLING-TOOL. PETER S. KEATING and WILLIAM A. OVERLEY, Chicago, Ill. Filed Oct. 17, 1911. Serial No. 655,146. (Cl. 1—50.)



1. In a device of the class described, relatively movable jaw members, one of said members being formed with a slot and the other member being formed with upsetting recesses, a spring secured upon the first mentioned member, and a finger hingedly connected with the spring and provided with a portion arranged to project through the said slot and having a notch to receive the head of a staple or the like to be set, the said spring being arranged to normally tend to swing the said finger away from the member upon which the spring is mounted.

2. A tool embodying two crosswise pivoted handles, each formed with a jaw, one an upper and the other a lower jaw, said upper jaw having an end entering slot and also oppositely positioned staple receiving recesses communicating with said end-entering slot, the face of said lower jaw being provided with an upsetting recess opposite said staple receiving recesses, a leaf spring secured to the upper side of said upper jaw and having an edgewise entering slot, a rear member secured to said upper jaw, and a spring leaf finger hinged to said rear member and provided at its hinged end with an ear ar-

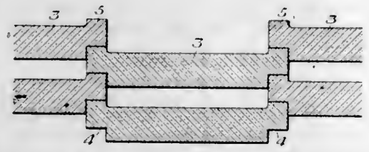
ranged to ride over the upper side of said spring, said finger at its free end being reduced in width and twisted to form a tongue in width to project through said leaf spring slot, and formed with a notch, all arranged as and for the purpose set forth.

3. In a tool of the kind described, a pair of coöperating pivoted jaws, one of said jaws being slotted at its forward end, handles for operating said jaws, a resilient member secured to said slotted jaw, said member having a slot registering with the slot of said jaw, and a staple-carrying member bearing upon said resilient member and having a hook portion projecting through the slot of said resilient member and yieldingly fitting in the slot of said jaw.

4. In a tool of the kind described, a pair of coöperating pivoted jaws, one of said jaws being slotted at its forward end, handles for operating said jaws, a leaf spring secured on said slotted jaw, said spring having a slot registering with the slot of said jaw, and a staple-carrying member pivoted on said slotted jaw and bearing adjacent one end upon said spring, said staple-carrying member having a staple-engaging hook projecting through the slot of said spring and yieldingly fitting in the slot of said jaw.

5. In a tool of the kind described, upper and lower co-operating pivoted jaws transversely recessed on their under and upper faces, respectively, said upper jaw being longitudinally slotted at its forward end, handles for operating said jaws, a leaf spring secured on said slotted jaw, said spring having a slot registering with the slot of said jaw, and a staple-carrying member pivoted on said slotted jaw and loosely bearing adjacent one end upon said spring, said staple-carrying member having a staple-engaging hook projecting through the slot of said spring and yieldingly fitting into the slot of said jaw.

1,167,081. FLUE STRUCTURE FOR HOT-BLAST STOVES. JULIAN KENNEDY, Pittsburgh, Pa. Filed Sept. 10, 1915. Serial No. 49,952. (Cl. 75—52.)



1. A regenerator checkerwork formed of a plurality of slab-like blocks stacked on edge in vertical rows, each of said blocks having recesses for the reception of the edges of the blocks in adjacent rows, the blocks in one row being in staggered relation to the blocks in adjacent rows whereby the spaces between the blocks in one row are in staggered relation with respect to the spaces between the blocks in adjacent rows, substantially as described.

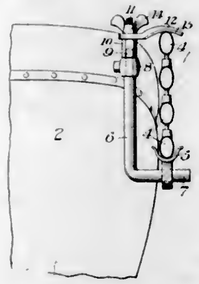
2. A regenerator checkerwork formed of slab-like blocks on edge in vertical rows, each of said slabs having a vertical recess along one of its longitudinal edges, said recesses being arranged to receive the edges of blocks in adjacent rows, the blocks in one row being in staggered relation to the blocks in adjacent rows whereby the spaces between the blocks in one row are in staggered relation with respect to the spaces between the blocks in adjacent rows, substantially as described.

3. A regenerator checkerwork formed of slab-like blocks on edge in vertical rows, each of said slabs having a vertical recess along one of its longitudinal edges, said recesses being arranged to receive the edges of blocks in adjacent rows, the blocks in one row being in staggered relation to the blocks in adjacent rows whereby the spaces between the blocks in one row are in staggered relation with respect to the spaces between the blocks in adjacent rows, the horizontal joints between the blocks in one row being in staggered relation to the horizontal joints in adjacent rows, substantially as described.

4. A regenerator checkerwork formed of slab-like blocks stacked on edge in vertical rows, the lower blocks of each row extending from the outer edge of one supporting pier to the outer edge of an adjacent pier, the blocks in one row being in staggered relation to the blocks in adjacent rows, and means for locking the blocks in their assembled positions, substantially as described.

5. A regenerator checkerwork formed of a plurality of slab-like blocks stacked on edge in vertical rows, each of said blocks having recesses for the reception of the edges of blocks in adjacent rows, the blocks in one row being in staggered relation to the blocks in adjacent rows, there being vertical flues or spaces between said rows of blocks, a portion at least of the ends of said spaces being formed between the edges of blocks in adjacent rows, substantially as described.

1,167,082. BOW HOLDER OR CLAMP FOR VEHICLE-TOPS. GEORGE W. KINNARD, Cleveland, Ohio. Filed July 3, 1915. Serial No. 37,967. (Cl. 21—61.)



1. A bow-holder, comprising a prop iron having a threaded portion at its upper end, a support through which said threaded portion extends, a nut member engaging said threaded portion and seating on said support, said nut member having an upwardly extending threaded stem, a clamp member engaging said stem, and a securing nut for holding the clamp member, substantially as described.

2. A bow-holder or clamp, comprising a prop iron having a threaded end portion, a support through which said threaded end portion extends, a long nut member having a threaded engagement with said threaded portion and seating upon said support, and also having an upwardly projecting threaded stem, a clamp arm having a concave bow engaging portion, and means for releasably securing the clamp arm on the threaded stem of the nut member, substantially as described.

1,167,083. HOLDER FOR NECKWEAR. EDGAR J. KUBICEK, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,455. (Cl. 45—37.)

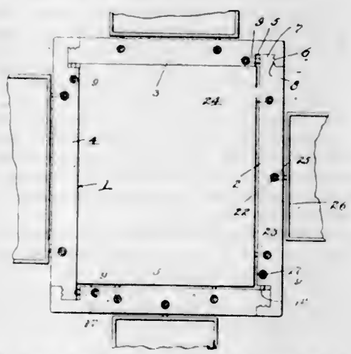


1. In a holder for neckwear, a frame consisting of a base, ends to said base, and a casing attached to said base and ends, in combination with a spring roller mounted within said frame and in said ends, a curtain attached to said roller, and a bar provided with ends adapted to fit to said roller, said bar attached to said curtain and arranged to stand out from the curtain when said curtain is unrolled from said roller.

2. In a holder for neck wear, a frame consisting of a sheet metal base provided with ears integral therewith and positioned in a plane at right angles to the remainder of said sheet, a sheet metal body attached to said base and ends, and said ears provided with apertures, in combination with a spring roller mounted in said apertures, a curtain attached to said roller, and a bar provided with curved ends adapted to fit to said roller and attached to said curtain.

3. In a holder for neck wear, a frame consisting of a sheet metal base provided with ears integral therewith and positioned in a plane at right angles to the remainder of said sheet, the side edges of said base doubled over onto said remainder, and a sheet metal body curved to fit the edges of said ears, said sheet metal body provided with ears fitting under the doubled over portions of said base and thereby attached thereto, the ends of said curved sheet metal body also doubled over onto the body portion thereof, in combination with a spring roller mounted in said frame by attachment to said first mentioned ears, a curtain attached to said roller, and a bar provided with curved ends adapted to fit to said roller and attached to said curtain.

1,167,084. CHASE. FRANK C. LEETHEM, Middletown, N. Y., assignor to Latham Automatic Registering Company, a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,244. (Cl. 101—25.)



1. A chase having adjacent rails forming a joint at the corner thereof, one of said rails having a socket in the inner edge thereof, the other of said rails having a projection received in said socket and freely movable across said socket, and means carried by one of said rails for drawing said projection laterally to lock the same in said socket.

2. A chase having adjacent rails forming a joint at the corner thereof, one of said rails having a socket in the inner edge thereof, the other of said rails having a projection received in said socket and freely movable across said socket, and means carried by one of said rails for locking said projection in said socket, the edge of said socket and edge of said projection being constructed so as to interlock when said projection is moved laterally in said socket to prevent a relative movement of said rails.

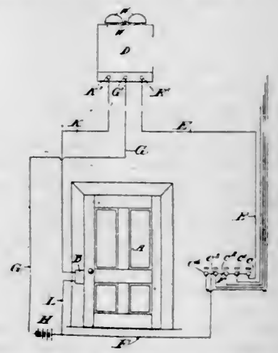
3. A chase having adjacent rails forming a corner joint of the chase, one of said rails having a socket with a locking shoulder extending transversely to the longitudinal axis of that rail and transversely to the plane of the chase, the other of said rails having a locking shoulder interlocking with said first locking shoulder to prevent a relative movement of said rails, and means carried by one of said rails engaging the adjacent edge of the other rail to force the other rail laterally to lock said shoulders together.

4. A chase having adjacent rails forming a corner joint of said chase, one of said rails having a socket on the inner edge thereof, the other of said rails having a projection at the end thereof adapted to be received with lateral play in said socket, said socket and said projection having interlocking projections and recesses, and a locking member movably mounted in one of said rails at the joint for holding the parts and locking said projection and socket together.

5. A chase consisting of rails and joints having shoulders extending transversely to the plane of the chase from one side face of the chase to the other and connecting the ends of said rails, and a sliding bolt mounted at one side of said shoulders adjacent each joint and having a projecting end adapted to press itself against one of the rails to force the interlocking shoulders toward each other.

[Claims 6 to 10 not printed in the Gazette.]

1,167,085. AUTOMATIC DOOR-RELEASING DEVICE. CHARLES E. LINDIG, New York, N. Y. Filed Jan. 18, 1915. Serial No. 2,923. (Cl. 70—52.)



1. The combination with a door releasing device and a call bell, of means for automatically operating said door releasing device a plurality of times after the bell is rung.

2. The combination with a door releasing device and a call bell, of a motor to be set in motion when the bell is rung, and means operated when said motor is running and after the bell has been rung for automatically actuating said door releasing device.

3. The combination with a door releasing device and a call bell, of a motor to be set in motion when the bell is rung, and means for automatically actuating said door releasing device a plurality of times while the motor is running and after the bell has been rung.

4. The combination with a door releasing device, of a spring motor, means for starting said motor, and means for actuating said door releasing device when the motor is running.

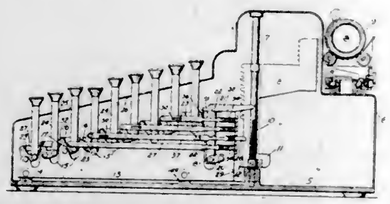
5. The combination with a door releasing device, of a normally open circuit to said device, a spring motor having means for closing said circuit when running, and means controlled from outside the door for starting said motor.

[Claims 6 to 10 not printed in the Gazette.]

1,167,086. KEYBOARD FOR CALCULATORS. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed Oct. 27, 1914. Serial No. 868,815. (Cl. 235—60.)

1. In a calculator, the combination of a supporting plate, a set of key stems, a set of stop bars, means connecting the key stems with the stop bars respectively to advance the stop bars, the supporting plate and the stop bars being provided with laterally projecting lugs in one of such members to engage the other of said members whereby to guide the stop bars by the plates.

2. In a calculator, the combination of a supporting plate, a set of key stems, a set of stop bars, means connecting the key stems with the stop bars respectively to advance the stop bars, the supporting plate and the stop bars being provided with laterally projecting lugs in one of such members and the other of said members being provided with longitudinal slots into which said lugs project to guide the stop bars by the plates.



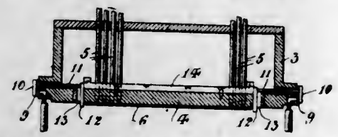
3. In a calculator, the combination of a supporting plate, a set of key stems, a set of stop bars, means connecting the key stems with the stop bars, and guiding means at the end of the stop bar adjacent the key connection to cause rectilinear reciprocation of the stop bar.

4. In a calculator, the combination of a supporting plate, a set of key stems, a set of stop bars, means connecting the key stems with the stop bars respectively to advance the stop bars, the supporting plate and the stop bars being provided with laterally projecting lugs in one of such members and the other of said members being provided with longitudinal slots into which said lugs project to guide the stop bars by the plates, each said lug engaging the end of its slot in the bar to limit the movement of the bar in one direction.

5. In a calculator, the combination of a supporting plate provided with a set of laterally projecting lugs, a set of stop bars each having a longitudinal slot and engaging the lugs respectively at the slotted portions, a set of key stems, means connecting the key stems with the stop bars respectively to advance the stop bars, and means for returning the stop bars and key stems when advanced, each said lug engaging the end of its slot in the bar to limit the return movement of such bar.

[Claim 6 not printed in the Gazette.]

1,167,087. MAGNETIC TRACKING DEVICE. FRANK G. LYNDE, Newark, N. J., assignor to Lauter Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 28, 1915. Serial No. 4,827. (Cl. 84—161.)



1. In a device of the class described, the combination of a valve controlling finger adapted to be actuated by the lateral wanderings from normal of the edge of a traveling sheet and a magnet having one of its poles positioned adjacent to and acting on said finger to draw the same toward the normal position of the sheet and tending to maintain the valve in set position.

2. In a player piano provided with a tracker bar, the combination of a pair of fingers projecting through the bar and adapted to have the music sheet fitted therebetween, valves for controlling sheet shifting mechanism operatively controlled by the shifting of the sheet against said fingers, a bar magnet fixed to the tracker bar and positioned between and acting on said fingers to draw the same toward the adjacent edges of the music sheet.

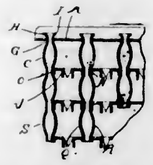
3. In a player piano, sheet shifting mechanism operatively controlled by the lateral wanderings of the music sheet, a permanent magnet operatively associated with said mechanism to maintain parts thereof resiliently in engagement with the edges of the music sheet when traveling out of its normal path.

4. In a player piano, a sheet shifting mechanism including a sheet engaging member, means acting on said member tending to move the same in a direction toward the normal path of the music sheet, said means acting on said member with a pressure decreasing in intensity as the member is moved in a direction away from the normal path of the sheet whereby in case the sheet runs wild it will be engaged by a pressure relatively light compared with the pressure thereon while the sheet is wandering but a slight distance from its normal path.

5. In a player piano, the combination of a pneumatically actuated sheet shifting mechanism, and a magnetically actuated control for governing the actuation of said mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,167,088. RADIATOR. JULIAN P. LYON, Detroit, Mich. Filed Dec. 20, 1913. Serial No. 807,862. (Cl. 257—130.)

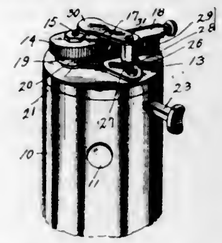


1. In a radiator the combination of a plurality of spaced tubes, each of a width to extend from front to back of the radiator and each having two substantially parallel slightly spaced side walls, the spacing being substantially uniform throughout the width of the side walls, each side wall having a plurality of cup-shaped cells arranged in horizontal rows extending from front to back of the tube, the rows being spaced and the corresponding rows upon the two side walls of the tubes being opposed whereby guides are formed, and fin strips extending from front to back of the radiator and positioned in the guides formed by adjacent rows in the cells, the sides of the strips being in substantial uninterrupted heat-conducting contact with the side walls of the tubes.

2. In a radiator the combination with a plurality of spaced tubes, each of a width to extend from front to back of the radiator, the forward end of each tube having a rebent portion closing the seam and forming a reinforced seam to close the same and the seam having a plurality of spaced slits, the corresponding slits in the seams of the tubes being alined, of a plurality of fins each having a plurality of strips arranged between the tubes and of a width to extend from front to back of the radiator and each fin having an integral part at its forward end connecting the strips and extending transversely of the tubes, said connecting part being folded to provide a plurality of plies of metal, and the folded parts of the fins being arranged in the alined slits, whereby the fins are rigidly held in spaced relation at the forward edge of the radiator and the forward edge of the radiator reinforced.

1,167,089. CIGAR-LIGHTER. MICHAEL MCANENY, St. Louis, Mo., assignor of one-half to Gerrit H. Ten Broek, St. Louis, Mo. Filed Mar. 18, 1915. Serial No. 15,310. (Cl. 67—7.1.)

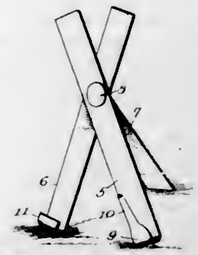
1. In a light-producing device, the combination of an elongated casing, spark-producing members supported by said casing at one end thereof, a wick contiguous to the spark-producing members, said spark-producing members including a file wheel, a collar concentric with the file wheel, a clutch device to connect the collar and the file wheel, a pinion on the collar, a reciprocable push bar adapted to actuate said pinion and extending transversely of the casing and protruding to the outside thereof near the casing end where the spark-producing members and the wick are located and in position for finger contact of the hand grasping the elongated casing, a snuffer plate pivoted to the casing on an axis parallel with the file wheel axis and adapted to swing laterally to cover and uncover the wick, a pin and slot connection between the push bar and the snuffer plate, and a spring acting upon said bar to press and hold it yieldingly outward and normally to hold the snuffer plate over the wick.



2. In a light-producing device, the combination of a portable casing adapted to be held in the hand, spark-producing members situated on the outer end of the casing, a wick contiguous to the spark-producing members, a snuffer plate pivoted upon the outer end of the casing and adapted to swing laterally to cover and uncover the wick, an operating push bar extending within the casing, means for connecting the portion of the said bar within the casing operatively with one of said spark-producing members, a pin and slot connection between said bar and said snuffer plate, and a spring within the casing acting upon said bar to press and hold it yieldingly outward.

3. In a light-producing device, the combination of an elongated casing, spark-producing members supported by said casing at one end thereof, a wick contiguous to the spark-producing members, said spark-producing members including a file wheel, a collar concentric with the file wheel, a clutch device to connect the collar and the file wheel, a pinion on the collar, a post upon which said collar, pinion, and file wheel are mounted to revolve, a reciprocable push bar having rack teeth meshing with the pinion and extending transversely of the casing and protruding to the outside thereof near the casing end where the spark-producing members and the wick are located and in position for finger contact of the hand grasping the elongated casing, and a movable snuffer plate actuated by said receptacle push bar.

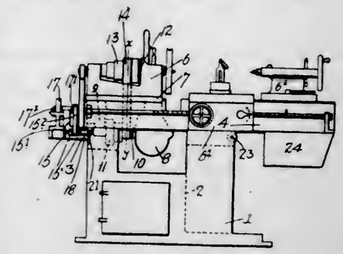
1,167,090. NEWSPAPER-EASEL. JOSEPH MCCARTHY, Spokane, Wash. Filed Aug. 8, 1914. Serial No. 855,857. (Cl. 45—57.)



1. An easel comprising a pair of cross bars adapted to receive reading matter, said cross bars each provided with a central longitudinally extending opening, a stud adapted to be projected through the openings for connecting the cross bars, said stud being substantially rectangular in cross section, the openings each having parallel end walls spaced apart a distance substantially equal to the width of the stud, and having side walls substantially V-shape, the apexes of the side walls occurring midway of their length and being disposed opposite to each other and a distance apart substantially equal to the thickness of said stud, a support, a pin journaled in the stud at the rear of said cross bars, said support having its upper end bifurcated and engaged upon said pin on opposite sides of the stud, said stud provided on its lower edge with a notch adapted to form a stop, said stop adapted to be engaged by the portion of the brace between the furcations, for limiting the opening movement of the brace.

2. An easel comprising supporting members and a support, and means for joining them and permitting their opening in one direction only, said means consisting of an opening in each of the bars having end and V-shaped side walls one leg of each V-shaped side wall lying parallel with the adjacent longitudinal edge of its bar.

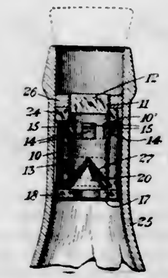
1,167,091. COMBINED LATHE AND DRILL. ANDREW MELVILLE MCGILL, Toronto, Ontario, Canada. Filed June 21, 1915. Serial No. 35,254. (Cl. 29—27.)



1. In a combined lathe and drill, the combination with the base provided with a recess in one side thereof, a lathe body supported normally upon the top of the base and having one end extended beyond the base edge, of means for swingably supporting the lathe body at the edge of the base above the aforesaid recess, a counterweight carried by the outwardly extending end of the lathe body designed to enter the recess when the lathe body assumes a vertical position, and means carried by the lathe body for driving the lathe.

2. In a combined lathe and drill, the combination with the base, of a lathe body swingably supported upon the base so as to assume either a horizontal position resting upon the top of the base or a vertical position parallel with one side of the base, a lathe head carried by the lathe body provided with a suitable drill shaft, a motor carried by the lathe head, bearings depending from the lathe head, a motor shaft journaled in such bearings, and a driving connection between the motor shaft and the drill shaft.

1,167,092. BOTTLE-STOPPER. CHARLES MCKEEVER, Jersey City, N. J. Filed Mar. 27, 1915. Serial No. 17,342. (Cl. 215—65.)



1. A bottle stopper comprising a shell, an inner tube secured in position in said shell and having discharge ports therein, a valve seat frictionally held in place within said shell, a conical valve adapted to bear against the said valve seat and to extend an appreciable distance into the inner end of said inner tube, and a member adapted normally to lie within the said inner tube adjacent the outer end thereof, and to be moved inwardly

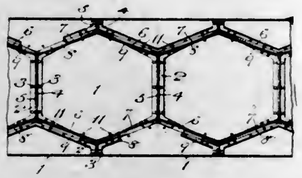
past said discharge ports to and against the stop provided therefor to uncover said discharge ports and lie in a position in which it will not connect with said valve.

2. A bottle stopper comprising a shell, an inner tube secured in position in the said shell and having discharge ports therein, a valve seat frictionally held in place in the said shell adjacent the inner end of the said inner tube, a conical valve adapted to bear against said seat and to extend an appreciable distance into a recess provided therefor in the inner end of the said inner tube, a movable member adapted to fit and normally lie in the said inner tube adjacent the outer end thereof and to be moved inwardly to uncover the said discharge ports in said inner tube, and a seat for the said member located beyond the said discharge ports in the inner tube and against which the said member is lodged when moved past the discharge ports to open the same and in which position the said movable member does not contact with the said conical valve.

3. A bottle stopper comprising a shell, an extension of reduced diameter at the outer end thereof, an inner tube concentric with the said shell and provided with ports adjacent the outer end of the shell and with a conical flange at its inner extremity, a valve seat member frictionally maintained in position in the inner end of the shell and provided centrally with an outlet port, a conical valve adapted to bear against the said valve seat member and to extend an appreciable distance within the said inner tube, and a cork lying normally within the said extension and adapted to be moved from its position in the same into the said inner tube and beyond the said ports therein in order to open the same for the use of the stopper.

4. A bottle stopper comprising a shell, an extension of reduced diameter at the outer end thereof, an inner tube concentric with the said shell and provided with ports adjacent the outer end of the shell and with a conical flange at its inner extremity, a valve seat member frictionally maintained in position in the inner end of the shell and provided centrally with an outlet port, a conical valve adapted to bear against the said valve seat member and to extend an appreciable distance within the said inner tube, a cork lying normally within the said extension and adapted to be moved from its position in the same into the said inner tube and beyond the said ports therein in order to open the same for the use of the stopper, and a cap frictionally held in position on the inner end of the said casing and provided with an outlet port concentric with the aforesaid outlet port in the valve seat member.

1,167,093. SECTIONAL CORE-MOLD. ARTHUR MILLER, New York, N. Y. Filed Feb. 23, 1915. Serial No. 9,970. (Cl. 25—128.)



1. A core-mold for tubular structures comprising a plurality of longitudinal series of units, the units of one series being interlocked in staggered relationship to the units of another series, thereby forming a continuity of alternating transverse and longitudinal abutting walls.

2. A core-mold for tubular structures comprising a plurality of longitudinal series of units, the units of one series being interlocked in staggered relationship to the units of another series, and means for removably securing the series of units together, thereby forming a continuity of alternating transverse and longitudinal abutting walls.

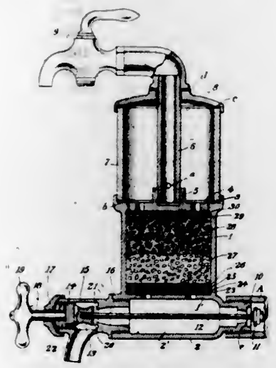
3. A core-mold for cylindrical structures comprising a plurality of longitudinal series of transversely curved units, the units of one series being interlocked in staggered relationship to the units of another series, thereby forming a continuity of alternating transverse and longitudinal abutting walls.

4. A core-mold for cylindrical structures comprising a plurality of longitudinal series of transversely curved units, the units of one series being interlocked in staggered relationship to the units of another series, and means for removably securing the series of units together, thereby forming a continuity of alternating transverse and longitudinal abutting walls.

5. A core-mold for cylindrical structures comprising a plurality of longitudinal series of transversely curved units, the units of one series being interlocked in staggered relationship to the units of another series, each unit having radially arranged and substantially parallel side flanges, thereby forming a continuity of alternating transverse and longitudinal abutting walls.

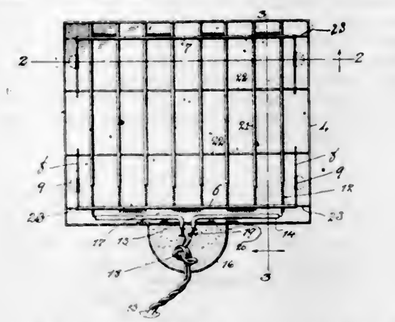
[Claims 6 to 10 not printed in the Gazette.]

1,167,094. FILTER. VALENTINE MÜLLER, New York, N. Y. Filed Nov. 28, 1914. Serial No. 874,371. (Cl. 210—15.)



In a filter, the combination comprising a casing provided with a raw water chamber the entire interior of which is substantially free from obstructions projecting thereinto from the inner surface of the walls thereof, said chamber being provided with an inlet opening and valve controlled outlet opening, a purified water reservoir adapted to confine in its upper portion a body of compressed air substantially equal in cross sectional area to the maximum cross sectional area of the reservoir, a filtering chamber intermediate said raw water chamber and said purified water reservoir, the said filter chamber being of smaller capacity that the said purified water reservoir, and having a cross sectional area not exceeding that of the said reservoir, fibrous pressure distributing means extending completely across each end of said filter chamber, a granular filtering medium interposed between said fibrous pressure distributing means and completely filling the space therebetween, a siphon, the lower end of which is in communication with the lower end of said reservoir and which is adapted to tap off a body of water stored in said reservoir at a point adjacent the bottom of said water, whereby the escape of the confined air above said water is substantially prevented during the efflux thereof, cut-off means for sealing said siphon and for optionally preventing the escape of water or air therethrough, means for sealing the inlet to said raw water chamber against the admission of raw water thereto without simultaneously obstructing the outlet from said raw water chamber, whereby the supply of air in said reservoir may be replenished at will when the pressure therein falls below a predetermined minimum, and perforate metal plates forming the opposite ends of said filter chamber and adapted to resist distortion and hold said filtering medium permanently in place irrespective of the pressure upon said plates.

1,167,095. ELECTRIC HEATER. JOSEPH B. MURRAY, Brooklyn, N. Y. Filed June 28, 1915. Serial No. 36,728. (Cl. 219—37.)



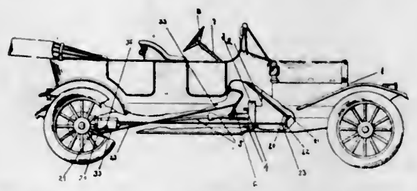
1. An electric heater, comprising a containing box, two walls within said box having their end portions bent at right angles to their middle portion, tongues on the lower edges of said end portions adapted to enter openings in the bottom of said box, the middle portions of said walls being longitudinally slotted, plates of insulating material secured on said middle portions and covering said slots, a heating element extending between and supported upon said insulating plates.

2. An electric heater, comprising a containing box, two walls within said box, each wall having its end portions bent at right angles and secured to the bottom of said box and having in its middle portion a longitudinal slot, a plate of insulating material covering the said slot in each wall and secured in place by bending over the longitudinal edges of said wall, and a wire-heating element extending between and supported upon said insulating plates.

3. An electric heater, comprising a containing box, two walls within said box, each wall having its end portions bent at right angles and secured to the bottom of said box, a wire-heating element supported on said walls and extending to and fro between them, and supporting bars extending between the bent end portions of each wall and disposed below said heating element.

4. An electric heater, comprising a containing box, two longitudinally slotted walls of metal within said box, the said walls having perforations above said slots, plates of insulating material secured on said walls and covering said slots, a wire-heating element extending between and supported upon said insulating plates, and a grid formed of loose metal rods extending through and inclosed in said wall perforations.

1,167,096. SELECTING GEAR-SHIFTING MECHANISM. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Sept. 15, 1913. Serial No. 789,876. (Cl. 74—58.)



1. A driving member, a driven member, variable speed gearing therebetween, a clutch, means for operating the clutch to connect and disconnect the gearing and one of said members, shifting means having connecting positions at which it may engage the gearing, said shifting means movable to change the speed of the gearing, positive holding means for maintaining connection of the shifting means to the gearing against disconnection at other than a connecting position, and driving relation determining means operable to select the shifting means movements, there being connections from the clutch operating means to the shifting means having variable travel rate to act more rapidly in the gear shifting portion of travel and less rapidly in reconnecting the clutch disconnected before the shifting means are moved.

2. A driving member, a driven member, variable speed gearing therebetween, a clutch, means for operating the clutch to connect and disconnect the gearing and one of said members, shift members having connecting positions at which they may engage the gearing, said shift members movable to change the speed of the gearing, positive holding means for maintaining connection of the shift members to the gearing against disconnection at other than a connection position, and driving relation determining means operable to select the shift member to be connected for movement, there being connections from the clutch operating means to the shift member more rapidly actuating the shift member during the speed changing movement of the shift member than the clutch is actuated to connect to the gearing.

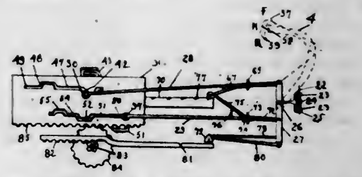
3. A clutch, a lever for operating the clutch, mechanism for establishing a plurality of driving relations, a series of elements connected to the lever to be operated thereby, shift members having connecting positions at which they may engage the mechanism, said shift members connected to the mechanism and operable to change the speed thereof, positive holding means for maintaining connection of the shift members to the mechanism against disconnection at other than a connecting position, the shift members having greater travel rate relatively to the lever after the lever has moved a portion of its throw, thereby permitting the clutch to be free before shifting takes place, and driving relation determining means operable at any time independently of the shift members.

4. Mechanism for establishing a plurality of driving relations comprising shifting means for the mechanism embodying reciprocable members, and actuator means including a pivoted dog for the shifting means, one of said means extending laterally beyond the other to partially embrace the other, said actuator dog being positively shiftable from an intermediate disconnected position as to the shifting means to effect opposite actuations of the shifting means.

5. A mechanism for establishing a plurality of driving relations, and shifting means for the mechanism embodying a pedal, a device actuated thereby embodying a pair of pivotally connected members and an actuator arm rigid with one of the members.

[Claims 6 to 21 not printed in the Gazette.]

1,167,097. GEAR-SHIFTING DEVICE. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Dec. 29, 1913. Serial No. 809,193. (Cl. 74—58.)



1. In a motor vehicle, variable speed driving mechanism, speed changing means, speed determining means, and an actuator including a pedal coacting with each of said means.

2. In a motor vehicle, variable speed driving mechanism, speed changing means, speed determining means, a driving member, a clutch for connecting the driving member to the mechanism, and an actuator for controlling said clutch, said actuator including a pedal coacting with each of said means.

3. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween,

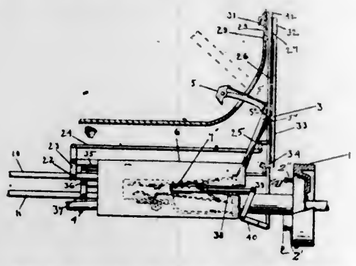
speed changing means embodying a shift member connectible to the mechanism and movable to change the speed of the driven member, an actuator having connections for moving the shift member, and means controllable from the actuator for determining the movement of the shift member.

4. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, speed changing means embodying a shift member for effecting change in the driving relations of the mechanism, an actuator embodying a lever having connections for moving the shift member, and means controllable from the lever and movable independently thereof for determining the direction of movement of the shift member.

5. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, speed changing means embodying shift members for effecting change in the driving relations of the mechanism, an actuator to engage the shift members, said actuator including a pedal, and means controllable from the pedal for determining the shift member to be engaged by the actuator.

[Claims 6 to 22 not printed in the Gazette.]

1,167,098. CHANGE-SPEED-GEARING INDICATOR. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Apr. 20, 1914. Serial No. 833,294. (Cl. 74—58.)



1. A speed changing device, a shiftable member therefor, means for shifting the member, and an indicator connected to the member to be movable relatively thereto but simultaneously with the member to disclose the position of the member.

2. A speed changing device, a control member therefor, actuating means for the member, and an indicator connected to the means to be actuated thereby and relatively thereto to disclose the position of the means.

3. A speed changing device, a shiftable member for effecting a speed change in the device, means for shifting the member, and an indicator connected to be actuated by the means and relatively thereto to disclose the speed change relation of the speed changing device.

4. A speed changing device, an actuating device therefor, and an indicator connected to the actuating device and movable thereby relatively thereto to disclose the position of the actuating means.

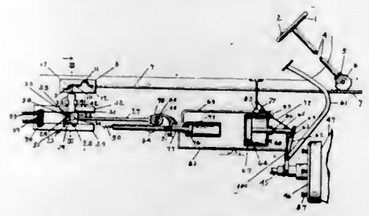
5. A speed changing device embodying a pair of shiftable members, an actuating device for the members, indicator means actuable by the actuating device to disclose the position of said shiftable members.

[Claims 6 to 9 not printed in the Gazette.]

1,167,099. SHIFTER. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Aug. 6, 1914. Serial No. 855,496. (Cl. 74—58.)

1. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, connecting means for the different driving relations, a selector for determining the connection of the connecting means, and an actuator for the connecting means including an energy converting device, a converted energy using device, and a member in its continuous travel operable through the devices to bring the connecting means to disconnecting position and then to connecting position.

2. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, connecting means for the different driving relations, a selector for determining the connection of the connecting means, and an actuator for the connecting means including a pump, a motor, and a member in its one direction travel operable through the pump and motor to bring the connecting means to disconnecting position and then to connecting position.



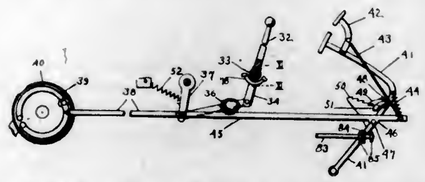
3. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, connecting means for the different driving relations, a selector for determining the connection of the connecting means, and an actuator for the connecting means including a rotatable member operable for a full rotation to bring the connecting means to disconnecting position and then to connecting position.

4. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, connecting means for the different driving relations, a selector for determining the connecting of the connecting means, and an actuator for the connecting means including an energy converting device, a converted energy using device, and a one direction driving travel member, operable through the devices during its continuous travel in the driving direction to bring the connecting means to disconnecting position and then to connecting position.

5. A driving member, a driven member, mechanism for establishing a plurality of driving relations therebetween, connecting means for determining the different driving relations of the mechanism, a driving relation selector for the connecting means, and an actuator for the connecting means including a pedal and energy converting and using devices operable from the pedal in one direction travel of the pedal to bring the connecting means to disconnecting position and then to connecting position.

[Claims 6 to 12 not printed in the Gazette.]

1,167,100. INTERCHANGEABLE CONTROLLING MECHANISM. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Aug. 28, 1914. Serial No. 859,021. (Cl. 74—58.)



1. Mechanism for establishing a plurality of driving relations, a first selector for a driving relation of the mechanism, first actuating means for effecting the driving relation connection selected by the selector, and disconnectible driving relation selecting and actuating means for rendering the first selector and first actuating means inoperative.

2. In a motor vehicle, a driving relation controller including a pair of manually operable members, one of which is movable into operative position to disconnect the other from operative relation.

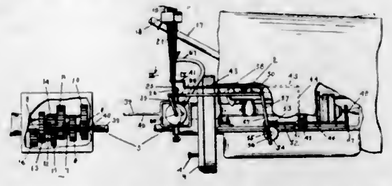
3. In a motor vehicle, a driving relation controller including a pedal, and a handle movable into position to disconnect the pedal.

4. In a motor vehicle, mechanism for establishing a plurality of driving relations for the vehicle, a handle movable to select and effect driving relation connections for the mechanism, a selector for the driving relations independently of the handle, a pedal for effecting driving relation connections for the mechanism as selected by the selector, and means controlled by the handle to render the selector and pedal operative.

5. Mechanism for establishing a plurality of driving relations, a manual selector and operable simultaneously therewith a driving relation connection effecting device, a second selector, a driving relation connection effecting device controlled by the second selector, and means disconnecting one device when the other is in operative condition.

[Claims 6 to 15 not printed in the Gazette.]

1,167,101. POWER-CONTROLLING MECHANISM. HUBERT A. MYERS, Toledo, Ohio, assignor of one-half to Albert A. Atwood, Toledo, Ohio. Filed Oct. 23, 1914. Serial No. 868,183. (Cl. 74—58.)



1. Mechanism for establishing a plurality of driving relations, driving means for effecting a complete change from a driving relation of the mechanism to another, separate selectors for different driving relations, and a selector controlled device co-acting with the driving means for bringing about action of the driving means to effect the selector determined driving relation of the mechanism from the previous driving relation of the mechanism.

2. Mechanism for establishing a plurality of driving relations, power means for effecting a complete change from a driving relation to disconnecting relation and back to driving relation, a device for connecting the power means to effect a complete change in the driving relation of the mechanism, and a one direction manually actuated driving relation selector in itself determining the change selection and effecting the device and power means operation.

3. Mechanism for establishing a plurality of driving relations, driving means for effecting the changes to different driving relations of the mechanism, a device for connecting the driving means to effect a driving relation of the mechanism, driving relation selectors for controlling the device, and means precluding a second selection until the first selection is effected.

4. Mechanism for establishing a plurality of driving relations, a push button selector for the driving relations of the mechanism, and a driving relation change disconnecting and connecting device actuated by the selector.

5. Mechanism for disestablishing and establishing a plurality of driving relations, and a mechanical remote control device therefor embodying a driving relation disestablishing and establishing push button.

[Claims 6 to 20 not printed in the Gazette.]

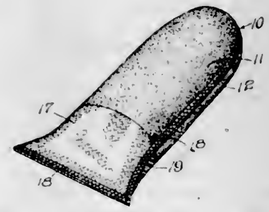
1,167,102. HOLDER FOR SHOE-POLISH AND OTHER BOXES. PETER NELSON, Larchmont Manor, N. Y. Filed Mar. 5, 1915. Serial No. 12,311. (Cl. 15—18.)

1. A holder for boxes comprising a circular box bed, a handle and a box-clamping jaw fixed to one side of the box bed, a pair of clamping arms pivoted eccentrically on the handle side of the box bed, and box clamping jaws and pinch pieces carried by the clamping arms and projecting radially outward from the jaws on the side of the box bed opposite the handle.



2. An opener and holder for boxes comprising a box bed, a box-clamping jaw on one side of the box bed, a pair of clamping arms pivoted on said side of the box bed, and box clamping jaws on said arms having inclined teeth or openers to, when swung into clamping position, enter between the box and cover and pry the cover off the box.

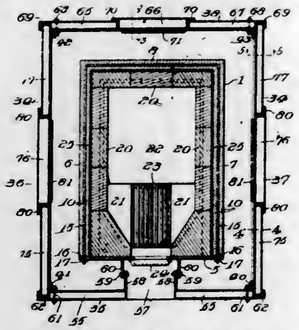
1,167,103. HEEL-PAD FOR SHOES. MICHAEL J. NOLAN, Chicago, Ill. Filed Dec. 3, 1914. Serial No. 875,236. (Cl. 36—37.)



1. A heel pad for shoes arranged to fit loosely within the heel and arch portions of the shoe and to terminate at the front of the arch and arranged for direct contact with the foot of the wearer, said pad comprising a covering or sheath made of a fabric having a foundation of porous texture and a soft outstanding pile or nap, and a filling composed of a material which has a tendency to reject moisture and having the capacity to restore itself from a compact to a fluffy condition, the filling of said pad being of uniform softness and fluffiness throughout its length and width and unrestrained by through-quilting and the pad being transversely and longitudinally rounded toward its thickest central portion whereby when the pad is compressed or flattened it is substantially equal in thickness throughout its heel supporting portion, the front end marginal portion being thinner than the other marginal portions and laterally flared.

2. A heel pad for shoes arranged to fit loosely within the heel of the shoe and to terminate short of the toe of the shoe and arranged for direct contact with the foot of the wearer, said pad comprising a covering or sheath made of a fabric having a foundation of porous texture and a soft pliable pile or nap, and a filling composed of a material which has the tendency to reject moisture and having a capacity to restore itself from a compact to a fluffy condition, and a covering applied to the upper side of the front end of the sheath to permit the foot to slip thereover without forcing the pad toward the toe of the shoe.

1,167,104. FURNACE-CASING. JOHN P. OTT, Philadelphia, Pa. Filed June 11, 1912. Serial No. 702,980. (Cl. 126—114.)



1. A furnace casing including beams forming a frame, and hollow sections carried by said beams and detachably secured thereto, said sections including a group of three sections, two of which are held in position by the third located between said two, said third section being detachably connected to said frame, and said two sections being freely removable upon the removal of said third section.

2. A furnace casing comprising a frame, and hollow sections carried by said frame and detachably secured thereto, said sections including a group of three sections, two of which are held in position by the third located between said two, said third section being detachably connected to said frame and said two sections being freely removable upon the removal of said third section.

3. A furnace casing consisting of a frame comprising vertically spaced substantially horizontal beams, a plurality of wall sections extending between said beams and supported thereby, said wall sections including a group of three consecutive sections arranged in horizontal series, the central section of said group being detachably connected to said beams and being arranged to hold the other two sections of said group in position, said two sections being freely removable from said beams upon the removal of said central section.

4. A furnace casing comprising a frame, including spaced horizontal parallel beams arranged in vertical alinement, and a hollow sectional wall fitting between said beams in a plane therewith, and supported by the lower one of said beams, said wall including a group of three hollow wall sections, two of which are held against withdrawal from said frame, solely by the third of said sections, said third section being located between said two sections, and being detachably connected to said horizontal beams.

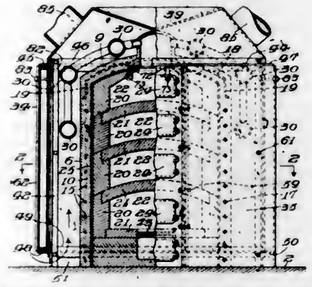
5. A furnace casing comprising two vertically spaced horizontal beams, vertical beams secured to said horizontal beams and holding the latter in spaced relationship, and hollow sheet metal wall sections arranged between and in the plane of said horizontal beams, said sections including a group of three sections, one of which is located between and is provided with flanges overlapping the other two sections, and means detachably connecting said section to said horizontal beams.

[Claim 6 not printed in the Gazette.]

1,167,105. FURNACE. JOHN P. OTT, Philadelphia, Pa. Original application filed June 11, 1912, Serial No. 702,980. Divided and this application filed Dec. 2, 1912. Serial No. 734,476. (Cl. 126—99.)

1. A furnace comprising a hollow cement body portion having an open front end, a detachable front plate extending over said end, reinforcing means embedded in said cement and holding said plate in position, a lining of fire brick arranged within said body portion, and means between said fire brick and said body portion adapted to prevent said body portion from adhering to said fire brick.

2. A furnace comprising a hollow cement body portion having an open front end, a detachable front plate extending over said end, reinforcing means embedded in said cement and holding said plate in position, a lining of fire brick arranged within said body portion, and yielding non-combustible means between said fire brick and said body portion adapted to prevent said body portion from adhering to said fire brick.



3. A furnace comprising a hollow cement body portion having an open end and including vertical substantially parallel cement side walls, a vertical cement end wall connecting said side walls and integral therewith, a cement top wall connecting the uppermost portions of said side walls and said end wall, and integral therewith, a substantially vertical metallic front plate extending over said open end, a plurality of substantially horizontal vertically spaced reinforcing rods each of which is in the form of a yoke passing through said side walls and said back wall and having its ends passing through said front plate and provided outside of said front plate with means for clamping said front plate against said cement walls, a plurality of transverse rods each of which extends through said top wall and has its ends turned downwardly and embedded in the upper portions of said side walls respectively, a fire-brick lining within said hollow body portion and including substantially vertical side walls, a substantially vertical back wall, a substantially vertical front wall, and a top wall, and a yielding non-combustible cellular layer of material between each of said cement walls and said fire-brick lining.

1,167,106. GOLF-CLUB. OLIVER M. PALMER, Montclair, N. J. Filed June 11, 1914. Serial No. 844,460. (Cl. 46—4.)



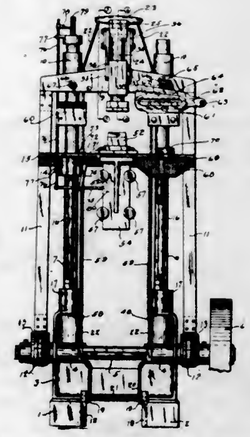
1. A hollow cast metal head for a golf club having its walls continuous and of substantially uniform thickness for the greater part, but having the wall containing the striking face thicker than the adjacent walls, substantially as set forth.

2. A hollow cast metal head for a golf club having a threaded aperture in its rear wall communicating with the hollow interior thereof, and a screw-threaded weighting plug in said aperture, substantially as set forth.

3. A continuous hollow cast metal head for a golf club, said entire head, including the striking face, being cast from manganese bronze, substantially as set forth.

4. A head for a golf club comprising a metallic striking wall, reinforcing walls about its edges and reinforcing ribs extending across the striking wall and back along the top and bottom walls, substantially as set forth.

1,167,107. MACHINE FOR CUTTING PIECED LIFTS AND FOR BUILDING HEEL-BLANKS THEREFROM. DENNIS PARKS, St. Louis, Mo. Filed June 1, 1915. Serial No. 31,371. (Cl. 164—23.)



1. In a machine of the class described, in combination with a die, a continuously reciprocable member, a manually depressible member carrying a cutting block, means for automatically effecting engagement between said depressible and reciprocable members when the former has been lowered a predetermined distance, to cause the cutting block to be carried into contact with the die by the reciprocable member, and coöperating means for automatically releasing such engagement after a single impact of the cutting block with the die.

2. In a machine of the class described, in combination with a die, a continuously reciprocable member, a depressible member carrying a cutting block adapted to coöperate with said die, and automatic mechanism carried by said depressible member and adapted to be actuated in the descent thereof to effect engagement of said depressible member with said reciprocable member in a downward movement thereof, to cause the cutting block to be carried into contact with the die, and to be released from such engagement in the following upward movement of said reciprocable member.

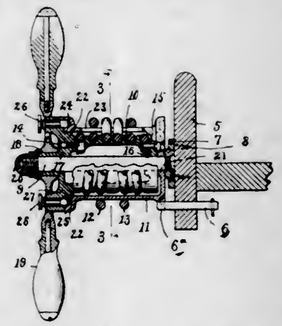
3. In a machine of the class described, in combination with a die, a continuously reciprocable member, a manually depressible member carrying a cutting block, and automatic catch mechanism carried by said depressible member and adapted to be actuated in the descent of said depressible member to effect engagement of said depressible member with said reciprocable member in a downward movement thereof to cause the cutting block to be carried into contact with the die, and to be released from such engagement in the following upward movement of said reciprocable member.

4. In a machine of the class described, in combination with a die, a continuously reciprocable member, a depressible member carrying a cutting block, and automatic catch mechanism carried by said depressible member and adapted to be actuated in the descent of said depressible member to effect engagement of said depressible member with said reciprocable member in a downward movement thereof, to cause the cutting block to be carried into contact with the die, and to be released from such engagement in the following upward movement of said reciprocable member until said depressible member is again raised and depressed.

5. In a machine of the class described, in combination with a die, a continuously reciprocable member, a depressible member carrying a cutting block adapted to coöperate with said die, a spring-controlled catch pivotally mounted on said depressible member, a dog movable with said depressible member and normally engaging said catch to hold it out of the path of movement of said depressible member, means for automatically releasing said dog from engagement with the catch in the downward movement of the depressible member to permit said catch to be thrown into engagement with said reciprocable member to cause the cutting block to be carried into contact with the die in a downward movement of the latter member, a spring operating to throw said dog into engagement with said catch while the cutting block is in its lowermost position, and automatic means operating to move said catch out of the path of movement of said reciprocable member in the following upward movement thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,167,108. STEERING-WHEEL FOR BOATS. GILBERT A. PENNY and GEORGE C. PENNY, Good Ground, N. Y. Filed Sept. 21, 1915. Serial No. 51,758. (Cl. 114—160.)



1. In a steering wheel of the class described, the combination of a rotatable drum, a second drum within the first named drum, a wheel attached to the inner drum, means for detachably connecting the inner and outer drum, and ropes secured to the inner drum and extended out through and over the outer drum.

2. In a steering wheel of the class described, the combination of a post, a drum rotatably mounted thereon, a second drum within the first named drum and having a flange to overlap the outer drum, a wheel secured to the inner drum and adapted to turn therewith, means for detachably connecting the inner and outer drum, and means for securing the outer drum in position.

3. In a steering wheel of the class described, the combination of a rotatable drum having a side opening, a second drum within the first named drum, a wheel secured to one of the drums and adapted to turn therewith, means for detachably connecting the two drums, and ropes secured to the inner drum and extended out through and over the outer drum.

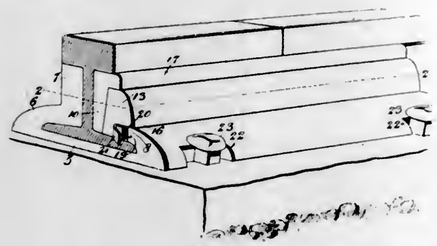
4. In a steering wheel of the class described, the combination of a post, a drum rotatably mounted thereon, a second drum within the first named drum, a wheel secured to one of the drums and adapted to turn therewith, means for detachably connecting the two drums, and ropes secured to the inner drum and extended out through and over the outer drum.

5. In a steering wheel of the class described, the combination of a post, an outer drum rotatably mounted

thereon, an inner drum within the first named drum and also mounted on the post, a wheel secured to one of the drums and adapted to turn the same, means for detachably connecting the two drums, ropes secured to the inner drum and extended out through and over the outer drum, and means for securing one of the drums in a locked position.

[Claim 6 not printed in the Gazette.]

1,167,109. RAIL-JOINT. JERRY COATTS PEPPERS, Beaumont, Tex. Filed Apr. 29, 1915. Serial No. 24,667. (Cl. 239—6.)



1. A rail joint comprising a chair having a base portion upon which the base flanges of adjacent rail ends are adapted to rest, said base portion being provided along one edge with an overhanging flange engaging upon the base flanges of the rails on one side of said rails, said flange being extended and provided with a vertically extending flange engaging against the web, and ball portions of the rail ends on the same side of the joint, an overhanging flange provided along the opposite edge of the rail chair and overhanging partially the opposite portions of the base flanges of the rail ends, a fish plate of a longitudinally and transversely tapering formation, and being provided adjacent its ends with pairs of laterally extending lugs, said lugs adapted to be engaged through openings in the web portions of the rail ends and extended into recesses provided in said vertical flange, said fish plate being provided along its upper edge with an overhanging flange, a wedge bar adapted to be extended between the fish plate and the second overhanging flange of the rail chair, and being provided with an inner inclined face adapted to engage against the outer face of the fish plate, said bar adapted to be engaged between the overhanging flange provided on the fish plate and the base flanges of the rail ends, a shoulder provided on the wedge bar and engaging against the upper portion of the second overhanging chair flange, and a spring detent carried by the chair and adapted to engage said wedge bar, for preventing accidental removal thereof, said lugs being of a length to engage within the openings in the rail webs when the fish plate is moved laterally into engagement with the said second overhanging chair flange, whereby to prevent removal of the fish plate from the rail ends prior to the removal of the chair.

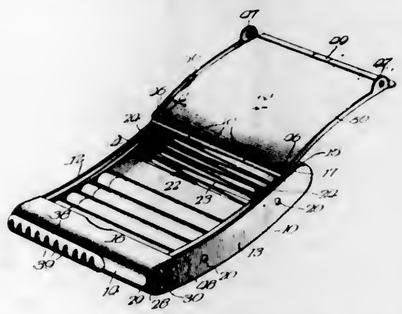
2. A rail joint including a rail chair having an overhanging flange and adapted to receive rail ends, a fish plate provided with engaging elements adapted to be extended through openings in the web portions of the rail ends, a wedge bar adapted to be engaged between the fish plate and overhanging flange for maintaining the former in position, said engaging elements being of such a length as to engage partially within the openings in the web portions of the rail upon removal of the wedge bar and lateral movement of the fish plate into engagement with said overhanging flange.

3. In a rail joint, the combination with a rail chair having an overhanging base flange engaging flange, of a fish plate, and a wedge bar, said wedge bar adapted to be engaged between the fish plate and overhanging flange for binding the former into engagement with adjacent rail ends, said bar being provided with an overhanging shoulder engaging against the overhanging chair flange, said plate being provided with an overhanging shoulder engaging against the said wedge bar.

4. In a rail joint, a chair adapted to receive adjacent rail ends and being provided with a flange overhanging the base flanges of the rail ends, a fish plate engaged against the adjacent rail ends and being provided with an outwardly extending flange disposed adjacent the ball portions of the rail ends, and a wedge bar arranged between the outwardly extending flange and the base flanges of the rail ends and engaging against the fish plate and said overhanging flange.

5. In a rail joint, a chair adapted to receive adjacent rail ends and being provided with a flange overhanging the base flanges of the rail ends, a fish plate engaged against the adjacent rail ends and being provided with an outwardly extending flange disposed adjacent the ball portions of the rail ends, a wedge bar arranged between the outwardly extending flange and the base flanges of the rail ends and engaging against the fish plate and said overhanging flange, and an outwardly extending flange provided on the wedge bar and engaging upon the overhanging flange of the chair.

1,167,110. CIGARETTE-CASE. EMIL POEPPEL, Chicago, Ill., assignor to Automatic Magazine Cigarette Box Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1914. Serial No. 877,044. (Cl. 206—41.)



1. In a cigarette case, the combination of a box adapted to hold a row of cigarettes arranged side by side and having a delivery opening in one edge, a pair of channel guides secured to the inner sides of the side edges, a follower head having on its ends transverse guide flanges slidably engaging said channel guides whereby to prevent canting of said follower head during its sliding movement, a spring for actuating said follower head, and an ejector operative to force the foremost cigarette of the row endwise through said opening.

2. In a cigarette case, the combination of a box adapted to hold a row of cigarettes arranged side by side and having a delivery opening in one edge, a pair of channel guides secured to the inner sides of the side edges and formed with narrow opposed vertical guide flanges on their upper and lower edges, a follower head having on its ends upper and lower transverse guide flanges slidably and interlockingly engaging the guide flanges of said channel guides whereby to prevent canting or disengagement of said follower head during its sliding movements, a spring for actuating said follower head, and an ejector operative to force the foremost cigarette of the row through said opening.

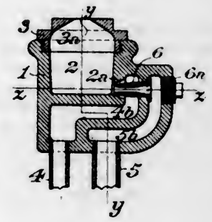
3. In a cigarette case, the combination of a box body adapted to hold a row of cigarettes arranged side-by-side and having a delivery opening in one side edge, a pair of slotted channel guides on the inner sides of the side edges, a spring-pressed follower-head slidably mounted at its ends in said channel guides and formed with projections adapted to engage the slots of said guides in the retracted position of said follower-head to lock the latter against forward movement, a hinged lid on said body having lugs adapted, when the lid is closed, to enter said slots and release said follower-head, and an ejector operative to force the foremost cigarette of the row endwise through said opening.

4. In a cigarette case, the combination of a box adapted to hold a row of cigarettes arranged side-by-side and formed with a slotted end wall and a delivery opening in one side wall adjacent to said slotted end wall, a slotted partition-plate mounted inwardly of and parallel with said slotted end wall, an ejector strip extending through the slot of said partition-plate and having a foot-carrying portion slidably engaging the inner face of said plate and a coupling portion slidably engaging the outer face of said plate, an ejector-actuating shell slidably mounted on the outer side of the slotted end wall of the box and operatively connected through the slot of said wall to the coupling portion of said ejector-strip, and a spring-pressed follower in said box normally urging the foremost cigarette of the row against said partition plate.

5. In a cigarette case, the combination of a box adapted to hold a row of cigarettes arranged side-by-side and formed with a slotted end wall and a delivery opening in one side wall adjacent to said slotted end wall, a slotted partition-plate mounted inwardly of and parallel with said slotted end wall, an ejector-strip having a narrow laterally bent portion engaged with the slot of said partition-plate, a foot-carrying portion engaged with the inner face of said plate, and a coupling portion engaged with the outer face of said plate, an ejector-actuating shell slidably mounted on the outer side of the slotted end wall of the box and formed on its longitudinal edges with inturned hooks interlockingly engaging the latter through the slot thereof and with a coupling lug also extended through said last-named slot and operatively connected to the coupling portion of said ejector-strip, a spring within said shell normally maintaining the latter in retracted position, and a spring-pressed follower in said box normally urging the foremost cigarette of the row against said partition plate.

[Claim 6 not printed in the Gazette.]

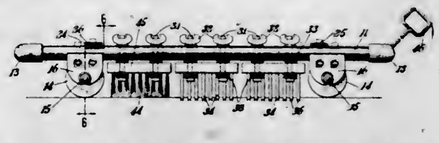
1,167,111. HYDROCARBON-BURNER. GEORGE GLASSFORD RAMSAY, Schenectady, N. Y. Filed Sept. 23, 1915. Serial No. 52,163. (Cl. 158—75.)



1. In a hydrocarbon burner, the combination of a casing having a cylindrical swirl chamber formed therein, a detachable cap closing one end of said chamber and having a central discharge outlet, a hydrocarbon jet passage formed in the wall of said chamber adjacent to the end thereof farther from the cap and substantially tangential to the chamber, a fluid pressure jet nozzle fitted in said passage, hydrocarbon and fluid pressure supply pipes leading into the casing and communicating, respectively, with said passage and said nozzle, and valves independently controlling said supply pipes.

2. In a hydrocarbon burner, the combination of a casing having a cylindrical swirl chamber and two adjoining fluid supply passages formed therein, a detachable cap closing one end of said chamber and having a central discharge outlet, a hydrocarbon jet passage formed in the wall of said chamber adjacent to the end thereof farther from the cap and substantially tangential to the chamber, a fluid pressure jet nozzle fitted detachably in the wall separating the fluid supply passages and extending into the hydrocarbon jet passage concentrically therewith, a detachable plug fitted in the wall of the casing concentrically with the hydrocarbon jet passage, supply pipes leading into the casing and communicating with the supply passages thereof, and valves independently controlling said supply pipes.

1,167,112. GROUND-SURFACING APPARATUS. CHARLES A. ROBINSON, East Orange, N. J. Filed Apr. 6, 1915. Serial No. 19,606. (Cl. 55—12.)



1. In an apparatus of the character described, a traveling support, a plurality of structures thereon comprising each a body and ground breaking and leveling devices depending therefrom, and means whereby said structures may be separately attached to said frame, either side by side, or end to end, as desired.

2. In an apparatus of the character described, a traveling support, a plurality of structures thereon comprising each a body and ground breaking and leveling devices depending therefrom, and means whereby said structures may be separately attached to said frame, either side by side, or end to end, as desired, said means including devices whereby said structures may be vertically adjusted independently of each other in either of their positions of attachment to the frame.

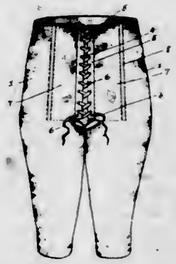
3. In an apparatus of the character described, a frame, rollers at the front and rear thereof, a plurality of ground breaking and leveling structures, and means whereby said structures may be separately attached to said frame, either side by side or end to end, as desired.

4. In an apparatus of the character described, the combination with a traveling support, of a structure thereon comprising a body and blades of thin flat spring material depending from said body, said blades being adjustable edgewise in respect to the cutting path without changing the horizontal level of the lower extremities of the blades.

5. In an apparatus of the character described, the combination with a traveling support, of a structure thereon comprising a body having a multiplicity of rows of holes therein in spaced relation to each other and plural legged ground breaking and leveling devices extending downwardly through and below spaced holes of the body.

[Claims 6 to 13 not printed in the Gazette.]

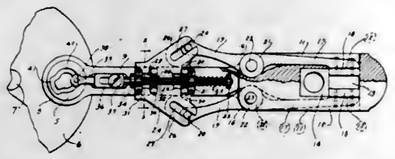
1,167,113. FLESH-REDUCING GARMENT. THEODORA WORMLEY ROGERS, Columbus, Ohio. Filed Apr. 4, 1914. Serial No. 829,565. (Cl. 2—188.)



A reducing compressor made of elastic, expansible and pervious material throughout, of such strength and dimensions as to exert a compressive action throughout its area and comprising tubular leg pieces which completely incase the legs throughout their lengths, and a body portion encircling and closely conforming to the shape of the but-

tocks and hips to which the leg portions are connected at their outer sides, the inner upper portions of the tubular leg pieces being separated laterally from the body portion for a substantial distance on opposite sides of the medial line of the garment to permit a compressive action of the leg pieces and to permit freedom of movement of the wearer, the vertical draw of the leg pieces upon the body portion serving to reduce the hips.

1,167,114. LINK-MOTION. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Mar. 14, 1914. Serial No. 824,606. (Cl. 164—107.)



1. In a mechanism of the character specified, the combination of a driving element; a reciprocatory driven element; and a link conection between said driving and driven elements, for operating the latter from the former, embodying a clutch which consists of a pair of oppositely-acting gags normally engaged with said driven element, and means for automatically and periodically separating said gags to release said clutch from such engagement during the movement of the link connection.

2. In a mechanism of the character specified, the combination of a driving element; a reciprocatory driven element; and a link connection between said driving and driven elements, for operating the latter from the former, embodying a clutch which includes a gag normally engaged with said driven element, and means for automatically releasing said clutch from such engagement during a portion of each movement of the link connection in one direction.

3. In a mechanism of the character specified, the combination of a driving element; a reciprocatory driven element, and a link connection between said driving and driven elements, for operating the latter from the former, embodying a clutch which includes rocking levers provided with gags normally engaged with said driven element, and means for automatically and periodically rocking said levers to release their gags from such engagement during the movement of the link connection.

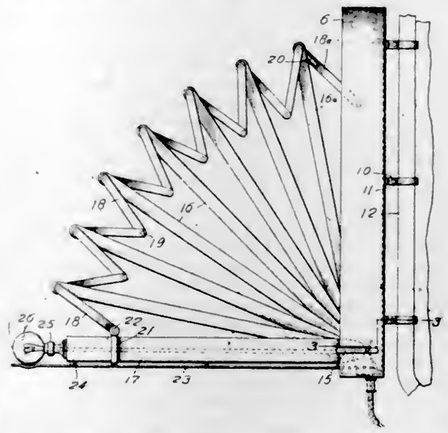
4. In a mechanism of the character specified, the combination of a driving element; a reciprocatory driven element; and a link connection between said driving and driven elements for operating the latter from the former, embodying a clutch which comprises a pair of oppositely-acting gags normally engaged with said driven element, and a sliding member operatively connected with said gags for automatically and periodically separating the same from such engagement during the movement of the link connection to release the clutch.

5. In a mechanism of the character specified, the combination of a driving element; a reciprocatory driven element; and a link connection between said driving and driven elements for operating the latter from the former, embodying a clutch which comprises a pair of oppositely-acting gags normally engaged with said driven element, and cam-operated means for automatically and periodically separating said gags to release the same from such engagement during the movement of the link connection.

[Claims 6 to 30 not printed in the Gazette.]

1,167,115. SIGNAL FOR AUTOMOBILES. HENRY ROSE, Shreveport, La. Filed Feb. 18, 1915. Serial No. 9,149. (Cl. 177—311.)

1. A signal comprising a casing, open on one side and adapted to be connected to a vehicle, a shaft journaled within the casing and extending at one end beyond the same and being provided with a handle whereby the shaft may be rotated at will, a hollow arm fixed to the shaft within the casing and adapted to be moved outwardly into view by the shaft, a closure for the casing carried by the hollow arm, a plurality of additional arms pivoted at their lower end on the shaft and having link connections with each other, a link pivoted to the casing, a pin and slot connection between said link and the terminal additional arm, a link connecting said hollow arm with the adjacent additional arm, a pin and slot connection between last said link and the hollow arm, an electrically controlled light carried by the arm, means operable by the arm when in extended position to close a circuit for energizing the light, a contact for controlling an audible signal, and means carried by the shaft for operating the contact whereby to momentarily sound the signal upon extension of the arm.



2. A signal comprising a casing open on one side and adapted to be connected to a vehicle, a shaft journaled within the casing, whereby said shaft may be rotated at will, a hollow arm fixed to the shaft and adapted to be moved into view, a closure for the casing carried by the hollow arm, a plurality of additional arms pivoted to the shaft and having link connections, a link connection between the terminal additional arm and the casing, a link connection between the hollow arm and adjacent additional arm, an electrically controlled light carried by the hollow arm, means operable by the hollow arm when in extended position for closing a circuit whereby to energize the light, a contact for controlling an audible signal, and means operable by the shaft whereby to operate the contact to momentarily sound the signal upon extension of the arm.

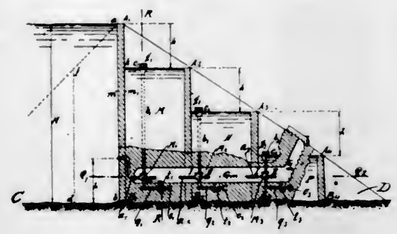
3. A signal comprising a casing open on one side, means whereby said casing may be secured to the windshield of a vehicle, a shaft journaled within the casing, means whereby said shaft may be turned at will, a fan mounted on the shaft and adapted to be extended when the shaft is turned, said fan adapted normally to be maintained within the housing and adapted to be moved outwardly at will, said fan comprising a plurality of link connected arms, an electrically operable light carried by one of the arms, a contact controlling the operation of the light, said contact including a spring disposed within the housing, and a lug carried by one of the arms, said lug adapted to be moved into engagement with the spring when the fan is moved outwardly whereby to close a circuit for controlling the light, a contact for controlling an audible signal, and means operable by the shaft whereby to actuate the contact for momentarily sounding the signal upon extension of the fan.

4. A signal comprising a casing, means whereby the casing may be secured to a vehicle, a fan normally housed within the casing and adapted to be shifted outwardly, said fan comprising a plurality of link connected arms, an electrically controlled light carried by one of the arms, means operable by said arm when in extended position to close a circuit for energizing the light, a contact for controlling an audible signal, a spring adapted to be actuated by the fan for operating last said contact, whereby to momentarily sound the signal upon extension of the fan.

5. A signal comprising a casing adapted to be connected to a vehicle, a fan arranged within the casing and adapted to be shifted outwardly at will, an electrically controlled light carried by the fan, means operable by the fan when in outwardly extended position to close a circuit for energizing the light, a contact for controlling an audible signal, and means actuable by the fan for operating said contact for sounding the signal upon extension of the fan.

[Claim 6 not printed in the Gazette.]

1,167,116. DAM. PETR RUTENBERG, Genoa, Italy. Filed Nov. 29, 1912. Serial No. 734,089. (Cl. 61—24.)



1. A dam construction comprising in combination, longitudinal and transverse walls forming series of reservoirs longitudinally of a stream, successive reservoirs decreasing in depth in the direction of flow of the stream, means for filling one reservoir from the contents of the preceding reservoir, and means controlled by the overflow of the reservoir to cut off the supply thereto.

2. A dam construction comprising in combination, successive walls forming a series of liquid containing reservoirs of successively diminishing depth in the direction of flow of the stream, means for filling each reservoir from the preceding one, and means controlled by the overflow of said reservoir for cutting off the supply thereto.

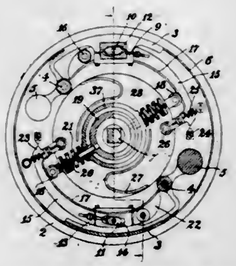
3. A dam construction comprising in combination, longitudinal and transverse walls forming series of reservoirs of successively decreasing depth in the direction of flow of the stream, means to fill the first up-stream reservoir from the dammed up water and each successive reservoir from the preceding reservoir, and means controlled by the overflow of each reservoir for cutting off the water supply thereto.

4. A dam construction comprising in combination, a plurality of transverse walls of successively decreasing height in the direction of current flow, longitudinal walls joining said transverse walls and forming therewith series of alined reservoirs of equal depth and in transverse rows, successively decreasing in depth in rows in the direction of flow, means to admit water from the dammed up water to the first transverse row and successively to each following row down stream from the preceding row, said means operating through the transverse walls, and means controlled by the overflow in each row to close said water admitting means thereto.

5. A dam construction, comprising in combination, longitudinal and transverse walls forming series of reservoirs of successively decreasing depth in the direction of flow of the stream and each reservoir receiving the overflow from the preceding reservoir, means to fill the first up-stream reservoir from the dammed up water and each successive reservoir from the preceding reservoir, means to relieve the pressure in preceding reservoirs when any wall collapses and means controlled by the overflow in each reservoir to maintain the water at regulated levels in said reservoir.

[Claims 6 and 7 not printed in the Gazette.]

1,167,117. FRICTION-CLUTCH. WILLIAM H. SANDFORD, Armagh, Ireland. Filed Apr. 22, 1915. Serial No. 23,071. (Cl. 192—11.)



1. A rotary friction clutch comprising inner and outer relatively movable frictional parts, a pivotally mounted operating lever actuating said inner frictional part, a spider carrying said inner frictional part, a counterweight on said spider connected to said inner frictional part to avoid the effect of centrifugal force, pressure means for exerting force on said operating lever, and means to change the moment of said force about the fulcrum of said lever.

2. A rotary friction clutch comprising, in combination, a frictional drum, a spider mounted to rotate relatively to said drum, counterweighted frictional shoes mounted upon said spider in operative relation to said drum, pivotally mounted levers mounted upon said spider and operatively connected with said frictional shoes, pressure means for exerting force upon said levers, and means for changing the moments of said force about the fulcra of said levers.

3. A friction clutch comprising in combination, a friction drum, a spider, friction shoes pivoted on said spider in operative relation to said drum, counterweights on said shoes, pivoted levers operatively connected with said shoes, pressure exerting means operating on said levers, and means for changing the point of application of said pressure exerting means upon said levers, relatively to the lever fulcrums.

4. A friction clutch, comprising in combination a friction drum, a spider, friction shoes pivoted on said spider, in operative relation to said drum, counterweights on said shoes, levers connected with said shoes, pivots carrying said levers, cam surfaces on said levers, pressure exerting means operating on said cam surfaces, and means to displace said pressure exerting means along said cam surface.

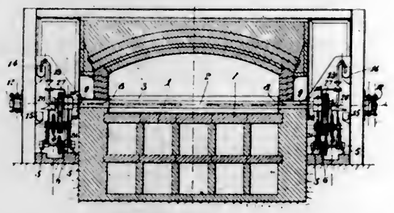
5. A friction clutch comprising a friction drum, friction shoes, pivots carrying said shoes, counterweights on said shoes preventing displacement of said shoes about said pivots due to centrifugal force, means for exerting pressure on said shoes and means for displacing the point of application on said pressure exerting means relatively to the pivots of said shoes.

[Claims 6 to 14 not printed in the Gazette.]

1,167,118. HORIZONTAL MECHANICAL FURNACE FOR ROASTING. PAUL SARRASIN, Dijon, France. Filed Nov. 29, 1913. Serial No. 803,658. (Cl. 75—142.)

1. An ore roasting furnace having feed and discharge ends and a horizontal ore bed extending between the said ends, a transverse shaft mounted within the furnace for movement in a plane parallel to the said ore bed above the same and in a direction at right angles to its longitudinal axis, means for reciprocating the shaft in this direction, means for rotating the shaft only during its movement toward the feed end of the furnace, and rabbles provided upon the outer surface of the shaft for engagement with

the ore upon the bed to press the same toward the discharge end of the furnace during movement of the shaft toward the feed end thereof.



2. An ore roasting furnace having feed and discharge ends and a horizontal ore bed extending between the said ends, a transverse shaft mounted within the furnace for movement in a plane parallel to the said bed and situated above the same in a direction at right angles to its axis, means for reciprocating the shaft in this direction, means for rotating the shaft during its movement toward the feed end of the furnace, means for securing the shaft against rotation during its reverse movement in the direction of the discharge end of the furnace, and rabbles provided upon the outer surface of the shaft for engagement with the ore upon the bed to move the same toward the discharge end during movement of the shaft toward the feed end of the furnace.

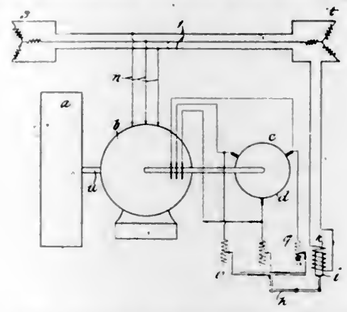
3. An ore roasting furnace having feed end, a discharge end, and a horizontal ore bed extending between the same, a transverse shaft mounted within the furnace for movement in a plane parallel to the said bed and situated above the same in a direction at right angles to its axis, means for reciprocating the shaft in this direction, means for rotating the shaft during movement of the same toward the feed end of the furnace, and rabbles provided upon the outer periphery of the shaft and being in the form of circumferentially spaced fins extending axially upon the shaft throughout the width of the furnace for engagement with the ore upon the bed to move the same in the direction of the discharge end during movement of the shaft in the opposite direction.

4. An ore roasting furnace having feed end, a discharge end and a horizontal ore bed extending between the same, a transverse shaft mounted within the furnace for movement in a plane parallel to the said bed and situated above the same in a direction at right angles to its axis, means for reciprocating the shaft in this direction, means for rotating the shaft during movement of the same toward the feed end of the furnace, and means for securing the shaft against rotation during its movement in the direction of the discharge end of the furnace and for maintaining the rabbles in inoperative position out of engagement with the ore upon the bed during this movement of the shaft.

5. An ore roasting furnace having an ore bed, a rabble shaft traversing the bed, means for translating said shaft at right angles to its axis, and means for rotating the shaft throughout its translatory movement in one direction only at a tangential speed exceeding the speed of translation.

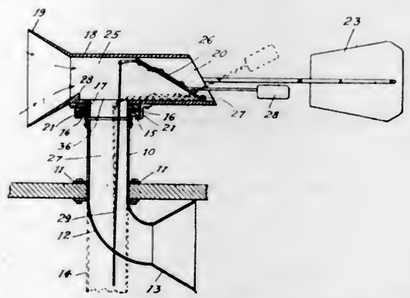
1,167,119. BUFFER-MACHINE FOR ALTERNATING-CURRENT SYSTEMS. ARTHUR SCHEBBIUS, Baden, Switzerland, assignor to General Electric Company, a Corporation of New York. Filed June 27, 1908. Serial No. 440,694. (Cl. 171—312.)

A buffer set for equalizing the load on a system of distribution, comprising an asynchronous machine, a dynamo electric commuator machine, and a fly-wheel, the rotor of said asynchronous machine being mechanically connected to said fly-wheel, the primary winding of said asynchronous machine being electrically connected to said system, the secondary winding of said asynchronous machine being connected in cascade with the commuted winding of said commutator machine, and means responsive to the load on said system for varying the voltage generated by said commutator machine in such a manner that said asynchronous machine will deliver electrical



energy to said system of distribution upon an increase in the load on said system and will receive energy therefrom upon a decrease in such load.

1,167,120. VENTILATOR. HENRY A. SCHMELZ, Perham, Minn. Filed Apr. 6, 1914. Serial No. 829,814. (Cl. 98—3.)



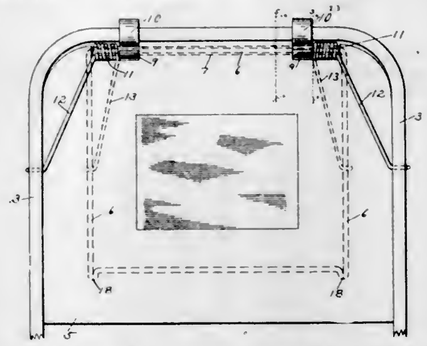
1. A ventilating device comprising a hollow vertical standard secured to the roof of a building or car, said standard providing a single passageway extending through said roof, a conductor connecting said passageway with any part of the interior, an open-mouthed tubular member rotatably mounted upon said standard having the interior thereof in full communication with said passageway and having a funnel-shaped mouth, a vane for causing said funnel mouth to face the wind, and means within the tubular member controllable within the building or car to cause the current of air compressed in said funnel to deliver fresh air through said passageway into the building or car or to withdraw foul air through said same passageway from the building or car.

2. A ventilating device comprising a hollow vertical standard secured to the roof of a building or car, said standard providing a single passageway extending through said roof, a conductor connecting said passageway with any part of the interior, a tubular member of square cross section rotatably mounted upon said standard having the interior thereof in full communication with said passageway and having a funnel-shaped mouth and a discharge opening, a vane for causing said mouth to face the wind, a damper hinged to the bottom of said tubular member near the open discharge end, a weight attached to said damper to hold said damper in an oblique position normally closing the discharge end of said tube, an arm on said damper extending beyond the edge of said damper to the central axis of said standard, and a cord attached to said arm passing within said standard and through said conductor into the building or car for opening said damper.

3. A ventilating device comprising a hollow vertical standard secured to the roof of a building or car, said

standard providing a single passageway extending through said roof, a conductor connecting said passageway with any part of the interior, an open-monthed tubular member rotatably mounted upon said standard having the interior thereof in full communication with said passageway and having a funnel-shaped mouth, a vane for causing said funnel mouth to face the wind, and a lip on said funnel-shaped mouth adjacent the opening to said passageway for deflecting the air current upward to cause a vacuum and produce suction in said passageway.

1,167,121. STORM-FRONT FOR VEHICLES. GEORGE W. SCOTT, Troy, Ohio. Filed Aug. 8, 1914. Serial No. 855,819. (Cl. 21—81.)

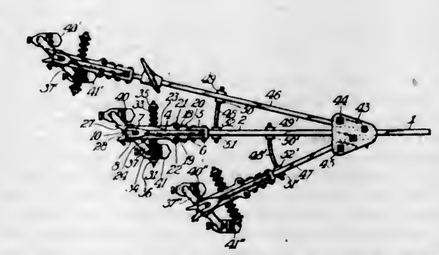


1. In a storm front for vehicles, a frame, means for pivotally connecting said frame to the front bow of the vehicle top, a coil spring arranged about the pivotal connection of said frame, each end of said spring being extended to form an arm, one arm being connected to said bow and the other arm connected to said frame, said arms being of substantially the same length.

2. In a storm front for vehicles, a frame, means for pivotally connecting said frame to the front bow of the vehicle top, a coil spring arranged around the pivotal center of said frame on each side thereof, each of said springs having an arm projecting from its respective ends, means for connecting one arm of each spring to said frame, and hooks on the other arms of said springs adapted to engage the rear side of said bow.

3. In a storm front for vehicles, a frame, removable devices for connecting said frame to the front bow of the vehicle top, each of said devices having a depending bracket within which said frame is pivoted, coiled springs arranged around the pivotal center of said frame on either side thereof, each spring having integrally formed arms at its respective ends, one of said arms being connected to said frame and the other arm hooked about the rear side of said bow.

1,167,122. CULTIVATOR. LEROY W. SIMMONS, Broad Ripple, Ind. Filed July 24, 1915. Serial No. 41,719. (Cl. 97—35.)



1. A cultivator beam having an open seat on its rear end and also a pivot supported substantially above the rear end, a standard connected to the pivot and normally extending against the seat, and a draft device mounted on the beam to elastically swing horizontally and provided with a lug normally engaging and removably holding the standard to the seat.

2. A cultivator beam having an upward extending hinge member, a standard hinged to the hinge member above the plane of the beam, two draft bars separately connected to opposite sides respectively of the beam and yieldingly drawn each toward the other, the bars having lugs normally engaging and detachably connecting a portion of the standard to the rear end of the beam.

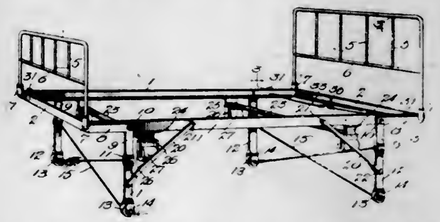
3. A cultivator including a beam having two coöperating draft bars hinged to the rearward portion thereof, each draft bar having a recess therein, means for yieldingly holding the draft bars substantially together, a standard hingedly connected with the beam above the draft bars and removably embraced in the recesses of the draft bars, and a cultivator implement carried by the standard.

4. A cultivator including a beam having two laterally movable draft devices normally drawn yieldingly each toward the other, the beam having also a seat between the draft devices, a standard hingedly connected with the beam and normally in contact with the seat, the standard being normally engaged by the draft devices and thereby retained in normal position but permitted to be forced therefrom, and a cultivator implement carried by the standard.

5. A cultivator including a beam bar having an upward extending hinge member thereon, two hinge members secured to opposite sides respectively of the bar and having each an upright hinge pin, a standard hingedly connected to the upward extending hinge member, two draft bars connected to the hinge pins respectively and constructed for engaging and yieldingly holding the standard to the beam bar, and a cultivator implement carried by the standard.

[Claims 6 to 9 not printed in the Gazette.]

1,167,123. BED-FRAME. NEIL SINCLAIR, Boise, Idaho. Filed Mar. 5, 1915. Serial No. 12,377. (Cl. 5—9.)



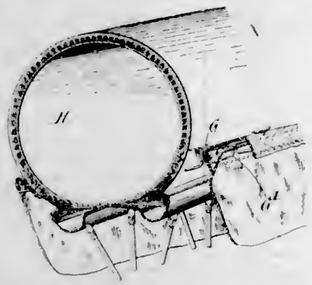
1. A bed frame, comprising a substantially rectangular open body, elbow levers pivoted to the opposite sides of the body near the ends thereof, each lever consisting of arms extending at approximately a right angle with respect to each other and of a length to extend from the pivotal connection to the adjacent end of the body, a head frame and a foot frame, the head frame being connected to the outer ends of the arms of the elbow levers at one end and the foot frame being connected to the outer ends of the arms of the elbow levers at the other end, a leg pivoted to the other arm of each elbow lever, a roller at the lower end of each arm, a pair of inclined braces arranged between the legs at each end of the bed, the braces being crossed at the center of the frame and the ends thereof forming the pivotal connection between the legs and the elbow levers and the journal pins for the rollers, a brace arranged between each leg and the adjacent side member of the body and on the inner side of the leg, and pivoted to the side member at one end and to the leg at the other, a plate arranged transversely of the body near each end thereof, rollers depending from the ends of the plate and journaled to rotate on axes longitudinal to the bed, and to come into engagement with the floor when the legs are folded, and latch mechanism for

holding the bed in extended position, said mechanism comprising angle plates near the ends of the side members of the body, each angle plate comprising a horizontal and a vertical portion and the vertical portion of each angle plate having a flange at its upper end for engaging over the adjacent arm of the adjacent elbow lever, a spring normally pressing each angle plate into engagement with the arm, and a common means connecting the horizontal portions of the angle plates at each end of the bed for simultaneously moving the said plates inwardly to disengage them from the arms of the elbow levers.

2. A bed frame, comprising a substantially rectangular body, elbow levers pivoted to the body at the opposite sides and near the ends thereof, each elbow lever comprising two arms extending at approximately a right angle and of a length to extend from the pivotal connection to approximately the adjacent end of the body, an end frame secured to the corresponding arms of the elbow levers at each end of the frame, and standing erect when the arms to which the frame is secured are in the plane of the body, a leg pivoted to the other arm of each elbow lever and extending in alinement with the arm when the adjacent end frame is erect, a brace for each leg hinged to the leg intermediate the ends thereof, and to the body at the inner side of the leg, latch mechanism adjacent to each elbow lever for holding the lever with the adjacent end frame in vertical position, and a common means for releasing the said mechanisms at each end of the body, each of the said latch mechanisms comprising a sliding member movable toward and from the elbow lever on the body and adapted to over-lie the upper edge of the arm when in outward position, and a spring pressing each of the sliding members outwardly.

3. A bed frame comprising a body, an elbow lever pivoted to each side of the body near each end thereof, a leg pivoted to one arm of each elbow lever, an end frame connecting the other arms of the elbow levers at each end of the bed, a swinging connection between each leg and the body for moving the free end of the leg upward when the adjacent end frame is swung over upon the body, a latch engaging over each elbow lever when such levers are in normal position to prevent swinging movement thereof, springs normally holding the latches in engaging position, and a common means for releasing the latches at each end of the bed.

1,167,124. WIND-SHIELD. THOMAS SLOPER, Devizes, England. Filed Aug. 18, 1914. Serial No. 857,353. (Cl. 21—203.)

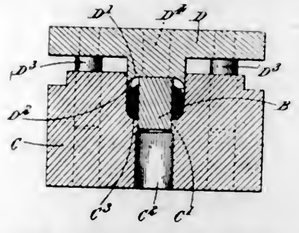


1. In a wind shield for a wheel, the combination of a shield of flexible material shaped to cover the side of the wheel and of a diameter less than the combined diameter of the wheel and tire, said shield having fastening means around its periphery, yieldingly controlled to move inward in a radial direction, but which are forced outward against the yielding control, to operatively engage the periphery of the shield with an element of the wheel, whereby the shield is stretched over the wheel, substantially as described.

2. The combination with a wheel having a series of perforations in the rim, of a wind shield of flexible material shaped to cover the side of the wheel but of a diameter less than the combined diameter of the wheel and its tire, the shield having fastening hooks secured around its periphery and yieldingly controlled to move inward toward the center of the shield, the said hooks being shaped to engage perforations in the rim when they are forced outward against their yielding control, substantially as described.

3. A wind shield for a wheel, comprising a shield of flexible material shaped to cover the side of the wheel but of a diameter less than that of the wheel and tire combined, the shield having a wire secured around its peripheral portion, and said wire having thereon a plurality of outwardly directed hooks, the wire being bent to put tension on the hooks and thus tend to draw them radially inward after they have been operatively engaged with an element of the wheel, substantially as described.

1,167,125. METHOD OF MANUFACTURING STRAIN-INSULATORS. THOMAS SLOPER, Devizes, England. Filed Mar. 31, 1915. Serial No. 18,324. (Cl. 173—28.)



1. In a process of manufacture of insulators for strainers form rubbered thread, the following steps, (*a*) winding the thread on a "former" to constitute an elongated loop, (*b*) placing the loop while still on the "former" between the movable dies of a press-tool shaped to the form it is desired the exterior of the loop shall take while still on the "former," (*c*) compressing the loop between the said dies, and (*d*) removing the loop from the "former."

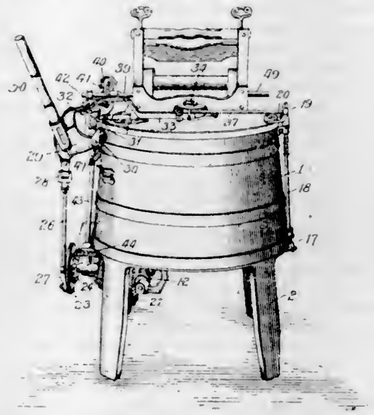
2. In a process of manufacture of insulators for strainers from rubbered thread, the following steps, (*a*) winding the thread on a "former" to constitute an elongated loop, (*b*) placing the loop while still on the "former" between the movable dies of a press-tool shaped to the form it is desired the exterior of the loop shall take while still on the "former," (*c*) compressing the loop between the said dies, and (*d*) removing the loop from the "former" by driving the "former" out of the loop while the latter itself still remains between the dies of the press-tool.

3. In a process of manufacture of insulators for strainers from rubbered thread, the following steps, (*a*) winding the thread on a "former" to constitute an elongated loop, (*b*) placing the loop while still on the "former" between the movable dies of a press-tool shaped to the form it is desired the exterior of the loop shall take while still on the "former," (*c*) compressing the loop between the said dies, (*d*) removing the loop from the "former," (*e*) collapsing the limbs of the loop together except at the ends which are left open to form eyes, and (*f*) lashing the collapsed part of the loop around with thread from eye to eye.

4. In a process of manufacture of insulators for strainers from rubbered thread, the following steps, (*a*) winding the thread on a "former" to constitute an elongated loop, (*b*) placing the loop while still on the "former" between the movable dies of a press-tool shaped to the form it is desired the exterior of the loop shall take while still on the "former," (*c*) compressing the loop between the said dies, (*d*) removing the loop from the "former," (*c*) collapsing the limbs of the loop together except at the ends which are left open to form eyes, (*f*) inserting a thimble of hard material with a surrounding filling-piece in each eye, (*g*) lashing the collapsed part of the loop around with thread from eye to eye, and (*h*) vulcanizing the whole of these parts together.

5. In a process of manufacture of insulators for strainers from rubbered thread, the following steps, (*a*) winding the thread on a "former" to constitute an elongated loop, (*b*) placing the loop while still on the "former" between the movable dies of a press-tool shaped to the form it is desired the exterior of the loop shall take while still on the "former," (*c*) compressing the loop between the said dies, (*d*) removing the loop from the "former," (*e*) collapsing the limbs of the loop together except at the ends which are left open to form eyes, (*f*) forming a laterally projecting water-shed on the strainer at a point between the eyes, and (*g*) vulcanizing the water-shed on the strainer when the whole is vulcanized.

1,167,126. GEARING. HOWARD F. SNYDER, Newton, Iowa, assignor to The Maytag Company, a Corporation of Iowa. Filed Sept. 6, 1912. Serial No. 718,864. (Cl. 74—50.)



1. In a gearing mechanism the combination of a support, a member hinged to the support, a vertical shaft in said member a pinion thereon, a reciprocatory rack bar for engagement with said pinion to oscillate the vertical shaft, means upon the support to reciprocate said rack bar and having a pivotal connection therewith, a guide upon the hinged member parallel with the rack bar and adapted to cause the same to move accurately into and out of mesh with the pinion as the hinged member is lowered or raised.

2. In a gearing mechanism, the combination of a support, a hinged member carried thereon, a vertical shaft supported in said hinged member, a gear on the upper end of said shaft, a rack bar having driving engagement with said gear, a guide bar along which said rack bar slides, a bell crank pivoted at the side of said support and connected to move said rack bar with a forward and backward motion with respect to said vertical shaft, a pitman connected to drive said bell crank, a crank disk connected to drive said pitman, a counter shaft on which said crank disk is mounted, a power shaft, and a gearing between said power shaft and said counter shaft.

3. In a gearing mechanism, the combination of a power shaft, bevel gears loosely mounted thereon, a sliding clutch member movable along said shaft into driving engagement with either of said gears, a counter shaft, a bevel gear on said counter shaft permanently meshing with both bevel gears on said power shaft, a crank actuated by said counter shaft, a pitman driven by said crank, a vertically disposed rotary shaft, and means for driving said vertical shaft from said pitman with an alternately reversing motion irrespective of the direction of rotation of the counter shaft, whereby reversible mechanism may be directly driven from the latter.

1,167,127. FOOD PRODUCT. EDWARD RAY SPEARE, Newton, Mass., assignor, by mesne assignments, to Economy Food Products Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Apr. 28, 1915. Serial No. 24,577. (Cl. 99—10.)

1. An article of food of the class described comprising bran and popped corn and bees' honey disposed on the surface of the popped corn.

2. An article of the class described comprising the following elements: bran, substantially twenty-five parts by weight; flaked corn, substantially twenty-five parts by weight; popped corn, substantially fifty parts by weight; and a suitable amount of flavoring material disposed on the surface of the popped corn.

3. An article of human diet comprising the following elements: bran, substantially twenty-five parts by weight; flaked corn, substantially twenty-five parts by weight; popped corn, substantially fifty parts by weight; and a suitable amount of bees' honey disposed on the surface of the popped corn.

4. In an article of food of the class described, bran, a predominating amount of popped corn and a flavoring disposed on the surface of the popped corn.

5. As an article of human diet a food containing bran, corn flakes and popped corn, and bees' honey disposed on the surface of the popped corn.

1,167,128. COMBINED TYPE-WRITING AND COMPUTING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to John T. Underwood, Brooklyn, N. Y. Filed Dec. 30, 1913. Serial No. 809,445. (Cl. 235—60.)

1. In a combined typewriting and computing machine, embodying a traveling carriage, a tappet on said carriage, and computation members normally in ineffective position and disposed in the base of the machine; a set of vertically pivoted transposition members operable seriatim by said tappet in one order and extending down to the corresponding computation members to move them into effective position in the reverse order, each transposition member having an upper bearing adjacent the said tappet and a lower bearing adjacent the companion computation member.

2. In a combined typewriting and computing machine, embodying a traveling carriage, a tappet on said carriage, and computation members normally in ineffective position and disposed in the base of the machine; a set of vertically pivoted transposition members operable seriatim by said tappet in one order to move the corresponding computation members into effective position in the reverse order and provided, each, with a bearing adjacent the said tappet and a bearing adjacent the companion computation member, each transposition member including a horizontally-swinging arm extending to said tappet and a horizontally-swinging arm extending to its companion computation member.

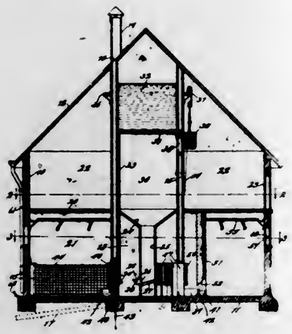
3. In a combined typewriting and computing machine, embodying a traveling carriage, a tappet on said carriage, and computation members normally in ineffective position and disposed in the base of the machine; a set of vertically pivoted transposition members operable seriatim by said tappet in one order and extending down to the corresponding computation members to move them into effective position in the reverse order and including, each, a vertical ball having upper and lower bearings therefor at opposite ends, said balls being nested.

4. In a combined typewriting and computing machine, embodying a traveling carriage, a tappet on said carriage, and computation members normally in ineffective position and disposed in the base of the machine; a set of vertically pivoted transposition members operable seriatim by said tappet in one order to move the corresponding computation members into effective position in the reverse order and including, each, a vertical bail which is integral therewith and forms the body thereof, the top and bottom members of each bail being provided with bearings therefor.

5. In a combined typewriting and computing machine, embodying a traveling carriage, a tappet on said carriage, and computation members normally in ineffective position and disposed in the base of the machine; a nest of vertically pivoted transposition members operable seriatim by said tappet in one order and extending down to the corresponding computation members to move them into effective position in the reverse order and including, each, a vertical bail, each bail having an upper extension which co-acts with said tappet and a lower extension which co-acts with the companion computation member.

[Claims 6 to 20 not printed in the Gazette.]

1,167,129. BARN CONSTRUCTION. PETER O. SWEDBERG, Marshalltown, Iowa. Filed May 13, 1915. Serial No. 27,807. (Cl. 119—16.)



1. A building provided with a wall arranged therein to form two chambers one of which is encompassed by the other, the innermost chamber being considerably smaller than the outer chamber, a partition extending across the inner chamber above the floor of the building to form a food compartment, a chute leading from said compartment and having an opening adjacent the floor of the building, said chute being of a size considerably smaller than the chamber to form a passage therearound, and one or more troughs arranged in the outer chamber adjacent the said wall, there being openings through the wall adjacent the trough to form communicating passages between the two chambers.

2. A building provided with a wall arranged therein to form two chambers one of which is encompassed by the other, the innermost chamber being considerably smaller than the outer chamber, a partition extending across the inner chamber above the floor of the building to form a food compartment, a chute leading from said compartment and having an opening adjacent the floor of the building, said chute being of a size considerably smaller than the chamber to form a passage therearound, one or more troughs arranged in the outer chamber adjacent the said wall, there being openings through the wall adjacent the trough to form communicating passages between the two chambers, and guards for said openings.

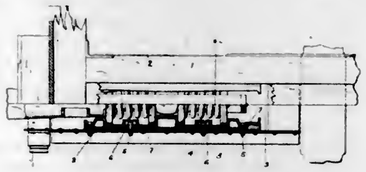
3. A building provided with a wall arranged therein to form two chambers one of which is encompassed by the other, the innermost chamber being considerably smaller than the outer chamber, a partition extending across the inner chamber above the floor of the building to form a food compartment, a chute leading from said compartment and having an opening adjacent the floor of the building, said chute being of a size considerably smaller than the chamber to form a passage therearound, one or more troughs arranged in the outer chamber adjacent the said wall, there being openings through the wall adjacent the trough to form communicating passages between the two chambers, and adjustable partitions dividing the outer chamber into a plurality of stalls.

4. A building provided with a wall arranged therein to form two chambers one of which is encompassed by the other, the innermost chamber being considerably smaller than the outer chamber, a partition extending across the inner chamber above the floor of the building to form a food compartment, a chute leading from said compartment and having an opening adjacent the floor of the building, said chute being of a size considerably smaller than the chamber to form a passage therearound, one or more troughs arranged in the outer chamber adjacent the said wall, there being openings through the wall adjacent the trough to form communicating passages between the two chambers, and adjustable partitions dividing the outer chamber into a plurality of stalls.

5. A building provided with a wall arranged therein to form two chambers one of which is encompassed by the other, the innermost chamber being considerably smaller than the outer chamber, a partition extending across the inner chamber above the floor of the building to form a food compartment, a chute leading from said compartment and having an opening adjacent the floor of the building, said chute being of a size considerably smaller than the chamber to form a passage therearound, one or more troughs arranged in the outer chamber adjacent the said wall, there being openings through the wall adjacent the trough to form communicating passages between the two chambers, and collapsible flexible partitions dividing the outer chamber into a plurality of stalls.

[Claims 6 to 11 not printed in the Gazette.]

1,167,130. DRAFT-SEAT. THOMAS H. SYMINGTON, Rochester, N. Y. Filed Nov. 10, 1914. Serial No. 871,278. (Cl. 213—42.)

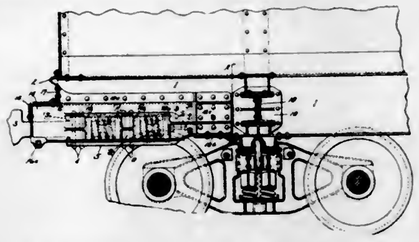


1. In an end construction for cars, in combination, metal draft plates, cheek plates having on their back faces projecting lugs of the kind adapted to be used to cooperate with wooden draft sills and seating members secured to the draft plates forming seats for the lugs.

2. In an end construction for cars, wooden center sills, depending metal draft plates, cheek plates having on their back faces projecting lugs of the kind adapted to be used to coöperate with wooden draft sills, the cheek plates being secured to the draft plates and the latter having secured to their surfaces a seating member forming seats for the lugs on the cheek plates, the seating member being between the cheek plates and the draft plates.

3. In an underframe construction for cars, in combination, wooden center sills, depending draft plates, cheek plates secured to the draft plates, the cheek plates having projecting lugs and recesses on their back or outer faces, seating members secured to the draft plates between the cheek plates and the draft plates, the seating members entering the recesses and forming seats for the lugs and serving to prevent longitudinal play of the cheek plates.

1,167,131. DRAFT-RIGGING. RALPH G. TAYLOR and CLAUS J. WERNER CLASEN, Davenport, Iowa, assignors, by mesne assignments, to The Bettendorf Company, Bettendorf, Iowa, a Corporation of Iowa. Filed June 22, 1912. Serial No. 705,211. (Cl. 213—42.)



1. In a tandem spring draft rigging, the combination with a draw-bar and vertically disposed draw-bar yoke connected to said draw-bar, tandem arranged springs, front, rear and intermediate followers; a single center sill in line with the draw-bar and having a longitudinal indent at each end made by cutting away the lower flange and lower portion of the web, to receive the draw-bar, followers and cushioning device; and draft arms or stop castings occupying the said indent and secured to the web of the center sill, and provided with integral front, rear and intermediate draft lugs or stops for the front, rear and intermediate followers to abut against.

2. In a tandem spring draft rigging, the combination with a single center sill having a vertically disposed web and having the ends reduced vertically, a draw-bar in line with the center sill, a vertically disposed draft yoke connected to the draw-bar and lying in the plane of the center sill web, a pair of vertically disposed devices connected to said yoke in the plane of the center sill web, a spring and a pair of followers arranged between said devices, a second spring and a pair of followers arranged between one of said devices and the end of the draw-bar, intermediate stops and end stops vertically disposed and secured to the center sill and coöperating with said followers.

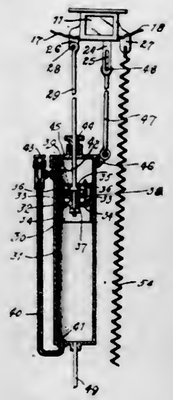
3. A draft and buffing gear comprising an I beam with the lower flange and a portion of its web removed for a distance at each end, cheek plates secured to opposite sides of the beam, a draw-bar, followers, a cushioning device in connection with the followers, and a vertically disposed yoke connecting the draw-bar with the rear follower.

1,167,132. ATTACHMENT FOR CALCULATING-MACHINES. MARTIN TEETOR, Des Moines, Iowa, assignor to Teetor Company, Des Moines, Iowa, a Corporation of Iowa. Filed Mar. 3, 1911. Serial No. 612,131. (Cl. 172—239.)

1. The combination of a machine, an electric motor for operating the same, a switch in the motor circuit, a treadle, a fluid-filled cylinder connected at one end to said treadle and at the other end to said switch, a stationarily supported piston within said cylinder, one or more normally closed valves carried by said piston and arranged to open automatically when the cylinder is moved down by the operation of the treadle, and a by-pass connected to said cylinder at opposite sides of the piston.

2. The combination of a suitable support, a machine mounted thereon, an electric motor for operating said machine, a switch secured to said support for controlling the motor circuit, a treadle pivoted to said support, a fluid-filled cylinder connected at its lower end to said treadle, a lost-motion connection between said switch and said cylinder, a piston within said cylinder, a rod secured at one end to said piston and pivoted at its other end to said support, one or more normally closed valves carried by said piston and arranged to open automatically when the cylinder is moved down by the operation of the treadle, and a by-pass connected to said cylinder at opposite sides of the piston.

3. The combination of a suitable support, a driven machine mounted thereon, an electric motor for operating said machine, a switch secured to said support for controlling the motor circuit, a treadle pivoted to said support, a fluid-filled cylinder connected at its lower end to said treadle, a lost-motion connection between said switch and said cylinder, a piston within said cylinder, a rod secured at one end to said piston and pivoted at its other end to said support, one or more normally closed valves carried by said piston and arranged to open automatically when the cylinder is moved down by the operation of the treadle, a by-pass connected to said cylinder at opposite sides of the piston, and means for regulating the flow of fluid through said by-pass.



4. The combination of a suitable appliance, an electric motor for operating the same, a switch in the motor circuit, a treadle, operative connections between said treadle and said switch for controlling the latter, a retarding device included in said connections for retarding the operation of the switch when the treadle is released, and means for regulating the amount of retardation of said device.

5. The combination of a suitable support, a driven machine mounted thereon, an electric motor for operating said driven machine, a switch secured to said support for controlling the motor circuit, a treadle pivoted to said support and having connections with said switch for controlling the same, said connections including a device for retarding the operation of the switch when the treadle is released, a spring for normally holding the treadle in inoperative position, and means for regulating the amount of retardation of said device.

[Claims 6 and 7 not printed in the Gazette.]

1,167,133. METHOD OF MAKING SHORTENED FOOD PRODUCTS. THOMAS FRANCIS TIERNEY, Watertown, Mass., assignor to Economy Food Products Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Apr. 7, 1914. Serial No. 830,282. (Cl. 99—10.)

1. As an article of manufacture, a dry mixture consisting of a cereal, leaven and seasoning, including a dry shortening element consisting of comminuted fatty matter in an intimate mixture with an amount of dry, soluble, edible matter sufficient to eliminate the greasy characteristic in the mixture.

2. The method of producing a doughnut mixture consisting in mechanically manipulating an oily or fatty shortening matter with an amount of powdered sugar sufficient to reduce it to minute particles isolated in said powdered sugar, and in dry mixing the elements so produced with suitable proportions of flour, leaven and shortening to produce a dry pulverized product.

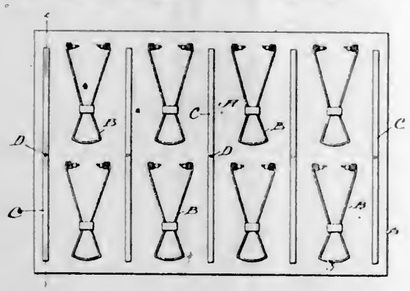
3. As an article of manufacture, a dry mixture consisting of a cereal including a dry shortening element consisting of comminuted fatty matter in an intimate mixture

with an amount of dry, soluble, edible matter sufficient to eliminate the greasy characteristic in the mixture.

4. The method of producing a product of the class described, consisting in mechanically manipulating an oily or fatty shortening matter with an amount of edible matter in finely pulverized form to reduce it to minute particles, isolated in said pulverized matter, and in dry mixing the elements so produced with suitable proportions of other food elements to produce a pulverized product.

5. A method of producing a shortening element consisting in mechanically manipulating an oily or fatty shortening with an amount of dry, soluble, edible matter to reduce it to minute particles in intimate relation with the soluble matter.

1,167,134. RUBBING-STRIP. CHARLES H. TODD, Cleveland, Ohio, assignor to The Champion Register Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 23, 1912. Serial No. 699,267. (Cl. 129—34.)



1. The combination with a bill holding leaf, of metallic rubbing strips oppositely disposed upon opposite sides of said leaf, each rubbing strip having an extension adapted to be projected through the leaf and engage the adjacent end of the opposed rubbing strip.

2. The combination with a bill holding leaf having horizontal and vertical slots therein, of sheet metal rubbing strips oppositely disposed upon opposite sides of the bill holding leaf, each strip having an end extension and also a side extension, said extensions being adapted to pass through the slotted bill leaf the end extension engaging adjacent portions of the opposed rubbing strips, as set forth.

3. The combination with a bill holding leaf having horizontal and vertical slots therein, of sheet metal rubbing strips oppositely disposed upon opposite sides of said leaf, each strip having integral end extensions, an extension at one end being longer than the extension at the other, said strips also having side extensions, said longer end extensions and side extensions being adapted to pass through the slots in the leaf the longer end extensions engaging the adjacent portions of the opposed rubbing strip, as set forth.

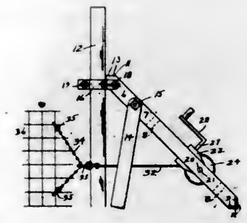
1,167,135. REFRACTORY LINING. TOR A. R. W. TORSEN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1914. Serial No. 813,319. (Cl. 106—9.)

1. A furnace lining composition comprising silica, a clay and a refractory compound of silicon and carbon, the amount of said refractory compound by weight being substantially equal to the combined amount by weight of the silica and the clay.

2. A furnace lining composition comprising about 40 to 50 parts by weight of a refractory compound of silica and carbon, about 15 to 25 parts of fire clay, and about 33 to 48 parts of silica.

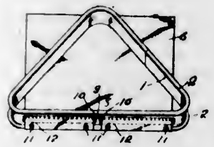
1,167,136. FENCE-STRETCHER. LEWIS TREELAND, Moville, Iowa, assignor to J. J. Hicks, St. Cloud, Minn. Filed Mar. 9, 1915. Serial No. 13,103. (Cl. 254—162.)

1. A fence-stretcher comprising a frame including parallel inclined side members, the upper end of one of said members being engageable with a fence-post, and a supporting leg for the upper end of the other of said members, and means for stretching the fencing including a horizontal shaft mounted rotatably in the frame and having a worm-wheel secured thereon, a crank-operated worm mounted on the frame to drive the worm-wheel, and a flexible link adapted to be secured to the fencing and wound upon the shaft.



2. A reversible fence-stretcher comprising a frame including parallel side members adapted to be inclined in either direction, the upper end of one of said members being adapted to engage a fence-post, and a supporting leg pivotally secured to the upper end of the other of said members, and means for stretching the fencing including a horizontal shaft rotatably mounted in the frame, a flexible link adapted to be secured to the fencing and wound upon the shaft, and means for rotating the shaft.

1,167,137. POOL-TABLE TRIANGLE. THEODORE R. TREIBER, Kansas City, Mo., assignor to Fred Huttig, Kansas City, Mo. Filed Apr. 13, 1914. Serial No. 831,501. Renewed Oct. 28, 1915. Serial No. 58,510. (Cl. 46—6.)



1. A pool table triangle provided with a body, a longitudinal member having its ends connected to one side of said body and forming therewith a longitudinal slot, and a flexible ball supporting member extended through said slot and formed at one end into a loop embracing said longitudinal member.

2. A pool table triangle provided with a body having in one side a portion cut along its longitudinal edges from said body and raised from said body a distance coextensive with said cut edges so as to form with the body a longitudinal slot, and a flexible ball supporting member having one end looped around said raised portion.

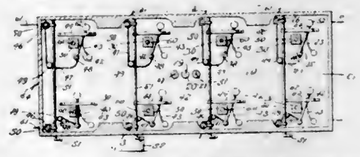
3. A pool table triangle provided with a body having in one side a longitudinal raised portion connected at its ends to the body and severed along its longitudinal edges from the body and forming therewith a longitudinal slot, and a flexible ball supporting member extending through and removable from said slot and provided with means, when one end of the ball supporting member is formed into a loop around said raised portion, for detachably connecting said end of said ball supporting member to another portion thereof.

4. A pool table triangle having along one side a bridge portion forming with said side a longitudinal slot, and a flexible ball supporting member extended through said slot and forming a loop embracing said bridge portion and provided with buttons and button holes coöperating with the buttons for releasably securing together the portions of the ball supporting member forming said loop.

5. A pool table triangle, and a flexible ball supporting member provided with means for being detachably connected adjacent to one end thereof to one side of said triangle.

[Claims 6 and 7 not printed in the Gazette.]

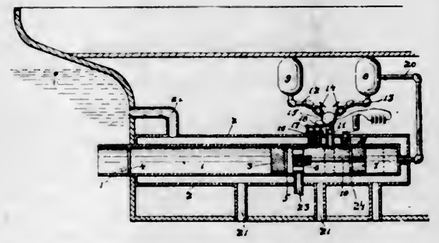
1,167,138. BLOCK-SYSTEM SWITCHBOARD. RUFUS L. TURK, Minneapolis, Kans. Filed Mar. 21, 1912. Serial No. 685,199. (Cl. 179—91.)



1. The combination in a switch board, of a contact plate, a supporting plate, plugs movable through said supporting plate, caps formed upon the plugs for engagement with the contact plate, conducting means extending through the plugs, posts extending through the supporting plate, conductors connected to the posts, notches provided in the plugs, levers engaging said notches for retaining the plugs in engagement with the contact plate and engaging the conductors extending through the plugs and means for connecting the levers with the posts.

2. The combination in a switch board, of a contact plate, supporting means, a plurality of plugs movable through said supporting means, caps secured slidably upon the ends of the plug, springs urging said caps toward said contact plate, springs interposed between the caps and the supporting means for normally retaining the caps out of engagement with the contact plate, notches provided in the plugs, levers engaging said notches and retaining the plugs in engagement with the contact plate, indicating plates secured to the heads of the plugs, posts extending through the supporting means, flexible conductors connected to the posts, spring contact means connecting the levers and the posts, and means for throwing the spring contact members out of engagement with the posts.

1,167,139. ENGINE FOR THE PROPULSION OF VESSELS. JAMES WILLIAMS, Canfield, Ohio. Filed June 30, 1914. Serial No. 848,256. (Cl. 115—13.)

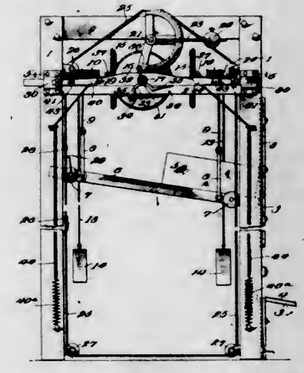


1. In an engine for the propulsion of vessels, the combination of an open ended cylinder adapted to receive water, said cylinder provided with flanges spaced apart, a piston located between said spaced flanges and adapted for contact with the water contained in the cylinder, pistons located in alinement with the aforesaid sliding pistons, said pistons spaced apart from each other and connected together, one of said pistons provided with openings, a spark plug adapted to produce explosions intermediate the pistons located in alinement with the sliding pistons located in the spaced flanges in the cylinder.

2. In a device of the character described, the combination of a vessel, an open ended cylinder located in the lower portion of the vessel, a water jacket surrounding said cylinder and spaced therefrom, passages leading from the water contact surface of the vessel to the cylinder, and a water exhaust pipe leading from the water jacket, a sliding piston, means for limiting the movements of said sliding piston, spaced pistons located in alinement with said sliding piston, one of said spaced pistons open and the other solid, air and gas tanks, means for conveying air and gas to the cylinder between the spaced pistons and means for conveying air to the inner or closed end of the cylinder.

3. In a device of the character described, the combination of a vessel, an open ended cylinder located in the lower portion of the vessel, a water jacket surrounding said cylinder and spaced therefrom, passages leading from the water contact surface of the vessel to the cylinder, and a water exhaust pipe leading from the water jacket, a sliding piston, means for limiting the movements of said sliding piston, spaced pistons located in alinement with said sliding piston, one of said spaced pistons open and the other solid, air and gas tanks, means for conveying air and gas to the cylinder between the spaced pistons, means for conveying air to the inner or closed end of the cylinder, and means for producing an explosion between the sliding piston and the spaced piston.

1,167,140. ICE-HANDLING APPARATUS. WILLIAM EDWARD WILLIS, Fairview, Okla. Continuation in part of application Serial No. 781,226, filed July 26, 1913. This application filed Aug. 12, 1914. Serial No. 856,400. (Cl. 187—27.)



1. The combination of a support, a carrier arranged to travel therein, a slide mounted on the support, a shaft mounted on the support, connections between said shaft and the carrier, a driving shaft mounted on the slide, a rock shaft, operative connections between the carrier and the rock shaft, means whereby the driving shaft will actuate the shaft on the support in either direction and impart travel to the carrier, an escapement dog on the slide, lateral projections on the support arranged to be engaged by said dog, and means on the rock shaft to engage the dog and shift the slide and the driving shaft thereon to thereby reverse the travel of the carrier.

2. The combination of a supporting structure, a carrier mounted to travel therein, a drum shaft upon said structure supporting the carrier, opposed gear-wheels upon the said drum shaft, a slide mounted upon the supporting structure, a driving shaft carried by said slide, means actuated by the carrier for reciprocating said slide, a gear-wheel mounted upon the driving shaft and brought into engagement with either one of the first mentioned gear-wheels by the movement of said slide, and means controlled by the slide for arresting movement of the carrier.

3. The combination of a supporting structure, a carrier mounted to travel therein, a drum shaft supported by said structure, drums on said shaft, cables secured to said drums and supporting the carrier, opposed gear-wheels on the shaft, a slide mounted on the supporting structure, a driving shaft carried by said slide, a gear-wheel on said shaft adapted to mesh with either of the first mentioned gear-wheels, means controlled by the carrier for shifting said slide, and means controlled by said slide for arresting the movement of the carrier.

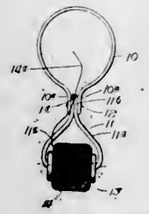
4. The combination of a supporting structure, a carrier mounted to travel therein, a drum shaft mounted

in the supporting structure, means for suspending the carrier from said shaft, opposed gear-wheels on the drum shaft, a slide upon the supporting structure, a driving shaft carried by said slide, a gear-wheel on the driving shaft adapted to mesh with either of the first mentioned gear-wheels, brake levers pivoted upon the supporting structure and extending past the respective opposed gear-wheels in proximity to the same, means actuated from the carrier to shift the said slide, and dogs mounted upon the slide and adapted to engage the respectively adjacent brake levers and force the same against the respective opposed gear-wheels whereby to arrest the travel of the carrier.

5. The combination of a supporting structure, a drum shaft mounted thereon, a carrier suspended from the drum shaft and arranged to travel in the supporting structure, opposed gear-wheels on the drum shaft, a slide mounted on the supporting structure, a driving shaft carried by said slide, a gear-wheel on the driving shaft adapted to mesh with either of the opposed gear-wheels, brake levers pivoted upon the supporting structure and extending past the respective opposed gear-wheels in proximity thereto, dogs pivoted upon the carrier and having weighted outer ends whereby their inner ends will tend to move into engagement with the respective brake levers, and means controlled by the carrier for reciprocating the slide.

[Claims 6 and 7 not printed in the Gazette.]

1,167,141. CROCHET-BALL HOLDER. CHARLOTTE H. WINSLOW, Chicago, Ill., assignor to Marshall Field & Co., a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,396. (Cl. 242—136.)



1. A device of the character described, comprising a permanently distended loop member, and a spool-supporting member pivotally attached to the loop member upon an axis in the plane of the loop member to permit movement of the spool-supporting member, together with the spool supported thereby, into said loop member.

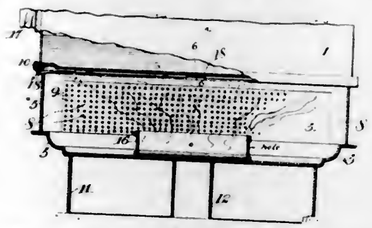
2. A device of the class described, comprising a loop member formed of a continuous strip of material having its ends projecting radially from the loop member in close proximity to each other, and a spool-supporting member pivotally connected to the ends of said loop member upon an axis parallel to the plane of said loop member.

3. A device of the character described, comprising a permanently distended loop member, a spool-engaging member pivotally attached to the loop member, said spool member comprising arms having spool-engaging jaws, said arms being narrowed into contact for a portion of their length, and said contacting portions being provided with a thread-guiding aperture.

4. A device of the class described comprising a loop member having parallel adjacent extremities, and a spool-carrying member comprising arms, said arms being bent or looped into contact adjacent one extremity, said contacting portions of said arms being pivotally mounted between said parallel extremities of said loop member to permit their movement into or out of said loop member.

5. A device of the class described comprising a loop member having parallel adjacent extremities, and a spool-carrying member comprising arms, said arms being bent or looped into contact adjacent one extremity, said contacting portions of said arms being pivotally mounted between said parallel extremities of said loop member to permit their movement into or out of said loop member, said contacting portions of said arms being provided with a thread-guiding aperture therethrough.

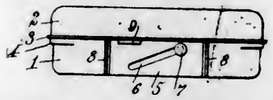
1,167,142. DINNER-PAIL. WHITELAW R. WRIGHT, Marion, Ind. Filed Oct. 12, 1915. Serial No. 55,510. (Cl. 126—266.)



1. A dinner-pail comprising an outer shell or body portion, a food-receptacle supported in said body portion, a food-tray supported in said receptacle, a cover on the receptacle having on its upper surface two cylindrical projections, one adapted to contain a fuel can and both serving as supports for the cover when inverted, said cover having a plurality of holes in its sides, for passage of air, as described.

2. A dinner pail comprising an invertible cover having its sides provided with air passages, and a body serving as a coffee receptacle and adapted to be placed and supported on said cover when the latter is inverted, the body having its bottom provided with devices which extend across the edge of the cover flange to provide a space for circulation of gases, as described.

1,167,143. BOX-OPENER. HORACE Q. ALEXANDER, Dayton, Ohio. Filed Dec. 26, 1913. Serial No. 808,673. (Cl. 220—6.)



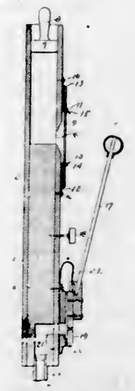
The combination with a box having a lid provided with a circumferential bead, of a lid-raiser comprising a rectangular plate, said plate being provided with an end marginal finger piece and a diagonal slot disposed longitudinally, and a pin uniting said plate to the outside of the box and extending through said slot said pin forming a supporting guide for the longitudinal movement of the plate or a pivot upon which said plate may be moved in raising the lid, substantially as described.

1,167,144. HARP DEVICE FOR ORGANS. BASIL G. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed Mar. 12, 1915. Serial No. 13,987. (Cl. 84—31.)

1. A device of the class described comprising a resonator having a duct, a sounding member on the resonator, a hammer for the sounding member, and a pneumatic to which said hammer is connected, the pneumatic being on the resonator, the resonator, the sounding member, the hammer and the pneumatic constituting a unit and being mountable and dismountable as such, and the pneumatic being in communication with said duct.

2. A device of the class described comprising a resonator having a duct, a sounding member and a pneumatic both carried by the resonator, the pneumatic being in communication with said duct, and the resonator with the sounding member and the pneumatic being mountable and dismountable as a unit.

3. A device of the class described comprising a resonator having a duct, a sounding member and a bellows both supported by the resonator, the bellows being in communication with said duct, a hammer supported by the movable member of the bellows, a spring connected with said movable member and with the body of the resonator for expanding the bellows, the resonator with the sounding member and the bellows being mountable and dismountable as a unit.

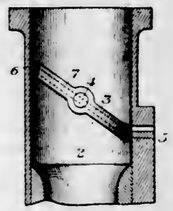


4. A device of the class described comprising an elongated resonator, a sounding member extending longitudinally of the resonator, and flexible cords connected with the sounding member and extending oppositely therefrom in the direction of the length of said resonator, said cords being connected with the resonator.

5. A device of the class described comprising an elongated resonator, a sounding member extending longitudinally of the resonator, cords located between the sounding member and the resonator, the sounding member being perforated and the cords being extended through the perforations and provided with retaining means on the front of the sounding member, the cords extending oppositely to each other and longitudinally of the resonator, the cords being connected at their ends with the resonator.

[Claim 6 not printed in the Gazette.]

1,167,145. BUTTERFLY-VALVE SYSTEM FOR CARBURETERS. FRANÇOIS BAVEREY, Oullins, France. Filed July 30, 1914. Serial No. 854,104. (Cl. 137—7.)



1. A butterfly throttle valve for internal combustion engines, having its upper edge arranged to leave the wall on the first opening movement of the valve, and a fluid conduit leading to and having an outlet in said upper edge portion, substantially as described.

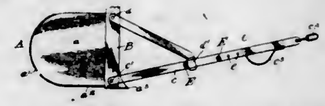
2. A butterfly throttle valve for internal combustion engines, having its upper edge arranged to leave the wall on the first opening movement of the valve, and an inclosed fluid conduit leading to and having an outlet in said upper edge portion, substantially as described.

3. A butterfly throttle valve for internal combustion engines, having its upper edge formed substantially as a section of a cylinder, said valve having a fluid conduit leading to and having an outlet in the upper edge portion, substantially as described.

4. A butterfly throttle valve for internal combustion engines, having an inclosed hole leading to its upper edge portion, substantially as described.

5. A butterfly throttle valve for internal combustion engines having an inclosed hole leading from the body of the valve to the upper edge thereof, substantially as described.

1,167,146. DRAG-LINE-BUCKET EXCAVATOR. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Mar. 18, 1909. Serial No. 484,290. (Cl. 37—19.)

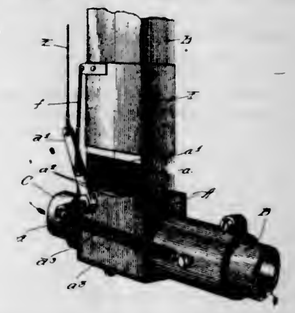


1. An excavator drag line bucket provided with a bail pivoted on the lower front portions of the bucket, at points only slightly above the bottom of the bucket, front and rear stops on said bail, arms pivoted on the upper front portions of the bucket, and means on said arms, sliding on the bail between said stops, for limiting the back and forth tilting motion of the bucket while loading.

2. An excavator drag line bucket provided with a bail pivoted on the lower front portions of the bucket, at points only slightly above the bottom of the bucket, front and rear stops on said bail, arms pivoted on the upper front portions of the bucket, and means on said arms, sliding on the bail between said stops for limiting the back and forth tilting motion of the bucket while loading, and a shoe for the said bail, disposed in front of said stops.

3. An excavator drag line bucket provided with a bail pivoted on the lower front portions of the bucket, at points only slightly above the bottom of the bucket, front and rear stops on said bail, arms pivoted on the upper front portions of the bucket, and means on said arms, sliding on the bail between said stops, said stops being disposed in position for limiting the back and forth tilting motion of the bucket while loading, said stops being adjustable longitudinally of the bail.

1,167,147. WHISTLE. MORTON G. BUNNELL, Chicago, Ill., assignor to Ivory Safety Razor Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 29, 1912. Serial No. 733,953. (Cl. 116—59.)



1. A whistle comprising a hollow structure having an edge, a slot for directing fluid pressure against said edge, and means movable in and out of said slot to keep it clean, having motion longitudinally of said slot while entering and leaving the same.

2. A whistle comprising a hollow structure having an edge, a slot for directing fluid pressure against said edge, means movable in and out of said slot to keep it clean, having motion longitudinally of said slot while entering and leaving the same, and an internal combustion engine exhaust for supplying the fluid pressure.

3. A whistle comprising a hollow structure having an edge, a slot for directing fluid pressure against said edge.

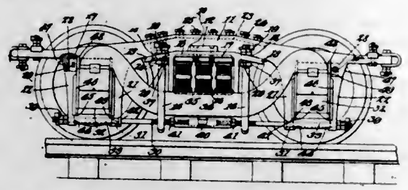
means movable in and out of said slot to keep it clean, and a shield for covering said edge when the said means is occupying said slot, operatively connected with said means.

4. A whistle comprising a hollow structure having an edge, a slot for directing fluid pressure against said edge, means movable in and out of said slot to keep it clean, an internal combustion engine exhaust for supplying the fluid pressure, and a shield for covering said edge when the said means is occupying said slot, operatively connected with said means.

5. A whistle comprising a hollow structure having a plurality of compartments, an edge for each compartment, slots for directing fluid pressure against said edges, means movable in and out of said slots to keep them clean, and a spring for normally keeping said means in said slots, said means having an axis extending at right-angles to said slots.

[Claims 6 to 19 not printed in the Gazette.]

1,167,148. CAR-TRUCK. JOHN A. BUSH, Walla Walla, Wash. Filed May 15, 1915. Serial No. 28,371. (Cl. 105—243.)



1. A truck side frame having pedestals at its ends, each pedestal comprising a horn which is integral with the side frame and an opposite horn which is removably connected to the side frame, said frame having a bottom mortise and the removable horn having a top tenon seating in the mortise, a fastening passing through the tenon and the mortised portion of the side frame, a pedestal cap between the lower ends of the integral and the removable horns, and a fastening passing through said cap and horns.

2. A truck side frame having pedestals at its ends, each pedestal comprising a horn which is integral with the side frame, and an opposite horn which is removably connected to the side frame, said side frame having a bottom mortise and the removable horn having a top tenon seating in the mortise, a fastening passing through the tenon and the mortised portion of the side frame, a pedestal cap between the lower ends of the integral and the removable horns, a truss rod passing through the horns and the caps of the respective pedestals, said rod being divided and its respective sections having a turnbuckle connection, and nuts on the outer ends of the rod sections, said nuts engaging the back of the removable pedestal horns.

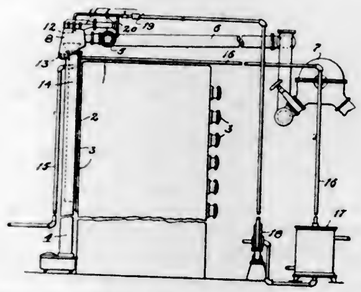
3. A truck side frame having pedestals at its ends, each pedestal comprising a horn which is integral with the side frame, and an opposite horn which is removably connected to the side frame, said side frame having a bottom mortise and the removable horn having a top tenon seating in the mortise, a fastening passing through the tenon and the mortised portion of the side frame, a pedestal cap between the lower ends of the integral and the removable horns, a truss rod passing through the horns and the caps of the respective pedestals, said rod being divided and its respective sections having a turnbuckle connection, nuts on the outer ends of the rod sections, said nuts engaging the back of the removable pedestal horns, and abutments on the rod sections engaging the back of the integral pedestal horns.

4. A truck side frame having pedestals at its ends, each pedestal comprising a horn which is integral with the side frame, and an opposite horn which is removably connected to the side frame, said side frame having a bottom mortise and the removable horn having a top tenon seating in the mortise, a fastening passing through the tenon and the mortised portion of the side frame, a pedestal cap between the lower ends of the integral and the removable horns, a truss rod passing through the horns and the caps of the respective pedestals, said rod being divided and its respective sections having a turnbuckle connection, and nuts on the outer ends of the rod sections, said nuts engaging the back of the removable pedestal horns, the distance between the inner ends of the rod sections which have the turnbuckle connection being less than the length of the end portions of the rod sections which carry the nuts.

5. A truck side frame having pedestals at its ends, each pedestal comprising a horn which is integral with the side frame, and an opposite horn which is removably connected to the side frame, a fastening for securing the top of the removable horn to the side frame, a pedestal cap between the lower ends of the integral and the removable horns, a truss rod passing through the horns and the caps of the respective pedestals, said rod being divided and its respective sections having a turnbuckle connection, and nuts on the outer ends of the rod sections, said nuts engaging the back of the removable pedestal horns.

[Claims 6 to 14 not printed in the Gazette.]

1,167,149. METHOD OF TREATING COAL-GAS. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 6, 1914. Serial No. 836,677. (Cl. 48—210.)



1. The method herein described of treating coal gas consisting in maintaining a stream of gas within a stand-pipe at a gas-fixing temperature, discharging the stream from the stand-pipe immediately into a gas container and subjecting the gas within the container to a substantially uniform temperature reduction, and withdrawing the reduced temperature gas from the container.

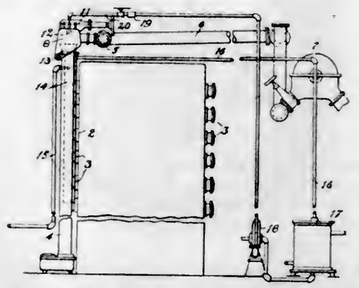
2. The method herein described of treating coal gas consisting in discharging gas from a plurality of retorts into a stand-pipe and thereby producing a continuous stream of gas in the pipe, maintaining such stream at a substantially uniform gas-fixing temperature, discharging the high temperature stream from the stand-pipe immediately into a gas container and subjecting the gas within the container to a substantially uniform temperature reduction and thereby removing impurities therefrom, and withdrawing the purified reduced-temperature gas from the container.

3. The method herein described of treating coal gas consisting in maintaining a stream of gas within a stand-pipe at a gas-fixing temperature, discharging the stream from the stand-pipe immediately into a gas container and subjecting the gas within the container to a substantially uniform temperature reduction, and subjecting the cooled and cleansed gas within said container to exit force that acts equally on all portions of the gas.

1,167,150. APPARATUS FOR TREATING COAL-GAS. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Original application filed May 6, 1914, Serial No. 836,677. Divided and this application filed Aug. 6, 1914. Serial No. 855,415. (Cl. 48—171.)

1. The combination of a stand-pipe in communication with coal gas generating apparatus and adapted to conduct

the gas upwardly therefrom, a take-off main, a cooling and condensing chamber at the upper end of the stand-pipe and into which the latter discharges, means for maintaining controlled communication between said chamber and main, and means operative within said chamber for cooling the gas immediately upon its discharge from the stand-pipe and thereby precipitating tar and other impurities therefrom before it passes to the main.



2. The combination of a cooling chamber, a stand-pipe beneath and adapted to discharge upwardly into the chamber with the stand-pipe outlet above the chamber bottom, means within the upper portion of the chamber for directing a spray of liquid on the gas discharging upwardly from the stand-pipe, and a take-off main in communication with the upper portion of the chamber.

3. The combination of a cooling chamber, a stand-pipe extending upwardly into the chamber through the bottom of the latter with the upper end of the pipe open for discharging gas into the upper portion of the chamber, means within the chamber for subjecting the gas discharge thereinto to a liquid spray, a liquid outlet for the chamber located beneath the plane of the upper end of the stand-pipe, and a take-off main in communication with the upper portion of said chamber.

4. The combination of a plurality of stand-pipes, a cooling chamber above and common to the stand-pipes and into which the latter are adapted to discharge above the chamber bottom, a liquid outlet for the chamber located in a plane lower than the stand-pipe outlets, means within the upper portion of the chamber for subjecting the gas discharging from the several stand-pipes to a liquid spray, and a take-off main in communication with the upper portion of said chamber.

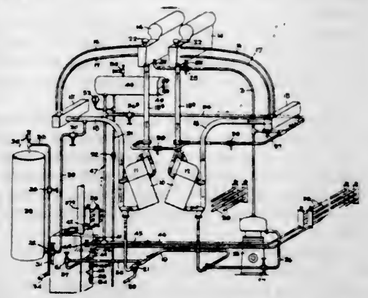
5. The combination with a plurality of gas-bench stand-pipes, of a cooling chamber into which the pipes discharge, means for cooling the discharged gas within the chamber and thereby precipitating the heavier hydrocarbons, and an off-take main in controlled communication with the chamber at a plurality of points for subjecting all of the cooled and cleansed gas within the chamber to uniform exit force.

[Claims 6 to 8 not printed in the Gazette.]

1,167,151. ENGINE-COOLING AND CAR-HEATING SYSTEM. HENRI G. CHATAIN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Nov. 17, 1914. Serial No. 872,621. (Cl. 121—122.)

1. In combination, an engine having a cooling jacket, a radiator located above the engine for dissipating the heat of the fluid circulating through the jacket, a heater, a heating system connected thereto, a tank, and valved conduit means for draining the radiator into the tank and connecting the cooling jacket to the heating system.

2. In combination, an engine having a cooling jacket, a radiator located above the engine, pipes connecting the engine jacket thereto, a heater, a hot water heating system connected thereto comprising circulating coils, an expansion tank located above the same, and a pipe connecting the expansion tank to the circulating coils; and a valved pipe connecting the last named pipe to the first named pipes at points between the top of the engine and the radiator.



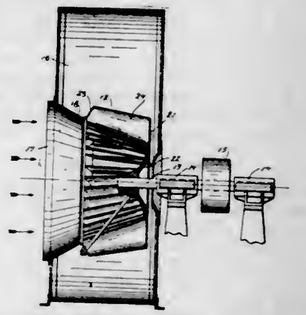
3. In combination, an engine having a cooling jacket, a radiator located above the engine, pipes connecting the engine jacket thereto, a heater, a hot water heating system connected thereto, comprising circulating coils, an expansion tank located above the same, and a pipe connecting the expansion tank to the circulating coils; a valved pipe connecting the last named pipe to the first named pipes at points between the top of the engine and the radiator, a second tank, and a valved conduit connecting the second tank to the radiator for draining the same.

4. In combination, an engine having a cooling jacket, a radiator located above the engine for dissipating the heat of the fluid circulating through the jacket, a heater, a heating system connected thereto, a tank, valved conduit means for draining the radiator into the tank and connecting the cooling jacket to the heating system, and a pipe for conveying air under pressure to said tank to force the cooling medium back into the radiator.

5. In a combined car heating and engine cooling system, the combination of an engine having two sets of cylinders with cooling jackets, a radiator comprising two sections located above the engine, conduits connecting the cooling jackets of one set of cylinders to each radiator section, a heater, a heating system connected thereto, a tank, a pipe for draining the radiator into the tank, pipes connecting the heating system to the conduits at points between the top of the engine and the radiator, and valves in said pipes controlling the connection to each set of cylinders.

[Claims 6 and 7 not printed in the Gazette.]

1,167,152. CENTRIFUGAL FAN. ALBERT A. CRIQUI, Buffalo, N. Y. Filed Feb. 20, 1914. Serial No. 819,861. (Cl. 230—11.)



1. A centrifugal fan having a wheel provided with a plurality of blades, the surfaces of each of said blades being made from a portion of the surfaces of two cones.

2. A centrifugal fan having a wheel provided with a plurality of blades, a portion of the surfaces of each of

said blades being made from a portion of the surfaces of two cones, each of which has an element included in a plane tangent to their surfaces.

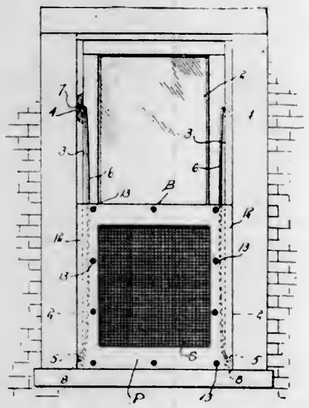
3. A centrifugal fan having a wheel provided with a plurality of blades, the surfaces of each of said blades being made from a portion of the surfaces of two cones, each of said blades having a forward and backward curve.

4. A centrifugal fan having a wheel provided with a plurality of blades, the surfaces of each of said blades being made from a portion of the surfaces of two cones, each of said blades having a forward and backward curve and the surfaces of each of said blades, which is presented to the air, being concave at its heel and convex at its tip.

5. A centrifugal fan having a wheel provided with a plurality of blades, the surfaces of each of said blades being made from a portion of the surfaces of two cones, and the tip of each blade being substantially coplanar with the axis of the said wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,167,153. WINDOW-SCREEN. OSCAR B. CRITCHLOW, Monaca, Pa. Filed Feb. 18, 1915. Serial No. 9,070. (Cl. 156—14.)

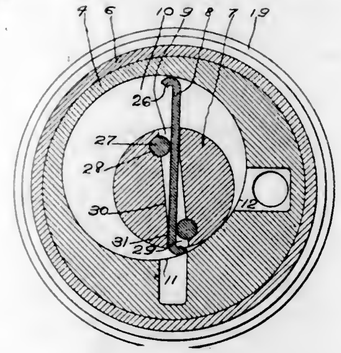


The combination with a window frame including the outer parting beads thereof, of a pair of spaced thimbles socketed in each parting bead, a vertically disposed spring guide rod overlying each parting bead and having laterally bent terminals removably seated in the thimbles of such parting bead, a sliding screen frame having longitudinal grooves in the sides thereof adapted to receive the spring guide rods, a piece of reticulated material covering the screen frame, and a skeleton frame plate overlying the piece of reticulated material and having its side portions extending beyond the sides of the screen frame, said extending portions of the sides of the plate frame resting upon and slidably engaging the outer faces of the parting beads of the window frame, and means for fastening the plate and screen to the screen frame.

1,167,154. ROTARY MOTOR. PHILIP J. DARLINGTON, Hartford, Conn. Filed Nov. 24, 1914. Serial No. 873,737. (Cl. 138—19.)

1. In a rotary machine, a cylinder, a slotted shaft, a blade free to slide in the slot of said shaft and a removable member carried by said shaft to prevent said blade falling out.

2. In a rotary machine, a cylinder, a cylinder cover, a slotted shaft, a blade free to slide in the slot of said shaft and normally held in pdace by said cylinder and cylinder cover, a removable member carried by said shaft and normally locked in place by said cylinder and cylinder cover, said removable member preventing said blade falling out of the slot of said shaft when said cylinder is removed.



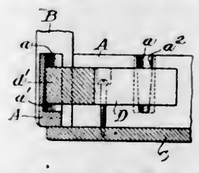
3. In a rotary machine, a cylinder, a slotted shaft, a blade free to slide in the slot of said shaft and normally held in place by said cylinder and removable means for preventing said blade falling out of the slot of said shaft when said cylinder is removed.

4. In a rotary machine, a cylinder, a shaft, a slot in said shaft, a blade sliding in said slot and a removable member for partly closing the width of said slot, said removable member being normally held in place by the cylinder cover.

5. In a rotary machine, a cylinder, a shaft, a diametric slot through said shaft, said slot being formed with two sets of surfaces two of which are parallel with each other and the other two in parallel planes with each other, but at an angle to the first two surfaces.

[Claims 6 to 9 not printed in the Gazette.]

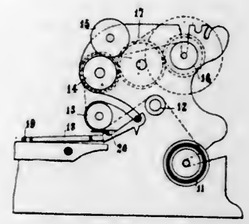
1,167,155. CORNER-JOINT. ASHTON P. DERBY, Gardner, Mass., assignor to P. Derby & Company, Inc., Gardner, Mass., a Corporation of Massachusetts. Filed May 1, 1914. Serial No. 835,744. (Cl. 45—48.)



A corner joint comprising two angle members, a brace member, and interlocking connections between the angle members and the ends of the brace member, said interlocking connections comprising a socket in each of the angle members, both the mouth and the side of each socket opening through the sides of the angle member, a tapering projection on each end of the brace member, said sockets being correspondingly inclined and said sockets and projections being adapted to draw and hold the brace member and the angle members together by a wedge-like action, a cover piece supported on said angle members at the side opposite to the mouths of said sockets and spaced from said brace member, and a screw connecting said brace members and said cover piece to draw and hold said projections tight in said sockets.

1,167,156. PAPER-FEEDING MECHANISM FOR TYPEWRITERS. VICTOR-CHARLES DOLD, Vanves, France, assignor to Société La Sténophile Bivort, Paris, France. Filed Jan. 19, 1914. Serial No. 813,069. (Cl. 197—9.)

1. In a typewriting machine, the combination, with mechanism for feeding a continuous strip of paper embodying a pair of superposed rollers between which the strip passes; of a winding device to which said strip is fed, comprising a differentially-movable roller, and a gear yieldingly connected with one end thereof; and a gear connection between one of said superposed rollers and the first-named gear.

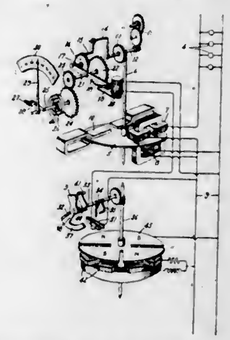


2. In a typewriting machine, the combination, with mechanism for feeding a continuous strip of paper; of a winding device to which the strip is fed comprising a differentially-movable, cylindrical shell whereon said strip is wound, a supporting shaft therefor, and a spring-controlled gear mounted upon said shaft at one end of said shell; and a gear connection between said feeding mechanism and the first-named gear.

3. In a typewriting machine, the combination, with mechanism for feeding a continuous strip of paper; of a winding device to which the strip is fed comprising a differentially-movable roller, a supporting shaft therefor, a gear loosely mounted upon said shaft at one end of said roller, and a spring washer engaging said gear to force the latter into frictional engagement with said roller end; and a gear connection between said feeding mechanism and the first-named gear.

4. In a typewriting machine, the combination, with mechanism for feeding a continuous strip of paper; of a winding device to which the strip is fed comprising a differentially-movable roller, a supporting shaft therefor, a gear loosely mounted upon said shaft at one end of said roller, a Belleville washer engaging said gear for forcing the latter into frictional engagement with said roller end, and means for adjusting the pressure of said washer upon said gear; and a gear connection between said feeding mechanism and the first-named gear.

1,167,157. MAXIMUM-INDICATOR. CHARLES G. DURFEE, Rochester, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 20, 1912. Serial No. 710,545. (Cl. 171—34.)



1. The combination with a rotatable shaft of a maximum indicator comprising an actuator having an initial position, means for operatively connecting said rotatable shaft to said actuator, electromagnetic means including an electric circuit adapted to interrupt the operative connection between said rotatable shaft and said actuator, means adapted to return said actuator to its initial position when the operative connection between the rotatable shaft and the actuator is interrupted, a fixed contact in said electric circuit, a rotatable sector-shaped contact-maker coöperating with said fixed contact to complete said electric circuit, means for positively rotating said contact-maker through half a revolution, means whereby said contact-maker is urged by gravity to complete the other half of its revolution thereby engaging said fixed contact, the length of the contact surface of said contact-maker being such that said electric circuit is maintained completed until said actuator has returned to its initial position, and means for indicating the maximum movement of said actuator.

2. The combination with a rotatable shaft of a maximum indicator comprising an actuator having an initial position, means for operatively connecting said rotatable shaft to said actuator, electromagnetic means including an electric circuit adapted to interrupt the operative connection between said rotatable shaft and said actuator, means adapted to return said actuator to its initial position when the operative connection between the rotatable shaft and the actuator is interrupted, a fixed contact in said electric circuit, a rotatable sector-shaped contact-maker adapted to coöperate with said fixed contact to complete said electric circuit, means for positively rotating said contact-maker through half a revolution, means whereby said contact-maker is urged by gravity to complete the other half of its revolution thereby making contact with said fixed contact, the length of the contact surface of said contact-maker being such that said electric circuit is maintained completed until said actuator has returned to its initial position, means for preventing a rebound of said contact-maker after its action in response to gravity, and means for indicating the maximum movement of said actuator.

3. The combination with a rotatable shaft of a maximum indicator comprising a non-return pointer, an actuator adapted to move said pointer, means for normally maintaining said actuator in an initial position, a second shaft operatively connected to said rotatable shaft and to said actuator, an electromagnet, an armature for said magnet connected to said second shaft and adapted to rock said shaft through a small angle when the magnet is energized, a circuit for said electromagnet, spring contacts in said circuit, a rotatable contact-maker coöperating with said contact, means for positively rotating said contact-maker through half a revolution, a sector-shaped contact member on said contact-maker adapted to rotate the contact-maker by gravity through half a revolution, and means for preventing a rotation of said contact-maker in a reverse direction.

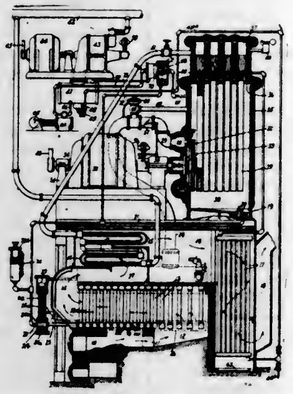
1,167,158. METHOD OF AND APPARATUS FOR GENERATING POWER. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 29, 1915. Serial No. 63,992. (Cl. 60—4.)

1. The process of generating power which consists in transmitting heat from a source to mercury and producing mercury vapor at a high temperature, converting a portion of the heat energy in this mercury vapor into mechanical work, condensing the vapor and transferring its remaining heat of vaporization and its latent heat of condensation to a secondary fluid, and utilizing the heat energy in this vapor so generated to produce mechanical work.

2. The process of deriving mechanical energy from a source of heat, which consists in delivering high temperature heat energy from such source to mercury, and vaporizing the same, working the resulting mercury vapor in a heat engine, extracting residual heat energy from mercury vapor at a lower temperature and utilizing the same, and extracting residual heat energy from the said source and utilizing the same.

3. The process which consists in generating gases at high temperature, transmitting heat from said gases to mercury and vaporizing the same, extracting mechanical work from the vapor, condensing the vapor and utilizing the heat of condensation for the production of vapor in a secondary system at a lower temperature, utilizing such lower temperature vapor for the production of mechanical

work, extracting residual heat from said gases and utilizing the same in successive steps at increasingly lower temperature, first for heating the mercury before vaporization, and second, for adding to the heat in the secondary system.

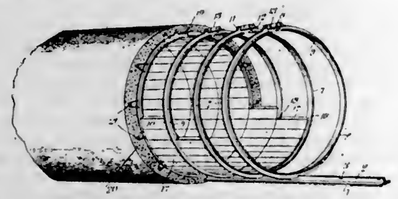


4. The process of utilizing the heat of combustion to generate power, which consists in causing the high temperature gases resulting from said combustion to vaporize mercury at low pressure, converting a portion of the heat energy of such vapor into mechanical energy in a fluid engine, discharging the mercury vapor from said fluid engine into a closed chamber having a vacuum maintained therein, utilizing the heat energy of said exhaust vapor to vaporize a fluid of lower boiling point at a materially higher pressure, and thereafter utilizing said latter vapor to generate further mechanical power in a fluid engine.

5. The process of delivering energy to an electric system, which consists in generating high temperature gases by combustion, transferring heat from said gases to a fluid having a higher boiling point than water, converting a portion of the heat energy of such fluid into mechanical energy, utilizing the latent heat of vaporization of the fluid after said conversion into mechanical energy takes place to generate vapor of a secondary fluid of lower boiling point, utilizing a portion of the heat energy of said secondary fluid to generate further mechanical power, converting the mechanical power resulting from these steps into electrical energy and delivering the electrical energy resulting from both steps to the said electric system.

[Claims 6 to 48 not printed in the Gazette.]

1,167,159. CONSTRUCTION OF CONCRETE SEWERS, AQUEDUCTS, &c. WILLIAM C. FLANNERY, Washington, D. C. Filed July 19, 1911. Serial No. 639,454. (Cl. 72—53.)



1. In a sewer, aqueduct or like conduit construction, the combination of a longitudinally extending frame girder, vertical transverse frame members supported and held in spaced relation by said girder, tiles supported by and closing the space between said frame members, and an outer wall of concrete in which the aforesaid parts are invested.

2. A sewer, aqueduct or like horizontal conduit including a longitudinally extending girder, vertical, transverse rings or bands arranged at spaced intervals along the girder, an inner wall or lining of tiles supported by and internally filling the spaces between the rings or bands, and an outer wall of concrete in which said girder, rings or bands and tiles are embedded.

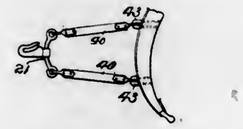
3. A sewer, aqueduct or like horizontal conduit including a longtudinally extending girder, vertical, transverse circumferentially adjustable rings or bands arranged at spaced intervals along the girder, an inner wall or lining of tiles supported by and internally filling the spaces between the rings or bands, and an outer wall of concrete in which said girder, rings or bands and tiles are embedded.

4. A sewer, aqueduct or like horizontal conduit comprising a horizontal girder extending longitudinally along the line of the trench, vertically arranged frame rings or bands supported transversely of and at spaced intervals along the girder, an inner wall formed of tiles supported by the frame rings or bands, and an outer inclosing wall of concrete in which the girder, frame rings or bands and tiles are embedded and by which they are additionally supported.

5. A sewer, aqueduct or like horizontal conduit comprising a horizontal girder extending longitudinally along the line of the base of the trench, said girder being provided at spaced intervals with seats, vertically arranged spaced frame rings or bands resting in said seats, an inner wall formed of tiles supported by the frame rings or bands, and an outer inclosing wall of concrete in which the girder, frame rings or bands and tiles are embedded and by which they are additionally supported.

[Claims 6 to 14 not printed in the Gazette.]

1,167,160. HAME AND TRACE CONNECTOR. GEORGE L. FORMAN, Louisville, Ky., assignor to Forman-Breen Manufacturing Company, Louisville, Ky., a Corporation of Kentucky. Filed Apr. 1, 1914. Serial No. 828,770. (Cl. 54—31.)



1. The combination of a hame-body and a draft connection, the said draft connection comprising an element arranged to be attached to a trace and a means for connecting said element to the hame-body, said means being attached to the hame-body at separated places along the length of the latter, and said element and means being connected to each other substantially in line with the center of the space between said places, the connection between the trace-element and means being arranged to permit free relative sliding movement in the direction of the length of the hame-body.

2. The combination of a hame-body and a draft connection, said draft connection comprising elements which are connected to the hame body at spaced places along the length of the latter and an element arranged to be connected to a trace, the latter element having a loose connection with the first-named elements at a place which is substantially in line with a point on the hame body equidistant from the places at which said first-named elements are connected to the hame-body.

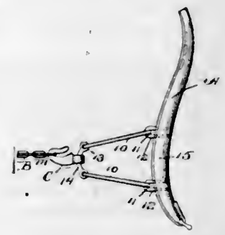
3. The combination of a hame-body and a draft connection, said draft connection comprising a part arranged to be connected to a trace and a means having end parts which are loosely attached to the hame-body at separated places along the length of the latter, the trace part and said means having connection with each other at a place which is substantially in line with a point on the hame-body equidistant from the places at which the end parts are secured to the hame-body, said connection being arranged to permit relative sliding movement in the direction of the length of the hame-body automatically, in accord with changes in the direction of the line of pull.

4. The combination of a hame-body and a draft connection, said draft connection having end parts which are loosely connected to the hame-body at separated places along the length of the latter and an interposed part which is loosely connected to the end parts, the draft connection also having a member which is arranged to be connected with a trace and is loosely connected to the interposed part, the connection of the interposed part and the said member being such as to permit free relative sliding movement thereof in the direction of the length of the hame-body, in accord with changes in the direction of the line of pull.

5. The combination of a hame-body and a draft connection, the draft connection comprising elements which are loosely connected to the hame body at spaced places along the length of the latter and an element which is arranged to be connected to a trace and has connection with the first named elements, the connection between said elements including an opening arranged to permit free relative sliding movement in the direction of the length of the hame-body.

[Claims 6 to 12 not printed in the Gazette.]

1,167,161. HAME AND TRACE CONNECTOR. GEORGE L. FORMAN, Louisville, Ky., assignor to Forman-Breen Manufacturing Company, Louisville, Ky., a Corporation of Kentucky. Filed Nov. 23, 1914. Serial No. 873,510. (Cl. 54—30.)



1. The combination of a hame-body, and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection including rigid elements whose forward ends are loosely connected to the hame-body at spaced points, and a part arranged to be connected to a trace and having connection with the rear ends of said elements and slidable with relation thereto in the direction of the length of the hame-body.

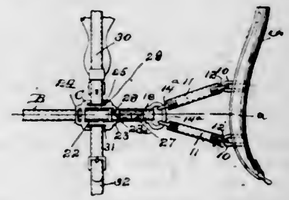
2. The combination with a hame-body and a trace, of means connecting the hame-body with the trace, the said means being arranged to maintain the line of draft through a predetermined point on the hame-body and including rigid elements whose forward ends are loosely connected to the hame-body at spaced points and a part connected to the trace, the said part having lateral pivotal movement and having connection with the rear ends of said elements and being slidable with relation to the latter in the direction of the length of the hame-body.

3. The combination of a hame-body and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection including rigid elements whose forward ends are loosely connected to the hame-body at spaced point, an element loosely connected to the rear ends of the first-named elements and connecting the same to each other, and a trace part connected to the second-named element and movable relatively thereto in the direction of the length of the hame-body.

4. The combination of a hame-body and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection including rigid elements whose forward ends are loosely connected to the hame-body at spaced points, a bar having its ends loosely connected to the rear ends of said elements and connecting the same, and a part slidably mounted on the said bar.

5. The combination of a hame-body and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection including rigid elements whose forward ends are loosely connected to the hame-body at spaced points, an element loosely connected to the rear ends of the first-named elements, and a trace-part connected to the second named element and arranged to move relatively to the latter pivotally in a lateral direction and bodily in the direction of the length of the hame-body.

1,167,162. HAME AND TRACE CONNECTOR. GEORGE L. FORMAN, Louisville, Ky., assignor to Forman-Breen Manufacturing Company, Louisville, Ky., a Corporation of Kentucky. Filed Nov. 23, 1914. Serial No. 873,511. (Cl. 54—30.)



1. The combination of a hame-body and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection comprising elements whose forward ends are loosely connected to the hame body at spaced point and an element arranged to be connected with a trace and slidably engaged with the rear ends of the first named elements.

2. The combination of a hame body and a draft connection arranged constantly to maintain the line of draft through a predetermined point on the hame-body, the said draft connection comprising elements whose forward ends are loosely connected to the hame body at spaced points and an element arranged to be connected with a trace and having a curved forward part loosely engaged with the rear ends of the first named elements and slidable with relation thereto.

3. The combination of a hame body and a draft connection arranged to cause the line to pull to pass constantly through a given point on the hame body, said draft connection including a trace element and hame elements, the hame elements being flexible and having their forward ends loosely connected to the hame body at spaced points on the latter, and the trace element having connection with the rear ends of the hame elements and being arranged to slide relatively thereto in the direction of the length of the hame body.

4. The combination of a hame body and a draft connection arranged to cause the line of pull to pass constantly through a given point on the hame body, said draft connection including a trace element and hame elements, the hame elements being flexible and having their forward ends loosely connected to the hame body at spaced points on the latter, and the trace element directly engaging the rear ends of the hame elements and being arranged to slide relatively thereto in the direction of the length of the hame body.

5. The combination of a hame-body and a draft connection, the draft connection comprising flexible elements and a D, the flexible elements having their forward ends loosely connected to the hame body at spaced points along the length of the latter and the D being slidably mounted in the rear ends of said flexible elements.

[Claims 6 to 8 not printed in the Gazette.]

1,167,163. COHERER. CROSBY FIELD FRANK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 10, 1914. Serial No. 844,194. (Cl. 250—32.)



1. The combination in a coherer of a vertical tube comprising a main portion and two branches at its lower end, an electrode in each branch and a mass of metallic granules filling said branches above said electrodes and a part of the main portion of the tube.

2. The combination in a coherer of a tube comprising a main portion and two branches, an electrode in each of said branches, a mass of finely divided magnetic material in said tube between said electrodes and means for withdrawing said magnetic material from contact with said electrodes.

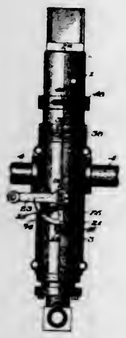
3. The combination in a coherer of a tube comprising a main portion and two branches, an electrode in each of said branches, a mass of finely divided magnetic material in said tube between said electrodes and a solenoid surrounding said tube.

4. The combination in a coherer of a tube of insulating material comprising a main portion and two branches, a stationary electrode in each of said branches, a mass of metallic granules in said tube between said electrodes, means for moving the tube with respect to the electrodes to vary the distance between said electrodes through said metallic mass, and a solenoid for withdrawing said metallic granules from contact with said electrodes.

5. The combination in a coherer of a vertical tube comprising a main portion and two branches at its lower end, an electrode extending into each of said branches, a mass of metallic granules in said tube between said electrodes, means for lifting said metallic mass from contact with said electrodes.

[Claims 6 to 37 not printed in the Gazette.]

1,167,164. VARIABLE-POWER TELESCOPE. ALBERT GREBE, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 14, 1912. Serial No. 731,284. (Cl. 88—32.)



1. In an optical instrument, the combination with a tube having objective and eyepiece lenses, an erecting system of lenses and a carrier for the latter movable in the tube, of an operating member arranged exteriorly of the tube and movable alternately in opposite directions, driving connections between said member and carrier for shifting the latter and means for impelling the carrier to the limit of its movement in both directions.

2. In an optical instrument, the combination with a tube having objective and eyepiece lenses, and an erecting system of lenses, of a carrier for the latter guided in the tube, a shiftable operating member arranged exteriorly of the tube and operating mechanism between said member and carrier comprising a tension device which operates to impel the carrier to the limit of its longitudinal movement in both directions.

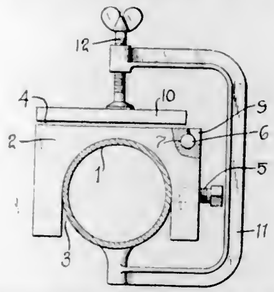
3. In an optical instrument, the combination with a tube having objective and eyepiece lenses, and an erecting system of lenses, of a carrier for the latter guided in the tube, a shiftable operating member arranged exteriorly to swing a partial revolution in opposite directions, operating mechanism for effecting the longitudinal adjustment of the carrier in opposite directions upon movement of the operating member and means coöperating with said mechanism to impel the carrier toward the limits of its movement when moved past a central point in either direction and also serving to yieldingly hold the carrier at the extremes of its movement.

4. In a telescope, the combination with a tube, fitted with objective and eyepiece lenses, a system of erecting lenses and a movable carrier therefor, guided in the tube, having a gear rack, of a segmental gear mounted exteriorly of the tube, a bearing block at the side of the tube supporting the segmental gear, an arbor also extending through said block and provided upon its inner and outer ends with pinions coöperating respectively with the rack and the segmental gear.

5. In a variable power telescope, the combination with a tube having objective and eyepiece lenses and a system of erecting lenses, of a mounting for the latter movable longitudinally in said tube, an oscillatory operating member on the latter and connections between it and said mounting for shifting the latter, a spring connected to said operating member and to the tube and serving to rotate the member to the limit of its movement after it has passed the center of movement when traveling in one direction or the other.

[Claims 6 to 10 not printed in the Gazette.]

1,167,165. EXHAUST-HEATED VULCANIZER. CHARLES W. GRIFFITH, Altoona, Pa., assignor of two-thirds to John Neason and Samuel A. Trees, Altoona, Pa. Filed Oct. 28, 1914. Serial No. 869,088. (Cl. 18—18.)



1. The combination with a pipe carrying heated vapors, of a solid vulcanizing plate detachably mounted upon the pipe and having a thickness greater than the diameter of the pipe and a recess having a depth approximately equal to the diameter of the pipe whereby to provide oppositely disposed depending portions engaging on each side of the pipe, and means passing through one of said depending portions for engaging the pipe and clamping the vulcanizing plate upon the pipe.

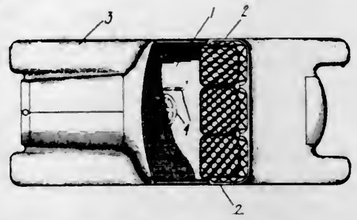
2. A vulcanizing attachment comprising a plate cut away upon its under face to fit over and partially embrace the exhaust pipe of an internal combustion engine, said plate having a flat upper face, a clamping plate confronting the flat upper face of the vulcanizing plate, and a clamp comprising a body having one terminal adapted to engage with the under face of the exhaust pipe and the other terminal extending over the upper face of the clamping plate, and a clamping screw passing through the last-named terminal and engaging with the clamping plate.

3. A vulcanizing attachment comprising a plate cut away upon its under face to fit over and contact with the exhaust pipe of an internal combustion engine, and provided with oppositely disposed depending portions engaging on each side of said exhaust pipe, a screw passing through one of these depending portions and adapted to engage the exhaust pipe to detachably hold the vulcanizing plate in place thereon, and a clamping member approximately U-shaped in form adapted to have one terminal engage beneath the exhaust pipe and the other terminal extend over the vulcanizing plate, and a clamp screw passing through this last-named terminal.

4. A vulcanizing plate having a thickness greater than the diameter of an automobile engine exhaust pipe and being recessed at its under side to fit over the said exhaust pipe and contact therewith, said recess having a depth approximately equal to the diameter of the exhaust pipe, said vulcanizing plate having a longitudinal bore extending from one end of the plate adjacent an upper corner thereof, a corner of the plate being cut away to intersect this bore, means for detachably engaging said plate with the exhaust pipe of the engine, and a thermometer mounted within the bore and entirely housed thereby, the thermometer being read through the cut away corner of the plate.

5. A vulcanizing plate for detachable connection to the exhaust pipe of an automobile engine, said plate having a thickness greater than the diameter of the exhaust pipe and being recessed on its under side to fit over the exhaust pipe and contact therewith, said recess having a depth approximately equal to the diameter of the exhaust pipe, and means passing through the side of the vulcanizing plate and adapted to engage the exhaust pipe to hold the vulcanizing plate in place thereon.

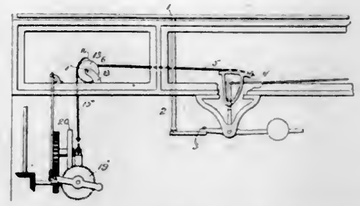
1,167,166. AUTOMOBILE. WILLIAM P. HAMMOND, Passaic, N. J. Filed June 7, 1915. Serial No. 32,514. (Cl. 21—7.)



1. An automobile body having a seating compartment extending the full width and depth of the body and of substantially the same width at the bottom as at the top, said compartment extending laterally to include the space usually occupied by the running-boards common to such bodies, and seats extending the full width of such compartment to provide seating accommodations for three persons side by side, and curved mud guards or fenders having their outer edges in line with the sides of the seating compartment and merging into the walls of the compartment as though forming continuations of running boards.

2. An automobile body having a seating compartment extending the full width of the body, said seating compartment extending laterally to include the width usually occupied by the running-boards common to such bodies, and curved mud guards or fenders having their outer edges in line with the sides of the seating compartment and extending forwardly and rearwardly therefrom, and merging into the walls of the compartment as though forming a continuation of the running-boards.

1,167,167. BUILDER-MOTION. GEORGE S. HARRIS, West Point, Ga., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 13, 1909. Serial No. 477,671. (Cl. 118—1.)



1. In a device of the class described, the combination, with means for delivering yarn onto a bobbin, of means for actuating said yarn delivering means, a cable for operating said actuating means, a drum engaged by said cable, means for operating said drum simultaneously imparting bodily reciprocation and a step by step shifting of the cable, means for varying the traverse of the yarn delivering means, and a block carried by the cable and having a concave face adapted to ride at times on the periphery of the drum in position for causing the block to produce greater longitudinal shifting of the cable than the regular shifting thereof while the block contacts with the drum, the block being adapted to be lifted free of the drum by the cable.

2. In a device of the class described, the combination with a ring rail, a segment for actuating the same, and means for transmitting movement from the segment to the ring rail, of means for variably reciprocating the segment and allowing a variable gain thereof in an inverse ratio to the increased reciprocation thereof comprising an actuating cable, a cam for variably reciprocating and variably paying out said cable, a builder motion for actuating said cam, a cable engaging a drum of said builder motion and connected with the cam for transmitting movement from the builder motion to the cam, said second mentioned cable being adapted to be paid out by said drum for the regular gain, a lug carried by said cable and engaging said drum and disposed for causing an excess paying out of the second mentioned cable over the regular paying out thereof by the drum in decreasing amounts exactly proportionate to the increasing amounts of reciprocation imparted to the segment engaging cable.

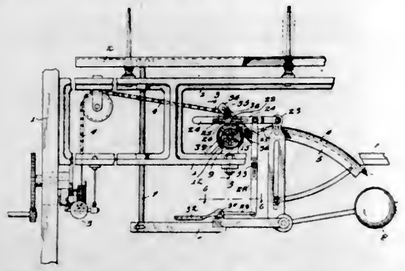
3. In a device of the class described the combination with means for delivering yarn to a bobbin, of means for actuating said yarn delivering means, a cable for operating said actuating means, a drum engaged by said cable, means for operating said drum for simultaneously imparting bodily reciprocation and a step by step shifting of the cable, means for varying the traverse of the yarn delivering means, and a block connected with the cable and engaging the drum in position for allowing a greater longitudinal shifting of the cable than the regular shift thereof while the block is in contact with the drum, the block being adapted to be lifted free of the drum by the cable.

4. In a machine for winding yarn upon a carrier or bobbin, a builder motion including a winding drum, means for directing the yarn to the carrier or bobbin as it is being wound thereon, a flexible connection between the winding drum and directing means, a deflector mounted on and movable with the flexible connection, and means for engaging said deflector and imparting a deflecting movement thereto.

5. In a machine of the character described, the combination of means for delivering yarn onto bobbins, a builder motion for traversing the yarn delivering means, a flexible connection between the yarn delivering means and builder motion, and means carried by and operating upon said flexible connection during the preliminary or initial winding for modifying the gain or traverse due to the builder motion.

[Claims 6 to 16 not printed in the Gazette.]

1,167,168. SPINNING-FRAME BUILDER. GEORGE S. HARRIS, West Point, Ga., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 23, 1914. Serial No. 833,919. (Cl. 118—1.)



1. In builder mechanism, the combination, with a movable yarn guide, and a builder cable connected to actuate the guide, of means extending substantially parallel to and engaging an intermediate portion of the cable without interruption of the cable for rendering the same rigid, means for actuating the cable, means for imparting an angular movement to the rigid portion of the cable relative to movements of the cable, and means for releasing the last named means for eliminating the angular movement.

2. In builder mechanism, the combination, with a movable yarn guide, and a builder cable connected to actuate the guide, of means extending substantially parallel to and engaging an intermediate portion of the cable without interruption of the cable for rendering the same rigid, said means being adjustable along the cable, means for actuating the cable, and means for imparting an angular movement to the rigid portion of the cable relative to movements of the cable.

3. In builder mechanism, the combination, with a movable yarn guide, and a builder cable connected to actuate the guide, of means extending substantially parallel to and engaging an intermediate portion of the cable without interruption of the cable for rendering the same rigid, said means being adjustable along the cable, means for actuating the cable, a deflecting lever connected to the cable engaging means, and a detent, extending into the path of the deflecting lever for causing the same to move angularly and thus deflect the rigid portion of the cable.

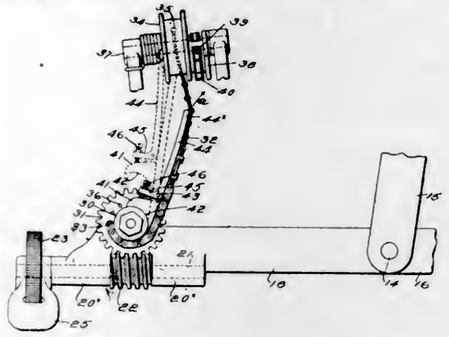
4. In builder mechanism, the combination, with a movable yarn guide, a builder cable connected to actuate the guide, and means for actuating the cable, of a rigid plate extending along the cable, means adjustable along the plate for clamping the cable to the plate for rendering the clamped portion of the cable rigid, a deflector lever engaging the plate, and means in the path of the lever for deflecting the same during movement of the cable.

5. In the builder mechanism, the combination, with a movable yarn guide, a builder cable connected to actuate the guide, and means for actuating the cable, of a rigid plate extending along the cable, means adjustable along the plate for clamping the cable to the plate for rendering the clamped portion of the cable rigid, a deflector lever engaging the plate, means in the path of the lever for deflecting the same during movement of the cable, and means for moving the lever deflecting means out of the path of the lever relative to movements of the cable.

[Claims 6 to 18 not printed in the Gazette.]

1,167,169. SPINNING-MACHINE. CHARLES E. LOVEJOY, Lowell, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed July 24, 1913. Serial No. 780,863. (Cl. 118—1.)

1. In a machine of the character described, the combination of a ring-rail, a builder motion, a flexible connection between the ring-rail and builder motion, means carried by the flexible connection and acting with maximum deflecting influence upon said flexible connection at the commencement of the winding operation and becoming automatically less effective upon said flexible connection as the winding proceeds, and an adjustable device for varying the initial position of the means carried by the flexible connection.



2. In a machine of the character described, the combination of a ring-rail, a builder arm, a flexible connection between the builder arm and ring rail, and a deflector pivotally mounted on the flexible connection to deflect the same during the preliminary or initial windings, said deflector becoming ineffective when the windings have reached a predetermined point.

3. In a machine of the character described, the combination of a ring-rail, a builder arm, a flexible connection between the ring-rail and builder arm, means mounted upon the flexible connection and movable by the builder arm for deflecting said flexible connection, and means for adjusting said first-named means to vary its deflecting capacity.

4. In a machine of the character described, the combination of a ring-rail and builder arm, a flexible connection between the ring-rail and builder arm, a block secured to the flexible connection between its ends, a finger carried by the block, and means to engage the block during the winding of a bunch to deflect the flexible connection.

5. In a machine of the character described, the combination of a ring-rail and builder arm, a flexible conection between the ring-rail and builder arm, a block secured to the flexible connection between its ends, a finger carried by the block, an adjusting device to adjust the finger with respect to said block, and means to engage the block during the winding of a bunch to deflect the flexible connection.

[Claims 6 to 8 not printed in the Gazette.]

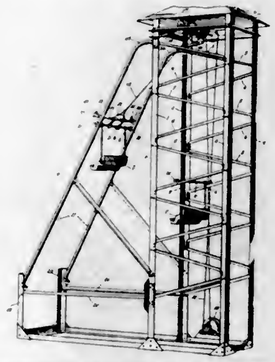
1,167,170. AMUSEMENT DEVICE. HANS HARTMAN, New York, N. Y. Filed Mar. 26, 1915. Serial No. 17,223. (Cl. 104—111.)

1. An amusement device having an upright frame structure, a carriage, rails on which said carriage descends in a zig-zag path, hoisting means for the carriage, a track on which the carriage is hoisted, one of said rails being a part and continuation of said track, and means to release the carriage from the hoisting means at the junction of said track with the last mentioned rails.

2. An amusement device having an upright frame structure, a carriage, rails on which said carriage descends, hoisting means for the carriage having a device to detachably engage the carriage, a track on which the carriage is hoisted, and friction reducing means on said device movable on said track.

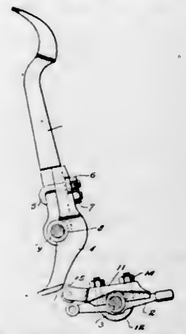
3. An amusement device having an upright frame structure, a carriage, rails on which said carriage descends in a zig-zag path, said rails at their lower ends being overlapped by the upper ends of the next rails so that the carriage will successively slide and fall from one rail directly onto the next rail and means to prevent displacement of the carriage during the falling or transfer of the carriage from rail to rail.

4. An amusement device having an upright frame structure, a carriage, rails on which said carriage descends in a zig-zag path, said rails at their lower ends being overlapped by the upper ends of the next rails so that the carriage will successively slide and fall from one rail directly onto the next rail, means to prevent displacement of the carriage during the falling or transfer of the carriage from rail to rail, such means being in the nature of guide elements, said carriage having a wheel to extend between said guide elements, and an axle for said wheel movable on one of said guide elements.



5. An amusement device having a frame structure provided with an upright having a flange, a guide member adjacent and spaced from the flange, a carriage, rails on which said carriage descends in a zig-zag path, said rails at their lower ends being overlapped by the upper ends of the next rails so that the carriage will successively slide and fall from one rail directly onto the next rail, and a wheel for said carriage to travel intermediate the said flange and guide member during the falling or transfer of the carriage from rail to rail.

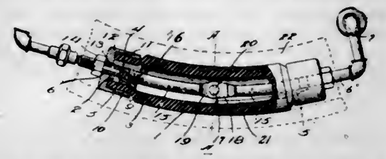
1,167,171. CLUTCH-RELEASING MEANS FOR MOTOR-CARS. LAFAYETTE A. HAYS, Manchester, N. H. Filed Feb. 13, 1915. Serial No. 8,108. (Cl. 74—5.)



The combination with the clutch releasing lever of a motor car, of an extension arm, a roller carried by said extension arm, fastening means for securing said arm in fixed relation to said clutch releasing lever, a brake pedal, an extension arm for said pedal lever, and fastening means for securing the last named arm to said brake pedal, said arms coöperating in such manner that when pressure is exerted on the brake pedal the clutch is first released followed by the application of the brake.

1,167,172. VULCANIZING-CORE. WILLIAM L. HEINIG and MARION A. JOHNSTON, Denver, Colo. Filed Oct. 12, 1914. Serial No. 866,406. (Cl. 18—45.)

1. A core for vulcanizing purposes comprising a flexible tubular member, closures at the ends of the same, means for admitting a fluid heating agent, an internal element connecting said closures and adapted to hold the member against longitudinal stretching, and means for permitting said element to flex, for the purpose set forth.



2. A core for vulcanizing purposes comprising a flexible tubular member, closures at the ends of the same, means for admitting a fluid heating agent, an element connecting said closures and adapted to hold the member against longitudinal stretching, and jointed means for permitting said element to flex, for the purpose set forth.

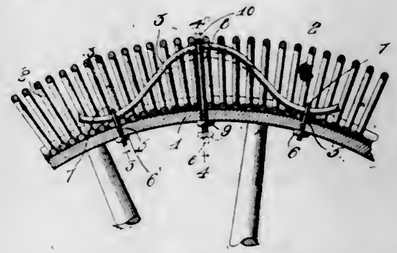
3. A core for vulcanizing purposes comprising a flexible tubular member, plugs closing the ends thereof and having openings for the circulation of steam throughout said member, a two-part rod within said member with the outer ends of its parts connected with said plugs, and a joint between the inner ends of said parts.

4. A core for vulcanizing purposes comprising an expansible tubular member, steam tight closures at the ends thereof, an element connected with the ends of said member for holding the same against longitudinal stretching, means for admitting steam into said member, and a water outlet therefrom having its intake at the lowest part of the interior of the core.

5. A core for vulcanizing purposes comprising a flexible tubular member, plugs located in the ends of and forming steam-tight closures for such member, a bracing element interposed between the plugs and connected thereto, means for admitting steam through one of said plugs, and a water outlet pipe passing through the other plug and having the intake end thereof at the lowest part of the interior of the core.

[Claims 6 to 12 not printed in the Gazette.]

1,167,173. AUTOMOBILE-TIRE. WILLIAM A. HEIZER, Richmond, Va. Filed Nov. 6, 1914. Serial No. 870,655. (Cl. 152—8.)

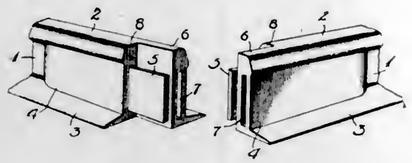


1. In a device of the class described, the combination with a rim, of a coiled spring mounted upon said rim, a bracing wire extending longitudinally through said coiled spring and provided with alternately arranged outwardly bulged portions and inwardly extending portions, bolt members passing through said rim for firmly anchoring said inwardly extending portions in engagement with said rim, and a plurality of bracing bolts slidably mounted through said rim and engaging said outwardly extending portions for constituting a brace therefor and holding said bracing wire in proper alinement with respect to said rim.

2. In a device of the class described, the combination with a rim, of a coiled spring mounted upon said rim, a bracing wire extending longitudinally through said coiled spring and provided with alternately arranged outwardly bulged portions and inwardly extending portions, bolt members passing through said rim for firmly anchoring

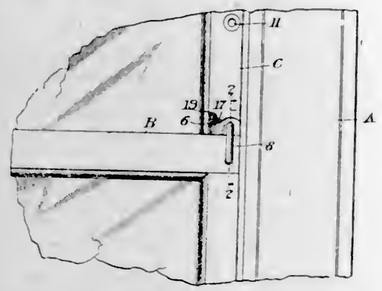
said inwardly extending portions in engagement with said rim, and a plurality of bracing bolts slidably mounted through said rim and engaging said outwardly extending portions for constituting a brace therefor and holding said bracing wire in proper alinement with respect to said rim, said last-mentioned bolt portions provided with an overhanging hooked end, an integral lug placed within said hooked end and adapted to firmly grip said bracing wire for holding said last-mentioned bolt portion in firm engagement with said bracing wire.

1,167,174. RAIL-JOINT. OTHO E. HESTER, Van Meter, Iowa, assignor of one-half to Franklin Clement Hester, Linden, Iowa. Filed Apr. 22, 1915. Serial No. 23,224. (Cl. 239—8.)



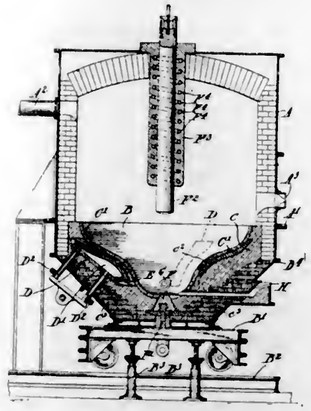
A railway rail having its upright web increased horizontally in thickness from one end to a point spaced longitudinally therefrom, said rail being formed with a right angular notch opening through the upper surface of its head, through the lower side of its base, through one of its upright sides, and through its aforesaid end, one wall of said notch being disposed in a vertical longitudinal plane centrally intersecting the web of the rail, and the other wall of said notch being disposed in a vertical transverse plane to form a shoulder, and a flat rectangular tongue extending longitudinally from said shoulder in parallel spaced relation to the longitudinal wall of the notch, the free end of said tongue being disposed in the upright plane of the aforesaid end of the rail, while the upper and lower edges of said tongue are positioned respectively in the plane of the lower side of the rail head, and in that of the upper side of the rail base, the rail being formed with a longitudinal socket opening through its aforesaid end, said socket being of a shape and size identical with the shape and size of the tongue and being spaced from the longitudinal wall of the notch a distance equal to that between said wall and the tongue, the upper and lower sides of the socket being disposed in the horizontal planes of the upper and lower edges of said tongue; combined with a second rail of identical construction, the tongue of the first rail being received in the socket of the second, and vice versa.

1,167,175. WINDOW-SASH LOCK. ADRIAN A. HICKS, Hillsboro, Ill. Filed Apr. 26, 1915. Serial No. 23,980. (Cl. 16—52.)



A window sash lock comprising a slidable base adapted to be fitted for movement upon the meeting rails of the lower sash, a locking member slidably fitted in said base and engageable with both sashes, a locking bolt extension on the base to engage with the frame of the window, and a swinging latch mounted upon the base for holding the second locking member in released or engaged position.

1,167,176. SMELTING OF ORES AND APPARATUS THEREFOR. FRANK WILLIAM HIGHFIELD, Caversham, England. Filed Feb. 23, 1915. Serial No. 10,052. (Cl. 204—64.)



1. The herein described process for the reduction of complex sulfid ores, which consists in roasting the ore to remove sulfur therefrom, mixing the roasted ore with a reducing agent and heating the charge electrically in a reducing atmosphere to a temperature below the volatilization point of lead but above that of zinc and sufficient to effect reduction of both lead and zinc in the presence of one another so that the zinc content is separated from the lead by being volatilized and recovered as vapor while the lead is not volatilized, separating the molten lead from the residual matte, and heating the said residual matte electrically to the temperature at which silicious slags are formed.

2. The herein described process for the reduction of complex sulfid ores which consists in roasting the ore to remove sulfur therefrom, mixing the roasted ore with a reducing agent and heating the charge electrically in a reducing atmosphere to a temperature at which the zinc content is volatilized while the lead is not, separating the molten lead from the residual matte, heating the said residual matte electrically to a temperature at which silicious slags are formed and subjecting the matte of copper and iron sulfids while it is still liquid to the action of a direct current to promote separation of its iron and copper contents and decomposition of the copper and iron sulfids.

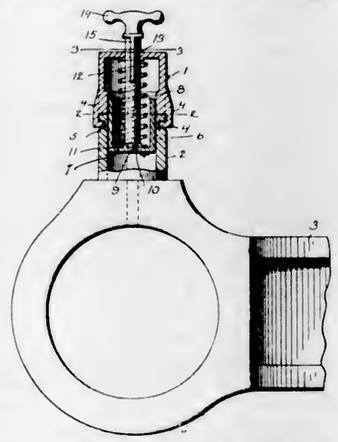
3. The hereinbefore described process for the reduction of complex sulfid ores which consists in roasting the ore to remove sulfur therefrom, mixing the roasted ore with a reducing agent and heating the charge electrically in a reducing atmosphere to a temperature of 950° C. at which the zinc content is volatilized but the lead is not and the latter is thereby separated in a liquid condition from the former, separating the molten lead from the residual matte and heating the said residual matte electrically to a temperature of 1300° C. for the formation of silicious slags and subjecting the matte of copper and iron sulfids while it is still liquid to the action of a direct current to promote separation of its iron and copper contents and decomposition of the copper and iron sulfids.

4. An electric smelting furnace having a hearth consisting of a lowermost support of refractory material, a lining of refractory material belonging to the second class of electrical conductors molded on to the said lowermost support, electrodes embedded in the said lining of refractory material, a resistance composition formed of refractory material mixed with carbon so as to constitute a conductor which conducts when cold molded on to the said lining belonging to the second class of electrical conductors, and an uppermost lining formed of a composition which is a second class electrical conductor.

5. An electric smelting furnace having a hearth consisting of a lowermost support of silicia, a lining of refractory material belonging to the second class of electrical conductors molded on to the silica support, electrodes embedded in the said lining of refractory material, a resistance composition formed of refractory material mixed with carbon so as to constitute a conductor which conducts when cold molded on to the said lining belonging to the second class of electrical conductors, and an uppermost lining formed of a composition which is a second class electrical conductor.

[Claims 6 to 13 not printed in the Gazette.]

1,167,177. GREASE-CUP CAP FOR LOCOMOTIVE-SIDE-ROD CUPS. JOHN C. HILL, Erwin, Tenn. Filed Feb. 26, 1915. Serial No. 10,776. (Cl. 184—45.)



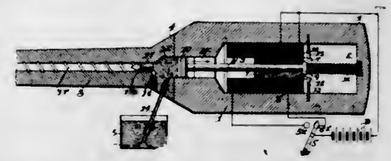
1. The combination with a grease cup, of a cap arranged upon the upper edge of the cup and slidably interlocked with the same and movable transversely to engage it with and disengage it from the cup and a spring actuated plunger operating in the cup and extending through the cap, said plunger being arranged to normally extend into both the cup and the cap to maintain the cap against sliding movement.

2. The combination with a grease cup provided in its exterior with opposite grooves, of a cap fitted on the grease cup and having depending approximately L-shaped lugs slidably engaging the grooves, and a spring actuated plunger extending through the cap and projecting below the upper edge of the cup to maintain the cap in interlocked relation with the cup.

3. The combination with a grease cup, of a cap slidably interlocked with the cup and movable transversely to engage it with and disengage it from the same, said cap being provided with a central opening and having a notch in one side thereof, and a spring actuated plunger operating in the cup and the cap and extending through the latter, said plunger maintaining the cap in interlocked relation with the cup and provided with a rib movable through the said notch and adapted to support the plunger out of engagement with the cup.

4. The combination with a grease cup, of a grease cup cap fitted on the upper edge of the cup and slidably interlocked therewith and movable transversely into and out of engagement with the same, a hollow plunger operating in the cup and the cap and normally extending into both of said parts to prevent sliding movement of the cap and provided with a lower end wall having a valve, a stem connected with the plunger and a spring for urging the plunger downwardly or inwardly.

1,167,178. ELECTROHYDRAULIC GUN. ROLLIE CALVIN HILL, Memphis, Tenn. Filed Oct. 1, 1915. Serial No. 53,511. (Cl. 89—1.)



1. In a gun, a casing, a barrel connected therewith and arranged to receive a projectile, and electro-magnet means disposed within the casing for drawing into the gun behind the projectile a propelling liquid.

2. In a gun, a casing, a barrel connected therewith and arranged to receive a projectile, electro-magnetic means disposed within the casing for drawing into the gun behind the projectile a propelling liquid, and for forcing said liquid in the direction of the projectile whereby the latter is projected.

3. In a gun, a casing, a barrel hingedly connected therewith and arranged to receive a projectile, said casing and said barrel having registering bores, a receptacle having a liquid, means for establishing communication between said receptacle and the registering bores, a piston disposed in one of said registering bores, a pair of solenoids, and a common core for said solenoids arranged to engage said piston in its movement in one direction to force the latter against the liquid and to retract the piston in its movement in the other direction.

4. In a gun, a casing having a bore, a pair of solenoids disposed within said bore, a common core for said solenoids, a piston rod passing through said core and provided with a head at one end and having a piston at the other, said casing having a reduced bore, a barrel hingedly connected with said casing and having a bore arranged to register with said reduced bore, and a smaller bore for a projecting, a receptacle for a liquid, means connecting said receptacle with the registering bores, and means for energizing said solenoids independently.

5. In a gun, a casing having a bore, a pair of solenoids disposed within said bore, a common core for said solenoids, a piston rod passing through said core and provided with a head at one end and having a piston at the other, said casing having a reduced bore, a barrel hingedly connected with said casing and having a bore arranged to register with said reduced bore and a smaller bore for a projectile, a receptacle for a liquid, a pipe for establishing communication between said receptacle and said registering bores, a check valve in said pipe, and means for energizing said solenoids independently.

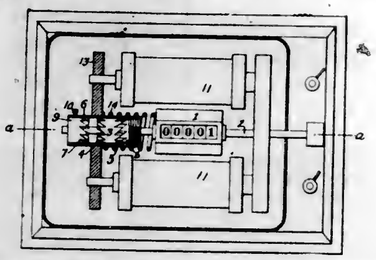
[Claim 6 not printed in the Gazette.]

1,167,179. MECHANICAL MOVEMENT. JOHN E. HIRES, Ardmore, Pa. Filed Aug. 26, 1915. Serial No. 47,514. (Cl. 74—14.)

1. Means for rotating a shaft, comprising a cylindrical member toothed at each end, a tubular member surrounding said cylindrical member, and means for reciprocating one of said members with respect to the other, said tubular member having teeth for engagement with the teeth at both ends of the cylindrical member, and one of said members being connected to the shaft; the contact of the teeth of said tubular member with those of the cylindrical member effecting rotative movement of the shaft when the slidable member is moved in either direction.

2. Means for rotating a shaft, comprising a cylindrical member toothed at each end, a tubular member surrounding said cylindrical member, means for imparting longi-

tudinal or sliding movement to one of said members with respect to the other in one direction, said tubular member having teeth for engagement with the teeth at both ends of the cylindrical member, one of said members being connected to the shaft, and a spring for moving said slidable member in the opposite direction, the contact of the teeth of said tubular member with those of the cylindrical member effecting rotative movement of the shaft when the slidable member is moved in either direction.



3. Means for rotating a shaft, comprising a ratchet or pinion having teeth at its end mounted on said shaft, a slidable sleeve surrounding said pinion, and means for imparting movement to said sleeve, the latter having teeth for engagement with the teeth of the ratchet or pinion; the contact of the teeth of said sleeve with those of the ratchet or pinion effecting rotative movement of the shaft when the sleeve is moved.

4. Means for rotating a shaft, comprising a double-ended ratchet or pinion mounted on said shaft, a slidable sleeve surrounding said pinion, and means for reciprocating said sleeve, the latter having teeth for engagement with the teeth at both ends of the pinion; the contact of the teeth of said sleeve with those of the ratchet or pinion effecting rotative movement of the shaft when the sleeve is moved in both directions.

5. Means for rotating a shaft, comprising a double-ended ratchet or pinion mounted on said shaft, a slidable sleeve surrounding said pinion, means for imparting movement to said sleeve in one direction; the latter having teeth for engagement with the teeth at both ends of the ratchet or pinion, and a spring for returning said sleeve to its normal position, the contact of the teeth of said sleeve with those of the ratchet or pinion effecting rotative movement of the shaft when the sleeve is moved in both directions.

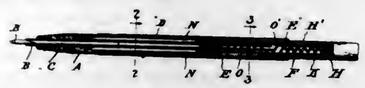
[Claims 6 and 7 not printed in the Gazette.]

1,167,180. CHECK-VALVE. GEORGE HITCHCOCK, Flint, Mich., assignor of one-third to Raymond S. Halligan, Flint, Mich. Filed Apr. 16, 1915. Serial No. 21,763. (Cl. 137—82.)



A check valve comprising two parts, internally bored and screwed together with threaded orifices at their outer ends, one part having a valve seat, a valve slidable in the bore and adapted to rest normally upon the seat, a ball confined within the check valve, and adapted to reseat the valve, and a pin extending across the bore of one part to limit the outward movement of the ball and valve.

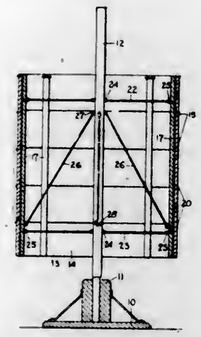
1,167,181. MAGAZINE-PENCIL. JOHN A. HOLLENBERGER, Hagerstown, Md. Filed Nov. 11, 1914. Serial No. 871,592. (Cl. 120—18.)



1. A magazine pencil, consisting of a shell with a contracted portion and a central tubular lead receiving portion, a cylindrical barrel portion telescoping over a contracted part of said shell and extending beyond the inner end thereof, a cylindrical casing within said barrel portion and provided with a longitudinal opening in alinement with the lead receiving tube and provided with an elongated groove in the wall of said opening, a shell telescoping over and rotatable about said casing, a spring fastened to said rotatable shell, a plunger mounted in said casing and tube and provided with a lateral extension movable within a groove in the casing, said plunger being actuated by the rotary movement of the spring, a portion of the latter limiting the movement of the plunger in one direction.

2. A magazine pencil consisting of a shell with a contracted portion and a central tubular lead receiving portion, a cylindrical barrel portion telescoping over a contracted part of said shell and extending beyond the inner end thereof, a cylindrical casing within said barrel portion and provided with a longitudinal opening in alinement with the lead receiving tube and provided with an elongated groove in the wall of said opening, a shell telescoping over and rotatable about said casing, a spring fastened to said rotatable shell, the convolutions of the spring being spaced apart, a plunger mounted in said casing and tube and having a lateral projection extending between the convolutions of the spring and held from rotation by the walls of the groove in which it engages, the forward end of the spring having its convolutions in contact with each other and serving as a stop to limit the forward movement of the plunger.

1,167,182. POST-CARD RACK. GUSTAV HONIG, Alice, Tex. Filed Mar. 18, 1915. Serial No. 15,266. (Cl. 40—68.)



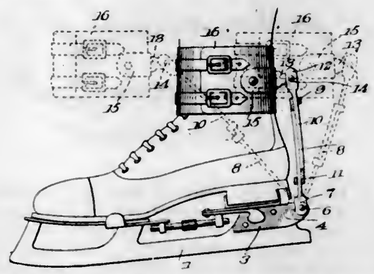
1. The herein described display device comprising a tubular skirt portion including a fabric member formed circumferentially into a plurality of plaits or pockets and including also a series of pairs of slats secured to the fabric portion to maintain the plaits in form, means cooperating with the plaits to support articles for display on the outside of the skirt, and means to support said skirt in display position.

2. In a device of the kind set forth, the combination of a tubular member formed of flexible sheet material and plaited to form a series of parallel pockets in horizontal planes with their upwardly directed openings on the outside, means to maintain said pockets in holding position, and a member surrounding and spaced outwardly from said flexible member above each pocket for supporting the upper ends of articles seated at their lower ends in such pocket.

3. In a display device, the combination of a tubular member made of flexible sheet material and formed into a series of horizontal parallel pockets having their openings extending upwardly on the outside of the member, a series of retaining devices, one for each pocket and located above the same and spaced outwardly from said flexible member, vertical rigid members maintaining said pockets and retaining devices in definite relation to one another, and means for supporting said flexible member and said vertical rigid members.

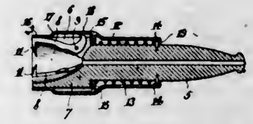
4. In a post card display apparatus, the combination of a base, a vertical post supported in said base, a collapsible skirt surrounding the post and composed of a tubular flexible member folded to form parallel pockets in horizontal planes and also including vertical rigid slats holding said pockets in definite position, a plurality of links pivoted at their inner ends to said post and at their outer ends to said slats and adapted to extend radially from the post in horizontal directions, and a series of diagonally arranged braces pivotally connected at their upper ends to said post and having detachable hooked connection at their lower ends to said slats, substantially as set forth.

1,167,183. ANKLE-SUPPORT. JOSEPH HAYTON KING, San Diego, Cal. Filed Feb. 12, 1915. Serial No. 7,827. (Cl. 46—53.)



An ankle support for skates comprising a slotted plate secured to opposite sides of the runner of the skate, an ankle strap, a yoke secured to said strap at the rear and provided with a rearwardly extending lug, a substantially vertical bar pivotally secured at its upper end to said lug for allowing vertical movement of said strap, and a second bar pivotally connected to said plate and having a slidable engagement with said first bar.

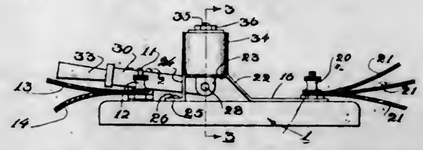
1,167,184. SAFETY CIGAR-HOLDER. CHARLES ALEXANDER KNUNTILA, Detroit, Mich. Filed Feb. 10, 1915. Serial No. 7,352. (Cl. 131—10.)



1. A cigar holder comprising a stock, hooklike gripping members pivoted thereon, a sleeve slidably mounted on said stock, a spring encircling the latter and normally holding said sleeve in adjusted position whereby said members are maintained in gripping relation, means for limiting the adjustments of said sleeve, means for moving said members to inoperative position on adjustment of said sleeve against the tension of the spring, and said spring operating to automatically return the parts to normal position.

2. A cigar holder comprising a stock having a plurality of longitudinally disposed slots, a hook-like gripping member pivoted within each of said slots and normally disposed therein, each of said members having a tail portion projecting from its respective slot, a sleeve slidably mounted upon said stock, a spring encircling the latter and normally maintaining said sleeve in adjusted position, whereby said members are held in gripping relation, a shoulder on said sleeve for engagement with said projecting tail portions of the members when said sleeve is adjusted in the direction against the tension of said spring, thereby locking said members upon their pivots to inoperative position, said spring operating to automatically return the parts to normal position, and means for limiting the adjustment of said sleeve.

1,167,185. TELEPHONE-PROTECTOR. OSCAR W. KUATH, Berlin, N. D. Filed Mar. 26, 1915. Serial No. 17,246. (Cl. 175—30.)



1. A device of the character described comprising an insulator base, contacts mounted on the base, bars on the base, switch blades pivoted to the bars and arranged to engage the contacts, the said bars being connected to the line wires of a telephone, and the contacts being connected to the telephone, a bar intermediate the first mentioned bars, switch blades passing between the bars, carbon blocks mounted on each of the bars, the bars and blocks being spaced from each other for a slight distance, and the switch blades being arranged to engage the faces of the blocks to clean the same when the switch is thrown to open position.

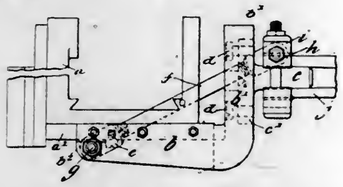
2. A telephone protector of the character described comprising a pair of contacts, each of said contacts comprising a base, a pair of upstanding arms formed on the base, and a tongue extending between the arms, a pair of bars secured to the base in spaced relation, offset parallel portions formed on the bars, ears depending from the parallel portions, switch blades pivoted to the ears and arranged to engage between the arms and the tongues of the contacts, binding posts carried by the contacts and being connected to a telephone, binding posts carried by the bars and being connected to the line wires of a telephone circuit, carbon blocks supported on the offset portions of the bars and arranged to be engaged by the switch blades to clean the inner faces of said blocks, a bar mounted on the base between the first mentioned bars, an offset parallel portion on the last named bar, a ground wire connected to the last mentioned bar, and a carbon block supported on the offset portion intermediate the first mentioned carbon blocks and in close proximity thereto, whereby when the line wire conducts an abnormally heavy charge, the same will be grounded and thereby prevent injury to the telephone.

3. A telephone protector of the character described comprising a base, contacts on the base, bars on the base, switch blades pivoted to the bars for engagement with the contacts, a bar extending parallel to the first mentioned bar, a switch blade straddling the last mentioned bar and blocks supported by the bar in close proximity to each other, said blocks being engaged by the switch blades when the switch is thrown to an open position, said switch blades cleaning the adjacent faces of the blocks.

1,167,186. APPARATUS FOR TURNING, SHAPING, AND SCREW-CUTTING. HENRY STEPHEN LAND, county of Essex, England. Original application filed Dec. 31, 1912, Serial No. 739,508. Divided and this application filed Jan. 5, 1914. Serial No. 810,470. (Cl. 82—24.)

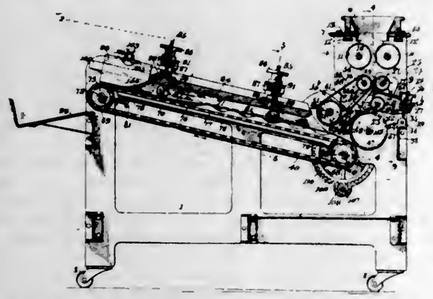
1. In a device of the class described, the combination of a cradle having means whereby it may be detachably sup-

ported at its rear end from the lathe puppet head and provided with a straight longitudinal slideway, a lathe tool-holder having a dependent portion formed as a counterpart of and adapted to slide to and fro rectilineally in the said slideway, means for limiting the relative movement of the cradle and tool-holder, and means for supporting the forward end of the cradle from the lathe puppet head, said means comprising a pin carried by the cradle, a pin secured to the puppet head and a rod connecting said pins.



2. In a device of the class described, the combination of a cradle having interchangeable means whereby it may be detachably supported from the lathe puppet head and provided with a straight longitudinal slideway, a lathe tool-holder having a dependent portion formed as a counterpart of and adapted to slide to and fro rectilineally in the said slideway, means for limiting the relative movement of the cradle and tool-holder, and means for supporting the cradle from the lathe, said means comprising a pin carried by the cradle, a pin secured to the lathe, and rods connecting said pins.

1,167,187. DOUGH-MOLDING MACHINE. FRANK X. LAUTERBUR, Sidney, Ohio. Filed June 10, 1913. Serial No. 772,869. (Cl. 107—9.)



1. A dough molding machine, comprising an endless conveyer for carrying the dough through the machine, means for exerting pressure on the dough as it is fed through the machine for shaping it, and means for driving the conveyer for causing the stretch of the conveyer conducting the dough to have greater flexibility than the other stretch.

2. A dough molding machine including a main frame having a supporting portion provided with an opening, feed rolls mounted in the frame below the opening and adapted to flatten a lump of dough and feed the same into the machine, a hopper adjustably mounted on the said supporting portion of the frame and extending into and guided by the said opening and adapted to be arranged in different positions along the same, and means for securing the hopper in its adjustment.

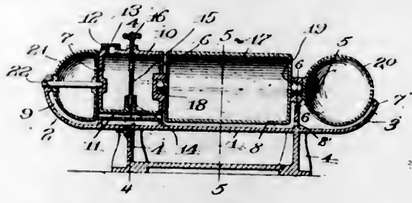
3. A dough molding machine including a main frame having a supporting portion provided with an opening having opposite parallel guiding walls or edges, feed rolls mounted in the frame below the opening and adapted to flatten and feed a lump of dough into the machine, an adjustable hopper seated upon the said supporting portions of the frame and having depending flanges extending through the said opening and fitted against and guided by the said walls or edges thereof, and means for securing the hopper in its adjustment.

4. A dough molding machine including a main frame provided with a supporting portion having an opening and provided at opposite sides thereof with slots, feed rolls mounted in the main frame below the opening and adapted to flatten a lump of dough and feed the same into the machine, an adjustable hopper arranged upon the said supporting portion of the frame at the opening thereof and having a tapered interior and cored to form hollow walls, said walls being thickened at opposite portions and provided therein with threaded sockets, and set screws operating in the slots of the said supporting portion and engaging the threaded sockets of the hopper to secure the latter in its adjustment.

5. A dough molding machine including a pair of pressure rolls adapted to roll the dough into a sheet, forming rolls arranged below the pressure rolls and adapted to coil or wrap the sheet of dough into a roll, and a trip belt independent of the forming rolls located opposite the forming rolls and coacting therewith to form a dough receiving pocket and yieldably mounted and adapted to be forced outwardly by the dough to vary the size of the pocket.

[Claims 6 to 36 not printed in the Gazette.]

1,167,188. HOG-OILING DEVICE. ISAAC W. LEEPER, Monmouth, Ill. Filed Feb. 6, 1915. Serial No. 6,562. (Cl. 119—157.)



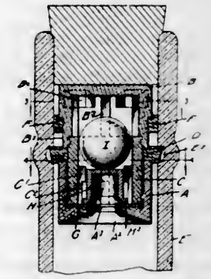
1. A device of the character described comprising a trough having a central compartment, end compartments, and a storage reservoir between said central compartment and one of said end compartments, said compartments being in communication with each other, rollers mounted to revolve in the respective compartments, means for filling the reservoir, and means for governing the flow of the medicament from said reservoir to the compartments.

2. A device of the character described comprising a trough having a central compartment, end compartments and a storage reservoir between said central compartment and one of said end compartments, a supply pipe connecting said compartments, the said central compartment being in direct communication with the other end compartment, rollers mounted to revolve in the respective compartments, means for filling the reservoir, and means governing the flow of the medicament from said reservoir to said supply pipe.

3. A device of the character described comprising a trough having a central compartment, end compartments, and a storage reservoir between said central compartment and one said end compartments, a supply pipe connecting said compartments, the said central compartment being in direct communication with the other end compartment, rollers mounted to revolve in the central compartment and latter-named end compartment and connected for movement in unison, a roller mounted to revolve within the other end compartment, means for filling the reservoir, means governing the flow of the medicament from said reservoir to the said supply pipe.

1,167,189. BOTTLE-VALVE. CHRISTIAN F. LENG, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,044. (Cl. 215—62.)

1. A valve mechanism for bottles, comprising a casing having a bottom section provided with a valve seat, a top section having outlet openings, and a connecting section secured to the top and bottom sections and extending to the valve seat of the latter section, said connecting section having shouldered ribs, a washer held between the inner ends of the top and bottom sections and projecting beyond the face of the casing for the engagement with a groove of a bottle neck, and a valve mounted to slide on the said ribs and having a flange for engaging the shoulders of the ribs.



2. In a valve mechanism for bottles, a bottle neck provided in its inner face with an annular groove, the bottom of which projects inward beyond the said inner face, a cylindrical valve casing having a bottom section provided with a valve seat, an upper section provided with outlets, and a connecting section connecting the bottom and top sections with each other, a valve adapted to be seated on the said valve seat and having a limited sliding movement in the said connecting section, a weight adapted to rest on top of the said valve and freely movable in the upper portion of the said connecting section and in the said top section, and a washer held on the said connecting section between the adjacent ends of the said bottom and top section, the said washer projecting into the said groove.

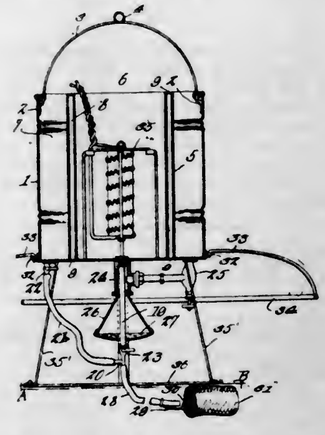
3. In a valve mechanism for bottles, a bottle-neck provided in its inner face with an annular groove, the bottom of which projects inward beyond the inner face, a cylindrical valve casing having a bottom section provided with a valve seat, an upper section provided with outlets, and a connecting section connecting the bottom and top sections with each other, a valve adapted to be seated on the said valve seat having a limited sliding movement in the said connecting section, a weight adapted to rest on top of the said valve and freely movable in the upper portion of the said connecting section and in the said top section, and a washer held on the said connecting section between the adjacent ends of the bottom and top section, the said washer projecting into the said groove and the peripheral face of the washer being beveled upwardly and outwardly.

4. In a valve mechanism for bottles, a bottle neck provided in its inner face with an annular groove, the bottom of which projects beyond the inner face, a cylindrical valve casing having a bottom section provided with a valve seat, an upper section provided with outlets and a connecting section connecting the bottom and top sections with each other, a valve adapted to be seated on the said valve seat and having a limited sliding movement in the said connecting section, a weight adapted to rest on top of the said valve and freely movable in the upper portion of the said connecting section and in the said top section, a washer held on the said connecting section between the adjacent ends of the said bottom and top section, the said washer projecting into the said groove, the lower portion of the top section being reduced, and a second washer held on the said reduced portion and fitting against the inner face of the bottle neck above the groove therein.

5. A valve mechanism for bottles, comprising a casing having a bottom section provided at its lower end with a valve seat and having its under side concave, a top section provided with side openings and a connecting section screwing at its lower end into the said bottom section and at its upper end into the said top section, the said connecting section being provided at its inner face with vertical ribs having shoulders, and an inverted cup-shaped valve having a flange at its lower end, the valve controlling the said valve seat and being mounted to slide on the said ribs, the flange of the valve being adapted to abut against the said shoulders to limit the outward sliding movement of the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,167,190. BATH APPARATUS. WILLIS LIPPINCOTT, Kalispell, Mont., assignor of one-half to James K. Lang, Kalispell, Mont. Filed May 19, 1915. Serial No. 29,184. (Cl. 4—26.)



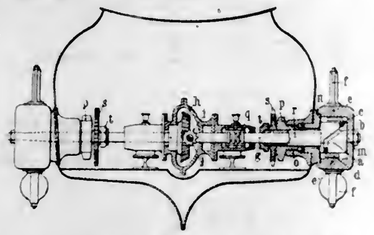
1. Bath apparatus including a portable tank, concentric partitions therein dividing the interior of the tank into a central hot water compartment and an outer cold water compartment, a heater removably mounted in the central compartment, there being an annular air space between the compartments provided with openings in the bottom thereof and an open top, a pipe communicating with and depending from the central compartment, a flexible tube communicating therewith, a tubular connection between the outer compartment and said flexible tube, valves for controlling the passage of water from the respective compartments to the flexible tube, a sleeve surrounding the pipe, a spraying nozzle depending therefrom, and valved means for directing water into the sleeve from the outer compartment.

2. Bath apparatus including a portable tank, concentric partitions therein dividing the interior of the tank into a central hot water compartment and an outer cold water compartment, and a heater removably mounted in one of the compartments, said compartments having separate outlets.

3. Bath apparatus including a portable tank having concentric compartments, a ring-like base, connections between the base and the bottom of the tank, a spraying nozzle supported by the tank and above the base, a valved connection between the spraying nozzle and one of the compartments, an outlet tube, and valved connections between said tube and the respective compartments.

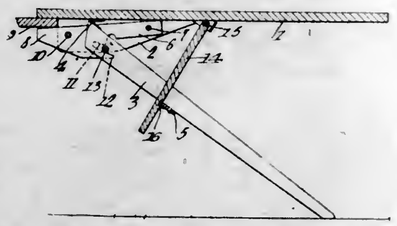
4. Bath apparatus including a portable tank having concentric compartments, a ring-like base, connections between the base and the bottom of the tank, a spraying nozzle supported by the tank and above the base, a valved connection between the spraying nozzle and one of the compartments, an outlet tube, and valved connections between said tube and the respective compartments, one of said connections constituting a support for the spraying nozzle, arms detachably engaging and extending outwardly from the bottom portion of the tank, and a curtain supporting ring carried by the arms and above the base.

1,167,191. APPARATUS FOR PROPELLING, ELEVATING, AND SUPPORTING SHIPS, BOATS, SUBMARINES, AND THE LIKE VESSELS. PIERRE URBAIN LOUBERY, Juvisy, France. Filed Oct. 5, 1912. Serial No. 724,066. (Cl. 115—49.)



The combination with the hull of a boat having a member on the outer face thereof, a driven shaft mounted in the hull and having its end projecting beyond the said member, a hollow hub secured on the projecting end of the hub and having its inner face recessed to receive the member of the hull and upon which it turns, vanes mounted to rotate on the hub, and a stationary member within the hub and having means engaging the shafts of the vanes to turn the same.

1,167,192. IRONING-BOARD. JAMES MCDONNALL, Chicago, Ill. Filed May 15, 1915. Serial No. 28,464. (Cl. 68—10.)



1. In a device of the character described, a board, an arm having one end pivoted thereto and having its free end coöperable therewith to grip a support, and a leg hinged to the board between the ends of said arm, the leg carrying a member engaging under said arm between the ends of said arm.

2. In a device of the character described, a board, a pair of arms pivoted to the board and having their free ends coöperable therewith to grip a support, a pair of legs hinged to the board between the ends of said arms, a cross piece carried by legs, and said arms having depending V-shaped cams under which said cross piece engages for forcibly swinging the arms toward the board when the legs are swung toward the board.

1,167,193. PROCESS OF MAKING STERILIZED GRANULATED MEAT FIBER. CHARLES MARCHAND, New York, N. Y., assignor, by mesne assignments, to Louis N. Depeyre, Colorado Springs, Colo. Filed Mar. 14, 1907, Serial No. 362,435. Renewed Nov. 22, 1915. Serial No. 62,916. (Cl. 99—5.)

1. The process of producing granulated meat fiber consisting in macerating meat pulp in an acidulated bath until it is gelatinous, neutralizing the acidulated mass, adding a material to prevent putrefaction, melting and removing the fat, removing the moisture from the mass and reducing to granular form.

2. The process of producing granulated meat fiber consisting in macerating meat pulp in a hydrochloric acid bath at about 25° C. until it is gelatinous, neutralizing the acidulated mass by the addition of an alkali, adding a material to prevent putrefaction, heating to about 40° C. to melt the fat, removing the moisture from the fat and mass and reducing to granular form.

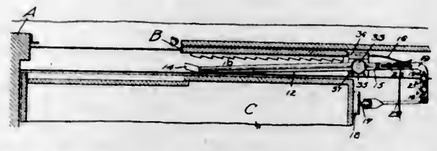
3. The process of producing granulated meat fiber consisting in macerating meat pulp in dilute hydrochloric acid until it is gelatinous, neutralizing the acidulated mass by the addition of an alkali, adding hydrogen peroxid, heating to about 40° C. to melt the fat, removing the fat and moisture from the mass and reducing to granular form.

4. The process of producing granulated meat fiber consisting in macerating meat pulp in dilute hydrochloric acid at about 25° C. until it is gelatinous, neutralizing the acidulated mass by the addition of an alkali, adding hydrogen peroxid, heating to about 40° C. to melt the fat, removing the fat and moisture from the mass and reducing to granular form.

5. The process of producing granulated meat fiber consisting in macerating meat pulp in an acidulated bath until it is gelatinous, neutralizing the acidity of the mass, removing the fat and moisture and reducing to granular form.

[Claims 6 to 13 not printed in the Gazette.]

1,167,194. SAFETY-LATCH FOR ELEVATOR-DOORS. CHARLES O. MARX, New York, N. Y., assignor of one-half to Bernard Spitzfaden, Brooklyn, N. Y. Filed Mar. 24, 1915. Serial No. 16,631. (Cl. 187—61.)



1. In a safety device for elevators, a rack adapted to be rigidly secured to an elevator door to range transversely at the inner side thereof, a latch bar, and means to pivotally secure the latch bar between the ends thereof, in the elevator well at the front, one arm of the said latch being the longer and having a forwardly disposed pawl to engage the door rack, and a spring acting on the latch bar and tending to engage the pawl with the rack, the shorter arm of the latch bar being extended rearwardly to range in the direction of the rear wall of an elevator well between the adjacent side wall of the well and the space for the elevator car, said rearward extension having an offset returned member disposed in the same general direction as the latch bar and terminating in a member to be tripped by a car in opposition to the spring, to disengage the pawl from the rack.

2. In a safety device for elevator doors, an elongated rack bar adapted to be rigidly secured to an elevator door to range transversely thereon at the inner side; a latch bar; means to pivotally mount the latch between the ends thereof, in an elevator well at the front, adjacent to a landing, to range lengthwise with the rack, said latch having a long arm formed with a pawl; and a spring co-acting with the latch and tending to engage the pawl with the rack; the other arm of the said latch being straight with the first arm and shorter, and offset rearwardly to lie at the side of an elevator car, the rear end of said shorter arm being returned laterally in an inward direction and; having a terminal adapted to be tripped by an elevator car at the side to rock the latch in opposition to the spring and disengage the pawl, to permit the door rack to move freely past the pawl.

3. The combination with an elevator shaft or well, a transversely sliding door therein, and an elevator car, of a safety means to control the said door, said means comprising a transverse rack on the door at the inner side, an elongated latch bar, rockably mounted at the front of the well and ranging transversely of the latter, the said latch bar presenting a longer and a shorter arm, the longer arm having a pawl adapted to engage the rack to hold the door against movement, the shorter arm of the latch having an offset returned member disposed between the adjacent side wall of the well and the space for the travel of the car, there being a spring acting on the latch and tending to engage the pawl with the rack, the said car having a trip member adapted to engage and trip the said returned member of the latch to rock the latter in opposition to the spring and thereby disengage the pawl.

4. The combination of an elevator shaft or well, a transversely sliding door therein and an elevator car, of a safety means to control said door, comprising a transversely disposed rack on the door at the inner side, an elongated latch bar rockably mounted at the front of the well and ranging transversely of the latter, the said latch bar having a longer arm formed with a pawl to engage the rack, and with a shorter arm disposed at the rear of the first arm between the adjacent side wall of the well and the space for the travel of the car, said shorter arm having a member extending into the path of movement of the adjacent side surface of the car to be tripped by the latter.

5. In a safety device for elevator doors, a rack adapted to be secured to an elevator door to range transversely at the inner side thereof, an elongated latch bar, means to pivotally mount the latch bar between its ends in an elevator well, a spring pressing on said latch bar, one arm of the bar having a pawl adapted to engage the rack, the other arm of the bar being returned and offset in the rear of the first arm, to be received in an elevator well at a side of the car, the second arm of the bar being extensible lengthwise of the bar and transversely thereof.

[Claims 6 and 7 not printed in the Gazette.]

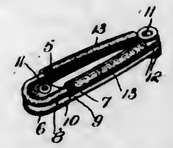
1,167,195. ROOF-COVERING. OSKAR MATTER, Bonn, Germany. Filed Jan. 15, 1914. Serial No. 812,314. (Cl. 106—31.)

1. A roofing material having a fibrous base impregnated with a combustible fusible body and a fire-proofing compound having a melting point substantially that of said body.

2. A roofing material having a fibrous base impregnated with a combustible fusible water-proofing body and a fire-proofing body consisting of an arylphosphate having a melting point substantially that of said body.

3. A roofing material having a fibrous base impregnated with a combustible fusible water-proofing body and a fire-proofing body consisting of tri-phenylphosphate the melting point of which is substantially that of said body.

1,167,196. SAFETY PENCIL-HOLDER. CHARLES B. MERCER, North Pittston, Pa. Filed Apr. 27, 1915. Serial No. 24,298. (Cl. 24—10.)

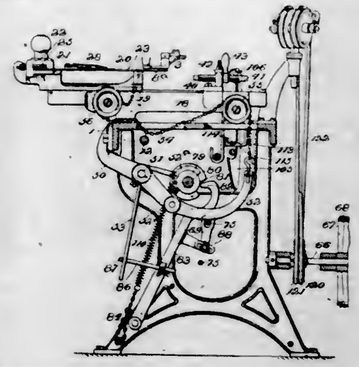


A clip or holder comprising a pair of companion safety pins, means fastening the pins together, the movable pin member of one of the safety pins being permanently fastened closed, while the pin member of the other safety pin is free, and resilient tube sections carried by the closed safety pin.

1,167,197. BUTTONHOLE-MACHINE. HENRY C. MILLER, Waterford, N. Y. Filed Aug. 16, 1911. Serial No. 644,444. (Cl. 112—4.)

1. In a machine of the class described, the combination of stitching mechanism, power mechanism for operating the stitching mechanism, a gaging device for gaging an article and for controlling the power mechanism, and means for automatically withdrawing the gaging device prior to the operation of the stitching mechanism.

2. In a machine of the class described, the combination of stitching mechanism, automatic mechanism for starting the stitching mechanism, power mechanism and movable means including an article gaging device for starting the power mechanism to operate the stitching mechanism, said means being arranged to cease its movement before the automatic mechanism is operated to stop the stitching mechanism.



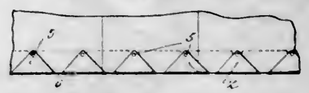
3. In a machine of the class described, the combination of stitching mechanism, power mechanism including a shiftable belt, a shaft, a movable gaging device, means between the shaft and the gaging device to cause the shifting of the belt to operate the shaft and start the stitching mechanism, and means for automatically withdrawing the movable gaging device prior to the operation of the stitching mechanism.

4. In a machine of the class described, the combination of two button hole machine heads, each of which includes stitching mechanism, a cloth clamp, and automatic starting and stopping means, a slidable gaging device operable toward and from the heads, end gages mounted on the gaging device, power mechanism for operating the stitching mechanisms and cloth clamps, and means controlled by the movement of the gaging device for starting the power mechanism.

5. In a button hole machine, the combination of two button hole stitching machine heads, each of said heads including independent stitching mechanism, a cloth clamp, and a stop motion device, power mechanism, connections between the power mechanism and the cloth clamps and the stop motion devices, and a gaging device including gages to position an article and to start the power mechanism to elevate the cloth clamps and operate the stop motions and start the stitching mechanisms.

[Claims 6 to 50 not printed in the Gazette.]

1,167,198. DRIP-EDGE. JOHN E. MILLER, Olean, N. Y. Filed Mar. 18, 1914. Serial No. 825,558. (Cl. 108—9.)

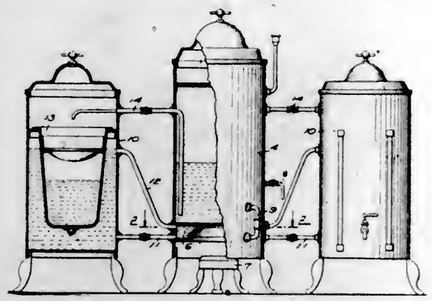


A drip edge comprising a lower body member and a plurality of substantially triangular tongues overlying said member and having their tips perforated, said tongues being turned up from one edge of the body member and the said lower body member having notches therein opposite the perforations in the tips of the said tongues as and for the purpose specified.

1,167,199. COFFEE-MAKING APPARATUS. ALEX MINTZ, New York, N. Y. Filed June 15, 1915. Serial No. 34,228. (Cl. 53—3.)

1. In a coffee-making apparatus, the combination of a boiler having a water-jacket at the bottom thereof, means for heating the bottom of the boiler and the jacket thereof, a coffee-pot associated with the boiler, a valve-con-

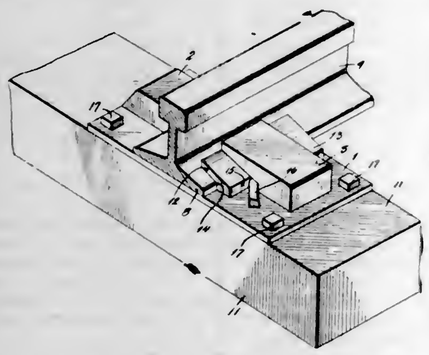
trolled conduit connecting the jacket to the bottom of the pot, a conduit connecting the top of the pot to the jacket, a valve-controlled conduit connecting the boiler to the jacket, a coffee container in said pot, and means for supplying water from the boiler to the container.



2. In a coffee-making apparatus, the combination of a boiler having an annular water-jacket below the bottom, a burner, the flame of which is adapted to contact with the bottom of the boiler and the jacket thereat, a valve-controlled conduit connecting the jacket and the boiler, a coffee-pot, a valve-controlled conduit from the jacket to the bottom of the pot, a conduit connecting the jacket to the pot at a point above the valve-controlled conduit which connects the jacket to the pot, a coffee container in said pot, and a valve-controlled conduit for supplying the container with water from the boiler.

3. In a coffee-making apparatus, the combination of a boiler having a water jacket positioned below the bottom, a burner, the flame of which is adapted to engage the bottom of the boiler and the water-jacket thereat, a valve-controlled conduit from the boiler to the water-jacket, a coffee-pot, a coffee container in the pot, a valve-controlled conduit for supplying water from the boiler to the container, a valve-controlled conduit from the water-jacket to the pot, and a second conduit from the water-jacket to the pot connecting the two at points above the connection therebetween produced by the valve-controlled conduit.

1,167,200. COMBINATION TIE-PLATE AND ANTI-CREEPER. JAMES MOIR and HARVEY P. MCFARLAND, Burlington, Iowa. Filed May 18, 1915. Serial No. 28,928. (Cl. 238—2.)

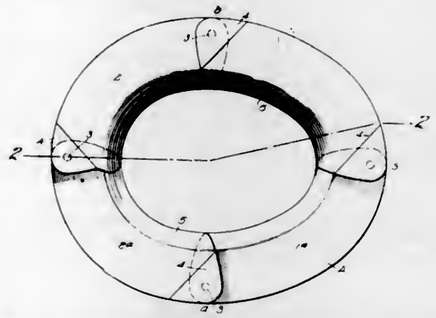


1. A tie plate and anti-creeper comprising a base, means for holding the same in engagement with a tie, a primary jaw carried by said plate and provided with a plurality of rail gripping ribs formed upon the under face of said jaw and adapted to firmly bite into the upper face of the base of a rail, said body provided with an auxiliary jaw, and a wedging plate fitting under said auxiliary jaw and adapted to engage the base of a rail for firmly clamping the rail between said jaws and causing said biting ribs to firmly engage the upper face of the base of a rail.

2. A tie plate and anti-creeper comprising a base, means for holding the same in engagement with a tie, a primary jaw carried by said plate and provided with a plurality of rail gripping ribs formed upon the under face of said jaw and adapted to firmly bite into the uper face of the base of a rail, said body provided with an auxiliary jaw, a wedging plate fitting under said auxiliary jaw and adapted to engage the base of a rail for firmly clamping the rail between said jaws and causing said biting ribs to firmly engage the upper face of the base of a rail, a tongue carried by said wedge plate and adapted to be bent backwardly upon said auxiliary jaw for holding said wedging plate against accidental removal from said auxiliary jaw.

3. A tie plate and anti-creeper comprising a base, means for holding the same in engagement with a tie, a primary jaw carried by said plate and provided with a plurality of rail gripping ribs formed upon the under face of said jaw and adapted to firmly bite into the upper face of the base of a rail, said body provided with an auxiliary jaw, a wedging plate fitting under said auxiliary jaw and adapted to engage the base of a rail for firmly clamping the rail between said jaws and causing said biting ribs to firmly engage the upper face of the base of a rail, a tongue carried by said wedging plate and adapted to be bent backwardly upon said auxiliary jaw for holding said wedging plate against accidental removal from said auxiliary jaw, and said wedging plate provided with a cut-out portion upon one side thereof for fitting snugly over the base of a rail.

1,167,201. SANITARY CLOSET-SEAT COVER. HUGO G. A. MORÉN, New York, N. Y. Filed July 9, 1915. Serial No. 38,883. (Cl. 4—18.)



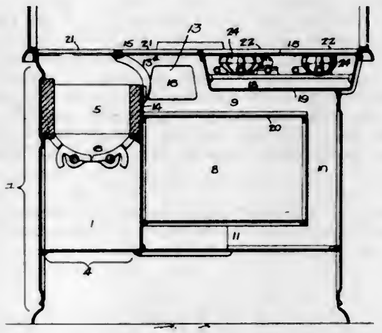
1. A cover of the class described comprising a plurality of sections, the sections being arranged end to end and each section having both ends pivotally connected with the adjacent ends of juxtaposed sections, the axes of the pivotal connections being at right-angles to the plane of the sections, whereby the said sections fold in their own planes.

2. A cover of the class described composed of four sections arranged end to end and each section having both ends pivotally connected with the adjacent ends of juxtaposed sections, the axes of the pivotal connections being at right-angles to the plane of the sections, whereby the said sections fold in their own planes, and one pair of sections being shorter than the other pair to permit the shorter sections to be folded in between the other sections.

3. A cover of the class described composed of four sections forming an ovoid structure, pivots connecting the adjacent ends of juxtaposed sections together, the pivots being arranged approximately in the transverse and longitudinal axes of the cover, and of the same number as the sections, and pieces applied to the faces of the sections and covering the pivots.

4. A cover of the class described comprising an ovoid body having an ovoid opening, the marginal portion around the opening being bent downwardly, said body being divided in four sections pivotally connected together, the pivotal points being located in approximately longitudinal and transverse lines, the two rear sections being shorter than the front sections, whereby the rear sections can fold in between the front sections.

1,167,202. RANGE. ABRAM C. MOTT, Jr., Philadelphia, Pa., and JAFEW S. VAN BUREN, Albany, N. Y., assignors to Abram Cox Stove Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 1, 1913. Serial No. 764,949. (Cl. 126—36.)



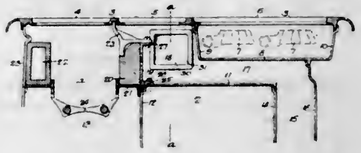
1. The combination in a combined gas and coal range, of a flat top plate; a fire pot located under one end of the top plate; a chamber located under the opposite end thereof and having gas burners therein, the fire pot and the gas chamber being separated by a combustion chamber; an oven under the combustion chamber and separated from the gas chamber to form a flue, the top of the fire pot extending a considerable distance above the oven so as to form one side wall of the combustion chamber, the casing of the gas chamber forming the other wall so that as the products of combustion from the fire pot pass into the combustion chamber they will circulate in the combustion chamber and will be deflected by both walls before passing to the flue located between the gas chamber and the top of the oven.

2. The combination in a gas and coal range, of a top plate; a gas burner casing below the top plate and having a wall forming part of the wall of the combustion chamber; a fire pot spaced from the gas burner casing and having a wall forming the opposite side of the combustion chamber; an oven having a top plate disposed a substantial distance below the top of the firepot and the burner casing and forming the bottom of the combustion chamber and the bottom of the flue leading therefrom, the top of the fire pot being above the bottom of the burner casing so that the products of combustion passing from the fire pot will circulate in the combustion chamber before passing to the flue.

3. The combination in a combined gas and coal range having a flat top plate, of a gas burner casing located directly below the top plate at one side of the range and having a wall forming part of the combustion chamber; a fire pot at the other side of the range; an oven having a top plate disposed a substantial distance below the top plate of the range and forming the bottom of the combustion chamber and the bottom of the flue leading therefrom, the fire pot extending to such a distance above the top plate of the oven as to form one wall of the combustion chamber, the fire pot being located a given distance below the top plate of the range to form a passage; a gas burner casing extending from the front to the rear of the range so that the products of combustion in passing from the fire pot to the flue will be momentarily detained and deflected by the walls of the combustion chamber before passing to the flue between the top of the oven and the gas burner casing.

4. The combination in a combined coal and gas range, of a top plate; a gas burner casing located directly below the top plate at one side of the range; a fire pot at the other side of the range separated from the gas burner casing by a combustion chamber; an oven having a top plate forming the bottom of the combustion chamber and the bottom of the flue leading therefrom, one side wall of the combustion chamber being formed by the wall of the gas chamber which projects downward from the top plate, the other wall of the combustion chamber being formed by the wall projecting vertically from the top plate of the oven at the side of the fire pot so that there will be a positive circulation of the products of combustion in said chamber.

1,167,203. COAL AND GAS RANGE CONSTRUCTION. ABRAM C. MOTT, Jr., Philadelphia, Pa. Filed Oct. 29, 1914. Serial No. 869,302. (Cl. 126—36.)



1. The combination in a combined gas and coal range, of a top plate; a fire pot located on one side of the range under the top plate and spaced therefrom; a casing located under the top plate at the opposite side of the range; gas burners located in the chamber formed by the casing, said casing being spaced from the fire pot so as to form an intermediate combustion chamber; an oven having a top plate forming the bottom of the combustion chamber and extending under the casing and spaced therefrom to form a flue; a flanged plate secured to the top plate of the oven and forming the support for the fire brick at the inner side of the fire pot, the fire brick and said plate being spaced from the top plate so as to form a communicating passage between the fire pot and the combustion chamber.

2. The combination in a combined gas and coal range, of a top plate; a fire pot located on one side of the range under the top plate and spaced therefrom; a casing located under the top plate at the opposite side of the range; gas burners located in the chamber formed by the casing, said casing being spaced from the fire pot so as to form an intermediate combustion chamber; an oven having a top plate forming the bottom of the combustion chamber and extending under the casing and spaced therefrom to form a flue; a flanged plate secured to the top plate of the oven and forming the support for the fire brick at the inner side of the fire pot, the fire brick and said plate being spaced from the top plate so as to form a communicating passage between the fire pot and the combustion chamber; and a support, in the form of a bracket, secured to the flanged top plate, resting on the fire brick, and having a portion extending to and supporting the central portion of the top plate of the range.

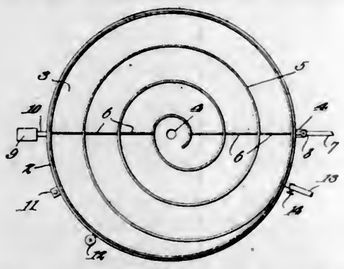
1,167,204. EVAPORATOR. JOHN NAEF, Dermott, Ark. Filed Oct. 1, 1915. Serial No. 53,572. (Cl. 127—9.)

1. An evaporator embodying a spiral trough, and means therein for impeding the flow of liquid.

2. An evaporator pan having an upstanding spiral flange upon its bottom providing a spiral trough, an outlet at the inner end of said trough, and means within said trough for impeding the flow of liquid therein.

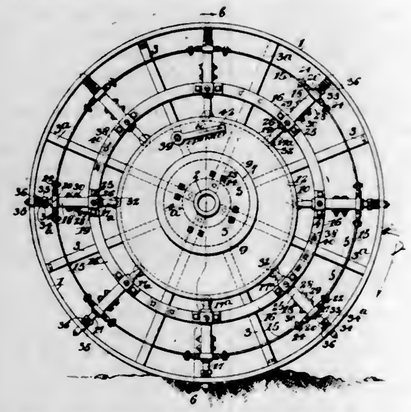
3. An evaporator pan having a dished bottom and an outlet spout at the center of said bottom, a spiral upstanding flange upon said bottom and extending from the rim of the pan to the central portion of the bottom to provide a spiral trough, and radial plates slipped between the convolutions of said flange to impede the flow of liquid within the trough.

4. An evaporator embodying a boiler, a pan seated thereon having a dished bottom and a spout extending from the center of said bottom through the boiler, and



an upstanding spiral flange upon said bottom extending from the rim of the pan to the central portion of the bottom to provide a spiral trough.

1,167,205. WHEEL FOR TRACTION-ENGINES. FRANK RUDOLPH NYBERG, Lamar, Colo., assignor of one-half to George J. Garvin, Lamar, Colo. Filed Aug. 9, 1915. Serial No. 44,556. (Cl. 21—210.)



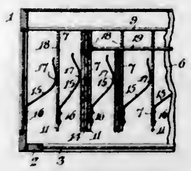
1. The combination with a wheel, of a series of tubular casings supported by the wheel radially thereof, a dog mounted in each casing to move longitudinally thereof, each dog consisting of inner and outer sections, and the sections extending beyond the casing at each end thereof, a spring between the sections and normally holding them spaced apart from each other, a slidable connection between adjacent ends of the dog sections to permit them to move toward and from each other and longitudinally of the casing, means adjustable angularly of the wheel for engaging the inner ends of the dogs to extend the dogs beyond the periphery of the wheel, and springs forcing the dogs inwardly.

2. The combination with a wheel, of a series of tubular casings arranged radially of the wheel in spaced relation, a sectional dog arranged in each casing and movable longitudinally thereof, each dog consisting of an inner and an outer section, a slidable connection between the sections of each dog and slidably connected with the casing, a spring arranged between the sections of each dog and adapted to be compressed when the outer end of the dog meets with an obstruction and normally holding them extended, an eccentric journaled on the hub, the inner ends of the dogs engaging the periphery of the eccentric, and said eccentric extending the dogs beyond the periphery of the casing when the highest portion thereof is in engagement with the said inner ends, a common means for moving the eccentric angularly to cause the dogs to be extended at any point in the periphery of the wheel, and for holding the eccentric from movement with the wheel, and springs forcing the dogs inwardly.

3. The combination with a wheel, of a series of tubular casings supported by the wheel radially thereof, a dog mounted in each casing to move longitudinally thereof, an eccentric journaled coaxial with the wheel and engaging the dogs at their inner ends, the rim having an opening for each dog for permitting the dog to pass at its outer end beyond the rim, a stop adjustably mounted on each dog and near the inner side of the rim and a spring between each stop and the rim and normally pressing the dog inward.

4. The combination with a wheel of a series of tubular casings supported by the wheel radially thereof, a pair of coaxial inner and outer rings between the rim and the hub, a clip connecting the inner end of each casing to the inner ring, a sectional clip connecting the outer end of each casing to the outer ring, an eccentric journaled on the hub, a dog in each casing engaging the eccentric at its inner end, springs pressing the dogs inwardly, and means for holding the eccentric from movement and for adjusting the same angularly with respect to the wheel.

1,167,206. CABINET FOR SOUND-RECORDS. JOHN BROWNING OGDEN, Lynchburg, Va. Filed Oct. 12, 1914. Serial No. 866,347. (Cl. 211—16.)



1. A storage cabinet for sound record disks having a series of compartments therein formed by a plurality of upright partitions, the comparements being open at the front, and flat leaf springs secured to the partitions near the front thereof, said springs being bent outwardly and rearwardly toward the next adjacent partition and normally in contact therewith intermediate of their length, and thence curved away from the last mentioned partition, said springs being arranged in pairs in each compartment with one spring above and the other below the horizontal center of the compartment, whereby the records when inserted through the open front of the compartments are caused to strike the springs near their fastened ends, and when the records are in place the springs engage the records on the opposite sides of the horizontal diameter and substantially at the vertical diameter, so as to maintain the records on edge in an upright position and prevent warping.

2. A storage cabinet for sound record disks having a series of upright partitions, a bottom member carrying the partitions and a rear member connecting the partitions and serving as a stop, said partitions each carrying springs, each spring being connected at one end to the corresponding wall of a partition near the front edge, and having a normal tendency to engage the corresponding wall of the next partition in order, said partitions with their connecting parts and springs being bodily removable as a unit from and insertible into the cabinet.

3. A storage cabinet for sound record disks having a series of compartments therein provided with upright partitions and each compartment having flat leaf springs secured to one side wall of the compartment near the front end thereof and thence directed toward the other wall of the compartment and having the extremity curved away from said last-named wall, the springs in each compartment being arranged above and below the mid point of the height of the compartment, each compartment having its front to rear depth sufficient to accommodate a record disk of largest diameter and said compartments being also provided with readily removable stop means situated

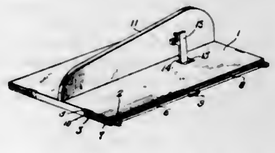
at a distance from the front of the compartment corresponding to the diameter of a smaller disk than the first-named disk.

4. A storage cabinet for sound record disks having a series of upright partitions defining compartments with each compartment provided with leaf springs one above and the other below the middle of a record disk when lodged in the compartment, each spring being secured at one end to a respective wall of the compartment and having a normal tendency to engage the other wall thereof, the partition walls of the compartments being provided with stop means for record disks of a predetermined diameter and other stop means in the form of a removable rod, the partitions being provided with alined passages for the reception of the rod.

5. A storage cabinet for sound record disks having a series of upright partitions, a bottom member carrying the partitions, and a top member joining the spacing the partitions, together with a rear member connecting the partitions and serving as a stop member, the said partitions each carrying on one wall a set of leaf springs each connected at one end to the corresponding wall of a partition near the front edge of the partition and having a normal tendency to engage the corresponding wall of the next partition in order with the free rear end of the spring bent backward toward the partition carrying it, said partitions with their connecting parts and springs being bodily removable from and insertible into the cabinet.

[Claim 6 not printed in the Gazette.]

1,167,207. SANDPAPER-HOLDER. ARTHUR W. OLDHAM, Ada, Ohio. Filed Apr. 27, 1915. Serial No. 24,295. (Cl. 51—1.)



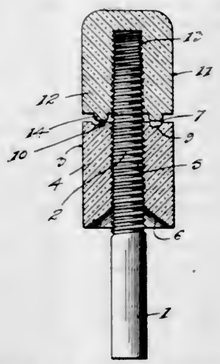
1. A sandpaper holder comprising a flat body having grooves in its side edges, means for clamping the paper within the grooves, a handle hinged to the body and arranged to lie flat therein or extend at right angles thereto and means for holding the handle at right angles to the body.

2. A sandpaper holder comprising a flat body having grooves in its side edges, spring clamping members for holding the paper within the grooves, said body having an under cut socket, a handle hinged to the body and arranged to lie flat thereon and a dog pivoted to the handle and arranged to engage the shoulder at the under cut socket for holding the handle at right angles to the body.

3. A sandpaper holder comprising a flat body having grooves in its side edges, apertured plates carried by the ends of the body, said plates having spaced projections, U-shaped spring clamping members having inwardly turned terminals engaging the apertures in said plates, the legs of the clamping members arranged to engage between said projections for holding the clamping members in inoperative position, said clamping members attached to secure the paper within the grooves and a foldable handle carried by the body.

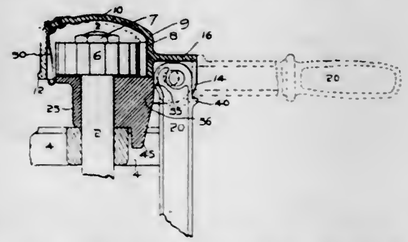
4. A sandpaper holder comprising a flat body having grooves in its side edges, apertured plates carried by the ends of the body, said plates having spaced projections, U-shaped spring clamping members having inwardly turned terminals engaging the apertures in said plates, the legs of the clamping members arranged to engage between said projections for holding the clamping members in inoperative position, said clamping members attached to secure the paper within the grooves, a foldable handle carried by the body and a manipulating handle formed on the clamping members.

1,167,208. INSULATOR. WILLIAM OPPELT, Metuchen, N. J., assignor of one-third to Harry K. Gamber, Harrisburg, Pa. Filed Feb. 8, 1915. Serial No. 6,817. (Cl. 173—314.)



An insulator of the character described including a cylindrical base member having a centrally located, longitudinally extending, internally screw threaded bore extending throughout its entire length, ribs formed exteriorly of the base member and arranged to form a means to permit a gripping element to be used to tighten the base member in place, the under side of the base member having a depression therein to act as a guide in placing the same in position, the upper side of the base member being formed with an annular groove and having parallel grooves extending thereacross, a cover member having a central, longitudinally extending, internally screw threaded bore, ribs formed externally of the cover member to provide a gripping means, and an annular rib on the under face of the cover member arranged to aline with the annular groove to clamp a line wire in place.

1,167,209. BRAKE. LEWIS C. ORD, Montreal, Quebec, Canada, assignor, by mesne assignments, to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 22, 1911, Serial No. 650,770. Renewed May 1, 1915. Serial No. 25,306. (Cl. 188—57.)



1. In a ratchet brake mechanism, the combination of a brake staff, a ratchet thereon, a supporting member movable about said staff, a pawl pivoted to said supporting member and a drop handle pivoted to said pawl and having a cam for engagement with said supporting member.

2. In a ratchet brake mechanism, the combination of a brake staff, a ratchet thereon, a supporting member adapted to turn about said staff, a pawl pivoted to said supporting member and a drop handle permanently attached to said pawl and adapted when dropped to hold said pawl out of engagement with said ratchet.

3. In a ratchet brake mechanism, the combination of a brake staff, a ratchet thereon, a member adapted to turn about said staff, a pawl pivoted to said member, a drop handle pivoted to said pawl and serving when

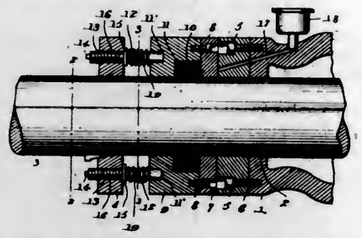
dropped to release said pawl from said ratchet and a spring normally urging said pawl toward said ratchet.

4. In a ratchet brake mechanism, the combination of a vertical brake staff, a toothed ratchet thereon, a pawl adapted to swing in a horizontal plane into and out of engagement with said ratchet, a drop handle pivoted to said pawl and effective to move it into driving engagement with said ratchet when the brakes are to be set, said handle when dropped serving to release said pawl from said ratchet.

5. In a ratchet brake mechanism, the combination of a brake staff, a toothed ratchet thereon, a supporting member adapted to turn about said staff, a swinging pawl rotatable with said supporting member and a drop handle permanently attached to said pawl and adapted when dropped to hold said pawl out of engagement with said ratchet.

[Claims 6 to 13 not printed in the Gazette.]

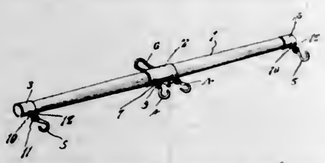
1,167,210. ROTARY SHAFT OR ROD PACKING. STANLEY ORR, Tarpon Springs, Fla. Filed Jan. 13, 1915. Serial No. 2,033. (Cl. 137—115.)



1. A rotary shaft packing comprising a casing, a rotary shaft, a packing ring of medium hard metal secured to the casing and surounding the shaft, a carrier ring slidably mounted on the shaft, a soft metal packing ring secured to said carrier ring and lying in contact with the first-named ring, an elastic packing seated in the carrier ring and engaging the shaft, and means for connecting the carrier ring for rotation with the shaft, adjusting said ring longitudinally of the shaft and yieldingly pressing said carrier ring toward said packing ring.

2. In a shaft packing, the combination of a casing, a rotary shaft, a packing ring of medium hard metal secured to the casing and inclosing the shaft, a carrier ring inclosing the shaft, a head fixed to the shaft, adjusting screws engaging the head and journaled in the carrier ring, an elastic gasket seated in the carrier ring and engaging the shaft, a soft metal packing ring secured to the carrier ring and lying in contact with the first-named ring, and coiled springs surrounding the screws and exerting pressure on the carrier ring and adapted to be tensioned by the screws.

1,167,211. WHIFFLETREE. JAMES L. PADGETT, Mize, Miss., assignor of one-fifth to Walter C. Currie, Raleigh, Miss. Filed Mar. 1, 1915. Serial No. 11,301. (Cl. 21—78.)

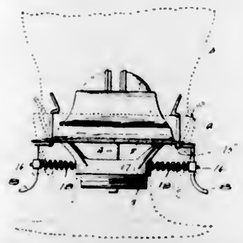


1. A whiffle-tree of the class described including a bar, and central and end cuffs embracing the said bar and each constructed of a single piece of flat metal bent to embrace the bar, the central cuff being provided with a pair of forwardly extending hooks and the end cuffs having a single hook, said hooks being drawn of the metal.

2. A whiffle-tree of the class described including a bar, a central cuff constructed of flat metal bent to embrace the bar and provided at one of its edges with rigid forwardly extending hooks having shanks connected to the cuff, said cuff being provided at its other meeting edge with spaced lugs or flanges embracing the shanks of the hooks.

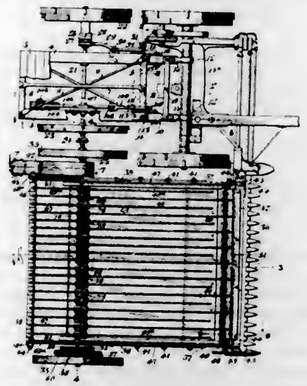
3. A whiffle-tree of the class described including a bar, provided with a central cuff formed from a single piece of flat metal bent to embrace the bar and having meeting edges at the front of the bar, a pair of hooks rigid with and extending from the cuff at the said meeting edges and a loop extending rearwardly from the cuff and carried by the same.

1,167,212. LAMP-BURNER. SIMON H. PATTERSON, Santo, Tex. Filed June 18, 1915. Serial No. 34,893. (Cl. 240—99.)



A lamp burner having a pair of chimney engaging clamps, arranged at opposite sides, each clamp comprising a shaft pivotally mounted on the burner, having an outstanding offset portion with a depending operating arm, and also having upstanding chimney engaging clamping arms, rods extending from the base of the burner and slidably engaged with the operating arms of the clamps and springs on said rods and pressing outwardly against the operating arms of the clamps and serving to normally hold the clamps in engaged position.

1,167,213. SEED-HARVESTING ATTACHMENT FOR MOWING-MACHINES. RALPH PECK, Vicksburg, Miss. Filed Sept. 4, 1914. Serial No. 860,227. (Cl. 56—29.)



1. A seed harvesting attachment for mowing machines including an endless conveyer located in rear of the cutting apparatus of the mowing machine in position to receive the severed material therefrom, vibratory beaters for beating the seed from the severed material onto the conveyer, mechanism for collecting the seed, and means for operating the conveyer and the said beaters.

2. A seed harvesting attachment for mowing machines including a wheeled conveyer frame located in rear of and

provided with means for connecting it with the cutting apparatus of the mowing machine, a conveyer carried by the said frame and arranged in position to receive the severed material from the said cutting apparatus, a wheeled rear frame arranged at one side of the conveyer frame and provided with means for connecting it to the mowing machine, said wheeled frame having a shaft or axle, connections between the said shaft or axle and the conveyer for operating the latter and means also actuated by the said rotary shaft or axle for shaking the seed from the severed material while the latter is on the conveyer.

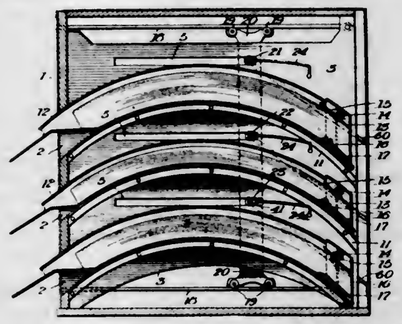
3. A seed harvesting attachment for mowing machines including a wheeled conveyer frame having a shaft or axle and located in rear of and provided with means for connecting it with the cutting apparatus of the mowing machine, a wheeled rear frame arranged in rear of the frame of the mowing machine and located at one side of the conveyer frame, said wheeled frame having a rotary shaft or axle, means for transmitting motion from the shaft or axle of the rear frame to the shaft or axle of the conveyer frame, a conveyer carried by the conveyer frame and actuated by the shaft or axle thereof, said conveyer being arranged to receive the severed material from the cutting apparatus, and means connected with the shaft or axle of the conveyer frame for shaking the seed from the severed material.

4. A seed harvesting attachment for mowing machines including a wheeled conveyer frame having a shaft or axle and located in rear of and provided with means for connecting it with the cutting apparatus of the mowing machine, a rear wheeled frame located in rear of and provided with means for connecting it with the frame of the mowing machine and having a rotary shaft or axle, a flexible joint or coupling connecting the said shafts or axles, a conveyer carried by the conveyer frame and actuated by the shaft or axle thereof, said conveyer being arranged in position to receive the severed material from the cutting apparatus of the mowing machine, and means carried by the conveyer frame for shaking seed from the severed material while the same is on the conveyer.

5. A seed harvesting attachment for mowing machines including a wheeled conveyer frame located in rear of and provided with means for connecting it with the cutting apparatus of a mowing machine, an endless conveyer carried by the frame and arranged to receive the severed material from the cutting apparatus and discharge the said material from the rear of the conveyer frame, a plurality of vibratory beaters located above the conveyer frame for shaking the seed from the severed material while the latter is on the conveyer, and means for operating the conveyer and the beaters.

[Claims 6 to 29 not printed in the Gazette.]

1,167,214. DELIVERY APPARATUS. HANS O. PETERSEN, Newport, R. I. Filed Feb. 18, 1915. Serial No. 9,095. (Cl. 211—22.)



1. In apparatus for the purpose described, spaced means for holding superimposed sheets of material, a reciprocatory carriage, means actuable by movement of the carriage and constructed and arranged on movement of the carriage to withdraw one sheet of each set, and means for temporarily placing out of commission the sheet-withdrawing means complementary to one set of sheets.

2. In apparatus for the purpose described, spaced and suitably-supported means for holding sets of superimposed sheets of material, suitably-supported means for initially moving the uppermost sheets of each set, a reciprocatory carriage, means connected with and movable by the carriage for actuating the said means for initially moving the uppermost sheets of each set, and means on the carriage constructed and arranged on movement of the same in one direction to withdraw the uppermost sheets of the sets.

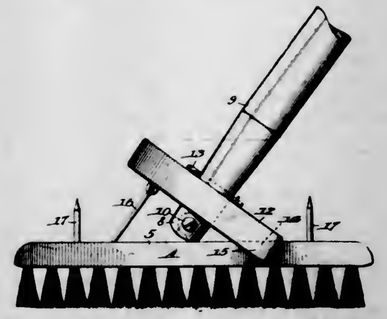
3. In an apparatus for the purpose set forth, spaced means for holding sets of superimposed sheets of material, impalement pins carried by said means and adapted to engage and hold the sheets, a roller carried by said means and adapted when rotated to start the uppermost sheet off the pins, a reciprocatory carriage, means on the carriage constructed and arranged on movement of the carriage in one direction to withdraw the uppermost sheets of the sets, and means constructed and arranged on movement of the carriage in the other direction to hold said sheet-withdrawing means out of engagement with the sheets.

4. In apparatus for the purpose described, spaced and suitably-supported means for holding sets of superimposed sheets of material, suitably-supported means for initially moving the uppermost sheets of each set, a reciprocatory carriage, means connected with and movable by the carriage for actuating the said means for initially moving the uppermost sheets of each set on movement of the carriage in one direction and leaving said means idle on movement of the carriage in the opposite direction, means on the carriage constructed and arranged on movement of the carriage in one direction to withdraw the uppermost sheets of the set, and means constructed and arranged on movement of the carriage in the other direction to hold said sheet-withdrawing means out of engagement with the sheets.

5. In apparatus for the purpose described, means for supporting sets of first-copy sheets, carbon sheets and second-copy sheets, a reciprocatory carriage, means actuable by movement of the carriage and constructed and arranged on movement of the carriage to withdraw one sheet of each set, and means for temporarily placing out of commission the sheet-withdrawing means complementary to the first-copy sheets.

[Claims 6 to 12 not printed in the Gazette.]

1,167,215. STAND-UP SCRUBBING-BRUSH. JAMES T. PHARES, Carlinville, Ill. Filed Jan. 22, 1915. Serial No. 3,839. (Cl. 15—24.)



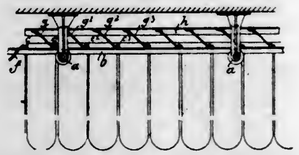
1. A brush, a handle rising therefrom and adjustably associated therewith, and adapted to extend at an inclination beyond either side or end of the brush, a block mounted on the handle for engagement with the brush to limit the adjustment of the handle in one direction, and means for holding said handle against movement in an opposite direction.

2. A brush, a handle rising therefrom and adjustably

associated therewith and adapted to extend at an inclination beyond either side or end of the brush, a block mounted upon the handle for engagement with said brush to limit the adjustment of the handle in one direction, and a locking element supported by the block for engagement with the brush to hold said handle against movement in an opposite direction.

3. A brush, a handle therefor, a connection between the brush and handle, said connection pivotally supporting said handle and provided for relative rotation between said members, a block mounted upon the handle for engagement with the brush to limit the pivotal movement of the handle in one direction and to prevent casual rotation of the said handle or brush, and a locking element carried by said block for engagement with the brush to prevent pivotal movement of the handle in an opposite direction.

1,167,216. WEB-ADVANCING MECHANISM FOR DRYING-FRAMES. BERTHOLD HEINRICH CARL HERMANN RATHSFELD, Nordhausen, Germany. Filed Oct. 30, 1913. Serial No. 798,244. (Cl. 34—25.)



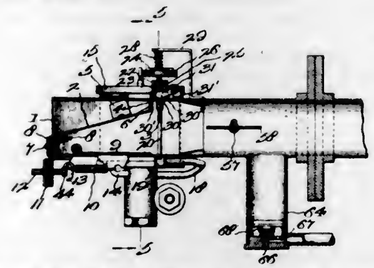
1. In a web swinging and advancing mechanism for drying frames, the combination of carrying rails, web-supporting bars loosely mounted on the rails, means for reciprocating the latter, pawls adapted to permit the supporting bars to move with the rails in one direction and to retain the bars during the movement of the rails in the opposite direction, and means to hold the pawls out of engagement with the bars to permit the latter to move with the rails in both directions.

2. In a web swinging and advancing mechanism for drying frames, the combination of carrying rails, web-supporting bars loosely mounted on the rails, means for reciprocating the latter, fixed rails adjacent the carrying rails, pawls pivoted on the fixed rails and adapted to permit the bars to move with the carrying rails during their forward stroke and to retain said bars during the return stroke of the carrying rails, means to hold the pawls out of engagement with the bars to permit the latter to move with the rails to impart a swinging movement to the web, and pawls on receiving ends of the carrying rails adapted to pass beneath said bars during the return stroke of said carrying rails and to advance the bars during the forward stroke.

3. In a web swinging and advancing mechanism for drying frames, the combination of carrying rails, web-supporting bars loosely mounted on the rails, means for reciprocating the latter, stationary supporting rails, two sets of pawls pivoted on the supporting rails, one set of pawls arranged to allow the bars to pass unobstructed during their forward stroke and to retain said bars during the return stroke of the carrying rails, the other set of pawls arranged to allow said bars to pass unobstructed during the return stroke and to retain said bars during the forward stroke of the carrying rails, pawls on the receiving ends of the carrying rails adapted to pass beneath the bars during the return stroke of said carrying rails and advance the bars during the forward stroke, and an independently operable rod for each set of pawls to move the latter into and out of engagement with the rods.

1,167,217. CARBURETER. HENRY M. REICHENBACH, Rochester, N. Y. Filed Jan. 27, 1915. Serial No. 4,721. (Cl. 48—150.2.)

1. In a fuel feeding device for internal combustion engines, in combination, an intake conduit for said engine, a deflecting plate fixed in said conduit, fuel discharge means in said conduit, said plate inclined toward said fuel discharge means, and provided with openings in proper relation thereto, and an auxiliary air valve opening into said conduit, said auxiliary valve being arranged to respond to engine suction, a control for fuel supply, and a differential control means arranged between said valve and said fuel supply control.



2. In a fuel feeding device for an internal combustion engine, in combination, an intake conduit for said engine, a deflecting plate fixed in said conduit, fuel discharge means in said conduit, said plate inclined toward said fuel discharge means, and provided with openings in proper relation thereto, and an auxiliary air valve opening into said conduit, said auxiliary valve being arranged to respond to engine suction, a control for fuel supply, a two-part head, means for adjusting one part of said head with reference to the other, means carried by said adjusted part for controlling fuel supply, and a differential control means arranged between said valve and said head.

3. In a fuel feeding device for an internal combustion engine, in combination, an intake conduit for said engine, a deflecting plate fixed in said conduit, fuel discharge means in said conduit, said plate inclined toward said fuel discharge means, and provided with openings in proper relation thereto, and an auxiliary air valve opening into said conduit, said auxiliary valve being arranged to respond to engine suction, a control for fuel supply, a two-part head, means for adjusting one part of said head with reference to the other, means carried by said adjusted part for controlling fuel supply, a spring for maintaining said head depressed, and a differential control means between said valve and said head, for varying the position of said head with reference to the fuel supply means, in opposition to said spring in differential response to engine suction.

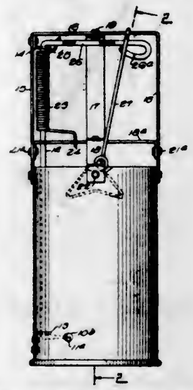
4. In a fuel feeding device for an internal combustion engine, in combination, an intake conduit for said engine, a deflecting plate fixed in said conduit, fuel discharge means in said conduit, said plate inclined toward said fuel discharge means, and provided with openings in proper relation thereto, and an auxiliary air valve opening into said conduit, said auxiliary valve being arranged to respond to engine suction, a control for fuel supply, a two-part head, means for adjusting one part of said head wtih reference to the other, means carried by said adjusted part for controlling fuel supply, a spring for maintaining said head depressed, a shaft, levers on said shaft adapted when the shaft is turned to raise said head in opposition to the pressure of the spring, and a differential control means between said valve and said shaft for causing said shaft to turn in differential response to engine suction.

5. In a fuel feeding device for internal combustion engines, in combination, an intake conduit, a fixed deflector plate in said conduit, a spring-controlled valve below said plate, fuel supplying means arranged in atomizing relation to said deflector plate and said valve, and means for varying the supply of fuel, said means arranged in differentially-controlled relation to said spring valve.

[Claims 6 to 21 not printed in the Gazette.]

1,167,218. GOPHER-TRAP. ANTON F. RENKEN, Kramer, Nebr. Filed June 26, 1915. Serial No. 36,490. (Cl. 43—21.)

1. A trap comprising a tubular body, a spindle disposed longitudinally of the body and mounted to rock, said spindle having a transverse spear thereon at its rear end and with an integral lateral arm at the opposite end, a frame on the tubular body at the front, a trigger mounted on the body at the front, a latch mounted on the frame and extending at one side of the lateral arm of the spindle, said latch detachably engaging the trigger, and a torsion spring surrounding the spindle, one end of the spring being engaged with a fixed part of the trap and the other bearing against the lateral front arm of the spindle, the said spear having a spur at approximately right angles thereto and the said body at the rear end having a slot through which the spur and the adjacent portion of the spear may extend and having also an aperture distant from the said slot through which the spur may be projected under the influence of the said spring.



2. A trap of the character described, comprising a tubular body adapted to be disposed in a burrow and constituting a passageway for a gopher, a spindle ranging longitudinally at the interior of the body and rockably mounted, said spindle having a laterally disposed spear at its rear end and a lateral arm at its front end, a spring normally tending to turn said spindle to throw the spear through an angle transversely of the body, a trigger pivotally mounted on the body and having a member projecting into the body to be engaged by an animal passing through the latter, and a pivoted latch extending at one side of the said lateral arm of the spindle and having its free end engaging the trigger.

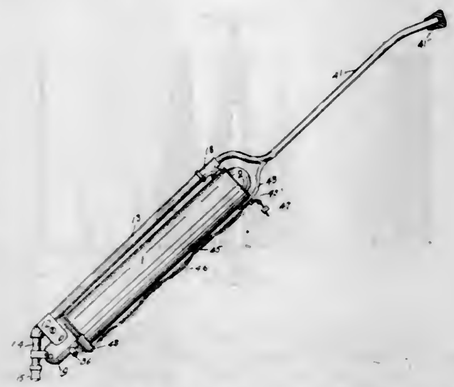
3. A trap comprising a tubular body having adjacent one end a slot and an opening spaced from said slot, a frame secured to one end of the body, a spindle journaled in the body and frame and provided at the end within the body with a lateral arm having an angular spear member and at its other end with a lateral arm, a spring surrounding the spindle and having one end secured to the frame and its other end engaging the arm of the spindle, a latch pivoted to the frame above the arm of the spindle and extending at one side of the arm of the spindle, and a trigger pivoted between its ends and having one member thereof extending into the body, the other member of the trigger having a loop with which the free end of the latch engages.

1,167,219. PORTABLE VACUUM-CLEANER. DANIEL BENSON REPLOGLE, Berkeley, Cal., assignor of one-third to F. M. Ray, Oakland, Cal. Filed Feb. 16, 1911. Serial No. 609,039. (Cl. 15—60.)

1. In a portable vacuum cleaner of the kind described, a suction pipe handle, adapted to connect with suction cleaning tools at either end, and carrying vacuum producing means and dust collecting means operably connected intermediate of its ends.

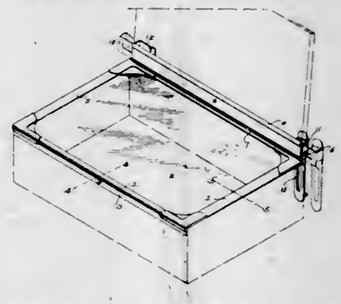
2. In a portable vacuum cleaner of the kind described, the combination with vacuum producing means and dust collecting means operably connected, of a suction pipe handle rigidly secured thereto and communicating with the dust collector at a point intermediate of its ends, said suction pipe handle adapted to receive cleaning tools at either of its ends.

3. In a vacuum cleaner of the kind described, vacuum producing means, dust collecting means and floor tool, operably connected, in combination with a suction pipe



handle section extended from a communicating connection with the dust collecting means, and adapted to connect with cleaning tools at its outer end.

1,167,220. SUPPLEMENTAL LID FOR BOXED GOODS. EDWARD REUKAUF, Philadelphia, Pa. Filed Jan. 30, 1914. Serial No. 815,515. (Cl. 217—58.)



1. In a supplemental cover for boxes, the combination of a frame carrying a transparent plate, a grooved wall carried by said frame substantially at right angles thereto, and box-lid engaging members slidably mounted with respect to said grooved wall.

2. In a supplemental cover for boxes, the combination of a frame carrying a transparent plate, a grooved wall carried by said frame substantially at right angles thereto, and clamping members slidably mounted with respect to said grooved wall and movable into clamping engagement with the lid of the box carrying such frame.

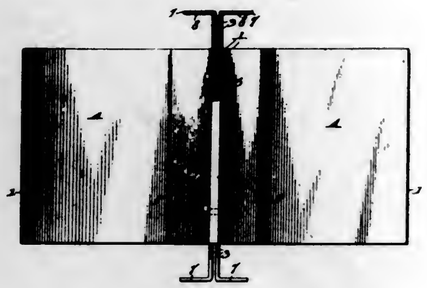
3. In a supplemental cover for boxes, the combination of a frame carrying a transparent plate, a grooved supporting wall carried by said frame, and lid-engaging members slidably mounted with respect to said grooved wall.

4. In a supplemental cover for boxes, the combination of a frame carrying a transparent plate, a rear flanged support carried by said frame, and secured substantially at right angles thereto, and lid-engaging members slidably mounted with respect to said flanged support.

5. The combination, in a supplemental cover for boxes, of a frame carrying a transparent plate, flanges carried by said frame and overlying the edges of the box, an upstanding grooved supporting wall secured to and disposed substantially at right angles to said frame at the rear of the same, and clamping members slidably mounted in said grooved supporting wall for engagement with the box lid.

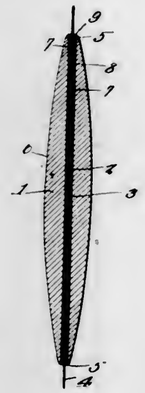
[Claims 6 to 10 not printed in the Gazette.]

1,167,221. JOINT FOR BILL-BOARDS. WILLIAM D. RICE, Conneaut, Ohio. Filed Apr. 23, 1915. Serial No. 23,470. (Cl. 189—36.)



A bill-board comprising flanged sheet-metal sections, a cap straddling and housing two adjacent flanges which are to be joined together, clamp-bars embracing the flanges from opposite sides and inclosed and housed by the cap, and common bolts extending through the flanges, the clamp-bars and cap.

1,167,222. FISHING-FLOAT. JOHN S. SCOTT, Greenville, Tex. Filed Sept. 17, 1915. Serial No. 51,241. (Cl. 43—4.)



1. A fishing float having a line receiving bore, and a line fastener embodying a pair of tubular sections fitted in said bore for the passage of the line therethrough and having a resilient line clamping portion connecting them.

2. A fishing float having a line receiving bore, and a line fastener embodying a pair of tubular sections fitted within said bore and having a resilient bowed portion connecting their adjacent ends for clamping the line within the bore.

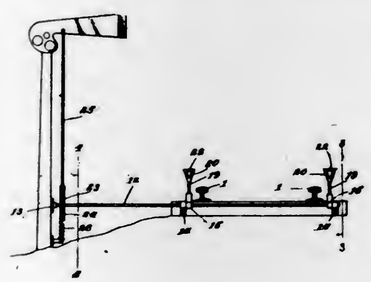
1,167,223. HOG-CATCHER. OLIVER E. SHEIDLER, Old Fort, Ohio. Filed Apr. 16, 1914. Serial No. 832,274. (Cl. 119—153.)

In a hog catcher, a metal tube having a hole adjacent to one end at one side and a slot adjacent to the same end at the other side, a wire secured in said hole and looped and passed through said slot into said tube, a chain of flat links connected to said wire within said tube and projecting through the other end of the same, said tube at said other end having slots diametrically opposite each other and extending from the end longitudinally whereby to receive a flat link and retain the same, and a hand loop secured to the outside end of said chain all



being arranged substantially as shown and for the purposes described.

1,167,224. TRAIN-STOP. WILLETS SHROPSHIRE, Port Elizabeth, N. J. Filed Apr. 9, 1915. Serial No. 20,286. (Cl. 246—59.)

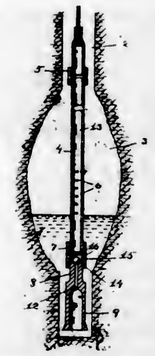


In train stopping apparatus, a horizontal shaft arranged transversely of the trackway below the lines of rails, bearings for said shaft, trip arms secured to said shaft at the outer sides of the lines of rails of the trackway and rotatable with the shaft from inactive to active position and vice versa, a sprocket wheel keyed upon said shaft and disposed in proximity to an adjacent road signal, a vertical chain meshing with the teeth of said sprocket wheel, a connection between the upper end of said chain and a signal blade of the adjacent road signal whereby the shaft will be rotated to swing the arm to inactive position in the movement of the signal blade to clear position, and a spring connected to the lower end of said chain and acting to rotate said shaft to swing said arms to active position in the movement of the blade to danger position.

1,167,225. WELL-CLEANING DEVICE. ARTHUR L. SMITH, McConnelsville, Ohio. Filed Oct. 12, 1915. Serial No. 55,457. (Cl. 166—20.)

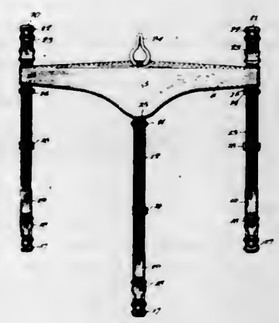
In a well cleaning device, a reciprocatory tube having jet perforations in its lower portion and an air chamber in its upper portion above the perforations, an upper

coupling, a lower coupling and valve chamber wall, a bit having an open lower end and an upper axially per-



forated neck portion connected to the lower coupling, and a valve operating in the coupling chamber.

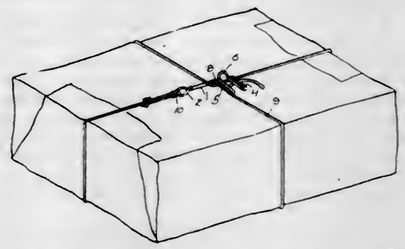
1,167,226. GARTER. LEWIS MACK SPANN, Columbus, Miss. Filed Sept. 30, 1914. Serial No. 864,337. (Cl. 241—1.)



A garter of the character described, comprising a flexible band adapted to be arranged forwardly of the knee in a substantially horizontal position with its opposite ends extending upon opposite sides of the knee, means for attaching the band to an under garment for suspending said band, side straps attached to the opposite ends of the band and depending therefrom and adapted to be arranged upon opposite sides of the leg, a front strap attached to the band at a point substantially equidistantly spaced from the ends thereof and adapted to be arranged in front of the leg and having a substantially greater length than the side straps to extend downwardly beyond the same for a substantial distance, and hose attaching devices secured to the free ends of the side and front straps.

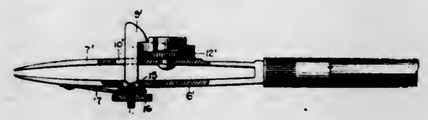
1,167,227. PACKAGE-TIE. DAVID WILLIAM SQUIRE, White Plains, N. Y. Filed July 1, 1914. Serial No. 848,443. (Cl. 24—18.)

A package tie formed of a single piece of metal comprising a shank, one end loop forming a cord receiving eye, a downwardly extending arm formed at the outer end of said shank, a U-shaped member connected to the lower extremity of said arm its free end bent upwardly and around said shank said U-shaped member acting as a



spring, when a tying element is forced down between the arms and the U-shaped member.

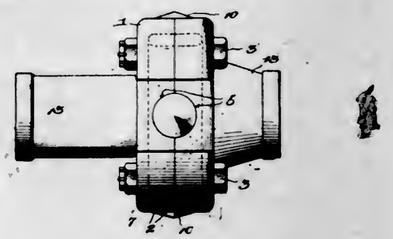
1,167,228. DRAWING-PEN REGULATOR. MORRIS SPERRY STROCK, Boulder, Colo. Filed Jan. 20, 1915. Serial No. 3,251. (Cl. 120—109.5.)



1. In a pen, blades tending normally to part, a trigger associated with one of the blades and projecting through the other, a member mounted to rotate on said other blade, said member having an incline engaging the trigger whereby in turning said member the distance between the points of the blades may be varied, said member having means for indicating the distance between the pen points as said member is rotated.

2. In a pen, a pair of blades normally tending to part, a trigger the ends of which project through said blades, a threaded member, one end of the trigger being threaded to adjustably receive the said threaded member, a resilient member associated with one of the blades and maintaining said threaded member against said blade whereby the trigger is adjustably connected to said blade, and a member mounted to rotate on the other blade, said member having an incline engaging the other end of the trigger projecting through said blade and whereby the distance between the blades may be varied.

1,167,229. UNIVERSAL JOINT. CARL E. SWENSON, Rockford, Ill. Filed Feb. 11, 1915. Serial No. 7,573. (Cl. 74—19.)



1. A universal joint comprising a connecting member formed of a pair of axially alined rings secured together, the abutting faces of said rings having a plurality of registering radial grooves constituting bearings, and registering circumferentially extending oil grooves connecting

the radial grooves and serving as lubricating means for such bearings, combined with two pairs of studs mounted for oscillation in the bearings, and shaft sections to which said studs are secured.

2. A universal joint comprising an annular connecting member formed of two axially alined rings secured together and having registering radial grooves in their abutting faces, said faces also having registering circumferentially extending oil grooves, and bushings clamped between the two rings and disposed in the registering radial grooves therein, said bushings having perforations opening into the registering oil grooves, in combination with radially extending studs mounted for oscillation in the bushings, and a pair of shaft sections to which said studs are secured.

3. A universal joint comprising an annular connecting member formed of two axially alined rings secured together and having registering radial grooves in their abutting faces, said faces also having registering circumferentially extending oil grooves intercepting the radial grooves, and bushings clamped between the two rings and disposed in the registering radial grooves therein, said bushings having perforations opening into the registering oil grooves, in combination with two pairs of studs mounted for oscillation in said bushings, and shaft sections to which the studs are secured.

4. A universal joint comprising an annular connecting member having two pairs of radial openings extending from its inner to its outer side, the body of said member being formed with an annular oil channel intercepting said radial openings, bushings inserted in said openings and having perforations opening into the oil channel, said bushings likewise having closed outer ends, two pairs of studs mounted for oscillation in said bushings, and a pair of shaft sections to which said studs are secured.

5. A universal joint comprising an annular connecting member having two pairs of radial openings extending from its inner to its outer side, the body of said member being formed with an annular oil channel intercepting said openings, bushings inserted in said openings and having perforations communicating with the oil channel, said bushings having closed outer ends and stop means on their inner ends for preventing outward movement, two pairs of studs mounted for oscillation in said bushings, and shaft sections to which said studs are secured.

[Claim 6 not printed in the Gazette.]

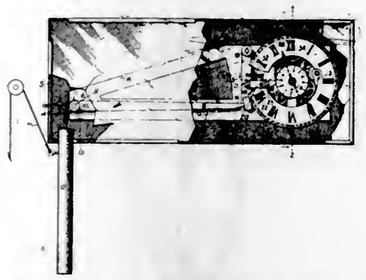
1,167,230. MEDICINAL EXTRACT OF APERIENT DRUGS. RUDOLF TAMBACH, Ludwigshafen-on-the-Rhine, Germany, assignor to the Firm of Knoll and Company, Ludwigshafen-on-the-Rhine, Germany. Filed July 29, 1909. Serial No. 510,278. (Cl. 167—4.)

1. The process for the manufacture of purified extracts of aperient drugs, the active constituents of which belong to the class of oxymethyl-anthraquinones and which on the extraction of the drug with alcohol are soluble without alteration, which consists in preparing an alcoholic extract from the same, treating the extract with ether as long as a precipitate is formed, concentrating the same by evaporation, and adding a suitable diluent, sufficient in quantity to obtain the desired strength, substantially as described.

2. The process for the manufacture of purified extracts of aperient drugs, the active constituents of which belong to the class of oxymethyl-anthraquinones and which on the extraction of the drug with alcohol are soluble without alteration, which consists in preparing an alcoholic extract from the same, treating the extract with ether as long as a precipitate is formed, concentrating the same by evaporation, and adding sufficient milk sugar to obtain the desired strength, substantially as described.

3. As a new product, an extract of an aperient drug, whose active constituent belongs to the class of oxymethyl-anthraquinones and is obtainable in the manner described, the said extract containing almost the whole of the active constituents in unaltered condition free from most of the superfluous other constituents and being diluted with milk sugar in any desired proportion.

1,167,231. AUTOMATIC RELEASING DEVICE. ARTHUR J. TIZLEY, New York, N. Y. Filed Nov. 17, 1914. Serial No. 872,546. (Cl. 161—8.)



1. In a device of the class described, a lever, a weight normally supported on one arm of the lever, a second lever disposed substantially at right angles to the first mentioned lever and having a shoulder engaging the other arm of the first mentioned lever, a spring for moving the second mentioned lever to free its shoulder from the first mentioned lever, an arm pivoted to the second mentioned lever for moving the latter against the resiliency of the spring, the arm being disposed in a horizontal plane substantially parallel with the first mentioned lever, guide means for the arm, a rotatably mounted member, and a cam engaging the arm and having frictional engagement with the rotatably mounted member.

2. In a device of the class described, a horizontal lever, a weight normally supported on an arm of the lever, a second lever having a shoulder engaging the other arm of the first mentioned lever, a spring for moving the second mentioned lever to free its shoulder from the first mentioned lever an arm for moving the latter against the resiliency of the spring, the arm being disposed in a horizontal plane substantially parallel with the first mentioned lever, a rotatably mounted member having a hand, clock means for rotating the member, a cam rotatably mounted on the member and having frictional engagement therewith, the cam normally engaging the arm and having marks thereon to assist in setting the cam relatively to the hands.

1,167,232. ATTACHMENT-PLUG. SAMUEL TROOD, Pittsburgh, Pa., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 26, 1912. Serial No. 727,961. (Cl. 173—359.)



1. An attachment plug comprising upper and lower insulating buttons, a metallic sleeve surrounding adjacent parts of said buttons and having a flange at one end, means for rigidly uniting said parts in assembled position, together with a screw shell in swiveling engagement with the flange on said sleeve and means to hold said screw shell against material longitudinal displacement with relation to said sleeve, substantially as described.

2. An attachment plug comprising upper and lower insulating buttons pierced in register, a flanged metallic sleeve surrounding adjacent parts of the buttons, an internally threaded eyelet lining the hole pierced in the upper button and a screw bolt passing through the pierced lower button and taking into said eyelet to rigidly unite said parts in readily detachable assembled condition, together with a screw shell in swiveling engagement with the flange on said sleeve and having only limited freedom of longitudinal displacement with relation thereto.

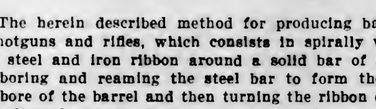
3. An attachment plug comprising upper and lower insulating buttons pierced in register, a flanged metallic sleeve surrounding adjacent parts of the buttons and having a wing struck inwardly therefrom to form a wire terminal within the sleeve, a screw shell surrounding and in swiveling engagement with the flange on said sleeve, a threaded socket in said upper button, a screw bolt passing through the lower button and taking into said socket to rigidly unite said parts in readily detachable assembled condition for the purpose described.

4. An attachment plug comprising upper and lower insulating buttons, peripheral shoulders thereon, a metallic sleeve engaged between said shoulders, a wire terminal and binding screw on the inner face of said sleeve, a center contact bolt passing through the lower button and engaging the upper button to hold said parts rigidly together and a screw shell in swiveling engagement with said sleeve, said upper and lower buttons being apertured to afford an insulated channel for the wire leading to the center contact terminal.

5. In an attachment plug, an upper button provided with a central stud axially perforated to receive a threaded eyelet, a lower button recessed to receive said stud and perforated in register therewith to permit the passage of a securing bolt therethrough into engagement with the threaded eyelet of the upper button, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,167,233. MANUFACTURE OF BARRELS FOR SHOTGUNS AND RIFLES. FRANKLIN BROCKWAY WARNER, New York, N. Y. Filed Mar. 11, 1915. Serial No. 13,599. (Cl. 86—4.)



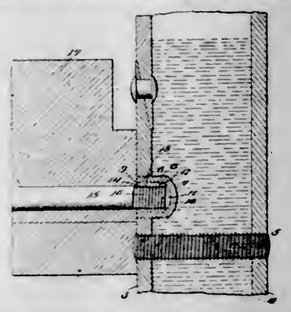
1. The herein described method for producing barrels for shotguns and rifles, which consists in spirally winding a steel and iron ribbon around a solid bar of steel, then boring and reaming the steel bar to form the desired bore of the barrel and then turning the ribbon down to the desired exterior diameter of the barrel.

2. The herein described method for producing barrels for shotguns and rifles, which consists in spirally winding a hot steel and iron ribbon around a solid bar of steel, then hammering the abutting edges of the ribbon together, then boring and reaming the steel bar to form the desired bore of the barrel, and then turning the ribbon down to the desired exterior diameter of the barrel.

1,167,234. STUD-SUPPORT. CHARLES O. WESCOTT, Tacoma, Wash. Filed July 9, 1914. Serial No. 850,058. (Cl. 110—97.)

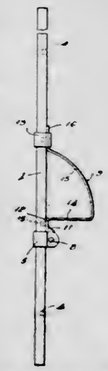
1. A brick stud supporting means comprising a hollow member externally and internally threaded and adapted to be inserted in a fire box wall, a second cylindrical member externally and internally threaded, the external threads of which are adapted to engage the internal threads of said first mentioned member and the internal threads of which are adapted to receive the threaded ends of a brick supporting stud, and a heat resisting metallic block forming a stop for the further insertion of said second member and said stud.

2. In a fire box, the combination with a fire box wall provided with a threaded opening therethrough, of a cylindrical member closed at its inner end and externally and internally threaded and adapted to engage the threaded opening in the fire box wall, a second cylindrical member externally and internally threaded, the external threads of which are adapted to engage the internal threads of said first mentioned member, a heat resisting metallic block in the closed end of said supporting member and adapted to form a stop for the further insertion



of said second member, a stud having a threaded portion adapted to engage the internal threads of said second mentioned member whereby to support the stud.

1,167,235. STILT. CLARENCE A. WETZELL, Sterling, Ill. Filed Dec. 14, 1914. Serial No. 877,188. (Cl. 135—53.2.)



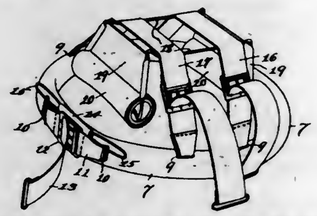
1. A stilt of the character described comprising an elongated rectangular body, said body being provided with a plurality of spaced depressions, a sleeve slidable on the body, an ear pivoted to the sleeve, a horizontal supporting portion formed on the ear and extending outwardly therefrom, an inwardly and upwardly curved portion extending upwardly from the end of the horizontal supporting portion, a vertical parallel extension formed at the upper end of the inwardly curved portion, said parallel extension being in a plane with the ear, a lug carried by the ear and by the parallel portion, the lug on each being arranged to enter the depressions in the body, and a sleeve slidable on the body and arranged to surround the body and the vertical extension to lock the stirrup in its outward movement.

2. A stilt of the character described comprising a body, said body being provided with a plurality of spaced depressions, a sleeve slidable on the body, a horizontal supporting portion pivoted on the sleeve, a lug carried thereby arranged to enter one of the depressions in the body, a guard member extending upwardly and inwardly from the horizontal supporting portion, a lug at the upper end of the guard member arranged to enter the depression immediately above the first mentioned depression and a sleeve surrounding the end of the guard member to hold the lug carried thereby in its depression.

3. A stilt of the character described comprising a body, said body being provided with a plurality of spaced depressions, a sleeve slidable on the body, an ear on the

sleeve, the horizontal supporting portion secured to the ear, a lug on the supporting portion arranged to engage in one of the depressions, an upwardly extending inwardly curved guard member formed at the free end of the horizontal supporting portion, an upturned portion at the upper end of the guard member, a lug carried by the upturned portion and a sleeve slidable on the body to engage the upwardly extending portion and hold the lug in the depression immediately above the first mentioned depression.

1,167,236. APPARATUS FOR PROMOTING THE GROWTH OF HAIR. LAWRENCE J. WIDNESS, New York, N. Y. Filed May 11, 1915. Serial No. 27,327. (Cl. 128—3.)



1. An apparatus for promoting the growth of the hair, comprising a band adjustable about the head of a wearer, a frame provided with legs resting upon the top of the head of the wearer, and adjustable straps connecting said band and frame.

2. An apparatus for promoting the growth of the hair, comprising a band adjustable about the head of a wearer, a resilient frame provided with legs resting upon the top of the head of the wearer, and adjustable straps connecting said band and frame.

3. An apparatus for promoting the growth of the hair, comprising a band adjustable about the head of a wearer, a frame provided with legs resting upon the top of the head of the wearer, tubular resilient cushions interposed between said legs and the head of the wearer, and adjustable straps connecting said band and frame.

4. An appartaus for promoting the growth of the hair, comprising a tubular resilient ring around the head of a wearer, an adjustable band within said ring, a frame provided with legs resting upon the top of the head of the wearer, and adjustable straps connecting said band and frame.

5. An apparatus for promoting the growth of the hair, comprising a tubular resilient ring around the head of a wearer, an adjustable band within said tube provided with loops projecting through said ring, a frame provided with legs resting upon the top of the head of a wearer, and adjustable straps connecting said frame and loops.

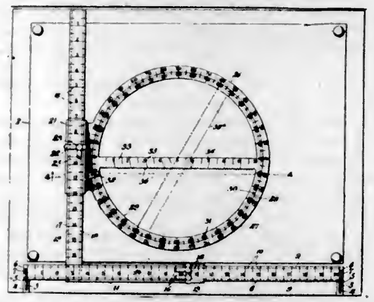
1,167,237. DRAFTING INSTRUMENT. JOHAN WIKBERG and SAMUEL A. WIKBERG, Tangle Flags, Saskatchewan, Canada. Filed Feb. 11, 1915. Serial No. 7,585. (Cl. 33—79.)

1. A drafting instrument comprising a scale stock, a scale beam movable therealong and disposed at right angles to the stock, a rotatable ring and carrying means therefor on and movable along the scale beam, and a rule extending across the ring and rotatable therewith.

2. A drafting instrument comprising a scale stock, a scale beam supported at right angles to said scale stock and adjustable therealong, a ring and supporting means therefor, on and adjustable along the scale beam, and a rule supported across and rotatable with said ring with one edge of the rule in a diameter of the ring.

3. A drafting instrument comprising a scale stock, a scale beam thereon and adjustable therealong and arranged at right angles thereto, a protractor carried by the scale beam and adjustable therealong, and a ring carried by the protractor and having a rule extending thereacross with one edge in a diameter of the ring and rotatable with the ring into different positions of angular adjustment.

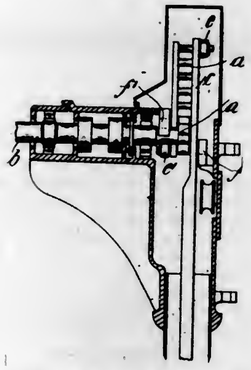
4. A drafting instrument comprising a scale stock with pivotal supports adapted to be secured to a drafting board, a scale beam at right angles to the scale stock and adjustable lengthwise of the latter, a circular protractor carried by and adjustable along the scale beam and projecting laterally therefrom, and a ring rotatably supported within the protractor and provided with a rule extending diametrically across said ring.



5. A drafting instrument comprising a pair of brackets, a scale stock pivotally supported between said brackets, a scale beam right-angularly supported from said scale stock and adjustable therealong, a circular protractor supported laterally from said beam, a ring rotatably supported within said protractor, and a rule diametrically supported across said ring.

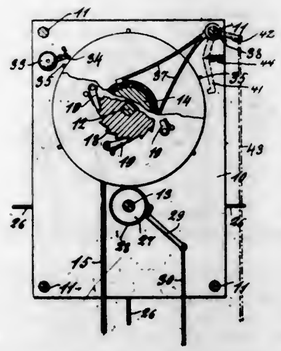
[Claims 6 to 12 not printed in the Gazette.]

1,167,238. MOTION-CONVERTING DEVICE. HENRY WATSON WILLIAMS, Perth, Western Australia, Australia. Filed May 19, 1913. Serial No. 768,612. (Cl. 74—27.)
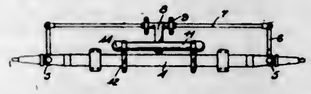


A motion converting device of the character specified, comprising a horizontal rotary driving shaft, a pinion fixed to the one free end of said shaft, a vertical reciprocatory driven element having a ladder rack located at the upper end thereof and comprising opposite members with exposed edges and teeth between the said members, rollers mounted on the ladder rack in alinement with the axes of the uppermost and lowermost teeth of said rack, a pair of fixed semicircular guides disposed adjacent to the opposite side members of the rack in the paths of said rollers for alternate engagement by the latter at the ends of the up and down strokes of the rack, said guides being arranged in inverted relation to each other one above and the other below the axis of said shaft and with their centers in alinement with the said axis, and pairs of spaced rollers mounted in opposite relation to the rack for alternate engagement with the edges of the rack members to maintain the rack in gear with the pinion on the shaft.

1,167,239. PORTABLE FIRE-ESCAPE. ABRAHAM WINKLER, Chicago, Ill. Filed July 25, 1914. Serial No. 853,118. (Cl. 227—22.)



The combination of a drum and a line to be wound thereon, of a pair of spring arms straddling the drum and slidable in the direction of the length thereof, one of said arms having seats for a plurality of strands of the line.

1,167,240. ATTACHMENT FOR STEERING MECHANISMS. ROY L. WOOD, Russell, Kans., assignor to Wood Brothers, Russell, Kans. Filed Oct. 28, 1914. Serial No. 868,995. (Cl. 21—200.)

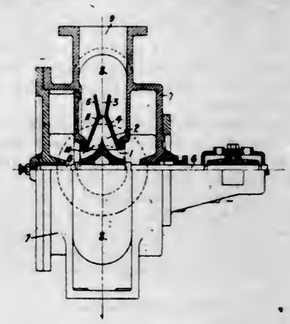


1. The combination with a steering mechanism having a tie-bar, of an arm projecting laterally from said bar and adapted to participate in all the movements of said bar, a tubular member having longitudinal slots engaged by said arm, said tubular member being stationary, coil springs in said tubular member one on each side of said arm, and means in said tubular member normally preventing the engagement of said resilient members with said arm whereby said arm is free to move transversely of said tubular member but resisted in the longitudinal movement of said tubular member by said coil springs substantially as and for the purpose set forth.

2. In combination, a steering mechanism having a tie-bar, an axle having steering knuckles connected to the tie-bar, a T-shaped arm carried by the tie-bar and adapted to participate in all the movements of the bar, a tubular member carried by the axle, said tubular member having longitudinal slots engaged by said arm, compression coil springs in said tubular member, one on each side of said arm, stops normally engaging the ends of the springs adjacent the arm and preventing the contact of said ends of the springs with said arm, and means for moving said tie-bar relative to said axle substantially as and for the purpose set forth.

1,167,241. CENTRIFUGAL LIQUID-PUMP. FRANK KNIGHT WOODROFFE, Chester, and HAROLD C. HODGSON, Egremont, England. Filed Sept. 22, 1913. Serial No. 791,176. (Cl. 253—191.)

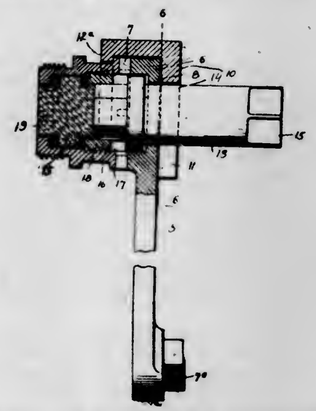
1. In a centrifugal pump, an impeller wheel having a central inlet and a plurality of spaced blades which form a plurality of passages which communicate with said inlet, the outer ends of the blades terminating at a distance from the periphery of the impeller wheel, each of said passages being of gradually diminishing area from the inlet to the outer ends of the blades, and the side walls of the impeller wheel from the outer ends of the blades to the periphery thereof flaring outwardly to form a space of gradually increasing area and with which all the passages communicate, the smallest area of the passages and the space beyond same being adjacent, and means for permitting the outlet of fluid flowing through said passages.



2. In combination, a casing, an impeller wheel mounted in the casing comprising two circular spaced plates having alined central inlet openings, said side plates having inwardly inclined portions and outwardly inclined portions extending from said inwardly inclined portions, spaced blades between the two plates to provide a plurality of passages, said blades terminating at the point of juncture of the inwardly and outwardly inclined portions, the inwardly inclined portions of the plates and the blades forming a plurality of passages of gradually diminishing area and the outwardly inclined portions of the plates forming a space of gradually increasing area common to all the passages, the smallest area of each inclined passage and the space being adjacent.

1,167,242. WRENCH. JOHN G. WRIGHT, Tyler, Tex. Filed May 25, 1915. Serial No. 30,349. (Cl. 81—90.)

1. In combination, a wrench including a handle, a head at one end of said handle, axially projecting ribs or wings on said head, and means for securing said head in position upon an object to be rotated.



2. A wrench including a handle, an annular head at one end of said handle, a plurality of ribs or wings projecting axially of said head, a centering element removably positioned in said head, and means for securing said head against lateral movement with relation to an object engaged therewith.

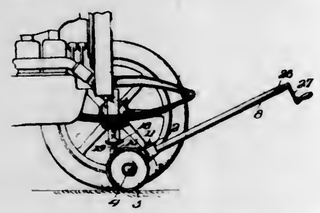
3. A wrench including a handle, an annular head at one end of said handle, a plurality of wings or ribs projecting axially of said head, a centering element removably positioned in said annular head, means for limiting longitudi-

sal movement of said centering element with relation to said head, and means for securing said wrench head in operative position upon an object.

4. A wrench including a handle, an annular head at one end of said handle, a plurality of ribs or wings projecting axially of said head, a centering element removably positioned in said head, and a holder removably engaged with said head for retaining the latter in engagement with an object including a body plate, an annular flange thereon, and a semi-circular extension on said flange disposed at right angles thereto.

5. A wrench including a handle, an annular head at one end of said handle, a plurality of axially projecting ribs or wings on said head, a centering element removably positioned in said head, means for limiting the longitudinal movement of said centering element in one direction with relation to said head, and a holder for retaining said head in operative engagement with an object including a body plate having a radial slot therein, a semi-circular flange on said plate, and an angular semi-circular extension on said flange.

1,167,243. AUTOMOBILE-TRUCK. CHARLES YOUNGS, Wellsville, N. Y. Filed May 28, 1914. Serial No. 841,504. (Cl. 254—4.)



1. An automobile truck comprising a body portion mounted on wheels and having an inclined support, a member slidably mounted on said inclined support, a vehicle engaging member adjustably supported by said slidable member whereby said vehicle engaging member may be raised or lowered with respect to the slidable member, and means for adjusting the position of said slidable member on said inclined support whereby said engaging member is elevated.

2. An automobile truck comprising a body portion mounted on wheels and having a support inclined in its normal working position, a vehicle engaging member slidably mounted on said inclined support, a tongue secured to said body portion, and means positioned near the free end of said tongue and operable independently of the tongue for causing the engaging member to slide on the inclined support.

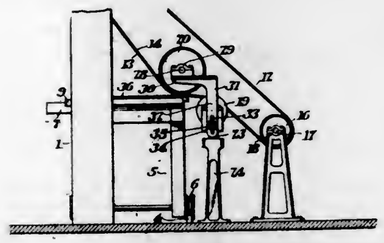
3. An automobile truck comprising a body portion mounted on wheels and provided with an inclined guideway, a member slidably mounted in said guideway and provided with a threaded recess, a vehicle engaging member provided with a shank threaded to engage the threads in said recess, means for adjusting the position of said slidable member in said guideways, and means for tilting said body portion.

4. An automobile stuck comprising a body portion mounted on wheels and provided with an inclined guideway; a vehicle engaging member slidably mounted in said guideway; a hollow tongue secured to said body portion; a screw rotatably fixed within said tongue; a non-rotatable sleeve mounted on and engaging said screw; means connecting said sleeve with said vehicle engaging member; and means for turning said screw.

5. An automobile truck comprising a carriage mounted on wheels and provided with an inclined guideway; a member slidably mounted in said guideway; a vehicle engaging member pivotally mounted on said slidable member; and a tongue for tilting said carriage provided with means for moving the slidable member in said guideway.

[Claims 6 to 8 not printed in the Gazette.]

1,167,244. MACHINE FOR POLISHING PLATE-GLASS. HUGO ZOERNER, Arcadia, Mich. Filed May 5, 1915. Serial No. 26,091. (Cl. 51—11.)



1. In a machine for polishing the beveled surfaces of plate glass, the combination of an endless traveling polishing belt having a lower working stretch arranged at an angle to the horizontal, a horizontal support for the glass, a guide roller for the working stretch of the belt disposed at a point beyond and substantially in the plane of said support, and means for acting upon the working stretch of the said belt adjacent to said roller to regulate the working angle of the working portion of said stretch and its pressure upon the glass.

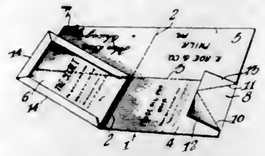
2. In a machine for polishing the beveled surfaces of plate glass, the combination of an endless traveling and polishing belt arranged at an angle to the horizontal, a carriage mounted to reciprocate in a direction transversely to the direction of movement of the belt, a bed to support the glass adjustably mounted on said carriage for movement toward and from the acting surface of the belt, a guide roller disposed beyond the carriage and adjustable in a vertical plane to bear against the working surface of the belt, a guiding and pressure regulating roller arranged to engage the upper surface of the working stretch of the belt for adjusting the same toward and from the surface of the glass to be acted upon, and means for throwing said roller into and out of operative position.

3. In a machine for polishing the beveled surfaces of plate glass, the combination of an overhead drive shaft, a countershaft arranged below and in rear of said drive shaft, an inclined endless polishing belt passing arouud pulleys on said shafts, a carriage mounted for movement in a direction transversely of the belt, a work supporting bed on said carriage adjustable toward and from the belt, a guide roller disposed between the carriage and countershaft and adjustable vertically to act upon the intervening portion of the lower stretch of the belt, a pressure roller arranged above the portion of the bed on which the portion of the work to be polished is disposed, and arranged to bear against the upper surface of the working stretch of the belt to vary its angle of inclination and its pressure against the said surface to be acted upon, and means for adjusting said roller.

4. In a machine for polishing the beveled surfaces of plate glass, the combination of an endless traveling polishing belt having a lower working stretch arranged at an angle to the horizontal, a carriage mounted for movement in a direction transversely of the belt, a work supporting bed on said carriage adjustable toward and from the belt, a guide roller for the working stretch of the belt disposed at a point beyond and substantially in the plane of said work supporting bed, and means for acting upon the working stretch of the said belt adjacent to said roller to regulate the working angle of the working portion of said stretch and its pressure upon the glass.

5. In a machine for polisbing the beveled surfaces of an inclined endless polishing belt, a carriage mounted for movement in a direction transversely of the belt, a work supporting bed on said carriage adjustable toward and from the belt, a guide roller arranged to bear against the lower stretch of the belt, a pressure roller arranged above the portion of the bel on which the portion of the work to be polished is disposed, and so as to bear against the upper surface of the working stretch of the belt to vary its angle of inclination and its pressure against the said surface to be acted upon, and means for adjusting said roller.

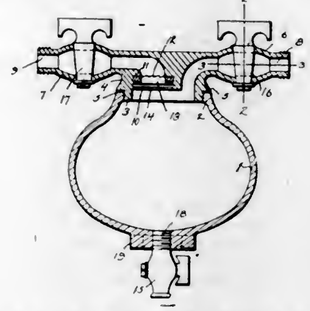
1,167,245. COMBINED CIRCULAR, COIN-CARRIER, MAILING, AND RETURN ENVELOP. PERCY G. ABRAMS, Philadelphia, Pa. Filed June 4, 1914. Serial No. 842,994. (Cl. 120—74.)



1. A mailing sheet comprising a plurality of foldably connected sections two of which are separated by longitudinal slit, and sealing flaps disposed along the free side and end edges of one of the slit separated sections, and sealing flaps secured to the outer face of the connected end of said section.

2. A mailing sheet comprising a plurality of foldably connected sections, a coin holder foldably connected to one end of one of said sections and having foldable flaps thereon for incasing a coin, two of said sections being separated longitudinally by a slit and one of them provided along one face on both side edges and one end with sealing flaps and on its opposite face at its other end with a sealing flap.

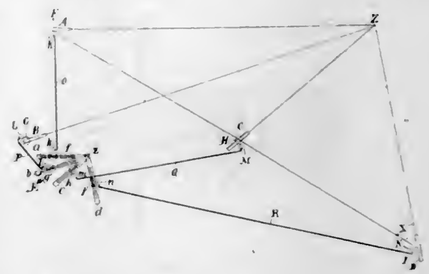
1,167,246. GASOLENE-SEDIMENT TRAP. CLAUDE D. ADAIR, Shellrock, Iowa. Filed Mar. 26, 1915. Serial No. 17,280. (Cl. 210—16.)



A device of the class described including a trap receptacle, a cap section fitted on the said receptacle and provided with inlet and outlet passages communicating at their inner ends with the said receptacle, said cap section being provided at the inner end of the outlet passage with a recess forming a shoulder or seat and having screw threads, a strainer arranged in the recess against the shoulder or seat and a threaded locking ring engaging the threads of the recess and retaining the strainer in position.

1,167,247. SYSTEM AND APPARATUS OF AUTOMATIC ELEVATION AND LATERAL DIRECTION OF ONE OR MORE GUNS. FRIDTJOV ANDERSEN, Haagen, near Tönsberg, Norway. Filed Apr. 29, 1912. Serial No. 693,847. (Cl. 172—239.)

1. In a system or apparatus for elevating and traversing guns, telescopes or sighting devices situated at suitable points, a central station having bars corresponding in number and disposition with those of the telescopes and the guns, and synchronously running means controlled and operated from the sighting apparatus for positioning said bars, said bars pivotally connected at a common point, and slidable over fixed points the positions of which correspond to the geographical positions of the telescopes and the guns, and means controlled by said bars to control the movement of the guns, whereby the angular movements of the telescopes are communicated to the corresponding bars at the central station and also the consequent angular motion of the bars corresponding to the guns is communicated to the guns.



2. In an ordnance sighting system a telescope, having a revoluble base, a plate, a pivot between the base and plate, a pin projecting through a slot in said base, two contact levers (6, 7) whose shorter arms are spring held against said pin, and contact arcs in the paths of the longer arms of said levers when said arms are moved by the displacement of the plate when the telescope is rotated.

3. In an ordnance sighting system, the combination with a telescope base, a plate, a pivot between the plate and base, a bar corresponding in direction to said base, synchronously operating means for moving said plate and bar, and electric contacts, and contact levers on said base to control the operation of said means.

4. In an ordnance sighting system, a sighting instrument, guns distanced from the instrument whose lines of sight intersect that of the instrument, a bar pertaining to each gun and parallel therewith, a bar parallel with the instrument, said bars having a pivot common to all of them, and each bar being in sliding connection with a separate pivot, means to impart angular movement from the instrument to its corresponding bar and thereby angularly position the bars pertaining to the guns, and means to impart equal angular movement from the latter bars to their pertaining guns.

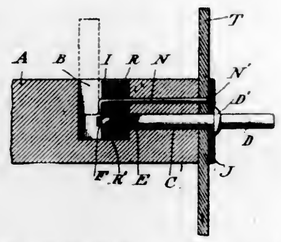
5. In a combined range finding and automatic sighting and gun training system, a telescope having a pivoted base, a plate for supporting said base, a pin on the plate projecting through a slot in the base, a pair of pivoted contact levers on the base, means to keep the short arms of the levers against said pin, contact pieces disposed in the path of the long arms of said levers when the latter are moved by the displacement of the telescope base relatively to said plate, electric circuits connected with said levers and the contact pieces, electromagnets in said circuits, a synchronized-motor at the telescope station, a central station, a synchronized-motor and a bar at the central station, and coupling and reversing means at each motor acted upon simultaneously by said electromagnets and actuating said pin carrying plate and said bar respectively as long as a contact lever is in contact with its contact piece.

[Claims 6 to 8 not printed in the Gazette.]

1,167,248. SPINDLE-HOLDING DEVICE FOR SPOOLS. LEWIS W. APPLETON, Philadelphia, Pa., assignor of one-half to Isaac Wortman, Philadelphia, Pa. Filed Feb. 27, 1915. Serial No. 11,015. (Cl. 242—124.)

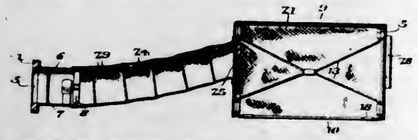
1. In a device for fastening spindles upon spools comprising, in combination with a spool having a recess formed therein with an opening leading centrally through one end of the spool into said recess, a spindle having a threaded portion angular in cross section at its inner end,

a nut adapted to be mounted in said recess and having a threaded opening for the reception of said screw, an apertured plate receiving the inner end of the spindle, nails passing through a portion of the spindle, nut and plate and adapted to hold the later in place, an apertured disk through which said spindle and nail passes, and a washer mounted upon the spindle and held by the latter against the disk and outer end of the nail.



2. A device for fastening spindles upon spools comprising, in combination with a spool having a recess formed therein with an opening leading centrally through one end of the spool into said recess, a flanged spindle having a threaded portion angular in cross section at its inner end, a nut mounted in said recess and provided with a threaded aperture for the reception of the spindle and an unthreaded aperture, a plate having an angular outlined opening for the reception of the inner end of the spindle and an aperture in alinement with the unthreaded aperture in the nut, an apertured disk upon the spindle, a nail passing through registering apertures in said disk, spindle nut and plate and against which latter the end of the nail is adapted to be clenched, a washer upon the spindle bearing against the disk and head of the nail and engaged by the flange of the spindle.

1,167,249. WINDOW-VENTILATOR. HECTOR A. AREL, Northampton, Mass. Filed Oct. 30, 1914. Serial No. 869,459. (Cl. 98—31.)

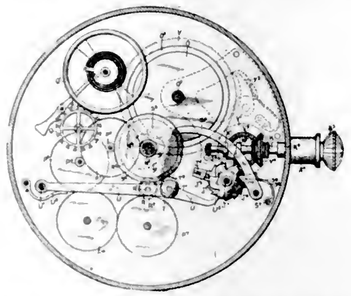


In a window ventilating device, the combination with a hood and means connecting said hood with the outside air and means for forcing air through said connecting means into the hood and said hood being provided with means permitting the escape of air from the hood into the room.

1,167,250. MOTION-COUNTER. WALLACE R. AYARS and BURT M. ANDERSON, Rome, N. Y. Filed Apr. 23, 1915. Serial No. 23,371. (Cl. 235—104.)

1. A motion counter, comprising a motion indicator, actuating means for the said indicator and normally out of engagement with the same, the said actuating means being controlled by a moving part of a machine, a time indicator, a motor for driving the said time indicator and normally out of engagement with the same, and connecting means adapted to simultaneously connect the said actuating means with the said motion indicator and the said motor with the said time indicator to simultaneously start the said motion indicator and the said time indicator.

2. A motion counter, comprising a motion indicator, actuating means for the said indicator and normally out of engagement with the same, the said actuating means being controlled by a moving part of a machine, a time indicator, a motor for driving the said time indicator and normally out of engagement with the same, and connecting means adapted to simultaneously connect the said actuating means with the said motion indicator and the said motor with the said time indicator to simultaneously start the said motion indicator and the said time indicator to simultaneously disconnecting the said actuating means from the said motion indicator and the said motor from the said time indicator.



3. A motion counter, comprising a motion indicator, actuating means for the said indicator and normally out of engagement with the same, the said actuating means being controlled by a moving part of a machine, a time indicator, a motor for driving the said time indicator and normally out of engagement with the same, connecting means adapted to simultaneously connect the said actuating means with the said motion indicator and the said motor with the said time indicator to simultaneously start the said motion indicator and the said time indicator, the said means on being actuated a second time simultaneously disconnecting the said actuating means from the motion indicator and the said motor from the time indicator, and a resetting device controlled by the said controlled means for simultaneously returning the said motion indicator and the said time indicator to zero position.

4. A motion counter, comprising a motion indicator, a driving mechanism for the said motion indicator and having a spindle adapted to be driven from a machine part, the said driving mechanism being normally disconnected from the said motion indicator, a time indicator, a motor for the said time indicator and normally out of engagement with the time indicator, and connecting means adapted to simultaneously connect the said driving means with the said motion indicator and the said motor with the said time indicator to simultaneously start the said motion indicator and the said time indicator.

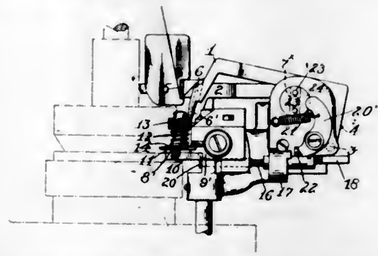
5. A motion counter, comprising a motion indicator, a driving mechanism for the said motion indicator and having a spindle adapted to be driven from a machine part, the said driving mechanism being normally disconnected from the said motion indicator, a time indicator, a motor for the said time indicator and normally out of engagement with the time indicator, and connecting means adapted to simultaneously connect the said driving means with the said motion indicator and the said motor with the said time indicator to simultaneously start and stop the said motion indicator and the said time indicator.

[Claims 6 and 7 not printed in the Gazette.]

1,167,251. STRIPING ATTACHMENT. GEORGE L. BALLARD, Norristown, Pa., assignor to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed Nov. 8, 1911. Serial No. 659,233. (Cl. 66—12.)

1. In combination a thread guide arm having a thread eye at its lower end and a guide opening at a point above the same for receiving the thread and directing it to the thread eye, and a slack producing member beneath which the thread passes to the guide opening, said guide opening being carried above the lower edge of the said slack producing member when the guide retracts from the needles, and means for advancing the guide to and retracting it from the needles, substantially as described.

2. In combination a thread guide movable toward and from the needles, means for moving the same, a fixed and a movable blade outside the needle row, a clamp also outside the needle row and movable with the movable blade, means for momentarily operating said movable blade and clamp to cut and clamp the thread, detent means for holding them in said operated position independently of the said operating means, and means for releasing the detent for effecting the opening of the cutter and clamp when the guide arm is advanced to present the thread to the needles, substantially as described.



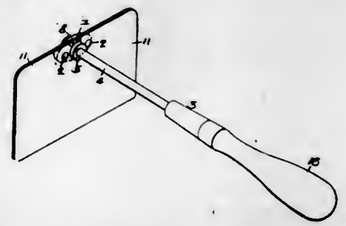
3. In combination a thread guide movable toward and from the needles, a fixed and a movable blade, a clamp movable with the movable blade, means for operating said movable blade and clamp to close them to cut and hold the yarn, detent means for holding them in operated position independently of the operating means, means for effecting the opening of the cutter and clamp when the guide arm is advanced to present the thread to the needles, said means including the cam shaft which controls the guide arm, and a device operated thereby to release the detent, substantially as described.

4. In combination a guide arm for the thread, a cam shaft for controlling the same, a cutter and clamping means for the thread, means for operating the same, a detent operating independently of the said operating means of the cutter and clamp for holding the cutter and clamping means in operated position, a spring for opening the cutter and clamp and a member on the cam shaft to withdraw the detent and allow the cutter and clamp to open under the action of the spring, substantially as described.

5. In combination a guide for the thread, a cam shaft for operating the same, a movable shear blade, a rod for operating the same, means for operating the rod, a spring detent lever bearing on the rod to hold the same in operated position independently of the operating means, and a pin on the cam shaft for operating the detent lever, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,167,252. INSTRUMENT-HANDLE CONNECTION. WALTER D. BANES, Philadelphia, Pa., assignor of one-fourth to T. L. Hacker, one-fourth to M. F. Oebbecke, one-fourth to Stewart Murray, and one-fourth to C. E. Rolfe, 2d, Philadelphia, Pa. Filed Mar. 2, 1915. Serial No. 11,604. (Cl. 55—43.)

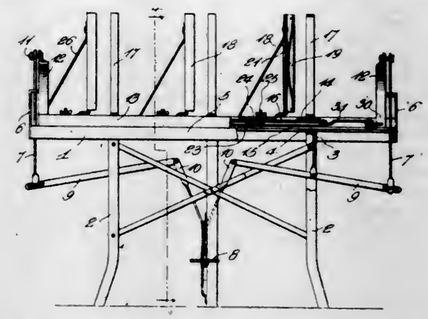


1. The combination of a handle having a threaded portion, a relatively fixed abutment, and a permanently fixed enlargement at its extremity; a head adjustable on the threaded portion between the enlargement and the abutment; a member slotted to receive that part of the handle between the head and the abutment; and means for preventing movement of the member relatively to the handle after said member has been gripped between the head and the abutment.

2. The combination of a member having a slot; a handle having a portion removably passing through said slot and provided with an abutment frictionally engaging one face of said member; with a head threaded on the handle and having a cavity in its face adjacent said member, there being a projection on said member fitting the cavity of said head; with means for permanently retaining said head on the handle while permitting its adjustment.

3. The combination of a handle having a collar, an enlarged extremity, and a threaded portion between said enlarged extremity and the collar; a head adjustable on said threaded portion and having cavities on opposite sides thereof; and a member having a slot extending inwardly from one edge for the reception of the handle between the collar and the head, said member being provided with projections on opposite sides of said slot placed to fit the cavities of the head.

1,167,253. CRATE-MAKING MACHINE. MARTIN S. BENNETT, Minneapolis, Kans. Filed July 29, 1915. Serial No. 42,622. (Cl. 144—295.)



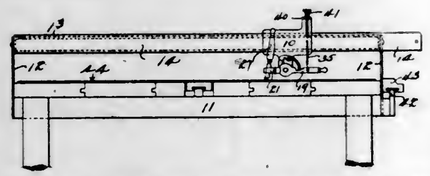
1. In a crate making machine, the combination with a rigid clamping member, a longitudinally shiftable bar at right angles thereto, and means for shifting said bar, of a substantially tubular clamping member parallel to the aforesaid member, a rigid arm projecting from the bar into the tubular member, and spring means interposed between said arm and the side of said tubular member adjacent the rigid member.

2. In a crate making machine the combination with a rigid clamping member, a longitudinally shiftable bar at right angles thereto, and means for shifting said bar, of a substantially tubular clamping member parallel to the rigid member, a rigid arm projecting from the bar into the tubular member, a bowed spring interposed between said arm and the side of said tubular member adjacent the other member, and a pair of stops projecting inwardly from said side of the tubular member and disposed adjacent the opposite ends of said spring.

3. In a crate making machine, the combination with a rigid clamping member, a longitudinally shiftable bar at right angles thereto, and means for shifting said bar, of a substantially tubular clamping member parallel to the aforesaid member having in one of its side walls a longitudinal slot, such wall being positioned remote from the rigid clamping member, a rigid arm projecting from the bar into the tubular member adjacent the slotted side wall thereof, spring means interposed between said arm and the aforesaid wall of the tubular member, an attaching foot projecting laterally from one end of the rigid arm and secured to the aforesaid bar, and an obliquely disposed brace bar extending from the foot through the slot and secured to the other end of the rigid arm.

4. In a crate making machine, the combination with a rigid clamping member, a longitudinally shiftable bar at right angles thereto, and means for shifting said bar, of a substantially tubular clamping member parallel to the aforesaid member having in one of its side walls a longitudinal slot, such wall being positioned remote from the rigid clamping member, a rigid arm projecting from the bar into the tubular member adjacent the slotted side wall thereof, spring means interposed between said arm and the aforesaid side wall of the tubular member, an attaching foot projecting laterally from one end of the rigid arm and secured to the aforesaid bar, and an obliquely disposed brace bar extending from the foot through the slot and secured to the other end of the rigid arm, the portion of said brace bar secured to the arm being reduced in width for reception in the slot.

1,167,254. GLASS-CUTTING MACHINE. OSCAR BENSON, Altoona, Pa. Filed Feb. 4, 1915. Serial No. 6,133. (Cl. 33—32.)



1. A glass cutting device comprising a table, a frame work including a guide rail, means for mounting said frame work over said table to be shiftable longitudinally thereof, a glass cutter carriage slidably mounted on said guide rail and having a pendent portion, a cutter carrying arm pivoted to said pendent portion of the carriage and having cutter clamping means at one end and tension means connected with the other end, and means for locking said arm at the desired tension.

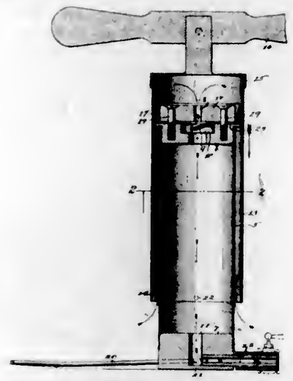
2. A glass cutting device comprising a table, a frame work including a guide rail, means for mounting said frame work over said table to be shiftable longitudinally thereof, a glass cutter carriage slidably mounted on said guide rail and having a pendent portion, a cutter tension arm pivotally carried by said pendent portion of the carriage, a clamping jaw at one end of said arm for clamping a cutter element, a spring having one end adjustably connected to the carriage and the other connected with said arm opposite the clamping jaw, and pivoted means for engaging said arm.

3. A glass cutting device comprising a table, a frame work including a guide rail, means for mounting said frame work over said table to be shiftable longitudinally thereof, a glass cutter carriage including a main frame having a guideway for slidably engaging said guide rail carried by the frame, and also having a pendent leg portion, a cutter carrying arm pivoted to said leg portion and having cutter clamping means, a flange projecting from the main frame of the carriage, a tension spring having one end adjustably connected to said flange and the other end secured to said cutter carrying arm, and a pawl pivotally carried by said carriage frame and having one end adapted to engage said cutter carrying arm.

4. A glass cutting device including a table, a shiftable rectangular frame element including a guide rail, means for mounting said frame work over the table to be shiftable longitudinally thereof, a glass cutter carriage slidable on said guide rail of the frame, and abutment blocks slidably mounted at one side of the table.

5. A glass cutting device comprising a table, a frame work having means for shiftably mounting the same over said table, a cutter carriage slidably mounted on said frame work, and a cutter carrying member in the form of a lever intermediately pivoted to said carriage and having cutter clamping means at one end and adjustable tension means connected with the other end, and means for engaging said cutter carrying member at one side of its pivot to regulate the position of the cutter clamping means.

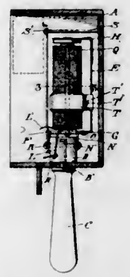
1,167,255. AIR-PUMP. ALVIN R. BERCK and FRED TJADEN, Hastings, Nebr. Filed Sept. 17, 1914. Serial No. 862,176. (Cl. 230—27.)



1. A pump, comprising a tubular reservoir, a ported block at the lower end provided with a lateral nipple, a ported block at its upper end formed of two members one of which is flanged and in threaded engagement with said reservoir and the other of which is detachably held thereon, said threaded member having a recess in the upper side thereof, a cup valve held between said members and provided with a flap in said recess serving as a valve for said port, a cylinder telescoped over said reservoir to fit said cup valve, and means for sealing the top of said cylinder in detachable engagement therewith.

2. A pump, comprising a tubular reservoir, a ported block at the lower end provided with a lateral nipple, a ported block at its upper end formed of two members one of which is flanged and in threaded engagement with said reservoir and the other of which is detachably held thereon, said threaded member having a recess in the upper side thereof, a cup valve held between said members and provided with a flap in said recess serving as a valve for said port, a cylinder telescoped over said reservoir to fit said cup valve, an internal guiding ring at the lower end of said cylinder adapted to be engaged by the flange on said threaded member to limit the cylinder movement, a detachable cap for said cylinder to limit downward cylinder movement, and detachable means exteriorly of said reservoir at the lower end thereof serving as a support for said pump and limiting downward movement of said cylinder when said cap is removed to give access to said valves.

1,167,256. VIBRATOR. CHARLOTTE BERGMAN, Los Angeles, Cal. Filed May 18, 1915. Serial No. 28,915 (Cl. 128—16.)

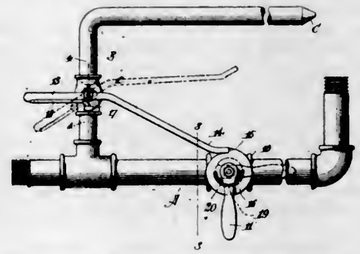


1. An electro-magnetic vibrator comprising a receptacle with an open face, an armature secured to the casing, an adjustable clamping member engaging the coil and having angled ends for engagement with a portion of the armature, and means for holding the clamping member in an adjusted position.

2. An electro-magnetic vibrator comprising a receptacle with an open face, an insulation block within the casing and a handle passing through the wall of the latter and engaging said block, an armature having a shank portion, an angle plate, screws passing through the shank portion of the armature and said plate, means for fastening the plate to the block, a coil supported within the receptacle, a clamping member frictionally engaging the coil and having angled ends for engaging with the opposite edges of the armature.

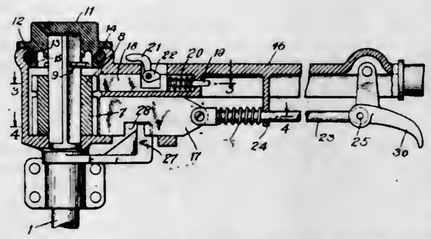
3. An electro-magnetic vibrator comprising a receptacle with an open face, an insulation block within the casing and a handle passing through the wall of the latter and engaging said block, an armature having a shank portion, an angle plate, screws passing through the shank portion of the armature and said plate, means for fastening the plate to the block, a coil supported within the receptacle, a clamping member frictionally engaging the coil and having angled ends for engagement with the opposite edges of the armature, a plate secured to said block, and a post within the casing and fastened to the plate and to said receptacle.

1,167,257. SAFETY APPLIANCE FOR GAS WATER-HEATERS. CHARLES L. BEST, Annapolis, Md. Filed Apr. 26, 1915. Serial No. 23,999. (Cl. 158—115.)



The combination with a gas supply pipe and a pilot light tube, of turning valves located within the respective pipe and tube, levers carried by the valves, a latch extension on one of said levers, a shouldered disk coöperating with the other lever and engageable by the latch extension to lock one valve against turning movement, and means acting upon the lever having the latch extension to automatically move the same into engagement with the shoulder on the disk.

1,167,258. RATCHET BRAKE MECHANISM. ROBERT H. BLACKALL, Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 28, 1915. Serial No. 24,404. (Cl. 188—56.)



1. The combination of a brake staff, a winding drum thereon, a brake chain to be wound on said drum, right and left hand ratchets secured to said staff, an operating lever, and sliding pawls carried by said lever for ratcheting said staff in either direction.

2. The combination of a brake staff, a brake chain to be wound thereon, right and left hand ratchets secured to said staff, an operating handle pivoted to swing about said staff, a pawl for said right-hand ratchet, a separate pawl for said left-hand ratchet, and means for holding each pawl inoperative while the other is in action.

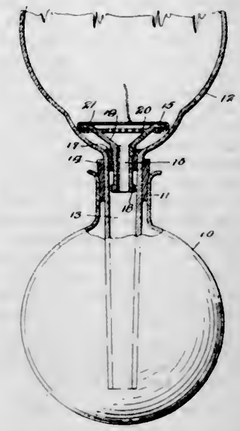
3. The combination of a brake staff, a brake chain to be wound thereon, an operating lever mounted to swing about said staff, right and left hand ratchets carried by said brake staff, a pair of spring pressed pawls, one for each ratchet, carried by said operating lever, and a pivoted handle whereby one of said pawls may be held retracted and inactive while the other pawl is in operative engagement with its ratchet.

4. The combination of a brake staff, a brake chain to be wound thereon, an operating lever mounted to swing about said staff and carrying a pair of spring pressed sliding pawls, a right-hand ratchet secured to said staff for receiving one of said pawls and a left-hand ratchet secured to said staff for receiving the other pawl, means for holding one of said pawls out of engagement with its ratchet when the operating lever is to be swung forward to wind the brake chain about the brake staff, and means for holding the other pawl out of action when the brake chain fails to unwind on release of the brake staff and the staff is to be ratcheted in the reverse direction.

5. The combination with a brake staff, of a support therefor having a stop, right and left hand ratchets carried by said staff, a housing inclosing said ratchets, an operating handle secured to said housing, a pair of sliding pawls carried by said handle, one of said pawls being adapted to engage said stop for automatic retraction when said operating handle has been swung back to its initial position, and the other ratchet having means normally holding it retracted but allowing it to come into engagement with its ratchet when the brake staff is to be rotated backward by hand.

[Claims 6 to 16 not printed in the Gazette.]

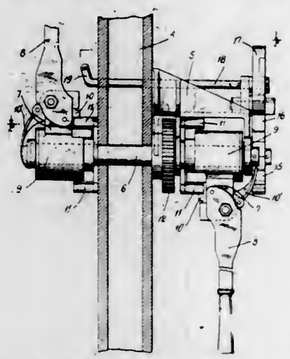
1,167,259. PERCOLATOR-STRAINER. JACOB B. BLEICHRODE, Brooklyn, N. Y., assignor to Crystal Percolator Company, Inc., New York, N. Y., a Corporation of New York. Filed May 5, 1915. Serial No. 26,040. (Cl. 210—16.)



1. In a strainer of the class described, in combination with a funnel, a strainer insertible in the spout of said funnel, said strainer having a reduced depending stem, a resilient sleeve carried by said stem for engagement in the spout of said funnel, said strainer having a flaring upper end, a perforated diaphragm carried by the upper end of said strainer, the upper edge of said strainer being raised above the perforated diaphragm and a strainer cloth detachably secured to the upper end of said strainer.

2. In a strainer of the class described, a funnel, a strainer detachably secured in said funnel, said strainer being of a non-metallic substance, said strainer having a reduced stem for insertion in the spout of the funnel, a retaining ring formed on the lower end of said reduced stem, a resilient sleeve carried by said stem above said retaining ring for frictional contact with the walls of the spout of said funnel, said strainer having a flaring bowl, a flange extending from the edge of the top of said bowl, a strainer cloth across said bowl having its edges gathered under said flange, said strainer cloth being stretched taut across said bowl and a perforated diaphragm across said bowl in spaced relation to said strainer cloth to afford an interval of space between said diaphragm and strainer cloth.

1,167,260. TUNNEL-BRAKE. ROBERT H. BLACKALL, Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Filed June 28, 1915. Serial No. 36,772. (Cl. 188—59.)



1. In combination with a car body, a horizontal brake staff rotatably supported thereby, a shaft rotatably supported by the car body and geared to the brake staff, and ratchet means for rotating the shaft.

2. In combination with a car body, a horizontal brake staff rotatably supported thereby, a shaft rotatably supported by the car body and geared to the brake staff, and hand operated means for ratcheting the shaft forward.

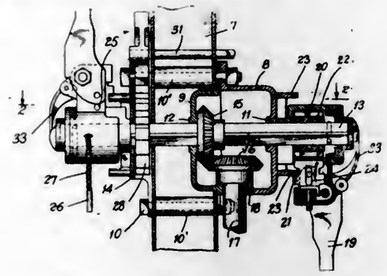
3. In combination with a car body, a brake staff rotatably supported thereby, a shaft rotatably supported by the car body and geared to the brake staff, hand operated ratchet mechanism for rotating the shaft and means for disengaging the ratchet mechanism.

4. In combination with a car body, a brake staff rotatably supported thereby, a shaft rotatably supported by the car body and geared to the brake staff, said shaft extending into the car, and means positioned inside of and outside of the car for rotating the shaft.

5. In combination with a car body, a frame secured to the outer surface of one of the end walls thereof, a horizontally disposed brake staff rotatably supported by the frame, a horizontally disposed shaft rotatably supported by the frame and extending through the end wall and into the car, the shaft being geared to the brake staff, and hand actuated ratchet mechanism positioned inside and outside of the car for rotating the shaft.

1,167,261. RATCHET MECHANISM FOR BLIND-END CARS. ROBERT H. BLACKALL, Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Filed June 28, 1915. Serial No. 36,773. (Cl. 188—54.)

1. In combination iwth a car body, a horizontal shaft extending through one of the end walls thereof and carrying a bevel gear, a vertical brake shaft carrying a bevel gear meshing with the first mentioned bevel gear, ratchets secured to the outer and inner ends of the horizontal shaft, and hand actuated means operatively associated with said ratchets for rotating the horizontal shaft from the outside or inside of the car body to set the brakes; substantially as described.



2. In combination with a car body, a horizontal shaft extending through one of the end walls thereof and carrying a bevel gear, a vertical brake shaft carrying a bevel gear meshing with the first mentioned bevel gear, ratchets secured to the outer and inner ends of the horizontal shaft, and hand actuated means operatively associated with said ratchets for rotating the horizontal shaft from the outside or inside of the car body to set the brakes, said hand actuated means operating independently of one another; substantially as described.

3. In combination with a car body, a horizontal shaft extending through one of the end walls thereof and carrying a bevel gear, a vertical brake shaft carrying a bevel gear meshing with the first mentioned bevel gear, ratchets secured to the outer and inner ends of the horizontal shaft, pawls movable into and out of engagement with the ratchets, and hand actuated means for moving either one of said pawls into engagement with its corresponding ratchet and for rotating the horizontal shaft, whereby said shaft may be rotated either from the outside or the inside of the car body to set the brakes; substantially as described.

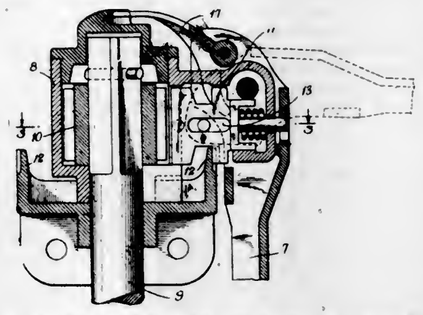
4. In combination with a car body, a horizontal shaft extending through one of the end walls thereof and carrying a bevel gear, a vertical brake shaft carrying a bevel gear meshing with the first mentioned bevel gear, ratchets secured to the outer and inner ends of the horizontal shaft, pawls movable into and out of engagement with the ratchets, hand actuated means for moving either one of said pawls into engagement with its corresponding ratchet and for rotating the horizontal shaft, whereby said shaft may be rotated either from the outside or the inside of the car body to set the brakes, and means for locking either pawl in engagement with its corresponding ratchet whereby the horizontal shaft may be rotated in the reverse direction by either one of the hand actuated means to release the brakes; substantially as described.

5. In combination with a car body, a horizontal shaft extending through one of the end walls thereof and carrying a bevel gear, a vertical brake shaft carrying a bevel gear meshing with the first mentioned bevel gear, said vertical shaft being positioned outside of the car body, and hand actuated ratchet mechanism mounted upon the inner and outer ends of the horizontal shaft to rotate the same; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,167,262. BACK-OFF RATCHET. ROBERT H. BLACKALL, Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y., a Corporation of Delaware. Filed July 23, 1915. Serial No. 41,473. (Cl. 188—57.)

1. In a hand-actuated brake mechanism, in combination, a brake shaft, an oscillating lever, co-acting clutch members carried by the shaft and the lever to rotate the shaft when the lever is moved in one direction, one of the clutch members being movable relatively to the other when the lever is moved in the reverse direction, and means to lock the clutch members together, whereby movement of the lever in the reverse direction will positively rotate the shaft backward.



2. In hand-actuated brake mechanism, in combination, a brake shaft, a ratchet member secured thereto, an oscillating lever, a pawl carried thereby and operatively engaging said ratchet member to rotate the shaft when the lever is moved in one direction, the pawl moving over the teeth of the ratchet member when the lever is moved in the reverse direction, and means to lock the pawl to the ratchet, whereby movement of the lever in the reverse direction will rotate the shaft backward.

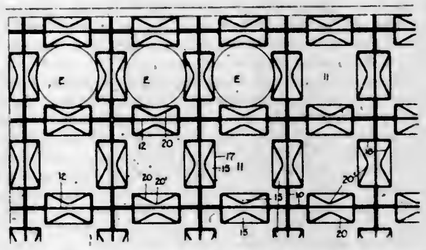
3. In hand-actuated brake mechanism, in combination, a brake shaft, a clutch member secured thereto, an oscillating lever, a clutch member carried thereby and movable into and out of engagement with the first mentioned clutch member, and means to lock the second clutch member against movement relatively to the first mentioned clutch member when in engagement therewith.

4. In hand-actuated brake mechanism, in combination, a brake shaft, a clutch member secured thereto, an oscillating lever, a clutch member carried thereby and movable into and out of engagement with the first mentioned clutch member, and means engaging the lever and the clutch member carried thereby to lock the latter against movement relatively to the first mentioned clutch member when in engagement therewith to permit positive backward rotation of the brake staff.

5. In hand-actuated brake mechanism, in combination, a brake shaft, a clutch member secured thereto, an oscillating operating lever, a clutch member carried thereby and movable into and out of engagement with the first mentioned clutch member, the lever having an opening formed therein, the second mentioned clutch member having an opening formed therein adapted to register with the opening in the lever when said clutch member is in engagement with the first mentioned clutch member, and a pin adapted to be inserted through the registering openings to lock the second mentioned clutch member in engagement with the first mentioned clutch member.

[Claim 6 not printed in the Gazette.]

1,167,263. EGG-CARRIER. ISAAC VINCEN BOWLEY, Boston, Mass. Filed Jan. 9, 1915. Serial No. 1,370. (Cl. 217—34.)



1. In a device of the character set forth, the combination of interlocking partitions each comprising a flat rib, a jacket secured directly to the rib at spaced intervals and having loose portions forming loops, and means acting upon the loops to hold the same spaced from the rib.

2. In a device of the character set forth, a plurality of partition strips adapted to interlock with one another forming cells, each strip including a flat rib of comparatively stiff material, a jacket secured on one side of the rib and formed of comparatively light flexible material, spaced portions of the jacket being secured directly to the rib while the portions of the jacket between the connected portions form loose loops spaced from the rib and forming auxiliary cells, and stiffening means for the strip extending longitudinally thereof.

3. In a device of the character set forth, a plurality of interlocking partitions forming cells for individual objects, each partition comprising a stiff flat rib, a jacket of flexible material secured at spaced intervals along one side of the rib, the portions of the jacket between adjacent secured portions extending in spaced relation from the rib forming vertical auxiliary cells, and metal strips extending longitudinally of the partition stiffening the same and serving to hold the free portions of the jacket spaced from the rib.

4. In a device of the character set forth, a filler partition comprising, in combination, a flat stiff rib, a jacket secured to the face thereof at spaced intervals, the unsecured portions of the jacket forming loose vertical pockets of substantially rectangular form, and metal reinforcing strips extending longitudinally of the partition between the rib and the jacket, certain portions of the reinforcing strips being extended outwardly from the rib and conforming to and defining the aforesaid pocket portions of the jacket.

1,167,264. STABLE ROSIN AND PROCESS OF MAKING THE SAME. BENJAMIN T. BROOKS, Pittsburgh, Pa., assignor to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Dec. 2, 1914. Serial No. 875,186. (Cl. 134—56.)

1. As a new composition of matter, a material comprising a resin having the saponification value and many of the other properties of colophony but distinguished therefrom by having an iodin absorption not above 20, such resin being permanent in the air and evincing little or no tendency to take up oxygen even when existing in thin films.

2. A coating material comprising a hydrogenated resin having the saponification value and many of the other properties of colophony but distinguished therefrom by having an iodin absorption not exceeding 20 and by the power of forming permanently continuous films without development of fissures or crazing.

3. As a new composition of matter a resin of the colophony class displaying a high saponification value and having an iodin absorption of less than 20.

4. The process of improving resins which comprises reducing a resin of the colophony class to a fluent condition and treating with hydrogen in the presence of a hydrogen-transferring catalyst.

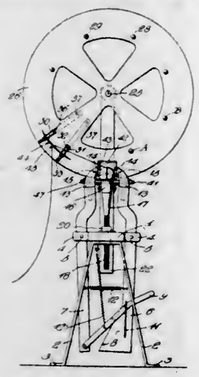
5. The process of improving colophony which comprises reducing colophony to a fluent condition and treating with hydrogen in the presence of a hydrogen-transferring catalyst.

[Claims 6 and 7 not printed in the Gazette.]

1,167,265. SEWING-MACHINE FOR BASE-BALL COVERS. ADOLPHUS J. BRUSSEAU, Plymouth, N. H., assignor of one-half to William A. Kimball, Plymouth, N. H. Filed Sept. 17, 1914. Serial No. 862,230. (Cl. 112—24.)

1. A machine for sewing base ball covers comprising a supporting structure, ball clamping jaws mounted thereon, means for forcing said jaws into gripping engagement with a ball, a ball support mounted between said jaws, a wheel mounted to turn in a plane at right angles, to the plane of said jaws, needle gripping fingers carried by said wheel and means for actuating said fingers to alternately grip and release a needle.

2. A machine for sewing base ball covers comprising a supporting structure, ball clamping jaws mounted thereon, means for forcing said jaws into gripping engagement with a ball, a ball support mounted between said jaws, a wheel mounted to turn in a plane at right angles, to the plane of said jaws, needle gripping fingers carried by said wheel, and cam controlled actuating means for alternately opening and closing said fingers.



3. A machine for sewing base ball covers comprising a supporting structure, ball clamping jaws mounted thereon, means for forcing said jaws into gripping engagement with a ball, a ball support mounted between said jaws, a wheel mounted to turn in a plane at right angles, to the plane of said jaws, needle gripping fingers carried by said wheel, cam controlled actuating means for alternately opening and closing said fingers, cam controlled means for retracting said fingers, and resilient means for projecting said fingers.

4. A machine for sewing base ball covers comprising a supporting structure, ball clamping jaws mounted thereon, means for forcing said jaws into gripping engagement with a ball, a ball support mounted between said jaws, a wheel mounted to turn in a plane at right angles, to the plane of said jaws, needle gripping fingers carried by said wheel, and each of said fingers comprising a pair of fulcrumed jaws having longitudinally projecting actuating arms, one of said actuating arms, having a recess in its inner face, means for forcing said arms normally apart, and a cam for engaging said recesses to retract said fingers.

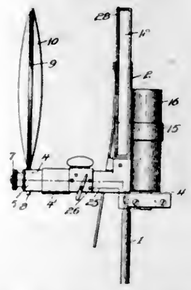
5. A machine for sewing base ball covers comprising a supporting structure, ball clamping jaws mounted thereon, means for forcing said jaws into gripping engagement with a ball, a ball support mounted between said jaws, a wheel mounted to turn in a plane at right angles, to the plane of said jaws, needle gripping fingers carried by said wheel, means for actuating said fingers to alternately grip and release a needle, each of said fingers comprising a pair of fulcrumed jaws having longitudinally projecting actuating arms, one of said actuating arms, having a recess in its inner face, means for forcing said arms normally apart, and a cam for engaging said recesses to retract said fingers positioned for alternate engagement by said finger arms to successively retract said fingers.

[Claims 6 to 8 not printed in the Gazette.]

1,167,266. MUSIC-LYRE. FRANK A. BUA, Lodi, N. J. Filed Feb. 13, 1915. Serial No. 8,028. (Cl. 240—2.)

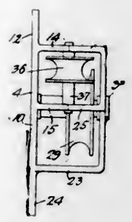
1. A music lyre comprising a supporting standard, a music rack carried by said standard, parallel spaced fingers formed on said rack and extending laterally therefrom, the outer extremities being bent to form guideways, a bracket slidably mounted in said guideways, and a magnifying glass adjustably mounted on said bracket.

2. A lyre comprising a supporting standard, a music rack vertically arranged on the outer extremity of said standard, fingers formed on said rack adjacent the music rack and extending at right angles from said music rack, a clamping frame pivotally mounted between said fingers and engaging said music rack, a handle formed on said clamping frame and extending through said rack, a bracket slidably mounted on said rack, and a magnifying glass mounted on said bracket.



3. A music lyre comprising a supporting standard, a music rack carried by said standard, a platform formed on said rack, terminals mounted in said platform, an electric battery mounted on said platform and having the electrodes thereof engaging said terminals, spaced fingers mounted on said rack and extending laterally therefrom, an electric light socket having depending L-shaped arms formed thereon, said arms straddling the said fingers, a bracket slidably mounted on said rack, and a magnifying glass mounted on said bracket.

1,167,267. GATE-CLOSER. ALBERT BUJEWSKI, Nashville, Ill. Filed May 13, 1915. Serial No. 27,913. (Cl. 254—190.)

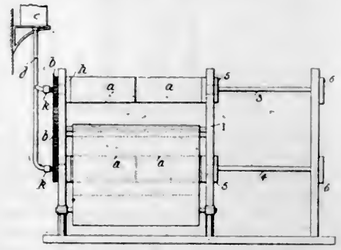


1. In a device of the class described, a casing including a back having upper and lower forwardly extended wings; a front comprising a top including an extension lying between the upper wings and provided with support engaging means, and lower wings coöperating with the lower wings of the back; a main sheave disposed parallel to the front and to the back and journaled therein; and an auxiliary sheave disposed approximately at right angles to the front and the back, the top and the upper wings on the one hand, and the lower wings of the front and the back on the other hand constituting bearings for the auxiliary sheave whereby the same may be mounted at either end of the casing.

2. In a device of the class described, a casing including a back having upper and lower outstanding wings; a front comprising a top including an extension lying between the upper wings and provided with support engaging means, lower wings coöperating with the lower wings of the back, and a bottom coacting with the back, the bottom being provided with support engaging means; a main sheave disposed parallel to the front and the back and journaled therein; and an auxiliary sheave disposed at right angles to the front and back, the top and the upper wings upon the one hand, and the lower wings of the front and the back on the other hand constituting bearings for the auxiliary sheave whereby the same may be mounted at either end of the casing.

3. In a device of the class described, a casing comprising a front, and a back abutting against the front, the front having attaching means whereby the back may be held against a support by the front, the back having attaching means whereby the front may be held against a support by the back when the casing is reversed; and a pair of angularly disposed sheaves journaled in the front and in the back.

1,167,268. INKING DEVICE FOR PRINTING-MACHINES. JEAN CARRELET and LAURENT DICK DE LONLAY, Paris, France. Filed Oct. 10, 1913. Serial No. 794,417. (101—71.)



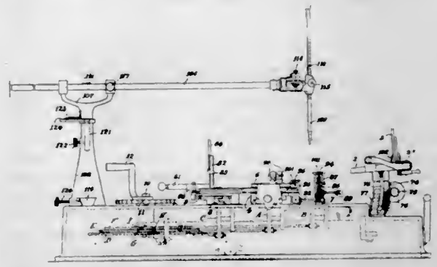
1. In a device of the class described, a rotary member; means for feeding ink under pressure to said rotary member; a roller removably associated with said rotary member and having means whereby it is constrained to rotate with said member, said roller comprising an exterior lateral layer of comparatively non-porous material forming a printing surface with apertures therein; a layer of porous material beneath said non-porous layer wherethrough the ink is fed to the apertured printing surface, said roller being hollow beneath said porous layer and thereby forming an ink container therein, said roller and said rotating member having registering passageways; and valves positioned in said passageways whereby the ink flows from said rotating member to said roller to the exclusion of air and whereby the flow is controlled.

2. In a device of the class described, a hollow cylinder of porous material; a shell of comparatively non-porous material fixed on the cylinder and applied by electrodeposition, the said shell forming a printing surface thereon, said shell being apertured where said printing surface is formed; means for moving the cylinder; means for feeding ink into said hollow cylinder during its movement under a pressure such as to cause the ink to flow to the printing surface through the pores of the material of the cylinder and hence through the apertures of the shell.

3. In a machine of the class described, a rotary inker comprising a porous-cylinder and a sleeve carrying the same and forming between them an ink space, a drum on which the rotary inker is adapted to be mounted, the drum having a head provided with an ink passage, the said head serving as a stop for the sleeve when the cylinder and sleeve are in working position, and a device for establishing automatically a communication between the ink space of the rotary inker and the said ink passage and consisting of two lantern valves opposed to each other and mounted to slide in passages arranged respectively, the one in the said sleeve and the other in the head of the drum, the said valves being moved inward in their respective passages, when the cylinder and its supporting sleeve are in position, to establish the desired communication, and springs for moving the said valves outward to seat the same and interrupt the said communication when the cylinder and its supporting sleeve are not in working position.

4. In a rotary machine of the class described, a drum having an axis, porous cylinders which carry the blocks or plates, and means for mounting the porous cylinders, comprising a sleeve fitted onto the axis of the drum, the said sleeve carrying at its ends rims on which rest the porous cylinder, thereby forming an annular ink space between the sleeve and the cylinder.

1,167,269. APPARATUS FOR MEASURING FEET, LASTS, AND THE LIKE. ALFRED HARRY CHURCH, Leicester, England, assignor to Pedograde Company Limited, Leicester, England. Filed Aug. 6, 1914. Serial No. 855,353. (Cl. 33—3.)



1. A foot or last measuring machine, comprising in combination a base, a support for the heel carried on the base, and having a central index line or mark against which the backmost point of the heel may be placed, a ball joint support slidably mounted on the base, an index gage in connection with the ball joint support whose members are adapted to engage opposite sides of the foot or last at the ball joint, operative connections between said gage members for causing them to move on said ball joint support equally and in opposite directions, and an index gage in connection with the heel support for locking the heel at the central index mark, and determining the width of the heel, and its swell at either side of the datum line determined by the action of said index gages.

2. A foot or last measuring apparatus, comprising in combination, a base, and a surface gage carried by the base for testing and measuring the upper part of the foot or last, said surface gage comprising an upstanding pillar on the base, a horizontal bar mounted and adapted to slide longitudinally in a guide at the top of the upstanding pillar, a horizontal cross arm on the end of said horizontal bar and a vertical pointer slidably mounted on said cross arm and vertically adjustable thereon, whereby said pointer is capable of being adjusted not only vertically, but also of being set into the dead center line of the horizontal bar, or to one side or the other thereof.

3. A foot or last measuring apparatus comprising in combination a base, an upstanding pillar on the base, a horizontal bar mounted and adapted to slide in a guide at the top of the upstanding pillar, a scale and index in connection with this horizontal bar, a slide carried by the end of the said horizontal bar so as to have transverse adjustment, a pointer vertically guided in the said slide, a scale and index in connection with the slide and a scale and index in connection with the pointer.

4. A foot or last measuring apparatus, comprising in combination a base, an upstanding pillar on the base, a guide mounted on the pillar, so as to be adjustable on a vertical axis, a horizontal bar having a scale mounted in the said guide so as to slide horizontally therein, a pointer vertically guided at one end of the horizontal arm and provided with a vertical scale, and a scale and index in connection with the pillar and guide whereby the horizontal arm may be set so as to occupy the true center line of the machine, or be adjusted to any desired angle relative thereto.

5. A foot or last measuring apparatus, comprising in combination a base, an upstanding pillar mounted upon a slide rest upon the base so as to have a transverse adjustment, a longitudinal bar mounted horizontally and adapted to slide in a guide at the top of the pillar, a

horizontal cross arm at the end of the longitudinal bar, a slide mounted on the said cross arm so that it can be set into the dead center line of the longitudinal bar or to one side or the other thereof, and a pointer mounted vertically in the said slide and adjustable therein in a perpendicular direction.

[Claims 6 to 17 not printed in the Gazette.]

1,167,270. SHORT-TURNING TRUCK. CHARLES JACKSON CLARKE, Kingsburg, Cal. Filed May 22, 1915. Serial No. 29,852. (Cl. 21—144.)



1. A short turning truck comprising a body, downwardly extending sleeves carried by the body at the forward and rear ends, cylindrical members carried by the front and rear axles and extending through the sleeves and vertically movable therein, and springs surrounding the cylindrical members for holding the axles and body separated.

2. A short turning truck comprising a body, downwardly extending sleeves at the center of the body at its front and rear ends, cylindrical members carried by the axles and extending upwardly through the sleeves and having a headed portion above the sleeve and vertically movable therein, springs surrounding the sleeves and normally holding the body in an upward position, and bars connecting the front and rear axles whereby the rear axle is moved in the reverse direction from that of the forward axle, substantially as shown and described.

3. A short turning truck comprising a body, pivoted axles carried by the body, spring means for surrounding the pivots of the axles for allowing the body to move vertically, means connecting the front and rear axles whereby the rear axles turn in the opposite direction from that of the front axles.

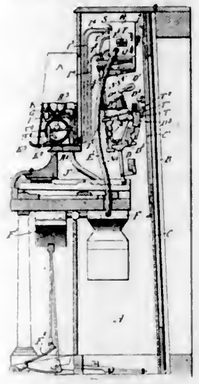
4. A short turning truck comprising a body, sleeves carried by the lower face of the body, axles below the body, vertically disposed members carried by the centers of the axles and vertically movable in the sleeves, springs surrounding the sleeves between the body and the axles whereby the rear axle is moved in the opposite direction from that of the forward axle.

5. A short turning truck comprising a body, vertically arranged sleeves carried by the center of the truck adjacent its ends, axles, vertically disposed members carried by the axles and telescoping within the sleeves, springs surrounding the sleeves and normally supporting the body, and rods connecting the rear and front axles whereby the rear axle is moved in the opposite direction to the movement of the forward axle.

[Claims 6 to 9 not printed in the Gazette.]

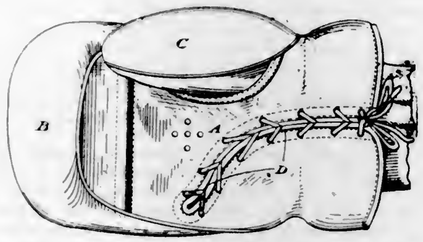
1,167,271. PLAYER-PIANO. HENRY A. CLAUSING, Lima, Ohio. Filed Nov. 27, 1912. Serial No. 733,778. (Cl. 84—168.)

1. In a player piano, the combination of a pneumatic adapted to connect with the playing action, a valve chest having a single vacuum chamber, and a single channel extending vertically through its rear wall and leading to the pneumatic and also having vertically spaced interior ports in its said rear wall communicating between its vacuum chamber and the said channel, one of said ports extending through the said rear wall of the chest and communicating with the exterior thereof, a main valve having inner and outer valve members disposed at the respectively opposite ends of the last mentioned port, an auxiliary valve controlling the other port, an independent motor for each of said main and auxiliary valves, and a tracker board having a main opening in communication with the said motor of the main valve and having an auxiliary opening in communication with the said motor of the auxiliary valve, all for the purpose described.



2. In a player piano, the combination of a pneumatic adapted to connect with the playing action, a valve chest having a single vacuum chamber, and a single channel extending vertically through its rear wall and leading to the pneumatic and also having vertically spaced ports in its said rear wall communicating between its vacuum chamber and the said channel, one of said ports extending through the said rear wall of the chest and communicating also with the exterior thereof, a main valve having two valve members disposed at the opposite ends of the last mentioned port, an auxiliary valve controlling the other port, said valve chest having its front wall provided with upper and lower cavities opposite to the said ports, diaphragms arranged to cover the cavities and to which the stems of the said valves are connected, and a tracker board having a main opening in communication with one of the diaphragm cavities of the valve chest and having an auxiliary opening in communication with the other diaphragm cavity of the valve chest, all for the purpose described.

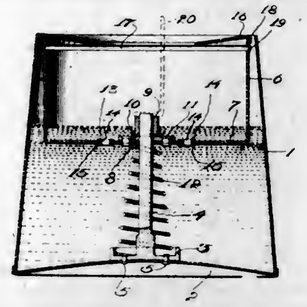
1,167,272. BOXING-GLOVE. SAMUEL CLINE, Philadelphia, Pa., assignor to George A. Reach, Bala, Pa. Filed July 20, 1914. Serial No. 852,048. (Cl. 2—196.)



A boxing or fighting glove including padded end and back portions, a padded wrist portion and an unpadded palm portion having a palm opening, the edges of which are brought together and secured when the glove is in use, said opening starting centrally of the glove at the wrist in approximately a straight line and then curved outwardly toward the side of the glove opposite the thumb, a hand opening thus being formed of maximum width, substantially as described.

1,167,273. CUSPIDOR. PETER H. COLLING, Albany, N. Y., assignor of one-half to Archie Warhurst, Albany, N. Y. Filed Oct. 20, 1915. Serial No. 56,942. (Cl. 4—40.)

1. The combination with a flush tank having an upright therein, and a cuspidor movably mounted within the tank and having an opening in its bottom wall adapted to loosely receive the upright, and a sleeve mounted within the cuspidor and registering within the openings in the bottom wall and loosely receiving the upper end of the the upright, and a base flange carried by the sleeve and resting on and secured to the bottom wall of the cuspidor.

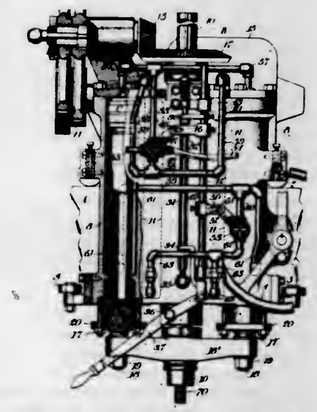


2. In combination, a flush tank having a concavo convex bottom wall and having a convex surface extending into the tank, an upright positioned within the tank and adapted to support a cuspidor, a base plate carried by the lower end of the upright and having its under surface concaved and engaging the convex surface of the bottom wall of the tank, and means for securing the base plate to the bottom wall of the tank.

3. In combination, a flush tank, an annular base plate mounted within the tank, an upright carried by the base plate, a cuspidor slidably mounted on the upright, and a helical spring encircling the upright and having one end engaging the under side of the cuspidor and its opposite end mounted on the base-plate.

4. A cuspidor of the class described comprising a flush tank, a hollow cylindrical body movably mounted within the tank and having an annular rib formed thereon adjacent its upper end, a cap closing the upper end of the cylindrical body and having an opening therein and having a depending flange thereon engaging over the upper edge of the receptacle and lying in close proximity to the annular bead on the cylindrical body.

1,167,274. DRILL-FEED MECHANISM. PAUL A. CUENOT, Harrisburg, and LOUIS G. FISCHER, Camp Hill, Pa. Filed Aug. 17, 1914. Serial No. 857,241. (Cl. 77—33.)



1. In a drill feed mechanism, a drill head comprising a passageway, a drill spindle movable therein, a cylinder on each side of said passage parallel to the latter, pistons in the cylinders connected to the spindle, an oil reservoir interposed between the passage way and each cylinder, and means for establishing communication between the reservoirs and cylinders.

2. In a drill feed mechanism, a drill head comprising a passage way, a drill spindle movable therein, a cylinder on each side of said passage parallel to the latter, pistons in the cylinders connected to the spindle, an oil reservoir interposed between the passage way and each cylinder, a pipe connecting the bottom portions of said cylinders, a pipe connecting the bottom portions of the reservoirs, and a valved by-pass connecting said pipes to simultaneously connect the cylinders and reservoirs at the bottoms.

3. In a drill feed mechanism, a drill head comprising a passage way, a drill spindle movable therein, a cylinder on each side of said passage parallel to the latter, pistons in the cylinders connected to the spindle, an oil reservoir interposed between the passage way and each cylinder, a pipe connecting the bottom portions of said cylinders, a pipe connecting the bottom portions of the reservoirs, a valved by-pass connecting said pipes to simultaneously connect the cylinders and reservoirs at the bottoms, a pipe communicating with the cylinders above the pistons, a pressure air supply connected with the last named pipe, a pipe communicating with the reservoirs at their tops, a by-pass connecting the two last named pipes, and a valve in the last mentioned by-pass adapted to connect the cylinders with the air supply and to simultaneously vent the reservoirs.

4. The combination with a rotatably, longitudinally movable tool spindle, a cylinder on each side of said spindle, pistons in said cylinders, a cross head connecting the pistons and spindle and in which cross head said spindle is rotatable, but not slidable, an oil chamber adjacent each cylinder, a cock controlling the entrance and exit of oil below the pistons on both of said cylinders, a cock controlling the exit and entrance of compressed air to said cylinders and oil chambers, and mechanism controlled from said spindle for simultaneously actuating said cocks.

5. The combination with a rotatably, longitudinally movable tool spindle, a cylinder on each side of said spindle, pistons in said cylinders, a cross head connecting the pistons and spindle and in which cross head said spindle is rotatable but not slidable, an oil chamber adjacent each cylinder, a cock controlling the entrance and exit of oil below the pistons in both of said cylinders, a cock controlling the exit and entrance of compressed air to said cylinders and oil chambers, mechanism controlled from said spindle for simultaneously actuating said cocks, and manual means to independently effect the control of said compressed air and liquid.

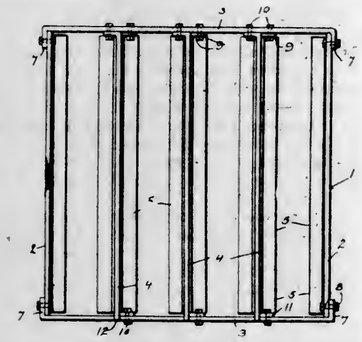
1,167,275. WRENCH. IRA CUNNINGHAM, Grand Saline, Tex. Filed Feb. 26, 1915. Serial No. 10,780. (Cl. 81—161.)



A wrench including a shank having a fixed jaw, and provided at its opposite edges with ratchet teeth having shoulders arranged at an inclination, a sliding jaw mounted on the shank and provided at its inner end with a cylindrical extension, a sliding sleeve or casing also mount-

ed on the shank and provided at its outer end with a cylindrical extension, spring actuated pawls or dogs carried by the sleeve or casing and provided with inner portions arranged to engage the teeth of the shank, the outer portions of the pawls or dogs being extended beyond the sleeve or casing and arranged in spaced relation with the cylindrical extension of the sleeve or casing, and an adjusting nut having right and left hand screw threads and arranged on the said cylindrical extensions, the latter being correspondingly right and left hand threaded to engage with the threads of the nut.

1,167,276. HOTHOUSE-FRAME. CLARENCE Y. DAVIDSON, Hazleton, Ind. Filed June 17, 1914. Serial No. 845,662. (Cl. 47—27.)



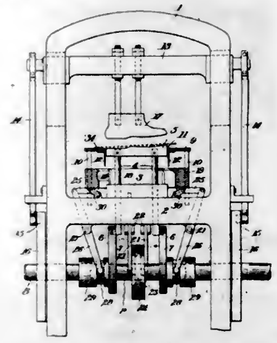
1. A hot house frame comprising end plates, side plates, right angular securing flanges formed on the ends of the end plates and overlapping the ends of the side plates, means to secure the flanges to the side plates, a plurality of equidistantly spaced partition plates secured at their ends to the end plates and being parallel with the side plates, means to support panes of glass between the side and several partition plates at points approximately centrally of the upper and lower edges of said plates, said partition, and side plates and one end plate having the same width and the other of the end plates being approximately half the width of the other plates and disposed to one side of the glass pane support for the purpose specified.

2. A hot house frame comprising rectangular metallic side and end plates secured to each other, a plurality of partition plates located between the side and end plates and in spaced relation and parallel with each other and with the side plates, glass holding means associated with the partition plates, one of the end plates having a width less than the width of the partition plate and the other end plate and located below the glass holding means, the said partition plates having their ends adjacent the wider end plate provided with oppositely extending flanges adapted to engage and to be secured to said end plates, and the opposite ends of the partition plates being slitted longitudinally and having a portion thereof offset laterally to provide a flange adapted to be secured to the end plate having the less width, and an end extension projecting beyond the offset flanges and adapted to rest on one of the longitudinal edges of the last-mentioned end plate.

1,167,277. MACHINE FOR FORMING SHOES. WILFRED J. DREY, Carlisle, Pa., assignor of one-half to Edward J. Wilks, Carlisle, Pa. Filed Mar. 22, 1915. Serial No. 16,173. (Cl. 12—22.)

1. In a machine of the character described, the combination with a pair of dies for clamping a blank between them to form the sole of a sandal, of a table having an opening through which the dies are movable for turning up the marginal portion of the blank to form the sides of the sandal.

2. In a machine of the character described, the combination with a pair of dies for clamping a blank between them to form the sole of a sandal, of a table having an opening through which the dies are movable for turning up the marginal portion of the blank to form the sides of the sandal, and means for compressing said upturned marginal portion of the blank around one of the dies for shaping the sides of the sandal.



3. In a machine of the character described, the combination with a pair of dies for clamping a blank between them to form the sole of a sandal, of means for turning up the marginal portion of the blank to form the sides of the sandal, means to which said blank is moved spaced below said upturning means for pressing said upturned marginal portion of the blank around one of the dies to shape the sides of the sandal, and means for holding the upturned marginal portion of the blank in position as it is moved from the upturning means to the pressing means.

4. In a machine of the character described, the combination with a pair of dies for clamping a blank between them to form the sole of a sandal, of means for turning up the marginal portion of the blank to form the sides of the sandal, means to which said blank is moved spaced below said upturning means for pressing said upturned marginal portion of the blank around one of the dies to shape the sides of the sandal, and a series of brackets or pins extending below the upturning means adapted to hold the upturned marginal portion of the blank in position as it is moved from the upturning means to the pressing means.

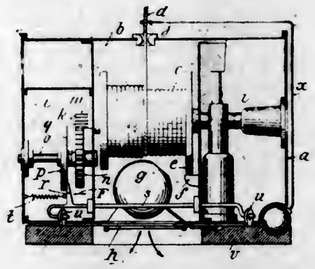
5. In a machine of the character described, the combination, with a pair of dies for clamping a blank between them to form the sole of a sandal, of a table having an opening through which the dies are movable for turning up the marginal portion of the blank to form the sides of the sandal, means spaced below the table for pressing said upturned marginal portion of the blank around one of the dies to shape the sides of the sandal, and depending brackets attached to the table and arranged flush with the opening therein for holding the upturned marginal portion of the blank in position as it passes from the table to the pressing means.

[Claims 6 and 7 not printed in the Gazette.]

1,167,278. DEVICE FOR AUTOMATICALLY ANCHORING SUBMARINE MINES AT A PREDETERMINED DEPTH INDEPENDENTLY OF THE BOTTOM OF THE SEA. GIOVANNI EMANUELE ELIA, Paris, France, assignor to Vickers Limited, London, England. Filed Oct. 1, 1914. Serial No. 864,414. (Cl. 102—3.)

1. A device for automatically anchoring submarine mines at a predetermined depth, comprising an anchoring device carrying a float and provided with means for reducing the weight thereof to permit it to be supported by the float, whereby provision is made for converting a mine adapted to be anchored on the bottom of the sea into a floating mine.

2. A device for automatically anchoring submarine mines at a predetermined depth independently of the bottom of the sea, comprising an anchoring device carrying a float and provided with a detachable weight and means for releasing the weight when the anchoring device reaches a predetermined depth.



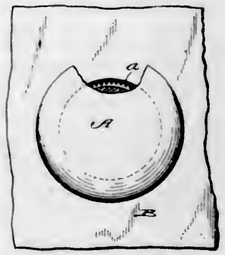
3. A device for automatically anchoring submarine mines at predetermined depth, comprising an anchoring device provided with a detachable weight, a float retained in inoperative position by the weight, and means for releasing the weight and thereby the float when the anchoring device reaches a predetermined depth.

4. A device for automatically anchoring submarine mines at a predetermined depth, comprising an anchoring device provided with a detachable weight, a float retained in inoperative position by the weight and having a cable the length of which is equal to the depth at which the mine is to be immersed and slidable on the mooring cable of the anchoring device, and means for releasing the weight when the anchoring device reaches a predetermined depth.

5. In an anchoring device for submarine mines, a casing, a drum mounted in the casing, a mooring cable on the drum, a weight at the bottom of the casing, means detachably engaging the weight, to hold it to the casing, and means for releasing the holding means from the weight when the mooring cable has been unwound from the drum.

[Claims 6 to 13 not printed in the Gazette.]

1,167,279. SIGN. CALEB ELLIOT, Clinton, Iowa. Filed Nov. 7, 1913. Serial No. 799,783. (Cl. 240—111.)



In a sign, in combination a plate having an opening, a lens having a reduced circular shank which is inserted through the opening, the shank having a circumscribing shoulder and having a groove between the shoulder and the body of the lens, the said groove having a curved or tapered cross section, and a lens locking key consisting of a retractile coil spring of endless annular form, adapted to fit uniformly throughout its extent in the groove and having its coils of less pitch than said groove and with their diameter so selected that they are disposed partly within and partly beyond the groove and engage both the surface of the groove and the adjacent surface of the face plate, the said spring having such length that when fitted in the groove, it tends to contract, and thereby coöperates with the surface of said groove in holding the lens tightly against the plate.

1,167,280. CATALYTIC BODY AND METHOD OF MAKING THE SAME. CARLETON ELLIS, Montclair, N. J. Filed Aug. 9, 1912. Serial No. 714,155. (Cl. 23—28.)

1. A process of making a catalytic mass which comprises physically uniting granular carbonaceous material with finely divided cerium.

2. A process of making a catalytic mass, which comprises treating granular charcoal with a solvent for alkali metal compounds and alkaline earth metal compounds, thereafter drying and physically uniting with a finely divided free metal capable of serving as a catalyzer.

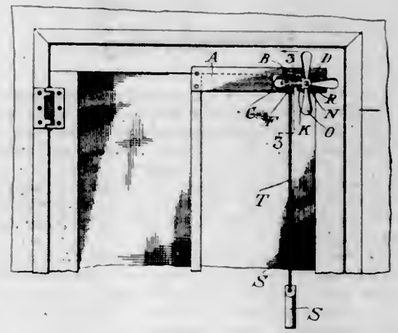
3. A process of making a catalytic mass, which comprises physically uniting granular charcoal and a molten metal.

4. A process of making a catalytic mass, which comprises atomizing molten catalytic material into contact with a granular carrier.

5. A process of making a catalytic mass, which comprises atomizing molten cerium, containing activating agents, into contact with granular purified charcoal.

[Claims 6 to 36 not printed in the Gazette.]

1,167,281. FAN ATTACHMENT FOR DOORS. FLORENCE EVANS, near Clark, Mo. Filed Mar. 10, 1915. Serial No. 13,536. (Cl. 230—7.)



In combination with a door, a strip secured thereto and having a recess in one edge, brackets fastened to the face of the door adjacent to the marginal edges of the recess, a shaft journaled in said brackets, a pulley upon the shaft, a beveled gear fixed to rotate with the pulley, a fan shaft journaled in one of said bracket arms, a fan upon the fan shaft and a beveled gear wheel thereon in mesh with the gear wheel which rotates with said pulley, a cord passing about said pulley and extending through said recess, and weights secured to the ends of the cord, said cord being accessible from either side of the door.

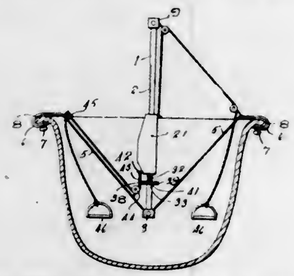
1,167,282. BACK-BATHER. OLIVER M. FARMER, Lewistown, Mont. Filed Mar. 26, 1915. Serial No. 17,303. (Cl. 4—2.)

1. A device of the character described including a standard, rack teeth on the standard, a housing, means within the housing to engage the rack teeth, vibrating means cooperating with the teeth engaging means within the housing and arranged to be vibrated thereby upon movement of the housing with relation to the standard, and a brush carried by the vibrating means.

2. A device of the character described including a standard, a housing slidable on the standard, a gear carried by the housing, a gear train operated upon rotation of the gear, a crank, an oscillating arm operatively connected with the crank and arranged to be moved thereby, and a brush removably secured to the arm.

3. A device of the character described including a standard, a housing slidable on the standard, vibratory means within the housing and arranged to be vibrated

upon movement of the housing on the standard, means to support the standard in a shower bath, means to move



the housing with relation to the standard, and a brush carried by the vibratory means.

1,167,283. GUN-SIGHT. ANDREW G. FLICKINGER, Vallejo, Cal. Filed May 7, 1914. Serial No. 836,982. (Cl. 33—47.)

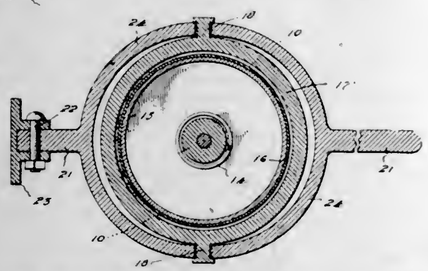


1. A gun sight comprising a cylindrical body portion to fit over the end of a fire arm barrel and having a bayonet slot adjacent to its inner edge and a projection adjacent to the forward edge of the said body portion surrounding the same and projecting at right angles thereto.

2. A gun sight comprising a cylindrical body adapted to surround the end of a fire arm barrel, an annular bead formed on the outer edge of the said body, as and for the purpose specified.

3. A gun sight comprising a cylindrical body portion to be fitted over the end of a fire arm barrel and a bead formed integral with the outer face of the body portion adjacent to the outer edge thereof, said bead being approximately semi-cylindrical in cross section.

1,167,284. COMBINED ENGINE BRAKE AND STARTER. ANDREW G. FLICKINGER, Vallejo, Cal. Filed Feb. 23, 1915. Serial No. 10,012. (Cl. 74—13.)



1. A device of the character described comprising a shaft, a pair of brake drums rotatably mounted on said shaft, a brake ring adapted to coöperate with said brake drums, a lever carried by said brake ring, and a pair of oppositely wound spiral springs secured at their inner ends to said shaft and at their outer ends to said drum.

2. A device of the character described comprising a shaft, a brake drum including a hub rotatably mounted on said shaft, a spring casing formed integral with said brake drum, a brake ring, a lever connected with said brake ring, a spring secured in said casing and to said shaft and a closure plate removably secured over said spring casing.

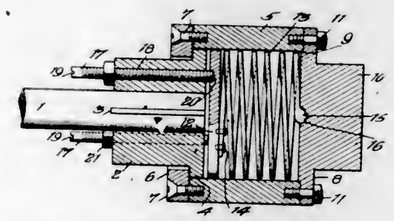
3. A device of the character described comprising a shaft, a pair of brake drums rotatably mounted on said shaft, means normally retaining said brake drums in spaced relation, a brake ring, a lever connected with said brake ring for moving the latter into frictional engagement with either of the brake drums, and springs connecting each of the brake drums with said shaft.

4. A device of the character described comprising a shaft, a pair of brake drums rotatably mounted on said shaft, a spacing element interposed between said brake drums, means normally tending to move said brake drums apart, spring casings formed integral with said drums, and springs disposed within said spring caaings and secured at opposite ends to said casings and said shaft, and a brake ring adapted to frictionally engage either of said brake drums.

5. A device of the character described comprising a shaft, a pair of oppositely disposed frusto-conical brake drums rotatably mounted on said shaft, means normally retaining said drums in spaced relation, spring casings formed integral with said drums, springs disposed in said casings secured at one end to said casings and at the opposite ends to said shaft, a brake ring having oppositely inclined inner surfaces, and a pivoted lever pivotally connected with said brake ring.

[Claim 6 not printed in the Gazette.]

1,167,285. SAFETY-COUPLING. GUS OLAUS FLOGLAND, Minocqua, Wis. Filed Sept. 2, 1913. Serial No. 787,647. (Cl. 64—13.)



1. In a device of the character specified, the combination with the driving shaft and the driven shaft, of a collar keyed to the inner end of the driven shaft and having an annular marginal rib at the end adjacent to the driving shaft, a drum rigidly connected with the inner end of the driving shaft, the rib of the collar being received within the drum, a retaining ring secured to the end of the drum adjacent to the driven shaft and engaging the rib to prevent displacement thereof from the drum, a coil spring within the drum, a disk adjacent to the collar and to which one end of the spring is secured, rods threaded through the collar longitudinally of the shaft, the disk having depressions for engagement by the rods, and lock nuts on the rods, the end of the spring remote from the disk having an enlargement or head, and the end of the driving shaft having a recess or depression for engagement by the head.

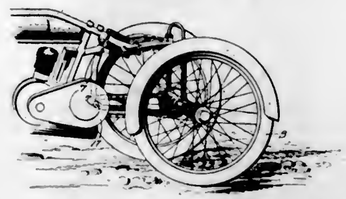
2. A device of the character specified, comprising in combination with the driving shaft and the driven shaft, a collar keyed to the inner end of the driven shaft, a drum secured to the inner end of the driving shaft, a disk within the drum and adjacent to the collar, a coil spring within the drum having one end connected to the disk, a detachable connection between the drum and the other end of the spring, means in connection with the collar for engaging the disk to vary the tension of the spring, said means connecting the disk to the collar, and means for preventing disengagement of the collar from the drum, said means comprising an annular marginal rib at the inner end of the collar, and a retaining ring secured to the end of the drum adjacent to the collar and engaging the outside of the rib.

3. A device of the character specified, comprising in combination with the driving shaft and the driven shaft, a collar keyed to the inner end of the driven shaft, a drum

secured to the inner end of the driving shaft, a disk within the drum and adjacent to the collar, a coil spring within the drum having one end connected to the disk, a detachable connection between the drum and the other end of the spring, means in connection with the collar for engaging the disk to vary the tension of the spring, said means connecting the disk to the collar, and means for preventing disengagement of the collar from the drum.

4. A device of the character specified, comprising in combination with the driving shaft and the driven shaft, a drum connected to the inner end of the driving shaft and coaxial therewith, a coil spring within the drum having one end frictionally connected with the drum, a disk rigidly connected with the other end of the spring, means for connecting the disk to the driven shaft, and means for varying the tension of the spring.

1,167,286. ATTACHMENT FOR CONVERTING A BICYCLE INTO A TRICYCLE. JEREMIAH C. FOLEY, New York, N. Y. Filed Apr. 16, 1915. Serial No. 21,684. (Cl. 208—93.)



1. A motorcycle attachment comprising a rear fork having means whereby the same can be secured to a motorcycle frame, a rear axle mounted to rotate in said fork, a wheel at each end of said axle mounted to rotate therewith, and means for adjusting said axle in the fork.

2. A motorcycle attachment comprising a fork having means whereby the same can be secured to the motorcycle frame, an axle casing carried by said fork and having means for engaging the motorcycle frame, an axle rotatably mounted within said casing, means carried by said axle whereby the same may be driven, and wheels at each end of said axle mounted to rotate therewith.

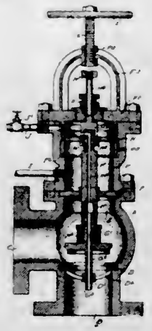
3. In combination with a motorcycle frame having a detachable, substantially horizontal rear fork, a casing at the open end of the fork, said casing having means for engaging the motorcycle frame, means for adjusting said casing within the fork, an axle in the casing, means on the axle for rotating the same within the casing and a wheel at each end of said axle mounted to rotate therewith.

4. A motorcycle attachment consisting of a rear fork adapted to be disposed horizontally and having means for detachably securing the same, a casing carried by said fork at the open end thereof, means for adjusting said casing in the plane of the fork, an axle rotatably mounted within said casing, means on said casing for detachably securing the same to the motorcycle, means carried by said axle whereby the same may be driven, and wheels at each end of the axle mounted to rotate therewith.

1,167,287. AUTOMATIC EMERGENCY RETURN-CHECK AND STOP VALVE. THOMAS BURTON FORD, New York, N. Y. Filed June 29, 1915. Serial No. 36,978. (Cl. 137—4.)

1. An automatic emergency, return check and stop valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a check valve controlling the said valve seat, a cylinder connected at its inner end at all times with the main, a piston mounted to reciprocate loosely in the said cylinder and having its piston rod slidably connected with the stem of the said check valve, the said stems having connected bores connecting the inlet of the valve body with the outer end of the said cylinder, and a pipe connected with the outer end of the cylinder and having a normally closed valve.

2. An automatic emergency, return check and stop valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a check valve controlling the said valve seat, a cylinder connected at its inner end with the main, and a piston mounted to reciprocate loosely in the said cylinder and having its piston rod slidably connected with the stem of the said check valve, the said stems having connected bores connecting the inlet of the valve body with the outer end of the said cylinder, the said cylinder having an annular seat for the said piston to be seated on at the time the said check valve is seated on its seat in the valve body.



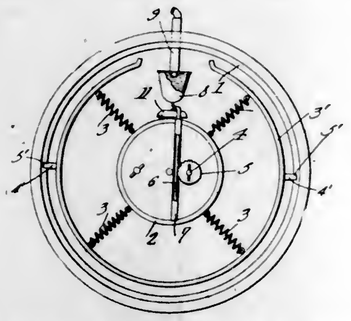
3. An automatic emergency, return check and stop valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a check valve controlling the said valve seat, a cylinder connected at its inner end with the main, a piston mounted to reciprocate loosely in the said cylinder and having its piston rod slidably connected with the stem of the said check valve, the said stems having connected bores connecting the inlet of the valve body with the outer end of the said cylinder, the said cylinder having an annular seat for the said piston to be seated on at the time the said check valve is seated on its seat in the valve body, and means for adjusting the said piston on its piston rod to insure accurate coördination in seating of the piston and the check valve.

4. An automatic emergency, return check and stop valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a check valve controlling the said valve seat, a cylinder connected at its inner end with the main, a piston mounted to reciprocate loosely in the said cylinder and having its piston rod slidably connected with the stem of the said check valve, the said stems having connected bores connecting the inlet of the valve body with the outer end of the said cylinder, the said cylinder having an annular seat for the said piston to be seated on at the time the said check valve is seated on its seat in the valve body, an auxiliary stem extending from the said piston stem to the outside of the cylinder, and a screw rod adapted to engage the said auxiliary stem to manually move the said piston and the said check valve into their seats.

5. An automatic emergency, return check and stop valve, comprising a valve body provided with an inlet, an outlet and a valve seat intermediate the said inlet and outlet, a check valve controlling the said valve seat, a cylinder connected at its inner end with the main, a piston mounted to reciprocate loosely in the said cylinder and having an adjustable piston rod slidably connected at its lower end with the stem of the said check valve, the said stems having connected bores to connect the inlet of the valve body with the outer end of the said cylinder, the lower end of the piston rod being provided with a stuffing box, and manually controlled means for moving the said piston downward to engage the stuffing box of the piston rod with the said check valve to move the latter to its seat.

[Claims 6 to 10 not printed in the Gazette.]

1,167,288. FUSE-IGNITER. SIGMUND FRENSDORF, Deepwater, Mo. Filed May 24, 1915. Serial No. 30,158. (Cl. 161—1.)



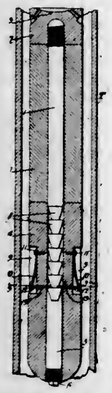
1. In apparatus of the class described, the combination with a casing constituting a fuse holder, of a container, time controlled means for shifting the container to receive the fuse therein.

2. The combination with fuse holding means, of fuse igniting means normally spaced therefrom, and time controlled means for directing said igniting means into active position relative to the fuse.

3. The combination with a casing constituting a fuse holder, of an alarm clock supported within the casing, fuse igniting means, and means operated by the alarm clock during the sounding of the alarm, for directing said igniting means against the fuse.

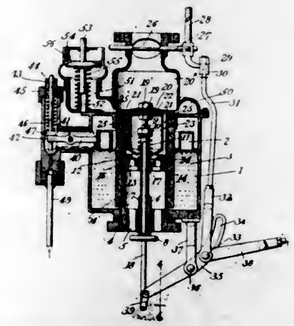
4. The combination with a casing constituting a fuse holder, of an alarm clock suspended within the casing, a liquid container supported by the clock, and means operated by the clock during the sounding of the alarm for shifting said container to bring its contents into engagement with the held fuse.

1,167,289. WELL-PLUG. GUY G. GILBERT, Cushing, Okla. Filed May 3, 1915. Serial No. 25,548. (Cl. 166—13.)



A well plug comprising a head, a sleeve, a rod having one end engaged to the said head and having its other end portion slidably received by said sleeve, the last mentioned end portion of said rod having a longitudinal series of frusto-conical portions providing a rack within said sleeve, a compressible member between the head and sleeve adapted to be expanded when the head and sleeve are moved toward one another, the sleeve having diametrically opposite longitudinal recesses and slots between said recesses and the bore of the sleeve, leaf springs having their butt ends secured flatly in said recesses, and pawls pivoted to the free ends of the leaf springs and slidable through said slots to engage said rack.

1,167,290. CARBURETER. THEODORE S. GLOVER, Saranac Lake, N. Y., assignor of one-half to Clayton M. Bessett, Saranac Lake, N. Y. Filed Mar. 25, 1915. Serial No. 16,964. (Cl. 48—156.)



1. A carbureter having a fuel reservoir, a sleeve mounted therein, a wick within the reservoir and about the sleeve, a chamber into which the wick is movable, means for moving the wick, a deflecting member movable with the wick, a throttle, and connections between the same and the means for moving the wick.

2. A carbureter comprising a gasolene reservoir and means for regulating the supply of gasolene thereto, a sleeve mounted in a threaded opening in the reservoir and provided with an opening in the end thereof, a wick mounted within the reservoir and movable about the sleeve, an apertured plate secured to the wick, a rod secured to the plate, a chamber into which the wick is movable, a deflecting drum secured to the plate, a throttle valve in said chamber, connections between the same and said rod, and means for regulating the air passing through the sleeve.

3. A carbureter comprising a gasolene reservoir and means for regulating the supply of gasolene thereto, a sleeve mounted in a threaded opening in the reservoir and provided with an opening in the end thereof, a wick mounted within the reservoir and movable about the sleeve, an apertured plate secured to the wick, a rod secured to the plate, a chamber into which the wick is movable, a deflecting drum secured to the plate, a throttle valve in said chamber, connections between the same and said rod, a hollow screw fitted in said sleeve and through which said tube passes, a valve mounted about said hollow screw and a valve seat secured to the sleeve, a spring holding the valve against said seat.

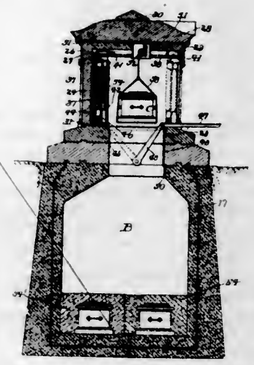
4. A carbureter comprising a gasolene reservoir and means for regulating the supply of gasolene thereto, a sleeve mounted in a threaded opening in the reservoir and provided with an opening in the end thereof, a wick mounted within the reservoir and movable about the sleeve, an apertured plate secured to the wick, a rod secured to the plate, a chamber into which the wick is movable, a deflecting drum secured to the plate, a throttle valve in said chamber, connections between the same and said rod, a hollow screw fitted in said sleeve and through which said rod passes, a valve mounted about said hollow screw and a valve seat secured to the sleeve, a spring mounted about said hollow screw, a nut upon the latter, a spring interposed between said nut and valve.

5. A carbureter comprising a gasolene reservoir and means for regulating the supply of gasolene thereto, a sleeve mounted in a threaded opening in the reservoir and provided with an opening in the end thereof, a wick mounted within the reservoir and movable about the sleeve, an apertured plate secured to the wick, a rod secured to the plate, a chamber into which the wick is mov-

able, a deflecting drum secured to the plate, a throttle valve in said chamber, connections between the same and said rod, a hollow screw fitted in said sleeve and through which said rod passes, a valve mounted about said hollow screw, a spring mounted upon the latter, a nut mounted upon the threaded portion of the hollow screw, a spring passing through an opening into said deflecting drum and bearing at one end against said nut and the other end against said valve, and a valve seat secured within the sleeve.

[Claims 6 to 8 not printed in the Gazette.]

1,167,291. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor of one-half to Ellis M. Treat, Pittsburgh, Pa. Filed May 27, 1915. Serial No. 30,836. (Cl. 72—7.)



1. In a sepulchral memorial, the combination with an above ground hollow memorial having one side provided with access means, of a casket receiving compartment located below ground and communicating with the interior of the memorial, and a floor connected with the structure for lateral movement and normally interposed between the memorial and the casket receiving compartment, the access means normally lying in the path of movement of the floor and being movable out of said path.

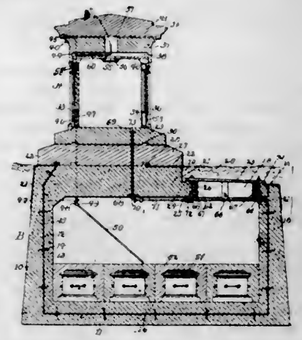
2. In a sepulchral memorial, the combination with a memorial chamber having one wall movable into and out of position to close and open the chamber, of a casket receiving compartment located beneath the memorial and communicating therewith, and a floor connected with the structure for lateral movement and normally interposed between the casket receiving compartment and the interior of the memorial the wall normally lying in the path of movement of the floor and being movable out of said path.

3. In a sepulchral memorial, the combination with a memorial chamber having one wall movable into and out of position to close and open the chamber, of a casket receiving compartment located beneath the memorial and communicating therewith, said movable wall being provided with a door attached thereto and movable therewith, the floor being connected to the structure and arranged for lateral movement with respect thereto, the wall normally lying in the path of movement of the floor and being movable out of said path.

4. In a sepulchral memorial, the combination with a memorial chamber having one wall movable into and out of position to close and open the chamber, of a casket receiving compartment located beneath the memorial and communicating therewith, said movable wall being provided with a door attached thereto and movable therewith, and a floor connected with the structure for lateral movement and normally interposed between the casket receiving compartment and the interior of the memorial, the wall normally lying in the path of movement of the floor and being movable out of said path.

5. In a sepulchral memorial, a hollow memorial having one wall bodily movable to afford access to the interior, a casket receiving compartment beneath the memorial and communicating with the interior thereof and a movable floor having means for connection whereby it closes communication between the compartment and memorial when in one position and moves laterally and forms a projecting shelf extending outward from the memorial when in the other position.

1,167,292. SEPULCHRAL MEMORIAL. ANDREW W. GRAHAM, Buffalo, N. Y., assignor of one-half to Ellis M. Treat, Pittsburgh, Pa. Filed June 17, 1915. Serial No. 34,595. (Cl. 72—7.)

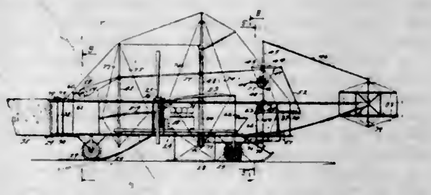


1. The combination with an underground sepulcher having an opening in its top; of an above ground hollow memorial, the sepulcher being inaccessible from within the memorial, a closure for the opening, a protected lock for the closure, and controlling means connected to the lock and terminating in the memorial.

2. The combination with a sepulcher located beneath the ground and a memorial structure supported on the sepulcher, the sepulcher being inaccessible from within the memorial and provided with an entrance opening exterior to the memorial; of a closure for the opening, a locking device for the closure located within the sepulcher, and controlling means for the locking device located within and accessible only from within the memorial.

3. The combination with a sepulcher located beneath the ground and a memorial structure supported on the sepulcher, the sepulcher being inaccessible from within the memorial and provided with an entrance opening exterior to the memorial; of a closure for the opening, a series of locking bolts engaging the closure, rock shafts surrounding the opening, rock arms carried by the shafts and connected to the bolts, gears connecting the rock shafts, and actuating means operatively connected to one of the shafts and terminating in the memorial.

1,167,293. AEROPLANE. JOHN B. GROSS, New York, N. Y., assignor to Joseph W. Connelly, Jersey City, N. J. Filed Nov. 30, 1914. Serial No. 874,699. (Cl. 244—29.)



1. In an aeroplane, a frame, main sustaining planes, auxiliary sustaining planes, ailerons, a frame for carrying said ailerons, means for simultaneously warping the

ends of said planes and inclining said aileron frame on an axis arranged longitudinally of said aeroplane, an elevating plane, and means for simultaneously actuating said elevating plane and rotating said aileron frame on an axis arranged transversely of said aeroplane.

2. In an aeroplane, a frame, sustaining planes, ailerons arranged forwardly thereof, elevating planes arranged rearwardly thereof, means for simultaneously warping the ends of said sustaining planes and moving said ailerons about a longitudinal axis, means for rotating said ailerons on a transverse axis, and means for inclining said elevating planes.

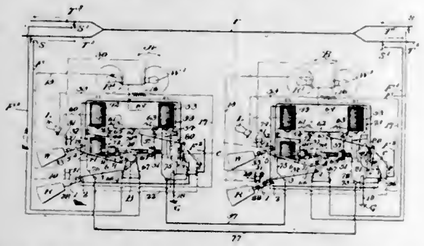
3. In an aeroplane, a frame, sustaining planes, ailerons arranged forwardly thereof, a frame for said ailerons, elevating planes at the rear of said sustaining planes, means for warping said sustaining planes, means for moving said aileron frame about a longitudinal axis, means for rotating said ailerons on a transverse axis, and means for inclining said elevating planes.

4. In an aeroplane, a frame, sustaining planes, elevating planes, means for actuating the same, a rudder, means for actuating the same, ailerons arranged forwardly of said sustaining planes, a frame therefor pivoted to said aeroplane frame, means for tilting said aileron frame on a longitudinal axis, means for rotating said aileron frame on a transverse axis, and means for warping said sustaining planes.

5. In an aeroplane, a frame, sustaining planes, a rudder, an elevating plane, a lever pivoted to said frame and directed forward, a supplemental frame in pivotal connection with said lever and adapted to move into and out of the lateral, horizontal plane of the aeroplane, ailerons carried by said supplemental frame, and means for moving said lever to move said ailerons into and out of the longitudinal, horizontal, plane of said aeroplane.

[Claim 6 not printed in the Gazette.]

1,167,294. RAILWAY BLOCK-SIGNALING SYSTEM. WILLIAM GRUNOW, Jr., New York, N. Y. Filed Jan. 16, 1915. Serial No. 2,686. (Cl. 246—36.)



1. A railway block signaling system comprising signal units at each end of the block, each unit including a movable permissive signal, a separate movable danger signal, electrically operated devices movable in one direction for setting the danger signal and in the other direction for setting the permissive signal, means operated by each car entering a block for moving said devices in the signal unit at the opposite end of the block in a direction for setting the danger signal, and means controlled by each of said movements of the last named devices for moving the devices in the signal unit at the entering end of the block in a direction for setting the permissive signal.

2. A railway block signaling system comprising signal units at each end of the block, each unit including a movable permissive signal, a separate movable danger signal, electrically operated devices movable in one direction for setting the danger signal and in the other direction for setting the permissive signal means controlled by each car entering a block for moving said devices in the signal unit at the opposite end of the block in a direction for setting the danger signal, means controlled by each of said movements of the last named devices for moving the devices in the signal unit at the entering end of the block in a direction for releasing the permissive signal, means operated by a car leaving a block for moving the operating devices in the signal unit at the entering end of the block in a direction for releasing the permissive signal, and means controlled by each movement of said last named devices for actuating the operating devices in the signal unit at the outgoing end of the block in a direction for releasing the danger signal.

3. A railway block signaling system comprising signal units at each end of the block, an ingoing and an outgoing switch at each end of the block, each unit including a movable permissive signal, a separate movable danger signal, electrically operated devices movable in one direction for setting the danger signal and in the other direction for setting the permissive signal, means operated by the closing of the ingoing switch at the entering end of the block for moving said devices in the signal unit at the opposite end of the block in a direction for setting the danger signal and for simultaneously cutting out the ingoing switch at that end of the block, and means controlled by each of said movements of the last named devices for moving the devices in the signal unit at the entering end of the block in a direction for setting the permissive signal.

4. A railway block signal system comprising signal units at each end of the block, each unit including a movable permissive signal and a separate movable danger signal, a movable member in each signal unit having means when moved in one direction for setting the danger signal, and means when moved in the opposite direction for setting the permissive signal, electrically operated devices actuated by a car entering the block for moving said member in the signal unit at the opposite end of the block in a direction for setting the danger signal, and means controlled by each movement of said last named devices for moving the member in the signal unit at the entering end of the block in a direction for setting the permissive signal.

5. A railway block signal system comprising signal units at each end of the block, each unit including a movable permissive signal and a separate movable danger signal, a movable member in each signal unit having means when moved in one direction for setting the danger signal, and means when moved in the opposite direction for setting the permissive signal, electrically operated devices actuated by a car entering the block for moving said member in the signal unit at the opposite end of the block in a direction for setting the danger signal, means controlled by each movement of said last named devices for moving the member in the signal unit at the entering end of the block in a direction for releasing the permissive signal, and means controlled by each movement of said last named devices for actuating the member in the signal unit at the outgoing end of the block in a direction for releasing the danger signal.

[Claims 6 to 20 not printed in the Gazette.]

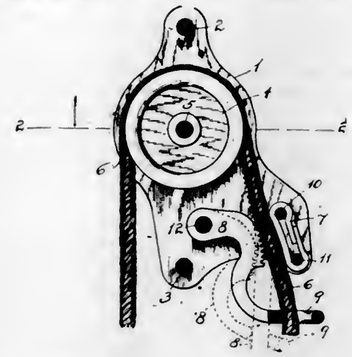
1,167,295. PULLEY-BLOCK. JOHN SMITH HALL, Monticello, Iowa. Continuation of application Serial No. 835,806, filed May 2, 1914. This application filed Dec. 7, 1914. Serial No. 875,952. (Cl. 24—134.)

1. In a pulley-block, a frame, a sheave mounted therein and adapted to be traversed by a cord, a resilient lock-shoe secured within the frame, and a locking-dog for forcing said cord against said shoe.

2. In a pulley-block, a frame, a sheave mounted therein and adapted to be traversed by a cord, a skeleton, loop-like lock-shoe within the frame, and a locking-dog for forcing the cord against the shoe.

3. In a pulley-block, a frame, a sheave mounted therein, a skeleton, loop-like lock-shoe secured within the frame, and an ogee-shaped locking-dog having at its lower end an eye through which an actuating cord passes, one of its convex portions adapted to force said cord against said shoe.

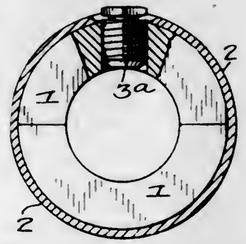
4. In a pulley-block, a frame, a sheave mounted therein and adapted to be traversed by a cord, a locking-dog pivoted in the frame, and a skeleton lock-shoe one portion of which is adapted to be forced out of normal position when the locking dog is forced against the cord to force the latter against the shoe, the other portions of said shoe remaining in normal position.



5. In a pulley-block, a frame, a sheave mounted therein, a loop-like lock-shoe arranged in the frame, and a locking-dog for forcing a cord against said shoe.

[Claims 6 to 9 not printed in the Gazette.]

1,167,296. SHAFT-COLLAR. HOWARD T. HALLOWELL, Philadelphia, Pa. Filed Feb. 14, 1913. Serial No. 748,403. (Cl. 74—8.)

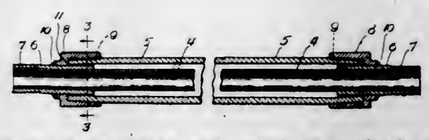


1. An annulus or collar for shafts comprising a body or core consisting of a ring of cast metal having its marginal walls substantially at right angles to each other, a seamless single piece sheet metal covering for certain of the walls of said body or core, said core and cover being apertured and the aperture of the core being threaded, and a set screw adapted to the threaded aperture of the core.

2. In an annulus or collar designed for application to a shaft or similar structure, the combination of an annular discontinuous core of cast metal having a substantially circular inner wall with its several marginal walls substantially at right angles to each other, a seamless single piece sheet metal cover of uniform thickness inclosing three sides of said core, said core and cover being apertured and the aperture of the core being threaded, and a set screw for engagement with the shaft on which the collar is mounted adapted to said threaded aperture of the core; the sheet metal cover having an enlarged opening registering with the aperture of the core.

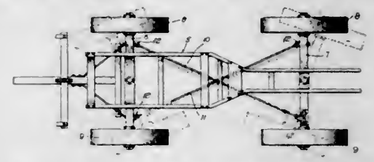
1,167,297. SPRAY-ROD. RALPH W. E. HAYES, Galva, Ill., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Filed Mar. 5, 1915. Serial No. 12,437. (Cl. 137—17.)

1. In a device of the class described, the combination of a central conduit member of relatively thin metal, a peripherally threaded tubular member rigidly fixed to each end of the conduit member, an outer casing member, an offset collar associated with each tubular member and arranged to initially slide over the tubular member, the offset portion of each of said collars abutting against one end of the outer casing member, and means for positively and fixedly securing each collar to the periphery of the tubular member with which it is associated, whereby the parts are joined into a rigid non-yielding structure having no relative movement between the parts thereof, substantially as described.



2. In a device of the class described, the combination of a central conduit member of relatively thin metal, a peripherally threaded tubular member rigidly fixed to each end of the conduit member, an outer casing member, an offset collar associated with each tubular member and arranged to initially slide over the tubular member, the offset portion of each of said collars abutting against one end of the outer casing member, means for positively and fixedly securing each collar to the periphery of the tubular member with which it is associated, whereby the parts are joined into a rigid non-yielding structure having no relative movement between the parts thereof, and an inwardly extending protuberance from the inner wall of the collar, adapted to abut into the casing member, substantially as described.

1,167,298. ATTACHMENT FOR CROSS-REACH TRUCKS. RALPH W. E. HAYES and PHILIP P. WILLIAMS, Galva, Ill., assignors to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Filed Apr. 9, 1915. Serial No. 20,349. (Cl. 21—144.)



1. A clip for cross reaches comprising an attaching portion and a reach retaining portion, said retaining portion consisting of a projecting lug located along one of the horizontal edges of the attaching portion, and said lug being formed with an elongated slot, substantially as described.

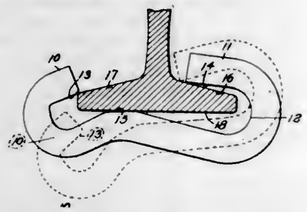
2. A clip for cross reaches formed of a single piece of metal and comprising a plate like attaching portion and a reach retaining portion in the form of an outwardly projecting lug extending diagonally from the attaching portion, and said lug being formed with an elongated slot, substantially as described.

3. A clip for cross reaches formed of a single piece of metal and comprising a plate like attaching portion and a reach retaining portion in the form of an outwardly projecting lug extending diagonally from the attaching portion, said lug being formed with an elongated slot, and said lug being arranged along one of the horizontal edges of the attaching portion, substantially as described.

1,167,299. CREEP-CHECK. LEWIS O. HENGGI, Oakmont, Pa. Continuation in part of application Serial No. 825,244, filed Mar. 17, 1914. This application filed Aug. 19, 1915. Serial No. 46,258. (Cl. 238—4.)

1. In an anti-creeper, a body having a portion disposed so as to bear against the bottom of the rail base, and a pair of terminal jaws disposed so as to rigidly engage the top of the rail base when said body is forcibly moved

transversely of said rail base, and thereby retain the anti-creeper in position on the rail base.



2. An anti-creeper for rails including a bowed body member having an intermediate bearing projection engageable with the bottom face of a rail base, and terminal gripping jaws formed on the body member for securing said anti-creeper to the rail base, said body member being adapted to be moved transversely on the rail base after being applied thereto, whereby the jaws may be tightened or loosened on the rail base.

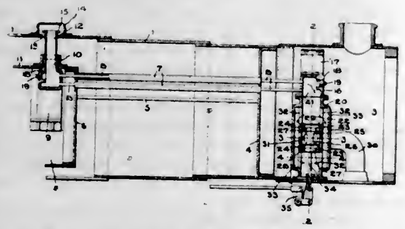
3. An anti-creeper formed from a single bar of metal bent to form an upwardly bowed body portion and terminal jaws of unequal length.

4. A one-piece creep-check comprising a body having portions for engaging and gripping the rail base, thereby to secure the creep-check on the rail base, said portions being arranged and disposed so as to permit of distortion of the creep-check within its elastic limit to effect such engagement, one of said portions being extended outwardly to form an interior clearance, thereby to permit the creep-check to be first placed in position on said rail base and then distorted so as to effect such gripping engagement.

5. A creep-check comprising a member having the ends thereof bent to form a body portion and end jaws for engaging the top surfaces of the rail base on either side of the rail thereby to secure the creep-check to the rail base, said body portion being formed with a seat for engaging against the bottom surface of the rail base, and said seat being so disposed with relation to said jaws as to necessitate distortion of the creep-check to allow said engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,167,300. THROTTLE-VALVE. HAROLD L. HENSZEY, Haddonfield, N. J. Filed July 7, 1914. Serial No. 849,380. (Cl. 137—4.)

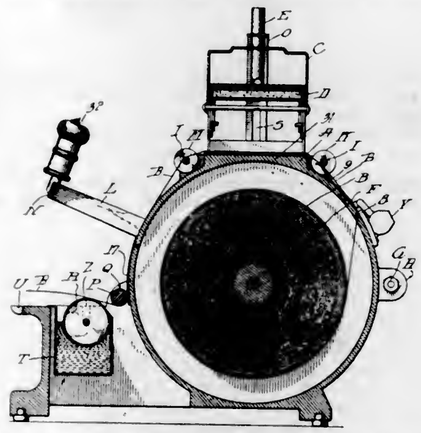


1. In a throttle valve, the combination with a casing having a pair of valve seats therein, of a valve in the casing having a pair of cylindrical faces fitting the casing and guiding the valve, said valve having a pair of valve faces smaller than the said cylindrical guides and adapted to engage said valve seats in the casing, said casing having its wall hollow forming steam passages around the outside of the valve seats, and directing live steam against both ends of the valve in all positions of the valve, substantially as described.

2. In a throttle valve, the combination with a casing having a cylindrical bore, and a pair of valve seats therein, of a valve in the casing having a pair of valve faces adapted to engage the valve seats, said valve adjacent both faces having annular bearing surfaces constituting the greatest diameter of the valve, said bearing surfaces fitting the bore of the casing, said casing having its wall hollow forming steam passages around the outside of the valve seats, and directing live steam against both ends of the valve in all positions of the valve, substantially as described.

3. In a throttle valve, the combination with a casing, having a longitudinal bore with a pair of valve seats in the bore spaced apart, of a valve having two annular bearing surfaces fitting the bore, said valve having adjacent the bearing surfaces valve faces adapted to engage the valve seats, and cylindrical portions adapted to project through the valve seats, said casing having hollow enlargements at opposite sides communicating with the bore of the casing at opposite ends of the valve, whereby live steam is admitted to both ends of the valve in all positions of the valve, and said casing having outlets in opposite sides between the valve seats, substantially as described.

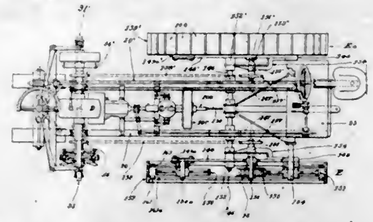
1,167,301. APPARATUS FOR MOISTENING AND PRINTING GUM-TAPE. GEORGE LEWIS HOGAN, Chicago, Ill., assignor to James Ihrie Leary, Chicago, Ill. Filed July 26, 1915. Serial No. 42,091. (Cl. 41—30.)



A roll tape printing device comprising a frame, an axis supported by such frame for the purpose of holding the roll tape, permitting of its free rotary motion about such axis, a lever attached to the said frame at one end and in operative relation with a printing device, the type of which is held up by the action of a spring, a perforating marking or cutting knife at the other end of the said lever, held in transverse position with respect to the path of the tape, a printing table in operative relation with the said printing device, a passage between the printing device and the said printing table, permitting the tape to be drawn through such passage as it is unwound from the roll in such manner that a pressure upon the said lever will force the type of the said printing device against the said tape and simultaneously perforate, crease or mark the tape at a point beyond the roll and said printing device rendering it easy to tear as and for the purpose described.

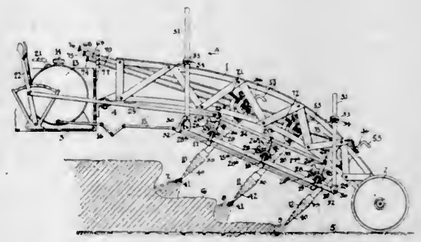
1,167,302. TRACTION-ENGINE. ORLEY C. HOUGHTON, Chicago, Ill., assignor to Bullock Tractor Company, Chicago, Ill., a Corporation of Illinois. Original application filed Sept. 26, 1914, Serial No. 863,724. Divided and this application filed May 6, 1915. Serial No. 26,342. (Cl. 21—150.)

1. In a motor vehicle, the combination of a chassis, a motor on said chassis, and one or more traction trucks, each truck having an endless traction belt operatively connected to said motor each of said endless traction bands comprising a series of hingedly connected shoes, each of said shoes consisting of a metallic plate said plate being downwardly and then upwardly bent near their transverse edges, the transverse terminal margins of said plate being curved, the concavo-convex portion at one margin being constructed to overlap the concave margin of the adjacent plate when the plates have been assembled, said plates being pivotally connected one to the other.



2. In a motor vehicle, the combination of a chassis, a motor on said chassis, and one or more traction trucks having endless traction bands operatively connected to said motor, each traction band comprising a multiplicity of shoes, each shoe consisting of a metallic plate, said plate being downwardly and then upwardly bent adjacent to its transverse margins, the terminals of said upwardly bent portions being outwardly bent and curved, the curvature at one margin being constructed to overlap the curved portion at the opposing margin, two upstanding walls rising from said plate, said walls being offset at their middle to permit the offset portions of said walls to admit the narrower portion thereof between them, there being a tubular boss connecting the narrower portion of said walls, the whole being integrally formed in the process of casting.

1,167,303. HYDROCARBON-BURNER. CHARLES JOHNSON HUTCHISON, Pittsburgh, Pa. Filed Apr. 17, 1915. Serial No. 22,020. (Cl. 126—271.2.)



1. In a snow melting device the combination of a car, a fuel supply tank, flexible fuel supply piping, a plurality of rows of adjustable hydrocarbon burners, a plurality of transverse tubes for supporting the said adjustable hydrocarbon burners, adjustable longitudinal angle-iron side pieces for carrying the said transverse tubes, adjustable suspension rods for supporting the said side pieces and swivel supporting means for the said supporting rods.

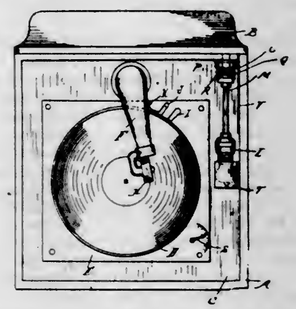
2. In a snow melting device the combination of a car, a fuel supply tank, flexible fuel supply piping, a plurality of rows of adjustable fan-shaped hydrocarbon burners, a plurality of transverse tubes for supporting the said adjustable fan-shaped hydrocarbon burners, bearings for the said tubing, adjustable longitudinal side supporting means for the said bearings, adjustable suspension rods pivotally suspended from the said car and pivotally secured to the longitudinal supporting means, a split-jaw mounting means integral with the burner body-portion, a thumb-screw tightening means for the said mounting means, a rotating arm for the said tubing, a distant means for operating said arm, a worm-wheel mounted upon the needle-valve stem of the said burner, a worm in operative relation with the said worm-wheel, and a distant means for rotating said worm.

3. In a snow melting device, the combination of a car, a fuel supply tank, fuel supply piping, a plurality of rows of adjustable burners, a plurality of transverse tubes for supporting the burners, bearings for the said tubes, adjustable longitudinal supporting means for the said bearings, and adjustable suspension rods suspended from the car and secured to the said longitudinal supporting means.

4. In a snow melting device, the combination of a car, a fuel supply tank, fuel supply piping, a plurality of rows of adjustable burners, a plurality of adjustable transverse tubes for supporting the said burners, a rotatinn arm for the said tubes, and means for operating said arm; worm-wheels mounted upon the needle-valve stems of the aforementioned burners, worms in operative relation thereto, and means for rotating said worms.

5. In a snow melting device, the combination of a car, a fuel supply tank, fuel supply piping, a plurality of rows of burners, a plurality of transverse tubes for supporting the burners, longitudinal supporting means for the said transverse tubes, and adjustable suspension rods suspended from the said car and secured to the said longitudinal supporting means.

1,167,304. AUTOMATIC LIGHTING ATTACHMENT FOR PHONOGRAPH-CABINETS. FRANK B. JOHNSON, Detroit, Mich. Filed Jan. 19, 1915. Serial No. 3,112. (Cl. 240—2.)



1. The combination with a phonograph cabinet, of a lamp for illuminating the same, comprising a laterally-extending arm, a lamp socket mounted at the outer end of said arm, a controlling switch secured to the inner end of said arm and attached to the rear wall of the cabinet, electrical connections to said switch and lamp, extending through the rear wall of the cabinet, and a finger secured to the hinged lid for operating said switch.

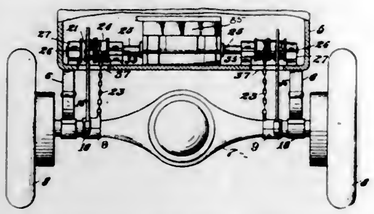
2. The combination with a phonograph cabinet, of a lamp for illuminating the same, comprising a laterally extended arm, a lamp socket mounted at the outer end of said arm, a controlling switch secured to the inner end of said arm and attached to the rear wall of the cabinet, electrical connections to said lamp and switch, and means secured to the hinged lid for operating said switch.

3. The combination with a phonograph and a cabinet containing the same, having a hinged lid, of a lamp mounted substantially midway between the front and rear walls of the cabinet to illuminate portions of the phonograph, said lamp being supported from the rear wall of the cabinet, a reflector secured to a side wall of the cabinet to direct the lamp rays to the phonograph, a switch in the cabinet for controlling said lamp, and means carried by the cover for opening and closing said switch according as the lid is lowered or raised.

1,167,305. SHOCK-ABSORBER. PETER W. KANE, San Pedro, Cal. Filed Mar. 1, 1915. Serial No. 11,119. (Cl. 21—183.)

1. A shock absorber, comprising in combination a standard secured to the axle of a vehicle, a flexible member secured at one end to said standard and at the other

end to a spool, a second flexible member secured at one end to the axle and at the other end to a second spool, a power generator mounted on the body of the vehicle and having a rotary shaft, clutch means securing said rotary shaft and one spool for rotation in one direction, and another clutch means securing said rotary shaft and the other spool for rotation in the same direction.

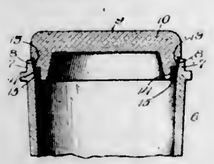


2. A shock absorber, comprising in combination a coupling attachment fixed to the axle of a vehicle, a standard secured thereto, a flexible member secured at one end to said standard and at the other end to a spool, a second flexible member secured at one end to the axle and at the other end to a spool, a power generator mounted on the body of a vehicle and having a rotary shaft, clutch means securing said rotary shaft and one spool for rotation in one direction, and another clutch means securing said rotary shaft and the other spool for rotation in the same direction.

3. A shock absorber, comprising in combination a standard secured to the axle of a vehicle, a flexible member secured at one end to said standard and encompassing a spool and attached thereto, a secong flexible member secured to the attachment coupling encompassing a second spool in the opposite direction and secured thereto, a power generator provided with a rotary shaft mounted on the body of the vehicle, clutch means securing said rotary shaft and one spool for rotation in one direction, and another clutch means securing said rotary shaft and the other spool for rotation in the same direction.

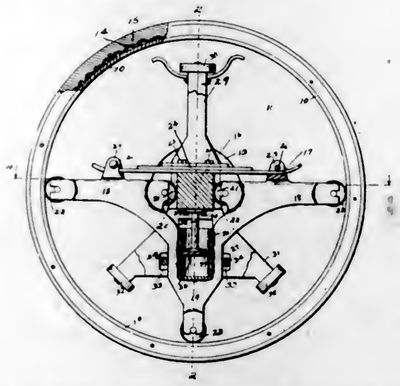
4. A shock absorber, comprising in combination a standard secured to the axle of a vehicle, a flexible member secured at one end to said standard and attached to a spool at the other end, a second flexible member secured at one end to the axle and at the other end to a second spool, a power generator having a rotary shaft mounted on the body of the vehicle, ratchet teeth on said shaft and pawls in said spools engaging said ratchet teeth.

1,167,306. RECEPTACLE-CLOSURE. CHARLES R. KEERAN, Bloomington, Ill. Filed Apr. 18, 1912. Serial No. 691,562. (Cl. 215—95.)



In combination with a receptacle provided with a mouth having an inwardly tapering inner wall, a closure therefor formed of a single piece and provided with a circumferential groove intermediate its upper and lower ends, the bottom wall of the groove tapering in conformity to the taper of the wall of the mouth, said groove forming a shoulder adapted to overlie the upper edge of the mouth, a second groove extending from the lower terminus of the first groove to the bottom of the base of the closure and adapted to receive a gasket having an outer vertical face, whereby a wedging action is effected between the inner wall of the mouth and the outer face of the gasket, the bottom wall of said second groove extending in a vertical direction, said second groove lying entirely below the upper end of the mouth of the receptacle when the closure is in place and said second groove being of a less depth than the thickness of the gasket, substantially as described.

1,167,307. VEHICLE-WHEEL. FRANK JAMES MCCANDLESS, Charlton, Iowa. Filed June 4, 1914. Serial No. 843,031. (Cl. 21—187.)



1. In a device of the class described, a cylindrical casing, an axle extended into the central portion thereof, a supporting frame within the casing having rollers to engage the inner periphery of said casing, a second frame slidably mounted with the first frame and having rollers to engage the inner end faces of said casing, means for securing the second frame to said axle, and yielding means for carrying the axle from the supporting frame.

2. In combination with a vehicle axle, a cylindrical casing having end plates, the axle being extended into said casing, a spring for said axle, a supporting frame within said casing for carrying said spring, rollers in said frame to engage the inner periphery of said cylinder, a cylinder on said supporting frame, a piston therein having a check valve and having a stem supporting said axle, a second frame secured to said axle to support the casing in vertical position relative to the axle, rollers on said second frame to engage between the end plates, and plates secured to said axle adjacent to the opening on said end plates.

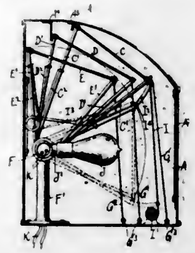
3. In a device of the class described, a cylindrical casing having side members, an axle extended into said casing and capable of vertical movement with relation thereto, a frame within said casing having laterally extending arms, rollers in said arms to engage the inner surface of the periphery of said casing, rollers carried by said arms to engage said axle, a downwardly extending arm connected with said laterally extending arms, a roller thereon to engage the inner periphery of said casing, and a spring device for supporting said axle on said frame.

4. In a device of the class described, a cylindrical casing having side members, an axle extended into said casing and capable of vertical movement with relation thereto, a frame within said casing having laterally extending arms, rollers in said arms to engage the inner surface of the periphery of said casing, rollers carried by said arms to engage said axle, a downwardly extending arm connected with said laterally extending arms, a roller thereon to engage the inner periphery of said casing, a spring device for supporting said axle on said frame, a second frame within said casing secured to said axle and having a plurality of arms, and arms carried by said rollers for engaging the side of said casing.

5. In a device of the class described, a casing, a frame therein having laterally extending arms and a downwardly extending arm, rollers carried by said arms for engaging the inner periphery of said casing, a cylinder formed in the upper surface of the downwardly extending arm, a piston therein, and a stem on said piston secured to said axle.

[Claim 6 not printed in the Gazette.]

1,167,308. SIGNALING DEVICE. M. JOSEPH MANDELBAUM, New York, N. Y. Filed Dec. 6, 1912. Serial No. 735,223. (Cl. 40—77.)



1. A signaling device for automobiles and similar vehicles, comprising a casing having a display opening, a series of signs mounted to swing in the said casing one independent of the other, the signs being normally one above the other and out of register with the said display opening, manually-controlled actuating means under the control of the operator in charge of the machine for swinging either of the said signs into display position at the said display opening, a spring roller mounted in the said casing, a curtain winding and unwinding on the said roller, and operating means connected with the free end of the said curtain to normally close the display opening, the said operating means being adapted to be engaged by the said signs to allow the roller to wind up the curtain on moving a sign into display position.

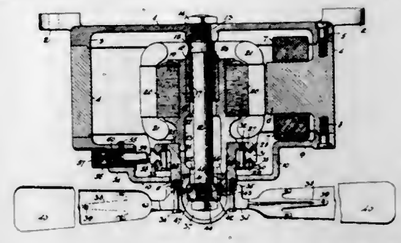
2. A signaling device for automobiles and similar vehicles, comprising a casing having a display opening at the rear, a transverse bearing arranged in the casing, stop and turn-out signs within the said casing and normally out of register with the said display opening, arms carrying the said signs and mounted to swing independent one of the other on the said bearing, springs pressing the said arms to normally hold the signs in normal inactive position, levers under the control of the operator, flexible connections connecting the said levers with the said signs to swing the latter in displaying position at the said display opening, a spring roller journaled in the said casing, a curtain winding and unwinding on the said roller and normally closing the said display opening, and a swing frame fulcrumed on the said bearing and adapted to be engaged by either of the said arms.

3. A signaling device for automobiles and similar vehicles, comprising a casing having a display opening, a plurality of signs in the casing to move in front of the opening, a spring roller in the casing, a curtain carried by the roller, and a member operated by the signs and to which the curtain is attached.

4. A signaling device for automobiles and similar vehicles, a casing having a display opening at the rear, a plurality of movable and spring pressed signs mounted in the casing, means for moving the signs in front of the opening of the casing, a spring roller in the casing, a curtain carried by the roller, and a movable and spring pressed member in the casing and to which the curtain is attached, said member being operated by the signs when moved in front of the opening to permit the curtain to wind upon its roller.

5. A signaling device for automobiles and similar vehicles, a casing having a display opening therein, a plurality of pivoted and spring pressed arms in the casing, signs carried by the arms, means for swinging the arms to bring the signs in front of the opening of the casing, a spring roller, a curtain carried by the roller, and a pivoted and spring pressed frame to which the curtain is secured, said frame being adapted to be swung downward by the arms carrying the signs.

1,167,309. LUBRICATED BEARING FOR ELECTRIC FANS. GUSTAVE C. MARX, Elizabeth, N. J., assignor to Diehl Manufacturing Company, a Corporation of New Jersey. Filed Dec. 16, 1910. Serial No. 597,663. (Cl. 64—56.)



1. The combination with a stationary vertical shaft, of a rotary sleeve embracing said shaft and having at the upper end a self-lubricating side-bearing and at the lower end a combined side- and step-bearing sustained by the shaft, said sleeve having a bore below its side-bearing substantially larger than said shaft to afford clearance therewith intermediate said bearings, and a closed oil-cup carried by said sleeve and embracing said combined side- and step-bearing.

2. The combination with a stationary vertical shaft, of a rotary sleeve surrounding and spaced from said shaft, a combined side- and step-bearing sustained by the shaft for the lower end of said sleeve, a blade-carrier carried by said sleeve and embracing said side- and step-bearing to afford a closed oil-cup therefor, and a self-lubricating side-bearing intermediate the upper portion of said sleeve and the shaft, the said side bearing and blade carrier serving to seal the sleeve against dust.

3. The combination with a stationary vertical shaft, of a rotary sleeve surrounding and spaced from said shaft, a combined side- and step-bearing sustained by said shaft for the lower end of said sleeve, a blade-carrier carried by said sleeve and embracing said side- and step-bearing to afford a closed oil-cup therefor, a self-lubricating side-bearing for the upper portion of said sleeve, and an annular chamber with overhanging walls formed in said sleeve intermediate its bearing members.

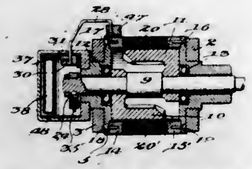
4. The combination with a stationary vertical shaft provided with a reduced threaded end, of a rotary sleeve surrounding said shaft, a self-lubricating side-bearing intermediate the upper portion of said sleeve and the shaft, a collar fitted upon the threaded end of the shaft and affording a combined side- and step-bearing for the lower end of said sleeve, a blade-carrier secured to said sleeve and embracing said side- and step-bearing to afford a closed oil-cup therefor, and an internal cavity formed in the sleeve intermediate its bearing members and adapted to arrest the upward movement of oil from said closed oil-cup.

5. The combination with a stationary vertical shaft, of a rotary sleeve having an annular chamber merging into a shaft-receiving aperture, a step-bearing sustained by the shaft for the lower end of said sleeve, a detachable lubricant reservoir embracing the step-bearing and sealing the lower end of the sleeve, and a self-lubricating side bearing intermediate the upper portion of the sleeve and said shaft and serving to close the sleeve against dust.

1,167,310. INTERRUPTER MECHANISM FOR IGNITION-DYNAMOS. CHARLES THOMAS MASON, Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Original application filed Nov. 21, 1912, Serial No. 732,681. Divided and this application filed July 29, 1913. Serial No. 781,839. (Cl. 123—166.)

1. In an ignition dynamo, an interrupter having a casing with fixed and movable contact members carried thereby, one of said members being insulated therefrom, a cover fitting said casing, a condenser carried by said cover, and conducting means mechanically connected to

the cover and electrically connected to the condenser terminals, for mechanically securing the cover to the casing, and electrically completing the circuit connections between the condenser and the interrupter mechanism in the casing.



2. In an ignition dynamo, an interrupter having a casing with fixed and movable contact members carried thereby, one of said members being insulated therefrom, a cover fitting said casing, a condenser carried by said cover, an insulated condenser terminal on the cap, and a corresponding insulated terminal on the casing connected to the insulated member on the interrupter, and conducting means for connecting said insulated terminals when the cover is in place on the casing, thereby mechanically securing the cover in place and electrically connecting the condenser and the interrupter contacts.

3. In an ignition dynamo, a field, a rotor, and an interrupter comprising an open ended casing mounted coaxially with the rotor, concentric therewith, and of a diameter no greater than the diameter of the rotor, a pair of contacts mounted and carried within the casing, with their operating points extending through a lateral opening in the wall of the casing, means within the casing and driven with the rotor for actuating said contacts, and two separate detachable caps or covers for said casing, one fitted to the open end and the other fitted to the lateral opening and adapted to cover and inclose the exposed contact ends when in place, whereby for purposes of timing and adjustment of engine connections, the contact points may be inspected by removing the lateral cover only, without exposing the principal working parts, and for repairs or adjustments to the latter, the entire body of the interrupter may be opened by removal of the end cap.

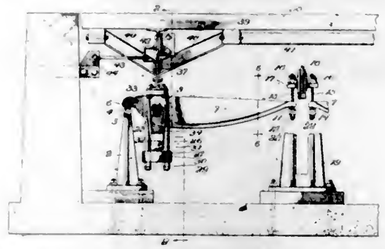
4. In an ignition dynamo, circuit controlling contacts, an inclosing casing therefor, and a separable portion of the casing with a condenser mounted thereon and carried thereby, together with means for connecting said separable portion mechanically to the body of the casing, and for simultaneously connecting the condenser terminals electrically with the circuit controlling apparatus in the casing.

5. In an ignition dynamo, a separable interrupter and condenser unit comprising a casing containing the interrupter contacts, an operating cam with an opening on one side to receive the cam shaft of the machine, and an opening on the other side to expose the parts, and a cap for the casing adapted to cover said second opening, said cap containing an inclosed chamber, a condenser mounted within the said chamber, terminals for said condenser carried on the cap, complementary circuit terminals in the casing and conducting means for securing said condenser terminals both mechanically and electrically to said complementary terminals when the cap is in position, so as to complete the combined unit and properly relate the condenser to the other parts both mechanically and electrically at the same time.

[Claims 6 to 9 not printed in the Gazette.]

1,167,311. WEIGHING-SCALE. CHARLES F. MOORE and EVERETT L. HUNTER, Bennington, Vt., assignors to Bennington Scale Company, Bennington, Vt., a Corporation of Vermont. Filed Sept. 9, 1914. Serial No. 860,900. (Cl. 73—121.)

1. In a weighing scale, the combination with a lever, of a load-receiver pivot mounted with said lever, a saddle block mounted upon said load-receiver pivot, a U-shaped suspension member embracing said saddle block, a platform supporting member embracing said lever, a connecting member for said platform supporting member, a ball block carried by said U-shaped suspension member having a universal connection with said platform connecting member, and means for adjusting said ball block.



2. In a weighing scale, the combination with a lever having a pivot, a saddle block mounted upon said pivot, a U-shaped suspension member embracing said saddle block, a platform supporting member embracing said lever, a connecting member for said platform supporting member, and a ball block adjustably mounted upon said U-shaped suspension member having a universal connection with said connecting member.

3. In a weighing scale, the combination with a lever having a load-receiver pivot, of a saddle block mounted upon said load-receiver pivot, a suspension member embracing said saddle block, a platform supporting member embracing said lever, adjustable supporting means carried by said suspension member, and a connecting member for said platform supporting member having a universal connection with said supporting means.

4. In a weighing scale, the combination with a lever having a pivot, a saddle block mounted upon said pivot, a suspension member embracing said saddle block, a block adjustably mounted upon said suspension member, a connecting member mounted upon said block and having a universal movement thereon, and a platform supporting member embracing said lever and mounted upon said connecting member.

5. In a weighing scale, the combination with a lever having a pivot, a saddle block mounted upon said pivot, a suspension member embracing said saddle block, a block adjustably mounted upon said suspension member, a connecting member mounted upon said block and extending transversely of said lever and having a universal movement upon said block, and a platform supporting member embracing said lever mounted upon said connecting member.

[Claims 6 to 27 not printed in the Gazette.]

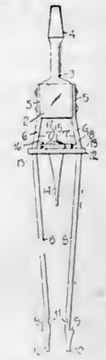
1,167,312. VALVE-GRINDING TOOL. GEORGE FRANKLIN NORTON, Fargo, N. D. Filed Aug. 16, 1915. Serial No. 45,853. (Cl. 51—4.)

1. A valve grinding tool including a shank, spring legs attached to the shank and extending therefrom in spaced opposed relation, the legs being formed at their lower ends to engage in the dolly holes of a valve, and means for adjusting the legs in different spaced relation to each other.

2. A valve grinding tool including a shank, spring legs attached to the shank and extending therefrom in spaced opposed relation, the legs being formed at their lower ends to engage in the dolly holes of a valve, and means for adjusting the legs in different spaced relation to each other, said means including a member longitudinally movable along the legs.

3. An implement for grinding valves including a shank whereby the implement may be operated, oppositely disposed legs attached to the shank and extending therefrom in spaced relation, said legs normally extending upward and away from each other from their lower ends and being of resilient material, and an adjusting slide having sliding engagement with the legs and adjustable therealong to cause the legs to be spaced at different distances from each other.

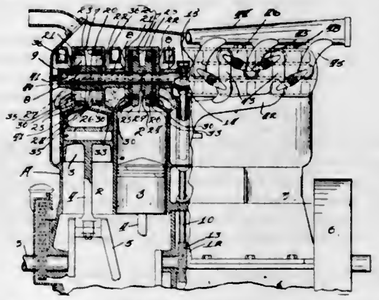
4. An implement of the character described comprising a body having a shank extending therefrom formed with a head adapted to be engaged by a seat, legs attached to the head and extending downward and outward therefrom and then downward and slightly inward, the lower ends of the legs being formed to engage in the dolly holes of a valve, and means slidable along the legs for varying the distance between the legs.



5. An implement of the character described having a plurality of legs extending in approximately parallel relation and a blade disposed between the legs and movable longitudinally of the legs to dispose the blade with its edge inward of the like ends of the legs or projected beyond the ends of the legs, and means for locking the blade in its projected position, said means including a member rotatably mounted for movement into an operative or inoperative position, the legs being formed with notches with which said member is adapted to engage when in operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,167,313. COMBUSTION-ENGINE. FREDERICK A. OST, Minneapolis, Minn., assignor to Andrew D. O'Brien, Graceville, Minn. Filed Mar. 10, 1915. Serial No. 13,363. (Cl. 123—80.)



1. An engine of the class set forth, comprising, in combination, a cylinder forming an explosion chamber having a head forming a valve chamber, said head being provided with a pair of opposite side walls, each side wall being formed with a pair of ingress and a pair of egress ducts, a piston reciprocable in said cylinder, a crank shaft to which said piston is connected, a valve in said valve chamber having a longitudinal core and a pair of ends extending laterally from the ends of said core, each of said ends being formed with a pair of substantially oppositely disposed passages therethrough, said valve being journaled in said valve chamber on an axis passing longitudinally through said core and said passages in said ends being adapted to register successively with the pairs of ducts in the sides of said valve chamber to admit a fuel charge or exhaust spent gases and means for revolving said valve in synchronism with the reciprocation of said piston.

2. A combustion engine, comprising, in combination, a cylinder forming a combustion chamber, having a valve chamber provided with a pair of opposite sides, each of said sides being formed with a pair of ingress and a pair of egress ducts for the admission of a fuel charge and the exhaust of spent gases, a valve having a core and a pair of opposite ends extending laterally from said core, each of said ends being formed with a pair of passages adapted to register successively with the pairs of ingress and exhaust ducts in a wall of said valve chamber, said valve being journaled in said valve chamber on an axis passing longitudinally through said core and the passages through the ends of said valve being so positioned that they register simultaneously first with all of the ingress ducts in both of said walls of said valve chamber and then with all of the exhaust ducts in said walls and means for revolving said valve in synchronism with the movement of said piston.

3. In an engine having a piston and cylinder forming a combustion chamber, a valve revolubly mounted in connection with said combustion chamber consisting of a hub portion and a pair of opposite ends extending laterally from said hub portion, each of said ends being ported for the simultaneous admission of fuel through both of said ends into said chamber, means for revolving said valve with its ports in synchronism with the movement between said cylinder and piston.

4. An engine, comprising, in combination, a cylinder having a valve chamber formed with a pair of opposite end walls, each end wall being provided with a pair of ingress and a pair of egress ducts, a piston reciprocable in said cylinder, a crank shaft to which said piston is connected, a valve in said valve chamber having a pair of end elements revoluble about an axis, each of said end elements being formed with a pair of substantially oppositely disposed passages therethrough, said valve being journaled in said valve casing upon said axis and said passages being adapted to register successively with the pairs of ducts in the sides of said chamber to admit a charge of fuel or exhaust spent gases and means for revolving said valve in synchronism wth the reciprocation of said piston.

5. An engine, comprising, in combination, a cylinder having a valve chamber formed with a pair of opposite end walls, each end wall being provided with a pair of ingress and a pair of egress ducts, a piston reciprocable in said cylinder, a valve in said valve chamber having a pair of end elements spaced apart and revoluble upon a single axis, each of said end elements being formed with a pair of substantially oppositely disposed passages therethrough and said valve being journaled in said valve chamber on said axis with said passages adapted to register successively with the pairs of ducts in the sides of said valve chamber to admit a fuel charge or exhaust spent gases and means for revolving said valve in synchronism with the motion between said piston and cylinder.

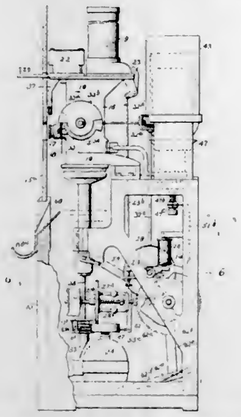
[Claims 6 to 8 not printed in the Gazette.]

1,167,314. AUTOMATIC PHOTOGRAPHING APPARATUS. GEORGE N. PIPER, Cleveland, Ohio, assignor, by mesne assignments, to The Auto Portrait Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 8, 1912. Serial No. 730,198. (Cl. 95—14.)

1. In an automatic photographing apparatus, a camera, apparatus for finishing the plate and means for causing the plate to pass from the camera to the finishing apparatus, said finishing apparatus comprising means for applying a solution to the plate, and means for spinning the plate to cause the solution to be thrown therefrom by centrifugal force.

2. In an automatic photographing apparatus, means for causing a photographic exposure to be made on a sensitized plate, a support adapted to receive the plate after the exposure, means for causing the delivery of the exposed plate to said support, means for applying a finishing solution to the plate, and means for spinning said support to throw the solution from the plate.

3. In an automatic photographing apparatus, means for causing a photographic exposure to be made on a sensitized plate, a support adapted to receive the plate after the exposure, means for causing the exposed plate to pass to said support, means for applying finishing solutions to the plate and means for spinning said support intermittently to cause the solutions to be thrown from the plate.

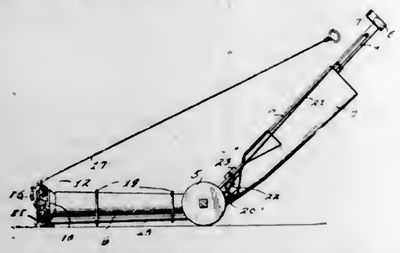


4. In combination in an automatic photographing apparatus, a camera for causing a photographic exposure to be made on a sensitized plate, a support for the plate, means for causing the delivery of the exposed plate from the camera to said support, means for causing a plurality of solutions to be successively applied to the plate, and means for intermittently spinning said support to cause the solution to be thrown from the plate.

5. In an automatic photographing apparatus, means for causing a photographic exposure to be made upon a sensitized plate, a horizontal support adapted to receive and hold the exposed plate, means for causing the delivery of the exposed plate to said support, means for applying successively a plurality of solutions to said plate, and means for intermittently spinning said support to free the plate of the solutions applied to it.

[Claims 6 to 37 not printed in the Gazette.]

1,167,315. MOPPING DEVICE. WILLIAM C. REDING, Greenwood, Ark. Filed June 25, 1915. Serial No. 36,325. (Cl. 15—14.)

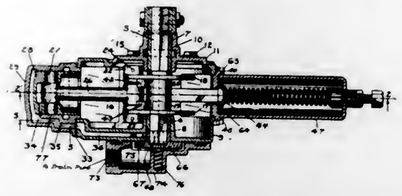


1. In a mopping device, the combination with a water reservoir, of a frame for supporting the same, a mop holding member having a mop on the end thereof pivotally mounted on said frame and constructed and arranged to swing over the water reservoir and means for wringing the mop.

2. In a mopping device, the combination with a water reservoir, of a frame for supporting the same, a mop carrying member pivotally mounted on said frame, means for securing a mop thereto, a rod for operating said member to swing the mop above the water reservoir, and means for returning the said member to its initial position.

3. In a mopping device, the combination with a water reservoir, of a mop carrying member pivotally mounted on the end of said member, means for actuating the member to draw the mop over the water reservoir, the said means being thereafter operable to wring the mop, a tube leading from the said water reservoir to the mop and means for controlling the flow of water through said tube.

1,167,316. AUTOMATIC TRIP-VALVE. OSCAR A. ROSS, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Nov. 11, 1910. Serial No. 591,890. (Cl. 246—59.)



1. In an automatic valve, in combination, a source of compressed air, a member to be moved and means directly controlled by said member to hold the said member in the moved position by the action of the compressed air.

2. In an automatic valve, in combination, a source of compressed air, a member to be moved, a valve connected to said member and moved by the movement of said member and means directly controlled by the movement of said valve to hold the said member in the moved position by the action of the compressed air.

3. In an automatic valve, in combination a member to be moved, means acting mechanically on said member to move said member to its moved position, a valve connected to said member and moved by the movement of said member, a receiver for compressed air in communication with said valve, a cylinder, a cavity connecting the valve and the cylinder, a piston in the cylinder connected to the said member, for holding the said member in its moved position through the action of the compressed air.

4. In an automatic valve, in combination a member to be moved, a cavity connected with a train line of an air brake system, the air-pressure in said cavity controlling the position of said member, and means for exhausting air from said train line through said cavity by the movement of said member.

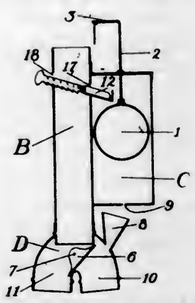
5. In an automatic valve, in combination a member to be moved, a cavity connected with a train line of an air brake system, the air-pressure in said cavity controlling the position of said member, and means controlled by the movement of said member for opening an exhaust to effect a predetermined reduction of pressure in said train line.

[Claims 6 to 11 not printed in the Gazette.]

1,167,317. AUTOMATIC WATER-CONTROLLER FOR WATER-PIPES. JOHN SAUER, Sr., Cincinnati, Ohio. Filed Feb. 4, 1915. Serial No. 6,034. (Cl. 137—9.)

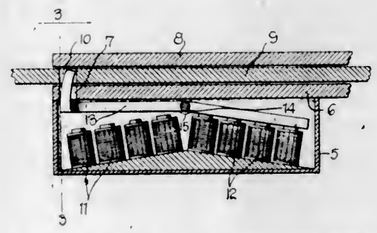
1. In an automatic water-controller for water pipes, a splasher-cup having cut-outs in the sides thereof in combination with a handle therefor, said handle having a saw-toothed lower edge and a numerically numbered graduated side.

2. In an automatic water-controller for water pipes and in combination; an ordinary water pipe; a float chamber positioned alongside said pipe; a splasher cup and a graduated handle therefor extending across the internal cavity of said pipe and into said float chamber; a water-frog attached to the lower end of said pipe, said frog having a water cut-off pivotally mounted within and at the junction of the two pipes thereof, a crank attached to said cut-off and a funnel-shaped opening leading into one of the pipes thereof; said float chamber having a float within, a



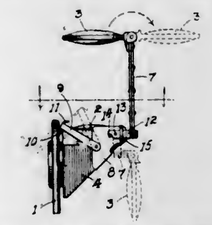
stem attached to said float and a drainage perforation in the bottom of said chamber and at a point overlying said funnel-shaped opening; and a rod connecting the upper end of said stem with the free end of said crank.

1,167,318. MAGNETIC LATCH. FRANK A. SCHOENLE, Buffalo, N. Y. Filed Apr. 18, 1914, Serial No. 832,826. Renewed Dec. 1, 1915. Serial No. 64,589. (Cl. 70—50.)



In a magnetic latch, a latch bar fulcrumed intermediate of its ends and having angularly disposed portions extending upon relatively opposite sides of its fulcrum, and two series of electromagnets also arranged at an angle with respect to each other and opposed to the respective angularly extending portions of the latch bar, to move said bar to its locking or release positions upon the energization of the magnets.

1,167,319. AMPLIFYING-FINDER FOR CAMERAS. EZRA B. SMITH, Chicago, Ill. Filed Aug. 8, 1914. Serial No. 855,752. (Cl. 88—1.5.)



1. The combination with a folding camera, of a universally focused finder adapted to be housed in the camera when the latter is folded, of an attachment for focusing and enlarging the image produced by the finder; said attachment including a lens, and a collapsible and extensible member for supporting the lens in an extended working position above the finder and also in an idle position in such proximity to the finder as to permit it to be housed within the camera when the latter is folded.

2. The combination with a folding camera, of a finder adapted to be housed in the camera when the latter is folded, and an attachment for focusing and enlarging the image produced by the finder; said attachment including a member adapted to be detachably connected to the finder, a lens, and a collapsible and extensible support arranged between said lens and said member and constructed and arranged to support the lens in a working position above the finder and also in an idle position in such proximity to the finder as to permit the attachment to be housed within the camera when the latter is folded.

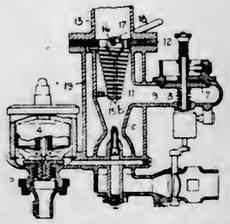
3. The combination with a folding camera, of a finder adapted to be housed in the camera when the latter is folded, of a collapsible and extensible support connected at one end to the finder, and a lens connected to the other end of the support, the parts being so constructed and arranged that the support may be extended to support the lens in a view position and be collapsed to bring the lens in such proximity to the finder as to permit it to be housed in the camera when the latter is folded.

4. The combination with a folding camera having a lens adapted to be housed in the camera when the latter is folded, of a collapsible and extensible support connected at one end to the finder at one edge of the latter, and a lens hinged to the other end of said support so as to be capable of swinging about an axis parallel with said edge from a view position above the finder to an idle position in such proximity to the finder as to permit it to be housed within the camera when the latter is folded.

5. The combination with the non-focusing finder of a folding camera adapted to be folded into the camera, of a lens, and an extensible and collapsible support for the lens mounted on the finder, said support being constructed and arranged to permit the lens to be moved transversely of the direction of the folding movement of the camera when the camera is open and to position the lens in such proximity to the finder when it is desired to close the camera to permit the camera to be folded.

[Claims 6 and 7 not printed in the Gazette.]

1,167,320. CARBURETER. CARL C. THOMAS, Baltimore, Md. Filed Mar. 22, 1915. Serial No. 16,138. (Cl. 48—155.2.)



1. The combination with a carbureter having communicating passages for primary and auxiliary air respectively, and having means for injecting fuel into the primary air, prior to the entry of the auxiliary air into the primary air passage, of a combined mixing device and valve located at the intersection of the primary and auxiliary air passages, and comprising a hollow member having a helical slot through which the vapor and air currents may pass into the interior of said combined mixing device and valve, and means for compressing said device axially, or permitting extension of said device axially, at will, and thereby varying the width of such helical slot.

2. The combination with a carbureter having communicating passages for primary and auxiliary air respectively, and having means for injecting fuel into the primary air, prior to the entry of the auxiliary air into the primary air passage, of a combined mixing device and valve located, in part at least, at the intersection of the primary and auxiliary air passages, and comprising a hollow member having a helical slot through which the vapor and air curents may pass into the interior of said combined mixing device and valve, and means for compressing said device axially, at will, and thereby varying the width of such helical slot.

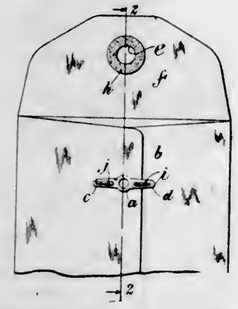
3. The combination with a carbureter having communicating passages for primary and auxiliary air respectively, and having means for injecting fuel into the primary air, prior to the entry of the auxiliary air into the primary air passage, of a combined mixing device and valve located at the intersection of the primary and auxiliary air passages, and comprising a hollow member flaring outwardly in the direction of flow, and having a helical slot through which the vapor and air currents may pass into the interior of said combined mixing device and valve, and means for compressing said device axially, or permitting extension of said device axially, at will, and thereby varying the width of such helical slot.

4. The combination with a carbureter having communicating passages for primary and auxiliary air respectively, and having means for injecting fuel into the primary air, prior to the entry of the auxiliary air into the primary air passage, of a combined mixing device and valve located in part at least at the intersection of the primary and auxiliary air passages, and comprising a hollow member flaring outwardly in the direction of flow, and having a helical slot through which the vapor and air currents may pass into the interior of said combined mixing device and valve, and means for compressing said device axially, or permitting extension of said device axially, at will, and thereby varying the width of such helical slot.

5. The combination with a carbureter having communicating passages for primary and auxiliary air respectively, and having means for injecting fuel into the primary air, prior to the entry of the auxiliary air into the primary air passage, of a combined mixing device and valve located at the intersection of the primary and auxiliary air passages, and comprising a helical spring having between successive coils openings through which the vapor and air currents may pass into the interior of said combined mixing device and valve, and means for compressing said spring axially, or permitting extension of said spring axially, at will, and thereby varying the width of the spaces between the successive coils.

[Claims 6 and 7 not printed in the Gazette.]

1,167,321. ENVELOP-FASTENER. HENRY TRENCHARD, Jr., New York, N. Y. Filed Dec. 19, 1913. Serial No. 807,609. (Cl. 229—78.)



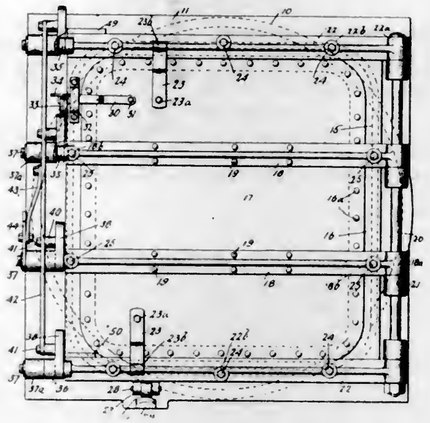
1. An envelop fastener comprising an eyelet adapted to pass through the body of an envelop and be headed up on the inside, and a fastening finger which is continuous with and projects from the exterior rim of the eyelet, the said finger having a reinforcing rib, extending longitudinally thereof from a point entirely outside the said rim to the end substantially of the finger, thereby leaving a flat portion on each side of the rib to lie flat against the envelop and a flexible portion between the rim and the end of the rib adjacent to the rim.

2. A fastener including a base provided with attaching means, and arms extending from the base in opposite directions and provided with a stiffening element extending lengthwise of the arms leaving a flat border on opposite sides of said stiffening element and a narrow space between the stiffening element and base.

3. A fastener including a base provided with attaching means, and arms extending in opposite directions from the base, each arm being tapered from its root to its tip and having a stiffening element extending lengthwise thereof with a flat border extending completely thereabout and providing a small space between the end of the stiffening element and the base.

4. A fastener including a base provided with attaching means, and arms extending in opposite directions from the base, each arm having a plication extending from a point a short distance from the base lengthwise along the arms leaving a flat border on opposite sides of the plication, and a narrow space between the ends of the plication and the base.

1,167,322. HINGED RETORT-DOOR. NELSON TROYER and FRANK CHESTER FOX, Astoria, Oreg., assignors to Astoria Iron Works, Astoria, Oreg. Filed Aug. 7, 1913. Serial No. 783,494. (Cl. 220—124.)



1. A door, comprising a hinge bar, a door body carried by the said bar and connected therewith between the ends of the bar, the side portions of the body being free from connection with the bar, and means for springing said side portions relatively to the bar.

2. A door comprising a hinge bar, a door body carried by the said bar and connected therewith between the ends of the bar, the side portions of the body being free from connection with the bar, and adjusting screws carried by the bar near the ends, to bear against the free side portions of the body for adjusting said portions relatively to the bar.

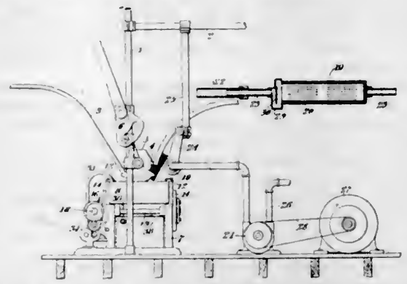
3. A door comprising a door body, a member carrying said body, means for adjusting edge portions of the body and fixedly secured to the body inward from the edge of the latter relatively to the said member, hinge means associated with said member for hinging the door, and latching means movably mounted adjacent to the door to be moved into engagement with said member to force the door to a closed position.

4. In a door, a door body, a hinge bar, a rigid connection between the bar and door body at points distant from the side edges of the door, the side edge portions of the door being free from the bar, means for adjusting the said free edge portions of the bar relatively to the central portion and relatively to said hinge bar, hinged floating bars above and below the hinge bars, and means for bodily adjusting the floating bars transversely relatively to the door body.

5. A door comprising a body, a hinge bar, means connecting said bar and door body and sustaining the body against bodily transverse movement relatively to the bar, a hinged floating bar arranged across the body and adapted to be pressed against the same, adjusting means associated with said floating bar and body to adjust the floating bar transversely relatively to the body, and latching means mounted on a relatively fixed support and movable into engagement with said bars to force the door to a tightly closed position.

[Claims 6 to 14 not printed in the Gazette.]

1,167,323. MACHINE FOR IMPREGNATING MATCHES. JAMES H. WEAVER and ALVIN D. WELKER, Wadsworth, Ohio, assignors to The Ohio Match Company, Wadsworth, Ohio, a Corporation of Ohio. Filed Jan. 11, 1913. Serial No. 741,601. (Cl. 144—60.)



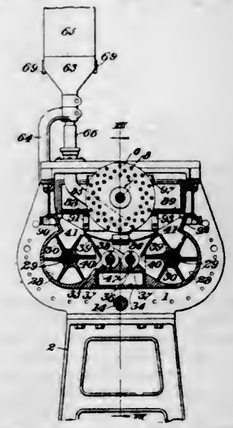
1. In a machine for impregnating match splints with a material which will render them non-glowing after the matches have been ignited and extinguished, an endless traveling splint carrier, and a polygonal roller about which the carrier passes and by which the said carrier is momentarily detained over the impregnating bath, combined with the said impregnating bath, means to move said bath toward and away from the detained splints, means to keep the impregnating bath supplied with impregnating material, and an absorbent pad interposed in the path of movement of the carrier as it leaves the bath.

2. In a machine for impregnating match splints with a material which will render them non-glowing after the matches have been ignited and extinguished, an endless traveling splint carrier, and a polygonal roller about which the carrier passes and by which the splint carrier is momentarily detained over the impregnating bath, combined with the said impregnating bath, means to move said bath toward and away from the detained splints, means to keep the impregnating bath supplied with impregnating material, and a hollow perforated roller covered with moisture-absorbing material interposed in the path of movement of the carrier as it leaves the bath.

3. In a machine for impregnating match splints with a material which will render them non-glowing after the matches have been ignited and extinguished, an endless traveling splint carrier, and a polygonal roller about which the carrier passes and by which the said carrier is momentarily detained over the impregnating bath, combined with the said impregnating bath, means to move said bath toward and away from the detaining splints, means to keep the impregnating bath supplied with impregnating material, and a hollow absorbent pad interposed in the path of movement of the carrier as it leaves the bath and having an exhaust mechanism arranged within it for the removal of the impregnating material absorbed by the pad.

4. In a machine for impregnating match splints with a material which will render them non-glowing after the matches have been ignited and extinguished, an endless traveling splint carrier, and a polygonal roller about which the carrier passes and by which the splint carrier is momentarily detained over the impregnating bath, combined with the said impregnating bath, means to move said bath toward and away from the detained splints, means to keep the impregnating bath supplied with impregnating material, a hollow absorbent pad interposed in the path of movement of the carrier as it leaves the bath and having an exhaust mechanism arranged within it for the removal of the impregnating material absorbed by the pad, and means to connect the exhaust with the bath to return the material for reuse in the bath.

1,167,324. MACHINE FOR IMPREGNATING MATCH-STICKS. EDWIN J. YOUNG and ALVIN D. WELKER, Wadsworth, Ohio, assignors to The Ohio Match Company, Wadsworth, Ohio, a Corporation of Ohio. Filed Feb. 10, 1915. Serial No. 7,450. (Cl. 91—44.)



1. In a machine for impregnating match sticks, a rotary discous distributer, a body in which it is mounted, rotary agitators flanking said distributer, means interposed between the agitators to insure pulverulence of the impregnating material and its delivery to the agitators, and means to supply powdered impregnating material to the agitators.

2. In a machine for impregnating match sticks, a rotary discous distributer, a body in which it is mounted, means to vibrate said distributer longitudinally, rotary agitators flanking said distributer, means interposed between the agitators to insure pulverulence of the impregnating material and its delivery to the agitators, and means to supply powdered impregnating material to the agitators.

3. In a machine for impregnating match sticks, a rotary discous distributer, a body in which it is mounted, rotary agitators flanking said distributer, means interposed between the agitators to insure pulverulence of the impregnating material and its delivery to the agitators, means to vibrate said means for insuring pulverulence, and means to supply powdered impregnating material to the agitators.

4. In a machine for impregnating match sticks, a rotary discous distributer, a body in which it is mounted, rotary agitators flanking said distributer, means interposed between the agitators to insure pulverulence of the impregnating material and its delivery to the agitators, and means to supply powdered impregnating material in regulated quantity to the agitators.

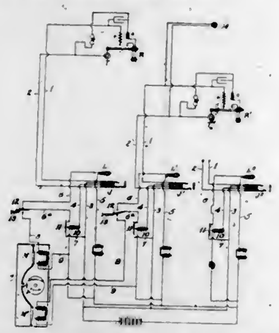
5. In a machine for impregnating match sticks, a rotary discous distributer, a body in which it is mounted, rotary agitators flanking said distributer, spirals interposed between the agitators to insure pulverulence of the impregnating material and its delivery to the agitators, and means to supply powdered impregnating material to the agitators.

[Claims 6 to 19 not printed in the Gazette.]

1,167,325. COMBINED CENTRAL-ENERGY TELEPHONE AND WATCHMAN'S-CLOCK SYSTEM. LEWIS AIRHART, West Reading, Pa., assignor of one-half to The Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1913. Serial No. 804,624. (Cl. 234—37.5.)

1. A combined central energy telephone and watchman's clock system having a common circuit and source of current, circuit-closing means at stations on said circuit, separate signal relays for said stations at a central station each provided with a signal-cut-out switch, and a watchman's clock device adapted to be thrown into operative

connection with any one of said relays by signal-cut-out movement of the corresponding switch.



2. A combined central energy telephone and watchman's clock system having a common circuit and source of current, separate telephone-operated signal relays for the stations on said circuit each provided with a signal-cut-out switch, and a watchman's clock device adapted to be thrown into operative connection with any one of said telephone-operated relays by signal-cut-out movement of the corresponding switch.

3. A combined central energy telephone and watchman's clock system having a common circuit and source of current, separate telephone-operated signal relays for the stations on said circuit each provided with a signal-cut-out switch, and a watchman's clock device comprising an electro-magnet wound to equal resistance with the signal device and adapted to be thrown into operative connection with any one of said telephone-operated relays by signal-cut-out movement of the corresponding switch.

1,167,326. FLEXIBLE WATERPROOF LEATHER AND METHOD OF MAKING IT. JOHN WESLEY BARBER, Newton, Mass. Filed Oct. 7, 1910, Serial No. 585,795. Renewed July 14, 1913. Serial No. 779,006. (Cl. 149—6.)

1. The method of rendering leather pliable and waterproof, consisting in immersing it successively in dissimilarly proportioned compositions of petrolatum and paraffin, the proportion of petrolatum in one composition being in excess, to impart flexibility to the leather, and the proportion of paraffin in the succeeding composition being considerably in excess of that in the preceding composition, to increase the durability of the resistance to moisture and to confine the before-applied composition.

2. The method of rendering leather pliable and waterproof, consisting in immersing it successively in dissimilarly proportioned compositions of petrolatum and paraffin, the proportion of paraffin in the composition used for the second immersion being greatly in excess of that in the first used composition, to increase the durability of the resistance to moisture.

3. The method of rendering leather pliable and waterproof, consisting in impregnating substantially the entire body of the leather by a composition consisting of petrolatum and paraffin in substantially the proportions of three parts of the former to one of the latter, and then impregnating the surface portions of the leather by a composition consisting also of petrolatum and paraffin in substantially or nearly equal parts.

4. As an article of manufacture, leather impregnated with petrolatum and paraffin, the proportion of the paraffin relatively to the petrolatum being greater in the surface portions of the leather than in the intermediate or body portion.

5. The method of rendering leather pliable and waterproof, consisting in impregnating it successively with dissimilarly proportioned compositions of hydrocarbons possessing respectively the qualities of imparting flexibility to the leather and waterproofing it, the proportion of the hydrocarbon which possesses waterproofing qualities being in excess in the later used composition over that in the previously applied composition.

[Claim 6 not printed in the Gazette.]

1,167,327. FLEXIBLE AND WATERPROOF POROUS MATERIAL AND METHOD OF MAKING THE SAME. JOHN WESLEY BARBER, Newton, Mass. Filed June 9, 1913. Serial No. 772,716. (Cl. 91—68.)

1. The method of waterproofing flexible porous material, consisting in impregnating it successively with differently proportioned compositions of waterproofing substances of the characteristics specified and containing the same ingredients, the last impregnation causing the porous material to absorb the last applied composition and to combine it with and confine the previously applied composition.

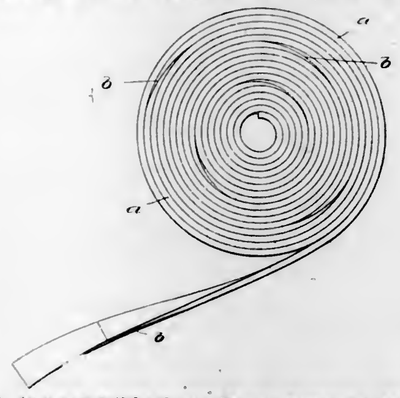
2. The method of waterproofing leather and increasing its flexibility, consisting in impregnating it successively with differently proportioned compositions of waterproofing substances of the characteristics specified and containing the same ingredients, having such related natures or characteristics as not to be antagonistic to each other, the last impregnation causing the leather to absorb the last applied composition and to blend it with and confine the previously applied composition in the body of the leather.

3. As an article of manufacture, flexible porous material impregnated with differently proportioned waterproofing compositions of the characteristics specified and containing the same ingredients, the last applied waterproofing composition being absorbed by the porous material and confining the other impregnating composition within the body of the porous material.

4. As an article of manufacture, leather impregnated successively with differently proportioned compositions of waterproofing substances of the characteristics specified and containing the same ingredients and having such related natures or characteristics as not to be antagonistic to each other, the material of the last impregnation being absorbed by the leather and blended with the previously applied composition, and confining the latter in the body of the leather.

5. As an article of manufacture, leather impregnated with a plurality of waterproofing compositions including a crystalline substance, the last applied composition having a larger proportion of the crystalline substance than the preceding composition, the purpose thereof being to blend with and confine the preceding composition, and to provide a filling for the leather which will prevent the passage of water through holes made by a needle and thread.

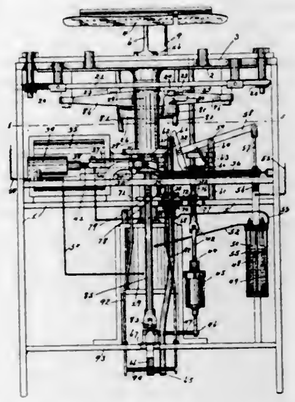
1,167,328. WATERPROOF LEATHER WELTING. JOHN W. BARBER, Newton, Mass. Original application filed Oct. 7, 1910, Serial No. 585,795. Renewed July 14, 1913, Serial No. 779,006. Divided and this application filed Apr. 14, 1915. Serial No. 21,357. (Cl. 36—78.)



1. As a new article of manufacture, waterproof leather welting consisting of a plurality of strips cemented together, the said welting having sufficient pliability to enable it to pass through the welt guide of a shoe sewing machine without being moistened, the welting also having sufficient strength to enable it to be secured in the ordinary manner.

2. As a new article of manufacture, a welt of leather formed of pieces united end to end and waterproofed substantially as shown and described.

1,167,329. FOLDING-MACHINE. WALTER J. BEATTIE, Cohoes, N. Y., assignor, by mesne assignments, to Beattie Manufacturing Company, Cohoes, N. Y., a Corporation of New York. Filed Apr. 23, 1915. Serial No. 23,369. (Cl. 223—55.)



1. In a folding-machine, and in combination, a bed; a templet movable toward and from the bed; infolders movable inwardly and outwardly over the bed; a pair of solenoids, one having a core operatively connected with the templet, and the other having a core operatively connected with the infolders; and switch-mechanism having means whereby the electric circuits of the respective solenoids are successively closed.

2. In a folding-machine, and in combination, a bed; a templet movable toward and from the bed; infolders movable inwardly and outwardly over the bed; a pair of solenoids, one having a core operatively connected with the templet, and the other having a core operatively connected with the infolders; and switch-mechanism controlling electric circuits of the respective solenoids and having contacts arranged successively whereby the solenoid connected with the templet is energized in advance of the solenoid connected with the infolders.

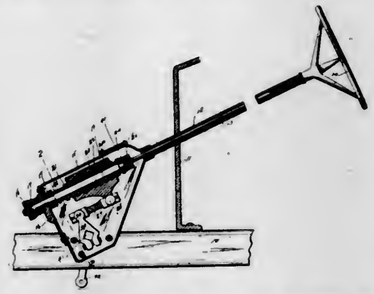
3. In a folding-machine, and in combination, a bed; a templet movable toward and from the bed; infolders movable inwardly and outwardly over the bed; a pair of solenoids, one having a core operatively connected with the templet, and the other having a core operatively connected with the infolders; switch-mechanism controlling the electric circuits of the respective solenoids and having a pair of successively arranged switch-members connected with the respective solenoids, and a movable switch-member engageable successively with said successively arranged switch-members, foot-actuated mechanism for moving said movable switch-member into engagement with the successively arranged switch-members; a stop adapted to arrest the movement of the foot-actuated mechanism after the movable switch member has engaged the first, and before it has engaged the other, of the successively arranged switch-members; and stop-releasing mechanism actuated by movement of the core of the first-energized of said solenoids.

4. In a folding-machine, and in combination, a bed; a templet movable toward and from the bed; infolders movable inwardly and outwardly over the bed; a solenoid having a core operatively connected with the templet adapted to force the templet down upon the bed when the solenoid is energized; and a dash-pot arranged to cushion the engagement of the templet with the bed.

5. In a folding-machine, and in combination, a bed; a templet movable toward and from the bed; infolders movable inwardly and outwardly over the bed; a solenoid having a core operatively connected with the infolders adapted to force the infolders inwardly when the solenoid is energized; a spring for imparting a return movement to the infolders; and a dash-pot arranged to cushion the return movemnt of the infolders.

[Claims 6 to 12 not printed in the Gazette.]

1,167,330. ADJUSTABLE SCREW GEARING. CARL E. BISHOP and IRA J. BISHOP, Mitchellville, Iowa. Filed Oct. 6, 1913. Serial No. 793,959. (Cl. 74—36.)



1. In a device of the class described, a casing, a steering rod extended through the casing and rotatably mounted therein, a two piece worm gear mounted on said rod, one part being fixed on the rod and the other part being spaced from the first part and slidably but non-rotatably mounted on the rod, a nut on said worm gear, adjustable means on said rod for moving the second part of the worm gear toward the fixed part thereof, and suitable guides for supporting said nut on said casing.

2. In a device of the class described, a casing, a steering rod extended through the casing and rotatably mounted therein, a two piece worm gear mounted on said rod, one part being fixed on the rod and the other part being spaced from the first part and slidably but non-rotatably mounted on the rod, and adjustable means on said rod for moving the second part of the worm gear toward the fixed part thereof, a nut on said worm gear, and adjustable guide devices on opposite sides of said nut for slidably mounting said nut on said casing.

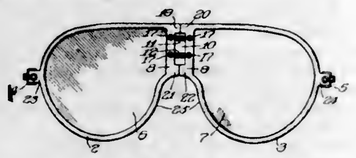
3. In a device of the class described, a casing, a steering rod extended through the casing and rotatably mounted therein, a two piece worm gear mounted on said rod, one part being fixed on the rod and the other part being spaced from the first part and slidably but non-rotatably mounted on the rod, a nut on said worm gear, adjustable means on said rod for moving the second part of the worm gear toward the fixed part thereof, said nut and said casing being provided with coacting guide members for supporting the nut against rotation while permitting it to slide parallel with the rod, part of said guide members being adjustable toward and from the rod.

1,167,331. FLEXIBLE GOGGLES. HERMAN J. BRENNECKE, Chicago, Ill., assignor of one-half to Robert Malcolm, Chicago, Ill. Filed Aug. 6, 1915. Serial No. 43,935. (Cl. 88—41.)

1. The combination with a pair of lenses, of lugs on each lens which contact with similar lugs on the other lens to form a bridge and a coiled spring container-space, and the coiled springs, the latter suporting said lugs against each other.

2. The combination with a pair of lenses of continuous edge or rim portions which at the adjacent portions of said lenses form a nose-piece and mutual support lugs in

the upper horizontal plane of said lenses, and a pair of coiled springs between said adjacent edges having ends connecting said edges.



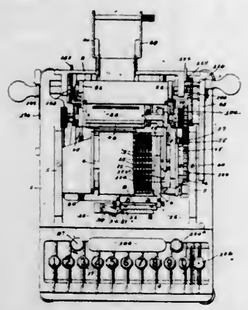
3. The combination with a pair of lenses, of rims or edges therefor which have meeting portions that form a nose-piece or nose-space, and similar meeting portions above the nose-piece portions which balance the latter, and means supporting said meeting portions against each other.

4. The combination with a pair of lenses having on the adjacent portions of the rims or edges upper and lower contacting lugs, and a plurality of coiled spring connections arranged in different horizontal planes between said upper and lower contacting lugs.

5. The combination with the rims or edges of a pair of lenses, of an upper pair of meeting lugs, a lower pair of meeting lugs, the latter forming a nose-contacting portion, and flexible connecting means for said lenses arranged between said upper and said lower pairs of lugs.

[Claim 6 not printed in the Gazette.]

1,167,332. CALCULATING-MACHINE. WILLIAM H. BROWN, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 13, 1913. Serial No. 741,786. (Cl. 235—60.)



1. In a calculating machine, a series of controlling wheels movable laterally to the left into denominational positions and about their axes into numerical positions, calculating wheels movable into and out of connection with the controlling wheels, a carriage for the calculating wheels, an actuating member arranged coaxially with the controlling wheels, connections between said member and the controlling wheels operating to return the wheels about their axes to their starting positions, and to the left out of their denominational positions, and connections between said member and the carriage to control the movement thereof, substantially as and for the purpose described.

2. In a calculating machine, a series of controlling wheels movable laterally to the left into denominational positions and about their axes into numerical positions, calculating wheels movable into and out of connection with the controlling wheels, a shaft on which the controlling wheels are loosely mounted, a carriage for the calculating wheels, an actuating member including a sleeve mounted on the shaft and connected thereto to rock the same, the shaft having means thereon connected to the controlling wheels to return the same about their axes to their starting positions, and means operated by the sleeve for moving the controlling wheels to the right out of their denominational positions and also means for controlling the movement of the carriage, substantially as and for the purpose specified.

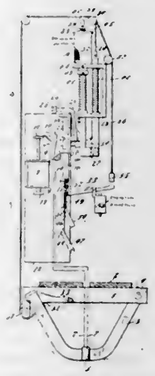
3. In a calculating machine, a series of controlling wheels movable laterally to the left into denominational positions and about their axes into numerical positions, calculating wheels movable into and out of connection with the controlling wheels, a platen movable toward and from the controlling wheels, carriages for the calculating wheels and the platen, an actuating member arranged coaxially with the controlling wheels and connected to said controlling wheels to return the same about their axes to their starting positions and to the right out of their denominational positions, and connections between said member and the carriages to control the movements thereof, substantially as and for the purpose set forth.

4. In a calculating machine, a series of controlling wheels movable laterally to the left into denominational positions and about their axes into numerical positions, calculating wheels movable into and out of connection with the controlling wheels, a platen movable toward and from the controlling wheels, carriages for the calculating wheels and the platen, an actuating member arranged coaxially with the controlling wheels and connected to said wheels to move the same about their axes to their initial position, and said member having cams thereon operating to move the controlling wheels to the right out of their denominational positions and coacting with power transmitting means actuating said carriages, substantially as and for the purpose described.

5. In a calculating machine, a series of controlling wheels movable laterally to the left into denominational positions and about their axes into numerical positions, calculating wheels movable into and out of connection with the controlling wheels, a platen movable toward and from the controlling wheels, a shaft on which the controlling wheels are loosely mounted, carriages for the calculating wheels and the platen, an actuating member including a sleeve mounted on the shaft and connected thereto to rock the shaft, power transmitting connections between the shaft and the controlling wheels, connections operated by the sleeve to move the controlling elements to the right out of their denominational positions, and other connections operated by said sleeve for controlling the operation of the carriages, substantially as and for the purpose specified.

[Claims 6 to 36 not printed in the Gazette.]

1,167,333. SYSTEM FOR CONTROLLING THE MOVEMENTS OF VEHICLES. FRANK E. BUTTON, New York, N. Y. Filed Mar. 28, 1912. Serial No. 686,752. (Cl. 246—58.)



1. In combination, a car or train, train controlling means thereon, operating means for said train controlling means located on the car or train, time controlled means on said car or train for controlling the effectiveness of said operating means and means located along the trackway controlling the time controlled means and the operating means.

2. In combination, a car or train, train controlling means thereon, operating means for said train controlling means located on the car or train, time controlled means on said car or train for controlling the effectiveness of said operating means and means located along the trackway defining a definite space interval controlling the time controlled means and the operating means.

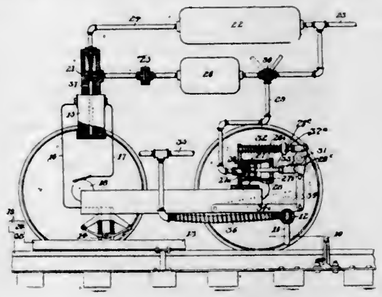
3. In combination, a car or train, a train controlling means, means for operating the same comprising a device along the trackway, time controlled means on the car for controlling the effectiveness of said operating means, and means along the trackway for setting said time controlled means in operation before the train reaches said device.

4. In combination, a car or train, a train controlling device thereon including a movable arm, operating means for said device located on said car or train and including an arm coacting with said first-mentioned arm, and time controlled means also located on the car or train for controlling the co-action of the arms with each other.

5. In combination, a car or train, train controlling means thereon comprising operating means and time controlled means for controlling the effectiveness of said operating means, means spaced along the trackway co-acting with said train controlling means for effecting the operation of said time controlled means, and for later causing said operating means to act.

[Claims 6 to 39 not printed in the Gazette.]

1,167,334. CONTROLLING APPARATUS FOR RAILWAY CARS OR TRAINS. LLOYD V. LEWIS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 7, 1912. Serial No. 713,838. (Cl. 246—58.)



1. An apparatus for governing railway cars or trains comprising a trip located adjacent the trackway, a device carried by a car or train and adapted to engage with the said trip to control the speed of the car or train, time-controlled means carried by the car or train for moving the said device out of position to engage with the said trip, and means located adjacent the trackway for setting said time-controlled means into operation at a predetermined distance before the car or train reaches the said trip.

2. A speed control apparatus for cars or trains traveling along a trackway, comprising apparatus on the car or train for controlling the speed thereof, a device on the car or train for operating said apparatus, means adjacent the trackway for engaging said device to have it operate said apparatus, mechanism also on the car or train for moving the device to a position in which it cannot be operated by the said means, said mechanism requiring time for its operation, and other means adjacent the trackway for starting the operation of said mechanism so that the car or train may proceed at a safe speed between the two said means.

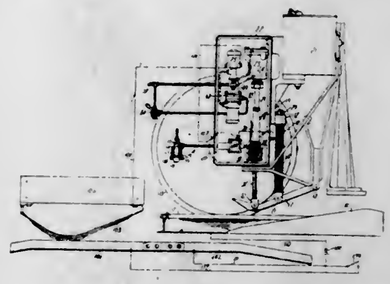
3. A speed control apparatus for cars or trains traveling along a trackway having in combination means on the car or train for controlling the speed thereof, a device on the car or train for operating said means and having an operative and an inoperative position, two devices located in the trackway, one of which will engage the device on the car or train, and the other of which causes the device on the car or train to be moved to the inoperative position if the car or train is proceeding at a safe speed between the two said devices.

4. A speed control apparatus for railways comprising a signal adapted to indicate to a driver of a car or train a plurality of permissive speeds, a trip located adjacent the trackway, a device carried by the car or train and adapted to coöperate with the trip to control the speed of the car or train, means carried by the car or train for rendering the said device ineffective to coöperate with the trip said means requiring a predetermined period of time for operation, and means located adjacent the trackway and controlled in accordance with the speed indicated by the signal for setting the other said means into operation at one of a plurality of distances before the car or train reaches the trip, said distance depending upon the speed indicated by the signal.

5. A speed control apparatus for railways comprising a signal adapted to indicate to a driver of a car or train a plurality of permissive speeds, a trip located adjacent the trackway, a device carried by the car or train and adapted to coöperate with the trip to control the speed of the car or train, means carried by the car or train for rendering the said device ineffective to coöperate with the trip, said means requiring a predetermined period of time for operation, a plurality of conductor sections extending along the trackway and terminating at different distances in the rear of the said trip, means controlled in accordance with the speed indicated by the signal for energizing one or another of said conductor sections, a second device carried by the car or train and adapted to coact with the conductor sections, and means carried by the car or train for setting into operation the first-named means when the said second device coacts with a conductor section which is energized.

[Claims 6 to 26 not printed in the Gazette.]

1,167,335. RAILWAY-TRAFFIC-CONTROLLING APPARATUS. LLOYD V. LEWIS, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 713,838, filed Aug. 7, 1912. This application filed Feb. 13, 1913. Serial No. 748,092. (Cl. 246—59.)



1. In combination, a railway track, a vehicle, adapted to travel thereon, a trip located in the trackway, an arm on the vehicle biased to position for engagement with the trip, a member adapted to move the arm out of said engaging position against the bias but to permit similar movement of the arm by the trip without causing movement of said member, means for moving said member, and means operated by relative movement of said arm and said member for controlling the vehicle.

2. In combination, a railway track, a vehicle, adapted to travel thereon, a trip located in the trackway, an arm on the vehicle biased to position for engagement with the trip, means for moving the arm out of said engaging po-

sition against its bias and for permitting movement of the arm by the trip in the same direction relative to said means, and means controlled by said movement of the arm relative to its moving means for governing the vehicle.

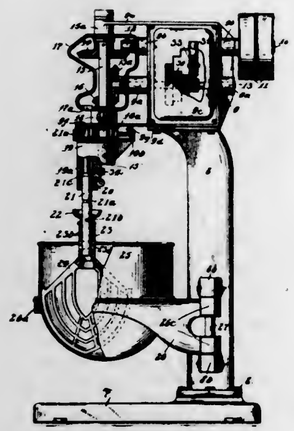
3. In combination, a railway track, a vehicle adapted to travel thereon, a trip in the trackway, two members on the vehicle, means on the vehicle operated by the trip for moving one of said members relative to the other, means on the vehicle for moving said members simultaneously out of position for movement of the one member by the trip, a third member on the vehicle moved by the said movement of one of the first two members relative to the other, the movement of said third member being in a lateral direction with relation to the movements of the first two members, and means operated by said lateral movement of the third member for controlling the vehicle.

4. In combination, a railway track, a vehicle adapted to travel thereon, a trip located in the trackway, an arm on the vehicle adapted to engage the trip and to be moved thereby, a member on the vehicle moved by said movement of the arm, a second member on the vehicle, means for causing simultaneous movements of said two members or for permitting movement of the first member relative to the second member, a third member moved laterally by said relative movement but not moved laterally by said simultaneous movement of the first two members, and means operated by said third member for controlling the vehicle.

5. In combination, a railway track, a vehicle, adapted to travel thereon, a trip located in the trackway, an arm on the vehicle biased to position for engagement with the trip, a member adapted to move the arm out of said engaging position against the bias but to permit movement of the arm in the same direction by the trip without causing movement of said member, means operated by relative movement of said arm and said member for controlling the vehicle, a source of fluid pressure on the vehicle, a cylinder and a piston one of which is operatively connected with said member, and means for admitting fluid pressure to the cylinder to cause movement of the arm out of position for engagement with the trip.

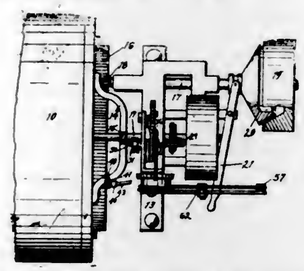
[Claims 6 to 33 not printed in the Gazette.]

1,167,336. BEATER. ELMER A. CLARK, Joliet, Ill. Filed Feb. 28, 1913. Serial No. 751,247. (Cl. 107—35.)



In a beater comprising a standard and a kettle mounted thereon, a whip extending into said kettle, means for rotating said whip on its vertical axis, means for bodily moving whip concentric to said kettle, and means for yieldingly connecting said whip to said driving means.

1,167,337. INTERMITTENT DRIVING MECHANISM. HOWARD M. CROCKER, Nora Springs, Iowa, assignor to Minnetonna Company, a Corporation. Filed Oct. 20, 1913. Serial No. 796,360. (Cl. 74—54.)



1. In a device of the class described, the combination of a frame, a rotary member, a bracket on the frame, a toothed wheel mounted on the bracket, a rod mounted to slide in said bracket, toward or from said rotary member, having an extension at one end, at an angle to the body thereof, means for fixing said rod in any position of its sliding movement, a pawl operatively mounted with relation to said rod to coact with said wheel and means on said rotary member for engaging said extension.

2. In a device of the class described, the combination of a frame, a rotary member thereon, a bracket on the frame, a toothed wheel mounted thereon, a rod mounted to slide in said bracket, toward or from said rotary member, having an extension at one end, at an angle to the body thereof, means for fixing said shaft in any position of its sliding movement, a pawl operatively mounted with relation to said rod to coact with said wheel, and means designed to be adjustably mounted on said rotary member, for intermittently engaging said extension.

3. In a device of the class described, a machine having a stationary, and a rotating part, a bracket on the stationary part, a ratchet wheel mounted on said bracket, a rod mounted to slide in said bracket having an extension at one end at an angle to the body of the rod, means for fixing said rod in any position of its sliding movement against longitudinal movement, an arm adjustably mounted on said rod, a pawl pivoted to said arm to coact with said ratchet wheel and means on said rotary part for engaging said extension.

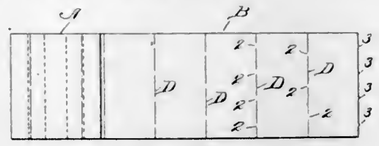
4. In a device of the class described, a machine having a stationary and a rotating part, a bracket on the stationary part, a ratchet wheel mounted on said bracket, a rod mounted to slide in said bracket having an extension at one end at an angle to the body of the rod, means for fixing said rod in any position of its sliding movement against longitudinal movement, an arm adjustably mounted on said rod, a pawl pivoted to said arm to coact with said ratchet wheel, and adjustable means on said rotating part for engaging said extension once every revolution of said part for thereby operating said pawl for causing it to move said wheel a certain distance.

5. In a device of the class described, a bracket, a toothed wheel mounted thereon, a rod mounted to slide in said bracket, having an extension at one end, at an angle to the body thereof, means for fixing said rod in any position of its sliding movement, a pawl operatively mounted with relation to said rod to coact with said wheel, means for limiting the rotary movement of said rod away from the ratchet wheel, a rotary member and means thereon for engaging said extension.

[Claims 6 to 8 not printed in the Gazette.]

1,167,338. SAFETY SEALING-TAPE. CHARLES H. CROWELL, Swampscott, Mass. Filed Feb. 14, 1913. Serial No. 748,298. (Cl. 229—49.)

1. A sealing tape for cartons comprising a strip of fibrous material having a series of weakened lines extending transversely of the tape from side to side, forming a series of unweakened sections extending longitudinally of the tape, said weakened portions having strength sufficient to hold the strip together while being applied to a carton, but not having sufficient strength to hold the strip together while being stripped off.

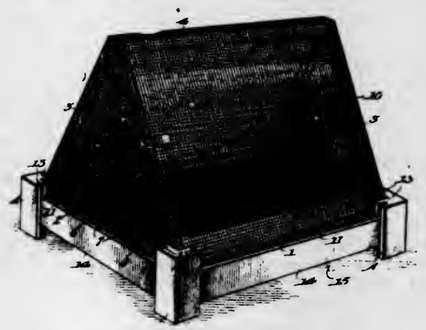


2. A sealing tape for cartons comprising a strip of fibrous material, a series of lines of transverse cuts extending from one side of the material to the other, each of said cuts in said lines of cuts being separated to leave a portion of the material intact, said lines of cuts forming a series of unweakened sections extending longitudinally of the tape, the intact portions having sufficient strength to hold the strip together while being applied to a carton, but not sufficient strength to hold the strip together while being stripped therefrom.

3. In a sealing tape for cartons, the combination of a strip of fibrous material divided into a plurality of sections extending longitudinally of the tape by a plurality of severed portions, said severed portions being separated by unsevered portions of sufficient strength to hold the strip together while being applied to a carton, and a water-proof coating on one side of said strip covering the unserved portions thereof.

4. In a sealing tape for cartons, the combination of a strip of fibrous material, a series of transverse cuts extending from one side of the material to the other, each of said cuts in said lines of cuts being separated to leave a portion of the material intact, said lines of cuts forming a series of unweakened sections extending longitudinally of the tape, the intact portions having insufficient strength to hold the strip together while being stripped from the carton, a coating of adhesive on one side of said strip, and a wax water-proof coating on the other side of said strip covering the unsevered portions thereof.

1,167,339. FLY-TRAP. CHARLES MEDFORD CURRY, Douglas, Ariz., assignor of one-fourth to Alcinous Young Wright, Douglas, Ariz. Filed Oct. 10, 1914. Serial No. 866,077. (Cl. 43—22.)

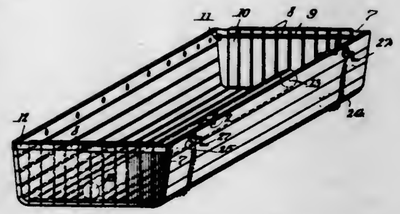


1. A trap comprising a base composed of base bars and transverse bars, means for supporting the base away from the surface on which the trap is placed, two frames, one within the other supported on the base, said frames having reticulated material thereon, the inner frame having an opening at top and bottom, doors for closing the space at the bottom between the two frames, and means at the outer edge of the base for regulating the size of the space at the bottom and which with the doors create a darkened area on both sides of the light area beneath the bottom of the inner frame.

2. A trap, the base of which has an opening therein, means for supporting the base away from the surface on which the trap is placed, and means connected with the base for regulating the size of the space between the base and surface on which it rests for creating a darkened area between the opening and a side of the base.

3. In a trap, the combination of corner posts having vertical grooves therein, bars secured to the posts, and two A-shaped frames, one within the other supported by these bars, said frames having reticulated material thereon, the inner frame open at top and bottom, means closing the bottom of the outer frame, and gates slidable in the vertical grooves of the posts for regulating the space between them and the surface on which the trap rests.

1,167,340. COLLAPSIBLE LIFE-BOAT. FRANK DOLEJSKA and LOUIS M. HERZIK, Houston, Tex., assignors of one-tenth to Frank Herzik and one-tenth to Louis Sonosky. Filed Oct. 22, 1914. Serial No. 867,987. (Cl. 9—2.)



1. A boat whose bottom and sides are formed of strips of inflexible material, said strips being arranged side by side and hinged together at their edges, so that said bottom and sides may be formed into a roll; flexible ends for said boat and cross braces arranged at each end of the boat, the respective braces being pivoted at their ends to opposite sides of the boat and being hinged at their center.

2. A boat whose bottom and sides are formed of adjacent strips of inflexible material hinged together at their edges so that said sides and bottom may be formed into a roll; a flexible fabric secured to said strips and forming an inner lining for said boat; flexible ends for the boat; end graces formed of sections hinged together, the opposite ends of each of said braces being pivoted to the opposite sides of said boat.

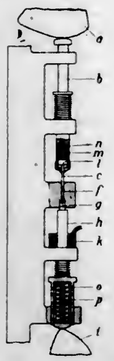
3. A boat whose bottom and sides are formed of strips of inflexible material hinged together at their edges so that said sides and bottom may be formed into a roll; a flexible fabric secured to said strips and forming an inner lining for said boat; flexible ends therefor; end braces formed of sections hinged together, the opposite ends of each of said braces being pivoted to the opposite sides of said boat, and means for detachably securing said boat to a vessel.

4. A boat whose bottom and sides are formed of strips of inflexible material, said strips being arranged side by side and hinged together at their edges, so that said bottom and sides may be formed into a roll; flexible ends for said boat and cross braces arranged at each end of the boat, the respective braces being pivoted at their ends to opposite sides of the boat and being hinged at their center, a reinforcement for each end fabric formed of vertical slats hinged at their lower ends to the corresponding bottom strips and having their upper ends fixed relative to each other and a brace rod at each end of the boat, said rods, each, being hinged at one end to one side of the boat and being detachably secured to the other side thereof, and securing said end reinforcement in vertical position.

5. A boat whose bottom and sides are formed of strips of inflexible material, said strips being arranged side by side and hinged together at their edges so that said bottom and sides may be formed into a roll; flexible ends

for said bottom, reinforcing means for said ends hinged to the bottom of the boat at each end, and cross braces arranged at each end of the boat, the respective braces being pivoted at their ends to opposite sides of the boat and being hinged at the center.

1,167,341. MECHANISM FOR UPSETTING HEADS ON FASTENING-PINS FOR ARTIFICIAL TEETH. KARL FINCKH, Berlin, and PAUL ALMSTEDT, Berlin-Baumschulenweg, Germany. Filed Oct. 24, 1914. Serial No. 868,541. (Cl. 10—11.)



1. In combination, in head upsetting mechanism for pins, a die having a vertical pin holding bore, an upsetting stamp below and an abutment stamp above the die, and means for first moving the upsetting stamp upwardly so as to close the bore below, then moving the abutment stamp downwardly into the bore and in contact with the pin, then further moving the upsetting stamp upwardly so as to upset the lower end of the pin, and finally moving both stamps downwardly so as to push the headed pin from the die.

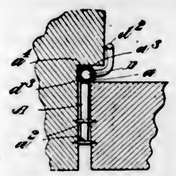
2. In combination, in head upsetting mechanism for pins, a die having a vertical pin holding bore, an upsetting stamp below and an abutment stamp above the die, a magnetizing solemold mounted on said upsetting stamp, and means for first moving the upsetting stamp upwardly so as to close the bore below, then moving the abutment stamp downwardly into the bore and in contact with the pin, then further moving the upsetting stamp upwardly so as to upset the lower end of the pin, and finally moving both stamps downwardly so as to push the headed pin from the die.

3. In combination, in head upsetting mechanism for pins, a die having a vertical pin holding bore, an upsetting stamp below said die, an abutment stamp above said die, a support with which said abutment stamp is slidably engaged said support having a stop, a spring tending to hold stop and abutment stamp apart, and means for first moving the upsetting stamp upwardly while the abutment stamp is in contact both with the pin and the stops of the support so as to upset the lower end of the pin and then simultaneously moving the support and the upsetting stamp downwardly the stamp being moved through a greater distance than the support so as to push the headed pin from the die.

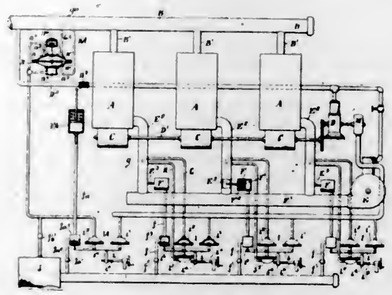
1,167,342. DOOR-SECURER. JAMES A. FRASER, Lowell, Mass. Filed Aug. 31, 1914. Serial No. 859,308. (Cl. 16—8.)

1. The combination of a shank having oppositely extending blades and having a perforation and a groove opening out of said perforation and a lever having a sliding fit in said perforation and provided with a tongue to engage said groove; to prevent said shank from turning about the axis of said lever.

2. The combination of a lever having a reduced and curved end-portion and an enlarged handle and a shank having a perforation through which said lever has a sliding fit, to enable said shank to be folded against the body of said lever.



1,167,343. FURNACE REGULATION. GEORGE H. GIBSON, Montclair, N. J. Filed Oct. 3, 1914. Serial No. 864,734. (Cl. 110—54.)



1. In a furnace a draft regulating device and in combination therewith means responsive to the volume of draft controlling said device and tending on a departure in the volume of draft from a predetermined standard to effect a progressive compensating adjustment of said device continuing until the draft returns to said standard.

2. In a furnace, the combination of means responsive to the rate at which fuel is fed into the furnace, means responsive to the volume of furnace draft and means jointly controlled thereby for regulating the ratio of fuel feed to the volume of draft.

3. The combination with a steam generating boiler, of a mechanical stoker therefor, means automatically responsive to the rate at which said stoker operates, means automatically responsive to the volume of boiler draft and a device jointly controlled by both of said means for regulating the draft.

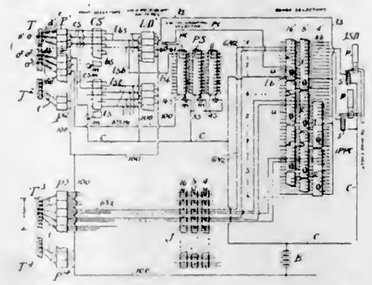
4. In a steam generating plant, the combination of means responsive to the rate at which steam is withdrawn from the plant, and coöperating means including a fuel feeding device, a draft regulating device, and a device responsive to the volume of draft for regulating the fuel feed and volume of draft in accordance with the rate at which steam is withdrawn from the plant.

5. In a boiler plant comprising a plurality of boiler furnaces, means separately regulating the combustion in the differnt furnaces and controlling means therefor including a device responsive to the joint rate of steam delivery from said furnaces, for proportionately varying the rate of combustion in the different furnaces according to variations in said rate of steam generation.

[Claims 6 to 16 not printed in the Gazette.]

1,167,344. AUTOMATIC ORGAN. MYRON C. BEMAN and FRANK A. PILCHER, Binghamton, N. Y., assignors to Beman Symphonic Organ Company, Binghamton, N. Y., a Corporation of New York. Filed Apr. 16, 1913. Serial No. 761,642. (Cl. 84—243.)

1. An orchestral musical instrument comprising a plurality of stops of sounding devices, each stop divided into a plurality of parts, a tracker bar, a range selector consisting of switching devices, note-control-connections extending in multiple between the tracker bar and said switching devices, means for actuating said switching devices, and connections from the tracker bar for energizing said means; whereby the said parts of stops may be connected interchangeably for operation from different positions on the tracker bar; and switching means extending between said energizing connections and said note-control-connections and when operated interchanging said connections with respect to the tracker bar.



2. An orchestral musical instrument comprising a plurality of stops of sounding devices and a tracker bar, a range selector for each stop comprising a plurality of switching devices arranged in groups having connections with said stop dividing it into separately operable parts, multiple note-control connections between the tracker bar and the said switches, each of said multiple note-control connections connecting through a switching device associated with a part of the stop in a different register, means controlled through the tracker bar for at will actuating the switches associated with any desired set of multiples, actuating connections therefor; and switches between said actuating connections on the one hand and said multiple note control connections on the other to interchange the connections of said actuating connections and said multiple note control connections to the tracker bar.

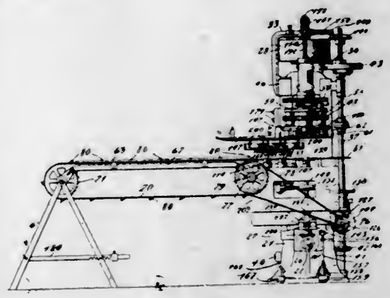
3. An orchestral musical instrument comprising a plurality of stops of sounding devices, and a common tracker bar; a plurality of normally inactive sets of note control connections extending in multiple from different sections of the tracker bar to each sounding device of each stop, each set being distributed to the sounding devices of its respective stop in a different register, and individual means for governing the connection of each individual set of multiples from the tracker bar to the sounding devices whereby the relation of the register of the sounding devices to different sections of the tracker bar may be varied automatically and at will.

4. An orchestral musical instrument comprising a plurality of stops of sounding devices, and a tracker bar, a plurality of normally inactive sets of note control connections extending in multiple between the tracker bar and the stops, a group of switches through which each set of connections is connected to its respective stop in a differnt pitch relation from the others, means for actuating said switches, together with actuating connections therefor governed from said tracker whereby any switch of any group or all the switches of any group may be energized to connect any part of a stop with any given part of said tracker.

5. An orchestral musical instrument comprising a plurality of stops of sounding devices, and a tracker bar, a plurality of sets of note control connections extending in multiple between said tracker and said stops, a group of switches connecting one set of multiple note control connections to a stop in different registers, a second group of switches connecting another set of the aforesaid multiples in other different registers to the same stop, means for actuating all of the switching devices, and sets of connections for actuating said actuating means extending in multiple to the actuating means of the respective groups of switches aforesaid.

[Claims 6 to 40 not printed in the Gazette.]

1,167,345. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, Bridgeport, Conn., a Corporation of New York. Filed Mar. 24, 1909. Serial No. 485,451. (Cl. 113—24.)



1. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of seaming mechanism which includes two members, means for rotating said members in unison, a seaming roller carried by one of said members out of work-engaging position when said members are rotated in unison, means for successively retarding and accelerating one of said members at intervals, and means whereby the position of said seaming roller relative to the supported can parts is varied by such retardation and acceleration.

2. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of seaming mechanism which includes two members, means for rotating said members in unison, a seaming roller carried by one of said members out of work-engaging position when said members are rotating in unison, means for successively retarding and accelerating rotation of the other member at intervals, and connecting means between said last-mentioned member and said seaming roller to effect engagement between the latter and the supported can parts when rotation of the variable-speed member is retarded.

3. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of seaming mechanism which includes two members, means for rotating said members in unison, a seaming roller carried by one of said members out of work-engaging position when said members are rotated in unison, means for successively retarding and accelerating rotation of one of said members at intervals, and connecting means between said seaming roller and the member not carrying the same to effect engagement between said roller and the supported can parts when the relative velocities of said members are varied by such retardation or acceleration.

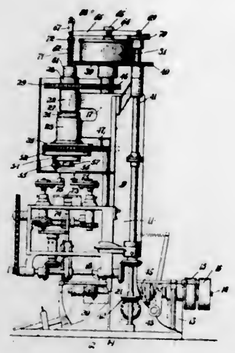
4. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of seaming mechanism which includes two members, means for rotating said members in unison, an arm pivoted to one of said members and carrying at its free end a seaming roller out of work-engaging position when said members are rotating in unison, means for successively retarding and accelerating one of said members at intervals, and connecting means between said arm and the member not carrying the same to oscillate said arm by said retardation and acceleration.

5. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of seaming mechanism which includes two members, means for rotating said members in unison, an arm pivoted to one of said members and carrying at its free end a seaming roller out of work-engaging position when said members are rotating in unison, means for successively retarding and accelerating rotation of the other member at intervals, and connecting means between

said arm and said last-mentioned member to oscillate said arm as said last-mentioned member is periodically retarded and accelerated.

[Claims 6 to 47 not printed in the Gazette.]

1,167,346. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, a Corporation of New York. Filed July 5, 1910. Serial No. 570,343. (Cl. 113—14.)



1. In a machine of the character described, the combination of a tool-carrier, a movable bearing therefor, means for actuating said carrier relative to its bearing, said carrier having limited freedom of bodily movement in its entirety relative to its actuating means, and means for imparting bodily movement to said bearing to regularly vary the path of movement of said carrier under influence of said actuating means.

2. In a machine of the character described, the combination of a tool-carrier, a movable bearing therefor, means for actuating said carrier relative to its bearing, said carrier having limited freedom of bodily movement in its entirety with relation to said actuating means, and means for moving said bearing in a fixed path to regularly vary the path of movement of said carrier to render operation of a tool thereon intermittently effective.

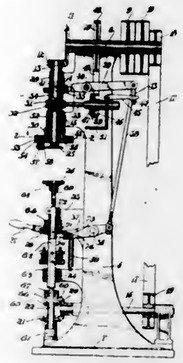
3. In a machine of the character described, the combination of a member carrying a plurality of tools, a movable bearing therefor, means for actuating said member relative to its bearing, said member having limited freedom of bodily movement in its entirety with relation to said actuating means, and means for moving said bearing to regularly vary the path of movement of said member to render operations of said tools intermittently and successively effective.

4. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of a rotatable member having a seaming tool mounted thereon, means for rotatively supporting and means for rotating said member, each of said last-mentioned means permitting movement of said member relative thereto and combining to cause and control such movement to regularly vary the position of said tool relative to said can parts.

5. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, of a rotatable member having a plurality of seaming tools mounted thereon, means for rotatively supporting and means for rotating said member, each of said last-mentioned means permitting movement of said member relative thereto and combining to cause and control such movement to vary intermittently and in regular succession the positions of said tools relative to said can parts.

[Claims 6 to 32 not printed in the Gazette.]

1,167,347. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed June 7, 1911. Serial No. 631,752. (Cl. 113—21.)



1. In a machine of the character described, the combination, with a circular eccentric, and a member concentrically mounted wtih respect to the axis of the eccentric, one of said elements being stationary and the other rotating, of a tool carrier journaled on said eccentric, and connecting means between said concentric member and said carrier to prevent relative rotation thereof and permit of relative lateral bodily movement of said carrier.

2. In a machine of the character described, the combination of a rotating circular eccentric, a tool carrier journaled thereon, a stationary member, and connecting means between said carrier and said member to hold the former against relative rotation with a freedom of lateral bodily movement.

3. In a machine of the character described, the combination, with a circular eccentric, and a member concentrically mounted wtih respect to the axis of the eccentric, one of said elements being stationary and the other rotating, of a tool carrier journaled on said eccentric and supported by said member for lateral bodily movement with relation thereto, and connecting means between said member and said carrier to hold the latter against relative rotation.

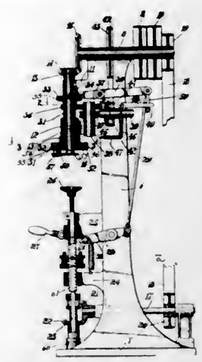
4. In a machine of the character described, the combination of a rotating circular eccentric, a tool carrier journaled thereon, a stationary member supporting said carrier for lateral bodily movement with relation thereto, and connecting means between said carrier and said member to hold the former against rotation.

5. In a machine of the character described, the combination, with a circular eccentric, and a member concentrically mounted wtih respect to the axis of the eccentric, one of said elements being stationary and the other rotating, of a tool carrier journaled on said eccentric, a plurality of tools on said carrier and all located on one side of said common axis, and connecting means between said concentric member and said carrier to prevent relative rotation thereof and permit of relative lateral bodily movement of said carrier.

[Claims 6 to 30 not printed in the Gazette.]

1,167,348. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed June 8, 1911. Serial No. 631,889. (Cl. 113—23.)

1. In a can heading machine, the combination, with means for supporting the assembled parts of the can to be headed, the seaming mechanism, and rotative means actuated from a constant source of power to advance and retract said seaming mechanism to and from work-engaging position, of means for accelerating rotative movement of said advancing and retracting means when the seaming mechanism is not in the work-engaging position.



2. In a can heading machine, the combination of a chuck, a seaming roller, rotative means for periodically bringing said elements into work-engaging position, and means for accelerating rotation of said rotative means when said elements are not in work-engaging position.

3. In a can heading machine, the combination, with a chuck, a seaming-roller support having a seaming roller mounted thereon, and rotative means for intermittently bringing said elements into work-engaging position, of means for accelerating the speed of said rotative means to accelerate the speed of relative movement of said elements toward and away from each other when not in work-engaging position.

4. In a can heading machine, the combination, with a chuck, a seaming roller, and rotative means for advancing and retracting said roller to and from work-engaging position with relation to said chuck, of means for varying the speed of rotation of said rotative means and thus the speed of the advancing and retracting movements of said roller.

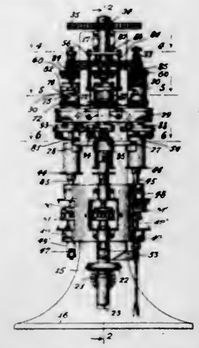
5. In a can heading machine, the combination, with a chuck, a seaming roller, and rotative means actuated from a constant source of power to advance and retract said roller to and from work-engaging position with relation to said chuck, of means for accelerating rotative movement of said advancing and retracting means when said roller is not in the work-engaging position.

[Claims 6 to 23 not printed in the Gazette.]

1,167,349. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed Sept. 29, 1913. Serial No. 792,291. (Cl. 113—24.)

1. In a can heading machine, the combination, with a traveling support for the assembled parts of a can to be headed, correspondingly traveling heading mechanism, and means for intermittently effecting a coöperative relationship therebetween to sustain and head an advancing can in transit, said heading mechanism operating continuously and the tools thereon being out of work-engaging positions, of disconnected means connectible to advance said tools to work-engaging positions, and means rendered operable through the medium of can parts interposed between said support and said mechanism to connect said tool-advancing means.

2. In a can heading machine, the combination, with a traveling support for the assembled parts of a can to be headed, correspondingly traveling heading mechanism, and means for intermittently effecting a coöperative relationship therebetween to sustain and head an advancing can in transit, said heading mechanism operating continuously and the tools thereon being out of work-engaging positions, of disconnected means connectible to advance said tools to work-engaging positions, and means rendered operable through the medium of can parts interposed between said support and said mechanism to connect said tool-advancing means, and means independent of the means for establishing such connection to continue the same until completion of the heading operation.



3. In a can heading machine, the combination, with a traveling support for the assembled parts of a can to be headed, and heading mechanism located essentially above and traveling with said support, of means for raising said support in transit to position said parts in sustained condition in said heading mechanism, said heading mechanism operating continuously and the tools thereon being out of work-engaging positions, disconnected means connectible to advance said tools to work-engaging positions, and means rendered operable through the medium of can parts interposed between said support and said mechanism to connect said tool-advancing means.

4. In a can heading machine, the combination, with a traveling support for the assembled parts of a can to be headed, and heading mechanism located essentially above and traveling with said support, of means for raising said support in transit to position said parts in sustained condition in said heading mechanism, said heading mechanism operating continuously and the tools thereon being out of work-engaging positions, disconnected means connectible to advance said tools to work-engaging positions, means rendered operable through the medium of can parts interposed between said support and said mechanism to connect said tool-advancing means, and means independent of the means for establishing such connection to continue the same until completon of the heading operation.

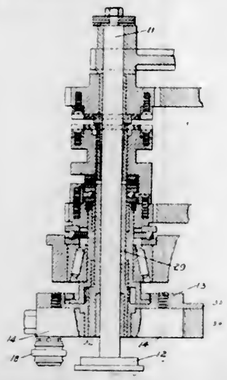
5. In a can heading machine, the combination, with a revolving support for the assembled parts of a can to be headed, correspondingly revolving heading mechanism, and means for intermittently effecting a coöperating relationship therebetween to sustain and head an advancing can in transit, said heading mechanism operating continuously and the tools thereon being out of work-engaging positions, of disconnected means connectible to advance said tools to work-engaging positions, and means rendered operable through the medium of can parts interposed between said support and said mechanism to connect said tool-advancing means.

[Claims 6 to 20 not printed in the Gazette.]

1,167,350. TOOL-CARRIER FOR CAN-HEADING MACHINES. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, a Corporation of New York. Filed Sept. 29, 1913. Serial No. 792,294. (Cl. 113—24.)

1. In a machine of the character described, the combination, with a seaming head, means for supporting therein the assembled parts of a can to be headed, and means for rotating one of said elements, of a tool-carrier having a plurality of tools thereon, said carrier having rigid connection with and forming a detachable part of said head, and means for imparting bodily movement to said head to

advance and retract said tools successively to and from work-engaging positions.



2. In a machine of the character described, the combination, with a seaming head, means for supporting therein the assembled parts of a can to be headed, and means for rotating said head, of a tool-carrier having rigid connection with and forming a detachable part of said head whereby a tool thereon is revolved around the supported can parts, and means for imparting bodily movement to said head independent of rotation thereof to advance and retract said tool to and from work-engaging position.

3. In a machine of the character described, the combination, with a seaming head, means for supporting therein the assembled parts of a can to be headed, and means for rotating said head, of a tool carrier having a plurality of tools thereon, said carrier having rigid connection with and forming a detachable part of said head whereby said tools are revolved around the supported can parts, and means for imparting bodily movement to said head independent of rotation thereof to advance and retract said tools successively to and from work-engaging positions.

4. In a machine of the character described, the combination, with a seaming head, means for supporting therein the assembled parts of a can to be headed, and means for rotating one of said elements, of an annular tool-carrier having rigid connection with and forming a detachable part of said head, a plurality of tools on said carrier located in proximity to each other on one side thereof, and means for imparting bodily movement to said head to advance and retract said tools successively to and from work-engaging positions.

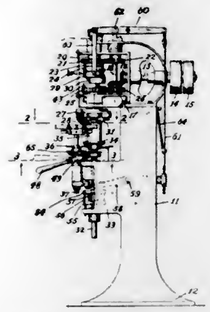
5. In a machine of the character described, the combination, with means for supporting the work, a seaming head, and means for rotating one of said elements, of a tool carrier in the form of a split ring rigidly and detachably secured to said head throughout a portion only of its length, a seaming tool mounted on said ring near the unsecured end thereof, and means for moving said head to advance and retract said tool to and from work-engaging position.

[Claims 6 to 11 not printed in the Gazette.]

1,167,351. CAN-HEADING MACHINE. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed Sept. 29, 1913. Serial No. 792,296. (Cl. 113—24.)

1. In a can heading machine, the combination, with a seaming tool and its actuating means, and means for engaging the assembled can parts and sustaining the same against the forces of the seaming operation, of means for conveying an assembled can body and head to and positioning the same in said engaging means, and a single member manually operable to first actuate said conveying means and then said engaging means.

2. In a can heading machine, the combination, with a seaming tool and its actuating means, and means for engaging the assembled can parts and sustaining the same against the forces of the seaming operation, of means for conveying an assembled can body and head to and positioning the same in said engaging means, means manually operable to first actuate said conveying means and then said engaging means, and means for holding said engaging means in engaging and sustaining condition after withdrawal of said actuating means and throughout the seaming operation.



3. In a can heading machine, the combination, with a seaming tool, means for engaging the assembled can parts and sustaining the same against the forces of the seaming operation, means comprising disconnected elements connectible to advance and retract said tool to and from work-engaging position during continuous operation thereof, and means for effecting such connection, of means for conveying an assembled can body and head to and positioning the same in said engaging means, and a single member manually operable to severally actuate said conveying means, said engaging means and said means for connecting the elements of said advancing and retracting means.

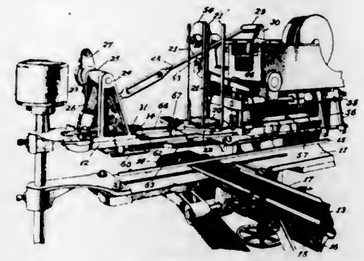
4. In a can heading machine, the combination, with a seaming tool, means for engaging the assembled can parts and sustaining the same against the forces of the seaming operation, means comprising disconnected elements connectible to advance and retract said tool to and from work-engaging position during continuous operation thereof, and means for effecting such connection, of means for conveying an assembled can body and head to and positioning the same in said engaging means, and means manually operable at one stroke to first actuate said conveying means and upon continuation of said stroke to actuate said engaging means and said means for connecting the elements of said advancing and retracting means.

5. In a can heading machine, the combination, with a seaming tool, means for engaging the assembled can parts and sustaining the same against the forces of the seaming operation, means comprising disconnected elements connectible to advance and retract said tool to and from work-engaging position during continuous operation thereof, and means for effecting such connection, continuing the same throughout the seaming operation and then restoring said condition of disconnection, of means for conveying an assembled can body and head to and positioning the same in said engaging means, and a single member manually operable to severally actuate said conveying means, said engaging means and said means for connecting the elements of said advancing and retracting means.

[Claims 6 to 37 not printed in the Gazette.]

1,167,352. AUTOMATIC ASSEMBLING AND FEEDING DEVICE FOR CAN-HEADING MACHINES. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed Sept. 29, 1913. Serial No. 792,290. (Cl. 113—14.)

1. In a device of the character described, the combination of means for advancing open containers in procession to permanent closing mechanism, means for retaining a supply of tops or covers, means for automatically applying one of said tops or covers to each container in transit, and means for rendering said advancing and applying means inoperative when the supply of tops or covers has become depleted.



2. In a device of the character described, the combination of means for advancing open containers in succession to the seaming mechanism, means for retaining a supply of tops or covers, means for automatically applying one of said tops or covers to each container in transit, and means for rendering said advancing and applying means inoperative when said supply of can tops has become depleted and in the absence of a container in position to be advanced.

3. In a device of the character described, the combination of means for advancing open containers in succession to the seaming mechanism, means for retaining a supply of tops or covers, a reciprocating member adapted to engage one of said tops or covers upon each forward stroke of reciprocation thereof and deliver the same in proper adjustment to an open container in transit, means for actuating said reciprocating member, said actuating means normally operating ineffectively, and means controlled by each moving container in turn to render operations of said actuating means effective.

4. In a device of the character described, the combination of means for advancing open containers in succession to the seaming mechanism, means for retaining a supply of tops or covers, a reciprocating member adapted to engage one of said tops or covers upon each forward stroke of reciprocation thereof and deliver the same in proper adjustment to an open container in transit, means for actuating said reciprocating member, and means for rendering operations of said actuating means ineffective upon depletion of the supply of tops or covers within said retaining means.

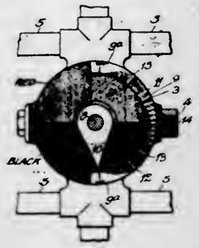
5. In a device of the character described, the combination of means for advancing open containers in succession to the seaming mechanism, means for retaining a supply of tops or covers, a reciprocating member adapted to engage one of said tops or covers upon each forward stroke of reciprocation thereof and deliver the same in proper adjustment to an open container in transit, means normally operating ineffectively for actuating said reciprocating member, means controlled by each moving container in turn to render operations of said actuating means effective and means for rendering the same again ineffective upon depletion of the supply of tops or covers in said retaining means.

[Claims 6 to 21 not printed in the Gazette.]

1,167,353. ANESTHETIC APPARATUS. ALBERT CHARLES CLARK, Chicago, Ill., assignor to A. C. Clark & Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1913. Serial No. 762,348. (Cl. 137—26.)

1. In an anesthetic apparatus, a valve device arranged to supply two different gases from different sources either alone or mixed in different proportions and including a valve handle and fixed and movable indicating elements, one of said elements being provided with complementary contrasting colored areas constituting scales for indicating at a glance the particular gas being supplied or the relative proportions of such gases.

2. In an anesthetic apparatus, a valve device arranged to supply two different gases from different sources either alone or mixed in different proportions and including a valve handle aranged for indication, and a casing having indicated thereon in contrasting colors two crescents overlapping each other.

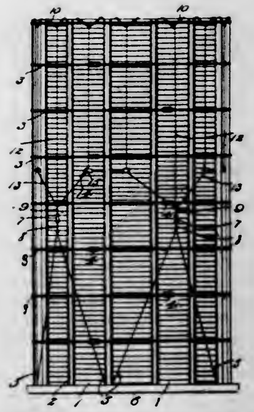


3. In an anesthetic apparatus, a valve device arranged to supply nitrous oxid and oxygen either alone or mixed in different proportions and including a valve handle arranged for indication and a casing colored on one-half to indicate the nitrous oxid side thereof and colored by a contrasting color on the other half to indicate the oxygen side thereof, said casing having at its margin everlapping crescents in contrasting colors.

4. In an anesthetic apparatus, a valve device arranged to supply two different gases from different sources either alone or mixed in different proportions and including a valve handle arranged for indication, and a casing provided with an upwardly projecting portion having indicated thereon in contrasting colors two overlapping crescents at its intermediate portion to indicate mixture of the two gases and substantially half crescents in still different contrasting color at its end portions.

5. In an anesthetic apparatus, a valve device arranged to supply nitrous oxid and oxygen either alone or mixed in different proportions and including a valve handle arranged for indcation, and a casing colored black on one half to indicate the nitrous oxid side thereof and colored red on the other half to indicate the oxygen side thereof, said casing being provided with a plate 9 having graduations to indicate "off" positions of the valve device, "N_2O" and "oxy" positions thereof and also having indicated thereon in contrasting colors two overlapping crescents to indicate mixture of the two gases.

1,167,354. SILO. CHARLES C. CRADY, Fort Worth, Tex. Filed Nov. 9, 1914. Serial No. 870,984. (Cl. 217—4.)



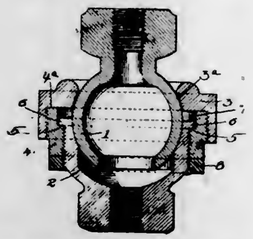
1. A silo constructed of vertical beams having vertical acute angular grooves cut in their inner corners,

boards horizontally disposed and having their ends cut to conform to said grooves and projected into said grooves, a cement base, and means for tightening said boards vertically consisting of turn-buckles, a cable operatively connected with each turn-buckle and both ends anchored in said cement base, bent rods engaging the top of each column of boards, one cable connected to each turn-buckle and to the bent rod directly above the turn-buckle, another cable connected to the same turn-buckle and having the two ends connected to bent rods on each side of the first mentioned bent rod, and means for causing a direct pull on the cable on each side of the direct cable.

2. A silo constructed of vertical beams having grooves in their inner edges and columns of boards horizontally disposed with their ends projected in said grooves, bands on said silo outside of said beams, and means for tightening said boards on each other consisting of a turn-buckle for each three columns, a bent rod for each column with the ends hooked over the top board, a cable connected to said turn buckle and to the rod directly above the turn-buckle, a cable connected to said turnbuckle and to the bent rods in the columns adjacent to the first named cable connection, means for causing a direct pull on the rods by said last named cable, and a cable connected to the lower side of said turn-buckle and having its ends anchored to the bottom of said silo.

3. A silo constructed of vertical beams having grooves in their inner edges and columns of boards horizontally disposed with their ends projected into said grooves, bands on said silo on the outside of said beams, and means for tightening said boards on each other consisting of a bent rod for each column with its ends hooked over the top board and hanging down on the outside, a turn-buckle for each three columns located in the middle one of said three columns, a cable in said middle column connected to said turn buckle and to the bent rod in said middle column, a cable connected to said turn-buckle and to the bent rods in the adjacent columns, means for causing a direct pull of said cable on the rods in said adjacent columns, and a cable connected to the lower side of said turn-buckle and anchored to the bottom of the silo.

1,167,355. FLEXIBLE JOINT. HARRY J. EVERSON, Louisville, Ky., assignor, by mesne assignments, to Barco Brass & Joint Company, Chicago, Ill., a Corporation of Illinois. Filed May 24, 1909. Serial No. 497,974. (Cl. 137—88.)



1. A flexible joint comprising a ball, a cup, a ball inclosing part, and an intermediate adjusting part, all of said parts overlapping, said intermediate adjusting part having a screw threaded engagement both with said cup and with said ball inclosing part, the end of said adjusting part projecting from between the cup and ball inclosing part, and having an exposed portion which may be engaged to rotate it, whereby the cup and ball inclosing part may be adjusted with relation to each other so as to provide a loose joint or a tight joint without disconnecting the parts of the joint.

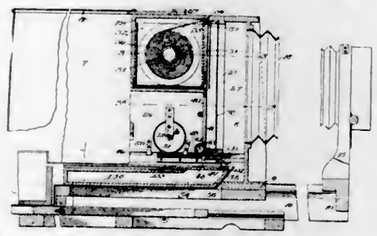
2. A flexible joint comprising a ball, a cup, a ball inclosing part, and an intermediate adjusting part, all of said parts of metal, the cup and ball inclosing part having metal engaging faces integral therewith and adapted to engage said ball, said intermediate adjusting part having a screw threaded engagement with said cup and ball inclosing part, the end of said intermediate adjusting part projecting from between said cup and ball inclosing part and having an exposed portion which may be engaged to rotate said intermediate adjusting part so as to adjust said cup and ball inclosing part to provide a loose joint or a tight joint without disconnecting the parts of the joint.

3. A flexible joint comprising a ball, a cup, a ball inclosing part, and an intermediate adjusting part, said intermediate adjusting part having left hand screw threads on one side and right hand screw threads on the other side, one set of screw threads engaging similar threads on the cup, and the other set of screw threads engaging the screw threads on the ball inclosing part, the end of said intermediate adjusting part projecting from between the cup and ball inclosing part and having an exposed portion, by means of which it may be rotated so as to adjust the cup and ball engaging parts with relation to each other and with relation to the ball so as to provide a loose or a tight joint without disconnecting the parts of the joint.

4. A flexible joint comprising a ball, a cup, a ball-inclosing part, an adjusting part having a right-hand screw thread engagement with one of said latter parts, and a left-hand screw thread engagement with the other, said adjusting part also having plain engaging faces which engage said cup and ball-inclosing part.

5. A flexible joint comprising a ball, a cup, a ball inclosing part, and an intermediate adjusting part, said latter part provided on its inner face with a shoulder, a projection on the cup opposite said shoulder and adapted to engage the same under predetermined conditions, said intermediate adjusting part provided on its opposite faces with screw threads, screw threads on the outer face of said cup and on the inner face of said ball inclosing part, which respectively engage the threads on the opposite sides of said intermediate adjusting part, the projection on the cup overlapping the screw threaded connection between the cup and the intermediate adjusting part, the end of the intermediate adjusting part projecting from between the cup and ball inclosing part and having an exposed portion which may be engaged to rotate it to adjust the parts to provide a loose or a tight joint without disconnecting the parts of the joint.

1,167,356. PHOTOGRAPHIC CAMERA. OSCAR T. GREGORY and NORMAN W. CARKHUFF, Rochester, N. Y., assignors, by mesne assignments, to Commercial Camera Co., Providence, R. I., a Corporation of Rhode Island. Filed Apr. 15, 1910. Serial No. 555,709. (Cl. 95—34.)



1. In a camera, the combination with a body portion, of a chamber for the exposed sheets in the lower part thereof, a back having a separable relation to the body and a normal position above the chamber, a holder for the sensitized material carried by the back and means for feeding the sensitized material, after exposure, from the back to the chamber.

2. In a camera, the combination with a body portion, and a back having a separable relation but normally cooperating to form an exposure chamber, of a chamber for the exposed sheets in the lower part of the body and below the back when the back and body are in coöperative position, a holder for the sensitized material carried by the back, means for feeding said material after exposure from the back to the chamber, and a shutter for sealing the back to the chamber, and a shutter for sealing the back when separated from the body and moved from above the chamber.

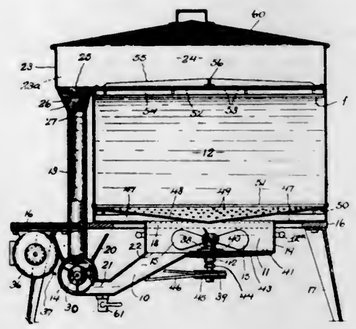
3. In a camera, the combination with a body portion, of a chamber for the exposed sheets in the lower part thereof, a back having a normal position above the chamber in coöperation with the body, and hinged to the latter to swing to a lateral position, a holder for the sensitized material carried by the back and means for feeding the sensitized material, after exposure, from the back to the chamber.

4. In a camera, the combination with a body portion, of a chamber for the exposed sheets in the lower part thereof, a movable back having a separable relation to the body and a normal position above a portion of the chamber, a holder for the sensitized material carried by the back, means for feeding an exposed sheet from the back to the chamber, and a flexible light excluding hood carried by the back to overhang the other portion of the chamber and movable with the back to expose the same.

5. In a camera, the combination with an exposure chamber, a storage chamber communicating therewith by a connecting passage and means for transferring an exposed sheet from the former to the latter, of a removable light tight receptacle adapted to occupy the storage chamber and provided with an opening registering with the communicating passage between the chambers, and a shutter device for closing said opening prior to the removal of the receptacle.

[Claims 6 to 9 not printed in the Gazette.]

1,167,357. WASHING-MACHINE. FERDINAND G. HAAS and HARRY B. COLESTOCK, St. Paul, Minn.; said Haas assignor to George G. Whitney, St. Paul, Minn. Filed July 15, 1914. Serial No. 851,067. (Cl. 68—37.)

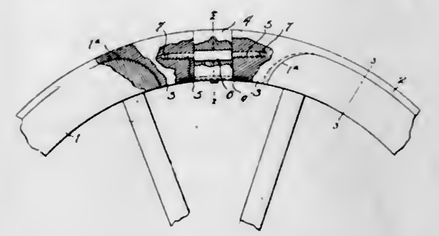


1. A washing machine comprising a tub having a bottom proper with a large opening therein, lateral walls extending downwardly from said opening, a bottom to said walls, an impeller housed between said walls, a perforated bottom plate in the tub above said opening, a pump adjacent said impeller, a tube connecting the outlet of said pump with the chamber inclosed by said walls, a spout connecting the upper portion of the tub with the intake of said pump, and a strainer at the upper end of said spout.

2. A washing machine comprising a tub having a lateral chamber projecting from its upper portion, said chamber having an outlet in the bottom; the bottom proper of said tub being formed with a large aperture therein, a foraminous false bottom positioned above said bottom proper, a pump, a conduit from said pump to said large aperture and a conduit from said lateral chamber outlet to the intake of said pump.

3. In a washing machine, a box, a vertical shaft bearing secured to the bottom thereof, the lower end of said bearing being provided with a packing box and gland, a rotary shaft passing through said bearing and gland, an impeller on said shaft within said box, a belt-pulley on said shaft below said gland, a rotary pump, a tube connecting the outlet of said pump with an opening in said box, said pump comprising a shaft and two pulleys thereon, one of said pulleys being adapted to receive a belt for driving said impeller pulley and the other to be driven from a motor, a tub, and means for passing water through the tub from said impeller box and thence to the intake of the pump.

1,167,358. TIRE-TIGHTENER. JOSEPH B. LAND, New Point, Ind. Filed June 6, 1914. Serial No. 843,448. (Cl. 21—158.)



A device of the character described including a split wheel rim, a tire applied to the rim and having a corresponding break therein, said tire being formed with enlarged heads which engage the ends of the rim and have substantially the same cross section as the combined tire and rim, said enlarged heads being provided in the opposed faces thereof with threaded openings arranged in alinement with each other and being also provided upon corresponding sides thereof with recesses, a key block interposed between the heads of the tire and having substantially the same cross section as the same, a locking bolt extending through the key block and projecting from opposite sides thereof, the ends of the locking bolt having a threaded engagement with the before mentioned openings of the heads of the tire, a spring strip terminating at its opposite ends in noses adapted to engage the recesses of the heads, and a screw adjustably securing the middle portion of the spring strip to the key block so that by loosening the screw the spring strip can be disengaged from the recesses of the heads preparatory to rotating the key block.

1,167,359. ART OF DEVULCANIZING RUBBER. HENRY J. MAYERS, Cleveland, Ohio, assignor to The Empire Rubber Company, a Corporation of Ohio. Continuation of application Serial No. 664,333, filed Dec. 7, 1911. This application filed Feb. 17, 1912. Serial No. 678,219. (Cl. 18—52.)

1. The process of devulcanizing rubber which consists in subjecting the same to a bath containing de-resinated oil of pine.

2. The process of devulcanizing rubber which consists in subjecting the same to a bath containing a de-resinated and de-turpentinated oil of pine.

3. The process of devulcanizing rubber which consists in subjecting the same to a bath containing a de-turpentinated oil of pine.

4. The process of devulcanizing rubber which consists in subjecting the same to a bath obtained by the distillation of pine wood between .88 and .96 specific gravity and subsequently refined by distilling at a temperature of about 212° F. with water.

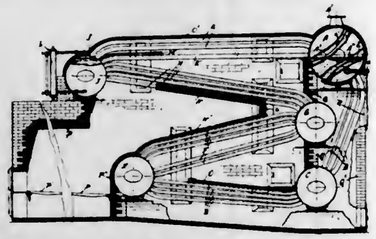
5. The process of devulcanizing rubber which consists in subjecting the same to a bath containing oil obtained by distilling pine wood at a specific gravity of between .88 and .96 and subsequently refined by distilling in conjunction with a salt.

[Claims 6 to 13 not printed in the Gazette.]

1,167,360. DISINFECTANT. CARL SHELLEY MINER, Chicago, Ill., assignor to Allwood Lime Company, Allwood Siding, Wis., a Corporation of Wisconsin. Filed Nov. 26, 1913. Serial No. 803,304. (Cl. 167—3.)

A disinfecting composition comprising calcium oxid and potassium permanganate in substantially the proportions of two percent. of potassium permanganate and ninety-eight per cent. of calcium oxid, said composition being in the form of a dry powder and capable, in the presence of moisture, of reacting between the constituents to liberate free oxygen, with the production of calcium manganate and potassium hydroxid.

1,167,361. WATER-TUBE STEAM-BOILER. WALTER A. MOFFAT, Erie, Pa., assignor of one-half to Erie City Iron Works, Erie, Pa., a Corporation of Pennsylvania. Filed June 16, 1915. Serial No. 34,500. (Cl. 122—265.)

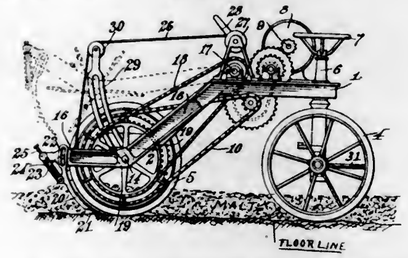


1. The combination of a box like boiler setting, a fire-box at the front thereof having a discharge thereinto, a fire-wall at the rear of said fire-box, a steam and water receiving drum at the rear end of said setting, a drum below the upper edge of said fire-wall, water-tubes secured to said drum, said tubes being in communication with the steam and water receiving drum, a drum located above said fire-box, water-tubes secured therein, said tubes being in communication with the drum behind said fire-wall, steam and water conveying tubes connecting said steam and water receiving drum, and the drum above said fire-box, and a series of baffle-plates adapted to cause the fire-gas to flow along the exterior of said water-tubes in a direction opposite to the flow of water in said tubes, and in the direction of the flow of steam in the steam conveying tubes, substantially as shown and described.

2. In a water-tube steam boiler the combination of a water and steam receiving drum, a pair of tube-header drums therebelow, water-tubes connecting said upper drum and the lowermost drum, a rear boiler-setting wall, a transverse wall in spaced relation to said rear wall and closing the spaces between said drums and leaving a fire-gas passage under the lowermost drum, a smoke exit in said rear wall, a fire-wall at the rear of the grate-bars, a header-drum partially inclosed in said fire-wall, a series of water-tubes connecting said lowermost drum and the drum in said fire-wall, a series of water-tubes connecting the drum in said fire-wall and the intermediate header drum at the rear of said boiler, a steam liberating drum above the fire-box of the boiler setting, a series of water tubes connecting said rear intermediate drum and said steam liberating drum, a series of steam conveying tubes connecting said steam liberating drum and said steam and water receiving drum, a series of water conveying tubes connecting said last mentioned drums at substantially water level, and a series of baffle-plates adapted to guide the fire-gas directly to the top of the boiler-setting, thence rearwardly and downwardly in front of said rear intermediate drum, thence forward and downward behind the drum in said fire-wall and rearwardly under the lowermost drum and into the chamber under the steam and water receiving drum, substantially as set forth.

3. In a steam generator, a boiler setting comprising side walls, a rear wall, a covering therefor, a fire-box having a fire-wall at the rear thereof, and an arch wall thereon, a steam and water receiving drum mounted upon the rear of said setting, a lowermost drum in spaced relation to the bottom and rear wall of said setting, a series of downflow water-tubes connecting said drums, a drum mounted behind said fire-wall, a series of up-flow water-tubes connecting said lowermost drum and the drum at the rear of said fire-wall, a baffle-plate above said water-tubes and extending forwardly from said lowermost drum a portion of the length of said tubes, an intermediate drum above said lowermost drum and in spaced relation thereto, a vertical wall inclosing the spaces between said rear-drums, a series of up-flow water-tubes connecting the drum behind the fire-wall and said intermediate drum, a baffle-plate above said water-tubes extending backwardly from the drum behind said fire-wall a portion of the length of said tubes, a steam liberating drum above the fire-box arch, up-flow water-tubes connecting said intermediate drum and said steam liberating drum, a baffle-plate under said tubes and extending forwardly from the rear end of the last previously mentioned baffle-plate a portion of the length of said tubes, a series of water-tubes connecting said steam liberating drum and said steam and water receiving drum, a baffle-plate thereon extending from said steam liberating drum rearwardly a portion of the length of said tubes, and a series of steam conveying tubes above said water conveying tubes and connecting said steam liberating drum and said steam and water receiving drum above the water level therein, substantially as set forth.

1,167,362. MALT-TURNING MACHINE. JOHN F. O'BRIEN, Piqua, Ohio, assignor to The Piqua Machine and Boiler Co., Piqua, Ohio. Filed Apr. 26, 1915. Serial No. 23,800. (Cl. 34—43.)

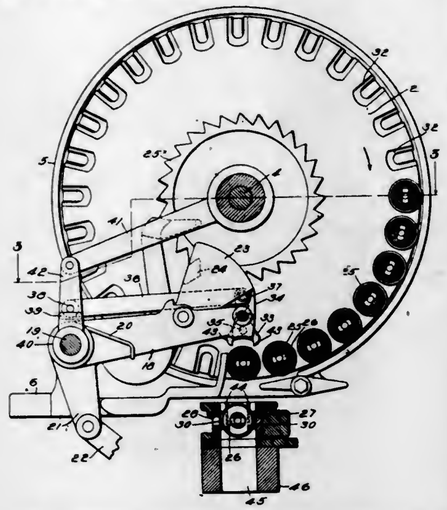


1. In a machine of the character specified, the combination of a main vehicle frame, and tractors upon which said frame is supported having substantially narrow tread portions, of a turning cylinder comprising a series of blades arranged to engage the malt as the vehicle passes thereover, a pivotal frame upon which said turning cylinder is mounted, and a deflector blade mounted adjacent to said turning cylinder and parallel with the blades thereof, the mounting of said deflector cylinder being such as to permit of its yielding and conforming to the surface over which it passes and upon which the malt is spread, substantially as specified.

2. In a machine of the character specified, the combination with a vehicle frame having a dropped portion, and tractors upon which said frame is mounted having substantially narrow tread surfaces, of a turning cylinder comprising a series of blades adapted to pass through malt spread upon the surface over which the vehicle traverses, a hanging frame upon which the said turning cylinder is mounted, means for driving said turning cylinder, a deflector blade having a yielding connection with the frame upon which the turning cylinder is supported, and a spring exerting a force upon said deflector blade to keep it in contact with said surface, substantially as specified.

1,167,363. FILLING-REPLENISHING LOOM. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 6, 1914. Serial No. 823,014. (Cl. 139—85.)

1. In a filling replenishing loom, the combination of a filling carrier hopper or feeder, a transferrer for transferring a filling carrier from the hopper or feeder to a shuttle, and means movable relatively to the transferrer during the transfer movement and acting on the filling carrier as it is moved between the hopper or feeder and shuttle to preserve the rotative position of the carrier unchanged as it is transferred to the shuttle.



2. In a filling replenishing loom, the combination of a filling carrier hopper or feeder, a transferrer for transferring a carrier from the hopper or feeder to a shuttle, a device adapted to engage the carrier as it is transferred, and means for moving said device relatively to the transferrer to preserve the original rotative position of the carrier as it is transferred to the shuttle.

3. In a filling replenishing loom, the combination of a hopper or feeder, a transferrer to transfer a carrier from the hopper or feeder to a shuttle, and a carrier controller acting upon the filling carrier between the feeder and shuttle, and means for moving it relatively to the transferrer during the transfer movement for preserving the rotative position of the carrier as it is transferred to the shuttle.

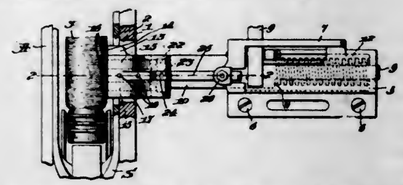
4. In a filling replenishing loom, the combination of a hopper or feeder, a filling carrier having a slot or opening, a shuttle having an opening in its side wall and jaws for engaging the carrier, a transferrer for transferring a carrier from the hopper or feeder to the shuttle, and means acting to turn the carrier relative to the transferrer as it is moved between the hopper or feeder and shuttle to insure its position in the shuttle.

5. In a filling replenishing loom, the combination of a feeder, a transferrer for transferring a filling carrier from the feeder to a shuttle, and means for engaging the carrier and having a movement with and another movement independent of the transferrer for moving the carrier relatively to the transferrer and preventing rotation of the carrier as it is transferred.

[Claims 6 to 14 not printed in the Gazette.]

1,167,364. FEELER DEVICE FOR FILLING-REPLENISHING LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 28, 1914. Serial No. 874,415. (Cl. 139—85.)

1. In a filling replenishing loom, the combination of a shuttle to contain a filling carrier, means to initiate filling replenishment, a feeler comprising an impinging member and a plurality of penetrating members, means in coöperative relation to each of said penetrating members and operatively positioned to effect filling replenishment by simultaneous movement of said penetrating members relative to the impinging member and remaining ineffectual to initiate filling replenishment when only one of the penetrating members is moved relatively to the impinging member by a denser portion of the working filling.



2. In a filling replenishing loom, the combination of a shuttle adapted to contain a carrier or bobbin having a supply of filling wound thereon, means to initiate filling replenishment, and a feeler having an impinging member and relatively movable penetrating portions to effect actuation of said means by simultaneous movement of said penetrating portions when the filling has become practically exhausted and remaining ineffective for the actuation of said means when said penetrating portions are moved independently.

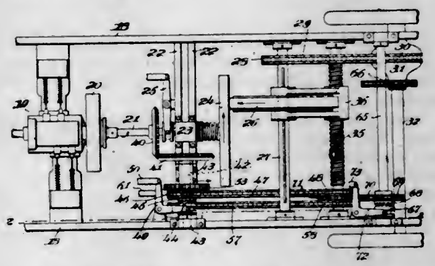
3. In a feeler device for looms, the combination of an impinging member and a penetrating member, said penetrating member having two independently movable penetrating portions, and means to initiate filling replenishment operatively positioned only upon simultaneous movement of said two penetrating portions relative to the impinging member when the filling in the shuttle has become practically exhausted.

4. In a feeler device for looms, the combination of an impinging member and two relatively movable penetrating members, a finger for initiating filling replenishment, means between the finger and penetrating members to operatively position the finger upon movement of both said penetrating members relative to the impinging member and to permit the said finger to remain in inoperative position when only one of said penetrating members is moved relative to the impinging member.

5. In a feeler device for looms, the combination of an impinging member and a penetrating member, said penetrating member being carried by the impinging member and comprising two separated and relatively movable penetrating portions, a rocker coöperating with said penetrating portions, and means connected to said rocker for initiating filling replenishment upon substantial exhaustion of the filling.

[Claims 6 to 10 not printed in the Gazette.]

1,167,365. SPEED-CHANGING MECHANISM FOR POWER-DRIVEN MACHINES. AUGUST R. SCHOENKY, Somerville, Mass. Filed Jan. 7, 1914. Serial No. 810,696. (Cl. 74—26.)



1. A machine speed changing mechanism including in combination, a driver, a driven member, a variable speed transmitter between said driver and driven member, and means whereby a running part of said mechanism may effect the adjustment of the transmitter to relatively increase the forward speed of the driven member.

2. A machine speed changing mechanism including in combination, a driver, a driven member, a variable speed transmitter between said driver and driven member, and means whereby said driver may effect the adjustment of the transmitter to relatively increase the forward speed of the driven member.

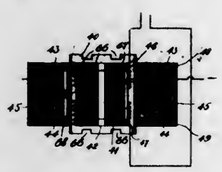
3. A machine speed changing mechanism including in combination, a driver, a driven member, a variable speed transmitter between said driver and driven member, connections including a cam and follower between a running part of said mechanism and said transmitter whereby adjustment of the transmitter may be automatically effected, said connections being normally inoperative during the running of the machine, and a controller for rendering said connections operative at suitable times to change the relative speed of the driven member.

4. A machine speed changing mechanism including in combination, a driver, a driven member, a variable speed transmitter between said driver and driven member, connections including a clutch between a running part of said mechanism and said transmitter whereby adjustment of the transmitter may be automatically effected, said connections being normally inoperative during the running of the machine, and a controller for rendering said connections operative by closing said clutch at suitable times to change the relative speed of the driven member.

5. A machine speed changing mechanism including in combination, a driver, a driven member, a variable speed transmitter between said driver and driven member and means whereby said driven member may effect the adjustment of the transmitter to change the speed ratio.

[Claims 6 to 13 not printed in the Gazette.]

1,167,366. DYNAMO-ELECTRIC MACHINERY. REGINALD A. FESSENDEN, Brookline, Mass., assignor to Submarine Signal Company, Boston, Mass., a Corporation of Maine. Original application filed Jan. 29, 1913, Serial No. 744,793. Divided and this application filed May 31, 1913. Serial No. 770,857. (Cl. 171—209.)



1. An oscillating dynamo, means for generating a magnetic field, a primary coil situated in said magnetic field, and a closed secondary also situated in said megnetic field, and in inductive relation to said primary coil and so placed as to annul the self-induction of said primary coil.

2. An oscillating dynamo, means for generating a magnetic field, a primary coil situated in said magnetic field, and a closed secondary also situated in said magnetic field, and in inductive relation to said primary coil and so placed as to annul the self-induction of said coil, one of the two, said primary coil and said secondary, being movable.

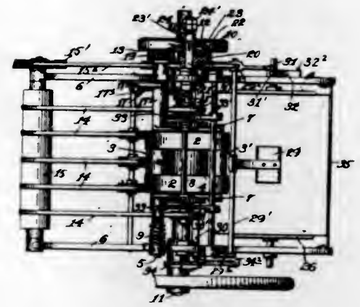
3. An oscillating dynamo, means for generating a magnetic field, primary coil situated in said magnetic field, and a closed secondary also situated in said magnetic field, and in inductive relation to said primary coil and so placed as to annul the self-induction of said coil, said secondary being movable and said primary coil being fixed.

4. An oscillating dynamo comprising means for generating a magnetic field, a primary coil situated in said magnetic field and a closed secondary also situated in said magnetic field concentric and closely adjacent to and in inductive relation to said primary coil, one of the two, said primary coil and said secondary, being movable.

5. An oscillating dynamo comprising means for generating a magnetic field, a primary coil situated in said magnetic field and a closed secondary also situated in said magnetic field concentric and closely adjacent to and in inductive relation to said primary coil, said secondary being movable and said primary being fixed.

[Claims 6 to 24 not printed in the Gazette.]

1,167,367. SHEET SEPARATOR AND FEEDER. PIERSON L. WELLS, New York, N. Y.; Nettie J. Wells, Rockville Center, N. Y., and Charles I. Wells, Brooklyn, N. Y., administrators of said Pierson L. Wells, deceased, assignors to Miller Saw-Trimmer Company of Michigan, Pittsburgh, Pa., a Corporation of Michigan. Filed July 11, 1908, Serial No. 443,132. Renewed May 6, 1913. Serial No. 765,965. (Cl. 101—39.)



1. In a sheet feeder and separator, the combination of a positively driven sheet forwarder, and a coöperative sheet retarder adapted to travel with the forwarder when the two are in contact, said retarder being frictionally driven in a direction such that its coöperative surface tends to move in the opposite direction to the corresponding surface of the forwarder, whereby the retarder and the forwarder tend to maintain contact with the same single sheet.

2. In a sheet feeder and separator, the combination of a positively driven sheet forwarding belt, and a retarding roll driven thereby when the two are in contact and means for frictionally driving said roll in the opposite direction, whereby the roll and the belt tend to maintain contact with the same single sheet.

3. In a sheet feeder and separator, the combination of a positively driven sheet forwarder, a coöperative sheet retarder driven thereby when the two are in contact, means for yieldingly urging said retarder in the opposite direction, and means adapted to introduce the material between the forwarder and the retarder.

4. In a sheet feeder and separator, the combination of a positively driven sheet forwarder, a coöperating sheet retarder driven thereby when the two are in contact, means for yieldingly urging said retarder in the opposite direction, and a jogging device.

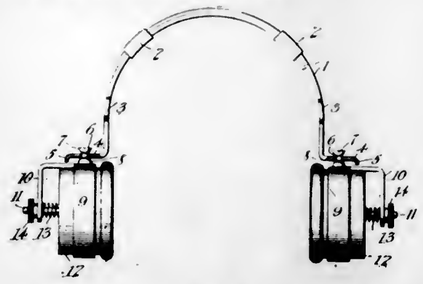
5. In a sheet feeder and separator, the combination with a pair of oppositely disposed coöperative friction elements for feeding and separating sheets and between which the latter pass, of driven means for seizing the advanced sheet and forwarding the same, and means, for shifting and holding said friction elements out of coöperative relation after each sheet has been thus seized.

[Claims 6 to 12 not printed in the Gazette.]

1,167,368. HEAD-SUPPORT FOR TELEPHONE-RECEIVERS. CHARLES ADAMS-RANDALL, Boston, Mass., assignor to Frank G. Davison, Boston, Mass. Filed Mar. 24, 1914. Serial No. 826,946. (Cl. 179—156.)

1. In a head support for telephone receivers, a head band, receivers swiveled to said head band, means carried by said head band for vertically adjusting said receivers, and resiliently retained, screw operated means for causing said receivers to approach or recede from the ears.

2. In a head support for telephone receivers, a head band, receivers secured to said head band, and screws which adjust said receivers horizontally.



3. In a head support for telephone receivers, a head band, receivers secured to said head band, and screws which adjust said receivers toward and away from the ears.

4. In a head support for telephone receivers, a head band, resilient members adjustably secured to said head band, receivers carried by said members, and screws, carried by said members and engaging said band, which adjust the receivers toward and away from the head.

1,167,369. SHUTTLE-GUARD. PHILIP JONCAS, Fall River, Mass., assignor to James K. Lanning, Fall River, Mass. Filed Dec. 22, 1914. Serial No. 878,599. (Cl. 139—30.)



1. In a loom, a shuttle guard having a bowed portion positioned to be engaged by a shuttle in its deflected flight and means engaging said guard at its unbowed portion and securing it to its support, thereby permitting slight yielding of the bowed portion.

2. In a loom, a lay having a reed and a reed cap, and a shuttle guard supported by and secured to said reed cap and positioned at the under side thereof, said guard having a bowed portion to be engaged by the shuttle in its deflected flight.

3. In a loom, a lay having a reed, a shuttle guard attached thereto and having a bowed portion positioned to be engaged by the shuttle in its deflected flight and means engaging said guard at its unbowed portion and securing it to its support, thereby permitting slight yielding of the bowed portion.

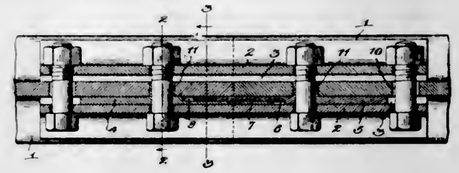
4. In a loom, a lay having a reed and a reed cap, and a shuttle guard positioned at the under side of the reed cap and in the path of the shuttle, said guard being secured directly to and facewise against said under side of the reed cap and supported thereby.

5. In a loom, a shuttle guard positioned in advance of the shuttle box and consisting of a slightly resilient, metal strip having a bowed portion to be engaged by a shuttle in its deflected flight.

[Claims 6 to 8 not printed in the Gazette.]

1,167,370. RAIL-BOND. JAMES LINDLEY, Providence, R. I., assignor of one-half to James H. Lindley, Providence, R. I. Filed Apr. 14, 1914. Serial No. 831,846. (Cl. 173—262.)

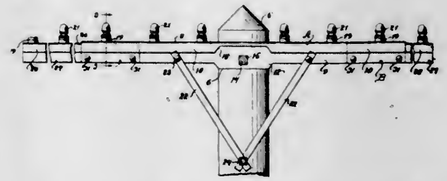
1. In a rail bond, a pair of plates each having a tongue of reduced thickness, which tongues overlap, one of the tongues having a dovetail recess and the other tongue having a dovetail projection which is slidably received in the recess whereby said tongues may be adjusted toward or away from each other by sliding same, and a split bushing formed integral with each plate and adapted to be received in the bolt aperture of the rail webs, said bond in its entirety being engageable in a recess provided for the reception thereof in the inner face of one of the fish plates and being held in position against the rail webs by said fish plate.



2. In a rail bond, a pair of plates each having a tongue of reduced thickness, which tongues overlap, one of the tongues having a dovetail recess and the other tongue having a dovetail projection slidably engaged in the recess whereby said tongues may be adjusted toward or away from each other by sliding the plates longitudinally.

REISSUES.

14,040. METALLIC CROSS-ARM. LAWRENCE L. CRABTREE and T CHARLEY RIPLEY, Sulphur Springs, Tex. Filed June 21, 1915. Serial No. 35,425. Original No. 1,047,176, dated Dec. 17, 1912, Serial No. 678,167. (Cl. 189—33.)



1. A cross-arm of the character described formed with a top portion adapted to support insulators, a rear wall, and a front reinforcing lip, the rear wall being of a depth to extend below the top and lip portions, substantially as described.

2. A cross-arm formed from a blank of sheet metal bent longitudinally to form a top, rear wall and a downwardly extending front lip, the wall being centrally formed with a downwardly projecting attaching lip and the front lip being cut away at a point in register with the attaching lip.

3. A cross arm comprising in combination, a main arm forming in cross section a U-shaped structure, a correspondingly shaped extension arm interfitted with one end of the main arm, one of the sides of the main arm and the corresponding side of the extension arm depending below the other sides of the main and extension arms, and fastening means for the arms extending through the depending portions thereof.

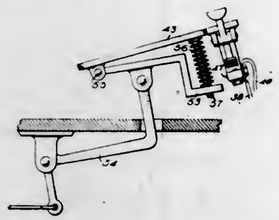
4. A cross-arm of the character described formed with a top portion adapted to support insulators, a rear wall, and a front downwardly extending reinforcing lip, the rear wall being of a depth to extend below the top and lip portions, substanstially as described.

5. A cross-arm of the character described formed with a top portion adapted to support insulators, a rear portion, and a downwardly extending forward lip, said lip being cut away at a point in front of and along the lower edge of the rear wall to expose the latter through the cutaway portion, substantially as described.

6. A cross-arm of the character described formed of a top portion adapted to support insulators, a rear wall, and a downwardly extending forward lip, the rear wall having a part located downwardly below the forward lip, substantially as described.

7. The combination with a cross-arm of hollow formation, of an extension-arm interfitted therewith, and means for securing the cross-arm and the extension-arm together, adjacent attaching walls of the hollow cross-arm and the extension-arm depending below the forward portion of the hollow cross-arm to render the securing means accessible, substantially as described.

14,041. REAR-END SIGNAL FOR VEHICLES. CHARLES F. MARSTON, Cedarhurst, N. Y. Filed Aug. 18, 1915. Serial No. 46,199. Original No. 1,095,902, dated May 5, 1914, Serial No. 749,064. (Cl. 177—337.)



1. In combination with an automobile-operating foot-pedal, a foot-plate movably mounted on said pedal, to be depressed by the foot of the operator toward said pedal, a signal embodying direction indicating members and electro-mechanical devices for operating the same, and an electric current supply for said electro-mechanical devices embodying switch members, one of which is supported by said plate to be moved therewith into contact with said pedal.

2. In combination with an automobile-operating foot-pedal, a foot plate movably mounted on said pedal to be depressed by the foot of the operator toward said pedal, a signal embodying direction indicating members and electro-mechanical devices for operating the same, an electric current supply for said electro-mechanical devices embodying switch members, one of which is supported by said plate to be moved therewith into contact with said pedal, and a plurality of swinging switch members mounted on said plate, the depression whereof selectively actuates said electro-mechanical devices.

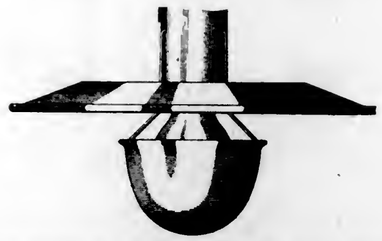
3. In combination with an automobile-operating mechanism having a foot-pedal, a foot-plate movably mounted on said pedal to be depressed by the foot of the operator toward said pedal, a signal, embodying a plurality of movable panels and electro-mechanical devices for operating to expose the same, means for normally concealing said panels, an electric current supply for said electro-mechanical devices, embodying switch members, one of which is supported by said plate, to be moved therewith into contact with said pedal, and a plurality of swinging switch members mounted on said plate, operably disposed to the foot of the driver, the depression whereof selectively actuates said electro-mechanical devices, said switch members being spaced apart to avoid being operated simultaneously by the foot of the driver.

4. A signal as characterized comprising a vehicle control pedal, a foot plate yieldingly mounted thereon, a switch mounted on said foot plate to be closed thereby, a plurality of foot pads yieldingly mounted on said plate, and a plurality of switches mounted on said plate, said switches being operable by said pads.

5. A signal as characterized comprising a vehicle control pedal, a foot plate yieldingly mounted thereon, a switch embodying said pedal and said plate, a plurality of foot pads yieldingly mounted on said plate, selective switches embodying said pads and said plate, a signal having direction indicating members, and a transmission mechanism operatively connecting said switches and said direction indicating members.

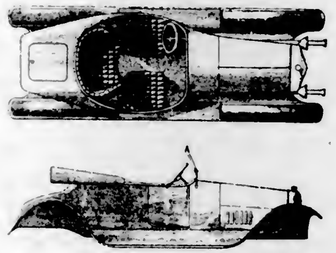
DESIGNS.

48,358. LIGHTING-FIXTURE. HARRY C. ADAM, St. Louis, Mo. Filed Oct. 1, 1915. Serial No. 53,642. Term of patent 14 years.



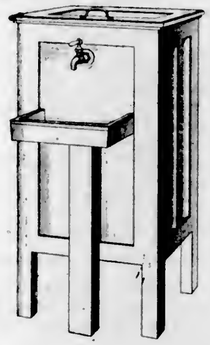
The ornamental design for a lighting fixture, as shown.

48,359. AUTOMOBILE-BODY. ELMER APPERSON, Kokomo, Ind., assignor to Apperson Bros. Automobile Company, Kokomo, Ind., a Corporation of Indiana. Filed Aug. 6, 1915. Serial No. 44,121. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

48,360. WATER-COOLER. CHARLES C. BARGREEN, Streator, Ill. Filed Sept. 24, 1915. Serial No. 52,532. Term of patent 7 years.



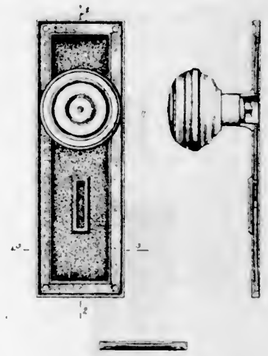
The ornamental design for a water cooler as shown.

48,361. CEILING-LIGHT. KRAFT BOOTH, Philadelphia, Pa., assignor to Gillinder & Sons, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 17, 1915. Serial No. 51,296. Term of patent 7 years.



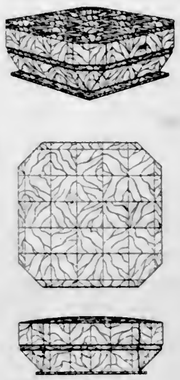
The ornamental design for a ceiling light substantially as shown.

48,362. ESCUTCHEON-PLATE AND KNOB. WILLIAM W. BOSWORTH, New York, N. Y., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 3, 1915. Serial No. 43,475. Term of patent 3½ years.



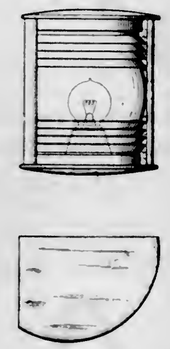
The ornamental design for an escutcheon plate and knob as shown.

48,363. BOX FOR FACE-POWDER. WALTER C. CARLSON, Milwaukee, Wis., assignor to Milwaukee Paper Box Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 21, 1915. Serial No. 57,199. Term of patent 3½ years.



The ornamental design for a box for face powder, as shown.

48,364. ELECTRIC SIDE LIGHT FOR BOATS. IRWIN CHASE, Bayonne, N. J., assignor to The Elco Company, Bayonne, N. J., a Corporation of New Jersey. Filed Apr. 17, 1915. Serial No. 22,187. Term of patent 14 years.



The ornamental design for an electric side light for boats as shown.

48,365. COLLAR-BUTTON OR SIMILAR GARMENT-FASTENING DEVICE. HENRY ESCH, Jr., Manitowoc, Wis. Filed Mar. 20, 1915. Serial No. 15,959. Term of patent 3½ years.



The ornamental design for a collar button or similar garment fastening device as shown.

48,366. DOUBLE-ENDED HOLLOW LOOP. EUGENE O. FOX, Cleveland, Ohio, assignor to Benjamin F. Klein, Cleveland, Ohio. Filed Aug. 6, 1915. Serial No. 44,128. Term of patent 3½ years.



The ornamental design for a double ended hollow loop, as shown.

48,367. ARM FOR LIGHTING-FIXTURES. MORTIMER GARRISON, Bridgeton, N. J., assignor to Crescent Brass Manufacturing Company, Reading, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1915. Serial No. 57,196. Term of patent 7 years.



The ornamental design for an arm for lighting fixtures, as shown.

48,368. ARM FOR LIGHTING-FIXTURES. MORTIMER GARRISON, Bridgeton, N. J., assignor to Crescent Brass Manufacturing Company, Reading, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1915. Serial No. 57,197. Term of patent 7 years.



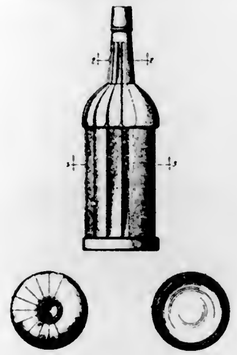
The ornamental design for an arm for lighting fixtures, as shown.

48,369. ARM FOR LIGHTING-FIXTURES. MORTIMER GARRISON, Bridgeton, N. J., assignor to Crescent Brass Manufacturing Company, Reading, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1915. Serial No. 57,198. Term of patent 7 years.



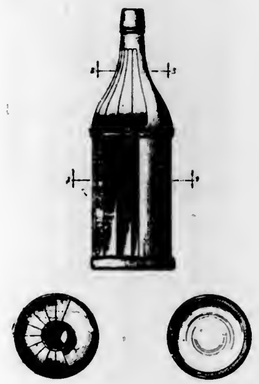
The ornamental design for an arm for lighting fixtures, as shown.

48,370. BOTTLE. SHEPARD J. GOLDBERG, New York, N. Y. Filed May 4, 1915. Serial No. 25,852. Term of patent 14 years.



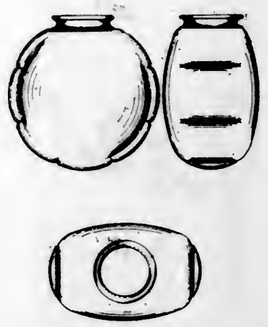
The ornamental design for a bottle as shown.

48,371. BOTTLE. SHEPARD J. GOLDBERG, New York, N. Y. Filed May 4, 1915. Serial No. 25,853. Term of patent 14 years.



The ornamental design for a bottle as shown.

48,372. ELECTRIC-LAMP GLOBE. ALBERT GRAESER, Knoxville borough, Pa. Filed Sept. 29, 1915. Serial No. 53,202. Term of patent 7 years.



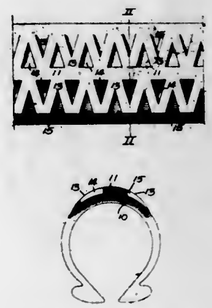
The ornamental design for an electric lamp globe, as shown.

48,373. VALVE-FLOAT. JOSEPH L. GRAY, Fort Worth, Tex. Filed Jan. 30, 1915. Serial No. 5,331. Term of patent 14 years.



The ornamental design for a valve float, as shown.

48,374. TIRE. GEORGE W. GREENE, Louisville, Ky., assignor to Ten Broeck Tyre Company, Louisville, Ky., a Corporation of Delaware. Filed July 10, 1915. Serial No. 39,201. Term of patent 7 years.



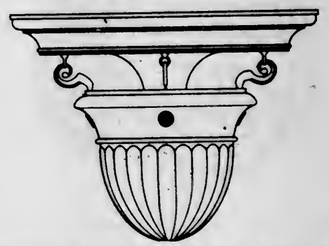
The ornamental design for a tire, substantially as shown and described.

48,375. SPOON, FORK, OR THE LIKE. CHARLES W. HARMAN, New Rochelle, N. Y., assignor to Joseph Fahys & Co., New York, N. Y., a Corporation of New York. Filed Oct. 5, 1915. Serial No. 54,284. Term of patent 7 years.



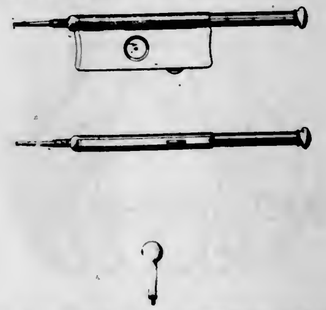
The ornamental design for a spoon, fork, or the like as shown.

48,376. LIGHTING-FIXTURE. GUSTAV A. HARTER, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,128. Term of patent 3½ years.



The ornamental design for a lighting fixture, as shown.

48,377. COMBINED PENCIL AND CIGAR-CUTTER. JOHN W. L. HENCKEL, Yonkers, N. Y., assignor to Durand & Company, Newark, N. J. Filed Oct. 28, 1915. Serial No. 58,505. Term of patent 7 years.



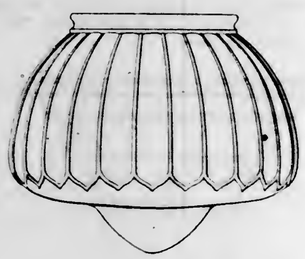
The ornamental design for a combined pencil and cigar cutter, as shown.

48,378. LIGHTING-FIXTURE. FRED E. HOWARTH, Utica, N. Y. Filed Sept. 30, 1915. Serial No. 53,469. Term of patent 7 years.



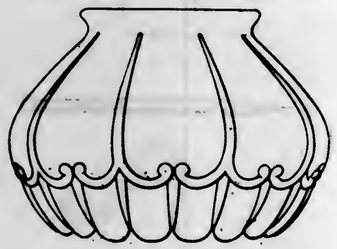
The ornamental design for a lighting fixture, as shown.

48,379. LAMP-GLOBE. ALFRED H. HUMPHREY, New York, N. Y. Filed Oct. 29, 1915. Serial No. 58,714. Term of patent 3½ years.



The ornamental design for a lamp globe as shown.

48,380. LAMP-SHADE. ALFRED H. HUMPHREY, New York, N. Y. Filed Oct. 29, 1915. Serial No. 58,715. Term of patent 3½ years.



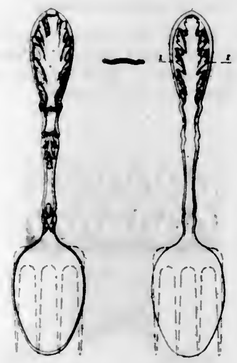
The ornamental design for a lamp shade as shown.

48,381. DOLL OR STATUETTE. ROWLAND SUTHERLAND ILSLEY, Edmonton, Alberta, Canada. Filed Oct. 14, 1915. Serial No. 55,904. Term of patent 14 years.



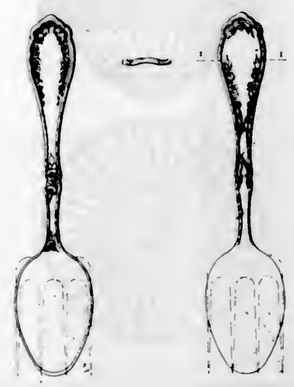
The ornamental design for a doll or statuette as shown and described.

48,382. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Aug. 7, 1915. Serial No. 44,324. Term of patent 7 years.



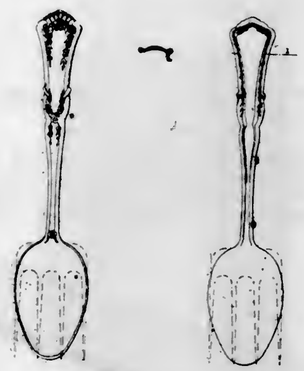
The ornamental design for a handle for a spoon, fork, or similar article, as shown.

48,383. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Aug. 7, 1915. Serial No. 44,325. Term of patent 7 years.



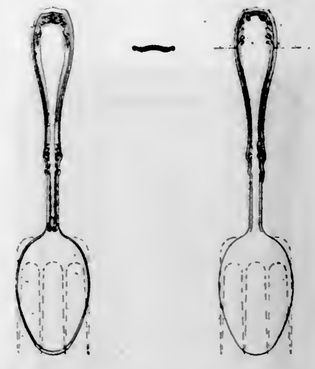
The ornamental design for a handle for a spoon, fork or similar article, as shown.

48,384. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Aug. 7, 1915. Serial No. 44,326. Term of patent 7 years.



The ornamental design for a handle for a spoon, fork, or similar article, as shown.

48,385. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Aug. 7, 1915. Serial No. 44,327. Term of patent 7 years.



The ornamental design for a handle for a spoon, fork, or similar article, as shown.

48,386. ARM FOR CHANDELIERS OR BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 20, 1915. Serial No. 56,997. Term of patent 3½ years.



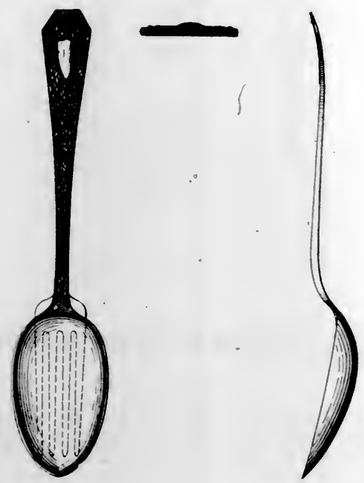
The ornamental design for an arm for chandelier or bracket, as shown.

48,387. HANGER FOR LIGHT-REFLECTING BOWLS. WALTER R. KAHNS, Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Oct. 19, 1915. Serial No. 56,813. Term of patent 7 years.



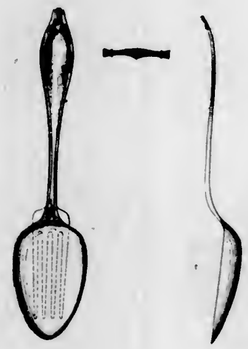
The ornamental design for a hanger for light reflecting bowls as shown.

48,388. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. ROBERT R. KINTZ, Meriden, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of Connecticut. Filed Sept. 3, 1915. Serial No. 48,893. Term of patent 7 years.



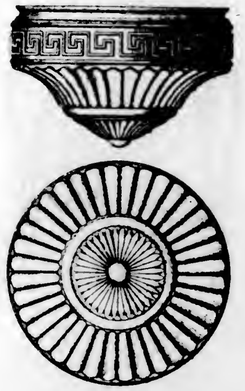
The ornamental design for a handle for spoons, forks, and similar articles as shown.

48,389. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. ROBERT R. KINTZ, Meriden, Conn., assignor to International Silver Company, Meriden, Conn., a Corporation of Connecticut. Filed Sept. 3, 1915. Serial No. 48,894. Term of patent 7 years.



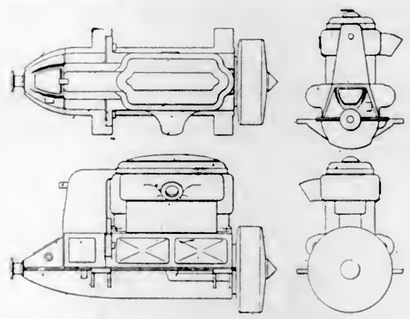
The ornamental design for a handle for spoons, forks and similar articles, as shown.

48,390. GLASS BOWL FOR LIGHTING PURPOSES. NICHOLAS KOPP, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Aug. 24, 1915. Serial No. 47,158. Term of patent 3½ years.



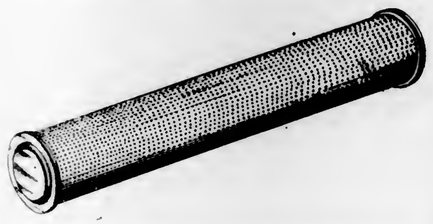
The ornamental design for a glass bowl for lighting purposes, as shown.

48,391. ENGINE-CASING. FREDERICK K. LORD, Bayonne, N. J. Filed Nov. 8, 1915. Serial No. 60,438. Term of patent 7 years.



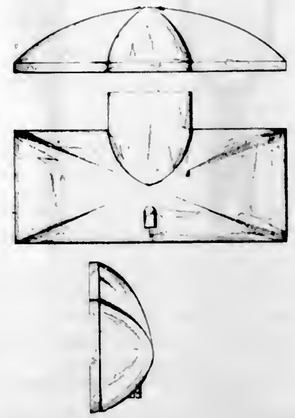
The ornamental design for an engine casing, substantially as shown.

48,392. HUMIDIFIER. HERMAN L. LOHEIDE, St. Louis, Mo., assignor to Loheide Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 3, 1915. Serial No. 19,067. Term of patent 14 years.



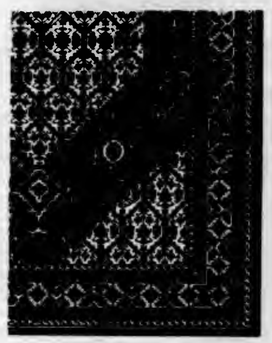
The ornamental design for a humidifier substantially as shown.

48,393. LAMP-CASE. ARNOLD GEORGE PETERS, Minneapolis, Minn. Filed Oct. 1, 1915. Serial No. 53,641. Term of patent 14 years.



The ornamental design for lamp case as shown and described.

48,394. RUG. HARRY A. S. READ, Lawrence, Mass., assignor to Plymouth Mills, Lawrence, Mass., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,709. Term of patent 3½ years.



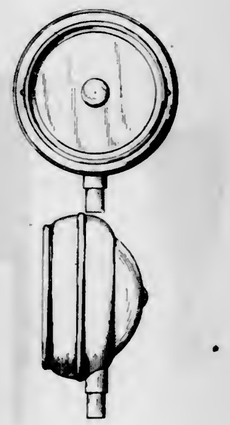
The ornamental design for a rug, as shown.

48,395. RUG. HARRY A. S. READ, Lawrence, Mass., assignor to Plymouth Mills, Lawrence, Mass., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,710. Term of patent 3½ years.



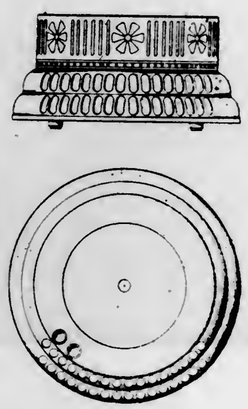
The ornamental design for a rug, as shown.

48,396. AUTOMOBILE-HEADLIGHT. LEON RUBAY, Cleveland, Ohio, assignor to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 4, 1915. Serial No. 49,124. Term of patent 7 years.



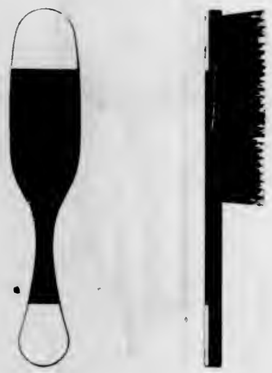
The ornamental design for an automobile headlight, as shown.

48,397. TALKING-MACHINE CASE. MARK JAY SAMUELS, New York, N. Y., assignor to Lyraphone Company of America, Washington, D. C., a Corporation of Delaware. Filed Oct. 27, 1915. Serial No. 58,289. Term of patent 7 years.



The ornamental design for a talking machine case, as shown.

48,398. HAIR-BRUSH. JACOB H. SCHEUER, New York, N. Y. Filed Dec. 8, 1914. Serial No. 876,155. Term or patent 14 years.



The ornamental design for a hair brush as shown.

48,399. HAIR-BRUSH. JACOB H. SCHEUER, New York, N. Y. Filed Dec. 8, 1914. Serial No. 876,156. Term of patent 3½ years.



The ornamental design for a hair brush as shown.

48,400. LIGHTING-FIXTURE. ERNEST J. SCHWEITZER and ROBERT G. WAGNER, Los Angeles, Cal. Filed Oct. 28, 1915. Serial No. 58,495. Term of patent 3½ years.



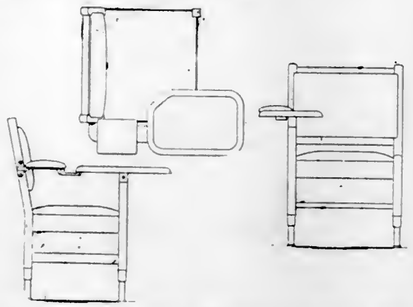
The ornamental design for a lighting fixture, as shown.

48,401. PLATE. FRANK A. SEBRING, Sebring, Ohio. Filed Oct. 7, 1915. Serial No. 54,678. Term of patent 3½ years.



The ornamental design of a plate, substantially as shown.

48,402. LUNCH-ROOM CHAIR. WILLIAM N. STACEY, Springfield, Mass. Filed Sept. 27, 1915. Serial No. 52,964. Term of patent 14 years.



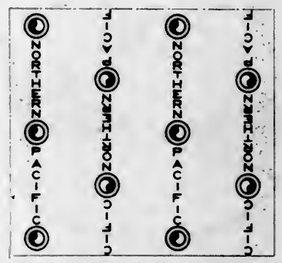
The ornamental design for a lunchroom chair, as shown.

48,403. LOAF OF BREAD. LEONIDAS STAVROPULOS, Pocatello, Idaho. Filed Aug. 23, 1915. Serial No. 46,968. Term of patent 3½ years.



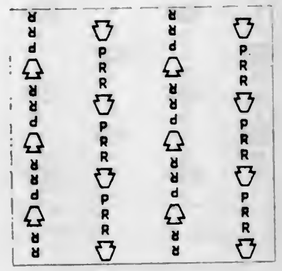
The ornamental design for a loaf of bread as shown.

48,404. TEXTILE FABRIC. EDWARD W. STIFEL, Wheeling, W. Va. Filed May 15, 1915. Serial No. 28,470. Term of patent 14 years.



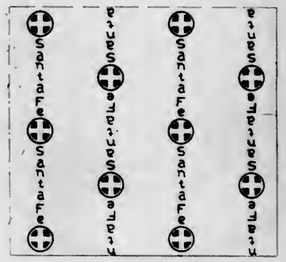
The ornamental design for a textile fabric, as shown.

48,405. TEXTILE FABRIC. EDWARD W. STIFEL, Wheeling, W. Va. Filed May 15, 1915. Serial No. 28,471. Term of patent 14 years.



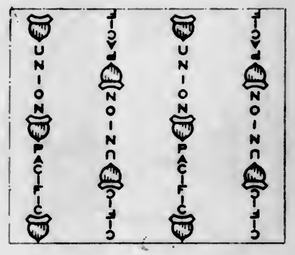
The ornamental design for a textile fabric, as shown.

48,406. TEXTILE FABRIC. EDWARD W. STIFEL, Wheeling, W. Va. Filed May 15, 1915. Serial No. 28,472. Term of patent 14 years.



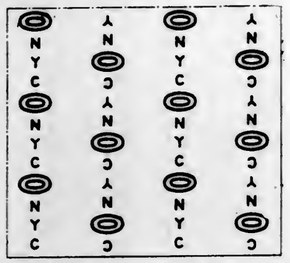
The ornamental design for a textile fabric, as shown.

48,407. TEXTILE FABRIC. EDWARD W. STIFEL, Wheeling, W. Va. Filed May 15, 1915. Serial No. 28,473. Term of patent 14 years.



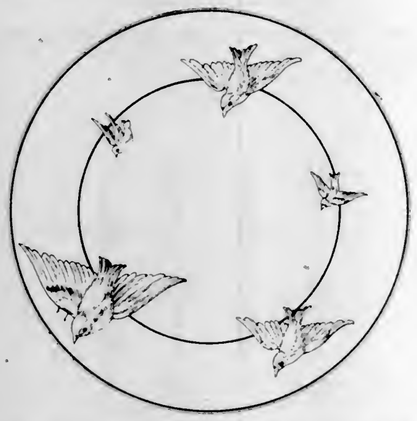
The ornamental design for a textile fabric, as shown.

48,408. TEXTILE FABRIC. EDWARD W. STIFEL, Wheeling, W. Va. Filed May 15, 1915. Serial No. 28,474. Term of patent 14 years.



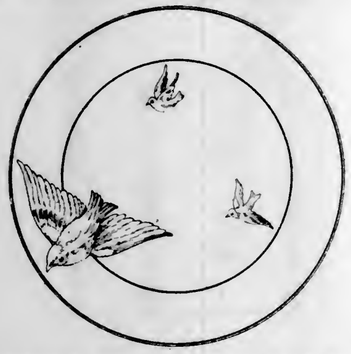
The ornamental design for a textile fabric, as shown.

48,409. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 27, 1915. Serial No. 52,763. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

48,410. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 27, 1915. Serial No. 52,764. Term of patent 3½ years.



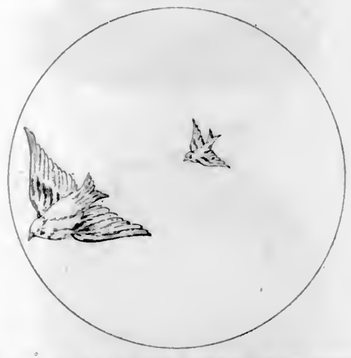
The ornamental design for a plate or similar article, as shown.

48,411. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 27, 1915. Serial No. 52,765. Term of patent 3½ years.



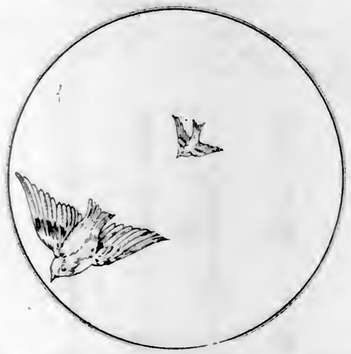
The ornamental design for a plate or similar article, as shown.

48,412. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,135. Term of patent 3½ years.



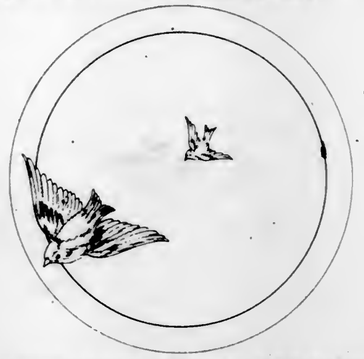
The ornamental design for a plate or similar article, as shown.

48,413. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,136. Term of patent 3½ years.



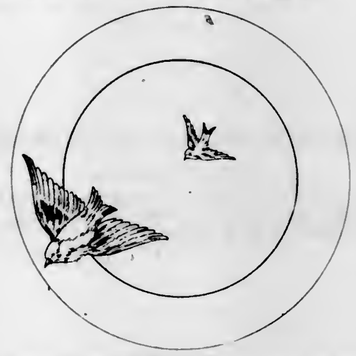
The ornamental design for a plate or similar article, as shown.

48,414. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,137. Term of patent 3½ years.



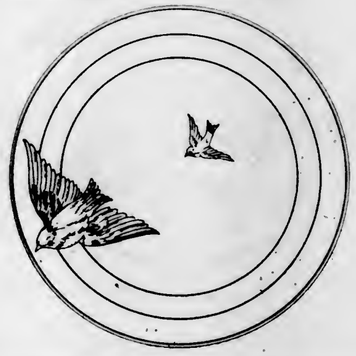
The ornamental design for a plate or similar article, as shown.

48,415. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,138. Term of patent 3½ years.



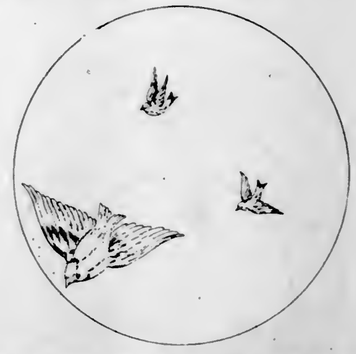
The ornamental design for a plate or similar article, as shown.

48,416. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,139. Term of patent 3½ years.



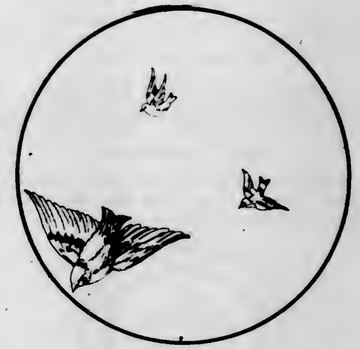
The ornamental design for a plate or similar article, as shown.

48,417. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,140. Term of patent 3½ years.



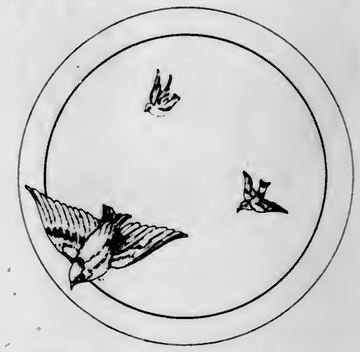
The ornamental design for a plate or similar article as shown.

48,418. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,141. Term of patent 3½ years.



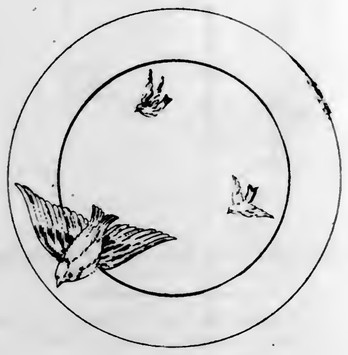
The ornamental design for a plate or similar article, as shown.

48,419. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,142. Term of patent 3½ years.



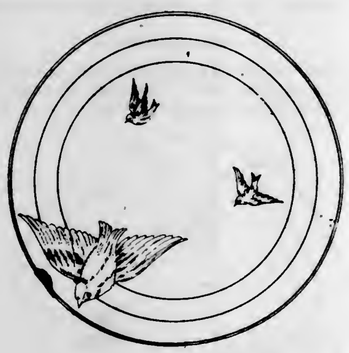
The ornamental design for a plate or similar article, as shown.

48,420. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,143. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

48,421. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,144. Term of patent 3½ years.



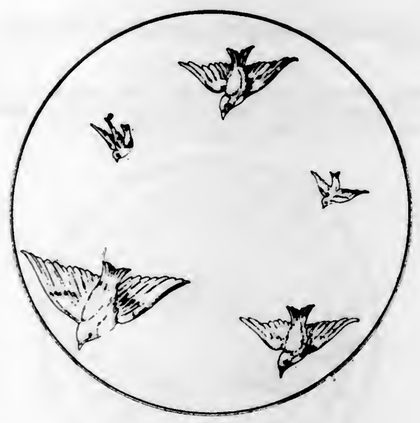
The ornamental design for a plate or similar article, as shown.

48,422. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,145. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

48,423. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,146. Term of patent 3½ years.



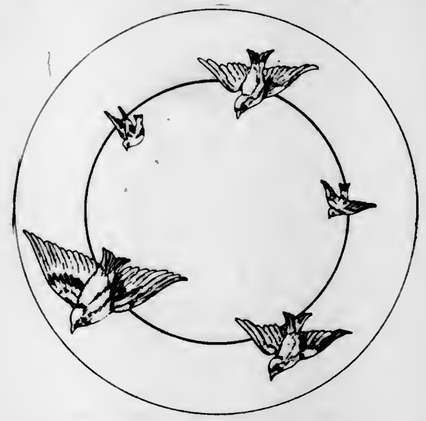
The ornamental design for a plate or similar article, as shown.

48,424. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,147. Term of patent 3½ years.



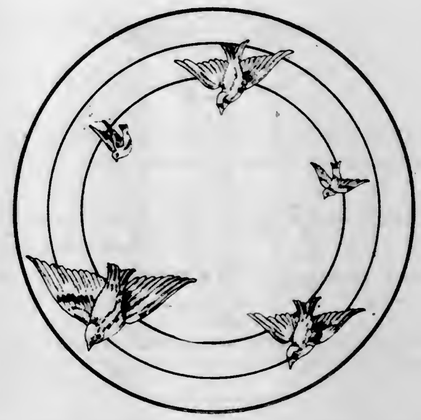
The ornamental design for a plate or similar article, as shown.

48,425. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,148. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

48,426. PLATE OR SIMILAR ARTICLE. HOMER J. TAYLOR, East Liverpool, Ohio. Filed Sept. 28, 1915. Serial No. 53,149. Term of patent 3½ years.



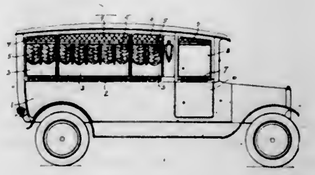
The ornamental design for a plate or similar article, as shown.

48,427. SHELL FOR LIGHTING-FIXTURES. ALBERT E. TEPPER, New York, N. Y., assignor to National Metal Spinning & Stamping Company, New York, N. Y., a Corporation of New York. Filed Nov. 6, 1915. Serial No. 60,145. Term of patent 7 years.



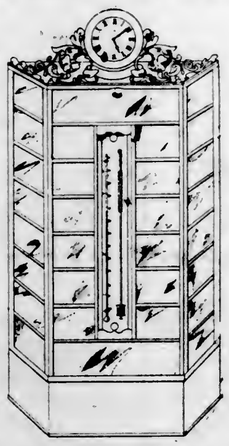
The ornamental design for a shell for lighting fixtures, as shown.

48,428. FUNERAL-CAR. WILLIAM H. THOMAS, Sterling, Ill., assignor to Rock Falls Manufacturing Company, Sterling, Ill. Filed May 21, 1915. Serial No. 29,675. Term of patent 3½ years.



The ornamental design for a funeral car, as herein shown and described.

48,429. ADVERTISING-CABINET. KAREL M. WEGKAMP and CORNELUS J. PEET, Spokane, Wash. Filed Oct. 14, 1915. Serial No. 55,903. Term of patent 7 years.



The ornamental design for an advertising cabinet, substantially as shown.

48,430. SWIVEL-CLAMP FOR RAZOR-STROPS OR THE LIKE. GEORGE U. WEIFFENBACH, Adrian, Mich., assignor to The Gibford-Weiffenbach Company, Adrian, Mich., a Corporation of Michigan. Filed July 6, 1915. Serial No. 38,324. Term of patent 3½ years.



The ornamental design for a swivel clamp for razor strops or the like substantially as shown.

48,431. WEIGHING-MACHINE. HARRY M. ZILM, Washington, D. C. Filed Oct. 5, 1915. Serial No. 54,289. Term of patent 14 years.



The ornamental design for a weighing machine, as shown and described.

TRADE-MARKS

PUBLISHED JANUARY 4, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

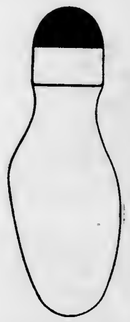
As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 71,928. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAGGONER-GATES MILLG. CO., Independence, Mo. Filed July 23, 1913.



Particular description of goods.—Self-Rising Flour.
Claims use since July 7, 1913.

Ser. No. 72,390. (CLASS 39. CLOTHING.) BOURN RUBBER COMPANY, Providence, R. I. Filed Aug. 18, 1913.



No claim being made to the representation of the bottom of the shoe apart from the mark shown in the drawing. While the drawing shows the rear portion of a shoe-heel colored red, said section is not always of that color and has in some instances been white.

Particular description of goods.—Rubber Boots and Shoes.
Claims use since Mar. 10, 1913.

Ser. No. 73,200. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SPROEHNLE & COMPANY, Chicago, Ill. Filed Oct. 3, 1913.

Delmar

Particular description of goods.—Watches.
Claims use since Feb. 10, 1913.

Ser. No. 74,175. (CLASS 39. CLOTHING.) THE TETRA COMPANY, Chicago, Ill. Filed Nov. 24, 1913.



The word "Tetra" printed in cross form on the vertical and horizontal bars of the figure 4, said figure 4 being shown upon a background of contrasting color, blue being employed for the figure and red for the background, the whole being surrounded by a circular band of color contrasting with the background, blue being also employed for the band, no claim being made to the words "Trade Mark" or "The Tetra Company."

Particular description of goods.—Woven Underwear, Bath-Robes, Negligée Shirts, and Bathing-Caps.
Claims use since Oct. 15, 1913.

Ser. No. 74,667. (CLASS 31. FILTERS AND REFRIGERATORS.) S. F. BOWSER & COMPANY, INC., Fort Wayne, Ind. Filed Dec. 18, 1913.

BOWSER
SELF MEASURING OIL TANKS
PAT'D BY
S.F.BOWSER & CO. INC.
PUMP No.
FORT WAYNE, IND. U.S.A.

The applicant disclaims the exclusive use of the words "Established 1885," "Self-Measuring Oil Tanks Pat'd. by," "S. F. Bowser & Co. Inc.," "Pump No.," and "Ft. Wayne, Ind., U. S. A.," the inclosing oval, the center circle, and the solid rectangle at the bottom.

Particular description of goods.—Oil Filtration and Circulation Apparatus.

Claims use since Nov. 13, 1913.

Ser. No. 75,362. (CLASS 39. CLOTHING.) LOUIS MEYERS & SON, New York, N. Y., assignors to Louis Meyers & Son, New York, N. Y., a Firm composed of Edwin L. Meyers, David F. Meyers, and Wallace E. Meyers. Filed Jan. 22, 1914.



Particular description of goods.—Leather Gloves.

Claims use since on or about Jan. 1, 1886.

Ser. No. 75,778. (CLASS 2. RECEPTACLES.) S. F. BOWSER & Co., INC., Fort Wayne, Ind. Filed Feb. 9, 1914.

BOWSER
SELF MEASURING OIL TANKS
PAT'D BY
S.F.BOWSER & CO.INC.
PUMP No.
FORT WAYNE IND U.S.A.

The same being the word "Bowser" with letters larger in the center than at the ends and the letters connected by lines. Applicant disclaims the exclusive use of the words "Established 1885," "Self-Measuring Oil Tanks Pat'd. by," "S. F. Bowser & Co. Inc.," "Pump No.," and "Ft. Wayne, Ind., U. S. A.," the inclosing oval, the center circle, and the solid rectangle at the bottom.

Particular description of goods.—Storage-Receptacles.

Claims use since Nov. 13, 1913.

Ser. No. 79,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DR. S. A. RICHMOND NERVINE CO., St. Joseph, Mo. Filed June 17, 1914. Under ten-year proviso.



The portrait being that of Samuel Allen Richmond.

Particular description of goods.—A Nerve Remedy.

Claims use since about 1884.

Ser. No. 79,182. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DR. S. A. RICHMOND NERVINE CO., St. Joseph, Mo. Filed June 17, 1914. Under ten-year proviso.



The portrait being that of Samuel Allen Richmond.

Particular description of goods.—A Nerve Remedy.

Claims use since about 1884.

Ser. No. 80,485. (CLASS 39. CLOTHING.) DONALD J. CAMERON, Syracuse, N. Y. Filed Aug. 12, 1914. Under ten-year proviso.



I disclaim the words "Trade Mark" and "Gray Brothers."

Particular description of goods.—Boots and Shoes, Either of Leather or of Leather and Fabric.

Claims use since about 1865.

Ser. No. 80,681. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTONIO MAGNANO, Seattle, Wash. Filed Aug. 19, 1914.

REGINA

Particular description of goods.—Olive-Oil.

Claims use since May 1, 1914.

Ser. No. 80,771. (CLASS 2. RECEPTACLES.) THE NATIONAL SANIFOLD COMPANY, Denver, Colo. Filed Aug. 24, 1914.

Sanifold

Particular description of goods.—Tooth-Brush Cases.

Claims use since Jan. 10, 1913.

Ser. No. 81,877. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) NEW YORK SPORTING GOODS COMPANY, New York, N. Y. Filed Oct. 14, 1914.

DRIKI

Particular description of goods.—Tents.

Claims use since about April, 1910.

Ser. No. 81,938. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GORDON RUBBER COMPANY, Canton, Ohio. Filed Oct. 16, 1914.

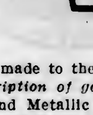


Particular description of goods.—Rubber Tubes and Tires.

Claims use since the month of March, 1913.

Ser. No. 82,037. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE TURNER & SEYMOUR MANUFACTURING CO., Torrington, Conn. Filed Oct. 20, 1914.

KEYSTONE BRAND



No claim being made to the word "Brand."

Particular description of goods.—Metallic Curtain and Shade Fixtures and Metallic Ornamental Fastening Devices for Drapery and Upholstery, other Than Safety-Pins.

Claims use since May, 1908.

Ser. No. 82,130. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES A. DANIEL, Philadelphia, Pa. Filed Oct. 24, 1914.

QUAKER CITY RUBBER CO.
DANIEL'S
EBONITE
PHILADELPHIA PENNA.U.S.A.

No claim being made to the words "Quaker City Rubber Co., Philadelphia, Penna., U. S. A."

Particular description of goods.—Rubber Machinery Packing.

Claims use since Aug. 27, 1906.

Ser. No. 83,067. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM FOSTER COMPANY, New York, N. Y. Filed Dec. 4, 1914.

SEALECT BRAND
W.F.CO.

No claim being made to the words "Sealect Brand," except as associated with the features shown in the drawing.

Particular description of goods.—Oysters and Clams.

Claims use since Nov. 7, 1914.

Ser. No. 83,106. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. A. CARMICHAEL & Co., Detroit, Mich. Filed Dec. 7, 1914.

L'ESPRIT

Particular description of goods.—Perfumes, Toilet Waters, Florida Waters, Sachet, Liquid Powder, Toilet Cream, Toilet Powders, Brilliantine, Bath-Salt, Bath-Oil, Almond-Meal, Face-Rouge, and Smelling-Salts.

Claims use since April in the year 1914.

Ser. No. 83,319. (CLASS 33. GLASSWARE.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Dec. 16, 1914.

DRUID

Particular description of goods.—Glass Used in Lamps, Glass Columns, Glass Bases, Glass Supports, Glass Globes, Glass Shades, Glass Reflectors, and Glass Bowls for Illuminating Purposes.

Claims use since about Nov. 1, 1913.

Ser. No. 83,720. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) CLARK MFG. CO., Philadelphia, Pa. Filed Jan. 7, 1915.

TRADE-MARK
For the QUEEN MOP

QUEEN

Actual Size

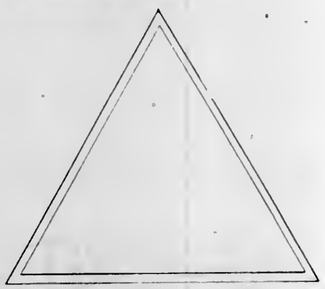
We herewith disclaim the words "Trade Mark for Queen Mop" and also the words "Actual Size."
Particular description of goods.—Mops.
Claims use since Oct. 13, 1914.

Ser. No. 84,575. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) I. P. FRINK, New York, N. Y. Filed Feb. 17, 1915.

POLARALITE

Particular description of goods.—Illuminated Signs.
Claims use since Aug. 8, 1914.

Ser. No. 84,623. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CARL J. GOE, Hazelwood, Pa. Filed Feb. 19, 1915.



Particular description of goods.—Stoves.
Claims use since Jan. 1, 1915.

Ser. No. 84,633. (CLASS 10. FERTILIZERS.) LISTERS AGRICULTURAL CHEMICAL WORKS, Newark, N. J., and New York, N. Y. Filed Feb. 19, 1915.



No claim being made to the exclusive use of the words "Trade Mark."
Particular description of goods.—Fertilizers.
Claims use since 1879.

Ser. No. 84,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. J. MATHESON, Cocoanut Grove, Fla. Filed Mar. 1, 1915.

SWASTIKA

Particular description of goods.—Raw Natural Fruits and Vegetables and Honey.
Claims use since Feb. 21, 1909.

Ser. No. 84,860. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. J. MATHESON, Cocoanut Grove, Fla. Filed Mar. 1, 1915.



Particular description of goods.—Raw Natural Fruits and Vegetables and Honey.
Claims use since Feb. 21, 1909.

Ser. No. 86,274. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) O'BANNON CORPORATION, New York, N. Y. Filed Apr. 29, 1915.

O'BANNON
ARTIFICIAL
LEATHER

No claim being made to the words "Artificial Leather" apart from the mark as shown in the drawing.
Particular description of goods.—Artificial Leather.
Claims use since Apr. 1, 1915.

Ser. No. 86,318. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENNEPIN MILL CO., Minneapolis, Minn. Filed May 1, 1915.



No claim being made to the words "Harina de Trigo de Primavera" apart from the mark as shown in the drawing.
Particular description of goods.—Wheat-Flour.
Claims use since the 1st day of April, 1915.

Ser. No. 86,356. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GEO. RAHMANN & CO., New York, N. Y. Filed May 3, 1915.

KROMOKE

"Kromoke."
Particular description of goods.—Leather Belting.
Claims use since the 27th day of August, 1914.

Ser. No. 86,899. (CLASS 12. CONSTRUCTION MATERIALS.) BUFFALO WIRE WORKS CO., Buffalo, N. Y. Filed May 26, 1915. Under ten-year proviso.

Buffalo

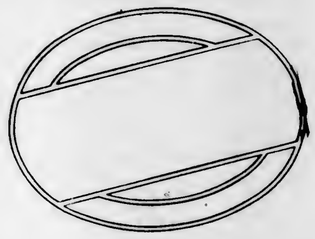
Particular description of goods.—Wire Guards for Counters, Skylights, Windows, Machines, Elevators, and Stalls; Wire Railings for Floors, Windows, and Desks; Wire Partitions, Panels, and Walls; Wire Inclosures for Switchboards, Lockers, and Tool-Rooms, and Wire Doors, Gates, and Office-Screens.
Claims use since 1869.

Ser. No. 87,008. (CLASS 12. CONSTRUCTION MATERIALS.) BUFFALO WIRE WORKS CO., Buffalo, N. Y. Filed June 1, 1915. Under ten-year proviso.



Particular description of goods.—Wire Guards for Counters, Skylights, Windows, Machines, Elevators, and Stalls; Wire Railings for Floors, Windows, and Desks; Wire Partitions, Panels, and Walls; Wire Inclosures for Switchboards, Lockers, and Tool-Rooms, and Wire Doors, Gates, and Office-Screens.
Claims use since 1883.

Ser. No. 87,757. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WILLYS OVERLAND CO., Toledo, Ohio. Filed July 3, 1915.



Particular description of goods.—Automobiles, Automobile-Trucks, Trailers, Whether of Two or More Wheels, and Parts Thereof, Not Including Engines.
Claims use since on or before August, 1910.

Ser. No. 87,758. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WILLYS OVERLAND CO., Toledo, Ohio. Filed July 3, 1915.

Willys

The mark is as written by John North Willys, president of The Willys Overland Co.
Particular description of goods.—Automobiles, Automobile-Trucks, Trailers, Whether of Two or More Wheels, and Parts Thereof, Not Including Engines.
Claims use since on or before September, 1913.

Ser. No. 87,776. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE THOMAS B. JEFFERY COMPANY, Kenosha, Wis. Filed July 6, 1915.

Jeffery

Particular description of goods.—Pleasure-Automobiles.
Claims use since Aug. 27, 1913.

Ser. No. 87,863. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ISAAC N. DEITSCH, New York, N. Y., assignor to The Newton-Bolle Company, Inc., New York, N. Y., a Corporation of New York. Filed July 10, 1915.

VacuVas

Particular description of goods.—Vase-Like Holders Adapted to Receive Hat-Pins, Cut Flowers, and Like Articles.
Claims use since Jan. 15, 1914.

Ser. No. 87,895. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LAVIGNE GEAR CO., Racine, Wis. Filed July 12, 1915.



Particular description of goods.—Steering-Gears for Vehicles.
Claims use since June 14, 1915.

Ser. No. 88,246. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. P. BABCOCK CO., New York, N. Y. Filed July 28, 1915.

VIOLET ELICE

Comprising the words "Violet Elice," the exclusive use of the word "Violet" not being claimed except as shown in the drawing.

Particular description of goods.—Talcum Powder, Toilet Water, Extracts for the Handkerchief, Face-Powder, Sachet-Powder, and Cold-Cream.

Claims use since Jan. 1, 1908.

Ser. No. 88,260. (CLASS 39. CLOTHING.) J. & I. SAUL, New York, N. Y. Filed July 28, 1915.

CRAFTSMAN



Particular description of goods.—Men's Outer Garments, Including Suits and Overcoats.

Claims use since July 1, 1911.

Ser. No. 88,572. (CLASS 39. CLOTHING.) LA CROSSE CLOTHING COMPANY, La Crosse, Wis. Filed Aug. 12, 1915.

ALLOVERALLS

Particular description of goods.—One-Piece Protective Garments for Men, Women, and Children.

Claims use since the 26th day of July, 1915.

Ser. No. 88,631. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SWARTWOUT MFG. CO., Clinton, N. Y. Filed Aug. 14, 1915.

TRADE MARK
TRIUMPH

No claim being made to the words "Trade Mark" apart from the mark shown on the drawing.

Particular description of goods.—Hand-Carts and Hand-Trucks.

Claims use since Jan. 1, 1908.

Ser. No. 88,780. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FERGUSON AND TIMPSON, LIMITED, Glasgow, Scotland, and London, England. Filed Aug. 24, 1915.

UNIPAK

Particular description of goods.—Molded Split-Ring Packing for Machinery Glands and Stuffing-Boxes, Which Goods are Made of Asbestos, White Metal, Graphite, Hemp, and other Substances in a Composition, but Not Including India-Rubber.

Claims use since the month of April, 1915.

Ser. No. 88,820. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEO. R. GIBSON COMPANY, New York, N. Y. Filed Aug. 26, 1915.

Crystalloid

Particular description of goods.—Toilet-Brushes—viz., Tooth-Brushes, Hair-Brushes, Cloth-Brushes, Hat-Brushes, Bonnet-Brushes, Shaving-Brushes, Nail-Brushes, Bath-Brushes, and Military Brushes.

Claims use since January, 1911.

Ser. No. 88,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO. INC., New York, N. Y. Filed Sept. 1, 1915.

L'Adorée

Particular description of goods.—Toilet Powder in Powdered and in Compressed Form, the Latter Being Generally Known as Solid Face-Powder or Rouge.

Claims use since Nov. 7, 1914.

Ser. No. 89,223. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) STA-TITE PACKING RING COMPANY, St. Louis, Mo. Filed Sept. 15, 1915.

K-P

No claim is made to the exclusive use of the packing-ring illustrated, except in connection with the other features of the trade-mark shown.

Particular description of goods.—Metallic Packing-Rings.

Claims use since on or about the 26th day of August, 1915.

Ser. No. 89,257. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN PHOTOGRAPHIC PUBLISHING COMPANY, Boston, Mass. Filed Sept. 17, 1915.

PRACTICAL PHOTOGRAPHY

Particular description of goods.—Books on Subjects Pertaining to Photography Published from Time to Time.

Claims use since July 29, 1915.

Ser. No. 89,368. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE C. S. BELL CO., Hillsboro, Ohio. Filed Sept. 22, 1915.

LA
CAMPANA

Particular description of goods.—Grinding-Mills.

Claims use since Jan. 15, 1913.

Ser. No. 89,389. (CLASS 17. TOBACCO PRODUCTS.) SCHINASI BROS., New York, N. Y. Filed Sept. 22, 1915.



Particular description of goods.—Cigarettes Manufactured of Tobacco.

Claims use since May 1, 1915.

Ser. No. 89,412. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE W. LOFT, New York, N. Y. Filed Sept. 23, 1915.

5th. AVE. CARAMELS.

The word "Caramels" being disclaimed as a part of the mark.

Particular description of goods.—Caramels.

Claims use since 1900.

Ser. No. 89,416. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) POWELL & GIBERSON LINEN CO., New York, N. Y. Filed Sept. 23, 1915.

GRID IRON

Comprising the word "Grid-Iron."

Particular description of goods.—Cotton, Linen, and Wool Piece Goods.

Claims use since Jan. 23, 1915.

Ser. No. 89,444. (CLASS 39. CLOTHING.) EVERETT T. PACKARD, Avon, Mass. Filed Sept. 24, 1915.



Particular description of goods.—Rubber Heels.

Claims use since Mar. 15, 1915.

Ser. No. 89,454. (CLASS 39. CLOTHING.) YOUNG, SMYTH, FIELD COMPANY, Philadelphia, Pa. Filed Sept. 24, 1915.



Particular description of goods.—Stockings.

Claims use since Sept. 22, 1915.

Ser. No. 89,540. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) N. ERLANGER, BLUMGART & CO., New York, N. Y. Filed Sept. 30, 1915.

SILKRASH

No claim being made to registration of the word "Silkrash" apart from the mark shown in the drawing.

Particular description of goods.—Silk or Cotton Crash or a Mixture of Silk and Cotton Piece Goods.

Claims use since about Aug. 30, 1915.

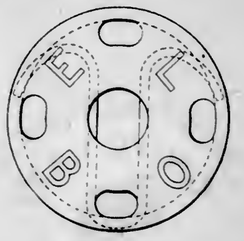
Ser. No. 89,624. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHIROSABURO CHIBA, Seattle, Wash. Filed Oct. 4, 1915.

Rubina

Particular description of goods.—Face-Creams and Hair-Tonic.

Claims use since July 1, 1915.

Ser. No. 89,662. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) E-L-B-O INC., New York, N. Y. Filed Oct. 5, 1915.



No claim being made to the representation of the snap-fastener apart from the mark shown in the drawing.

Particular description of goods.—Dress-Fasteners, Known as Snap-Fasteners.

Claims use since July 15, 1915.

Ser. No. 89,664. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HOMESTEAD VALVE MANUFACTURING COMPANY, Homestead, Pa. Filed Oct. 5, 1915.

HOVALCO

Particular description of goods.—Renewable Blow-Off Steam-Valves and Regrinding Blow-Off Steam-Valves.

Claims use since Aug. 1, 1913.

Ser. No. 89,717. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) SAMUEL LIPPERT, Cleveland, Ohio. Filed Oct. 7, 1915.

THERMOVACVAL

"Thermovacval."

Particular description of goods.—Steam-Controlled Valves Containing Composite Laminated Expanding Elements.

Claims use since Jan. 20, 1915.

Ser. No. 89,734. (CLASS 39. CLOTHING.) LAMBERTVILLE RUBBER CO., Lambertville, N. J. Filed Oct. 8, 1915.

REDSKIN

Particular description of goods.—Rubber Boots and Rubber Shoes.

Claims use since Sept. 28, 1915.

Ser. No. 89,736. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN S. MABRY, Dallas, Tex. Filed Oct. 8, 1915.

"The Old Indian Medicine Man" CHOCTAW LIVER & KIDNEY TONIC "Makes Life Worth Living"

No claim being made to the use of the words "The Old Indian Medicine Man" and "Liver & Kidney Tonic Makes Life Worth Living" apart from the mark shown in the drawing.

Particular description of goods.—A Tonic for Liver, Kidney, and other Physical Ailments, Composed of the Essence of Herbs, Water, and other Liquids and Ingredients.

Claims use since May 10, 1915.

Ser. No. 89,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STRICKLER BROS. CANNING COMPANY, Tippecanoe City, Ohio. Filed Oct. 8, 1915.



Particular description of goods.—Canned Tomatoes.

Claims use since November, 1913.

Ser. No. 89,747. (CLASS 37. PAPER AND STATIONERY.) THE B & B PAPER SUPPLY CO., Holyoke, Mass. Filed Oct. 9, 1915.



MENORAH

Particular description of goods.—Printing, Writing, and Cover Papers.

Claims use since Oct. 7, 1915.

Ser. No. 89,757. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED HARVEY, INC., Kansas City, Mo. Filed Oct. 9, 1915.



Particular description of goods.—Candy.

Claims use since July 3, 1915.

Ser. No. 89,841. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMMON & PERSON, Jersey City, N. J. Filed Oct. 14, 1915. Under ten-year proviso.

Prize

Particular description of goods.—Oleomargarin.

Claims use since April, 1887.

Ser. No. 89,846. (CLASS 37. PAPER AND STATIONERY.) KEITH PAPER CO., Turners Falls, Mass. Filed Oct. 14, 1915.

GREEN RIVER BOND

No claim being made to the word "Bond."

Particular description of goods.—Writing and Printing Papers.

Claims use since on or about Mar. 1, 1915.

Ser. No. 89,875. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLARK THREAD CO., Newark, N. J. Filed Oct. 16, 1915. Under ten-year proviso.

O.N.T.

Particular description of goods.—Pattern Publication Issued Serially.

Claims use since February, 1890.

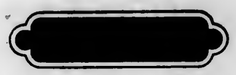
Ser. No. 89,876. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLARK THREAD CO., Newark, N. J. Filed Oct. 16, 1915. Under ten-year proviso.

CLARK'S

Particular description of goods.—Pattern Publications Issued Serially.

Claims use since February, 1890.

Ser. No. 89,877. (CLASS 38. PRINTS AND PUBLICATIONS.) THE CLARK THREAD CO., Newark, N. J. Filed Oct. 16, 1915.



Particular description of goods.—Pattern Publications Issued Serially.

Claims use since September, 1913.

Ser. No. 89,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHR. BJELLAND & CO., INC., New York, N. Y. Filed Oct. 18, 1915.

MIGNON

Particular description of goods.—Canned Fish and Canned Sardines.

Claims use since May 18, 1914.

Ser. No. 89,915. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PERRY D. FRAZER, Ridgewood, N. J. Filed Oct. 18, 1915.

PIONEER

Particular description of goods.—Fishing and Tournament Lines.

Claims use since about Mar. 8, 1912.

Ser. No. 89,954½. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Oct. 20, 1915.



The trade-mark having within a golden and white border upon a blue background yellowish flowers with green leaves and a yellowish oblong panel, said panel surrounded by a golden and white border, no claim to the words shown being made in this application.

Particular description of goods.—Toilet Powder.

Claims use since Mar. 3, 1915.

Ser. No. 89,969. (CLASS 38. PRINTS AND PUBLICATIONS.) PARIS-NEW YORK FASHION CO., New York, N. Y. Filed Oct. 20, 1915.

FASHION-REVIEW

Particular description of goods.—Periodicals Issued Monthly.

Claims use since Sept. 1, 1915.

Ser. No. 90,006. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) RICHARD WEICHOLD, Dresden, Germany. Filed Oct. 21, 1915.



No claim is made to the goods themselves shown in the drawing, and the mark consists in the gold-colored or gilt end.

Particular description of goods.—Strings and Chords for Musical Instruments.

Claims use since July 19, 1915.

Ser. No. 90,025. (CLASS 48. MALT EXTRACTS AND LIQUORS.) FLORIDA BREWING CO., Tampa, Fla. Filed Oct. 22, 1915.



Particular description of goods.—Beer.

Claims use since Sept. 27, 1915.

Ser. No. 90,087. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. F. HILLERICH & SON CO., INC., Louisville, Ky. Filed Oct. 25, 1915.



Joe Jackson

The trade-mark being the portrait and facsimile signature of **Joe Jackson**.

Particular description of goods.—Base-Ball Bats.

Claims use since Feb. 21, 1913.

Ser. No. 90,097. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE OSHKOSH TRUNK CO., Oshkosh, Wis. Filed Oct. 25, 1915.



No claim being made for the words "The Oshkosh Wardrobe, Oshkosh, Wisconsin" apart from the mark shown in the drawing.

Particular description of goods.—Trunks.

Claims use since Apr. 1, 1915.

Ser. No. 90,108. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM BARTELS CO., New York, N. Y. Filed Oct. 26, 1915.



Consisting of the name "Bartels" printed in the particular and distinctive manner shown in the drawing.

Particular description of goods.—All Varieties, Genera, and Species of Live Creatures of the Animal Kingdom Not Raised Primarily for Food, Including Canaries, Parrots, Rabbits, Monkeys, and Goldfish, Mice, and Squirrels.

Claims use since Mar. 1, 1914.

Ser. No. 90,160. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SPOTLESS COMPANY INC., Richmond, Va. Filed Oct. 27, 1915.

SPOTLESS

Particular description of goods.—Buggies and Wagons.

Claims use since Oct. 10, 1915.

Ser. No. 90,176. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) WILLIAM H. HORN & BROTHER, INCORPORATED, Philadelphia, Pa. Filed Oct. 28, 1915.



Particular description of goods.—Trusses, Supporters, Braces, Elastic Stockings, Surgical Belts, and Parts Therefor.

Claims use since about the year 1879.

Ser. No. 90,243. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SCRIPPS BOOTH CO., Detroit, Mich. Filed Oct. 30, 1915.



No claim being made to the word "Detroit" apart from the mark shown in the drawing.

Particular description of goods.—Automobiles, Automobile-Frames, Automobile-Bodies, and Automobile-Chassis.

Claims use since August, 1914.

Ser. No. 90,295. (CLASS 12. CONSTRUCTION MATERIALS.) UNION FIBRE COMPANY, Winona, Minn. Filed Nov. 1, 1915.

HIVOFELT

Particular description of goods.—A Self-Sustaining Heat-Insulating Board Composed of Vegetable Fibers.

Claims use since Oct. 22, 1915.

Ser. No. 90,302. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALVA CITRUS GROWERS' ASSOCIATION, Alva, Fla. Filed Nov. 2, 1915.

LEOPARD



Particular description of goods.—Citrus Fruits.

Claims use since Sept. 23, 1915.

Ser. No. 90,309. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSTRONG PACKING COMPANY, Dallas, Tex. Filed Nov. 2, 1915.



Particular description of goods.—Pure Lard and Compound Lard.

Claims use since June 24, 1915.

Ser. No. 90,310. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSTRONG PACKING COMPANY, Dallas, Tex. Filed Nov. 2, 1915.

El Pajarito



Particular description of goods.—Pure Lard and Compound Lard.

Claims use since June 24, 1915.

Ser. No. 90,318. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CAUSSE MANUFACTURING & IMPORTING COMPANY, Jersey City, N. J. Filed Nov. 2, 1915.

SAXONIA

Particular description of goods.—Preserved and Candied Fruits.

Claims use since 1907.

Ser. No. 90,319. (CLASS 38. PRINTS AND PUBLICATIONS.) DRY GOODS REPORTER COMPANY, Chicago, Ill. Filed Nov. 2, 1915.

STORE·EQUIPMENT·and WINDOW·DISPLAY·MONTHLY

Particular description of goods.—A Section of the *Dry Goods Reporter* Published Periodically, Devoted to Store Equipment and Window Display.

Claims use since Apr. 20, 1907.

Ser. No. 90,324. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GIBBS PRESERVING CO., Baltimore, Md. Filed Nov. 2, 1915.

MELLAX

Particular description of goods.—A Fruit Product for Jelly-Making.
Claims use since Aug. 6, 1915.

Ser. No. 90,332. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HARRIS & BERNTZ COMPANY, Philadelphia, Pa. Filed Nov. 2, 1915.



The words "Prevents Colic" being disclaimed, the color of the background for the circle and the printed matter being red, no claim being made to the words "Round Top" apart from the mark shown in the drawing.
Particular description of goods.—Nursing-Bottle Nipples.
Claims use since Dec. 1, 1914.

Ser. No. 90,335. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWLEY & HOOPS, New York, N. Y. Filed Nov. 2, 1915.

LEADER

Particular description of goods.—Chocolate Creams and Chocolate-Covered Almonds.
Claims use since June, 1899.

Ser. No. 90,341. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed Nov. 2, 1915.

BON-AYRE

Particular description of goods.—Chocolates.
Claims use since July 8, 1915.

Ser. No. 90,342. (CLASS 37. PAPER AND STATIONERY.) MOSER PAPER COMPANY, Chicago, Ill. Filed Nov. 2, 1915.



No claim being made to the words "Bond" and "Biggest in Value—Broadest in Use," except in connection with the word "Giant."
Particular description of goods.—Bond-Paper.
Claims use since Sept. 11, 1915.

Ser. No. 90,344. (CLASS 39. CLOTHING.) MCFADDEN BROS., Wheeling, W. Va. Filed Nov. 2, 1915.



The picture being fanciful.
Particular description of goods.—Suits, Coats, Trousers, Vests, Overcoats, Overalls, Shirts, Collars, Gloves, Hats, Caps, Shoes and Boots of Leather and Rubber, Hosiery, Underwear, (Knitted,) and Underwear Made of Cotton and Linen Fabrics, Sweaters and Knitted Coats, Pajamas and Bath-Robes, Bathing-Suits, Leggings, (Leather, Fabric, or Knitted,) and Rubberized and Oiled Waterproof Clothing.
Claims use since June 21, 1915.

Ser. No. 90,348. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & COMPANY, Chicago, Ill. Filed Nov. 2, 1915.

TROJAN

Particular description of goods.—Coffee.
Claims use since about 1897.

Ser. No. 90,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & COMPANY, Chicago, Ill. Filed Nov. 2, 1915.

STELLAR

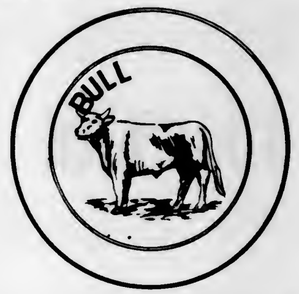
Particular description of goods.—Tea.
Claims use since about 1901.

Ser. No. 90,359. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. G. PRINCE & CO., Oakland, Cal. Filed Nov. 2, 1915.



The signature being in the handwriting of H. G. Prince.
Particular description of goods.—Canned Fruits, Including Berries and Canned Vegetables.
Claims use since Sept. 23, 1915.

Ser. No. 90,361. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERTS BROS. & CO., Zolfo, Fla. Filed Nov. 2, 1915.



Particular description of goods.—Citrus Fruits.
Claims use since October, 1906.

Ser. No. 90,363. (CLASS 12. CONSTRUCTION MATERIALS.) SEARS, ROBUCK AND CO., Chicago, Ill. Filed Nov. 2, 1915.



Particular description of goods.—Prepared Roofings.
Claims use since June 1, 1915.

Ser. No. 90,374. (CLASS 37. PAPER AND STATIONERY.) G. W. TODD & COMPANY, Rochester, N. Y. Filed Nov. 2, 1915.

PROTOD

Particular description of goods.—Paper for Negotiable Instruments.
Claims use since Oct. 22, 1914.

Ser. No. 90,410. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Nov. 4, 1915.

UNIKA

Particular description of goods.—Teething-Rings, Rubber Beard-Softeners, and Rubber Complexion-Cloths.
Claims use since Oct. 7, 1915.

Ser. No. 90,412. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Nov. 4, 1915.

NAUGAHYDE

Particular description of goods.—Foot-Balls and Basket-Balls.
Claims use since Sept. 29, 1915.

Ser. No. 90,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM MYRON REYNOLDS, New York, N. Y. Filed Nov. 4, 1915. Under ten-year proviso.



Particular description of goods.—Medicinal Preparations Employed for Treating Rheumatism, Sciatica, and Kindred Diseases.
Claims use for ten years next preceding Feb. 20, 1905.

Ser. No. 90,435. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. F. HILLERICH & SON CO., INC., Louisville, Ky. Filed Nov. 5, 1915.



Tris Speaker.

Being the portrait and facsimile signature of Tris Speaker.
Particular description of goods.—Base-Ball Bats.
Claims use since Dec. 4, 1912.

Ser. No. 90,465. (CLASS 2. RECEPTACLES.) COLUMBIA PAPER BAG COMPANY, Baltimore, Md. Filed Nov. 6, 1915.

Hindu-Kraft



No claim being made to the word "Hindu-Kraft" except in association with the mark as shown.

Particular description of goods.—Paper Bags.

Claims use since October, 1906.

Ser. No. 90,502. (CLASS 39. CLOTHING.) THE DANDYLINE COMPANY, Chicago, Ill. Filed Nov. 8, 1915.

Elsie Dinsmore

The name "Elsie Dinsmore" is in the handwriting of Magnus Myres, a stockholder and officer of The Dandyline Company.

Particular description of goods.—Girls' Dresses.

Claims use since Nov. 1, 1915.

Ser. No. 90,523. (CLASS 32. FURNITURE AND UPHOLSTERY.) HENRY JOSEPH PODLESÁK, Chicago, Ill. Filed Nov. 8, 1915.



Particular description of goods.—Display Racks or Fixtures.

Claims use since Jan. 2, 1912.

Ser. No. 90,542. (CLASS 38. PRINTS AND PUBLICATIONS.) EVERYDAY MECHANICS CO., INC., New York, N. Y. Filed Nov. 9, 1915.

Everyday Mechanics

Particular description of goods.—Magazines Published Monthly.

Claims use since Oct. 1, 1915.

Ser. No. 90,544. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROSE A. MCGRATH, New York, N. Y. Filed Nov. 9, 1915.

Bell-Rath

Particular description of goods.—Cold-Cream, Skin-Bleach, Hair-Tonic, Face-Powder, and Hand-Lotion.

Claims use since Apr. 15, 1915.

Ser. No. 90,554. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) BOSTON NOVELTY CO., Boston, Mass. Filed Nov. 10, 1915.

INVENTOY

Particular description of goods.—Wood Construction Toy.

Claims use since Nov. 1, 1915.

Ser. No. 90,562. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) M. J. LEMAIRE, Berkeley, Cal. Filed Nov. 10, 1915.

GUACANA

Particular description of goods.—A Remedy for Yellow Fever, Typhoid Fever, Chills, Ague, and Rheumatism.

Claims use since Oct. 29, 1915.

Ser. No. 90,664. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SA-TAN-IC MEDICINE CO., Wichita, Kans. Filed Nov. 15, 1915.

SA-TAN-IC



Particular description of goods.—A Medicinal Preparation for Use in Stomach, Kidney, and Liver Complaints, Dyspepsia, Constipation, Appendicitis, Asthma, Shortness of Breath, and Rheumatism.

Claims use since about Mar. 1, 1915.

Ser. No. 90,695. (CLASS 12. CONSTRUCTION MATERIALS.) BOWIE LUMBER COMPANY, Bowie, La. Filed Nov. 17, 1915.



Particular description of goods.—Shingles, Laths, Turned Posts, Sawed Posts, Sawed Lumber, Planed Lumber, Sawed Timbers, and Planed Timbers.

Claims use since July 5, 1915.

Ser. No. 90,740. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNA L. SWARTZ, Fort Wayne, Ind. Filed Nov. 18, 1915.

KONETA

Particular description of goods.—Blood-Purifier.

Claims use since 1900.

Ser. No. 90,744. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed Nov. 18, 1915.

SCOUT

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.

Claims use since or about the 1st day of November, 1915.

Ser. No. 90,745. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed Nov. 18, 1915.

UNEEDA

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.

Claims use since or about the 1st day of November, 1915.

Ser. No. 90,770. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL TYPEWRITER MANUFACTURING COMPANY, Chicago, Ill. Filed Nov. 19, 1915.

NATIONAL

Particular description of goods.—Type-Writers.

Claims use since July 1, 1915.

Ser. No. 90,784. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOERICKE & TAFEL, INC., Philadelphia, Pa. Filed Nov. 20, 1915.

ALFALCO

Particular description of goods.—Medicinal Tonic.

Claims use since about Sept. 15, 1915.

Ser. No. 90,796. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARDEN, ORTH & HASTINGS CO., Boston, Mass. Filed Nov. 20, 1915.

MOHCO

The word "Mohco."

Particular description of goods.—Tannins and Tanning Extracts, Logwood, Fustic, and Sumac.

Claims use since Oct. 1, 1915.

Ser. No. 90,801. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POWELL'S, New York, N. Y. Filed Nov. 20, 1915.

JACK ROSE

Particular description of goods.—Chocolates.

Claims use since 1904.

Ser. No. 90,808. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANGLO-AMERICAN PHARMACEUTICAL COMPANY, LIMITED, Croydon, England, and New York, N. Y. Filed Nov. 22, 1915.

I-D-L

Particular description of goods.—A Surgical Lubricant and Antiseptic.

Claims use since the year 1912.

Ser. No. 90,809. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. THOMAS FLORENCE BRADY, Sanford, Fla. Filed Nov. 22, 1915.

MOTHERINE

Particular description of goods.—A Preparation for Use in Making Childbirth Easy.

Claims use since July 4, 1915.

Ser. No. 90,825. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE DE LONG HOOK & EYE COMPANY, Philadelphia, Pa. Filed Nov. 22, 1915.

Atlas

Particular description of goods.—Hooks and Eyes and Safety-Pins.
Claims use since April, 1905.

Ser. No. 90,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES D. FULLER, Detroit, Mich. Filed Nov. 22, 1915.

ION-O-LEX

Particular description of goods.—Remedy for Use in Inflammatory Conditions and Wherever Local Pyrexia is Present in Various Parts of the Body.
Claims use since Nov. 16, 1915.

Ser. No. 90,834. (CLASS 17. TOBACCO PRODUCTS.) MI FAVORITA CIGAR CO., INC., New York, N. Y. Filed Nov. 22, 1915.

LOBELIA

Particular description of goods.—Cigars, Cheroots, Little Cigars, Cigarettes, and Manufactured Tobaccos.
Claims use since October, 1915.

Ser. No. 90,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROSE CHEMICAL WORKS, New York, N. Y. Filed Nov. 22, 1915.



The trade-mark consists of the compound word "No-Garb."
Particular description of goods.—Chemicals Used in Preventing the Deposit of Carbon in the Cylinders of Oil and Similar Engines.
Claims use since Sept. 1, 1915.

Ser. No. 90,854. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN TSAK, Bayside, N. Y. Filed Nov. 22, 1915.



Particular description of goods.—A Polish for Furniture, Pianos, Victrolas, Woodwork, Floors, Type-Writers, and All Varnished Surfaces.
Claims use since about Nov. 1, 1915.

Ser. No. 90,860. (CLASS 37. PAPER AND STATIONERY.) UNITED DRUG COMPANY, Boston, Mass. Filed Nov. 22, 1915.

SYMPHONY LAWN

The word "Lawn" is disclaimed.
Particular description of goods.—Writing-Paper and Envelops.
Claims use since prior to June, 1910.

Ser. No. 90,861. (CLASS 37. PAPER AND STATIONERY.) UNITED DRUG COMPANY, Boston, Mass. Filed Nov. 22, 1915.

TULIP LINEN

The word "Linen" is disclaimed.
Particular description of goods.—Writing-Paper and Envelops.
Claims use since prior to June, 1910.

Ser. No. 90,867. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AGRICULTURAL SPECIALTY CO., Dorchester, Mass. Filed Nov. 23, 1915.



No claim being made to the words "Tip Top."
Particular description of goods.—Fruit-Pickers.
Claims use since Aug. 31, 1915.

Ser. No. 90,870. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THOMAS A. EDISON, INCORPORATED, West Orange, N. J. Filed Nov. 23, 1915.

DIAMOND

Particular description of goods.—Sound-Records.
Claims use since Oct. 30, 1915.

Ser. No. 90,878. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK A. MONROE, Jamestown, N. Y. Filed Nov. 23, 1915.

GIST

Particular description of goods.—An Antiphlogistic, Antiseptic, and Prophylactic Liquid.
Claims use since the 28th day of January, 1914.

Ser. No. 90,879. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OVERNITE CARBON REMOVER COMPANY, Chicago, Ill. Filed Nov. 23, 1915.

OVERNITE

Particular description of goods.—Carbon-Remover.
Claims use since Nov. 18, 1915.

Ser. No. 90,907. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ROGERS COMPANY, Tacoma, Wash. Filed Nov. 24, 1915.

Auto Club

Particular description of goods.—Baking-Powder.
Claims use since November, 1914.

Ser. No. 90,939. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 26, 1915.

BOHEMIAN TICKING

Comprising the words "Bohemian Ticking," the exclusive independent use of the word "Ticking" not being claimed except as shown in the drawing.
Particular description of goods.—Cotton Piece Goods.
Claims use since about Feb. 1, 1908.

Ser. No. 90,940. (CLASS 12. CONSTRUCTION MATERIALS.) WESTERN BRICK COMPANY, Danville, Ill. Filed Nov. 26, 1915.

GOTHIC

Particular description of goods.—Bricks.
Claims use since Nov. 10, 1915.

Ser. No. 90,978. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAMS DRUG CO., Ogdensburg, N. Y. Filed Nov. 27, 1915.



Particular description of goods.—A Camphorated Mustard Cream.
Claims use since Nov. 15, 1915.

Ser. No. 90,980. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 29, 1915.

GOLDSEAL

Particular description of goods.—Fertilizers.
Claims use since the spring of 1914.

Ser. No. 91,014. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERM. MADOERY, Basel, Switzerland. Filed Nov. 29, 1915.

SULFOTHYOL

Particular description of goods.—Certain Medicinal Products for Internal and External Use, the Said Material Being Used Internally for Tuberculosis, Diseases of the Lungs, and Catarrh of the Intestines and Stomach, and Being Used Externally for Various Skin Disorders and Eruptions.
Claims use since about 1911.

Ser. No. 91,017. (CLASS 2. RECEPTACLES.) THE NORTHERN JOBBING CO., Chicago, Ill. Filed Nov. 29, 1915.

THE R.C.U. STORE

No claim being made to the words "The Store" except in association with the mark as shown.
Particular description of goods.—Paper Bags.
Claims use since 1914.

Ser. No. 91,033. (CLASS 39. CLOTHING.) EVANSVILLE OVERALL CO., Evansville, Ind. Filed Nov. 30, 1915.

Whitleather

Particular description of goods.—Overalls and Trousers.
Claims use since Oct. 15, 1911.

Ser. No. 91,062. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EUREKA FLINT AND SPAR CO., Trenton, N. J. Filed Dec. 1, 1915.

SUNIAM

Particular description of goods.—A Polishing and Scouring Compound.
Claims use since Nov. 20, 1915.

Ser. No. 91,077. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATURAL PRODUCTS REF. CO., Jersey City, N. J. Filed Dec. 1, 1915.

"NAPROCO"

Particular description of goods.—Bichromate of Soda.
Claims use since Jan. 1, 1910.

Ser. No. 91,102. (CLASS 17. TOBACCO PRODUCTS.) JACOBSTEIN BROTHERS, Rochester, N. Y. Filed Dec. 2, 1915.

LORD PUFFER

Particular description of goods.—Cigars and Cigarettes.
Claims use since Oct. 10, 1909.

Ser. No. 91,118. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM T. ACHENBACH, Glens Falls, N. Y. Filed Dec. 3, 1915.

COLAC

Particular description of goods.—Pile-Pills.
Claims use since Sept. 1, 1915.

Ser. No. 91,119. (CLASS 12. CONSTRUCTION MATERIALS.) BLACK ROCK WALL BOARD CO., Buffalo, N. Y. Filed Dec. 3, 1915.

BLACK ROCK WALLBOARD
BLACK CENTRE

No claim being made to the words "Wallboard" and "Black Center" apart from the mark shown in the drawing.
Particular description of goods.—Wall-Board and Building-Paper.
Claims use since Oct. 15, 1915.

Ser. No. 91,120. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CRIPPEN COMPANY, INC., New York, N. Y. Filed Dec. 3, 1915.

Interpretone

"Interpretone."
Particular description of goods.—Mechanical Music-Playing Instruments and Music-Sheets Thereof.
Claims use since about Sept. 25, 1915.

Ser. No. 91,124. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE DUEBER WATCH CASE MANUFACTURING COMPANY, Canton, Ohio. Filed Dec. 3, 1915.

DUECO

Particular description of goods.—Watchcases and Watch-Works.
Claims use since Oct. 6, 1915.

Ser. No. 91,153. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDERSON M. AILSTOCK, Hinton, W. Va. Filed Dec. 4, 1915.

"I Am A. A. A."

Particular description of goods.—A Remedy for Sores and All Skin Diseases, Blood-Purifier, and Remedy for Rheumatism.
Claims use since July 1, 1914.

Ser. No. 91,157. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE H. BETTS, New York, N. Y. Filed Dec. 4, 1915.

GLEBEAS ADORATION

Particular description of goods.—Perfumes, Toilet Waters, Face-Powders, and Face-Creams.
Claims use since July 1, 1915.

Ser. No. 91,159. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COFLUX, LIMITED, London, England. Filed Dec. 4, 1915.

COFLUX

Particular description of goods.—A Medicinal Preparation for Reducing Inflammatory Conditions of the Body and for a Medicinal Preparation for Inflammatory Diseases of the Throat, Chest, and Skin and for the Alleviation of Pain or Inflammation in any Form, also a Remedy for Lupus, Cuts, Wounds, Bruises, Piles, Sprains, Burns, and Chilblains.
Claims use since the 8th of October, 1915.

Ser. No. 91,171. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) STRAWBRIDGE & CLOTHIER, Philadelphia, Pa. Filed Dec. 4, 1915.

YELVA

Particular description of goods.—Artificial Pearls.
Claims use since Oct. 28, 1912.

Ser. No. 91,196. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915.

AUTUMN LEAF ROYAL

Particular description of goods.—Textile Threads.
Claims use since January, 1889.

Ser. No. 91,197. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

SUPERIOR

Particular description of goods.—Textile Threads.
Claims use since January, 1889.

Ser. No. 91,200. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

DRESDEN

Particular description of goods.—Textile Threads.
Claims use since January, 1889.

Ser. No. 91,201. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

BELDING'S

Particular description of goods.—Textile Threads.
Claims use since January, 1863.

Ser. No. 91,202. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

BELDING BRO'S. & CO.

Particular description of goods.—Textile Threads.
Claims use since January, 1863.

Ser. No. 91,205. (CLASS 43. THREAD AND YARN.) BELDING BROS. & Co., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

PRIZE MEDAL

Particular description of goods.—Textile Threads.
Claims use since January, 1889.

Ser. No. 91,230. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARLOWE MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 6, 1915.

DIANA

Particular description of goods.—Hair-Nets.
Claims use since Jan. 25, 1911.

Ser. No. 91,235. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

RICHARDSON SILK CO.

Particular description of goods.—Textile Threads.
Claims use since January, 1887.

Ser. No. 91,239. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

PERFECT

Particular description of goods.—Textile Threads.
Claims use since January, 1887.

Ser. No. 91,240. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

Grecian

Particular description of goods.—Textile Threads.
Claims use since January, 1887.

Ser. No. 91,242. (CLASS 43. THREAD AND YARN.) SALTER SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

SALTERS

Particular description of goods.—Textile Threads.
Claims use since January, 1895.

Ser. No. 91,243. (CLASS 43. THREAD AND YARN.) SALTER SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

"PRINCE ALBERT"

Particular description of goods.—Textile Threads.
Claims use since January, 1895.

Ser. No. 91,248. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

WINSTED

Particular description of goods.—Textile Threads.
Claims use since January, 1885.

Ser. No. 91,249. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

POTTER'S

Particular description of goods.—Textile Threads.
Claims use since January, 1875.

Ser. No. 91,250. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

ART FLOSS

Particular description of goods.—Textile Threads.
Claims use since January, 1895.

Ser. No. 91,251. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

BEAVER

Particular description of goods.—Textile Threads.
Claims use since January, 1885.

Ser. No. 91,252. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

ORIENTAL

Particular description of goods.—Textile Threads.
Claims use since January, 1885.

Ser. No. 91,253. (CLASS 43. THREAD AND YARN.) WINSTED SILK CO., Winsted, Conn. Filed Dec. 6, 1915. Under ten-year proviso.

Springfield

Particular description of goods.—Textile Threads.
Claims use since January, 1885.

Ser. No. 91,374. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HOWLETT & HOCKMEYER CO., INC., New York, N. Y. Filed Dec. 10, 1915.

Waterside

Particular description of goods.—Corduroys, Velveteens, and Cotton Piece Goods.
Claims use since June 1, 1915.

Ser. No. 91,442. (CLASS 38. PRINTS AND PUBLICATIONS.) ARCHIBALD MCLELLAN, ALLISON V. STEWART, JOHN V. DITTEMORE, ADAM H. DICKEY, and JAMES A. NEAL, Brookline, Mass., and JOSIAH E. FERNALD, Concord, N. H., trustees under the will of Mary Baker G. Eddy, deceased, doing business at Boston, Mass. Filed Dec. 13, 1915.



The lining in the cross is not intended to indicate color.
Particular description of goods.—Printed Books, Printed Magazines Published Monthly, and Printed Bible Lessons Published Quarterly.
Claims use since Apr. 1, 1908.

Ser. No. 91,514. (CLASS 47. WINES.) THE CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed Dec. 16, 1915.

FERMO

Particular description of goods.—Wine.
Claims use since Oct. 1, 1915.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 4, 1916.

107,875. CLEANING FLUID FOR CLEANSING CLOTHES AND CLOTH FABRICS. MARTHA M. ARMSTRONG, Morristown, N. J.
Filed July 7, 1915. Serial No. 87,799. PUBLISHED OCTOBER 19, 1915.

107,876. SLEEPING-GARMENTS. THE BRISTOL MANUFACTURING COMPANY, Bristol, Conn.
Filed September 16, 1915. Serial No. 89,234. PUBLISHED OCTOBER 26, 1915.

107,877. HORSE-NAILS. THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn.
Filed August 6, 1915. Serial No. 88,458. PUBLISHED OCTOBER 26, 1915.

107,878. DOG-BISCUITS. CHAMPION ANIMAL FOOD COMPANY, St. Paul, Minn.
Filed March 22, 1915. Serial No. 85,296. PUBLISHED OCTOBER 19, 1915.

107,879. CERTAIN NAMED HARDWARE, PLUMBING, AND STEAM-FITTING SUPPLIES. THE CLEVELAND BRASS MANUFACTURING CO., Cleveland, Ohio.
Filed May 17, 1915. Serial No. 86,658. PUBLISHED OCTOBER 26, 1915.

107,880. SOAPS AND SOAP CHIPS. COLGATE & CO., Jersey City, N. J., and New York, N. Y.
Filed March 4, 1915. Serial No. 84,923. PUBLISHED APRIL 27, 1915.

107,881. MEDICINAL TONIC. ADELIA G. DORSEY, Lockport, La.
Filed August 18, 1915. Serial No. 88,672. PUBLISHED OCTOBER 19, 1915.

107,882. SOAP, BRASS-POLISH, SILVER-POLISH, AND STOVE-POLISH. DUDLEY MANUFACTURING COMPANY, Boston, Mass.
Filed April 28, 1915. Serial No. 86,243. PUBLISHED OCTOBER 19, 1915.

107,883. BISCUIT AND WAFERS. MRS. JACK'S HAM BISCUIT CO., Birmingham, Ala.
Filed May 5, 1915. Serial No. 86,393. PUBLISHED OCTOBER 19, 1915.

107,884. FLOUR MADE FROM WHEAT AND CEREALS. THE JOBES MILLING CO., St. Johns, Oreg.
Filed March 16, 1915. Serial No. 85,187. PUBLISHED AUGUST 3, 1915.

107,885. CEREAL FOOD PRODUCTS. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed April 16, 1915. Serial No. 85,992. PUBLISHED AUGUST 3, 1915.

107,886. GROUND-ANCHORS. W. N. MATTHEWS & BRO., INC., St. Louis, Mo.
Filed September 15, 1915. Serial No. 89,211. PUBLISHED OCTOBER 19, 1915.

107,887. NIGHT-SHIRTS AND PAJAMAS. E. ROSENFELD & COMPANY, Baltimore, Md.
Filed August 27, 1915. Serial No. 88,843. PUBLISHED OCTOBER 26, 1915.

107,888. CANDY. C. SAUTTER & SONS, INC., Philadelphia, Pa.
Filed April 23, 1915. Serial No. 86,158. PUBLISHED OCTOBER 19, 1915.

107,889. MIXED FOOD FOR POULTRY. SOUTH TEXAS GRAIN COMPANY, Houston, Tex.
Filed August 5, 1915. Serial No. 88,449. PUBLISHED OCTOBER 19, 1915.

107,890. DRESS AND NEGLIGÉE SHIRTS. SAMUEL STERNBERGER COMPANY, Philadelphia, Pa.
Filed August 20, 1915. Serial No. 88,719. PUBLISHED OCTOBER 26, 1915.

107,891. WHEAT-FLOUR. CHARLES TIEDEMANN MILLING CO., O'Fallon, Ill.
Filed June 4, 1915. Serial No. 87,116. PUBLISHED OCTOBER 19, 1915.

107,892. COLLAR-SUPPORTS. THE WARREN FEATHERBONE COMPANY, Three Oaks, Mich.
Filed August 9, 1915. Serial No. 88,513. PUBLISHED OCTOBER 19, 1915.

107,893. MECHANICAL RAZOR-STROPPERS. ACME ROTA STROP CO., Morris Park, N. Y.
Filed July 9, 1915. Serial No. 87,837. PUBLISHED OCTOBER 19, 1915.

107,894. LEATHER BELTING. ALEXANDER BROTHERS, Philadelphia, Pa.
Filed July 25, 1914. Serial No. 80,051. PUBLISHED OCTOBER 19, 1915.

107,895. READY ROOFING IN ROLL OR SHINGLE FORM. ASPHALT READY ROOFING CO., New York, N. Y.
Filed August 20, 1915. Serial No. 88,701. PUBLISHED OCTOBER 26, 1915.

107,896. MIDDY-BLOUSES FOR WOMEN AND GIRLS. BLOOM & MILLMAN, New York, N. Y.
Filed August 6, 1915. Serial No. 88,454. PUBLISHED OCTOBER 26, 1915.

107,897. CLOTHS AND STUFFS OF WOOL, WORSTED, OR HAIR. THE BRADFORD DYERS' ASSOCIATION, LIMITED, Bradford, England.
Filed September 15, 1915. Serial No. 89,204. PUBLISHED OCTOBER 26, 1915.

107,898. MEN'S LEATHER SHOES. BROWN SHOE COMPANY, INC., St. Louis, Mo.
Filed August 3, 1915. Serial No. 88,381. PUBLISHED OCTOBER 26, 1915.

107,899. CIGARETTES. BUD CIGARETTE CO., INC., New York, N. Y.
Filed November 25, 1914. Serial No. 82,900. PUBLISHED FEBRUARY 9, 1915.

107,900. ORANGE-JUICE. BURNEE CORPORATION, New York, N. Y.
Filed September 15, 1915. Serial No. 89,205. PUBLISHED OCTOBER 12, 1915.

107,901. COTTON AND WOOL BATTING. CALIFORNIA COTTON MILLS COMPANY, Oakland, Cal.
Filed January 28, 1915. Serial No. 84,165. PUBLISHED OCTOBER 26, 1915.

107,902. SLOT-MACHINES FOR VENDING PLAIN OR AERATED WATER. CENTADRINK FILTERS CO. INC., New York, N. Y.
Filed June 23, 1915. Serial No. 87,516. PUBLISHED OCTOBER 19, 1915.

107,903. BRASS, COPPER, PORCELAIN-ENAMELED STEEL, AND OTHER METALLIC AND ENAMELED-METAL REFLECTORS. CENTRAL ELECTRIC COMPANY, Chicago, Ill.
Filed March 4, 1914. Serial No. 76,312. PUBLISHED JULY 21, 1914.

107,904. BOXES AND CRATES MADE OF CERTAIN NAMED MATERIALS AND CHICKEN-COOPS. CHICAGO MILL AND LUMBER COMPANY, Chicago, Ill.
Filed September 7, 1915. Serial No. 89,054. PUBLISHED OCTOBER 12, 1915.

107,905. BOOTS AND SHOES OF LEATHER OR SKIN. LEWIS A. CROSSETT INC., North Abington, Mass.
Filed August 25, 1915. Serial No. 88,799. PUBLISHED OCTOBER 26, 1915.

107,906. CERTAIN NAMED BUILDING MATERIAL. THE CURTIS LUMBER & MILLWORK CO., Clinton, Iowa.
Filed July 2, 1913. Serial No. 71,472. PUBLISHED SEPTEMBER 7, 1915.

107,907. WHEAT-FLOUR. ELM GROVE MILLING CO., Elm Grove, W. Va.
Filed August 24, 1915. Serial No. 88,778. PUBLISHED OCTOBER 19, 1915.

107,908. COFFEE. L. DOELMAN COMPANY, Buffalo, N. Y.
Filed August 21, 1915. Serial No. 88,729. PUBLISHED OCTOBER 26, 1915.

107,909. COFFEE. DWINELL-WRIGHT CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,875. PUBLISHED OCTOBER 26, 1915.

107,910. WEIGHING-MACHINES AND PARTS THEREOF. E. AND T. FAIRBANKS AND COMPANY, St. Johnsbury, Vt.
Filed July 17, 1915. Serial No. 87,986. PUBLISHED OCTOBER 26, 1915.

107,911. POULTRY FOOD—TO WIT, A MIXTURE OF WHEAT, CORN, AND BARLEY. FISHER FLOURING MILLS COMPANY, Seattle, Wash.
Filed August 11, 1915. Serial No. 88,538. PUBLISHED OCTOBER 19, 1915.

107,912. DRY, PASTE, AND READY-MIXED PAINTS, JAPANS, AND VARNISHES. N. Z. GRAVES COMPANY, Philadelphia, Pa.
Filed October 16, 1908. Serial No. 38,040. PUBLISHED NOVEMBER 24, 1914.

107,913. KEROSENE. GULF REFINING COMPANY, Port Arthur, Tex., and Pittsburgh, Pa.
Filed August 16, 1915. Serial No. 88,646. PUBLISHED OCTOBER 26, 1915.

107,914. PURE REFINED PARAFFIN-WAX. GULF REFINING COMPANY, Port Arthur, Tex., and Pittsburgh, Pa.
Filed August 16, 1915. Serial No. 88,647. PUBLISHED OCTOBER 26, 1915.

107,915. CERTAIN NAMED FOODS. HAWKS, INCORPORATED, Bloomington, Ill.
Filed May 28, 1914. Serial No. 78,616. PUBLISHED SEPTEMBER 7, 1915.

107,916. COFFEE. HOTEL SHERMAN COMPANY, Chicago, Ill.
Filed May 13, 1915. Serial No. 86,595. PUBLISHED AUGUST 3, 1915.

107,917. CANNED VEGETABLES. THE K-C LUMBER COMPANY, Lucedale, Miss.
Filed August 18, 1915. Serial No. 88,675. PUBLISHED OCTOBER 26, 1915.

107,918. CANNED VEGETABLES. THE K-C LUMBER COMPANY, Lucedale, Miss.
Filed August 18, 1915. Serial No. 88,676. PUBLISHED OCTOBER 26, 1915.

107,919. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. KAHN BROTHERS COMPANY, Chicago, Ill.
Filed June 11, 1915. Serial No. 87,252. PUBLISHED SEPTEMBER 7, 1915.

107,920. CAKE. P. C. KNOWLTON CO., INC., SUCCESSORS TO BALDWIN, KNOWLTON & LAKE, Memphis, Tenn.
Filed August 25, 1915. Serial No. 88,805. PUBLISHED OCTOBER 19, 1915.

107,921. CORSETS, CORSET-COVERS, AND CORSET-PADS. KOPS BROS., New York, N. Y.
Filed September 16, 1915. Serial No. 89,239. PUBLISHED OCTOBER 26, 1915.

107,922. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed August 26, 1915. Serial No. 88,823. PUBLISHED OCTOBER 26, 1915.

107,923. PRINTING-PRESSES, PLATE-PRINTING MACHINES, AND DEVICES FOR INKING AND WIPING THE PRINTING-SURFACES THEREOF. LINOTYPE AND MACHINERY LIMITED, London, England.
Filed July 9, 1914. Serial No. 79,673. PUBLISHED OCTOBER 19, 1915.

107,924. CERTAIN NAMED FOODS. FRANKLIN MACVEAGH & COMPANY, Chicago, Ill.
Filed August 16, 1909. Serial No. 44,156. PUBLISHED AUGUST 3, 1915.

107,925. CORSETS. MADAME IRÈNE, New York, N. Y.
Filed August 26, 1915. Serial No. 88,826. PUBLISHED OCTOBER 26, 1915.

107,926. CLOTH AND FABRIC MEASURING MACHINES AND PARTS THEREOF. THE MEASUREGRAPH COMPANY, St. Louis, Mo.
Filed July 14, 1915. Serial No. 87,930. PUBLISHED OCTOBER 26, 1915.

107,927. CANNED FISH AND CANNED VEGETABLES. J. HOWARD MERCIAN, New York, N. Y.
Filed July 24, 1915. Serial No. 88,165. PUBLISHED OCTOBER 26, 1915.

107,928. BERRY AND FRUIT PRESERVES AND FRUIT AND BERRY JELLY. JOS. MIDDLEBY, JR., INC., Boston, Mass.
Filed June 1, 1915. Serial No. 87,022. PUBLISHED OCTOBER 19, 1915.

107,929. MOVING-PICTURE AND PICTURE-PROJECTION MACHINES AND APPARATUS AND PICTURE-SLIDES OR TRANSPARENCIES THEREFOR. MOVING ADVERTISEMENT CO., New York, N. Y.
Filed August 13, 1915. Serial No. 88,597. PUBLISHED OCTOBER 26, 1915.

107,930. OLIVE-OIL. NASIACOS IMPORTING CO., Chicago, Ill.
Filed July 6, 1915. Serial No. 87,786. PUBLISHED OCTOBER 19, 1915.

107,931. RUBBER AND CANVAS BOOTS AND SHOES. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed September 25, 1914. Serial No. 81,471. PUBLISHED OCTOBER 26, 1915.

107,932. RUBBER AND CANVAS BOOTS AND SHOES. NATIONAL INDIA RUBBER CO., Bristol, R. I.
Filed September 25, 1914. Serial No. 81,472. PUBLISHED OCTOBER 26, 1915.

107,933. CANNED FISH. NORTH AMERICAN TUNA CANNING CO., Los Angeles, Cal.
Filed August 30, 1915. Serial No. 88,884. PUBLISHED OCTOBER 26, 1915.

107,934. OLEOMARGARIN. THE OHIO BUTTERINE CO., Cincinnati, Ohio.
Filed September 4, 1915. Serial No. 89,035. PUBLISHED OCTOBER 26, 1915.

107,935. CANNED FRUITS. PACIFIC COAST CANNING CO., Oakland, Cal.
Filed July 30, 1915. Serial No. 88,313. PUBLISHED OCTOBER 19, 1915.

107,936. OLIVE-OIL AND MACARONI. SILAS PEIRCE & CO. LTD., Boston, Mass.
Filed July 2, 1915. Serial No. 87,717. PUBLISHED AUGUST 17, 1915.

107,937. RYE-FLOUR. MORRIS ROSENFELD, New York, N. Y.
Filed September 4, 1915. Serial No. 89,037. PUBLISHED OCTOBER 26, 1915.

107,938. TOILET-PAPER. SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y.
Filed July 26, 1915. Serial No. 88,212. PUBLISHED OCTOBER 19, 1915.

107,939. DRESSING FOR MACHINERY-BELTS. SAWYER BELTING COMPANY, Cleveland, Ohio.
Filed May 27, 1915. Serial No. 86,942. PUBLISHED OCTOBER 19, 1915.

107,940. DRESSING FOR MACHINERY-BELTS. SAWYER BELTING COMPANY, Cleveland, Ohio.
Filed May 27, 1915. Serial No. 86,943. PUBLISHED OCTOBER 19, 1915.

107,941. COLLAR-SUPPORTERS. JOSEPH W. SCHLOSS CO., New York, N. Y.
Filed August 2, 1915. Serial No. 88,369. PUBLISHED OCTOBER 19, 1915.

107,942. PAPER BAGS. THE SELBERT PAPER CO., Cincinnati, Ohio, assignor to The Advance Bag Company, Middletown, Ohio.
Filed March 23, 1915. Serial No. 85,347. PUBLISHED OCTOBER 19, 1915.

107,943. CIGARS. SERV-US PURE FOOD CO., Chicago, Ill.
Filed August 19, 1915. Serial No. 88,696. PUBLISHED OCTOBER 19, 1915.

107,944. SHOES OF CANVAS AND LEATHER. SHAFT-PIERCE SHOE CO., Faribault, Minn.
Filed April 22, 1915. Serial No. 86,124. PUBLISHED OCTOBER 26, 1915.

107,945. VEHICLE-SPRINGS. SHELDON AXLE AND SPRING COMPANY, Wilkes-Barre, Pa.
Filed August 10, 1915. Serial No. 88,523. PUBLISHED OCTOBER 19, 1915.

107,946. BOOK-COVERS. SMALLEY BOOK COVER CO., Yonkers, N. Y.
Filed July 3, 1915. Serial No. 87,750. PUBLISHED OCTOBER 19, 1915.

107,947. ASPHALTUM. STANDARD OIL COMPANY, Richmond, Cal.
Filed August 25, 1915. Serial No. 88,813. PUBLISHED OCTOBER 26, 1915.

107,948. REMEDY FOR CUTS, SPRAINS, SCALDS, AND RUNNING SORES. GEORGE STANKIEWICZ, Chicago, Ill.
Filed September 10, 1915. Serial No. 89,136. PUBLISHED OCTOBER 26, 1915.

107,949. ICING-POWDER, FLAVORING FOR CAKES AND PASTRIES, A MILK SUBSTITUTE. TAFACO SPECIALTY COMPANY, Boston, Mass.
Filed June 22, 1915. Serial No. 87,509. PUBLISHED OCTOBER 19, 1915.

107,950. OLIVE-OIL IN TINS. VINCENT TAORMINA, New Orleans, La.
Filed December 2, 1914. Serial No. 83,030. PUBLISHED SEPTEMBER 28, 1915.

107,951. CERTAIN NAMED FOODS. THE TIEDTKE BROTHERS COMPANY, Toledo, Ohio.
Filed April 5, 1915. Serial No. 85,724. PUBLISHED AUGUST 3, 1915.

107,952. [WITHDRAWN.]

107,953. BOOTS AND SHOES HAVING FABRIC UPPERS AND RUBBER SOLES. UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed October 31, 1914. Serial No. 82,317. PUBLISHED OCTOBER 19, 1915.

107,954. BUTTER. WHITE RIVER CREAMERY CO., Muncie, Ind., and Cincinnati, Ohio.
Filed June 9, 1915. Serial No. 87,210. PUBLISHED SEPTEMBER 21, 1915.

107,955. COFFEE. THE WOOLSON SPICE COMPANY, Toledo, Ohio.
Filed January 11, 1915. Serial No. 83,789. PUBLISHED OCTOBER 19, 1915.

107,956. PAPERS, FELTS, AND COMPOSITE FABRICS FOR ROOFING, SHEATHING, AND WATERPROOFING. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed August 14, 1915. Serial No. 88,609. PUBLISHED OCTOBER 26, 1915.

107,957. PAPERS, FELTS, AND COMPOSITE FABRICS FOR ROOFING, SHEATHING, AND WATERPROOFING. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed August 14, 1915. Serial No. 88,610. PUBLISHED OCTOBER 26, 1915.

107,958. BOTTLE, CAN, AND JAR CLOSURES. BROOKLYN BOTTLE STOPPER CO., Brooklyn, N. Y.
Filed July 30, 1915. Serial No. 88,297. PUBLISHED OCTOBER 26, 1915.

107,959. PORTABLE HANGERS FOR HOUSEHOLD AND TRAVELERS' USE. MARY ELIZABETH BUTCHER, Cambridge, Mass.
Filed August 21, 1915. Serial No. 88,725. PUBLISHED OCTOBER 26, 1915.

107,960. MATERIAL USED IN BUILDING ROADS, APPLIED BY MIXING OR BY PENETRATION. MERLIN T. CALEF, Philadelphia, Pa.
Filed January 25, 1915. Serial No. 84,077. PUBLISHED OCTOBER 19, 1915.

107,961. SOAP. CARBONA PRODUCTS COMPANY, East Orange, N. J., and New York, N. Y.
Filed May 10, 1915. Serial No. 86,507. PUBLISHED OCTOBER 12, 1915.

107,962. SHIRTS, COLLARS, AND CUFFS. CLUETT, PEABODY & CO. INC., Troy, N. Y.
Filed August 16, 1915. Serial No. 88,641. PUBLISHED OCTOBER 26, 1915.

107,963. FOR USE IN PROMOTING THE GROWTH OF HAIR. J. A. COBB, Jackson, Miss.
Filed September 11, 1915. Serial No. 89,144. PUBLISHED OCTOBER 19, 1915.

107,964. POPCORN, PEANUTS, CANDIED POPCORN, AND CANDIED PEANUTS. DIRNBERGER POP CORN CO., Buffalo, N. Y.
Filed August 23, 1915. Serial No. 88,753. PUBLISHED OCTOBER 26, 1915.

107,965. FIRE-BRICK. ELK FIRE BRICK COMPANY, St. Marys, Pa.
Filed June 1, 1915. Serial No. 87,010. PUBLISHED OCTOBER 19, 1915.

107,966. CORKS. OLIN FINNEY, Columbus, Ohio.
Filed September 18, 1912. Serial No. 65,847. PUBLISHED OCTOBER 26, 1915.

107,967. COTTON FLANNELS, OUTINGS, DOMETS, MOTTLED FLANNELS, GINGHAMS, FANCY COTTON PLAIDS, TICKING, CHAMBREYS, CHEVIOTS, AND CHECKS. THE GLENCOE MILLS, Burlington, N. C.
Filed February 17, 1914. Serial No. 75,963. PUBLISHED DECEMBER 8, 1914.

107,968. DRIED AND CURED BEEF AND BOLOGNA-STYLE SAUSAGE. SAM GORDON, New York, N. Y.
Filed April 1, 1912. Serial No. 85,609. PUBLISHED OCTOBER 26, 1915.

107,969. CANNED PINEAPPLES. HAIKU FRUIT & PACKING CO., LTD., Haiku, Maui, Hawaii Ter.
Filed February 10, 1915. Serial No. 84,428. PUBLISHED MAY 25, 1915.

107,970. MOTOR-CYCLES AND BICYCLES. HARLEY-DAVIDSON MOTOR CO., Milwaukee, Wis.
Filed August 11, 1915. Serial No. 88,541. PUBLISHED OCTOBER 19, 1915.

107,971. NEWSPAPERS PUBLISHED WEEKLY. THE LINCOLN HIGHWAY ASSOCIATION, Detroit, Mich.
Filed July 16, 1914. Serial No. 79,848. PUBLISHED OCTOBER 26, 1915.

107,972. CERTAIN NAMED ELECTRICAL APPARATUS AND SUPPLIES. METAL SPECIALTIES MANUFACTURING CO., Chicago, Ill.
Filed August 31, 1915. Serial No. 88,927. PUBLISHED NOVEMBER 2, 1915.

107,973. PADLOCKS, DOOR-LOCKS, TUMBLER-LOCKS, FLUSH LOCKS, AND SEAL-LOCKS. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed July 2, 1914. Serial No. 79,519. PUBLISHED OCTOBER 26, 1915.

107,974. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,887. PUBLISHED OCTOBER 26, 1915.

107,975. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,888. PUBLISHED OCTOBER 26, 1915.

107,976. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,889. PUBLISHED OCTOBER 26, 1915.

107,977. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,894. PUBLISHED OCTOBER 26, 1915.

107,978. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,896. PUBLISHED OCTOBER 26, 1915.

107,979. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,897. PUBLISHED OCTOBER 26, 1915.

107,980. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,899. PUBLISHED OCTOBER 26, 1915.

107,981. SPICED HERRING. PARKER & CO., Minneapolis, Minn.
Filed August 12, 1915. Serial No. 88,577. PUBLISHED OCTOBER 26, 1915.

107,982. CAKE. PURITY CORPORATION, Richmond, Va.
Filed December 22, 1914. Serial No. 83,464. PUBLISHED APRIL 20, 1915.

107,983. MONTHLY PERIODICAL PUBLICATION. THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio.
Filed February 25, 1915. Serial No. 84,772. PUBLISHED OCTOBER 19, 1915.

107,984. BELTING MADE OF COTTON AND RUBBER. THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio.
Filed May 5, 1915. Serial No. 86,408. PUBLISHED OCTOBER 26, 1915.

107,985. BROAD-SILK PIECE GOODS. SAUQUOIT SILK MFG. CO., Philadelphia, Pa., and New York, N. Y.
Filed September 7, 1915. Serial No. 89,079. PUBLISHED OCTOBER 26, 1915.

107,986. LADIES' COATS, SUITS, SKIRTS, AND DRESSES. M. E. SMITH & CO. INC., Omaha, Nebr.
Filed September 7, 1915. Serial No. 89,082. PUBLISHED OCTOBER 26, 1915.

107,987. KEROSENE-OIL. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed September 21, 1914. Serial No. 81,389. PUBLISHED OCTOBER 26, 1915.

107,988. FURNITURE-POLISH. JOHN HOWARD THOMASSON, Minneapolis, Minn.
Filed April 10, 1915. Serial No. 85,883. PUBLISHED OCTOBER 26, 1915.

107,989. FLY-KILLERS OR HAND DEVICES FOR KILLING FLIES AND OTHER INSECTS. UNITED STATES WIRE MAT COMPANY, Decatur, Ill.
Filed August 16, 1915. Serial No. 88,657. PUBLISHED OCTOBER 19, 1915.

107,990. POPCORN CONFECTION. THE WELCH COMPANY, Chicago, Ill.
Filed August 19, 1915. Serial No. 88,700. PUBLISHED OCTOBER 26, 1915.

107,991. WRITING-TABLETS AND NOTE-BOOK PAPERS. WESTERN TABLET CO., St. Joseph, Mo.
Filed July 15, 1915. Serial No. 87,963. PUBLISHED OCTOBER 19, 1915.

107,992. GLUTEN-FLOUR. GEORGE J. WILSON, Rochester, N. Y.
Filed June 19, 1915. Serial No. 87,449. PUBLISHED OCTOBER 19, 1915.

107,993. CLOCKS AND WATCHES. THE WILSON CHEMICAL CO., Tyrone, Pa.
Filed July 22, 1915. Serial No. 88,130. PUBLISHED OCTOBER 19, 1915.

107,994. BUOYANT LIFE-SAVING APPLIANCE TO BE WORN ON THE HUMAN BODY. AMERICAN LIFE SAVING GARMENT COMPANY, Boston, Mass.
Filed April 12, 1915. Serial No. 85,887. PUBLISHED OCTOBER 19, 1915.

107,995. CLEANING AND POLISHING PASTE FOR GLASSWARE AND SILVERWARE. CRYSTELLA COMPANY, New York, N. Y.
Filed April 1, 1913. Serial No. 69,506. PUBLISHED AUGUST 10, 1915.

107,996. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,061. PUBLISHED OCTOBER 19, 1915.

107,997. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,067. PUBLISHED OCTOBER 19, 1915.

107,998. THERAPEUTIC IODIN COMPOUNDS HAVING ALTERATIVE AND ANTISEPTIC INTERNAL USAGE AND ANTISEPTIC EXTERNAL USAGE. HOWARD-HOLT COMPANY, Cedar Rapids, Iowa.
Filed August 7, 1915. Serial No. 88,476. PUBLISHED OCTOBER 19, 1915.

107,999. CARRIAGE-ROBES, BLANKETS, AND STEAMER-RUGS. THOMAS KELLY & CO., Boston, Mass.
Filed September 14, 1915. Serial No. 89,185. PUBLISHED OCTOBER 19, 1915.

108,000. ANTISEPTIC THROAT-TABLET. THE E. L. PATCH CO., Boston, Mass.
Filed September 14, 1915. Serial No. 89,189. PUBLISHED OCTOBER 19, 1915.

108,001. PIECE GOODS STAMPED WITH DESIGNS FOR EMBROIDERY. FRED L. NIETMANN, New York, N. Y.
Filed September 3, 1915. Serial No. 89,011. PUBLISHED NOVEMBER 2, 1915.

108,002. MECHANICAL BOILER-TUBE CLEANERS. THE WILLIAM B. PIERCE COMPANY, Buffalo, N. Y.
Filed June 5, 1915. Serial No. 87,146. PUBLISHED NOVEMBER 2, 1915.

108,003. PRESERVED FIGS. TEXAS FIG CO., Houston, and La Porte, Tex.
Filed August 12, 1915. Serial No. 88,581. PUBLISHED OCTOBER 26, 1915.

108,004. INTERNAL-COMBUSTION MOTORS. UNIVERSAL MOTOR COMPANY, Oshkosh, Wis.
Filed January 18, 1915. Serial No. 83,947. PUBLISHED NOVEMBER 2, 1915.

108,005. FLOUR AND BREAKFAST CEREALS MADE FROM WHEAT. WHEAT MEAL COMPANY, Le Mars, Iowa.
Filed October 14, 1914. Serial No. 81,883. PUBLISHED OCTOBER 19, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

12,857. LAUNDRY AND TOILET SOAP. N. K. FAIRBANK & CO., Chicago, Ill.; The N. K. Fairbank Company, a Corporation of New Jersey, assignee.
Registered December 15, 1885. Renewed December 15, 1915.

LABELS

REGISTERED JANUARY 4, 1916.

18,966.—*Title:* "MAX BEST." (For Flour.) DOCK AND COAL COMPANY, Plattsburg, N. Y. Filed September 25, 1914.

18,967.—*Title:* "JOSEPH, THE FIRST COATMAKER, NEW YORK." (For Suits and Overcoats.) SAMUEL JOSEPH, New York, N. Y. Filed November 29, 1915.

18,968.—*Title:* "'AMERICA'S BEST' BOY'S BLOUSE." (For Boys' Blouses.) DAVID KURTZ, Brooklyn, N. Y. Filed November 9, 1915.

18,969.—*Title:* "TRAVERS ANTISEPTIC POWDER COMPOUND." (For Travers Antiseptic Powder Compound.) EDMUND J. MCGRAW, Baltimore, Md. Filed March 15, 1915.

18,970.—*Title:* "THE MAKERS OF THIS CAN GUARANTEE THAT BEFORE LEAVING THE FACTORY, IT WAS TESTED AND FOUND FREE FROM LEAKS AND OF CORRECT CAPACITY." (For Cans.) STURGES & BURN MANUFACTURING COMPANY, Chicago, Ill. Filed November 16, 1914.

PRINTS

REGISTERED JANUARY 4, 1916.

4,167.—*Title:* "ICE CREAM, THE NATIONAL DESSERT." (For Ice-Cream.) THE BURDICK-SIMPSON CO., INC., New York, N. Y. Filed July 9, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

CADILLAC MOTOR CAR CO. *et al. v.* AUSTIN.

Decided June 30, 1915.

225 Fed. Rep., 983.

1. PATENTS—CONSTRUCTION OF CLAIMS.
   An element which expressly characterizes and limits one claim of a patent and by which alone it substantially differs from another claim will not be read into the latter when not necessary to make it operative.
2. SAME—VALIDITY AND INFRINGEMENT—CHANGE-SPEED GEARING.
   The Austin patent, No. 1,091,618, for change-speed gearing for automobiles, was not anticipated and discloses invention, the device being the first practically-operative two-speed axle-drive gearing; also *Held* infringed as to claims 9 to 12, inclusive.
3. SAME—INVENTION—NEW COMBINATION OF OLD ELEMENTS.
   If the selection of elements from existing machines into a complete combination has for the first time produced from a practical and commercial aspect a new result, invention may well be predicated thereon.
4. SAME—CONSTRUCTION OF CLAIMS—AMENDMENT OF APPLICATION.
   That the claims of a patent as granted were introduced by a voluntary amendment and are broader than those in the original application does not deprive the patentee of the right to have them construed as broadly as their language implies nor of the right to hold as an infringer one who, with knowledge of the original claims, built a structure which avoided them, but which is within the broader claims.

APPEAL from the District Court of the United States for the Western District of Michigan; Clarence W. Sessions, Judge.

STATEMENT OF THE CASE.

Infringement suit by Austin against the Cadillac Company, based upon claims 9, 10, 11, and 12, of Patent No. 1,091,618 for "change-speed gearing," issued to Austin March 31, 1914, on application filed August 12, 1913, in renewal of application filed February 16, 1911. From the usual interlocutory decree for injunction and accounting, the Cadillac Company appeals.

The specification classifies the invention as relating to change-speed gearing, "especially adapted to automobiles." In the common form of this machine, the engine crank-shaft, running longitudinally of the car, is clutch-connected to a propeller-shaft, extending back in the same axial line into bevel-gear engagement with the rear axle, which is thus driven, and which drives the car. In the simplest form of clutch connection between engine-shaft and propeller-shaft, the two must always revolve at the same speed. In transmitting the power from the propeller-shaft to the axle through the bevel-gearing, it is obvious that the relative speeds of driving-shaft and driven axle can be determined by adopting any desired ratio between the number of teeth on the driving-shaft-carried pinion as compared with the number on the driven-axle-carried gear. To illustrate: It may be assumed that, for ordinary speed on average roads, the best ratio is three to one—that is, three times as many teeth upon the axle-gear as upon the shaft-pinion—and it will follow that for each shaft revolution the wheels will make one-third of a revolution. It is clear that no such permanent or fixed relation, "direct drive," between engine speed and axle speed will meet the varying conditions of service; and so it has been common to interrupt the propeller-shaft by interposing between its front and rear severed portions selective transmission devices, whereby the relation between the speeds of engine and of propeller-shaft may be varied. A short parallel counter-shaft, carrying gears of different sizes, corresponding gears upon the propeller-shaft, and means for sliding some of these gears longitudinally, or, perhaps for using none of them and clutching the two parts of the shaft directly to each other, enable the operator to select the ratio which he prefers; and if, for example, he selects a ratio of four to one in his transmission, and has a ratio of three to one in his direct drive, he will have an effective final ratio of twelve to one, as between his engine and his driven axle, resulting in the so-called "low speed." It is obvious, too, that this indirect method of transmission, by breaking the continuity of the propeller-shaft and interposing gearing, is less desirable than if the driving power comes directly from engine to axle, and so it is commonly understood that the direct drive or the "high speed" is to be preferred wherever conditions permit. It was Austin's idea to increase the flexibility of this direct drive by providing alternative gear pairs between shaft and axle and by providing selective mechanism, whereby the driver can cause one of two driving-pinions on his shaft to drive either one of two beveled gears upon the axle, whereby, for example, the driver may shift the connection from one to the other and change the gear ratio from three to one to two to one, so causing a complete revolution of the wheels to each two revolutions of the engine shaft, and increasing the speed of the car fifty per cent. without changing the speed of the engine. The very considerable practical advantages of this result are conceded, although there are disadvantages, and the ultimate balance will not necessarily and always be favorable. Such favorable net result, which will make the idea practically worth while, was to be attained only by exercising either a high degree of skill or a considerable amount of invention, as the two may be classified, in minimizing the bad and emphasizing the good among the attendant conditions.

What Austin did was to provide, at the rear end of his propeller-shaft, a small bevel-pinion fixed

thereon and to carry just forward thereof another and larger bevel-pinion fixed to a sleeve surrounding the driving-shaft. In front of this sleeve the shaft carried a longitudinally-sliding clutch, splined upon and always revolving with the shaft, but capable of being engaged with or disengaged from the pinion-carrying sleeve. It resulted that while the smaller pinion would always revolve with the shaft, the larger one would or would not, according as it was clutched thereto or unclutched therefrom. These two pinions were always in mesh with the corresponding bevel-gears on the differential housing (thus ultimately revolving the axle), the forward pinion and the outside gear having the high, or two to one, ratio, and the rear pinion and the inside gear having the low, or three to one, ratio. Since it is clear that both gear pairs could not be clutched to and fast upon shaft and axle, respectively, at the same time without stripping some of the gears, and since when Austin's clutch-pinion was fast to the shaft, both pinions thereon must revolve, he made the inner or low-speed gear loose upon the axle, and provided a clutch sliding longitudinally on the axle and always revolving therewith, but engaging the inner gear to the axle only when desired. He then connected his clutch on the shaft and his clutch on the axle by toggle-levers so that they automatically acted together, and when one was thrown in, the other was thereby necessarily thrown out. It followed that if the forward pinion on the shaft was made fast thereto, it would drive the outer gear and so drive the axle, but while the rear pinion would also drive the inner gear, the latter would be free from the axle and would run idle thereon. If the forward pinion was unclutched from the shaft, the inner gear would be driven by the rear pinion, and the inner gear being then fast to the axle, it would cause the outer gear also to revolve; this, in turn, would drive the forward pinion, and the latter, being free from the shaft, would run idle thereon. It therefore resulted that, of the four gear members, three were always fast and one always idle.

The defendant's device employs the same two gear pairs; that is, two driving-pinions on a propeller-shaft, and two driven gears upon the axle. The four gear members have the same relative form, size, mounting, and arrangement as in Austin's, in all particulars except one; the smaller and rear (being the low-speed) driving-pinion, instead of being fixed on the propeller-shaft, is carried upon a sleeve concentric therewith, and which may be clutched thereto, and the other member of the pair, the inner or low-speed driven gear, is fixed to the axle instead of being clutch-connected thereto. In other words, the high-speed gear pair is wholly the same in both machines and the low-speed gear pair is the same, excepting that the capacity of being detached from its shaft is transposed from one member to the other. Of the four gear members, three are always fast and active, one always loose and idle.

The case presents the questions whether the claims in suit can properly be so read as to cover defendant's device, and, if so, whether they are valid. Claim 10 may fairly be considered typical of the group sued upon, and it reads as follows:

> In a change-speed gearing for automobiles, the combination of the axle, differential gearing, and a suitable housing, an outer driven beveled gear secured to said housing and an inner driven beveled gear nested with the outer beveled gear, either one or the other of which is adapted to be connected to drive the differential gearing structure to operate the said axle, a propeller shaft, a bearing for the inner end thereof, an inner pinion thereon adapted to mesh with the inner driven beveled gear, and an outer pinion concentric therewith adapted to mesh with the outer beveled gear, the outer gear and pinion being of higher ratio than the inner gear and pinion, and means for coupling either the outer beveled gear and pinion, or the inner beveled gear and pinion to said propeller shaft to drive the said axle, coöperating for the purpose specified.

Mr. F. P. Fish for the appellants.

Mr. F. L. Chappell for the appellee.

Before WARRINGTON, KNAPPEN, and DENISON, Circuit Judges.

DENISON, *Cir. J.*, (after stating the facts as above:)

1. Defendant insists that whatever invention Austin made extended only to the relative arrangement of his clutched and fixed gear members, and hence that his patent must be confined to a device carrying one clutched driving-pinion and one clutched driven gear, with connections whereby the two clutches have an in-and-out automatic action. We cannot so interpret claim 10. Its language is not incapable of such a limitation, when it is read in connection with the specification; but when we compare the various claims, including those not in suit, we find that this particular clutch construction and arrangement are expressly specified in, and seem to be the dominant thought of, another group of claims, while not mentioned in the group of claims in suit. This comparison clearly shows that the latter were intended to be distinguished and characterized by the provision that the outer gear and pinion were of higher ratio than the inner gear and pinion. It follows that, under the familiar rule which we have several times followed and applied (*Scaife* v. *Falls City Co.*, 209 Fed., 210, 214; 126 C. C. A., 304; *National Co.* v. *Mark*, 216 Fed., 507, 521; 133 C. C. A., 13), we will not read into one claim elements which expressly characterize another, by which alone the two substantially differ and which are not necessary to make the former operative; and that if Austin's only real invention resided in his peculiar clutch mechanism, claim 10 would be void, because broader than the invention.

2. If the words of claim 10 are given quite ordinary and normal meanings, the claim clearly reads upon defendant's device, which has all the parts named, and in their specified, mutual relationship. Its sliding clutch, engaging one or the other of the pinions and so driving one or the other of the fixed gears, fully responds to the phrase—

> means for coupling either the outer beveled gear and pinion or the inner beveled gear and pinion to the said propeller shaft to drive the said axle.

Aside from the contention that the special clutch arrangement should be read in, only two questions of failure to respond to the terms of the claim are raised. One is whether the defendant's inner driven beveled gear is "nested" with the outer beveled gear. This word "nested" is not of very precise meaning. In Austin, the outer surface of the inner gear-ring rests, in part, against the inner surface of the outer ring; in the Cadillac, both rings are supported upon and carried by the same back frame, though the two are not in actual contact; but in each case, looked at from the face side, there is no appreciable annular space between the two gears, and the face plane of the inner gear projects beyond the outer just about half of the thickness of the ring. From the face side, the difference between the two devices is not noticeable; and the word

"nested" is not inapt to describe the relations between the two gears and their respective supports, as found in the Cadillac structure. The other suggestion is that in the Cadillac, the inner driving-pinion is not "on" the shaft ("an inner pinion thereon") because it is not integral with the shaft, as in Austin, or carried solely thereby. It surrounds the shaft, revolves with or upon the shaft, and would be carried thereby and would operate if it had no other support, but through its surrounding outer pinion and frame-bearings external thereto, it would be kept in place if the shaft were removed. We find no reason for giving to "thereon" so limited a meaning as defendant's contention requires, and we must think that the mechanism of the claim is used by defendant.

3. These considerations lead us to conclude that the vital question is whether, construing the claim as we do and considering what others had already done, there was invention in the combination claimed. In deciding this question, one fact stands out as important, and, we think, controlling. This fact is that, although it was common mechanical knowledge that with constant speed in a driving-shaft, the speed of a right-angled driven shaft could be changed by providing two pairs of driving-pinions and driven gears and clutching one or the other pair to the shaft, and although certain advantages to be derived from employing this principle upon an automobile were very apparent, and although numerous skilled engineers and inventors had tried for many years to accomplish this result in a commercially useful way, Austin was the first man who practically succeeded and who built a marketable automobile with a two-speed axle.[1] The strongest evidence of the lack of any prior practically operative device and of Austin's success is furnished by the defendant's conduct. There are, in the record, a number of earlier patents illustrating various conceptions of an automobile-axle having two or more speeds; there is no affirmative evidence that any of them ever came upon the market. The Cadillac Company had long been among the leaders in the industry; its skilled engineers, who testified as witnesses in this case, doubtless thoroughly knew the practical art and its history the world over, and their admission that Austin's two-speed axle was the first one they had ever seen practical enough to impress them favorably, and their failure to say they ever heard of any other on the market, are evidence enough that there was no such predecessor. Of course, if any one of these earlier patents disclosed Austin's complete combination, it would be of little or no importance that they never came into use; but the rule is quite different when the issue is whether modifications and rearrangements amount to invention.

Some apparent instances of earlier adoption of this idea in practice turn out to be exceptions that emphasize Austin's real priority. Defendant's chief engineer testifies that two or three "two-speed axles" built into automobiles had been demonstrated to him by other inventors in an effort to interest him and his company, and that he had been taken to ride in automobiles so equipped; and while his testimony implies that they worked well enough, neither he nor his company was attracted by these devices, or paid any further attention to them, and the devices dropped out of sight. On the contrary, after the Cadillac Company had thus "turned down" such devices and had considered and discarded various designs and plans for a two-speed axle, and after Austin had kept one or more of his in use for a year or so, he exhibited it at the Chicago show, in January, 1913. Defendant's chief engineer saw it there, was attracted by it, and at once procured Austin to ship him an axle for trial. This was built into a Cadillac car and used for a time. The company negotiated with Austin for the right to use his invention, but apparently became satisfied both that his royalty demands were exorbitant, and that he would not, upon his pending application, secure a patent broad enough to be of very much value. It thereupon returned his axle and declined further to consider a contract with him. However, it immediately modified some theretofore discarded two-speed-axle designs so as to put the device in the form which we have described as "defendant's device," put this upon all its cars for the annual season then beginning, and extensively advertised its two-speed axle as the greatest advance in the automobile art made by any manufacturer in any country. Indeed, it exploited an international award made to it as depending partly upon this ground.[2] It may not be clear that, as compared with the prior art, Austin made any new invention, but it is quite clear that, as compared with the prior art plus Austin, defendant's engineers did not; and it follows that their advertising claims go far toward crediting Austin with an epoch-making invention. This kind of advertising does not demonstrate anything; but unless the defendant was acting in bad faith—which should not be presumed—it shows that defendant's present insistence on the trifling character of what Austin did is an afterthought. In such a situation, the courts must be very reluctant to say that the step in advance taken by the patentee was only mechanical skill.

The French patent to the Minerve Company, dated in 1904, presents, perhaps, the closest approximation to the Cadillac structure. Indeed, defendant insists that the Minerve device is the prototype of defendant's; and it would go without saying that if in fact defendant has followed the Minerve disclosure with only those changes and adjustments obvious to the skilled automobile me-

[1] Austin is himself an automobile manufacturer, and his machines, containing the invention, have been made and sold, though in limited number.

[2] "Public attention is focusing upon one car, and especially upon a principle in that car which distinguishes it from other cars. This car is, as you will surmise, the Cadillac; and the principle is its two-speed direct drive axle. Partly because of that principle, the Cadillac rides differently, and, it is said more luxuriously than most other cars. * * * The qualities which won the Dewar Trophy * * * are peculiar in the Cadillac. They flow out of Cadillac standardization, Cadillac methods, Cadillac ideals, and the Cadillac two-speed direct drive axle."

chanic, or if the same construction of claim 10 of the Austin patent necessary to make it read upon the Cadillac will also cause it to read upon the Minerve, the claim is not valid. A careful study of this French patent so becomes necessary. It had a four-speed axle, and was intended to provide, by this mechanism alone, all the necessary variety of speeds. At the rear end of its propeller-shaft, it carried four concentric sleeves, each of which, at its rear end, carried a beveled gear constituting a driving-pinion. The pinion-gear faces were approximately in the same vertical plane, whereby it resulted that each of the three outer pinion-gears was dished partly or wholly around the next within. A so-called sleeve upon the axle carried fixed thereon four beveled gears. Each was carried upon an independent disk, spider, or other frame, and these were spaced well apart along the sleeve. Each gear meshed with the corresponding sleeve-carried pinion. A sliding clutch on the shaft fastened thereto any one of the four pinion-sleeves, leaving the other free to be driven idle. The gears on the axle-sleeve were of substantially the same diameter. From this construction, it followed that the outside gear pair had the highest ratio, resulting in high speed in the axle, while the innermost pair resulted in low speed. The drawing indicates that the ratios, commencing at the inside, were approximately, four to one, two to one, one and one-half to one and one and one-fifth to one. We have already stated the reasons why it is to be presumed that this Minerve device never came into use. In addition, it is pointed out that a ratio as low as twelve to one is necessary to meet common conditions, and that, if the Minerve was built so as to give that ratio, and with the smallest practicable driving-pinion, the driven gear must have such a radius that the gear-case would drag on the ground. Other defects are pointed out, which, it is said, would prevent practical and successful use; but it is not clear just how far such defects may be due to an imperfect drawing[3] or might be remedied by fairly skilful construction.

Defendant says if we throw away either the outer two or the inner two of the Minerve gear pairs, we have the Cadillac construction. This is, superficially and broadly, true; but more exact comparison shows three elements specified in the combination of Austin's claim 10 and found in defendant's structure, which are not in the Minerve. These are: (1) In Austin and in the Cadillac, the outer driven gear is seated directly on the differential housing. This gives a broad and rigid support, and it is carried into the claim by the words "secured to said housing." In Minerve, the gear nearest the part which may be the housing is at a considerable distance away, and there is no direct connection. The axle-sleeve on which the gear-frame is centrally mounted does by its revolution ultimately drive the axle and the differential gears; but the patent does not indicate how this is done, nor indeed is it clear that the drawing shows any revolving differential housing. The gear is thus unsupported for the greater part of its diameter, and more free to vibrate. We cannot be sure that it is "secured to the differential housing" within Austin's contemplation. (2) In Austin and in the Cadillac, the inner driven gear is "nested" in the outer. Even in the rather narrow sense that the inner gear-ring is partly withdrawn inside of the plane of the face of the outer ring, and that the outer furnishes a rigidity of support to the inner, either by rather direct contact, as in Austin, or because the supporting-frame of one merges into that of the other, as in the Cadillac; in no such sense are the Minerve gears "nested." They lie in wholly independent planes, and neither as to 1 and 2 or 3 and 4 does the outer furnish any support to the inner. Their only connection is through their common axis. (3) In Austin, as in the Cadillac, the rear end of the continuous propeller-shaft rests in a bearing carried by the rear-axle structure, thus tending to maintain the perfect respective positioning of the driving-pinions and driven gears. This is made an element of the claim by the words "a bearing for the inner end" of the shaft. In Minerve, the outer pinion-sleeve is carried in a fixed bearing, each sleeve closely surrounds and supports the one next within it, and when the shaft and inner sleeve are not clutched together, the shaft finds its bearing therein. The differences between carrying the shaft end in this complex structure, with four bearing-surfaces between it and the frame, and carrying it directly in the frame are obvious and may be important.

It is not necessary to decide just how closely Austin should be limited to his form of each one of these three elements. It is enough to say that, as to each, he departs from Minerve to some extent, and that, to the full extent of his departure, the Cadillac does the same, both as to each of these three and as to the combination of the three with each other, and as to the combination of the three with all the other named elements of the claim. This complete construction was taken from Austin, and it is not, in its entirety, to be found elsewhere.

In addition to these differences between Minerve and Austin, the two were intended for use in different environments. Austin used his patented invention in connection with the ordinary gear-box, whereby two speeds upon the axle became sufficient, and he became independent of any attempt to get his low speed at the axle; the Minerve undertook to dispense with the ordinary gear-box and provide at the axle all necessary transmissions, and thereby met new problems, perhaps practically insuperable. It is true that the gear-box transmission is not an element of claim 10, and cannot be read in; but nevertheless, in deciding whether Austin invented anything over the Minerve builder, it is quite appropriate to observe that the two were working under different surroundings and upon different operative theories.

Upon the whole, we are well convinced that Austin's successful machine, as specified in claim 10,

[3] For example, the clutch shown in the drawing could not be passed from one sleeve to the next without engaging both at once. This at least indicates that the drawing was not made from a working device.

involved invention, as compared with the Minerve—probably impractical—construction.

It is true that each one of these missing elements can be found in some one of the prior patents; but this is not enough to negative invention. If the selection of elements from existing machines into a complete combination has, for the first time, produced, from a practical and commercial aspect, a new result, invention may well be predicated thereon; and if producing more of a woven fabric within a stated time was a "new result" within the meaning of this familiar rule (*Loom Co.* v. *Higgins*, 105 U. S., 580; 26 L. Ed., 1177) so must be the additional mileage per gallon of gasolene, the saving of wear and the additional ease of riding, all of which the Cadillac Company so strongly attributed to the two-speed axle.

We have said that claim 10 is characterized and distinguished from the other claims by the provision that the high-speed gear pair should be on the outside; and we are referred to patents (like Smith, No. 933,864, November 7, 1911) which are said to anticipate, excepting that they have the high-speed gear inside; and it is argued that there can be no invention in the mere reversal of the position between high and low, because this is all a matter of designing and proportioning the respective number of teeth in the pinion and gear. It is shown that upon prior structures of this general class, some had the high-speed pair outside and some inside, and we cannot doubt that the transposition of these pairs would, *prima facie*, seem to be within the expected skill of the gear designer; but questions of invention cannot be decided on such *prima facie* rules. The automobile probably presents, as never before, the problem of adapting rather delicate mechanism and adjustments to the hardest kind of hard usage. Under such conditions, theoretical judgment in advance of practice is not convincing, and there is less room than in some other fields for safely assuming that a particular change in structure involves no invention. Certain it is that in an automobile structure of this type, and which carried the outer driving-gear fixed upon a differential housing, and the inner "nested" therein, no one had put the higher-gear pair outside. In the two or three instances which more or less respond to this description, the high had been on the inside. The very fact that there are distinct and great advantages in having the high on the outside—a fact not only apparent when it is pointed out, but confessed by defendant, which adopted this form in preference to the other—and that several successive inventors failed to notice it and adhered to the other form, tends to show that the substitution was not obvious. That there were likely to be such difficulties about the substitution as to cause mechanics to think it was impracticable in an automobile is illustrated by what defendant's experts have done. From the basis of their commercial device, they have made a drawing showing the low speed outside, to demonstrate how simple the transposition is, yet they have been compelled to reduce the diameter of their inner gear so considerably as materially to affect the mechanical problems involved, and the inner pinion cannot be inserted or removed by sliding forward along the shaft. They have also, for the same purpose, designed a transposition of high and low as applied to the Dewald French patent of 1905, but in the end, they have a high ratio of about one to one, and a low of about one and one-third to one, a result hardly worth the trouble, because the low is higher than the highest high used outside of a racing-car. True, this lack of much difference between the two ratios results from a faithful transposition of what Dewald shows, and to get the necessary practical ratios would require reorganizing his structure; but this confirms the impression that it never proved worth building. Questions of size, weight, accessibility, lubrication, suitability for very high-speed revolution, etc., complicate what, in other situations, might be simple. After a considerable period of discussion with Austin, and experimenting with his device, defendant's engineers seemed to be impressed with this feature—high speed outside—as its chief merit. Other more or less similar devices with low speed outside were open to defendant; one such patent it owned, and yet it adopted and persisted in using Austin's precise form of combination, so far as concerns this feature. Under such circumstances, it cannot safely be said that the transposition of the gear ratios, with all the changes which were involved and which followed, was a thing which, in its combined conception and execution, involved nothing but skill. We think this conclusion more consonant than the other would be with the view of invention taken by the Supreme Court in (*e. g.*) *Expanded Co.* v. *Bradford* (214 U. S., 366; 29 Sup. Ct., 652; 53 L. Ed., 1034) and *Diamond Co.* v. *Consolidated Co.* (220 U. S., 428; 31 Sup. Ct., 444; 55 L. Ed., 527) and by this court in (*e. g.*) *Schiebel Co.* v. *Clark* (217 Fed., 760; 133 C. C. A., 490) and *Davis* v. *New Departure Co.*, (217 Fed., 775; 133 C. C. A., 505.) *Mast* v. *Stover* (177 U. S., 485; 20 Sup. Ct., 708; 44 L. Ed., 856) is not inconsistent; the change in gearing there considered involved none of the complications we have recited.

There is no doubt that Austin at first regarded his relative arrangement of gear members and clutches as characteristic of his invention, both according to the specification and to the claims which were allowed on his original application. The idea of one fixed member and one clutch member upon the shaft and one of each upon the axle was inherent in all these. The defendant's device does not infringe those claims. While the first specification notices the disposition of the gears with the high outside, this was urged as desirable because of an advantage which was due to his form of clutch and not due to his relative gear ratios; but after all this had taken place, Austin took further counsel, abandoned his application, and filed another one in renewal; and upon his new application he obtained the issue of claim 10. We see in this situation no estoppel against giving to claim 10 the full breadth implied by a natural construction of its words. Estoppel comes from accepting a narrower claim which the Patent Office

makes the condition of the grant. Here, the narrow claims, which would not have reached the defendant's structure, were not accepted as the full measure of the grant, but were refused, and the applicant deliberately insisted upon and secured the claims which he thought appropriate.

Very likely the necessity for these new claims was brought to Austin's attention by his dealings with defendant, and by observing defendant's later structure. Speaking now of the additional character given to the combination by having the high outside, if this feature had not been embodied in Austin's structure, but had later been added by defendant, and Austin had then secured a generic claim reaching to the form which he had not made, we might well apply what Judge Wallace said in *Westinghouse Co.* v. *New York Co.* (C. C., 87 Fed., 882, 884) and hold that he was endeavoring to gather unto himself an invention which the defendant had made; but that is not the case here. This feature of Austin's device was completely present in the structure which he brought to defendant. His original failure to claim it when not used in combination with his peculiar clutch ought not, on any principle, to prevent him from claiming it as soon as the propriety of doing so occurred to him. Although during the negotiations Austin furnished defendant with copies of his claims as they stood, we cannot see that defendant was misled. The fact that this feature—high outside—was regarded by Austin as his chief advance, and that he so presented it to defendant clearly appears, as does the further fact that Austin then notified defendant that he had employed other advisers, and that he expected to be able to get better claims. A defendant who proceeds to manufacture under such circumstances has nothing to complain of if the applicant succeeds in getting better claims and if the courts sustain them.

We do not imply that defendant is to be condemned as having acted unfairly. Although the Austin device convinced defendant that the two-speed axle was or could be made practical, it had a perfect right to manufacture such an axle, if it did not infringe upon the patents of Austin or any one else. It kept away from Austin's claims, as they had so far been formulated. In view of the state of the art, as defendant then examined it, its officers may well have been advised and have believed that Austin could not procure any patent which would cover their form. The question of patentability is too close to justify assuming that there would be any bad faith in such belief. Each party endeavored to get the rights and advantages which the patent laws secured to him as an inventor or a manufacturer; and the questions of patentability and infringement we have intended to decide upon their merits, and without assuming that either party acted unfairly toward the other.

The decree below is affirmed, except as to claims 13 and 14, withdrawn after appeal. The relative character of these claims and claims 9–12 and the history of the withdrawal do not justify awarding, on this account, costs of the appeal against Austin; neither party will recover costs in this court. A new decree should be entered upon claims 9–12 only.

ADJUDICATED PATENTS.

(U. S. D. C.) The Craig and Slocomb reissue patent, No. 11,848, for a leather-staking machine, *Held* valid. *F. F. Slocomb & Co.* v. *A. C. Layman Mach. Co.*, 227 Fed. Rep., 94.

(U. S. C. C. A.) The Smart reissue patent, No. 13,579, (original No. 956,207,) for a machine for making tie-plugs, *Held* void for anticipation. *Smart* v. *Wright*, 227 Fed. Rep., 84.

(U. S. C. C. A.) The Chipley patent, No. 651,435, for a railway brake-shoe, *Held* not anticipated and valid. *Hoadley Brake Shoe Co.* v. *American Brake Shoe & Foundry Co.*, 227 Fed. Rep., 90.

(U. S. D. C.) The Dundon patent, No. 653,503, for a door for digesters, *Held* infringed. *Dundon* v. *Pedersen*, 227 Fed. Rep., 120.

(U. S. D. C.) The Shuman patent, No. 733,288, relating to apparatus and process for forming concrete piling, *Held* valid. *Simplex Concrete Piling Co.* v. *MacArthur Concrete Pile & Foundation Co.*, 227 Fed. Rep., 107.

(U. S. D. C.) The Shuman patent, No. 739,268, relating to apparatus and process for forming concrete piling, *Held* valid. *Simplex Concrete Piling Co.* v. *MacArthur Concrete Pile & Foundation Co.*, 227 Fed. Rep., 107.

(U. S. C. C. A.) The Thoma patent, No. 808,224, for the art of filling shoes, *Held* void for lack of invention. *North American Chemical Co.* v. *Keno Supply Co.*, 227 Fed. Rep., 63.

(U. S. C. C. A.) The Arnold patent, No. 808,227, for a shoe-filling apparatus, *Held* void for lack of invention. *North American Chemical Co.* v. *Keno Supply Co.*, 227 Fed. Rep., 63.

(U. S. C. C. A.) The Thoma patent, No. 832,002, for a shoe-button filler, *Held* valid and infringed. *North American Chemical Co.* v. *Keno Supply Co.*, 227 Fed. Rep., 63.

(U. S. D. C.) The Steiner patent, No. 886,886, for a knit fabric and process of making same, *Held* not anticipated and valid. *Salt's Textile Mfg. Co.* v. *Tingue Mfg. Co.*, 227 Fed. Rep., 115.

(U. S. C. C. A.) The Wheeler patent, No. 887,883, for apparatus for the manufacture of bottle-closures, *Held* valid. *Crown Cork & Seal Co. of Baltimore City* v. *Bond Bottle Sealing Co.*, 227 Fed. Rep., 51.

Adverse Decisions in Interference.

PATENT No. 1,006,064.

On December 3, 1915, a decision was rendered that John S. Clarke was not the first inventor of the subject-matter covered by claims 1, 2, and 4 of his Patent No. 1,006,064, subject, "Starting device for automobile-engines," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,106,326.

On December 3, 1915, a decision was rendered that Alexander Winton was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, and 5 of his Patent No. 1,106,326, subject, "Fuel-governing mechanism for internal-combustion engines," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,138,264.

On November 20, 1915, a decision was rendered that Charles B. Van Vorst and Nina E. Fulkerson were not the first inventors of the subject-matter covered by claims 1, 2, 3, 4, 5, and 6 of their Patent No. 1,138,264, subject, "Mattresses and cushions," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 23, 1915.

Central Stock Food Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of D. H. Grandin Milling Co., Jamestown, N. Y., for registration of a trade-mark and trade-mark registered June 24, 1902, No. 38,515, to the Central Stock Food Co., Columbus, Nebr., and a notice of such declaration sent by registered mail to said Central Stock Food Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Central Stock Food Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 14, 1915.

Providence Athletic Association, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of David S. Bernstein, 18–20 Vine street, Evansville, Ind., for registration of a trade-mark and trade-mark registered August 9, 1887, No. 14,667, to Knights of Labor Co-operative Manufacturing Tailoring Company, Chicago, Ill., and a notice of such declaration sent by registered mail to said Knights of Labor Co-operative Manufacturing Tailoring Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Knights of Labor Co-operative Manufacturing Tailoring Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 14, 1915.

Knights of Labor Co-operative Manufacturing Tailoring Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of David S. Bernstein, 18–20 Vine street, Evansville, Ind., for registration of a trade-mark and trade-mark registered August 9, 1887, No. 14,667, to Knights of Labor Co-operative Manufacturing Tailoring Company, Chicago, Ill., and a notice of such declaration sent by registered mail to said Knights of Labor Co-operative Manufacturing Tailoring Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Knights of Labor Co-operative Manufacturing Tailoring Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 14, 1915.

Solidity Co-operative Clothing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of David S. Bernstein, 18–20 Vine street, Evansville, Ind., for registration of a trade-mark and trade-mark registered December 6, 1887, No. 15,012, to Solidity Co-operative Clothing Company, New York, N. Y., and a notice of such declaration sent by registered mail to said Solidity Co-operative Clothing Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Solidity Co-operative Clothing Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE

OFFICIAL GAZETTE

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ISSUE OF JANUARY 11, 1916.

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Designs	30	No. 48,432 to No. 48,461,	inclusive.
Trade-Marks	67	No. 108,006 to No. 108,072,	inclusive.
Labels	9	No. 18,971 to No. 18,979,	inclusive.
Prints	5	No. 4,168 to No. 4,172,	inclusive.
Reissues	8	No. 14,042 to No. 14,049,	inclusive.
Total	1015		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	.....	North Carolina	7	.....
Arizona	5	.....	North Dakota	4	.....
Arkansas	1	.....	Ohio	53	2
California	37	1	Oklahoma	6	.....
Colorado	9	.....	Oregon	8	.....
Connecticut	21	1	Pennsylvania	93	4
Delaware	.....	1	Rhode Island	11	.....
Florida	1	1	South Carolina	3	.....
Georgia	3	.....	South Dakota	3	.....
Idaho	6	.....	Tennessee	2	.....
Illinois	81	6	Texas	10	1
Indiana	22	4	Utah	1	.....
Iowa	13	2	Vermont	4	.....
Kansas	15	.....	Virginia	5	.....
Kentucky	6	2	Washington	15	.....
Louisiana	1	1	West Virginia	6	.....
Maine	3	1	Wisconsin	21	3
Maryland	9	3	Wyoming	1	.....
Massachusetts	58	5			
Michigan	39	2	Alaska, District of	.....	.....
Minnesota	15	3	Canal Zone	.....	.....
Mississippi	2	1	District of Columbia	9	.....
Missouri	28	1	Hawaii Territory	.....	.....
Montana	3	.....	Philippine Islands	.....	.....
Nebraska	8	.....	Porto Rico	1	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	4	.....	U. S. Navy	.....	.....
New Jersey	59	7			
New Mexico	.....	.....	Total to residents of the United States	862	75
New York	143	23			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	5	.....	Netherlands	.....	.....
Belgium	2	.....	New South Wales	1	.....
Brazil	1	.....	New Zealand	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	7	2	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Scotland	2	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	2	.....	Spain	.....	.....
England	8	1	Sweden	3	.....
Finland	.....	.....	Switzerland	1	.....
France	7	2	Transvaal, South Africa	.....	.....
Germany	20	.....	Victoria	1	.....
Guatemala	.....	.....	Wales	.....	.....
India	.....	.....	Western Australia	1	.....
Ireland	.....	.....			
Italy	.....	.....	Total to residents of foreign countries	62	5
Luxemburg	.....	.....			
Mexico	1	.....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Communications to the Patent Office.

RULE 9. A separate letter should in every case be written in relation to each distinct subject of inquiry or application. Assignments for record, final fees, and orders for copies or abstracts must be sent to the Office in separate letters.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 8, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Oct. 21	Oct. 11	356
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 1	Oct. 23	879
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Dec. 14	Dec. 23	103
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Sept. 16	Dec. 18	405
167	5. Bookbinding; Harvesters; Jewelry; Music.	Sept. 14	Nov. 24	296
818	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	May 11	Nov. 12	473
812	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Sept. 23	Dec. 3	456
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Sept. 15	Nov. 6	1146
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	June 5	Oct. 15	553
235	10. Carriages and Wagons	Aug. 18	Dec. 27	682
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Nov. 24	Dec. 17	141
822	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 16	Dec. 6	480
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 2	Nov. 3	476
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Aug. 20	Dec. 8	213
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Sept. 23	Dec. 27	367
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Aug. 18	Dec. 18	458
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Oct. 7	Dec. 18	132
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Oct. 22	Dec. 1	219
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Nov. 5	Oct. 18	189
170	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 4	Dec. 18	169

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 16	Nov. 16	312
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 21	Nov. 24	331
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 14	Nov. 23	442
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Aug. 16	Dec. 2	438
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 4	Dec. 17	127
106	26. Electricity, Generation; Motive Power.	May 17	Sept. 14	526
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 11	Nov. 26	205
65	28. Internal-Combustion Engines	Sept. 13	Nov. 13	409
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Sept. 16	Dec. 8	366
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 26	Dec. 14	313
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 11	Dec. 3	263
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	June 7	Dec. 15	693
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Aug. 20	Nov. 3	416
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Sept. 20	Nov. 27	253
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 8	Dec. 27	581
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Sept. 3	Oct. 22	774
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	June 7	Nov. 6	618
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Oct. 2	Nov. 16	270
321	39. Water Distribution	Sept. 8	Nov. 2	372
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 24	Nov. 9	1009
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Aug. 23	Dec. 15	374
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 22	Sept. 13	892
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 20	Nov. 2	259

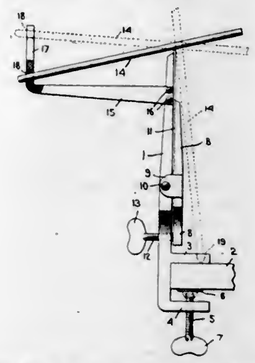
Oldest new case, May 11; oldest amended, Sept. 13.
Total number of applications awaiting action..... 18,436

Room No.		Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 8	Dec. 30	1150
	Designs	Aug. 23	Nov. 20	563
	Labels and Prints	Dec. 8	Dec. 4	79

PATENTS

GRANTED JANUARY 11, 1916.

1,167,371. SCRAPER-VISE AND BURNISHER. JEFFERSON ALLEN, Kennebunk Port, Me. Filed July 16, 1915. Serial No. 40,334. (Cl. 29—83.)



1. A tool treating device comprising means for holding an edged tool, members oppositely disposed thereto and an instrumentality adapted to treat the tool edge, each of said members having means adapted detachably and successively to receive said instrumentality whereby the tool edge may be treated at variant angles thereto.

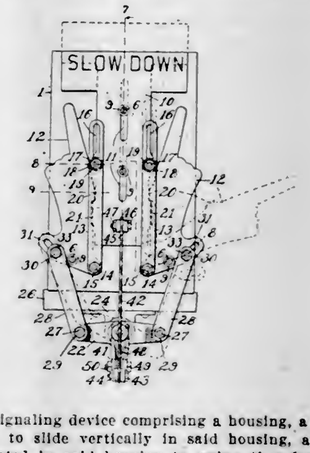
2. A tool treating device comprising means for holding an edged tool, an arm having means to engage operably an instrumentality whereby the tool edge may be treated from one side of the tool and a clamping member detachably to secure said device to a suitable support, said clamping member having means thereon to engage operably said instrumentality whereby the tool edge may be treated from another side of the tool.

3. A burnishing device comprising a standard, a clamping member pivotally mounted on the standard, and cooperating therewith rigidly to hold an edged instrument, an arm rigidly mounted on said standard, there being means on the arm adapted to engage a burnishing element whereby the edge of said instrument may be burnished in one direction, arms on said standard, means on one of said arms whereby the standard may be securely clamped to a support introduced between said arms, and means on one of said clamping arms to engage the burnishing element whereby the edge of said instrument may be burnished in the opposite direction.

1,167,372. SIGNALING DEVICE FOR AUTOMOBILES. ORIN J. BEMISS Ypsilanti, Mich. Filed Jan. 9, 1915. Serial No. 1,381. (Cl. 40—65.)

1. A signaling device comprising a housing, a sign plate movably mounted in said housing, a signaling arm pivoted to swing into and out of said housing and operatively connected with said sign plate to impart movement thereto in one direction with the movement of said arm, and an operating member having actuating means connected to said sign plate and to said signaling arm movable in one direction for imparting movement to said sign plate and movable in another direction for imparting movement to said arm and to said sign plate.

2. A signaling device comprising a housing, a sign plate movably mounted in said housing, a signaling arm pivoted to swing into and out of said housing, a connecting member carried by said arm and engaged with said sign plate to impart movement thereto in one direction through the movement of said arm, an operating member movable in different directions and carrying actuating means connected to said sign plate and to said signaling arm, operative in one direction for imparting movement to said sign plate and actuatable in another direction for transmitting movement to said signaling arm to said sign plate.



3. A signaling device comprising a housing, a sign plate mounted to slide vertically in said housing, a signaling arm pivoted in said housing to swing therefrom, a connecting member pivoted to said signaling arm and slidably engaged with said sign plate for imparting movement thereto in one direction, an operating member movable in different directions having a control arm for differentiating the movement thereof, and actuating means connecting said operating member with said sign plate and said signaling arm, whereby through the movement of said control arm in one direction movement is imparted to raise said sign plate and by movement in another direction said plate is raised through the outward swinging motion transmitted to said signaling arm.

4. In a signaling device, a supporting frame, a housing mounted thereon, a sign plate mounted to slide vertically in said housing, a signaling arm pivoted in said housing to swing therefrom, a connecting link pivoted to said signaling arm and slidably connected to said sign plate to impart movement to and permit said plate to move independently thereof in one direction, an operating member mounted on said frame and movable thereon in different directions, a crank arm on said operating member having a linked connection with said signaling arm for transmitting movement thereto through the movement of said operating member, and a lever pivotally supported on said frame in engagement at one end with said operating member and having a linked connection at its opposite end with said sign plate for imparting movement thereto through the movement of said operating member in one direction.

5. In a signaling device, a supporting frame, a housing mounted thereon, a sign plate mounted to slide vertically in said housing, a signaling arm pivoted to swing

therefrom, a connecting link pivoted to said arm and slidably engaged with said sign plate, an operating shaft journaled to rock and to slide longitudinally in bearings on said frame and having a control arm for differentiating the movement of said shaft, a crank arm splined on said shaft to rock therewith and permit longitudinal movement of said shaft therein, a link pivotally connected to said crank arm and to said signaling arm for transmitting the rocking movement of said shaft to swing said arm and raise said plate, a lever pivotally supported on said frame in sliding contact at one end with said shaft and having a link pivotally connected thereto and to said sign plate for transmitting the longitudinal movement of said shaft to raise said plate, and a coiled spring interposed between said lever and said crank for returning said parts to their normal positions.

[Claim 6 not printed in the Gazette.]

1,167,373. PROCESS FOR SOLIDIFYING EMULSION PRODUCTS. LUDWIG BEREND, Amöneburg-on-the-Rhine, Germany. Filed June 4, 1914. Serial No. 843,026. (Cl. 44—7.)

1. A process of solidifying mineral, tar and other oils, hydrocarbons, asphalt, wax, rosin and the like, consisting in emulging the same with a small quantity of a colloidal substance and water and in mixing therewith so much of a body which removes water that the resulting solid mass cannot be converted by water into an emulsion solution.

2. A process of solidifying mineral, tar and other oils, hydrocarbons, asphalt, wax, rosin and the like, consisting in emulging the same with a small quantity of a colloidal substance and water and in mixing therewith so much of a de-hydrating body that the resulting solid mass cannot be converted by water into an emulsion solution.

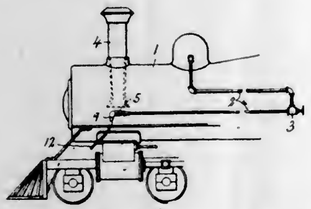
3. A process of solidifying mineral, tar and other oils, liquid hydrocarbons and solutions of solid substances in oils, consisting in emulging the same with sulfite cellulose waste liquor, and in hardening the emulsion mass thereby obtained with so much of a body which removes water that the resulting solid mass cannot be converted by water into an emulsion solution.

4. A process of solidifying mineral, tar and other oils, hydrocarbons, asphalt, wax, rosin and the like, consisting in emulging the same with a small quantity of a colloidal substance and water, in adding a loading material thereto, and mixing a de-hydrating substance therewith.

5. A process of solidifying mineral, tar and other oils, liquid hydrocarbons and solutions of solid substances in oils, consisting in emulging the same with sulfite cellulose waste liquor, in adding a loading material thereto, and in mixing quick-lime therewith.

[Claims 6 and 7 not printed in the Gazette.]

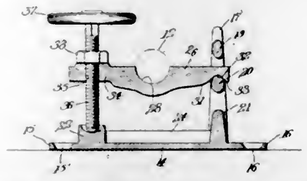
1,167,374. FORCED-DRAFT DEVICE FOR LOCOMOTIVE-BOILERS. LOUIS DE LISSA BERG, Watertown, N. Y. Filed Mar. 9, 1914. Serial No. 823,454. (Cl. 110—150.)



1. The combination with a locomotive boiler, of a valve case external to the boiler and having separate steam inlets and an outlet common to both inlets and discharging into the smoke stack of the boiler, and a check-valve controlling both inlets, connections between one inlet and the steam chamber of the boiler, and means for connecting the other inlet to a separate source of steam supply.

2. The combination with a locomotive boiler, of a valve case having separate steam inlets and co-axial valve seats therein in spaced relation, said valve case having an outlet leading from the space between the valve seats and communicating with the smoke stack of the boiler, a check valve playing between said seats and controlling both inlets, connections between one inlet and the steam chamber of the boiler, and means on the valve case for connecting the other inlet to a separate steam supply conduit.

1,167,375. ADJUSTABLE BEARING. ELLIS R. BROCK, Belton, S. C., assignor of one-half to Medicus F. Day, Belton, S. C. Filed Aug. 12, 1915. Serial No. 45,186. (Cl. 64—55.)



1. An adjustable bearing comprising a block provided in its upper surface with a groove constituting a bearing for a shaft, a base, a horizontal support mounted on said base and disposed above the same, said block having means at one side thereof loosely interengaging with said support, and means for adjustably supporting the other side of said block whereby said bearing may be raised and lowered.

2. An adjustable bearing comprising a block provided in its upper surface with a groove constituting a bearing for a shaft, a base, a support mounted on said base at a distance above the same, said block having a hook at one side thereof interengaging with said support whereby said block is adapted to be readily disengaged from said support, and screw threaded means for adjustably supporting the other side of said block whereby said bearing groove may be raised and lowered.

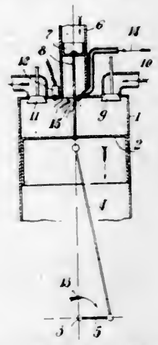
3. An adjustable bearing comprising a block provided in its upper surface with a groove constituting a bearing for a shaft, a base, spaced horizontal supports above the base for supporting one side of said block at different distances above the base, said block having means at one side thereof adapted to engage any one of said supports, and means for adjustably supporting the other side of said block whereby said bearing groove may be raised and lowered.

4. An adjustable bearing comprising a base plate, upright members on said base plate at one side thereof, a cross piece extending between said upright members, a block provided in its upper surface with a groove constituting a bearing for a shaft, said block having means at one side thereof adapted to interengage with said cross piece whereby said block is supported on said cross piece and readily detachable therefrom, said upright members limiting the lateral movement of the end of said block supported on said cross piece, and means for adjustably supporting the other side of said block whereby said bearing groove may be raised and lowered.

5. An adjustable bearing comprising an integral base provided at one side thereof with upright members and spaced horizontal cross pieces between said upright members, a block provided in its upper surface with a groove constituting a bearing for a shaft, said block having a hook at one side thereof adapted to engage any one of said cross pieces, said upright members limiting the lateral movement of the block along the cross pieces, and means for adjustably supporting the other side of said block whereby said bearing groove may be raised and lowered.

[Claims 6 and 7 not printed in the Gazette.]

1,167,376. INTERNAL-COMBUSTION ENGINE. JOSEPH BOUTEILLE, Paris, France. Filed July 13, 1914. Serial No. 850,607. (Cl. 123—27.)



1. In an internal combustion engine operated by progressive internal combustion, in combination, a working cylinder with air-inlet and exhaust valves, a relatively small compression cylinder thereon, a piston for said working cylinder, a piston for said compression cylinder, a positive connection for said pistons, an ignition device carried by said working cylinder, and a fuel admission inlet arranged at the mouth of said compression cylinder substantially as and for the purpose described.

2. In an internal combustion engine operated by progressive internal combustion, in combination, a working cylinder with air inlet and exhaust valves, a relatively small compression cylinder thereon, a piston for said working cylinder, a piston for said compression cylinder, a positive connection for said pistons, an ignition device carried by said working cylinder, and fuel admission means at the mouth of said compression cylinder adapted to admit fuel progressively during the working stroke of the engine, substantially as described.

1,167,377. PADLOCK. LEWIS A. BROWN, Horine, Mo. Filed Aug. 2, 1915. Serial No. 43,091. (Cl. 70—104.)



1. A padlock comprising two relatively movable members, one of which is provided with a relatively large recess and with a relatively smaller recess at the bottom of the large one, a shoulder formed on one of the side walls of said small recess, a hook carried by the other member adapted to extend into said small recess to effect releasable engagement with said shoulder, a plate attached to said second mentioned member arranged to extend into the large recess in the other member and provided with a hole through which said hook may be engaged for the purpose of disengaging the same from said shoulder, a pivot connecting said two members at one end thereof, overlapping shackle portions at the opposite end of said members arranged to prevent forcing of said members laterally in one direction and means in connection with one of said members for engaging the other to prevent forcing of said members laterally in the opposite direction.

2. A padlock, comprising two relatively movable members, an element pivotally uniting said members at one end, overlapping engaging portions rigid with the opposite ends of said members respectively, engageable lock elements supported by said members intermediate of the ends thereof separate from said engaging portions and arranged to hold said two members side by side with said engaging portions overlapped, and means for supporting a guard to prevent release of said locking elements.

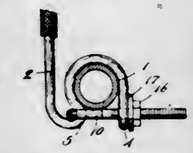
3. A padlock, comprising two pivotally united members, overlapping engaging portions rigidly supported by said members, respectively, a hook movably supported by one of said members separate from said overlapping portions and projecting beyond the side edge thereof, a shoulder rigidly supported by the other member separate from said overlapping portions in position to be engaged by said hook when said members are positioned side by side, and means for supporting a guard to prevent release of said hook from said shoulder.

4. A padlock, comprising two pivotally united members, overlapping engaging portions on said members adapted to be engaged with the object to be locked, a flange on one of said members engaging with the other member to prevent lateral movement of said members with respect to each other, a hook movably supported by one of said members, and a shoulder rigidly supported by the other member in position to be engaged by said hook, said hook and said shoulder being entirely separate from said overlapping portion.

5. A padlock, comprising two pivotally united members, overlapping engaging portions on said members preventing lateral movement of said members with respect to each other in one direction, an additional device carried by one of said members and engaging the other and preventing lateral movement of said members with respect to each other in the opposite direction, a hook movably supported by one of said members, and a shoulder rigidly supported by the other member in position to be engaged by said hook to hold said overlapping portions in position overlapping each other.

[Claims 6 and 7 not printed in the Gazette.]

1,167,378. GROUND-TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS. LEONARD B. BUCHANAN, Woburn, Mass. Filed June 4, 1915. Serial No. 32,213. (Cl. 173—273.)



1. A grounding device for electrical connections, consisting of a wire current-conducting portion, bent upon itself to form an encircling portion, encircling the ground terminal and a clamping device, consisting of a hooked portion engaging a bend in one end of the doubled strand, and a threaded portion passing through the loop formed by the bending of the strands, a bearing fitted upon said threaded portion and set up tightly against said loop, so as to hold the encircling portion in close electrical contact with said ground terminal.

2. The attaching-means for connecting an electric conductor with a pipe, comprising a bared end-portion of the conductor bent to form a circular embracing-portion, and a loop or eye at each end of said embracing-portion arranged in alinement, and a connecting-device engaging said loops or eyes, having the characteristics of a bolt and having its threaded-portion provided with a nut which may be tightened up to draw said end-portions together, and thus firmly clamp the conductor to the pipe.

1,167,379. HOOD. JACOB BUCKMAN, New York, N. Y. Filed Jan. 30, 1915. Serial No. 5,298. (Cl. 2—118.)

1. A hood made of double thickness of material to lie flat in the form of a sailor collar when folded and not in

use, and to be opened for covering the head, and separable fastening means for retaining the corner portions of the folded hood in transverse turned down folds when used as a covering for the head.



2. A hood made of double thickness of material to lie flat in the form of a sailor collar when folded and not in use, and to be opened for covering the head, separable fastening means for retaining the corner portions of the folded hood in transverse turned down folds when used as a head covering, forward extensions on the hood, and separable fastening means on said extensions for connecting them below the chin of the wearer.

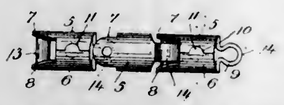
3. The combination with a foldable hood, of flaps permanently secured to the side portions of the front edge of the hood and having separable fastening means on their free ends for securing said free ends together for protecting the face of the wearer.

4. The combination with a foldable hood, of flaps permanently secured to the side portions of the front edge of the hood each flap having an eye space, and means for fastening the free ends of the flaps together for the purpose specified.

5. The combination with a folded hood, of flaps secured to the side portions of the front edge of the hood and having upwardly extending tabs to extend up and be held below the top portion of said front edge of the hood, and means for fastening the free ends of the flaps together over the nose of the wearer.

[Claims 6 and 7 not printed in the Gazette.]

1,167,380. FLEXIBLE-SHAFT LINK. ADDI BENJAMIN CADMAN, Beloit, Wis., assignor to Stewart-Warner Speedometer Corporation, Beloit, Wis., a Corporation of Virginia. Filed Apr. 15, 1913. Serial No. 761,162. (Cl. 64—30.)



1. A flexible shaft link composed of semi-cylindrical body portions and an intermediate loop portion connecting the same at one end, said semi-cylindrical body portions interlocked with each other at their corresponding meeting edges, and a rivet connecting together the free ends of the body portions.

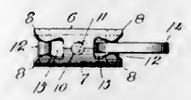
2. A flexible shaft link composed of semi-cylindrical body portions and an integral intermediate loop portion connecting the same at one end, said body portions having extensions at their free ends, and interlocking with each other at their corresponding meeting edges, and a rivet connecting together said extensions.

3. A flexible shaft link composed of semi-cylindrical body portions and an intermediate loop portion connecting the same at one end, the corresponding meeting edges of said body portions having the one a recess and the other a projection engaging in said recess, and a rivet connecting together the free ends of said body portions.

4. A flexible shaft composed of links each comprising body portions having their edges brought into respectively abutting relation, said body portions being connected together at one end by a loop portion formed integrally therewith, the meeting edges of the body portions being formed one with a transversely extending projection and the other with a coöperating seat to receive the same, and a rivet connecting together the free ends of said body portions, the rivet at the end of one link passing through the integral loop at the proximate end of the next adjacent link.

5. A flexible shaft link formed from a single piece and composed of semi-cylindrical body portions, and a loop portion integrally connecting the same at one end, the free ends of said body portions having extensions, the corresponding meeting edges of said body portions interlocking with each other, and a rivet connecting together said extensions.

1,167,381. FLEXIBLE SHAFT. ADDI BENJAMIN CADMAN, Beloit, Wis., assignor to Stewart-Warner Speedometer Corporation, Beloit, Wis., a Corporation of Virginia. Filed Apr. 15, 1913. Serial No. 761,163. (Cl. 64—30.)

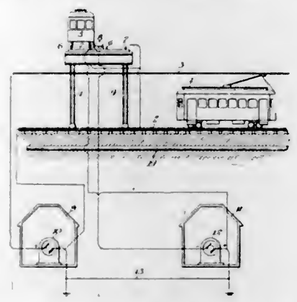


1. A flexible shaft link composed of sections each section having a semi-cylindrical body and an extension at each end thereof, said sections being assembled with the semi-cylindrical bodies thereof meeting edge to edge, and rivets connecting together corresponding end portions.

2. A flexible shaft link composed of sections each having a semi-cylindrical body and an extension at each end thereof, said sections being assembled with the semi-cylindrical bodies thereof meeting edge to edge, the said meeting edges inter-locking with each other, and rivets connecting together the end extensions of said sections.

3. A flexible shaft link composed of sections each having a semi-cylindrical body and an extension at each end thereof, said sections being assembled with the semi-cylindrical bodies thereof meeting edge to edge, said end extension being shaped to form an undercut opening therebetween when said sections are assembled, and rivets connecting together said end extensions.

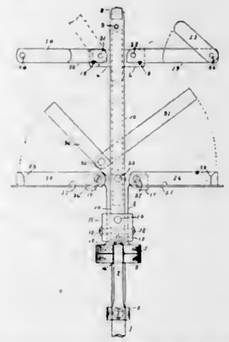
1,167,382. SYSTEM OF ELECTRICAL DISTRIBUTION. FERRUCCIO CASTIGLIONI, Wilmette, Ill. Filed Aug. 28, 1912. Serial No. 717,460. (Cl. 171—316.)



1. In a system of electrical distribution, the combination of D. C. electric traction systems disposed at different elevations and having no contact crossings of the feed conductors of one system with those of the other system, each traction system having its own generator, running rails and supply conductor, the running rails of one traction system constituting the positive or feeder of said system, and reversely the running rails of the other traction system constituting the negative or return of its system, the generators of the several reversed systems being in circuit, and a plurality of low resistance bonds extending from the running rails of one system to the running rails of the other system, whereby the tracks of the connected systems form the third wire of a three-wire system and leakage of current from the running rails of the connected systems is prevented or reduced.

2. In a system of electrical distribution, the combination of D. C. electrical traction systems disposed at different elevations and having no contact crossings of the feed conductors of one system with those of the other system, each traction system having its own generator, running rails and supply conductor, the running rails of one traction system constituting the positive or feeder of said system, and reversely the running rails of the other traction system constituting the negative or return of its system, and a plurality of low resistance bonds extending from the running rails of one system to the running rails of the other system, whereby the tracks of the conected systems form the third wire of a three-wire system and leakage of current from the running rails of the connected systems is prevented or reduced, and an electric connection between the terminals of the reversed generators.

1,167,383. MUSIC-RACK. ROYAL W. CATHCART and JOHN P. CARPENTER, Elkhart, Ind. Filed Dec. 23, 1913. Serial No. 808,363. (Cl. 45—121.)



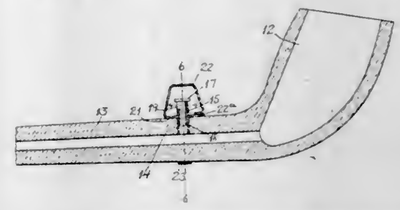
1. A sheet music rack comprising a non-rotative frame support, a frame shaft mounted upon said frame support and in pivotal relation therewith, a sleeve member adjustably mounted upon said frame shaft having frame arms thereon and clamps on said arms, frame arms mounted at the base of said frame shaft and revoluble therewith, a swinging clamping member mounted upon said frame shaft base, means for locking one end of said clamping member to said frame shaft, and means for arresting rotation of said frame shaft after rotation thereof.

2. In a music rock, the combination of a non-rotative frame support and a rotative music holding frame pivotally mounted upon the frame support, said music holding frame comprising in combination, a frame shaft having its base arranged in pivotal relation to said frame support and mounted thereon, a swinging clamp member mounted upon said frame and rotative therewith, lower frame arms mounted upon the frame shaft base and pivotally connected therewith, locking arms mounted upon the clamp member and adapted to coöperate with said lower frame arms, means for locking one end of said clamp member, and means for arresting rotation of said frame after rotation thereof.

3. In a music rack, the combination of a non-rotative frame support and a rotative music holding frame pivotally mounted upon the frame support, said frame comprising in combination a frame shaft, a clamping member mounted thereon and rotative therewith, lower frame arms pivotally connected with said frame shaft, said arms having lugs at their outer ends, locking arms pivotally mounted upon the clamping member and adapted to engage the lugs on said frame arms, and means for locking the clamping member at one end thereof.

4. A music rack comprising a non-rotative frame support and a rotative frame pivotally mounted thereon, said rotative frame comprising in combination, an inclined frame shaft, a sleeve adjustably mounted thereon, collapsible supporting arms carried by said sleeve and a clamp mounted upon each of said arms, a swinging rotative clamp member mounted upon said shaft and means for locking one end thereof, locking arms mounted upon said clamp member, collapsible arms mounted at the base of said inclined shaft and adapted for coöperation with said locking arms, and means for arresting rotation of said frame after rotation thereof.

1,167,384. SMOKE-COOLING ATTACHMENT FOR TOBACCO-PIPES, &c. JOSEPH O. CHARPENTIER, Concord, N. H. Filed Apr. 23, 1915. Serial No. 23,336. (Cl. 137—26.)



1. A smoke cooling attachment comprising an air-conducting nipple insertible in an orifice formed in a smoke-conducting body, a valve adapted to be seated on the outer end of said nipple and having a stem which is movable endwise in the nipple, and a stop connected with the nipple and projecting outwardly therefrom across the path of the valve to limit the opening movement of said valve.

2. A smoke cooling attachment comprising an air-conducting nipple insertible in an orifice formed in a smoke-conducting body, and provided with a slot in its outer end portion, said slot communicating with the air passage through the nipple, a valve adapted to be seated on the outer end of said nipple and provided with a stem which is movable endwise in the nipple, said valve being formed to close the outer end of the nipple and having a slot-closing extension, one end of said extension forming a shoulder adapted to hold the valve open, and a stop connected with the nipple and adapted to limit the opening movement of the valve.

3. A smoke cooling attachment comprising an air-conducting nipple insertible in an orifice formed in a smoke-conducting body, a valve adapted to be seated on the outer end of said nipple and having a stem which is movable endwise in the nipple, and a stop connected with the nipple and projecting outwardly therefrom across the path of the valve to limit the opening movement of said valve, said nipple being provided with a flange adapted to limit the entrance of the nipple into said opening.

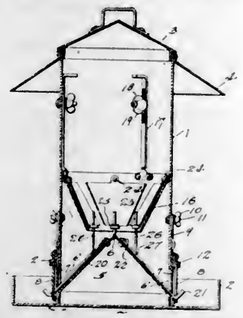
4. A smoke cooling attachment comprising an air-conducting nipple insertible in an orifice formed in a smoke-conducting body, a valve adapted to be seated on the outer end of said nipple and having a stem which is movable endwise in the nipple, and a stop connected with the nipple and adapted to limit the opening movement of said valve, said nipple being provided with a flange adapted to limit its entrance into said opening and with a flexible ear adapted to form a stem-embracing clasp.

1,167,385. ANIMAL-FEEDING DEVICE. OTIS HALE CLOUGH, Mechanicsburg, Ohio. Filed Jan. 18, 1915. Serial No. 2,877. (Cl. 119—53.)

1. The combination with a feed receptacle having a conical shaped bottom and openings in proximity thereto, an annular trough around the lower end of the receptacle, and an inverted truncated hopper with open bottom adjustably suspended within the receptacle, of agitating devices each comprising a pivoted arm with a bent end outside the receptacle, a pivoted plate in the hopper and a connecting link between said arm and said plate.

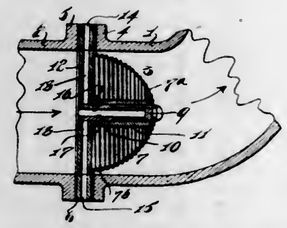
2. The combination with a feed receptacle having openings therein and a conical bottom and open bottom hopper thereabove, and an annular trough around the lower end

of the receptacle, of agitating devices each comprising a pivoted arm with a bent end outside the receptacle, a



pivoted plate in the hopper, and a connecting link between said arms and said plate, as described.

1,167,386. FUEL-MIXING DEVICE FOR INTERNAL-COMBUSTION MOTORS. ARTHUR A. CRUSIUS, New York, N. Y. Filed Aug. 18, 1915. Serial No. 46,100. (Cl. 48—180.)



1. A mixing device for carbureters comprising a support having an opening therethrough, a mixer carried by said support, consisting of an extensible mantle covering the opening in said support, said mantle consisting of a coil spring, the coils thereof being closely wound, a port in said support, and a valve, actuated by the movement of said mantle, to control the flow of air through said port.

2. In a fuel mixer, a plate arranged for insertion between the flanges of a carbureter and intake manifold of a gasolene motor, said plate being provided with an opening therethrough and with ports communicating with said manifold, a valve to control the flow of air through said ports, and means operated by the suction of a motor piston to actuate said valve.

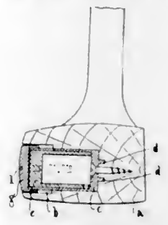
3. A fuel mixer consisting of a coil spring wound in substantially hemi-spherical form, some of the convolutions of said spring being nested closer than others.

4. A fuel mixer consisting of a plate arranged for insertion between the flanges of a carbureter and intake manifold of a gasolene motor, said plate having an opening therethrough, ports extending from the outer surface of said plate to the interior of the manifold, a mixer carried by said plate, consisting of an extensible member, and a valve operated by said member to control the flow of air through said ports.

5. A fuel mixer for internal combustion motors, consisting of a support having an opening therethrough, a duct extending across said opening and provided with ports extending to the outer surface of said support, a lug carried by said duct provided with an opening therethrough to provide a valve-seat communicating with the ports in said duct, a valve in said opening arranged to normally close said ducts, and means to automatically operate said valve to open said ports when the motor attains high speed.

[Claims 6 to 11 not printed in the Gazette.]

1,167,387. GOLF-CLUB AND THE LIKE. PERCY GORDON ECKERSLEY DANIEL, Clevedon, England. Filed Nov. 1, 1913. Serial No. 798,634. (Cl. 46—4.)



1. A club, stick or like implement for golf or other purposes, weighting means therefor whereby the weight or balance or both may be varied, means for retaining the weighting means in place, and means movable against the side or sides of said weighting means so as to prevent the said weighting means from shifting when the implement is in use.

2. A club, stick or like implement for golf or other purposes, a recess therein, weighting means in said recess, means for closing the recess, and means movable against said weighting means so as to bring lateral pressure to bear thereon to secure the weighting means in place.

3. A club, stick or like implement for golf or other purposes having a head, a socket member carried thereby having its axis in the line of flight of the head, weighting means for said socket member and means for bringing lateral pressure to bear on said weighting means.

4. A club, stick or like implement for golf or other purposes, a socket member attached thereto and open at one end, weighting means in said socket member, means for closing the open end of said socket member and means for bringing lateral pressure to bear upon said weighting means.

5. Means for varying the weight or balance or both of clubs, sticks or the like for golf or other purposes, comprising a socket member, means for closing said socket member, weighting means adapted to be contained therein, and means for contracting the socket member against the weighting means therein.

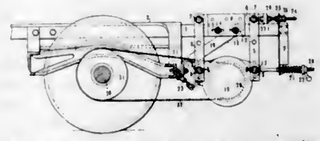
[Claims 6 to 10 not printed in the Gazette.]

1,167,388. DRESS-FORM. JAMES F. DINN, Port Washington, N. Y., assignor to Hall-Borchert Dress Form Company, New York, N. Y., a Corporation of New Jersey. Filed July 3, 1914. Serial No. 848,882. (Cl. 223—18.)



In a dress form, the combination with a tubular supporting member provided at its upper end with an inwardly-directed annular flange, of a clamping member having a neck extending through said flange, the end of the neck being enlarged to underlie the flange whereby the clamping member is swiveled to the tubular supporting member, a dress form body having a central supporting rod extending through the clamping member, and means to clamp said member adjustably to said rod.

1,167,389. GENERATOR SUSPENSION. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Feb. 16, 1911. Serial No. 609,055. (Cl. 105—238.)



1. In an apparatus of the character described, in combination, a car-truck, a dynamo provided with lugs, a frame projecting from said truck, side bars adjustably mounted on said frame, links pivotally attached to each of said side bars, and cross rods removably attached to said links and passing through said lugs.

2. In an apparatus of the character described, in combination, a car-truck, a dynamo provided with lugs on opposite sides, a frame projecting from said truck, side bars adjustably mounted on said frame, a pair of links pivotally attached to each of said side bars, and a pair of cross rods removably attached to said links and passing through the lugs on said dynamo.

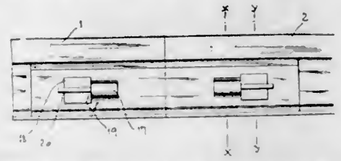
3. In an apparatus of the character described, in combination, a car truck, a dynamo, a frame projecting from said truck, members adjustably mounted on said frame, links pivotally attached to said members, cross rods attached to said links, and means for supporting said dynamo on said cross rods in such a manner that it cannot be removed therefrom without removing said rods from said links.

4. In an apparatus of the character described, in combination, a car truck, a dynamo, a frame comprising members projecting from said truck and connected at their ends by a cross bar, side bars adjustably mounted on said projecting members, links pivotally attached to said side bars, rods detachably connected to said links, means for supporting said dynamo upon said rods, and a single tension spring attached to said cross bar and to one of said rods.

5. In an apparatus of the character described, in combination, a car-truck, arms projecting therefrom, a sliding carriage mounted on said arms and adapted to support a dynamo, said carriage comprising side bars, each of said side bars being adapted to slide on one of said arms, hanger links pivotally attached to each of said side bars at a point above said arms, and cross rods attached to said hanger links and adapted to be removed therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,167,390. RAIL-JOINT. ISIDOR DUPIN, Groveton, Pa. Filed Mar. 12, 1915. Serial No. 13,837. (Cl. 239—11.)



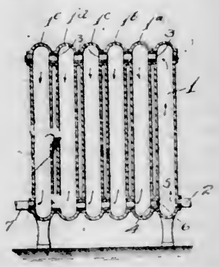
1. A rail joint comprising the combination with a pair of track rails each having its web formed with a pair of openings, one of the openings of each pair being larger than the other opening of the pair, the openings of each pair merging into each other, of a pair of fish plates positioned against said webs and having openings corresponding in contour to the openings in the web, the openings in the fish plates alining with the openings of the webs, coupling members extending through the alining smaller openings and provided with means engaging said fish plates to set up a wedging action, a pair of holding members extending through the alining larger openings, and a fastener member extending between each pair of holding members for maintaining them in position.

2. A rail joint comprising the combination with a pair of track rails each having its web formed with a pair of openings, one of the openings of each pair being larger than the other opening of the pair, the openings of each pair merging into each other, of a pair of fish plates positioned against said webs and having openings corresponding in contour to the openings in the web, the openings in the fish plates alining with the openings of the webs, coupling members extending through the alining smaller openings and provided with means engaging said fish plates to set up a wedging action, a pair of holding members extending through the alining larger openings, and a fastener member extending between each pair of holding members for maintaining them in position, said fish plates provided with seats, and said holding members having flanges engaging said seats.

3. A rail joint comprising the combination with a pair of track rails each having its web formed with a pair of openings, one of the openings of each pair being larger than the other opening of the pair, the openings of each pair merging into each other, of a pair of fish plates positioned against said webs and having openings corresponding in contour to the openings in the web, the openings in the fish plates alining with the openings of the webs, coupling members extending through the alining smaller openings and provided with means engaging said fish plates to set up a wedging action, a pair of holding members extending through the alining larger openings, and a fastener member extending between each pair of holding members for maintaining them in position, said fish plates provided with seats, and said holding members having flanges engaging said seats, said fastener members being wedge-shape in contour.

4. A rail joint comprising the combination with a pair of track rails each having its web formed with a pair of openings, one of the openings of each pair being larger than the other opening of the pair, the openings of each pair merging into each other, of a pair of fish plates positioned against said webs and having openings corresponding in contour to the openings in the web, the openings in the fish plates alining with the openings of the webs, coupling members extending through the alining smaller openings and provided with means engaging said fish plates to set up a wedging action, a pair of holding members extending through the alining larger openings, and a fastener member extending between each pair of holding members for maintaining them in position, said fish plates having beveled surfaces associated with said means of the coupling members to assist in the wedging action.

1,167,391. RADIATOR. JOSEPH ELGER, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,573. (Cl. 257—160.)



1. A hot water radiator comprising a plurality of separate sections connected together at the top and the bottom, an inlet connected with one of said sections, a nipple be-

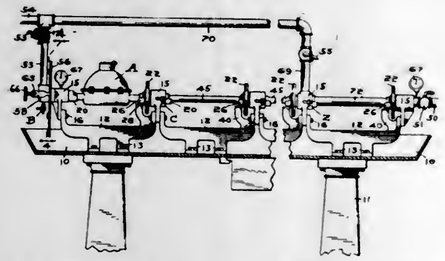
tween said inlet section and the adjoining section, said nipple provided with a web extending thereacross and provided near its middle with an opening so that as the water enters it is divided into two portions, the main portion passing up the inlet section and an auxiliary portion passing through said nipple.

2. A hot water radiator comprising a plurality of separate sections, connected together at the top and bottom, one of said sections forming an inlet section and connected near the bottom with a source of hot water supply, an obstructing device between the inlet section and the adjacent section at the bottom, said obstructing device consisting of a part with a small opening near the center thereof, arranged so that as the hot water enters the radiator it is divided into two portions, a small portion passing through said opening, the main portion passing up the inlet section and across the top of the radiator and down the several sections back of said inlet section.

3. A hot water radiator, comprising a plurality of separate sections connected together at the top and bottom, one of said sections forming an inlet section and adapted to be connected with a source of hot water supply, the sections connected together at the top and bottom so as to provide a non-obstructed passageway from one to the other and means in said connection at the bottom, between the inlet section and the adjacent section for obstructing the flow of water from the inlet section to the adjacent section, so as to limit said flow to a comparatively small stream.

4. A hot water radiator, comprising a plurality of separate sections connected together at the top and bottom, one of said sections forming an inlet section and adapted to be connected with a source of hot water supply, the sections connected together at the top and bottom so as to provide a non-obstructed passageway from one to the other and means in said connection at the bottom, between the inlet section and the adjacent section for obstructing the flow of water from the inlet section to the adjacent section, so as to limit said flow to a comparatively small stream, said means comprising a nipple with a circular shell, having a transverse web formed integral therewith, said web provided near its center with an opening extending therethrough.

1,167,392. MACHINE FOR TESTING WATER-METERS. EDWIN H. FORD, Wabash, Ind. Filed Aug. 12, 1914. Serial No. 856,350. (Cl. 73—51.)



1. In combination, in a machine for testing a group of meters arranged in successive communication, means for independently securing each meter in operative position, and means for replacing one or more meters without disturbing the remaining meters in the group.

2. In combination, in a machine for simultaneously testing a group of meters arranged in successive communication, means for removably supporting each meter independently in operative position, means for independently securing each meter in operative position, and means for replacing one or more meters without disturbing the remaining meters in the group.

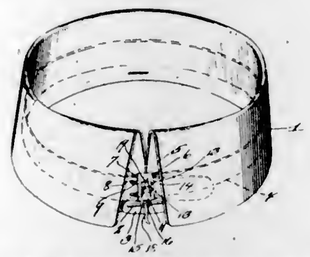
3. In combination, in a machine for testing a group of meters arranged *seriatim*, each of said meters being provided with an indicator, means for removably supporting each meter independently of the other meters in the group, means for securing each meter independently of the others in the group, and means for initially setting each meter indicator beginning at the discharge end of the machine independently of the other meter indicators in the group.

4. In combination, in a machine for testing a group of meters arranged *seriatim*, each of said meters being provided with an indicator, means for removably supporting each meter independently of the other meters in the group, means for securing each meter independently of the other meters in the group, means for initially setting each meter indicator beginning at the discharge end of the machine independently of the other meter indicators, and means for replacing one or more meters without disturbing the remaining meters in the group.

5. In combination, in a machine for testing a group of meters arranged *seriatim*, means for removably supporting independently each meter in operative position, means for securing each meter independently of the other meters, a single means for conducting the water to said meters, a single means for controlling the flow of water in the conducting means leading to the meters, a discharge means for the water, and a single means for controlling the flow of water through said discharge means.

[Claims 6 to 12 not printed in the Gazette.]

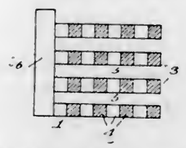
1,167,393. COLLAR-FASTENING DEVICE. SAMUEL W. FORD, Washington, D. C. Filed Dec. 24, 1914. Serial No. 878,838. (Cl. 2—69.)



1. A collar tightening and fastening device, comprising a strip passing about a collar and provided with means connecting its ends for fastening and tightening the same adjustably, said means having a connection with a collar button, to hold the strip in place and prevent the same from riding the collar.

2. A collar tightening and fastening device, comprising a strip passing about a collar and having a fastener adjustably tightening and fastening the strip, said fastener comprising a shield plate having opposite side rolls, one roll being adjustably and detachably connected to one end of the strip, the other roll being permanently attached to said strip, said shield plate having an eye to engage the shank of a collar button.

1,167,394. GAME. EDWIN W. FOSTER, Central Park, N. Y. Filed Apr. 14, 1914. Serial No. 831,728. (Cl. 46—64.)



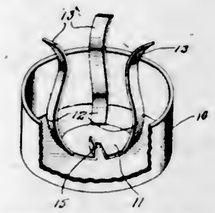
1. In a sectional game board, a section comprising a series of rows of squares, said rows being spaced apart to allow the rows of a similar section to slidably fit therein.

2. A sectional game board comprising two sections, each of said sections having four rows of squares arranged in suitable spaced relation to allow said sections to mutually interlock, said sections being relatively movable longitudinally of said rows.

3. In a sectional game board, two series of alternate rows of squares relatively movable longitudinally, and means for holding said alternate rows in suitable spaced relation.

4. A sectional game board comprising two sections, each of said sections having four rows of eight squares in each row, means for retaining said rows in suitable lateral spaced relation to allow said sections to mutually interlock, said sections being movable relatively longitudinally of said rows.

1,167,395. WATER SEAL FOR REFRIGERATORS. ELIZA J. FULTON, St. Louis, Mo. Filed Jan. 21, 1915. Serial No. 3,590. (Cl. 182—13.)



1. A device of the class described comprising a receptacle, a series of drip pipe engaging fingers extending upwardly from the bottom of said receptacle, and an elastic member surrounding the upper portions of said fingers.

2. A device of the class described comprising a receptacle, a series of drip pipe engaging fingers extending upwardly from the bottom of said receptacle, and a drip pipe stop projecting upwardly from the bottom of said receptacle.

3. A device of the class described comprising a receptacle, a series of drip pipe engaging fingers extending upwardly from the bottom of said receptacle, an elastic member surrounding the upper portions of said fingers, and a drip pipe stop projecting upwardly from the bottom of said receptacle.

4. In a device of the class described, a receptacle, a member fixed to the bottom thereof, a series of drip pipe engaging fingers projecting upwardly from said member, and an elastic member surrounding the upper portions of said fingers.

5. In a device of the class described, a receptacle, a member fixed to the bottom thereof, a series of drip pipe engaging fingers projecting upwardly from said member, and a drip engaging stop projecting upwardly from said member.

[Claim 6 not printed in the Gazette.]

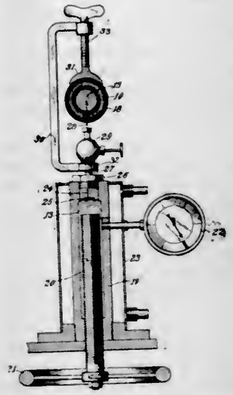
1,167,396. METHOD OF MAKING GOLF-BALLS. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Feb. 25, 1914. Serial No. 820,899. (Cl. 154—18.)

1. The process of making a golf-ball core which consists in winding the core with rubber thread stretched nearly to the breaking point, allowing the thread to relax, and then injecting and stretching the rubber-wound core.

2. The process of making a golf-ball core which consists in winding rubber thread under high tension over a central body of permanently-mobile material, allowing said thread to relax, and then injecting further mobile material into the central body.

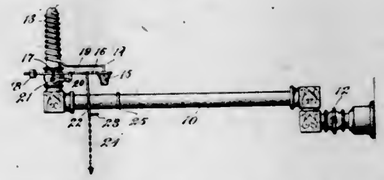
3. The process of making a golf-ball core which consists in winding rubber thread substantially to its temporary elastic limit over a central envelop, and then, after a substantial interval, injecting said envelop to further stretch said winding.

4. The process of making a golf-ball core which consists in winding the core with rubber thread stretched nearly to its temporary elastic limit, hypodermically injecting said core to further stretch said winding, causing the injecting material to set while the injecting instrument is still in place, and finally withdrawing the injecting instrument.



5. The process of making a golf-ball core which consists in piecing a hollow soft-rubber envelop to make a vent and collapsing it to exhaust the air through said vent, injecting the exhausted envelop with mobile material, winding said envelop with rubber thread under high tension, and then, after a substantial interval, again injecting said envelop with mobile material to further stretch the winding.

1,167,397. AUTOMATIC CUT-OFF FOR GAS-BURNERS. PHILIP GETSON, Philadelphia, Pa. Filed Feb. 6, 1915. Serial No. 6,514. (Cl. 67—116.)



1. In a device of the class described, a gas burner, an auxiliary gas valve therefor, an air pipe or air chamber fixed in juxtaposition to said burner closed at the upper end and open at the lower end, a shiftable fluid container adjacent the lower end of the air tube and operatively connected to said valve, said tube being arranged to dip into said fluid container, whereby changes of temperature operates to shift the fluid from the container to the air tube and thus operates the valve.

2. In a device of the class described, a gas burner, an auxiliary gas valve therefor, a top-closed air pipe or air chamber arranged in juxtaposition to said burner the open lower end of which constitutes a fixed fluid container, a shiftable medium, carrying a second fluid container, which is co-actively disposed with respect to the first mentioned container, so that the contents of one container may be intermittently shifted to the other container and means operatively connecting said medium and auxiliary valve whereby air contained within said pipe or chamber when influenced by changes in temperature, resulting from the igniting and extinguishing of flame of gas at said burner, serves to shift said fluid to relatively fix the open and closed position of said auxiliary valve.

3. In a device of the class described, a fixture provided with a gas burner and its complemental gas cock, an auxiliary gas valve in said burner, a top-closed air pipe or air chamber arranged in juxtaposition to said burner, the open lower end of which constitutes a fixed fluid container, a beam pivotally carried by said fixture, provided at one

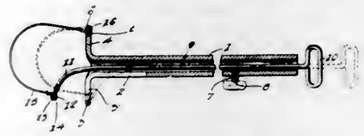
end with a second fluid container, arranged in co-acting relation with the first mentioned container so that the contents of the one container may be intermittently shifted to the other container, said beam being provided at its opposite end with a counterbalance and means connecting said beam and said auxiliary valve whereby air contained within said pipe or chamber when influenced by changes in temperature resulting from the igniting and extinguishing of gas at said burner, serves to shift said fluid to relatively fix the open and closed position of said auxiliary valve.

4. In a device of the class described, a fixture, provided with a gas burner and its complemental gas cock, an auxiliary gas valve for said burner, a top-closed air pipe or chamber arranged in juxtaposition to said burner, the lower open end of which constitutes a fixed fluid container, a beam pivotally carried by said fixture provided at one end with a second fluid container arranged in co-acting relation with the first mentioned container so that the contents of one of them may be intermittently shifted to the other of them, said beam being provided at its opposite end with a counterbalance, means operatively connecting said beam and said auxiliary valve, and a solid elongated body connected pivotally at its upper end with said beam and having a pull chain at its lower end and a solid perpendicular projection a little above its lower end and capable of being brought under and held when placed at right angles to a similar projection attached to the main gas fixture a little away from the center of gravity of this solid elongated body for initially opening said auxiliary valve whereby air contained within said chamber when influenced by changes in temperature, resulting from the igniting and extinguishing of gas at said burner, serves to shift said fluid to relatively fix the open and closed position of said auxiliary valve and automatically release the mentioned perpendicular solid projection from the similar projection attached to the gas fixture a little away from the center of gravity of the mentioned solid elongated body.

5. In a device of the class described, a fixture, provided with a gas burner and its complemental gas cock, an auxiliary gas valve for said burner, a top-closed air pipe or air chamber arranged in juxtaposition to said burner, the lower open end of which constitutes a fixed fluid container, a beam pivotally carried by said fixture provided at one end with a second fluid container arranged in co-acting relation with the first mentioned container so that the contents of one of them may be intermittently shifted to the other of them, said beam being provided at its opposite end with a counterbalance, means operatively connecting said beam and said auxiliary valve, and a solid elongated body connected pivotally at its upper end with said beam and having a pull chain at its lower end and a solid perpendicular projection a little above its lower end, a similar projection attached to the main gas fixture a little away from the center of gravity of the mentioned solid elongated body capable of holding the perpendicular projection extending from the lower portion of said elongated body when this is brought under and at right angles to it for initially opening said auxiliary valve whereby air contained within said chamber when influenced by changes in temperature, resulting from the igniting and extinguishing of gas at said burner, serves to shift said fluid to relatively fix the open and closed position of said auxiliary valve and automatically release the mentioned perpendicular solid projection from the similar projection attached to the gas fixture a little away from the center of gravity of the mentioned solid elongated body.

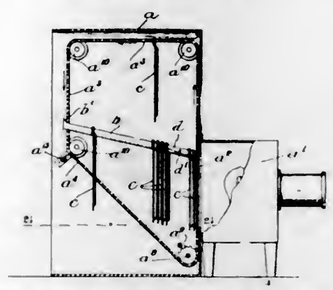
1,167,398. HOG-HOLDER. ROSCOE E. GIBSON, Pender, Nebr. Filed Sept. 29, 1914. Serial No. 864,048. (Cl. 119—153.)

A device of the class described including a cylindrical casing, a pair of arms extending laterally from one end of the casing, one of said arms provided with an elongated slot, the other of said arms having an aperture formed therein, a wire connected to the aperture of the arm, a shank slidable through the casing, a handle at one end of the shank, the opposite end being curved angularly and provided with a loop, the opposite end of the wire being connected to the loop at the end of the shank, and means



intermediate the ends of the cylindrical casing for frictionally holding the shank against movement in the cylindrical casing.

1,167,399. PICTURE-PROJECTING DEVICE. MANLY M. GILLAM, Flushing, N. Y. Filed June 2, 1915. Serial No. 31,653. (Cl. 88—28.)



1. With a picture projecting device the combination of endless conveyers, adapted to engage at predetermined intervals subject-holders or carriers and remove them sequentially from a position for focused exposure to the projecting light rays to a posterior position and there disengage them, means for causing the subject-holders or carriers so disengaged to serially pass into focused position to receive the projecting light rays and means for imparting motion to said endless conveyers, substantially as and for the purposes described.

2. With a picture projecting device the combination of endless conveyers adapted to engage at predetermined intervals subject-holders or carriers and remove them sequentially from a position for focused exposure to the projecting light rays to a posterior position and there disengage them, means for causing the subject-holders or carriers so disengaged to serially pass into focused position to receive the projecting light rays, rollers or friction reducing means so shaped and placed as to confine the friction of removal to predetermined and restricted parts of the subject-holders or carriers and means for imparting motion to said endless conveyers, substantially as and for the purposes described.

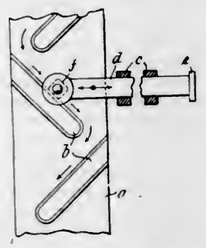
3. With a picture projecting device the combination of endless conveyers adapted to engage at predetermined intervals subject-holders or carriers, remove them sequentially from a position for focused exposure to projecting light rays to a posterior position and there disengage them, means for imparting motion to said endless conveyrs, a rack anteriorly inclined to support said subject-holders or carriers so disengaged or otherwise there placed, projecting arms on said subject-holders or carriers to engage said rack, flanged pulleys or wheels on said projecting arms to reduce friction and to limit lateral motion of said subject-holders or carriers while moving on said rack toward or into position for focused exposure to projecting light rays as aforesaid, and provision made on said projecting arms for completing the mutuality for engagement between the said subject-holders or carriers and the said endless conveyers while operatively united, substantially as and for the purposes described.

4. With a picture projecting device the combination of endless chains, belts or bands adapted to engage at predetermined intervals subject-holders or carriers and remove them sequentially from a position for focused exposure to the projecting light rays to a posterior position and there disengage them, a rack anteriorly inclined to support said subject-holders or carriers so disengaged, means for supporting said subject-holders or carriers on said rack and for completing the mutuality for engagement between the said subject-holders or carriers and the said endless chains, belts or bands, an acute downward inclination of the subject-holder or carrier supporting face at the posterior extremity of each member of said rack, sprocket wheels to produce synchronous movement of the said chains, belts or bands, guide or carrying wheels adjustably mounted to permit the easy, exact and desired reduction of looseness or tightness in the said chains, belts or bands when operatively in position and to further insure their synchronous movement throughout their entire circuit as aforesaid, and means for imparting motion to said endless chains, belts or bands, substantially as and for the purposes described.

5. With a picture projecting device the combination of endless conveyers adapted to engage at predetermined intervals subject-holders or carriers and remove them sequentially from a position for focused exposure to the projecting light rays to a posterior position and there disengage them, a rack anteriorly inclined to support said subject-holders or carriers so disengaged, means for supporting said subject-holders or carriers on said rack and for completing the mutuality for engagement between the said subject holders or carriers and the said endless conveyers, an acute downward inclination of the subject-holder or carrier supporting face at the posterior extremity of each member of said rack, a depression in the anterior end of each member of said rack, sprocket wheels to produce synchronous movement of the said endless conveyers, wheels adjustably mounted to permit the easy, exact and desired reduction of looseness or tightness in the said endless conveyers when in operative position and to further insure their synchronous movement throughout their entire circuit, and means for imparting motion to said endless conveyers substantially as and for the purposes described.

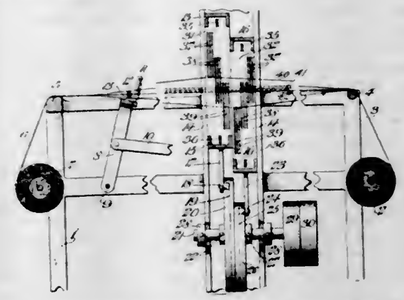
[Claims 6 to 9 not printed in the Gazette.]

1,167,400. APPARATUS FOR CLEANING THE STRAKES ON THE DRIVING-WHEELS OF TRACTION-ENGINES. JULES GOBIET, Valentigney, France. Filed Aug. 16, 1913. Serial No. 785,149. (Cl. 21—23.)



Apparatus for preventing the slipping of the driving wheels of traction engines comprising in combination fillets or gronsers on the face of the driving wheels which are arranged angularly and in opposite directions from each edge of the wheel alternately, a support fixed to the engine framing, a rod adapted to slide longitudinally in said support, a stud extending through the end of said rod and adapted to turn axially whereby on the rotation of the wheel the rod is reciprocated, one side of each fillet contacting with the stud removing the adhering soil from the side of the fillet, the stud thus moving across the whole face of the wheel.

1,167,401. HARNESSLESS LOOM. ALBERT C. GREINER, Philadelphia, Pa., assignor of one-half to James E. Kelly, Philadelphia, Pa. Filed May 11, 1914. Serial No. 837,736. (Cl. 139—18.)



1. In a loom, shed forming reeds each having parallelly arranged slots therein, the ends of said slots terminating in different horizontal planes.

2. In a loom, shed forming reeds each having upper, intermediate, and lower sets of slots therein adapted to receive the warp threads.

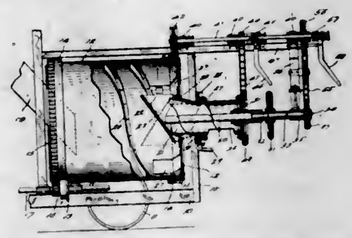
3. In a loom, shed forming reeds each having upper, lower, and intermediate sets of warp receiving slots, and means to actuate said reeds to form a double shed during the process of weaving.

4. In a loom, a plurality of frames, shed forming reeds carried by said frames each reed being provided with a plurality of slots arranged side by side, means to alternately actuate each of said reeds to form one or more sheds, and means to pass a weft thread through a predetermined shed.

5. In a loom, a plurality of shed forming frames, shed forming reeds carried by said frames, each of said reeds having a plurality of upper slots, a plurality of intermediate slots, and a plurality of lower slots therein, the ends of said slots terminating in different horizontal planes, means to simultaneously actuate said frames to position the warps passing through said slots, means to pass the weft through the space between the warps, and means to press the weft against the preceding weft which has been passed through the space between the warps.

[Claims 6 to 14 not printed in the Gazette.]

1,167,402. CONCRETE-MIXER. CARL F. HETHERINGTON, Indianapolis, Ind. Filed Feb. 15, 1915. Serial No. 8,176. (Cl. 83—73.)



1. In combination, a mixing drum, a delivery chute projecting into the end of said drum, a cantaliver support for said delivery chute located entirely outside of said drum and in which said delivery chute is rotatably mounted to swing about an axis which extends along the passageway of the chute, said delivery chute having a receiving mouth within the drum which may be brought either to the upper or lower side of the chute by such rotation and with a sloping end wall within the drum which when such receiving mouth is downward throws material backward along the drum and with a delivery

mouth outside of said drum and a rotary conveyer mounted in said chute and rotated on the axis about which the chute is rotatable.

2. In combination, a mixing drum, a delivery chute projecting into the end of said drum, a cantaliver support for said delivery chute located entirely outside of said drum and in which said delivery chute is mounted to swing about an axis which extends along the passageway of the chute, and a rotary conveyer mounted in said chute and rotatable on the axis about which the chute is rotatable.

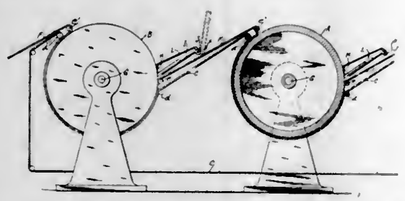
3. In combination, a mixing drum, a delivery chute projecting into the end of said drum, a cantaliver support for said delivery chute located entirely outside of said drum and in which said delivery chute is rotatably mounted to swing about an axis which extends along the passageway of the chute, said delivery chute having a receiving mouth within the drum which may be brought either to the upper or lower side of the chute by such rotation and with a delivery mouth outside of said drum and a rotary conveyer mounted in said chute and rotated on the axis about which the chute is rotatable.

4. In combination, a rotatable mixing drum, a delivery chute projecting into the end of said drum, a cantaliver support for said delivery chute located entirely outside of said drum and in which said delivery chute is rotatably mounted to swing about an axis which extends along the passageway of the chute, said delivery chute having a receiving mouth within the drum which may be brought either to the upper or lower side of the chute by such rotation and with a sloping end wall within the drum which when such receiving mouth is downward throws material backward along the drum and with a delivery mouth outside of said drum, and common means for rotating said chute and said drum at will.

5. In combination, a rotatable mixing drum, a delivery chute projecting into the end of said drum, a cantaliver support for said delivery chute located entirely outside of said drum and in which said delivery chute is rotatably mounted to swing about an axis which extenda along the passageway of the chute, said delivery chute having a receiving mouth within the drum which may be brought either to the upper or lower side of the chute by such rotation and with a delivery mouth outside of said drum, and means for drivingly connecting said chute to the drum at will to produce rotation of said chute about its axis.

[Claims 6 to 16 not printed in the Gazette.]

1,167,403. PROCESS OF WAXING PAPER. FRANK H. HOBERG, Green Bay, Wis. Filed Jan. 6, 1913. Serial No. 740,367. (Cl. 91—68.)



1. That process of making water-proof paper which consists in simultaneously expelling the moisture from newly made paper and impregnating the paper with water-proof material.

2. The process of waxing paper consisting in passing newly made moist paper over a rotating drying roll in pressure contact therewith and simultaneously waxing the outer surface of said roll prior to the point of contact of the roll with the paper.

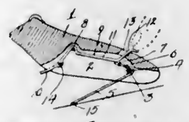
3. The process of waxing paper, consisting in applying wax to the paper during the manufacture thereof and during the final drying operation, and simultaneously spreading the wox and compressing the wax and the paper under the influence of heat and for a sufficient period to expel the moisture and simultaneously effect absorption of the wax.

1,167,404. METHOD OF MAKING HANDLES FOR KNIVES, FORKS, AND TOOLS. OTTO HOCH, Neukölln, Germany. Filed Aug. 4, 1913. Serial No. 782,911. (Cl. 30—9.)



The method of making handles for knives, forks and tools by inserting a wooden mandrel in a metallic tube closed at one end, the mandrel flaring toward the open end, and then compressing both the tube and core to a conical shape and then introducing the tang of the tool and compressing in a mold.

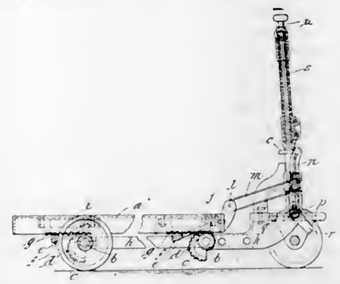
1,167,405. JUMPING TOY. ALFERD E. HOLMBERG, Maple Lake, Minn. Filed Oct. 3, 1914. Serial No. 864,764. (Cl. 46—40.)



A mechanical leaping toy comprising a body member of a shape to substantially resemble that of a frog, said body member having a chambered out portion extending substantially from the center of the body member toward the rear, an opening through the upper wall of the body member at the rear end thereof adjoining the rear portion of the chambered out part, a pin extending transversely of the rear of the chambered out portion, a substantially U-shaped spring tensioned lever having spring coils mounted upon said pin, said lever normally extending rearwardly, but designated to be pressed forwardly and within the forward part of the chambered out portion, a latch dog pivoted in the forward part of the chambered out portion and having a downwardly and forwardly extending arm provided with a notch for the reception of the forward part of said lever for holding the same in the forward part of the chambered out portion, said latch dog having a rearwardly extending arm lying in the upper portion of the chambered out portion and terminating in an angular end extending through said opening in the upper wall of the body member, said angular end adapted to be slightly tapped to tilt the latch dog, thereby actuating the downwardly and forwardly extending arm to release the spring tensioned lever.

1,167,406. TRUCK. WILLIAM F. IRRGANG, Windsor Locks, Conn., assignor to George P. Clark Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed June 18, 1912. Serial No. 704,352. (Cl. 254—6.)

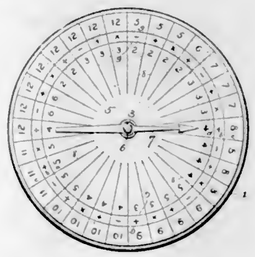
1. In combination, a truck frame, cams rotatably mounted thereon, a gear segment with the pitch line corresponding to the cam attached to each cam to turn therewith, a truck platform having racks attached thereto, and a bearing surface for each cam and gear on the frame, all constructed and arranged so that the gears mesh with the racks and each of the cam faces bears on its respective bearing surface.



2. In combination, a truck frame, cams rotatably mounted thereon, a gear segment with the pitch line corresponding to the cam attached to each cam to turn therewith, a truck platform having racks attached thereto, and a bearing surface for each cam and gear on the frame, all constructed and arranged so that the gears mesh with the racks and each of the cam faces bears on its respective bearing surface, a handle for the truck, and means operable by the handle for shifting the platform and frame one relatively to the other, whereby said cams, racks, and gears may lift and lower the platform on the frame.

3. In combination, a truck frame provided with a steering wheel and pivoted handle therefor, a lifting platform mounted on the truck frame, means operable by the horizontal movement of the platform to lift and lower the latter, and mechanism to move the platform horizontally comprising a U-shaped frame pivoted to the truck adjacent the handle having a member extending across and in front of the handle and a rearwardly extending member to overlap the handle, a link pivoted to the platform and said U-shaped frame at a distance from the pivot of the latter, and means on the handle to engage said overlapping member, all constructed and arranged so that the handle may engage and fully control the said mechanism as the handle is swung up or down on its pivot.

1,167,407. EDUCATIONAL GAME DEVICE. AMOS ELLMAKER JOHNSON, Northumberland, Pa. Filed May 8, 1915. Serial No. 26,793. (Cl. 46—56.)

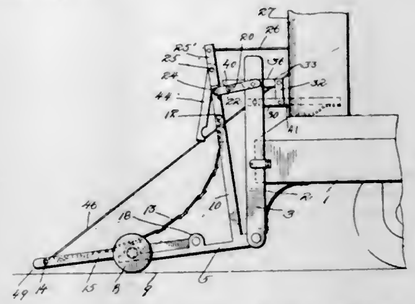


1. An educational game device comprising a table, having a central hole, a removable hub entering said central hole, a plurality of disks having central holes, held in place on the table by said hub, each of said disks having educational matter thereon differing from such matter on the other disks, whereby said disks may be interchanged and permit the playing of various educational games and a pointer disposed over the table and provided with a pin revolubly mounted in said removable hub.

2. An educational device, comprising a table, a removable hub mounted on said table and projecting upwardly therefrom, a spinning arrow provided with a pin mounted in said hub, and a removable disk held in place on said table by said hub and having a central hole to accommodate the latter, said disk having educational data thereon.

3. An educational game device, comprising a spinning arrow and a disk having three circular series of spaces two of series of spaces containing figures, and the intermediate circular series of spaces containing various arithmetical symbols in radial alinement with spaces of the other two circular series.

1,167,408. FENDER. WILLIAM JOHNSTON, Washington, Pa. Filed Sept. 11, 1914. Serial No. 861,320. (Cl. 105—253.)



1. A fender having horizontal arms pivoted at their inner ends, uprights carried thereby forming a frame, an extension frame pivoted thereto and a flexible scoop, said arms and uprights being integral.

2. A fender having horizontal arms pivoted at their inner ends, uprights carried thereby forming a frame, an extension frame pivoted thereto and a flexible scoop, said arms and uprights being integral forward of said pivoted ends.

3. A fender having horizontal arms pivoted at their inner ends, uprights carried thereby forming a frame, an extension frame pivoted thereto and a flexible scoop, said arms and uprights being integral forward of said pivoted ends, and wheels on the forward ends of said arms.

4. A fender having horizontal arms pivoted at their inner ends, uprights carried thereby forming a frame, an extension frame pivoted thereto and a flexible scoop, said arms and uprights being integral forward of said pivoted ends, and wheels on the forward ends of said arms, said extension frame consisting of arms pivoted to said first arms.

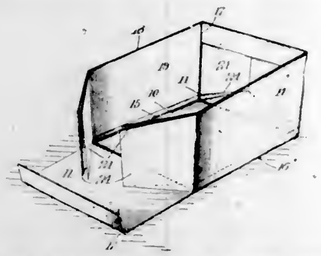
5. A fender having horizontal arms pivoted at their inner ends, uprights carried thereby forming a frame, an extension frame pivoted thereto and a flexible scoop, said arms and uprights being integral forward of said pivoted ends, and wheels on the forward ends of said arms, said extension frame consisting of arms pivoted to said first arms centrally thereof.

[Claims 6 to 41 not printed in the Gazette.]

1,167,409. BERRY-BASKET. FRANK M. JOSLIN, Amsterdam, N. Y., assignor to Inman Manufacturing Company, Inc., Amsterdam, N. Y., a Corporation of New York. Filed June 22, 1914. Serial No. 846,593. (Cl. 229—34.)

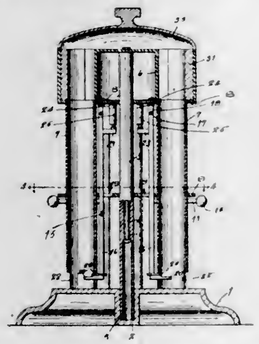
A paper box made from a one-piece blank and comprising a four-sided rectangular bottom and four flaring sides each integral with a side of the bottom, two of said sides being formed with two thicknesses of material and each thickness having independent flaps of substantially the same size and shape joined to the opposite vertical edges thereof and arranged on and secured to the two other sides

of the box, said flaps on each of said other sides being arranged wholly in two parallel planes, and said other



sides having flaps joined to the top edges thereof and secured over said first mentioned flaps.

1,167,410. DISPENSING DEVICE. JOSEPH KANTOR, New York, N. Y., assignor to Sanitary Sugar Dispenser Company, New York, N. Y., a Corporation of New York. Filed Aug. 29, 1914. Serial No. 859,196. (Cl. 211—8.)



1. In a sugar dispenser, a plurality of vertical sugar loaf containing tubes, a pivotally mounted lever positioned alongside each of said tubes, substantially T-shaped loaf supporting shoes formed upon the lower end of said lever and extending into the tubes, a lever pivotally connected to and extending transversely from each of said vertical levers for moving the vertical levers inwardly for permitting the sugar loaves to fall downwardly in the tubes, the vertical portions of said T-shaped shoes being longer than the horizontal or head portions for engaging and forcing the lowermost sugar loaf from the corresponding tube upon the return of the vertical lever to its normal position.

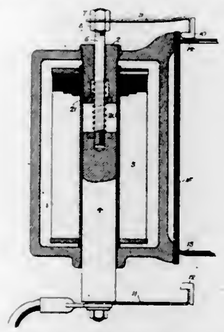
2. In a sugar dispenser, a supporting base, a vertical post carried by said supporting base centrally thereof, horizontal plates carried by said vertical post and being provided with openings formed radially about the center of said plates, vertical cylindrical tubes supported by said base and extending upwardly through said openings formed in said plates and provided for retaining loaves of sugar, a sugar receiving casing mounted upon the upper ends of said tubes and being provided with arcuate openings for alining communication with said cylindrical tubes, vertical bars pivotally connected to one of said horizontal supporting plates, substantially T-shaped sugar loaf supporting shoes carried by the lower ends of said pivoted bars and extending horizontally within said cylindrical tubes for supporting the lumps of sugar therein, and means for operating one of said bars at a time for forcing a single lump of sugar from the corresponding tube.

3. In a sugar dispenser, a supporting base, a vertical post carried by said supporting base centrally thereof, horizontal plates carried by said vertical post and being provided with openings formed radially about the center of said plates, vertical cylindrical tubes supported by said base and extending upwardly through said openings formed in said plates and provided for retaining loaves of sugar, a sugar receiving casing mounted upon the upper ends of said tubes and being provided with arcuate openings for alining communication with said cylindrical tubes, vertical bars pivotally connected to one of said horizontal supporting plates, substantially T-shaped sugar loaf supporting shoes carried by the lower ends of said pivoted bars and extending horizontally within said cylindrical tubes for supporting the lumps of sugar therein, means for operating one of said bars at a time for forcing a single lump of sugar from the corresponding tube, and means for returning said supporting shoe to a supporting position after having been operated for dispensing a lump of sugar from said tube.

4. In a sugar dispenser, a plurality of vertical sugar loaf containing tubes, a pivotally mounted lever positioned alongside of each of said tubes, substantially T-shaped loaf supporting shoes formed upon the lower ends of said levers, and extending into the tubes, a lever pivotally connected to and extending transversely from each of said vertical levers for moving said levers inwardly for permitting the sugar loaves to fall downwardly in the tubes, the vertical portions of said T-shaped shoes being longer than the horizontal or head portions for engaging and forcing the lowermost loaf of sugar from a tube upon the return of the lever to its normal position, and spring controlled means for automatically returning said vertical levers to their normal positions after operation.

5. In a sugar dispenser, a plurality of vertical sugar loaf containing tubes, a pivotally mounted lever positioned alongside each of said tubes, substantially T-shaped loaf supporting shoes formed upon the lower ends of said levers and extending into the tubes, a lever pivotally connected to and extending transversely from each of said vertical levers for moving said vertical levers inwardly for permitting the sugar loaves to fall downwardly in the tubes, the vertical portions of said T-shaped shoes being longer than the horizontal or head portions for engaging and forcing the lowermost sugar loaf from the corresponding tube upon the return of the vertical lever to its normal position, arms formed upon and extending transversely from said vertical levers, and spring controlled pistons engaging said arms for automatically moving said vertical levers into a normal position after operation.

1,167,411. CIRCUIT-BREAKER. SAMUEL H. KEEFER, Plainfield, N. J., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 24, 1909. Serial No. 534,809. (Cl. 175—270.)



1. Apparatus of the character described, comprising in combination, a winding, means adapted to energize and deenergize said winding in accordance with the conditions in a circuit, a fixed core and a movable core within said winding and adapted to contact when said winding is energized, and means for varying the area of contact between said cores, all so proportioned that the cores are retarded to an adjustable extent from separation upon a deenergization of the winding.

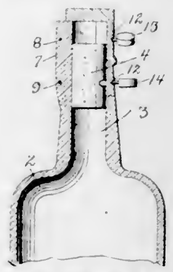
2. Apparatus of the character described, comprising in combination, a circuit, a winding, means responsive to current changes in said circuit adapted to energize or deenergize said winding in accordance with said changes, a fixed core and a movable core within said winding adapted when said winding is energized to contact with each other and maintains said circuit closed, means acting in opposition to said winding and tending to separate said cores to open said circuit, said cores having an adjustable contact surface whereby the effect of momentary deënergization of said winding in permitting said second means to separate said cores may be nullified to an adjustable extent.

3. Apparatus of the character described, comprising in combination, a circuit, a winding, a fixed and a movable core therein, said winding when energized acting through said cores to maintain said circuit closed, a relay adapted to deënergize said winding when the current in said circuit becomes abnormal, means tending to separate said cores, said cores contacting when said winding is energized, whereby upon a momentary deënergization of said winding said means is rendered ineffective to separate said cores to open said circuit, and means for adjusting the area of contact of said cores.

4. Apparatus of the character described, comprising in combination, a winding normally excited, coöperating fixed and movable cores therein adapted to contact when said winding is excited and to close thereby a circuit, means tending to separate said cores to open said circuit, a relay responsive to current changes in said circuit and adapted with abnormal current therein to deënergize said winding, the contact between said cores serving to maintain said circuit closed upon momentary deënergization of said winding, and means adapted to vary the surface of contact.

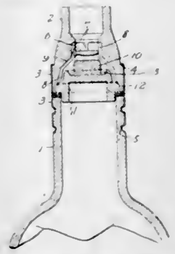
5. Apparatus of the character described, comprising in combination, a winding, a fixed core therein, a movable core adapted to be attracted toward said fixed core when said magnet is energized, means constantly tending to separate said cores in opposition to the force exerted by said magnet, means adapted to make and break the magnet circuit, said cores contacting when said magnet circuit is closed, whereby upon a momentary break of said circuit said separating means is rendered ineffective to separate said cores, and means for adjusting the area of contact between said cores.

1,167,412. NON-REFILLABLE BOTTLE. ALEXANDER S. KOZELL, Lorain, Ohio. Filed Apr. 29, 1914. Serial No. 835,300. Renewed June 14, 1915. Serial No. 34,069. (Cl. 215—72.)



In a device of the class described, a bottle, a neck formed thereon being cut away longitudinally at one side thereof, a shoulder formed at the lower end of said cut away portion, a projection cast on the opposite side of said neck, wires welded in said projection, a closure removably mounted on said neck including a shank portion adapted to rest upon the aforementioned shoulder, and a disk secured at the upper end thereof, grooves formed in the neck member and in the closure plate in alinement with the wires so that when the same are drawn about the neck and closure plate they will be prevented from longitudinal movement, leaden seals securing the ends of said wires together, a projection on the inner face of said closure plate adapted to be drawn into engagement and embedded in the cork within the neck.

1,167,413. NON-REFILLABLE BOTTLE. JOSEPH D. LACROIX, Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Jan. 20, 1912. Serial No. 672,428. (Cl. 215—69.)



1. In a non-refillable bottle, the combination of a neck portion having a conoidal valve chamber, a separable valve seat device having an opening and a flat valve-seating surface around said opening, said valve seat device being arranged at the bottom of the valve chamber, and a pyramidal valve device having its base provided with a flat portion arranged to coact with the flat valve-seating surface of the valve seat, and having a fulcrum portion intermediate its base and top arranged to be brought into engagement with the wall of the valve chamber when the bottle is tipped, whereby the valve device will tilt on said fulcrum portion to open the valve.

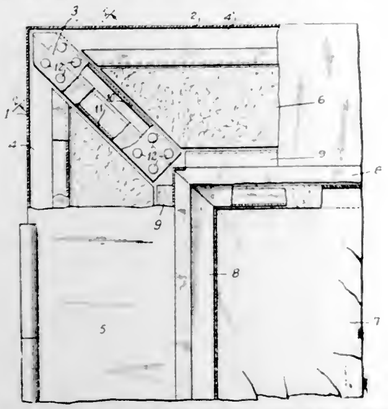
2. In a non-refillable bottle, the combination of a neck portion having a conoidal valve chamber, a separate valve seat device having an opening and a flat valve-seating surface around said opening, said valve seat device being arranged at the bottom of the valve chamber, a pyramidal valve device having its base provided with a flat portion arranged to coact with the flat valve-seating surface of the valve seat, and having a fulcrum portion intermediate its base and top arranged to be brought into engagement with the wall of the valve chamber when the bottle is tipped, whereby the valve device will tilt on said fulcrum portion to open the valve, and a baffle device secured within the neck portion above the valve device and arranged to limit the movement of the latter.

3. In a non-refillable bottle, the combination of a neck portion having a conoidal valve chamber, a separable valve seat device having an opening and a flat valve-seating surface around said opening, said valve seat device being arranged at the bottom of the valve chamber, a pyramidal valve device having its base provided with a flat portion arranged to coact with the flat valve-seating surface of the valve seat, the valve device also having a portion provided with a peripheral surface arranged to act as a fulcrum in tilting the valve, and with an interior downward sloping surface arranged to serve as a baffle surface, and a baffle device secured within the neck portion above the valve device and arranged to limit the movement of the valve and coact with the baffle surface of the valve device to prevent tampering with the valve.

1,167,414. SHEET-METAL-DOOR CONSTRUCTION. ALBERT LESLIE LAMBERT and ALFRED B. BELL, Philadelphia, Pa., assignors to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Original application filed Jan. 14, 1915, Serial No. 2,120. Divided and this application filed May 1, 1915. Serial No. 25,097. (Cl. 189—46.)

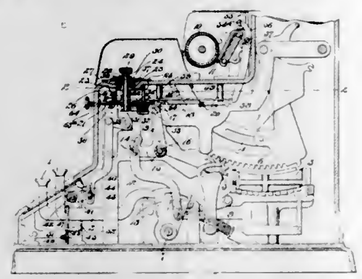
In a door, or similar construction, the combination of a pair of frame members, one transverse and the other lon-

gitudinal, having parallel metallic inner and outer sheets, having abutting inclined ends welded together to form a corner of the structure, a channel bar within said sheets, extending transverse to the welded joints of the same and



welded to sheets on both sides of the joints and a channel bar within said first channel bar, in reversed position thereto, to form a box section with said first bar, substantially as set forth.

1,167,415. ADDING AND RECORDING MACHINE. HARRY LANDSIEDEL, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 8, 1913. Serial No. 747,182. (Cl. 235—60.)



1. In an adding machine, the combination with depressible keys for setting up numbers and a laterally movable carriage movable to different column positions, of devices for locking the keys to prevent depression thereof, and mechanism controlled by said carriage when released for column movement for unlocking the keys.

2. In an adding machine, the combination of depressible keys, a carriage movable to and settable in different column positions, elements for engaging and preventing depression of said keys under predetermined conditions, means for releasing the carriage for movement to different column positions, and means controlled by the carriage when released for such movement for unlocking the keys.

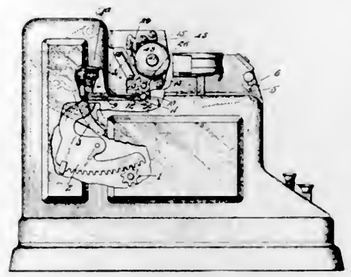
3. In an adding machine, the combination of depressible numeral keys, a paper carriage movable to different column positions, devices preventing depression of the keys at the end of each column, and means controlled by the movement of the carriage to another column position for releasing said devices to permit depression of the keys.

4. In an adding machine, the combination of depressible keys operable to set up numbers, mechanism for locking said keys at the end of each column, a carriage movable to different lateral column positions, means for holding said carriage in its different column positions, means for releasing said carriage for column movements, and means controlled by said carriage when released for column movement for unlocking said keys.

5. In an adding machine, the combination of keys operable to set up numbers, a carriage movable to different column positions, means for locking said keys at the end of each column, means for varying the length of the column which will be recorded before said locking means will lock said keys, means for holding said carriage in its different column positions, means for releasing said carriage for column movement, and connections controlled by said carriage when released for column movement for unlocking the keys irrespective of the length of the column.

[Claims 6 to 24 not printed in the Gazette.]

1,167,416. RECORDING-MACHINE. HARRY LANDSIEDEL, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 4, 1913. Serial No. 758,850. (Cl. 235—58.)



1. In an adding machine, an item counting device comprising a support, a numeral scale on said support, a second numeral scale, a latching device whereby said second numeral scale may be held in any desired relation to the first named numeral scale, a signaling element, means for operating said support to move said signaling element, and means carried by said second numeral scale for causing said signal element to signal.

2. In an adding machine, an item counting device comprising a support, a numeral scale on said support, a second numeral scale adjustable with respect to the first one, a latching device whereby said second numeral scale may be held in any desired adjustment with respect to the first-named scale, an actuator for holding said latching device in engagement, a signaling element, and means operated by said second numeral scale for causing said signaling element to signal.

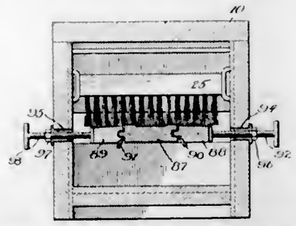
3. In an adding machine, an item counting device comprising a support, a numeral scale on said support, an additional support, a second numeral scale on said additional support, a latching device for holding said two supports and thereby said scales in any desired relation with respect to each other, an actuator for holding said latching device in engagement, a signaling element carried by one of said supports, means for moving the support carrying said element with respect to the other support, and means carried by the other support for causing said signaling element to signal when said two numeral scales arrive at a predetermined relative position.

4. In an adding machine, an item counting device comprising an annular support, a numeral scale on said support, an additional support, a numeral scale on said additional support, a latching device whereby said additional support may be held in any desired relation to said first-named support, a signaling element carried by said first-named support, means for operating said first-named support to move said signaling elements, and means carried by said additional support for causing said signaling element to signal when said first-named scale arrives at a predetermined position with respect to said second-named scale.

5. In an adding machine, an item counting device comprising a support, a numeral scale on said support, an additional support which is adjustable with respect to said first-named support, a numeral scale on said additional support, means for retaining said additional support and the numeral scale thereon in desired relation to the first-named numeral scale, a signaling element carried by said first-named support, means for moving said first-named support and thereby said signaling element, and means carried by said additional support for causing said signaling element to signal when the numeral scale on said first-named support reaches a predetermined position with respect to the numeral scale on said additional support.

[Claims 6 and 7 not printed in the Gazette.]

1,167,417. WOOD-TREATING MACHINE. CLIFTON F. LEATHERBEE, Newton, Mass., assignor to Painting Machine Company, Kittery, Me., a Corporation of Maine. Filed Feb. 10, 1909. Serial No. 477,051. (Cl. 91—43.)



1. In a machine for treating moving material, in combination, a casing adapted to receive moving material, means for guiding the edge of the material, means for applying liquid to part of the material and means coöperating with the said guiding means preventing the application of the liquid to other parts of the moving material.

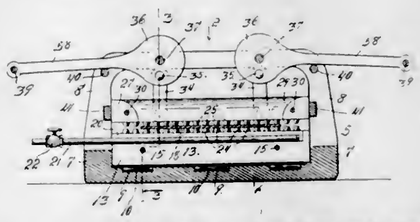
2. In a machine for treating moving material, in combination, a casing adapted to receive moving material, means for applying liquid to part of the moving material, a pair of strips for guiding the moving material, and felt strips on the said guides.

3. In a machine for applying a liquid to one face of tongue-and-groove boards, guide means fitting the edges of the boards and projecting them, and a brush adjacent the face of the board.

4. In a machine for treating material, the combination with means for supplying liquid to the material, of a brush having an irregularly serrated contour whereby the end portions of the longest bristles can flex independently of the shorter.

5. In a machine for treating material, the combination with means for supplying liquid to the material, of a brush having tufts of bristles of pointed or jagged contour whereby the bristles forming the end portions of said tufts can flex independently of the shorter bristles.

1,167,418. CLAMPING DEVICE. WILLIAM LENNON, Manitou, Colo. Filed Mar. 21, 1914. Serial No. 826,161. (Cl. 113—99.)



1. A clamping device for use in welding metal sheets, comprising upper and lower coöperating members arranged to clamp the edges of the plates to be joined, the upper member having an opening extending lengthwise of said edges to permit the introduction of the welding torch, means for bringing the two members into coöperative relation and means for subjecting the metal sheets along the entire length of the abutting edges to a moderate degree of heat prior and during, to the use of the welding torch.

2. A clamping device for use in welding sheet metal sections, said device comprising upper and lower members between which the sheets are placed, and means for bringing the edges of said members into coöperative clamping relation, one of the members being equipped with means for heating the metal sheets in advance of the use of the welding torch, and the other member having an opening extending lengthwise of the said edges to permit the introduction of the welding torch.

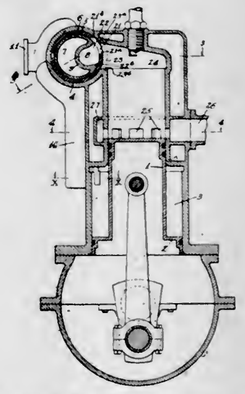
3. A clamping device of the character described, comprising upper and lower members between which metal sections to be welded may be placed, means for bringing the members into coöperative clamping relation, one of the members having a centrally located recess and a perforated pipe located in the said recess and adapted to supply fuel for heating the abutting edges of the plates to be joined, while the other member is provided with an opening opposite said recess to permit the introduction of the welding heating device.

4. A clamping device comprising upper and lower members arranged to engage the plates to be joined adjacent their abutting edges, means for bringing the two members into coöperative clamping relation, the upper member having a central opening extending lengthwise of said edges to permit the introduction of a welding torch, each member being composed of two parts and the two parts of each member being connected to permit expansion for the purpose set forth.

5. A clamping device comprising two coöperating members, each member consisting of two parts connected to permit lateral expansion, and anti-frictional devices upon which the lower member is supported, to facilitate lateral movement, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,167,419. INTERNAL-COMBUSTION ENGINE. HERBERT L. MAGILL, Chicago, Ill. Filed Nov. 7, 1914. Serial No. 870,750. (Cl. 123—59.)



1. In a two-cycle gas engine, in combination with a cylinder having an exhaust port and an inlet port; gas-compressing means adapted to furnish gas at a pressure higher than the pressure in said cylinder at any time during the inlet period, and controlling means adapted to permit the inlet port to remain open after the closing of the exhaust port, and adjustable for varying the period during which said port remains open, together with means arranged to automatically vary the supply of gas to the compressing device in accordance with variations in said inlet period.

2. In a two-cycle gas engine, in combination with the cylinder and its inlet port, means for compressing the gas outside the firing chamber of the cylinder, a rotary valve

sleeve controlling said inlet port and communicating with said compressing means, and a ported timing sleeve concentric with said valve sleeve and adapted for rotative adjustment with respect thereto in direction to vary the time of closing of the inlet valve.

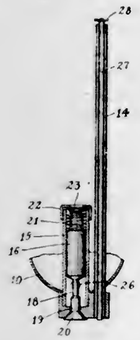
3. In a two-cycle gas engine, in combination with the cylinder and its piston, an enhaust port in the cylinder wall positioned for control by the movement of said piston, an inlet port located at a higher position in said cylinder wall, and means for controlling said inlet port comprising a rotary valve sleeve, and a ported timing sleeve concentric therewith rotatably adjustable in direction for varying the time of closing of the inlet valve.

4. In a two-cycle gas engine in combination with the cylinder and its piston, an exhaust port in the cylinder wall positioned to be uncovered by the piston at the lower limit of its travel, an inlet port located at a higher position in said cylinder wall, and means for controlling said inlet port comprising a rotary valve sleeve, and a ported timing sleeve within said valve sleeve rotatively adjustable for varying the effective position of the port with respect to the valve sleeve.

5. In an internal combustion engine, in combination with a cylinder and its inlet port, a rotary valve sleeve controlling said port, and a gas supply reservoir within said sleeve having an opening which is rotatively adjustable with respect to the said inlet port for varying the timing of the valve.

[Claims 6 to 13 not printed in the Gazette.]

1,167,420. LIQUID-SOAP DISPENSER. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, a Corporation of New York. Filed Oct. 2, 1911. Serial No. 652,450. (Cl. 221—114.)

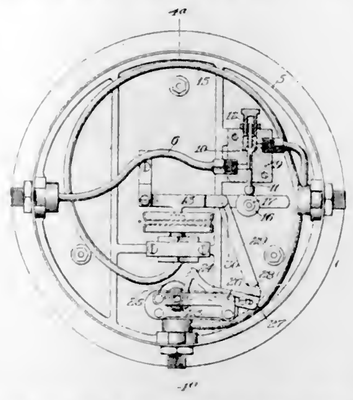


1. In a liquid dispensing device, an outer casing for holding the liquid, a plunger casing of substantially cylindrical form extending upward into said outer casing and having a bottom opening and a side opening, the latter communicating directly with the interior of the outer casing; in combination with a plunger within said plunger casing adapted to close both of said openings when in its normal and lowermost position, a spring tending to push said plunger downward, a stem on said plunger extending out through the bottom opening and an enlargement on said stem adapted to slide into said bottom opening and to close the same when said plunger is pushed above said side opening so as to open it, substantially as described.

2. A liquid dispensing device comprising in combination a casing, a positive liquid ejecting device normally in its inoperative position, lifting means for manually lifting said device into an operative position, a vent comprising a tube extending upward to a point above the intended level of liquid within said casing, an operating rod loosely placed within said tube, and extending below its lower extremity into the path of movement of the hand in operating said lifting means, and means at the upper end of said rod adapted to close the top of said vent tube, substantially as described.

3. In a liquid dispensing device a casing for the liquid, a vent comprising a tube extending upward to a point above the intended level of liquid in said casing, an operating rod loosely placed within said tube and extending below its lower extremity and a cap on said rod normally resting upon the top of said tube; in combination with a normally depressed ejecting plunger and a lifting stem therefor placed near the projecting end of the vent operating rod and of such a length as to permit appropriate successive normal operation of said plunger and of said vent, substantially as described.

1,167,421. PRESSURE INDICATING AND REGULATING DEVICE. HENRY W. MAURER and FRED K. TAYLOR, Rochester, N. Y., assignors to Taylor Instrument Companies, Rochester, N. Y., a Corporation of New York. Filed Apr. 5, 1915. Serial No. 19,163. (Cl. 50—11.)



1. In a combined pressure indicating and regulating device, the combination with a casing, of an indicator movably arranged in the casing, a pipe arranged in the casing and adapted to receive a pressure supply for controlling a valve governing the pressure to be regulated, a valve located in said pipe within the casing, and means disposed in the casing controlled by the pressure to be regulated and operatively connected to said indicator and to the supplemental valve.

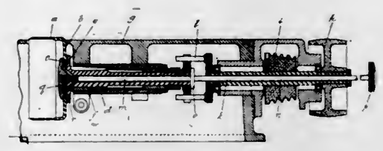
2. In a combined pressure indicating and regulating device, the combination with a casing, of an indicator movably arranged in the casing, a pipe arranged in the casing and adapted to receive a pressure supply for controlling a valve governing the pressure to be regulated, a valve located in said pipe within the casing, an actuating lever arranged within the casing controlled by the pressure to be regulated, and operative connections between the lever and the indicator and between the lever and the last mentioned valve.

3. In a combined pressure indicating and regulating device, the combination with a casing, of an indicator movably arranged in the casing, a pipe arranged in the casing and adapted to receive a pressure supply for controlling a valve governing the pressure to be regulated, a valve located in said pressure supply pipe within the casing, and means actuated by the pressure to be regulated and arranged within the casing including an actuating lever, and connections between said lever and the indicator and between the lever and the last mentioned valve.

4. In a combined pressure indicating and regulating device, the combination with a casing, of an indicator movably arranged in the casing, a pipe arranged in the casing and adapted to receive a pressure supply for controlling a valve governing the pressure to be regulated, a valve located in said pipe within the casing, means disposed in the casing controlled by the pressure to be regulated, operative connections between said means and the last mentioned valve including an adjustable device acting to vary the movement of the valve, and operative connections between said means and the indicator.

5. In a combined pressure indicating and regulating device, the combination with a casing, of an indicator movably arranged in the casing, a pipe arranged in the casing and adapted to receive a pressure supply for controlling a valve governing the pressure to be regulated, a valve located in said pipe within the casing and mounted on a movable valve stem, means controlled by the pressure to be regulated including an actuating lever arranged within the casing, a rotatably adjustable cam on the lever having engagement with said valve stem and operating the latter in accordance with its position on the lever, and operative connections between the lever and the aforesaid indicator.

1,167,422. MOUNTING FOR RING-KNIVES FOR PARING OR SPLITTING LEATHER. PAUL W. MERKLE, London, England. Filed Dec. 30, 1913. Serial No. 809,463. (Cl. 69—9.5.)



1. In machines for paring and splitting leather, the combination of a ring knife, and means for fastening said knife to its shaft, comprising a fastening member and controlling means capable of attachment to said fastening member, said controlling means being capable of manipulation outside of the hollow of said ring knife.

2. In a machine for paring and splitting leather, the combination of a ring knife, and means for fastening said ring knife to a shaft, comprising a fastening member and means for controlling said fastening member, the major portion of said controlling means being located behind the hollow of the said ring knife.

3. In a machine for paring and splitting leather, the combination of a ring-knife, a hollow shaft having a flange on which said ring knife is mounted, a bolt lying in said hollow shaft and capable of manipulation behind the ring knife, and means for engaging said bolt and said ring knife to fasten said ring knife to said flange.

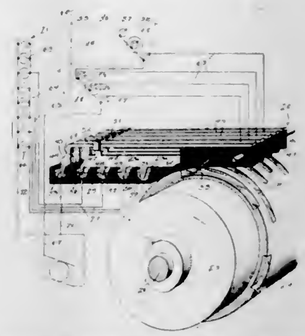
4. In a machine for cutting and paring leather, the combination of a ring knife having a boring, a hollow shaft having a flange on which said ring knife is mounted, a plate capable of being placed on the foundation plate of said ring knife within the hollow thereof, and a bolt lying in said hollow shaft and capable of projecting through said boring of the ring knife, said first-mentioned plate and said bolt being constructed for interengagement to fasten said ring knife to said flange.

5. In a machine for cutting and paring leather, the combination of a ring knife, a shaft having a flange, a plate capable of being placed on the foundation plate of said ring knife within the hollow thereof, a fastening member for fastening said plate to said ring knife, means for fastening said foundation plate and said shaft at a plurality of points, whereby the ring knife is secured against revolution and radial movement on the shaft, and means for manipulating said fastening member located outside the hollow of the knife.

[Claims 6 to 8 not printed in the Gazette.]

1,167,423. ANNUNCIATOR FOR CHECKERS AND SIMILAR GAMES. ANTHONY NELSON, St. Paul, Minn. Filed Nov. 18, 1912. Serial No. 732,014. (Cl. 177—348.)

1. In a device of the class described, the combination of an electric annunciator, a source of electric current, lamps for said annunciator, a rheostat having a plurality of current resisting sections, a plurality of electric terminals, one of said terminals being directly connected with the source of current and each of the remaining terminals being connected with said source through one of said rheostat sections, movable switch arms severally connected through said lamp with said source of current, each of said arms being adapted first to engage said terminals to complete a circuit through its lamp and the source of current, secondly to engage only said second mentioned terminals to complete the circuit through its lamp, source of current and rheostat, and then be successively disengaged from said second mentioned terminals to confine the current to a decreasing number of rheostat sections, and thirdly to be disengaged from all of said terminals, whereby its lamp is respectively lighted, dimmed and extinguished.



2. In a device of the class described, the combination of a plurality of compartments arranged to correspond with the playing squares of a checker-board, a plurality of electric lamps in said compartments, a second compartment, within each of said first mentioned compartments, containing an electric lamp, a source of current, a terminal connected through said source of current wth each lamp, a plurality of movable switch arms, adapted to engage said terminal, each of said arms being connected with a lamp, and means for severally shifting said arms to engage the same with or disengage the same from said terminal, whereby the circuit through said source of current and the respective lamps of said arms will be completed or broken.

3. In a device of the class described, the combination of an electric annunciator, a source of electric current, lamps for said annunciator, a rheostat having a plurality of current resisting sections, a terminal board having a plurality of terminals, one terminal being directly connected with said source of current and each of the other terminals being connected with said source of current through a rheostat section, tiltable arms electrically connected through said lamps with the source of current, a power-driven cylindrical record having transverse portions thereof formed to engage and connect certain arms with or disconnect the same from said terminals, each of said arms being adapted first to engage said terminals to complete a circuit through its lamp and the source of current, secondly to engage only said second mentioned terminals to complete the circuit through its lamp, source of current and rheostat and then to be successively disengaged from said second mentioned terminals to confine the current to a decreasing number of rheostat sections, and thirdly to be disengaged from all of said terminals, whereby its lamp is respectively lighted, dimmed and extinguished.

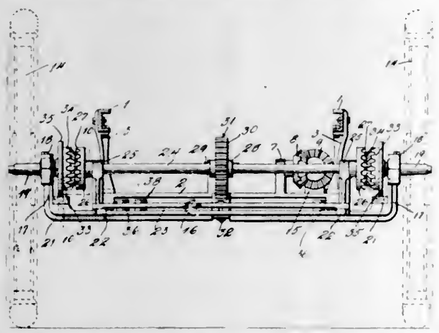
4. In a device of the class described, the combination of an electric annunciator, a source of electric current, lamps for said annunciator, a rheostat having a plurality of current resisting sections, a terminal board having a plurality of terminals, one of said terminals being connected with said source of current and each of the remaining terminals being connected with said source through one of said rheostat sections, movable arms severally connected through said lamps with the source of current, each of said arms comprising a bar adapted to form a contact with said first mentioned terminal and a blade pivoted with respect to the bar, said blade being adapted to make a contact with

said second mentioned terminals, means for raising and lowering each arm to first disengage the bar thereof from its terminal, secondly to successively disconnect the blade from its terminals and thirdly to reëngage said bar and blade with said terminals.

5. In a device of the class described, the combination of a plurality of compartments arranged to correspond with the playing squares of a checker-board, a plurality of electric lamps in said compartments, a second compartment, within each of said first mentioned compartments, containing an electric lamp, a translucent closure for said compartments, a source of current, a terminal connected through said source of current with each lamp, a plurality of movable switch arms, adapted to engage said terminal, each of said arms being connected with a lamp, and means for severally shifting said arms to engage the same with or disengage the same from said terminal, whereby the circuit through said source of current and the respective lamps of said arms will be completed or broken.

[Claims 6 and 7 not printed in the Gazette.]

1,167,424. DEVICE FOR DRIVING FRONT WHEELS OF AUTOMOBILES. ELI NOEL, Kansas City, Mo. Filed Mar. 29, 1915. Serial No. 17,828. (Cl. 21—90.)



1. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a pad supported near each end of said yoke, a loosely mounted disk carried by each stub axle, said loosely mounted disk resting upon said pad, a gear carried by each stub axle, means for driving said gear, and means for changing the position of said driving means for facilitating the steering of wheels adapted to be supported upon said stub axles.

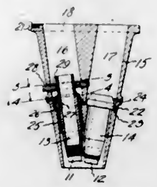
2. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, gears carried by said stub axles, a turn-table frame rotatably mounted upon said yoke, a shaft carried by said turn-table frame, gears carried by said last mentioned shaft and meshing with said gears carried by said stub axles, means for facilitating the driving of said shaft, and means for facilitating the swinging of said turn-table frame upon said axle supporting yoke.

3. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, gears carried by said stub axles, a turn-table frame rotatably mounted upon said yoke, a shaft carried by said turn-table frame, gears carried by said last mentioned shaft and meshing with said gears carried by said stub axles, means for facilitating the driving of said shaft, said axle supporting yoke provided with a plurality of arc tracks near the respective ends thereof, the ends of said turn-table frame resting upon said track, and steering means for facilitating the swinging of said turn-table frame for changing the position of said stub axles.

4. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a turn-table frame, a driving shaft carried thereby, means for facilitating the driving of said stub axles from said shaft, a gear carried by said shaft and provided with convex teeth, an auxiliary shaft mounted adjacent said first mentioned shaft, a gear carried by said auxiliary shaft and having concave teeth meshing with the convex teeth of said last mentioned gear, and means for driving said auxiliary shaft.

5. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a turn-table frame, a driving shaft carried thereby, means for facilitating the driving of said stub axles from said shaft, a gear carried by said shaft and provided with convex teeth, an auxiliary shaft mounted adjacent said first mentioned shaft, a gear carried by said auxiliary shaft and having concave teeth meshing with the convex teeth of said last mentioned gear, means for driving said auxiliary shaft, and means for swinging said turn-table frame.

1,167,425. MICROSCOPE. HARVEY N. OTT, Buffalo, N. Y., assignor to Spencer Lens Company, Buffalo, N. Y. Filed Apr. 5, 1915. Serial No. 19,107. (Cl. 88—39.)



1. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container.

2. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said container having protecting walls which surround the objectives and extend substantially to the outer ends thereof.

3. The combination of two objectives for a binocular microscope, a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container, and means for adjusting said objectives in the container relative to each other.

4. The combination of two objectives for a binocular microscope, a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container, means for adjusting said objectives laterally in the container relative to each other, and means for adjusting one of said objectives axially.

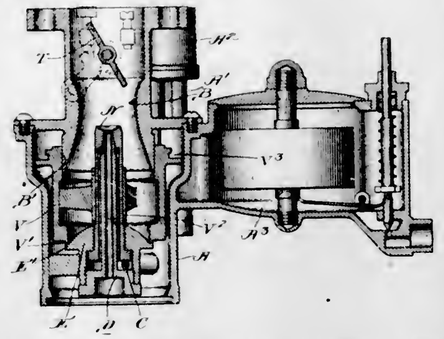
5. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and which is provided with converging chambers in which said objective are mounted with the outer ends of the objectives surrounded and protected by the walls of said chambers.

[Claims 6 to 11 not printed in the Gazette.]

1,167,426. CARBURETER. WILLIAM R. PARK, Taunton, Mass., assignor to United Injector Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1913. Serial No. 788,500. (Cl. 48—154.1.)

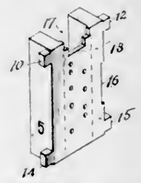
1. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a fuel inlet communicating with the interior of the mixing tube, and a needle valve to control the fuel supply, connected with and operated by the gravity air valve.

2. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a steadying finger bearing on the gravity air valve, and a fuel inlet communicating with the interior of the mixing tube.



3. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a fuel inlet communicating with the interior of the mixing tube, a needle valve to control the fuel supply, connected with and operated by the gravity air valve, and a steadying finger bearing on the gravity air valve.

1,167,427. MATRIX. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed May 15, 1915. Serial No. 28,257. (Cl. 199—12.)



1. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and having a vertical groove extending from top to bottom in that side which is the leading side during composition.

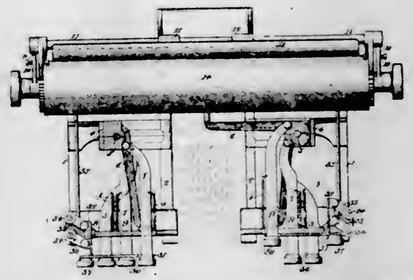
2. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and a vertical groove in its left side extending from top to bottom, and having a smooth right side.

3. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and forwardly and rearwardly projecting ears, and a distributer combination web, the following faces of said ears and of the combination web being in the same plane and on that side of the matrix which is the following side during composition, and said matrix having in that side which is the leading side during composition a vertical groove extending from top to bottom by which the said web is produced.

4. A set of matrices of which the matrices are of different thicknesses but which have combination webs of the same thickness and which have in those sides which are the leading sides during composition vertical grooves which extend from top to bottom, and are of different depths on matrices of different thicknesses.

5. A matrix adapted for circulation in a typographic machine wherein it travels in an upright position sidewise during composition, said type or matrix being formed with projecting ears of less thickness than that of its body, and with a distributing web of less thickness than that of its body, said web and ears being located in the same plane and at that side thereof which is the following side during composition.

1,167,428. TYPE-WRITING MACHINE. CHARLES K. PICKLES, St. Louis, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 27, 1908. Serial No. 464,747. (Cl. 197—22.)



1. In a typewriting machine, a laterally movable paper carriage, a revoluble platen mounted in said carriage, type bars arranged to operate upon a visible portion of said platen, key stems having their inner ends pivoted to said type bars, whereby said type bars may be operated to record, plates actuated by inward movement of said key stems, escapement mechanism controlling said carriage, connections whereby said plates will operate said escapement mechanism while said platen is held against revolving, and means for returning said type bars and key stems to idle position after each operation.

2. In a typewriting machine, a carriage, a support upon which said carriage is laterally movable, a revoluble platen mounted in said carriage, means for revolving said carriage to feed paper in line spacing, escapement mechanism controlling lateral movement of said carriage, type bars arranged to operate upon said platen, key stems having their inner ends pivoted to said type bars and having finger buttons attached to the outer ends thereof, whereby said key stems may be manually operated to actuate said type bars, plates movable by said key stems during manual operation thereof, connections from said plates for operating said escapement mechanism, actuating devices for restoring said plates to idle position after each operation thereof, and springs for restoring said key stems to idle position.

3. In a typewriting machine, in combination, a revoluble platen, escapement mechanism, type-bars, key-stems pivoted to said type-bars, plates actuated by said key-stems, and connections from said plates whereby said plates will operate said escapement mechanism while said platen is held against revolving, substantially as specified.

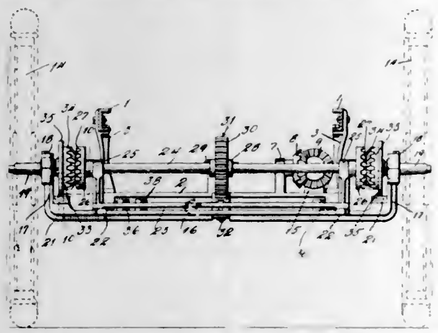
4. In a typewriting machine, the combination with a laterally movable paper carriage and a revolnble platen mounted in said carriage and having the recording space thereon visible to the operator, of escapement mechanism controlling lateral movement of said carriage, type bars, longitudinally slidable key stems having their inner ends pivoted to said type bars, plates having openings through which said key stems extend, elements on said key stems engaging said plates, connections from said plates to said escapement mechanism, whereby the escapement mecha-

said second mentioned terminals, means for raising and lowering each arm to first disengage the bar thereof from its terminal, secondly to successively disconnect the blade from its terminals and thirdly to reëngage said bar and blade with said terminals.

5. In a device of the class described, the combination of a plurality of compartments arranged to correspond with the playing squares of a checker-board, a plurality of electric lamps in said compartments, a second compartment, within each of said first mentioned compartments, containing an electric lamp, a translucent closure for said compartments, a source of current, a terminal connected through said source of current with each lamp, a plurality of movable switch arms, adapted to engage said terminal, each of said arms being connected with a lamp, and means for severally shifting said arms to engage the same with or disengage the same from said terminal, whereby the circuit through said source of current and the respective lamps of said arms will be completed or broken.

[Claims 6 and 7 not printed in the Gazette.]

1,167,424. DEVICE FOR DRIVING FRONT WHEELS OF AUTOMOBILES. ELI NOEL, Kansas City, Mo. Filed Mar. 29, 1915. Serial No. 17,828. (Cl. 21—90.)



1. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a pad supported near each end of said yoke, a loosely mounted disk carried by each stub axle, said loosely mounted disk resting upon said pad, a gear carried by each stub axle, means for driving said gear, and means for changing the position of said driving means for facilitating the steering of wheels adapted to be supported upon said stub axles.

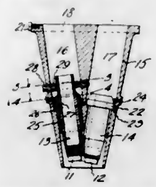
2. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, gears carried by said stub axles, a turn-table frame rotatably mounted upon said yoke, a shaft carried by said turn-table frame, gears carried by said last mentioned shaft and meshing with said gears carried by said stub axles, means for facilitating the driving of said shaft, and means for facilitating the swinging of said turn-table frame upon said axle supporting yoke.

3. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, gears carried by said stub axles, a turn-table frame rotatably mounted upon said yoke, a shaft carried by said turn-table frame, gears carried by said last mentioned shaft and meshing with said gears carried by said stub axles, means for facilitating the driving of said shaft, said axle supporting yoke provided with a plurality of arc tracks near the respective ends thereof, the ends of said turn-table frame resting upon said track, and steering means for facilitating the swinging of said turn-table frame for changing the position of said stub axles.

4. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a turn-table frame, a driving shaft carried thereby, means for facilitating the driving of said stub axles from said shaft, a gear carried by said shaft and provided with convex teeth, an auxiliary shaft mounted adjacent said first mentioned shaft, a gear carried by said auxiliary shaft and having concave teeth meshing with the convex teeth of said last mentioned gear, and means for driving said auxiliary shaft.

5. A device of the class described comprising an axle supporting yoke, stub axles carried thereby, a turn-table frame, a driving shaft carried thereby, means for facilitating the driving of said stub axles from said shaft, a gear carried by said shaft and provided with convex teeth, an auxiliary shaft mounted adjacent said first mentioned shaft, a gear carried by said auxiliary shaft and having concave teeth meshing with the convex teeth of said last mentioned gear, means for driving said auxiliary shaft, and means for swinging said turn-table frame.

1,167,425. MICROSCOPE. HARVEY N. OTT, Buffalo, N. Y., assignor to Spencer Lens Company, Buffalo, N. Y. Filed Apr. 5, 1915. Serial No. 19,107. (Cl. 88—39.)



1. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container.

2. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said container having protecting walls which surround the objectives and extend substantially to the outer ends thereof.

3. The combination of two objectives for a binocular microscope, a container which is adapted to be removably secured on the microscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container, and means for adjusting said objectives in the container relative to each other.

4. The combination of two objectives for a binocular microscope, a container which is adapted to be removably secured on the miscroscope and within which said objectives are mounted in converging relation to each other, said objectives being protected by surrounding portions of the container, means for adjusting said objectives laterally in the container relative to each other, and means for adjusting one of said objectives axially.

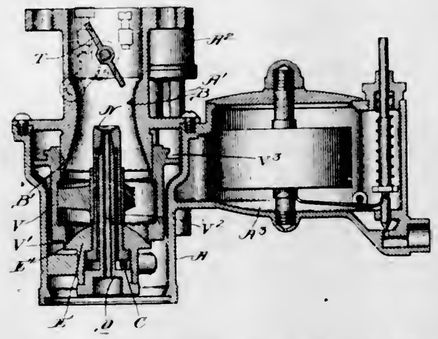
5. The combination of two objectives for a binocular microscope, and a container which is adapted to be removably secured on the microscope and which is provided with converging chambers in which said objective are mounted with the outer ends of the objectives surrounded and protected by the walls of said chambers.

[Claims 6 to 11 not printed in the Gazette.]

1,167,426. CARBURETER. WILLIAM R. PARK, Taunton, Mass., assignor to United Injector Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1913. Serial No. 788,500. (Cl. 48—154.1.)

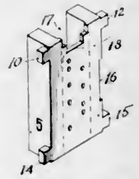
1. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a fuel inlet communicating with the interior of the mixing tube, and a needle valve to control the fuel supply, connected with and operated by the gravity air valve.

2. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a steadying finger bearing on the gravity air valve, and a fuel inlet communicating with the interior of the mixing tube.



3. In a carbureter, the combination of a tubular gravity air valve, a seat therefor coacting with the lower end of the tubular valve, a mixing tube entering the upper end of the tubular air valve and constituting a sliding bearing for the valve, the diameter of the upper end of the tubular bore of the air valve being greater than that of the lower end, a fuel inlet communicating with the interior of the mixing tube, a needle valve to control the fuel supply, connected with and operated by the gravity air valve, and a steadying finger bearing on the gravity air valve.

1,167,427. MATRIX. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed May 15, 1915. Serial No. 28,257. (Cl. 199—12.)



1. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and having a vertical groove extending from top to bottom in that side which is the leading side during composition.

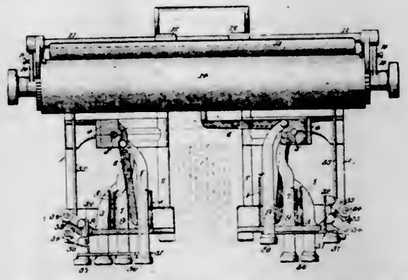
2. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and a vertical groove in its left side extending from top to bottom, and having a smooth right side.

3. A matrix adapted for circulation in a typographical machine wherein it travels in an erect position sidewise during composition, said matrix having an inverted character depression in its rear edge, and forwardly and rearwardly projecting ears, and a distributer combination web, the following faces of said ears and of the combination web being in the same plane and on that side of the matrix which is the following side during composition, and said matrix having in that side which is the leading side during composition a vertical groove extending from top to bottom by which the said web is produced.

4. A set of matrices of which the matrices are of different thicknesses but which have combination webs of the same thickness and which have in those sides which are the leading sides during composition vertical grooves which extend from top to bottom, and are of different depths on matrices of different thicknesses.

5. A matrix adapted for circulation in a typographic machine wherein it travels in an upright position sidewise during composition, said type or matrix being formed with projecting ears of less thickness than that of its body, and with a distributing web of less thickness than that of its body, said web and ears being located in the same plane and at that side thereof which is the following side during composition.

1,167,428. TYPE-WRITING MACHINE. CHARLES K. PICKLES, St. Louis, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 27, 1908. Serial No. 464,747. (Cl. 197—22.)



1. In a typewriting machine, a laterally movable paper carriage, a revoluble platen mounted in said carriage, type bars arranged to operate upon a visible portion of said platen, key stems having their inner ends pivoted to said type bars, whereby said type bars may be operated to record, plates actuated by inward movement of said key stems, escapement mechanism controlling said carriage, connections whereby said plates will operate said escapement mechanism while said platen is held against revolving, and means for returning said type bars and key stems to idle position after each operation.

2. In a typewriting machine, a carriage, a support upon which said carriage is laterally movable, a revoluble platen mounted in said carriage, means for revolving said carriage to feed paper in line spacing, escapement mechanism controlling lateral movement of said carriage, type bars arranged to operate upon said platen, key stems having their inner ends pivoted to said type bars and having finger buttons attached to the outer ends thereof, whereby said key stems may be manually operated to actuate said type bars, plates movable by said key stems during manual operation thereof, connections from said plates for operating said escapement mechanism, actuating devices for restoring said plates to idle position after each operation thereof, and springs for restoring said key stems to idle position.

3. In a typewriting machine, in combination, a revoluble platen, escapement mechanism, type-bars, key-stems pivoted to said type-bars, plates actuated by said key-stems, and connections from said plates whereby said plates will operate said escapement mechanism while said platen is held against revolving, substantially as specified.

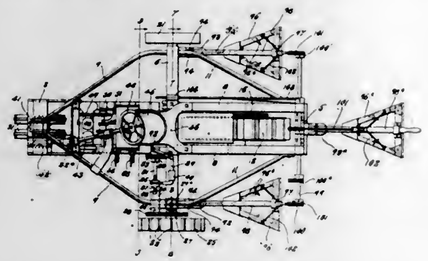
4. In a typewriting machine, the combination with a laterally movable paper carriage and a revoluble platen mounted in said carriage and having the recording space thereon visible to the operator, of escapement mechanism controlling lateral movement of said carriage, type bars, longitudinally slidable key stems having their inner ends pivoted to said type bars, plates having openings through which said key stems extend, elements on said key stems engaging said plates, connections from said plates to said escapement mechanism, whereby the escapement mecha-

nism will be operated by the manual movement of said key stems, devices for restoring said key stems to idle position after each manual operation, and additional devices for restoring said plates to idle position after each operation.

5. In a type writing machine, the combination of a carriage, a revolnble platen mounted in said carriage, manually operable means for rotating said platen in line spacing, series of type bars, series of longitudinally slidable key stems having their inner ends pivoted to said type bars respectively, supports in which said key stems are longitudinally movable, lettered finger buttons attached to said key stems, whereby said stems may be moved bodily in the direction of their length to operate said type bars, a movable element engaging all of the key stems of one series, an additional movable element engaging all of said key stems of the other series, mechanism controlled by both of said elements for moving said carriage and platen laterally effectively to move a straight line surface of said platen across the printing point, and means to prevent rotation of said platen during the lateral movement aforesaid.

[Claims 6 to 10 not printed in the Gazette.]

1,167,429. MOTOR PLOW AND CULTIVATOR. WILLIAM S. PLUMMER, St. Louis, Mo. Filed Apr. 11, 1914. Serial No. 831,318. (Cl. 21—114.)



1. In a combined traction plow and cultivator, an elongated narrow main frame, a main traction wheel mounted in said frame, a steering wheel at the forward end of said frame, inverted U-shaped arches fixed to and extending outwardly from the sides of the main frame, small wheels on the outer legs of said arches, a motor on the main frame, and driving connections from said motor to the main traction wheel.

2. In a combined traction plow and cultivator, an elongated narrow main frame, a main traction wheel, mounted in said frame, a steering wheel at the forward end of said frame, inverted U-shaped arches fixed to and extending outwardly from the sides of the main frame, small wheels on the outer legs of said arches, a motor on the main frame, driving connections from said motor to the main traction wheel, and means on the rear portion of the main frame, and the outer legs of the inverted U-shaped arches for attaching plow carrying frames.

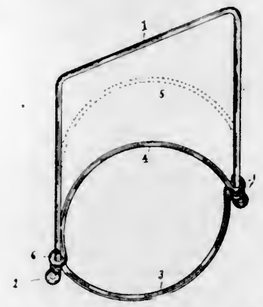
3. In a combined traction plow and cultivator, an elongated narrow main frame, a main traction wheel mounted for operation therein, a motor on said frame, driving connections from the motor to the main traction wheel, a steering wheel at the forward end of the frame, arches fixed to and extending outwardly from the sides of the frame, small wheels on the outer legs of said arches, and driving connections between the motor and one of said small wheels.

4. In a combined traction plow and cultivator, an elongated narrow main frame, a main traction wheel mounted for operation therein, a motor on said frame, driving connections from the motor to the main traction wheel, a steering wheel at the forward end of the frame, arches fixed to and extending outwardly from the sides of the frame, small wheels mounted on the outer legs of the arches, one of which small wheels is arranged to yield vertically upon the leg by which it is supported, and yielding pressure means for resisting the upward movement of said wheel.

5. In a combined motor plow and cultivator, an elongated main frame, a large traction wheel mounted for operation in the rear portion of said main frame, an adjustable steering wheel mounted for operation at the forward end of said main frame, inverted U-shaped arches projecting laterally from the sides of the main frame, small wheels mounted on the outer legs of said arches, a motor on the forward portion of the main frame, and driving connections from said motor to the main traction wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,167,430. BOTTLE-CARRIER. CHARLES A. PRESTON, Wichita, Kans. Filed Nov. 1, 1915. Serial No. 59,063. (Cl. 215—1.)



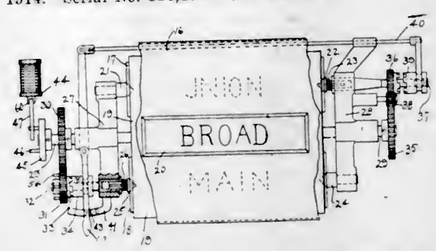
In a bottle carrier a bail having eyes on its free ends, curved loops having eyes on their free ends and slidably positioned on the said bail as specified.

1,167,431. UMBRELLA. HERMAN JULIUS RAABE, New York, N. Y. Filed May 14, 1914. Serial No. 838,436. (Cl. 135—27.)



As a new and improved article of manufacture, a safety attachment adapted to be applied to an umbrella for preventing the umbrella from turning inside out, comprising a reinforcing rod or strut, a device pivotally connected to one end of said rod, means for adjustably fastening said device to a stretcher of the umbrella, a clamp pivotally connected to the other end of said rod, and adapted to be placed over the umbrella rib, a member adapted to embrace the umbrella rib and slide along the rib into interlocking engagement with said clamp for slidably securing the clamp on a rib of the umbrella, and a stop, adapted to be removably and adjustably secured upon the rib of the umbrella for limiting the sliding movement of the clamp in an inward direction.

1,167,432. STREET-INDICATOR FOR CARS. PASQUALE RADOCCIO, Providence, R. I., assignor of one-third to Nicola di Domenico, Providence, R. I. Filed Mar. 20, 1914. Serial No. 826,103. (Cl. 40—59.)



1. A street indicator of the character described, comprising spaced apart standards, each having oppositely extended arms, the arms of each standard being parallel with the arms of the other standard, spaced apart rolls between said standards, a ribbon carried by said rolls, a rotatable center mounted in the end of an arm of one standard and engaging an end of one of said rolls, a second rotatable center mounted in the end of an arm of the other standard and engaging the opposite end of the other roll, jack shafts rotatably mounted in the ends of the remaining arms of said standards and having sockets in their ends, spring pressed centers mounted in said sockets and engaging the ends of the respective rolls opposite those engaged by the first mentioned center, a motor, and means for simultaneously connecting either jack shaft with the motor when the other jack shaft is disconnected therefrom.

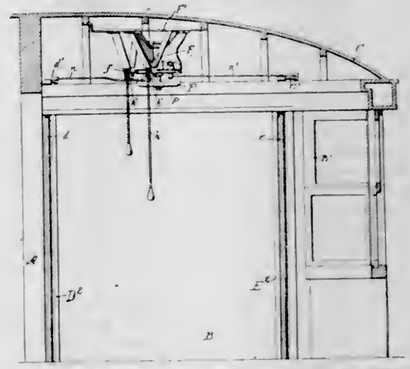
2. A street indicator of the character described, comprising spaced apart standards each having oppositely extended arms, the arms of each standard being parallel with the arms of the other standard, spaced apart rolls between said standards, a ribbon carried by said rolls, a rotatable center mounted in the end of an arm of one standard and engaging an end of one of said rolls, a second rotatable center mounted in the end of an arm of the other standard and engaging the opposite end of the other roll, jack shafts rotatably mounted in the ends of the remaining arms of said standards and having sockets in their ends, spring pressed centers mounted in said sockets and having flat noses engaging the ends of the respective rolls opposite those engaged by the first mentioned centers, the ends of said rolls being grooved to receive said flat noses, a motor, and means for simultaneously connecting either jack shaft with the motor when the other jack shaft is disconnected therefrom.

3. A street indicator of the character described, comprising spaced apart standards each having oppositely extended arms, the arms of each standard being parallel with the arms of the other standard, each standard being also provided with a laterally disposed bearing midway between the arms thereof, a main shaft rotatably supported by said bearings, spaced apart rolls between said standards, a ribbon carried by said rolls, a rotatable center mounted in the end of an arm of one standard and engaging an end of one of said rolls, a second rotatable center mounted in the end of an arm of the other standard and engaging the opposite end of the other roll, jack shafts rotatably mounted in the ends of the remaining arms of said standards and having sockets in their ends, spring pressed centers mounted in said sockets and engaging the ends of the respective rolls opposite those engaged by the first mentioned centers, and means for simultaneously connecting either jack shaft with said main shaft when the other shaft is disconnected therefrom.

4. A street indicator of the character described, comprising spaced apart standards each having oppositely extended arms, the arms of each standard being parallel with the arms of the other standard, spaced apart rolls between said standards, a ribbon carried by said rolls, a rotatable center mounted in the end of an arm of one standard and engaging an end of one of said rolls, a second rotatable center mounted in the end of an arm of the other standard and engaging the opposite end of the other roll, jack shafts rotatably mounted in the ends of the remaining arms of said standards and having sockets in their ends, spring pressed centers mounted in said sockets and engaging the ends of the respective rolls opposite those engaged by the first mentioned centers, a motor, a clutch lever pivotally supported by one of said standards, clutches for connecting said jack shafts with said motor, and means operated by said clutch lever for rendering each clutch inoperative as the other is made operative.

5. A street indicator of the character described, comprising spaced apart standards each having oppositely extended arms, the arms of each standard being parallel with the arms of the other standard, spaced apart rolls between said standards, a ribbon carried by said rolls, a rotatable center mounted in the end of an arm of one standard and engaging an end of one of said rolls, a second rotatable center mounted in the end of an arm of the other standard and engaging the opposite end of the other roll, jack shafts rotatably mounted in the ends of the remaining arms of said standards and having sockets in their ends, spring pressed centers mounted in said sockets and engaging the ends of the respective rolls opposite those engaged by the first mentioned centers, a motor, a clutch lever pivotally supported by one of said standards, a guide carried by the other standard, a clutch member attached to said lever for connecting one of said jack shafts to the motor, a clutch rod attached to said lever and passed through said guide, and a second clutch operated by said rod for connecting the other jack shaft with the motor.

1,167,433. DOOR-OPERATING MECHANISM. CHARLES A. REMELIUS, New York, N. Y., assignor to The Pay-As-You-Enter Car Corporation, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 15, 1911. Serial No. 649,591. (Cl. 268—7.)



The combination in means for operating passenger car doors, of an overhead bearing, a vertical shaft in the said bearing having a head resting on the bearing, and a sheave secured to the shaft under the bearing, pins on the sheave to which the rods are attached leading to the doors to be operated, a stop on the bearing, and lugs on the sheave contacting with the stop to limit the movement of the sheave, and means for rotating said sheave to operate the doors.

1,167,434. PROCESS OF PRODUCING CASEIN AND PRODUCT THEREOF. LUDWIG H. REUTER, Torreón, Mexico. Filed Dec. 12, 1914. Serial No. 876,982. (Cl. 87—17.)

1. A process of making casein, consisting in macerating buttermilk with an alkali and a formate, filtering, precipitating the filtrate by means of a plurality of acids,

washing the precipitate with water containing formic acid, drying and grinding the casein and mixing it with alkalis or lime.

2. A process of making casein, consisting in macerating buttermilk with an alkali and a formate, filtering, precipitating the filtrate by means of a mixture of sulfuric acid and formic acid, washing the precipitate with water containing formic acid, drying and grinding the casein and mixing it with alkalis or lime.

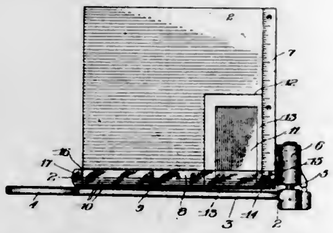
3. A process of making casein, which comprises precipitating the casein from buttermilk by a mixture of sulfuric acid and formic acid.

4. A process of manufacturing casein from milk products, which consists in separating the milk albumen and precipitating the casein from buttermilk by a mixture of an inorganic acid and an organic acid having bactericidal properties.

5. A process of making casein, which comprises precipitating the casein by sulfuric acid and a small percentage of formic acid, and washing the precipitated casein with water containing a small percentage of formic acid.

[Claims 6 to 18 not printed in the Gazette.]

1,167,435. TRIMMING-BOARD. JOHN A. ROBERTSON and GEORGE W. ADAMS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 21, 1915. Serial No. 51,823. (Cl. 164—44.)



1. In a trimming board, the combination with a table and a cutter, of a gage plate overlying the table adjacent to the cutter and a spring arranged to hold the gage plate under longitudinal tension.

2. In a trimming board, the combination with a table and a cutter, of a flexible gage plate overlying the table adjacent to the cutter and means for normally maintaining said gage plate under longitudinal tension.

3. In a trimming board, the combination with a table and a cutter, of a flexible gage plate having hygroscopic properties overlying the table adjacent to the cutter and a spring arranged to hold the gage plate under longitudinal tension.

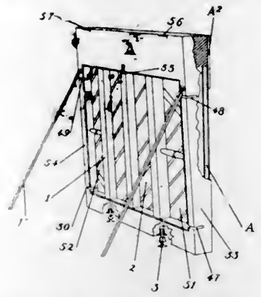
4. In a trimming board, the combination with a table and a cutter, of a transparent celluloid gage plate overlying the table adjacent to the cutter and a spring arranged to hold the gage plate under longitudinal tension.

5. In a trimming board, the combination with a table and a cutter, of a flexible gage plate overlying the table adjacent to the cutter, means for rigidly anchoring one end of the gage plate and a spring arm coöperating with the other end to hold it under longitudinal tension.

[Claims 6 and 7 not printed in the Gazette.]

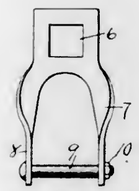
1,167,436. MEANS FOR DETACHING AND SUPPORTING THE BACK OF A PIANO. OTTO SCHWEMBERGER, Cincinnati, Ohio, assignor of one-third to Domenico Venosa, Jr., and one-third to Orrin Cady, Cincinnati, Ohio. Filed July 6, 1914. Serial No. 849,315. (Cl. 84—52.)

1. The combination with a piano case having ends, of a back detachably secured to said ends, jacks securely and permanently secured to the lower end portion of said back, said back in its normal position within the casing of said piano being adapted to hold and suspend said jacks, which, in their turn, are adapted when elongated normally to engage the floor on which said piano rests and support said back independently of said casing.



2. The combination of a piano casing having sides and ends, of a back detachably secured to said ends, jacks securely and permanently attached to the lower side of said back, brackets attached to the inside faces of the ends of said piano casing, upright strips attached also to the inside faces of the ends of said piano casing, slots extending horizontally through the back edges of the upright ends of the frame work of said back, metal plates having bolts with crank-nuts mounted thereon pivotally attached thereto attached to the inside faces of said upright ends of said piano casing above said brackets, metal plates having props swivelly and pivotally attached thereto attached to the rear face of the upper side of said back, a spring catch having two offsets inwardly, one offset being adapted to support horizontally one of said props and the other adapted to support similarly the other, when not in use, said catch being securely attached to the rear face of the upper side of said back and centrally positioned from end to end thereof, and a detachable lid adapted to cover the top of said piano.

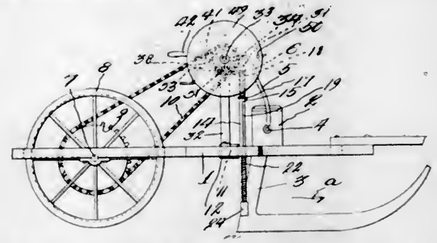
1,167,437. HARNESS-LOOP. ALBERT L. SESSIONS, Bristol, Conn. Filed July 6, 1909. Serial No. 505,961. (Cl. 54—87.)



A harness loop consisting of a plate formed from a thin piece of metal and having an opening at one end to receive a harness strap and with the metal removed at the opposite end to form side parts, one of said side parts being twisted at its outer end to present its flat surface substantially at right angles to the main part of the plate and with a substantial part of said side part located substantially in the plane of the flat surface of the plate, and an end bar secured in an opening in said side part and so arranged in conjunction with the said side parts as to form a loop.

1,167,438. CHECK-ROW CORN-PLANTER AND MARKER. JOHN C. SHOEMAKE, Hiram, Mo. Filed Oct. 7, 1915. Serial No. 54,524. (Cl. 111—24.)

1. In combination with a corn planter having a frame and supporting wheels and provided with dropper devices, a marker mechanism comprising guide standards mounted on said frame, tubular members mounted in said guide standards having heads at their upper ends and provided with yieldable means between the head and the upper end of the guide standards, markers having shanks telescoping into the tubular members and having slot and pin limiting connections with the tubular members, springs upon said shanks between the markers and the lower ends of the tubular members, and means having connections with the supporting wheels for intermittently actuating said tubular members.



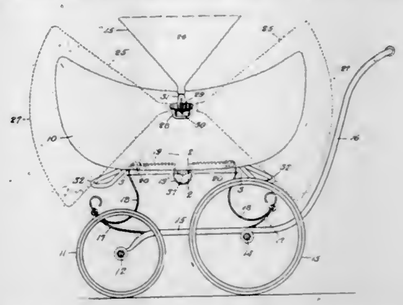
2. In combination with a corn planter having a frame and supporting wheels and provided with dropper devices, a marker mechanism comprising guide standards mounted on said frame, tubular members mounted in said guide standards having heads at their upper ends and provided with yieldable means between the head and the upper end of the guide standards, markers having shanks telescoping into the tubular members and having slot and pin limiting connections with the tubular members, springs upon said shanks between the markers and the lower ends of the tubular members, and means having connections with the supporting wheels for intermittently actuating said tubular members, said means having operating connections with the dropper devices of the seed receptacles of the planter, for actuating the dropper devices at the same time the markers are actuated.

3. In combination with a corn planter having a frame and supporting wheels and provided with dropper devices, a marker mechanism comprising guide standards mounted on said frame, tubular members mounted in said guide standards having heads at their upper ends and provided with yieldable means between the head and the upper end of the guide standards, markers having shanks telescoping into the tubular members and having slot and pin limiting connections with the tubular members, springs upon said shanks between the marks and the lower ends of the tubular members, and means having connections with the supporting wheels for intermittently actuating said members, said means having operating connections with the dropper devices of the seed receptacles of the planter, for actuating the dropper devices at the same time the markers are actuated, said means having a clutch mechanism to throw the means out of gear with said supporting wheels, said means including a revoluble shaft, and a device having connections with said shaft for manually rotating the same partially to set said means and the means of connection with the dropper devices.

1,167,439. CONVERTIBLE BABY-CARRIAGE. OTTO W. SIEBERT and ORA N. TURNER, Templeton, Mass.; said Turner assignor to Bay State Metal Wheel Company, Templeton, Mass., a Corporation of Maine. Filed June 16, 1915. Serial No. 34,371. (Cl. 21—12.)

1. The combination with a running frame, and a body-supporting structure carried thereby, of a body, means arranged to fasten said body to said structure, said means being adjustable to permit detaching said body from said structure, two pairs of body-supporting legs arranged under said body and pivotally connected thereto so as to fold laterally against the bottom of said body, the free ends of said legs being movable beyond the perpendicular planes of the sides of said body, to support the body, and means carried by said body and arranged to latch said legs in body-supporting position.

2. In combination, a running frame, two separated body-supporting elements carried thereby, a detachable body adapted to rest upon said elements, two pairs of body-supporting legs, two pairs of fixtures affixed to and projecting downwardly from the bottom of said body, and pivotal means connecting said legs and said fixtures below the bottom of said body, said fixtures being arranged to set between said body-supporting elements, said legs being arranged to fold upwardly into crossed relation under said body and to project beyond the longitudinal and transverse lines in which said fixtures are arranged.



3. In combination, a running frame, body-supporting means including a platform carried by said running frame, a detachable body adapted to rest upon said platform, two pairs of body-supporting legs, and pivotal connections connecting said legs to the bottom of said body, said legs being arranged to fold upwardly into crossed relation under said body, the free ends of said legs being offset from said pivotal connections beyond the ends of said platform whereby said legs are caused to clear said platform when the legs are folded.

4. A baby carriage body or bassinet having two pairs of legs, and pivotal means connecting said legs to said body, said pairs of legs being arranged to fold upwardly into crossed relation under said body, said pairs of legs being foldable in either order, the first pair so folded, according to either order, being foldable against the bottom of said body, and the latter pair so folded being foldable against the first pair.

5. A baby carriage body or bassinet having two pairs of legs, pivotal connections connecting said legs with said body, said legs being arranged to unfold to body-supporting position and to fold upwardly under said body, a bar connecting the legs of each pair to cause the legs of each pair to move in unison, and two spring-pressed devices mounted on the bottom of said body to coact respectively with said bars, said devices being arranged to hold said pairs of legs in body supporting position and in folded position as the case may be.

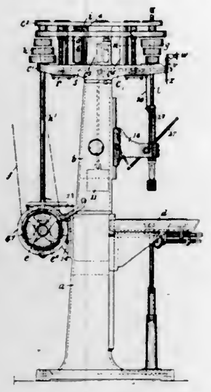
1,167,440. VARIABLE-SPEED GEARING. GRANT SIPP, Paterson, N. J. Filed Feb. 14, 1914. Serial No. 818,794. (Cl. 74—21.)

1. In a drill-press, the combination of the frame having a head, a pair of power-transmitting devices journaled in the head and including reverse cone-pulleys having substantially vertical axes, a depending rotary spindle driven by one of said devices, means to drive the other of said devices, a power-transmitting endless belt extending around the pulleys, means to shift the belt equal stages, and simultaneously, with respect to both pulleys, and yielding means to preserve the belt always in tension.

2. In a drill-press, the combination of the frame having a head, a pair of power-transmitting devices journaled in the head and including reverse cone-pulleys having substantially vertical axes, a rotary spindle coaxial and rotative with and depending from one of said devices, the other of said devices including a shaft depending from and coaxial and rotative with the pulley thereof, means, coupled with the depending part of said shaft, for rotating said other device, a power-transmitting endless belt extending around the pulleys, means to shift the belt equal

stages, and simultaneously, with respect to both pulleys, and yielding means to preserve the belt always in tension.

3. In a drill-press, the combination of a pillar, a head surmounting the pillar and including superposed spaced horizontally extending head members and an upright portion rigidly connecting each member between its ends with the other member, a pair of power-transmitting devices journaled on vertical axes in both of, and including reverse cone-pulleys each arranged between, said head members, one of said devices being arranged on one side and the other on the opposite side of said upright portion, a spindle depending from and driven by one of said devices, means for driving the other of said devices, a power-transmitting belt extending around the pulleys, and means to shift the belt lengthwise of said axes.



4. In a drill-press, the combination of a pillar, a head surmounting the pillar and including superposed spaced horizontally extending head members and an upright portion rigidly connecting each member between its ends with the other member, a pair of power-transmitting devices journaled on vertical axes in both of, and including reverse cone-pulleys each arranged between, said head members, one of said devices being arranged on one side and the other on the opposite side of said upright portion, a spindle driven by one of said devices, means for driving the other of said devices, a power-transmitting belt extending around the pulleys, yielding means to preserve the belt always in tension movably mounted on the lower head member and affording clearance between itself and the other head member for the passage of the belt in applying the latter to and removing it from the pulleys, and means to shift the belt lengthwise of the pulley axes.

1,167,441. DEVICE FOR CONNECTING CHAINS. JOHN G. SMITH and BENJAMIN F. SMITH, Wahoo, Nebr. Filed Mar. 4, 1915. Serial No. 12,177. (Cl. 24—232.)

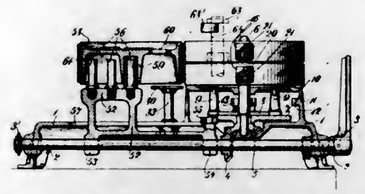


1. In a device of the class described, a head having a notch; and a hook disposed substantially at right angles to the head, the hook including a shank pivoted to one side of the head to move parallel thereto, the hook including a bill overhanging the other side of the head and adapted to coöperate with the notch, the bill including a beveled edge disposed substantially at right angles to the said other side of the head.

2. In a device of the class described, a head having a notch; and a hook disposed substantially at right angles to the head, the hook including a shank pivoted to one side of the head to move parallel thereto, the hook including a bill overhanging the other side of the head, the head being provided with a link-receiving peripheral groove, the bill of the hook constituting a link-retaining means coacting with the notch.

3. In a device of the class described, a head having a notch; and a hook pivoted to the head to move parallel thereto, the hook including a bill receiving the edge of the head and coöperating with the notch, the bill including a beveled edge disposed substantially at right angles to the plane of the head, and the head being provided with a stop shoulder engaging the beveled edge of the bill whereby the opposite edge of the bill will be disposed at an angle to one edge of the notch to define a link-receiving throat.

1,167,442. MACHINE FOR AFFIXING AND CANCELING STAMPS. RUDOLF STEIN, Frankfort-on-the-Main, Germany. Filed July 14, 1913. Serial No. 778,973. (Cl. 216—21.)



1. A machine for affixing and canceling postage stamps and the like drawn in strips from rolls to postal matter comprising in combination rotary drum stamp casings each mounted on a spindle, a cam disk mounted on said spindle and adapted to rotate with said casings, a postal matter supporting roller located in proximity to said casings, a spring adapted to press said roller against said casings and an abutting angle piece disposed in the path of the postal matter, said abutting angle piece being adjustable as and for the purpose set forth.

2. A machine for affixing and canceling postage stamps and the like drawn in strips from rolls to postal matter comprising in combination rotary drum stamp casings each mounted on a spindle, a cam disk mounted on said spindle and adapted to rotate with said casings, a postal matter supporting roller located in proximity to said casings, a spring adapted to press said roller against said casings, an abutting angle piece disposed in the path of the postal matter, said abutting angle piece being adjustable, means for moving said angle piece and a spring holding said abutting angle in position and adapted to coöperate with said means.

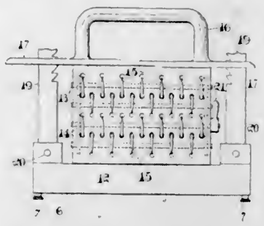
3. A machine for affixing and canceling postage stamps and the like drawn in strips from rolls to postal matter comprising in combination rotary drum casings each mounted on a spindle, a cam disk mounted on said spindle and adapted to rotate with said casings, a postal matter supporting roller located in proximity to said casings, a spring adapted to press said roller against said casings, an abutting angle piece disposed in the path of the postal matter, said abutting angle piece being adjustable, means for moving said angle piece, a spring holding said abutting angle in position and adapted to coöperate with said means and a table located in proximity to said roller, said table adjustable in height as and for the purpose set forth.

4. A machine for affixing and canceling postage stamps and the like drawn in strips from rolls to postal matter comprising in combination a rotary drum stamp casing mounted on a spindle, a postal matter supporting roller located in proximity to said casing and a spring adapted to press the said roller against said casing and means for supporting said roller at different distances from said casing.

5. A machine for affixing and canceling postage stamps and the like drawn in strips from rolls to postal matter comprising in combination a rotary drum stamp casing mounted on a spindle, a postal matter supporting roller located in proximity to said casing, a spring adapted to press the said roller against said casing, a carrier for said supporting roller and means for positioning said roller on said carrier at different distances from said casing.

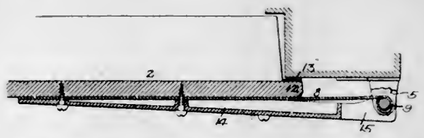
[Claims 6 to 10 not printed in the Gazette.]

1,167,443. MEAT-HOLDING MECHANISM FOR SLICING-MACHINES. HOWARD STEPHENSON and JOSEPH L. HOWARD, Brantford, Ontario, Canada, assignors to Brantford Computing Scale Company, Limited, Brantford, Canada. Filed Apr. 10, 1915. Serial No. 20,571. (Cl. 17—14.)



A meat holder for slicing machines comprising a head having a plurality of rows of holes formed in its face arranged in pairs; a plurality of shafts journaled in said head; intermeshing gears on each shaft whereby the shafts may be alternately oscillated in opposite directions; gripping prongs secured to said shafts having arc-shaped outer ends adapted to be protruded from the holes of one row of each pair and to enter the holes of the other row of each pair.

1,167,444. HINGE-GUARD. SAMUEL PRICE STEVENSON, Chester, Pa. Filed June 14, 1913. Serial No. 773,691. (Cl. 16—108.)



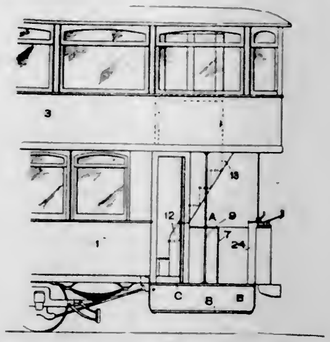
1. The combination of a frame; a door; a hinge having a bracket secured to the frame; a spring plate secured to the door; and a guard of rigid material, also secured to the door, and extending over the spring plate and having an arm projecting between the pintle and the frame and arranged to bear upon the pintle of the hinge when said hinge is subjected to excessive strains in closing the door.

2. The combination of a frame; a door; hinges by which the door is hung from the frame; each hinge having a rigid bracket secured to the frame and a spring plate secured to the door; a slotted guard extending over the spring plate of the hinge; and a pin connecting the two parts of the hinge and extending through the slot in the guard.

3. The combination of a frame; a door; hinges therefor; each hinge having a bracket provided with lugs and a spring plate having an eye, said plate being secured to the door; a guard extending over one of the spring plates and having slotted arms; and a pivot pin extending through the slots in the arms and through the lugs and eye of the hinge.

4. As a new article of manufacture, a guard for a hinge of the type having a bracket arranged to be secured to a door frame; a spring plate arranged to be secured to a door, said guard having a rigid body portion; and a slotted arm projecting from end of the body portion, said arm being so located with respect to the hinge that the pintle of the hinge will pass through the slot of the guard.

1,167,445. PASSENGER-VEHICLE. ARNOLD J. TANNER, London, England, assignor to Prepayment Car Sales Company, New York, N. Y., a Corporation of West Virginia. Filed Apr. 10, 1913. Serial No. 760,329. (Cl. 105—199.)

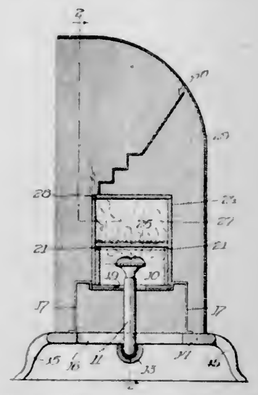


1. A double deck passenger vehicle having a body portion and a platform with an intervening angular shaped bulkhead extending outwardly on to the platform having an opening in each side thereof and a stairway located wholly or partly within the body of the vehicle.

2. A double deck passenger vehicle having a body portion and a platform with an intervening angular shaped bulkhead having a doorway at each side thereof and stairways situated within the car body at opposite sides thereof each stairway having the lower step thereof adjacent to a doorway in the bulkhead.

3. In a car comprising an upper deck and a lower deck, said lower deck having a body portion and a platform at one end of the body portion, said platform having entrance and exit passages, a stairway arranged within said body portion and extending from a point near said platform to said upper deck.

1,167,446. BURNER. WILLIAM K. TWOMEY, Chicago, Ill. Filed Dec. 12, 1914. Serial No. 876,997. (Cl. 158—99.)



1. In a device of the character described, the combination of three burners arranged in series to compel the gaseous mixture to pass successively through them, and means to supply the total air of the mixture to the flame of the initial burner, whereby the mixture may be burned at each burner, substantially as described.

2. In a device of the character described, the combination of three burners, the outer one inclosing the other two, and the intermediate one inclosing the inner one, whereby the gaseous mixture is compelled to pass suc-

cessively through the burners, at each of which combustion may take place, and means to supply the total air of the mixture to the flame of the initial burner, substantially as described.

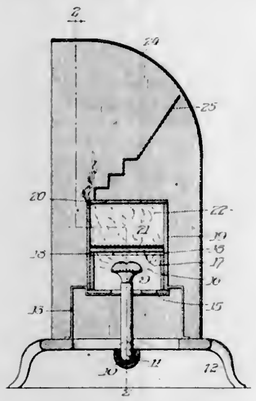
3. In a device of the character described, the combination of four burners arranged in series, compelling the gaseous mixture to pass successively through them, whereby the mixture may be burned at each burner, and means to supply the total air of the mixture to the flame of the initial burner, substantially as described.

4. In a device of the character described, the combination of a burner, and a box provided with a jet-opening, inclosing said burner and of such size that the flames of the burner impinge on the box-walls, the gaseous mixture being adapted to burn both at the burner and at the jet-opening, the total air of the gaseous mixture being supplied to the flame of said burner, substantially as described.

5. In a device of the character described, the combination of a burner, and an apertured box provided with a jet-opening, inclosing said burner, the gaseous mixture being adapted to burn both at the burner and at the jet-opening of the box, the outside air entering the box through the aperture of the latter, whereby the total air of the mixture is supplied to the flame of the burner, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,167,447. METHOD OF BURNING GAS. WILLIAM K. TWOMEY, Chicago, Ill. Filed Dec. 12, 1914. Serial No. 876,998. (Cl. 158—117.5.)



1. The method of burning gas in successive combustions, which consists in burning the gaseous mixture more than twice in succession, and commingling the ingredients of the mixture between the successive combustions without the addition of air, substantially as described.

2. The method of burning gas in successive combustions, and heating the ingredients of the mixture between the successive combustions and without the addition of air, substantially as described.

3. The method of burning gas in a plurality of successive combustions, and heating and commingling the ingredients of the mixture between the successive combustions without the addition of air, substantially as described.

4. The method of burning gas, consisting in burning a mixture of gas and air, projecting the products of combustion and the unburned portions of the mixture against a surface to secure their better intermixture, and then again burning the mixture without the addition of air, substantially as described.

5. The method of burning gas, consisting in burning a mixture of gas and air, subdividing the products of combustion and the unburned parts of the mixture into small portions, reassembling or collecting such products and parts into a main body without the addition of air, thereby effecting a better intermixture, and burning such body, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,167,448. AIR-TRAP NON-REFILLABLE BOTTLE. CHARLES VAN AMBURGH, Tacoma, Wash. Filed Mar. 16, 1915. Serial No. 14,714. (Cl. 215—65.)



A bottle having a partition formed in its neck as a part thereof, and having a trapped passage in said partition, said bottle having a portion along a side of the body and neck thereof made thick and having an air passage in said thickened portion opening at its inner end within the bottle near the bottom thereof and at its outer end within the neck between the trapped partition and the mouth and adapted to be closed at its outer end by the cork used for sealing the bottle.

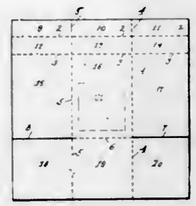
1,167,449. MUD-GUARD FOR MOTOR-VEHICLES. ANTOINE VAN DEN PLAS, Brussels-Cinquantenaire, Belgium. Filed Sept. 16, 1912, Serial No. 720,665. Renewed Oct. 5, 1915. Serial No. 54,258. (Cl. 21—23.)



A mudguard for vehicles comprising a body portion arranged to cover the upper portion of a wheel and having a portion of its inner side bulged toward the vehicle, said body portion and bulge being provided with a lateral flange extending from the lower inner edge of the body toward the vehicle to fill the space between the body portion and the body of the vehicle.

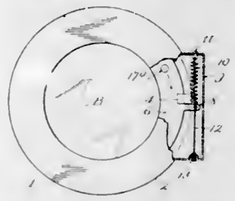
1,167,450. RAILWAY SIGNAL-TORPEDO. CHARLES P. VAN GUNDY, Catonsville, Md. Filed Jan. 3, 1914. Serial No. 810,109. (Cl. 246—20.)

1. A railway or like torpedo comprising a single rectangular piece of pliable sheet material scored to divide said sheet into a plurality of upper and a plurality of lower rectangular sections, one of said lower sections being separated from and independent of the upper sections and attached to a lower section, and a lower section attached to an upper section, said upper sections folded upon each other and the lower sections folded upon and around the upper sections, thereby forming a container with a plurality of superimposed layers of said material and a closed bottom, a suitable explosive material within the container, and suitable means attached to one end of the container for holding the torpedo on the railway track.



2. A railway or like torpedo comprising a single rectangular piece of pliable material scored to divide said sheet into more than two upper, more than two central and more than two lower rectangular sections, two of said lower sections being cut or separated from the central sections, and the other lower sections attached to the central sections, said central sections folded upon each other, and the lower sections folded upon and around the central sections, thereby forming a container having its sides formed of a series of superimposed layers of said pliable material and a closed bottom, a suitable explosive material within the container, and a pliable strip at one end of the container and surrounded by the upper sections of the sheet when folded for holding the torpedo on the railway track.

1,167,451. HEADLIGHT-DIMMER. ROBIN A. WALKER, Kansas City, Mo. Filed Dec. 26, 1914. Serial No. 879,087. (Cl. 240—45.2.)



1. In combination with a headlight, a shutter consisting of a series of mutually and centrally intersecting segmental leaves pivoted at each of their ends, and means to open and partly close said shutter to control the volume of light rays projected from the headlight.

2. In combination with a headlight, a stationary annulus, a movable annulus, and a series of mutually and centrally intersecting leaves operably-connected to said annuli at their respective ends to control the volume of light rays projected from the headlight.

3. In combination with a headlight, a case secured to said headlight, mutually and centrally intersecting segmental leaves operably-mounted within said case, and means to actuate said leaves to control the volume of light rays projected from the headlight, said leaves being connected at their ends to said case and means and arranged to have their center portions intersecting one another.

4. In combination with a headlight, a shutter consisting of a series of segmental leaves which centrally intersect each other and are supported at each of their ends to control the volume of light rays projected from the headlight, means to automatically move said leaves in one direction, and manual means to move said leaves in an opposite direction.

5. In combination with a headlight, a shutter consisting of a stationary annulus, a movable annulus, segmental leaves having pin and slot connections with said annuli at their respective ends, and flanges on said leaves to cover the heads of the pins.

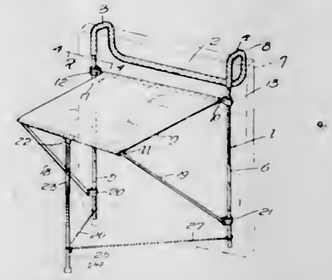
[Claim 6 not printed in the Gazette.]

1,167,452. GAME APPARATUS. BERTRAND G. WARD, Jersey City, N. J. Filed May 24, 1915. Serial No. 30,077. (Cl. 46—61.)



A game apparatus comprising a board having a plurality of seats formed therein, and game pieces for projection into said seats, each of said game pieces being in the form of a cylindrical block having a reduced extension at one end with a shoulder formed at the base of said extension, said extension being of a diameter slightly less than the seats of said board, and of a length corresponding to the depth of said seats.

1,167,453. EXTRA SEAT FOR AUTOMOBILES. OTIS S. WARREN, Los Angeles, Cal. Filed Jan. 20, 1915. Serial No. 3,221. (Cl. 155—26.)



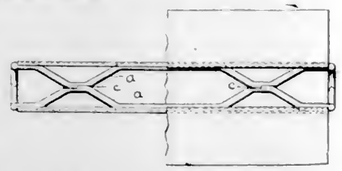
1. A seat, comprising return bends, a brace connecting the outer ends of the return bends, posts extending outwardly from the inner ends of the return bends, a flexible seat, a supporting bar adjustably mounted upon the uper ends of the posts, a second supporting bar, braces connecting the second supporting bar adjustably to the lower ends of the posts, and an adjustable leg carried by the second supporting bar.

2. A seat, comprising return bends, a brace connecting the outer ends of the return bends extending downwardly from the inner ends of the return bends, a cross bar adjustably mounted upon the upper ends of the posts, a second cross bar, braces connecting the second cross bar adjustably to the lower ends of the posts, a flexible seat connecting said cross bars, an adjustable leg carried by the second cross bar, and cords connecting the lower end of the adjustable leg to the lower end of the posts.

1,167,454. LOOSE-LEAF BINDER. RICHARD M. WATSON, Detroit, Mich. Filed Mar. 10, 1915. Serial No. 13,344. (Cl. 129—24.)

1. A method for making and interengaging the hook-carring members of loose-leaf binders, comprising the denting of portions of the hook-carrying members, the one hook-carrying member being dented at one point on its upper side and the other hook-carrying member being

dented oppositely on its under side, and conversely, the one hook-carrying member being dented at another point on its under side and the other hook-carrying member being dented oppositely on its upper side, and the said two hook-carrying members being interengaged by placing the projecting portions formed by the dents so as to engage in the opposite dents.



2. A method of manufacturing and interengaging wire hook-carrying members, comprising the forcing of V-like portions in the hook-carrying rods and simultaneously swaging in the V-portions, recesses, one on the upper side of one hook-carrying member and one on the under side of the other hook-carrying member, and conversely, one recess on the under side of the one hook-carrying member and one recess on the upper side of the other hook-carrying member and interengaging the projecting portions formed by the recesses with the opposite recesses.

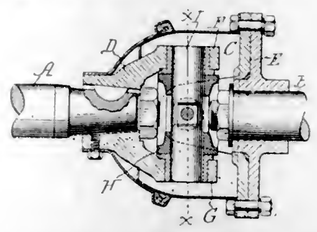
3. In a loose-leaf binder, the combination of a pair of hook-carrying members which have meeting portions, the meeting portions of one of which have a recess on the upper side and the meeting portions of the other of which have an opposite recess on the under side, and conversely, the meeting portions of one of which have another recess on the under side and the meeting portions of the other of which have an opposite recess on the upper side, the projecting portions formed by the said recesses engaging in the opposite recesses, substantially as described.

4. In a loose-leaf binder, the combination of a pair of hook-carrying rods having bent portions adapted to meet, the said bent portions of one hook-carrying rod having a recess in the upper side of the rod and the said bent portions on the other hook-carrying rod having an opposite recess in the under side of the rod, and conversely, the said bent portions of the one rod having a recess in the under side of the rod and the said bent portions of the other hook-carrying rod having an opposite recess in the upper side of the rod, the projecting portions formed by the said recesses engaging in the recesses of the opposite rod, substantially as described.

5. In a loose-leaf binder, the combination of a pair of hook-carrying members, one of which has a recess provided with an abrupt shoulder at one end and a second recess below the same but out of registry therewith, having an abrupt shoulder at the end opposite to the end of the first recess having the said abrupt shoulder, and the other hook-carrying member being provided wth a pair of recesses which are similarly formed but conversely arranged so that one recess with an abrupt shoulder is provided to engage with one projecting portion formed by the said two recesses in the first hook-carrying member, and a second recess is formed with an abrupt shoulder to engage with the second projection formed by said two recesses of the first mentioned hook-carrying member, the abrupt shoulders of recesses and projections engaging together in opposed pairs to prevent longitudinal movement of the hook-carrying members.

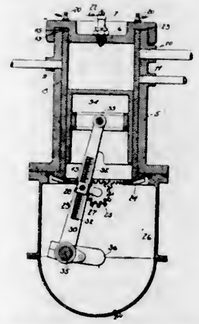
1,167,455. UNIVERSAL JOINT. FRANK E. WATTS, Detroit, Mich., assignor to Hupp Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 4, 1914. Serial No. 875,496. (Cl. 74—19.)

1. In a universal joint, the combination with two shafts having adjacent ends of complementary forked members respectively carried by said shafts, the forks of said members being provided with bearings, the bearings of one member being arranged at right angles to those of the other, of a block interposed between the said shafts, having opposite recessed faces to respectively accommodate the adjacent ends of the two shafts, the latter being extended through the forked members, and transverse pivot pins carried by said block and detachable therefrom, engaging said bearings of the forked members.



2. In a universal joint, the combination with complementary forked members, the forks of said members being circularly apertured to form bearings, a block having bores extending therethrough at right angles to one another, a pin journaled in the bearings of one of said members and extending through one of the bores of said block, alined studs having their outer ends journaled in the bearings of the other member and their inner ends arranged in the other of said bores, said pin having diametrically-opposed tapering recesses, and the inner ends of said studs being tapered to engage said recesses, a bolt passing through said studs and said pin for clamping the inner ends of said studs firmly within the recessed portions of said pin, having its head bearing against the outer end of one of the studs, and a nut carried by the bolt bearing upon the outer end of the other stud.

1,167,456. IGNITION SYSTEM FOR INTERNAL-COMBUSTION ENGINES. HUGO C. WELL, New York, N. Y., assignor of fifty one-hundredths to Frederick A. B. Meinhardt, New York, N. Y. Filed Aug. 27, 1914. Serial No. 858,806. (Cl. 123—166.)



1. In an ignition system for internal combustion engines, a cylinder having a head and a spark plug, a sleeve rotatably mounted within the cylinder, a conducting member on the sleeve adjacent the head, an open circuit for the spark plug having terminals within the cylinder in the path of the conducting member, and means for rotating the sleeve.

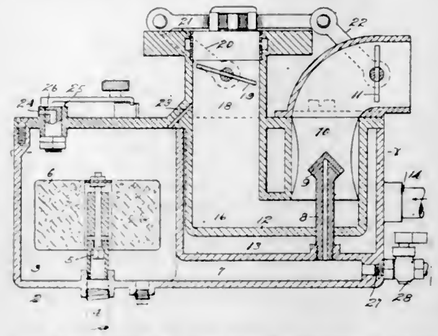
2. In an ignition system for internal combustion engines, a cylinder having a spark plug, an open circuit for the spark plug, having terminals spaced apart within the cylinder, a sleeve rotatably disposed within the cylinder, a conducting member on the sleeve for periodically contacting with the terminals, and closing the circuit with the rotation of the sleeve, and means for rotating the sleeve.

3. In an ignition system for internal combustion engines, a cylinder having a spark plug, an open circuit for the spark plug and having terminals spaced apart within the cylinder, a sleeve rotatably mounted within the cylinder and coaxially therewith, a conducting member on the

sleeve for periodically engaging the terminals to close the circuit, a piston within the cylinder, a piston rod articulated to the piston, and means operable by the piston rod for rotating the sleeve.

4. In an ignition system for internal combustion engines, a cylinder having a head extending within the cylinder, with a portion of the head spaced from the cylinder to form an annular guideway, a spark plug in the head, an open circuit for the spark plug and having terminals spaced apart within the guideway, a sleeve rotatably mounted in the cylinder and having an end extending into the guideway, and a conducting member on the said end of the sleeve for periodically engaging the terminals to close the circuit.

1,167,457. CARBURETER. ELMER E. WICKERSHAM, Sunnyvale, Cal., assignor to The Yuba Construction Company, San Francisco, Cal., a Corporation of California. Filed Jan. 26, 1914, Serial No. 814,355. Renewed June 1, 1915. Serial No. 31,619. (Cl. 48—148.)



1. In a carbureter, a fuel supply chamber, a channel extending laterally from said chamber, a plate located above said channel in spaced relation thereto to form a hot gas chamber, an air inlet tube having its lower end disposed over said plate in spaced relation thereto, a discharge flue to one side of the inlet tube; a nozzle communicating with said channel and extending through the hot gas chamber and said plate and up into the air inlet tube, a valve controlled port communicating with the atmosphere and with said fuel supply chamber, there being a port between said fuel supply chamber and the flue, and means to lead hot gas into and out of the hot gas chamber.

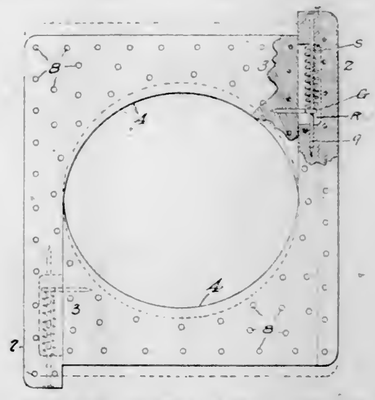
2. In a carbureter, a vertically disposed fuel supply chamber and a horizontal passage leading therefrom, a horizontal hot gas chamber overlying said passage and terminating at its inner end at the inner end of the supply chamber, an air inlet flue having a discharge which overlies the hot gas chamber, a vertical spray nozzle connected to the passage and extending up into the air flue, and an exit passage arranged to have its lower end disposed over said hot gas chamber.

3. In a carbureter, a main fuel supply chamber having a horizontal passage leading therefrom, a carbureting chamber having a floor overlying and spaced vertically from said passage to provide therewith a heating chamber, an air inlet flue leading to said carbureting chamber, and a gas exit pipe, a spray pipe extending from said passage into said flue and having passages arranged to direct the fuel jets downward toward said floor, said heating chamber extending to said main fuel supply chamber.

4. In a carbureter, a main fuel supply chamber having a horizontal discharge passage, a carbureting chamber, an air inlet flue leading thereinto, a plate forming the bottom wall of said carbureting chamber, said plate overlying and spaced vertically from said passage and forming therewith a heating chamber which extends to said main fuel chamber, and a spray pipe connected with said passage and extending through the heating chamber and into said flue, and discharging fuel downward toward said plate, whereby the sprayed fuel is brought into direct contact with the heated bottom wall of the carbureting chamber.

5. In a carbureter, a main fuel supply chamber, a horizontal discharge passage leading therefrom, a carbureting chamber located over said passage and having a plate constituting its floor which is spaced vertically from said passage and forms therewith a heating chamber that extends to said main fuel chamber, air inlet and gas discharge flues in communication with the carbureting chamber, and a fuel spray pipe connected with said passage and extending through the heating chamber and into the air inlet flue and arranged to discharge the fuel downward against said plate.

1,167,458. DUST-GUARD. LACEY Y. WILLIAMS, Toledo, Ohio. Filed Apr. 10, 1915. Serial No. 20,478. (Cl. 64—22.)



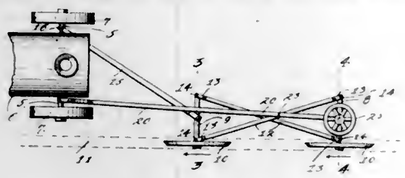
1. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm and a semicircular bearing edge, and the said sections oppositely disposed to each other to form a substantially circular opening; both of said sections consisting of sheets of wood with the grains of the wood angularly disposed and the sheets glued or cemented and riveted together; each pair of adjacent long and short arms of the guard being connected by a screw eye or staple and a pin, and a coiled spring located within a recess in one of said arms of each pair, said springs acting by expansive energy to force the said sections toward each other and against a journal when the guard is in use.

2. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm and a semicircular bearing edge, and the said sections oppositely disposed to each other to form a substantially circular opening, both of said sections consisting of sheets of wood with the grains of the wood angularly disposed and the sheets glued or cemented and riveted together; each pair of adjacent long and short arms being united by a screw eye or staple and a pin passed through the same, and a coiled spring located within a recess in one of said arms of each pair, surrounding the pin and bearing against the screw or staple and acting by expansive energy to force the sections together.

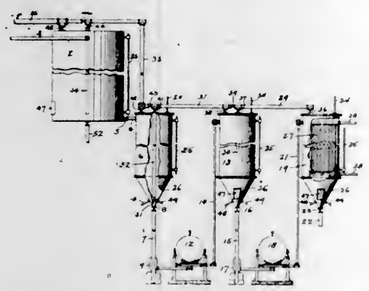
1,167,459. GUIDING MEANS FOR TRACTION-ENGINES. ROY A. WILLIAMS, Desiacs, N. D. Filed July 13, 1915. Serial No. 39,650. (Cl. 97—81.)

1. A guiding means comprising a pair of axles, a furrow wheel carried by the outer end of each axle, bars pivotally connecting the end portions of the axles, a link pivoted to the rear axle and adapted to be pivoted to one end of the axle of an engine and a second link pivoted to the front axle and adapted to be pivoted to the other end of the engine axle.

2. A guiding means comprising a pair of axles, a furrow wheel carried by the outer end of each axle, bars pivotally connecting the end portions of the axles, a standard provided centrally on one of the axles, controlling means carried by the standard, a link pivoted to one of the axles at its center and adapted to be pivoted to one end of an engine axle and a second link pivoted to the standard and adapted to be pivoted to the other end of the engine axle.



1,167,460. APPARATUS FOR SEPARATING AND RECOVERING METALLIFEROUS COMPOUNDS AND GASES FROM LIQUIDS. FRANK L. WILSON, Berkeley, Cal. Filed Mar. 18, 1914. Serial No. 825,685. (Cl. 75—86.)



1. In an apparatus of the character described, a series of closed stationary containers adapted to contain liquid, conduits for conveying the liquid from one container to the next, means for directly heating the liquid in the last container of the series and conductors arranged to convey the hot vapors formed in the last container through the other containers successively.

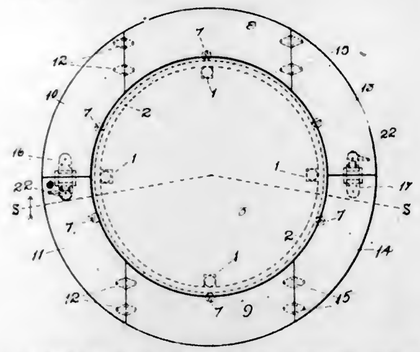
2. In an apparatus of the character described, a series of closed containers adapted to contain liquid, conductors connecting said containers in series arranged to convey the liquid from the bottom of one container to the top of the next, a filter arranged between each successive pair of containers, a steam coil arranged in the last container of the series and conductors arranged to convey the vapors formed therein through the other containers successively.

3. In an apparatus of the character described, a plurality of stationary stills, conduits connecting the successive stills arranged to convey liquid from one still to the other, means for heating the liquid in the last still to form vapor therein, conductors partially inclosed in said containers for conveying the vapor successively through the other stills and valves in said conductors whereby the vapor may be shunted past any of said other stills.

4. In an apparatus of the character described, a series of stills, conductors connecting the bottom of one still with the top of the successive still, a pump and a filter in each of said conductors, a steam coil in the last still arranged to cause the liquid therein to boil, a conductor extending from each still into and below the level of the liquid in the next preceding still and a charging tank for the stills through which the vapors pass.

5. In an apparatus of the character described, a series of closed containers adapted to contain liquid, conduits connecting the successive containers and arranged to convey liquid from one to the other, a filter arranged between each successive pair of containers, means for properly removing the precipitated metalliferous compounds mixed with a portion of liquid from the said containers, means for conveying the said mixture to the said filters, and means for conveying the filtered liquid from the filter to the succeeding still.

1,167,461. TABLE-TOP. HUGH E. WILSON, Grand Rapids, Mich. Filed June 6, 1910. Serial No. 565,293. (Cl. 45—9.)



1. In a table top of the character described having a central member and an extension member surrounding the central member and detachably connected thereto and formed in connected sections, a hinge connecting adjacent sections and having one of its leaves secured to its section on slide bearings, and a cam-lever adapted to move said leaf to draw said adjacent sections together, for the purpose described.

2. In a table top of the character described, a central member and an extension member surrounding the central member and detachably connected thereto and formed in six sections foldable on connecting hinges, a pair of such sections being hingedly-connected together, and another pair of sections oppositely disposed to the said first pair and being hingedly-connected together, the axes of such hinged connections being alined, the remaining two sections being hinged to one pair of said hingedly-connected sections on one side and to the other pair of hingedly-connected sections on the other side, the axes of the hinges connecting said remaining two sections with one said pair of hingedly-connected sections being alined and the axes of the hinges connecting said remaining two sections with the other said pair of hingedly-connected sections being alined.

1,167,462. FINISH-REMOVER AND PROCESS OF MAKING SAME. JOHN M. WILSON, Montclair, N. J., and CHARLES V. BACON, New York, N. Y., assignors to Wilson Remover Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 16, 1912. Serial No. 720,704. (Cl. 87—5.)

1. The process of making a finish remover which consists in incorporating a substantial amount, and in excess of 1% of the finish remover, of a water soluble gelatinizing mineral acid with a wax having substantially the same reaction therewith as that of palm wax, and suitable finish solvents including a wax solvent.

2. The process of making a finish remover which consists in subjecting a vegetable wax to the action of a substantial amount, and in excess of 1% of the finish remover, of a water soluble inorganic acid compound and in the presence of other volatile finish solvents including a solvent of said wax.

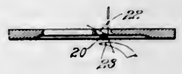
3. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water soluble mineral gelatinizing acid, a waxy body having substantially the same reaction therewith as that of palm wax, a volatile finish solvent including a solvent of said wax.

4. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water soluble inorganic acid and a waxy body having substantially the same reaction therewith as that of palm wax, and a plurality of organic finish solvents including a wax solvent.

5. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water soluble weak inorganic acid and a waxy body having substantially the same reaction therewith as that of palm wax, and a plurality of organic finish solvents including a wax solvent.

[Claims 6 to 9 not printed in the Gazette.]

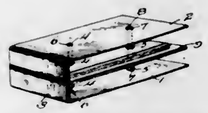
1,167,463. CHAIN-STITCH MACHINE. RUSSEL G. WOODWARD, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 9, 1911. Serial No. 601,656. (Cl. 112—5.)



1. A single chain stitch machine including in combination a needle, a non-thread carrying looper coöperating with said needle and moving in the direction of the feed when entering the needle loop, means for oscillating said looper, a throat plate having a needle hole therein for the needle, a bar having a rounded face secured to the under side of the throat plate and extending across said needle hole in the rear of the path of the needle whereby the needle loop on the looper and extending to the previous needle puncture is drawn by said looper across said supporting bar and properly positioned for the entrance of the needle into said loop.

2. A single chain stitch machine, including in combination a needle, a non-thread carrying looper coöperating with said needle and moving in the direction of feed when entering the needle loop, said looper being cut away in rear of its point from top to bottom thereof to form a space for the point of the needle and the body portion of said looper at the side thereof between the point and the shank of the looper and adjacent said cut away portion being enlarged and adapted to move through the needle loop, so that when said looper is retracted said needle loop will be temporarily retained by said enlarged portion and spread for the entrance of the needle into said loop, a throat plate having a needle hole therein, a bar having a rounded face secured on the under side of the throat plate and extending across said needle hole or slot in rear of the path of the needle, whereby the needle loop on the looper and extending to the previous needle puncture is drawn by said enlarged portion of the looper across said supporting bar which properly positions the strands of the loop for the entrance of the needle into said loop.

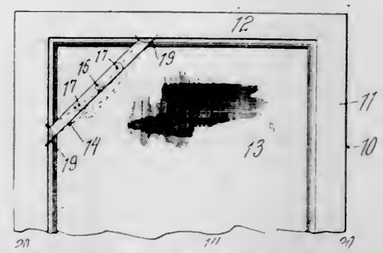
1,167,464. CONTAINER FOR SAFETY-RAZOR BLADES. HARRY BENTON YOUNG, Cincinnati, Ohio. Filed Dec. 14, 1914. Serial No. 877,140. (Cl. 206—16.)



1. A container for razor blades comprising a sheet of metal or like material bent to form a base and a cover portion, said base portion being bent back upon itself to form the base of a twin holder having a similar cover plate, said base portion having projecting posts to project through the perforations in perforated razor blades, and said cover portions having perforations registering with said posts, and means for locking said covers in closed positions, substantially as described.

2. A container for safety razor blades comprising a base plate, and a perforated cover plate movably secured at one end thereof, a plurality of posts carried on the inner face of the base plate, one of which is provided with a fixed locking head, adapted to project through the perforations in perforated razor blades, and said locking head being adapted to project through a perforation in the cover plate and secure same in closed position, substantially as described.

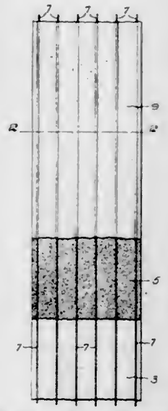
1,167,465. DOOR-BRACE. EDDIE GOODELL ABBEY, Monett, Mo., assignor of one-half to Ludwell B. Durnil, Monett, Mo. Filed June 19, 1915. Serial No. 35,026. (Cl. 20—38.)



1. A brace for a door or the like having vertical and horizontal members, comprising a plurality of pivotally connected arms, shoes having prongs to penetrate the vertical and horizontal members and pivotally connected with the attaching ends of the arms, and means to detachably lock the arms together when in the open position.

2. A brace for a door or the like having vertical and horizontal members, comprising a pair of pivotally connected arms, and shoes pivotally connected with the attaching ends of the arms and provided near their ends with prongs to penetrate the vertical and horizontal members.

1,167,466. BINDER-TAPE. EDWARD H. ANGIER, Framingham, Mass. Filed Jan. 27, 1914. Serial No. 814,832. (Cl. 154—50.)

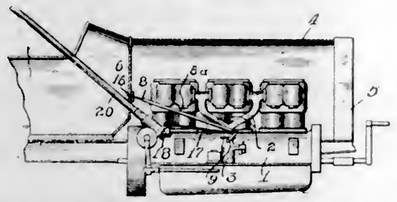


1. A composite material comprising outer sheets of paper, a gum coating on the exterior surface of one of said sheets, a waterproof, adhesive layer between and uniting said sheets and preventing the ingress of moisture through the material to said gum coating, and a series of tension threads having substantial spaces between them and embedded in said waterproof layer.

2. A composite strip comprising outer paper sheets, a gum coating on the exterior surface of one of said sheets, a waterproof, adhesive layer between and uniting said sheets, and a series of tension threads having substantial spaces between them embedded in said waterproof layer and extending longitudinally of said strip.

3. A composite material comprising outer paper sheets, a gum coating on the exterior surface of one of said sheets, a waterproof adhesive layer between and uniting said sheets, and a series of tension threads having substantial spaces between them embedded in said waterproof layer and producing wear-resisting ribs projecting from the outer surfaces of the material.

1,167,467. DASH-CONTROLLED CARBURETER-VALVE LOCK. GEORGE ARCHER, Chicago, Ill. Filed Jan. 17, 1914. Serial No. 812,722. (Cl. 137—7.)



1. The combination with the throttle valve of a carbureter and means for actuating the same at the steering post of an automobile, of an auxiliary actuating rod connected to the carbureter and slidably mounted in the dash of the motor car, and locking means adapted to lock said actuating rod to prevent opening of the carbureter throttle valve.

2. In a device of the class described the combination with a lock adapted to lock the throttle valve of a carbureter from opening, of actuating means connected to the throttle valve of the carbureter capable of engagement by said lock to permit locking of the carbureter from the dash of a motor car, and mechanism for normally operating the throttle valve of the carbureter when said means is released from said lock.

3. In a device of the class described the combination with a lock, a carbureter, a throttle valve in said carbureter, an auxiliary actuating rod connected to said throttle valve, an extended slotted locking lever in said lock adapted to engage around said actuating rod, a stop thereon to prevent movement of said actuating rod when engaged by said locking lever, and a key for extending and retracting said locking lever from the lock.

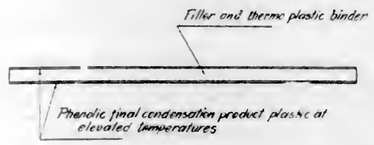
4. In a device of the class described the combination with the throttle valve of a carbureter, a lock, an auxiliary actuating rod connected to the throttle valve and adapted to be operatively engaged by said lock to prevent movement thereof to lock the carbureter in closed position, and actuating means connected to operate said throttle valve when the auxiliary rod is not engage by said lock.

5. In a device of the class described the combination with the main actuating means of the throttle valve of a carbureter, of auxiliary mechanism for actuating said throttle valve permitting said throttle valve to be operated by either one of said actuating members, and a lock connected to lock said auxiliary actuating means whereby the throttle valve of the carbureter is locked from movement by either one of said actuating members.

[Claim 6 not printed in the Gazette.]

1,167,468. MOLDED ARTICLE. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Original application filed Jan. 30, 1912, Serial No. 674,289. Patented July 13, 1915, No. 1,146,391. Divided and this application filed Sept. 10, 1914. Serial No. 861,037. (Cl. 181—17.)

1. A sound record or other object comprising a thermo plastic base having a surface veneer welded thereto, said surface veneer containing a final hardened phenolic condensation product and being sufficiently plastic at elevated temepratures to be pressed or molded, substantially as described.



2. A sound record or other object comprising a base of thermo plastic material containing a fibrous filling material distributed through the same and having a surface veneer welded thereto, said surface veneer containing a final hardened phenolic condensation produce and being sufficiently plastic at elevated temperatures to be pressed or molded, substantially as described.

3. A sound record or other object comprising a base containing a fusible phenolic resin and having a suface veneer of final hardened phenolic condensation product secured thereto, substantially as described.

4. A sound record or other article comprising a base of fusible resin containing a finely divided filling material distributed through the same, and a surface veneer welded to said base, said veneer containing a final hardened phenolic condensation product and being sufficiently plastic at elevated temperatures to be pressed or molded, substantially as described.

5. A sound record or other article comprising a base of fusible phenolic resin containing a fibrous filling material distributed through the same, and a surface veneer welded to said base, said veneer having a smooth surface free from air bubbles and extraneous particles and being formed of a hard infusible product, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,167,469. FINISH-REMOVER AND PROCESS OF MAKING SAME. CHARLES V. BACON, New York, N. Y., and JOHN M. WILSON, Montclair, N. J., assignors to Wilson Remover Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 5, 1912. Serial No. 718,620. (Cl. 87—5.)

1. The process of making a finish remover which consists in incorporating a substantial amount, and in excess of 1% of the finish remover, of a water-soluble gelatinizing acid with a wax having substantially the same reaction therewith as that of palm wax, and suitable finish solvents including a wax solvent.

2. The process of making a finish remover, which consists in subjecting a vegetable wax to the action of a substantial amount, and in excess of 1% of the finish remover, of a water-soluble organic compound containing the radical (COOH) and in the presence of other volatile finish solvents including a solvent of said wax.

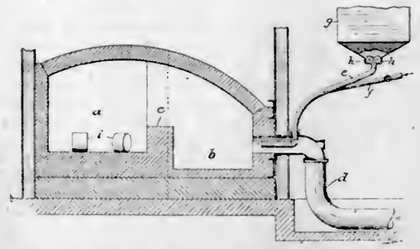
3. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water-soluble gelatinizing agent, a waxy body having substantially the same reaction therewith as that of palm wax, a volatile finish, solvent including a solvent of said wax.

4. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water-soluble organic acid containing the radical (COOH) and a waxy body having substantially the same reaction therewith as that of palm wax, and a plurality of organic finish solvents including a wax solvent.

5. A finish remover consisting of a substantial amount, and in excess of 1% of the finish remover, of a water-soluble fatty organic acid and a waxy body having substantially the same reaction therewith as that of palm wax, and a plurality of organic finish solvents including a wax solvent.

[Claims 6 to 9 not printed in the Gazette.]

1,167,470. PROCESS OF MODIFYING THE ASH RESULTING FROM THE COMBUSTION OF POWDERED FUEL. WILLIAM P. BARBA, Philadelphia, Pa., assignor to The Midvale Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1914. Serial No. 857,108. (Cl. 44—4.)



1. The process of modifying the ash produced in burning powdered coal in a furnace containing metal articles to be heat treated, which consists in adding to the powdered coal an inorganic acid substance in quantity substantially in excess of that required to bind the excess of alkalis contained in the coal and sufficient to afford a substantial amount of free acid to combine with the scale and form a protective coating against further oxidation.

2. The process of modifying the ash produced in burning powder coal in a furnace which consists in adding to the powdered coal an inorganic acid substance in quantity substantially in excess of that required to find the excess of alkalis contained in the coal and sufficient to substantially raise the melting point of the ash.

3. The process of modifying the ash produced in burning powdered coal in a furnace which consists in adding to the powdered coal an inorganic acid substance in an amount in excess of twonty per cent. of the ash-forming constituents of the coal.

1,167,471. PROCESS OF MODIFYING THE ASH RESULTING FROM THE COMBUSTION OF POWDERED FUEL. WILLIAM P. BARBA, Philadelphia, Pa., assignor to The Midvale Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1914. Serial No. 857,109. (Cl. 44—4.)

1. The process of modifying the ash produced in burning powdered coal in a furnace which consists in adding to the powdered coal powdered refractory clay.

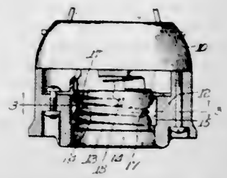
2. The process of modifying the ash produced in burning powdered coal in a furnace which consists in adding to the powdered coal powdered refractory clay in excess of ten per cent. of the ash forming constituents of the coal.

3. The process of modifying the ash produced in burning powdered coal in a furnace containing metal articles to be heated, which consists in adding to the powdered coal an inorganic neutral substance in quantity sufficient to raise the melting point of the ash to the extent required to form a modified ash which will act as a protective coating for said articles and thereby minimize the production of scale.

1,167,472. PROCESS OF PROTECTING METAL ARTICLES HEATED BY THE COMBUSTION OF POWDERED COAL. WILLIAM P. BARBA, Philadelphia, Pa., assignor to The Midvale Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1914. Serial No. 857,110. (Cl. 44—4.)

The process of protecting metal articles in a furnace in which the coal is burned in a powdered form, which consists in burning in a furnace containing such metal articles powdered coal mixed with an inorganic basic substance in a proportion to the weight of the ash forming constituents of the coal, sufficient to raise the melting point of the ash to the extent required to cause it to adhere to the billets and form a protective coating therefor to minimize scale and insufficient to elevate such melting point to a degree which would destroy its adherent property, substantially as described.

1,167,473. LAMP-CLAMPING SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1913. Serial No. 760,478. (Cl. 173—358.)



1. The combination with an electric lamp socket including an insulating body, of a resilient lamp-clamping member carried by said socket and adapted to be distorted by the lamp base when a lamp is inserted in the socket, said insulating body comprising means for laterally supporting said clamping member.

2. The combination with an electric lamp socket including an insulating body having a shoulder thereon, of a lamp-clamping member with its side engaging said shoulder so as to be laterally supported thereby.

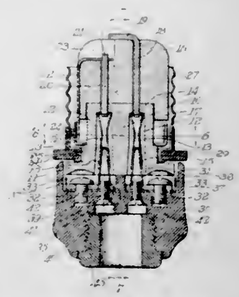
3. The combination with an electric lamp socket including an insulating body formed with a pair of shoulders and a depression between said shoulders, of a lamp-clamping member with its side engaging said shoulders so as to be laterally supported at its ends thereby.

4. The combination with an electric lamp socket including lamp contacts and means inclosing said contacts, of a resilient lamp-clamping member carried by said socket and adapted to be distorted by the lamp base when a lamp is inserted in the socket, said inclosing means comprising means for laterally supporting said clamping member.

5. The combination with an electric lamp socket including lamp contacts and means inclosing said contacts, said inclosing means being formed with a pair of shoulders and a depression between said shoulders, of a lamp-clamping member with its side engaging said shoulders so as to be laterally supported at its ends thereby.

[Claims 6 to 15 not printed in the Gazette.]

1,167,474. ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1913. Serial No. 762,429. (Cl. 173—343.)



1. In combination, an insulating base, a metallic strip lying on said base and having a portion thereof bent upwardly and back upon itself to form a V-shaped contact, a retaining plate having a tongue extending through the base of said V-shaped contact, the contact being provided with portions for engaging with said tongue and said la

sulating base between the two, and means located in the same plane as said V-shaped contact for securing said retaining plate in position.

2. In a separable attachment plug, an insulating member, a substantially U-shaped contact having the portion between its arms secured against said member and its arms free from and spaced away from said member, a second insulating member, a substantially V-shaped contact secured to said second insulating member with the divergent ends of its arms against said second member, the convergent ends of said V-shaped contact extending between and engaging the arms of the U-shaped contact.

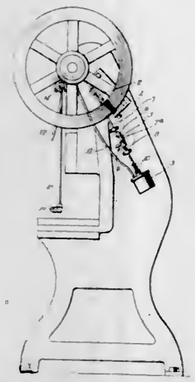
3. In a separable attachment plug, an insulating member, a substantially U-shaped contact having the portion between its arms secured against said member and its arms free from and spaced away from said member, a second insulating member, a substantially V-shaped contact secured to said second insulating member with the divergent ends of its arms against said second member, the convergent ends of said V-shaped contact extending between and engaging the arms of the U-shaped contact, one of said engaging arms being provided with an aperture, and another of said arms having a projection extending into said aperture.

4. In combination, an insulating base, a substantially V-shaped contact having an aperture in each arm thereof, said apertures being distant from the apex of the V, a retaining member extending through both of said apertures, and means for securing said member to said base.

5. In combination, an insulating base, a substantially V-shaped contact having an aperture in each arm thereof, a retaining member of conducting material extending through both of said apertures, a binding terminal engaging said retaining member, and means for securing said member to said base.

[Claims 6 to 9 not printed in the Gazette.]

1,167,475. SAFETY DEVICE FOR PRESSES. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1913. Serial No. 763,578. (Cl. 164—107.)



1. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of a fluid pressure motor for operating said movable member and means movable with the hands of the operator, said means being so arranged that both hands of the operator must be out of the danger zone of the mechanism of the press before said means will cause the motor to operate.

2. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of a fluid pressure motor for operating said movable member, and a pair of movable members movable with the hands of the operator for controlling the operation of said motor, said movable members being so arranged that both hands of the operator must be out of the zone of danger of the mechanism of the press before they will cause the motor to operate.

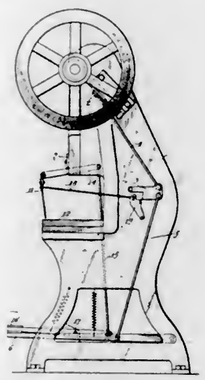
3. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of a fluid pressure motor, means for rendering said motor inoperative with respect to said movable member after it has moved the member to trip the press, controlling means for said motor movable with the hands of the operator, said controlling means being so arranged that when either of the hands is moved toward the mechanism of the press, the motor will be restored to operative position, but cannot be caused to operate until both hands of the operator are moved out of the danger zone of the mechanism of the press.

4. In a device of the character described, the combination with a movable member for controlling the clutch of a press, of a fluid pressure motor for operating said movable member, a pair of valves for controlling the admission of fluid under pressure to said motor, and a pair of members movable with the hands of the operator, said valves being so arranged that they will not admit fluid under pressure to the motor until both of the hands of the operator are out of the danger zone of the mechanism of the press.

5. In a device of the character described, the combination with a movable member for tripping the clutch of a press, of a fluid pressure motor for operating said movable member, a pair of valves arranged in series for controlling the admission of fluid under pressure to said motor, and a pair of movable members for operating said valves movable with the hands of the operator, said valves being so arranged that both hands of the operator must be out of the danger zone of the mechanism of the press before fluid under pressure will be admitted to said motor.

[Claims 6 to 14 not printed in the Gazette.]

1,167,476. SAFETY DEVICE FOR PRESSES. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1913. Serial No. 777,372. (Cl. 164—107.)



1. In a safety device for presses, the combination with a movable member for tripping the press, of a barrier pivoted in front of the operating mechanism of the press and arranged when in closed position to prevent the operator from inserting his hands in the operating mechanism of the press and to be swung on its pivot to a substantially horizontal position to permit the insertion of the work in the mechanism of the press, and means connected with said barrier arranged to be moved in a locking position to prevent the tripping of the press when the barrier is swung to open position.

2. In a safety device for presses, the combination with a movable member for tripping the press, of a barrier pivoted above the table of the press and arranged to hang in a substantially vertical position in front of the operating mechanism of the press and to be swung on its pivot toward a horizontal position to permit insertion of the work in the operating mechanism of the press, and means connected with said barrier arranged when the barrier is swung in horizontal position to lock the movable tripping member against movement.

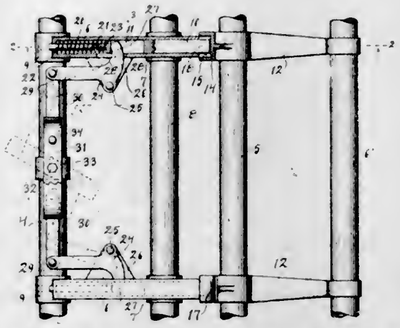
3. In a safety device for presses, the combination with a movable tripping member for the press, of operating means for said tripping member, a barrier pivoted in front of the operating mechanism of the press and arranged to be swung to a substantially horizontal position to permit the insertion of the work in the press, and a stop connected with said barrier and arranged to be moved into position to prevent said operating means from moving said movable member when the barrier is swung to substantially horizontal position.

4. In a safety device for presses, the combination with a movable member for tripping the press, of a barrier pivoted in front of the operating mechanism of the press and arranged when in closed position to prevent the insertion of the hands in the mechanism of the press, said barrier being arranged to be swung to a substantially horizontal position to permit the insertion of the work in the mechanism of the press, and means connected with said barrier arranged when the barrier is swung to horizontal position to be thrown into locking position to prevent the tripping of the press, said means remaining in locking position until the barrier is returned to full closed position.

5. In a safety device for presses, the combination with a spring-returned tripping mechanism, of a pivoted arm, a rod connecting said tripping mechanism with said arm, means for depressing said arm, a stop, a barrier pivoted above said press and arranged to be swung toward horizontal position to permit the work to be inserted in the operating mechanism of said press, and means connecting said barrier with said stop for moving said stop into the path of said pivoted arm when the barrier is swung to permit the insertion of the work in the press.

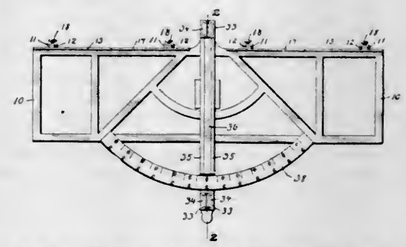
[Claims 6 to 13 not printed in the Gazette.]

1,167,477. GATE-LATCH. FRANK H. BOGDA, Burnett, Wis. Filed Mar. 20, 1915. Serial No. 15,758. (Cl. 70—28.)



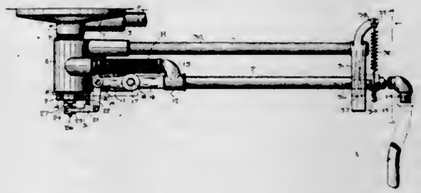
A gate latch comprising horizontally disposed members mounted on the gate and having longitudinally extending bores and slots therein, a pair of locking bolts slidably mounted within said bores and having slots therein, springs disposed within the bores to normally act upon said bolts, locking pocket members on the adjacent fence standard to receive said bolts, and means for unlocking said gate comprising bell-crank levers pivotally connected to said members and having one of their ends slidably mounted in the slots in said members and in the locking bolts, a handle rotatably mounted upon said gate, and links connecting said levers with said handle whereby the handle may be turned in either direction to unlock the gate.

1,167,478. MITER-BOX. WILLIAM P. CALLAHAN, Oakland, Cal. Filed Sept. 23, 1914. Serial No. 863,146. (Cl. 143—88.)



In a mitering device, a base, a bar pivoted to said base, upstanding guides carried by said bar, parallel arcuate members fixed to said base and having their proximal sides inclined downwardly toward each other, the lower edges of said sides being provided with spaced notches, a locking member provided with a tapered head straddling a plurality of said notches and movable between said arcuate members, said head having downwardly extending legs straddling said bar, lugs on said head for selective engagement with said notches, a lever pivoted to said bar and engaging beneath said legs, and a spring normally holding said lever downward.

1,167,479. OVERHEAD WASHER FOR GARAGES AND THE LIKE. GEORGE A. COLLISON, Burlington, Vt. Filed Aug. 13, 1914. Serial No. 856,702. (Cl. 137—14.)



1. In combination, a hollow post, a valve in the post, means for operating said valve extending outside of the post, a sleeve having a bracket thereon and having a water connection with the post, a water carrying arm pivoted to said bracket, a hose connection between said arm and sleeve, and means for actuating said valve operating means under the movements of said arm.

2. In combination, a hollow post, a valve in the post, means for operating said valve extending outside of the post, a sleeve having a bracket thereon and having a water connection with the post, a water carrying arm pivoted to said bracket, a hose connection between said arm and sleeve, means for actuating said valve operating means under the movements of said arm, and means for holding said arm normally elevated.

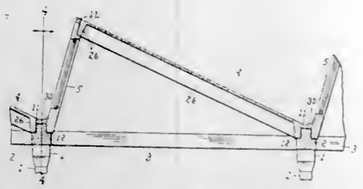
3. In combination, a hollow post, a valve in the post, means for operating said valve extending outside of the post, a sleeve having a bracket thereon and having a water connection with the post, a water carrying arm pivoted to said bracket, a hose connection between said arm and sleeve, means for actuating said valve operating means under the movements of said arm, means for holding said arm normally elevated, and means for retaining said arm in either elevated or lowered position.

4. In combination, a hollow post, a valve in the post, a stem for operating said valve extending out through the bottom of the post, a sleeve having a water connection with the post, means guided by the post for lifting said stem, a water carrying arm pivoted to said sleeve and adapted to operate said means, a hose connection between said sleeve and arm, and a supporting arm affording a guide for the water carrying arm.

5. In combination, a hollow post, a valve in the post, a stem for operating said valve extending out through the

bottom of the post, a sleeve having a water connection with the post, means guided by the post for lifting said stem, a water carrying arm pivoted to said sleeve and adapted to operate said means, a hose connection between said sleeve and arm, a supporting arm affording a guide for the water carrying arm, said supporting arm having a loop, and a connection for elevating the water carrying arm.

1,167,480. CONCRETE ROOF CONSTRUCTION. JOHN E. CONZELMAN, Webster Groves, Mo., assignor to Unit Construction Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 2, 1912. Serial No. 694,780. (Cl. 108—1.)



1. A concrete roof comprising parallel rows of groups of individually molded roof slabs, each group of slabs being mutually self-supporting, the slabs in said groups being arranged with their upper edges meeting at a peak and with their lower edges resting on horizontal supporting members, each supporting member providing a common support for the lower edges of slabs in groups of adjacent rows, a concrete filling over said supporting members forming a bond between the slabs supported thereby, and a gutter formed in said filling.

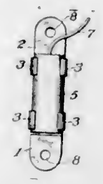
2. A roof comprising individually molded concrete units assembled in alternate rows of inclined roof slabs and supporting panel units, the upper edges of said panel units being notched lengthwise to form continuous bearing ledges, and the upper ends of said roof slabs being supported on said ledges, the thickness of the roof slabs being greater than the depth of said notches, whereby the upper corners of said roof slabs project above the upper edges of said panel units, and a filling of concrete covering the upper edges of said panel units flush with the top surface of said roof slabs and overhanging the outside face of said panel units to form a drip edge.

3. A roof comprising individually molded concrete units assembled in alternate rows of inclined roof slabs and supporting panel units, the upper edges of said panel units being notched lengthwise to form bearing ledges, and the upper ends of said roof slabs being supported on said ledges, the thickness of the roof slabs being greater than the depth of said notches, whereby the upper corners of said roof slabs project above the upper edges of said panel units, reinforcing rods molded in said panel units and roof slabs and having loops extending into the space over the upper edges of said panel units, horizontal reinforcing rods arranged through said loops and pinning the upper ends of said panel units and roof slabs together, and a filling of concrete covering the upper edges of said panel units flush with the top surface of said roof slabs and embedding said reinforcing rods.

4. In a reinforced concrete saw tooth roof, approximately upright panel girder units arranged end to end in parallel rows, said panel girder units having shouldered bearing portions along one side of their top edges, supporting members along the opposite side of the bottom edges of said units, inclined roof slabs arranged with their lower ends resting upon said supporting members and with their upper ends resting in the bearing portions of said units, and a concrete filling between the lower meeting edges of said roof slabs and said panel units forming a watertight joint, said filling having the upper surface sloped to form a gutter.

5. A concrete roof structure consisting of rows of hollow posts and girders supported thereon in parallel rows, tie-beams connecting the parallel rows of girders, inclined individually molded window panels with their lower edges resting on said girders and slanting individually molded roof slabs with their lower ends resting on said girders and with their upper ends resting on said window panels, and a filling of concrete between the lower meeting edges of said panels and slabs, said concrete filling being sloped toward the posts and provided with drain holes at said posts discharging into the latter.

1,167,481. FUSIBLE-LINK HEATER. EDWIN TURNER COPELAND, New York, N. Y. Filed July 29, 1915. Serial No. 42,509. (Cl. 236—16.)



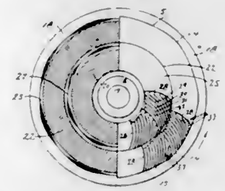
1. The combination of a fusible link consisting of two separable members soldered together and a removable electrical heating unit attached to one of the members and independent of the other member.

2. In a fusible link device, the combination of a fusible link consisting of two separable members soldered together, an independent electrical heating unit and means for attaching the electrical heating unit to one of the members of the fusible link.

3. The combination of a fusible link consisting of two separable members soldered together, one of the members being provided with binding clasps, and a heating unit held by the binding clasps.

4. The combination of a fusible link consisting of two separable members soldered together, one of the members being provided with binding clasps, a heating unit held by the binding clasps and an amalgam heat conductor between the heating unit and the member provided with the binding clasps.

1,167,482. GRINDING-HEAD. JAMES ARCHIBALD CRAIG, Toronto, Ontario, Canada, assignor of two-thirds to William J. Cant, Lancaster, N. Y. Filed Dec. 12, 1914. Serial No. 876,819. (Cl. 83—3.)



1. A grinding head comprising an annular disk provided with integral, beveled, peripheral interlocking means, said annular disk being provided with a comminuting face.

2. A grinding head comprising an annular disk provided with integral, beveled, peripheral interlocking means, said annular disk being provided with comminuting faces.

3. A grinding head comprising a plurality of annular disks each provided with integral, beveled, peripheral interlocking means, and each of said disks being provided with comminuting faces.

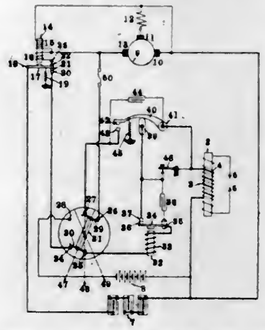
4. A grinding disk provided with cutting teeth formed on its comminuting surface, said teeth being arranged in a plurality of series, each series comprising a main breaking tooth and a succession of substantially full, intermediate, breaking teeth between each of said main breaking teeth, and a series of short teeth between the main breaking tooth and the next rearward, full tooth.

5. A grinding disk provided with cutting teeth formed on its comminuting surface, said teeth being arranged in

a plurality of series, each series comprising a main curved, breaking tooth and a succession of substantially full, intermediate, breaking teeth between each of said main breaking teeth and a series of short teeth between the main breaking tooth and the next rearward, full tooth.

[Claims 6 to 10 not printed in the Gazette.]

1,167,483. IGNITION SYSTEM. BURNS DICK, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 13, 1914. Serial No. 831,445. (Cl. 123—148.)



1. In an ignition system for internal combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, means comprising coöperating contacts for making and breaking the circuit through the exciting coil, other means for making and breaking the circuit through the exciting coil comprising a vibratile element, and means connecting said last named circuit interrupting means in circuit with the exciting coil approximately coincident with the separation of the contacts of the first mentioned circuit interrupting means.

2. In an ignition system for internal combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, a mechanically operated circuit breaker for the exciting coil, a vibratile circuit breaker, and means for connecting the vibratile circuit breaker in circuit with the exciting coil at the time the contacts of the mechanical circuit breaker are separated.

3. In an ignition system for internal combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, a battery, a dynamo electric machine, two circuit breakers for the exciting coil, and means adapted to render one circuit breaker inoperative and to connect the dynamo in circuit with the battery.

4. In an ignition system for internal combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, a battery, a dynamo electric machine, two circuit breakers, a switch adapted to disconnect one circuit breaker from the exciting coil and to connect the dynamo in circuit with the battery, and means governed by the voltage of the dynamo for operating said switch.

5. In an ignition system for internal combustion engines, a secondary ignition circuit, an exciting coil for energizing said secondary circuit, a circuit breaker for the exciting coil comprising coöperating contacts, a vibratile circuit breaker, and a cam actuated by the engine and adapted to separate the contacts of the first mentioned circuit breaker and connect the vibratile circuit breaker in circuit with the exciting coil.

[Claims 6 to 9 not printed in the Gazette.]

1,167,484. PRODUCTION OF NICKEL HYDROXID. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Apr. 8, 1911. Serial No. 619,674. (Cl. 204—29.)

1. The method of manufacturing nickel hydroxid which consists in precipitating nickel hydroxid from a solution of a nickel salt, drying the precipitate together with a soluble reaction product or products, and washing the precipitate to remove the soluble reaction product or products, substantially as described.

2. The method of manufacturing nickel hydroxid which consists in precipitating nickel hydroxid from a solution of a nickel salt, drying the precipitate together with a soluble reaction product or products, washing the precipitate, and drying the residue, substantially as described.

3. The method of manufacturing nickel hydroxid which consists in mixing together solutions of a nickel salt and a hydroxid whereby a precipitate of nickel hydroxid is obtained, evaporating the precipitated pulp together with some or all of the soluble reaction products to dryness, washing the residue and redrying, substantially as described.

4. The method of manufacturing nickel hydroxid for use in alkaline storage batteries which consists in precipitating nickel hydroxid by mixing solutions of a nickel salt and a predetermined considerable excess of alkaline hydroxid over the amount necessary to effect complete precipitation, evaporating the precipitated pulp together with excess alkali and a reaction product or products to dryness, removing the excess alkali and the soluble reaction product or products by washing, and drying the residue, substantially as described.

5. The method of manufacturing nickel hydroxid which consists in precipitating nickel hydroxid from a solution of a nickel salt, evaporating the precipitated pulp together with a soluble reaction product or products until a cream-like consistency is attained, slowly drying the cream-like mixture, washing the dried mixture and redrying the residue, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,167,485. STORAGE BATTERY. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Apr. 30, 1912. Serial No. 694,247. (Cl. 204—29.)

1. In a storage battery, an electrode having as a fixed part thereof active material containing a compound of cerium in undissolved condition, substantially as described.

2. An active material for the depolarizing element of an alkaline storage battery containing an oxid of cerium, substantially as described.

3. In an electrode for storage batteries, a perforated receptacle of conducting material having packed therein cerium oxid and a flake-like conducting material, substantially as described.

4. In an electrode for storage batteries, a metal perforated receptacle of conducting material having packed therein cerium oxid and flake nickel, substantially as described.

5. In an electrode for storage batteries, a perforated tubular receptacle of conducting material having packed therein cerium oxid and flake nickel in alternating layers, substantially as described.

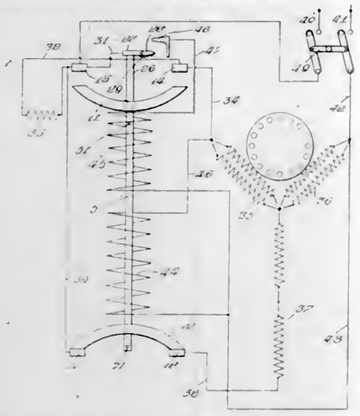
[Claims 6 to 16 not printed in the Gazette.]

1,167,486. STARTER FOR INDUCTION-MOTORS. PAUL R. ELLGUTH, Chicago, Ill. Filed June 13, 1914. Serial No. 844,918. (Cl. 172—289.)

1. A motor and starter combination, including an electric motor having an auxiliary starting winding, a movable member interposed in and forming part of the current supply circuit for the said auxiliary winding; a pivoted lever carrying the said movable member, a solenoid in circuit with the main windings of the motor; a support and a sliding core for the said solenoid, and a pair of jointed links connected at their free ends respectively to the said pivoted lever and the said support, the common pivot of the said jointed links being interposed in the path of a portion of the said core, whereby the movement of the said core is adapted to move the said links with respect to each other.

2. A motor and starter combination, including an electric motor having main and auxiliary windings, a resist-

ance adapted to be inserted in series with the said main windings, a solenoid having a winding continuously in shunt with the said main windings, a switch adapted to connect the auxiliary winding to one terminal of the operating circuit, a second switch adapted to short-circuit the said resistance, a movable core for the solenoid, and transmission mechanism connecting the said core with both of the said switches for simultaneously operating the said switches by the movement of the said core.



3. A motor and starter combination, including an electric motor having main and auxiliary windings, a pivoted switch controlling the said auxiliary windings, and magnetically actuated apparatus for actuating the said switch; the said mechanism comprising a solenoid winding continuously connected to the circuit, a movable core for the said solenoid, and connections between the said core and the said lever-actuated switch for causing the movement of the core to actuate the said switch.

4. A motor and starter combination, including an electric motor having main windings and auxiliary windings, a movable switching member controlling the said auxiliary windings, a solenoid subject to the flow of current in the main windings of the motor, a core for the solenoid, the said core having a slotted end; and a link connecting the said movable switching member with the slotted end of the said core, the slot in the latter affording an engagement between the core and the said link after the core has been moved a predetermined distance.

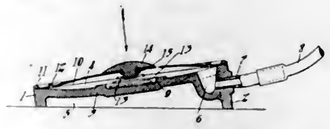
5. A motor and starter combination, including an electric motor having main and auxiliary windings, a resistance adapted to be inserted in series with the former of the said windings, a switch member adapted to short circuit the said resistance, another switch member controlling the circuit connection to the latter of the said windings; a rocking lever carrying the said switching members at its opposite ends, a solenoid having a winding in shunt with the former of the said motor windings; a core for the said solenoid, and conections between the said core and the said rocking lever for transmitting the motion of the core to the lever to actuate the said switching members.

[Claims 6 to 14 not printed in the Gazette.]

1,167,487. CONTROLLING DEVICE. FREDERICK H. FAIRWEATHER, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed May 18, 1911. Serial No. 627,986. (Cl. 230—5.)

1. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient diaphragm secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.

2. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient outwardly arched diaphragm secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.



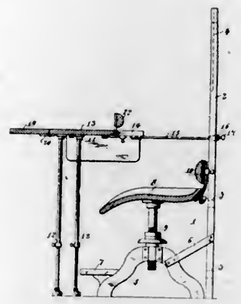
3. In a device of the class described, the combination of a flat base, said base having a recess or chamber in the top thereof and also an outlet passage extending from said recess or chamber, and a resilient outwardly arched diaphragm corrugated near its periphery and secured to said base over said recess or chamber in position to be moved directly by the foot of the operator, substantially as described.

4. In a device of the class described, the combination of a flat base having an inclined upper portion, said base having also a recess or chamber and an outlet passage extending from said recess or chamber, and a resilient diaphragm inclined in the same direction as the upper portion of said base and secured to the same over said recess or chamber and in position to be moved directly by the foot of the operator, substantially as described.

5. In a device of the class described, the combination of a flat base having an inclined upper portion, said base having also a recess or chamber and an outlet passage extending from said recess or chamber through the high portion of said base, and a resilient diaphragm inclined in the same direction as the upper portion of said base and secured to the same over said recess or chamber and in position to be moved directly by the foot of the operator, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,167,488. CHAIR. MARIE A. FERGUSON, New Haven, Conn. Filed Apr. 13, 1914. Serial No. 831,409. (Cl. 155—22.)

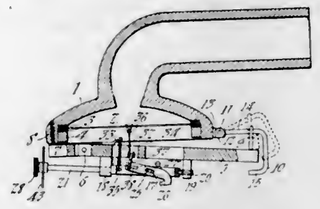


1. A means for supporting a person in a sitting position, comprising a seat, a pair of back members carried by the seat adapted to engage the loins of the person, a shoulder rest, and breast supports adapted to fit against the diaphragm of the person to maintain the person in braced position between the back members and breast supports.

2. A means for supporting a person in a sitting position, comprising a seat having a back formed of two adjustable members and two independently supported rest supports adapted to fit against the diaphragm of the person to maintain the person in a braced position between said back and said rest supports, each of said rest supports being adjustable relatively to said seat and to each other.

3. In a work-seat, the combination with an adjustable seat, a stationary work support in front of the seat and a stationary shoulder rest above the seat, a pair of supporting members carried by the seat and adjustable vertically with respect thereto and adapted to engage the loins of the person, and a pair of vertically adjustable rest supports on said work-support adapted to fit against the diaphragm of the person to maintain the person in braced and supported position between said first mentioned members and said rest supports.

1,167,489. PHONOGRAPH-REPRODUCER. ADOLPH F. GALL, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 26, 1909. Serial No. 529,917. (Cl. 181—10.)



1. In a device of the class described, the combination with vibratory means and a floating weight, of a member rotatably secured to said weight, the axis of rotation of said member being substantially parallel to a diametrical plane of the record in which is located the sound record groove and also approximately parallel to said vibratory means, a stylus lever carried by said member, and connections between said vibratory means and said lever, substantially as described.

2. In a device of the class described, the combination with vibratory means and a floating weight, of a stylus lever pivotally connected to said weight, a stylus projecting from each of two surfaces of said lever, connections between said vibratory means and said lever, means carried by said floating weight for rotating the pivot of said lever about an axis substantially parallel to the normal position of said vibratory means to rotate said lever and place either stylus in operative position, and means for resisting rotation of said second named means away from the position corresponding with the engagement of either of said styli with the record, substantially as described.

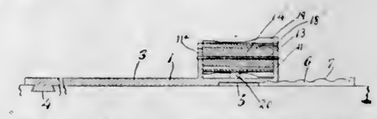
3. In a device of the class described, the combination with vibratory means and a floating weight, of a member secured to said weight and rotatable about an axis substantially parallel to said vibratory means, a stylus lever pivoted to said member, and connections including pivotal means between said vibratory means and one extremity of said lever, substantially as described.

4. In a device of the class described, the combination with vibratory means and a floating weight, of a member rotatably secured to said weight, the axis of rotation of said member being substantially parallel to a diametrical plane of the record in which is located the sound record groove and also approximately parellel to said vibratory means, a stylus lever carried by said member, styli projecting from different faces of said lever, connections between one extremity of said lever and said vibratory means, and means resisting rotation of said member away from the position of engagement of either of said styli with the record, substantially as described.

5. In a device of the class described, in combination, a stylus lever, styli projecting from opposite faces thereof, a member in which said lever is pivoted, supporting means in which said member is rotatably mounted, the axis of rotation of said member being substantially parallel to a diametrical plane of the record in which is located the record groove, stops on said supporting means adapted to co-act with said member in its rotation, and spring means to hold said member in engagement with either of said stops, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,167,490. GUN-SIGHT. ROBERT B. GILMORE, Morrow, Ohio. Filed July 6, 1915. Serial No. 38,208. (Cl. 33—54.)



1. In a gun sight, the combination with a sighting pin at the end of the barrel of the gun, of an elongated block having a channel, and a tubular peep hole through the block located just below the base of the channel.

2. In a gun sight, the combination with a sighting pin at the end of the barrel of the gun, of an elongated block having a channel, a tubular peep hole through the block located just below the base of the channel, means for mounting said block on the barrel of the gun, and means for positioning the block for sighting with the channel and with the tubular peep hole.

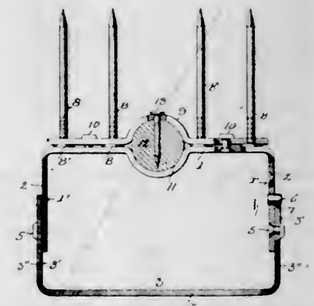
3. In a gun sight, the combination with a sighting pin at the end of the barrel of the gun, of an elongated block having a channel, a tubular peep hole through the block located just below the base of the channel, means for mounting said block on the barrel of the gun, and means for positioning the block for sighting with the channel and with the tubular peep hole, said latter means being adjustable for varying ranges.

4. In a gun sight, the combination with a sighting pin at the end of the barrel of the gun, of a rotary member having a series of channels of varying sizes cut longitudinally on its periphery, and a series of peep holes through said member located just below the channels, said holes being of varying sizes.

5. In a gun sight, the combination with a sighting pin at the end of the barrel of the gun, of a rotary member having a series of channels of varying sizes cut longitudinally on its periphery, and a series of peep holes through said member located just below the channels, said holes being of varying sizes, means for mounting said rotary member on the barrel of the gun, and means for positioning it for sighting with the channels and with the peeps.

[Claim 6 not printed in the Gazette.]

1,167,491. GARDEN-TOOL. JOHN GILSON, Sr., Port Washington, Wis. Filed Feb. 16, 1915. Serial No. 8,514. (Cl. 55—42.)



1. A garden tool comprising a socketed bridge piece having downturned legs provided with front and rear cutting edges, a two edge cutting blade having upturned legs provided with front and rear cutting edges and in pivotal union with the bridge piece legs, and means for limiting oscillatory movement of the cutting blade.

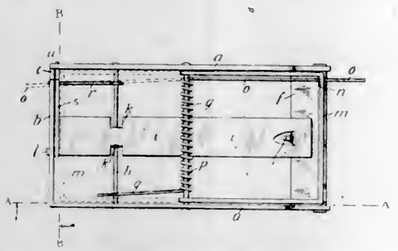
2. A garden tool comprising a bridge piece having downturned legs, said legs being provided with outwardly projecting stops, and a cutting blade having upstanding legs pivoted to the legs of the bridge piece, and provided with notches—having inwardly beveled side edges—and into which the stops project.

1,167,492. ART OF IMPREGNATING TIMBER AND OTHER POROUS MATERIAL WITH A PRESERVATIVE. OLIVER P. M. GOSS, Seattle, Wash. Filed Feb. 10, 1915. Serial No. 7,389. (Cl. 99—12.)

1. In the preserving treatment of porous material, the method which consists in immersing the material in the preservative fluid contained in a closed container and then heating the fluid to approximately 230 degrees Fahrenheit, then emptying the container of the preserving fluid and drawing a vacuum therein of from 23 to 28 inches approximately and simultaneously heating the interior of the container to a temperature of from 150 to 230 degrees Fahrenheit, and continuing such treatment for upward of half an hour, then breaking the vacuum in the container by the re-introduction therein of the preserving fluid, then applying pressure to the fluid sufficient to force into the pores of each cubic foot of the material approximately five to twenty pounds of the fluid.

2. In the preserving treatment of porous material, a method which consists in immersing the material in the preservative fluid contained in a closed container and then heating the fluid to approximately 230 degrees Fahrenheit, then emptying the container of the preserving fluid and drawing a vacuum therein of from 23 to 28 inches approximately and simultaneously heating the interior of the container to a temperature of from 150 to 230 degrees Fahrenheit, and continuing such treatment for upward of half an hour, then breaking the vacuum in the container by the re-introduction therein of the preserving fluid, then applying pressure to the fluid sufficient to force into the pores of each cubic foot of the material approximately five to twenty pounds of the fluid, then reheating the fluid in the container for from one to six hours continuously to a temperature of from 200 to 240 degrees, then emptying the container of the preserving fluid and while the fluid is still hot, drawing a vacuum in the container of from 23 to 28 inches approximately.

1,167,493. ANIMAL-TRAP. ALBERT M. GRUBBS, Portland, Oreg. Filed May 11, 1915. Serial No. 27,449. (Cl. 43—21.)



1. In an animal trap, the combination of a spring actuated jaw, an arm projecting from the latter, means for engaging said arm when the jaw is set, such means operable to disengage said arm by the lateral movement of the latter, a rockable member operable to bear against the extremity of said arm and laterally move the same, and a bait holding trigger hinged on an axis parallel to that of the jaw, the inner end of said trigger being connected with said rockable member, and rocking the latter when the front end of the trigger is depressed.

2. An animal trap comprising a skeleton frame, a spring-actuated jaw hinged in such frame and arranged to strike the front cross-bar of the latter, an arm projecting from the front end of said jaw, means on the rear end of said frame for engaging the extremity of said arm, such means, when operated, adapted to cause the latter to be disengaged by a lateral movement, a rockable member operable to bear against the extremity of said arm, to thereby release the same from said means, and a bait-holding trigger hinged on an axis parallel to that of the jaw, the inner end of said trigger being connected with said rockable member and rocking the latter when the front end of the trigger is depressed.

3. An animal trap comprising a skeleton frame, a spring-actuated jaw hinged in such frame and arranged to strike the front cross-bar of the latter, an arm projecting from the front end of said jaw, a notch provided in the rear cross-bar of said frame with which the extremity of said arm may be engaged, a rockable member operable to bear against the extremity of said arm, to thereby release the same from said notch, and a bait-holding trigger hinged on an axis parallel to that of the jaw, the inner end of said trigger being connected with said rockable member and rocking the latter when the front end of the trigger is depressed.

4. An animal trap comprising a skeleton frame, a jaw hinged in such frame and arranged to strike the front cross-bar of the latter, a coil-spring on the hinge axis of said jaw, and having an arm projecting through and beyond the front end of the latter, means on the rear end of said frame for engaging the extremity of said arm, such means, when operated, adapted to cause the latter to be disengaged by a lateral movement, a rockable member operable to bear against the extremity of said arm, to thereby release the same from said means, and a bait-holding trigger hinged on an axis parallel to that of the jaw, the inner end of said trigger being connected with said rockable member and rocking the latter when the front end of the trigger is depressed.

5. An animal trap comprising a skeleton frame, a jaw hinged in such frame and arranged to strike the front cross-bar of the latter, a coil-spring on the hinge axis of said jaw, and having an arm projecting through and beyond the front end of the latter, a notch provided in the rear cross-bar of said frame with which the extremity of said arm may be engaged, a rockable member operable to bear against the extremity of said arm, to thereby release the same from said notch, and a bait-holding trigger hinged on an axis parallel to that of the jaw, the inner end of said trigger being connected with said rockable member and rocking the latter when the front end of the trigger is depressed.

[Claims 6 and 7 not printed in the Gazette.]

1,167,494. HIGHWAY-TRACK. FRANK J. HARDECKER, New York, N. Y. Filed Apr. 20, 1915. Serial No. 22,539. (Cl. 104—178.)



1. A track construction for roadways, comprising rows of slabs laid end to end to form two parallel runways for the wheels of a vehicle, said slabs being provided with vertical apertures in their body part, and semi-apertures in their end sections, supporting piles extending through said apertures into the ground and alining piles between two adjacent slabs, filling the semi-apertures.

2. A highway track comprising two separate, parallel runways for the wheels of a vehicle, each runway consisting of a row of slabs or blocks embedded in the roadway, an aperture extending vertically through the joint of two slabs, a pile or peg built into the ground under each aperture and extending vertically through said aperture to the upper surface of said slabs.

3. A highway track comprising a row of flat slabs or blocks forming a vehicular track, a vertical aperture in the body portion of each slab, a widening in the middle of the mantle of said aperture, a pile formed in the ground beneath and filling the volume of said aperture and its widening, said widening forming an anchor to hold said pile in said aperture.

4. A highway track comprising a row of flat slabs laid with abutting ends to form a vehicular track, a vertical aperture formed at the joint of two adjacent slabs, a part of said aperture falling in each of the two slabs, a horizontal widening in the middle part of the mantle surface of said aperture and its widening to aline said slabs vertically and horizontally.

1,167,495. HIGHWAY-TRACK. FRANK J. HARDECKER, New York, N. Y. Filed Oct. 15, 1915. Serial No. 55,948. (Cl. 104—178.)



1. A highway track comprising a runway for the wheels of vehicles, said runway consisting of a row of beams embedded in the roadway, piles built into the ground at intervals under said beam the heads of said piles being incased by the body of said beams.

2. A track construction comprising a series of piles or pegs built into the ground of a roadway forming a row in the longitudinal direction thereof and a beam or slab embracing the upper ends of a number of said piles, the top of the surface of said beam to provide a runway for the wheels of vehicles.

3. A track construction for roadways comprising a row of piles built into the ground of a highway in its longitudinal direction a beam embracing the upper ends of said piles and means to anchor said piles to said beam.

4. A track construction for roadways comprising two parallel runways for the wheels of a vehicle, consisting of a row of piles built into the ground of the highway in its longitudinal direction, a series of beams encircling the upper ends of a number of piles of each row, and means to aline said beams at their joints horizontally and vertically.

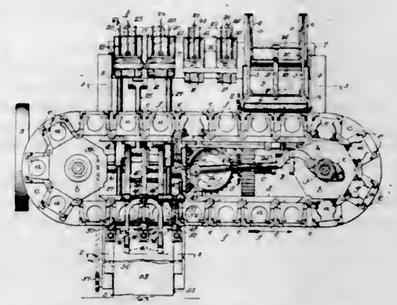
5. A track construction for roadways comprising a row of piles arranged in the longitudinal direction of said roadway and a continuous beam embedded into the surface of said roadway integrally connected to the upper ends of said piles the upper surface of said beam forming a runway for the wheels of a vehicle.

[Claims 6 and 7 not printed in the Gazette.]

1,167,496. LABELING-MACHINE. HARTWIG M. A. HARDERS, Milwaukee, Wis., assignor to The 20th Century Machinery Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1912. Serial No. 679,927. (Cl. 216—13.)

1. In a labeling machine the combination of a carrier having bottle holders provided with gummers, means for intermittently moving said carrier, a paste receptacle adjacent to the carrier, a paste roller adapted to receive paste from said receptacle and to apply the same to said gummers and means for intermittently moving said roller forward and back transversely to the travel of the opposite portion of the carrier and vertically over and in contact with the opposite gummers while they are at rest.

2. In a labeling machine the combination of a carrier having a series of bottle holders provided with gummers, means for intermittently operating said carrier, a paste receptacle adjacent to the carrier, a feed roller mounted in said receptacle, a paste applying roller adapted to take paste from said feed roller and apply the same to the gummers, and means for intermittently moving said paste applying rollers forward and back between said feed roller and opposite gummers and vertically over and in contact with said gummers while they are at rest.



3. In a labeling machine the combination of a carrier comprising bottle holders provided with gummers, means for moving said carrier intermittently, a paste receptacle adjacent to said carrier, a paste applying roller, and means adapted to carry said roller from said paste receptacle over and in contact with the gummers as they are brought into position opposite the paste receptacle and to return said roller out of contact with the gummers to the paste receptacle.

4. In a labeling machine the combination of a carrier comprising bottle holders provided with vertically disposed gummers, means for advancing said carrier intermittently, a paste receptacle adjacent to said carrier provided with a rotated feed roller, a reciprocative carriage movable transversely to the travel of the carrier, a vertically swinging frame pivoted to said carriage and provided with a paste applying roller held normally in contact with said feed roller, and a cam guide adapted to direct said paste applying roller upwardly from the feed roller over and in contact with the opposite gummers as said carriage advances toward the bottle carrier.

5. In a labeling machine the combination of an intermittently advancing bottle carrier comprising bottle holders provided with vertically disposed gummers, a paste receptacle adjacent to the carrier, a reciprocative carriage movable toward and from the carrier, and a vertically swinging frame provided with a roller for carrying paste from said receptacle to the gummers and with cam guides, one fixedly and the other movably attached to said frame and adapted by engagement with a relatively stationary part of the machine to direct said roller from the paste receptacle over and in contact with the gummers as the carriage advances toward the bottle carrier and back to the paste receptacle out of contact with the gummers on the return movement of the carriage.

[Claims 6 to 20 not printed in the Gazette.]

1,167,497. COLLAPSIBLE BUCKET. FAY C. HAYNS, Altamont, N. Y. Filed Dec. 11, 1913. Serial No. 806,042. (Cl. 150—48.)



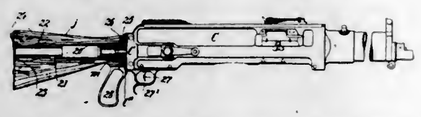
1. In a collapsible bucket, the combination of a containing body of foldable material having an open top, means for stiffening and holding the top open and proportioned to be grasped between the palm and fingers of

the hand of the user, the stiffening means being equal to the body in one dimension to act as a frame or form about which the body may be folded, said body being substantially of a greater length in one direction than the other, substantially as described.

2. In a collapsible bucket, the combination of a containing body of flexible material having an open top, stiffening means associated with the upper marginal edge of said body of such shape as to snugly fit between the fingers and palm of the hand of a user, said stiffening means converging at one end and shaped to conform to said body and provide a mouth therefor.

3. In a collapsible bucket, a containing body of flexible material having an open end, a stiffening rod on the upper marginal edge thereof, said rod being of elongated substantially elliptical contour and having a tapering portion formed to provide a mouth, said rod being of such shape as to be readily grasped between the fingers and palm of the user's hand.

1,167,498. MACHINE-GUN. AUGUST ALBERT KARL HEINEMANN, Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Filed Feb. 25, 1914. Serial No. 820,805. (Cl. 42—75.)



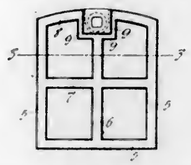
1. In a machine gun, the combination of a receiver, a screw threaded tubular projection extending from the rear wall thereof and communicating with the receiver, a recoil spring extending into said projection, adjusting means located in said projection for adjusting said recoil spring, a stock having a longitudinal perforation adapted to fit over said projection, and a tubular screw member arranged to be inserted from the butt end of the stock into said perforation and adapted for screw threaded connection with said projection whereby said stock and receiver are clamped together and access is had to said adjusting means.

2. In a machine gun, the combination of a receiver, a screw threaded tubular projection extending from the rear wall thereof and communicating with the receiver, said projection being in substantial axial alinement with the bore of the gun barrel and having its internal diameter substantially constant throughout, a recoil spring extending into said projection, adjusting means located in said projection for adjusting said recoil spring, a stock having a longitudinal perforation adapted to fit over said projection and provided in its one end face with recesses, dowels projecting from said receiver into said recesses whereby rotation of said stock on said projection is prevented, a tubular screw member arranged to be inserted from the butt end of the stock into said perforation and adapted for screw threaded connection with said projection whereby said stock and receiver are clamped together and access is had to said adjusting means, a butt-plate detachably secured to the butt end of the stock and covering said recess and screw member and a grip projecting downwardly from said stock adjacent to the trigger of the gun.

1,167,499. PRIMARY BATTERY. WALTER E. HOLLAND, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 8, 1909. Serial No. 532,094. (Cl. 204—49.)

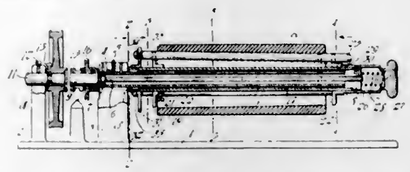
1. In a primary battery, a substantially homogeneous zinc electrode plate having its edges thickened to prevent reduction in effective area during the operation of the battery and having strengthening ribs extending from said thickened edges across said plate integrally therewith, substantially as described.

2. In a primary battery, a flat substantially homogeneous zinc electrode plate having its edges thickened to prevent reduction in effective area during the operation of the battery and having a strengthening rib formed upon



its surface and extending from a thickened edge portion of said plate integrally therewith, substantially as described.

1,167,500. PHONOGRAPH. NEWMAN H. HOLLAND, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 6, 1911. Serial No. 653,155. (Cl. 181—13.)



1. In a device of the class described, the combination of a shaft, a plurality of supporting members arranged about said shaft and adapted to engage the bore of a sound record, and means for changing the inclinations of said supporting members relatively to said shaft, said means comprising a manually operable device coaxial with said shaft, engaging said supporting members and movable bodily longitudinally thereof, and means tending automatically to move said device in a given direction longitudinally of said members, substantially aa described.

2. In a device of the class described, the combination of a plurality of movable members arranged about an axis to engage an article to be supported, supporting means for said members, said supporting means engaging said members and being immovable toward and away from said axis, and means coacting with said supporting means for automatically moving said members away from said axis, substantially as described.

3. In a device of the class described, the combination of a plurality of record engaging members grouped about a common axis, and a plurality of relatively movable rigid supporting members respectively engaging said first named members at different points in the length of the same and adapted to normally retain said first named members against displacement in directions toward and away from the said axis, each of said supporting members engaging all of said record engaging members, said supporting members being adapted by their relative movement to move said record engaging members toward or away from each other, substantially as described.

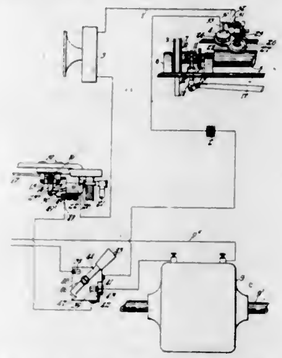
4. In a device of the class described, the combination of a plurality of record engaging members grouped about a common axis, and a plurality of supporting means respectively engaging said members at different points in the length of the same at a fixed distance from said axis and adapted to normally retain said members against displacement in directions toward and away from said axis, said supporting means being adapted by their relative movement to move said members toward or away from each other, substantially as described.

5. In a device of the class described, the combination with a shaft, of a plurality of record engaging members extending longitudinally thereof, and a plurality of rigid supports each having seats for all of said members, one of said supports being movable relatively to the other

along said shaft and having connected therewith means for manually moving the same along said shaft to change the relative inclination of said members, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,167,501. PHONOGRAPHIC APPARATUS. NEWMAN H. HOLLAND, West Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 8, 1911. Serial No. 659,092. (Cl. 181—1.)



1. In a device of the class described, the combination with a record support, of a circuit including an electrically operable sound box, said sound box being movable into and out of operative position with respect to said support, and means for opening said circuit by the movement of the said sound box into inoperative position with respect to said support, substantially as described.

2. In a device of the class described, the combination with a rotatable record support, a motor, means for connecting said motor to said record support to rotate the latter, and means for rendering said connecting means inoperative, of a circuit including an electrically operable sound box, said sound box being movable into and out of operative position with respect to said support, means for forming a gap in said circuit by the movement of said sound box into inoperative position with respect to said support, and means for forming a gap in the same by the operation of said second named means, substantially as described.

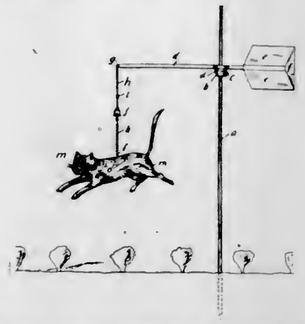
3. In a device of the class described, the combination with a rotatable record support, a circuit including an electric motor, means for rotating said record support from said motor, and means for rendering said first named means inoperative, of a circuit including an electrically operable sound box, said sound box being movable into and out of operative position with respect to said support, unitary means for opening and closing a gap in both of said circuits, means for forming a gap in said second named circuit by the movement of said sound box into inoperative position with respect to said record support, and means for forming a gap in the said second named circuit by the operation of said second named means, substantially as described.

4. In a device of the class described, the combination with a rotatable record support, a circuit including an electric motor, means for rotating said record support from said motor, and means for rendering said first named means inoperative, of a circuit including an electrically operable sound box mounted adjacent said support, a single switch for opening and closing a gap in both of said circuits, and means for forming a gap in said second named circuit by the operation of said second named means, substantially as described.

5. In a device of the class described, the combination with a rotatable record support, and a circuit including an electric motor for rotating said support, of a second circuit including an electrically operable sound box mounted adjacent said support, and unitary means for closing both of said circuits, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,167,502. SCARECROW. HUGH HUFFMAN and ERNEST J. PECK, Portland, Oreg. Filed July 8, 1915. Serial No. 38,801. (Cl. 46—40.)



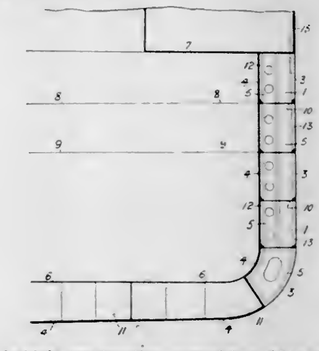
1. A scare-crow comprising a standard, a rotatable arm adjustably mounted on the standard, wind vanes on one end of said arm, a flexible supporting element fixed to the other end of said arm, including a spring and a swivel, and a figure supported by said flexible element.

2. A scare-crow comprising a standard, a rotatable arm adjustably mounted on the standard, wind vanes on one end of said arm, a flexible supporting element fixed to the other end of said arm, including a spring and a swivel, a figure supported by said spring, and an audible alarm carried by the figure.

3. A scare-crow comprising a standard, a rotatable arm adjustably mounted on the standard, wind vanes on one end of said arm, an adjustable, flexible supporting element fixed to the other end of said arm, including a spring and a swivel, a feline figure supported by the said element, and sounding bells carried by the figure.

4. A scare-crow comprising a standard, a rotatable arm adjustably mounted on the standard, wind vanes on one end of said arm, an adjustable cord fixed to the other end of said arm, a spring and swivel suspended by said cord, and a feline figure supported by the spring.

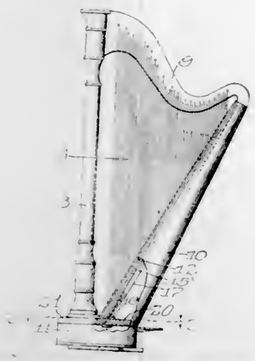
1,167,503. SHIP'S CONSTRUCTION. THOMAS TURTON JONES, Liverpool, England. Filed May 1, 1913. Serial No. 764,957. (Cl. 114—68.)



A metal ship's construction comprising sides of tubular construction having thick inner shell plates 4 and comparatively thin outer shell plates 3, and being fitted with vertical diaphragms or partitions 2 spaced at long intervals, and forming vertical water tight diaphragms be-

tween the shell plates 4 and 3, and with intervening frames 5, of relatively light, and of non-water tight construction, and attached to the inner shell 4, and to the outer shell 3; substantially as described.

1,167,504. HARP. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill. a Corporation of Illinois. Filed June 10, 1912. Serial No. 702,670. (Cl. 84—14.)



1. In a harp, the combination of a base, a pedestal, a neck, a sounding-board extending between the base and neck, a reinforceing member for the sounding-board extending substantially the length thereof, a truss member superposed on said reinforcing member and extending from the base a distance less than the length of the reinforceing member, and comprising a strip having spaced flanges, and harp strings tensioned between said neck and said truss member so that said member takes the strains imposed by the tension of said strings, and sound-deadening material interposed between said reinforcing member and said truss member.

2. In a harp, the combination of a base, a neck, a sounding-board extending from the base to the neck, a reinforcing truss member in the rear of said sounding-board extending from the base, a reinforceing strip interposed between the sounding-board and truss member, and harp strings extending from said neck through the sounding-board and attached to said truss member and reinforcing strip.

1,167,505. METHOD OF PRODUCING HALF-TONE NEGATIVES. WERNER ROBERT BUSCH LARSEN, Copenhagen, Denmark. Filed Nov. 14, 1911. Serial No. 660,289. (Cl. 95—5.)



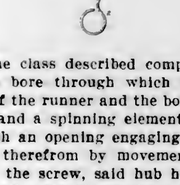
1. The herein described method of producing half-tone negatives, which consists in making the exposure upon a sensitive plate simultaneously through screens of different characters and pitch, and keeping the said screens in place during at least part of the exposure.

2. The herein described method of making half-tone negatives, which consists in making the exposure simultaneously through a line screen and a dot screen upon a sensitive plate for a certain period, then removing the line screen and completing the exposure through the dot screen only.

3. The herein described method of making half-tone negatives, which consists in arranging a line screen and a dot screen in front of a sensitive plate, the opaque elements on the dot screen being less in number than the intersecting points of the lines of the said screen, and then making the exposure simultaneously through both the said screens upon the said sensitive plate.

4. The herein described method of making half-tone negatives, which consists in arranging a line screen and dot screen in contact and in front of a sensitive plate, then making the exposure for a certain time through both the said screens, and completing the exposure through the dot screen only.

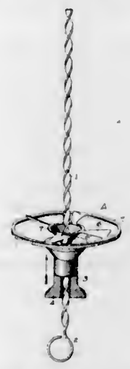
1,167,506. METHOD OF PRODUCING DOT-SCREENS FOR PHOTOGRAPHIC WORK. WERNER ROBERT BUSCH LARSEN, Copenhagen, Denmark. Filed June 6, 1913. Serial No. 772,171. (Cl. 95—81.)



1. The improvement in the art of producing dot screens used in taking half-tone negatives, which consists in exposing a sensitive plate through a line screen, developing the plate so exposed, producing a positive plate from the thereby obtained negative, and removing alternate rows of opaque spots from the said positive plates.

2. The herein described improvement in the art of producing dot screens for use in taking half-tone negatives, which consists in exposing a sensitive plate through a line screen, developing the plate so exposed, producing a positive plate from the negative when developed, and removing opaque spots at intervals from said positive plate.

1,167,507. COMBINED FLYING AND SPINNING TOP. BURT EDWARD LLOYD, New York, N. Y. Filed Apr. 24, 1915. Serial No. 23,625. (Cl. 244—2.)



1. A toy of the class described comprising a screw, a runner having a bore through which the screw passes, the end surface of the runner and the bore thereof forming a circular edge, and a spinning element having a conical hub provided with an opening engaging the screw for receiving rotation therefrom by movement of the element longitudinally of the screw, said hub having its external surface bearing and rotatable on the said circular edge.

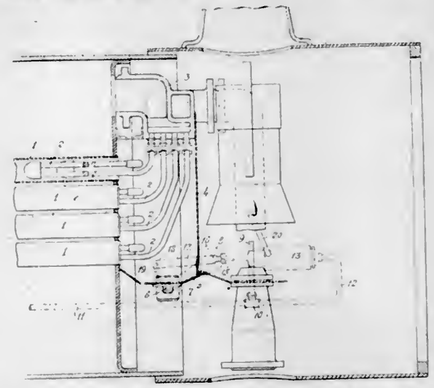
2. A toy of the class described comprising a screw, a runner movable freely along the same, a spinning element having a conical hub forming a spinning point, and said point having an aperture fitting the screw, whereby the spinning element receives rotation by movement longitudinally of the screw.

3. A toy of the class described comprising a screw, a runner movable freely along the same, a spinning element having a conical hub forming a spinning point, and said point having an aperture fitting the screw, whereby the spinning element receives rotation by movement longitudinally of the screw, said spinning element embodying vanes adjustable to any desired pitch.

4. A combined flying and spinning top comprising a screw, a runner movable along the same, a spinning element including vanes disposed in a plane transverse to the screw, and a hub to which the vanes are connected, said hub being in the form of a cone depending below the plane of the vanes and having a point on which the element spins on a surface, and the point having an aperture shaped to correspond to the cross-sectional shape of the screw.

5. A combined flying and spinning top comprising a screw, a spinning element provided with vanes and having an oppositely pointed hub through which the screw extends for imparting rotation to the spinning element by longitudinal movement of the latter along the screw, one point serving to permit the said element to spin against a ceiling or on a floor.

1,167,508. DAMPER FOR LOCOMOTIVE-SUPERHEATERS. NEAL TRIMBLE MCKEE, Yonkers, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 14, 1915. Serial No. 50,570. (Cl. 122—480.)



1. In a locomotive provided with a blower and a superheater of the class described, the combination with the superheater tubes of baffle means including a damper in the path of the furnace gases, steam actuated means operatively attached to the damper, a steam connection between the main steam pipe and the steam actuated means tending to open the damper and a steam connection between the blower and the steam actuated means tending to close the damper.

2. In a locomotive provided with a blower and a superheater of the class described, the combination with the superheater tubes, of baffle means including a damper in the path of the furnace gases, steam actuated means operatively attached to the damper, a steam connection between the main steam pipe and the steam actuated means tending to open the damper, a steam connection between the blower and the steam actuated means tending to close the damper, and a counterweight fixed to the damper and tending to open the damper.

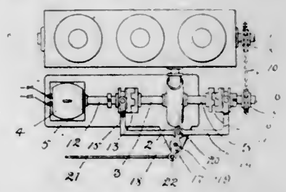
3. In a locomotive provided with a blower and a superheater of the class described, the combination with the superheater tubes, of baffle means including a damper in the path of the furnace gases, steam actuated means attached to the damper and a steam connection between said steam actuated means and the main steam pipe and between said means and the blower said connections being arranged to produce oppositely acting pressures upon said steam actuated means.

4. In a locomotive provided with a blower and a superheater of the class described, the combination with the superheater tubes, of baffle means including a damper in the path of the furnace gases, a pair of piston mechanisms operatively attached to said damper, a steam connection between one piston mechanism and the main steam pipe, and steam connections at opposite ends of the other piston mechanism to blower nozzle and blower steam supply respectively, the connection to blower steam supply being arranged so as to act oppositely, as to the damper, to the connection from the other piston mechanism to the main steam pipe.

5. In a locomotive provided with a blower and a superheater of the class described, the combination, with the superheater tubes, of baffle means including a damper in the path of the furnace gases, steam actuated means operatively attached to the damper, a steam connection between said steam actuated means and the main steam pipe tending to open the damper, a steam connection between the steam actuated means and the blower steam supply, and a steam connection going from the steam actuated means to the blower nozzle said last named connection being open or closed according to the position of the steam actuated means.

[Claim 6 not printed in the Gazette.]

1,167,509. WATER-CIRCULATING MEANS FOR AUTOMOBILES. JAMES ROBB MACDONALD, Duluth, Minn. Filed July 3, 1915. Serial No. 38,007. (Cl. 123—175.)



1. In water circulating means for an internal combustion engine, the combination with the engine of a circulating pump and means whereby the circulating pump may be operated either by the engine or by auxiliary power independent of the engine.

2. Water circulating means for internal combustion engines, comprising a pump installed adjacent the engine and having water connections therewith, an auxiliary source of power operatively connected to the pump and means whereby the pump may be operated either by the engine or by the auxiliary power.

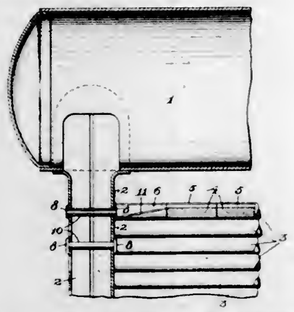
3. The combination with an internal combustion engine of a water circulating pump, an auxiliary motor, means for connecting or disconnecting the motor to the pump and means for connecting or disconnecting the engine to the pump, whereby the pump may be operated either by the engine or the auxiliary motor.

4. The combination with an internal combustion engine, of a water circulating pump, a counter shaft, means for operating the counter shaft from the engine shaft, adjustable means for operating the pump from the counter shaft, an auxiliary motor and adjustable means for operating the pump from the auxiliary motor, whereby the pump may be operated either by the engine or by the motor.

1,167,510. FURNACE-TILE. EDWARD C. MEIER, Phoenixville, Pa. Original application filed Aug. 14, 1915. Serial No. 45,551. Divided and this application filed Oct. 11, 1915. Serial No. 55,225. (Cl. 110—98.)

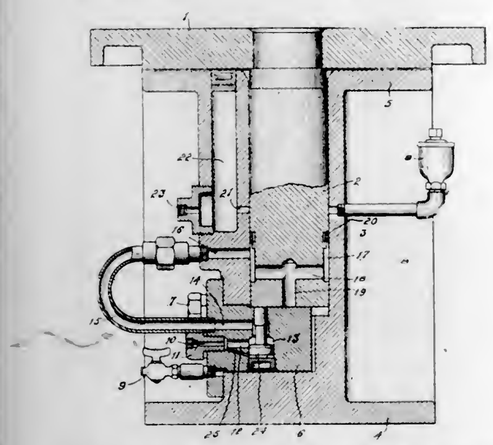
1. A tile, comprising a steam guide adapted to be located at the end of a series of baffling tile and having a

groove in its upper face forming a steam passage widest at its inlet end and diminishing in width to its outlet end, substantially as described.



2. A tile, comprising a steam guide adapted to be located at the end of a series of baffling tile and having a groove in its upper face forming a steam passage widest and deepest at its inlet end and diminishing in width and depth to its outlet ends, substantially as described.

1,167,511. JOLT RAMMING-MACHINE. EDGAR H. MUMFORD and EDWARD MELVILLE HUGGINS, Plainfield, N. J.; said Huggins assignor to Mumford Molding Machine Company, Chicago, Ill., a Corporation of New Jersey; Rose Skeel Mumford executrix of said Edgar H. Mumford, deceased. Filed July 3, 1912. Serial No. 707,618. (Cl. 121—19.)



1. A jolt ramming molding machine comprising in combination a cylinder having a port and an opening in its wall above the said port, a vertically movable plunger in said cylinder adapted to uncover said opening, and a valve for controlling the supply of fluid pressure and allowing its admission into said cylinder to raise the plunger, said valve being held in open position by the fluid pressure flowing to the machine and governed as to its closing movement by the uncovering of said opening by the plunger as it moves upwardly.

2. In a jolt ramming mechanism, in combination with a vertically movable plunger arranged to move down by the the action of gravity alone and to be moved upward by air pressure, of a cylinder for the plunger provided in its wall with an exhaust port uncovered by the plunger as it moves upward and approaches its upward extreme of movement, and a valve for controlling the admission of air to the cylinder, held open by air pressure during the upward movement of the plunger and governed as to its closing movement by the uncovering by the plunger of the said exhaust port, the said exhaust port constituting the only means of escape of the air from beneath the plunger.

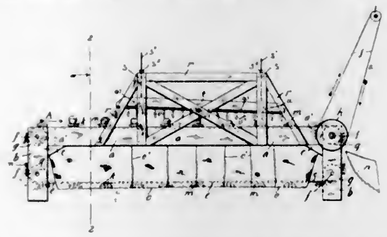
3. In a jolt ramming mechanism, in combination with a vertically movable plunger arranged to move down by the action of gravity alone and to be moved upward by air pressure, of a cylinder for the plunger provided in its wall with an exhaust port uncovered by the plunger as it moves upward and approaches its upward extreme of movement, and an admission valve positively opened by the plunger as it descends, the said valve being held open by air pressure during the upward movement of the plunger and governed as to its closing movement by the unbalanced pressure induced by the uncovering of the exhaust port.

4. In combination in a jolt ramming machine, a cylinder, a piston provided with a passage leading from the side to the lower end thereof, an inlet passage through the side of the cylinder adapted to register with the passage in the piston when the latter is in lower position, an exhaust port through the side of the cylinder adapted to register with a portion of the passage in the piston when the latter approaches upper position, and a valve in one of the passages normally held in open position and adapted to be closed by the unbalanced air pressure induced when the exhaust port is brought into communication with the said passage in the piston.

5. In combination a jolt ramming machine, a cylinder, a piston provided with a passage leading from the side to the lower end thereof, an inlet passage through the side of the cylinder adapted to register with the passage in the piston when the latter is in lower position, an exhaust port through the side of the cylinder adapted to register with a portion of the passage in the piston when the latter approaches upper position, and a valve in the inlet passage normally held open during the upward movement of the piston and adapted to be closed by the unbalanced air pressure induced when the exhaust port is brought into communication with the said passage in the piston.

[Claim 6 not printed in the Gazette.]

1,167,512. FRUIT-GRADING MACHINE. JAMES R. NUNAMAKER, Hood River, Oreg. Filed June 6, 1914. Serial No. 843,572. (Cl. 130—32.)



1. A grading machine comprising an endless traveling carrier, trays included in such carrier, said trays having an inclined supporting face, a series of graduated brushes arranged longitudinally of the carrier, and receivers located relatively to the respective brushes.

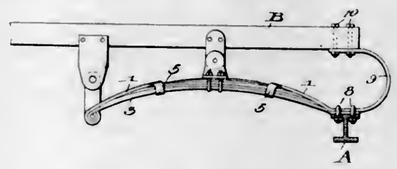
2. A grading machine comprising an endless traveling carrier, trays included in such cerrier, said trays having an inclined supporting face, a series of graduated yielding brushes arranged longitudinally of the carrier, and receivers located relatively to the respective brushes.

3. In a grading machine comprising an endless traveling carrier, and trays included in such carrier, a frame arranged longitudinally of the carrier, a series of graduated brushes hinged pendent to the frame, and means imposing a yielding hold on the tops of the brushes to thereby hold the latter pendent, normally.

4. In a grading machine comprising an endless traveling carrier, and trays included in such carrier, a frame arranged longitudinally of the carrier, a series of graduated brushes hinged pendent to the frame, and a weight vertically movable in said frame and imposed on the tops of said brushes to thereby hold the latter pendent, normally.

5. In a grading machine an endless traveling carrier, and trays included in such carrier, said trays having an inclined supporting face, and a series of graduated swinging brushes arranged longitudinally of the carrier, means for yieldingly holding the brushes pendent.

1,167,513. SAFETY-CLIP FOR LEAF-SPRINGS. DOCTOR FRANKLIN OLIVER, Oakland, Cal. Filed Feb. 13, 1915. Serial No. 8,049. (Cl. 267—27.)



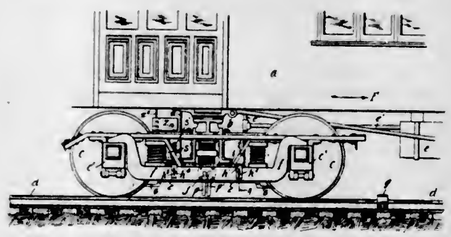
1. A safety clip for leaf springs comprising a spring plate engaged over the tops of the ends of each of the leaves of the springs and having its inner end secured to the spring so as to prevent up or down movement of the plate relative to the spring leaves and having its other end extending over and throughout the length of the free outer end portion of the main leaf and secured thereto.

2. A safety clip for leaf springs consisting of a spring plate superimposed upon each of the ends of the spring and having one end thereof secured to the outer free end of the main leaf of the spring and having means at its opposite end for engagement with the sides of the leaves and with the under face of the main leaf.

3. A safety clip for leaf springs consisting of a spring member overlying the leaves at each of the ends of the latter and connected thereto at each of its ends whereby to prevent up or down movement of the member relative to the leaves, the outer end of the member extending throughout the length of the free outer end portion of the main leaf.

4. A safety clip for leaf springs consisting of a spring plate overlying the leaves at the end of the latter and having one end connected to the main leaf and having its opposite end bifurcated to form prongs which latter engage the sides of the leaves and have inwardly extending portions which engage beneath the main leaf.

1,167,514. PNEUMATIC FLANGE-OILER FOR CAR-WHEELS. AUGUST W. OLSEN, Portland, Oreg. Filed Oct. 23, 1914. Serial No. 868,344. (Cl. 184—3.)



1. A device of the character described comprising in combination with a lubricant reservoir and a source of fluid under pressure, a lubricant ejector having an atomizing chamber, a conduit from the reservoir to said chamber, a valve controlling the admission of lubricant into said atomizing chamber, a conduit connecting said ejector with said source of fluid pressure, a valve operated by fluid pressure controlling the admission of fluid from said conduit into said atomizing chamber, means for operating the valve controlling the admission of fluid into said atomizing chamber, in time with said valve controlling the admission of the lubricant into the latter, a valve controlling the passage of fluid through the conduit connecting the ejector with said source of fluid pressure, means for operating the latter valve, said means including a movable member adapted for being operated by impact with a fixed abutment, a discharge conduit leading from the atomizing chamber of the ejector, and a nozzle element at the extremity of such discharge conduit.

2. A device of the character described comprising in combination with a lubricant reservoir and a source of fluid under pressure, a lubricant ejector having an atomizing chamber, a conduit from the reservoir to said chamber, a valve controlling the admission of lubricant into said atomizing chamber, a conduit connecting said ejector with said source of fluid pressure, a valve operated by fluid pressure controlling the admission of fluid from said conduit into said atomizing chamber, means for operating the valve controlling the admission of fluid into said atomizing chamber, in time with said valve controlling the admission of the lubricant into the latter, a valve controlling the passage of fluid through the conduit connecting the ejector with said source of fluid pressure, means for operating the latter valve, a discharge conduit leading from the atomizing chamber of the ejector, and a nozzle element at the extremity of such discharge conduit.

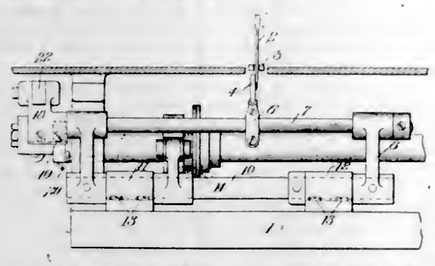
3. A device of the character described comprising in combination with a lubricant reservoir and a source of fluid under pressure, a lubricant ejector having an atomizing chamber, a conduit from the reservoir to said chamber, a valve controlling the admission of lubricant into said atomizing chamber, a conduit connecting said ejector with said source of fluid pressure, a valve operated by fluid pressure controlling the admission of fluid from said conduit into said atomizing chamber, means for operating the valve controlling the admission of fluid into said atomizing chamber, in time with said valve controlling the admission of the lubricant into the latter, a valve controlling the passage of fluid through the conduit connecting the ejector with said source of fluid pressure, means for operating the latter valve comprising a pair of parallel rotatable shafts, a connection causing the rotation of one shaft to reversely rotate the other, a crank arm on each shaft, a pendent arm pivoted on each shaft near such crank-arm, and a connection between the related crank-arm and pendent arm adapted to permit each to have some movement independent of the other, a discharge conduit leading from the atomizing chamber of the ejector, and a nozzle element at the extremity of such discharge conduit.

4. In a device of the character described comprising in combination with a lubricant reservoir and a source of fluid under pressure, a lubricant ejector having an atomizing chamber, a conduit from the reservoir to said chamber, a valve controlling the admission of lubricant into said atomizing chamber, a conduit connecting said ejector with said source of fluid pressure, a valve operated by fluid pressure controlling the admission of fluid from said conduit into said atomizing chamber, means for operating the valve controlling the admission of fluid into said atomizing chamber in advance of said valve controlling the admission of the lubricant into the latter, means for operating the latter valve.

5. In a device of the character described comprising in combination with a lubricant reservoir and a source of fluid under pressure, a lubricant ejector having an atomizing chamber, a conduit from the reservoir to said chamber, a valve controlling the admission of lubricant into said atomizing chamber, a conduit connecting said ejector with said source of fluid pressure, a valve operated by fluid pressure controlling the admission of fluid from said conduit into said atomizing chamber, the valves controlling the admission of lubricant and of the atomizing fluid into said atomizing chamber being alined one over the other and the latter valve having a stem impinging against and lifting the former valve, means for operating the latter valve.

[Claims 6 to 15 not printed in the Gazette.]

1,167,515. LOOPER MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1910. Serial No. 575,943. (Cl. 112—5.)



1. In a sewing machine, the combination of a work support, a needle, a looper located and operated entirely beneath the work support, means for supporting said looper, and means for moving the looper into and out of the needle loop, including devices for bodily moving the looper support so as to carry the looper into the needle loop, and devices for oscillating the looper support, to move the looper to the forward end of its stroke.

2. In a sewing machine, the combination of a needle, a looper located and operated entirely beneath the work support, means for moving said looper bodily forward until the beak thereof has entered the needle loop, and means for subsequently oscillating said looper to carry the same to the forward end of the stroke and into the needle loop.

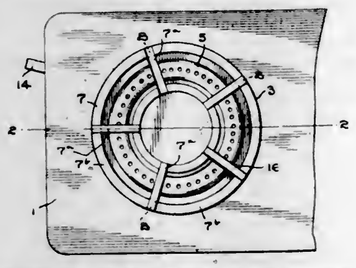
3. In a sewing machine, the combination of a needle, a looper located and operated entirely beneath the work support, means for bodily moving said looper in a rearward direction while in the needle loop for positioning the needle loop for the entrance of the needle, and means for oscillating said looper to retract it from the needle loop.

4. In a sewing machine, the combination of a needle, a looper located and operated entirely beneath the work support, means for moving said looper forwardly into the needle loop and for retracting the same from the needle loop, and means for lifting the beak of the looper as it is retracted from the needle loop.

5. In a sewing machine, the combination of a work support, a needle, a looper movable into and out of the needle loop beneath the work support, a looper supporting shaft on which the looper is mounted, said shaft being so disposed as to cut a vertical plane containing the line of feed, means for oscillating the shaft, and means for bodily moving the shaft in a direction at right angles to its longitudinal axis.

[Claims 6 to 8 not printed in the Gazette.]

1,167,516. HEAT REGULATOR AND DISTRIBUTER. GEORGE W. PEARCE, Philadelphia, Pa. Filed Mar. 16, 1915. Serial No. 14,678. (Cl. 126—215.)



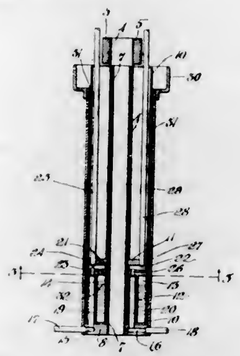
1. The combination with a plate having a circular opening therein, and a depending apron around the opening having an opening in the wall thereof, a door normally closing the opening in the apron, a grid located in the opening, and means constructed to move the door and turn the grid, and supporting means for the grid compelling the latter to elevate when the door is closed, and lower when the door is opened, substantially as described.

2. The combination with a plate having a circular opening therein, and a circular series of cam surfaces located around the opening, a circular grid fitting the opening and having projecting devices supported on the cam surfaces, a circular depending apron around the opening, said apron having an opening in the wall thereof, means compelling the door and grid to move together, whereby the grid is elevated when the door is closed, and lowered when the door is open, substantially as described.

3. The combination with a plate having a circular opening therein, and a circular series of cam surfaces located around the opening, a circular grid fitting the opening and having projecting devices supported on the cam surfaces, a circular depending apron around the opening, said apron having an opening in the wall thereof, a depending device on the grid, a device on the door engaging the device on the grid, whereby the movement of the door to closed position causes the elevation of the grid, and the movement of the door to open position permits the lowering of the grid, substantially as described.

4. The combination with a plate having a circular opening therein, and a circular depending apron around the opening, said apron having an opening in the wall thereof, a door normally closing the opening in the apron, means for moving the door, a grid located in the opening in the plate, said plate having a circular series of cam surfaces supporting the grid, and devices connecting the door and the grid, whereby the movement of the door causes the rotary movement of the grid, substantially as described.

1,167,517. MERCURY SEAL. WALTER PEARSON, Whitman, Mass. Filed May 14, 1914. Serial No. 838,612. (Cl. 137—34.)



1. In a device of the kind described, the combination of a rotatable sewing machine spindle and a support therefor, supply and return steam pipes carried by said spindle, a fixed receptacle surrounding said spindle and the steam pipes carried thereby, and containing a quantity of mercury sufficient in weight to withstand normal steam pressure to be supplied, fixed supply and return steam pipes carried by the spindle support and extending through said mercury receptacle above the normal level of the mercury, means permitting said mercury to flow upwardly outside of the rotatable spindle member and to a considerable height to increase its resistance against excessive steam pressure, and means on said spindle to receive steam from the fixed supply pipe and the rotatable supply pipe and to transfer steam from the rotatable return supply pipe to the fixed supply pipe during rotation of said spindle, whereby a continuous steam circulation is effected.

2. In a device of the kind described, the combination of a rotatable sewing machine spindle and a support therefor, supply and return steam pipes carried by said spindle, a fixed receptacle surrounding said spindle and the steam pipes carried thereby, and containing a quantity of mercury sufficient in weight to withstand normal steam pressure to be supplied, fixed supply and return steam pipes carried by the spindle support and extending through said mercury receptacle above the normal level of the mercury, means permitting said mercury to flow upwardly outside of the rotatable spindle member and to a considerable height to increase its resistance against excessive steam pressure, and means on said spindle to receive steam from the fixed supply pipe and the rotatable supply pipe and to transfer steam from the rotatable return supply pipe to the fixed supply pipe during rotation of said spindle, said last mentioned means consisting in a partition on the rotatable spindle, bored passages in said spindle connecting the rotatable supply pipe with an annular channel inclosing the fixed return pipe, both said annular channels being immersed in the mercury, whereby continuous steam circulation is effected.

1,167,518. MANUFACTURING FROTH FILLINGS. FRITZ PFLEUMER, Dresden, Germany. Filed Aug. 12, 1912. Serial No. 714,611. (Cl. 154—13.)

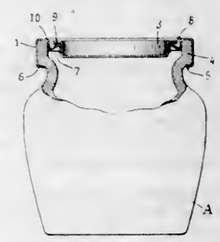
1. The process of manufacturing froth fillings which comprises the steps of vulcanizing vulcanizable material under a hot high gas pressure, then cooling the same under a cool gas pressure at least equal to the gas pressure applied during vulcanization, inserting the cooled filling into a casing, and then heating the filled casing to expand the filling until it occupies the interior of the casing.

2. The process of manufacturing froth fillings which comprises the steps of vulcanizing vulcanizable material under a hot high gas pressure, then cooling the same under a cool gas pressure at least equal to the gas pressure applied during vulcanization, inserting the cooled filling into a casing, heating the casing and subjecting the heated casing to a vacuum to further expand the filling.

3. The process of manufacturing froth fillings which comprises the steps of vulcanizing vulcanizable material under a hot high gas pressure, then cooling the same under a cool gas pressure higher than the gas pressure applied during vulcanization, inserting the cooled filling into a casing, and then heating the filled casing to expand the filling until it occupies the interior of the casing.

4. The process of manufacturing froth fillings which comprises the steps of vulcanizing vulcanizable material under a hot high gas pressure, then cooling the same under a cool gas pressure higher than the gas pressure applied during vulcanization, inserting the cooled filling into a casing, heating the casing and subjecting the heated casing to a vacuum to further expand the filling.

1,167,519. RECEPTACLE AND CLOSURE THEREFOR. ELLIS M. POTTER, New York, N. Y. Filed June 8, 1914. Serial No. 843,624. (Cl. 215—80.)



1. A receptacle having a closure consisting of a metallic cap swaged about the neck of the receptacle and provided with a spring-rimmed opening and a removable spring cap fitting within said opening.

2. An earthenware receptacle having a shoulder about its neck, a metallic cap fitting over the neck of the receptacle and swaged under the shoulder and provided with a central spring-rimmed orifice and a removable spring cap inserted through said orifice.

3. A receptacle having a metallic cap section adapted to be swaged into interlocking engagement with the neck of the receptacle to form a hermetically sealed cap and a gasket interposed between the metal cap and neck of the receptacle, said cap provided with a spring-rimmed opening and a removable metallic spring cap fitting within the opening.

4. An earthenware receptacle having a metallic spring cap formed of a single piece of material and having a central opening and a spring rim surrounding the opening, said cap permanently swaged into engagement with the receptacle and a removable metallic cap fitting the opening.

5. An earthenware receptacle having a metallic cap swaged about its neck, said cap having a central depressed portion and a central spring opening of annular form and a removable spring cap fitting said opening, said cap and depressed portion lying below the upper surface of the receptacle.

[Claim 6 not printed in the Gazette.]

1,167,520. BOILER-CLEANER. EDMUND RANKIN, Lincoln, Ill. Filed Mar. 24, 1915. Serial No. 16,654. (Cl. 122—389.)



1. A boiler cleaner comprising an elongated skimmer extending in the direction of the length of the boiler, floats on opposite sides of the skimmer, and a flexible coupling connecting the skimmer to the boiler wall and an outlet, said coupling comprising a member which is swiveled to turn on an axis coinciding with the longitudinal axis of the boiler, a hollow arm pivoted to said member to swing vertically, and a pivotal connection between the arm and the skimmer to allow the latter to swing vertically relative to the arm.

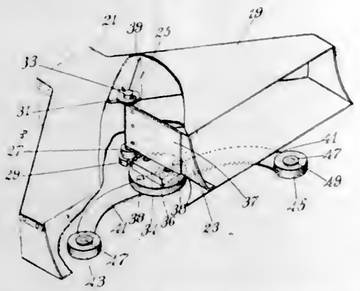
2. A boiler cleaner comprising an elongated skimmer extending in the direction of the length of the boiler, floats on opposite sides of the skimmer, and a flexible coupling connecting the skimmer to the boiler wall and an outlet, said coupling comprising a member connected to the outlet, a member swiveled to said member to turn on an axis coinciding with the longitudinal axis of the boiler, a hollow arm pivoted to the second-mentioned member to swing vertically, a member pivoted to the arm to swing vertically relative thereto, and a connection between the last-mentioned member and the skimmer.

1,167,521. ABRADING-MACHINE. WILLIAM A. REED, Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 26, 1911. Serial No. 635,446. (Cl. 51—17.)

1. A machine of the class described having an operating tool and an exhaust pipe arranged to withdraw waste material caused by the operation of said tool in combination with a valve for controlling said pipe, means for partially opening said valve, and a member of sufficient area when acted upon by the exhaust current to enable it to actuate the valve and movable with said valve into the path of the exhaust current whereby the action of said current upon said member completes the opening of said valve.

2. A machine of the class described having a plurality of operating tools, an exhaust pipe, and passages leading from said tools to said pipe, in combination with valves for closing said passages, and a member movable to open and close said valves, said member being located to be engaged by the work as it is presented to the operating tools.

3. A machine of the class described having two operating tools, an exhaust pipe through which a current of air is drawn and passages leading from said tools to said pipe, in combination with valves one of which normally extends across one of the passages while the other extends approximately in the direction of the exhaust current, and means for moving said valves angularly to a position in which the exhaust current will tend to reverse the effective positions of the valves.

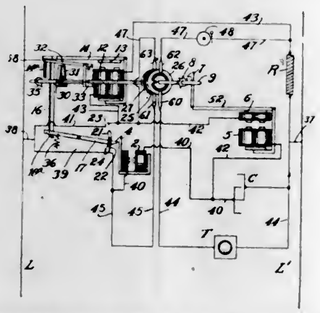


4. A machine of the class described having two tools, an exhaust pipe through which a current of air is drawn, a hood partially inclosing said tools, said hood being divided by a partition to form a separate passage leading from each tool to the exhaust pipe, two valves rigidly connected, arranged at an angle to each other and angularly movable about an axis located in the plane of the partition, one valve being normally held in closed position and the other in open position against the partition by the exhaust current, and means operated by presentation of a piece of work to one of the tools for moving said valves to a position in which the current will act to close the valve which was previously open and to hold open the valve which was previously closed.

5. A machine of the class described having two tools, an exhaust pipe through which a current of air is drawn, said pipe having forks leading to said tools, and two valves arranged at an angle to each other the angular relation of said valves to each other and to the forks being such that when one valve is closed the other presents its surface of smallest dimension to the action of the exhaust current.

[Claims 6 to 12 not printed in the Gazette.]

1,167,522. ELECTROMECHANICAL SELECTING MECHANISM FOR TELEPHONES. WILLIAM CUMSTON RICHARDSON, Boston, Mass. Filed July 26, 1912. Serial No. 711,726. (Cl. 179—31.)



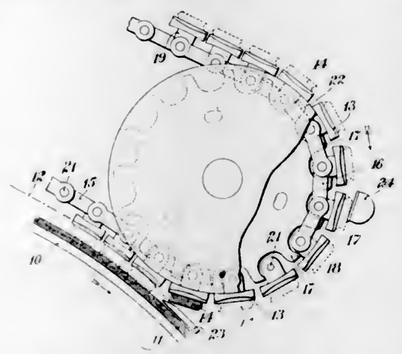
1. In a metallic telephone circuit, a plurality of telephone stations in said metallic circuit; a plurality of bridges at each station; a telephone on one of said bridges at each station; another bridge at each station having means in circuit for cutting out the telephone bridges and cutting in other bridges located at each station having in circuit selective and signaling devices; means in said selective and signaling devices for selecting and cutting into circuit the desired telephone or telephones and signaling the stations where telephones are cut in, all said devices being operable from a central station.

2. In a telephone circuit, a plurality of telephone stations in said circuit; a plurality of bridges at each station; a telephone in one of said bridges; means in another of said bridges for cutting the telephone bridge out of circuit and cutting in a bridge having selective devices in circuit and another bridge having a signaling device in circuit; means in the bridge having selective devices for selecting the telephone at the station in which said bridge is located; and means in said selecting bridge for cutting the bridge of the telephone selected into the circuit.

3. In a metallic telephone circuit, a plurality of telephone stations; a plurality of bridges capable of being cut in or out across said circuit one of which is normally in circuit; a telephone in one of said bridges at each station; another bridge at each station having means in circuit for cutting out the telephone bridge and cutting in a selective and a signaling bridge at each station; means in circuit in the selective bridges for selecting and cutting in any one or more telephone bridges in said metallic telephone circuit; means in each signaling bridge for signaling the station selected.

4. In a party line telephone system, main line circuits; a signaling circuit and a telephone circuit at each of a plurality of telephone stations; means operated by a current of very weak amperage for opening the telephone circuit and closing the signaling circuit; and means operated by a current of stronger amperage for selecting and signaling the subscriber, all operable whether the telephone receivers at one or more stations are on or off the hooks.

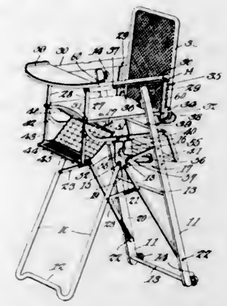
1,167,523. CARDING-ENGINE. HENRY J. ROGERS, Lowell, Mass., assignor to Albert H. Morton and J. Munn Andrews, a Copartnership doing business as Morton & Andrews, Lowell, Mass. Filed Oct. 19, 1914. Serial No. 867,398. (Cl. 19—15.)



A carding engine having, in combination, a main cylinder, revolving top flats, a top flat stripping comb, a top flat sprocket and a top flat disk, said sprocket having teeth the advancing corners of which project forward and engage the top flats, thereby holding them in proper positions during passage by the top flat stripping comb.

1,167,524. CONVERTIBLE CHAIR. GEORGE W. RUNDLE, Spokane, Wash. Filed Nov. 23, 1914. Serial No. 873,494. (Cl. 155—12.)

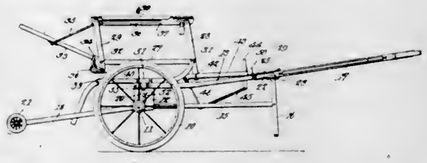
1. A convertible chair comprising a seat, supporting members carrying the seat, front and rear legs pivotally connected to said members, the rear legs carrying wheels and being adjustable into horizontal position to provide a wheeled support for the seat, a rearward and downwardly extending prop member extending from the seat and engaging the rear legs when in horizontal position, and pivoted brace bars extending between the supporting members and the lower ends of the rear legs, said brace bars extending between the supporting members and the front portions of the rear legs when the latter are in horizontal position.



2. A convertible chair comprising a seat, a yoke connected to the seat and extending beneath the same, said yoke having a rearward and downwardly extending portion, supporting members to which the yoke is connected, front and rear legs pivotally connected to the supporting members, the rear legs carrying wheels and being adjustable into horizontal position to provide a wheeled support for the chair, in which position of the rear legs the aforesaid downwardly extending portion of the yoke engages the rear portion of said legs to serve as a prop for the seat, and pivoted brace bars extending between the supporting members and the lower ends of the rear legs, said brace bars extending between the supporting members and the front portions of the rear legs when the latter are in horizontal position.

3. A convertible chair comprising supporting members having vertical slots and top horizontal flanges provided with slots, a seat, a support for the seat having plates which pass through the slots of the aforesaid flanges and have outstanding pins working in the first-mentioned slots, hooks carried by the supporting members and engageable with the pins, and legs carried by the supporting members.

1,167,525. SULKY. GEORGE W. RUNDLE, Spokane, Wash. Filed Nov. 23, 1914. Serial No. 873,495. (Cl. 21—83.)



1. A sulky comprising a running gear, a seat having front and rear pivoted uprights and arm rests pivotally connected to the upper ends of the uprights, a foot rest, bars supporting the foot rest and pivotally connected to the lower ends of the front uprights, a pivoted tongue on the running gear, and a connection between the tongue and the aforesaid bars for folding the uprights and the arm rests of the seat.

2. A sulky comprising a running gear, a seat having front and rear pivoted uprights and arm rests pivotally connected to the upper ends of the uprights, a back rest pivoted to the seat, a connection between the back rest and the arm rests, a foot rest, bars supporting the foot rest and pivotally connected to the lower ends of the front uprights, a pivoted tongue on the running gear, and a connection between the tongue and the aforesaid bars for folding the uprights, the arm rests and the back rest of the chair.

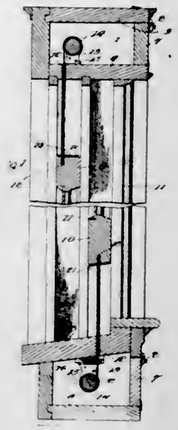
3. A sulky comprising a running gear, a seat having front and rear pivoted uprights and arm rests pivotally connected to the upper ends of the uprights, horizontal bars connected to the lower ends of the front uprights, a foot rest carried by the forward ends of said bars and having a rearwardly extending portion, a connection between said rearwardly extending portion and the rear ends of the horizontal bars, a pivoted tongue on the running gear, and a connection between the tongue and the horizontal bars for folding the uprights and the arm rests of the seat.

4. A sulky comprising a running gear, a seat removably mounted on the running gear, and an adjustable foot rest carried by the seat, and having separate foot-engaging parts, said foot rest being adjustable to bring either foot-engaging part into position for use.

5. A sulky comprising a running gear, a seat removably mounted thereon, and a foot rest pivotally connected to the seat, and having angularly connected foot-engaging parts, said foot rest being adjustable to bring either foot-engaging part into position for use.

[Claims 6 to 9 not printed in the Gazette.]

1,167,526. WINDOW-SCREEN. FRITZ SCHEEREN, Ford City, Pa. Filed Feb. 25, 1915. Serial No. 10,561. (Cl. 156—39.)

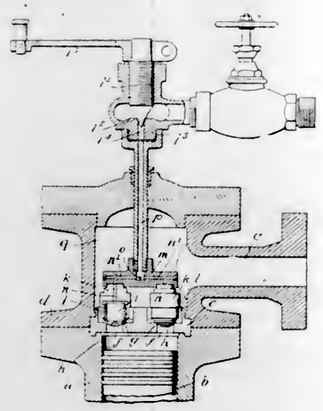


1. The combination of a window sash having a groove formed in one end and having a keyway in the external surface of said end disposed at an angle to said groove and intersecting the same, a screen having its edge inserted in said groove and provided with an opening adapted to register with said keyway, a key fitted in said keyway and extending through said opening, a keeper secured upon the sash over said key, and means for maintaining the screen in a taut condition.

2. The combination of a window frame, a sash slidable therein, bearings upon the frame, a roller having pintles adapted to engage said bearings, a spring connecting the pintle and the roller, and means for winding the spring and also locking the same to the roller whereby to prevent unwinding of the spring.

3. The combination of a window frame, a sash slidable therein, bearings upon the frame, a roller having pintles in its ends adapted to engage said bearings, a screen secured to the roller and connected to the sash, a spring wound about the pintle and having one end connected with the roller, and a key constructed to have angular engagement with the pintle whereby the spring may be wound and provided with a holding member adapted to engage the roller whereby to lock the spring to the roller and prevent unwinding thereof.

1,167,527. ENGINE-GOVERNOR WITH AUTOMATIC INLET-VALVE. WILHELM SCHMIDT, Cassel-Wilhelmshöhe, Germany, assignor to Schmidt'sche Heissdampf-Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed May 7, 1914. Serial No. 836,859. (Cl. 121—45.)



1. In an engine cylinder provided with a piston, a plurality of similar automatic inlet valves in either cylinder head each of said valves being adapted to be opened by compression pressure and to be closed by the throttling of the incoming steam which is produced by the forwardly moving piston.

2. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder, a plurality of inlets opening from said inlet chamber into said cylinder, and an outlet, of controlling means for said inlet openings said means comprising a plurality of valves corresponding to the plurality of openings, means for leading steam from the inlet chamber to both sides of each valve, and a steam outlet from the outer side of each valve.

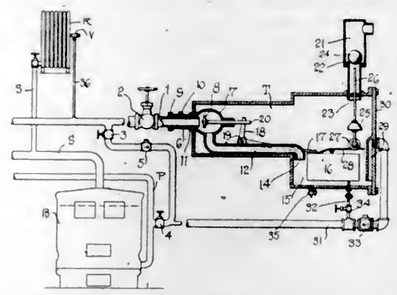
3. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder, a plurality of inlets opening from said inlet chamber into said cylinder, and an outlet, of controlling means for said inlet openings said means comprising a plurality of valves corresponding to the plurality of openings, means for leading steam from the inlet chamber to both sides of each valve, a steam outlet from the outer slides of said valves, and means for regulating the steam pressure on said outer sides of said valves.

4. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder, a plurality of inlets opening from said inlet chamber into said cylinder, and an outlet, of controlling means for said inlet openings said means comprising a plurality of valves corresponding to the plurality of openings, means for leading steam from the inlet chamber to the inner sides of said valves, a regulating chamber for each valve in which said valve moves, a contracted passage between said regulating chamber and the inlet chamber, and a steam outlet from the regulating chamber.

5. The combination, with an engine cylinder provided with a piston, an inlet chamber at the end of said cylinder, a plurality of inlets opening from said inlet chamber into said cylinder, and an outlet, of controlling means for said inlet openings said means comprising a plurality of valves corresponding to the plurality of openings, means for leading steam from the inlet chamber to the inner sides of said valves, a regulating chamber for each valve in which said valve moves, the walls of said chamber being spaced from the valve so as to constitute a passage between said regulating chamber and said lower side of the valve, and a steam outlet from the regulating chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,167,528. HEATING SYSTEM. CLARENCE R. SHAW, Marine City, Mich. Filed Mar. 13, 1915. Serial No. 14,270. (Cl. 137—101.)



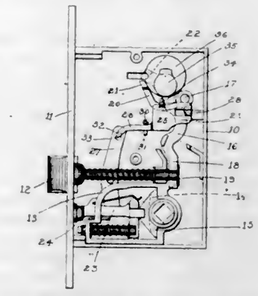
1. A system of the character described including, in combination with a boiler, a steam pipe and a return pipe, a tank positioned above the water-line of the boiler and in communication with the return pipe, said tank having a well portion formed in one end thereof, a valve within the tank for controlling the communication with the return pipe, a conduit leading from the return pipe into the well, a float within the well and having connection with the valve for automatically operating the same, a relief valve in communication with the tank, said relief valve being under control of the float, a siphon in communication with the well and with the return pipe, and a check valve interposed in the siphon and serving to prevent retrograde flow therethrough.

2. A system of the character described including, in combination with a steam pipe and a return pipe, a tank, said tank having a well formed in one end thereof, a branch pipe in communication with the return pipe and projecting with the tank, a casing telescopically engageable with the return pipe and extending within the tank, a conduit leading from the casing into the well, the inner extremity of said branch pipe serving as a valve seat, a valve mounted for reciprocal movement within the casing and coacting with the valve seat, a float positioned within the tank, an operative connection between the float and the valve whereby said valve is moved upon the raising or falling of the float, a relief valve in communication with the tank, means under control of the float for operating the relief valve, said last named means being capable of limited independent operation, a siphon in communication with the well and return pipe, and a check valve interposed in the siphon and serving to prevent retrograde flow therethrough.

3. A system of the character described including, in combination with a boiler, a steam pipe and a return pipe, a tank positioned above the water-line of the boiler and in communication with the return pipe, a valve within the tank for controlling the communication with the return pipe, a float within the tank and having connection with the valve for automatically operating the same, a relief valve in communication with the tank, spaced seats therein, a ball valve coacting with the uppermost seat, a stem movable vertically within said valve, a second valve member carried by the stem and coacting with the lowermost valve seat, the upper extremity of said stem being arranged for contact with the ball valve to unseat upon upward movement of the stem and at a predetermined period before the second valve operatively engages the lower valve seat, and means carried by the float for yieldingly engaging the lower extremity of the stem as and for the purpose set forth.

4. A system of the character described including, in combination with a steam pipe and a return pipe, a tank, a branch pipe in comunication with the return pipe and projecting within the tank, a casing telescopically engageable with the return pipe and extending within the tank, the inner extremity of the branch serving as a valve seat, a valve mounted for reciprocal movement within the casing and coacting with the valve seat, a float positioned within the tank, an operative conection between the float and the valve whereby said valve is moved upon the raising or falling of the float, a relief valve in communication with the tank, and means under control of the float for operating the relief valve, said last named means being capable of limited independent operation.

1,167,529. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Jan. 29, 1912. Serial No. 674,040. (Cl. 70—46.)



1. In a lock, night latch mechanism manually operable from the exterior of the lock in one direction only, and means for operating said night latch mechanism in the other direction by a key; substantially as described.

2. In a lock, having a face plate, a latch bolt, and manually operable means for retracting the latch bolt, the combination of night latch mechanism, manually operable from the face of the lock in one direction only, and means for operating said night latch mechanism in the other direction by a key; substantially as described.

3. In a lock, the combination of a latch bolt, manual retracting means therefor, night latch mechanism manually operable from the exterior of the lock solely in such a direction as to dog said retracting means, and a key for releasing said night latch mechanism; substantially as described.

4. In a lock, the combination of a case having a face plate, a latch bolt projecting through said face plate, manual retracting means for said bolt, night latch mechanism mannally operable from the face plate, only in such a direction as to dog said retracting means, and a key for releasing said retracting means from said night latch mechanism; substantially as described.

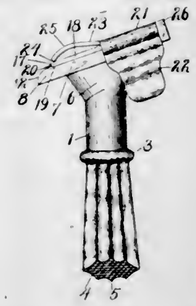
5. In a lock, the combination of a latch bolt, retracting means therefor, night latch mechanism associated with said retracting means, and movable into dogging position from the face of the lock, and means for releasing said night latch mechanism only by a key inserted at the inside of the door; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,167,530. SAFETY-RAZOR. JOHN RUSSELL SHEARMAN, Indianapolis, Ind. Filed Mar. 13, 1911. Serial No. 614,186. (Cl. 30—12.)

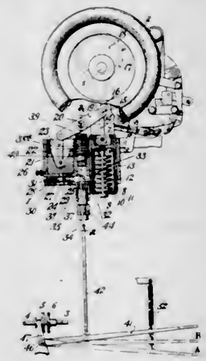
1. In a safety razor, a blade supporting structure including a guard provided with comb teeth each having a convexly curved surface on the upper side thereof, a blade having a shaving edge projecting over and along the said teeth, and a clip cap member having the rearward portion adapted to engage the said supporting structure to hold said blade in place and including a forward resilient portion engaging the forward portion of the blade and co-extensive therewith in length whereby the blade is allowed to flex.

2. In a safety razor, a blade supporting structure including a guard provided with comb teeth each having a convexly curved surface on the upper side thereof, a blade having a shaving edge projecting over and along said teeth, and a clip cap member having a rearward portion substantially equal to one-half the width of said blade and engaging said blade and supporting structure to retain the former in position, said clip cap member



including a forward resilient portion engaging the blade adjacent the edge thereof and extending the entire length of said edge whereby the blade is allowed to flex.

1,167,531. STOP MECHANISM. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 18, 1911. Serial No. 666,559. (Cl. 74—46.)



1. A stop mechanism having, in combination, a shaft, mechanism for arresting the forward rotation of said shaft and for imparting a return movement thereto and a pneumatically controlled dash-pot acting through a material interval during the return movement of said shaft to retard the return movement of the shaft and coöperating with said mechanism to cause the shaft to rotate at slow speed to stopping position.

2. A stop mechanism having, in combination, a shaft, mechanism for arresting the forward rotation of said shaft and for imparting a return movement thereto and a dashpot connected with the shaft and acting through a material interval during the return movement of said shaft to retard the return movement of the shaft and cooperating with said mechanism to cause the shaft to rotate at slow speed to stopping position.

3. A stop mechanism having, in combination, a shaft, mechanism acting to arrest the forward rotation of said shaft, to impart a reverse rotation thereto and finally to bring the shaft to rest at a constant position, and a pneumatically controlled dash-pot acting through a material interval during the reverse rotation of said shaft to retard the reverse rotation of the shaft and coöperating with said mechanism to cause the shaft to rotate at slow speed to stopping position.

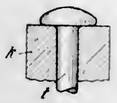
4. A stop mechanism having, in combination, a shaft, mechanism to arrest the forward rotation of said shaft and to impart a return movement thereto comprising a

spring arranged to be placed under progressively increasing tension by the further forward rotation of the shaft after the stop mechanism is thrown into operation to check the forward rotation of the shaft and acting to impart by its recoil a return movement to the shaft and a pneumatically controlled dash-pot acting through a material interval during the return movement of the shaft to retard the return movement of the shaft and coöperating with said spring to cause the shaft to rotate at slow speed to stopping position.

5. A stop mechanism having, in combination, a shaft, mechanism to arrast the forward rotation of the shaft and to impart a reverse rotation thereto comprising a spring arranged to be placed under progressively increasing tension by the forward rotation of the shaft after the stop mechanism is thrown into operation and acting to impart by its recoil a reverse movement to the shaft and a dashpot connected with the shaft and acting through a material interval during the reverse rotation of the shaft to retard the reverse rotation of the shaft and coöperating with said spring to cause the shaft to rotate at slow speed to stopping position.

[Claims 6 to 22 not printed in the Gazette.]

1,167,532. PROCESS OF MANUFACTURING TUNGSTEN ANTICATHODES FOR RÖNTGEN TUBES. OTTO ARCHIBALD SIMPSON, Charlottenburg, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed Feb. 4, 1913. Serial No. 746,241. (Cl. 250—35.)



1. A process of making tungsten anti-cathodes for Röntgen tubes, consisting in melting an annular piece of tungsten formed of powdered tungsten compressed together and fitted on the end of a drawn rod of tungsten and continuing the process until the said piece and rod become welded together, and in allowing the molten mass so formed to cool freely.

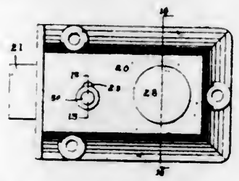
2. A process of making tungsten anti-cathodes for Röntgen tubes, consisting in melting a hole into a plate of tungsten formed of tungsten powder compressed together, in fitting in the hole the tapered end of a drawn rod of tungsten, in heating said plate until the plate is melted and welded to the rod, and in allowing the molten mass so formed to cool freely.

3. The process of manufacturing an anti-cathode for Röntgen tubes which consists in compressing tungsten metal powder to form a plate, in providing said plate with a hole, in inserting a stem into said hole, and in fusing said stem to said plate.

4. The process of manufacturing an anti-cathode for Röntgen tubes which consists in compressing tungsten metal powder and fusing the same to form an integral plate, in providing a hole in said plate, in inserting a tungsten rod into said hole with its end protruding beyond the surface of said plate, in fusing the rod and plate together, and in permitting the fused mass composed of the plate and rod end to become chilled while its surface is curved under the surface tension of the metal.

1,167,533. LOCK. WILLIAM E. SPARKS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 17, 1914. Serial No. 832,587. (Cl. 70—29.)

1. In a lock, a case, a latch bolt therein having a head and a stem, a guide member for the latch bolt stem, a spring embracing said stem and reacting against said guide member to push the bolt head out of the case beyond the normal latching position, a hub for retracting the bolt, means acting on the hub to hold the bolt in latching position in opposition to said spring, and means separate from said hub to release said holding means from the exterior of the case and thereby permit the free excursion of the bolt to an abnormally protracted position; substantially as described.



2. In a lock, a case, a latch bolt therein, a spring acting directly on the latch bolt to protract the same beyond the normal latching position, a hub for retracting the bolt, a lever pivoted to the case and acting on the hub to hold the bolt in latching position in opposition to said spring, and means separate from the hub to release said holding means from the exterior of the case and thereby permit a free excursion of the bolt to an abnormally protracted position; substantially as described.

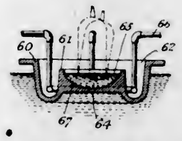
3. In a lock, a case, a latch bolt therein having a head and a stem, a guide member for the latch bolt stem, a spring embracing the stem between the bolt head and said guide member and tending to hold the latch bolt in an abnormally protracted position, a cross-head on the rear end of the stem, a hub for engaging said cross-head and retracting the bolt, means acting on the hub to hold the latch bolt in latching position in opposition to said spring, and means separate from the hub to release said holding means from the exterior of the case and thereby permit a free excursion of the bolt from latching position to an abnormally protracted position; substantially as described.

4. In a lock, a case, a latch bolt therein, a spring tending to push the latch bolt out of the case beyond the normal latching position, a hub for retracting the bolt, a lever pivoted to the case intermediate of the ends of said lever and adapted to act at one end on the hub to hold the latch bolt in latching position in opposition to said spring, and an operating button on the other end of said lever for releasing the bolt from latching position; substantially as described.

5. In a lock, a case, a latch bolt therein, a spring tending to push the latch bolt out of the case beyond the normal latching position, a hub for retracting the bolt, means acting on the hub to hold the latch bolt in latching position in opposition to said spring, means separate from the hub to release said holding means from the exterior of the case, and means operating automatically on the release of said holding means for engaging the bolt head and thereby giving the bolt a double-throw; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,167,534. GLASS-WORKING APPARATUS. ARTHUR E. SPINASSE, Mount Vernon, Ohio. Filed Oct. 1, 1909. Serial No. 520,495. (Cl. 49—61.)



1. In combination with a deep glass tank, a device for segregating a quantity of glass without disturbing its horizontal stratification, said device being provided with means whereby temperature controlling agents may be brought into effect at desired or predetermined points in the periphery of the said device, for the purpose of controlling or modifying the viscosity of the segregated glass at such points.

2. In combination with a deep glass tank, a device for segregating without horizontal disturbance a mass of glass, said device having channels extending below the surface of the glass, whereby temperature controlling means may be applied to effect the viscosity of the segregated mass of glass at will, at points below the surface of said segregated mass.

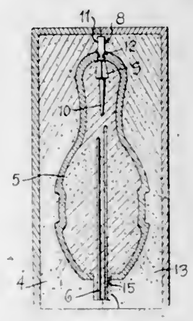
3. In combination with a deep glass tank, a ring adapted to float in the glass in said tank and to segregate a mass of said glass without permitting disturbance of its horizontal relation, said ring being provided with channels or conduits extending below the surface of the glass whereby temperature affecting agents may be applied at desired points in the periphery of the ring to modify the temperature of the ring and hence affect the viscosity of the glass.

4. In combination with a deep glass tank, a ring adapted to float in the glass and to segregate without horizontal disturbance a portion from the body of said glass, said ring being provided with a border extended above the surface of the glass and adapted to form an anchorage for a drawing cylinder, and means for modifying the temperature of said ring at desired points in order to control the thickness of the walls of the drawing cylinder at these points and thereby procure the draw of a cylinder having walls of uniform thickness.

5. In combination with a deep glass tank, a ring adapted to float in said tank and segregate a portion of the glass in said tank, a border forming a drawing ledge on said ring, and said ring having an opening in the bottom thereof of a size sufficiently small to aid in effecting the commingling of imperfectly mixed portions of the body of the glass as they pass through said ring.

[Claims 6 to 12 not printed in the Gazette.]

1,167,535. MEANS FOR MAKING BOWLING-PINS. RICHARD E. STANLEY, Pittsburgh, Pa., assignor of one-half to Charles Lutz, Pittsburgh, Pa. Filed Aug. 14, 1915. Serial No. 45,519. (Cl. 22—131.)

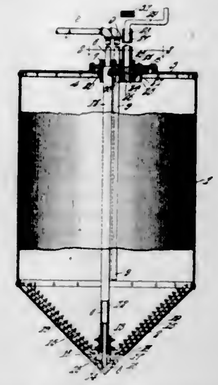


Means for making hollow cast metal bowling pins including a sand core provided with a print extension on its base, a longitudinal rod embodied in the core and extending through the extension and into the core body, and a lug extending into the head of the core and terminating in longitudinal spaced relation to the core rod, said lug having an extension projecting beyond the head of the core and provided with a V-shaped groove to receive the poured metal, said extension of the lug and the print extension of the core supporting the core within the mold in spaced relation to the walls thereof.

1,167,536. AGITATING MECHANISM. JOHN J. TOKHEIM, Cedar Rapids, Iowa. Filed Feb. 20, 1915. Serial No. 9,720. (Cl. 91—57.)

1. In a device of the character described, a tank, a suction pipe extending downwardly therein, a tubular agitator shaft journaled upon the suction pipe and carried thereby, and an agitator carried by the shaft.

2. In a device of the character described, a tank, a suction pipe extending downwardly therein to the bottom thereof, a tubular agitator shaft journaled upon and supported by the said pipe, and an agitator carried by the lower end of the said shaft and coöperating with the bottom of the tank.



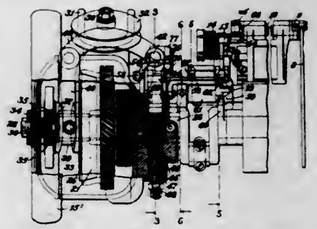
3. In a device of the character described, a tank having an inverted conical bottom, a suction pipe extending downwardly into the tank to the apex of the bottom, a tubular agitator shaft journaled upon and carried by the pipe, and an agitator carried by the lower end of the shaft and cooperating with the conical bottom of the tank.

4. In a device of the character described, a tank having an inverted conical bottom, a suction pipe extending downwardly into the tank to the apex of the bottom, a tubular agitator shaft journaled upon and carried by the pipe, and an agitator embodying an arm pivoted to the lower end of the shaft to swing to and from the shaft and to bear against the bottom of the tank.

5. In a device of the character described, a tank having an inverted conical bottom, a suction pipe extending downwardly into the tank and having its lower end seated upon the apical portion of the bottom and provided with an inlet, a rotary tubular agitator shaft journaled upon the said pipe, a sleeve attached to the lower end of the shaft, a member carried by the lower end portion of the said pipe for supporting the said sleeve, and agitator arms pivoted to the said sleeve to swing to and from the shaft and to bear against the tank bottom.

[Claims 6 to 9 not printed in the Gazette.]

1,167,537. DRIVING AND STOPPING MECHANISM. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 25, 1911, Serial No. 656,685. Divided and this application filed Feb. 18, 1915. Serial No. 9,017. (Cl. 74—46.)



1. A driving and stopping mechanism, having, in combination, a shaft, high speed driving mechanism therefor, low speed driving mechanism therefor, arranged to drive the shaft in the same direction as the high speed mechanism, means under the control of the operator for shifting

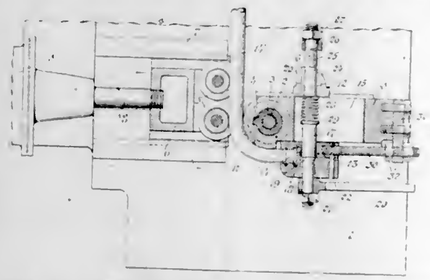
to the low speed driving mechanism at a certain predetermined time in the rotation of the shaft, and means for stopping the shaft while it is being driven by the low speed mechanism.

2. A driving and stopping mechanism, having, in combination, a shaft, high speed driving mechanism therefor, low speed driving mechanism therefor, arranged to drive the shaft in the same direction as the high speed mechanism, means under the control of the operator operating automatically to shift to the low speed driving mechanism at a certain predetermined time in the rotation of the shaft, and means for stopping the shaft while it is being driven by the low speed mechanism.

3. A driving and stopping mechanism, having, in combination, a shaft, high speed driving mechanism therefor, speed reducing and driving mechanism therefor, arranged to drive the shaft in the same direction as the high speed mechanism, and means under the control of the operator for shifting to the speed reducing and driving mechanism at a predetermined time in the rotation of the shaft and for thereafter throwing said speed reducing and driving mechanism out of operation.

4. A driving and stopping mechanism, having, in combination, a shaft, high speed driving mechanism therefor, speed reducing and driving mechanism therefor, arranged to drive the shaft in the same direction as the high speed mechanism, and means under the control of the operator for shifting to the speed reducing and driving mechanism and for thereafter throwing said speed reducing and driving mechanism out of operation said means consisting solely of a normally inoperative cam driven by the shaft and connections operated by the cam.

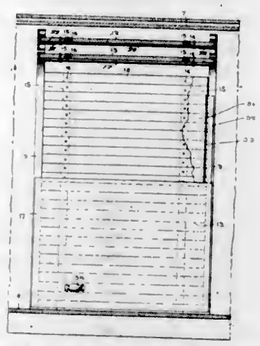
1,167,538. PIPE-BENDING DIE. CHARLES H. TRUE, Hammond, Ind., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 1, 1914. Serial No. 854,428. (Cl. 153—40.)



In a pipe bending die of the class described and adapted to be revolved about an axis, means for holding the end of the pipe said means comprising a jaw member and a notched cam member slidably engaged with the die, a clamp operating shaft passing slidably and rotatably through said jaw and cam members, a clamp member and a riding bar fixed to said shaft and the length of said shaft being such that when the riding bar is free of the notches the clamp and jaw members are drawn together while when the riding bar is at the bottom of the notches the clamp member and jaw member are separated so as to admit the end of the pipe, means for rotating said shaft, and means engaging both the die and the pipe end holding means whereby the latter may be moved along the die with respect to the axis thereof.

1,167,539. GRAIN-CAR DOOR. CHARLES F. WALTER, Quenemo, Kans. Filed Feb. 12, 1914. Serial No. 818,223. (Cl. 20—32.)

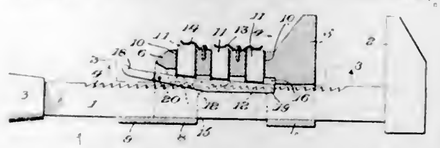
1. In a door construction, a pair of channel-shaped guides, said guides being forked at their upper ends to form upper and lower guide members, an upper and lower flexible door section adapted to move in said guides to form a closure, a metallic lining on the upper door section having a hinged portion to extend over the inner faces of the channels when in lowered position and to move out of engagement with said inner faces when in elevated position whereby the tension of said lining will direct the upper scetion into said upper channel, and a similar lining on the lower door section having a fixed edge engaging the inner face of the channels whereby the lower door section will be guided into the lower guide members when in elevated position.



2. In a door structure, a pair of channel-shaped guides terminating at their upper ends in an upper and lower guide member, a two-part flexible door slidable in said guides, a lining on the inner face of one section of the door, the tension of which is adapted to direct said sections into the uppermost guide member, and a similar lining on the other door member adapted to guide said latter door section into the lowermost guide member when said sections are in elevated position.

3. A door structure comprising a pair of channel-shaped guides, said guides being bifurcated at their upper ends to form upper and lower guide members, a door comprising an upper and lower section, a metallic lining on the inner face of said upper door section adapted to direct tension thereagainst and guide the same into the upper guide members, wings hingedly secured to the edges of said lining adapted to extend over the inner faces of the guide members when in lowered position, a similar lining on the lower door section having fixed edges projecting over the inner faces of the guides adapted to move the lower door section into the lowermost guide members, and means to normally retain the door sections in their respective elevated positions.

1,167,540. WRENCH. HARRY G. WHITE, Templeton, Pa. Filed Jan. 27, 1915. Serial No. 4,755. (Cl. 81—145.)



1. In a tool of the character specified, the combination of a main shank toothed along its inner face and provided with a jaw, a movable jaw slidable upon the shank and having a shank adjacent the toothed face of the main shank, a plurality of dogs mounted upon the shank of the movable jaw and toothed at their inner ends to engage the teeth of the main shank at different stages, and an operating lever pivotally mounted upon the inner side of the shank of the movable jaw between the same and the main shank and at one side of the main shank and adapted to engage the dogs.

2. A tool of the character specified comprising a main shank provided with a jaw and having a face formed with teeth, a movable jaw slidable upon the main shank and provided with a shank in which is formed transversely a plurality of openings, dogs mounted in the openings of the movable shank and having their inner ends toothed and arranged to engage the toothed face of the main shank at different stages, said dogs having their inner ends cut away at one side, springs normally pressing the dogs inward, and a lever pivoted to the movable shank and comprising a finger piece projecting from one end of the same and an arm engaging the cut away portions of the dogs and extending along the toothed face of the main shank at the sides of the same.

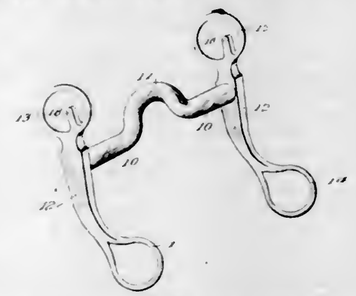
3. A tool of the character specified comprising a main shank toothed along one face and provided with a fixed jaw, a movable jaw slidable upon the main shank and formed with a shank extending along the toothed face of the main shank and provided at intervals with transverse openings and having a longitudinal recess at its inner face intersecting the transverse openings, dogs arranged in the transverse openings of the movable shank and having their inner ends cut away at one side to register with the longitudinal recess, and an operating lever pivoted to the movable shank and disposed in the longitudinal recess of such shank and engaging the cut away portions of the dogs, the wall of said recess limiting the movement of the free end of the lever away from the main shank.

4. In a tool of the character described, a main shank toothed along one face and provided with a jaw, a movable jaw slidable upon the main shank and formed with a shank extending along the toothed face of the main shank and formed with transverse openings and a longitudinal recess in one inner side face intersecting with the inner ends of the transverse openings, said shank having a longitudinal flange at one side overlapping the toothed face of the main shank, dogs mounted in the openings of the movable shank and having their inner ends cut away to register with the longitudinal recess of the movable shank, and an operating lever pivotally mounted upon the movable shank and disposed in the longitudinal recess thereof and engaging the cut away portions of the dogs, said lever being disposed at the side opposite the said longitudinal flange and arranged thereat to overlap the toothed face of the main shank.

5. In a tool of the character described, a main shank having a toothed face and provided with a jaw, a movable jaw slidable upon the main shank and provided with a shank extending along the toothed face of the main shank and formed with a plurality of transverse openings, dogs mounted in the transverse openings of the movable shank, springs attached to the outer face of the movable shank and overlapping the transverse openings and bearing upon the outer ends of the dogs to retain the same in place and normally exerting a pressure to move the dogs inward, and a lever mounted upon the movable shank and disposed between the same and the main shank and adapted to engage the inner ends of the dogs to press the same outward.

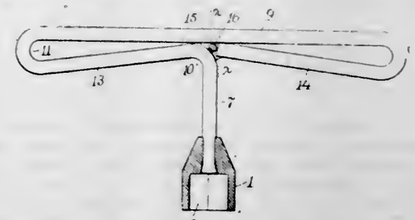
[Claim 6 not printed in the Gazette.]

1,167,541. BRIDLE-BIT. JAMES O. BASS, Tulia, Tex. Filed Feb. 20, 1915. Serial No. 9,618. (Cl. 54—7.)



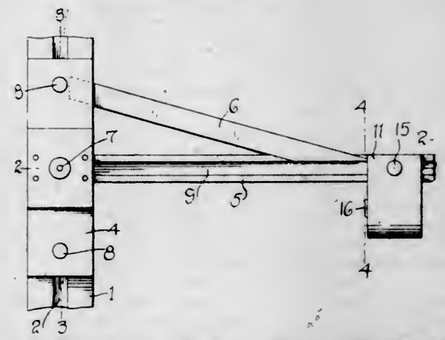
A bridle bit including cheek bars connected near one end by a mouth bar, each of said cheek bars having a loop at one end adapted to receive the cheek straps and the curb members and with means at their other ends adapted to receive the driving reins, and a stop extending into each of the curb receiving loops and directed in substantial alinement with the cheek bars, whereby the curb members are prevented from contacting with the lips of a horse when strain is applied to the driving reins.

1,167,542. SOCKET-WRENCH. WARREN S. BELLOWS, Worcester, Mass. Filed Oct. 26, 1912. Serial No. 727,983. (Cl. 81—177.)



A wrench comprising a socket member, and a length of metal rod bent to compose four sections, one thereof being a shank-section rigid with said socket member, the second being bent out nearly at right angles to said shank-section, the third being in the same plane as said shank and second section and at right angles to the shank, and a fourth section bent inward to the shank from the third section, and means for fastening the end of the fourth section from dislodgement out of the plane of said sections.

1,167,543. DRAFTING IMPLEMENT. JAMES H. CLENDENNING, Gary, Ind. Filed Apr. 3, 1915. Serial No. 18,983. (Cl. 33—26.)



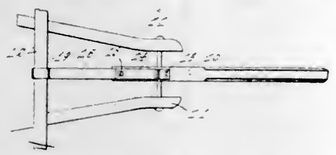
1. A device of the character described comprising a member provided with a groove, a rib slidably engaged within said groove, a head pivotally engaged with said rib, a blade projecting laterally from said head, and a diagonally disposed brace member connecting the blade and the head.

2. A device of the character described comprising a member provided with a groove, a rib slidably engaged within said groove, a head pivotally engaged with said rib, a blade projecting laterally from said head, and means carried by the head coacting with the rib for maintaining the head against movement about its pivot, and detachable means carried by the head disposed at opposite sides of the pivotal connection between the head and rib and coacting with the rib for maintaining the head against movement about its pivot.

3. A device of the character described comprising a blade provided with a groove disposed longitudinally thereof, a gage having a bifurcated extremity whereby the same may straddle a longitudinal marginal portion

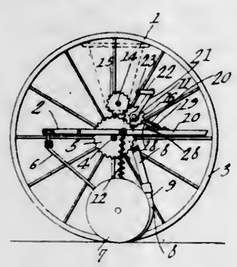
of the blade, one of the forks of the bifurcation being provided with a projection disposed within the groove of the blade, a marker carried by the gage, and means for holding the gage against movement upon the blade.

1,167,544. WAGON-TONGUE SUPPORT. WILLIAM J. COLE, Marysville, Tex. Filed Mar. 17, 1915. Serial No. 15,067. (Cl. 21—63.)



The combination with the pole and axle of a vehicle, of a rearwardly extending plate secured at its forward end to the upper side of the pole, a plate having a downturned forward edge secured to the axle, and a rearwardly extending spring member pivotally connected to the first-named plate for lateral movement, said spring member having an upwardly directed terminal hook for engagement with the axle attached plate.

1,167,545. DRILL ATTACHMENT. HENRY CONDELL, PAUL E. CONDELL, and RICHARD CONDELL, Troy, Idaho. Filed May 25, 1915. Serial No. 30,363. (Cl. 111—18.)



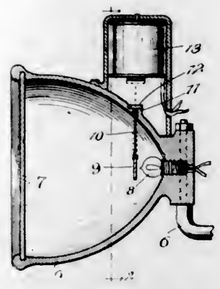
1. In a drill, the combination with a hopper, a revoluble axle and a gear movable with the axle, and a gear carried by the hopper, of a frame angularly adjustable below the hopper, soil engaging devices movable therewith, an intermediate gear carried by said frame and normally meshing with the first named gear, and means for shifting said gear out of mesh with the axle gear, said means being independent of the frame.

2. In a drill, the combination with a hopper, a gear thereon, a revoluble axle, a gear thereon, an angularly adjustable frame, soil engaging devices carried thereby, and means for adjusting the frame, of an intermediate gear normally meshing with the first named gear and shiftable out of mesh with the axle gear when the frame is raised, and means for shifting said intermediate gear independently of the frame to disengage it from the axle gear.

3. In a drill, the combination with a hopper, a gear thereon, a revoluble axle, a gear thereon, an angularly adjustable frame, soil engaging devices carried thereby, and means for adjusting the frame, of a yieldingly held intermediate gear carried by the frame and normally meshing with the axle gear, said intermediate gear being movable upwardly with the frame and out of engagement with the axle gear, a lever, and means operated thereby for shifting the intermediate gear out of mesh with the axle gear independently of the movement of the frame, said means constituting a lock for holding the intermediate gear in disengaged position.

4. An attachment for drills of the class described, including bearing members for attachment to a hopper, a lever supported by one of said members, a shaft supported by certain of said members and having a crank arm at each end, said crank arms being disposed at right angles to each other, a link connection between one of the crank arms and the lever, a yoke pivotally connected to the other crank arm, an intermediate gear supported by the yoke, means for movably connecting the intermediate gear to the adjustable frame of a drill, and yielding means for holding the gear normally in a predetermined position on said frame.

1,167,546. AUTOMOBILE TAIL-LAMP. MELVIN B. DANHEISER, Huntsville, Ala. Filed Sept. 3, 1914. Serial No. 859,988. (Cl. 177—339.)



1. The combination with the tail lamp of an automobile embodying a source of light, of a movable translucent colored plate normally disposed in advance of the source of light, electrically operated means to move the translucent colored plate from its normal position in advance of the source of light, a circuit connected with the electrically operated device, a gear shifting lever, and means to operate the circuit when the gear shifting lever is moved to the vehicle reverse position.

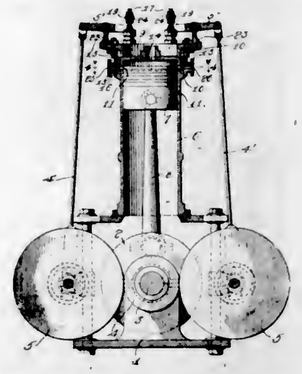
2. The combination with the tail-lamp of an automobile embodying a source of light, of a reciprocatory translucent colored plate normally disposed in advance of and in the path of travel of the rays of light radiating from the same, electrically operated means adapted when energized to shift the translucent colored plate out of the path of travel of the rays of light, a circuit connected with the electrically operated means, a gear shifting lever, and means to close the circuit for energizing the electrically operated device when the gear shifting lever is moved to the reverse position.

3. In apparatus of the character described, the combination with the tail lamp of an automobile embodying a source of light, of a vertically movable translucent colored plate normally disposed in advance of the source of light to color the light, an electrically operated device arranged above the movable plate and adapted to elevate it when energized whereby the lamp will glow brightly, a circuit connected with the electrically operated device, a gear shifting lever, and means to close the circuit when the gear shifting lever is moved to the vehicle reverse position.

1,167,547. SLIDE-VALVE GASOLENE-ENGINE. EDGAR C. DAVIDSON, Ogdensburg, N. Y. Filed Mar. 25, 1914. Serial No. 827,192. (Cl. 123—87.)

1. A device of the class described, comprising a cylinder, said cylinder provided with inlet and exhaust ports, slide-valves adapted to open and close said ports, means for reciprocating said valves within said cylinder, and said slide-valves provided with vertically-extending ports having laterally-extending discharge ports communicating therwith for preventing compression upon the top of said slide-valve as the same are actuated.

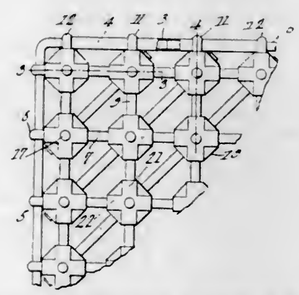
2. In a device of the class described, the combination of a cylinder, said cylinder provided with inlet and exhaust ports, a cylinder head carried by said cylinder, said cylinder provided with an off-set portion at its upper portion, said head provided with a depending sleeve, said sleeve and off-set portion extending in parallel spaced relation, slide valves adapted to open and close said ports, means for reciprocating said valves within the space between said sleeve and off-set portion, and said slide-valves provided with vertically extending ports having laterally-extending discharge ports communicating therewith, whereby air within the space between said sleeve and said off-set portion will be forced through the ports formed in said slide-valves as said valves are actuated, whereby air compression upon the top of said slide-valves is prevented.



3. In a device of the class described, the combination of a cylinder, said cylinder provided with inlet and exhaust ports, slide-valves fitting upon said cylinder and conforming in shape thereto for opening and closing said ports, means for reciprocating said valves, and said slide-valves provided with vertically-extending ports having laterally-extending discharge ports communicating therewith for preventing compression upon the top of said slide-valves as the same are actuated.

4. In a device of the class described, the combination of a cylinder, said cylinder provided with inlet and exhaust ports, said cylinder having guide-portions, slide-valves slidably mounted within said guide portions for opening and closing said ports, said guide portions being adapted to retain said slide-valves in operative positions, means for reciprocating said slide-valves, and said slide-valves provided with vertically extending ports having laterally-extending discharge ports communicating therewith for preventing compression upon the top of said slide-valves as the same are actuated.

1,167,548. METAL FILLING-BOARD. FRANK DAVIS, Cambridge, Mass. Filed Dec. 15, 1914. Serial No. 877,346. (Cl. 242—131.)



1. A bobbin rack comprising a frame; a sleeve into which the ends of the frame are inserted; secondary cross strips connecting opposed portions of the frame, one of the secondary cross strips being clenched upon the sleeve; and primary cross strips disposed at an angle to the secondary cross strips and connecting other opposed portions of the frame; one set of strips being flexed upon themselves to form pins located at the points where the primary and secondary strips cross.

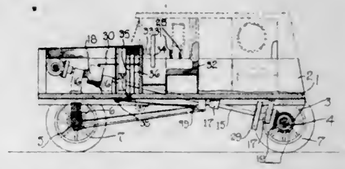
2. A bobbin rack comprising a frame; a sleeve into which the ends of the frame are inserted; secondary cross strips connecting opposed portions of the frame, certain of the secondary cross strips being clenched upon the frame at the ends of the sleeve; and primary cross strips disposed at an angle to the secondary cross strips connecting other opposed portions of the frame, the cross strips of one set being flexed upon themselves to form pins located at the points where the primary and secondary strips cross.

3. A bobbin rack comprising a frame; a sleeve into which the ends of the frame are inserted; secondary cross strips connecting opposed portions of the frame, one of the secondary cross strips being clenched upon the sleeve, and others of the secondary cross strips being clenched upon the frame at the ends of the sleeve; the primary cross strips disposed at an angle to the secondary cross strips and connecting other opposed portions of the frame; the cross strips of one set being bent upon themselves to form pins located at the point where the primary and secondary strips cross.

4. A bobbin rack embodying crossed strips defining openings, one strip being bent upon itself to form a pin; a cap having an opening receiving the pin, the cap embodying an arm clenched beneath the strips, and an arm which overlies the clench arm; and a diagonal supporting strip extended across the opening, the supporting strip passing between the arms.

5. A bobbin rack embodying a frame; crossed strips located within the contour of the frame and defining openings, one strip being provided with an upstanding pin; a cap having an opening receiving the pin and comprising arms, one of which arms is clenched beneath the strips at their point of crossing; and a diagonal supporting strip extended across the opening, the other arm being clenched upon the supporting strip, one of the cross strips terminating in a hook engaged around the frame and bearing upon the last specified arm.

1,167,549. MOTOR-VEHICLE. RUBIN L. DIAMOND, Vestry, Miss., assignor of one-half to David L. Walker, Clarence, Miss. Filed Nov. 2, 1914. Serial No. 869,918. (Cl. 21—90.)



1. In a motor vehicle, a source of power mounted within the hood, a drive shaft operatively connected at its rear end to the rear axle and projecting at its forward end into the hood, in transversely spaced relation to the crank shaft of the source of power, and a transversely disposed jack shaft operatively connecting the drive shaft and the crank shaft with the source of power.

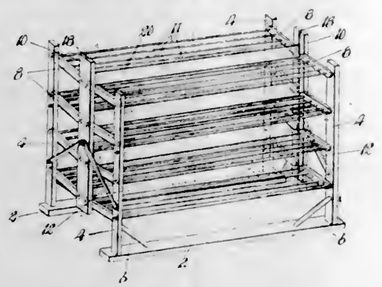
2. In a motor vehicle, an engine disposed within the hood, with its crank shaft longitudinally related to the vehicle, a drive shaft operatively connected at its rear end to the rear axle of the vehicle and projecting at its forward end into the hood and in transversely spaced relation to the crank shaft of the engine, a transverse jack shaft operatively connecting the crank shaft and drive shaft, a transmission interposed in the drive shaft and disposed within the hood of the vehicle, and means for adjusting the transmission.

3. In a motor vehicle, an engine disposed within the hood, with its crank shaft longitudinally related to the vehicle, a drive shaft operatively connected at its rear end to the rear axle of the vehicle and projecting at its forward

end into the hood and in spaced relation to the crank shaft of the engine, a transverse jack shaft operatively connecting the crank shaft and drive shaft, said jack shaft being disposed in advance of the engine, a transmission interposed in the drive shaft and disposed within the hood of the vehicle, and means for adjusting the transmission.

4. In a motor vehicle, an engine disposed within the hood of the vehicle, a drive shaft operatively connected at its rear end to the rear axle and projecting at its forward end into the hood, in spaced relation to the crank shaft of the engine, the vertical plane of the drive shaft being parallel to the vertical plane of the crank shaft and means located in the hood operatively connecting the drive shaft and the crank shaft.

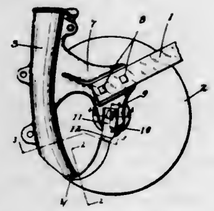
1,167,550. SHOE-RACK. WILLIAM R. FORSYTH, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 18, 1912. Serial No. 710,170. (Cl. 211—14.)



1. A folding shoe rack comprising a series of pairs of shelves, the members of each pair being arranged side by side, corner standards pivotally supporting said shelves at their outside edges, center supports pivoted to said shelves at their inside edges, and movable relatively to said standards to place said shelves substantially horizontal, or in positions substantially inclined to each other and to the horizontal, and also to collapse the rack, and means for holding the rack both in its collapsed and in any of its operative positions.

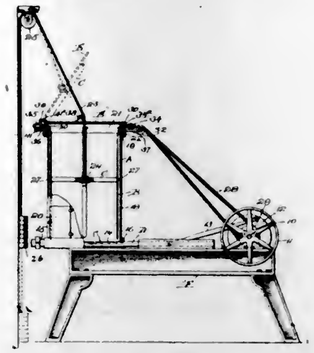
2. A folding shoe rack comprising two pairs of corner standards, a pair of center supports, a vertical series of pairs of shelves, the members of each pair being arranged side by side and pivotally supported by said supports and standards, a hook pivoted to each of said standards having a plurality of notches therein, and studs on said supports and standards arranged to be engaged by the notches of said hooks to lock the rack either in collapsed condition or in different adjustments of extended condition.

1,167,551. DISK GRAIN-DRILL. CHARLES L. FOWLE, Dowagiac, Mich., assignor to Dowagiac Drill Company, Dowagiac, Mich. Filed Oct. 16, 1912. Serial No. 726,076. (Cl. 111—11.)



In a disk drill, the combination with a disk, of a boot having a forwardly tapered inwardly curved toe, said boot being disposed on the convex side of the disk and provided with a forwardly projecting supporting arm, said arm having a curved scraper seat in its outer side, a bearing for said disk mounted on said arm, and a scraper mounted on said arm in said curved scraper seat whereby it may be adjusted relative to the disk, said scraper being curved downwardly and rearwardly in front of the toe of the boot with its outer end below and out of contact therewith.

1,167,552. MACHINE FOR STUFFING HORSE-COLLARS. JOSIAH B. GATHRIGHT, Louisville, Ky. Filed Sept. 3, 1910. Serial No. 580,355. (Cl. 69—4.)



1. In a stuffing machine, a container having an outlet, a stuffing rod mounted to reciprocate across the container and in operative relation with said outlet, distributing arms and a carrier for said arms, the carrier being movably mounted on and supported by the end of the container remote from the stuffing rod and the distributing arms being spaced from each other and arranged near to the inner wall of the container and extending longitudinally of the latter and terminating near the portion of the container across which the stuffing rod reciprocates.

2. In a stuffing machine, a container having an outlet, a stuffing rod in operative relation with said outlet, and means for supplying the material to said stuffing rod, comprising stirrer or distributing arms and a presser, said arms being mounted to rotate within the container and the presser being mounted to move longitudinally of the container and relatively to the distributing arms, toward the outlet, as the material is ejected through said outlet.

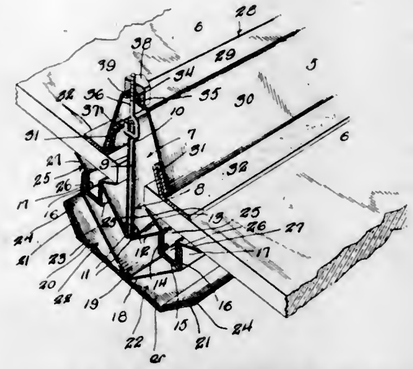
3. In a stuffing machine, a container having an outlet, a stuffing rod in operative relation with said outlet, and means for supplying the material to said stuffing rod, comprising a presser element in the container, said presser element being arranged to move longitudinally of the container and to force the material toward said outlet, and means for rotating said presser element.

4. In a stuffing machine, a container having an outlet, a stuffing rod in operative relation with the outlet, and means for supplying the material to the outlet, comprising distributing arms, a presser element, and means for rotating said arms and presser element in the container, said presser element having movement relative to the arms in the direction of the length of the container.

5. In a stuffing machine, a container having an outlet, a stuffing rod in operative relation with the outlet, and means for supplying the material to the outlet, comprising distributing arms, a rotatable ring which carries said arms and is mounted at the end of the container remote from the stuffing rod, and a presser element movable in the container in the direction of the length of the latter and also rotatably, said element having means which are engaged by said arms and transmit the rotative movement of the latter thereto, said means adapted to permit the presser element to move relatively to the arms in the direction of the length of the container.

[Claims 6 to 15 not printed in the Gazette.]

1,167,553. SKYLIGHT. HARRY J. GICLAS and SAMUEL C. BRENEMAN, Washington, D. C. Filed Dec. 1, 1913. Serial No. 804,020. (Cl. 108—16.)



1. In a skylight, the combination with a glass panel, of a strip of material disposed adjacent said panel, said strip having a channel formed therein, and a resilient packing located in said strip, said packing having a body portion engaging the opposite sides and bottom of said channel, and outwardly extending wings formed upon the side edges of the body of the packing and being movable to and from each other, for sliding engagement with the panel.

2. In a skylight, the combination with a glass panel, of a strip of material, a resilient packing supported thereon, and outwardly extending wings formed upon said packing and slidably engaging the panel for movement away from each other.

3. In a skylight, the combination with a glass panel, of a strip of material having upstanding portions, packings supported upon said upstanding portions of said strip, and resilient wings extending outwardly from said packings and slidable in opposite directions upon the panel.

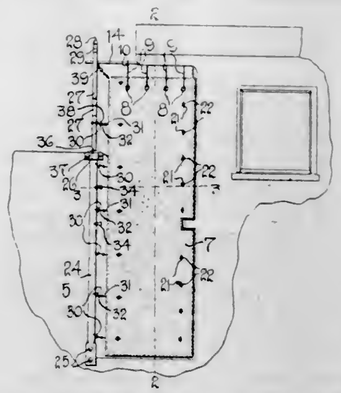
4. In a skylight, the combination with a glass panel, of a strip of material, packings supported thereon, and resilient non-compressible wings extending outwardly in opposite directions and slidable an unlimited degree upon said panels.

5. In a skylight, the combination with a glass panel, of a strip of material having spaced upstanding portions, packings supported upon said spaced portions of said strip, resilient wings extending outwardly and forming the terminals of said packings, said wings being slidable upon the panels away from each other, upon the depression of the panels.

1,167,554. CURTAIN. WILLIAM JAKOB GOELZ, Albany, N. Y. Filed Mar. 31, 1915. Serial No. 18,373. (Cl. 156—41.)

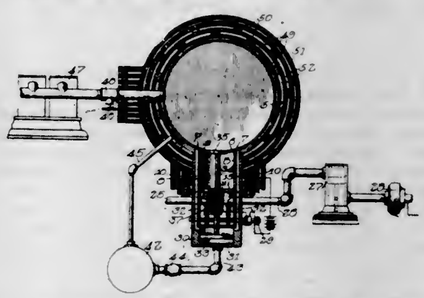
1. The combination with a structure having an entrance opening, of a curtain detachably secured along one of its vertical edges at one side of said opening, a hanger rod loosely mounted at one of its ends upon the structure, means for detachably and slidably connecting the upper end of the curtain to the hanger rod, means mounted upon the structure at the opposite side of said opening to removably receive the other end of the hanger rod and provided with attaching devices to which the other free vertical edge of the curtain is adapted to be connected, and additional means to receive the free end of the hanger rod and support the same in an inoperative position when the curtain is removed.

2. The combination with a structure having an entrance opening, of a curtain, means for detachably securing said curtain along one of its vertical edges at one side of the entrance opening, a hanger rod loosely mounted at one of its ends at the corresponding side of said opening, a vertically adjustable supporting rod mounted upon the structure at the opposite side of said opening and provided with means to receive and support the free end of the hanger rod, means connected to the upper end of the curtain slidably and removably engaged upon the hanger rod, fastening means for the other vertical edge of the curtain to secure the same in its closed position over the opening, means for securing the supporting rod in its adjusted operative position or in an inoperative position, and additional means to receive the free end of the hanger rod and support the same in an inoperative position at one side of the entrance opening when the curtain is removed.



3. The combination with a structure provided with an opening in one of its walls, of a curtain and means for detachably securing the same along one of its vertical edges upon said structure at one side of the opening, a hanger rod loosely mounted at one of its ends upon said structure at the corresponding side of the opening, a vertical guide secured to the wall of the structure upon the opposite side of said opening, a support vertically adjustable in said guide and provided upon its upper end with means to removably receive the free end of the hanger rod, means for securing the support in its adjusted position in the guide, means connected to the upper end of the curtain having slidable and removable engagement upon the hanger rod, means for detachably fastening the free vertical edge of the curtain to the supporting rod and said guide, and additional means to receive the free end of the hanger rod and support the same in an inoperative position at one side of the entrance opening when the curtain is removed.

1,167,555. POWER-STORAGE DEVICE. EDWARD E. GRAY, Plano, Ill., assignor to Gray Pneumatic Gear Shift Company, a Corporation of Illinois. Filed Jan. 20, 1913. Serial No. 743,052. (Cl. 10—37.)



1. The combination with a storage chamber for expanded gases, of an explosion chamber connected therewith and

means for discharging an expansive fluid into the storage chamber when an explosion occurs in the explosion chamber.

2. The combination with a storage chamber for expanded gases, of a receptacle connected therewith forming an explosion chamber, a fluid containing means for communicating with the storage chamber, and means operated by an explosion in the explosion chamber for feeding fluid into the storage chamber.

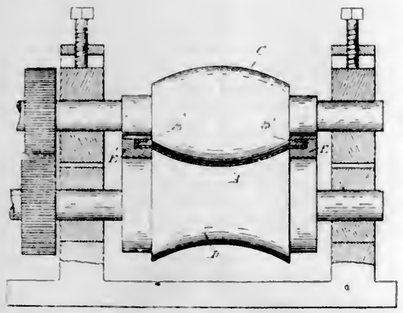
3. In a device of the class described, the combination with a receptacle forming a storage chamber for expanded gases, of a receptacle connected therewith forming an explosion chamber, means for containing a liquid for communication with the storage receptacle about the explosion chamber, and a valve between the explosion chamber and the storage chamber having means connected therewith for feeding fluid into the storage chamber when an explosion occurs.

4. In a device of the class described, the combination with a receptacle forming a storage chamber for expanded gases, of a receptacle connected therewith forming an explosion chamber, means for containing a liquid for communication with the storage receptacle about the explosion chamber, and a valve between the explosion chamber and the storage chamber having means connected therewith for feeding fluid into the storage chamber simultaneously with the opening of the valve whereby the fluid is vaporized by the heat of the explosion.

5. A device of the class described, the combination with a receptacle forming an explosion chamber, another receptacle forming a fluid containing chamber, an outwardly opening valve in the explosion chamber having a piston connected therewith in the fluid containing receptacle, fluid discharging openings adjacent the said valve, and means for exploding a gaseous mixture in the explosion chamber whereby the valve is opened outwardly causing the piston to eject the fluid from the fluid receptacle adjacent the valve, the heat generated by the explosion vaporizing the fluid discharged adjacent the valve.

[Claims 6 to 13 not printed in the Gazette.]

1,167,556. METHOD OF FORMING SHEET METAL. OTTO J. GROEHN, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed June 11, 1914. Serial No. 844,447. (Cl. 153—54.)



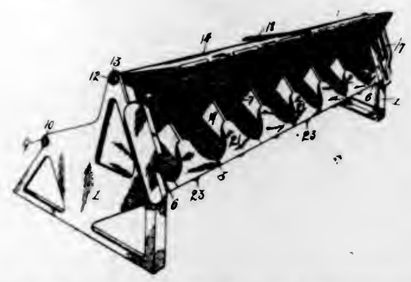
1. The method of fashioning sheet metal blanks to warped or transversely-curved forms, comprising the progressive bulging of the central portion of the blank to stretch the metal longitudinally and transversely, and the holding of the marginal portions of the blank from inward movement during this operation to prevent buckling.

2. The method of fashioning sheet metal blanks to warped or transversely-curved forms, comprising the progressive bulging of the central portion of a sheet metal strip, and the holding from inward movement and the guiding of the marginal portions of said strip to prevent buckling and to determine the longitudinal contour.

3. The method of fashioning sheet metal blanks to warped or transversely-curved forms, comprising the formation of marginal flanges longitudinally of the flat sheet metal strip, the bending of said strip to bulge the central portion thereof, and the holding of the marginal portions during said bending movement to prevent drawing toward each other and to hold the same from buckling.

4. The method of fashioning sheet metal blanks to warped or transversely-curved forms, comprising the forming of a sheet metal strip with hooked flanges upon opposite edges thereof, feeding said strip longitudinally and simultaneously bulging the central portion thereof, the bending of the strip longitudinally during its feeding movement to conform to a predetermined curve, and the guiding of the hooked flanges at the margin of said strip to prevent movement toward each other and to hold the same from buckling.

1,167,557. HOG-TROUGH. JACOB R. HESSER, Toledo, Ohio. Filed May 20, 1915. Serial No. 29,385. (Cl. 119—63.)



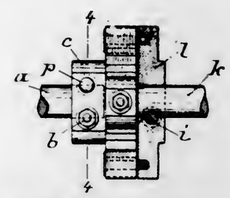
1. In an article of the class described, two end members, rods removably connecting said end members, a trough secured at its ends to said end members, a partition suspended from one of said rods between the front and rear edges of the trough and terminating at its lower edge above the trough, and doors pivotally carried by said rods, one door serving to close the space between the rear edge of the trough and said partition and the other door serving to close the space between said partition and the front edge of the trough.

2. An article of the class described comprising two end members, each having a V-shaped ledge at the inner side of its lower portion, a trough connecting said end members and resting at its ends on said ledges, means for releasably securing the ends of the trough to the end members, a rod releasably connecting the end members at the rear edge of the trough, a rod releasably connecting the end members at the upper ends thereof above the trough, a partition extending downward from adjacent to the upper rod and terminating at its lower end in vertically spaced relation to the trough, a sectional door hinged to the upper rod and adapted to close the space between said rod and the forward edge of the trough, a door hinged to the rear rod and adapted to close a space between said rod and said partition and members connecting the front edge of the trough and said partition to divide the trough into stalls and being adjustable lengthwise of the trough.

3. An article of the class described comprising single piece end members having door guiding slots therein, a trough releasably connecting the lower portions of said end members, rods releasably connecting said end members one above the trough and one at the upper rear edge of the trough, a partition extending downward from adjacent to the upper bar and terminating at its lower end in vertically spaced relation to the front and rear edges thereof, a feed door hinged to the rear rod and adapted to close the space between the rear edge of the trough and said partition, a sectional door hinged to the upper rod and adapted to close the space between said upper rod and the front edge of the trough, said door having parts projecting from its free edge at the ends thereof and projecting into guide slots in said end members, said parts

and slots coöperating to guide the opening movement of the door, to support the door in open position, and upon a continued upward movement of the door to effect a reversal of its movement to permit it to return to closed position.

1,167,558. COUPLING-FASTENER. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Original application filed Sept. 23, 1910, Serial No. 583,378. Divided and this application filed Oct. 24, 1911. Serial No. 656,493. (Cl. 64—13.)



1. The combination with an armature shaft and a driving shaft, the best angular relation of which can be determined only by trial rotation, said shafts having abutting ends and being in axial alinement, of coupling mechanism therefor comprising a coupling member rigidly secured to one shaft, a second coupling member engaging therewith and mounted on the other shaft, and a pair of securing devices comprising means for holding said second coupling member on its shaft, one of said securing devices being shaped with a shoulder which bears against a smooth portion of said last named shaft to permit said second coupling member to turn on its shaft, but with difficulty, while the trial rotation is being made, and the other securing device holding said coupling rigidly to its shaft when its final adjusted position has been determined by the trial rotation.

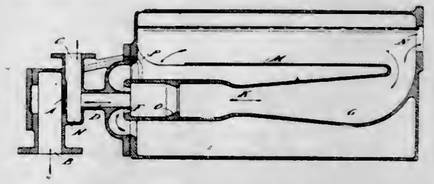
2. The combination of a pair of axially alined shafts, the best angular relation of which can be determined only by trial rotation while coupled together, one being an armature shaft and the other a driving shaft, and coupling mechanism therefor comprising a coupling member rigidly secured to one shaft, a second coupling member cooperatively engaging therewith and mounted on the other shaft, and a pair of securing devices for said second coupling member, one of said devices consisting of a bolt extending through the coupling member and having a shoulder yieldingly gripping the cylindrical surface of the shaft, and the other of said devices rigidly locking its coupling member to said shaft.

3. The combination of a pair of axially alined shafts, the best angular relation of which can be determined only by trial rotation while coupled together, and coupling mechanism therefor comprising a coupling member rigidly secured to one shaft, a second coupling member cooperatively engaging therewith and mounted on the other shaft, and a pair of securing devices for said second coupling member, one of said devices consisting of a bolt cut away to fit the circular curvature of the shaft and forming a shoulder yieldingly gripping the cylindrical surface of the shaft to permit its coupling member to turn on said shaft, but with difficulty, while the trial rotation is being made, and the other securing device consisting of a wedge pin fitted in a recess of said shaft and rigidly locking its coupling member against rotation from its final adjusted position, as determined by the trial rotation.

4. The combination of a pair of axially alined shafts, the best angular relation of which can be determined only by trial rotation while coupled together, and coupling mechanism therefor, comprising a coupling member rigidly secured to one shaft, a second coupling member operatively engaging therewith and mounted on the other shaft, and a pair of securing devices for said second coupling member, one of said devices consisting of a bolt extending through the coupling member and cut away at the shaft to form a shoulder for yieldingly gripping the cylindrical surface, said bolt being adjusted to permit said second coupling member to turn on its shaft, but with difficulty, while the trial rotation is being made, and the second of said securing devices consisting of a wedge pin passing through the coupling member and fitted to a recess of said shaft to rigidly lock said coupling member against rotation on said shaft after said coupling member has been adjusted to its final position by trial rotation with the opposing member.

5. The combination of a shaft having a recess in one side, a coupling member mounted thereon, a bolt passing through said coupling member and having a shoulder which grips the cylindrical surface of said shaft but permits rotation thereof with respect to said coupling member, though with difficulty, and a locking pin in said coupling member fitted to the recess of said shaft for rigidly securing said coupling member against rotation on said shaft.

1,167,559. HYDRAULIC DEVICE FOR COMPRESSING GASES. KENNETH GAULDIE, Glasgow, Scotland. Filed Mar. 29, 1915. Serial No. 17,890. (Cl. 230—13.)



1. A hydraulic device for compressing gases, comprising, in combination, a conduit having an inlet for a high velocity primary liquid supply and an inlet for the gas to be compressed; a combining tube for said gas and liquid, said tube having an inlet at a point after the junction of said gas with the primary supply for the introduction of a secondary supply of liquid at a pressure not substantially exceeding that against which the liquid is discharged; a channel in which the primary supply of liquid with the entrained gas mingles with the secondary liquid supply to form a combined stream; and a receptacle to receive said combined stream.

2. A hydraulic device for compressing gases, comprising, in combination, a conduit having an inlet for a high velocity primary liquid supply and an inlet for the gas to be compressed; a combining tube for said gas and liquid, said tube having an inlet at a point after the junction of said gas with the primary supply for the introduction of a secondary supply of liquid at a pressure not substantially exceeding that against which the liquid is discharged; a channel in which the primary supply of liquid with the entrained gas mingles with the secondary liquid supply to form a combined stream; and a receptacle to receive said combined stream, said secondary supply being drawn from said receptacle into which the combined stream is discharged.

3. A hydraulic device for compressing gases, comprising, in combination, a conduit having an inlet for a high velocity primary liquid supply and an inlet for the gas to be compressed; a combining tube for said gas and liquid, said tube having an inlet at a point after the junction of the gas with the primary supply for the introduction of a secondary supply of liquid in the form of an annular jet encircling the primary supply at a pressure not substantially exceeding that against which the liquid is discharged; a channel in which the primary supply of liquid with the entrained gas mingles with the secondary liquid supply to form a combined stream, and a receptacle to receive said combined stream.

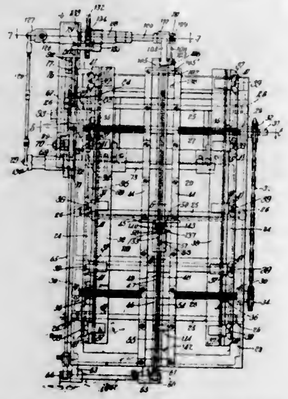
4. A hydraulic device for compressing gases, comprising, in combination, a conduit having an inlet for a high velocity primary liquid supply and an inlet for the gas to be compressed; a combining tube of considerable length substantially constant in cross section for said gas and liquid, said tube having an inlet surrounding the farther

end of said combining tube for the introduction of a secondary supply of liquid at a pressure not substantially exceeding that against which the liquid is discharged; a channel in which the primary supply of liquid with the entrained gas mingles with the secondary liquid supply to form a combined stream; and a receptacle to receive said combined stream.

5. A hydraulic device for compressing gases, comprising, in combination, a receptacle having an inlet for a high velocity primary liquid supply and an inlet for gases to be compressed, a combining tube for said gas and liquid and formed with an inlet, at a point after the junction of said gas with the primary supply, for the introduction of a secondary supply of liquid at a pressure not substantially exceeding that against which the liquid is discharged; an expanding channel in which the primary supply of liquid with the entrained gas mingles with a secondary liquid supply to form a combined stream, and a receptacle to receive said combined stream.

[Claims 6 to 8 not printed in the Gazette.]

1,167,560. MACHINE FOR FEEDING ARTICLES. ALBERT M. HOYT, Swampscott, and CARL A. MATSON, Lynn, Mass. Filed July 26, 1913. Serial No. 781,388. (Cl. 12—61.)



1. A machine for feeding an article having, in combination, a support for said article, a receptacle for said article, a rocker arm, a pivot for said rocker arm located between said support and said receptacle, a carrier pivotally mounted on the free end of said rocker arm and adapted to hold said article, mechanism adapted to rock said rocker arm, a stationary pinion concentric with said rocker arm pivot, a pinion fast to said carrier and a spur gear pivoted to rock on said arm and meshing into said pinions said gear and pinions lying at all times in the same vertical plane whereby, when said arm is rocked, said carrier will be held in a substantially fixed position relatively to a vertical plane containing the median axial line thereof during the rocking of said rocker arm.

2. A machine for feeding an article having, in combination, a support for said article, a receptacle for said article, a rocker arm, a shaft to which said rocker arm is fastened, mechanism adapted to rock said shaft, a second shaft rotatably mounted in the free end of said rocker arm, a carrier fast to said second shaft, means adapted to maintain said carrier in a substantially fixed position relatively to a vertical plane containing the median axial line thereof during the rocking of said rocker arm, said shafts and arm being provided with passages leading to ports provided in one face of said carrier and means adapted to alternately exhaust air from, and supply air to said passages, whereby said article may be carried from said support to said receptacle.

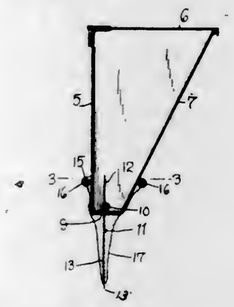
3. A machine for feeding an article having, in combination, a support for said article, a receptacle for said article, a rocker arm, a shaft to which said rocker arm is fastened, mechanism adapted to rock said shaft, a second shaft rotatably mounted in the free end of said rocker arm, a carrier, said carrier comprising an arm adjustably fastened to said second shaft, a foot pivoted to said arm, an arm adjustably fastened to said second shaft and a link connecting said foot and last-named arm, whereby said foot can be set at different positions relatively to a vertical plane containing the median axial line of said second shaft.

4. A hopper adapted to hold and guide a column of articles, a table slidably mounted in said hopper, a stationary rack, a movable rack, pawls pivoted to said table and adapted to engage both of said racks simultaneously, mechanism adapted to impart a reciprocatory motion to said movable rack whereby said table may be moved longitudinally of said hopper in one direction and a lever pivoted to said table and adapted to engage said pawls whereby the same may be disengaged from said racks and said table left free to be moved longitudinally of said hopper in either direction.

5. A machine for feeding articles having, in combination, a hopper adapted to hold a column of said articles, mechanism adapted to feed said column of articles intermittently longitudinally thereof in said hopper in one direction, means adapted to hold said column of articles against movement in the opposite direction, mechanism adapted to remove said articles one by one from one end of said column, said feeding mechanism including a slide with a projection thereon, a tripper lever adapted to engage said projection and hold said slide and the feeding mechanism of which it forms a part out of operation, said tripper lever adapted to be operated by said removing mechanism to disengage said projection and allow said feeding mechanism to operate and a latch adapted to hold said tripper lever out of engagement with said projection.

[Claims 6 to 10 not printed in the Gazette.]

1,167,561. POULTRY-DUSTER. EDWARD F. HUDSON, Wilkes-Barre, Pa. Filed July 24, 1915. Serial No. 41,704. (Cl. 119—159.)



1. A poultry duster comprising a hopper having a longitudinal slot in its bottom, an agitating member mounted for swinging movement upon the hopper and extending above and below said slot, and means secured to the exterior of the hopper and connected to said agitating member to receive powder falling through said slot and sift the same upon the body of the fowl.

2. A poultry duster comprising a hopper having an opening in its bottom, an agitating member mounted for swinging movement upon the bottom of the hopper and extending interiorly and exteriorly thereof, and an open mesh sheath for the exteriorly disposed portion of the agitating member to receive the powder from the hopper and sift the same upon the body of the fowl.

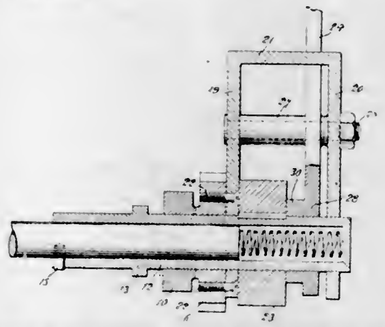
3. A poultry duster comprising a hopper having an opening in its bottom, an agitating member mounted for swinging movement in the bottom of the hopper and extending interiorly and exteriorly thereof, and an open mesh fabric sheath extending around the exteriorly disposed portion of the agitating member and held at its longitudinal edges upon the walls of the hopper, said sheath receiving the powder from the hopper when the agitator is moved and sifting the same upon the body of the fowl.

4. A poultry duster comprising a hopper having a longitudinal slot in its bottom, a longitudinally disposed rod rotatably mounted in the end walls of the hopper and extending above said slot, a reticulated agitating member fixed upon said rod and extending above and below the same interiorly and exteriorly of the hopper, longitudinal rods mounted upon the side walls of the hopper exteriorly thereof, and an open mesh fabric sheet secured at its edges upon said rods and extending around the exteriorly disposed portion of the agitating member, the opposite sides of the fabric being secured together at their ends, said fabric constituting a sheath to receive the powder falling through said slot when the agitator is moved and sifting the same upon the body of the fowl.

5. A poultry duster comprising a hopper, a receiving member having reticulated walls through which the powder received from the member is adapted to sift, and an oscillatable comb mounted upon the hopper adapted to spread or separate the feathers of the fowl.

[Claim 6 not printed in the Gazette.]

1,167,562. STARTING-LEVER. JOSEF HUTTER, New York, N. Y. Filed May 21, 1915. Serial No. 29,470. (Cl. 123—185.)



1. In a safety starting mechanism, a shaft, a sleeve movable thereon, and a support, of a yoke lever revoluble on said sleeve, a ratchet engaged therewith, an actuating lever pivoted in said yoke lever, a disk keyed to said sleeve, and means combined with the disk and said actuating lever whereby the latter is prevented from turning when said shaft is rotated reversely from normal.

2. In a safety starting mechanism, the combination with a rotatable shaft, a sleeve limitedly slidable and revoluble thereon, and means for operatively engaging said sleeve with said shaft, of an actuating lever oscillatable on said sleeve, a support for said actuating lever, said support being centered on said sleeve, means for normally maintaining said lever in an operative position and means for disengaging said lever upon a reverse action of said shaft.

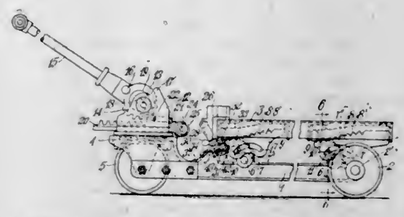
3. In a safety starting mechanism, the combination with a shaft, a sleeve movable thereon, and a fixed support, of a ratchet on said sleeve, a pawl engageable therewith, a forked lever on said sleeve rigid with said ratchet, an operating lever pivoted in said forked lever, an extension of said operating lever having an elongated slot engaging said sleeve, a cam formed with said extension, a disk fixed to said sleeve, and a pin in said disk engageable with said cam whereby the disk may be moved together with said extension on said sleeve and also allow said shaft to rotate in a direction reverse to the normal.

4. In a safety starting mechanism, the combination with a rotatable shaft, a fixed support, a sleeve movable in said support on said shaft, and means for engaging said sleeve with said shaft, of a yoke lever revoluble on said sleeve, an actuating lever combined therewith, said actuating lever being oscillatable with respect to said sleeve, means for preventing a reverse movement of said yoke lever, and means rigidly engaged with said sleeve for oscillating said actuating lever into an inoperative position, said means becoming operative upon the reverse rotation of said shaft.

1,167,563. FRUIT-SNOW. JOHN B. INGRAM, Los Angeles, Cal. Filed Aug. 8, 1914. Serial No. 855,889. (Cl. 99—11.)

A fruit snow product comprising a mixture of shaved ice and mashed fruit, flavored with mint, the entire mass being pressed into cylindrical molds and having several layers differently colored.

1,167,564. LIFTING-TRUCK. WILLIAM F. IRRGANG, Windsor Locks, Conn., assignor to George P. Clark Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed Feb. 2, 1915. Serial No. 5,628. (Cl. 254—5.)



1. A lifting truck, comprising, a liftable frame supported on wheels, lifting devices operable to lift said frame, means to hold the frame lifted, mechanism to trip said means and controlling devices rendered effective by the movement of the frame to render said mechanism inoperable until said means is set to hold the frame and thereafter render it operable.

2. A lifting truck, comprising, a frame mounted on wheels, a platform, devices operable on longitudinal movement of the platform to lift the latter, a rack and gear supported on the frame independently of the platform operable to move the latter longitudinally and adapted to be completely separated from the platform, a truck handle constructed and arranged to turn the gear for operating the rack, said handle, gear, and rack being mounted to turn laterally as a unit.

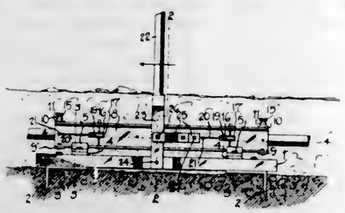
3. A truck, comprising, a platform, devices operated by the movement of the platform to lift the latter, a truck frame on wheels to support said elements, a handle operated mechanism on the frame operable when properly positioned by the operator to engage and move the platform by one downward sweep of the handle and to disengage the platform by each upward sweep of the handle.

4. A truck, comprising, a platform, a handle, devices operated by the platform to lift the latter, mechanism structurally independent of the platform and movable in one direction to move the latter by abutment therewith to operate said devices and movable in the opposite direction out of contact with the platform, and a catch to hold the platform lifted, said independent mechanism being movable with and by the handle.

5 A truck, comprising, a handle, a platform, devices operated by the platform to lift the latter, mechanism structurally independent of the platform and movable in one direction to move the latter by abutment therewith to operate said devices and movable in the opposite direction out of contact with the platform, a catch to hold the platform lifted, said independent mechanism being movable with and by the handle, and means to trip said catch actuated by the movement of the platform.

[Claims 6 to 17 not printed in the Gazette.]

1,167,565. PIPE-LAYING MACHINE. JACK JACKSON, Broken Arrow, Okla. Filed Jan. 30, 1915. Serial No. 5,258. (Cl. 254—29.)



1. A device of the class described including a base, anchor plates secured thereto and adapted to be secured to the surface of the earth to hold said plates in position, channel members arranged in spaced opposed relation and adapted for sliding movement upon the base, bearing blocks disposed between the channel members, means for retaining a pipe in position on said bearing blocks, spring actuated cams carried by the channel members and adapted for engagement with the sides of the plates, and means for moving said channel members in one direction whereby said cams will grip the pipe to move the same with the channel members, said cams passing over the pipe upon the return movement of the channel members, as and for the purpose set forth.

2. A device of the class described including a base member, supporting plates carried thereby, channel members arranged in spaced opposed relation and mounted upon said plates, angular members adapted to engage over the lower horizontal portions of the channels, to retain them in position, bearing blocks arranged between said channel members, pivoted cross bars adapted to connect the upper horizontal portions of the channels, a set screw carried by each of said bars, an arcuate plate at the lower end of each set screw adapted for engagement with the pipe placed upon the bearing blocks, spring actuated cam members carried by the channels and adapted for engagement with the pipe section disposed between said channels, and means for moving said channels, whereby the cams will engage the pipe section upon movement in one direction and pass over the pipe section upon movement in the opposite direction.

3. A pipe laying machine including a base, a pair of longitudinally spaced bearing blocks mounted upon the base to freely receive a length of pipe, vertically adjustable blocks engageable with the upper face of the pipe for holding the same against upward displacement from the bearing blocks, a pair of longitudinally extending, parallel channel members movable upon the base, pivotally mounted cams carried by the channel members for gripping the pipe when the channel members are moved in one direction, and means for reciprocating the channel members.

4. A pipe laying machine including a base, longitudinally spaced, transversely extending plates mounted upon the base, parallel, longitudinally extending channel members mounted for sliding movement over the plates, guide members carried by the plates for holding the channel members against displacement, pivotal cam members carried by the channel members, bearing blocks supported upon the base, said blocks being adapted to receive a length of pipe, vertically adjustable members for holding a pipe against upward movement from the bearing blocks, and means for reciprocating the channel members.

1,167,566. STREET-RAILWAY TRANSFER-TICKET. COURTNEY M. JENKINS, Washington, D. C. Filed May 4, 1915. Serial No. 25,774. (Cl. 11—15.)

1. A street railway transfer ticket embodying means influenced by light rays for indicating whether or not the ticket is void, and means upon the ticket for indicating by comparison a condition of the first-mentioned means to indicate the void stage.

2. A street railway ticket provided with normally invisible matter to be developed by light rays, and normally visible matter to be rendered invisible by light rays.

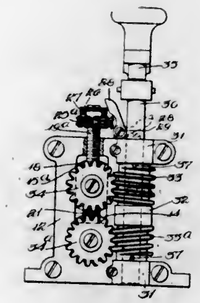
3. A street railway transfer ticket bearing matter adapted to disappear under the influence of light rays, and other matter adapted to appear under the influence of light rays.



4. A street railway transfer ticket bearing thereon matter normally invisible and adapted to be developed by light rays after a predetermined period to indicate that said ticket is void, and a comparison means for indicating when such developed matter is developed to a mature degree.

5. A street railway transfer ticket having means adapted to be influenced by light rays and developed to a predetermined condition to indicate a void period, and a comparison mark upon the ticket of a color conforming to that adapted to be assumed by such means when the void period is reached.

1,167,567. ROLLING-MILL. JAMES A. JEROME, Montpelier, Vt. Filed Apr. 6, 1915. Serial No. 19,467. (Cl. 80—54.)

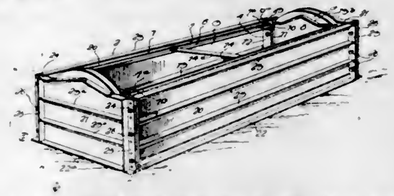


1. A rolling mill comprising spaced-apart frame members having fixed bearings and movable bearings, rolls journaled in said bearings, means for adjusting the movable bearings and the roll carried thereby to vary the width of the nip of the rolls, and mechanism for simultaneously rotating the rolls in opposite directions, said mechanism including a single operating shaft, arranged at right angles with the axes of the rolls, and connections between said shaft and the rolls, having provisions for imparting rotary movement from the shaft to the rolls when the adjustable roll is in any position to which it may be adjusted.

2. A rolling mill comprising spaced-apart frame members having fixed bearings and movable bearings, rolls journaled in said bearings, means for adjusting the movable bearings and the roll carried thereby to vary the width of the nip of the rolls, and mechanism for simultaneously rotating the rolls in opposite directions, said mechanism including a single operating shaft arranged at right angles with the axes of the rolls and having two worms of opposite inclination and corresponding worm gears attached to the respective rolls, and meshing with said worms, the gear of the adjustable roll being adapted to roll in contact with the accompanying worm when said roll is being adjusted.

3. A rolling mill comprising spaced-apart frame members having fixed bearings and movable bearings, rolls journaled in said bearings, means for adjusting the movable bearings and the roll carried thereby to vary the width of the nip of the rolls, and mechanism for simultaneously rotating the rolls in opposite directions, said mechanism including a single operating shaft arranged at right angles with the axes of the rolls and having two worms of opposite inclination and corresponding worm gears attached to the respective rolls, and meshing with said worms, one of said frame members being provided with upper and lower shaft bearings and an intermediate shaft bearing, and the worms being attached to the shaft between said bearings.

1,167,568. CONCRETE-MOLD FOR CONSTRUCTING BURIAL-VAULTS AND THE LIKE. JAMES GUTHRIE JOHNSON, Carthage, Ill. Filed Apr. 12, 1915. Serial No. 20,895. (Cl. 25—130.)



1. A form comprising side walls, end walls spaced from the ends thereof, side wall continuations carried by the end walls and abutting the ends of the side walls, and alining longitudinally disposed external projections on the upper edges of the side walls and side wall continuations.

2. A form comprising side walls, end walls spaced from the ends thereof and having obliquely disposed side wall continuations on their opposite edges abutting the ends of said side walls, and reinforcing bars secured to the inner sides of the end walls and having beveled ends contacting with the side wall continuations, whereby to reinforce the latter.

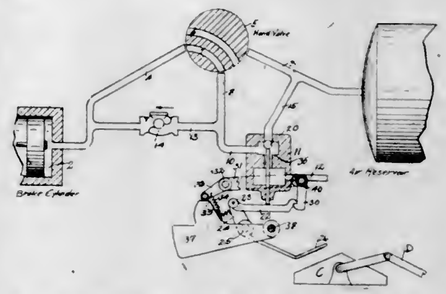
3. A form of the class described comprising a pair of side walls having their ends bent laterally outward to provide upright attaching flanges, horizontal reinforcing bars secured to the outer sides of said side walls and abutting the aforesaid flanges at their opposite ends, end walls having their upright end portions disposed in contact with the aforesaid upright flanges, upright angle-iron reinforcing flanges secured to the outer sides of the end walls at the said end portions thereof, fasteners passing through the angle-iron flanges, through the first named flanges, and through the intervening end portions of the end walls, and horizontal reinforcing bars secured to the outer sides of the end walls and abutting the angle-iron flanges on the ends thereof.

4. A form comprising side walls, end walls spaced from the ends thereof and having side wall continuations on their opposite edges abutting the ends of said side walls, and reinforcing bars secured to the inner side of the end walls and having their ends disposed in contact with the side wall continuations, whereby to brace the latter.

1,167,569. AUTOMATIC AIR-CONTROLLING DEVICE FOR VEHICLE-BRAKES. ELMER M. JONES, Atlanta, Ga., assignor to Jones Signal System Company, Atlanta, Ga., a Corporation of Georgia. Filed Sept. 4, 1913. Serial No. 788,185. (Cl. 246—59.)

1. In a brake applying mechanism for vehicles having a direct air system, the combination, with a brake cylinder, an air reservoir, a conduit between them and a hand valve controlling the passage of air through said conduit, of an automatically operating valve adapted to be opened and closed by means on the trackway and a normally closed conduit connecting the reservoir with the brake cylinder and adapted to be opened by the automatic valve independently of whether the hand valve be closed or open.

2. In a brake applying mechanism for vehicles having a direct air system, the combination, with a brake cylinder and air reservoir and hand valve, of an automatically operating valve adapted to connect the reservoir with the brake cylinder independently of the hand valve when operated by means on the trackway, a vent pipe from the hand valve, said automatically operating valve being connected with the vent pipe from the hand valve and itself having a vent and having a connection with the air reservoir.



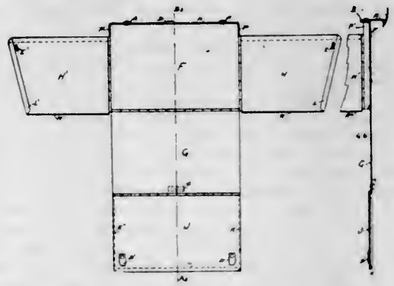
3. The combination, with an air reservoir and brake cylinder, of a passageway between them and an interposed hand valve, a vent pipe from the hand valve, a valve casing connected with the vent pipe and having a venting opening, a connection with the reservoir from the valve casing, and a valve adapted to alternately close the venting opening or the connection with the reservoir.

4. The combination, with a brake cylinder and reservoir, of a passageway between them having an interposed hand valve, a vent pipe from the hand valve, a passageway between the vent pipe and the brake cylinder, a check valve in said passageway, and means for connecting the vent pipe with the atmosphere or with the reservoir.

5. The combination, with a brake cylinder and reservoir, of a connecting pipe between them and a hand valve interposed in said connecting pipe, a vent pipe from the hand valve, a casing connected with the vent pipe, an exit opening from the casing, connections from the casing to the reservoir, valve seats for the casing vent and for the reservoir connection, said seats being opposite each other, and a double-faced valve adapted to engage one seat or the other.

[Claims 6 to 11 not printed in the Gazette.]

1,167,570. COLLAPSIBLE BOX. MATHEW H. JONES, Cresco, Pa. Filed Apr. 14, 1915. Serial No. 21,311. (Cl. 220—17.)

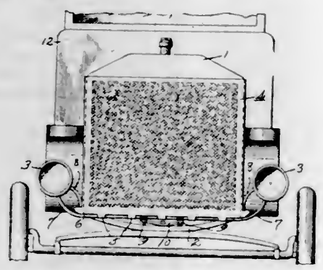


1. A collapsible box including a rear wall having a laterally disposed longitudinal flange on its upper edge, a bottom wall hingedly connected to the lower edge of the rear wall, a front wall hingedly connected to said bottom wall, end walls hinged to the ends of said rear wall, said front and end walls of the box having means to effect an interlocking connection between the same, means on said front wall to engage the end wall of the box and hold said walls in interlocking connection with each other, said front and bottom walls being adapted to be folded

against the rear wall and the end walls of the box structure folded inwardly upon each other, a keeper secured upon the flange of said rear wall, and a latch member on said bottom wall adapted to engage said keeper and also engage one of the end walls to retain the several walls of the box structure in their collapsed positions and hold the same against relative movement.

2. A collapsible box including a rear wall provided with laterally projecting flanges on its opposite ends and upon its upper edge, a bottom wall hinged to the lower edge of the rear wall, a front wall hingedly connected to the bottom wall, end walls hinged upon the edges of the end flanges on said rear wall, said front wall and the end walls of the box being provided with means for effecting an interlocking connection between the same when the walls are set up, said front wall being adapted to be folded inwardly upon the bottom wall and said front and bottom walls folded against the rear wall to lie between the end flanges thereon, said end walls being foldable inwardly upon each other and against the bottom wall, a keeper centrally secured upon the longitudinal flange of the rear wall, and a pivoted member mounted upon the bottom wall adapted for engagement at one of its ends with said keeper and having its other end angularly offset for engagement upon one of said end walls whereby the several walls of the box are held in their collapsed positions and against relative movement.

1,167,571. RADIATOR-SHIELD FOR AUTOMOBILES. WILLIE C. KAROW, Germantown township, Cottonwood county, Minn. Filed Mar. 9, 1915. Serial No. 13,109. (Cl. 257—132.)

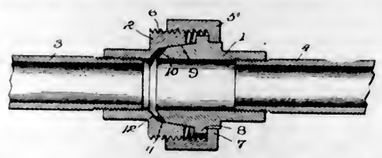


1. In a radiator shield for automobiles, the combination of an imperforate plate member coextensive with the front of the hood of an automobile, said plate member being hingedly mounted upon the front of an automobile, a push-bar secured to said plate member and extending therefrom to a point within the car, said push-bar being adapted to move one end of said plate outwardly from the front of the automobile, means adapted to coöperate with said push-bar to maintain the same in a predetermined position, and means secured to said plate member adapted to return the same to closed position when said push-bar is disengaged from said last-named means.

2. In a radiator shield for automobiles, in combination, an imperforate plate member coextensive with the front of the hood of an automobile, a hinge secured to the bottom of said plate member, said hinge mounted upon the front of said automobile, a push-bar secured at its end near the top of said plate member and extending rearwardly along the outside of the hood of said automobile, a handle formed on the other end of said push-bar, a graduated locking member mounted upon the dashboard of said automobile, said locking member adapted to coöperate with said handle, and a spring actuated wire secured to said plate member and said dashboard adapted normally to maintain said plate member in closed position.

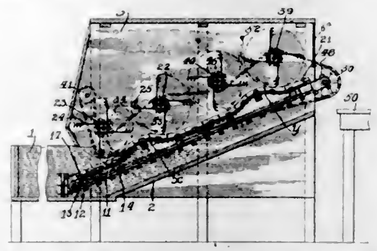
1,167,572. PIPE-UNION. WILLIAM J. KERR and THOMAS HODGSON, Buffalo, N. Y. Filed Feb. 24, 1912. Serial No. 679,687. (Cl. 137—28.)

A pipe-union, comprising male and female members and means for coupling and tightening the same, said male and female members having coöperating primary and secondary joint-surfaces arranged one beyond the other, the joint-surfaces of both pairs being beveled and rigid, the



secondary joint-surfaces being beveled at a greater angle than said primary surfaces and the diameter of said primary surfaces being such as to separate the coöperating secondary surfaces in the initial condition of the union.

1,167,573. CARCASS SCRAPING AND POLISHING MECHANISM. JOHN W. KOHLHEPP, Chicago, Ill., assignor to The Albright-Nell Company, a Corporation of Illinois. Filed May 9, 1912. Serial No. 696,092. (Cl. 17—11.)



1. A scalding tub, a carcass dehairing and polishing machine mounted thereon to receive the carcass directly therefrom and to dehair and polish the carcasses, said machine comprising dehairing mechanism, and means projecting the carcasses beyond normal into close relation with said mechanism while subjected to the scalding temperature of the water therein.

2. The combination with a scalding tub of a dehairing and polishing machine mounted thereon to dehair and polish the carcasses before removal from the tub, dehairing mechanism, a part of the dehairing mechanism acting while cleaning the carcasses to continuously dash the hot water over the carcasses, and mechanism abnormally elevating the same into close relation with said dehairing mechanism.

3. A device of the class described embracing a scalding tub and a dehairing machine mounted on one end thereof and acting to dehair and clean the carcasses while subjected to the heat of the water in the tub, said machine comprising dehairing mechanism, and means advancing and withdrawing the carcasses relative the field of said dehairing mechanism as the carcass moves past the same.

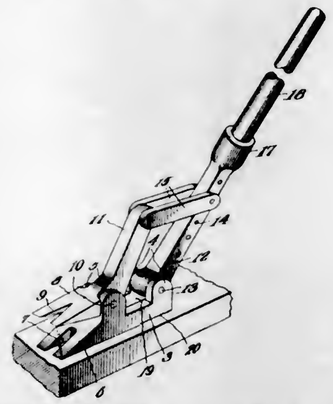
4. A device of the class described embracing a scalding tub, a dehairing machine mounted thereon to receive the carcasses immediately therefrom while subjected to the heat of the water in the tub and embracing in part an inclined conveyer and a pair of oppositely rotating beater shafts acting above the conveyer to strike and retain the carcasses therebetween, and a raised portion at each side of the conveyer adapted to elevate the heads and hams of the animals to be cleaned into the field of operation of the scraping mechanism.

5. A carcass dehairing and polishing machine, adapted for close association with a scalding tub, embracing a pair of rotative beater shafts, beaters thereon, the one striking upwardly and inwardly of the machine, the other striking downwardly and inwardly therefrom, a conveyer for moving the carcasses freely to the beaters on said shafts and acting together with said beaters to continuously rotate the same while in the field of operation of the beaters,

a raised portion of the conveyer intermediate the beaters adapted to elevate and support the carcasses while operated on thereby, and means for passing the carcasses past the upper beater shaft and to a place of discharge.

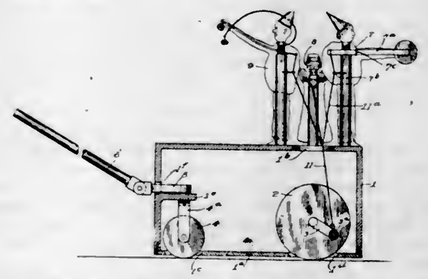
[Claims 6 to 34 not printed in the Gazette.]

1,167,574. NAIL AND SPIKE EXTRACTOR. CHARLE LECHNER, Franklin, La., assignor of one-half to Fritz Schoenstein, Franklin, La. Filed June 5, 1914. Serial No. 843,274. (Cl. 254—25.)



An extractor embodying an elongated shoe having a wedge-shaped claw at its forward end and flush with its lower surface, an open slot extending from the rear end of the shoe to the butt end of said claw, a pair of upstanding ears at the rear end of the shoe at the opposite sides of said slot, and a pair of upstanding ears at the opposite sides of said slot adjacent the butt end of said claw, said claw having an open U-shaped slot extending from its sharp end, an angular lever having its elbow fulcrumed between the second mentioned pair of ears and working in the first mentioned slot, one arm of said lever being in the form of a wedge-shaped claw adapted to swing snugly upon the first mentioned claw and having an open V-shaped slot above said U-shaped slot of the first mentioned claw, the other arm of said lever projecting upwardly, a power lever having its lower end fulcrumed between the first mentioned pair of ears and working in the first mentioned slot, and a link connecting the upwardly projecting arm of the angular lever with the power lever, the lower surface of the shoe being toothed at opposite sides of the first mentioned slot adjacent the rear end of the shoe.

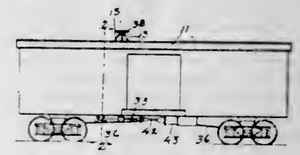
1,167,575. MECHANICAL TOY. FRANK K. LOMBARDY, San Diego, Cal. Filed Oct. 5, 1914. Serial No. 865,015. (Cl. 46—45.)



1. In a mechanical toy, the combination of a casing, wheels upon which said casing is mounted, a crank shaft rigidly secured to a portion of said wheels, a plurality of figures mounted on said casing, some provided with arms mounted to rotate about a vertical axis and some provided with arms mounted to rotate about a horizontal axis, means in connection with said arms mounted to rotate about a vertical axis, tending to hold them together at their extended ends and a cord provided with branches connecting said crank shaft with the arms of said figures, whereby, with the movement of said crank shaft, said arms are moved upon their mountings.

2. In a mechanical toy, the combination of a frame or casing, wheels upon which said frame or casing is mounted, a crank shaft rigidly secured to said wheels, a cord engaging with said crank shaft whereby it may be alternately tightened or loosened with the revolution of the wheels, a plurality of figures each provided with arms mounted to rotate about a vertical axis to which branches of cord are attached and means in connection with said arms mounted on a vertical axis for normally holding them together at their extended ends whereby said arms are made to move upon their pivotal mountings with the tightening and loosening of said cords.

1,167,576. HAND-BRAKE FOR BOX-CARS. ALBERT L. MCCALLUM, Spokane, Wash. Filed June 21, 1915. Serial No. 35,239. (Cl. 188—24.)



1. A hand brake mechanism for box cars comprising a brake wheel shaft mounted on the top of the car and extending through the top thereof and having a gear at the bottom thereof, a shaft journaled to a permanent position underneath the top of the car and having a gear at each end thereof, one of said gears meshing with the gear at the end of the brake wheel shaft, a vertically arranged shaft at the side of the car having a gear at each end thereof, the outer one of said gears meshing with the gear on the end of the shaft journaled underneath the top of the car, a shaft journaled to a permanent position underneath the floor of the car and having a gear on the end thereof meshing with the gear on the lower end of said vertically arranged shaft, a connection between said shaft on the under side of the floor of the car and a floating beam adapted to be operated to set and release brake shoes.

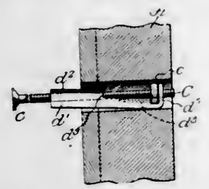
2. A hand brake mechanism for box cars comprising a brake wheel and shaft rotatably mounted near the center of the top of a box car, a shaft horizontally arranged and transversely journaled to the floor of the car on the under side thereof and adapted to rotate, a connection between said shaft and the brake levers of the trucks of the car, and shaft and gear connections across the top and down the side of the car from the brake wheel shaft on the top of the car to the horizontally arranged shaft on the bottom of the car.

1,167,577. TOGGLE-BOLT. PAUL H. MCCAIN, Chicago, Ill., assignor to Pheoll Manufacturing Company, Chicago, Ill., a Corporation. Filed Mar. 1, 1915. Serial No. 11,277. (Cl. 85—3.)

1. An anchor head for toggle bolts formed of side walls having a raised or connecting crown at one end and a depressed bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, and an outwardly projecting arm at the end of said bridge, such arm being arranged at one side of the axial line of the anchor head.

2. The combination with a bolt and nut of an anchor head formed of side walls having a raised connecting

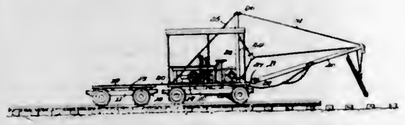
crown at one end and a depressed bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, said open space being shorter than the diagonal width of said nut and the adjacent end of the crown being formed with a shoulder to engage said nut when the bolt is in operative position.



3. An anchor head for toggle bolts formed of side walls having a raised connecting crown at one end and a depressed bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, and outwardly projecting arms at a slight distance from the end of said bridge to receive the bolt between them, a depressed seat being formed between the end of the bridge and the said outwardly projecting arms to admit the edge of the bolt nut.

4. An anchor head for toggle bolts formed of side walls having a raised connecting crown at one end and a bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, said side walls being provided with projecting arms extending from their lower edges outwardly a slight distance and having upturned ends extending at approximately right angles to the anchor head at a slight distance from the outer end of the bridge.

1,167,578. RAILROAD-TRACK-LAYING MACHINE OR DERRICK. JOHN F. MCNALLY and EDWARD RAYMOND, Newton, Kans. Filed May 9, 1914. Serial No. 837,583. (Cl. 212—38.)

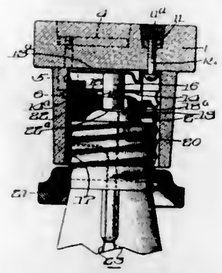


1. In a track laying machine, two independent trucks mounted upon a track, the one in advance of the other, a derrick located upon the front portion of the forward truck, longitudinal members secured to the side portions of the rear truck and projecting forwardly therefrom along opposite sides of the forward truck, and means detachably connecting the longitudinal members to the front and rear portions of the forward truck.

2. In a track laying machine, two independent trucks disposed the one in advance of the other, a derrick mounted centrally upon the front end of the forward truck and arranged to swing in advance thereof, brackets near the front corners of the forward truck, longitudinal members secured to the rear truck and projecting forwardly therefrom along the sides of the front truck and engaging the said brackets thereof, and fastening means connecting such longitudinal members to the rear corner portions of the forward truck.

1,167,579. LAMP-SOCKET. ARTHUR C. MCWILLIAMS, South Bend, Ind. Filed Jan. 12, 1914. Serial No. 811,663. (Cl. 173—344.)

1. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell mounted on said base and electrically connected to one of said terminals, a film holder comprising a metallic shell screwing into the first mentioned shell and being internally threaded to receive the lamp, said internal shell having a flange formed at its inner end, an annular metallic plate forming part of said film holder and lying adjacent to the flange of the internal shell, a film normally insulating said plate from the flange of the internal shell, means composed of insulating material for securing said plate to said internal shell, means for electrically connecting said plate to the opposite main terminal when the film holder is in position in the external shell, and means for electrically connecting the center contact of the lamp with the last mentioned terminal.



2. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell inclosed within said base and permanently secured to one of said terminals, a dielectric film, a film holder comprising an annular metallic plate, a metallic shell screwing into the first mentioned shell and having an internal screw thread for receiving the lamp, said internal shell having an annular flange at the inner end substantially co-extensive with said plate and separated therefrom by said film, said film holder also including a ring of insulating material for holding the internal shell and film and annular plate assembled, means for electrically connecting said plate to the opposite main terminal of the device, and means for electrically connecting the center contact of the lamp to the last mentioned terminal.

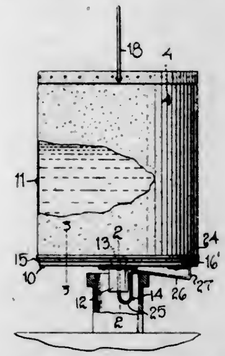
3. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell inclosed within said base and permanently secured to one of said terminals, a dielectric film, a film holder comprising an annular metallic plate, a metallic shell screwing into the first mentioned shell and having an internal screw thread for receiving the lamp, said internal shell having an annular flange at the inner end substantially co-extensive with said plate and separated therefrom by said film, said film holder also including a ring of insulating material for holding the internal shell and film and annular plate assembled, means for electrically connecting said plate to the opposite main terminal of the device, and a switch electrically connected to the last mentioned terminal, said switch being engaged by the center contact of the lamp and tending to move into contact with the first mentioned shell.

4. A film socket comprising, in combination with an annular film, an insulating base, two main terminals on said base, a metallic shell inclosed within said base and electrically connected to one of said terminals, a film holder screwing into the first mentioned shell and having an internal screw thread for receiving the base of the lamp, said film holder comprising a metallic shell having formed thereon an annular flange approximately co-extensive with said film, an insulating collar whereby said shell may be manipulated, an annular plate substantially co-extensive with said film and separated by said film from the annular flange on the internal shell, an insulating ring fitting over the inner edge of flange on said internal shell, said plate having spring fingers adapted to snap over said insulating ring for holding the plate in position, and means for electrically connecting said plate to the opposite terminal when the film holder is in position within the first mentioned shell.

5. In a film socket, the combination of an insulating base, two main terminals on said base, a metallic shell located within said base and electrically connected to one

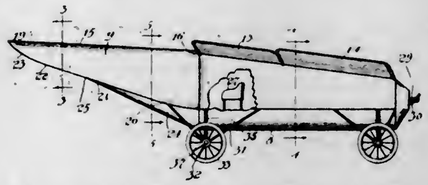
of said terminals, an internal metallic shell screwing into the first mentioned shell and having internal screw threads for receiving the base of the lamp, said internal shell having an annular flange at its inner end, an annular film supported upon the flange on the internal shell, an annular plate overlying said film, means for removably holding said plate upon said film, an annular shoe electrically connected to the opposite terminal on the base and located in position to be engaged by said plate when the parts are assembled, a post contact electrically connected to the same terminal as the shoe and adapted to pass through the central opening of the shoe, film, film holding plate and internal shell to energize the center contact of the lamp, and a spring switch electrically connected to and operated by said post and tending to engage the external shell for the purpose described.

1,167,580. BUCKET FOR FILLING AUTOMOBILE-RADIATORS. CYRUS W. MACKENZIE, Waverly, Ind. Filed Apr. 19, 1915. Serial No. 22,432. (Cl. 226—33.)



A container including a body having an opening in its bottom wall, said opening being defined by a depending tube, a flap valve secured within the body and to the bottom wall thereof at one side of the opening, said valve overlying the opening in the bottom wall, a spring positioned within the body secured to the bottom wall thereof at one side of the opening and at a point substantially diametric to the point of connection between the valve and bottom wall, said spring overlying the valve for normally maintaining the same in a closed position, and a resilient rod having one extremity secured to the outer face of the bottom wall of the body and terminating in a goose-neck extension bridging the wall of the depending tube, the free extremity of said extension passing inwardly of the tube and in constant contact with the flap valve whereby inward movement of the rod relative to the body forces said flap valve into open position, the tension of the rod being less than the tension of the spring, whereby the valve is maintained normally closed.

1,167,581. MONOPLANE. FRANCIS JOHN MARONKA, Chicago, Ill. Filed Apr. 26, 1913. Serial No. 763,716. (Cl. 244—30.)



1. A monoplane comprising in combination a body portion, having parallel sides and a convex bottom, a beak-like member projecting forwardly thereof, in cross section substantially triangular.

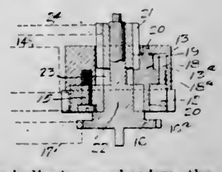
2. A monoplane comprising in combination a body portion, the sides of which are parallel, and its bottom convex, a beak-like member at the forward end thereof, the bottom of which adjacent the body is convexed, and gradually merges into a substantially flat transverse surface to the point of the beak, substantially as described.

3. A monoplane comprising in combination a body portion the side walls of which increase in width from the rear toward their front ends, a convexed bottom connecting said side walls, a beak like portion at the forward end thereof, the bottom of which converges to a point and extends upwardly at an angle from the body portion, substantially as described.

4. A monoplane comprising in combination a body portion, the outer side faces of which are parallel, a beak-like portion projecting from the forward end thereof, triangular in cross-section with its several sides converging to a point terminating at the apex of the beak-like portion.

5. A monoplane comprising in combination a body portion, the opposing side faces of which extend in parallel lines and increase in width from rear to front, a beak-like portion joined to the forward end thereof, triangular in cross-section and converging to a point adjacent which the bottom curves upwardly.

1,167,582. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Mar. 1, 1913. Serial No. 751,471. (Cl. 58—85.)

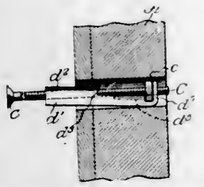


1. In winding indicator mechanism, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear adapted to rotate independently of each other, a gear-member mounted on said bearing member interposed between the two sets of teeth of said double gear, a planet-gear supported by said gear-member, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, and connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator-hand, and connections between said pinion and said indicator-hand.

2. In winding indicator mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear-member adapted to rotate independently of each other, a gear-member between the two sets of teeth of said double gear mounted loosely on the bearing-member and having a chamber therein, a planet-gear supported by said gear-member within said chamber, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator-hand, and connections between said pinion and said indicator-hand.

3. In winding indicator mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear-member adapted to rotate independently of each other, a gear-member mounted loosely on said bearing member composed of two parts forming a chamber, a planet-gear supported by said gear-member within said chamber, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, connections between the other set of teeth of said double gear and said ratchet, an indicator-hand, and connections between said pinion and said indicator-hand.

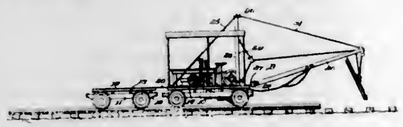
crown at one end and a depressed bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, said open space being shorter than the diagonal width of said nut and the adjacent end of the crown being formed with a shoulder to engage said nut when the bolt is in operative position.



3. An anchor head for toggle bolts formed of side walls having a raised connecting crown at one end and a depressed bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, and outwardly projecting arms at a slight distance from the end of said bridge to receive the bolt between them, a depressed seat being formed between the end of the bridge and the said outwardly projecting arms to admit the edge of the bolt nut.

4. An anchor head for toggle bolts formed of side walls having a raised connecting crown at one end and a bridge adjacent its opposite end, an open space being formed between said crown and bridge for the passage of the bolt, said side walls being provided with projecting arms extending from their lower edges outwardly a slight distance and having upturned ends extending at approximately right angles to the anchor head at a slight distance from the outer end of the bridge.

1,167,578. RAILROAD-TRACK-LAYING MACHINE OR DERRICK. JOHN F. MCNALLY and EDWARD RAYMOND, Newton, Kans. Filed May 9, 1914. Serial No. 837,583. (Cl. 212—38.)

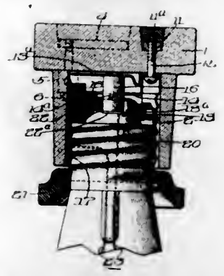


1. In a track laying machine, two independent trucks mounted upon a track, the one in advance of the other, a derrick located upon the front portion of the forward truck, longitudinal members secured to the side portions of the rear truck and projecting forwardly therefrom along opposite sides of the forward truck, and means detachably connecting the longitudinal members to the front and rear portions of the forward truck.

2. In a track laying machine, two independent trucks disposed the one in advance of the other, a derrick mounted centrally upon the front end of the forward truck and arranged to swing in advance thereof, brackets near the front corners of the forward truck, longitudinal members secured to the rear truck and projecting forwardly therefrom along the sides of the front truck and engaging the said brackets thereof, and fastening means connecting such longitudinal members to the rear corner portions of the forward truck.

1,167,579. LAMP-SOCKET. ARTHUR C. MCWILLIAMS, South Bend, Ind. Filed Jan. 12, 1914. Serial No. 811,663. (Cl. 173—344.)

1. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell mounted on said base and electrically connected to one of said terminals, a film holder comprising a metallic shell screwing into the first mentioned shell and being internally threaded to receive the lamp, said internal shell having a flange formed at its inner end, an annular metallic plate forming part of said film holder and lying adjacent to the flange of the internal shell, a film normally insulating said plate from the flange of the internal shell, means composed of insulating material for securing said plate to said internal shell, means for electrically connecting said plate to the opposite main terminal when the film holder is in position in the external shell, and means for electrically connecting the center contact of the lamp with the last mentioned terminal.



2. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell inclosed within said base and permanently secured to one of said terminals, a dielectric film, a film holder comprising an annular metallic plate, a metallic shell screwing into the first mentioned shell and having an internal screw thread for receiving the lamp, said internal shell having an annular flange at the inner end substantially co-extensive with said plate and separated therefrom by said film, said film holder also including a ring of insulating material for holding the internal shell and film and annular plate assembled, means for electrically connecting said plate to the opposite main terminal of the device, and means for electrically connecting the center contact of the lamp to the last mentioned terminal.

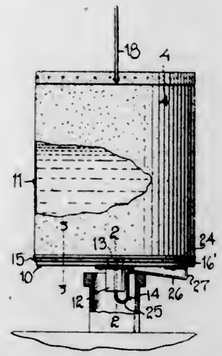
3. A lamp socket comprising an insulating base provided with two main terminals, a metallic shell inclosed within said base and permanently secured to one of said terminals, a dielectric film, a film holder comprising an annular metallic plate, a metallic shell screwing into the first mentioned shell and having an internal screw thread for receiving the lamp, said internal shell having an annular flange at the inner end substantially co-extensive with said plate and separated therefrom by said film, said film holder also including a ring of insulating material for holding the internal shell and film and annular plate assembled, means for electrically connecting said plate to the opposite main terminal of the device, and a switch electrically connected to the last mentioned terminal, said switch being engaged by the center contact of the lamp and tending to move into contact with the first mentioned shell.

4. A film socket comprising, in combination with an annular film, an insulating base, two main terminals on said base, a metallic shell inclosed within said base and electrically connected to one of said terminals, a film holder screwing into the first mentioned shell and having an internal screw thread for receiving the base of the lamp, said film holder comprising a metallic shell having formed thereon an annular flange approximately co-extensive with said film, an insulating collar whereby said shell may be manipulated, an annular plate substantially co-extensive with said film and separated by said film from the annular flange on the internal shell, an insulating ring fitting over the inner edge of flange on said internal shell, said plate having spring fingers adapted to snap over said insulating ring for holding the plate in position, and means for electrically connecting said plate to the opposite terminal when the film holder is in position within the first mentioned shell.

5. In a film socket, the combination of an insulating base, two main terminals on said base, a metallic shell located within said base and electrically connected to one

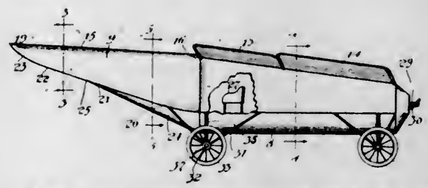
of said terminals, an internal metallic shell screwing into the first mentioned shell and having internal screw threads for receiving the base of the lamp, said internal shell having an annular flange at its inner end, an annular film supported upon the flange on the internal shell, an annular plate overlying said film, means for removably holding said plate upon said film, an annular shoe electrically connected to the opposite terminal on the base and located in position to be engaged by said plate when the parts are assembled, a post contact electrically connected to the same terminal as the shoe and adapted to pass through the central opening of the shoe, film, film holding plate and internal shell to energize the center contact of the lamp, and a spring switch electrically connected to and operated by said post and tending to engage the external shell for the purpose described.

1,167,580. BUCKET FOR FILLING AUTOMOBILE-RADIATORS. CYRUS W. MACKENZIE, Waverly, Ind. Filed Apr. 19, 1915. Serial No. 22,432. (Cl. 226—33.)



A container including a body having an opening in its bottom wall, said opening being defined by a depending tube, a flap valve secured within the body and to the bottom wall thereof at one side of the opening, said valve overlying the opening in the bottom wall, a spring positioned within the body secured to the bottom wall thereof at one side of the opening and at a point substantially diametric to the point of connection between the valve and bottom wall, said spring overlying the valve for normally maintaining the same in a closed position, and a resilient rod having one extremity secured to the outer face of the bottom wall of the body and terminating in a goose-neck extension bridging the wall of the depending tube, the free extremity of said extension passing inwardly of the tube and in constant contact with the flap valve whereby inward movement of the rod relative to the body forces said flap valve into open position, the tension of the rod being less than the tension of the spring, whereby the valve is maintained normally closed.

1,167,581. MONOPLANE. FRANCIS JOHN MARONKA, Chicago, Ill. Filed Apr. 26, 1913. Serial No. 763,716. (Cl. 244—30.)



1. A monoplane comprising in combination a body portion, having parallel sides and a convex bottom, a beak-like member projecting forwardly thereof, in cross section substantially triangular.

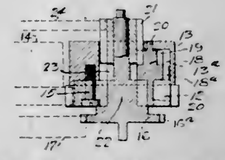
2. A monoplane comprising in combination a body portion, the sides of which are parallel, and its bottom convex, a beak-like member at the forward end thereof, the bottom of which adjacent the body is convexed, and gradually merges into a substantially flat transverse surface to the point of the beak, substantially as described.

3. A monoplane comprising in combination a body portion the side walls of which increase in width from the rear toward their front ends, a convexed bottom connecting said side walls, a beak like portion at the forward end thereof, the bottom of which converges to a point and extends upwardly at an angle from the body portion, substantially as described.

4. A monoplane comprising in combination a body portion, the outer side faces of which are parallel, a beak-like portion projecting from the forward end thereof, triangular in cross-section with its several sides converging to a point terminating at the apex of the beak-like portion.

5. A monoplane comprising in combination a body portion, the opposing side faces of which extend in parallel lines and increase in width from rear to front, a beak-like portion joined to the forward end thereof, triangular in cross-section and converging to a point adjacent which the bottom curves upwardly.

1,167,582. WINDING-INDICATOR. JOSEPH MAZER, McAlester, Okla. Filed Mar. 1, 1913. Serial No. 751,471. (Cl. 58—85.)



1. In winding indicator mechanism, the combination of the main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear adapted to rotate independently of each other, a gear-member mounted on said bearing member interposed between the two sets of teeth of said double gear, a planet-gear supported by said gear-member, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, and connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator-hand, and connections between said pinion and said indicator-hand.

2. In winding indicator mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear-member adapted to rotate independently of each other, a gear-member between the two sets of teeth of said double gear mounted loosely on the bearing-member and having a chamber therein, a planet-gear supported by said gear-member within said chamber, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator-hand, and connections between said pinion and said indicator-hand.

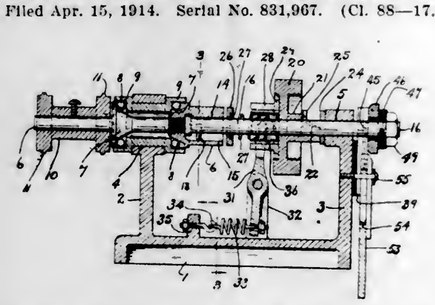
3. In winding indicator mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member comprising a pinion and a double gear-member adapted to rotate independently of each other, a gear-member mounted loosely on said bearing member composed of two parts forming a chamber, a planet-gear supported by said gear-member within said chamber, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double gear and said pinion, connections between the other set of teeth of said double gear and said ratchet, an indicator-hand, and connections between said pinion and said indicator-hand.

4. In winding mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing-member including a ratchet-wheel, a bearing-member comprising a pinion loosely mounted thereon and a double gear rigid therewith, a gear-member mounted on said double gear interposed between the two sets of teeth of said double gear, a planet gear supported by said gear-member, connections between said gear-member and said barrel, said planet-gear engaging one set of teeth of said double-gear and said pinion, connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator-hand, and connections between said pinion and said indicator hand.

5. In winding indicator mechanism, the combination of a main-spring barrel, winding mechanism including a ratchet-wheel, a bearing member comprising a pinion and a double gear-member adapted to rotate independently of each other, a gear-member mounted on said bearing member comprising two parts united to form a chamber, a planet-gear loosely mounted in said gear-chamber, said planet-gear comprising two pinions of different diameter, one of said pinions engaging said first named pinion, the other pinion engaging one set of teeth of said double gear member, connections between said gear-member and said barrel, connections between the other set of teeth of said double gear and said ratchet-wheel, an indicator hand, and connections between said first named pinion and said indicator hand.

[Claims 6 to 9 not printed in the Gazette.]

1,167,583. SAFETY DEVICE FOR MOVING-PICTURE MACHINES. CHARLES F. MEHL, HENRY B. LIEBLER, JABEZ NALL, and EDWARD J. NOBBE, Cleveland, Ohio. Filed Apr. 15, 1914. Serial No. 831,967. (Cl. 88—17.)



1. In a device of the character described, the combination with a moving picture machine of a frame, a driving shaft journaled in said frame, a drum mounted on one end of said shaft, said drum being provided with projections adapted to engage with the perforations of the film of the moving picture machine, a longitudinally shiftable shaft journaled in line with said driving shaft, means forming an operative connection between the driving shaft and said longitudinally shiftable shaft so that said driving shaft will rotate said longitudinally shiftable shaft while leaving it free to move longitudinally, a spring arranged to resist the longitudinal movement of said longitudinally shiftable shaft, a cam carrying member rotatably mounted on said longitudinally shiftable shaft, a pin carried by said longitudinally shiftable shaft and arranged to engage with the cam surface on the cam carrying member, terminals arranged in proximity to said longitudinally shiftable shaft and a circuit closer carried by said longitudinally shiftable shaft and adapted to make contact with said terminals in the inward position of said longitudinally shiftable shaft.

2. In a device of the character described, the combination with a moving picture machine of a frame, a driving shaft journaled in said frame, said shaft having a socket in one end thereof and said socket having a key-way in the wall thereof, a drum journaled on the other end of said shaft, said drum being provided with projections adapted to engage with the perforations in the film of the moving picture machine, a longitudinally shiftable shaft journaled in line with said first mentioned shaft and having one end extending into the socket in the driving shaft, a pin secured in the end of said longitudinally shiftable shaft where it extends into the said socket, said pin being arranged to extend into the key-way in the wall of the said socket, a member mounted on said longitudinally shiftable shaft and free to rotate thereon, said member being provided with a cam surface, a pin secured in said longitudinally shiftable shaft and adapted to engage with the cam surface on said member, a spring arranged on said longitudinally shiftable shaft and adapted to resist the longitudinal movement thereof and return said shaft to its original position after it has been moved longitudinally, a lever mounted on said frame, a friction member mounted at the upper end of said lever, a spring having one end secured to said frame and the other end to the lower end of said lever and arranged to cause the lever to yieldingly hold the friction member against the cam carrying member, terminal plates mounted in proximity to the end of said longitudinally shiftable shaft and a circuit closer carried by said longitudinally shiftable shaft and arranged to make contact with said terminal plates in the inward position of said longitudinally shiftable shaft.

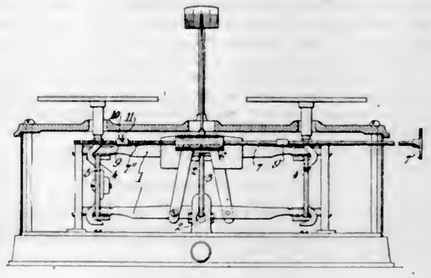
3. In a device of the character described, the combination with a moving picture machine of a base, a pair of standards mounted on said base, a driving shaft journaled in one of said standards, a drum secured on one end of said shaft, a second shaft journaled in line with said driving shaft and operatively connected with the driving shaft so as to rotate therewith, while being free to slide longitudinally, a member mounted on the said longitudinally shiftable shaft and free to rotate thereon, said member being provided with a cam surface, a pin secured in said longitudinally shiftable shaft and adapted to engage with the cam surface on the cam carrying member, a spring arranged on said longitudinally shiftable shaft and adapted to yieldingly resist the longitudinal movement of said shaft and return said shaft to its original position after the shaft has been moved longitudinally, a lever mounted on said base, a friction member mounted on said lever and arranged to engage with said cam carrying member, a spring having one end secured to said base and the other end secured to said lever and adapted to cause the lever to yieldingly hold the friction member against the cam carrying member, terminal plates mounted in proximity to the end of said longitudinally shiftable shaft and a circuit closer carried by said longitudinally shiftable shaft and adapted to make contact with said terminal plates in the inward position of said shaft.

4. In a device of the character described, the combination with a moving picture machine of a drum arranged to be driven directly by the film of the moving picture machine, a shaft operatively connected with said drum and arranged to be rotated by said drum while being free to move longitudinally, means for resiliently resisting the longitudinal movement of said shaft, means for producing a longitudinal movement of said shaft when the said drum is driven, terminal plates mounted adjacent to the end of said shaft, a contact member carried by said shaft and adapted to engage said terminal plates, and a spacer plate adapted to be inserted between said terminal plates and the said contact member so as to be held therein when the said drum is not driven.

1,167,584. WEIGHING-SCALE. CLARENCE G. MICHALIS, East Orange, N. J., assignor to The Torsion Balance Company, New York, N. Y., a Corporation of New York. Filed June 9, 1915. Serial No. 33,044. (Cl. 73—30.)

1. The combination with a scale beam, of a tare balance comprising a weighted bar provided with a screw thread, and a releasable nut carried by the beam and engaging the screw thread for effecting quick and fine adjustment.

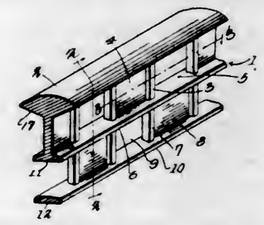
2. The combination with a fulcrumed scale beam, of supporting brackets carried by the beam at the respective sides of the fulcrum, a releasable nut carried by one of the said brackets, a weight, and a bar carrying the weight and mounted in said brackets and having a screw thread engaging the said releasable nut.



3. In a weighing scale, the combination with a housing, of a beam fulcrumed therein, supporting brackets carried by the beam at the respective sides of the fulcrum, a bar mounted in the said brackets and at one end extending outside the housing, an actuator carried by the said extending end, the other end of the bar being provided with a screw thread, a releasable nut carried by one of the said brackets and engaging the said screw thread, and a weight carried by the said bar.

4. The combination with a scale beam, of a weight bar provided with a screw thread, a supporting bracket carried by the beam and having an eye embracing such bar, the bar being slotted transversely of the eye, and a spring wire disposed in such slot and engaging the screw thread.

1,167,585. CONCRETE-CURB ARMOR. CHARLES A. MILLER and CLAUDE K. DOAK, San Francisco, Cal. Filed July 26, 1915. Serial No. 41,918. (Cl. 94—2.)

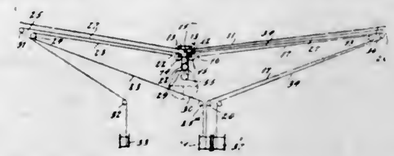


A concrete curb armor comprising a buffer, posts extending downwardly from the transverse center of the buffer, webs connecting the posts in pairs, there being openings extending to the inner face of the buffer between the connected pairs of posts, a base connected to the lower ends of the posts and webs, second posts extending downwardly from the base, webs connecting the second posts in pairs, there being second openings between the connected pairs of second posts said openings extending to the lower face of the base and the second openings being in vertical planes between the first openings, and a second base connected to the lower ends of the second posts and webs.

1,167,586. LOAD-TRANSFER APPARATUS. THOMAS SPENCER MILLER, South Orange, N. J. Filed Mar. 14, 1914. Serial No. 824,590. (Cl. 212—81.)

1. In a load transfer, in combination, a main cable, a carriage movable along the main cable, a holding line anchored at one end of the main cable and having a bight depending from the carriage, an opening and closing bucket hung in the bight of the holding line, a closing line for the bucket, a power-operated drum for operating the closing line, and a power-operated drum for operating the holding line, the maximum power of said last-named drum being below the maximum power of the closing line drum.

2. In a load transfer, in combination, a main cable, a carriage movable along the main cable, an opening and closing bucket, a holding line having a fixed end and one end wound on a power-operated drum, said holding line having a bite depending from the carriage and in which the bucket is suspended, a closing line for the bucket, a power-operated drum upon which the closing line is wound, traversing lines for the carriage, an operating drum for the traversing lines, and means for interlocking the closing line drum and the drum for the traversing lines.



3. In a load transfer, in combination, a main cable, a carriage movable along the main cable, an opening and closing bucket, a holding line having a fixed end and one end wound on a power-operated drum, said holding line having a bight depending from the carriage and in which the bucket is suspended, a closing line for the bucket, a power-operated drum upon which the closing line is wound, traversing lines for the carriage, an operating drum for the traversing lines, means whereby said closing line drum may operate independently of said traversing line drum, and means for interlocking said drums to cause them to operate together.

4. In a load transfer, in combination, a main cable, a carriage movable along the main cable, an opening and closing bucket, a holding line having a fixed end and one end wound on a power-operated drum, said holding line having a bight depending from the carriage and in which the bucket is suspended, a closing line for the bucket, traversing lines for the carriage, a power-driven shaft, a drum for the closing line fixed to said shaft, a drum for the traversing lines loosely mounted on said shaft, and means whereby said closing line drum may be driven independently of and simultaneously with the traversing line drum.

5. In a load transfer, in combination, a main cable, a carriage movable along the main cable, an opening and closing bucket, a holding line having a fixed end and one end wound on a power-operated drum, said holding line having a bight depending from the carriage and in which the bucket is suspended, a closing line for the bucket, traversing lines for the carriage, a shaft, a drum for the closing line fixed to said shaft, a drum for the traversing lines loosely mounted on said shaft, a power-driven shaft geared to the closing line drum, a pinion loose on said last-named shaft and geared to the drum for the traversing lines, and a clutch connecting said pinion with and disconnecting it from the power-shaft.

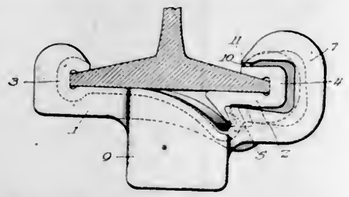
[Claims 6 to 9 not printed in the Gazette.]

1,167,587. ANTICREEPER FOR RAILS. PHILIP W. MOORE, Evanston, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed July 29, 1912. Serial No. 711,978. (Cl. 238—4.)

1. An anti-creeper for rails comprising a plurality of relatively movable members, one of said members having a thin wall adapted to be bent into a depression in another of said members so as to lock said two members against movement in one direction, said wall extending in the direction of said relative movement whereby it may be deflected in any one of a number of relative positions to effect said locking.

2. An anti-creeper for rails comprising a plurality of members one of which is provided with a projection and

another of which is provided with a thin wall arranged adjacent to said projection, whereby said wall may be deflected behind said projection at any one of a number of intermediate points thereon to lock said members against movement in whatever position they may assume.



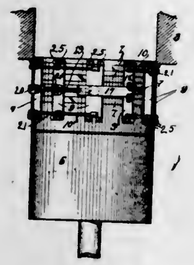
3. An anti-creeper for rails comprising a plurality of movable parts, a plurality of projections carried by one of said parts and a thin wall carried by another of said parts, said thin wall being arranged to extend over said projections, whereby it may be bent down between two or more of said projections to lock the parts against relative movement.

4. An anti-creeper comprising two relatively movable members each having a jaw adapted to grip one side of a rail base, one of said members having a plurality of ridges and the other of said members having a diaphragm adjacent to said ridges and spanning the same, whereby it may be deflected into the space between said ridges.

5. An anti-creeper comprising two relatively movable members each having a jaw arranged to grip one side of a rail base when the parts are assembled, one of said members having a tie-abutting flange and having a thin diaphragm adapted to be bent at some intermediate point so as to obstruct the movement of the other of said members.

[Claims 6 to 13 not printed in the Gazette.]

1,167,588. PISTON-RING-COMPRESSING DEVICE. BERNARD MORGAN, Newport, R. I. Filed Mar. 12, 1915. Serial No. 13,996. (Cl. 29—84.)



1. A device of the class described comprising a plurality of bars spaced apart from one another, flexible means in direct engagement with said bars and adapted to extend about a piston, and to which said bars are secured, and means for drawing the free ends of said device toward one another.

2. A device of the class described comprising two flexible members spaced apart from one another, a series of bars each of which is secured directly to both of said flexible members, and means for drawing the free ends of said device toward one another.

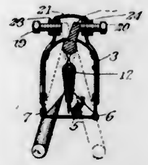
3. A device of the class described comprising two flexible members spaced apart from one another, a series of bars each of which is rigidly connected with both of said flexible members, and means in operative engagement with the end bars of said series for drawing the free ends of said device toward one another.

4. In a device of the class described, two flexible members spaced apart from one another; a plurality of bars spaced apart from one another and which bars are secured to said flexible members; and a pulling member pivotally connected with the bar at one end of the device and adapted to engage a bar at the other end of the device, to thereby draw said ends toward one another.

5. In a device of the class described, two flexible members spaced apart from one another; a plurality of bars spaced apart from one another, and secured at their ends to said flexible members; a latch member pivotally connected with the bar at one end of the device; a screw in threaded engagement with said latch member; and a lug carried by a bar at the other end of said device and adapted to be engaged by said screw.

[Claims 6 to 10 not printed in the Gazette.]

1,167,589. RAZOR-SHARPENER. WILLIAM H. MORGAN, Pomeroy, Ohio. Filed July 22, 1914. Serial No. 852,369. (Cl. 51—16.)

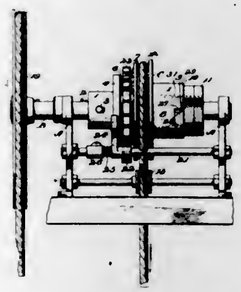


1. A device for use in sharpening razor blades, comprising a hollow sheet metal handle, the sides of said handle being extended forwardly and brought together at their free edges to adapt them to clamp a razor-blade, and means carried in said extended portion to serve as a gage in stropping the blade.

2. A device for use in sharpening razor blades, comprising a hollow sheet-metal handle, the sides of said handle being extended forwardly and brought together at their free edges to adapt them to clamp a razor-blade, and a gage-bar journaled in the top portion of said extended sides to determine the angle of incidence of the blade with the strop.

3. A device for use in sharpening razor blades, comprising a hollow sheet-metal handle, the sides of said handle being extended forwardly and brought together at their free edges to adapt them to clamp a razor-blade, a gage-bar journaled in the top portion of said extended sides to determine the angle of incidence of the blade with the strop, and means mounted in the top portion of the handle to limit the movement of said gage-bar in either direction.

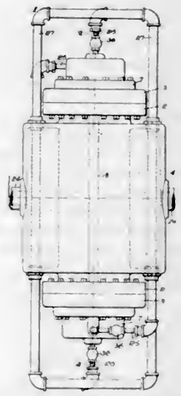
1,167,590. CLUTCH. JOHN H. MOSS, deceased, by Clarence B. Moss, administrator, Glen Ridge, N. J. Filed Mar. 20, 1913. Serial No. 755,798. (Cl. 57—116.)



In a clutch mechanism, the combination with a shaft, of a removable sleeve having a disk thereon and fixedly attached to the shaft, a ratchet wheel loosely mounted on the fixedly attached sleeve having frictional blocks on one face adapted to engage the face of the disk, a pulley

loosely mounted on the fixedly attached sleeve having friction blocks adapted to engage the face of the ratchet wheel, a beveled face on the pulley, a collar, having a beveled face, mounted to rotate with the shaft, the beveled face of the collar and pulley adapted to engage to move the pulley laterally and away from the collar for producing a friction between the pulley, ratchet wheel, and disk, for binding the collar, pulley, and ratchet wheel and disk together for revolution as a unit in one direction, the edges of the beveled faces of the collar and pulley being adapted to be engaged to prevent revolution of the pulley independent of the ratchet wheel in one direction, but allowing the pulley, collar, ratchet wheel and disk to rotate together with the shaft in a contrary direction, means engaging the ratchet wheel for holding it against rotation in one direction, means for revolving the shaft, and means actuated upon the rotation of the shaft for releasing the ratchet-engaging means from engagement with the ratchet wheel whereby the ratchet wheel may be freely rotated.

1,167,591. REFRIGERATING APPARATUS. GEORGE MURRAY, Cambridgeport, Mass. Filed June 24, 1912. Serial No. 705,479. (Cl. 62—115.)



1. A refrigerating apparatus comprising a rotatable receptacle, pipes connecting opposite ends thereof, and means operated by the rotation of said receptacle to spray a refrigerating liquid in said receptacle.

2. A refrigerating apparatus comprising an hermetically sealed cylinder, pipes connecting opposite ends thereof, a gravity piston in said cylinder, and spraying devices between which said piston reciprocates.

3. A refrigerating apparatus comprising a closed cylinder rotatable end over end, pipes connecting opposite ends of said piston, and alternatively operative spraying devices within said cylinder and between which the piston reciprocates.

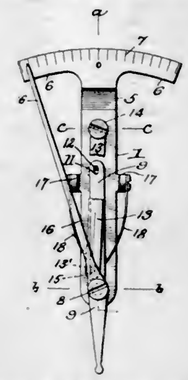
4. A refrigerating apparatus comprising a closed cylinder rotatable about its shorter axis, a pair of pipes connecting the ends of said cylinder, a terminal spraying device in communication with each pipe, and means for projecting spraying charges alternately through said pipes.

5. A refrigerating apparatus comprising a closed cylinder rotatable about its shorter axis, refrigerating liquid containing caps secured to opposite ends of said cylinders and communicating therewith, a plurality of pipes connecting opposite ends of said cylinder through said caps and means to spray the liquid discharged from said caps into said cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,167,592. TEST-INDICATOR. KARL A. NEUMANN and HAROLD K. ANDREWS, Bridgeport, Conn. Filed Aug. 6, 1915. Serial No. 44,104. (Cl. 33—172.)

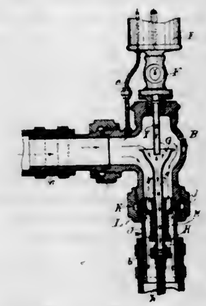
1. In an indicator, a base, a lever pivoted intermediate its ends upon said base, an arm pivoted at its upper end upon said base, and having a pin engaging the upper end of said lever, said arm having a slot in its lower end, and an indicator hand mounted upon the journal of said lever, and having a pin operating in the slot of said arm.



2. In an indicator, a base having its upper end terminating in a head having a scale upon the face thereof, a lever pivoted intermediate its ends upon the lower end of said base and having its lower end terminating in a head adapted to contact with the work being tested, and its upper end provided with a slot, an arm pivoted at its upper end to said base above the upper end of said lever and having a pin adapted to fit within the slot of said lever and its lower end provided with a slot, an indicator hand pivoted upon the journal of said lever and having a pin adapted to operate in the slot of said arm and its upper end extended over the face of the graduations of said base.

3. In an indicator, a base having its upper end terminating in a head having a scale upon the face thereof, a lever pivoted intermediate its ends upon the lower end of said base and having its lower end terminating in a head adapted to contact with the work being tested and its upper end provided with a slot, an arm pivoted at its upper end above the upper end of said lever and having a pin adapted to fit within the slot of said lever and its lower end provided with a slot, an indicator hand pivoted upon the journal of said lever and having a pin adapted to operate in the slot of said arm and its upper end extended over the face of the graduations of said head, and springs carried by said base adapted to engage the edges of said lever and said arm whereby to hold the latter and said indicator hand in a neutral position.

1,167,593. AIR-PRESSURE LUBRICATOR. LEWIS G. O'DONNELL, Coscob, Conn. Filed May 4, 1915. Serial No. 25,819. (Cl. 184—1.)



1. In an air pressure lubricator, the combination with an air-service pipe, of a T-connection secured to the said pipe, an oil-feeding device arranged vertically above the said connection in communication therewith, an air tube connecting the said device and the air-service pipe, a

funnel located in the said connection and arranged to receive the oil from the oil-feeding device, a rubber-carrying pipe connected with the said T-connection and having a pipe-coupling at its other end, a metal oil-carrying tube connected with the said funnel and extending within the rubber air-carrying pipe and having a nozzle at its end arranged in the said pipe-coupling, and means for removably securing the said nozzle within the said pipe-coupling.

2. In an air-pressure lubricator, the combination with an air-service pipe, of a T-connection, an oil-feeding device arranged vertically above the said connection in communication therewith, an air tube connecting the said device and the said air-service pipe, a funnel located in the said connection and arranged to receive the oil from the oil-feeding device, a rubber air-carrying pipe connected with the said T-connection and having a pipe coupling at its other end, a spring-seated check valve in the said connection opening downwardly and controlling the passage of air into the said air-carrying pipe, a metal oil-carrying tube extending within the rubber air-carrying pipe and having a nozzle at its end arranged within the said pipe-coupling, a spring-seated check valve in the said nozzle opening outwardly, and means for removably securing the nozzle within the said pipe-coupling.

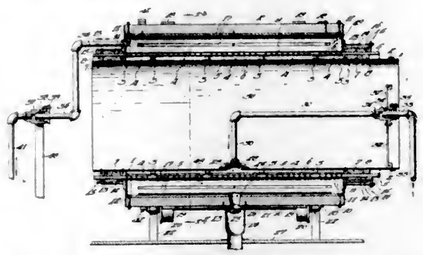
3. In an air pressure lubricator, the combination with an air-service pipe, of a T-connection, an oil-feeding device arranged vertically above the said connection in communication therewith, means for connecting the said device with the said air-service pipe, the said device being constructed to deliver oil into the said connection, a rubber air-carrying pipe connected with the said T-connection and having a pipe-coupling at its other end, a metal oil-carrying tube extending within the said air-carrying pipe and having a nozzle at its end arranged within the said pipe-coupling, means for securing the said nozzle removably within the said pipe-coupling, and means arranged within the said T-connection for directing the oil from the said oil-feeding device into the said metal oil-carrying tube.

4. In an air pressure lubricator, the combination with an air service pipe, of a T-connection, an oil-feeding device arranged vertically above the said connection in communication therewith, means for connecting the said device with the said air-service pipe, a rubber air-carrying pipe connected with the said T-connection and having a pipe-coupling at its other end, a spring-seated check valve within the said connection opening downwardly and controlling the passage of air into the said air-carrying pipe, a metal oil-carrying tube extending within the rubber air-carrying pipe and having a nozzle at its end arranged within the said pipe-coupling, means for securing the said nozzle removably within the said pipe-coupling, a spring-seated check valve within the said nozzle opening outwardly, and means arranged within the said T-connection for directing the oil from the oil-feeding device into the said metal oil-carrying tube.

5. In an air pressure lubricator, the combination with an air-service pipe, of a T-connection, an oil-feeding device in communication with the said connection, means for connecting the said device with the said air-service pipe, the said device being constructed to deliver oil into the said connection, a rubber air-carrying pipe connected with the said T-connection and having a pipe-coupling at its other end, a metal oil-carrying tube extending within the said air-carrying pipe and having a nozzle at its end arranged within the said pipe-coupling, means for securing the said nozzle removably within the said pipe-coupling, and means arranged within the said T-connection for directing the oil from the said oil-feeding device into the said metal oil-carrying tube.

1,167,594. ELECTROLYTIC CELL. LEWIS E. PORTER, Los Angeles, Cal., assignor of one-half to Hugh E. Stock, Casper, Wyo. Filed May 11, 1914. Serial No. 837,939. (Cl. 204—15.)

1. An electrolytic cell comprising a cylindrical metal cathode, a series of insulating strips on the outer surface of said cathode dividing it into a series of rectangular areas, an insulating shell surrounding said cathode, ends making a tight closure and forming a pressure tight compartment between said shell and said cathode, a series of anode conductors inside said shell, a porous diaphragm dividing said compartment into two chambers, and means for connecting an electrical source to said cathode and to said anode conductors.

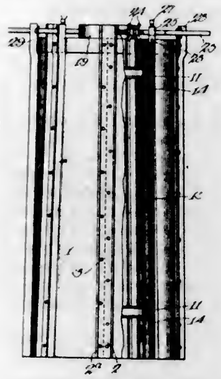


2. An electrolytic cell comprising a cylindrical cathode, a porous diaphragm surrounding said cathode, an outer shell surrounding said diaphragm, anode conductors inside said shell, ends forming a tight joint with said shell and forming a stuffing box casing about said diaphragm, means for forming a tight joint between the ends of said cathode and said diaphragm, and means for forming a tight joint between said stuffing box casing and said diaphragm.

3. An electrolytic cell comprising a cylindrical cathode, a porous diaphragm surrounding said cathode, an outer shell surrounding said diaphragm, anode conductors inside said shell, ends forming a tight joint with said shell and forming a stuffing box casing about said diaphragm, means for forming a tight joint between the end of said cathode and said diaphragm, packing placed inside said stuffing box casing about said diaphragm, and means for compressing said packing.

4. An electrolytic cell comprising an outer cylindrical shell having a horizontal axis, means for rotating said cell, a porous diaphragm inside said shell, a cathode inside said porous diaphragm, ends making a tight closure between said shell and said cathode, a swiveled pipe for conducting liquid into said shell through one of said ends, and a swiveled pipe for conducting liquid from the interior of said shell through the wall of said cathode.

1,167,595. CONCRETE-BUILDING APPARATUS. HENRY REITINGER, Chicago, Ill. Filed June 18, 1915. Serial No. 34,792. (Cl. 25—124.)



1. In an apparatus of the class described, an inner shell, an outer shell surrounding said inner shell and separated therefrom to leave an intervening space in which concrete may be poured, and means for centering said shells relatively to each other, comprising a centering ring, radial adjustment bars projecting from said centering ring, and projecting elements on the inner and outer shells through which the adjustment bars fit.

2. In an apparatus of the class described, an inner shell, an outer shell surrounding said inner shell and separated therefrom to leave an intervening space in which concrete may be poured, a support within the inner shell, a centering ring of smaller diameter than the inner shell attached to and arranged above said support, adjustment bars adjustably connected at their inner ends to the centering ring, a bifurcated clamp straddling the top edge of the inner shell and having openings through which the adjustment bars pass and vertical extensions on the outer shell through which the adjustment bars are fitted.

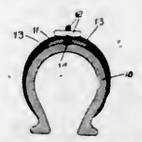
3. In an apparatus of the class described, an inner shell, an outer shell, a centering ring of smaller circumference than the inner shell and having a plurality of J-shaped slots, adjustment bars adjustably fitted in the J-shaped slots and projecting radially outward, and vertically projecting elements on the inner and outer shells for respectively and separately connecting the adjustment bars thereto.

4. In an apparatus of the class described, an outer shell comprising a plurality of segmental plates, means for detachably securing said sections together, and a circumferentially adjustable reinforcing ring encircling said plates; said ring being composed of sections having curved bodies and radial inwardly extending end portions, and screw bars extending between and adjustably connecting the end portions of said sections.

5. In an apparatus of the class described, an inner shell comprising a plurality of segmental plates, brackets adapted to the inner surface of some of said plates, and reinforcing rings supported in said brackets, said rings being composed of hinged together sections.

[Claims 6 and 7 not printed in the Gazette.]

1,167,596. METAL-CHAIN-TREAD TIRE. AMBROSE RICH, Stamford, Conn. Filed July 13, 1915. Serial No. 39,608. (Cl. 152—14.)

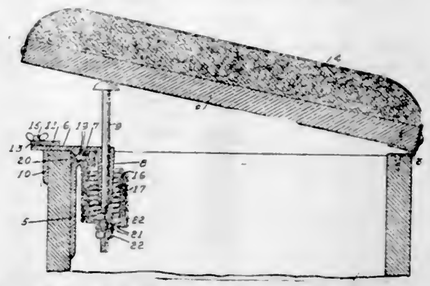


1. A non-skid tire comprising a body, a foundation strip surrounding the body and provided with slots, a metallic chain secured to the foundation strip with alternate links lying vertically in the slots and a finishing ply over the foundation strip upon which the intermediate links of the chain lie.

2. A non-skid tire comprising a body, a metallic chain, a foundation strip having slots to receive alternate links of the chain vertically, means for attaching the vertical links to the foundation strip, and a finishing ply lying between the intermediate links and the supporting strip.

1,167,597. SEAT-SPRING. WILLIAM C. RIEHM, Kalamazoo, Mich. Filed Feb. 23, 1915. Serial No. 9,939. (Cl. 155—25.)

1. The combination with a box provided with a cover hinged at one side, said cover being adapted as a seat, of a spring supporting bracket having a vertical arm disposed against the inner side of the box and an outer horizontal arm resting upon the upper edge thereof and projecting beyond the same, and an inner horizontal arm provided with a vertical elongated depending bearing spaced from said vertical arm, an adjustable clamping plate having a flange at its upper end projecting at each side thereof, the outwardly projecting arm of said flange being adapted to receive a set screw, said plate being slotted below said flange to slidably engage the outer horizontal arm of said bracket, coiled springs arranged one within the other and terminating at their upper ends in vertically disposed eyes and at their lower ends in horizontally disposed central eyes, a spring suspending bolt arranged through said vertical arm and engaging said eyes at the upper ends of said springs whereby the springs are supported to embrace said bearing, a seat supporting bolt arranged in said bearing to project above said bracket and arranged through the eyes at the lower ends of said springs, and nuts on said supporting bolt disposed above and below said horizontal eyes whereby said bolt is yieldingly supported in said bearing.



2. The combination with a box provided with a cover hinged at one side, said cover being adapted as a seat, of a spring supporting bracket having a vertical arm disposed against the inner side of the box and an outer horizontal arm resting upon the upper edge thereof and projecting beyond the same, and an inner horizontal arm provided with a vertical elongated depending bearing spaced from said vertical arm, a clamping plate on said outer horizontal arm, coiled springs arranged one within the other and terminating at their upper ends in vertically disposed eyes and at their lower ends in horizontally disposed central eyes, a spring suspending bolt arranged through said vertical arm and engaging said eyes at the upper ends of said springs whereby the springs are supported to embrace said bearing, a seat supporting bolt arranged in said bearing to project above said bracket and arranged through the eyes at the lower ends of said springs, and nuts on said supporting bolt disposed above and below said horizontal eyes whereby said bolt is yieldingly supported in said bearing.

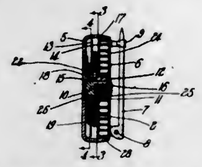
3. The combination with a box provided with a cover hinged at one side, said cover being adapted as a seat, of a spring supporting bracket having a vertical arm disposed against the inner side of the box and an outer horizontal arm resting upon the upper edge thereof, coiled springs arranged one within the other and terminating at their upper ends in vertically disposed eyes and at their lower ends in horizontally disposed central eyes, a spring suspending bolt arranged through said vertical arm and engaging said eyes at the upper ends of said springs whereby the springs are supported to embrace said bearing, a seat supporting bolt arranged in said bearing to project above said bracket and arranged through the eyes at the lower ends of said springs, and nuts on said supporting bolt disposed above and below said horizontal eyes whereby said bolt is yieldingly supported in said bearing.

4. The combination with a box provided with a cover hinged at one side, said cover being adapted as a seat, of a spring supporting bracket having a vertical arm disposed against the inner side of the box and an outer horizontal arm resting upon the upper edge thereof and projecting beyond the same, and an inner horizontal arm provided with a vertical bearing, an adjustable clamping plate having a flange at its upper end projecting at each side thereof, the outwardly projecting arm of said flange being adapted to receive a set screw, said plate being slotted below said flange to slidably engage the outer horizontal arm of said bracket, a coiled spring mounted on said bracket to embrace said bearing, and a seat supporting rod supported in said bearing by said spring to project above said bracket.

5. The combination with a box provided with a cover hinged at one side, said cover being adapted as a seat, of a spring supporting bracket having a vertical arm disposed against the inner side of the box and an outer horizontal arm resting upon the upper edge thereof and projecting beyond the same, and an inner horizontal arm provided with a vertical bearing, a clamping plate on said outer arm, a coiled spring mounted on said bracket to embrace said bearing, and a seat supporting rod supported in said bearing by said spring to project above said bracket.

[Claims 6 to 8 not printed in the Gazette.]

1,167,598. EYEGLASS-REEL. ALBERT F. ROBBINS, Waltham, Mass. Filed Jan. 14, 1915. Serial No. 2,115. (Cl. 242—98.)



1. An eyeglass reel having, in combination, a casing, a spring actuated spool rotatably mounted within said casing, a stop pin on said spool projecting laterally from one face thereof and a locking ring pivoted to said casing, the inner edge of said ring having a tooth thereon constructed and arranged to engage said stop pin whereby said spool may be locked against rotation in one direction.

2. An eyeglass reel having, in combination, a casing, a spring actuated spool rotatably mounted within said casing, a stop pin on said spool projecting laterally from one face thereof, and a locking ring pivoted to said casing, said locking ring having a cam-shaped inner edge constructed and arranged to engage said stop pin whereby said spool may be locked against rotation in one direction.

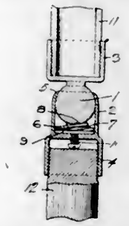
3. An eyeglass reel having, in combination, a casing, a spring actuated spool rotatably mounted within said casing, said spool having two annular flanges thereon, a stop pin on said spool extending laterally thereof from one of said flanges to the other and projecting beyond the outer face of one of said flanges to constitute a stop pin, a flexible member fast to said spool and projecting through said casing and a locking ring pivoted to said casing, said locking ring having a cam-shaped inner edge constructed and arranged to engage said stop pin whereby said spool may be locked against rotation in one direction.

4. An eyeglass reel having, in combination, a casing, a spool rotatably mounted within said casing, a spiral spring, the inner end thereof being fast to said spool and the outer end terminating in a hook, and means to lock the outer end of said spring to said casing comprising a metal ring located within said casing, one end thereof engaging said hook, the opposite end thereof projecting into a recess provided in the inner face of said casing and projecting partly therethrough and means to lock said spool against rotation in one direction.

5. An eyeglass reel having, in combination, a casing, a spring actuated spool rotatably mounted within said casing, a stop pin on said spool projecting laterally from one face thereof and a locking ring pivoted to said casing, the inner edge of said ring having a tooth thereon formed and arranged to engage said stop pin and lock the same against rotation in one direction when said spool is rotating slowly, said tooth being formed and arranged to allow said stop pin to pass the same in either direction when said spool is rapidly rotating.

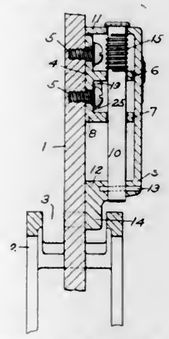
1,167,599. UNIVERSAL JOINT. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Jan. 20, 1913. Serial No. 743,096. (Cl. 74—19.)

A universal joint construction comprising a standard, an adjustable arm mounted thereon, and a universal joint for said arm, said joint comprising a socket member screwed to the standard, a ball member screwed to said arm, a spring interposed between the base of said socket



member and said ball member, and a tension adjusting screw in the base of said socket member adapted to regulate the tension of said spring and adapted to be engaged by the standard to hold the screw in adjusted position.

1,167,600. LEVER-LOCKING DEVICE. CHARLES R. SAUNDERS, Lakewood, Ohio. Filed June 2, 1913. Serial No. 771,222. (Cl. 70—90.)



1. In a device of the character set forth, the combination, with a base, of a casing reciprocably mounted thereon, means normally holding the casing near one of the limits of its movement with respect to said base, a guideway carried by the casing, a bolt in said guideway adapted to engage said base to retain the casing near its other limit of movement, and means carried by the casing for releasing said bolt.

2. In a device of the character set forth, the combination, with a base, of a casing reciprocably mounted on said base, means normally holding the casing away from the coöperating object, said casing being provided with a transverse bore, a bolt or plunger slidably mounted in said bore and adapted to engage a portion of the base to retain the casing in operative relation to such object, a spring for forcing said bolt or plunger toward the coöperating part of the base, and a lock comprising a rotatable barrel having a projection adapted to engage the bolt or plunger to withdraw it from engagement with the coöperating portion of the base.

3. In a device of the character set forth, the combination, with a base or support, of a locking member reciprocably mounted on the base or support and having a lug or extension, a spring adapted to move the locking member in one direction, a projection carried by the base or support, a bolt carried by the locking member and adapted to engage such projection and to hold the locking member in locking relation to its coöperating object, and means for retracting said bolt.

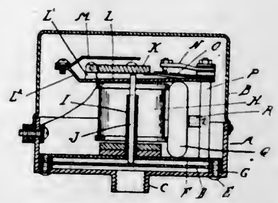
4. In a device of the character set forth, the combination, with a base having a lateral projection, of a casing reciprocably mounted on said base, a bolt in said casing extending through said projection and guiding the casing on said base, a spring surrounding the bolt and

engaging said projection and a portion of the casing and tending to move the casing away from the coöperating object, a locking lug or extension carried by the casing and adapted to engage such object, a bolt carried by the casing and adapted to engage the projection, a spring tending to move the bolt toward the projection, and means for retracting said bolt.

5. In a device of the character set forth, the combination, with a supporting base, of a casing slidably mounted on said base, a spring within the casing adapted to move the same away from its coöperating object, said casing having a lug or extension adapted to engage the said object, a lock carried by the casing and comprising a rotary barrel, a finger projecting from the barrel, a bolt within the casing adapted to be engaged by said finger, a projection carried by the base to retain the casing in engagement with said object, and a spring pressing the bolt toward said projection.

[Claims 6 to 11 not printed in the Gazette.]

1,167,601. ELECTRICALLY-OPERATED SOUND-PRODUCER. CARL J. SCHWARZE, Adrian, Mich., assignor to Schwarze Electric Company, Adrian, Mich., a Corporation of Michigan. Filed Sept. 17, 1912. Serial No. 720,851. (Cl. 177—7.)



1. A sound producer comprising a resilient sounder and an opposed resilient buffer, a freely movable striker interposed between said sounder and buffer with a clearance, electro-magnetic means independent of said resilient buffer for oscillating said striker, comprising an electro-magnet, a pivoted armature arranged between the striker and the buffer, and a make-and-break circuit closer operated by the oscillation of said armature.

2. A sound producer comprising a resilient sounder and opposed resilient buffer, an electro-magnet, a pivoted armature therefor arranged adjacent to said buffer with a clearance for a limited freedom of oscillation, a make-and-break circuit closer operated by the oscillation of said armature, said make-and-break circuit closer being independent of said resilient buffer, and a striker rod having one end arranged in the path of said armature and the other end adapted to strike against said sounder.

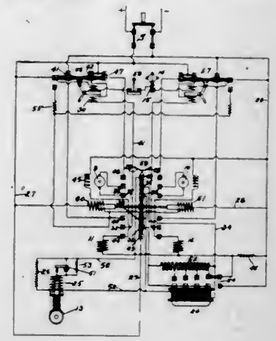
3. A sound producer comprising a resilient sounding diaphragm, an electro-magnet and a pivoted armature for said magnet, a make-and-break circuit closer, a resilient buffer independent of said make-and-break circuit closer adjacent to said armature but providing a clearance for a limited free oscillation of the latter, and a striker rod having one end in the path of said armature and the opposite end adjacent to said sounding diaphragm.

4. A sound producer comprising a case, a sounding diaphragm marginally supported within said case, an electro-magnet within the case adjacent to but out of contact with said diaphragm, a non-magnetic plate secured to the poles of said magnet, a pivoted armature, a make-and-break circuit closer and a resilient buffer independent of said make-and-break circuit closer, all mounted on said non-magnetic plate; and a cover for closing said case and completely housing the parts therein.

5. A sound producer comprising a case, a resilient sounding diaphragm marginally supported within said case adjacent to one end thereof, a head within said case adjacent to but out of contact with said diaphragm, an electro-magnet mounted on said head, a non-magnetic plate mounted on the poles of said magnet, a pivoted armature, a make-and-break circuit closer and resilient buffer independent of said make-and-break circuit closer mounted on said magnetic plate, a striker rod between said armature and said diaphragm, and a cover for said case.

[Claims 6 to 9 not printed in the Gazette.]

1,167,602. ESCALATOR-CONTROLLING SYSTEM. WALTER C. STRANG, Yonkers, N. Y., assignor to Otis Elevator Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 10, 1913. Serial No. 753,185. (Cl. 172—239.)



1. In an escalator, the combination of a driving shaft, a plurality of motors, and automatic means independent of the speed of a motor for operatively connecting either motor to the said shaft.

2. In an escalator, the combination of a driving shaft, a plurality of motors, and an electro-responsive device adapted automatically to connect either motor to said shaft.

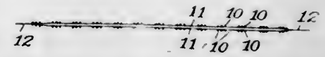
3. In an escalator, the combination of a driving shaft, a plurality of motors, and an automatically operated change-over switch adapted operatively to connect either motor with the said shaft.

4. In an escalator, the combination of a driving shaft, two motors, circuits for said motors, and automatic means for simultaneously connecting either one of the motors to the said circuits and driving shaft.

5. In an escalator, the combination of a driving shaft, two motors, circuits for said motors, and automatically operated means for connecting one motor and disconnecting the other motor with said circuits and driving shaft.

[Claims 6 to 24 not printed in the Gazette.]

1,167,603. PAPER TOWEL. WILLARD E. SWIFT, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed June 15, 1912. Serial No. 703,877. (Cl. 92—68.)



1. A paper towel, consisting of a double sheet united at its edges and separate at its center, and provided on its outer surface with raised projections having scraping edges.

2. A paper towel comprising superposed indented sheets, united along their edges, and separated inwardly of said edges.

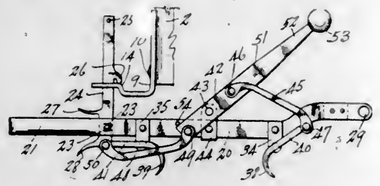
3. A paper towel consisting of a double sheet united at its edges and separate at its center.

4. A towel comprising a sheet of paper having a series of indentations on one side to form corresponding projections on the other side, each indented portion being joined to the body of the sheet by a wall perpendicular to the plane of said sheet, with the perpendicular walls of each series of indentations opposing each other.

5. A towel comprising a sheet of paper having oppositely disposed indentations on one side producing corresponding projections on the opposite side.

[Claim 6 not printed in the Gazette.]

1,167,604. BAG-HOLDER. EDWARD M. TUCKER, Oakesdale, Wash. Filed May 10, 1915. Serial No. 27,083. (Cl. 83—26.)

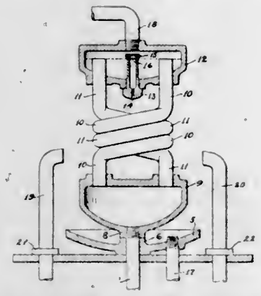


1. In a bag holder mechanism, a spout structure, bag holding means pivoted on said structure and having a handle end, a jigger member mounted on said spout structure and having a slotted end provided with a shoulder, and a jigger bar pivoted on said handle end and projecting through said slotted end and having a lug for coaction with said shoulder to support said holding means in a fixed position, substantially as described.

2. In a bag holding mechanism, a spout structure provided with a pivot bar, bag holding means pivoted on said bar, and devices mounted on said means and on said spout structure for coaction to release said holding means or to support the latter, substantially as described.

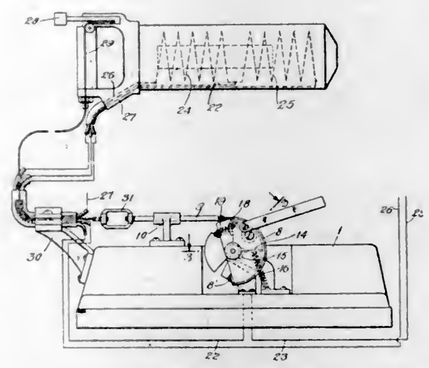
3. In a bag holding mechanism, a supporting structure including a spout, bag holding means pivoted on said structure, and devices mounted on said means and on said structure for co-action to release said holding means for movement about its pivot or to support said means in a fixed position on said structure, substantially as described.

1,167,605. OIL-BURNER. JOHN H. WELCH, Seattle, Wash. Filed Apr. 17, 1915. Serial No. 22,122. (Cl. 158—56.)



In a burner of the class described, the combination with a base portion provided with a chamber adapted to receive fluid fuel, of a fluid supply pipe disposed to adapt it to conduct fluid fuel from a source of supply into said chamber of said base portion, two conducting pipes disposed to extend upwardly from said chamber through the top wall of said base portion in the form of a helix, an inclosed receptacle for fluid fuel secured to the upper ends of said two pipes, said upper ends of said pipes extending through the bottom wall of said receptacle and above the inner surface of the bottom thereof so that said receptacle shall be concentric with said base portion, a pipe adapted to conduct steam through the central portion of the top wall of said receptacle, a burner tip of tubular form removably disposed to extend upwardly through the bottom wall of said receptacle and into the space therewithin to a plane higher than the inner surface of the bottom wall of said receptacle, a cap disposed to cover the top inner end of said burner tip, and a plurality of passageways disposed each at a different circumferential point to extend through the wall of said burner tip adjacent to said cap.

1,167,606. SWITCH MECHANISM. ALEX WENDELBURG, New York, N. Y., assignor to Pittsburgh Electric Tool Company, New York, N. Y., a Corporation of Pennsylvania. Filed Apr. 20, 1915. Serial No. 22,554. (Cl. 175—288.)



1. A switch comprising contact blades, a rotatable spring-retarded disk, a blade movable between said contact blades and a spring connecting said disk to said movable blade.

2. A switch comprising contact blades, a rotatable disk, a spring for retarding the forward swing of said disk, a blade movable between said contact blades, and a second and weaker spring connecting said movable blade to said disk.

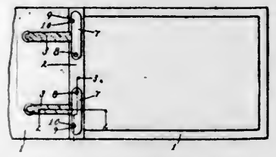
3. A switch comprising contact blades, a rotatable spring-retarded disk, a blade movable between said contact blades, a spring connecting said movable blade to said disk and a finger on said disk positioned to positively move said movable blade from between said contact blades.

4. A switch comprising contact blades, a rotatable spring-retarded disk, a blade movable between said contact blades, a spring connecting said disk to said movable blade, a flexible strap connected to said disk and means for pulling said strap to rotate said disk, substantially as described.

5. A switch comprising yielding contact blades, a segmental metal blade movable between said contact blades to establish electrical connection therebetween, a rotatable disk for moving said segmental blade forward, a spring connected to retard the forward movement of said disk, and a second and weaker spring connecting said segmental blade to said disk to effect a quick break when the electrical connection is interrupted.

[Claims 6 to 8 not printed in the Gazette.]

1,167,607. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich. Filed Aug. 27, 1914. Serial No. 858,972. (Cl. 129—41.)



1. A temporary binder comprising a binding member having slots therein, binding strips arranged through said slots, clutch members of spring material pivotally mounted on the outer side of said binding members to swing in a plant substantially parallel with the plane of the side thereof and adapted to coact with the edges of the slots of the binding member to clutch the binding strips, and clutch member retaining studs arranged on said binding member so that said clutch members may be engaged therewith when in binding strip engaging position.

2. A temporary binder comprising a binding member having slots therein, binding strips arranged through said slots, clutch members of spring material pivotally mounted on the outer side of said binding members to swing in a plane substantially parallel with the plane of the side thereof and adapted to coact with the edges of the slots of the binding member to clutch the binding strips, and parts of said binding members and clutch members adapted to be engaged when the clutch members are in their binding strip engaging position and whereby the swinging ends of the clutch members are supported.

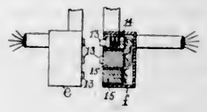
3. A temporary binder comprising a binding member having slots therein, binding strips arranged through said slots, and securing members of spring material pivotally mounted on the outer side of said binding member to swing in a plane substantially parallel with the plane of the side thereof to engage the binding strips and coacting with the edges of the slots of the binding member in clutching the binding strips, the free ends of the binding strips projecting from one edge of the securing members so that the securing members may be disengaged by a pull on the free ends of the binding strips.

4. A temporary binder comprising a binding member having an opening therein, a binding strip arranged through said opening, and a clutch member pivotally mounted on said binding member to swing in a plane parallel with the side of the binding member and engage the binding strip as it passes through the opening of the binding member, the binding strip being disposed relative to the clutch member so that the clutch is disengaged by a pull on the free end of the binding strip.

5. In a temporary binder, the combination of binding members, binding strips connected to one of said binding members the other member having openings therein through which said binding strips are arranged, spring clutch members pivotally mounted on said slotted binding member to swing in a plane parallel with the side of the binding member with their free ends disposed outwardly and means for holding the swinging ends of the clutch members toward the binding member on which they are mounted to clutch the binding strips under spring tension as they pass through the openings, the binding strips being disposed relative to the clutch members so as to be disengaged by a pull on the free ends of the binding strips.

[Claim 6 not printed in the Gazette.]

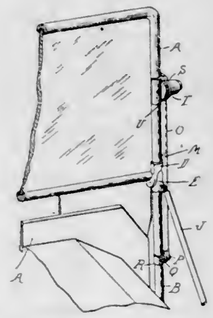
1,167,608. ELECTRIC COUPLING FOR CARS. PAUL WINSOR, Weston, and CYRUS CORLISS, Boston, Mass. Filed Jan. 23, 1914. Serial No. 813,985. (Cl. 173—332.)



1. The combination with a car provided with wires or electrical conductors, of electrical coupling terminals carried by and located at the opposite ends of said car, each of said coupling terminals having a plurality of pairs of contact members, with the contact members of each pair connected electrically together and to a single electrical conductor, a plurality of said pairs being located in the same plane with the members of each pair on opposite sides of a plane at right angles to the said plane and with both members of each pair equi-distant from said latter plane, whereby the car can be coupled directly at either end with another car, equipped exactly the same, and connect like electrical conductors in one car with the same electrical conductors in the other car or cars irrespective of which ends of the cars are coupled together.

2. The combination with a car provided with wires or electrical conductors, of electrical coupling terminals carried by and located at the opposite ends of said car, each of said coupling terminals having a plurality of pairs of contact members, with the contact members of each pair connected electrically together and to a single electrical conductor, the contact members of some of the pairs being separated by different distances, with the members of each pair on opposite sides of a plane common to all the pairs and at right angles to the planes in which the contact members of each pair are located, and with both members of each pair equi-distant from said latter plane, whereby when two cars equipped identically are coupled together, each electrical conductor in the coupling terminal will be automatically connected to exactly the corresponding electrical conductor in the coupling terminal of the adjacent car irrespective of which ends of the cars come together.

1,167,609. WIND-SHIELD. EDWARD L. ACKERMAN, Detroit, Mich., assignor of one-half to Charles E. Chamberlin, Detroit, Mich. Filed Mar. 6, 1911. Serial No. 612,674. (Cl. 21—148.)



1. In a wind shield, the combination with a supporting section, of a movable wind shield section pivotally connected directly to said supporting section at the upper end thereof, and a rod having its ends connected respectively to said sections and pivoted to turn in relation thereto, and an automatic lock for locking the rod in an adjusted position of the movable shield section comprising coöperating interlocking portions respectively upon one of the sections and an intermediate portion of the rod.

2. In a wind shield, the combination with a supporting section, of a movable wind shield section pivotally connected directly to the supporting section at the upper end thereof, and a rod having its ends connected respectively to said sections and pivoted to turn in relation thereto, and means on one of the sections independent of said connections adapted to have an automatic locking engagement with the rod intermediate the ends thereof in the adjusted position of the movable shield section.

3. In a wind shield, the combination with a supporting section, of a movable wind shield section pivotally connected directly to the supporting section at the upper end thereof, a rod having its ends connected respectively to said sections and pivoted to turn in relation thereto, said rod in one position of adjustment of the movable shield section being substantially parallel with the side of one of the sections, and an automatic lock for retaining said rod in its parallel position.

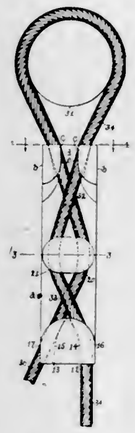
4. In a wind-shield, the combination with a supporting section, of a movable wind-shield section pivotally connected thereto, a telescopic rod having its outer ends pivotally connected at fixed points to said sections, and coöperating interlocking portions upon one of the sec-

tions and an intermediate portion of the rod adapted to automatically interlock in an adjusted position of the movable shield section.

5. In a wind-shield, the combination with a supporting section, of a movable wind-shield section pivotally connected thereto, a telescopic rod having its outer ends pivotally connected at fixed points to the sides of said sections, said rod in one position of adjustment of the movable shield section being substantially parallel with the side of one of the sections, and a bearing on the latter section adapted to have an automatic locking engagement with the rod intermediate the ends thereof when the rod is parallel to the side of said section.

[Claims 6 to 9 not printed in the Gazette.]

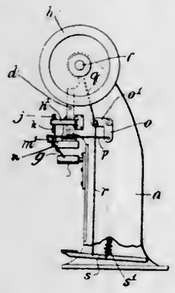
1,167,610. HOLDING DEVICE FOR ROPES. LELAND R. ADAMS, Lynn, Mass. Filed Sept. 25, 1914. Serial No. 863,547. (Cl. 24—129.)



1. A holding device of the character described, comprising a body member provided at one end with spreading members and at its opposite end with side arms having flanges extended toward each other to form a slot, and having between said parts spreading members, substantially as described.

2. A holding device of the character described, comprising a body member provided with spreading members and with side arms having flanges extended toward each other to form a slot, substantially as described.

1,167,611. PUNCH-PRESS GUARD. FRANK S. ALIANO, New York, N. Y. Filed May 6, 1914. Serial No. 836,616. (Cl. 164—107.)



1. A punch press guard embodying therein an oscillatory guard plate normally projecting downwardly toward the press and above the anvil or die and between the ram and the operator, manually operative means whereby the movement of the ram of a press is controlled and operative connections between said means and said oscillatory guard plate whereby said guard plate may be swung downwardly and toward the operator to bring the lower edge of said plate upon a plane below the top surface of the anvil or die.

2. A punch press guard embodying therein an oscillatory shaft and guard mounted thereon and movable therewith, said plate normally projecting downwardly toward the press and above the anvil or die and between the ram and the operator, a bell crank lever, a plurality of links whereby one arm of said lever may be connected to the controlling pedal and the clutch mechanism, a crank arm carried by said oscillatory shaft and a link connection between the other arm of said bell crank lever and said crank arm whereby the depression of the pedal to said clutch will swing said plate downwardly and toward the operator to bring the lower edge thereof upon a plane below the top surface of the anvil or die.

3. A punch press guard embodying therein an oscillatory guard plate normally projecting downwardly toward the press and above the anvil or die and between the ram and the operator, said plate having thereon extensions disposed to the opposite sides thereof and adapted to straddle the anvil or die whereby the work may be held upon said anvil or die beneath said plate but access to said anvil or die about the sides of said plate is prevented.

4. A punch press guard embodying therein a plurality of brackets adapted to be disposed upon opposite sides of a press, studs carried by each of said brackets a bearing block adapted to be mounted upon each of said studs, means whereby each of said blocks may be clamped upon its stud, an oscillatory shaft the opposite ends of which are mounted in said blocks respectively, a guard plate mounted upon and movable with said shaft, said plate normally projecting downwardly toward the press and above the anvil or die and between the ram and the operator and means whereby said guard plate may be swung downwardly and toward the operator to bring the lower edge of said plate upon a plane below the top surface of the die.

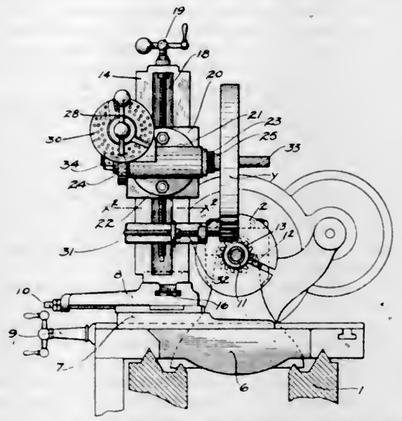
5. A punch press guard embodying therein a plurality of brackets adapted to be disposed upon opposite sides of a press, screw studs mounted in said brackets respectively, means whereby each of said blocks may be clamped upon its stud, an oscillatory shaft the opposite ends of which are mounted in said blocks respectively, a guard plate mounted upon and movable with said shaft, said plate normally projecting downwardly toward the press and above the anvil or die and between the ram and the operator and means whereby said guard plate may be swung downwardly and toward the operator to bring the lower edge of said plate upon a plane below the top surface of the die.

[Claims 6 to 8 not printed in the Gazette.]

1,167,612. MILLING ATTACHMENT FOR LATHES. GEORGE L. ANDERSON and CHARLES D. BACON, Faribault, Minn.: said Bacon assignor to said Anderson. Filed Mar. 28, 1914. Serial No. 827,896. (Cl. 90—11.)

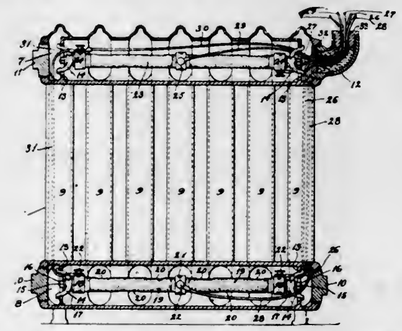
1. The combination with the live and dead centers and the carriage and cross feed slide of a lathe, of a column carried by the said cross feed slide and provided with means for holding work at a point above the horizontal line of the said live and dead centers, and a work steadying device located below said work support and independently adjustable on said column and projecting horizontally outward therefrom.

2. The combination with the live and dead centers and the carriage and cross feed slide of a lathe, of a column carried by the said cross feed slide, and provided with means for holding work at a point above the horizontal line of said live and dead centers, a work steadying bracket located below said work support and vertical adjustments therefor on said column, and a work steadying screw applied to said bracket and engageable with the work in the vicinity of the point of action of the cutting



tool thereon and projecting horizontally outward therefrom.

1,167,613. ELECTRICALLY-HEATED RADIATOR. PHILIP F. APFEL, Seattle, Wash. Filed Oct. 5, 1915. Serial No. 54,280. (Cl. 219—34.)



1. A radiator of the class described, which embodies a hermetically closed metal container within which is a body of oil; an electrical heating element comprising a carbon tube disposed within said container and electrically insulated therefrom, said tube having a plurality of holes extending through its side walls and being submerged in said body of oil; and insulated electric conducting wires electrically connected each with a different end of said carbon tube and extending to the exterior of said container through a sealed passageway formed in a wall of said container.

2. A radiator of the class described, which embodies a hermetically closed metal container within which is a body of oil; a plurality of electrical heating elements comprising carbon tubes disposed within said container and electrically insulated therefrom, each of said tubes having a plurality of holes extending through its side walls; and a plurality of insulated electric conducting wires electrically connected with said carbon tubes each at a different point thereof, and disposed to extend therefrom to the exterior of said container through a sealed passageway formed in the wall of said container.

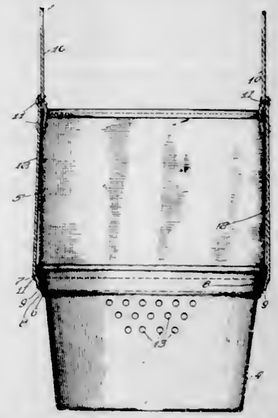
3. A radiator of the class described, which embodies a closed metal container whose joined parts are hermetically sealed by gum shellac; a body of oil disposed within said container; an electrical heating element comprising a rod of carbon disposed within said container and electrically insulated therefrom, said rod of carbon being submerged in said body of oil; insulated electric conducting wires electrically connected each at a different point on said heating element and disposed to extend therefrom to the exterior of said container through a passageway formed in a wall of said container; and a body of gum shellac disposed in said passageway to fill the space around said conducting wires therein thus to seal said passageway to be fluid tight.

4. A radiator of the class described, which embodies a metal container, within which is disposed a circulating medium that is a non-conductor of electricity; an electrical heating element disposed within said container and electrically insulated therefrom; and electric conducting wires connected each at a different point on said heating elements to extend therefrom to the exterior of said container through a sealed passageway formed in a wall of said container.

5. A radiator of the class described, which embodies a metal container, said container having a cylindrically formed chamber in the lower portion thereof; a heating element adapted to be heated in response to the flow of a current of electricity therethrough and disposed within said cylindrically formed chamber; a metal fitting disposed with one of its ends through a wall of said container; a perforated disk of insulating material securely fixed within the inner end of said fitting; a bushing securely fixed in the outer end of said fitting; electrical conducting wires connected each at a different point with said heating element to extend therefrom to the exterior of said container through said disk, said fitting and said bushing; and a body of gum shellac disposed within said fitting to fill the space between said disk and said bushing thereby to embed said wires therein.

[Claims 6 and 7 not printed in the Gazette.]

1,167,614. FEED-BAG. ADOLPH G. BADE, Chicago, Ill. Filed Oct. 30, 1914. Serial No. 869,388. (Cl. 150—50.)



1. A feed bag comprising a lower portion of substantially rigid material and having two spaced outwardly extending ridges around its upper edge providing a channel therebetween, the upper of the ridges being of a larger diameter than the lower; an upper portion of flexible material having its lower end extending over the upper of said ridges and disposed in the channel, the lower edge of the upper portion being bent back upon itself on its inner side and secured thereto forming a hem; and an annular hoop in said hem and disposed between said ridges, the hoop being of a size permitting it to pass over the lower of the ridges through the application of considerable force and too small to pass over the upper of the ridges.

2. A feed bag comprising a lower portion having two spaced outwardly extending ribs around its upper edge, and an upper portion extending downwardly over the up-

per of said ribs and having its lower edge disposed between said ribs, the lower edge of said upper portion being of a size adapted to pass over the lower of said ribs through the application of considerable force and too small to pass over the upper of said ribs.

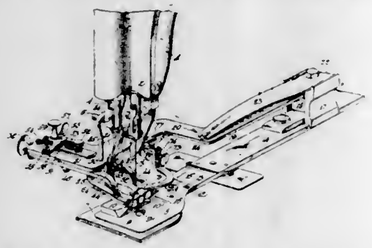
3. A feed bag comprising a lower portion having two spaced outwardly extending ribs around its upper edge; an upper portion extending downwardly over the upper of said ribs and having its lower edge disposed between said ribs; and a hoop secured to the lower edge of the upper portion and of a size adapted to pass over the lower of said ribs through the application of considerable force and too small to pass over the upper of said ribs.

1,167,615. REINFORCING IN CONCRETE. HENRY C. BARNES, Kalamazoo, Mich. Filed Nov. 30, 1914. Serial No. 874,839. (Cl. 94—1.)



An anchoring iron of the character set forth comprising a body, a plurality of spurs arranged thereon, said body having one end bifurcated, said furcations being arcuately extended in opposite directions to form fingers, and boring means formed at the other extremity of said body substantially as and for the purpose set forth.

1,167,616. BUTTON-HOLDING CLAMP. WILLIAM L. BARRON, New York, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 27, 1912. Serial No. 693,752. (Cl. 112—32.)



1. The work-holding means comprising a work-supporting member having a work-sustaining operative face provided with a shoulder in angular relation therewith, and a shank-button holding member constructed with a button-support disposed above the face of the work-supporting member and at the side of said shoulder from the adjacent face of which it is rigidly sustained a fixed distance and provided with button-head sustaining jaws with an intervening space extending throughout their depth in a direction transverse to the operative face of said work-supporting member, and spring-actuated means acting independently of and adapted to press the button-bead upon said jaws.

2. The work-holding means comprising a work-supporting member having a work-sustaining operative face provided with a shoulder in angular relation therewith and a button-holding member constructed with a pair of reciprocally movable levers provided with opposed button-head sustaining jaws and fulcrumed to swing so as to move said jaws in the path adjacent and substantially parallel with the face of said shoulder, and means for holding a button-head in engagement with said jaws with its shank projecting between the same.

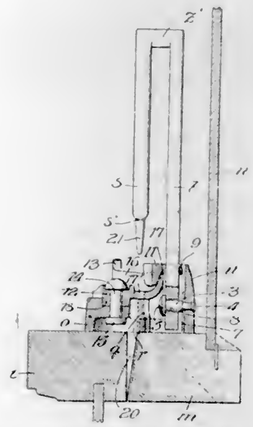
3. The work-holding means comprising a work-supporting member having a work-sustaining operative face provided with a shoulder in angular relation therewith, and a button-holding member constructed with a pair of reciprocally movable levers mounted upon independent fulcrums disposed in a plane substantially parallel with the face of said shoulder and provided with opposed button-head sustaining jaws, and means for holding a button-head in engagement with said jaws with its shank projecting between the same.

4. The work-holding means comprising a work-supporting member having a work-sustaining operative face provided with a shoulder in angular relation therewith, and a button-holding member constructed with a support, a pair of spaced and opposed jaws mounted upon said support and disposed at the side of and rigidly sustained a fixed distance from the face of said shoulder, and means sustained by said support independently of said jaws for yieldingly maintaining a button-head in engagement therewith.

5. The work-holding means comprising a work-supporting member having a work-sustaining operative face provided with a shoulder in angular relation therewith, and a button-holding member constructed with a support, a pair of spaced and opposed jaws disposed at the side of and rigidly sustained relatively to the face of said shoulder, and means including an element mounted upon said support and bodily movable transversely of said jaws whereby the button is maintained in engagement with the latter.

[Claims 6 to 23 not printed in the Gazette.]

1,167,617. ADJUSTABLE FASTENING DEVICE OR SASH-LOCK. JOSEPH BARTL, Chicago, Ill. Filed Oct. 28, 1914. Serial No. 868,926. (Cl. 16—30.)



1. In a fastening device of the class described, the combination of a socket member, means for securing the socket member to a window sash, a hooked guard arm pivotally connected with a sash located adjacent to the sash to which said socket member is secured, said guard arm comprising a main body portion and a hook portion which extend in substantially parallel relation, the hook portion of said guard arm member being movable into and out of interlocking engagement with said socket member, said

socket member being slidable longitudinally of said hook portion with said interlocking parts in interlocking engagement and with said hook portion extending through the socket member, and a pivoted locking member operatively connected with the socket member and adapted to be moved into and out of locking engagement with the guard arm at the intersection of the hook portion and main body portion of said guard arm member.

2. In a fastening device of the class described, the combination of a socket member, means for securing the socket member to a window sash, a hooked guard arm pivotally connected with a sash located adjacent to the sash to which the socket member is secured, said hooked guard arm comprising a main body portion and a hook portion extending in substantially parallel relation, the hook portion of said guard member being movable into and out of interlocking engagement with the socket member, and said socket member being adapted to slide upon said hook portion with said interlocking parts in interlocking engagement, and means for securing the pivoted guard arm in upright position.

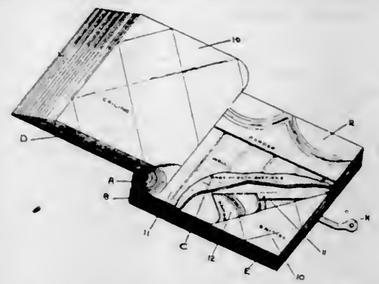
3. In a fastening device of the class described, the combination of a socket member, means for securing the socket member to a window sash, a hooked guard arm pivotally connected with a sash located adjacent to the sash to which the socket member is secured, said hooked guard arm comprising a main body portion and a hook portion extending in substantially parallel relation, the hook portion of said guard member being movable into and out of interlocking engagement with the socket member, and said socket member being adapted to slide upon said hook portion with said interlocking parts in interlocking engagement, means for securing the pivoted guard arm in upright position, and a locking member operatively connected with the socket member and movable into and out of locking engagement with the hooked guard arm.

4. In a fastening device of the class described, the combination of a socket member, means for securing the socket member to a window sash, a hooked guard arm pivotally connected with a sash located adjacent to the sash to which the socket member is secured, said hooked guard arm comprising a main body portion and a hook portion extending in substantially parallel relation, the hook portion of said guard member being movable into and out of interlocking engagement with the socket member, and said socket member being adapted to slide upon said hook portion with said interlocking parts in interlocking engagement, a detent adapted to engage the pivoted guard arm, for holding the latter in upright position, and a spring in operative engagement with said guard arm, for yieldingly holding the latter in position to engage the socket member and detent.

5. In a fastening device of the class described, the combination of a socket member, means for securing the socket member to a window sash, a hooked guard arm pivotally connected with a sash located adjacent to the sash to which the socket member is secured, said hooked guard arm comprising a main body portion and a hook portion extending in substantially parallel relation, the hook portion of said guard member being movable into and out of interlocking engagement with the socket member, and said socket member being adapted to slide upon said hook portion with said interlocking parts in interlocking engagement, a detent adapted to engage the pivoted guard arm, for holding the latter in upright position, a spring in operative engagement with said guard arm, for yieldingly holding the latter in position to engage the socket member and detent, and a locking member operatively connected with the socket member and movable into and out of locking engagement with the hooked guard arm.

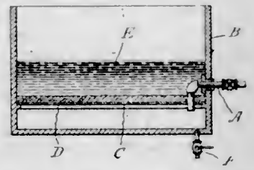
1,167,618. PORTABLE DISPLAY-BOOK. ROBERT N. BEARD, Omaha, Nebr. Filed Jan. 11, 1915. Serial No. 1,709. (Cl. 211—34.)

A display book made up of a plurality of sections, each section comprising a series of leaves of one length and a series of leaves of a length different from the first series, both series being united by the same binding means, the sections being reversely arranged to compensate for the



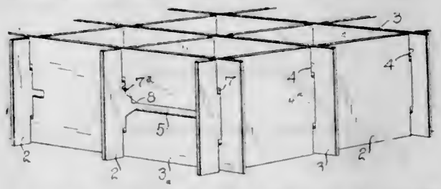
unequal length of the leaves and to produce a book of substantially uniform thickness throughout.

1,167,619. BUBBLE-MAKING MACHINE. ESTEN BEELER, New York, N. Y., assignor, by mesne assignments, of one-fourth to Herbert Beeler, New York, N. Y. Filed June 27, 1914. Serial No. 847,625. (Cl. 46—37.)



The combination in a bubble making machine of a tank or suitable container having a false bottom with a plurality of small holes therein, means for introducing compressed air beneath said false bottom, and a solution of bubble making properties maintained above such false bottom, all substantially as set forth.

1,167,620. CELLULAR PACKING STRUCTURE. CHARLES O. BLACKWELL, Hanna, W. Va., assignor of one-half to John B. Yeager, Walker, W. Va. Filed June 19, 1915. Serial No. 35,162. (Cl. 217—31.)

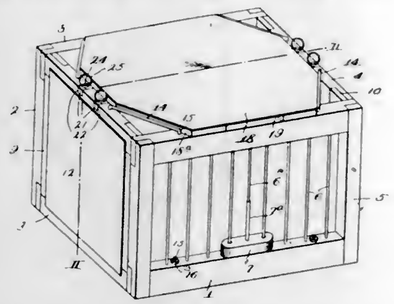


A cellular structure comprising two sets of intersecting strips, one set being provided with a plurality of uniformly spaced slits extending inward from its side edges, the other set being formed with a plurality of longitudinally extending slots having a length equal to the width of the first-named strips and intersected by transversely extending slots having a length equal to the space between the inner ends of each pair of slits on the first named set of strips, the wall of each intersecting slots being cut away at the intersection of the slots whereby to permit the first-named set of strips to be inserted within the longitudinally extending slots and then rotated out of alinement with the longitudinal slots and into position within the intersecting slots.

1,167,621. COLLAPSIBLE CRATE. THOMAS EDWARD BLOYD, Leavenworth, Kans. Filed Sept. 11, 1915. Serial No. 50,234. (Cl. 217—48.)

A collapsible crate consisting of vertical walls, upper and lower hinges connecting said walls, a removable bot-

tom fitting against the vertical sides of said vertical walls and resting upon the lower hinges, a top to close the upper portion of the crate, said top having oblique edges to fit against the upper hinges, longitudinal reinforcing



pieces secured to the underside of the top and having offsets to fit into recesses in the upper edges of the end walls, and screw eyes engaging said offsets and the end walls to secure the top from accidental displacement.

1,167,622. MERCURY PREPARATION FOR THERAPEUTIC PURPOSES. HANS BUCHTALA, Gratz, Austria-Hungary, assignor to Dr. Bayer Es Tarsa, a Firm comprising Dr. Dezso Bayer and Rudolph Braun de Belatin, Budapest, Austria-Hungary. Original application filed June 5, 1913, Serial No. 771,796. Divided and this application filed May 23, 1914. Serial No. 840,454. (Cl. 167—7.)

1. An alkaline solution of a stable compound of tyrosin and mercury for therapeutic use, said mercury compound having the empirical formula $C_9H_9O_3NHg$.

2. An alkaline solution of a stable compound of tyrosin and mercury for therapeutic use, said mercury compound being obtained by heating a solution of tyrosin and a mercuric compound, as the oxid or a salt of a weak acid, the negative element or radical of which does not enter into the compound.

1,167,623. PARCEL-CARRIER. GEORGE BULLOCK, Grand Junction, Colo. Filed June 27, 1914. Serial No. 847,596. (Cl. 224—55.)



1. A device of the character described, comprising a handle portion, a downwardly-curved portion at each end of said handle portion provided with a horizontal transverse slot adapted to receive a strap passing therethrough longitudinally under said handle, and an outwardly extending base portion integral with each of said curved portions below said slots and the longitudinal strap passing therethrough.

2. A device of the character described, comprising a handle portion, a downwardly curved portion at each end of said handle portion, each of said curved portions being provided with a horizontal slot adapted to receive a strap passing therethrough longitudinally under said handle, a base portion extending outwardly from each of said curved portions below said slots and provided with parallel slots adapted to receive a strap passing transversely over said base portions.

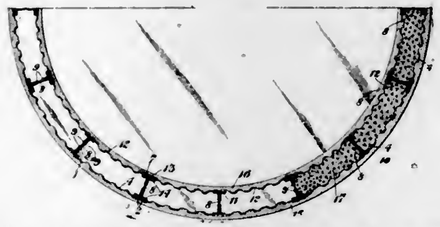
3. A device of the character described, comprising a sheet metal section including two base portions at the ends thereof having slots for straps, an integral handle rising from said base portions and having its side edges curved to form a rounded under surface, and means whereby a strap may be retained in position on said base portions longitudinally under said handle.

4. A device of the character described, comprising a section of sheet metal having two base portions at the ends thereof provided with parallel slots arranged to receive straps passing transversely of said base portions, said section of sheet metal being bent to form a handle rising from said base portions and having slots therein adjacent to said base portions arranged to receive a strap passing through said slots and longitudinally under said handle, and upwardly curved edge portions on said handle forming a rounded under surface.

5. A device of the character described, comprising a section of sheet metal bent to form two base portions at the ends of said section in substantially the same plane and to form a handle rising from said base portions, the side edges of said handle being bent to provide a rounded under surface for said handle, means for holding straps passing transversely of said base portions at the ends of said handle, and means for holding a strap passing longitudinally of said base portions under said handle.

[Claims 6 and 7 not printed in the Gazette.]

1,167,624. REINFORCED CONCRETE CONSTRUCTION. MINOR E. CHAMBERLAIN, Lebanon, Mo. Filed Feb. 13, 1915. Serial No. 7,936. (Cl. 72—1.)



1. In a reinforced concrete structure, an outer series of upright sheet metal reinforcements each comprising a single sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of a double and the remaining two of a single thickness of the sheet, the single wings of the series being arranged in alinement and the double wings extending inwardly, means for supporting connecting devices on said wings of single thickness, an inner series of upright sheet metal reinforcements each comprising a single sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of a double and the remaining two of a single thickness of the sheet, the single wings of the series being arranged in alinement and adapted to support the connecting devices, and the double wings extending outwardly toward the double wings of the outer series, metallic elements engaging the wings of double thickness of both series of upright reinforcements, lateral extensions on said elements abutting against the wings of single thickness on both series of upright reinforcements, and devices binding said extensions in engagement with said wings of single thickness.

2. In a reinforced concrete structure, an outer series of upright reinforcements each comprising a single sheet of metal folded to provided three perpendicularly disposed lateral wings, one of which wings is of a double and the remaining two of a single thickness of the sheet, the wings of single thickness being adapted to support the connecting devices, and the wings of double thickness extending inwardly, an inner series of upright reinforcements each comprising a single metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which is of a double thickness and the remaining two of a single thickness of the sheet, the wings of single thickness being adapted to support the connecting devices, and the wings of double thickness extending outwardly toward the wings of double thickness of the

outer series of uprights, metallic elements connecting the wings of duble thickness of the outer series of uprights with the wings of double thickness of the inner series of uprights, lateral extensions on said elements bearing against the wings of single thickness on both series of uprights and metallic members holding said elements in engagement with said uprights.

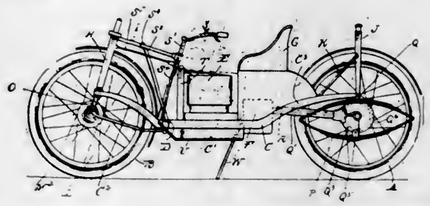
3. In a reinforced concrete structure, an outer series of upright reinforcements each comprising a single metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of a double thickness and the remaining two of a single thickness of the sheet, the single wings being arranged in alinement, an inner series of upright reinforcements each comprising a single metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of a double thickness extending toward the wings of double thickness of the outer series of reinforcements, metallic elements connecting the wings of double thickness of the outer series of uprights with the wings of the inner series, and floor supporting members seated upon the ends of the wings of single thickness of the inner series of uprights and having spaces receiving the wings of double thickness of both series of uprights, whereby said members and said uprights are interlocked.

4. In a reinforced concrete structure, an outer series of upright reinforcements each comprising a single metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of double thickness of the sheet, an inner series of upright reinforcements each comprising a single metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which wings extends toward the wings of double thickness of the outer series of reinforcements, floor members seated upon the ends of the wings of single thickness of the inner series of uprights and having spaces receiving the wings of the outer series of uprights, and interlocking connection between the inner series of uprights and said members.

5. In a reinforced concrete structure, a series of upright sheet metal reinforcements each comprising a metallic sheet folded to provide three perpendicularly disposed lateral wings, one of which wings is of a double thickness and the remaining two of a single thickness of the sheet, a number of metallic plates for each of said reinforcements having their outer ends connected to the wing of double thickness for holding said reinforcements from inward or outward movement, means for holding said plates in rigid position to prevent inward or outward movement or said reinforcements, horizontal reinforcements encircling said series of upright reinforcements, and elements holding said horizontal reinforcements in engagament with said upright reinforcements.

[Claim 6 not printed in the Gazette.]

1,167,625. MOTOR-CYCLE. JOHN J. CHAPIN, Detroit, Mich., assignor to Stephen A. Griggs, Walkerville, Canada. Filed Apr. 19, 1913. Serial No. 762,164. (Cl. 21—90.)



1. A motorcycle, comprising driving and steering wheels, a rigid frame embracing said wheels and providing clearance for the turning of the latter, resilient vertically-yieldable supports for said frame upon said wheels, radius rods for connecting said wheels with said frame, and driving mechanism mounted on said frame operatively connected with said driving wheel in different positions of adjustment thereof.

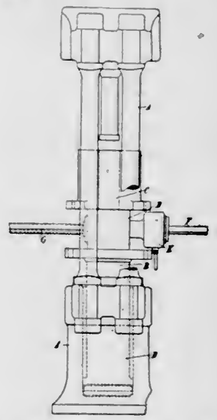
2. In a motorcycle, the combination with the driving wheel, of a frame bifurcated to embrace said wheel and resiliently, yieldably supported thereon, a motor mounted on said frame, a transmission connection between said motor and drive wheel, a plurality of independent radius rods pivotally connecting said drive wheel with said frame, and a universal pivotal coupling in said transmission alined with the pivot axis of said radius rod.

3. In a motorcycle, the combination with a drive wheel, of a frame having side sills embracing said drive wheel, radius rods connecting said wheel to said frame, intermeshing bevel gears for driving said wheel, and a housing for said gears mounted upon one of said radius rods, and having a detachable section permitting the rearward removal of said wheel.

4. In a motorcycle, the combination with a drive wheel, of a frame having side sills embracing said drive wheel, a motor and transmission gearing mounted on said frame, radius rods upon opposite sides of the drive wheel pivotally connecting said drive wheel with said frame, intermeshing gears housed within one of said radius rods for driving said drive wheel, and a drive shaft extending through said last mentioned radius rod for connecting one of said gears with the transmission gearing, said drive shaft having a universal coupling therein in substantial transverse alinement with the pivotal points of the radius rods.

5. In a motorcycle, the combination with a drive wheel, of a frame having side sills embracing said drive wheel, a yoke, a spring connected to one of said sills, a tubular radius rod securing said drive wheel to said frame, intermeshing gears for driving said wheel, a housing for said gears upon said radius rod formed in sections, one of said sections forming a support for said yoke, and a bearing for attachment with said spring, the complementary section being detachable to permit the rearward and downward removal of said wheel from the frame.

1,167,626. COATING GLAZING-BARS AND OTHER IMPLEMENTS WITH LEAD OR OTHER PROTECTIVE METAL. ERNEST ALEXANDER CLAREMONT, High Legh, JOHN STRATTON, Bowdon, and CHARLES SANDELL FARMER, Salford, England. Filed Apr. 12, 1915. Serial No. 20,766. (Cl. 207—4.)



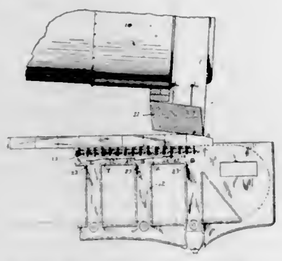
1. The combination of a hydraulic lead press, adapted to receive articles to be coated, a co-acting core and die in said press adapted to extrude a pipe to form a metal coating for said articles, and meeans for causing a relative movement of said core and die, whereby between adjacent articles a solid mass of metal is produced homogeneous with said coating.

2. The combination of a hydraulic lead press, adapted to receive articles to be coated, a core box therein to re-

ceive molten metal, a co-acting core and die in said core-box, adapted to extrude a pipe to form a metal coating for said articles, an auxiliary hydraulic press and means operated thereby to cause a relative movement of said core and die for the purpose of producing between adjacent articles a mass of metal homogeneous with said coating.

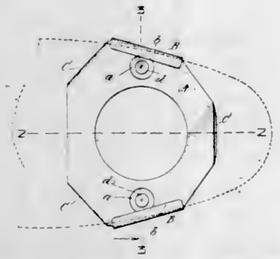
3. The combination of a hydraulic lead press, adapted to receive glazing bars to be coated, a core-box therein to receive molten lead, a die and hollow core co-acting therewith disposed in said core-box, and adapted to extrude a pipe to form a lead coating for said bars, an additional hydraulic press, a ram in the latter and means for actuating said ram to cause a relative movement between said core and die, whereby between adjacent bars a solid mass of lead of the same cross section as the bars is produced, homogeneous with said coating, and forming an end covering for said bars.

1,167,627. MECHANICAL STOKER. FRANCIS MORTON CLARK, Garden City, N. Y. Filed Apr. 14, 1914. Serial No. 831,783. (Cl. 110—40.)



In a mechanical stoker, conveyer chains, a plurality of grate bars mounted directly on said chains, said grate bars having vertically slotted connection with said chains, an agitator bar having inclined planes on its upper surface disposed in the path of the lower portion of said grate bars and inclined planes on its lower surface, transverse shafts supporting said agitator bar and located in coöperative relation to said last mentioned planes, and means for imparting movement to said agitator bar in a longitudinal direction, whereby said last mentioned inclines will ride on said shafts and thereby adjust the vertical position of the agitator bar.

1,167,628. ANTISLIPPING DEVICE FOR SHOES. HAROLD E. CLARKE, Somerville, Mass. Filed June 26, 1915. Serial No. 36,494. (Cl. 36—65.)

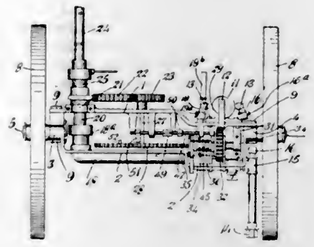


1. In a device of the character specified a plate, spikes on the said plate, ears on said plate, arranged to embrace the edge of the sole of a shoe, and screws mounted in said plate and arranged to be brought into contact with the bottom of the sole of said shoe and thereby draw said ears downward into firm engagement with the edge of the sole thereof.

2. In a device of the character specified a plate provided with a depression having a threaded hole therein, a screw passing through said hole in said plate and arranged to be brought into contact with the bottom of the sole of a shoe, spikes on said plate and ears on said plate arranged to embrace the edge of the sole of a shoe.

3. In a device of the character specified, a plate, ears on said plate arranged to embrace the edge of the sole of a shoe, and screws mounted in said plate in close proximity to said ears and arranged to be brought into contact with the bottom of the sole of said shoe and draw said ears into firm engagement with the edge of said sole.

1,167,629. IRRIGATION DEVICE. WALTER H. COLES, Troy, Ohio. Filed Oct. 17, 1914. Serial No. 867,077. (Cl. 137—66.)



1. An irrigating plant comprising: spraying means including a spraying pipe, an intake pipe, a water-motor connected to each of said pipes, means comprising a pipe shunting the motor and provided with a valve, for varying at will the speed of said motor, and means whereby, upon the operation of the motor, said spraying pipe is given an oscillating movement at a speed independent of the rate of water supply to the spraying pipe.

2. An irrigating plant comprising: spraying means including a pipe, a water-motor driven by water which may later pass through said pipe, means operatively connecting said motor and said pipe whereby the operation of the former effects the oscillation of the latter, and means for varying at will the frequency of oscillation of the spraying means without substantially varying the rate of flow of water discharged by the spraying means.

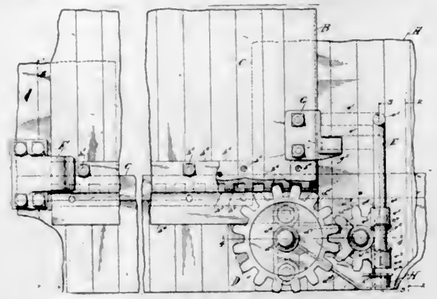
3. An irrigating plant comprising: spraying means including a pipe, a reciprocating water-motor driven by water which later passes through said pipe, connections to convert the reciprocations of the motor into oscillations of the pipe, means for automatically varying the speed of oscillation of the pipe during each cycle of oscillation to maintain constant the rate of travel of the spray over the ground and means for varying the frequency of oscillation of the spraying means at will without substantially varying the rate of flow of water discharged by the spraying means.

4. An irrigating plant comprising: a spraying pipe, a reciprocating water-motor including a piston, means for supplying water to said motor, a waste pipe for the water, control means for passing the exhaust water of the motor through said spraying pipe or through the waste pipe at will, and means whereby the reciprocation of the piston effects an oscillation of the pipes.

5. An irrigating plant comprising: spraying means including a pipe having an oscillating movement, a reciprocating water-motor having a piston, a variable-speed mechanism in operative connection with said piston and pipe whereby the reciprocation of the piston effects the oscillation of the pipe at a speed varying during each oscillation to maintain constant the rate of travel of the spray over the ground, and means for varying at will the speed of the water-motor independently of the rate of flow of water through said pipe.

[Claims 6 to 9 not printed in the Gazette.]

1,167,630. DOOR OPERATING AND LOCKING DEVICE. JOSEPH F. COMEE, Chicago, Ill., assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Filed Sept. 10, 1914. Serial No. 861,039. (Cl. 70—102.)



1. A sliding door in combination with a gear mechanism operatively engaging the door to move it back and forth, and a rigid gear operating lever movable into and out of the path of the door, as and for the purpose specified.

2. In a sliding door operating and locking mechanism a rack and gear device for opening and closing the door and a one piece lever for operating said device, said lever being movable into the path of the door when the door is closed to lock the door, as and for the purpose specified.

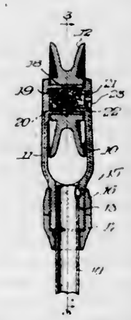
3. A sliding door in combination with door operating and locking mechanism, comprising a rack fixed to the door, a gear engaging the rack and a lever for rotating the gear, said lever having a part rigid therewith movable into the path of the door to lock it in closed position, and movable out of the path of the door for rotating the gear.

4. A door operating mechanism comprising a rack secured to the door, a gear mechanism secured adjacent to the door and engaging said rack, an operating lever having a handle rigid therewith and carried by said mechanism, said lever being movable into the path of the door to lock the door in closed position, and movable out of the path of the door to operative position, and means for retaining the lever in its locking position.

5. In a freight car having a sliding door, a door operating and locking mechanism, comprising a rack fixed to the door, a gear engaging the rack and a lever for rotating the gear, said lever being movable into the path of the door to lock it in closed position, and movable out of the path of the door for rotating the gear, and means for sealing the lever in its locking position.

[Claims 6 to 12 not printed in the Gazette.]

1,167,631. TROLLEY-WHEEL. JAMES E. CROOK, Chicago, Ill. Filed Feb. 5, 1915. Serial No. 6,235. (Cl. 64—66.)



1. In a trolley harp, the combination of a pair of arms constituting a yoke, a trolley wheel between said arms, a hollow bearing carried by one of said arms and serving to support said wheel, and a threaded plug carried by the other arm and serving to close an open end of said hollow bearing, substantially as described.

2. In a trolley harp, the combination of a pair of arms, a trolley wheel mounted between said arms, a hollow bearing carried by one of said arms, a plug carried by the other arm and acting to close the open end of said bearing, the shanks of said arms being circular and threaded upon their exterior, and a fastening nut coöperating with said combined shanks to fasten the same upon a trolley pole, substantially as described.

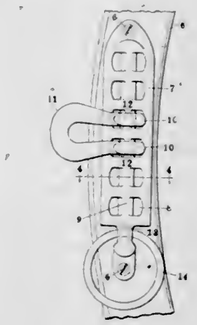
3. In a trolley harp, the combination of a pair of arms, a hollow bearing member carried by one arm and a plug carried by the other arm, said hollow bearing being provided with a radial opening, a trolley wheel mounted upon said bearing, and means for supplying a lubricant to the interior of said bearing and retarding the escape of the same through the aperture to the bearing surfaces, substantially as described.

4. In a trolley harp the combination of a pair of arms, a hollow bearing carried by one arm and a threaded plug carried by the other arm, said bearing being provided with a slot, a wheel mounted upon said bearing, and fibrous material within the hollow bearing, substantially as described.

5. In a trolley harp, the combination of a shank constructed in two parts and arranged when combined to form a tube, an arm springing from each portion of said shank and adapted to accommodate a trolley wheel therebetween, one portion of said shank being provided with a recess, a trolley pole having a lug adapted to be accommodated within said recess and a nut for clamping said pole in place and rigidly securing the two halves of said shank, substantially as described.

[Claim 6 not printed in the Gazette.]

1,167,632. ADJUSTABLE TRACE-FASTENER FOR HAMES. SAMUEL L. CROW, Seymour, Ind., assignor to Seymour Manufacturing Company, Seymour, Ind., a Corporation of Indiana. Filed July 28, 1915. Serial No. 42,262. (Cl. 54—31.)



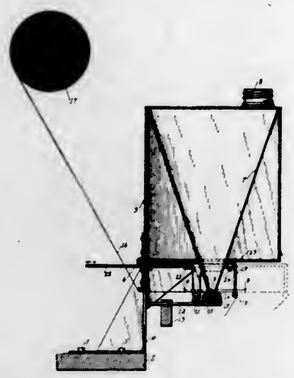
1. The combination with a hame, of an adjusting member secured to said hame and provided along its length with a plurality of engaging points, and a resilient trace fastener adapted to be sprung into engagement with said points and retained in position by its own resiliency.

2. The combination with a hame, of an adjusting member, and a trace fastening member, said trace fastening member being provided with cam surfaces adapted to be sprung into engagement with the said adjusting member and retained in position by the resiliency of the said trace fastening member.

3. The combination with a hame, of a plate carried thereby and forming an adjusting member, said plate being provided with a plurality of openings, and a bifurcated trace fastening member adapted to be spring into engagement with said opening and retained in position by its own resiliency.

4. The combination with a hame, of a plate carried thereby and forming an adjusting member, said plate being provided with a plurality of openings, and a loop for fastening a trace to the said plate, said loop having on each end a hook adapted to engage with the openings in said plate, said hooks being provided with cam surfaces adapted to be sprung into engagement with the openings of said plate and retained in position by the resiliency of said loop.

1,167,633. GLUE-DISTRIBUTER FOR VENEER-TAPING MACHINES OR MACHINES FOR SIMILAR PURPOSES. ALFRED A. DENNIS, Grand Rapids, Mich., assignor to The Veneer Machinery Company, Grand Rapids, Mich. Filed Jan. 29, 1914. Serial No. 815,132. (Cl. 91—43.)



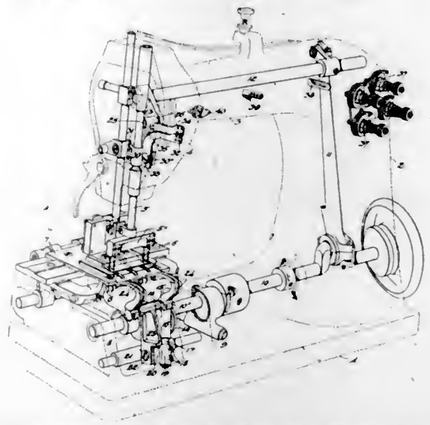
1. In a device of the class described, the combination of a glue tank, a water jacket surrounding the same, a discharging slot at the bottom of said tank, brackets secured to said tank, a plate pivoted on said brackets, a pad of felt secured to said plate in alinement with said discharging slot, a rearwardly extending rod secured to said plate, a weight on the rear end of said rod, adapted to keep the pad normally in engagement with the bottom of the tank, a bracket adjustably secured to the bottom of the water jacket, a roller supported on said bracket in alinement with said pad, and an arm extending upwardly and rearwardly from said tank for supporting a reel of paper, all coacting substantially as described for the purpose specified.

2. In a device of the class described, the combination of a glue tank, a discharging slot at the bottom of said tank, brackets secured to said tank, a plate pivoted on said brackets, a pad of felt secured to said plate in alinement with said discharging slot, a rearwardly extending rod secured to said plate, a weight on the rear end of said rod, adapted to keep the pad normally in engagement with the bottom of the tank, a bracket adjustably supported, a roller supported on said adjustable bracket in alinement with said pad, all coacting substantially as described for the purpose specified.

3. In a device of the class described, the combination with a supporting bracket, of a glue tank hingedly carried thereby, a narrow discharging slot at the bottom of said tank, a plate pivotally secured to said tank, a pad of felt carried by said plate in alinement with said slot, means holding said pad normally in engagement with the bottom of said tank, a bracket adjustably secured to the bottom of said tank, and a roller carried thereby, all coacting substantially as described for the purpose specified.

4. In a device of the class described, the combination of a glue tank having a discharge slot in the bottom thereof, and a roller adjustably supported whereby the distance between said roller and said slot can be varied to time the solidifying of said glue, all coacting substantially as described and for the purpose specified.

1,167,634. TAKE-UP MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 24, 1913. Serial No. 775,477. (Cl. 112—26.)



1. In combination with stitch-forming mechanism including a needle-bar, a shaft, and a link connecting said shaft and the needle-bar, of coacting thread controlling members carried respectively by the needle-bar and the link to have thread drawing actions in transverse paths.

2. In combination with stitch-forming mechanism, including a needle-bar, a shaft and a link connecting said shaft and the needle-bar, a thread-controlling arm operatively connected to the needle-bar, and a thread-controlling element operatively connected to said link and coacting with said thread-controlling arm to reduce the degree of pull upon the thread as the needle-bar approaches its extreme upper position.

3. In combination with stitch-forming mechanism, including a needle-bar, a shaft and a link connecting said shaft and the needle-bar, a thread-controlling arm operatively connected to the needle-bar, and a thread-controlling element bodily movable with said link, said thread-controlling arm and thread-controlling element moving differentially to take up slack thread and to reduce the degree of such take-up action during a portion of the rise of said needle-bar.

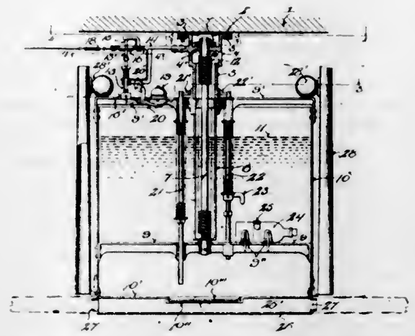
4. In combination with stitch-forming mechanism, including a needle-bar, a shaft and a link connecting said shaft and the needle-bar, thread controlling arms operatively connected to the needle-bar and link respectively and bodily movable to neutralize their action upon the thread during a portion of the descent and during a portion of the rise of said needle-bar.

5. In combination with stitch-forming mechanism, including a needle-bar, a needle, a looper and actuating means therefor, a shaft and a link connecting said shaft and the needle-bar, of thread-controlling members operatively connected to the needle-bar and link to move bodily and differentially in adjacent paths and operating during the descent of the needle to produce slack thread and thereafter permit the action of the needle to draw up a previously formed loop, and operating during the rise of the needle to permit the action of the needle to form slack for a loop seizing operation and thereafter to finally set the previously formed and concatenated loop to complete the stitch.

[Claims 6 to 11 not printed in the Gazette.]

1,167,635. FIRE-EXTINGUISHER. RICHARD F. DOWNEY, Milwaukee, Wis., assignor of one-half to Hugo Loewenbach, Milwaukee, Wis. Filed Feb. 17, 1914. Serial No. 819,194. (Cl. 169—14.)

1. A fire-extinguisher comprising a revoluble tank having a sealed discharge mouth in its bottom, a sealed chemical-holding vessel within the tank, a spring motor for rotating the tank, a locking mechanism for the motor, a thermal-controlled means for releasing the motor-locking mechanism, means associated with the thermal-controlled release mechanism for unsealing the vessel and tank discharge mouth, and a ported compartment in communication with said tank discharge mouth.



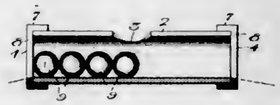
2. A fire-extinguisher comprising a fixed hanger, a tank revolubly mounted about the hanger, a motor spring connecting the tank and hanger, a trigger mechanism for locking the tank against rotation in opposition to the motor-spring, a thermal-controlled mechanism for releasing the trigger mechanism, a sealed discharge mouth in connection with the tank, and means for unsealing said mouth.

3. A fire-extinguisher comprising a fixed hanger, a tank revolubly mounted about the hanger, a motor spring connecting the tank and hanger, a trigger mechanism for locking the tank against rotation in opposition to the motor-spring, a thermal-controlled mechanism for releasing the trigger mechanism, a sealed discharge mouth in connection with the tank, means for unsealing said mouth, a removable sealed chemical-holding vessel fitted within the tank, and means associated with the trigger mechanism for unsealing said vessel.

4. A fire-extinguisher comprising a stationary hanger, a spindle revolubly supported upon the hanger, a fluid-containing tank secured to the spindle, the bottom of the tank being provided with a sealed discharge mouth, an auxiliary compartment below the tank bottom having horizontally disposed discharge ports therein, hinged nozzles associated with said ports, means for holding the hinged nozzles in approximately vertical positions when the tank is at rest, a motor-spring surrounding the tank spindle having its ends connected respectively to the hanger and said spindle, a thermal-controlled lock and release trigger for the tank, a sealed chemical-holding vessel seated within the tank, spring-controlled plungers adapted to unseal the vessel and tank bottom discharge mouth, and means for locking the plungers in opposition to spring-control when the tank is at rest.

5. A fire-extinguisher mechanism comprising a hanger, a spindle revoluble therein, a coiled spring surrounding the spindle having its ends respectively connected to said spindle and hanger, a tank secured to the spindle having a bottom provided with a discharge mouth, a fragile sealing-plate for the discharge mouth, a fragile chemical-holding vessel seated within the tank, spring-actuated plungers arranged to break the vessel and mouth closure-plate, means in connection with the hanger for holding the plungers under spring tension, a trigger mechanism in connection with the hanger for locking the tank against rotation in opposition to spring tension, a receiving compartment in connection with the tank below its discharge mouth, the compartment being provided with ports, nozzles in communication with the ports, and thermal elements in connection with the trigger mechanism whereby the same is actuated to effect release of the tank.

1,167,636. THREAD-TENSION DEVICE. JAMES EASTWOOD, Paterson, N. J., assignor to Benjamin Eastwood Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 28, 1913. Serial No. 787,175. (Cl. 242—151.)



1. A thread tension device, comprising an elongated body the ends of which are open, said body being provided with a longitudinal slot for the passage of the thread, closure heads inclosing the ends of and shaping said body and provided with slots to receive the thread, and tension-producing elements arranged within said body.

2. A thread tension device, comprising an elongated tubular body having a longitudinal slot formed therein for the reception of the thread, a closure device associated with each end of the body, said closure devices and the body being frictionally engaged so that the former positions the latter, said closure devices also being slotted coincident with the longitudinal slot in said body, and tension producing elements arranged within said body.

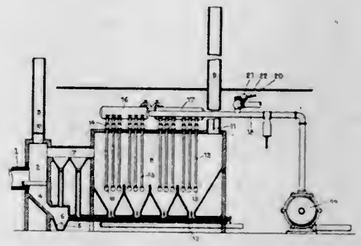
3. A thread tension device, comprising an elongated open-ended body having an entrance slot for the passage of the thread thereto, caps inclosing the ends of said body and aiding in shaping the latter, each of said closures being provided with a slot for passage of the thread, and means within the body for imparting the requisite tension to the thread in its transit therethrough.

4. A thread tension device, comprising an elongated resilient shell-like body the ends of which are open, said body being provided with a longitudinal slot for the passage of the thread, flanged closure heads surrounding the open ends of said body and frictionally engaged therewith by the expansion of the latter therein, each of said heads being provided with a slot for the passage of the thread through the device, and tension-producing means located within said shell.

5. A thread tension device, comprising a tubular body the ends of which are open, said body being provided with a thread-receiving slot, and being resilient in a transverse direction, closure heads frictionally engaged with the ends of said body, the latter being expanded therein, each of said heads being provided with a slot for the passage of the thread in its transit through the device, and tension-producing means arranged within said body.

[Claims 6 to 9 not printed in the Gazette.]

1,167,637. METHOD OF UTILIZING WASTE HEAT IN KILNS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed July 7, 1910. Serial No. 570,913. (Cl. 122—7.)



1. The method of utilizing the waste hot gases from a kiln without varying the draft of the kiln thereby, which consists in causing said gases of an approximately constant volume and temperature to pass around a plurality of steam pipes connected together to thereby generate

steam at a definite rate, greater than the maximum rate of consumption thereof, using as much of said steam as desired in a low pressure condensing steam turbine, and allowing the remainder of the total amount of steam generated to escape, the pressure of the steam in the system being kept sufficiently low to largely obviate leakage in the joints of said steam pipes, substantially as described.

2. The method of utilizing the waste hot gases from a kiln without varying the draft of the kiln thereby, which consists in causing said gases of an approximately constant volume and temperature to pass around a plurality of steam pipes connected together to thereby generate steam at a low pressure and at a definite rate, greater than the maximum rate of consumption of the engine or engines using said steam, using as much of said steam as desired in a low pressure condensing steam turbine or turbines, and allowing the remainder of the total amount of said steam to escape, substantially as described.

3. The method of utilizing the waste hot gases from a kiln without varying the draft of the kiln thereby, which consists in causing said gases to generate steam at a definite rate, greater than the maximum rate of consumption thereof, using as much of said steam as desired in a low pressure condensing turbine or turbines, and allowing the remainder of the total amount of said steam to escape, substantially as described.

1,167,638. MEANS FOR CONCENTRATING ORES. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed May 23, 1912. Serial No. 699,109. (Cl. 83—82.)



1. Means for concentrating ores including a plurality of horizontally elongated, substantially level, endless tanks, said tanks being arranged adjacent to each other and so that each tank except one surrounds an adjacent tank, means for producing a uniform flow of liquid in a horizontal direction in portions of each of the tanks, means for introducing ore into the uniformly flowing liquid in each tank, whereby the ore constitutents are separated and deposited according to their densities by the action of gravity and the flowing liquid, and means for collecting and removing ore constituents so deposited, substantially as described.

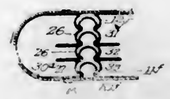
2. Means for concentrating ores including a plurality of horizontally elongated substantially level, endless tanks, said tanks being arranged adjacent to each other and so that each tank except one surrounds an adjacent tank, and means for maintaining a substantially uniform flow of liquid in a horizontal direction in portions of each of said tanks, substantially as described.

3. Means for concentrating ores including a plurality of horizontally elongated, substantially level, endless tanks, said tanks having concentrating portions of different widths and being arranged adjacent to each other and so that each tank except one surrounds an adjacent tank, each of said tanks having portions of different widths, and means for maintaining substantially uniform flows of liquid in a horizontal direction and at successively slower rates in concentrating portions of each of said tanks, substantially as described.

4. In apparatus of the class described, an elongated concentrating tank, means for maintaining a uniform flow of liquid therein, a feed chute wholly disposed above the flow of liquid for feeding ore into the liquid, and a float supported solely by the flow of liquid adjacent to and slightly beyond the outlet of the feed chute to insure the complete submersion of the ore fed from the feed chute, substantially as described.

5. In apparatus of the class described, an elongated concentrating tank, means for maintaining a uniform flow of liquid therein, means wholly disposed above the flow of liquid for feeding ore into the liquid, and a float supported solely by the flow of liquid adjacent and slightly beyond the outlet of the feeding means to insure the complete submersion of the ore fed from the feeding means, substantially as described.

1,167,639. LOOSE-LEAF HOLDER. JOSEPH EIFEL, Chicago, Ill. Filed Nov. 17, 1911. Serial No. 660,821. (Cl. 129—23.)



1. In a device of the character described, in combination with a loose sheet holder, coöperating stemless ball and socket members adapted to be moved freely in all directions relatively to each other and disposed within the holder, and means for connecting them to the holder.

2. A device of the character described comprising, in combination, a loose sheet holder connected at its inner side to interiorly disposed detachable coöperating interlocking devices adapted to engage sheets between portions of such interlocking devices.

3. A device of the character described comprising, in combination, a continuous base connected at its inner side to coöperating flanged ball and socket members adapted to engage sheets between the flanges thereof.

4. In a device of the character described, in combination with a loose sheet holder provided with coöperating engaging members adapted to retain sheets between portions of the holder, a lengthening member adapted for interposition between and spring engagement with said coöperating members, whereby intermediate sheets carried by the holder may be inserted or removed without disturbance of other sheets carried therein.

5. In a device of the character described, in combination with a loose sheet holder provided with coöperating engaging members adapted to retain sheets between portions of the holder, a flanged retaining member adapted for interposition between and spring engagement with said coöperating members, whereby intermediate sheets carried by the holder may be inserted or removed without disturbance of other sheets carried therein.

[Claims 6 to 12 not printed in the Gazette.]

1,167,640. FINISH-REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed July 30, 1910. Serial No. 574,708. (Cl. 87—5.)

1. The non-inflammable finish remover comprising approximately ortho-anisidin ten parts, naphthenic acid fifteen parts, benzal chlorid twenty-five parts, anilin five parts, monochlorcresol ten parts, benzyl alcohol forty parts, ethyl alcohol ten parts and incorporated stiffening material including Montan wax four parts, paraffin wax three parts and laundry soap three parts.

2. The substantially non-inflammable finish remover comprising approximately ortho-anisidin ten parts, naphthenic acid fifteen parts, benzal chlorid twenty-five parts, monochlorcresol ten parts, benzyl alcohol forty parts, ethyl alcohol ten parts and incorporated antacid material and waxy stiffening material.

3. The substantially non-inflammable finish remover comprising approximately ortho-anisidin ten parts, naphthenic acid fifteen parts, benzal chlorid twenty-five parts, monochlorcresol ten parts, benzyl alcohol forty parts, ethyl alcohol ten parts, and incorporated stiffening material.

4. The finish remover comprising ortho-anisidin, naphthenic acid, benzal chlorid, monochlorcresol, loosening finish solvent material including an alcohol and incorporated stiffening material.

5. The substantially non-inflammable finish remover comprising approximately ortho-anisidin ten parts, naphthenic acid fifteen parts, benzal chlorid twenty-five parts, monochlorcresol ten parts, benzyl alcohol forty parts and ethyl alcohol ten parts.

[Claims 6 to 15 not printed in the Gazette.]

1,167,641. FINISH-REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Nov. 14, 1910. Serial No. 592,342. (Cl. 87—5.)

1. A compound consisting of alcohol, benzol and an acetate of a metal.

2. A compound consisting of alcohol, benzol and an acetate of a metal dissolved therein.

3. A finish remover comprising organic solvents and sodium acetate.

4. A finish remover comprising benzol, alcohol and an organic salt of sodium as a thickener.

5. A finish remover comprising considerable proportions of penetrating and of loosening finish solvent material and a crystallizable organic salt of an alkali incorporated therewith.

[Claims 6 and 7 not printed in the Gazette.]

1,167,642. DISINFECTING AGENTS. MAX ENGELMANN and BENEDIKT MEBKEL, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 5, 1914. Serial No. 870,498. (Cl. 167—3.)

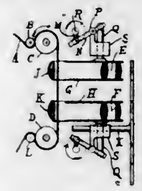
1. The herein described new disinfecting preparation containing an organic mercury compound and an alkaline substance, said products being a whitish to yellowish powder soluble in water; insoluble in alcohol and ether; giving with hot ammonium sulfid a black precipitate of Hg_2S; being split up into $HgCl_2$ and a phenol or an aromatic acid by heating it with concentrated hydrochloric acid, substantially as described.

2. The herein described new disinfecting preparation comprising an organic mercury compound and a caustic alkali, said preparation being a whitish to yellowish powder soluble in water; insoluble in alcohol and ether; giving with hot ammonium sulfid a black precipitate of Hg_2S; being split up into $HgCl_2$ and a phenol or an aromatic acid by heating it with concentrated hydrochloric acid, substantially as described.

3. The herein described new disinfecting preparation comprising mercurichlorophenol and an alkaline substance, said preparation being a whitish stable powder clearly soluble in water, insoluble in alcohol and ether; giving with hot ammonium sulfid a black precipitate of Hg_2S; being split up into $HgCl_2$ and chlorophenol by heating it with concentrated hydrochloric acid, substantially as described.

4. The herein described new disinfecting preparation comprising mercurichlorophenol and caustic soda, said preparation being a whitish stable powder clearly soluble in water, substantially as described.

1,167,643. PROJECTING-MACHINE. WILLARD B. FEATHERSTONE, Washington, D. C. Filed May 10, 1912. Serial No. 696,423. (Cl. 88—16.8.)



1. In an optical projection device, of the continuously moving picture-surface type, a pair of objectives adapted to reciprocate alternately, and substantially in the same plane and means to cause the direct travel of the objectives to be slightly less than that of the picture surface.

2. In an optical projection device, of the continuously moving picture-surface type, a pair of objectives means to reciprocate the objectives alternately, and substantially in the same plane, and a shutter adapted to expose the objectives in the order of their reciprocation.

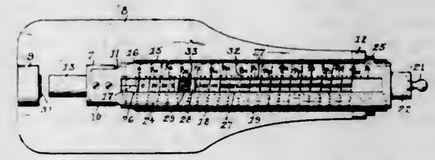
3. In an optical projection device, the combination with a pair of similar objectives, of means to reciprocate the objectives alternately and substantially perpendicularly to their optic axes, and substantially in the same plane, and means to move a series of images continuously across the said axes, and at a rate so proportioned to that of the direct movement of the objectives that the axis of each shall intersect continuously a given point in a moving image, and a stationary point in the corresponding projected image throughout substantially the entire exposure period.

4. In an optical projection device, of the continuously moving picture-surface type, the combination with a reciprocating objective and a stationary condensing element, of another and smaller condensing element adapted to reciprocate with the objective.

5. In an optical projection device, of the continuously moving picture-surface type, a plurality of reciprocating objectives and a plurality of condensing elements adapted to reciprocate with the objectives.

[Claims 6 and 7 not printed in the Gazette.]

1,167,644. AMPLIFYING MEASURING INSTRUMENT. FERNANDO OSCAR JAQUES, Sr., Cranston, R. I. Filed May 3, 1915. Serial No. 25,485. (Cl. 33—166.)



1. A measuring instrument having a frame, a screw-threaded spindle in screw-thread engagement with the frame, a cylinder on the spindle and having an external spiral groove the pitch of which is in a reverse direction to the screw-threads on the spindle, said spiral groove forming a spiral face on the cylinder on which is indicated units of measurement.

2. A measuring instrument having a frame, a screw-threaded spindle in screw-thread engagement with the frame, a cylinder on the spindle and having an external spiral groove the pitch of which is greater and in a reverse direction to the screw-threads on the spindle, said spiral groove forming a spiral face on the cylinder on which is indicated units of measurement.

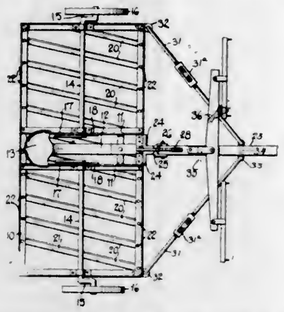
3. A measuring instrument having a frame, a sleeve on the frame, a screw-threaded spindle in screw-thread engagement with the sleeve, a cylinder on the spindle and having a spiral groove forming a spiral face on the cylinder on which are units of measurements, an arm over the cylinder and having a slot, a slide reciprocally supported on the arm in the slot and having a sight opening, and means for operatively connecting the slide with the spiral groove on the cylinder.

4. A measuring instrument having a frame, a screw-threaded spindle in screw-thread engagement with the frame, a cylinder on the spindle and having a spiral face on which is indicated units of measurements, an arm over the cylinder, a slide having a sight opening, means for reciprocally supporting the slide on the arm, and means for giving a greater longitudinal movement to the slide than the longitudinal movement given to the cylinder, by the spindle.

5. A measuring instrument having a frame, a sleeve on the frame, a screw-threaded spindle screw-threaded through the sleeve, a cylinder on the spindle and having a spiral groove forming a spiral face on the cylinder on which is indicated units of measurement, an arm over the cylinder, a slide on the arm and having a sight opening, means for reciprocally supporting the slide on the arm, means for operatively connecting the slide with the spiral groove on the cylinder, and means for rotating the spindle and cylinder.

[Claims 6 to 8 not printed in the Gazette.]

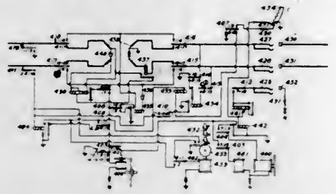
1,167,645. WEED-CUTTER AND PULVERIZING-MACHINE. WILLIAM KIDMAN, Jr., Mendon, Utah. Filed May 19, 1915. Serial No. 29,134. (Cl. 55—22.)



1. In a machine of the character described, a supporting frame, and a plurality of longitudinally extending parallel cutting blades mounted upon the frame, said blades being disposed at an inclination to the line of draft, each of said blades being downwardly and laterally curved.

2. In a machine of the character described, a supporting frame, a plurality of longitudinally extending parallel cutting blades mounted upon the frame, said blades being disposed at an inclination to the line of draft, each of said blades being downwardly and laterally curved, and the forward end of each blade being approximately in line with the rear end of the next succeeding blade on one side.

1,167,646. MACHINE TELEPHONE SWITCHING SYSTEM. FRANK ROBERT MCBERTY, Antwerp, Belgium, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 25, 1913. Serial No. 775,645. (Cl. 179—27.)



1. In a telephone exchange system, the combination with a plurality of lines, automatic power-driven selector switches adapted to interconnect the same, a sender adapted severally to control said switches by means of revertive impulses transmitted over a selection-controlling circuit from the switch under control back to the sender and which measure the advance of such switch, and electromagnetic impulse-repeating means located at one of said switches adapted to reproduce in a selection-controlling circuit terminating thereat impulses produced by the movement of a succeeding switch, whereby the movement of such succeeding switch may be controlled by said sender.

2. In a telephone exchange system, the combination with a plurality of subscribers' lines terminating in different offices, trunk lines, automatic power-driven selector switches adapted to interconnect said subscribers' lines by means of said trunk lines, a sender adapted severally to control said switches by means of revertive impulses transmitted over a selection-controlling circuit from the switch under control back to the sender and which measure the advance of such switch, an established connection leading through a plurality of such offices, a repeating coil and battery for supplying current to the called party being located at a switch in one of the offices through which the connection extends, and electromagnetic impulse-repeating means located at said switch adapted to reproduce in the selection controlling circuit terminating thereat impulses produced by the movement of a switch located beyond said repeating coil, such repeating means being rendered operative upon the completion of operation of the selector with which it is associated, and subsequently rendered inoperative before the completion of the talking connection.

3. In a telephone exchange system, the combination with a plurality of subscribers' lines terminating in different offices, trunk lines, automatic power-driven selector switches adapted to interconnect said subscribers' lines by means of said trunk lines, a sender adapted severally to control said switches by means of revertive impulses transmitted over a selection-controlling circuit from the switch under control back to the sender and which measure the advance of such switch, an established connection leading through a plurality of said offices, a repeating coil and battery for supplying current to the called party being located at a switch in one of the intermediate offices over which the connection extends, and electromagnetic impulse repeating means located at said switch adapted to reproduce in the selection controlling circuit terminating thereat impulses produced by the movement of a switch located in a distant office beyond said repeating coil, a sequence switch, such repeating means being rendered operative by said sequence switch upon the completion of operation of the selector with which it is associated, and subsequently rendered inoperative thereby before the completion of the talking connection.

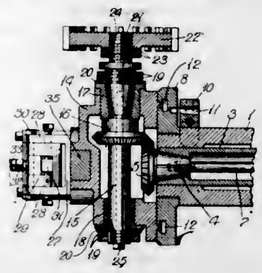
4. In a telephone exchange system, the combination with a plurality of lines, automatic power-driven selector switches adapted to interconnect the same, a sender adapted severally to control said switches by means of revertive impulses transmitted over a selection-controlling circuit from the switch under control back to the sender and which measure the advance of such switch, and electromagnetic impulse-repeating means located at one of said switches adapted to reproduce in the selection controlling circuit terminating thereat impulses produced by the movement of a succeeding switch, said repeating means comprising a relay 434 included in the circuit leading to the other selector adapted to control the circuit leading to the sender, and a relay 433 controlled by the circuit leading to such sender adapted to control the circuit leading to the subsequent selector.

5. In a telephone exchange system, the combination with a plurality of subscribers' lines, trunk lines, automatic power-driven selector switches adapted to interconnect said subscribers' lines by means of said trunk lines, a relay for each switch controlling the motor circuit thereof, a sender adapted severally to control such switches by means of revertive impulses transmitted over a selection-controlling circuit from the switch under control back to the sender, such circuit including the power control relay of the switch under control, a repeating coil and battery for supplying current to the called party located at one of the switches of the connecting circuit over which the connection extends, impulse repeating means located at said switch adapted to be operated by the advance of a selector located beyond the repeating coil and intermittently to deënergize the sender magnet without affecting the motor control relay of the switch with which the impulse repeating means is associated and which controls the circuit of said impulse repeating means which in turn controls the motor-control relay of the succeeding switch, the impulses from which are being repeated in the selection controlling circuit, until upon the completion of operation of the sender the motor control relay circuit of the switch with which the repeating means is associated is opened which causes the opening of the circuit of the impulse repeating means which in turn opens the motor-control relay circuit of the succeeding switch and thus terminates selection.

[Claims 6 to 20 not printed in the Gazette.]

1,167,647. MILLING ATTACHMENT FOR SHAPER-RAMS. HENRY E. MORTON, Muskegon, Mich. Filed July 6, 1914. Serial No. 849,236. (Cl. 29—30.)

1. The combination with a shaper ram, of a head detachably secured to said ram to rotate in a plane transversely to the plane of the longitudinal axis of the ram and about said axis, a cutting tool carried by said head and adjusted by turning the head, and means coincident in the axis of the ram for driving said tool.



2. The combination with a shaper ram, of a head detachably secured to said ram and adapted to be turned in a plane transversely of the plane of the longitudinal axis of the ram and about said axis, tools carried by said head and extending in different radial directions to the longitudinal axis of the ram, means coincident with the axis of the ram for driving certain of the tools, and means for adjustably securing said head in the position to which it is turned to adjust the tools.

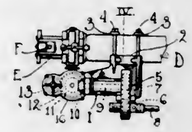
3. The combination with a shaper ram, of a ring detachably secured upon the end of the ram, a head engaging said ring and rotatively supported thereby opposite the end face of the ram to rotate upon an axis coincident with the longitudinal axis of the ram, a cutting tool on the head extending radially toward the axis of rotation of the head, means coincident with the axis of the ram for driving the tool, and a tool holder for a fixed tool detachably secured to the outer end of the head.

4. The combination with a shaper ram having a reduced and screwthreaded end portion, of a ring engaging said end portion, a head, means connecting the head and ring to permit a rotary movement of the head upon the ring, a spindle mounted in the head transversely of the longitudinal axis of the ram, and means coincident with the longitudinal axis of the ram and the axis of rotation of the head for driving said spindle.

5. The combination of a hollow ram, a head detachably secured to the ram over the open end of the ram, a driving member extending longitudinally of the ram within the same and coincident with the axis of rotation of the head, and a rotary cutting tool mounted on the head with its axis of rotation intersecting the axis of rotation of the driving member and operatively connected to the driving member to receive motion therefrom.

[Claims 6 to 11 not printed in the Gazette.]

1,167,648. BORING ATTACHMENT FOR SHAPER-RAMS. HENRY E. MORTON, Muskegon, Mich. Filed July 6, 1914. Serial No. 849,237. (Cl. 29—30.)

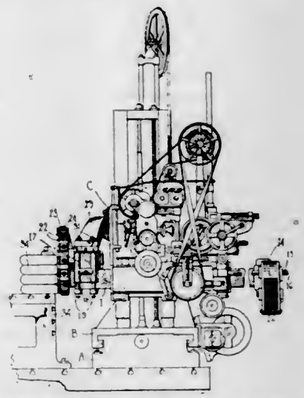


1. An attachment for shaper rams, embodying a supporting member formed with a seat to engage a ram, means for detachably holding the member seated upon the ram, a spindle carried by said member, said member being provided with bearings for said spindle, gears mounted on the member for actuating the spindle, and a driving shaft extending longitudinally of the ram for actuating the gears.

2. An attachment for shaper rams embodying a supporting member having a laterally off-set portion formed with a seat to engage the side of a ram, means for detachably securing said member seated upon a ram, a splined shaft having a bearing at one end on said member and adapted to extend longitudinally of a ram to which the member is secured, a tool actuating member mounted in bearings on said supporting member, and means on the supporting member for transmitting motion from said shaft to said tool actuating member.

3. An attachment for shaper rams embodying a supporting member having a laterally off-set portion formed with a seat to engage the side of a ram, means for detachably holding said member seated upon a ram at one side of and spaced from the ram, said member being formed with a gear casing and bearings for a vertical and a horizontal shaft, a splined shaft supported at one end in the horizontal bearing to extend longitudinally of a ram to which the member is attached, a vertical tool carrying spindle mounted in the vertical bearing, and a train of gearing in the gear casing for transmitting motion from the said shaft to the spindle.

1,167,649. TRAVELING-HEAD SHAPER. HENRY E. MORTON, Muskegon, Mich. Filed July 6, 1914. Serial No. 849,238. (Cl. 29—30.)



1. The combination with the head and driving mechanism of a shaper, of a tool carrying ram actuated by said mechanism, said ram having an axial bore, an arbor mounted in said bore, means actuated by said driving mechanism for rotating said arbor, and a cutting tool mounted on said ram to turn upon an axis at one side of a parallel with the axis of said arbor and driven by said arbor.

2. The combination with the head and driving mechanism of a shaper, of a tool carrying ram actuated by said mechanism, said ram having an axial bore, a tubular arbor in said bore, an actuating member detachably connected to one end of the arbor to turn therewith, a rotatable cutting tool actuated by said member, a bearing member detachably mounted on said ram and having a bearing for the tool, said tool and arbor being adapted to rotate upon parallel axes, and means extending through said arbor for detachably holding said actuating member engaged with the arbor.

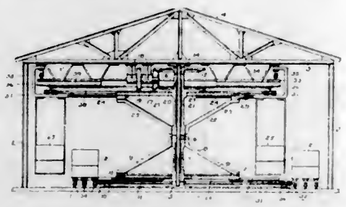
3. The combination with the head and driving mechanism of a shaper and a tool carrying ram, of a member detachably secured to the free end of the ram and provided with a bearing for a tool, a rotatable cutting tool mounted in the bearing on said member, and means carried by and movable with the ram for transmitting motion from said driving mechanism to rotate the tool independently of the movement of the ram.

4. The combination with the ram of a shaper or planer, of a saddle formed with a seat to engage the ram, means for detachably securing the saddle in place upon the ram, a rotary tool mounted on the saddle, and means carried by the ram for actuating the tool.

5. The combination of a ram for a shaper or planer having an axial bore, an arbor in said bore, a saddle having a seat to engage the side of the ram, means for detachably holding the saddle seated upon the ram, a rotary tool mounted on the saddle, and means on the arbor for actuating the rotary tool.

[Claims 6 to 12 not printed in the Gazette.]

1,167,650. CAROUSEL. PAUL F. NACHTIGALL, Fort Wayne, Ind. Filed July 13, 1914. Serial No. 850,615. (Cl. 46—27.)



1. In a carousel the combination with a revolubly mounted frame, a plurality of reciprocable members carried by the frame and radiating therefrom, a vehicle secured to each member, a fixed guide for controlling the reciprocation of the members and means to rotate the frame.

2. In a carousel the combination with two independent revolubly mounted frames, a plurality of reciprocable members carried by each frame and radiating therefrom, a vehicle secured to each member, guides to control the reciprocation of the members and means to rotate the frames in opposite directions.

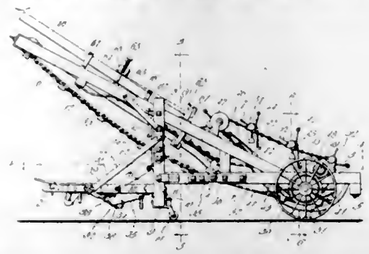
3. In a carousel the combination with a platform, of a frame revolubly mounted on the platform, a plurality of reciprocable rods carried by the frame and radiating therefrom antifriction rollers carried by the frame and engaging the rods, respectively, a vehicle secured to each rod and having rolling contact with the platform, a guide on the platform, means on the rods and engaging the guide for controlling the reciprocation of the rods and means to rotate the frame.

4. In a carousel the combination with a fixed platform, of two frames revolubly mounted upon the platform one above the other, a plurality of reciprocable rods carried by each frame and radiating therefrom, an antifriction roller for each rod and carried by the frames, a vehicle connected to each rod, a portion of the vehicles having a rolling support on the platform, a second platform above the vehicles upon which the remainder of the vehicles have a rolling support, a guide on each platform for controlling the reciprocation of the rods, respectively, and means to rotate the frames in opposite directions.

5. In a carousel the combination of two fixed platforms one above the other, a central vertical shaft revolubly mounted between the platforms, a fixed frame and a loose frame on the shaft, a plurality of longitudinally reciprocable rods carried by the frames, antifriction rollers carried by the frames and engaging the rods, respectively, a vehicle secured to each rod and having a rolling support on one of the platforms, a guide on each platform in the form of a sinuous curve, means on each rod engaging one of the the guides and means to rotate the shaft and loose frame in opposite directions whereby by means of the guides the vehicles are caused to travel in sinuous paths, one portion of them traveling in one direction and the other portion in the opposite direction.

1,167,651. HAY-LOADER. EDWIN T. NELSON, St. Olaf, Iowa. Filed July 26, 1915. Serial No. 41,993. (Cl. 56—61.)

1. In a hay loader, a horizontal base frame formed of a front and a rear section hinged together, a truck for supporting the rear section, a conveyer frame secured to the rear section and inclined upwardly and forwardly therefrom, a standard formed of an upper and a lower section hinged together, a pivotal connection between the intermediate portion of the lower standard section and the front end of the front frame section, an additional pivotal connection between the upper standard section and the conveyer frame, releasable means normally imparting rigidity to the two hinge points, an additional truck carried by the lower end of the lower standard section, and a rigid tongue extending forwardly from said lower section.



2. In a hay loader, the combination of a rear horizontal wheel supported frame section, a front horizontal frame section hinged to the other section on a horizontal axis, a conveyer frame rigidly secured to the rear frame section and inclining upwardly and forwardly therefrom, a pair of upright lower standard sections hinged between their ends to the front end of the front frame section, supporting wheels on the lower ends of said standard sections, a transverse bar rigidly connecting said standard sections near their lower ends, a tongue extending rigidly from said transverse bar in a forward direction, a pair of upper standard sections pivoted at their upper ends to the conveyer frame and hinged at their lower ends to the upper ends of the lower standard sections, and a pair of releasable inclined retaining bars extending from the conveyer frame to certain of the aforesaid standard sections, whereby to normally impart rigidity to all of the hinged points.

3. In a hay loader, the combination of a rear horizontal wheel supported frame section, a conveyer frame rigidly secured thereto and inclining upwardly and forwardly therefrom, a front horizontal frame section hinged to the front end of the rear section on a horizontal axis, a pair of upright lower standard sections pivoted between their ends to the front corners of the front frame section and having supporting wheels on their lower ends, a transverse bar rigidly connecting the lower end portions of said standard sections, a tongue rigidly secured to and extending forwardly from said bar, a pair of spaced plates secured to and rising from the upper end of each standard section, upper standard sections having their lower ends interposed between the plates of said pairs, their upper ends being pivoted to the conveyer frame, upper and lower bolts passed through the pairs of plates and through the intervening lower ends of the upper standard sections, brace bars extending from the uppermost of said bolts to the conveyer frame, and additional brace bars extending from the lowermost of said bolts to the tongue.

1,167,652. INK-DISTRIBUTING ROLLER. LAURITZ F. NIELSEN, St. Paul, Minn., assignor to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Jan. 18, 1915. Serial No. 2,856. (Cl. 101—71.)



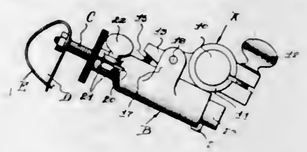
1. In a device of the class described, the combination of a shaft, spaced bearings secured to said shaft, cams revoluble and slidable on the shaft, a tubular shell secured to and carried by said cams and also having a revoluble and slidable mounting near its ends upon said bearings, said cams being adapted to impinge against the stationary bearings and reciprocate said shell as the same is turned.

2. In a device of the class described, the combination of a shaft, a tubular shell revoluble and slidable on the shaft, cams within the shell and a fixed ball bearing for each cam face, said cams being arranged to engage said bearings and reciprocate said shell as the same is turned.

3. In a device of the class described, the combination of a shaft fixed against rotation and longitudinal movements, bearings secured to said shaft, a shell revoluble and slidable on the shaft and cams on the shell adapted to impinge against said stationary bearings and alternately shift said shell longitudinally as the same is rotated.

4. In a device of the class described, the combination of a rigid shaft, bearings secured to said shaft, a tubular shell revoluble and slidable at its ends on said bearings, and cams secured upon the inner periphery of said shell, said cams being adapted to impinge against said bearings and impart a lengthwise reciprocating movement to the shell.

1,167,653. FRONT-FEED GUIDE FOR PRINTING-PRESSES. LAURITZ F. NIELSEN, St. Paul, Minn., assignor to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed July 23, 1915. Serial No. 41,511. (Cl. 101—38.)



1. In a front feed guide for printing presses, the combination with a rock shaft and feeding bar of a clamp adjustably secured upon said rock shaft, a barrel pivotally suspended beneath said clamp, a guide stem adjustable longitudinally in said barrel and provided with a dependent guide plate adapted to engage said feeding bar, and a compression spring interposed between said clamp and barrel, said spring being adapted to tilt the barrel upon the initial upward movement of the guide, whereby the guide plate is withdrawn from the edge of a sheet before said plate is lifted.

2. In a front feed guide for printing presses, the combination with a rock shaft and feeding bar of a clamp adjustably secured upon said rock shaft, a barrel pivotally suspended beneath said clamp, a compression spring interposed between one end of said barrel and said clamp to tilt the former with respect to the latter, a stop on the clamp to limit the tilting movement of the barrel, a guide stem slidable longitudinally in said barrel, means to prevent the turning of said stem, a second spring, within the barrel, coiled about the stem and operating to move the stem in one direction, a nut threaded on the stem and abutting against one end of said barrel, said nut being adapted to permit the movement of said stem by said spring, also to check said movement and further to shift the stem against the action of the spring, a guide plate depending from the stem and arranged to bear upon said feeding bar, a depression finger on the stem to guide a sheet as it is fed toward said plate, said compression spring being adapted to tilt the barrel during the initial upward movement of the guide, so as to withdraw the guide plate from the edge of said sheet before said plate is lifted.

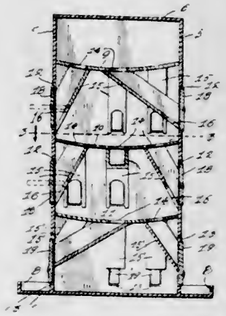
1,167,654. SELF-INDUCTION COILS FOR DUPLEX TELEPHONE CONNECTIONS ACCORDING TO THE PUPIN SYSTEM. AXEL HERMAN OLSSON and HENNING BERNHARD MATHIAS PLEIJEL, Stockholm, Sweden. Filed Nov. 2, 1914. Serial No. 869,954. (Cl. 179—15.)

1. Self-induction coils for loading duplex telephone circuits, consisting of two double loading coils inserted one in each of the two double lines in order to load them according to the Pupin system, the duplex circuit being loaded by the leakage fields which are produced by the current in the duplex circuit between the two double coils laid together.



2. Self-induction coil for loading duplex telephone circuits, consisting of two double loading coils inserted one in each of the two double lines in order to load them, the two coils being so laid together that the points of the iron cores opposite one another, where poles will be set up by the current in the duplex circuit, are of opposite polarity.

1,167,655. GAME APPARATUS. HANS PASSIG, Lake Benton, Minn. Filed Apr. 1, 1915. Serial No. 18,570. (Cl. 46—57.)



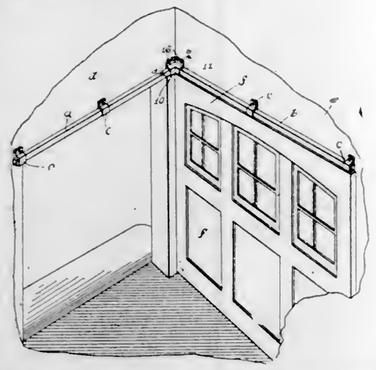
1. A game apparatus comprising a casing, a plurality of transverse partitions therein each provided with openings, chutes extending from said openings toward the casing for conveying an object from one partition to another, and indicators carried by the casing adjacent the chutes.

2. A game apparatus comprising a casing, a plurality of transverse apertured partitions therein, the casing below these partitions being provided with openings, indicators pivoted in the openings, and chutes extending from each partition to convey an object from one partition to another to the openings below.

3. A game apparatus comprising a casing, a plurality of transverse apertured partitions therein, the casing being provided with series of openings below said partitions, the lowermost of said openings being enlarged, and chutes extending from each partition to the next lower partition to convey an object to the openings below.

4. A game apparatus comprising a casing, transverse partitions mounted therein and having openings, said casing having openings in its sides, indicators pivotally mounted in the openings, chutes leading from the openings of the partitions to the openings of the sides for conveying an object from one partition to the next lower partition, said object being capable of actuating the indicators when passing from the lower ends of the chutes.

1,167,656. MEANS FOR SUPPORTING TROLLEY-TRACKS. ELLIS J. G. PHILLIPS, Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,649. (Cl. 104—180.)



1. As a new article of manufacture, a joint-bracket for trolley-tracks comprising two track-supporting members at an angle to each other, the bottom wall of each member being slotted for the passage of a door-hanger pendant, and means for permitting the attachment of the bracket to two walls of a building and in the angle formed by such walls.

2. As a new article of manufacture, a joint-bracket for trolley-tracks comprising two track-supporting members at an angle to each other, each member having a slot in its bottom wall, the two slots opening into each other.

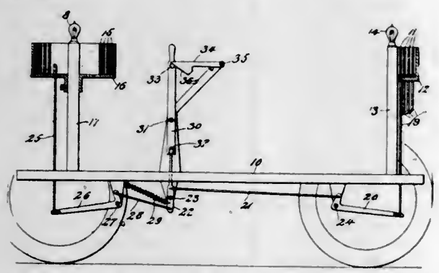
3. As a new article of manufacture, a joint-bracket for trolley-tracks comprising two track-supporting members at an angle to each other and in the same horizontal plane, each of said members having means for permitting the attachment of the bracket to two walls of a building and in the angle formed by such walls.

4. As a new article of manufacture, a joint-bracket for trolley-tracks comprising two track-supporting members at an angle to each other and means for causing the pendant of a trolley entering either member to come to rest opposite the other member.

5. As a new article of manufacture, a joint-bracket for trolley-tracks comprising two track-supporting members at an angle to each other, each member having a slot in it for the passage therethrough of a trolley pendant and the two slots opening into each other, and means for causing the pendant of a trolley running on either member to come to rest in the angle formed by the two slots.

[Claims 6 to 11 not printed in the Gazette.]

1,167,657. INDICATOR. JOSEPH V. POTTER, Louisville, Ky. Filed Mar. 19, 1915. Serial No. 15,564. (Cl. 40—65.)



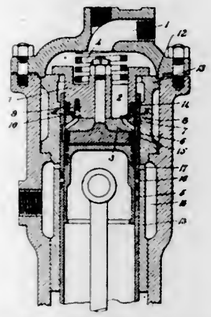
1. A signal device comprising a housing, a series of indicators mounted one behind the other in the housing, a series of independently operated levers operatively connected to the respective indicators for moving the same out of the housing into display position, said connections including means for returning the indicators to the housing, a separate holding latch for each lever, means for initially placing the latch in release position when the lever is operated, and a connection between the several latches to obtain a simultaneous release thereof when either lever is operated.

2. A signal device comprising a housing, a series of indicators mounted one behind the other in the housing, a series of independently operated levers operatively connected to the respective indicators for moving the same out of the housing into display position, said connections including means for returning the indicators to the housing, a separate holding latch for each lever, said latch having an incline, a member on the lever engageable with the incline for initially placing the latch in release position when the lever is operated, and a connection between the several latches to obtain a simultaneous release thereof when either lever is operated.

3. A signal device comprising a series of indicators movable into and out of display position, a series of independently operated levers operatively connected to the respective indicators, said connections including means for moving the indicators out of display position, a separate holding latch for each lever, means for initially placing the latch in release position when the lever is operated, and a connection between the several latches to obtain a simultaneous release thereof when any lever is operated.

4. A signal device comprising a series of indicators movable into and out of display position, a series of independently operated levers operatively connected to the respective indicators, said connections including means for moving the indicators out of display position, a separate holding latch for each lever, said latch having an incline, a member on the lever engageable with the incline for initially placing the latch in release position when the lever is operated, and a connection between the several latches to obtain a simultaneous release thereof when any lever is operated.

1,167,658. HIGH-PRESSURE GAS-COMPRESSOR. EDWIN PRESTAGE, Stoke Newington, London, England. Filed Oct. 23, 1914. Serial No. 868,310. (Cl. 230—34.)



1. A high pressure compressor for ammonia or carbonic acid gas comprising a cylinder with a series of gas inlets spaced around its wall, a piston reciprocating in said cylinder, a sleeve valve reciprocating between the piston and the cylinder with a series of ports adapted to register with said gas inlets in one position of said valve and with gas outlet passages on the inner surface of said sleeve valve adapted to register with the cutoff edge of a cylinder head projecting into said sleeve valve.

2. A high pressure compressor for ammonia or carbonic acid gas comprising a cylinder with a series of gas inlets spaced around its wall, a piston reciprocating in said cylinder, a sleeve valve reciprocating between the piston and the cylinder with a series of ports adapted to register with said gas inlets in one position of said valve, a series of channels cored out on the inner surface of the upper end of said sleeve valve adapted to form gas outlet passages from said cylinder, a false head in the top of said cylinder projecting into said sleeve valve and provided with ports registering with the channels in said sleeve valve and leading to a gas chamber above said false head.

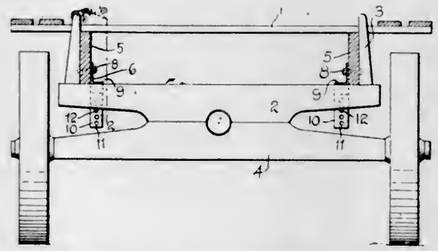
3. A high pressure compressor for ammonia or carbonic acid gas comprising a cylinder with a series of gas inlets spaced around its wall, a piston reciprocating in said cylinder, a sleeve valve reciprocating between the piston and the cylinder with a series of ports adapted to register with said gas inlets in one position of said valve, a series of channels cored out on the inner surface of the upper end of said sleeve valve adapted to form outlet passages from said cylinder, a false head in the top of the said cylinder projecting into said sleeve valve with ports registering with the channels in said sleeve valve and leading to a gas chamber above said false head and packing rings adapted to prevent the gas from leaking over the top of said sleeve valve back into said cylinder.

4. A high pressure compressor for ammonia or carbonic acid gas comprising a cylinder with a series of gas inlets spaced around its wall, a piston reciprocating in said cylinder, a sleeve valve reciprocating between the piston and the cylinder with a series of ports adapted to register with said gas inlets in one position of said valve, a series of channels cored out on the inner surface of the upper end of said sleeve valve parallel with the axis of said sleeve valve and adapted to form outlet passages from said cylinder, a false head in the top of said cylinder projecting into said sleeve valve with ports registering with the channels in said sleeve valve and leading to a gas chamber above said false head, and packing rings adapted to prevent the gas from leaking over the top of said sleeve valve back into said cylinder.

5. A high pressure compressor for ammonia or carbonic acid gas comprising a cylinder with a series of gas inlets spaced around its wall, a piston reciprocating in said cylinder, a sleeve valve reciprocating between the piston and the cylinder with a series of ports adapted to register with said gas inlets in one position of said valve, a series of channels cored out on the inner surface of the upper end of said sleeve valve adapted to form outlet passages from said cylinder, a false head in the top of the cylinder projecting into said sleeve valve with ports registering with the channels in said sleeve valve and leading to a gas chamber above said false head and a spring controlled ring closing the orifices of the ports opening into the gas chamber through said false head.

[Claim 6 not printed in the Gazette.]

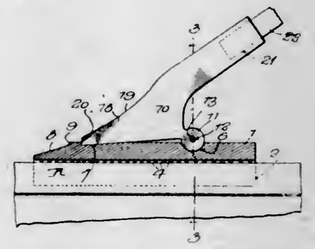
1,167,659. HAY-RACK FASTENER. JOHN REITER, Beloit, Kans. Filed Aug. 21, 1915. Serial No. 46,725. (Cl. 21—74.)



1. As an article of manufacture, a hay-rack fastener comprising a plate adapted to be disposed against the side face of a hay-rack sill and having a laterally projecting portion formed with downwardly depending side portions forming a U-shaped member adapted to fit over and embrace a bolster of a wagon and extending below the bolster, said downwardly extending portions being formed with a plurality of perforations, and a bolt passing through any one of said perforations and adapted to engage beneath the bolster.

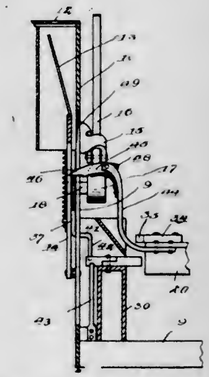
2. As an article of manufacture, a hay-rack fastener comprising a member attachable to the sill of a hay-rack, said member having a laterally projecting portion formed with downwardly extending sides adapted to fit over and embrace the bolster, and extension plates detachably connected to said sides and having each a plurality of apertures and a bolt passing through any one of said apertures to thereby engage beneath the bolster.

1,167,660. CAR-MOVER. CHARLES M. ROLPH, Monticello, Wis. Filed June 24, 1915. Serial No. 36,123. (Cl. 254—36.)



A car mover comprising an inverted substantially U-shaped base plate, a plurality of teeth on the inner surface of the same, the top of said plate having a semi-cylindrical socket adjacent its rear end and a longitudinally extending forwardly inclined depression adjacent its forward end, the said forward end of the plate extending vertically downward and then inclined forwardly, a pinch bar having a cylindrical extension fulcrumed on the said socket, a U-shaped pivot pin extending laterally through said extension and having its arms projecting downwardly through the top of said base plate, counter-sunk positioning means to hold the ends of said arms, the forward end of the pinch bar positioned in the said inclined depression, and the outer forward face of said pinch bar being roughened for engagement with the outer periphery of the car wheel.

1,167,661. COIN-CONTROLLED VENDING-MACHINE. RADE SARAC, South Bend, Ind. Filed May 11, 1914. Serial No. 837,932. (Cl. 194—57.)



1. A vending machine including a platform, means for moving the platform in one direction, levers adapted when in closed relation to interpose a stop in the path of movement of the platform, a release member for opening the levers to permit movement of the platform, and means on said platform serving to initially actuate the release mem-

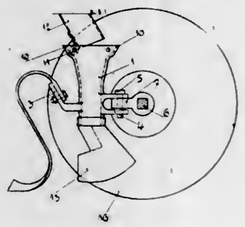
ber through the coöperation of a selective element to be interposed between said second named means and said member.

2. A vending machine including a platform, means for moving the platform in one direction, a lug carried by the platform, pivotally connected levers adapted when in contact to interpose a stop in the path of movement of said lug, a release member for opening the levers to free the path of movement of the lug from obstructions, said lock release being adapted to be operatively connected to the platform through the use of a predetermined coin.

3. A locking means for the actuating member of a vending machine including pivotally connected levers, a lug carried by the actuating member, said levers when in closed relation presenting a stop in the path of the lug, the levers in open position permitting the passage of the lug between them, a lock release for opening the levers, an actuating means for the member, said actuating member being normally free of connection with the lock release and adapted to be operatively connected thereto by a predetermined coin.

4. A vending machine including a platform, means for moving the platform in one direction, a lug carried by the platform, pivotally connected levers adapted when in contact to interpose a stop in the path of movement of said lug, a plate operable to open the levers to displace the stop, and means carried by the platform for operating the plate through the medium of an interposed coin.

1,167,662. SEED-FEEDING APPARATUS FOR CULTIVATORS WITH DISKS AND ELASTIC TEETH. LEONHARDT SESSLER, Bottenweiler, near Zumhaus, Germany. Filed Jan. 14, 1914. Serial No. 812,061. (Cl. 111—11.)

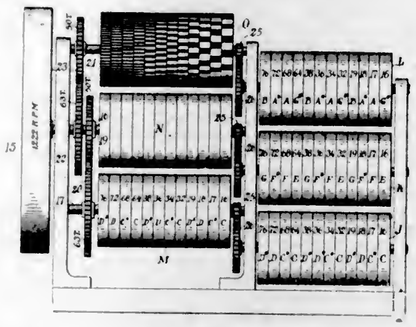


1. In a machine of the class described, in combination, a seed feeding funnel, an upwardly directed carrier at the rear of said funnel, a covering blade secured to said carrier, a fork at the front side of said funnel, rotating means for drilling the soil, a link secured to the axle of said soil drilling means and means for connecting said fork with said link of the said soil drilling means, substantially as described.

2. In a machine of the class described, in combination, a seed feeding funnel, an upwardly directed carrier at the rear of said funnel, a covering blade secured to said carrier, a fork at the front side of said funnel, a drilling disk for loosening and turning the soil, a link secured to the axle of said drilling disk, means for connecting said link and said fork, and means for adjusting the covering blade in said carrier, substantially as described.

1,167,663. PULSATION DEVICE FOR MUSICAL INSTRUMENTS. GEORGE B. SINCLAIR, Medford, and GEORGE I. FISKE, Boston, Mass., assignors, by mesne assignments, to Choralcelo Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Nov. 16, 1911. Serial No. 660,584. (Cl. 84—131.)

1. The combination of a plurality of sonorous bodies tuned to the equally tempered scale; a plurality of rotors; a plurality of pulsators for vibrating successive ones of said sonorous bodies a semi-tone apart, said pulsators embracing an octave interval, and a plurality of successive ones thereof being mounted on each rotor; electromagnetic means for forming an operative connection between said pulsators and their respective sonorous bodies; and gearing of suitable ratio between said rotors.



2. The combination of a plurality of sonorous bodies tuned to the equally tempered scale; a plurality of rotors; a plurality of pulsators for vibrating successive ones of said sonorous bodies a semi-tone apart, said pulsators being arranged in groups embracing octave intervals, and a plurality of successive pulsators of each group being mounted on each rotor; electromagnetic means for forming an operative connection between said pulsators and their respective sonorous bodies; and gearing of suitable ratio between said rotors.

3. The combination of a plurality of sonorous bodies tuned to the equally tempered scale; a plurality of identical rotors each including a plurality of pulsators for vibrating corresponding ones of said sonorous bodies, the twelve pulsators corresponding to the semi-tones of an octave being divided between said rotors in groups each consisting of a plurality of successive pulsators; electromagnetic means for forming an operative connection between said pulsators and their respective sonorous bodies; and gearing of suitable ratio between said rotors.

4. The combination of a plurality of sonorous bodies tuned to the equally tempered scale; a plurality of identical rotors each including a plurality of pulsators for vibrating corresponding ones of said sonorous bodies, the twelve pulsators corresponding to the semi-tones of each successive octave being similarly distributed between said rotors in groups each consisting of a plurality of successive pulsators; electromagnetic means for forming an operative connection between said pulsators and their respective sonorous bodies; and gearing of suitable ratio between said rotors.

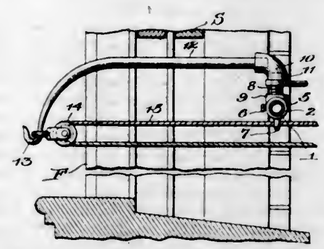
5. The combination of a plurality of sonorous bodies tuned to the equally tempered scale; three rotors each provided with four pulsators for vibrating corresponding ones of said sonorous bodies, the twelve pulsators corresponding to the successive semi-tones of an octave being arranged in groups of four successive pulsators on each rotor; electromagnetic means for forming an operative connection between said pulsators and their respective sonorous bodies; and gearing of suitable ratio between said rotors.

[Claims 6 to 14 not printed in the Gazette.]

1,167,664. CLOTHES-LINE SUPPORT. BENJAMIN SMITH and ABRAHAM BARLEVY, New York, N. Y. Filed June 21, 1915. Serial No. 35,446. (Cl. 68—12.)

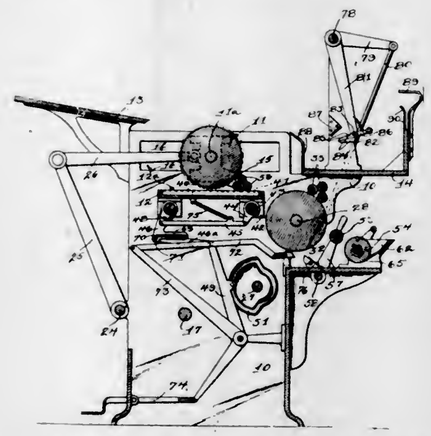
1. In a clothes line support of the class described, the combination of a supporting rod, a sleeve slidably mounted thereon, a line engaging element carried by said sleeve, a bracket arm rotatably mounted on said sleeve, a line supporting guide carried by said bracket arm, and means for locking said arm in adjusted position.

2. In a clothes line support of the class described, the combination of a supporting rod, a T-coupling slidably mounted thereon, means for retaining said coupling in adjusted position, a hook depending from and a threaded neck projecting from the end of the shank of said T-coupling, a laterally extended and swinging bracket arm having one end downturned, a hook carried by said downturned end, a line supporting guide carried thereby, an



elbow coupling carried by the opposite end of said bracket, and mounted to rotate on the threaded neck of said T-coupling, and means arranged on said neck between said elbow coupling and the body of said T-coupling for locking said bracket in adjusted position.

1,167,665. PRINTING-PRESS. SWAN SMITH and OSCAR W. HAMMERQUIST, Ramsey county, Minn., assignors, by direct and mesne assignments, to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Apr. 22, 1912. Serial No. 692,421. (Cl. 101—11.)



1. In a printing press, the combination of a frame, a bed on said frame, an impression cylinder for said bed, means for engaging said bed and cylinder on the forward stroke of the latter, power driven means for constantly rotating said cylinder in one direction and power driven means for intermittently reciprocating the cylinder and for synchronizing its reciprocating movement with respect to the rotation thereof whereby said cylinder is held at the ends of its strokes to permit the rotation of the same to positions for receiving and discharging sheets of paper and for registering said cylinder and bed on the forward stroke of the former.

2. In a printing press, the combination of a frame, an impression cylinder on the frame, means for intermittently reciprocating and continuously rotating said cylinder, a movable bed on said frame, power operated means for normally elevating the bed during the forward stroke of the cylinder and for lowering said bed during the return of said cylinder, and means for manually lowering and discontinuing the movement of said bed.

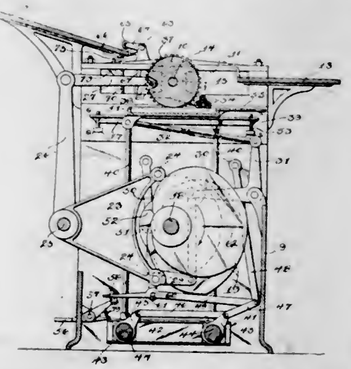
3. In a printing press, the combination of a frame, a bed on said frame, an impression cylinder for said bed, mechanism for intermittently engaging said bed and cylinder, means for continuously rotating said cylinder and separate means for reciprocating said cylinder in a straight path and for holding the same at the beginning and end of the printing stroke, whereby during the pause in reciprocation at the beginning of a stroke a sheet may be fed to the cylinder, while rotating, and carried a substantial distance to printing position and during the pause in reciprocation at the end of a stroke the sheet may be withdrawn from printing position and ejected from the press by said rotating cylinder.

4. In a printing press, the combination of a frame, a bed movable on said frame, an impression cylinder for said bed, means for continuously rotating said cylinder and for intermittently reciprocating the same on said frame and means for raising and lowering said bed and for correlating the movement thereof with that of said cylinder.

5. In a printing press, the combination of a frame, a reciprocating impression cylinder on said frame, a bed on the frame, a form in said bed, mechanism for inking the form, a ductor roller for supplying said mechanism with ink, power operated means for normally reciprocating said bed vertically and for timing its movement with respect to that of said cylinder, resilient means tending to lower the bed and manually operated means for discontinuing the operation of the ductor roller and rendering said first mentioned means inoperative whereby the action of said resilient means is permitted to instantly lower and prevent the movement of said bed.

[Claims 6 to 26 not printed in the Gazette.]

1,167,666. PRINTING-PRESS. SWAN SMITH and OSCAR W. HAMMERQUIST, Ramsey county, Minn., assignors, by direct and mesne assignments, to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Dec. 27, 1912. Serial No. 738,816. (Cl. 101—11.)



1. In a printing press, the combination of a frame, a bed on said frame, an impression cylinder for said bed, mechanism for intermittently engaging said bed and cylinder, means for continuously rotating said cylinder and separate means for reciprocating said cylinder and bed in straight paths in opposite directions and for holding the cylinder at the beginning and end of the printing stroke, whereby during the pause in reciprocation at the beginning of a stroke, a sheet may be fed to the cylinder while rotating and carried a substantial distance to printing position and during the pause in reciprocation at the end of a stroke, the sheet may be withdrawn from printing position and ejected from the press by said rotating cylinder.

2. In a printing press, the combination of a frame, a bed on said frame, an impression cylinder for said bed, continuously power-driven means for constantly rotating said cylinder and a power-driven cam in operative connection with said cylinder and bed having active surfaces

adapted to intermittently reciprocate the cylinder and bed in opposite directions, one stroke of the cylinder being at a rate equal to the peripheral movement of said cylinder on said bed, whereby perfect registry between the cylinder and bed is obtained.

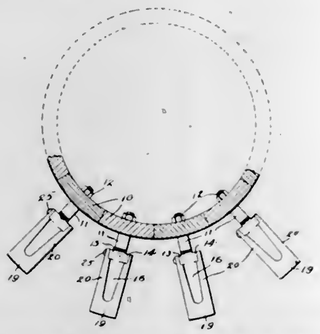
3. In a printing press, the combination of a frame, an impression cylinder revoluble and slidable on the frame, a bed on the frame, means for engaging the bed with said cylinder on its forward stroke, a power shaft revoluble in the frame, a train of gears in operative connection with said cylinder and shaft, a cam on said shaft in operative connection with said cylinder and bed, said cam having active surfaces adapted to reciprocate the cylinder and bed in opposite directions at speeds proportionate to the peripheral movement of said cylinder, whereby perfect registry between the cylinder and bed is obtained.

4. In a printing press, the combination of a frame, an impression cylinder on the frame, a bed movable on said frame, means for intermittently reciprocating said bed and cylinder horizontally in opposite directions, power operated mechanism for normally elevating the bed during the forward stroke of the cylinder and for lowering said bed during the return of said cylinder and foot-operated means for rendering said mechanism inoperative.

5. In a printing press, the combination of a frame, an impression cylinder on the frame, a bed movable on said frame, means for intermittently reciprocating said bed and cylinder horizontally in opposite directions, power operated mechanism for normally elevating the bed during the forward stroke of the cylinder and for lowering said bed during the return of said cylinder, foot-operated means and automatically actuated means for rendering said mechanism inoperative.

[Claims 6 to 34 not printed in the Gazette.]

1,167,667. CYLINDER-TOOTH. WALTER STOFFEL, Greenleaf, Kans. Filed Apr. 7, 1915. Serial No. 19,731. (Cl. 130—27.)



1. In a device of the character described, a shank structure, a support on said shank structure, opposite shoulders arranged intermediate said shank structure and said support and projecting beyond the longitudinal edges thereof, a reversible facing member carried on said support and engaging the outer faces of said shoulders and means detachably connecting said shoulders and said member, substantially as described.

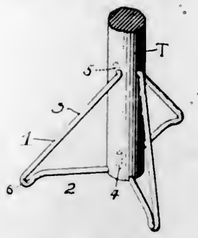
2. In a device of the character described, a shank structure, a support arranged at one end of said shank structure, shoulders formed intermediate said support and said shank structure, a substantially U-shaped facing member carried on said support and engaging the outer face of said shoulder and means connecting said member and said shoulders, substantially as described.

3. In a device of the character described, a shank structure, a supporting structure formed integral therewith, opposite shoulders formed from said shank structure, a facing member, opposite flanges arranged on said facing member and adapted to engage the respective sides of said supporting structure, said supporting structure being beveled adjacent its respective longitudinal edges and adjacent the free end thereof, the inner opposite faces of said flanges being beveled for engagement therewith, and means for securing said facing member to said shoulders, substantially as described.

4. In a device of the character described, a shank structure and supporting structure formed integral therewith, opposite shoulders arranged intermediate said supporting structure and said shank structure, a facing member, opposite flanges carried by said facing member and embracing said supporting structure, and fastening means extending through said shoulders and having connection with said facing member, substantially as described.

5. In a device of the character described, a shank structure, a supporting structure formed integral therewith, shoulders formed intermediate said support and said shank and projecting beyond the longitudinal edges thereof, a substantially U-shaped member, inwardly projecting flanges formed on said facing member to embrace said supporting structure, said facing member engaging the outer faces of said shoulders, and a fastening member extending through alined openings in said shoulders and said facing member, for the purpose specified.

1,167,668. TREE-SUPPORT. EVERETT E. THAYER, Jackson, Mich.; Archie B. Thayer, executor of said Everett E. Thayer, deceased, assignor to The Thayer Manufacturing Co., Jackson, Mich. Filed Mar. 9, 1914. Serial No. 823,474. (Cl. 248—38.)



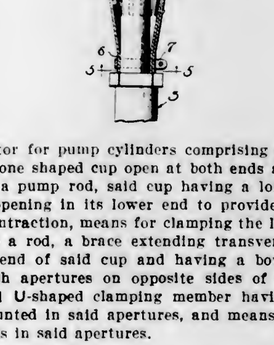
A tree support formed of a single piece of wire bent to form a horizontal base bar and an inclined brace bar normally positioned in the same vertical plane, a depending loop at the juncture of said brace and base bars, the free ends of said base bar being bent upwardly to provide an attaching prong at the base of the tree, and the free end of said brace bar being bent laterally to form an attaching prong which is adapted to be moved arcuately around the tree to engage the side of the same whereby the brace bar is moved from its normal position and will be under tension to return thereto which will consequently exert a constant inward pressure on the laterally projecting prong and hold the same to prevent any casual disengagement when driven into the tree.

1,167,669. HOSE-SUPPORTER. ROBERT E. WARD, Kansas City, Mo. Filed Feb. 25, 1915. Serial No. 10,479. (Cl. 241—6.)

1. A hose supporter comprising a pad, a stocking engaging member carried thereby, an inelastic strip secured at one end to said pad and an elastic strip adjustably connected with the free end of said inelastic strip, and means for detachably connecting said elastic strip with said pad.

2. A hose supporter comprising a pad, a stocking engaging member carried thereby, a soft leather strip secured at one end to said pad and of a length to extend around the greater portion of the circumference of the leg of the wearer, an elastic loop detachably connected with the free end of said strip, and means for detachably connecting said loop and pad.

3. A hose supporter comprising a substantially triangular member, a leg encircling member connected at one end to one corner of said pad, said member being composed of detachably connected elastic and inelastic strips, and means for detachably connecting the other end of said member to the inner corner of said pad, and hose engaging means carried by said pad.



4. A hose supporter comprising a pad, a stocking engaging member carried thereby, a soft leather strip secured at one end to said pad, a clamp secured to the free end of said strip, an elastic strip folded transversely to form a loop with the free ends thereof inserted in said clamp, a slotted plate slidably mounted on said loop and having a fastening element thereon, and a coöperating fastening element on said pad.

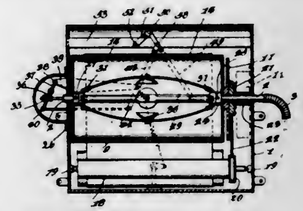
1,167,670. PUMP-CYLINDER PROTECTOR. ROY EDWIN WHEELER, Kittitas, Wash. Filed Jan. 25, 1915. Serial No. 4,272. (Cl. 103—61.)



A protector for pump cylinders comprising an inverted truncated cone shaped cup open at both ends and adapted to encircle a pump rod, said cup having a longitudinally extending opening in its lower end to provide for expansion and contraction, means for clamping the lower end of said cup to a rod, a brace extending transversely across the larger end of said cup and having a bowed central portion with apertures on opposite sides of said bowed portion and U-shaped clamping member having the legs thereof mounted in said apertures, and means for fastening said legs in said apertures.

1,167,671. SPEED INDICATOR AND RECORDER. CARL ARTHUR ANDERSON, Chicago, Ill. Filed Dec. 11, 1913. Serial No. 806,027. (Cl. 234—31.)

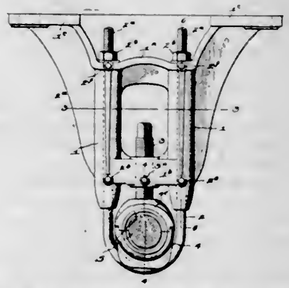
1. In a speed indicator and recorder, an inclosing casing, a driving cylinder, an indicating web trained thereabout, winding and unwinding rollers for the extremities of said web, a governor mounted within said cylinder, an elongated bracket means carried by said casing, a lever, and an operating arm pivoted at opposite extremities of said bracket, link means connecting said lever and said arm the latter arching partially about said cylinder, and a marking arm for operation upon said web as controlled by said first arm and oppositely arching about said cylinder.



2. In a speed indicator and recorder, an inclosing casing, a shaft journaled in the ends of said casing, a cylinder loosely mounted upon said shaft, independent driving means for said shaft and said cylinder, a governor mounted upon said shaft and within said cylinder, bracket means extending through said casing, a lever pivoted at one extremity of said bracket for operation by said governor, an operating arm also pivoted to said bracket and arching partially about the upper portion of said cylinder on one side thereof, a web trained over said cylinder for rotation therewith, and a marking arm adapted to operate upon said web under control of said first arm and oppositely arching about the upper portion of said cylinder upon the other side thereof.

3. In a speed indicator and recorder, an inclosing casing, a shaft journaled in the ends of said casing, a driving cylinder loosely mounted upon said shaft, a web trained over said cylinder, winding and unwinding rollers for the extremities of said web, a governor mounted for rotation with said shaft and within said cylinder, means slidable through a partial bore of said shaft for rotation therewith and longitudinally actuated by said governor, bracket means extending through said casing, a lever pivoted at one extremity of said bracket and loosely embracing said slidable means, an operating arm also pivoted to said bracket, link means maintaining said lever and said arm in substantially parallel relation, said arm arching about one side of the upper portion of said cylinder, means connected to said arm for calibrating purposes, and a marking arm pivoted above said cylinder and pivotally connected to first said arm to oppositely arch over the other side of said cylinder and to contact with said web under control of said operating arm.

1,167,672. SHAFT-HANGER. NICHOLAS BARRY, Muscatine, Iowa, assignor to Barry Company, Muscatine, Iowa, a Corporation of Iowa. Filed July 30, 1914, Serial No. 854,058. Renewed Aug. 14, 1915. Serial No. 45,573. (Cl. 64—14.)



1. In a shaft hanger the combination of a body adapted to be secured to a suitable support, and having parallel tubular side members connected by cross bars, a shaft supporting bail having its legs extended through said tubular members, means securing said bail to said members, a

journal box mounted in the bend of the bail having a transverse groove to engage the bend of the bail and retain the box in position in the bail while permitting its oscillation, and a set-bolt tapped through the body intermediate the passages and engaging the said box opposite the said groove.

2. In a shaft hanger the combination of a body adapted to be attached to a support and having adjacent vertical legs provided with vertical passages to receive the legs of a U-shaped bail, and cross bars connecting such legs; a U-shaped bail having its legs extended through said passages, and nuts tapped on the upper ends of said bail to secure the same to the body; with a journal box having transversely grooved upper and lower portions either of which can be engaged with the bend of the bail to permit the box to tilt, and each portion having a convexed surface; and a set-bolt tapped through the body intermediate the legs of the bail and engaging the opposed convexed surface of the box and permitting the self-adjusting tilting movement of the box, substantially as described.

3. A shaft hanger comprising a body adapted to be attached to a support and having adjacent vertical legs provided with cored vertical passages to receive the legs of a U-shaped bail, and cross bars connecting such legs; a U-shaped bail having its legs extended through said passages, and nuts tapped on the upper ends of said bail to secure the same to the body and having annular extensions engaging corresponding enlargements in said passages; with a journal box suspended upon the bail and having a grooved lower side engaging the lower part of the bail to permit the box to tilt on the bail, and having a convexed portion on its top; an adjusting set-bolt tapped through the body intermediate the legs of the bail and engaging the top convexed portion of the box so that the bolt will not interfere with the self-adjusting tilting movement of the box; and set-bolts tapped through the body to lock said nuts and said adjusting bolt, substantially as described.

4. A hanger comprising a body provided with parallel vertical passages contracted at their upper and lower ends and adapted to be attached to a support; a U-shaped bail having its legs extended through said passages and bearing against the contracted portions thereof; fastening nuts on the ends of said bail; a horizontally and vertically tiltable self-adjusting journal box pivotally mounted within the bend of said bail; and a set-bolt tapped through the body adjacent the box and intermediate the passages and engaging said box at the side opposite the part of the box engaged by the bend of said bail.

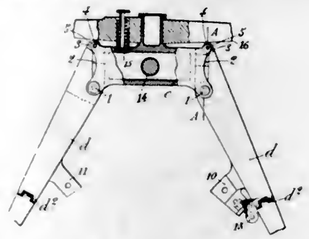
5. A shaft hanger comprising a body adapted to be attached to a support and having adjacent vertical passages; a U-shaped bail having its legs extending through said passages, and nuts on the ends of the bail securing it to the body; with a horizontally and vertically tiltable journal box having a grooved side adapted to engage the bend of the bail, and a convexed surface on its opposite side; a set screw tapped through the body adjacent the bend of the bail and intermediate the said passages having its end concaved to engage the convexed surface of the box, and set bolts tapped through the body to lock the bail.

[Claims 6 and 7 not printed in the Gazette.]

1,167,673. WHEELED GUN-CARRIAGE. EMILE BOURDELLES, Paris, France, assignor to Schneider & Cie., Paris, France. Filed Apr. 16, 1913. Serial No. 761,582. (Cl. 89—40.)

1. In a gun support, an axle, a base having a pivot support in and normal to said axle, a gun cradle carried by said base, supporting props pivoted to the rear corners of said base and provided with locking extensions, and means for locking said extensions to the forward corners of said base for holding the frame in firing position.

2. In a gun support, an axle, a base having a pivot support in and normal to said axle, a gun cradle carried by said base, supporting props pivoted to the rear corners of said base and provided with locking extensions, and means for locking said extensions to the forward corners of said base for holding the cradle in firing position said props being adapted to serve as shafts for hauling when not in firing position.



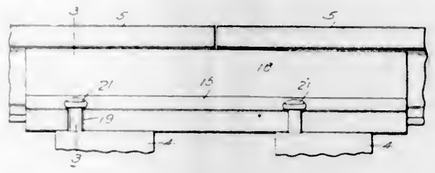
3. In a gun support, an axle, a base having a pivot support in and normal to said axle, a gun cradle carried by said base, supporting props pivoted to the rear corners of said base and provided with locking extensions, means for locking said extensions to the forward corners of said base for holding the cradle in firing position, and means for locking said props in position for coupling with a limber when not in firing position.

4. In a gun support, an axle, a base having a pivot support in and normal to said axle, a gun cradle carried by said base, supporting props pivoted to said base and provided with locking extensions, said props being adapted to swing in a plane passing through the major axis of said base, and means for locking said extensions to the forward parts of said base.

5. In a gun carriage, a gun or gun cradle supporting frame, and swinging props having hinged connections with said frame and each prop having a part thereof extending forward of said hinged connections and having means for automatically locking said props to said frame when in firing position.

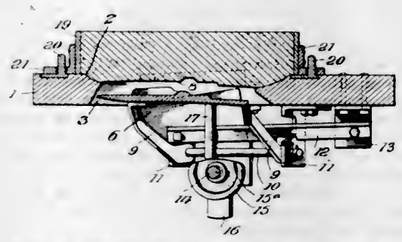
[Claims 6 to 13 not printed in the Gazette.]

1,167,674. RAIL-JOINT. JOSEPH M. BRATTEN, Jr., Earleys, N. C. Filed Mar. 31, 1915. Serial No. 18,280. (Cl. 239—6.)



The combination with the abutting end portions of meeting rails having base flanges, a web and a head, of a chair for the rails comprising a base, side marginal upturned flanges, one of which is of greater height and at a greater distance from the longitudinal axis of the rail base than the other, the upper portion of said flanges being bent inwardly to constitute retaining bars throughout their length, one of said retaining bars being disposed in a longitudinal plane higher than the other, said vertical side marginal flanges being parallel throughout their length, and a straight key of substantially uniform thickness having parallel faces throughout its length constructed to fit within the space between the base marginal flange of the rail and one of the side marginal flanges and the retaining bar carried thereby, said key being provided with an upright member held snugly when in position against the web of the rail with its upper edge fitting snugly under the head of the rail, and means locking the key to the chair against relative longitudinal movement thereof whereby the rails may be inserted within said chair and withdrawn therefrom vertically; said key locking the rails in said chair against lateral and vertical movement but permitting them to move axially relatively to the key and chair under the force of expansion and contraction.

1,167,675. MACHINE FOR MAKING PLOW-POINT MOLDS. FRANK A. BREEZE, Newburgh, Ontario, Canada. Filed June 3, 1915. Serial No. 31,928. (Cl. 22—47.)



1. A mold forming machine comprising a table having therein an opening, a pair of vertically movable pattern sections normally disposed in and closing said opening, and independent pivotally supported arms for the two sections swinging in intersecting planes.

2. A mold forming machine comprising a table having therein an opening, a pair of vertically movable pattern sections normally disposed in and closing said opening, independent pivotally supported arms swinging in intersecting planes and secured respectively to the two sections, and independent successively released supporting members retaining the two sections of the pattern in their raised active positions.

3. In a mold forming machine, the combination with a table having therein an opening, and a pair of downwardly movable pattern sections normally closing said opening, of a horizontal rock shaft below the table, a radial arm carried by said shaft for supporting one of said pattern sections until the shaft is rocked, and an eccentric on the edge of which the other section is supported until said shaft is rocked, said eccentric having a portion of its edge disposed concentric with the shaft, whereby the pattern section supported by said eccentric will remain supported a predetermined length of time after the other section has been released by its supporting arm.

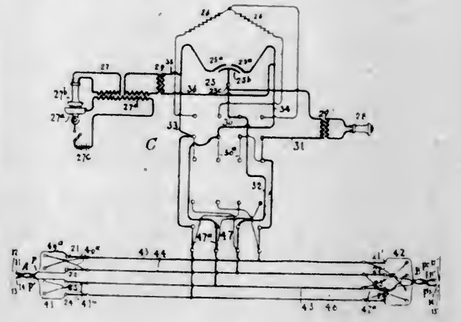
1,167,676. SUPPORT FOR PEANUT-STACKS. WILLIAM C. BRYANT, Ivor, Va. Filed Feb. 1, 1915. Serial No. 5,565. (Cl. 34—26.)



1. A stacking device for forming and supporting stacks of peanut vines consisting of a hollow metallic stake provided with a solid conical or pointed lower end and a solid conical or pointed upper end, a series of transverse perforations formed at intervals in said post, and cross-bars or rods adapted to be inserted in said perforations to form a support for the lower end of the stack, one cross-bar extending in one direction and the other cross-bar at right angles thereto, substantially as set forth.

2. A device for forming stacks of peanut vines comprising a hollow metallic stake with a pointed lower end and a pointed upper end and with a series of transverse perforations one above the other and at right angles to each other near the lower end thereof, and with horizontal arms or pins mounted in said perforations, substantially as set forth.

1,167,677. SYSTEM FOR MEASURING CAPACITIES. GEORGE A. CAMPBELL, Brooklyn, N. Y., and OTTO B. BLACKWELL, Maplewood, and EDWIN H. COLPITTS, East Orange, N. J., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed Apr. 11, 1912. Serial No. 690,060. (Cl. 175—183.)



1. In apparatus for determining capacities between the elements of phantom circuits, the combination of means for producing a variable potential adapted to be connected between one pair of elements, a potential detecting device adapted to be connected between another pair of the elements, and variable capacities associated with said elements and in parallel with the capacities between said elements.

2. In apparatus for determining capacities between the elements of a phantom circuit, the combination of means for producing variable potential adapted to be connected between one pair of elements, a potential detecting device adapted to be connected between another pair of elements, and a device adapted to simultaneously add capacity to one element of a pair and to subtract capacity from the other element of the pair.

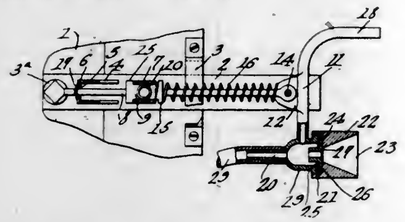
3. In apparatus for determining capacities between the elements of a phantom circuit, the combination of inductive devices, means for producing variable potential adapted to be connected between a pair of elements through one of said devices, potential detecting means adapted to be connected between another pair of elements through the other of said devices, and variable capacities adapted to be associated with the said elements and in parallel with the capacities between said elements.

4. In apparatus for determining capacities between the elements of a phantom circuit, the combination of means for producing variable potential adapted to be connected between one pair of the elements, an impedance device, a potential detecting device adapted to be connected between another pair of the elements through said impedance device, and variable capacities adapted to be associated with said elements and in parallel with the capacities between said elements.

5. In apparatus for determining capacities between the elements of phantom circuits, the combination of means for producing variable potential, and potential detecting means, one of said means being adapted to be connected between the two sides of a phantom circuit, and the other of said means being adapted to be connected between the conductors of a pair of the elements, and variable capacities in parallel with the capacities between the conductors of one of said sides.

[Claims 6 to 16 not printed in the Gazette.]

1,167,678. AUTOMATIC TRAIN-PIPE COUPLING. JOHN OLLEN COBB, West, Tex. Filed July 31, 1915. Serial No. 43,012. (Cl. 188—13.)



1. In a device of the class described, a support; means for mounting the support for longitudinal reciprocation; a conduit disposed transversely of the support and pivoted thereto, the conduit having forwardly presented coupling elements; and a compression spring surrounding the support and abutting against the conduit, the spring constituting at once a means for limiting the rearward movement of the support and the conduit and a means for maintaining the conduit disposed transversely of the support.

2. In a device of the class described, a car; a hanger carried by the car; a support mounted to move longitudinally and transversely in the hanger; a spring interposed between the hanger and the support; a conduit carried by the forward end of the support; a spring interposed between the conduit and the hanger; and means for limiting the forward movement of the support under the action of the last specified spring.

3. In a device of the class described, a car; a hanger carried thereby; a support mounted to reciprocate longitudinally and to move transversely in the hanger; a spring interposed between the hanger and the support; a conduit pivoted to the forward end of the support and comprising forwardly presented coupling elements; a spring interposed between the hanger and the conduit; and means for limiting the forward movement of the support under the action of the last specified spring.

4. In a device of the class described, a support; means for movably mounting the support; a pipe pivoted intermediate its ends to the support, one end of the pipe being forwardly presented; a cup connected with the other end of the pipe; a source of fluid pressure supply for the cup; a gasket carried by the end of the cup; and a tubular head mounted on the cup and binding upon the gasket.

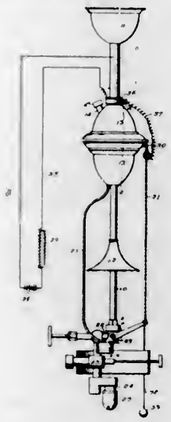
1,167,679. [WITHDRAWN.]

1,167,680. AUTOMATIC GENERATOR. JOEL BENJ. DALBEY, Nevada, Iowa. Filed Nov. 4, 1914. Serial No. 870,317. (Cl. 67—41.)

1. In a generating device of the class described, a support, a burner mounted thereon, a fuel receiver adjacent to said burner, a fuel supply tube adapted to lead to said receiver, a receptacle pivotally mounted and adapted in one position of its movement to discharge into said tube, means for yieldingly holding said receptacle in horizontal position, a fuel supply tube adapted to extend downwardly into said receptacle when the receptacle is in its horizontal position, and means for tilting said receptacle and for simultaneously causing a spark at the discharge end of said first named tube.

2. In a device of the class described, a fuel receptacle, a movable receptacle mounted below said first receptacle, means for yieldingly holding said movable receptacle in horizontal position, a tube leading from said first receptacle and adapted to stand with its lower end received within the movable receptacle, when the latter is in horizontal position, a receptacle below said movable receptacle, a discharge tube leading from the receptacle below the movable receptacle, and means for tilting said movable receptacle for discharging its contents into said last described tube.

3. In a device of the class described, a lamp fixture comprising an upright member, a fuel receptacle mounted thereon, a movable receptacle mounted below said first receptacle, means for yieldingly holding said movable receptacle in horizontal position, a tube leading from said first receptacle and adapted to stand with its lower end received within the movable receptacle, when the latter is in horizontal position, a receptacle below said movable receptacle, a discharge tube leading from the receptacle below the movable receptacle, means for tilting said movable receptacle for discharging its contents into said last described tube, a burner on the lower portion of said support below said fuel receptacle, a fuel receiving device adjacent to said burner, and below the discharge end of said last described discharge tube.

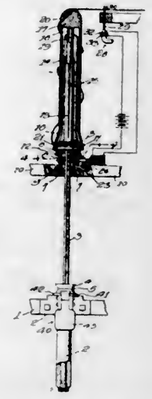


4. In a device of the class described, a lamp fixture comprising an upright member, a fuel receptacle mounted thereon, a movable receptacle mounted below said first receptacle, means for yieldingly holding said movable receptacle in horizontal position, a tube leading from said first receptacle and adapted to stand with its lower end received within the movable receptacle, when the latter is in horizontal position, a receptacle below said movable receptacle, a discharge tube leading from the receptacle below the movable receptacle for discharging its contents into said last described tube, a burner on the lower portion of said support below said fuel receptacle, a fuel receiving device adjacent to said burner, and below the discharge end of said last described discharge tube, and means for tilting said movable receptacle, and for simultaneously igniting fuel discharged from the lower end of said last described tube.

5. In a device of the class described, a lamp fixture comprising an upright member, a fuel receptacle mounted thereon, a movable receptacle mounted below said first receptacle, means for yieldingly holding said movable receptacle in horizontal position, a tube leading from said first receptacle and adapted to stand with its lower end received within the movable receptacle, when the latter is in horizontal position, a receptacle below said movable receptacle, a discharge tube leading from the receptacle below the movable receptacle for discharging its contents into said last described tube, a burner on the lower portion of said support below said fuel receptacle, a fuel receiving device adjacent to said burner, and below the discharge end of said last described discharge tube, means for tilting said movable receptacle, and for simultaneously igniting fuel discharged from the lower end of said last described tube, a fuel supply tube leading to said burner, a valve therein, and means for operatively connecting said valve with said first means.

[Claims 6 and 7 not printed in the Gazette.]

1,167,681. SPINNING DEVICE. HENRY EVANS, Lewiston, Me. Filed July 12, 1915. Serial No. 39,436. (Cl. 118—13.)

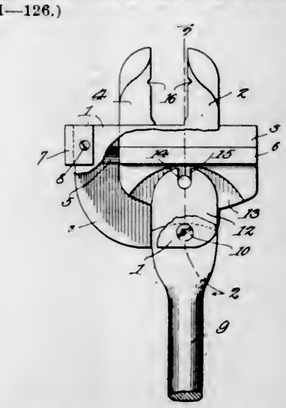


1. In a spinning device, the combination of a leading and a lagging member, one carrying a bobbin upon which thread may be wound only when the two members travel at different speeds, slack in the thread being caused when said members move at the same speed, an electric brake for momentary application to the lagging member at intervals, and an electric circuit for said brake including a circuit closer comprising a fixed contact having connection with one wire of the circuit, and a movable contact having connection with another wire of said circuit and held normally from engagement with said fixed contact but in close proximity thereto by the thread, whereby if the leading and lagging members travel at the same speed and thus cause slack in the thread, the movable contact will immediately engage the fixed contact and will thereby complete the circuit of the brake to momentarily apply the latter to the lagging member.

2. In a spinning device, the combination of a leading and a lagging member, one carrying a bobbin upon which thread may be wound only when the two members travel at different speeds, slack in the thread being caused when said members move at the same speed, an electric brake for momentary application to the lagging member at intervals and an electric circuit for said brake including a circuit closer comprising a fixed contact having connection with one wire of the circuit, and a movable gravity lowered contact having connection with another wire of said circuit, said movable contact being disposed above and in close proximity to the other contact and having an eye through which the thread passes, whereby if the leading and lagging members travel at the same speed and thus cause slack in the thread, the movable contact will immediately engage the fixed contact and will thereby complete the circuit of the brake to momentarily apply the latter to the lagging member.

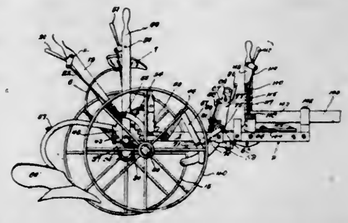
3. In a spinning device, the combination of a leading and a lagging member, one carrying a bobbin upon which thread may be wound only when the two members travel at different speeds, slack in the thread being caused when said members move at the same speed, an electric brake for momentary application to the lagging member at intervals, and an electric circuit for said brake including a circuit closer comprising a fixed contact having connection with one wire of the circuit, a fixed support above said fixed contact, a vertically slidable blade carried by said support and having at its lower end a weighted contact having connection with another wire of the circuit and positioned immediately above the aforesaid contact, and an eye at the upper end of the blade receiving the thread, whereby if the leading and lagging members travel at the same speed and thus cause slack in the thread, the weighted contact will drop by gravity into engagement with the fixed contact and will thereby close the circuit of the brake to apply the latter to the lagging member.

1,167,682. WRENCH. WILLIAM H. EVERETT, Mount Pleasant, Pa. Filed Jan. 22, 1914. Serial No. 813,727. (Cl. 81—126.)



A wrench embodying a pair of cheek plates, having an outstanding jaw, a slide mounted between the cheek plates and having an outstanding jaw, the cheek plates and slide having interfitting tongues and grooves, one side of the slide having a recess adjacent one cheek plate and a lug or pin within said recess, a pivot element engaged through the cheek plates, a handle pivotally mounted upon said pivot element and having a lobe projecting into said recess and provided with an open slot receiving said lug or pin, and a spacing collar upon said pivot element between the handle and other cheek plate, the pivot element being composed of two sections threaded together between the handle and spacing collar.

1,167,683. PLOW. PAUL EWALD, Clintonville, Wis. Filed Aug. 10, 1911. Serial No. 643,280½. (Cl. 97—36.)

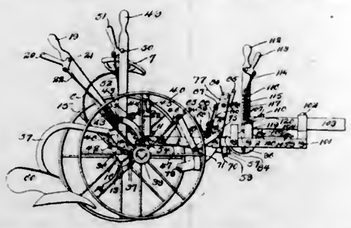


1. In a device of the character described, a body portion, an axle carried by said body portion, a part of said axle bent to form a crank, a wheel carried upon said crank, means carried by said axle and having engagement with said crank whereby said body portion may be raised and lowered in relation thereto, a second axle, a bracket carried upon said axle, a means for supporting said bracket, a bell crank lever pivoted upon said body portion and having connection with the bracket supporting means, a means carried by the bracket supporting means and having engagement with said second mentioned axle whereby said body portion may be adjusted in relation to said bracket supporting means and means for operating said bell crank lever.

2. In a device of the character described, a body portion, a pair of wheels supporting the same, a means for raising and lowering said body portion, a bar journaled over said body portion and terminating at one end in a finger, a coil spring mounted upon said bar as a means for holding the same in normal position, an arm secured to said bar, a plurality of bell crank levers pivotally mounted uopn said body portion, a plurality of arms pivotally connecting one of said bell crank levers with the said finger, a plurality of arms connecting another of said bell crank levers with the first mentioned arm and the

last mentioned bell crank lever terminating in a supporting means for one of said wheels, an adjustable bracket mounted upon said supporting means for the reception of a plow beam, a U shaped bracket extending downwardly from the forward end of said body portion for the reception of one end of the plow beam, a plow blade secured to the other end of said plow beam and a lever secured to the other end of said bar as a means for raising and lowering the plow beam as and for the purpose set forth and described.

1,167,684. DRAFT ADJUSTMENT. PAUL EWALD, Clintonville, Wis. Original application filed Aug. 10, 1911, Serial No. 643,280½. Divided and this application filed July 16, 1914. Serial No. 851,344. (Cl. 97—36.)

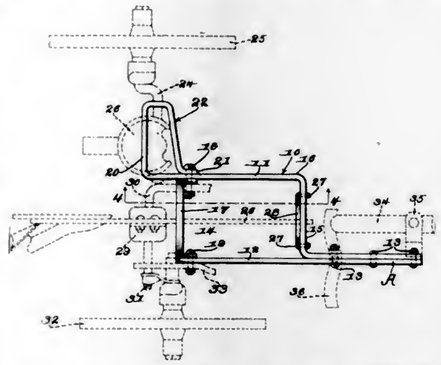


1. In a device of the character described, a body portion having an extension formed thereon, a plurality of wheels supporting the said body portion, a plurality of supporting members provided upon the said extension, a tongue pivotally mounted therebetween and having a recess formed therein at the inner end thereof, a curved arm secured to the said extension for engagement with the said recess as a guide means for the said tongue, and an operating lever and coöperating members as a means for oscillating the said tongue.

2. In a device of the character described, a body portion having an extension formed thereon, a plurality of wheels supporting said body portion, a plurality of supporting members provided upon said extension, a tongue pivotally mounted therebetween and having a recess formed therein at the inner end thereof, a curved arm secured to the said extension for engagement with the said recess as a guide means for the said tongue, a finger projecting from the inner terminal of said tongue, a bell crank lever pivotally mounted upon the said extension and having one end thereof engaging said finger, an arm pivotally engaging the other end of said bell crank lever, a transverse bar connecting the said body portion with the extension, a segmental rack secured to said transverse bar, an operating lever pivotally mounted upon said segmental rack and engaging the other end of said arm as a means for oscillating the said tongue, a handle pivotally mounted upon said operating lever, a rod connected thereto and a pawl carried by said rod for engagement with said segmental rack for the purpose of substantially holding the said tongue against movement.

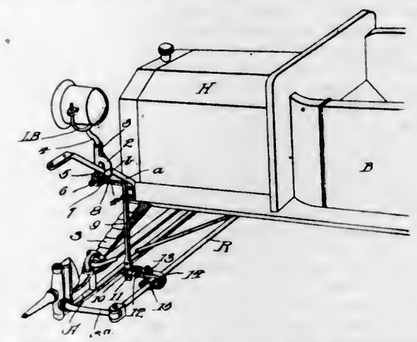
1,167,685. PLOW-FRAME STRUCTURE. PAUL EWALD, Clintonville, Wis. Original application filed July 16, 1914, Serial No. 851,344. Divided and this application filed July 9, 1915. Serial No. 38,898. (Cl. 97—36.)

1. In a device of the character described comprising a frame composed of a plurality of rails connected to each other at their forward ends, one of said rails being straight and having a means connected at the rear end for supporting a wheel axle, the other of said rails being bent at right angles a limited distance from the forward ends of said rails, then bent again into parallel relation with said straight rail, extended at right angles to the parallel portion, then bent again into parallel relation with said straight rail and extended inward to join the first parallel portion in line with the rear end of the straight rail, thus constituting an extension at right angles to said frame and having means connected therewith for supporting a second wheel axle, a bracket connecting both of said rails at the rear ends thereof and a second bracket secured to the first-mentioned right angular portion of the second-mentioned rail for the reception of the plow beam or the like.



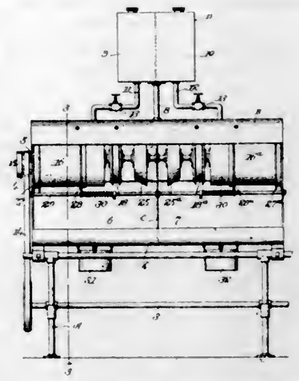
2. In a device of the character described comprising a frame composed of a plurality of rails connected to each other at their forward ends, one of said rails being straight and having a lever pivotally mounted at the rear end for supporting a wheel axle, the other of said rails being bent at right angles a limited distance from the forward ends of said rails, then bent again into parallel relation with said straight rail, extended at right angles to the parallel portion, then bent again into parallel relation with said straight rail and extended inward to join the first parallel portion in line with the rear end of the straight rail, thus constituting an extension at right angles to said frame and having a plurality of bearings connected therewith for supporting an axle having a wheel mounted thereon, a bracket connecting both of said rails at the rear ends thereof as a reinforcing means for said frame, a second bracket secured to the first-mentioned right angular portion of the second-mentioned rail for the reception of a plow beam or the like and a second extension formed at the forward end of said rails by their contacting engagement with each other to the first right angular bend of the second-mentioned rail for the purpose of providing a supporting means for a draft attachment.

1,167,686. MEANS FOR STEERING AUTOMOBILE-HEADLIGHTS. WILLIAM C. FREELAND, Lomax, Ill. Filed Mar. 29, 1915. Serial No. 17,818. (Cl. 240—62.)



The combination with an automobile and a laterally swinging lamp bracket carried thereby, of a substantially horizontal crank arm pivoted to said bracket upon a horizontal axis, a rod depending from said crank arm, a link with forked opposite ends connected at one end with the lower end of said rod, an additional link pivoted to the free end of said first mentioned link upon a horizontal axis, and a substantially U-shaped arm rigidly secured at one end to the steering rod of the automobile and pivotally engaged at the other to the additional link upon a vertical axis.

1,167,687. SOLE AND HEEL INKING MACHINE. MARTIN FRISCH, St. Louis, Mo. Filed Apr. 4, 1914. Serial No. 829,580. (Cl. 12—31.)



1. A sole and heel inking machine comprising in combination, a roll constructed to simultaneously ink the edges of the sole and welt and the top of the welt, means for rotating said roll, means to supply ink to said roll as the same is rotated, and a guard to protect the uppers of the shoes from being spattered with ink during such inking operation.

2. A sole and heel making machine comprising in combination, a welt and sole edge inking roll, a heel inking roll, and a sole face inking roll.

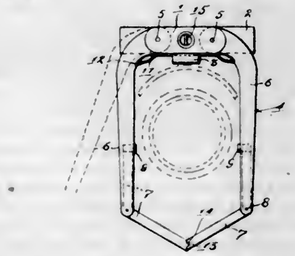
3. A sole and heel inking machine, comprising in combination, rolls to ink the edges of the sole and heel, the face of the sole and the shank, and means arranged in conjunction with said sole face and edge inking rolls to prevent spattering of the ink upon the upper.

4. A sole and heel inking machine comprising in combination, means to ink the edges of the heel and the edges of the sole, a roll to ink the surface of the sole, and means to prevent spattering of the ink onto the upper during said latter inking operation.

5. A sole and heel inking machine comprising in combination means to ink the edges of the sole and heel, the face of the sole and the shank, and means to supply ink to all of said inking means simultaneously.

[Claims 6 to 10 not printed in the Gazette.]

1,167,688. VEHICLE-LOCK. WALTON H. FULLER, Sacramento, Cal. Filed Apr. 15, 1914. Serial No. 832,110. (Cl. 70—90.)



1. In a vehicle lock, relatively movable arms, one of the said arms being longitudinally grooved, an extension pivoted to the grooved arm, means to lock and unlock the arms, said extension being immovable relatively to the arms when locked, and spring means to releasably hold the extension within the groove in the unlocked position of the arm.

2. A lock for vehicles including a pair of relatively movable locking arms, an extension pivoted to the free end of each arm, the respective extensions being engageable one with the other in the locked position of the arms, means operating automatically to withdraw the extensions from engagement one with the other upon an unlocking of the arms, and means maintaining the extensions in locking engagement when the arms are locked.

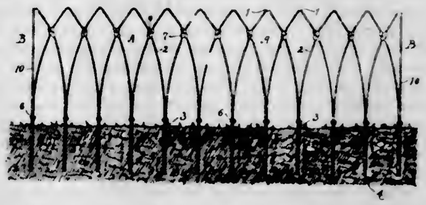
3. A lock for vehicles including a pair of relatively movable locking arms, an extension pivoted to the free end of each arm, the free end of one of the said extensions having a recess formed therein, a tenon formed upon the free end of the other of the said extensions, said tenon being adapted for engagement with said recess in the locked position of the arms to render the extensions immovable relatively to each other, and means actuatable to lock and unlock said arms, as and for the purpose set forth.

4. A lock for vehicles including a pair of relatively movable locking arms, means actuatable to lock and unlock the arms, an extension pivoted to the free end of each arm, means limiting movement of the extensions, means maintaining the extensions in engagement with each other in the locked position of the arms, the respective extensions being foldable relatively to the arms in the unlocked position of the latter, and spring means engaging the respective extensions when folded to releasably hold the said extensions immovable relatively to the arms.

5. A lock for vehicles including a pair of relatively movable arms, each of the said arms being grooved longitudinally throughout a portion of its length, means actuatable to lock and unlock the arms, an extension pivoted to the free end of each arm, the said extensions being foldable within the respective grooves in the unlocked position of the arms.

[Claims 6 and 7 not printed in the Gazette.]

1,167,689. BORDER-GUARD. FREDERICK S. GICHNER, Washington, D. C. Filed June 10, 1915. Serial No. 33,270. (Cl. 256—22.)



1. In an extensible border guard, in combination: sections each formed with a bent top and two legs, and arranged with the sections alternating with and overlapping each other so as to form stiff contacting double legs; fastenings separable from the sections and uniting the bent portions of the sections; and fastenings separable from said legs and uniting said legs in pairs; substantially as specified.

2. In an extensible border guard in combination: a series of sections each formed with a bent top and two legs; fastenings separable from the sections for uniting said legs in pairs, the legs being in contact with each other; a second series of such sections having their legs similarly united, and applied to the first series so that the sections of the second series alternate with and overlap the sections of the first series; and fastenings separable from the sections for uniting the bent top of each leg of one series with the bent top of a leg of the other series of sections; substantially as specified.

3. In an extensible border guard, in combination: a series of sections each formed of flat metal bent at the top

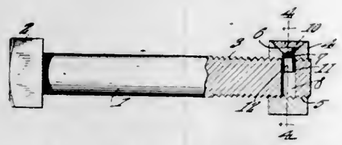
to form two legs and presenting the edges of the sections toward the sides of the guard; detachable fastenings for uniting the lower parts of the said legs; a second series of such sections similarly united and applied to the first series so that the sections of the second series alternate with and overlap the sections of the first series; and detachable fastenings for uniting the upper part of each leg of one series of sections with a leg of the other series of sections.

4. In an extensible border guard, in combination; a series of sections each formed of flat metal bent at the top to form two legs, each leg being formed near the top with a quarter turn and a transverse perforation and near the bottom with a longitudinal perforation; detachable fastenings uniting the lower parts of said legs; a second series of such sections having the lower parts of their legs detachably united; and detachable fastenings uniting the quarter turns of the second series of sections with the quarter turns of the sections of the first series.

5. In an extensible border guard, in combination: a series of sections each formed of flat metal bent at the top to form two legs, each leg being formed near the top with a quarter turn and a transverse perforation and near the bottom with a longitudinal perforation; detachable bolts in said longitudinal perforations and uniting the lower parts of said legs; a second series of such sections having the lower parts of their legs detachably united; and detachable bolts in said transverse perforations and uniting the quarter turns of the second series of sections with the quarter turns of the sections of the first series.

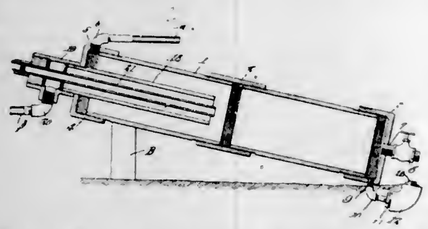
[Claims 6 to 9 not printed in the Gazette.]

1,167,690. BRASS-SCREW NUT-LOCK. HENRY S. GRIFFIN, Piqua, Ohio. Filed Sept. 20, 1915. Serial No. 51,650. (Cl. 151—5.)



In a device of the class described, a bolt having a transverse opening; a nut threaded onto the bolt and provided with a threaded passage adapted to be alined with the opening; and a screw threaded into the passage and en- adapted to be engaged by the bolt when the nut is re- terting the opening in the bolt, the screw having a flat side tated slightly on the bolt, thereby to prevent the screw from rotating in the nut and to render the screw efficient as a means for preventing a further rotation of the nut.

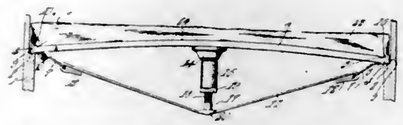
1,167,691. WATER AND GAS SEPARATOR. WILLIAM HEMME, Altoona, Kans. Filed Oct. 2, 1915. Serial No. 53,843. (Cl. 48—140.)



1. A water and gas separator, comprising an inclined casing having a gas outlet at its upper end, a gas inlet nozzle projecting axially into the casing from the upper end thereof, an elbow having one arm connected to the lower end of the casing and having its other arm projecting upwardly, a bushing engaged within the last mentioned arm of the elbow, an apertured plug carried by said bushing to provide a restricted water outlet, and a screen carried by the bushing to prevent the sediment from clogging up the plug.

2. A water and gas separator, comprising an inclined casing having a gas outlet at its upper end and water escape means at its lower end, a low pressure gas nozzle projecting through the upper end of the casing axially into the casing, a coupling attached to the outer end of said nozzle and having means for the connection of a gas pipe, and a high pressure nozzle projecting through the aforesaid nozzle and engaged through said coupling.

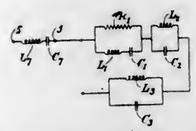
1,167,692. BED-SLAT. GEORGE WASHINGTON HINTON, Hope, Ark. Filed Feb. 15, 1915. Serial No. 8,285. (Cl. 5—25.)



1. In a device of the class described, coöperating elements comprising a flexible slat and a tie having its ends assembled with the slat; and a longitudinally extensible strut interposed between said coöperating elements and located intermediate the ends thereof, the strut comprising a pedestal engaging one of said coöperating elements, a screw mounted to slide in the pedestal and engaging the other of said coöperating elements, and a nut on the screw, the nut bearing against the pedestal.

2. In a device of the class described, a slat provided in its upper face and at its ends with transverse grooves defining heads at the ends of the slat; hook-shaped connections extended around the ends of the slat and engaged with the heads against removal longitudinally of the slat, the connections being removable transversely of the slat; a tie assembled with the ends of the connections and located beneath the slat; and an expansible strut interposed between the intermediate portion of the tie and the intermediate portion of the slat.

1,167,693. ARTIFICIAL LINE. RAY S. HOYT, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Aug. 7, 1915. Serial No. 44,173. (Cl. 178—45.)



1. An artificial line simulating the characteristic impedance of an actual loaded line, said artificial line comprising precomputed resistance, inductance and capacity elements having values depending on the load coil inductance, the distance between consecutive load coils, the capacity and inductance of said actual line, and the distributed character of said line inductance.

2. An artificial line simulating the characteristic impedance of an actual loaded line, said artificial line comprising precomputed resistance, inductance and capacity elements having values depending on the load coil inductance and resistance, the distance between consecutive load coils, the capacity, resistance and inductance of said actual line, and the distributed character of said line inductance.

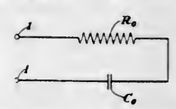
3. An artificial line simulating the characteristic impedance of an actual loaded line, said artificial line including means having an impedance composed of resistance and reactance components, said resistance component simulating the resistance component of the impedance of the actual loaded line, and means for neutralizing the reactance component of the impedance of said first named means.

4. An artificial line simulating the characteristic impedance of an actual loaded line, said artificial line including resistance and reactance elements providing impedance having a resistance component simulating the resistance component of the impedance of the actual loaded line, and means for neutralizing the reactance component of the impedance produced by said resistance and reactance elements; whereby the joint impedance of said resistance and reactance elements and of said neutralizing means has no reactance component but has a resistance component substantially equal to the resistance component of the impedance of said actual loaded line.

5. An artificial line simulating the characteristic impedance of an actual loaded line, the combination of means for simulating the reactance component of said impedance; means composed of resistance and reactance elements providing an impedance having a resistance component simulating the resistance component of the impedance of said actual loaded line; and means for neutralizing the reactance component of the impedance produced by said resistance and reactance elements.

[Claims 6 to 12 not printed in the Gazette.]

1,167,694. ARTIFICIAL LINE. RAY S. HOYT, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Aug. 7, 1915. Serial No. 44,174. (Cl. 178—44.)



An artificial line simulating the impedance of an actual uniform transmission line and comprising resistance and capacity elements connected in series, the value of said resistance element being approximately equal to

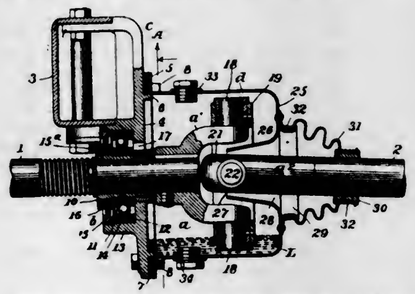
$$\sqrt{\frac{L}{C}}$$

and the value of said capacity element being approximately equal to

$$\frac{2\sqrt{LC}}{R},$$

where L, C and R denote the distributed inductance, the distributed capacity and the distributed resistance, respectively, per unit length of line.

1,167,695. TRANSMISSION-SHAFT FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 24, 1907. Serial No. 390,021. (Cl. 74—10.)



1. The combination with two shaft members and a universal joint connecting said members, of a stationary casing surrounding said joint and having an open end for one of said shaft members to extend through, a collar closely journaled upon said latter shaft member, and a flexible shield extending between the open end of said casing and said collar.

2. The combination with two shaft members and a universal joint connecting said members, of a stationary casing surrounding said joint and having an open end for one of said shaft members to extend through, said casing having an outwardly projecting annular flange at its open end, a collar closely journaled on said latter shaft member, and a flexible shield secured to said annular flange and to said collar.

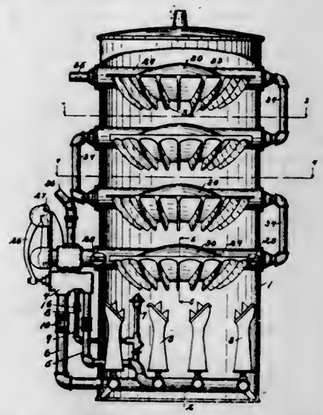
3. The combination with two shaft members and a universal joint connecting said members, of a casing surrounding said joint and having an open end for one of said shaft members to extend through, said casing having an annular flange projecting inwardly from said end toward the central portion of said joint.

4. The combination with two shaft members and a universal joint connecting said members, of a casing surrounding said joint and having an open end for one of said shaft members to extend through, said casing having a conical flange projecting inwardly from said end toward the central portion of said joint.

5. The combination with a universal joint comprising a forked member having trunnions, a member having a head provided with trunnions, said latter member having recesses between its trunnions and its shank, and means connecting the trunnions of said members, of a stationary casing surrounding said coupling and having an open end and having an annular flange extending from said open end into said recesses.

[Claims 6 to 13 not printed in the Gazette.]

1,167,696. WATER-HEATER. HERBERT S. HUMPHREY, Kalamazoo, Mich. Filed May 31, 1913. Serial No. 771,058. (126—351.)



1. The combination with a water heater, of a thermostat associated therewith; burner units; fuel connections for said burner units including a valve casing provided with valve seats and having a gas supply connection between the valve seats and independent gas delivery connections with the burner units at the other sides of the valve seats; valves, the outer valve being provided with a tubular stem and the inner valve with a stem arranged through the outer valve and its tubular stem and provided with an actuating member disposed to engage the outer valve after the inner valve is opened, said thermostat being operatively connected to said inner valve stem; a spring for closing said outer valve; and a spring for closing said inner valve arranged between said valves, said inner valve spring being of less strength than the said outer valve spring.

2. The combination with a water heater, of a thermostat associated therewith; burner units; fuel valves, the outer valve being provided with a tubular stem and the inner valve with a stem arranged through the outer valve and its tubular stem and provided with an actuating member

disposed to engage the outer valve after the inner valve is opened, said thermostat being operatively connected to said inner valve stem; a spring for closing said outer valve; and a spring for closing said inner valve arranged between said valves, said inner valve spring being of less strength than the said outer valve spring.

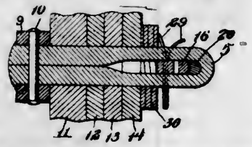
3. The combination with a water heater, of a thermostat associated therewith; burner units; fuel connections for said burner units including a valve casing provided with valve seats and having a gas supply connection between the valve seats and independent gas delivery connections with the burner units at the other sides of the valve seats; and valves, the outer valve being provided with a tubular stem and the inner valve with a stem arranged through the outer valve and its tubular stem and provided with an actuating member disposed to engage the outer valve after the inner valve is opened, said thermostat being operatively connected to said inner valve stem.

4. The combination with a water heater, of a thermostat associated therewith; burner units; fuel valves therefor, the inner valve being provided with a stem slidably associated with the outer valve and with an actuating member disposed to engage the outer valve after the inner valve is opened, said thermostat being operatively connected to said inner valve stem, whereby the valves are successively opened by the thermostat; a spring for closing said outer valve; and a spring for closing said inner valve arranged between said valves, said inner valve spring being of less strength than the said outer valve spring.

5. The combination with a water heater boiler, of a thermostat associated therewith, a plurality of independent heating burner units for said boiler, fuel connections for said burner units including a valve casing provided with allned valve seats and having a gas supply connection between the valve seats and independent gas delivery connections with the burner units at the other side of said valve seats, valves coacting with said valve seats, the inner valve being provided with a stem slidably associated with the outer valve and with a tappet member disposed to engage the outer valve after the inner valve is opened, said thermostat being connected with said inner valve stem whereby the valves are successively opened by the thermostat, a spring disposed between said valves acting to normally seat the inner valve, and a spring acting on said outer valve to normally seat the same, such spring being of greater strength than the said spring between said valves.

[Claims 6 to 10 not printed in the Gazette.]

1,167,697. SAFETY-BOLT AND SAFETY-FASTENER THEREFOR. CHARLES A. HYDE, Clear Spring, Md. Filed Feb. 9, 1914. Serial No. 817,639. (Cl. 85—7.)



1. A bolt having a head composed of welded portions, and a band encircling said head and reinforcing the same.

2. A bolt having a head composed of welded portions, and a reinforcing band encircling the head and welded thereto.

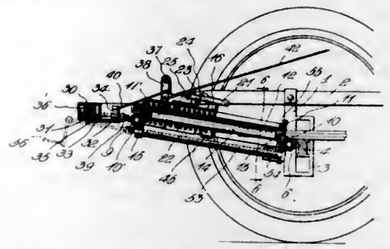
3. A bolt having a shank formed of portions welded together, and a head formed of portions welded together, and a band inclosing the head and reinforcing the same.

4. A bolt having a shank composed of welded portions and a head composed of welded portions, and a reinforcing band surrounding the head and welded thereto.

5. A bolt formed of a length of material folded to provide a shank, and having the portions thereof welded together, and also having a head composed of welded portions, and a reinforcing band surrounding the head and welded thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,167,698. AUTOMOBILE-FENDER. EMIL E. JOHNSTON, Potlatch, Idaho. Filed Sept. 2, 1915. Serial No. 48,686. (Cl. 105—130.)



1. In a vehicle fender, the combination of a normally raised fender member to be lowered and projected forwardly, means for normally supporting the fender member, additional means for releasing the aforesaid means, and normally latent projecting mechanism for the fender member released by the lowering of said member.

2. In a vehicle fender, the combination of a normally raised fender member to be lowered and projected forwardly, means for normally supporting the fender member, additional means for releasing the aforesaid means, projecting mechanism for the fender member, catch means for normally preventing actuation of said mechanism, and catch tripping means for releasing said catch means upon lowering of the fender member.

3. In a vehicle fender, the combination of a normally raised fender member to be lowered and projected forwardly, means for normally supporting the fender member, additional means for releasing the aforesaid means, projecting mechanism for the fender member, a catch for normally preventing actuation of said mechanism, and a flexible catch releasing member adapted to be drawn taut when the fender member is lowered, whereby to release the catch.

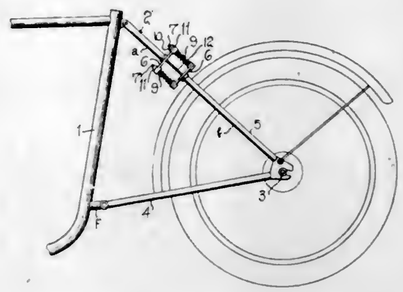
4. In a vehicle fender, the combination of a normally raised fender member to be lowered and projected forwardly, means for normally supporting the fender member, additional means for releasing the aforesaid means, projecting means for the fender member including a spring pressed plunger having thereon a stop shoulder, a pivoted catch movable downwardly with the fender member and normally abutting the shoulder to prevent actuation of the projecting means, a crank arm rigid with the catch, and a link pivoted at one end to the crank arm and adapted to have its other end pivoted to a fixed member to release the catch when the fender member is lowered.

5. In a vehicle fender, the combination of a normally raised fender member to be lowered and projected forwardly, means for normally supporting the fender member, additional means for releasing the aforesaid means, projecting means for the fender member including a spring pressed plunger having thereon a stop shoulder, a pivoted catch movable downwardly with the fender member and normally abutting said shoulder to prevent actuation of the projecting means, a crank arm rigid with the catch, a link pivoted at one end to said crank arm and adapted to have its other end pivoted to a fixed member, and spring means in conjunction with the crank arm and the link tending to aline the two for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,167,699. CYCLE-FRAME. ELMER JOURNELL, Urbana, Ohio. Filed June 28, 1915. Serial No. 36,846. (Cl. 208—94.)

1. As a new article of manufacture, a wheel fork, the stems thereof being in sections, cross arms carried by the adjacent ends of the sections, expansible members interposed between the extremities of the cross arms, a rod carried by each extremity of one of the cross arms and loosely disposed through the adjacent extremity of the second cross arm, means carried by the free extremity of the rods for limiting the separating movement of the sections, and buffers coacting with said last named means.



2. As a new article of manufacture, a wheel fork, the stems thereof being in sections, cross arms carried by the adjacent ends of the sections, expansible members interposed between the extremities of the cross arms, a rod carried by each extremity of one of the cross arms and loosely disposed through the adjacent extremity of the second cross arm, means carried by the free extremity of the rods for limiting the separating movement of the sections, and a guide member carried by a section of each of the standards and telescopically engaging the coacting section.

1,167,700. PROCESS OF EXTRACTING ZINC FROM ITS ORES. FREDERICK LAIST and FREDERICK F. FRICK, Anaconda, Mont. Filed Aug. 13, 1915. Serial No. 45,361. (Cl. 204—15.)

1. A cyclical process of extracting zinc from oxidized ores thereof containing iron, which consists in leaching the ore with dilute sulfuric acid, oxidizing the ferrous sulfate by means of a manganese compound in a state of oxidation higher than the manganous state, precipitating the ferric iron, electrolytically depositing the zinc from the purified solution with insoluble anodes, and utilizing the resulting acid solution containing manganese in its higher states of oxidation for the extraction of zinc from additional portions of the ore.

2. In a cyclical process of extracting zinc from oxidized ores thereof, the steps which consist in electrolyzing, with insoluble anodes, a solution containing salts of zinc and manganese, depositing the zinc in metallic state, and utilizing the resulting acid solution containing oxidized compounds of manganese for the extraction of zinc from its oxidized ores.

3. A process of extracting zinc from sulfid ores thereof containing iron, which consists in roasting the sulfid ore in presence of a manganese compound, leaching the ore with dilute sulfuric acid, oxidizing the ferrous iron and precipitating the ferric iron, electrolytically depositing the zinc from the purified solution with insoluble anodes, and utilizing the resulting acid solution containing manganese in its higher states of oxidation for the extraction of zinc from additional portions of roasted ore.

4. A process of extracting zinc from oxidized ores thereof containing iron, which consists in leaching the ore with an acid reagent, oxidizing the dissolved ferrous salt and precipitating the ferric iron, electrolytically depositing the zinc from the purified solution with insoluble anodes in presence of a manganese salt, and utilizing the resulting acid solution containing manganese in its higher states of oxidation for the extraction of zinc from additional portions of the ore.

5. In a process of extracting zinc from oxidized ores thereof containing iron, the steps which consist in leaching the ore with an acid solution containing manganese in a state of oxidation higher than the manganous state, whereby the ferrous iron is converted to the ferric state, precipitating the ferric iron, reoxidizing the manganese compound, and utilizing the same for the extraction of zinc from additional portions of the ore.

[Claim 6 not printed in the Gazette.]

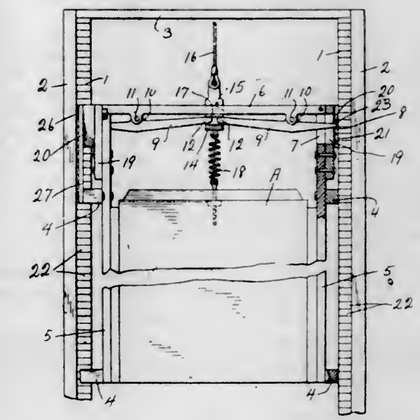
1,167,701. PROCESS OF RECOVERING ZINC FROM ITS ORES. FREDERICK LAIST and FREDERICK F. FRICK, Anaconda, Mont. Filed Sept. 9, 1915. Serial No. 49,788. (Cl. 204—15.)

1. A cyclical process of recovering zinc from oxidized ores thereof containing iron, which consists in leaching the ore with an acid reagent, oxidizing the dissolved ferrous salt, purifying the solution by adding thereto an excess of calcine in presence of an agent capable of oxidizing ferrous iron, and electrolytically regenerating the oxidizing agent with simultaneous deposition of metallic zinc.

2. A cyclical process of recovering zinc from oxidized ores thereof containing iron, which consists in leaching the ore with an acid reagent, oxidizing the dissolved ferrous salt, purifying the solution by adding thereto an excess of calcine in presence of manganese dioxid, and electrolytically regenerating the manganese dioxid with simultaneous deposition of metallic zinc.

3. A cyclical process of recovering zinc from oxidized ores thereof containing iron, which consists in leaching the ore with an acid reagent, oxidizing the dissolved ferrous salt by means of a manganese compound in a state of oxidation higher than the manganous state, purifying the solution by means of an excess of calcine in presence of manganese dioxid, and electrolytically regenerating the manganese in its higher states of oxidation with simultaneous deposition of metallic zinc.

1,167,702. SAFETY DEVICE FOR ELEVATORS. ANTONE LEAL, Selma, Cal. Filed Mar. 3, 1915. Serial No. 11,775. (Cl. 187—83.)



In combination with guide-ways, a cage mounted for movement longitudinally of the guide-ways, uprights carried by the cage and projecting thereabove, a cross beam connecting said uprights, extensions projecting in opposite directions from the upper portions of each of the uprights, clutch members pivotally engaged with the extensions and adapted to coact with the guides, each of said clutch members being provided with an inwardly disposed extension, levers pivotally supported intermediate their lengths by the cross beam and having their outer extremities underlying the extensions of the clutch members, outwardly disposed lugs carried by the extensions of the uprights overlying the clutch members and serving to limit the upward movement of said clutch members, a stirrup straddling across beam and underlying the inner extremities of the levers, an expansible member interposed

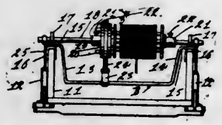
between the stirrup and the cage, and a hoisting member secured to the stirrup, the engaging surfaces of the clutch members being toothed and the coacting surfaces of the guides being also toothed.

1,167,703. PROCESS OF MANUFACTURING BREAD FROM WHOLE GRAIN. BERTHA LEIBBRANDT, Santa Cruz, Cal. Filed Jan. 2, 1915. Serial No. 263. (Cl. 99—10.)

1. The herein described process for manufacturing bread which consists in placing the whole grain in a steeping vat and subjecting the same to the action of warm water to cause germination, then crushing the moist grain and converting the same into dough, then permitting the dough to rise through the action of the yeast inherent therein and finally forming the dough into loaves and baking the same in a moderate heat and for a comparatively long time.

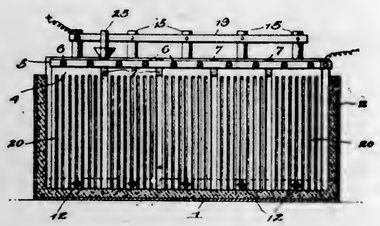
2. The herein described process for manufacturing bread from whole grain which consists in first thoroughly washing the whole grain in running water, secondly, placing the grain in a steeping vat and subjecting the same to warm water whereby the grain is caused to germinate and the nutritive constituents thereof are developed, thirdly, crushing the moist grain and permitting the same to rise or expand through the action of the yeast inherent therein, and lastly, forming the dough into loaves and baking the same in an oven at a low heat for approximately twelve hours.

1,167,704. WIRE-REEL. JOHN L. LOFTS, Clarinda, Iowa. Filed Mar. 8, 1915. Serial No. 13,018. (Cl. 242—85.)



In a device of the class described the combination of a substantially U-shaped bar having the free ends of its arm directed outwardly, U-shaped brackets secured to the free ends of said arms and adapted for detachable engagement with the sides of a wagon body, additional U-shaped brackets secured to the free ends of the bar, a shaft engaged in the last named bracket, hooks connected with the ends of said shaft and detachably engageable with a relatively fixed part, a brake wheel rotatably mounted on the shaft, a brake shoe pivotally connected with the bar and engageable with the periphery of the wheel to retard the rotation of the latter, and lateral studs on said wheel adapted to interlock with a wire reel rotatably mounted on the shaft to effect unitary rotation of the wheel and reel.

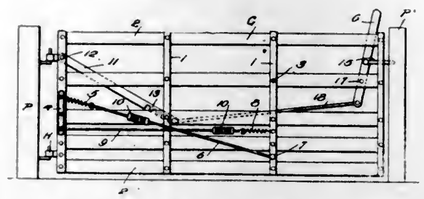
1,167,705. CATHODE FOR ELECTROLYTIC CELLS. FRANK MCDONALD, Roaring Spring, Pa. Filed Aug. 5, 1915. Serial No. 43,862. (Cl. 204—58.)



1. A cathode for an electrolytic cell composed of a graphite plate having its upper end rabbeted and the portion thereof below said rabbet provided with transversely extending slots.

2. A cathode for an electrolytic cell composed of a graphite plate having its upper end rabbeted and the portion thereof below said rabbet provided with transversely extending slots, a bus bar connecting the reduced upper ends of said cathodes, and insulating gaskets arranged between the graphite plates.

1,167,706. GATE. THOMAS CLYDE MCPHERSON, Independence, Mo. Filed Aug. 16, 1915. Serial No. 45,793. (Cl. 39—80.)



1. In combination, a vertically shiftable gate, mechanical raising means therefor, an inclined pivoted brace bar for normally overcoming the action of the raising means, a stop on said bar, an additional stop carried by the gate for coaction with the aforesaid stop, a latch for the gate, and link means connecting the brace bar and the latch, whereby to disengage the stops when such latch is released.

2. In combination, a vertically tilting hingedly mounted gate, spring means for tilting the same, an inclined brace rod pivoted to the gate at one end and having a stop adjacent its other end, an additional stop carried by the gate for coaction with the aforesaid stop to normally overcome the action of the raising means, a latch for the gate including a manually shiftable member, and a link connecting said member and the free end of the brace bar, whereby to shift the latter to disengage the stops upon releasing of the latch.

3. In combination, a vertically tilting hingedly supported gate, an upright evening lever fulcrumed between its ends to the hinged end of the gate, an inclined lifting rod connecting the upper end of the evening lever with a lower point on the gate, an additional rod connecting a higher point on the gate and the lower end of the evening lever, springs forming portions of the aforesaid rods, an inclined brace rod pivoted at its upper end near the upper corner of the gate at the hinged end thereof, a series of spaced stops on the lower end of the brace rod, an additional stop carried by the intermediate portion of the gate for coaction with the aforesaid stops, a link leading from said lower end of the brace bar to the free end of the gate, an upright lever to which said link is connected, and a latch bolt likewise connected to said lever.

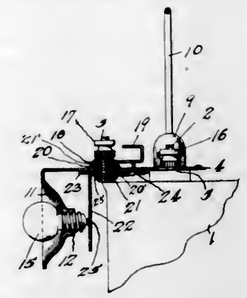
1,167,707. PORTABLE SELF-CONTAINED ELECTRIC LAMP. FREDERICK W. MEBOLD, St. Louis, Mo. Filed Feb. 27, 1915. Serial No. 10,930. (Cl. 240—8.5.)

1. The combination with a dry battery and its binding posts, of an attachment comprising a base plate having a reflector portion and an incandescent lamp secured therein, an insulated eyelet on the base plate to receive one of the binding posts and said base plate slotted to receive the other post, an insulated spring plate on the eyelet having a tongue, and a switch on the eyelet to co-act with said tongue.

2. The combination with a dry battery and its two binding posts, of a base plate fashioned with a reflecting cup, an incandescent lamp threaded through said cup, a switch plate, a spring plate, an eyelet fastening these two members above and below the base plate respectively, and a tongue on the spring plate projecting through a slot in the base plate in position to contact with the switch plate, substantially as described.

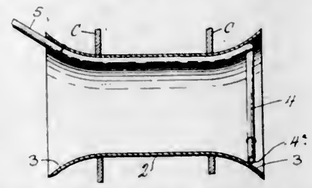
3. The combination with a battery and its binding posts, of a base plate fashioned to support an incandescent lamp,

a switch plate, a spring plate and an eyelet fastening these two members above and below the base plate respectively,



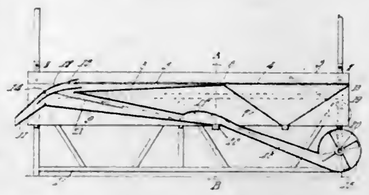
and a tongue on the spring plate projecting through a slot in the base plate in position to contact with the switch plate.

1,167,708. DRAFT-FORMING DEVICE FOR FURNACES. JOHN D. MILNER, Huntington, Tex. Filed May 5, 1915. Serial No. 26,033. (Cl. 230—13.)



An air injector for furnaces, comprising a hollow tubular body flared at opposite ends, an annular pipe disposed in the inner end of the tubular body and having perforations discharging approximately parallel to the adjacent wall of the flared end of the body, and a steam inlet pipe extending through said body and connecting with the annular pipe.

1,167,709. SEPARATOR. JAMES DUDLEY MOORE, North Wilkesboro, N. C. Filed Jan. 21, 1915. Serial No. 3,529. (Cl. 130—15.)

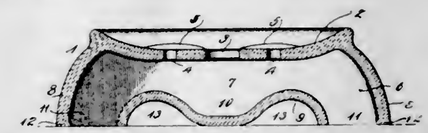


1. A separator including alining fine and coarse screens, means for receiving screenings from the fine screen, an outlet spout, means for directing tailings into the outlet spout from the coarse screen, a flue extending downwardly away from the spout, an inclined board for directing screenings from the coarse screen into the flue, a blower casing, and means for directing an air blast from the blower casing and longitudinally of said flue, said flue having an outlet between its ends, the top of the flue being curved upwardly in the line of the air current thereby to deflect the current downwardly against the bottom of the flue at a point above the outlet of the flue.

2. A separator including alining fine and coarse screens mounted for reciprocation, means for receiving screenings from the fine screen, a downwardly and inwardly inclined flue having an outlet in the bottom thereof between its ends, a spout at the upper end of the flue, a wind shield extending into the spout and upwardly across the flue for directing tailings from the coarse screen and into the spout, an inclined board extending under the coarse screen for directing screenings into the flue, means for directing an air blast longitudinally through the flue and against the wind shield into the spout, said flue having its top bulged upwardly adjacent the outlet thereby to deflect the air current downwardly against the bottom of the flue at a point above the flue outlet.

3. A separator including a screen, an inclined board thereunder, an outlet spout, means for directing tailings from the screen and into the spout, a flue extending downwardly from the spout, and a screen of the same mesh as the first named screen for receiving material from the inclined board, said screen being located in the upper end portion of the flue, and means for directing an air current longitudinally within the flue and into the outlet spout.

1,167,710. SOAP-DISH. WILLIAM M. MYERS, Hannibal, Mo. Filed July 20, 1911. Serial No. 639,608. (Cl. 45—28.)

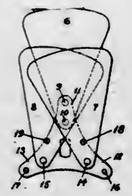


1. A soap dish comprising a perforated receiving tray, a hollow base depressed midway its ends, the ends of said depressed portion curving downwardly and terminating some distance from the ends of the dish forming discharge openings.

2. A soap dish comprising a perforated soap receiving tray an integrally formed hollow base portion having in the bottom thereof a centrally disposed depression forming a drip receptacle, said bottom terminating short of the ends of the base thereby forming discharge openings through which the waste water and drippings caught by the receptacle are removed.

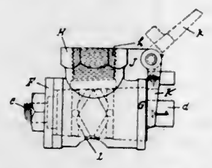
3. A soap dish comprising a perforated soap receiving tray, an integrally formed hollow base portion having outwardly bulged ends, the bottom of said base portion being depressed midway between said ends to form a centrally disposed drip receptacle, and a central support for the dish, the ends of said depressed portion curving downwardly and terminating some distance from the ends of the dish, thereby forming discharge openings through which the waste water and drippings may be removed from the drip receptacle, said downwardly extending ends of the drip receptacle portion of the bottom providing ventilating spaces between themselves and the depressed central portion of the base.

1,167,711. ROTARY FAN. MASAHACHI NAKATA, Crystal-springs, Wash. Filed Apr. 17, 1915. Serial No. 21,942. (Cl. 230—1.)



A rotary fan comprising a polygonal hub, a pivot located in each angle of said hub between the apex of the angle and the center of the hub, a stop pin located adjacent the apex of each angle, and blades each having an end carried by said pivot and provided with openings registrable with said stop pin.

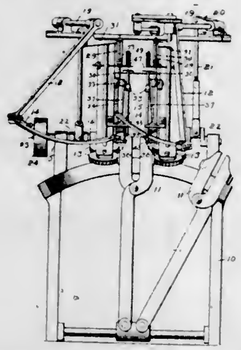
1,167,712. NOZZLE. FINDLEY R. PAINE, Albany, N. Y., assignor to Standard Oil Company of New York, New York, N. Y., a Corporation. Filed Aug. 25, 1915. Serial No. 47,277. (Cl. 137—85.)



1. A two-part nozzle, comprising a hollow casting provided with means for securing the same to a source of liquid supply and provided with a discharge orifice of smaller diameter than that through which the supply is received; with a barrel provided with diametric intercepting passageways therethrough and with obliquely arranged passageways extending from each pair of said diametric intercepting passageways to the exterior of the barrel; and means for holding the barrel in its rotative position in the casting, substantially as described.

2. In a nozzle, the combination of a hollow casting adapted to be secured to a source of liquid supply with a barrel adapted to be inserted into said casting, said barrel provided with two pairs of passageways extending diametrically through the barrel from side to side, the passageways of one pair intercepting the passageways of the other pair in the line of the axis of the barrel; four pairs of oblique passageways extending from each passageway of each pair to the surface of the barrel about midway between the openings of the passageways of said pairs respectively, said casting having a discharge opening adapted to register with the openings of said oblique passageways; indicating means on the exterior of the barrel for showing which of the oblique passageway openings is in register with the discharge opening in the casting; with means for locking the barrel in position in the casting.

1,167,713. BROOM-SEWING MACHINE. LEANDER PELTON, Des Moines, Iowa. Filed Jan. 27, 1913. Serial No. 744,577. (Cl. 112—43.)



1. In a machine of the class described, a means for making a single seam comprising a frame, a supporting means for articles to be sewed, two pairs of needles arranged on opposite sides of said supporting means, the needles of each pair being arranged side by side and in such positions that a line run transversely through the needles will be in the plane of the single seam being sewed and designed to alternately project through the article to be sewed, said needles being so arranged that one pair may engage two portions of twine and pull them through the article to be sewed and the other may then engage the same portions of twine and pull them through the articles to be sewed.

2. In a machine of the class described, a means for making a single seam comprising a frame, a supporting means for articles to be sewed, two pairs of needles arranged on opposite sides of said supporting means, the needles of each pair being arranged side by side and in such positions that a line run transversely through the needles will be in the plane of the single seam being sewed and designed to alternately project through the articles to be sewed, said needles being so arranged that one pair may engage two portions of twine and pull them through the article to be sewed and the other may then engage the same portions of twine and pull them through the articles to be sewed, the needles of each pair being arranged adjacent to each other and parallel.

3. In a machine of the class described, a means for making a single seam comprising a frame, a supporting means for articles to be sewed, two pairs of needles arranged on opposite sides of said supporting means, the needles of each pair being arranged side by side and in such positions that a line run transversely through the needles will be in the plane of the single seam being sewed and designed to alternately project through the articles to be sewed, said needles being so arranged that one pair may engage two portions of twine and pull them through the articles to be sewed and the other may then engage the same portions of twine and pull them through the articles to be sewed, and means on each side of the supporting means for threading the needles.

4. In a machine of the class described, a means for making a single seam comprising a frame, a supporting means for articles to be sewed, two pairs of needles arranged on opposite sides of said supporting means, the needles of each pair being arranged side by side and in such positions that a line run transversely through the needles will be in the plane of the single seam being sewed and designed to alternately project through the articles to be sewed, said needles being so arranged that one pair may engage two portions of twine and pull them through the articles to be sewed and the other may then engage the same portions of twine and pull them through the articles to be sewed, a twine holder at each side of the supporting means, and two needle threading hooks on each side of the supporting means.

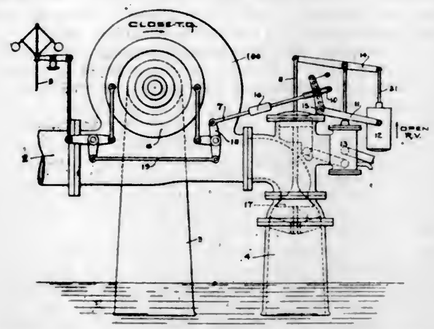
5. In a machine of the class described, a means for making a single seam comprising the combination of a frame, supporting means for an article to be sewed, two swinging arms arranged on opposite sides of the said supporting means a pair of needles carried by each swinging arm, said pairs designed to be alternately passed through the article to be sewed, and means on each side of the supporting means for holding said twine and threading the needles, the needles of each pair being arranged side by side and in such positions that a line run transversely through the needles will be in the plane of the single seam being sewed.

[Claims 6 to 10 not printed in the Gazette.]

1,167,714. RELIEF MECHANISM FOR HYDRAULIC TURBINES. ARNOLD PFAU, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 26, 1912. Serial No. 738,756. (Cl. 138—5.)

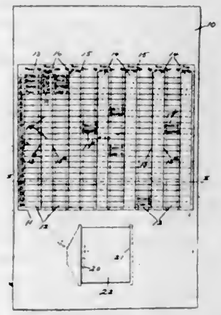
1. In a hydraulic turbine, a gate, a relief valve of smaller capacity than said gate, operating means for said gate, means for relatively varying the rates of discharge through said relief valve and through said gate whereby for like periods of time any change in discharge through said relief valve will be inverse and equal to a corresponding change in discharge through said gate, and means operable independently of said varying means for relatively changing the timing of the strokes of said relief valve and of said gate.

2. In a hydraulic turbine, a gate, a relief valve of smaller capacity than said gate, operating means for said gate, means for varying the rate of discharge through said relief valve whereby for like periods of time any change in discharge through said relief valve will be inverse and equal to a corresponding change in discharge through said gate, and means operable independently of said varying means for changing the timing of the stroke of said relief valve with respect to the stroke of said gate.



3. In a hydraulic turbine, a gate, a relief valve of smaller capacity than said gate, means for inversely operating said gate and said relief valve, adjustable means for maintaining the same rate of change of discharge through said gate and through said relief valve, and means for varying the timing of the stroke of said relief valve with respect to the stroke of said gate, said adjustable means and said varying means being independently operable.

1,167,715. SCORE-BOARD. JOHN L. PREO, New York, N. Y. Filed Mar. 13, 1914. Serial No. 824,468. (Cl. 40—63.)

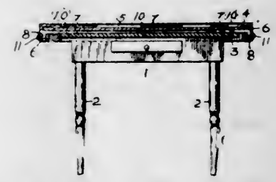


1. A device of the character described, comprising a supporting board having a number of spaced vertical columns, a plurality of vertically disposed flexible retaining members provided on the board, one of the members being arranged between each of two adjacent columns, and said members being in spaced relation to the board to provide vertically disposed pockets in the board, and a plurality of flexible strips, each being removably disposed in one of the pockets so that one of the faces of each strip will be displayed in one of the spaces between the columns of the supporting board, substantially as described and for the purpose specified.

2. A device of the character described, comprising a supporting board having a number of spaced vertical columns, a plurality of vertically disposed flexible retaining members provided on the board, one of the members being arranged between each of two adjacent columns, and said members being in spaced relation to the body of the board to provide vertically disposed pockets in the board, and a plurality of flexible strips, each being removably disposed in one of the pockets so that one of the faces of each strip will be displayed in one of the spaces between the columns of the supporting board, and the ends of each strip having notches in which are seated the parts of the supporting board at the ends of the pockets in which the strip is disposed, substantially as described and for the purpose specified.

3. In a device of the character described, a flexible supporting board having spaced vertically disposed columns and an integral section therebetween, formed by a pair of vertically disposed slits in the board, and the flexible section being disposed in spaced relation to the body of the board to form a pocket, and a flexible strip disposed in the pocket so that one of its faces is displayed in the space between the columns, and the ends of the strip having notches in which are seated the parts of the supporting board at the ends of the slits for removably locking the strip to the supporting board, substantially as set forth and for the purpose specified.

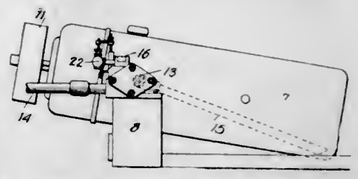
1,167,716. TABLE. ERNEST RICHARDSON, College Hill, Pa. Filed Nov. 23, 1914. Serial No. 873,460. (Cl. 45—31.)



1. A table-top having a depending flange, a horizontal support, and metal L-shaped brackets each having a vertical member secured to the flange and a horizontal member, and means whereby the horizontal members may be longitudinally adjustable on the support so as to adjust the vertical member at various predetermined distances from the support.

2. A table top having a vertical flange, a horizontal support, and metal brackets, each having a horizontal member secured to the said support and a vertical member in engagement with the flange and secured thereto, the said horizontal member having provision whereby the horizontal member may be supported by the said support when the distance between the support and the flange varies between certain limits.

1,167,717. TRAP. SAMUEL RICHARDSON, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed June 9, 1910. Serial No. 566,028. (Cl. 137—103.)



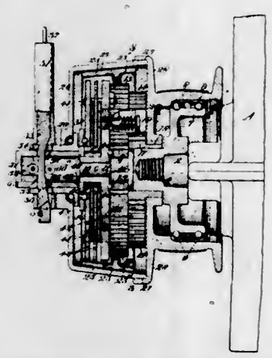
1. In combination, a tilting tank, an exhaust axis therefor communicating with a pressure controlled valve, means for opening and closing the valve comprising a pilot valve provided with a vertically movable stem having an arm formed thereon, a rod movably mounted on a suitable support and having a connection at its upper end with said arm, and further provided with an oppositely disposed arm on its lower end having an adjustable lost motion connection with said tank.

2. In a trap of the character described, a tilting tank having an exhaust axis, a chambered fitting having a discharge outlet disposed to one side of the tank and communicating with the exhaust axis, a valve in the fitting for said outlet and whose stem is provided with a projecting forked member, and a movable rod interposed between the valve and the tank and operatively engaging with the forked member, said rod being adapted to receive reciprocating movement from the tank.

3. In combination, a tilting tank, a chambered fitting disposed to one side of the tank substantially in line with the axis of tilt and provided with a discharge opening, exhaust connections between the tank and the chambered fitting, a valve for the opening movable in said fitting and having a piston moving in a cylinder mounted in the fitting, said cylinder having a closed end to constitute a pressure chamber, a pilot valve in communication with the chamber, and adjustable means for controlling the pilot valve comprising a movable rod carried by the fitting and oppositely disposed arms on the rod connecting it with the tank and the stem of the pilot valve.

4. In a trap of the character described, the combination of a frame, a tilting tank provided with a pressure admission inlet, a chambered valve casing fixedly associated with said frame and provided with an outlet, an exhaust trunnion conduit leading from the tank interior to the inlet side of the casing, a main pressure controlled piston valve in said casing for said outlet, a pressure chamber above said valve adapted to receive a supply of pressure from the tank through said exhaust conduit to overbalance the main valve and maintain the same closed down on its seat, there being an exhaust passage leading from said chamber, a pilot valve adapted to exhaust the pressure in said chamber through said passage whereby to open the main valve, and means operatively connected to the tank adapted to actuate the pilot valve when the tank tilts.

1,167,718. TRANSMISSION MECHANISM. WILLIAM H. ROST, Oakland, Cal., assignor to Rudolph-Myers Manufacturing Co., San Jose, Cal., a Corporation of California. Filed Feb. 8, 1915. Serial No. 6,796. (Cl. 74—34.)



1. The combination with a driving and a driven element, and connecting gearing and a cone clutch, of a stationary sleeve mounted interior thereof, a multiple disk clutch mounted on said sleeve, a thrust sleeve slidably mounted interior of the stationary sleeve, a manually operated means for controlling the sliding movement of the thrust sleeve, means for transmitting the movement of the thrust sleeve to throw the cone clutch out, and means for transmitting the thrust of the thrust sleeve against the disks of the multiple disk clutch to lock same.

2. The combination with the cone clutch and multiple disk clutch in a transmission of the character described, of driving and driven elements and connecting gearing, a stationary sleeve 29, a thrust sleeve slidably mounted in said stationary sleeve, means for controlling the sliding movement of the thrust sleeve, and means for transmitting the sliding movement of the thrust sleeve to engage or disengage the multiple disk clutch and also to engage or disengage the cone clutch.

3. The combination with the cone clutch and multiple disk clutch in a transmission of the character described, of driving and driven elements and connecting gearing, a stationary sleeve 29, a thrust sleeve slidably mounted in said stationary sleeve, a roller journaled in the thrust sleeve, a cam member extending through the stationary sleeve and thrust sleeve and engageable with the roller, means for reciprocating the cam to transmit a similar movement to the thrust sleeve, and means for transmitting the movement of the thrust sleeve to disengage the cone clutch and also to lock the multiple disk clutch.

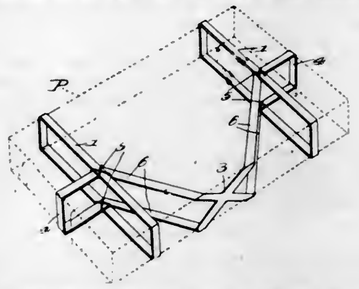
4. A variable speed transmission gearing for motorcycles, comprising a drive-shaft, a driving pinion secured to the shaft, a transmission pulley journaled on the shaft, a secondary driving pinion secured to the pulley, a disk 11 journaled on the shaft, a pair of stud bolts secured to said disk, a pair of intermediate gears on each stud bolt intermeshing with the driving pinion and the secondary pinion, a clutch member secured to the transmission pulley, a cone clutch member slidably mounted on studs projecting from disk 11 adapted to engage with the clutch member, springs surrounding the studs upon which the cone is slidably mounted adapted to normally force the cone into engagement with the clutch member, a stationary sleeve mounted in the clutch member, said sleeve having slots formed in its inner and outer end, a plurality of stationary disks having downwardly extending lugs engaging the inner slots in the sleeve, a plurality of revoluble disks mounted on the sleeve and interposed between the stationary disks, pins carried by the revolving disks engageable with the cone clutch, a thrust sleeve slidably mounted interior of the stationary sleeve, means for controlling the sliding movement of the thrust sleeve, and means for transmitting the movement of the thrust sleeve to move the cone clutch and multiple disks into and out of engagement independent of each other.

5. A variable speed transmission gearing for motorcycles, comprising a drive-shaft, a driving pinion secured to the shaft, a transmission pulley journaled on the shaft, a secondary driving pinion secured to the pulley, a disk 11 journaled on the shaft, a pair of stud bolts secured to said disk, a pair of intermediate gears on each stud bolt intermeshing with the driving pinion and the secondary pinion, a clutch member secured to the transmission pulley, a cone clutch member slidably mounted on studs projecting from disk 11 adapted to engage with the clutch member, springs surrounding the studs upon which the cone is slidably mounted adapted to normally force the cone into engagement with the clutch member, a stationary sleeve mounted in the clutch member, said sleeve having slots formed in its inner and outer end, a plurality of stationary disks having downwardly extending lugs engaging the inner slots in the sleeve, a plurality of revoluble disks mounted on the sleeves and interposed between the stationary disks, pins carried by the revolving disks engageable with the cone clutch, a thrust sleeve slidably mounted interior of the stationary sleeve, means for controlling the sliding movement of the thrust sleeve, said means including a cam engageable with the thrust sleeve and means for reciprocating the cam, and means for transmitting the movement of the thrust sleeve to move the cone clutch and multiple disks into and out of engagement independent of each other.

1,167,719. PACKAGE-TIE. MALON F. SAULMON, Morganton, N. C. Filed Aug. 8, 1912. Serial No. 714,055. (Cl. 24—17.)

1. A package tie composed of a pair of spaced endless bands for engagement over the sides of a package, and a connecting member for said bands having a central part for engagement with the center of one of the sides of the package, said central part having its ends bifurcated and formed with loops, the inner ends of said loops being diagonally disposed with relation to said bands and having their sides connected to the respective sides of the bands, the closed or outer ends of the loops being for engagement with the ends of the package and being disposed at right angles to the bands.

2. A package tie including a pair of spaced continuous bands, and a connecting member for said bands, said connecting member having crossed portions which have their point of crossing located approximately central of the space between the bands at one of the ends of the latter and having loops formed of continuations of the member which extend outwardly from the sides of the bands.

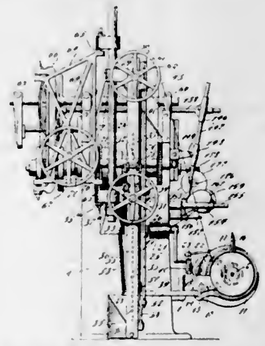


3. A package tie including a pair of spaced continuous bands, and a connecting member for said bands, said connecting member being disposed in part in substantially the same plane with the bands at one of their ends and in the space between the bands, loops extending outwardly from the sides of the bands at points between the ends of the latter, and having parts which extend from the bands to said member.

4. A package tie including a pair of spaced continuous bands, and a connecting member for said bands, said connecting member having crossed portions which have their point of crossing located approximately central of the space between the bands at one of the ends of the latter and having upper and lower parts which are connected to the sides of the bands and terminate in loops which extend outwardly from the sides of the bands at points central of the length of the bands.

5. A package tie composed of a pair of spaced endless bands for engagement over the package sides, a member for engagement with one of the package sides, said member being located in the space between said endless bands, means to connect the ends of the member to the respective opposite sides of the bands at points substantially central of the lengths of the latter, and loops connected to the sides of the band for engagement over the package ends.

1,167,720. MACHINE FOR WINDING COILS. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 27, 1910. Serial No. 584,040. (Cl. 242—9.)



1. In a coil winding machine, a revoluble core or mandrel having interchangeable sets of parallel guide grooves offset from each other lengthwise of the mandrel, a movable guide, and interchangeable means driven from the mandrel independent of said guide grooves to progressively feed said second guide lengthwise of the mandrel in a determined relation to said guide grooves.

2. In a coil winding machine, a revoluble mandrel or core, an interchangeable strand guide on the mandrel to cause the turns laid to take a determined position to form a guide for a subsequent layer, a guide separate from the mandrel, and interchangeable means for operating said second guide to lay the strand of said subsequent layer between the turns of said guide layer.

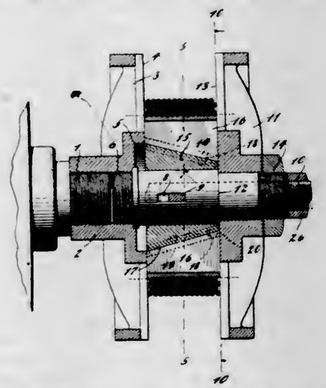
3. In a coil winding machine, a revoluble mandrel or core, an interchangeable strand guide on the mandrel having grooves to receive the strand to cause the same to take a determined position to form a guide for a subsequent layer, a guide movable parallel to the axis of the mandrel, and change gearing for causing the second guide to move progressively to take a position opposite each groove for each revolution of the mandrel.

4. In a coil winding machine, a frame, a mandrel spindle, a shaft having a gear driven by said spindle, a second gear on said shaft, a counter-shaft having a gear, a gear connecting said second gear and the gear on the counter-shaft, an adjustable bearing for said connecting gear, said bearing consisting of a stud shaft upon which said gear is mounted, means for adjustably fixing said stud shaft on the frame, a cam on said countershaft, and a strand guide operated by said cam.

5. In a coil winding machine, a frame, a mandrel spindle, a shaft having a gear driven by said spindle, a second gear on said shaft, a counter-shaft having a gear, a curved undercut groove in the frame, a shaft having a head slidable in said groove, a sleeve on said last-named shaft, a nut engaging said sleeve, a gear on said sleeve meshing with said second gear and the gear on the counter-shaft, and a strand guide driven by said counter-shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,167,721. MANDREL FOR WINDING COILS. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Sept. 27, 1910, Serial No. 584,040. Divided and this application filed Jan. 12, 1912. Serial No. 670,794. (Cl. 242—25.)



1. An expansible and contractible mandrel for winding coils, having independent sets of strand-guiding grooves on the receiving surface thereof, the grooves of each set running substantially parallel to the direction of rotation of the mandrel, the grooves of one set being offset lengthwise of the mandrel from the grooves of another set, and means whereby said mandrel is expansible and contractible.

2. An expansible and contractible winding mandrel comprising a core piece, filler blocks on the core piece, means whereby said blocks are movable in and out radially of the mandrel, and sets of strand-guiding grooves on said blocks, said grooves running substantially parallel to the direction of rotation of the mandrel, and the grooves of one set being offset lengthwise of the mandrel from the grooves of another set.

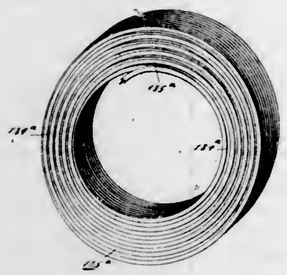
3. A polysided winding mandrel having end flanges, and a corrugated strand guiding pin extending longitudinally of the mandrel from flange to flange.

4. A polysided winding mandrel having a corrugated strand guiding pin extending longitudinally thereof at a juncture between the sides.

5. A polysided winding mandrel having corrugated strand guiding pins extending longitudinally thereof, the corrugations of one pin being offset from those of the preceding pin in the direction taken by the strand in being wound.

[Claims 6 to 16 not printed in the Gazette.]

1,167,722. METHOD OF WINDING AND THE PRODUCT THEREOF. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Sept. 27, 1910, Serial No. 584,040. Divided and this application filed Aug. 13, 1912. Serial No. 714,777. (Cl. 175—21.)



1. A winding or coil in which the turns of the layers lie substantially at right angles to its axis and parallel to one another on two opposite side portions, the turns of each of the layers after the innermost on said two sides being embedded between the turns of the next underlying layer so that the thickness of each of said sides is less than the diameter of the strand multiplied by the number of layers, while on the opposite side portions of the winding between said first-named two side portions, the turns of each layer run oblique to the axis, the oblique turns of each layer crossing and being superimposed on the oblique turns of the next underlying layer, whereby the thickness of the coil on the sides containing the oblique and superimposed turns is thicker than said first-named side portions.

2. A winding in which the turns of the layers are offset laterally longitudinally thereof twice in a revolution of a winding, each offset being to the extent of substantially half the diameter of the wire being wound, and are substantially at right angles to its axis between said offsets, and parallel to each other.

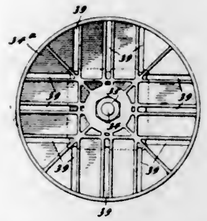
3. The method of winding in coil form on a mandrel which consists in laying a strand on the mandrel substantially at right angles to the axis of rotation for a portion of a turn and positively holding said portion in said position, continuing the winding by offsetting the said turn laterally and obliquely in the direction in which the turns of the layer are successively laid, and positively holding the oblique portion of the turn in said position and then again carrying the strand substantially at right angles to the axis of rotation, and repeating the said operations for all the subsequent turns of the layer, and employing the grooves formed between said turns to positively determine the position of the turns of subsequent layers in conformation to said first layer.

4. The method of winding which consists in winding the strand on a mandrel or form having end flanges, and positively placing and holding, independently of the side engagement of adjacent turns, all the turns in fixed predetermined positions in such manner that on two opposite sides of the axis at each end flange the end turns of successive layers are alternately, parallel to the flange in contact therewith, and parallel to the flange distant therefrom one-half the diameter of the strand.

5. The method of winding which consists in winding the strand on a mandrel or form having end flanges, and positively placing and holding, independently of the side engagement of adjacent turns, all the turns in fixed predetermined positions in such manner that on two opposite sides of the axis at each end flange the end turns of successive layers are alternately, parallel to the flange in contact therewith, and parallel to the flange distant therefrom one-half the diameter of the strand, and so that one part of each end turn touches the flange and the part of the same turn on the opposite side of the axis of the winding will be distant from the flange one-half the diameter of the strand.

[Claims 6 to 8 not printed in the Gazette.]

1,167,723. MANDREL FOR WINDING COILS. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Original application filed Sept. 27, 1910, Serial No. 584,040. Divided and this application filed Sept. 6, 1912. Serial No. 718,812. (Cl. 242—25.)



1. A winding mandrel comprising a receiving body provided with end flanges and having means to cause the turns of a layer to lie parallel with the direction of rotation over a determined area of the mandrel, and oblique to the direction of rotation through another area of the mandrel, said means comprising guiding devices spaced from each other about the mandrel and located at the juncture of an end flange with the body, said guiding devices projecting inward from the flange equal distances and formed to permit the endmost turn of a subsequent layer to take position against an end flange.

2. A winding mandrel, an end flange or head therefor, and a guiding device located at the angle between the receiving surface of the mandrel and the flange, said device projecting outward beyond the receiving surface a distance substantially equal to the diameter of the wire and having a guiding face, and said device projecting from the head lengthwise of the mandrel a distance substantially equal to one-half the diameter of the wire.

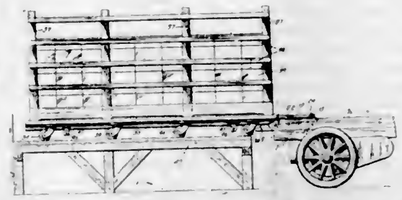
3. A winding mandrel comprising a poly-sided receiving body provided with end flanges and having means to cause the turns of a layer to lie parallel with the direction of rotation over a determined area of the mandrel and oblique to the direction of rotation through another area of the mandrel, said means comprising guiding devices spaced from each other about the mandrel and located respectively at the meeting points of sides thereof and at the juncture of an end flange with the body, said guiding devices projecting inward from the flange equal distances longitudinally of the body.

4. A winding mandrel, a head for the mandrel, and means on the mandrel for guiding the initial coil laid on the mandrel away from said head, said means having a convexly curved face adapted to form with an adjacent strand a guide groove for a turn of a superposed layer, and being so formed that the endmost turn of the said subsequent layer may take position against the head.

5. A winding mandrel having a socket in an end face thereof and extending lengthwise of the mandrel, a guiding device consisting of a pin seated in the socket and having a part extending laterally from the pin and projecting beyond the receiving face of the mandrel.

[Claims 6 to 12 not printed in the Gazette.]

1,167,724. TRUCK. WILLIAM OSCAR SHADBOLT, New York, N. Y. Filed Oct. 4, 1913. Serial No. 793,405. (Cl. 254—45.)

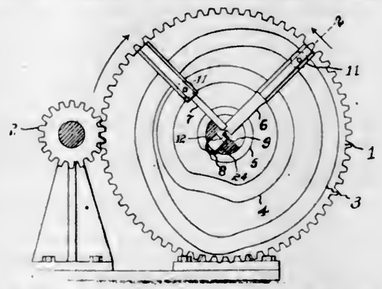


1. A motor truck comprising a chassis, a traveling platform movable onto and off said chassis, slide contacts between said elements, rollers on said platform forming roller contacts therefor in a plane below the plane of said slide contacts, said slide contacts coming into sliding engagement in the onward and offward movements of the platform and affording a steadying bearing therefor during the travel of the chassis, said roller contacts supporting said platform when off the chassis and acting in conjunction with said slide contacts to support said platform during its onward and offward movements, and inclines between said planes adapted to guide said platform from one plane to the other in the onward and offward movements thereof.

2. A motor truck comprising a chassis, a traveling platform movable onto and off said chassis, slide contacts between said elements, rollers on said platform forming roller contacts therefor in a plane below the plane of said slide contacts, said slide contacts coming into sliding engagement in the onward and offward movements of the platform and affording a steadying bearing therefor during the travel of the chassis, said roller contacts supporting said platform when off the chassis and acting in conjunction with said slide contacts to support said platform during its onward and offward movements, inclines between said planes adapted to guide said platform from one plane to the other in the onward and offward movements thereof, and lateral guides for said platform.

3. A motor truck comprising a chassis having parallel load supporting rails, a traveling platform movable onto and off said chassis, slide contacts between said elements, downward flanges disposed on said platform and adapted for lateral engagement with said rails, rollers on said platform forming roller contacts therefor on a plane below said slide contacts, inclines between said planes adapted to guide said platform from one plane to the other in the onward and offward movements thereof, and lateral guides for said platform.

1,167,725. MACHINE FOR CUTTING AND FORMING WIRE CLIPS. WOODFORD SHANNON, Louisville, Ky. Filed Dec. 19, 1910. Serial No. 598,025. (Cl. 140—82.)



1. A fixed element, an element rotating thereon, and an operating tool; said fixed element being adapted to direct workable material through said rotating element to the operating position, and said rotating element being provided with a driving mechanism for said tool.

2. A fixed element and an element rotating thereon; said fixed element being adapted to direct workable material through said rotating element to the operating position and said rotating element being provided with a cam; and means driven by said cam for operating upon said material.

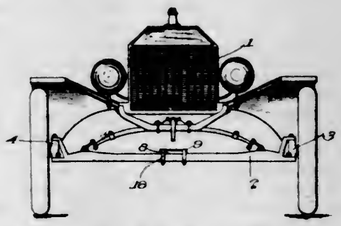
3. A fixed shaft and a cam disk rotating thereon; said shaft being bored axially to direct workable material through said cam disk; and means driven by said cam disk for operating upon said material.

4. A fixed shaft bored to feed material lengthwise thereof; a cam disk rotating thereon, provided with a cam within its core and a cam on one face thereof; means operated by said internal cam for cutting off material fed therethrough; and an operating tool driven by said external cam.

5. A rotatable element provided with a plurality of cams on one end thereof and a plurality of operating elements driven by said cams in different directions approximately toward the axis of revolution of said rotatable element; one of said operating elements being adapted to straddle the other and to operate on each side thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,167,726. SAFETY DEVICE FOR AUTOMOBILES. ROBERT C. SHEPHERD, Los Angeles, Cal. Filed Oct. 31, 1914. Serial No. 869,574. (Cl. 21—200.)



1. The combination with the spindle connecting rod forming a part of the steering mechanism of a motor vehicle, of a safety device comprising a body formed with sockets, a pair of fingers having heads on one end, said heads fitting within the sockets, the body being formed with a stop lug between the fingers, spring means holding the fingers normally in contact with said stop lug at which time the free ends of the fingers are disposed in spaced relation to one another, and a block rigidly secured to the spindle connecting rod between said fingers and in the path thereof.

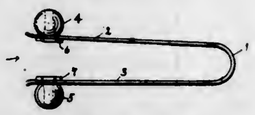
2. The combination with the spindle connecting rod of a vehicle of a safety device comprising a base, a lower member and an upper member, the lower member being formed with a pair of sockets and provided with an extension extending from said sockets, the upper member closing said sockets, a pair of fingers having terminal heads fitting within the sockets, the fingers projecting over said extension and being supported thereby, the lower member being formed with shoulders to limit the outward movement of the fingers, spring means for drawing the fingers toward each other, a lug formed on said extension, between the fingers to limit their movement toward each other, and a block secured to the spindle connecting rod and disposed between the fingers in the path thereof.

3. In an automobile safety device, a body to be attached to the stationary part of an automobile and consisting of an upper and a lower section, said lower section having sockets formed therein, an extension on said lower section, said extension and the section being recessed, a lug located on the extension between the sockets, said sockets opening in the recess, said upper section being placed upon the lower section and covering the sockets, and means for yieldingly holding the steering mechanism of the automobile in center position including

fingers pivotally mounted within the sockets and being normally engaged with opposite sides of said lug, said lower section having shoulders on the outer side of each socket to limit the outer movement of the fingers.

4. In an automobile safety device, a base comprising a lower substantially rectangular section and an upper substantially rectangular section mounted upon the lower section, said lower section having end recesses, lugs on the ends of the upper section engaging in said recesses, an extension on the lower section intermediate the ends thereof, a lug carried by said extension, said lower section having sockets therein opening onto the extension, means for yieldingly holding the steering mechanism of the automobile in center position including fingers pivotally mounted in said sockets and normally engaging with opposite sides of said lug, and means to detachably secure the base to a stationary part of the automobile.

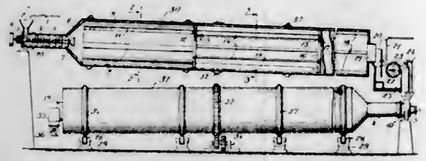
1,167,727. PRINTING DEVICE. RALPH P. STEVENS, Palo Alto, Cal. Filed Oct. 26, 1914. Serial No. 868,672. (Cl. 101—56.)



1. A printing device comprising a pair of integral spring arms, one overlying the other, a knob secured to each of said spring arms, each knob having an opening therethrough a portion of which opening is frusto-conical, a printing device having a frusto-conical shank secured in one of said knobs, and a die having a frusto-conical shank secured in the other knob.

2. A printing device comprising a pair of integral spring arms, one overlying the other, a knob secured to the free edge of each arm, each knob having an opening therethrough, a portion of which is frusto-conical, a printing device having a frusto-conical shank secured in one of said knobs, said printing device having an ink ribbon secured over the face thereof, and a die having a frusto-conical shank secured in the other knob and adapted to produce an impression with the coöperation of the printing device.

1,167,728. BLEACHING APPARATUS. FLOYD G. TEN BROECK, New York, N. Y., assignor to West Virginia Pulp & Paper Company, New York, N. Y., a Corporation of West Virginia. Filed Feb. 16, 1915. Serial No. 8,490. (Cl. 8—2.)



1. In fiber pulp bleaching apparatus, a large diameter rotary elongated inclined bleacher having spaced partitions forming a number of communicating chambers therein, internally projecting agitating and mixing devices in said bleacher including radially arranged bucket ribs, feeding means coöperating with the feed ends of said bleacher, a reduced axially arranged discharge on the discharge end of said bleacher, a continuous washer device receiving the bleached material from said bleacher to wash and partly dry the same, and a second elongated rotary bleacher connected to said washer to receive material therefrom and arranged adjacent and substantially alongside the first bleacher and inclined in the opposite direction to discharge the bleached material adjacent the feed end of said first bleacher.

2. In fiber bleaching apparatus, a large diameter rotary elongated inclined bleacher having spaced partitions forming a number of communicating chambers therein, feeding means coöperating with the feed end of said bleacher, a reduced axially arranged discharge on the discharge end of said bleacher, a continuous washer device receiving the bleached material from said bleacher to wash and partly dry the same, and a second elongated rotary bleacher connected to said washer to receive material therefrom and arranged adjacent the first bleacher and inclined in the opposite direction to discharge the bleached material adjacent the feed end of said first bleacher.

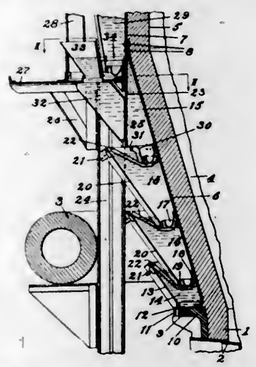
3. In fiber bleaching apparatus, a large diameter rotary elongated bleacher having a substantially cylindrical form and provided with internally projecting agitating and mixing devices adjacent its feed end, means to continuously feed into said bleacher a mixture of fibrous material and bleach, a continuous washing device receiving the bleached material from said bleacher to wash and partly dry the same, and a second elongated rotary bleacher connected to said washer to receive bleach and material from said washer and arranged substantially alongside the first bleacher to discharge the bleached material adjacent the feed end of said first bleacher.

4. In fiber bleaching apparatus, a large diameter rotary elongated bleacher having a substantially cylindrical form, means to feed into said bleacher a mixture of fibrous material and bleach, a washing device receiving the bleached material from said bleacher to wash and partly dry the same, and a second elongated rotary bleacher connected to said washer to receive bleach and material from said washing device.

5. In fiber bleaching apparatus, a large diameter rotary bleacher provided with internally projecting agitating mixing devices, means to continuously feed into said bleacher fibrous material and bleach, a washing device receiving the bleached material from said bleacher, and a second large diameter rotary bleacher connected to said washing device to receive material therefrom.

[Claim 6 not printed in the Gazette.]

1,167,729. BLAST-FURNACE. WILLIAM P. THORNTON, Knoxville, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 5, 1912. Serial No. 701,783. (Cl. 75—5.)



1. In a blast furnace, a metallic furnace shell, water troughs on the outer surface of said shell, said troughs each having a bottom of channel form in cross section and spaced away from the shell.

2. In a blast furnace, a metallic furnace shell, a water trough on the outer surface of the shell having its bottom including a member of substantially U-shaped in cross section and having an inclined extension projecting from an edge thereof adapted to engage the shell.

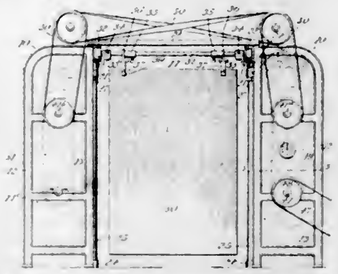
3. In a blast furnace, a metallic furnace shell, a water trough on the outer surface of the shell having its bottom including a pressed plate member of substantially U-shape in cross sections spaced away from the shell and having an inclined extension projecting from an edge thereof adapted to engage the shell.

4. In a blast furnace, a metallic furnace shell, a water trough on the outer surface of the shell having its bottom including a member of substantially U-shape in cross section and having an extension projecting from opposite ends thereof, the inner extension adapted to engage the shell, and the outer extension a member of the trough.

5. In a blast furnace, a metallic furnace shell, a water trough on the outer surface of the shell having its bottom including a member of substantially U-shape in cross section and having an inclined extension projecting from an edge thereof adapted to engage the shell.

[Claims 6 to 11 not printed in the Gazette.]

1,167,730. PAPER-CURING MACHINE. CHARLES WAGNER, Grantwood, N. J., and AUGUST HORMEL, New York, N. Y. Filed June 24, 1915. Serial No. 36,050. (Cl. 34—12.)



1. A paper curing machine comprising a pair of opposed inwardly opening spaced housings to form a paper curing chameber therebetween, paper suspending means adapted to be introduced into said chamber, and blowers located within the housings and adapted to throw the air against the suspended paper.

2. A paper curing machine comprising a pair of opposed inwardly opening spaced housings to form a paper curing chamber therebetween, paper suspending means adapted to be introduced into and to be subsequently withdrawn from said chamber, and blowers located within the housing and adapted to throw the air against the suspended paper.

3. A paper curing machine comprising a pair of opposed inwardly opening spaced housings to form a paper curing chamber therebetween, a track extending through said chamber, movable paper suspending means supported by said track, and blowers located within the housing and adapted to throw the air against the suspended paper.

4. A paper curing machine comprising a pair of opposed inwardly opening spaced housings to form a paper curing chamber therebetween, each of said housings comprising a pair of end frames and a middle frame, and metal sheets extending along the top, outer side and bottom of such end and middle frames, a track extending along the inner side of each housing, paper suspending means supported by said track, and blowers located within the housings.

5. A paper curing machine comprising a pair of opposed inwardly opening spaced housings to form a paper curing chamber therebetween, each of said housings comprising a pair of end frames and a middle frame, and metal sheets extending along the top, outer side and bottom of such end and middle frames, a track extending along the inner side of each housing, paper suspending means supported by said track, blowers located within the housings, and common means for rotating said blowers.

[Claims 6 to 9 not printed in the Gazette.]

1,167,731. SWIVEL-CLIP. JOHN RALPH WALDO, Los Angeles, Cal. Filed May 17, 1913. Serial No. 768,256. Renewed Apr. 26, 1915. Serial No. 24,151. (Cl. 24—10.)

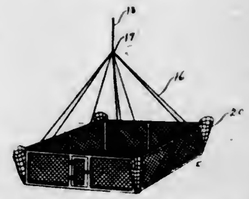
1. A swivel clamp, comprising a body member having an apertured dome formed thereon, a plurality of clasping arms formed integral with said body portion, and a headed swivel formed of an integral piece of wire having an eye formed thereon, said swivel mounted in the apertured dome to have a revoluble and oscillatory connection therewith.



2. A swivel clamp, comprising a body member having an apertured dome formed outwardly thereon, a plurality of clasping arms formed integral with said body member and extending in an oppositely disposed direction from said dome, and a swivel member formed of an integral piece of wire having an eye, and a headed portion intermediate of which the material is constricted and adapted to engage in said aperture in revoluble and oscillatory connection therewith.

3. A clip, comprising a body member having arms thereon to frictionally clasp the stem of the pen or pencil, said body member formed with an outwardly projecting dome having a central aperture therein, a swivel link comprising an integral piece of wire bent to form an eye with contracted portions extending through said aperture with the inner ends bent outwardly and thence inwardly to engage the inner wall of the dome, said link being adapted to rotate and oscillate in relation to the dome.

1,167,732. FISH-TRAP. JAMES R. WHELEN, Denver, Colo. Filed Jan. 24, 1913. Serial No. 743,964. (Cl. 43—20.)



1. A fish trap, adapted to be anchored in the water, said trap consisting of a bottom member, side members adapted to occupy the down position when said trap is anchored in the water, rigid hinges connecting the inner sides of said side members with the upper side of said bottom member, chains arranged at right angles to the axis upon which said side members operate and connecting the outer sides of said side members with the under side of said bottom member, netting connecting the extremities of said side members, and means connected with said side members adapted to cause the latter to assume the raised position and lift the said trap out of the water.

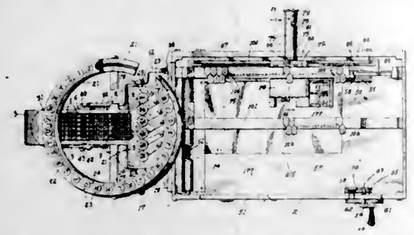
2. A trap, comprising a bottom member, side members adapted to occupy the down position when said trap is set, rigid hinges connecting the inner sides of said side members with the upper side of said bottom member, chains arranged at right angles to the axis upon which said side members operate and connecting the outer sides of said side members with the under side of said bottom member, and means connected with said side members adapted to cause the latter to assume the raised position.

1,167,733. MARKING, REGISTERING, AND RECORD-PRINTING MACHINE. FRANK F. AKERLY, Chicago, Ill. Filed Aug. 3, 1914. Serial No. 854,746. (Cl. 234—1.)

1. In combination, means for supporting a record sheet, article counting and record printing mechanism, means for actuating said mechanism to print on the sheet, means for marking an article and simultaneously setting said mechanism, and means for shifting said mechanism to vary the printing point and simultaneously resetting the counting mechanism.

2. In combination, article counting and record printing mechanism, means for marking an article and simulta-

neously setting said mechanism, and means for actuating said mechanism to cause it to print.



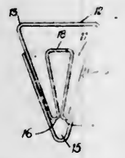
3. In combination, means for supporting a record sheet, article counting and printing mechanism adjacent to said support so as to be movable along a sheet on said support, means for marking an article and simultaneously setting said mechanism irrespective of the position which said mechanism is occupying with respect to the sheet, means for actuating said mechanism to print on the sheet, and means for shifting said mechanism to vary the printing point and simultaneously returning the counting mechanism to zero.

4. In combination, means for supporting a record sheet, article counting and record printing mechanism, means including a series of keys for shifting said mechanism to vary the printing point, and means for simultaneously marking an article and setting said mechanism.

5. In combination, means for supporting a record sheet, article counting and record printing mechanism, means including a series of keys for shifting said mechanism to vary the printing point, means for simultaneously marking an article and setting said mechanism, and an additional key for actuating said mechanism to cause it to print.

[Claims 6 to 30 not printed in the Gazette.]

1,167,734. PAPER-CLIP. JOHN ANDERSON, Mount Vernon, Me. Filed Oct. 31, 1914. Serial No. 869,677. (Cl. 24—261.)

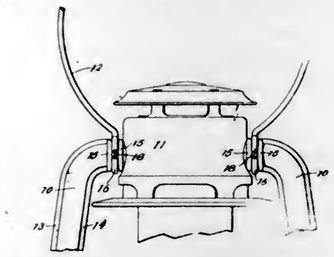


A paper fastener comprising a resilient wire with one portion bent in the form of a closed figure having a pair of straight sides and another portion bent into the form of a double yoke or W within the closed figure, with the outer arms of the double yoke or W close to the aforesaid straight side of the closed figure, whereby the yoke portion and the closed figure portion may be placed on opposite sides of an object to be clamped and whereby the central member of the yoke or W and the remainder of the fastener may be used as an alternative clamp.

1,167,735. TUBULAR LANTERN. JAMES BARNES, Rochester, N. Y., assignor, by mesne assignments, to R. E. Dietz Company, New York, N. Y., a Corporation of New York. Filed May 13, 1914. Serial No. 838,205. (Cl. 240—52.)

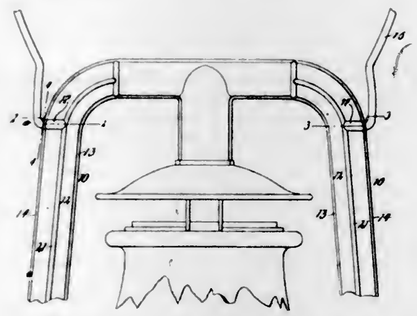
1. In a tubular lantern, the combination with round lantern tubes each provided near its upper end with a pair of spaced annular beads which are formed integrally on the tube, of a bail having eyes at the lower ends thereof which encircle and are rotatably mounted on the tubes between the beads thereof.

2. In a tubular lantern, the combination with round tubes each having near its upper end a pair of spaced annular beads which are formed integrally on the tubes and a locking depression between said pair of beads, of a bail having its ends bent to form eyes which are mounted upon the tubes between the beads thereof and provided on their inner sides with integral locking projections which enter said depressions when the bail is in its upright position.



3. In a tubular lantern, the combination with lantern tubes each provided near its upper end with a pair of spaced annular beads, formed integrally on the tube, of a bail having the lower end thereof bent to form expansible eyes which encircle the tubes and are rotatably mounted on said tubes between the beads thereof.

1,167,736. TUBULAR LANTERN. JAMES BARNES, Rochester, N. Y., assignor, by mesne assignments, to R. E. Dietz Company, New York, N. Y., a Corporation of New York. Filed May 13, 1914. Serial No. 838,206. (Cl. 240—52.)

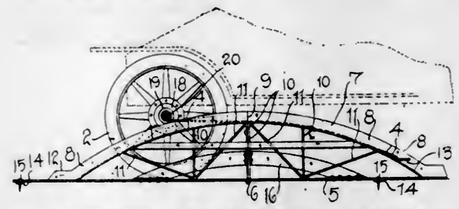


1. In a tubular lantern, the combination with a tube provided with an opening for the bail and with a locking depression formed in the wall of the tube on the inner side thereof adjacent to said opening, of a bail journaled in said opening and provided within the tube with a projecting locking arm adapted to spring into said depression when the bail reaches the upright position, thereby holding the bail yieldingly in that position.

2. In a tubular lantern, the combination with a tube provided with an opening for the bail and formed with a locking groove formed in the wall of the tube and partly encircling the tube on the inner side thereof, of a bail journaled in said opening and provided within the tube with a laterally projecting locking arm adapted to spring into said groove when the bail reaches the upright position, thereby holding the bail yieldingly in that position.

3. In a tubular lantern, the combination with a tube provided with an opening for the bail and with a locking depression formed in the wall of the tube on the inner side thereof adjacent to said opening, of a bail journaled in said opening and provided within the tube with a laterally projecting locking arm having a rounded head, which arm is adapted to spring into said depression when the bail reaches the upright position, thereby holding the bail yieldingly in that position.

1,167,737. MUD-JACK FOR AUTOMOBILES. ALFRED J. BERRIEN and ELBERT I. BOWE, Huron, S. D.; said Berrien assignor to said Bowe. Filed Mar. 17, 1915. Serial No. 15,138. (Cl. 21—114.)



1. The combination with an inclined track and a support therefor designed to hold said track rigidly in inclined position, of a connection adapted to be engaged with an automobile to cause the automobile to be raised upon said track.

2. The combination with an inclined track and means for supporting said track in an inclined position, of a flexible connection extending from said track and connected thereto, and a winding drum adapted to be attached to the power wheel of an automobile and upon which such flexible connection is adapted to be wound to thereby cause the automobile to be raised by its own power forwardly and upwardly along and upon the inclined track.

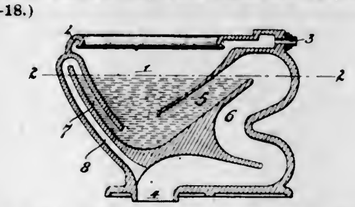
3. A mud jack for automobiles including an upwardly and longitudinally extending track, and means for operatively engaging the axle of an automobile with said track and drawing the automobile forward and up said track.

4. A mud jack for automobiles including an inclined track, a base upon which the track is mounted and adapted to rest whereby to hold it in its inclined position, and means for operatively engaging the axle of an automobile with said track and for drawing the automobile along and upon said track to thereby lift it.

5. A mud jack for automobiles including an inclined track, a base upon which said track is supported in its inclined position, means adapted to be actuated by the power of the automobile for drawing the same upwardly and along the track, and a longitudinally extending guard below said track and extending longitudinally thereof, as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

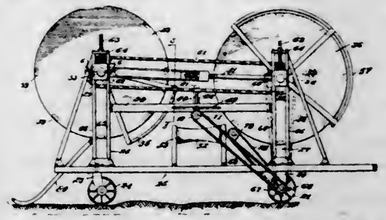
1,167,738. WATER-CLOSET. JOHN J. BOYNE, Buffalo, N. Y. Filed Mar. 10, 1913. Serial No. 753,230. (Cl. 4—18.)



1. A water closet comprising a bowl, an outlet below said bowl, a main siphon having an ascending passage extending upwardly from the bottom of said bowl and a descending passage extending downwardly from the upper end of said ascending passage to said outlet, and an auxiliary siphon or overflow having an ascending passage extending upwardly from the bottom of the bowl and a descending passage extending downwardly from the upper end of said last mentioned ascending passage to said outlet, the upper ends of the passages of the auxiliary siphon being arranged higher than the upper ends of the passages of the main siphon.

2. A water closet comprising a bowl, an outlet below said bowl, a main siphon having an ascending passage extending upwardly from the bottom of said bowl and a descending passage extending downwardly from the upper end of said ascending passage to said outlet, and an auxiliary siphon or overflow having an ascending passage extending upwardly from the bottom of the bowl and a descending passage extending downwardly from the upper end of said last mentioned ascending passage to said outlet, the upper ends of the passages of the auxiliary siphon being arranged higher than the upper ends of the passages of the main siphon and said main siphon being arranged on the rear part of the closet and said auxiliary siphon on the front part of the closet and the cross sectional area of said auxiliary siphon being less than that of said main siphon.

1,167,739. GRAIN-HEADING MACHINE. AUBREY BROOKS, Heber, Cal. Filed June 23, 1915. Serial No. 35,756. (Cl. 56—131.)



1. In a grain heading machine the combination of a pair of feed drums, a cutting member interposed between said drums, and means coöperating with the drums whereby the grain will be fed to the cutting member and head portions of the grain of substantially equal length cut from the stalks.

2. In a grain heading machine the combination of a pair of feed drums mounted parallel to each other and rotating simultaneously, a cutting knife interposed between the drums, shield members partially covering the outer faces of the drums and so positioned to coöperate with the feed drums in feeding the grain to the cutting knife as to sever head portions of the grain of substantially equal length.

3. In a grain heading machine the combination of primary and secondary horizontally disposed parallel feed drums, a shield partially encompassing and extending rearwardly and downwardly from the primary drum, a shield substantially encompassing the upper and rearward portion of the secondary drum, and a reciprocally moving cutter interposed between said primary and secondary drums.

4. In a grain heading machine the combination of primary drum and a secondary drum rotating in substantially the same horizontal plane, a sickle interposed between the drums, and means whereby the grain is thrown back of the primary drum and into the secondary drum, and means coöperating with the secondary drum whereby the grain will be drawn across the sickle at such a point on the stalk that the head portions cut therefrom will be of uniform length while the machine is advancing, regardless of the total length of the stalk.

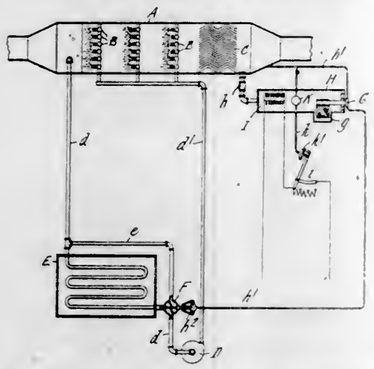
5. In a grain heading machine, a carriage, a horizontal drum having spaced slats, revolubly mounted on the forward portion of the carriage, a shield extending across and spaced from the drum and projecting upwardly from a point near the lower portion of the drum toward the rear thereof, a horizontal cutter having vertically extending cutting blades arranged adjacent the upper end of the shield, means for rotating the drum to cause it to engage the tops of stalks as the carriage advances and carry them over the shield, and means for delivering the ends of the stalks to the cutter.

[Claims 6 to 12 not printed in the Gazette.]

1,167,740. METHOD OF CONTROLLING THE HUMIDITY OF AIR UNDER PRESSURE. WILLIS H. CARRIER, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed Aug. 21, 1911. Serial No. 645,089. (Cl. 98—39.)

1. The herein described method of controlling the humidity of air under pressure, consisting in reducing the

pressure of a portion of said air substantially to atmospheric pressure and so regulating the temperature of said compressed air under the control of said air of reduced pressure as to maintain substantially a predetermined relation between the wet and dry bulb temperatures of said air of reduced pressure, substantially as set forth.



2. The herein described method of controlling the humidity of air under variable pressures, consisting in cooling said air to condense water vapor therefrom, reducing the pressure of a portion of said air after cooling substantially to atmospheric pressure, and so regulating the temperature to which said compressed air is cooled under the control of said air of reduced pressure as to maintain substantially a predetermined relation between the wet and dry bulb temperatures of said air of reduced pressure, substantially as set forth.

3. The herein described method of controlling the humidity of air under variable pressures, consisting in cooling said air by means of a cooling liquid to condense water vapor therefrom, reducing the pressure of a portion of said air after cooling substantially to atmospheric pressure, and so regulating the cooling effect of said cooling liquid under the control of said air of reduced pressure as to maintain substantially a predetermined relation between the wet and dry bulb temperatures of said air of reduced pressure, substantially as set forth.

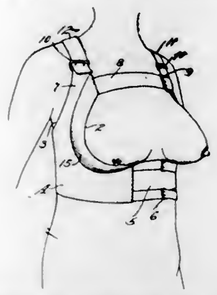
4. The herein described method of controlling the humidity of air under variable pressures, consisting in spraying a liquid into said air to alter the temperature and humidity thereof, separating the free moisture from the air, thereafter reducing the pressure of a portion of said air substantially to atmospheric pressure, and so regulating the temperature of said liquid under the control of said air of reduced pressure as to maintain substantially a predetermined relation between the wet and dry bulb temperatures of said air of reduced pressure, substantially as set forth.

5. The herein described method of controlling the humidity of air under variable pressures, consisting in cooling said air by means of a cooling liquid to condense water vapor therefrom, reducing the pressure of a portion of said air after cooling substantially to atmospheric pressure, and regulating the temperature of said cooling liquid through the medium of the coöperation of the separate effects of the wet and dry bulb temperatures of said air of reduced pressure, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,167,741. BREAST-SUPPORTER. BENJAMIN FRANKLIN CLARKE, Paso Robles, Cal. Filed Oct. 28, 1914. Serial No. 869,064. (Cl. 2—87.)

1. A breast supporter comprising a body-encircling piece having spaced upwardly extending portions, one for each breast fashioned and adapted to pass upwardly at the outside of the breast to give the latter lateral support, said portions terminating above the breasts, an adjustable connection above the latter and between the upwardly extending portions, a strap secured adjacent each upward portion to the body-encircling piece for extending upwardly across the back and over the shoulder to be fastened to the terminal of the other upward portion, adjustable connections between the straps and the upwardly extending portions, and an insert secured to the inner border of each upward portion to provide a cup-shaped support for the breast.



2. A breast supporter comprising two complementary triangular body pieces, each having a waist portion connected at front and rear with its mate and also an upwardly extending portion terminating just above a breast and fashioned to pass under an arm and to give lateral support to the outerside of a breast, the upward portion being wider at the base whereby the under arm part provides for the lateral support of the breast, connections between the pieces above and below the breasts, and shoulder straps connected with the top angles of the respective pieces and with the opposite base portions after passing over the shoulders.

3. A breast supporter comprising two complementary body portions adjustably connected around the waist, each body portion having an upward under-arm extension terminating above the adjacent breast and which is cup-shaped to fit the contour of the outer side of a breast and laterally to support the latter, an adjustable connection between said upward extension extending across the chest above the breasts, and adjustable shoulder straps connected to the upward extension and passing therefrom over the shoulders.

1,167,742. GEAR-WHEEL. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 2, 1913. Serial No. 776,951. (Cl. 74—28.)



1. A self-sustaining gear composed of fibrous material and a binder.

2. A self-sustaining gear composed of laminations of fibrous material and a binder.

3. A gear having a self-sustaining working body portion composed of laminations of fibrous material and a binder comprising a phenolic condensation product.

4. A gear having a self-sustaining working body portion composed of a fibrous material, and a binder that resists attack by heat, oil or water, under operating conditions.

5. A gear having a self-sustaining working body portion composed of fibrous material, and a binder that is unimpaired by operating temperatures.

[Claims 6 to 14 not printed in the Gazette.]

1,167,743. GEAR. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed July 2, 1913, Serial No. 776,951. Divided and this application filed Apr. 6, 1915. Serial No. 19,608. (Cl. 74—41.)



1. A gear having a self-sustaining working body portion composed of laminations of cloth cemented together by means of an adhesive.

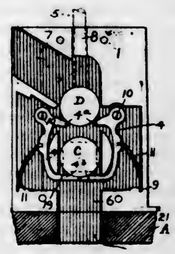
2. A gear having a self-sustaining working body portion composed of laminations of cloth cemented together by means of an adhesive that resists attack by heat, oil or water, under operating conditions.

3. A gear having a self-sustaining working body portion composed of laminations of cloth and a phenolic condensation product.

4. A gear having a self-sustaining working body portion composed of laminations of cloth and a binder that resists attack by heat, oil or water under operating conditions.

5. A gear having a self-sustaining working body portion composed of laminations of cloth and a binder that is unimpaired by operating temperatures.

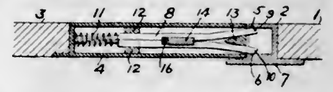
1,167,744. COIN-SLOT MECHANISM. WILLIAM COOPER, Denver, Colo. Filed Oct. 28, 1915. Serial No. 58,323. (Cl. 194—98.)



1. A coin slot mechanism consisting of a casing provided with a coin slot; a pair of spring actuated pivoted retaining arms having inwardly extending top and bottom ends intersecting the said slot, the coin first introduced being held in the lower portion of said coin slot by the lower ends of said arms and the coin last introduced resting upon the upper ends of said arms in the upper portion of said slot, and a spring controlled plunger adapted to be forced down against said second coil whereby said arms are spread apart to permit the first coin to drop down out of said coin slot and the second coin to assume the previous position of said first coin, for the purpose described.

2. A coin slot mechanism consisting of a casing provided with a vertical coin slot having an inclined upper mouth; a pair of spring actuated pivoted retaining arms having inwardly extending top and bottom ends intersecting said slot, the coin first introduced being held in the lower portion of said coin slot by the lower ends of said arms and the coin last introduced resting upon the upper ends of said arms in the upper portion of said slot, and a spring controlled plunger adapted to be forced down against said second coin whereby said arms are spread apart to permit the first coin to drop down out of said coin slot and the second coin to assume the previous position of said first coin, for the purpose described.

1,167,745. ANTIRATTLE-FASTENING FOR DOORS AND THE LIKE. EDWARD J. DECKER, Lansdowne, Pa., assignor to Virginia Brooks Decker, Lansdowne, Pa. Filed Nov. 24, 1914. Serial No. 873,675. (Cl. 70—64.)



1. An anti-rattle fastening for doors and the like comprising the combination of a fixed and a movable element, a two-part sliding wedge bolt on one of said elements, a fixed guide between the parts of the wedge bolt for spreading its projecting end, guides for preventing spreading at the other end of the wedge bolt, spaced abutments on the other element against which the ends of the wedge bolt are spread, and a spring continuously acting to spread the ends of the wedge bolt.

2. An anti-rattle fastening for doors and the like comprising the combination of a fixed and a movable element of which one is provided with two abutments, a two-part slidable locking member adapted to be spread between the abutments, and means operating upon said sliding member and tending to continuously spread its parts and maintain a wedging action, substantially as described.

3. An anti-rattle fastening for doors and the like comprising the combination of two elements of which one is movable with respect to the other, two abutments on one of said elements, a continuous spring acting sliding wedge mechanism on the other of said elements adapted to exert lateral wedging action in respect to said abutments and whereby rattling is avoided, a hand lever for retracting the wedge bolt, and a latch adapted to engage the hand lever and to be released by contact with one of the elements to free the lever.

4. An anti-rattle fastening for doors and the like comprising the combination of a fixed and a movable element, two relatively fixed abutments on one of said elements, a sliding wedge bolt on the other of said elements adapted to exert its wedging action sidewise between said abutments, a continuously acting spring and guides for causing the wedge bolt to continue to exert such wedging action, a hand lever for retracting the wedge bolt, and a latch adapted to engage the hand lever and to be released by contact with one of the elements to free the lever.

5. An anti-rattle fastening for doors and the like comprising the combination of a fixed and a movable element, two relatively fixed abutments on one of said elements, wedge bolt guides on the other element, a sliding wedge bolt adapted to exert a sidewise wedging action between said abutments and to wedge itself against said guides, a continuously acting spring for causing the wedge bolt to continue to exert such wedging action, a hand lever for retracting the wedge bolt, and a latch adapted to engage the hand lever and to be released by contact with one of the elements and to free the lever.

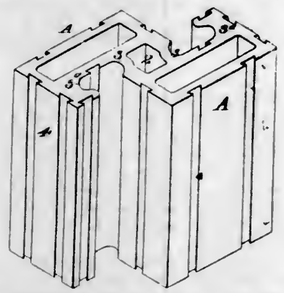
[Claims 6 and 7 not printed in the Gazette.]

1,167,746. BUILDING BLOCK AND CONSTRUCTION. JAMES J. FUNSTEN, San Francisco, Cal. Filed Apr. 10, 1915. Serial No. 20,438. (Cl. 72—38.)

1. In a wall, a series of front blocks, each having a part forming a portion of the rear face of the wall and a series of rear blocks each having a part forming a portion of the front face of the wall, and a projection on each block at right angles to the front and rear faces thereof each projection having a straight outer end face and an inner S-shaped face the S-shaped faces of adjacent blocks being adapted to interlock.

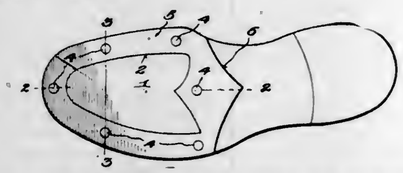
2. A block having a front face to form a part of the front of a wall and having an end projection that extends at right angles to said front face, said projection having a substantially straight outer face and an irregular inner face the latter adapted to interlock with the similar inner face of the similar projection of an adjacent block, said block further having a part adapted to form a part of the rear of the wall.

8. A block having substantially similar front and rear members each having front and rear faces, the members being arranged in parallelism and having their inner ends arranged in lapping relation, means to connect the members at their said inner ends and a projection on the outer



end of each member, said projections extending in opposite directions and from the inner faces of the respective members, the opposite faces of said connecting means and the inner faces of the projections being formed with grooves which lie opposite to one another.

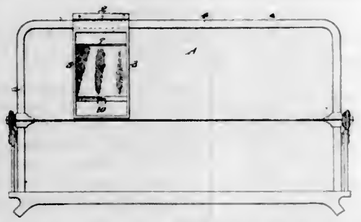
1,167,747. SHOE-SOLE. BENJAMIN GILOWITZ, Greenport, N. Y. Filed Apr. 22, 1915. Serial No. 23,226. (Cl. 36—59.)



1. A non-slip shoe sole having its edge portion reduced in thickness and provided thereon with a plurality of spaced depending non-slip studs, in combination with an attaching and wear strip of tough material underlying said edge portion and having spaced apertures through which said studs project.

2. A non-slip shoe sole having its edge portion channeled on its lower side and equipped with non-slip studs depending into the channel, combined with an attaching and wear strip of tough material received by the channel and having spaced apertures through which said non-slip studs project.

1,167,748. LIGHT-DIMMER. CARL K. GREENLEAF, Santa Clara, Cal. Filed Mar. 2, 1915. Serial No. 11,456. (Cl. 21—148.)



The combination with the wind-shield of an automobile, of a frame provided with apertures, a clamping member for securing said frame to the wind-shield, a sliding frame mounted in said frame, a colored glass mounted in the sliding frame, and a pair of spring actuated latches on the sliding frame, said latches being adapted to be projected into the apertures formed in the first-named frame to support and lock the sliding frame.

1,167,749. ELECTRIC HEATING APPARATUS. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Sept. 26, 1913. Serial No. 791,931. (Cl. 219—63.)



1. An electric heater comprising an attachment member having contacts adapted to engage coöperating receptacle contacts, a rigid conductor connected to one of said contacts adapted to be supported solely by the attachment member and extending outwardly therefrom, and a heater element supported by the conductor and electrically connected at its respective ends to the outer end of the conductor and to another of said attachment contacts.

2. A heater comprising a plug having a helically corrugated body adapted to engage and make electrical contact with the interior walls of a socket and an end contact electrically separated from the body of the plug and adapted to make contact with the interior bottom contact of a socket, a conducting rod secured to said end contact, an insulating sleeve surrounding the rod, a terminal member secured to the body of the plug, an opposite terminal member at the outer end of the rod and a heater element connected at its respective ends to the terminal members.

3. An electric heater comprising an attachment plug, a casing socket secured thereto and insulated therefrom, a conducting rod extending outwardly from the plug, a heater element arranged above the rod as a support, a casing frame supported in said casing socket, translucent panels supported by said frame, a cap at the outer end of said casing and an insulating nut screwed onto the end of the conducting rod for holding the parts of the casing together in position.

4. An electric heater comprising an attachment member, a casing socket secured thereto and insulated therefrom, a central rod, a heater element, a casing frame supported in the casing socket, a cap at the outer end of the casing and an insulating nut screwed onto the outer end of the central rod.

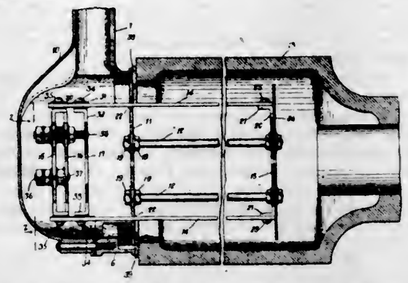
5. An electric heater comprising an attachment plug, a polygonal casing socket secured thereto and insulated therefrom, a central rod extending outwardly from the plug, a heater element supported by the rod, a casing frame in the form of a hollow polygonal prism with open panels, set into the casing socket, a cap fitted into the outer end of the casing frame, and an insulating means affixed to the outer end of the rod for holding the parts of the casing together in position.

[Claim 6 not printed in the Gazette.]

1,167,750. ELECTRIC HEATER FOR LAUNDRY-ROLLS. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed July 13, 1914. Serial No. 850,559. (Cl. 219—37.)

1. An inclosed electric heater comprising a casing having a plate adapted to be located in juxtaposition to the open end of a relatively empty hollow rotatable body, and armored heater units extending from the casing into the space within the hollow body.

2. A heater comprising a pair of spaced supporting plates, tie rods secured thereto, a plurality of armored heater units closed at one end and having spaced terminal members at the opposite end, said armored units being affixed to one of said supporting plates at their closed ends and extending through uniformly spaced holes in the other supporting plate, and a casing inclosing the terminal ends of the heater units and secured to the adjacent supporting plate.



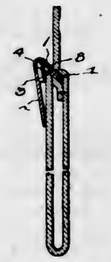
3. A heater comprising a pair of spaced supporting plates, tie rods secured thereto, a plurality of armored heater units closed at one end and having spaced terminal members at the opposite end, said armored units being affixed to one of said supporting plates at their closed ends and extending through uniformly spaced holes in the other supporting plate, a casing inclosing the terminal ends of the heater units and secured to the adjacent supporting plate, and interconnecting rings within the casing joining different uniformly distributed groups of the units.

4. A heater comprising a pair of spaced supporting plates, tie rods secured thereto, a plurality of armored heater units closed at one end and having spaced terminal members at the opposite end, said armored units being affixed to one of said supporting plates at their closed ends and extending through uniformly spaced holes in the other supporting plate, a casing inclosing the terminal ends of the heater units and secured to the adjacent supporting plate, and interconnecting rings, one joined to a corresponding terminal of each unit and others joining the opposite terminals of different groups of the units.

5. A heater comprising a stationary plate, a disk, a plurality of outwardly extending truss rods affixed to the plate or disk, a supporting disk secured at the outer ends of the truss rods, a plurality of armored units extending outwardly through holes in said plate or disk and affixed to said supporting disk, and interconnecting rings adapted to electrically connect the heater units in groups.

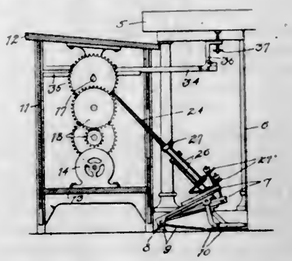
[Claims 6 to 11 not printed in the Gazette.]

1,167,751. BUCKLE. MYRON B. HAMMOND, Bridgeport, Conn. Filed Oct. 21, 1914. Serial No. 867,835. (Cl. 24—191.)



In a buckle, a bottom bar made entirely of wire having its ends extended outwardly and inwardly toward each other and spaced from said bar and from each other to form short portions parallel to said bar, the extreme ends of said portions being further bent outwardly at an angle to form a pair of spaced stops which latter have free outer ends that terminate in front of and adjacent to said bar, and a clamping lever pivoted to said portions between the stops and the said outward end extensions of the bar and provided with an angular portion which coöperates with said bar in and is movable through the space between said stops, so that when the inner face of said lever engages said stops, said angular portion of the lever is in clamping position.

1,167,752. MEANS FOR OPERATING PLAYER-PIANOS. STILLWELL R. HARCOURT, Chicago, Ill. Filed May 15, 1915. Serial No. 28,332. (Cl. 74—5.)

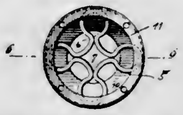


1. In combination, a pneumatically operated player piano, pumping pedals for said pneumatically operated player piano, an operating shaft, means for rotating said shaft, and means for operatively connecting said pedals and said shaft, said last named means having a resilient element therein through which the movement of said shaft is transmitted to depress the pedals.

2. In combination, a pneumatically operated player piano, pumping pedals for said pneumatically operated player piano, a portable power plant adapted for operative connection to said pumping pedals, said power plant comprising an operating shaft, means for rotating said shaft, and means for operatively connecting said pedals and said shaft, said last named means having a resilient element therein through which the movement of said shaft is transmitted to depress the pedals, and means for clamping said power plant firmly in position in front of said pumping pedals.

3. A cabinet, a shaft in said cabinet, means for operating said shaft, a crank on said shaft, a connecting rod extending from said crank and an L-shaped member for connecting said rod to the top of a player pedal.

1,167,753. SNAP-BUTTON. BEN ZION HAUSNER, New York, N. Y. Filed Sept. 8, 1915. Serial No. 49,490. (Cl. 24—218.)

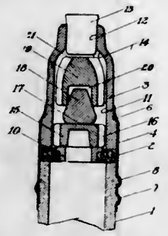


In a snap button, a female member composed of a continuous strip of resilient material formed of a plurality of normally closed outer loops and a plurality of intervening inner loops all arranged in a common plane, and of a frame having flattened sides that engage the corresponding sides of the outer loops, the entire device being flat on the front and back and reversible.

1,167,754. NON-REFILLABLE BOTTLE. CHARLES N. HAYES, Rochester, N. Y. Filed Aug. 24, 1915. Serial No. 47,053. (Cl. 215—62.)

1. A non-refillable bottle having a neck, a seat in the neck, a valve arranged to coöperate with the seat to close the neck and having a flat face, a member arranged in the

neck above the valve and having a pocket in the under side thereof and a weight having a substantially flat face portion to coöperate with the flat face of the valve, and a tapered portion received within the pocket of the pocketed member, the pocket being of a size to permit the end of the tapered portion to shift laterally therein while the weight is tilting on an edge of the pocket as a fulcrum to close the valve.

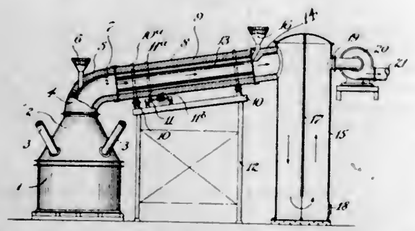


2. A non-refillable bottle having a neck, a seat in the neck, a valve arranged to coöperate with the seat to close the neck, and having a flat top face, a member arranged in the neck above the valve and having a pocket arranged in its under side, and a weight having a flat face to cooperate with the flat face of the valve and a tapered portion operating in the pocket and arranged to tilt on one edge of the pocket as a fulcrum.

3. A non-refillable bottle having a neck, a seat in the neck, a valve having a flat top face and arranged to cooperate with the seat to close the neck, two weights arranged in the neck above the valve, one of said weights having a pocket in its under side and the other of said weights having a flat face for coöperation with the flat face of the valve and a tapered portion operating in the pocket of the first named weight, said pocket being of a size to permit the end of the tapered portion to shift laterally therein while maintaining the greater portion of the weight outside of the pocket at all times, so that the weight may tilt laterally on the edge of the pocket as a fulcrum to close the valve.

4. A non-refillable bottle comprising a neck, a seat in the neck, a valve arranged to coöperate with the seat to close the neck and having a flat-top face, a fixed abutment in the neck, and two weights one of which acts on the fixed abutment to rock laterally, and has a pocket in its under side, said pocket having substantially cylindrical side walls, and the other of which has a flat face for cooperation with the flat face of the valve and a tapered portion projecting within the pocket of the first named weight while maintaining the greater portion of the weight outside of the pocket at all times so that the second named weight may tilt on the edge of the pocket as a fulcrum to engage the valve and close the same.

1,167,755. APPARATUS AND PROCESS FOR OXIDIZING PHOSPHORUS. INGENUIN HECHENBLEIKNER, Charlotte, N. C. Filed Nov. 6, 1914. Serial No. 870,625. (Cl. 23—1.)



1. The process of manufacturing phosphoric acid which consists in heating together in a furnace phosphatic material, a flux and a carbonaceous material, feeding and conducting a mass of the phosphatic material and the flux toward the furnace, passing the gases from said furnace through said mass as it progresses toward the furnace to pre-heat the same, and separately feeding the carbonaceous material into the furnace.

2. The process of manufacturing phosphoric acid which consists in heating together in a furnace phosphatic material, a silicious flux and a carbonaceous material, feeding and conducting a stream of the phosphatic material and the flux toward the furnace, passing the gases from the furnace through said stream as it progresses toward the furnace to pre-heat the same, and separately feeding the carbonaceous material into the furnace.

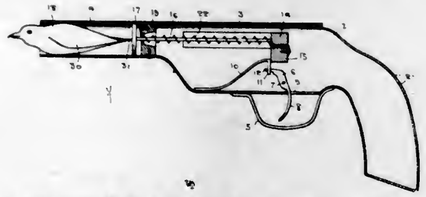
3. The process of manufacturing phosphoric acid which consists in heating together in a furnace phosphatic material, a flux and a carbonaceous material to drive off phosphorus gas and carbon monoxid gas, feeding and conducting a stream of the phosphatic material and the flux toward the furnace, passing said phosphorus gas through said stream and admitting air to said stream to effect a further oxidation of the phosphorus and the carbon monoxid while passing in said stream, and thereby pre-heating the material in said stream.

4. The process of manufacturing phosphoric acid which consists in heating together in a furnace phosphatic material, a silicious flux and a carbonaceous material to produce phosphorus gas and carbon monoxid, leading said phosphorus gas and said monoxid in a current from the furnace, feeding and conducting a stream of the phosphatic material and the flux in a divided condition toward the furnace, revolving the said stream to effect its gradual progress toward the furnace, and introducing oxygen into said stream to oxidize the phosphorus to phosphorus pentoxid, and to oxidize the carbon monoxid to carbon dioxid within the stream, and thereby pre-heating the material in the stream before it passes into the furnace.

5. The process of manufacturing phosphoric acid which consists in heating together in a furnace phosphatic material, a silicious flux and a carbonaceous material to produce phosphorus gas and carbon monoxid, leading said phosphorus gas and said monoxid in a current from the furnace, feeding and conducting a stream of the phosphatic material and the flux through said current toward the furnace, revolving the said stream to effect its gradual progress toward the furnace, and introducing oxygen into said stream to oxidize the phosphorus to phosphorus pentoxid, and to oxidize the carbon monoxid to carbon dioxid within the stream, and thereby pre-heating the column before it passes into the furnace, and feeding a carbonaceous material into the furnace.

[Claims 6 to 15 not printed in the Gazette.]

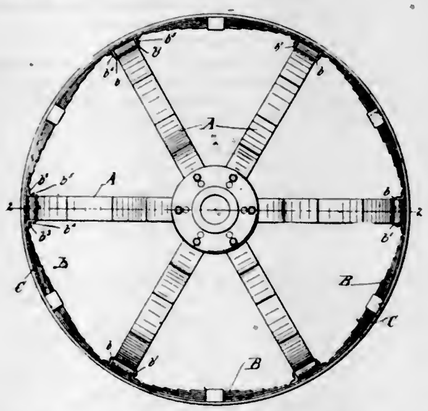
1,167,756. TOY. MILTON ANTHONY HEINZER, Absecon, N. J. Filed Aug. 13, 1914. Serial No. 856,569. (Cl. 124—12.)



A toy comprising a pistol barrel, and a stock having longitudinal slots in its sides, a piston block slidably mounted in said slots and provided with a centrally disposed depending lug, a bushing within said barrel adjacent said stock and provided with a central aperture, a piston rod secured to said piston block centrally thereof and projecting through said apertured bushing, a piston secured upon the projecting end of said piston rod within said barrel and forwardly of said apertured bushing, a retractile spring interposed between said piston block and said bushing and surrounding said piston rod, the forward

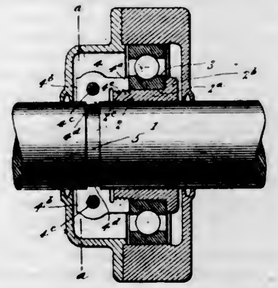
end of said spring projecting through the aperture of said bushing and having an upturned angular portion secured to the forward side of said bushing, the rear end of said spring projecting through an aperture formed in said piston block and having a downturned angular portion secured to the rear side of the lug of said piston block, a trigger spring provided with a depending angular offset for engaging said lug for retaining said piston block in rearward position and said spring under tension until released, said angular offset provided with an aperture, and a trigger having its upper end projecting through the aperture of said angular offset of said trigger spring, whereby to release said piston block for projecting said piston forwardly under the tension of said spring.

1,167,757. VEHICLE-WHEEL. HENRY HESS, Wawa, Pa. Filed Mar. 4, 1907. Serial No. 360,312. (Cl. 152—29.)



In a vehicle wheel, the combination with a hub, yielding spokes, and a resilient tire, of a plurality of leaf springs, each comprising superposed connected plates of gradually decreasing length, said springs being applied to the tire at points between the spokes, with the longer plates next the tire, and being proportioned in relation to the spokes to offer a gradually decreasing resistance to the bend of the tire uniformly in both directions toward the spokes.

1,167,758. CLAMPING DEVICE FOR ANTIFRICTION-BEARINGS. HENRY HESS, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 21, 1910. Serial No. 593,450. (Cl. 74—8.)



1. In combination with a shaft, a bushing thereon provided with a supporting surface and with an annular bearing rib at the end of the supporting surface, a member supported by the bushing and adapted to bind against said bearing rib, and a clamping nut interlocked with the shaft and interlocked also with the bushing, said nut being adapted when turned, to shift the bushing endwise and clamp said member between the nut and bearing rib on the bushing.

2. In combination with a shaft provided with a groove, a bushing on the shaft having a supporting surface and provided with a threaded portion, a member supported by the bushing, and a nut surrounding the shaft and screwed onto the threaded portion of the bushing, said nut being formed with a rib engaging in the groove in the shaft and adapted when turned to shift the bushing endwise and bind the said member thereon.

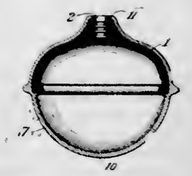
3. In combination with a shaft provided with a groove, a bushing on the shaft having a supporting portion and provided with a shoulder, and having also a threaded portion, a member supported by the bushing and adapted to bear against said shoulder, and a nut provided with a rib engaging in the groove in the shaft, and having a threaded extension adapted to be screwed on the threaded portion of the bushing and to engage said member.

4. In combination with a shaft, a bushing thereon provided with a bearing shoulder, a member surrounding and supported by said bushing and adapted to bear against the shoulder thereon, and a clamping device interlocked with the shaft in such manner as to be held against endwise motion relative to the shaft, said clamping device being operatively connected with the bushing and being adapted, when turned, to shift the bushing endwise and also to engage said member in clamping the same against the bearing shoulder on the bushing.

5. In combination with a shaft, a bushing thereon provided with a supporting surface and with a bearing shoulder at the end of said surface, projecting laterally therefrom, a member supported by the bushing and adapted to bear at its end against the bearing shoulder, and a nut on the shaft engaging the bushing and acting when turned to shift the bushing endwise on the shaft and bind said shoulder forcibly against said member endwise.

[Claim 6 not printed in the Gazette.]

1,167,759. PROCESS FOR MAKING BULBS FOR TANK-VALVES. ARTHUR T. HOPKINS, Cleveland, Ohio, assignor to The Mechanical Rubber Company, a Corporation of New Jersey. Original application filed Apr. 13, 1914, Serial No. 831,608. Divided and this application filed May 21, 1914. Serial No. 839,935. (Cl. 18—55.)



1. The process of making bulbs for tank valves, comprising first forming a supporting part of the upper portion thereof, applying to the part so formed by means of a suitable adhesive a covering of rubber stock, attaching to said part and said covering a hemispherical lower portion of rubber stock capable of being vulcanized, and then vulcanizing the whole.

2. The process of making bulbs for tank valves, comprising, first forming a supporting part of the upper portion thereof out of relatively hard material, applying to the inner and outer margins of the part so formed an adhesive material, covering the surfaces thereof at said margins with rubber stock capable of being vulcanized, attaching to said coverings at said margins a hemispherical portion of said rubber stock, and then vulcanizing the whole.

3. The process of making bulbs for tank valves, comprising first forming a core for the upper portion thereof out of raw rubber stock capable of being vulcanized rela-

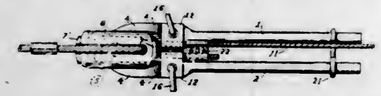
tively hard, partly vulcanizing the same, applying to the part so formed an adhesive material, attaching to said upper portion a hemispherical portion of sheet rubber stock capable of being vulcanized relatively soft, and then vulcanizing the whole.

4. The process of making bulbs for tank valves, comprising, first forming a core for the upper portion thereof out of raw rubber stock capable of being vulcanized relatively hard, partly vulcanizing the same, applying to the part so formed an adhesive material, covering the outer surface thereof with a sheet of rubber stock capable of being vulcanized relatively soft, attaching to said upper portion a hemispherical portion of the last named rubber stock, and then vulcanizing the whole.

5. The process of making bulbs for tank valves, comprising, first molding a core for the upper portion thereof out of raw rubber stock capable of being vulcanized relatively hard, partly vulcanizing the same, applying a strip of rubber stock to the margins thereof, attaching to said strip a hemispherical portion of raw sheet rubber stock capable of being vulcanized relatively soft, and then vulcanizing the whole.

[Claims 6 to 10 not printed in the Gazette.]

1,167,760. LINEMAN'S TOOL. SHERMAN JONES, Newark, N. J. Filed July 23, 1914. Serial No. 852,532. (Cl. 140—121.)



1. A tool comprising a pair of pivotally connected handles, adjustable cable gripping jaws longitudinally arranged upon each of the said handles and positioned in axial alinement with each other when the handles are open and in parallelism when the device is in its closed position.

2. A tool comprising a pair of pivoted handles having flattened and offset end portions and provided with longitudinal grooves positioned in axial alinement with each other when the handles are open and in parallelism when the device is in its closed position, and adjustable cable-engaging clamping jaws fitted into the said grooves.

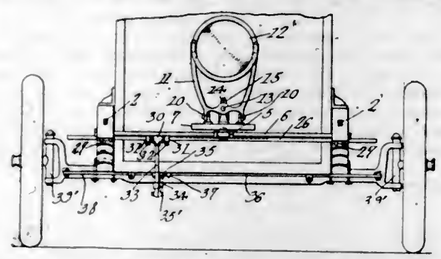
3. In a lineman's tool as described, a pair of handles adapted for pivotal connection, each handle being flattened and offset near the pivoted end and provided with a groove, and a jaw fitted in said groove, means for adjusting said jaw, in combination with a holder provided with means for pivotally connecting said pair of handles together.

4. A tool comprising a pair of pivotally connected handles, adjustable cable gripping jaws longitudinally arranged upon each of the said handles and positioned in axial alinement with each other when the handles are open and in parallelism when the device is in its closed position, and a pivoted holder arranged adjacent the point of connection between the handles.

1,167,761. DIRIGIBLE LAMP. FRANK KEELIN, Oxley, W. Va. Filed Oct. 28, 1915. Serial No. 58,427. (Cl. 240—62.)

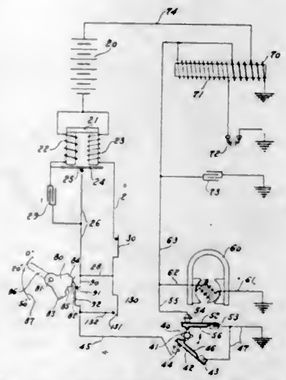
1. In a device of the character described, a pair of transverse rods, a longitudinal yoke having one end attached to one of said rods, a securing element attaching the other end of the yoke to the other rod, said securing element having a lower hook provided with a guide, a rotatable lamp carrying member mounted upon said yoke and having a gear segment, a pinion rotatable on said yoke and meshing with said segment, a transverse rack bar slidable in said guide and meshing with the bottom of said pinion, and means for operatively connecting said bar with the steering gear of a vehicle.

2. In a device of the character described, a longitudinal yoke, a hook attached thereto and depending therefrom and provided in its end with a guide, a rotatable lamp carrying member mounted upon said yoke and having a lower gear segment, a pinion rotatable on said yoke and meshing with said segment, a transverse rack bar slidable



in said guide and meshing with the bottom of said pinion, and means for operatively connecting said bar with the steering gear of a vehicle.

1,167,762. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Nov. 14, 1910. Serial No. 592,292. (Cl. 123—148.)



1. In an ignition system, the combination with an ignition circuit including a sparking device and a battery and a magneto as energizing sources therefor; of means for controlling the spark advance and retard; and means connected with and operable by said spark controlling means for throwing the battery into and out of the ignition circuit.

2. In an ignition system, the combination with an ignition circuit including a sparking device and a battery and a magneto as energizing sources therefor; of means for controlling the spark advance and retard; and means connected with and operable by said spark controlling means for connecting the battery into the ignition circuit for retarded spark range, cutting out the battery for the range of effectiveness of the magneto, and cutting the battery into circuit again for the advance spark range beyond the effective advance of the magneto.

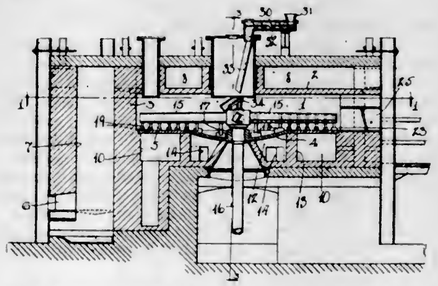
3. In an ignition system, the combination with an ignition circuit including a sparking device and a battery and a magneto as energizing sources therefor; of means for controlling the spark advance and retard; and means connected with and operable by said spark controlling means for connecting the battery into ignition circuit for retarded spark range, cutting out the battery for the range of effectiveness of the magneto, and cutting the battery into circuit again for the advance spark range beyond the effective advance of the magneto; with provisions for cutting out the battery when the spark control means is in its position of extreme retard.

4. In an ignition system, the combination with an ignition circuit including a sparking device and a battery and a magneto as energizing sources therefor; of means for controlling the spark advance and retard; and means connected with and operable by said spark controlling means for connecting the battery into ignition circuit for retarded spark range, cutting out the battery for the range of effectiveness of the magneto, and cutting the battery into circuit again for the advance spark range beyond the effective advance of the magneto; with provisions for cutting out the battery when the spark control means is in its position of extreme retard; and a latch device for blocking the movement of the spark control means into such extreme retard position until the latch is operated.

5. In an ignition system, the combination with an ignition circuit including a sparking device and a battery and a magneto as energizing sources therefor; of means for controlling the spark advance and retard; and means connected with and operable by said spark controlling means for connecting the battery into the ignition circuit for retarded spark range, cutting out the battery for the range of effectiveness of the magneto, and cutting the battery into circuit again for the advance spark range beyond the effective advance of the magneto; with provisions for cutting out the battery when the spark control means is in its position of extreme retard; and a latch device for blocking the movement of the spark control means into such extreme retard position until the latch is operated, with provisions permitting the free movement of said spark control means away from extreme retarded position independently of the manipulation of said latch.

[Claims 6 to 14 not printed in the Gazette.]

1,167,763. FURNACE FOR MAKING HYDROCHLORIC ACID AND THE LIKE. WILLIAM M. KRICKBAUM, Cleveland Heights, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 17, 1915. Serial No. 34,589. (Cl. 23—1.)



1. In a furnace for making hydrochloric acid and the like, the combination with a working chamber having a floor adapted to receive the material to be operated upon; of heating chambers located beneath such floor, said heating chambers being arranged to impart different degrees of heat to different parts of such floor, substantially as described.

2. In a furnace for making hydrochloric acid and the like, the combination with a working chamber having a floor adapted to receive the material to be operated upon; of a heating chamber located above said working chamber; and other heating chambers located beneath such floor, said heating chambers being arranged to impart different degrees of heat to different parts of such floor, substantially as described.

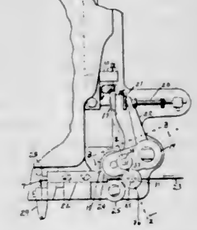
3. In a furnace for making hydrochloric acid and the like, the combination with a substantially circular working chamber having a floor adapted to receive the material to be operated upon; of a circular heating chamber located centrally beneath such floor; and an annular heating chamber beneath the outer portion of such floor, the heated gases passing directly through such annular chamber, and said circular chamber having limited communication with said annular chamber, whereby the portion of such floor over the latter is more highly heated than the central portion of such floor.

4. In a furnace for making hydrochloric acid and the like, the combination with a substantially circular working chamber having a floor adapted to receive the material to be operated upon; of a heating chamber located above said working chamber; another circular heating chamber located centrally beneath such floor; and an annular heating chamber beneath the outer portion of such floor, the heated gases passing directly through such annular chamber, and said circular chamber having limited communication with said annular chamber, whereby the portion of such floor over the latter is more highly heated than the central portion of such floor.

5. In a furnace for making hydrochloric acid and the like, the combination with a substantially circular working chamber, a shallow pot forming the central portion of the floor of said chamber, and an annular calcining bed surrounding said pot; of a circular heating chamber located beneath said pot; and an annular heating chamber located beneath said bed, the heated gases passing directly through such annular chamber, and said circular chamber having limited communication with said annular chamber, whereby said bed is more highly heated than said pot.

[Claims 6 to 15 not printed in the Gazette.]

1,167,764. WIRE-TENSIONING DEVICE. WILLIAM G. LIEBIG, Detroit, Mich. Filed Mar. 15, 1915. Serial No. 14,567. (Cl. 140—135.)



1. In combination with a pair of feed rollers, means for yieldingly forcing one of said rollers into peripheral engagement with the other, means for periodically rotating one of said rollers through a predetermined peripheral distance, and means for yieldingly engaging said rotated roller and a length of wire interposed between its periphery and that of the other roller to hold them against slippage between successive operations, substantially as described.

2. In combination with a supporting frame, a bracket pivotally supported thereon, a pair of pivoted rollers, one of which is mounted upon said frame and the other of which is mounted in said bracket, spring means for projecting said last-named roller toward a position of peripheral engagement with the first-named roller, means for periodically rotating said last-named roller, thereby projecting to a predetermined degree a wire interposed between the rollers, and means for frictionally holding said rotated roller and the wire against slippage between successive cycles of operation.

3. In combination with a projecting roller and an idler roller between which a wire is adapted to pass, means for periodically actuating the projecting roller to frictionally advance the wire a predetermined distance, and a pair of adjustably resilient members adapted to engage the pro-

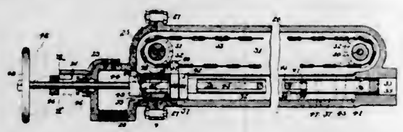
jecting roller and the wire to prevent slippage thereof between successive cycles of operation.

4. In combination with a pivoted arm, resilient means for normally holding one end thereof in depressed position, a projecting roller rotatably supported in the depressed end of said pivoted arm, with its periphery in frictional engagement with a wire whose periodical advancement is desired, means for rotatively actuating said roller at desired intervals to cause the travel of the wire accordingly, and resilient means engaging the projecting roller and the wire, whereby the same are held against slippage between successive movements thereof, substantially as described.

5. In combination with a pivoted arm, a wire-advancing roller rotatably supported in one end thereof, a spring engaging said arm whereby said roller is yieldingly held in frictional engagement with a wire leading from a source of supply, a pair of adjustable spring stops engaging said roller and the wire whereby the same are held against undesired movement, and means for intermittently rotating said roller to advance the wire a predetermined length, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,167,765. SOOT-CLEANER FOR BOILERS. FREDERICK W. LINAKER, Dubois, Pa., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa., a Corporation of New Jersey. Filed May 20, 1915. Serial No. 29,335. (Cl. 137—97.)



1. A soot cleaner for boiler tubes including an inclosing housing, a distributing pipe slidably mounted therein, unitary manually-operable means within said housing for moving said distributing pipe into and out of the same, an operating rod extending into said housing and said distributing pipe, and means carried by said rod and coöperating with said housing to determine when said distributing pipe is in either projected or retracted position.

2. A soot cleaner for boiler tubes including an inclosing housing, a yoke and a distributing pipe carried thereby slidably-mounted within said housing, a collar fixed to said distributing pipe in spaced relation to said yoke, a loose collar mounted on said distributing pipe between the yoke and fixed collar, and means within said housing adapted to engage said loose collar to move the same in either direction within said housing to cause the distributing pipe to be projected from said housing and also returned thereinto.

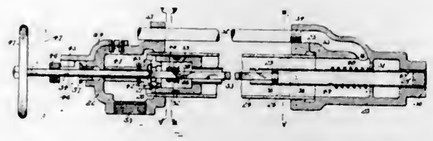
3. A soot cleaner for water tube boilers including an inclosing housing, a yoke member and distributing pipe carried thereby arranged within said housing, a fixed collar on said distributing pipe in spaced relation to said yoke, a loose collar on said distributing pipe between the yoke and fixed collar and having a lateral projection, a pair of sprocket wheels journaled in said housing above said distributing pipe, a sprocket chain passing over said wheels, the lateral extension of said loose collar adapted to be connected to said sprocket chain, and means for causing said sprocket chain to travel in opposite directions whereby reciprocable movement is imparted to said distributing pipe.

4. A soot cleaner for water tube boilers including an inclosing housing, a yoke and distributing pipe carried thereby slidably arranged within said housing, an endless sprocket chain arranged within said housing, and means connecting said sprocket chain to said distributing pipe whereby movement of the chain in opposite directions is positively imparted to said pipe.

5. A soot cleaner for water tube boilers comprising a housing, a cleaning fluid distributing pipe within said housing, manually-operable means for projecting said distributing pipe from said housing means for rotating said pipe, and indicating means carried by said pipe rotating means and made operative by the movement of said distributing pipe to indicate when the said pipe is in projected or retracted position.

[Claims 6 to 12 not printed in the Gazette.]

1,167,766. SOOT-CLEANER FOR BOILERS. FREDERICK W. LINAKER, Dubois, Pa., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa., a Corporation of New Jersey. Filed May 20, 1915. Serial No. 29,336. (Cl. 137—97.)



1. A soot cleaner for water tube boilers, including end castings and a connecting cylinder, a hollow piston and distributing pipe carried thereby reciprocable in said cylinder and castings, an operating rod extending into said piston and distributing pipe, fluid-operated means for moving the piston and distributing pipe in either direction, and indicating means for determining when the distributing pipe is within the connecting cylinder and castings.

2. A soot cleaner for water tube boilers comprising a cleaning device including a cylinder, a hollow piston and distributing pipe carried by said piston arranged within said cylinder, fluid supply means for each end of the cylinder at opposite sides of the piston, an operating rod extending into said piston and distributing pipe, and a check valve supported on said rod adapted to be moved to engaging position with said piston to prevent the escape of cleaning fluid therethrough.

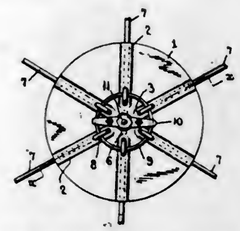
3. A soot cleaner for water tube boilers comprising a cleaning device including end castings, and a connecting cylinder, a hollow piston within said cylinder, a distributing pipe carried by said piston, an operating rod including a portion angular in cross-section slidably extending into one of said castings, the piston and the distributing pipe, connecting means between the angular portion of the operating rod and the piston whereby the same are caused to rotarily move in unison, coöperative valve mechanism carried by the piston and angular portion of the rod, and valve-controlled fluid supply pipes connected to each casting whereby the piston is caused to move in opposite directions.

4. A soot cleaner comprising an inclosing housing, a piston including a valve seat and a distributing pipe carried thereby and slidably arranged within said housing, fluid supply means for each end of the housing, an operating rod associated with said piston whereby when the distributing pipe is projected from the housing, the same may be rotated by said rod, and a valve carried by said rod adapted to engage the piston valve seat to prevent the escape of fluid therethrough.

5. A soot cleaner for water tube boilers including an inclosing housing, a distributing pipe arranged within said housing, a member having an opening therein connected to said distributing pipe, an operating rod received in said opening in the member, an enlarged head carried by the extreme inner end of said operating rod, an indicating device carried by said rod exteriorly of the housing, and means for moving said distributing pipe exteriorly of said housing and to a position to cause said member to engage the enlarged head on the operating rod to move said rod to a position whereby the indicating device will determine when the distributing pipe is in operative position.

[Claims 6 to 25 not printed in the Gazette.]

1,167,767. CANOPY-FRAME. GEORGE F. LINDSEY and GEORGE A. WILLIAMS, Birmingham, Ala., assignors to H. G. Marsh, Birmingham, Ala. Filed Oct. 7, 1914. Serial No. 865,439. (Cl. 135—7.)

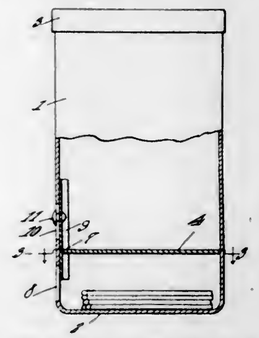


1. In a collapsible canopy frame, a center plate having radial seats in its upper periphery and openings in line with said seats, frame members adapted to fit in said seats and having their inner ends adapted to project down through said openings in the plate, and means to hingedly connect the several inner ends of said members to the underside of said plate, substantially as described.

2. In a collapsible canopy frame, the combination with a center plate having a series of radial seats in its upper face, frame members adapted at their inner ends to fit in said seats and having eyes at their inner ends, said plate having openings through which said eyes project below the plate, and a common ring passed through the eyes of said members below the plate and serving to hingedly connect them to swing from vertical to horizontal position relatively to the plate, substantially as described.

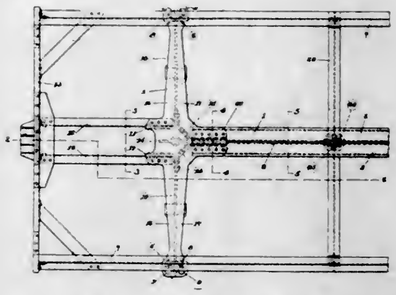
3. In a collapsible canopy frame, a center plate formed of pressed metal and shaped to provide radial seats extending from its periphery to points adjacent to its center, said seats having openings at their inner ends, frame members formed of metal rods adapted to fit snugly in said seats and having their inner ends bent to form an eye adapted to pass through said openings in the seats, a ring which passes through the several eyes below the plate, a hook which is provided with a screw shank which passes downwardly through the center of the plate, a nut and washer to connect said hook to the plate, said washer being adapted to engage and hold the ring adjacent to the underface of the plate, substantially as described.

1,167,768. COMBINATION TOBACCO-CAN AND MATCH-HOLDER. ADAM LOCHNER, Pine, Colo. Filed Apr. 12, 1915. Serial No. 20,798. (Cl. 206—38.)



A flat receptacle adapted to be carried in the pocket and having a false bottom above its bottom and an opening in one edge portion between the bottoms, there being a slot between one end of the false bottom and said edge portion of the receptacle, a valve slidable upon the inner side of said edge portion of the receptacle and movable through said slot for closing said opening, said edge portion of the receptacle having a vertical slot above the false bottom, and a headed element carried by the valve and working in said slot for guiding the valve and enabling the valve to be manually opened and closed.

1,167,769. CAR-UNDERFRAME CONSTRUCTION. BURNS D. LOCKWOOD, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 3, 1913. Serial No. 798,791. (Cl. 105—76.)



1. An underframe comprising a single rigid bolster element in combination with a single center sill, said bolster element having a central V-shaped portion to which the end of said center sill is secured.

2. An underframe comprising a single rigid bolster element in combination with a single center sill, said bolster element having a wedge shaped web portion intermediate its ends, and means connecting said center sill and wedge shaped web portion.

3. In a railway car underframe, the combination with a single bolster element having a wedge shaped web portion intermediate its ends, of a single center sill framed into said bolster element, and means for connecting said members.

4. In a railway car underframe, the combination with a single bolster element having a V-shaped web portion of a single center sill framed into said bolster member and means secured to said sill and V-shaped portion for connecting all of said members.

5. In a railway car underframe, the combination with a single rigid bolster element having lugs extending in one direction, and a central V-shaped portion extending in the opposite direction, of draft sills secured to said lugs and a single center sill secured to said V-shaped portion.

[Claims 6 to 15 not printed in the Gazette.]

1,167,770. COMPOSITION OF MATTER TO BE ADDED TO INTERNAL-COMBUSTION-ENGINE FUELS AND TO BE USED FOR OTHER PURPOSES. WILLIAM FITZ CHARLES MASON MCCARTY, East Pleasantville, N. Y. Filed Aug. 19, 1913. Serial No. 785,583. (Cl. 87—5.)

1. A composition of matter for the purposes specified comprising acetone, ether, hydrogen dioxid and methyl nitrate.

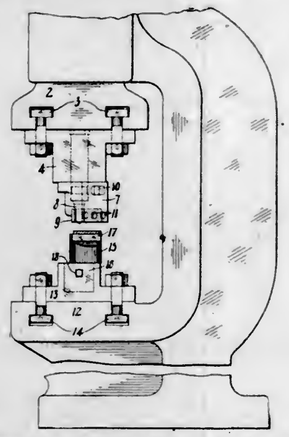
2. A composition of matter for the purposes specified comprising acetone, ether, hydrogen dioxid, methyl nitrate and a high explosive.

3. A composition of matter for the purposes specified comprising acetone, ether, hydrogen dioxid, methyl nitrate and nitro-glycerin.

1,167,771. PUNCHING AND SHEARING MECHANISM. ROBERT F. MCCLOSKEY, Pittsburgh, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 9, 1912. Serial No. 724,704. (Cl. 164—124.)

1. In punching and shearing mechanism, a longitudinally movable supporting member, a tool holder movable therewith and rotatable thereon, said holder having a

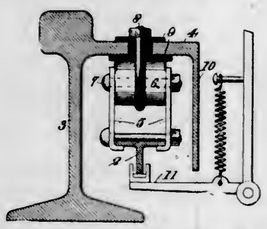
shear tool seat spaced from the axis of adjustment with the direction of length of the seat angular with respect to a radius of such axis, whereby adjustment of a tool holder will provide variations in angularity of the shear tool and permit shear cutting on planes non-intersecting with respect to such axis.



2. In punching and shearing mechanism, a longitudinally movable supporting member, a tool holder movable therewith and rotatively adjustable thereon, said holder having a shear tool seat spaced from the axis of adjustment, whereby adjustment of the tool holder will provide variations in angularity of the shear tool, said holder having a punch receiving opening with its axis corresponding to the axis of rotative adjustment of the holder.

3. In punching and shearing mechanism, the combination with a longitudinally movable supporting member, a tool holder movable therewith and rotatably adjustable thereon, said holder having a shear tool seat spaced from the axis of adjustment, whereby adjustment of the tool holder will provide variations in the angularity of the shear tool, a stationary supporting member, and a combined die and shear member rotatably adjustable therein.

1,167,772. THIRD-RAIL SUPPORT. JOHN C. McGOVERN and MELLIE COHEN, South San Francisco, Cal. Filed June 30, 1915. Serial No. 37,291. (Cl. 191—30.)



1. A device of the character described, comprising a main rail having a continuous angular shaped, outwardly extending flange formed on one side, a plurality of downwardly extending U-bolts secured in and insulated from the angular shaped flange, a spool-shaped insulator secured in each U-bolt, a clip secured to each spool-shaped insulator, and a third rail carried by said clips.

2. A third rail support and protector, including a main rail having a continuous flange projecting outwardly and downwardly integral with the rail, and forming a housing closed from above, openings at intervals through said flange, insulating plates closing said openings, insulators secured beneath said plates, clips extending downward from said insulators, and a conducting rail held and suspended by said clips within the housing.

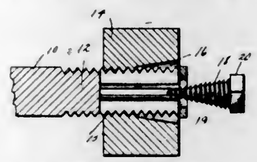
1,167,773. HORSESHOE. GEORGE H. MAULT, Amsterdam, N. Y., assignor to Shure Grip Horse Shoe & Manufacturing Co. Inc., Amsterdam, N. Y. Filed Feb. 16, 1914. Serial No. 818,825. (Cl. 168—40.)



1. The combination of a horse shoe with a removable toe piece, said toe piece V-shaped along one edge and beveled along the other; a groove in said shoe into which the toe piece is inserted, the V-shaped edge thereof fitting a V-shaped bottom in the groove, the beveled edge projecting beyond the groove; one side of the groove reinforced by metal forming the toe of the shoe; and tapering pins extending through said groove and through the toe piece, substantially as described.

2. The combination of a shoe with toe piece and calks, each V-shaped along one edge and beveled along the other edge; grooves formed at the toe and heel of the shoe into which said toe piece and calks fit, provided with V-shaped bottoms for the reception of said V-shaped edges of the calks and toe piece respectively; tapering pins passing through the sides of the grooves and through the calks and toe piece respectively.

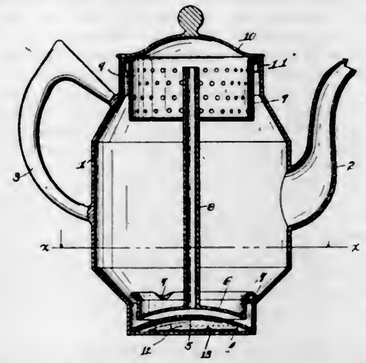
1,167,774. NUT-LOCK. CLAUDE E. MENTZER, Des Moines, Iowa, assignor of one-fourth to Leon Goodman and one-fourth to Louis Evans, Des Moines, Iowa. Filed Sept. 2, 1913. Serial No. 787,800. (Cl. 151—31.)



In a device of the class described, a bolt, having a screw threaded end split longitudinally into a plurality of parts, a nut having an opening through it, a portion of said opening being screw threaded, and said opening being tapered outwardly from said screw threaded portion to the surface of the nut, said screw threaded end of said bolt being received in said opening in the nut, a barbed screw received in the split end of said bolt for forcing the parts of the bolt into the larger part of said beveled opening.

1,167,775. PERCOLATOR. ISAAC E. MILLER, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 814,900. (Cl. 53—3.)

1. A device of the kind described comprising a receptacle; a foraminated container arranged in the upper end of said receptacle; a chamber in said receptacle immediately above the bottom thereof in open communication with the interior of said receptacle; a vibratory member arranged in said chamber normally resting in close proximity with the bottom of said receptacle, the upper wall of said chamber having an opening through which the liquid in said chamber will be forced upon vibration of said member; and a pipe arranged in said receptacle communicating at its upper end with said container, the lower end of said pipe being so positioned that liquid forced from said chamber through the opening in the upper wall thereof by vibration of said member, will enter said lower end of said pipe, substantially as described.



2. A device of the kind described comprising a receptacle; a foraminated container arranged in the upper end of said receptacle; a chamber in said receptacle immediately above the bottom thereof in open communication with the interior of said receptacle; a vertically vibratory member arranged in said chamber normally resting in close proximity with the bottom of said receptacle, the upper wall of said chamber having an opening through which the liquid in said chamber will be forced upon vibration of said member; and a vertically extending pipe arranged in said receptacle communicating at its upper end with said container, the lower end of said pipe being so positioned that the liquid forced from said chamber through the opening in the upper wall thereof by vibration of said member, will enter said lower end of said pipe, substantially as described.

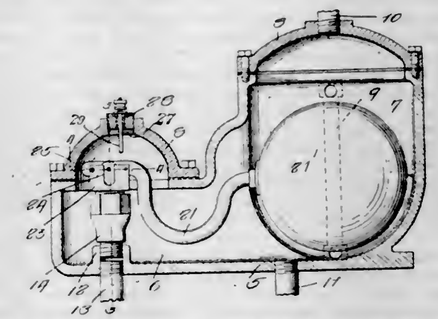
3. A device of the kind described comprising a receptacle; a foraminated container arranged in the upper end of said receptacle; a chamber in said receptacle immediately above the bottom thereof, the upper wall of said chamber having a central opening; a passage leading outwardly from said opening establishing communication between the same and the interior of said receptacle; a vibratory member arranged in said chamber normally resting in close proximity with the bottom of said receptacle; vibration of said member causing the liquid in said chamber to be forced therefrom through said openings; and a vertically extending pipe arranged in said receptacle communicating at its upper end with said container, the lower end of said pipe being so positioned that the liquid forced from said chamber through the opening in the upper wall thereof by vibration of said member, will enter said lower end of said pipe, substantially as described.

4. A device of the class described comprising a receptacle; a foraminated container arranged in the upper end of said receptacle; a vertically extending pipe arranged substantially centrally in said receptacle and communicating at its upper end with said container; a false bottom arranged upon the bottom of said receptacle having its central portion spaced from said bottom, said false bottom having an opening therein in alinement with said pipe; a vertically movable member arranged below said false bottom; and means arranged above said false bottom forming a passage establishing communication between the opening therein and the interior of said receptacle, said passage extending outwardly along said false bottom and then upwardly opening into said receptacle interior, substantially as described.

5. A device of the class described comprising a receptacle; a foraminated container arranged in the upper end of said receptacle; a vertically extending pipe arranged substantially centrally in said receptacle and communicating at its upper end with said container; a false bottom arranged upon the bottom of said receptacle having its central portion spaced from said bottom, said false bottom having an opening therein in alinement with said pipe; a vertically movable disk loosely arranged below said false bottom; means arranged above said false bottom forming a passage establishing communication between the opening therein and the interior of said receptacle, said means comprising a member spaced from and extending substantially parallel with said false bottom; and an annular flange arising from the periphery of said member spaced from and disposed concentric with the lateral wall of said receptacle, substantially as described.

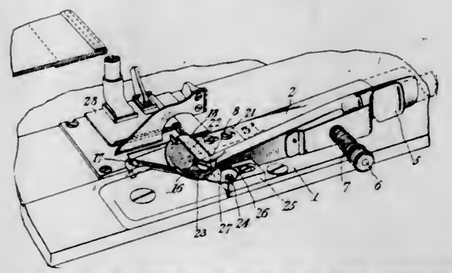
[Claims 6 to 8 not printed in the Gazette.]

1,167,776. REGULATOR. WILLIAM H. MINEKIME, Water Valley, N. Y. Filed Dec. 11, 1913. Serial No. 806,013. (Cl. 137—101.)



In a liquid regulator, a valve casing, an annular rib provided in the casing, a valve seat resting on said rib, a sleeve threaded in the casing to engage the seat, the other end of the sleeve being provided with pairs of diametrically alined open ended slots, the sleeve being further provided with passages intersecting said slots, a float rod disposed in a pair of said slots, a pin passed through one of the passages detachably pivoted to the float rod, a sleeve having one end pivoted to the float rod within the casing, a valve stem threadedly engaged in the sleeve and a valve on the stem inwardly of the seat.

1,167,777. FOLDER FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1912. Serial No. 679,979. (Cl. 112—1.)



1. A folder for sewing machines, said folder including a body portion having spaced guiding walls shaped so as to fold a strip between its edges, said folder being located at an angle to the line of feed and having its delivery end cut away, whereby said strip may be inverted, said folder at one side of the central plane thereof being wider than at the other, so that one face of the folded strip when guided through the folder may be wider than the other, and means independent of the folder extending between the faces of the folded strip after it leaves the folder for guiding and maintaining the fold in said strip.

2. A folder for sewing machines, said folder including a body portion having spaced guiding walls shaped so as to fold a strip between its edges, said folder being located at an angle to the line of feed and having its delivery end cut away, whereby said strip may be inverted, said folder at one side of the central plane thereof being wider than at the other, so that one face of the folded strip when guided through the folder may be wider than the other, means independent of the folder extending between the faces of the folded strip after it leaves the folder for guiding and maintaining the fold in said strip, and means for placing a tension on the strip as it passes into the folder.

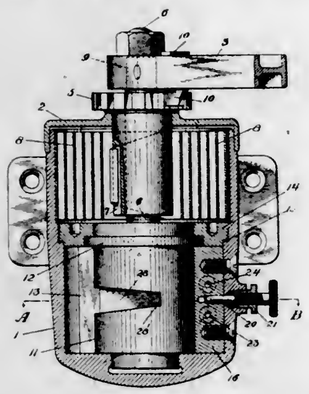
3. A folder for sewing machines, including means for folding a strip with one face thereof wider than the other, and for inverting said folded strip whereby the same is led from the folder in a direction at an angle to the longitudinal axis of the folder, and a separating plate for supporting the upper folded edge of the strip after the same passes from the folder.

4. A folder for sewing machines, including means for folding a strip with one face thereof wider than the other, and for inverting said folded strip whereby the same is led from the folder in a direction at an angle to the longitudinal axis of the folder, and a separating plate for supporting the upper folded edge of the strip after the same passes from the folder, means for pivotally supporting said separating plate, and a stop for limiting the swinging movement thereof.

5. A folder for sewing machines, including means for folding a strip with one face thereof wider than the other and for folding in the edges of the strip, and for inverting said folded strip whereby the same is led from the folder in a direction at an angle to the longitudinal axis of the folder, and a separating plate for supporting the upper folded edge of the strip as it passes from the folder, said separating plate being spaced from the lower part of the folder, whereby a body fabric may be led underneath said separating plate.

[Claim 6 not printed in the Gazette.]

1,167,778. DOOR CHECK AND CLOSER. THOMAS MOONEY, Douglaston, N. Y. Filed Aug. 21, 1912. Serial No. 716,179. (Cl. 16—88.)



1. In a liquid door check, a cylindrical casing, an abutment having a concave face located within and attached to the casing, an oscillating member mounted within the casing with its periphery in sealing and bearing contact with the abutment, a radial piston carried by the said member, and a port located between the abutment and said member, the cross-sectional area of the port varying in accordance with the angular position of the oscillatory member.

2. In a liquid door check, a cylindrical casing, an abutment having a concave face located within and attached to the casing, an oscillating valve member mounted within the casing with its periphery in sealing and bearing contact with the abutment, a radial piston carried by the said member, and a port located between the said member and abutment, the said port having as its walls the inner end of the abutment and a peripheral channel in the oscillating member, and the cross-sectional area of the port varying with the angular position of the said member.

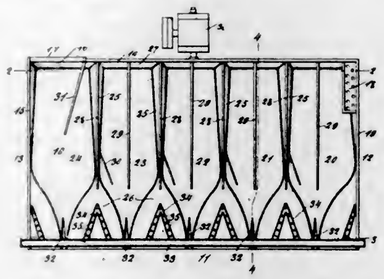
3. A door check and closer, comprising a cylindrical casing inclosing a liquid-containing chamber, a fixed abutment within the chamber having a fluid passage through it, an oscillating piston-carrying member within the fluid chamber which with the abutment divides the chamber into two parts and which is provided with a tapered port widest near the piston and narrowest at the point of cut-off for the flow of liquid past the abutment during a portion of the time when the door is closing and for the gradual reduction of said flow as the closing of the door continues, and an automatic valve in the fluid passage of the abutment which opens when the flow through the said tapered port is stopped to facilitate in the latching of the door.

4. In a liquid door check, a cylindrical casing, an abutment having a concave face located within and attached to the casing, an oscillating member mounted within the casing with its periphery in sealing and bearing contact with the abutment, a radial piston carried by the said member, a port of variable cross-sectional area located between the abutment and the periphery of said member, and a port and valve located in the abutment and controlled by the pressure of the liquid.

5. In a liquid door check, a cylindrical casing, an abutment having a concave face located within and attached to the casing, an oscillating member mounted within the casing with its periphery in sealing and bearing contact with the abutment, a radial piston carried by the said member, a port of variable cross-sectional area located between the abutment and the periphery of said member, and an adjustable valve located in the abutment.

[Claims 6 and 7 not printed in the Gazette.]

1,167,779. CONCENTRATING-TABLE. MICHAEL J. MORLEY, Hayden, Ariz. Filed Feb. 16, 1914. Serial No. 818,942. Renewed June 10, 1915. Serial No. 33,390. (Cl. 83—88.)



1. A concentrating table having a lateral reciprocatory motion and a series of settling areas, lateral ridges defining said areas and terminating at the concentrates discharge side of the table, said ridges being oblique to the direction of motion of the table and having oppositely sloping sides, riffles on the apices of the ridges and terminating short of the concentrates side of the table, means for discharging wash water on the ridges adjacent to the aforesaid side of the table beyond the riffles, and riffles in the settling areas parallel to and co-extensive with the first-mentioned riffles.

2. A concentrating table having a lateral reciprocatory motion and a series of alternate high and low riffles extending laterally across the table parallel to the direction of motion thereof, lateral ridges on the table having oppositely sloping sides on the apices of which ridges the high riffles are located, said ridges decreasing in height toward the concentrates discharge side of the table and terminating short of said side, and lateral ridges extending from the terminals of the aforesaid ridges and having oppositely sloping sides, and means for discharging wash water on the second-mentioned ridges.

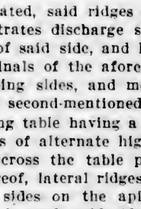
3. A concentrating table having a lateral reciprocatory motion and a series of alternate high and low riffles extending laterally across the table parallel to the direction of motion thereof, lateral ridges on the table having oppositely sloping sides on the apices of which ridges the high riffles are located, said ridges being slightly oblique to the direction of motion of the table and decreasing in height toward the concentrates discharge side of the table and terminating short of said side, and lateral ridges extending from the terminals of the aforesaid ridges and having oppositely sloping sides, and means for discharging wash water on the second-mentioned ridges.

4. A concentrating table having a lateral reciprocatory motion and a series of alternate high and low riffles extending laterally across the table parallel to the direction of motion thereof, lateral ridges on the table having oppositely sloping sides on the apices of which ridges the high riffles are located, said ridges decreasing in height toward the concentrates discharge side of the table and terminating short of said side, lateral ridges extending from the terminals of the aforesaid ridges and having oppositely sloping sides, means for discharging wash water on the second-mentioned ridges, and concentrates discharge grooves between the second-mentioned ridges.

5. A concentrating table having a lateral reciprocatory motion and a series of alternate high and low riffles extending laterally across the table parallel to the direction of motion thereof, lateral ridges on the table having oppositely sloping sides on the apices of which ridges the high riffles are located, said ridges decreasing in height and width toward the concentrates discharge side of the table and terminating short of said side, and lateral ridges extending from the terminals of the aforesaid ridges and having oppositely sloping sides and an increase in width toward the concentrates discharge side of the table, and means for discharging wash water on the second-mentioned ridges.

[Claims 6 to 15 not printed in the Gazette.]

1,167,780. CONNECTOR. EDMUND QUINCY MOSES, New York, N. Y., assignor of one-half to William P. Hammond, Passaic, N. J. Filed July 3, 1915. Serial No. 37,882. (Cl. 173—269.)



1. A connector terminal including in combination a single pair of flat thin metal plates having binding post holes therein, a spring member connecting said plates, a stock portion connected to one of said plates and comprising a thin sheet metal member adapted to be bent to inclose the end of a conductor wire, and a finger piece connected to the other of said plates and extending along side of said stock portion.

2. A conductor terminal comprising a pair of superposed members having binding post holes therein, resilient means connecting said members, a stock portion projecting from one of said members for engagement with a conducting wire, and a finger piece carried by the other member and extending along side of that part of said stock portion adapted to engage with said conductor wire.

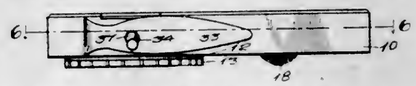
3. A conductor terminal formed of a single piece of sheet metal bent to provide a stock portion adapted to be connected to a wire, a flat plate having a binding post hole therein directly connected to said stock portion, a resilient web bent at right angles to said plate, a second flat plate having a binding post hole therein and superposed upon said first plate, said second plate being bent from said resilient web, said web being carried beyond said second plate and adjacent to said stock portion to form a finger hold to coöperate with said stock portion when the device is to be operated.

4. A battery connector comprising a wire having a connector terminal attached to each end thereof, each of said terminals comprising a short stock portion to which the wire is connected, a pair of superposed plates having binding post holes therein, one of said plates being connected to said stock portion and the other of said plates being connected to the first of said plates by a resilient member and a finger piece carried by the second of said plates and extending alongside of said stock portion and the end of the wire connected thereto to permit said finger piece and stock portion to be simultaneously grasped.

5. A conductor terminal comprising a pair of superposed plates having binding post holes therein, one of said plates having means for connection to a conductor wire and having a web joined thereto at the top thereof and bent at an angle therefrom, said web carrying the second of said plates, the bent-up portion of said web at the top of the first of said plates forming a stop for engagement with the second of said plates to limit the movement of the latter to a position in which the holes in the plates register.

[Claim 6 not printed in the Gazette.]

1,167,781. CURRYCOMB. OLOF OKLAND, Detroit, Minn. Filed Oct. 17, 1914. Serial No. 867,226. (Cl. 119—85.)



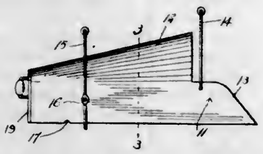
1. A curry comb of the character described, comprising a body portion, a horizontally rotating combining element arranged near the lower surface of the body portion and pivotally connected with the body portion, a vertically rotating brush arranged near and upon one side of the horizontally rotating combining element, pivotally connected with the body portion, having its plane of rotation fixed with respect to the body portion, and projecting downwardly below the lower surface of the body portion, and means to drive the rotatable combing element and the brush independently of the movement of the body portion.

2. A curry comb of the character described, comprising a body portion adapted to be held in the hand, a horizontally rotating combing element arranged near the lower surface of the body portion and pivotally connected with the body portion, a vertically rotating brush arranged near the lower surface of the body portion rearwardly of the horizontally rotating combing element and having its plane of rotation fixed with respect to the longitudinal axis of the body portion, means to drive the combing element and brush independently of the movement of the body portion, and manually operated means to control the driving means.

3. A curry comb of the character described, comprising a body portion adapted to be held in the hand and having a transverse opening formed through its rear portion and disposed at substantially a righ angle to the longitudinal axis thereof, a vertically rotating brush mounted within the transverse opening and pivotally connected with the body portion with its plane of rotation disposed at substantially a right angle to the transverse axis of the body portion, a horizontally rotating combing element arranged near the lower surface of the body portion forwardly of and spaced from the brush and pivotally connected with the body portion, and means to drive the combing element and brush independently of the movement of the body portion.

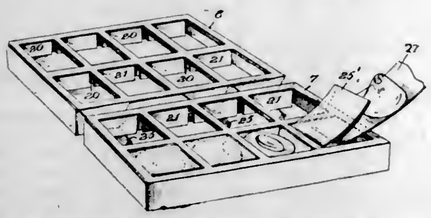
4. A curry-comb of the character described, comprising a body portion adapted to be held in the hand and bodily moved thereby, a vertically rotating brush connected with the body portion and extending therebelow, a horizontally rotating combing element connected with the body portion upon one side of the brush and extending below the body portion, common means to drive the combing element and brush independently of the movement of the body portion, and a pivoted member carried by the body portion to control the operation of the common driving means and arranged near one side of the body portion to be conveniently moved by the hand of the operator holding the body portion.

1,167,782. GRAIN-SCOOP. JAMES W. RICHARDS, Westbourne, Manitoba, Canada. Filed Feb. 8, 1915. Serial No. 6,948. (Cl. 83—26.)



A device for filling a bag with grain comprising an open ended tapering scoop, the smaller end of which is arranged for disposition in the mouth of the bag, the bottom of the smaller end of the scoop having a transverse groove, means pivotally carried by the scoop for engagement in a portion of the bag and forcing the same into the groove, said means having an extension on the opposite side of the scoop from said groove, adapted to be grasped in one hand together with another portion of the mouth of the bag, and a handle on the forward end of the scoop arranged to be grasped with the other hand whereby the scoop can be plunged into a mass of grain and deliver the grain into the bag.

1,167,783. BOX. ANDREW H. ROLKJER, Boise, Idaho, assignor of one-fourth to Margaret S. Roberts and one-fourth to Mary Snowden Reed, Boise, Idaho. Filed June 23, 1915. Serial No. 35,805. (Cl. 229—29.)



1. A blank for a paper box unit, comprising a bottom section and two top sections adapted to be folded one above the other and side flaps integrally formed with one of said first mentioned sections and means integrally connected with and forming a part of the blank for connecting a box unit to a similar box unit.

2. A blank for a paper box comprising a bottom section and two top sections adapted to be folded one above the other, side flaps integrally formed with one of said first mentioned sections, said top section being provided with a plurality of openings and the intermediate section being provided with registering openings and flaps adapted to divide the interior of the box into compartments and means for covering said openings.

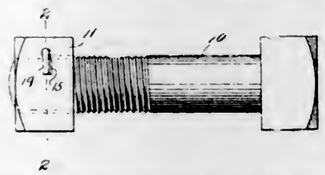
3. A box of the character described comprising a bottom section and top and intermediate sections having intervening side sections adapted to be folded one over the other, the top section being provided with openings to expose the interior of the box, and a plurality of tongues along one of the edges of the top section adapted to coact with slots in the bottom of the box adjacent the bottom section.

4. A box of the character described comprising a bottom section and top and intermediate sections having intervening side sections adapted to be folded one over the other, the top section being provided with openings to expose the interior of the box, a plurality of tongues along one of the edges of the top section adapted to coact with slots in the bottom of the box adjacent the bottom section, the intermediate section being provided with openings and depending flaps dividing the interior of the box longitudinally into compartments.

5. A box of the character described comprising a bottom, top and intermediate section having intervening side sections adapted to be folded one over the top, the top section being provided with openings to expose the interior of the box, a plurality of tongues along one of the edges of the top section adapted to coact with slots in the bottom of the box adjacent the bottom section, the intermediate section being provided with openings and depending flaps dividing the interior of the box longitudinally into compartments, and means interwoven with the openings in the top and intermediate sections dividing the longitudinal compartments into an individual series of cells.

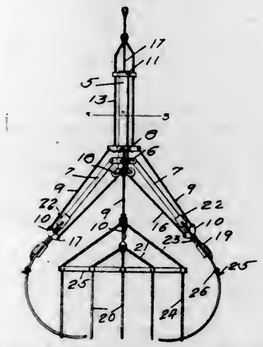
[Claims 6 to 13 not printed in the Gazette.]

1,167,784. NUT-LOCK. ALBIN E. RUD, Claire City, S. D. Filed June 25, 1914. Serial No. 847,252. (Cl. 151—25.)



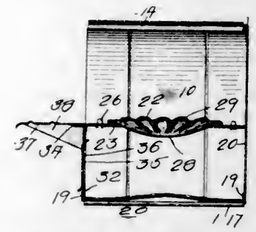
In a nut lock, the combination with a nut and bolt, the nut having a recess formed in the wall of the central opening thereof, said nut also having a bore formed transversely therethrough and tangentially with the central opening, a pin disposed longitudinally in the bore and having a head engaging the face of the nut at one end of the bore, a spring finger secured to the other end of the pin and having a sharpened free end extending inwardly into the recess and having biting engagement with the threads of the bolt, the said other end of the pin being bent against the face of the nut at the remaining end of the bore.

1,167,785. HAY-FORK MECHANISM. GEORGE G. SEARCY and WILLIAM D. BARNHART, American Falls, Idaho. Filed May 28, 1915. Serial No. 31,048. (Cl. 57—40.)



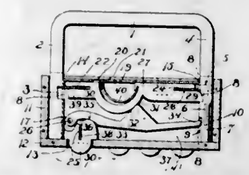
A fork mechanism comprising a tubular head portion, a plurality of tine members pivoted to one end portion of the head, a collar slidable on the head portion, links connecting the collar and the tine members, a suspension yoke secured to the collar and slidably held at the other end of the head, and a cable member slidable in the head and branches at its lower end secured to the tine members.

1,167,786. HEN'S NEST. MARTINUS T. SELS, Knoxville, Iowa. Filed Mar. 30, 1915. Serial No. 18,149. (Cl. 119—45.)



A collapsible nest box comprising a bottom member provided at its front edge with an upturned flange, side members detachably interlocked with the bottom member, a nest bottom removably supported between the side members and dividing the box vertically into compartments, a front member for the lower of said compartments detachably interlocked with the side members and resting upon the bottom member between its flange and the side members, said front member having its upper edge outwardly directed, and a platform disposed in the plane of the nest bottom and supported upon the outwardly directed portion of the front member, said platform having its sides angularly directed and detachably interlocked with the front and side members and its rear edge bent downwardly and engaged behind said front member.

1,167,787. KEYLESS LOCK. SEIZI TADAKUMA, Portland, Oreg. Filed July 19, 1915. Serial No. 40,606. (Cl. 70—113.)



1. In a lock, a body and a shackle, works within said body and comprising sets of locking mechanism each including lock bars, releasing levers and push plates, said body having slots through which said push plates project, said shackle having notches coöperative with said bars and levers.

2. In a keyless lock, a body, and a shackle adapted to project into said body, sets of locking mechanism including lock bars, releasing levers and push plates in said body, said shackle having lock members for said lock bars, said shackle also having a holding notch designed to receive said lock bars at times, said lock members being reversible for rendering any lock bar inoperative as to said shackle bar lock members.

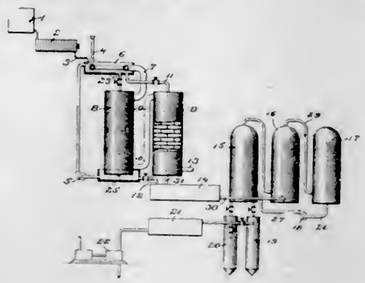
3. In a keyless lock, a body, works within said body, a shackle having arms insertible into said body, one of said arms having normal lock notches, said works including sets of lock bars designed to engage said notches, means for holding certain of said bars out of the notches and thus out of the "combination", means for withdrawing said lock bars from the notch engaging position, and means coöperating with the lock bar that is out of the "combination" for bringing it into locking engagement with the shackle when the withdrawing means of that bar is operated.

4. In a keyless lock, a body, a shackle adapted to be inserted into said body, said shackle having a recess, lock plates reversibly mounted in said recess, said lock plates having lock notches and releasing notches on one edge and an idling notch on the other edge, works within said body, said works comprising a plurality of sets of locking mechanism, each set consisting of a lock bar, means for forcing said lock bar into locking engagement with the lock notch of the respective lock plate, a releasing lever having engagement with said lock bar to withdraw the same, said releasing lever projecting into said releasing notch of the respective lock plate, and a push plate designed to engage said releasing lever, said body having slots through which the respective pusher plates project.

5. In a keyless lock, a body, a shackle adapted to be inserted into said body, said shackle having a recess, lock plates reversibly mounted in said recess, said lock plates having lock notches and releasing notches on one edge and an idling notch on the other edge, works within said body, said works comprising a plurality of sets of locking mechanism, each set consisting of a lock bar, means for forcing said lock bar into locking engagement with the lock notch of the respective lock plate, a releasing lever having engagement with said lock bar to withdraw the same, said releasing lever projecting into said releasing notch of the respective lock plate, a push plate designed to engage said releasing lever, said body having slots through which the respective push plates project, said shackle having a holding notch, said locking plates being reversible to bring the idling notch in position to receive said releasing lever ends and hold said lock bars from locking action, said lock bar so held from locking action adapted to be forced into said holding notch of said shackle when the respective push plate is operated.

[Claims 6 and 7 not printed in the Gazette.]

1,167,788. PROCESS OF MAKING AMMONIUM PHOSPHATE. FRANK S. WASHBURN, Nashville, Tenn., assignor, by mesne assignments, to Ammo-Phos Corporation, a Corporation of New York. Filed Aug. 17, 1915. Serial No. 45,924. (Cl. 23—21.)

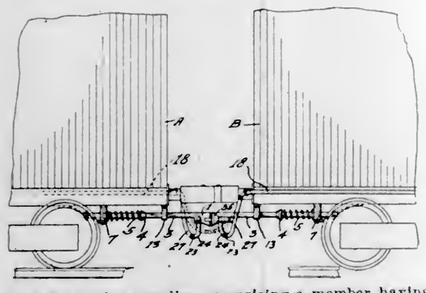


1. The process of treating a crude solution of phosphoric acid with ammonia which consists in providing a supply of said solution; segregating a portion of said solution and subjecting it to the action of a mixture of steam and ammonia; segregating a second portion of said solution of a quantity more than sufficient to absorb any ammonia that may be led to it; and leading the unabsorbed gases and vapors from said first named segregated portion through said second named segregated portion; and leading any uncondensed steam from said second portion to said supply of solution and causing said steam to preheat said supply, substantially as described.

2. The process of treating a crude solution of phosphoric acid with ammonia which consists in providing a supply of said solution; segregating a portion of said solution and subjecting it to the action of an excess of ammonia; segregating a second portion of said solution, and subjecting it to a deficiency of ammonia; returning said second portion to said supply for subsequent treatment with an excess of ammonia, substantially as described.

3. The process of treating a crude solution of phosphoric acid, which consists in providing a supply of said solution; segregating a portion of said solution, and subjecting it to the action of steam mixed with ammonia in excess; to produce a solution high in di-ammonium phosphate; passing the unabsorbed ammonia to an excess of a second portion of said solution adapted to react with all of said unabsorbed ammonia to produce a second solution containing only mono-ammonium phosphate; returning said second solution to said supply; and adding to said di-ammonium phosphate solution a quantity of phosphoric acid slightly in excess of that required to produce a mono-ammonium phosphate solution free from di-ammonium phosphate, substantially as described.

1,167,789. AUTOMATIC TRAIN-PIPE COUPLING. JOHN W. BEACHAM, Montgomery, and BENJAMIN F. POWERS, Birmingham, Ala. Filed Nov. 19, 1913. Serial No. 801,913. (Cl. 188—13.)



1. A train pipe coupling comprising a member having a conduit therein and means to guide and interlock therewith another coupling member, said means comprising on one side of the member a projecting guide arm tapered outwardly from its inside to its outside side edges and having a straight outer side edge and on the other side a funnel shaped guide box converging into a rear lock box having a greater length than the guide box and shaped and positioned to receive and bear against the long outer side of the guide arm of another coupler, a sufficient portion of the arm fitting into said lock box to rigidly interlock said parts.

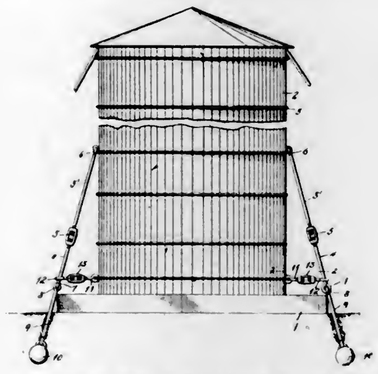
2. In a train pipe coupling, in combination, a coupler member having a conduit, a rearwardly extending stem for said member, front and rear brackets adapted to be fastened to a car, the front bracket having a narrow vertical guide frame in which the stem fits loosely enough to pivot about its sides and to move vertically, a spring adapted to hold the stem against the bottom of the guide frame, the rear bracket having a horizontal guide frame in which the stem fits loosely and is free to swing laterally, spring means to hold the stem centrally of said rear bracket, spring means to urge the stem longitudinally outwardly through said brackets, and stop means to limit the outward travel of said stem.

3. In combination, a train pipe coupler and supporting mechanism therefor comprising a front bracket having its vertical legs adapted to be received between and attached to the draft sills, a vertical coupler guide mounted in said bracket, a rear bracket having its vertical legs adapted to embrace the outer sides of the draft sills and to be attached to said sills, a horizontal coupler guide mounted in said rear bracket, rear brace means for said rear bracket, spring means in said brackets to center the coupler, and spring means to urge the coupler forwardly in its supports.

4. In a train pipe coupler, a coupler head having one or more conduits and means to connect same with the train pipe connections, of a shank for supporting said conduits, a pair of brackets for supporting the shank, the forward bracket having fast therein a narrow vertical guide frame in which the shank is guided for adjustment in a vertical plane and about which the shank is angularly adjustable, a spring to oppose said vertical adjustment, a rear bracket having a narrow horizontal guide frame in which the shank is confined to adjustments in a horizontal plane, springs which hold said shank normally in the center of said latter frame, spring means to urge the shank forward, and a removable stop to engage a bracket and arrest the forward travel of the shank, substantially as described.

5. In a train pipe coupler comprising a coupling head and shank, and means for mounting the shank in adjustable position under a car comprising a front U-shaped bracket adapted to be connected to the car body, a narrow inverted U-shaped frame connected to the bottom of the bracket and adapted to receive in it for vertical adjustment said shank, a spring mounted in said frame and acting to hold the shank against the bottom of the bracket, a rear bracket also connected to the body of the car and comprising a transverse bar which forms with the bottom of the bracket a horizontal guide in which the shank is movable horizontally and longitudinally but not vertically, spring holders set in each end of said horizontal guide, springs connected to said holders and adapted to slidingly engaging the shank on each side to hold it centrally of the rear bracket while permitting it to shift horizontally therein, a washer through which the shank passes loosely and which bears against the front of the rear bracket, a stop disposed on the shank between said brackets, a coiled spring surrounding the shank and seated against said washer and stop, and a stop on the shank to the rear of said rear bracket, said forward guide frame permitting the shank to move angularly therein as its rear end swings horizontally in the rear bracket, substantially as described.

1,167,790. ANCHORING DEVICE. CLARENCE E. BENSON, Harris, Iowa. Filed Aug. 22, 1912. Serial No. 716,500. (Cl. 217—4.)



The combination with a silo having spaced hoops encircling the same, a rod formed of two sections adjustably secured together and pivotally secured to one of said hoops, and extending downwardly and outwardly from the said hoops, a rod pivotally secured to the lower end of the lowermost of said sections, a spherical anchor pivotally mounted on the end of the last mentioned rod to maintain the same in the ground, and a hook member slidably mounted on the lower section of the first mentioned rod, a second hook secured to the lowermost of said hoops, and a turn buckle adjustably securing the ends of the said hooks together.

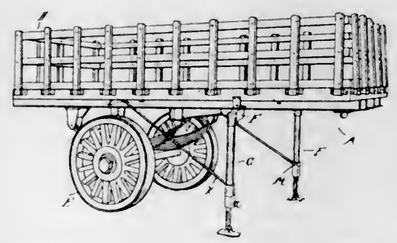
1,167,791. NON-REFILLABLE BOTTLE. JOHN HERBERT BOOTHE, Indianola, Iowa, assignor of one-third to Fred Clark and one-third to Ernest Clark, Indianola, Iowa. Filed Mar. 31, 1915. Serial No. 18,395. (Cl. 215—69.)

In a non-refillable bottle, the combination of a body having a neck formed thereon, said body provided with an annular shoulder forming a valve seat, said neck provided with a rounded pocket having vertical side walls, a valve member carried by said neck, said valve member comprising a body having an integral shank extending therefrom and terminating in a bearing portion, said bearing portion provided with a transverse opening, said bearing portion fitting snugly within said pocket, a pin passing through said neck through the opening in said bearing portion for pivotally retaining said valve member in its



correct position, said pocket being adapted to retain said valve member against wabbling and at the same time allow the same to pivot freely, said bearing portion and said pin being protected by said pocket, whereby the liquid contents of said body will be prevented from engaging said pin and bearing, thereby corroding the same and preventing the valve member from operating efficiently, and a guard carried by said neck for preventing unauthorized access to said valve member.

1,167,792. TRUCK. ORRA E. BYRON, Walkerville, Ontario, Canada, assignor to Stephen A. Griggs, Walkerville, Canada. Filed Apr. 1, 1915. Serial No. 18,483. (Cl. 21—90.)



1. The combination with a two-wheel trailer, of supports arranged upon opposite sides of the trailer, each comprising a laterally-extending arm pivotally and slidably connected to the trailer and a standard attached to the arm, and a brace rod detachably connected to said standard.

2. The combination with a two-wheel trailer, of supports arranged upon opposite sides of the trailer, each comprising a laterally-extending arm and a standard carried by said arm, the arm being provided with a bearing, a shaft extending transversely of the trailer and upon which said bearing is mounted for longitudinal and rocking movement, and a brace rod having one end connected to the trailer and having the other end detachably connected to the standard.

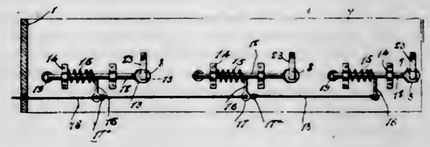
3. The combination with a two-wheel trailer, of supports arranged upon opposite sides of the trailer, each comprising a laterally-extending arm and a standard carried by said arm, the arm being provided with a bearing, a shaft extending transversely of the trailer and upon which said bearing is mounted for longitudinal and rocking movement, and a brace rod having one end connected to the trailer and having the other end detachably connected to the standard, said rod and said standard being foldable into parallelism with the frame of the trailer.

4. The combination with a two-wheel trailer including its frame, of foldable supports arranged upon opposite sides of the trailer, each comprising a laterally-extending arm and a standard carried by said arm, a shaft arranged beneath the frame of the trailer, there being a bearing on said arm engaging said shaft, a brace rod pivotally connected at one end to the frame of the trailer and having the opposite end detachably connected to the standard, said brace rod when detached from the standard being foldable into parallelism with the frame of the trailer and said support being rockable about said shaft to fold the support into parallelism with the trailer and being longitudinally movable inwardly upon said shaft, and means for retaining said support in its folded position.

5. The combination with a two-wheel trailer including its frame, of foldable supports arranged upon opposite sides of the trailer, each comprising a laterally-extending arm, a standard carried by said arm, a shaft extending transversely of and arranged beneath said trailer frame, said arm being provided with an eye mounted upon said shaft for rocking and longitudinal movement, a brace rod pivotally connected at one end to the frame of the trailer and having an eye at the opposite end, there being a stud upon the standard with which said eye has a detachable engagement, a stud upon the trailer frame for receiving said eye when the brace rod is in stored position, and a bearing upon the trailer frame adapted to engage the standard in the stored position of the latter.

[Claims 6 to 9 not printed in the Gazette.]

1,167,793. ANIMAL-RELEASING DEVICE. DANIEL J. CALHOON, Charter Oak, Iowa. Filed Apr. 10, 1915. Serial No. 20,471. (Cl. 119—115.)

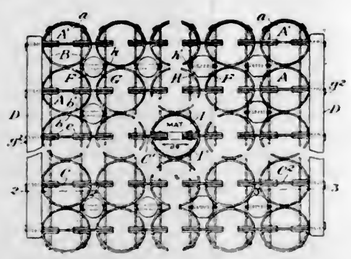


1. An animal releasing device comprising a releasing plug fitted in an aperture in a stable wall, said releasing plug having a reduced neck, a sliding lever mounted in keepers to engage said neck, a spring for expelling said plug, said sliding lever being spring actuated, and a wire connected to said lever for withdrawing it from engagement with the reduced portion of the plug, to permit said spring to expel said plug and detach the animal connected thereto.

2. An animal releasing device comprising a base plate, a series of sliding releasing levers mounted on said base plate, a series of releasing plugs extending through said plate to be engaged by said levers, springs for sliding said levers in one direction to engage said plugs, and a wire connected to said levers for releasing said plugs, and a spring for expelling each of said plugs, the latter being provided each with a ring for connecting a halter strap thereto.

3. An animal releasing device comprising a series of plugs, means for connecting said plugs to an animal, means for holding said plugs within apertures in the wall of a stall, said means being spring actuated, and means for releasing said holding means, and means for expelling the plugs.

1,167,794. METAL FABRIC. SPENCER C. CARY, New York, N. Y. Filed Feb. 11, 1910. Serial No. 543,306. (Cl. 15—63.)



1. A metal fabric embodying rows of members, means for connecting said rows, a marginal strip, and a row of links attached to and projecting beyond one row of units, said links being fastened individually and directly to the marginal strip, whereby the row of links and the marginal strip are fastened together independently of separate attaching means.

2. A metal fabric embodying rows of members, means for connecting said rows, a marginal strip composed of a piece of sheet metal doubled upon itself and producing a longitudinal channel, and a row of links attached to a marginal row of units, the end portions of said links being positioned within the channel of said doubled strip and said links being attached individually and directly to the doubled strip and independently of separate fastening means.

3. A metal fabric embodying rows of members, means connecting said rows of members, a marginal strip provided with a longitudinal channel and with apertures opening into said channel, and a row of links attached to one marginal row of members, each link being provided with a tongue which is incased within the channel of the marginal strip and said tongue passing through one aperture of said strip and with the free end of the tongue bent against the strip, whereby the links are fastened by the tongues to the marginal strip independently of separate attaching devices.

4. A metal fabric embodying rows of members, means connecting said rows of members, a marginal strip provided with a longitudinal channel, the top of said channeled strip being imperforate and being inclined relative to the bottom of the strip, and a row of links attached to and projecting beyond a marginal row of members.

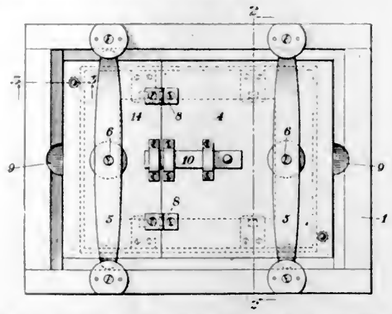
5. A metal fabric embodying rows of unitary members, means connecting said rows of unitary members, a marginal strip composed of a piece of sheet metal doubled upon itself to produce a longitudinal channel, and a row of links attached to and projecting beyond a marginal row of units, each link having a tapering end portion which is incased within the channel of the marginal strip and said tapering end portion being fastened directly to said strip, the top of said marginal strip being imperforate or unbroken and the inner edge of said top portion of the marginal strip being substantially flush with the top edges of the links and of the unitary members.

[Claims 6 to 9 not printed in the Gazette.]

1,167,795. PHOTOGRAPHIC-PRINTING APPARATUS. RAYMOND CILLEY, New York, N. Y. Filed Jan. 12, 1910. Serial No. 537,756. (Cl. 95—77.)

1. In an apparatus for printing from film negatives and similar flexible transparencies, a film holder formed with a printing opening therethrough, the material forming the edges of said opening being normally flexible, and means upon said holder for securing a film negative over said opening, in combination with a stiff, transparent sheet applied over one face of said film holder and means for forcing sensitive paper against the opposite face of said film to clamp said paper and film in close contact with said transparent sheet.

2. In an apparatus for printing from film negatives and similar flexible transparencies, a film holder formed with a printing opening therethrough, the material forming the edges of said opening being normally flexible, and means upon said holder for securing a film negative over said opening, in combination with a stiff, transparent sheet applied over one face of said film holder, and an elastic pad or back, whereby the film engaging portions of the film holder and the central portions of the film are flexed into close contact with said transparent sheet.



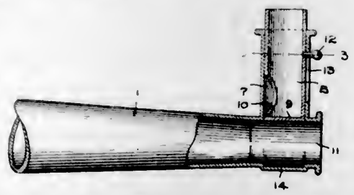
3. In an apparatus for printing from film negatives and similar flexible transparencies, a film holder formed with a stiff outer frame and with a printing opening therethrough, the material forming the edges of said opening being normally flexible, and means upon said holder for securing a film negative over said opening, in combination with a stiff, transparent sheet applied over one face of said film holder, and means for forcing sensitive paper against the opposite face of said film to clamp said paper and film in close contact with said transparent sheet.

4. In an apparatus for printing from film negatives and similar flexible transparencies, a film holder formed with a stiff outer frame and with printing opening therethrough, the material forming the edges of said opening being normally flexible, and means upon said holder for securing a film negative over said opening, in combination with a stiff, transparent sheet applied over one face of said film holder, and an elastic pad or back of greater area than said opening, whereby the film engaging portions of the film holder and the central portions of the film are flexed into intimate contact with said transparent sheet.

5. In an apparatus for printing from film negatives and similar flexible transparencies, a film holder formed with a stiff outer frame and with a printing opening therethrough, the material forming the edges of said opening being normally flexible, and thin clips upon said holder for securing a film negative over said opening, in combination with a stiff, transparent sheet applied over one face of said film holder, and means for forcing sensitive paper against the opposite face of said film to clamp said paper and film in close contact with said transparent sheet.

[Claims 6 to 10 not printed in the Gazette.]

1,167,796. TALKING-MACHINE. FRANCESCO CIRELLI, Philadelphia, Pa. Filed Apr. 22, 1915. Serial No. 22,995. (Cl. 181—3.)



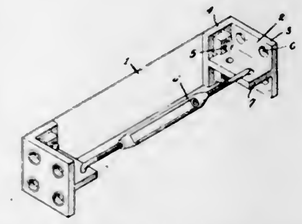
1. The combination with a tone arm having an opening at one end, an extension projecting at an angle thereto, a slide in the extension adapted to cut off either the extension or the open end of the tone arm, a sound box adapted to be supported in the extension or the end of the tone arm, substantially as described.

2. The combination with a tone arm having an opening at one end, an extension projecting at an angle thereto, a slide in the extension adapted to cut off either the extension or the open end of the tone arm, a sound box adapted to be supported in the extension or the end of the tone arm, and said sound box having rotary adjustment in either of its positions, substantially as described.

3. The combination with a tone arm having a lateral extension adjacent its open end, a hollow slide mounted in the extension having a closed inner end and an open outer end, said slide having an opening in its side adjacent its closed inner end, said extension having a longitudinal slot therein, and a button secured to the slide and projecting through the slot, substantially as described.

4. The combination with a tone arm having a lateral extension adjacent its open end, a hollow slide mounted in the extension having a closed inner end and an open outer end, said slide having an opening in its side adjacent its closed inner end, said extension having a longitudinal slot therein, a button secured to the slide and projecting through the slot, a sound box, and a nipple on the sound box constructed to fit the end of the extension and the end of the tone arm, substantially as described.

1,167,797. MOLD-FORM. PERRY CLAWSON, Hamilton, Ohio. Filed Oct. 7, 1915. Serial No. 54,496. (Cl. 25—118.)



1. A mold-form comprising, a straight strip of flexible material, angle-plates bolted to the opposite ends of one surface of said strip having a flange projecting at right angles therefrom and provided with bolt-holes to permit the employment of blots for securing the angle-plate at one end of said strip to a similar angle-plate on the end of a similar strip, and means connected with said angle-plates and adapted to serve in drawing the angle-plates toward each other and curving said flexible strip, combined substantially as set forth.

2. A mold-form comprising, a straight strip of flexible material, angle-plates bolted to the opposite ends of one surface of said strip having a flange projecting at right angles therefrom and provided with bolt-holes to permit the employment of bolts for securing the angle-plate at one end of said strip to a similar angle-plate on the end of a similar strip, and a turnbuckle having its opposite ends connected with said angle-plates and adapted to serve in drawing the angle-plates toward each other and curving said flexible strip, combined substantially as set forth.

3. A mold-form comprising, a straight strip of flexible material, angle-plates bolted to the opposite ends of one surface of said strip having a flange projecting at right angles therefrom and provided with bolt-holes to permit the employment of blots for securing the angle-plate at one end of said strip to a similar angle-plate on the end of a similar strip, a reinforcing strip separate from said flexible strip disposed against the surface of the flexible strip bearing the angle-plates, abutments carried by the flexible strip and adapted to engage the ends of said reinforcement, and means connected with said angle-plates and adapted to serve in drawing the angle-plates toward each other and curving said flexible strip, combined substantially as set forth.

4. A mold-form comprising, a straight strip of flexible material, angle-plates bolted to the opposite ends of one surface of said strip having a flange projecting at right angles therefrom and provided with bolt-holes to permit the employement of blots for securing the angle-plates at one end of said strip to a similar angle-plate on the end of a similar strip, a laminated reinforcing strip separate from said flexible strip disposed against the surface of the flexible strip bearing the angle-plates, abutments carried by the flexible strip and adapted to engage the ends of said reinforcement, and means connected with said angle-plates and adapted to serve in drawing the angle-plates toward each other and curving said flexible strip, combined substantially as set forth.

5. A mold-form comprising, a straight strip of flexible material, angle-plates bolted to the opposite ends of one surface of said strip having a flange projecting at right angles therefrom and provided with bolt-holes to permit the employment of bolts for securing the angle-plate at one end of said strip to a similar angle-plate on the end of a similar strip, a laminated reinforcing strip separate from said flexible strip disposed against the surface of the flexible strip bearing the angle-plates, abutments carried by the flexible strip and adapted to engage the ends of said reinforcement, and means connected with said angle-plates and adapted to serve in drawing the angle-plates toward each other and curving said flexible strip, the laminations of said laminated strip being secured to each other at a point and left free to crawl with reference to each other at other points, combined substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,167,798. STRUCTURE OF METAL AND GLASS OR THE LIKE. ANDREW JAY CROSS, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,380. (Cl. 88—47.)



1. A structure composed of metal and glass or the like, in which the parts are united by a cement capable of being softened by water or other hydrous fluid, and a seal for the joint, said seal being impervious to air and moisture.

2. A structure of metal and glass or the like, in which the glass and metal are united by a cement capable of being softened by water, and a varnish seal for the meeting parts, said seal being impervious to air and moisture.

3. The combination of eyeglasses and their mounting, the glasses and mountings being cemented together by a cement which can be softened in water, and the united parts being hermetically sealed by a seal which is impervious to air and moisture.

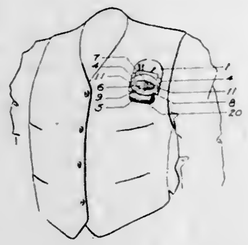
4. The construction of eyeglasses in which the metal and glass parts are united by a cement which can be softened in water, and a varnish seal for the united parts, said seal being impervious to air and moisture.

1,167,799. MATCH-POCKET. MARTIN R. CROSSMAN, Boston, Mass. Filed Jan. 23, 1915. Serial No. 4,052. (Cl. 206—33.)

1. A match pocket comprising a body member having a match-receiving pocket therein, a match-scratching member overlying the body member, a cover member overlying the match-scratching member and provided with a central opening through which the latter is accessible, and means for detachably securing the match pocket to an article of clothing, said means operating to hold the match-scratching member and cover member in position.

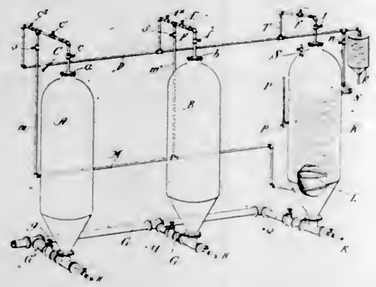
2. A match pocket comprising a body member having a match-receiving pocket therein, a match-scratching member overlying the body member, a cover member overlying the match-scratching member and provided with a central opening through which the latter is accessible, and

attaching pins extending through the cover member and body member by which the device is attached to an article



of clothing, said pins engaging the match-scratching member and holding the latter in position.

1,167,800. APPARATUS FOR COOKING WOOD-PULP. LEMUEL B. DECKER, Kenogami, Quebec, Canada, assignor of one-half to John Ball, Kenogami, Quebec, Canada. Filed Feb. 23, 1915. Serial No. 10,095. (Cl. 92—7.)



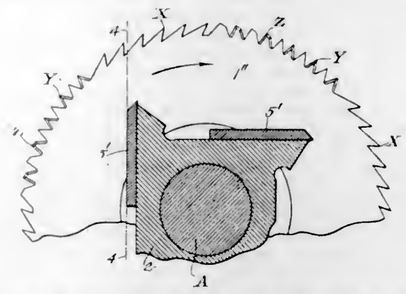
1. An apparatus for cooking wood pulp, comprising a main digester, an acid cooler connected therewith, means for admitting steam to the digester, another or wood waste digester provided with a heater within it connected with the main digester and with the cooler, and means for directing the flow of gas and liquor from the main digester either directly to the cooler or through the heater in the wood waste digester to the cooler.

2. An apparatus for cooking wood pulp, comprising a main digester, an acid cooler, means for admitting steam to said digester, a wood waste digester, a heating coil arranged therein and connected with the main digester and with the cooler, a connection between the interior of the wood waste digester and the cooler, and means for admitting steam to the last named digester.

3. An apparatus for cooking wood pulp, comprising a main digester, an acid cooler, pipe connections between the cooler and said digester, means for admitting steam to the main digester, a wood waste digester, a heating coil within said last named digester, a pipe line connecting said coil with the pipe line connecting the main digester with the cooler, another pipe connecting the coil with said pipe line leading to the cooler, and valves in said pipes and pipe lines for directing the acid liquor and gas from the main digester directly to the cooler or to the cooler through said coil for the purpose specified.

4. An apparatus for cooking wood pulp, comprising a main digester, an acid cooler, means for admitting steam to said digester, a wood waste digester, a heating coil arranged therein for distributing the heat therethrough, connections between the main digester and the heating coil, and a connection between the heating coil and the cooler.

1,167,801. MOLDING BLADE AND SAW. JOHN C. DE LANEY, Watertown, Mass. Original application filed Jan. 16, 1913, Serial No. 742,429. Divided and this application filed June 2, 1914. Serial No. 842,509. (Cl. 143—140.)

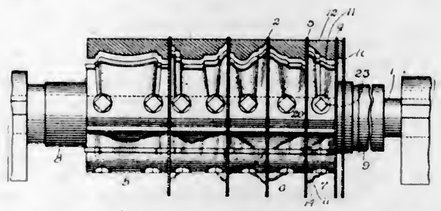


1. In a separator for splitting and smoothing the sides of the kerf formed by the splitting, a series of teeth each having front and rear points with a cutting edge extending therebetween forming a long drawing cutting edge, said front point lying in a plane parallel to and within the plane of said rear point, whereby said cutting edge will gradually cut toward the side of the kerf from the front to the rear point.

2. A separator for splitting and smoothing the sides of the kerf formed by the splitting, comprising a circular blade having sides which are hollow-ground from the peripheral edges toward its hub, a series of splitting, radial and shaving teeth formed around the edge of said blade, each of said shaving teeth having front and rear points with a cutting edge extending therebetween, said front point lying in a plane parallel to and within the plane of said rear point, whereby said cutting edges of the shaving teeth will gradually cut toward the side of the kerf from the front to the rear point.

3. A separator for splitting and smoothing the sides of the kerf formed by the splitting, comprising a circular blade having sides which are hollow-ground from the peripheral edges toward its hub and having in each of its quadrants a series of splitting, radial and shaving teeth formed around the edge of said blade, each of said shaving teeth having front and rear points with a cutting edge extending therebetween, said front point lying in a plane parallel to and within the plane of said rear point, whereby said cutting edges of the shaving teeth will gradually cut toward the side of the kerf from the front to the rear point, said splitting teeth covering the largest portion of the periphery of each quadrant, the radial teeth covering a less portion, and the shaving teeth a still less portion than the radial teeth.

1,167,802. MOLDING-MACHINE. JOHN C. DE LANEY, Watertown, Mass. Filed July 8, 1915. Serial No. 38,662. (Cl. 144—223.)



1. In an apparatus for cutting a plurality of moldings simultaneously, the combination of an arbor, two or more cutter heads thereon and one or more disk separators alternating with said cutter heads and clamped thereagainst, said separators extending circumferentially beyond the cutter heads and each being recessed in its side face between its hub and its teeth and each cutter head being provided with a series of tangential cutting blades, each blade widening toward its cutting edge, these widened portions projecting into the recesses in the separators, one at least of the widened points of the blades of at least one head having hard contact with the adjacent separator at the bottom of the recess in which it lies, for the purposes set forth.

2. The combination of two polygonal molding heads, each molding head having a series of tangential plane bit surfaces, each of said surfaces being projected forward of the next in advance adjacent seat, in a contour of approximately the desired configuration to be cut by the head; all of the points of projection of such line being forward of the plane of the ordinary chip breaking bit supporting ledge; a bit or molding blade to be mounted upon each of said surfaces and having a cutting edge of the desired configuration; a lock-piece to engage the top of each blade and having its outer edge in substantial parallelism with, and in close proximity to, the beveled contour of the blade; there being clearance between the rear of the lock-piece and the supporting outer portion of the adjacent blade or bit surface; a bolt to secure each lock-piece to the head; and a hollow ground separator mounted between said molding heads; each of said blades gradually widening toward its edge so as to extend transversely beyond the sides of said head, and having its extreme outermost side cutting edge contact the side of the separator only at the very point of intersection of the bit edge with the surface of the separator; and means for holding the separator against said blade points, and supporting the tension in the separator.

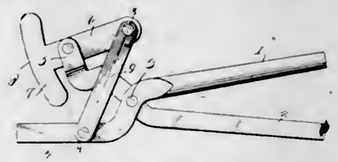
3. The combination of two or more polygonal molding heads, each molding head having a series of tangential plane bit surfaces, each of said surfaces being projected forward of the next in advance adjacent seat, in a contour of approximately the desired configuration to be cut by the head; all of the points of projection of such line being forward of the plane of the ordinary chip breaking bit supporting ledge; a bit or molding blade to be mounted upon each of said surfaces and having a cutting edge of the desired configuration; a lock-piece to engage the top of each blade and having its outer edge in substantial parallelism with, and in close proximity to, the beveled contour of the blade; there being clearance between the rear of the lock-piece and the supporting outer portion of the adjacent blade or bit surface; a bolt to secure each lock-piece to the head; and one or more hollow ground separators, each being mounted between two of said molding heads; each of said molding blades gradually widening toward its cutting edge, so as to extend transversely beyond the sides of said head; only the extreme outermost side cutting point of each blade contacting one concave side of its adjacent separator at a point within the plane containing the cutting points of the separator splitting and shaving teeth; and means for holding the separator against said blade points and supporting the tension in the separator.

4. The combination of two polygonal molding heads, each molding head having a series of tangential plane bit surfaces, each of said surfaces being projected forward of the next in advance adjacent seat, in a contour of approximately the desired configuration to be cut by the head; all of the points of projection of such line being forward of the plane of the ordinary chip breaking bit supporting ledge; a bit or molding blade to be mounted upon each of said surfaces and having a cutting edge of the desired configuration; a lock-piece to engage the top of each blade and having its outer edge in substantial parallelism with, and in close proximity to, the beveled contour of the blade; there being clearance between the rear of the lock-piece and the supporting outer portion of the adjacent blade or bit surface; a bolt to secure each lock-piece to the head; a hollow ground separator mounted between said polygonal molding heads; each of said blades gradually widening toward its edge so as to extend transversely beyond the sides of its head; only the extreme outer most side-cutting point of each blade of one head contacting one concave side of one separator; and the extreme innermost side cutting point of the blade of the adjacent head extending through the plane of the teeth, on the opposite side of the separator, far enough to prevent any of the molding passing between said points and their adjacent said concave side of said separator; and means for holding the said contacting extreme outermost cutting points of the blade against said separator, and supporting the tension in the separator.

5. Three or more polygonal molding heads having a series of tangential plane bit surfaces, each of said surfaces being projected forward of the next in advance adjacent seat, in a contour of approximately the desired configuration to be cut by the head; all of the points of projection of such line being forward of the plane of the ordinary chip breaking bit supporting ledge; a bit or molding blade to be mounted upon each of said surfaces and having a cutting edge of the desired configuration, and each of said blades gradually widening toward its edge so as to extend transversely beyond the sides of said head; a lock-piece to engage the top of each blade and having its outer edge in substantial parallelism with, and in close proximity to, the beveled contour of the blade; there being clearance between the rear of the lock piece and the supporting outer portion of the adjacent blade or bit surface; and a bolt to secure each lock-piece in the head; two or more hollow ground separators, each being mounted between two of each of said blades extending transversely beyond the sides of its respective head; only the extreme outermost side-cutting point of each blade, contacting one concave side of one separator; and the extreme innermost side cutting point of each blade extending through the plane of the teeth of the adjacent separator, far enough to prevent any of the molding passing between said points and their adjacent concave side of said separator; and means for holding said separators against said extreme outermost cutting points of the blades and supporting the tension in the separators.

[Claim 6 not printed in the Gazette.]

1,167,803. TOOL FOR CLENCHING HORSESHOE-NAILS. AUGUST F. DESING, Elkhorn, Wis. Filed July 25, 1912. Serial No. 711,536. (Cl. 168—49.)



A horse shoer's clenching pliers, including a pair of pivotally connected crossed handle levers, one of said levers terminating in a fixed jaw, a movable jaw fulcrumed on the end of the other of said levers and provided with an arcuate clenching surface disposed concentrically of said fulcrum, and a link operatively connecting said movable jaw with said fixed jaw.

1,167,804. SPARK-PLUG. AUBREY AUGUSTUS EDEY, Mobile, Ala. Filed Oct. 1, 1915. Serial No. 53,560. (Cl. 123—169.)



1. In combination with a spark plug, an open-ended cover for the electrodes of said plug carrying an imperforate baffle-plate in front of said opening and slightly separated therefrom.

2. In combination with a spark plug, a cap for the spark points carried by said plug, said cap having a conical por-

tion open at its apex and carrying a baffle plate slightly separated from said opening.

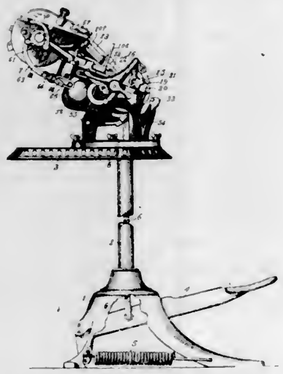
3. In combination with a spark plug having an open end, a cap secured on said end having a conical portion open at its apex and in effect forming an extension of the tube; said cap supporting a baffle-plate slightly separated from the opening in the apex of the cone.

4. In combination with a spark plug having an open end, a cap of cylindrical form screwed on said end and having a conical portion open at its apex and in effect forming an extension of the tube; said cap supporting a baffle-plate slightly separated from the opening in the apex of the cone; there being an unInclosed space between the apex of the cone and said baffle-plate.

5. In combination with a spark plug having an exteriorly threaded end, a cap of cylindrical form screwed on said end having a conical portion open at its apex and in effect forming an extension of the tube, and a baffle-plate carried by said cap slightly below and separated from the opening in the apex of the cone so as to leave an unInclosed space between said opening and said baffle-plate.

[Claims 6 and 7 not printed in the Gazette.]

1,167,805. AUTOMATIC BUTTON-ATTACHING MACHINE. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Filed Aug. 19, 1912. Serial No. 715,794. (Cl. 218—12.)



1. A button feeding device for a button setting machine, comprising a feed wheel, radially extending, V-shaped fins on the wheel, a hopper inclosing the wheel, said hopper having a vertical side close to the apex of the fins and a peripheral portion inclined toward the wheel, and an inclined ledge in the upper part of the hopper having a groove to receive the eyes of the buttons.

2. A button feeding device for a button setting machine, comprising a button feed wheel, a ratchet wheel connected to the feed wheel, a reciprocating pawl engaging the ratchet wheel, a slotted link connected to the pawl, a reciprocating stud slidable in the slot, and a yieldable trip lever having an inclined end to yieldably hold the stud in one end of the slot and adapted to release the same under abnormal stress.

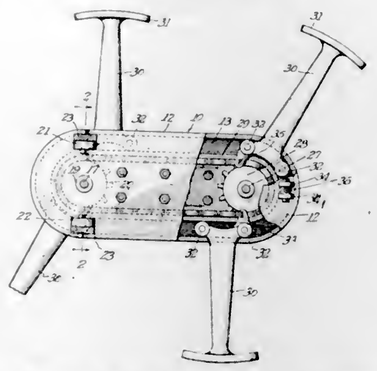
3. A button feeding device for a button setting machine, comprising a reciprocating driving member carrying a stud, a slotted link carried by the stud at one end and connected at the other end to an oscillating disk, a pawl carried by the disk, a ratchet wheel engaged by the pawl, a button feed wheel rotated by the ratchet wheel, a trip lever having an inclined end engaging the stud to hold the same in one end of the slot in the link, and a spring to yieldably hold the said inclined end in engagement with the stud.

4. A button feeding device for a button setting machine, comprising a button chute, means for supplying buttons to the chute, a bell crank lever, means for reciprocating said lever, a finger pivoted to one arm of the lever, a spring to yieldably turn the finger toward the chute, a guide block, a roller on the finger traversing the guide block, an elevating shoe pivoted to the guide block and engaged by the roller to lift the finger over the lower button in the chute, and a spring lever having a divided end engaging the shoe to yieldably retain the same in operative position.

5. A button feeding device for a button setting machine, comprising a bell crank lever, a button feeding finger carried on one arm of the lever, a spring to hold the lever in forward position, a reciprocating driving member, studs on the said member and lever, a connecting rod having slotted ends engaging the studs, a spring engaging the lever at one end and mounted on a rotative hub at the other end, an arm on the hub and a link connecting the arm and the said slotted rod.

[Claims 6 to 10 not printed in the Gazette.]

1,167,806. VEHICLE-PROPELLING DEVICE. ALBIN J. ERICKSON, Chicago, Ill. Filed June 30, 1915. Serial No. 37,164. (Cl. 21—150.)



1. In a device of the character described, a casing having opposite, continuous channels in each of its side walls; a series of legs having ends projecting between the side walls, rollers carried on each side of the legs and projecting into said channels; a chain in said casing to which said legs are attached and means to drive the chain.

2. In a device of the character described, a casing having opposite upper and lower continuous channels in each of its side walls; a series of intermediate legs arranged between said walls and having rollers projecting laterally into said channels; a chain in said casing, to which said legs are attached at uniform intervals; a power shaft section extending into said casing; a sprocket wheel carried by said shaft to drive the chain; another sprocket wheel in the rear of the casing over which said chain passes, and connecting means at the rear of the casing for connection with a similar driving device on the opposite side of a vehicle.

3. In a device of the character described, the combination of two oppositely disposed, spaced apart plates, having opposite upper and lower channels and curved connecting channels at their ends; a driving chain within said casing; a driving sprocket wheel within the casing over which the chain passes; another sprocket wheel in the rear of the casing; a shaft section for driving the front sprocket wheel; a fixed axle to which the device is swiveled; a drive shaft carried by the axle; a universal joint connecting said shaft sections and legs connected at uniform intervals to the chain and having rollers on each side projecting laterally into said channels.

4. In a device of the character described, a casing having opposite, continuous channels in each of its side walls, a series of legs having their inner ends guidedly supported within said channels, a chain in said casing to which said legs are attached, means for pivotally mounting the casing on a vertical axis, the number of the legs being such that one comes in contact with the ground as another is about to leave the ground.

1,167,807. BOTTLE-STOPPER. FRED EVANS and GUSTAVUS A. DURYEE, Summit, N. J. Filed Jan. 14, 1914. Serial No. 812,001. (Cl. 215—53.)



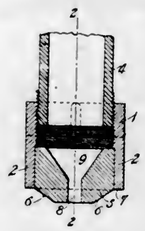
1. As a new article of manufacture, a bottle stopper comprising a cap having a clamping flange to extend down on the outside of a bottle to have holding engagement therewith, and a tape secured in an aperture formed in the clamping flanges of the cap between the upper and lower edges thereof and projecting beyond the clamping edge of the cap for removing the bottle stopper from the neck of the bottle.

2. As a new article of manufacture, a bottle stopper comprising a disk-lined cap having a clamping flange to extend down on the outside of a bottle to have holding engagement therewith, and means removably secured in an opening formed in the clamping flange of said cap, said means projecting beyond the clamping edge of the cap for removing the bottle stopper from the neck of the bottle.

3. As a new article of manufacture, a bottle stopper comprising a cap having a clamping flange to extend down on the outside of a bottle to have holding engagement therewith, and flexible means removably secured in an opening located in the clamping flange of said cap, the ends of said flexible means projecting beyond the edge of the cap for removing the bottle stopper from the neck of the bottle.

4. As a new article of manufacture, a bottle stopper comprising a cap having a crimped clamping flange to extend down on the outside of a bottle to have holding engagement therewith, and flexible means interposed between the neck of the bottle and the inside of the clamping flange, said flexible means being secured in an opening located in said clamping flange of said cap, the ends of said flexible means projecting beyond the edge of the cap for removing the bottle stopper from the neck of the bottle.

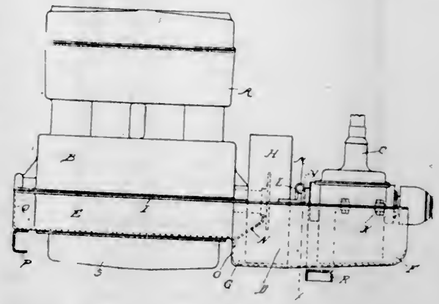
1,167,808. SCREEN-PLATE CLEANER. HILAND R. FARNSWORTH and THOMAS H. SAVERY, Jr., Sandusky, Ohio. Filed Sept. 30, 1915. Serial No. 53,242. (Cl. 92—31.)



1. A vacuum screen plate cleaner comprising, in combination, a casing having depending sides and an open recessed bottom portion, a block removably fitted in the casing and formed with an elongated opening in its lower side, said opening leading to an enlarged elongated opening having flaring or inclined sides which extend outwardly from the elongated opening, and a suction pipe connected to the casing to which a vacuum producing means may be connected, as described.

2. A vacuum screen plate cleaner comprising, in combination, a casing having depending sides and an open recessed bottom portion, a block removably fitted in the casing and formed with an elongated opening in its lower side, said opening leading to an enlarged elongated opening having flaring or inclined sides which extend outwardly from the elongated opening, and a suction pipe connected to the casing to which a vacuum producing means may be connected, said block having its lower surface formed with inclined oppositely extending surfaces which terminate at the lower inner edge or border of the opening formed by the depending sides of the casing.

1,167,809. ENGINE AND TRANSMISSION UNIT. DONALD M. FERGUSON, Detroit, Mich., assignor to General Motors Company, Detroit, Mich., a Corporation of New Jersey. Filed July 23, 1914. Serial No. 852,581. (Cl. 74—56.)



1. In an engine transmission unit, the combination with the uper portion of the crank case housing, of a separate transmission gearing housing, and a pressed sheet metal member having a portion forming the complementary portion of the crank case, a portion embracing and secured to the transmission casing and an enlarged intermediate portion for embracing the fly-wheel.

2. In an engine transmission unit, the combination of an engine casing including the upper portion of the crank case, a separate transmission gearing housing, a pressed sheet metal member having a portion complementary to said crank case, a portion embracing said transmission housing, and an intermediate portion expanded to receive the fly-wheel, flanges projecting laterally from the upper edges of said pressed sheet metal member forming a means of connection with said engine and transmission casing, and a supporting cross bar having a U-shaped portion for embracing said sheet metal member and a bearing for supporting and connecting to said laterally extending flanges.

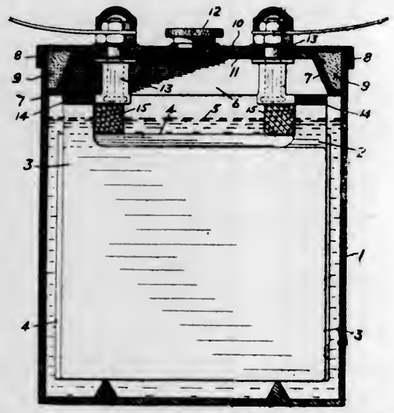
3. In an engine transmission unit, the combination with separate engine and transmission casings, of a pressed sheet metal member having a portion complementary to the engine casing, a portion embracing the transmission casing, an intermediate portion expanded to receive the fly-wheel and an intermediate head or partition for separating the engine portion from the fly-wheel portion.

4. In an engine transmission unit, the combination with an engine casing and a separate transmission casing, of a pressed sheet metal member having a portion complementary to the engine case, a portion embracing the transmission casing, an intermediate portion expanded to receive the fly wheel, and a detachable pan forming the bottom of the engine casing portion.

5. In an engine transmission unit, the combination with the upper portion of the crank case housing, of a pressed sheet metal member formed with laterally projecting flanges at each side of its upper edge, and having a portion forming the complementary portion of the crank-case, an enlarged intermediate portion for embracing the fly-wheel and a portion to receive transmission mechanism, and a supporting cross-bar having a U-

shaped portion embracing said sheet metal member, and forming bearings at each side of the U-shaped portion for respectively supporting said flanges.

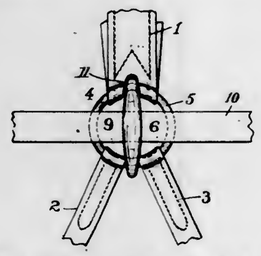
1,167,810. STORAGE-BATTERY JAR. BRUCE FORD, Philadelphia, Pa. Filed Dec. 19, 1912. Serial No. 737,634. (Cl. 215—82.)



1. A storage battery closure comprising the combination of a jar, and a cover concave on one side and marginally provided with a sealing compound channel terminating at the inner face of the jar and with a marginal flange surrounding the side wall of the jar, substantially as described.

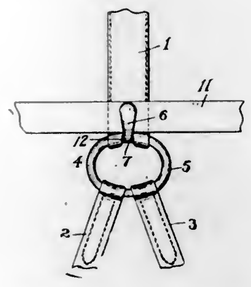
2. A storage battery closure comprising the combination of a jar, a two-part cover of which one part is provided with a marginal flange surrounding the exterior of the top of the wall of the jar and of which the other part is provided with a marginal channel terminating at the inner face of the wall of the jar, and a sealing compound arranged in said channel and against said wall, substantially as described.

1,167,811. HARNESS. THOMAS A. FOX, Newark, N. J., assignor to The Steffens-Amberg Co., a Corporation of New Jersey. Filed Feb. 27, 1912. Serial No. 680,314. (Cl. 54—73.)



A ring-neck terret or spider comprising a ring-shaped main body of circular configuration flat so that it will lie in a single straight plane, and an upwardly projecting loop-shaped element extending centrally and transversely across said ring-shaped body in a straight plane at right angles to the single straight plane of the said ring-shaped body, said loop-shaped element comprising a pair of upwardly extending end-members projecting at obtuse angles in outward directions oppositely from the outer marginal edge-portion of said ring-shaped body, and a curved connecting bar between the end-portions of said angularly disposed and upwardly and outwardly projecting end-members, substantially as and for the purposes set forth.

1,167,812. SPUD HIP-LOOP FOR HARNESS. THOMAS A. FOX, Newark, N. J., assignor to The Steffens-Amberg Co., a Corporation of New Jersey. Filed Feb. 27, 1912. Serial No. 680,315. (Cl. 54—73.)



1. A spud hip loop for the hip-straps of harness comprising a ring-shaped main body of oval configuration flat so that it will lie in a single straight plane, and an upwardly projecting rein-supporting finger extending centrally and transversely from said oval ring-shaped body in a plane at right angles to the single straight plane of the said oval ring-shaped body, said finger comprising an upwardly extending end-member integrally connected with the said ring-shaped body and curved at its free end-portion forwardly in a manner substantially as and for the purposes set forth.

2. A spud hip loop for the hip-straps of harness comprising a ring-shaped main body of oval configuration flat so that it will lie in a single straight plane, and an upwardly projecting rein-supporting finger extending centrally and transversely from said oval ring-shaped body in a plane at right-angles to the single straight plane of the said oval ring-shaped body, said finger comprising an upwardly extending end-member integrally connected with a marginal part of said oval ring-shaped body and curved at its free end-portion forwardly and beyond the outer marginal surface portion of said part, substantially as and for the purposes set forth.

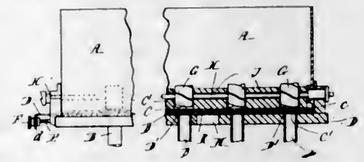
1,167,813. CLIP. ARTHUR L. GALLIGAN, Kenosha, Wis. Filed June 18, 1915. Serial No. 34,859. (Cl. 5—29.)



1. The combination with a metallic spring and a tie rod; of a clip for fastening said spring and rod together, said clip comprising a body portion having opposite outstanding longitudinal flexible flanges, one of the flanges having a perforation, the spring and the rod being on the body portion and the flanges being bendable over the same to overlap, the contiguous portions of the spring and the tie rod having interlocking outward bends seating in the aforesaid perforation.

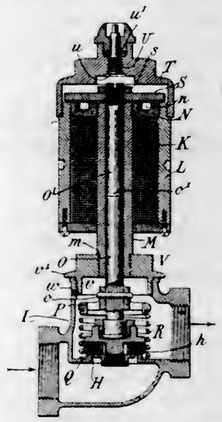
2. The combination with a metallic spring and a tie rod; of a clip for fastening said spring and rod together, said clip comprising a body portion having opposite outstanding longitudinal flexible flanges, one of the flanges having a perforation, the spring and the rod being on the body portion and the flanges being bendable over the same to overlap, the contiguous portions of the spring and the tie rod having interlocking outward bends seating in the aforesaid perforation, the imperforate end portions of the perforated flange engaging the ends of the bends and being connected by an imperforate portion which overlaps the other flange.

1,167,814. SEED AND FERTILIZER SOWER. GEORGE WILLIAM GANE, Normanby, Taranaki, New Zealand. Filed Aug. 13, 1914. Serial No. 856,557. (Cl. 111—34.)



In seed and fertilizer sowers, the combination of a box having a number of discharge openings and slot apertures in the bottom thereof; a plate fixed above said bottom and provided with apertures registering with the discharge openings; and a sliding plate having therein discharge apertures corresponding to said discharge openings and slot apertures corresponding to the slot apertures.

1,167,815. AUTOMATIC VALVE. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed May 16, 1913. Serial No. 768,059. (Cl. 137—4.)



1. A valve, a valve seat, a valve casing, a spring tending to press said valve away from its seat, an actuating magnet adapted when energized to seat said valve, a casing inclosing the armature thereof and forming fluid-tight chamber therefor, a valve stem connecting said valve to the armature, a tube having one end opening into the said chamber and the other end connected to the said valve casing, and providing a free passageway for said valve stem, said tube adapted to be disconnected from said valve casing, and said valve stem being divided transversely within said tube into disconnected parts capable of movement relative to each other and that part of said stem which is attached to the valve being adapted to slide out of said tube upon removal of the tube from the valve casing.

2. A valve casing, a valve disk therein, spring means for normally holding said valve open, valve operating means comprising a magnet, a fluid-tight casing for its coil, a bonnet fitted to one end thereof and inclosing an armature chamber, said magnet having a passage therethrough leading to said chamber, and a tube extending through said passage and connected to said casing, said armature chamber and said connected passage being fluid-tight, a bolt threaded in said bonnet and having a cone valve on its inner end, a seat therefor in said bonnet adapted to be engaged by said bolt to prevent the escape of fluid, said bolt having a smooth portion and a stuffing-box on said bonnet therefor and adapted when moved to extreme open position to close said valve disk against the passage of steam, and when closed to permit said valve disk to open and to close the passage in the bonnet against leakage of steam.

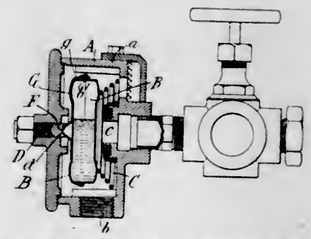
3. A valve, a valve seat, a spring tending to press said valve away from its seat, an operating magnet adapted when energized to seat said valve, having a coil and an armature, a casing therefor forming a fluid-tight covering for said coil and a bonnet attached to the top of said casing providing a chamber for said armature, a tube connecting said valve and said armature chamber and capable of being disconnected from said valve, a valve stem adapted to move freely in said tube and being divided transversely therein into disconnected parts, connected respectively to said armature and to said valve whereby upon removal of the tube from the valve said stem will separate, said tube and armature chamber being fluid-tight, and means for adjusting the stem relatively to the armature.

4. A valve, a valve seat, a valve casing, a spring tending to press said valve away from its seat, an actuating magnet adapted when energized to seat said valve, a casing inclosing the armature thereof and forming a fluid-tight chamber therefor, a valve stem connecting said valve to the armature, a tube connecting said chamber with the valve casing and disconnectible from said casing, and providing a free passageway for said valve stem, said valve stem having an adjustable connection to said armature whereby the position of the valve relatively to its seat may be adjusted to compensate for wear, and being divided transversely within said tube, into disconnected parts capable of separating to permit the removal of said tube.

5. A valve having a valve disk, a valve seat and a valve casing, a bonnet threaded thereon and having a shouldered engagement therewith, an operating magnet having a coil and an armature, a casing for said magnet comprising an integral tube threaded to said bonnet and having a shouldered engagement therewith and extending within the said coil, and a shell inclosing said coil and supported on said tube, a bonnet on said shell secured steam-tight thereto, and extending beyond the outer end of said tube and providing a space for the movement of said armature, a valve stem located in said tube and secured to the armature and to the valve disk, and a spring tending to press said valve disk in a direction opposed to said magnet.

[Claim 6 not printed in the Gazette.]

1,167,816. STEAM-HEATING APPARATUS. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1915. Serial No. 18,698. (Cl. 236—10.)



1. A retaining device for a thermostatic cell, comprising a plate, arms on said plate having bent spring ends adapted to engage over the side of the cell and hold the plate in place and an outwardly projecting boss on said plate.

2. A retaining device for a thermostatic cell, comprising a plate, spring arms on said plate adapted to engage over the side of the cell and hold the plate in place, and said plate being detachable from said cell, and an outwardly projecting boss on said plate.

3. A retaining device for a thermostatic cell, comprising a plate, outwardly projecting arms integral with said plate and having bent ends adapted to spring over the side

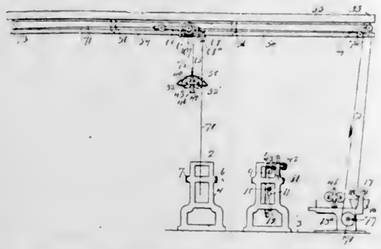
of the cell and hold the plate in place and being detachable therefrom and an outwardly projecting boss on said plate.

4. A retaining device for a thermostatic cell comprising a plate, arms on said plate having bent spring ends the extremities of which are shouldered and are adapted to clasp the sides of said cell and hold the plate therein by reason of said shoulders passing over the seam in the cell, and said cell being removable from said arms and an outwardly projecting boss on said plate.

5. A retaining device for a thermostatic cell comprising a plate, arms on said plate having bent ends the extremities of which are shouldered and are adapted to clasp the sides of said cell and hold the plate therein by reason of said shoulders passing over the seam in the cell, and an outwardly projecting boss on said plate, said plate and arms being integral and formed of spring metal.

[Claims 6 and 7 not printed in the Gazette.]

1,167,817. DEVICE FOR SUPPLYING FABRIC TO EMBROIDERING-MACHINES. JOSEPH A. GROEBLI, New York, N. Y. Filed July 11, 1911. Serial No. 638,010. (Cl. 112—7.)



1. The combination with an embroidering machine having a tambour frame, of three rollers, the first of which rollers shall have the fabric wound thereon and held in a roll thereon, the second roller being adapted to have the fabric wound upon itself and held in a roll thereon and to receive the fabric from the first roller, and a third roller on which the fabric from the second roller is wound upon itself, after the fabric from the first roller has been wound upon the second roller, said second and third rollers being mounted upon the tambour frame and arranged to hold the fabric between them in position to be switched by the embroidering needles and means for revolubly supporting said first roller.

2. The combination with an embroidering machine having a tambour frame, of three rollers, the first of which rollers shall have the fabric wound upon itself and held in a roll thereon, the second roller being adapted to have the fabric wound upon itself and held in a roll thereon and to receive the fabric from the first roller, and a third roller on which the fabric from the second roller is wound upon itself, after the fabric from the first roller has been wound upon the second roller, said second and third rollers being mounted upon the tambour frame and arranged to hold the fabric between them in position to be stitched by the embroidering needles, and means for revolubly supporting said first roller independently of the tambour frame.

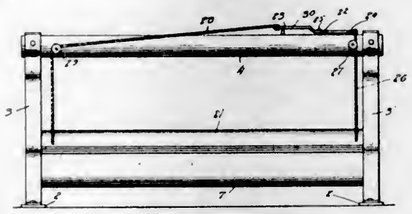
3. A device of the character described, including embroidering machines of the type described arranged in parallel relation and having fabric rollers, and a transporting device adapted to convey fabric from a source of supply to any of said embroidering machines, said transporting device embodying fabric rollers upon which the fabric may be wound, means for holding said rollers on the embroidering machine, and means for conveying the transporting device over said machines and into position where the fabric may be held by said holding means and the fabric reeled from the rollers of the transporting device upon the rollers of either of the embroidering machines.

4. In a device of the character described, the combination of an embroidering machine, and a transporting device for conveying fabric in rolled condition from a source of supply to the embroidering machine, embodying a roller upon which the fabric may be wound, means for supplying fabric, embodying a trough for holding the fabric, a roller in proximity thereto and upon which the fabric is adapted to be wound from the trough, said transporting device being adapted to be brought into position where the fabric from the supplying roller may be reeled upon the roller of the transporting device, and means for conveying the transporting device into position where the fabric may be reeled from the transporting device roller upon the embroidering machine roller.

5. In a device of the character described, the combination of an embroidering machine and a transporting device adapted to convey fabric from a source of supply to the embroidering machine, embodying a fabric roller for holding the fabric, means for supplying fabric, embodying a trough for holding the fabric, a roller in proximity thereto upon which the fabric from the trough may be wound, a brake for said supply roller, said transporting device being adapted to be brought into position to receive upon its roller the fabric from said supply roller, means for revolving the roller of the transporting device and means for conveying said transporting device into position where the fabric may be reeled from the transporting roller upon the roller of the embroidering machine.

[Claims 6 to 9 not printed in the Gazette.]

1,167,818. HOG-TROUGH. ORIS A. GROSSMAN, Plymouth, Ind. Filed July 29, 1914. Serial No. 853,894. (Cl. 119—63.)



In a device of the class described, standards, a cross bar joining said standards at their upper ends, a trough secured between said standards, a cover slidably mounted between the trough and the cross bar and guided by the standards, means for raising and lowering the cover comprising pairs of flexible members secured to the ends of the cover, a lever pivotally secured to the cross bar and to which the flexible members are attached, means for limiting the movement of the lever to maintain the cover in its raised position, and means for releasing said lever.

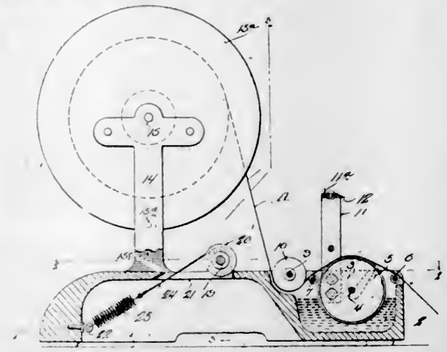
1,167,819. MOISTENER. CLYDE R. HANSON, Milwaukee, Wis., assignor to Clyde Sealing Machine Company, Milwaukee, Wis. Filed Aug. 20, 1915. Serial No. 46,506. (Cl. 91—14.5.)

1. A moistener comprising a stand having a source of material supply and a reservoir, a moistening roller cooperating with the reservoir to moisten the material, a moisture spreading roller coöperating with the moistening roll, a tension roller engaging the material in advance of the moistening roll, and yieldable means opposing rotary movements of the tension roll.

2. A moistener comprising a source of paper supply, a reservoir, a moistening roll operating in the reservoir; a tension roll for the material fed to the moistening roll, and means resiliently opposing a forward rotation of the tension roll to provide for reverse movement thereof.

3. A moistener comprising a stand having a forward reservoir and a rear source of material supply, a moistening roll in the reservoir, a spreading roll forward of the moistening roll, a tension roll engaging the material in advance of the moistening roll, and mechanism actuated by the forward rotation of the tension roll for opposing rotary movements of said tension roll.

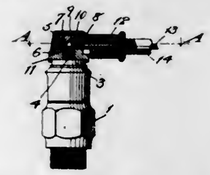
4. A moistener comprising a stand provided with a reservoir, and with a source of material supply, a moistening roll in the reservoir, a tension roll engaging the material in advance of the moistening roll, gearing actuated by a forward rotation of the tension roller, means operated by the gearing for limiting the rotary movements of the tension roller, and means opposing a forward movement of the tension roller.



5. A moistener comprising a stand provided with a fluid reservoir and a source of material supply, a moistening roll in the reservoir, a spreading roll coöperating with the moistening roll, a tension roll engaging the material in advance of the moistening roll, a shaft carried by the stand, a spring connection between the stand and the shaft for opposing movement of said shaft in one direction, gear connections between the shaft and the tension roll, an indicator mounted on the shaft, and stops in the forward and rear paths of movements of said indicator.

[Claims 6 to 9 not printed in the Gazette.]

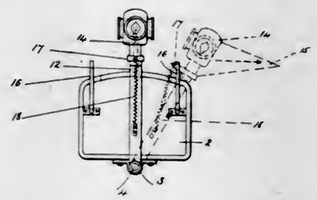
1,167,820. ELECTRIC-CABLE TERMINAL. GUSTAVE L. HERZ, Vienna, Austria-Hungary. Filed Apr. 9, 1913. Serial No. 759,974. (Cl. 173—269.)



A cable terminal for spark plugs comprising a non-conducting casing, a head embedded therein, said head being provided with a downwardly extending lug having its lower portion outwardly spreading, a socket piece provided with an inwardly extending shoulder adapted to engage the outwardly spreading portion of said lug, thereby forming a swivel connection between said head and said socket piece, said socket piece being screw threaded for engagement with the spark plug.

1,167,821. SIGNAL FOR MOTOR-CARS. AUGUST HOLTZ, Detroit, Mich. Filed May 17, 1915. Serial No. 28,619. (Cl. 116—31.)

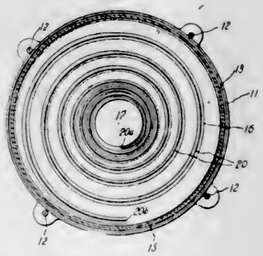
1. The combination, with the front end portion of a motor car, of a rock-shaft mounted longitudinally on the center line of the car and provided with an upwardly projecting arm at its front end, a signal lamp and a pointer signal rigidly secured together and pivoted to move in a normally horizontal plane on the upper end portion of the said arm, operating devices for oscillating the said arm, and means for moving the signals pivotally on the arm when the arm is moved to the right or to the left so as to turn a different side of the lamp and signal to the front and thereby indicate the change in the direction of travel of the car.



2. The combination, with the front end portion of a motor car, of a rock-shaft mounted longitudinally on the center line of the car and provided with an upwardly projecting arm at its front end, a signal lamp and a pointer signal rigidly secured together and pivoted to move in a normally horizontal plane on the upper end portion of the said arm, a crossbar operatively connected with the rear end portion of the rock-shaft, means for operating the rock-shaft, springs normally holding the crossbar in a horizontal position and the said arm in a vertical position, and means for moving the signal pivotally on the arm when the arm is moved to the right or to the left to turn a different side of the lamp and pointer signal to the front and thereby indicate the change in the direction of travel of the car.

3. The combination, with a motor car, of an arm having its lower end portion pivoted on the center line of the car at one end thereof and provided at its upper end with a normally vertical pivot, a signal lamp and a pointer signal rigidly secured together and mounted on the said pivot, a spring arranged to normally hold the lamp and pointer signal so that the latter is arranged longitudinally of the car, means for oscillating the said arm at will to move the lamp and pointer signal laterally, and means for automatically turning the lamp and pointer signal partially around on the said pivot when they are moved laterally by the said arm.

1,167,822. MUFFLER. GEORGE W. HOWELL, Los Angeles, Cal. Filed Feb. 9, 1915. Serial No. 7,112. (Cl. 121—116.)



1. A device of the character described, comprising a structure having therein a radially spiral passage of uniform axial length uniformly increasing in size from center to outside, an inlet at the center connecting with the passage at its point of minimum size, and an outlet at the outside communicating with the passage at its point of maximum size.

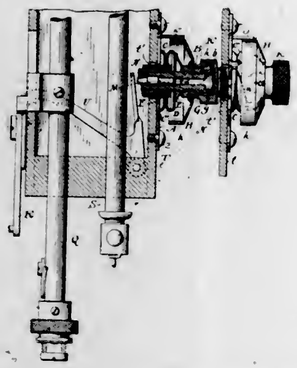
2. A device of the character described, comprising a structure embodying a sheet of uniform axial length wound in a radial spiral to form a spiral passage, the distance between successive convolutions being gradually and uniformly greater progressing outwardly on the spiral, an inlet at the center connecting with the passage at its point of minimum size, and an outlet at the outside communicating with the passage at its point of maximum size.

3. A device of the character described, comprising a structure having therein a radially spiral passage of uniform dimension in an axial direction and of gradually and uniformly increasing radial dimension progressing outwardly, the axial dimension being relatively great as compared with the maximum radial dimension, an inlet at the center connecting with the passage at its point of minimum size, and at outlet at the outside communicating with the passage at its point of maximum size.

4. A device of the character described, comprising an outer casing embodying a pair of circular heads and a cylindrical casing secured between them, each of the heads having a volute spiral groove in its inner surface, the radial distance between successive convolutions gradually and uniformly increasing progressively outwardly on the spiral, a spirally wound sheet held between the heads with its edges in said grooves, to form a spiral passage gradually increasing in size from inside to outside, an inlet at the center connecting with the passage at its point of minimum size, and an outlet at the outside communicating with the passage at its point of minimum size.

5. A device of the character described, comprising an outer casing embodying a pair of circular heads and a cylindrical casing secured between them, each of the heads having a volute spiral groove in its inner surface, one of said heads having a central admission opening, and said spiral grooves having their inner ends of a circumference of approximately the size of said opening, the radial distance between successive convolutions gradually and uniformly increasing progressively outwardly on the spiral, and a spirally wound sheet held between the heads with its edges in said grooves, the outer cylindrical casing having a series of perforations on a longitudinal line near the outer end of the spiral sheet, the aggregate area of said openings being not less than the cross-sectional area of the space between the two last convolutions of the spiral.

1,167,823. TENSION DEVICE FOR SEWING-MACHINES. JOHN O. HUFFMAN and EMIL J. LAUFFER, Cleveland, Ohio., assignors, by mesne assignments, to The White Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 30, 1913. Serial No. 745,076. (Cl. 242—150.)

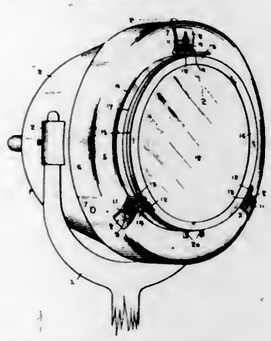


1. In an upper thread tension device for sewing machines, the combination of a fixed stud adapted to be secured to the sewing machine head, and to project forwardly therefrom, said stud being externally threaded at its front end, a fixed tension disk, and a movable tension disk,—both of which embrace said stud and have opposed annular surfaces which are in contact and have their marginal edges curved away from each other, a spring acting to press the movable tension disk against the fixed tension disk with greater or less force, a tension nut which screws onto said stud against said spring to vary the tension of said spring, and an annular indicator disk which is centrally fixed to said nut and has a rearwardly extended cylindrical marginal flange,—the rear edge of which is extended rearwardly past the plane in which lies the front edge of the movable tension disk.

2. In an upper thread tension device for sewing machines, the combination of a fixed stud adapted to be secured to the sewing machine head and to project forwardly therefrom, said stud being externally threaded at its front end, a fixed tension disk, and a movable tension disk,—both of which embrace said stud and have opposed annular surfaces which are in contact and have their marginal edges curved away from each other, a spring acting to press the movable tension disk against the fixed tension disk with greater or less force, a tension nut which screws onto said stud against said spring to vary the tension of said spring, and an annular indicator disk which is centrally fixed to said nut and has a rearwardly extended cylindrical marginal flange,—the rear edge of which is extended rearwardly past the plane in which lies the front edge of the movable tension disk, and a fixed pointer for coöperation with said indicator disk.

3. In an upper thread tension device for sewing machines, the combination of a fixed stud adapted to be secured to the sewing machine head, and to project forwardly therefrom, said stud being externally threaded at its front end, a fixed tension disk, and a movable tension disk,—both of which embrace said stud and have opposed annular surfaces which are in contact and have their marginal edges curved away from each other, a spring acting to press the movable tension disk against the fixed tension disk with greater or less force, a tension nut which screws onto said stud against said spring to vary the tension of said spring, and an annular indicator disk which is centrally fixed to said nut and has a rearwardly extended cylindrical marginal flange,—the rear edge of which is extended rearwardly past the plane in which lies the front edge of the movable tension disk, a pointer, and two stops carried by said indicator disk for engagement with opposite sides of said pointer to limit the turning movement of said indicator disk.

1,167,824. DIMMER FOR HEADLIGHTS. JOHN W. HUNT, Washington, D. C. Filed Aug. 31, 1915. Serial No. 48,161. (Cl. 240—48.4.)



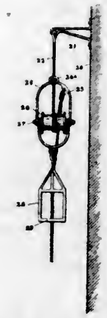
1. In a dimming device for head lights, the combination with the flange of the rim for supporting the front lens, of a dimmer adapted to be used on a flange having a greater or less diameter than the diameter of said dimmer, and means for mounting said dimmer on either of said flanges.

2. In a dimming device for head lights, the combination with the flange of the rim for supporting the front lens, of a dimmer adapted to be used on a flange having a greater or less diameter than the diameter of said dimmer, and reversible and radially adjustable attaching members for detachably mounting said dimmer on either of said flanges.

3. In a device of the class described, the combination with a head light, of a frame therefor, a dimmer member within said frame, means for securing said dimmer member within said frame, attaching members adjustably secured upon said head light and provided with seats, and means upon said frame for engaging said seats for mounting said frame and said dimmer member upon said head light.

4. In a device of the class described, the combination with a head light, and the glass retaining rim thereof, of reversible brackets adjustably secured upon said rim and provided with seats, a frame having means for engaging said seats for removably attaching said frame to said brackets, a dimmer glass within said frame, and means for removably securing said dimmer glass within said frame.

1,167,825. FIRE-ESCAPE. ODIN M. JENSEN, Norfolk Downs, Mass. Filed May 20, 1915. Serial No. 29,255. (Cl. 227—29.)



A fire escape of the type described including interconnected frames the upper frame having journaled therein a winding drum, said cable having one end connected to an outstanding point above the upper frame, and its other end extending downwardly groundward, the upper end of the upper frame having a terminal eye, said cable or line being passed intermediate its ends through the upper end eye-terminal of said upper frame and looped a number of times around said drum, said line or cable also having its intermediate portion rove through a pulley suspended from the upper end of said upper frame, laterally of the longitudinal center of the latter, said intermediate line-portion thence extending laterally of said drum and said upper frame also laterally of said lower frame, said lower frame being provided with a brake-equipped tubular member, said cable extending through said tubular member and for engagement by the brake of said tubular member, said lower frame being adapted to serve as a seat.

1,167,826. METHOD OF FORMING BRAKE-SHOES. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed Jan. 23, 1915. Serial No. 3,875. (Cl. 22—202.)



1. The method of forming brake shoes consisting in forming a coating, including graphite, upon an insert of metal, casting the body of a brake shoe therearound, and supplying a liquid oil to the said coating.

2. The method of forming brake shoes consisting in casting a shoe body around an insert including a porous mixture of graphite, positioning the said insert so as to protrude beyond the body of the shoe and immersing the protruding end of said insert into a bath of oil.

3. The method of forming brake shoes consisting in forming a plurality of interlaced or connected tubes of a porous mixture including graphite, casting the metal body of a shoe therearound, and supplying an oil to the said porous tubes for the absorption thereof and rendering the said tubes capable of lubricating the shoe.

4. The method of forming brake shoes consisting in forming a plurality of interlaced or connected tubes of graphite and sodium silicate, casting a shoe body therearound, and supplying an oil to said porous tubes for the absorption of the former, thereby rendering said tubes capable of lubricating the shoe.

5. The method of forming brake shoes consisting in coating reticulated metal with a porous mixture including graphite, casting a shoe body therearound, and supplying oil to said porous coating.

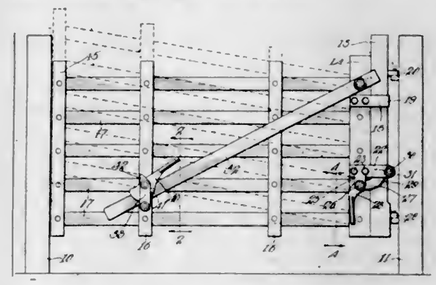
1,167,827. PROCESS FOR THE PRODUCTION OF ALLOYS OF HIGH MELTING-POINT HAVING DUCTILE PROPERTIES. HANS KAISER, Augsburg, Germany, assignor to the Firm of Wolfram-Lampen Aktien Gesellschaft, Augsburg, Germany. Filed Feb. 14, 1914. Serial No. 818,620. (Cl. 75—1.)

1. The process substantially as herein described, of making alloys or solid solutions of high melting pofat having ductile properties, from the rare metals, which consists in preparing a mixture composed of one of said metals as a base or foundation metal, with the addition of a smaller amount of a second one of said metals, and an extremely small added amount of a third one of said metals and sintering the product.

2. The process substantially as herein described, of making alloys or solid solutions of high melting point having ductile properties, from the rare metals, which consists in preparing a mixture composed of one of said metals as a base or foundation metal, with the addition of a smaller amount of a second one of said metals, and an added amount in the proportion of a fraction of one per cent. or less of a third one of said metals, and sintering the product.

3. The process substantially as herein described of making alloys or solid solutions of high melting point having ductile properties, from the rare metals, (such as chromium, vanadium, niobium, tantalum, osmium, ruthenium, zirconium, thorium and tungsten) which consists in preparing a mixture composed of one of said metals as a base or foundation metal, with the addition of a smaller amount of a second one of said metals, and an added amount of a fraction of one per cent. of a different metal of the platinum group, forming the mixture under pressure to suitable shape, and sintering the product.

1,167,828. LOCKING-CLAMP FOR GATES AND THE LIKE. ISRAEL L. LANDIS, Chicago, Ill. Filed Jan. 23, 1915. Serial No. 3,877. (Cl. 39—78.)

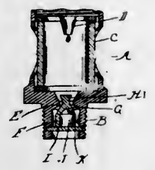


1. In a locking clamp, the combination with a support including the parts to be clamped, of a pair of bolts extended through the support and having a detachable connection near one of their ends, a pair of plates loosely mounted on said bolts near their other ends, said plates

having their adjacent surfaces planed or flat and a suitably fulcrumed wedge-shaped lever positioned to be interposed between the pair of plates and having on one of its surfaces a projection adapted to strike one of said plates and restrict the movement of said lever.

2. In a locking-clamp, the combination with a support including the parts to be clamped, of a pair of bolts extended through the support and each having a head on one of its ends and screw-threads near its other end, a plate uniting said bolts at their headed portions, a pair of plates loosely mounted on said bolts near their other ends, said plates having their adjacent surfaces plain or flat a nut on the screw-threaded portion of each bolt, and a wedge-shaped lever fulcrumed on one of said bolts and positioned to be interposed between said pair of plates and having a projection adapted to strike one of said plates of said pair to restrict the movement of said lever.

1,167,829. LUBRICATOR. FRANK LE ROY, Detroit, Mich., assignor to Michigan Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 23, 1915. Serial No. 46,895. (Cl. 184—76.)



1. In a lubricator, the combination with the sight feed chamber and a stationary drop-forming nozzle, of a back pressure baffle at the bottom of said chamber, comprising a valve seat below said nozzle, a conical valve for engaging said seat, and a reversed cone or flaring portion above said seat, for the purpose described.

2. In a lubricator, the combination with the sight-feed chamber and a stationary drop-forming nozzle, of a back-pressure baffle at the bottom of said chamber, comprising a valve seat below said nozzle, a valve having a portion for engaging said seat, and a deflector portion above said seating portion.

3. In a lubricator, the combination with the sight-feed chamber and a stationary drop-forming nozzle, of a back-pressure baffle at the bottom of said chamber, comprising a valve seat below said nozzle, a valve for engaging said seat having a conical seating portion, a recessed bottom portion of greater area and a flaring top for the purpose described.

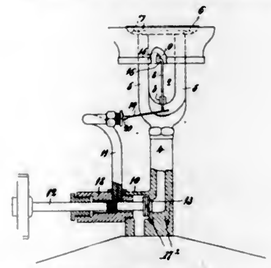
4. In a lubricator, the combination with the sight feed chamber and a stationary drop-forming nozzle, of a back-pressure baffle at the bottom of said chamber, comprising a valve seat below said nozzle, a valve having a portion for engaging said seat and a deflector portion above said seating portion, and means located exterior to said chamber beneath said valve for supporting the same when unseated.

1,167,830. STARTING-VAPORIZER. ALBERT OLOF MELCHER LÖFGREN, Stockholm, Sweden. Filed Aug. 8, 1912. Serial No. 714,068. (Cl. 158—81.)

1. Vaporizing apparatus for volatile combustible, comprising a main vaporizer, and an additional vaporizer having a burner nozzle provided with two oppositely directed burner jets, the first of said burner jets being directed toward the main vaporizer and the second burner jet being directed toward the additional vaporizer.

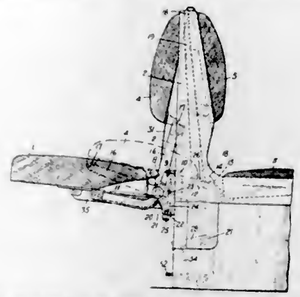
2. Vaporizing apparatus for volatile combustible, comprising a main vaporizer, and an additional vaporizer having a burner nozzle provided with two oppositely directed burner jets in alinement with each other, the first of said burner jets being directed toward the main vaporizer and the second burner jet being directed toward the additional vaporizer.

3. Vaporizing apparatus for volatile combustible, comprising a main vaporizer, and an additional vaporizer directing a flame toward the main vaporizer, and a holder for supporting a match beneath a part of said additional vaporizer reduced in section for initiating the evaporation in said reduced part of the additional vaporizer.



4. Vaporizing apparatus for volatile combustible, comprising a main vaporizer, and an additional vaporizer having a burner nozzle provided with two oppositely directed burner jets, the first of said burner jets being directed toward the main vaporizer, and the second burner jet being directed toward a part of the additional vaporizer reduced in section.

1,167,831. CAR-SEAT CONSTRUCTION. JOHN EDWIN KILBURN, Philadelphia, Pa., assignor to Hale & Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 26, 1914. Serial No. 858,606. (Cl. 155—2.)



1. In a car-seat construction, the combination of a support, a shaft carried thereby, a seat pivotally mounted on said shaft, and adapted to be held in operative position, a back, pivotal means supporting said back from said shaft, and means connected to said back and said seat for locking said back in operative position when said seat is in operative position, said locking means being arranged to be moved out of coöperative relation by upward movement of said seat, substantially as set forth.

2. In a car-seat construction, the combination of a support, a shaft carried thereby, a seat pivotally mounted on said shaft, and adapted to be held in operative position, a back, links supporting the lower part of said back from said shaft, means supporting the upper part of said back from said support, and means for locking said back in operative position when said seat is in operative position, said back being movable to inoperative position, when unlocked, by forward movement of the lower part thereof over said seat, substantially as set forth.

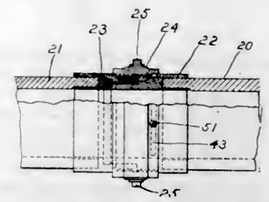
3. In a car-seat construction, the combination of a support, a seat pivotally secured thereto, at its rear edge, and adapted to be swung backwardly and upwardly to inoperative position, a back, means for latching the same in operative position when said seat is in operative position, and supporting means for said back such that, when said seat is raised, said back may be moved into parallel relation thereto by the forward movement of the lower end of said back, substantially as set forth.

4. In a car seat construction, the combination of a support, a seat pivotally secured thereto, adapted to be swung into inoperative position, a support for said seat when in operative position, a back, means for locking said back in operative position when said seat is in operative position, arranged to be released by a slight upward movement of said seat, and supporting means for said back adapted to guide said back into an inoperative position when unrestrained by said locking means, substantially as set forth.

5. In a car seat construction, the combination of a seat, a back therefor, a frame, link means pivotally connected to said back and said frame, and adapted to support said back in operative position, a track carried by said frame, and guiding means secured to said back and movable in said track, for guiding said back in a movement away from operative position, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,167,832. COUPLING DEVICE. MORRIS A. MARTIN, Dayton, Ohio. Filed Oct. 9, 1911. Serial No. 653,586. (Cl. 137—28.)

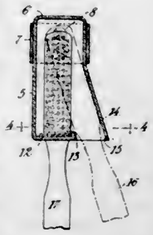


1. In a coupling device, the combination with two coupling members, of a locking member coöperating therewith and having screw threaded conections movably attaching said locking member to one of said coupling members, with segmental interlocking screw thread portions carried respectively by said locking member and the second coupling member, said segmental interlocking portions being mutually spaced to permit the coupling members to be assembled with said interlocking threads normally out of alinement but to be brought into engaging and interlocking position upon the coupling movement of said locking member; and a slot and pin connection between said coupling members to prevent relative rotary movement thereof; and alining means for alining said coupling members and locking member with said segmental threaded portions in their normal positions out of alinement preparatory to the coupling movement of the locking member, and at the same time effecting the connection of said connecting means between said two coupling members.

2. In a coupling device, the combination with two coupling members, of a locking member coöperating therewith and having connections movably attaching said locking member to one of said coupling members, with segmental interlocking screw thread portions carried respectively by said locking member and the second coupling member, said segemental interlocking portions being mutually spaced to permit the coupling members to be assembled with said interlocking threads normally out of alinement but to be brought into engaging and interlocking position upon the coupling movement of said locking member; and a slot and pin connection between said two coupling members to prevent relative rotary movement thereof; and an alining device comprising a blocking obstruction to position the locking member upon the first coupling member, with indicating devices carried by said locking member and said second coupling member to aline all of the parts in position to cause the engagement of said slot and pin connections and at the same time assemble the segmental threaded portions out of alinement preparatory to coupling.

3. A coupling device comprising two coupling members, and a locking member coöperating therewith and having screw-threaded connections movably attaching one of said coupling members and having interlocking screw threads adapted to engage corresponding screw threads on the other member, whereby said locking member is adapted to move longitudinally with respect to both of said coupling members upon the coupling movement thereof, in combination with means for preventing relative rotary movement of said coupling members in the coupling movement of said locking member.

1,167,833. TOOTH-BRUSH HOLDER. WILLIAM METZROTH, Syracuse, N. Y. Filed Apr. 24, 1915. Serial No. 23,621. (Cl. 132—11.)



1. A tooth brush holder, comprising a casing having a closed top, a brush support at the bottom, the side of the casing flaring away from the support for affording an opening adjacent the support for the introduction and withdrawal of the brush.

2. A tooth brush holder, comprising an integrally formed casing having a closed top, a brush support at the bottom, the side of the casing flaring away from the support for affording an opening adjacent the support for the introduction and withdrawal of the brush.

3. A tooth brush holder, comprising a casing having a closed top, a brush support at the bottom formed as a shelf, the side of the casing flaring away from the support for affording an opening adjacent the support for the introduction and withdrawal of the brush.

4. A tooth brush holder, comprising a casing having a closed top, a brush support at the bottom, formed as a shelf ending short of one side of the casing for affording space for the brush handle, and short of another side for affording an opening for the introduction and withdrawal of the brush.

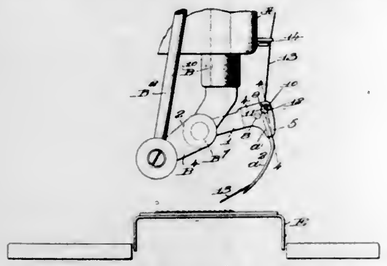
5. A tooth brush holder, comprising a casing having a closed top, a brush support at the bottom formed as a shelf ending short of one side of the casing for affording space for the brush handle, and short of another side for affording an opening for the introduction and withdrawal of the brush, the shelf adjacent the latter side being provided with a retaining bead.

1,167,834. COMBINED NEEDLE-BAR AND THREAD-GUIDE FOR SEWING-MACHINES. HARLEY C. MOULTON, Dorchester, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed Nov. 15, 1912. Serial No. 731,543. (Cl. 112—29.)

1. As an article of manufacture, a needle bar having a head and a depending nose adapted to receive the shank of a curved eye-pointed needle provided with a thread-groove in its convex side, an open, continuous slot forming a thread passage in the head and nose in alinement with and leading to the upper end of the thread-groove, to receive and guide the thread thereto from the top of the head, and means at the upper end of and within the passage to prevent escape of the thread therefrom.

2. As an article of manufacture, a needle bar having an enlarged head and a depending nose, the head and nose being apertured and slotted to receive the shank of a curved eye-pointed needle provided with a thread-groove in its convex side, a device to compress the sides of the head and nose upon the needle shank, the slot at the front

of the head and nose forming a continuous open passage to receive and guide the thread to the upper end of the groove, means at the upper end of and within the passage to prevent the escape of the thread therefrom, and an inlet in one side of the head to permit the entrance of the thread to the passage and to the control of said means.



3. As an article of manufacture, a needle bar having an enlarged head and a depending nose, the head and nose being apertured and slotted to receive the shank of a curved eye-pointed needle provided with a thread-groove in its convex side, means to clamp the needle shank in the head and nose, the slot at the front thereof forming an open, continuous passage to receive and guide the thread to the groove in the needle, one side of the head having an outwardly flared hole provided with an open inlet, and a retaining pin fixed in the opposite side of the head and extended into the flared hole, the thread being passed through the inlet into the hole around the pin and thence behind it into the slot, to be retained therein.

4. As an article of manufacture, a needle bar having a slotted clamping head and a depending nose also slotted, for the reception of the shank of a curved eye-pointed needle having a thread-groove in its convex side, the thread being directed between the sides of the head and nose to the upper end of the thread-groove, means crossing the upper portion of the slot in the head to control the thread and retain it in the slot, and an open lateral threading inlet to introduce the thread into the passage behind said means, the sides of the nose at the tip thereof guiding the thread at the upper end of the groove in the needle.

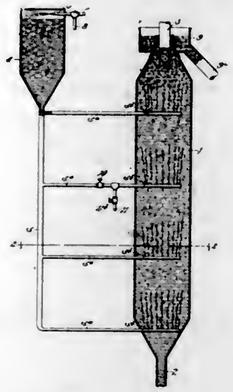
5. The combination with a curved eye-pointed needle having a thread-groove in its convex side between the eye and the shank, of a needle bar having a head provided with a depending nose, apertured for the reception of the needle shank, the nose extending along the needle to the thread-groove, an open, continuous passage for the thread from the top of the head to the tip of the nose, communicating with the thread-groove, and means in the head to hold the thread away from the end of the needle shank and retain it in the passage.

[Claim 6 not printed in the Gazette.]

1,167,835. APPARATUS FOR SEPARATING THE METALLIC AND ROCKY CONSTITUENTS OF ORES. DUDLEY H. NORRIS, San Francisco, Cal. Filed Apr. 5, 1915. Serial No. 19,314. (Cl. 83—85.)

1. An apparatus for separating the metallic and rocky constituents of ores comprising means for introducing water containing air in solution into a flowing mixture of crushed ore and water at a number of different points along the path of travel of the mixture so as to cause nascent bubbles of air to form continuously in said mixture and rise to the surface thereof to carry off the metallic particles of the ore.

2. An apparatus for separating the metallic and rocky constituents of ores, comprising a member that forms a passageway, means for causing a mixture of crushed ore and water to flow through said passageway, and means for discharging aerated water into said passageway at a number of different zones so as to cause nascent bubbles of air to be created in the mixture for the purpose of carrying the metallic particles of the ore upwardly to the surface of the mixture.



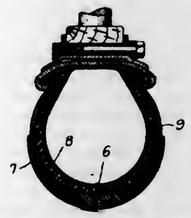
3. An apparatus for separating the metallic and rocky constituents of ores, comprising a vertically-disposed container whose upper end is open, means for supplying a mixture of crushed ore and water to said container, said container being provided with a discharge outlet at its lower end, and means for introducing water containing air in solution into said container at a number of different levels so as to cause infinitesimally small nascent bubbles of air to form continuously in the mixture and pass upwardly through same so as to carry the metallic particles of the ore upwardly to a point where they can be collected.

4. An apparatus for separating the metallic and rocky constituents of ores, comprising a member that forms a passageway through which a mixture of pulverized ore and water is adapted to flow, and means for causing said mixture to be subjected repeatedly to the action of aerated water at different zones in the passageway while the mixture is passing through the same.

5. An apparatus for separating the metallic and rocky constituents of ores, comprising a container through which a mixture of crushed ore and water is adapted to flow, means for introducing water containing air in solution into the lower portion of said container so as to create small nascent bubbles of air in the mixture which rise upwardly through same, and an independent means for creating small nascent bubbles of air at a higher point in the container so as to compensate for the bubbles of air that start at the lower portion of the container but which dissolve during their upward travel through the mixture.

[Claims 6 to 10 not printed in the Gazette.]

1,167,836. MILEAGE-INDICATOR FOR TIRES. ALPHONSO COMSTOCK PRATT, Glen Ridge, N. J. Filed Dec. 26, 1914. Serial No. 879,110. (Cl. 234—1.)



1. A tire having a flexible member therein responsive to repetitions of flexures to give an indication of the extent of use of the tire; substantially as described.

2. A tire having a flexible member therein adapted to give an indication of the extent of use of the tire dependent upon the capacity of the member to withstand repeated flexures; substantially as described.

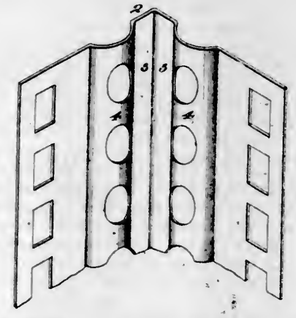
3. A tire having a flexible mileage-indicating member therein in position to be subjected to repeated flexures when the tire is in use; substantially as described.

4. A tire having a flexible member therein in position to flex with the tread portion of the tire when the tire is in use, and adapted to be affected in a prescribed manner by predetermined numbers of flexures to indicate the extent of use of the tire; substantially as described.

5. A tire having a flexible mileage-indicating member therein in position to be subjected to repeated flexures when the tire is in use, said member being capable of withstanding flexures to varying degrees at different points thereon; substantially as described.

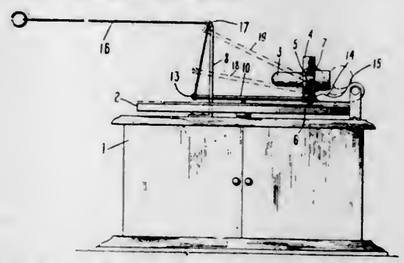
[Claims 6 to 9 not printed in the Gazette.]

1,167,837. REINFORCEMENT FOR PLASTERING. WILLIAM S. PRIDE, Oakland, Cal. Filed Dec. 21, 1914. Serial No. 878,255. (Cl. 72—121.)



A reinforcement for interior plastered corners consisting of a plate bent at an angle to fit the interior corner and to form angularly disposed sides, each side being arched inwardly adjacent the angle of the plate to form vertical channels and to form with the sides of the angle a corner vertical channel having a restricted vertical inlet formed by the arched portions, each arched portion having a vertical series of openings opposing those of the other arched portion for admitting plastic material to fill the first channels and permit of the formation of a series of continuous cross bars of plastic material extending across the angle formed by the plate sides and connecting the material in all of the vertical channels, whereby the plastic material is doubly secured by either of the first vertical channels and the corner channel.

1,167,838. SOUND-REPRODUCING MACHINE. JOHN T. PROUT, New York, N. Y. Filed Oct. 18, 1913. Serial No. 795,846. (Cl. 181—3.)



1. A resetter for sound producing machines compriaing in combination with the sound arm and stylus, a pivoted member, a vertical supporting guide, and a pull member fastened to the pivoted member and coöperating with the vertical supporting guide to oscillate the pivoted member enabling the latter to raise the sound arm, to return the stylus through gravity to its point of beginning on the effective zone of the sound producing record.

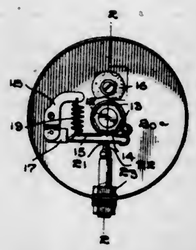
2. A resetter for sound producing machines comprising a pivoted member provided with a limiting stop, a vertical guide support provided with a slot through which the pivoted member projects, a guide provided at the top of the vertical support, and an operating member connected to the pivoted member and threaded through the guide for operating the pivoted member, substantially as described.

3. A resetter for sound producing machines comprising, in combination with the sound arm and stylus, flexible means coöperating with the sound arm and capable of manipulation to return the stylus any desired distance at any time after the inauguration of its movement over the effective sound producing zone of the record at the will of the operator in order to repeat the portion of the record desired.

4. A resetter for sound producing machines comprising, in combination with the sound arm and stylus, a member coöperating with the sound arm, a flexible member coöperating with, and adapted to operate said first member and capable of manipulation to return the stylus any desired distance at any time after the inauguration of its movement over the effective sound producing zone of the record, at the will of the operator.

5. A resetter for sound producing machines comprising, in combination with the sound arm and stylus, a pivoted arm coöperatively associated with the sound arm, and a flexible member coöperating with the pivoted arm which, when manually operated, will return the sound arm and stylus any desired distance at the will of the operator to enable the stylus to retraverse any portion or all of the record over which the stylus has previously moved.

1,167,839. AUTOMATIC CONTROL FOR IGNITION DEVICES. LEWIS T. RHOADES, Mont Clare, Pa., assignor to New York Coil Company, Incorporated, New York, N. Y. Filed Mar. 6, 1915. Serial No. 12,531. (Cl. 123—165.)



1. In an ignition device for internal combustion engines, the combination with a timer, of a thermostat normally maintaining a closed electric circuit and constructed to open the electric circuit when the device stops with the timer contacts together, substantially as described.

2. In an ignition device for internal combustion engines, the combination with a timer, of a thermostat normally maintaining a closed electric circuit and constructed to open the electric circuit when the device stops with the timer contacts together, and means for closing the circuit when the device is started, substantially as described.

3. In an ignition device for internal combustion engines, the combination with a timer, of a thermostat normally maintaining a closed electric circuit and constructed to open the electric circuit when the device stops with the timer contacts together, and mechanical means for closing the circuit when the device is started, substantially as described.

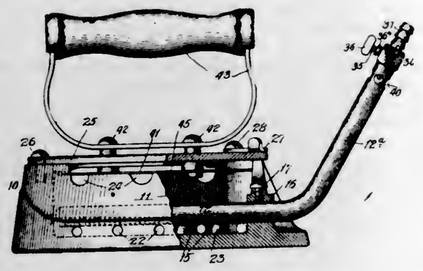
4. The combination with a timer, of spring contacts normally together, and included in an electric circuit with the

timer, a thermostat normally holding the spring contacts together and constructed to permit the contacts to separate when the timer stops with its contacts together, substantially as described.

5. The combination with a timer, of spring contacts normally together, and included in an electric circuit with timer, a thermostat constructed to separate the contacts when the timer stops with its contacts together, and means for moving said thermostatic controlled contact together when the timer moves, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,167,840. GAS-HEATED SAD-IRON. GEORGE T. ROSENGREN, Chicago, Ill., assignor to Enterprise Tool & Metal Works, Chicago, Ill., a Corporation. Filed Sept. 14, 1914. Serial No. 861,505. (Cl. 158—23.1.)



1. A sad iron comprising a body having a chamber therein, a cover, a handle secured to the cover, a burner pipe extending into the chamber, and a perforated shield secured in spaced relation to the cover, the body having openings therein above and below the shield, the openings below the shield being disposed adjacent the shield.

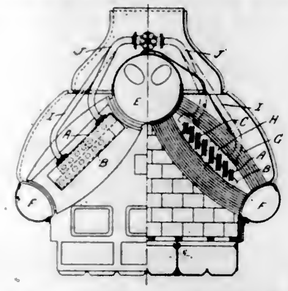
2. A sad iron comprising a body having a chamber therein, a cover removably secured to the body, a handle secured to the cover, a burner pipe extending into the chamber, and a perforated shield secured in spaced relation to the cover and removable therewith, the body having openings therein above and below the shield, the openings below the shield being disposed adjacent the shield.

3. A sad iron comprising a body having a chamber therein, a cover, a handle, and a tubular burner pipe extending into said chamber and secured to said body, said pipe having parallel sided slits therein extending at an oblique angle with respect to the axis of the tube and of gradually increasing depth from the inlet portion of said pipe.

4. A sad iron comprising a body having a chamber therein, a cover, the body having portions of its sides terminating below the cover, and a handle secured to the cover, a burner pipe extending into the chamber, and a perforated shield secured in spaced relation to the cover and disposed to overlie said side portions, the latter being notched immediately below the shield.

1,167,841. STEAM-GENERATOR. JAMES HERMANN ROSENTHAL, London, and EDWIN CHARLES CARNT, East Cowes, Isle of Wight, England, assignors to Babcock & Wilcox, Limited, London, England, and J. Samuel White & Company, Limited, East Cowes, Isle of Wight, England. Filed July 20, 1911. Serial No. 639,477. (Cl. 122—473.)

1. A steam generator, comprising a combustion chamber, an offtake for the gases, a steam and water drum, a mud drum below the steam and water drum and at one side thereof, a plurality of sets of inclined water tubes within the combustion chamber and in the direct path of the gases to the offtake flue and connecting the steam and water drum to the mud drum, headers at one end of the generator, U-shaped superheater tubes connected to said headers, both legs of said tubes extending in a longitudinal direction between the sets of water tubes and at approximately right angles to the water tubes, the arrangement being such that the gases in passing from the combustion chamber to the offtake flue will pass transversely over one set of water tubes, the superheater tubes, and then the second set of water tubes without changing the general course of the gases; substantially as described.



2. A steam generator, comprising a combustion chamber, an offtake flue for the gases, a steam and water drum, a plurality of mud drums below the steam and water drum, there being one of said mud drums at each side of the steam and water drum, a plurality of sets of water tubes connecting each mud drum with the steam and water drum within the combustion chamber and in the direct path of the gases to the offtake flue, headers at one end of the generators, and U-shaped superheater tubes connected to said headers the legs of said tubes extending in a longitudinal direction between the sets of water tubes and at approximately right angles to the water tubes on the opposite sides of the respective spaces, the arrangement being such that the gases in passing from the combustion chamber to the offtake flue will pass approximately over the water tubes and the superheater tubes without changing the general course of the gases; substantially as described.

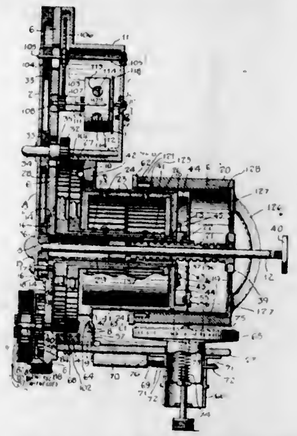
3. A steam generator, comprising a steam and water drum, a mud drum below the steam and water drum and at one side thereof, a plurality of sets of inclined water tubes within the combustion chamber and in the direct path of the gases of the offtake flue connecting the steam and water drum to the mud drum, headers at one end of the generator, and U-shaped superheater tubes connected to said headers, both legs of said tubes extending in a longitudinal direction between the sets of water tubes and at approximately right angles to the water tubes, the upper legs of the intermediate tubes being approximately central between both legs of an adjacent tube, while the lower legs of the intermediate tubes are approximately centrally located between the legs of an adjacent tube at the other side, the arrangement being such that the passage for the gases transversely across the superheater tubes will not be restricted in a plane extending through the upper and lower legs of the superheater tubes; substantially as described.

4. A steam boiler, having a single combustion chamber extending from one side of the setting to the other, a central steam and water drum, two mud drums below the steam and water drum, there being one mud drum on each side of the combustion chamber, two banks of inclined tubes one on each side of the setting bent to substantially the same radius within the combustion chamber and in the direct path of the gases to the offtake and connecting the steam and water drum with the mud drums, each bank being divided into two groups so as to form between them an oval chamber having an inclined major axis, a superheater in each chamber between the groups comprising parallel and contiguous header boxes in approximately the same plane as the major axis of the chamber, and U-tubes connecting these header boxes extending transversely across the banks of water tubes within the oval chamber, one end of each U-tube being connected to one header box and the other end to the other header box; substantially as described.

5. A steam boiler, having a single combustion chamber extending from one side of the setting to the other, a central steam and water drum, two mud drums below the steam and water drum, there being one mud drum on each side of the combustion chamber, two banks of inclined tubes one on each side of the setting bent to substantially the same radius within the combustion chamber and in the direct path of the gases to the offtake flue and connecting the steam and water drum with the mud drums, each bank being divided into two groups so as to form between them an oval chamber having an inclined major axis, a superheater in each chamber between the groups comprising parallel and contiguous header boxes in approximately the same plane as the major axis of the chamber, and U-tubes connecting these header boxes extending transversely across the banks of water tubes within the oval chamber, one end of each U-tube being connected to one header box and the other end to the other header box, the upper header being divided into two parts, the steam entering one of the compartments of the upper box and then passing through the U-tubes to the other header, and from the last mentioned header to the steam offtake through the other compartment of the first mentioned header; substantially as described.

[Claim 6 not printed in the Gazette.]

1,167,842. PHONOGRAPH MECHANISM. WILLIAM ROTTER and RICHARD S. ARTHUR, New York, N. Y., assignors to Talking Doll & Novelty Company, Inc., New York, N. Y. Filed July 1, 1914. Serial No. 848,340. (Cl. 181—6.)



1. In phonograph mechanism, the combination of a driving spring, a hollow cylindrical record support rotatable by and in encircling relation to said spring, and means for feeding the record support over the spring.

2. In phonograph mechanism, the combination of a driving spring barrel and a rotatable and axially movable record support in telescopic relation thereto.

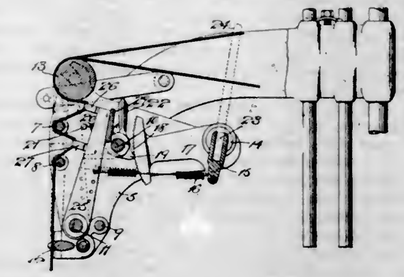
3. In phonograph mechanism, the combination with a support and an axle projecting therefrom, of a record drum supported by said axle, a driving spring accommodated within said record drum, and coaxial winding and driving gears connected with the spring interposed between the same and said support.

4. In phonograph mechanism, the combination with a support, and fixed axles projecting therefrom one within the other, of a thread-bar mounted on the inner axle and carrying a record drum, and spring driving mechanism mounted on the outer axle.

5. In phonograph mechanism, the combination with fixed axles one within the other, of a thread-bar on the inner axle, a record drum carried by the thread-bar, a feed-nut coöperative with the thread-bar, a rotary sleeve inside the outer axle having slidable driving connection with said thread-bar, and means mounted on the outer axle for driving said rotary sleeve.

[Claims 6 to 32 not printed in the Gazette.]

1,167,843. TAKE-UP OR TENSION MECHANISM. VERNON ROYLE, Paterson, N. J. Filed Sept. 17, 1914. Serial No. 862,213. (Cl. 139—59.)



1. A suitable support, a take-up or tension mechanism comprising a bank of independently acting spring-actuated arms, the said bank being pivoted to swing bodily in said support and means for locking the mechanism in its operative swung position.

2. A suitable support, a take-up or tension mechanism comprising a bank of independently acting, spring-actuated arms, the said bank being pivoted to swing bodily in said support and a spring-actuated bolt for locking the mechanism in its operative swung position.

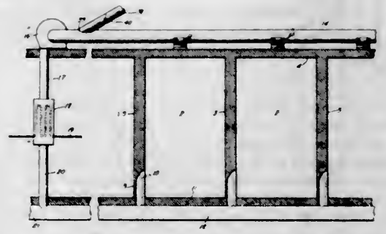
3. A take-up or tension mechanism comprising independent spring-actuated tension arms, one for each thread, and means for simultaneously forcing the said arms into inactive position against the action of their springs.

4. A take-up or tension mechanism comprising independent spring-actuated tension arms and a lever manipulated device for forcing the tension arms simultaneously into inactive position against the action of their springs.

5. A take-up or tension device comprising a bank of independent spring actuated tension arms and means for forcing the arms simultaneously into inactive position, in combination with a support in which the said bank of arms and forcing means are mounted to swing together.

[Claims 6 to 8 not printed in the Gazette.]

1,167,844. DRYING-KILN. FELIX J. RUSH, New York, N. Y. Filed June 7, 1912. Serial No. 702,204. (Cl. 34—19.)



1. A drying kiln consisting of a room in which the material to be dried may be stacked, and having an air inlet and an air outlet chamber arranged near its floor at opposite ends thereof, respectively, each of said chambers being provided with a valve for opening and closing the same, means for opening and closing said valves alternately whereby to admit air to and exhaust air from said room, and said room having at one end a door through which to admit the material to be dried.

2. A drying kiln consisting of a room having an inlet and an outlet chamber arranged at opposite ends thereof, respectively, an inlet-duct communicating with said inlet chamber and extending along the bottom of the room, an outlet-duct communicating with the outlet-chamber and extending along the bottom of the room, and means for intermittently opening and closing the two chambers whereby to admit air into and exhaust air from the room.

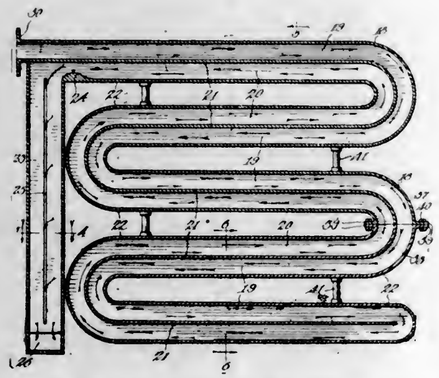
3. A drying kiln consisting of a room closed on all sides and having in the walls thereof, an inlet chamber and an outlet chamber, valves for controlling the inlet of air to and the outlet of air from said room through said chambers, and means for alternately opening and closing said valves so as to create in the room a pulsatory action of the air.

4. A drying kiln consisting of a room having an inlet in its bottom at one end and an outlet in its bottom at the other end; valves, one in the inlet and one in the outlet; a blower for drawing air and driving it through the inlet in the bottom of the room; an inlet for air communicating with the blower on one side thereof; and a conduit extending beneath the room and communicating with the blower on the other side thereof and with the inlet; and means for actuating the valves.

5. A drying kiln consisting of a room having an inlet in its bottom at one end and an outlet in its bottom; valves, one in the inlet and one in the outlet; a blower for drawing air and driving it through the inlet in the bottom of the room; an inlet for air communicating with the blower on one side thereof; and a conduit communicating with the blower on the other side thereof and with the inlet, said conduit being provided with a heating-chamber; and means for actuating the valves.

[Claims 6 to 8 not printed in the Gazette.]

1,167,845. FUEL-SAVING ATTACHMENT FOR FURNACES. NELSON J. RUSSELL and CARL A. TYDEN, Chicago, Ill. Filed June 28, 1915. Serial No. 36,649. (Cl. 110—75.)

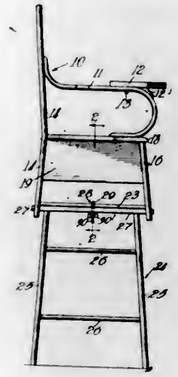


1. In a fuel saving attachment for furnaces, the combination with a furnace having an opening therein leading to the combustion chamber thereof, of a casing horizontally located in the upper portion of said chamber and having communication with said opening, said casing comprising a plurality of spaced apart members united at their alternate ends and each provided with a plurality of conduits, one of said conduits only having communication with the said opening in the furnace, and an expansion and discharge chamber or conduit located within the furnace and communicating with the discharging end of another one of said conduits of the casing.

2. In a fuel saving attachment for furnaces, the combination with a furnace having an opening therein leading to the combustion chamber thereof, of a casing horizontally located in the upper portion of said chamber and having communication with said opening, said casing comprising a plurality of spaced apart members united at their alternate ends and each member provided with a pair of conduits, one of said conduits only having communication with said opening in the furnace and adapted for the forward circulation of air, and the other conduit having communication with the first named conduit at its terminus and adapted for the rearward or return circulation of air, and an expansion and discharge chamber-casing having communication with the discharging end of the said return conduit and located horizontally within the furnace, said expansion and discharge chamber-casing having an opening for the discharge of air.

3. In a fuel saving attachment for furnaces, the combination with a furnace having an opening therein leading to the combustion chamber thereof, of a casing horizontally located in the upper portion of said chamber and having communication with said opening, said casing comprising a plurality of spaced apart members united at their alternate ends and each provided with a pair of conduits co-extensive with said members and casing, one of said conduits only having communication with the said opening in the furnace, an expansion and discharge chamber-casing or conduit horizontally located within the combustion chamber and communicating at one of its ends with the discharging end of one of said conduits of the casing, a conduit extended downwardly from the free end of said chamber casing, and a horizontally disposed expansion and discharge chamber-casing located at the front portion of the ash-pit of the furnace and having means for the discharge of air into said pit.

1,167,846. CHAIR. LILLIAN M. SAYEN, Rock, Mich. Filed July 10, 1915. Serial No. 39,031. (Cl. 155—12.)

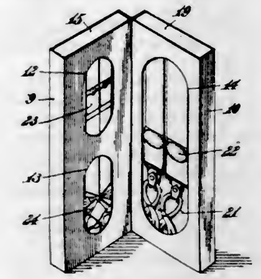


1. In combination with a chair, having four leg-joining rungs in the same horizontal plane, of a support having a top, within one pair of oppositely disposed rungs and projecting beyond the other pair, and clamps secured to the top and engaging the appropriate pair of rungs.

2. In combination with a chair having four leg-joining rungs, in the same horizontal plane, of a support having a top, within one pair of oppositely disposed rungs and underlying and projecting beyond the other pair; a plurality of clamps, each comprising a screw-threaded shank and a turned over end to engage a given pair of rungs, said shanks passing through said top and a nut on the threaded shank of each clamp, under said top, to cause the opposite pair of rungs to securely engage said top.

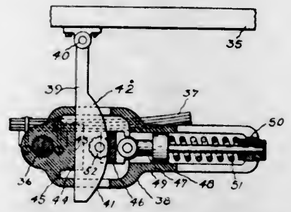
1,167,847. DISPLAY-BOX. FERDINAND SCHOETTLE, Germantown, Pa., assignor to Pioneer Suspender Company, a Corporation of Pennsylvania. Filed Jan. 6, 1910. Serial No. 536,715. (Cl. 206—44.)

1. The combination of a plurality of slide cases hinged together so that one case will fold upon another, the faces which fold upon each other being provided with display openings so that when these slide cases are folded together these openings are closed, containers fitting in said slide cases for containing articles in suitable position for display with respect to said display openings.



2. The combination of a plurality of slide cases hinged together so that one case will fold upon another, the faces which fold upon each other being provided with display openings so that when these slide cases are folded together the said openings are closed, containers fitting in said slide cases and means provided therein for supporting and maintaining articles in suitable position for display with respect to said display openings.

1,167,848. SHOCK-ABSORBER. WILLARD T. SEARS, Philadelphia, Pa. Filed June 23, 1915. Serial No. 35,754. (Cl. 21—105.)



1. A shock absorber comprising a wedge element and a shoe element, the wedge element having two oppositely disposed wedge portions and the shoe element having means connected therewith for urging the same yieldingly toward the wedge element, said wedge element and shoe element being relatively movable toward and from an initial position, and the shoe element being adapted to traverse said wedge portions in alternation on the relative movement of the parts oppositely from said initial position, the wedge element having means associated therewith for approximately cutting out resistance between the wedge and shoe elements when the elements are in said initial position.

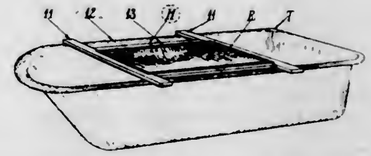
2. The combination of a novelty mounted wedge element and a shoe element, the two elements being relatively movable toward and from an initial position, the wedge element having two oppositely disposed wedge portions and the shoe element having means for yieldingly urging the same toward the wedge element, the shoe element being adapted to traverse said wedge portions in alternation on the relative movement of the parts in opposite directions from said initial position, the wedge element having means associated therewith for approximately cutting out resistance between the two elements when the same are in said initial position.

3. A shock absorber comprising a wedge element and a shoe element relatively movable toward and from an initial position, the shoe element being adapted to traverse the wedge face of the wedge element on opposite relative movement and the wedge presenting no resistance to the shoe element on relative movement in one direction but presenting resistance on the opposite movement thereof, and means for approximately automatically cutting out the resistance at the conclusion of the relative resisting movement.

4. The combination of a pivotally mounted wedge element and a shoe element, the two elements being relatively movable toward and from an initial position, the wedge element having two oppositely disposed wedge portions and the shoe element having means for yieldingly urging the same toward the wedge element, the shoe element being adapted to traverse said wedge portions in alternation on the relative movement of the parts in opposite directions from said initial position, the wedge element having means associated therewith for approximately cutting out resistance between the two elements when the same are in said initial position.

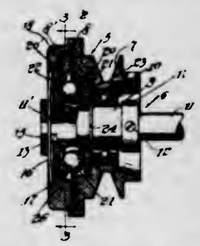
5. The combination of the body and the running gear of a vehicle, a wedge element connected with one of the vehicle parts, a shoe element connected with the other vehicle part, the shoe element having means connected therewith for urging the same yieldingly toward the wedge element, the two elements being relatively movable toward and from a neutral position on the relative movement of the body of the running gear, the shoe element being adapted to traverse said wedge element in opposite directions on said relative movement, the wedge element presenting no resistance to the shoe element on the relative movement in one direction and offerng resistance to the shoe element on the relative movement in the other direction, and means for approximately automatically cutting out the resistance when the neutral position is reached.

1,167,849. INFANT'S FOLDING BATH-TUB. MAX C. SHERMAN, Ben Avon, Pa. Filed Jan. 22, 1915. Serial No. 3,700. (Cl. 4—27.)



In an infant's folding bath tub, the combination of a rectangular frame composed of two end members adapted to rest upon the edges of an ordinary bath tub, cross members rigidly attached to the end members and divided at their middle point, hinges connecting the divided cross members whereby the frame may be doubled upon itself in one direction only, and a waterproof membrane suspended in the frame and attached thereto, the end members being extended beyond the frame unequally on the opposite sides thereof, substantially as and for the purposes described.

1,167,850. CENTRIFUGAL SPEED-GOVERNOR. FRANK L. SMITH, Winthrop, Mass., assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 16, 1914. Serial No. 825,094. (Cl. 74—45.)



1. A speed governor comprising rotatable driving and driven members; a yielding means for forcing said mem-

bers into frictional driving engagement, and centrifugally actuated, rolling, wedge members contacting with one of said members only and rotatively carried thereby, actuating under speed to tend to force said members out of their driving frictional engagement.

2. A governor comprising rotatable driving and driven members; a yielding means for forcing said members into frictional driving engagement and a plurality of centrifugally actuated balls rotatively carried by one of said members, acting under speed to tend to force said members out of their frictional engagement and means to automatically return the said balls out of their forcible contact with said members upon the decrease of speed.

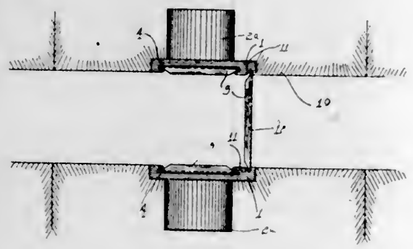
3. A speed governor comprising rotatable driving and driven elements, a yielding means for forcing said elements into frictional driving engagement, a pair of members carried by one of the elements freely movable axially relatively to each other, and a plurality of centrifugally actuated balls rotatably carried between said members, acting under increased speed to move radially outwardly into contact with said members thereby tending to force the element on which said members are carried out of driving frictional engagement with the other element and permitting said yielding means to return them to position out of operative contact with said members upon decrease of speed.

4. A speed governor comprising a rotatable driving and a driven disk, said disks having coöperative frictional driving surface and each provided with an axially concentric recess to jointly provide a chamber for centrifugally actuated, separating members; means for yieldingly forcing said surfaces into frictional driving engagement; means within said chamber, adapted to exert a separating pressure upon said disks when centrifugally actuated, and means for forcing a current of air through the said chamber when the device is rotated, to cool the parts.

5. A speed governor comprising a driving and a driven member; a yielding member for forcing said members into frictional driving engagement, and centrifugally actuated, rolling, wedge members contacting only with the driven member and rotatively carried thereby, acting under speed to tend to force the driven member out of engagement with the driving member.

[Claims 6 to 8 not printed in the Gazette.]

1,167,851. WATER-GATE. EWALD M. SPIEKERMAN, Lodi, Cal. Filed Mar. 25, 1915. Serial No. 16,885. (Cl. 61—46.)



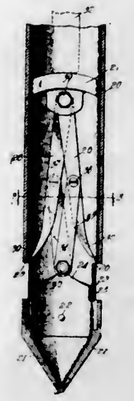
1. A device of the character described comprising a body member provided with an opening, said body member being provided with a pair of guide grooves inclined toward each other at their lower ends to form a tapered guide, and a tapered closure slidable in said grooves to close said opening, as described.

2. A device of the character described comprising a body member provided with an opening, said body member being provided with a pair of grooves extending toward each other at one end to form a tapered guide, a liner disposed in said guide, such liner having bent edges conforming to said grooves, a closure extending into said guide and having bent edges conforming to said grooves, said closure being adapted to extend into said guide to close said openings, as described.

3. A device of the character described comprising a body member provided with a pair of grooves and openings between said grooves, said grooves extending toward each other at one end to form a tapered guide, a closure adapted to extend into said guide and over said opening, the upper end of said closure being overturned to form a handle, as described.

4. A device of the character described comprising the combination of two body members spaced apart, each provided with an opening and a tapered guide, and a closure movable in said guide to close said opening, each member being further provided with a groove in its face, said grooves being adapted to receive a closure between said members at right angles to the first named closures, as described.

1,167,852. POST-ANCHOR. ARTHUR W. SPRAGUE, La Grange, Ill. Filed July 14, 1915. Serial No. 39,740. (Cl. 189—31.)



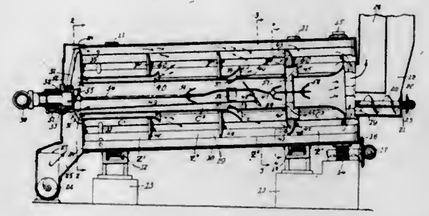
1. In combination with a hollow post or tube; an anchor, for insertion within the tube and to be driven therefrom after the post has been driven into the ground, comprising a head; two arms, or horns, pivoted thereto and two links pivoted together, the free ends whereof are pivoted to the respective horns, to form a toggle lock when the horns are extended.

2. In combination with a hollow post or tube; an anchor, for insertion within the tube and to be driven therefrom, after the post has been driven into the ground, comprising a head; two outwardly curved, pointed arms or horns, pivoted together and two links pivoted together, the free ends whereof are pivoted to the respective horns to lie in the same longitudinal plane, to thus form a toggle lock for the horns when the latter are extended.

3. In combination with a hollow post or tube; an anchor for insertion within the tube and to be driven therefrom, after the post has been driven into the ground, comprising a head; means for preventing the head from being driven from the tube; two outwardly curved, pointed arms, or horns, pivoted to the head and two links pivoted together, the free end whereof are pivoted to the reapective horns, to lie in the same longitudinal plane, to form a toggle lock for the horns after the latter have been driven from the tube.

4. In combination with a hollow open ended post or tube, an anchor, for insertion within the tube and to be driven therefrom after the tube has been placed in the ground, comprising a head, two arms or horns pivoted thereto, two links pivoted together with their free ends pivoted to the respective horns to form a toggle lock when the horns are extended, and a ground engaging member carried by the anchor at the point of pivotal connection between the two links substantially as and for the purpose set forth.

1,167,853. DRIER. CHARLES FREDERICK STEHLIN, New Rochelle, N. Y. Filed Mar. 18, 1915. Serial No. 15,165. (Cl. 34—6.)



1. In a drier, an inclined rotating drum, means for feeding material thereto at one end, means for discharging it dried at the other end, means for causing air to traverse said drum in a direction opposite to the direction of movement of the material being treated, and a series of transverse partitions within said drum and spaced away from the walls thereof for distributing the air in its passage through the drum, substantially as set forth.

2. In a drier, an inclined rotating drum, means for feeding material thereto at one end, means for discharging the dried material from the other end comprising a discharge conduit, and means for supplying air to the drum in a direction opposite to the direction of movement of the material under treatment, said air being passed through the conduit whereby the heated dried material is discharged to thereby become heated before it enters the drum, substantially as set forth.

3. In a drier, an inclined rotating drum through which material is passed lengthwise in one direction, means for causing air to pass through the drum in the opposite direction, and a series of transverse partitions in said drum and spaced away from the walls thereof for controlling and distributing the drying air in its passage through the drum, substantially as set forth.

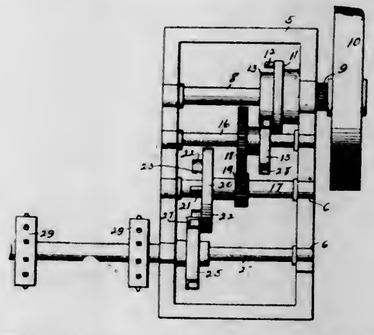
4. In a drier, an inclined rotating drum, means on its side walls to lift and shower down material under treatment, means for causing a current of air to travel lengthwise through said drum, a series of transverse partitions in said drum, and air supply means arranged centrally of said drum, said partitions and air supply means serving to control and distribute the air in its passage through the drum, substantially as set forth.

5. In a drier, an inclined rotating drum, means on its side walls to lift and shower down material under treatment, means for causing a current of air to travel lengthwise through said drum, a series of transverse partitions in said drum and spaced away from the side walls thereof, and centrally arranged air supply means in said drum cooperating with said partitions to control and distribute the air in its passage through the drum, substantially as set forth.

[Claims 6 to 26 not printed in the Gazette.]

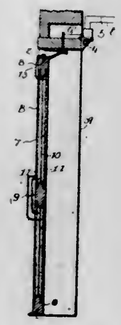
1,167,854. MOTION-PICTURE-PROJECTOR GEARING. RALPH P. STINEMAN and ONA O. TAYLOR, San Diego, Cal. Filed Oct. 5, 1915. Serial No. 54,154. (Cl. 74—41.)

The combination with a driving shaft and a film carrying driven shaft of an intermediate shaft, a single pin Geneva movement between the driving shaft and said intermediate shaft a double pin Geneva movement between the film carrying shaft and said intermediate shaft



and a two-to-one gearing between said intermediate shaft and the last named Geneva movement.

1,167,855. FLY-TRAP. CHARLES E. STIPP, Dillon, Mont. Filed July 15, 1912. Serial No. 709,531. (Cl. 43—34.)



1. The combination with a screen door frame, of an insect trap consisting of screens of large and small mesh, said screens of larger mesh being secured to said door on opposite sides of the screens of small mesh and out of contact therewith, means to connect to the screens of small mesh one side of a source of current and to connect the screens of large mesh to the other side whereby when an insect in passing through a screen of large mesh contacts simultaneously with said screen of large mesh and the screen of small mesh, a circuit is completed through its body.

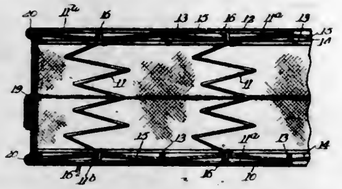
2. In combination with a screen door frame, of an insect trap comprising screens of small mesh on the door, means to connect a source of current at one terminal to said screens comprising contact plates secured to the upper portion of the door and frame, screens secured to the door on opposite sides thereof and being of large mesh to form inlet openings for insects, and similar means to connect the opposite terminal of said source of current to said screens of large mesh.

3. A device for electrocuting insects comprising sets of reticulated metal sheets arranged in parallel relations, the openings of the outer set of sheets being larger than the openings of the other sheets, to permit the passage of insects therethrough, said sheets being insulated from each other, and electrical connections between the sets of sheets and opposite sides of a source of electric energy.

4. In a device for electrocuting insects, the combination wtih a screen door frame, of screens of different mesh mounted on the frame in parallel and insulated relation

to each other, the screens of large mesh being outside the others, and means for sending an electric current of high frequency through the screens, and the body of an insect which has bridged the screens of different mesh.

1,167,856. UPHOLSTERING SPRING STRUCTURE. LOUIS A. SUEKOFF, Chicago, Ill. Filed Jan. 11, 1915. Serial No. 1,525. (Cl. 5—13.)

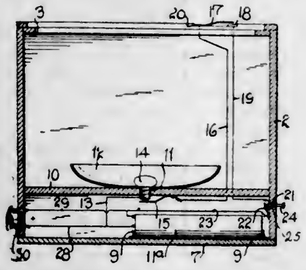


1. A structure of the character described comprising a top and bottom cover, each having parallel, laterally-extending pairs of substantially continuous projections, to provide therebetween receptacles to receive spring ends; a series of open coil springs, having their ends within said receptacles and means for securing the selvage edges of said top and bottom covers together to entirely inclose the springs.

2. A structure of the character described comprising a top and bottom fabric cover, each having integral, laterally-extending substantially continuous projections angularly related by intersecting each other at suitable intervals to provide receptacles to receive the end rings of coil springs; a series of coil springs, having their end rings within said receptacles of the respective top and bottom covers; cords, parallel with and between adjacent projections of a series and passing transversely through the projections of the angularly related series, said cords crossing each other within each spring receiving receptacle and overlying the end rings of the respective springs.

3. A structure of the character described comprising a top and bottom fabric cover, each having two series of integral, laterally extending substantially continuous projecting seams, angularly related by intersecting each other at suitable intervals to provide a series of rows of receptacles, to receive the end rings of coil springs; a series of rows of coil springs having their end rings within said receptacles of the respective top and bottom covers; cords parallel with and between adjacent seams of a series and passing transversely through seams of the angularly related series, said cords crossing each other midway over each spring receiving receptacle and overlying the end rings of the respective springs.

1,167,857. PHOTOGRAPHIC-PRINTING MACHINE. ERIC A. THORBERG, Bismarck, N. D. Filed May 13, 1915. Serial No. 27,853. (Cl. 95—73.)

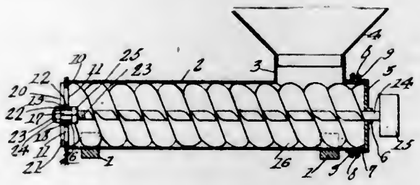


1. In a photographic printing machine, a casing having a bottom movably connected therewith and a false bottom spaced from the first named bottom, a lamp operatively supported upon the false bottom, means in the casing disposed above the lamp for supporting a negative and sensitized sheet, a cover movably connected to the casing, means in the space between the first named bottom and false bottom for supplying the lamp with electricity, and a normally open switch in said casing and in the lamp circuit, said switch being engageable by the cover in the closed position of the latter whereby to close the lamp circuit.

2. In a photographic printing machine, a casing having a main bottom movably connected therewith and a false bottom spaced from the main bottom, an electric lamp supported upon the false bottom, means in the casing above the lamp for supporting a negative and sensitized sheet, a cover movably connected to the casing, a battery removably disposed upon the first named bottom, means for electrically connecting one of the poles of said battery to one of the lamp contacts, means for electrically connecting the other pole of said battery to the other contact of the lamp, including a spring member with which the base of the lamp is adapted to engage, and normally spaced contacts mounted upon the upper edge of the casing and included in said connecting means and adapted to be placed in electrical engagement with each other by the closing of the cover.

3. In a photographic printing machine, a casing having a hinged bottom, a false bottom disposed above the hinged bottom, a lamp operatively supported upon the false bottom, means in the casing disposed above the lamp for supporting a negative and sensitized sheet, a cover hinged to the casing, a battery removably disposed upon the hinged bottom, means for electrically connecting one of the poles of said battery to one of the lamp contacts, and means for electrically connecting the other pole of said battery to the other contact of said lamp including a spring member with which the base of the lamp is adapted to engage, and normally spaced contacts mounted upon the upper edge of the casing and included in said connecting means and adapted to be placed in electrical engagement with each other by the closing of the cover.

1,167,858. ALFALFA-MEAL GRINDER. ROSS S. THORNTON, Cozad, Nebr. Filed Aug. 6, 1915. Serial No. 44,075. (Cl. 146—26.)



1. In a device of the class described, a shell; a spider carried by one end of the shell; a head carried by the other end of the shell; a shaft journaled in the head and in the spider; a conveyer on the shaft and abutting at its ends against the head and the spider; a removable cutter on the shaft and engaging the outer face of the spider, the shaft having polygonal portions lying upon opposite sides of the spider whereby the cutter may be connected with the shaft interchangeably to engage with the inner and the outer faces of the spider; the head being mounted for adjustment longitudinally of the shell; and means for holding the head in adjusted positions longitudinally of the shell thereby to permit a retraction of the shaft and the conveyer and to permit the conveyer to abut against the head and the cutter when the cutter coacts with the inner face of the spider.

2. In a device of the class described, a shell provided at one end with a spider; a collar journaled for rotation in the spider; a shaft having a polygonal portion received in the collar, and threaded at the ends of the polygonal portion; a cutter mounted on the polygonal portion of the shaft; a spacer mounted on the polygonal portion of the shaft, the cutter and the spacer being interchangeable to engage with the respective faces of the spider; and nuts on the threaded portions of the shaft and coöperating, respectively with the cutter and with the spacer.

1,167,859. HOOK AND EYE. ALBERT T. VAN ALSTYN, New York, N. Y. Filed May 15, 1913. Serial No. 767,950. (Cl. 24—226.)



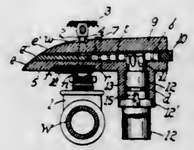
1. In interlocking hooks-and-eyes, the combination, with an eye having a fulcrum-bar and two opposing actuator faces, of a sheet-metal hook consisting of an endless strip of metal folded transversely, in a bend zone having located therein oppositely-disposed cam-faces coöperative with the actuator-faces of the eye for closing the hook at one end thereof for releasing the eye, and operative for locking the eye in place when this lies extended in the direction of the plane of the base-portion of the hook, the fulcrum-bar of said eye being of sufficient width so that in locking position, its fulcrum point extends a sufficient distance from the bend zone, in order to be in position to allow the proper leverage without requiring it to be first moved away from said bend zone.

2. In a sheet metal hook device of the class specified, in combination, a hook point and a base member disposed in different planes to one another, both being formed of one endless strip stamped out of sheet metal, the hook point having two sides that converge toward one another and form a closed point at one end of the hook point, the two sides at the other end of the hook point curving out of the plane of the hook point, extending in the same direction with one another and bending inwardly to form cam faces, then bending into the plane of the base member where they extend substantially parallel to one another for a certain distance, and then forming an enlarged loop-like conformation with one another, the flat metal strip portion of the base member lying in one plane and the flat metal strip portions of the hook point lying in one plane so that these metal strip portions will flex in an edgewise direction, the enlarged loop-like portion serving to permit the greater distribution of the flexure.

3. In a sheet-metal hook device of the class specified, in combination, a hook point and a base member disposed in different planes to one another, both being formed of one endless strip stamped out of sheet metal, the hook point having two sides that form a closed point at one end of the hook point, the two sides at the other end of the hook point curving out of the plane of the hook point, extending in the same direction with one another and bending inwardly to form cam faces, then bending into the plane of the base member where they form a loop-like conformation with one another, the flat metal strip portions of the base member lying in one plane and the flat metal strip portions of the hook lying in one plane so that these metal strip portions will flex in an edgewise direction.

4. In interlocking hooks and eyes, the combination with an eye having a fulcrum bar and two opposing actuator faces, of a sheet metal hook comprehending a continuous loop-like configuration resilient transversely throughout its extent and including spaced lateral carrying oppositely disposed marginal cam faces, said laterals being bent back on themselves to form a hook bill and to bring said cam faces wholly within the quadrant of the bend zone adjacent the hook bill to be engaged by the actuator faces of the eye when the latter is rotated through an arc of 90° to compress the hook.

1,167,860. EMERGENCY CUT-OFF FOR AUTOMATIC SPRINKLER SYSTEMS. JOHN T. VAN DILLEN and GEORGE H. F. BERGMANN, St. Louis, Mo. Filed May 22, 1915. Serial No. 29,901. (Cl. 169—5.)



1. In combination with a pair of separable members jointly insertible into a loop forming the terminal of a sprinkler head, a slide interposed between the members and operating in a plane transverse to the path of the separating movement of the members to drive the members apart with a movement of the slide in a given direction, and a member about which the separable members are jointly rotatable operating through one of the separable members for actuating the slide.

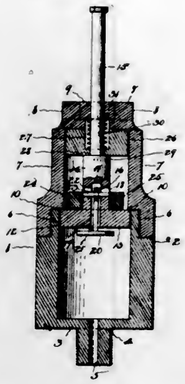
2. In combination with a pair of separable blocks jointly insertible into a loop forming the terminal of a sprinkler head, said blocks tapering at the forward end, a pair of transversely disposed guide pins on one of the blocks spaced apart and operating freely through openings in the opposite block, a sliding wedge operating between the blocks, and an operating pole having one end traversing one of the blocks for actuating said wedge.

3. In combination with a pair of separable blocks insertible into a loop forming the terminal of a sprinkler head, said blocks tapering at the forward end, a pair of transversely disposed pins on one of the blocks spaced apart and operating freely through openings in the opposite block, a sliding wedge operating between the blocks and provided with a slot having rack teeth disposed on one wall thereof, a pinion engaging the rack, and a rotatable operating pole coupled to the pinion and operating through one of the blocks for rotating the pinion and actuating the wedge.

4. An emergency cut-off for sprinkler heads comprising a pair of blocks insertible into a loop forming the terminal of a sprinkler head, said blocks having contiguous plane faces along which the same are separable, and tapering at one end for ready insertion into said loop, a layer of compressible material on the outer face of one of the blocks for engaging the discharge opening of the sprinkler head and forming a seat for said block, a pair of transversely disposed guide pins leading from the last mentioned block and operating through openings of the opposite block, a sliding wedge between the blocks, provided with a slot elongated in the general direction of movement of said wedge, a rack formation on one of the side walls of the slot, a pinion engaging said rack, and a rotatable operating stick to which said pinion is secured operating through the block carrying the compressible layer, for rotating said pinion and actuating the wedge, the compressible layer aforesaid being positioned to pass over the discharge opening of the sprinkler head and form a tight joint therewith with a separating movement of the blocks under the action of the wedge.

5. In an emergency cut-off for sprinkler systems, a pair of blocks insertible into a loop forming the terminal of a sprinkler head, a sliding wedge operating between the blocks, a rotatable member operating through one of the blocks for actuating the wedge, a spring or resilient catch on said rotatable member, the block traversed by said rotatable member being provided with a shallow depression for receiving the catch, whereby accidental rotary displacement of the blocks during the act of insertion is prevented, but rotation of the member is permitted for actuating the member and the wedge controlled thereby.

1,167,861. GREASE-CUP. LOUIS N. VINCENT, Prescott, Ariz., assignor of nine-twentieths to Charles A. Chambers, Prescott, Ariz. Filed Aug. 6, 1914. Serial No. 855,401. (Cl. 184—46.)



1. In a grease cup, a grease receptacle, a follower and a valve loosely mounted and freely movable up and down within the follower having a stem loosely fitting the follower, said valve admitting air through said follower to the grease receptacle, substantially as described.

2. In a grease cup, a grease receptacle, a cover, a follower, spring means for pressing said follower downward, a reciprocatory weight, and a valve within the follower having a stem provided with laterally extending means for loosely mounting it in said follower, said valve controlling the admission of air through said follower to the grease receptacle, substantially as described.

3. In a grease cup, a grease receptacle, a follower, a reciprocatory weight, means for supplementing the pressure of the follower on the grease and a valve within the follower having a stem provided with laterally extending means for loosely mounting it in said follower, said valve admitting air through the follower to the grease receptacle, substantially as described.

4. In a grease cup, a grease receptacle, a cover, a follower having a stem passing through said cover, a reciprocatory weight, a spring pressed sleeve mounted on said stem and loosely mounted means for admitting air through said follower to said grease receptacle, substantially as described.

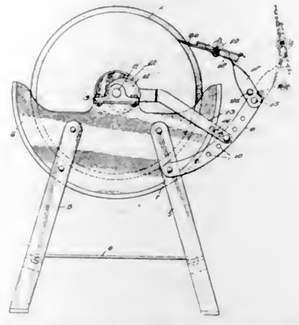
5. In a grease cup, a grease receptacle, a cover, a follower having a stem passing through said cover, a reciprocatory weight, a sleeve mounted on said stem, a spring for imparting pressure to said sleeve and loosely mounted means for admitting air through said follower to said grease receptacle, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,167,862. GRINDER FOR MOWER-KNIVES. JOHN E. VOGT, Chicago, Ill. Filed June 2, 1914, Serial No. 842,450. Renewed June 28, 1915. Serial No. 36,909. (Cl. 51—8.)

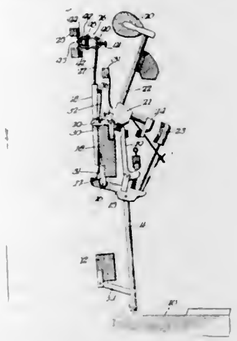
1. A grinder including a supporting member, a shaft carried thereby, an abrasive wheel and an eccentric both rotatably mounted upon the shaft, a bifurcated member straddling the said supporting member and pivotally joined thereto at the ends of its forks and equipped with alined perforations in its forks; connections between the eccentric and the bifurcated member for causing the rotation of the former to oscillate the latter about its said pivotal junctions, a rod slidably extending through the said alined perforations in the forks of the bifurcated member and substantially parallel to said shaft, and a blade-holder pivotally carried by said rod.

2. A grinder including a supporting member, a shaft carried thereby, an abrasive wheel and an eccentric both rotatably mounted upon the shaft, a bifurcated member straddling the said supporting member and pivotally joined thereto at the ends of its forks and equipped with alined perforations in its forks; connections between the eccentric and the bifurcated member for causing the rotation of the former to oscillate the latter about its said pivotal junctions, a rod slidably extending through the said alined perforations in the forks of the bifurcated member and substantially parallel to said shaft, a blade-holder pivotally carried by said rod; and means associated with the blade-holder and bifurcated member for holding the said blade-holder in a position in which the blade mounted thereon is out of contact with the abrasive wheel when the blade-holder is moved about said rod to bring the center of gravity of the blade-holder beyond said rod.



3. A grinder including a supporting member, a shaft carried thereby, an abrasive wheel and an eccentric both rotatably mounted upon the shaft, a bifurcated member straddling the said supporting member and pivotally joined thereto at the ends of its forks and equipped with alined perforations in its forks; connections between the eccentric and the bifurcated member for causing the rotation of the former to oscillate the latter about its said pivotal junctions, and a blade-holding member including a pair of parallel rods, one thereof extending through the said perforations in the bifurcated member, the other thereof adapted to bear against a portion of the said bifurcated member to support the blade-holder in a position in which the blade carried thereby is out of contact with the abrasive wheel.

1,167,863. PIANO-ACTION. HARVEY L. WEST, Elgin, Ill. Filed Jan. 9, 1915. Serial No. 1,285. (Cl. 84—100.)



1. In a piano action, the combination with a damper lever and a support to which it is pivoted, of a controlling spring for said lever anchored to said support and having a point pivotal engagement with the lever between the support and the damper end of the lever.

2. In a piano action, the combination with a damper lever and a support to which it is pivoted, of a spring anchored at one end to said support and entering at its other end a recess in the lever for point pivotal contact with the bottom of the recess and formed to provide near its latter end a coil to increase the flexibility of the spring.

3. In a piano action, the combination with a damper head provided with a yielding non-shrinkable projection, of a damper block having means to clamp it to said yielding projection to constitute a connection between the block and head.

4. In a piano action, the combination with a damper head provided with a yielding non-shrinkable projection, of a U-shaped resilient damper block and clamping means acting thereon to clamp the block to said projection.

1,167,864. METHOD OF FINISHING ROLLED SHEETS AND PLATES. GEORGE A. WHITE, Pittsburgh, Pa. Filed Nov. 2, 1915. Serial No. 59,212. (Cl. 148—42.)



1. The continuous method of finishing rolled metal sheets and plates which consists in fractionally heating and cooling individual sheets and plates to anneal the material, exposing the material to the atmosphere in annealing while heated to a temperature sufficient to crack and peel off the scale on the surfaces of the material, passing the cooled material through a pickling bath to complete the scale removing operation, and washing the pickled material preparatory to coating or cold rolling the pickled and washed material.

2. The continuous method of finishing rolled metal sheets and plates which consists in fractionally heating and cooling individual sheets and plates to anneal the material, exposing the material to the cooling effect of the atmosphere in annealing while heated to a temperature sufficient to crack and peel off the scale on the surface of the material, passing the cooled material through a pickling bath to complete the scale removing operation, washing the pickled material, and then galvanizing the washed material.

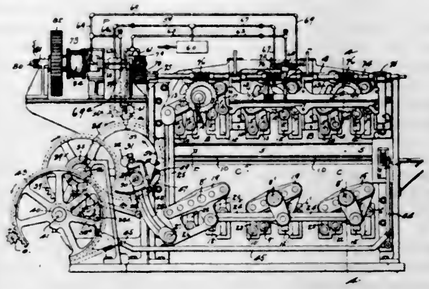
3. The continuous method of finishing rolled metal sheets and plates which consists in fractionally heating and cooling individual sheets and plates to anneal the material, exposing the material to the atmosphere in annealing while heated to a temperature sufficient to crack and peel off the scale on the surfaces of the material, passing the scaled material through a leveler to flatten the material, passing the flattened material through a pickling bath to complete the scale removing operation, and washing the pickled material preparatory to coating or cold rolling the material.

4. The continuous method of finishing rolled metal sheets and plates which consists in fractionally heating and cooling individual sheets or plates to thereby anneal the material, exposing the successively heated fractional portions of the material to the atmosphere in the order of heating while at a temperature sufficient to crack and peel off the scale on the surfaces of the material, passing the annealed and scaled material through a pickling bath to remove the scale or oxid on the surfaces thereof, and washing the pickled material preparatory to galvanizing or cold rolling the washed material.

1,167,865. MACHINE-CONTROLLING MECHANISM. HERBERT E. WHITE, Youngstown, Ohio. Filed June 11, 1915. Serial No. 33,536. (Cl. 74—46.)

1. A machine controlling mechanism including, in combination with the moving part of the machine to be operated, a combined clutch and brake unit having an operative connection with said moving part, and a fluid pressure operating means for said unit.

2. A machine controlling mechanism including, in combination with the moving part of the machine to be operated, a combined clutch and brake unit having an operative connection with said moving part, and a fluid-pressure device having an operative connection with both the clutch and brake of said unit to simultaneously operate the same.



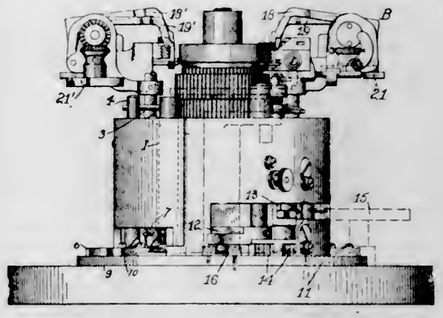
3. A machine controlling mechanism including, in combination with the moving part of the machine to be operated, a combined clutch and brake unit operatively connected with said moving part, an operating means common to the clutch and the brake of said unit to respectively apply and release the same simultaneously, and a fluid-pressure device connecting with said operating means.

4. A machine controlling mechanism including, in combination with the moving part of the machine to be operated, a multiple-disk clutch and a multiple-disk brake operatively connected with said moving part, a common operating means for both the clutch and brake, and a fluid-pressure device having a shifting connection with the said operating means.

5. A machine controlling mechanism including, in combination with the moving part of the machine to be operated, a multiple-disk clutch and a multiple-disk brake operatively connected with said moving part, a common operating means for the clutch and brake including a sleeve member connecting with the movable disks of the clutch and of the brake, and a fluid-pressure device having a shifting connection with said sleeve.

[Claims 6 to 40 not printed in the Gazette.]

1,167,866. CIRCULAR-KNITTING MACHINE. FRANK B. WILDMAN, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 18, 1912. Serial No. 704,440. (Cl. 66—22.)



1. In a circular rib knitting machine with an even number of feeds and having two sets of needles, i. e., cylinder and dial, one set of needles being divided into two groups, one group being long needles and the other short needles, an automatic striper at each feed for changing the color of yarn, two independent cam races one for the long needles and the other for the short needles, each cam race including a tucking cam at each feed in each cam race, operating means with connections therefrom to the tuck-

ing cams, the long needles tucking at one feed and knitting at the other, while the short needles knit at the first mentioned feed and tuck at the other for vertical striping or reversing the order of tucking and knitting for making checks or both groups of needles knitting, substantially as described.

2. In a circular rib knitting machine with an even number of feeds and with two sets of needles, *i. e.*, cylinder and dial, one set of needles being divided into two groups, one group having long needles and the other short needles, two independent cam races, one for the long needles and the other for the short needles, each cam race including a tucking cam at each feed in each cam race, a ring movable circumferentially of the machine with connections therefrom to the tucking cams to make each group of needles knit and tuck alternately at alternate feeds, and in opposition to the other group of needles, or to make both groups of needles knit, substantially as described.

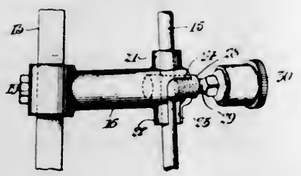
3. In combination in a rib knitting machine, the long and short needles in one set, a plurality of feeds, upper and lower sets of cams at each feed for the short and long needles, adjusting cams for the needle cams, a pair of vertically movable rods at each feed operated by the cam means, the first rod at one feed being connected with the upper needle cam while the first rod at the other feed is connected with the lower needle cam, while the second rods at the two feeds are connected respectively to the lower and upper needle cams, substantially as described.

4. In combination in a circular knitting machine, long and short needles in one circle, a set of upper and a set of lower needle cams, each set including needle advancing cams, one arranged over the other, adjustable for knitting or tucking, a cam ring carrying the said cams, rods movable vertically of the cam ring, one being connected to the advancing cam of the upper set and the other being connected to the advancing cam of the lower set, and cam means operating circumferentially of the cam ring for operating the said rods and operating connections for the said cam means, substantially as described.

5. In a circular knitting machine, a circle of needles divided into two groups long and short, two yarn feeds each consisting of two yarn fingers with means for operating said yarn fingers automatically to change the yarn, two independent cam races one for the long needles and one for the short needles, two tucking cams at each feed, one in one race and the other in the other race, and means for operating said tucking cams automatically into tucking or knitting position in predetermined order and relation in respect to each other, substantially as described.

[Claim 6 not printed in the Gazette.]

1,167,867. BRAKE-ROD SUPPORT. NATHANIEL T. WILEY, Somerville, Mass., assignor to Motor Specialties Company, Waltham, Mass., a Corporation of Massachusetts. Filed Nov. 4, 1914. Serial No. 870,233. (Cl. 21—8.)



1. A rod support, including a bracket having a rod receiving opening extending therethrough and bayonet slots leading from the end of said bracket to said opening and through which said rod may pass in assembling the parts.

2. In combination, a brake rod support including a tubular bracket having oppositely disposed bayonet slots adjacent to one end, a brake rod disposed within said slots, and means at the opposite ends of said support for rigidly holding the latter.

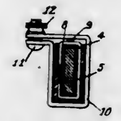
3. In combination, a brake rod, a bracket having a rod receiving opening extending therethrough, and bayonet slots leading to said opening and through which said rod may pass in securing the support to the rod, and means for attaching said support to a frame part of the vehicle.

4. In combination, a vehicle frame part, a brake rod adjacent thereto, a rod support having a rod receiving opening, and bayonet slots leading to said opening and means for securing said support to said vehicle frame part.

5. In combination, a frame part in the form of a bar, a longitudinally movable rod adjacent thereto and means for supporting said rod from said bar, said means including a bracket having oppositely disposed bayonet slots to receive said rod upon the proper movement of the bracket in respect to the rod and means for securing said bracket to said bar after the latter has been secured to said rod.

[Claims 6 to 16 not printed in the Gazette.]

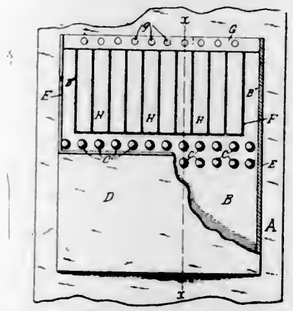
1,167,868. RHEOSTAT. GEORGE M. WILLIS, Chicago, Ill., assignor, by mesne assignments, to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 24, 1911. Serial No. 610,572. (Cl. 219—62.)



1. A rheostat comprising in combination a supporting core of polygonal cross section, a coil wound around said core from end to end, insulation around said coil except on one side thereof, a clip conformed to have an aperture corresponding to the cross section of said core fitted over said core and coil and movable thereon, a contact carried by the clip held at all times adjacent to the uninsulated side of said coil, and means for tightening said clip at any desired position around said core and coil.

2. A rheostat comprising in combination a supporting core, a coil wound around said core from end to end, insulation covering said coil except on one side thereof, said core, coil and insulation constituting a structure having a polygonal cross section, a clip of correspondingly polygonal conformation arranged to fit over said structure, a contact element carried by said clip and always retained adjacent to the uninsulated side of said coil, and means for securing said clip at any one of a plurality of positions upon said structure to determine the position of said contact element along the uninsulated side of said coil.

1,167,869. BELT ELEVATOR. GEORGE M. WOLFF, Milwaukee, Wis. Filed July 31, 1915. Serial No. 42,919. (Cl. 193—28.)



1. A bucket for belt elevators provided with a series of perforations near its transverse center line to facilitate connecting said bucket with a belt carrier, the back wall of said bucket above said line of perforations having a slot through which material may pass from the space in the rear of the upper portion of the back wall.

2. A bucket for belt elevators provided with a series of perforations near its transverse center line to facilitate connecting said bucket with a belt carrier, the back wall of said bucket above said line of perforations having a slot through which material may pass from the space in the rear of the upper portion of the back wall, and a flexible screen extending substantially across said slot.

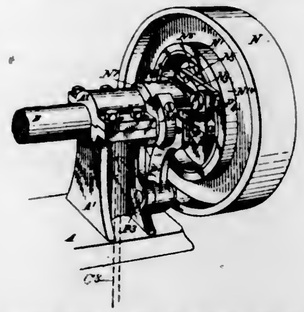
3. A bucket for belt elevators provided with a series of perforations near its transverse center line to facilitate connecting said bucket with a belt carrier, the back wall of said bucket above said line of perforations having a slot through which material may pass from the space in the rear of the upper portion of the back wall, and a flexible screen extending substantially across said slot, said flexible screen comprising a series of resilient fingers composed of flat strips secured at their upper ends to the back wall of the bucket and projecting downwardly into the slot, substantially as described.

4. The combination with an elevator belt, of a bucket having the middle portion of its back wall secured to the belt and also having the upper portion of said wall apertured to allow material to pass through it from the space between such wall and the belt.

5. The combination with an elevator belt, of a bucket having the middle portion of its back wall secured to the belt and also having the upper portion of said wall apertured to allow material to pass through it from the space between such wall and the belt, and means for protecting the belt in the rear of said aperture from material contained in the bucket, said protecting means being adapted to permit material to enter the bucket from the space between the apertured wall and the belt.

[Claim 6 not printed in the Gazette.]

1,167,870. CLUTCH. ERASTUS WOODWARD, Somerville, Mass.; Elmina Millett, executrix of said Woodward, deceased, assignor, by mesne assignments, of one-half to John J. Sheehan and one-half to William P. Egan, Lynn, Mass. Filed Nov. 1, 1909. Serial No. 525,672. (Cl. 192—2.)



1. In a clutch mechanism, a driving pulley, a shaft adapted to be connected to and disconnected from said pulley, a sliding wedge mounted around said shaft, a gripping member adapted to coöperate with said sliding wedge and said pulley, mechanism adapted to control said sliding wedge whereby said gripping member is held out of engagement with said pulley, and automatic mechanism for operating said sliding wedge to engage said gripping member with said pulley after the operation of said controlling mechanism.

2. In a clutch mechanism, a driving pulley, a shaft adapted to be connected to and disconnected from said pulley, an engaging roll, a sliding wedge mounted on said shaft and adapted to operate said roll, mechanism adapted to control and normally hold said sliding wedge in non-operating position, and automatic mechanism for operating said sliding wedge to engage said roll with said pulley after the operation of said controlling mechanism.

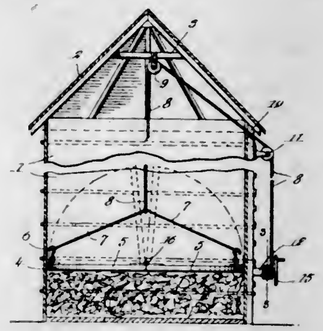
3. In a clutch mechanism, a driving pulley, a shaft adapted to be connected to and disconnected from said pulley, a sliding wedge connected with said shaft, a dog adapted to be operated by said sliding wedge to engage said pulley, mechanism adapted to control and normally hold said sliding wedge in non-operating position, and automatic mechanism for operating said sliding wedge to engage said dog with said pulley after the operation of said controlling mechanism.

4. In a clutch mechanism, a driving pulley, a shaft adapted to be connected to and disconnected from said pulley, a sliding wedge connected with said shaft, a dog adapted to engage said pulley and having a beveled face coöperating with said sliding wedge and adapted to be operated thereby, mechanism adapted to control and normally hold said sliding wedge in non-operating position, and automatic mechanism for operating said sliding wedge to engage said dog with said pulley after the operation of said controlling means.

5. In a clutch mechanism, a driving pulley, a shaft adapted to be connected to and disconnected from said pulley, an engaging roll, a sliding wedge mounted on said shaft and adapted to operate said roll, a holder for maintaining said roll in position on said sliding wedge, mechanism adapted to control and normally hold said sliding wedge in non-operating position, and automatic mechanism for operating said sliding wedge to engage said roll with said pulley after the operation of said controlling mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,167,871. ENSILAGE-PROTECTOR. WILLIAM AUSTON ADAMS, La Grange, Ky. Filed May 2, 1914. Serial No. 835,979. (Cl. 217—86.)



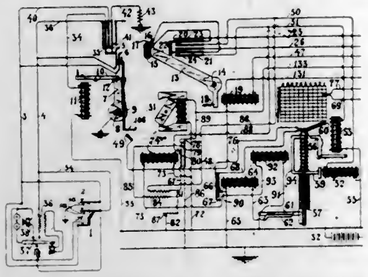
1. An ensilage cover for use in silos comprising a pair of hingedly connected relatively movable cover sections, a flexible element connecting said sections, and a means operable to first move said sections into a contiguous vertical position and subsequently bodily elevate the cover, substantially as described.

2. In means for protecting the ensilage within a silo, the combination with the silo, of a cover comprising a pair of hingedly connected cover sections, said cover being shaped to conform to the configuration of the inner wall of the silo, a flexible element attached to the respective cover sections at diametrically opposite points, a second flexible element attached to said first mentioned flexible element at points equi-distant its ends, pulleys over which the said second flexible element is arranged, and means including a winding drum to which said second element is attached, said drum being arranged upon a point exteriorly of the silo and operable to raise and lower said cover relatively to the ensilage therein, as and for the purpose set forth.

1,167,872. ELECTROMECHANICAL EXCHANGE SYSTEM. FRANS GUNNAR AGRELL, Stockholm, Sweden. Filed Aug. 23, 1907. Serial No. 389,855. (Cl. 179—18.)

1. In an electro-mechanical exchange system, the combination of a number of circuits of which any one is adapted to be connected to any other, two groups of

switching circuits, one incoming and one outgoing, of which any ingoing switching circuit is adapted to be connected with any outgoing switching circuit, automatically operated means adapted to connect the calling circuit to an incoming switching circuit, selectively operated means for determining the circuit to be called common to a number of switching circuits of said group, automatically operated means adapted to connect the incoming switching circuit with the determined outgoing switch-circuit and the said outgoing switching circuit with the so determined circuit to be called.



2. In an electro-mechanical exchange system, the combination of a number of circuits of which any one is adapted to be connected to any other, a number of groups of switching circuits, said groups being incoming, intermediate and outgoing groups, automatically operated means adapted to connect a calling circuit with a switching circuit of the incoming group, selectively operated means common to a number of switching circuits adapted to determine the intermediate and outgoing switching circuits and the circuit to be called and automatically operated means adapted to connect the incoming switching circuit with the so determined intermediate switching circuit, said intermediate switching circuit with the so determined outgoing switching circuit and said outgoing switching circuit with the so determined circuit to be called.

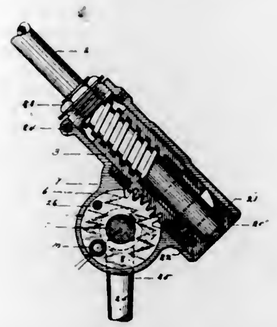
3. In an electro-mechanical exchange system, the combination of a plurality of local circuits adapted to be connected with each other through switching circuits, a number of switching circuits adapted to be controlled by the action of selective means, selective means for controlling said switching circuits common to a number of said circuits, means adapted to indicate any one of said switching circuits busy when the selective means that controls said circuit is busy, and means adapted to automatically connect a local circuit with a switching circuit that is not indicated busy.

4. In an electro-mechanical exchange system, the combination of a group of circuits, each circuit adapted to be connected with another circuit through a switching circuit, a switching device for said group of circuits, a group of terminals within said switching device to which said circuits are connected, another group of terminals connected to switching circuits leading to terminals of a switching device common to a number of said switching circuits, a common switching device, a group of such switching circuits, and means adapted to cause the terminals of one of said first named circuits to engage the terminals of one of said switching circuits.

5. In an electro-mechanical exchange system, the combination of a group of circuits, each circuit adapted to be connected with another circuit through a switching circuit, a switching device for said group of circuits, a group of terminals within said switching device to which said circuits are connected, a group of switching circuits, another group of terminals connected to said switching circuits leading to terminals of a switching device common to a number of said switching circuits, a common switching device, means adapted to indicate any one of said switching circuits busy when engaged by a circuit of the first named group, and means adapted to cause the terminals of one of the circuits of said group to engage and make contact with a switching circuit that is not indicated busy.

[Claims 6 to 14 not printed in the Gazette.]

1,167,873. STEERING-GEAR FOR MOTOR-VEHICLES. WILLIAM H. APPLEMAN, Belmont, N. Y. Filed Jan. 23, 1913. Serial No. 743,857. (Cl. 74—79.)



1. The combination of a housing, a rotatable threaded steering post entering therein, a longitudinal divided two part nut moving longitudinally on said thread, a toothed abutment on each member of said divided nut, a rocker journaled in said housing comprising two toothed members lying side by side, one of which is rotatably adjustable in relation to the other, and each of which meshes in the toothed abutment of a separate member of said divided nut, and means for rotatably adjusting one of said toothed members in relation to the other.

2. The combination of a housing, a rotatable steering post entering therein, a member moving longitudinally on said steering post, a rocker journaled in said housing comprising members which are rotatably adjustable in relation to each other, means for locking said members rigidly together, a threaded engagement between said steering post and said longitudinally moving member, and a toothed engagement between said latter member and said rocker.

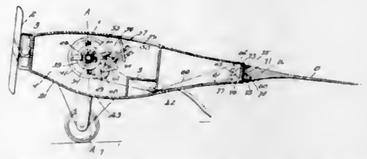
3. The combination of a housing having a longitudinal and a circular transverse chamber therein, a rotatable steering post entering said longitudinal chamber having a thread thereon, a nut moving longitudinally on said thread and having a toothed section thereon, a rocker journaled in said housing comprising a spur toothed member; the toothed face of which engages with the teeth on said nut and also contacts pivotally with the circular walls of said transverse chamber.

4. The combination of a housing having a longitudinal and a circular transverse chamber therein, a rotatable steering post entering said longitudinal chamber having a therad thereon, a nut moving longitudinally on said thread and having a toothed section thereon, a rocker journaled in said transverse chamber comprising two circular plates which are peripherally journaled against the walls of said transverse chamber, and a toothed member confined between said plates which engages with the teeth on said nut.

5. The combination of a housing having a longitudinal and a circular transverse chamber therein, a rotatable steering post entering said longitudinal chamber having a thread thereon, a nut moving longitudinally on said thread having a toothed section thereon, a rocker journaled in said transverse chamber comprising two circular plates which have a peripheral pivotal and also a lateral engagement with the walls of said transverse chamber, and a toothed member confined between said circular plates through which motion is imparted from said nut to said rocker.

[Claims 6 to 12 not printed in the Gazette.]

1,167,874. FLYING-MACHINE. CLYDE V. BACKUS, Jefferson, Ohio. Filed Dec. 3, 1913. Serial No. 804,392. (Cl. 244—29.)



1. A flying machine including a body of stream line form having an upper convex rarefaction surface and a lower compoundly curved reaction surface, a vertically adjustable tail piece at the rear end of said body, said tail piece forming a continuation of the reaction surface, said reaction surface of the body including a bulged breast portion arranged substantially in line with the centers of gravity and pressure of the machine and dividing said reaction surface into anterior and posterior lifting portions, and wings mounted upon the body and having similarly shaped rarefaction and reaction surfaces.

2. A flying machine including a body of stream line form having an upper convex rarefaction surface and a lower compoundly curved reaction surface, a vertically adjustable tail piece at the rear end of said body, said tail piece forming a continuation of the reaction surface, said body having a bulged breast portion arranged substantially in line with the centers of gravity and pressure of the machine and dividing said reaction surface into anterior and posterior lifting portions, wings mounted upon the body and provided with similarly shaped rarefaction and reaction surfaces, and means for tilting said wings vertically upon horizontal transverse axes to vary the angle of incidence of said surfaces.

3. A flying machine including a body having an upper convex rarefaction surface and a compoundly formed bottom forming front and rear lifting surfaces, and wings carried by the body and provided with similarly shaped rarefaction and reaction surfaces, said wings being mounted to tilt upon horizontal transverse axes coinciding with the line of division between the front and rear lifting surfaces, the lifting surfaces of the body and wings being arranged, respectively, in front and rear of the centers of gravity and pressure of the machine.

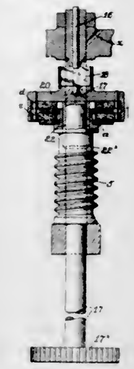
4. In a flying machine, a supporting surface comprising a wing of birdlike contour having an upper convexly curved rarefaction surface, and a lower compoundly curved reaction surface, said wing being provided upon its reaction side with a bulged portion rendering it of maximum depth at a point coincident with the centers of gravity and pressure thereof, said breast portion separating the said reaction surface in front and rear lifting portions, each having a lifting curvature.

5. In a flying machine, a supporting surface comprising a wing of birdlike contour and having an upper convexly curved rarefaction surface and a lower compoundly curved reaction surface, said wing being provided upon its reaction side with a bulged breast portion rendering it of maximum depth at a point substantially coincident with its centers of gravity and pressure, said breast portion separating the reaction surface into front and rear lifting surfaces, each having a lifting curvature, the tail portion of said wing forming the extremity of the rear lifting surface being provided with flaps or vanes arranged in lapping relation and forming passages for the escape of air under excess pressure.

[Claims 6 to 28 not printed in the Gazette.]

1,167,875. DRIVING MECHANISM. GEORGE LAWSON BALLARD, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1915. Serial No. 20,887. (Cl. 192—10.)

In combination in driving mechanism a vertical shaft with means for driving the same, a worm on the said shaft to be driven thereby and a friction clutch connection between the shaft and worm consisting of a clutch member keyed to and free to be pressed along the said shaft, said clutch member carrying a fiber disk or ring, a ring or disk engaging the said fiber disk, a shield on



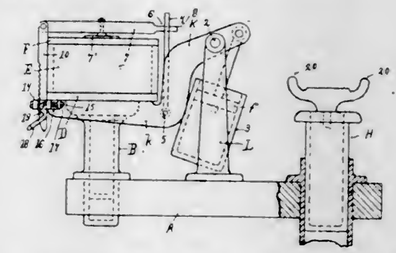
the clutch member extending along the shaft and past the fiber disk and the other disk mentioned, the said worm having an extension carrying the last mentioned disk and surrounding the shield, substantially as described.

1,167,876. MOTOR-BOAT. ANDREW J. BARTLETT, Revere, Mass. Filed Mar. 24, 1915. Serial No. 16,584. (Cl 115—42.)



In combination with a motor boat, an inclined plane of the approximate width of the mid-ships, in cross-section of the boat, with its inner end fixed to the keel or skag at its aft end, said inclined plane being positioned under and extending beyond the rudder, with the lower end of the rudder-shaft or post bearing in said inclined plane.

1,167,877. MOLDING-MACHINE CLAMPING MECHANISM. GIDEON C. BATTEN, Cincinnati, Ohio, assignor to International Molding Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 20, 1915. Serial No. 22,706. (Cl. 22—33.)



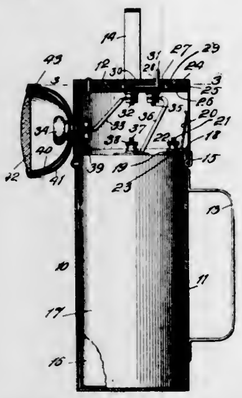
1. In combination with the mold board and transposing frame of a molding machine, a locking mechanism comprising a locking member hinged to said frame and a latch member carried rigidly relative to said frame, and a detachable member composed of two bars hinged together and provided with means to detachably engage their free ends respectively with the free end of said hinged locking member and said latch member.

2. In combination with the mold board and transposing frame of a molding machine a locking mechanism comprising a horizontally disposed cross bar above a flask member to hold it in position upon the mold board, a vertically disposed toothed bar hinged at one end to said cross-bar, and means carried by said frame to detachably engage the free ends of said respective bars.

3. In combination with the mold board and transposing frame of a molding machine, a locking mechanism comprising a locking member hinged at one end to said frame, and free at its opposite end, and located at one side of said mold board a latch member carried by said frame at the opposite side of said mold board, a cross-bar detachably and adjustably connected to the free end of said hinged member, and a toothed bar hinged at one end to said cross-bar and detachably and adjustably engaged at its opposite end to said latch member.

4. In combination with the mold board and transposing frame of a molding machine a locking mechanism, comprising a horizontally disposed cross-bar, a tiltable shoe carried by said bar to engage and lock a flask member and bottom board to said mold board, a vertically disposed bar hinged at one end to said cross bar, and means carried by said frame to detachably engage the free ends of said respective bars.

1,167,878. PORTABLE ELECTRIC LIGHT. BERNARD BENEDICT, New York, N. Y., assignor to Beacon Miniature Electric Co., Inc., New York, N. Y., a Corporation of New York. Filed Feb. 12, 1915. Serial No. 7,692. (Cl. 240—8.5.)



1. In a portable electric light an exterior casing having a body-portion and a cover-portion carrying the lamp, one terminal of which is in electrical connection with said cover-portion, a battery within said body-portion and normally out of circuit and having exposed pole contacts, means electrically connecting the negative pole contact of the battery with said cover-portion, contact parts carried by and insulated from said cover-portion and from each other and respectively electrically connected with the other terminal of the lamp and the carbon pole of the battery, and a circuit closer carried by said cover-portion and manually operable to connect said contact parts, for completing the circuit, said cover-portion being hinged to said body-portion and said body-portion having a hinged plate to engage the negative pole contact of the battery.

2. In a portable electric light an exterior casing having a body-portion and a cover-portion carrying the lamp, one terminal of which is in electrical connection with said cover-portion, a battery within said body-portion and normally out of circuit and having exposed pole contacts, means electrically connecting the negative pole contact of the battery with said cover-portions, contact parts carried by and insulated from said cover-portion and from each other and respectively electrically connected with the other terminal of the lamp and the carbon pole of the battery, and a circuit closer carried by said cover-portion and manually operable to connect said contact parts, for completing the circuit, said cover-portion being hinged to said body-portion and said body-portion having a hinged right-angular plate one member of which is engaged with the negative pole contact of the battery and the other member of which is engaged with said cover-portion.

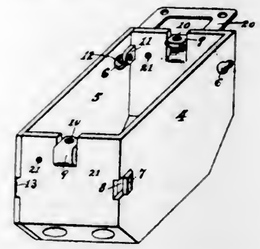
3. In a portable electric light an exterior casing having a body-portion and a cover-portion carrying the lamp, one terminal of which is in electrical connection with said cover-portion, a battery within said body-portion and normally out of circuit and having exposed pole contacts, means electrically connecting the negative pole contact of the battery with said cover-portion, contact parts carried by and insulated from said cover-portion and from each other and respectively electrically connected with the other terminal of the lamp and the carbon pole of the battery, and a circuit closer carried by said cover-portion and manually operable to connect said contact parts, for completing the circuit, the means insulating said contact parts from said cover-portion comprising three layers of insulating material secured to one another and to the top of said cover-portion, the inner one of said layers having said contact parts secured to it, the next inner layer having a recess or opening therein housing the circuit-closer and the onter layer and the top of the cover being correspondingly slotted to expose a finger-piece on the circuit-closer.

4. In a portable electric light an exterior casing having a body-portion and a cover-portion carrying the lamp, one terminal of which is in electrical connection with said cover-portion, a battery within said body-portion and normally out of circuit and having exposed pole contacts, means electrically connecting the negative pole contact of the battery with said cover-portion, contact parts carried by and insulated from said cover-portion and from each other and respectively electrically connected with the other terminal of the lamp and the carbon pole of the battery, and a circuit closer carried by said cover-portion and manually operable to connect said contact parts, for completing the circuit, the means insulating said contact parts from said cover-portion comprising three layers of insulating material secured to one another and to the top of said cover-portion, the inner one of said layers having said contact parts secured to it, the next inner layer having a recess or opening therein housing the circuit-closer and the outer layer and the top of the cover being correspondingly slotted to expose a finger-piece on the circuit-closer, and said circuit closer being an arm pivotally connected with one of said contact parts and adapted to be turned to engage the other of said parts.

5. In a portable electric light an exterior casing having a body-portion and a cover-portion hinged thereto carrying the lamp, one terminal of which is in electrical connection with said cover-portion, a battery within said body-portion and normally out of circuit and having exposed pole contacts one of which is electrically connected with said cover-portion, contact parts carried by and insulated from said cover section and from each other, a conductor connecting one of said parts with the other terminal of the lamp, a conductor connecting the other of said parts with the other exposed pole contact of the battery, and a circuit closer carried by said cover-portion and manually operable to connect said contact parts, for completing the circuit, the means insulating said contact parts from said cover-portion comprising three layers of insulating material secured to one another and to the top of said cover-portion, the inner one of said layers having said contact parts secured to it, the next inner layers having a recess or opening therein housing the circuit-closer and the outer layer and the top of the cover being correspondingly slotted to expose a finger piece on the circuit closer.

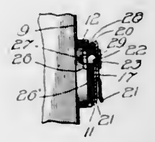
1,167,879. SWITCH-BOX. JEROME Z. BAYLISS and CHARLES RAUS, Cleveland, Ohio. Filed Aug. 31, 1914. Serial No. 859,521. (Cl. 247—5.)

1. An outlet or switch box comprising a casing having an open side and lugs projecting inwardly adjacent to said side from the ends of the casing, one of said lugs being tapped to receive a screw, and a removable side plate having an offset lug adapted to engage the other of said inwardly projecting lugs, and also having a key-hole slot adapted to receive the screw.



2. A gang outlet box comprising a unit box or casing one side of which has an offset lug with an opening thereunder, and a key-hole slot, and another unit or box fitting against the side of said box and having a lug engaging in the recess behind said lug and also having a screw engaging in said key-hole slot.

1,167,880. ELECTRICAL-SWITCH MOUNTING. JOHN A. BENNAN, Chicago, Ill. Filed Nov. 9, 1914. Serial No. 870,954. (Cl. 175—282.)



1. An electrical switch mounting comprising a sheet metal base formed with a non-circular recess on the interior thereof, a sheet of insulating material fitted in said non-circular recess, a second sheet of insulating material in contact with the exterior of said base, openings through said base, non-circular openings through said insulating sheets of less size than the openings through said base, combined clamping bolts and binding posts extending through said openings and shaped to fit the non-circular openings in said insulating sheets, electrical contact members interlocked with said binding posts exterior of said base, and means for connecting and disconnecting said electrical contact members.

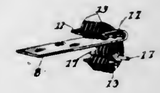
2. In combination a sheet metal casing, a plate forming a closure for one side of said casing and having an integral extension struck outwardly therefrom and forming a switch base having a non-circular recess on the interior thereof, a plurality of openings through said switch base, a sheet of insulating material fitted to the interior of said switch base and having openings therein registering with the openings in said base and smaller than said openings, combined clamping bolts and binding posts interlocked with the openings in said insulating sheet and extending through the openings in said base and having an air space between them and the walls of said openings, an electrical contact member secured to one of said binding posts and insulated from said base, and an electrical switch pivoted to another of said binding posts insulated from said base and adapted to be swung into and out of contact with said electrical contact member.

3. An electrical switch comprising a flanged sheet metal base, an insulating sheet member applied to the inner side of the base and held in fixed relation thereto by engagement with the base flange, an insulating member between said clip and base, registering openings extending through said insulated members and base, the openings in said base being larger than the openings in said insulating members, binding posts having non-rotative interlocking connection with the openings in said insulating members and passing through the openings in said base, electrical contact members secured to said binding posts exterior to said base, and an electrical switch secured to one of said binding posts and adapted to connect and disconnect said electrical contact members.

4. In a device of the character described, a box adapted to contain batteries or other electrical apparatus and having a sheet metal closure for one side thereof, a projection struck outwardly from said closure and forming a hollow base of non-circular shape, a sheet of insulating material placed within said base and fitted to the interior thereof, openings through said base, non-circular openings through said insulating sheet of less size than the openings through said base, binding posts passing through said non-circular openings and fitting closely therein, electrical contact members secured to said base by said binding posts exterior to said base, and a pivoted switch adapted to make and break electrical connection between said contact members.

5. In combination, a container having sheet metal side walls and a bottom connected together to form a box for holding electric batteries, a portion of one of said side walls being struck outwardly to form a hollow switch base of non-circular formation, a sheet of insulating material fitted to the interior of said switch base, and a plurality of electrical contact members non-rotatably interlocked with said insulating sheet and passing through openings in said base without contacting therewith, whereby said electrical contact members are held from movement by said insulating material relative to one another and relative to said material.

1,167,881. HINGE. STEPHAN BOHNERT, Cleveland, Ohio. Filed Oct. 27, 1915. Serial No. 58,153. (Cl. 16—105.)



1. A hinge comprising two leaves, each leaf having a pair of eyes and a pair of tongues bent to form guideways, sets of connecting members pivoted together and to the eyes of either leaf, and a pin extending through the members of each set and having flattened end portions slidable in said guideways.

2. A hinge comprising two leaves, each leaf having a pair of tongues bent inwardly at the ends of the leaves to form guideways, and sets of connecting links pivoted together and to either leaf and having projections slidable in said guideways.

3. A hinge comprising two leaf plates having eyes at their adjacent ends and also tongues at said ends bent backwardly to form guideways between said tongues and the plates, sets of connecting members pivoted together and to the eyes of either leaf, and pins connecting the members of each set and projecting at their ends into the guideways.

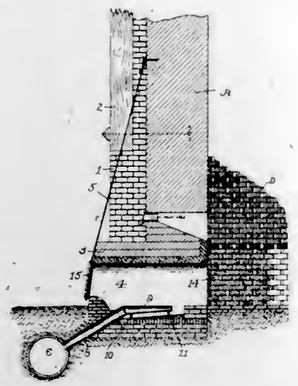
1,167,882. BRICK-KILN. JOHN C. BOSS, Elkhart, Ind. Filed Aug. 10, 1911. Serial No. 643,415. (Cl. 25—148.)

1. In a brick kiln, a fire chamber in the wall thereof, a hollow burner made tapering from its outer to its inner end, air passages therein on its under side, and an air feeder connecting its outer end with an outer air duct.

2. In a brick kiln, a fire chamber in the wall thereof, a hollow burner made tapering from its outer to its inner end, air passages therein on its under side increasing in size toward the inner end, and an air feeder connecting its outer end with an outer air duct.

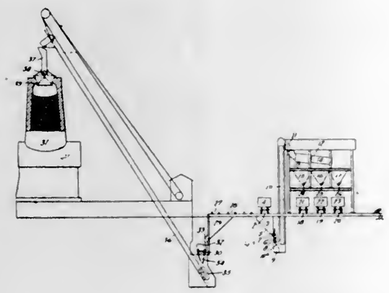
3. In a brick kiln, a fire chamber in the wall thereof opening to the outside and having inner discharge open-

ings, a burner connected to an air duct outside the wall, and having downwardly discharging openings, the walls



of said chamber being curved laterally in respect to the fire chamber.

1,167,883. METHOD OF CHARGING BLAST-FURNACES. ARTHUR J. BOYNTON, Lorain, Ohio. Filed Aug. 21, 1915. Serial No. 46,676. (Cl. 214—23.)



1. The method of charging blast furnaces which consists in separating the raw material used in forming the furnace burden into classes according to size, and forming the charges put into the furnace from material of a given class preparatory to depositing the charges in the furnace.

2. The method of charging blast furnaces which consists in separating the raw material used in forming the furnace burden into classes according to size and kind, storing the classified material according to class and kind, and forming the charges put into the furnace of a given size and kind preparatory to depositing the charges in the furnace.

3. The method of charging blast furnaces which consists in separating the raw materials used in forming the furnace burden into a series of classes according to size, and forming the charges put into the furnace from material of a given class preparatory to depositing the charges within the furnace.

4. The method of charging blast furnaces which consists in separating the ore used in forming the furnace burden into classes according to size, and forming the charges of ore put into the furnace from ore of a given class preparatory to depositing such charges in the furnace.

1,167,884. PETROLEUM PRODUCT. WILLIAM M. BURTON, Chicago, Ill., assignor to Standard Oil Company, Whiting, Ind., a Corporation of Indiana. Filed Feb. 20, 1915. Serial No. 9,754. (Cl. 196—25.)

1. As a new article of manufacture, a petroleum oil characterized by the following approximate relation between its gravity and its viscosity:

$$.51x^2+106xy-961x-29y^2-244y-53296=0.$$

where "x" is the viscosity at 100° F. according to the Saybolt viscosimeter and "y" the Baumé gravity of the oil.

2. As a new article of manufacture, a petroleum distillate produced by the following process: distilling an oil having a boiling point of upward of 500° F. at a temperature from about 650° to 850° F. and under a pressure of upward of three atmospheres until about 65% of the oil has been distilled over, drawing off the residue from the pressure still, distilling the latter under approximately atmospheric pressure, and condensing and collecting the distillate.

3. As a new article of manufacture, a petroleum oil having a Baumé gravity of approximately 15° and a viscosity of approximately 130°, as measured by the Saybolt viscosimeter at 100° F. and comprising a mixture of fractions mainly of the paraffin series and having a Baume gravity varying approximately from 20° to 10° and a corresponding viscosity ranging approximately from 50 to 200.

1,167,885. HEEL AND SOLE BLANK. EDWARD E. CARLL, (known as E. C. Edwards,) West Haven, Conn., assignor to Cooperative Rubber Company, a Corporation of Maine. Filed Aug. 22, 1912. Serial No. 716,536. (Cl. 36—32.)



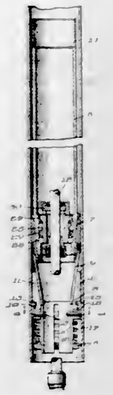
1. A blank having heel and sole portions, each portion being provided with a recess, and a series of closely scattered rubber teats extending upwardly from the bottom of said recesses, each of said teats being substantially pyramidal in outline and having a rounded end, said series of teats being so arranged as to be increased in length as they approach the center of the heel and sole portions, respectively, the longest of said teats projecting beyond the adjacent face of said heel and sole.

2. The described device consisting of a rubber blank having a recess, and a series of teats projecting from the surface of said blank within said recess, each of said teats being pyramidal in shape, said series of teats gradually increasing in length as the center of said blank is approached, the longer of said teats projecting above the uppermost surface of said blank.

1,167,886. PUMP. MATTHEW T. CHAPMAN and MARK C. CHAPMAN, Aurora, Ill., assignors to American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Oct. 26, 1910, Serial No. 589,216. Renewed Dec. 9, 1915. Serial No. 66,021. (Cl. 103—70.)

1. In combination, a well-tube, a pump-cylinder therein, and means supporting said cylinder at any desired point along said well-tube, comprising a collar, wedge-members secured to said collar and spaced circumferentially of the collar in the well-tube, yielding means tending to hold said collar in operative raised position for causing the wedges to grip the well-tube for supporting the cylinder, and three or more pins extending inward from said collar adapted to be engaged from the interior of the cylinder for forcing said collar evenly up or down relative to said well-tube but adapted to permit the passage of a water-supply pipe through said collar.

2. In combination, a well tube, a pump cylinder therein, means for supporting said cylinder in said well tube, and a pump-rod extending through said cylinder and below said supporting means, said supporting means comprising a tube flared at its upper end portion, a wedge between said flared portion and the well tube, a spring mounted on said tube tending to hold said wedge in operative wedging position, and means connected with said wedge and extending into said tube close to said pump-rod adapted to be engaged from above for loosening said wedge in said well tube.



3. In combination, a well tube, a pump cylinder therein, means for supporting said cylinder in said well tube, and a pump-rod extending through said cylinder and below said supporting means, said supporting means comprising a tube flared at its upper end portion, a wedge between said flared portion and the well tube, a spring mounted on said tube tending to hold said wedge in operative wedging position, and a plurality of screws connected with said wedge and extending through longitudinal slots in the wall of said flared tube adapted to be engaged from above for loosening said wedge in said well tube.

4. In a pump, the combination with a well-tube, of a pump cylinder supporting device comprising a tube flared at its upper end portion, wedges between said flared portion and the well-tube, and means connecting said wedges with said supporting device and projecting slightly beyond the inner surface thereof, said supporting device having a free open passage adapted to receive a pump-rod.

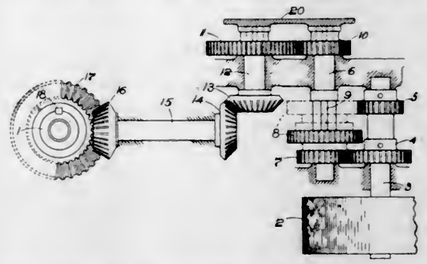
5. In a pump, the combination with a well-tube, of a pump cylinder supporting device comprising a tube having its upper end portion flared and having longitudinal slots in its lower portion, a collar mounted on said supporting device and having pins projecting through said slots beyond the inner surface of the tube, the inner ends of said pins being a distance apart sufficient to permit the passage of a pump rod between them, and wedges connected with said collar and adapted to engage the well-tube.

[Claims 6 to 10 not printed in the Gazette.]

1,167,887. DRILL-PRESS. FREDERICK F. CLARKE, Franklin, Pa., assignor to Colburn Machine Tool Company, Franklin, Pa., a Corporation of Pennsylvania. Filed June 14, 1915. Serial No. 34,046. (Cl. 74—58.)

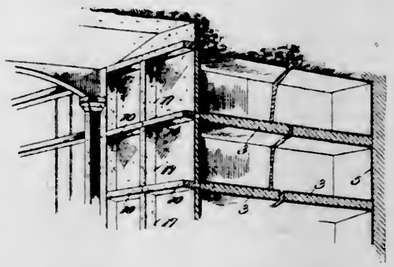
1. The combination with the spindle of a drill press, of a train of gearing operable to revolve said spindle, two parallel shafts having fixed centers, two intermeshing gears in said train mounted upon said shafts, said gears differing as to ratio or diameter and being transposably mounted for the purpose of causing, by the transposition thereof, a variation in the revoluble speed of said spindle.

2. The combination with the spindle of a drill press, of a train of gearing operable to revolve said spindle and comprising among its elements two parallel shafts having fixed centers, a gear mounted upon each of said shafts, said gears being in mesh with each other and being also interchangeable for the purpose of causing a change of speed between said shafts by such interchange, additional gears



in said train shiftably mounted upon their respective shafts whereby additional variations of speed are obtainable.

1,167,888. MAUSOLEUM. WILLIAM A. CLOCK, Binghamton, N. Y. Filed May 25, 1915. Serial No. 30,388. (Cl. 72—7.)



1. A mausoleum comprising a plurality of individual chambers having end plates closing said chambers, a sealing slab for each chamber, ledges common to a plurality of chambers, upright stiles between said ledges and common to a plurality of chambers, means for holding each of said slabs in contact with a plurality of said ledges and stiles, and means for permitting lateral movement of said stiles.

2. A mausoleum comprising a plurality of individual chambers arranged in orderly relation, a slab for each member, ledges common to a plurality of chambers, upright stiles mounted between said ledges for lateral movement and each overlapping the side edges of two adjacent slabs, whereby lateral movement of a given stile in one direction frees the adjacent edge of one of the adjacent slabs and lateral movement in the opposite direction frees the adjacent edge of the other, said slabs retaining at all times a place in the structure.

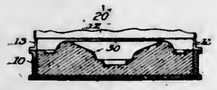
3. A mausoleum comprising a plurality of individual chambers arranged in orderly relation, a readily removable normally inaccessible slab adjacent the end of each chamber, and framing adjacent the ends of said chambers and having fixed horizontal members and upright members located between them and normally in front of the side edges of said slabs and mounted for lateral movement, whereby movement of said members from in front of a slab renders it accessible, said movable members retaining at all times a place in the structure.

4. A mausoleum comprising a series of chambers arranged in vertical and horizontal rows, a series of slabs each corresponding to one of said chambers and located adjacent its entering end, and framing inclosing the entering ends of the chambers, normally rendering said slabs inaccessible, and having fixed members and members mounted for movement in said framing into and out of normal position therein.

5. A mausoleum comprising a plurality of chambers arranged in orderly relation, a series of slabs each corresponding to one of said chambers and located adjacent its entering end, said slabs having spaces adjacent their side edges whereby when exposed they may be grasped by the hands, and framing inclosing the entering ends of said chambers and having fixed horizontal members and upright members between them at the sides of said slabs mounted for movement in said framing into different positions therein and normally rendering the side edges of said slabs inaccessible but exposing them when moved.

[Claims 6 and 7 not printed in the Gazette.]

1,167,889. ART OF MAKING MOLDS. JAMES CAREY DAVIS, Hinsdale, Ill., assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 16, 1912. Serial No. 736,935. (Cl. 22—192.)



1. The method of producing a mold having a metal molding surface composed of a mixture of sand and dextrin, which consists in subjecting the metal molding surface to a current of heated air under pressure.

2. The method of drying molds by means of air, which consists in subjecting the surface of the mold to a current of heated air under pressure of about three ounces.

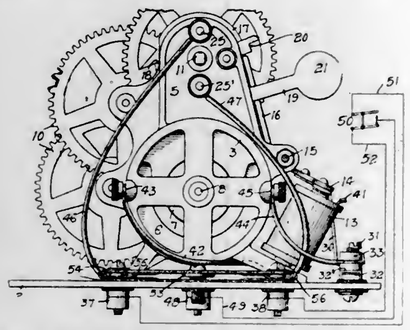
3. The method of producing a mold having a metal molding surface composed of a mixture of sand and dextrin, which consists in subjecting the metal molding surface to a current of heated air under pressure for a period of about ten minutes.

4. The method of drying molds by means of air, which consists in subjecting the surface of the mold to a current of heated air under pressure at a temperature between substantially 140 degrees and 200 degrees Fahrenheit.

5. The method of producing a mold having a metal molding surface composed of a mixture of sand and dextrin, which consists in subjecting the metal molding surface to a regulated current of heated air under pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,167,890. ELECTRIC MOTOR. FREDERICK S. DENISON, Minneapolis, Minn., assignor to Minneapolis Heat Regulator Co., Minneapolis, Minn., a Corporation. Filed Nov. 2, 1914. Serial No. 869,897. (Cl. 172—288.)



1. The combination, with a crank shaft, of an electric motor geared thereto and having an electric circuit, electromagnets and a thermostatic circuit therefor, an armature for said magnets, a circuit closer for said electric motor circuit carried by said armature for closing said electric motor circuit when said armature is attracted, and means for locking said armature in its attracted position for a predetermined movement of said shaft, and means for breaking the circuit through said magnets upon the initial movement of said motor.

2. The combination, with a crank shaft and crank arms, of an electric motor geared to said shaft and having an electric circuit, electromagnets and a thermostatic circuit therefor, an armature for said magnets, a circuit closer for said electric motor circuit actuated by said armature for closing said electric motor circuit when said armature is attracted, means for locking said armature in its attracted position for predetermined movement of said shaft, and a circuit breaker mounted to break the circuit through said magnets and release said armature upon the initial movement of said motor.

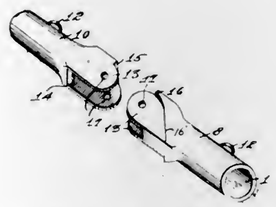
3. The combination, with a suitable base, of an electric motor mounted thereon, a crank shaft mounted on the frame of said motor and having crank arms, a gearing between said motor and said crank shaft, an electric circuit for said motor, electromagnets and a thermostatic circuit therefor, an armature for said magnets, a circuit closer for closing said electric motor circuit when said armature is attracted, means for locking said armature in its attracted position for a predetermined movement of said shaft, and means for breaking the circuit through said magnets after the initial movement of said motor.

4. The combination, with a crank shaft, of an electric motor geared thereto and having an electric circuit, electromagnets, a thermostatic circuit therefor, an armature for said magnets, a circuit closer for closing said electric motor circuit when said armature is attracted by said magnets, and means for checking the movement of said electric motor when the electric motor circuit is broken by the release of said magnet armature.

5. The combination, with a crank shaft, of an electric motor geared thereto and having an electric circuit, electromagnets and a thermostatic circuit therefor, an armature for said magnets, a circuit closer for said electric motor circuit carried by said armature for closing said electric motor circuit when said armature is attracted by the energizing of said magnets, means for locking said armature in its attracted position for a predetermined movement of said shaft, and means carried by said armature for checking the movement of said electric motor armature when the electric motor circuit is broken at the end of said shaft movement.

[Claims 6 to 9 not printed in the Gazette.]

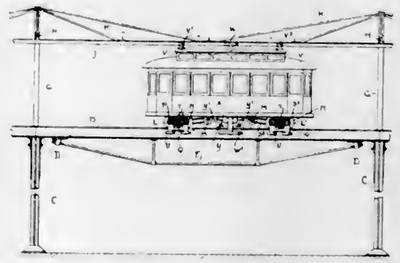
1,167,891. ELECTRIC-LIGHT SHIFTER. WILLIAM H. EISENHART, York, Pa. Filed Nov. 12, 1914. Serial No. 871,782. (Cl. 240—73.)



1. An electric light bracket including a pair of hollow arms, hollow joint members associated with the arms, means for removably holding the members in engagement with the arms, an insulated adjusting pin for pivotally connecting the joint members together, transverse shoulders on one side of each of the joint members constituting stops for holding the members in longitudinal alinement, and diagonal shoulders on one of the members for limiting the swinging movement of the other member.

2. An electric light bracket including a pair of hollow arms, joint members telescopically associated with the adjacent ends of the arms, set screws associated with the joint members for removably holding them in position on the arms, spaced flanges formed on the adjacent ends of the joint members and arranged in complementary pairs to provide a space therebetween, a screw-threaded pin associated with the flanges for pivotally and adjustably connecting the joint members, transverse shoulders on one of the sides of each of the members constituting stops for holding the members in longitudinal alinement, and diagonal shoulders on one of the members for limiting the swinging movement of the other member.

1,167,892. MONORAIL SYSTEM. PETER ENGLISH, Detroit, Mich., assignor to Mono-Rail Syndicate, Frost & Donovan, trustee, Detroit, Mich., a Corporation of Michigan. Filed Apr. 28, 1915. Serial No. 24,411. (Cl. 104—4.)



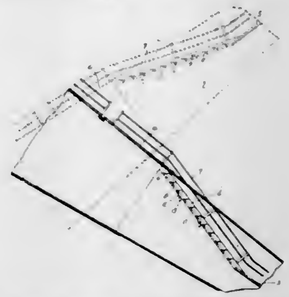
1. In a mono-rail system, the combination of a lower truck rail, an upper guiding and sustaining rail, a car interposed and carried between them, carrying trucks for said car, each axle thereof having a single central wheel with a flat tread, depending arms from the truck thereof, carrying guiding or friction wheels impinging against the web of the tread rail, a power apparatus applied to the axle of said tread wheel to drive the same and propel the car, suitable friction and guiding wheels at the top of the car impinging against the sides of a guiding and retaining rail above the car, with means to allow vertical oscillation of the car between the lower and upper rails, substantially as described.

2. In a mono-rail system, the combination of a lower truck rail, an upper guiding and sustaining rail, a car interposed and carried between them, carrying trucks for said car, each axle thereof having a single central wheel with a flat tread, depending arms from the truck thereof, carrying guiding or friction wheels impinging against the web of the tread rail, a power apparatus applied to the axle of said tread wheel to drive the same and propel the car, suitable friction and guiding wheels at the top of the car impinging against the sides of the guiding and retaining rail above the car, the tread wheels being formed in their peripheries with a hard rubber tread, substantially as described.

3. In a mono-rail system, the combination of a lower truck rail, an upper guiding and sustaining rail, a car interposed and carried between them, carrying trucks for said car, each axle thereof having a single central wheel with a flat tread, depending arms from the truck thereof, carrying guiding or friction wheels impinging against the web of the tread rail, power apparatus applied to the axle of said tread wheel to drive the same and propel the car, suitable friction and guiding wheels at the top of the car impinging against the sides of the guiding and retaining rail above the car with means to allow vertical oscillation of the car between the lower and upper rails, and in independent braking system whereby the weight of the car is transferred to the rail by means independent of the wheels, substantially as described.

1,167,893. COMPENSATING STAIRWAY. PRESLY J. FICKINGER, Conneaut, Ohio. Filed Sept. 25, 1915. Serial No. 52,564. (Cl. 228—4.)

1. In a stairway the combination with a swinging arm, of stair sides secured thereto, a plurality of treads pivotally mounted on the sides, means pivotally connecting said treads and means for moving said treads in unison, said tread moving means having a swinging weight arranged to maintain the moving treads in parallel planes when said arm is swung.

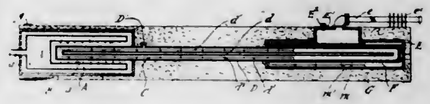


2. A swinging stairway comprising a series of treads, swinging means to which the treads are pivoted, means for swinging said pivoted treads in unison, and a swinging weight whereby said treads are maintained in parallel, horizontal planes in the swinging movement thereof.

3. A swinging stairway comprising a series of treads, swinging means to which the treads are pivoted, means for moving said pivoted treads in unison, and a depending weight whereby said treads are maintained in parallel horizontal planes in the movement thereof.

4. A swinging stairway comprising a series of treads, swinging means to which the treads are pivoted, means for moving said pivoted treads in unison, means for moving said swinging means to which the treads are pivoted and a pendulum whereby said treads are maintained in parallel horizontal planes in the movement thereof.

1,167,894. HEATING APPARATUS. JONATHAN O. FOWLER, New York, N. Y. Filed May 25, 1912. Serial No. 699,819. (Cl. 122—33.)



1. In a heating apparatus, a casing comprising side supporting means and a transverse part to support and having an opening for a heater, heat generating means located at one side of the said transverse portion, and a separate and independent transmitting-medium heat unit positioned at another side of the casing to receive heat from the heat generator and to convey it away from the latter and to store the same, and a device comprising a supplemental shell or casing respectively separable from and independent of and extending above the transmitting-medium heat unit to contain a thermal storage fluid kept heated by said transmitting-medium heat unit, and having at least one outlet and a separable closure to close the same at will, and also having located therein relatively horizontally disposed devices adapted to distribute heat, the transmitting-medium heat unit and thermal storage fluid being surrounded by a sectional heat non-conducting material, and means to hold the latter in position, the whole being supported by the first named casing.

2. In a heating apparatus, a casing comprising side supporting means and a transverse part to support and having an opening for a heater, heat generating means located at one side of the said transverse portion, and a separate and independent transmitting-medium heat unit positioned at another side of the casing to receive heat from the heat generator and to convey it away from the latter and to store the same, and a device respectively separable from and independent of and extending above the transmitting-medium heat unit to contain a thermal storage fluid kept heated by the said transmitting medium heat unit, the whole being supported by the said casing.

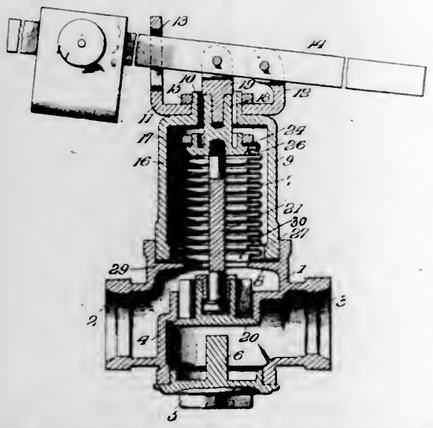
3. In a heating apparatus, a casing comprising side supporting means and a transverse part to support a heater, heat generating means located at one side of the said transverse portion, and a separate and independent transmitting-medium heat unit positioned at another side of the casing and comprising a circulating liquid medium to receive heat from the heat generator and to convey it away from the latter and to store the same, and a device respectively separable from and independent of and extending above the transmitting-medium heat unit to contain a thermal storage fluid kept heated by the said transmitting-medium heat unit, the whole being supported by the said casing.

4. In a heating apparatus, a casing comprising side supporting means and a transverse part to support a heater, heat generating means located at one side of the said transverse portion, and a separate and independent transmitting-medium heat unit positioned at another side of the casing to receive heat from the heat generator and to convey it away from the latter and to store the same, and a device comprising a supplemental shell or casing respectively separable from and independent of and extending above the transmitting-medium heat unit to contain a thermal storage fluid kept heated by the said transmitting-medium heat unit.

5. In a heating apparatus, a casing comprising side supporting means and a transverse part to support a heater, heat generating means located at one side of the said transverse portion, and a separate and independent transmitting-medium heat unit positioned at another side of the casing to receive heat from the heat generator and to convey it away from the latter and to store the same, and a device respectively separable from and independent of and extending above the transmitting-medium heat unit to contain a thermal storage fluid kept heated by the said transmitting-medium heat unit, and also having located therein relatively horizontally disposed devices adapted to distribute heat.

[Claims 6 to 14 not printed in the Gazette.]

1,167,895. COLLAPSIBLE AND EXPANSIBLE VESSEL. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Feb. 19, 1915. Serial No. 9,301. (Cl. 60—2.)



1. In combination, a collapsible and expansible corrugated tubular wall having a flange portion extending from an end corrugation, and a reinforcing flange member for said parts consisting of an annular plate having an edge portion embracing said corrugation and adapted to reinforce said end corrugation and its flange portion.

2. In combination, a collapsible and expansible corrugated tubular wall having a flange portion extending from an end corrugation, the diameter of said wall through said corrugation being greater than that of the next inner corrugation, and a reinforcing flange member consisting of an annular plate having its inner rim turned up and embracing said end corrugation to reinforce the latter and its flange portion and flush with the inner corrugation of the tube.

3. In combination, a collapsible and expansible corrugated tubular wall having a flange portion extending from an end corrugation, and a flange member for reinforcing said parts consisting of an annular plate having one rim turned up and embracing said corrugation and terminating in a flexible reduced edge.

4. In combination, a collapsible and expansible corrugated tubular wall having a flange portion extending from an end corrugation, and a flange member for reinforcing said parts and having a curved portion embracing said corrugation and flush with the corrugation located on the side to which the flange is applied.

5. In combination, a collapsible and expansible corrugated tubular wall having a flange portion extending from an end corrugation, and an annular plate one rim of which engages said flange portion and the other rim of which is turned up to embrace and reinforce said end corrugation.

1,167,896. AUTOMOBILE-RADIATOR. MATHIAS GAL, Cleveland, Ohio. Filed Mar. 8, 1915. Serial No. 12,775. (Cl. 257—129.)



1. A radiator comprising opposite headers, and a plurality of tubes connecting the same, said tubes comprising corrugated plates standing side by side in close contact except at the corners of the corrugations, the plates being spaced apart at said corners to form continuous tubes extending between the headers.

2. A tube structure for radiators, comprising corrugated plates side by side, each of which has alternate convex and concave curved parts at the corners of the corrugations, said parts forming tubes.

3. A tube structure for radiators, comprising a pair of zigzag plates with their sides in contact, each plate having, at the corners of the corrugations, alternate convex and concave curved parts which fit together to form complete tubes, with intermediate flat portions between the tubes.

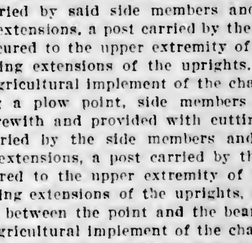
4. A radiator structure comprising corrugated plates with their sides together to form a plurality of spaced passages therebetween, and having openings through the same, between said passages.

5. A radiator structure comprising corrugated plates set together and bent to form spaced passages at the corners of the corrugations, with intervening straight portions having air openings through the same.

[Claim 6 not printed in the Gazette.]

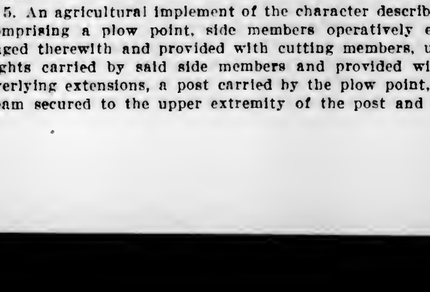
1,167,897. INSECT-TRAP. BELMONT GOODEN, San Diego, Cal. Filed Nov. 2, 1914. Serial No. 869,925. (Cl. 43—22.)

An insect trap comprising a confining chamber, an inlet leader therefor embodying an inclined panel attached to one side of said chamber, a strip hinged to the lower edge of said panel and projecting between said panel and side of the chamber, there being a slot between said strip and said side of the chamber, said side of the chamber having openings between said strip and the upper edge of



said panel, and means for supporting said strip at various angles.

1,167,898. AGRICULTURAL IMPLEMENT. WILLIAM OLIVER HALFORD, McCammon, Idaho, assignor of one-fourth to Amos Hawks and one-fourth to Brigham Y. Green, McCammon, Idaho. Filed July 21, 1915. Serial No. 41,130. (Cl. 55—60.)



1. An agricultural implement comprising a plow point, side members pivotally engaged therewith, cutting members extending laterally from said side members, uprights carried by the side members and provided with inwardly disposed overlying extensions, a clamping member coacting with said overlying extensions, and a hoe maintained in applied position by the clamping means of said extensions.

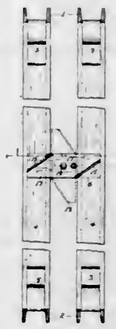
2. An agricultural implement of the character described comprising a plow point, side members operatively engaged therewith and provided with cutting members, uprights carried by said side members and provided with overlying extensions, a post carried by the plow point, and a beam secured to the upper extremity of the post and to the overlying extensions of the uprights.

3. An agricultural implement of the character described comprising a plow point, side members operatively engaged therewith and provided with cutting members, uprights carried by the side members and provided with overlying extensions, a post carried by the plow point, a beam secured to the upper extremity of the post and to the overlying extensions of the uprights, and a brace rod interposed between the point and the beam.

4. An agricultural implement of the character described comprising a plow point, side members operatively engaged therewith and provided with cutting members, uprights carried by said side members and provided with overlying extensions, a post carried by the plow point, a beam secured to the upper extremity of the post and to the overlying extensions of the uprights, a rearwardly disposed extension carried by the point, and a brace rod operatively engaged with said extension and with the beam.

5. An agricultural implement of the character described comprising a plow point, side members operatively engaged therewith and provided with cutting members, uprights carried by said side members and provided with overlying extensions, a post carried by the plow point, a beam secured to the upper extremity of the post and to the overlying extensions of the uprights, a transversely disposed member secured to the beam above the post, handles secured to said member and disposed rearwardly of the implement, a rod connecting the free end portions of said handles, said beam being provided with an extension with which said rod is operatively engaged.

1,167,899. PARTITION-STUD CLAMP. WILBERT D. HENDERSON, San Francisco, Cal. Filed Apr. 20, 1915. Serial No. 22,602. (Cl. 189—35.)



1. A clamp for uniting channel-shaped stud members comprising a stationary member adapted to engage the inner surfaces of said stud members to prevent it from turning on said members, and a member pivoted to said stationary member and having a plane inner surface whereby it can slide in contact with the outer sides of said stud members.

2. A clamp for uniting channel-shaped stud members comprising a stationary member adapted to engage the inner surfaces of said stud members to prevent it from turning on said members, and a member pivoted to said stationary member and having a plane inner surface whereby it can slide in contact with the outer sides of said stud members said members having parts adapted to engage each other with spring pressure when they extend parallel with each other.

3. A clamp for uniting channel-shaped stud members comprising a stationary member adapted to engage the inner surfaces of said stud members to prevent it from turning on said members, and a member pivoted to said stationary member and having a plane inner surface whereby it can slide in contact with the outer sides of said stud members, said members having, the one a projection, and the other a recess to receive said projection to limit the turning movement of the latter sheet.

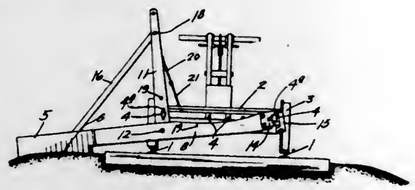
4. A clamp for uniting channel-shaped stud members comprising a stationary member adapted to engage the inner surfaces of said stud members to prevent it from turning on said members, and a member pivoted to said stationary member and having a plane inner surface whereby it can slide in contact with the outer sides of said stud members and also having a portion bent outwardly to form a finger piece.

1,167,900. BALLAST-TRIMMER. JORGEN JACOBSEN, Halma, Minn. Filed Jan. 22, 1915. Serial No. 3,743. (Cl. 37—22.)

1. The combination with a car, having at one end, a pair of handle bars, of a ballast trimmer comprising a crossbeam intermediately and pivotally supported from one of said handle bars for vertical movement, a scraper blade carried at one end of said beam, and means for securing the free end of said beam to the other of said handle bars in different vertical adjustment.

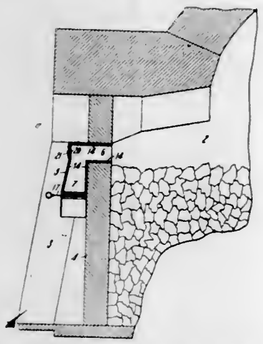
2. The combination with a car, having at one end, a pair of handle bars, of a ballast trimmer comprising a crossbeam, a standard pivotally secured to the interme-

diate portion of said crossbeam, a scraper blade carried at one end of said beam, said standard being secured to one of said handle bars, and means for securing the free end of said beam to the other of said handle bars in different vertical adjustment.



3. The combination with a car, having at one end, a pair of handle bars, of a ballast trimmer comprising a crossbeam, a standard pivotally secured to the intermediate portion of said crossbeam, a scraper blade carried at one end of said beam, said standard being secured to one of said handle bars, means for securing the free end of said beam to the other of said handle bars in different vertical adjustments, and braces detachably connecting said standard to said car and scraper blade.

1,167,901. AERATOR FOR COKE-OVENS. JOSEPH B. KELLER, Scottdale, Pa. Filed June 20, 1914. Serial No. 846,338. (Cl. 202—6.)



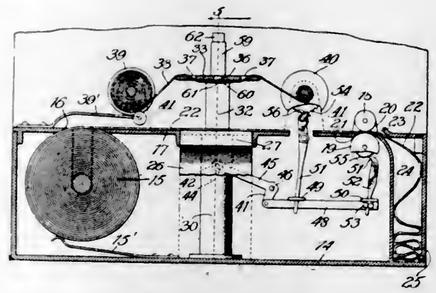
1. In a coke oven, the combination with the oven doorway of an aerator positioned in said doorway and comprising a hollow box, L-shaped in cross section and having a horizontal leg and vertical leg, a partition separating the aerator into compartments, outlets on the horizontal leg opening into the coke oven, inlets on the vertical leg opening on the exterior of the oven and sliding plates forming shutters or gates to regulate the flow of air through the aerator compartments.

2. In a coke oven, the combination with the oven doorway of an aerator positioned in said doorway and comprising a hollow box, L-shaped in cross section and having a horizontal leg and vertical leg, partitions separating the aerator into a series of compartments, an outlet on the horizontal leg opening from each compartment into the coke oven, an inlet on the lower end of the vertical leg opening from each compartment on the exterior of the aerator, and means in each compartment for regulating the flow of air therethrough.

3. In a coke oven, the combination with the oven doorway and comprising an L-shaped hollow box having a horizontal leg and a vertical leg, one end of said horizontal leg forming an outlet leading into the coke oven and one horizontal leg and a vertical leg, one end of said horizontal leg forming an outlet leading into the coke oven and one aerator into compartments and sliding plates or shutters in the compartments to vary the flow of air through said compartments.

4. In a coke oven, the combination with the oven doorway and comprising an L-shaped hollow box having a horizontal leg and a vertical leg, one end of said horizontal leg forming an outlet leading into the coke oven and one end of said vertical leg forming an inlet opening on the exterior of the oven, a plurality of partitions in said box separating the aerator into compartments, and means in said compartments to regulate the flow of air through the compartments.

1,167,902. RECORDING CLOCK MECHANISM. CASS L. KENNICOTT, Chicago Heights, Ill., assignor to The Kennicott Company, Chicago Heights, Ill., a Corporation of Illinois. Filed Mar. 22, 1915. Serial No. 16,156. (Cl. 234—47.)



1. In a printing machine, a frame, type members carried by said frame, a striker-plate carried by the said frame for movement toward and away from the said type members to press a sheet to be printed thereagainst, a printing ribbon interposed between said type members and said striker-plate, and type members carried by said striker-plate, the said printing ribbon having its operative length lying wholly on one face of the said sheet, whereby both of the said sets of type members print upon the same face of the said sheet.

2. In a printing machine a stationary platen, type members carried by the said platen and having their printing surfaces flush with the plane surface of said platen, a movable platen having a striker surface opposed to the type surfaces of said stationary platen to press a sheet to be printed thereagainst, type members mounted in said movable platen opposed to the plane surface of the stationary platen, and a printing ribbon interposed between said stationary and movable platens, the said printing ribbon having its operative length lying wholly on one face of the said sheet, whereby both of the said sets of type members print upon the same face of the said sheet.

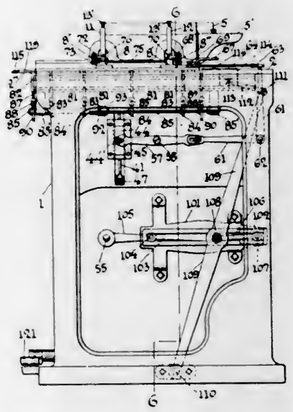
3. In a printing machine and in combination, a stationary platen, type members carried by said platen and having their printing surfaces flush with the same, a movable platen opposed to said stationary platen to press a sheet to be printed thereagainst, means for mounting type members in said movable platen and opposed to the flush surface of said stationary platen, and a printing ribbon interposed between the said platens, the said printing ribbon having its operative length lying wholly on one face of the said sheet, whereby both of the said sets of type members print upon the same face of the said sheet.

4. In a printing machine and in combination, a stationary platen, type members carried by said platen and having their printing surfaces flush therewith, a movable platen opposed to said stationary platen and having a striker surface opposed to the type surfaces of said stationary platen to press a sheet to be printed thereagainst, means for mounting type members in said movable platen with their printing surfaces opposed to the plane surface of said stationary platen, and a printing ribbon carried by said movable platen and lying between the said movable and stationary platens, the said printing ribbon having its operative length lying wholly on one face of the said sheet, whereby both of the said sets of type members print upon the same face of the said sheet.

5. In a printing machine a stationary platen, time-controlled type members carried by said stationary platen and with their printing surfaces flush therewith, a movable platen having a striker surface opposed to the printing surfaces of said type members to press a sheet to be printed thereagainst, means for mounting type members in said movable platen and with their printing surfaces flush with the striker surface thereof and opposed to the plane surface of the said stationary platen, and a printing ribbon carried by said movable platen and lying between said movable and stationary platens, the said printing ribbon having its operative length lying wholly on one face of the said sheet, whereby both of the said sets of type members print upon the same face of the said sheet.

[Claims 6 to 9 not printed in the Gazette.]

1,167,903. CORSET-BONING MACHINE. GARRETT A. KINDER, Worcester, Mass., assignor to Royal Worcester Corset Co., a Corporation of Massachusetts. Filed May 14, 1915. Serial No. 28,231. (Cl. 223—59.)



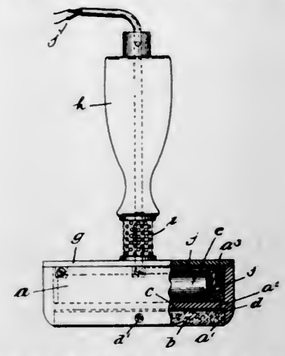
1. In a corset boning machine, means for holding the bones, carrying plates for a bone, and means for moving said carrying plates, a feeding plate to move the bone into a position to be inserted in a corset fabric, holding jaws, having holding means thereon, to hold the corset fabric when the bone passes between said jaws and is inserted in said fabric, and means for pushing the bone between said holding jaws, and inserting it into the corset fabric.

2. In a machine for inserting bones or steels into pockets in a corset fabric, a reservoir or holder for the bones, selecting fingers to move the lowest bone in said reservoir or holder, and means for operating said selecting fingers, carrying plates for a bone, means for operating said carrying plates, a feeding plate, and means for operating said feeding plate, a guide plate, holding jaws, having holding means to hold the corset fabric when the bone is inserted into the pocket therein, and to release the fabric after the bone is inserted, and means for releasing said jaws from the fabric, and means for moving said bone between said feeding plate and said guide plate, and between said holding jaws into a pocket in the corset fabric.

3. In a machine for inserting bones or steels into pockets in a corset fabric, a pair of holding jaws, located at the discharging end of the machine, and having holding means, to enter within the end of a pocket in the corset fabric, and engage with the corset fabric, to secure it to the discharging end of the machine, when the bone is inserted into a pocket in said fabric, and to release said fabric after a bone is inserted.

4. In a machine for inserting bones or steels into pockets in a corset fabric, having a magazine or holder for said bones or steels, and having guiding mechanism, and feeding mechanism for said bones of steels, a single hand lever, to adjust simultaneously said guiding mechanism, and said feeding mechanism, according to the varying thickness of said bones or steels.

1,167,904. APPARATUS FOR TREATING BOX-TOE PIECES. WILLIAM A. KNIPE and TIMOTHY MCKINNEY, Ward Hill, Mass.; said McKinney assignor to said Knipe. Filed Dec. 21, 1914. Serial No. 878,280. (Cl. 91—47.)



1. A device for saturating a portion of an absorbent sheet with a stiffening substance, which is liquid when heated above ordinary temperatures, and hardens on cooling, composed of an absorbent pad having an engaging face shaped to correspond to the sheet portion to be saturated, and adapted to be pressed thereagainst, and means for heating said pad to maintain the saturating substance therein in a liquid state.

2. An implement for saturating a portion of an absorbent sheet with a liquid substance which is self-hardening on cooling to ordinary temperatures, composed of an absorbent pad having a sheet-portion engaging face at its under side, and means for heating said pad to maintain the substance absorbed thereby in a liquid state, and for simultaneously pressing its face against the sheet-portion to be saturated, to heat said sheet-portion and deliver the liquid substance thereto.

3. An implement for saturating a portion of an absorbent sheet, composed of a casing having a bottom recess, an absorbent pad located in said recess and projecting at its lower portion beyond the walls thereof, and having a work-engaging face on its under side, and heating means for the pad located within the casing above and in proximity thereto, as, and for the purpose described.

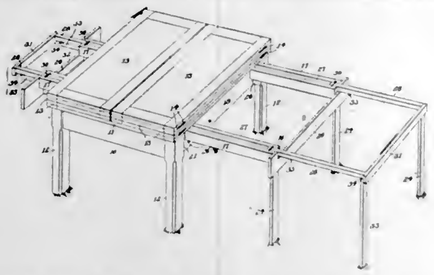
4. A device for saturating a portion of an absorbent sheet, with a substance which is liquid when hot, and a solid, or semi-solid, at ordinary temperatures, composed of a holder, an absorbent pad of approximately uniform thickness connected to the holder, and having a work-engaging face on its under side, a heat-conducting plate disposed in engagement with approximately the entire upper surface of the pad, and means for heating said plate to heat the pad to the liquefying temperature of the saturating substance.

5. An implement for saturating a portion of an absorbent sheet with a substance which is a solid, or semi-solid, at ordinary temperatures, and a liquid at higher temperatures, composed of a metallic casing having a recess in its under side, an absorbent pad disposed in and protruding from said recess, a heater disposed in said casing above the pad, means to conduct the heat from the heater to the pad, and a handle connected to the casing.

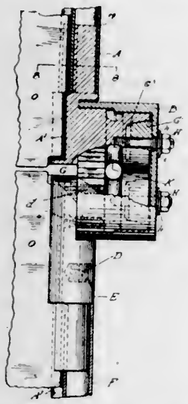
1,167,905. EXTENSION-TABLE. MICHAEL KRECZKOWSKI, New York, N. Y. Filed July 7, 1915. Serial No. 38,444. (Cl. 45—113.)

A device of the class described comprising a table having slots spaced apart at different distances in the opposite depending sides thereof and having lower extensions,

beams slidably mounted through the said slots and having stop flanges on their inner ends and being provided with longitudinal grooves upon their upper sides, legs forwardly hinged beneath the said beams and slidably positioned through the said slot extensions, a transverse facing strip secured to the forward ends of the said beams and having an upper cut-away portion, bars slidably positioned within the said grooves, a front strip secured to the forward ends of the said bars and seated within the said cut away portion of the facing strip when the device is in its folded position and with the said facing strip and front strip flatly engaging the forward side of the table, front legs hinged forwardly to the said bars and slidably arranged within the said grooves when in their folded positions and foldable leaves for the said beams and bars hingedly connected to the said table.



1,167,906. HINGE. WILLIAM G. LE COMPTE, New York, N. Y., assignor of one-half to J. Odell Fowler, New York, N. Y. Filed Apr. 13, 1910. Serial No. 555,257. (Cl. 21—148.)



1. A hinge comprising a plurality of peripherally engaged hinge members formed with teeth on the outer edges thereof, a casing for the hinge members, and means for creating friction between the hinge members and the casing by a transverse pressure of the casing against the peripheral teeth of the hinge members.

2. A hinge comprising a plurality of peripherally engaged hinge members formed with teeth on the outer edges thereof, a casing for the hinge members, and means for creating friction between the hinge members and the casing by a transverse pressure of the casing against the peripheral teeth of the hinge members, and means for exerting a lateral pressure of the casing on the side face of a hinge member.

3. In a device of the class described, a hinge comprising a plurality of members A and E formed with peripheral gear teeth, one at least being adapted to roll about the other, a separate support F for each member located at the inner portions of the gears, a common support and covering B for the said members having a flexible portion and located at the outer faces of the latter, the axes of the same being concentric with those of the hinge members, means comprising the abutting inner edge of the outer portion of the common support to prevent the latter from moving inwardly as an entirety, the said hinge members and the common support being so respectively constructed and arranged that the latter shall be capable of approaching the former under pressure at the axes thereof, and means comprising a bolt H to produce, by the yielding at the central part of the common support, a greater pressure of the same against the hinge members at the said concentric portions thereof than at the outer part or periphery of the same, whereby centainty of action and great solidity and strength of the device are secured.

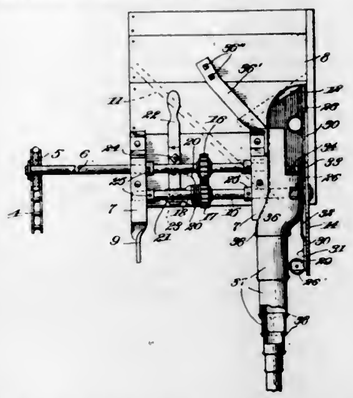
4. In a device of the class described, a hinge comprising a plurality of members formed with peripheral gear teeth, one at least being adapted to roll about the other, a separate support for each member located at the inner portions of the gears, a common support and covering for the said members having a flexible portion and located at the outer faces of the latter, the axes of the same being concentric with those of the hinge members, means to prevent the common support from moving inwardly, as an entirety, the said hinge members and the common support being so respectively constructed and arranged that the latter shall be capable of approaching the former under pressure at the axes thereof, and means to produce, by the yielding at the central part of the common support, a greater pressure of the same against the hinge members at the said concentric portions thereof than at the outer part or periphery of the same, whereby certainty of action and great solidity and strength of the device are secured.

5. In a device of the class described, a hinge comprising a plurality of members formed with peripheral gear teeth, one at least being adapted to roll about the other, a separate support for each member located at the inner portions of the gears, a common support and covering for the said members having a flexible portion and located at the outer faces of the latter, the axes of the same being concentric with those of the hinge members, means to prevent the common support from moving inwardly as an entirety, the said hinge members and the common support being so respectively constructed and arranged that the latter shall be capable of approaching the former under pressure at the axes thereof, and means to produce, by the yielding at the central part of the common support, a greater pressure of the same against the hinge members at the said concentric portions thereof than at the outer part or periphery of the same, whereby certainty of action and great solidity and strength of the device are secured, in combination with means located intermediate the common support and pressure means and adapted in use to convey the pressure to the common support and to be relatively movable so far as the latter is concerned, but to have a fixed relation in respect to the said pressure means, whereby the parts are prevented from working loose.

1,167,907. POTATO-PLANTING ATTACHMENT. BERNARD LEIN, Powers Lake, N. D. Filed Jan. 15, 1914. Serial No. 812,332. (Cl. 111—27.)

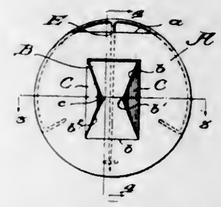
1. In a planter, a supply hopper, a planter member, laterally offset discharge means carried by said member including a receptacle having a plurality of tines and a pivoted discharge member carried by the planter member, said discharge member having a portion normally resting on said receptacle intermediate said tines serving as its bottom and means on which contents thereof rest.

2. In a planter, a supply hopper, a planter member, laterally offset discharge means carried by said member including a bracket fastened to the member and receptacle fastened to the bracket having a plurality of tines, a discharge member pivoted on said planter member, said discharge member having a portion normally resting on said receptacle intermediate said tines and serving as its bottom and means on which contents thereof rest, said pivoted discharge member having an offset portion in combination with a trip means mounted on said hopper and engageable by said offset portion.



3. In a planter, a supply hopper, a first shaft, a second shaft, a planter member turnable with one of said shafts, means to drive the other of said shafts, means to drive one of said shafts from the other of said shafts, said hopper being provided with an opening in its bottom, said opening having an enlargement serving as a rest opening for contents, said planter member being movable through said opening, a discharge chute supported from the hopper, discharge means on the planter member to pass through said enlargement and to empty into said chute, said discharge means including a receptacle and a pivoted discharge member, said pivoted discharge member normally resting on said receptacle and serving as its bottom and means on which contents thereof rest and trip means on said hopper to be engaged by said pivoted discharge member.

1,167,908. TICKET-HOLDER. EMILE B. LEVEY, Flushing, N. Y. Filed Dec. 1, 1914. Serial No. 874,976. (Cl. 40—11.)



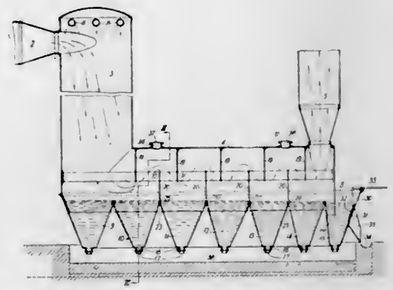
1. A ticket holder comprising a body plate, a tongue fast thereon and obliquely projecting therefrom and having notched sides, and a projection from said body plate upon each side of and adjacent said tongue opposite said notches.

2. A ticket holder comprising a sheet metal body plate, a tongue punched from and obliquely extending therefrom and having notched sides, and a projection upon each side of and adjacent said tongue opposite said notches formed up from said body plate material.

3. A ticket holder comprising a sheet metal body plate, a tongue punched therefrom by cutting opposite and reversely arranged obtuse angle slits, the lower end of said tongue forming the attachment to the body plate and the upper end thereof extending obliquely from said body plate, and a projection upon each side of and adjacent said tongue formed up from the body plate material at the other side of each slit within the obtuse angle.

4. A ticket holder comprising a body plate of substantially circular outline, a tongue fast thereon and obliquely projecting from one face thereof, an additional holding means comprising a spring wire member secured upon the reverse side of said plate and bent to the circular outline of the latter, said plate having a cut away upper portion so as to present an upper edge below the upper portion of said circular additional holding member.

1,167,909. GAS-WASHER. THOMAS MCDONALD, Youngstown, Ohio. Filed June 1, 1912. Serial No. 700,954. (Cl. 75—30.)



1. A gas washer comprising a washing chamber having gas inlet and outlet openings therein and having means for supplying liquid thereto, means for maintaining separate pools of liquid in the chamber, and a partition in said chamber arranged to permit passage of gases in the upper portion of the chamber, said partition having a transverse opening in the lower portion thereof arranged to permit passage of liquid and gases past said partition and maintain the pools at successively lower levels within the chamber.

2. A gas washer comprising a washing chamber having gas inlet and outlet openings therein and having means for supplying liquid thereto, means for maintaining separate pools of liquid in said chamber, an upwardly extending partition in the chamber alternating with a downwardly extending baffle depending from the top of the chamber and arranged to permit passage of gases over the partition and under the baffle, said partition having an opening in the lower portion thereof arranged to permit passage of liquids and gases from one side to the other of the partition, said opening forming an overflow outlet to determine the level of the liquid therein.

3. A gas washer comprising a washing chamber having gas inlet and outlet opening therein and having means for supplying liquid thereto, means for maintaining separate pools of liquid in the chamber, a plurality of upwardly extending partitions in the chamber alternating with downwardly extending baffles depending from the top of said chamber, said partitions and baffles being arranged to permit passage of gases over the partitions and under the baffles, and said partition having openings forming overflow outlets in the lower portion thereof arranged to permit passage of liquid and gases from one side to the other of the partition and regulate the height to which the liquid is maintained in said pools at successively lower levels.

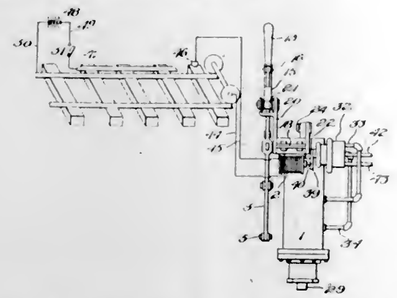
4. A gas washer comprising a washing chamber having gas inlet and outlet openings therein and having means for supplying liquid thereto, means for maintaining separate pools of liquid therein, a series of upwardly extending partitions and depending baffles in said chamber, said baffles being located between the partitions and the partitions terminating below the top of the chamber and having transverse openings in the lower portion thereof forming passages for liquid and gases through the partitions and an overflow outlet opening for the liquids.

5. A gas washer comprising a chamber having gas inlet and outlet openings therein and having means for supplying liquid thereto, a plurality of upwardly extending partitions in the chamber, a plurality of downwardly extending baffles in said chamber, said partitions and baffles being relatively arranged to permit passage of gases over the partitions and under the baffles, said partitions having openings in the lower portion thereof arranged to permit

passage of liquids from one side to the other of the upwardly extending baffles, the lower marginal edge of said openings being at successively lower levels.

[Claims 6 and 7 not printed in the Gazette.]

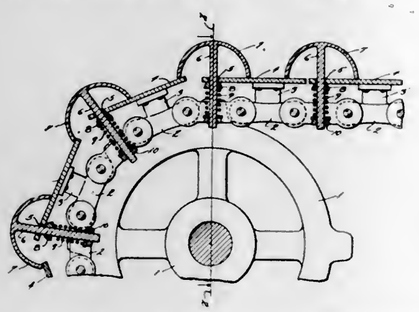
1,167,910. AUTOMATIC TRAIN-STOPPING DEVICE. HARRY W. MARSTON, Everett, Mass. Filed Mar. 3, 1913. Serial No. 751,786. (Cl. 246—58.)



1. An automatic train stopping device, comprising an engine throttle valve and lock therefor, and means acting successively to release the lock on the lever, move the lever to close the throttle and throw in the air brakes, said means consisting in a single air operated cylinder adjacent the throttle, and a two-way valve, automatic means to turn the two-way valve on the train running by a set signal, to admit air to said cylinder and actuate the piston to release the lock on the throttle lever, close the engine throttle, and then to cause a flow of air through the second way in said valve to operate the air brakes of the train.

2. An automatic train stopping device, comprising a throttle lever, a single cylinder adjacent the throttle lever, a lock for said lever, a bell crank with one arm of said crank adapted to release the lock of said lever, and move said lever to close the throttle by a continuous movement in the same direction, in combination with a two-way valve, controlling the admission of air through one way to said cylinder and from said cylinder through the second way in said valve to the brake mechanism of the train, and automatic means to operate said valve on passing of the train by a signal set for stopping the train.

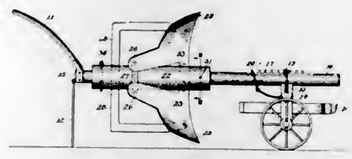
1,167,911. GRAIN-CARRIER FOR HARVESTERS. ORRIN SPENCER MASON, Valley City, N. D. Filed Oct. 12, 1914. Serial No. 866,325. (Cl. 193—2.)



1. A grain carrier for harvesters comprising in combination, a plurality of terminally apertured bars carried by alternate links in the elevator chain, pins extending through the apertured portions of said bars, semi-cylindrical members made integral with said pins and bearing upon the adjacent ends of successive bars and flexible supports for the apertured ends of said bars disposed about said pins.

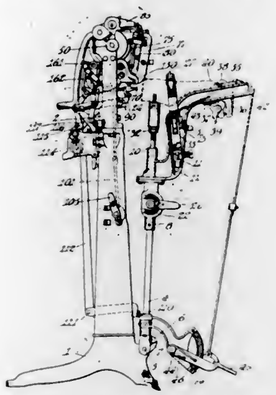
2. A grain carrier for harvesters comprising in combination, a plurality of terminally apertured bars carried by alternate links in the elevator chain, pins extending through the apertured portions of said bars, semi-cylindrical members made integral with said pins and bearing upon the adjacent ends of successive bars, apertured heads movable over said pins beneath said bars, nuts terminally carried by said pins and springs disposed between said nuts and heads.

1,167,912. PLOW. JOHN MATOFIJ, Kato, Pa. Filed July 1, 1915. Serial No. 37,490. (Cl. 97—27.)



A plow comprising a supporting beam, a forwardly arranged wheel carriage adapted to support said beam, a rack bar carried by the upper face of the beam adjacent the carriage, oppositely-extending resilient arms carried by the carriage for engagement with said rack bar, handles carried by the ends of the resilient arms flexible connecting means between the carriage and rack bar, a relatively long barrel journaled upon the said beam, releasable retaining means for the said barrel, and oppositely arranged reversely operating mold boards secured to the said barrel.

1,167,913. SHOE-ASSEMBLING AND HEEL-SEAT-LASTING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 28, 1912. Serial No. 680,450. (Cl. 12—5.)



1. An assembling and tacking machine having, in combination, a support for a last, a gripper to tension the upper forwardly about the heel end of the last and hold it under tension for the fastening operation, and tackers arranged to insert tacks at right angles to one another in the seat and the rear end face of the heel while the upper is so held under tension.

2. An assembling and tacking machine having, in combination, a support for a last, a gripper to tension the upper forwardly about the heel end of the last and hold it under tension for the fastening operation, a tacker, and power driven mechanism for actuating said tacker arranged to be started by the pressure of the shoe during the movement of the shoe into position to be fastened.

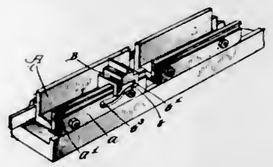
3. An assembling and tacking machine having, in combination, a last support, a gripper to tension the upper forwardly about the rear end of the last, a tacker to fasten the upper materials to the insole at the rear end of the heel seat, and power driven mechanism for said tacker, said machine including a counter presser to hold the heel stiffener from springing away from the rear end face of the last when the upper materials are bent over the insole into position to be fastened, said counter presser being movable by the work and arranged to start the tacker actuating mechanism.

4. An assembling and tacking machine having, in combination, a last support, a gripper to tension the upper forwardly about the rear end of the last, and a tacker arranged to drive a tack into the rear end face of the shoe while the upper is held under tension by said gripper.

5. An assembling and tacking machine having, in combination, a last support, a gripper to tension the upper forwardly about the rear end of the last, an end tacker into operative relation to which the last support can carry the shoe endwise with the upper held under tension by the gripper, and means adapted to be tripped during said endwise movement of the shoe for causing the tacker to insert a tack through the upper into the heel end face of the last.

[Claims 6 to 68 not printed in the Gazette.]

1,167,914. WIRE-BOUND-BOX-BLANK MACHINE. HOWARD G. MEAD, St. Louis, Mo., assignor to William P. Healy, Chicago, Ill. Filed Sept. 14, 1911. Serial No. 649,377. (Cl. 1—15.)



1. A machine for making wire-bound box blanks, adapted for use with cleats of different lengths, comprising blocks for spacing the cleats of the blank apart endwise, a chain, means for producing a step by step movement of the chain and blocks, and cams having handles for adjustably securing the blocks to said chain, and carried by portions of said blocks which are disposed at one side of the path of travel of the cleats.

2. A machine for making wire-bound box blanks, adapted for use with cleats of different lengths, comprising blocks for spacing the cleats of the blanks apart endwise, a chain, means for producing a step by step movement of the chain and blocks, levers pivoted on said blocks, the axes of said levers extending in a vertical plane at one side of said chain, and means operated by said levers for fixing the blocks to the chain, and carried by portions of said blocks which are disposed at one side of the path of travel of the cleats, said chain having means for insuring the correct position of the blocks thereon.

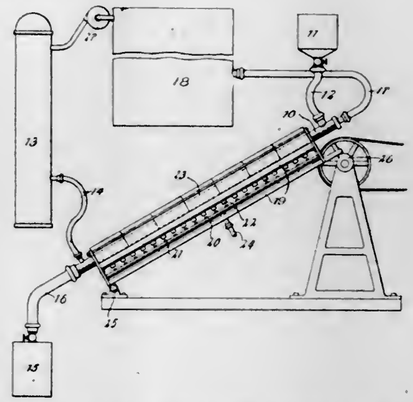
3. A machine for making wire-bound box blanks, adapted for use with cleats of different lengths, comprising blocks for spacing the cleats of the blanks apart endwise, a chain, means for producing a step by step movement of the chain and blocks, and means pivoted on the blocks for fixing the latter on the chain, and carried by portions of said blocks which are disposed at one side of the path of travel of the cleats, the axes of said means extending in a common vertical plane at one side of said chain, said chain having means for insuring the correct position of the blocks thereon.

4. A machine for making wire-bound box blanks, adapted for use with cleats of different lengths, comprising blocks for spacing the cleats of the blanks apart endwise, a chain, means for producing a step by step movement of the chain and blocks, and lever actuated cam mechanism for securing the blocks on said chain, and carried by portions of said blocks which are disposed at one side of the path of travel of the cleats, whereby the distance between said blocks may be changed at will, said chain having means for insuring the correct position of the blocks thereon.

5. A machine for making wire-bound box blanks, comprising blocks for spacing the cleats of the blanks apart endwise, a chain, and cams for adjustably securing the blocks to said chain, said chain having a side wall, and each block being split to straddle said wall, said wall and said cams coöperating to hold the blocks against upward movement.

[Claims 6 to 10 not printed in the Gazette.]

1,167,915. APPARATUS FOR MAKING CATALYTIC MATERIAL. CHARLES BURROWS MOREY and CHARLES ROLLIN CRAINE, Buffalo, N. Y., assignors to Larkin Co., Buffalo, N. Y. Filed May 15, 1914. Serial No. 838,778. (Cl. 75—57.)



1. In an apparatus for producing catalyzers, the combination with an inclined conduit through which the material flows while being treated, of means for feeding the raw material into the upper portion of said conduit, means for discharging the treated material from the lower portion of said conduit, means for supplying a treating gas to said conduit and means located exterior to said conduit for causing the material to pass through said conduit.

2. In an apparatus for producing catalyzers, the combination with an inclined conduit through which the material flows while being treated, of means for feeding the raw material into the upper portion of said conduit, means for discharging the treated material from the lower portion of said conduit, means for supplying a treating gas to said conduit, means for heating said conduit and means for jarring said conduit to cause the material to pass through the same.

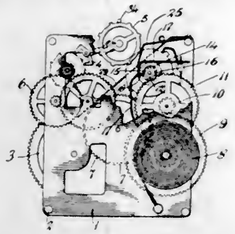
3. In an apparatus for producing catalyzers, the combination with an inclined conduit through which the material flows while being treated, of means for feeding the raw material into the upper portion of said conduit, means for discharging the treated material from the lower portion of said conduit, means for supplying a treating gas to said conduit, and means for jarring said conduit.

4. In an apparatus for producing catalyzers, the combination with an inclined conduit through which the material flows while being treated, of means for feeding the raw material into the upper portion of the conduit, means for receiving the material at the lower portion of said conduit, means for supplying a treating gas to said conduit, said conduit being pivoted at one end, and means for jarring the upper portion of said conduit.

5. In an apparatus for producing catalyzers, the combination with an inclined conduit through which the material flows while being treated, of means for feeding the raw material into the upper portion of said conduit, means for receiving the treated material at the lower portion of said conduit, means for supplying a treating gas to said conduit, said conduit being pivoted at one end, and a rotating member on which the other end of said conduit rests and which jars the conduit to cause the material to flow through the same.

[Claim 6 not printed in the Gazette.]

1,167,916. INTERMITTENT POWER-CONTROLLING DEVICE. GEORGE W. MOSHER, Newport, Ky. Filed Mar. 18, 1915. Serial No. 15,213. (Cl. 74—46.)



1. In a device of the character specified, a rotating shaft, means for rotating the same, a clockwork, means for locking the shaft against rotation, means actuated by said clockwork for releasing the shaft, and means actuated by the shaft for engaging the clockwork except when the shaft is in locked position.

2. In a device of the character specified, a rotating shaft, means for rotating the same, a clockwork, means for locking the shaft against rotation, means actuated by said clockwork for releasing the shaft, means for engaging the clockwork to stop the same, and means on the shaft for holding said means in stopping position except when the shaft is in locked position.

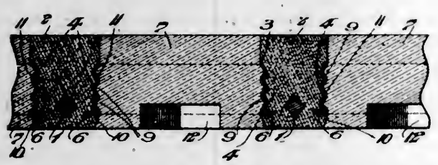
3. In a device of the character specified, a rotating shaft, means for rotating the same, a clockwork, means for locking the shaft against rotation, means actuated by said clockwork for releasing the shaft, a spring finger for engaging the clockwork to stop the same, and means on the shaft for holding said spring finger in stopping position except when the shaft is in locked position.

4. In a device of the character described, in combination with a gear of a time-piece movement, a rotating shaft, means to rotate the same, locking means for said shaft, and means for releasing said means actuated by the teeth of said gear, and means on said rotating shaft for returning the releasing means ready to be actuated anew by the gear.

5. Means for intermittently locking and releasing a rotating shaft, comprising a lock on said shaft, and a latch therefor, a releasing bar to shift the latch, a continuously driven clock gear in mesh with the bar, a stop for said bar over which it is to be lifted by the gear, and means whereby said bar will swing out said latch when raised over said stop, and means for returning the bar to the next tooth of said rotating gear.

[Claims 6 to 10 not printed in the Gazette.]

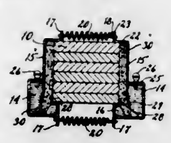
1,167,917. SIDEWALK, VAULT-LIGHT, FLOOR-LIGHT, AND SKYLIGHT CONSTRUCTION. LOGAN WILLARD MULFORD, Narberth, Pa. Filed July 6, 1914. Serial No. 849,325. (Cl. 94—7.)



1. A construction of the character stated, comprising a concrete body, threaded bands terminating within the body below the top and above the bottom thereof and interlocked with the body, the bottom of said bands having a plurality of flanges extending laterally therefrom and interlocked with the concrete, and lenses having threads to engage the threads of said band, and said body being constructed to permit the insertion of a lens from the under side of the body.

2. A construction of the character stated, comprising a concrete body having reinforcements therein, bands interlocked with the body and each consisting of an integral piece of material having portions of its side wall deflected to form threads and having portions cut away at its bottom to form a plurality of flanges which are outwardly deflected and interlocked with the concrete body, the upper ends of said bands terminating beneath the top of said body and the lower ends of said bands terminating above the bottom of said body, lenses having intermediate their ends threads to engage the threads of said bands, plastic cement between said lenses and said bands, the lower end of a lens having an inwardly converging side wall and a portion of said concrete body beneath the flanges of a band forming an inwardly converging side wall with which the converging side wall of a lens engages, and said lenses being adapted to be inserted into position from the under side of said concrete body.

1,167,918. LEAF-SPRING LUBRICATOR. ALBERT MUSTEE, Lakewood, Ohio. Filed Jan. 23, 1915. Serial No. 3,967. (Cl. 184—1.)



1. The combination with a leaf spring, of a device for lubricating the surfaces between the leaves of said spring comprising a reservoir, a conduit communicating with the surfaces to be lubricated and opening into the reservoir at a point below the surfaces to be lubricated, and a wick occupying the opening between the conduit and said reservoir and extending along said conduit.

2. The combination, with a leaf spring, of a device for lubricating the same comprising a conduit in communication with the surfaces to be lubricated, a reservoir into which said conduit opens at its lower end, and a wick occupying the opening between said conduit and the reservoir and extending upwardly along said conduit across the sides of the leaves.

3. The combination, with a leaf spring, of a device for lubricating the surfaces between the leaves, comprising a reservoir, a conduit leading upwardly from said reservoir and extending transversely of the sides of the leaves and communicating with the surfaces to be lubricated, and a wick extending into said reservoir through the opening leading to the conduit and extending upwardly along the conduit across said leaves.

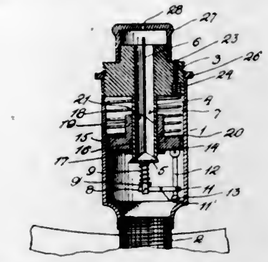
4. A device of the class described, comprising a reservoir, a conduit extending upwardly from the same and having a vertical opening on one side adapted to extend transversely across and be closed by the sides of the leaves of a spring, and a wick member substantially filling said conduit and extending into said reservoir.

5. The combination, with a leaf spring, of a device for lubricating the same, comprising a reservoir for lubricant having an opening below the lower surface to be lubricated, a conduit extending across the sides of the leaves and communicating with the surfaces to be lubricated, and a wick extending into the reservoir substantially filling the opening and extending upwardly along said conduit in contact with the edges of the leaves.

[Claims 6 to 13 not printed in the Gazette.]

1,167,919. SAFETY-VALVE. JOHN NATHAN, Los Angeles, Cal., assignor of one-third to M. M. Gilchrist and one-third to J. C. Spaniding, Los Angeles, Cal. Filed Aug. 17, 1915. Serial No. 45,981. (Cl. 152—12.)

1. A valve comprising a housing, a member threading therein and having an inwardly directed tube, a piston slidable on said tube, a compressible means normally holding said piston spaced from said member, a valve bearing against the end of said tube and pivotally connected to a lever fulcrumed in said housing, and means operatively connected with said piston to operate said valve when moving under the pressure of air in said housing.



2. A valve comprising a housing, a member threading therein and having an inwardly directed tube, a piston movable on and with said tube, a compressible means to hold said piston in normal position and to move same with said member, a valve bearing against the end of said tube, a lever fulcrumed in said housing and pivotally connected with said valve, and means operatively connected with and controllable by the movement of said piston in one direction to operate said valve.

3. A valve comprising a housing, a member movable longitudinally therein and having an inwardly directed tube, a piston movable on and relatively to said tube and yieldingly held spaced from said member, a valve to seal the end of said tube, a lever fulcrumed in said housing and pivotally connected with said valve, and means connected with said piston and having operative connection with said lever to unseat said valve when said piston moves in one direction, said member movable with said piston to govern the time of operation of said valve.

4. A valve comprising a housing, a plug threading therein and having a centrally disposed inwardly directed tube, a piston longitudinally movable on said tube, means to hold said piston on said tube when said plug is moved in one direction, a yielding means between said piston and plug to cause said piston to be moved with said plug in another direction, a spring-pressed valve bearing against the end of said tube and having a stem, a lever fulcrumed in said housing and pivotally connected at one end with said stem, and a link carried by said piston and provided with a knob extending in operative relation to the other end of said lever and operable by the movement of said piston in one direction to unseat said valve, said lever movable with said piston and with respect to the lever to govern the time of operation of the valve.

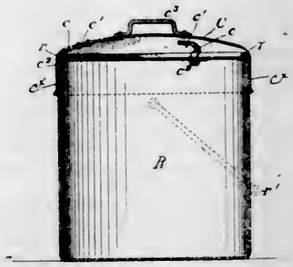
5. A valve comprising a housing, a member movable therein and having an inwardly directed tube provided with ports, a piston movable longitudinally on said tube and having a sleeve provided with a port, said member being rotatable to cause one of the ports in said tube to be brought in line with the port in said sleeve, and said piston being movable under pressure until the port in the sleeve thereon registers with the port in said tube, a valve seating against the end of said tube and pivotally connected to a lever fulcrumed in said housing, and means movable with said piston to operate said lever.

[Claims 6 to 11 not printed in the Gazette.]

1,167,920. GARBAGE-HOLDER. ELIZABETH H. NATSCH, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,687. (Cl. 220—80.)

1. In a garbage holder of the character designated, the combination of a receptacle formed at its upper end with an inturned bead, and a cover having a depending external flange to embrace the upper portion of the receptacle, and with spring members following the contour of and secured to the under side of the cover and having each a curved terminal adapted to spring under said bead when the cover is forced down upon the receptacle for the purpose described.

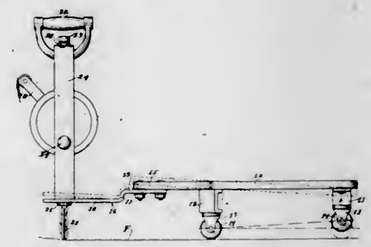
2. In a garbage holder of the character designated, the combination of a receptacle formed with an inturned retaining bead and an externally flanged cover formed with a plurality of elastic resilient clips adapted to engage with said retaining bead, for the purpose described.



3. A garbage holder of the character designated, comprising a cylindrical receptacle the mouth of which is formed with an annular inturned retaining bead, and a cover formed with a cylindrical flange fitting externally and snugly over the annular mouth of said receptacle, said cover being also formed on its under side with a plurality of equidistant elastic resilient clips adapted to engage with said inturned retaining bead on the mouth of the receptacle, for the purpose set forth.

4. A garbage holder of the character designated, comprising a cylindrical receptacle the mouth of which is formed with an annular inturned retaining bead, and a cover formed with a cylindrical flange fitting externally and snugly over the annular mouth of said receptacle, said cover being also formed on its under side with a plurality of equidistant elastic resilient clips each formed with a curved terminal adapted to spring under said retaining bead when the cover is forced down upon the receptacle, for the purpose set forth.

1,167,921. TOOL-HOLDING FLOOR-STAND. HENRY B NEWHALL, Jr., Plainfield, N. J. Filed Feb. 10, 1915. Serial No. 7,259. (Cl. 255—51.)



1. In a device of the character described, the combination with a conveyance on which the operator may sit, comprising a platform supported on casters by means of which the platform may be shifted from place to place, of an extension at one end of said platform, a yoke secured to said extension, there being openings in the upper end of said yoke, in the lower end of said yoke, and through the extension adjacent to said yoke all in alinement with one another, a tool carrier swivelly supported in said openings, a tool carried by said tool carrier and extending through the lower end of said yoke and through said extension to be in position to be operated by the operator seated on the platform.

2. In a device of the character described, the combination with a conveyance on which the operator may sit, comprising a platform movably supported, of an extension at one end of said platform, a yoke secured to said extension, there being openings in the upper end of said yoke, in the lower end of said yoke, and through the extension adjacent to said yoke all in alinement with one

another, a tool carrier swivelly supported in said openings, a tool carried by said tool carrier and extending through the lower end of said yoke and through said extension to be in position to be operated by the operator seated on the platform.

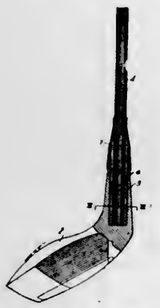
3. In a device of the character described, the combination with a conveyance on which the operator may sit, comprising a support movably mounted, of a yoke secured to said support, there being openings in the upper end of said yoke, in the lower end of said yoke, and through said support adjacent to said yoke all in alinement with one another, a tool carrier swivelly supported in said openings, and a tool carried by said tool carrier and extending through the lower end of said yoke and through said support to be in position to be operated by the operator seated on the support.

4. In a device of the character described, the combination with a conveyance on which the operator may sit comprising a platform, of casters on which said platform is movably mounted, a pair of said casters being disposed adjacent to the front end of said platform, an extension secured at such front end of said platform, a yoke secured to such extension, there being openings in the upper end of said yoke, in the lower end of said yoke, and through the extension adjacent to said yoke all in alinement with one another, a tool carrier swivelly supported in said openings, a tool carried by said tool carrier and extending through the lower end of said yoke and through said extension to be in position to be operated by the operator seated on said platform, the platform being tiltably mounted with said pair of casters as a fulcrum.

5. In a device of the character described, the combination with a conveyance on which the operator may sit comprising a platform, of casters on which said platform is movably mounted, a pair of said casters being disposed adjacent to the front end of said platform, an extension secured at such front end of said platform, a yoke secured to such extension, there being openings in the upper end of said yoke, in the lower end of said yoke, and through the extension adjacent to said yoke all in alinement with one another, a tool carrier swivelly supported in said openings, a tool carried by said tool carrier and extending through the lower end of said yoke and through said extension to be in position to be operated by the operator seated on said platform, the platform being tiltably mounted with said pair of casters as a fulcrum, said platform being disposed at an inclined angle to the floor on which it is supported when in raised position, said tool being disposed substantially at right angles to said platform.

[Claims 6 to 10 not printed in the Gazette.]

1,167,922. GOLF-CLUB. JOHN W. OFFUTT, Ellwood City, Pa. Filed Sept. 23, 1914. Serial No. 863,055. (Cl. 46—4.)



1. A golf club comprising a tubular metal shaft and a non-metallic head, the contacting surfaces of the head and shaft being fluted to prevent relative turning movement of the head and shaft.

2. A golf club comprising a tubular metal shaft and a non-metallic head, the end of the shaft having an enlargement to which the head of the golf club is attached and the contacting surfaces of the head and shaft being fluted to prevent relative axial movement of the head and shaft.

3. A golf club comprising a tubular metal shaft and a non-metallic head, the contacting surfaces of the head and shaft being fluted, the metal shaft having an integral enlargement on its end to which the head of the golf club is attached.

4. A golf club comprising a tubular metal shaft and a non-metallic head, the tubular metal shaft having an integral enlargement on its end to which the head of the golf club is attached, and the surface of said enlargement having a series of parallel flutes in the outer surface thereof to engage the neck of the head and prevent turning of the head on the shaft.

1,167,923. BRUSH. ERNST OLSON, Ossining, N. Y. Filed Oct. 15, 1915. Serial No. 56,135. (Cl. 15—37.)



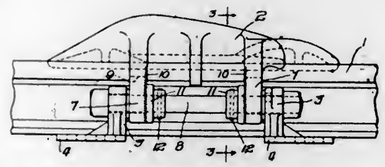
1. A binding for brush bristles consisting of two elongated adjacent binding elements; and bristles doubled about and between said binding elements, substantially as described.

2. A binding for brush bristles consisting of two elongated adjacent binding elements; bristles doubled about and between said binding elements, and said binding elements being coiled helically, substantially as described.

3. A brush comprising a central stem; a brush element consisting of two elongated adjacent binding elements and bristles doubled about and between said binding elements, said binding elements being wound about said stem helically; and means securing said binding elements and bristles to said stem, substantially as described.

4. A brush comprising a central threaded stem; a brush element consisting of two elongated adjacent binding elements and bristles doubled about and between said binding elements, said binding elements being wound about said stem helically; and a nut securing said binding elements and bristles to said stem, substantially as described.

1,167,924. ADJUSTABLE DERAIL. EBEN R. PACKER, Wilmette, Ill., assignor to Q & C Company, New York, N. Y., a Corporation of Maine. Filed Sept. 18, 1915. Serial No. 51,330. (Cl. 104—127.)



1. In combination, a derailing block, a stationary support, and a radially adjustable hinge connection between said block and said support.

2. In combination, a derailing block, a stationary support, an arm extending from said block into proximity to said support, and means for pivotally connecting said arm to said support at one of a plurality of positions distributed lengthwise of said arm.

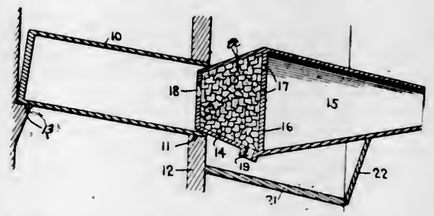
3. In combination, a derailing block, a support, an arm projecting from the block in proximity to one side of said support, said arm having a slot therein elongated in the direction of the length of the arm, a rotatable shaft extending through said support and said slot, and means for holding said shaft in any desired position lengthwise of the slot.

4. In combination, a derailing block, an arm projecting therefrom, said arm having a slot therein elongated in the direction of the length of the arm, a supporting member on one side of the arm, a rotary shaft passing through said supporting member and said slot, the other side of said arm being provided with a roughened face, and a part fixed to said shaft and engaging with said roughened face to hold the shaft in any desired position in said slot.

5. In combination, a derailing block, two parallel arms projecting laterally from one side of the block, two supporting members lying upon the outer side and engaging with said arms, each of said arms having therein a slot elongated in the direction of the length of the arm, a bolt passing through said supporting members and said slots, and means on said bolt on the inner sides of said arms engaging with the arms to lock the bolt in any desired position along said slots.

[Claim 6 not printed in the Gazette.]

1,167,925. APPARATUS FOR THE EXTRACTION OF ZINC. MARTIN M. PEARLMAN, Clarksburg, W. Va. Filed Mar. 9, 1915. Serial No. 13,140. (Cl. 75—154.)



1. The combination with means for the extraction of zinc including a retort having an open outer end, of a combined filter and condenser consisting of a hollow casing provided intermediate its ends with a transverse partition dividing the casing into an inner filtering chamber and an outer condensing chamber, the inner end of the casing fitting within the open end of and engaging the walls of the retort to form a closure for the same.

2. The combination with means for the extraction of zinc including a retort having an open outer end, of a combined filter and condenser consisting of a hollow casing provided intermediate its ends with a transverse partition dividing the casing into an inner filtering chamber and an outer condensing chamber, the inner end of the casing being tapered and fitting within the open end of the retort and engaging the walls of the retort and forming a closure for the same.

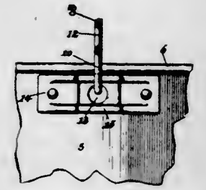
3. The combination with means for the extraction of zinc including a retort having an open outer end, of a combined filter and condenser consisting of an oppositely tapered casing provided at a point intermediate of its ends with a transverse partition dividing the casing into an inner filtering chamber and an outer condensing chamber, the inner end of the casing fitting within the open end of the retort and engaging the walls thereof and forming a closure for the retort.

4. The combination with means for the extraction of zinc including a retort having an open outer end, of a combined filter and condenser consisting of an oppositely tapered casing provided at a point intermediate of its ends with a transverse partition dividing the casing into an inner filtering chamber and an outer condensing chamber, the inner end of the casing fitting within the open end of the retort and engaging the walls thereof and forming a closure for the retort, and the said filtering chamber having a downwardly and outwardly inclined bottom and provided at the lower end thereof with an outlet.

5. The combination with means for the extraction of zinc including a retort having an open outer end, of a combined filter and condenser consisting of an oppositely tapered casing provided at a point intermediate of its ends with a transverse partition dividing the casing into an inner filtering chamber and an outer condensing chamber, the inner end of the casing fitting within the open end of the retort and engaging the walls thereof and forming a closure for the retort, and the said filtering chamber having a downwardly and outwardly inclined bottom and provided at the lower end thereof with an outlet, and the said partition being provided above the outlet with an aperture forming a communication between the filtering and condensing chambers.

[Claim 6 not printed in the Gazette.]

1,167,926. BAIL AND BAIL-EAR FOR BUCKETS. CHARLES F. PFALZGRAF, Baltimore, Md. Filed Feb. 10, 1914. Serial No. 817,776. (Cl. 220—26.)



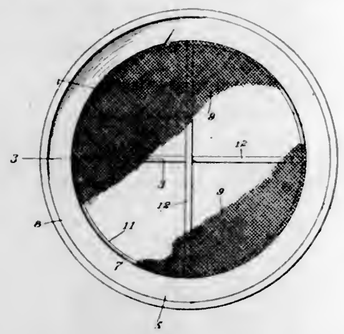
1. The combination with a vessel having an outward projection on its wall, of a plate at the side of the vessel wall and having an opening and extending outwardly from said wall to provide a space at the inner side of the plate all around said opening; a swinging bail having an inturned hook that extends through the plate opening which hook is free to swing in said space at the inner side of the plate when the bail is swung up or down,—said hook having a length that will enable it to engage the under side of the vessel-projection when swung up whereby to relieve the wall of the opening in the plate from the weight in the pail.

2. The combination with a vessel having an outward projection, of a plate having its ends secured to the vessel beneath said projection and provided with an outwardly-projecting portion between its secured ends whereby to provide a space between the vessel wall and the outwardly-projecting portion said projecting portion having an opening; a bail having its end bent inwardly toward the vessel wall, said inwardly bent end of the bail extending loosely through the opening in the projecting portion of the said plate and being free at the inner side of said plate said free end of the bail being turned laterally in said space and being movable with the bail, the distance between the bend and free end of the laterally-turned portion thereof being greater than the distance between the wall of the opening in the plate and the projection on the vessel-wall whereby the bail may be turned to swing the bent-end upwardly at the inner side of said plate to engage under the projection on the vessel wall and free the bail from all engagement with the wall of the opening in said plate.

1,167,927. SIEVE. CHARLES F. PFALZGRAF, Baltimore, Md. Filed Feb. 18, 1915. Serial No. 9,028. (Cl. 83—60.)

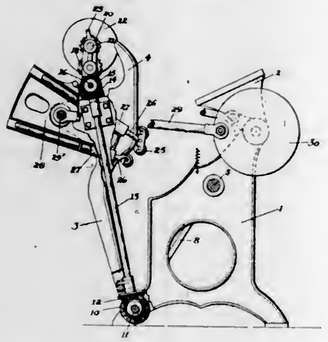
1. A circular sieve having in combination, a woven-wire disk with a down-turned rim flange; a sheet-metal ring-shaped wall higher than and surrounding said disk and said metal also forming a hollow ring-shaped foot below the disk; a plural number of thin flat sheet-metal bars in contact with the lower surface of the woven-wire disk the bars being crossed at the center and each bar provided at both ends with a hook whose point-end projects upwardly said hooks being seated within the hollow part of said ring-shaped foot, and the down-turned rim flange

of the wire disk being in said hollow foot and also in the said upwardly-projecting hooks, and an annular indentation formed around the ring-shaped foot and compressing the sheet-metal directly in contact with said woven-wire rim flange immediately above the point ends of the upwardly turned hooks, said compressed indentations causing the hooks to grip the woven-wire flange.



2. A circular sieve consisting of a sheet-metal ring-shaped wall and an integral ring-shaped foot which in cross-section is in the form of a loop longer vertically and at the top of which is an inwardly-projecting horizontal annular flange; a plural number of flat sheet-metal bars crossed at the center each bar having at both ends an upturned hook and all the hooks being seated within the said loop-shaped foot, and the flat horizontal part of each bar resting on said inwardly-projecting horizontal flange; and a woven wire disk whose rim-edge is in the said loop-shaped foot and said disk resting on the flat horizontal tops of said bars.

1,167,928. INKING ATTACHMENT FOR PRINTING-PRESSES. JOHN C. POFFENBARGER, Peoria, Ill. Filed Aug. 28, 1914. Serial No. 859,018. (Cl. 101—71.)



1. In combination in a printing press, a stationary frame provided with an oscillatory platen, a main driving shaft, a bed pivoted relative to said frame, means for reciprocating said bed to and from said frame, form inking rollers mounted on said bed, an inking cylinder journaled in the upper part of said bed, connections from the main driving shaft to said inking cylinder to rotate the same, and means for moving said form inking rollers over the form and into engagement with said inking cylinder, said means being adapted to cause said form inking rollers to "dwell" or remain in engagement with said inking cylinder during several revolutions of said form inking rollers.

2. In combination in a printing press, a stationary frame having an oscillatory platen, a main driving shaft, a shaft journaled in the lower portion thereof, a bed mounted to reciprocate on said last mentioned shaft, roller wings pivotally mounted on said bed and having inking rollers connected thereto, an inking cylinder journaled in the upper portion of said bed, connections between said main driving shaft and said inking cylinder to rotate the same, means for reciprocating the said bed, means for raising and lowering said roller wings so as to move said inking rollers over the form and in contact with said inking cylinder, said means being adapted to cause said inking rollers to "dwell" or remain in engagement with said inking cylinder during several revolutions of said inking rollers.

3. In a printing press, in combination a main frame having an oscillatory platen, a main driving shaft, a shaft in the lower portion of said main frame, a bed mounted on said second mentioned shaft and adapted to reciprocate to and from said main frame, means for reciprocating said bed to and from said main frame, a roller carriage pivotally mounted on said bed, an inking cylinder journaled in the upper portion of said bed, means for rotating the said inking cylinder, and a link connection between said main frame and said roller carriage so as to rotate said carriage during the reciprocation of said bed to bring the rollers in contact with said inking cylinder, said link connection including means for causing said rollers to "dwell" or remain in engagement with said inking cylinder during several rotations of said rollers.

4. In a printing press, in combination, a main frame having an oscillatory platen, a main driving shaft, a shaft in the lower portion of said main frame, a bed mounted on said second mentioned shaft and adapted to reciprocate to and from said main frame, means for reciprocating said bed to and from said main frame, a roller carriage pivotally mounted on said bed, an inking cylinder journaled in the upper portion of said bed, means for operating the said inking cylinder, a link connection between said main frame and said roller carriage so as to rotate said carriage during the reciprocation of said bed to bring the rollers in contact with said inking cylinder, said link connection comprising a link or arm pivoted to said main frame and having an elongated slot in its other end, said slot having a groove or recess in its extreme end, and a lug or pin on said roller carriage adapted to move in said slot and engage in said groove or recess therein.

5. In a printing press, in combination, a main frame having an oscillatory platen, a main driving shaft, a shaft in the lower portion of said main frame, a bed mounted on said second mentioned shaft and adapted to reciprocate to and from said main frame, means for reciprocating said bed to and from said main frame, a roller carriage pivotally mounted on said bed, an inking cylinder journaled in the upper portion of said bed, means for operating the said inking cylinder, a link connection between said main frame and said roller carriage so as to rotate said carriage during the reciprocation of said bed to bring the rollers in contact with said inking cylinder, said link connection comprising a link or arm pivoted to said main frame and having an elongated slot in its other end, said slot having a groove or recess in its extreme end, a lug or pin on said roller carriage adapted to move in said slot and engage in said groove or recess therein, and means for lifting said link so that the lug or pin is removed from engagement with said groove or recess in said slot.

[Claims 6 to 11 not printed in the Gazette.]

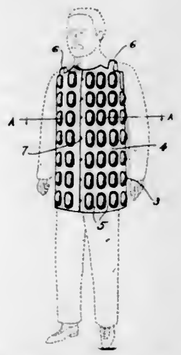
1,167,929. WINDOW-SCREEN. JAMES P. QUINN, Chicago, Ill. Filed Aug. 22, 1914. Serial No. 858,083. (Cl. 156—39.)

In a window screen structure, a roller supporting and inclosing housing comprising end members, a cover piece extending from end to end, curved downwardly at its outer edge and terminating approximately in a plane passing horizontally through the axis of the roller, means carried by the end members for supporting the roller within the housing, and a shutter curved to conform to the curvature of the cover piece extending from end to end of the housing and slidable up under the cover piece for



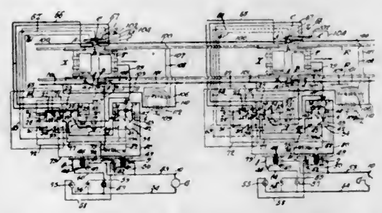
removal of the roller or down under the roller to partially inclose the same.

1,167,930. LIFE-SAVING APPLIANCE. ARNOLD C. RASMUSSEN, Chicago, Ill. Filed Sept. 25, 1915. Serial No. 52,558. (Cl. 9—20.)



A life-saving appliance, comprising a sheet of elastic material formed into a plurality of circular web portions bounding substantially globular air cells, all integrally connected together to form a jacket.

1,167,931. ELECTRIC SIGNAL SYSTEM. EDWARD A. REYNOLDS and HENRY V. REYNOLDS, Anderson, Ind. Filed May 3, 1915. Serial No. 25,559. (Cl. 246—26.)



1. In a signal system, the combination with an electrically continuous track, a pair of insulated sub-rails, and sources of electrical energy between the track and sub-rails; of a train mechanism including a pair of brush devices coöperable with the sub-rails, means for electrically connecting one brush device to the track to provide a short circuit, and means for electrically connecting the other brush device and track and including an electrically operated signal device.

2. In a signal system, the combination with an electrically continuous track, a pair of insulated sub-rails, and sources of electrical energy between the track and sub-rails; of a train mechanism including a pair of brush devices coöperable with the sub-rails, an electrically operated signal device, and means for electrically connecting said signal device to the brush devices and track and including a reversing means whereby either brush device may be connected electrically to the track to provide a short circuit while the other brush device is connected electrically to the signal device.

3. In a signal system, the combination with an electrically continuous track, a pair of insulated sub-rails, and sources of electrical energy between the track and sub-rails; of a train mechanism including a pair of brush devices coöperable with the sub-rails, means for electrically connecting one brush device to the track to provide a short circuit, means for electrically connecting the other brush and track and including an electrically operated signal device, and means operable when the train is stopped for electrically connecting the track and last mentioned brush device to provide a short circuit therebetween.

4. In a signal system, the combination with an electrically continuous track, a pair of insulated sub-rails, and sources of electrical energy between the track and sub-rails; of a train mechanism including a pair of brush devices coöperable with the sub-rails, an electrically operated signal device, and means for electrically connecting the signal device to the brush devices and track and including reversing means whereby either brush device may be connected to the track to form a short circuit while the other brush device is electrically connected to the signal device the first mentioned means also including means whereby when the train is stopped, both brush devices are connected to the track to provide short circuits between the sub-rails and track.

5. In a signal system, the combination with an electrically continuous track, a pair of insulated sub-rails, and sources of electrical energy between the tracks and sub-rails; of a train mechanism including a pair of brush devices to engage the sub-rails, means for electrically connecting one brush device and the track, means for electrically connecting the other brush device and the track and including an electrically operated signal device, a source of electrical energy electrically connected to said signal device and brush devices, the brush devices and said means being operable to electrically connect the signal device to the last mentioned source of electrical energy when the brush devices are disengaged from the sub-rails, and to disconnect the signal device from the last mentioned source of electrical energy and to electrically connect the signal device to the track and one sub-rail when the brush devices are engaged to the sub-rails.

[Claims 6 to 16 not printed in the Gazette.]

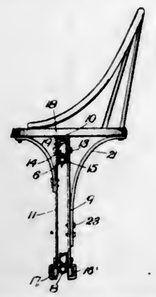
1,167,932. BOOKKEEPER'S STOOL. THOMAS W. ROBERTSON, Kansas City, Mo. Filed Feb. 27, 1914. Serial No. 821,405. (Cl. 155—22.)

1. In a bookkeeper's stool, a supporting frame comprising vertically spaced rails, a guide frame lying along the sides of both of said rails, rollers carried by the guide frame and running on said rails to support the frame and permit free travel thereof, and a seat carried by the guide frame.

2. In a bookkeeper's stool, a supporting frame comprising vertically spaced rails, a guide frame overlying both of said rails, rollers mounted within the guide frame and supporting said frame from both of said rails, anti-friction members carried by said guide frame and engaging the sides of the lower rail, and a seat mounted on said guide frame.

3. In a bookkeeper's stool, a supporting frame comprising upper and lower rails, a U-shaped guide frame supported on said rails, and vertical rollers mounted in

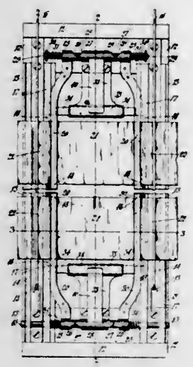
said guide frame and engaging the lower rail of the supporting frame, for the purpose set forth.



4. In a bookkeeper's stool, a supporting frame comprising upper and lower rails, an inverted U-shaped guide frame supported on said rails and having housings at its lower ends, and vertical rollers mounted in said housings and adapted for engagement with the sides of the lower rail.

5. A bookkeeper's stool, comprising a supporting frame, a guide frame movably mounted on the supporting frame, a seat mounted on said guide frame, and a brace connected with said seat and having pin and slot connection with the guide frame, for the purpose set forth.

1,167,933. EMBROIDERY-FRAME. JOSEPH ROSCHACH, Campgaw, N. J. Filed June 22, 1914. Serial No. 846,548. (Cl. 112—7.)



1. An embroidery frame, comprising stationary side bars connected at their ends, laterally movable side bars adapted to coöperate therewith and pivoted at one end thereof to swing at an angle thereto, a manually-operated cam device at one end of the frame for moving said movable bars toward the stationary bars, a like cam device connecting with the free ends of the movable side bars and disconnected from said stationary bars, and springs actuating said movable bars in return direction away from the stationary bars.

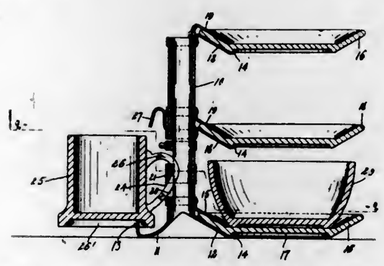
2. An embroidery frame, comprising stationary side bars connected at their ends, laterally movable side bars adapted to coöperate therewith and pivoted at one end thereof to swing at an angle thereto, a manually-operated cam device at one end of the frame for moving said movable bars toward the stationary bars, a like cam device connecting with the free ends of the movable side bars and disconnected from said stationary bars, springs actuating said movable bars in return direction away from the stationary bars, and means beyond the stationary bars for clamping the loose flaps of material extending therefrom in position away from said bars.

3. An embroidery frame, comprising stationary side bars connected at their ends, laterally movable side bars adapted to coöperate therewith and pivoted at one end thereof to swing at an angle thereto, a manually-operated cam device at one end of the frame for moving said movable bars toward the stationary bars, a like cam device connecting with the free ends of the movable side bars and disconnected from said stationary bars, springs actuating said movable bars in return direction away from the stationary bars, clamping members at the ends of the frame connected with the stationary bars, and cooperating end clamping members loosely mounted in the movable bars.

4. An embroidery frame, comprising stationary side bars connected at their ends, laterally movable side bars adapted to coöperate therewith and pivoted at one end thereof to swing at an angle thereto, a manually-operated cam device at one end of the frame for moving said movable bars toward the stationary bars, a like cam device connecting with the free ends of the movable side bars and disconnected from said stationary bars, springs actuating said movable bars in return direction away from the stationary bars, clamping members at the ends of the frame connected with the stationary bars, coöperating end clamping members loosely mounted in the movable bars, said end clamping members being movable longitudinally of the frame into engagement with the end-portions thereof between the stationary side bars, and means for simultaneously operating said coöperating end clamping members when the movable side bars are operated.

5. An embroidery frame, comprising parallel stationary side bars connected at their ends, a transverse shaft at one end of said stationary side bars, laterally movable side bars having at their ends oppositely-directed cam members slidably mounted upon said shaft and spring-actuated thereon in opening direction away from said stationary side bars, a double-ended cam member on said shaft between said first-named cam members and adapted to simultaneously operate said cam members in opposite directions on the shaft, an operating handle connected with said double-ended cam member, a shaft at the opposite ends of said movable side bars, oppositely-directed cam members connected with the last named ends of said movable side bars and slidably mounted on said last named shaft and spring-actuated thereon in opening direction away from the stationary side bars, a double-ended cam on said last-named shaft adapted to operate the said last-named cam members in closing direction, and an operating handle connected with said last-named cam member.

1,167,934. DISH-CARRIER. ANDOR RÓTH, New York, N. Y., assignor of one-half to Theodore Freund, New York, N. Y. Filed Feb. 24, 1915. Serial No. 10,272. (Cl. 65—53.)



1. In a device for carrying food and drink serving articles, the combination with a bar, of a plurality of resilient supporting strips fixedly attached thereto at an angle to the longitudinal axis of said bar, said supporting strips being arranged in clusters and each being provided with a lug extending substantially at right angles to the plane thereof, and a clip associated with each supporting strip, said clips being rigidly attached to said bar and extending each in parallel relation to the respective supporting strips but being shorter than said supporting strips.

2. In a device for carrying food and drink serving articles, the combination with a tubular body having a longitudinal slot, of a plurality of parallel resilient supporting strips fixedly attached thereto at an angle to the longitudinal axis of said tubular body, each of said supporting strips being provided with a lug extending substantially at right angles to the plane thereof, a clip associated with each supporting strip, said clips being rigidly attached to said tubular body and extending in parallel relation to said supporting strips but being substantially shorter than said supporting strips, and a sleeve shiftably and rotatably disposed upon said tubular body, said sleeve encircling the slotted portion of said body and having a slot and a recess above said slot, said recess extending substantially in rear of the slot in said sleeve, and both the slot and recess in said sleeve being adapted to register with the slot in said tubular body.

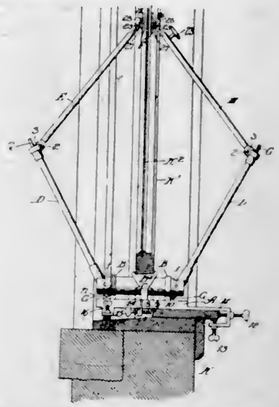
3. In a device for carrying food and drink serving articles, the combination with a tubular body having a longitudinal slot, of a plurality of parallel resilient supporting strips fixedly attached thereto at an angle to the longitudinal axis of said tubular body, each of said supporting strips being provided with a lug extending substantially at right angles to the plane thereof, a clip associated with each supporting strip, said clips being rigidly attached to said tubular body and extending in parallel relation to said supporting strips but being substantially shorter than said supporting strips, a sleeve shiftably and rotatably disposed upon said tubular body, said sleeve encircling the slotted portion of said body and having a slot and a recess above said slot, said recess extending substantially in rear of the slot in said sleeve, and both the slot and recess in said sleeve being adapted to register with the slot in said tubular body, and a projection upon said tubular body in alinement with and below the slot therein.

4. In a device for carrying food and drink serving articles, the combination with a tubular body having a longitudinal slot, of a plurality of parallel resilient supporting strips fixedly attached thereto at an angle to the longitudinal axis of said tubular body, each of said supporting strips being provided with a lug extending substantially at right angles to the plane thereof, a clip associated with each supporting strip, said clips being rigidly attached to said tubular body and extending in parallel relation to said supporting strips but being substantially shorter than said supporting strips, a sleeve shiftably and rotatably disposed upon said tubular body, said sleeve encircling the slotted portion of said body and having a slot and a recess above said slot, said recess extending substantially in rear of the slot in said sleeve, and both the slot and recess in said sleeve being adapted to register with the slot in said tubular body, a projection upon said tubular body in alinement with and below the slot therein, and an inverted U-shaped member attached to said body in alinement with said projection and above the slotted portion of said tubular body.

1,167,935. WINDOW-CLEANING DEVICE. CHARLES RUDOLF, Chicago, Ill. Filed May 1, 1915. Serial No. 25,163. (Cl. 15—59.)

1. In a window-cleaning device, the combination with a suitable support adapted to be carried by a window-sill, of a rock-member mounted thereon, a jointed arm carried by each end of said rock-member and flexing in a plane perpendicular to the window, a cleaning tool carried by each jointed arm, and motion transmitting mechanism connected with the upper sections of the jointed arms and extending through the lower arms and through said rock-member, whereby the swinging movement of one upper arm-section about its lower arm-section is duplicated by the upper arm-section on the opposite side of the window.

2. In a window-cleaning device, the combination of a base-member adapted to be mounted on a window-sill, a sash-support and a rock-shaft supported thereby, a pair of jointed arms carried by said rock-shaft and flexing in a plane perpendicular to the window, and motion transmitting mechanism connecting the upper arm-sections and extending through said rock-shaft.



3. In a window-cleaning device, the combination of a base-member equipped with clamping means, a rock-shaft carried thereby, a pair of lower arms having pivotal connection with the rock-shaft, of such a character as to enable the rock-shaft to be rotated through the medium thereof, mechanism connecting the base-portions of said arms, whereby the swinging movement of one arm about its pivot is duplicated by the other arm, a pair of upper arms pivotally connected with said first-named arms, and connecting mechanism between the base-portion of the upper arms, said mechanism extending through the lower arms and through said rock-shaft, whereby the swinging movement of one upper arm about its pivot is transmitted to the other upper arm.

4. In a window-cleaning device, the combination with a suitable mounting, of a rock-shaft journaled therein, a pair of lower arms pivotally connected with the ends of said rock-shaft and equipped with gear-sectors, rack connections between said gear-sectors slidably connected with said rock-shaft, a pair of upper arms pivotally connected with the lower arms and equipped with gear-sectors, racks extending through the lower arms and engaging said last-named gear-sectors, and gear and rack connections between the lower ends of said last-named racks and mounted on said rock-shaft.

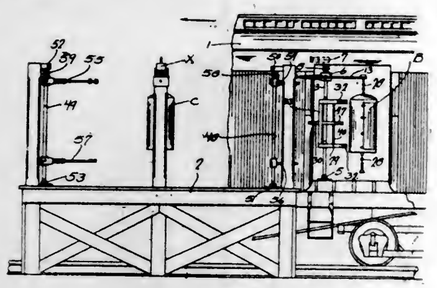
5. In a window-cleaning device, the combination of a suitable mounting adapted to be carried by a window-sill, a tubular rock-shaft journaled therein, a pair of lower arms pivotally connected with said rock-shaft and equipped with gear-sectors, a rack slidably mounted in said rock-shaft and serving to transmit motion from one of said gear-sectors to the other, a pair of racks slidably connected with said arms, gear and rack connections mounted in the rock-shaft and connected with said last-named racks, a pair of upper arms equipped with gear-sectors engaging the racks with which said lower arms are equipped, and cleaning tools mounted on said upper arms.

[Claims 6 to 10 not printed in the Gazette.]

1,167,936. MAIL CATCHING AND DELIVERING MECHANISM. JOSEPH P. SANDER, Spokane, Wash. Filed Sept. 2, 1914. Serial No. 859,866. (Cl. 258—17.)

1. In a mail catching device, a rotatable shaft provided with a spring abutment and a threaded journal, a threaded bearing engaging said journal for shifting said shaft axially during impact rotation thereof, a second bearing of the shaft, and a coiled spring interposed between said abutment and said second bearing for compression by said shaft to resist impact rotation of the latter, said

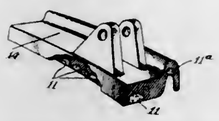
shaft having bag catching means thereon, substantially as described.



2. In a mail catching device, a catching mechanism, a shaft for supporting said mechanism, and bearing means for causing axial shifting movement of said shaft during impact rotation thereof, and a spring means acted upon by such axial shifting movement of said shaft to resist impact rotation of the latter, substantially as described.

3. In a mail pouch transferring mechanism for punches having endwise projecting pins or shanks provided with enlarged heads, a catching device including a horizontally disposed fork having a crotch enlarged with respect to the throat of said fork but of reduced size with respect to said head, the forked portions of said fork having retaining lugs extending along the throat and inclined upwardly toward and terminating in abrupt shoulders adjacent the juncture of said throat and crotch for movement of said head upwardly along said lugs and downwardly behind said shoulders into said enlarged crotch to be supported in the latter, substantially as described.

1,167,937. BRAKE-SHOE. WILLIAM H. SAYRE, Glen Ridge, N. J., assignor to American Abrasive Metals Company, New York, N. Y., a Corporation of New York. Filed Feb. 24, 1913. Serial No. 750,154. (Cl. 188—27.)



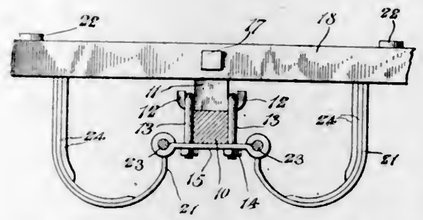
1. A self trimming brake shoe composed of a cast metal body having embedded therein lumps of harder material of considerable size and irregular shape, said lumps being arranged so as to form a minor part of the wearing surface of the shoe, and so as to come opposite only the particular portion or portions of the wheel which are to be trimmed.

2. A self trimming brake shoe composed of a cast metal body having embedded therein lumps of alundum of considerable size and iregular shape, said lumps being arranged so as to form a minor part of the wearing surface of the shoe, and so as to come opposite only the particular portion or portions of the wheel which are to be trimmed.

3. A brake shoe adapted to true the wheel braked thereby, the same composed of a cast-metal body of suitable shape, having embedded therein a plurality of detached lumps of irregular shape and considerable size of a mineral abrasive, which is of considerably greater hardness than the body-metal and is proof against impairment at the casting temperature of the body metal, and said irregular lumps being arranged so as to form a minor part of the wearing surface of the shoe, and so as to afford an abrading effect chiefly at the particular wheel portions which are least subject to wear.

4. A brake shoe adapted to true the wheel braked thereby, the same composed of a cast-metal body of suitable shape, adapted to contact entirely across the tread of a wheel, and having embedded therein a plurality of detached pieces of considerable size of a mineral abrasive, which is of considerably greater hardness than the body-metal and is proof against impairment at the casting temperature of the body-metal, and said pieces being arranged so as to form a minor part of the wearing surface of the shoe, and so as to afford an abrading effect chiefly at the particular wheel portions which are least subject to wear.

1,167,938. VEHICLE-SPRING. ROBERT J. SCHEIDT, California, Mo., assignor of one-fourth to Roy L. Kay, California, Mo. Filed Sept. 29, 1914. Serial No. 864,063. (Cl. 267—21.)



1. In combination, a vehicle axle, a suport arranged above said vehicle axle, a block rigidly secured to said axle, means pivotally securing the upper extremity of said block with said support including a plate arranged under said axle, and springs connecting said support with said plate at points forwardly and rearwardly of said axle.

2. In combination, an axle, a block secured on top of said axle, a support pivotally secured to said block, a plate secured under said axle, and oppositely arranged curved springs connecting said plate with said support.

3. In combination, an axle, a block rigidly secured on top of said axle, a support pivotally secured to said block, a plate rigidly secured beneath said axle, and oppositely arranged substantially J-shaped springs, connecting the opposite ends of said plate with said support at points forwardly and rearwardly of said axle.

4. In combination, an axle, a support arranged above said axle, a block pivotally secured to said support having a pair of upwardly curved ears, a plate arranged under said axle, means engaged with said upwardly curved ears and extending through said plate for securing said block and said plate in position upon said axle, and oppositely arranged substantially J-shaped springs, connecting the opposite ends of said plate with said support, at points forwardly and rearwardly of said axle.

5. In combination, an axle, a support arranged above said axle, means pivotally connecting said axle with said support, means for retarding and cushioning the pivotal movement between said support and said axle, and a brace rigidly secured at one end to said axle and pivotally secured at the opposite end to said support.

[Claims 6 to 8 not printed in the Gazette.]

1,167,939. METHOD OF MAKING RELIEVO-FORMES FOR PRINTING. PAUL JOSEPH ALOYS SCHOLZ, Dresden, Germany, assignor to the Firm of Adolph Renner, Dresden, Germany. Filed Mar. 10, 1915. Serial No. 13,503. (Cl. 41—24.)

1. A method of making a form for use in the art of printing which comprises applying to a plain surface over the portions thereof designed to be in relief a solution expansible under heat, and subjecting said plain surface to a heating action which causes said portions to become swollen and set forming the desired rilievo.

2. A method of making a form for use in the art of printing which comprises applying to a plain surface over the portions thereof designed to be in relief a colored solution expansible under heat, and subjecting said plain surface to a heating action which causes said portions to become swollen and set forming the desired rilievo.

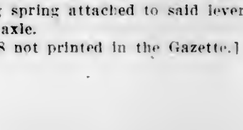
3. A method of making a form for use in the art of printing which comprises applying to a matrix board over the portions thereof in ultimate relief a solution expansible under heat, and casting a stereotype form in contac with said matrix, the heat of the casting developing said portions into the desired rilievo and the so-developed portions serving to mold the casting.

4. A method of making a form for use in the art of printing which comprises applying to a matrix board over the portions thereof in ultimate relief solutions having different degrees of expansion under heat, and casting a stereotype form in contact with said matrix, the heat of the casting developing said portions into the desired rilievo and the so-developed portions serving to mold the casting.

5. A method of making a form for use in the art of printing which comprises applying to a plain surface over the portions thereof designed to be in relief a solution expansible under heat containing gum-arabic, autographic ink, shellac and soap, and subjecting said plain surface to a heating action which causes said portions to become swollen and set forming the desired rilievo.

[Claims 6 and 7 not printed in the Gazette.]

1,167,940. SPRING CONNECTION FOR VEHICLES. EDWARD WILLIAM SERRELL, Chabeuil, France. Filed June 25, 1912. Serial No. 705,740. (Cl. 267—9.)



1. The combination with the frame and running gear of a vehicle, of supports projecting oppositely therefrom, toggle links between said supports capable of alinement to keep the frame suspended in properly spaced relation above the running gear, and a resilient member operating normally to draw said links into an angular position relatively to the plane of alinement.

2. The combination with normally lapped supports projecting from the running gear and frame of a vehicle respectively, of toggle links pivotally connected to said supports, said links being capable of substantial alinement, and a spring drawing upon the toggle joint of said links.

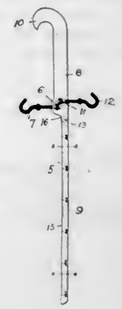
3. A resilient suspension device for vehicles including, in combination, a plurality of supports rising from the running gear, coacting supports projecting oppositely thereto from the vehicle frame, intermediate toggle links pivotally connected to the opposite supports so as to form suspending means operating therewith in like directions, and a spring positioned to draw upon said links at their toggle-joints.

4. In a resilient suspension device for vehicles, the combination of in-curved posts standing in opposed relation upon the running gear, correspondingly curved hangers projecting from the vehicle frame in position to lap over said posts by crossing their respective curves, toggle links pivotally engaging contignous posts and hangers, and an intermediate spring tensioned by the toggle-joints of said links, operating normally to draw the latter out of said curves.

5. A spring-structure for vehicles comprising, in combination, a supporting member located transversely with relation to the axle of the vehicle, posts mounted upon the opposite ends thereof, hangers projecting from the vehicle frame in position to lap over said posts under normal stress of the load on said frame, or by ascent of the supporting member resulting from shocks thereon, and to rise above the posts at rebound, toggle levers having pivotal connections with the adjacent posts and hangers, and a tensioning spring attached to said levers on opposite sides of the axle.

[Claims 6 to 8 not printed in the Gazette.]

1,167,941. SCALE-BEAM. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Dec. 12, 1913. Serial No. 806,249. (Cl. 73—30.)



A scale beam, comprising a relatively wide flat plate having at one end a solid stub projecting integrally therefrom, said stub narrower than said plate but of substantially the same thickness, a bar of approximately the same cross-section as said stub abutting against the end of the latter and welded thereto by a substantially invisible weld, said bar being of substantially uniform cross-section throughout its length, and provided with a plurality of graduations, a suspension pivot for the beam projecting laterally from one face of said plate, and a suspension pivot for the article to be weighed, projecting laterally from one face of said plate; substantially as described.

1,167,942. MINER'S LAMP. JACOB S. SHERMAN, Staunton, Ill. Filed Sept. 12, 1914. Serial No. 861,438. (Cl. 220—92.)

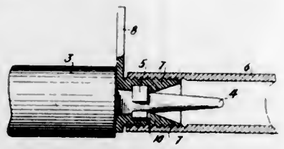


As a new article of manufacture, a miner's lamp carbid cup formed from a single piece of sheet metal and having a flat bottom, a vertically disposed circular wall extending upwardly from said bottom, an outwardly projecting combined hammering and gripping bead pressed from the metal forming said wall at the point where the same unites with the bottom, an outwardly projecting bead pressed from the metal in the wall at a point a substantial distance above the combined hammering and gripping bead, the outer faces of both of said beads being milled and the upper end of said vertical wall being contracted and having a thread pressed therein.

1,167,943. AEROPLANE. HORACE L. SHORT, ALBERT EUSTACE SHORT, and HUGO OSWALD SHORT, Battersea Park, London, England. Filed Aug. 25, 1915. Serial No. 47,382. (Cl. 244—31.)

1. In an aeroplane flying machine in which wing spars are divided transversely of their length and detachably connected at such division; the combination of a pin projecting coaxially from the end of one spar section, said pin having outstanding projections separated from one another circumferentially, a socket on the adjacent end of the other spar section, said socket hav-

ing a central bore to receive said pin and longitudinal recesses to permit of the entry of said outstanding projections on said pin, means for giving relative angular movement to said pin and socket about their common axis to cause the said projections on said pin to pass angularly beyond said recesses in said socket to lock the parts together, and means for limiting said relative angular movement and for securing the said parts in the locked position.



2. In an aeroplane flying machine in which wing spars are divided transversely of their length and detachably connected at such division; the combination of a pin projecting coaxially from the end of one spar section, said pin having outstanding projections separated from one another circumferentially, a tapered portion of said pin extending beyond said outstanding projections, a socket on the adjacent end of the other spar section, sand socket having a central bore to receive said pin and longitudinal recesses to permit of the entry of said outstanding projections on said pin, means for giving relative angular movement to said pin and socket about their common axis to cause the said projections on said pin to pass angularly beyond said recesses in said socket to lock the parts together, and means for limiting said relative angular movement and for securing the said parts in the locked position.

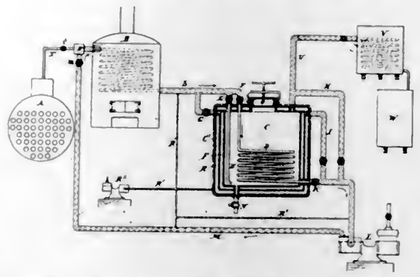
3. In an aeroplane flying machine in which wing spars are divided transversely of their length and detachably connected at such division; the combination of a pin projecting coaxially from the end of one spar section, said pin having outstanding projections separated from one another circumferentially, a socket on the adjacent end of the other spar section, said socket having a central bore to receive said pin and longitudinal recesses to permit of the entry of said outstanding projections on said pin, means for giving angular movement to said socket about its axis to cause said projections on said pin to become located angularly beyond said recesses in said socket to lock the parts together, and means for limiting said angular movement and for securing the said parts in the locked position.

4. In an aeroplane flying machine in which wing spars are divided transversely of their length and detachably connected at such division; the combination of a pin projecting coxially from the end of one spar section, said pin having outstanding projections separated from one another circumferentially and a tapered portion extending beyond said outstanding projections, a socket on the adjacent end of the other spar section, means for securing said socket to said spar section to permit said socket to have angular adjustment about its axis relatively thereto, said socket having a central bore and longitudinal recesses to permit of the entry of said pin and of said outstanding projections on said pin, a radially extending arm on said socket for giving angular adjustment thereto to cause said projections on said pin to become located angularly beyond said recesses in said socket to lock the parts together, and means for limiting said angular movement and for securing the said parts in the locked position.

5. In an aeroplane flying machine in which wing spars are divided transversely of their length and detachably connected at such division; the combination of a pin projecting coaxially from the end of one spar section, said pin having outstanding projections separated from one another circumferentially, the faces of said projections facing the end of the spar section being inclined, a tapered portion of the pin extending beyond said outstanding projections, a socket on the adjacent end of the other spar section, means for securing said socket to said spar section to permit said socket to have angular adjustment about its axis relatively thereto, said socket having a central bore and longitudinal recesses to permit of the entry of said pin and of said outstanding projections on said pin, a radially extending arm on said socket for giving angular adjustment thereto to cause said projections on said pin to become located angularly beyond said recesses in said socket to lock the parts together, said inclined faces of said projections coacting with surfaces on said socket to draw said pin into said socket, and means for limiting said angular movement for securing the said parts in the locked position.

[Claims 6 and 7 not printed in the Gazette.]

1,167,944. METHOD OF AND MEANS FOR MELTING METALS. FRANK SHUMAN, Philadelphia, Pa. Filed July 20, 1909. Serial No. 508,649. (Cl. 75—84.)



1. The herein described method of melting metals which consists in heating a fluid, conveying the fluid with its contained heat to a distance to the place of heating, melting a metal or keeping it liquid by transferring a portion only of the heat units contained in the fluid to the metal, recirculating the said fluid, and superheating the circulated fluid before being again utilized for melting the metal or retaining the metal in a fluid condition.

2. The herein described method of melting metals which consists in heating a fluid, conveying the fluid with its contained heat to a distance to the place of heating, melting a metal or keeping it liquid by transferring a portion only of the heat units contained in the fluid to the metal, recirculating the said fluid, superheating the circulated fluid before being again utilized for melting the metal or retaining the metal in a fluid condition, and adding from time to time additional quantities of the fluid to that in circulation to compensate for losses in leakage, etc., whereby the normal quantity of the fluid may be practically maintained.

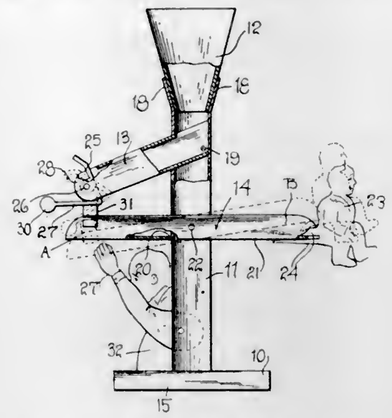
3. The herein described method of melting metals which consists in supporting the metal in a vessel, generating steam and superheating it to a higher temperature than the melting point of the metal, conveying the steam into close proximity to the metal within the vessel, and transferring a portion of the heat of the steam in excess of the latent heat therein to reduce the metal to the melted state.

4. The herein described method of melting metals which consists in supporting the metal in a vessel, generating steam and superheating it to a higher temperature than the melting point of the metal, conveying the steam into close proximity to the metal within the vessel, transferring a portion of the heat of the steam in excess of the latent heat therein to reduce the metal to the melted state, and recirculating the steam after acting upon the metal without condensing it, whereby said steam is successively superheated and utilized for imparting heat to the metal for maintaining said metal in a fluid condition.

5. The herein described method of melting metals which consists in supporting the metal in a vessel, generating steam and superheating it to a higher temperature than the melting point of the metal, conveying the steam into close proximity to the metal within the vessel, transferring a portion of the heat of the steam in excess of the latent heat therein to reduce the metal to the melted state, recirculating the steam after acting upon the metal without condensing it, whereby said steam is successively superheated and utilized for imparting heat to the metal for maintaining said metal in a fluid condition, and from time to time adding sufficient additional steam to that in circulation for compensating for any loss of volume therein.

[Claims 6 to 23 not printed in the Gazette.]

1,167,945. TOY. JOHN H. SIMPSON, Providence, R. I. Filed Mar. 24, 1915. Serial No. 16,691. (Cl. 46—37.)



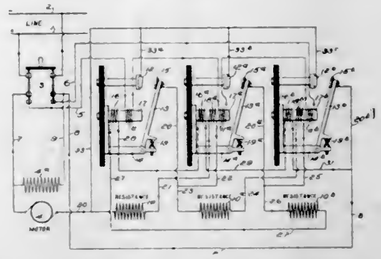
1. A toy including a standard, a see-saw pivoted thereto, a hopper carried by the standard, a chute communicating with the hopper, and having its outer end arranged to deliver material to one end of the see-saw, a valve for the outer end of the chute, means carried by the sea-saw for normally holding the valve in open position, and means for automatically moving the valve to closed position when said first mentioned means moves away from the valve upon the swinging of the see-saw.

2. A toy including a hollow standard, a hopper mounted in the upper end thereof, a discharge chute having its inner end extending into the standard to receive material from the hopper, a valve carried by the outer end of the chute for controlling the discharge of material therefrom, a see-saw pivotally attached to the standard, a longitudinally adjustable manikin attached to one end of the see-saw, and a valve trip member carried by the other end of the see-saw, said manikin being adapted to normally hold the trip member in engagement with the valve for maintaining the same in open position.

3. A toy including a hollow standard, a hopper mounted in the upper end thereof, a discharge chute having its inner end extending into the standard to receive material from the hopper, a valve carried by the outer end of the chute for controlling the discharge of material therefrom, a see-saw pivotally attached to the standard, a longitudinally adjustable manikin attached to one end of the see-saw, said manikin being adapted to normally hold the opposite end of the see-saw in engagement with the valve for maintaining the same in open position, and a counterbalance carried by the valve for moving the same in closed position, immediately subsequent to the discharging of material upon the see-saw sufficient to cause the swinging of the same.

1,167,946. STARTING AND ACCELERATING DEVICE FOR MOTORS. WILLIAM S. SMITH, Cambridge, Mass. Filed Apr. 19, 1912. Serial No. 691,971. (Cl. 172—288.)

1. The combination with a motor, of resistance in the armature circuit, a shunt circuit, a series of magnets each having a coil connected in the shunt circuit and a coil connected in the armature circuit, an additional coil in the armature circuit on each except the first of said magnets, all coils in the armature circuit being similarly wound, but differentially wound from the coils in the shunt circuit, a series of contacts, one operated by each of said magnets, to cut out a section of resistance in the armature circuit and simultaneously therewith a magnet coil in the armature circuit on the magnet next succeeding the magnet which has caused a contact to operate, and means to short circuit all said coils in the armature circuit when the last magnet operates.



2. The combination with a motor, of resistance in the armature circuit, a shunt circuit, a series of magnets each having a coil connected in the shunt circuit and a coil connected in the armature circuit, an additional coil on all but one of said magnets and connected in the armature circuit, all coils in said armature circuit being similarly wound but differentially wound from the coils in the shunt circuit and contacts operated by said magnets, so connected in the armature circuit as to cut out a section of resistance and a coil in the armature circuit on the magnet next succeeding the magnet which has caused a contact to operate when the current of the armature circuit reaches a predetermined value and to cut in such resistance and such coils in the armature circuit if the current of the armature circuit afterward goes higher than another predetermined value.

3. The combination of an electric motor, resistance in the armature circuit, a plurality of magnets energized from a shunt circuit, a coil on one of said magnets connected in the armature circuit so as to oppose the operation of said magnet, a plurality of coils on another magnet connected in the armature circuit so as to oppose the operation of said last-mentioned magnet, and means for short-circuiting a section of such resistance and a coil connected in the armature circuit on the magnet having a plurality of such coils when the current of the armature circuit drops to a predetermined value.

4. The combination of an electric motor, resistance in the armature circuit, a plurality of magnets energized from a shunt circuit, a coil on one of said magnets and connected in the armature circuit so as to oppose and prevent the operation of said magnet until the current in the armature circuit drops to a predetermined value, a plurality of coils on another magnet and connected in the armature circuit so as to oppose and prevent the operation of said last-mentioned magnet until said first-mentioned magnet has operated, and contacts controlled by said magnets and so connected in the armature circuit as to cutout a section of resistance and a coil in the armature circuit on the magnet having the plurality of coils when the current in the armature circuit has dropped to such predetermined value.

5. In combination, an electric motor, resistance in the armature circuit, a plurality of contacts connected with, and arranged to cut resistance out of the armature circuit, step by step, when actuated by said magnets, a coil on each of said magnets, connected in the armature circuit to oppose the operation of said magnets, an additional coil on all but one of said magnets and connected in the armature circuit to further oppose the operation of any magnet having such additional coil, until the next preceding magnet has operated.

[Claims 6 to 10 not printed in the Gazette.]

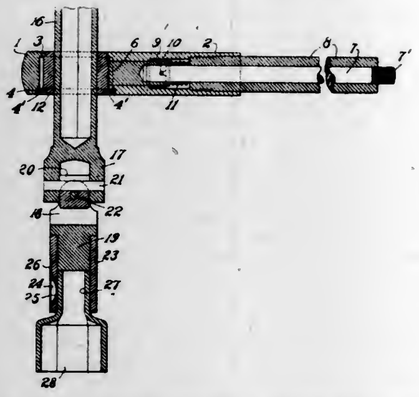
1,167,947. EGG-BOILER. CHARLES SPITZ and CLEMENT A. DODSON, New York, N. Y. Filed June 4, 1914. Serial No. 842,823. (Cl. 161—16.)



1. In an apparatus for boiling eggs, the combination of a boiler, an egg-receptacle, a weight for withdrawing the receptacle having a hook with an extended lip, a lead-screw, a traveling half-nut for engaging the lead-screw with a support for the weight-hook, and means for operating the lead-screw whereby the half-nut is moved out of engagement with the weight-hook, substantially as described.

2. In an apparatus for boiling eggs, the combination of a boiler, an egg-receptacle, a weight having a hook with an extended lip, a pulley, a chain leading over the pulley and connecting the weight and receptacle with the portion between the pulley and the weight at an upward inclination in the direction which the hook faces, guides for the weight terminated below the point of attachment of the chain to the weight when at its highest position, a lead-screw, a traveling half-nut with a support for the weight-hook, and means for operating the lead-screw, substantially as described.

1,167,948. RATCHET-WRENCH. LAROY S. STARRETT and JOHN A. ADELL, Athol, Mass., assignors to L. S. Starrett Company, Athol, Mass., a Corporation of Massachusetts. Original application filed Apr. 25, 1910, Serial No. 557,384. Divided and this application filed Nov. 7, 1911. Serial No. 658,979. (Cl. 81—177.)



1. A ratchet wrench comprising in combination a handle having a transverse socket therein, a stem member rotatably mounted through said socket and having an end of a size to fit said socket and having a wrench socket at its opposite end, and an interchangeable wrench member of a size to fit either of said sockets.

2. A ratchet wrench comprising in combination a handle having a transverse socket opening therein, an extension stem having a shank of the same size as said socket and having a wrench socket at its opposite end, and an interchangeable wrench member having a stem of a size to fit either of said sockets.

3. A ratchet wrench comprising in combination a handle having a transverse socket opening in the ratchet piece thereof, an extension stem having a shank of the same size as said socket and having a wrench socket at its opposite end, a universal joint between said shank and wrench socket, and an interchangeable wrench member having a stem of a size to fit either of said sockets.

1,167,949. RIGID PIECE OF METAL INSULATED AGAINST ELECTROLYSIS AND CORROSION AND THE PROCESS OF MAKING THE SAME. PEREZ M. STEWART, New York, N. Y., assignor of one-half to Harold H. Robertson, Sewickley, Pa., and one-half to Gertrude F. Stewart. Filed Sept. 16, 1912. Serial No. 720,492. (Cl. 154—41.)



1. The process of insulating structural steel shapes to prevent electrolysis and corrosion, which consists in cleaning and heating the surfaces of the steel structure to remove scale, dirt, moisture, etc., and to open the pores of the steel, applying to the steel structure thus cleaned and while in a heated condition a fluxed bituminous composition, applying to said coating of bituminous composition while the latter is soft a layer of asbestos paper in its normal condition, and applying to the exterior surface of the asbestos paper a waterproof coating, for the purpose specified.

2. The process of insulating structural steel shapes to prevent electrolysis and corrosion, which consists in cleaning and heating the surfaces of the steel structure to remove scale, dirt, moisture, etc., and to open the pores of the steel, applying to the steel structure thus cleaned and while in a heated condition a fluxed bituminous composition, and applying to said coating of bituminous composition while the latter is soft a layer of asbestos paper in its normal condition.

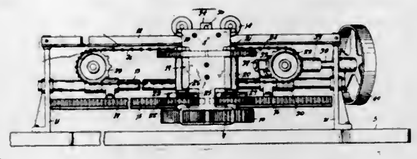
3. The process of insulating a rigid piece of metal, which consists in heating the outer surface of the metal piece to expel moisture and open the pores of the metal, covering the said surface while in a heated condition with a layer of bituminous composition, and applying to the bituminous layer while soft a sheet of insulating material which is impervious to sunlight and in its normal condition.

4. As an improved article of manufacture, a rigid piece of corrodible metal having its outer surface free from deleterious substances protected by a layer of bituminous composition applied to the said surface, and penetrating into the pores thereof, and a layer of asbestos paper adhesively secured to the rigid metal structure by said bituminous coating which penetrates one surface of the asbestos layer, substantially as described.

5. The process of insulating a rigid piece of metal, which consists in cleaning the rigid article, coating the rigid article thus treated with a layer of bituminous composition, applying to the bituminous layer while soft a layer of asbestos, folding the layer of asbestos about the coated rigid article to envelop the same, and pressing the asbestos layer into firm contact with the rigid article.

[Claims 6 to 9 not printed in the Gazette.]

1,167,950. FEED FOR FINISHING-CARDS. SOLON S. STILES and GEORGE M. STILES, Middletown, Conn. Filed Feb. 20, 1914. Serial No. 820,063. (Cl. 19—7.)



1. A supporting track, sheaves rotatably mounted and movable along said track, a traveler supported by said sheaves and upon which the latter are mounted, means for reciprocating the traveler, a rack located below said track, feed shafts mounted on the traveler, gears connecting said feed shafts to rotate them in opposite directions, feed rolls secured to the shafts, feed gears loosely mounted on the shafts and constantly engaging said rack, clutch members secured to the shafts adjacent to said feed gears, and means between said members and gears for alternately connecting and disconnecting said gears with and from said shafts.

2. A supporting track, grooved sheaves rotatably mounted and movable along said track, a traveler supported by said sheaves and upon which the latter are mounted, means for reciprocating the traveler, a rack located below said track, feed shafts mounted on the traveler, gears connecting said feed shafts to rotate them in opposite directions, feed rolls secured to the shafts, feed gears loosely mounted on the shafts and constantly engaging said rack, clutch members secured to the shafts adjacent to said feed gears, and means between said members and gears for alternately connecting and disconnecting said gears with and from said shafts.

3. A supporting track, sheaves rotatably mounted and movable along said track, a traveler supported by said sheaves, the latter being mounted at one edge of the traveler, means for reciprocating the traveler, a rack located below said track, feed shafts mounted on the traveler, gears connecting said feed shafts to rotate them in opposite directions, feed rolls secured to the shafts, feed gears loosely mounted on the shafts and constantly engaging said rack, clutch members secured to the shafts adjacent to said feed gears, and means between said members and gears for alternately connecting and disconnecting said gears with and from said shafts.

4. A supporting track, sheaves rotatably mounted and movable along said track, a traveler supported by said sheaves and upon which said sheaves are mounted, means for reciprocating the traveler, a rack secured to the under side of said track, feed shafts mounted on the traveler, gears connecting said feed shafts to rotate them in opposite directions, feed rolls secured to the shafts, feed gears loosely mounted on the shafts and constantly engaging said rack, clutch members secured to the shafts adjacent to said feed gears, and means between said members and gears for alternately connecting and disconnecting said gears with and from said shafts.

1,167,951. PROCESS OF TANNING. JOSEPH GUSTAVE STODOLA, Agram, Austria-Hungary, assignor to Gustav J. A. Trostel, Milwaukee, Wis. Filed Mar. 12, 1909. Serial No. 482,920. (Cl. 149—5.)

1. The process of tanning hides to produce durable leather which consists in subjecting them to the tanning action of both iron and chromium compounds.

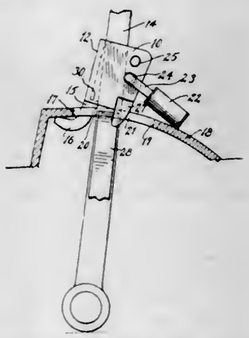
2. The process of tanning hides which consists in subjecting the hides to the tanning action of basic iron salts and basic chromium compounds.

3. The process of tanning hides which consists in subjecting the hides to the tanning action of chromium compounds and then subjecting them to the combined action of basic chromium compounds and basic iron salts.

4. The process of tanning hides which consists in subjecting them to pickling solution so that they will absorb acid, then treating them to a preliminary chrome tannage, then treating them with basic iron salts and basic chromium compounds in the same solution.

5. The process of tanning hides which consists in subjecting them to a pickling solution so that they will absorb acid, then treating them to a preliminary chrome tannage, then treating them with basic iron salts and basic chromium compounds in the same solution, removing them from the solution and permitting them to drain, then treating them in an alkali solution to prevent washing out much of the iron, and finally washing them with lukewarm water.

1,167,952. AUTOMOBILE-LOCK. GEORGE T. TRUNDLE, Jr., Cleveland, Ohio. Filed Jan. 29, 1915. Serial No. 4,987. (Cl. 70—90.)



1. The combination, with a gear shift lever and a guide plate having a longitudinal slot and a recess communicating with the slot into which the lever is adapted to be moved, of a U-shaped locking member adapted to embrace the sides of the lever and having a rigid finger depending through the slot and engaging beneath the plate adjacent the slot, the sides of said U-shaped member having therein a plurality of registering openings adapted to receive the bow of a padlock engaging the lever when in position, and so arranged that the bow of the lock may closely engage levers of varying widths.

2. The combination, with a lever and a slotted guide plate therefor having a longitudinal slot and a recess communicating therewith adapted to receive the lever, of a U-shaped locking member adapted to embrace the lever, a finger rigid with the member adapted to depend through the slot and having a projection on its lower end for engaging beneath the under side of the plate, the sides of said U-shaped member having therein a plurality of openings adapted to receive a lock and arranged as to be in positions at different distances from the side of the lever when the member is in position.

3. The combination, with a gear shift lever and a guide plate therefor having therein a longitudinal slot and a recess adapted to receive the lever and engage its edges, of a locking member for holding said lever in the recess, comprising a clevis-like member having an open side allowing it to be placed on the lever and having a depending finger adapted to engage the sides of the slot, a downwardly extending wedge-shaped projection rigid on the side of the clevis-like member and adapted to engage the slot to prevent lateral movement of the clevis-like member, said clevis-like member having registering openings adapted to receive a lock for engaging a side of the lever.

4. The combination, with a gear shift lever and a guide plate therefor having pairs of longitudinal slots connected by a passage, of means for holding said lever in the passage comprising a member adapted to embrace one edge and two sides of the lever and having openings therein for the bow of a pad-lock adapted to engage the other edge of the lever, said member having rigid depending projections adapted to engage each slot, one of said projections having means engaging beneath the guide plate.

5. The combination, with a gear shift lever and a guide plate therefor having a longitudinal slot and a communicating recess adapted to receive the lever, of a locking member comprising a pair of side members connected at one edge and adapted to embrace the gear shift lever and having a rigid depending finger adapted to engage the sides of the slot and hook beneath and engage the plate adjacent the end of the slot opposite the connecting portion of the locking member, and locking means engaging the side members and the side of the lever opposite the connecting portion.

[Claims 6 to 10 not printed in the Gazette.]

1,167,953. EYEGLASS-BRIDGE. WILLIAM R. UHLEMANN, Chicago, Ill. Filed Sept. 5, 1913. Serial No. 788,340. (Cl. 88—43.)



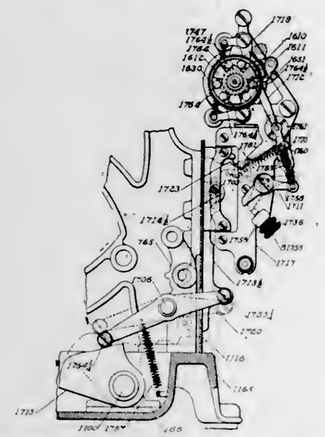
1. An eyeglass bridge or arch formed of vitreous material.

2. An eyeglass bridge or arch formed of transparent vitreous material.

3. An eyeglass bridge or arch formed of viterous material and integrally connected to the eyeglass lenses.

4. An eyeglass bridge or arch formed of transparent vitreous material and integrally connected to the eyeglass lenses.

1,167,954. LINE-SPACING MECHANISM FOR ADDING-MACHINES, TYPE-WRITERS, AND THE LIKE. JESSE G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 31, 1905. Serial No. 276,542. (Cl. 197—120.)



1. The combination of a roller platen, a ratchet wheel loosely mounted concentric therewith and having an annular flange, a disk secured to the platen within said flange and peripherally notched angularly, a roller in the notch, and a knob concentric with the platen and having a pin to engage said roller, said knob rotatable to disable the latter and then turn the platen independently of the ratchet wheel.

2. The combination of a roller platen, a ratchet wheel loosely mounted concentric therewith and having an annular flange, a disk secured to the platen within said flange and having a series of peripheral recesses, the bottoms of which are cammed in opposite directions from an intermediate point, a pair of rollers in each notch and a knob having a pin projecting between the rollers of each pair, said knob rotatable to disable either roller and turn the platen independently of the ratchet wheel.

3. In line spacing mechanism for adding machines, typewriting machines, and the like, the combination with the rotatable platen and its shaft, a ratchet wheel loosely mounted on the platen shaft and a swinging pawl; of a friction clutch device comprising a clutch ring on the ratchet wheel, a disk connected with the platen and having a marginal recess with two opposing angles, separate rollers in the angles respectively, means for normally pressing the rollers to engaging position, one roller making clutching engagement between said ring and disk in the line spacing operation and the other roller making clutching engagement between said members to lock the platen against independent forward rotation, and a movable disk loosely mounted on the platen shaft and closing the open end of the clutch ring, said disk being provided with an inwardly directed pin normally positioned between said rollers and arranged to be moved to engage either one of said rollers according to the direction of movement of said disk.

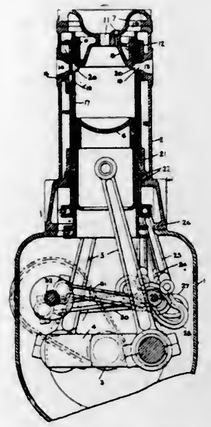
4. In line spacing mechanism for adding machines, typewriting machines, and the like, the combination with the rotatable platen and its shaft, a ratchet wheel loosely mounted on the platen shaft, and a swinging pawl; of a friction clutch device comprising a clutch ring on the ratchet wheel, a disk connected with the platen and having a plurality of arms with a pair of opposing angles between adjacent arms, series of rollers in the angles respectively, one series transmitting the movement of the ratchet wheel to the disk and platen and the other series locking the platen against independent forward rotation, and a series of pins arranged to be simultaneously moved to engage the rollers of one or the other series according to the direction of movement.

5. In line spacing mechanism for adding machines, typewriting machines, and the like, the combination with the rotatable platen and its shaft, a ratchet wheel loosely mounted on the platen shaft, and a swinging pawl; of a friction clutch device comprising a clutch ring on the ratchet wheel, a disk connected with the platen and having a plurality of arms with a pair of opposing angles between adjacent arms, series of rollers in the angles respectively, one series transmitting the movement of the ratchet wheel to the disk and platen and the other series locking the platen against independent forward rotation, and a disk provided with a series of laterally projecting pins normally positioned between the rollers and adapted to engage the rollers of one or the other series according to the direction of movement.

[Claims 6 to 13 not printed in the Gazette.]

1,167,955. INTERNAL-COMBUSTION ENGINE. JAMES KEISTER, Steubenville, Ohio. Filed May 28, 1912, Serial No. 700,160. Renewed Aug. 6, 1915. Serial No. 43,981. (Cl. 123—75.)

1. In an internal combustion engine, the combination of a crank case, a casing mounted thereon, a head for said casing having a projection extending into the casing and provided with a return flange, a valve sleeve inside of said casing and reciprocating at the outer side of the said flange of the head, and a piston reciprocating in said valve sleeve, the said valve sleeve forming with the piston and the projection of the head a power chamber, the valve sleeve being spaced from the outer wall of the casing and the interior of the casing head communicating with said space to permit of the circulation of a cooling agent.



2. In an internal combustion engine, the combination of a casing, a ring carried inside of the same, said ring having inlet and outlet ports therein and opening through the wall of the casing, a valve sleeve having telescoping engagement with said ring and having corresponding ports formed therein to register with the first-named ports, a piston reciprocating in said sleeve, and a head carried by the casing and having a projection which extends into the valve sleeve, said projection being of less diameter than the ring and surrounded at its inner end by the latter, the projection forming with the piston and valve sleeve a power chamber.

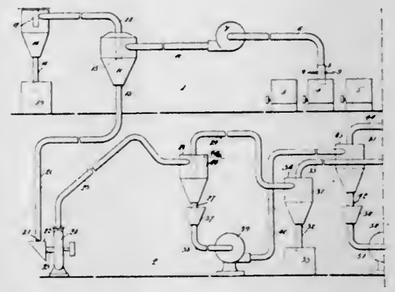
3. In an internal combustion engine, the combination of a casing having a head, said head having a projection with a returned flange thereon, a ring supported by said casing and surrounding the lower part of said flange but separted therefrom by means of an annular space, said ring having ports therein extending therethrough and through the wall of the casing, a valve sleeve located within said casing and reciprocating through the space between said ring and flange, and a piston reciprocating in the valve sleeve forming therewith and with the head a power chamber.

4. In an internal combustion engine, the combination of a casing, a head for said casing having a projection extending into the same, said casing having a returned flange forming a space between the same and the adjacent wall of said projection, a ring supported by said casing surrounding the lower part of the flange but separated therefrom by an annular space, said ring having ports extending therethrough and through the wall of the casing, a valve sleeve reciprocating at one end in the space between the projection and the ring, a piston reciprocating in said valve sleeve and forming therewith and with said head a power chamber, said valve sleeve being separated from the outer wall of the cylinder by a space communicating with the interior of the head to permit the circulation of a cooling and lubricating agent in contact with the outer surface of the valve sleeve and the inner end thereof.

5. In an internal combustion engine, the combination of a casing, a pair of heads for closing the same, each of said heads having an internal projection with a returned flange thereon separated from the outer wall of the projection, a pair of rings supported by said casing, each of said rings surrounding one of said projections at its inner end but separated therefrom by an annular space, each of said rings having ports passing therethrough and the outer wall of the casing, a valve sleeve received in each space between the ring and the projection and having ports therein to register with the first-named ports, a piston within each of said valve sleeves and forming therewith and with the heads a power chamber, and a web closing the opposite end of the casing and having openings therethrough to receive the valve sleeves, said valve sleeves being spaced from the walls of the casing to form a space communicating with spaces in the heads to permit circulation of a cooling and lubricating agent in contact with the lateral surfaces and the inner ends of the valve sleeves.

[Claims 6 to 17 not printed in the Gazette.]

1,167,956. PROCESS OF TREATING COCOA. JOHN WALKER, Boston, Mass., assignor to Massachusetts Chocolate Company, Boston, Mass., a Corporation of Massachusetts. Filed May 16, 1914. Serial No. 839,180. (Cl. 99—11.)



1. The process of treating cocoa which comprises breaking up and heating the cocoa cake and afterward chilling the broken cocoa by suspension of the heated particles thereof in cold air.

2. The process of treating cocoa which comprises breaking up and heating the cocoa cake and afterward chilling the broken cocoa by the suspension and conveyance of the heated particles thereof in a current of cold air.

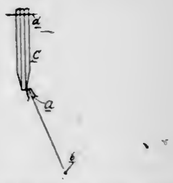
3. The process of treating cocoa which comprises breaking up and heating the cocoa cake and afterward chilling the broken cocoa by the suspension and conveyance of the heated particles thereof in cold air induced to pass through a pipe.

4. The process of treating cocoa which comprises breaking up and heating the cocoa cake and afterward chilling the broken cocoa by the suspension and conveyance of the heated particles thereof in successive currents of cold air.

5. The process of treating cocoa which comprises breaking up and heating the cocoa cake and afterward chilling the broken cocoa by subjecting the heated particles thereof to successive blasts of cold air induced to pass through pipes.

[Claims 6 to 25 not printed in the Gazette.]

1,167,957. BEVEL-GEAR-GRINDING MACHINE. FREDERICK ALEXANDER WARD, Detroit, Mich., assignor to Gear Grinding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 9, 1913. Serial No. 766,544. (Cl. 51—12.)



1. In machines for grinding toothed bevel wheels and the like, the combination of an abrasive element, means

for periodically restoring the contour of the said element, a reciprocatory slide upon which the abrasive element is mounted, a saddle carrying the slide and movable laterally in a circular path, a work support and means whereby rolling and indexing motions are intermittently imparted to the work.

2. In machines for grinding toothed bevel wheels or the like, the combination of a reciprocatory slide, a grinding wheel and trimming means for said wheel mounted on the slide, a saddle carrying the slide and movable laterally in a circular path, a work support, and means for producing simultaneous movement of the saddle in a circular path and rolling motion of the work.

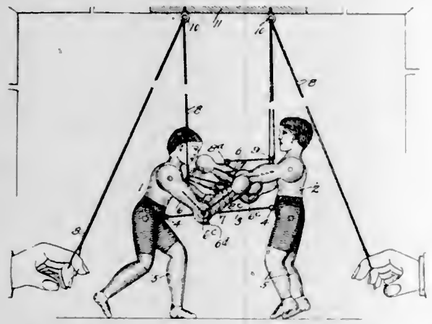
3. In machines for grinding toothed bevel wheels and the like, the combination of a grinding wheel formed with a pair of inclined grinding faces or edges, a reciprocatory slide carrying the wheel, a saddle carrying the slide and movable laterally in a circular path, a wheel carrying bracket mounted on the slide and movable laterally thereon, and means arranged in part on the slide and in part on the saddle for imparting a lateral movement to the bracket at the completion of each grinding operation on the tooth face.

4. In machines for grinding toothed bevel wheels and the like, the combination with a saddle movable laterally in a circular path and carrying a reciprocatory slide on which a grinding wheel is mounted, and a work support, of means for producing simultaneous movement of the saddle in its circular path and rolling motion of the work.

5. In machines for grinding toothed bevel wheels and the like, the combination with means comprising a rack or a pair of racks for producing simultaneous motion, of a saddle carrying a reciprocatory slide and grinding wheel, and a rotatable work support, of a lever and an operating cam adapted to provide an interval of rest after each double stroke of the rack or racks.

[Claims 6 to 13 not printed in the Gazette.]

1,167,958. AMUSEMENT DEVICE. WILLIAM F. WATKINS, Spokane, Wash., assignor to C. W. van Wye, Spokane, Wash. Filed Mar. 1, 1915. Serial No. 13,550. (Cl. 46—40.)



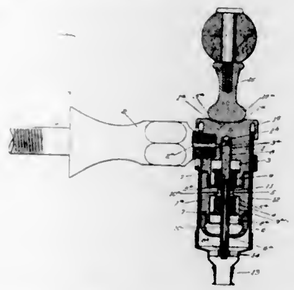
1. In a figure toy, the combination of a body comprising jointed arm members and movable leg members, operating cords for suspending the body and for imparting oscillation to said parts, said cords being attached at one end to a section of each of the arm members, guide means projecting from the top of the other section of the arm members and through which the cords pass, whereby to hold the cords in line with the path of movement of the arms in the oscillation thereof, and means for forcing the arm sections into extended position.

2. In a figure toy, the combination of a pair of puppets each comprising movable arm and leg members, operating cords for suspending the puppets and for imparting vibration thereto, means intermediate the puppets for holding the same in spaced relation, said means comprising a spring member adapted to vibrate upon movement of the operating cords and to transmit such vibration to the puppets.

3. In a figure toy, the combination with a support, of a pair of puppets, means for suspending said puppets from the support, said means constituting manipulative means for actuating said puppets, and a resilient member pivotally connected at each end to said puppets to maintain the same in spaced relation to each other.

4. In a figure toy, the combination of a pair of puppets, each comprising a body portion, sectional arm members movably connected thereto, and leg members also connected to the body portion, operating means for manipulating the puppets comprising an operating cord connected to one of the arm sections, a guide member on the other arm section through which the operating cord passes, and a support above said puppets from which the operating cord is suspended, a resilient member connected to the body portion of each figure for maintaining them in relative position with respect to each other, and springs connected to the arm sections tending to hold the same in normal positions.

1,167,959. FOUNTAIN-FAUCET. FRANK T. WIECHERT, Bellevue, Ohio. Filed Oct. 8, 1914. Serial No. 865,683. (Cl. 225—23.)

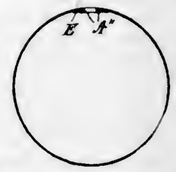


1. A fountain faucet, comprising a stationary valve body including a section threaded thereon and having oppositely disposed valve chambers, a movable surrounding cylinder terminating in a nozzle member carrying a hollow valve stem, the latter being removable with the removal of said section and adapted to communicate with one of said valve chambers, valves on said valve stem operating in said valve chambers and adapted to open and close communication between said valve chambers and between one of said valve chambers and said hollow valve stem, and means for operating and regulating the movements of said movable cylinder and nozzle member.

2. A fountain faucet, comprising a stationary valve body having oppositely disposed valve chambers, said valve body including a threaded section forming one of said chambers and provided with oppositely disposed valve seats, a vertically movable surrounding cylinder and nozzle member carrying a liquid discharge valve stem adapted to communicate with one of said valve chambers and provided with oppositely disposed valves operating in said valve chambers and coöperating with said valve seats, and means for operating said vertically movable surrounding cylinder and nozzle member whereby to operate said valves and open and close communication between one of said valve chambers and said liquid discharge stem.

1,167,960. PROCESS OF MANUFACTURING WICK-HOLDERS. LEWIS T. WILCOX, Peekskill, N. Y. Filed May 25, 1915. Serial No. 30,331. (Cl. 113—116.)

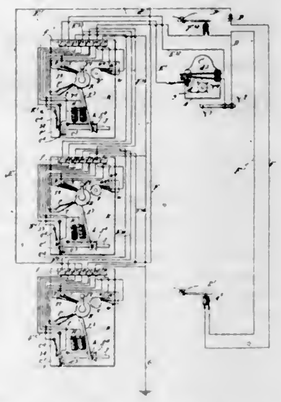
1. The method of making cylindrical carriers and the like, which consists in forming openings in both ends of a substantially flat blank, forming upstanding integral rivet flanges on the edges surrounding the openings at one end of said blank, bending the blank to tubular form, passing the said flanges through the openings of the opposite end and upsetting said flanges snugly over said other end.



2. The method of making cylindrical carriers and the like, which consists in forming a zone of perforations in and transversely of a substantially flat blank, forming openings in both ends of said blank, and producing upstanding integral rivet flanges around the openings at one end from the metal displaced in forming said openings, bending the blank to tubular form, passing the said flanges through the openings of the opposite end, and upsetting said flanges snugly over said other end.

3. The method of making cylindrical carriers and the like, which consists in forming a zone of perforations in and transversely of a substantially flat blank, producing flanges at the ends of said blank in a longitudinal curvature that is substantially the curvature of the completed carrier, forming openings in said flanges, the openings at one end being of greater diameter than those of the other and the metal displaced in forming said other openings constituting circular upstanding rivet flanges that snugly pass through the larger openings at the opposite end, bending the blank to tubular form passing the said flanges through the openings of said opposite end, and upsetting said flanges over said opposite end.

1,167,961. STATION-BOX FOR WATCHMEN AND FIRE-ALARM SIGNALING. FREDERICK WILLIAMS, Somerville, Mass., assignor to Acme Register Company, Somerville, Mass., a Corporation of Massachusetts. Filed Sept. 18, 1912. Serial No. 720,922. (Cl. 234—37.5.)



1. In a signal system comprising a central station and a series of signal stations, in combination with two recording instruments one giving a time signal and the other a signal which by its character will designate a particular place located at said central station, means located at a signal station adapted to send a time signal and means adapted to send a place signal, means adapted to send said signals simultaneously, and means whereby said place signal may be sent independently of said time signal.

2. In a signal system comprising a central station and a series of signal stations, means located at a signal station for sending a place signal and means also located at said signal station operable to indicate that said place signal is a fire or special signal, said place signal comprising a rotary circuit breaker adapted to make and break the circuit at predetermined intervals and said indicating signal comprising a circuit breaker operable during one or more complete rotations of said rotary circuit breaker, in combination with a recording instrument located at said central station, a circuit connected therewith and breakable by said circuit breaker as described.

3. In a signaling system comprising a series of signal boxes each adapted to be operated normally in a closed circuit, means for sending a place record comprising a rotary circuit breaker and means for operating said circuit breaker comprising a spring operated shaft and gear connections between said shaft and said rotary circuit breaker, said shaft carrying a wheel, two pairs of contacts, one pair engaging said rotary circuit breaker and the other said wheel, and two ground contacts, one adapted to be available upon the breaking of any part of the circuit upon one side of the circuit breaker and wheel, and the other to become available upon the breaking of any part of the circuit upon the other side of the circuit breaker and wheel, as described.

4. In a signaling system comprising a series of signal boxes each, means for sending a place signal comprising a rotary circuit breaker and means for operating said circuit breaker comprising a spring operated shaft, said shaft carrying a wheel, two pairs of contacts, one pair engaging said rotary circuit breaker and the other said wheel, whereby a circuit may be made through each pair of contacts, said wheel having an interruption in its periphery whereby the circuit through its pair of contacts is temporarily broken to give a signal independent of the signal given by said rotary circuit breaker.

5. In a signaling system comprising a series of signal boxes, in combination with a time-recording mechanism as described, a place-recording mechanism adapted to be operable normally in a closed circuit, and means to operate said mechanism substantially as described, and a lever pivoted to engage said place-recording mechanism at one end, said lever also being in engagement with said time-recording mechanism at the other end whereby said signals may be sent simultaneously.

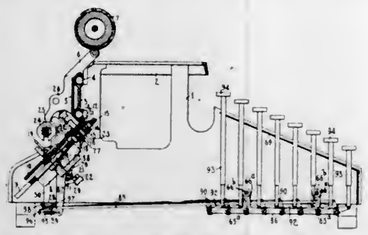
[Claims 6 to 9 not printed in the Gazette.]

1,167,962. CABLE-SPLICE. WILBUR O. WILSON, Chicago, Ill. Filed Dec. 12, 1913. Serial No. 806,175. (Cl. 173—268.)



A device of the class described comprising two cable sections, lead pipes encircling said cables, a casing section of larger diameter secured to the end of each of said pipes, means for securing the ends of said casings together, a socket member secured to the end of the wire of one cable, a plug secured to the end of the wire of the other cable section, a tube of insulating material surrounding said socket member throughout its length and extending over the entire portion of the respective cable end within the casing member, a similar tube having one end thereof arranged between the last mentioned tube and the casing and projecting beyond said socket member, insulation inclosing said plug except the portion adapted to fit within said socket, the end of said insulation being adapted to abut the end of the socket member and the tube immediately surrounding the same, insulation arranged between the cable end bearing the plug and its respective casing member and the projecting end of the insulating tube on the socket end adapted to extend over the insulation on the plug and adjacent portion of the cable and abut the last mentioned insulation, substantially as described.

1,167,963. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to The Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Sept. 16, 1914. Serial No. 861,965. (Cl. 197—177.)



1. In a column selecting mechanism for typewriting machines, the combination of a rotatable multiple stop, a support on which said stop is mounted, to afford movement independent of said support, a plurality of column stops operative to rotate said multiple stop, and means for moving said support to bring said multiple stop into coöperative relationship with said column stops.

2. In a column selecting mechanism for typewriting machines, the combination of a carriage, a plurality of stops mounted thereon, a support movably mounted on the machine frame, a column selector on said support, and means for moving said support to bring said selector into coöperative relationship with the carriage stops, each of which is adapted to move it a limited extent independently of said support.

3. In a column selecting mechanism for typewriting machines, the combination of a multiple stop, a pivoted support on which said multiple stop is movably mounted, a plurality of column stops each operative to move said multiple stop to a new position, and means for swinging said support on its pivot to bring said multiple stop into coöperative relationship with said column stops.

4. In a typewriting machine, the combination of a movably supported frame, a multiple stop journaled on said frame, a plurality of column stops each adapted to rotate said multiple stop independently of said movable frame, and means for moving said frame and carying said multiple stop bodily into a position where it will coöperate with said column stops.

5. In a column selecting mechanism for typewriting machines, the combination of a carriage, a stop bar thereon, a plurality of stops adjustably mounted on said bar, a column selector rotatable to a new position by each of said plurality of stops but normally out of operative relationship therewith, a pivoted frame on which said selector is mounted, means for moving said frame to carry said selector to operative position, and spring means operative on said pivoted frame and constantly tending to maintain said selector in inoperative position.

[Claims 6 to 28 not printed in the Gazette.]

1,167,964. ELECTRICAL FUSE. HARRY W. YOUNG, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 814,853. (Cl. 175—273.)



1. A fuse comprising a tubular member; terminal contacts at each end of said tubular member; a fusible member in said tubular member; a screw connection between one of said contacts and one end of said fusible member; a guard arranged on one of said members in definite relation with said screw to prevent engagement of said screw connection except when said guard and connection are properly arranged; and means on the other member for accommodating said guard set in the same relation to the screw, substantially as described.
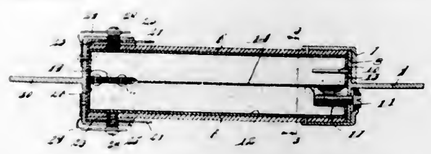
2. A fuse comprising a tubular member; terminal contacts at each end of said tubular member; a fusible member in said tubular member; a screw in one of said contacts and arranged to connect with one end of said fusible member; and a guard pin on said contact projecting beyond said screw, there being an opening in said fusible member adapted to receive said pin, substantially as described.

3. A fuse comprising an outer tube having metallic caps at each end; a screw carried by one of said caps; a guard for said screw; an inner tube; a threaded socket at one end of said inner tube adapted to receive said screw and said inner tube being arranged to receive said guard; and a fusible member in said inner tube and having one end connected with said socket and its other end connected with the cap at the other end of said outer tube, substantially as described.

4. A fuse comprising an outer tube having a metallic cap permanently secured at one end thereof; a screw swiveled in said cap and extending inwardly into said tube; an inwardly extending guard post of insulating material for said screw; an inner tube having a closure at one end provided with an opening adapted to pass over said guard and a threaded socket adapted to receive said screw; a fusible member secured to said closure at one end, extending the full length of said inner tube; and means for effecting electrical connection with the other end of said fusible member.

5. A fuse comprising a tube having a metallic cap at one end; an inwardly extending screw carried by said cap; a guard for said screw; and a fusible member in said tube and provided at one end with a threaded socket adapted to receive said screw and also provided with means for accommodating said guard, substantially as described.

1,167,965. ELECTRICAL FUSE. HARRY W. YOUNG, Chicago, Ill. Filed July 8, 1914. Serial No. 849,675. (Cl. 175—273.)



1. A fuse comprising an outer casing of insulating material; a metallic cap for one end of said casing; a comparatively long screw swiveled in said cap and extending into said casing; an inner removable cartridge; a fusible member in said cartridge; a metallic sleeve secured to one end of said fusible member, and arranged to receive said screw, said sleeve being provided with a locking lip and fitting a corresponding opening in the cartridge end; and means at the other end of said casing for effecting electrical connection with the other end of said fusible member, substantially as described.

2. A fuse comprising an outer casing of insulating material; a screw projecting into one end of said casing; an inner removable cartridge; a fusible member in said cartridge having one end formed into a substantially U-shaped channel; a metallic sleeve secured to one end of said fusible member and arranged to receive said screw, said sleeve being provided with a locking lip interlocking with said channel and fitting a corresponding opening in the cartridge end; and means in the other end of said casing for effecting electrical connection with the other end of said fusible member, substantially as described.

3. A fusible member having one end formed into a substantially U-shaped channel; and a threaded sleeve having a locking lip interlocking with said channel, substantially as described.

1,167,966. PROCESS FOR RUST-PROOFING IRON AND STEEL. WILLIAM H. ALLEN, Detroit, Mich., assignor to Clark W. Parker, Detroit, Mich. Filed May 10, 1915. Serial No. 27,101. (Cl. 148—41.)

1. The process of rendering the surfaces of iron or steel rust-proof which consists in immersing the same in a solution of an acid phosphate salt of the alkali earth metals in the presence of hydrated manganic oxid until a layer of suitable thickness of ferrosoferric phosphate is formed.

2. The process of rendering the surfaces of iron or steel rust-proof which consists in immersing the same in a solution of an acid phosphate salt of the alkali earth metals in the presence of hydrated manganic oxid until a layer of suitable thickness of ferrosoferric phosphate is formed, a current of air being pased up through the solution.

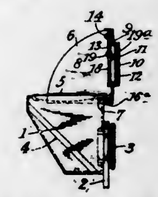
3. The process of rendering the surfaces of iron or steel rust-proof which consists in immersing the same in a solution of mono-calcium phosphate in the presence of hydrated manganic oxid in water.

4. The process of rendering the surfaces of iron or steel rust-proof which consists in immersing the same in a solution of mono-calcium phosphate in the presence of hydrated manganic oxid in water while fine streams of air are being passed through the solution.

5. The process of rendering the surfaces of iron or steel rust-proof which consists in immersing the same in a solution of mono-calcium phosphate in the presence of hydrated manganic oxid in water practically free of free phosphoric acid.

[Claim 6 not printed in the Gazette.]

1,167,967. LEVELING DEVICE FOR PHOTOGRAPHIC CAMERAS. FREDERICK D. ANDERSON, Denver, Colo., assignor to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed Aug. 25, 1915. Serial No. 47,330. (Cl. 88—1.5.)



1. In a finder a gravity acting camera leveling device pivotally connected to the interior of the hood of the finder.

2. In a finder a gravity acting camera leveling device so pivotally connected to the hood of the finder that it will afford no obstruction to the closing of the hood.

3. In a finder a hood provided with a stop to determine the extent to which the hood may be opened and a gravity acting camera leveling device pivoted near the swinging edge of the hood.

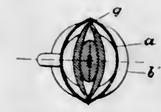
4. In a finder, a hood, a primary gravity acting camera leveling device pivotally connected to the hood and adapted to right and left oscillation and a supplemental gravity acting camera leveling device pivotally connected to the primary leveling device and adapted to forward and rearward oscillation.

5. In a finder, a hood having a recess in its back, a primary gravity acting camera leveling device pivoted to the hood in front of the recess and adapted to right and left oscillation and a supplemental gravity acting camera leveling device pivoted to the primary leveling device and adapted to forward and rearward oscillation.

1,167,968. TEAT-CUP. OSCAR ANDERSON, Lancaster, Pa. Filed Sept. 5, 1914. Serial No. 860,483. (Cl. 31—102.)

1. In a milking machine subjecting the teat to steady suction and intermittent squeezing, means for concentrating atmospheric pressure to give a greater effective squeezing pressure on the teat and means to intermittently relax said pressure by suction.

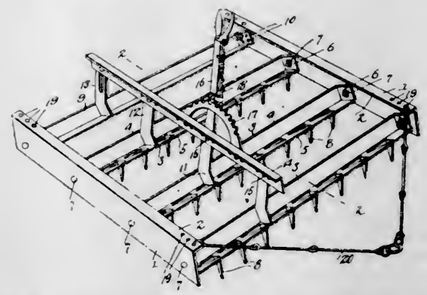
2. In a milking machine teatcup subjecting the teat to steady suction and intermittent squeezing, means whereby a low fluid pressure can be concentrated to give a greater proportionate degree of squeezing on the teat, and means to relax said squeezing by suction.



3. In a milking machine teatcup subjecting the teat to steady suction and intermittent squeezing, means within the teatcup, whereby the atmospheric pressure may be concentrated to give a greater proportionate degree of squeezing on the teat.

4. In a milking machine subjecting the teat to steady suction and intermittent squeezing, means adapted to convert a low outside pressure to a higher pressure on the teat and means to intermittently relax the squeezing without interrupting the steady suction on the teat.

1,167,969. COMBINED DRAG AND HARROW. WILLIAM C. ARBOGAST, Blanchester, Ohio. Filed Jan. 29, 1915. Serial No. 5,021. (Cl. 55—23.)



1. A combined drag and harrow including tooth-bars and drag bars each constructed of angle strips, the tooth bars having integral teeth struck from one plane of such bars.

2. A combined drag and harrow including tooth bars and drag bars each constructed of angle strips, the tooth bars having integral teeth struck from one plane of such bars, and means for adjusting said bars to present distinct surfaces to the ground surface.

3. A combined drag and harrow including tooth bars and drag bars each constructed of angle strips, the tooth bars having integral teeth struck from one plane of such bars, and means for simultaneously adjusting all of said bars to present distinct surfaces to the ground surfaces.

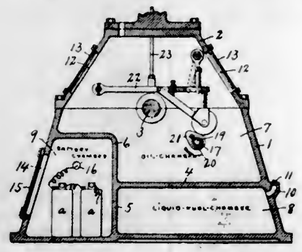
4. A combined drag and harrow including side bars, angle bars pivotally supported by and between said side bars, certain of said angle bars presenting both toothed surfaces and drag surfaces.

5. A combined drag and harrow including side bars, angle bars with right angled surfaces pivoted between the side bars, one of the angle bars having both right angled surfaces unbroken to form a drag bar, others of the angle bars having one surface each formed with integral teeth to present combined harrow and drag bars.

1,167,970. INTERNAL-COMBUSTION ENGINE. ROBERT J. BALZ, Syracuse, N. Y., assignor of one-half to Gertrude C. Meyer, Syracuse, N. Y. Original application filed Apr. 9, 1914, Serial No. 830,610. Divided and this application filed Feb. 17, 1915. Serial No. 8,964. (Cl. 123—195.)

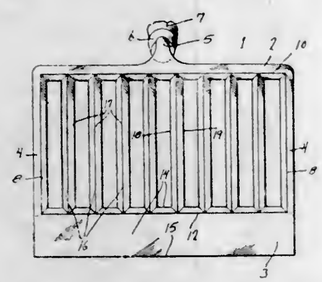
An internal combustion engine having a hollow base divided into a plurality of non-communicating compart-

ments, one of the compartments constituting an oil chamber, another compartment, a liquid fuel chamber, a third compartment, a battery chamber, and a hollow cam shaft



extending across and journaled in opposite sides of the oil chamber and provided with radial passages connecting the interior of the hollow shaft with the oil chamber.

1,167,971. MIXING-HOE. LUDWIG J. BIRN, Chewelah, Wash. Filed Mar. 13, 1915. Serial No. 14,147. (Cl. 55—98.)

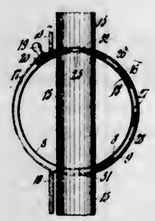


1. A mixing hoe comprising an open frame provided with a handle, and mixing bars extending across the open portion of said frame and of diamond cross section and having their longitudinally extending sharp edge portions disposed forwardly and rearwardly with respect to the plane of the hoe, substantially as described.

2. A mixing hoe comprising a hoe body composed of an open frame including a lower bar, said lower bar being of substantially diamond shaped cross section with one sharp edge elongated and disposed downwardly, substantially as described.

3. A mixing hoe comprising a hoe body composed of an open framework with the framework portions having forwardly and rearwardly disposed sharp edges, said portions diverging from said sharp edges in plane of the hoe body, substantially as described.

1,167,972. TONE-MODERATOR FOR TALKING-MACHINES. GEORGE E. BRIGHTSON, Oyster Bay, N. Y., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed Feb. 17, 1914. Serial No. 819,275. (Cl. 181—27.)

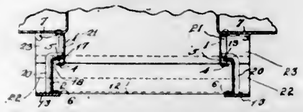


1. A combination of an intermediate sound conduit of a talking machine provided between the end thereof which connects with the sound box and the end thereof which connects with the horn with a transverse slot cut through the wall of said conduit throughout the circumference thereof, a valve casing extending laterally from said conduit and provided with a guideway broader than said conduit and registering with the slot thereof, and a block of felt constituting a valve and slidable in said guideway and softly and snugly fitting and closing the grooves thereof against the passage of sound through said grooves around the valve, and operative to cover or vary the sound passage of said conduit.

2. A combination of an intermediate sound conduit of a talking machine provided between the end thereof which connects with the sound box and the end thereof which connects with the horn with a transverse slot cut through the wall of said conduit throughout the circumference thereof, a valve casing extending laterally from said conduit and provided with a guideway broader than said conduit and registering with the slot thereof, and a block of felt constituting a valve and slidable in said guideway and softly and snugly fitting and closing the grooves thereof against the passage of sound through said grooves around the valve, and provided with a series of openings of different areas adapted to vary the sound passage of said conduit.

3. A combination of an intermediate sound conduit of a talking machine provided between the end thereof which connects with the sound box and the end thereof which connects with the horn with an arc-shaped transverse slot cut through the wall of said conduit throughout the circumference thereof, a valve casing in the form of a ring having a circumferential slot, extending laterally from said conduit and provided with an arc-shaped guideway broader than said conduit and registering with the slot thereof, and a valve of soft material slidable snugly in said guideway and adapted to cover the cross-section of said conduit at said arc-shaped slot, and provided with an opening of smaller area than said conduit adapted to change the sound passage thereof and with a knob projecting through said circumferential slot.

1,167,973. CAR-DIAPHRAGM. RAY M. BROWN, Cleveland, Ohio, assignor to The Curtain Supply Company, Chicago, Ill., a Corporation of New Jersey. Filed May 16, 1914. Serial No. 838,922. (Cl. 105—61.)



1. The combination with a car having a yielding buffer, of a pair of independently mounted overlapping diaphragm side members spaced apart to permit of angular movement in a horizontal plane, one of such members being carried by the buffer and the other being carried by the car.

2. The combination with a car having a yielding buffer, of a pair of independently mounted overlapping diaphragm members spaced apart, one of such members being carried by the buffer and the other being carried by the car and a yielding weather strip secured to one of the members adapted to slidably engage the other member.

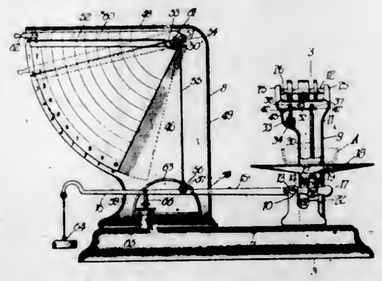
3. In combination in a car having a yielding buffer, a diaphragm side member carried by the buffer having an inwardly projecting flange, and a diaphragm member carried by the car adapted to telescope with the first diaphragm member having an outwardly projecting flange, the latter member extending within the former member and being spaced therefrom when operative to permit of angular movement in a horizontal plane.

4. In combination in a car having a yielding buffer, a diaphragm side member carried by the buffer having an inwardly projecting flange and a diaphragm member carried by the car adapted to telescope with the first diaphragm member having an outwardly projecting flange, the said flanges being overlapped and having their edges spaced from the adjacent diaphragm when such diaphragms are telescoped to permit of angular movement in a horizontal plane.

5. In combination in a car having a yielding buffer, a pair of independently mounted telescoping diaphragm side members spaced apart and provided at the overlapping ends with overlapping flanges, each flange being out of contact with the body of the other member to permit of angular movement in a horizontal plane, one of such diaphragms being carried by the buffer and the other carried by the car.

[Claims 6 to 20 not printed in the Gazette.]

1,167,974. SCALE. JOHN D. BURKHOLDER, Lancaster, Pa., assignor to Toledo Scale Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 12, 1911. Serial No. 632,714. (Cl. 73—29.)



1. In a device of the class described a beam, a frame upon which the beam is fulcrumed, a scale pan pivotally mounted on the beam, a bracket extending from the scale pan laterally of the beam and a link pivoted to the bracket and to the frame.

2. In a weighing scale a beam, a frame upon which the beam is fulcrumed, a scale pan pivotally mounted on the beam, an arm upon the scale pan extending laterally with respect to the beam, a vertical post upon the arm and a link pivoted to the post and to the frame.

3. In a device of the class described a beam, a frame upon which the beam is fulcrumed, a scale pan pivotally mounted on the beam, a bracket extending from the scale pan laterally of the beam and a link pivoted to the bracket and to the frame and extending parallel to the beam.

4. In a weighing scale a beam, a frame upon which the beam is fulcrumed, a scale pan pivotally mounted on the beam, a bracket extending laterally with respect to said beam and upwardly from the scale pan and a link pivoted to the bracket and to the frame.

5. In a weighing scale a beam, a frame comprising fulcra for said beam, a scale pan pivotally mounted upon the beam, a hollow member on the frame offset laterally of the beam, a bracket attached to the scale pan and extending within the hollow member, and a link pivoted to said bracket and to said member.

[Claims 6 to 8 not printed in the Gazette.]

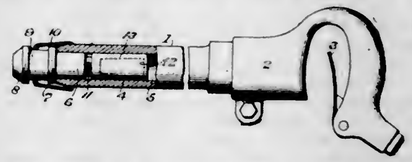
1,167,975. PNEUMATIC-TOOL PISTON. WILLIAM BURLINGHAM, Newport News, Va., assignor, by direct and mesne assignments, to Engineering Products Corporation, Newport News, Va., a Corporation of Virginia. Filed May 21, 1914. Serial No. 840,025. (Cl. 121—20.)

1. The combination of a pneumatic tool cylinder, a hollow piston having a closed chamber therein, and a working tool upon the shank of which the blows of the piston are imparted.

2. A pneumatic tool piston of the impact type having a completely and tightly closed chamber therein.

3. A pneumatic tool piston of the impact type having a longitudinally extending completely and tightly closed chamber therein.

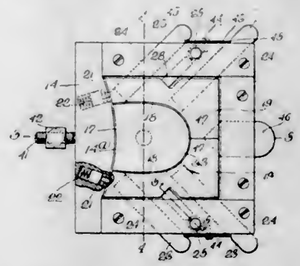
4. A pneumatic tool piston of the impact type having a longitudinally extending closed chamber therein and its forward striking end solid and of reduced diameter.



5. A pneumatic tool piston having a forward striking end, and provided with a chamber extending through its rear end, and a plug closing the end of said chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,167,976. MACHINE FOR TRIMMING THE FIN OR OVERFLOW FROM MOLDED ARTICLES. DUNCAN R. CAMPBELL, Boston, Mass., assignor of one-half to Frank Rumrill, Boston, Mass. Filed May 28, 1915. Serial No. 30,956. (Cl. 164—31.)



1. In a machine of the character stated, the combination of a press bed, a platen, a holder supported by the bed under the platen, a sectional trimming die formed to embrace a molded article and composed of a section fixed to the holder and a plurality of sections movable relatively to each other and to the fixed section to expand and contract the die, means for maintaining the die normally expanded, and means operable by the press platen for moving the body sections to contract the die.

2. In a machine of the character stated, the combination of a press bed, a platen, a holder supported by the bed under the platen, a trimming die section fixed to the holder, carriers movable in the holder, a plurality of trimming die sections fixed to said carriers, said sections collectively forming an adjustable trimming die formed to embrace a molded article, means for guiding said carriers to expand and contract the die, means yieldingly holding the carriers retracted to expand the die, and means operable by the press platen for moving said carriers to contract the die.

3. In a machine of the character stated, the combination of a press bed, a platen, a holder supported by the bed under the platen, a trimming die section fixed to the holder, carriers movable in the holder, a plurality of trimming die sections fixed to said carriers, said sections collectively forming an adjustable trimming die formed to embrace a molded article, means for guiding said carriers to expand and contract the die, spring-pressed die-expanding means adapted to yieldingly hold the carriers retracted, and die-contracting plungers projecting from the holder and adapted to be pressed inwardly by the platen to contract the die.

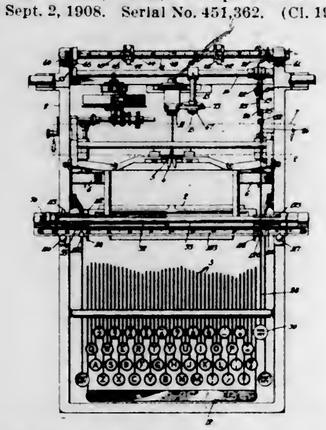
4. In a machine of the character stated, the combination of a press bed, a platen, a holder supported by the bed under the platen, a sectional trimming die formed to receive a molded article, and composed of a section fixed to the holder and a plurality of sections movable relatively to each other and to the fixed section to expand and contract the die, means for maintaining the die normally

expanded, means operable by the platen for moving the body sections to contract the die, and automatic means for ejecting a heel from the expanded die.

5. In a machine of the character stated, the combination of a press bed, a platen, a holder supported by the bed under the platen, a trimming die section fixed to the holder, carriers movable in the holder, a plurality of trimming die sections fixed to said carriers, said sections collectively forming an adjustable trimming die formed to embrace a molded article, oblique guide bars engaged with said holder, oblique guideways for said bars in the carriers, means yieldingly holding the carriers retracted to expand the die, and means operable by the platen for moving said carriers to contract the die.

[Claims 6 to 11 not printed in the Gazette.]

1,167,977. TYPE-WRITING MACHINE. JOHN J. CHAPIN, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 2, 1908. Serial No. 451,362. (Cl. 197—176.)



1. In a typewriting machine, the combination of a laterally shiftable spring-drawn paper carriage, an escapement rack movably mounted thereon, one or more movable tabulator stops, normally restrained spring-actuated means for displacing the rack and moving a tabulator stop to effective position, and a tabulator key controlling said means and adapted to release the same toward the end of its operation.

2. In a typewriting machine, the combination of a laterally shiftable spring-drawn paper carriage, an escapement rack movably mounted thereon, one or more movable tabulator stops, normally restrained spring-actuated means for displacing the rack and moving a tabulator stop to effective position, and a tabulator key adapted in the first part of its movement to put the spring of said means under tension and in the latter part of its movement to release said means.

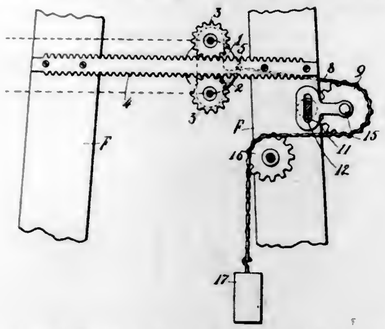
3. In a typewriting machine, the combination of a laterally shiftable spring-drawn paper carriage; an escapement rack pivotally mounted thereon, one or more movable tabulator stops, normally restrained spring-actuated means for displacing the rack and moving a tabulator stop to effective position, and a tabulator key controlling said means and adapted to release the same toward the end of its operation.

4. In a typewriting machine, the combination of a laterally movable spring-drawn paper carriage; a tabulator key lever; a second lever controlled thereby but movable independently thereof; a spring for effecting such latter movement adapted to be put under tension by the key lever; a latch for restraining the second lever adapted to be tripped by the key lever; and carriage release and stop setting means operated by the second lever.

5. In a typewriting machine, the combination of a laterally movable spring-drawn paper carriage; a tabulator key lever; a secondary lever mounted intermediate its ends on the key lever; a spring applied to one end of said secondary lever; a latch engaging the other end of said secondary lever and adapted to be tripped by the key lever; and carriage release and stop setting means operated by the secondary lever.

[Claims 6 to 66 not printed in the Gazette.]

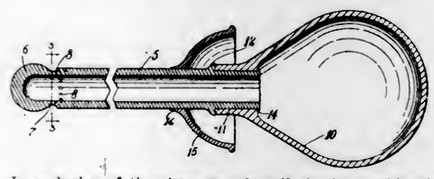
1,167,978. TENSION DEVICE FOR YARN-DRESSING MACHINES. OCTAVE CHARBONNEAU, Providence, R. I. Filed Mar. 13, 1915. Serial No. 14,148. (Cl. 28—14.)



1. In a yarn dressing machine, a double rack, a tension roll, a carrier therefor, said carrier having upper and lower gears meshed with the teeth of the rack, a rotatable gear having numbers on its face, a stationary pointer associated with the numbers, a gear below the last named gear, and a weighted chain connected to the carrier and engaged over the third named gear and thereunder and over the last named gear.

2. In a yarn dressing machine, a track, a tension roll carrier movably related to the track, an indicator including a rotatable element mounted independent of the carrier, and combined means to tension the roll carrier and to operate the rotatable element of the indicator including a flexible member connected to the carrier and passing over said rotatable element and having a weight connected thereto whereby to tension the flexible element and thereby the carrier so that each movement of the carrier will effect corresponding movement of the rotatable element.

1,167,979. VAGINAL IRRIGATOR. MARCELLUS B. CLARKE, Akron, Ohio. Filed June 5, 1914. Serial No. 843,306. (Cl. 128—25.)



In a device of the character described, the combination of a hollow flexible barrel having at its end a ball-shaped head connected with the barrel by a neck which leaves an external annular groove, an annular series of openings extending diagonally through the barrel in a general forward direction and terminating in said groove, a flexible bell-shaped shield surrounding the barrel and slidably embracing the same, an annular shoulder on the barrel between the shield and the end opposite the head, and a bulb embracing the barrel and abutting said shoulder.

1,167,980. INDICATOR FOR PNEUMATIC TIRES. SAMUEL F. COLE, Purcellville, Va. Filed Aug. 26, 1914. Serial No. 858,631. (Cl. 200—27.)

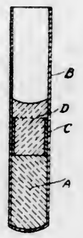
1. An indicating device for pneumatic tires, comprising outer and inner tubes; contact-strips within the inner tube; an armature arranged to make contact with the contact-strips; a pressure-means situated within said inner tube, and a circuit-closer adapted to be brought into operation by the decreased pressure of air within the tire.

2. An indicating device, comprising outer and inner tubes; a pressure-means within the inner tube; contact-strips extending into the inner tube; conductors in contact with the contact-strips, and an armature adapted to make contact with the contact-strips.



3. A device for indicating the deflation of a pneumatic tire, having in combination, outer and inner tubes; a pressure-means within the inner tube, adapted to be set to a predetermined pressure; a flanged-tube swiveled in the head of the outer tube; adjustable means for clamping the flanged-tube to said head; a flanged, insulating block fitted into the flanged-tube; contact-strips in the inner tube, and an armature adapted to make contact with the contact-strips, when the pressure within the tire has become reduced to the predetermined pressure.

1,167,981. DETONATOR. DAVID CORRIE and GEORGE ALFRED ASHCROFT, county of Stirling, Scotland, assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Filed Dec. 10, 1913. Serial No. 805,695. (Cl. 102—9.)

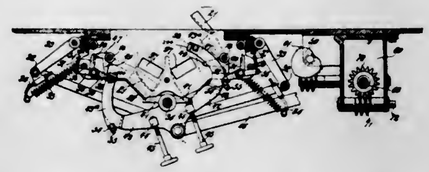


1. A detonator comprising a tube containing a charge of detonator composition, part of the tube containing the detonator composition merging into a reinforced part of constricted internal diameter which again merges into a non-reinforced part of greater diameter and a charge of priming composition filling the reinforced part and extending into said part of greater diameter.

2. A detonator comprising a tube closed at one end and partially filled with a charge of detonator composition, a reinforcing member in said tube consisting of a short tubular member fitting the bore of said first mentioned tube above the charge of detonator composition, and a charge of priming composition within said reinforcing member, and presenting an igniting surface equal in area to the cross section of the bore of said first mentioned tube, the strength of the walls of said reinforcing member being so proportioned relative to the charge of the priming composition as to prevent rupture of the tube until the charge of detonator composition has been detonated.

3. A detonator comprising a tube closed at one end and partially filled with a charge of detonator composition, a reinforcing member in said tube consisting of a short tubular member fitting the bore of said first mentioned tubes above the charge of detonator composition, and a charge of priming composition within said reinforcing member and comprising an igniting surface as large in area as the cross section of the bore of said reinforcing member, the strength of the walls of said reinforcing member being so proportioned relative to the charge of the priming composition as to prevent rupture of the tube until the charge of detonator composition has been detonated.

1,167,982. AUTOMATIC STOKER. ALFRED COTTON, Newark, N. J. Filed May 4, 1910. Serial No. 559,287. (Cl. 110—113.)



1. An automatic stoker comprising a horizontally swinging shovel, a tension means for moving said shovel through its fuel-throwing movement, and means for varying the tension on the shovel for successive throws to vary the velocity of the shovel movement and the longitudinal distribution of the fuel, said means also varying the inner limit of the shovel movement to vary the lateral or sidewise distribution of the fuel.

2. An automatic stoker comprising a horizontally swinging shovel, a tension means for moving said shovel through its fuel-throwing movement, and means for varying the inner limit of the shovel movement to vary the extent of the lateral distribution of the fuel.

3. An automatic stoker comprising a horizontally swinging shovel, a tension means for moving said shovel through its fuel-throwing movement, and means for automatically varying the tension on the shovel for successive throws to vary the velocity of the shovel movement and the longitudinal distribution of the fuel, said means also varying the inner limit of the shovel movement to vary the lateral or sidewise distribution of the fuel.

4. An automatic stoker comprising a horizontally swinging shovel, a tension means for moving said shovel through its fuel-throwing movement, means for withdrawing the said shovel to the same point for each movement, and means for varying the inner limit of travel of the shovel to vary the lateral distribution of the fuel.

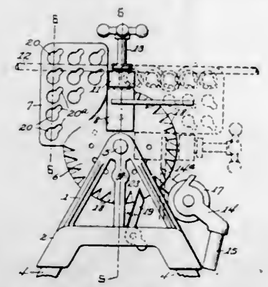
5. An automatic stoker comprising a horizontally swinging shovel, a tension means for moving said shovel through its fuel-throwing movement, means for withdrawing said shovel to the same point for each movement, means for varying the tension on the shovel for each movement, said means also varying the inner limit of the travel of the shovel in each successive movement to vary the lateral and longitudinal distribution of the fuel.

[Claims 6 to 45 not printed in the Gazette.]

1,167,983. PIPE-BENDING APPARATUS. RAY L. DAVIS and GUY C. MOYERS, Wheeling, W. Va. Filed Feb. 12, 1915. Serial No. 7,876. (Cl. 153—46.)

1. A pipe bending apparatus comprising a support, a wheel rotatably mounted on said support, a ratchet in fixed relation to said wheel, a pawl normally engaging said ratchet, means for clamping a pipe against the periphery of said wheel, and means mounted on the axis of said wheel and adapted for movement adjacent to the periphery of the latter whereby the pipe is bent about said periphery.

2. A pipe bending apparatus comprising a support, a wheel rotatably mounted on said support, means for clamping a pipe against the periphery of said wheel, a ratchet in fixed relation to said wheel, a pawl normally engaging said ratchet, and a lever-operated wheel adapted to be rotated adjacent to the periphery of the first-mentioned wheel for bending the pipe about the latter.



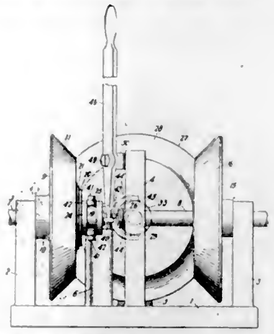
3. A pipe bending apparatus comprising a support, a wheel rotatably mounted on said support, a ratchet in fixed relation to said wheel, a pawl normally engaging said ratchet, a yoke having pivotal relation to the axis of said wheel, a wheel rotatably mounted in said yoke and located in opposing relation to and at a spaced distance from the periphery of the first mentioned wheel, means for clamping a pipe against the periphery of said first mentioned wheel, and means for swinging said yoke downward for bending over said periphery a pipe secured by said clamping means and interposed between said wheels.

4. A pipe bending apparatus comprising a support, a wheel rotatably mounted on said support, a ratchet in fixed relation to said wheel, a pawl normally engaging said ratchet, a yoke having a pivotal relation to the axis of said wheel, a wheel rotatably mounted in said yoke and located in opposing relation to and at a spaced distance from the periphery of the first mentioned wheel, a bearing block carried by said first-mentioned wheel, a head-piece mounted over said bearing block, means for adjusting said head-piece for clamping a pipe against the periphery of said first mentioned wheel, and means for swinging the yoke downward for bending a pipe interposed between said wheels and secured by the clamping mechanism.

5. A pipe bending apparatus comprising a support, a wheel rotatably mounted on said support, a ratchet in fixed relation to said wheel, a pawl normally engaging said ratchet, a yoke having a pivotal relation to the axis of said wheel, a wheel rotatably mounted in said yoke and located in opposing relation to and at a spaced distance from the periphery of the first mentioned wheel, a bearing block carried by said first-mentioned wheel, an adjusting screw mounted in said bearing block, a head-piece disposed in overlying relation to the first-mentioned wheel and mounted in swiveled relation to said adjusting screw, said block being adapted to clamp a pipe interposed between said wheels in rigid relation to the first mentioned wheel, and hand operated means for lowering the yoke-carried wheel for bending the pipe over the periphery of the first mentioned wheel.

1,167,984. DRIVING AND REVERSING MECHANISM. DANIEL L. DODGE, Inwood, and THOMAS F. ARMSTRONG, Far Rockaway, N. Y. Filed Dec. 11, 1914. Serial No. 876,655. (Cl. 74—26.)

1. In driving and reversing mechanism the combination of a driving shaft, a driven shaft the axis of which is a prolongation of that of the driving shaft and one end of which faces and is adjacent to an end of the driving shaft, a driving bevel-wheel fast on one shaft, a driven bevel-wheel fast on the other shaft, a transverse axially shiftable bevel-wheel, a shiftable clutch-member mounted on one shaft adjacent to the wheel which is on the other shaft and which includes a coacting clutch-member, the shiftable clutch-member being movable axially to and from said coacting clutch-member, and shifting mechanism connected both to said shiftable clutch-member and to the transverse bevel-wheel and operative to shift them simultaneously as described.



2. In driving and reversing mechanism the combination of a driving shaft, a driven shaft the axis of which is a prolongation of that of the driving shaft and one end of which faces and is adjacent to an end of the driving shaft, a driving bevel-wheel and clutch-member fast on the driving shaft, a driven bevel-wheel fast on the driven shaft, a transverse axially shiftable bevel-wheel, a clutch-member mounted on the driven shaft between the driving wheel and driven wheel and shiftable axially to and from the clutch-member of the driving wheel, and shifting mechanism connected both to said shiftable clutch-member and to the transverse bevel-wheel and operative to shift them simultaneously as described.

3. In driving and reversing mechanism the combination of a driving bevel-wheel, a driven bevel-wheel, a clutch-member included in one of said wheels, a transverse axially movable bevel-wheel, a shiftable clutch-member adjacent to the wheel which includes the aforesaid clutch-member, shifting mechanism connected both to said shiftable clutch-member and to the transverse bevel-wheel and operative to shift them simultaneously, and a spring that normally presses the clutch-members together and acts through the shifting mechanism on the transverse bevel-wheel to keep it disengaged from the other wheels.

4. In driving and reversing mechanism the combination of a driving bevel-wheel and clutch-member, a driven bevel-wheel, a transverse axially movable bevel-wheel, a shiftable clutch-member, shifting mechanism connected both to said shiftable clutch-member and to the transverse bevel-wheel and operative to shift them simultaneously, and a spring that normally presses the clutch-members together and acts through the shifting mechanism on the transverse bevel-wheel to keep it disengaged from the other wheels.

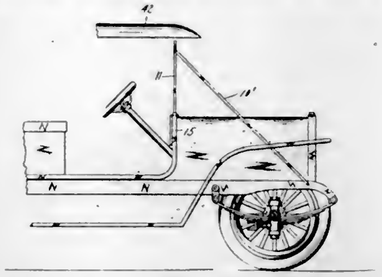
5. In driving and reversing mechanism the combination of a driving bevel-wheel and clutch-member, a driven bevel-wheel, a transverse axially movable bevel-wheel, a shiftable clutch-member, and shifting-mechanism comprising a lever connected to the shiftable clutch-member, another lever connected to the transverse bevel-wheel, and a third lever movable by hand and operative on both of the others simultaneously.

[Claims 6 to 9 not printed in the Gazette.]

1,167,985. WIND-SHIELD. MARIA DOUJAK, New York, N. Y., assignor of one-fourth to Carl Heller, New York, N. Y. Filed Mar. 1, 1915. Serial No. 11,228. (Cl. 21—148.)

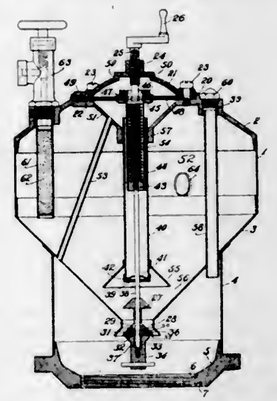
In a wind-shield, the combination with a fixed vertically extending main frame, of a second frame of smaller width pivoted to the top rail of said main frame, means for holding said second frame in the plane of said first frame, said second frame being adapted to be swung

rearwardly out of the plane of said main frame, a rigid plate pivoted in a line parallel to the bottom rail of said main frame to some stationary part of the automobile, coacting means upon the bottom rail of said second frame and upon that edge of said plate which is parallel to its pivoted edge for attaching said plate to said second



frame when the latter is swung rearwardly, and substantially triangular sheets fastened to the remaining edges of said plate adapted to engage the side rails of said second frame and said main frame, substantially as and for the purpose specified.

1,167,986. CARBID-FEED ACETYLENE-GENERATOR. RICHARD P. ELLIOTT, Boston, Mass. Filed May 7, 1910. Serial No. 559,955. (Cl. 48—53.)



1. In an acetylene generator, a carbid-feed mechanism comprising a carbid chamber and a downward tapering opening in the bottom of the carbid-chamber to form a valve seat; an inclosed chamber formed at the top of the carbid-chamber having a flexible diaphragm located in the middle thereof, the edges of the diaphragm being secured in said inclosed chamber to form a gas-tight closure; a tube extending downwardly from the inclosed chamber and secured therein with a gas and dust-tight closure; an outwardly and downwardly flaring metal support secured to the lower part of said tube; a cup-shaped guiding washer secured on the lower end of said tubing; a flexible washer secured to the lower end of said tube having a hole therethrough to receive a valve rod; said valve rod; a spring-casing secured to the upper end of said valve rod, the upper end of said spring-casing being secured in the center of the diaphragm with a gas-tight closure; a valve mounted upon the lower end of said valve rod having secured therein a flexible ring formed to seat in the valve seat with a carbid and water-tight closure; a metal flange formed on the top of said valve of a diameter approximately the same as the diameter of the valve seat and adapted to close it to prevent carbid falling through the valve seat when it is moved downwardly into said valve seat; a compressible spring mounted in the spring-casing; a screw threaded into the top of the carbid-chamber and arranged to press against the top of the compressible spring; means for turning the screw downwardly against the end of the spring to compress it so as to move the valve downward away from the valve seat; and a passage from the space below the bottom of the carbid-chamber to the inclosed chamber in which the diaphragm is located so that gas pressure in the generator can be communicated therethrough to the under side of the diaphragm.

2. In an acetylene generator, a water-tank and a carbid-chamber; a cylindrical opening in the bottom of the carbid-chamber through which the carbid is fed to the water; a flexible valve for closing said opening; a fixed flaring shelf in said carbid-chamber for partially supporting the weight of the carbid, located just above the valve seat in the bottom of the carbid-chamber; a compressible spring for opening the valve; a pressure-controlled diaphragm for closing the valve; a diaphragm chamber in which said diaphragm is mounted having a dust and gas-tight wall between it and the carbid chamber; a passage communicating with the gas space in the generator and the underside of the diaphragm; a tube through which the gas can flow from the water-tank to the top of the carbid-chamber; and an outlet from the carbid-chamber having a fibrous filtering material located therein.

1,167,987. WINDOW-SHADE. BLAINE EWING, New York, N. Y. Filed Dec. 22, 1914. Serial No. 878,476. (Cl. 156—31.)

In a device of the kind described, a shade having a hem at the lower edge thereof, reinforcing means contained in said hem, a transparent protective film of substantially colorless material covering a portion of the hem, located at the center thereof and attached thereto by the seam forming the hem, and cord carrying means passing through said transparent material and fastened to the reinforcing means.

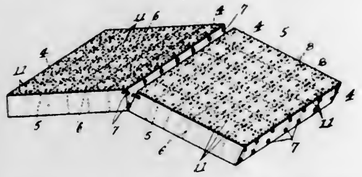
1,167,988. SCAFFOLD. ALBERT N. FAULKNER, New York, N. Y. Filed Nov. 20, 1914. Serial No. 873,142. (Cl. 20—81.)

1. In an improved scaffold, the combination with side rails, and means for connecting the same, the lower walls of the side rails having grooves therein, of brackets secured to the ends of said side rails, having rounded portions engaging the lower portions of the ends of the said side rails, and provided with grooves registering with the grooves of said side rails, and extending to the upper edge of the said rails, each having an inverted, truncated, conically-shaped socket extending substantially to the

upper side of said side rails, and formed continuous with the said grooves, cables resting within said grooves and extending over said brackets, the extremities of the cables being enlarged and resting within the sockets to form a rigid connection between the cables and the brackets, and lugs carried by the brackets at the lower ends thereof adjacent the grooves of the said side rails, for gripping the cables, and preventing dislodgment of the same from the said grooves.

2. In an improved scaffold, the combination with side rails and means for connecting the same, the lower walls of the side rails having grooves therein, of brackets secured to the ends of said side rails, having rounded portions engaging the lower portions of the ends of the said side rails, and provided with grooves registering with the grooves of said side rails, and extending to the upper edge of said rails, each having an inverted, truncated, conically-shaped socket extending substantially to the upper side of said side rails, and formed continuous with the said grooves, cables resting within said grooves and extending over said brackets, the extremities of the cables being unraveled and adapted to rest within the said sockets, a filling adapted to rest within the sockets for the forming of a rigid connection between the cables and the brackets, and lugs carried by the brackets at the lower ends thereof adjacent the grooves of the said side rails, for gripping the cables, and preventing dislodgment of the same from the said grooves.

1,167,989. SUPPLEMENTARY MATTRESS. MICHAEL P. FLEMING, Chicago, Ill. Filed Apr. 30, 1914. Serial No. 835,386. (Cl. 5—13.)



1. A supplementary mattress comprising a rigid rectangular frame; parallel spaced rigid ribs extending across and secured at their ends to said frame; a covering enveloping said frame; and filling material between said ribs in said covering, substantially as described.

2. A supplementary mattress comprising a rigid rectangular frame; a covering enveloping said frame; parallel spaced rigid ribs in and having their ends secured to said frame, the edges of said ribs engaging said covering; and filling material between said ribs in said covering, substantially as described.

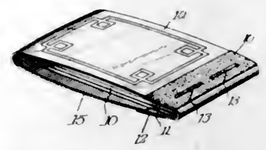
3. A supplementary mattress comprising a rigid rectangular frame; a covering enveloping said frame; parallel spaced rigid ribs in and having their ends secured to said frame, the edges of said ribs engaging said covering; short spaced parallel rigid ribs in said frame and between said first mentioned ribs and at right angles to the latter; and filling material between said ribs in said covering, substantially as described.

4. A supplementary mattress comprising a rigid rectangular frame; a covering enveloping said frame; parallel spaced rigid ribs in and having their ends secured to said frame, the edges of said ribs engaging said covering; short spaced parallel rigid ribs in said frame and between said first mentioned ribs and at right angles to the latter; filling material between said ribs in said covering; and ties passing through said filling material and covering binding the latter against said ribs and said filling material, substantially as described.

5. A supplementary mattress comprising a rigid rectangular frame; a covering enveloping said frame; a plurality of spaced rigid ribs extending longitudinally of said frame; nails passing through said covering and frame and into the ends of said ribs; a plurality of short spaced rigid ribs disposed transversely of said frame and positioned between said first mentioned ribs and the sides of said frame; filling material in said covering and between said ribs and frame portions; and ties through said filling material and covering binding the latter against said frame and ribs, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,167,990. SAFETY-MATCH FOLDER. OSCAR J. FRIEDMAN, Chicago, Ill. Filed Mar. 22, 1915. Serial No. 16,058. (Cl. 206—29.)



1. A safety match folder comprising a sheet folded to provide a back and front overlapping flaps, said back being surfaced with match-igniting material throughout a portion of its outer face behind the lower front flap.

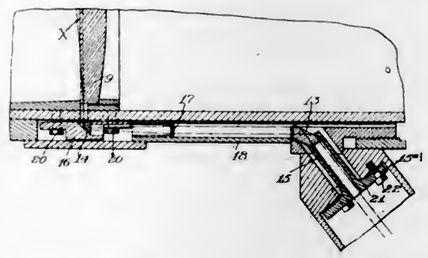
2. A safety match folder comprising a card of matches and a cover encompassing said card, said cover being folded to provide a back and overlapping front flaps, the outer face of said back being surfaced with match-igniting material.

3. A safety match folder comprising a card of matches and an encompassing cover therefor, said cover being folded to provide a back and overlapping front cover flaps, a portion of the outer face of said back remote from the exposed heads of the matches forming said card being surfaced with match-igniting material.

4. A safety match folder comprising a card of matches and a cover encompassing said card, said cover being folded to provide a back and overlapping front flaps, the lower front flap and said back embracing the lower edge of said card, a portion of said back disposed opposite said lower flap being surfaced with match-igniting material.

5. A safety match folder comprising a card of matches and a protecting sheet secured at its lower edge to the lower edge of said card and extending upwardly behind said matches, said sheet being provided on its face behind said matches and remote from the exposed matches forming the card with a surface of match-igniting material.

1,167,991. ILLUMINATING MEANS FOR TELESCOPE CROSS-HAIRS. ALBERT GREBE, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed May 1, 1914. Serial No. 835,671. (Cl. 88—32.)



1. In a telescope, the combination with a tube, of a glass therein having cross hairs on one surface thereof, said tube having an opening in its side wall in alinement with the edge of the glass, a roughened surface on the edge of the glass at a point opposite the opening and means for directing a beam of light through the opening and through the edge of the glass upon the cross hairs at such an angle that the reflected light impinges upon the roughened surface.

2. In a telescope, the combination with a tube, of a glass therein having cross hairs on one surface and having a roughened edge and a smooth spot at one point of the edge, of means for directing a beam of light through the smooth spot on the edge of the lens upon a limited portion of the cross hairs at such an angle that the reflected light is incident on the roughened edge at a point opposite the smooth spot.

3. In a telescope, the combination with a casing having an aperture, of a glass mounted therein in alinement with the aperture and provided with cross hairs, and having a portion of its periphery polished, a source of illumination and a lens arranged to direct the rays of light received therefrom into said aperture and focus them upon said polished portion.

4. In a device for illuminating cross hairs of telescopes, the combination with a telescope, a support for the telescope and a lens carrying the cross hairs located within the telescope at a point surrounded by the support, of a lamp socket located on the telescope beyond the support and having a lamp therein, and reflectors carried by the telescope and adjacent the lamp socket and lens, one of said reflectors adapted to receive a beam of light from the lamp and transmit it in a longitudinal direction to the other reflector, which latter reflects it upon the edge of the lens.

1,167,992. BRASSIÈRE. EDGAR GUGGENHEIM, New York, N. Y., assignor to Meyer W. Schloss, New York, N. Y. Filed Sept. 19, 1914. Serial No. 862,432. (Cl. 2—73.)

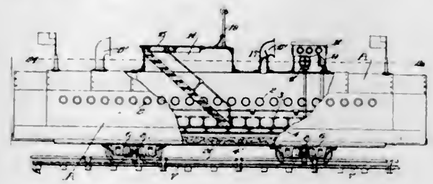


1. A brassière having pockets to accommodate the breast lobes, constructed of flat strips of elastic fabric, two of said strips converging toward each other at diametrically opposite locations and across the face of an intermediate strip, the edges of said converging strips being stitched to the face of the intermediate strip, substantially as described.

2. A supporting device for a portion of the body, comprising a pocket to accommodate such portion, said pocket being constructed of flat strips of elastic fabric two of which are superposed upon one face of a third strip and converge thereacross, the converging strips being stitched to the face of the third strip.

3. A supporting band for the body comprising a pocket portion formed of flat elastic bands, two of which are separated from each other at their middle portions and converge toward each other until they intersect at their end portions, and a third band to which said converging bands are attached.

1,167,993. AMUSEMENT APPARATUS. JACOB GUNZENDORFER, San Francisco, Cal. Filed Apr. 7, 1915. Serial No. 19,703. (Cl. 104—111.)



1. In an aquatic amusement device, the combination with a trackway, of a vessel mounted on trucks and adapted to travel over said trackway, said trackway being inclined longitudinally and laterally at different points to transmit a wave-like motion to the vessel, a guide rail mounted on each side of the trackway, brackets secured on the trucks, rollers on said brackets engageable with the guide tracks to limit lateral movement of the vessel, a plurality of inclosures through which the trackway passes, electrically operated means within said inclosures, switches controlling the flow of current through said electrically operated means, and means controlled by the passage of the vessel through the inclosures for opening or closing said switches.

2. In an aquatic amusement device, the combination with a trackway, of a vessel mounted on trucks and adapted to travel over said trackway, said trackway having means arranged at different points to transmit a wave-like motion to the vessel, a guide rail mounted on each side of the trackway, brackets secured on the trucks, rollers on said brackets engageable with the guide tracks to limit lateral movement of the vessel, a plurality of inclosures through which the trackway passes, electrically operated means within said inclosures, switches controlling the flow of current through said electrically operated means, means controlled by the passage of the vessel through the inclosures for opening or closing said switches, a tank through which the trackway passes, and a ballast chamber in the vessel to submerge the vessel while passing through the tank.

3. In an aquatic amusement device, the combination with a trackway, of a vessel mounted on trucks and adapted to travel over said trackway, said trackway having means arranged at different points to transmit a wave-like motion to the vessel, a plurality of inclosures through which the trackway passes, and a plurality of suspended weights in one of said inclosures in the path of the vessel to produce a grating or grinding sound on the vessel to imitate traveling through icebergs.

4. In an aquatic amusement device, the combination with a trackway, of a vessel mounted on trucks and adapted to travel over said trackway, said trackway being inclined longitudinally and laterally at different points to transmit a wave-like motion to the vessel, a plurality of inclosures through which the trackway passes, scenic displays in said inclosures, port-holes formed in the sides of the vessel through which the scenic displays are viewed, and convex lenses in said port-holes to produce optical illusion and distance.

5. In an aquatic amusement device, the combination with a trackway, of a vessel mounted on trucks and adapted to travel over said trackway, a plurality of inclosures through which the trackway passes, and a plurality of suspended weights in one of said inclosures in the path of the vessel to produce a grating or grinding sound on the vessel to imitate traveling through icebergs.

[Claims 6 to 8 not printed in the Gazette.]

1,167,994. SOAP-HOLDER. GEORGE F. HALL, Irvington, N. J., assignor to Russell T. Binder, Orange, N. J. Filed Dec. 31, 1914. Serial No. 879,943. (Cl. 45—28.)

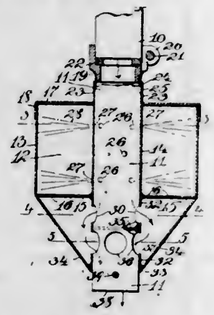
1. A soap holder comprising a soap receptacle, a tube passing through the receptacle, the receptacle being mounted on the tube so that it has a limited rotation thereon, the tube having an outlet into the soap receptacle and having an outlet below the receptacle, the outlets being arranged so that by rotative movement of the receptacle one outlet is opened and the other closed.

2. A soap holder comprising a soap receptacle, a tube with open ends and passing through the receptacle and supporting the receptacle so that it can be rotated to a limited extent, the receptacle having an outlet portion, the tube having an outlet into the soap receptacle and having an outlet below the receptacle, the outlets being arranged so that by rotative movement of the receptacle one outlet is opened and the other closed, the outlet of the receptacle and of the tube below the receptacle passing out through the bottom open end of the tube.

3. A soap holder comprising a tube having means on its top end for securing it to a faucet, the tube having

an upper outlet and a lower outlet, a soap receptacle mounted on the tube so that the receptacle has a limited rotation, the soap receptacle having a perforated partition between the upper and lower outlets of the tube, and means on the receptacle for alternately opening and closing the outlets of the tube when the receptacle is turned.

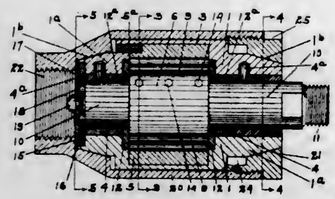
4. A soap holder comprising a tube, means on one end for securing the tube to a faucet, the tube having upper and lower outlets, a soap receptacle comprising a sleeve to fit the tube, an outer wall and a perforated bottom, the sleeve having upper openings to be placed in and out of register with the upper outlets of the tube by rotative movement of the receptacle, the sleeve having lower openings to be placed in and out of register with the lower outlets of the tube, the respective registering outlets and openings being arranged so that when the upper ones are open the lower ones are closed and vice versa, the perforated bottom of the receptacle being arranged between the upper and lower set of openings.



5. A soap holder comprising a tube having means on one end for fastening it to a faucet, an annular receptacle encircling the tube and arranged to oscillate thereon, the tube having small outlets, the receptacle having means for closing and opening the holes according to the direction of its movement, the tube extending below the receptacle, the extending part of the tube having a lower outlet, and means on the receptacle for opening and closing the lower outlet in opposition to the small outlets, the bottom of the receptacle being perforated.

[Claims 6 and 7 not printed in the Gazette.]

1,167,995. MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed July 26, 1913. Serial No. 781,418. (Cl. 138—3.)



1. In a rotary motor, a motor cylinder, a split holding member having a chamber in which said cylinder is seated and means adapted to engage and secure said holding member in assembled position, substantially as described.

2. In a rotary motor, a motor cylinder, a split holding member having end bearings with an intermediate chamber in which said cylinder is seated and means adapted to engage and secure said holding member in assembled position, substantially as described.

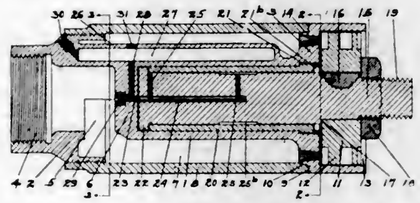
3. In a rotary motor, a motor cylinder, a split holding member having a chamber and end bearings with removable bushings therein, said cylinder being seated in said chamber and means adapted to engage and secure said holding member in assembled position, substantially as described.

4. In a rotary motor, a motor cylinder, a split holding member having a chamber therein, means to hold said cylinder against rotation within said chamber and means adapted to engage and secure said holding member in assembled position, substantially as described.

5. In a rotary motor, a motor cylinder, a split holding member having a chamber therein, means to hold said cylinder against rotation in said chamber and a casing for said holding member, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

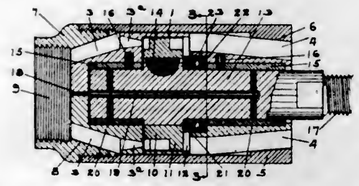
1,167,996. ROTARY MOTOR FOR DRIVING TOOLS. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed May 22, 1914. Serial No. 840,337. (Cl. 121—57.)



1. In a rotary motor, a supporting body having heads of greater diameter at its respective ends one of said heads having a motor chamber therein, a rotary motor member in said chamber having a shaft journaled in said body and means to supply the motive agent to said member, said means including a cylinder screw-threaded to one of said heads and abutting an inclined portion of the other head, substantially as described.

2. In a rotary motor, a body having a supply opening, an oil reservoir and a bearing, a rotary motor member having a shaft journaled in said bearing and means to admit the motive agent from said supply opening or oil from said reservoir to said bearing as desired, substantially as described.

1,167,997. MOTOR. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Original application filed July 26, 1913, Serial No. 781,418. Divided and this application filed May 10, 1915. Serial No. 27,199. (Cl. 138—7.)



1. In a rotary motor, a holding member separable by being split in the direction of its length and a casing for said holding member, substantially as described.

2. In a rotary motor, a holding member separable by being split in the direction of its length and having a chamber therein with bearings having removable bushings extending from opposite sides of said chamber and a casing for said holding member, substantially as described.

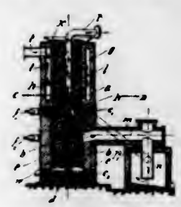
3. In a rotary motor, a holding member separable by being split in the direction of its length and having a chamber therein with bearings having removable bushings extending from opposite sides of said chamber, means to hold said bushings from rotation and a casing for said holding member, substantially as described.

4. In a rotary motor, a holding member separable by being split in the direction of its length and having a chamber therein with journal bearings extending from opposite sides thereof, means at an end of said chamber to take the wear and end thrust of the rotary motor member and a casing for said holding member, substantially as described.

5. In a rotary motor, a holding member separable by being split in the direction of its length and having a chamber therein with bearings extending from opposite sides of said chamber, bushings in said bearings with means to prevent their rotation, a wear and thrust plate at an end of said chamber and a casing to engage and secure said holding member in assembled position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

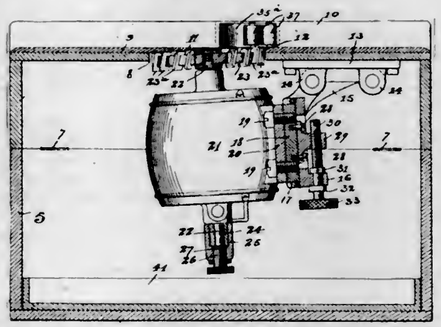
1,167,998. PROCESS OF OBTAINING METALS, SUCH AS LEAD OR ZINC, IN AN ELECTRIC FURNACE. ALOIS HELFENSTEIN, Vienna, Austria-Hungary. Filed Feb. 2, 1914. Serial No. 816,036. (Cl. 204—63.)



1. A process for obtaining metal vapors, especially those of zinc and lead, from ores in an electric furnace, which consists of preheating the charge before the distillation process takes place, exhausting the gases and vapors developed in the preheating zone to free the metallic vapors from gases favoring oxids or formation of metallic dust, and exhausting part of the carbon oxids and metal vapors generated in the distillation zone.

2. The process for obtaining metal vapors, especially those of zinc and lead, from ores in an electric furnace, which consists of preheating the charge before the distillation process takes place, exhausting the gases and vapors developed in the preheating zone to free the metallic vapors from gases favoring oxids or formation of metallic dust, exhausting part of the carbon oxids and metal vapors generated in the distillation zone, and conducting the carbon oxids escaping with the metal vapors into the preheating zone to preheat the charge.

1,167,999. LETTER-OPENING MACHINE. EDWARD T. HENDEE, Chicago, Ill. Filed Mar. 30, 1912. Serial No. 687,416. (Cl. 164—60.)



1. In a letter opening machine, the combination of a cabinet provided with a channel guide for envelops on its top wall and a slot formed through said top wall and the bottom of said channel guide, a cutter-wheel mounted in said cabinet with its working surface projecting through said slot, and a cover for said slot mounted on said top wall and adapted to overlie and close the slot or any portion thereof not closed by envelops.

2. In a letter opening machine, the combination of a cabinet provided with a channel guide for envelops on its top wall and a slot formed through said top wall and the bottom of said channel guide, a cutter-wheel mounted in said cabinet with its working surface projecting through said slot, and a spring-pressed follower mounted and operating transversely of said channel guide above said slot and serving to laterally compress a bunch of envelops when the latter are passed over said slot and to close said slot or any unused portion thereof.

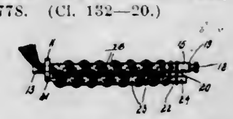
3. In a letter opening machine, the combination of a cabinet provided with a channel guide for envelops on its top wall and a slot formed through said top wall and the bottom of said channel guide, a cutter-wheel mounted in said cabinet with its working surface projecting through said slot, and a spring-pressed follower mounted and operating transversely of said channel guide above said slot, said follower having an inclined edge on its approach side adapted to be engaged by the advance end of a bunch of envelops passed through said channel guide whereby to force back said follower from above said slot.

4. In a letter opening machine, the combination of a cabinet provided with a channel guide for envelops on its top wall and a slot formed through said top wall and the bottom of said channel guide, a cutter-wheel mounted in said cabinet on an axis slightly inclined from the vertical, said cutter-wheel having blades the cutting edges of which lie in a plane substantially parallel with the plane of the body of the wheel and project through said slot on the high side of said wheel, a spring-pressed follower mounted and operating transversely of said channel guide above said slot and serving to laterally compress a bunch of envelops when the latter are passed over said slot, and an adjustable cutter plate opposite said follower, the lower edge of said cutter plate coöperating with the blades of said cutter wheel to effect a shearing cut on the outer edge of said bunch of envelops.

5. In a letter opening machine, the combination of a cabinet having a slot in its top wall, an electric motor in said cabinet disposed with its armature shaft slightly inclined from the vertical, a cutter-wheel mounted on the upper end of said armature shaft with the outer portion of its upper face projecting through said slot on the high side of said cutter wheel, means for supporting said motor from a wall of said cabinet, and means for bodily adjusting said motor in the longitudinal direction of its armature shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,168,000. HAIR CURLER AND WAVER. PAUL E. HERRMANN, New York, N. Y. Filed May 27, 1915. Serial No. 30,778. (Cl. 132—20.)



1. In a hair curler and waver, the combination with a tubular member having a fixed stop near one of its ends, of a shell rotatably mounted upon said member, and means for forcing said shell against said stop and thereby preventing the rotation of said shell in relation to said tubular member, substantially as and for the purpose specified.

2. In a hair curler and waver, the combination with a tubular member having a fixed stop near one of its ends, of a shell rotatably mounted upon said member, the outer end of said tubular member being provided with internal screw threads, and a screw bolt in engagement with said threads provided with a head adapted to abut against said shell and to force the same against said stop to prevent rotation of said shell in relation to said tubular member.

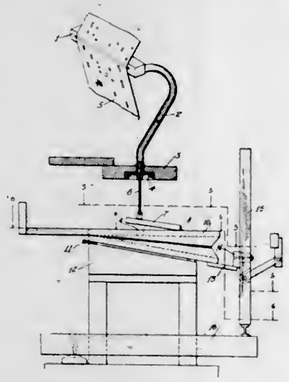
3. In a hair curler and waver, the combination with a tubular member having a notched head near one of its ends, of a shell rotatably mounted upon said member, the outer end of said tubular member being provided with internal screw threads, and a screw bolt in engagement with said threads provided with a head adapted to abut against said shell and to force the same against said notched head to prevent rotation of said shell in relation to said tubular member.

4. In a hair curler and waver, the combination with a tubular member having a fixed stop near one of its ends, of a shell rotatably mounted upon said member, means for forcing said shell against said stop and thereby preventing the rotation of said shell in relation to said tubular member, and a tubular member pivoted to said stop and extending in parallel relation to said first tubular member, substantially as and for the purpose specified.

5. In a hair curler and waver, the combination with a tubular member having a fixed stop near one of its ends, of a shell rotatably mounted upon said member, the outer end of said tubular member being provided with internal screw threads, a screw bolt in engagement with said threads provided with a head adapted to abut against said shell and to force the same against said stop to prevent rotation of said shell in relation to said tubular member, and a tubular member pivoted to said stop and extending in parallel relation to said first tubular member.

[Claims 6 and 7 not printed in the Gazette.]

1,168,001. PNEUMATIC ACTION FOR PIANO-PLAYERS. JOHN HILLSTROM and AMIL HAWKINSON, Chicago, Ill. Filed Apr. 9, 1915. Serial No. 20,209. (Cl. 84—177.)



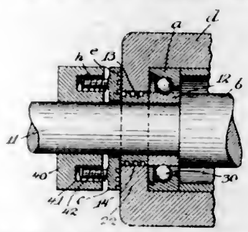
1. A hinged striking pneumatic comprising an oscillatory wing, a relative stationary wing and means connected to said oscillatory wing whereby its relative movement is obviated.

2. A striking pneumatic comprising an oscillatory wing, a non-oscillatory wing, a hinge for the latter wing and means connected to the first named wing whereby its relative movement is obviated.

3. A hinged striking pneumatic comprising an oscillatory wing, a relatively stationary wing and a gravity valve carried by said oscillatory wing whereby its relative movement is obviated.

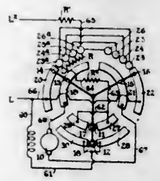
1,168,002. PACKING FOR JOURNALS. ALBERT HIATH, Cannstatt-Stuttgart, Germany, assignor to Norma Compagnie Gesellschaft mit beschraenkter Haftung, Cannstatt-Stuttgart, Germany, a Corporation of Germany. Filed Dec. 13, 1913. Serial No. 806,587. (Cl. 137—120.)

A journal box provided with an opening at one end, a shaft projecting through said opening and provided in said opening with a spirally grooved lubricating ring, an annular lubricating plate surrounding said shaft and having a broad spirally grooved contact face engaging the end wall of said box and overlapping the joint between



said end wall and said lubricating ring, and means for holding said lubricating plate in yielding contact with said end wall.

1,168,003. MOTOR-CONTROLLER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 28, 1914. Serial No. 841,610. (Cl. 172—179.)



1. The combination with a motor having an armature taking a relatively low current and a shunt field taking a relatively high current, of a variable resistance and means for connecting the motor armature and shunt field through said resistance to a source of supply for starting said motor in either direction, said resistance being adjustable to regulate the motor speed but being variable only with respect to the armature branch.

2. The combination with a shunt motor, of power connections for the armature and field branches of said motor including a resistance common to both branches and means controlling the continuity of both branches, said means in off position establishing a closed loop across the terminals of the motor armature.

3. The combination with a shunt motor, of a common series resistance for the armature and shunt field winding of said motor and means operable to reverse the flow of current in one branch of the motor circuit for varying the direction of operation of said motor and also operable to vary said resistance with respect to the armature branch for regulating the speed of the motor, but leaving said resistance constant with respect to the field branch.

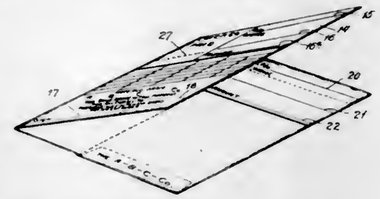
4. The combination with a shunt motor, of a plurality of resistances and means controlling the continuity of both the armature and field branches of said motor, said means, upon completing said branches, including certain of said resistances in series with both and another of said resistances in the field branch.

5. The combination with a shunt motor, a resistance, stationary contacts and three sets of electrically independent contacts simultaneously adjustable with respect to said stationary contacts to complete the armature and field branches of the motor and to include said resistance in series with both branches and thereafter vary said resistance with respect to the armature branch leaving the same constant with respect to the field branch.

[Claims 6 to 9 not printed in the Gazette.]

1,168,004. COMBINED RECEIPT AND ENVELOP. RICHARD A. KELLER, Chicago, Ill. Filed July 25, 1914. Serial No. 853,024. (Cl. 11—19.)

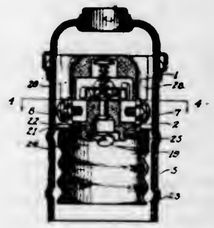
1. The combination of an envelop, having a closing flap at one side, of a severable slip extending from the free edge of said flap and foldable over one face of the envelop while said flap is open, so that an impression of the matter written on said slip may be made on the envelop upon the interposition of a reproducing element, the face of the envelop receiving the impression and the outer face of the slip having printed thereon similar identifying data disposed to register when the slip is folded over the envelop.



2. The combination with an envelop having a closing flap at one side, of a slip extending from the free edge of said flap and foldable over one face of the envelop while said flap is open, so that an impression of the matter written on the slip may be made on the envelop upon the interposition of a reproducing element, the face of the envelop receiving the impression and the other face of said slip having printed thereon similar identifying data disposed to register when the slip is folded over the envelop, a line of perforations being formed between the slip and the flap of the envelop.

3. The combination with an envelop, having a closing flap at one side, of a severable slip extending from the free edge of said flap and foldable over one face of the envelop while said flap is open, so that an impression of the matter written on the slip may be made on the envelop upon the interposition of a reproducing element, the face of the envelop receiving the impression and the outer face of the slip having printed thereon identifying data disposed to register when the slip is folded over the envelop, the flap having a gummed margin adjacent the slip.

1,168,005. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 14, 1912. Serial No. 715,049. (Cl. 173—355.)



1. In combination, a base having flat vertical sides, a snap switch mechanism carried thereby, contacts for said switch mechanism, a threaded conducting shell carried on one face of said base, a conducting plate clamping said shell to said base, and terminal members for said switch mechanism carried upon the vertical sides of said base, one of said terminal connections being integral with said conducting plate and the other being directly connected to one of said switch contacts.

2. In an electric switch, the combination of a horizontally divided two-part base having flat vertical sides, means for holding the parts of said base together, a snap switch mechanism carried between the parts of said base, terminal plates fixed to the bottom of one part of said base and having integral extensions upon the flat vertical sides of said base, and binding screws carried by said extensions.

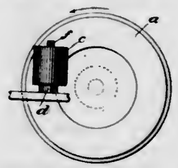
3. In combination, a horizontally divided two-part base, one of the parts of said base having vertically extending conductor grooves, while the other part of said base is provided with flat vertical sides, a switch mechanism housed between the parts of said base, contacts therefor carried upon one of the parts of said base, and terminal plates fixed to the bottom of said part of the base and having integral extensions resting upon the flat vertical sides of said part opposite the ends of the conductor grooves in the other part of said base.

4. In a lamp socket, in combination, an insulating base, a screw shell carried on the outer face thereof, a center contact for said shell fixed marginally on the outer face of said base, said shell having an inturned flange overlapping a portion of said contact, an insulating disk interposed between said flange and said contact overlapped thereby, and conductor terminals for said contact and said shell arranged on the sides of said base.

5. In a lamp socket, in combination, a circular insulating base, a screw shell contact and a center contact therefor mounted on the outer face of said base, conductor terminals for said contacts on opposite sides of said base, a switch mechanism mounted on the inner face of said base and arranged to control circuit between one of said conductor terminals and its associated contact, said mechanism having an exposed conducting part on the outer face of said base overlapping a portion of said contact in the other circuit branch, and an insulating member interposed between said last mentioned contact and said conducting part overlapped thereby.

[Claims 6 and 7 not printed in the Gazette.]

1,168,006. APPARATUS FOR GRINDING THE SURFACE OF ROLLERS. JOSEF KIRNER, Stuttgart, Germany, assignor to Norma Compagnie Gesellschaft mit beschraenkter Haftung, Cannstatt-Stuttgart, Germany, a Corporation of Germany. Filed Feb. 5, 1914. Serial No. 816,785. (Cl. 51—4.)



1. A roller grinding machine comprising a rotary disk having a facial grinding surface, and a work holding means adapted to hold a roller along a longitudinal line of grinding contact in engagement with said facial grinding surface, its line of contact with said disk being at an angle to both the radial and chord lines of said disk which pass through said line of contact, the face of said rotary disk having a swiping contact with said roller and being operative to simultaneously grind the surface thereof and to rotate said roller to cause the longitudinal line of grinding contact to traverse the circumference of said roller.

2. A roller grinding machine comprising a rotary disk having a facial grinding surface, and a work holder having two points of contact with the interior of the roller to be ground and adapted to hold said roller along a longitudinal line of grinding contact in engagement with said facial grinding surface, the face of said rotary disk having a swiping contact with said roller and being operative to simultaneously grind the surface thereof and to rotate said roller to cause the longitudinal line of grinding contact to traverse the circumference of said roller.

3. A roller grinding machine comprising a rotary disk having a facial grinding surface, and a work holder including a guide spindle disposed at an angle to the radial and chord lines of said disk and adapted to loosely engage the bore of and hold a roller along a longitudinal line of grinding contact in engagement with said facial grinding surface, the face of said rotary disk having a swiping

contact with said roller and being operative to simultaneously grind the surface thereof and to rotate said roller to cause the longitudinal line of grinding contact to traverse the circumference of said roller.

4. A roller grinding machine comprising a rotary disk having a facial grinding surface, and a work holder including a spindle disposed in front of said facial grinding surface at an angle to the radial and chord lines of said disk and inclined toward said surface, said spindle being adapted to loosely engage the bore of a roller to be ground and to hold such roller along a longitudinal line of grinding contact in engagement with said grinding surface, the face of said rotary disk having a swiping contact with said roller and being operative to simultaneously grind the surface thereof and to rotate said roller to cause the longitudinal line of grinding contact to traverse the circumference of said roller.

1,168,007. STUMP-PULLER. ALFRED J. KIRSTIN, Escanaba, Mich. Filed Mar. 30, 1914. Serial No. 828,226. (Cl. 254—76.)



1. In a device of the described class, the combination of a cable adapted to be connected at one end with a movable object and at its opposite end with a stationary object, an operating lever connected with said cable, a pair of clutch members respectively pivotally connected near one of their ends with said operating lever upon the respective sides of said cable, and non-resilient means for causing said clutch members to engage the cable which is connected with the immovable object.

2. In a device of the described class, the combination of a tackle block and pulley, a cable connected at one end to a stationary object and at its opposite end with a movable object through said tackle block and pulley, an operating lever, a pair of clutch members respectively pivotally connected near one of their ends with said operating lever upon the respective sides of said cable, a pair of non-resilient links each connected at one of its ends with said clutch members and at its opposite end with said cable, said clutch members being adapted with each rearward movement of said lever to engage the cable connected with the immovable object.

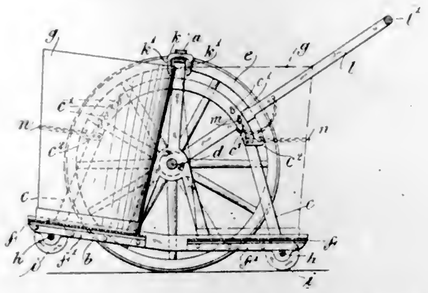
3. In a device of the described class, the combination of a cable adapted to be connected at one end to a movable object and at its opposite end with a stationary object through a tackle block, a pair of clutch members pivotally connected near one of their ends to said operating lever and adapted to alternately engage at their opposite ends with said cable, a pair of links respectively connected at one of their ends with the rear end of said clutch members, the opposite end of said links being slidably connected together.

4. In a device of the described class, the combination of a cable adapted to be connected at one end to a stationary object and at its opposite end with a movable object, an operating lever, and a pair of clutch members pivotally connected near one of their ends to said operating lever, said clutch members being respectively curved outwardly in opposite direction past such pivotal connections, a pair of non-resilient links each link connected at one of its ends with said clutch members and at its opposite end with said cable, whereby said clutch members are adapted to alternately engage at their oposite ends with said cable.

5. In a device of the described class, the combination of a cable adapted to be connected at one end to a movable object and at its opposite end with a stationary object, a pair of clutch members respectively pivotally connected at one of their ends with said operating lever upon the respective sides of said cable, a pair of eccentric clamping members connected with each of said clutch members, means for causing said clamping members to firmly impinge opposing sides of said cable with each rearward movement of said clutch members, all substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,168,008. CAN-TRUCK. WILLIAM E. KLEINE, Highwood, N. J. Filed Sept. 4, 1915. Serial No. 48,943. (Cl. 21—119.)



1. A can truck comprising, with an axle and wheels, a frame supported on the axle, two relatively inclined supporting platforms for the cans secured to the frame on opposite sides of the axle, and a handle.

2. A can truck comprising, with an axle and wheels, a frame supported on the axle, two relatively inclined supporting platforms for the cans secured to the frame on opposite sides of the axle, wheels supported adjacent the outer ends of the platforms respectively, the wheels at one end of one platform being out of engagement with the road surface when the wheels at the end of the other platform are in engagement therewith.

3. A can truck comprising, with an axle and large wheels, a U-shaped frame supported on the axle, relatively inclined side frame members secured to the U-shaped frame adjacent the lower ends of the legs thereof, two supporting platforms for the cans fixed in inclined positions on the side frame members on opposite sides of the axle, and pairs of relatively small wheels supported adjacent the outer ends of the platforms respectively, said last named wheels being out of contact with the road surface when the U-shaped frame lies in a vertical plane and one pair of the small wheels being out of contact with the road surface when the other pair is in contact therewith.

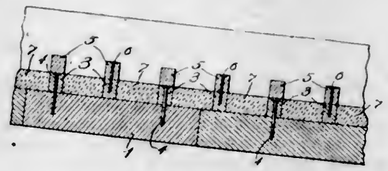
4. A can truck comprising, with an axle and wheels, a U-shaped frame supported on the axle, two supporting platforms for the cans secured to the frame on opposite sides of the axle, and a single latch pivoted adjacent the mid-section of the horizontal portion of the frame and having legs adapted to engage the rims of two cans, respectively.

5. A can truck comprising, with an axle and wheels, a frame supported on the axle, supporting platforms for the cans, curved frame members disposed at the sides of the frame and provided with key-hole slots therein, a handle pivoted on the axle and adapted to swing about the axle, and keys adapted to pass through the handle and the slots in the curved frame members to lock the handle in any desired position.

[Claim 6 not printed in the Gazette.]

1,168,009. RIFFLE-TABLE FOR CONCENTRATING APPARATUS AND METHOD OF CONSTRUCTING THE SAME. FREDERIC B. KOLLBERG, Bisbee, Ariz. Filed Apr. 12, 1915. Serial No. 20,913. (Cl. 83—89.)

1. In concentrating apparatus, the combination of a table; riffles spaced on said table, each of said riffles being formed of two superimposed sections; and a layer of plastic material on said table arranged between said riffles, said layer being of a thickness substantially the same as the height of the lower sections of said riffles, substantially as described.



2. In concentrating apparatus, the combination of a table; riffles spaced on said table, said riffles being formed of base sections and sections fastened to the upper sides of said base sections; and a layer of plastic material arranged on said table between said riffles, said layer being of a thickness substantially the same as the height of the base sections of said riffles, substantially as described.

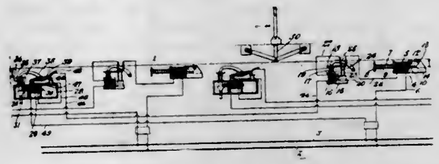
3. In concentrating apparatus, the combination of a table; transversely extending riffles spaced on said table, each of said riffles being formed of two superimposed sections; and a layer of plastic material on said table positioned between said riffles, said layer being of a thickness substantially the same as the height of the lower sections of said riffles, substantially as described.

4. In concentrating apparatus, the combination of a table; riffles spaced on said table, each of said riffles being formed of two superimposed sections; and a layer of cement on said table arranged between said riffles, said layer being of a thickness substantially the same as the height of the lower sections of said riffles, substantially as described.

5. In concentrating apparatus, the combination of a table; riffles spaced on said table, said riffles being formed of base sections of uniform height and sections fastened to the upper sides of said base sections; and a layer of plastic material on said table between said riffles having its upper surface flush with the upper sides of said base sections, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,168,010. AUTOMATIC TRAIN CONTROL. JOHN KONSEL, New York, N. Y., assignor of one-fourth to Joseph Havranek, New York, N. Y. Filed May 1, 1915. Serial No. 25,229. (Cl. 246—59.)



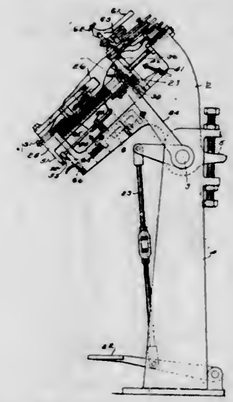
1. In a train control a track, an arm movably mounted with relation to the track and adapted to be engaged by the flange of a wheel passing along the track, a magnet located adjacent the arm, a spring supported core movably mounted in the magnet and adapted to be depressed by the arm, an open circuit connected with the magnet and means carried by the core for closing the circuit and operable to close the circuit when the said core is depressed.

2. In a train control a track, an arm pivotally mounted adjacent the track and adapted to be depressed by the flange of a wheel passing along the track, a magnet located adjacent the arm, a spring supported core movably mounted in the magnet, and movable by the arm when the arm is depressed, spaced pins movably mounted with the core, a cup receiving said pins, a circuit connected with the pins and the magnet and a liquid electric conductor located in the cup and in which the pins are adapted to be immersed when the core is depressed.

3. In a train control a track, an arm pivotally mounted adjacent the track, a spring supported bolt against which the free end of the arm bears, a stop mounted upon the bolt, a magnet located adjacent the bolt, a core movably mounted in the magnet and engageable with the stop, a circuit connected with the magnet and means carried by the arm for breaking the circuit.

4. In a train control a track, an arm pivotally mounted adjacent the track and having extensions, a spring supported bolt for supporting the arm, a stop carried by the bolt, cups located adjacent the arm, pins carried by the extensions of the arm and entering the cups, means electrically connecting the pins together, electric transmitting fluid located in the cups and adapted to be entered successively by the pins, the said pins at an interval being out of engagement with both bodies of fluid, means electrically connecting the bodies of fluid together and means electrically connecting one of the bodies of fluid with the magnet.

1,168,011. MACHINE FOR WORKING AN UPPER ON A LAST. EUCLID I. LA CHAPELLE, Beverly, Mass. Filed May 23, 1913. Serial No. 769,533. (Cl. 12—14.)



1. A machine for working an upper on a last, having, upper pulling meaus adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, arranged to permit the operator to turn the upper thereover and arranged to permit the operator to hold the upper in turned over position thereupon, during the pulling operation of said upper pulling means upon the upper.

2. A machine for working an upper on a last, having, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be thereby pulled by friction and arranged to permit the operator to turn the upper thereover and arranged to permit the operator to hold the upper in turned over position thereupon, during the pulling operation of said upper pulling means upon the upper.

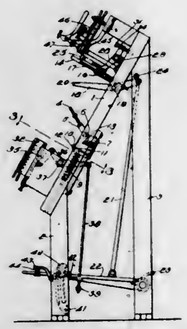
3. A machine for working an upper on a last, having, in combination, wipers adapted to be positioned at one end of the last, so arranged that the upper may be thereby wiped over the bottom of the last, and upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be thereby pulled lengthwise of the last, preparatory to the wiping operation of said wipers upon the upper, said upper pulling means being arranged to permit the operator to turn the upper thereover and arranged to permit the operator to hold the upper in turned over position thereupon, during the pulling operation of said upper pulling means upon the upper.

4. A machine for working an upper on a last, having, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the last may be thereby supported in inverted position and arranged to permit the operator to turn the upper thereover and arranged to permit the operator to move said upper pulling means, during the time that the upper is in turned over position thereupon to cause said upper pulling means to pull the upper lengthwise of the last.

5. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be turned thereover and last moving means adapted to be positioned relatively to the last, so arranged that the last may be thereby moved toward said upper pulling means, during the time that the upper is in turned over position upon said upper pulling means.

[Claims 6 to 140 not printed in the Gazette.]

1,168,012. MACHINE FOR WORKING AN UPPER ON A LAST. EUCLID I. LA CHAPELLE, Beverly, Mass. Filed Oct. 7, 1913. Serial No. 793,881. (Cl. 12—14.)



1. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, upper pulling means adapted to be positioned at the forepart of the last, so arranged that the upper may be thereby pulled lengthwise of the last, heel wipers, so arranged that the upper may be thereby wiped over the bottom of the last, movable supporting means for said heel wipers, a single actuating means positioned relatively to said upper pulling means and to said movable supporting means, so arranged that said upper pulling means and said movable supporting means may be thereby actuated, said single actuating means having a lost motion connection, so arranged that the relative time of the actuation of said upper pulling means and of said movable supporting means by said single actuating means may be thereby predetermined and last holding means adapted to be positioned relatively to the last and so arranged that the last may be thereby held toward said upper pulling means and toward said last supporting means.

2. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, wipers adapted to be positioned at one end of the last, so arranged that the upper may be thereby wiped over the bottom of the last, upper pulling means adapted to be positioned at the forepart of the last, heel engaging means, so arranged that the upper may be thereby held toward the last and non-yielding actuating means positioned relatively to said upper pulling means and to said heel engaging means, so arranged that said upper pulling means and said heel engaging means may be thereby actuated, said non-yielding actuating means having a lost motion movement, so arranged that said upper pulling means and said heel engaging means may be actuated by said non-yielding actuating means, during a portion of the actuation of said non-yielding actuating means.

3. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, wipers adapted to be positioned at one end of the last, so arranged that the upper may be thereby wiped over the bottom of the last, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be thereby engaged at one side only, a treadle and connections positioned relatively to said upper pulling means and to said treadle, so arranged that the operator may thereby move said upper pulling means lengthwise of the last to cause said upper pulling means to pull the upper lengthwise of the last and heel engaging means adapted to be positioned relatively to the last and so arranged that the upper may be thereby held toward the last.

4. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, wipers adapted to be positioned at one end of the last, so arranged that the upper may be thereby wiped over the bottom of the last, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be thereby engaged at one side only, a lever, connections positioned relatively to said upper pulling means and to said lever, so arranged that the operator may thereby move said upper pulling means lengthwise of the last to cause said upper pulling means to pull the upper lengthwise of the last and heel engaging means adapted to be positioned relatively to the last and so arranged that the upper may be thereby held toward the last.

5. A machine for working an upper on a last, having, in combination, last supporting means adapted to be positioned at the rear part of the last, so arranged that the last may be thereby engaged independently of the upper on the last, wipers adapted to be positioned at one end of the last, so arranged that the upper may be thereby wiped over the bottom of the last, upper pulling means adapted to be positioned approximately at the center of the top of the forepart of the last, back of the toe, so arranged that the upper may be thereby pulled lengthwise of the last, heel engaging means and connections positioned relatively to said upper pulling means and to said heel engaging means, so arranged that movement thereof may cause movement of said upper pulling means and of said heel engaging means.

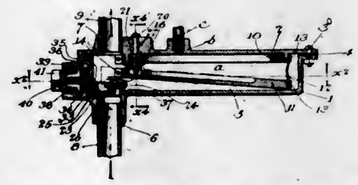
[Claims 6 to 106 not printed in the Gazette.]

1,168,013. REGULATOR. FRANK J. LALLEMENT, Los Angeles, Cal., assignor of one-half to Warren S. Pangborn, Los Angeles, Cal. Filed Mar. 8, 1915. Serial No. 12,843. (Cl. 50—27.)

1. A regulator comprising a case, a plate pivoted in the case, said case and plate together forming the top and bottom respectively of a bellows, a flexible bellows band fastened at its edges to the case and plate respectively, said case being provided with an inlet external of the bellows, and a valve controlling said inlet and operated by said plate.

2. A regulator comprising a case, a plate pivoted in the case and designed when moved in one direction to engage the case, said case and plate together forming the top and bottom respectively of a bellows, a flexible bellows band fastened at its edges to the case and plate respectively and being of sufficient width to allow it to be slack when the plate is in engagement with the case, said case being provided with an inlet external of the bellows, and a valve controlling said inlet and operated by said plate.

3. A regulator comprising a case, a plate pivoted in the case and provided with an arm, said plate and arm forming a lever of the first class and said case and plate together forming the top and bottom respectively of a bellows, a flexible bellows band fastened at its edge to the case and plate respectively, said case being provided with an inlet external of the bellows, and a valve operated by the arm to open and close the inlet.

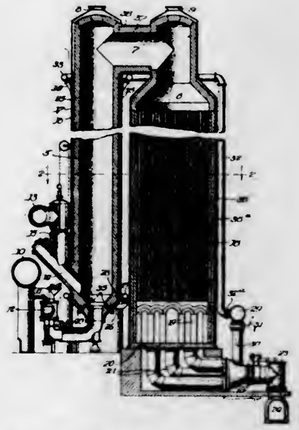


4. A regulator comprising a case, a bellows in the case provided with a plate, said case having an inlet external of the bellows, a valve controlling the inlet and operated by said plate, ears projecting from the plate, pivots screw-threaded through said ears, a nut having sockets engaged by said pivots, and a stem adjustably engaging the nut and extending through the wall of the case.

5. A regulator comprising a case having an annular lug projecting downward from its top, a flexible band fastened at one edge to said lug, a plate fastened to the other edge of said band, a pivot for the plate between the case top and the plate, said case having an inlet outside of said flexible band, and a valve controlling said inlet and operated by movement of the plate on its pivot.

[Claims 6 to 9 not printed in the Gazette.]

1,168,014. HOT-BLAST STOVE. KARL L. LANDGREBE, Ensley, Ala. Filed July 31, 1915. Serial No. 42,928. (Cl. 75—52.)

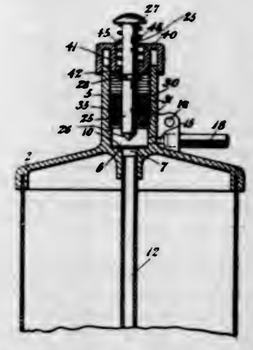


1. In a hot blast stove, the combination of a heating chamber, and a separate combustion chamber, means connecting said chambers, a breeching, a plurality of pipes leading from the bottom of the heating chamber and directly connecting said heating chamber and said breeching, a stack, and means connecting said breeching and said stack, substantially as described.

2. In a hot blast stove, the combination of a heating chamber and a separate combustion chamber, means connecting said chambers, a breeching, a plurality of pipes leading from the bottom of the heating chamber and connecting said heating chamber and said breeching, a stack, and means connecting said breeching and said stack, said combustion chamber provided with a shell about its walls, an air blast line connected to said shell and to said breeching, and valves in said connections, substantially as described.

3. A heating chamber provided with a plurality of substantially vertical passages therethrough, a plurality of pipes arranged to extend through the bottom of said chamber, a stack, said pipes connected to said stack, an air main, connections between said air main and said stack connection, a valve in said connection, a combustion chamber apart from said heating chamber, connections between said chambers, a shell about said combustion chamber, connections between said air main and said shell, connections between said shell and said combustion chamber, and a valve in said connections, substantially as described.

1,168,015. FIRE-EXTINGUISHER. WILLIS LAWRENCE, Yonkers, N. Y. Filed May 8, 1915. Serial No. 26,778. (Cl. 169—12.)



1. A fire extinguisher comprising a container having a tubular head provided with a discharge passage, a sealing disk in said head normally closing communication between the container and discharge passage, a disk-piercing valve member movably mounted in said head and adapted to be forced into piercing engagement with said disk, and means for retaining said valve member in sealing engagement with the pierced disk.

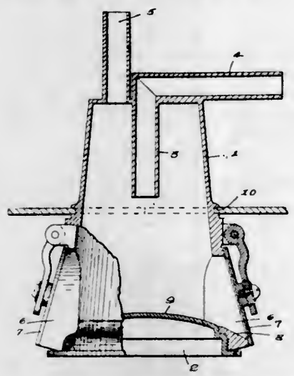
2. A fire extinguisher comprising a container having a tubular head provided with a discharge passage, a sealing disk in said head normally closing communication between the container and discharge passage, an adjustable member on said head, a disk piercing valve member movably mounted in said adjustable member, and having means of engagement therewith to limit its movement in one direction, whereby said valve member can be employed for piercing the sealing disk and for sealing the opening therein.

3. A fire extinguisher comprising a container having a tubular head provided with a discharge passage, a sealing disk in said head normally closing communication between the container and discharge passage, an adjustable nut having threaded engagement with said tubular head, a disk-piercing valve member movably mounted in an opening in said nut in operative relation to said disk, a stop upon said valve member adapted to engage said nut to limit the outward movement of the valve member in the nut, and a spring confined between said nut and the valve member to yieldingly retain the valve member in its outer position.

4. A fire extinguisher comprising a container having a tubular head provided with a discharge passage, a sealing disk in said head normally closing communication between the container and discharge passage, an adjustable nut threaded on said head, a packed bearing in said head, a disk piercing valve member movably mounted in

said adjustable nut and bearing, and having means of engagement with said nut to limit its movement in one direction, whereby said valve member can be employed for piercing the sealing disk and for sealing the opening therein.

1,168,016. MILKING-MACHINE. JAMES F. LEMON and SAMUEL A. MACDONALD, Syracuse, N. Y. Filed Aug. 7, 1914. Serial No. 855,578. (Cl. 31—98.)



1. A milking machine comprising a vertical elongated body open at its bottom, and a removable closure at the lower end of the body, and inlet and suction pipes at the top of the body, the body having a milk outlet at the lower end of the body, substantially as and for the purpose described.

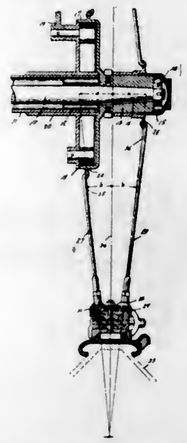
2. In a milking machine, a vacuum chamber comprising an elongated body in the form of a truncated cone, inlet and suction pipes at the top of the body, a removable closure at the lower end of the body, and an outlet for the milk in the side of the body and near the lower end thereof, substantially as and for the purpose specified.

3. In a milking machine, a vacuum chamber comprising an elongated body in the form of a truncated cone having means between its ends for engaging the margin of the wall around the opening in the cover of a milk pail, the body also having an inlet extending through the top thereof substantially centrally of the body and terminating near the center of the body, a suction pipe opening through the top and terminating at the inner face of the top, a removable closure for the lower end of the body, and a milk outlet located at the side of the body near the lower end thereof, substantially as and for the purpose described.

4. In a milking machine, a vacuum chamber comprising a body open at its lower end, a closure for the lower end of the body, the body having a milk inlet and a suction pipe in its upper portion, and a milk outlet in its side and near its lower end, the bottom of the milk outlet being inclined downwardly and outwardly, and the inner face of the closure being convex and alined at its margin with the bottom of the milk outlet, substantially as and for the purpose specified.

5. In a milking machine, a vacuum chamber comprising an elongated body in the form of a truncated cone having means between its ends for engaging the margin of the wall around the opening in the cover of a milk pail, the body also having an inlet pipe extending through the top thereof, substantially central of the body and terminating near the center of the body, a suction pipe opening through the top and terminating at the inner face of the top, a removable closure for the lower end of the body, and a milk outlet located in its side and near its lower end, the bottom of the milk outlet inclining downwardly and outwardly, and the inner face of the closure being convex and the margin thereof being alined with the bottom of the outlet, substantially as and for the purpose set forth.

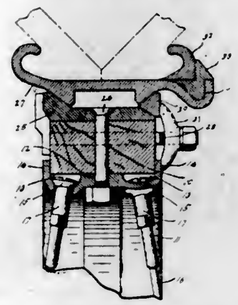
1,168,017. WHEEL AND AXLE. THOMAS J. LINDSAY, Indianapolis, Ind. Filed Nov. 6, 1913. Serial No. 799,434. (Cl. 21—69.)



1. A wheel comprising a felly, a hub and a brake drum interconnected with each other, said felly and hub being interconnected, and wire spokes extending inwardly from said felly to said brake drum, the cone determined by the circles in which are located the inner and outer ends of said spokes being comprised of elements which intersect the braking surface of the brake drum at substantially the axial center thereof.

2. A wheel comprising a felly, a hub and brake drum interconnected with each other, said felly and hub being interconnected, and wire spokes extending inwardly from said felly to said brake drum, the cone determined by the circles in which are located the inner and outer ends of said spokes being comprised of elements which intersect the braking surface of the brake drum.

1,168,018. WHEEL. THOMAS J. LINDSAY, Indianapolis, Ind., assignor to Lindsay Auto Parts Company, a Corporation of Indiana. Original application filed Dec. 13, 1912, Serial No. 736,481. Divided and this application filed Dec. 22, 1913. Serial No. 808,088. (Cl. 21—69.)



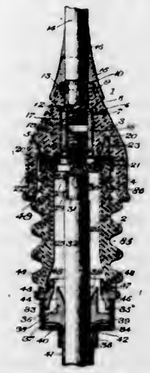
1. A wheel comprising a wood felly, an internal metal felly having a middle substantially cylindrical portion which furnishes a support for said wood felly and a channel portion on each side of said middle portion, said channel portions being of curved cross section and of smaller mean outside diameter than is said middle portion, and spokes mounted in said internal metal felly and extending inward therefrom.

2. A wheel comprising a wood felly, an internal metal felly having a middle substantially cylindrical portion which furnishes a support for said wood felly and a channel portion on each side of said middle portion, said channel portions being of smaller mean outside diameter than is said middle portion, and spokes mounted in said internal metal felly and extending inward therefrom.

3. A wheel comprising a wood felly, an internal metal felly having a middle substantially cylindrical portion which furnishes a support for said wood felly and a channel portions being of curved cross section of smaller mean outside diameter than is said middle portion, and spokes mounted in said internal metal felly and extending inward therefrom.

4. A wheel comprising a wood felly, an internal metal felly having a middle substantially cylindrical portion which furnishes a support for said wood felly and channel portion on each side of said middle portion, and spokes mounted in said internal metal felly and extending inward therefrom.

1,168,019. POTHEAD OR CONNECTOR FOR ELECTRICAL CONDUCTORS. HORACE P. LIVERSIDGE, Bala, Pa. Filed Mar. 5, 1915. Serial No. 12,248. (Cl. 173—253.)



1. In a device of the character stated, a lower terminal lug, an upper terminal lug, a lower insulating body containing said lower lug, an upper insulating cap containing said upper lug, a sealing device covering the top of said lower body, and coupling devices for said lugs contained in said cap.

2. In a device of the character stated, a pair of terminal lugs, an insulating member inclosing each of said lugs, an upper auxiliary cap inclosing one of said terminal lugs and supported by one of said members, and coupling devices for said lugs, said auxiliary cap, a cable terminal, and one of said lugs being detachable as a unit.

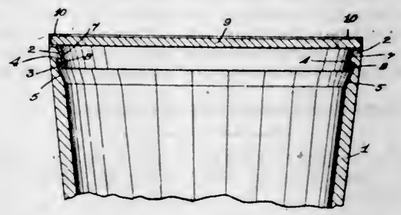
3. In a device of the character stated, a lower terminal lug, an upper terminal lug, a lower insulating body in which said lower lug is centered and contained, an upper, insulating, bell-end, conical cap containing said upper lug, a sealing device covering the top of said lower body, and coupling devices for said lugs contained in said conical cap.

4. In a device of the character stated, an upper and lower terminal lug, a lower insulating body in which said lower lug is centered and contained, an upper, insulated, bell-end, conical cap containing said upper lug, a sealing device covering the top of said lower body, an auxiliary cap containing the lead-out conductor and seated on the top of said bell-end insulating cap, and coupling devices for said terminal lugs contained on said upper bell-end cap.

5. In a device of the character stated, an upper and lower terminal lug, a lower insulating body in which said lower lug is centered and contained, an upper insulated cap containing said upper lug, a sealing device covering the top of said lower body, an auxiliary cap containing the lead-out conductor and seated on the top of said insulating cap, and coupling devices for said terminal lugs contained in said upper cap.

[Claims 6 to 33 not printed in the Gazette.]

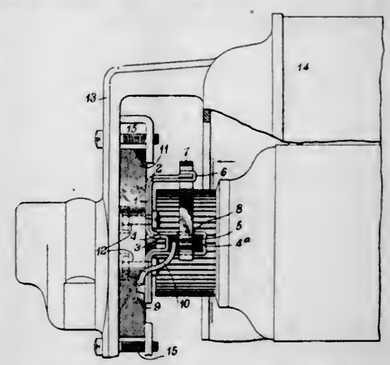
1,168,020. COVER-FASTENER. WARREN A. MCVOY, Tacoma, Wash. Filed Mar. 29, 1912. Serial No. 687,076. (Cl. 217—89.)



1. In combination with a receptacle provided at its inner upper side with a beveled surface and below said beveled surface with an annular groove, a cover comprising a plate provided with means adapted to extend under the intermediate portion of the plate and downwardly against the beveled surface of said receptacle, said means so disposed as to adapt said downwardly projecting portion to fit snugly against the beveled surface, the said means being provided at its lower extremity with a flange adapted to spring into engagement with the groove.

2. In combination with a receptacle provided at its inner, upper side with a beveled surface and below the said beveled surface with an annular groove, a cover comprising a plate having its edge portion folded back under the intermediate portion of the plate and provided with a conical band depending from the inner edge of the said bent back portion, said band adapted to fit snugly against the beveled surface, the said band being provided at its lower edge with a flange adapted to be sprung into engagement with the groove.

1,168,021. BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. CHESTER B. MILLS, East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 9, 1911, Serial No. 626,111. Renewed Feb. 1, 1912. Serial No. 674,827. (Cl. 200—24.)



1. A brush-holder comprising two side-by-side pieces of sheet metal having U-shaped portions of different lengths nested together to form a brush box.

2. A brush-holder comprising two side-by-side pieces of sheet metal having U-shaped portions of different lengths nested together to form a brush box and laterally extending end portions, and a spring carried by the said end portions and extending over the brush box.

3. A brush-holder comprising two side-by-side pieces of sheet metal having U-shaped portions of different lengths nested together to form a brush box, the end of the longer U-shaped portion being curved inwardly.

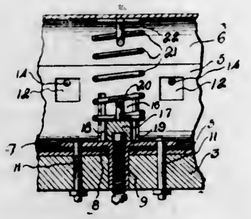
4. A brush-holder comprising two side-by-side pieces of sheet metal having U-shaped portions of different lengths

nested together to form a brush box and laterally extending end portions, and a spring clamped between the said end portions and extending over the brush box.

5. A brush-holder comprising two side-by-side pieces of sheet metal, intermediate portions of which are spaced apart to form a brush box between them and end portions of which are extended laterally, and a spring clamped between the said end portions and extending over the brush box.

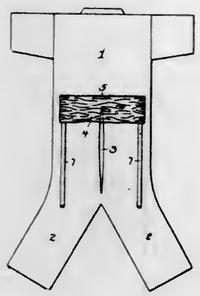
[Claims 6 to 12 not printed in the Gazette.]

1,168,022. VEHICLE-TIRE. ALWIN A. MOHR, Red Bud, Ill. Filed July 13, 1915. Serial No. 39,659. (Cl. 152—38.)



In combination with a vehicle wheel rim, of an inner section fixed thereto, an outer section telescopically engaged with the inner section, heads mounted in the inner section and having tubular shanks extending through the rim, guides formed on the sides of the inner section, blocks having their ends slidably engaged in the guides, bolts threaded in the tubular shanks and having their outer ends engaged with the blocks, coil springs having their outer ends engaged with the outer section and their inner ends engaged with the blocks, said bolts being operable to adjust the blocks in the guides to regulate the tension of the springs.

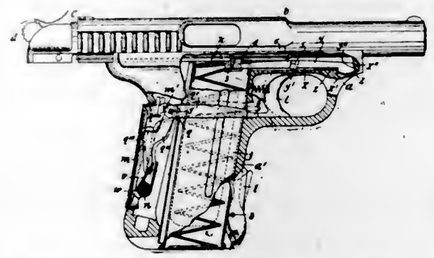
1,168,023. UNION SUIT. JOSEPH D. MORLEY, Utica, N. Y., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Apr. 10, 1912. Serial No. 689,783. (Cl. 2—144.)



1. A union suit having, at their rear, a seat aperture, an apron for covering the same, and on each side of said aperture a vertical tape secured to the garment at top and bottom but free from connection with the garment at all other points, said apron having portions which engage the disconnected portions of said tapes and are vertically movable thereon.

2. A union suit having a seat aperture in the rear, straps or tapes on opposite sides of said aperture, and an apron adapted to cover said aperture, said apron being secured at the top to the back of the suit and having at the opposite edges guideways for the reception of said straps or tapes, whereby it is kept laterally stretched and guided as it is raised or lowered.

1,168,024. FIREARM. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed June 22, 1914. Serial No. 846,457. (Cl. 42—3.)



1. The combination of the frame having a rigid overhanging shoulder, a recoiling breech bolt, a spring normally opposing recoil of the breech-bolt, a cockable firing mechanism arranged in the breech-bolt and including a sear, and a rearwardly movable means, including the connected trigger and sear trip, for transmitting releasing movement to the sear, said trip being depressible by the recoiling breech-bolt and having a rearwardly projecting toe movable with the sear trip against said shoulder and adapted to snap under the latter to lock down the depressed sear trip, and said means being unyielding, from and including the trigger to and including said toe, to compression exerted longitudinally of the gun.

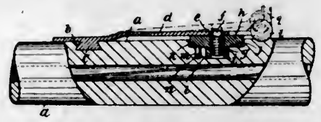
2. In combination, the frame having a downwardly projecting grip-forming portion, a firing mechanism including a rearwardly moving trigger, a detent lever fulcrumed in the frame on a transverse axis and having a forwardly extending arm normally in movement-opposing relation to the trigger and also having a depending arm, a spring normally holding said lever with its forwardly projecting arm in movement-opposing relation to the trigger, and an upstanding lever fulcrumed near its lower end in the frame on a transverse axis and forming with said grip-forming portion of the frame the grip of the gun and movable against the depending arm of the first lever to actuate the latter.

3. In combination, the frame having a downwardly projecting grip-forming portion, a firing mechanism including a rearwardly moving trigger, a detent lever fulcrumed in the frame on a transverse axis and having a forwardly extending arm normally in movement-opposing relation to the trigger and also having a depending arm, an upstanding lever fulcrumed near its lower end in the frame on a transverse axis and forming with said grip-forming portion of the frame the grip of the gun and bearing backwardly against the frame, said depending arm of the first lever bearing backwardly against the second lever, and a spring opposing the movement of the first lever in response to forward movement of the second lever.

4. In combination, the frame having an elongated longitudinally extending upwardly open groove, a breech-bolt having limited forward and rearward sliding movement on the frame over the groove, a firing mechanism, a magazine and its normally elevated platform, the breech-bolt having a locking notch on its under side, and a detent lever arranged in said groove and having a bearing upon the bottom thereof, said lever having a fulcrum on the under side of the breech-bolt and being engageable, and adapted to be moved by the platform into locking engagement, with said notch and adapted to bear forwardly against the frame.

5. In combination, the frame having an elongated longitudinally extending upwardly open housing, a removable breech-bolt having limited forward and rearward sliding movement on the frame over the housing, a firing mechanism, a magazine and its normally elevated platform, the breech-bolt having a locking notch on its under side, and a detent lever arranged in said housing and engageable, and adapted to be moved by the platform into locking engagement, with said notch, said housing having surfaces opposing longitudinal movement of the lever in the housing and converging upwardly one at an angle substantially coinciding with an arc concentric with a point in the housing at or near the other of said surfaces.

1,168,025. SIGHT FOR FIREARMS. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed Oct. 6, 1914. Serial No. 865,265. (Cl. 33—56.)

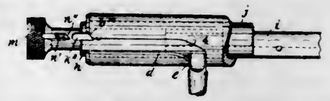


1. In combination, with a fixed part of a gun, a sighting device including an elastic blade arranged in flatwise relation to and upon and secured to said part and having one end free and equipped with a sighting point, and a screw-and-nut elevating means for said end of the blade removably arranged on and countersunk in said part and overlapped and held in the countersink by said end of the blade.

2. In combination, with a fixed part of a gun, a sighting device including an elastic blade arranged in flatwise relation to and upon said part and having a tongue-and-groove connection therewith separable by movement of the blade laterally in substantially its own plane, and a screw-and-nut elevating means for the blade attached thereto and arranged between said blade and said part and interlocked with the gun against lateral displacement.

3. In combination, a supporting member, a sighting member having a sighting point and slidable back and forth on the supporting member, a screw tapped into one member and having spaced heads receiving between them the other member, one head having a ratchet connection with said other member, and a spring interposed between the other head and said other member.

1,168,026. FIREARM. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Filed Oct. 6, 1914. Serial No. 865,266. (Cl. 42—16.)



1. In combination, with a fixed breech-including part of a gun, a breech-bolt movable longitudinally therein to open and close the breech and rotative into and out of blow-back-opposed relation to said part, and firing mechanism including a cockable spring-pressed longitudinally movable firing means carried by and rotative with the breech-bolt, said part and the firing means having coactive means to obstruct the firing movement of the firing means on release of the latter when the breech-bolt is out of blow-back-opposed relation to said part.

2. In combination, with a fixed breech-including part of a gun, a breech-bolt movable longitudinally therein to open and close the breech and rotative into and out of blow-back-opposed relation to said part, and firing mechanism including a cockable spring-pressed longitudinally movable firing means carried by and rotative with the breech-bolt, said part and the firing means having abutments longitudinally alinable with each other, and also coactive to obstruct the firing movement of the firing means, when the breech-bolt is out of blow-back-opposed relation to said part.

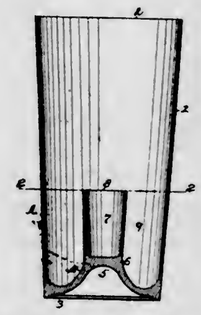
3. In combination, with a fixed breech-including part of a gun, a breech-bolt movable longitudinally therein to open and close the breech and rotative into and out of blow-back-opposed relation to said part, and firing mechanism including a cockable spring-pressed longitudinally movable firing means carried by and rotative with the breech-bolt, said part and the firing means having abutments longitudinally alinable with each other, and also coactive to obstruct the firing movement of the firing means, when the breech-bolt is out of blow-back-opposed relation to said part, one of said abutments being oblique.

4. In combination, with a fixed breech-including part of a gun, a breech-bolt movable longitudinally therein to open and close the breech and rotative into and out of blow-back-opposed relation to said part, and firing mechanism including a cockable longitudinally movable firing means carried by and rotative with the breech-bolt and elastic means to press forward the firing means having a forward pressure-limit on the firing means not exceeding the forward limit of movement of the firing means, said part and firing means having camming abutments longitudinally alinable with each other, and also coactive to obstruct the firing movement of the firing means at approximately the point corresponding to the forward pressure-limit of said elastic means, when the breech-bolt is out of blow-back-opposed relation to said part.

5. In combination, with a fixed breech-including part of a gun, a breech-bolt movable longitudinally therein to open and close the breech and rotative into and out of blow-back-opposed relation to said part, and firing mechanism including a cockable longitudinally movable firing means carried by and rotative with the breech-bolt and elastic means to press forward the firing means having a forward pressure-limit on the firing means extending short of the forward limit of movement of the firing means, said part and firing means having camming abutments longitudinally alinable with each other, and also coactive to obstruct the firing movement of the firing means at approximately the point corresponding to the forward pressure-limit of said elastic means, when the breech-bolt is out of blow-back-opposed relation to said part.

[Claim 6 not printed in the Gazette.]

1,168,027. DRINKING VESSEL. MAX NIRDLINGER, Pittsburgh, Pa. Filed Feb. 3, 1915. Serial No. 5,869. (Cl. 73—62.)



1. A drinking vessel having separated receptacles formed in the bottom of the same and having their mouths below the mouth of the vessel.

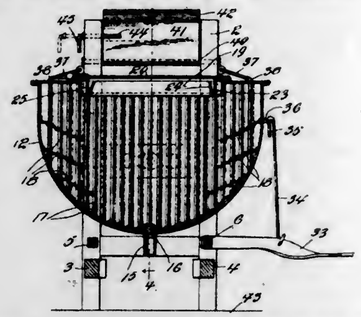
2. A drinking vessel having a substantially circular separated receptacle formed in the bottom of the same and having its mouth below the mouth of the vessel.

3. A drinking vessel having a substantially circular separated receptacle formed in a raised portion on the bottom of the same and having its mouth below the mouth of the vessel.

1,168,028. WASHING-MACHINE. GEORGE PORTSCHE, Sr., Lincoln, Nebr. Filed Nov. 27, 1912. Serial No. 733,771. (Cl. 68—21.)

A washing machine comprising a frame, a receptacle mounted for oscillatory movement on said frame, said receptacle being rectangular in cross section and in longi-

tudinal section shaped to have an arcuate bottom and a pair of end walls a continuation of said bottom, a corrugated lining covering the major portion of the inner surface of said bottom, and two sets of rectangular corru-



gated sheet metal plates of a width equal to and secured to the inner surface of said bottom between said lining and the juncture of the bottom and end walls, the plates of each set being spaced apart vertically and inclining downwardly toward said bottom.

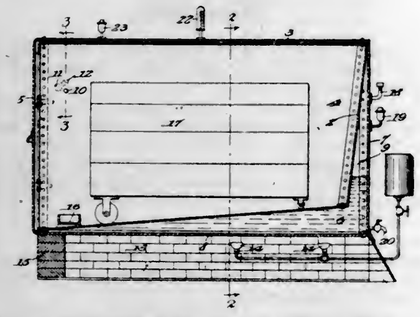
1,168,029. PROCESS OF TREATING TOBACCO. JAMES K. PROBST, Lock Haven, Pa. Original application filed Aug. 25, 1915, Serial No. 47,384. Divided and this application filed Nov. 17, 1915. Serial No. 61,936. (Cl. 131—6.)

1. A process of treating tobacco which comprises packing cured tobacco, preparing a vaporous reagent for the treatment thereof, by subjecting salt water to heat, bringing the vapors given off, together with the vapors of a reagent capable of cutting the gum, into contact with the packed tobacco, for a period at least sufficient to permit the vapors to permeate the mass of packed tobacco.

2. In the treatment of tobacco, the step of preparing a suitable vaporous treating agent by heating salt water, and subjecting the stripped leaves of cured tobacco to the joint action of the vapors liberated from said salt water and the vapors liberated from a mixture of vinegar and ammonia.

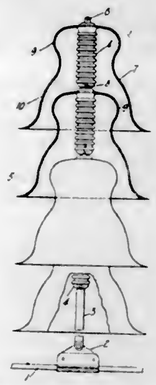
3. A process of treating tobacco, which comprises subjecting the cured tobacco to the action of a vaporous reagent produced by bringing together the vapors liberated be heating salt water, and the vapors liberated by heating a liquid containing a gum cutting and flavor-producing reagent.

1,168,030. VULCANIZER FOR SWEATING AND RE-SWEATING TOBACCO. JAMES K. PROBST, Lock Haven, Pa. Filed Aug. 25, 1915. Serial No. 47,384. (Cl. 131—6.)



A vulcanizer suitable for treating tobacco which comprises an inner receptacle having an inclined bottom, and having side, top, and back walls, and having a removable front wall, a jacket surrounding at least a portion of said casing, capable of containing salt water in a heated condition, heating means associated with said jacket, a vapor passage from said jacket to said receptacle, a container of relatively small size within said receptacle, suitable for holding a conditioning agent, and a wheeled truck capable of being pushed into or out of said receptacle.

1,168,031. SUSPENSION-TYPE INSULATOR. KARL C. RANDALL, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 4, 1915. Serial No. 25,726. (Cl. 173—318.)



1. An insulating structure comprising a plurality of alternately-disposed conducting and insulating bodies, the insulating bodies being inclosed within the conducting bodies which consist of bell-shaped members having surfaces of double curvature of relatively large radii, the upper portions thereof having smaller radii of curvature than the lower portions.

2. An insulating structure comprising a plurality of alternately-disposed conducting and insulating bodies, the insulating bodies being inclosed within the conducting bodies and spaced therefrom, said conducting bodies being nested in, but spaced from, one another and consisting of bell-shaped members having surfaces of double curvature of relatively large radii, the upper portions thereof having smaller radii of curvature than the lower portions.

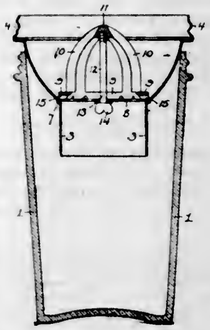
3. An insulating structure comprising a plurality of alternately-disposed insulating and conducting bodies, the insulating bodies being flexibly connected to one another and the conducting bodies being rigidly supported upon the insulating bodies adjacent to said flexible connections, each of said conducting bodies surrounding the insulating body which is disposed immediately below and consisting of a bell-shaped member having a surface of double curvature of relatively large radii, said conducting bodies being so nested within one another as to preclude undue concentrations of electrostatic flow-lines thereupon.

4. A suspension-type insulator comprising a plurality of flexibly connected insulating members, conducting bodies disposed on the insulating members adjacent to said flexible connections, each of said conducting bodies surrounding the insulating member disposed immediately below, and consisting of a bell-shaped member having an exterior surface of double curvature, the upper portion thereof having a smaller radius of curvature than the lower portion, said conducting bodies being nested within one another so that the outer surfaces of the upper portions of the lower conducting bodies are adjacent to, but spaced from, the inner surfaces of the lower portions of the immediately superposed conducting bodies.

5. A suspension-type insulator comprising a plurality of flexibly connected insulating members, conducting

bodies disposed on the insulating members adjacent to said flexible connections, each of said conducting bodies surrounding the insulating body disposed immediately below and consisting of a bell-shaped member having an exterior surface of double curvature, said conducting bodies being nested within, but spaced from, one another, the adjacently-disposed surfaces thereof being so formed as to preclude undue concentrations of electrostatic flow-lines thereupon.

1,168,032. JUICE-EXTRACTOR. LOUIS IRVING REICHNER, Atlantic City, N. J. Filed Apr. 26, 1915. Serial No. 23,878. (Cl. 100—49.)



1. A juice extractor consisting of a base ring having an unobstructed opening therethrough and converging arms projecting therefrom, and integral therewith.

2. A juice extractor consisting of a base ring having an unobstructed opening therethrough and converging arms projecting therefrom and integral therewith, a crown block, a support for the base ring of the extractor, and means for connecting said crown block and support.

3. A juice extractor consisting of a base ring having an unobstructed opening therethrough and converging arms projecting therefrom and integral therewith, a crown block having a threaded opening therein, a support for the base ring of the extractor, and a screw stem having a head for engaging said support, and a threaded portion for engaging the threaded opening in the crown block.

4. A juice extractor comprising a base ring having drainage recesses in the under face of the same and converging arms projecting therefrom and integral therewith, and a support for said base ring.

1,168,033. PLATE-HOLDER. PLUMLEIGH A. ROGERS, Minneapolis, Minn. Filed July 8, 1915. Serial No. 38,675. (Cl. 101—169.)

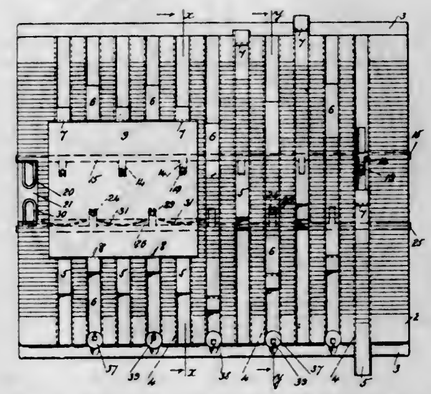


1. The combination, with a printing plate having dovetailed grooves in its sides, of marginal backing blocks adapted to be clamped in a printing frame, said marginal blocks having dovetailed shouldered portions on two adjacent sides arranged at an angle to each other and adapted to engage with the dovetailed grooves at the corner portions of the printing plate.

2. The combination, with a printing plate having dovetailed grooves in its sides, of marginal backing blocks adapted to be clamped in a printing frame, said marginal blocks having dovetailed shouldered portions on two adjacent sides arranged at an angle to each other and adapted to engage with the dovetailed grooves at the corner portions of the printing plate, and intermediate marginal backing blocks engaging with the said printing plate and arranged between the aforesaid marginal backing blocks.

3. The combination, with a printing plate having dovetailed grooves in its four sides, of marginal backing blocks adapted to be clamped in a printing frame, said marginal blocks comprising corner blocks each provided with dovetailed shouldered portions on two adjacent sides, and intermediate blocks fitting between the corner blocks and also provided with dovetailed shouldered portions, said dovetailed shouldered portions engaging with the dovetailed grooves of the printing plate.

1,168,034. PRINTER'S CHASE. PLUMLEIGH A. ROGERS, Minneapolis, Minn. Filed July 8, 1915. Serial No. 38,676. (Cl. 101—169.)



1. In a chase, a supporting plate provided with an abutment for engaging with one edge of a printing plate, a slide carried by the supporting plate and provided with a jaw for engaging with the opposite edge of the printing plate, a pivoted pawl and rack carried by the supporting plate and slide and normally preventing the slide jaw from being moved away from the printing plate, and locking mechanism operating to move the said pawl and rack so as to cause the slide jaw to grip the printing plate.

2. In a chase, a supporting plate provided with an abutment for engaging with one edge of a printing plate, a slide carried by the supporting plate and having a jaw for engaging with the opposite edge of the printing plate, said slide having also a toothed rack, and a disengageable pawl pivotally connected with the supporting plate and normally engaging with the toothed rack and preventing the slide jaw from being moved away from the printing plate.

3. In a chase, a supporting plate provided with parallel grooves, slides working in the said grooves and provided with toothed racks and having opposed jaws which project from the grooves and are adapted to engage with a printing plate, and disengageable pawls pivoted in the supporting plate and normally engaging with the said toothed racks.

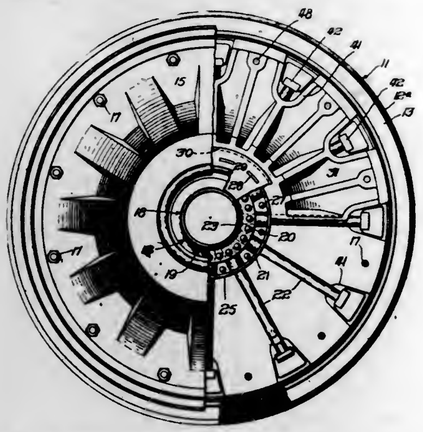
4. In a chase, a supporting plate provided with parallel grooves, slides working in the said grooves and provided with toothed racks and having jaws which project from the grooves and are adapted to engage with one edge of a printing plate, an abutment for the opposite edge of the printing plate, a rock-shaft journaled in the supporting plate and provided with pawls which normally engage with the toothed racks, and a lever on the rock-shaft for disengaging the said pawls.

5. In a chase, a supporting plate provided with parallel grooves, slides working in the said grooves and provided with toothed racks and having jaws which project from the grooves and are adapted to engage with one edge of

a printing plate, an abutment for the opposite edge of the printing plate, a laterally slidable rock-shaft mounted in the supporting plate and provided with pawls which normally engage with the toothed racks, springs which press the rock-shaft laterally in one direction, locking devices for moving the rock-shaft laterally in the opposite direction, and means for turning the rock-shaft on its axis to disengage the pawls from the toothed racks.

[Claims 6 and 7 not printed in the Gazette.]

1,168,035. RESILIENT WHEEL. WILLIAM SEIDEL, Chicago, Ill. Filed Oct. 28, 1914. Serial No. 869,132. (Cl. 152—28.)



1. In a resilient wheel the combination of an outer section movable diametrically with respect to the axle of the wheel, an inner section held against such diametrical movement, cushioning substance interposed between the inner and outer wheel sections, a positive connection between said cushioning substance and the outer wheel section, a positive connection between the cushioning substance and the inner wheel section, and auxiliary cushioning substance around the hub of the wheel and engaging at its upper end with the lower end of the inner section, substantially as described.

2. In a resilient wheel the combination of an outer section movable diametrically with respect to the axle of the wheel, an inner section held against such diametrical movement, cushioning substance concentric with the axle of the wheel, a positive connection between the upper end of said cushioning substance and the outer wheel section, a positive connection between the lower end of said cushioning substance and the inner wheel section, and auxiliary cushioning substance around the axle of the wheel and connected at its upper end to the outer section and having its lower end resting against the inner section, substantially as described.

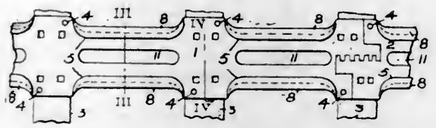
3. In a resilient wheel the combination of an outer section movable diametrically with respect to the axle of the wheel, an inner section held against such diametrical movement, spokes extending from the inner section, companion disk-like members of resilient material formed at intervals with radially extending grooves, said sections when placed together having the grooves therein alined to provide bores through which said spokes extend, a positive connection between the resilient members and the outer section of the wheel, and a positive connection between the resilient member and the inner section of the wheel, substantially as described.

4. In a resilient wheel the combination of an outer section movable diametrically with respect to the axle of the wheel, an inner section held against such diametrical movement, spokes extending from the inner section, companion disk-like members of resilient material formed at intervals with radially extending grooves, said disks when placed together having the grooves therein alined to provide bores through which said spokes extend, a positive connection between the resilient member and the outer section of the wheel, a positive connection between the resilient member and the inner section of the wheel, and a ring of auxiliary cushioning substance interposed about the axle of the wheel, substantially as described.

5. In a resilient wheel the combination of an outer section movable diametrically with respect to the axle of the wheel, an inner section held against such diametrical movement, cushioning material interposed between the outer and inner wheel sections and extending concentric with the axle of the wheel, said material being notched at intervals around its periphery to form recesses and said material being formed with bores extending into said notched portions, spokes on the inner wheel section extending through said bores and into said recesses, and cushioning material affixed to the outer ends of said spokes, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,168,036. BASE-PLATE FOR RAILWAY-RAILS. HARRY E. SHELDON, Pittsburgh, Pa., assignor of one-half to William D. Forsyth, Youngstown, Ohio. Filed May 7, 1915. Serial No. 26,501. (Cl. 238—5.)



1. In a railway, continuous steel base-plates supporting the rails the entire length of the latter, and means integral with the base-plates whereby the ends of two base-plates may be adjustably locked together in different relative longitudinal positions and thereby prevented from relative longitudinal movement.

2. In a railway, continuous steel base-plates supporting the rails the entire length of the latter, and interlocking teeth on the ends of the base-plates, the teeth being arranged in lines parallel with the base-plates, whereby the latter may be secured together in different relative longitudinal positions.

3. In a railway, continuous steel base-plates arranged end to end and supporting the rails the entire length of the latter, and tongues projecting from the ends of the base-plates and having interlocking teeth arranged in line with the base-plates, there being a recess in the end of each base-plate to receive the tongue on the companion base-plate.

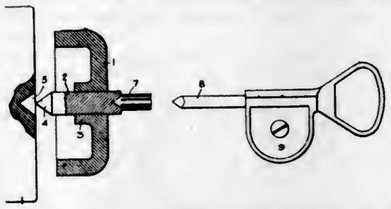
4. In a railway, cross-ties, and continuous steel base-plates thereon supporting the rails the entire length of the latter, the opposite edges of the base-plates between consecutive cross-ties being turned upwardly and forced toward each other, and railway rails having their flanges engaging the opposing faces of the said upwardly-turned portions of the base-plates.

5. In a railway, cross-ties, continuous steel base-plates thereon supporting the rails the entire length of the latter, the opposite edges of the base-plates between consecutive cross-ties being turned upwardly and forced toward each other, railway rails having their flanges engaging the opposing faces of the said upwardly-turned portions of the base-plates, and outwardly turned flanges on the top of the said portions and below the bolt holes in the rails.

[Claim 6 not printed in the Gazette.]

1,168,037. MAGNETIC CONNECTION. FRANK SHORT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 15, 1914. Serial No. 857,002. (Cl. 235—103.)

1. A device for connecting a speed indicator to a revolving shaft comprising a magnetic part adapted to be applied endwise and adhere to the shaft so as to rotate with it and engagement means for centering said part with reference to the shaft.

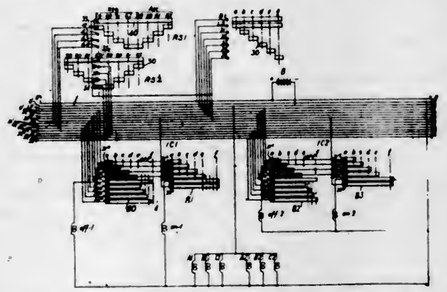


2. A device for connecting a speed indicator to a revolving shaft comprising a permanently magnetized steel part adapted to be applied endwise and adhere to the shaft so as to rotate with it and a center punch for centering said part with reference to the shaft so associated therewith as to be movable lengthwise of the shaft with reference thereto.

3. A device for connecting a speed indicator to a revolving shaft comprising a permanently magnetized steel part adapted to be applied endwise and adhere to the shaft so as to rotate with it, a center punch for centering said part with reference to the shaft associated with said part, and means also associated with said part for engaging and holding the actuating member of the speed indicator.

4. A device for connecting a speed indicator to a revolving shaft comprising a magnetic part adapted to be applied endwise and adhere to a revolving shaft so as to rotate with it, engagement means for centering said part with reference to the shaft, and socket means for the actuating member of the speed indicator associated with said magnetic part.

1,168,038. CONTROL SYSTEM. KARL A. SIMMON, Edgewood Park, and ARTHUR J. HALL, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 6, 1915. Serial No. 838. (Cl. 172—179.)



1. In a control system for electric vehicles, the combination with a plurality of electric driving motors, a plurality of rheostats for governing the operation of said motors, and means for controlling the operation of said rheostats during acceleration and regeneration, of auxiliary means coöperating with said control means for adapting said control means for periods of acceleration and regeneration and for compensating for differences in wheel diameters of the vehicle.

2. In a control system for electric vehicles, the combination with a plurality of electric driving motors, a plurality of rheostats for governing the operation of said motors, and means for controlling the operation of said rheostats during acceleration and regeneration, of manually adjustable means associated with said control means for effecting relative adjustment of the operation of the respective rheostats in accordance with differences in the diameters of the driving wheels of the vehicles.

3. In a control system for electric vehicles, the combination with a plurality of electric driving motors, a plurality of rheostats for governing the operation of said motors, and means for controlling the operation of said rheostats during acceleration and regeneration, of a plurality of switching devices associated with said control means and with the respective rheostats for independently adjusting the operation of the respective rheostats to compensate for differences in driving wheel diameters for both acceleration and regeneration.

4. In a control system, the combination with a source of energy, a plurality of induction motors connected thereto, and a plurality of electrically controlled liquid rheostats for severally governing the operation of said motors, of control means embodying a master controller for concurrently effecting step-by-step actuations of said liquid rheostats, and auxiliary control switching means coöperating with said control means for limiting the operation of the respective rheostats during periods of acceleration and regeneration.

5. In a control system for electric vehicles, the combination with a source of energy, a plurality of induction motors connected thereto, and a plurality of electrically controlled liquid rheostats for severally governing the operation of said motors, of control means, including a master controller, for concurrently effecting step-by-step actuations of said liquid rheostats, an dadjustable auxiliary means for modifying the action of said control means and discontinuing the step-by-step operation of one rheostat before the other to compensate for differences in diameters of the driving wheels.

[Claims 6 to 10 not printed in the Gazette.]

1,168,039. LATCH-NEEDLE FOR KNITTING-MACHINES. HARRY SWINGLEHURST, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Feb. 14, 1911. Serial No. 608,629. (Cl. 66—5.)



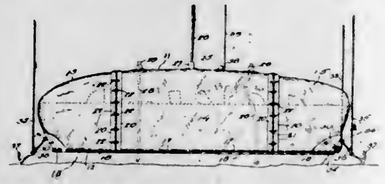
A knitting machine latch needle having at its upper end a hook, and a pivoted latch whose free end engages the front portion of said hook, the back of the needle being inclined forwardly from the pivot of the latch to the hook so as to contract the latter, and said inclined back of the needle being substantially parallel with the outer face of the latch when the latter is closed against the hook, the distance around the needle and latch at any point along the inclined back of the needle being substantially the same as the distance around the shank of the needle at the pivot point of the latch.

1,168,040. APPARATUS FOR RAISING SUNKEN VESSELS. OLAF M. WICK, Jamestown, N. D. Filed Oct. 29, 1914. Serial No. 869,282. (Cl. 114—54.)

1. A device for raising sunken vessels at great depths comprising an envelop in the shape of an inverted bag, transverse flexible members fixed on the bag having moderate stiffness, means to draw the edges of the bag inwardly, and means to conduct air to the bag.

2. A device for raising sunken vessels comprising a buoy bag constructed to engage over a vessel, means to

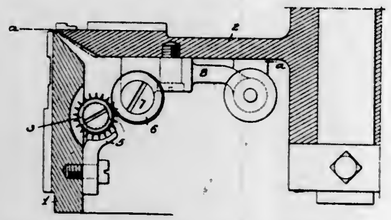
conduct air thereto, anchor devices, pulleys thereon, cables connected to the buoy bag at respective ends, and engaged through the pulleys for engagement with a reeling device, and means to secure the bag upon a vessel.



3. In a device of the class described a buoy bag constructed for engagement over a vessel, a cable member having slidable engagement with the bag and extending therearound for engagement around the hull of a vessel, a reeling device connected with the cable and carried by the bag and including a winding drum engaged with the said cable, an operating cable connected with the drum and wound oppositely thereon and extended for operation as described.

4. A device for raising sunken vessels comprising a buoy bag including a plurality of transverse sections having slidably overlapped edge portions, means for clamping the overlapped edge portions together adjustably, a cable slidably connected to the lower edge of the bag and circumscribing the same, a tightening device for drawing up the cable, and air supply connections on the bag.

1,168,041. MECHANISM FOR LOCKING TOGETHER THE NEEDLE-CARRIERS OF RIB-KNITTING MACHINES. LOUIS N. D. WILLIAMS, Ogontz, Pa. Filed June 24, 1914. Serial No. 846,946. (Cl. 66—22.)



1. The combination of the two needle carrying members of a knitting machine with locking dogs one mounted upon one and the other upon the other of said needle carrying members and engaging one another upon one and the same side of the knitted web.

2. The combination of the two needle carrying members of a knitting machine with locking dogs one on one side of the web and one on the other side of the same, one of said dogs having projecting teeth which can pass through the web and engage the other dog.

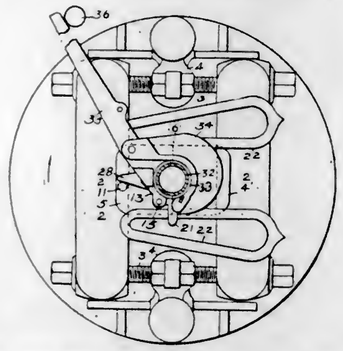
3. The combination of the two needle carrying members of a knitting machine, with rotating dogs carried thereby, one of said dogs having teeth which can project through the web of fabric for engagement with the other dog.

4. The combination of the two needle carrying members of a knitting machine with locking dogs carried thereby and so disposed that while the knitted web passes between them they engage with one another on one and the same side of said web, and means for separating said dogs from one another so as to permit free passage of the web between them.

5. The combination of the two needle carrying members of a knitting machine with locking dogs carried thereon, one of said dogs having teeth which can project through the web of fabric for engagement with the other dog and one of said dogs being separable from the other so as to permit free passage of the web between them.

[Claims 6 to 8 not printed in the Gazette.]

1,168,042. ELEVATOR-WRENCH. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 29, 1914. Serial No. 864,083. (Cl. 255—35.)



1. The combination of a sleeve comprising two members, one member having a lateral opening to allow a pipe to pass through it transversely, the other member being pivoted at one end to the first member, and removably secured at the other end to the first member, an annular shoulder within the sleeve forming a rest for the lower end of a pipe coupling, a lever pivoted in a lateral opening in one of the members, the inner end of the lever having teeth for engagement with the pipe coupling when on the said shoulder, a rotary table supporting the sleeve, means rotatable with the table and engageable with the remaining end of the lever to cause the lever to rotate the sleeve and coupling, and means carried by the sleeve for engagement with a hoisting mechanism.

2. The combination of a horizontal rotary device having an axial opening, a sleeve comprising two hinged members having a reduced annular lower extension fitting the said axial opening, and a shoulder resting on the said rotary device, a lever pivoted in a lateral opening in one member and having its inner end toothed and engageable with a coupling in the said axial opening and on an annular shoulder within the axial opening, means on the rotary device for engagement with the outer end of the lever for causing the lever to rotate the sleeve and coupling, and means carried by the sleeve for engagement with a hoisting mechanism.

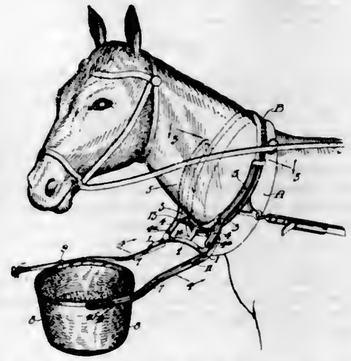
3. In a pipe elevator wrench, a sleeve arranged to surround a pipe coupling and the upper end of a pipe connected thereto, the sleeve having an annular shoulder carrying steel pins on which the lower end of the coupling rests, and means carried by the sleeve above the shoulder for rigidly connecting the sleeve and coupling together.

4. In an elevator wrench, a sleeve having an opening to receive a coupling and the upper end of a pipe connected thereto, the opening being contracted to form a shoulder, steel pins carried by the shoulder and forming a rest for the lower end of the coupling, a rotary device on which the sleeve moves with less friction than that between the coupling and the steel pins, a lever carried by the sleeve and movable to rigidly connect the coupling and sleeve together, and means on the rotary device for so moving the lever.

1,168,043. FEED-BAG SUPPORT. JEREMIAH ZWEIGHAFT and LAWRENCE NAUMAN, Cresco, Pa. Filed Dec. 7, 1914. Serial No. 875,790. (Cl. 119—67.)

1. A feed-bag support for draft animals, comprising a feed-bag carrying member, a bearing member connected to said carrying member adapted to bear against the collar of the animal for supporting said carrying member thereon, and holding means having operative connection with said bearing member and pivoted for lateral movement to engage said collar, to hold the bearing member in operative position.

2. A feed-bag support for draft animals, comprising a plurality of feed-bag carrying members, a bearing member secured to said carrying members adapted to bear against the collar of the animal for supporting said carrying members thereon, pivoted means mounted on said bearing member and adapted to engage said collar for holding the bearing member in operative position, and tension means connected to said pivoted means for automatically moving the latter into engagement with said collar.



3. A feed-bag support for draft animals, comprising a plurality of feed-bag carrying members, a bearing member, including a plurality of spaced apart bearing arms, connected to said carrying members, adapted to bear against the collar of the animal for supporting said carrying members thereon, said arms being curved to approximately fit an inner surface of the collar, and holding arms connected on said bearing member and adapted to engage said collar, to hold the bearing member in operative position.

4. A feed-bag support for draft animals, comprising a plurality of feed bag carrying members, a bearing member including a plurality of bearing arms secured to said carrying members adapted to bear against the collar of the animal for supporting said carrying members thereon, pivoted means mounted on said bearing member and adapted to engage said collar for holding the bearing member in operative position, and tension means connected to said pivoted means for automatically moving the latter into engagement with said collar.

5. A support for feed bags, comprising a carrying member to which the bag is attached, rigid means connected to said member adapted to loosely bear upon a surface of a horse collar and support a portion of the load thereon, and holding members movable laterally to engage said collar and having operative connection with said bearing means to hold the latter in operative position.

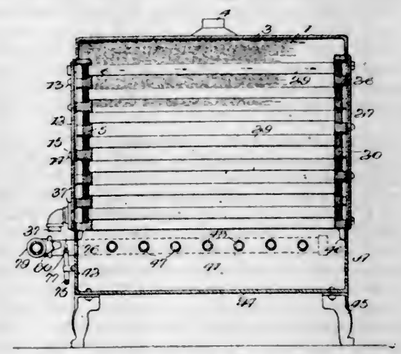
[Claims 6 to 8 not printed in the Gazette.]

1,168,044. WATER-HEATER. RALPH D. ALBRIGHT and JACOB E. LUKEHART, Oil City, Pa. Filed July 13, 1914. Serial No. 850,840. (Cl. 122—264.)

1. In a water heater, spaced water heads and connecting water tubes, the water heads being provided with water passages establishing communication between the tubes in series and between the series of tubes, one of the said heads having an inlet and an outlet and one set of tubes of one series being in communication with the inlet and one set of tubes of the other series being in communication with the outlet, the said sets of tubes being out of communication with each other.

2. In a water heater, spaced water heads, and a bank of water tubes connecting the heads, one of the heads having an inlet and an outlet and the heads having water passages communicating with the tubes and arranged in such manner as to cause a passage of water from the inlet back and forth in a continuous flow through the tubes at one side of the bank and thence back and forth through the tubes at the other side of the bank to the outlet.

3. In a water heater, spaced water heads, and a bank of water tubes connecting the heads, one of the heads having an inlet and an outlet and the heads having water passages communicating with the tubes and establishing communication between the tubes in series, each series of passages being out of communication with each other at a point in the series whereby the bank of tubes is divided, except for the corresponding ends of the tubes comprising one of the series, which ends of all of said tubes are in communication with each other.

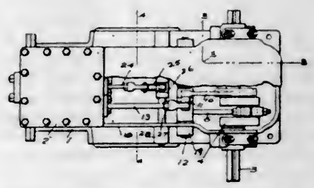


4. In a water heater, spaced water heads, and a bank of water tubes connecting the heads, one of the heads having an inlet and an outlet and the heads having water passages communicating with the tubes and establishing communication between the tubes in the series, each series of passages being out of communication with each other at a point on the series, whereby the bank of tubes is divided, except for the corresponding ends of the tubes, comprising one of the series, which ends of all of said tubes are in communication with each other, the inlet and the outlet each communicating with corresponding ends of the tubes comprising a division of a series of the tubes remote from the first-mentioned series.

5. In a water heater, spaced water heads, each comprising a body and a cap plate, and a packing sheet disposed between a face of the body and the said cap plate, and a bank of water tubes connecting the heads, the heads having water passages communicating with the tubes and establishing communication between the tubes in the series and between the series of tubes, the packing sheets having passages matching the passages in the faces of the respective bodies of the water heads.

[Claim 6 not printed in the Gazette.]

1,168,045. STEAM-ENGINE. EDWIN J. ARMSTRONG, Erie, Pa., assignor to Ball Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1915. Serial No. 3,370. (Cl. 121—45.)



1. In a steam engine, the combination with the moving parts comprising a cross head; a crank; a connecting rod pivotally connected with the cross head and journaled on the crank; a valve rod moving in the same direction as the cross head and off-set from the cross head at right angles to the axis of the pivotal connection between the connecting rod and the cross head; and an eccentric rod driving the valve rod from the crank shaft; of cross head

guides; crank shaft bearings; a frame on which the guides and bearings are carried; and devices co-acting with the frame inclosing said working parts.

2. In a steam engine, the combination with the moving parts comprising two cross heads; two cranks; connecting rods between the cross heads and the cranks, said connecting rods being pivotally connected with the cross heads and journaled on the cranks; engine valve rods moving in the same general direction as the cross heads and off-set from the cross heads at right angles to the axis of the pivotal connections between the cross heads and the connecting rods; eccentrics driving the valve rods from the crank shaft; a controlling valve rod between the engine valve rods; and means for actuating the controlling valve rod; of cross head guides; crank shaft bearings; a frame on which the guides and bearings are carried; and devices co-acting with the frame inclosing said working parts.

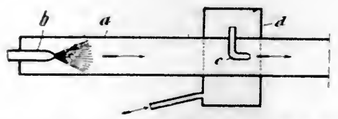
3. In a steam engine, the combination with the moving parts comprising a cross head; a crank; a connecting rod pivotally connected with the cross head and journaled on the crank; a valve rod moving in the same general direction as the cross head and off-set from the cross head at right angles to the axis of the pivotal connection between the cross head and the connecting rod; a rock arm from which the valve rod is driven; a rock shaft on which the rock arm is mounted; and an eccentric rod for driving the rock shaft from the crank shaft; of cross head guides; crank shaft bearings; bearings for said rock shaft; a frame on which the guides and bearings are mounted; and a cover piece co-acting with the frame inclosing said working parts, the joint between the cover piece and the frame forming the part of the inclosure immediately adjacent to the bearings in the frame.

4. In a steam engine, the combination with the moving parts comprising two cross heads; two cranks; connecting rods pivotally connected with the cross heads and journaled on the cranks; engine valve rods moving in the same general direction as the cross heads and off-set from the cross heads at right angles to the pivotal connection between the cross heads and the connecting rods; rock levers to which the valve rods are connected; a shaft on which the rock levers are mounted; eccentric rods driving the rock levers from the engine shaft; a controlling valve rod between the engine valve rods; a rock lever to which the controlling valve rod is connected; a rock-shaft on which the rock lever controlling the controlling valve rod is mounted; of cross head guides for said cross heads; crank shaft bearings; bearings for said rock shafts; a frame on which the guides and bearings are mounted, said frame having inclosing webs extended to form the inclosing walls adjacent to said bearings; and a cover piece co-acting with said inclosing webs to inclose said working parts.

5. In a steam engine, the combination with the moving parts comprising a cross head; a crank; a connecting rod pivotally connected with the cross head and journaled on the crank; a valve rod moving in the same general direction as the cross head and off-set from the cross head at right angles to the axis of the pivotal connection between the cross head and the connecting rod; a rock arm from which the valve rod is driven; a rock shaft on which the rock arm is mounted; and an eccentric rod for driving the rock shaft from the crank shaft of an engine frame having side walls carrying the crank shaft bearings; lateral webs carrying the cross head guides; side webs extending from the lateral webs and having bearings for the rock shaft; and a cover piece co-acting with the side walls and side webs for inclosing the working parts.

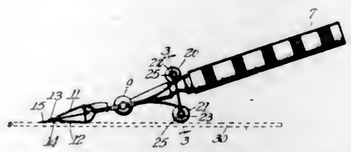
1,168,046. PROCESS FOR RECOVERING SULFUR DIOXID. LUCIEN PAUL BASSET, Montmorency, France. Filed July 7, 1913. Serial No. 777,735. (Cl. 23—1.)

1. A process for obtaining sulfur dioxid as a by-product incidental to the manufacture of cement and calcium sulfate, clay and carboniferous material in a furnace, which consists in injecting into the furnace at a certain point therein a supply of air, the zone of air injection having a temperature conducive to rapid chemical re-action without possibility of decomposition of the hereinafter mentioned compounds, whereby oxysulfid of carbon and carbon monoxid which is formed during the heating of the cement mixture may be readily oxidized into sulfur dioxid and carbon dioxid.



2. A process for obtaining sulfur dioxid as a by-product incidental to the manufacture of cement from calcium sulfate, clay and carboniferous material in a furnace, which process consists in introducing into the furnace at a point therein where the temperature is approximately 900° C. a supply of air, whereby the oxysulfid of carbon, and carbon monoxid gases, which are evolved by the heated cement mixture at this point of the furnace, are oxidized into sulfur dioxid and carbon dioxid.

1,168,047. RAZOR-BLADE SHARPENER. WILLIAM J. BAUER, Chicago, Ill., assignor to Harry L. Marks, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,160. (Cl 51—16.)



1. A safety razor blade sharpener comprising a handle, a blade holding member pivoted to said handle, angle determining members secured to said blade holding member arranged upon opposite sides of said handle and rollers connected to said angle determining members and positioned upon opposite sides of said handle.

2. A safety razor blade sharpener comprising a handle, a blade holding member pivotally connected to said handle, angle determining members secured to said blade holding member and longitudinally disposed relative to said handle and a pair of rollers pivotally connected to said angle determining members and arranged upon opposite sides of said handle.

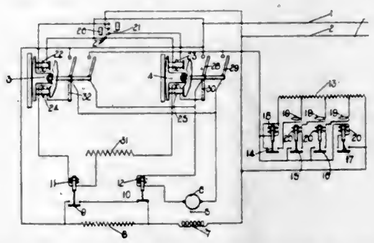
3. A safety razor blade sharpener comprising a blade holding member, angle determining members connected to said blade holding member, rollers connected to said angle determining members and spaced from each other and a handle extending between said rollers and angle determining members and pivotally connected to said blade holding member centrally thereof.

4. A safety razor blade sharpening device comprising a pair of jaw members, a pair of angle determining members formed from a single piece of material, a handle connected to said jaw members centrally thereof and a pair of rollers connected to said angle determining members and disposed upon opposite sides of said handle.

1,168,048. MOTOR-CONTROL SYSTEM. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 23, 1913. Serial No. 796,831. (Cl. 172—288.)

1. In a motor control system, the combination with a motor having a field winding, and a resistor for controlling said winding, of a short circuit for said resistor, and current-limit devices operable at different predetermined values for controlling said circuit.

2. In a motor control system, the combination with a motor having a field winding, and a resistor for controlling said winding, of a dynamic braking circuit for said motor, and means for shunting said resistor when the current traversing said circuit exceeds a predetermined value and is less than a second and higher predetermined value.



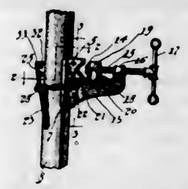
3. In a motor control system, the combination with a motor having a field winding, and a resistor for controlling said winding, of a dynamic braking circuit comprising means actuated at different predetermined current values for controlling said resistor.

4. In a motor control system, the combination with a motor having a field winding, a resistor in series with said winding, and a shunt circuit for said resistor, of a dynamic braking circuit for said motor, and means operable at predetermined maximum and minimum values of current in said braking circuit for controlling said shunt circuit.

5. In a motor control system, the combination with a motor having a field winding, of a resistor in series with said winding, a shunt circuit for said resistor, a dynamic braking circuit for said motor, and a plurality of electromagnetic switches having coils in said braking circuit operable at different predetermined current values for controlling said shunt circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,168,049. POST PIPE-VISE. EDWARD E. BECK, Chicago, Ill., assignor to Crown Die & Tool Co., Chicago, Ill., a Corporation of Illinois. Filed July 16, 1915. Serial No. 40,175. (Cl. 81—41.)



1. A post vise, the jaw supporting arm of which is provided with a perforation transversely therethrough for the passage of a chain, a chain passing through said perforation for surrounding a post, means for connecting the links of the chain at the side of the post opposite the vise, and means adapted to tighten the chain against the post, and thereby rigidly securing the vise in its operative position to the post.

2. A device for the purposes described, comprising in combination a vise, a chain, an opening through said vise for the passage of said chain, a yoke, provided with hooks, adapted to be projected through the links of and form a fastening device for the chain, and a tightening wedge, the bearing surfaces of which are opposed by the post and yoke.

3. A device for the purposes described, comprising in combination a vise provided with a perforation through the jaw supporting arm thereof forming a passage for a chain, a yoke, a chain secured to one end thereof, means for fastening the adjacent link of the tightened chain thereto, a groove in said hook, and a wedge adapted to be simultaneously tightened in said groove and against the opposing surface of a post, whereby the wedge is prevented from a lateral movement when in its operative position for tightening the vise against the post.

4. A post pipe vise provided with a perforation laterally through the jaw supporting arm thereof sustaining the jaws, for the passage of a chain and with a notch in the edge of the base plate thereof, forming a guide for said chain across the base plate, a chain, a bar for connecting the ends of said chain to the side of the post opposite the vise, and a wedge adapted to be interposed between the post and said bar for tightening the chain and the vise against the post, whereby a vise is adjusted and removably secured to a post in its operative position.

1,168,050. WIRE-DRAWING. BURNIE LEE BENBOW, Cleveland, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Dec. 7, 1912. Serial No. 735,551. (Cl. 205—19.)

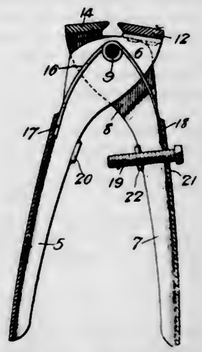
1. A lubricant consisting of finely divided graphite in suspension and a binder composed of material which may be carbonized by heating, the proportion of the said binder being considerably in excess of that necessary to keep the said graphite in suspension.

2. A liquid lubricant comprising finely divided graphite in suspension and a sugar syrup, the proportion of the latter being considerably in excess of that necessary to keep the graphite in suspension.

3. A lubricant consisting of deflocculated graphite and a binder therefor composed of material which may be carbonized by heating, the proportion of the said binder being considerably in excess of that necessary to keep the said graphite in the deflocculated state.

4. A liquid lubricant comprising deflocculated graphite and a carbonizable syrup, the proportion of the latter being considerably in excess of that necessary to keep the graphite in the deflocculated state.

1,168,051. HAND-TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 29, 1915. Serial No. 58,717. (Cl. 81—198.)



1. In a hand tool, the combination of sheet metal lever handles of U-shaped cross-section having widened forked forward end portions pivoted together, one of said portions being offset so as to straddle the other, each of said forked portions having lateral and outwardly bent flanges of the same thickness as the side walls of said forked portions, the flanges of each fork projecting laterally from the tool on opposite sides, cutting blades bridging the respective forked portions and each resting on the outturned flanges of the corresponding forked portion, and rivets for securing said cutting blades to said sheet metal flanges, said rivets having heads located at the rear or under surfaces of said flanges, and the cutting blades being of substantially the same width as the respective supporting flanges; substantially as described.

2. In a hand tool, the combination of a lever member constructed of sheet metal and having a forked forward

portion, outturned flanges on the extremity of said forward portion formed of sheet metal integrally with said lever member, a second lever member having a forked forward portion straddling and pivoted to the first forked portion, coöperating cutting blades carried respectively by the second lever member and by the outturned flanges on the first lever member, rivets passing through said outturned flanges and the corresponding cutting blade for securing the latter to said flanges, said rivets having heads at the lower or under surface of said flanges, and the forked portion of said second lever member being extended behind at least one of said flanges in close proximity thereto at a point between one of said rivet heads and the adjacent side wall of the forked forward portion of the first lever so that said edge will abut said flange and thereby limit the separation of the cutting blades; substantially as described.

3. In a hand tool, the combination of a lever member constructed of sheet metal and having a widened forked forward portion, outturned flanges integral with the edges of the fork at the forward extremity thereof, a second lever member of sheet metal having a forked forward portion which is offset so as to straddle said first forked portion, means for pivoting said forked portions together, outturned flanges integral with the edges of the second forked portion, all of said flanges being of the same thickness as the side walls of the respective forked portions, a cutting blade of substantially the same width as the flanges of the first lever member bridging the forked portion of said lever member and seated on said flanges, a similar cutting blade bridging the forked portion of said lever member and seated on the flanges thereof, and a plurality of rivets extending through the outer portion of each flange into the corresponding cutting blade, all of the rivets at one face of the tool being located in the same plane, and the forked portion of the second lever member being extended back of one of the flanges on the first lever member between the forked portion of the first lever member and one of said rivets so as to act as a stop for limiting the separation of the cutting blades; substantially as described.

4. In a hand tool, the combination of pivoted lever members, one of said members being constructed of sheet metal bent up into U-shaped cross-section, lugs formed integral with the inner edges of said last-named member and substantially meeting each other to present a stop surface at the inner part of the U-shaped member, and a stop device mounted on the other lever member, adapted to engage said stop surface; substantially as described.

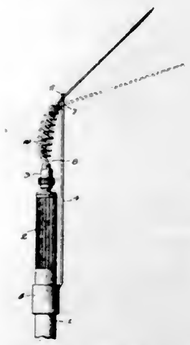
5. In a hand tool, the combination of pivoted lever members, one of said members being constructed of sheet metal bent up into U-shaped cross-section, lugs formed integral with the inner edges of said last-named member and substantially meeting each other, there being a screw socket at the adjacent edges of said lugs, a stop screw engaging said socket and adjustable therein, and a stop surface on the other lever member to coöperate with said screw; substantially as described.

1,168,052. DENTAL INSTRUMENT. WILLIAM W. BOLLS, Washington, D. C. Filed Oct. 17, 1914. Serial No. 867,114. (Cl. 3—10.)

1. In combination with a holder having broach rotating means, and means adjustable on the holder to directly engage the free end of the broach to hold said free end at varying angles to the longitudinal axis of the broach, an integral broach having an inner end held by said rotating means and an outer end connected to the inner end by a series of transverse coils the coils being arranged between the point of engagement of the adjustable means with the outer end of the broach and the rotating means.

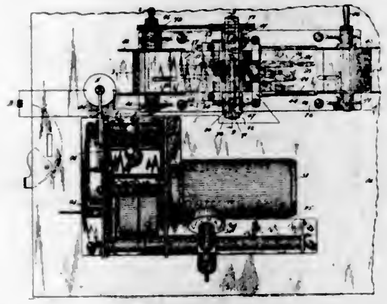
2. A rotatable broach comprising an end adapted to be secured to a driving member, and a working end connected to the first end eccentrically when in normal position and adapted to be angularly related to the first end of the broach.

3. A broach comprising an end adapted to be secured to a rotary chuck, a working end, a coiled connection between the broach ends being axially offset relative to the first end of the broach, and a movable member for adjusting the working end of the broach at an angle to the first



broach end whereby on rotation of latter end the offset coiled connection will impart a reciprocation to the working broach end.

1,168,053. VEHICLE SIGNALING SYSTEM. GEORGE E. BOYDEN, New York, N. Y., assignor to Alexander P. Browne, trustee, Boston, Mass. Filed July 17, 1914. Serial No. 851,451. (Cl. 181—2.)



1. A vehicle signaling system comprising in combination a phonograph provided with a record adapted for the reproduction of directions relating to a predetermined route to be followed by said vehicle operating mechanism for said phonograph, and means driven by said vehicle relatively thereto at a rate proportionate to the speed thereof for intermittently controlling the operating mechanism of said phonograph whereby the proper directions are reproduced by said record at definite predetermined points along the route traveled by the vehicle.

2. A vehicle signaling system comprising in combination a phonograph provided with a record adapted for the reproduction of directions relating to a predetermined route to be followed by said vehicle, means normally restraining said phonograph from operation, electromagnetic means for releasing the restraining means and means driven by said vehicle relatively thereto at a rate proportionate to the speed thereof for controlling said electromagnet device whereby the proper directions are reproduced by said record at definite predetermined points along the route traveled by the vehicle.

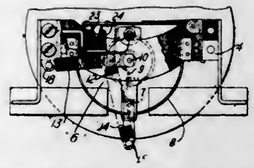
3. A vehicle signaling system comprising in combination a phonograph provided with a record adapted for the reproduction of directions relating to a predetermined route to be followed by said vehicle, a perforated web, means for driving said web at a rate proportionate to the speed of the vehicle and means coöperating with said perforated web for controlling the operation of said phonograph whereby the proper directions are reproduced by said record at definite predetermined points along the route traveled by the vehicle.

4. A vehicle signaling system comprising in combination a phonograph provided with a transmitter and a record adapted for the reproduction of directions relating to a predetermined route to be followed by said vehicle, operating mechanism for said phonograph, means driven by said vehicle relatively thereto at a rate proportionate to the speed thereof for intermittently controlling the operating mechanism of said phonograph whereby the proper directions are reproduced by said record at definite predetermined points along the route traveled by the vehicle, manually operated means for controlling the operation of said phonograph at will and manually operated means for adjusting the position of the phonograph transmitter with respect to its record.

5. The combination with a vehicle, of a phonograph, control means therefor, means connected with a moving part of said vehicle for driving said control means at a rate proportionate to the speed of said vehicle, restraining means for said phonograph, and means governed by said control means for releasing said restraining means at predetermined intervals.

[Claims 6 to 10 not printed in the Gazette.]

1,168,054. ELECTRICAL PROTECTIVE DEVICE. HAROLD W. BROWN, Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 19, 1913. Serial No. 807,709. (Cl. 175—268.)



1. In an electrical protective device, the combination with a rotatable member, of a plurality of springs angularly disposed with respect to each other and operatively connected to the rotatable member, and means for adjusting the relative tension of the said springs.

2. In an electrical protective device, the combination with a relay and a plurality of resilient means angularly disposed with respect to each other for controlling the shape of the torque curve of said protective device.

3. In an electrical protective device, the combination with a relay, of contact members, a plurality of resilient members angularly disposed with respect to each other for controlling the shape of the torque curve of said protective device, and means for adjusting the angularity of said resilient members.

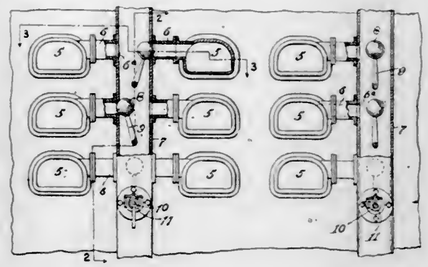
4. In an electrical protective device, the combination with a relay of the rotative type, of contact members operated by said relay, resilient members eccentrically connected to the rotatable member of the said relay, and means for varying the angular displacement of said resilient members with respect to each other.

5. The combination with an electro-responsive device, of a plurality of resilient means for retarding the movable member of the said electro-responsive device, said resilient means being so disposed with respect to each other and to the movable member of the electro-responsive device that the movable member of the electro-responsive device has a substantially constant torque during the first part of its movement and a relatively greater torque during the latter part of its movement.

[Claims 6 to 9 not printed in the Gazette.]

1,168,055. GAS-GENERATING APPARATUS. REZEAU B. BROWN, Milwaukee, Wis., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 14, 1914. Serial No. 866,600. (Cl. 48—126.)

1. In gas generating apparatus, a stand-pipe a retort communicating therewith through a lateral connection, and closure means therefor comprising a member carried rigidly by an arm, said arm having a lateral extension extending through the front wall of the stand-pipe below the plane of the connection, whereby the member may have a swinging movement toward and from its seat and be held thereon by the weight of the member, said member having a curved face opposing the communication passageway.



2. In gas generating apparatus, a vertically-extending stand-pipe, a pair of retorts communicating therewith through connections opposing each other in the stand-pipe, and swinging means within the pipe adapted to close either connection at will, said means swinging on an axis located below the plane of the connections, said means including a member having curved faces opposing the connections.

3. In gas generating apparatus, a vertically-extending stand-pipe, a pair of retorts communicating therewith through connections opposing each other in the stand-pipe, and swinging means within the pipe adapted to close either connection at will, said means swinging on an axis located below the plane of the connections, said means including a spherical member having a diameter greater than the cross-sectional area of either communication-passageway.

4. In gas generating apparatus, a vertically extending stand-pipe, a pair of retorts communicating therewith through connections opposing each other in the stand-pipe, and swinging means within the pipe adapted to close either connection at will, said means swinging on an axis located below the plane of the connections, the connections having seats acting to limit the swinging movements of the means, said means having an external operating member, and means coöperating with said member for retaining said closure means at an intermediate position to maintain communication between the stand-pipe and both retorts.

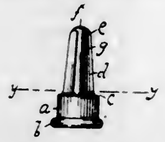
5. In gas generating apparatus, the combination of a plurality of retorts arranged one above the other, a mouth-piece for each retort forming an end extension thereof, a stand-pipe arranged vertically at one side of and closely adjacent to the mouth-pieces, relatively short lateral conduits extending from the mouth-pieces and separately opening one above the other through a vertical wall of the stand-pipe and with a valve seat at the juncture of each conduit with the stand-pipe, and a plurality of independently operating valves within the stand-pipe and mounted to oscillate about horizontal axes disposed transversely of the stand-pipe, each valve adapted to coöperate with one of said valve seats for closing communication between the corresponding retort and the stand-pipe.

[Claim 6 not printed in the Gazette.]

1,168,056. NURSING-NIPPLE. HOWARD V. BRUMLEY, Plandome, N. Y., assignor to Whitall Tatum Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 15, 1915. Serial No. 55,995. (Cl. 128—18.)

1. A nursing nipple comprising a base adapted for insertion on the neck of a bottle, and an angular tubular stem projecting from the base.

2. A nursing nipple comprising a base adapted for insertion on the neck of a bottle, and a tapered angular tubular stem projecting from the base.



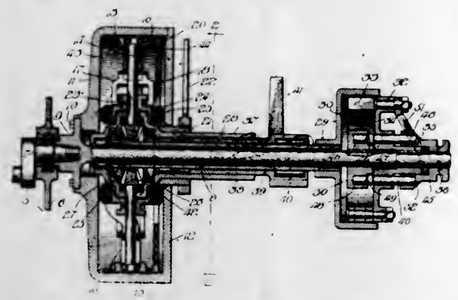
3. A nursing nipple comprising a cylindrical flanged base adapted for insertion on the neck of a bottle, and a tapered angular tubular stem projecting from the base.

4. A nursing nipple comprising a cylindrical shouldered and flanged base adapted for insertion on the neck of a bottle, and a tapered angular stem having a hemispherical apex.

5. A nursing nipple comprising a cylindrical shouldered and flanged base adapted for insertion on the neck of a bottle, and a triangular tapered stem projecting from the base, said stem having a hemispherical apex.

[Claims 6 and 7 not printed in the Gazette.]

1,168,057. FRICTION TRANSMISSION MECHANISM. WILMER G. BUCK, Warren, Ohio. Filed Sept. 5, 1914. Serial No. 860,363. (Cl. 74—26.)



1. In a device of the class described, the combination of a driving shaft and a driven shaft, friction devices interposed between the driving and driven shafts, a connection between the friction devices and driven shaft comprising a hollow member connected to said friction devices and a member connected to the driven shaft, means for establishing a connection between said hollow member and the member connected to the driven shaft, a member connected to the driving shaft, and means for breaking the connection between the hollow member and the member connected to the driven shaft and for establishing connection between the member connected to the driving shaft and the member connected to the driven shaft whereby a direct drive is effected, substantially as described.

2. In a device of the class described, the combination of a driving shaft and a driven shaft, friction devices interposed between the driving and driven shafts, a hollow member actuated by said friction devices, a member connected to the driven shaft, friction means for establishing a connection between the hollow member and the member connected to the driven shaft, a member connected to the driving shaft, and means for breaking the friction connection between the hollow member and the member connected to the driven shaft and for establishing connection between the member connected to the driving shaft and the member connected to the driven shaft whereby a direct drive is effected, substantially as described.

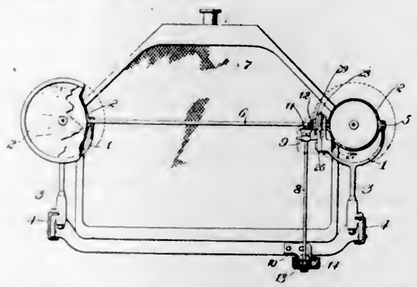
3. In a device of the class described, the combination of a driving shaft and a driven shaft, friction devices actuated by the driving shaft, a connection between the friction devices and driven shaft comprising a hollow member, pivoted arms within the hollow member, a member connected to the driven shaft, a connection between said arms and said member connected to the driven shaft, means for spreading and collapsing said arms to make and break a connection between the hollow member and member connected to the driven shaft, a member connected to the driving shaft, and means for effecting a connection between the member connected to the driving shaft and the member connected to the driven shaft whereby a direct drive is effected, substantially as described.

4. In a device of the class described, the combination of a driving shaft and a driven shaft, friction devices interposed between said driving and driven shafts, means for transmitting movement from said friction devices to the driven shaft comprising a hollow member, an expansible part within said hollow member, means for expanding and contracting said expansible part, a member connected to the driven shaft, a connection between said expansible part and said member, a member connected to the driving shaft, and means for effecting a connection between the member connected to the driving shaft and the member connected to the driven shaft whereby a direct drive is effected, substantially as described.

5. In a device of the class described, the combination of a driving shaft and a driven shaft, friction devices actuated by the driving shaft comprising oppositely disposed plates, a series of rotatable friction members lying between said plates and rotated by engagement with the inner wall of one of said plates, a sleeve, a connection between said rotated members and said sleeve, a connection between said sleeve and the driven shaft, and means for shifting said rotated member from engagement with the wall of one plate to engage with the wall of the other plate whereby the direction of rotation is reserved, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,168,058. AUTOMOBILE-HEADLIGHT. MICHAEL J. CAWLEY, Buffalo, N. Y. Filed Oct. 22, 1915. Serial No. 57,228. (Cl. 240—61.)



1. In an automobile, the combination of the frame, upright supports fixed to the frame, a transverse rock shaft journaled in the upper portions of said supports, a headlight mounted directly on said shaft to turn therewith, said fixed supports rising to the level of the headlight-case, and means accessible from the driver's seat for actuating said shaft.

2. In an automobile, the combination of the frame, upright supports fixed to the frame, a transverse rock shaft journaled in the upper portions of said supports, a headlight mounted directly on said shaft to turn therewith, said fixed supports rising to the level of the headlight-case, an upright shaft, means for transmitting motion from said shaft to said transverse shaft, and means accessible from the driver's seat for operating said upright shaft.

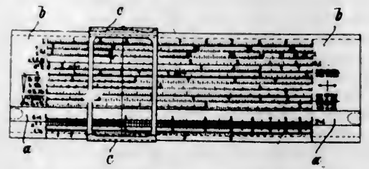
3. In an automobile, the combination of the inclined steering post, a support, a headlight tiltably mounted in said support, an upright shaft, bevel gears for transmitting motion from said shaft to the headlight, said shaft being provided at its lower end with a worm-wheel, a longitudinal shaft extending rearwardly from said upright shaft and provided with a worm meshing with said worm wheel, an inclined shaft extending lengthwise of the steering post and having an actuating device, and means for transmitting motion from said inclined shaft to said longitudinal shaft.

4. In an automobile, the combination of a pair of fixed upright yokes, a transverse rock shaft journaled in the inner arms of said yokes, a pair of headlights secured at their inner sides to the ends of said rock shaft and journaled at their outer sides in the outer arms of said yokes, an actuating device for said shaft accessible from the interior of the automobile, and operative connections extending from said actuating device to said rock shaft.

5. In an automobile, the combination of a shaft, a tiltable headlight secured to said shaft, a locking member fixed to said shaft, a locking device engaging said member, a releasing member coupled to said locking member and rotatable independently thereof to a limited extent, said releasing member having means arranged to disengage said locking device from said locking member, and means for rotating said releasing member.

[Claims 6 and 7 not printed in the Gazette.]

1,168,059. SLIDE-RULE CALCULATOR. GREGOR RUDOLF FERDINAND HEINRICH CUNTZ, Hamburg, Germany. Filed Nov. 18, 1913. Serial No. 801,702. (Cl. 235—70.)



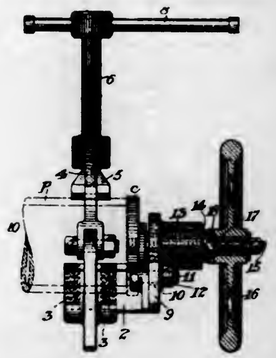
1. In a slide rule, a stock provided at one edge with the logarithmically divided scale and having arranged oppositely thereto a plurality of root scales logarithmically divided and being arranged to indicate different decimal orders, the roots corresponding to different decimal writings on the first scale.

2. In a slide rule, a stock provided at one edge with the logarithmically divided scale and having arranged oppositely thereto a plurality of root scales logarithmically divided and being arranged to indicate different decimal orders, the roots corresponding to different decimal writings on the first scale, said plurality of scales equaling in number the different decimal orders essentially involved in the root to be extracted.

1,168,060. APPARATUS FOR FACING THE ENDS OF PIPES, &c. JOHN H. DEPPELER, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed July 10, 1913. Serial No. 778,293. (Cl. 82—4.)

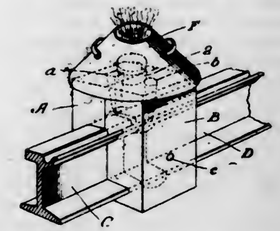
1. Apparatus for facing the ends of pipes, comprising a clamp for engaging the work, a facing tool for operating upon the end of the work, a spindle rotatably supporting said tool in the clamp, an externally-threaded sleeve coaxial with and loosely mounted on said spindle, said sleeve coöperating with an internally-threaded portion of the clamp and having a portion to contact with said tool, actuating means to rotate said rod to turn the same in the sleeve, and means automatically operable by axial shifting of said actuating means to connect said sleeve with said means so that the sleeve will rotate with the spindle to feed the tool forward.

2. In an apparatus for facing the ends of pipes, etc., the combination with a clamp for engaging the work, of a cross-slide adjustably connected at each end to said clamp whereby it may be adjusted transversely to the longitudinal axis of the work and having a threaded bore extending lengthwise of said axis, an externally threaded bearing fitting into and coöperating with said threaded bore, a spindle journaled in said bearing, a facing tool secured to said spindle, a driving wheel on said spindle for rotating the same, and coupling means between said spindle and sleeve for simultaneously turning and feeding said



sleeve, said coupling means adapted to be automatically actuated by lateral movements of the wheel.

1,168,061. METHOD OF PRODUCING ALUMINOTHERMIC MIXTURES. JOHN H. DEPPELER, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1915. Serial No. 49,469. (Cl. 75—17,)



1. The improvement in the art of producing aluminothermic mixture from aluminum, an oxid, and an additional constituent to be used in preheated molds for welding and other purposes, which consists in preheating the additional constituent during the preheating of the mold and placing the same in an unmelted state in the aluminum and oxid, the heat of the reaction serving to melt the additional constituent.

2. The improvement in the art of producing aluminothermic mixture from aluminum, an oxid, and an additional constituent, which consists in placing the additional constituent in sufficiently close relation with the aluminum and oxid to cause the heat of the reaction to melt the additional constituent, said additional constituent being kept separate from the aluminum and oxid until the molten metal begins to form.

3. The improvement in the art of producing aluminothermic mixture from aluminum, an oxid, and an additional constituent, which consists in placing the additional constituent in a sheet-metal container and placing the container and its contents in the mixture of aluminum and oxid.

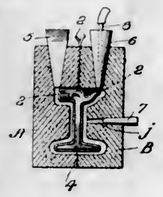
4. The improvement in the art of producing aluminothermic mixture from aluminum, an oxid, and an additional constituent, to be used in preheated molds for welding and similar operations, which consists in placing the additional constituent in a fusible container, preheating the container and its contents during the preheating of the mold, and then placing the container and its contents in the mixture of aluminum and oxid.

5. The improvement in the art of producing aluminothermic mixture from aluminum, an oxid, and an additional constituent, which consists in placing the addi-

tional constituent in a fusible container, preheating the container and its contents and then placing the same in the mixture of aluminum and oxid.

[Claim 6 not printed in the Gazette.]

1,168,062. METHOD OF SEALING OR LUTING MOLDS. JOHN H. DEPPELER, Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1915. Serial No. 49,470. (Cl. 22—190.)



1. The method of luting or sealing molds employed in welding the ends of railway rails and the like, which consists in winding a strip of refractory material around the end of each of the rails before applying the mold.

2. The method of luting or sealing mold sections which consists in treating strips of material with a sticky substance and so positioning the strips thus treated before the mold sections are assembled as to close all of the leakage openings which would normally occur after assembling of the mold sections.

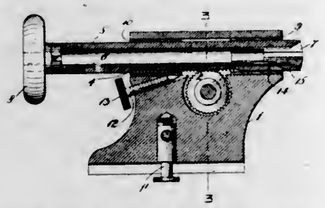
3. The method of luting or sealing the joints between mold sections and the articles to which they are applied, which consists in treating strips of material with a sticky substance and applying the same to the articles before the mold sections are applied.

4. The method of luting or sealing molds, which consists in closing the leakage openings with strips of material treated with a sticky substance, and then blowing finely divided material into the mold, for the purpose described.

5. The method of luting or sealing molds, which consists in closing the leakage openings with strips of material treated with a sticky substance, and then subjecting the leakage openings to a pressure medium containing finely divided material.

[Claims 6 to 10 not printed in the Gazette.]

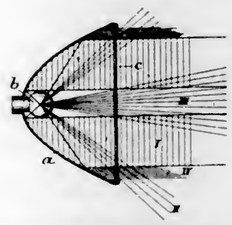
1,168,063. TAIL-STOCK. FREDERICK W. DERBYSHIRE, Waltham, Mass. Filed June 4, 1913. Serial No. 771,636. (Cl. 82—31.)



The combination with a lathe-stock of a sleeve fixed in said lathe-stock and provided with a tongue, a drawing-in spindle within said sleeve, a screw threaded to said lathe-stock and having its inner end bearing against said tongue, and means whereby said screw may be rotated for forcing said tongue against said spindle.

1,168,064. SEARCH-LIGHT. VICTOR ELSAESSER, Langerfield, near Barmen, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany, a Corporation of Germany. Filed Nov. 10, 1915. Serial No. 60,778. (Cl. 240—41.)

1. In a headlight, the combination of a source of light, a reflector adapted to reflect part of the rays emitted thereby in a direction substantially parallel with the axis of the reflector to form a zone of the parallel rays of greatest luminous intensity, a transparent cover having a coaxial annular portion through which said parallel rays are permitted to pass unrefracted, means peripherally disposed with respect to the cover for deflecting downwardly and to the side at least a portion of the rays which are not included in the above-mentioned zone, and means interposed in the path of the centermost unreflected rays issuing directly from the light to deflect the same downwardly.



2. In a headlight, the combination of a source of light, a reflector adapted to reflect part of the rays emitted thereby in a direction substantially parallel with the axis of the reflector to form a zone of the parallel rays of greatest luminous intensity, a transparent cover, and a prism secured at the center of said cover to deflect downwardly and laterally only, the centermost unreflected rays issuing directly from the light.

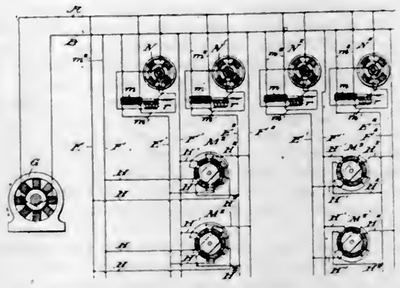
3. In a headlight, the combination of a source of light, a reflector adapted to reflect part of the rays emitted thereby in a direction substantially parallel with the axis of the reflector to form a zone of the parallel rays of greatest luminous intensity, a transparent cover through which said parallel rays are permitted to pass unrefracted, said cover being dish-shaped with a horizontally-directed rim portion, and means including a plurality of circularly-disposed prism associated with said rim portion to deflect downwardly and laterally only, at least a portion of those rays not included in the above-mentioned zone.

4. In a headlight, the combination with a source of light, a reflector adapted to reflect part of the rays emitted thereby in a direction substantially parallel with the axis of the reflector to form a zone of the parallel rays of greatest luminous intensity, a transparent cover through which such parallel rays are permitted to pass unrefracted, a plurality of circularly-risposed prisms inserted between the lower half of said deflector and said cover, and an arcuate reflecting member inserted between the upper part of said reflector and said cover, said prisms and reflecting member being adapted to deflect downwardly and laterally only, at least a portion of the rays not included in the above-mentioned zone.

5. In a headlight, the combination with a source of light, a reflector adapted to reflect part of the rays emitted thereby in a direction substantially parallel with the axis of the reflector to form a zone of the parallel rays of greatest luminous intensity, a transparent cover through which such parallel rays are permitted to pass unrefracted, said cover being dish-shaped with a horizontally directed rim portion, a plurality of circularly-disposed prisms associated with the outer surface of said rim portion, and a reflecting coating on the inner surface of the upper half of said rim portion, said prisms and reflecting coating being adapted to deflect downwardly and laterally only, at least a portion of the rays not included in the above-mentioned zone.

1,168,065. SYSTEM FOR DISTRIBUTING AND REGULATING ELECTRICAL ENERGY IN THE FORM OF ALTERNATING CURRENTS. WILLIAM M. FAIRFAX, Washington, D. C. Original application filed Dec. 24, 1897, Serial No. 663,405. Divided and this application filed Mar. 1, 1915. Serial No. 11,215. (Cl. 172—238.)

1. The combination of the single phase circuit of an alternating current supply system, branch circuits leading from said single phase circuit, a translating device energized by said branch circuits in the operation of which different conditions tend to produce variations in the phase relation of the currents in said branch circuits, and means in one of said branch circuits for shifting the phase of its current with relation to the current in another of said branch circuits with automatic means responsive to changes in circuit conditions for modifying the action of said phase shifting means.



2. The combination of a single phase circuit of an alternating current supply system, branch circuits leading from said single phase circuit, a polyphase motor energized by said branch circuits in the operation of which different conditions tend to produce variations in the phase relation of the currents in said branch circuits, and means in one of said branch circuits for shifting the phase of its current with relation to the current in another of said branch circuits with automatic means responsive to changes in circuit conditions for modifying the action of said phase shifting means.

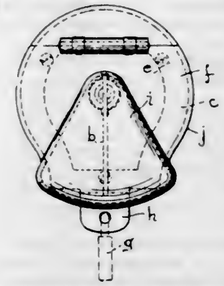
3. The combination of a single phase circuit of an alternating current supply system, branch circuits leading from said single phase circuit, an induction motor connected to said branch circuits, and means in one of said branch circuits for shifting the phase of its current with relation to the current in another of said branch circuits with automatic means responsive to changes in circuit conditions for modifying the action of said phase shifting means.

4. The combination of a single phase circuit of an alternating current supply system, branch circuits leading from said single phase circuit, a multi-phase translating and responsive device energized by said branch circuits in the operation of which different conditions tend to produce variations in the phase relation of the currents in said branch circuits and thereby impair the torque and efficiency of the device, with means for shifting the phase of the current in one of said branch circuits with relation to the current in another of said branch circuits and for automatically modifying the action of the phase shifting means in response to changes in circuit conditions.

5. The combination of a single phase circuit of an alternating current supply system, branch circuits leading from said single phase circuit, a multi-phase translating device energized by said branch circuits in the operation of which different conditions tend to produce variations in the phase relations of the currents in said branch circuits, and means in one of said branch circuits for shifting the phase of its current with relation to the current in another of said branch circuits with automatic means responsive to load and circuit changes for modifying the action of the phase shifting means and tending to maintain the phase relations.

1,168,066. SWITCH-LOCK. RAYMOND L. GIRARDOT, Detroit, Mich. Filed Dec. 14, 1914. Serial No. 877,170. (Cl. 70—8.)

1. The combination with a switch casing provided with a key socket, a switch lock comprising an annular plate having a central aperture therein fitted to the switch casing, fastening means for securing said plate to the casing, a cover hinged to said plate and adapted to swing down over the same and protect the fastening means and prevent access to the socket, and means for locking said cover and plate together.



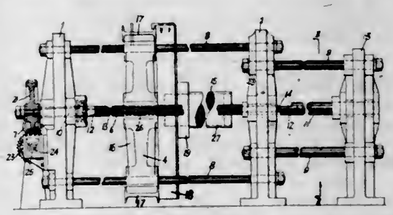
2. The combination with a switch casing provided with a key socket, a switch lock comprising an apertured plate conforming to the contour of the casing and having a flange adapted to overlie the sides of the casing, fastening devices for securing said plate to the face of the casing, a movable cover attached to the plate adapted to overlie the fastening devices and prevent access to the key socket, and means for locking the movable cover and the plate together.

3. The combination with a switch casing provided with a key socket having a key therein, a switch lock comprising an annular plate having a central aperture therein fitted to the switch casing, fastening means for securing said plate to the casing, a cover having a boss therein hinged to the plate and adapted to swing down over the same to protect the fastening means and overlie the key, and socket, and means for locking said cover in closed position.

4. The combination with a switch casing, provided with a key socket, a switch lock comprising a plate secured to the casing by suitable fastening devices and leaving the key socket within the casing exposed, a cover for preventing access to the socket attached to the plate and adapted when in a closed position to overlie and protect the fastening devices for the said plate and the key socket, and means for locking said cover to the plate.

5. The combination with a switch casing having a key socket therein, a switch lock comprising a plate attached to said casing near the socket and adapted to leave the said key socket exposed, fastening devices for attaching said plate to the casing, a cover for preventing access to the socket hinged to said plate and adapted to swing down over the fastening devices for the plate and inclose the key socket, and means for locking said cover in its closed position.

1,168,067. PRESS. EMIL HAEFELY, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1912. Serial No. 700,028. (Cl. 29—88.2.)



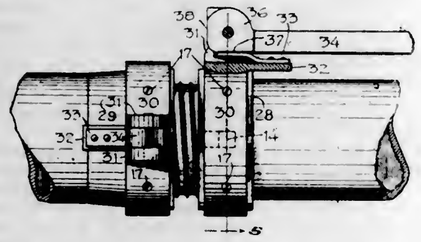
1. A press comprising a stationary frame having supporting bearings for a mandrel, and a carriage supported on the frame and movable longitudinally of the mandrel, said carriage having pressure members that are adjustable transversely with respect to the mandrel.

2. A press comprising a supporting frame having spaced end members joined by tie rods, a carriage movably supported on the tie rods so as to be adjustable longitudinally of the mandrel and having pressure members adjustable transversely with respect to the mandrel, actuating screws for the carriage, and means for synchronously driving the said screws.

3. A press comprising a stationary frame having end members joined by tie rods, and a stationary post joined to one of the end members by tie rods and having an inwardly extending shaft projection provided with an open bearing, a similar projection at the opposite end of the structure, a carriage movably supported upon the tie rods between the end frames, adjusting screws rotatably supported in the end frames and extending through nuts in the carriage, and means for synchronously driving the adjusting screws.

4. A press comprising a stationary frame, a mandrel, bearing members for the mandrel projecting inwardly from the ends of the frame, the said members being of less diameter than the mandrel, and a carriage supported by the frame and movable longitudinally of the mandrel, the said carriage having pressure members adjacent to the mandrel.

1,168,068. SPANNER ATTACHMENT FOR HOSE COUPLINGS AND CONNECTIONS. MORRIS HARRISON, Brooklyn, N. Y. Filed Sept. 22, 1914. Serial No. 862,954. (Cl. 137—28.)



1. A coupling device including a rotating element, a lever carried pivotally thereby for movement to position at right angles to the axis of the device at times and to lie closely thereagainst at other times, and yieldable means engaged with the lever to hold it at the inner limit of its movement.

2. A coupling device comprising a rotating element, radial ears carried thereby spaced circumferentially, a lever pivoted between the ears, and a resilient member carried between the ears and bearing against the lever, the lever being movable to lie close against a concentric member engaged with the rotating element.

3. In a device of the class described an annulus, a plurality of binding screws engaged therethrough for the purpose described, two circumferentially spaced ears formed on the annulus, a lever pivoted at its base therebetween, movable and shaped to lie close beside a concentric member connected to the annulus, and means to hold the lever releasably at the inner limit of its movement.

1,168,069. MACHINE FOR PRESSING KNITTED GARMENTS. MAX JOSEPH HIRSCH, Schönau, near Chemnitz, Germany, assignor to the Firm of C. G. Haubold Jr. G. M. B. H., Chemnitz, Germany. Filed Nov. 5. 1915. Serial No. 59,883. (Cl. 26—3.)



1. A machine for pressing knitted garments comprising a pair of pressure rollers and two pairs of heating plates and feeding rollers arranged in front and rear of said pressure rollers respectively.

2. In a machine of the class described, in combination, two pairs of feeding rollers, two pairs of superposed heating plates arranged between said pairs of feeding rollers and a pair of pressure rollers arranged between said pairs of heating plates.

3. In a machine of the class described, the combination of two parallel plates spaced apart a distance equal to the thickness of two press boards and the material to be pressed between them, means for feeding such boards and material through said space, and a pair of pressure rolls arranged at the outlet end of said space and between which the boards and intermediate material pass.

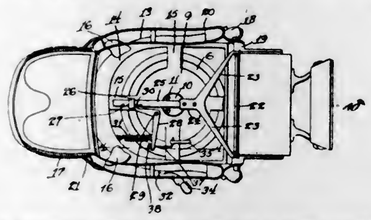
4. In a machine of the class described, the combination of a table like support for press boards and material to be pressed, a pair of parallel plates spaced apart a distance equal to the thickness of two press boards and the material to be pressed thereby, rolls arranged to feed a pair of press boards and material to be pressed thereby between said plates, and a pair of pressure rolls for acting on the press boards.

5. In a machine of the class described, the combination of two pressure rolls adapted to receive a pair of press boards and the material to be pressed thereby, means for feeding the boards and material between the rolls, and means intermediate the feeding devices and pressure rolls for heating the material.

1,168,070. MANUFACTURE OF ISOPRENE AND HOMOLOGUES THEREOF. HENRY STATLAY ARTHUR HOLT, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed June 13, 1912. Serial No. 703,417. (Cl. 23—24.)

The process of producing butadiene hydrocarbons by heating in the vaporized condition, while in a state of dilution and in the practical absence of other organic hydrocarbons, the mixture of polymerized products other than caoutchouc-like matter resulting in the polymerization of butadiene hydrocarbons.

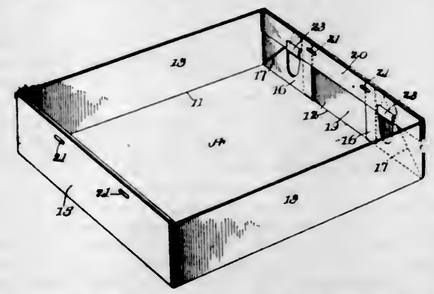
1,168,071. BARBER'S CHAIR. WALTER S. HOLZBAUR, White Horse, Hamilton township, Mercer county, N. J., assignor to John E. Mathews, Trenton, N. J. Filed Sept. 14, 1914. Serial No. 861,675. (Cl. 155—7.)



1. In a barber's chair, the combination with a pedestal, of a seat frame rotatably mounted on said pedestal, a chair back pivotally mounted upon said seat frame, a leg rest pivotally mounted on the seat frame, an arm rest pivotally connected to said back and leg rest, a Y shaped frame having its outer end connected to the leg rest portion and its inner end formed with an extension, a guide on the seat frame, a horizontally disposed rack bar having one end guided and retained by said guide and its other end secured to the extension of the Y shaped frame, a bell crank lever pivoted to the seat frame in horizontal relation to the said rack bar, one arm of said lever constructed to engage the rack, a spring having one end connected to the seat frame, and the other end secured to the other arm of said lever, a rod having one end adjustably connected to said arm near the connection of the spring, a segment shaped vertically disposed curved arm having its upper end connected to said rod and a right angled shaped hand lever pivoted to the seat frame, having its horizontal limb connected to the lower end of said curved arm and having its vertical limb formed with a handle arranged practically under one of the arm rests and protected from contact thereby and in easy reach of the hand of the operator.

2. In a barber's chair, the combination with a pedestal, a circular support mounted upon said pedestal provided with a centrally disposed vertical stud, a circular turn table mounted on said stud and capable of rotation thereon, a series of arms projecting laterally from said turn table, a lug formed on one of said arms and having a circular shaft bearing therein, a lug formed on one of the other arms and having an angular guiding opening therein, a rack bar guided horizontally in said opening, an arm connected to the other end of said rack bar, a leg section pivotally connected with said arm, arm and back rests connected in proper relation, a yoke shaped seat frame to which the back and arm rests are adjustably connected, said seat frame being secured to the arms of the turn table, a bell crank lever fulcrumed at its corner to the turn table and having one arm engaging said rack bar, a spring connected to the seat frame and to the other arm of said lever upon one side of said arm, an adjustable rod leading from the end of the last named arm of said lever, a curved vertically disposed arm secured to said adjustable connection, a rod mounted in the circular shaft bearing upon the arm of the turn table and having said circular arm mounted upon its inner end, and a vertical terminal formed on said rod and carrying a handle for operating said rod, said handle and rod being disposed at one side of the chair and practically under one of the arm rests of the chair.

1,168,072. COLLAPSIBLE BOX. FRANK H. HOUGHLAND, Houston, Tex. Filed Mar. 9, 1915. Serial No. 13,098. (Cl. 229—34.)

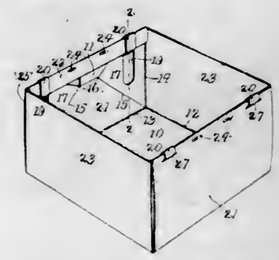


1. A collapsible box formed of a blank of appropriate material creased along the lines of the folds between the bottom and the sides and ends of the box, the ends of said box beyond said folds being of a length greater than the normal height of the box and formed with slits from the outer ends of the fold between the end and the bottom of the box along the lines of the fold between the bottom and sides, the end portions between said slits being reinforced with a central stiffening strip and formed to fold along the line of the normal height of the box over onto said stiffening strip, the corners formed by the ends of the sides of the box being folded diagonally from the juncture at the corner between the side and the bottom to the outside at a point in line with the normal height of the box, said corners being folded along said crease and then the sides folded over onto the top face of the bottom, then the outer flap on the extreme end being folded over onto the several parts and secured by staples driven through the several thicknesses, said corner flaps of the sides being formed with tongues adapted to be bent upwardly and inserted through slots in the outer fold of the end pieces, all substantially as set forth.

2. A collapsible box formed of a board creased along the lines marking the junction between the normal bottom, ends and sides of the box, folds on the ends of the box having slots to fit tongues cut from end flaps, end flaps formed from the sides outside the normal length of the box, said end flaps having tongues cut therefrom and having diagonal creases or folds extending from the corner between the sides and the bottom to a point on the upper outer edge of said end flaps substantially opposite that edge of the tongue nearest the end of said end flaps, the several parts when brought together in position forming a permanent fastening device, substantially as set forth.

3. A collapsible box formed of appropriate material creased along the lines marking the junction between the normal bottom, sides and ends of the box, slits being formed to divide the ends from the sides, the ends of said box beyond said creases being of a length greater than the normal height of the box and formed with slots in the outer ends to the creases between the end and the bottom of the box along the lines of the fold between the bottom and sides, end flaps formed from the sides outside the normal length of the box, tongues cut from end flaps, diagonal folds or creases extending from the corner between the sides and bottom to the top of the end flaps at a point in line with the normal height of the box, the several parts when brought together forming a permanent locking device, substantially as set forth.

1,168,073. COLLAPSIBLE BOX. FRANK H. HOUGHLAND, Houston, Tex. Filed May 26, 1915. Serial No. 30,588. (Cl. 229—34.)



1. A collapsible box formed of a blank with its ends creased and adapted to be folded along lines extending from the juncture between the sides and bottom at right angles with each other, with sections between said lines adapted to fold on a diagonal line between said right angular lines, one of said sections being formed with a tongue adapted to be folded over the top edge and inserted in a slit in the outer end of said box when erected, substantially as set forth.

2. A collapsible box formed of a single piece blank having notches cut in opposite edges near each end, forming flaps at the corners thereof, and folded with the section between the lines of the fold between the bottom and the sides and the bottom and the ends adapted to double over along a diagonal line one part on the other, the part of each corner piece connected with the end being normally doubled over onto said end and secured thereto and the other part being formed with a tongue adapted to fold over the top edge of the end of the box and be inserted in a slit on the outside, whereby said end is secured together, substantially as set forth.

3. A box formed of a blank having notches cut near each end on opposite sides thereof forming flaps at each corner, the section of the blank at each corner between the line of the bottom fold and the line of the end fold being normally doubled on a diagonal line extending from the juncture between said two main folds to the bottom of the notch in said corner, the part of said corner connected with the end of the box being normally folded onto said end and permanently secured thereto by staples, and the other part being formed with a tongue adapted to fold over the top edge of the end and be inserted in a slit in the outside part thereof, substantially as set forth.

1,168,074. ELECTRIC-RESISTANCE MATERIAL. MATTHEW A. HUNTER, Troy, N. Y. Filed May 21, 1915. Serial No. 29,589. (Cl. 75—1.)

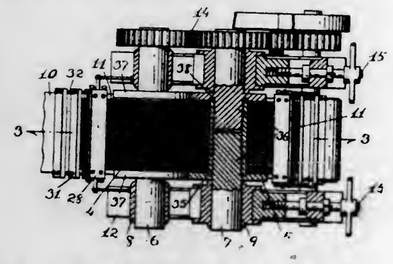
1. An electric resistance material consisting of an alloy of nickel, copper and chromium, the nickel and copper being in the relation of 75 parts to 95 parts of nickel to 25 parts to 5 parts of copper; substantially as described.

2. An electric resistance material consisting of a large proportion of nickel, a small proportion of copper, and chromium amounting to from 10 parts to 25 parts to 100 parts of the nickel and copper; substantially as described.

3. An electric resistance material consisting of an alloy of nickel, copper and chromium, the copper and nickel being in the proportion of from 5 to 25 parts of copper to 95 to 75 parts of nickel and the chromium being in the proportion of from 10 to 25 parts of chromium to 100 parts of nickel and copper; substantially as described.

4. An electric resistance material consisting of an alloy of nickel, copper and chromium, the copper and nickel being in the proportion of approximately 15 parts of copper to 85 parts of nickel and the chromium being in approximately the proportion of 20 parts of chromium to 100 parts of nickel and copper; substantially as described.

1,168,075. ROLL-MACHINE FOR REDUCING CEREALS TO FILAMENTOUS FORM. JOHN E. HUTZEN, Pittsburgh, Pa. Filed Aug. 24, 1915. Serial No. 47,176. (Cl. 83—12.)



1. In a roll machine for reducing cereal material, the combination with a moving element having a convex bottom channel between vertical walls, and a rotary roll having a circumferential rib provided with vertical side walls engaging the walls of said channel and a transversely convex circumferential edge engaging the convex bottom of the channel and providing, for the reduced material, a lateral moving moldway between the vertical channel wall and the contact line of the channel bottom with the circumferential rib of the rotary roll.

2. In a roll machine for cereals, a reducing roll having a series of circumferential convex-bottom channels and alternating circumferential convex-edge ribs having lateral vertical walls forming the sides of said channels, each channel providing a re-entrant angular moldway between its lateral wall and the highest portion of its convex bottom.

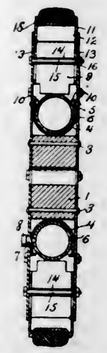
3. In a roll machine for cereals, a reducing roll comprising a series of removable thin disks, each having plane sides and terminating in a transversely convex edge, and smaller concentric alternating removable disks of substantially equal thickness to said thin disks and having similar plane sides and transversely convex edges, said convex edges forming the bottoms of fine circumferential channels.

4. In a roll machine for cereals, a journal shaft, thereon a series of thin removable reducing disks each having plane sides and terminating in a transversely convex circumferential edge, alternating smaller concentric disks of equal thickness to said reducing disks and having similar transversely convex circumferential edges forming channel-bottoms, a shaft parallel to said journal shaft, and thereon a similar series of similar thin convex-edge reducing disks and similar alternating convex-edge smaller disks forming channel-bottoms.

5. In a roll machine for cereals, parallel shafts having each a roll having circumferential transversely convex-bottom channels, between transversely convex-edge circumferential ribs having vertical side walls bounding said channels, the ribs of one roll entering the channels of the other parallel roll and engaging the side walls and convex bottoms thereof, to provide lateral angular moldways between said side walls and the convex edges of the disks.

[Claims 6 and 7 not printed in the Gazette.]

1,168,076. VEHICLE-WHEEL. JULIAN B. HYMER, Zarah, Kans. Filed Apr. 18, 1912. Serial No. 691,705. (Cl. 152—42.)



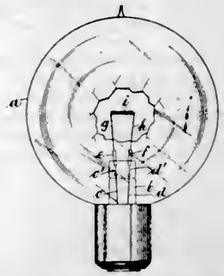
1. In a vehicle wheel, two side members, an annular support secured to and between said members, radially independently movable members arranged around said support and adapted when moved inwardly a predetermined distance to contact with said support, resilient means supported by and encircling said support and normally holding the radially movable members out of contact with said support, the radially movable members being adapted to contact with each other when in contact with said support, and a rim encircling the radially movable members and having an inner annular groove in which said radially movable members are mounted.

2. In a vehicle wheel, two side members, a ring support secured centrally to and between said side members and having a peripheral groove and inwardly turned peripheral flanges at opposite sides of said groove, resilient means mounted in said groove of said ring support, radially independently movable members arranged around and adapted, when the resilient means is in the expanded condition to contact at their inner ends therewith, and adapted, when the resilient means is collapsed a predetermined amount to contact with said flanges, and a rim encircling and in contact with said blocks when the resilient means is expanded.

3. In a vehicle wheel, two side members, a ring support secured centrally to and between said members and having a peripheral groove and inwardly turned flanges at opposite sides of said groove, a pneumatic resilient tube mounted in said groove, radially independently movable members between said side members and having their inner ends adapted to contact with the pneumatic tube when the tube is expanded, and adapted, when the tube is collapsed to a predetermined amount to contact with said flanges, and a rim mounted on the outer ends of said radially movable members.

1,168,077. INCANDESCENT LAMP WITH CONCENTRATED METALLIC FILAMENT. HERMAN J. JAEGER, Weehawken, N. J. Filed Dec. 17, 1914. Serial No. 877,624. (Cl. 176—16.)

1. An incandescent electric filament lamp comprising conductive supporting means having free ends bent toward each other, and short concentrated incandescing means loosely mounted on the said free bent end portions of the conductive supporting means.



2. An incandescent metallic filament lamp comprising conductive supporting means having free ends bent at approximately a right angle toward each other, and short metallic concentrated incandescing means loosely mounted on the said free bent end portions of the conductive means.

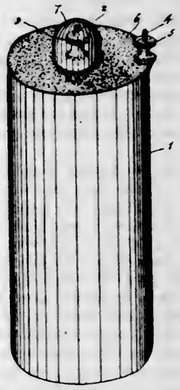
3. An incandescent electric filament lamp comprising a multiple of conductive supports having the free ends of each adjoining pair of supports bent at approximately a right angle toward each other, and a short concentrated incandescing means loosely mounted on the said free bent end portions of each adjoining pair of supports.

4. An incandescent metallic filament lamp comprising a multiple of conductive supports having the free ends of each adjoining pair of supports bent at approximately a right angle toward each other, and a short concentrated metallic filament loosely mounted on the said free bent end portions of each adjoining pair of supports.

5. An incandescent metallic filament lamp comprising a multiple of conductive supports having the free ends of each adjoining pair of supports bent at approximately a right angle toward each other, and a short concentrated tungsten filament loosely mounted on the said free bent end portions of each adjoining pair of supports.

[Claims 6 to 8 not printed in the Gazette.]

1,168,078. TERMINAL SEAL FOR BATTERIES. ERNEST WALTER JEFFERSON, Winnipeg, Manitoba, Canada. Filed May 21, 1915. Serial No. 29,554. (Cl. 204—53.)



1. A device for conserving the electrical energy of a battery or other source of electrical energy against discharge comprising, a destructible, covering for a terminal of the battery designed to prevent an electrical connection being made with the terminal without involving the destruction of the covering.

2. A device for conserving the electrical energy of a battery or other source of electrical energy against discharge comprising, a fixed destructible sealing cap entirely inclosing and clear of the positive terminal of the battery.

3. A device for conserving the electrical energy of a battery or other source of electrical energy against discharge comprising, a destructible sealing cap inclosing the positive terminal of the battery and having the base thereof embedded in the top of the battery and surrounding the terminal.

4. A device for conserving the electrical energy of a battery or other source of electrical energy against discharge comprising, a temporary sealing cap in the nature of a paper dome inclosing the positive terminal of a battery.

5. The combination with a battery or other source of electrical energy having the top closed over with a self setting composition and a positive terminal protruding through such composition, of a destructible sealing cap inclosing the said terminal and having the base thereof set in the self setting composition.

[Claim 6 not printed in the Gazette.]

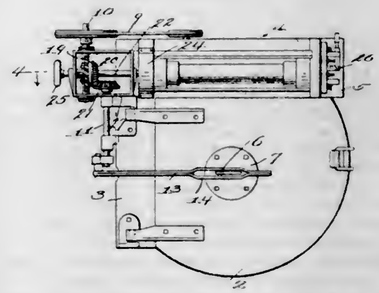
1,168,079. BUTTON. ROSE KARGER, Sealy, Tex. Filed Sept. 28, 1914. Serial No. 863,872. (Cl. 24—90.)



1. A button comprising a pair of rings arranged one within the other and extending at right angles to each other, one of the rings having recesses formed therein at diametrically opposite points and the other ring snugly fitting within the recesses in the first-mentioned ring, so as to hold the rings against relative movement, and means on the rings for attaching the button to a garment.

2. A button comprising a pair of rings arranged one within the other and extending at right angles to each other, the outer ring having its inner surface provided with recesses located at diametrically opposite points, the inner ring having its periphery provided with recesses at diametrically opposite points, and the recessed portions of the inner ring being received by the recessed portions of the outer ring, whereby the inner and outer surfaces of one ring lies flush with the inner and outer surfaces of the other ring.

1,168,080. GEARING SYSTEM. WILLIAM J. KELLY, Clinton, Iowa. Original application filed Jan. 21, 1914, Serial No. 813,552. Divided and this application filed May 15, 1914. Serial No. 838,823. (Cl. 74—7.)



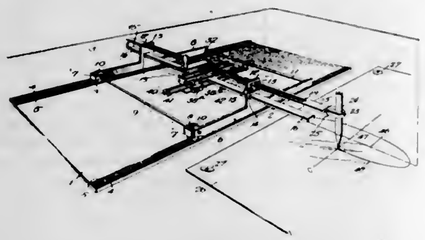
1. In a gearing system of the class described, in combination, a support, a transverse power shaft mounted on the support, an upright mechanism operating element, a horizontal mechanism operating shaft, a transverse shaft extending at an angle to said horizontal shaft, connec-

tions between the last named transverse shaft and the upright element to oscillate the latter, a worm on said power shaft, a worm wheel operated by said worm, bevel gearing between the worm wheel and said last named transverse shaft, a longitudinal shaft upon which said worm wheel is mounted, the worm wheel being splined upon the longitudinal shaft and the latter being slidably mounted, a pinion mounted on said horizontal operating shaft and a pinion fixed on said longitudinal shaft and engaging said first named pinion in one position of said longitudinal shaft.

2. In a gearing system of the class described, in combination, a support, a transverse power shaft mounted on the support, an upright mechanism operating element, a horizontal mechanism operating shaft, a transverse shaft extending at an angle to said horizontal shaft, connections between the last named transverse shaft and the upright element to oscillate the latter, a worm on said power shaft, a worm wheel operated by said worm, bevel gearing between the worm wheel and said last named transverse shaft, a longitudinal shaft upon which said worm wheel is mounted the worm wheel being splined upon the longitudinal shaft and the latter being slidably mounted, a pinion mounted on said horizontal operating shaft, a pinion fixed on said longitudinal shaft and engaging said first named pinion in one position of said longitudinal shaft and a casing inclosing said worm wheel and providing bearings for the horizontal shaft.

3. In a gearing system of the class described, in combination, a support, a transverse power shaft mounted on the support, an upright mechanism operating element, a horizontal mechanism operating shaft, a transverse shaft extending at an angle to said horizontal shaft, connections between the last named transverse shaft and the upright element to operate the latter, a worm on said power shaft, a worm wheel operated by said worm, bevel gearing between the worm wheel and said last named shaft and a longitudinal shaft geared to said horizontal shaft to drive the latter and upon which said worm wheel is mounted.

1,168,081. ELLIPSOGRAPH. FRANK KIRK and LESLIE E. FRANCISCO, Canon City, Colo., assignors of one-fourth to Timothy Sullivan and one-fourth to John Cox, Canon City, Colo. Filed June 4, 1915. Serial No. 32,089. (Cl. 33—30.)



1. An ellipsograph, comprising a table having longitudinally extending guides at its opposite side edges, a carriage mounted to move on the guides, said carriage comprising connected side plates, each plate having a standard intermediate its ends and the standards being in register and having registering slots, a drafting arm mounted to slide in the standards and comprising upper and lower bars spaced apart vertically and approximately parallel and movable in the slots, said bars being connected at one end, and the upper bar having a longitudinally extending slot and extending beyond the lower bar at the opposite end, said bar having at the extended ends means for clamping a pencil to the bar, and the table having depending spurs or lugs in alinement with the point of a pencil supported by the drafting arm for engaging the supporting surface for the table to anchor the table to the said surface, the lower bar of the drafting arm having a transverse guideway provided with a longitudinal slot, a bar arranged above the guideway and beneath the upper bar, a strap arranged below the guideway, a clip connecting the bar and the strap and having a pin extending through the slot of the guideway, said clip being slidable with respect to the bar and the strap, and means for rigidly connecting the clip to the bar and to the strap, a detachable pivotal connection between the strap and the table at the end remote from the clip, said bar having in its upper face an undercut longitudinally extending groove, a slide block fitting the grooves and having a threaded opening, and a crank arm having a threaded stem passing through the slot of the upper bar and engaging the threaded opening of the slide block, said bar having graduations with which the clip and block coöperate as indicators.

2. An ellipsograph, comprising a table having guides at its opposite sides, a carriage modified to move on the guides, a drafting arm comprising upper and lower portions connected at one end and mounted to slide transversely of the table, the table having means for guiding the arm, and the upper portion of the arm having means at the end remote from the connection for clamping a pencil to the said portion, the lower portion of the arm having a slotted guideway intermediate its ends and extending transversely of the portion of the arm, a strap arranged below the lower portion of the arm and having a detachable pivotal connection with the table at one end, a bar arranged between the portions of the arm and having a scale and connected to the strap at the end adjacent to the pivotal connection of the strap, a connector connecting the bar to the strap at the opposite end from the pivotal connection and slidable with respect to the bar and the strap and having means for securing the connector to the bar and to the strap, said connector moving in the slot of the guideway and a common means adjustable with respect to the bar for clamping the upper portion of the arm to the bar and for swinging the bar and strap on the pivotal connection of the strap, said means and the connector coöperating with the scale as indicators.

3. An ellipsograph, comprising a table, a carriage movable longitudinally of the table and having guided movement on the table, a drafting arm mounted to slide transversely of the carriage and provided at one end with means for clamping a pencil to the arm, a strap having a detachable pivotal connection with the table at one side of the arm, a bar arranged above the strap and connected with the strap at the end adjacent to the pivotal connection of the strap, a guideway in connection with the drafting arm and extending transversely thereof and rigid with the arm, a connection between the bar and the strap at the opposite end from the pivotal connection of the strap and extending through the guideway and adjustable with respect to the bar and the strap toward and from the pivotal connection, and a common means for clamping the arm to the bar and for swinging the strap on its pivotal connection and adjustable with respect to the bar.

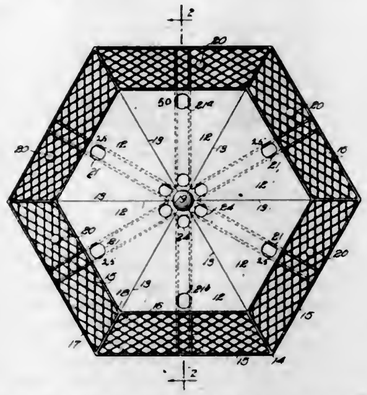
4. An ellipsograph, comprising a table, a carriage movable longitudinally of the table and having guided movement on the table, a drafting arm mounted to slide transversely of the carriage and provided at one end with means for clamping a pencil to the arm, a strap having a detachable pivotal connection with the table at one side of the arm, a guideway extending transversely of the arm at the strap, a bar adjustable transversely of the arm at the strap and connected to the strap at the end adjacent to the pivotal connection, means adjustable with respect to the strap and the bar for connecting the strap and the bar to constrain them to move together, said means passing through the guideway, and means for swinging the strap and the bar on the pivotal connection of the strap, said means being adjustably connected with the bar and detachably connected with the arm.

5. An ellipsograph, comprising a table, a drafting arm arranged transversely of the table, a carriage movable longitudinally of the table and having guides for the arm, said arm having a transverse guideway, a strap pivoted to the table at one end of the strap and at one side of the arm, a bar arranged above the guideway and connected to the strap at the end adjacent to the pivotal connection

thereof, means adjustable with respect to the strap and the bar and passing through the guideway for rigidly connecting the bar and the strap, and a common means for swinging the bar and the strap and for clamping the arm to the bar.

[Claim 6 not printed in the Gazette.]

1,168,082. GAME APPARATUS. LOUIS M. KRANER, Cloverdale, Oreg. Filed Sept. 15, 1915. Serial No. 50,742. (Cl. 46—61.)



1. A game apparatus including a table depressed toward the center and presenting a plurality of inclined planes, tapering from the outside to the center of the table, a marginal structure extending around the table outside of the inclined planes and made up of a series of compartments corresponding in number with the said planes and adapted to hold striking balls, there being a barrier between each compartment and the adjacent inclined plane, an object ball adapted to receive an impulse in the direction from the center of the table outwardly over any of the inclined planes, a series of striking balls adapted to be directed at the object ball by players adjacent to the respective compartments, and races beneath the table and extending from near the center thereof to points beneath the compartments, each of the inclined planes having a goal adjacent to its outer end, adapted to accommodate the object ball, each panel having an outlet hole near the depressed center of the table for escape of the striking balls, there being a space for the object ball at the center of the table within the series of outlet holes.

2. A game apparatus including a table depressed toward the center and presenting a series of separate inclined planes, together with an object ball and a series of striking balls to be directed against the object ball to cause it to travel upwardly and outwardly from the center of the table, there being goals near the outer ends of the said inclined planes adapted to accommodate the object ball.

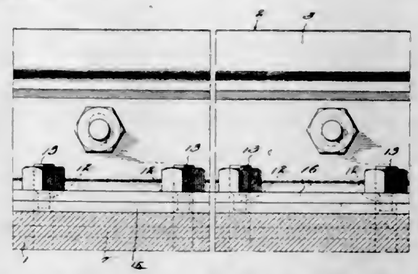
3. A game apparatus including a table top, depressed toward the center and gradually rising toward the edge, an object ball adapted to gravitate to the depressed center of the table, and a striking ball adapted to be directed by a player against the object ball to cause the latter to move upwardly and outwardly from the center of the table, there being a series of goals in the table top outward from the center, adapted to accommodate the object ball.

4. A game apparatus including a table, a structure extending around the table, and consisting of a series of wickers, the said table having a series of goals near the edge thereof, there being barriers between the wickers and goals, an object ball adapted to be positioned on the table within the goals and striking balls adapted to be directed at the object ball.

5. A game apparatus including a table having a series of goals near the edge thereof, an object ball adapted to be positioned on the table within the series of goals, striking balls adapted to be directed against the object ball to cause the same to travel toward the goals, and races beneath the table and leading outwardly from points adjacent to the center, there being outlet holes in the table, inward from the goals through which the striking balls may escape to said races.

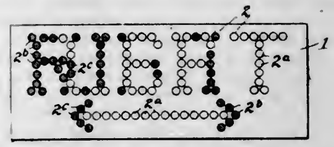
[Claims 6 and 7 not printed in the Gazette.]

1,168,083. RAIL-SHOE. WILLIAM LEWIS, East Chicago, Ind. Filed Dec. 29, 1914. Serial No. 879,544. (Cl. 239—6.)



A rail shoe of the character described including a base member, said base member being substantially U-shaped in cross section and forming a trough, flanges formed on the upper edges of the vertical walls of the U-shaped member and extending outwardly, said body portion of the U-shaped member adapted to rest within a recess of a tie, a filler member arranged to fill the space between the upper edges of the vertical walls of the U-shaped member and the bottom, said filler member being formed of a relative soft pliable and resilient material, a rail engaging member comprising a web engaging portion, a flange engaging portion formed on the lower terminal of said web engaging portion, said flange engaging portion having its outer end curved downwardly and outwardly to conform to the configuration of a flange of a rail, the last mentioned outwardly bent portion of the flange adapted to rest on the upper face of the flange of the U-shaped member, means placed through the flange of the U-shaped member and the flanges for firmly holding a rail therebetween.

1,168,084. ILLUMINATED SIGN. HARRY F. LÖWENSTEIN, Washington, D. C., assignor of one-half to Hugh S. Hill, Washington, D. C. Filed Oct. 17, 1914. Serial No. 867,101. (Cl. 40—132.)



1. An illuminated sign including means for producing two forms of light rays of a complemental nature, and an opaque cover plate having transparencies therein forming overlapping designs, those portions of the transparencies common to both of the designs being transparent to both forms of light rays while those portions of the transparencies peculiar to the individual designs are respectively opaque to one form of the light rays and transparent to the other form of the light rays.

2. An illuminated sign including selective means for producing light rays of complemental colors, and an opaque cover plate having overlappnig designs formed thereon by transparencies, those portions of the transparencies which are common to both designs being uncolored while those portions of the transparencies which are peculiar to the individual designs have the complemental colors of the light rays so that either one of the designs may be illuminated to the exclusion of the other design by producing light rays of the proper complemental color.

3. An illuminated sign including means for producing light rays of complemental colors, and a cover plate hav-

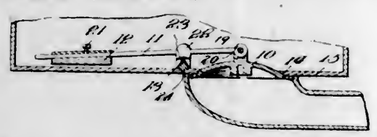
ing transparent designs thereon of the same complemental colors of the light rays so that either one of the designs may be illuminated to the exclusion of the other design by producing light rays of the proper complemental color.

4. An illuminated sign including means for producing two forms of light rays of a complemental nature, and a cover plate provided with overlapping designs, those portions of the designs which are common being affected in the same manner by both forms of light rays, while those portions of the designs which are individual are affected in different manners by the two forms of light rays.

5. An illuminated sign including means for producing two forms of light rays of a complemental nature, and a cover plate provided with overlapping designs, those portions of the designs which are common being transparent to both forms of light rays, while those portions of the designs which are individual are respectively opaque to one form of the light rays and transparent to the other form of the light ray.

[Claim 6 not printed in the Gazette.]

1,168,085. SEWER-TRAP VALVE. JOHN W. MCKELVEY, Chicago Junction, Ohio. Filed Mar. 12, 1914. Serial No. 824,246. (Cl. 182—14.)



1. The combination with a sewer trap box provided with side walls and a bottom wall having circular opening formed therein, the edge defining said opening being flared outwardly, of an outlet valve mounted upon said bottom wall, said valve including a substantially concavo convex valve body normally engaging said flared edges by its convex face, with a portion of the valve body projecting into the box and with the lower edge of the valve body arranged exteriorly of the box, a valve stem pivotally connected to the valve body, a fulcrum for the valve stem connected to the bottom wall of the box, and a counterpoise adjustable on the valve stem within the box, said counterpoise being adapted to normally hold the valve in closed position and being adjustable to engage the side walls of the box for holding the valve in fixed position.

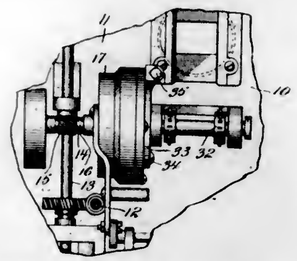
2. The combination with a sewer trap box having a side wall and a bottom wall provided with an opening, of a valve including a valve body adapted to fit in said opening, a valve stem fulcrumed upon the bottom wall, and a counterpoise adjustable on said stem to engage the side wall for holding the valve body in fixed position.

3. The combination with a sewer trap box having angularly disposed side walls and a bottom wall provided with an opening, of an outlet valve including a valve body adapted to fit in said opening, a valve stem pivotally mounted upon the bottom wall, and a counterpoise adjustable upon the valve stem and having one terminal thereof cut away to fit within the angle between adjacent side walls of the box, the counterpoise being movable to engage said adjacent side walls for holding the valve body in fixed position.

1,168,086. INTERMITTENT-MOTION DEVICE. ELISHA E. MAGGARD, Morehead, Ky. Filed Dec. 16, 1913. Serial No. 807,108. (Cl. 74—41.)

1. In an intermittent motion mechanism, a casing, a revoluble disk in the casing, a pin on the disk, a shaft, a frame having the shaft journaled thereon, with the shaft projecting into the said casing, a grooved member carried on the shaft and having the pin of the disk operating in the groove thereof when rotation is imparted to the said disk, whereby an intermittent rotation is imparted to the said shaft, and means connecting the said frame with the said casing for permitting of an adjustment of the said grooved member relatively to the said pin.

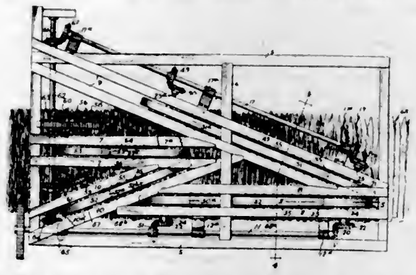
2. In an intermittent motion device, a casing, a driving shaft extending into the casing, a driven shaft extending into the casing, a cam-like disk carried by the driving shaft and rotatable therewith within the casing, a pin on the said disk, a grooved triangular member on the driven shaft and having the pin of the disk operating in the grooves thereof when rotation is imparted by the said disk to the driving shaft, whereby the said driven shaft will be intermittently rotated, and an adjusting device on the casing and coöperating with the said frame for adjusting the said grooved member relatively to the axis of rotation of the said disk.



3. In an intermittent motion mechanism, the combination with a frame, of a flat head on the frame, a driven shaft journaled on the frame, a casing carried by the frame, a driving shaft journaled on the casing and extending therein, a triangularly shaped member provided with intercommunicating grooves and supported on the said driven shaft, a disk on the driving shaft, a pin on the disk and operating in the intercommunicating grooves of the said member for imparting an intermittent motion to the driven shaft when the driving shaft is operated, and an adjusting member connecting the head of the said frame with the said casing for adjusting the said triangularly shaped member relatively to the axis of rotation of the said disk.

4. In an intermittent motion device, the combination with a driving shaft, of a casing having one end of the driving shaft extending therein, a driven shaft extending into the casing, a frame having the driven shaft journaled thereon, said frame supporting the casing, means connecting the driving shaft with the driven shaft for imparting intermittent motion to the driven shaft when the driving shaft is operated, and means on the casing and coöperating with the frame for adjusting the driven shaft relatively to the driving shaft.

1,168,087. METHOD AND APPARATUS FOR DEFIBRATING FIBROUS VEGETABLE MATERIALS. GEORGE JOHN MAHIEU, Rio de Janeiro, Brazil. Filed Apr. 15, 1914. Serial No. 832,006. (Cl. 13—18.)



1 The method herein described of treating fibrous vegetable material for the purpose of removing the fiber thereof, which consists in gripping different portions of the same piece of stock by means of gripping members traveling in divergent paths and applied thereto, and causing every part of said stock to remain continuously on the same plane relatively to said gripping members for the purpose of causing said gripping members to scrape upon said stock in virtue of the divergence of their paths.

2. The method herein described of treating fibrous vegetable material for the purpose of extracting the fiber therefrom, which consists in gripping the material in slots one of which diverges relatively to another and causing every part of said material to travel in the same plane which contains these slots, in the general longitudinal direction of the length of one of these slots wherein it shall be firmly gripped, so that said material, because of the divergence of said slots, is scraped in the general direction of the fiber of such material, by slipping between the sides of the other slots which do not grip it so firmly, letting pass the fiber but retaining the pulp and other impurities.

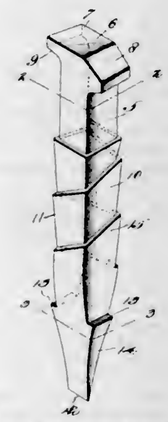
3. In a device of the character described, the combination of a frame, a plurality of endless members movably mounted within said frames and disposed in pairs, the endless members of each pair diverging from the endless members of another pair while moving in the same general longitudinal direction, and means for holding the members of each pair in gripping contact with the stock to be operated upon, maintaining the said stock in the same plane throughout its passage through the device.

4. A device of the character described comprising a frame, a plurality of pulleys journaled therein, endless members mounted upon said pulleys and disposed in pairs, the constituents of each pair having adjacent portions separated from each other so as to form virtually a slot therebetween, and rollers engaging said adjacent portions of said members for the purpose of pressing them toward each other and thus causing said members to grip the material to be operated upon, some of said members diverging from others while maintaining the same general longitudinal direction of movement, in order to produce a scraping effect lengthwise of the stock to be operated upon.

5. A device of the character described, comprising a frame, roller guides mounted therein, rollers journaled within said roller guides, movable members engaging said rollers and arranged in pairs, the constituents of each pair having oppositely disposed portions close together for the purpose of gripping pieces of stock and carrying same along the same general longitudinal direction, and means for pulling upon each piece of stock in the general direction of the length thereof, which shall lie in the same plane, by causing a divergence in the paths of the said pairs of members in order to cause them to scrape said pieces of stock.

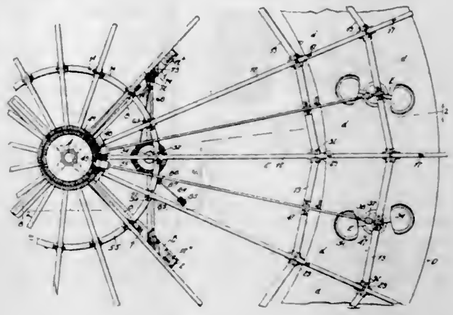
[Claims 6 to 8 not printed in the Gazette.]

1,168,088. SPIKE. ALEXANDER MAKLEY, Saginaw, Mich., assignor of one-fourth to Victor J. Tatham, Saginaw, Mich. Filed Mar. 15, 1915. Serial No. 14,456. (Cl. 85—21.)



A spike including a shank rectangular in cross section having front, rear and side faces, the side faces at one end of the shank being converged to define a cutting edge, a pair of oppositely disposed shoulders formed on the front and rear faces adjacent said cutting edge, and a substantially spiral shoulder extending from a point adjacent said shoulders to a point adjacent the opposite end of said shank and being gradually decreased in pitch from end to end.

1,168,089. CAROUSEL. WILLIAM F. MANGELS, New York, N. Y. Filed July 17, 1914. Serial No. 851,512. (Cl. 46—27.)



1. In a carousel, the combination of a supporting column, a rotary structure thereon including platform-supporting arms, a circular rack arranged concentric with the column and disposed under the arms, lugs on the upper side of the rack, ears on the arms, and pins fastened through the lugs and ears for detachably connecting the rack with the arms.

2. In a carousel, the combination of a supporting column, a rotary structure thereon including platform-supporting arms, a circular rack arranged concentric with the column and disposed under the arms, lugs on the upper side of the rack, ears on the arms, pins fastened through the lugs and ears for detachably connecting the rack with the arms, said pins having heads adapted to assume a pendent position when the pins are inserted, and stops on the rack disposed in front of the pendent heads to prevent accidental detachment of the pins.

3. A knock-down carousel comprising a supporting column, a rotary structure mounted thereon and composed of detachably connected parts, a base on which the column is detachably mounted, an operating shaft for rotating the said structure, a lower bearing in which the shaft is removably mounted, an upper bearing in the form of a block having a vertical opening for receiving the shaft, and also having a horizontal opening, a brace rod connected with the column and extending through the horizontal opening of the bearing block to support the latter, and means for rotating the said shaft.

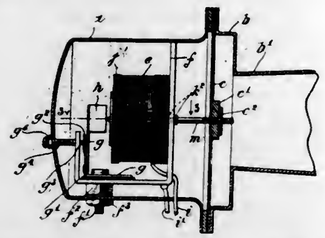
4. A knock-down carousel comprising a supporting column, a base frame therefor, a rotary structure mounted on the column, a circular rack carried by the said structure, a vertical shaft, a pinion on the shaft meshing with the said rack, a bearing on the base frame in which the shaft is removably mounted, a brace rod connected with the column, a bearing on the shaft and having an opening through which the brace rod extends, and means on the rod for preventing the bearing from shifting on the latter, and means for rotating said shaft.

5. A knock-down carousel comprising a supporting column, a base frame therefor, a rotary structure mounted on the column, a circular rack carried by the said structure, a vertical shaft, a pinion on the shaft meshing with the said rack, a bearing on the base frame in which the shaft is removably mounted, a brace rod connected with the column, a bearing on the shaft and having an opening through which the brace rod extends, and means on the rod for preventing the bearing from shifting on the latter,

steadying bars detachably connected with the outer end of the brace rod, and means detachably connecting the steadying rods with the base frame.

[Claims 6 to 10 not printed in the Gazette.]

1,168,090. MECHANICAL HORN. GERARDO MARSICO, New York, N. Y. Filed Mar. 2, 1914. Serial No. 821,894. (Cl. 177—1.)

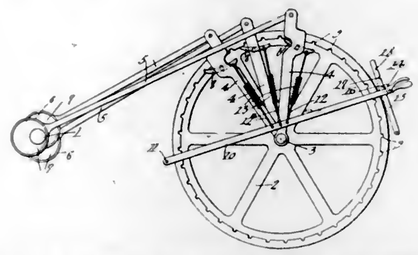


1. A mechanical horn, embodying a casing having a sound outlet opening, an amplifier communicating with said opening, a rear casing, a flexible diaphragm between said casings, an angular frame plate mounted in and detachable from the rear casing; and diaphragm-actuating mechanism comprising an electro-magnet having a tubular core of magnetic material fastened at one extremity to one arm of said frame plate, an armature, a resilient support for said armature attached to but insulated from said frame plate, make and break mechanism carried by said armature support, fastening means detachably securing said frame plate within the rear casing, a contact screw having a threaded and adjustable connection with said frame plate and projecting through the rear casing for exterior adjustment, and an elongated contact attached to the diaphragm, projecting through the magnet core and terminating near the armature.

2. A mechanical horn, embodying a casing having a sound outlet opening, an amplifier communicating with said opening, a rear casing, a flexible diaphragm between said casings, an angular frame plate mounted in and detachable from the rear casing; and diaphragm-actuating mechanism comprising an electro-magnet having a tubular core of magnetic material fastened at one extremity to one arm of said frame plate, an armature, a resilient support for said armature attached to but insulated from said frame plate, make and break mechanism carried by said armature support, fastening means detachably securing said frame plate within the rear casing, a contact screw having a threaded and adjustable connection with said frame plate and projecting through the rear casing for exterior adjustment, and an elongated contact attached to the diaphragm, projecting through the magnet core and terminating near the armature, the means for fastening the frame plate to the rear casing serving also as means for fastening the armature support to the frame plate.

3. A mechanical horn embodying therein a casing having a sound outlet opening, an amplifier communicating with said opening, a back casing or cup, a flexible diaphragm mounted in said casing, an actuating mechanism for said diaphragm comprising an angular plate, an electro-magnet having a core of magnetic material having a large bore longitudinally therethrough, one end of said core being secured to one arm of said plate and the other end having a flange beyond the spool of said magnet, an angular spring strip, bolts securing one arm thereof to, but insulated from, said plate, a weighted armature carried by the other arm of said strip adjacent said flange, and a make and break mechanism consisting of a spring tongue carried by said armature support, and a contact screw adjustably mounted in said plate and projecting beyond said rear casing or cup, means coöperating with said bolts whereby said actuating mechanism is mounted within said rear casing or cup, and an elongated contact supported by and having movement with said diaphragm and projecting through and beyond said core and terminating near said armature, said contact being of relatively small thickness as compared with the bore of said core, whereby clearance is afforded about said contact within said core.

1,168,091. MECHANICAL MOVEMENT. JOHN W. MAUGHMER, Hume, Ill. Filed Sept. 20, 1915. Serial No. 51,691. (Cl. 74—54.)



1. In a mechanical movement, a rotary driven element, oscillatory arms for actuating it, pawls carried by the arms and coöperable with the driven element to rotate it in either direction, and means for setting all of the pawls simultaneously for rotating the driven element in one direction or the other.

2. In a mechanical movement, a rotary driven element, oscillatory arms for actuating it, double pawls pivoted between their ends to the arms, the ends of the pawls being coöperable with the driven element, and means for swinging all of the pawls simultaneously for bringing one end or the other of each pawl into coöperation with the driven element.

3. In a mechanical movement, a rotary wheel having notches, oscillatory arms for rotating the wheel, double pawls pivoted between their ends to said arms, the ends of the pawls being coöperable with the notches, and means for setting all of said pawls simultaneously whereby one end or the other of each pawl is brought into coöperation with the notches, said means having resilient portions to allow the pawls to swing against the tension thereof.

4. In a mechanical movement, a rotary wheel having notches, oscillatory arms for actuating said wheels, double pawls pivoted between their ends to the arms, the ends of the pawls being coöperable with said notches, a lever, and links connecting said lever and pawls whereby the pawls can be set simultaneously to bring one end or the other of each pawl into coöperation with the notches.

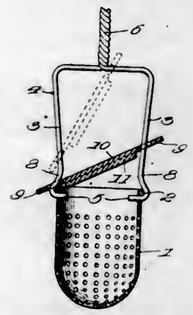
5. In a mechanical movement, a rotary wheel having notches, oscillatory arms for actuating said wheel, double pawls pivoted between their ends to the arms, the ends of the pawls being coöperable with said notches, a lever, links connecting said lever and pawls whereby the pawls can be set simultaneously to bring one end or the other of each pawl into coöperation with the notches, said links having resilient portions, and means for holding the lever at various adjusted positions.

[Claim 6 not printed in the Gazette.]

1,168,092. UTENSIL. VINCENT J. MAUNTEL, Washington, Mo. Filed Nov. 12, 1914. Serial No. 871,731. (Cl. 220—22.)

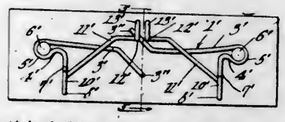
1. A utensil comprising a container open at its top, an external bead surrounding said top, an inverted U-shaped bail having its arms pivoted to opposite sides of the container directly below said bead, the free end portions of said arms being curved inwardly toward each other to provide resilient stops to spring over said bead and contact with the underside thereof, when the bail is swung to a horizontal position, a cover for said container, and bearings on the cover slidable on said arms of the bail, whereby the resilient stops thereon may retain said cover in closed position when the bail is swung to an upright position.

2. A utensil comprising a container open at its top and having a pair of bearing openings adjacent its upper edge, an inverted U-shaped bail having the ends of its arms bent inwardly to form trunnions adapted to be slidably held in said bearing openings, the portions of said arms adjacent their ends being curved inwardly toward each other to provide resilient stops, a cover for said con-



tainer, said cover having openings therethrough to receive the arms of the bail, the distance between the inner edges of said openings being greater than the distance between said resilient stops, whereby the cover may be held in a plurality of elevated positions above the container, said arms being adapted to spring apart to permit the cover to be adjusted.

1,168,093. ARTICLE-HOLDER. LUTHER MERRELL, San Martin, Cal. Filed June 2, 1915. Serial No. 31,719. (Cl. 24—261.)



1. An article holder comprising a back and wire clip carried thereby, said clip having a pair of doubled portions providing a pair of jaws, the jaws being arranged at an angle with the back, one arm of each jaw being attached to the back and the other arm being flexible, a yoke carried by the last mentioned arm of each of said jaws, the yokes projecting toward one another and having outstanding jaws for clamping an article upon the aforesaid jaws.

2. An article holder comprising a back and wire clip carried thereby, said clip having a pair of double portions providing a pair of jaws, the jaws being arranged at an angle with the back, one arm of each jaw being attached to the back and the other arm being flexible, a yoke carried by the last mentioned arm of each of said jaws, and outstanding jaws carried by said yokes for clamping an article upon the aforesaid jaws.

3. In an article holder, a back, and a wire clip carried thereby, said clip having an outstanding jaw and a double portion providing a second outstanding jaw, one arm of the double portion being attached to the back and the other arm being flexible, a yoke carried by the last mentioned arm and projecting toward the first mentioned jaw, and an outstanding jaw carried by said yoke for clamping an article upon the aforesaid jaws.

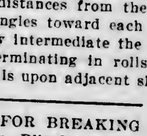
1,168,094. THRUST-BEARING ELEMENT. ANTHONY GEORGE MALDON MICHELL, Melbourne, Victoria, Australia. Original application filed Jan. 3, 1913, Serial No. 740,041. Divided and this application filed June 10, 1915. Serial No. 33,394. (Cl. 64—25.)

1. A thrust-bearing element comprising a pivoted housing and a pair of blocks pivotally mounted upon and secured to said housing, substantially as described.

2. In a thrust-bearing element, comprising two pivoted blocks, means for distributing the thrust pressure equally between said blocks, and for attaching said blocks together, substantially as described.

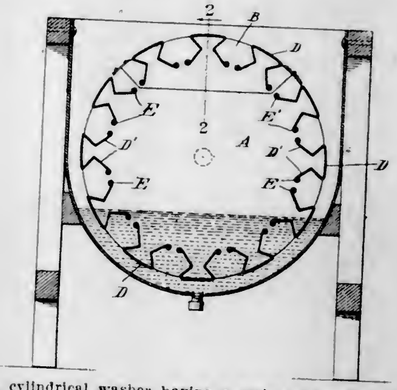
3. In a thrust-beraing, a pair of bearing blocks as 1, 1, and an element as 7 provided with means for attaching and pivotally supporting said bearing blocks, and for equalizing the pressure between them.

1,168,095. CUFF-BUTTON. JOHN P. MIDDLETON and HAROLD D. ROSS, Pittsfield, Mass. Filed Apr. 22, 1915. Serial No. 23,250. (Cl. 24—101.)



A cuff button made from a single piece of material comprising a straight shank oblong in cross section and uniform in size throughout its length, an elongated head centrally arranged at one end of said shank, an elongated base centrally arranged at the other end of said shank, the longitudinal axes of said head and said base lying in a plane disposed at right angles to the wide sides of said shank, and a circular disk centrally arranged on said shank and disposed midway of said head and said base, substantially as and for the purpose set forth.

1,168,096. WASHING-MACHINE. GEORGE WASHINGTON MOORE, Tulsa, Okla. Filed July 1, 1915. Serial No. 37,532. (Cl. 68—18.)



A cylindrical washer having a series of metallic slats secured to the inner circumferential surface thereof, each slat having oppositely disposed wings projecting from the edges thereof slight distances from the ends, each wing being bent at right angles toward each other, forming a contracted passageway intermediate the angles, the outer ends of the wings terminating in rolls with contracted spaces between the rolls upon adjacent slats.

1,168,097. DEVICE FOR BREAKING AND LOCKING RIMS. MAX MOREY, Blissfield, Mich. Filed July 15, 1915. Serial No. 40,088. (Cl. 157—1.)

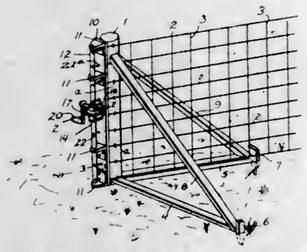
1. A device of the character described comprising a pair of clamps for gripping the opposite ends of a rim adjacent the joint thereof, a lever with a bifurcated straight portion and a curved handle to correspond to the curvature of the inner surface of said rim, a short link con-

necting the outer end of said bifurcated portion and one of the clamps, and a long link pivotally connected at one end to the remaining clamp and having a lateral projection on its other, pivotally connected with the inner end of said bifurcated portion, whereby said last mentioned pivotal connection may be positioned below the dead center to lock the lever in operative position.



2. A device of the character described comprising a pair of clamps for gripping the opposite ends of a rim adjacent the joint thereof, a lever with a bifurcated straight portion and a curved handle to correspond to the curvature of the inner surface of said rim, a short link connecting the outer end of said bifurcated portion and one of the clamps, a long link pivotally connected at one end to the remaining clamp and having a lateral projection on its other pivotally connected with the inner end of said bifurcated portion, said link having an opening therethrough intermediate its end alining with a pair of openings through the sides of said bifurcated portion adjacent the ends thereof when the lever is in operative position, and a pin projecting through said opening to pivotally lock the lever.

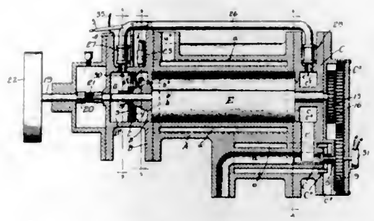
1,168,098. FENCE-WIRE STRETCHER. EPHRAIM MORROW, Bakerstown, Pa. Filed Feb. 24, 1914. Serial No. 820,668. (Cl. 256—41.)



The herein described fence wire stretcher comprising a vertically disposed base member connected to a fence post and extending from end to end thereof and provided with annular brackets extending at right angles to the base, said brackets being spaced apart and disposed near the top and bottom of the base, said base also provided with a plurality of openings, a winding shaft mounted in said brackets, a worm gear disposed centrally on said shaft, said shaft having perforations therein in alinement with the openings in the base through which the line wires of the fence extend, a bearing bracket including relatively long spaced ears having vertically alined apertures rotatably receiving said winding shaft and relatively short spaced ears having horizontally alined apertures, a crank shaft mounted to rotate in the relatively short ears, a worm on said crank shaft disposed between said short ears, and a crank handle for operating the winding shaft.

1,168,099. ROTARY GAS-ENGINE. NEWELL H. MOSINGER, Greensburg, Pa. Filed Sept. 30, 1910. Serial No. 584,722. (Cl. 123—13.)

1. A rotary gas engine comprising a suitable casing, a series of rotors mounted in chambers therein and formed with intermeshing pistons and grooves, a part at one end of said casing having a combustion chamber and a receiving chamber for the charge which latter chamber is connected to the chambers containing said rotors by suitable ports, igniting means within said combustion chamber, gas supply means, valve mechanism for controlling the inflow of the charge of gas, a part at the opposite end of said casing having a chamber also connected by ports with the chambers containing the rotors and by another port with the exhaust port and by a by-pass with the combustion chamber at the opposite end of the engine, an exhaust valve in the exhaust port for regulating the exhaust, and a valve in said by-pass for controlling passage therethrough, substantially as set forth.



2. A rotary gas engine comprising a casing, a series of rotors mounted in appropriate chambers therein, a head at one end of said casing formed with a multiple of charge receiving chambers connected by a communicating passage, firing means in one of said chambers, valves for controlling the passage between said chambers, a head at the opposite end of said casing formed with a combined gas receiving and exhaust chamber communicating with the chambers containing the rotors and with the exhaust and with the initial charge receiving chamber and valves for controlling the handling of the exhaust and the charges from said combined gas receiving and exhaust chamber alternately, substantially as set forth.

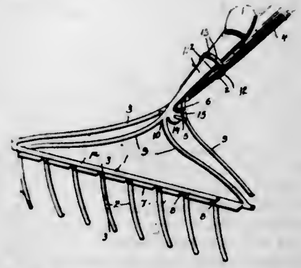
3. A rotary gas engine comprising a casing, a series of rotors mounted in suitable chambers therein and provided with intermeshing pistons and grooves, gearing connecting said rotors, a head on one end of said casing containing a charge receiving chamber communicating with the chambers containing the rotors, and a combustion chamber separated from said receiving chamber by parts having ports therethrough, a valve plate for controlling said ports, a head at the opposite end of said casing having an exhaust chamber communicating with the chambers containing the rotors, a by-pass leading from said charge receiving chamber to the combustion chamber in the outer end of the opposite head, a rotary exhaust valve controlling a port leading to the outside from said chamber, and a sparker in the combustion chamber, substantialy as set forth.

4. A rotary gas engine comprising a casing, a series of rotors mounted in suitable chambers therein and provided with pistons and grooves adapted to inter-mesh during rotation, a head at one end of said casing provided with chambers to receive the charge provided with appropriate inlets and outlets, valves for controlling the inlets and outlets to said chambers, a head at the other end of the casing having a chamber communicating with the exhaust and with the charge receiving chamber, both of said heads being formed with ports leading from the chambers therein to the chambers containing the rotors, valves for controlling the exhaust and compression, and firing mechanism, substantially as set forth.

5. A rotary gas engine comprising a casing, a series of rotors mounted in longitudinal bores therein with their axes in the same plane, the center rotor being formed with two longitudinal grooves in diametrically opposite sides and the side rotors each being formed with two pistons adapted to mesh therewith, a head on one end of said casing formed with a charge receiving chamber communicating through suitable ports with chambers in said casing between the pistons of the respective side rotors at diagonally opposite sides, a supply pipe leading to said charge chamber, a combustion receiving chamber in said head separated from the charge receiving chamber by valve mechanism, said valve mechanism, sparking means communicating with said combustion chamber, a head on the opposite end of said casing formed with an exhaust chamber also communicating with the chambers in the casing surrounding the side rotors at diagonally opposite sides and oppositely disposed to the ports at the opposite end, a by-pass leading from said exhaust chamber to said charge receiving chamber, an exhaust port leading from said exhaust chamber, and means for controlling the operation of the several valves to properly time the compression, the exhaust and the explosion, substantially as set forth.

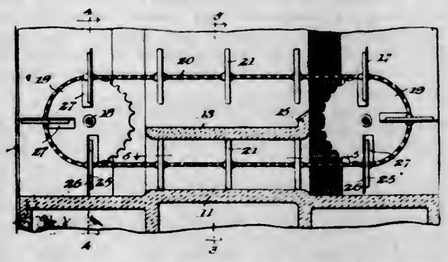
[Claims 6 to 10 not printed in the Gazette.]

1,168,100. RAKE-CLEANER. EVERETT A. NEAL, Muncie, Ind. Filed Jan. 20, 1914. Serial No. 813,230. (Cl. 55—146.)



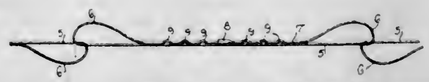
In a device of the character described including a rake, said rake comprising a handle, a head, teeth carried by the head, a pair of converging bars formed at the ends of the head and connected to the handle at their converging point, a pin extending transversely of the converging bars, a stripping bar adapted to engage said teeth, a pair of converging members formed at the ends of the stripping bar, a lug secured to said converging members at their converging point, said lug having an aperture, said pin extending through said aperture, whereby the stripping bar is pivoted to the converging bars of the brake, a stop bar secured to the converging bars intermediate the said pin and rake handle, a curved extension on said lug, said extension being adapted to engage said stop bar, whereby the downward movement of the stripping bar is limited, a lever secured to said lug and extending rearwardly to lie on the rake handle, a spring clasp secured to said lever and adapted to engage the rake handle, whereby the lever is normally held against the rake handle.

1,168,101. WATER-MOTOR. THORNTON R. NEISWANDER, Mesa, Ariz. Filed Sept. 22, 1914. Serial No. 863,036. (Cl. 170—89.)



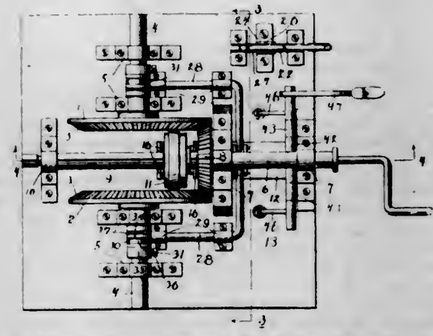
A water motor comprising a walled water way having a restricted intermediate portion forming a passage therethrough, shafts journaled in the walled way beyond the restricted passage, sprocket wheels carried by the shafts, endless sprocket chains trained over the sprocket wheels and having the lowermost stretches thereof passing through the passage, a plurality of blades fixed to the chains and each being of a size corresponding to the size of the restricted passage to form pistons movable therethrough, the said blades being cut away to provide clearances for the endless chains, and flexible members on the said blades at the cut away portion and on opposite sides of the gears to prevent leakage through the blades when traveling through the passage.

1,168,102. CLOTHES-LINE. JOHN NELSON, Stamford, Nebr. Filed Nov. 1, 1915. Serial No. 59,092. (Cl. 68—3.)



A clothes line consisting of a series of links each formed from a single length of wire bent upon itself to produce terminal loops for connection to the corresponding loops of adjacent links, the end portions of the wire being extended along the medial portion thereof and resiliently engaged with the same, said end portions of the wire being permanently connected together at their extremities and each end portion having a plurality of gripping jaws formed therein.

1,168,103. AUTO TRANSMISSION. EDMUND A. NORTON, Niagara Falls, N. Y. Filed Sept. 4, 1915. Serial No. 49,123. (Cl. 74—26.)

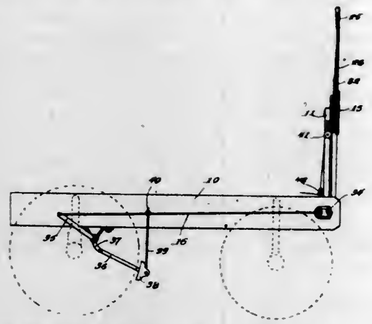


1. A transmission apparatus for automobiles, etc., comprising a driving shaft with a gear wheel fixed thereto, oppositely disposed frictional gear disks with gear teeth engaging said gear wheel, a hollow shaft telescoping said driving shaft, a friction disk splined to said hollow shaft, a carriage and means projecting therefrom for engagement with the friction disk to move the same upon the hollow shaft, a cam upon said carriage, rock shafts, a yoke pivoted to the rock shafts, anti-friction rollers carried by the yoke and in the path of said cam, and means actuated by the rocking of said shafts to cause the friction gears to move toward or away from each other.

2. A transmission apparatus for automobiles, etc., comprising a driving shaft with a gear wheel fixed thereto, oppositely disposed frictional gear disks with gear teeth engaging said gear wheel, a hollow shaft telescoping said driving shaft, a friction disk splined to said hollow shaft, a carriage and means projecting therefrom for engagement with the friction disks to move the same upon the hollow shaft, a cam upon said carriage, rock shafts, a yoke pivoted to the rock shafts, anti-friction rollers carried by the yoke and in the path of said cam, an emergency foot-operated rock shaft having pivotal connections with said yoke, and means for moving the friction disks toward or away from each other as the rock shafts are operated.

3. A transmission apparatus for automobiles, etc., comprising a driving shaft with a gear wheel fixed thereto, oppositely disposed frictional gear disks with gear teeth engaging said gear wheel, a hollow shaft telescoping said driving shaft, a friction disk splined to said hollow shaft, a carriage and means projecting therefrom for engagement with the friction disk to move the same upon the hollow shaft, a cam upon said carriage, rock shafts, a yoke pivoted to the rock shafts, anti-friction rollers carried by the yoke and in the path of said cam, an emergency spring-actuated rock shaft with depressible arm thereon, collars upon the shafts of the friction gears, and forked portions of the rock shafts engaging said collars to move the friction gears from each other.

1,168,104. COMBINED BRAKE AND LOAD-BINDER. JAMES NOVOTNY, Union Center, Wis. Filed Nov. 25, 1912. Serial No. 733,368. (Cl. 21—8.)



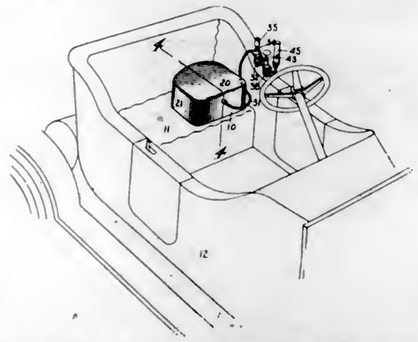
1. A vehicle, brake mechanisms carried by said vehicle, a standard carried by said vehicle, a pivot pin carried by said standard, a ratchet wheel rigidly mounted upon said pivot pin, a drum rotatably mounted upon said pin to one side of said ratchet wheel, a ratchet drum rotatably mounted upon said pin inside said ratchet wheel and provided with a plurality of sets of ratchet teeth, an actuating cable leading from said brake mechanisms and connected with said winding drum, a binding cable having one end portion connected with said ratchet drum, a lever carried by said winding drum, pawls slidably connected with said lever, one of said pawls engaging the teeth of said ratchet wheel and the other of said pawls engaging one set of teeth of said ratchet drum, independent actuating means for said pawls, and a pawl for engaging the second set of teeth of said ratchet drum.

2. In a device of the character described a standard, a pivot pin carried by said standard, a support secured to said standard, a ratchet drum rotatably mounted upon said pivot pin and provided with a plurality of sets of teeth, a pawl carried by said support and engaging one set of teeth, a ratchet wheel rigidly mounted upon said pivot pin, a drum rotatably mounted upon said pivot pin, a lever carried by said drum, pawls slidably connected with said lever, one of said pawls engaging the second set of teeth of said ratchet drum and the other pawl engaging the teeth of said ratchet wheel, and independent actuating means for the pawls of said lever.

3. In a device of the character described a standard, a pivot pin carried by said standard, a ratchet drum rotatably mounted upon said pivot pin, a ratchet wheel rigidly mounted upon said pivot pin, a winding drum rotatably mounted upon said pivot pin, a rigid support, a pawl carried by said rigid support and engaging the teeth of said ratchet drum, and a latch lever carried by said winding drum and provided with a plurality of latches, one of the latches engaging the teeth of said ratchet drum and the other engaging the teeth of said ratchet wheel.

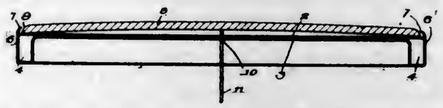
4. In a device of the character described a support, a pivot pin, a ratchet wheel rigidly mounted upon said pivot pin, a ratchet drum rotatably mounted upon said pivot pin and having its teeth extending in opposite directions to the teeth of said ratchet wheel, a winding drum rotatably mounted upon said pivot pin, and a latch lever rigidly connected with said winding drum and having its latches engaging the teeth of said ratchet drum and ratchet wheel.

1,168,105. BLOWER FOR SIGNALING DEVICES. NELSON NYBERG, Miami, Ariz. Filed Nov. 28, 1914. Serial No. 874,505. (Cl. 230—2.)



In a device of the character described, a seat having a top, bottom and sides, a partition in the seat disposed substantially parallel with the top and the bottom, there being a valve opening in the partition, a valve commanding the valve opening, there being a valve opening adjacent the bottom of the seat, there being a valve commanding the second valve opening, an outlet for the seat above the partition, and springs in the seat for raising the partition and the top of the seat to draw in air through the valves for compression when a person sits on the seat.

1,168,106. TOP FOR FURNITURE. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to U. S. Steel Furniture Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 7, 1912. Serial No. 719,246. (Cl. 45—31.)



1. A top for furniture comprising a base provided with a central opening, a portion surrounding the base and turned inwardly above the same, and a flexible covering resting upon said base with portions of its elges located beneath the inwardly turned portion, said covering being adapted to be fitted to the base by bulging the same centrally by an instrument introduced through the central opening.

2. A top for furniture comprising a sheet metal plate notched at its corners and bent between the notched portions, downwardly, outwardly and upwardly, the upper free edges lying above the top surface of the plate, and a covering supported by said plate and confined within the free edges of the base.

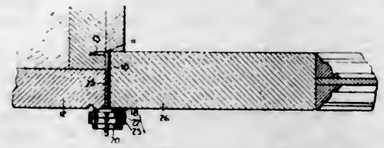
3. A top for furniture comprising a base formed from a rectangular piece of sheet metal notched at its corners, the portions of the material between the notches being bent downwardly, outwardly and upwardly and secured together at their ends, the upper edges of said upwardly extending portions lying above the top surface of the base and being turned inwardly and provided with a sharp edge, and a covering supported on said base and having its edges firmly engaged below the upper face thereof by the sharp edges on the base.

4. A top for furniture comprising a sheet of material bent downwardly, outwardly and upwardly near its edges, the extreme edges lying above the top surface of said

sheet, a second sheet of material supported on the first named sheet and bridging the channels formed in the first named sheet, and a sheet of pliable covering material resting upon the second named sheet to be supported by the latter over the channel and having its edges protected by the edges of the first named sheet.

5. A top for furniture comprising a sheet of material notched at its corners and bent between the notched portions downwardly, outwardly and upwardly to provide channels about the said sheet, the upper edge of the upwardly-extending portion lying above the top surface of the said sheet, a sheet of pliable covering material supported within the upwardly extending portions to be protected at its edges by said portions and means for supporting the edges of said pliable covering over said channels.

1,168,107. DETACHABLE COMBINATION-LOCK. GEORGE T. OLDHAM, New York, N. Y., assignor of one-half to George S. Elliott, New York, N. Y. Filed Feb. 1, 1915. Serial No. 5,442. (Cl. 16—8.)



1. In a detachable combination lock, a shank having securing means and teeth extending along one edge, and a locking device slidably mounted on the shank for adjustment therealong and having a rotatable ring with a rim for moving between the teeth on the shank for holding the locking device in adjusted position, the rim having a recess to permit of the movement of the shank longitudinally of the locking device.

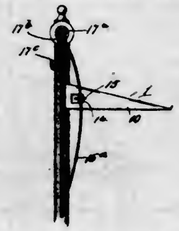
2. In a detachable combination lock, a shank having securing means, and teeth extending along one edge, a spindle having a slot in which the shank is disposed, a plurality of rings rotatably mounted on the spindle and having inner rims for disposal between the teeth on the shank for holding the spindle in a predetermined position on the shank, there being recesses in the rims to permit of the movement of the shank longitudinally of the spindle, and means at the ends of the spindle for holding the rings on the spindle.

3. In a detachable combination lock, a shank having securing means and teeth extending along one of its edges, a spindle with a longitudinally extending slot in which the shank is disposed, a plate at each end of the spindle with slots in alinement with the first mentioned slot and one or more locking rings rotatably mounted on the spindle between the plates and having inner rims for disposal between any predetermined teeth when the spindle has been adjusted along the shank, there being recesses in the rims to permit of the movement of the shank relatively to the spindle.

1,168,108. GUARD FOR WIND-SHIELDS AND THE LIKE. RODNEY B. OSTERHOUDT, Kingston, N. Y. Filed July 1, 1915. Serial No. 37,471. (Cl. 21—148.)

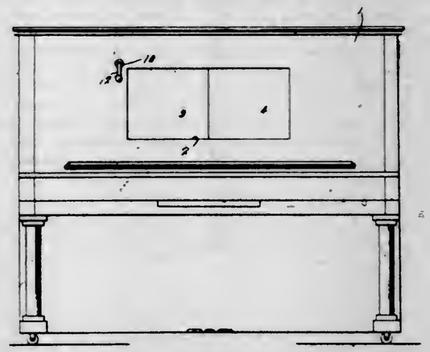
1. A wind shield portector comprising an inclined roof plate having a packing strip at its upper edge for contact with a wind shield, a pair of gables depending from the inclined edges of said plate and also having packing strips at their rear edges for contact with the shield, a pair of upright tubular guides carried one by each gable and disposed adjacent the rear edges thereof, a pair of upright springs received slidably in said tubular guides, hooks on the upper ends of the springs for engagement with the upper edge of the wind shield, and set screws threaded through the guides into contact with the springs.

2. A wind shield protector comprising an inclined roof plate having a packing strip at its upper edge for contact with a wind shield, a pair of gables depending from the inclined edges of said plate and also having packing strips at their rear edges for contact with the shield, and a pair of upright tubular guides carried one by each gable and disposed adjacent the rear edges thereof, in combination with an attaching device formed of a single piece of wire having a substantially horizontal central portion and having its end portions directed upwardly at the ends



of said central portion to form hook bills for engagement with the upper edge of the wind shield, said end portions being then bent forwardly and downwardly upon themselves and continued downwardly in parallel relation to form a pair of upright springs, the latter being received in the aforesaid tubular guides.

1,168,109. PANEL-OPERATOR FOR PLAYER-PIANOS. ELMER R. PARSONS, Omaha, Nebr. Filed July 15, 1915. Serial No. 40,048. (Cl. 84—159.)



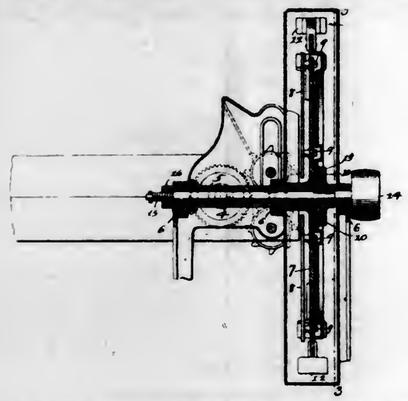
1. In a player-piano a slidably mounted panel, a shaft having an operating lever and also provided with a gear, a second gear engaged with the first gear, suitably mounted for oscillating movement and provided with an arm rigid therewith, a link pivotally connected to the panel, a lever having one end pivotally mounted at a fixed point and the other end pivotally connected to said link and a second link connecting said lever to the arm.

2. In a player-piano, a pair of slidably mounted panels, manually operable means by which one of said panels may be opened and closed, said means comprising a shaft having an operating lever and also provided with a gear, a second gear engaged with the first gear, said second gear being mounted for oscillating movement and provided with an arm rigid therewith, a link pivotally connected to one of said panels, a lever having one end pivotally mounted at a fixed point and the other end pivotally connected to said link, and a second link connecting said lever to the arm, and means operable by said panel to simultaneously open and close the other panel.

1,168,110. SAFETY-CLUTCH FOR FEED-CUTTERS. MARTIN A. PAULSON and CHRISTIAN FREDERICKSON, Rice Lake, Wis. Filed Mar. 3, 1915. Serial No. 11,689. (Cl. 192—8.)

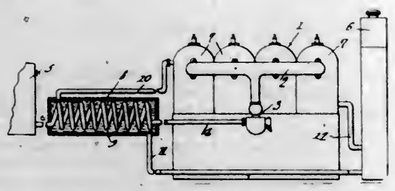
1. A device of the class described, comprising a shaft, a sleeve independently rotatable thereon, supports therefor, a disk on said sleeve provided with a rib concentric with said shaft, a disk on said shaft provided with a chan-

nel concentric with said shaft and adapted to receive said rib, and means displaceable by retardation of said first named disk for normally holding said disks in frictional contact to insure simultaneous revolution thereof.



2. A device of the class described, comprising a shaft, a sleeve independently rotatable thereon, supports therefor, a disk on said sleeve provided with a rib concentric with said shaft, a disk on said shaft provided with a channel concentric with said shaft adapted to receive said rib, said shaft having a screw-thread thereon in the direction of shaft rotation, a nut engaged by said screw-thread and bearing on the corresponding end of said sleeve to force said disks into frictional contact to insure revolution thereof as a unit, a retardation of said first named disk holding said nut immovable with respect thereto during the continued rotation of said shaft to unscrew said nut on said shaft and destroy the frictional engagement of said disks.

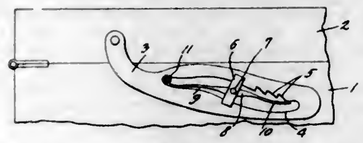
1,168,111. FUEL-HEATING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. JOSEPH WILLIAM POPE, Boston, Mass. Filed Apr. 3, 1915. Serial No. 18,928. (Cl. 123—122.)



The combination with the water jackets of an internal combustion engine, having a lower inlet and an upper outlet, a radiator having a lower inlet below said jackets, and a carbureter, of a cool water pipe connecting the radiator and the inlet of said jackets, a hot water reservoir disposed between the horizontal planes of the radiator inlet and the outlet of the jackets, a hot water pipe connecting the outlet of the jackets and one end of said reservoir, a pipe connecting the other end of said reservoir and the inlet of the radiator so that the hot water flows downwardly from the jackets into said reservoir and thence downwardly from the reservoir into the radiator, and a fuel pipe connected to the carbureter and extending through said reservoir, said fuel pipe having a coil within the reservoir.

1,168,112. HOLDER FOR BOX-LIDS, SASHES, AND THE LIKE. JOHN W. ROCKWELL, Waynesboro, Pa. Filed May 11, 1915. Serial No. 27,376. (Cl. 217—60.)

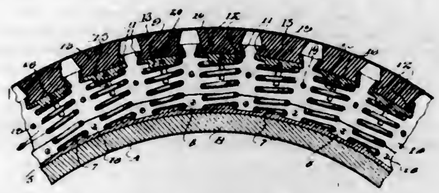
1. The combination with a fixed projection, and a hingedly mounted structure, of a strip pivotally connected to said structure and having a longitudinal slot into which the projection extends, the upper wall of said slot having a notch adjacent one end, and a dividing strip mounted in the slot and having oppositely extending spring fingers yieldingly engaging the upper wall of the slot adjacent one end thereof and the lower wall of the slot adjacent the other end thereof.



2. The combination with a fixed projection and a hinged structure, of a strip pivotally connected to the hinged structure and having a longitudinal slot into which the projection extends, one wall of the slot being notched for engaging the projection to support the hinged structure in one position, and oppositely extending spring fingers mounted within the slot and bearing against the respective walls of the slot adjacent opposite ends thereof respectively.

3. The combination with a hinged structure and a fixed projection, of a strip slidably mounted on said structure and having a slot into which said projection extends, one wall of the slot being notched to receive the projection and support the hinged structure out of normal position, a cross strip bridging the slot and carried by the pivoted strip, and oppositely extending spring fingers connected to the cross strip and bearing at their free ends against the opposed walls respectively of the slot.

1,168,113. TIRE. SAMUEL K. ROSSIGNOL, Greenwood, S. C. Filed May 8, 1915. Serial No. 26,816. (Cl. 152—8.)

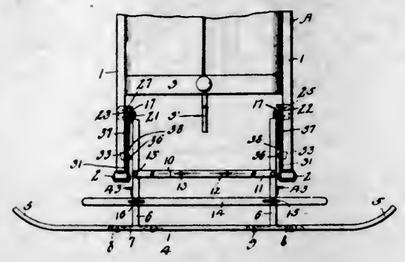


1. A tire comprising a substantially U-shaped annulus adapted to be mounted on the felly of a wheel, side rings fixed to the said annulus and having radially disposed slots at intervals throughout the circumference thereof, outwardly bulged portions formed on the side rings, tread blocks supported between the side rings, bosses formed within the channels in the U-shaped annulus, bearing disks supporting the said tread blocks, guide pins passed through the bearing disks and slidably engaged in the said slots, and resilient elements interposed between the said disks and the annulus and engaged on the bosses.

2. A tire comprising a substantially U-shaped annulus adapted to be mounted on the felly of a wheel, side rings fixed to the said annulus and having radially disposed slots at intervals throughout the circumference thereof, outwardly bulged portions formed on the side rings, tread blocks supported between the side rings, bosses formed within the channels in the U-shaped annulus, bearing disks supporting the said tread blocks, guide pins passed through the bearing disks and slidably engaged in the said slots, resilient elements interposed between the said disks and the annulus and engaged on the bosses, and tie members passed through the side rings and engaged in the outwardly bowed portions thereof at points between the resilient elements.

3. A tire comprising a substantially U-shaped annulus adapted to be mounted on the felly of a wheel, side rings fixed to the said annulus and having radially disposed slots at intervals throughout the circumference thereof, outwardly bulged portions formed on the side rings, tread blocks supported between the side rings, bosses formed within the channels in the U-shaped annulus, bearing disks supporting the said tread blocks, guide pins passed through the bearing disks and slidably engaged in the said slots, resilient elements interposed between the said disks and the annulus and engaged on the bosses, tie members passed through the side rings and engaged in the outwardly bowed portions thereof at points between the resilient elements, and a flexible covering inclosing the tread blocks and disposed outside of the outwardly bowed portions of the ring.

1,168,114. FENDER. ELMER H. ROYER, Philadelphia, Pa. Filed May 29, 1915. Serial No. 31,212. (Cl. 105—130.)



1. In a vehicle fender, a fender frame embodying a front fender bar, side arms fastened at their forward ends to said bar and extending rearwardly therefrom, oscillatory fender suspending links connecting the side arms of the fender frame to the vehicle frame, fender supporting members fixedly attached to the vehicle frame, and projections on the side arms of the fender frame engaging said fender supporting members to uphold the fender and adapted in the rearward thrust of the fender to become disengaged from said fender supporting members, permitting the front end of the fender to drop.

2. In a vehicle fender, a fender frame embodying a front fender bar, side arms fastened at their forward ends to said bar adjustable longitudinally of the latter and extending rearwardly therefrom, oscillatory fender suspending links connecting the side arms of the fender frame to the vehicle frame, fender supporting members fixedly attached to the vehicle frame, and projections on the side arms of the fender frame engaging said fender supporting members to uphold the fender and adapted in the rearward thrust of the fender to become disengaged from said fender supporting members, permitting the front end of the fender to drop.

3. In a vehicle fender, a fender frame embodying a front fender bar, side arms fastened at their forward ends to said bar and extending rearwardly therefrom, oscillatory fender suspending links connecting the side arms of the fender frame to the vehicle frame, fender supporting members fixedly attached to the vehicle frame, and projections on the side arms of the fender frame engaging said fender supporting members to uphold the fender and adapted in the rearward thrust of the fender to become disengaged from said fender supporting members, permitting the front end of the fender to drop, and springs connecting said links and fender supporting members to hold the projections on the side arms of the fender frame in engagement with the fender supporting members.

4. In a vehicle fender, a fender frame embodying a front fender bar, side arms fastened at their forward ends to said bar and extending rearwardly therefrom, oscillatory fender suspending links connecting the side arms of the fender frame to the vehicle frame, fender supporting members fixedly attached to the vehicle frame, projections on the side arms of the fender frame engaging said fender supporting members to uphold the fender and adapted in the rearward thrust of the fender to become disengaged from said fender supporting members, permitting the front end of the fender to drop, and means for limiting the downward movement of the fender frame.

5. In a vehicle fender, a fender frame embodying a front fender bar, side arms fastened at their forward ends to said bar and extending rearwardly therefrom, oscillatory fender suspending links connecting the side arms of the fender frame to the vehicle frame, fender supporting members fixedly attached to the vehicle frame, projections on the side arms of the fender frame engaging said fender supporting members to uphold the fender and adapted in the rearward thrust of the fender to become disengaged from said fender supporting members, permitting the front end of the fender to drop, and stirrups attached to said fender supporting members serving to arrest the downward movement of said side arms and support the fender in its lowest position.

[Claims 6 to 9 not printed in the Gazette.]

1,168,115. FORK OR TONGS. ERNEST F. RUECKERT, Providence, R. I. Filed May 20, 1915. Serial No. 29,380. (Cl. 65—52.)



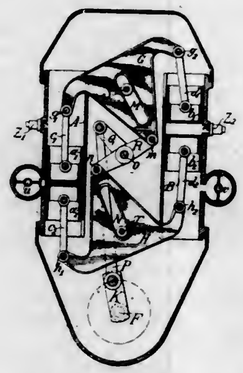
In combination with a tube having a recess in the inner end thereof, a rod slidably mounted therein, jaws connected to the rod and extending from the outer end of the tube, a coiled spring mounted on the rod, and having its outer portion coiled tightly about the rod and its inner terminal bent and engaged with the said recess, a plug having an opening through which the rod passes and closing the inner end of the tube and bearing against the inner terminal of the spring and holding it in position, and a disk mounted upon the tube on the outside of the said recess and closing the latter, said plug having a head which overlaps the end of the tube and engages the disk.

1,168,116. FOUR-STROKE-CYCLE ENGINE. PAUL SCHARF, Berlin, Germany, and EMIL KWAYSSER, Vienna, Austria-Hungary. Filed Feb. 18, 1913. Serial No. 749,219. (Cl. 123—51.)

1. In a four-cycle internal combustion engine, a cylinder, a pair of opposed pistons therein, a main shaft, a two-armed rocking lever connected to the main shaft to effect the rotation thereof, and connections between one arm of said lever and one of said pistons and between the other arm of said lever and the other piston, the connections including a pair of levers pivotally connected to the opposite arms of said first named lever and each having pivotal and sliding components of movement and a rod connecting said last named levers and the respective pistons.

2. In a four-cycle internal combustion engine, a pair of parallel cylinders, a pair of opposed pistons working in each cylinder, a main shaft, a two-armed rocking lever connected to the main shaft to effect the rotation thereof,

and operative connections between the pistons at corresponding ends of said cylinders and one arm of said lever and between the other pistons and the other arm of said lever.



3. In a four-cycle internal combustion engine, a pair of parallel cylinders, a pair of opposed pistons working in each cylinder, a main shaft, a two-armed rocking lever connected to the main shaft to effect the rotation thereof, and operative connections between the pistons at corresponding ends of said cylinders and one arm of said lever and between the other pistons and the other arm of said lever, the connections comprising a pair of levers pivoted to the respective arms of said first named lever and having pivotal and sliding components of movement and rods connecting each of the levers of said pair with the piston at the ends of the cylinders which said levers adjoin.

4. In a four-cycle internal combustion engine, a cylinder, a pair of opposed pistons therein, a main shaft, a two-armed rocking lever connected to the main shaft to effect the rotation thereof and connections between one arm of said lever and one of said pistons and between the other arm of said lever and the other piston, the connections including a pair of levers pivotally connected to the opposite arms of said first named lever and each having pivotal and sliding components of movement and rods connecting said last named levers and the respective pistons, the pivotal axes of the levers of said pair being located at different distances from the pivotal axis of said rocking lever.

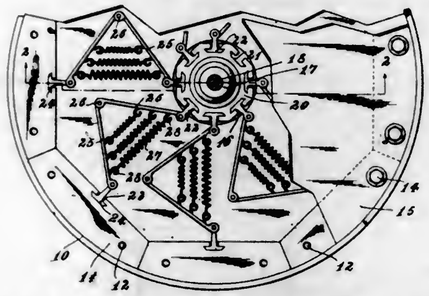
5. In a four-cycle internal combustion engine, a cylinder, a pair of opposed pistons therein, a main shaft, each piston having four dead center positions during a revolution of said shaft and said pistons having two of their dead center positions simultaneously and moving oppositely to one another at nearly equal speed shortly before and shortly after reaching their said simultaneous dead center positions, each piston attaining nearly its greatest speed during the other dead center position of the other piston, a two-armed rocking lever connected to the main shaft to effect the rotation thereof, and connections between the arms of said lever and the respective pistons to cause the operations of the latter in the sequence stated.

[Claims 6 to 13 not printed in the Gazette.]

1,168,117. RESILIENT WHEEL. CARL OSKAR SCHULZE, New York, N. Y. Filed Sept. 28, 1915. Serial No. 53,029. (Cl. 152—28.)

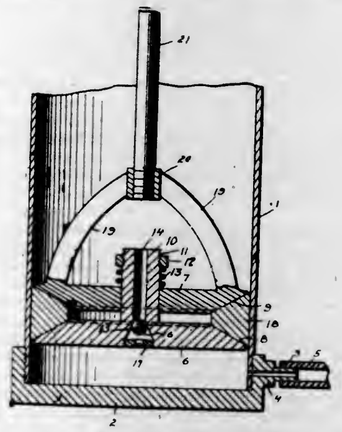
1. In a resilient wheel, in combination with the felly, and hub thereof, said felly and hub having uniformly disposed, parallel surfaces facing one another, hangers removably engaged in said felly and hub at the center of the mentioned surfaces, said hangers being oppositely disposed in a radial line, links pivoted in said hangers, extending therefrom in a non-radial line, hinges at the ends of said links, and a plurality of tension springs between the elements of said links.

2. In a resilient wheel, in combination with the felly and hub thereof, a plurality of paired hangers transversely slidable in undercut recesses formed in said felly and hub respectively, link elements pivoted to each pair of hangers, said link elements extending angularly outward from a radial line and within the contour of the wheel, a hinge at the outer end of said link elements, and means combined with each pair of links for constraining each link element toward the mating element.



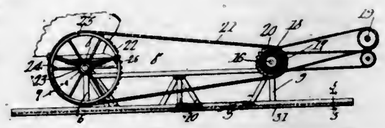
3. In a resilient wheel, the combination with a plurality of segmental blocks, having transversely undercut recesses and forming a felly, a rim circumjacent thereto, and cover-plates attached to said blocks, overlying the wheel, of a polygonal faced hub, having transversely undercut recesses in each face, hangers suited to the mentioned recesses in said blocks and hub, links pivotally engaged at one end thereof with said hangers, hingedly connected in pairs at their opposite ends, and a plurality of pull springs secured between each pair of links, tending to draw said hangers radially together.

1,168,118. PUMP-PLUNGER. HARRY F. SCHUMANN, Los Gatos, Cal. Filed Apr. 18, 1914. Serial No. 832,869. (Cl. 103—63.)



A piston head comprising a lower plate and an upper plate, a spider made integral with the upper plate, a sucker rod connected to said spider, said plates each having oppositely disposed annular beveled surfaces, a stud made integral with the lower plate and extending through said upper plate to approximately the center of the spider, said stud having a vertical bore, a valve in said bore, and an adjusting nut threaded on said stud, a spring encircling said stud and interposed between said adjusting nut and upper plate whereby the said gasket is forced outwardly.

1,168,119. POWER-TRANSMISSION DEVICE. DEVELVES M. SILVERS, Rea, Mo. Filed June 22, 1914. Serial No. 846,680. (Cl. 21—90.)



1. The combination with a lower frame, an upper frame supported thereby and having spaced bearings, a driven shaft supported by the upper frame, of a motor vehicle having its rear axle supported by said spaced bearings on the upper frame, means for transmitting motion from the wheels on the rear axle of the vehicle to the driven shaft, braces fixed relative to the lower frame and inclined upwardly relative to the axle for holding said axle against movement toward the driven shaft, clips upon said braces and embracing the axle at opposite sides of the center thereof and between the spaced bearings.

2. The combination with a frame and a driven shaft journaled thereon, spaced bearings upon the frame, of a motor vehicle including a rear axle and supporting wheels upon the axle, said axle being mounted on the spaced bearings, the wheels of the vehicle being arranged beyond the sides of the frame and bearings, a ring at the outer side of each of said wheels, segmental members back of and integral with the ring and fitted between the spokes of the adjacent wheel, said ring having slots extending across the spokes, bolts straddling the spokes and secured within the slots, a sprocket engaging said bolts and held thereby against the ring, and chains for transmitting motion from the sprockets to the driven shaft.

1,168,120. SWINGLETREE ATTACHMENT. JOHN J. SIMMONS, Dunnegan, Mo. Filed Sept. 1, 1914. Serial No. 859,666. (Cl. 21—78.)



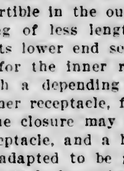
1. The combination of a doubletree having a U-shaped member secured thereto, a portion of the arms of the said member snugly engaging the doubletree, the terminals of said arms bent to form channelways, a swingletree having a plate secured thereto and received within said channelways, and a bolt pivotally connecting the doubletree and swingletree.

2. The combination of a doubletree having a U-shaped member snugly engaged therewith, the terminals of said member bent to form channelways, a swingletree having a plate secured thereto, laterally extending ears on the plate alined with the swingletree, semicircular extensions on the plate adapted to be received in the channelways, means for securing the plate to the swingletree, and a bolt pivotally connecting the doubletree and swingletree.

1,168,121. YIELDING COUPLING. ELDERT HERMANUS SIMONS and RUDOLF KLEIN, Weinheim, Germany, assignors to Maschinenfabrik Badenia, vorm. Wm. Platz Söhne A.-G., Weinheim, Germany, a Firm. Filed Sept. 29, 1913. Serial No. 792,339. (Cl. 64—13.)

1. In a yielding coupling a driving and a driven member, a spring member consisting of twin blade springs connected at the ends and arranged on the one coupling member for the direct transmission of the power and means for eliminating the lateral forces created in the blade springs.

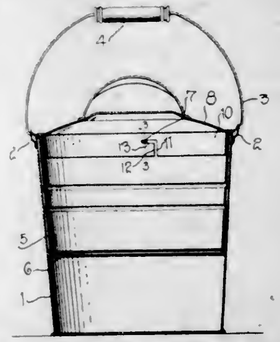
2. In a yielding coupling a driving and a driven member, a spring member consisting of twin blade springs, connected at the ends and arranged on the one coupling member for the direct transmission of the power and means for guiding the spring in order to eliminate the lateral forces created in the blade springs.



3. In a yielding coupling, a driving and a driven member, a spring consisting of two blades connected at their ends and attached to one coupling member for direct transmission of power to the other member, and means for eliminating lateral forces created in the blades of the springs.

4. In a yielding coupling, a driving and a driven member, a spring member consisting of twin blade springs connected at their ends and attached to one coupling member for transmitting power directly to the other member, and slotted means for guiding said spring to eliminate the lateral forces created in the said blade springs.

1,168,122. REMOVABLE COVER FOR RECEPTACLES. SOLON SMITH, Krebs, Okla. Filed Apr. 11, 1914. Serial No. 831,302. (Cl. 220—51.)

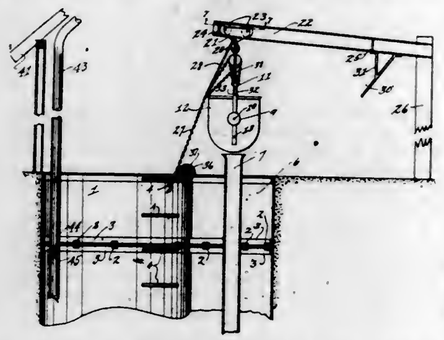


A receptacle including an outer body having an annular internal flange spaced above its bottom wall, an inner receptacle freely insertible in the outer receptacle, said inner receptacle being of less length than the outer receptacle, whereby its lower end seats upon the flange, a removable closure for the inner receptacle, said closure being provided with a depending annular flange which seats within the inner receptacle, fastening means whereby the flange of the closure may be detachably engaged with the inner receptacle, and a handle for the closure, said handle being adapted to be grasped to thereby remove the inner receptacle from the outer receptacle.

1,168,123. SILO-MATERIAL-HANDLING MECHANISM. JOSEPH C. SPAETH and BOHUMIR VINAR, Dwyer, Wyo. Filed Apr. 9, 1914. Serial No. 830,770. (Cl. 214—4.)

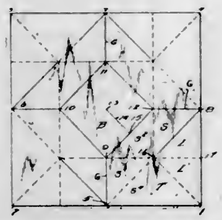
1. In a device of the class described, a shaft, guide members extending longitudinally of said shaft and projecting from the upper end thereof, the upper extremities of said guide members being flared, a bucket adapted for vertical movement between said guides, means carried by said bucket for engagement with said guides, a carriage, said bucket being suspended from said carriage, a guide roller carried by one wall of said shaft, a track for said carriage, means for locking said carriage against movement upon said track, means engaged over said guide roller and connected with the locking means to release the same, and means engaged over said roller for controlling movement of said carriage between said guides.

2. In a device of the class described, a shaft, a track positioned upon an incline and having its upper end extended over the shaft, a carriage mounted for movement upon said track, means for locking said carriage at the upper end of said track, means for releasing said locking means, a pulley suspended from said carriage, chains mounted



upon said pulley, a bucket suspended by said chains, a handle carried by said bucket, a latch member carried by said handle and engaged with the bucket to prevent turning of the latter, and a latch engaging arm at the lower end of said track for engagement with the latch member to disengage the latter from the bucket.

1,168,124. CUSPIDOR. JOHN L. STONE, Sr., Richmond, Va. Filed Feb. 13, 1915. Serial No. 8,119. (Cl. 4—38.)



1. The herein described receptacle made from a single blank of pliable material folded on lines defining a polygonal bottom at the center of the blank, and on radial lines from the corners of said bottom to the periphery of the blank dividing the latter into sections around the bottom; each section being folded into a series of panels collectively constituting one side of the receptacle, and into additional panels superimposed on each other and bent into the space between said side and the next and constituting a lock, for the purpose set forth.

2. The herein described receptacle made from a single blank of pliable material folded on lines defining a polygonal bottom within the blank, and on lines from the edge of said bottom to the periphery of the blank dividing the latter into sections around the bottom; each section being folded into a series of panels collectively constituting one side of the receptacle, and into two contiguous triangular panels superimposed on each other and bent into the space between said side and the next and constituting a lock, for the purpose set forth.

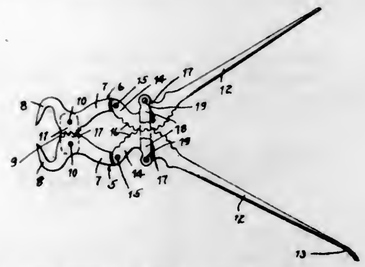
3. The herein described receptacle made from a single blank of pliable material folded on lines defining a polygonal bottom at the center of the blank, and on radial lines from the corners of said bottom to the periphery of the blank dividing the latter into sections around the bottom, each section being folded into a series of triangular panels collectively making up a pyramid and constituting one side of the receptacle, and into two triangular panels whose bases are coincident with one corner line of said pyramid and whose bodies are superimposed and bent into the space between one side of such pyramid and the contiguous side of the next pyramid, for the purpose set forth.

4. The herein described cuspidor made from a single blank of paper folded on lines defining a polygonal bottom at the center of the blank, and folded on lines from the corners of said bottom to the periphery of the blank to define sections around the bottom separated by radial gutters; each section being folded into an inwardly projecting pyramid constituting one side of the cuspidor, and into a pair of triangular panels projecting beyond one corner line of said pyramid and bent down into the space between this pyramid and the next with its outer edge seated in said gutter.

5. The herein described receptacle made from a single blank folded on lines defining a polygonal bottom within the blank, and on radial lines from the angles of said bottom to the periphery of the blank dividing the latter into sections around the bottom; each section being folded into a triangle whose base is co-incident with the adjacent side of the bottom and whose apex is directed outward, into a pair of equal triangles disposed on opposite sides of the first and with their apexes directed inward, into a fourth triangle extending from the base of one of said pair to the periphery of the blank, and into additional panels constituting a lock for holding said triangles out of the plane of the bottom when the receptacle is set up.

[Claims 6 to 13 not printed in the Gazette.]

1,168,125. HOOF-TRIMMER. EDWARD S. STOWELL, Rexburg, Idaho, assignor, by direct and mesne assignments, to Atlas Implement and Tool Company, Rexburg, Idaho, a Corporation of Idaho. Filed June 12, 1914, Serial No. 844,802. Renewed Aug. 31, 1915. Serial No. 48,348. (Cl. 168—48.)



1. A hoof trimming device comprising a pair of lever arms, intermeshing segmental gears formed on one end thereof, transverse bars extending across said gears and having said levers pivoted thereon, a pair of jaws pivoted upon the ends of said segmental gears and provided with cutting edges, intermeshing segmental gears formed on the contacting inner faces of said jaws, and bars extending transversely of said jaws and having said jaws pivoted thereon.

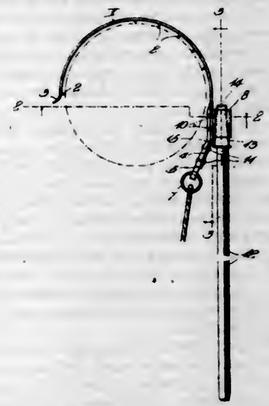
2. A pair of levers provided upon one end with segmental gears, bars pivotally connected with and extending transversely across said segmental gears for holding them in intermeshing position, a pair of jaws pivoted upon the ends of said segmental gears and provided upon their other ends with cutting edges, and transverse bars pivoted upon said jaws for holding them in their proper coacting position.

1,168,126. MOORING-HOOK. HARRY A. SYMES, Portland, Oreg. Filed June 14, 1915. Serial No. 34,060. (Cl. 114—221.)

1. A device of the character described comprising a hook, a resilient socket on said hook, and a handle detachably secured in said socket.

2. A device of the character described comprising a hook, a resilient socket on said hook, and a handle having a wedge-shaped end adapted to frictionally engage said socket.

3. A device of the character described comprising a hook, a rectangular shaped longitudinally split socket on said hook, and a handle having a squared end with sloping sides adapted to frictionally engage said socket.

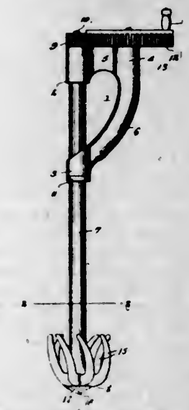


4. A device of the character described comprising a semi-circular hook having a plurality of teeth on its inner surface, a ring adapted to receive a rope at one end of said hook, a resilient socket on said hook, and a handle having a wedge-shaped end adapted to frictionally engage said socket.

5. A device of the character described comprising a semi-circular hook having a plurality of teeth on its inner surface, an extension on one end of said hook, a rope attaching the ring on the outer end of said extension, a rectangular-shaped longitudinally split socket on said hook, fastening means for securing both the extension and socket to said hook, and a handle having a squared end with sloping sides adapted to frictionally engage said socket.

[Claim 6 not printed in the Gazette.]

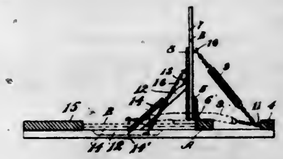
1,168,127. EGG-BEATER. KATHERINE SZLEMKO, Chester, Pa. Filed Apr. 20, 1915. Serial No. 22,656. (Cl. 107—41.)



1. An egg beater including a rotary beater head formed of a substantially conical body having an annular series of integral spaced beater arms, and a shank integral with the body and extending upwardly therefrom and surrounded by said beater arms, the beater arms being provided with spirally curved tips extending on arcs concentric with the shank, said body being provided with a conical base portion formed with radial grooves cut therein and communicating with the spaces between the beater arms.

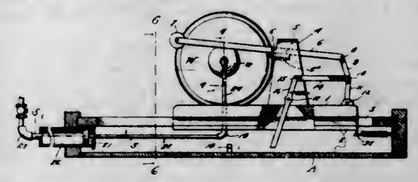
2. An egg beater comprising a bearing bracket, a shank journaled to revolve upon the bearing bracket, means for revolving said shank, and a beater head upon the shank comprising an annular series of arms or flukes grouped about the shank, said arms being of maximum thickness at their base and minimum thickness at their extremities, each arm being curved on an arc outwardly and upwardly from the base thence inwardly toward the shank, and having its upper portion tapered toward its free end and curved spirally in a direction concentric with the shank.

1,168,128. FLOOD-GATE. GEORGE THOMASON, Ada, Okla. Filed Mar. 24, 1914. Serial No. 826,970. (Cl. 39—4.)



In a flood gate structure, the combination of a submerged rail, a gate hinged to said rail and adapted to swing from a horizontal to a vertical position and vice-versa, a brace for latching said gate in a vertical position, buoyant means controlled by the water level for tripping said brace, a spring for raising said gate from a horizontal to a vertical position permitting said brace to perform its function, and means for preventing the gate from moving beyond a substantially vertical position when acted upon by said spring.

1,168,129. AUTOMATIC LUBRICATING DEVICE. CALVIN L. VAN NORSDALL, Arma, Kans., assignor of one-fourth to William L. Weir, Weir, Kans. Filed Oct. 19, 1914. Serial No. 867,446. (Cl. 184—2.)



1. The combination with a sliding support, of a member carried thereby and adapted to be contacted with by a wheel to be oiled to move the support, of an oil pipe carried by the sliding support, and having a nozzle adapted to discharge the oil into the wheel bearing, an oil cylinder located adjacent the sliding support, and a piston carried by the oil pipe and working in said cylinder, and means for returning the sliding support to its normally inoperative position.

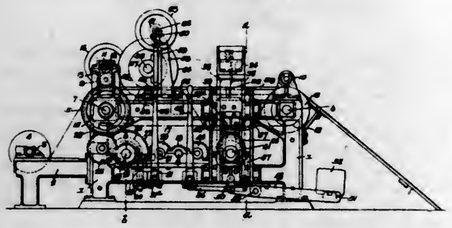
2. The combination with a movable support, of an oil cylinder located adjacent thereto, a piston working in said cylinder, an oil pipe connected with the piston and carried by the movable support, said pipe terminating at its upper end in a discharge opening through which the oil is discharged to the bearing of the wheel to be oiled, means carried by the movable support adapted to be contacted with by the car wheel to move the support and cause the oil to be discharged from the cylinder through the oil pipe to the wheel, and means for returning the support to its normal position.

3. The combination with a movable support, of an oil pipe carried thereby and having a discharge end through which the oil is adapted to flow to the bearing of a wheel to be oiled, means carried by the movable support adapted

to be contacted with by the wheel to be oiled to move the support and cause the oil to be discharged through the oil pipe, means for throwing said contact means out of contact with the wheel, and means for returning the movable support to its normal position.

4. The combination with a base, of a support sliding thereon, an oil pipe carried by the sliding support and terminating at one end in a piston and at its opposite end in a discharge nozzle adapted to discharge the oil to the bearing of the wheel to be lubricated, an oil cylinder arranged adjacent the base and within which the piston moves, a bar pivotally mounted on the support and terminating at one end in a contact member adapted to be struck by the car wheel to be oiled and to move the sliding support forward on its base, to cause the movement of the piston in the cylinder and discharge the oil to the wheel, tripping means for moving said contact member out of contact with the wheel after the latter has been oiled, and means for returning the sliding support to its normal position.

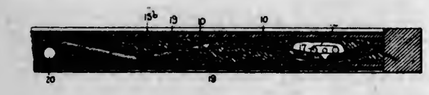
1,168,130. RUG-CUTTING MACHINE. WILLIAM H. WALDRON, New Brunswick, N. J. Filed June 22, 1915. Serial No. 35,635. (Cl. 164—49.)



1. The combination in a cutting machine for fabrics, of a frame; feed rolls mounted on the frame; means for intermittently operating the feed rolls; a hand lever and clutch for controlling the operation of the feed rolls; a cutter for cutting the fabric; a clutch mechanism and a hand lever for controlling the cutter, whereby the fabric is fed a given distance toward the cutters and the cutters are actuated to sever the material.

2. The combination in a rug cutting machine, of a frame, two feed rolls; means for driving said feed rolls in unison; presser rolls; a driving shaft; a clutch located between the driving shaft and the feed rolls; hand operated means for releasing the clutch to allow it to throw in gear so as to turn the feed rolls, means for automatically withdrawing the clutch at a predetermined point; a transversely arranged cutter; a cam shaft; cams thereon for operating the cutter; a clutch; and a hand lever for releasing the clutch; and automatic means for withdrawing the clutch so that the cutter will make one stroke and will automatically stop.

1,168,131. PLASTER-BOARD. JAMES R. WALSH, Jacksonville, Fla. Filed Dec. 16, 1914. Serial No. 877,499. (Cl. 72—124.)



1. A plaster-board consisting of separate plaster-board panels, and a flexible covering at each side thereof hingedly connecting the panels, the said covering forming the only connection between the panels, said panels having recesses extending longitudinally thereof at the joints at alternately opposite faces of the board, the opposed recesses of adjacent panels forming grooves and there being at each joint an ungrooved surface opposite each groove, the said panels being foldable flat against one another into zig-zag form.

2. A plaster-board formed of separate plaster-board panels, and flexible material hingedly joining the several panels at both sides, the said plaster panels having recesses at the joints at alternately opposite faces, and the said flexible material being depressed at the joints to correspond with the recesses in the juxtaposed edges of the panels, presenting longitudinal grooves in the board at the joints at alternately opposite sides of the board, alternate joints being plain and ungrooved opposite to the grooves, and the panels being foldable flat onto one another in zig-zag form.

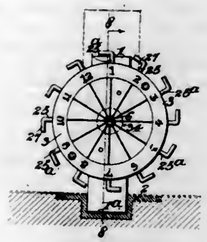
3. A plaster-board formed of separate plaster-board panels, and means hingedly joining the said panels together, said board having at each of the joints, a longitudinal groove and a plain, ungrooved surface, the grooves and ungrooved surfaces being reversely disposed at alternate joints to permit a zig-zag folding of the panels.

4. A plaster-board comprising separate plaster board panels, there being a covering of flexible material on both faces hingedly connecting the said panels, adjacent panels being foldable on their said hinged connection through angles to lie close together or to dispose the panels into various angular positions.

5. A wall having therein a plaster-board, composed of a series of separate plaster-board panels hingedly connected together and disposed at angles to each other in zig-zag form, presenting depressions at alternately opposite sides between the salient angles of the board, the depressions being defined by adjacent angularly disposed panels, and plaster filling said depressions of the board.

[Claim 6 not printed in the Gazette.]

1,168,132. LOCK. GEORGE ANTHONY WEHNER, Savannah, Ga. Filed May 25, 1915. Serial No. 30,264. (Cl. 70—54.)



1. A lock comprising a substantially cylindrical casing, a guideway extending diametrically of the casing on the rear face thereof, a sectional bolt held in the guideway, one of the sections of the bolt being adapted to engage a catch, a spring normally pressing the said section into inoperative position, the other section abutting the first named section at its inner end and extending beyond the casing at its outer end to permit the first-named section to be moved into engagement with the catch, a locking wheel mounted to rotate in the casing, said wheel having a plurality of laterally extending pins, the first named section of the bolt having a shoulder for engagement by one of the pins to hold the bolt section in engagement with the catch, the other bolt section having a lateral lug for engaging the other pin of the locking wheel to partially rotate the wheel when the bolt section is moved to engage the other section with the catch, a spring normally holding the locking wheel in inoperative position, a plurality of series of push buttons mounted radially of the casing and movable radially thereof, springs normally pressing the buttons outward, said buttons being positive and negative, the negative buttons when in outward position offering no impediment to the movement of the wheel, and the positive buttons when in outward position preventing movement of the wheel, and when in inward position permitting the free movement of the wheel, said wheel having radial arms provided with laterally extending lugs adapted to engage the positive buttons when in outward position to prevent angular movement of the wheel, each positive button having a notch for registering with the lugs when the button is depressed.

2. A lock comprising a substantially cylindrical casing, a guideway extending diametrically of the casing on the rear face thereof, a sectional bolt held in the guideway, one of the sections of the bolt being adapted to engage a catch, a spring normally pressing the said section into inoperative position, the other section abutting the first named section at its inner end and extending beyond the casing at its outer end to permit the first named section to be moved into engagement with the catch, a locking wheel mounted to rotate in the casing, said wheel having a plurality of laterally extending pins, the first named section of the bolt having a shoulder for engagement by one of the pins to hold the bolt section in engagement with the catch, the other bolt section having a lateral lug for engaging the other pin of the locking wheel to partially rotate the wheel when the bolt section is moved to engage the other section with the catch, a spring normaly holding the locking wheel in inoperative position, a series of radial push buttons mounted in the casing, springs normally holding the buttons outward, the locking wheel having angular lugs extending between the buttons, sundry of the buttons having portions extending into the path of movement of the lugs when the buttons are in normal position to prevent angular movement of the locking wheel in a direction to release the bolt and having notches or recesses for registering with the lugs to permit the passage thereof when the buttons are depressed, others of the buttons having portions adapted to extend into the path of movement of the lugs when the buttons are depressed.

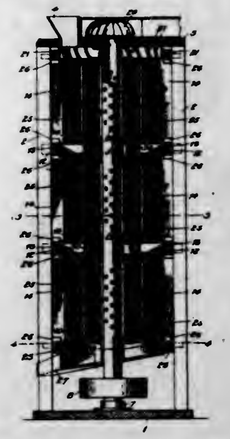
3. A lock comprising a casing having a guideway extending transversely of one face thereof, a bolt movable in the guideway and adapted to engage a catch at one end, and extending beyond the casing at the other end to permit the bolt to be moved manually, a spring normally holding the bolt in inoperative position, a locking wheel mounted to rotate in the casing and having a pin for engaging the bolt to hold the bolt in locked position, said wheel having a second pin and the bolt having a lug for engaging the pin to swing the wheel when the bolt is moved toward the catch to cause the first named pin to engage and lock the bolt, a spring normally holding the locking wheel in inoperative position, a series of radially movable push buttons in connection with the casing, springs pressing the buttons outward, the locking wheel having angular lugs extending between the buttons, and sundry of the buttons having openings for permitting the passage of the lugs when the buttons are in normal position, and adapted to be moved out of register with the lugs when the buttons are depressed, other of the buttons having recesses normally out of register with the lugs.

4. A lock comprising a casing having a guideway extending transversely of one face thereof, a bolt movable in the guideway and adapted to engage a catch at one end, and extending beyond the casing at the other end to permit the bolt to be moved manually, a spring normally holding the bolt in inoperative position, a locking wheel mounted to rotate in the casing and having a pin for engaging the bolt to hold the bolt in locked position, said wheel having a second pin, and the bolt having a lug for engaging the pin to swing the wheel when the bolt is moved toward the catch to cause the first named pin to engage and lock the bolt, a spring normally holding the locking wheel in inoperative position, a series of radially movable push buttons in connection with the casing, springs pressing the buttons outward, the locking wheel having angular lugs extending between the buttons, each button having a recess for registering with the lugs to permit the passage thereof past said push buttons, the recesses of sundry of the buttons being normally in register with the lugs, and the recesses of other of the buttons being normally out of register with the lugs.

5. A lock comprising a casing having a guideway extending transversely thereof, a bolt movable in the guideway and adapted to engage a catch at one end, a spring normally holding the bolt in inoperative position, a locking wheel mounted to rotate in the casing and having means for engaging the bolt to hold it in locked position when the wheel is oscillated in one direction, means on the bolt for engaging the wheel to oscillate the same into locking position when the bolt is moved into engagement with the catch, a spring normally holding the wheel in inoperative position, push buttons mounted for radial movement in the casing, the locking wheel having angular lugs extending toward the buttons, and spaced apart at equal distances from the center of the wheel, the push buttons being arranged in annular series and coaxial with the wheel, each button having an opening for permitting the passage of the lugs, the recesses of sundry of the buttons being normally in register with the lugs, and the recesses of the other buttons being normally out of register with the lugs, and springs normally holding the buttons in outward position.

[Claims 6 to 24 not printed in the Gazette.]

1,168,133. RICE HULLING AND POLISHING MACHINE. ... SIA W. WELCH, Baltimore, Md., assignor of one-half to John H. Windfelder, Baltimore, Md. Filed Feb. 13, 1915. Serial No. 8,013. (Cl. 83—29.)



1. A machine of the character described, including a revoluble member and a contractible and expansible casing enveloping the same, said casing embodying a plurality of sections provided with oblique slots, rods receiving in said slots, and means for moving said rods whereby the sections will be simultaneously moved inward or outward.

2. A machine of the character described, including a revoluble member and a sectional casing enveloping the same, supports for the casing section, said supports being formed with circumferentially disposed slots extending therethrough, and the casing sections being formed with oblique slots, rods mounted in the circumferential and oblique slots, the rods being connected together, and means for moving said rods simultaneously whereby the sections will be moved in and out.

3. A machine of the character described, including a revoluble member and a casing enveloping the same, said casing comprising a plurality of sections formed at the top and bottom with oblique slots, supports for said sections provided with circumferential slots, rods passing through the oblique and circumferential slots, and rings mounted for a partial revoluble movement and connecting said rods together, whereby to move the casing sections in and out.

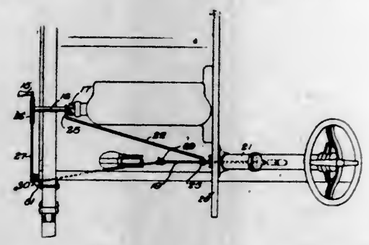
4. A machine of the character described, comprising a framework, a shaft journaled therein, a plurality of drums carried by said shaft and spaced from one another, rings secured to the framework in the spaces between said drums, said rings being formed with circumferentially disposed slots, and a casing enveloping said drums, said casing comprising sections movably supported upon the rings, said sections being formed with oblique slots, rods passing

through said circumferential and oblique slots, and means for simultaneously moving said rods whereby to move the casing sections in and out, toward and away from the drums.

5. A machine of the character described, including a supporting framework, a shaft revolubly mounted therein, a plurality of drums carried by said shaft and in spaced relation to each other, deflecting rings supported by the framework and extending into the spaces between the drums, said rings being formed with circumferential slots and a casing enveloping said drums and formed in sections surrounding the respective drums, said sections being supported and guided on said rings and formed in their tops and bottoms with oblique slots, rods passing through the circumferential and oblique slots, rings connecting the upper ends of said rods together and also the lower ends thereof, and supports for said rings on which the rings are adapted for a partial revoluble movement whereby the casing sections may be moved toward and away from the drums.

[Claim 6 not printed in the Gazette.]

1,168,134. AUTOMOBILE-CRANKER. JACOB D. WELLIVER, Milford, Pa., assignor of one-fourth to William B. Kenworthy and one-fourth to George R. Bull, Milford, Pa. Filed June 19, 1915. Serial No. 35,060. (Cl. 74—39.)

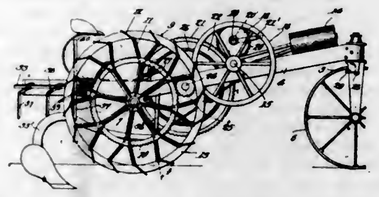


1. In a mechanical cranking device for automobiles, the combination with a crank and clutch head carried thereby, of means normally holding the crank in elevated position suitable for cranking, a draft member within reach of the driver adjacent the steering post and movable rearwardly substantially parallel thereto, a flexible connection leading from the draft member to the crank, a direction pulley over which the intermediate portion of the flexible connection operates, an auxiliary draft member movable adjacent the first mentioned draft member at one end and having the other end coöperating with the clutch head, and means to cause a rearward effective draft upon the auxiliary draft member to set the clutch preliminary to the rotation of the crank through said flexible connection.

2. In a device of the character set forth, the combination with an automobile crank shaft having a clutch head at its rear end and a crank at its front end, of a quadrant member secured to the crank and having a grooved periphery, a flexible connection secured in the groove of said quadrant member and extending laterally of the machine therefrom, means to guide the other end of the flexible connection rearwardly, a draft member connected to the rear end of the flexible connection within reach of the operator adjacent the steering post, and an auxiliary draft member comprising a rod having ends arranged at angles to the main portion thereof, one end of the rod constituting a head slidable upon the first mentioned draft member and the other end having a loop embracing the crank shaft adjacent the front face of the clutch head, substantially as set forth.

1,168,135. MOTOR-PLOW. GEORGE W. WHITE, Hutchinson, Kans. Filed Jan. 17, 1914. Serial No. 812,733. (Cl. 97—30.)

1. A motor plow comprising tractor wheels with outstanding blades, a plow supporting beam supported by said wheels, a plow elevating shaft extending parallel to said beam, a plow pivotally secured to the beam and linkedly secured to an arm rigidly carried by said shaft, and mechanical means extending in the path of motion of the outstanding blades of the tractor wheels for mechanically rotating the shaft through a limited arc for the raising and lowering of the said plow.

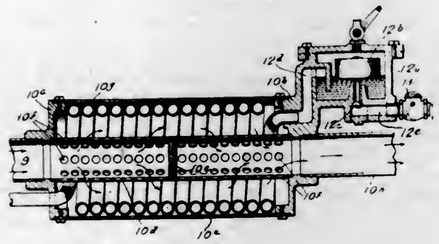


2. A motor plow comprising tractor wheels with outstanding blades, a tractor frame carried thereby, a rearwardly extending beam carried by said frame, a plow secured thereto, a shaft carried by said frame and provided with an outstanding arm, links extending between the said arm and the said plow for the raising and lowering thereof, and a wiper arm carried by said shaft arranged with a portion of its path of rotation intersecting the path of rotation of the tractor blades.

3. A motor plow comprising tractor wheels with outstanding blades, a tractor frame carried thereby, a rearwardly extending beam carried by said frame, a plurality of plows secured thereto, a shaft carried by said frame and provided with a plurality of outstanding arms, links extending between said arms and said plows for the raising and lowering thereof, a wiper arm carried by said shaft arranged with a portion of its path of rotation intersecting the path of rotation of the tractor blades, and means engaging the said shaft preventing the reverse rotation thereof.

4. A plow comprising wheels, a frame carried thereby, a plow carried by said frame, and a wiper arm mechanically connected thereto so as to raise and lower the said plow, said wiper arm being mounted to oscillate in a plane lying at an angle to the plane of rotation of one of the wheels, the arc of oscillation of the wiper arm intersecting, for a predetermined distance, the path of rotation of one of the wheels.

1,168,136. FUEL-VAPORIZING DEVICE FOR INTERNAL-COMBUSTION ENGINES. LEWIS B. WHITE, Manson, N. C. Filed Aug. 8, 1914. Serial No. 855,854. (Cl. 257—16.)



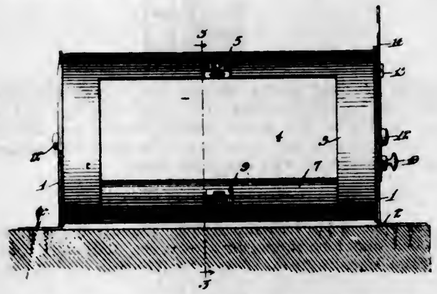
In a combined muffler and vaporizer, an inner tube for the passage of exhaust products of combustion having a central partition, said tube being perforated on both sides of said central partition, heads secured to said tube, an outer cylindrical casing secured to said heads, a coiled pipe disposed in the space between said inner tube and said outer casing, the coils of said pipe forming a baffle for the products of combustion, side pipe having an inlet end and an outlet, the opposite ends of said pipe being carried by the heads and the outlet end of said coiled pipe being adjacent to the inlet end of said inner tube.

1,168,137. PROCESS OF MAKING AN ADHESIVE. EMIL WIESE, Hamburg, Germany. Filed Aug. 7, 1915. Serial No. 44,307. (Cl. 87—17.)

1. A process of making an adhesive which comprises acting upon gelatin with a warm mixture of hydrogen peroxid, acetic acid and zinc chlorid, then allowing the product to stand for several days and filtering the same.

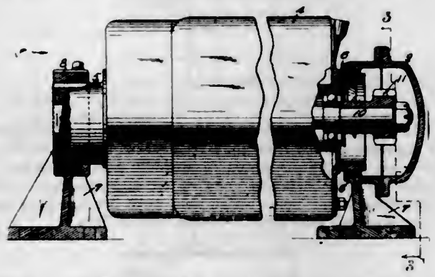
2. A process of making a liquid adhesive which comprises digesting 600 grams of gelatin with a warm mixture of 1 liter of 3% hydrogen peroxid, 100 cubic centimeters of acetic acid, 80 grams of zinc chlorid, allowing the mixture to stand for several days and filtering the same.

1,168,138. MAIL-BOX. WILLIAM WYATT, Salem, Va., assignor of one-half to Ada B. Webster, Salem, Va. Filed Nov. 6, 1914. Serial No. 870,644. (Cl. 232—28.)



A mail box comprising an outer cylinder having an opening therein and a lock attached adjacent the upper edge of said opening, a cylinder rotatably mounted within the outer cylinder and provided with an opening and a catch, adapted to engage with said lock, adjacent the lower edge of the opening, a projection on said lock extending into and engaging with the inner cylinder to limit the rotatable movement of said cylinder, a roll formed on the lower edge of the opening in the inner cylinder, and a cylindrical weight incased in said roll to automatically bring said openings into registration when the lock is unfastened.

1,168,139. FLEXIBLE-DRIVE MOUNTING. MILLARD S. YOUNG, Detroit, Mich. Filed Apr. 15, 1915. Serial No. 21,494. (Cl. 64—53.)

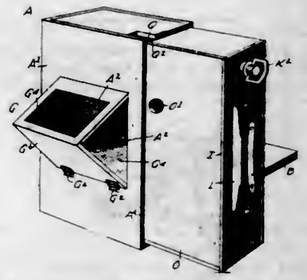


1. In a flexible-drive mounting, the combination of a motor casing including a motor shaft, trunnions projecting from the ends of the casing eccentric with the motor shaft, split bearing brackets for said trunnions wherein the casing may be turned and thereby the motor shaft displaced parellel to itself, and means associated with said brackets for clamping said trunnions therein to retain the casing in displaced position.

2. In a flexible-drive mounting, the combination of a motor shaft, a casing therefor having trunnions eccentric with the shaft, supporting brackets for the trunnions in which the trunnions are mounted to rotate, and means for locking said trunnions in the brackets in predetermined positions.

3. In a flexible-drive mounting, the combination of a motor shaft, a revoluble casing for the shaft having trunnions eccentric with said shaft, supporting brackets engaging the trunnions, said trunnions being adapted to revolve simultaneously in their brackets, whereby the shaft can be displaced parallelly to itself, and means for locking said trunnions in the brackets so that the casing cannot displace itself accidentally as the shaft is revolved.

1,168,140. PHOTOGRAPHIC CAMERA. SYLVAN ZACHARIA, New York, N. Y. Filed Apr. 23, 1915. Serial No. 23,350. (Cl. 95—32.)



1. A photographic camera provided with a camera casing having a rear aperture, a focusing screen mounted in the said casing, a reflecting surface foldable on the back of the casing adjacent said aperture and adapted to extend at an angle thereto and to the said focusing screen to reflect the image on the focusing screen in an upward direction, and a support for said reflecting surface including a base hinged to the casing, flexible sides, and an apertured top hinged to the base at one edge, the side edges of said casing along its said aperture and the said support top having relatively engaging means for guiding the latter vertically to and from operative position.

2. A photographic camera, provided with an objective, a camera casing, a focusing screen mounted therein and in alinement with the objective, and a carrier adapted to contain a sensitized medium and having a limited sliding movement on the said casing, the said carrier when within the casing containing the said focusing screen, and the said carrier when in outer position uncovering the said focusing screen.

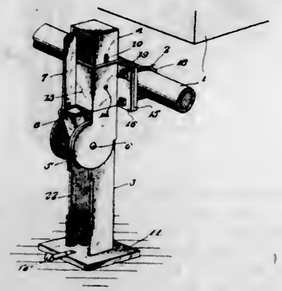
3. A photographic camera, provided with an objective, a camera casing, a focusing screen mounted therein and in alinement with the objective, a carrier adapted to contain a sensitized medium and having a limited sliding movement on the said casing, the said carrier when within the casing containing the said focusing screen, and the said carrier when in outer position uncovering the said focusing screen, and a hood held foldable on the back of the casing opposite the said focusing screen, the said hood having a reflecting surface at an angle to the focusing screen.

4. A photographic camera provided with an objective, a casing having an opening in the back and an opening at one side, a carrier mounted to slide sidewise on the said casing by way of the said side opening, the said carrier having a back and being adapted to carry a sensitized medium in front of the said back, a focusing screen fixed in the said casing in alinement with the said objective and the said back opening, the said focusing screen being adapted to extend between the said sensitized medium and the back of the carrier at the time the latter is within the casing, and a hood held on the back of the casing and adapted to fold into the back opening of the casing, the said hood having a reflecting surface adapted to extend at an angle to the said back opening and the said focusing screen.

5. A photographic camera provided with an objective, a casing having an opening in the back and an opening at one side, a carrier mounted to slide sidewise on the said casing by way of the said side opening, the said carrier having a back and being adapted to carry a sensitized medium in front of the said back, a focusing screen fixed in the said casing in alinement with the said objective and the said back opening, the said focusing screen being adapted to extend between the said sensitized medium and the back of the carrier at the time the latter is within the casing, a hood held on the back of the casing and adapted to fold into the back opening of the casing, the said hood having a reflecting surface adapted to extend at an angle to the said back opening and the said focusing screen, and means to hold the said hood in extended position on the back of the casing.

[Claims 6 to 13 not printed in the Gazette.]

1,168,141. JACK. GEORGE J. ABERNATHY, Ambrose, Tex., assignor of one-half to T. E. Amos, Ambrose, Tex. Filed Feb. 13, 1915. Serial No. 8,012. (Cl. 254—131.)



1. A jack comprising a channeled standard formed from sections which, when united, provide a hinge joint including a pintle, a load carrying block slidable upon one of the sections, a forked lever mounted upon said pintle, and a link eccentrically connecting said lever with the load carrying block.

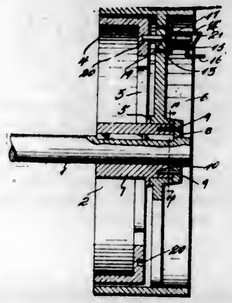
2. A jack comprising a channeled standard formed from sections hingedly connected together by means of a pintle intermediate the ends of the standard, a load carrying block slidable upon and within one of said standards, a forked lever mounted upon the above mentioned pintle, and a link eccentrically pivoted to said lever and connected with the load carrying block.

3. A jack comprising channeled sections adapted, when united, to form a standard having a hinge joint intermediate the ends thereof, one of said sections being provided with alined slots, a load carrying block slidable upon one of the channeled sections and in said slots, means for connecting the load to said block, a lever having a forked end fulcrumed upon the standards, and a link connecting the forked end of said lever with the load carrying block.

4. A jack comprising a pair of channeled sections adapted, when united end to end, to provide a standard having a hinge joint intermediate the ends thereof, a spring latch upon one of said sections, a load carrying block slidable upon one of said sections, an operating lever pivotally connected with the standard, and a link connecting the lever and load carrying block, said lever and link coöperating when the jack is folded to restore the load carrying block to its normal position.

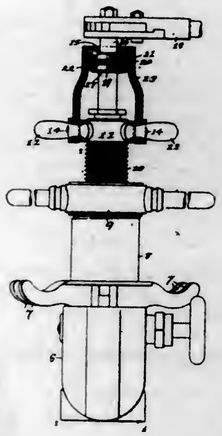
1,168,142. FLY-WHEEL. ELMER AKINS, Fair Play, Mo. Filed July 20, 1914. Serial No. 851,994. (Cl. 192—9.)

A device of the class described comprising a shaft, a fixed wheel carried thereby, said fixed wheel provided with a laterally-extending flanged periphery, said fixed wheel provided with a plurality of sockets formed therein, a loose wheel mounted adjacent said fixed wheel, a housing supported upon said loose wheel, a spring pressed plunger positioned within said housing and adapted to engage one of said sockets formed in said fixed wheel for



locking the said wheels together for simultaneous rotation, said housing provided with a cam outer face, and an arm carried by said spring pressed plunger and adapted to ride upon said cam outer face for drawing said plunger out of engagement with said fixed wheel.

1,168,143. TAPPING-MACHINE. HARRY WEIMER ALCORN and FREDERICK REED GRAVATT, Barberton, Ohio. Filed Mar. 27, 1915. Serial No. 17,370. (Cl. 77—32.)

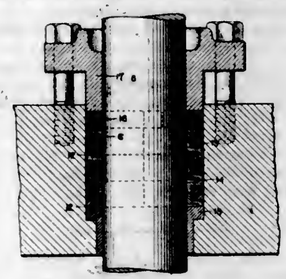


In a tapping machine provided with a boring-bar having a shoulder formed thereon, a feed screw, a feed-nut, and a yoke on said nut, adapted to straddle said boring-bar; a collar on said boring-bar resting on said shoulder, a supplemental collar upon which said yoke bears, and a ball-carrying ring interposed between said collars.

1,168,144. METALLIC PACKING. ROSCOE HILTON ALDRICH, Allentown, Pa., assignor to The Aldrich Pump Company, Allentown, Pa. Filed Apr. 30, 1915. Serial No. 24,885. (Cl. 137—115.)

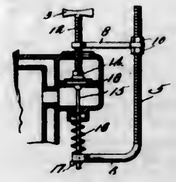
A metallic packing, consisting of a metallic ring rectangular in cross section and formed of two semi-circular sections having square abutting ends, the ring having a straight inner face, a V-shaped notch in said inner face, a rectangular groove in its periphery, a central depression in each side, and an annular rib on each side at the periphery of the ring and bounding the depression, and a rubber ring in the rectangular groove of the ring, whereby

when pressure is applied to the ribs of the metallic ring the inner face of said ring will be rendered convex and the



rubber ring compressed, thereby causing the metallic ring to tightly contact with the part it surrounds.

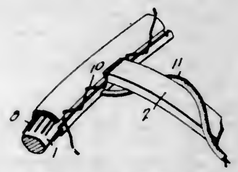
1,168,145. DEVICE FOR FACILITATING THE REMOVAL OF VALVES. EDWARD P. BAKER, Darien, Conn. Filed Feb. 23, 1915. Serial No. 10,081. (Cl. 29—87.1.)



1. A device for facilitating the removal of valves, comprising a bar having an angularly directed end formed with an inwardly directed longitudinal slot, an arm adjustably mounted on said bar, means for securing said arm in adjusted position, a screw fitted in the end of said arm opposite said bar, and a polygonal head having an internally screw threaded recess receiving the inner end of said screw.

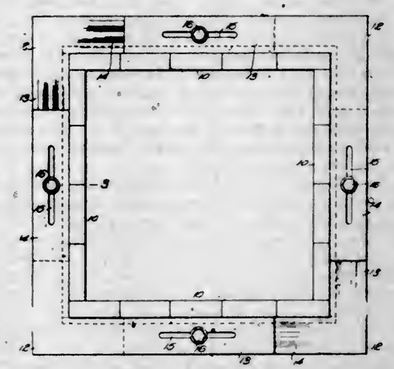
2. A device for facilitating the removal of valves comprising a screwthreaded bar, an angularly directed end on said bar, an arm having an opening adjacent one end slidably and rotatably receiving said bar, a pair of nuts fitted on said bar and engaging the opposite side faces of said arm for securing the latter in adjusted position on said bar, a screw fitted in the opposite end of said arm, and a polygonal head having an internally screwthreaded recess receiving the inner end of said screw.

1,168,146. ELECTRIC HEATER FOR STEERING-WHEELS. GEORGE HENRY BARNES, Dunham, Quebec, Canada. Filed Mar. 25, 1915. Serial No. 16,894. (Cl. 219—19.)



An electric heating device for steering wheels comprising in combination, a flexible sheet having an outer layer, an inner layer, and a non-combustible layer disposed between the outer and the inner layer, an electrical resistance element inclosed in said non-combustible layer, the edges of the flexible sheet being brought adjacent to each other in the inner side of the rim, means for securing the adjacent edges together thereby holding the covering to the rim, said means comprising eyelets carried by the adjacent edges of the flexible sheet and a flexible cord adapted to pass through the eyelets for lacing the edges together.

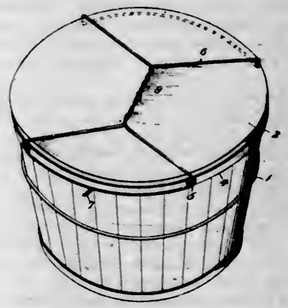
1,168,147. MOLD-CLAMP. WILLIAM BENDER, New York, N. Y. Filed Aug. 24, 1915. Serial No. 47,066. (Cl. 25—131.)



1. A mold clamp, comprising a plurality of angular plates adapted to fit onto the corners of the mold and having their members fitting the sides of the mold, the members on a mold side overlapping one the other, the members being provided with slots extending in the direction of the length of the members, the slots of the overlapping members being in register, means extending through the slots for fastening the members together the contacting faces of the overlapping members being provided with lengthwise extending ridges and grooves, the ridges of one member fitting into the grooves of the mating member.

2. In combination, a mold having each side formed of planks having cross boards attached thereto, angular plates resting on the cross boards and fitting snugly onto the corners and against the sides of the mold, the members of each plate extending along adjacent sides of the mold and the said members on a mold side lapping one over the other in a common plane, means for fastening the overlapping members in adjusted position, said members having their contacting faces provided with interengaging longitudinally extending ridges.

1,168,148. SECURING DEVICE FOR THE CLOSURES OF PAILS, &c. JESSE H. BERRY, Boston, Mass. Filed Mar. 9, 1914. Serial No. 823,571. (Cl. 70—80.)



1. As a new article of manufacture, a fastening device for the covers of pails comprising an endless wire loop and sets of anchoring elements engageable with the loop at opposite sides thereof and constructed to be se-

cured to the wall of the pail whereby opposite portions of the loop will extend between the anchoring elements of each set and the remaining portions of the loop will extend between corresponding ones of the said sets of anchoring elements, the last mentioned portions of the loop being continuous and free from obstructions whereby they may be twisted together above the cover for the pail.

2. The combination with a pail, of a fastening device for the cover thereof comprising an endless wire loop having opposite portions secured to the wall of the pail at spaced points and extending around the wall between the said points of attachment, the sides of the loop extending above the open top of the pail and being of a length greater than the distance between the corresponding points of attachment of the loop to the pail, whereby the said portions may be brought together above the cover for the pail and united.

3. In a device of the class described, the combination with a container and a cover therefor, of anchoring elements carried by the container and arranged a pair at each side of the wall thereof, and a fastening means for the cover comprising a single length of wire engaged with the anchoring element of one pair and having a portion extending circumferentially of the container between the said elements of the said pair, the wire being engaged with the elements of the other pair and having its end portions extending circumferentially of the container between the said elements and united, the portions of the wire which extend above the cover for the container being twisted together.

1,168,149. INSECT-EXTERMINATOR. JOHN BIGGS, Kimball, Nebr. Filed Apr. 29, 1914. Serial No. 835,293. (Cl. 43—22.)

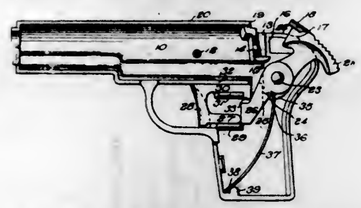


1. A portable insect exterminator including a tank constituting a base and adapted to be arranged upon the ground, a fluid discharge pipe or post connected at its lower end with the tank, a perforated spray ring located above and supported by and communicating with the discharge pipe or post, a lamp support mounted upon and extending upwardly from the spray ring, and a lamp carried by the said support and located above the spray ring, the latter being of considerably greater diameter than the lamp and adapted to throw a curtain of spray upwardly around the same.

2. A portable insect exterminator including a tank constituting a base and adapted to be arranged upon the ground, a fluid discharge pipe or post connected at its lower end with the tank, arms mounted upon and diverging upwardly from the discharge pipe or post, a perforated spray ring supported by the arms and communicating with the said discharge pipe or post, a lamp support composed of inclined legs mounted on and extending upwardly and inwardly from the spray ring, a cap fitted over the upper ends of the legs, and means carried by the legs for supporting a lamp above the spray ring and beneath the cap, the ring being of considerably greater diameter than the lamp and adapted to throw a curtain of spray upwardly around the same.

3. An insect exterminator, comprising a fluid discharge pipe, a perforated spray ring connected to the upper terminal of the discharge pipe and in communication therewith, a plurality of legs mounted on the ring and extending upwardly and converging at their outer ends, a lamp suspended from the upper terminals of the legs, and a cap fitted over the upper terminals of the legs and extending downwardly sufficiently for throwing the light in a downward direction, whereby the insects in seeking the light will pass between the cap and ring and through the spray.

1,168,150. TOY PISTOL. LEWIS SHARPS BIXLER, Kenton, Ohio. Filed July 10, 1915. Serial No. 39,093. (Cl. 42—54.)



1. In a toy pistol, a casing having an anvil and a cap seat and a hammer for striking the anvil and having a projection extending over the anvil with its upper surface flush with the top of the casing when the hammer is seated on the anvil.

2. In a toy pistol, a casing having a cap opening, and a slot in the rear thereof, an anvil disposed within the casing adjacent the cap opening, and a hammer operable from within the casing and disposed in the slot, the upper surface of the hammer being flush with the top of the casing when the hammer is seated against the anvil.

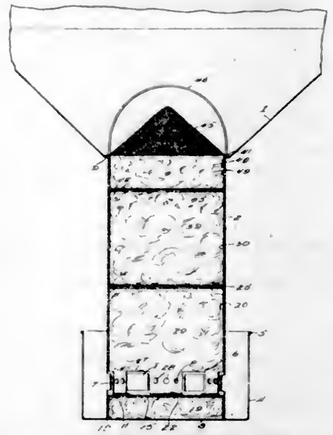
3. In a toy pistol, a casing having a cap opening and a slot in the rear thereof, an anvil disposed within the casing adjacent the opening, there being a recess in the casing in front of the cap opening, a hammer disposed in the slot for striking against the anvil, the upper surface of the hammer being flush with the upper surface of the casing when the hammer is seated against the anvil, and a projection on the hammer for entering the recess in the casing when the hammer is seated on the anvil.

1,168,151. MILK-STRAINER. PATRICK J. BOLEN, Wichita, Kans. Filed Sept. 28, 1915. Serial No. 53,107. (Cl. 210—16.)

1. In a milk strainer, the combination with a funnel whose spout has its lower end closed and its wall provided with an annular series of openings on a line above said lower end; of a series of independent filtering elements removably disposed within said spout, the lowermost having a series of openings adapted to be thrown into register with those in the spout, and a catching element resting on said bottom and supporting said lowermost filtering element.

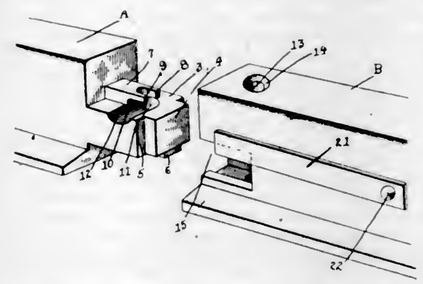
2. In a milk strainer, the combination with a funnel whose spout has its lower end closed and its wall provided with an annular series of openings on a line above said lower end; of a series of independent filtering elements removably disposed within said spout, the lowermost having a series of openings adapted to be thrown into register with those in the spout, and a catching element resting on said bottom and supporting said lowermost filtering element, each of said elements including a collar fitting removably within the spout, a screen across its upper end, and a filling of cotton.

3. In a milk strainer, a funnel having a cylindrical spout with lateral outlets through its wall near its lower end, and a cup whose bottom closes the lower end of the spout and whose wall surrounds that of the spout and rises above its openings; combined with a catching element seated in the spout beneath said openings and resting on said bottom, and a series of filtering elements in the spout above said catching element and respectively above each other, the lowermost having openings adapted to register with those in the spout and each element containing a filling of filtering material.



4. In a milk strainer, the combination with a funnel, a cylindrical spout having radial openings near its lower end and an out-turned shoulder at its upper end uniting it with the smaller end of the funnel, and a cup whose bottom closes the lower end of the spout and whose wall rises around its openings; of catching element in the spout beneath its openings and resting on the bottom of the cup, a series of filtering elements in the spout above the catching element, flanges at the upper and lower ends of said elements adapted to contact with each other, and an uppermost filtering element having an inturned flange at its lower end, an outturned flange at its upper end adapted to rest on said shoulder, and a handle.

1,168,152. RAIL-JOINT. THEODORE J. BONNEL, Rosalia, Kans. Filed July 27, 1914. Serial No. 853,373. (Cl. 239—8.)



1. A rail joint, comprising two abutting rails, an extension formed on one of said rails, outstanding members formed integrally therewith, the remaining rail being provided with cut-out portions for the reception of said extension and said outstanding members to hold said rails in alinement, said extension and said outstanding members being provided with a bore and a cut-out portion in connection with said bore, said remaining rail being provided with a bore adapted to register with said first named bore and a cut-out portion connected with said second named bore and adapted to register with the cut-out portion in said extension, and locking means retained within said bores and said cut-out portions for retaining the rails in abutting relation.

2. A rail joint, comprising a pair of abutting rails, an extension formed on the abutting end of one of said rails, an enlargement formed beneath said extension, a second extension formed above said first extension, said first and second extensions and said enlargement having a bore formed therein, the other of said rails being provided with a cut-out portion formed in said rail for the reception of said first extension, a pair of recesses for the reception of said enlargement and said second extension, the other of said rails having a bore registering with said extension, means passing through said bores to lock said rails in abutting position, and means carried by the first named rail to lock said first named means in position.

3. A rail joint, comprising two abutting rails, an extension formed on the abutting end of one of said rails, an enlargement formed below said extension, a second extension formed above said first extension, said first and second extensions and said enlargement having a bore formed therein, the other of said rails being provided with a cut-out portion for the reception of said first extension, the remaining rail having a pair of recesses for the reception of said enlargement and said extensions, the second-mentioned rail having a bore formed therein for registration with the first mentioned bore, means passing through said bores to lock said rails in abutting position, a plate spring carried by said other rail, and a pin disposed upon said plate spring and extended through said other rail and into engagement with said means for securely retaining said means in said bores.

1,168,153. STRINGED MUSICAL INSTRUMENT. NATHANIEL RICHARD BOSWELL and EDWIN DAVID WILBER, Delanson, N. Y. Filed Sept. 23, 1914. Serial No. 863,071. (Cl. 84—80.)



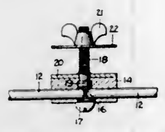
1. A stringed musical instrument, comprising a body, a neck, a head provided with tuning means, a bridge, a tail piece and three sets of strings stretched over the said body and connected with the said tuning means and the said tail piece, the said sets of strings being selected and tuned, one for producing a minor chord, another for producing a diminished chord, and the third for producing a major chord.

2. A stringed musical instrument, comprising a body, a neck, a head, sets of strings stretched over said body, indicating frets arranged on said neck below said strings, and a manually controlled movable finger adapted to engage any one set of strings opposite any one of said indicating frets, said strings being spaced from said indicating frets a sufficient distance to prevent contact of the strings with any of said indicating frets while the movable finger is resting against the strings.

3. A stringed musical instrument comprising a body, a neck, a head provided with tuning means, a bridge, a tail piece, three sets of strings stretched over said body and connected with said tuning means and said tail piece, one of said sets being composed of five strings for producing a minor chord, another set being composed of five strings for producing a diminished chord, and the third set being composed of seven strings to produce a major chord.

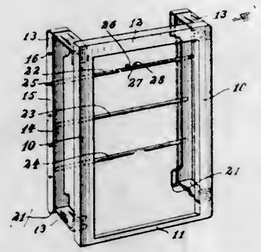
4. A stringed musical instrument, comprising a body, a neck, a head provided with tuning means, a bridge, a tail piece, and three sets of strings stretched over the said body and connected with the said tuning means and the said tail piece, one set of strings comprising strings tuned to sound the notes *g, d, b, g, d, f, g*, the second set of strings being tuned to sound the notes *g, e, c*, sharp, *b* flat, *g*, and the third set of strings being tuned to sound the notes *g, e, b, g, e*, the said notes being progressively higher in the order named.

1,168,154. WARDROBE-FIXTURE. BERNHARDT BRAGER, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,993. (Cl. 45—37.)



In a wardrobe fixture, the combination of a body having a vertical axial socket, a bolt having a head located in said socket and upon which the body is free to rotate around its axis, a plate rigidly secured to the bolt adjacent the head, means coöperating with the bolt and plate to secure the same to a fixed elevated support, a bail carried by said body including a lower horizontal bar and a pair of upper bars extending in alinement with each other into the body, and a plug closing the lower end of said socket and bearing against the adjacent ends of said upper bars.

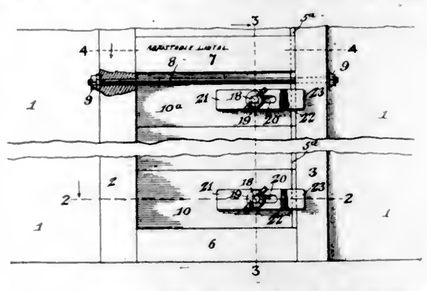
1,168,155. WINDOW-GUARD. ABRAHAM BROUNE, Brooklyn, N. Y. Filed May 3, 1915. Serial No. 25,542. (Cl. 20—71.)



In a safety device for window openings, a rectangular frame removably engaged in the window opening, arms extending adjustably rearwardly beyond the window frame, oppositely disposed channel guides supported by said arms, a pair of springs contained in the upper portion of said channel guides, chains connected with said springs, secured at their opposite ends to the lower ends of said channel guides, bars engaged at spaced intervals with said chains slidable within said channel guides, and means combined with the upermost of said bars whereby it may be positively held at certain predetermined heights therein.

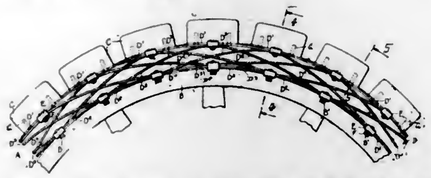
1,168,156. SILO-DOOR. GEORGE P. BRUBAKER, Berlin, Pa. Filed Feb. 18, 1915. Serial No. 9,115. (Cl. 20—1.4.)

A silo provided with a door opening having upright jambs on opposite sides, one jamb having a longitudinal groove along its inner face and the other jamb having a longitudinal beveled iner surface, a sill and a lintel for the door opening provided with marginal rabbets, said sill lintel being of substantially the same thickness as the jambs and having their end edges shaped to slidably engage the inner grooved and beveled faces of the jambs, and a door consisting of a plurality of sections between the sill and lintel, but of less thickness, each section having its end edges shaped to engage the grooved and beveled inner faces of the jambs and having a top and a bottom rabbet providing a top and bottom tongue, the tongues of the door sections entering corresponding rabbets of the door sections and of the sill and lintel, and a fastening



device for each door section located at the beveled end of the door, the fastening devices and the tongues and rabbets coacting to cause each higher door section to prevent the removal of any lower door section.

1,168,157. RESILIENT WHEEL. RUDOLPH ERNEST BRÜNNOW, Princeton, N. J. Filed Mar. 31, 1915. Serial No. 18,271. (Cl. 152—8.)



1. In a resilient wheel, a tire formed of a plurality of springs each extending around the wheel and each having inner rim portions, outer tread portions, and connecting members connecting the said outer and inner portions with each other and alternately at opposite sides, each connecting member of one spring being connected near one end to the outer portion of another spring and at the other end to the inner portion of another spring.

2. In a resilient vehicle wheel, a tire formed of a plurality of springs each extending around the wheel and each having inner rim portions, outer tread portions, and connecting members connecting the said outer and inner portions with each other and alternately at opposite sides, each connecting member of one spring extending at its outer end under the adjacent outer portion of the next following spring and being secured thereto, and the inner end of each connecting member overlying the inner portion of another spring and being secured thereto.

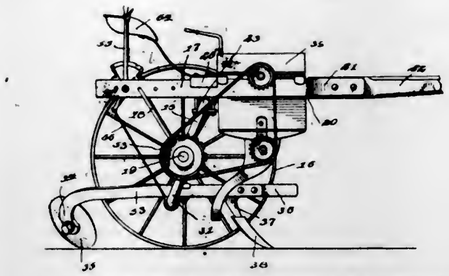
3. In a resilient vehicle wheel formed of a plurality of connected flat springs each extending completely around the wheel and each having outer tread portions, inner rim portions and connecting members connecting the tread portions and rim portions with each other and alternately on opposite sides, one of the rim portions forming one end of the spring and one of the connecting members forming the other end of the spring, the terminal of this end connecting member being attached to the said terminal rim portion.

4. In a resilient vehicle wheel, a tire formed of a plurality of connected flat springs each extending completely around the wheel and each having outer tread portions, inner rim portions and connecting members connecting the tread portions and rim portions with each other and alternately on opposite sides, one of the rim portions forming one end of the spring and one of the connecting members forming the other end of the spring, the terminal of this end connecting member being attached to the said terminal rim portion, each connecting member of a spring being attached near its outer end to the adjacent tread portion of another spring and each connecting member being attached near its inner end to the rim portion of another spring.

5. In a resilient vehicle wheel, a tire formed of a plurality of connected flat springs each extending completely around the wheel and each having outer tread portions, inner rim portions and connecting members connecting the tread portions and rim portions with each other and alternately on opposite sides, one of the rim portions forming one end of the spring and one of the connecting members forming the other end of the spring, the terminal of this end connecting member being attached to the said terminal rim portion, each connecting member of a spring extending at its outer end under the tread portion of another spring and extending at the inner end over the rim portion of another spring, and fastening devices for fastening the outer and inner ends of each connecting member of one spring to the adjacent tread and rim portions of the other springs.

[Claims 6 and 7 not printed in the Gazette.]

1,168,158. COMBINED LISTER AND FERTILIZER-DISTRIBUTER. JOSEPH H. BUFFALOE, Huntsville, Ala. Filed Sept. 25, 1914. Serial No. 863,539. (Cl. 111—6.)



1. In a machine of the class described, an arched axle having supporting wheels, a sleeve mounted on the axle arch, a top frame including side members supported on the sleeve, a clip plate straddling the side members and having downturned end flanges, bolts extending through the clip plate, washer plates mounted on the bolts and bearing against the underside of the sleeve, and braces connecting the side members of the top frame with the axle spindles.

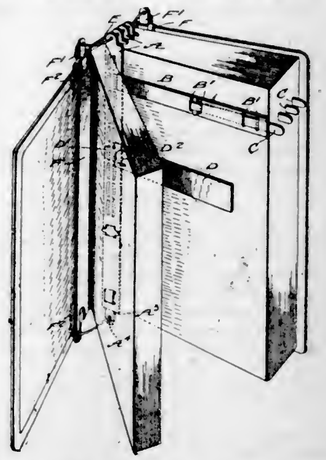
2. In a machine of the class described, an arched axle having supporting wheels, a top frame mounted on the axle arch, bearing members supported on the spindles of the axle, a rock shaft mounted for oscillation in the bearing members and having a crank intermediate the ends thereof, a sleeve mounted on the crank, beams connected with said sleeve and having rearwardly divergent ends with downwardly extending standards, lister disks mounted for rotation on the standards, a hand lever mounted on a side member of the top frame, and a rod connecting one arm of said hand lever with the crank of the rock shaft; and a plow stock secured between the forward ends of the beams, said beams being spaced apart for the admission of the plow stock.

1,168,159. BOOK-MARKER. HELEN S. CARSON, Chicago, Ill. Filed May 13, 1915. Serial No. 27,829. (Cl. 11—12.)

1. A book marker having a pair of transverse slots therein, and a main indicating bar having extensions clamped through said slots to rigidly hold the bar in position.

2. A book marker having a series of slots arranged in transverse pairs and provided with a rigid main indicating bar, and a sub-indicating bar adjustable on the marker and having an extension at one end for engagement in selected pairs of said slots, and having also an integral struck up tongue for engagement with the marker in adjusted position, whereby to prevent displacement thereof.

3. A book marker having a longitudinal series of slots and a rigid main indicating bar, and a sub-indicating bar provided with means engageable in selected slots of the marker, and other means engageable with the marker to lock said sub-indicating bar in adjusted position.

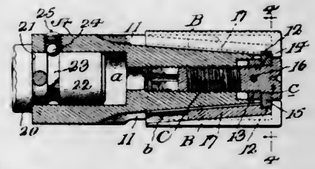


4. A book marker having an eye, a lace extending through the eye, and securing strips with which said lace is connected, said strips extending along the inner surfaces of the sides of the book cover and having means to engage the said cover sides.

5. A book marker having an eye, a lace extending through the eye, and cover engaging strips extending along the inside of the cover sides of the book and having exteriorly bent ends provided with eyes through which the lace also passes.

[Claims 6 to 10 not printed in the Gazette.]

1,168,160. REAMER-HEAD. CLARENCE G. CASHMAN, Waynesboro, Pa. Filed Jan. 2, 1914. Serial No. 809,914. (Cl. 77—75.5.)



1. A reamer comprising a body formed with longitudinal radial grooves arranged at predetermined distances around its periphery, reamer blades mounted in said grooves, a screw for sliding said reamer blades longitudinally mounted in a screw-threaded perforation in said body, and rotatable means carried by said screw for engaging said blades whereby they may be adjusted, substantially as set forth.

2. A reamer head comprising a body formed with longitudinal grooves spaced about its periphery and having tapered bottoms, reamer knives mounted in said grooves formed with correspondingly tapered inner edges resting on the bottoms of said grooves, a screw mounted in said body, a part mounted to turn thereon and move therewith which engages said reamer knives to move them longitudinally, whereby said reamer head may be expanded and contracted, substantially as set forth.

3. A reamer head comprising a body formed with a series of flat tangential surfaces at its operative end of equal width and with a longitudinal slot at the inner edge of each of said surfaces formed with a tapered bottom, reamer knives formed with correspondingly tapered inner

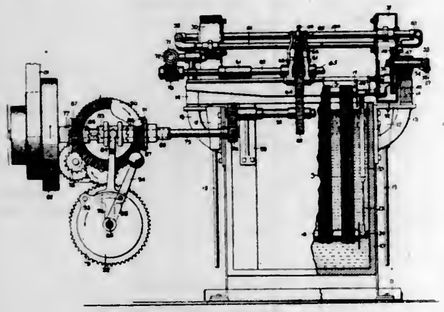
edges mounted in said slots to rest on said bottoms, a screw mounted in said head, and a wheel mounted on said screw and formed with projections adapted to engage notches in said reamer knives, substantially as set forth.

4. A reamer head comprising a body formed with longitudinal grooves spaced apart around its periphery, pins mounted in longitudinal perforations alongside the back faces of said grooves and cutting into said grooves for less than half their circumference, reamer blades formed with longitudinal segmental grooves in their sides adapted to be mounted in said grooves in the head and engage to slide on the ribs consisting of the portions of said pins projecting into the grooves, a screw mounted in the body, and a connection between said screw and the blades whereby they may be adjusted longitudinally, substantially as set forth.

5. A reamer head comprising a body formed with a series of flat tangential surfaces around its periphery, a longitudinal groove at the inner edge of each of said surfaces, reamer blades mounted in said grooves and secured from radial displacement by interengaging ribs and grooves one in the head and the other in the blade, a screw mounted in said body, and a rotatable part on said screw formed with projections adapted to engage said blades, whereby said blades may be moved with said screw, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,168,161. MACHINE FOR STRIPPING, DYEING, AND WASHING SILK. GEORGE A. CASSON, Paterson, N. J., assignor of one-half to Robert H. Casson, Paterson, N. J. Filed Jan. 27, 1915. Serial No. 4,636. (Cl. 8—19.)



1. The combination with a vat adapted to contain a cleansing fluid, of a cover for the vat, a series of reels carried by the cover and projecting into the fluid in the vat, and mechanism carried by the vat and its cover to operate said reels.

2. The combination of a vat, a cover for the vat, a series of skein supports carried by the cover and extending into the vat, and means acting upon the skein supports to impart to them a combined motion of rotation and revolution, substantially as set forth.

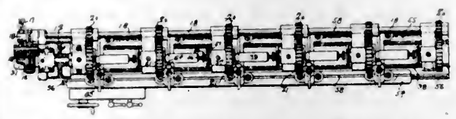
3. The combination of a vat adapted to contain a cleansing fluid, a cover for the vat, a series of reels carried by the cover and projecting thence downwardly in parallel relation to one another into the liquid, and means serving to cause the reels to revolve and be given a relative vertical reciprocation.

4. The combination of a series of reels arranged in parallel vertical pairs, each reel comprising a head roller and a foot roller and flexible side bars connecting said rollers whereby they may move relatively toward and from each other, driving mechanism for each pair of reels serving to impart to the rollers thereof a compound movement of revolution and rotation, and means to reverse the direction of movement of said reels.

5. The combination of a vat adapted to contain a liquor, driving mechanism carried by the vat, a cover for the vat, means carried by the cover for supporting skeins of material and projecting the same into the liquor in the vat, operating devices carried by the cover for causing a movement of said supporting devices and skeins, and operating connections between said two sets of driving mechanisms and made operative by the lowering of the cover into position upon the vat.

[Claims 6 to 20 not printed in the Gazette.]

1,168,162. LATHE. ABEL E. CHERNACK, Providence, R. I. Filed Sept. 8, 1915. Serial No. 49,601. (Cl. 82—3.)



1. A multiple lathe having a bed, a plurality of combined head and tail stocks arranged in tandem and longitudinally adjustable thereon, a tool table common to said organization, a plurality of tool carriers, one for each work blank, mounted on said table, and means for driving in unison the rotors of the several combined head and tail stocks and simultaneously traveling the tool table past the blanks to operate upon the series simultaneously.

2. In a multiple lathe, a combined head and tail stock having a pair of oppositely faced centers and means for driving the same simultaneously at the same speed.

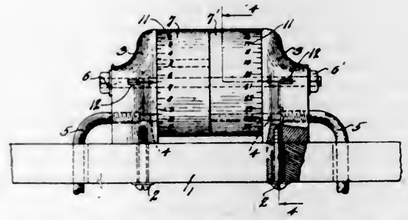
3. In a multiple lathe, a combined head and tail stock having a pair of oppositely faced centers and means for driving the same simultaneously at the same speed, said centers being relatively displaceable to permit of the adjustment of a work blank without disturbing the position of the combined head and tail stock on the lathe bed.

4. In a multiple lathe, a combined head and tail stock having a pair of oppositely faced centers and means for driving the same simultaneously at the same speed, said centers being relatively displaceable to permit of the adjustment of a work blank without disturbing the position of the combined head and tail stock, together with means to lock the same in adjusted relation.

5. In a multiple lathe, a combined head and tail stock having a sleeved face plate, a center rigid therewith and an oppositely faced center adjustably secured to said sleeve.

[Claims 6 to 13 not printed in the Gazette.]

1,168,163. PERMUTATION-VALVE. ALFRED CHRISTENSEN and CHRIST OVERGAARD, Coulter, Iowa. Filed June 14, 1915. Serial No. 34,088. (Cl. 137—7.)



1. In a device of the class described adapted for interposition in the fuel line for a motor vehicle or the like, the combination with spaced supports to and from which said fuel line leads, rotatable cylinders intermediate said supports, said cylinders having communicating means formed at corresponding distances from the axial center of the cylinders and adapted for registry with the fuel line upon disposition of the cylinders in a predetermined relation to each other and to said supports the fuel line being likewise disposed with respect to the axial center whereby to provide a continuous, alined fuel passage through the device, and an axial support for said cylinders connecting the supports together and adjustable to take up wear and control operation of the cylinders.

2. In a device of the class described adapted for interposition in the fuel line for a motor vehicle or the like, the combination with spaced supports having alined fuel passages to and from which said fuel line leads, rotatable cylinders intermediate said supports, said cylinders having communicating means adapted for registry in the same plane as the passage of the fuel line upon disposition of the cylinders in a predetermined relation to each other and to said supports, an axial support for said cylinders connecting the spaced members aforesaid together, and interlocking means between the faces of the cylinders and supports for preventing leakage of the fuel.

3. In a device of the class described, the combination of spaced supporting elements adapted to be interposed in a fuel supply line, means for holding said supports in spaced relation, permutation cylinders rotatably mounted between said spaced supports, passages formed in said supports and cylinders adapted to be brought into registry to establish continuous communication in a horizontal plane through the fuel line upon disposition of said cylinders in predetermined relation to each other and to said supports, an adjustable axial support for said cylinders, said cylinders and supports being formed with tongue and groove interlocking connection for preventing leakage of the fuel, and means to indicate the registered position of the passages hereinbefore mentioned.

1,168,164. DERIVATIVES OF CELLULOSE CONTAINING THE RESIDUE OF AN ORGANIC ACID AND NITROGEN AND PROCESS OF MAKING SAME. LOUIS CLÉMENT, Paris, and CLERY RIVIÈRE, Pantin, near Paris, France, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Aug. 21, 1912, Serial No. 716,324. Renewed June 19, 1915. Serial No. 35,126. (Cl. 23—24.)

1. The hereinbefore-described process for the production of cellulose derivatives containing the residue of an organic acid and nitrogen, which process consists in acting with an acid anhydrid of the fatty series in the presence of a condensing medium upon those lower nitro derivatives of cellulose which possess the appearance of cellulose and are insoluble in organic acids, in acetic anhydrid, in hydrochloric acid, in nitric acid, in phenols, in solutions of alkaline hydroxids, in alcohol + ether, and in acetone.

2. The hereinbefore-described process for the production of cellulose derivatives containing the residue of an organic acid and nitrogen, which process consists in acting with an acid anhydrid of the fatty series in the presence of a condensing medium upon those lower nitro derivatives of cellulose which possess the appearance of cellulose and are insoluble in organic acids, in acetic anhydrid, in hydrochloric acid, in nitric acid, in phenols, in solutions of alkaline hydroxids, in alcohol + ether, and in acetone, and subjecting the products to hydrolysis.

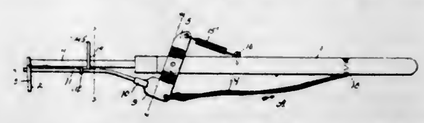
3. The hereinbefore-described process for the production of cellulose derivatives containing the residue of an organic acid and nitrogen, which process consists in acting with acetic anhydrid in the presence of a condensing medium upon those lower nitro derivatives of cellulose which possess the appearance of cellulose and are insoluble in organic acids, in acetic anhydrid, in hydrochloric acid, in nitric acid, in phenols, in solutions of alkaline hydroxids, in alcohol + ether, and in acetone.

4. The hereinbefore-described process for the production of cellulose derivatives containing the residue of an organic acid and nitrogen, which process consists in acting with acetic anhydrid in the presence of a condensing medium upon those lower nitro-derivatives of cellulose which posses the appearance of cellulose and are insoluble in organic acids, in acetic anhydrid, in hydrochloric acid, in nitric acid, in phenols, in solutions of alkaline hydroxids, in alcohol + ether, and in acetone, and subjecting the products to hydrolysis.

5. The hereinbefore-described process for the production of cellulose derivatives containing the residue of an organic acid and nitrogen, which process consists in acting with acetic anhydrid in the presence of a condensing medium with the addition of a suitable liquid upon those lower nitro-derivatives of cellulose which possess the appearance of cellulose and are insoluble in organic acids, acetic anhydrid, in hydrochloric acid, in nitric acid, in phenols, in solutions of alkaline hydroxids, in alcohol + ether, and in acetone, and subjecting the products to hydrolysis.

[Claims 6 to 15 not printed in the Gazette.]

1,168,165. RAKE. ENOS M. CLOUGH, Lakeport, N. H. Filed Sept. 14, 1915. Serial No. 50,673. (Cl. 55—146.)



In a rake structure, a rake handle, a rake head having a plurality of depending spaced rake teeth carried thereby, a lever pivotally connected to said handle, a head secured to the lower end of said lever, a plurality of tines carried by said head and extending outwardly therefrom, said tines having their outermost ends positioned between the rake teeth of said head, a spiral spring connected to the upper end of said lever and to said handle for normally holding said tines in an upward position, a flexible member connected to the lower end of said lever and said head, said flexible member being also connected to said handle and adapted for rocking said lever upon a pull upon the flexible member for moving said tines downwardly between said teeth, a U-shaped member carried by said tines and extending over said handle for limiting the downward movement of said tines.

1,168,166. VENTILATION DEVICE FOR BOOTS AND OTHER FOOTWEAR. DIGBY ESMOND COOK, Sydney, New South Wales, Australia. Filed Aug. 23, 1915. Serial No. 46,963. (Cl. 36—3.)



1. A ventilation device for boots and other footwear consisting of an annular locking member having a securing flange and a screw-threaded opening, an annular ventilator member provided with an annular seat therein and a screw-threaded portion to engage the screw-threaded opening of the locking member, wire gauze ventilators secured in said annular seat of the ventilator member, and means for holding the wire gauze ventilators in spaced parallel planes.

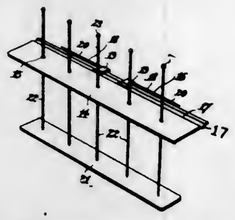
2. A ventilation device for boots and other footwear consisting of an annular locking member having a securing flange, an annular ventilator carrying member separably connected to the locking member, and wire gauze ventilators secured in the said carrying member and disposed in parallel spaced planes.

3. A ventilation device for boots and other footwear consisting of an annular locking member, an annular ventilator carrying member separably connected to the locking member, wire gauze disks disposed in the ventilator carrying member, and a ring between said disks for holding the latter in spaced relation.

1,168,167. HAT-FASTENER. CHARLES E. COOKE, Atlantic City, N. J. Filed Aug. 8, 1914. Serial No. 855,776. (Cl. 132—25.)

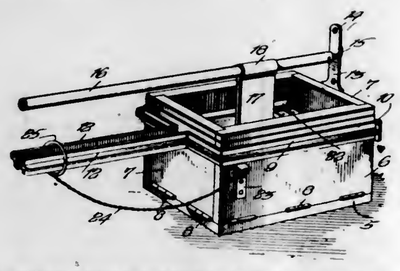
1. A hat fastener comprising an elongated plate having a longitudinally disposed groove adjacent one edge thereof, a U-shaped clamp embracing said edge and having a portion disposed within the groove for retaining the same

thereon for sliding movement, a fastening element carried by said clamp for securing the plate upon the hat, and hair engaging means carried by said plate.



2. A hat fastener comprising an elongated plate having a longitudinally disposed groove on one face thereof and defining a bead on the opposite face thereof, a U-shaped clamp slidably mounted on said edge and having one of its limbs positioned within the groove, and its opposite limb engaging said bead, a fastening element carried by the clamp for securing the plate upon the hat, and hair engaging means carried by said plate.

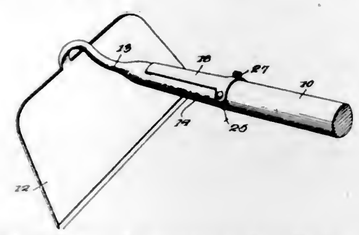
1,168,168. BUTTER-MOLD. ROBERT J. COSSEBOOM, Buena Vista, Colo., assignor of one-fourth to Daniel C. Sindlinger and one-fourth to Charles A. Niles, Buena Vista, Colo. Filed May 13, 1915. Serial No. 27,827. (Cl. 31—25.)



A molding device substantially as herein described, comprising a molding box whose sections may open outwardly, a clamp comprising a cross-bar extending along the outer side of one end of the box, side bars hinged at one end to the ends of said cross bar and extending thence along the sides and opposite end of the box and projecting beyond the end of the box in the form of handle portions, an operating rod or lever pivotally supported at the end of the box carrying the cross-bar of the clamp and extending thence longitudinally over the box and beyond the opposite end thereof and over the projecting handle portions of the clamp and in such relation thereto that said handle portions of the clamp may be held together by the hand of the operator, which is simultaneously employed in holding the handle end of the operating rod down in operative position, and a press block carried by the operating rod and operating within the box, all substantially as and for the purpose set forth.

1,168,169. HANDLE-FASTENING DEVICE. FENTON D. CRAIG, Memphis, Tenn. Filed Oct. 20, 1913, Serial No. 796,308. Renewed June 14, 1915. Serial No. 34,070. (Cl. 55—101.)

1. A tool formed with a shank, said shank terminating in a barrel, the barrel being slotted longitudinally, a handle, one end of which is received within the barrel, a plate partially embracing the barrel, said plate being formed with an extension disposed at right angles to its body portion, said extension contacting with the handle to restrict its movement longitudinally of the barrel in one direction, the plate being provided with apertured extensions, the apertures and said extensions alining with openings formed in the barrel adjacent its open end, and a securing device passing through said apertures and the handle, there being means arranged on the securing device for contracting the barrel to bring the same in binding contact with the handle.



2. A handle fastening device for tools in which the tool is provided with a hollow cylindrical extension constituting a shank, a handle adapted to be inserted within the extension said extension being provided with a longitudinally disposed slot, a plate forming a closure for said slot, said plate being provided with a portion which projects within the cylindrical extension and contacts with the end of the handle, and a bolt passing through the plate and the handle, there being means arranged on the bolt for contracting the cylindrical extension to bring the same in binding contact with the handle.

3. A device for securing tools to their supporting handles, comprising a tool formed with a barrel, said barrel being slotted longitudinally, a handle received within the barrel, a plate provided with an extension which projects within the barrel and contacts with the end of the handle, and means for connecting the plate to the barrel, whereby the barrel may be contracted and brought into binding contact with the handle.

4. A device for securing tools to their supporting handles, comprising a barrel formed integral with the tool and constituting a shank, a handle received within the barrel, said barrel being slotted longitudinally, a concaved plate embracing the barrel, and provided with an extension which projects within the barrel, said extension contacting with the end of the handle, whereby movement of the handle longitudinally of the barrel in one direction is restricted, said plate being formed with apertured extensions, there being apertures formed in the barrel on both sides of the slot, which is arranged therein, the apertures alining with the apertures in the plate, a split ring embracing the barrel and plate, there being apertures formed in the ring which aline with the apertures arranged in the plate and barrel, and a bolt passing through said apertures, said bolt extending through the handle.

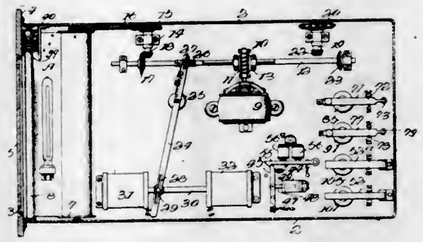
5. A device for securing tools to their supporting handles including a tool carried barrel provided with a longitudinal slot opening through the free end of the barrel and enlarged at its inner end, a plate provided at one end with a lateral extension slidable in the slot when the plate extends at right angles to the barrel and adapted to seat in the enlarged end of the slot and be held against outward movement when the plate is swung into alinement with the barrel, and means for connecting the free end of the plate with the free end of the barrel to contract the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,168,170. STATION-INDICATOR. RICHARD M. CRAIG, San Antonio, Tex. Filed Mar. 17, 1914. Serial No. 825,382. (Cl. 40—57.)

1. In a mechanism of the character described, a sign displaying band, reels supporting the band, an electric motor, means for actuating said reels through the motor to thereby cause the band to travel, a contact member confronting one face of the band, a pair of contact members confronting the other face of the band and coacting with the first named contact member, means connected in circuit with said contact members for breaking the motor circuit when the circuit is completed by the electrical

engagement of either one of the pair of contact members with the first named contact member, said band being divided into a plurality of spaces, each of said spaces having thereon the name of a street, the names of consecutive streets being separated from each other by an intermediate space, the band being provided with means opposite each of the first named spaces whereby a circuit may be closed between one of the contact members of a pair and the first named contact to thereby stop the motor upon the travel of the band in one direction and the band being provided in conjunction with the alternate spaces with means whereby a circuit may be closed between the other of the pair of contact members and the first named contact member to thereby intermittently break the motor circuit upon a movement of the band in a direction opposite to its first movement.



2. In a mechanism of the character described, a sign displaying band, reels over which the band is wound, an electric motor operatively connected to the reels and connected in an interrupted circuit to a source of electric energy, means operated at predetermined intervals to close the motor circuit to thereby cause the actuation of the motor, means for holding the circuit closed to thereby cause the continued reeling up of the band, a pair of contacts disposed on one side of the band and laterally spaced from each other, a contact member disposed on the opposite side of the band and coacting with the first mentioned contacts, a battery, separate electrically actuated means for releasing said holding means each connected in circuit with the battery and with a corresponding one of the first mentioned contacts, the band being provided with means disposed at predetermined intervals for electrically closing the gap between one of the first mentioned contacts and the contact member, means disposed alternately to the last named means for electrically closing the gap between the other first mentioned contact and the contact member, means for reversing the direction of travel of the band, and means for breaking the circuit between one of the first mentioned contacts and its corresponding electrically actuated means and establishing a circuit between the other first mentioned contact and its electrically actuated means upon a movement of the band in one direction or breaking the last named circuit and establishing the first named circuit upon a movement of the band in the opposite direction.

3. In a mechanism of the character described, a sign displaying band having thereon a series of street names, certain names indicating streets on one portion of a loop route, certain of the names indicating streets on a straight route continuing from the loop, certain other names indicating streets on the other portion of the loop, that portion of the band containing names of streets on the loop route having the names relating to the two portions of the loop in alternate relation to each other, that portion of the band relating to the straight portion of the route having the names of the streets arranged in consecutive order, means for intermittently shifting the band a distance equal to two name spaces while the vehicle is traveling over the loop portion of the route, means for shifting the band intermittently a distance equal to one name space during the travel of the vehicle over the straight portion of the route, and means for reversing the direction of movement of the band at the termini of the route.

4. In a mechanism of the character described, a sign displaying band, an electric motor for moving the band located in circuit with a source of energy, a normally open switch for closing said circuit, a solenoid operatively engaging said switch and when energized acting to close the switch, means urging the switch to open position, means whereby the solenoid may be momentarily energized, a latch adapted to hold the switch closed, a pair of electromagnets coacting with the latch, either of said magnets when energized releasing it, a local battery, contact members, each connected in an open circuit with the battery and a corresponding one of the electro-magnets, a contact common to the first mentioned contacts and between which and the said first mentioned contact members the band passes, means disposed at predetermined intervals along the band permitting the gap between the first and second mentioned contact members to be closed to thereby energize one or the other of the corresponding electro-magnets and release said switch to break the motor circuit, means for causing a reversal of the movement of said band when the band has reached the end of its travel in either direction, said means including a shiftable member adapted to break the circuit through one of said electro-magnets and corresponding contacts and close the circuit between the other electro-magnet and its corresponding contacts when in one position or close the circuit through the first named magnet and break the circuit through the second named magnet in its other position.

5. In a mechanism of the character described, a sign-displaying band, an electric motor for moving the band located in circuit with a source of energy, a normally open switch for closing said circuit, a solenoid operatively engaging said switch and when energized acting to close the switch, means urging the switch to open position, means whereby the solenoid may be momentarily energized, a latch adapted to hold the switch closed, a pair of electromagnets coacting with the latch, either of said magnets when energized, releasing it, a local battery, contact members, each connected in an open circuit with the battery and a corresponding one of the electromagnets, a contact common to the first mentioned contacts and between which and the said first mentioned contact members the band passes, means disposed at predetermined intervals along the band permitting the gap between the first and second mentioned contact members to be closed to thereby energize one or the other of the corresponding electromagnets and release said switch to break the motor circuit, a pair of solenoids, a core coacting therewith, means for energizing one of said solenoids and deënergizing the other solenoid when the band has reached the extremity of its movement in one direction, a lever shiftable with the core, means connected to the lever for reversing the travel of the band upon a shifting of the lever in one or the other direction, and means connected to said lever adapted to complete said circuit through one of said electromagnets and its corresponding contact members when the lever is thrown in one direction and through the other of said electromagnets and its corresponding cotnact members when the lever is thrown in the other direction.

[Claims 6 to 8 not printed in the Gazette.]

1,168,171. HEATING MEANS FOR CORRUGATING-ROLLERS. GEORGE P. CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Sept. 21, 1914. Serial No. 862,764. (Cl. 154—30.)



1. The combination with a roller of the class specified, of means for feeding and burning a fuel medium in the interior of the roller, and separate means extending into the roller for feeding air under pressure and positively directing and delivering the air to the point of ignition of the burning fuel medium within the roller.

2. The combination with a roller of the class specified having a chamber, of means extending into said chamber for feeding a fuel medium and burning said medium adjacent to the interior surface of the wall of the chamber, and separate means extending into the roller chamber for feeding air under pressure and positively directing and liberating the air close to the point of combustion of the fuel medium.

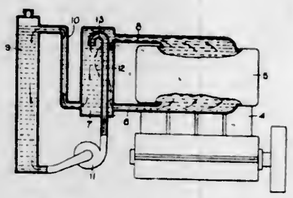
3. The combination with a roller of the class specified having a chamber, of conduit devices extending into the chamber for respectively and separately feeding and burning a fuel medium and for feeding air under pressure and positively directing and delivering said air to the burning points of said fuel medium within the chamber, and supply means exterior of the roller and connected to said conduit devices.

4. The combination with a roller of the class specified having a chamber, of tubular devices in the chamber for respectively feeding and burning a fuel medium and delivering air under pressure to the burning fuel exteriorly of the devices for feeding the fuel, the tubular device for delivering air under pressure to the fuel medium maintaining the air separate from the fuel medium, one of said devices extending into the other, and supply means exterior of the roller connected to said devices.

5. The combination with a roller of the class specified having a chamber, of tubular devices in the chamber for feeding and burning a fuel medium and delivering air under pressure to the burning fuel exteriorly of the devices for feeding the fuel, one of said devices extending into the other and both devices projecting through the opposite ends of the roller to the exterior of the latter, and supply means connected to the portions of said devices exterior of the roller.

[Claims 6 and 7 not printed in the Gazette.]

1,168,172. COOLING SYSTEM. EDWARD PECK CULVER, Schenectady, N. Y. Filed Dec. 17, 1914. Serial No. 877,775. (Cl. 123—170.)



1. In a cooling system of the class described, a cylinder cooling jacket having an inlet adjacent the bottom thereof and an outlet adjacent the top thereof, a reservoir connected to the inlet and the outlet of said jacket, a radiator, a conduit from the radiator to the reservoir, a pump, and a conduit from the radiator to the pump and from the pump to the reservoir, whereby the cooling medium from the radiator is forced into the reservoir substantially as and for the purpose set forth.

2. In a cooling system of the class described a cooling jacket having an inlet at the bottom and an outlet at the top thereof, a reservoir for the cooling medium, the top of said reservoir being connected to the outlet of the jacket and the bottom of the reservoir to the inlet of the jacket, a radiator into which the reservoir has an overflow, and a pump for supplying said reservoir with the cooling medium at the bottom from the bottom of the radiator.

3. In a cooling system, a cylinder cooling jacket, a reservoir for the cooling medium connected to the jacket to cause a thermo-siphon circulation through the jacket and reservoir, a radiator in connection with the reservoir, and means for displacing the cooling medium from the radiator to the reservoir directly.

4. In a cooling system, a thermo-siphon circulation comprising a cooling jacket, a reservoir for the cooling medium connected to the jacket, so that a thermo circulation is created between the jacket and the reservoir, a radiator, and a pump exterior to the thermo-siphon circulation for displacing the cooling medium from the radiator to the reservoir directly.

5. In a cooling system, a cylinder cooling jacket, a reservoir for the cooling medium, connected with the jacket so that the heat supplied to the jacket causes a circulation of the cooling medium through the jacket and reservoir, and a pump for displacing the cooling medium from the radiator to the reservoir directly.

[Claims 6 and 7 not printed in the Gazette.]

1,168,173. SEALED CONTAINER OF SURGICAL LIGATURES AND METHOD OF PREPARING SAME. CHARLES T. DAVIS, Brooklyn, N. Y. Filed Apr. 20, 1915. Serial No. 22,643. (Cl. 99—1.)



1. As a new article of manufacture, a hermetically sealed glass container holding a ligature with a highly volatile hydrocarbon liquid within said container having a volume which is a fraction of the volume of said container, the interior of said container being devoid of water, and substantially devoid of air.

2. As an article of manufacture, a hermetically sealed glass tube containing a ligature, and a liquid hydrocarbon having a boiling point between 80° and 143° C.

3. As an article of manufacture, a hermetically sealed glass tube containing a ligature and a liquid incapable of mixing with water, such liquid having a boiling point sufficiently high to admit of the tube being heated to at least 100° C. without generating dangerous pressures within the same.

4. As an article of manufacture, a hermetically sealed glass tube containing a ligature, and a stable, volatile, preserving and storing liquid, said liquid having a volume which is a small fraction of the volume of the tube, whereby a relatively large space is presented within the tube to hold the vapors of said liquid, when the tube is heated.

5. The method of preserving surgical ligatures which consists in placing the ligature in a container together with a quantity of a stable, inert storing liquid, the volume of the liquid being less than that of the container, heating the container until the liquid gives off vapor in such quantity as to expel the air, and then sealing the container while filled with the vapor, whereby air is substantially excluded.

[Claims 6 to 9 not printed in the Gazette.]

1,168,174. PROCESS FOR STERILIZING AND PRESERVING SURGICAL LIGATURES. CHARLES T. DAVIS, Brooklyn, N. Y. Filed May 17, 1915. Serial No. 28,599. (Cl. 99—1.)

1. The process of preserving surgical ligatures and the like which comprises storing them in contact with a hydrocarbon having a boiling point between 80° and 143° C.

2. The process of preserving surgical ligatures and the like which comprises storing them in contact with a coal-tar distillate going over between 80° and 143° C.

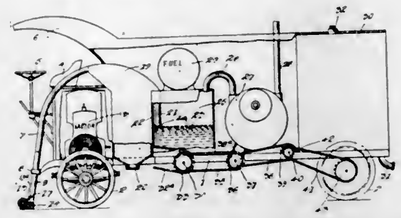
3. The process of preserving surgical ligatures and the like which comprises storing them in contact with a coal-tar distillate of the benzene series, having a boiling point at or below 143° C.

4. The process of preserving surgical ligatures and the like which comprises storing them in contact with a hydrocarbon of the benzene series having a boiling point at or below 143° C.

5. The process of preserving surgical ligatures and the like which comprises storing them in contact with an organic compound containing only hydrogen and carbon and having a boiling point at or below 143° C.

[Claims 6 to 10 not printed in the Gazette.]

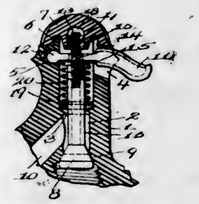
1,168,175. VACUUM STREET-CLEANER. JAMES E. DEARDORFF, Wichita, Kans. Filed Jan. 30, 1914. Serial No. 815,469. (Cl. 15—17.)



1. A vacuum street cleaner comprising a suction pipe, an intake nozzle mounted on said pipe, a shaft extending through said nozzle, ground wheels mounted on the ends of said shaft outside of the nozzle, brackets extending forwardly from the ends of said shaft, a rotary brush, said brush mounted on the forward ends of said brackets, a sprocket wheel mounted on one end of said shaft, a sprocket wheel mounted on one end of said brush, and a sprocket chain connecting said sprocket wheels.

2. A vacuum street cleaner comprising intake nozzles, a pipe leading from each of said nozzles, and mounted in a suction pipe telescopically to permit independent movement of each nozzle, a shaft mounted transversely in each of said nozzles and projecting beyond on both sides, ground wheels mounted on the ends of said shafts, brackets extending forwardly from the ends of said shafts, rotary brushes, said brushes mounted on the forward ends of said brackets, means for rotating the brushes from said wheels, a refuse chamber communicating with said pipes and a suction fan communicating with said chamber.

1,168,176. SIPHON-HEAD. CHARLES DE LUKACSEVICS, West Nutley, N. J., assignor to The Dane Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 26, 1915. Serial No. 24,116. (Cl. 215—115.)



1. In a siphon head, a body formed with an internal bore therein, an opening communicating with said bore, an operating lever formed with an aperture therein and having one end extending through said opening into said body and pivotally retained therein, said body being formed with a fluid passage, a valve controlling the passage and having a stem extending into said bore and through the aperture in said lever and adapted to hold the lever in position, a sleeve surrounding the valve stem between said lever and said valve, and bearing members surrounding said stem on the opposite side of said lever, said lever having pivotal bearing lines provided on its opposite sides adjacent the aperture and adapted to engage said bearing members and said sleeve for operating the valve when said lever is operated.

2. In a siphon head, a body formed with an internal bore therein and an opening communicating with said bore, an operating lever formed with an aperture therein and having one end extended through said opening into the body and pivotally secured therein, said body being formed with a fluid passage, a valve controlling the fluid passage having a valve stem extending into said bore and through the aperture in said lever, a sleeve surrounding the valve stem between the valve and the lever, said lever having pivotal bearing lines formed on one of its sides adjacent said aperture and adapted to rest upon the upper end of the sleeve, and pivotal bearing lines formed on its other side adjacent said aperture and an adjustable bearing member secured on the free end of said valve stem and adapted to engage said last-mentioned pivotal bearing lines and to retain the whole organization in operative position.

3. In a siphon head, a body formed with an internal bore therein and an opening communicating with said bore, an operating lever formed with an aperture therein and having one end extended through said opening into the body and pivotally secured therein, said body being formed with a fluid passage, a valve controlling the fluid passage having a valve stem extending into said bore and through the aperture in said lever, a sleeve surrounding the valve stem between the valve and the lever, said lever having pivotal bearing lines formed on one of its sides adjacent said aperture adapted to rest upon the upper end of the sleeve, and pivotal bearing lines formed on its other side adjacent said aperture, an adjustable bearing member secured on the free end of said valve stem and adapted to engage said last-mentioned pivotal bearing lines and to retain the whole organization in operative position, and a cap removably secured to the upper end of the body member and having a guide-way to receive said adjustable bearing member and guide the upper end of the valve stem, said guide-way being adapted to prevent accidental adjustment of said bearing member.

4. In combination, a body formed with an internal bore extending therethrough and with a slot extending from the upper edge of said body and communicating with said bore, said body being formed with a fluid passage, a valve controlling said passage, a valve stem extending into said bore, an operating lever extending through said slot into said body, said lever having pivotal bearing lines formed on its upper and lower faces, a bearing member on said stem adapted to be engaged by the pivotal bearing lines on the lower side of said lever, an adjustable bearing member on said stem adapted to be engaged by the pivotal bearing lines on the upper side of said lever, and a cap removably secured to the upper end of the body and being formed with a guide-way therein adapted to receive said adjustable bearing member and to prevent accidental adjustment of the latter, said guide-way adapted to direct the movement of said valve stem.

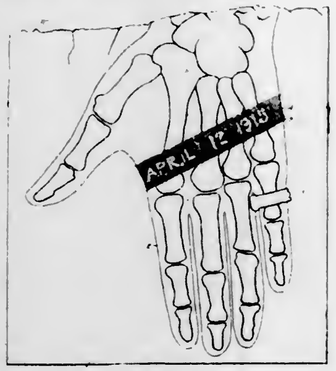
1,168,177. MEANS FOR LABELING RADIOGRAPHS. AURELIUS DE YOANNA, New York, N. Y. Filed May 8, 1915. Serial No. 26,909. (Cl. 250—34.)

1. A radiograph label comprising a thin sheet of metal partially opaque to X-rays, a legend on said sheet, said legend being arranged so that the permeability thereof will be different from the thickness of the sheet whereby a different number of rays are allowed to penetrate at that point.

2. A radiograph label comprising a tinfoil sheet sufficiently thin to allow most of the rays of an X-ray machine to penetrate the same, said sheet being formed with a legend thereon, said legent being arranged in such a manner that the same will be of a different permeability to the remaining part of the sheet whereby a different number of rays are allowed to penetrate at that point.

3. A radiograph label comprising a tinfoil sheet sufficiently thin to allow most of the rays of an X-ray machine to penetrate the same, said sheet being of such a consistency as to be capable of having a legend produced

thereon by writing, said writing being done in such a manner as to cause the sheet to have a different opaqueness at the point of writing to the remaining part of the sheet so as to allow a different number of rays of an X-ray machine to penetrate at that point.

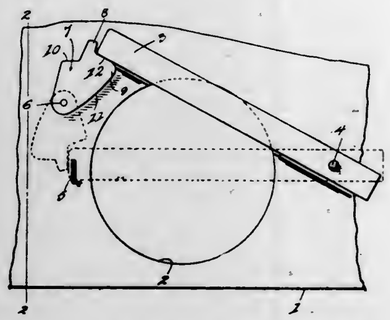


4. A radiograph label, comprising a sheet of lead sufficiently thin to allow most of the rays of an X-ray machine to penetrate the same, said sheet being formed with a legend thereon, the sheet at the point where the legend is provided being thinner than the remaining part of the sheet, whereby a greater number of rays are allowed to penetrate at that point.

5. A radiograph label, comprising a sheet partially opaque to X-rays, a legend on said sheet, said legend being arranged so that the permeability thereof will be different from the remaining part of the sheet, whereby a different number of rays are allowed to penetrate at that point.

[Claim 6 not printed in the Gazette.]

1,168,178. BAR TRAP-NEST. FREDERICK DOREE, Rex, Oreg. Filed July 8, 1913. Serial No. 777,940. (Cl. 119—49.)



The combination with a fowl nest including a front wall having an entrance and exit opening therein, a guard pivoted to the front wall at the side of the opening and a keeper carried on the opposite side of the opening to support the guard in operative position, of a pawl pivoted at one end to said wall at a point above the keeper and a tongue projecting from the free end of the pawl, arranged to engage the free end of the guard when the latter is in operative and inoperative position and being diaposed between the sides of the pawl, said pawl having locking and supporting shoulders on the free end and on opposite sides thereof, said supporting shoulder being disposed outwardly beyond the locking shoulder and engaging the guard on the under face thereof, when the guard is in inoperative position, said locking shoulder engaging the upper face of the guard when the latter is in operative position.

1,168,179. MOTOR-VEHICLE SPEED-CONTROLLER. THEODORE DOUGLAS, Scarboro, N. Y. Filed May 1, 1913. Serial No. 764,889. (Cl. 21—90.)



1. In combination in a motor vehicle, a motor, a governor for said motor controlled by the speed of the vehicle, and means controlled by the vehicle load, for regulating said governor.

2. In combination, in a motor vehicle, a motor, a governor for said motor controlled by the speed of the vehicle, means for manually adjusting the setting of said governor, and means controlled by the vehicle load for regulating said governor automatically.

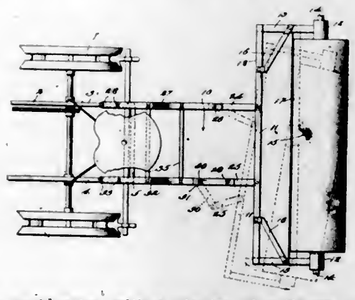
3. In combination in a motor vehicle, a motor, a governor for said motor controlled by the speed of the vehicle, and means controlled by the vehicle load for automatically adjusting the setting of said governor while the vehicle is in operation.

4. In combination in a vehicle, automatic means for regulating the speed of said vehicle, and means controlled directly by the load upon said vehicle, for controlling said first means whereby the speed of the vehicle is varied.

5. In combination, in a vehicle, a motor to propel the vehicle, a governor for said motor, and means interposed between the load on the vehicle and said governor, for automatically setting said governor.

[Claims 6 to 11 not printed in the Gazette.]

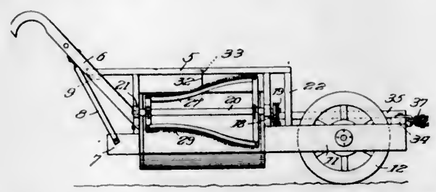
1,168,180. ROLLER ATTACHMENT FOR CORN AND COTTON PLANTERS. JOHN DRAPELA, Taiton, Tex. Filed June 19, 1915. Serial No. 35,112. (Cl. 55—6.)



The combination with a planter of ordinary construction; of a roller, a frame connected to said roller for rotatably supporting the same, a bar pivotally connected to said frame, a second bar pivotally connected to said first named bar and detachably connected to the planter frame, a bar detachably connected to said planter frame in spaced relation with respect to said second named bar, and a pair of bars pivotally connected to each other and to said last named bar and roller frame.

1,168,181. INSECT-EXTERMINATOR. WILLIAM GOLLOP ELKIN, French Camp, Miss. Filed July 21, 1915. Serial No. 41,116. (Cl. 43—1.)

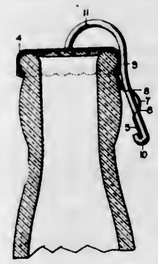
1. In a device of the class described comprising a yoke having handles connected to the rear end thereof, a pair of spaced beams connected with the forward end of the yoke, a ground wheel mounted for rotation between said beams, a shaft journaled to one side of the yoke, a driving mechanism arranged between the ground wheel and shaft whereby the latter may be driven as the machine moves along, a rotary brush carried by said shaft, a receptacle mounted within the yoke and adapted to receive insects raked from vegetation by action of said brush, a laterally extending beam carried at the forward end of said spaced bars, an arm extending laterally from the yoke and a beam connecting last said beam and arm whereby to strengthen the device and to provide protection for the driving mechanism, substantially as described.



2. A device of the class described comprising a vertically disposed yoke having handles secured at its rear end and having a pair of spaced beams connected at its forward end, a ground wheel journaled between the beams, a shaft carried by one of said beams, a bevel pinion mounted upon said shaft, a bevel gear mounted upon the ground wheel and meshing with said pinion, a shaft journaled on the opposite side of the yoke from that on which first said shaft is disposed, a rotary brush carried by the second said shaft, driving means between the shafts whereby the brush may be driven as the ground wheel rotates, and a receptacle carried by the yoke and adapted to receive insects raked from plants by action of said brush.

3. A device of the class described comprising a yoke having handles and a ground wheel associated therewith, a shaft journaled longitudinally of the yoke to one side thereof, driving mechanism between the ground wheel and shaft for operating the latter as the ground wheel rotates, a plurality of arms connected with the shaft, brushes carried by the arms, means whereby said arms may be adjusted laterally with respect to the shaft for adjusting the diameter of the path of revolution of the brushes, and a receptacle journaled in said yoke and adapted to be adjusted relatively to the brushes.

1,168,182. BOTTLE CAP AND OPENER. NATHAN ELLIS, Syracuse, N. Y. Filed Feb. 16, 1915. Serial No. 8,539. (Cl. 215—53.)



1. The combination of a bottle cap having an integral tongue, said tongue having a bulging portion, and an opener for the cap bearing in the bulging portion and having its fulcrum on the cap top.

2. The combination of a bottle cap having an integral tongue, said tongue having an arcuate portion bulging away from the axis of the cap, and a wire member bearing in said arcuate tongue portion, one end of said wire being clamped to the end of the tongue, the extremity of the other end of said wire bearing on the top of the cap and constituting the fulcrum for said wire when a pull is exerted on the tongue.

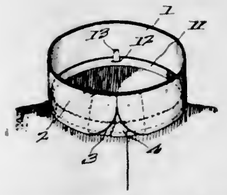
3. The combination of a bottle cap having an integral tongue, said tongue having an arcuate portion in the middle thereof adapted to bulge away from the axis of the cap, said tongue having alining openings in the arcuate portion adjacent the straight portion of the tongue, and a wire passing through said alining openings and having one end thereof clamped to the end of the tongue, the other end of the wire being hook-shaped, with the extremity bearing on the top of the cap, said extremity being adapted to form the fulcrum for said wire when a pull is exerted on the tongue.

4. The combination of a cap and an opener therefor, said cap being formed of a blank having a tongue, said tongue having a pair of openings alining with the center of the blank, the opener engaging the said openings of the blank and fulcrumed on the top of the cap.

5. The combination of a cap with an opener therefor, said cap being formed of a circular blank having an integral tongue, said tongue having a pair of openings alining with the center of the blank, said opener bearing in the openings of the tongue and engage the blank adjacent the central part thereof after the same has been shaped into a cap.

[Claim 6 not printed in the Gazette.]

1,168,183. COLLAR. OLIVER E. FELLERS, Holdenville, Okla. Filed May 27, 1915. Serial No. 30,794. (Cl. 2—69.)



1. An improved buttonless collar including a front closure, means for securing said collar to the usual rear button hole of a shirt band, and a tab associated with the front closure and formed from the material of the collar, the collar being slitted along opposite edges of said tab to provide a continuation of the same, said tab being bent up vertically about a line of flexure corresponding in height to the height of the usual front button holes in a shirt collar and band adapted to be inserted upwardly therethrough to secure the collar in position, substantially as described.

2. An improved buttonless collar including a pair of flaps constituting a front closure and provided with means for securing the same together, the rear flap being formed with a recess opening on the bottom edge thereof, and a tab on the front flap, said front flap being slitted on either side of the tab to provide a continuation thereof, said tab being bent up vertically through the recess in said rear flap along a line of flexure of substantially the height of the front button holes of the shirt band and inserted through the latter to maintain the collar in position, substantially as described.

3. An improved buttonless collar having flaps provided with complemental slots opening through the upper and lower edges, respectively, thereof and constituted each of a vertical and oblique portion for binding the collar ends close together and forming an interlocking joint, and a tab associated wtih said front closure and adapted to engage through the front buttonholes of the shirt band to connect the collar in place, substantially as described.

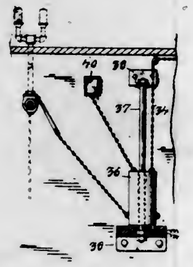
4. An improved collar including a closure comprising a pair of flaps provided with complemental slots opening on the upper and lower edges of said flaps respectively and constituted each of a vertical and oblique portion for binding the collar ends closely together and providing an in-

terlocking joint therebetween, and a tab associated with said front closure and formed from the material of the collar, the collar being slitted along either longitudinal edge of said tab for providing a continuation thereof, said tab being bent vertically along a line of flexure corresponding in height to the height of the front button holes of the shirt band and inserted upwardly through the latter to secure the collar in position, substantially as described.

5. An improved collar comprising a front closure consisting of a pair of flaps provided with complemental slots opening through the upper and lower edges respectively thereof and constituted each of a vertical and oblique portion for binding the collar ends close together and forming an interlocking joint, the rear flap being formed with a recess along its lower edge, a tab on the front flap and constructed integral with the material of the collar, the front flap at each side of said tab being slitted to form a continuation thereof, said tab being bent vertically upward through the recess in the rear flap along a line of flexure of substantially the height of the front button holes in the shirt collar band and adapted to be inserted therethrough to secure the collar in position, and means for securing the collar to the rear button hole of the shirt band, substantially as described.

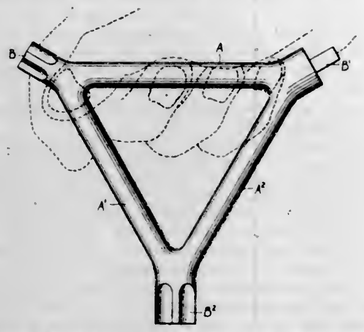
[Claim 6 not printed in the Gazette.]

1,168,184. CIRCUIT-CLOSER. EDWARD FLANAGAN, Philadelphia, Pa. Filed Jan. 15, 1913. Serial No. 742,257. (Cl. 200—34.)



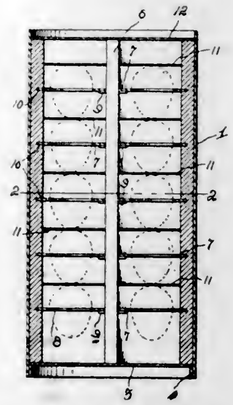
In a fire alarm signal, a support, a pair of vertically spaced brackets secured thereto, a vertical rod secured at its end to said brackets, a weight slidable on said rod, a fusible chain normally holding said weight in an elevated position, a block of insulation mounted upon the lower bracket and encircling said rod, and a pair of vertically arranged normally spaced contacts embedded in said block, one of said contacts projecting above said block in close proximity to said rod.

1,168,185. WRENCH. FRANK X. FLECK, New York, N. Y. Filed Nov. 12, 1914. Serial No. 871,701. (Cl. 81—177.)



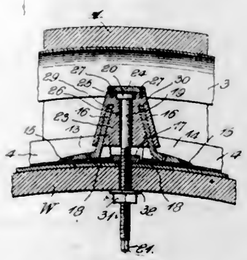
A wrench substantially as herein described, comprising three integral handle bars arranged in the form of a triangle and extending throughout the major portion of their lengths on straight lines, and all of which are unobstructed on their outer sides, together with extensions at the junctures of the adjacent handle bars forming prolongations thereof in a direction at an angle to their respective handle bars, and said extensions being in alinement with lines bisecting the inner angles of said bars, and at right angles to the handle bar uniting the opposite ends of said handle bars, said extensions being constructed to serve as wrench heads, and operating as limiting ends of the handle bars, to center the hand, when any one of the latter grasped by the hand in operating the wrench head extending at a right angle to said particular handle bar.

1,168,186. EGG-CRATE. EDWIN C. FORREST, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,360. (Cl. 217—26.)



An egg crate comprising a container cylindrical in cross section, a rack within said container, said rack comprising a plurality of vertical bars and a centrally disposed vertical bar positioned within the rack, a plurality of egg trays comprising disks having circular openings therein, the inner face of said rack bars being provided with spaced recesses, said trays being arranged on the central bar and held in place by means of pins positioned thereunder, the peripheral edges of said disks adapted to rest within the recesses on the inner face of the rack bars for normally holding said disks a spaced distance apart, a partition layer disposed between each of said disks adapted to prevent the eggs from engaging one another when positioned within the openings of the trays.

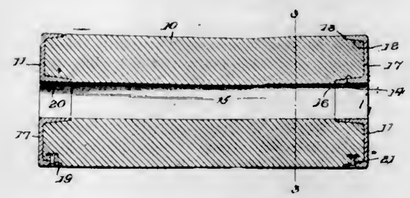
1,168,187. RESILIENT TIRE. MORRIS FRIEDMAN, Avonmore, Pa., assignor to Abraham S. Braverman, Avonmore, Pa. Filed Feb. 11, 1915. Serial No. 7,538. (Cl. 152—7.)



1. The combination with a transversely split tire member, of a device for connecting the ends thereof comprising arms extending outwardly from the ends of said tire member and converging toward their free ends, a block having a bolt swiveled therein, a nut disposed between the ends of said tire member and through which said bolt extends, said nut having lateral flanges lapping under said tire member ends, said block having slots to receive said arms and converging toward their outer ends.

2. The combination with a transversely split tire member, of a device for connecting the ends thereof comprising arms extending outwardly from the ends of said tire member and converging toward their free ends, a sectional block having registering recesses to form a seat, a bore communicating with said seat, a bolt mounted in said bore and having a circular head swiveled in said seat, one section having slots to receive said arms, a nut positioned for threaded engagement with said bolt, and means for connecting said sections.

1,168,188. COMPOSITE ROLL FOR TEXTILES. WILLIAM F. GAMMETER, Cadiz, Ohio. Filed Sept. 10, 1914. Serial No. 861,035. (Cl. 242—68.)

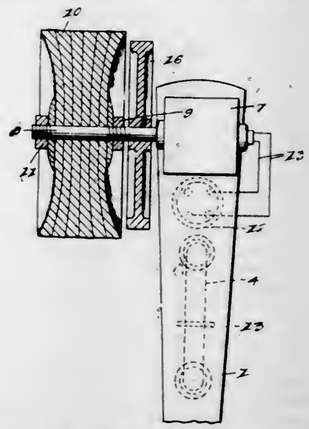


1. A roll including a cylindrical body having a squared longitudinal bore, and reinforcing caps secured to the ends of the body and having squared openings alining with and forming continuations of the bore, said caps about the openings having laterally directed flanges extending into the ends of the bore, the body about such ends of the bore being cut-away to seat these flanges, and peripheral flanges extending laterally from the caps and surrounding the exterior end portions of the body, said end portions being cut-away to seat these latter flanges, and the outer surface of said flanges being flush with the surface of the body.

2. A roll including a cylindrical built up body having a squared longitudinal bore of uniform size througout its length, the walls of said bore being flared at their ends and the body being tapered externally at its ends, and protective caps secured to the ends of the body, said caps each including a body portion engaging against the end of the roll body, an outer circular flange having an inclined inner face fitting on the tapered end of the roll body, and an inner squared flange or sleeve projecting into the end of the bore, the outer face of said inner flange being inclined to fit the flared end of the bore of the roll body and the inner face of the said flange being flush with the walls of the bore, the body of the cap being formed with a squared opening forming a continuation of the squared bore of the roll body and equal in size thereto.

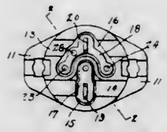
1,168,189. POLISHING-MACHINE. WILLIAM H. GARLOCK, Seattle, Wash. Filed May 7, 1914. Serial No. 836,983. (Cl. 51—12.)

A polishing machine of the character described, a support having its sides tapered from the top to the lower portion thereof, and provided with a gripping member at the lower end, a motor fixed to the wider end of the support, a buffing wheel connected on the motor shaft and arranged to be driven thereby, an independently rotatable guard wheel mounted on the motor shaft intermediate the motor and the buffing wheel, and a U-shaped member extending through the support between the motor and the lower gripping member, to form a hand grip, said grip allowing



the pressure of the buffing wheel against the article being polished to be regulated.

1,168,190. ELECTRIC-LAMP RECEPTACLE. GEORGE A. GAUTHIER, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 30, 1913. Serial No. 809,568. (Cl. 173—342.)



1. A lamp receptacle comprising an insulating base, a screw shell with base flange thereon, a wire terminal yoke, a plurality of screws passing downward through the base flange of said screw shell and insulating base and threaded into said yoke to mechanically and electrically connect said screw shell and yoke, in combination with a security screw lying below the base of screw shell and passing downward through the insulating base of the receptacle and tapped into said yoke to hold the latter in position irrespective of the screw shell holding screws, substantially as described.

2. A lamp receptacle comprising an insulating base recessed on its outer face to form a well, a screw shell with holding flange seated in the bottom of said well, a current-carrying yoke plate mounted on the inner face of said base beneath said well, a plurality of screws passing downward through the holding flange of the screw shell and the base and taking into said yoke, in combination with a screw arranged in the well in the base and beneath the screw shell and passing downward through said base into engagement with the yoke to hold the latter in fixed position to receive the screw shell securing screws.

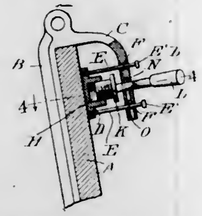
3. A lamp receptacle comprising an insulating base recessed on its outer face to form a well, a screw shell with holding flange seated in the bottom of said well, a current-carrying yoke plate mounted on the inner face of said base beneath said well, a plurality of screws passing downward through the holding flange of the screw shell and the base and taking into said yoke, in combination with a screw arranged in the well in the base and beneath the screw shell and passing downward through said base into engagement with the yoke to hold the latter in fixed position to receive the screw shell securing screws, said yoke-engaging screw being inaccessible in the completed fitting.

1,168,191. SHIRT. HENRY GERHARDT, Hazleton, Pa. Filed Apr. 2, 1914. Serial No. 829,059. (Cl. 2—41.)



In a shirt, an extension tail of substantially triangular form extending from the rear of the shirt, a triangular flap secured to the tail adjacent the end and having a portion overhanging the end of the tail, and securing means at the end of the tail and the overhanging end of the flap whereby each or both may be secured to the central part of the front of the shirt.

1,168,192. PORTABLE-PROPELLER-HOLDING DEVICE. WILFRID GOUNOD GILLIAM, Boston, Mass. Filed May 12, 1915. Serial No. 27,700. (Cl. 115—17.)



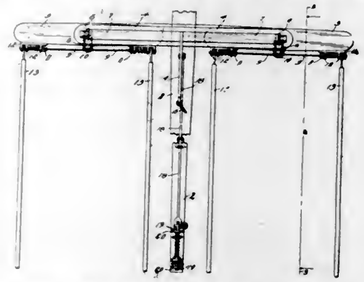
1. A device for fastening portable propellers and power driving apparatus to boats comprising a yoke, a portion of which forms a clamping surface, said yoke having arms, levers pivotally mounted upon said arms, a movable clamping member, and an adjusting screw carried by said member and against which the end of the lever is adapted to frictionally contact, as set forth.

2. A device for fastening portable propellers and power driving apparatus to boats, comprising a yoke, a portion of which forms a clamping surface, said yoke having arms, levers pivotally mounted upon said arms, clamping members supported by said arms, adjusting screws carried by said members and against which the ends of the levers are adapted to contact, and means for guiding the clamping members, as set forth.

3. A device for fastening portable propellers and power driving apparatus to boats, comprising a yoke, a portion of which forms a clamping surface, said yoke having resilient arms which are apertured, pins movable through said apertures, clamping members fixed to said pins, adjusting screws mounted in the threaded sockets in said members, and levers pivotally mounted one upon each of said arms and having each an end adapted to contact with one of said screws, as set forth.

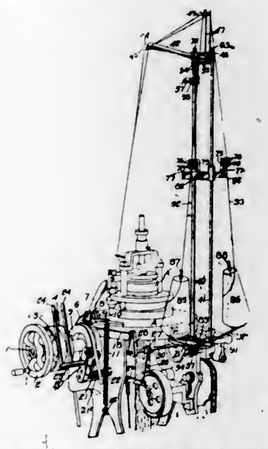
1,168,193. HORSE-DETACHER. CHRISTIAN GRAF, Paxico, Kans. Filed Oct. 17, 1914. Serial No. 867,135. (Cl. 21—75.)

The combination with the tongue and swingletrees of a vehicle, of a rock-shaft disposed above said swingletrees and extending from approximately the longitudinal center of one swingletree to the longitudinal center of the other swingletree, yieldingly retractable tug-carrying draw-bolts arranged at each end of each swingletree, downwardly bent staples terminally carried by said rock-shaft, guide staples centrally carried by said swingletrees, flexible means carried by the said downwardly turned staples and



passing through said guide staples and operatively connected to said draw-bolts whereby the latter may be drawn toward each other as said rock-shaft is actuated; a draw-bolt carried by said tongue and manually operable means for actuating said rock-shaft and the last named draw-bolt.

1,168,194. STOP-MOTION MECHANISM FOR KNITTING-MACHINES. IVERN W. GROTHEY, York, Pa., assignor to General Machine Works, York, Pa., a Corporation of Pennsylvania. Filed Oct. 1, 1910. Serial No. 584,874. (Cl. 66—7.)



1. A stop motion mechanism for knitting machines, comprising means for coupling and uncoupling the driving shaft of the machine to the driving power, a brake mechanism, a rock-shaft carrying crank-arms, a connection between one of said crank-arms and the drive controlling mechanism, a connection between another of said arms and the brake controlling mechanism, means for holding said rock-shaft under tension and actuating it, a pivoted catch arranged to engage another arm on said rock-shaft to secure it in "set" position, a tubular upright carrying the yarn supports, a connection running through said tubular support between said pivoted catch and means for actuating it, said means, a catch for locking said means against operating, tilting thread supports, and a connection from said tilting thread supports to said catch for releasing it and setting off said mechanism upon the tilting or falling of one of said thread supports, substantially as set forth.

2. A stop motion mechanism for knitting machines comprising an automatically operating belt shifter for the driving belt, an automatically operating brake mechanism, a catch for holding said belt shifter mechanism set, a catch for holding said brake mechanism set, a rock-shaft, means for holding said rock-shaft under tension and operating it, several crank-arms on said rock-shaft, an operative connection between one of said crank-arms and the catch for holding the belt shifter mechanism, a connection between another of said crank-arms and the catch for holding the brake mechanism, a pivoted catch for holding said rock-shaft in set position, means connected with the yarn supports for tripping said catch, and said yarn supports mounted to pivot and set off said mechanism, substantially as set forth.

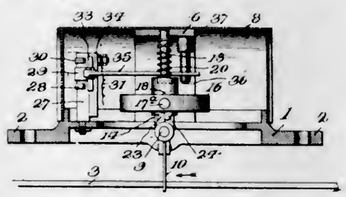
3. A stop motion mechanism for knitting machines comprising drive controlling means, brake mechanism, a rock-shaft operatively connected by a separate connection to each for operating them, means for holding said rock-shaft under tension and operating it, means for locking said shaft in set position, a trip mechanism connected with said locking means consisting of a spring set under tension and controlled by a catch, the yarn supports mounted to pivot, and a connection running from said yarn supports to said catch for tripping it, substantially as set forth.

4. A stop motion mechanism for knitting machines, comprising drive controlling mechanism, brake mechanism, a rock-shaft with crank-arms operatively connected by a separate connection to each, means for applying tension to said rock-shaft and operating it, means for holding said rock-shaft in set position, a tubular upright carrying the yarn supports, said yarn supports pivoted on said upright, a spring in said tubular support connected at one end with a fixed support and at its other end with a trip mechanism, said trip mechanism connected with the means for holding the rock shaft in set position, and connections running from said pivoted yarn supports to said trip mechanism, whereby the tilting of one of said yarn supports will operate said trip mechanism and permit the spring to release the means for holding said rock-shaft and said rock-shaft to operate under its tension applying means to shift the driving means and apply the brake, substantially as set forth.

5. A stop motion mechanism comprising drive controlling mechanism, brake mechanism, a rock-shaft under tension directly connected thereto for controlling said mechanisms, locking devices for securing said mechanisms in set position, a tubular upright on the machine, pivoted yarn supports on said upright, a spring within said tubular upright connected to normally operate to release said locking devices, a trip mechanism connected with said spring to hold it under tension, and a connection running from said pivoted yarn supports to said trip mechanism, whereby the tilting of either yarn support will set off said trip mechanism and permit the spring to set off the stop motion mechanism, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,168,195. CIRCUIT-CLOSING SWITCH. WILLIAM GRUNOW, Jr., New York, N. Y. Filed Jan. 16, 1915. Serial No. 2,687. (Cl. 246—54.)



1. A circuit closing switch comprising a horizontally rotating momentum wheel, devices controlled thereby for closing the switch upon a movement of the momentum wheel in one direction and for opening the switch upon a movement of the momentum wheel in the opposite direction, devices coöperating with said momentum wheel for raising the same during the closing of the switch for storing power for automatically returning the momentum wheel to normal position for opening the switch.

2. A circuit closing switch comprising a horizontally rotating momentum wheel, devices controlled thereby for closing the switch upon a movement of the momentum wheel in one direction and for opening the switch upon a movement of the momentum wheel in the opposite direction, devices coöperating with said momentum wheel for raising the same during the closing of the switch for storing power for automatically returning the momentum wheel to normal position for opening the switch, and a spring associated with said momentum wheel for retarding the movement of said wheel when closing the switch and for accelerating said wheel when opening the switch.

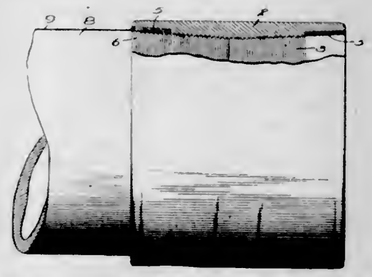
3. A circuit closing switch comprising a horizontally rotating momentum wheel, devices controlled thereby for closing the switch by the movement of the wheel in one direction and for opening the switch upon the movement of the wheel in the opposite direction, a fixed shaft supporting said wheel, said shaft having a spiral thread thereon, and means carried by the momentum wheel for engaging said spiral thread, whereby said momentum wheel is raised when moved for closing the switch.

4. A circuit closing switch comprising a horizontally rotating momentum wheel, devices controlled thereby for closing the switch by the movement of the wheel in one direction and for opening the switch upon the movement of the wheel in the opposite direction, a fixed shaft supporting said wheel, said shaft having a spiral thread thereon, means carried by the momentum wheel for engaging said spiral thread, whereby said momentum wheel is raised when moved for closing the switch, a tripper, and a finger carried by said tripper for engaging a lug on the momentum wheel for rotating the same.

5. A circuit closing switch comprising a horizontally rotating momentum wheel, devices controlled thereby for closing the switch by the movement of the wheel in one direction and for opening the switch upon the movement of the wheel in the opposite direction, a fixed shaft supporting said wheel, said shaft having a spiral thread thereon, means carried by the momentum wheel for engaging said spiral thread, whereby said momentum wheel is raised when moved for closing the switch, a spring surrounding said shaft and connected to said momentum wheel, said spring being placed under tension when said momentum wheel is rotated to close the switch.

[Claims 6 to 9 not printed in the Gazette.]

1,168,196. PIPE-COUPLING. WILLIAM A. HALL, New York, N. Y. Filed Nov. 17, 1915. Serial No. 61,990. (Cl. 137—28.)



1. A pipe coupling having a body provided with an internally threaded portion and an annulus of material softer than said body secured within the same upon either side of said threaded portion, said annulus having a smooth inner surface and having an inner diameter intermediate the inner and outer diameters of the adjacent thread.

2. A pipe coupling, comprising a tubular metal body having internal screw threads through the intermediate

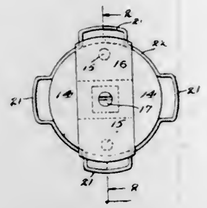
portion and counterbored ends, and an annulus of softer metal within each counterbored part having a smooth inner surface and an inner diameter greater than the inner diameter of the adjacent thread.

3. A pipe coupling, comprising a tubular member provided with an internally screw threaded portion flaring from the center outwardly in both directions and having counterbored ends, and an annulus of softer material than said member secured in each of said counterbored portions, said annulus having its smallest internal diameter greater than the internal diameter of the adjacent threads, whereby a threaded pipe tapered to correspond with said flaring threaded portion will cut into said annulus.

4. The method of forming a sealed joint between an externally coated pipe having a threaded end and an internally threaded coupling member, which comprises the inserting of an annulus of softer material than the pipe within the bore of the coupling at the end thereof, and threading the pipe into the coupling until the pipe threads cut into said softer material and the pipe coating is brought into intimate contact with the outer periphery of said material.

5. The method of forming a sealed joint between an externally coated pipe having a threaded end and an internally threaded coupling member, which comprises the inserting of an annulus of softer material than the pipe within the bore of the coupling at the end thereof, and threading the pipe into the coupling until the pipe threads cut into said softer material and force the outer end of the soft material to flow outwardly into contact with the coating on the pipe.

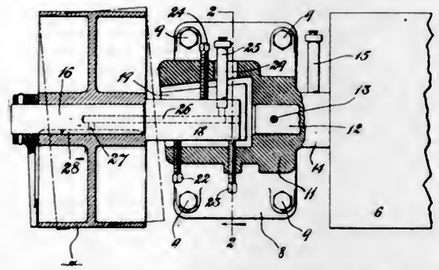
1,168,197. TRACE-CARRIER. WILLIAM F. HALLEY, Quinn, S. D. Filed June 30, 1915. Serial No. 37,332. (Cl. 54—56.)



1. In a trace carrying device, a base plate having a plurality of strap engaging portions, an upstanding core carried by said base plate, said core being open at its lower end and closed at its upper end through the medium of a plate, a pair of segmental side portions carried by said base plate, cover portions carried by said side portions, a pair of retaining studs fixed to said base plate and arranged in alinement with said core, a retaining plate, a pin depending from said retaining plate and extending within said core, a fastening member carried on said pin within said core, and a coil spring interposed between said second mentioned plate and said fastening member, as and for the purpose set forth and described.

2. In a trace carrying device, a base plate having a plurality of strap engaging portions, an upstanding core formed on said base plate, the lower end of said core being open, a plate carried at the upper end of said core, a pair of retaining studs fixed to said base plate and alined with said core, a pair of segmental side portions carried by said base plate, cover portions carried by said side portions, a retaining plate of greater length than the diameter of said base plate, said retaining plate normally resting on the upper ends of said studs, the upper face of said retaining plate being flush with the upper face of said cover portions, a pin depending from said retaining plate and projecting into said core, a member fixed on said pin and arranged within said core, and a coil spring arranged about said pin and interposed between said second mentioned plate and said member, as and for the purpose set forth and described.

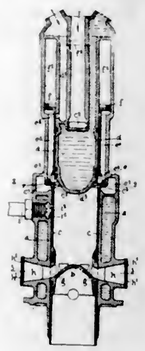
1,168,198. PULLEY MECHANISM. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,136. (Cl. 74—51.)



1. Pulley mechanism comprising a shaft, a pulley rotatively supported by said shaft, the latter having an extension provided with flat opposite faces, a boxing to receive said extension and having flat faces adapted to be slidably engaged by those of the extension, and means for tipping the extension in the boxing.

2. Pulley mechanism comprising a shaft, a pulley rotatively supported by said shaft, the latter having an extension provided with flat opposite faces, a boxing to receive said extension and having flat faces slidably engaged by those of the extension, two screws engaging one face of the extension, and a third screw engaging the opposite face of the extension at a point between those which the other screws engage said extension, the several screws being tapped through the boxing.

1,168,199. TWO-STROKE-CYCLE EXPLOSION-ENGINE. JEAN ALBERT HARDY, Levallois-Perret, France. Filed Nov. 17, 1913. Serial No. 801,556. (Cl. 123—65.)



1. In an internal combustion engine, an explosion cylinder and a piston working therein, a sleeve extension for said piston, a pair of pump pistons spaced apart thereon, pump casing therefor, means for admitting air to one of said pump casings and an explosive mixture to the other, and ports in said sleeve for admitting the compressed air and mixture independently to the explosion cylinder, substantially as described.

2. In an internal combustion engine, an explosion cylinder and a piston working therein, a sleeve extension for said piston, a pair of pump pistons spaced apart thereon, pump casings therefor, means for admitting air to one of said pump casings and an explosive mixture to the other, and ports in said sleeve for admitting the compressed air and mixture independently and in succession to the working cylinder, substantially as described.

3. In an internal combustion engine, an explosion cylinder and a piston working therein, a sleeve extension for

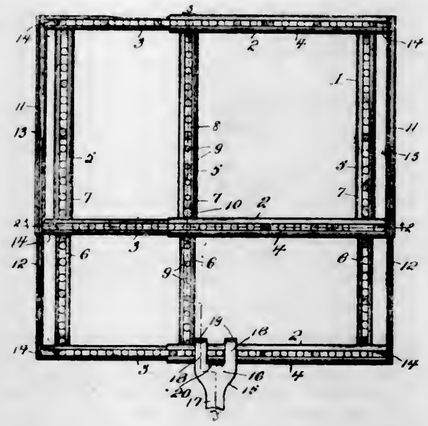
said piston, a pair of pump pistons spaced apart thereon, pump casing therefor, said pump pistons and casing being of different diameter, means for admitting air to one of said pump casings and an explosive mixture to the other, and ports in said sleeve for admitting the compressed air and mixture independently to the explosion cylinder, substantially as described.

4. In an internal combustion engine, an explosion cylinder and a piston working therein, a sleeve extension on said piston, a pair of pump pistons of different diameter spaced apart thereon, adjacent pump casing opening to one another for said pump pistons, the working chamber for the pump piston of smaller diameter forming above the piston a compression chamber open to the working chamber of the piston of larger diameter, and means for admitting an explosive mixture to the working face of the piston of larger diameter and air to the working face of the smaller piston together with ports in said sleeve for admitting the compressed air and gas from the pump chambers to the working cylinder.

5. In an internal combustion engine, an explosion cylinder and a piston working therein, a sleeve extension on said piston, a pair of pump pistons of different diameter spaced apart thereon, adjacent pump casings opening to one another for said pistons, the working chamber for the pump piston of smaller diameter forming above the piston a compression chamber open to the working chamber of the piston of larger diameter, and means for admitting an explosive mixture to the working face of the piston of larger diameter and air to the working face of the smaller piston, together with ports in said sleeve for admitting the compressed air and gas from the pump chambers to the working cylinder in succession, first air then mixture, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,168,200. OVEN-RACK. MAYME HARRIS, Palisades, Colo. Filed May 14, 1915. Serial No. 28,137. (Cl. 126—339.)

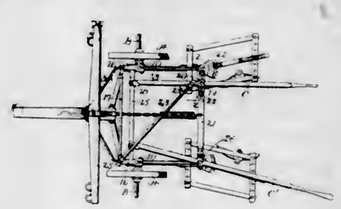


1. An oven rack comprising transverse bars each formed of telescopic sections whereby the width of the rack may be varied, longitudinal bars secured to said transverse bars and each formed of telescopic sections whereby the length of the rack may be varied, the sections of one of said longitudinal bars being formed with interchangeable alining openings, and a pin adapted to be passed through the alining openings to hold the sections of the longitudinal bars in adjusted position.

2. An oven rack comprising transverse bars each formed of telescopic sections whereby the width of the rack may be varied, longitudinal bars secured to said transverse bars and each formed of telescopic sections whereby the length of the rack may be varied, and runners carried by the ends of said transverse bars and holding the transverse and longitudinal bars spaced apart from the bottom wall of the oven.

3. An oven rack comprising transverse bars each formed of telescopic sections whereby the width of the rack may be varied, longitudinal bars secured to said transverse bars and each formed of telescopic sections whereby the length of the rack may be varied, runners carried by the ends of said transverse bars and holding the transverse and longitudinal bars spaced apart from the bottom wall of the oven, each runner comprising telescopic sections, and lugs formed on the inner side of each runner and engaging in the adjacent ends of the respective transverse bars.

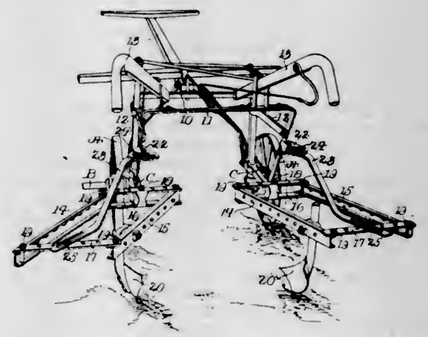
1,168,201. WHEEL-CULTIVATOR. JOSEPH D. HASKETT and BRAD SANDERS, Elizabeth City, N. C. Filed Mar. 6, 1915. Serial No. 12,639. (Cl. 97—35.)



1. In a walking cultivator, the combination, of a frame, supporting wheels swivelly mounted on the frame, cultivator manipulating handles mounted on the frame, one of said handles being pivoted to swing horizontally and the other handle being rigidly mounted, and a connection between said pivoted handle and the swiveled wheels for steering said wheels, substantially as set forth.

2. In a walking cultivator the combination, of a frame having front and rear cross-bars, oscillating posts carried by said frame, axles mounted on said posts, wheels journaled on the axles, horizontal arms projecting from said posts, a rod connecting said horizontal arms, a handle fixedly mounted on the frame, a wheel steering handle fulcrumed on the front cross-bar of the frame and having limited sliding movement on the rear cross-bar thereof, and a rigid rod providing pivotal connection between the steering handle and said horizontal arms, substantially as set forth.

1,168,202. WHEEL-CULTIVATOR. JOSEPH D. HASKETT and BRAD SANDERS, Elizabeth City, N. C. Filed Mar. 6, 1915. Serial No. 12,640. (Cl. 97—35.)



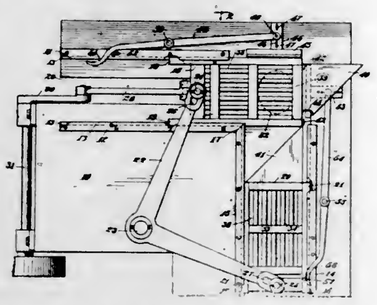
1. In a walking cultivator, a plow carrying frame composed of four bars pivoted together at their corners and pivoted to the beams of the frame, and a brace bar connected to the cultivator frame at one end and to the plow

carrying frame at the other with means for locking said bar and frame to secure said frame rigidly in adjusted position, substantially as set forth.

2. In a walking cultivator, the combination, of the cultivator frame, plow carrying frames connected therewith each of which is a parallelogram pivoted at its corners, and a rigid brace for each plow carrying frame adjustably connected at one end to the cultivator frame and adjustably connected at its other end to said plow carrying frame, substantially as set forth.

3. A walking cultivator, comprising a frame, plow carrying frame connected therewith each of which is a parallelogram hinged at its corners, and means for locking each plow carrying frame in certain adjustable positions, substantially as set forth.

1,168,203. VEGETABLE-CUTTING MACHINE. CARL HEILINGER and MATHIAS LISATZ, Los Angeles, Cal.; said Lisatz assignor to said Heilinger. Filed Jan. 30, 1915. Serial No. 5,209. (Cl. 146—7.)



1. A vegetable slicing machine, comprising a pair of parallel spaced reciprocal blades mounted to move at right angles in relation to each other, vegetable supporting plates, one secured to each cutting blade at the front end and disposed in the same plane, and means for operating said blades to cause the same to alternately advance through the vegetable.

2. A vegetable slicing machine, comprising a pair of parallel spaced reciprocal frames, corrugated blades formed thereon, vegetable supporting plates, one secured to each cutting blade at the front end and disposed in the same plane, and means for reciprocating said blades simultaneously at right angles in relation to each other to cause the same to alternately pass through the vegetable.

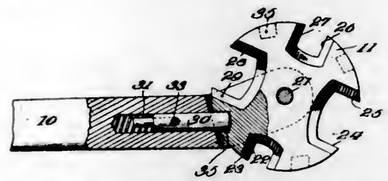
3. A vegetable cutting machine, comprising a pair of reciprocal frames, corrugated blades on said frames arranged with a blade on one frame disposed on a plane above the blade on the other frame, vegetable supporting blades, one secured to each cutting blade at the front end and disposed in the same plane, and means for reciprocating said blades whereby they are caused to pass alternately through the vegetable.

4. A vegetable cutting machine, comprising a pair of reciprocal frames, a bell-crank lever connecting said frames, means for reciprocating one of said frames for causing the frames to move at right angles thereto through the bell-crank connection, a cutting blade on each of said frames, the blade on one frame being arranged on a plane above the blades on the other frame, vegetable supporting plates, one secured to each cutting blade at the forward end and disposed in the same plane.

5. A vegetable slicing machine, comprising a pair of reciprocal blades mounted to move at right angles in relation to each other, movable abutments, one disposed opposite each blade, means for moving each abutment into position for engaging a vegetable when the cutting blade opposite moves toward it, and means for operating said blades to cause the same to alternately advance through the vegetable.

[Claims 6 to 9 not printed in the Gazette.]

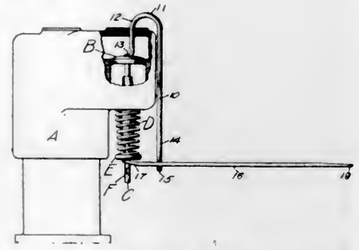
1,168,204. WRENCH. JOHN HELSTROM, Morristown, N. J. Filed Nov. 3, 1913. Serial No. 798,995. (Cl. 81—58.)



1. A wrench including a shank having offset fork arms, a revoluble wrench head mounted between the said arms with its axis offset relative to the axis of the shank, said wrench head being provided upon one side with a work receiving notch and upon its opposite side with a socket diametrically offset relative to the notch, and locking means for the wrench head shiftable axially of the shank, to project through one end thereof between said arms for engagement in said socket, whereby leverage upon the shank tending to rotate the head will be communicated through the head in angularly disposed radial lines passing through the axis of the head and through said notch and socket respectively.

2. A wrench including a shank having offset arms, a revoluble wrench head mounted between said arms with its axis offset relative to the axis of the shank, said wrench head upon one side being formed with a work engaging portion, and locking means for the head shiftable axially of the shank to project between the arms in engagement with the head upon its opposite side at a point diametrically offset relative to the work engaging portion of the head, whereby leverage upon the shank tending to rotate the head will be communicated through the head in angularly disposed radial lines passing through said work engaging portion and the said point respectively.

1,168,205. VALVE-LIFTER. ROBERT P. HENDERSON, New York, N. Y. Filed Mar. 26, 1915. Serial No. 17,132. (Cl. 29—87.1.)

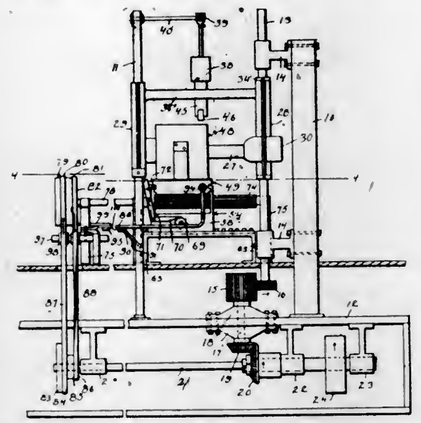


A valve lever composed of a valve clamping member return bent at one end to enter a cylinder and bear against a valve, and formed at the opposite end with a loop presenting a bottom bearing wall, and a separate lever in the form of a bar freely slidable in the loop to project the forward end of the lever to a position to engage a valve washer, the lever being furthermore freely rockable in the loop, the bottom bearing wall of the latter serving as a fulcrum for the lever.

1,168,206. GRINDING-MACHINE. OSCAR F. HENTSCHEL, Michigan City, Ind. Filed Apr. 23, 1915. Serial No. 23,404. (Cl. 51—12.)

1. In an automatic grinding machine, a laterally movable carriage, supporting means for said carriage formed with rack bars, a shaft journaled through the carriage, pinions rigid with said shaft and meshing with the rack bars, a table movable longitudinally on the carriage, and means actuated by the table for rotating the pinion.

2. In an automatic grinding machine, a laterally movable carriage, supporting means for said carriage formed with rack bars, a shaft journaled through the carriage and extending transversely of the rack bars, pinions rigid with the shaft and meshing with said rack bars, a table slidably supported by the table when it reaches one end of its path to rotate the shaft.



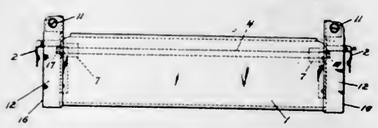
3. In an automatic grinding machine, a laterally movable carriage, supporting means for said carriage, a rack bar, a shaft journaled to the carriage and extending across said rack bar, a pinion rigid with the shaft and meshing with the rack bar, a table slidably connected to the carriage and movable in the direction at right angles to the path of movement of the carriage, a ratchet wheel connected to said shaft, a pivoted lever, a pawl pivotally connected to said lever and engaging the ratchet wheel, and a trip projecting beyond one end of the carriage for engagement with said lever whereby the shaft is rotated.

4. In an automatic grinding machine, a laterally movable carriage, supporting means for said carriage, means for actuating the carriage, a table slidably supported by the carriage and movable at right angles to the path of movement of the carriage, a cylinder gear extending transversely under the table, and a rack bar fixed to the table and engaging said gear.

5. In an automatic grinding machine, a laterally movable carriage, a table slidably mounted on said carriage, feed mechanism for the carriage operated by the table, drive means for the table, and reversing mechanism for said drive means, the reversing mechanism being automatically operated by the table at each end of its stroke.

[Claims 6 to 12 not printed in the Gazette.]

1,168,207. PAPER-GAGE FOR TYPE-WRITING MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 31, 1913. Serial No. 745,329. (Cl. 197—140.)



1. The combination with the paper table of a type-writing machine of a paper gage adapted to coöperate with the table and pivotally movable about two axes one perpendicular to the table and the other parallel with the transverse length of the table for the purpose set forth.

2. The combination with the paper table of a type-writing machine of a paper gage adapted to coöperate with the table and movable about two axes one perpendicular to the table and the other parallel with the transverse length of the table and means whereby the paper gage is adjustable longitudinally of the table for the purpose set forth.

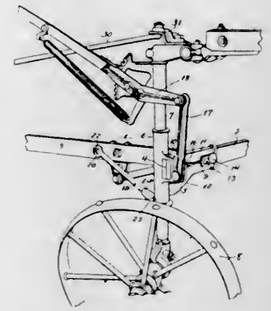
3. The combination with the paper table of a type-writing machine, of a paper gage, a pivotal support therefor at the rear of the table upon which the gage may be turned to operative position transversely across the face of the table or to inoperative position parallel with the table, and supporting means carrying said pivotal support and mounted to rock about a transverse axis parallel with the table whereby said supporting means may be rocked rearwardly and downwardly away from the rear of the paper table.

4. The combination with the paper table of a type-writing machine, of a pair of rearwardly downwardly extending table supporting arms adapted to rock about a horizontal axis, a cross rod extending between said arms adjacent the paper table, an upwardly extending paper gage supporting arm rotatable about the axis of said rod and adjustable longitudinally therealong, a pivotal support for a paper gage carried by the upper end of said arm and the axis of which is perpendicular to the plane of the table and a paper gage mounted upon said pivotal support all for the purpose set forth.

5. The combination with the paper table of a type-writing machine, of a paper gage support mounted to swing about an axis parallel or substantially so to the table to a position below the rear edge of the table, and a paper gage pivotally mounted on said support and adapted to disappear therewith behind the paper table.

[Claims 6 and 7 not printed in the Gazette.]

1,168,208. WHEELED PLOW. EDWARD M. HEYLMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Apr. 30, 1915. Serial No. 24,979. (Cl. 97—73.)



1. In a plow structure, the combination with a frame having a laterally projecting frame arm at its forward end, of a bearing bracket for the front furrow wheel axle adjustably secured to the front end of the frame and to said lateral frame arm with the vertical portion through which the axle passes disposed behind the lateral frame-arm, and an adjustable brace connecting said bracket with the side of said frame.

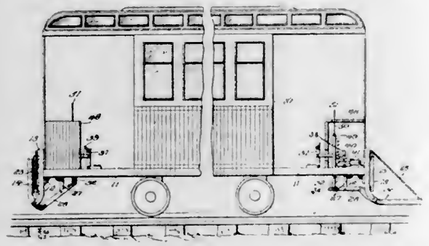
2. In a plow structure, the combination with a frame having a front arm projecting laterally therefrom, of a bracket for the front furrow wheel axle adjustably secured to the front end of the frame and mounted on said lateral arm, and set screws passing through said bracket and engaging the lateral frame arm, whereby the bracket will be clamped to the latter.

3. In a plow structure, the combination with a horizontal frame having side and front bars and a laterally projecting arm at the juncture of the front and one side

bar, of a bearing bracket for the front furrow wheel axle, secured to said lateral arm and to the forward bar of said frame, means permitting lateral adjustment of said bracket relatively to the frame, and an adjustable brace connecting the lower portion of the bearing bracket with a side bar of the frame.

4. In a plow structure, the combination with a horizontal frame having a lateral frame arm at its forward end, of a bearing bracket for a front furrow wheel axle, said gracket comprising a slotted arm adjustably secured to the front bar of the frame, an upright tubular member to receive said axle, and an intermediate loop portion for the passage of said lateral frame arm.

1,168,209. AUTOMATIC FOLDING FENDER. WILLIAM J. HICKEY, Reno, Nev. Filed Apr. 8, 1913, Serial No. 759,769. Renewed June 14, 1915. Serial No. 34,068. (Cl. 105—127.)



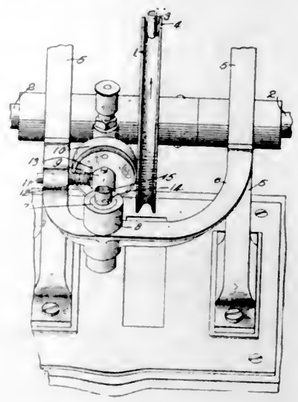
1. A fender including hingedly connected vertical and horizontal members, a diagonally extending flexible netting connecting the free edges of said members and movable rearwardly under impact to swing the free edge portion of the normally horizontal member upwardly, and means for automatically holding said member in upswung position, said means including a vertically reciprocable rack bar, a spring pressed pawl adapted to co-act with the teeth of said bar, and an operative connection between said bar and the normally horizontal fender member.

2. A fender including vertical and normally horizontal members hingedly connected, a flexible member connecting the free edges of said first members and movable rearwardly under impact to swing the free end of the normally horizontal member upwardly, and means for normally limiting the upward swinging of said member, said means being releasable to permit further upward swinging.

3. A fender including vertical and normally horizontal members hingedly connected, a flexible member connecting the free edges of said first members movable rearwardly under impact to swing the free end of the normally horizontal member upwardly, and means for limiting the upward swinging of said member, said means including a vertically reciprocable rack member provided with a pawl seat, a spring pressed pawl adapted for engagement in said seat to limit the upward movement of the rack member, and operative connection between the rack member and the normally horizontal fender member.

4. In a fender construction, a vertical fender member, a normally horizontal fender member hingedly connected by its rear end to the lower end of the vertical fender member and supported at its forward end by a flexible netting connecting said forward end with the upper end of the vertical fender member, the normally horizontal fender member having rearwardly and upwardly directed arms, a vertically movable rack member provided with a plurality of rack teeth and with a pawl seat, a lever pivoted intermediate its length and operatively connected to the extended arms of the normally horizontal member and to the lower end of the rack member, spring pressed pawls mounted for automatic engagement one with the teeth of the rack member and one with the pawl seat thereof, and a lever operatively connected with said pawls for simultaneously disengaging the same from the rack member.

1,168,210. VARIABLE FRICTION-DRIVE. ALBERT E. HILL, Atlanta, Ga. Filed Dec. 26, 1914. Serial No. 879,166. (Cl. 74—26.)



1. A changeable driving mechanism comprising a driven element, a driving element, an idler normally in light engagement with both, and a movable support for said idler whereby its engagement with the driver is altered when a load is thrown onto the driven element.

2. A changeable driving mechanism comprising a rotary driven element, a rotary driving element, an idler wheel normally in light frictional engagement with both, and a movable support for said idler wheel whereby its engagement with the driver is altered when the movement of the driven element is retarded.

3. A changeable driving mechanism comprising a rotary driven element, a rotary driving element, an idler wheel normally in light frictional engagement with both, and a movable support for said idler wheel whereby its frictional contact with said driver is increased when a load is thrown onto the driven element.

4. A frictional driving mechanism comprising a rotary driver, a driven element, an idler wheel in constant engagement with said element, means for forcing it normally into light frictional engagement with the driver, and a movable support for said wheel whereby its frictional contact with said driver is increased when a load is thrown onto the driven element.

5. A frictional driving mechanism comprising a rotary driver, an idler wheel, means for forcing it normally into light frictional engagement with the driver, a driven element resting on the idler wheel, and a movable support for said wheel whereby its frictional contact with said driver is increased when a load is thrown onto the driven element.

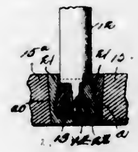
[Claims 6 to 9 not printed in the Gazette.]

1,168,211. FURNACE-BRICK. WILLIAM J. HILLIS, Johnstown, Pa., assignor to Hillis-Simler Brick Company, Johnstown, Pa. Filed Nov. 2, 1914. Serial No. 869,953. (Cl. 106—9.)

A brick formed of ground flint, plastic clay, carborundum, and binding clay in about the following proportions;—ground flint 20%, plastic clay 10%, carborundum 30%, binding clay 40%.

1,168,212. APPARATUS FOR SWAGING SEAMLESS CROWNS. GAILORD M. HINER and LOGAN L. HIDY, Jeffersonville, Ohio. Filed Feb. 10, 1915. Serial No. 7,426. (Cl. 113—39.)

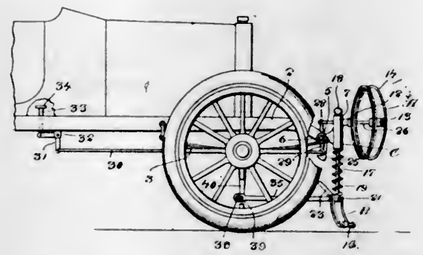
1. An apparatus for forming seamless crowns which comprises a sectional outer die, a sectional inner die, an expanding tool adapted to engage the inner surfaces of the inner die for crowding them outward to form a crown between the inner and outer dies, said expanding tool having a wedge-shaped end, and said inner die being recessed to receive the wedge.



2. An apparatus for swaging seamless crowns comprising a bed block having a recess therein and formed of two sections, means for holding said sections together, a die made in two sections and fitted in the aperture between the bed block sections, an inner die, and an expanding tool to fit between the two members of the expanding die and crowd the members outward against a crown blank between the inner and outer dies.

3. An apparatus for forming seamless crowns comprising a press having a shaft mounted therein, a spring for raising said shaft, a cam lever for depressing said shaft, a bed block, an outer die mounted in the bed block, an inner die mounted in the outer die, and an expanding tool adapted to enter between the inner dies, said expanding tool having a wedge-shaped end to force the inner die members outward and form a crown between said inner dies and outer dies.

1,168,213. FENDER. WLADIMIR HOFFMANN, Chicago, Ill. Filed Apr. 26, 1915. Serial No. 23,912. (Cl. 105—130.)



1. In a fender for automobiles, the combination of a shackle rod passing through both knuckles at the forward joints between the chassis and front body-supporting springs, a tubular trip shaft mounted to turn on said rod, fender supporting brackets held by said rod in fixed relation to the chassis, an upper resilient fender section supported by said brackets, means actuated by said upper fender section for rocking said trip shaft, a lower drop fender section guided and supported by said bracket, and means whereby said drop fender section may be upheld and released by said trip shaft.

2. In a fender for automobiles, the combination of a shackle rod passing through both knuckles at the forward joints between the chassis and front body-supporting springs, a tubular trip shaft mounted to turn on said rod, fender supporting brackets held by said rod in fixed relation to the chassis, an upper resilient fender section supported by said brackets, means actuated by said upper fender section for rocking said trip shaft, a lower spring depressed drop fender section guided and supported by said brackets, and means whereby said drop fender section may be upheld and released by said trip shaft.

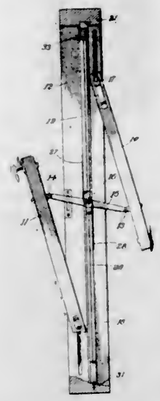
3. In a fender for automobiles, the combination of a shackle rod passing through both knuckles at the forward joints between the chassis and front body-supporting springs, a tubular trip shaft mounted to turn on said rod, fender supporting brackets held by said rod in fixed relation to the chassis, an upper resilient fender section supported by said brackets, means actuated by said upper fender section for rocking said trip shaft, a lower drop fender section guided and coöperating members on said trip shaft and drop fender section whereby said drop fender section may be upheld and released by said trip shaft.

4. In a fender for automobiles, the combination of a shackle rod passing through both knuckles at the forward joints between the chassis and front body-supporting springs, a tubular trip shaft mounted to turn on said rod, fender supporting brackets held by said rod in fixed relation to the chassis, an upper resilient fender section supported by said brackets and embodying a spring sustained impact bar, means actuated by said impact bar for rocking said trip shaft, a lower drop fender section guided and supported by said brackets, and means whereby said drop fender section may be upheld and released by said trip shaft.

5. In a fender for automobiles, the combination of a shackle rod passing through both knuckles at the forward joints between the chassis and front body-supporting springs, a tubular trip shaft mounted to turn on said rod, fender supporting brackets held by said rod in fixed relation to the chassis, an upper resilient fender section supported by said brackets, means actuated by said upper fender section for rocking said trip shaft, a lower drop fender section guided and supported by said brackets, means whereby said drop fender section may be upheld and released by said trip shaft, and links permitting said drop fender section to move downwardly and also acting as thrust resisting elements for said drop fender section when depressed.

[Claims 6 and 7 not printed in the Gazette.]

1,168,214. SCREENING FOR BALANCED WINDOWS. WALDO S. KELLOGG, New York, N. Y. Filed Nov. 7, 1913. Serial No. 799,673. (Cl. 156—14.)



1. In combination with a window frame, of a pair of sashes capable of being bodily raised and lowered therein, the upper sash being provided at its top and the lower sash at its bottom with means for pivotal engagement with the frame, a balance lever pivoted between its ends to the frame and at its ends to the upper and lower sashes, respectively, and upper and lower screens for said window connected to each other between the meeting rails of the sashes.

2. In combination with a window frame, of a pair of sashes capable of being bodily raised and lowered therein,

the upper sash being provided at its top and the lower sash at its bottom with means for pivotal engagement with the frame, a balance lever pivoted between its ends to the frame and at its ends to the upper and lower sashes, respectively, parting strips for said sashes, and upper and lower screens for said window in contact with the said parting strips.

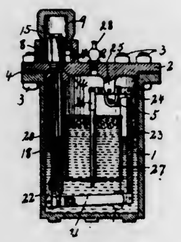
3. In combination with a window frame, of a pair of sashes capable of being bodily raised and lowered therein, the upper sash being provided at its top and the lower sash at its bottom with means for pivotal engagement with the frame, a balance lever pivoted between its ends to the frame and at its ends to the upper and lower sashes, respectively, parting strips for said sashes, and upper and lower screens located in the plane of the parting strips and provided with a connection to each other between the meeting rails of the sashes.

4. In combination with a window frame, of a pair of balanced sashes capable of being bodily raised and lowered simultaneously in said frame, parting strips for said sashes, and upper and lower screens for said window frame in contact with said parting strips and connected to each other between the meeting rails of the sashes.

5. In combination with a window frame, of a pair of balanced sashes capable of being bodily raised and lowered in said frame, balanced arms pivoted to the frame and to the said sashes, and upper and lower screens located between said sashes and provided with recesses for the balanced arm so that the latter will be located normally in the same vertical plane with said screens.

[Claims 6 to 10 not printed in the Gazette.]

1,168,215. STEAM-TRAP. WILLARD A. KITTS, Sr., Oswego, N. Y. Filed May 13, 1914. Serial No. 838,350. (Cl. 137—103.)

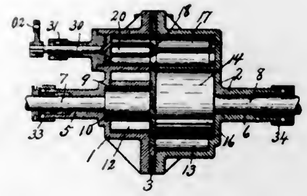


1. In a steam trap, a main receptacle having an inlet and an outlet, a cover for the main receptacle having a valve chamber communicating with the outlet, said cover having vertically alined openings through the lower and upper walls of the valve chamber, a cap for the upper opening screwed upon the cover, a valve case screwed into the lower opening and extending upwardly into the upper opening, a bushing screwed into the upper end of the valve case and provided with a passage therethrough communicating with the valve chamber, said bushing having its lower end provided with a valve seat, a valve coöperating with the seat to control the outflow of the water of condensation, a valve rod detachably connected to the valve and extending into the interior of the main receptacle, a lever fulcrumed on the underside of the cover, a float-bucket supported by the lever with one side thereof under the inlet to allow the water of condensation to flow thereinto, and connections between the lever and valve rod for operating the valve.

2. In a steam trap, a main flanged receptacle having an inlet and outlet diametrically opposite each other, directly under the flange, a cover therefor, provided with an integral hollow boss placed on a line diagonal with the line of the inlet and outlet connections to the trap and a passage from said integral hollow boss cored in the cover diagonally back to and meeting the diametrical line of the inlet and outlet connections and then downward through the flange to the outlet connection, a hollow screw cap screwing into said integral hollow boss; a lever fulcrumed on the cover, a float-bucket carried by the lever in such position as to receive the inflowing water from the inlet, a valve controlling the flow of water from the interior of the receptacle to the outlet, a weighted member connected to said lever to counterbalance the float bucket, a separate lever connected to the weighted member, and a valve rod connecting the separate lever to the valve.

3. In a steam trap, a main flanged receptacle having an inlet and outlet diametrically opposite each other and directly under the flange, a cover therefor, provided with an integral hollow boss placed on a line diagonal with the line of the inlet and outlet connections to the trap and a passage from said integral hollow boss cored in the cover diagonally back to and meeting the diametrical line of the inlet and outlet connections and then downward through the flange to the outlet connection, a hollow screw cap screwing into said integral hollow boss, a lever fulcrumed on the cover, on the same diametrical line as the hollow integral boss and diagonally with the line of the inlet and outlet ports, and a float-bucket carried by the lever in such position as to receive the inflowing water from the inlet, a valve controlling the flow of water from the interior of the receptacle to the outlet, a weighted member connected to said lever to counterbalance the float-bucket, a separate lever connected to the weighted member, and a valve rod connecting the separate lever to the valve.

1,168,216. HYDRAULIC POWER TRANSMISSION. WILLARD E. LAPE, Syracuse, N. Y., assignor of one-half to William J. Lewis, Syracuse, N. Y. Filed Jan. 24, 1913. Serial No. 743,908. (Cl. 138—3.)



1. In hydraulic power transmission, the combination, with a rotary impeller and a coaxial rotary motor each having a pair of passages leading from opposite sides thereof, of a valve chamber parallel with the axis of the motor and impeller and located between the passages of each pair, said valve chamber having one set of diametrically opposite ports communicating with the passages of the impeller and another set of diametrically opposite ports communicating with the passages of the motor, and a rotary valve in the valve chamber controlling the ports of both sets and having means for connecting the impeller ports when adjusted to one position and separate means for cutting off communication between the motor ports when in such position.

2. In hydraulic power transmission, a casing having separate compartments end to end, an impeller in one compartment and a coaxial motor in the other compartment, a valve chamber common to both compartments and having one set of ports communicating with the impeller chamber at opposite sides of the impeller and another set of ports communicating with the motor chamber at opposite sides of the motor, and a rotary valve in the valve chamber parallel with the axis of the impeller and motor and provided with a transverse passage for connecting the ports of the impeller chamber and movable into and out of registration with said ports.

3. In hydraulic power transmission, a casing having an impeller chamber and a motor chamber arranged end to end and a valve chamber parallel with and at one side of the first named chambers and provided with separate sets of diametrically opposite ports, those of one set communicating with opposite sides of the impeller chamber and those of the other set communicating with opposite sides of the motor chamber, a rotary impeller in the impeller chamber, a rotary motor in the motor chamber, and a rotary valve in the valve chamber having means for cutting off direct communication between the motor ports without closing the same, said valve having a diametric passage for connecting the impeller ports and movable to opposite sides of said impeller ports to permit communication between the motor ports and impeller ports at opposite sides of the valve and independently of said passage.

1,168,217. NUMBER LICENSE-TAG. WALLACE C. LYON, Hyattsville, Md. Filed Sept. 8, 1915. Serial No. 49,593. (Cl. 40—63.)



1. A main plate having a fixed color and bearing identification characters, in combination with an auxiliary plate, the opposite faces of which are of different colors and both differing from the color of the main plate and each of the faces bearing a fiscal date, said auxiliary plate being adapted to be superimposed upon and secured in contact with the main plate so as to present one of the fiscal dates upon the auxiliary plate, substantially as described.

2. A main plate having a fixed color and bearing identification characters, in combination with an auxiliary plate, the opposite faces of which are of different colors and both differing from the color of the main plate and each of the faces bearing a fiscal date, said auxiliary plate being adapted to be superimposed upon and permanently secured in contact with the main plate so as to present either of the fiscal dates upon the auxiliary plate, substantially as shown and described.

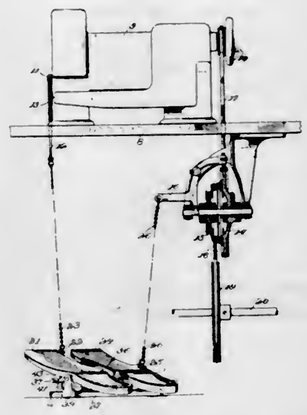
1,168,218. TREADLE. ARTHUR A. MERRITT, Worcester, Mass., assignor to Wilcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Aug. 4, 1910, Serial No. 575,513. Renewed Aug. 1, 1912. Serial No. 712,773. (Cl. 74—81.)

1. The combination of two independently movable treadles, a treadle frame or base on which they are mounted, and locking-means also mounted on said base beneath said treadles and actuated upon operation of either treadle to lock the other treadle.

2. The combination of two independently movable treadles, a treadle frame or base on which they are mounted, a locking-device common to both treadles mounted on said frame beneath the treadles and actuated by the operation of either treadle from a non-locking to a locking position with relation to the other treadle and thereby lock said other treadle against operation.

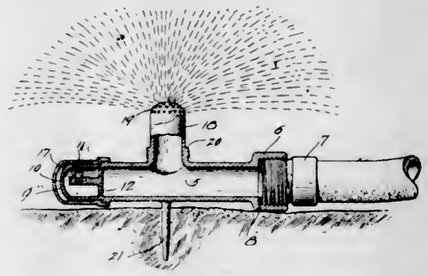
3. The combination of two independently movable treadles and a pivotal support for the same, a locking-device common to both treadles and positioned beneath the same, and a depending part on each treadle acting upon the operation of either treadle to actuate said locking-device from a non-locking to a locking position with relation to the other treadle and thereby lock said other treadle against operation.

4. The combination of two independently movable treadles, a pivotal support for the same, a locking-device common to both treadles and positioned beneath the same, spring-means for normally holding and returning said locking-device to a non-locking position relative to both treadles, and means associated with each treadle acting upon the operation of either treadle to actuate said locking-device from its non-locking to a locking position relative to the other treadle and thereby lock said other treadle against operation.



5. The combination of two independently movable treadles, a treadle-frame or base on which said treadles are pivotally mounted, a locking-device common to both treadles and mounted on the base beneath the treadles, spring-means normally holding and returning said locking-device to a non-locking position relative to both treadles, and means associated with each treadle acting upon the operation of either treadle to actuate said locking-device from its non-locking to a locking position relative to the other treadle and thereby lock said other treadle against operation.

1,168,219. SPRINKLER. FRANKLIN B. MILLER, Los Angeles, Cal. Filed May 28, 1913. Serial No. 770,524. (Cl. 137—80.)

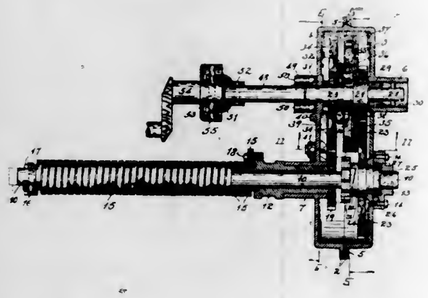


In a device such as described the combination with a hollow body portion having means at one end thereof for engaging a source of fluid supply, outlet nozzles extending integrally from the body and communicating therewith, one in alinement with the body and the other at right angles thereto, said nozzles being of corresponding shape and size and including tubular members having

rounded ends and enlarged shoulders provided with exterior threads adjacent the inner ends of the nozzles, and a removable cap for alternately closing the nozzles including a tubular member closed at its outer end and interiorly threaded at its inner end for engaging the threads upon said shoulders and a ring formed within said closure for engaging the exterior surface of the nozzles and adjacent sides of the shoulders forming a tight joint.

1,168,220. [WITHDRAWN.]

1,168,221. ENGINE-STARTER. EDWARD H. OVERHOLT, Galesburg, Ill. Filed Oct. 2, 1914. Serial No. 864,625. (Cl. 123—187.)



1. In combination in an engine-starter, an engine-shaft, a motor-shaft, a spring-shaft parallel with the motor-shaft, a spring coiled on the spring-shaft, a crank-sleeve rotatable on the spring-shaft and operable by said spring, a pinion fixed on said sleeve, and starter elements interposed between said motor-shaft and spring-shaft, said motor-shaft adapted to be actuated by said engine-snait, said starter elements adapted to be actuated by said cranking-pinion, said spring-shaft adapted to be actuated by said starter elements, and said spring adapted to be wound by said spring-shaft.

2. In combination in an engine-starter, an engine-shaft, a motor-shaft connected therewith, a spring-shaft parallel with the motor-shaft, a spring coiled on the spring-shaft, a cranking-sleeve on said spring-shaft and connected with one end of said spring, the other end of the spring fixed to said spring-shaft, a pinion fixed on said sleeve, and starter elements interposed between said pinion and motor-shaft and actuable by said spring to ultimately actuate the engine-shaft.

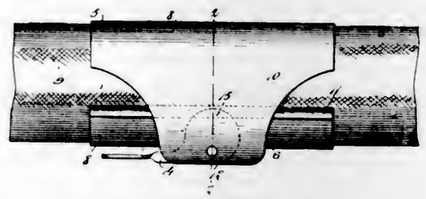
3. In combination in an engine-starter, an engine-shaft, a motor-shaft connected therewith, a spring-shaft, a torsion spring coiled longitudinally thereof and thereon, a cranking-sleeve on said spring-shaft and operable by said spring, a pinion fixed on said sleeve, and starter elements interposed between said spring-shaft and motor-shaft, said engine-shaft adapted to actuate the motor-shaft, said motor-shaft adapted to actuate said starter-elements, and said starter-elements adapted to store energy in said spring.

4. Combined in an engine-starter, a spring-shaft, a torsion-spring coiled longitudinally thereof and thereon, a motor-shaft, and means interposed between said shafts whereby either may impart rotary motion to the other, said means including a friction-drum and a friction-dog normally in contact with said drum and operable by said spring.

5. In an engine-starter, a spring-shaft, a spring coiled thereon, a clutch-member fixed on said shaft, a clutch-member adapted for engagement with the one recited, a motor-shaft, and starter elements interposed between said spring and motor-shaft, said spring adapted to elongate and thereby draw one of said clutch-members out of engagement with the other.

[Claims 6 to 43 not printed in the Gazette.]

1,168,222. HOSE-MENDING DEVICE. JOHN E. PECK, Logan, W. Va. Filed Oct. 8, 1912. Serial No. 724,534. (Cl. 137—33.)



A hose mending device comprising hinged arcuate sections, one of which is resilient, one of said sections having a hook flange on its free edge, the other section having a rigidly attached longitudinal tongue, and a cam carried by said tongue and arranged to engage the flange.

1,168,223. OPAQUE STENCIL-PAPER AND PROCESS FOR MAKING IT. CHARLES J. PEMBROKE, Rochester, N. Y. Filed Apr. 18, 1914. Serial No. 832,960. (Cl. 41—46.)



1. The process of making flexible opaque stencil paper having an opaque coating which can be removed at a single stroke of the stylus which consists in first making a translucent paper non-absorbent, then coating said paper with an opaque coating that will adhere to said paper without penetrating the fiber of the paper said coating being as flexible as the paper but little enough to be practically all removed from the paper by a single stroke of the stylus.

2. The process of making opaque stencil paper, having an opaque coating which can be removed at a single stroke of the stylus which consists in first covering a translucent paper with a waterproof covering, then coating said paper with an opaque coating that will adhere to said paper without penetrating the fiber of the paper or interfering with its flexibility, said coating being brittle enough to be practically all removed from the paper by a single stroke of the stylus.

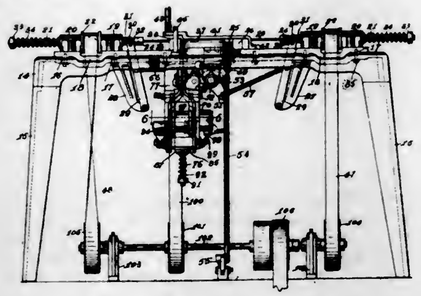
3. An article of manufacture consisting of a paper web impregnated with suitable material to make it more translucent and then made waterproof by a suitable coating and then coated on one side thereof with an opaque coating capable of being removed at a single stroke of a stylus.

4. An article of manufacture consisting of a translucent paper web made waterproof by a suitable coating and then coated on one side thereof with an opaque coating capable of being removed at a single stroke of a stylus.

5. An article of manufacture consisting of a translucent paper web made water proof by a translucent coating and then coated on one side with a combination of waxy material and opaque pigment.

[Claims 6 and 7 not printed in the Gazette.]

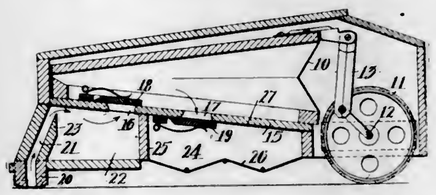
1,168,224. BORING-MACHINE. JOHN D. PUFF, East St. Louis, Ill. Filed Sept. 10, 1912. Serial No. 719,642. (Cl. 144—112.)



1. A boring machine comprising a bed plate mounted upon standards, tool plates laterally adjustably mounted on the bed plate, a material plate located on the bed plate between the tool plates, tool spindles mounted in bearings carried by the tool plates, bifurcated levers connected to the tool spindles by which the same are advanced forwardly bringing the bits carried thereby in contact with the edge of the material to be bored, pivoted spring clamping arms for supporting the material on the material plate, two vertical tool spindles suspended beneath the bed plate and adjustably mounted and means for elevating the same at a proper period to bore vertical holes in the material and a clutch mechanism by which one set of the tool spindles is automatically released in advance of the other set, the other set continuing forward making one continuous hole through the material, and means for releasing and automatically returning all of the bits to their starting position.

2. A boring machine comprising a plurality of horizontally arranged rotating and adjustable spindles, bits carried thereby for boring holes through the edge of the material located between the bits, a pair of rotating adjustably mounted vertical spindles, bits carried thereby and arranged to bore vertical holes in the material, and a rock arm mechanism for advancing the bits in contact with the material, a clutch for automatically releasing one set of the horizontal bits in advance of the other so as to prevent the point of the bits from contacting during their operation, substantially as specified, and means for returning the remaining bits to their starting position.

1,168,225. CARPET-CLEANER. FRANK J. QUIST, Worcester, Mass. Filed Oct. 18, 1913. Serial No. 796,032 (Cl. 15—60.)



1. In a carpet cleaner, the combination of a casing, supporting wheels at one end thereof, a nozzle for supporting the other end of said casing, means whereby the air and dust from the nozzle are conducted directly into the casing, and a dust separating chamber located directly under the casing between the nozzle and wheels and receiving air and dust from the casing, said chamber having a bottom filtering wall constituting the outlet thereof located near the plane of the bottoms of the wheels and nozzle.

2. In a carpet cleaner, the combination of a casing, a nozzle at one end and supporting wheels at the other end, bellows in said casing connected with said wheels for operation thereby, a dust chamber located under the bellows between the nozzle and wheels and having a screen constituting the bottom and the outlet thereof, said bellows having valves for the conduction of air to the bellows from the nozzle and to the dust chamber from the bellows.

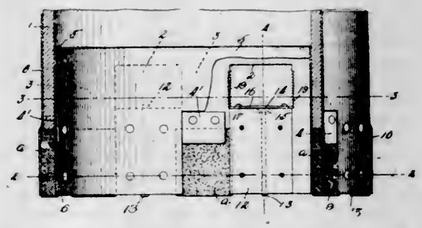
3. In a carpet cleaner, the combination of two casings detachably connected together, one above the other, a bellows located in the upper casing, wheels connected with the upper casing for supporting one end of the apparatus and connected with the bellows for operating it, the lower casing being open at the top and fitting the bottom of the upper casing and having a nozzle at the end opposite the wheels, a dust separating chamber between the nozzle and wheels, and means whereby the air drawn in through the nozzle will be taken into the bellows and then forced out through the dust separating chamber.

4. In a carpet cleaner, the combination of two casings, an upper one and a lower one, operating wheels carried by one of the casings, the lower casing having a nozzle at the end opposite the wheels and provided with an open-topped dust separating chamber having an external filtering wall, and means whereby the rotation of said wheels will cause air to be drawn into the upper casing through said nozzle and forced out through said dust separating chamber.

5. In a carpet cleaner, the combination of two casings, an upper one and a lower one, operating wheels carried by one end of the upper casing, the lower casing having a nozzle at the end opposite the wheels and provided with an open-topped dust separating chamber having an external filtering wall, means whereby the rotation of said wheels will cause air to be drawn in to the upper casing through said nozzle and forced out through said dust separating chamber, and means for detachably securing the lower casing to the upper casing.

[Claims 6 and 7 not printed in the Gazette.]

1,168,226. WELL-DRILLING APPARATUS. ED RAND, Charleston, W. Va. Filed June 18, 1914. Serial No. 845,891. (Cl. 255—72.)



1. In a well drilling apparatus, the combination with a core barrel, of cutting elements associated therewith, and adjustable bracing and reinforcing means for said cutters.

2. In a well drilling apparatus, the combination with a core-barrel, of cutting elements associated therewith, and means extending within a short distance of the lower edges of the cutting elements to brace the same against lateral forces, and means automatically operable as said elements wear to shift the position of said means to maintain the projecting relation of said elements.

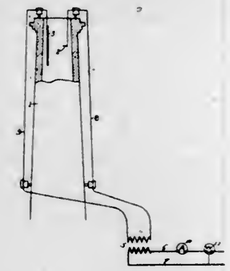
3. In a well drilling apparatus, the combination with a core-barrel, of cutting elements associated therewith, means for mounting said elements on the barrel with the lower edges of the elements projecting beyond said mounting means, and means to maintain such relation between the elements, and mounting means regardless of the reduction in length of the elements caused by wear.

4. In a well drilling apparatus, the combination with a core-barrel, of cutting elements associated therewith, means for mounting said elements on the barrel with the lower edges of the elements projecting beyond said mounting means, and means automatically operable as the elements wear to maintain the projecting relation of the same.

5. In a well drilling apparatus, the combination with a core-barrel, of cutting elements associated therewith, inner and outer sleeves slidably mounted on the core-barrel and serving to brace the cutting elements against lateral forces, the lower edges of said sleeves extending within a short distance of the lower edges of said cutting elements so that the latter project slightly beyond the former, and means automatically operable as the cutting elements wear to shift said sleeves upwardly and thereby maintain the projecting relation of said elements.

[Claims 6 and 7 not printed in the Gazette.]

1,168,227. METHOD AND MEANS FOR INDICATING SUSPENDED MATTER IN GASES. WALTER A. SCHMIDT, Los Angeles, Cal., assignor to International Precipitation Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 30, 1913. Serial No. 745,092 (Cl. 73—51.)



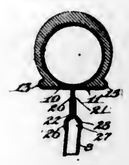
1. Means for indicating the amount of suspended matter in gases, comprising electrodes, flue means inclosing said electrodes for directing a current of gas between the electrodes, a high tension electric circuit connected to said electrodes and provided with means for applying high potential difference to said electrodes to produce silent discharge into the gas between the electrodes, and current indicating means responsive to the current in said high tension circuit, due to said silent discharge.

2. Means for indicating the amount of suspended matter in gases, comprising electrodes, means for directing a current of gas between the electrodes, a high tension alternating current circuit connected to said electrodes to produce a silent discharge therebetween, a transformer having its secondary connected to said high tension circuit, an alternating current supply circuit connected to the primary of said transformer, and a current indicating means in said supply circuit to indicate the amount of silent discharge between the electrodes.

3. The method of indicating the amount of suspended matter in gases, which consists in causing a current of such gases to pass between electrodes maintained at a high potential difference, sufficient to produce silent discharge into the gas but not sufficient to produce disruptive discharge in material amount between the electrodes, and measuring the amount of such discharge.

4. The method of indicating the amount of suspended matter in gases, which consists in causing the gas to pass between electrodes, applying to said electrodes high tension alternating electric potential difference, sufficient to cause silent discharge into the gas between the electrodes, but not sufficient to cause disruptive discharge in material amount between the electrodes, and measuring the amount of such silent discharge.

1,168,228. WHEEL. ARTHUR M. STANLEY, Lynn, Mass., assignor to Warren K. Blodgett, Cambridge, Mass. Filed Aug. 7, 1914. Serial No. 855,622. (Cl. 21—69.)

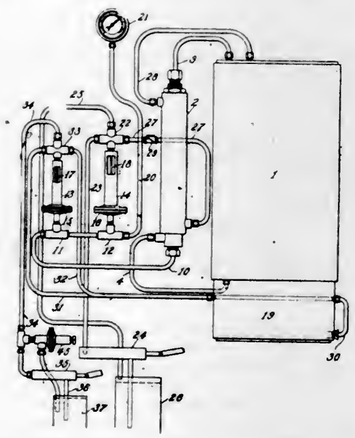


1. A metal wheel comprising a rim including two parts having flanges in contact with each other and having oppositely disposed recesses pressed in the flanges to form pockets between them, said pockets having narrow flat end portions and round mouth portions, and tubular spokes having flattened ends received in the flat end portions of the pockets and having short lengths of their tubular shanks received and supported in the round mouths of the pockets, said spokes being welded in the pockets by welded regions extending through the flattened ends of the spokes and including the metal of the pocket walls.

2. A metal wheel comprising a rim including two rings of substantially L-shape cross section having inwardly extending flanges in contact with each other, the flanges being provided with recesses pressed therein to form pockets, and tubular spokes having flattened ends received in the pockets and secured therein by welded areas extending through the flattened ends of the spokes and the flanges.

3. A metal wheel comprising a rim including two rings of substantially L-shape cross section, each ring made of a bar of angle metal bent into circular shape and butt-welded, the rings having inwardly extending flanges in contact with each other and provided with recesses pressed therein to form pockets between the flanges, and spokes having flattened ends received and welded in the pockets.

1,168,229. WATER-LEVEL INDICATOR AND AUTOMATIC FEED-WATER AND FUEL CONTROLLING DEVICE FOR STEAM-BOILERS. FRANCIS E. STANLEY, Newton, Mass., assignor to Stanley Motor Carriage Company, a Corporation of Massachusetts. Filed July 18, 1907. Serial No. 384,377. (Cl. 236—14.)

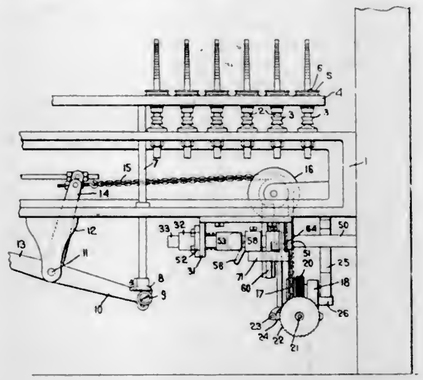


In a fuel supply controlling device for steam boilers, a water column; pipe lines connecting the upper and lower ends of the water column with the top and bottom of the boiler respectively; a water space contiguous to and outside the water column through which the feed water is pumped; a thermostatic tube closed at one end and inclosed in said water column; a pipe line connecting said tube with a diaphragm-controlled by-pass fuel valve; said fuel valve; a continuously operated fuel pump; pipe lines connecting said fuel by-pass valve with the fuel pump and a burner; said burner; all arranged so that the fuel supply will be cut off through the action of a low water condition in the boiler.

1,168,230. PROCESS OF RECOVERING RUBBER FROM VULCANIZED-RUBBER WASTE. GRAY STAUNTON, Muskegon, Mich. Filed June 20, 1912. Serial No. 704,734. (Cl. 18—52.)

The process of reclaiming rubber, from vulcanized rubber waste, which consists in comminuting said waste, incorporating therewith, by mixing, a substantially dry, pulverulent reagent, having chemical affinity for a vulcanizing agent contained in said waste, and while in a dry, loose, pulverulent state heating the mixture to a temperature not to exceed 300 degrees Fahrenheit, by application of dry heat thereto.

1,168,231. BUILDER MECHANISM FOR SPINNING-MACHINES. WILLIAM PARKER STRAW, Manchester, N. H., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed May 12, 1914. Serial No. 838,142. (Cl. 242—43.3.)



1. In a machine of the class described comprising a series of bobbin spindles and means for rotating the same, thread guiding means, builder mechanism for causing relative movement between the bobbins and the thread guiding means to cause a traverse of winding upon the bobbins, means for successively disengaging said builder mechanism from its source of power, and for positioning the same to a starting position whereby upon starting the machine an initial partial traverse toward the base of the bobbin will be laid before the first upward traverse is begun.

2. In a machine of the class described comprising a series of bobbin spindles and means for rotating the same, thread guiding means, means including a builder arm and actuating means therefor for causing relative movement between the thread guiding means and the bobbin to effect a traverse of the winding upon the bobbins, successively operable means for disenagaging said builder arm actuating means from its source of power and for positioning the same relatively to the builder arm to a starting position intermediate of the limits of movement of the builder arm whereby the initial movement of the builder arm will effect a single partial traverse of the winding toward the base of the bobbins and thereafter will cause a full upward and downward traverse of the thread upon the bobbins.

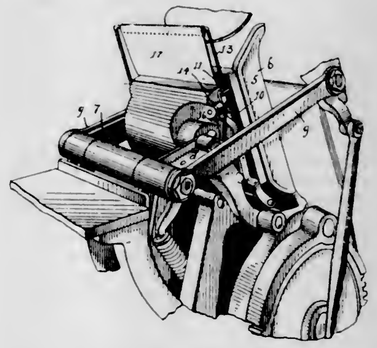
3. In a spinning machine a series of bobbin spindles and means for rotating the same, a ring rail provided with rings and travelers coöperating with said bobbin to wind the thread thereupon, a builder arm connected to said ring rail means for actuating the same to raise and lower said ring rail, means for disengaging said actuating means from its source of power and means operable thereby for positioning the builder arm actuating means relatively to the builder arm to a starting point intermediate of the limits of movement of said builder arm whereby the rings upon the ring rail will be below the feeling point upon the bobbin so that upon the starting of the machine a single partial traverse will be laid toward the bose of the bobbin and thereafter full upward and downward traverse will be effected.

4. In a spinning machine comprising a series of bobbin spindles and means for rotating the same, a ring rail provided with rings and travelers coöperating with said bobbins to wind the thread thereupon, a builder arm connected to said ring rail, means for actuating the same to raise and lower said ring rail, means for disengaging the builder arm actuating mechanism from its source of power and means operable thereby, means for positioning the same relatively to the builder arm to a starting position above the lowest point of movement of the builder arm whereby the initial movement of the builder arm will effect a single downward traverse of the winding toward the base of the bobbins and thereafter will cause the full upward and downward traverse of the thread upon the bobbins.

5. In a spinning machine having a series of spindles adapted to receive bobbins and means for rotating the same, coöperating thread guiding and twisting means, means for relatively moving said twisting means and said spindles to effect the traverse of the winding upon the bobbin including a builder arm, a cam for operating the same, and means for positioning said cam to a starting position, comprising means for releasing said cam from its driving shaft and means for rotating said cam to position the same relative to the builder arm to cause the latter to be engaged by a surface of said cam at a point in advance of the crest thereof whereby the first winding movement will be a partial downward traverse.

[Claims 6 to 11 not printed in the Gazette.]

1,168,232. SAFETY DEVICE FOR PRINTING-PRESSES. WILLIAM H. SYLVESTER, Philadelphia, Pa., assignor to the Firm of William H. Sylvester & Sons, Philadelphia, Pa. Filed Sept. 30, 1915. Serial No. 53,208. (Cl. 101—15.)

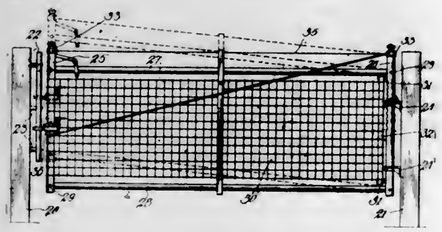


1. The combination with the reciprocating platen of a printing press and reciprocating arms carrying said platen,

of guides carried by the sides of said platen, a U shaped guard carried in said guides, pulleys, and cords passing over said pulleys one of the ends of which are attached to the lower ends of said guard and the other ends of which are attached to said reciprocating carrying arms.

2. The combination with the reciprocating platen of a printing press and the reciprocating arms carrying the same, of frames secured to the ends of said platen, guides carried by said frames, a U shaped guard the ends of which pass through said guides, a curtain secured to the upper part of said guard and to said platen, pulleys carried by said frames, and cords passing over said pulleys and secured at one end to said frame and at the other to said platen carrying arms.

1,168,233. ADJUSTABLE AND CONVERTIBLE GATE. JOSEPH H. TAUSCH, Waukegan, Ill., assignor of one-half to George Gorton, Racine, Wis. Filed Jan. 21, 1915. Serial No. 3,428. (Cl. 39—78.)



1. In a gate, the combination with a front end bar and a rear end bar, of upper and lower rails pivotally connecting the end bars, a link pivotally connected at one of its ends to one of the end bars, a spring actuated member loosely embracing one of said rails and pivotally connected to the other end of said link.

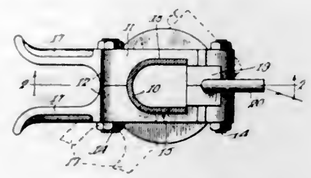
2. In a gate, the combination with a front end bar and a rear end bar, of upper and lower rails pivotally connecting the end bars, a link pivotally connected at one of its ends to one of the end bars, a member pivotally connected at one of its ends to the other end of said link and having parts extended above and below said rail, and a gripping or biting member interposed between each of the said upper and lower parts and the rail.

3. In a gate, the combination with a front end bar and a rear end bar, of upper and lower rails pivotally connecting the end bars, a link pivotally connected at one of its ends to one of the end bars, a spring actuated member loosely embracing one of said rails and pivotally connected to the other end of said link, and biting members interposed between the upper and lower parts of the last named member and said rail.

4. In a gate, the combination with a front end bar and a rear end bar, of upper and lower rails pivotally connecting the end bars, net work located in the space bounded by said rails and bars and connected to said end bars and rails a truss-brace comprising a pair of members extending transversely of said upper and lower rails with one on each side thereof, said members being slightly bowed coextensive of their lengths from each other, and clamping means positioned above and below each of the rails to hold said brace-members in engagement with said rails at substantially one point on each side thereof to provided a movable connection between the brace and rails.

5. In a gate, the combination with a front end bar and a rear end bar, of upper and lower rails pivotally connecting said end bars, net work located in the space bounded by said rails and bars a pair of members substantially semi-circular in cross section extended transversely of said upper and lower rails with one on each side thereof, said members being slightly bowed co-extensive of their lengths from each other and presenting their flat surfaces to said rails and a pair of bolts extended through said members, one of said bolts above and the other below each of the rails to hold said brace-members in engagement with said rails at substantially one point on each side thereof to provided a movable connection between the brace and rails.

1,168,234. GATE-LATCH. JOSEPH H. TAUSCH, Winthrop Harbor, Ill., assignor of one-half to George Gorton, Racine, Wis. Filed May 29, 1915. Serial No. 31,135. (Cl. 70—28.)



1. A latch for a gate consisting of a bracket adapted to be mounted around one of the upright bars of the gate and having an annular bearing provided with a vertical recess in the rear portion of its periphery, a pair of spaced arms rotatably mounted on said bearing and having a vertical recess adapted to register with the recess of said bearing, and a handled and spring actuated bolt carried by the bracket to engage said recesses.

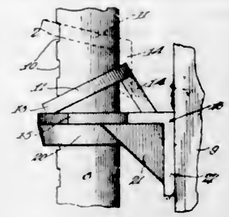
2. A latch for a gate consisting of a bracket adapted to be mounted on and around one of the upright bars of the gate and having an annular bearing provided with a recess in the rear portion of its periphery, a pair of spaced arms rotatably mounted on said bearing, said arms having a recess adapted to register with the recess of said bearing and also provided on each side of its recess with a segmental recess, and a spring actuated bolt carried by the bracket to engage said recesses.

3. A latch for a gate, consisting of a bracket adapted to be mounted on and around one of the upright bars of the gate and having an annular bearing provided with a recess in its periphery, a pair of spaced apart arms rotatably mounted on said bearing, said arms having a recess in their rear portions and another recess in their front portions to register alternately with the recess of said bearing, and a spring-actuated bolt carried by the bracket to engage said recesses.

4. A latch for a gate, consisting of a bracket adapted to be mounted on and around one of the upright bars of the gate and having an annular bearing provided with a vertical recess in the rear portion of its periphery, said bracket having a vertically extended housing at its rear portion provided with an opening in its upper portion, a pair of arms spaced apart at one of their ends and rotatably mounted on said bearing, said arms having a recess in their rear portions and another recess in their front portions to register alternately with the recess of said bearing, said arms also having a segmental recess on each side of the recess in the rear portion thereof, and a spring actuated bolt located in said housing to engage said recess extended at its upper end through the opening of said housing.

1,168,235. GATE-HINGE. JOSEPH H. TAUSCH, Winthrop Harbor, Ill., assignor of one-half to George Gorton, Racine, Wis. Filed Aug. 30, 1915. Serial No. 47,925. (Cl. 16—113.)

1. A hinge for gates consisting of a bracket having means to secure it to a post and provided with a vertically disposed opening for the reception and operation of an upright member, said member being connected to the gate and movably located within said opening, a holding member for the gate bar consisting of an orificed plate or member having an extension projected therefrom at an angle thereto and adapted to surround the gate bar above said bracket and to rest on the latter.



2. The combination with a post, of a pair of vertically apertured brackets adjustably secured one above the other to said post, a gate having an upright end bar located in the apertures of said brackets and having a series of recesses located one above the other, a holding or locking member surrounding the gate bar and located on the upper surface of one of said brackets, said holding member having an extension projected downwardly therefrom to rest on said bracket to normally hold the holding member at an angle on the gate bar.

1,168,236. TOOTHLESS SUSPENDER-BUCKLE. ABRAM VAN BRUNT, Brooklyn, N. Y., assignor to Waterbury Buckle Company, Waterbury, Conn., a Corporation. Filed Sept. 26, 1913. Serial No. 791,904. (Cl. 24—191.)



1. In a rustless suspender buckle, the combination with a loop like clamping bar member having a horizontal clamping bar at its lower end, of a clamping side arm member including two side arms that extend through the loop and having lower yieldable free end portions that extend across the clamping bar and which co-act with the clamping bar of the clamping bar member, and a lever member with which the upper ends of the said clamping bar member and clamping side arm member are eccentrically connected for moving the said members in the performance of their clamping functions.

2. In a rustless suspended buckle, the combination with a loop like clamping bar member having a horizontal clamping bar at its lower end, of a side clamping arm member including two side arms having yieldable free end portions that extend across and co-act with the clamping bar of the clamping bar member, the lower ends of the said members having interlocked sliding coupling connection, and a lever member eccentric with the upper ends of the said clamping bar member and clamping side arm member.

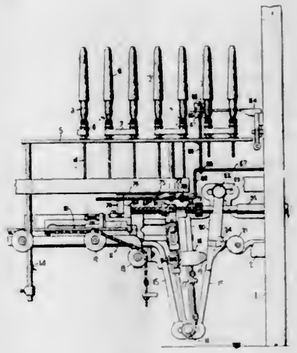
3. In a rustless suspender buckle, the combination with a loop like clamping bar member having a horizontal clamping bar at its lower end, of a clamping side arm member including two yieldable arms which extend through the loop and below the said clamping bar and having free end portions that are curved across and adapted to co-act therewith in clamping the webbing and the said members having interlocked sliding connection, and a lever member with which the upper ends of the said clamping bar member and clamping side bar member are eccentrically connected.

4. A buckle comprising a sliding side arm clamp, a clamping bar member and lever member, the clamp having a top member in pivotal connection with the lever member, end bars connected to the top member and including yieldable side arms and clamping members, the clamping bar member having a lower bar arranged at the rear of the end portions of the side arm clamping members, and loops to guide the side arm clamping members, upright bars rising from the loops out of line with the lower bar, and top pintle ends in pivotal engagement with the lever member and eccentric with relation to the pivotal bar of the side arm clamping member and the lever member.

5. A buckle comprising a lever member, a clamping bar member, a side clamping arm member, said side clamping arm member having a top bar in pivotal connection with the lever member, the clamping bar member including a lower horizontal clamping bar, end loops, end bars and pintle ends pivotally connected to the lever member said end bars being bent so as to throw the said parts into different planes, the said side arm members being guided through the loops of the clamping bar member and having their end portions disposed inward and across the front of the horizontal clamping bar of the clamping bar member, the two said clamping members being eccentric one with relation to the other so that in the operation of the said lever member the two said clamping bars will be moved to and from each other to clamp the webbing therebetween.

[Claim 6 not printed in the Gazette.]

1,168,237. SPINNING-MACHINE. AMARIAH AVERY, Manchester, N. H., assignor, by mesne assignments, to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 12, 1913. Serial No. 800,653. (Cl. 118—12.)



1. In a spinning machine having a series of bobbin spindles, means for rotating the bobbins thereon, a lifter rail and means for actuating the same including builder mechanism for causing a traverse of yarn upon the bobbin, stop mechanism comprising means automatically operable during the downward movement of the traverse of the yarn upon the bobbin to stop the machine to retain said lifter rail at a predetermined point of the traverse of the yarn upon the bobbin well below the highest point of traverse and means for restoring the builder mechanism to starting position without altering the position of traverse whereby the first full layer of filling laid upon the bobbin will be wound from the bottom upwardly.

2. In a spinning machine having a series of bobbin spindles, means for rotating the bobbins thereon, a lifter rail and means for actuating the same including builder mechanism for causing the traverse of yarn upon the bobbin, stop mechanism comprising adjustable means automatically operable during the downward movement of the traverse of the yarn upon the bobbin to stop the machine to retain said lifter rail at a predetermined point of the traverse of the yarn upon the bobbin below the highest point of traverse and means for restoring the builder mech-

anism to starting position without altering the position of traverse whereby the first full layer of filling laid upon the bobbin will be wound from the bottom upwardly.

3. In a spinning machine having a lifter rail, a series of bobbins mounted thereon, means for rotating the bobbins, builder mechanism for actuating said lifter rail, stop mechanism comprising means automatically operable to stop the machine to retain said lifter rail at the lowest point of traverse of the yarn upon the bobbin, means for restoring the builder mechanism to starting position without altering its position of traverse, whereby the first layer of filling laid upon the bobbin will be wound from the bobbin upwardly.

4. A spinning machine having a series of bobbin spindles, a lifter rail and means for actuating the same including traverse controlling mechanism, stop mechanism comprising a weight actuated belt shifting mechanism, means adapted to be operated by the traverse controlling mechanism during the downward traverse of the yarn upon the bobbin to release said weight mechanism to stop the machine with the lifter rail at a point intermediate of the limits of traverse of the yarn upon the bobbin and means for restoring the lifter rail actuating mechanism to starting position without altering the position of the rail in respect to the point of traverse upon the bobbin at which it is arrested.

5. In a spinning machine having a series of bobbin spindles, means for rotating bobbins thereon, a lifter rail and means for acutating the same, stop mechanism operated by the traverse controlling mechanism to stop said actuating mechanism to retain said lifter rail at a predetermined elevation comprising a weight actuated belt shifting mechanism, a latch adapted to support said weight and to release the same to actuate said belt shifting mechanism, a draw bar provided with a collar connected to said latch, a detent carried by said traverse controlling mechanism adapted to engage said collar to release said latch from engagement with said weight, whereby upon the descent of the weight the belt will be shifted from a tight to a loose pulley and means actuated by the falling weight to release said detent.

[Claims 6 to 11 not printed in the Gazette.]

1,168,238. RESILIENT WHEEL. JOSEPH RENÉ AYOTTE, Chicago, Ill. Filed Jan. 22, 1914. Serial No. 813,635. (Cl. 152—53.)



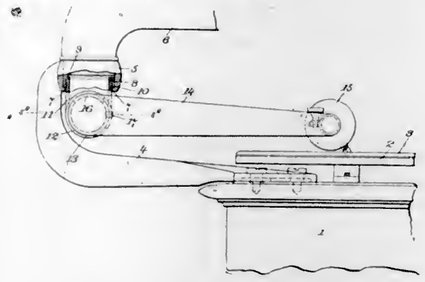
1. A resilient wheel comprising in combination a felly, an axial casing, tubular spokes, the opposite ends of which respectively abut against the felly and casing and project therethrough, a screw bolt removably clamping the spoke to the felly, a hollow screw-bolt clamping the opposite end of said spoke to the casing, plungers and springs for actuating said plungers confined by said spokes, said plungers having their bearing in the hollow screw-bolts and provided with a collar forming a stop by its engagement with the hollow screw-bolt limiting the stroke of the plunger.

2. A resilient wheel comprising in combination a hub, hollow spokes rigidly secured thereto, yielding plungers supported by said hub, angular in cross section, and an angular bearing therefor preventing a lateral movement of the plungers.

3. A resilient wheel comprising in combination a hub, hollow spokes rigidly mounted upon said hub, a collar screwed in the inner end of said spokes forming a bearing for the plunger, and whereby said collar is prevented from being accidentally turned or loosened and is locked by the plunger in its operative position.

4. A resilient wheel comprising in combination a hub, hollow spokes rigidly fixed thereto, an angular plunger, a bearing for said plunger in the hub, a collar screw-threaded in the inner end of the spoke forming an angular bearing for the plunger, a shoulder on said plunger for which the collar forms a stop and a spring seated thereon surrounding the plunger, and an abutment for said spring at the opposite end of and beyond the plunger.

1,168,239. TALKING-MACHINE. HENRY BLAKE BABSON, Chicago, Ill., and ANDREW HAUG, Caldwell, N. J., assignors, by mesne asignments to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Original application filed Mar. 7, 1905, Serial No. 248,872. Divided and this application filed July 17, 1909, Serial No. 508,117. Renewed Oct. 28, 1911. Serial No. 657,393. (Cl. 181—3.)



1. In a talking machine, the combination of a horn, a supporting bracket for said horn and a sound conveying tube supported in suspended relation by said bracket and as a continuation of the horn, and having its end nearer to said horn directed laterally, said tube being closed at said laterally directed end and provided adjacent to the closed end with an opening for the passage of sound.

2. In a talking machine, the combination of a horn, and a sound conveying tube supported in suspended relation as a continuation of the horn, and a connecting member interposed between the sound conveying tube and the horn, said connecting member being closed at one end and provided with an opening adjacent to the closed end thereof to slidably receive said tube, said tube being rotatable in said member.

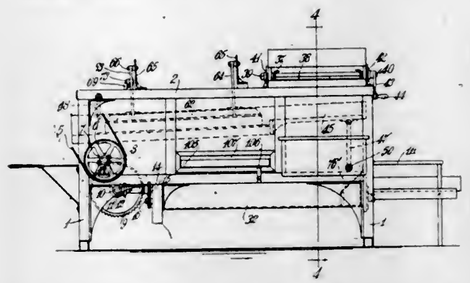
3. In a talking machine, the combination of a horn, a supporting bracket for said horn, a sound conveying tube supported in suspended relation by said bracket and as a continuation of said horn, said bracket being provided with a bearing, and a member rotatably mounted on said bearing and having said tube rotatably fitted in a lateral opening thereof.

4. In a talking machine, the combination of a horn, a supporting bracket for said horn, a sound conveying tube supported in suspended relation by said bracket and as a continuation of said horn, said bracket being provided with an annular bearing portion between said horn and said sound conveying tube, and a tubular member rotatable upon said bearing end having said tube fitted free to rotate in a lateral opening thereof.

5. In a talking machine, the combination of a horn, a sound conveying tube supported in suspended relation as a continuation of the horn and each being rotatably movable in planes at right angles to each other, and a member interposed as a connection between the horn and the sound conveying tube, said member serving as a turning axis for the sound conveying tube in both vertical and horizontal directions and having a lateral opening in which said tube is rotatably fitted.

[Claims 6 to 20 not printed in the Gazette.]

1,168,240. STARCH-MACHINE. ALONZO LINTON BAUSMAN, Springfield, Mass., assignor to National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 17, 1915. Serial No. 21,996. (Cl. 107—3.)

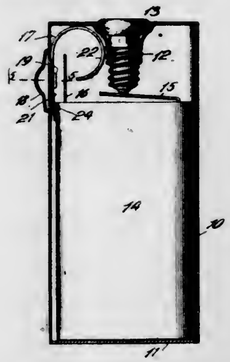


1. A starch machine, comprising, in combination, a device to empty trays filled with candies and starch, means to separate the candies from the starch, a receptacle for starch arranged below said means, a trackway above the receptacle arranged to receive a tray to be filled, an elevator to convey starch from the receptacle to a tray on the trackway, and semi-automatic means to move a tray along the trackway to a position below the elevator, said means involving a conveyer, a device operable at will to actuate the conveyer, and automatic mechanism to stop the conveyer after the tray has been moved a predetermined distance, said conveyer characterized by automatic operation in cycles which may be started manually by said device, when desired.

2. A semi-automatic starch machine, comprising, a reciprocatory sieve, a dumper adapted to empty trays filled with candies molded in starch upon the sieve, the latter arranged to separate the starch and candies, a receptacle below the sieve to receive starch falling therefrom, a trackway above the receptacle, an opening formed in the casing to permit an empty tray to be placed on the trackway, an elevator arranged to convey starch from the receptacle to a tray on the trackway, and means to move the tray from said opening to said elevator, said means comprising a conveyer having lugs to engage the tray, driving devices for the latter involving a clutch, a lever manually operable to actuate the clutch, a latch to hold the clutch in its moved position, and a device automatically operable by one of the lugs to release the clutch, all constructed and arranged so that the conveyer may be automatically operated in cycles which may be started by the operator at will and automatically terminated and reset for a subsequent cycle after the tray has been moved a definite distance.

3. A starch machine, comprising, means to separate candies and starch, a dumper above said means arranged to empty trays of candies molded in starch upon said means, a trackway below the latter, a receptacle below the trackway to receive starch from said means, mechanism to convey starch from the receptacle to a tray on the trackway, an opening adjacent said mechanism to permit a tray to be placed on the trackway, and means to move a tray so placed to said mechanism, comprising, a conveyer having lugs to engage the tray, means to drive the conveyer involving a clutch, a lever manually operable to actuate the clutch, a latch to hold the clutch in its moved position, a device automatically operable by one of said lugs to release the clutch after the tray has been moved to said mechanism, and means on said lever to prevent the insertion of a tray in said opening while the conveyer is in motion, all constructed and arranged so that the conveyer may be automatically operated in cycles which may be started by the operator at will and automatically terminated and reset for a subsequent cycle after the tray has been moved a definite distance.

1,168,241. FLASH-LIGHT. BERNARD BENEDICT, New York, N. Y., assignor, by mesne assignments, to Beacon Miniature Electric Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 8, 1914. Serial No. 860,542. (Cl. 175—282.)



1. In a portable electric flash light comprising an exterior casing and a normally free terminal adjacent to a side wall of said casing, a circuit closing mechanism comprising a slide mounted on the exterior of the casing and a bowed spring within the casing connected with said slide, said spring from its shank end curving upwardly adjacent to the end of the casing and then downwardly and outwardly in a lateral direction toward the inner face of the second batery terminal.

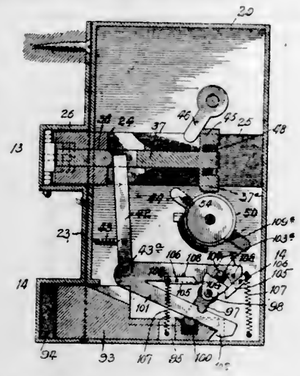
2. In a portable electric flash light comprising an exterior casing and a normally free terminal adjacent to a side wall of said casing, a circuit closing mechanism comprising a slide mounted on the exterior of the casing, a bowed spring within the casing connected with said slide, said spring from its shank end curving upwardly adjacent to the end of the casing and then downwardly and outwardly in a lateral direction toward the inner face of the second battery terminal, and interlocking means on the casing and spring for detachably locking the spring and slide in their operated position.

3. In a portable electric flash light comprising an exterior casing and a normally free terminal adjacent to a side wall of said casing, a circuit closing mechanism comprising a slide mounted on the exterior of the casing and having side lugs extending through parallel slots in said casing and a bowed spring within the casing having its shank end secured against the same and to said slide by said lugs, said shank end of the spring having recesses in its opposite edges to receive said lugs and said lugs being bent over on said shank end, and said spring from its shank end curving upwardly adjacent to the end of the casing and then downwardly and outwardly in a lateral direction toward the inner face of the second battery terminal.

1,168,242. LOCK. RICHARD P. BENNETT, Chicago, Ill. Filed Sept. 9, 1911. Serial No. 648,562. (Cl. 70—46.)

1. In a lock, the combination of a plurality of controllers mounted to slide in the direction of the axis of their rotation and rotatable and slidable by a key, a slidable locking bar having notches which permit the controllers to be rotated when the controllers are shifted by the key into alinement with the notches, means on one of the control-

lers for shifting said bar to bring its notches into position to release the controllers, when both the controllers and the bar have been shifted, a locking-bolt and bolt-shifting means operable by the rotation of the key.



2. In a lock, the combination of a plurality of controllers mounted to slide in the direction of the axis of their rotation and rotatable and slidable by a key, a plurality of locking devices, each provided with means for locking the controllers, one of said devices being movable relatively to the other, means for shifting one of the devices by a controller to shift said device into position to release the controllers when they and the movable device have been shifted, the locking bolt, and bolt shifting means operable by the rotation of the key.

3. In a lock, the combination of a case, a plurality of rotatable controllers mounted to slide in the direction of the axis about which they rotate and having means disposed at different distances from said axis and adapted to be engaged and shifted relatively to one another by stepped abutments on a key, a plurality of separate retracting springs for each of the controllers, means for holding the controllers against rotation except when they have been shifted into a certain relation, a locking-bolt and bolt-shifting means operable by a key.

4. In a lock, the combination of a case, a plurality of controllers mounted to slide in said case and relatively to one another in the direction of the axis about which they rotate, said controllers having sleeves slidable in one another and engageable by a key, a lock-bar for holding the controllers against rotation and having notches through which the controllers may rotate, and a locking-bolt operable when said controllers are positioned to pass into said notches.

5. In a lock, the combination of a case, a plurality of rotatable and slidable disks longitudinally extending sleeves on the disks respectively slidable in one another, and engageable by stepping abutments on a key, means for holding the disks against rotation except when they have been shifted to a certain relative position, and a locking-bolt operable by the key when the controllers are rotated.

[Claims 6 to 50 not printed in the Gazette.]

1,168,243. LINOTYPE-MACHINE. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed July 5, 1912. Serial No. 707,930. (Cl. 199—7.)

1. In a linotype machine, the combination of a removable matrix magazine, and a relatively stationary escapement mechanism separable from but forming a part of the magazine when in operative position, from a point above the escapement mechanism to the discharge end of the magazine.

2. In a linotype machine, the combination of a removable matrix magazine, and a relatively stationary matrix-controlling escapement mechanism coöperative therewith and embodying a plate separable from the magazine and forming an uninterrupted matrix guide past the escapement mechanism when the magazine is in operative position.



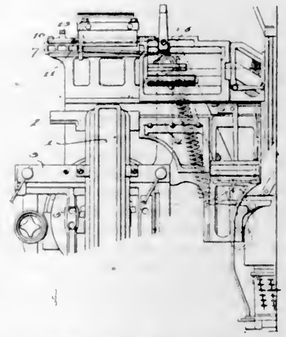
3. In a linotype machine, the combination of a removable matrix magazine having a channeled bottom for guiding the matrices, and a relatively stationary escapement mechanism embodying a plate channeled to form an uninterrupted continuation of the channeled bottom of the magazine past the escapement mechanism.

4. In a linotype machine, the combination of a matrix magazine having a channeled matrix-guiding bottom a portion of which is cut away adjacent to the delivery mouth of the magazine, and escapement mechanism embodying a plate adapted to removably fit said cut-away portion of the magazine bottom and forming an uninterrupted continuation of the magazine bottom past the escapement mechanism, and means for preventing spilling of matrices endwise and dropping of matrices from the cut-away portion of the magazine when the latter is removed from the escapement mechanism.

5. In a linotype machine, the combination of matrix-controlling escapement mechanism, and a magazine bodily removable with respect thereto and embodying a section movable relatively to the body of the magazine to disengage the matrices in said section from the escapement mechanism.

[Claims 6 to 12 not printed in the Gazette.]

1,168,244. LINOTYPE-MACHINE. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 30, 1912, Serial No. 734,325. Renewed Aug. 17, 1915. Serial No. 46,016. (Cl. 199—7.)



1. In a linotype machine, the combination of a matrix-carrying elevator, a transfer slide adapted to coöperate therewith, a latch coöperative automatically with the slide to lock the same in retracted position and releasable by the elevator when the latter reaches substantially its uppermost position, and a limiting stop adapted when in its operative position to arrest the movement of the elevator and thereby avoid releasing of the latch.

2. In a typographical machine, the combination of a matrix carrier to transport the matrices to and from the mold, a receiving device, means for transferring the matrices from the carrier to the receiving device, and locking devices controlled by the matrix carrier for preventing the operation of said transfer means unless the parts are in a proper registration with each other.

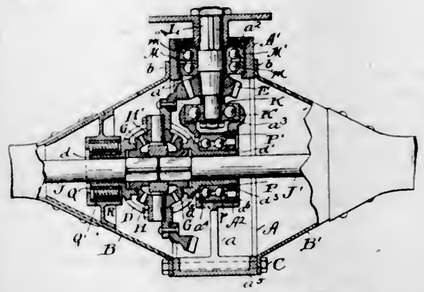
3. In a typographical machine, the combination of a matrix carrier to transport the matrices from one position to another in the machine after casting for distribution, a receiving device, means for transferring the matrices from the carrier to the receiving device, and locking devices controlled by the matrix carrier for preventing the operation of the transfer means unless said parts are in proper operative relation to each other.

4. In a typographical machine, the combination of the elevator to present the matrices for casting and movable vertically to deliver them for distribution, means for transferring the matrices from the elevator when in its uppermost position, and locking means controlled by the elevator to prevent the operation of said transfer means when the elevator fails to rise to the proper extent.

5. In a typographical machine, the combination of the elevator to present the matrices for casting and movable vertically to deliver them for distribution, means for transferring the matrices from the elevator when in its uppermost position, and locking devices to prevent the operation of said transfer means, the said devices adapted to be released by the elevator when it reaches the said position.

[Claim 6 not printed in the Gazette.]

1,168,245. REAR AXLE. ALANSON P. BRUSH, Detroit, Mich. Filed Feb. 1, 1915. Serial No. 5,421. (Cl. 74—34.)



1. In a rear axle structure, the combination of a hollow frame having a forwardly extended tube, a driving shaft which extends through said tube, a bearing in said tube in which said driven shaft is mounted, which bearing sustains radial loads and end thrusts in both directions, a driving bevel pinion fixed to said driving shaft within said hollow frame member, a differential drum within the hollow frame member having a driven bevel gear which meshes with said pinion, two bearings for said differential drum located on opposite sides of said driven gear and supported by said hollow frame member, one of said bearings being a master bearing constructed to sustain radial loads and end thrusts and located on the same side of said driven gear as that on which said pinion lies, and the other bearing being a mere steadying bearing which sustains radial loads, but does not sustain end thrusts in either direction

2. In a rear axle structure a hollow frame comprising a central member and two end members, all detachably connected together, said central member having an integral forwardly projecting tube and an integral internal sleeve so placed that its axis intersects the axis of said tube at right angles, a cylindrical tubular bracket within and fixed to one of said end members with its axis substantially alined with that of said sleeve, a driving shaft which extends through said forwardly projecting tube and is rotatably mounted therein, a driving bevel pinion secured to said driving shaft within the hollow frame member, a differential drum having a driven bevel gear secured to it in mesh with said driving pinion, two bearings for said differential drum located on opposite sides of said driven gear, one of said bearings being within and supported by said sleeve, and being adapted to sustain radial loads and end thrusts in both directions, and the other bearing being supported within said tubular bracket and being constructed to sustain radial loads but not to sustain end thrusts in either direction.

3. In a rear axle structure the combination of a hollow frame comprising a central member, and two end members detachably connected with said central member, said central member being formed with an integral forwardly extended tube having an inwardly projecting annular flange and with a bearing sleeve having an inwardly extended flange, which sleeve is so located that its axis intersects the axis of said tube at right angles, a driving shaft which extends through said forwardly projecting tube, a beveled driving pinion fixed to said driving shaft within the hollow frame member, ring bearings of which the inner ring is fixed upon said driven shaft and the outer ring is fitted into said tube in contact with the inwardly projecting flange thereof, means to hold said parts in contact, a differential drum having a driven gear which meshes with said driving pinion, and having also two alined hubs, one of which is provided with a shoulder, ring bearings for one of said hubs, the outer ring of which is fixed upon the shouldered hub in contact with the shoulder, and the outer ring of which is fitted in said bearing sleeve in contact with the inwardly projecting flange thereof, means for holding said contacting parts in contact, a tubular bracket fixed to one of the end members of the hollow frame and a bearing for the other hub of the differential drum supported within said tubular bracket.

4. In a rear axle structure the combination of a hollow frame comprising a central member and two end members, all detachably connected together, and said central member having an integral forwardly projecting tube, a driving shaft extended through said tube and a bearing in which said driving shaft is mounted which bearing sustains both radial loads and end thrusts in both directions, a driving bevel pinion fixed to the projecting inner end of said driving shaft, a differential drum carrying a driven bevel gear for meshing with said driving pinion and having two bearings located on opposite sides of said driven gear, one of said bearings being a master bearing which sustains radial loads and end thrusts in both directions and is supported by and within said central frame member in substantially such position that its center is coincident with the point of intersection between the axes of said driving shaft and differential drum, and the other bearing of the differential drum being a mere steadying bearing which sustains radial loads but does not sustain end thrusts in either direction.

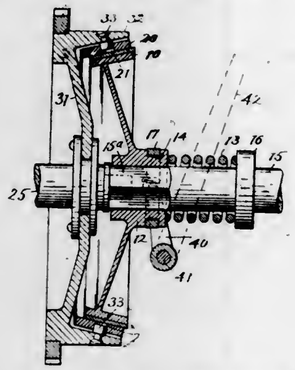
5. In a rear axle structure the combination of a hollow frame comprising a central member and two end members, all detachably connected together, and said central member having an integral forwardly projecting tube, a driving shaft extended through said tube and a bearing in which said driving shaft is rotatably mounted which bearing sustains both radial loads and end thrusts in both directions, a driving bevel pinion fixed to the projecting inner end of said driving shaft, a differential drum carrying a driven bevel gear for meshing with said driving pinion and having two bearings located on opposite sides of said driven gear, one of said bearings being a bearing which sustains radial loads and end thrusts in both directions, which bearing is located on the same side of the driven gear as that on which the driving shaft lies, and is supported wholly by the central frame member, and the other bearing being within, and supported by, the adjacent end of one of the end members.

1,168,246. CONE-COUPLING. ALANSON P. BRUSH, Detroit, Mich. Filed Apr. 5, 1915. Serial No. 19,124. (Cl. 192—8.)

1. In a cone coupling, the combination of two relatively rotatable parts, viz., a conical member, and a warped cone ring, and means for forcing the opposed surfaces of these two members into contact with sufficient force to cause the warped cone ring to be bent toward the true conical form.

2. In a cone coupling, the combination of two relatively rotatable parts, viz., a conical member, and a

warped cone ring which is symmetrically warped successively away from and toward the axis of rotation, and means for forcing the opposed surfaces of these two members into contact with sufficient force to cause the warped cone ring to be bent toward the true conical form.



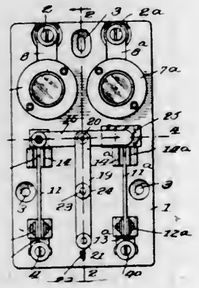
3. In a cone coupling, the combination of two relatively rotatable friction members, viz., a cone, and a warped cone-ring,—one of which is capable of movement in the direction of the axis of rotation, and means for moving the same toward and from the other member.

4. In a cone coupling, the combination of two relatively rotatable friction members, viz., a cone, and a warped cone ring,—one of which is capable of movement in the direction of the axis of rotation, a spring acting on said axially movable member to thrust it toward and into contact with the other member, and mechanism for moving said axially movable member in the reverse direction.

5. In a cone coupling, the combination of two relatively rotatable friction members, viz., a cone, and a warped cone ring,—an annular support for said ring, devices which connect said ring with said support at a plurality of separated points, and means for forcing the opposed surfaces of said two friction members into contact with sufficient force to cause the warped cone ring to be bent toward the true conical form.

[Claims 6 to 9 not printed in the Gazette.]

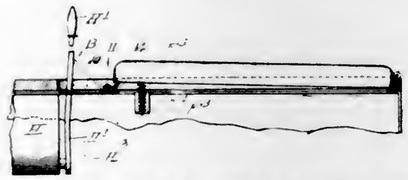
1,168,247. CUT-OUT AND SWITCH. JOHN J. BUERO, Charleston, S. C. Filed Apr. 21, 1914. Serial No. 833,336. (Cl. 175—30.)



1. In combination with a cut out switch, comprising an insulating base, and pairs of binding posts at the opposite ends of the base for connection with the supply wires, and the service wires respectively, a double pole single throw switch connected with the binding posts for the service wires, pairs of spring contact plates for engagement by the switch, said contact plates being connected with the adjacent binding posts of the first-named pair, and the switch being provided for connecting the last-named binding posts with the contact plates, a fuse plug arranged between each of the first-named binding posts and the adjacent pair of contact plates for the switch, and a protecting device for shunting an excess of current above a predetermined voltage from one pair of contact plates to the other or to the ground, and adapted to be brought into operation by the excess in voltage, said device comprising a conducting strip detachably connected with one pair of contact plates, and normally adapted to contact at the other end with the other pair, a plate of mica arranged between the strip and the said last named pair, and means for tensioning the pressure of the strip, said means comprising a second contact strip arranged longitudinally of the base and connected at one end to the first-named strip intermediate its ends, a binding post on the base for connection with a ground wire to which the other end of the last named strip is connected, and a set screw in connection with the base and engaging the last-named strip to vary the tension thereof.

2. In combination with a cut out switch, comprising an insulating base, and pairs of binding posts at the opposite ends of the base for connection with the supply wires, and the service wires respectively, a double pole single throw switch connected with the binding posts for the service wires, pairs of spring contact plates for engagement by the switch, said contact plates being connected with the adjacent binding posts of the first-named pair, and the switch being provided for connecting the last-named binding posts with the contact plates, a fuse plug arranged between each of the first-named binding posts and the adjacent pair of contact plates for the switch, and a protective device for shunting an excess of current above a predetermined voltage from one pair of contact plates to the other or to the ground, and adapted to be brought into operation by the excess in voltage, said device comprising a conducting strip detachably connected with one pair of contact plates, and normally adapted to contact at the other end with the other pair, a plate of mica arranged between the strip and the said last named pair, and means for tensioning the pressure of the strip.

1,168,248. CONTROLLER-LOCK FOR VEHICLES. GEORGE W. BULLEY, Chicago, Ill., assignor to Mercury Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 11, 1915. Serial No. 7,495. (Cl. 246—61.)



1. The combination of a vehicle, a controller having an operating lever, a seat for the vehicle, a locking plate normally in the path of said lever to prevent its operation, and means responsive to pressure on said seat for actuating said locking plate to release the controller lever.

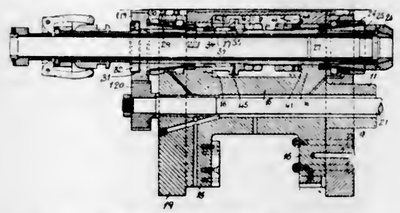
2. The combination of a vehicle seat, a controller lever positioned adjacent said seat, a hinged plate normally in the path of said lever to prevent its manipulation and having means co-acting with said seat responsive to pressure upon the seat for swinging said plate out of the path of the lever.

3. In a structure of the class described, the combination with a movable controller operating lever, a hinged plate pivoted adjacent said lever and normally interposed in the path of movement of said lever to lock the lever against operation, an operator's seat, and an arm on said plate and operable by the seat when depressed to swing the plate out of the path of said lever and release the lever.

4. The combination of a controller operating lever operable in a vertical plane, a plate pivotally mounted adjacent the lever to swing into and out of the path of movement of the lever, a hinged seat member adjacent said lever, and an extension on said plate operable when the seat is depressed to swing the plate out of the path of movement of said operating lever.

5. The combination of a support having an opening therein, a controller mounted on said support and having an operating lever projecting above and movable in said opening, a plate hinged on said support adjacent the lever and normally covering said opening, an extension on said plate, and a seat member hinged on the support and adapted when depressed to engage said extension and swing the plate away from the opening to release the lever.

1,168,249. SPINDLE-BEARING FOR MULTIPLE-SPINDLE METAL-WORKING MACHINES. FRANK L. CONE, Windsor, Vt., assignor to Windsor Machine Company, Windsor, Vt., a Corporation of Vermont. Filed Feb. 8, 1915. Serial No. 6,877. (Cl. 29—37.)



1. In a multi-spindle machine, a frame having a turret bearing, a turret journaled in said bearing, spindles passing through said turret in parallelism with the axis thereof, and bearings for said spindles supported by said turret and located beyond the ends of the turret bearings, whereby said spindle bearings may be of relatively large diameter.

2. In a multi-spindle machine, a frame having a turret bearing, a turret journaled in said bearing, spindles passing through said turret in parallelism with the axis thereof, end extensions formed on or secured to said turret, projecting beyond the turret bearing and of greater diameter than the turret, and spindle bearings mounted in said extensions in parallelism with the axis of the turret.

3. In a multi-spindle machine, a frame having a turret bearing, a turret journaled in said bearing, spindles passing through said turret in parallelism with the axis thereof, end extensions or disks formed on or secured to said turret and being located beyond the turret bearing and of greater diameter than the turret, said extensions or disks having cups or sockets formed in the outer faces thereof, and spindle bearing arranged in said cups or sockets.

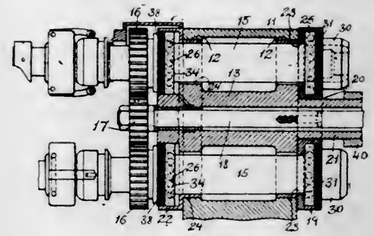
4. In a multi-spindle machine, a frame having a turret bearing, a turret journaled in said bearing, spindles passing through said turret in parallelism with the axis thereof, end extensions on said turret beyond the turret bearing, and having apertured cups or sockets in the outer faces thereof, and taper bearings for the spindles located in said cups or sockets.

5. The combination with work spindles and a turret having sockets in the end faces thereof, of lateral thrust bearings for said spindles, comprising internally tapered sleeves in said sockets and abutting against the end walls thereof, said sleeves flaring outwardly in opposite directions, and complemental externally and inwardly tapering sleeves, and end thrust bearings for said spindles bearing against said turret independently of the said sleeves.

[Claims 6 to 14 not printed in the Gazette.]

1,168,250. SPINDLE-BEARING FOR MULTIPLE-SPINDLE METAL-WORKING MACHINES. FRANK L. CONE, Windsor, Vt., assignor to Windsor Machine Company, Windsor, Vt., a Corporation of Vermont. Filed Feb. 8, 1915. Serial No. 6,878. Renewed Nov. 30, 1915. Serial No. 64,383. (Cl. 29—37.)

1. In a multi-spindle metal-working machine, a frame having a turret bearing, a turret journaled in said bearing and having end extensions beyond said bearing, spindles passing through said turret, and ball bearings supported by said turret extensions and located substantially beyond the ends of the turret bearing.



2. In a multi-spindle metal-working machine, a frame having a turret bearing, a turret journaled in said bearing and having end extensions beyond said bearing and overlapping the same, said extensions having apertures and sockets, ball bearings located in said sockets beyond the ends of said turret bearing, and spindles journaled in said ball bearings.

3. In a multi-spindle metal-working machine, a frame having a turret bearing, a turret journaled in said bearing, end extensions or disks formed on or secured to the ends of the turret and lying beyond the ends of the turret bearing, ball bearings mounted in the front end extension and arranged to resist lateral thrusts of the spindles, ball bearings mounted in the rear end extension to resist rear end thrusts of the spindles, and spindles journaled in said ball bearings.

4. In a multi-spindle metal-working machine, a frame having a turret bearing, a turret journaled in said bearing and having end extensions beyond said bearings, spindles passing through said turret, ball bearings placed in cups or sockets formed in the outer faces of said end extensions beyond the ends of the turret bearings, and spindles journaled in said bearings.

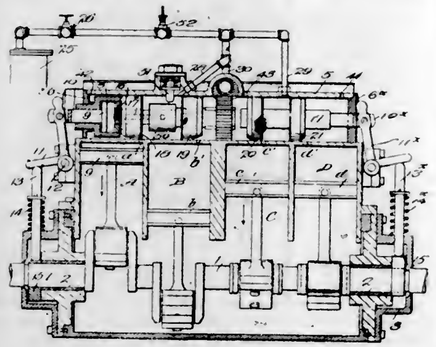
5. In a multi-spindle metal-working machine, a frame having a turret bearing, a turret journaled in said bearing and having end extensions beyond said bearing, spindles passing through said turret, ball bearings for said spindles supported by said end extensions, and each comprising a pair of opposing ball races, one on the turret and the other on said extension, and balls between said races, and means, one for each spindle, for simultaneously adjusting the races of the bearings for such spindle.

1,168,251. AIR-COMPRESSOR MOTOR. DAVID E. CROUSE and CHARLES G. EIDSON, Annapolis, and THOMAS DAVIS, Baltimore, Md. Filed July 23, 1914. Serial No. 852,677. (Cl. 230—37.)

1. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and an outlet check valve and each having a single port serving as an inlet port and an outlet port, a valve casing common to all of said cylinders, an individual piston valve in said valve casing for each of said ports, means for shifting said piston valves from one side of its individual port to the other when the device is being used as a motor, means for shifting the piston valves to cover certain of said ports when the device is being used as an air compressor, and automatic means for locking the piston valves which cover the ports against the pressure within the cylinders.

2. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and an outlet check valve, and each cylinder having a single port serving as an inlet port and an outlet port, a valve casing common to all of said cylinders, a shaft disposed therein, a plurality of piston valves carried by said shaft, means for moving the shaft longitudinally of its axis so

as to bring the valves into position to cover the ports when the device is used as an air compressor, an eccentric cam carried by said shaft, a spring pressed plunger arranged to engage said cam, and automatic means for rotating said shaft to bring the cam in position to lock the piston valves against pressure within the cylinder.



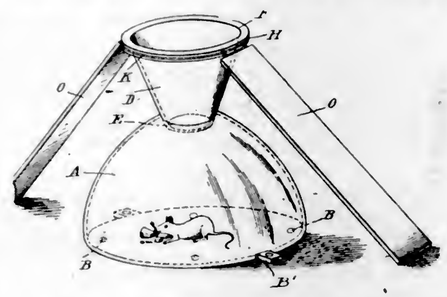
3. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and an outlet check valve, and each cylinder having a single port serving as an inlet port and an outlet port, a valve casing common to all of said cylinders, a shaft disposed therein, a plurality of piston valves carried by said shaft, means for moving the shaft longitudinally of its axis so as to bring the valves into position to cover the ports when the device is used as an air compressor, an eccentric cam carried by said shaft, a spring pressed plunger arranged to engage said cam, automatic means for rotating said shaft to bring the cam in position to lock the piston valves against pressure within the cylinder, said last named means comprising a segmental gear feathered to the shaft so as to rotate the shaft when the gear is rotated, but to permit the longitudinal movement of the shaft on its axis, and pneumatic means for operating the gear.

4. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and an outlet check valve, and each cylinder having a single port serving as an inlet port and an outlet port, a valve casing common to all of said cylinders, a shaft disposed therein, a plurality of piston valves carried by said shaft, means for moving the shaft longitudinally of its axis so as to bring the valves into position to cover the ports when the device is used as an air compressor, an eccentric cam carried by said shaft, a spring pressed plunger arranged to engage said cam, automatic means for rotating said shaft to bring the cam in position to lock the piston valves against pressure within the cylinder, said last named means comprising a segmental gear feathered to the shaft so as to rotate the shaft when the gear is rotated, but to permit the longitudinal movement of the shaft on its axis, an auxiliary air cylinder, a spring pressed piston disposed within said air cylinder and having an integral rack arranged to engage the gear, the admission of air into the auxiliary cylinder serving to rotate the gear in one direction and the withdrawal of air causing the rotation of the gear in the other direction through the expansion of the spring.

5. In a combined air motor and compressor, a plurality of cylinders each provided with an inlet check valve and an outlet check valve, each cylinder having a single port which serves as an inlet port and an outlet port, a valve casing common to all of said cylinders, a shaft disposed in said valve casing, a plurality of piston valves carried by said shaft, said piston valves each having a reduced peripheral portion, and automatic means for bringing said reduced peripheral portion in position to pass over said ports when the device is being used as a motor.

[Claims 6 to 9 not printed in the Gazette.]

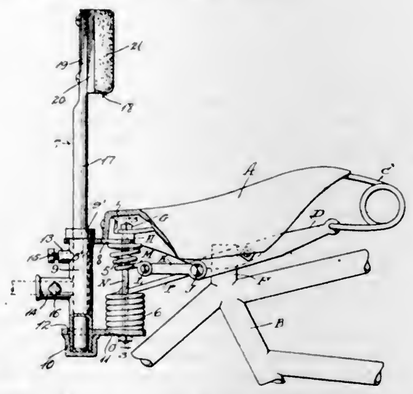
1,168,252. TRAP. CLARENCE A. ERDLEY, Mifflinburg, Pa. Filed Aug. 26, 1915. Serial No. 47,509. (Cl. 43—24.)



1. In a trap of the character described, a body portion having a perforated bottom provided with laterally extending apertured lugs, an opening in the upper part of the body portion, a funnel extending through the opening to a point within the body portion and its upper end provided with an outwardly extending flange, and a bridge connected to the outer edge of the funnel.

2. In a trap of the character described, an oval body portion having a perforated bottom, the outer edge of which is provided with laterally extended apertured lugs and at its apex provided with an opening, in combination with a funnel, the lower end of which projects through the opening in the body portion and is extended to a point within the chamber, the enlarged end of the funnel being provided with an outwardly extending flange, the outer edge of which is provided with a peripheral groove, a wire seated within the latter, and a bridge, having hinged connection with the wire within the groove.

1,168,253. BACK FOR MOTOR-CYCLE SADDLES. GRANT FRIEL, Los Angeles, Cal. Filed Aug. 5, 1912. Serial No. 713,230. (Cl. 208—138.)



1. A back for cycle saddles comprising the combination of a saddle having saddle bars, coiled springs connected to the rear ends of said saddle bars, bolts secured to said coiled springs, brackets secured to the upper ends of said bolts, links connecting said brackets to the saddle bars, springs connecting said brackets to the rear portion of the saddle, a pair of bracket plates supported on said last-named springs, a pair of bracket plates secured to the bolts and arranged below the first-named springs, tubular members carried by said bracket plates, and a back rest demountably carried by said tubular members.

2. A back rest for cycle saddles comprising the combination of a pair of saddle bars, a saddle carried thereby, coiled springs mounted on the rear ends of the saddle bars, upwardly extending bolts secured to the lower portion of said springs, brackets secured to the upper ends of said bolts, links connecting said brackets to the saddle bars, springs connecting said brackets to the rear portion of the saddle, bracket plates interposed between said last-named springs and the saddle having apertures therein, dependent tubular members projecting through the apertures in said plates and having a limited downward movement in relation thereto, bracket plates mounted on the lower ends of the bolts having apertures therein through which the lower portions of the tubular members extend, a pair of rods slidably mounted in said tubular members, and a back rest carried by said rods.

3. A back rest for cycle saddles comprising the combination of a pair of saddle bars, a saddle carried thereby, coiled springs mounted on the rear ends of the saddle bars, upwardly-extending bolts secured to the lower portion of the said springs, brackets secured to the upper ends of said bolts, links connecting said brackets to the saddle bars, springs connecting said brackets to the rear portion of the saddle, bracket plates interposed between said last-named springs and the saddle having apertures therein, dependent tubular members projecting through the aperture in said plates and having a limited downward movement in relation thereto, bracket plates mounted on the lower ends of the bolts having an aperture therein through which the lower portions of the tubular members extend, a pair of rods slidably mounted in said tubular members, a back rest carried by said rods, and means for adjusting the positions of said rods in relation to the tubular members.

1,168,254. SANITARY WRAPPER FOR BREAD AND THE LIKE. EMIL FRISCH and OSCAR C. MIESSLER, Chicago, Ill. Filed Mar. 9, 1914. Serial No. 823,337. (Cl. 229—87.)



1. A wrapper for baked commodities comprising a sheet of tissue provided with alternate longitudinally extending pervious and impervious sections.

2. A wrapper for baked commodities comprising a sheet of tissue provided with a plurality of alternate bands impregnated with paraffin.

3. A wrapper for baked commodities comprising a sheet of tissue provided with a plurality of alternate bands treated with a fusible impervious material.

1,168,255. PROCESS OF MANUFACTURING FERTILIZER CONTAINING POTASSIUM, NITROGEN, AND PHOSPHOROUS COMPOUNDS FROM MOLASSES REFUSE. EMILE HERZKA, Arecibo, Porto Rico, assignor to Abram I. Kaplan, New York, N. Y. Filed Jan. 25, 1915. Serial No. 4,365. (Cl. 71—6.)

1. The process of manufacturing fertilizer containing potassium, nitrogen, and phosphoric acid out of molasses refuse, consisting in concentrating the molasses refuse in a triple vacuum effect to 44° Baumé and then adding 30% to 50% of the weight of mineral phosphates, and in treating the resulting mixture with sulfuric acid of 66° Baumé.

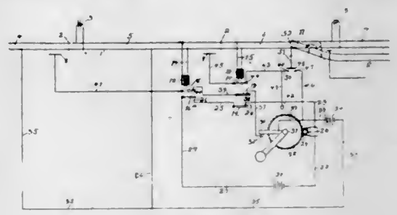
2. The process of manufacturing dry fertilizer from molasses refuse which consists in concentrating the refuse, adding phosphatic material, and treating the mixture with sulfuric acid.

3. The process of manufacturing dry fertilizer from molasses refuse which consists in concentrating the refuse, adding finely ground phosphatic material, and treating the mixture with sulfuric acid.

4. The process of manufacturing dry fertilizer which consists in taking concentrated molasses refuse, adding thereto a material rich in calcium phosphate and treating the resultant mixture with sulfuric acid.

5. The process of manufacturing dry fertilizer from molasses refuse which consists in concentrating the refuse, then adding from 30% to 50% of the weight of phosphate, and treating the mixture with a sufficient quantity of sulfuric acid to decompose the added phosphate and to change the potassium carbonate of the concentrated molasses refuse into potassium sulfate, substantially as described.

1,168,256. MEANS FOR AUTOMATICALLY CONTROLLING THE SPEED OF RAILWAY-VEHICLES. FRANK T. JONES, Baltimore, Md., assignor to The Jones Safety Train Control System Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 4, 1913. Serial No. 758,824. (Cl. 246—58.)



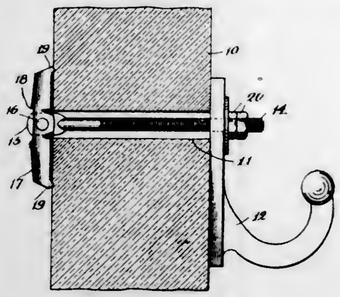
1. A safety device for railways wherein the vehicle is provided with a controlling device, a magnet to control said device, a contact shoe and a circuit normally including the shoe and magnet, the combination with two contact devices adjacent to the trackway and one in advance of another, of a current supply; a timing means; a connection normally maintained from the current supply through the timing means to one of the two contact devices; a normally broken means between the current supply and the other of said two contact devices; means for setting the timing means in motion and means after a predetermined interval of time from the starting of the timing means for completing the connection between the current supply and the other of said two contact devices.

2. A safety speed device for railways wherein the vehicle is provided with a controlling device, a magnet to control said device, a contact shoe and a circuit normally including the shoe and magnet, the combination with the track rails divided into insulated blocks or sections, of two contact devices each adjacent to a track section which is insulated from the other; a current supply; an electromagnet for each section and each magnet having an armature; a timing device; connections from one side of the current supply through the timing device while the latter is inactive through at least one armature and to one contact device; means for setting the timing device in motion upon the vehicle entering one track section and means actuated by the timing device only after a predetermined interval of time from the starting of the timing device for connecting the other contact device with one side of the current supply.

1,168,257. TOGGLE-BOLT. JOSEPH KENNEDY, New York, N. Y., assignor to J. Edward Ogden, Mountainville, town of Cornwall, N. Y. Filed Aug 28, 1915. Serial No. 47,897. (Cl. 85—3.)

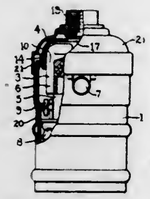
A toggle bolt comprising a stem and a toggle head connected to the stem at one end, said head having a forwardly extending curved portion at the point of connection with the stem, and end projections extending forwardly beyond the said curved portion and adapted to en-

gage the rear surface of a wall at a distance from the aperture therein through which the stem passes, and thus sup-



port the head, whereby the said curved portion is prevented from bearing against the edges of such aperture.

1,168,258. MEANS FOR INSULATING LAMP-SOCKETS AND THE LIKE. MARTIN MATSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 28, 1914. Serial No. 815,043. (Cl. 173—362.)



1. The combination with a lamp socket or similar casing including a cap, of a device provided with terminals for connection with line wires, and an insulating member carried by said device to insulate the line wires from said casing cap, one of said parts having a shoulder and the other having a resilient portion receiving said shoulder to secure the same together.

2. The combination with a metallic casing comprising a cap and shell having means for locking the same together, of an insulating base inclosed and supported within said casing, and an insulating lining of fiber-like material for said cap mounted on said base, said parts having snap engaging means, independent of said first-mentioned means, for securing said lining to said base.

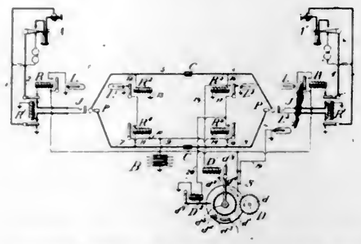
3. In a lamp socket or similar device, in combination, an insulating base having a peripheral transverse flange, said flange having a vertical recess therein, and an insulating member of fibrous material having a marginal ear with a cross head and connecting portion, the head of said ear engaging a transverse face of said base flange and the connecting portion of said ear fitting in said flange recess to hold said member and said base in fixed relation.

4. In a lamp socket or similar device, in combination, an insulating base having a terminal binding post accessible from the side of said base for connection to a line wire and having a recess above said binding post for receiving said wire, and an insulating lining having a marginal portion overlying said base recess for holding said wire therein.

5. In a lamp socket or similar device, in combination, an insulating base having a binding post for connection to a line wire and a groove thereabove for receiving said wire, and an insulating cover having a resilient marginal portion engaging said base for securing the same together and overlying said groove for holding said wire therein.

[Claim 6 not printed in the Gazette.]

1,168,259. TELEPHONE-EXCHANGE SYSTEM. JOSEPH L. WRIGHT, Cleveland, Ohio, assignor, by mesne assignments, to Edward E. Clement, Washington, D. C. Filed Oct. 15, 1908, Serial No. 457,929. Renewed June 2, 1915. Serial No. 31,790. (Cl. 179—9.)



1. A message registering system comprising means for interconnecting parties for message transmission, a motor mechanism, a timing mechanism, a special signal controlled by the timing mechanism, means automatically actuated in completing a message connection to engage the timing mechanism with the motor and at the termination thereof to disengage it therefrom, and means also automatically actuated at the beginning of a message connection and remaining actuated thereafter, for retaining the timing mechanism in its actuated or indicating position, substantially as described.

2. In a telephone exchange system, an operator's cord circuit having sleeve and tip relays and a bridged battery, a constantly driven motor mechanism and a time indicator normally disengaged therefrom and adapted to be held in a zero or non-indicating position, an electromagnet adapted to throw said indicator into engagement with the motor mechanism, a stop or detent for said timing mechanism, an electromagnet controlling the same, and circuit connections for said electromagnets controlled by the cord circuit relays, whereby the time indicator will be started when a called subscriber answers, will be stopped when he finally hangs up his receiver, and will be returned to zero when the connection with his line is broken, substantially as described.

3. In a telephone exchange system, line circuits and means for interconnecting the same, with a message registering device comprising a constantly driven motor, a timing device associated with but normally disengaged from said motor, a special signal controlled by said timing device after a predetermined interval of time from its starting, an electromagnet for engaging the timing device with the motor, and means automatically responsive to current flow in the use of the connective circuit and lines, controlling said electromagnet, substantially as described.

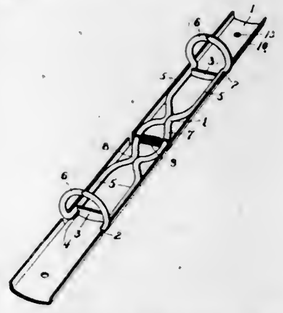
4. In a telephone exchange system, line terminals, a link circuit for interconnecting the same, a centralized battery and a supervisory relay connected with said link circuit, a constant speed motor, and a timing device carrying a circuit controller and adapted to engage said motor, an electromagnet controlling said engagement, a circuit for said electromagnet controlled by the supervisory relay, and a signal actuated by said circuit controller, substantially as described.

5. In a telephone exchange system, line circuits, a link circuit for interconnecting the same, a relay associated with said link circuit and becoming energized when the link is brought into connection with a line, a second relay associated with the link circuit and responsive to current flow in the connected line, a motor mechanism, a timing device normally disengaged therefrom, an electromagnet controlled by the first link circuit relay and adapted when energized to maintain the timing device immovable, and an electromagnet controlled by the second link circuit relay and adapted when energized to disengage the timing device from its holding means and engage it with the motor, whereby the initial connection of a link with a line will set the holding magnet,

but will produce no effect upon the timing device, the response of the called subscriber will throw the timing device into engagement with the motor and start it to running, the cessation of current flow when the subscriber finishes his conversation will disengage the timing device from the motor and cause it to engage its holding device, and finally when the indication has been read, the disengagement of the link circuit terminals from the line terminals will release the timing device and permit it to resume a normal or zero position.

[Claim 6 not printed in the Gazette.]

1,168,260. LOOSE-LEAF BINDER. WILLIAM ALBRECHT, St. Joseph, Mo., assignor to Western Tablet Company, St. Joseph, Mo. Filed July 7, 1915. Serial No. 38,416. (Cl. 129—24.)



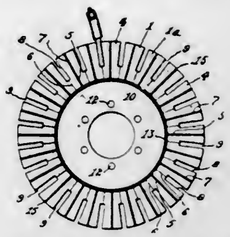
1. In a loose leaf binder, in combination, a base plate, a pair of rocking bars mounted on the plate, said bars having heels, those of one bar opposing and engaging those of the other bar, guides on said base in which said bars are mounted, mating prongs carried by the respective bars and a coil spring joining said bars to hold their respective heels in engagement with each other, and a cover plate over said base plate and said bars.

2. In a loose leaf binder, a base plate having longitudinal flanges provided with prong receiving notches, bridge members carried by said base plate adjacent to said notches and spaced from said flanges, rods mounted in said base and guided by said bridge members, each of said rods including inwardly projecting heels, the heels of one rod opposing those of the other rod, the respective heels having a tongue and groove connection, said rods including an intermedinte portion between said heels, and a coil spring located between said bars at said intermediate portions and secured at its ends to the respective intermediate portions, mating prongs carried by said bars, and a cover plate interlockably engaging said base plate and having prong passages.

3. A loose leaf binder comprising a base plate having longitudinal flanges provided with prong notches, rods mounted on said base member, mating prongs carried by said rods and projecting through said notches, each of said rods having inwardly projecting interengaging portions and a spring connecting said bars and drawing them together to hold said projecting portions in engagement, said rods being pivoted in the general longitudinal direction and said interengaging portions adapted to move to one side or the other of a center line to thereby hold said mating prongs open or closed, and a cover held over said base plate.

4. A loose leaf binder comprising a base plate and a cover plate having longitudinal interengaging retaining projections, a pair of rods mounted between and inclosed by said plates, said plates having openings, said rods having mating prongs projecting through said openings, said rods having engaging heels and springs drawing said rods toward each other to hold said heels in engagement and retain said mating prongs in their open and closed positions respectively.

1,168,261. COMMUTATOR-BAR. FRED J. BAIRD, Cleveland, Ohio. Filed Oct. 17, 1914. Serial No. 867,108. (Cl. 200—12.)



1. As a new article of manufacture, a hard-drawn continuous copper bar, having a cross section bounded wholly on one side and partly on the opposite side by converging lines, the boundary on the side last-mentioned being completed by the side and bottom contour of part of a straight sided slot, the upper and lower boundaries of the cross section being straight lines.

2. As a new article of manufacture, a straight bar of hard drawn copper forming a blank from which commutator bar elements may be cut and having a cross-section uniform throughout, both as to area and contour; said section being bounded entirely upon one side by a straight line and upon the other side by two lines and a third line connecting their inner ends, and a top and bottom line connecting the outer ends of said two lines with the said first-named line.

3. As a new article of manufacture, a commutator bar element consisting of a main or body portion having a radial portion integral therewith; said radial portion and the body portion adjacent thereto being bounded by a plane surface on one side, two plane surfaces on the other side connected at their inner ends by a third plane surface; and a top and bottom surface connecting the outer extremities of said two plane surfaces and said first-named plane surface.

4. As a new article of manufacture, a commutator bar element consisting of a main or body portion having a radial projecting portion integral therewith, said main or body portion having two lateral longitudinal faces angularly related to each other, each of which faces constitutes one entire face of said main or body portion, and said radial projecting portion having one of its lateral longitudinal faces occupying a plane different from either of the planes occupied by the lateral longitudinal faces of the body portion and forming one side of a straight sided slot.

5. A commutator-bar comprising two elements, each element comprising a main or body portion and a radial portion; said main or body portions being in contact with each other and said radial portions forming a longitudinal groove or slot.

[Claims 6 and 7 not printed in the Gazette.]

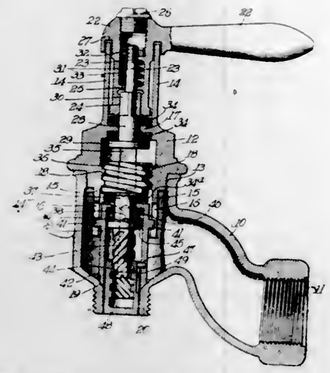
1,168,262. VALVE. ALLEN A. BOWSER, Fort Wayne, Ind. Filed Jan. 22, 1914. Serial No. 813,623. (Cl. 137—4.)

1. In a valve, the combination with the valve seat and a discharge spout extending therefrom, of a valve member coöperating with the seat, and a piston separately movable with respect to the valve member and operated simultaneously with the member to fill the spout when the valve member is on its seat.

2. In a valve, the combination with the valve seat and a discharge portion extending therefrom, of a valve member, and a piston movable independently of the valve and operated by the valve actuating means for clearing the entire inner surface of the discharge portion when the valve member is closed.

3. In a valve, the combination with the valve seat and a discharge portion extending therefrom, of a hollow valve member to coöperate with the seat in closing the

valve, a piston reciprocable in the valve member for clearing the entire inner surface of the discharge portion when the valve is closed, and operating apparatus common to both the valve member and the piston.

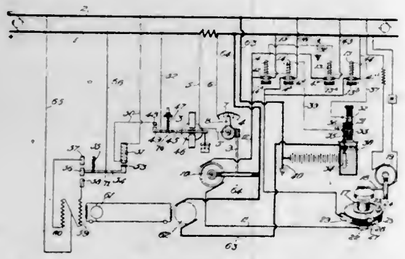


4. In a valve, the combination with the valve seat and discharge spout thereof, of a hollow valve member cooperating with the seat to close the valve, a reciprocating piston carried in the valve member for clearing the discharge spout of the valve, and operating apparatus common to both the valve member and the piston, said operating apparatus including two screws of different pitch.

5. In a valve, the combination with the valve seat and discharge spout thereof, of a hollow valve member the interior of which forms in combination with the discharge a straight passageway, a piston mounted in said passageway for reciprocation therein, and operating means common to the valve member and the piston for closing the valve and causing the piston simultaneously to traverse the discharge spout to the outer end thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,168,263. AUTOMATIC LOAD-ADJUSTER. LOUIS H. FLANDERS, Edgewood Park, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Mar. 15, 1909. Serial No. 483,571. (Cl. 171—310.)



1. In a system of electrical distribution, the combination of a storage apparatus and its regulator, electro mechanical means for controlling said regulator and continually operating means for periodically interrupting the circuit of the controlling means, whereby it is made slow acting.

2. In a system of electrical distribution, and electric circuit and its source, a storage battery operatively arranged to deliver and receive energy to and from said circuit, a shunt around a portion of the electric circuit having a regulator and a rheostat therein, a motor for controlling said rheostat, a circuit for said motor, a motor-driven circuit maker and breaker for the motor circuit, and means dependent upon the specific gravity of the solution of the battery for controlling the circuit of the motor.

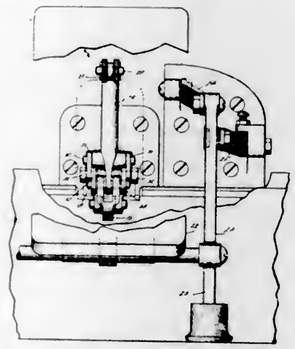
3. In a system of electrical distribution, an electric circuit and its source, a storage battery in parallel with the circuit, a shunt circuit from the first mentioned circuit and a regulator for the battery in the shunt circuit, a rheostat in the regulator circuit, an actuator for the rheostat, a timing device for the actuator, and a circuit closer for the rheostat actuator dependent for its movement upon the specific gravity of electrolyte in a battery cell.

4. In a system of electrical distribution, an electrical circuit and its source, a storage battery in parallel with the circuit, a regulator for the battery, a rheostat in the regulator circuit, an actuator for the rheostat, a variable timing device for the actuator in the actuator circuit, and a circuit maker and breaker for the actuator circuit dependent for its movement upon the state of battery charge or discharge.

5. In combination, an electric circuit and its source, storage apparatus adapted to receive and deliver energy from and to the circuit, a regulator for controlling the division of load between the source and the storage apparatus, a hydrometer device responsive to the condition of the storage apparatus and adapted to adjust the regulator to vary the load on the source, and means for periodically interrupting the operation of the hydrometer device, whereby it is made slower acting than the regulator.

[Claims 6 and 7 not printed in the Gazette.]

1,168,264. BELLOWS-OPERATING MECHANISM FOR PLAYER-PIANOS. ALEXANDER JAMESON, Indianapolis, Ind., assignor to Emerson Piano Company, Boston, Mass., a Corporation of Illinois. Filed Apr. 9, 1915. Serial No. 20,152. (Cl. 84—169.)



1. In a mechanically operated musical instrument, the combination of a bellows, a pedal, a link pivoted to the pedal, a link pivoted to the bellows, said two links being pivoted together, a third link pivoted to a fixed point and having a limited movement, and a fourth link pivoted to the third link and to the junction of the first two links.

2. In a mechanically operated musical instrument, the combination of a bellows, a pedal, a link pivoted to the pedal, a link pivoted to the bellows, said two links being pivoted together, and means for causing the pivotal connecting point between said two links to travel in a curve of variable curvature as the pedal is moved.

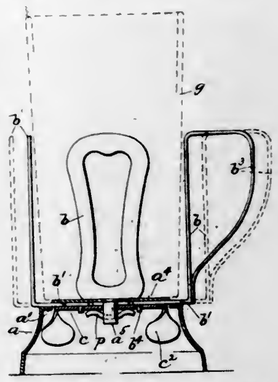
3. In a mechanically operated musical instrument, the combination of a bellows, a pedal, a link pivoted to the pedal, a link pivoted to the bellows, said two links being pivoted together, and means for guiding the pivotal connecting point between said two links in a curve which causes the movements of the pedal and bellows to be substantially proportional throughout their range of movement.

4. In a mechanically operated musical instrument, the combination of a bellows, a pedal, a connecting rod of variable effective length connecting said bellows and said pedal, and means for varying such effective length as the pedal is moved for causing the movements of the pedal and bellows to be substantially proportional throughout their range of movement.

5. In a mechanically operated musical instrument, the combination of a bellows, a pedal, a link pivoted to the pedal, a link pivoted to the bellows, said two links being pivoted together, means for causing the pivotal connecting point between said two links to travel in a curve of variable curvature as the pedal is moved, and a folding support for said pedal, said first link swinging about its pivotal connection with the second as the folding support for the pedal is folded.

[Claim 6 not printed in the Gazette.]

1,168,265. GLASS-HOLDER. CARL O. KRATZ, Attleboro, Mass. Filed Nov. 20, 1914. Serial No. 873,091. (Cl. 65—61.)



A holder for drinking-glasses comprising a base member having an annular wall and a flat top, and channels formed in the top and providing entering openings below the latter; a stud centrally of the top of said base member; arms slidable in the channels and having lateral extensions to pass through the opening, each arm having a pin, and one of said arms bent to form a handle; a finger-operated disk secured to the stud and provided with a series of equidistant eccentric slots engaging the pin of each arm, substantially as described.

1,168,266. PROCESS OF MAKING PICRIC ACID. GEORGE B. BRADSHAW, Roselle Park, N. J. Filed Nov. 8, 1915. Serial No. 60,279. (Cl. 23—24.)

1. The herein described process of producing picric acid comprising the steps of converting phenol completely into para-phenol sulfonic acid and nitrating said para-phenol sulfonic acid.

2. The herein described process of producing picric acid comprising the step of nitrating substantially pure para-phenol-mono-sulfonic acid.

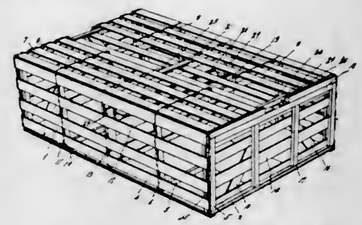
3. The herein described process of producing picric acid comprising the step of nitrating substantially pure para-phenol-mono-sulfonic acid and completing the nitration by the application of heat.

4. The herein described process of producing picric acid comprising the steps of converting phenol into substantially pure para phenol sulfonic acid in the presence of water so as to form a dilute solution thereof, mixing three and one-half parts of nitric acid of about 50° Bé with one part of said solution, heating the mixture until the reaction is completed, and allowing the picric acid to crystallize out of the reactive mass.

5. The herein described process of producing picric acid which consists in sulfonating phenol to produce a mixture of phenol-mono-sulfonic acids, diluting the mixed sulfonic acids with water and boiling the same with steam to convert the same into aqueous solution of substantially pure para-mono-sulfonic acid, mixing the said solution with nitric acid and then finally heating the same to a temperature of approximately 200° F. after which the picric acid is allowed to crystallize.

REISSUES.

14,042. CRATE. HUGH BROWN, Battle Creek, Mich., assignor to The Greenstreet Folding Box Machine Co., Indianapolis, Ind., a Corporation of Arizona. Filed Nov. 15, 1915. Serial No. 61,703. Original No. 1,056,146, dated Mar. 18, 1913, Serial No. 588,188. (Cl. 217—36.)



1. In a crate, the combination of the bottom, side and top wall pieces; cross pieces secured thereto to provide bottom, top and side walls, the securing means comprising binding wires whereby said walls are secured together in the flat and the wires constitute hinge connections for the walls, the top being formed in sections, one section being connected to each side wall, the inner edges of the top sections being spaced when the crate is erected, to provide a door opening; end walls for said crate comprising end wall pieces, cleats for the ends of said end wall pieces, arranged on the inner side thereof, the end wall pieces being adapted to rest against the inner sides of the side wall cross pieces, diagonally-disposed braces arranged on the inner sides of the end wall pieces, and vertically-disposed cleats arranged on the outer sides of the end wall pieces; top cleats arranged under the top cross pieces and extending across the space between the inner edges of the top wall sections, the top cleats at the ends of the crate being arranged on said vertically disposed end wall cleats; and a door slidably arranged on said top cleats between the ends of said top section cross pieces.

2. In a crate, the combination of the bottom, side and top wall pieces; cross pieces secured thereto to provide walls, the securing means comprising binding wires whereby said bottom, side and top walls are secured together in the flat and the wires constitute hinge connections for the walls, the top wall being formed in sections, one section being connected to each side wall, the inner edges of the top sections being spaced when the crate is erected to provide a door opening; end walls; top cleats extending across the space between the inner edges of the top sections to provide a rigid top; and a door slidably arranged on said top cleats between the ends of said top section cross pieces.

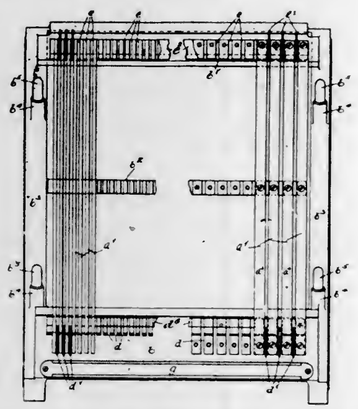
3. In a crate, the combination of the bottom, side and top wall pieces; cross pieces to provide bottom, side and top walls, secured thereto, the securing means comprising binding wires whereby the walls are secured together in the flat and the wires constitute hinge connections for the walls, the top being formed in sections, one section being connected to each side wall, the inner edges of the top sections being spaced to provide a door opening; end walls for said crate comprising end wall pieces, cleats for the ends of said end wall pieces, arranged on the inner side thereof, the end wall pieces being adapted to rest against the inner sides of the side wall cross pieces, vertically-disposed cleats arranged on the outer sides of the end wall pieces; and top cleats secured to the top cross pieces and extending across the space between the edges of the top sections, the vertically disposed end cleats being arranged to support the end top cleats.

4. A crate having a partition therein; a top for said crate having a door opening at each side of said partition; doors comprising slats, the inner ends of the slats being extended beyond the partition, the slats of the doors overlapping; cleats for said door slats disposed on opposite sides of the said partition, the cleat for the inner end of the under slats being on the under side thereof and that for upper slats being on the upper side thereof, said cleats being extended at each side under the top to provide retaining slides for the top.

5. A crate having a partition therein; a top for said crate having a door opening therein at each side of said partition; doors for said openings comprising slats, the inner ends of the slats being extended beyond the said partition; and cleats for the said door slats, the cleat for the inner end of each door being arranged on the opposite side of the partition and being extended at each end under the top to provide retaining slides for the top.

6. In a crate, the combination of the bottom, top and side wall pieces, the top being formed of sections, the inner edges of the top sections being spaced to provide a door opening; cleats extended across said door opening; and a door, said cleats being disposed to slidably support the door in a plane below the top of the crate, said door comprising longitudinal slats and cross pieces extended under the adjacent top to provide retaining slides for the top slats.

14,043. TYPE-CASE. WALTER CHIPPERFIELD, Romford, England. Filed Feb. 7, 1913. Serial No. 746,962. Original No. 983,350, dated Feb. 7, 1911, Serial No. 569,928. (Cl. 211—42.)



1. In a type case, the combination of a series of parallel overhanging rails providing channels down which type having grooves occupied by the rail edges may pass by gravity, movable stops at the lower ends of the respective channels normally in line with the type therein but adapted to be moved to release the type, and spring means automatically and yieldingly engaging the foot of the next to the bottom type when the stop is moved to release the bottom type.

2. In a type case, the combination of a series of parallel overhanging rails providing channels down which type having grooves occupying the rail-edges may pass by gravity, movable stops at the lower ends of said channels, each in the form of a pivoted lever having a shoulder normally engaging the lowermost type in the channel, and a spring automatically forced into engagement with the foot of the next to the bottom type in each channel when the lever thereof is moved to free the bottom type, each lever having a downward extension adapted to be engaged to move it rearwardly.

3. In a type case, the combination of a series of parallel overhanging rails providing channels down which type having grooves occupied by the rail-edges may pass by gravity, movable stops at the lower ends of the respective channels normally in line with the type therein but adapted to be moved to release the type, springs, one for each type channel, and means for automatically moving them into engagement with the foot of the next to the bottom type respectively when the stop is moved to free the corresponding bottom type.

4. In a type case, the combination of a series of channels side by side having means for loosely confining type grooved on its opposite sides, a series of levers pivotally mounted behind said channels near their lower ends, forwardly projecting shoulders on said levers adapted to engage beneath the bottommost type in the channels, normally idle springs standing behind the next to the bottom type in the respective channels, there being a shoulder on each lever adapted to force the corresponding spring forwardly when the lever is shoved rearwardly, whereby the next to the bottom type is engaged when the bottom type is freed.

5. In a type case, the combination, with a series of parallel overhanging rails, of a series of intermediately pivoted levers mounted adjacent to the lower ends of said rails and having forwardly projecting shoulders extending between the rails, a series of springs mounted behind the channels between the rails near their lower ends and overlapping the upper ends of the levers, such upper ends of the levers constituting shoulders adapted to force forwardly the springs when the levers are shoved rearwardly.

6. In a type case, the combination of a series of banks, means for removably holding them in parallel inclined position one directly above the other, each bank being provided at its lower end with a series of downwardly and rearwardly movable levers having stopping shoulders, the lower ends of said levers being accessible at the front of the case, and means for yieldingly engaging the foot of the next to the bottom type in any channel when its lever is pressed rearwardly to release the bottom type.

7. In a type case, the combination of a series of parallel channels, a series of members adjacent to the upper ends of the channels adapted to engage the next to the bottom type in a stick contiguous to the upper end of the channel, whereby type may be fed into the channel by a stick having a gate controlling the release of the bottom type therein.

8. In a type case, the combination of a series of parallel channels open at their upper ends, and a series of springs mounted behind such upper ends and projecting upwardly in a position to engage the foot of a type in a line alined with the corresponding channels, and means for centering a portable distributing stick holding such line in alinement with such channel.

9. In a type case, the combination of a series of channels down which the type may slide, intermediately pivoted levers having projections below their pivots adapted to form stops for such type, and leaf springs anchored at one end and overhanging the upper ends of the levers and having free ends behind the next to the bottom type, each spring performing the double function of normally holding the corresponding lever in active position and of itself constituting a stop to engage the next to the bottom type when the lever is moved to free the bottom type.

10. In a type case, the combination of a series of parallel bars providing between them channels down which grooved type may slide while being held in the case, a series of intermediately pivoted levers behind their respective channels having forwardly projecting shoulders below their pivots adapted to extend beneath the bottommost type, said levers extending above their pivots, and a series of leaf springs anchored at their upper ends and extending downwardly across the upper ends of the levers and having their free ends a distance above said shoulders greater than the thickness of one type and less than the thickness of two type, whereby said springs may perform the double function of normally holding the levers in active position, and when the levers are moved to inactive position constituting stops yieldingly engaging the next to the bottom type.

11. The combination of a type channel provided by a pair of parallel rails with their edges projecting toward each other, a pivoted lever mounted behind the channel adjacent to its lower end and having a forwardly projecting shoulder adapted to engage the lowermost type, said lever projecting above its pivot, and a normally idle leaf spring overhanging such projection and standing behind the next to the bottom type, said spring serving the double purpose of holding the lever normally in engaging position and of being moved by the lever to engage the next to the bottom type when the lever is moved to free the bottom type, said lever having a downward extension by which it may be so moved.

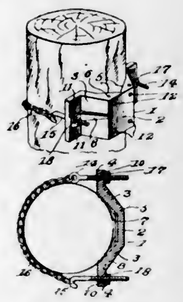
12. A type case comprising a plurality of inclined supports for banks of type each having a pin and socket connection whereby they are supported one on the other, spring controlled means at one end of each type-way adapted to be actuated by a composing stick for releasing the end type and holding back the second of said type when composing, and spring actuated means at the other end for holding the second type in a composing stick when distributing.

13. A type case comprising a plurality of inclined supports for banks of type each formed of a number of bars having type-ways in their adjacent faces, a pin and socket connection whereby the supports are supported one on the other, spring controlled means at one end of each type-way adapted to be actuated by a composing stick for releasing the end type and holding back the second of said type when composing, and spring actuated means at the other end for holding the second type in a composing stick when distributing.

14. A type case comprising a plurality of inclined banks of type each formed of a number of bars having typeways in their adjacent faces, said bars being supported by intermediate and end supports arranged at a right angle to the lines of the bars and connected to end members parallel with said bars, pin and socket connection upon the end members whereby the banks are supported one on the other, spring controlled means at one end of each typeway adapted to be actuated by a composing stick for releasing the end type and holding back the second of said type when composing, and spring actuated means at the other end for holding a second type in a composing stick when distributing.

15. A type case comprising a plurality of inclined banks of type each formed of a number of bars having typeways in their adjacent faces, a catch located at one end of each of the typeways, a spring member actuated by said catch and designed to lock the second type within the typeways, said catch being adapted to be actuated by the end of a composing stick when same is positioned to receive the type, a spring at the opposite end of the type way for holding back the second type within a composing stick when the same is positioned to discharge the type into the case.

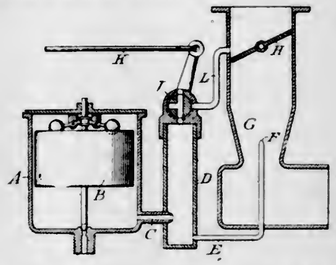
14,044. PIPE-VISE HOLDER. FREDRICK W. GRIFFIN, Rich Hill, Mo. Filed Nov. 22, 1915. Serial No. 62,913. Original No. 1,113,781, dated Oct. 13, 1914, Serial No. 807,975. (Cl. 81—41.)



1. A holder of the class described comprising a yoke or body having a base wall, end walls diverging from the base wall and provided at their outer ends with outwardly extending feet, the base wall and end walls being provided on their inner sides with spaced ribs, the body or yoke being also provided with lugs in the angles between the base wall and end walls and also with reinforcing ribs on the outer sides of the end walls.

2. A holder of the class described comprising a yoke or body having a base wall, end walls diverging from the base wall and provided at their outer ends with outwardly extending feet, the base wall and end walls being provided on their inner sides with spaced ribs, and the body or yoke being also provided with lugs in the angles between the base wall and end walls.

14,045. CARBURETER. VICTOR R. HEFTLER, Detroit, Mich., assignor to Societe du Carburateur Zenith, Lyon, France, a Corporation of France. Filed Apr. 1, 1915. Serial No. 18,603. Original No. 1,096,626, dated May 12, 1914, Serial No. 684,937. (Cl. 48—150.3.)

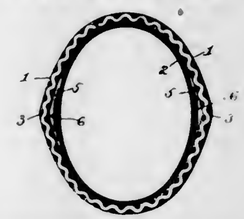


1. In a carbureter, the combination of a float chamber, a supply chamber connected therewith, a carbureting chamber connected with said supply chamber, a pipe leading from said supply chamber to a point in said carbureting chamber near the throttle, and a valve whereby the same may be closed and whereby the connection between said supply chamber and the outside air may be regulated; substantially as described.

2. The combination of a float chamber, a supply chamber, and a carbureting chamber connected in the order named, a pipe leading from the top of the supply chamber to a point above the throttle in the carbureting chamber, and a valve whereby the same may be regulated, and by whose further movement the interior of the supply chamber may be exposed to atmospheric pressure.

3. In a carbureter, a constant level feed chamber, a well having an air inlet in its upper portion, a fuel supply channel extending from the constant level chamber into the well, a feed tube leading from the lower portion of the well into the carbureting passage and a hand controlled valve device arranged to control the admission of air to the upper portion of the well; substantially as described.

14,046. HOSE CONSTRUCTION. JOHN F. JOSEPH, Akron, Ohio, assignor, by mesne assignments, to The B. F. Goodrich Company, a Corporation of New York. Filed Nov. 2, 1915. Serial No. 59,325. Original No. 1,100,829, dated June 23, 1914, Serial No. 619,555. (Cl. 137—90.)



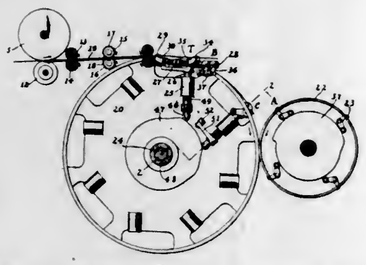
1. A hose, comprising a flexible, tubular casing creased along oposite sides to assume a flattened form when

empty; a tubular lining of rubber free from the casing along and adjacent to the creases; and an extensible band formed of bias fabric secured upon the outer face of the tubular lining and extending lengthwise thereof along such free portions and lying next to the casing.

2. A hose, comprising a flexible, tubular casing creased along opposite sides to assume a flattened form when empty; a tubular lining of rubber cemented to the casing between the creases, but free from the casing along and adjacent to the creases; and an extensible band formed of bias fabric secured upon the outer face of the tubular lining and extending lengthwise thereof along such free portions and lying next to the casing.

3. A hose, comprising a flexible, tubular casing creased along opposite sides to assume a flattened form when empty; a tubular lining of rubber cemented to the casing between the creases, but free from the casing along and adjacent to the creases; and an extensible band formed of a plurality of superposed strips of bias fabric cemented to the outer face of the tubular lining and extending lengthwise thereof along such free portions and lying next to the casing.

14,047. BLANK-HANDLING MECHANISM. WILBUR M. STONE, East Orange, N. J., assignor to Mercantile Corporation, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1915. Serial No. 43,352. Original No. 1,123,617, dated Jan. 5, 1915, Serial No. 755,342. (Cl. 93—63.)



1. The combination of means for advancing an envelop blank whose sides form substantially a rhomb having sides parallel with the path of the blank, a turning device having means thereon for gripping the angularly disposed leading end of the blank and means for gripping one of the sides parallel with the path of the blank, and means for turning said device for presenting the blank in angular relation to its receiving position.

2. The combination of means for advancing an envelop blank whose sides form substantially a rhomb having sides parallel with the path of the blank, a turning device having means thereon for gripping the angularly disposed leading end of the blank and means for gripping one of the sides parallel with the path of the blank and means for turning said turning device for presenting the blank in angular relation to its received position and means for delivering said blank in its turned relation to subsequent mechanism.

3. The combination of means for advancing an envelop blank whose sides form substantially a rhomb having sides parallel with the path of the blank, a turning device having means thereon for gripping the angularly disposed leading end of the blank and means for gripping one of the sides parallel with the path of the blank, means for independently actuating each of said gripping means and means for turning said turning device for presenting the blank in angular relation to its received position.

4. The combination of means for advancing an envelop blank whose sides form substantially a rhomb having sides parallel with the path of the blank, a rotatable frame, a turning device pivotally mounted thereon having means for gripping the angularly disposed leading end of the blank and means for gripping one of the sides parallel with the path of the blank, means for independently actuating each of said gripping means for turning said turning device for presenting the blank in angular relation to its received position.

5. Blank handling mechanism including in combination, a pivotally mounted turning device, a pair of grippers thereon for gripping said blank, means for independently actuating each of said grippers, and means for swinging said turning device on its pivot for presenting said blank in angular relation to its received position.

6. In a machine for handling blanks each of which forms substantially a rhomb having its sides parallel with the path of the web from which it is cut, the combination of a turning device having means thereon for gripping the angularly disposed leading end of the blank and means for gripping one of the sides parallel with the path of the web and means for turning said turning device for presenting the blank in angular relation to its received position.

7. Blank handling mechanism including in combination, a rotatable frame, a turning device pivotally mounted thereon and mounted for movement axially of its pivot, a pair of grippers thereon for gripping said blank, means for independently actuating each of said grippers, and means for moving said device in the line of its pivotal axis outwardly and inwardly relatively to said rotatable frame.

8. Blank handling mechanism including in combination, a rotatable frame, a turning device pivotally mounted thereon and mounted for movement axially of its pivot, a pair of grippers thereon for gripping said blank, means for independently actuating each of said grippers, and means for swinging said turning device on its pivot for presenting said blank in angular relation to its received position.

9. Blank handling mechanism including in combination, a rotatable frame, a plurality of turning devices pivotally mounted symmetrically about the periphery of said frame, each device being mounted for movement axially of its pivot, a pair of grippers on each turning device for gripping said blank, means for independently actuating each of said grippers, and means for swinging each turning device on its pivot for presenting its blank in angular relation to its received position.

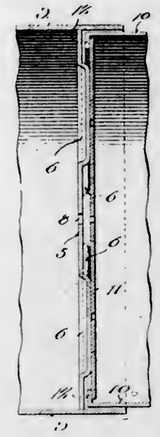
10. Blank handling mechanism including in combination, the following instrumentalities operated in the sequence recited: means for advancing a blank, a rotatable frame, a turning device pivotally mounted thereon and mounted for movement axially of its pivot, a gripper on said turning device operated for gripping the blank, means for moving said turning device in the line of its pivotal axis outwardly relatively to said rotatable frame, a second gripper on said turning device operated for gripping said blank, means for swinging said turning device on its pivot for presenting said blank in angular relation to its received position, means for moving said turning device in the line of its pivotal axis inwardly relatively to said rotatable frame, and means for releasing the grippers.

11. In a machine for handling blanks, each of which is a diamond shaped blank having its major axis at an angle to the side of the web from which they are cut, the combination of means for continuously advancing said blanks; and means for gripping said blanks and for turning and delivering the said blanks in a position with their major axes normal to their subsequent direction of travel.

12. In a machine for handling blanks each of which is a diamond shaped blank having its major axis at an angle to the side of the web from which they are cut, the combination of a blank handling device having means to grip the blank as it advances and to turn said blank to a position in which the major axis of the blank is normal to its subsequent direction of travel, said means comprising mechanism to continuously advance the blank simultaneously with the turning thereof.

13. In a machine for handling a plurality of advancing blanks each of which is a diamond shaped blank having its major axis at an angle to the side of the web from which it is cut, the combination of blank receiving devices adapted to receive and advance the blanks; and means for continuously advancing the blanks to said blank receiving devices, said means including a blank turning device which grips the continuously advancing blanks and turns said blanks while gripped to position them with their major axes normal to their subsequent direction of travel in said blank receiving devices.

14,048. CHEESE-FOLLOWER. LOUIS H. PIEPER, Plymouth, Wis. Filed Dec. 13, 1915. Serial No. 66,638. Original No. 1,158,276, dated Oct. 26, 1915, Serial No. 868,636. (Cl. 31—21.)



1. A cheese follower comprising a single flat metal plate having a plurality of projections extending from one surface thereof, whereby the entire surface of the plate, exclusive of the projections, may be utilized as a whey drainage, said plate having its flat portion only perforated.

2. A cheese follower comprising a single flat metal plate provided with a plurality of imperforate projections and provided with a plurality of perforations arranged between the projections.

3. The combination with a hoop of a perforated bottom plate for said hoop, a perforated follower plate associated with the bottom plate, and a plurality of projections extending from one of the plates for engaging the juxtaposed face of the other plate to hold said plates spaced to form a drainage chamber between the plates.

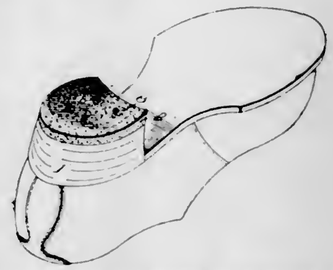
4. In a cheese press, the combination with a hoop having an inwardly projecting flange, and a bottom adapted to rest against said flange, of a follower comprising a perforated disk having projections formed on one face thereof to engage the bottom, said projections being of a depth greater than the thickness of said flange.

14,049. RESILIENT HEEL. JOHN G. TUFFORD, Elyria, Ohio, assignor, by direct and mesne assignments, to The I. T. S. Rubber Company, Elyria, Ohio. Filed June 22, 1915. Serial No. 35,710. Original No. 1,110,730, dated Sept. 15, 1914, Serial No. 780,290. (Cl. 36—35.)

1. A cushion heel lift having washers embedded therein near its center portion and each of segmental form, the washers being arranged with their chordal edges presented toward the edge of the lift.

2. A cushion heel lift divided by a plurality of intercommunicating channels into a group of suction areas.

3. A cushion heel lift having a concave attaching face formed with a groove having a line of extent substantially parallel to the margin of the lift and having other channels intersecting each other and communicating with the first-mentioned channel.



4. A cushion heel lift having its attaching face provided with a suction area located substantially centrally thereof, and washers embedded in the lift and located in a series extending around the said area and located relatively close thereto, the washers at their sides which are located nearer the margin of the lift being straight edged.

5. A heel lift of substantially non-metallic resilient material having its body portion of concavo-convex form on every line of cross section, the concave upper face lying entirely below a plane passing through the rear upper edge and the breast corners of the lift.

6. A heel lift of substantially resilient material having its body portion of concavo-convex form on every line of cross section, the concave upper face lying entirely below a plane passing through the rear upper edge and the breast corners of the lift, said lift being provided with nail receiving openings located near the center thereof.

7. A heel lift of substantially resilient material comprising a body portion, the attaching face of which is concave and the tread face of which is convex on every line of cross section and normally held in such form by its own inherent resiliency, the concave attaching face lying entirely below a plane passing through the rear upper edge and the breast corners of the lift, whereby to cause the entire margin of said lift to exert a uniform pressure on the heel of a shoe when said lift is positioned on the heel and the convex tread face thereof depressed to flatten said lift.

8. A heel lift of resilient material comprising a body portion of uniform thickness throughout its entire area and of concavo-convex form on every line of cross section, the concave upper face of the lift lying entirely below a plane passing through the upper edge and the breast corners of said lift.

9. A heel lift of resilient material comprising a body portion, the attaching face of which is concave and the tread face of which is convex, the concave face of the lift being unbroken and lying entirely below a plane passing through the rear upper edge and the breast corners of the lift, whereby when the convex tread face is depressed to flatten said lift a suction will be created between the lift and the heel to hold the attaching face of the lift throughout its entire extent in contact with the exposed face of the heel.

10. A heel lift of substantially resilient material comprising a body portion, the attaching face of which is concave and the tread face convex on every line of cross section, the rear upper edge and breast corners of the concave attaching face of the lift being disposed in a plane above the upper side and breast edges of said concave attaching face.

DESIGNS.

48,432. CANDY CUP. SALVATORE BAGNULO, East Boston, Mass. Filed Oct. 1, 1915. Serial No. 53,645. Term of patent 7 years.



The ornamental design for a candy cup as shown.

48,433. CANDY CUP. SALVATORE BAGNULO, East Boston, Mass. Filed Oct. 5, 1915. Serial No. 54,287. Term of patent 7 years.



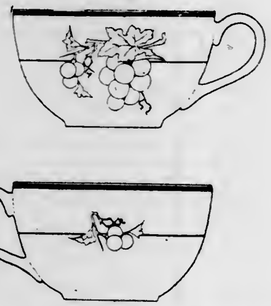
The ornamental design for a candy cup as shown.

48,434. CANDY CUP. SALVATORE BAGNULO, East Boston, Mass. Filed Oct. 11, 1915. Sereal No. 55,332. Term of patent 7 years.



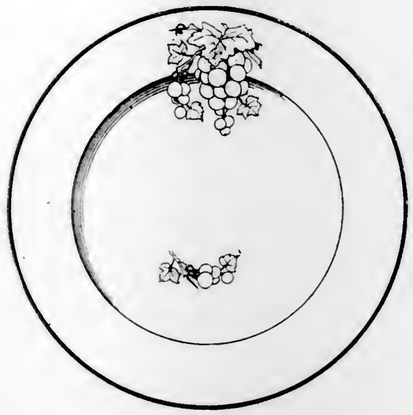
The ornamental design for a candy cup as shown.

48,435. CUP OR SIMILAR ARTICLE. WILLIAM R. COWAN, Newark, N. J. Filed Nov. 5, 1915. Serial No. 59,879. Term of patent 3½ years.



The ornamental design for a cup or similar article as shown.

48,436. PLATE OR SIMILAR ARTICLE. WILLIAM R. COWAN, Newark, N. J. Filed Nov. 5, 1915. Serial No. 59,880. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

48,437. MINER'S SHOE. JOHN T. CROWLEY, Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company, a Corporation of Massachusetts. Filed Sept. 1, 1914. Serial No. 859,715. Term of patent 3½ years.



The ornamental design for a miner's shoe as shown.

48,438. MINER'S SHOE. JOHN T. CROWLEY, Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company, a Corporation of Massachusetts. Filed Sept. 19, 1914. Serial No. 862,604. Term of patent 3½ years.



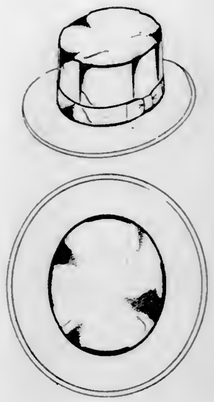
The ornamental design for a miner's shoe, as shown.

48,439. CASE FOR VACUUM-JUGS. GEORGE E. CURTISS, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 14, 1915. Serial No. 2,287. Term of patent 14 years.



The ornamental design for a case for vacuum jugs, as shown.

48,440. HAT. LEO GALITZKI, Jr., Chicago, Ill. Filed July 29, 1915. Serial No. 42,666. Term of patent 7 years.



The ornamental design for a hat, as shown.

48,441. SCOURING DEVICE. LILLIAN GRAHAM, Philadelphia, Pa. Filed Oct. 26, 1915. Serial No. 58,083. Term of patent 7 years.



The ornamental design for a scouring device, as shown.

48,442. DOLL. MARTHA R. HARRISON, Jersey City, N. J. Filed Sept. 26, 1914. Serial No. 863,770. Term of patent 14 years.



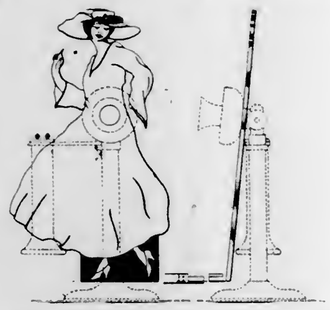
The ornamental design for a doll, as shown and described.

48,443. GLASS VESSEL. WILLIAM H. HAWKEN, Honesdale, Pa., assignor to Irving Cut Glass Co., Inc., Honesdale, Pa. Filed Oct. 19, 1915. Serial No. 56,810. Term of patent 3½ years.



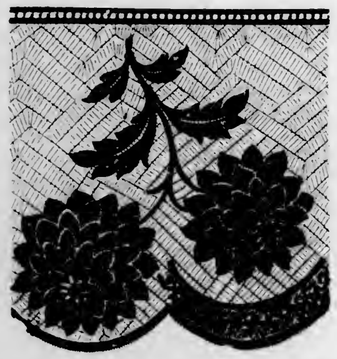
The ornamental design for a glass vessel, as shown.

48,444. TELEPHONE APPLIANCE. SARAH LORD MURPHY, New York, N. Y., assignor to Mayfair, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 18, 1915. Serial No. 51,490. Term of patent 3½ years.



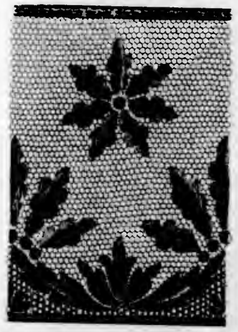
The ornamental design for a telephone appliance, as shown.

48,445. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Nov. 5, 1915. Serial No. 59,877. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

48,446. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Nov. 6, 1915. Serial No. 60,148. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

48,447. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Nov. 27, 1915. Serial No. 63,898. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

48,448. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Nov. 27, 1915. Serial No. 63,899. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

48,449. ELECTRIC SIGN. MORTIMER NORDEN, New York, N. Y., assignor to Joseph Norden, New York, N. Y. Filed Nov. 2, 1915. Serial No. 59,328. Term of patent 7 years.



The ornamental design for an electric sign, as shown.

48,450. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Nov. 18, 1915. Serial No. 62,249. Term of patent 7 years.



The ornamental design for a rug, as shown.

48,451. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Nov. 18, 1915. Serial No. 62,250. Term of patent 7 years.



The ornamental design for a rug, as shown.

48,452. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Nov. 18, 1915. Serial No. 62,251. Term of patent 7 years.



The ornamental design for a rug, as shown.

48,453. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Nov. 18, 1915. Serial No. 63,681. Term of patent 7 years.



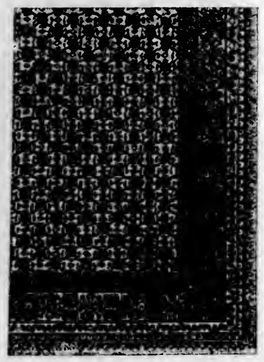
The ornamental design for a rug, as shown.

48,454. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Nov. 26, 1915. Serial No. 63,682. Term of patent 7 years.



The ornamental design for a rug, as shown.

48,455. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Dec. 2, 1915. Serial No. 64,782. Term of patent 3½ years.



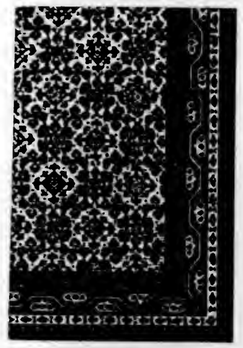
The ornamental design for a rug, as shown.

48,456. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Dec. 2, 1915. Serial No. 64,783. Term of patent 3½ years.



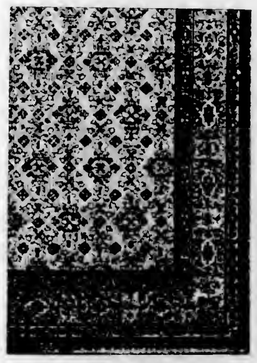
The ornamental design for a rug, as shown.

48,457. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Dec. 6, 1915. Serial No. 65,422. Term of patent 3½ years.



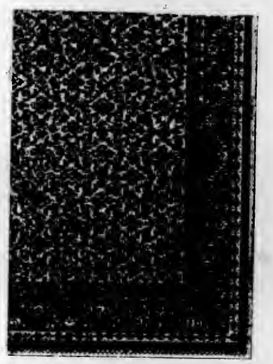
The ornamental design for a rug, as shown.

48,458. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Dec. 6, 1915. Serial No. 65,423. Term of patent 3½ years.



The ornamental design for a rug, as shown.

48,459. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley, Philadelphia, Pa., trading as John Bromley & Sons. Filed Dec. 6, 1915. Serial No. 65,424. Term of patent 3½ years.



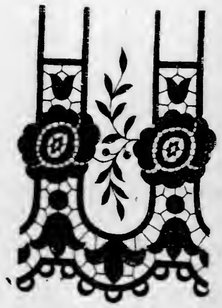
The ornamental design for a rug, as shown.

48,460. EMBROIDERED TRIMMING. OTTO PAUL RIEDEL, West New York, N. J., assignor to West Shore Embroidery Company, West New York, N. J., a Corporation of New Jersey. Filed Nov. 26, 1915. Serial No. 63,683. Term of patent 3½ years.



The ornamental design for embroidered trimming, as shown.

48,461. EMBROIDERED TRIMMING. OTTO PAUL RIEDEL, West New York, N. J., assignor to West Shore Embroidery Company, West New York, N. J., a Corporation of New Jersey. Filed Nov. 26, 1915. Serial No. 63,684. Term of patent 3½ years.



The ornamental design for embroidered trimming, as shown.

TRADE-MARKS

PUBLISHED JANUARY 11, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 82,342. (CLASS 37. PAPER AND STATIONERY.) THE DENNEY TAG COMPANY, West Chester, Pa. Filed Nov. 2, 1914.

T

Particular description of goods.—Tags.
Claims use since about 1906.

Ser. No. 82,344. (CLASS 37. PAPER AND STATIONERY.) THE DENNEY TAG COMPANY, West Chester, Pa. Filed Nov. 2, 1914.

D

Particular description of goods.—Tags.
Claims use since about 1905.

Ser. No. 82,778. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) COSMO BUTTERMILK SOAP COMPANY, Upper Sandusky, Ohio. Filed Nov. 23, 1914.

COSMO *Buttermilk*

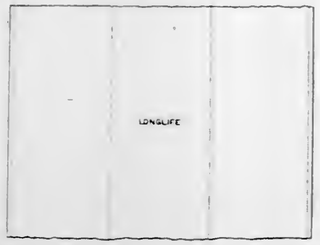
No claim is made to the exclusive use of the word "Buttermilk" except as associated with the word "Cosmo."
Particular description of goods.—Toilet Soaps.
Claims use since Nov. 28, 1890.

Ser. No. 82,954. (CLASS 37. PAPER AND STATIONERY.) STRATHMORE PAPER COMPANY, West Springfield, Me. Filed Nov. 28, 1914.

BAY PATH

Particular description of goods.—Cover-Papers—That is, Papers to Constitute Covers for Catalogues, Pamphlets, and the Like.
Claims use since on or about May 5, 1914.

Ser. No. 83,454. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TINGUE, BROWN & CO., New York, N. Y. Filed Dec. 21, 1914.



The trade-mark consists of four longitudinally-extending interwoven colored strands, two of said colored strands extending adjacent the edges of the canvas and the other two being spaced intermediate thereof, the spaces between the lines being substantially equal. The color of said strands is blue.

Particular description of goods.—Apron-Canvas.

Claims use since the 8th day of January, 1913.

Ser. No. 85,278. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LABOWS SPECIALTY CO., Philadelphia, Pa. Filed Mar. 20, 1915.



The words "Butter" and "Phila., Pa." forming no part of the trade-mark.

Particular description of goods.—Butter.

Claims use since about 1910.

Ser. No. 85,471. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FRANK A. CANFIELD, Chicago, Ill. Filed Mar. 27, 1915.



The words "Trade Mark" and "Diamond Top" and the representation of a collar-button are not claimed apart from the mark shown.

Particular description of goods.—Collar-Buttons Made of or Plated with Precious Metal.

Claims use since Jan. 1, 1915.

Ser. No. 85,615. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KAR-RU CHEMICAL CO., Tacoma, Wash. Filed Apr. 1, 1915.

KAR-RU

Particular description of goods.—A Preparation for the Treatment of Hog-Cholera, a Preparation for the Treatment of Tuberculosis in Cattle, and a Preparation for the Treatment of the Kidneys, Liver, Bladder, Stomach, and Catarrhal and Lung Affections, Mental and Physical Debility, Eczema, Irregular Menstruation, Venereal Diseases, and Rheumatic Conditions in Human Beings.

Claims use since Jan. 22, 1915.

Ser. No. 86,177. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FITZPATRICK BROS., Chicago, Ill. Filed Apr. 24, 1915.



Particular description of goods.—Soap Flakes.

Claims use since January, 1915.

Ser. No. 86,478. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRUNING, Höchst-on-the-Main, Germany. Filed May 8, 1915.

TOPHOSAL

Particular description of goods.—A Remedy for Gouty and Rheumatic Diseases and Neuralgic Affections.

Claims use since 15th day of January, 1915.

Ser. No. 86,777. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) E. D. GILMORE & CO., Attleboro, Mass. Filed May 20, 1915.

EDG
CO

Particular description of goods.—Jewelry for Personal Wear.

Claims use since May 1, 1915.

Ser. No. 87,173. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed June 7, 1915.

COMMUNITY

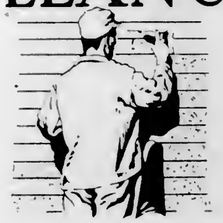
The word "Community."

Particular description of goods.—Carving-Knives, Ice-Cream Knives, Dessert-Knives, Dinner-Knives, Tea-Knives, Bread-Knives, Meat-Knives, Fish-Knives, Daggers, Fish-Eaters, Shears, Cheese-Scoops, and Pincers Made of Non-Precious Metal.

Claims use since on or before 1908.

Ser. No. 87,330. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 16, 1915.

KLEANUP



No claim is made to the word "Kleanup" apart from the mark shown in the drawing.

Particular description of goods.—Dry and Ready-Mixed Paints, Wall-Paints, Lacs, Stains, Enamels, Varnishes, and Fillers.

Claims use since May 5, 1915.

Ser. No. 87,399. (CLASS 38. PRINTS AND PUBLICATIONS.) A. W. SHAW COMPANY, Chicago, Ill. Filed June 18, 1915.

THE
LIBRARY OF FACTORY
MANAGEMENT

Particular description of goods.—A Series of Books, the Subject-Matter of Which is Not Potentially Complete.

Claims use since May 1, 1915.

Ser. No. 87,400. (CLASS 38. PRINTS AND PUBLICATIONS.) A. W. SHAW COMPANY, Chicago, Ill. Filed June 18, 1915.

THE
LIBRARY OF BUSINESS
PRACTICE

Particular description of goods.—A Series of Books, the Subject-Matter of Which is Not Potentially Complete.

Claims use since the month of January, 1914.

Ser. No. 87,839. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) C. BAHNSEN & CO., New York, N. Y. Filed July 9, 1915.

SUMABREEZE

Particular description of goods.—A Fabric in the Piece Made of a Mixture of Woolen and Cotton Thread.

Claims use since June 24, 1915.

Ser. No. 88,071. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HERBERT S. GARDNER, St. Louis, Mo. Filed July 21, 1915.

Monoplex
For single edge blades

The words "For Shingle Edge Blades" appearing on the drawing are not a part of the trade-mark, and I disclaim any intention of registering them as such.

Particular description of goods.—Mechanical Razor-Strops.

Claims use since Mar. 1, 1915.

Ser. No. 88,259. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JULIUS LOEB STRAUSS, New York, N. Y. Filed July 28, 1915.

Jules

Particular description of goods.—Electrical Supplies—viz., Electric-Light Fixtures.

Claims use since about Aug. 13, 1912.

Ser. No. 88,419. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) NON-BREAKABLE DOLL CO., Pawtucket, R. I. Filed Aug. 4, 1915.



A shield, the upper part of which is blue, inclosing the following white letters: "Jam Kiddoo," and the lower part of which, separated from the upper part by a white horizontal line, is in alternate blue and white perpendicular stripes, no claim being made to the phrase "Made in U. S. A." apart from the marks shown on the drawing.

Particular description of goods.—Dolls and Stuffed Animals.

Claims use since Mar. 24, 1915.

Ser. No. 88,444. (CLASS 39. CLOTHING.) JONAS B. ROBITSCHER, New York, N. Y. Filed Aug. 5, 1915.

PONTIAC

Particular description of goods.—Knit Underwear and Sweaters.
Claims use since Dec. 1, 1912.

Ser. No. 88,654. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LEMUEL W. SERRELL, Plainfield, N. J., and New York, N. Y. Filed Aug. 16, 1915.

HOME HELPS

Particular description of goods.—Hand Dish-Washing Devices.
Claims use since Aug. 11, 1915.

Ser. No. 89,287. (CLASS 25. LOCKS AND SAFES.) RALPH H. DICK, Marietta, Ohio. Filed Sept. 18, 1915.

PHOENIX

Particular description of goods.—Safes and Heat-Resisting Cabinets.
Claims use since July 23, 1915.

Ser. No. 89,372. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DUDLEY LUMBER COMPANY INCORPORATED, Memphis, Tenn. Filed Sept. 22, 1915.

DUD

Particular description of goods.—Logs and Rough Lumber.
Claims use since about June 10, 1915.

Ser. No. 89,449. (CLASS 39. CLOTHING.) FRANKLIN SIMON & CO. INC., New York, N. Y. Filed Sept. 24, 1915.

"Society Satin"

No claim being made to the exclusive right to the use of the word "Satin" apart from the mark shown on the drawing.
Particular description of goods.—Women's Negligées and Undergarments—Namely, Nightgowns, Petticoats, Bodices, Drawers, Chemise, and Combinations Made Out of Textile Materials.
Claims use since the 19th day of December, 1914.

Ser. No. 89,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JABURG BROTHERS, New York, N. Y. Filed Sept. 28, 1915.

J.B. SPECIAL

No claim being made to the word "Special" except in connection with the letters "J. B." as shown.
Particular description of goods.—Baker's Shortening.
Claims use since December, 1912.

Ser. No. 89,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN MORRELL & CO., Ottumwa, Iowa. Filed Sept. 28, 1915.

Il Trionfo

Particular description of goods.—Ham.
Claims use since June 4, 1915.

Ser. No. 89,519. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. S. MCKENZIE & COMPANY, INC., New York, N. Y. Filed Sept. 28, 1915.

REWARD

Particular description of goods.—Canned Sardines, Herring in Tomato Sauce, Kippered Herring, Soused Mackerel, and Fresh Mackerel.
Claims use since Feb. 23, 1915.

Ser. No. 89,533. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. CUSIMANO & CO., New Orleans, La. Filed Sept. 30, 1915.



No claim is made to the representation of the tomatoes or to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Tomato Paste.
Claims use since 1875.

Ser. No. 89,601. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LULA L. HARRIS, Memphis, Tenn. Filed Oct. 2, 1915.

MARO

Particular description of goods.—Hair-Restorer.
Claims use since Feb. 1, 1908.

Ser. No. 89,668. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BERNHARD R. PFRETZSCHNER, Denver, Colo. Filed Oct. 5, 1915.

Non-tox

Particular description of goods.—Non-Alcoholic Carbonated Beverages Sold as Soft Drinks.
Claims use since about the 15th of June, 1915.

Ser. No. 89,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLEECKER & SIMONS, New York, N. Y. Filed Oct. 6, 1915.

BLACK CAT



Particular description of goods.—Tea.
Claims use since February, 1915.

Ser. No. 89,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STRICKLER BROS. CANNING COMPANY, Tippecanoe City, Ohio. Filed Oct. 9, 1915.



No claim being made to the word "Quality" apart from the mark as it appears in said drawing.
Particular description of goods.—Canned Tomatoes.
Claims use since November, 1913.

Ser. No. 89,824. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PIMBLEY PAINT & GLASS CO., St. Joseph, Mo. Filed Oct. 12, 1915.



Particular description of goods.—A Preparation for Cleaning and Polishing Pianos.
Claims use since the 20th day of September, 1915.

Ser. No. 89,840. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL A. WING, Wrentham, Mass. Filed Oct. 13, 1915.



The signature being a facsimile of the applicant's signature, no claim being made to the words "None Genuine Without this Signature" and "Mfg. by S. A. Wing & Co. Wrentham, Mass."
Particular description of goods.—Chemical Liquid Non-Poisonous Preparation for Plants to be Used in Connection with Plants for Killing Worms.
Claims use since April, 1915.

Ser. No. 89,852. (CLASS 37. PAPER AND STATIONERY.) THE TURNER & SEYMOUR MANUFACTURING CO., Torrington, Conn. Filed Oct. 14, 1915.

T. & S.

Particular description of goods.—Thumb-Tacks.
Claims use since prior to 1879.

Ser. No. 89,853. (CLASS 37. PAPER AND STATIONERY.) THE TURNER & SEYMOUR MANUFACTURING CO., Torrington, Conn. Filed Oct. 14, 1915.



Particular description of goods.—Thumb-Tacks.
Claims use since Oct. 1, 1914.

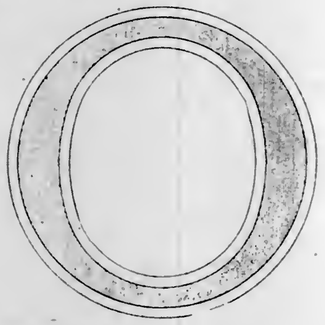
Ser. No. 89,886. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) KLOO MFG. CO., New York, N. Y. Filed Oct. 16, 1915.

Kloo

Particular description of goods.—Shoe-Trees.
Claims use since Nov. 1, 1914.

Ser. No. 90,008. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WENATCHEE NORTH CENTRAL FRUIT DISTRIBUTORS, Wenatchee, Wash. Filed Oct. 21, 1915.

RED "O"



The drawing being lined for red.
Particular description of goods.—Fresh and Green Fruits.
Claims use since June 28, 1915.

Ser. No. 90,063. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE RADIUM DYE CO., Kansas City, Mo. Filed Oct. 23, 1915.



The word "Dye" forming no part of the mark.
Particular description of goods.—Dyes.
Claims use since Sept. 6, 1913.

Ser. No. 90,069. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STETSON-BARRET CO., Los Angeles, Cal. Filed Oct. 23, 1915.



Particular description of goods.—Canned Fruits and Vegetables.
Claims use since July 7, 1915.

Ser. No. 90,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LIBERTY MILLS, Nashville, Tenn. Filed Oct. 27, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since Oct. 1, 1915.

Ser. No. 90,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATURAL FRUIT CO., Pennington, N. J. Filed Oct. 27, 1915.

THREE POINT



Particular description of goods.—Table Sauces, Marmalades, Jellies, and Salad-Dressing.
Claims use since Oct. 22, 1915.

Ser. No. 90,147. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Oct. 27, 1915.

NOBS

Particular description of goods.—Biscuit.
Claims use since Oct. 22, 1915.

Ser. No. 90,148. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Oct. 27, 1915.

DICKORY DOCKS

Particular description of goods.—Biscuit.
Claims use since Oct. 22, 1915.

Ser. No. 90,151. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) POWHATAN BRASS & IRON WORKS, Ransom, W. Va. Filed Oct. 27, 1915.



Particular description of goods.—The Following Brass Goods for Steam, Water, Gas, and Oil Uses, to wit: Compression-Bibs, (Plain, Hose, and Washtray,) Ground-Key Bibs, (Plain, Hose, and Washtray,) Ground-Key Bibs, Compression Bath-Cocks, Upright Bath-Bibs, Telegraph-Handle Self-Closing Bibs, Compression-Stops and Stops and Wastes, Lavatory-Stops, Compression Urinal-Cocks, Hopper-Cocks, Sill-Cocks, Ball-Cocks, Boiler Drain-Cocks, Compression Pantry-Cocks, Compression Flanged Bibs, Compression Basin-Cocks, Telegraph-Handle Self-Closing Basin-Cocks, Ground-Key Sister-Cocks, Ground-Key Boiler Drain-Cocks, Ground-Key Rain and Well Water Cocks, Ground-Key Stops and Stops and Wastes, Ground-Key Hydrant-Cocks, Ground-Key Corporation-Cocks, Double Bath-Cocks, Ground-Joint Brass Unions, Steam-Cocks, Gas-Cocks, Meter-Cocks, Union Meter-Cocks, Lock Union Meter-Cocks, Service-Cocks, Lock Service-Cocks, Tank-Wagon Faucets, Single and Double Acting Hopper-Valves, Hose-Nipples, Hose-Reducers, Hose-Couplings, and Hose-Bushings, Boiler-Spuds, Urinal-Shields, Urinal Connections, Soldering Nipples and Unions, Boiler-Couplings, Water-Back Couplings, and Trap-Screws.
Claims use since about July 1, 1895.

Ser. No. 90,157. (CLASS 12. CONSTRUCTION MATERIALS.) SPOTLESS COMPANY, INC., Richmond, Va. Filed Oct. 27, 1915.

SPOTLESS

Particular description of goods.—Rubber Roofing.
Claims use since April, 1912.

Ser. No. 90,178. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & CO., Chicago, Ill. Filed Oct. 28, 1915.

ZEST

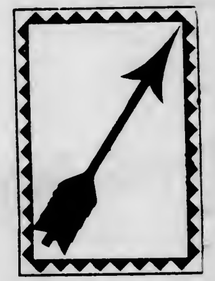
Particular description of goods.—Cocoa.
Claims use since March, 1914.

Ser. No. 90,203. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERNATIONAL SUGAR FEED CO., Minneapolis, Minn. Filed Oct. 29, 1915.



Particular description of goods.—A Horse Feed.
Claims use since the 31st day of January, 1914.

Ser. No. 90,204. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERNATIONAL SUGAR FEED NO. TWO CO., Minneapolis, Minn. Filed Oct. 29, 1915.



Particular description of goods.—A Horse Feed.
Claims use since June 12, 1914.

Ser. No. 90,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARTER OAK CITRUS ASSOCIATION, Charter Oak, Cal. Filed Oct. 30, 1915.



Particular description of goods.—Lemons, Oranges, and Grape-Fruit.
Claims use since Aug. 20, 1911.

Ser. No. 90,225. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COAST CANNING CO., Beach, Wash., and Portland, Oreg. Filed Oct. 30, 1915.



Particular description of goods.—Canned Salmon.
Claims use since Sept. 15, 1915.

Ser. No. 90,232. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELLIS H. LAWRY, Lawry, Me. Filed Oct. 30, 1915.



Particular description of goods.—Canned Clams.
Claims use since the year 1900.

Ser. No. 90,233. (CLASS 39. CLOTHING.) LAX & BURGHEIMER, INC., New York, N. Y. Filed Oct. 30, 1915.



Particular description of goods.—Knitted Hosiery and Underwear.
Claims use since July 15, 1912.

Ser. No. 90,287. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROYAL REMEDY & EXTRACT Co., Dayton, Ohio. Filed Nov. 1, 1915.



Particular description of goods.—Food-Flavoring Extracts.
Claims use since March, 1912.

Ser. No. 90,311. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEATRICE CREAMERY COMPANY, Chicago, Ill. Filed Nov. 2, 1915.



Particular description of goods.—Butter.
Claims use since September, 1903.

Ser. No. 90,314. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BAY STATE MILLING CO., Winona, Minn. Filed Nov. 2, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since June 1, 1905.

Ser. No. 90,320. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVANSVILLE MILL & ELEVATOR CO., Evansville, Ind. Filed Nov. 2, 1915.



Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Sept. 7, 1915.

Ser. No. 90,321. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FISHER FLOURING MILLS COMPANY, Seattle, Wash. Filed Nov. 2, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since Mar. 14, 1914.

Ser. No. 90,328. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HARRIS & BERNTZ COMPANY, Philadelphia, Pa. Filed Nov. 2, 1915.



Particular description of goods.—Tooth-Brushes, Hair-Brushes, Shaving-Brushes, Flesh-Brushes, Nail-Brushes, Hat-Brushes, Cloth-Brushes, and Hand-Scrubs.
Claims use since May, 1907.

Ser. No. 90,336. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HIGGINSVILLE MILLING CO., Higginsville, Mo. Filed Nov. 2, 1915.



Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since July 27, 1915.

Ser. No. 90,343. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCDONALD MILLING COMPANY, McDonald, Pa. Filed Nov. 2, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since May 15, 1915.

Ser. No. 90,345. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MEMPHIS COTTON HULL AND FIBRE CO. LTD., London, England, and Memphis, Tenn. Filed Nov. 2, 1915.



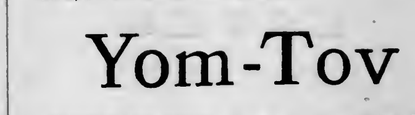
Particular description of goods.—Mixed Feed for Horses, Mules, and Cattle.
Claims use since July 12, 1915.

Ser. No. 90,352. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIS NORTON & CO., Topeka, Kans. Filed Nov. 2, 1915.



The picture being fanciful.
Particular description of goods.—Wheat-Flour.
Claims use since July 31, 1915.

Ser. No. 90,358. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRIVATE ESTATE COFFEE CO., New York, N. Y. Filed Nov. 2, 1915.



Particular description of goods.—Coffee, Tea, Olive-Oil, Canned Sardines, Cocoa, and Rice.
Claims use since Aug. 10, 1915.

Ser. No. 90,360. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. G. PALMER COMPANY, Minneapolis, Minn. Filed Nov. 2, 1915.



Particular description of goods.—Cheese.
Claims use since September, 1914.

Ser. No. 90,379. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BUFFALO CEREAL COMPANY, Buffalo, N. Y. Filed Nov. 3, 1915.



Particular description of goods.—Rolled Oats or Oatmeal.
Claims use since Aug. 26, 1915.

Ser. No. 90,393. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. ROMEO & CO., INC., New York, N. Y. Filed Nov. 3, 1915.



Particular description of goods.—Macaroni.
Claims use since about Oct. 1, 1915.

Ser. No. 90,396. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. ROMEO & CO., INC., New York, N. Y. Filed Nov. 3, 1915.

GIULIETTA

Particular description of goods.—Macaroni.
Claims use since about Oct. 1, 1915.

Ser. No. 90,406. CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FUEL SPIRITS COMPANY OF PENNA., Pittsburgh, Pa. Filed Nov. 4, 1915.

RUSTINE

Particular description of goods.—A Rust-Remover.
Claims use since Oct. 1, 1915.

Ser. No. 90,409. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. GOODMAN & SONS, INC., New York, N. Y. Filed Nov. 4, 1915.

EATEM

Particular description of goods.—Egg-Noodles, Egg Flakes, and Egg-Alphabets.
Claims use since Apr. 8, 1915.

Ser. No. 90,451. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SALLY CROSS, INC., Providence, R. I. Filed Nov. 6, 1915.

Jamalade

Particular description of goods.—Conserves.
Claims use since Oct. 7, 1915.

Ser. No. 90,470. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRESNO FRUIT GROWERS CO., Fresno, Cal. Filed Nov. 6, 1915.

Sunflower

Particular description of goods.—Fresh Fruits.
Claims use since August, 1912.

Ser. No. 90,471. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FAIRMONT CREAMERY CO., Omaha, Nebr. Filed Nov. 6, 1915.

DIADEM

Particular description of goods.—Butter.
Claims use since 1885.

Ser. No. 90,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. O. MITCHELL & BRO., Perryman, Md. Filed Nov. 6, 1915.

HARROWS

Particular description of goods.—Canned Corn.
Claims use since 1896.

Ser. No. 90,482. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. O. MITCHELL & BRO., Perryman, Md. Filed Nov. 6, 1915.

LITTLE "BO-PEEP"

Particular description of goods.—Canned Corn.
Claims use since 1905.

Ser. No. 90,549. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Nov. 10, 1915.



Particular description of goods.—Tents, Tent-Windows, Ground-Cloths, Mosquito-Proof Fronts, Rubber Blankets.
Claims use since January, 1900.

Ser. No. 90,643. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YORK PRETZEL BAKERY, York, Pa. Filed Nov. 13, 1915.

O-SO-GUD

Particular description of goods.—Pretzels.
Claims use since Nov. 9, 1914.

Ser. No. 90,757. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WHEELING CORRUGATING COMPANY, Wheeling, W. Va. Filed Nov. 18, 1915.



No claim being made to the exclusive use of the picture of the roaster.
Particular description of goods.—Steel Roasters.
Claims use since November, 1914.

Ser. No. 90,858. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) UNITED DRUG COMPANY, Boston, Mass. Filed Nov. 22, 1915.

Liggett

The trade-mark "Liggett" is the facsimile signature of Louis K. Liggett, the president of the United Drug Company.
Particular description of goods.—Soft Drinks and Ingredients Used in the Making of Soft Drinks—Namely, Fruit Syrups, Fruit Extracts, Crushed Fruits, Lime-Juice, Orangeade, Citric-Acid Solution for Flavoring Beverages, Ginger-Syrup, Peach-Syrup, Sarsaparilla-Syrup, Grape-Punch, Limeade, Root-Beer Syrup, Coffee-Syrup, Imitation Maple-Syrup, Claret-Punch, Mint-Flavor Syrup, Fruit-Punch Syrup.
Claims use since prior to June 1, 1911.

Ser. No. 90,882. (CLASS 15. OILS AND GREASES.) RIVERSIDE OIL COMPANY, Pittsburgh, Pa. Filed Nov. 23, 1915.



Particular description of goods.—Lubricating-Greases, Lubricating and Illuminating Oils, Carbon-Oil, Petroleum, Kerosene, Gasolene, Benzin, and Naphtha.
Claims use since Nov. 10, 1915.

Ser. No. 90,899. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) R. E. DIETZ COMPANY, New York, N. Y. Filed Nov. 24, 1915.

REDCO

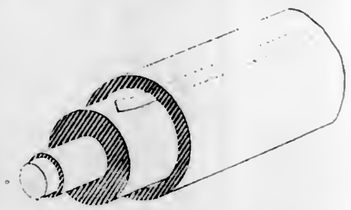
Particular description of goods.—Electrical Lamps, Lanterns, and Headlights.
Claims use since about the 1st of November, 1915.

Ser. No. 90,931. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ECLIPSE WHITE LEAD AND COLOR COMPANY, Brooklyn, N. Y. Filed Nov. 26, 1915.

TUFF KOTE

No claim is made to the exclusive use of the word "Tuff-kote" except as arranged and used with other features in the mark as shown.
Particular description of goods.—Paste Paints, Ready-Mixed Paints, and Varnishes.
Claims use since about November, 1913.

Ser. No. 90,960. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STANDARD UNDERGROUND CABLE COMPANY, Pittsburgh, Pa. Filed Nov. 26, 1915.

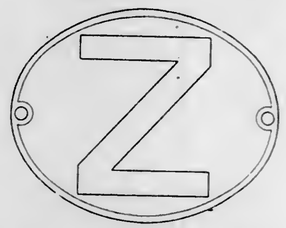


Consists of a thin tape or flat strip, adventitious so far as cable-service is concerned, being of paper or a thin fabric and adapted to receive, by printing, perforation, embossing, or the like, intelligible characters and being itself uniformly green in color.

Particular description of goods.—Electric Cables.

Claims use since Apr. 3, 1911.

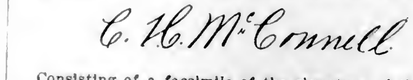
Ser. No. 91,002. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FAIRBANKS, MORSE & Co., Chicago, Ill. Filed Nov. 29, 1915.



Particular description of goods.—Internal-Combustion Engines.

Claims use since about the 1st day of October, 1915.

Ser. No. 91,013. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORA H. MCCONNELL, Cornelia, Ga. Filed Nov. 29, 1915.



Consisting of a facsimile of the signature of the applicant.

Particular description of goods.—A Preparation for the Treatment of Rheumatism.

Claims use since Nov. 14, 1914.

Ser. No. 91,579. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) DON JOSE ROZAS CO., INC., New York, N. Y. Filed Dec. 18, 1915.



Particular description of goods.—Cordials.

Claims use since June 1, 1914.

Ser. No. 91,585. (CLASS 48. MALT EXTRACTS AND LIQUORS.) VAL BLATZ BREWING CO., Milwaukee, Wis. Filed Dec. 18, 1915.



Particular description of goods.—Fermented Malt Liquor.

Claims use since Nov. 24, 1915.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 11, 1916.

108,006. FURNITURE AND WOODWORK POLISH. EDWARD J. BOERSIG, Detroit, Mich.
Filed August 30, 1915. Serial No. 88,870. PUBLISHED NOVEMBER 2, 1915.

108,007. CERTAIN NAMED FURNITURE. LOUISE BRIGHAM, New York, N. Y.
Filed February 9, 1915. Serial No. 84,396. PUBLISHED SEPTEMBER 7, 1915.

108,008. READY-MIXED PAINTS, VARNISHES, ENAMELS, AND PAINT-OILS. THE CHARLES H. BROWN PAINT CO., New York, N. Y.
Filed April 1, 1915. Serial No. 85,597. PUBLISHED AUGUST 17, 1915.

108,009. VARNISH AND PAINT REMOVER. CLEN-RE-PO MANUFACTURING CO., Chicago, Ill.
Filed August 14, 1915. Serial No. 88,613. PUBLISHED NOVEMBER 2, 1915.

108,010. ACID-PROOF CEMENT. ELECTRO-CHEMICAL SUPPLY & ENGINEERING CO., Wilmington, Del., and Philadelphia, Pa.
Filed February 5, 1915. Serial No. 84,308. PUBLISHED AUGUST 10, 1915.

108,011. CONDENSED MILK. THE DENMARK CONDENSED MILK COMPANY, Denmark, Wis.
Filed August 24, 1915. Serial No. 88,777. PUBLISHED OCTOBER 26, 1915.

108,012. BRICK AND TILE USED FOR CONSTRUCTION PURPOSES. FISKE & COMPANY INCORPORATED, Boston, Mass., and New York, N. Y.
Filed September 18, 1915. Serial No. 89,289. PUBLISHED OCTOBER 26, 1915.

108,013. COATING FOR AUTOMATIC SPRINKLERS IN THE NATURE OF A PAINT. GENERAL FIRE EXTINGUISHER COMPANY, New York, N. Y., and Providence, R. I.
Filed August 13, 1914. Serial No. 80,537. PUBLISHED OCTOBER 26, 1915.

108,014. COCOA, SWEET AND BITTER CHOCOLATE. HOOTON COCOA COMPANY, Newark, N. J.
Filed August 11, 1915. Serial No. 88,542. PUBLISHED OCTOBER 26, 1915.

108,015. COTTON-SEED SALAD-OIL. ITALIAN IMPORTING COMPANY, Des Moines, Iowa.
Filed February 16, 1915. Serial No. 84,556. PUBLISHED APRIL 27, 1915.

108,016. FISH PACKED IN WOODEN BOXES AND IN GLASS JARS. ALFRED JONES' SONS, Bangor, Me.
Filed March 6, 1915. Serial No. 84,980. PUBLISHED AUGUST 31, 1915.

108,017. BEER. S. LIEBMANN'S SONS BREWING CO., Brooklyn, N. Y.
Filed October 22, 1913. Serial No. 73,555. PUBLISHED DECEMBER 9, 1915.

108,018. VARNISHES. LILLY VARNISH CO., Indianapolis, Ind.
Filed August 16, 1915. Serial No. 88,650. PUBLISHED NOVEMBER 2, 1915.

108,019. CLAMPS FOR PIPE, CONDUIT, AND CABLES. MINERALLAC ELECTRIC COMPANY, Chicago, Ill.
Filed August 14, 1915. Serial No. 88,624. PUBLISHED NOVEMBER 2, 1915.

108,020. BISCUITS. GEORGE FRANCIS NICHOLLS, Toronto, Ontario, Canada.
Filed October 26, 1914. Serial No. 82,184. PUBLISHED OCTOBER 19, 1915.

108,021. CERTAIN NAMED KETTLES, POTS, AND PANS, AND BOWLS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed September 11, 1915. Serial No. 89,153. PUBLISHED NOVEMBER 2, 1915.

108,022. FLY-TRAPS. CHARLES A. PIPENHAGEN, Chicago, Ill.
Filed August 14, 1915. Serial No. 88,630. PUBLISHED OCTOBER 26, 1915.

108,023. FLOOR-CLOTHS. THOMAS POTTER, SONS & COMPANY, INC., Philadelphia, Pa.
Filed September 27, 1915. Serial No. 89,488. PUBLISHED OCTOBER 26, 1915.

108,024. FRESH AND CANNED FRUITS. PUNTA GORDA PINEAPPLE CORPORATION, Punta Gorda, Fla., and Chicago, Ill.
Filed August 17, 1915. Serial No. 88,667. PUBLISHED OCTOBER 26, 1915.

108,025. CERTAIN NAMED OILS AND GREASES. PURE OIL COMPANY, Minneapolis, Minn.
Filed August 30, 1915. Serial No. 88,885. PUBLISHED NOVEMBER 2, 1915.

108,026. SUBSTANCE TO BE USED WITH SOAP FOR WASHING PURPOSES. ALMA C. RICHARDS, Sherman, Tex., assignor to A. B. Richards Medicine Co. Inc., Sherman, Tex., a Corporation.
Filed January 6, 1915. Serial No. 83,700. PUBLISHED JUNE 8, 1915.

108,027. MOTION-PICTURE FILMS. SELIG POLYSCOPE COMPANY, Chicago, Ill.
Filed May 27, 1915. Serial No. 86,941. PUBLISHED SEPTEMBER 7, 1915.

108,028. CERTAIN NAMED ALUMINUM KITCHEN UTENSILS. STANDARD ALUMINUM CO., Two Rivers, Wis.
Filed December 28, 1914. Serial No. 83,559. PUBLISHED NOVEMBER 2, 1915.

108,029. LADDERS, LADDER-BRACKETS, MASON-HORSES, EXTENSION-PLANKS, TELESCOPING EXTENSION-PLANKS, LADDER-BUMPERS, TRESTLES, PLATFORMS. THE JOHN S. TILLEY LADDERS CO., Watervliet, N. Y.
Filed April 23, 1915. Serial No. 86,166. PUBLISHED OCTOBER 26, 1915.

108,030. LINIMENT USED FOR THE ALLEVIATION OF PAIN BY EXTERNAL APPLICATION. WM. P. S. TONER, Springfield, Mass.
Filed April 30, 1915. Serial No. 86,306. PUBLISHED AUGUST 3, 1915.

108,031. BAKING-POWDER AND SALT. ABRAHAM & STRAUS, New York, N. Y.
Filed September 22, 1915. Serial No. 89,367. PUBLISHED NOVEMBER 2, 1915.

108,032. CHOCOLATE CANDY. AMBROSIA CHOCOLATE CO., Milwaukee, Wis.
Filed April 23, 1915. Serial No. 86,128. PUBLISHED AUGUST 3, 1915.

108,033. CERTAIN NAMED FASTENERS, LOCKS, CATCHES, AND PARTS THEREOF. THE AMERICAN HARDWARE CORPORATION, New Britain, Conn.
Filed July 19, 1915. Serial No. 88,001. PUBLISHED NOVEMBER 2, 1915.

108,034. THERMOMETERS. FRANKLIN E. ASPINWALL, La Grange, Ky.
Filed October 4, 1915. Serial No. 89,621. PUBLISHED NOVEMBER 9, 1915.

108,035. CHEMICAL-CLOSETS. AUTOMATIC CHEMICAL CLOSET COMPANY, Minneapolis, Minn.
Filed January 29, 1915. Serial No. 84,184. PUBLISHED NOVEMBER 2, 1915.

108,036. BLOOD AND NERVE REMEDY. PHILIP BERNARDI, Newark, N. J.
Filed September 17, 1915. Serial No. 89,261. PUBLISHED NOVEMBER 2, 1915.

108,037. MEN'S AND BOYS' SUITS, OVERCOATS, AND HATS. BLOCK BROTHERS CLOTHING COMPANY, St. Joseph, Mo.
Filed June 29, 1915. Serial No. 87,652. PUBLISHED NOVEMBER 9, 1915.

108,038. TREATMENT FOR CERTAIN NAMED AFFECTIONS ARISING FROM DISORDERS OF THE KIDNEYS AND BLADDER. BOOTH'S HYOMEI CO., Buffalo, N. Y.
Filed October 1, 1915. Serial No. 89,569. PUBLISHED NOVEMBER 2, 1915.

108,039. CERTAIN NAMED PIECE GOODS, COMFORTERS, AND TOWELING OF CERTAIN NAMED MATERIALS. CALIFORNIA COTTON MILLS COMPANY, Oakland, Cal.
Filed January 28, 1915. Serial No. 84,166. PUBLISHED NOVEMBER 9, 1915.

108,040. TRAVELING-CASE. ROLAND R. CARTER, New York, N. Y., assignor to The Camp Toiletkit Company, Inc., a Corporation.
Filed May 20, 1915. Serial No. 86,771. PUBLISHED NOVEMBER 9, 1915.

108,041. SPECIALLY-PREPARED DOLOMITE. ROY P. M. DAVIS, Pittsburgh, Pa.
Filed October 4, 1915. Serial No. 89,626. PUBLISHED NOVEMBER 2, 1915.

108,042. COMPOUND FOR CLEANING PLATENS AND TREATING PLATENS TO PREVENT PAPER TROUBLES. WILLIAM F. DEMING, Des Moines, Iowa.
Filed March 16, 1915. Serial No. 85,179. PUBLISHED NOVEMBER 2, 1915.

108,043. COMBINATION OF ALKALOIDS IN SOLUTION FOR TREATING AND PREVENTING CERTAIN DISEASES OF THE TEETH. JOHN BOHR, Chicago, Ill.
Filed June 21, 1915. Serial No. 87,456. PUBLISHED NOVEMBER 2, 1915.

108,044. CLASPS FOR GARMENTS. THE CLARK MANUFACTURING CO., Boston, Mass.
Filed September 17, 1915. Serial No. 89,266. PUBLISHED NOVEMBER 9, 1915.

108,045. ELASTIC WEBBING. THE CLARK MANUFACTURING CO., Boston, Mass.
Filed September 30, 1915. Serial No. 89,535. PUBLISHED NOVEMBER 9, 1915.

108,046. CONSTIPATION, LIVER, STOMACH, AND HEADACHE. DUER-LATTA CO., Philadelphia, Pa.
Filed September 3, 1915. Serial No. 89,000. PUBLISHED NOVEMBER 2, 1915.

108,047. FEMALE-TONIC FOR USE DURING PREGNANCY. CHRISTENA M. FREUND, Quesnal, British Columbia, Canada.
Filed January 4, 1915. Serial No. 83,654. PUBLISHED NOVEMBER 2, 1915.

108,048. AERIAL MACHINES—NAMELY AEROPLANES AND HYDROAEROPLANES. EMILIE GRAMATICESCO, Paris, France.
Filed July 1, 1914. Serial No. 79,488. PUBLISHED NOVEMBER 9, 1915.

108,049. MEN'S AND BOYS' COATS, VESTS, AND TROUSERS. L. GREIF & BRO., Baltimore, Md.
Filed September 1, 1915. Serial No. 88,958. PUBLISHED NOVEMBER 9, 1915.

108,050. HORSESHOE-PADS. HOOPES AND TOWNSEND COMPANY, Philadelphia, Pa.
Filed August 20, 1915. Serial No. 88,710. PUBLISHED NOVEMBER 2, 1915.

108,051. CYLINDERS AND CRANK-CASINGS. INTERNATIONAL MOTOR COMPANY, New York, N. Y.
Filed June 5, 1915. Serial No. 87,135. PUBLISHED SEPTEMBER 14, 1915.

108,052. MOTOR-TRUCKS, TRANSMISSION-CASINGS, AND HUBS. INTERNATIONAL MOTOR COMPANY, New York, N. Y.
Filed August 5, 1915. Serial No. 88,433. PUBLISHED SEPTEMBER 7, 1915.

108,053. LIQUID FEMALE-TONIC AND HEALTH-BUILDER. MILTON R. R. JONES, Jackson, Miss.
Filed October 1, 1915. Serial No. 89,578. PUBLISHED NOVEMBER 2, 1915.

108,054. SILK PIECE GOODS. EUGENE W. KAHN, New York, N. Y.
Filed September 22, 1915. Serial No. 89,381. PUBLISHED NOVEMBER 9, 1915.

108,055. COACH AND CARRIAGE BODIES. KELLNER FRERES, Paris, France.
Filed May 8, 1913. Serial No. 70,462. PUBLISHED NOVEMBER 9, 1915.

108,056. INFANTS' HOSIERY. S. S. KRESGE CO., Detroit, Mich.
Filed October 7, 1915. Serial No. 89,716. PUBLISHED NOVEMBER 9, 1915.

108,057. CORSETS. MADAME IRÈNE, New York, N. Y.
Filed October 6, 1915. Serial No. 89,686. PUBLISHED NOVEMBER 9, 1915.

108,058. BLOOD MEDICINE. JOHN C. MENDENHALL, Evansville, Ind.
Filed June 23, 1915. Serial No. 87,672½. PUBLISHED AUGUST 17, 1915.

108,059. BEER. MONUMENTAL BREWING COMPANY, Baltimore, Md.
Filed September 25, 1915. Serial No. 89,465. PUBLISHED NOVEMBER 9, 1915.

108,060. ANTISEPTIC COMPOUNDS. THE MU-COL COMPANY, Buffalo, N. Y.
Filed September 15, 1915. Serial No. 89,210. PUBLISHED NOVEMBER 2, 1915.

108,061. REMEDY FOR MALARIA, TYPHOID FEVER, SCARLET FEVER, RHEUMATISM, AND COLDS. PAUL PARNITZKY, New York, N. Y.
Filed September 22, 1915. Serial No. 89,387. PUBLISHED NOVEMBER 2, 1915.

108,062. [WITHDRAWN.]

108,063. UNDERWEAR—VIZ., MEN'S AND BOYS' UNION SUITS MADE OF TEXTILE OR KNITTED MATERIALS. ROBERT REIS & Co., New York, N. Y.
Filed September 23, 1915. Serial No. 89,417. PUBLISHED NOVEMBER 9, 1915.

108,064. DRESS, NEGLIGÉE, AND WORK SHIRTS. MACHAEL M. RUBINSTEIN, New York, N. Y.
Filed August 24, 1915. Serial No. 88,791. PUBLISHED NOVEMBER 9, 1915.

108,065. TOOTH-WASH. SHARP & DOHME, Baltimore, Md.
Filed September 21, 1915. Serial No. 89,362. PUBLISHED NOVEMBER 2, 1915.

108,066. UNWROUGHT AND PARTLY-WROUGHT METALS USED IN MANUFACTURE. WALTER SPENCER & Co. LD., Sheffield, England.
Filed May 17, 1915. Serial No. 86,685. PUBLISHED NOVEMBER 9, 1915.

108,067. SILKS IN THE PIECE. STEHLI SILKS CORPORATION, New York, N. Y.
Filed August 19, 1915. Serial No. 88,695. PUBLISHED NOVEMBER 2, 1915.

108,068. REMEDY FOR GOUT, RHEUMATISM, AND NERVOUS TROUBLES. AUG. H. STOECKLEIN and WM. MASSOPUST, trading as Celery Tea Co., Brooklyn, N. Y.
Filed September 14, 1915. Serial No. 89,179. PUBLISHED NOVEMBER 2, 1915.

108,069. MOPS. CARL H. SUESS, Indianapolis, Ind.
Filed February 23, 1915. Serial No. 84,712. PUBLISHED AUGUST 3, 1915.

108,070. CANDY AND ICE-CREAM. UNITED CIGAR STORES CO., Jersey City, N. J.
Filed September 13, 1913. Serial No. 72,850. PUBLISHED MAY 5, 1914.

108,071. STIFFENING MATERIAL. VICTORIUS BROS., New York, N. Y.
Filed October 7, 1915. Serial No. 89,727. PUBLISHED NOVEMBER 9, 1915.

108,072. COTTON PIECE GOODS AND COTTON CHIFFONS. PACIFIC MILLS, Lawrence and Boston, Mass.
Filed August 27, 1915. Serial No. 88,842. PUBLISHED NOVEMBER 2, 1915.

LABELS

REGISTERED JANUARY 11, 1916.

18,971.—*Title:* "RYTHMODIK RECORD MUSIC ROLLS." (For a Music-Roll Box.) AMERICAN PIANO COMPANY, New York, N. Y. Filed September 20, 1915.

18,972.—*Title:* "AMMEN'S PRICKLY HEAT BABY POWDER." (For Toilet Powder.) CHAS. AMMEN CO., LTD., Alexandria, La. Filed August 12, 1914.

18,973.—*Title:* "GOLD MEDAL." (For Shoe-Polish.) ADOLPH LIPSHUTZ, New York, N. Y. Filed November 1, 1915.

18,974.—*Title:* "COSMOS." (For Printing-Paper.) THE MEAD PULP AND PAPER COMPANY, Dayton, Ohio. Filed December 7, 1914.

18,975.—*Title:* "ENAMELINE." (For Printing-Paper.) THE MEAD PULP AND PAPER COMPANY, Dayton, Ohio. Filed December 7, 1914.

18,976.—*Title:* "OERTEL BREW." (For Beer.) JOHN F. OERTEL CO., Louisville, Ky. Filed September 3, 1915.

18,977.—*Title:* "THE LUBRICANT THAT RESISTS HEAT." (For Lubricating-Oils.) PLATT & WASHBURN REFINING COMPANY, New York, N. Y. Filed December 18, 1915.

18,978.—*Title:* "TEN BRUIN'S." (For Mustard.) H. TEN BRUIN & SONS, Chicago, Ill. Filed October 19, 1915.

18,979.—*Title:* "BUTTER BURST BREAD." (For Bread.) WISEHEART BAKING CO., Fortville, Ind. Filed July 24, 1915.

PRINTS

REGISTERED JANUARY 11, 1916.

4,168.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed November 26, 1915.

4,169.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed November 26, 1915.

4,170.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed November 26, 1915.

4,171.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed November 26, 1915.

4,172.—*Title:* "PERFECTION IN MUNSINGWEAR." (For Underwear.) NORTHWESTERN KNITTING COMPANY, Minneapolis, Minn. Filed May 7, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

COOPER *v.* DOWNING.

Decided November 16, 1915.

INTERFERENCE—TESTIMONY AS TO DISCLOSURE OF APPLICATION.

It is not the practice of the Office to permit expert testimony to explain what an application discloses, and it should be permitted only in very exceptional cases, if at all. (Distinguishing from *Hopkins* v. *Newman*, 134 O. G., 2028; 30 App. D. C., 402.)

ON PETITION for supervisory authority.

SHEET-METAL CAR END.

Mr. Frederick R. Cornwall and *Mr. George W. Ramsey* for Cooper.

Messrs. Barnett & Truman for Downing.

EWING, *Commissioner:*

This is a petition that the Commissioner exercise his supervisory authority for the purpose of correcting an error of law in a decision of the Examiners-in-Chief.

Downing contends that this petition should be dismissed; but the conclusion of the Examiners-in-Chief as to the expert testimony which Downing might be permitted to take makes this case unusual.

Hopkins v. *Newman* (134 O. G., 2028; 30 App. D. C., 402) is not in point. The testimony on behalf of Newman which was considered in that case merely explained the statement of Newman's application that a certain conventional showing was a "registering accountant." This was well known in the art, and its structure was set forth in the testimony. Supplemented by this explanatory testimony the disclosure of Newman was found to be sufficient. The testimony of the experts produced on behalf of Hopkins is considered by the court of appeals with especial reference to certain admissions which bear out the contention of Newman with reference to the "registering accountant."

It is not the practice of this Office to permit expert testimony to explain what an application discloses. The tribunals of this Office are presumed to be sufficiently expert to understand the technical terms, and they are in possession of information as to the state of the art upon which any alleged improvement is grounded. Therefore expert evidence is admissible, if at all, in very exceptional cases.

As presented no question is involved in this interference excepting whether Downing discloses the invention. The drawing is somewhat obscure; but the statements of the specification are clear as to the function of the channels under consideration. An ingenious model has been presented on behalf of Cooper, which is not inconsistent with the drawing and in which the channels are of no advantage in strengthening the end walls, since they do not extend under the flanges and are not continuous. This model is inconsistent with the statements of function of the specification. The construction which Downing contends for is a simple and readily-attainable construction for effecting the object stated by him. I therefore see no difficulty in accepting his specification and drawings as disclosing the structure illustrated in his model, in which the corrugations form a continuous channel, and not the structure illustrated in the model submitted on behalf of Cooper.

Cooper having brought this interference before me on petition, I deem it proper to dispose of it on the merits.

The Examiners-in-Chief are sustained. As the date of conception alleged by Cooper in his preliminary statements is subsequent to Downing's filing date, it results that priority must be awarded to Ira S. Downing, and it is so ordered.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE HERBST.

Decided November 29, 1915.

RES ADJUDICATA—SUBSEQUENT DECISIONS IN OTHER CASES IMMATERIAL.

Where in a trade-mark interference the Patent Office decided that the mark was unregistrable to an applicant and no appeal to the court was taken, *Held* that the question is *res adjudicata* and will not be reconsidered upon a new application merely because the applicant thinks a later decision by the court of appeals shows that the Office was wrong.

Mr. L. S. Bacon and *Mr. J. H. Milans* for the appellant.

Mr. M. E. Porter for the Commissioner of Patents.

ROBB, *J.:*

Appeal from a decision of the Patent Office refusing to register the words "Old Judge" as a trade-mark for whisky.

Appellant first applied for the registration of this mark on April 19, 1905. Thereafter an interference was declared between that application and two others. The Patent Office decided that no one of the parties was entitled to registration. No appeal was taken from this decision and it therefore became final. Subsequently Herbst, the appellant here, began the prosecution of his application *ex parte*. Registration was refused by the Patent Office on the ground that the decision in the interference proceeding was *res adjudicata* and, on appeal to this court, that decision was affirmed. (*In re Herbst*, 32 App. D. C., 269.) We said:

Appellant's remedy, if he was aggrieved by the decision of the Commissioner, was by way of appeal to this court. When the time within which an appeal might have been taken from that decision expired the decision became final and was *res adjudicata*, and appellant had no more right to prosecute his original application before the Examiner of Trade-Marks than he would have had to prosecute his application before the Examiner for the second time after an adverse decision by the Commissioner in an *ex parte* case.

The present application was filed on April 12, 1913. Appellant now contends that under a decision of this court rendered subsequent to the decision of the Patent Office in said interference proceeding, the decision of the Patent Office in that proceeding was wrong, and that—

thereafter Herbst filed this application, which seemingly was a proper thing for him to do.

We cannot agree with appellant's contention. Whether the former decision of the Patent Office was right or wrong is not the question. It was final and conclusive of every question that was or might have been presented and determined in that case. (*Blackford* v. *Wilder*, 28 App. D. C., 535; *United States, ex rel. Newcomb Motor Co.*, v. *Moore*, 30 App. D. C., 464; *in re Herbst*, 32 App. D. C., 269.) As pointed out in the Herbst case, appellant's remedy, if he was dissatisfied with the decision of the Patent Office in the interference proceeding, was by way of appeal to this court. Because, as he now believes, he would have prevailed had he taken such an appeal, in no way changes the situation. He has had his day in court and is not entitled to another for the consideration of the questions previously determined.

The decision is affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

THE STANDARD BREWERY COMPANY OF BALTIMORE CITY v. INTERBORO BREWING COMPANY, INC.

Decided November 29, 1915.

TRADE-MARK—CANCELATION.

Where an applicant for cancelation of a registration does not set up facts showing a superior right in himself to use the mark, but depends upon the showing of a superior right in a third party, *Held* that the application for cancelation should be dismissed.

Mr. Archibald Cox and *Mr. E. W. Brewington* for the appellant.

Mr. W. H. Small and *Mr. Melville Church* for the appellee.

ROBB, *J.*:

This is an appeal from a final decision of the Patent Office sustaining appellee's application for the cancelation of appellant's registered trade-mark "Bismark" for beer.

In its application for cancelation appellee alleges that it has adopted for use and has used upon bottled beer in interstate commerce this mark, but it does not aver that its date of adoption antedates that of appellant. It does aver, however, that the Massachusetts Breweries Company, a third party, has a right to said trade-mark superior to that of appellant. The Patent Office tribunals, upon the showing made by appellee as to the superior right to this mark of said third party, the Massachusetts Breweries Company, sustained the application of appellee.

Section 13 of the Trade-Mark Act of February 20, 1905, (33 Stat., 724,) authorizes any person who may deem himself injured by the registration of a trade-mark to apply to the Commissioner of Patents to cancel such registration. In *Mellhenny's Son* v. *New Iberia Ex. of T. P. Co.* (30 App. D. C., 337) we ruled that the right of a party to file such a petition is dependent upon a showing of interest, and that his petition must contain a statement of fact on this jurisdictional question. There the petition failed to state the use of the mark upon goods of the same descriptive properties as those to which the registrant had applied it. Here, while the petition does contain this averment, it would be fatally defective without the additional averment as to use by a third party, for the reason that the petition does not aver that, as between the registrant and appellant, appellant was the first to adopt and use the trade-mark. The question presented, therefore, is whether the statute contemplates that a party who, upon his own showing, has no right to the use of a trade-mark, may nevertheless prosecute in the Patent Office an application for the cancelation of such trade-mark. We must answer this question in the negative. An application for the registration of a trade-mark must follow the procedure prescribed by law and the rules of the Patent Office. The Commissioner of Patents represents the public and where in due course an application has been granted and a trade-mark registered, the Commissioner may assume that if any person has a superior right to the use of the mark he will invoke the provisions of section 13 of the Trade-Mark Act, to the end that the registration may be canceled. We do not think the statute contemplates that a mere interloper may invoke its provisions. The statute was intended as a shield to the innocent, rather than as a foil to the guilty. The appellee, on its own showing, has no right whatever to the use of this trade-mark. How, then, can it be injured by its registration by the appellant? It is not concerned with the question whether the appellant's right to the mark is superior to that of the third party. If that party deems itself injured by the registration it may invoke the provisions of this statute, but certainly an interloper and wrong-doer has no standing to invoke it. Appellee's petition, therefore, should have been dismissed.

The decision of the Patent Office is reversed.

Reversed.

Court of Appeals of the District of Columbia.

IN RE UNITED DRUG COMPANY.

Decided November 29, 1915.

TRADE-MARK—NAME OF CORPORATION UNREGISTRABLE.

The word "Stork" *Held* unregistrable as a trade-mark in view of the existence of a corporation named The Stork Company, (citing *The Asbestone Co.* v. *The Philip Carey Mfg. Co.*, 41 App. D. C., 507; 200 O. G., 857.)

Mr. Jos. R. Edson and *Mr. Arthur W. Murray* for the appellant.

Mr. William R. Ballard for the Commissioner of Patents.

SHEPARD, *C. J.*:

United Drug Company appeals from a decision of the Commissioner of Patents denying registration of the word "Stork" as a trade-mark for rubber nipples.

The registration was denied because the Commissioner had on file a certificate of incorporation granted in the State of Maine, in December, 1904, to a corporation entitled The Stork Company.

The case is governed by the decision in *The Asbestone Company* v. *The Philip Carey Manufacturing Company*, (41 App. D. C., 507.)

It is not important that The Stork Company is not engaged in the manufacture of rubber nipples. The purpose of its incorporation seems, however, to have been the manufacture of waterproof goods.

The corporate name of The Stork Company is protected by the express provisions of the Trade-Mark Act.

The Commissioner was right, and his decision is affirmed, and this decision will be certified to the Commissioner of Patents.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Hodges patent, No. 953,334, for a method of operating compound compressed-air engines, claims 1 and 4 *Held* valid. *H. K. Porter Co.* v. *Baldwin Locomotive Works*, 227 Fed. Rep., 216.

(U. S. C. C. A.) The Kerwin patent, No. 1,000,270, for a portable crossover for use on street-railroad tracks, *Held* void for lack of patentable invention. *Belsteel Co.* v. *Lorain Steel Co.*, 227 Fed. Rep., 240.

(U. S. C. C. A.) The Hitchcock patent, No. 1,056,415, for apparatus for grinding plate-glass, *Held* valid. *Hitchcock* v. *American Plate Glass Co.*, 227 Fed. Rep., 227.

(U. S. C. C. A.) The Hitchcock patent, No. 1,056,416, for process for grinding plate-glass, *Held* valid. *Hitchcock* v. *American Plate Glass Co.*, 227 Fed. Rep., 227.

Adverse Decisions in Interference.

PATENT NO. 1,038,773.

On December 18, 1915, a decision was rendered that John C. MacLachlan was not the first inventor of the subject-matter covered by claim 22 of his Patent No. 1,038,773, subject, "Desiccating apparatus," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,067,074.

On November 27, 1915, a decision was rendered that Charles Strellner and John Sierk were not the first inventors of the subject-matter covered by claim 3 of their Patent No. 1,067,074, subject, "Dump-cars," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,110,698.

On December 10, 1915, a decision was rendered that Francis N. Lambert was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,110,698, subject, "Speed-measure," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,115,629.

On November 26, 1915, a decision was rendered that Raymond L. Ward was not the first inventor of the subject-matter covered by claims 1, 2, 3, and 4 of his Patent No. 1,115,629, subject, "Sheet-holddown attachment for fly-sticks," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,115,895.

On November 26, 1915, decisions were rendered that Charles F. Brown was not the first inventor of the subject-matter covered by claims 1, 2, and 3 of his Patent No. 1,115,895, subject, "Towel-holders," and no appeal having been taken within the time allowed such decisions have become final.

Disclaimers.

954,056.—*Homer Clyde Snook*, Philadelphia, Pa. X-RAY SYSTEM. Patent dated April 5, 1910. Disclaimer filed December 31, 1915, by *Snook-Roentgen Manufacturing Company*, assignee by mesne assignments.

Enters this disclaimer—

"To that part of the specification printed at page 3, lines 98 to 106, inclusive, and reading as follows:

"It is obvious also that a source of direct current may be employed in connection with the transformer primary, a pole changing switch and interrupter being included in the circuit and driven or operated at desired speed, with a high tension pole changing switch or rectifier in the secondary circuit synchronous with the switch and interrupter in the primary circuit."

1,107,519.—*Frank O. Hoagland*, Bridgeport, Conn. RIM-FIRE CARTRIDGE. Patent dated August 18, 1914. Disclaimer filed January 6, 1916, by *Union Metallic Cartridge Company*, assignee.

It, therefore, disclaims in claims 1 and 2 of said patent, any shell made of brass containing less than 15% of zinc.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 23, 1915.

Central Stock Food Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of D. H. Grandin Milling Co., Jamestown, N. Y., for registration of a trade-mark and trade-mark registered June 24, 1902, No. 38,515, to the Central Stock Food Co., Columbus, Nebr., and a notice of such declaration sent by registered mail to said Central Stock Food Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Central Stock Food Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE

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OF THE

United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF JANUARY 18, 1916.

Patents	838—No.	1,168,267 to No. 1,169,104,	inclusive.
Designs	19—No.	48,462 to No. 48,480,	inclusive.
Trade-Marks	161—No.	108,073 to No. 108,233,	inclusive.
Labels	14—No.	18,980 to No. 18,993,	inclusive.
Prints	11—No.	4,173 to No. 4,183,	inclusive.
Reissues	1—No.	14,050.	
Total	1044		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels and Prints.
Alabama	4	.....	North Carolina	4	2
Arizona	4	.....	North Dakota	6	.....
Arkansas	4	1	Ohio	58	11
California	43	8	Oklahoma	8	.....
Colorado	6	.....	Oregon	4	1
Connecticut	30	3	Pennsylvania	73	5
Delaware	5	3	Rhode Island	2	1
Florida	3	1	South Carolina	2	1
Georgia	1	1	South Dakota	8	.....
Idaho	1	1	Tennessee	5	1
Illinois	84	30	Texas	11	.....
Indiana	15	3	Utah	1	.....
Iowa	17	1	Vermont	1	.....
Kansas	10	2	Virginia	13	3
Kentucky	9	1	Washington	8	1
Louisiana	5	1	West Virginia	9	.....
Maine	5	1	Wisconsin	17	3
Maryland	4	1	Wyoming	.....	.....
Massachusetts	53	12			
Michigan	27	2	Alaska, District of	.....	1
Minnesota	11	1	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	7	.....
Missouri	36	3	Hawaii Territory	.....	.....
Montana	3	.....	Philippine Islands	1	.....
Nebraska	6	1	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	.....	.....
New Jersey	41	12			
New Mexico	2	.....	Total to residents of the United States	830	179
New York	128	60			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	1	.....
Austria-Hungary	1	1	New South Wales	.....	.....
Belgium	.....	1	New Zealand	1	.....
Brazil	1	.....	Nicaragua	1	.....
British West Indies	.....	.....	Peru	.....	.....
Canada	5	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	1	.....	South Australia	.....	.....
England	19	.....	Straits Settlements	.....	.....
Finland	.....	.....	Sweden	5	.....
France	8	.....	Switzerland	1	.....
Germany	11	2	Transvaal, South Africa	.....	.....
Guatemala	.....	2	Tasmania	.....	1
India	.....	.....	Wales	.....	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	1	.....			
Japan	.....	.....	Total to residents of foreign countries	56	7
Luxemburg	.....	.....			
Mexico	.....	.....			

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 7, 1916.

Anna H. McDonnald, her assigns or legal representatives, take notice:

A cancelation proceeding having been instituted by this Office upon the application of Richard Hudnut, of 115 East Twenty-ninth street, New York, N. Y., to effect the cancelation of the trade-mark registration of Anna H. McDonnald, of 351 State street, Albany, N. Y., No. 18,410, dated September 9, 1890, and the notice of such proceeding sent by registered mail to the said Anna H. McDonnald at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anna H. McDonnald, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Adverse Decisions in Interference.

PATENT NO. 1,073,640.

On December 15, 1915, a decision was rendered that Paul S. Smith was not the first inventor of the subject-matter covered by claims 1, 2, and 3 of his Patent No. 1,073,640, subject, "Internal-combustion engine," and no appeal having been taken within the time allowed such decision has become final.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 15, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows: Seeders and Planters; Trees, Plants, and Flowers.	Oct. 29	Nov. 3	347
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 1	Oct. 26	891
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy: Plastic Metal Working.	Jan. 3	Dec. 30	81
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Oct. 1	Dec. 18	400
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 4	Nov. 26	296
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	May 18	Nov. 12	468
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Oct. 14	Nov. 26	436
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Sept. 22	Nov. 19	1118
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	June 14	Dec. 15	546
235	10. Carriages and Wagons	Aug. 21	Jan. 3	691
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Nov. 24	Jan. 3	139
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 17	Dec. 6	477
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 5	Nov. 3	478
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure: Wire-Working.	Aug. 31	Dec. 14	193
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass, Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Oct. 6	Jan. 4	353
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Aug. 23	Dec. 22	453
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Oct. 14	Jan. 3	144
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 3	Dec. 1	218
238	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Nov. 11	Dec. 6	197
179	20. Artificial Limbs: Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 15	Dec. 21	151

Applications Under Examination—Continued.

Room No	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Sept. 17	Nov. 16	300
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 23	Dec. 9	360
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 14	Nov. 22	440
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Aug. 21	Dec. 16	334
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 14	Dec. 20	125
106	26. Electricity, Generation; Motive Power.	May 17	Sept. 15	536
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 18	Dec. 9	205
65	28. Internal-Combustion Engines	Sept. 12	Dec. 2	425
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Sept. 16	Dec. 14	370
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 26	Dec. 16	295
172	31. Alcohol: Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating: Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 13	Dec. 8	283
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	June 7	Dec. 20	682
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Aug. 24	Dec. 8	413
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Sept. 20	Dec. 11	250
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	July 8	Jan. 4	577
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Sept. 16	Nov. 27	739
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	June 16	Nov. 6	612
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Oct. 2	Nov. 26	261
321	39. Water Distribution	Sept. 8	Nov. 17	356
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 26	Nov. 9	963
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 2	Dec. 18	368
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 22	Sept. 18	877
282	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 14	Nov. 2	248

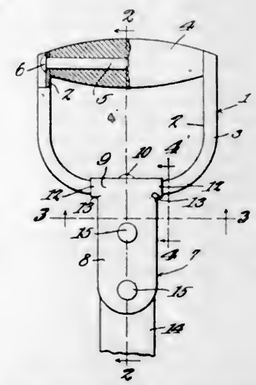
Oldest new case, May 17; oldest amended, Sept. 15.
Total number of applications awaiting action..... 18,196

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 10	Dec. 23	1012
	Designs	Aug. 23	Nov 27	552
	Labels and Prints	Jan. 6	Jan. 8	60

PATENTS

GRANTED JANUARY 18, 1916.

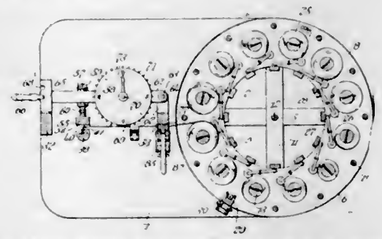
1,168,267. HANDLE. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed Mar. 24, 1915. Serial No. 16,732. (Cl. 55—116.)



1. A hand hold comprising a hand receiving member embodying a channel member, and a doubled handle engaging member having its intermediate portion secured to the back of the channel member, and the intermediate portion of the second mentioned member having portions engaged around the edges of the flanges of the channel member.

2. A hand hold comprising a U-shaped channel member having its flanges projecting outwardly, a member secured between the ends of the said member, and a doubled handle engaging strip having its bend portion extending around and secured to the back of the channel member, the strip forming handle engaging leaves, and the leaves being of arcuate cross section, the bend portion of the strip having protruding portions and the protruding portions having portions engaged around the edges of the flanges of the channel member.

1,168,268. FABRIC REELING AND MEASURING APPARATUS. JOSIAH ADDISON, Broughton, Ill., assignor of forty-five one-hundredths to Francis W. Davis, Broughton, Ill. Filed May 15, 1914. Serial No. 838,775. (Cl. 33—130.)



1. A fabric reeling and measuring apparatus, including means for holding a plurality of rolls, means for preventing movement of the holding means beyond a predetermined point, means for drawing a piece from one of the rolls, means yieldingly associated with the drawing means for facilitating the tight winding of the fabric being wound thereon, means disposed between the roll and the drawing means for measuring the amount withdrawn, means for guiding the fabric into engagement with the measuring means, and means for moving the measuring means out of engagement with the piece being withdrawn.

2. In a fabric reeling and measuring apparatus, means for holding a roll of fabric, a sectional roller for drawing a piece from the roll, the sections of said roller being co-actingly associated with each other, one of said sections being eccentrically connected to the other, fabric engaging prongs projecting from the eccentrically mounted section, and means for removably mounting said roller for facilitating the removal of the fabric thereon.

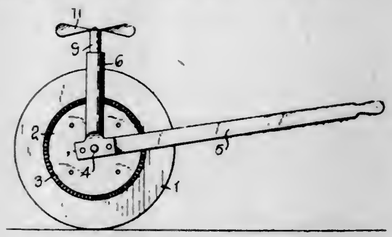
3. In a fabric reel and measuring apparatus, means for holding a roll of fabric, a sectional roller for drawing a piece from the roll, one of said sections being eccentrically connected to the other, fabric engaging prongs projecting from the eccentrically mounted section, a yieldingly supported bar coöperatively associated with the roller for facilitating the tight winding of the fabric on the roller, and said bar being provided with a plurality of recesses for allowing the passage of the engaging prongs during the operation of the roller.

4. In a fabric reeling and measuring apparatus, a rotatably mounted reel, a plurality of rotatably and removably mounted spindles vertically disposed in said reel for holding rolls of fabric, means for limiting the movement of said reel beyond a predetermined point, means removably mounted in each of said spindles for gripping the rolls of fabric and preventing the rotation of the same about the spindles, and means for drawing fabric from one of the spindles.

5. In a fabric reeling and measuring apparatus, means for holding a roll of fabric, means for drawing a piece therefrom, means for preventing reverse movement of the drawing means, and means disposed between the drawing means and holding means for clamping the piece being withdrawn for facilitating the severing of the same.

[Claims 6 to 14 not printed in the Gazette.]

1,168,269. TOY. DAVID E. ALLEN, Ardmore, Okla. Filed Oct. 16, 1915. Serial No. 56,282. (Cl. 46—38.)

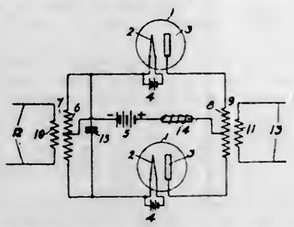


1. As a new article of manufacture, a toy including a wheel having an annular series of teeth carried by a side face thereof, a handle loosely engaged with the wheel at the axial center thereof, said teeth being concentric to the axial center of the wheel, a sleeve secured to the handle and radiating from the axial center of the wheel, said sleeve being provided in its inner face with an opening through which the teeth of the wheel travel, a shaft

loosely mounted within the sleeve and provided with an annular series of teeth in mesh with the teeth of the wheel, said shaft being of a length to extend beyond the sleeve, and a whirligig carried by the extended end of the shaft.

2. As a new article of manufacture, a toy including a wheel having an annular series of teeth carried by a side face thereof, a handle loosely engaged with the wheel at the axial center thereof, said teeth being concentric to the axial center of the wheel, a sleeve secured to the handle and radiating from the axial center of the wheel, said sleeve being provided at its inner face with an opening through which the teeth of the wheel travel, the inner end of said sleeve being closed and provided with an upstanding extension to afford a mounting, a shaft loosely disposed within the sleeve and resting upon the mounting within the sleeve, said shaft being provided with a series of annular teeth in mesh with the teeth of the wheel, and a whirligig carried by the shaft.

1,168,270. PROTECTION DEVICE FOR ELECTRIC CIRCUITS. HAROLD DE FOREST ARNOLD, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 14, 1914. Serial No. 877,056. (Cl. 171—97.)



1. In a protector for electric circuits, the combination of a source of direct potential; two electric valves connected in multiple to said source of potential, each valve consisting of an electron-emitting cathode and an anode inclosed in an evacuated tube; windings connecting, respectively, said anodes and said cathodes; and two circuits inductively connected, respectively, to said windings.

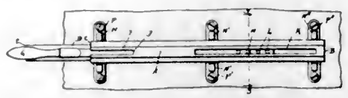
2. In a protector for electric circuits, the combination of two electric valves each consisting of an electron-emitting cathode and an anode inclosed in an evacuated tube; two transformers one winding of each of which lies in a single circuit containing said valves; and a source of constant electromotive force connected between the middle points of said windings.

3. In combination with a source of power and a receiving circuit, a protector for electric circuits comprising a source of constant electromotive force, an inductive branch containing said source, unilaterally conducting thermionic elements connected in multiple to said branch, each element consisting of an electron-emitting cathode and an anode in an evacuated vessel, transformer windings for connecting together said anodes and said cathodes, respectively, and other windings of said transformers for connecting said protector to said source of power and to said receiving circuit.

4. In combination with a source of power and a receiving circuit, a protector for electric circuits comprising a source of constant electromotive force, an inductive branch containing such source, unilaterally conducting thermionic elements connected in multiple to such branch, transformer windings for connecting said elements in multiple and other windings of said transformers for connecting said protector to said source of power and to said receiving circuit.

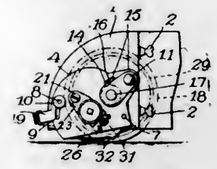
1,168,271. SHOE-SHINING FOOT-REST. BENJAMIN BALSER, Des Moines, Iowa. Filed June 4, 1914. Serial No. 842,935. (Cl. 15—58.)

1. A tubular horizontally mounted base member having a slot at its top which opens through the front end of said member and also having a second slot at its rear the front wall of which second slot forms a stop, a bar slidable in said member, a foot rest secured to the bar and extending up through the front slot, said bar having a series of spaced apertures which register with the rear slot, and a pin for selective engagement in any one of the apertures and with the stop.



2. A tubular horizontally mounted base member having a slot at its top which opens through the front end of said member and also having a second slot at its rear the front wall of which second slot forms a stop, a bar slidable in said member, a foot rest secured to the bar and extending up through the front slot, said bar having a series of spaced apertures which register with the rear slot, a pin for selective engagement in any one of the apertures and with the stop, and a vertical member connected to the bar and extending through the front slot and engaged with the foot rest to provide a hand grip.

1,168,272. VACUUM CARPET-CLEANER. WALTER E. BANGS, Worcester, Mass. Filed Apr. 7, 1913. Serial No. 759,368. (Cl. 15—60.)



1. A carpet cleaner including a vacuum nozzle, a brush, a supporting wheel, and means for simultaneously raising or lowering the brush and the wheel with relation to the nozzle.

2. A carpet cleaner including a vacuum nozzle, a brush at the opening of the nozzle, a supporting wheel, and means for raising or lowering the wheel with relation to the nozzle and for simultaneously raising or lowering the brush to a greater extent.

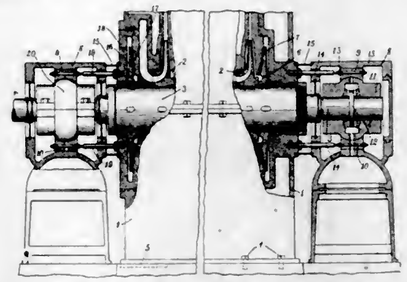
3. A carpet cleaner including a casing, a brush, a supporting wheel having a friction surface, a driven wheel connected with the brush and having a friction surface, an arm carrying the driven wheel and one end of the brush, a plate pivoted to the casing and carrying the supporting wheel and the arm, and means for yieldingly pressing the arm about an axis to hold the friction surfaces of the supporting and driven wheels together, whereby the supporting wheel and the brush may be simultaneously raised or lowered by turning the pivoted plate about its pivot.

4. A carpet cleaner including a casing carrying a vacuum nozzle, a plate pivotally connected to the casing, an arm pivoted at one end to the plate, a supporting wheel carried by the free end of the arm, and a stop contacting with an edge of the arm, said edge of the arm being shouldered, whereby the stop forces the wheel downwardly as the plate is turned on its pivot.

5. A carpet cleaner including a casing carrying a vacuum nozzle, a plate pivotally connected to the casing, an arm pivoted at one end to the plate and having a shoulder, a supporting wheel carried by the free end of the arm, and a pin on the casing projecting above and resting upon the arm to engage the shoulder so as to limit rotation of the plate in one direction and to force the wheel downwardly as the plate is turned in the other direction.

[Claims 6 to 9 not printed in the Gazette.]

1,168,273. MEANS FOR MAINTAINING CLEARANCES IN ROTARY MACHINES. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 11, 1914. Serial No. 837,670. (Cl. 121—58.)

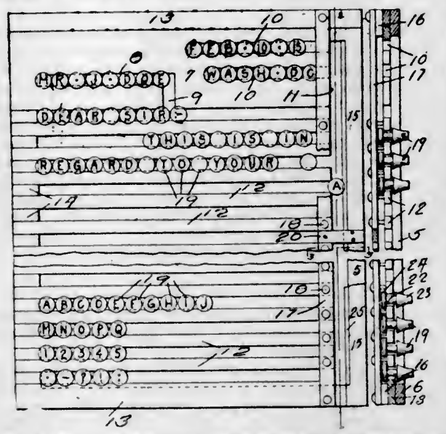


1. In a rotary machine, a casing secured at one end, a shaft secured at the same end, a rotor element at the free end of the casing, a movable casing portion having surfaces with slight clearances from said rotor element, and means connecting said shaft and said casing portions to prevent relative movement.

2. In a rotary machine, a casing secured at one end, a shaft having a thrust bearing secured to said casing by a heat expansible connection, a rotor element on the shaft at the other end of the casing, a separate casing portion slidable in the casing and surrounding said rotor element, and means for securing said separate casing portion in a fixed lineal position on said shaft, to prevent the disturbance of clearances between said rotor element and said casing portion.

3. In a rotary machine, a casing secured at one end and free at the other, a shaft, a rotor element on the shaft in the fixed end of the casing having slight clearance therefrom, a movable thrust bearing for the shaft at the fixed end of the casing, heat expansible rods joining said fixed end and said thrust bearing, a second rotor element on the other end of the shaft, a movable head sliding in the casing and having slight clearances from said second rotor element, a flange on the shaft, a movable bearing box engaging said flange and heat expansible rods joining said head and said bearing box.

1,168,274. EDUCATIONAL TOY. ARTHUR C. BAUMANN, New York, N. Y. Filed Mar. 22, 1915. Serial No. 16,135. (Cl. 35—9.)

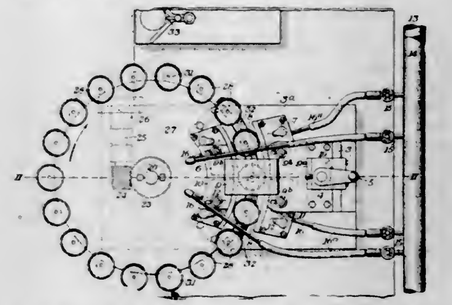


1. A toy apparatus comprising a frame a plurality of strips secured to one side of the frame, and terminating short of the other side, said strips being spaced to form channels, letter-blocks slidably held in said channels, and adapted to pass between the ends of the strips and the frame, and means for securing the otherwise free ends of the strips.

2. A toy apparatus comprising a frame, a plate secured at the upper end of the frame, a plurality of spaced strips secured to one side of the frame, and terminating short of said other side, said plate being provided with slots opening at the inner edge thereof, said slots, and the spaces between the strips, and between the free ends of the strips and the adjacent side forming channels and letter-blocks slidably held in said channels.

3. In a toy apparatus, a rectangular frame, spaced strips each secured at one end to one side of the frame, and having its other end spaced from the other side of the frame, blocks on the ends of the frame, a bar secured to said blocks, and disposed over the free ends of the strips and spaced therefrom, and bolts passed through said bar and the ends of the strips.

1,168,275. MACHINE FOR CRACKING OFF GLASS BLANKS. ELMER BELL, Mount Pleasant, Pa., assignor to Bryce Brothers Company, Mount Pleasant, Pa., a Corporation of Pennsylvania. Filed Oct. 21, 1913. Serial No. 796,434. (Cl. 49—50.)



1. A machine of the character described, comprising a horizontal, rotatable carrier having a plurality of blank supports, each of said supports being mounted for separate rotation about a vertical axis while moving with the carrier, and the series of said supports being arranged in a circle on said carrier, a pair of segmental burners mounted over said carrier and having between them a curved space whose center line is directly over the center line of the series of blank supports and through which space the blanks are carried by the carrier, said burners having elongated discharge openings, and means for successively rotating the different blank supports while they are passing below the burners; substantially as described.

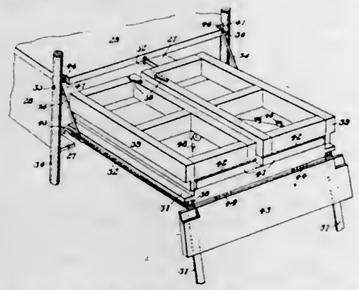
2. A machine of the character described, comprising a horizontal table, means for rotating said table, a circular series of blank supports each of which has a vertical spindle journaled in said table, a segmental rail below the carrier, means on the spindle for contact with said rail to rotate the spindle, and a segmental cracking off passage above said supports; substantially as described.

3. A machine of the character described, comprising a rotatable horizontal table having a plurality of blank supports, a vertical screw at one side of the said table, and oppositely arranged cracking-off burners mounted on said screw and projecting over one side of the carrier, said burners having a curved passageway between them for the passage of the blanks, together with flexible connections for supplying the burners; substantially as described.

1,168,276. CONVERTIBLE RECLINING-CHAIR. STEVE BENDZSA, Atlasburg, Pa., assignor of one-half to Charles Farkas, Cherry Valley, Pa. Filed June 5, 1915. Serial No. 32,318. (Cl. 155—9.)

1. A device of the class described, comprising a chair, opposite ledges secured in spaced relation beneath the bot-

tom of the chair, swinging hooks carried forwardly of the chair, a foot portion, metallic guides carried by the opposite edges of the said foot portion slidingly receiving the lower ends of the said hooks, eyes positioned upon the forward portion of the said bottom, supporting legs hingedly carried forwardly of the said foot portion, and hooks rigidly secured to and extending rearwardly from the said foot portion and seated within the said eyes when the said foot portion is in horizotnal alinement with the said bottom.

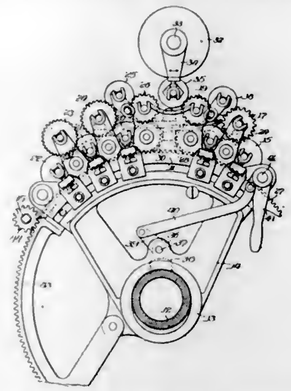


2. A device of the class described comprising a chair, opposite ledges secured in spaced relation beneath the bottom of the chair, swinging hooks carried forwardly of the chair, a foot portion, metallic guides carried by the opposite edges of the said foot portion slidingly receiving the lower ends of the said hooks, eyes positioned upon the forward portion of the said bottom, supporting legs hingedly carried forwardly of the said foot portion, hooks rigidly secured to and extending rearwardly from the said foot portion and seated within the said eyes when the said foot portion is in horizontal alinement with the said bottom, a closable foot board hinged to the forward end of the said foot portion and in engagement with the forward edge of the said bottom when the device is in its closed position, inwardly foldable sides carried by the said foot portion, inwardly swinging brackets hinged to the forward ends of the said sides, inwardly projecting hooks carried by the lower edges of the said brackets, the said end board having receiving sockets adjacent its outer edges and in receiving engagement with the said bracket hooks when the device is in its open unfolded position.

3. A device of the class described comprising a chair, opposite ledges secured in spaced relation beneath the bottom of the chair, swinging hooks carried forwardly of the chair, a foot portion, metallic guides carried by the opposite edges of the said foot portion slidingly receiving the lower ends of the said hooks, eyes positioned upon the forward portion of the said bottom, supporting legs hingedly carried forwardly of the said foot portion, hooks rigidly secured to and extending rearwardly from the said foot portion and seated within the said eyes when the said foot portion is in horizontal alinement with the said bottom, a closable foot board hinged to the forward end of the said foot portion and in engagement with the forward edge of the said bottom when the device is in its closed position, inwardly foldable sides carried by the said foot portion, inwardly swinging brackets hinged to the forward ends of the said sides, inwardly projecting hooks carried by the lower edges of the said brackets, the said end board having receiving sockets adjacent its outer edges and in receiving engagement with the said bracket hooks when the device is in its open unfolded position, and a back hingedly mounted to the rear of the said chair.

1,168,277. INK DISTRIBUTION FOR PRINTING-PRESSES. JOSEPH R. BLAINE, Chicago, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1914. Serial No. 833,579. (Cl. 101—71.)

1. In an ink distributing system, the combination with the form cylinder, of a plurality of trains of form and rider rolls arranged to apply ink to the cylinder at different points, an ink drum, means to distribute ink from the drum independently to the two trains, and means to swing the trains of rolls bodily to an accessible position for cleaning or adjustment, substantially as described.



2. In an ink distributing system, the combination with the form, of a plurality of trains of form and rider rolls arranged to apply ink to the form at different points, an ink drum, a ductor roll arranged to transfer ink from the drum to the first roll of each train in turn, and means to swing the trains of rolls bodily free of the form to an accessible position for cleaning or adjustment, substantially as described.

3. In an ink distributing system, the combination with a form cylinder, of a plurality of trains of rolls each including a form roll and a rider roll, an ink drum, a ductor roll mounted to oscillate upon the drum axis in continual peripheral contact with the drum and in intermittent alternate contact with the rider roll of each train, and means to swing the trains of rolls bodily free of the form to an accessible position for cleaning or adjustment, substantially as described.

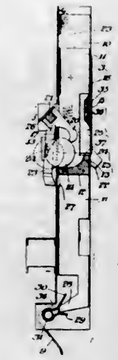
4. In an ink distributing system, the combination with a form cylinder, of a frame adjustable toward and from the form, a train of form and rider rolls mounted in the frame and arranged to apply ink to the cylinder, means to adjust the frame to bring the form rolls into and out of operative relation to the cylinder, and means to swing the trains of rolls bodily free of the form to an accessible position for cleaning or adjustment, substantially as described.

5. In an ink distributing system, the combination with the form cylinder, of a frame adjustable radially and concentrically thereof, a plurality of trains of form and rider rolls mounted in the frame and arranged to apply ink to the cylinder at different points, an ink drum, and a ductor roll arranged to transfer ink from the drum to the first roll of each train in turn, and means to adjust the frame radially to bring the trains of rolls into and out of operative relation to the form of cylinder and concentrically about the cylinder axis to swing the frame and trains of rolls bodily to an accessible position for cleaning or adjustment, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,168,278. COIN-CONTROLLED APPARATUS. ORSON W. BRENIZER, Philadelphia, Pa. Filed Nov. 2, 1914. Serial No. 869,736. (Cl. 194—75.)

1. In a coin-controlled machine, the combination of a supporting frame having a coin-engaging part, a movable member guided in said frame and having a coin-engaging face spaced from said part, a spring holding said member yieldingly in a normal position, a coin-engaging arm movable from and back to a normal position and toward and from the space between said part and said face and adapted to force a coin into said space and thereby move said member from its normal position, hand engaging means adapted to move said arm, and a latch adapted to engage and retain said member against the action of its spring when said member is moved from its normal position, said arm having means to operate said latch to release said member when said arm is returned to normal position.



2. In a coin-controlled machine, the combination of a supporting frame, a member mounted to slide vertically in said frame and including two side members and a floor portion having an upper coin-engaging face, said side members being adapted to receive a coin edgewise therebetween, said frame having a coin-engaging part above and spaced from said face, said part and said face being adapted to support a coin between said side members, a coin-engaging arm above and movable between said side members and toward and from the space between said part and said face and adapted to force a coin into said space and thereby move said members, and hand-engaging means operative to move said arm.

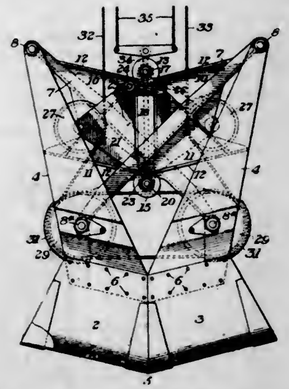
3. In a coin-controlled machine, the combination of a supporting frame, a member mounted to slide vertically in said frame and including two side members and a floor portion having an inwardly-extending forward portion and an upper coin-receiving face, said side members being adapted to receive a coin edgewise therebetween, said frame having a coin-engaging part rearwardly of said member and above and spaced from said face, said part and said face being adapted to support a coin between said side members, a coin-engaging arm above and movable between said side members and toward and from the space between said part and said face and adapted to force a coin into said space and thereby move said members, and hand-engaging means operative to move said arm.

4. In a coin-controlled machine, the combination of a supporting frame including a part having a coin-receiving slot therein, a movable member guided in said frame, coin controlled means for moving said member, and a spring pressed door normally closing said slot, said member having a part adapted to engage said door and prevent movement of the member when the door is out of its normal position.

5. In a coin-controlled machine, the combination of a supporting frame, a member mounted to slide vertically in said frame and including two side members and a floor portion having an upwardly-extending forward portion and an upper coin-receiving face, said side members being adapted to receive a coin edgewise therebetween, said frame having a coin-engaging part rearwardly of said member and above and spaced from said face, said part and said face being adapted to support a coin between said side members, a coin-engaging arm above and movable between said side members and toward and from the space between said part and said face and adapted to force a coin into said face and thereby move said members, and hand-engaging means operative to move said arm.

[Claims 6 and 7 not printed in the Gazette.]

1,168,279. GRAB-BUCKET. EDGAR E. BROSIUS, Pittsburgh, Pa. Filed Dec. 14, 1914. Serial No. 877,037. (Cl. 37—30.)



1. A grab bucket comprising two bucket sections each having upwardly extending substantially parallel lever arms rigidly connected to the sections and a link member connecting the upper portions of the arms of one bucket section with the lower portions of the arms of the other bucket section, said links having their center lines intersecting each other, a sheave journaled between the arms of each bucket section and a closing line engaging said sheaves, substantially as described.

2. A grab bucket comprising two bucket sections each of which has substantially parallel upwardly extending lever arms, a link member connecting the upper portion of each pair of arms with the lower portion of the arms of the other bucket section, said levers having their center lines intersecting each other, floating pins or shafts connecting the links to the arms, sheaves journaled on the lower shafts, and a closing line engaging said sheaves, substantially as described.

3. A grab bucket comprising two bucket sections each having upwardly extending long lever arms, pins or shafts connecting the upper and lower portions of the arms of each bucket section, a link member extending from the lower shaft connection of each pair of arms to the upper shaft connection of the other pair of arms, a closing line connected to both arms, a central suspension member and two oppositely acting opening members having a pivotal connection with the lower end portion of the suspension member, and also each having a pivotal connection with one of said link members, substantially as described.

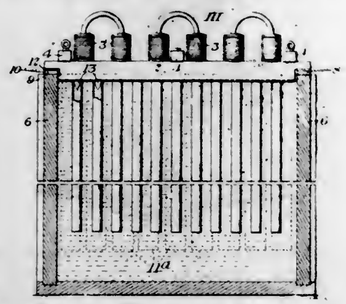
4. A grab bucket comprising two bucket sections each having upwardly extending long lever arms, pins or shafts connecting the upper and lower portions of the arms of each bucket section, a link member extending from the lower shaft connection of each pair of arms to the upper shaft connection of the other pair of arms, a closing line connected to both arms, a central suspension member and two oppositely acting opening members having a pivotal connection with the lower end portion of the suspension member, each link also having a pivotal connection with the upper portion of one of said link members, being the link member which is opposite thereto, substantially as described.

5. A grab bucket comprising two bucket sections each having upwardly extending long lever arms, pins or shafts connecting the upper and lower portions of the arms of each bucket section, a link member extending from the lower shaft connection of each pair of arms to the upper shaft connection of the other pair of arms, a closing line connected to both arms, a central suspension member and two oppositely acting opening members having a pivotal connection with the lower end portion of the suspension member, each opening member also having a pivotal connection with the upper portion of one of said link members, being the link member which is opposite thereto, to-

gether with guiding means for the closing line carried by each of the opening members, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,168,280. METHOD AND APPARATUS FOR ELECTROPLATING PIPES AND OTHER ARTICLES OF MAGNETIC MATERIAL. NEWTON W. BUCH, New Castle, Pa., assignor to Safety Armorite Conduit Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 23, 1913. Serial No. 775,250. (Cl. 204—5.)



1. The method of coating articles, consisting in stacking a plurality of articles in prearranged spaced-apart relation, simultaneously engaging said articles by their upper end surfaces only and in spaced relation by a lifting device, lowering them into a coating bath while so supported and coating them, and then lifting the frame containing the spaced-apart articles out of the bath; substantially as described.

2. The herein described method of coating magnetizable articles, which consists in stacking a plurality of the articles in prearranged position, bringing a lifting frame having magnetized portions over the articles and causing them to adhere to the said magnetized portions, moving said articles while suspended on said frame over and into the bath and coating them, and then lifting the frame to remove the coated articles from the bath and cutting off the magnetizing force applied to said frame to release the articles; substantially as described.

3. In electro-plating apparatus, a tank, a magnetizable holder for the articles to be coated, means for magnetizing said holder, and means on the holder for spacing the articles in definite positions while suspended from the magnetizable holder; substantially as described.

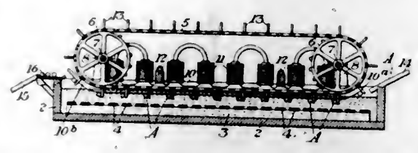
4. The herein described method of electroplating magnetizable articles, which consists in stacking a plurality of the articles in prearranged position, bringing a lifting frame having magnetized portions over the articles and causing them to adhere to the said magnetized portions, moving said articles while suspended on said frame over and into the bath, and utilizing the said magnetizable portions as cathode members; substantially as described.

5. Apparatus for electroplating, comprising a tank or vessel adapted to contain an electrode, a frame having a plurality of cathode members and adapted to be removably supported on the tank, means for magnetizing said cathode members to cause them to magnetically support the articles to be electroplated, and means for connecting said members with one side of an electric current while on the tank; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,168,281. ELECTROPLATING APPARATUS. NEWTON W. BUCH, New Castle, Pa., assignor to Safety Armorite Conduit Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 23, 1913. Serial No. 775,251. (Cl. 204—11.)

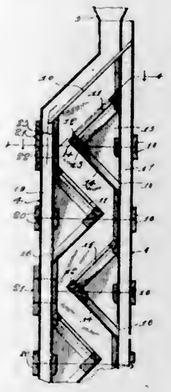
1. Electroplating apparatus, comprising a tank or vessel for the electrolyte, anode members therein, a cathode member supported above the anode members in position to leave a passage between the anode and cathode members for the articles to be coated, means for magnetizing the cathode members, and conveyer means for engaging and moving the articles through the electrolyte while they are suspended from above by the cathode members and at a distance from the anode members, substantially as described.



2. Electroplating apparatus having a cathode member extending longitudinally within the electrolyte above and at a distance from an anode member, and means whereby the articles to be coated are moved through the electrolyte at the under side of the cathode member while suspended therefrom, the space below the articles being unobstructed to the passage of current to the articles, substantially as described.

3. Electroplating apparatus having a cathode member extending longitudinally within the electrolyte, magnets for magnetizing the cathode member, and means for moving the articles to be coated through the electrolyte while they are held in contact with the under side of the cathode member, substantially as described.

1,168,282. GRAIN-SEPARATOR. OTTO A. BURGESON, Nanson, N. D. Filed June 18, 1915. Serial No. 34,863. (Cl. 130—15.)



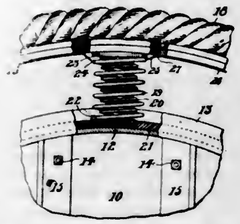
1. In a grain separator, a plurality of superimposed separator sections, and a removable door arranged to fit between abutting sections to afford a means whereby said sections are held against relative lateral movement and for the purpose specified.

2. In a grain separator, a plurality of superimposed separator sections, lock means to maintain the sections in vertical alinement, a plurality of screens arranged interiorly of the separator, and a removable door arranged to fit between the abutting sections and to afford a means whereby said sections are locked against relative lateral movement, a portion of the door projecting exteriorly of the separator to provide thereon a means confining the material acted on against escape.

3. In a grain separator, a plurality of superimposed separator sections, each section being cut away, the recess formed by that portion cut away providing a door opening, a door fitting the opening, the mentioned door engaging the abutting sections to preclude lateral displacement thereof, and means affixed to the outside of the separator and engaging the top and bottom edges of the door to afford a closure means at such points, substantially as described.

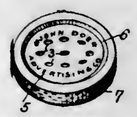
4. In a grain separator, a plurality of superimposed separator sections, one corner of each section being cut away to afford with the adjacent corner of the abutting sections a recess, a door fitting each recess, supports for the door disposed interiorly of the separator, an extension formed at each end of the door to overlap the side walls of the separator and terminate flush with the outside thereof, and strips affixed to the separator to engage with the door for the purpose specified.

1,168,283. SPRING-WHEEL. MIKLOS CHUPKA, Johnstown, Pa., assignor of one-third to Michael Bulik, Conemaugh, Pa., and one-third to Sandor Jarina, Johnstown, Pa. Filed July 13, 1915. Serial No. 39,716. (Cl. 152—8.)



A spring wheel including a rigid inner rim section and a deformable outer rim section in spaced relation thereto, outwardly directed flanges at the outer edges of the inner rim, compression coil springs arranged between the inner and outer rims, guide blocks engaging the inner face of the outer rim section and carrying bosses for reception in the outer ends of the coil springs, staples engaging the inner convolution of each spring for securing the same to the inner rim, tie wires extending about the inner face of the outer rim and secured at spaced points to the outer rim, and connections between the outer convolutions of each spring and the tie wires.

1,168,284. SANITARY COVER FOR TELEPHONE-MOUTHPIECES. EDWARD E. CLAUSSEN, Hartford, Conn. Filed Oct. 27, 1914. Serial No. 868,830. (Cl. 179—185.)



1. A sanitary one-piece cover of paper for telephone mouth pieces comprising a circular inwardly bulged body, the external portion of the bulge being upon a taper and being adapted to engage the inner surface of the telephone mouth piece, said body having an inturned circular plaited flange between the inner and outer sides of which the bulge is situated, said flange being adapted to engage the exterior of the mouth piece and the flange and the tapered portion of the bulge acting jointly to prevent accidental withdrawal of the cover from the mouth piece.

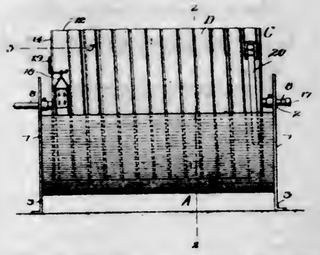
2. A sanitary one-piece cover of paper for telephone mouth pieces comprising a body provided with a marginal circular plaited and mashed-down flange.

1,168,285. PAPER. FRANK H. COYNE, Bryn Mawr, Pa., assignor to The General Fiber Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 4, 1915. Serial No. 506. (Cl. 92—39.)

1. As a new article of manufacture, a sheet of paper made directly from mature flax straw, said paper having throughout its structure numerous bits of the cortex of the flax plant so as to form anchorages for roofing compounds.

2. As a new article of manufacture, a paper made directly and wholly from the whole of the flax plant, the plant having been passed through a beater until the fibers have become changed into paper making material but with the cortex remaining largely in small pieces unreduced, whereby the finished product consists of a felted mass of the fibers and pith of the flax plant having embeded therein unreduced particles of the cortex.

1,168,286. METHOD OF TREATING PHOTOGRAPHIC FILM. JOHN ICKERINGILL CRABTREE, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed May 11, 1914. Serial No. 837,961. (Cl. 91—69.)



1. The method of protecting one side of a photographic film from an application made to the other side which consists in confining the side to be protected against an inflated surface while such application is being made.

2. The method of protecting one side of a photographic film from an application made to the other side, which consists in confining the side to be protected against the surface of an inflatable body, inflating said body and then making the application to the other side.

3. The method of protecting one side of a photographic film strip from an application made to the other side, which consists in winding the strip about an inflatable body with the side to be protected confined against the surface of the body, inflating said body and then making the application to the other side of the film strip.

4. The method of protecting one side of a photographic film strip from an application made to the other side, which consists in winding the strip in spiral convolutions about an inflatable body with the side to be protected confined against the surface of the body and the ends of the strip secured, inflating said body and then making the application to the other side of the strip.

5. The method of applying a liquid treament to one side only of a photographic film strip, which consists in winding the strip about an inflatable body, inflating said body and then immersing the surface of said body and the strip carried thereon in the liquid bath.

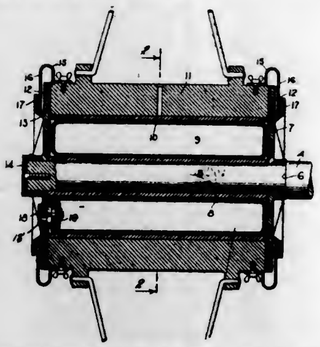
[Claim 6 not printed in the Gazette.]

1,168,287. WHEEL. JAMES BOUIE CUMMING, Ellerslie, Auckland, New Zealand. Filed Jan. 7, 1915. Serial No. 1,019. (Cl. 21—187.)

1. The combination of an axle, a pair of disks on the axle, a bushing on the axle free to turn thereon and spacing the disks, said axle having means for maintaining the disks against the bushing, an annular pneumatic tube on said bushing between the disks, a sleeve on the pneumatic tube, a hub between the disks mounted to rotate on the sleeve, said disks having leather washers on their faces adapted to contact with the tube and the hub, and dust guards on the hub surrounding the edges of the disks, each of said disks having a flange projecting in front of the dust guard carried by the hub.

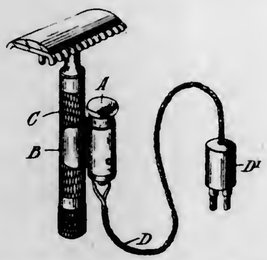
2. In combination, an axle, a pair of disks on the axle free to turn thereon, a bushing on the axle also free to turn thereon and spacing disks, means associated with the axle for maintaining the disks against the bushing, an

annular, pneumatic tube on the bushing between the disks, one of said disks having an apertured recess, said tube having a valve projecting into said recess, a sleeve on the pneumatic tube, a hub between the disks mounted to rotate on the sleeve, and a dust protector carried by the hub and surrounding the edge of the disk, each of the disks having a laterally projecting circular flange lying in front of the edge of the dust protector.



3. In combination, an axle, a pair of disks on the axle, a bushing on the axle free to turn thereon and spacing the disks, means associated with the axle for maintaining the disks against the bushing, an annular pneumatic tube on said bushing extending between the disks and having the ends thereof in close proximity to said disks, a sleeve fitting snugly over the pneumatic tube and extending through the entire length thereof, and a hub between the disks mounted to rotate on the sleeve, one of said disks having an apertured recess, said pneumatic tube having a valve projecting into said recess.

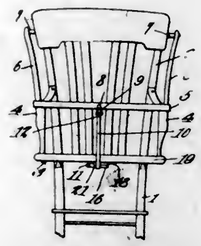
1,168,288. RAZOR. FREDERICK NATHANIEL DAVIDSON, London, England. Filed Sept. 9, 1913. Serial No. 788,782. (Cl. 240—2.)



1. The combination of a razor frame having a blade holder and a handle approximately perpendicular to the blade holder, an electric lamp socket extending parallel to said handle, means for securing the lamp socket to the handle at the side of the handle which lies beneath the blade edge when in use, an electric lamp in the front end of the socket adapted to throw its light rays below the blade holder, and a flexible electrical conductor extending from the rear of the lamp socket, said lamp socket and handle forming a hand hold; substantially as described.

2. The combination of a razor frame having a blade holder and a handle approximately perpendicular to the blade holder, an electric lamp socket extending parallel to the handle, a clip for adjustably securing the lamp socket to the handle at the side of the handle which lies beneath the blade edge when in use, and arranged to permit the socket to be adjusted longitudinally along the handle toward and from the blade holder, an electric lamp in the front end of the socket and adapted to throw its light rays below the blade holder, and a flexible electrrical conductor extending from the rear of the lamp socket, said lamp socket and handle forming a hand hold; substantially as described.

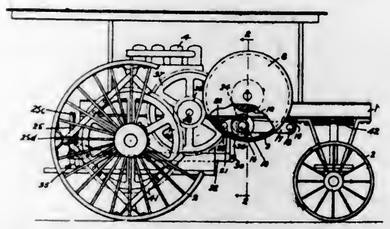
1,168,289. CHAIR. CHARLES H. DE FREHN, Johnstown, Pa. Filed Apr. 9, 1915. Serial No. 20,265. (Cl. 155—12.)



1. A high chair embodying as coöperating elements, a seat and a movable tray; a tightening device on one of said coöperating elements; and a flexible element assembled with the tightening device and with the other of said coöperating elements, the flexible element being located adjacent the forward edges of the seat and the tray and being located intermediate the sides of the chair.

2. A high chair embodying a seat and a movable tray; a lever fulcrumed on the seat; a retaining member connected at one end with the lever; and means for detachably connecting the other end of the retaining member with the tray, the lever being located to the rear of the forward edge of the seat, whereby when the retaining member is detached from the tray, the retaining member may hang in a depending position beneath the seat.

1,168,290. GEARING. EDMURN L. DEMOREST, Delaware, Ohio. Filed Sept. 11, 1913. Serial No. 789,395. (Cl. 21—114.)



1. In a vehicle of the class described, drivers having opposed working faces, complemental driven structures for said drivers arranged to coöperate with either of their opposed working faces, the complemental driven structures for the different drivers being operable independently of each other, and means for moving one of said driven structures into engagement with one face of its corresponding driver and moving the other complemental driven structure into engagement with the opposite face of its corresponding driver.

2. In a vehicle of the class described, drivers having opposed working faces, complemental driven structures for said drivers arranged to coöperate with either of their working faces, the complemental driven structures for the different drivers being operable independently of each other, and controlling mechanism comprising an operating lever, and means connected with and under the control of said lever for moving one of said driven structures into engagement with one face of its corresponding driver and moving the other complemental driven structure into engagement with the opposite face of its corresponding driver.

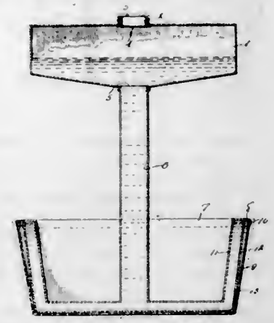
3. In a vehicle of the class described, drivers having opposed working faces, complemental driven structures for said drivers arranged to coöperate with either of their opposed working faces, the complemental driven structures for the different drivers being operable independently of each other, and means for moving one of said driven structures into engagement with one face of its corresponding driver and moving and keeping the other complemental driven structure out of engagement with either of the opposed faces of its corresponding driver.

4. In a vehicle of the class described, drivers having opposed working faces, complemental driven structures for said drivers arranged to coöperate with either of their working faces, the complemental driven structures for the different drivers being operable independently of each other, a controlling mechanism comprising an operating lever, and means connected with and under the control of said lever for moving one of said driven structures into engagement with one face of its corresponding driver and moving and keeping the other complemental driven structure out of engagement with either of the opposed faces of its corresponding driver.

5. In a vehicle of the class described, drivers having opposed working faces, complemental driven wheels having working faces adapted to coöperate with either of the opposed working faces of said drivers, and means for moving one of said driven wheels into engagement with one face of its complemental driver and moving the other driven wheel into engagement with the opposite face of its complemental driver.

[Claims 6 to 13 not printed in the Gazette.]

1,168,291. BREAD-PAN LUBRICATOR. JOHN A. DENGLER, Jr., New Ulm, Minn. Filed Dec. 21, 1914. Serial No. 878,322. (Cl. 107—7.)

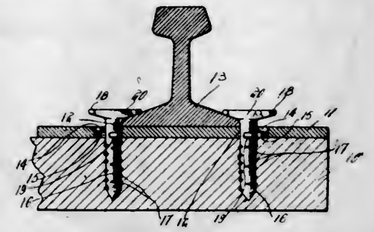


1. A device of the character described including a body portion, a reservoir connected to said body, the outer wall of said body provided with perforations, a pad member secured about the outer surface of said body, and means to space said pad member from the respective sides of said body to form a distribution chamber.

2. A device of the character described including a body portion, having side and end walls, a reservoir, means connecting said reservoir and said body, the outer wall of said body provided with perforations, a strip secured about said body and adjacent the upper edges of said end and side walls, a pad member arranged about the outer surfaces of said body, and means to secure the outed edges of said pad member to said strip, to space the same from the respective side and end walls of said body.

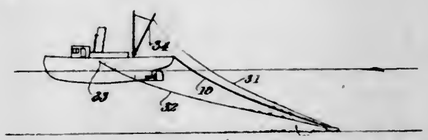
3. A device of the character described including a body portion, said body portion having outer and inner side and end walls, a reservoir, a tube connecting said reservoir and said body and forming a handle for operating the device, the outer end and side walls provided with perforations, a strip secured to the side and end walls of said body, a pad member arranged about said body, said pad member engaging the bottom thereof, means connecting said pad member and said strip, said strip spacing said pad member from the outer side and end walls of said body so as to form a distributing chamber, as and for the purpose set forth and described.

1,168,292. RAIL-FASTENER. CHARLES W. DWELLY, Johnstown, N. Y. Filed May 28, 1915. Serial No. 31,057. (Cl. 238—2.)



A rail fastener comprising a plate mounted on one end of the tie and supporting a rail thereon, said plate having vertical openings at opposite sides of the rail, ledges formed on the under side of the plate and partly encircling the openings, said plate having a recess in the side wall of each of the openings passing through the ledges, and a spike arranged to be passed through the opening and driven into the tie and having a laterally projecting pin for passage through the recess, and a wrench engaging head on the spike whereby the spike can be turned after it is driven into the tie so as to dispose the pin on the ledge.

1,168,293. DREDGE. STEPHEN A. EMMONS, Brooklyn, N. Y. Filed Feb. 3, 1915. Serial No. 5,918. (Cl. 43—11.)



1. In a dredge, the combination with a cage-like body portion, of pipes provided with jet tubes to which water under pressure is supplied, said jet tubes being angularly disposed so that the streams issuing therefrom will intersect each other and give a revolving motion to the material dredged.

2. In a dredge, a body portion having an open end and a closed end, a pair of pipes arranged at top and bottom of said open end, sets of jet tubes which also act as rake teeth screwthreaded into said pipes, the lower set of said tubes being clamped between reinforcing strips so situated that if the tubes of said set are broken off sufficient of their length will be left by which they may be unscrewed and replaced, and means for supplying water under pressure to said tubes.

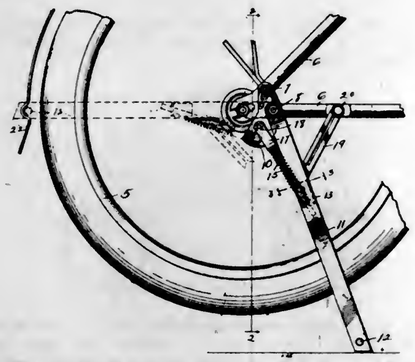
3. A dredge, having a cage-like body portion, a gate at one end, the other end of said body portion being open, jet tubes in said open end arranged to discharge streams of water in opposition to each other, and means to supply water under pressure to said jet tubes.

4. In a dredge, a cage-like body having a gate at one end and its other end open and provided at the top with a series of depending jet tubes, a series of jet tubes at the bottom of said opening arranged on a downward incline, and means to supply water under pressure to said tubes.

5. In a dredge, a cage-like body having a closed end and an open end, a series of jet tubes at the top of said open end arranged to discharge downwardly and another series of jet tubes at said open end arranged to discharge substantially forward, and means for supplying water under pressure to said tubes.

[Claims 6 and 7 not printed in the Gazette.]

1,168,294. MOTOR-CYCLE STAND. HARVEY V. ETTER, Norfolk, Va., assignor of one-half to E. R. Beadle, Norfolk, Va. Filed July 17, 1915. Serial No. 40,405. (Cl. 208—75.)



1. The combination with a motorcycle of a stand pivoted thereto, and pivoted spring means acting upon said stand in such manner as to throw it upon opposite sides of a dead center, said stand when thrown to one side of the dead center serving to support the rear wheel of a motorcycle in an elevated position and being moved by said spring means to an elevated position when moved to the opposite side of said dead center, and means for mounting said springs in such manner that their fulcrum is shifted to increase their angle of thrust with relation to the stand near the termination of the upward movement of said stand.

2. In a device of the character described the combination with a motorcycle of a stand, the upper end of which is pivoted to said motorcycle, spring actuated members bearing between a part of said motorcycle and said stand and acting to move said stand in opposite directions upon each side of a dead center.

3. In a device of the character described the combination with a motorcycle, of a stand, the upper end of which is pivoted to said motorcycle, spring actuated members bearing between a part of said motorcycle and said stand and acting to move said stand in opposite directions upon each side of a dead center and means for increasing the angle between said spring actuated means and the stand at the termination of the upward movement of said stand.

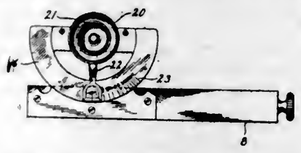
4. In a device of the character described the combination with a motorcycle of a stand pivoted thereto, cam plates fixed thereto, slots formed in said plates, plungers, bearing elements carried by said plungers and moving in said slots, and springs bearing between parts of said plungers and parts of said stand.

5. In a device of the character described the combination with a motorcycle, of a stand pivoted thereto, cam plates fixed thereto, slots formed in said plates, plungers, bearing elements carried by said plungers and moving in said slots, and springs bearing between parts of said plungers and parts of said stand, said slots being of such shape that said spring means ride in the upper portions thereof until the stand nearly reaches its upward limit of movement, and then ride to the lower part of said slots whereby the angle of thrust of the springs upon the stand is increased.

1,168,295. POLE-ELEVATION INDICATOR. JOHN L. FAY and SYLVESTER B. WAY, Milwaukee, Wis. Filed Sept. 30, 1912. Serial No. 723,010. (Cl. 33—70.)

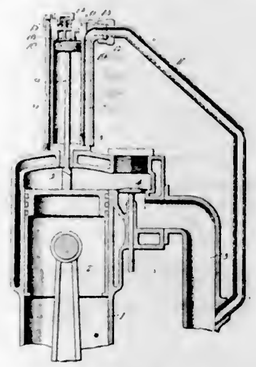
1. A device of the character described for determining the varying unknown length of different poles, comprising an altimeter embodying an indicator arm and cooperating indicating characters, said characters representing numerically various total lengths which are in excess of and in varying proportion to the actual heights of the different objects sighted.

2. A device of the character described for determining the varying unknown length of different poles, comprising an altimeter embodying an indicator arm and coöperating indicating characters, said characters representing



numerically various total lengths which are in excess of and in varying proportion to the actual heights of the different objects sighted, means for manually operating said indicating arm, and a separate means for locking said indicating arm in its adjusted positions.

1,168,296. POWER TIRE-PUMP. FREDERICK G. FOLBERTH, Cleveland, Ohio. Filed May 13, 1913. Serial No. 767,348. (Cl. 230—27.)



1. The combination with a cylinder and piston of an explosion engine, of an air pump having its casing connected with said cylinder and its piston stem extending into contact with the piston therein, and means connecting the engine cylinder and pump casing whereby the suction created during the inward stroke of the engine piston may be utilized to cause the pump piston stem to remain in contact with the engine piston throughout said stroke of the latter.

2. The combination with a cylinder and piston of an explosion engine, of an air pump having its casing connected with said cylinder and its piston stem extending into contact with the piston therein, and means connecting the engine cylinder with the casing of the pump between the piston in the latter and the engine cylinder, substantially as and for the purpose described.

3. The combination with a cylinder and piston of an explosion engine, of a pump having its piston stem extending into the engine cylinder and its casing connected with said cylinder by means including an adjustable valve adapted to establish communication between the engine cylinder and either of the two sections of the pump casing on opposite sides of the piston therein.

4. The combination with a cylinder and piston of an explosion engine, of a pump having its piston stem extending into the engine cylinder and the portion of its casing between the piston therein and the engine cylinder connected with the latter, and a valve adapted to open and close said connection between the pump casing and engine cylinder independent of any adjustment of the pump piston.

5. The combination with a cylinder and piston of an explosion engine, of a pump having its piston stem extending into the engine cylinder and the section of its casing between the piston therein and the engine cylinder connected with the latter, and a valve adapted to simultaneously open and close both said connection between the pump casing and engine cylinder and the air inlet to the pump casing.

[Claims 6 and 7 not printed in the Gazette.]

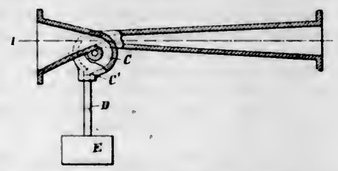
1,168,297. FLUID-HANDLING MECHANISM. GEORGE H. GIBSON, Montclair, N. J. Filed Jan. 20, 1914. Serial No. 813,241. (Cl. 230—13.)



1. A fluid jet ejector comprising a stationary annular chamber having a peripheral outlet and a central inlet for the impelling fluid and the fluid ejected, and stationary means for discharging the impelling fluid into said chamber said means comprising a discharge orifice through which the impelling fluid is discharged with a high velocity tangential to a circle coaxial with said chamber and with such direction of flow as to carry the impelling fluid directly into said chamber.

2. A device for the purpose specified comprising a stationary annular velocity increasing chamber having a tangential peripheral inlet and a central outlet, and a stationary annular compressing chamber having a peripheral outlet and open centrally to receive the tangential discharge from the outlet of the first mentioned chamber and to permit the passage through one of said chambers of a fluid not flowing through the other.

1,168,298. METHOD OF AND APPARATUS FOR DRYING AND SUPERHEATING A VAPOR. GEORGE H. GIBSON, Montclair, N. J. Filed May 11, 1914. Serial No. 837,629. (Cl. 122—459.)



1. The method of treating a vapor which consists in expanding the vapor to convert some of its potential energy into kinetic energy, separating suspended liquid from the uncondensed vapor, and then utilizing the kinetic energy of the uncondensed vapor in effecting a recompression of the latter.

2. The method of drying and superheating a vapor which consists in expanding the vapor to convert some of its potential energy into kinetic energy, utilizing the velocity of the vapor and suspended liquid, first in separating the latter from the uncondensed vapor, and then in effecting a recompression of the uncondensed vapor whereby the latter is superheated.

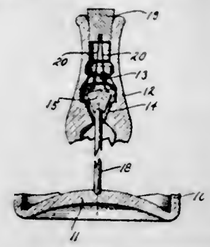
3. The method of drying and superheating a vapor which consists in effecting a substantially isentropic expansion of the vapor, eliminating suspended liquid from the uncondensed vapor, and then utilizing the velocity of the expanded vapor in effecting a recompression of the uncondensed vapor whereby the latter is superheated.

4. Apparatus for drying and superheating a vapor, comprising in combination, an expansion nozzle and a recompressing nozzle through which the vapor is passed in series, and provisions for eliminating liquid of condensation resulting from the expansion of the vapor in said expansion nozzle and other liquid mixed with the vapor before its recompression in said recompressing nozzle.

5. Apparatus for drying and superheating a vapor, comprising in combination, an expansion nozzle and a recompressing nozzle and a connecting passage, and provisions associated with said passage for eliminating liquid from vapor passing from the expansion nozzle into the recompressing nozzle through said passage.

[Claims 6 and 7 not printed in the Gazette.]

1,168,299. ANTIREFILLABLE BOTTLE. CLEMENS J. GIESE, Ambia, Ind. Filed Sept. 14, 1915. Serial No. 50,670. (Cl. 215—112.)



1. In a device of the character described, a bottle having a neck portion, a valve mounted in said neck portion, a rod arranged in said bottle and adapted to support said valve, and means carried by the bottle stopper to normally retain the valve in engagement with the upper end of said rod.

2. In a device of the character described, a bottle having a neck portion, a rod loosely mounted in said bottle and projecting into said neck portion, a valve in said neck portion normally supported by said rod out of engagement with its respective valve seat a stopper adapted to be arranged in said neck, and means carried by said stopper to normally retain said valve in engagement with said rod.

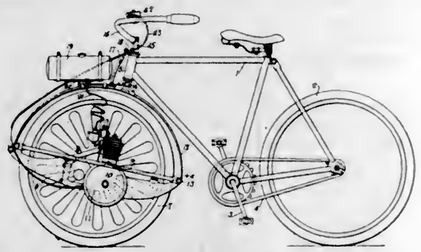
3. In a device of the character described, a bottle having a neck portion, the bottom of said bottle provided with a recess, a rod having its lower end seated in said recess, a valve in said neck, the under face of said valve provided with a recess for receiving the upper end of said rod, said rod adapted to normally retain said valve out of engagement with its respective valve seat, a stopper adapted to be arranged within said neck, and means carried by said stopper to normally retain said valve in engagement with the upper end of said rod.

4. In a device of the character described, the combination with a bottle having a neck portion, and a bottom portion having its inner surface convexed, the bottom portion of the bottle provided with a recess upon its inner face, of a valve loosely mounted in said neck and having a recess formed on its under face, a rod having its ends seated in said recesses to normally retain said valve out of engagement with its respective valve seat, a baffle member arranged in said neck above said valve for limiting the movement thereof at certain times, a stopper adapted to be arranged in said neck, and means carried by said stopper to normally retain said valve in engagement with the upper end of said rod.

1,168,300. PROPELLING DEVICE FOR VEHICLES. GEORGE HARRIES GORMAN, Dayton, Ohio, assignor to The Davis Sewing Machine Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 17, 1915. Serial No. 15,063. (Cl. 21—90.)

1. In a vehicle, a main frame, an auxiliary frame member mounted thereon, a wheel journaled on said auxiliary frame member, a motor mounted on said auxiliary frame member, the journal of said wheel being located above the center of gravity of the auxiliary frame and motor.

2. In a vehicle, a main frame, a frame supporting wheel mounted at one end of said frame, an auxiliary frame member yieldably mounted at the other end of said main frame, a second frame supporting wheel journaled on said auxiliary frame member, a motor mounted on said auxiliary frame member in close proximity to said wheel, and a driving connection between said motor and said wheel.



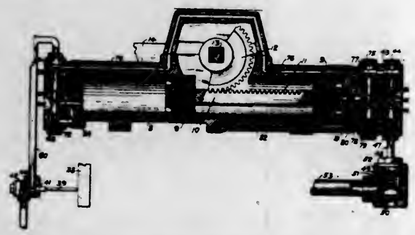
3. The combination, with a vehicle frame, of a frame supporting wheel arranged in alinement with said frame, an auxiliary frame member arranged alongside of said wheel and intermediately supporting the same, a motor mounted on said auxiliary frame member and supported between said auxiliary frame member and said wheel, a driving connection between said motor and said wheel, and means for connecting the end portions of said auxiliary frame member to said main frame.

4. The combination, with a vehicle frame, of a frame supporting wheel arranged in alinement with said frame, an auxiliary frame member arranged alongside of said wheel and supporting the same, said auxiliary frame member being pivotally connected with said main frame to enable steering movement to be imparted to said wheel, a motor mounted on said auxiliary frame member in close proximity to said wheel, and a driving connection between said motor and said wheel.

5. In a vehicle, the combination, with a main frame having an approximately vertical bearing at one end thereof, of a propelling device comprising a spindle adapted to be mounted in said bearing, an auxilairy frame member connected with and carried by said spindle, a wheel journaled on said frame member and laterally spaced therefrom, a motor mounted on said frame member, and a driving connection between said motor and said wheel.

[Claims 6 to 15 not printed in the Gazette.]

1,168,301. DOOR-OPERATING APPARATUS. ALBERT GOTTSCHALK, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Feb. 1, 1913. Serial No. 745,587. (Cl. 268—7.)



1. In a door operating apparatus, the combination with the door and a fluid pressure motor for actuating the same upon a car, of means operated by an object being forced against the door jamb, for controlling said motor and causing an application of the car brakes.

2. In a door operating apparatus, the combination with a car door and a motor for actuating the same, of a door jamb having a yielding strip, and mean operated by the movement of said strip for controlling said motor and causing an application of the brakes upon the car.

3. In a door operating apparatus, the combination with a door and a fluid pressure motor for actuating same, of a main valve for controlling the pressure acting on said motor, an auxiliary valve governing said main valve, and means operated by an obstruction being caught in the door when closing, for actuating said auxiliary valve.

4. In a door operating apparatus, the combination with a door and a fluid pressure motor for actuating same, of valve mechanism for reversing the action of said motor, an auxiliary valve controlling said valve mechanism, and means operated by an obstruction being caught in the door when closing, for actuating said auxiliary valve.

5. In a door operating apparatus, the combination with a door and a fluid pressure motor for actuating same, of a valve mechanism for controlling the pressure acting on said motor and for causing an application of the brakes, an auxiliary valve governing said valve mechanism, and means operated by an obstruction being caught in the door when closing, for actuating said auxiliary valve.

[Claims 6 to 17 not printed in the Gazette.]

1,168,302. SHARPENING DEVICE. MOSES L. HAWKS, New York, N. Y. Filed July 21, 1915. Serial No. 41,179. (Cl. 76—89.)



1. A sharpening device consisting of two centrally perforated sharpening members blanked and formed as described, having a beveled marginal surface on which are file cut sharpening teeth, the beveled sharpening surface of said members forming a groove for the blade of a knife when the two members are clamped together as shown, the said sharpening members being tightly clamped together between the ends of the handles or parts serving as a handle for same.

2. A knife and scissor sharpener consisting of two centrally perforated sharpening members circular shaped in their general contour and having a beveled marginal surface on which are file cut sharpening teeth, the beveled sharpening surface of said members forming a groove for a knife blade when the two members are clamped together as shown, at least one of the sharpening members being provided with one or more radial projections bent or turned outward at a more obtuse angle than that of the beveled sharpening surface so as to form a bearing suitable as a guide in sharpening scissors or shears, the said sharpening members being firmly clamped together between the ends of the handles or parts serving as a handle for same.

1,168,303. CASTING AND ANNEALING TABLE. CHARLES R. HAZEL, Charleroi, Pa. Filed May 22, 1914. Serial No. 840,336. (Cl. 49—3.)

1. An annealing table comprising a track, a stationary table carried by said track, a movable table mounted upon said track for moving across said stationary table, spacing strips carried by said stationary table, a roller carried by said movable table and engaging said spacing strips while said movable table is moving across said stationary table, the rails of said track being provided with depressions into which the wheels of said movable table pass when said movable table is above said stationary table to permit said movable table to drop upon said spacing strips, a water circulating system for said tables and roller, and means for heating said tables.



2. An annealing and casting table comprising a track, a stationary table carried by said track, a movable table having its supporting wheels resting upon the rails of said track, said tracks being formed to permit said movable table to move to a lowered position when above said stationary table and rest upon said stationary table, a spreading element carried by said movable table for spreading material upon said stationary table, a water circulating system for said tables and spreading element, and means carried by said table for heating the water in the water circulating system to heat said table.

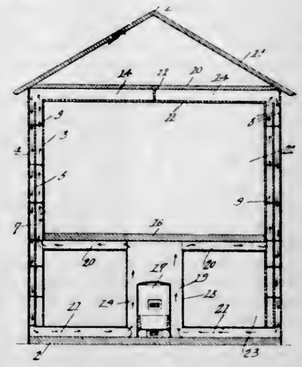
3. A casting and annealing table comprising a track, a stationary table carried by said track, a movable table mounted upon the rails of said track, a spreading element carried by said movable table for spreading material upon said stationary table while said movable table is moving above the same, means for permitting said movable table to rest upon said stationary table after moving above the same, a water circulating system for said tables and spreading element, and a heating system for said tables.

4. In a casting and annealing table a stationary table, a movable table, a spreading element carried by said movable table, a water circulating system for said table and spreading element comprising an inlet main, an outlet main, pipes passing through said stationary table, a cross head connecting the pipes at one end of said stationary table, a pipe connecting said inlet main with said cross head, a second cross head connected with the pipes at the opposite ends of said stationary table, a pipe connecting said outlet main with said second cross head, pipes passing through said movable table, a cross head connected with the pipes at one end of said movable table, a cross head connected with the opposite end of said movable table, a pipe connecting the second cross head of said movable table with said spreading element, a pipe leading from said spreading element to the first mentioned cross head of said movable table, a pipe leading from the second mentioned cross head of said movable table above the same, a pipe having a pivotal connection with said outlet main, a pipe connected with the pipe leading from the said second mentioned cross head to said movable table and having a telescoping connection with said last mentioned pipe, a pipe having a pivotal connection with said inlet main, and a pipe leading from the first mentioned cross head to said movable table and having a telescoping connection with said last mentioned pipe, and a heating system for said tables.

5. In a casting and annealing table, a support, a stationary table carried by said support, a movable table mounted upon said support, a roller carried by said movable table, said tables each comprising a plurality of longitudinally extending bars provided with passageways, the contacting edges of said bars being provided with grooves forming keyways, keys extending through said keyways to prevent independent vertical movement of said bars, said bars being also provided with transversely extending under cut grooves, cross bars extending transversely across said longitudinally extending bars and provided with dovetailed ribs fitting into the under cut grooves of said bars, fastening means extending transversely through said bars, a water circulating system including pipes passing through the longitudinally extending passageways of said bars, and electric conductors passing through said longitudinally extending passageways adjacent said pipes for heating the water in said pipes.

[Claims 6 to 12 not printed in the Gazette.]

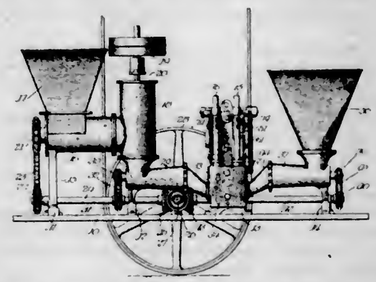
1,168,304. HEATING SYSTEM. FRANK O. HELLSTROM, Bismarck, N. D. Filed Aug. 7, 1915. Serial No. 44,203. (Cl. 237—50.)



1. A building comprising an outer wall; an inner wall of less height than the outer wall; superposed upper and lower ceiling members projecting respectively from the walls and forming a compartment communicating with the space between the walls; an intermediate wall between the inner and outer walls and having its upper edge spaced from the upper ceiling member; a floor extended from the inner wall; a heater; a supply conduit leading from the heater to the space between the inner and intermediate walls; and a return conduit leading from the heater to the space between the outer and intermediate walls; the inner wall, the lower ceiling member and the floor defining an apartment which is heated by radiation from the lower ceiling member and the inner wall.

2. In a device of the class described, a building comprising an inner wall; an outer wall; an intermediate wall, the walls being made up of superposed courses; an openwork reinforcement lying between the courses; a heater; a conduit leading from the heater to the space between the inner and intermediate walls; a conduit leading from the heater to the space between the intermediate and outer walls; and the upper ends of the intermediate walls being open, to permit a return circulation thereacross.

1,168,305. TAMAL-MACHINE. HARRY H. HOOD, Chicago, Ill., assignor to Sprague Canning Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 3, 1912. Serial No. 688,333. (Cl. 107—1.)



1. In a device of the class described, the combination of a sheath forming tube having an intake orifice disposed

substantially in a plane oblique to the longitudinal axis of its intake end, and a core forming tube disposed within the first-named tube.

2. In a device of the class described, the combination of a sheath forming tube having an intake orifice disposed oblique to the longitudinal axis of its intake end, and a core forming tube concentrically disposed within the first-named tube.

3. In a device of the class described, the combination of a sheath-forming tube having its intake end disposed oblique to its longitudinal axis, a core-forming tube disposed within the first-named tube, a feed conduit for the sheath-forming tube, and a combined cut-off and severing member for the feed conduit and the discharge end of the sheath-forming tube respectively.

4. In a machine of the class described, a pair of chambers, each chamber including compressing mechanism, a sheath-forming tube having its intake end connected with one of the chambers, a feed conduit for said chamber, a core-forming tube having its intake end communicating with the other chamber and projecting into the sheath-forming tube, and a combined cut-off and knife coacting with said feed conduit and the discharge end of the sheath-forming tube, respectively.

5. In a device of the class described, a pair of chambers, feed conduits for said chambers, compression mechanism arranged in each of the chambers, a sheath forming tube arranged in one of the chambers and having its intake end disposed oblique to its longitudinal axis, a core forming tube communicating with the other chamber and projecting into the sheath forming tube and terminating substantially flush with the discharge end thereof, and cut-off mechanism coacting with each of the conduits, one of the cut-offs constituting a knife to coact with the discharge end of the sheath forming tube to sever the product issuing therefrom.

[Claims 6 to 16 not printed in the Gazette.]

1,168,306. RUBBER FOOTWEAR. ALFRED JOHNSON, Duluth, Minn. Filed July 26, 1915. Serial No. 41,899. (Cl. 36—6.)



1. An article of footwear, comprising a removable sole, an engaging portion extending upwardly and inwardly from the edges of the sole, and a spring wire incorporated within the engaging portion throughout its entire length and terminating at both ends in a gripping means whereby the article is securely held in position when placed upon a shoe.

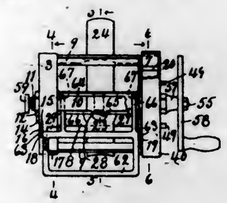
2. A removable article of footwear, comprising a sole, and engaging means partly surrounding the sole and terminating in resilient gripping means at the corners of the instep end of the sole.

3. A removable sole of the character described having a spring wire incorporated within the uppermost shoe engaging edges thereof, one end of said wire terminating in a gripping member, and the opposite end terminating in a gripping and cutting member.

4. A removable sole of the character described, having a spring wire incorporated within the uppermost shoe engaging edges thereof, both ends of said wire terminating in resilient gripping members.

5. A removable sole of the character described having a spring wire incorporated within the uppermost shoe engaging edges thereof, and a resilient gripping member formed integral with each end of the spring wire, the outside one of said members having an upwardly and outwardly extending portion by which it is manipulated.

1,168,307. FISHING-REEL. GUSTAF A. JOHNSON, Springfield, Mass. Filed Oct. 26, 1914. Serial No. 868,557. (Cl. 242—84.6.)



1. The combination, in a fishing reel, with a housing consisting in part of a fixed base piece, and a spool rotatably mounted in said housing, of a base plate extending over said base piece and pivotally attached directly thereto, said base piece and said plate having engaging serrations, and the arrangement of parts being such that said housing is normally held stationary, but can be partially rotated upon the application of force thereto, for adjustment on the pivotal connection between said base piece and said base plate.

2. The combination, in a fishing reel, with a housing consisting of a disk provided with an inwardly-directed flange, at one end, a band at the other end, and connecting members between said flange and band, said disk, flange, band and connecting members being rigidly and fixedly attached one to another, and said band having an opening therein for the passage of a line, of a revoluble spool adapted to be inserted in said housing and removed therefrom through said band, the line from said spool, if attached at its outer end, entering and escaping from the housing by way of said passage, when and accordingly as said spool is inserted or removed.

3. The combination, in a fishing reel, of a housing having a flange with a thumb-receiving recess therein, a spool mounted to rotate in said housing, and having a projecting rim forming a thumb-controlled brake band within said housing flange, and a lifter mounted on said housing and having a part which is adjacent to said recess, and provided with a drag bar for said spool and the line thereon, the arrangement of parts being such that both said lifter and said brake band are under the control of the thumb of the operator.

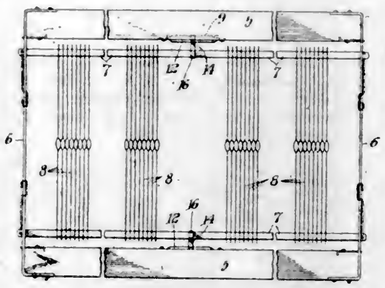
4. The combination, in a fishing reel, with a housing having an annular part at one end, a removable chambered cap comprising two attached flanged members arranged with the flange of one within and spaced from the flange of the other, said annular part being receivable within the space between said flanges, and means to lock said cap to said annular part, of a spool adapted to be mounted to revolve in said housing.

5. The combination, in a fishing reel, with a housing having an annular part at one end, a removable chambered cap comprising two attached flanged members arranged with the flange of one within and spaced from the flange of the other, said annular part being receivable within the space between said flanges, and a latch in the chamber in said cap to lock said flanges to said annular part and release them therefrom, of a spool adapted to be mounted to revolve in said housing.

[Claims 6 to 14 not printed in the Gazette.]

1,168,308. HEDDLE-FRAME. JACOB KAUFMANN, Philadelphia, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 10, 1915. Serial No. 44,683. (Cl. 139—73.)

1. In a heddle frame, means for supporting the heddle bars intermediate their ends comprising auxiliary supporting bars mounted in recesses in the top and bottom bars of the heddle frame, and links slidably and non-rotatably mounted on said auxiliary supporting bars, the heddle bars being non-rotatably mounted in said links, and said links being formed of a strip of flat metal having its longest axis in cross-section disposed parallel to the longitudinal extension of the frame.

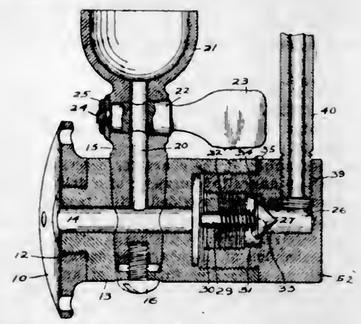


2. In a heddle frame, means for supporting the heddle bars intermediate their ends comprising auxiliary supporting bars mounted in recesses in the top and bottom bars of the heddle frame, and open sided links slidably and non-rotatably mounted on said auxiliary supporting bars, the heddle bars being non-rotatably mounted in said links, and said links being formed of a strip of flat metal having its longest axis in cross-section disposed parallel to the longitudinal extension of the frame.

3. In a heddle frame, means for supporting the heddle bars intermediate their ends comprising auxiliary supporting bars mounted in the top and bottom bars of the heddle frame, and open sided links slidably and non-rotatably mounted on said auxiliary supporting bars, the heddle bars being non-rotatably mounted in said links, said links being formed of a strip of flat metal having its ends bent over.

4. In a heddle frame, means for supporting the heddle bars intermediate their ends comprising auxiliary supporting bars mounted in the top and bottom bars of the heddle frame, and open sided links slidably and non-rotatably mounted on said auxiliary supporting bars, the heddle bars being non-rotatably mounted in said links, said links being formed of a strip of flat metal having its ends bent over and having its longest axis in cross-section disposed parallel to the longitudinal extension of the frame.

1,168,309. AUXILIARY VALVE FOR INTERNAL-COMBUSTION ENGINES. HARRY F. KEIFFER, Perrysburg, Ohio. Filed Oct. 19, 1914. Serial No. 867,382. (Cl. 137—26.)



1. The combination of a valve casing, a threaded cylinder located within a casing, a cross bar having threads extending across the ends and threaded in the cylinder, a cone valve member having radially extending fingers and seated on the end of the cylinder, a stem secured to the movable valve member and freely movable through the cross bar, a spring located on the rod and intermediate the valve member and the bar, and means for adjustably varying the pressure of the spring.

2. The combination of a manifold and a carbureter, an auxiliary valve connected to the manifold and comprising a valve casing having a stop cock at one end and a valve casing having a movable bent intake tube for taking air more or less remote from heated pads of the engine at the other end, a cross bar located in the valve casing and having its ends threaded to engage with the threaded walls of the cylinder, a movable valve member having radially extending fingers, the outer ends of which are bent at right angles and longitudinally to the casing, the movable valve member seated on the end of the cylinder communicating with the tube, a rod connected to the movable valve member and movable in the cross bar, a spring located intermediate the cross bar and the valve member.

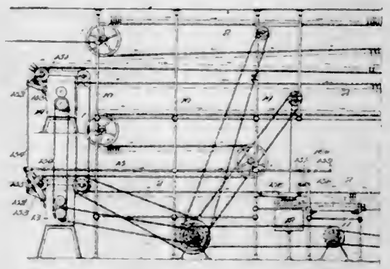
3. In combination with a carbureter of an internal combustion engine, a valve casing having a passageway extending therethrough, a valve member for controlling the passageway, a stop cock located intermediate the valve member and the engine also for controlling the passageway, the cock having a priming cup and a passageway communicating with the passageway of the casing and a stop cock located in the first-named stop cock for controlling the second passageway.

4. In combination with the carbureter of an internal combustion engine, a casing having a passageway communicating with the engine, a stop cock for controlling the passageway, the stop cock having a cup and a passageway connecting the cup with the first-named passageway, a stop cock for controlling the second passageway in the first-named cock.

5. In combination with the carbureter, a valve casing having a passageway therethrough and communicating with the engine, an adjustable tube communicating with the passageway of the casing, a valve member having a cone for guiding the valve member to its seat, a stem secured to the valve member, a cross bar having threaded ends and an opening through which the stem is movable, a spring located intermediate the cross bar and the movable valve member, a cock also for controlling the passageway and having a priming cup and a controlling cock.

[Claims 6 and 7 not printed in the Gazette.]

1,168,310. MATCH-MAKING MACHINERY. ALEXANDER KELLEY, Wilmington, Del., assignor to Climax Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Sept. 18, 1914. Serial No. 862,366. (Cl. 144—52.)



1. In match-making machinery, the combination with splint-forming means, of a conveyer moving past said splint-forming means and comprising transverse members, each of said members comprising an elastic strip so bent that substantial longitudinal flat portions adjacent their edges are brought toward each other more closely at the outer portions and normally bear against each other and are grooved to provide splint-receiving channels, the

bend being such and so spaced from said flat portions that, when the splints are forced into the grooves and the flat portions thereby slightly spaced said flat portions will be substantially parallel, and means for driving splints between the said jaws.

2. In match making machinery, the combination with splint forming means, of a conveyer moving past said splint forming means and adapted to receive splints therefrom and comprising separate endless chains, carrier bars connecting said chains, and a pair of coacting splint-engaging jaws fitted around and carried by each of said carrier bars.

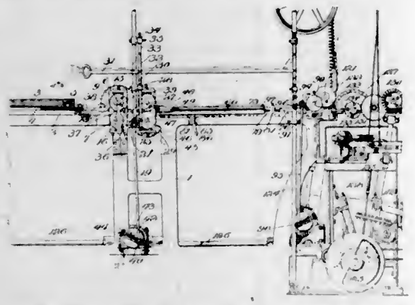
3. The combination of chain links having inwardly projecting boxes thereon, carrier bars fitting frictionally in and extending between corresponding boxes, and splint-engaging jaws fitted upon said carrier bars.

4. The combination of chain links having angular open ended boxes projecting inwardly therefrom, angular carrier bars having their ends fitted in and held by said boxes, and a splint holding member embracing said bar and having opposed coacting resilient jaws.

5. A conveyer for match splints comprising a carrier bar, a rod disposed above the carrier bar, and a splint engaging member embracing the carrier bar and the rod and terminating in opposed jaws beyond the said rod.

[Claims 6 to 11 not printed in the Gazette.]

1,168,311. MATCH-MACHINE. ALEXANDER KELLEY, Wilmington, Del., assignor to Climax Machine Company, Wilmington, Del., a Corporation of Delaware. Continuation in part of application Serial No. 862,366, filed Sept. 18, 1914. This application filed June 28, 1915. Serial No. 36,836. (Cl. 144—54.)



1. The combination of means for dividing stock into longitudinal strips, and means for separating and spreading said strips in different planes and returning them to a single plane.

2. The combination of rotary cutters, means for feeding stock to said cutters, upper and lower guides arranged to receive and separate strips formed by the cutters and deliver them in a single plane, and means for dividing the strips transversely.

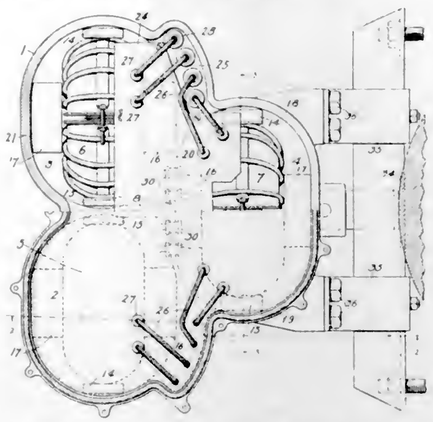
3. The combination of a frame, a conveyer movable intermittently past the discharge end of the frame, a plate supported rigidly by the frame and disposed between the discharge end of the same and the conveyer and provided with grooves whereby strips fed to said plate will be guided in a single plane into the conveyer, means for intermittently feeding stock longitudinally of the frame to said plate, means for intemittently cutting said stock into longitudinal strips, and means working between the said plate and the end of the frame to sever said strips transversely while they are supported by the frame and the conveyer.

4. The combination of a frame, means supported on the frame for feeding stock longitudinally thereof in a horizontal plane and dividing said stock into longitudinal strips, brackets mounted upon the frame at the discharge end thereof, a cutter slidably fitted to and supported in said brackets and constructed to engage the strips individually, and means on the sides of the frame to reciprocate said cutter across the stock and thereby cut the same into splints.

5. The combination of a conveyer constructed to receive separated strips, means for intermittently feeding separated strips to and into said conveyer, and means for cutting said strips into splints after they have been fed into the conveyer.

[Claims 6 to 16 not printed in the Gazette.]

1,168,312. LOADING-COIL AND CASE THEREFOR. STANLEY B. KENT, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 12, 1914. Serial No. 861,394. (Cl. 178—46.)



1. The combination with a toroidal loading coil having a magnetic core with a non-magnetic gap therein, of a case of magnetic material for said loading coil and conforming generally to the contour of the coil, said casing being elongated so as to be located at a greater distance from the coil adjacent the gap than elesewhere.

2. The combination with a toroidal loading coil having a core of magnetic material with a non-magnetic gap, of a casing of magnetic material for said loading coil, said casing having a contour coinciding approximately with a surface of uniform force due to magentic leakage from the coil.

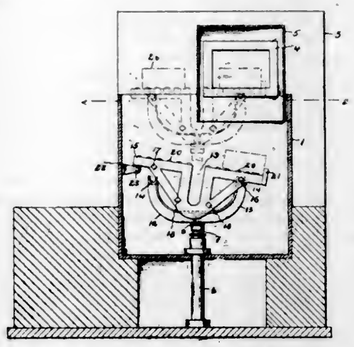
3. The combination with a toroidal loading coil having a core of magnetic material with a non-magnetic gap, of a casing of magnetic meterial for said loading coil, said casing having a contour graduated as to distance from the coil so that, for a given value of hysteresis and eddy current losses in the casing due to magnetic leakage lines, the volume inclosed by the casing is substantially a minimum.

1,168,313. FURNACE. CHARLES F. KENWORTHY, Waterbury, Conn. Filed Aug. 7, 1914. Serial No. 855,605. (Cl. 148—16.)

1. In a mechanism of the character described, the combination with an annealing furnace; of a delivery and discharge means therefor provided with means for automatically shifting the relative position of the load thereon between its receiving and its discharge positions.

2. In a mechanism of the character described, the combination with an annealing furnace; of an elevator for receiving and delivering loads therein; means for moving said elevator; and a fixed part in the path of movement of said elevator, and engaged thereby, to shift the angular position of a part of said elevator during the movement thereof.

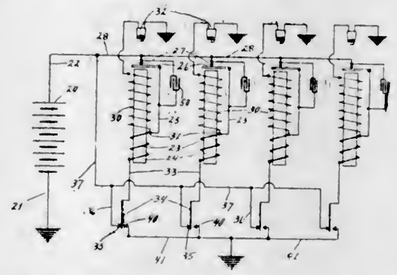
3. In a mechanism of the character described, the combination with an annealing furnace; of a non-rotatable elevator for receiving and discharging loads therein; a platform upon said elevator; and means for moving said platform from a substantially horizontal position to a position wherein it lies at an angle to its horizontal position.



4. An annealing furnace, comprising a retort, a hood inclosing an opening to said retort, a seal located adjacent to said hood and into which said hood extends; an elevator with a portion thereof movable in line with said hood and a portion thereof movable in line outside of said hood; and means for shifting a load upon said elevator from that portion of the platform outside of the hood to that portion of the platform in line therewith and vice versa.

5. In mechanism of the character described, the combination with a reciprocating frame; of means for preventing the rotation thereof; a platform; means for mounting said paltform upon said frame so that it may rock thereon in relation thereto upon two different axes; and a fixed member in the path of said plaftorm that engages the same and causes it to rock upon one of said axis during the movement of said frame.

1,168,314. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Nov. 3, 1910. Serial No. 590,442. (Cl. 123—148.)



1. In an ignition system, the combination with a plurality of induction coils including iron cores, primary and secondary coils and circuits, spark terminals in the secondary circuits and a main source of current for the primaries; of means for normally short-circuiting each of said primary coils to dampen any current induced in the secondary coils; and means for successively breaking the short circuit of each primary and concomitantly connecting that primary with the main source of current whereby to energize that primary and prevent any dampening effect therein.

2. In an ignition system, the combination with a plurality of induction coils including iron cores, primary and secondary coils and circuits, spark terminals in the secondary circuits and a main source of current for the

primaries; of switch mechanism and connections for said primaries normally short-circuiting the same to dissipate any current induced in the secondary coils; and a common member for engaging said switch mechanism and constructed to break the short-circuit of each primary in turn and at the same time connect that primary with the main source of current whereby sparking impulses will be induced in the secondary circuit of the said primary.

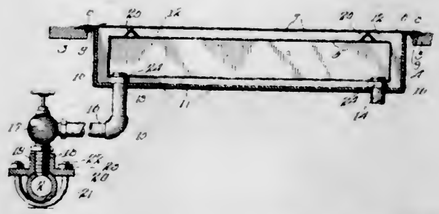
3. In an ignition system, the combination with a plurality of induction coils including primary and secondary coils and circuits, spark terminals in the secondary circuits and a main source of current for the primaries; of a switch and connections for each of said primaries normally short-circuiting the same, said switches being located in proximity to each other; a rotary controlling member rotating in the range of all of said switches; an insulated arm connected with said rotary member and positioned to engage said switches and break said short circuits in turn; and a conducting arm adjacent to said insulated arm and connected with said rotary member, said conducting arm being electrically connected with said main source of current and positioned to engage the switches and connect the same with said main source of current.

4. In an ignition system, the combination with a plurality of induction coils including iron cores, primary and secondary coils and circuits, spark terminals in the secondary circuits; of a main source of current for the primaries; of means for preventing premature sparking in the cylinders, including devices for normally short-circuiting said primaries and adapted to dampen the building up of induced currents in the secondary coils.

5. In an ignition system, the combination with a plurality of induction coils including primary and secondary coils and circuits, sparking terminals in the secondary circuits and a main source of curreut for the primaries; of switches and connections for said primaries normally short-circuiting the same, said switches being located in proximity to each other; a rotary controlling member rotating in the range of all of said switches, having an arm comprising an insulated portion, provided with a beveled approach to facilitate the engagement of the switches; and a conducting portion for concomitantly establishing the main circuit through the switches.

[Claims 6 and 7 not printed in the Gazette.]

1,168,315. HEATING DEVICE FOR AUTOMOBILES AND THE LIKE. GOTTHARDT KOCH, Chicago, Ill. Filed Jan. 30, 1915. Serial No. 5,302. (Cl. 237—21.)



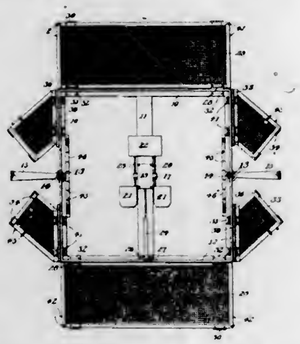
1. A heating device of the class described comprising a hollow rectangular shaped inner member having imperforate walls with the exception of openings for the connection of inlet and outlet pipes, and the interior of said inner member being entirely free from obstructions and forming in itself a reservoir for the heating agent, a hollow outer member of corresponding rectangular shape and sufficiently larger than the inner member to provide a circulating space for air extending entirely around said inner member, the top plate of said outer member being removable and provided with comparatively large outlet openings for the heated air, and the bottom of said outer member being also provided with inlet openings for unheated air considerably smaller in size than the outlet openings in the top plate, and inlet and outlet pipes for

the heating agent extending through the outer member and connected to the inner member.

2. A heating device of the class described comprising a hollow rectangular inner member having openings near its opposite ends for the connection of inlet and outlet pipes; the remainder of the walls of said member being imperforate and the interior of said member being entirely free from obstructions and forming in itself a reservoir for the heating agent, an outer member of corresponding hollow rectangular shape and sufficiently larger than the inner member to provide a circulating space for air extending entirely around the inner member, the top plate of said outer member being removable and being provided with outlet openings for heated air and the bottom of said outer member being provided with inlet openings for air and openings for the passage therethrough of the inlet and outlet pipes for the heating agent extending through the openings in the outer and inner members and into communication with the unobstructed interior of the inner member and means interposed between the lower portions of the two members and mounted on the inlet and outlet pipes for securing said pipes in place and also maintaining said members in their separated position.

3. A heating device of the class described comprising a hollow rectangular inner member having openings near its opposite ends for the connection of inlet and outlet pipes; the remainder of the walls of said members being imperforate and the interior of said member being entirely free from obstructions and forming in itself a reservoir for the heating agent, an outer member of corresponding hollow rectangular shape and sufficiently larger than the inner member to provide a circulating space for air extending entirely around the inner member, the top plate of said outer member being removable and being provided with outlet openings for heated air and the bottom of said outer member being provided with inlet openings for air and openings for the passage therethrough of the inlet and outlet pipes for the heating agent, inlet and outlet pipes for the heating agent extending through the openings in the outer and inner members and into communication with the unobstructed interior of the inner member, an asbestos lining for the sides, ends and bottom of the outer member having corresponding inlet openings and openings for the passage of the inlet and outlet pipes adapted to register with the similar openings in the bottom of said outer member, and means interposed between the lower portions of the two members and mounted on the inlet and outlet pipes for securing said pipes in place and also maintaining said members in their separated position.

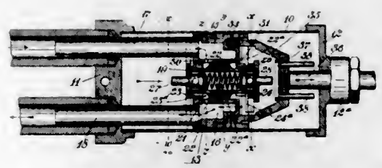
1,168,316. ANIMAL-TRAP. ANDY KORCOK, Akron, Ohio. Filed July 30, 1915. Serial No. 42,807. (Cl. 43—23.)



1. An animal trap including a rectangular base supporting frame, U-shaped frames swingingly attached thereto, hinged screen sections forming cover and end walls carried by the U-shaped frame sections, picket fences carried by the base supporting frame at each side thereof, a transversely-positioned bar carried by the supporting frame, trip mechanism supported on said bar including a journaled stub shaft, oppositely-extending pins carried thereby, platforms positioned at opposite sides of said shaft associated therewith, a trip rod operated by said pins and adapted to be positioned in engagement with one of said U-shaped frames, and coöperating retaining pins carried by the adjacent screen sections.

2. An animal trap including a base supporting frame, identically formed cover sections hingedly connected to said frame, a stub shaft supported by said base frame, oppositely directed pins carried by said stub shaft, tilting platforms associated with said stub shaft, a trip rod bifurcated at one end to engage each of said pins, the opposite end of said trip rod adapted to engage the cover sections to hold the same in open set position, and a spring associated with the cover sections to cause the same to assume a closed position when the trip rod is released.

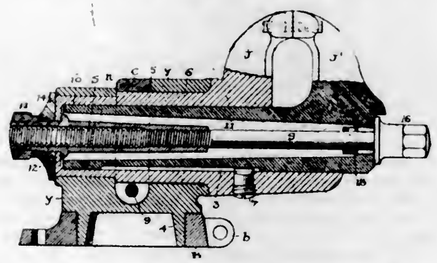
1,168,317. HYDRAULIC MOTOR. LLEWELYN LEWIS and THOMAS E. TAGGART, Columbus, Ohio, assignors to The American Water Motor Company, Columbus, Ohio, a Corporation of Ohio. Filed Feb. 16, 1914. Serial No. 818,843. (Cl. 138—2.)



1. In a hydraulic motor, a cylinder, a piston provided with an intake chamber, an exhaust chamber and a seat for a reciprocating valve, a hollow reciprocating valve in said seat adapted to open and close the ports from the intake chamber, said chambers having suitable ports, valves to open and close the ports to the aforesaid exhaust chamber, pins in said reciprocating valve and a spring between said pins to hold the same projected beyond the ends of the valve.

2. In a hydraulic motor, a cylinder, a piston therein provided with an intake, an exhaust chamber and a seat for a reciprocating valve, said exhaust chamber having ports leading thereinto from the opposite sides of the piston and said intake chamber having ports leading therefrom into the valve seat, a hollow reciprocating valve in said seat adapted to open and close the ports from the intake chamber, and valves on the end of the reciprocating valve adapted to open and close the ports to the aforesaid exhaust chamber, pins in said hollow reciprocating valve and a spring between said pins to hold the same projected beyond the ends of the valve.

1,168,318. BENCH-VISE. JOHN R. LONG, Akron, Ohio. Filed June 7, 1915. Serial No. 32,780. (Cl. 81—41.)



1. In a vise as described, a jaw supporting yoke provided with a hub on its bottom and a recess across its middle above said hub, jaws projecting through said recess and a collar in said recess adapted to clamp upon said jaws.

2. A vise as described having a pair of jaws, a yoke for said jaws having a transverse recess open from above a split friction collar embracing said jaws in said recess and having bosses at each side and a screw through said bosses beneath said jaws and adapted to clamp the collar thereon.

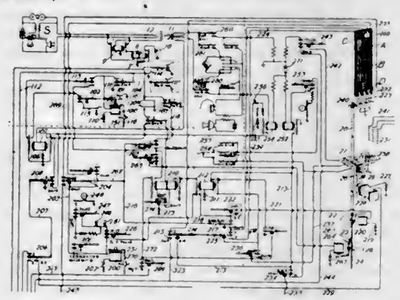
3. A vise having a double swivel as described and comprising a split base, a yoke having a hub rotatably seated in said base and adapted to be clamped therein, a pair of jaws provided with tubular bodies one within the other and extending through said hub, a split collar seated in said yoke and embracing said outer jaw body, and means to clamp said collar on said body.

4. A vise having a yoke and two jaws supported therein and having tubular bodies one within the other, an operating screw and a sleeve nut engaged thereby extending through the end of the outer of said bodies and provided with a collar bearing against the inside of the end thereof, a cap over said nut outside said yoke and bearing against the same and the end of said outer body and a nut to clamp said cap frictionally against said end.

5. In a vise as described, a pair of jaws, a base and a yoke therein having a recess across its middle through which said jaws project and a clamp about said jaws in said recess adapted to force said parts into frictional engagement with the walls of said yoke.

[Claims 6 and 7 not printed in the Gazette.]

1,168,319. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 22, 1913. Serial No. 786,165. (Cl. 179—27.)



1. In a telephone system, a plurality of telephone lines, connecting circuits for said lines, connecting devices for uniting said connecting circuits to said lines, mechanical switches for extending a connection to a called subscriber's line, a sending device for controlling the operation of said switches, a telephone set, means actuated upon the association of one of said connecting circuits with a line for uniting said telephone set thereto, and means whereby when the sending device has completed its operation, said telephone set is automatically removed from said circuit.

2. In a telephone system, a plurality of telephone lines, cord circuits and switches for interconnecting said lines, manually operable devices for uniting said cord circuits to said lines, a sending device for controlling said switches, a telephoning set, means actuated upon the association of one of said connecting circuits with a line for uniting said telephone set thereto, and means associated with said sending device whereby when the connection reaches a predetermined stage, said telephone set is automatically removed from the circuit.

3. In a telephone system, a plurality of telephone lines, connecting circuits for connection thereto, a telephone set common to said connecting circuits, a sequence switch for each connecting circuit, a controlling magnet for each switch, means whereby the controlling magnet of a sequence switch will be operated upon the association of a connecting circuit with a line to connect the telephone set to said circuit, and means whereby the magnet of said switch will be again actuated to remove said set from said circuit when the connection being established reaches a predetermined stage.

4. In a telephone system, a plurality of telephone lines, connecting circuits for connection thereto, a telephone set common to said connecting circuits, switches, one for each connecting circuit for uniting said telephone set thereto, an operating magnet for each of said switches, means whereby a magnet will be energized upon the association of a connecting circuit with a line to cause its switch to connect the telephone set to said circuit, and means whereby said magnet will be again energized to cause its switch to remove said set from said circuit when the connection being established over said circuit has reached a predetermined stage.

5. In a telephone system, a plurality of lines, connecting circuits and switches for interconnecting said lines, a telephone set common to said connecting circuits, electromagnetic means associated with each connecting circuit for automatically uniting said telephone set thereto when said circuit is connected to a line, means for removing said telephone set from said circuit when the connection being established thereover has reached a predetermined stage, and means whereby said set will not be disassociated from said circuit when a connection being established over a second circuit reaches said predetermined stage.

[Claims 6 to 17 not printed in the Gazette.]

1,168,320. RAILROAD-SPIKE. STEWART E. MCMILLIN, Lawrence, Kans. Filed May 9, 1914. Serial No. 837,498. (Cl. 85—23.)



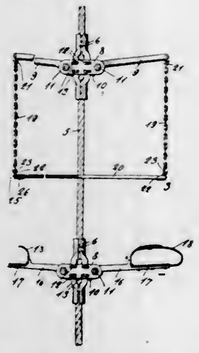
1. A railroad spike including a head, a pointed shank, a locking element pivotally and resiliently mounted within a corresponding recess in the shank, the upper end of said element normally extending beyond the surface of the shank, the lower end of the element being normally arranged in alinement with the surface of the shank, and the lower edge of the lower end of the element being beveled to form a cutting edge for facilitating the engagement with a tie when the upper end of the element is forced into the recess during the application of the spike.

2. A rail spike including a head and a pointed shank, said shank provided with a longitudinally arranged tapering recess, a locking element pivotally mounted within and conforming to the contour of the recess, a pointed hook formed on the lower end of said element, the lower edge of the hook being beveled to form a cutting edge, and resilient means positioned within the recess and bearing against the upper end of the locking element for maintaining the pointed hook in alinement with one of the faces of the shank.

3. A rail spike comprising a head and a pointed shank, said shank provided with a longitudinally arranged inwardly extending recess, said recess provided with a taper-

ing wall, a locking element pivotally mounted within and conforming to the contour of said recess, a pointed hook formed on the lower end of said element, the lower edge of said hook being beveled to form a cutting edge, and a leaf spring secured to the tapering wall of the recess, the free end of said spring bearing against the upper portion of said locking element for holding the upper portion thereof in a plane beyond the plane of the face of the shank and maintaining the pointed hook in alinement with the face.

1,168,321. CLIMBING DEVICE. WILLIAM J. MALEY, Chicago, Ill. Filed May 27, 1915. Serial No. 30,818. (Cl. 227—8.)



1. In a climbing device, a clamp comprising opposite gripping jaws having recesses in their gripping faces, springs mounted in said recesses to open the jaws, plates located on opposite sides of the jaws, a sliding connection between said plates and the jaws, the ends of the plates projecting beyond the back of the jaws, and levers pivoted between the projecting ends of the plates and having cam-shaped inner ends adapted to engage the back of the jaws.

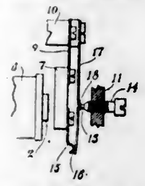
2. In a climbing device, a clamp comprising opposite gripping jaws, plates located on opposite sides of the jaws, a sliding connection between said plates and the jaws, the ends of the plates projecting beyond the back of the jaws, and levers pivoted between the projecting ends of the plates and having cam-shaped inner ends adapted to engage the back of the jaws.

3. In a climbing device, a clamp comprising opposite gripping jaws, plates located on opposite sides of the jaws, a sliding connection between said plates and the jaws, the ends of the plates projecting beyond the back of the jaws, levers pivoted between the projecting ends of the plates and having cam-shaped inner ends adapted to engage the back of the jaws, and foot supporting and securing means at the outer ends of the levers.

4. In a climbing device, a clamp comprising opposite gripping jaws, plates located on opposite sides of the jaws, a sliding connection between said plates and the jaws, the ends of the plates projecting beyond the back of the jaws, levers pivoted between the projecting ends of the plates and having cam-shaped inner ends adapted to engage the back of the jaws, suspension members carried by the outer ends of the levers, and a seat carried by the suspension members.

1,168,322. AUTOMOBILE-HORN. RAY H. MANSON, Elyria, Ohio, assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Original application filed Apr. 24, 1911, Serial No. 622,858. Divided and this application filed Mar. 2, 1912. Serial No. 681,212. (Cl. 177—7.)

1. In an electric horn for use upon conveyances, a vibratory sonorous diaphragm, a resonator for said horn, electro-magnetic means for actuating said diaphragm, a vibratory armature for said means, a switch controlled by said armature and consisting of two contacts, one of said contacts being normally stationary, a support, a spring attached at one end to said support and resting at the other end against said armature and carrying the second contact in between its ends, said second contact failing to follow up said armature for small movements thereof.

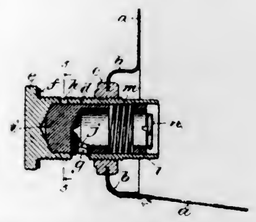


2. In an electric horn for use upon conveyances, a vibratory sonorous member adapted to give a warning signal, an electro-magnet controlling said member, an armature for said magnet, a pair of contacts forming a switch, one of said contacts being stationary, a support, a spring attached at one end to said support, and resting at the other aganist said armature, the central part of said spring being normally stressed away from said armature, the other contact being carried by said spring intermediate its ends, said spring expanding toward the other contact under the normal stress during the first part of the forward movement of said armature and thereby maintaining the switch closed and the contact carried by the spring following the movement of said armature during the latter part of its forward movement.

3. In an electric horn for use upon conveyances, a vibratory sonorous member, electro-magnetic means governing said member, a vibratory armature for said means, a switch controlled by said armature and consisting of two contacts, one of said contacts being normally stationary, a support, a spring attached at one end to said support and resting at the other end against said armature and carrying a second contact between its ends, said spring being normally stressed to bow its center away from said armature and toward said companion contact, the end of the spring resting against the armature being adapted to follow the movement of the armature when said armature is attracted to the electro-magnetic means.

4. In an electric horn for use upon conveyances, a vibratory sonorous diaphragm, a movable armature for said means, a switch controlled by said armature including two contacts, one of which is normally stationary, a support, a spring resting at one end against said armature and carrying a second contact in between its ends, said spring being normally stressed to bow its center away from the armature and toward the companion contact, the end of the spring resting against the armature adapted to follow the movement of the armature when said armature is moved to the operating means.

1,168,323. COMBINATION BUNG AND FAUCET. CARL E. MILLER, Winnetka, Ill., assignor to Pressed Steel Tank Company, West Allis, Wis., a Corporation of Wisconsin. Filed Aug. 16, 1915. Serial No. 45,610. (Cl. 217—99.)



1. The combination with a threaded bung bushing, of an externally threaded hollow bung fitted therein and having a lateral port and a transverse slot, and a hollow valve plug fitted to turn in said bung and having a lateral port arranged to be turned into and out of register with the port in the plug, and a radial hole accessible through the slot in the bung.

2. The combination of an externally threaded hollow bung open at its inner end and closed at its outer end which is formed with a head and having a lateral port and a transverse slot, and a hollow valve plug closed at its outer end and open at its inner end rotatably fitting in the bung and having a lateral port arranged to be turned into and out of register with the port in the bung, and a radial hole accessible through the slot in the bung.

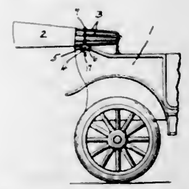
3. The combination of an externally threaded hollow bung open at its inner end and closed at its outer end which is formed with an enlarged polygonal head and having a lateral port and a slot in different transverse planes, a hollow valve plug fitted to turn in the bung and having a lateral port arranged to be turned into and out of register with the port in the bung and a series of radial holes accessible through said slot, and means for confining the plug in the bung.

4. The combination with an internally threaded bung bushing, of an externally threaded hollow bung fitted therein and formed with a lateral port and transverse slot and with an enlarged head at its outer end, a packing washer between the head and bushing, and a hollow valve plug fitted to turn in the bung and having a lateral port arranged to be turned into and out of register with the port in the bung, and a series of radial sockets accessible through said slot when it is exposed outside of the bushing.

5. The combination with an internally threaded bung bushing, of an externally threaded hollow bung fitted therein and formed with a lateral port and at its outer end with an enlarged closed head, a hollow valve plug fitted in the bung and formed with a lateral port arranged to be turned into and out of register with the port in the bung, and a contractile spring key projecting normally outward through openings in the bung adjacent to its inner end and adapted by engagement with the bushing to prevent the removal of the bung therefrom.

[Claims 6 and 7 not printed in the Gazette.]

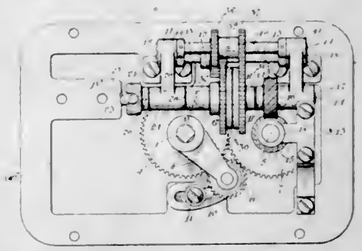
1,168,324. BOW-REST FOR VEHICLE-TOPS. RICHARD MILLER, New Berlin, Ohio. Filed Nov. 3, 1913. Serial No. 798,800. (Cl. 21—61.)



1. In a bow rest for vehicle tops, a supporting member formed of a single casting provided with upwardly disposed, concave bow receiving portions provided at their sides with upwardly and outwardly extending binding-member-attaching portions, said casting in its lower part formed with an integral, hollow bracket attaching portion opening at the top intermediate said bow receiving portions with a flared opening, a lining attached to said bow receiving portions, extending across said flared opening and constituting a cushion for receiving the lowermost bow of a folded top, said hollow bracket attaching portion provided with alined bracket receiving apertures in the opposite lateral walls of the same, said apertures having angular notched extensions in their upper portions, and a median, vertically disposed set screw extending through the bottom wall of said bracket attaching portion and adapted to engage the lower side of a bracket iron extended through said alined apertures, a binding member connected to said binding-member-attaching portions and means for adjustably connecting one end of said binding member to one of said binding-member-attaching portions.

2. A bow rest for vehicle tops comprising a supporting member provided with integral outwardly extending binding-member-attaching portions, a binding member having one end permanently connected to one of said attaching portions, the other attaching portion extending upwardly and outwardly and provided with inverted recesses, and a binding lever connected to the other end of said binding member, having lugs adapted to be removably seated in said inverted recesses, and said lever, when said lugs are so seated, adapted for pivotal movement to tighten or loosen said binding member, and said lever adapted to normally retain the position assumed when said binding member is fully tightened.

1,168,325. REGISTER-ACTUATING MECHANISM FOR METERS AND THE LIKE. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Filed Oct. 18, 1912. Serial No. 726,426. (Cl. 74—7.)



1. In mechanism of the class described, the combination with a unidirectional shaft having a recess at one end, of a pluridirectional shaft one end of which is freely rotatable in the said recess, a pair of ratchets each adapted to engage the pluridirectional shaft in one direction of rotation thereof and one of said ratchets being positively connected to the unidirectional shaft, and mechanism for positively connecting the two oppositely rotating ratchets.

2. The combination with a unidirectional shaft having a recess in one end, of a pluridirectional shaft with one end inserted for free rotation in the recess, a ratchet positively connected to the unidirectional shaft for engaging the other shaft when it is rotated in one direction, another ratchet to engage the pluridirectional shaft only when the shaft is rotated in the opposite direction, and gears connecting the two ratchets to drive the first mentioned shaft in a single direction regardless of the direction of rotation of the pluridirectional shaft.

3. The combination with a unidirectional shaft, of a pluridirectional shaft adjacent thereto and coaxial therewith, a ratchet connected to the unidirectional shaft and adapted to engage the other shaft when the said other shaft is rotated in one direction, another ratchet freely mounted on the pluridirectional shaft but adapted to grip it when the shaft is rotated in the reverse direction, and driving mechanism positively connecting the two ratchets for driving the unidirectional shaft continuously.

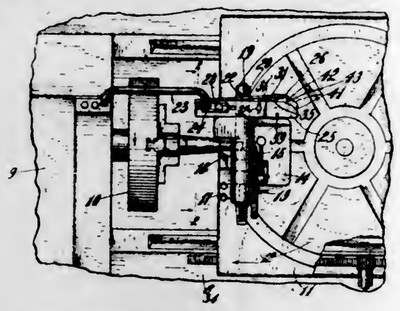
4. The combination with a driving shaft and a driven shaft arranged end to end, of a ratchet positively connected to the driven shaft and adapted to grip the driving shaft for rotating the two shafts together when the driving shaft is rotated in one direction, another ratchet freely mounted on the driving shaft and adapted to grip it when the shaft is rotated in the reverse direction, gearing positively connecting the two ratchets, and means for rotating the driving shaft in either direction whereby the driven shaft is rotated in a single direction.

5. The combination with a driving shaft and a driven shaft arranged in line and adjacent to each other, of means positively connected to the driven shaft for rotating it with the driving shaft in one direction of rotation, and mechanism directly connected to said means embodying a

ratchet member freely mounted on the driving shaft but adapted to engage the driving shaft when its direction of rotation is reversed so that the driven shaft may be driven continuously in one direction regardless of the direction of rotation of the driving shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,168,326. LATHE TAPER ATTACHMENT. CHARLES NORDSTROM and FREDERICK H. SCHWAIBOLD, Milwaukee, Wis. Filed Sept. 29, 1913. Serial No. 792,264. (Cl. 82—17.)



1. A lathe taper attachment, comprising a pair of overlapping co-acting members L-shaped in cross section, the flanges of each member extending in front of the side edge of the other member, means pivotally connecting the members together near their end portions, a slidable member mounted on one of the members and abutting against the flange of the other member, a worm wheel having a threaded bolt threaded into the slidable member, a worm member for revolving the worm wheel, means for locking the two members in adjusted positions, and means for attaching one of the members to a support.

2. A lathe taper attachment, comprising a pair of overlapping co-acting members L-shaped in cross section, the flanges of each member extending in front of the side edge of the other member, a threaded sleeve pivotally connecting the members together near their end portions, a bolt threaded into the sleeve for securing the members to a support, a slidable member mounted on one of the members and abutting against the flange of the other member, a worm wheel mounted in one of the members and having a projecting bolt which has a threaded engagement with the slidable member, a worm member in mesh with the worm for adjusting the angularity of the members, and a bolt and elongated slot connection between both members for locking the members in adjusted positions.

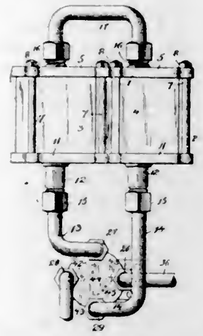
3. The combination, with a turret-lathe tool holder comprising a bracket and a tool holder actuating member slidably mounted in said bracket, of a taper attachment for guiding said actuating member comprising a plurality of members slidably engaging said actuating member, one of said members engaging said bracket, means for adjusting said taper attachment members with respect to each other to guide the tool for a taper cut, and means for attaching said attachment to a support.

4. The combination, with a turret-lathe tool holder comprising a bracket and a tool holder actuating member slidably mounted in said bracket, of a taper attachment for guiding said actuating member comprising a pair of members, one of said members having a bearing engagement with said actuating member, the other of said members having bearing engagement with said bracket, means for adjusting said taper attachment members with respect to each other to guide the tool for a taper cut and means for attaching said attachment to a support.

5. The combination with a turret-lathe tool holder comprising a bracket and a tool holder actuating member slidably mounted in said bracket and having a recess therein, of a taper attachment comprising a pair of co-acting members pivotally connected together and disposed within the recess in the actuating member between the bracket and said actuating member, means for moving one of said members with respect to the other to vary the angularity between said members, said members forming a guide for the tool actuating member and means for attaching said attachment to a support.

[Claims 6 and 7 not printed in the Gazette.]

1,168,327. LIQUID-MEASURING DEVICE. HENRY PEIN, Jersey City, N. J., assignor, by mesne assignments, to Centadrink-Filters Company, Inc., a Corporation of New York. Filed Apr. 2, 1906, Serial No. 309,337. Renewed Nov. 27, 1915. Serial No. 63,907. (Cl. 225—1.)



1. In a measuring device, the combination of a plurality of measuring cups, and a valve having a seat provided with the four ports 31, 32, 33, and 34, the measuring cups being connected to the alternate ports in said seat, a supply and a discharge pipe connected to the other alternate ports in said seat, said valve having ports 42 and 43 registering with the ports in said seat, and means of communication between the two ports 42 and the two ports 43, and means for revolving said valve so as to alternately connect each of said cups with the supply and discharge pipes.

2. In a measuring device, the combination of a plurality of measuring cups, a valve therefor having a seat provided with the four ports 31, 32, 33 and 34, said cups being connected with the ports 32 and 34, a supply pipe connected with port 33 and a discharge pipe with ports 31, said valve having ports 42 and 43, registering with the ports in the seat, the ports 42 being connected by a channel 44 and the ports 43 by a channel 45 whereby the turning of said valve will cause the same to connect the ports so that the said cups will be alternately connected with the supply and discharge pipes.

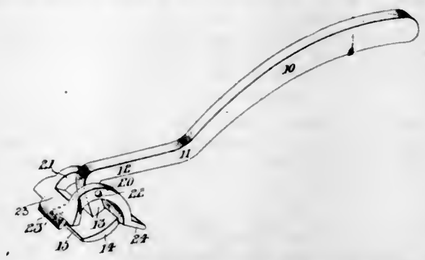
1,168,328. CHAIN OR RING MANUFACTURE. KUNO PEISELER, Frankfort-on-the-Main, Germany, assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1913. Serial No. 764,338. (Cl. 59—90.)



A chain link composed of a single length of wire formed into a single loop having its ends crossing one over the other and electrically welded together at the intersecting point.

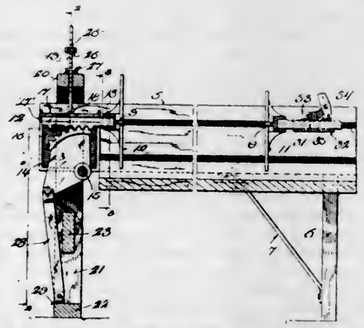
1,168,329. STOVE-LID HANDLE OR LIFTER. JOHN F. RACZKOWSKI, Plymouth, Pa., assignor of one-half to Arthur Gliddon, Plymouth, Pa. Filed Jan. 20, 1915. Serial No. 3,249. (Cl. 126—323.)

A lid lifter including a handle having an acute angular bend at the outer end thereof, a forwardly projecting enlarged foot carried by the angularly bent end, a locking yoke of inverted substantially U-form including spaced side members adapted to receive the angular end of the handle and be pivotally supported at the bent portion, and



forwardly and rearwardly projecting lid-engaging portions carried by the yoke member adapted to engage the lid on the opposite sides of the lid socket, the forwardly projecting lid engaging portion having a reduced shouldered extremity.

1,168,330. CHEESE-PRESS. HUGO F. REINHOLD, Plymouth, Wis., assignor to Reinhold & Meyer Mfg. Co., Plymouth, Wis. Filed June 16, 1915. Serial No. 34,349. (Cl. 100—55.)



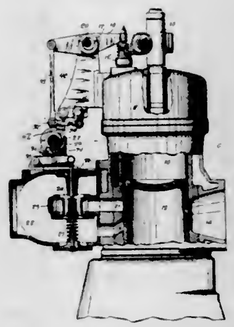
1. In a cheese-press, a tiltable trough, a frame, means in connection with the frame and an end of the trough for adjusting said trough to normal position, means for temporarily suspending said end of the trough, opposite followers movable in the trough, means for securing one of the followers in adjusted position, a segmental-gear in connection with the aforesaid end of the trough, a link-bar connected at its ends to the gear and the base of said frame, and a rack-shank of the other follower in mesh with said gear, whereby an inward pressing movement of the last named follower is had when the trough is free to tilt.

2. In a cheese-press, a tiltable trough having each side thereof provided with an inner longitudinal groove, means in connection with one end of the trough for adjusting said trough to normal position, means for temporarily suspending said end of the trough, opposite followers having projections guided in the trough-grooves, a carrier slidable in said grooves, a ratchet-shank of the rear follower guided on the carrier, a detent with the carrier engaging said shank, a lever fulcrumed in connection with the carrier, a pawl with the lever engaging said follower-shank, and means whereby pressing movement is imparted to the other follower on release of the aforesaid end of the trough.

3. In a chees press, a tiltable trough having side extensions at one end, a housing secured between said side extensions of the trough, a frame, means in connection with the housing and frame for adjusting the trough to normal position, means for temporarily suspending said trough in said position, opposite followers in the trough, means for securing one of the followers in adjusted position, a segmental gear fulcrumed in the housing, a link-bar connecting the gear and the base of said frame, and a rack-shank of the other follower guided in said housing and meshed with said gear.

4. In a cheese press, a tiltable trough having side extensions at one end, a housing secured between said side extensions of the trough, a frame, means in connection with the housing and frame for adjusting the trough to normal position, means for temporarily suspending said trough in said position, opposite followers in the trough, means for securing one of the followers in adjusted position, a segmental gear fulcrumed in the housing, a link-bar connecting the gear and the base of said frame, a rack-shank of the other follower guided in said housing and meshed with said gear, and guide plates on the side extensions of the trough engaged by side members of the frame, said guide-plates being fashioned to compensate for tilt of said trough.

1,168,331. INTERNAL-COMBUSTION ENGINE. THEODOR REUTER, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed July 12, 1913. Serial No. 778,646. (Cl. 123—30.)



1. An internal combustion engine comprising a cylinder having lateral piston-controlled scavenging and supplementary air admission ports, a valve also controlling the supplementary air admission port, fuel and starting valves in the head, and a common operating device arranged between the upper and lower valves for direct operation of both.

2. An internal combustion engine having a cylinder, piston and fuel valve whereby the fuel is injected in atomized form into air previously compressed in the cylinder, and also provided with means including a valve for admitting supplementary air during the compression stroke, in combination with a common operating device disposed at the side of the cylinder intermediate the fuel valve and the supplementary air valve and having direct operating connections with both.

3. In an internal combustion engine, the combination with a cylinder, piston and fuel valve for injecting the fuel into a body of air compressed in the cylinder by the piston, of a lateral air admission port, a valve controlling the same, a common cam shaft, disposed in intermediate relation to said fuel and air valves, and oppositely extending operating connections between said cam shaft and valves.

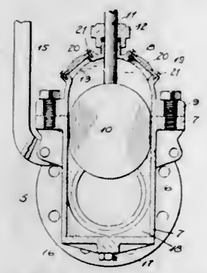
4. In an internal combustion engine, the combination with a cylinder, a piston therein, an exhaust, means for supplying compressed air to the cylinder for scavenging and subsequent compression by the piston, and a fuel valve for admitting the fuel to the body of air thus compressed, of a valve at the side and lower part of the cylinder for controlling the admission of supplementary air before the admission of the fuel, a common cam shaft disposed at one side of the cylinder above said air valve, and operating connections from the cam shaft to the fuel

valve on the one hand and to the supplementary air valve on the other hand.

5. In an internal combustion engine, the combination with a cylinder, a piston therein, a fuel valve, and piston-controlled scavenging and exhaust ports organized so that the engine operates on a two-stroke cycle, the fuel being introduced into a body of air previously compressed by the piston on the inward stroke, of means for forcing supplementary air into the cylinder during the inward stroke comprising a piston-controlled port above the scavenging port and a valve also controlling said supplementary air port, a cam shaft at the same side of the cylinder as the supplementary air valve, and operating connections extending upward from the cam shaft to actuate the fuel valve and downward to actuate the supplementary air valve.

[Claims 6 to 16 not printed in the Gazette.]

1,168,332. GATE-VALVE. RALPH J. RILEY, Livermore Falls, Me. Filed Sept. 2, 1914. Serial No. 859,799. (Cl. 137—5.)



1. In a sliding gate valve for pulpy material, a bonnet for the gate and adapted to accumulate pulpy material above the gate, said bonnet having openings opposite the edge of the gate for cleaning the bonnet from the pulpy material and swinging covers therefor normally closing said openings.

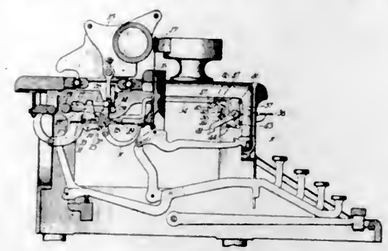
2. In a sliding gate valve for pulpy material, a main section having a gate passage open at the ends, a gate in said passage, a bonnet covering one end of the gate passage and adapted to accumulate pulpy material, a removable plug sealing the other end of the gate passage whereby the passage may be cleaned from pulpy material, and means for sliding the gate in the passage, said bonnet having openings in the upper part thereof whereby the gate passage in the bonnet may be cleaned from pulpy material, and covers for said openings.

3. In a sliding gate valve, a main section having a gate passage open at the ends, a gate in the passage, a bonnet over one of the open ends of the gate passage, a removable plug sealing the other end of the gate, said plug forming a stop for the gate in closed position, means for sliding the gate in the passage, said bonnet having openings in the upper part thereof opposite the edge of the gate for cleaning the passage, and swinging covers for said openings normally closing the same.

4. In a sliding gate valve for pulpy material, a main casing having a gate passage open at the ends, a gate in the passage, a bonnet covering one end of the passage and adapted to accumulate pulpy material over the gate, a removable plug sealing the other end of the gate passage whereby the same may be cleaned of the pulpy material that may be in the way of the gate, a rod from the gate passing through the bonnet, a lever pivotally connected to the main section and to the rod for moving the gate in the passage, said bonnet having openings on each side of the rod in alinement with the gate for cleaning the bonnet from pulpy material, and swinging covers for said openings normally closing the same.

5. In a sliding gate valve for pulpy material, a main section having a gate passage open at the ends, a gate in the passage, a bonnet for the gate covering one end of the passage and adapted to accumulate pulpy material above the gate, the contour of the bonnet being that of the gate, a removable plug sealing the other end of the gate passage whereby the main section may be cleaned of pulpy material below the gate, a rod from the gate through the bonnet, a lever connected to the rod for actuating the gate in the passage, said bonnet having openings on each side of the rod in alinement with the gate for cleaning the bonnet of pulpy material, and swinging covers for the openings normally closing the same.

1,168,333. RIBBON-VIBRATOR. ALVAH C. ROEBUCK and ADOLPH J. PRUSZYNSKI, Woodstock, Ill. Filed Apr. 25, 1914. Serial No. 834,302. (Cl. 197—157.)



1. The combination with a ribbon vibrator, of a rotary adjustment shaft connected thereto, and means for operating said adjustment shaft comprising a link, a lever connected to said link, a shiftable fulcrum for said lever, and means for shifting said lever for reciprocating said link and for rotating the shaft aforesaid.

2. The combination with a ribbon vibrator, of an adjustment shaft therefor, and means for adjusting said shaft comprising a link connected to said shaft, a lever connected to said link, a segment capable of a multiplicity of adjustments, a fulcrum for said lever carried by said segment, and means for oscillating said lever to reciprocate said link and adjust the shaft aforesaid.

3. The combination with a ribbon vibrator, of an adjustment shaft therefor, and means for adjusting said shaft comprising a link connected to said shaft, a lever connected to said link, a segment capable of a multiplicity of adjustments, a fulcrum for said lever carried by said segment, a second segment capable of a multiplicity of adjustments, and a connection between said second segment and said lever whereby the adjustment of said second segment will oscillate said lever to reciprocate said link and adjust the shaft aforesaid.

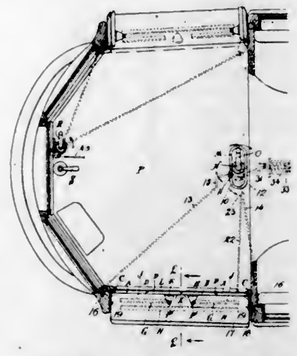
4. The combination with a ribbon vibrator, of an adjustment shaft therefor, and means for adjusting said shaft comprising a lever connected to said shaft, a segment capable of a multiplicity of adjustments, a fulcrum for said lever carried by said segment, a second segment capable of a multiplicity of adjustments, and a link connecting said second segment with said lever whereby the oscillation of said second segment will oscillate said lever and adjust the shaft aforesaid.

5. The combination with a ribbon vibrator, of an adjustment shaft connected thereto, and means for adjusting said shaft, comprising an adjustable segment, a fulcrum carried by said segment, a lever pivoted on said fulcrum so that the movement of said segment adjusts said fulcrum with respect to said lever, a link pivotally connecting one terminal of said lever to said shaft, a second adjustable segment, and a connection between said second adjustable segment and the opposite terminal of said lever.

[Claims 6 to 11 not printed in the Gazette.]

1,168,334. DOOR-OPERATING MECHANISM. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, a Corporation of West Virginia. Filed May 5, 1910. Serial No. 559,491. (Cl. 268—7.)

1. The combination with folding door panels, and manually operated devices for moving the same, of means rendered operative by a portion only of the movement of the manually operated devices for independently retarding the final movements of the panels to open or closed position.



2. The combination of a door and means for operating the same, including a rock shaft, a crank arm thereon, connections between the crank arm and door, and lost motion connection between the shaft and crank arm.

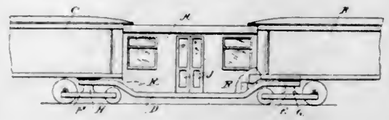
3. The combination of a door and means for operating the same including a rock shaft, a crank arm thereon, connections between the crank arm and door, lost motion connections between the shaft and crank arm, and means for retarding the crank arm as it approaches the limits of its movements.

4. The combination with a door composed of sections respectively arranged on opposite sides of the doorway, of an operating mechanism therefor including an operating shaft, a crank arm thereon, a connecting rod intermediate said crank arm and each of said door sections whereby both connecting rods are simultaneously operated, and means whereby said rods are each in dead center relation with respect to the crank arm when the doors are in closed position.

5. The combination with a door composed of sections respectively arranged on opposite sides of the doorway, of an operating mechanism therefor including an operating shaft, a crank arm thereon, a connecting rod intermediate said crank arm and each of said door sections whereby both connecting rods are simultaneously operated and means whereby said rods are each in dead center relation with respect to the crank arm when the doors are in both open and closed position.

[Claims 6 to 16 not printed in the Gazette.]

1,168,335. FLEXIBLE CAR. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Apr. 4, 1912. Serial No. 688,386. (Cl. 105—19.)



1. Means for transporting passengers consisting of car end portions and trucks therefor, an intermediate car portion swivelly supported at its ends by said trucks, the flooring of the end portions being at a higher elevation than the flooring of the intermediate portion, and a communicating way between the end portions and the intermediate portion.

2. A car composed of end sections including supporting trucks, and an intermediate section, said intermediate section pivotally supported on said trucks.

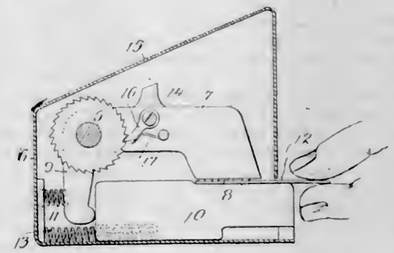
3. A car composed of end sections including supporting trucks, and an intermediate section, said intermediate section being swivelly supported at its ends upon said trucks.

4. A car composed of end sections including supporting trucks, and an intermediate section, said intermediate section having a flooring at a lower level than that of the end sections, and swivelly supported at its ends upon said trucks.

5. A car composed of end sections including supporting trucks, and an intermediate section having hinged supporting connection at its ends with the trucks which support said end sections, the interiors of said sections communicating with each other, and a flexible curtain carried by the end of one of said sections and connected to the proximate end of another of said sections.

[Claim 6 not printed in the Gazette.]

1,168,336. AUTOMATIC TICKET-PUNCH. HAROLD ROWNTREE, Kenilworth, Ill. Filed Oct. 16, 1912. Serial No. 725,984. (Cl. 101—56.)



1. In a ticket punch device, a casing, a punch member pivotally mounted therein, a slide block upon which the ticket to be punched is to be placed and means controlled by the sliding movement of said slide block for causing the punch member to punch the ticket.

2. A ticket punch device comprising a casing, a punch member pivotally mounted therein, means normally operating to maintain said member in raised position, a slide block adapted to slide into said casing and to receive the ticket to be punched, and means engaged by the inward movement of the said slide block for causing said punch member to rock to effect the punching operation.

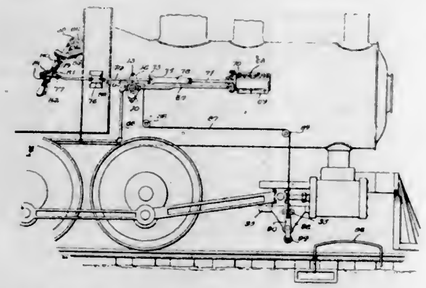
3. In a ticket punch device, a casing, a shaft mounted therein, a bell crank lever mounted upon said shaft to rock thereon, one arm of said lever forming a punching member, a slide block mounted to slide into said casing and arranged to engage the other arm of said lever to effect the punching operation of said member.

4. In a ticket punch device, a casing having a shaft arranged therein, a bell crank lever pivotally mounted at its angle upon said shaft, one arm of said lever forming the punching member, means for normally maintaining said member in raised position, a slide block upon which the ticket to be punched is adapted to be placed, the other arm of said bell crank lever arranged in the path of movement of said block, whereby, when said block is moved into said casing said punching member is depressed to effect a punching of the ticket.

5. In an automatic ticket punch device, a casing, a shaft mounted therein, a bell crank lever journaled upon said shaft to rock thereon, one arm of said lever forming a ticket punch member, a spring engaging the other arm of said lever to normally maintain the punch member in raised position, a slide block upon which the ticket to be punched is adapted to be placed, said other arm of the bell crank lever arranged in the line of movement of said slide block, whereby, when said slide is pushed into said casing the punch member of said lever is operated to stamp the ticket.

[Claim 6 not printed in the Gazette.]

1,168,337. SAFETY-STOP FOR TRAINS. JOHN V. RUND, Pesotum, Ill. Filed Feb. 20, 1915. Serial No. 9,671. (Cl. 246—59.)



1. In a safety appliance for trains, the combination with a throttle valve and its lever and a train pipe, of a vent valve for the train pipe, a clutch head normally connected with the valve and forming an operating means therefor, track obstacle operated means for turning the clutch head to open the valve, and means for releasing the clutch head, whereby its turning will not open the valve.

2. In a safety appliance for trains, the combination with a throttle valve and its lever and a train pipe, of a vent valve for the train pipe, a clutch head normally connected with the valve and forming an operating means therefor, track obstacle operated means for turning the clutch head to open the valve, and means for releasing the clutch head, whereby its turning will not open the valve, said means operating upon closing of the throttle valve.

3. In a safety appliance for trains, the combination with a throttle valve, its lever and a train pipe, of a vent valve in the train pipe, means operable by opening of the vent valve for closing the throttle valve, a clutch head normally connected with the vent valve and longitudinally movable to free it of such connection, track obstacle operated means for turning the clutch head to open the vent valve, and means for moving the clutch head longitudinally to free it from connection with the vent valve, said means being operable by movement of the throttle lever to close the throttle valve.

4. In a safety appliance for trains, the combination with a throttle valve, its lever and a train pipe, of a vent valve in the train pipe, means operable by opening of the vent valve for closing the throttle valve, a clutch head normally connected with the vent valve and longitudinally movable to free it of such connection, track obstacle operated means for turning the clutch head to open the vent valve, and means for moving the clutch head longitudinally to free it from connection with the vent valve, said means being operable by movement of the throttle lever to close the throttle valve, and including co-acting cam members, one of which is movable upon swinging of the throttle valve lever to move the other and cause it to force the clutch head out of connection with the vent valve.

5. In a safety appliance for trains, the combination with a throttle valve, its lever and a train pipe, of a valve casing having ports communicating with train pipe sections, a turn plug valve mounted in the casing, a revoluble stem for the valve, a clutch head mounted upon the stem and movable longitudinally thereof, means coacting between the stem and the clutch head to lock them for common turning movement in one position of the head on the stem and to leave the head free for independent turning movement when in another position on the stem, means normally holding the head in the former position, means operable by turning of the throttle valve lever to close the throttle valve for moving the head to the other position, and track obstacle operated means for turning the head irrespective of its position.

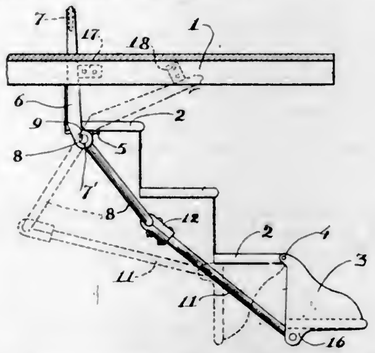
[Claims 6 to 9 not printed in the Gazette.]

1,168,338. THERAPEUTIC VIBRATOR. ALBERT J. SEAMAN, Boston, Mass. Filed Oct. 20, 1913, Serial No. 796,103. Renewed June 28, 1915. Serial No. 36,906. (Cl. 128—16.)



A vibrator of the nature described comprising a drive gear case having a socket, a bevel gear rotatable in said case, means to drive said gear at a high speed, a sleeve removably secured in said socket and having a vibrator head having a series of radial sockets, a shaft journaled in said sleeve and having at one end a pinion engaged with said bevel gear and at the other end a square shoulder having an axial stud, a rotor rotatable within said head and having a weighted rim channeled for a portion of its circumference and an axial sleeve engaged with the square shoulder of said shaft, a radial member having at its outer end a segmental balance weight to closely fit said rotor rim, said member pivotally engaged with said shaft stud, and a thumb screw engaged with said stud to secure said member in adjusted position.

1,168,339. EXTENSION-STEP FOR RAILWAY-CARS. ALBERT E. SEIBERT, Topeka, Kans. Filed Mar. 4, 1915. Serial No. 12,021. (Cl. 105—86.)

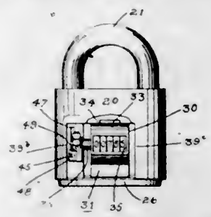


1. The combination with a railway car platform and set of stationary steps, of an extension step pivoted to the lowermost of the stationary steps and arranged to swing inwardly underneath the lowermost of the stationary steps when in out of the way position, a crank shaft journaled to the uppermost of the steps, a lever secured to one end of the crank shaft and extending above the car platform when the step is in extended position and arranged to be disposed beneath the platform when the step is in out of the way position, means to hold the lever in its two positions, and means operatively connecting the crank shaft with the steps.

2. The combination with a railway car platform and set of stationary steps, of an extension step pivoted to the lowermost of the stationary steps and arranged to swing outwardly under the lowermost of the stationary steps when in out of the way position, a crank shaft journaled to the uppermost of the steps, a lever secured to one end of the crank shaft and extending above the car platform when the step is in extended position and arranged to be disposed beneath the platform when the step is in out of the way position, means to hold the lever in its two positions, and means operatively connecting the crank shaft with the steps consisting of a rod pivoted to said crank shaft and right angularly extending rods secured to the lower end of said rod and being pivoted to the extension step at the ends thereof.

3. The combination with the stationary steps of the railway tie and platform therefor, of an extension step pivoted to the lowermost of the stationary steps and arranged to swing inwardly beneath and in engagement with the lowermost step of the stationary steps, a crank shaft journaled transversely to the uppermost of the steps, a rod pivotally secured at one end to the crank shaft at a point approximately centrally of the same and extending downwardly toward the extension step, a T coupling secured to the lower end of said rod, right angularly extending rods connected with the T coupling, bearings secured to the extension step adjacent the ends and upon the under face thereof and receiving the ends of said last named rods, a lever secured to one end of said crank shaft and arranged to extend upwardly through the platform floor when the step is in extended position and to be disposed beneath the floor of the platform when the step is in out of the way position, and means to hold the lever in its two positions.

1,168,340. PADLOCK. EVAN J. SHIPMAN, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 31, 1914. Serial No. 828,517. (Cl. 70—110.)



1. In a registering padlock, the combination of a case or shell having an opening at one end and a sight opening in one of its side walls, a shackle secured to said case or shell, lock mechanism coöperating with said shackle within said case or shell, means closing the open end of the shell and confining said lock mechanism therein, a shelf-contained registering counter in said shell disposed between the wall having said sight opening and a portion of said lock mechanism, said counter including a shackle located in a plane parallel to the plane of the shackle when the shackle is locked by said lock mechanism, number wheels rotatable about said shaft, and a counter case inclosing said wheels but having a sight opening registering with the sight opening of the shell, and means for actuating said counter by the actuation of the padlock; substantially as described.

2. In a padlock, the combination of a case or shell having an open end, a shackle secured to the shell at the opposite end, lock mechanism for said shackle located in said shell, a face or end plate for closing the open end of the shell, and a self-contained registering counter for registering the actuations of the padlock, comprising a counter case held in said shell by means of said face or end plate, and a plurality of number wheels mounted in the counter case and rotatable about a single axis; substantially as described.

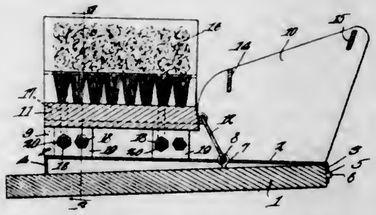
3. In a padlock, the combination of a case or shell having an open end, a shackle secured to said shell at the opposite end, lock mechanism for said shackle in said shell, registering mechanism in said shell operatively connected with said shackle, and a plate for inclosing said lock mechanism and said registering mechanism in said shell, said registering mechanism being constituted by a self-contained registering counter, the case of which is interposed between the lock mechanism and one of the shell walls; substantially as described.

4. In a padlock, the combination of a case or shell open at one end, a shackle secured to said shell at the opposite end, a pin tumbler lock mechanism coöperating with said shackle, and including a face plate rigidly carried by said lock mechanism, and closing said opening of the shell, a self-contained counter comprising a case interposed between said lock mechanism and one wall of said shell, and held in said shell by said face plate, a plurality of number wheels in said counter case rotatable about a single axis, and means for operatively connecting said number wheels with said shackle, substantially as described.

5. In a padlock, the combination of a case or shell open at one end, a shackle secured to the shell at the opposite end, a pin tumbler lock for said shackle located in said shell, a face or end plate for closing the open end of said shell rigidly secured to said pin tumbler lock, the shell having an enlargement at one side, and a self-contained registering counter operatively connected with the shackle and comprising a counter case supported by said face or end plate in the enlargement of the shell in the space between one side face of the pin tumbled lock and the opposing wall of the shell; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,168,341. SHOE-CLEANER. LUCIAN NARVEL SIMMONS, Huntington, W. Va. Filed Sept. 27, 1915. Serial No. 52,905. (Cl. 15—2.)



1. A shoe cleaner comprising a bottom having upturned flanges, a removable brush seated upon said flanges, means for holding the brush upon said flanges, the flanges having wings projecting upwardly above the brush beyond one end thereof, and a pair of transverse scrapers carried by said wings, one adjacent said end of the brush and the other remote from the brush and higher up than the aforesaid scraper.

2. A shoe cleaner comprising a bottom having upturned flanges, a removable brush seated upon said flanges, said flanges having wings projecting upwardly above said brush at one end thereof, a transverse scraper carried by said wings, one end of the brush seating against said wings, and means for holding the brush upon said flanges and against said wings.

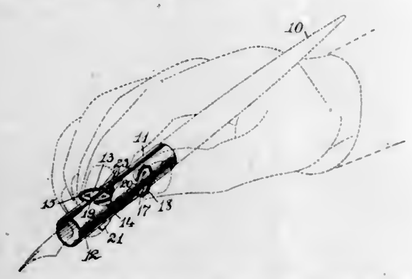
3. A shoe cleaner comprising a bottom plate having upturned flanges and upstruck ears between said flanges, standards having inwardly projecting angularly extending portions at their lower ends slidable through said flanges and ears, side brushes carried by the upper ends of said standards and having bristles projecting toward one another, nuts threaded upon the ends of said portions, and coiled wire expansion springs upon said portions between said ears and nuts.

4. A shoe cleaner, embodying a base, a bottom plate thereon, the base having a keeper projecting through the bottom plate, a brush seatable upon the bottom plate, and movable means carried by the brush engageable with said keeper for holding all of said parts assembled.

5. A shoe cleaner embodying a base, a bottom plate seated thereon and having an opening, the base having an upstanding keeper projecting through said opening, the bottom plate having upturned flanges, a brush seated upon said flanges, and a hook carried by the brush and engageable with said keeper to hold the parts assembled.

[Claims 6 and 7 not printed in the Gazette.]

1,168,342. GRIP FOR PENHOLDERS. CHARLES W. SLOCUM, Newark, N. J. Filed Apr. 30, 1915. Serial No. 24,916. (Cl. 120—103.)



1. A grip for pen holders comprising a shank having a tablet on the top near the front, a second tablet at one side and vertically arranged thereon in rear of the first mentioned tablet, and an obliquely arranged wing projecting from the lower part of the side opposite the second tablet, the wing being slightly in rear of the first tablet.

2. A grip for pen holders comprising a shank having a substantially flat horizontal tablet on the top near its front end, a substantially flat vertical tablet on one side of the shank in rear of the horizontal tablet, and a wing projecting from the lower part of the side opposite the vertical tablet, the wing being slightly in rear of the horizontal tablet.

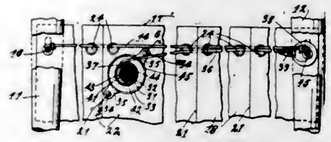
3. A grip for pen holders comprising a sleeve having a tablet struck up tangentially therefrom near its front end at the top, a second tablet struck up tangentially therefrom on one side in rear of the first tablet, the second tablet being vertically arranged, and a wing struck up from the sleeve at a point slightly in rear of the first tablet and at the lower part of the side opposite the side on which the second tablet is placed, the wing being obliquely arranged with its forward upper end tangential to the sleeve.

4. A grip for pen holders comprising a sleeve having a tablet struck up therefrom near its front end at the top, a second tablet struck up therefrom on one side in rear of the first tablet, the second tablet being vertically arranged, a wing struck up from the sleeve at a point slightly in rear of the first tablet and at the lower part of the side opposite the side on which the second tablet is placed, and transversely arranged raised portions struck up from the sleeve immediately in rear of the first-mentioned tablet.

5. A grip for pen holders comprising a split sleeve of sheet material, semi-circular parts struck up therefrom to form a tangential tablet on the top near its front end, semi-circular parts struck up therefrom to form a second tangential tablet vertically arranged on one side in rear of the first tablet, and an obliquely arranged wing at the lower part of the side opposite the second tablet and slightly in rear of the first tablet.

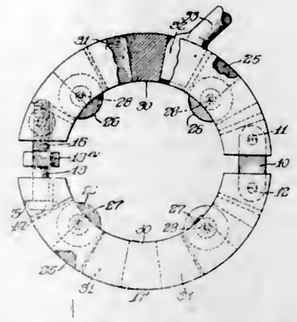
1,168,343. VEHICLE-CURTAIN. ERNEST SMITH, Fort Thomas, Ky. Filed Feb. 8, 1915. Serial No. 6,915. (Cl. 21—12.)

1. The combination of a vehicle-body, a hinged door therefor, and a top for said body above said door, a support on said top, a curtain comprising curtain-sections pivoted together and suspended from said support and arranged to slide lengthwise on said support, a case at one end of said curtain above the hinged end of said door, a spring-wound drum in said case, a flexible connection secured to and actuated by said spring-wound drum passing intermediate curtain-sections and having connection with a section of said curtain removed from said case, and coacting releasable securing means distanced from said case between said flexible connection and said top constructed and arranged whereby said curtain is automatically folded away from a position above said door upon release of said releasable securing means.



2. The combination of a vehicle-top, a curtain comprising curtain-sections whose edges are hinged together lengthwise of said curtain-sections for having said hinged edges alternately swing inwardly and outwardly, said curtain-sections provided with holes at their upper ends, a support on said top extending lengthwise of said curtain when closed and received through said holes for suspending said curtain-sections therefrom, a case, a drum in said case, a flexible connection one end whereof is secured to said drum, and a spring in said drum arranged to normally wind said flexible connection upon said drum, said case secured to the face of one of the sections of said curtain and said flexible connection received through said holes of intermediate curtain-sections and having pulling connection with a section of said curtain removed from said case, and said case located between opposed faces of said curtain-sections when said curtain-sections are arranged face to face.

1,168,344. BOILER-FLUE CUTTER. WILLIAM C. SPENCER, Batavia, Ill. Filed Mar. 25, 1915. Serial No. 16,967. (Cl. 81—189.)



1. A cutter comprising two semi-annular members maintained in spaced apart relation, cutting rollers rotatable in one of said members and flattening rollers rotatable in the other of said members, a link connecting adjacent ends of said spaced apart semi-annular members, and arranged to permit of pivotal and endwise movement of said members with respect to each other, and adjusting means pivoted to the other end of one of said members and engaging the adjacent end of the other of said members, whereby these ends of said members may be forced toward each other.

2. A cutter comprising two semi-annular members maintained in spaced apart relation, and adapted for free rotation about the periphery of a tube or the like, cutting rollers rotatable in one of said members and flattening rollers rotatable in the other of said members, a link connecting adjacent ends of said spaced apart semi-annular members, and arranged to permit of pivotal and endwise movement of said members with respect to each other, and adjusting means pivoted to the other end of one of said members and engaging the adjacent end of the other of said members, whereby these ends of said members may be forced toward each other.

3. An article of the class described comprising two semi-annular members connected together at one end in spaced apart relation and adapted for pivotal and endwise movement with respect to each other and adjustably and releasably connected at the opposite end, and adapted for free rotation about the periphery of a pipe or the like, there being a plurality of radial, equally spaced through openings in said members, cutting and flattening rollers journaled in said openings, and projecting beyond the interior periphery of said members, and pockets in the outer periphery of said members for the reception of a turning wrench.

4. In an article of the class described, including two semi-annular members having open slots in adjacent ends thereof, a link located in said slots and pivoted at its ends to said members, whereby said members are maintained in spaced apart relation and are adapted for pivotal and endwise movement with respect to each other, cutting and flattening rollers journaled in said members, and means adapted to draw the free ends of said members toward each other.

5. An article of the class described comprising a pair of semi-annular members entirely free from external projections on the outer periphery thereof, a hinged link located within said members, and pintles connecting said link to said members at opposite ends thereof, there being depressions in the periphery of said members opposite the hinged connection, one of said depressions having an oscillatable pin passing therethrough, said pin having a threaded aperture alined with said depression, the other of said depressions having a slotted shoulder, a headed, threaded stud, the head of which is adapted to bear against said shoulder, and the threaded portion of which is arranged to engage the threaded aperture in said pin, whereby said members may be adjustably and removably connected, and pockets in the periphery of said members for the reception of a turning wrench.

1,168,345. HANDLE FOR CANS. DANIEL B. TAMAGNO, New York, N. Y., assignor to Lydie Tamagno, New York, N. Y. Filed Feb. 19, 1913. Serial No. 749,352. (Cl. 220—30.)

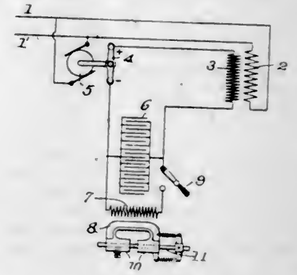


1. A can carrying means comprising an imperforate depression in the wall of the can, a rectangular handle having a hinge bearing at one side of the depression and a hand piece turning loosely on the other side of the handle, whereby the handle may be elevated from the bottom of the depression.

2. A can carrying means comprising a depression in the top of the can and a supplementary depression in the bottom thereof at one side, a rectangular handle having a hinge connection at one side of the supplementary recess and a swiveling hand piece turning upon the other side of the handle and overlying said supplementary depression.

3. A can carrying means comprising an imperforate depression in the top of the can, a rectangular handle, a bearing strip embracing one side of the handle and secured to one side of the depression whereby the handle may be swung in the depression, and a swiveling hand piece turning loosely on the other side of the handle and adapted to act on the bottom of the depression when turned on the handle to raise the handle out of the depression.

1,168,346. APPARATUS FOR ELECTRIC WELDING. ELIHU THOMSON, Swampscott, Mass., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Feb. 20, 1915. Serial No. 9,575. (Cl. 219—4.)

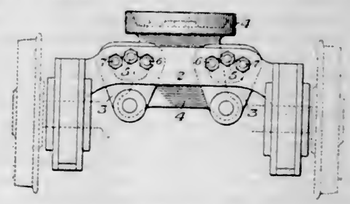


1. In an electric welding apparatus, the combination of a transformer, a condenser connected to the secondary thereof, means for charging the condenser by unidirectional currents taken from said secondary, a welding transformer and means for connecting the condenser with the primary thereof to effect a weld by the energy of the discharge of the condenser.

2. In an electric welding apparatus, the combination of a source of alternating current, a step-up transformer, means for completing the circuit of the secondary periodically to secure a unidirectional current, a condenser connected to the secondary of said transformer, a welding transformer and connections between said transformer and condenser whereby the condenser may be discharged through the primary thereof to produce in the secondary and work the desired welding current.

3. In an electric welding apparatus, the combination of a condenser, means operating continuously for charging the same with a unidirectional current derived from an alternating current, an electric welding transformer and means for discharging the condenser through the primary of said transformer at the will of the operator to effect a weld.

1,168,347. SWINGING-BOLSTER HANGER FOR TRUCKS. SAMUEL G. THOMSON, Reading, Pa. Filed Oct. 1, 1915. Serial No. 53,578. (Cl. 105—226.)



1. In a truck for locomotives or cars, a swinging hanger having at least three separate points of suspension.

2. In a truck for locomotives or cars, a swinging hanger having one point of suspension in its middle position, and another separate point of suspension arranged to come into action after swinging away from its middle position.

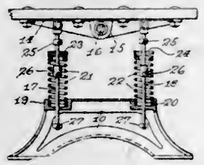
3. In a truck for locomotives or cars, a swinging hanger having at least two separate suspension points in different horizontal planes.

4. In a truck for locomotives or cars, a swinging hanger having a point of suspension in its mid position, and also having a separate point of suspension on each side of said point.

5. In a truck for locomotives or cars, a swinging hanger arranged to engage at least two separate bearing or suspension points in succession, as it swings from its mid-positions to its extreme side positions.

[Claims 6 to 12 not printed in the Gazette.]

1,168,348. TEETER-TOTTER DEVICE. WILLIAM S. TOTHILL, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,766. (Cl. 46—22.)



1. In a teeter-totter device, the combination of a standard, a bar pivotally mounted on said standard, a spring mounted on one of said members, bearing means interposed between said spring and the other of said members, said bearing means being adapted to cause said spring to be stressed by the movement of said bar to the limit of its movement in one direction but adapted to be relieved from pressure upon said spring at the end of the movement of the bar in the other direction, and auxiliary bearing means coöperating with said first-named bearing means adapted to cause said spring to be stressed in the opposite direction by the movement of said bar to the limit of its movement in the opposite direction.

2. In a teeter-totter device, the combination of a standard, a bar pivotally mounted on said standard, a spring mounted on one of said members, and means pivotally mounted on the other member actuated by the movement of said bar to the limit of its movement in one direction to swing in contact with said spring for compressing the spring but adapted to be relieved from pressure upon said spring at another portion of the swing of the said bar.

3. In a teeter-totter device, the combination of a standard, a bar pivotally mounted on said standard, a spring mounted on one of said members, and means pivotally mounted on the other member adapted to cause said spring to be stressed by the movement of said bar to the limit of its movement in one direction but adapted to cause said spring to be stressed in the opposite direction by the movement of the bar to the limit of its movement in the opposite direction.

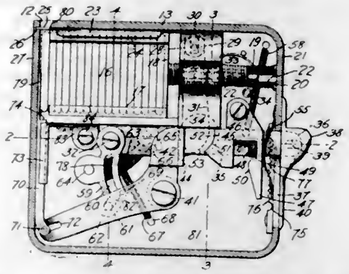
4. In a teeter-totter device, the combination of a standard, a bar pivotally mounted on said standard, a coiled spring mounted on one of said members, and a bearing device mounted upon the other of said members, said bearing device being adapted to compress said spring upon a movement of the bar to the limit of its movement in one direction and adapted to expand said spring upon a movement of the bar to the limit of its movement in the other direction.

5. In a teeter-totter device, the combination of a standard, a bar pivotally mounted on said standard, a spring mounted on one of said members, a rod pivotally connected with the other member, and means carried by said rod out of contact with said spring when the bar is at one limit of its swing but adapted to stress the spring for cushioning the swing of the bar to the other limit of its movement.

[Claims 6 to 10 not printed in the Gazette.]

1,168,349. VENDING-MACHINE. WILLIAM EDWARD VILLINGER, Williamsport, Pa., assignor to United States Sales Company, Williamsport, Pa., a Corporation of Delaware. Filed Dec. 21, 1914, Serial No. 878,260. Renewed Dec. 2, 1915. Serial No. 64,775. (Cl. 211—8.)

1. A device of the class described comprising in combination with a casing having a dispensing slot, an article supporting rack within said casing adjacent the said slot, a guard plate U-shaped in cross section slidably mounted upon the top of said rack and having a forward extension shiftable inwardly of the said slot, a pivoted operating arm engaging the said plate, a pusher slidably positioned in alinement with the forwardmost article in the rack and with the said slot, an operating lever pivoted within said casing and having one end extending exteriorly thereof and its opposite end in operative engagement with the said pusher, a link swingingly mounted at the pivotal point of the said arm and having an angular slot therein, and operative connections between the said link and aforementioned arm and lever.



2. A device of the class described comprising in combination with a casing having a dispensing slot, an article supporting rack within said casing adjacent the said slot, a guard plate U-shaped in cross section slidably mounted upon the top of said rack and having a forward extension shiftable inwardly of the said slot, a pivoted operating arm engaging the said plate, a pusher slidably positioned in alinement with the forwardmost article in the rack and with the said slot, an operating lever pivoted within said casing and having one end extending exteriorly thereof and its opposite end in operative engagement with the said pusher, a link swingingly mounted at the pivotal point of the said arm and having an angular slot therein, lugs upon the said arm and lever, a hook pivoted to the said link and extending over the said arm lug and being within the disengaging line of movement of the said lever lug.

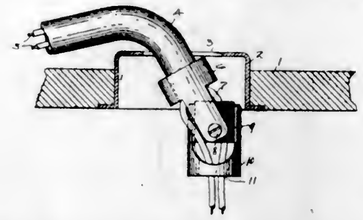
3. A device of the class described comprising in combination with a casing having a dispensing slot, an article supporting rack within said casing adjacent the said slot, a guard plate U-shaped in cross section slidably mounted upon the top of said rack and having a forward extension shiftable inwardly of the said slot, a pivoted operating arm engaging the said plate, a pusher slidably positioned in alinement with the forwardmost article in the rack and with the said slot, an operating lever pivoted within said casing and having one end extending exteriorly thereof and its opposite end in operative engagement with the said pusher, a link swingingly mounted at the pivotal point of the said arm and having an angular slot therein, lugs upon the said arm and lever, a hook pivoted to the said link and extending over the said arm lug and being within the disengaging line of movement of the said lever lug, a lug upon the rear portion of said lever slidably positioned within the said slot and shiftably engageable within the link only during the initial operating movement of the said lever and normal positioning springs for the said hook and arm.

4. A device of the class described comprising a casing having an article dispensing slot having one lateral wall vertical and the other lateral wall inclined upwardly and away from the first wall, an article supporting rack positioned inwardly of said slot, a pusher slidably positioned in alinement with the forwardmost article in the rack and with the said slot, the said pusher having a foot positioned beneath the said forwardmost article, a projecting article contacting plate carried by the said pusher adjacent its said foot and positioned on the opposite side of the dispensed article from the curved edge of the slot when the pusher is projected.

5. A device of the class described comprising a casing having a transverse slot adjacent one end of the top wall thereof, a supporting rack for articles arranged within said casing, an article engaged pusher slidably positioned inwardly of the said slot and having a side plate extension flatly engaging the adjacent end of the casing and projectable through the said slot, one lateral wall of the slot being vertical and the other lateral wall being inclined upwardly and away from the first wall, whereby the dispensed article is permitted to drop into flat engagement with the casing top.

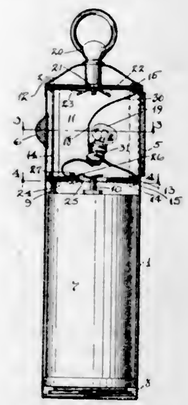
[Claims 6 and 7 not printed in the Gazette.]

1,168,350. LIGHTING-FIXTURE. FREDERICK W. WAKEFIELD, Vermilion, Ohio, assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio, a Corporation of Ohio. Filed Apr. 26, 1912. Serial No. 693,299. (Cl. 240—85.)



The combination of an outlet box having an aperture in the top thereof, a cable-containing conduit passing through such aperture in said box, and an insulated universal joint formed of upper and lower portions connected through insulating material and constructed to allow the convenient passage of the electrical cables, having its upper portion directly connected to said conduit, and allowing the vertical disposition of the lower portion and its complete insulation from said conduit and said box.

1,168,351. BATTERY-LAMP. FREDERICK W. WAKEFIELD, Vermilion, Ohio, assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio, a Corporation of Ohio. Filed Feb. 20, 1915. Serial No. 9,573. (Cl. 240—8.5.)



1. In a battery lamp, the combination with a battery having a peripheral and a central contact and a casing adapted to contain the same, of a lamp-carrying cage adapted to fit within said casing and to make an electrical circuit between said battery and said lamp, irrespective of the relation and angular positions of the same.

2. In a battery lamp, the combination with a battery and a casing adapted to contain the same, of a lamp-carrying cage mounted within said casing and provided with a continuous peripheral ring electrically connected to said lamp and a central member similarly connected to said lamp, said ring and said member being adapted to coöperatively complete a circuit through such battery by contact with the peripheral and central contacts thereof, respectively.

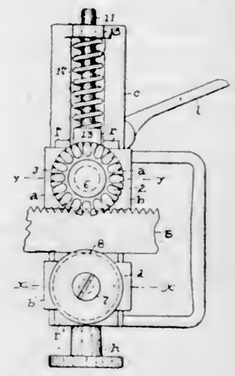
3. In a battery lamp, the combination with a casing, of a standard battery snugly fitted therein, and having peripheral and central binding posts, and a cage mounted above said battery in said casing, and bearing a lamp, an annular metallic ring disposed on the bottom of said cage and electrically connected to said lamp, a resilient metallic member centrally on the bottom of said cage and also electrically connected to said lamp, said ring and said member coöperating to complete a circuit through said battery by contacting said peripheral and central binding posts respectively.

4. In a battery lamp the combination with a casing and a battery therein, of a cover adapted to removably engage said casing, a lamp carried by said cover, fitting within said casing and electrically connected to said battery, a handle on said cover, and a switch operable by the rotation of said handle and adapted to make and break such electrical connection between said battery and said lamp.

5. In a battery lamp the combination with a casing and a standard battery therein; of a cover adapted to removably engage said casing; a cage bearing a lamp, attached to said cover, fitting within said casing, and electrically connecting said battery and said lamp; a handle on said cover; and a switch operable by the rotation of said handle and adapted to make and break the said connection between said battery and said lamp.

[Claims 6 to 12 not printed in the Gazette.]

1,168,352. SAW-SETTING DEVICE. FRANK WELLINGTON WARDWELL, Jr., Cleveland, Ohio. Filed Apr. 20, 1914. Serial No. 833,300. (Cl. 76—59.)



1. As a new article of manufacture, a rotatable wheel for setting saws having compound concave cavities in its periphery to engage the teeth of the saw and landings between said cavities, the said wheel being beveled on both sides toward its periphery and the said cavities of substantially the same width to the bottom thereof.

2. As a new article of manufacture, a saw setting wheel having cavities in its periphery alternately on opposite sides and concave radially and transversely and of substantially the same width to the bottom thereof, the transverse concavity being less than the radial.

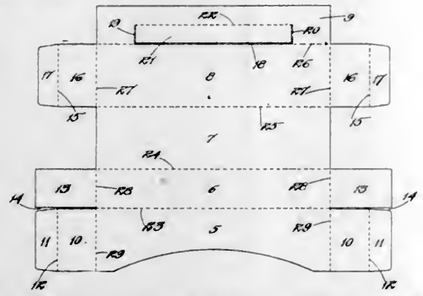
3. As a new article of manufacture a wheel adapted to set saws having oppositely disposed cavities in its periphery and the said cavities curved axially to an arc and transversely to a shorter arc, and ribs between said cavities tapering inward from the periphery of the wheel and extending the full depth of said cavities.

4. As a new article of manufacture a wheel to set saws having opposite compound concave cavities alternately and radially disposed ribs between the cavities of each side provided with landings for the cavities on the opposite side, the said ribs increasing in width from the bottoms of the cavities to the said landings.

1,168,353. PAPER BOX. PETER R. WARREN, Boston, Mass. Filed Apr. 13, 1915. Serial No. 21,147. (Cl. 229—16.)

1. A paper box or container having two side walls, two end walls and a bottom made of a single sheet of material, one of said side walls being formed of two panel portions folded on the line between them with the fold on the upper edge and forming a pocket between them open

at each end, the other side wall having flap extensions at both ends which are bent to form the outer faces of the ends of the box and terminate in tuck flaps which are inserted in the ends of the pocket between the two panels of the double side wall thereby locking the container in set up form.

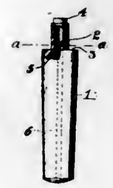


2. A blank for a folding paper box container consisting of a single sheet of paper died out and creased to form five body panel portions in such manner that one of the intermediate panel portions forms the real bottom of the box, one of the portions adjacent to one edge of said bottom forming panel forms one side of the box, another panel portion immediately adjacent to said bottom portion forms an outer wall of the other side of the box, another panel portion adjacent to said outer side wall portion forms an inside facing for said outer wall, another panel portion adjacent to said inside facing member forms an inside or false bottom for the container, said false bottom being slit to form a tongue portion which can be bent up to form a vertical partition wall to divide the container into two compartments, and end forming flaps integral with some of said side body flaps which form the ends of the container.

3. A blank for a folding paper box container consisting of a single sheet of paper died out and creased to form five body panel portions in such manner that one of the intermediate panel portions forms the real bottom of the box, one of the portions adjacent to one edge of said bottom forming panel forms one side of the box, another panel portion immediately adjacent to said bottom portion forms an outer wall of the other side of the box, another panel portion adjacent to said outer side wall portion forms an inside facing for said outer wall, another panel portion adjacent to said inside facing member forms an inside or false bottom for the container, said single side wall portion and said bottom body portion being formed with extension flaps at each end thereof which may be folded to form end walls of the set-up carton, the outer portion of said extension flaps of the single side wall portion forming tuck flaps which are folded and tucked in between the ends of the two members of the double side wall to lock the container in set-up form.

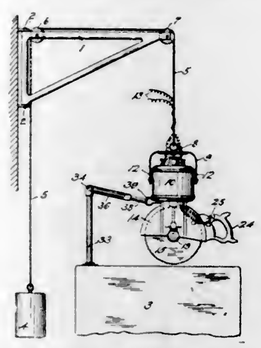
4. A blank for a folding paper box container consisting of a single sheet of paper died out and creased to form five body panel portions in such manner that one of the intermediate panel portions forms the real bottom of the box, one of the portions adjacent to one edge of said bottom forming panel forms one side of the box, another panel portion immediately adjacent to said bottom portion forms an outer wall of the other side of the box, another panel portion adjacent to said outer side wall portion forms an inside facing for said outer wall, another panel portion adjacent to said inside facing member forms an inside or false bottom for the container, said single side wall portion and said bottom body portion and said inside member of the double side wall being formed with extension flaps at each end thereof which form end walls of the set-up carton, the outer portion of the said extension flaps of the single side wall portion forming tuck flaps which are folded and tucked in between the ends of the two members of the double side wall to lock the container in set-up form.

1,168,354. STEM FOR TOBACCO-PIPES. OSKAR WARTEMANN, New York, N. Y., assignor to Traun Rubber Company, College Point, N. Y., a Corporation of New Jersey. Filed May 7, 1915. Serial No. 26,452. (Cl. 131—12.)



A tobacco pipe stem made of vulcanized hard rubber and having a tenon of less diameter than the stem, and a strip of reinforcing material embedded in the rubber and extending lengthwise through the tenon and into the body of the stem, which strip is located between the bore of the stem and the outer surface of the tenon and is surrounded throughout by hard rubber, substantially as set forth.

1,168,355. ELECTRIC BONE-SAW. FRANK F. WEAR, San Francisco, Cal., assignor to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 7, 1910. Serial No. 542,505. (Cl. 143—47.)

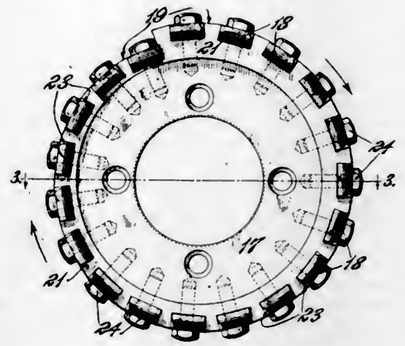


1. A portable motor and a saw carried and driven thereby, a pivoted crane, a counterbalanced flexible connection running over the crane for suspending said motor, means for guiding the travel of said motor and saw comprising a guide rod lying in a chord of the arc of swing of the crane, means slidable longitudinally of said rod and rotatable about the axis thereof and telescopic means at an angle to said slidable means and connected thereto and to the motor.

2. A portable motor and a saw carried and driven thereby, a pivoted crane, a counterbalanced flexible connection running over the crane for suspending said motor, means for guiding the travel of said motor and saw comprising a guide rod lying in a chord of the arc of swing of the crane, means slidable longitudinally of said rod and rotatable about the axis thereof and telescopic means fixed at an angle to said slidable means and connected thereto and to the motor.

3. A portable motor and a saw carried and driven thereby, a pivoted crane, a counterbalanced flexible connection running over the crane for suspending said motor, means for guiding the travel of said motor and saw comprising a guide rod lying in a chord of the arc of swing of the crane, means slidable longitudinally of said rod and rotatable about the axis thereof and telescopic means fixed at an angle to said slidable means and connected thereto and universally jointed to the motor to permit inclination of the saw about a vertical plane.

1,168,356. SPIRAL-GEAR CUTTER. ROBERT B. WEAVER, Detroit, Mich., assignor to The Timken-Detroit Axle Company, Detroit, Mich., a Corporation of Ohio. Filed Oct. 28, 1914. Serial No. 868,924. (Cl. 29—105.)

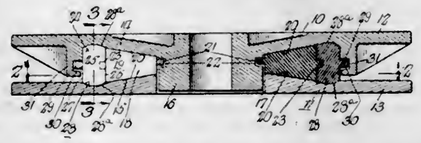


1. A cutter for shaping spiral gear teeth, said cutter comprising a face plate having a spiral periphery, an axially projecting flange around said face plate, said flange varying in height, and cutting teeth spaced around said flange and secured thereto.

2. A cutter for shaping spiral gear teeth, said cutter comprising a face plate having a spiral edge portion, and cutting teeth secured to said face plate, said cutting teeth having shoulders bearing against said spiral edge portion.

3. A cutter for shaping spiral gear teeth, said cutter comprising a face plate and suitably shaped cutting teeth arranged in series around its edge, and secured thereto, said face plate having a flange on its face with a spiral edge, and said teeth having shoulders bearing against the spiral edge of said flange.

1,168,357. ANTIFRICTION-BEARING. ARNOLD A. WEIGEL, Chicago, Ill., assignor to Albert G. Welch, Chicago, Ill., trustee of Edwin S. Woods, deceased. Filed Apr. 2, 1914. Serial No. 828,952. (Cl. 64—65.)



1. In a center bearing of the kind described, in combination with a radially disposed antifriction element adapted to transmit a part of the load, an antifriction end thrust member for said intifriction element adapted to transmit the balance of the load, said antifriction end thrust member being in coaxial alinement with said antifriction element.

2. In a center bearing comprising upper and lower bearing members, a plurality of interposed, annularly arranged, radially disposed antifriction elements, said antifriction elements being adapted to transmit a part of the load between said bearing members, and a plurality of annularly disposed antifriction end thrust members for said antifriction elements adapted to transmit the balance of the load between said bearing members, said antifriction end thrust members being in coaxial alinement with said antifriction elements.

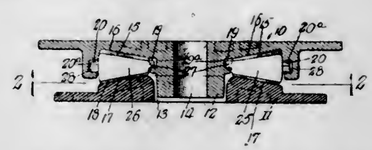
3. In a center bearing of the kind described, in combination with a radially disposed antifriction element adapted to transmit a part of the load, an antifriction end thrust member adapted to transmit the balance of the load, said end thrust member having a surface engaging with said antifriction element which is substantially equal to the area of the thrust end of the antifriction element, said antifriction end thrust member being in coaxial alinement with said antifriction element.

4. In a center bearing comprising upper and lower bearing members and a plurality of interposed annularly arranged, radially disposed antifriction elements adapted to transmit load between said bearing members, and a plurality of annularly disposed end thrust members, placed one at the end of and coaxial with each of said antifriction elements, each end thrust member having upper and lower spherical bearing surfaces adapted for engagement with said bearing members, and to transmit a part of the load between said bearing members, each end thrust member being constructed to engage and oscillate with an associated antifriction element.

5. In a center bearing comprising upper and lower bearing members and a plurality of interposed annularly arranged, radially disposed antifriction elements adapted to transmit load between said bearing members, a plurality of annularly disposed end thrust members, placed one at the outer end of and coaxial with each of said antifriction elements, each end thrust member having upper and lower spherical bearing surfaces adapted for engagement with said bearing members, and to transmit load between said bearing members, each end thrust member being constructed to engage and oscillate with an associated antifriction element, and means for supporting said end thrust members and said antifriction members in one of said bearing members.

[Claims 6 and 7 not printed in the Gazette.]

1,168,358. ANTIFRICTION-BEARING. ARNOLD A. WEIGEL, Chicago, Ill., assignor to Albert G. Welch, Chicago, Ill., trustee of Edwin S. Woods, deceased. Filed Apr. 2, 1914. Serial No. 828,953. (Cl. 64—65.)



1. In a center bearing, in combination with upper and lower bearing members and a plurality of annularly arranged, radially, disposed antifriction elements adapted to transmit load between said bearing members, a plurality of spacing blocks disposed at angular intervals among said antifriction elements, said spacing blocks approximating the vertical section of said antifriction elements but being of less vertical dimensions, and being of less thickness in an arcuate direction at one end than at the other and being provided with means for suspending them in proper relation between said antifriction elements.

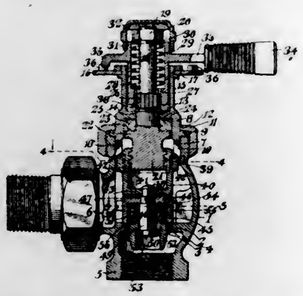
2. In a center bearing, in combination with upper and lower bearing members and a plurality of annularly arranged, radially disposed antifriction elements adapted to transmit load between said bearing members, a plurality of spacing blocks disposed at angular intervals among said antifriction elements, said spacing blocks being of less vertical height than said antifriction elements and having substantially flat faces adapted to engage the radial faces of said antifriction elements, the faces of said spacing blocks being spaced apart at different angular distances at their inner and outer ends, and means for suspending said spacing blocks in non-bearing relation between said antifriction elements.

3. In a center bearing, in combination with upper and lower bearing members and a plurality of annularly arranged, radially disposed antifriction elements adapted to transmit load between said bearing members, a plurality of spacing blocks disposed at angular intervals among said antifriction elements, said spacing blocks being of less vertical height than said antifriction elements and having substantially flat faces adapted to engage the radial faces of said antifriction elements, the faces of said spacing blocks being spaced apart at different angular distances at their inner and outer ends, and means for suspending said

spacing blocks in said upper bearing member in non-bearing relation between said antifriction elements.

4. In a center bearing, in combination with upper and lower bearing members and a plurality of annularly arranged, radially disposed antifriction elements adapted to transmit load between said bearing members, a plurality of spacing blocks at angular intervals among said antifriction elements, said spacing blocks being of less vertical height than said antifriction elements and having substantially flat faces adapted to engage the radial faces of said antifriction elements, the faces of said spacing blocks being spaced apart at different angular distances at their inner and outer ends, and means for suspending said spacing blocks in said upper bearing member in non-bearing relation between said antifriction elements, said means comprising inwardly and outwardly facing annular shoulders formed in said upper bearing member and trunnions formed on the inner and outer ends of said spacing blocks, said trunnions being adapted for supporting engagement with the respective inwardly and outwardly facing annular shoulders formed in said upper bearing member.

1,168,359. CALIBRATING RADIATOR-VALVE. EDGAR C. WILEY, Lynchburg, Va., assignor to The Simplex Heating Specialty Company, Lynchburg, Va., a Corporation of Virginia. Filed Oct. 31, 1914. Serial No. 869,684. (Cl. 137—4.)



1. A radiator valve comprising a valve casing, a bonnet carried by the casing, a rotatable valve stem in the bonnet, a reciprocable member threaded on the stem and guided in the bonnet, a valve plug carried by the reciprocable member in rotatable relation thereto, said valve plug and casing having connections for holding the valve plug against rotation but permitting reciprocatory movements thereof, a calibrating plug carried by the valve plug in telescoping relation thereto, and connections between the calibrating plug and the reciprocable member for holding them in nonrotatable relation one to the other.

2. A radiator valve comprising a valve casing, a bonnet carried by the casing, a rotatable valve stem in the bonnet, a reciprocable member threaded on the stem and guided in the bonnet, a valve plug carried by the reciprocable member in rotatable relation thereto, said valve plug and casing having connections for holding the valve plug against rotation but permitting reciprocatory movements thereof, a calibrating plug carried by the valve plug in telescoping relation thereto, and connections between the calibrating plug and the reciprocable member for holding them in nonrotatable relation one to the other, the calibrating plug and valve plug being provided with screw threaded connections for causing the telescoping movements of the calibrating plug into and out of the valve plug by rotative movements of the valve plug or the reciprocatory member.

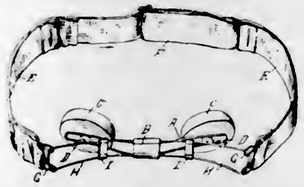
3. A radiator valve comprising a valve casing, a bonnet carried by the casing, a rotatable valve stem in the bonnet, a reciprocable member threaded on the stem and guided in the bonnet, a valve plug carried by the reciprocable member in rotatable relation thereto, said valve plug and casing having connections for holding the valve plug against rotation but permitting reciprocatory movements thereof, a calibrating plug carried by the valve plug in telescoping relation thereto, and connections between the calibrating plug and the reciprocable member for holding them in nonrotatable relation one to the other, the calibrating plug and valve plug being provided with screw threaded connections for causing the telescoping movements of the calibrating plug into and out of the valve plug by rotative movements of the valve plug or reciprocatory member, and the bonnet and valve casing having connecting means permitting rotative movements of the bonnet and parts carried thereby with respect to the valve casing to cause telescoping movements of the calibrating plug into and out of the valve plug.

4. A radiator valve comprising a valve casing, a bonnet carried thereby, a valve plug carried by the bonnet in rotatable relation thereto with the valve plug and casing provided with connections for holding the valve plug against rotation when in operative position within the casing, and a calibrating plug in telescoping relation to the valve plug and provided with connections with the bonnet for causing telescoping movements of the calibrating plug into and out of the valve plug by rotative movements of either the valve plug or the bonnet.

5. A radiator valve comprising a valve casing, a bonnet carried by the casing, valve operating means carried by the bonnet, a valve plug connected to the valve operating means, and a calibrating plug carried by the valve plug in telescoping relation thereto, the valve plug being in rotatable relation to the valve operating means and connected to the calibrating plug for causing the telescoping movements of the latter by rotative movements of either the bonnet or the valve plug.

[Claims 6 to 15 not printed in the Gazette.]

1,168,360. TRUSS FOR HERNIA. WILLIAM H. WILLSON, Fond du Lac, Wis. Filed Mar. 5, 1910. Serial No. 547,391. (Cl. 128—26.)



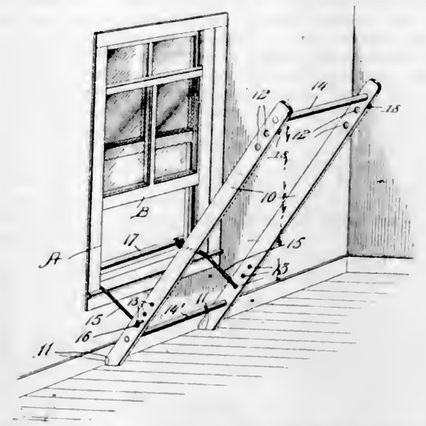
1. In a truss of the described class, the combination of a pad supporting frame formed of flexible and inelastic wire loops having sufficient rigidity to retain their shape when in use, pads adjustably mounted on said frame, clamping members arranged to hold said pads in any desired position of adjustment, a spring centrally secured to said frame and provided with outwardly curving end portions and a belt secured to the respective ends of said spring.

2. In a truss of the described class, the combination of a pad supporting frame formed of flexible and inelastic wire loops having sufficient rigidity to retain their shape when in use, pads adjustably mounted on said frame, clamping members arranged to hold said pads in any desired position of adjustment, a spring centrally secured to said frame and provided with outwardly curving end portions and a belt secured to the respective ends of said spring, said spring being preferably formed of wire and having a connecting member securing the central portions of the spring and pad supporting frame together.

1,168,361. EXERCISER. THOMAS HENRY WILSON, Memphis, Tenn. Filed Sept. 15, 1915. Serial No. 50,797. (Cl. 46—69.)

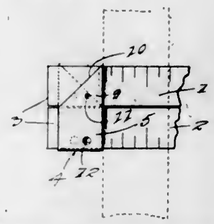
1. An exercising apparatus comprising a pair of spaced parallel side bars, a cross rung adjustably mounted therein near one end, flexible members detachably and adjustably engaged with the side bars near the other end, and a hanger bar connected to the flexible members.

2. An exercising apparatus comprising a pair of spaced parallel side bars having holes therein in spaced relation to each other near opposite ends, a cross rung adjustably



engaged in certain of the holes, knotted cables adjustably engaged in certain other holes, and a hanger bar connected to the cables.

1,168,362. ATTACHMENT FOR FOOT-RULES. ORVILLE L. WOOD, Bremerton, Wash. Filed Nov. 6, 1914. Serial No. 870,678. (Cl. 33—105.)

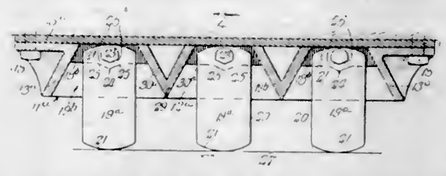


1. An attachment for foot rules including a base plate, a triangular extension formed on one of the lateral edges of the base plate, an upstanding extension formed on the opposite edge, a plate parallel to the base plate and a downward extension on the free edge of the parallel plate and extension being arranged to form an open ended chamber for the reception of one of the legs of the foot rule upon which the device is to be used.

2. An attachment for foot rules including a base plate, a triangular extension on one of the lateral edges of the base plate, said triangular extension being provided with an aperture for the reception of a sharp instrument, an upstanding extension formed at the edge of the base plate opposite the triangular extension, a plate parallel to the base plate formed at the upper end of the upstanding extension, a downturned extension on the parallel plate, the base plate having an opening therein and a foot rule arranged to slide between the base plate and parallel plate to permit the device to be used as a gage.

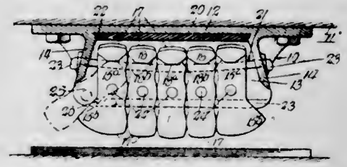
1,168,363. ANTIFRICTION-BEARING. EDWIN S. WOODS, Chicago, Ill.; Albert G. Welch, executor of said Woods, deceased, assignor to Albert G. Welch, trustee. Filed Apr. 18, 1913. Serial No. 761,894. (Cl. 64—65.)

1. In an antifriction bearing, a casing containing a chamber having a top wall, side walls and downwardly and outwardly inclined end walls, the side walls being provided near the top of the chamber with longitudinally extending rails provided with V-shaped notches having their apices in a transverse median line of the chamber, and a single flat-sided antifriction element provided with trunnions located above the center of gravity, said trunnions having V-shaped bearing surfaces for engagement with said notches.



2. In an antifriction bearing, a casing containing one or more chambers, each of said chambers having a top wall, side walls and downwardly and outwardly inclined end walls, said side walls being provided with longitudinally extending rails provided with V-shaped notches with their apices in a transverse median line of the chamber, and one or more flat-sided anti-friction elements, there being a single anti-friction element in each chamber, each anti-friction element being provided with trunnions above the center of gravity, said trunnions having V-shaped bearing surfaces adapted for engagement in said notches.

1,168,364. ANTIFRICTION-BEARING. EDWIN S. WOODS and TORRIS H. ALFREDS, Chicago, Ill.; said Alfreds assignor to said Woods; Albert G. Welch, executor of said Woods, deceased, assignor to Albert G. Welch, trustee. Filed Apr. 18, 1913. Serial No. 761,896. (Cl. 64—65.)



1. In an antifriction bearing, a casing having an integral top wall, side walls and end walls, the side walls being provided on their inner faces with longitudinally extending grooves and the end walls having openings in line with said grooves, and removable bars capable of insertion through the end walls into said grooves, said bars projecting from the inner faces of the side walls to constitute rails and having their ends bent down against the outer faces of the end walls to confine them in position, and a plurality of flat-sided antifriction elements suspended from said rails.

2. In an antifriction bearing, a casing provided at each side with upper and lower longitudinally extending rails and an antifriction element having upper and lower trunnions associated with said rails, said trunnions being spaced apart a distance less than the vertical distance between said rails.

3. In an antifriction bearing, a casing having an integral top wall and upper and lower longitudinally extending rails at each side, the upper rails consisting of removable bars, and a plurality of flat sided antifriction elements, each antifriction element having upper and lower trunnions associated with said rails, said trunnions being spaced apart distances less than the vertical space between said rails.

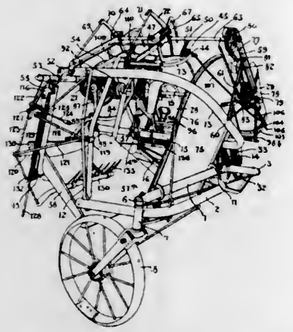
4. In an antifriction bearing, in combination with a casing, a plurality of flat sided, closely spaced antifriction elements suspended pendulum-wise in said casing, each end antifriction element being provided with an overweight extension at or near its bottom on the side next the end of the casing.

5. In an antifriction bearing, a casing provided with longitudinally extending rails, a plurality of flat sided closely spaced antifriction elements provided with trun

nions located above their centers of gravity adapted for engagement with said rails, each end antifriction element having a lateral overweight extension on the side adjacent the end of the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,168,365. MACHINE FOR SHOCKING GRAIN. THOMAS ARTHUR WOOLLEY and HERBERT FOX, Hamilton, Ontario, Canada. Filed June 1, 1914. Serial No. 841,987. (Cl. 56—121.)



1. In an automatic machine for shocking grain, the combination with the binder machine, of a frame extending from the binder machine, a sheaf receptacle arranged in said frame, means for carrying the sheaves from the binder machine to the sheaf receptacle, means for forming a shock, means for depositing the shock butt end on the ground to retain its formation without binding, and means automatically operated simultaneously with the commencement of the operation of the shock depositing means adapted to hold the sheaves delivered from the binder machine from contact with the sheaf carrying means for arresting the passing of the sheaves to the sheaf receptacle during the operation of discharging the shock.

2. In an automatic machine for shocking grain, the combination with the binder machine, of a frame extending from the binder machine, a sheaf receptacle arranged in said frame, means for carrying the sheaves from the binder machine to the sheaf receptacle, means for packing the sheaves to form a shock, means for depositing the shock butt end on the ground to retain its formation without binding, means operatively connected with said packing means for starting the discharge means into operation, and means for withholding the passage of sheaves to the sheaf receptacle during the discharging operation.

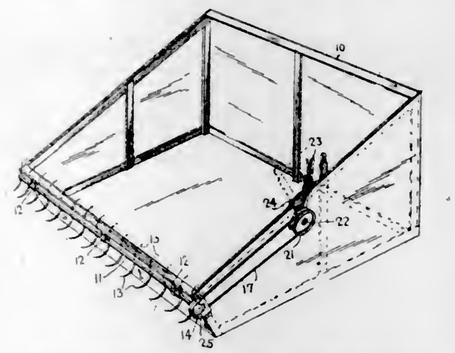
3. In a machine for shocking grain, the combination with the binder machine, of a frame extending from the binder machine, a sheaf receptacle arranged in said frame, an endless carrier adapted to convey the sheaves from the binder machine to the sheaf receptacle, means for packing the sheaves to form a shock, means for depositing the shock butt end upon the ground, means operated through the packing means for starting the discharge means into operation, and means operated by the means for starting the discharge of the shock adapted to hold the sheaves out of contact with the endless carriers during the discharging of the shock.

4. In a machine for shocking grain, the combination with the binder machine, of a frame extending from the binder machine, a sheaf receptacle arranged in said frame, an endless carrier adapted to convey the sheaves from the binder machine to the sheaf receptacle, means for packing the sheaves to form a shock, means for depositing the shock butt end upon the ground, means operated through the packing means for starting the discharge means into operation, guide arms arranged each side of the endless carrier adapted to be lifted upwardly to raise the sheaves in transit out of contact with the endless carrier, and means operated coincident with the operation of the means for starting the discharge for lifting said guide arms.

5. In a machine for shocking grain, the combination with the binder machine, of a frame extending from the binder machine, a sheaf receptacle arranged in said frame, an endless carrier adapted to convey the sheaves from the binder machine to the sheaf receptacle, means for packing the sheaves to form a shock, means for depositing the shock butt end upon the ground, means for starting the discharge means into operation, means operated from the packing means for operating said starting means, guide arms arranged each side of the endless carrier adapted to be lifted upwardly to raise the sheaves in transit out of contact with the endless carrier, and means connected with the means for starting the discharge means adapted to lift said guide arms to arrest the passing of the sheaves to the sheaf receptacle.

[Claims 6 to 26 not printed in the Gazette.]

1,168,366. HEADER-BARGE ATTACHMENT. IRA L. WORDEN, Carmen, Okla. Filed Apr. 9, 1915. Serial No. 20,245. (Cl. 21—74.)

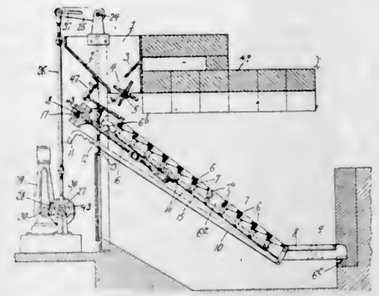


1. The combination with a header barge including a lower side, of a rock shaft journaled on the lower side of the barge adjacent the upper edge thereof, teeth carried by the shaft, a pulley on one end of the shaft, a larger pulley journaled on one end of the barge in alinement with the aforesaid pulley, a cable connected to the pulleys, a lever for rotating the larger pulley in opposite directions to thereby rock the shaft and throw the teeth up and down, and means for locking the rock shaft in adjusted positions against rotative movement.

2. The combination with a header barge including a lower side, of a rock shaft journaled on the lower side of the barge exteriorly thereof and adjacent the upper edge thereof, a pulley on one end of the shaft, a larger pulley journaled on one end of the barge in alinement with the aforesaid pulley, a connection between the pulleys, a lever for rotating the larger pulley in opposite directions to thereby rotate the rock shaft pulley accordingly to rock the rock shaft, and means carried by the rock shaft for movement therewith to be positioned down alongside of the lower side of the barge or to be swung upwardly at the lower side of the barge to prevent material in the barge from accidently falling over the lower side of the barge as the latter is transported from one place to another, and means for locking the rock shaft in adjusted positions against rotative movement.

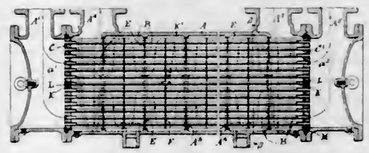
1,168,367. MECHANICAL STOKER. OTTO WUNDRACK, Maywood, Ill. Filed Apr. 27, 1912. Serial No. 693,555. (Cl. 110—39.)

1. A device for feeding fuel to furnaces comprising a grate consisting of a plurality of members each pivotally mounted contiguous to one edge and adapted to provide a continuous inclined fuel supporting surface or a stepped supporting surface, a reciprocable member connected with all of said grate bars for moving the same alternately to said respective positions, a crank-shaft for actuating said member, a ratchet wheel for actuating said crank-shaft, a hopper for fuel adapted to discharge upon the upper end of said grate, a rotatable fuel feeding device in the discharge end of said hopper, a shaft therefor carrying a ratchet wheel, rocking arms equipped with dogs engaging said respective ratchet wheels, and a walking beam connected at opposite ends with said rocking arms.



2. A device for feeding fuel to furnaces comprising a grate consisting of a plurality of members each pivotally mounted contiguous to one edge and adapted to provide a continuous inclined fuel supporting surface or a stepped supporting surface, a reciprocable member connected with all of said grate bars for moving the same alternately to said respective positions, a crank-shaft for actuating said reciprocable member, a ratchet wheel for actuating said crank-shaft, a hopper for fuel adapted to discharge upon the upper end of said grate, a rotatable fuel feeding device in the discharge end of said hopper, a shaft therefor carrying a ratchet wheel, rocking arms equipped with dogs engaging said respective ratchet wheels, a walking beam having longitudinal slots in its opposite end portions, and pitmen adjustably engaged at one end in said respective slots in said walking-beam and operatively engaged at their other ends with said rocking arms.

1,168,368. TUBULAR HEAT-EXCHANGING APPARATUS. HANS ZIMMERMANN, Philadelphia, Pa., assignor to Schutte & Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 12, 1914. Serial No. 871,667. (Cl. 257—236.)



1. In tubular heat interchanging apparatus, a tubular element comprising a set of open tubes and tube sheets to which the ends of said tubes are rigidly connected, and one or more closed tubes, each rigidly connected at its ends to said tube sheets and made readily expansible and contractile in length to compensate for the difference in the thermal expansion and contraction of the closed tubes relative to the open tubes.

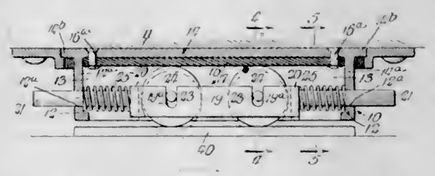
2. The combination in a tubular heat interchanging element comprising open tubes and tube sheets to which the ends of the tubes are rigidly connected and which are free to approach and separate from one another as said tubes contract and expand; and one or more closed tubes each extending between and rigidly connected at its ends to said tube sheets and formed with transverse cuts to render it readily expansible and contractile in length.

3. In tubular heat interchanging apparatus, a combination with a set of open tubes and tube sheets to which the ends of said tubes are rigidly connected, of baffles extending transversely to said tubes through the inter tube space, and baffle spacing means comprising one or more closed tubes, each rigidly connected at its ends to said tube sheets, and made expansible in length in comparison with said open tubes.

4. In tubular heat interchanging apparatus, a combination with a set of open tubes and tube sheets to which the ends of said tubes are rigidly connected, of baffles extending transversely to said tubes through the inter tube space, and baffle spacing means comprising one or more closed tubes, each rigidly connected at its ends to said tube sheets, and made expansible in length in comparison with said open tubes passing through apertures in said baffles and a set of tubular spacing sections proper surrounding said closed tube, and interposed between adjacent baffles and between the tube sheets and adjacent baffles.

5. In tubular heat interchanging apparatus, a combination with a set of open tubes and tube sheets to which the ends of said tubes are rigidly connected, or baffles extending transversely to said tubes through the inter tube space, and baffle spacing means comprising one or more closed tubes, each rigidly connected at its ends to said tube sheets, and made expansible in length in comparison with said open tubes passing through apertures in said baffles, and a set of tubular spacing sections proper surrounding said closed tube, and interposed between adjacent baffles and between the tube sheets and adjacent baffles, one or more of said spacing sections being made readily expansible and contractile in length.

1,168,369. ANTIFRICTION-BEARING. TORRIS H. ALFREDS, Chicago, Ill., assignor to Edwin S. Woods, Chicago, Ill.; Albert G. Welch, executor of said Woods, deceased, assignor to Albert G. Welch, trustee. Filed Mar. 15, 1913. Serial No. 754,524. (Cl. 64—64.)



1. In an antifriction bearing, the combination of a casing having apertured end members, an antifriction device including a carriage longitudinally movable in said casing, and extension bars fixed to said carriage in the plane of the movement thereof, said bars extending through the apertures in the casing end members and providing a non-rotative sliding bearing support for the carriage.

2. In an antifriction bearing, the combination of a casing open top and bottom and having side and apertured end walls, an antifriction device including a carriage longitudinally movable in said casing, and extension bars fixed to said carriage in the plane of the movement thereof, said bars extending through the apertures in said casing end walls and providing a non-rotative sliding bearing support for the carriage.

3. In an antifriction bearing, the combination of a casing having side and end walls, said end walls having bearing apertures therein, an antifriction device including a carriage movable in said casing, and extension bars fixed to said carriage, said extension bars having a non-rotative sliding bearing support in said aperture.

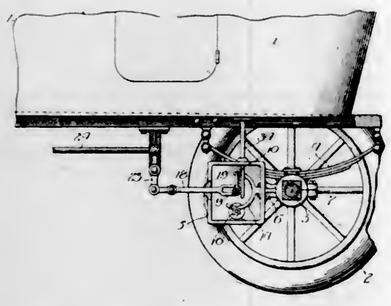
4. In an antifriction bearing, the combination of a casing having side and end walls, said end walls having bearing apertures therein, and an antifriction device including a carriage longitudinally movable in said casing, said carriage being provided at its ends with rigid extension bars, said bars having a non-rotative bearing in said apertures.

5. In an antifriction bearing, the combination of a casing having side and end walls, said end walls having bear-

ing apertures therein, an antifriction device including a carriage longitudinally movable in said casing, extension bars fixed to said carriage, said bars having a non-rotative sliding bearing in the apertures in said end walls and resilient means for centering the carriage in said casing.

[Claims 6 to 8 not printed in the Gazette.]

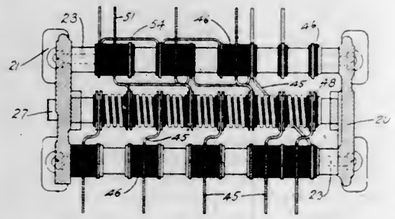
1,168,370. SAFETY RECORDING DEVICE. JOHN C. A. ANDERSON, Chicago, Ill., assignor, by direct and mesne assignments, to Everett V. Watson, Fishkill-on-the-Hudson, N. Y. Filed July 23, 1912. Serial No. 711,151. (Cl. 21—90.)



1. In a motor driven roa vehicle, the combination with the frame and axle, of controlling means interposed between said frame and axle adapted to automatically prevent starting the vehicle, the operation of said means depending upon the distance between the frame and axle, a manually controlled starting device for said vehicle, and operative connections between said starting device and said controlling means for rendering the controlling means inoperative on starting the vehicle with the load permitted.

2. In a motor driven road vehicle, the combination with the frame and axle, of controlling means interposed between said frame and axle adapted to automatically prevent starting the vehicle, the operation of said means depending upon the distance between the frame and axle, and devices for automatically rendering the said controlling means inoperative when the vehicle is in motion.

1,168,371. CIRCUIT-CONTROLLER. WILLIAM P. ANDERSON, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Sept. 12, 1912. Serial No. 719,997. (Cl. 175—282.)



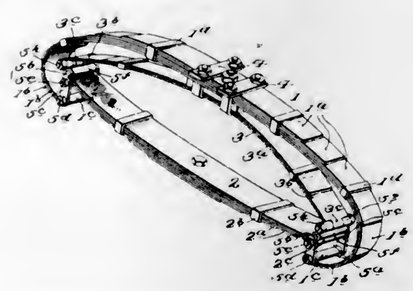
1. In a controller switch, the combination of a plurality of sets of movable contacts, of stationary conductors one of which is associated with each set of movable contacts; and resilient means positioned between the adjacent sets of movable contacts for maintaining one contact of each of said adjacent sets in electrical connection with its respective coöperating stationary conductor.

2. In a controller switch, the combination with a series of sets of movable elements, each comprising a pair of blades having free ends; of a series of stationary conductors, each positioned intermediate the blades of one of said sets of movable contacts; a plurality of sets of stationary contact elements oppositely disposed, and adapted to be engaged by the free ends of the movable contact elements; and resilient means interposed between each set of movable elements, whereby the blades of each set of movable elements will be yieldingly maintained in contact with the stationary conductors.

3. In a controller switch, the combination with a frame, of a series of sets of movable contacts, each comprising a pair of blades mounted thereon; a series of stationary conductors one of which is positioned intermediate each pair of blades also mounted on said frame; and resilient means positioned between the adjacent pairs of blades and adapted to maintain one blade of the said adjacent pairs in contact making position with the respective stationary conductors.

4. In a controller switch, the combination with a frame, of a plurality of stationary contact elements mounted thereon, each comprising a single blade; of a series of sets of movable contacts, each comprising a pair of resilient blades having free ends which coöperate with the said stationary contact elements movably mounted in said frame; a plurality of stationary conductors also mounted on said frame and coöperating with said movable contact elements; insulating means between the adjacent plates of each of said movable contacts; and resilient means interposed between the adjacent insulating means, adapted to compensate for variations in the size and location of the insulating means.

1,168,372. SPRING STRUCTURE. WILLIAM E. ANDREW, Atlantic Highlands, N. J. Filed Apr. 12, 1913. Serial No. 760,637. (Cl. 267—32.)



1. A spring-structure for vehicles and the like including in combination, a supporting-member; a spring-member overlying and disposed in movable relation to said supporting-member; an intermediate resilient spring-controlling instrumentality connected to said spring-member and constantly under tension whereby recoil of the vehicle-body is controlled in any position it may assume and have a normal tendency to effect a downward pulling movement upon said spring-member, said controlling-instrumentality having a movement toward and away from said supporting-member; and a connecting-instrumentality to which the ends of said supporting-member, said spring-member, and said spring-controlling instrumentality are independently connected, and including a plurality of co-acting elements adapted to transmit motion between said supporting-member and said spring-member without imposing a strain upon said controlling-instrumentality.

2. A spring-structure for vehicles and the like including in combination, a sustaining-instrumentality, a spring-device, a spring-controlling instrumentality interposed between said sustaining-instrumentality and said spring-device, and a connecting-instrumentality to which the ends of the sustaining and controlling-instrumentalities and the spring-device are independently connected and including a shackle and a joining-element hingedly connected to said shackle, whereby stresses upon the spring-controlling instrumentality are taken up and not transmitted to the sustaining-instrumentality.

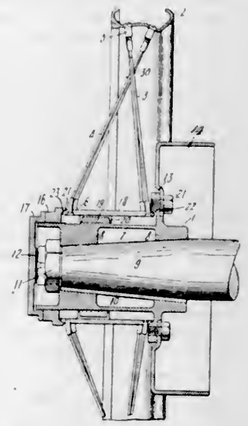
3. A spring-structure including in combination, a sustaining spring-instrumentality formed with a scroll; an equalizing-device attached to said spring-instrumentality; a spring-device arranged in juxtaposition to said equalizing-device; and a link-connection to which the ends of said elements are independently connected and including an inverted U-shaped shackle, a joining-element pivotally connected thereto, and means for attaching the sustaining-instrumentality, the spring-device and the equalizing-device thereto.

4. A spring-structure including in combination, a pair of springs extending longitudinally of and in the same vertical plane with each other, a spring-controlling device interposed between said springs and adapted to have a downward pulling action upon one of them and being, when in operative position, at all times under tension, and a link-connection operatively related to said springs and adapted to permit movement of one in relation to the other but operating to transmit stresses from one to the other, and including a shackle and a joining-element pivotally connected thereto.

5. A spring-structure including in combination, a plurality of springs extending longitudinally of each other and one overlying another; a spring-controlling device attached to the uppermost of said springs and at all times under tension having a normal tendency to effect a downward pulling action on said uppermost spring; and a link-connection mounted at the ends of said springs and controlling-device and including two independently rocking-elements, upon one of which said springs fulcrum coactively, and upon the other of which said controlling-device fulcrums for movement independent of said springs.

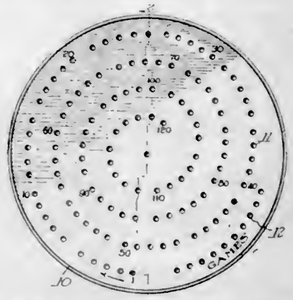
[Claims 6 to 9 not printed in the Gazette.]

1,168,373. VEHICLE-WHEEL. GEORGE BAEHR, McKeesport, Pa. Filed Oct. 13, 1913. Serial No. 794,864. (Cl. 21—31.)



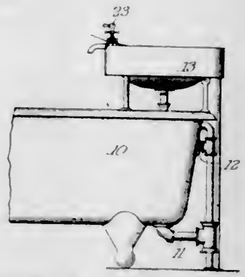
A vehicle wheel, comprising inner and outer hub members of different diameters with a space therebetween, the inner hub member having a beveled portion surrounding the outer hub member and closing said space at one end of the hub, a clamping nut having threaded engagement with the inner hub member and provided with a beveled hub portion surrounding the outer hub member for rigidly securing said members together and for closing said space at the other end of the hub, a rim, spokes connecting the outer hub member and rim, and interlocking jaw clutch driving members on said hub members and lying entirely within the space therebetween, said driving members having substantially radial side faces.

1,168,374. GAME-COUNTER. GEORGE H. BARKER, Los Angeles, Cal. Filed Oct. 30, 1911, Serial No. 657,433. Renewed July 12, 1915. Serial No. 39,522. (Cl. 235—90.)



A game counter composed of a base having a line of counting recesses therein, said line being arranged substantially in the form of a spiral, said spiral extending in a continuous line from the center to the outer edge of the base, substantially as described.

1,168,375. LAVATORY APPLIANCE. GEORGE H. BARKER, Los Angeles, Cal., assignor to Improved Sanitary Fixture Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 28, 1913. Serial No. 803,457. (Cl. 4—24.)



1. The combination with a bath tub and a basin located above the tub, a drain pipe connected to the tub, and a drain for the basin consisting of a connection imperforate with respect to the tub connections and extending from the basin down through the tub drain pipe and terminating below the tub drain whereby to prevent back flow of the water from the basin.

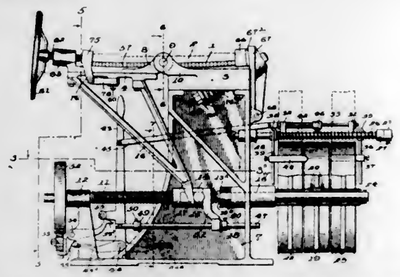
2. The combination with a bath tub and a basin located above the tub, a drain and overflow pipe connected at its upper end to the upper part of the tub and also having a connecting branch extending to the lower part of the tub, and an imperforate drain pipe extending from the basin down through the first pipe and terminating at its lower end below the connecting branch of the tub drain whereby to restrict back flow of water from the basin.

1,168,376. STAVE-BENDING MACHINE. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed June 2, 1915. Serial No. 31,695. (Cl. 144—265.)

1. A stave bending machine comprising a flexible table, a sectional bed plate supporting said table, means carried at the outer ends of the bed plate for securing a stave to said flexible table, and means for raising one section of the bed plate.

2. A stave bending machine comprising a flexible table, a sectional bed plate supporting said table, one section of which is vertically movable, means carried by the bed plate for securing a stave to said table, and means for im-

parting a vertical movement to the movable section of the bed plate.



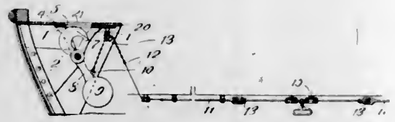
3. A stave bending machine comprising a flexible table, a sectional bed plate supporting said table, one section of which is movable and the other stationary, means carried by the bed plate for securing a stave to said flexible table, a vertically adjustable supporting block interposed between the inner ends of the bed plate sections for supporting the central portion of said flexible table, means for adjusting said supporting block relatively to said bed plate sections and means for imparting a vertical movement to the movable section of the bed plate.

4. A stave bending machine comprising a flexible table, a sectional bed plate supporting said table, one section of which is pivoted to move vertically, means carried at the outer end of said bed plate for clamping a stave to said flexible table, and a horizontal shaft journaled in fixed bearing, a tappet movable lengthwise of said shaft, and an arm engaged by said tappet and connected with the movable section of the bed plate.

5. A stave bending machine comprising a flexible table, a sectional bed plate supporting said table, one section of which is pivoted to turn vertically, means carried at the outer ends of said bed plate for clamping a stave to said flexible table, and means for imparting a vertical movement to the movable section of the bed plate comprising a worm shaft journaled in stationary bearings, a horizontally movable worm sleeve carried by said worm shaft, a shifting arm carried by the movable section of said bed plate and engaging with said worm sleeve, and means for rotating said worm shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,168,377. ENGAGING AND DISENGAGING GEAR FOR SHIPS' BOATS. HARRY W. BROADY, Bayside, N. Y., assignor to Welin Marine Equipment Company, a Corporation of New York. Filed June 6, 1914. Serial No. 843,392. (Cl. 9—23.)

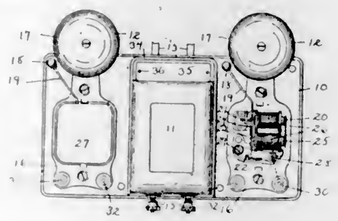


1. In engaging and disengaging gears for ships' boats, the combination with a pair of counter-weighted tripping hooks, means for supporting one of such hooks at each end of the boat, connections with opposite hooks suitably guided within the boat and extending toward each other, each connection having a pulley journaled at its end, an independent flexible connection passing over each of said pulleys, said connections having one of their ends fixed to the boat and the opposite end terminating adjacent to each other, and a common pulling-handle attached to said opposite ends as and for the purpose specified.

2. In engaging and disengaging gear for ships' boats the combination with a pair of tripping hooks pivoted intermediate its ends and provided with a counterweight, two connections having one of their ends engaging the hooks intermediate their pivotal points and the counterweights, said connections being suitably guided within the boat, extending toward each other, and having pulleys journaled at their ends, a flexible connection fixed intermediate its ends at a point between the ends of the connections having the pulleys to form independently-movable and oppositely disposed strands, one strand of such flexible connection passing over each pulley, a handle connecting the ends of the strands whereby the manipulation of said handle will cause the connections and pulleys to move toward each other to simultaneously release the tripping hooks at the opposite ends of the boat.

3. In engaging and disengaging gear for ships' boats a tripping hook, a pulley-ring guiding bracket and means for supporting the same, said bracket provided with a surface plate having a ring insertion opening, a hood fitting over said bracket having a ring insertion opening registering therewith and having independent connections with the boat at opposite sides of said bracket.

1,168,378. TRANSFORMER BELL DEVICE. CHARLES E. CAMPBELL, Lynn, Mass. Filed Sept. 2, 1915. Serial No. 48,626. (Cl. 177—7.)



1. In combination, a base having a terminal box, a transformer mounted on the said base and having primary leads extending into the said terminal box, a bell member mounted on the said base, a pair of terminals on the said base suitable for being connected to a push-button, and connections operatively connecting the said terminals with the secondary of the said transformer and the mechanism of the said bell member.

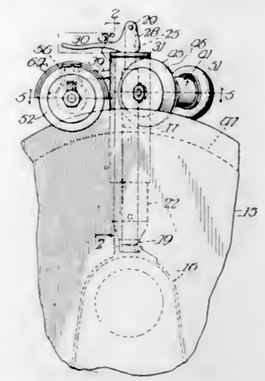
2. A unitary transformer bell device comprising a base, a pair of push-button terminals, supply terminals, a transformer, and a bell device supported by the said base, and connections interconnecting the said terminals, transformer, and bell device such that by supplying current to the said supply terminals the transformer will serve to operate the mechanism of the said bell member responsive to cross-connecting of the said push-button terminals.

3. A transformer-bell device comprising a pair of supply terminals for being connected to service mains, a bell member comprising a bell and a pair of push-button terminals adjacent thereto, a transformer, and connections interconnecting the said terminals, bell member and transformer such that a push-button connected across the said push-button terminals will operatively connect the said bell member with the said transformer.

1,168,379. SHARPENING DEVICE FOR SLICING-MACHINE KNIVES. PIETER C. DE GROOT, Rotterdam, Netherlands, assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1914. Serial No. 809,885. (Cl. 51—7.)

1. A sharpening device of the character described, embodying a sharpener for acting on each face of the knife, a freely shiftable support carrying both sharpeners, said sharpeners being fixed with respect to each other, and provisions for shifting the support to simultaneously move the sharpeners into active positions with relation to the respective faces of the knife.

2. A sharpening device of the character described, embodying a sharpener for acting on each face of the knife, a support carrying both sharpeners, said sharpeners being fixed with respect to each other, provisions for imparting a compound movement to the support to simultaneously move the sharpeners into active positions with relation to the respective faces of the knife, and provisions for moving the sharpeners in directions toward each other.



3. A sharpening device of the character described, embodying a sharpener for the front of the knife, a sharpener for the back of the knife, a support for both sharpeners, said sharpeners being fixed with respect to each other, means for shifting the support to move the sharpeners into and out of active position with relation to the respective faces of the knife, and means for imparting another and different movement to the support during a portion of the said shifting movement.

4. A sharpening device of the character described, embodying a sharpener for the front of the knife, a sharpener for the back of the knife, a support for both sharpeners, said sharpeners being fixed with respect to each other, means for shifting the support to move the sharpeners into and out of active position with relation to the respective faces of the knife, and means for automatically imparting another and different movement to the support during a portion of the said shifting movement of the support, to move one of the sharpeners over the edge of the knife.

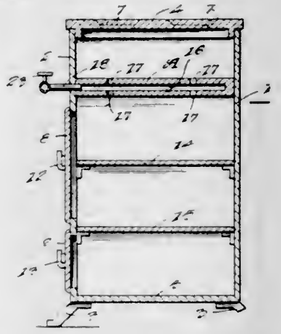
5. A sharpening device of the character described, embodying a sharpener for the front of the knife, a sharpener for the back of the knife, a support carrying both the sharpeners, provisions for imparting a compound movement to the support to simultaneously move the sharpeners into active positions with relation to the respective faces of the knife, and means for acting on each of the sharpeners for yieldingly holding them in engagement with the faces of the knife.

[Claims 6 to 27 not printed in the Gazette.]

1,168,380. STOVE. HENRY DEUTSCH, New York, N. Y. Filed Nov. 7, 1914. Serial No. 870,844. (Cl. 126—39.)

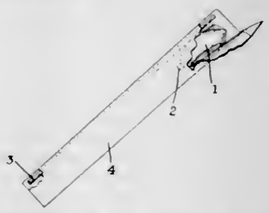
1. A stove provided with a metal casing, a metal top provided with openings, an oven within said casing and a thick metal plate disposed within the casing between the oven and top, said plate having a series of bores extending edgewise into the plate and terminating near the rear end, said bores each having a plurality of openings intersecting the same and extending entirely through the plate at right angles to said bores, pipes fitted in said bores and provided with burner openings in alinement with the openings in the plate, a feed pipe connected to the first mentioned pipes and branches in said feed pipe for supplying air and gas to the burners.

2. A stove provided with a metal casing, a metal top provided with openings, an oven within said casing, a thick metal plate disposed within the casing between the oven and top and extending to the side and end walls of said casing, said plate having a series of bores extending edgewise into the plate and terminating near the rear end, said bores each having a plurality of openings intersecting the same and extending entirely through the plate at right angles to said bores, pipes fitted in said bores and provided with burner openings in alinement with the openings in the plate, a feed pipe connected to the first mentioned pipes and branches in said feed pipe for supplying air and gas to the burners.



3. A stove provided with a metal casing, a metal top provided with openings, an oven within said casing, and a thick metal plate disposed within said casing between the oven and top, said plate having a series of bores extending edgewise into the plate, means to supply air and gas to said bores, said bores having a plurality of vertical openings intersecting the same and extending entirely through the plate whereby the heat and flame can extend downward to the oven as well as upward to the top.

1,168,381. PACKAGING TOY BALLOONS. HAROLD A. DODGE, Newark, N. J. Filed July 11, 1914. Serial No. 850,311. (Cl. 206—46.)



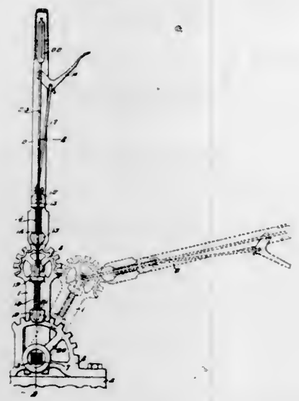
1. The combination of a collapsed balloon and a stick therefor several times as long as the same, said balloon and stick being separate and detached from each other and arranged longitudinally side by side, and an envelop inclosing said stick and balloon otherwise separate and detached from them except for a frictional engagement with the balloon which will hold it in such position that the stick prevents bending and crumpling of the balloon.

2. The combination of a collapsed balloon and a stick therefor several times as long as the same, said balloon and stick being separate and detached from each other and arranged longitudinally side by side with the balloon near one end of the stick, and an envelop inclosing said stick and balloon otherwise separate and detached from them except for a frictional engagement with the balloon which will hold it against both lateral and longitudinal displacement with respect to the stick, whereby the stick prevents bending and crumpling of the balloon and two similar such packages will lie compactly together with the bulge of one against the opposite end portion of the other.

3. The combination of a collapsed balloon and a stick therefor several times as long as the same, said balloon and stick being separate and detached from each other and arranged longitudinally side by side, and a rectangular envelop inclosing said stick and balloon with its length corresponding to the length of the stick and its width such that the envelop receives the balloon with sufficient

friction to prevent displacement of it longitudinally, said envelop being otherwise separate and detached from the stick and balloon.

1,168,382. FOLDABLE LEVER. HENRY N. FAAS and JACOB EPPLEY, Springfield, Ohio, assignors to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed June 11, 1912. Serial No. 702,969. (Cl. 74—39.)



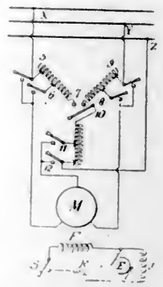
1. In a device of the character described, a lever formed of two members, a main pivoted member and an auxiliary member pivotally connected to the free end of the main member and adapted to form a continuation of the same, means independent of the auxiliary lever for holding said main member in different positions of operation, and means for holding said auxiliary member in different positions of adjustment with respect to the main member on either side of the longitudinal center thereof.

2. In a device of the character described, a lever formed of two members, a main pivoted member and an auxiliary member pivotally connected to the free end of said main member and adapted to form a continuation of the same, means independent of the auxiliary lever for holding said main member in different positions of operation, a fixed toothed segment on one of said members, and a spring-pressed dog on the other of said members for holding said auxiliary member in different positions of adjustment with respect to said main member on either side of the longitudinal center thereof.

3. In a device of the character described, a lever formed of two members, a main pivoted member and an auxiliary member pivotally connected to the free end of the main member and arranged to form a continuation of the same, means independent of the auxiliary lever for holding said main member in different positions of operation, a toothed segment at the free end of said main member, and a spring-pressed dog on said auxiliary member coöperating with said toothed segment to hold said auxiliary member in different positions of adjustment on either side of the longitudinal center of said main member.

4. In a device of the character described, a lever formed of two members, a main member pivoted to a fixed part and an auxiliary member pivotally connected to the free end of said main member adapted to form a continuation of the same, a toothed segment on said fixed part, and a spring-pressed dog on said main member coöperating with said segment to hold said main member in different positions of adjustment, a toothed segment arranged on said main member, and a spring-pressed dog on said auxiliary member to hold said auxiliary member in different positions of adjustment on either side of the longitudinal center of said main member, and means arranged at the free end of said auxiliary member and connected with said spring-pressed dogs for releasing said dogs from said segments.

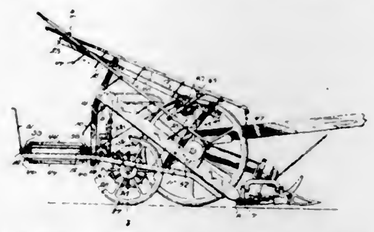
1,168,383. METHOD OF STARTING SYNCHRONOUS POLYPHASE MOTORS. CARL J. FECHHEIMER, Glen Ridge, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed May 6, 1913. Serial No. 765,862. (Cl. 172—274.)



1. The method of starting a synchronous electric motor which consists in impressing upon its armature a fraction of the working voltage, then exciting the field to such a degree that the armature takes a leading current, then disconnecting the armature from the fractional voltage and at the same time introducing sufficient inductive reactance in its circuit so that the power factor approximates unity and finally cutting out said reactance and connecting the armature directly to the supply conductors.

2. The method of starting a synchronous electric motor which consists in impressing upon its armature a fraction of the working voltage, then exciting the field to such a degree that the armature takes a leading current, then disconnecting the armature from the fractional voltage and at the same time introducing sufficient inductive reactance in its circuit so that the power factor approximates unity and finally cutting out said reactance and connecting the armature directly to the supply conductors, these changes being effected without interrupting the armature current.

1,168,384. MOWER ATTACHMENT. LOUIS FRANZMEIER, Newton, Wis. Filed Apr. 6, 1915. Serial No. 19,447. (Cl. 56—1.)

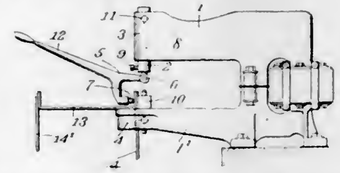


1. A mower comprising a wheeled support, and a frame for supporting tedders and the like thereon including standards, longitudinal members having connections with the standards that permit vertical and longitudinal adjustments of said longitudinal members relative to the standards, and a horizontal member connecting the longitudinal members.

2. A mower attachment comprising a wheeled support, and a support for tedders and the like mounted thereon and forming a frame that includes standards carried by the wheeled support, longitudinally extending side members having connections with the standards that permit said members to be adjusted vertically and longitudinally relatively to the standards, a connecting member for the longitudinal members, and braces having connections with the standards and longitudinal members that permit vertical and longitudinal adjustments of said braces.

3. The combination of a frame, comprising a pair of suitably bent side bars, a pair of beams supported on horizontal rear portions of said bars, a standard in connection with each of the side bars adjacent to the foremost beam, an inclined trough in detachable connection with the finger-bar of a mower and supported at the rear by said standards, another trough-supporting standard in connection with the inner side bar, both of the standards with said inner side bar being extended above the trough; an upper bar in vertically and longitudinally adjustable connection with the upwardly extending trough-supporting standards, a pair of upwardly divergent standards in connection with the outer side bar in rear of said beams, another upper bar and a brace for the same in vertically and longitudinally adjustable connection with said divergent standards, a rear cross-brace on the upper bars, a crank-shaft for which said upper bars are provided with bearings, tedder-bars coupled to the cranks of said shaft and guided on said cross-brace, an endless horizontal side-delivery conveyer the upper stretch of which travels on the aforesaid beams to receive cut tedder elevated material discharged from said trough, a traction-wheel having its axles in bearings with which the frame is provided, and clutch-controlled conveyer and tedder drive-gear in train with said axle.

1,168,385. ATTACHMENT FOR ELECTRIC WELDING-MACHINES. EDWARD FULDA, New York, N. Y. Filed Aug. 6, 1913. Serial No. 783,241. (Cl. 219—4.)



1. An attachment for electrode welding machines, comprising a pivoted arm pivotally supported at one end on one head of the machine and provided at its opposite end with an electrode adapted to coöperate with an electrode on the opposite head of the machine by a lateral movement on a line transverse to the vertical.

2. An attachment for electrode welding machines, comprising a bent arm hinged at one end on a support adapted to be inserted in a work-holding slide mounted on one head of the machine and provided at its opposite end with an electrode adapted to coöperate by a lateral movement with an electrode carried by the opposite head of the machine.

3. An attachment for electrode welding machines, comprising a bent arm adapted to be pivotally supported on one head of the machine and carrying at its opposite end an electrode adapted to engage the work by movement transverse to the vertical.

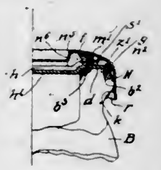
4. An attachment for electrode welding machines, comprising a bent arm adapted to be pivotally supported on one head of the machine and provided at its other end with a roller electrode adapted to enage the work by a movement of the end of said arm carrying said roller electrode in a direction transverse to the vertical.

5. An attachment for electrode welding machines, comprising a bent arm adapted to be pivotally supported on one head of the machine and provided at its other end with a roller electrode mounted to turn in a plane transverse to the vertical, and said arm being adapted to swing to carry the electrode bodily in a line transverse to said line of normal operation.

[Claims 6 to 9 not printed in the Gazette.]

1,168,386. BOTTLE-CLOSURE. WILLIAM E. GASTON, Torrington, Conn. Filed Dec. 3, 1914. Serial No. 875,213. (Cl. 215—10.)

1. In a bottle closure of the class described, the combination with a bottle-top having cap-retaining means for engaging a metal cap, and provided with an upper packing-face comprising a medial top-zone located between concentric inner and outer bearing-zones, and with a metal cap having an annular crown disk and provided on the outer circumference of said disk with a depending portion in position and arranged for engaging said cap-retaining means of the bottle-top, and also provided on the inner circumference of said disk with a concentrically-located resistance wall depending from the crown disk and of a diameter less than the diameter of said inner bearing-zone, of a packing member comprising a lower packing disk of a diameter greater than the outer diameter of said medial top-zone, and an annular forcing member, of a diameter corresponding with the outer diameter of said inner-bearing zone and surrounding said resistance-wall and supported thereby against diametrical contraction, whereby said members are arranged for and form a low-pressure zone which in the fully-compressed packing-member is located directly over the medial-zone of said packing-face of the bottle-top and between concentric zones of relatively high-pressure.



2. In a bottle closure of the class described, the combination with a bottle-top having an upper packing-face and cap-retaining means for engaging a metal cap, and having in said upper face three zones comprising a medial top-zone between concentric inner and outer bearing-zones, and with a metal-cap having an annular crown disk and provided on the outer circumference thereof with a depending outer portion in position and arranged for engaging said cap-retaining means of the bottle-top, and provided on the inner circumference thereof with the depending resistance wall of a diameter less than the inside diameter of said packing-face and consisting of a depending cap-zone having a concave packing-seat and located, in the completely applied closure, above and inwardly of the said inner bearing-zone, of a packing member comprising a lower packing disk of a diameter corresponding with the outer diameter of said packing-face, and also comprising an annular moldable forcing member of an outside diameter less than that of the outside diameter of said packing-face, and surrounding and diametrically supported against the concave packing-seat of said resistance wall of the cap, said members being arranged for and forming a low-pressure zone which, in the fully compressed packing-member, is located over the medial-zone of the bottle-face and between two concentric high-pressure bearing zones.

3. In a bottle closure of the class described, the combination with a bottle-top having the upper packing face and cap-retaining means for engaging a metal cap, and having in said upper face three zones comprising a medial top-zone between two concentric inner and outer bearing-zones, and with a metal-cap having an annular crown disk and provided on the outer circumference thereof with a depending outer portion in position and arranged for engaging said cap-retaining means of the bottle-top, and provided on the inner circumference thereof with a depending resistance wall of a diameter less than the inside diameter of said packing-face and consisting of a depending cap-zone having a concave packing-seat and located, in the completely applied closure, above and inwardly of the said inner bearing-zone, of a packing member comprising a sealing disk of a relatively large outside diameter and also comprising an annular moldable packing-disk of a relatively small outside diameter and located between said concave packing-seat and the sealing-disk.

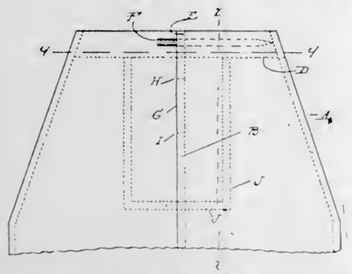
4. In a bottle closure of the class described, the combination with a bottle-top having the upper packing-face and cap-retaining means for engaging a metal-cap, and having in said upper face three zones comprising a medial top-

zone between concentric inner and outer bearing-zones, and with a metal-cap having an annular crown-disk and provided on the outer circumference thereof with a depending portion in position and arranged for engaging said cap-retaining means of the bottle-top, and provided on the inner circumference thereof with a depending resistance wall which at the lower edge thereof has a diameter less than the inside diameter of said inner bearing-zone, of a packing member comprising a lower packing disk of an outside diameter larger than the diameter of said medial top-zone, and also comprising an annular forcing member of an outside diameter less than the diameter of said outer bearing-zone, said forcing-member surrounding and being supported against said resistance wall of the cap, and said members being arranged in position for and forming a low-pressure zone which in the fully-compressed packing-member is located over the medial zone of the bottle-face and between two concentric bearing zones of relatively high-pressure.

5. In a bottle-closure of the class described, the combination with a bottle-top having the upper packing-face and cap-retaining means for engaging a metal cap, and with a metal-cap having an annular crown-disk and provided on the outer circumference thereof with a depending portion in position and arranged for engaging said cap-retaining means of the bottle-top, and provided on the inner circumference thereof with a depending resistance wall which at the lower edge thereof has a diameter less than the inside diameter of said packing-face, of a packing-member comprising a lower packing-disk of a diameter corresponding with the outer diameter of said packing-face, and also comprising an annular moldable forcing-member which has an outside diameter less than the outside diameter of said packing-face, and which surrounds and is supported by said resistance wall against diametrical contraction.

[Claims 6 to 8 not printed in the Gazette.]

1,168,387. PENCIL-POCKET FOR OVERALLS. EDGAR R. GERARD, Detroit, Mich., assignor to Larned, Carter & Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 20, 1914. Serial No. 833,235. (Cl. 2—15.)

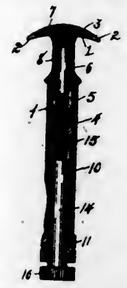


1. In a garment, a bib formed of two sections seamed together, and a hem at the edge of said bib extending transverse to said seam forming a laterally-extending pocket the opening of said pocket being formed by the omission of stitching in said seam.

2. In a garment, a bib formed to two sections united by a vertically-extending seam, a pocket stitched to said bib and extending upon opposite sides of said seam, and a hem at the upper end of said bib forming a laterally-extending pocket, the openings of both of said pockets being formed by omission of stitching in said seam.

1,168,388. SAFETY-RAZOR ADJUSTMENT. PAUL E. GLEASON, Toledo, Ohio. Filed Apr. 7, 1915. Serial No. 19,753. (Cl. 30—12.)

1. In a safety razor, a blade holder having a hollow handle projecting therefrom, a member for coöperating with said holder to clamp a blade thereto, said member having a stem projecting into the handle and threaded at its end, a plug rotatably projected into the outer end of the handle and threaded to said stem, and a stop member adjustably threaded into said plug in position to have stop contact at its inner end with said stem.

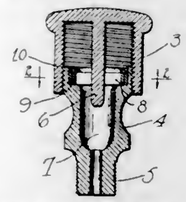


2. In a safety razor, blade holding means comprising two members having their meeting surfaces curved in cross-section, one of said members having a hollow handle projecting therefrom and the other having a stem projecting therefrom into the handle, a plug rotatably projected into the outer end of said handle and threaded at its inner end to said stem end, and a stop member rotatably carried by said plug and threaded therein with its inner end in position to have stop contact with said stem end.

3. In a safety razor, a blade opening part comprising two clamping members having their meeting faces transversely curved to adapt them when drawn together against an interposed blade to cause more or less flexing of the blade, one of said members having a hollow handle projecting therefrom and the other having a stem which removably projects into said handle, a plug inserted into the outer end of the handle and having a turning fit therein, said plug having its inner end threaded to the stem end and having its outer end shouldered against the handle end to limit its movement into the handle and to facilitate a hand turning of the plug, and a stop member projected into said plug axially thereof for turning movements therein and having its inner end threaded into the plug in position to have adjustable stop contact with the stem end and having its outer end exposed without the outer end of the plug to facilitate a turning of one relative to the other.

4. In a safety razor, a holder, a member for coacting with said holder to clamp a blade thereto and having a stem projected through the holder, means threaded onto said stem and coöperating with the holder to adjustably clamp said member to the holder, and a stop-member threaded into said means in position to have stop contact at its inner end with said stem end to limit the extent of threading of said means into the stem.

1,168,389. GREASE-CUP. JOHN S. GOLDBERG, Chicago, Ill., assignor to Alemite Metals Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1914. Serial No. 877,069. (Cl. 184—48.)



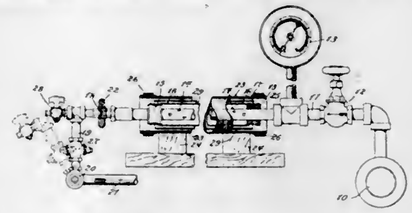
1. In a grease-cup or the like, a pair of screw-threaded parts forming a compression chamber, a projection having flat sides mounted on one of said parts, notches in the other of said parts, and a pair of spring arms extending eccentrically across said last mentioned part and embracing said projection to prevent relative rotation of said parts, the ends of said spring arms being secured in said notches.

2. In a grease-cup or the like, a screw-threaded stem, notches in said stem, a spring having its ends secured in said notches and extending eccentrically across said stem, a cap for said stem, and a flat projection carried by said cap coöperating with said spring to hinder unscrewing of the parts.

3. In a grease-cup or the like, a screw-threaded stem, notches in said stem, a spring having its ends secured in said notches and extending eccentrically across said stem, a cap for said stem, a flat projection coöperating with said spring to hinder unscrewing of the parts, said projection being secured to said cap, and means for securing said spring in said notches.

4. In a grease-cup or the like, a screw-threaded stem, notches in said stem, a spring having a pair of arms secured in said notches, said arms extending eccentrically across said stem, a cap for said stem, a flat projection co-operating with said spring and secured to said cap.

1,168,390. APPARATUS FOR MANUFACTURING RUBBER TUBING. BYRON B. GOLDSMITH, New York, N. Y. Filed Aug. 12, 1915. Serial No. 45,234. (Cl. 18—6.)



1. Apparatus for making tubing of rubber and the like comprising in combination a steam pipe having a perforated portion, means for supplying steam at will to one end thereof, a tilting return connection adapted to be joined with the opposite end thereof, a removable forming tube adapted to be slipped over the end of said steam pipe, and a suitable support for said forming tube.

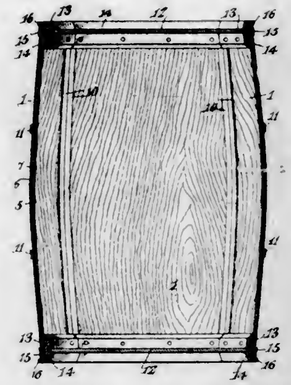
2. Apparatus for making tubing of rubber and the like comprising in combination a steam pipe having a perforated portion, means for supplying steam at will to one end thereof, a tilting return connection adapted to be joined with the opposite end thereof, and a movable combined support and forming tube adapted to be slipped over the end of said steam pipe.

3. Apparatus for making tubing of rubber and the like comprising in combination a steam pipe having a perforated portion, means for supplying steam at will to one end thereof, a tilting return connection adapted to be joined with the opposite end thereof, a removable forming tube adapted to be slipped over the end of said steam pipe, and a removable flexible lining for said forming tube adapted to serve as a matrix for impressing a suitable design upon the tubing to be treated.

4. Apparatus for making tubing of rubber and the like comprising in combination a steam pipe having a perforated portion, sleeves fixed to said pipe on opposite sides of said perforated portion, a flexible tube secured in a steam tight manner over said sleeves, means for supplying steam at will at one end of said pipe, a tilting return connection for the opposite end of the pipe, and a removable forming tube adapted to be slipped over said pipe and sleeves.

1,168,391. VENEER BARREL. CHARLES E. GREGORY, New Rochelle, N. Y., assignor of one-half to Richard E. Turner, Amsterdam, N. Y. Filed Apr. 14, 1914. Serial No. 831,825. (Cl. 217—72.)

1. A receptacle having a bilge and including a plurality of tapered stave sections, and longitudinal joint strips located between the side edges of the stave sections and overlapping each of the side edges of each stave, said joint strips permitting relative lateral movement of the tapered ends of the stave sections to expand and contract the end of the receptacle to permit the head of the same to be removed and replaced without recoopering.



2. A receptacle having a bilge and including tapered stave sections, longitudinal joint strips interposed between the adjacent edges of the stave sections and receiving the side edges thereof and permitting relative slidable movement of the tapered ends of the stave sections to expand and contract the end of the receptacle to permit the head thereof to be removed and replaced without recoopering, said strips overlapping the outer faces of the staves at the joints to provide a non-sifting barrel.

3. A receptacle having a bilge and including a plurality of tapered stave sections, and joint strips having grooves or channels receiving the side edges of the stave sections and permitting relative lateral movement of the tapered ends of the said stave sections to expand and contract the end of the receptacle to permit the head thereof to be removed and replaced without recoopering.

4. A receptacle having a bilge and including tapered stave sections, and joint strips provided with spaced flanges arranged in pairs and forming channels which receive the side edges of the stave sections and permit relative lateral movement of the tapered ends thereof to expand and contract the end of the receptacle and enable the head thereof to be removed and replaced without recoopering, the flanges at one of the faces of the stave sections being relatively flexible to enable them to be bent into engagement with the stave sections after the parts have been assembled.

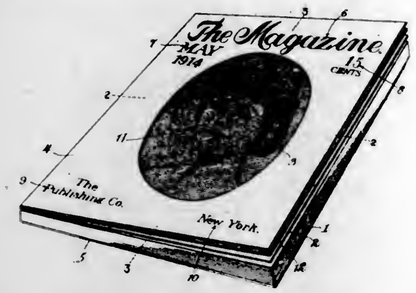
5. A receptacle having a bilge and including tapered stave sections, and joint strips provided with spaced flanges arranged in pairs and forming channels which receive the side edges of the stave sections and permit relative lateral movement of the tapered ends thereof to expand and contract the end of the receptacle and enable the head thereof to be removed and replaced without recoopering, the flanges at the outer faces of the stave sections bing relatively stiff and the other flanges being relatively flexible to enable them to be readily bent against the said stave sections after the parts have been assembled.

[Claims 6 to 8 not printed in the Gazette.]

1,168,392. COVER FOR MAGAZINES. HENRY WILLIAM JACOB GRUETTNER, Vallejo, Cal. Filed June 11, 1914. Serial No. 844,557. (Cl. 11—18.)

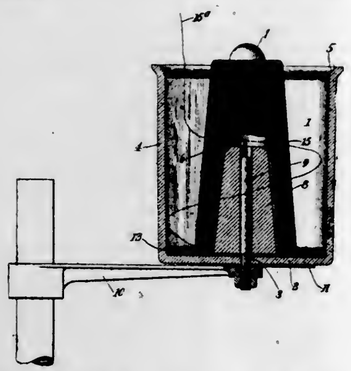
In a magazine, a cover comprising an external sheet having a cut-out and also having printed matter on its visible surface about the cut-out for imparting information as to the magazine, and another sheet bound into the magazine back of the first sheet and separate from the latter, said second sheet being free from printing of the kind customarily placed on magazine covers and provided

with artistic ornamentation located thereon in position to be visible through the cut-out of the first-named sheet and



coacting with the advertising matter on the external sheet to produce an ornamental cover for the magazine.

1,168,393. HOLDER FOR CONES OR SPOOLS OF ARTIFICIAL-SILK AND OTHER THREAD. JOSEPH HAAS, Martinsburg, W. Va., assignor to Interwoven Mills, Inc., New Brunswick, N. J., a Corporation of New Jersey. Filed June 11, 1915. Serial No. 33,446. (Cl. 242—146.)



1. A holding device for a cone or spool of artificial silk and other thread, comprising among its members a support for a cone or spool having a horizontally disposed supporting surface and a bedding material located upon said supporting surface, the upper surface of said bedding material being above the horizontal plane of the bottom of the thread body when the cone or spool is in operative position, and being composed of loosely associated, readily displaceable particles whereby the lower end of the cone or spool and the thread body thereon may be embedded in the loose particles of said bedding material, to prevent the thread from catching under the cone or spool or the body of thread thereon.

2. A holding device for a cone or spool of artificial silk and other thread, comprising among its members a support for engaging and holding the cone or spool, a horizontally disposed part having a supporting surface extending laterally of said support on all sides thereof beyond the periphery of the spool and the body of thread wound thereon, and granular bedding material on said supporting surface having portions adjacent to the lower end of the cone or spool for preventing the loosened thread from catching under the cone or spool or the body of thread wound thereon.

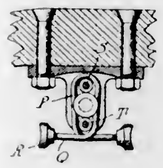
3. A holding device for a cone or spool of artificial silk and other thread, comprising among its members a support for a cone or spool having a horizontally disposed supporting surface and a bedding material composed of loose particles located upon said supporting surface, the upper surface of said bedding material being above the horizontal plane of the bottom of the thread body, whereby the lower end of the cone or spool and the thread body thereon may be embedded in the loose particles of said bedding material, to prevent the thread from catching under the cone or spool, or the body of thread thereon, and a vertically disposed wall extending around the said support above said supporting surface, and engaging said loose bedding material to confine it, and maintain its upper surface at the desired level.

4. A holding device for a cone or spool of artificial silk or other thread comprising among its members a receptacle having a supporting bottom and lateral vertically disposed inclosing walls, a support for engaging and holding a cone or spool within said receptacle, and granular bedding material in the bottom portion of said receptacle and having its upper surface above the plane of the bottom of the spool and the body of thread wound thereon, whereby they may be readily embedded therein, to prevent the thread from catching thereunder as it is drawn off.

5. A holding device for a cone or spool of artificial silk or other thread comprising a receptacle having transparent lateral walls extending above the bottom thereof, a support for a cone or spool within said receptacle and a bedding material composed of loose finely divided particles located in the bottom of said receptacle, and having its upper surface above the plane of the bottom of the body of yarn on said cone or spool to permit the spool and the bottom of the yarn body to be embedded therein, to prevent the yarn from catching under the spool and yarn body as it is drawn off and whereby the entire spool and the yarn thereon can be seen from a distance in any direction.

[Claim 6 not printed in the Gazette.]

1,168,394. FASTENER FOR VEHICLE-TOPS. DONALD T. HASTINGS and ADRIAN J. NEERKEN, Detroit, Mich., assignors to Hupp Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 22, 1914. Serial No. 868,023. (Cl. 24—211.)

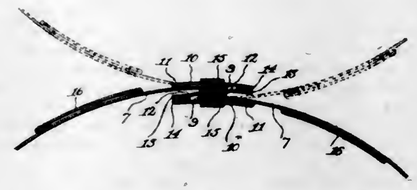


1. A fastener, comprising a headed member, and a member adapted to be engaged therewith, composed of a bracket having a bifurcated portion, the furcations being formed with alined apertures for receiving the headed member, means arranged intermediate the furcations for engaging the head and means for securing the bracket to a support.

2. A fastener, comprising a headed member, and a member adapted to be engaged therewith composed of a bracket apertured to receive the headed member, a looped resilient member mounted upon said bracket having portions for oppositely engaging beneath the head, and pins carried by said bracket at each side of the aperture therein and passing through the looped member to anchor the same to said bracket.

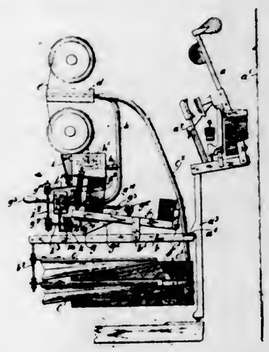
3. A fastener, comprising a headed member, and a member adapted to be engaged therewith composed of a bracket having a bifurcated portion, the furcations being apertured to receive the headed member, a looped resilient member mounted upon said bracket between said furcations, having portions for oppositely engaging beneath the head, and means passing through the looped member and connecting said furcations to anchor said looped member to the bracket.

1,168,395. GARMENT. MORRIS M. HORN, Eau Claire, Wis. Filed Oct. 17, 1913. Serial No. 795,614. (Cl. 2—41.)



In a device of the class described, a body portion open at its front and having its edges at said opening folded, wide bands of fabric folded at their edges and attached at one edge to the folded body portion, and strips of lining fabric turned at their edges and each attached at one edge to the outer edge of the fabric band and at its inner edge to the edge of the body portion.

1,168,396. AUTOMATIC PIANO-PLAYER. HENRY S. HORNBECK, Elizabeth, N. J., assignor to Volotone Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Feb. 14, 1913. Serial No. 748,342. (Cl. 84—160.)



1. In a musical instrument, the combination of a series of playing devices having each a lever with a movable fulcrum adapted to yield bodily during the playing movement, and a series of automatic devices for limiting each the yielding of a portion of such fulcra.

2. In a musical instrument, the combination of a series of playing devices having each a lever with a yielding, spring suspended fulcrum, and a series of automatic devices for limiting each the yielding of a portion of such fulcra.

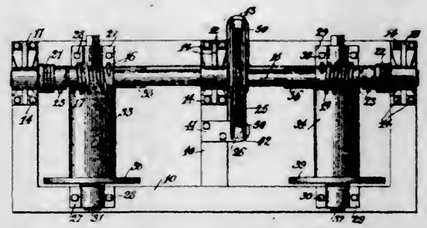
3. In a musical instrument, the combination of a series of playing devices having each a yielding fulcrum, automatic devices for controlling the movement of the yielding fulcra, and independent manually operated devices for limiting in different degrees the yielding of the fulcra when they are permitted by the automatic devices to yield.

4. In a pneumatic piano player, the combination of a playing mechanism including a series of levers having each a bodily movable fulcrum, a series of devices for limiting each the movement of a portion of the fulcra, and a series of automatically controlled pneumatics for actuating said devices severally.

5. In a pneumatic piano player, the combination of a playing mechanism including a series of levers and spring suspended fulcra therefor, adapted to yield bodily during the playing movement, a series of devices for limiting each the yielding of a portion of the fulcra, and a series of automatically controlled pneumatics for actuating said devices severally.

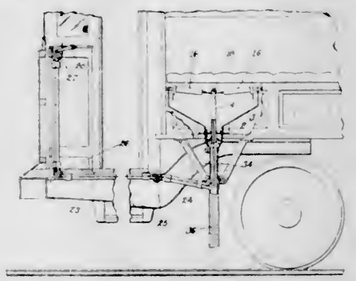
[Claims 6 to 9 not printed in the Gazette.]

1,168,397. SCAFFOLDING DEVICE. FRANK B. JOHNSTON, Roselle Park, N. J., assignor to American Safety Device Company, a Corporation of New York. Filed Sept. 4, 1913. Serial No. 788,068. (Cl. 254—144.)



A scaffolding device, comprising a rectangular frame, shafts transversely thereof, drums on the shafts, worm wheels on the drums, a worm-shaft extending longitudinally of the frame, worms on the shaft, means for manually operating the shaft, and a supporting member arranged centrally of the frame, intermediate the drums, and having rope-guiding means arranged in registration with the means for rotating the worm shaft.

1,168,398. SAND-BOX. FRANK W. KALLOM, Malden, and PETER S. TOENNESEN, Everett, Mass. Filed May 4, 1915. Serial No. 25,742. (Cl. 105—179.)



1. In a sand box, a hopper for sand and mechanical discharging means for the sand operable to take sand from the top layers in the hopper and discharge it from the hopper while leaving the lower layers substantially undisturbed, and means for operating said discharging means.

2. In a sand box, a hopper for sand, a discharge device for the sand and mechanism for relatively moving said device and hopper to cause the upper layers of sand in the hopper to run through said discharge device under the influence of gravity while leaving the lower layers of sand substantially undisturbed.

3. In a sand box, a stationary hopper for sand, a discharge tube extending through the bottom of said hopper and arranged to be raised or lowered relatively to the hopper, said tube having an intake opening normally positioned in the hopper at a point above the level of the sand in the hopper, and means for raising and lowering said tube to control the delivery of sand therethrough from the hopper.

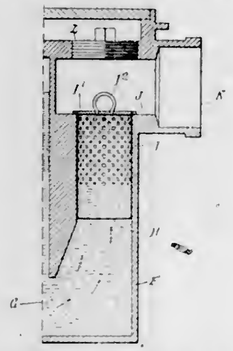
4. In a sand box, a stationary hopper for sand, a discharge tube extending through the bottom of said hopper and arranged to be raised or lowered relatively to the hopper, said tube having an intake opening in the hopper, means for normally holding said tube in a raised position with said intake opening above the level of the sand in the hopper, and means for positively lowering the tube.

5. In a sand box, a stationary hopper, a discharge tube extending through the bottom of the hopper, said tube being open at both ends, springs acting on the tube to hold it normally in an elevated position with its upper

open end above the level of the sand in the hopper, and manually operable means for lowering said tube against the action of said springs.

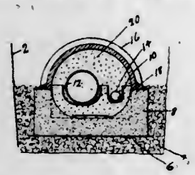
[Claims 6 to 11 not printed in the Gazette.]

1,168,399. STRAINER. EDWARD C. KELLY, Jr., Boston, Mass., assignor to Kelly Separator Company, Boston, Mass., a Corporation of Massachusetts. Filed June 4, 1915. Serial No. 32,212. (Cl. 210—16.)



A combination strainer and check valve for liquid conduits, comprising a laterally perforated cylindrical strainer adapted to slide in a similarly shaped section of the conduit, an imperforate head secured to said strainer having a circumferential flange coacting with a seat in said conduit, and said conduit provided with a slideway section for the strainer and a seat for the imperforate head thereof.

1,168,400. CONDUIT. PERCY N. KENWAY, Newton, Mass. Filed Apr. 2, 1910. Serial No. 553,055. (Cl. 137—75.)



1. A conduit for piping and the like, comprising a trough-shaped concrete bottom portion, a second similarly shaped portion within the first, an intermediate layer of waterproof material, the edges of which project above the edges of the inner of said portions, a curved cover portion resting on the inner portion, and waterproof filling between said cover portion and the projecting edge of the intermediate layer.

2. A conduit for piping and the like, comprising a trough-shaped bottom portion, a similarly shaped portion of concrete within the first, a cover portion resting on the inner of said portions, sheet material projecting upwardly adjacent to the outer surface of the inner portion and forming a channel with the outer surface of the cover portion, and waterproof filling in said channel.

3. A conduit for a line of piping, comprising a lower concave portion and an upper convex cover portion, said lower portion having an outer and an inner section with a layer of waterproof material between them and also a longitudinal projection extending along the outer upper edges of the inner section, the lower edges of the convex cover portion resting on the edges of the inner section within said projections, and waterproof material filling the space between the outer face of the cover portion and said longitudinal projections.

4. A conduit for piping and the like, comprising a trough-shaped portion having a longitudinal rib on one edge and a projecting flange of sheet material on the other, a cover portion of sectional channel pipe, the edges of which rest between the rib and the flange, and waterproof material retained by said rib and flange.

5. A conduit for protecting and insulating a line of piping comprising a flattened concave bottom portion, a layer of waterproof material co-extensive therewith, a series of recesses formed in the inner walls of the concave portion adjacent to the bottom thereof, means set in said recesses for supporting a line of piping above the bottom thereof, a convex closing portion formed of interlocking sections of channel pipe, and heat insulating material adjacent to the walls of the conduit.

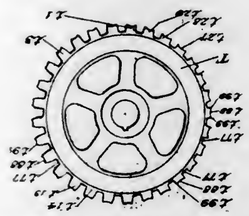
[Claims 6 to 10 not printed in the Gazette.]

1,168,401. PROCESS OF MAKING BRIQUETS FROM ZINC ORES AND MATERIAL CONTAINING ZINC. OTTO KIPPE, Osnabrück, Germany, assignor to General Briquetting Company, New York, N. Y., a Corporation of Maine. Filed Nov. 19, 1914. Serial No. 872,890. (Cl. 75—65.)

1. The hereindescribed process of producing briquets from finely divided zinc by-product material which consists in setting up binding conditions in said material by moistening said material with a liquid containing a chemically reactive dissolved salt, then compressing said moistened mass and evaporating the solvent, leaving the dry salt distributed in the mass without coöperating in the coherence of the mass.

2. The hereindescribed zinc-containing briquet comprising finely divided zinc by-product containing material, the particles of said material being bound together to form a hard, coherent mass, and a relatively small proportion of a water-soluble salt distributed throughout said mass as an ingredient which is inert with respect to the coherence of the particles.

1,168,402. GEAR-TEETH-FINISHING TOOL. ERNEST J. LEES, Cleveland, Ohio. Filed May 19, 1914. Serial No. 839,529. (Cl. 29—103.)



1. A gear tooth finishing tool comprising a tooth having a cutting edge at the junction of the top with each of its faces, such cutting edges being disposed different distances from and at different angles to the axis of the tool.

2. A gear tooth finishing tool, provided with teeth each having the junctions of their tops with their opposite faces respectively lying in two pairs of distinct conical surfaces to form four distinct cutting edges, said intersecting pairs of conical surfaces each having respectively a different relation to the axis.

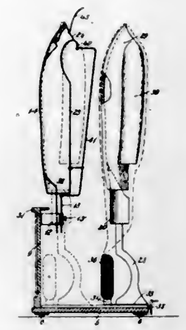
3. A gear tooth finishing tool, provided with a tooth having the two junctions of its top with its opposite faces each disposed in two intersecting conical surfaces to form two distinct cutting edges for each direction of rotation.

4. A gear tooth finishing tool, provided with a plurality of teeth each having a pair of cutting edges variously depressed as a whole.

5. A gear tooth finishing tool, provided with a tooth having a cutting edge, and its top concave adjacent such edge, said edge furthermore depressed relative to the top of another tooth, for the useful purpose specified.

[Claims 6 to 28 not printed in the Gazette.]

1,168,403. GARMENT-SIMULATOR. SAMUEL LIPPE, New York, N. Y. Filed Oct. 11, 1913. Serial No. 794,588. (Cl. 211—35.)



1. In a garment simulator, a wire frame having the outline and shape of the front and side of a garment when in use, a support having the shape of the front and side of a person and adapted to be covered with goods, means for moving the frame relatively to the support, and clamping means associated with the frame for securing the same to the support whereby the goods on the support is wound tightly thereabout.

2. In a garment simulator, a base, a support on said base having the shape of the front of a dummy, a bracket on said base adapted to receive uncut goods and wherefrom said dummy can be covered with the goods, a wall in front of said dummy on said base, a gate in said wall, a frame secured to said gate and having the shape of the outline of the front of the garment, said frame being adapted to contact with said dummy when said gate is closed and whereby the goods about the dummy is tightened in front of the dummy, and clamping means carried by the frame whereby the frame is secured to the support and thereby the goods draped on the same is tightened on the back of the support.

3. In a garment simulator, a base, a frame having the shape and the outline of a garment and mounted on said base, a support having the shape of a person mounted on said base and adapted to be covered by goods, means for raising and lowering said frame and support on said base, means for moving relatively said frame and said support on said base, and means for securing the frame to the support whereby the goods on the support is simulated into a garment on said support.

4. In a display device, a dummy, a framing structure adapted to fit upon and overlie said dummy, means for securing material between said dummy and said structure, said structure simulating details and parts appropriate and complemental to said dummy, whereby said details are displayed without draping of said material to form said details and parts.

1,168,404. PROCESS OF MANUFACTURING CATALYTIC BODIES. OWEN DAVID LUCAS, London, England, assignor to Lucas's Low Pressure Oil Cracking Process, Limited, London, England. Filed Mar. 4, 1915. Serial No. 12,193. (Cl. 23—28.)

1. A process of making a catalytic body which comprises heating to a sintering temperature, a mixture comprising (*a*) a reducible oxygen-containing compound of a metal having an atomic weight between 52 and 59, (*b*) a non-explosive metallic compound capable upon heating, of generating non-oxidizing gases containing an oxid of carbon, and (*c*) a carbonaceous reducing agent.

2. A process of making a catalytic body which comprises heating to a sintering temperature a mixture comprising (*a*) a reducible oxygen-containing compound of a metal having an atomic weight between 52 and 59, (*b*) a non-explosive metallic compound capable upon heating, of generating carbon monoxid, and (*c*) a carbonaceous reducing agent.

3. A process of making a catalytic body, which comprises heating to a sintering temperature, a mixture comprising (*a*) a reducible oxygen-containing compound of a metal having an atomic weight between 52 and 59, (*b*) a non-explosive metallic compound capable upon heating, of generating a gas mixture containing carbon monoxid, and (*c*) a carbonaceous reducing agent.

4. A process of making a catalytic body, which comprises heating to a sintering temperature, a mixture containing (*a*) a reducible oxygen-containing compound of a catalytic metal, (*b*) a salt of a catalytic metal which upon being heated is capable of liberating non-oxidizing gases containing carbon monoxid, and (*c*) a carbonaceous reducing agent.

5. A process of making a catalytic body, which comprises heating to a sintering temperature a briqueted mixture containing (*a*) a reducible oxygen-containing compound of a catalytic metal, (*b*) a salt of a catalytic metal which upon being heated is capable of liberating non-oxidizing gases containing carbon monoxid, and (*c*) a carbonaceous reducing agent.

[Claims 6 to 25 not printed in the Gazette.]

1,168,405. POST-HOLE DIGGER. CHARLES WALTON MCDONALD, Gallatin, Mo., assignor of one-half to Clarence W. Connally, Austin, Tex. Filed Apr. 16, 1915. Serial No. 21,699. (Cl. 55—71.)



1. A post hole digger provided with elongated relatively narrow blades with handles in line therewith and levers pivoted together and to the handles and blades and constituting the connections upon which the handles and blades may be rocked.

2. A post hole digger comprising handles and blades, levers each connected to the other at one end by a pivot connection and at the other ends connected to the handles in spaced relation to the blades, and said levers having lateral offsets between the ends pivotally connected to respective blades.

3. A post hole digger comprising handles and blades, levers each connected to the other at one end by a pivot connection and at the other ends connected to the handles in spaced relation to the blades, and said levers having lateral offsets between the ends pivotally connected to respective blades, said levers overlapping between the ends and there provided with a slidable uniting device.

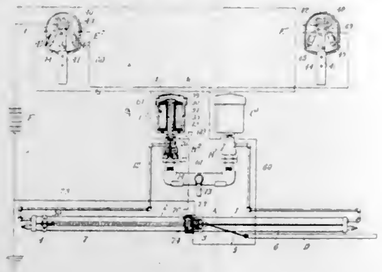
4. A post hole digger having elongated relatively narrow blades with handles in line with the blades and fast thereto, the blades and handles being provided with ears with those of the blades spaced from those of the handles in the direction of the length of the handles, levers each slidably pivoted to a respective handle by the ears thereon and to the blade carried by the other handle by means of the

ears on said blade, said levers being pivoted together at the ends remote from those pivoted to the handles and at a point nearer to the digging ends of the blades than where pivotally connected to the blades, and means for holding the levers in face to face engagement and permitting movements of the levers one on the other about the pivotal connection of the levers one with the other.

5. A post hole digger comprising blades and handles fast to and in line with the respective blades, and lever connections between each handle and the opposite blade and said lever connections being pivotally connected together between the blades at a point nearer to the cutting ends of the blades than where the levers are connected to said blades.

[Claims 6 and 7 not printed in the Gazette.]

1,168,406. DOOR-MOTOR CONTROLLER. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed June 29, 1912. Serial No. 706,781. (Cl. 268—8.)



1. The combination with a reciprocating door motor and a plurality of valves controlling the operation of said motor, of a controller for said valves, electromagnetic means for attracting said controller to maintain the same in operating position, means controlled by the progress of the door for controlling the circuit to said electromagnetic means, and means for normally maintaining said controller in inoperative position.

2. The combination with a reciprocating door motor and a plurality of valves controlling the operation of said motor, of a controller for said valves, electromagnetic means for attracting said controller to maintain the same in either of two operating positions, means operated by the motor at or near each end of its range of movement for controlling the circuit to said electro-magnetic means, and means for normally maintaining said controller in inoperative position.

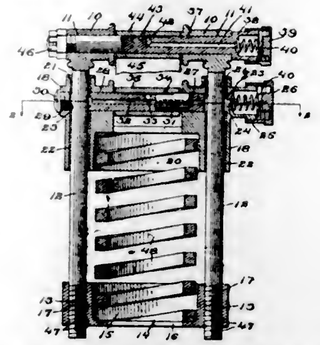
3. The combination with a door motor, of valves controlling the direction of movement thereof, electromagnets for operating said valves, a controller for said valves, electro-magnetic means for attracting said controller to maintain the same in operating position, means for normally maintaining said controller in inoperative position, and contact devices in the circuit of said electromagnetic means, said contact devices being operated by the door motor.

4. The combination with a door motor, of valves controlling the direction of movement thereof, electromagnets for operating said valves, a controller for said valves, spaced apart retaining magnets for attracting said controller to maintain the same in operating position, means for normally maintaining said controller in inoperative position, and circuit breakers in the circuits of said retaining magnets operated by the motor at or near the ends of its range of movement.

5. The combination with a reciprocating door motor having admission and exhaust ports for both directions of movement, of electro-magnetic valves controlling said ports, a controller for selectively closing the circuits to said magnets, magnetic retaining means for attracting said controller to maintain the same in operating position, means for normally maintaining said controller in inoperative position, and circuit controlling devices in the circuits of said retaining means, operated by the motor at or near each end of its range of movement.

[Claims 6 to 12 not printed in the Gazette.]

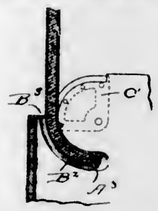
1,168,407. LUBRICATOR FOR SHOCK-ABSORBERS. PHILIP M. MALONEY, Philadelphia, Pa.; Robert E. Long administrator of said Maloney, deceased. Filed Mar. 27, 1915. Serial No. 17,463. (Cl. 267—19.)



1. A shock absorber comprising guide rods, a yoke provided with ears slidable on the rods and having spaced transversely alined passages and lubricant receiving chambers surrounding the rods intermediate the ends of the passages, the inner ends of the latter forming pin-receiving openings, the outer end of one passage constituting a grease holder including a closure, and the like end of the other passage being threaded to receive a retaining plug, and a pin having its ends held in the openings and provided with an all-through axial opening to provide communication between the chambers.

2. The combination with a shock-absorber having spaced guide rods and a yoke provided with ears slidable on said guide rods and having spaced alined transverse passages, the ears having lubricant-receiving chambers surrounding the rods intermediate the ends of the passages, the inner ends of the passages forming pin-receiving openings, the outer end of one passage being enlarged to form a grease-cup and having a cover, the outer end of the other passage being enlarged and threaded to receive a threaded retaining plug, and a pin having its ends held in the pin-receiving openings and provided with an axial opening extending from end to end to afford communication between said chambers, the pin also having a lateral passage between its openings and surface to permit passage of the lubricant to the surface.

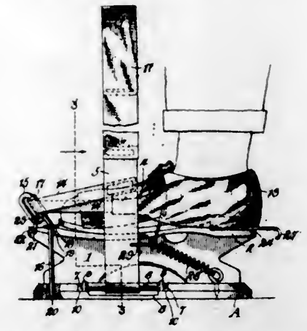
1,168,408. REGISTER-CASE. FRANK G. MARBACH, Cleveland, Ohio, assignor to Champion Register Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 3, 1914. Serial No. 860,040. (Cl. 45—91.)



A register case composed of sheet metal packed sheet asbestos, said case comprising a body portion and top portion, the meeting edges of said parts being shouldered, the rear end of said top or cover being slightly reduced in width and curved upon the arc of a circle, said

curved end terminating in a rearwardly projecting lip, cast metal filling blocks spot-welded in the upper rear corners of the sides of the body portion, said upper rear corners being cut-away upon the arc of a circle, the outer edge of said cast metal filling block being correspondingly curved and shouldered to correspond with the shoulder of the top and body portion, said curved end of cover being adapted to pass into the body portion at the rear end, the rear wall of said body portion having a forwardly projecting lip at its upper end, the inner plates of the sides being slotted in the arc of a circle to receive the curved end of the top or cover, substantially as set forth.

1,168,409. SHOE-SHINING DEVICE. WILLIAM MITTERREITER, Paris, Tenn. Filed July 28, 1915. Serial No. 42,402. (Cl. 15—58.)



1. A shoe shining device comprising a toe cloth, a heel cloth, guides for the cloths to hold the same in their respective positions against the shoe, and a single operating means connected to the adjacent ends of the toe and heel cloths to simultaneously draw the same back and forth over the respective parts of the shoe.

2. A shoe shining device comprising a toe cloth, a heel cloth, guides for the cloths to hold the same in their respective positions against a shoe, and a hand strap secured to each pair of opposite adjacent ends of the toe and heel cloths for actuating the same simultaneously upon the reciprocating movement of the hand straps.

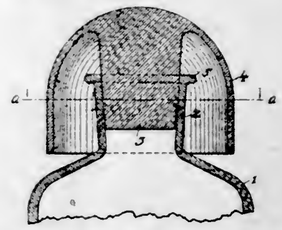
3. A shoe shining device, comprising a shoe support, a toe cloth adapted to extend transversely of the toe portion of a shoe, a heel cloth adapted to extend around the heel and along the sides of a shoe, guides at the forward end of the shoe to receive the ends of the heel cloth thereover, straps connected to the terminals of the toe cloth for causing the toe cloth to be moved transversely of the shoe, and means for connecting the said ends of the heel cloth to the straps, whereby said heel cloth is adapted to be moved longitudinally of the shoe and the toe cloth transversely of the shoe.

4. A shoe shining device, comprising a shoe support, a toe cloth adapted to extend transversely of the toe support, straps connected to the ends of the toe cloth, a heel cloth having straps connected thereto, posts connected to the forward end of the shoe support having rollers thereon, said heel straps extending around the rollers and connected to the toe straps, and rollers connected to the shoe support, beneath which the toe straps extend, whereby upon the operation of the straps for moving the toe cloth transversely, the heel straps will be actuated for causing the movement of the heel cloth.

5. A shoe shining device, comprising a shoe support, a toe cloth adapted to extend transversely of the toe and instep portion of a shoe, a heel cloth adapted to extend around the heel and along the sides of the shoe, straps connected to the toe cloth, rollers connected to the shoe support and located below the toe cloth, beneath which the toe straps extend, posts connected to the forward end of the shoe support having rollers thereon, straps connected to the heel cloth and extending around the rollers and connected to the toe straps, whereby the toe cloth and heel cloth will be simultaneously reciprocated upon the actuation of the toe straps, and springs connected to the shoe support, and loosely connected to the toe straps and heel cloth, for maintaining the heel and toe cloths in proper position on the shoe during the shining operation.

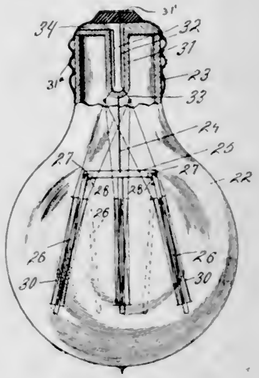
[Claims 6 to 9 not printed in the Gazette.]

1,168,410. BOTTLE CAP AND STOPPER. ARTHUR C. NOTHSTINE, Pittsburgh, Pa. Filed Mar. 23, 1914. Serial No. 826,560. (Cl. 215—8.)



The combination with a glass reagent bottle having a pouring lip, of a glass stopper ground to the neck of said bottle, and a cap integral with said stopper, said cap being of greater height than said stopper, the lower end of said cap being entirely free from contact with the outer surface of said bottle, and spaced therefrom a considerable extent, substantially as, and for the purposes described.

1,168,411. ELECTRIC FILAMENT-LAMP. THOMAS O'DONNELL, Ironwood, Mich. Filed Nov. 6, 1914. Serial No. 870,570. (Cl. 176—16.)



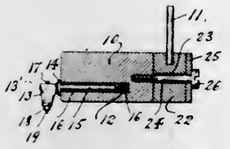
1. As an article of manufacture, an electric lamp, comprising a bulb having a contracted neck, a filament support adapted to extend into the bulb, extending arms pivoted to the support and extending longitudinally of the bulb, and filaments strung upon the arms.

2. As an article of manufacture, an electric lamp, comprising a bulb having a contracted neck, a filament support adapted to be extended into the bulb, longitudinally extending arms pivoted to the support to swing outwardly for a predetermined distance, springs to automatically swing the arms outwardly, and filaments strung upon the arms.

1,168,412. ADAPTER-STYLUS FOR PHONOGRAPHS. ELLIS S. OLIVER, Newark, N. J. Filed Mar. 3, 1915. Serial No. 11,792. (Cl. 181—11.)

1. An adapter stylus for phonograph sound-boxes having their diaphragms in planes substantially perpendicular to the sound-record disks to be reproduced compris-

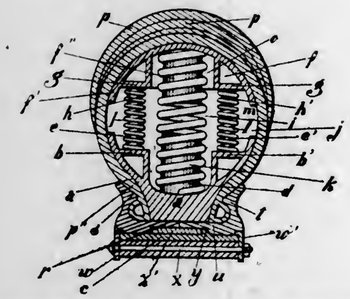
ing a horizontal body, a vertical butt-piece extending upwardly from one end of said body, a stylus-head having a laterally extending shank, said body having a longitudinally extending opening extending inwardly from its outer end for the reception of said shank, means for securing said shank in said opening, a vertically disposed stylus-setting supported by said stylus-head, and a downwardly depending vertical stylus-point carried by said setting.



2. An adapter stylus for phonograph sound-boxes having their diaphragms in planes substantially perpendicular to the sound-record disks to be reproduced comprising a horizontal body, a vertical butt-piece extending upwardly from one end of said body, a stylus-head having a laterally extending shank, said body having a longitudinally extending opening extending inwardly from its outer end for the reception of said shank, a plastic cementitious material having some resiliency filling said opening and surrounding said shank whereby the latter is secured in said body, a vertically disposed stylus-setting supported by said stylus-head, and a downwardly depending vertical stylus-point carried by said setting.

3. An adapter stylus for phonograph sound-boxes having their diaphragms in planes substantially perpendicular to the sound-record disks to be reproduced comprising a horizontal body, a vertical butt-piece extending upwardly from one end of said body, a vertical stylus-point extending downwardly from the opposite end of said body, and means permitting adjustment of said butt-piece relatively to the stylus-point as and for the purposes described.

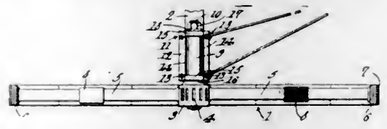
1,168,413. RESILIENT TIRE. EDWARD WALTER PRICE, Toronto, Ontario, Canada. Filed Apr. 10, 1915. Serial No. 20,573. (Cl. 152—8.)



1. A resilient tire comprising two concentric sets of arched segments normally separated for the independent inward movement of those of the outer set, a stud extending radially from the interior of each segment, compression springs held by each pair of opposed studs and engaging their respective segments to resist the inward movement of the outer segments, spring seats for each segment located on opposite sides of its radial stud, studs extending from the spring seats, and auxiliary springs held thereby and engaging the spring seats to resist the lateral movement of the outer segments.

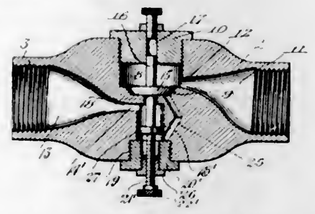
2. A resilient tire comprising two concentric sets of arched segments normally separated for the independent movement of those of the outer set, each segment of the outer set comprising an arched plate, a stud extending radially from the interior of the arched plate, and spring seats located on opposite sides of the stud and provided with a row of studs, each of the arched segments of the inner set comprising an arched plate, a base having converging sides centrally located with respect to the edges of the arched plate, a stud extending radially from the interior of the segment, and spring seats at each side of the radial stud, each spring seat being provided with a row of studs, in combination with compression springs held by each pair of radially-opposed studs engaging their respective segments to resist the inward movement of the outer segments, and auxiliary springs engaging the opposed spring seats and held by the rows of studs thereof to resist the lateral movement of the outer segments.

1,168,414. MEANS FOR JOURNALING WHEELS TO AXLES. JOHN W. PRICE, Vivian, La. Filed Jan. 16, 1914. Serial No. 812,597. (Cl. 21—153.)



In combination, an axle, a boxing comprising a plate resting against the axle and having integral angular ears provided with counter bores at their remote sides, a wheel hub having a shoulder bearing against one ear to close the respective counter bore and having a spindle journaled through said ears, U-shaped clips straddling the axle and terminally engaged to said plate, anti-frictional rollers for said spindle in said counter bores, the spindle having a reduced end forming a shoulder, a washer upon said reduced end of the spindle and bearing against said shoulder to close the other counter bore, and a nut threaded upon said reduced end of the spindle and holding said washer thereon.

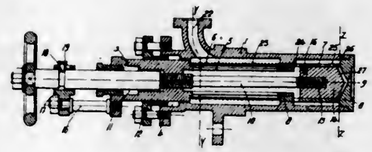
1,168,415. AUTOMATIC GAS CUT-OFF. BARZILLAI PULLEN, Philadelphia, Pa. Filed Apr. 27, 1915. Serial No. 24,365. (Cl. 67—115.)



An automatic gas cut-off comprising a valve casing having a valve chamber, an inlet port communicating with the lower portion of the valve chamber, a guide passage communicating with said valve chamber through a bypass, an outlet port communicating with said guide passage, a constricted passage between the valve chamber and guide passage, a self-closing valve in the valve chamber having a stem depending into the guide passage, an outlet passage provided with a restricted inlet communicating with the guide passage, an adjusting member, and a valve disk loosely mounted in the guide passage between said restricted passage and constricted end of the outlet passage, said disk being interposed between said adjusting device and the valve stem and being of less thickness than the depth of the said constricted inlet of the outlet passage.

1,168,416. LIQUID-FUEL ATOMIZER. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed June 18, 1914. Serial No. 845,877. (Cl. 137—86.)

1. In a liquid fuel burner, a cylindrical sleeve provided with at least one tangential opening, a plug having a conical inner surface and a slidable regulator mounted in said sleeve to control said opening and having a conical surface parallel to the conical surface of the plug to form a whirl chamber into which said tangential opening discharges, and means to actuate said regulator to control the output of the burner.



2. The combination with a fuel burner, of a rotatable and longitudinally movable rod capable of controlling the discharge of fuel from the burner, a stationary sleeve in which said rod moves, a pointer pivoted on said sleeve, a pin carried by the pointer, said sleeve having an opening through which the pin projects toward the rod, said rod having a recess in which said pin engages so that longitudinal movement of the rod shifts the pointer, and a stationary index with which said pointer coöperates.

1,168,417. PROCESS OF PREPARING CHROMATES OF LEAD. ALEXANDER S. RAMAGE, Buffalo, N. Y., assignor to International Color & Chemical Company, Incorporated, Detroit, Mich., a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,872. (Cl. 134—67.)

1. A cyclical process of making a chromate of lead, which consists in dissolving a lead-bearing material in an acid, precipitating the lead as sulfate and setting free the solvent acid by addition of sulfuric acid, washing the precipitated sulfate and digesting the same in presence of an alkali metal chromate, then adding an alkaline reagent, and applying the liberated solvent acid to fresh portions of the lead-bearing material.

2. A cyclical process of making a chromate of lead, which consists in dissolving a lead-bearing material in an acid, precipitating the lead as sulfate and setting free the solvent acid by addition of sulfuric acid, washing the precipitated sulfate and digesting the same in presence of sodium bichromate, then adding caustic soda, and applying the liberated solvent acid to fresh portions of the lead-bearing material.

3. In a process of producing a chromate of lead, the step which consists in digesting lead surfate in presence of a bichromate, and then adding an alkali, thereby converting the sulfate of lead into a chromate.

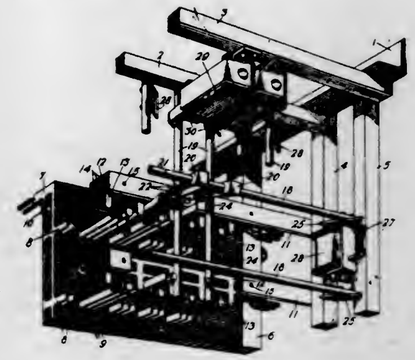
4. In a process of producing a chromate of lead, the step which consists in digesting lead sulfate in presence of a bichromate, then adding a caustic alkali, and continuing the digestion to convert the sulfate of lead into a chromate.

1,168,418. PROCESS OF PREPARING LEAD SULFATE. ALEXANDER S. RAMAGE, Buffalo, N. Y., assignor to International Color & Chemical Company, Incorporated, Detroit, Mich., a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,873. (Cl. 23—13.)

1. The process of preparing lead sulfate from sulfid ores of lead, which consists in roasting the ore and thereby producing a mixture containing oxid, sulfate and sulfid of lead; treating the said mixture with nitric acid and combining the evolved nitrous fumes in presence of oxygen with the sulfurous gases from the roasting operation; and utilizing the resulting acid products to complete the conversion of the mixture derived from the ore into sulfate of lead.

2. The process of preparing lead sulfate from sulfid ores of lead, which consists in roasting the ore with restricted access of air during the preliminary roasting stages and with free access of air during the latter roasting stages, thereby producing a roasted mixture containing oxid, sulfate and sulfid of lead; treating the said mixture with nitric acid and combining the evolved nitrous fumes in presence of oxygen with the sulfurous gases from the roasting operation thereby forming sulfuric and nitrosulfuric acids; and returning the acid products thus formed to the roasted ore, whereby the conversion of the roasted mixture into sulfate is completed and the nitric acid is evolved and recovered in available form for a repetition of the process.

1,168,419. SELECTOR-SWITCH. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 16, 1913. Serial No. 806,992. (Cl. 179—27.5.)



1. In a switch, a plurality of series of multiply connected incoming line terminals secured in a stationary bank, a group of contact operating devices, one for each series of terminals, a plurality of multiply connected outgoing line terminals similarly mounted adjacent thereto, a second group of contact operating devices, one for each series of outgoing line terminals, and means whereby the operation of a device of each group will cause engagement of terminals of the corresponding series.

2. In a switch, a plurality of series of multiply connected incoming line terminals secured in a stationary bank, a group of contact operating devices, one for each series of terminals, a plurality of series of multiply connected outgoing line terminals similarly mounted in a separate stationary bank, a second group of contact operating devices, one for each series of outgoing line terminals, and means whereby the operation of a device of each group in a predetermined order will cause engagement of terminals of the corresponding series.

3. In a switch, a plurality of series of multiply connected incoming line terminals mounted in a stationary bank, a group of rotatable shafts, one for each of said series of terminals, a plurality of series of multiply connected outgoing line terminals similarly mounted in a separate stationary bank, a second group of rotatable shafts, one for each series of outgoing line terminals, and means whereby the operation of a shaft of each group will cause engagement of terminals of the corresponding series.

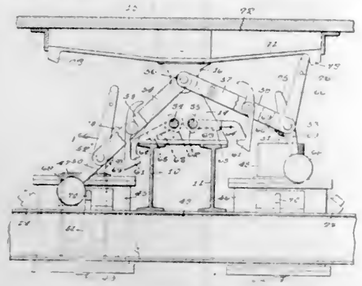
4. In a switch, a terminal support, two groups of stationarily mounted metallic strips, multiply connected contacts projecting therefrom, the strips of one set extending in one direction and the strips of the other set being arranged to extend at substantially right angles to the first group, and means for causing interengagement of the contacts of the two groups.

5. In a telephone exchange, a group of lines, a plurality of substantially parallel fixed terminal strips for said lines, multiple contacts projecting from each of said strips, a second group of lines, a plurality of terminal strips for said second group of lines mounted in a stationary bank independent of said first mentioned strips, multiple con-

tacts projecting from each strip of said second group, and means for selectively causing engagement of the contacts of the two groups of lines.

[Claims 6 to 14 not printed in the Gazette.]

1,168,420. DUMP-CAR. JAY B. RHODES, Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 26, 1914. Serial No. 863,612. (Cl. 105—191.)



1. In a dump car, the combination of a frame, a bed pivotally connected with said frame and adapted to be tilted to discharge its load, two links having hooked engagement at their upper ends with said bed at its opposite sides, means for moving either of said links to permit the bed to be tilted toward the opposite side, and means for locking said links against movement for locking the bed against tilting.

2. In a dump car, the combination of a frame, a bed pivotally connected with said frame and adapted to be tilted to discharge its load, two links having hooked engagement at their upper ends with said bed at its opposite sides, and links each having a pivotal connection at one end with said frame and pivotally connected at its other end with one of said first-named links, said pivotally-connected links at either side of the car being adapted to be moved into a retracted past-center locking position for holding the bed against tilting or into an extended position for permitting the bed to be tilted toward the opposite side.

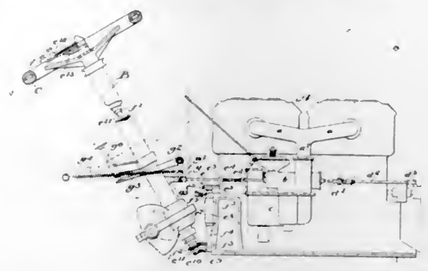
3. In a dump car, the combination of a frame, a bed pivotally connected with said frame and adapted to be tilted to discharge its load, two links having hooked engagement at their upper ends with said bed at its opposite sides, links each having a pivotal connection at one end with said frame and pivotally connected at its other end with one of said first-named links, said pivotally-connected links at either side of the car being adapted to be moved into a retracted past-center locking position for holding the bed against tilting or into an extended position for permitting the bed to be tilted toward the opposite side, and means for moving said links into and out of their past-center locking positions.

4. In a dump car, the combination of a frame, a bed pivotally connected with said frame and adapted to be tilted to discharge its load, two links having hooked engagement at their upper ends with said bed at its opposite sides, means for moving either of said links to permit the bed to be tilted toward the opposite side, and means for locking said links against movement for locking the bed against tilting, the bed being adapted to be moved downward at either side out of engagement with a hooked link at that side.

5. In a dump car, the combination of a frame, a bed pivotally connected with said frame and adapted to be tilted to discharge its load, two links having hooked engagement at their upper ends with said bed at its opposite sides, means for moving either of said links to permit the bed to be tilted toward the opposite side, means for locking said links against movement for holding the bed against tilting, and side gates movably mounted relative to said bed, the bed being adapted to be moved downward at either side out of engagement with the hooked link at that side and said link being adapted to limit the downward movement of the gate at that side whereby the bed is adapted to move out of engagement with the gate.

[Claims 6 to 32 not printed in the Gazette.]

1,168,421. CONTROLLING MEANS FOR INTERNAL-COMBUSTION ENGINES. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Feb. 10, 1906. Serial No. 300,418. (Cl. 123—98.)



1. An internal combustion engine having a fuel chamber, a throttle valve in said chamber, a controlling member secured to said valve and passing through one end of said chamber, a speed governor connected with said controlling member, a second controlling member operatively related to said valve and passing through the opposite end of said chamber, an adjustable spring operatively related to said second member and opposing the movement of said valve by said governor, and an accelerating device also operatively related to said second member for temporarily controlling said valve to the exclusion of said governor.

2. An internal combustion engine having a gas chamber, a piston throttle valve slidable in said chamber, a rod secured to one end of said valve and through which the valve may be moved to control the fuel supply to the engine, a governor connected to said controlling rod, a second rod operatively related to said valve but extending through said chamber in the opposite direction, an adjustable spring for acting upon said second rod to cause the latter to oppose governor controlled movement of the valve, and an accelerator operatively disconnected from said second rod but adapted to be moved at will to control the same and move the throttle to supersede the governor control thereof.

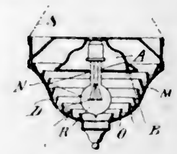
3. An internal combustion engine having a carbureter, a mixing chamber adjacent thereto, a piston throttle valve in said chamber, a rod connected to said valve to move the same and control the fuel supply to the engine, a governor connected to said rod, an auxiliary actuating rod also operatively related to said valve and extending in the opposite direction and controlling means connected to said auxiliary actuating rod temporarily to control the valve to the exclusion of the governor.

4. An internal combustion engine having a gas chamber, a piston throttle valve slidably mounted in the same, a rod secured to said valve, a governor connected to said rod to move the valve, and an auxiliary actuating rod between which and the valve there is provision for relative movement, said rod being adapted to engage the valve when the latter is moved to throttle the mixture.

5. An internal combustion engine having a carbureter, a mixing chamber adjacent thereto, a throttle valve in said chamber, a governor-controlled actuating rod connected to said throttle valve and passing out of one end of said mixing chamber, an auxiliary actuating rod operatively related to said valve and passing through the opposite end of said chamber, an adjustable spring for acting upon said auxiliary rod to cause the latter to oppose governor-controlled movement of the valve, and an accelerating device normally disconnected from the rod but adapted to be moved to control the same and supersede the governor control of the throttle valve.

[Claims 6 to 17 not printed in the Gazette.]

1,168,422. LAMP-SHADE. HANS K. RITTER, Niagara Falls, Ontario, Canada. Filed Nov. 30, 1914. Serial No. 874,911. (Cl. 240—92.)



1. A lamp shade of the class described comprising a frame, a distributer consisting of a plurality of slats mounted on the frame with spaces therebetween and adapted to prevent the light source being seen externally, and an upper reflector consisting of a plurality of annular sections carried by the frame and having spaces therebetween, as and for the purpose specified.

2. A lamp shade of the class described comprising a frame, a distributer consisting of a plurality of angularly disposed slats mounted on the frame with spaces therebetween and adapted to prevent the light source being seen externally, and an upper reflector consisting of a plurality of angularly disposed annular sections carried by the frame with spaces therebetween, the said reflector and distributer being adapted to cause the light rays to pass through the said spaces.

3. A lamp shade of the class described comprising a frame, a distributer consisting of a plurality of slats of S section mounted on the frame with spaces therebetween, and an upper reflector consisting of a plurality of corrugated annular sections having spaces therebetween.

4. A lamp shade of the class described comprising a frame, a distributer consisting of a plurality of slats mounted on the frame and having spaces therebetween, the slats on the upper part of the frame being angularly disposed to those on the lower part of the frame, and an upper reflector mounted on the frame.

5. A lamp shade of the class described comprising a frame, a lower distributer mounted on the frame consisting of a plurality of slats, and an upper reflector mounted on the frame comprising a plurality of annular sections.

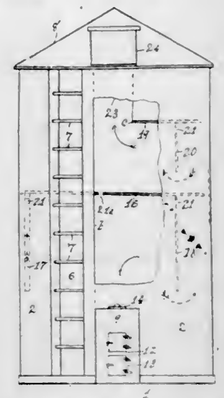
[Claims 6 to 10 not printed in the Gazette.]

1,168,423. CONTAINER FOR SANITARY SHAVING-BRUSHES. HARRY B. RODGERS, Chambersburg, Pa. Filed Nov. 24, 1914. Serial No. 873,759. (Cl. 206—46.)



As a new article of manufacture, a sanitary container for a shaving brush of substantially trapezoidal form, the container having its mouth located at its minor end and its bottom at its major end and having one side substantially at right angles to the said bottom, the walls of the container at the mouth thereof being adapted to be united subsequent to the introduction of the bristle end of the brush into the container and the said walls at the said mouth being arranged to have their ununited portions surround the shank of the brush, that portion of the container which is laterally disposed with relation to the portion embracing the brush being adapted to be folded over and secured to the said brush embracing portion.

1,168,424. HEATING ARRANGEMENT FOR SILOS. WILLIAM ROHM, Appleton, Wis. Filed Mar. 5, 1915. Serial No. 12,339. (Cl. 237—50.)



1. In combination with a silo having an outer and an inner wall with an air space between said walls, a heating system for heating the contents of the silo consisting of a heater located at the lower end of said air space at one side of the silo door and its combustion chamber in communication with the aforesaid air space, a baffle plate arranged horizontally around the silo and across said air space and extending from over the heater exit flue to within a suitable distance of the opposite side of said door, and a flue from said point leading upward and in communication with the outer air through a chimney in the silo roof.

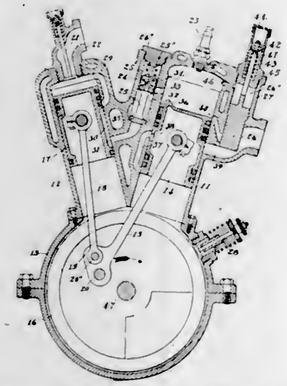
2. In combination with a silo having an outer and an inner wall with an air space between said walls, a heating system for heating the contents of the silo consisting of a heater located at the lower end of said air space at one side of the silo door and its combustion chamber in communication with the aforesaid air space, a baffle plate arranged horizontally around the silo and across said air space and extending from over the heater exit flue to within a suitable distance of the opposite side of the door, a second baffle plate arranged horizontally around the silo across said air space commencing at the aforesaid opposite side of the door and ending at a distance from the first mentioned door side substantially equal to the width of the combustion escape space from the heater to the air space between the silo walls, a vertically arranged baffle plate depending from each horizontal baffle plate at a suitable distance between its ends, and a flue opening from the space upon one side of a vertical baffle plate through the plate to the opposite side thereof near its upper end, and a chimney flue from the last mentioned end of said upper baffle plate to the outer air.

3. In combination with a silo having an outer and an inner wall with an air space between said walls, a heating system for heating the contents of the silo consisting of a heater located at the lower end of said air space at one side of the silo door and its combustion chamber in communication with the aforesaid air space, a baffle plate arranged horizontally around the silo across said air space and extending from over the heater exit flue to within a suitable distance of the opposite side of the door, a vertically arranged flue at the end of said baffle plate connecting the space below to the space above said plate, a second horizontally arranged baffle plate across said air space commencing at the aforesaid opposite side of the door and ending at a distance from the first mentioned

door side substantially equal to the width of the combustion escape space from the heater to the air space between the silo walls, and a chimney flue from the last mentioned end of said baffle plate to the outer air.

4. In combination with a silo having an outer and an inner wall with an air space between said walls, a heating system for heating the contents of the silo consisting of a heater located at the lower end of said air space at one side of the silo door, and its combustion chamber in communication with the aforesaid air space, a baffle plate arranged horizontally around the silo across said air space and extending from over the heater exit flue to within a suitable distance of the opposite side of the door, a vertically arranged flue at the end of said baffle plate connecting the space below to the space above said plate, a second horizontally arranged baffle plate across said air space, commencing at the aforesaid opposite side of the door and ending at a distance from the first mentioned door side substantially equal to the width of the combustion escape space from the heater to the air space between the silo walls, a flue of small area through the first mentioned baffle plate and a chimney flue from below the upper horizontally arranged baffle plate to the outer air.

1,168,425. INTERNAL-COMBUSTION ENGINE. VICTOR ROSENHAGEN, Newport, Ky., assignor of one-half to Arthur C. Hall, Newport, Ky. Filed Feb. 23, 1915. Serial No. 9,836. (Cl. 123—69.)

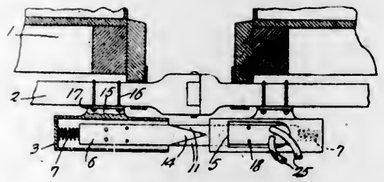


1. In combination in an internal combustion engine a supply cylinder having an inlet and a supply port formed therein, a power cylinder having a supply port, a main exhaust port, an auxiliary exhaust port, and an air supply port formed therein, said second mentioned supply port communicating with said first mentioned supply port and located above said main and auxiliary exhaust ports, said auxiliary exhaust port communicating with said main exhaust port, said main exhaust port being located below said auxiliary exhaust port, a supply piston reciprocally mounted in said supply cylinder, a power piston reciprocally mounted in said power cylinder and adapted to open and close said supply port, said auxiliary exhaust port, and said main exhaust port, said air supply port being located opposite said main exhaust port and adapted to be opened when said main exhaust port is opened by said power piston, an inlet valve adapted to open said power cylinder supply port when said supply piston forces a charge from said supply cylinder into said power cylinder through said supply ports, and to close when said power cylinder supply port is closed by said power piston, and an exhaust valve adapted to close said auxiliary exhaust port and adapted to be opened by the pressure of the exhaust gases when said main exhaust port is opened by said power piston.

2. An internal combustion engine comprising a supply cylinder having inlet and supply ports formed therein, a power cylinder having supply and exhaust ports formed therein, the supply ports of both cylinders having a communicating passage, a valve located in the passage and adapted to permit discharge of gas from said supply cylinder to said power cylinder, said valve having a head adapted to close the supply port of the supply cylinder and to open the supply port of the supply cylinder when discharge pressure from the supply cylinder exists beneath the head, and a sleeve adapted to close the supply port of the power cylinder when the valve head is in its normal position, and to open the supply port of the power cylinder when the valve head is moved to its open position.

3. In an internal combustion engine the combination of a supply cylinder, a power cylinder, a piston reciprocally mounted in the power cylinder, said cylinders having communicating supply ports, a valve located between the supply ports and adapted to open during discharge from said supply cylinder to said power cylinder, said valve comprising a head adapted to close the supply cylinder supply port, and a sleeve adapted to close the power cylinder supply port, said power cylinder having a main exhaust port formed therein below the supply port and adapted to be closed by the power piston, said power cylinder having an auxiliary exhaust port formed therein intermediate its supply and main exhaust ports, and an exhaust valve adapted to close the auxiliary exhaust port while the main exhaust port is closed.

1,168,426. AUTOMATIC AIR-HOSE COUPLING. JOHN ROY, Los Angeles, Cal. Filed Aug. 5, 1915. Serial No. 43,826. (Cl. 188—13.)



In a coupler of the class described, a head terminally bifurcated to form tapered main and auxiliary arms and to form a tapered seat therebetween, the main arm being longer than the auxiliary arm, the auxiliary arm being terminally provided with a tapered notch, and the outer face of the main arm being provided with a tapered longitudinal rib, the main arm and the rib being shaped to be received respectively in the seat and in the notch of a like coupler, the head having a passage embodying a mouth which opens laterally through the inner face of the main arm, the rib coacting with the notch to aline the mouths of two couplers when the same are brought into coöperating relation, and the main arm coacting with the seat to hold said mouths together.

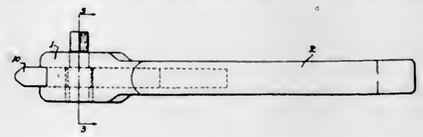
1,168,427. FOLDING UMBRELLA. CARL SARANIECKI, New Haven, Conn. Filed June 9, 1915. Serial No. 33,083. (Cl. 135—26.)

A folding umbrella comprising a tubular rod having a longitudinal slot therein, and further having a relatively short slot and a perforation adjacent its inner end and having a similar perforation through the side opposite the first named slot, an inner rod telescoping within the said tubular rod, a lug upon the inclosed end of the said inner rod slidably mounted in the said first-named relatively long slot, a spring pressed latch upon the said inner rod normally positioned through the said relatively short slot when the umbrella is closed, a handle carried by the outer end of the tubular rod, an expansion spring arranged between the inner end of the said handle and the adjacent end of the said inner rod, inner ribs hinged to the said inner rod and being substantially U-shaped in cross section, guide sleeves secured adjacent the free ends of the said ribs, outer ribs slidably positioned within the said sleeves and inner ribs, an operating ferrule slidably mounted upon the said tubular rod, brace ribs hingedly connected between the said ferrule and the inner ends of the said outer ribs inwardly of the said sleeves, and a spring-



pressed catch carried by the said ferrule and having a path of movement in the plane of the said perforations of the tubular rod.

1,168,428. TOOL-HOLDER. ROBERT J. SAUM, Springfield, Ohio, assignor to The Western Tool & Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed May 27, 1915. Serial No. 30,752. (Cl. 29—100.)



1. A tool holder having a tool receiving channel and a bore substantially at right angles to said channel communicating with same, said bore being of different dimensions, a bushing located in the larger end of said bore having an interior diameter corresponding to the diameter of the small end of said bore; a cam shaft having the opposite ends thereof of substantially the same diameter, and a cam portion intermediate the ends, said cam shaft having one end journaled in the small end of said bore and the other in said bushing, said cam portion on said shaft being capable of being inserted through the large bore and lying substantially co-incident with said tool receiving channel, substantially as specified.

2. A tool holder having a tool receiving channel and a bore arranged at right-angles to said channel and communicating with the same, said bore being of different dimensions, a removable bushing located in the large end of said bore having an interior diameter corresponding to the diameter of the small end of said bore, and a cam shaft having one end journaled in the small end of said bore and the other in said bushing, and a cam on said shaft capable of being inserted through the large end of said bore and lying coincident with said tool receiving channel.

1,168,429. SUPPORT FOR COTTON-PICKERS' SACKS. ALBERT SCHNABEL, Ottine, Tex. Filed Mar. 19, 1915. Serial No. 15,534. (Cl. 21—48.)

1. A cotton picker's bag support comprising a metal box having a strip of metal pivotally connected near its front end, and a keeper for the end of said pivoted strip, and a bag having a fabric tube connected to the lower side thereof to be engaged by said strip.

2. A cotton picker's bag support comprising a metal box having side and end flanges, and a pivoted holder for



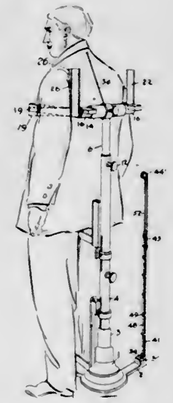
a bag, said holder being detachably connected to a spring keeper, and adapted to pass through a fabric tube connected to the lower side of the bag.

1,168,430. POWDER-PUFF. ANNA J. SCHRODER, Charleston, S. C. Filed June 19, 1915. Serial No. 35,157. (Cl. 132—28.)



A powder puff comprising a fleecy body provided with a perforate backing and a sheet of material overlying said backing, the marginal portions of said backing and sheet being secured one to the other to afford a pocket, a head to which the outer face of the sheet is secured, and a strip secured to the connected marginal portions of the backing and sheet and provided with an outstanding portion, the head being provided with a marginal flange overlying the outstanding portion of the strip.

1,168,431. MEASURING INSTRUMENT. JULIUS SCHUMAN, San Francisco, Cal. Filed Oct. 31, 1912. Serial No. 728,790. (Cl. 33—7.)



1. In a tailor's measuring instrument, the combination of an arm square comprising a vertical member and an approximately horizontal member, the latter arranged to fit close against the arm pit of the persons to be measured, and means for resiliently supporting said horizontal member on said vertical member, said means including means for indicating an excess of pressure of the arm pit on said horizontal member.

2. In a tailor's measuring instrument, the combination of a vertical member, means for adjustably supporting the same above the ground, a spring strip, the lower end of which is rigidly secured to said vertical member and a member extending in general horizontal direction from said spring strip and rigidly secured thereto.

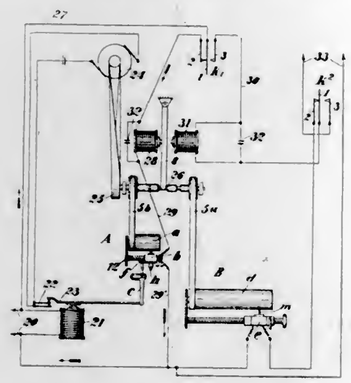
3. In a tailor's measuring instrument, a vertically extensible standard, a horizontal bar supported thereby and vertically adjustable in position by extension of said standard, extension members for said horizontal bar one at each end thereof and means for causing horizontal adjustment of said extensions, said means including means for causing said extensions to move inwardly and outwardly to and from each other by equal movements with relation to said horizontal bar, and an arm square carried at the outer end of each extension, said arm square comprising a vertical member, a horizontal member, and resilient means for normally holding said horizontal member up in true horizontal position, said means including means for indicating downward movement of the horizontal member due to excessive downward pressure thereon.

4. In a tailor's measuring instrument, a vertically extensible standard, a horizontal bar supported thereby and vertically adjustable in position by extension of said standard, extension members for said horizontal bar one at each end thereof and means for causing horizontal adjustment of said extensions, said means including means for causing said extensions to move inwardly and outwardly to and from each other by equal movement with relation to said horizontal bar, and an arm square carried at the outer end of each extension, said arm square comprising a vertical member, a horizontal member, and resilient means for normally holding said horizontal member up in true horizontal position, said means including a resilient strip fastened at its lower end to the vertical member and adapted to normally lie closely to said member, the horizontal member being mounted on said resilient strip somewhat above its lower end.

5. An arm square or the like, comprising a vertical member and a horizontal member, vertically adjustable means for supporting the vertical member, means for resiliently supporting said horizontal member on said vertical member and for indicating downward movement of the horizontal member from true horizontal position due to excessive downward pressure thereon.

[Claims 6 to 8 not printed in the Gazette.]

1,168,432. TELEGRAPHONE. FRANZ SEELAU, Berlin-Wilmersdorf, Germany, assignor of one-half to Alexander M. Newman, Berlin-Wannsee, Germany. Filed May 28, 1914. Serial No. 841,408. (Cl. 179—6.)



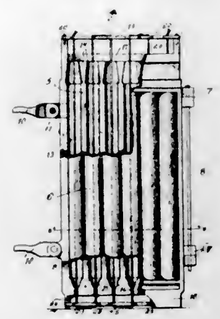
1. A device for recording messages transmitted by telephone comprising a responding roll with response impressions imprinted thereon, a responding sound box coacting with the response impressions on said responding roll, recording rolls, a recording sound box for making message impressions on each said recording roll, a calling telephone line, a connection between the responding sound box and the calling telephone line, switching devices controlled by the responding sound box and the recording sound box, means actuated by the switching device for starting the operation of a recording roll immediately the responding sound box reaches the end of the response impressions and for connecting the calling telephone line to the recording sound box, and means for connecting the calling telephone line to the recording sound box.

2. A device for recording messages transmitted by telephone comprising a responding roll with response impressions imprinted thereon, a responding sound box coacting with the impressions on the said responding roll, a recording roll, a recording sound box for making message impressions on said recording roll, a mounting for said recording sound box, a calling telephone line, a connection between the responding sound box and the calling telephone line, a switching device controlled by the responding sound box and the recording sound box, means actuated by the switching device for starting the operation of the recording roll, immediately the responding sound box reaches the end of the response impressions and for connecting the calling telephone line to the recording sound box, a listening telephone and means for connecting the listening telephone to the said responding sound box.

3. A device for recording messages transmitted by telephone comprising a responding roll with response impressions imprinted thereon, a responding sound box having a diaphragm acting directly on microphonic contacts and bearing a phonographic stile that coacts with the impressions on the said responding roll, a recording roll, a recording sound box for making message impressions on said recording roll, a calling telephone line, a connection between the responding sound box and the calling telephone line, a switching device controlled by the responding sound box and the recording sound box, means actuated by the switching device for starting the operation of a recording roll immediately the responding sound box reaches the end of the response impressions and for connecting the calling telephone line to the recording sound box.

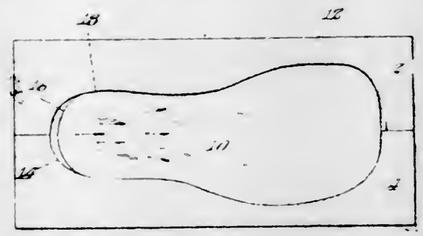
[Claims 6 to 8 not printed in the Gazette.]

1,168,433. CANDLE-MOLD. EMIL SEITER, Marinette, Wis. Filed Sept. 13, 1915. Serial No. 50,295. (Cl. 18—27.)



A mold comprising a pair of sections provided in their opposed faces with grooves coacting to form molds, plates secured to the ends of one section and having one side portion extending therepast adjacent the other section and provided with grooves extending diagonally inwardly from its edge in alternately opposite directions to the axes of said molds.

1,168,434. METHOD OF PREPARING SOLE-BLANKS. ORIN L. SMITH, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 10, 1913. Serial No. 760,277. (Cl. 12—146.)



1. The method of preparing sole blanks for boots or shoes which comprises confining the edges of the forepart of a blank, applying pressure to the faces of the forepart of the blank while the edges of the forepart are confined, and simultaneously elongating the rear part of the blank by exerting pressure on the faces of the shank and heel seat portions of the blank.

2. The method of producing sole blanks for boots or shoes which comprises applying pressure to the faces of the blank and to the edges of its forepart in such manner as to reduce the dimensions of the forepart and elongate the shank and heel seat portions of the blank.

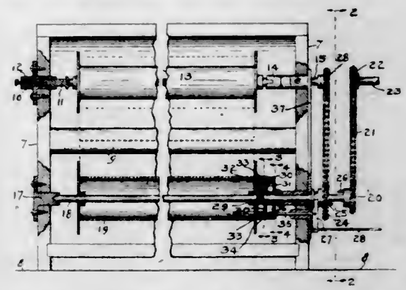
3. The method of preparing sole blanks for boots or shoes which comprises confining the edges of the forepart of a blank, applying pressure to the faces of the forepart of the blank while the edges of the forepart are confined, and exerting pressure on the faces of the rear part of the blank while its rear end is unconfined.

4. The method of preparing sole blanks for boots or shoes which comprises applying pressure to the faces of the forepart of a blank, confining the edges of the blank from a point located at substantially the widest part of the heel seat around the shank and forepart to a point similarly located on the opposite side of the blank, and simultaneously exerting pressure on the faces of the rear part of the blank while its rear end is unconfined.

5. The method of preparing sole blanks for boots or shoes which comprises confining the side edges of the forepart of a blank to prevent lateral expansion and, while the side edges are held confined, elongating the blank by pressure exerted upon its faces.

[Claims 6 and 7 not printed in the Gazette.]

1,168,435. TRANSMISSION FOR PLAYER-PIANOS. GEORGE H. STANT, Connersville, Ind. Filed Mar. 13, 1915. Serial No. 14,160. (Cl. 84—166.)



1. In a musical instrument, a rotating shaft, a roll on said shaft, a gear-housing also on the shaft, power transmission and speed reduction gear assembled in said housing and means for holding one of said parts against rotation.

2. In a musical instrument, a rotating shaft, a roll on said shaft, a gear-housing mounted loosely on the shaft, gear means assembled within the housing for drivingly connecting the shaft and roll when the housing is held from rotating, and means for holding the housing from rotating.
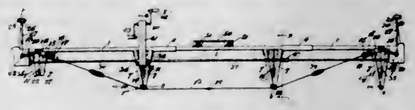
3. In a musical instrument, a rotating shaft, a roll on said shaft, and means for driving the roll from the shaft comprising a spur pinion, an internal gear surrounding it and both concentric with the shaft, an intermediate gear meshing with the other two, and means for holding the intermediate gear from rotating.

4. In a musical instrument, a rotating shaft, a roll on said shaft, a gear-housing mounted loosely on the shaft, means for driving the roll from the shaft comprising a spur pinion, an internal gear surrounding it and fixed to the roll, an intermediate gear meshing with the other two, and means for holding the housing against rotation.

5. In a musical instrument, a rotating shaft, a roll on said shaft, means for driving the roll from the shaft comprising a spur pinion, an internal gear surrounding it and both concentric with the shaft and an intermediate gear meshing with the other two, a spool, transmission means for rotating the spool from said rotary shaft, a coupling means for releasing the spool, and means when the spool is uncoupled for holding the intermediate gear to drive the roll.

[Claim 6 not printed in the Gazette.]

1,168,436. SCAFFOLD. AUGUST STELZER, St. Louis, Mo. Filed May 3, 1915. Serial No. 25,593. (Cl. 20—81.6.)



1. A scaffold comprising a number of detachably united platforms, a revoluble roll supported transversely at each end of the scaffold and in substantially the same horizontal plane therewith, a bracket at each end of the scaffold above the rolls respectively, a single suspending rope at each end of the scaffold having its lower end connected to the corresponding roll, said ropes being guided by said brackets, two independently revoluble shafts extending longitudinally of the scaffold toward the center thereof

for operating said rolls, and independent actuating connections for actuating said shafts independently of each other.

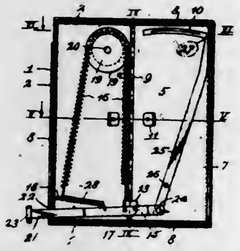
2. A scaffold comprising a platform, a revoluble roll at each end of said platform in substantially the same horizontal plane therewith, a rope arranged to wind on each roll to suspend the platform, a bracket above each roll through which the rope extends, two longitudinal shafts supported by the platform, gearing connecting said shafts with said rolls, respectively, and mechanism for revolving said shafts independently of each other.

3. A scaffold comprising a platform, a revoluble roll supported transversely at each end of the platform in substantially the same horizontal plane therewith, two independently revoluble shafts for revolving said rolls independently of each other, a support intermediate of said rolls, a device in said support for operating one of said shafts independently of the other, an additional device in said support for operating the other of said shafts independently of the one previously mentioned, a single rope connected to and arranged to wind on each roll, a rigid guide bracket for the rope above the roll, and a movable guide for the rope adjacent to each roll.

4. A scaffold comprising a platform, a roll supported at each end of the platform in substantially the same horizontal plane therewith, two independently revoluble longitudinal shafts for revolving said rolls independently of each other, gear devices entraining said shafts with said rolls, respectively, mechanism intermediate of said rolls for operating said shafts independently or concurrently as desired, a single suspending rope connected with each roll, a rigid guide bracket for the rope above each roll.

5. A scaffold comprising a platform, a roll at each end of said platform in substantially the same horizontal plane therewith, longitudinal shafts geared with said rolls, means for operating said longitudinal shafts effectively to revolve said rolls to wind or to unwind the supporting ropes, a single rope for suspending each end of the plaform and connecting with the corresponding roll, guide brackets for the ropes above said rolls, and a device for guiding the winding of the rope on each of said rolls.

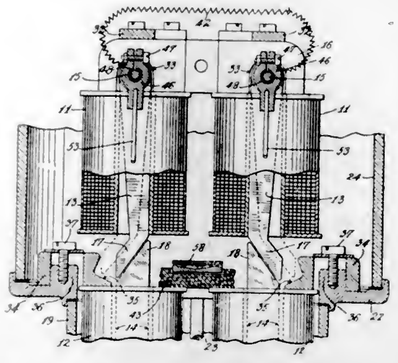
1,168,437. CIGARETTE-DISPENSING CASE. ANDREW STONE, Kansas City, Mo. Filed Apr. 17, 1915. Serial No. 22,006. (Cl. 206—41.)



1. In a device of the character described, a case having a magazine communicating with an outlet and adapted to hold cigars or cigarettes, a follow plate in said magazine to push the contents thereof toward the outlet, a plunger to lock said follow plate while the magazine is being loaded, and means controlled by said plunger to eject the contents of said magazine one by one through the outlet.

2. In a device of the character described, a case having a magazine communicating with an outlet, a slotted partition separating the magazine from the remainder of the case, a follow plate in said magazine to push the contents thereof toward the outlet, a guide on said follow plate operating in the slot of the magazine and having a bevel corner, a plunger to lock said follow plate while the magazine is being filled, and a lever controlled by said plunger to eject the contents of the magazine one by one through the outlet.

1,168,438. ELECTRIC RELAY. REUBEN WILLIAM TARRANT, Clapham, London, England. Filed June 3, 1914. Serial No. 842,557. (Cl. 175—281.)



1. An electric relay comprising in combination, a pair of axially alined U-shaped electromagnets, the cores of one of said magnets being fixed and those of the other magnet being movable about axes transverse to the common plane of the core-axes at the respective outer ends thereof, pole pieces on the nearer ends of each pair of alined cores, and soft iron shoes adjustably disposed opposite the pole pieces of the respective movable cores in the plane of motion thereof.

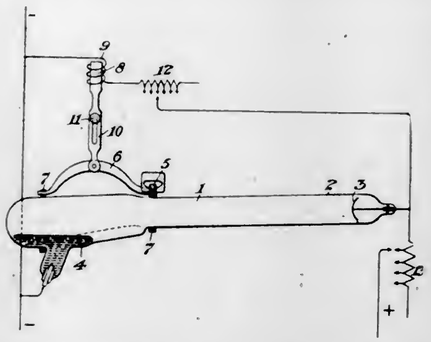
2. An electric relay comprising in combination, a pair of axially alined U-shaped electromagnets, the cores of one of said magnets being fixed and those of the other magnet being movable about axes transverse to the common plane of the core-axes at the respective outer ends thereof, and pole pieces on the nearer ends of each pair of alined cores, having faces disposed in planes approximately normal to the direction of motion of the movable pole pieces.

3. An electric relay comprising in combination, a pair of axially alined U-shaped electromagnets, the cores of one of said magnets being fixed and those of the other magnet being movable about axes transverse to the common plane of the core-axes at the respective outer ends thereof, pole pieces on the nearer ends of each pair of alined cores, having faces disposed in planes approximately normal to the direction of motion of the movable pole pieces, and circuit controlling switches each movable as a unit with its respective movable core.

4. An electric relay comprising in combination, a pair of axially alined U-shaped electromagnets the cores of one magnet being fixed, rock shafts fixed to the other magnet and transverse to the plane of its axis at the outer ends of the cores thereof, pole pieces on the nearer ends of each pair of alined cores said pole pieces being normally closely adjacent and provided with opposing similar plane surfaces which are inclined to the axis of the alined cores but perpendicular to the plane of the two pair of axes, the inclination of the faces being so determined that the pole pieces of the fixed cores lie between those of the movable cores, and a circuit controlling switch fixed to each rock shaft so as to move with the movable core.

1,168,439. SYSTEM OF CONSTANT-CURRENT DISTRIBUTION. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 22, 1913. Serial No. 756,074. (Cl. 176—45.)

1. A constant potential device comprising an exhausted container and electrodes therein, one of which is vaporizable, said container being provided with an adjustable cathode position, and pivotal bearings for said container, in combination with means for tilting said device to adjust said cathode position in response to the voltage upon said device.



2. The combination of a constant current circuit, a mercury vapor apparatus comprising an exhausted container and suitable electrodes therein, one being a cathode adjustable in position, a circuit in shunt to said device and means comprising a tilting coil in said shunt circuit whereby the position of said cathode is approached toward said anode on a rise in pressure within the device.

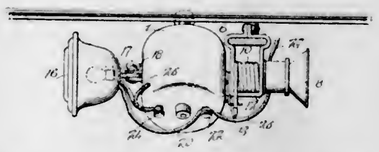
3. A mercury vapor apparatus comprising an exhausted container and electrodes therein, one being of mercury, a pivotal mounting for said container, means for tilting said container whereby movement is secured in said mercury and means for limiting the motion of said container so that the line connecting the center of gravity with the center of the pivotal mounting always lies in the central portion of the angle formed by a vertical and horizontal line through the center of said pivotal mounting.

4. In a system of electrical distribution, the combination of a constant current circuit, a mercury vapor device comprising an exhausted container and electrodes therein, one of which is adjustable on tilting the device and means comprising a coil in series with said apparatus for moving said container, and a coil in shunt thereto opposing said first named coil.

5. A system of electrical distribution comprising a constant current circuit, a mercury vapor apparatus comprising a movable exhausted container and electrodes therein, one of which approaches the other upon the lowering of the anode end of the container from the normal operating position, bearing for said apparatus and tilting means attached to said apparatus on the anode side of said bearing, composed of two opposing coils, one dominating the other and connected in series with the device and the latter connected in shunt thereto, in combination with means for bridging the electrodes in the non-operating condition of the apparatus.

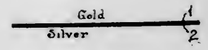
[Claims 6 to 10 not printed in the Gazette.]

1,168,440. SIGNAL-HOLDING BRACKET. ALBERT W. THOMPSON, Key West, Fla. Filed Mar. 27, 1913. Serial No. 757,204. (Cl. 74—5.)



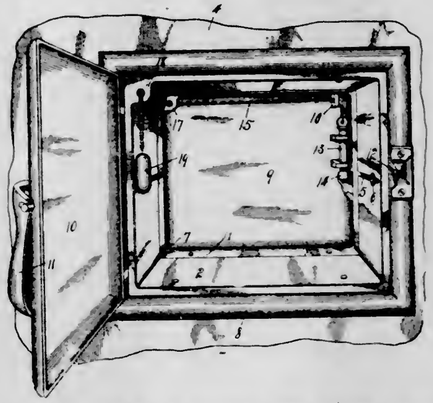
A supporting bracket including a bridge having a pair of arms extending therefrom and having their free end portions formed into clamps, a pivot pin extending through said arms adjacent said bridge, a lever mounted upon said pin and having its free end portion bent to extend across said bridge, and a spring mounted upon said pivot pin between the arms of said bracket and having one end portion rigidly secured to said bracket and its free end extending to engage the bent end portion of said lever whereby said spring will yieldably hold said lever in a normal position.

1,168,441. COMPOSITE METALLIC PLATE. CHARLES J. THORP, Detroit, Mich. Original application filed Nov. 23, 1914, Serial No. 873,428. Divided and this application filed Jan. 11, 1915. Serial No. 1,692. (Cl. 29—182.)



A bimetallic plate, composed of gold and silver fused together to form a plate having opposite exposed faces with one exposed face silver and the other exposed face gold.

1,168,442. WALL-RECEPTACLE. JAMES M. TRIGGS, Huntington, Ind. Filed Mar. 24, 1915. Serial No. 16,785. (Cl. 232—41.)



1. In combination, a stationary part having a catch member, a door hinged for swinging movements relative to said part, a latch member carried by said door for catch engagement with said catch member when the door is closed, and means manually operable at the inner side of said door to move said latch member to released position and counterbalance it in such position during an opening of the door, and automatically operable upon a closing movement of the door to permit the latch member to move by gravity into locking position.

2. In combination, a door casing having a catch part interiorly thereof, a door hinged to said casing, a gravity latch member carried by said door adjacent to its free edge portion and adapted to interengage with said catch member to lock the door in closed position, guide parts on said door and casing, a draft member extending from said latch member through said guide parts and weighted in opposition to said latch member, said draft member and its weight being operable to maintain the latch member in raised or released position when the latch member has been moved to such position and being operable in conjunction with the closing movements of the door to permit a lowering of the latch member into catch engaging position.

3. The combination with a door casing and a door hinged thereto, of a catch part carried by the casing, a gravity latch member carried by the door in position to

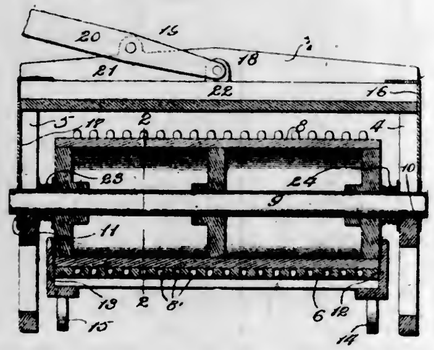
have locking engagement with the catch part when the door is closed, guide parts carried by said door and casing and a draft member weighted at one end and thence extending through said guide parts and connected to said latch member, the normal pull exerted on the latch member by said draft member being sufficient to maintain the latch member in raised or released position when it has been moved to such position, said draft member and guide parts coöperating to counteract the gravity action of the weighted end portion of the draft member and to permit a movement of the latch member into locking position during a swinging of the door from open to closed position.

4. In combination, a casing having a catch member, a door hinged to the casing and having a gravity latch member for engaging said catch member, guide parts on said door and casing, a flexible draft member extending up from the latch member, thence successively through the guide parts on said door and casing and being weighted at its free end, a guide part on said casing being located nearer to the free or outer edge of the door when closed than is the swinging axis of the door, said weighted draft member serving to maintain the latch member in raised or released position when it has been moved to such position and coöperating with said guide parts to slacken and permit a lowering of the latch member to locking position when the door is swung from open to closed position.

5. In combination, a case having two doors arranged in different walls thereof, one door being hinged, means for locking the other of said doors at the outside of the case, and means within the case for locking the hinged door in closed position, said last means being operable from within said other door and independently of a movement thereof to r tain the locking member thereof in released position when moved to such position and being automatically operable to lock the hinged door when swung from open to closed position.

[Claim 6 not printed in the Gazette.]

1,168,443. GRATE-CLEANER. FRANK TREUKE, Herculaneum, Mo. Filed Sept. 13, 1915. Serial No. 50,504. (Cl. 110—40.)



1. In a device of the character described, a grate, a cylinder having projections, adjustable means, to vary the space between the grate and the cylinder and for bringing the projections of said cylinder into selective engagement with the openings in said grate.

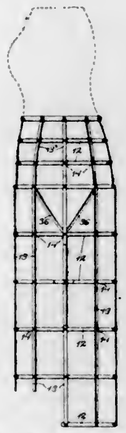
2. In a device of the character described, a chain grate comprising sections adjacently secured together, a cylinder with projections of substantially the size and positioning as the grate openings, and adjustable means, to vary the space between the grate and the cylinder, and for selectively bringing the grate and cylinder into frictional engagement.

3. In a device of the character described, a chain grate comprising sections adjacently secured together, a cylinder with projections of substantially the size and positioning as the grate openings, shaft stands, said cylinder mounted on said shaft and said shaft rotatively secured to said stands, said stands having vertical slots in which said shaft may move and means for moving said shaft in the slots in said stands.

4. In a device of the character described, a herring bone chain grate, a cylinder with projections on its lateral surface, the cylinder in frictional engagement with the grate so that each projection of the cylinder, engages a certain opening of the grate, thereby causing the clinker in each grate opening to be removed by its companion projection of the cylinder, and means for regulating the pressure of said cylinder against said grate and for varying the space between the grate and the cylinder.

5. In a device of the character described, a herring bone chain grate, a cylinder with projections on its lateral surface, the cylinder in frictional engagement with the grate so that each projection of the cylinder engages a certain opening of the grate, thereby causing the clinker in each grate opening to be removed by its companion projection of the cylinder and means for regulating the pressure of said cylinder against said grate for purposes of cleaning both said grate and said cylinder, comprising shaft stands, a cylinder shaft, said cylinder mounted on said shaft and said shaft rotatively secured to said stands, said stands having vertical slots in which said shaft may move and means for moving said shaft in the slots in said stands, substantially for the purposes set forth.

1,168,444. COLLAPSIBLE SKIRT-FORM. CHARLES A. UFFORD, Boston, Mass. Filed June 12, 1913. Serial No. 773,238. Renewed Feb. 5, 1915. Serial No. 6,373. (Cl. 223—18.)



1. A collapsible skirt form comprising a series of annular bands, the band at one end of the series constituting a waist band, a plurality of flexible strips each intersecting and pivoted to all the bands, so that the form may be longitudinally collapsed, a longitudinal internal strut adapted to prevent the collapse of the form, the strut being composed of detachably connected sections adapted to be separated to render the strut inoperative, and means for holding said sections connected to the form when the latter is collapsed.

2. A collapsible skirt form comprising a series of annular bands, the band at one end of the series constituting a waist band, a plurality of flexible strips each intersecting and pivoted to all the bands, so that the form may be longitudinally collapsed, and a longitudinal internal strut adapted to prevent the collapse of the form, the strut being composed of longitudinally slotted sections, and provided with devices engaging said slots whereby the sections may be detachably connected, and adjusted relatively to each other to vary the length of the strut.

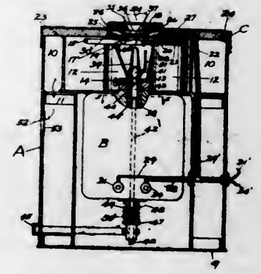
3. A collapsible form comprising a series of annular bands, the band at one end of the series constituting a waist band, a plurality of flexible longitudinal strips each intersecting and pivoted to all of the bands, the waist band and the lowest band being provided with cross bars, and a longitudinal internal strut engaged with said cross bars to prevent the collapse of the form.

4. A collapsible form comprising a series of annular bands, the band at one end of the series constituting a waist band, a plurality of flexible longitudinal strips each intersecting and pivoted to all of the bands, the waist band, the lowest band and one or more of the intermediate bands being provided with cross bars, and a strut adapted to prevent collapse of the form and composed of separable sections separably connected with said cross bars.

5. A collapsible skirt form comprising a series of annular bands including a waist band, and a plurality of flexible strips, each intersecting and pivoted to all the bands, the waist band being adjustable in diameter and provided with means for securing it at different diameters, and with a longitudinally adjustable strut-engaging cross bar extending across the interior of the waist band and composed of overlapping sections attached to the waist band and provided with means whereby they may be secured together at different adjustments.

[Claims 6 to 11 not printed in the Gazette.]

1,168,445. MOTOR-DRIVEN CIGAR CUTTER AND INHALER. ERNEST D. VAN DERSAL, Portland, Oreg. Filed Jan. 23, 1915. Serial No. 3,968. (Cl. 131—38.)

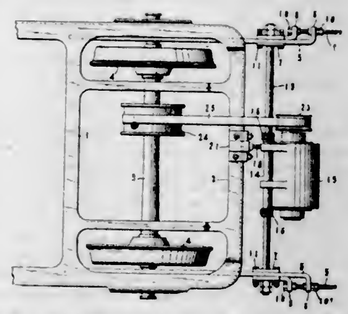


1. A cigar cutting and cleaning device, comprising a case having a spiral air chamber with an inlet and an outlet, a rotatable fan within the chamber, a support on its upper part, guides with stops thereon, secured upon the said support, a slidable frame on said guides provided with a knife and engageable with the guide stops, a spring positioned to engage the frame and the guide support, electrical motive means within the case, mechanism between said fan and the motive means to transmit rotary motion to the fan, means in the upper part of the case to effect an electrical connection between the motive means and a power source, substantially as described.

2. A cigar cutting and cleaning device, comprising a case having a spiral air chamber with an inlet and an outlet, a rotatable fan within the chamber, a perforator within the said chamber extending through the center of said fan and rotatable by it, means to vertically raise and drop said perforator, an auxiliary actuating spring on the perforator, electrical motive means within the case, mechanism between said fan and the motive means to transmit rotary motion to the fan, means in the upper part of the case to effect an electrical connection between the motive means and a power source, substantially as described.

3. A cigar cutting and cleaning device, comprising a case having a spiral air chamber with an inlet and an outlet, a rotatable fan within the chamber, guides with stops thereon, secured upon the upper part of the fan, a slidable frame on said guides provided with a knife and engageable with the guide stops, a spring positioned to engage the frame and the guide support, a perforator within said chamber extending through the center of said fan and rotatable by it, means to vertically raise and drop said perforator, an auxiliary actuating spring on the perforator, electrical motive means within the case, mechanism between said fan and the motive means to transmit rotary motion to the fan, means in the upper part of the case to effect an electrical connection between the motive means and a power source, substantially as described.

1,168,446. CAR-AXLE POWER-TRANSMITTING MECHANISM. RUDOLPH VUILLEUMIER, New Rochelle, N. Y., assignor to The Safety Car Heating and Lighting Co., New York, N. Y., a Corporation of New Jersey. Filed Jan. 10, 1912. Serial No. 670,383. (Cl. 105—238.)



1. In an apparatus of the character described, in combination, a car truck, a generator suspended therefrom, means for adjustably securing said generator in fixed position, a pulley on the generator, a second pulley on an axle of the truck, and an elastic belt connecting said pulleys and adapted to drive the generator as the axle rotates, said belt being composed of materials so proportioned that an excessive pressure on the driving pulley is eliminated.

2. In an apparatus of the character described, in combination, a car truck, a generator suspended therefrom, means for adjustably securing said generator in fixed position, a pulley on the generator, a second pulley on an axle of the truck, and an elastic belt connecting said pulleys and adapted to drive the generator as the axle rotates, said belt being composed of a strip of belting and an elastic strip of steel.

3. In an apparatus of the character described, in combination, a car truck, a generator suspended therefrom, means for adjustably securing said generator in fixed position, a pulley on the generator, a second pulley on an axle of the truck, and an elastic belt connecting said pulleys and adapted to drive the generator as the axle rotates, said belt being composed of an inner strip of belting and an outer strip of sheet steel.

4. In an apparatus of the character described, in combination, a car truck, a generator suspended therefrom, means for adjustably securing said generator in fixed position, a pulley on the generator, a second pulley on an axle of the truck, and an elastic belt connecting said pulleys and adapted to drive the generator as the axle rotates, said belt being composed of an inner strip of belting and an outer strip of sheet steel, said leather being longitudinally compressed before being secured to the strip of steel.

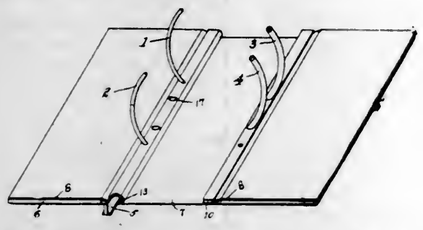
5. In an apparatus of the character described, in combination, a car truck, a generator suspended therefrom, means for adjustably securing said generator in fixed position, a pulley on the generator, a second pulley on an axle of the truck, and an elastic belt connecting said pulleys and adapted to drive the generator as the axle rotates, said belt being composed of an inner strip of belting and an outer strip of sheet steel, said strip of steel being provided with cuts to permit an elastic extension thereof.

[Claims 6 to 26 not printed in the Gazette.]

1,168,447. BOOK OR FILING DEVICE. BRADFORD WEBSTER, Louisville, Ky., assignor to Webster Loose-Leaf Filing Company, a Corporation of Kentucky. Filed Jan. 29, 1910. Serial No. 540,930. (Cl. 129—23.)

1. A file, comprising leaves and a retaining member; said retaining member passing through some of said leaves

obliquely; said leaves being provided with openings adapted to hold them to said retaining member against lateral movement whether said retaining member passes through them obliquely or perpendicularly.



2. A file, comprising leaves and a retaining member; said retaining member being approximately circular in cross-section; and said leaves being provided with openings, whose contour is an ellipse whose minor axis approximates the diameter of the minimum cross-section of said retaining member.

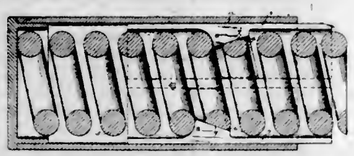
3. A file, comprising leaves, a retaining member, and a base therefor; said retaining member being curved lengthwise and approximately circular in its minimum cross-section; and said leaves being provided with openings whose contour is an ellipse whose minor axis approximates the diameter of said minimum cross-section and whose major axis approximates the major axis of the maximum section of said retaining member parallel to said base.

4. Leaves, two binding parts therefor, and back cover means for swingingly connecting said binding parts; one of said binding parts having positively fixed therein a perforated retaining member which is curved lengthwise; and the other having positively fixed therein a retaining member curved lengthwise and having a locking mechanism adapted to penetrate said perforated member.

5. Leaves, two binding parts therefor, and back cover means for swingingly connecting the rear edges thereof adapted to allow said edges to move toward and away from each other; one of said binding parts having positively fixed therein a perforated retaining member, and the other having positively fixed therein a retaining member and having a locking mechanism adapted to penetrate said perforated member.

[Claims 6 to 25 not printed in the Gazette.]

1,168,448. FRICTION DRAFT-GEAR. GEORGE WESTINGHOUSE, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 28, 1906. Serial No. 345,422. (Cl. 213—64.)

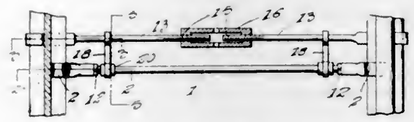


1. A yielding resistance mechanism comprising a continuous helical resistance spring having one only of its intermediate coils partly cut away to form a weakened portion of less cross-sectional area than the remainder of the spring, and provided with an inclined wedging surface, a member having a corresponding wedging surface for engaging therewith, and means coöperating with said member for producing frictional resistance.

2. A yielding resistance mechanism comprising a continuous resistance spring having one of its intermediate coils of less cross-sectional area and weaker than the remainder of the spring, and provided with an inclined wedging surface, a plurality of longitudinal segments each having a projection provided with a corresponding wedging surface for coöperating with the inclined surface of the coil, and means coöperating with said segment for producing frictional resistance.

3. A yielding resistance mechanism comprising a continuous resistance spring having one only of its intermediate coils provided with an inclined wedging surface, a plurality of longitudinal segments having helical projections provided with corresponding wedging surfaces and extending between the adjacent coils of the spring whereby the expansion of the spring operates to release the segments, and means coöperating with said segments for producing frictional resistance.

1,168,449. ANTI-RAIL-SPREADING DEVICE. ALONZO WINSTEAD, Sharpsburg, N. C. Filed May 14, 1915. Serial No. 28,106. (Cl. 238—5.)



1. An anti-rail spreading device including a gage bar, of a length to extend across a track and provided with terminal means for engaging the rails at one side thereof, pivoted arms located between the rails and extending from and carried by the gage bar, and means carried by the said arms for engaging the rails at the other side thereof, said arms permitting the last mentioned means to swing into and out of position for engaging the said rails.

2. An anti-rail spreading device including a gage bar or rod provided with means for engaging the rails at the inner sides thereof to form stops for preventing inward movement of the rails, links or arms extending from the gage bar or rod, tie rods slidably connected with the links or arms and provided at their outer ends with means for engaging the rails at the outer sides thereof to prevent the rails from spreading and means for adjustably connecting the inner portions of the tie rods.

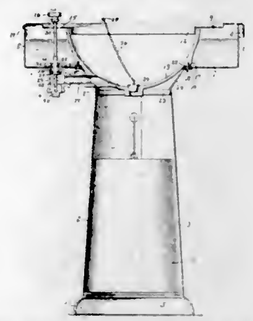
3. An anti-rail spreading device of the class described including a gage bar or rod provided with means for engaging the rails at the inner sides thereof to prevent the rails from moving inwardly, links pivotally connected with the gage bar or rod, and arranged at right angles thereto and provided with openings, tie rods slidable in the openings and provided at their outer ends with means for engaging the rails at the outer side thereof and a device adjustably connecting the inner portions of the tie rods and adapted to move the same inwardly and outwardly.

4. A device of the class described including a gage bar or rod having threaded terminals, arms extending from the gage bar at the inner ends of the said threaded terminals, threaded sections engaging the threaded terminals of the gage bar or rod and provided with means for engaging the rails of a track at one side of the said rails and means carried by the said arms for engaging the rails at the other side thereof, said arms permitting the last mentioned means to swing into and out of position for engaging the rails.

1,168,450. WASHSTAND. HERBERT J. WOOD, Mount Clemens, Mich. Filed May 22, 1915. Serial No. 29,729. (Cl. 4—1.)

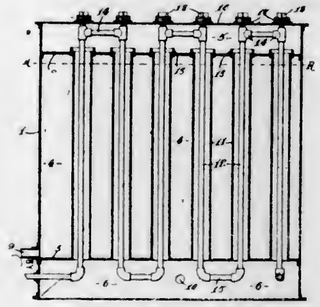
1. In a wash-stand, the combination of a pedestal having a flaring top ending in a radial flange, a reservoir having a flat bottom resting on said radial flange and provided with an opening substantially of the same diameter as the inner diameter of the flange, a bowl substantially hemispherical extending into said opening in the bottom of the reservoir and having a flange resting on the edge of said bottom, said bowl having inlet and outlet openings, a connection attached to the bottom of the reservoir and said inlet opening of the bowl, a valve to control the flow of water through said connection, and means to close the outlet opening.

2. In a wash-stand, the combination of a pedestal and a bowl having an inlet opening in one side and a central outlet opening, a reservoir surrounding the bowl and having a flat bottom, a cover for the reservoir, means to support the bowl and to form a watertight joint between the bowl and reservoir-bottom, a valve-body secured to the lower side of the reservoir-bottom, an operating stem for the valve extending upward through the cover and having a knob at its upper end, and means connecting the valve-body to the inlet opening in the bowl.



3. In a wash-stand, the combination of a bowl having an inlet opening, a reservoir surrounding the bowl and having a flat bottom, a cover for the reservoir, a T mounted just below the bottom, a pipe connecting one branch of the T to the inlet opening of the bowl, a plug screwing into a second branch of the T and through an opening in the bottom of the reservoir and formed with a flange to secure the T to said bottom and with a plurality of holes, at least one being adapted to permit water to flow into the T, a valve stem mounted in one of said holes and extending up above the cover, a valve on the stem below the plug to close the holes therein, a spring to hold the valve against said plug and mounted within said T, and a plug screwed into the third branch of the T to support said spring.

1,168,451. APPARATUS FOR TREATING GAS. LUDWIG ALVINE ZÖHE, Syracuse, N. Y. Filed May 9, 1910, Serial No. 560,197. Renewed June 15, 1915. Serial No. 34,314. (Cl. 48—135.)



1. In an apparatus for bringing gas in contact with a liquid, a receiver for the gas, a conduit for the liquid, the conduit extending into the receiver and having an outlet from its interior to the periphery thereof over which the liquid runs, and means for controlling the temperature of the liquid within the conduit, substantially as and for the purpose described.

2. In an apparatus for treating gas, a receiver for the gas, an outer conduit within the receiver, and an inner conduit within the outer conduits, one conduit communicating with the interior of the receiver for discharging the liquid on the peripheral surface of the outer conduit, and the other conduit conveying a medium for controlling the temperature of such peripheral surface, substantially as and for the purpose specified.

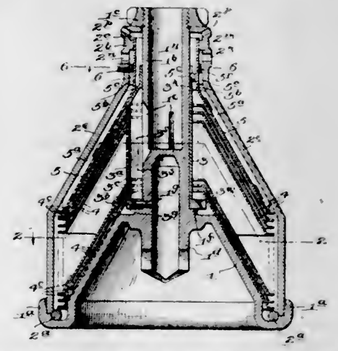
3. In an apparatus for treating gas, a receiver for the gas, a vertically extending conduit for the liquid with which the gas is to be treated, the conduit having an outlet from its interior to its periphery whereby the liquid may run freely down the periphery of the conduit, and a conduit within the former conduit, substantially as and for the purpose set forth.

4. In an apparatus of the class described a receiver for gas and conduits for liquid, the conduits extending into the receiver and having outlets from their interiors to the peripheries thereof over which the liquid runs, the peripheries being non-absorbent, substantially as and for the purpose described.

5. In an apparatus for treating gas, a receiver for the gas, an outer upwardly extending conduit within the receiver, and an inner conduit within the outer conduit, one conduit communicating with the interior of the receiver for discharging a liquid on the peripheral surface of the outer conduit, and the other conduit conveying a medium for controlling the temperature of the liquid on such peripheral surface, the last-mentioned conduit being disconnected from the receiver, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,168,452. CENTRIFUGAL CREAM-SEPARATOR. CARL OSCAR ANDERSON, Lancaster, Pa., assignor to The Champion Blower & Forge Co., Lancaster, Pa., a Corporation of Pennsylvania. Filed Sept. 28, 1914. Serial No. 863,891. (Cl. 233—29.)



1. The combination, in a cream separator, of a bowl provided with a centrally disposed feed-tube having discharge openings therein, a distributing sleeve surrounding said tube having radially extending hollow projections forming vertically disposed channels; said projections having perforations in their outer walls and open sides facing said discharge openings and said sleeve fitting closely against said tube between said projections, together with separating devices surrounding said sleeve between which the milk is discharged through said perforations.

2. In combination, a bowl provided with a centrally disposed feed-tube having vertically disposed slots therein, a distributing sleeve surrounding said tube having spaced integral radially extending hollow projections forming vertically disposed channels with perforations in their outer walls and open sides facing said slots; the parts of the sleeve between said projections fitting closely against said tube, and separating disks surrounding said sleeve adapted to receive therebetween the milk issuing through said perforations.

3. In a cream separator, a bowl having a central standard provided with a whole milk feed passage and discharge openings therein, a distributing sleeve surrounding said

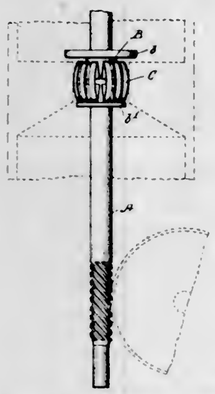
standard having radially extending hollow projections with open sides facing said discharge openings and perforations in their outer walls; said outer walls being located beyond the cream zone, and a series of slightly separated conical plates surrounding said sleeve between which the whole milk is discharged through the perforations in said projections.

4. In a cream separator, the combination with a casing having a centrally disposed feed-tube with discharge openings therein, a distributing sleeve surrounding said tube having radially extending hollow projections with open sides facing said discharge openings and perforations in their outermost walls; said walls being located beyond the cream zone, conical separating disks surrounding said sleeve having notches therein to receive said projections, and a conical divider-plate arranged between the outermost disk and the casing and having a tubular neck surrounding but slightly separated from the feed-tube and fitting closely within the neck of the casing; the latter having an interior annular channel with a milk exit in communication with the space between the casing and the divider-plate, and the neck of the divider-plate being open at its upper end and in communication with a cream exit in the neck of the bowl.

5. The combination, in a cream separator, of a casing having a tubular neck, a feed-tube within said casing, a distributing device around said tube having vertically disposed channels into which the feed-tube discharges; said channels having discharge apertures therein, a series of conical separating disks arranged to receive therebetween the milk issuing from the apertures in said distributing device, and a conical divider-plate arranged between the uppermost disk and the casing and having radially disposed ribs on its upper surface converging toward its neck, said neck of the divider-plate surrounding but slightly separated from the feed-tube and fitting closely within and against the tubular neck of the casing, together with means for causing said parts to rotate with the feed-tube.

[Claims 6 to 13 not printed in the Gazette.]

1,168,453. RADIAL ELLIPTICAL SPRING. CARL OSCAR ANDERSON, Lancaster, Pa., assignor to The Champion Blower & Forge Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed May 22, 1915. Serial No. 29,809. (Cl. 267—26.)



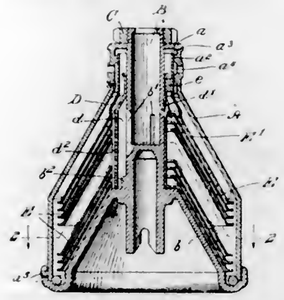
1. A circular spring consisting of a series of metal strips each having the form of an ellipse and united at opposite ends thereof with marginal portions which extend transversely of the group.

2. A circular spring consisting of a single piece of sheet metal cut and bent to provide a series of springs each having the form of an ellipse with their end portions integral with marginal portions which extend transversely of the series at one side of the circle concentric with the axis of the spring.

3. A circular spring consisting of a series of narrow metal strips each having the form of an ellipse and integral at opposite ends thereof with narrow marginal portions which extend transversely of the group, said marginal portions being arranged in juxtaposition on the inner side of the circle.

4. In combination, a vertically disposed shaft, a collar on said shaft, an outer casing, and a circular spring cushion interposed between said collar and casing; said cushion consisting of a series of elliptical springs each connected at opposite ends thereof with marginal portions which extend transversely of the series at one side of the circle concentric with the axis of the spring.

1,168,454. CENTRIFUGAL CREAM-SEPARATOR. CARL OSCAR ANDERSON, Lancaster, Pa., assignor to The Champion Blower & Forge Company, Lancaster, Pa., a Corporation of Pennsylvania. Filed June 15, 1915. Serial No. 34,263. (Cl. 233—35.)



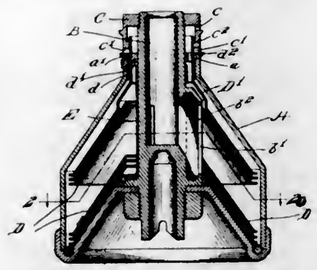
1. A cream separator, comprising a bowl or casing, a centrally disposed feed-tube projecting through a neck of the casing and having lateral discharge openings therein, a series of superposed separating disks surrounding said feed-tube, and an interposed distributing device consisting of a substantially tubular body or sleeve having radially extending hollow projections having outer perforated walls and open sides facing the discharge openings in said tube, so as to form vertically disposed distributing channels; said sleeve having a tubular neck closely fitting said tube and closing the upper end of said channels, which are open at their lower ends, and said feed-tube having an annular shoulder on which said sleeve rests, thereby normally closing the lower ends of said channels.

2. In combination, a bowl provided with a centrally disposed feed-tube having vertically disposed slots therein, a distributing sleeve surrounding said tube having spaced integral hollow projections with perforations in their outer walls and forming vertically disposed distributing channels having open sides facing the slots in said sleeve; the parts of the sleeve between said projections fitting closely against said tube; and separating disks surrounding said sleeve adapted to receive therebetween the milk issuing through said perforations; said sleeve being open at its lower end and resting upon an annular shoulder on the feed-tube normally closing the lower ends of said channels, which are also closed at their upper ends.

3. In a cream separator, a distributing device consisting of a substantially tubular body or sleeve adapted to fit around a feed-tube, and having a plurality of radially extending hollow projections forming vertically disposed channels with open sides adapted to face discharge apertures in the feed-tube; the outer walls of said projections being perforated and having vertically disposed grooves in their outer sides.

4. In combination with a feed-tube having a series of discharge apertures therein spaced apart around the tube, a distributing sleeve fitting closely against said tube between said discharge apertures and having a series of radially extending hollow projections with outer perforated walls forming vertically disposed trough-like channels with open sides facing said apertures; said outer walls having exterior vertically disposed grooves therein and said sleeve having both ends normally closed.

1,168,455. CENTRIFUGAL CREAM-SEPARATOR. CARL OSCAR ANDERSON, Lancaster, Pa., assignor to The Champion Blower & Forge Co., Lancaster, Pa., a Corporation of Pennsylvania. Filed July 21, 1915. Serial No. 41,140. (Cl. 233—29.)



1. In a centrifugal cream separator, a feed-tube having vertical radially projecting wings or blades, and a sleeve fitted on said tube having vertical radially projecting wings or blades arranged beside but slightly separated from the wings of the tube so as to provide vertically-disposed channels between adjacent wings having vertically disposed slits at the outer edges of the wings through which the milk is discharged; said tube having discharge apertures leading into said channels.

2. In a centrifugal cream separator, a feed-tube having integral radially projecting wings or blades, and a tubular co-acting member slidably fitted on said tube and having integral radially projecting wings or blades arranged beside but slightly separated from the wings of the tube so as to provide vertically-disposed channels between adjacent wings having vertically-disposed slits at the outer edges of the wings through which the milk is discharged; said tube having discharge apertures leading into said channels.

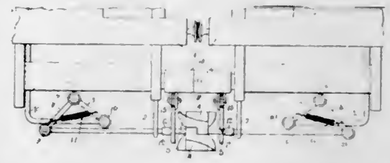
3. In a centrifugal cream separator, a feed-tube having vertical radially projecting wings or blades, and a sleeve slidably fitted on said tube having vertical radially projecting wings or blades arranged beside but slightly separated from the wings of the tube; one set of wings each having a terminal flange turned toward a wing of the other set but slightly separated therefrom to provide a narrow vertically-disposed discharge slit between said flange and the other edge of an adjacent wing and an enlarged channel between the tube and flange; said tube having discharge apertures leading into said channels.

4. In a centrifugal cream separator, a feeding and distributing device comprising a feed-tube having integral radially-projecting wings or blades and a co-acting member slidably fitted on said tube and having integral radially-projecting wings or blades arranged beside but slightly separated from the wings of the tube so as to provide vertically-disposed channels between adjacent wings having vertically-disposed slits at the outer edges of the wings through which the milk is discharged; said tube having discharge apertures leading into said channels.

5. In a centrifugal cream separator, a feed-tube having integral radially-projecting wings or blades extending in a straight line from the axis of the tube to a point beyond the cream zone, and a distributing sleeve slidably fitted on said tube having integral radially-projecting wings arranged beside but slightly separated from the wings of the tube so as to provide vertically-disposed channels between adjacent wings; the wings of the tube having terminal flanges turned toward the wings of the sleeve but slightly separated therefrom, thereby providing enlarged vertically disposed channels between adjacent wings and slits at the outer edges thereof through which the milk is discharged in a thin sheet.

[Claims 6 to 10 not printed in the Gazette.]

1,168,456. COUPLING FOR AIR-CONDUITS. MELVILLE ARNOLD, Lima, Ohio. Filed Aug. 1, 1914. Serial No. 854,454. (Cl. 188—13.)



1. In a coupling for a train pipe, a train pipe comprising a fixed portion and a longitudinally movable portion overlapping said fixed portion and provided with a coupling head, link-like portions pivotally connected to the respective ends of said overlapping portions, extending rearwardly at acute angles thereto and pivotally connected one to the other, and a spring to move said movable portion of said train pipe in one direction.

2. In a coupling for a train pipe, a train pipe comprising a fixed portion and a longitudinally movable portion having a coupling head at one end and having its other end overlapping and arranged substantially parallel to said fixed portion, two intermediate portions pivotally connected one to the other and pivotally connected at their opposite ends to the respective ends of said fixed portion and said movable portion, that intermediate portion which is connected with said fixed portion extending rearwardly at an acute angle to said fixed portion, and a spring connected with said intermediate portions and tending to move them toward each other to impart longitudinal movement to said movable portion of said train pipe.

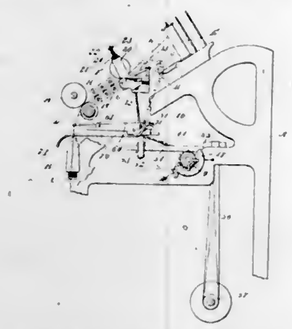
3. In a coupling for a train pipe, a train pipe comprising a fixed portion, a longitudinally movable portion having a coupling head, and intermediate portions pivotally connected one with the other and with said fixed portion and said movable portion on horizontal axes, a spring acting on said movable portion, and a supporting bar engaging the movable portion of said train pipe between said coupling head and its point of connection with said intermediate member and arranged to support said pipe against downward movement and to permit the same to have free lateral movement.

4. In a coupling for a train pipe, a train pipe comprising a fixed portion, a longitudinally movable portion having a coupling head, and intermediate portions pivotally connected one with the other and with said fixed portion and said movable portion, respectively, on horizontal axes, a spring acting on said movable portion, and a supporting bar engaging the movable portion of said train pipe between said coupling head and its point of connection with said intermediate member and arranged to support said pipe against downward movement and to permit the same to have free lateral movement, and a stop to limit the movement of said movable portion of said train pipe under the influence of said spring.

5. The combination, with a car having a coupler, a train pipe mounted on said car comprising a fixed portion, and a longitudinally movable portion having a coupling head, a spring to impart movement to said longitudinally movable portion, a stop carried by said longitudinally movable portion, a coöperating stop pivotally mounted on said car coupler, and means to prevent the movement of said coöperating stop in one direction, whereby it will limit the movement of said longitudinal member but will ride over the coupling head on said longitudinally movable member if said car coupler moves relatively thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,168,457. STOP-MOTION. GEORGE M. ARRAGG, Lawrence, Mass. Filed Jan. 28, 1915. Serial No. 4,877. (Cl. 118—17.)



1. In a worsted spinning machine, having a frame and a bobbin, a positively driven bottom back drawing roll, a spring-pressed frictionally driven top back drawing roll movable thereto and therefrom, a pivoted lifting plate adapted to lift the spring-pressed top back drawing roll, a spring which so engages said plate as to cause it to lift the spring-pressed drawing roll, a vibrator, a stretcher plate having a slot with a shoulder, a flexible member which passes through the stretcher plate slot and is fastened at one end to the frame of the machine and at the other end to the lifting plate, a medially pivoted rocking member of which one end is between the flexible member and the vibrator and the other end of which engages the roving between the bobbin and the drawing rolls, and setting means operative from the front of the machine to engage the flexible member with the shoulder of the stretcher plate.

2. In a worsted spinning machine having a frame and a bobbin, a positively driven bottom back drawing roll, a spring-pressed frictionally driven top back drawing roll movable thereto and therefrom, a pivoted lifting plate adapted to lift the spring-pressed top back drawing roll, a spring which so engages said plate as to cause it to lift the spring-pressed drawing roll, a vibrator, a stretcher plate having a slot with a shoulder, a flexible member which passes through the stretcher plate slot and is fastened at one end to the frame of the machine and at the other end to the lifting plate, a medially pivoted rocking member of which one end is between the flexible member and the vibrator and the other end of which engages the roving between the bobbin and the drawing rolls, and setting means which comprise a handle operative from the front of the machine, a slidable carriage operative thereby having an oblique forward edge in operative relation with the flexible member, and a slanting raising plate attached to the carriage as described.

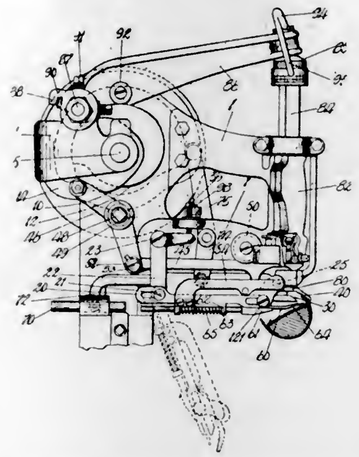
3. In a spinning machine, the combination of a bottom back drawing roll, a frictionally driven top back drawing roll spring-pressed thereon, a lifting plate, and a lifting plate spring, with a vibrator, a stretcher plate having a slot and a shoulder, a flexible member which passes through the slot in the stretcher plate and is fixed at one end and is attached at the other end to the lifting plate, and a medially pivoted rocking member having one end in engagement with the roving and the other end between the vibrator and the flexible member.

4. In a spinning machine, the combination of a bottom back drawing roll, a frictionally driven top back drawing roll spring-pressed thereon, a lifting plate, and a lifting plate spring, with a vibrator, a stretcher plate having a slot and a shoulder, a flexible member which passes through the slot in the stretcher plate and is fixed at one end and is attached at the other end to the lifting plate, and a medially pivoted rocking member having one end in engagement with the roving and the other end between the vibrator and the flexible member, together with setting means operative from the front of the machine to engage the flexible member with the shoulder of the stretcher plate.

5. In a spinning machine, the combination of a bottom back drawing roll, a frictionally driven top back drawing roll spring-pressed thereon, a lifting plate, and a lifting plate spring, with a vibrator, a stretcher plate having a slot and a shoulder, a flexible member which passes through the slot in the stretcher plate and is attached at one end to the lifting plate and at the other end to an adjusting member, said adjusting member, and a medially pivoted rocking member having one end in engagement with the roving and the other end between the vibrator and the flexible member.

[Claim 6 not printed in the Gazette.]

1,168,458. STOCK MANIPULATING AND TACKING APPARATUS FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ORRELL ASHTON, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 6, 1910, Serial No. 553,833. Divided and this application filed May 4, 1911. Serial No. 624,983. (Cl. 1—18.)



1. In a machine for use in the manufacture of boots and shoes, a tacking mechanism, a sole bottom rest having an acting end shaped to enter the channel incision of the sole, and a sole bottom engaging member of different formation, said rest and member being each supported in the machine for movement into and out of position for alternative use in locating the work for the operation of the tacker and said machine having means for retaining either of said engaging members in operative relation to the tacker each to the exclusion of the other.

2. A machine for use in the manufacture of boots and shoes, having in combination, a tacker, and a sole rest adapted to occupy a shoe receiving position under the tacker and yieldingly mounted to be normally pressed by the shoe out of the path of the tack driven from the tacker and provided with a recess through which the tack may pass if driven while the rest is in shoe receiving position.

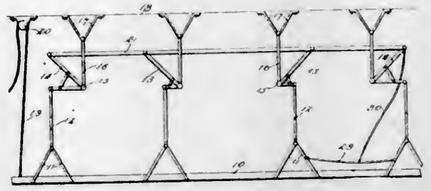
3. A machine for use in the manufacture of boots and shoes having, in combination, a tacker having a nozzle and a driver, a shoe rest normally projecting across the driver path into a shoe receiving position at the front side of the nozzle and movable backwardly to locate its shoe engaging end at the rear side of the nozzle, and means for limiting the rearward movement of the shoe rest to a predetermined extent.

4. A machine for use in the manufacture of boots and shoes, having in combination, a tacker, and a shoe rest normally extending forwardly under the tacker into shoe receiving position and mounted for inward movement by the shoe to guide the shoe into predetermined relation to the tacker, said rest having an opening therethrough to permit passage of a tack when the tacker is operated with the rest in shoe receiving position.

5. A machine for use in the manufacture of boots and shoes, having in combination, a tacker, a shoe rest yieldingly movable with and by the shoe from shoe receiving position into position for the insertion of tacks, and means for positively returning the rest to starting position.

[Claims 6 to 19 not printed in the Gazette.]

1,168,459. GRAVITY TRAY-CARRIER. WILLIAM ROLAND BANKSON, Partridge, Kans. Filed Nov. 22, 1912. Serial No. 732,981. (Cl. 186—6.)



1. A device of the character described comprising a track including rails, hangers for said rails including bell-crank levers, a draw line connected with each end of said rails, resilient brake strips positioned adjacent each end of said track between certain of said hangers, a bar connecting the bell-crank levers of said hangers, a draw line connected with each end of said bar and with said brake strips, and a carriage mounted upon the rails of said track.

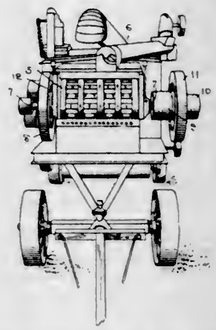
2. A device of the character described including a track comprising hanger brackets, suspending rods connected with said brackets, bell-crank levers connected with said rods, suspending rods connected with said levers, hangers connected with said last mentioned rods, rails connected with said hangers, means for tipping said track, means for causing said bell-crank levers to move in unison, and brake means operated from said last mentioned means.

3. A device of the character described including a track comprising rails, hangers for said rails including bell-crank levers, the lower arms of said levers increasing in length from the center toward the end portions of said track, means for causing said bell-crank levers to move together, brake means connected with said last mentioned means to cause the brake means to be operated when the track is tilted, and means for tilting said track.

4. A device of the character described comprising a track having rails, a carriage mounted upon said rails, a brake strip carried by said track adjacent the rails thereof, a strip carried by said carriage for engaging said brake strip, means for tilting said track and means for moving said brake strip out of a position to engage said carriage strip when said track is tilted.

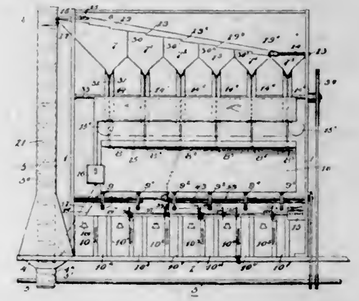
1,168,460. BALANCE MEANS FOR MACHINERY. BEN BARTLEY, New Haven, Ky. Filed Oct. 16, 1913. Serial No. 795,544. (Cl. 74—21.)

A balance means for machinery comprising a driving shaft for a threshing machine cylinder, a driving pulley carried by the shaft at one end thereof, a belt driving the pulley, a second pulley spaced from the driving pulley and at the same end of the shaft, a belt on the second pulley extending in the direction opposite to that of the first named belt, a fly wheel on the shaft between said pulleys, a third pulley mounted on the shaft at the opposite end thereof adapted to receive a belt extending in the same or a direction opposite to the first named belt,



and a second fly wheel carried by the driving shaft at the end of the shaft occupied by the last named pulley.

1,168,461. AUTOMATIC COIN SEPARATING, ADDING, COUNTING, AND BAGGING MACHINE. CHARLES S. BATDORF, Brooklyn, N. Y., assignor, by direct and mesne assignments, to Automatic Coinwrapping Machine Company, New York, N. Y., a Corporation of New York. Filed Aug. 18, 1909. Serial No. 513,383. (Cl. 133—8.)



1. A coin handling machine comprising in combination a table for the reception of coin, a hopper adjacent thereto arranged to receive the coin therefrom, coin separating and distributing means, means for conveying the coin from said hopper to said separating and distributing means, coin operable counting mechanism, coin operable adding mechanism, means for conveying the coin from said separating and distributing means to said counting and adding mechanisms, a plurality of coin receptacles each adapted to receive coin of a given denomination from said counting and adding mechanisms, and means for depositing a predetermined number of coins in each of said receptacles.

2. A coin handling machine comprising in combination a hopper for the reception of coin, coin separating and distributing mechanism, means for conveying the coin from said hopper to said separating and distributing mechanism, coin counting mechanism, coin adding mechanism, means for conveying the coin from said separating and distributing mechanism to said counting and adding mechanisms, and means interposed in said the last mentioned conveying means for ejecting mutilated or spurious coin, a plurality of coin receptacles each adapted to receive coin of a given denomination from said counting and adding mechanisms, and means for depositing a predetermined number of coins in each of said receptacles.

3. A coin handling machine comprising in combination a table for the reception of coin, a hopper located adjacent said table and arranged to receive the coin there-

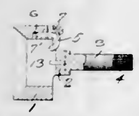
from, coin separating and distributing mechanism having means to agitate the same to sort and distribute the coins, means for conveying the coin from said hopper to said separating and distributing mechanism, coin operable counting mechanism, coin operable adding mechanism for the coins of each denomination, means for separately conveying the coins of each denomination to said counting and adding mechanisms respectively, means interposed in each of said separate conveying means for ejecting spurious or multilated coin, a coin receptacle adjacent each of said counting and adding mechanisms adapted respectively to receive the coins therefrom, and means to interrupt delivery of coins to said receptacles after a predetermined number have been delivered thereto respectively.

4. A coin handling machine comprising in combination a table for the reception of coin, a hopper adjacent therto, coin separating and distributing means, means for conveying the coin from said hopper to said separating and distributing means, coin operable counting mechanism, coin operable adding mechanism, and means for conveying the coin from said separating and distributing means to said counting and adding mechanisms.

5. A coin handling machine comprising in combination a table for the reception of coin, a hopper located adjacent said table and arranged to receive the coin therefrom, coin separating and distributing mechanism having means to agitate the same to sort and distribute the coin, and means for conveying the coin from said hopper to said separating and distributing mechanism, coin operable counting mechanism, coin operable adding mechanism for the coins of each denomination, means for separately conveying the coins of each denomination to said counting and adding mechanisms respectively, and means interposed in each of said separate conveying mechanisms for ejecting spurious or mutilated coin.

[Claims 6 to 51 not printed in the Gazette.]

1,168,462. COIN-PACKAGE-SEALING DEVICE. CHARLES S. BATDORF, Brooklyn, N. Y., assignor to Automatic Coinwrapping Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 25, 1912. Serial No. 693,133. (Cl. 93—2.)



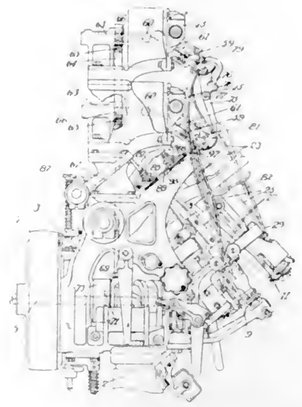
1. A coin package sealing device comprising a rotatable cylindrical body portion having a crimper finger mounted thereon and extending substantially tangentially within said body portion and adapted to inturn the end edges of a coin package wrapper when the same are guided thereto by said body portion.

2. A coin package sealing device comprising a rotatable cylindrical body portion having a crimping finger at the inner end thereof extending substantially tangentially within said body portion and a stop on said body portion adjacent said crimper member to determine the depth of the crimped portion of the wrapper.

3. A coin package sealing device comprising a rotatable cylindrical body portion having a crimper finger at one end thereof extending substantially tangentially into the bore of said body portion and a stop surface in alinement with the end of said crimper member and adapted in conjunction therewith to position the end of the package and determine the depth of the inturned portion of the wrapper thereof.

1,168,463. TACK SUPPLYING AND INSERTING MECHANISM FOR PULLING-OVER MACHINES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 27, 1910, Serial No. 574,058. Renewed Feb. 14, 1914. Serial No. 818,786. (Cl. 1—18.)

1. In a machine of the class described, the combination of drivers, a plurality of hoppers to contain different kinds of tacks, raceways from said hoppers to the several drivers, feeding means for controlling the supply to tacks from the raceways to the drivers, and manually-controllable means for suspending the operation of said feeding means for all but one of the hoppers.



2. In a machine of the class described, the combination of drivers, a plurality of sources of tack-supply, means for conveying tacks therefrom to the drivers, feeding means for controlling the supply of tacks from each source, actuators for said feeding means, means for operating said actuators, and means for suspending the operation of all but one of said actuators to permit the desired kind of tacks to be supplied to the drivers.

3. In a machine of the class described, a driver, a plurality of sources of tack-supply, means for conveying tacks therefrom to said driver, feeding means for controlling the supply of tacks from each source, actuators for said feeding means, a source of power, connections including a yielding device between said source of power and the actuators, and means for obstructing the movement of one of said actuators while the other actuator continues in operation.

4. In a machine of the class described, a driver, a plurality of sources of tack-supply, means for conveying tacks therefrom to said driver, tack-separators for controlling the supply of tacks from said sources, actuators therefor, a member having yielding connection with each actuator, means to effect simultaneous operation of said members, and means to obstruct at will the movement of one actuator while the other actuator is free to operate.

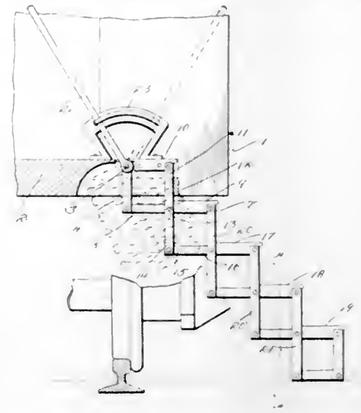
5. In a machine of the class described, a driver, a plurality of sources of tack-supply, a raceway for each of said sources, conduits from each of the raceways to said driver, tack-separators for said raceways, actuators therefor, a source of power and connections including a yielding element for operating said actuators, and a manually-controllable stop device arranged to obstruct the movement of either actuator while the other actuator is free to operate.

[Claims 6 to 30 not printed in the Gazette.]

1,168,464. STEPS FOR RAILWAY AND STREET CARS. MAE BECK, Perry, Iowa. Filed Apr. 10, 1914. Serial No. 830,956. (Cl. 105—86.)

A device of the kind described comprising a horizontal support forming a top step, a rod passing through said support at opposite ends, a plurality of steps arranged in lazy-tongs fashion, said top step being cut away to provide a downwardly extending wall, said steps having pivotal suspension levers disposed vertically, the uppermost of said suspension levers being fulcrumed upon said upper step at its forward end, actuating arms pivotally connected to one of said plurality of steps and being fixedly secured to the projecting ends of said rod whereby to turn with the latter, said actuating arms arranged to swing in

said cut-away portion, a lever secured to said rod at its end and adapted to rotate it, a segment fixed upon said



upper step, and a guiding arm on said segment between which and said segment said lever moves.

1,168,465. FIRE-ESCAPE. WILLIAM L. BEDINGER, Springville, Ala. Filed Feb. 26, 1915. Serial No. 10,754. (Cl. 244—21.)



1. A life saving apparatus comprising a parachute of flexible fabric in bag-like shape adapted to be folded or rolled into a bundle of compact form, flexible means tending to open the mouth of said parachute, releasable means for holding said parachute in said compact form, a flexible connection from said parachute for supporting a person, and means operated by said flexible connection for releasing said holding means.

2. A life saving apparatus comprising a parachute of flexible fabric in bag-like shape adapted to be folded or rolled into a bundle of compact form, flexible means tending to open the mouth of said parachute, releasable means for holding said parachute in said compact form, a flexible connection from said parachute for supporting a person, means operated by said flexible connection for releasing said holding means, a catch secured to said parachute adapted to releasably engage a support, and means brought into operation as said parachute is distended for releasing said catch from the support.

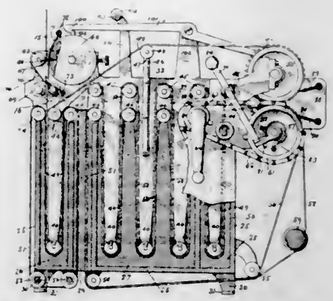
3. A life saving apparatus comprising a member provided with a releasable catch for engaging a support of a foldable parachute secured to said member, releasable means for holding said parachute in folded condition, a flexible connection from said parachute to support a person, means operated by said flexible connection for releasing said holding means upon the first pull on said flexible connection, and means operated by the weight of the person for releasing said catch before said parachute is fully distended.

4. A life saving apparatus comprising a parachute of flexible fabric in bag-like shape adapted to be folded or rolled into a bundle of compact form, a catch secured to said parachute at its closed end adapted to releasably engage a support, a connection to the open end of the parachute to support a person, and means operated by the weight of the person for releasing said catch.

5. A life saving apparatus comprising a parachute of flexible fabric in bag-like shape adapted to be folded or rolled into a bundle of compact form, flexible means tending to open the mouth of said parachute, releasable means for holding said parachute in said compact form, a catch secured to said parachute at its closed end adapted to releasably engage a support, a flexible connection to the open end of the parachute to support a person, and means operated by a pull on said flexible connection for first releasing said holding means and then releasing said catch.

[Claim 6 not printed in the Gazette.]

1,168,466. MACHINE FOR EXPOSING AND DEVELOPING SENSITIVE FILMS. GEORGE C. BEIDLER, Oklahoma, Okla. Filed Apr. 9, 1906. Serial No. 310,732. (Cl. 95—13.)



1. In a photographic and developing apparatus, a receptacle for fluid, a flexible apron and a means for holding film thereon movable in close relation to each other for carrying the film in the receptacle, means for moving the apron and the means for holding the film thereon, and means for separating the apron from the means for holding the film thereon.

2. In a photographic and developing apparatus, receptacles for fluid, flexible aprons movable in the receptacles, means for moving the aprons, and means traveling with the aprons for holding film thereon.

3. In a photographic and developing apparatus, receptacle for fluid, flexible aprons movable in the receptacles, means for moving the aprons, and bands traveling with the aprons and operating to hold the film thereon.

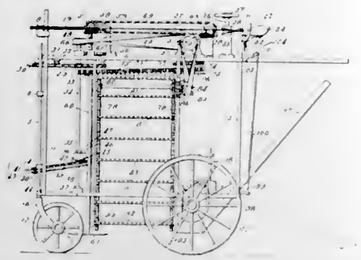
4. In a photographic and developing apparatus, a casing, a receptacle therein for containing fluid, said receptacle being divided into compartments, certain of said compartments being separated from the remainder, an apron passing through all of the compartments, flexible means traveling with the apron through the first of the compartments, a second apron traveling with the first named apron through the remainder of the compartments, and means for moving the aprons and flexible means.

5. In a photographic and developing apparatus, a casing, a receptacle therein for containing fluid, said receptacle being divided into compartments, certain of said compartments being separated from the remainder, an apron passing through all of the compartments, flexible means traveling with the apron through the first of the compartments, a second apron traveling with the first

named apron through the remainder of the compartments, bands also traveling with the aprons through the last named compartments, and means for moving the aprons and bands.

[Claims 6 to 114 not printed in the Gazette.]

1,168,467. CANE-CUTTING MACHINE. CHARLES E. BELL, Weeks, La. Filed Aug. 19, 1912, Serial No. 715,803. Renewed June 7, 1915. Serial No. 32,731. (Cl. 130—31.)



1. In a cane harvester, a frame, a pair of opposed horizontal endless belts extending longitudinally in the upper portion of the frame, blocks carried upon said belts adapted to be brought together between the belts and having intermeshing horizontally corrugated faces for crimping and holding the tops of stalks, top cutting mechanism in the frame immediately beneath the rear ends of the belts, and operating means for driving said belts and actuating said mechanism whereby to carry stalks through the frame and sever the tops from the stalks prior to the release of the tops from the belts.

2. In a cane harvester, a frame, a conveyer in the upper end of the frame for engagement with the tops of stalks to hold the same in suspended position, vertically arranged and spaced apart pairs of endless chains carried in the frame, stripper bars carried across the endless chains, stripping fingers outstanding from the bars and consecutively increasing in length from the forward to the rear end of the stripper bars, means for moving the endless chains to carry the fingers downwardly at the central portion of the frame, and a topping mechanism arranged at the rear end of the frame to cut the tops from the stalks as the latter pass from the stripping fingers.

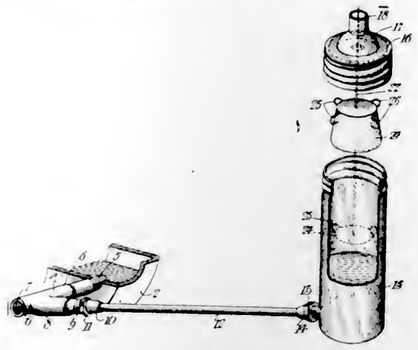
3. In a cane-harvester, a frame, a pair of horizontally disposed endless conveyers arranged longitudinally and in spaced relation within the frame, gripping blocks carried upon the endless conveyers and adapted to abut at their outer ends, the outer ends of said blocks being provided with horizontal serrated faces adapted to intermesh and crimp the tops of stalks therebetween, and means for operating the endless conveyers in unison.

1,168,468. OIL-GAGE. EDWARD M. BENFORD, Mount Vernon, N. Y. Filed Feb. 25, 1915. Serial No. 10,459. (Cl. 73—82.)

1. An oil gage comprising an oil cup, an indicating tube connected therewith and having a sight opening, an indicator movable in said tube, a float in said cup and connected with said indicator, a connecting pipe, and a Y-connection for connecting said pipe with the reservoir of an engine.

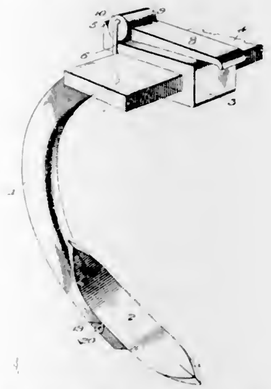
2. An oil gage comprising an oil cup, an indicating tube connected therewith and having a sight opening, an indicator movable in said tube, a float in said cup and connected to the lower end of said indicator, means relatively carried by the cup and float for preventing the sticking of the float, a connecting pipe, and a Y-connection for connecting said tube with the reservoir of an engine.

3. An oil gage comprising an oil cup, an indicating tube connected therewith and having a sight opening, an indicator movable in said tube, a float in said cup and connected to the lower end thereof, means relatively carried by the cup and float for preventing the sticking of the float, a straight pipe, and a Y-connection for connecting said pipe with the reservoir of an engine, one branch of said Y-connection being exteriorly threaded at one end and interiorly threaded at the other, and a shorter exteriorly threaded branch portion.



4. An oil gage comprising an oil cup, an indicating tube connected therewith and having a sight opening, an indicator movable in said tube, a float in said cup and connected with the lower end of said indicator, means relatively carried by the cup and float for preventing the sticking of the float, a connecting pipe, a Y-connection for connecting said pipe with the reservoir of an engine, and a pair of sliding coupling members connecting the pipe with the oil cup and with the Y-connection.

1,168,469. CULTIVATOR STANDARD AND SHOVEL. EDGAR W. BENSON, Richmond, Cal., assignor of one-half to George X. Fleming, Sacramento, Cal. Filed Sept. 18, 1915. Serial No. 51,394. (Cl. 97—11.)



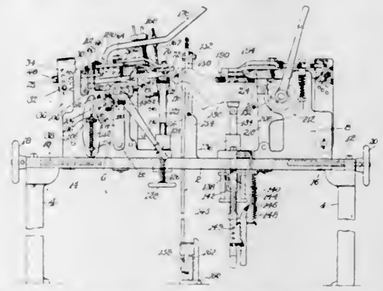
1. The combination with a cultivator standard having an under-cut slot or channel which tapers from its lower part to its upper end, and an opening intersecting the channel, of a shovel provided with an under-cut rib which is tapered in the direction of its length and is adapted to be received in the channel, said rib having a recess adapted to be brought into line with the opening, and a fastener adapted to be inserted in the opening and in the recess.

2. The combination with a cultivator standard having an under-cut slot or channel which tapers from its lower part to its upper end, and an opening intersecting the channel, of a double ended reversible shovel provided with an under-cut double ended rib tapered at both of its ends and provided with a recess in its face, said rib being arranged so that either of its tapered ends may be inserted into the channel or slot with a wedging action and to bring the recess in line with the opening in the standard, and a fastener adapted to be inserted in the opening and in the recess to prevent detachment of the shovel.

3. The combination with a cultivator standard having an under-cut slot or channel which tapers from its lower part to its upper end, and an opening intersecting the channel, of a double ended reversible shovel provided with an under-cut double ended rib tapered at both of its ends and provided with a recess in its face, said rib being arranged so that either of its tapered ends may be inserted into the channel or slot with a wedging action and to bring the recess in line with the opening in the standard, and a fastener having angular portions at its respective ends, one of which is of a length slightly less than the width of the opening in the standard, whereby said fastener and said end may be passed through the opening and turned to lock the fastener in position with its intermediate portion received in the recess of the rib.

4. The combination with a cultivator standard having a channel or slot tapered from its lower part toward its upper end and provided with a transverse opening which is elongated in width and intersects the channel aforesaid, of a cultivator shovel having a tapered rib adapted to fit in the channel with a wedging action and provided with a recess adapted to be brought in line with the opening in said standard, and a fastener having angular parts at its ends, one of which is of slightly less length than the width of the opening aforesaid and adapted to be inserted through said opening and to lie in said recess in the rib, whereby, on turning of the fastener, the angular portions thereof will lock it in position.

1,168,470. LASTING-MACHINE. GUSTAF BERGMAN, Marlboro, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 3, 1911. Serial No. 636,720. (Cl. 12—14.)



1. A lasting machine having, in combination, toe embracing wipers, a carrier for the wipers relatively to which the wipers have closing movement, said carrier being mounted to permit upward and forward swinging movement, means for swinging said carrier forwardly, and means to effect closing movement of the wipers by said swinging movement.

2. A lasting machine having, in combination, toe embracing wipers, a carrier relatively to which the wipers have closing movement, a pivot about which said carrier can swing upwardly, a pivot about which the carrier can swing forwardly, and means acting upon the wipers during said forward movement to effect closing movement of the wipers.

3. A lasting machine having, in combination, toe embracing wipers, a carrier relatively to which the wipers have closing movement, a support in which the rear end of the carrier is pivoted for movement of the wipers up and down, and means on which the support is pivoted below the carrier for movement of the wipers forwardly and backwardly.

4. A lasting machine having, in combination, toe embracing wipers, a carrier relatively to which the wipers have closing movement, a support in which the rear end of the carrier is pivoted for movement of the wipers up and down, means on which the support is pivoted below the carrier for movement of the wipers forwardly and backwardly, and an eccentric embraced by parts connected with the carrier to effect said movements of the wipers.

5. A lasting machine having, in combination, toe embracing wipers, a carrier relatively to which the wipers have closing movement, a support in which the rear end of the carrier is pivoted for movement of the wipers up and down, means on which the support is pivoted below the carrier for movement of the wipers forwardly and backwardly, and operating means to impart to the wipers through the said carrier and connections an updrawing movement, then an advancing movement and finally a downward movement.

[Claims 6 to 39 not printed in the Gazette.]

1,168,471. EMBROIDERY ATTACHMENT FOR SEWING-MACHINES. JOSEPH EVERT BERRY, St. Joseph, Mo. Filed May 29, 1915. Serial No. 31,226. (Cl. 112—7.)



1. An embroidery attachment for sewing machines, comprising a base, a swinging member carried thereby, a frame having a portion at one end slidably engaging said swinging member, the frame having means at its other end for receiving a pencil or similar element adapted to be moved for moving the intermediate portion of the frame, and a fabric holder carried by the frame.

2. An embroidery attachment for sewing machines embodying a swinging sleeve, a frame having a rod at one end slidable through said sleeve and having means at its other end for accommodating a pencil or similar element adapted to be moved for moving the frame, and a fabric holder carried by the intermediate portion of the frame.

3. In an embroidery attachment for sewing machines, a base, a swinging member carried thereby, an elongated loop-shaped frame having a portion at one end slidably engaging said member, and having a portion at its other end for accommodating a pencil or similar element, and a fabric holder disposed within and carried by the frame.

4. In an embroidery attachment for sewing machines, a swinging sleeve, an elongated loop-shaped frame having a rod at one end slidable through said sleeve and having a finger at its other end provided with an eye for receiving a pencil or similar element, and a fabric holder disposed within and carried by the frame.

5. In an embroidery attachment for sewing machines, a loop-shaped frame, means for mounting the same for movements in various directions, a fabric holder disposed within the frame and embodying an outer split hoop and an inner hoop adapted to fit therein, and resilient arms connecting the outer hoop and frame.

[Claim 6 not printed in the Gazette.]

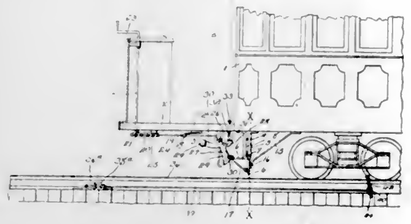
1,168,472. SWITCH-THROWING DEVICE. BENJAMIN BLOXTON, Richmond, Va. Filed July 10, 1913. Serial No. 778,272. (Cl. 104—171.)

1. In railway appliances of the type described, the combination with a railway switch, of a tripping element therefor pivoted to the car-platform, and a counterbalanced dog adjacent and adapted to support said tripping element in elevated position.

2. In railway appliances of the type described, the combination with a railway switch, of a tripping element therefor hung from the car-platform, a counterbalanced dog adjacent and adapted to support said tripping element elevated out of operative position, and means for tripping said dog.

3. In railway appliances of the type described, the combination with a railway switch, of a pivoted tripping element therefor hung from the car-platform, a counter-

balanced dog for supporting said tripping element in inoperative position and having an offset portion beyond its pivot, and a plunger for engaging said offset part.

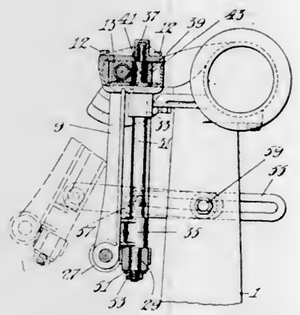


4. In railway appliances of the type described, the combination with a railway switch, of a pivoted tripping element hung from the car-platform, a counterbalanced dog for supporting said tripping element elevated, means for disengaging said dog from said tripping element, and a flexible connection for said tripping element and an actuating shaft for said flexible connection.

5. In railway appliances of the type described, the combination with a railway switch, of a tripping element hung from the car-platform, a counterbalanced dog for supporting said tripping element in inoperative position, means for disengaging said dog from said tripping element, an actuating shaft upon the car-platform, a flexible connection between said tripping element and said actuating shaft, and a resilient connection between said flexible connection and the car-platform.

[Claim 6 not printed in the Gazette.]

1,168,473. BUFFING-MACHINE. WILLIAM A. BOND, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 9, 1911. Serial No. 643,130. (Cl. 51—17.)



1. A machine of the class described having, in combination, an operating member, a support for said member, power actuated means for moving said member and its support in an orbital path, and means for varying the plane of said path.

2. A machine of the class described having, in combination, a rotary shaft, a plurality of buffing rolls mounted thereon, and means for moving said shaft in an orbital path the plane of which contains the axis of said shaft.

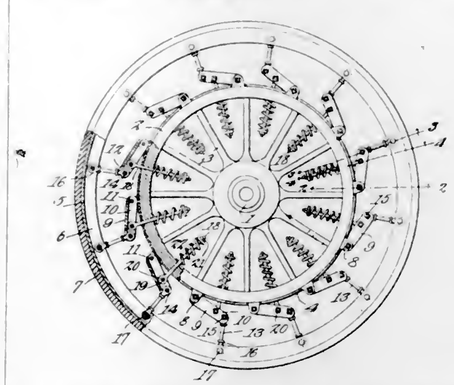
3. A machine of the class described having, in combination, an operating roll, means for rotating said roll, means for moving said roll longitudinally of its axis as well as transversely thereto, and means for varying the inclination of the plane of said transverse movement to the horizontal.

4. A machine of the class described having, in combination, an operating roll, means for rotating said roll, means for moving said roll in an orbital path, and means for varying the plane of said path.

5. A machine of the class described having, in combination, a shaft, an operating member mounted thereon, means for rotating said shaft, and means for moving said shaft in an orbital path the plane of which contains the axis of said shaft.

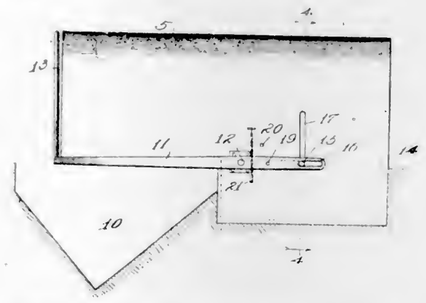
[Claims 6 to 17 not printed in the Gazette.]

1,168,474. RESILIENT WHEEL. ALBERT BOURGEOIS, Lafourche Crossing, La. Filed Dec. 22, 1914. Serial No. 878,537. (Cl. 152—28.)



In a resilient wheel, an inner annulus having outwardly projecting ears, levers each comprising a double plate having its bend facing outwardly and its flanges projecting inwardly, pivot elements engaged through said ears and flanges adjacent certain ends of the levers, an outer rim having inwardly projecting flanges, links having their ends fitted between the flanges of the rim and levers, pivot elements engaged with the rim flanges and the respective ends of the links, pivot elements engaged with the flanges of the levers adjacent the free ends of the levers and engaged with the respective ends of the links, the bends of the plates constituting the levers having slots at the free ends of the levers for the reception of the links, rods slidable through the annulus and having their outer ends disposed between the flanges of the levers between the ends thereof, pivot elements engaged with the flanges of the levers and through the respective ends of the rods, nuts upon the inner ends of the rods, and coiled expansion springs disposed upon the rods between the nuts and annulus.

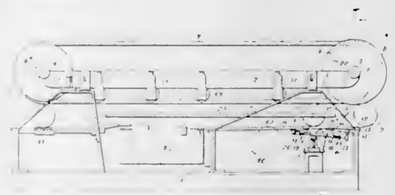
1,168,475. HEN'S NEST. DANIEL C. BUIE, Wills Point, Tex. Filed May 24, 1912. Serial No. 699,423. (Cl. 119—50.)



A hen's nest comprising a body including a bottom, top, side and rear end walls, said bottom having an opening therein adjacent the rear wall, said side walls from a point

approximately intermediate their length, throughout the remaining portion of their length depending below said bottom at the opposite sides of the opening therein, said side walls having alined vertically disposed slots, a nest box arranged within the body for vertical adjustment between said depending portions of the side walls and through said opening in the bottom, lugs projecting from the opposite sides of the box and movable within said slots to guide and limit the adjustments of said box, a pair of levers pivotally mounted exteriorly of the body and having slotted end portions receiving the said lugs, a gate fixed to the outer ends of the levers and adapted to normally lie beneath the plane of the bottom and adapted to be automatically elevated to close the open end of said body on the lowering of the nest box, said lever having an opening adapted to alternately register with spaced openings in the said side walls, and a pin suspended from said body and adapted to pass through said registering openings to lock said gate in either opened or closed position.

1,168,476. CAN LABELING MACHINE. CLARENCE W. BLACKSTONE, Chicago, Ill., assignor, by mesne assignments, to Burt Machine Company, Baltimore, Md., a Corporation of Delaware. Filed May 24, 1910, Serial No. 563,179. Renewed Dec. 21, 1915. Serial No. 68,042. (Cl. 216—48.)



1. In a labeling machine, the combination of a guide or runway for a can or the like, means for feeding a can along the same, paste applying instrumentalities arranged between the runway parts and offering substantially no obstruction thereabove adapted to produce a pasted surface of limited width entirely around the can at the junction of the flange of the lid with the body, and means adjacent the runway for interrupting the feed of the can along said runway while acted upon by said instrumentalities.

2. In a labeling machine, the combination of a rotary paste disk of a width less than that of a can to be labeled, an antifriction support for a can or the like adjacent the feed, and means whereby the can is rotated to complete a revolution on said support while in contact with said paste feed.

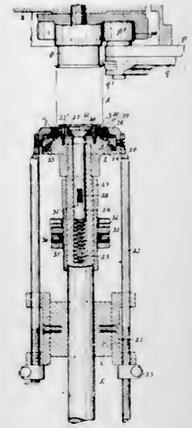
3. In a labeling machine, the combination of pasting and labeling instrumentalities, means for feeding a can or the like relative to said instrumentalities, opposed rollers separated from one another and extending transversely of the runway for supporting and interrupting the feeding movement of the can when adjacent said pasting instrumentality, said feeding means causing the can to rotate in contact with the paste applying instrumentalities.

4. In a labeling machine, the combination of a paste carrier, feeding mechanism for a can or the like, a support for a can or the like mounted adjacent to the past carrier, said support being independent of the paste carrier and including antifriction bearings permitting the can to rotate over the paste carrier.

5. In a labeling machine, a runway, a support intermediate the ends of the runway for a can or the like, comprising oppositely disposed rollers extending transversely across the runway and adjacent thereto adapted to form therebetween a seat or pocket for a can or the like, a rocking support for said rollers and means for applying paste to the can while positioned in said seat.

[Claims 6 to 24 not printed in the Gazette.]

1,168,477. CAN HEADING AND SHAPING MACHINE. AMOS CALLESON, Brooklyn, N. Y., assignor to Benjamin Adriance, Brooklyn, N. Y. Filed Dec. 30, 1911. Serial No. 668,793. (Cl. 113—24.)



1. In combination, the frame, means for clamping the vessel including a chuck and a plunger movable toward the chuck, means, movable around the chuck, for operating on the chuck-end of the vessel, a die-member carried by, and having expansion and contraction movement radially of the thrust-line of, the plunger, and means, relatively to which said plunger and die-member are movable toward the chuck and engageable by the die-member during such movement, for effecting one of said radial movements of the die-member, substantially as described.

2. In combination, the frame, a plunger movable therein, a contractible female die-member carried by the plunger, a die-member-actuating member carried by the plunger and movable against the frame, one of said members having a cam-surface impingible by the other and disposed obliquely to the thrust line of the plunger, an expansible male die-member carried by the plunger within the female die-member, and means for expanding the male die-member, substantially as described.

3. In combination, the frame, a plunger movable therein, expansible and contractible die members coactive with each other to grip the opposite faces of the edge portion of the can and carried by and movable with the plunger, means, movable with the plunger and also relatively thereto independently of said die member but having its movement with the plunger limited by the frame, for moving one die member toward the other, and means for thereupon moving the other die member toward the already-moved first-named die member, substantially as described.

4. In combination, the frame, a plunger movable therein, a vessel-inclosing contractible die-member carried by the plunger, a vessel-inclosed expansible die-member also carried by the plunger, means, movable with the plunger but limited in such movement by the frame, for actuating one of said die-members, and means for actuating the other die-member, substantially as described.

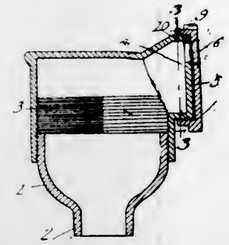
5. In combination with the frame, clamping members for the vessel adapted respectively to receive the vessel ends, one of said members being movable and including squeezing mechanism, and means, movable with the movable clamping member but having its movement therewith limited by the frame, for actuating said squeezing mechanism, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,168,478. GREASE-CUP. THEODORE W. CARTER, Silver City, N. Mex. Filed Oct. 8, 1915. Serial No. 54,782. (Cl. 184—92.)

1. A grease cup, a cap threaded thereon and provided with a cylindrical member extending therefrom having an

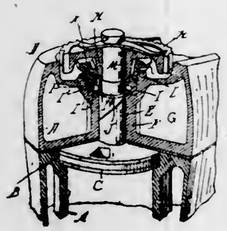
end wall across the end thereof, said wall having an eccentrically arranged aperture, and a rotatable closure upon the said member having an aperture adapted to be brought into and out of registration with the aforesaid aperture.



2. A grease cup, a cap thereon provided with a cylindrical member extending therefrom having an end wall across the end thereof, said wall having an eccentrically arranged aperture, and a cap threaded upon said member and having an eccentrically arranged aperture to be brought into and out of registration with the aforesaid aperture.

3. A grease cup, a cap thereon provided with a cylindrical member extending therefrom having an end wall across the end thereof, said wall having an eccentrically arranged aperture, and a cap threaded upon said member and having an eccentrically arranged aperture to be brought into and out of registration with the aforesaid aperture, the rim of the last mentioned cap and the member having coöperating means for limiting the rotary movement of said last mentioned cap.

1,168,479. ROTARY VALVE. HOWARD E. COFFIN, Detroit, Mich., assignor, by mesne assignments, to The Detroit Motor & Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 4, 1911. Serial No. 606,531. (Cl. 123—80.)



1. The combination with a rotary disk valve and a seat therefor, and a thrust bearing for said valve independent of said seat for relieving the load therefrom.

2. The combination with a rotary valve and its seat, of a stem for said valve, and a thrust bearing engaging said stem for relieving the load from said seat.

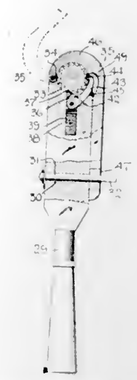
3. The combination with a rotary disk valve and its seat, of a stem for said valve, and a thrust bearing surrounding said stem and engaging a shoulder thereon and adapted to relieve the load from said seat.

4. The combination with a valve and its seat, of a stem for said valve passing outward through its seat, a thrust bearing surrounding said stem and engaging a shoulder thereon, and means for adjusting the position of said thrust bearing for variably relieving the load from said seat.

5. The combination with a rotary disk valve and its seat, of a stem for said valve passing outward through the seat, a bearing in which said stem is journaled, a thrust bearing engaging an enlargement in said bearing, and means for positioning said thrust bearing to adjust the valve a predetermined distance from its seat.

[Claims 6 to 13 not printed in the Gazette.]

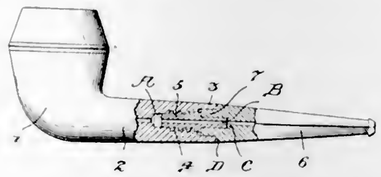
1,168,480. RATCHET-WRENCH. LEWIS C. COLLIER, Toltec, Ark., assignor of one-third to Sofie Collier, Toltec, Ark. Filed Mar. 20, 1915. Serial No. 15,942. (Cl. 81—60.)



1. A wrench of the character described including a body formed with a semi-circular end face, a yoke arching over the body, a longitudinally shiftable pawl carried within the body, and a hook-shaped pawl pivoted to the longitudinally shiftable pawl and extending up against one side of the yoke and beyond the first named pawl, said yoke being recessed to receive the hook-shaped pawl and a spring carried by the hook-shaped pawl and projecting therefrom into engagement with the interior face of said recess in the yoke.

2. In a wrench, a body having a semi-circular recess at one end, a yoke arching over the body, a longitudinally shiftable pawl carried within the body, and a hook-shaped pawl pivoted to the longitudinally shiftable pawl and extending up one side of the yoke and beyond the first named pawl.

1,168,481. SMOKING-PIPE. ROY E. COMBS, Des Moines, Iowa. Filed Sept. 1, 1914. Serial No. 859,654. (Cl. 131—12.)

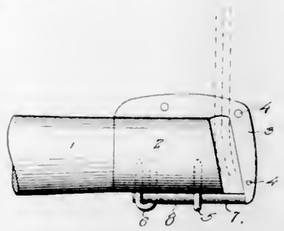


A separable stem for smoking pipes, comprising a bowl stem having a screw-threaded interior socket, a projecting annular flange thereon adapted to telescope and embrace the adjacent end of a bit, a bit having a projecting annular flange extending within the annular flange on the adjacent bowl stem and having a smooth-faced interior socket extending beyond the flange, and an interior longitudinal plug having screw threads at one end to engage the interior threads on the bowl stem and a smooth surface on the opposite end extending into the socket in the bit beyond the flange on the bit, whereby a separable joint is formed and the strain of supporting the bowl is sustained and distributed over all the parts, substantially as described.

1,168,482. SAFETY-HOOK. FREDERICK E. COTTRELL, Pepperwood, Cal. Filed Mar. 30, 1915. Serial No. 18,093. (Cl. 21—79.)

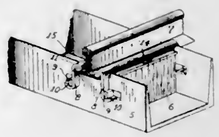
1. In means for the purpose described, the combination of a swingletree, a body mounted on the end portion thereof and having a hook spaced from its outer end,

staples driven through the body and into the swingletree; the said staples constituting fastening devices and guides, and the staple nearest the outer end of the body being disposed at right angles thereto and the other staple being disposed obliquely to the body, and a pin for guarding the mouth of the hook, said pin being movable endwise and about its axis in the guides and being provided with a laterally-disposed weight portion arranged between the guides.



2. The combination of a swingletree, a body carried by the swingletree and having a hook the mouth of which is beyond the end of the swingletree, a staple driven through the body and into the swingletree and disposed obliquely to the body, guiding means carried by the body and arranged in spaced relation to the staple and between said staple and the mouth of the hook, and a pin for guarding the mouth of the hook; said pin being movable endwise and about its axis in said staple and guiding means and being provided with a laterally-disposed weight portion arranged between the staple and the guiding means.

1,168,483. TIE AND MEANS FOR SECURING A RAIL THERETO. WILLARD D. CRANNEY, Logan, Utah. Filed May 26, 1914. Serial No. 840,981. (Cl. 238—5.)

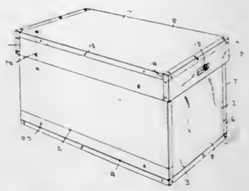


1. In combination, a rail, a tie having a pair of projections extending laterally from each side thereof, and a pair of bifurcated clamping members adapted to be placed one on each side of said rail to overlie and engage the flanges thereof and to pass under and engage a pair of said projections on opposite sides of the tie, and wedging means adapted to draw the rail and clamping members into close engagement.

2. In combination, a rail, a channeled metallic tie having a pair of projections extending laterally from each side thereof, a pair of bifurcated clamping members adapted to be placed one on each side of said rail to overlie and engage the flanges thereof and to pass under and engage a pair of projections on opposite sides of the tie, and a wedge shaped pillow block adapted to lie within the channel of the tie below the rail and, by being driven home, to force the clamps into close engagement with said rail.

3. In combination, a rail, a channeled metallic tie having a pair of projections extending laterally from each side thereof at each end, a pair of bifurcated clamping members adapted to lie one on each side of said rail to overlie and engage the flanges thereof and to pass under and engage a pair of projections on opposite sides of said tie, each of said clamping members having a perforated, horizontally extending lip for the reception of a retaining spike, and a wedge shaped pillow block adapted to lie within the channel of the tie below the rail and, by being driven home, to force the clamps into close engagement with said rail.

1,168,484. FOLDING SHIPPING-CRATE FOR EGGS. CILOS C. DALTON, Star, Va. Filed Nov. 23, 1914. Serial No. 873,593. (Cl. 217—15.)



1. A foldable crate comprising a body portion having metallic strips placed upon the inner surface thereof, end sections hingedly secured to said strips and adapted to be folded against the inner surface of the bottom, a central partition hinged to said strips adapted to be folded upon one of said end sections, a front section rigidly secured to the bottom, a front wall hinged to said rigid section and adapted to be folded over upon said partition, a rear section rigid with said bottom and of greater height than said rigid front section, a rear wall hinged to said last mentioned rigid section and adapted to be folded over upon said front hinged wall, a cover having side and end portions adapted to be mounted upon and around said folded body section, lugs carried by the front and rear walls and bifurcated latching members carried by the end sections adapted to interlock with the lugs of the front and rear walls.

2. A foldable crate comprising a cover, a body portion protected by said cover having hinged front and rear walls and hinged end sections, said end sections having suitable apertures at each edge portion near the top thereof, said front and rear walls having metallic strips on the inner faces thereof along the end edges thereof, each of said metallic strips having a hooked lug thereon and a metallic latching device mounted upon the top edge of each end section having bifurcated downward turned ends adapted to hook over said hooked lugs to lock said crate in assembled open position.

3. A foldable crate comprising end sections having recesses in their end portions near the top thereof, latching members mounted upon said end sections partially covering said recesses, hinged front and rear walls having metallic strips with hooked lugs there upon adapted to seat in said recesses and locked by said latching members, a cover to said crate having thimble mounted apertures therein, and means mounted in said apertures adapted to lock said cover to said crate when used in open or folded position.

1,168,485. COMPOSITIONS FOR USE WITH RAW LINSEED-OIL FOR FILLING, SMOOTHING, STAINING, AND POLISHING WOOD. GEORGE A. DENNIS, Oakland, Cal., assignor of forty-nine one-hundredths to Malott & Peterson, San Francisco, Cal., a Corporation. Filed Aug. 31, 1914. Serial No. 859,293. (Cl. 134—24.)

The herein described composition of matter, consisting of talc and manganese borate, substantially in the proportions described, to be used in conjunction with linseed oil as and for the purposes mentioned.

1,168,486. DEVICE FOR SAMPLING GRAIN AND THE LIKE. LEONARD H. DES ISLES, Chicago, Ill. Filed May 7, 1915. Srial No. 26,549. (Cl. 83—15.)

1. A sampler comprising a series of flexibly connected receptacles having openings therein, and a pipe for inclosing said receptacles and for forcing the same into a body of grain or the like.

2. A sampler comprising a series of tubular receptacles flexibly connected end-to-end and having openings therein, and a pipe for inclosing said receptacles and for forcing the same into a body of grain or the like.

3. A sampler for grain and the like, comprising a series of connected sampling receptacles having openings there-

in, an abutment connected to the end receptacle of said series, and a pipe inclosing said receptacles and engaging said abutment for forcing the receptacles into the body of grain or the like.

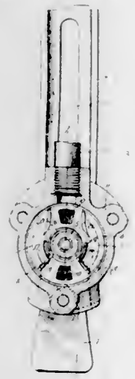


4. A sampler for grain and the like, comprising a series of sample receptacles flexibly connected end-to-end, a pipe for inclosing said receptacles for forcing the same into the body of grain or the like, and a conical prod member connected to the end receptacle of the series and projecting beyond the end of said pipe and provided with a shoulder adapted to be engaged by the grain, or the like, into which the sampler is thrust.

5. A sampler for grain and the like comprising a series of flexibly connected receptacles for receiving samples, a conical prod member connected to the end receptacle of said series, and a pipe inclosing said receptacles and engaging said prod member for forcing the receptacles into the body of grain or the like, the latter having a shoulder larger than said pipe.

[Claims 6 to 12 not printed in the Gazette.]

1,168,487. SELF-RESETTING TRIP-COCK. EDWARD H. DEWSON, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 25, 1910. Serial No. 573,798. (Cl. 246—59.)



1. In an automatic train stop, the combination with the train brake pipe, of a trip valve device comprising a casing having a valve seat, a vent valve slidably mounted thereon and held against its seat by train pipe pressure, said seat having a cavity exposing an unbalanced area of the valve to the atmosphere in its full open position for producing frictional resistance, a trip member for opening said valve, and a spring operating to automatically close the valve when the train pipe pressure falls below a certain amount.

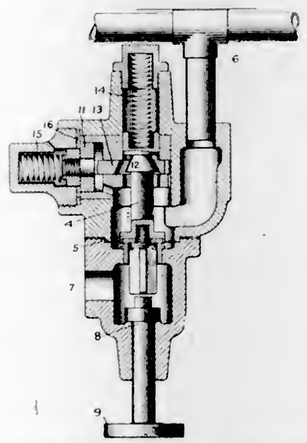
2. In an automatic train stop, the combination with a train pipe, of a trip valve device comprising a valve seat, a rotary valve held against said seat by train pipe pressure upon its outer side, and having an unbalanced area on the other side exposed to the atmosphere in all positions of the valve, a trip member for opening said valve, and a spring tending to return said valve to its closed position.

3. In an automatic train stop, the combination with a train brake pipe, of a trip valve device comprising a casing having a valve seat, a rotary valve mounted thereon and controlling a train pipe vent port, a trip member for opening said valve, and a coiled spring mounted on a projection within the valve chamber and having one end engaging a fixed part of the casing and the other end engaging the valve for automatically closing the same.

4. In a train stopping device, the combination with a train pipe, of a trip valve device adapted to be opened by engagement with an obstruction along the track to vent air from the train pipe, and means operated by the flow of air from the train pipe through the vent port and tending to hold said trip valve in its open position.

5. In a train stopping device, the combination with a train pipe, of a trip valve device adapted to be opened by engagement with an obstruction along the track to vent air from the train pipe, and vanes mounted on the valve and subject to the flow of air from the train pipe and tending to hold said trip valve in its open position.

1,168,488. TRIP-VALVE FOR AIR-BRAKES. EDWARD H. DEWSON, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 6, 1911. Serial No. 619,342. (Cl. 246—59.)



1. A trip valve device for air brakes, comprising a vent valve, trip mechanism for causing the opening of the same to discharge air from the train pipe, and a latch device governed by train pipe pressure for positively preventing the closure of the valve until the train pipe pressure is reduced a given amount.

2. The combination of a train brake pipe, a vent valve for discharging air therefrom, trip mechanism for opening said valve, and locking means normally subject to the train pipe pressure for controlling the closing of the vent valve.

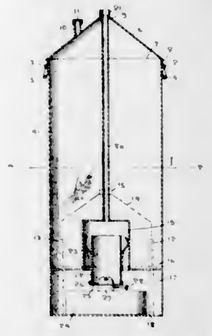
3. A trip valve device for air brakes, comprising a vent valve for discharging air from the train pipe, trip mechanism for causing the opening of said valve, and yielding locking means governed by train pipe pressure for positively holding said valve open until the train pipe pressure is reduced to a predetermined degree.

4. A trip valve device for air brakes, comprising a vent valve for discharging air from the train pipe, trip mechanism for causing the opening of said valve, and a yielding latch device governed by the train pipe pressure for preventing the closure of said valve until the train pipe pressure is reduced to a certain point.

5. A trip valve device for air brakes, comprising a vent valve for controlling the discharge of air from the train pipe, trip mechanism for causing the opening of said valve, a spring for closing said valve, and locking means governed by the train pipe pressure for holding said valve open until the train pipe pressure is reduced a given amount.

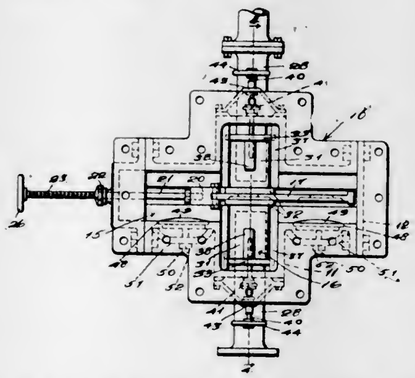
[Claims 6 to 10 not printed in the Gazette.]

1,168,489. POULTRY-FOUNTAIN. OSCAR A. DIETSCHE, Gladstone, N. D. Filed Nov. 5, 1914. Serial No. 870,354. (Cl. 119—73.)



A drinking fountain, comprising the combination with a container having a liquid chamber in the upper portion thereof, a heating chamber in the lower portion thereof, a division wall between said chamber and a hollow casing projecting upwardly from said partition, of a heating device, a chimney for said heating device, and oppositely disposed spring members on the chimney adapted to engage the walls of the casing to hold said chimney suspended while the heating device is being removed or introduced into the heating chamber.

1,168,490. METER-ORIFICE-DISK VALVE. CHARLES W. DUNCAN, Joplin, Mo. Filed Sept. 13, 1915. Serial No. 50,545. (Cl. 137—5.)



1. In apparatus of the character described, the combination with a casing having means for connection with a pipe, of a movable support arranged within the casing and having a plurality of openings, and a corresponding number of meter orifice disks removably mounted in the openings of the support for controlling the passage of fluid through the pipe, substantially as described.

2. In apparatus of the character described, the combination with a casing, of pipes extending into the casing in end to end relation with their ends spaced, a plate mounted to slide within the casing and having a plurality of openings adapted to be alternately brought into alinement with the ends of the pipes, a corresponding number of meter orifice disks removably mounted within the openings of the plate, and means to move the plate.

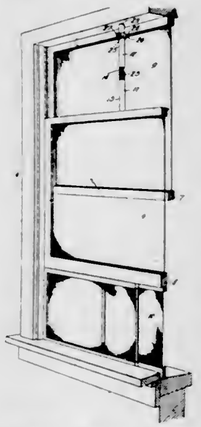
3. In apparatus of the character described, the combination with a casing, of pipes extending into the casing in end to end relation with their ends spaced, a plate mounted to slide within the casing between the inner ends of the pipes and provided with meter devices, sleeves mounted to slide upon the pipes to clamp opposite sides of the plates, means to move the sleeves, and means to move the plate.

4. In apparatus of the character described, the combination with a casing having spaced tubular members arranged therein, of a support mounted to move within the casing between the tubular members and having meter devices, sleeves mounted to slide upon the tubular members and contact with the support, means to move the sleeves, and means to move the support.

5. In apparatus of the character described, the combination with a casing having inlet and outlet means, of a plate arranged within the casing between the inlet and outlet means and provided with openings, meter orifice disks secured to the plate at the openings and having tapered openings decreasing in diameter away from the first named openings, and means to move the plate.

[Claim 6 not printed in the Gazette.]

1,168,491. WINDOW SCREEN AND SASH LOCKER. CLAUDE ELLIS, Springville, N. Y. Filed Sept. 1, 1915. Serial No. 48,398. (Cl. 16—18.)



1. In a sash fastener, the combination of two bar members arranged end to end in respect to one another and adapted to respectively engage the casing and one of the sashes of a window, adjusting means connecting said members for forcing the same apart to secure the device in place between the window casing and sash, and locking means mounted on one of said members adapted to engage the other sash of the widow.

2. In a sash fastener, the combination of two connected bar sections arranged end to end and capable of endwise movement relative to each other, adjusting means mounted intermediate the adjacent ends of the bar sections for forcing the sections apart to secure the device in place between the window casing and sash, and a locking member adjustably mounted on one of the sections and

adapted to be secured in different locking positions thereon.
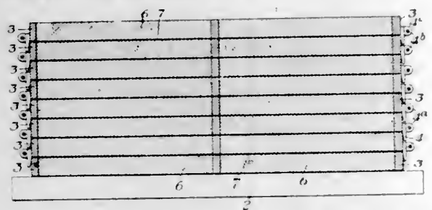
3. In a portable sash fastener, the combination of an outer casing comprising two bar sections having recesses therein, means for adjustably connecting said sections together comprising a bolt secured in the recess in one section and extending into the recess of the other section, adjusting means mounted on said bolt intermediate the adjacent ends of the bar sections by which said other sections can be moved relatively to the bolt, and independent locking means mounted on one of said sections.

4. In a sash fastener, the combination of two bar members arranged end to end in respect to one another, adjustable means connecting said members for moving the bar members relatively to each other to secure the device in place between the window casing and sash, and locking means mounted on one of said members adapted to engage the other sash of the window and comprising a collar encircling said member, an arm extending laterally from said collar, and sash-engaging means adjustably mounted on said arm.

5. A portable sash fastening device comprising two bar sections arranged end to end, means connecting the same arranged to allow one section to move vertically relatively to the other section, adjusting means located on the connecting means for effecting said relative movement of the sections, and independent adjustable sash-engaging means mounted on one of the sections.

[Claims 6 to 8 not printed in the Gazette.]

1,168,492. METHOD OF MAKING TILES. JACOB DE S. FREUND, Beaver, Pa., assignor to American Cement Tile Manufacturing Company, Wampum, Pa., a Corporation of Pennsylvania. Filed Dec. 27, 1912. Serial No. 738,848. (Cl. 25—155.)

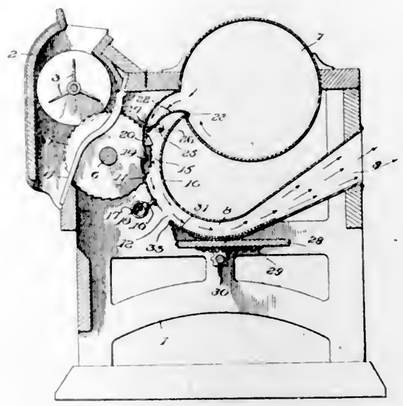


1. The method of forming a plurality of tiles or slabs one above the other, which consists in placing a mold open at the top and bottom on a suitable forming surface, then filling the mold with a cement mixture, then striking off the surplus mixture, then coating the top of the formed tile with a parting substance which will be absorbed by the cement mixture but in which the particles will not adhere to each other, then placing a second mold open at the top and bottom on the first mold, then filling the second mold with cement, then striking off the surplus material, and repeating the operation until a predetermined number of tiles have been formed; substantially as described.

2. The method of forming a plurality of tiles or slabs one above the other, which consists in placing a mold open at the top and bottom on a suitable forming surface, then filling the mold with a cement mixture, then striking off the surplus mixture, then coating the top of the formed tile with soapstone, then placing a second mold open at the top and bottom on the first mold, then filling the second mold with cement, then striking off the surplus material, and repeating the operation until a predetermined numebr of tiles have been formed; substantially as described.

1,168,493. AIR-BLAST COTTON-GIN. CARROLLVERNON B. GINN, Brenham, Tex., assignor of one-half to Paul D. Ginn, Brenham, Tex. Filed Nov. 21, 1914. Serial No. 873,353. (Cl. 13—9.)

1. In an air blast cotton gin and in combination with the gin saws, a flue having a section of its wall adjustable toward and from the opposite wall and having the gin saws extending therethrough, means for causing a blast of air to pass through the flue, and means for adjusting the movable section of the flue.



2. In an air blast cotton gin having openings in a wall thereof to receive the gin saws and having a discharge opening below the saw receiving openings, the portion of the wall of the flue above the discharge opening and containing the saw receiving openings being adjustable toward and away from the opposite wall of the flue, means for adjusting the movable portion of the flue wall, and means for causing a blast of air to pass through the flue.

3. In an air blast cotton gin, a flue comprising approximately vertical and horizontal portions and having a discharge opening in the outer wall at or near the juncture of the vertical and horizontal portions and having the section of the wall above the discharge opening formed with saw receiving openings and laterally adjustable at its lower end toward and away from the rear wall of the flue and a second section of wall immediately below the discharge opening adjustable horizontally, means for adjusting the upper section of the flue wall above the discharge opening, and other means for adjusting the second section of the flue wall below the discharge opening.

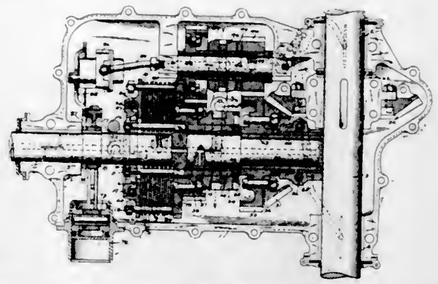
4. In an air blast cotton gin, a flue having a section of its wall adjustable toward and away from the opposite wall and formed with saw receiving openings and provided with an internal offset intermediate the ends of the saw receiving openings, and means for adjusting the movable wall section of the flue.

5. In an air blast cotton gin, a flue having a wall formed with saw receiving openings and having an internal offset in the wall intermediate the ends of the saw receiving openings, and deflectors arranged upon the inner side of the wall above the offset thereof about in line with the upper ends of the saw receiving openings and between the same, such deflectors having their opposite faces inversely inclined to concentrate and direct the blast of air against the sides of the saws.

[Claims 6 to 15 not printed in the Gazette.]

1,168,494. POWER-TRANSMITTING MECHANISM. LELAND F. GOODSPEED, Wilkinsburg, Pa. Filed Mar. 2, 1908. Serial No. 418,732. (Cl. 192—10.)

In a power transmitting mechanism, the combination of a driving shaft having bearings, and a flange between said bearings, a driven sleeve rotatably mounted on said shaft and having a flange in the same plane with the flange on the shaft, a ring on said shaft, two sets of friction disks surrounding the shaft and located between said ring and the flanges, bolts connecting the shaft flange and ring and extending through apertures in one set of said friction disks, other bolts secured to the sleeve flange and extending through apertures in the other set of



disks, a plate mounted on said sleeve flange bolts, and a pressure ring bearing against said plate.

1,168,495. BLAST-FURNACE PROCESS OF PRODUCING PHOSPHORUS AND PHOSPHORUS COMPOUNDS. JOHN J. GRAY, Jr., Rockdale, Tenn. Filed Sept. 7, 1915. Serial No. 49,359. (Cl. 75—45.)

1. The process of simultaneously producing in a blast furnace phosphorus and metal phosphids from a natural phosphate, which consists in charging said furnace with a suitable mixture containing said phosphate, sufficient silica to liberate the desired amount of phosphorus, metal sufficient to make the desired amount of phosphids and to produce the desired fluidity in the slag but insufficient to take up all the liberated phosphrus, and sufficient carbon to produce the desired reacting temperature as well as a reducing atmosphere in the furnace; and feeding to said charge only sufficient air to produce said temperature and reducing atmosphere, substantially as described.

2. The process of simultaneously producing phosphorus and metal phosphids from a natural phosphate in a blast furnace, which consists in charging said furnace with a suitable mixture containing said phosphate, sufficient silica to liberate the desired amount of phosphorus, metal sufficient to make the desired amount of phosphids and to produce the desired fluidity in the slag but insufficient to take up more than eighty per cent. of the liberated phosphorus, and sufficient carbon to produce the desired reacting temperature as well as a reducing atmosphere in the furnace; and feeding to said charge only sufficient air to produce said temperature and reducing atmosphere, substantially as described.

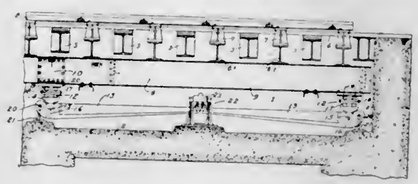
3. The process of simultaneously producing phosphorus and phosphids which consists in charging a blast furnace with a mixture containing a natural phosphate, sufficient silica to liberate a predetermined quantity of phosphorus, metal in the form of an ore sufficient to take up a predetermined per cent. of the liberated phosphorus and to produce the desired fluidity in the slag, but insufficient to take up a predetermined other quantity of said phosphorus, and sufficient carbon to bring about the desired reactions while supplying a reducing atmosphere in the furnace, and so controlling the air fed to the furnace as to maintain said reducing atmosphere therein, substantially as described.

4. The process of simultaneously producing phosphorus and phosphids which consists in charging a blast furnace with a mixture containing a natural phosphate, sufficient silica to liberate a predetermined quantity of phosphorus, metal in the form of an ore sufficient to take up more than ten per cent. of the liberated phosphorus and to produce the desired fluidity in the slag but insufficient to take up a substantial major quantity of said phorsporus, and sufficient carbon to bring about the desired reactions and to supply a reducing atmosphere in the furnace; and so controlling the air fed to the furnace as to maintain said reducing atmosphere therein, and adding to said charge when found necessary a small quantity of a basic material to render the slag more fluid.

5. The process of simultaneously producing phosphorus and phosphids which consists in charging a blast furnace with a mixture containing a natural phosphate, sufficient silica to liberate a predetermined quantity of phosphorus, iron sufficient to take up more than ten per cent. of the liberated phosphorus, but insufficient to take up a predetermined major quantity of said liberated phosphorus, and sufficient carbon to bring about the desired reactions while supplying a reducing atmosphere in the furnace; and so controlling the air fed to the furnace as to maintain said reducing atmosphere therein, substantially as described.

[Claim 6 not printed in the Gazette.]

1,168,496. RAILROAD TRACK-SCALE. RUDOLF GRUNDMAN, Chicago, Ill. Filed Nov. 17, 1914. Serial No. 872,582. (Cl. 73—121.)



1. A weighing scale comprising walls forming a scale pit, multiplication levers fulcrumed in said pit and having connections for operating a scale beam, a platform supported by said levers, and a plurality of superposed ball bearings between said levers and platform.

2. A weighing scale comprising walls forming a scale pit, a platform supported therein, the supports for said platform including a plurality of pairs of multiplication levers extending longitudinally of the platform, common transverse levers, each of said pairs of multiplication levers being fulcrumed near their outer ends and connected at their inner ends to said common transverse levers, said transverse levers having connections for operating a scale beam.

3. A weighing scale comprising walls forming a scale pit, a platform supported therein, the supports for said platform including a plurality of pairs of multiplication levers extending longitudinally of the platform, common transverse levers, each of said pairs of multiplication levers being fulcrumed near their outer ends and connected at their inner ends to said common transverse levers, said transverse levers having connections for operating a scale beam, said connections including end extension levers and non-multiplying middle extension levers respectively.

4. In a railway track scale, the combination of a scale beam, a platform, supports for said platform having connections for operating the scale beam, rails on said platform, a rigid deck having rail openings, and dirt shields pivoted to said rails and extending over said rail openings.

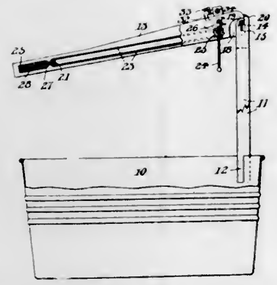
5. A weighing scale, comprising a scale beam, a platform, levers supporting the platform and having connections to operate said beam, ball bearings between said platform and supporting levers, knife edges between said bearings and levers, said ball bearings comprising superposed sets of balls with a free ball seat between, one of said sets of balls consisting of a single row extending transversely to the corresponding knife edge.

[Claims 6 and 7 not printed in the Gazette.]

1,168,497. BATHING APPARATUS. ALEX HAJDU, Barnesboro, Pa. Filed Aug. 18, 1915. Serial No. 46,164. (Cl. 4—2.)

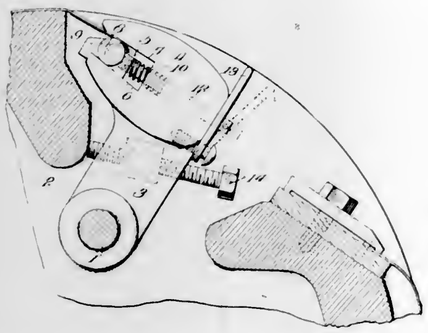
1. A device of the class described comprising a tub mounting means, an adjustable frame mounted thereon, a shiftable scrubbing towel carried by the said frame, a bearing roller, resilient means pressing said bearing roller in engagement with said towel, and a soap and water dispenser for the towel carried by the said frame.

2. A device of the class described comprising in combination with a tub, supporting posts removably attached to the tub, a mounting frame adjustably secured to the said posts, rollers journaled adjacent the opposite ends of the said frame, an endless scrubbing towel carried upon the said rollers, an operating crank attached to one of the said rollers, a friction roller carried by the said frame being in resilient contact with the said towel adjacent one of the said rollers, a water dispensing pipe transversely positioned in the said frame adjacent the said towel and provided with outlets therein, a soap holder carried by the said dispensing pipe, and a cake of soap within the said holder in contact with the said towel adjacent the other roller.



3. A device of the class described comprising mounting posts, a frame adjustably hinged to the upper ends of the said posts, an endless scrubbing towel carried by the said frame, operating means for the said towel, a contact roller in resilient engagement with the said towel at one end of the frame, and a soap and water dispenser adjacent the said towel at the opposite end thereof.

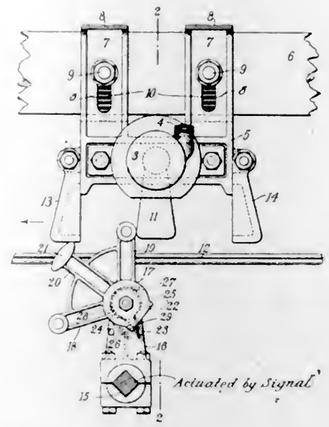
1,168,498. PLATE-HOLDER FOR PRINTING-PRESSES. CHARLES W. HARROLD, Warren, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed May 7, 1914. Serial No. 836,985. (Cl. 272.)



1. A plate holder for printing-presses comprising a support having a wedge-shape opening, a sliding block movable transversely of said opening, a binding roll carried by said block, a spring serving to hold said block and roll at the reduced end of said opening, a rod extending from said block, and a lever engaging said rod for moving said block and roll as against the tension of said spring.

2. A plate holder for printing-presses comprising a support having a wedge-shape opening, a block movable transversely of said opening, and a wedging roll having a reduced portion mounted on said block, said roll and block being movable toward and away from the reduced portion of said opening.

1,168,499. AUTOMATIC TRAIN-CONTROLLING SYSTEM. ERNEST ROWLAND HILL, East Orange, N. J., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 11, 1910. Serial No. 548,525. (Cl. 246—59.)



1. In an automatic train control system, the combination of a train controlling member carried by the train, guards also carried by the train in front and in rear of said member to clear obstructions from its path, and a track trip device provided with a movably mounted member having an arm adapted to be deflected by one of the guards, and another arm actuated by the movement of the first arm, for engaging the train controlling member.

2. In an automatic train control system, the combination of a train controlling member carried by the train, guards also carried by the train in front and rear of said member to clear obstructions from its path, and a pivotally mounted trip device adjacent to the track, and provided with an arm adapted to be projected into the path of one of said guards for actuation thereby, and also having means adapted to be projected into the path of said train controlling member by the movement of said arm.

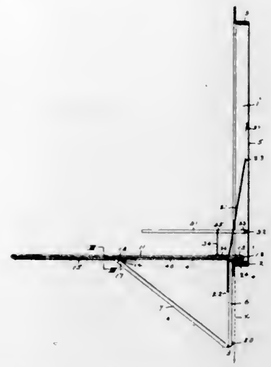
3. In an automatic train control system, the combination of a train controlling member carried by the train, guards pivotally mounted in front and rear of said member, whereby one guard or the other serves to clear obstructions from the path of said member, according to the direction of travel of the train, and a track trip device provided with a movably mounted member having an arm adapted to be deflected by one of the guards, and another arm actuated by the movement of the first arm for engaging the train controlling member.

4. In an automatic train-control system, in combination, a train-controlling member carried by the train, guards pivoted in front and rear of said member, and incapable of movement toward the latter, a setting arm adjacent to the track and adapted to be projected into the path of the guards for actuation by one or the other thereof according to the direction of the train's travel, and a pair of arms operatively connected with said setting-arm in front and rear thereof whereby one or the other, according to the direction of the train's travel, will be projected into the path of the train-controlling member by the actuation of the setting arm.

5. In an automatic train control system, the combination with a train-controlling member carried by the train, and guards also carried by the train in front and rear of said member to clear obstructions from the path of said member, of a track trip-device having a movably mounted member adapted to be deflected by the guard and operate the train controlling member, and a yielding means for returning said member to normal position.

[Claims 6 and 7 not printed in the Gazette.]

1,168,500. IRONING-BOARD. JOHN D. HOGAN, San Francisco, Cal. Filed July 11, 1914. Serial No. 850,505. (Cl. 68—10.)



1. An article of manufacture such as described including an inclosing cabinet; an ironing board pivoted in said cabinet; a door hinged to the bottom of said cabinet, and divided horizontally and having its upper edge attached to said ironing board.

2. An article such as described including an inclosing cabinet; a door hinged to said cabinet and horizontally pivoted intermediate of its length; an ironing board horizontally pivoted in said cabinet, and slidably connected to the top of said door.

3. In an article such as described including an inclosing cabinet; a door horizontally hinged near the bottom of said cabinet and horizontally pivoted intermediate of its length; an ironing board horizontally pivoted in said cabinet; a guide on the underside of said board engaging a lug on the upper edge of said door; and stops pivoted on said board and adapted to engage the edge of said door.

4. An article such as described, including an inclosing cabinet; a door horizontally hinged near the bottom of said cabinet, and horizontally pivoted intermediate of its length; an ironing board horizontally pivoted in said cabinet, and slidably connected to the top of said door; counterbalancing springs having one end attached to said cabinet, and the other end attached to said door.

5. An article such as described including an inclosing cabinet; a door horizontally hinged near the lower edge of said cabinet; a door horizontally hinged to said lower door; an ironing board horizontally hinged within said cabinet near the bottom thereof and slidably engaging the upper edge of said upper door; and pivotal stops on said board in the path of the upper edge of said upper door.

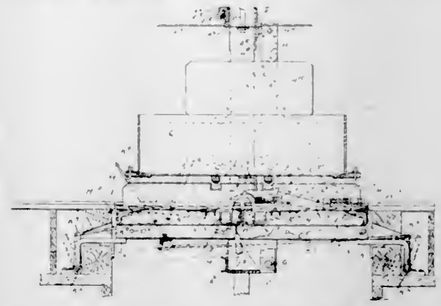
1,168,501. MINE-CAGE. PAUL W. HOLSTEIN, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Jan. 2, 1908. Serial No. 408,890. (Cl. 187—97.)

1. In a mine cage, the combination of two adjacent track sections pivoted at their outer ends and having their inner ends arranged to swing to points below the normal lines of the tracks, means for holding the track sections level at landings and adapted to permit said inner ends to move down to relatively low positions at points in their travel remote from the landings, substantially as set forth.

2. In a mine cage, the combination of wheel supports, longitudinal skids, arranged to be under the body of a car in position on the cage, and means for lowering a car until the car body rests on said skids, substantially as set forth.

3. In a mine cage, the combination of wheel supports, longitudinal skids, arranged to lie under a car body when in position on the cage, means for lowering a car until the body rests on said skids, and means on said skids for preventing longitudinal motion of the car relatively to the skids, substantially as set forth.

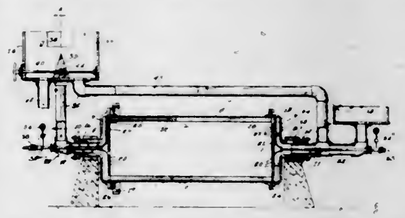
4. In a mine cage, the combination of wheel supports, longitudinal skids arranged so as to be under the body of a car on the cage, means for lowering a car until the body rests on said skids, and means for preventing longitudinal motion of the car relatively to the skids while in contact therewith, substantially as set forth.



5. In a mine hoist, the combination of a cage adapted to move vertically in a shaft and provided with a horizontally yieldable latch for holding a car in longitudinally fixed position thereon, and means attached to the shaft for releasing said latch, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,168,502. APPARATUS FOR TREATING PAPER-PULP. GUY C. HOWARD, Everett, Wash. Filed Mar. 31, 1915. Serial No. 18,251. (Cl. 92—20.)



1. The combination with a mill for reducing paper pulp provided with inlet and outlet openings for the passage of the material, a supply receptacle for fresh material having communication with said inlet opening, devices for diverting the discharged material from said outlet and returning it to said inlet opening intermediate said inlet opening and the connection with said receptacle, and means for regulating the proportions of said discharged material returned to the mill.

2. The combination with a rotatable mill having axially disposed inlet and outlet openings, of a receptacle for fresh pulp connected with said inlet opening, and devices for elevating a proportion of material discharged from said outlet opening and returning said material to said inlet opening at a point between said receptacle for fresh pulp and said inlet opening and under a greater hydraulic head than said fresh pulp.

3. The combination with a rotatable mill having axially disposed inlet and outlet openings, of a feed inlet pipe connected with said inlet opening, a receptacle for fresh pulp connected with said inlet pipe, a discharge box, means for elevating the discharged material to said discharge box, mechanical means in said discharge box for dividing said pulp in any desired proportion, and a pipe for returning regrinds from said discharge box to said feed pipe, said regrinds entering said feed-pipe at a point between said mill and said receptacle for fresh pulp and under a greater hydraulic head than said fresh pulp.

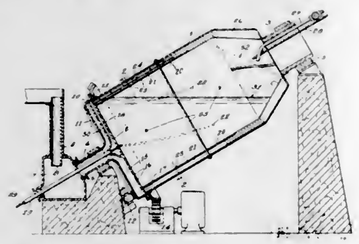
4. The combination with a rotatable mill having axially disposed inlet and outlet openings, of a feed inlet pipe connected with said inlet opening, a receptacle for fresh

pulp connected with said inlet pipe, a discharge box, a helicoidal screw conveyer rotatable in said discharge opening to convey pulp to said discharge box, mechanical means in said discharge box for dividing said pulp in any desired proportion, and a pipe for returning regrinds from said discharge box to said feed pipe, said regrinds entering said feed pipe at a point between said mill and said receptacle for fresh pulp and under a greater hydraulic head than said fresh pulp.

5. The combination with a rotatable mill for wet material, having inlet and outlet openings, of a receptacle for fresh pulp, a feed pipe connecting said receptacle for fresh pulp with said inlet opening, a discharge box located at a higher elevation than said receptacle for fresh pulp, a discharge pipe connecting said discharge box with said outlet opening, means for elevating the discharged material to said discharge box, and a pipe for conveying material from said discharge box to said inlet pipe at a point between said receptacle for fresh pulp and said mill.

[Claims 6 to 11 not printed in the Gazette.]

1,168,503. PAPER-PULP SHREDDER. GUY C. HOWARD, Everett, Wash. Filed Mar. 31, 1915. Serial No. 18,252. (Cl. 92—20.)



1. A mill for reducing pulp, comprising a rotatable cylinder provided with axially disposed inlet and discharge openings, a header screen in the discharge end of said cylinder, and a concentrically disposed cylindrical screen spaced within the walls of said cylinder to form an annular passage compartment for disintegrated pulp.

2. A mill for reducing pulp, comprising a rotatable cylinder provided with axially disposed inlet and discharge openings, a header screen in the discharge end of said cylinder, and a concentrically disposed cylindrical screen spaced within the walls of said cylinder to form an annular passage compartment for disintegrated pulp, and a plurality of helically arranged blades within said compartment.

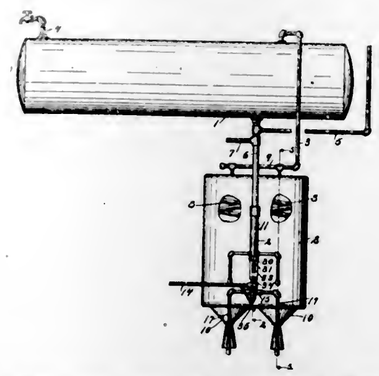
3. A mill for reducing pulp, comprising an inclined rotatable cylinder provided with an inlet and a discharge opening, helical blades in said cylinder adjacent said inlet opening, a header screen in the discharge end of said cylinder, and a concentrically disposed cylindrical screen spaced within the walls of said cylinder to form a compartment for disintegrated pulp.

4. A mill for reducing pulp, comprising an inclined rotatable cylinder provided with an inlet and a discharge opening, helical blades in said cylinder adjacent said inlet opening, a header screen in the discharge end of said cylinder, diametrically disposed tie-rods, and a concentrically disposed cylindrical screen spaced within the walls of said cylinder to form a compartment for disintegrated pulp.

5. A mill of the class described, comprising an inclined rotatable cylinder having axially disposed inlet and discharge openings, helically disposed blades in said cylinder adjacent said inlet openings, a header screen spaced from the discharge end of said cylinder, a cylindrical screen spaced from the walls of said cylinder to form a compartment for finished material, and helically disposed blades between said cylindrical screen and the walls of said cylinder.

[Claims 6 to 15 not printed in the Gazette.]

1,168,504. WATER-HEATER. HERBERT S. HUMPHREY, Kalamazoo, Mich. Filed Feb. 20, 1913. Serial No. 749,682. (Cl. 126—351.)



1. A water heater comprising a plurality of boiler coil units, a circulation system including said boiler units, a thermostat disposed in the return of said circulation system, a source of water supply connected to said return so that the thermostat is acted upon by the incoming water, burners for said boiler units, fuel valves having independent burner delivery connections, said valves being provided with independent stems, a thermostat actuated plunger member provided with a cross head adapted to successively engage said valve stems, and springs for independently closing said valves.

2. A water heater comprising a plurality of boiler coil units, a circulation system including said boiler units, a thermostat disposed in the said circulation system, burners for said boiler units, fuel valves having independent burner delivery connections, said valves being provided with independent stems, a thermostat actuated plunger member provided with a cross head adapted to successively engage said valve stems, and springs for independently closing said valves.

3. A water heater comprising a plurality of boiler coil units, a circulation system, a connection from said boiler units to said system, a return connection from said system to said boiler units, a thermostat disposed in said return connection, a source of water supply connected to said return connection in advance of the thermostat, burners for said boiler units, fuel valves having independent burner delivery connections, and operating connections for said thermostat to said valves, whereby they are successively actuated.

4. A water heater comprising a plurality of boiler coil units, a circulation system, a connection from said boiler units to said system, a return connection from said system to said boiler units, a thermostat, a heating burner for each of said boiler units, fuel valves having independent delivery connections to said burners, and operating connections for said thermostat to said valves, whereby they are successively actuated.

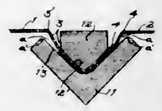
5. A water heater comprising a plurality of boiler units, a thermostat, a heating burner for each of said boiler units, a fuel valve for each of said burners, said valves being provided with independent adjustable stems, a thermostat actuated member adapted to successively engage said valve stems successively opening said valves, and springs for independently closing said valves.

[Claims 6 to 18 not printed in the Gazette.]

1,168,505. METALLIC WATER-FLUME. WILLIAM C. IRVIN and FREDERICK M. DOAK, San Francisco, Cal. Filed Oct. 28, 1914. Serial No. 869,030. (Cl. 61—5.)

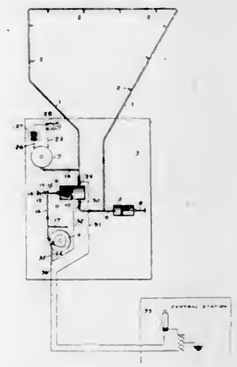
A water flume, the same comprising a supporting structure, a plurality of metallic flume sections situated within the sphere of the supporting structure, the ends of

each section terminating in substantially a V-shaped flanged extension providing a transversely grooved surface and the end flanged extension of adjacent flume sections overlapping for engagement one with the other, a transversely disposed fillet member fitted within the groove of the uppermost end flanged extension of the united flume sections, a transversely disposed angle member arranged beneath the lowermost end flanged extension



of adjacent flume sections and within which the same rests, the longitudinal side edges of the fillet and angle members being spaced from the joint of the V-shaped flanges of the main flume portions whereby a longitudinal expansion and contraction of the flume sections is permitted, and means for securing the said angle member to the supporting structure whereby the interlocked end flanged extension of adjacent flume sections will be clamped between said fillet and angle members.

1,168,506. PNEUMATIC ELECTRIC FIRE-ALARM. CHRISTIAN JOHN JENNE, San Francisco, Cal. Filed Dec. 28, 1914. Serial No. 879,314. (Cl. 177—358.)



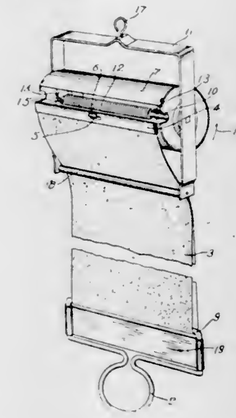
1. A fire alarm system comprising a tube extending throughout the structure to be protected, a pressure cylinder and a pressure gage connected with said tube, means to supply said tube with air under pressure above that of the atmosphere, a local alarm, an electric circuit connected with the pressure gage to set off said local alarm on the falling of the pressure within the tube, a central station, an electric circuit including the tube, a piston in the pressure cylinder, and means operated by the piston upon the falling of the air pressure in the tube to set off the central station alarm.

2. A fire alarm system comprising a tube extending throughout the building to be protected, fusible metal plugs carried thereby, a pressure cylinder and a pressure gage connected with said tube, means to supply said tube with air under pressure above that of the atmosphere, means operated by the pressure gage to set off a local alarm on the reduction of pressure within the tube, a central station, and means operated by the pressure cylinder to set off the alarm at the central station upon the falling of the air pressure in said tube.

3. A fire alarm system comprising a tube extending throughout the structure to be protected, fusible metal plugs carried thereby, means to supply said tube with air under pressure above that of the atmosphere, a pressure cylinder, a central station, means operated by the slow falling of the pressure in the tube to set off a partial alarm at the central station, and means to set off the complete alarm at the central station upon the final reduction of pressure in said tube to that of the atmosphere.

4. A fire alarm system comprising a tube extending throughout the structure to be protected, fusible metal plugs carried thereby, a pressure cylinder and a pressure gage connected with said tube, a local alarm, means operated by the pressure gage to set off said local alarm intermittently upon the slow falling of pressure in said tube, means to set off, a final alarm connected with said pressure gage upon the complete falling of pressure in said tube, and means connected with the pressure cylinder to set off an alarm at the central station on the falling of pressure in the tube.

1,168,507. KNIFE-SHARPENER. EDWARD P. JOHNSON, Chicago, Ill. Filed Feb. 17, 1915. Serial No. 8,713. (Cl. 51—16.)



1. A device of the class described, comprising a reel, a stropping member formed of two flexible strips attached only at their ends, having suitable stropping surfaces and connected to said reel, a handle for said member, means connecting said strips with said handle so as to allow for a relative longitudinal shifting of said strips when traveling to and from said reel, and other means normally actuating said reel to coil said member thereon.

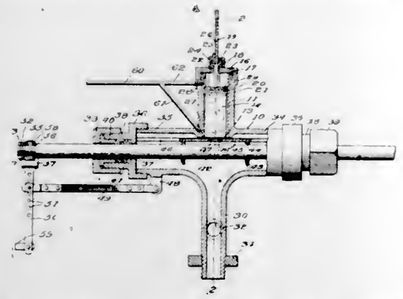
2. A device of the class described, comprising a reel, a band of material having an abrasive surface being looped upon itself to provide two super-imposed layers and being secured to said reel, a handle through which said band is looped so as to allow for a relative longitudinal shifting of said layers when said band is traveling to and from said reel, and means normally actuating said reel to coil said band thereon.

1,168,508. LUBRICATOR. EDWARD A. JONES, Scranton, and JOHN E. JONES, Throop, Pa., assignors to Engineer's Specialty Manufacturing Company, Scranton, Pa., a Corporation of Pennsylvania. Filed Aug. 10, 1915. Serial No. 44,807. (Cl. 184—46.)

1. A lubricator including a body member having vertically alined tubular portions, one providing a graphite stick holding chamber and the other a lubricant passage leading from the chamber, a reciprocably mounted cutter in the body member, movable across the lower end of the chamber, and means for holding the stick of graphite in engagement with the cutter.

2. A lubricator including a body member having vertically alined tubular portions, one providing a graphite stick holding chamber and the other a lubricant passage leading from the chamber, a reciprocably mounted cutter in the body member, movable across the lower end of the chamber, and means for holding the stick of graphite in

engagement with the cutter, said means including means for indicating the amount of graphite in the chamber.



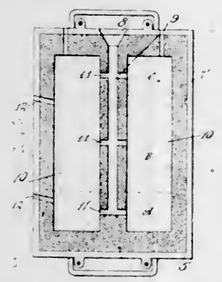
3. A lubricator including a body having vertically alined tubular portions, one providing a lubricant stick receiving chamber and the other a lubricant passage leading from the chamber, a cutter reciprocably mounted in the body and across the lower end of the lubricant chamber and adapted to support a stick of lubricant therein, means for imparting reciprocatory movement to the cutter, and means for admitting steam to the lubricator above and below the lubricant therein.

4. A lubricator including a body having a chamber adapted to receive a stick of lubricant, the peripheral wall of said body being interiorly channeled longitudinally, a cutter mechanism reciprocably mounted in the body and forming a support for the lower end of the lubricant stick, and means for admitting steam between the cutter and lubricant stick.

5. A lubricator including a substantially cross-shaped body having tubular arms, one of which is adapted for attachment to the machine being lubricated and to provide a lubricant passage to such machine, a shaft reciprocably mounted in a pair of oppositely disposed arms, a cutter bearing plate carried by the shaft and extending across the lower end of the other arm, and means in the other arm for forcing a stick of lubricant against the cutter carrying plate.

[Claims 6 to 10 not printed in the Gazette.]

1,168,509. METHOD OF FORMING BRAKE-SHOES. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed June 12, 1915. Serial No. 33,646. (Cl. 22—209.)



1. The method of forming brake shoes in molds which are provided with the shoe cavity on end and with overflow ports at successive heights, consisting in introducing molten metal within said cavity until the same flows from the lowermost overflow port, allowing said metal to harden, resulting in the closing of the lowermost overflow port, introducing a second allotment of molten metal within said cavity until it flows from the next adjacent and superimposed overflow port, allowing said metal to set and in this manner build up, step by step the body of the shoe.

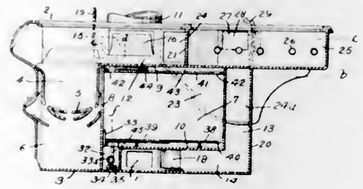
2. The method of forming brake shoes of that type which includes a bundle of open-work metal extending throughout their length, consisting in placing the mold in a position with the shoe cavity on end, introducing within said cavity a bundle of open-work metal, and pouring therein, and at subsequent times, limited quantities of molten metal.

3. The method of forming brake shoes consisting in introducing, at successive intervals, limited quantities of molten metal within a hold having a shoe cavity arranged on end, the brake shoe cavity containing a reinforcing back and a binding member, each allotment of metal being allowed to set prior to the introduction of the next allotment.

4. The method of forming castings as hereinabove described, consisting in introducing molten metal within a mold cavity, which cavity is provided withoverflow ports at successive heights, allowing said metal to harden, resulting in the closing of the lowermost overflow port, introducing a second allotment of molten metal within said cavity until it flows from the next adjacent and superimposed overflow port, allowing said metal to set and close this latter-mentioned overflow port, and in this manner build up, step by step, the body of the casting.

5. The method of forming brake shoes, consisting in placing a mold in a position with the shoe cavity on end, placing within said cavity a supporting member, introducing at successive intervals limited quantities of molten metal, allowing each allotment of metal to set prior to the introduction of the next allotment, the anchorage of each allotment of metal to said supporting member causing the isolation of the former by the shrinkage of the metal during cooling.

1,168,510. COOKING-STOVE. BERTRAND B. KAHN, Cincinnati, Ohio, assignor to The Estate Stove Company, Hamilton, Ohio. Filed Aug. 9, 1915. Serial No. 44,397. (Cl. 126—36.)



1. A cooking stove comprising, an oven, a fire-box, a top burner-box overlapping the oven, a top flue extending from the fire-box over such portion of the oven as is not overlapped by the burner-box, a vertical flue extending down the side of the oven on the side opposite the fire-box, a bottom flue communicating therewith and passing under the oven, a chimney-flue connected with the outlet to the chimney, a port placing the chimney-flue in communication with the bottom-flue, a port placing the chimney-flue in communication with the top flue, a damper adapted to open and close communication between the top flue and the chimney-flue, and a flue-structure disposed at the back of the stove in communication with the top flue and with the upper portion of said vertical flue, combined substantially as set forth.

2. A cooking stove comprising, an oven, a fire-box, a top burner-box overlapping the oven, a top flue extending from the fire-box over such portion of the oven as is not overlapped by the burner-box, a vertical flue extending down the side of the oven on the side opposite the fire-box, a bottom flue communicating therewith and passing under the oven, a chimney-flue connected with the outlet to the chimney, a port placing the chimney-flue in communication with the bottom flue, a port placing the chimney-flue in communication with the top flue, a damper adapted to open and close communication between the top flue and the chimney-flue, a flue-structure disposed at the back of the stove in communication with the top flue and with the upper portion of said vertical flue, and a port placing the burner-box in communication with the flue-structure, combined substantially as set forth.

3. A cooking stove comprising, an oven, a fire-box, a top burner-box overlapping the oven, a top flue extending from the fire-box over such portion of the oven as is not overlapped by the burner-box, a vertical flue extending down the side of the oven on the side opposite the fire-box, a bottom flue communicating therewith and passing under the oven, a chimney-flue connected with the outlet to the chimney, a port placing the chimney-flue in communication with the bottom flue, a port placing the chimney-flue in communication with the top flue, a damper adapted to open and close communication between the top flue and the chimney-flue, a flue-structure disposed at the back of the stove in communication with the top flue and with the upper portion of said vertical flue, a port placing the burner-box in communication with the flue-structure, and a damper adapted to close communication between the burner-box and flue-structure, combined substantially as set forth.

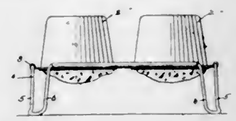
4. A cooking stove comprising, an oven, a fire-box at one side of the oven, a top flue extending from the fire-box over the oven, a vertical flue extending down the side of the oven at the side opposite the fire-box and in communication with said top flue, a bottom flue communicating with the vertical flue and passing under the oven and having an end wall near the wall dividing the oven from the fire-box, a chimney-flue connected with the outlet to the chimney, a port placing the chimney-flue in communication with the bottom flue, a port placing the chimney-flue in communication with the top flue, a damper adapted to open and close communication between the top flue and the chimney-flue, a burner-pit formed between the end wall of the bottom flue and the wall dividing the oven from the fire-box and floored by the extreme bottom of the stove and open at its top into the oven, a burner disposed therein, a plate disposed in the base of the oven above the main floor of the oven and extending over said main floor and over the burner-pit and leaving a space between the plate and the main floor of the oven and provided with ports placing said space in communication with the oven at its side opposite the burner-pit, and a port placing the extreme top of the oven in communication with the chimney flue, whereby heated products rising from the burner-pit pass upwardly the full height of the oven and then out of the oven, combined substantially as set forth.

5. A cooking stove comprising, an oven, a fire-box at one side of the oven, a top flue extending from the fire-box over the oven, a vertical flue extending down the side of the oven on the side opposite the fire-box and in communication with said top flue, a bottom flue communicating with the vertical flue and passing under the oven and having an end wall near the wall dividing the oven from the fire-box, a chimney-flue connected with the outlet to the chimney, a port placing the chimney-flue in communication with the bottom flue, a port placing the chimney-flue in communication with the top flue, a damper adapted to open and close communication between the top flue and the chimney-flue, a burner-pit formed between the end wall of the bottom flue and the wall dividing the oven from the fire-box and floored by the extreme bottom of the stove and open at its top into the oven, a burner disposed threin, a hinged cover disposed over the burner-pit and adapted to fold up against the side-wall of the oven, a plate disposed in the base of the oven above the main floor of the oven and extending over said main floor and over the burner-pit and leaving a space between the plate and the main floor of the oven and provided with ports placing said space in communication with the oven at its side opposite the burner-pit, and a port placing the upper portion of the oven in communication with the chimney-flue, combined substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

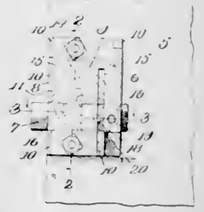
1,168,511. PASTRY-BAKING PAN. DELLA M. KEFAUVER, Columbus, Ohio. Filed Feb. 24, 1913. Serial No. 750,197. (Cl. 53—6.)

A baking pan comprising a member provided with a plurality of cup-shaped pans each having an apertured bottom, a removable supplemental disk bottom for each pan, and upwardly extending supporting legs at the corners of



said member of a height approximately equal to the depth of said pans and adapted to support said member when in an inverted position.

1,168,512. LOCK FOR TOY SAFES. HARRY T. KINGSBURY, Keene, N. H. Filed May 9, 1913. Serial No. 766,579. (Cl. 70—78.)



1. In a lock, the combination with a housing including a cover-plate and a bolt slidably mounted in said housing, the cover-plate being provided with a spring tongue arranged in a plane at right angles to the path of movement of said bolt, said tongue and bolt being relatively formed with a projection and a plurality of seats to frictionally retain said bolt in any one of a plurality of positions.

2. In a lock, the combination with a housing including a cover-plate formed of sheet spring metal and a bolt slidably mounted in the said housing, the cover-plate being stamped with a tongue arranged in a plane at right angles to the path of movement of said bolt, the free end of said tongue and the bolt being relatively formed with a projection and a plurality of seats to frictionally retain said bolt in any one of a plurality of positions.

3. In a lock, the combination with a support, of a key-plate rotatably mounted therein, a housing attached to said support around said plate, a bolt slidably mounted in said housing, and a combined spring washer and ward plate disposed between the support and bolt.

4. A combined spring washer and ward plate for locks stamped from spring sheet-metal to provide a keyway and a plurality of curved fingers, said fingers projecting laterally from the same side of the plate.

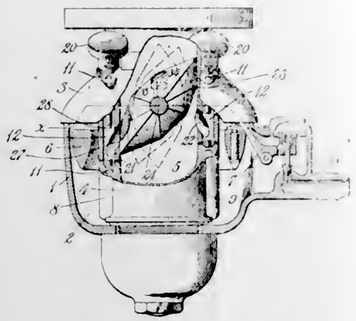
5. In a lock, the combination with a support and a housing, of a bolt slidably mounted therein, the housing being provided with a spring locking element arranged to coöperate with said bolt to lock the latter in any one of a plurality of positions, and a combined spring washer and ward plate disposed between the support and the bolt.

1,168,513. CARBURETER. GEORGE KINGSTON, Kokomo, Ind. Filed Jan. 5, 1912. Serial No. 669,631. (Cl. 48—150.3.)

1. In a carbureter, the combination with a casing having a main tubular air passage, and means for introducing fuel into the air passing through said passage, of a valve pivotally supported in said passage and having a thickened middle portion and tapered toward its edges to produce the effect of a venturi restriction in said passage.

2. In a carbureter, the combination of a tubular main air passage, means for introducing fuel into said passage opening through the side thereof, and a pivotally supported valve member in said passage having an enlargement intermediate its ends adjacent to its pivot to give the effect of a venturi restriction in the passage and adapted to be turned across and close the passage.

3. In a carbureter, the combination of a member forming a main air passage, means for introducing fuel into said passage and a valve pivotally supported in said member upon an axis extending transversely of said passage, said valve being enlarged intermediate its ends and tapered toward each end, in section transversely of its pivotal axis, to give the effect of a venturi restriction.

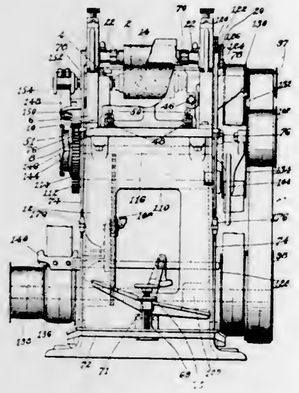


4. In a carbureter, the combination of a tubular main air passage, means for introducing fuel into said passage, and a valve member pivotally supported upon a transverse axis in said passage and having an elliptical outline with its major axis extending lengthwise of said passage and thickened intermediate its ends, said valve member being formed with facets to engage the wall of the air passage.

5. In a carbureter, the combination of a tubular member forming a main air passage, means for introducing fuel into said passage opening through opposite sides thereof, a valve pivotally supported in said air passage adjacent to said openings, said valve being oblong with rounded ends and a thickened middle portion and adapted to engage the wall of said passage between one of said openings and the discharge end of the passage and close said passage.

[Claims 6 to 12 not printed in the Gazette.]

1,168,514. BUFFING-MACHINE. ELMER E. LANE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 3, 1912. Serial No. 713,115. (Cl. 51—17.)



1. In a leather buffing machine the combination with a buffing roll and a feed roll adjustable toward and from said buffing roll, of a guide roll located at the rear of the feed roll and adjustable therewith.

2. In a leather buffing machine the combination with a buffing roll and a feed roll adjustable toward and from said buffing roll, of a guide roll located at the rear of the feed roll and adjustable therewith and means for adjusting said guide roll with respect to said feed roll.

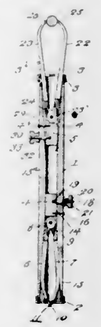
3. In a leather buffing machine the combination with a buffing roll, a feed roll and bearings for said feed roll which are adjustable toward and from said buffing roll, of a yoke fast to said bearings, a guide carried by said yoke and means for adjusting said guide with respect to said bearings.

4. In a leather buffing machine the combination with a buffing roll, a feed roll and bearings for said feed roll which are adjustable toward and from said buffing roll, of a yoke fast to said bearings, an auxiliary roll carried by said yoke and means for adjusting said auxiliary roll with respect to said bearings.

5. In a leather buffing machine the combination with a buffing roll, a fed roll and bearings for said feed roll which are adjustable toward and from said buffing roll, of a yoke fast to said bearings, an auxiliary roll carried by said yoke and a presser located between said feed roll and auxiliary roll.

[Claims 6 to 19 not printed in the Gazette.]

1,168,515. SELF-REGISTERING CALIPERS. WILLIAM J. LANOUETTE, Roxbury, Vt. Filed Feb. 17, 1915. Serial No. 8,901. (Cl. 33—147.)

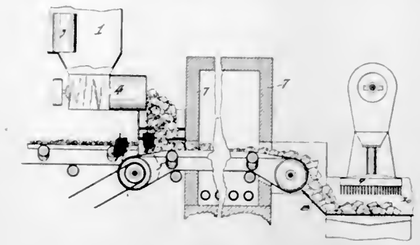


1. A measuring instrument of the class described comprising an elongated hollow body, a closure cap provided upon one end of said body and having guide openings therein, a slide block mounted for longitudinal movement within the body, a caliper including expansible legs pivoted to said slide block and having their free ends movable through the said guide openings and adapted to project outwardly from the body, and means by which the longitudinal movement of the slide block may be determined.

2. A measuring instrument of the class described comprising an elongated hollow body, a closure cap provided upon one end of said body and having guide openings therein, a slide block mounted for longitudinal movement within the body, a caliper including expansible legs pivoted to said slide block and having their free ends movable through the said guide openings and adapted to project outwardly from the body, means by which the longitudinal movement of the slide block may be determined, and yieldable means for normally maintaining the caliper legs in expanded relation to each other.

3. A measuring instrument of the class described comprising an elongated hollow body, a closure cap provided upon one end of said body and having guide openings therein, a slide block mounted for longitudinal movement within the body, a caliper including expansible legs pivoted to said slide block and having their free ends movable through the said guide openings and adapted to project outwardly from the body, means by which the longitudinal movement of the slide block may be determined, and means by which the slide block may be secured in its different adjusted positions.

1,168,516. METHOD OF PRODUCING STARCH OF ANGULAR CONFIGURATION. ADOLPH W. H. LENDERS, Cedar Rapids, Iowa. Filed Apr. 29, 1914. Serial No. 835,066. (Cl. 127—23.)



1. The herein described method of producing starch in angular configuration, which comprises cutting the cooled starch, from the cylinders, into lumps, placing the same in a curing kiln, so that the air can reach to all parts of the lumps, then breaking the lumps thus cured into pieces.

2. The herein described method of producing starch in angular configuration, which comprises cutting the cooled starch, from the cylinders, into large lumps, placing the same in the curing kiln, so that the air can reach to all parts of the lumps, then breaking the lumps thus cured into pieces.

3. The herein described method of producing starch which comprises cutting an uncured starch into lumps to produce large and well-defined angular configuration, conducting the said lumps through a kiln, in which all of the surfaces of the lumps are exposed to the air, then breaking the cured lumps up into pieces.

1,168,517. BOTTLE-MAKING MACHINE. JOHN G. LEPPER, Waterbury, Conn., and ALVIN MATTIS, Royersford, Pa., assignors to Booth, Schellinger and Williams Company, a Corporation of Delaware. Filed Oct. 28, 1912. Serial No. 728,282. (Cl. 49—23.)



1. A device of the kind described comprising a counterbalanced spindle carrying a finishing tool at its lower end, gravity operated means for lowering said spindle and tool together with gravity operated means for raising said spindle to its normal position.

2. A device of the kind described comprising a balanced spindle, a finishing tool arranged at the lower end of said spindle, said spindle being vertically movable and rotatable, means for actuating the elements of said finishing tool, said actuation of the finishing tool serving to overcome the balance of said spindle and cause the same to descend simultaneously with the operation of the finishing tool.

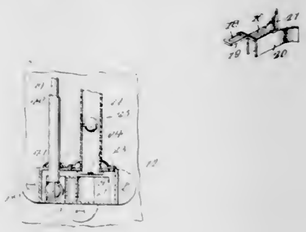
3. A device for the kind described comprising a spindle, a finishing tool carried at the lower end of said spindle, means attached to the opposite end of said spindle for maintaining said spindle in a suspended position, means operating upon said finishing tool for actuating the same and simultaneously lowering said spindle, and means for returning the tool actuated mechanism to its normal position and whereby the spindle suspending means can become operative again to elevate and suspend said spindle.

4. In a device of the kind described a balanced suspended spindle carrying a finishing tool at the lower end thereof, said spindle being rotatable and also vertically movable, an arm for actuating said tool and causing the spindle to descend, a locking lever for holding said arm inoperative together with means for disengaging said locking lever, thereby permitting the actuating arm to become operative for the purpose set forth.

5. In a device of the kind described a balanced and suspended rotatable spindle carrying a finishing tool at the lower end thereof, a gravity operated arm adapted to actuate said tool and cause the spindle to descend, a locking lever for holding said arm inoperative, means for disengaging said lever, and positive means for returning the tool actuating arm to its normal position and permit the suspending means of the spindle to elevate the same.

[Claims 6 and 7 not printed in the Gazette.]

1,168,518. WATER-GAGE AND THERMOSTAT. JAMES A. LEWIS, Minneapolis, Minn. Filed July 9, 1914. Serial No. 850,000. (Cl. 73—82.)



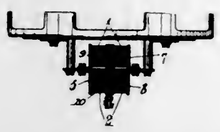
1. In a washer an outer receptacle provided with upper and lower openings, a lower inlet housing carried by said outer receptacle and inclosing the lower opening formed therein, a guide adjustably mounted in said inlet housing and provided with arms extending through the lower opening of said receptacle and having their free ends extending in diverging relation, an upper housing inclosing the upper opening formed in said receptacle, a water glass positioned between said upper and lower housings and having its upper and lower ends extending into said housing, and a thermometer extending into said lower housing.

2. In a washing machine a water receptacle provided with upper and lower openings, a lower housing inclosing the lower opening of said receptacle, a guide adjustably mounted in said lower housing and extending through the lower opening of said receptacle, an upper housing inclosing the upper opening of said receptacle, a water glass extending between said upper and lower housings and communicating with the same, and a thermometer extending into said lower housing.

3. A device of the character described comprising a lower inlet housing having an inlet, a guide mounted within said housing and provided with flaring arms extending through the inlet opening of the same, an upper housing, a water glass communicating with said housings, and a thermometer extending into said lower housing.

4. A device of the character described comprising upper and lower housings, a water glass communicating with said housings, a thermometric element extending into said lower housing, and means adjustably mounted in said lower housing for guiding water into and out of said lower housing.

1,168,519. ELECTROMAGNETIC FREQUENCY-METER AND THE LIKE. KARL RAGNAR LILJEBLAD, Järfva, near Stockholm, Sweden, assignor to Aktiebolaget Elevator, Järfva, near Stockholm, Sweden. Filed Dec. 1, 1913. Serial No. 803,890. (Cl. 172—245.)

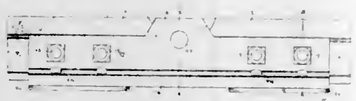


1. In an electromagnetic frequency-meter, the combination of two coils, an ohmic resistance connected in series with one of said coils, an inductive resistance connected in series with the other of said coils, a vane for each of the coils, and a common, freely turning shaft to which said vanes are secured so as to form an angle between each other.

2. In an electromagnetic frequency-meter, the combination of two coils, an ohmic resistance connected in series with one of said coils, an inductive resistance connected in series with the other of said coils, said coils being placed in juxtaposition with their axes approximately parallel, a vane for each of the coils, and a common, freely turning shaft to which said vanes are secured so as to form an angle between each other.

3. In an electromagnetic frequency-meter, the combination of two coils, an ohmic resistance connected in series with one of said coils, an inductive resistance connected in series with the other of said coils, a vane for each of the coils, and a common, freely turning shaft to which said vanes are adjustably secured so as to form an adjustable angle between each other.

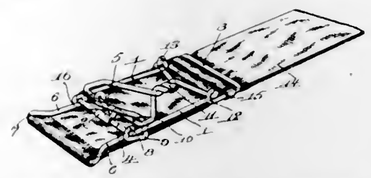
1,168,520. RAIL-JOINT. BENJAMIN F. LINDLEY, Danville, Ill. Filed July 7, 1915. Serial No. 38,408. (Cl. 239—3.)



1. In a rail joint, the combination with the meeting ends of rails, each end having a portion of its head removed on opposite sides of the web of the rail to form tongues, of angle bars having extensions at their central portion adapted to occupy the spaces formed by removing portions of the rail heads, said extensions projecting on opposite sides of the joint between the rails, a bolt extending transversely through the extensions and between the ends of the tongues, said tongues having recesses to receive the bolt, the head of said bolt being flush with the face of the extension on the inner face of the rails, a foot portion for each angle bar extending over the base of the rail and having a flange extending downwardly over the edge of the base and a distance below the same, said foot portion having a slot therein, a base plate below the rails, said base and base plate having notches registering with the slots of the foot portion, and spikes adapted to extend downwardly through said slots and notches and into a tie.

2. In a rail joint, the combination with the meeting ends of rails having portions of the heads removed to form tongues, the width of said tongues being equal to the width of the web of the rail, said tongues having semi-circular recesses in their meeting ends, the ends of the heads being under-cut, of angle bars having upwardly extending extensions at their longitudinal center, the end faces of the extensions being extended at an angle to fit the angle of the under-cut ends of the heads of the rails, a bolt extending transversely through the extensions and through the opening formed by the semi-circular recesses in the tongues, bolts extending transversely through the angle bars and the interposed rail webs and in a plane below the bolt in the extensions, foot portions at the lower edges of the angle plates extending over the faces of the base of the rail, said portions having slots therein, said foot portions terminating in depending flanges, and a base plate between said depending flanges and below the base of the rail, said base and base plate having notches registering with the slots in the foot portion, and spikes adapted to be entered through said registering slots and notches and into a tie.

1,168,521. CLASP. ISAAC W. LITCHFIELD, Boston, Mass., assignor of one-half to Harry H. De Loss, Bridgeport, Conn. Filed Aug. 2, 1907. Serial No. 386,723. (Cl. 24—248.)



1. A fastener comprising a body, a hook pivoted to one end of the body and having its mouth facing outward, a loop movably connected to the other end of the body and arranged to lie within the mouth of the hook back of its pivot when the material is folded through the loop by the hook, whereby the loop will be locked against movement away from the body by engagement with the hook, substantially as described.

2. A fastener comprising a body, a material engaging hook member pivoted to the body and having its mouth facing outward, a coöperating member supported on the body on that side of the hook away from which the mouth faces for movement toward and away from the hook, a material engaging bar on the coöperating member located between the point of support of the coöperating member and the pivot of the hook whereby pressure of the coöperating member against the hook tends to swing the hook in a direction to maintain the engagement between the hook and bar, substantially as described.

3. A fastener comprising a body, a member pivoted to the body comprising a material engaging hook portion having its mouth facing outward and a base portion adapted to lie parallel to the body portion when the hook is closed, a coöperating member mounted for movement toward and away from the pivot of the pivoted member, and a material engaging bar on the coöperating member arranged to lie within the mouth of the hook adjacent to its pivot and between said pivot and the point of support of said coöperating member, substantially as described.

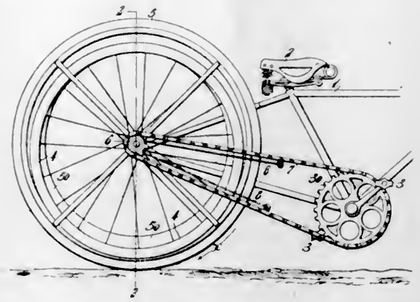
4. A fastener comprising a body member, a member pivoted to the lower end of the body member provided with a base portion and a material engaging hook the base portion adapted to lie parallel with the body portion when the hook is closed, a coöperating clamping member movably secured to the upper end of the body beyond the hook, a material engaging portion on the coöperating member arranged to lie within the hook when the base portion of the pivoted member is parallel with the body member, substantially as described.

5. A fastener comprising a body member, a hook pivoted to the body, a coöperating loop mounted on the body to the rear of the mouth of the hook through which the material is folded by the hook arranged to engage the hook back of its pivot, and a material deflecting device on the loop, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

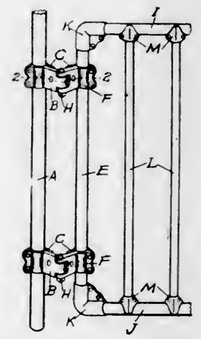
1,168,522. GEARING. CHARLES FRANKLIN LORING, Reno, Nev. Filed Apr. 30, 1913. Serial No. 764,527. (Cl. 74—26.)

1. In a power transmitting mechanism of the character stated, a frame, an inner wheel having a peripheral groove and relatively fixed journaled in said frame, a driving member, an outer wheel having an inner rim to receive said inner wheel, a driving element on said outer wheel and a power transmitting connection between said driving element of said outer wheel and said driving member, said outer wheel having its axis independent of the pivoted axis of the inner wheel, substantially as shown and described.



2. In a power transmitting mechanism, an outer driving wheel, an inner driven wheel having a peripheral groove, said outer driving wheel having an inner rim to project into the said groove, an initial driving element, a power transmitting connection between said initial driving element and said outer wheel, a rigid body on which said initial driving element is fixedly journaled, and means for holding said inner and outer wheels in the same plane.

1,168,523. GATE-HINGE. WILLIAM LOUDEN, Fairfield, Iowa. Filed Dec. 23, 1913. Serial No. 808,306. (Cl. 16—40.)

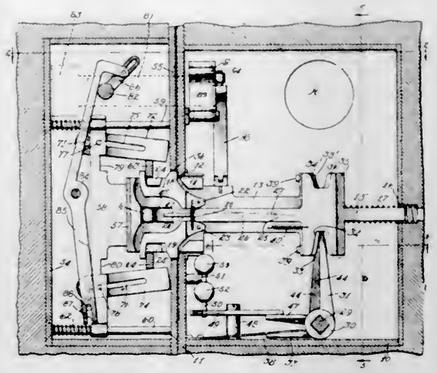


1. In hinges for gates having a cylindrical side rail and a cylindrical post for the attachment of the hinges, a pair of hinge members pivotally connected at their adjacent ends, and means to clamp their other ends on the side-rail and post, and to adjust them thereon.

2. In hinges for gates having a cylindrical side rail and a cylindrical post for the attachment of the hinges, a pair of hinge members pivotally connected at their adjacent ends, their other ends being set at an angle to their bodies and means to clamp said other ends to the side-rail and post, and to adjust them thereon.

3. In hinges for gates having a cylindrical side rail and a cylindrical post for the attachment of the hinges, a pair of hinge members pivotally connected at their adjacent ends, their other ends having concave sides adapted to fit adjacent sides of the side-rail and post, clamping members having concave sides adapted to fit the other sides of the side-rail and post, and bolts to draw said clamping members toward said hinge members, and to clamp them on the side-rail and post.

1,168,524. DOOR-LOCK. WILLIAM A. LURIE, Chicago, Ill. Filed June 17, 1914. Serial No. 845,620. (Cl. 70—14.)



1. In a lock, the combination of a bolt plate having a head, pawls pivoted in said head and having inner and outer teeth adapted to project beyond the opposite sides of the head, a bar movable on said bolt plate tending to keep said pawls spread apart with the teeth projecting, opposed latch plates in the jamb with which the door is associated, means controlled by entry of the bolt into the jamb for causing said latch plates to be moved against the opposite sides of said bolt head and in front of the outer teeth of the pawls when said teeth are projected from the head, an escutcheon plate on the door having an opening through which the bolt head travels and disposed in front of the inner teeth of the pawls when such teeth are projected, and actuating means associated with said bolt plate and bar thereon and adapted to first cause shifting of said bar to release the pawls and then inward movement of said bolt plate.

2. In locking mechanism for doors, the combination of a door lock section comprising an escutcheon plate having a bolt opening, a bolt plate having a head adapted to slide through said opening, pawls pivoted in said head and having teeth, means tending to swing said pawls to be entirely within said head, a bar slidable on said bolt plate and normally engaging said pawls to spread them apart to cause their teeth to project beyond the sides of the bolt head and in front of the escutcheon plate whereby said bolt plate is prevented from inward movement by pressure thereon, a door knob shaft and a hub thereon, an arm extending from said hub, said bolt plate and bar thereon having notches in which the end of said arm engages, said notches being offset whereby upon turning of said knob shaft and swinging of said arm said bar will be shifted a distance first to release the pawls to allow said bolt plate to be then shifted inwardly, an abutment arm extending from said hub, and a locking plate adapted to be set with reference to said abutment arm to prevent turning of said knob shaft and shifting of the bolt.

3. In locking mechanism for doors, the combination of a door lock section comprising an escutcheon plate having a bolt opening, a bolt plate having a head adapted to slide through said opening, pawls pivoted in said head and having teeth, means tending to swing said pawls to be entirely within said head, a bar slidable on said bolt plate and normally engaging said pawls to spred them apart to cause their teeth to project beyond the sides of the bolt head and in front of the escutcheon plate whereby said bolt plate is prevented from inward movement by pressure thereon, a door knob shaft and a hub thereon, an arm extending from said hub, said bolt plate and bar thereon having notches in which the end of said arm engages, said notches being offset whereby upon turning of said knob shaft and swing of said arm said bar will be shifted a distance first to release the pawls to allow said bolt plate to be then shifted inwardly, an abutment arm extending from

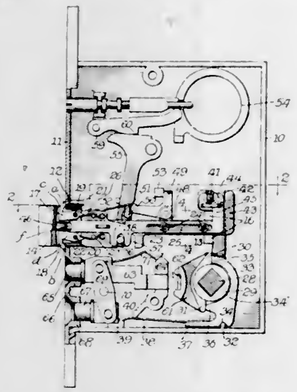
said hub, a pivoted locking plate, and an abutment controlled lever connected with said locking plate for setting said plate in the path of said abutment arm to prevent rotation of the knob shaft.

4. In locking mechanism for doors, the combination with a lock housing secured to the door, a lock bolt reciprocable in said housing and having a head, and means for controlling the shifting of said bolt, of a lock housing secured in the jamb of the door frame, a latch bar pivoted on said jamb housing and adapted to be swung to position in front of the door to lock the door against opening, means within said jamb housing controlled by the entry of the bolt head thereinto for effecting swinging of said latch bar to locking position, and a detent for locking the latch bar in locking position.

5. In locking mechanism for doors, the combination with a housing secured to the door, a bolt slidable in said housing, and means for actuating said bolt, of a housing secured in the jamb of the door frame, a latch bar pivoted to said jamb housing adapted to be swung to engage in front of the door housing to lock the door against opening, actuating lever mechanism within said jamb housing connected with said latch bar to be engaged and actuated by the bolt when said bolt is shifted into the jamb housing, and a detent for locking the latch bar in locking position.

[Claims 6 to 9 not printed in the Gazette.]

1,168,525. DOOR-LOCK. WILLIAM A. LURIE, Chicago, Ill. Filed Mar. 10, 1915. Serial No. 13,325. (Cl. 70—42.)



1. In a door lock, the combination of a containing case having a face plate provided with a bolt opening, a bolt member having a head adapted to slide through said opening, detent pawls pivoted in said head and having detent teeth, means tending to swing said pawls to be entirely within said head, a spreader bar slidable on said bolt member, spring means acting on said bolt member and spreader bar and tending to force said members outwardly, means for causing outward movement of the spreader bar on the bolt member before outward movement of the bolt member by the spring means, said spreader bar being adapted during the latter part of its outward movement to coöperate with said pawls to spread them apart to carry their teeth beyond the sides of the bolt head, a detent member for checking the forward movement of said spreader bar on said bolt member before said spreader bar reaches full outer position whereby to prevent coöperation of said bar with said pawls and to allow the bolt head to reach its outer position while the pawls are still within the head, and means for effecting release of the detent member after the bolt head has reached its outer position whereby to then allow the spreader bar to coöperate with the detent pawls to spread said pawls to carry their teeth into detent position beyond the sides of said bolt head.

2. In a door lock, the combination of a containing casing having a face plate provided with a bolt opening, a bolt member slidable within said casing and having a head adapted to pss through said opening, detent pawls pivoted within said head and having detent teeth at their outer ends, springs on said bolt member tending to swing said pawls to carry their teeth beyond the upper and lower sides of the bolt head whereby when said bolt member is out said pawls will prevent inward movement thereof, a spreader bar slidable on said bolt member and adapted in its outer position thereon for engagement with said pawls to spread said pawls to carry their teeth outwardly, shifting mechanism for said bolt member and spreader bar adapted when operable in outward or rearward direction to cause shifting of the spreader bar in advance of shifting of the bolt member whereby during operation rearwardly of the shifting mechanism said spreader bar will first withdraw from the pawls before the bolt is shifted rearwardly and whereby during outward operation of the shifting means said spreader bar will tend to spread the pawls apart before outward shift of the bolt, and detent means for coöperating with the spreader bar during outward movement of the bolt member for preventing outward movement of the bar on the member to thereby prevent spreading pawls by said bar while the bolt head is passing through said opening, and means for releasing the detent means after the bolt member is in its outer position whereby to allow forward movement of said spreader bar and spreading apart of the pawls.

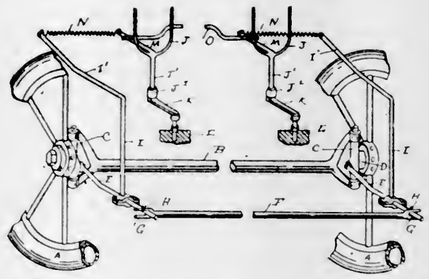
3. In a lock, the combination of a containing casing having a face plate provided with a bolt opening, a bolt member slidable within said casing and having a head adapted to pass through said opening, pawls pivoted in said head and having detent teeth at their outer ends, springs on the bolt member acting on said pawls to swing them to be entirely within said head, a spreader bar slidable on said bolt member, means tending to shift said bar forwardly on said bolt member and into wedging engagement with said pawls to spread said pawls outwardly to carry their teeth beyond the upper and lower sides of the bolt head, actuating means for shifting said bolt member inwardly, a connection between said actuating means and said spreader bar for effecting rearward movement of said bar on said bolt member before inward actuation of said bolt member whereby said pawls are first released and allowed to swing into the bolt head before inward movement of the bolt member, spring means adapted upon release of said actuating means to restore same to normal position, said spreader bar tending upon such restoring movement to shift forwardly on the bolt member to spread the pawls apart before forward movement of the bolt member, and detent mechanism for preventing such forward movement of the bar until the bolt member has substantially reached its outer position whereby the said pawls will be retained within the bolt head until the bolt head reaches its outermost position.

4. In a lock, the combination of a containing casing having a front wall provided with a bolt opening, a bolt reciprocable within said casing and having a head adapted to pass through said opening, detent pawls pivoted within said head and having detent teeth at their outer ends adapted upon spreading apart of the pawls to extend beyond the upper and lower sides of the bolt head to block inward movement of the bolt head, means on said bolt member tending to swing the pawls to be within the head, a bar slidable on said bolt member and adapted when in its outer position to engage at its front end between said pawls to spread them to carry their teeth beyond the sides of the bolt head, shifting mechanism for controlling the outward and rearward shift of the bolt and bar and adapted during shift in either direction to first cause primary shift of the bar whereby during inward shifting said bar will first be released from the pawls before the bolt is shifted inwardly and whereby during the outward shift said bar will tend to engage with the pawls before outward shift of the bolt, means for locking said bar to the bolt member away from said pawls during outward movement of the bolt member to prevent swinging apart of the pawls during such outward movement, and means for releasing the bar after the bolt member has been shifted outwardly.

5. In a lock, the combination of a containing casing having a front wall provided with a bolt opening, a bolt reciprocable within said casing and having a head adapted to pass through said opening, detent pawls pivoted within said head and having detent teeth at their outer ends adapted upon spreading apart of the pawls to extend beyond the upper and lower sides of the bolt head to block inward movement of the bolt head, means on said bolt member tending to swing the pawls to be within the head, a bar slidable on said bolt member and adapted when in its outer position to engage at its front end between said pawls to spread them to carry their teeth beyond the sides of the bolt head, shifting mechanism for controlling the outward and rearward shift of the bolt and bar and adapted during shift in either direction to first cause primary shift of the bar whereby during inward shifting said bar will be released from the pawls before the bolt is shifted inwardly and whereby during the outward shift said bar will tend to engage with the pawls before outward shift of the bolt, a latch for locking the bar against outward movement on the bolt member to prevent said bar from spreading the pawls during outward movement of the bolt member, and means for tripping said latch during the latter part of the outward movement of said bolt member whereby said bar may then coöperate with the pawls to spread them apart after the bolt head has reached its outer position.

[Claims 6 and 7 not printed in the Gazette.]

1,168,526. DIRIGIBLE HEADLIGHT. JOSEPH J. MCVETY and OSCAR R. EMERSON, Newport, Me. Filed Nov. 17, 1913. Serial No. 801,329. (Cl. 240—62.)

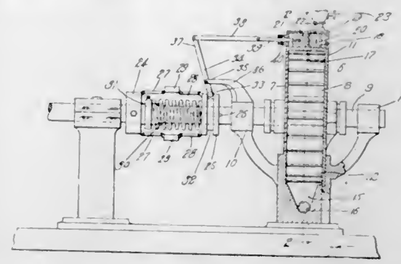


1. In a device of the character described, a vehicle body, a steering knuckle, a lamp holder mounted on said vehicle body and rotatable independently thereof, a horizontal crank on said lamp holder and means for rotating said lamp holder comprising an arm operated by said knuckle and extending upwardly to the plate of the lamp holder crank and a horizontal universally resilient connection directly between the upper end of said arm and the crank.

2. In a device of the character described, a vehicle body, a bent steering knuckle, a lamp holder mounted on said vehicle body and rotatable independently thereof, a horizontal crank on said lamp holder and means for operating said lamp holder comprising a vertical arm mounted on said knuckle and having a horizontal portion bent parallel with said knuckle and lying in the plane of said lamp operating crank and a horizontal universally resilient connection directly between said bent arm and said crank.

1,168,527. SPEED-CONTROLLING DEVICE. VASIL MACKAY, Boston, Mass. Filed Apr. 27, 1914. Serial No. 834,591. (Cl. 121—118.)

A device of the class described having, in combination, a shaft, a rotor secured to said shaft, a valve chest arranged transversely of the periphery of said rotor, said chest having a plurality of passages leading outwardly therefrom at different distances from the central plane of rotation of said rotor to different points in the periphery of said rotor, all of said points being located in said central plane of rotation, a valve arranged to reciprocate in



said chest transversely of said passages, and a governor on said shaft adapted to reciprocate said valve to open and close one or all of said passages.

1,168,528. HAT-PIN GUARD. EDUARD H. MASON, White Marsh, Va. Filed June 27, 1913. Serial No. 776,005. (Cl. 24—155.)



A hat pin protector comprising a tubular member having a closed flared outer end and an open flared inner end, and slitted from the inner flared end to about its mid length, to form tongues, said tongues being transversely grooved forming an inwardly projecting annular rib, and a protecting sleeve slidably mounted upon the tubular member, having one end portion of a diameter to snugly fit upon the slitted portion of the tubular member and slightly beyond the slits and its other end flared, projecting beyond the tongues and turned inward to protect the slitted end of the tubular member.

1,168,529. CONNECTOR FOR ELECTRIC CONDUCTORS. HOSEA F. MAXIM, Norfolk, Va., assignor of one-half to Otto Wells, Norfolk, Va. Filed Jan. 15, 1913. Serial No. 742,250. (Cl. 173—259.)



1. In a connector for electric conductors, the combination of a body, and a vertically vibrating spring coöperating with the body part to engage a conductor, the said spring being pivoted to the lower part of the body on a horizontal axis lying in the plane determined by the vibrations of the spring.

2. In a connector for electric conductors, the combination of a flat body having an opening within which to receive an electric conductor, and a wire spring positioned to vibrate vertically in a plane substantially parallel with the body, the said spring being pivotally connected to the lower part of the body on a horizontal axis lying in the plane of the vibrations of the spring.

3. In a connector for electric conductors, the combination of a flat body and a conductor-engaging spring vibrating vertically in substantially the same plane as the body, one end of the said spring being horizontally pivotally mounted on the lower part of the body on an axis lying in the plane thereof.

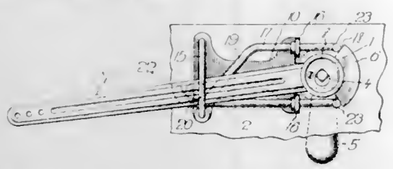
4. In a connector for electric conductors, the combination of a flat body, and a conductor-engaging spring posi-

tioned to vibrate vertically in substantially the same plane as the body and pivotally connected to the lower part thereof on a horizontal axis lying in the plane thereof.

5. In a connector for electrical conductors, the combination of two flat sections hinge-connected, and a narrow conductor-engaging spring mounted upon one of the said sections to vibrate substantially in the same plane as that determined by the flat section to which it is secured.

[Claims 6 and 7 not printed in the Gazette.]

1,168,530. FLUSHING-VALVE MECHANISM. JOHN W. MEAKER, Detroit, Mich. Filed Jan. 12, 1914. Serial No. 811,739. (Cl. 4—5.)



1. Mechanism for operating a flushing valve comprising housing means adapted to be secured in an opening of a tank wall, a rotatable handle member mounted therein, a guide member detachably mounted on the housing member, a slide member reciprocable on the guide member operatively connected to the handle member, and a valve operating oscillatory member pivotally mounted on the housing and shaft and engaged by the slide, the slide being projected when the shaft is turned in either direction from neutral position.

2. Mechanism for operating a flushing valve comprising housing means adapted to be secured in an opening of a tank wall, a rotatable handle member mounted therein, a guide member detachably mounted on the housing member, a slide member reciprocable on the guide member operatively connected to the handle member, a valve operating oscillatory member pivotally mounted on the housing and shaft and engaged by the slide, the slide being projected when the shaft is turned in either direction from neutral position, and means for detachably locking the handle member against removal from the housing.

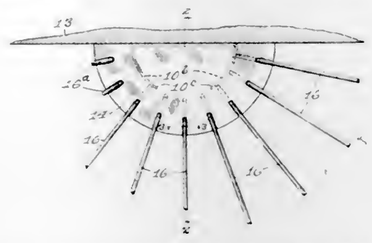
3. Mechanism for operating a flushing valve comprising a housing adapted to be secured in an opening of a tank wall, a handle member rotatably mounted in the housing to swing in either direction, a guide member detachably secured to the housing, a slide member detachably mounted on the guide member, means on the handle member engaging the slide for projecting the latter when the handle memebr is swung in either direction from neutral position, and an oscillatory valve operating member pivotally mounted in the housing and engaged by the guide member and slide to move to open position when the slide is projected.

4. Mechanism for operating flushing valves comprising a housing adapted to be mounted in the opening of a tank wall, a rotatable handle member therein, a guide member, means detachably securing the guide member on the housing, a slide member reciprocable on the guide member, means operated by the handle member for projecting the slide when the handle member is swung in either direction from neutral position, an oscillatory valve operating member mounted in the housing, and means detachably securing the oscillatory member in the housing and forming the bearing for the handle operating member, the slide engaging the oscillatory member to move the latter to open position when the slide is projected.

5. Mechanism for operating flushing valves comprising a sleeve having a lateral slot, means for securing the sleeve in an opening of the tank wall, a handle shaft member loosely rotatable in the sleeve, a guide member inserted in the lateral slot of the sleeve, a bushing detachably engaging the guiding member within the sleeve and interlocking it with the latter, a slide on the guide member, a member detachably secured on the shaft in abutment with the slide and adapted to project the latter when the shaft is swung in either direction, means on the slide operating member for locking the shaft against longitudinal displacement, and a lever pivotally mounted on the shaft and engaged by the slide to move to open position when the slide is projected.

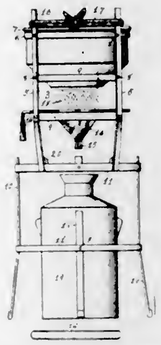
[Claims 6 to 8 not printed in the Gazette.]

1,168,531. CLOTHES-HANGER. PETER S. MEISTER, Camargo, Ill. Filed Feb. 13, 1914. Serial No. 818,439. (Cl. 68—34.)



A clothes hanger, comprising a bracket having a substantially horizontal plate portion provided with perforations spaced from its edge and a downwardly depressed trough extending from each perforation to the edge of the plate, and horizontally disposed hanger rods each having an end portion disposed in one of the troughs and extending through a corresponding perforation, the portion of the rod extending through the plate having two right angle bends spaced apart a distance substantially equal to the length of the trough in which such rod is disposed, providing means for supporting said rod in vertical position in such trough.

1,168,532. MILK-STRAINER. CHRISTIAN MELTZ, Allenville, Wis. Filed May 17, 1915. Serial No. 28,607. (Cl. 210—16.)



1. A milk strainer comprising a stand having a plurality of legs and connecting girts which are adapted to support a milk pan and be arranged above a milk can, a pan arranged near the upper end of the stand having a bottom inclined downward and inward toward its center, a series of perforations through its bottom around its center, a cloth strainer secured in position across the pan and permitted to sag toward its bottom and to receive milk and strain the same, a skeleton frame consisting of two side strips and two cross strips connected to the side strips with an open space inside of the four strips, and adapted to be supported upon the girts of the stand, a strainer cloth of a pillow slip or bag type inclosing said frame and permitted to sag through and below said open space, and being adapted to receive milk from the first named strainer and strain the same into a milk can.

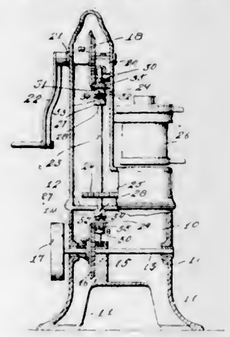
2. A milk strainer comprising a stand having connecting girts, a pan supported upon the stand having a bottom inclined downward and inward toward its center, a series of perforations through the bottom around its center, a cloth strainer secured across the pan and permitted to sag toward its bottom and to receive milk and strain the same, a skeleton frame consisting of two side strips and two cross strips connected to the side strips with an open space inside of the four strips arranged flatwise and being supported upon the girts of the stand, a cloth strainer around said skeleton frame adapted to sag downward through said open space and to receive milk from the first named strainer and conduct it into a milk can arranged in position below the strainers.

3. In a milk strainer having a pan with a perforated bottom and a cloth strainer arranged across the pan and depending into the same, a stand for supporting the pan having three or more legs and a ring secured to the legs a few inches below their upper ends and a plurality of stretchers between the legs, spaced from said ring, from each other and from the lower ends of the legs, one set of stretchers being arranged a suitable distance below the pan bottom for supporting a horizontally arranged skeleton strainer frame, and a hook upon the lower end of each leg adapted to hook over a similar ring as the upper ring of said stand.

4. In a milk strainer having a pan with a perforated bottom and a cloth strainer arranged across the pan and depending into the same and a stand for supporting the pan and a second strainer, supported upon said stand a second stand having three or more legs formed of band metal and connected to each other with a ring formed of similar band metal and secured thereto near their upper ends and adapted to support the legs of the first named stand, and a second ring secured to the legs intermediate the upper ring and lower ends of the legs.

5. In a milk strainer comprising a pan having a perforated bottom and a cloth strainer arranged across the pan and depending into the pan and a stand for supporting the pan, a second strainer consisting of a skeleton frame formed of two side pieces and two cross pieces connected to said side pieces with an open space inside of said four pieces, a cloth strainer of a pillow slip or bag construction type inclosing said frame and arranged in position thereon and adapted to be supported upon the stand for receiving milk as it falls from the pan and strain the same into a milk can.

1,168,533. GEARING. JOHN H. MEYER, Sherman, S. D. Filed July 25, 1913. Serial No. 781,227. (Cl. 74—7.)



In a device of the class described, the combination with a supporting body, and a shaft rotatably carried by said body, clutches carried by said shaft adjacent each end thereof, each clutch comprising a fixedly secured member and a rotary member, each of said rotary members provided with a beveled gear, pawls carried by said rotary members and adapted to engage said fixed members, means engaging said beveled gears for rotating the same, the pawls of said rotary members extending in opposite directions.

1,168,534. EMULSIFIED PARAFFIN-WAX AND PROCESS OF MAKING SAME. GEORGE W. MILES, Belmont, Mass., assignor to Ross Chemical Company, Boston, Mass., a Corporation of Maine. Filed Feb. 4, 1915. Serial No. 6,173. (Cl. 134—22.)

1. The method of emulsifying paraffin wax, which consists in heating the wax with a soap and sufficient water to produce a viscous paste with the quantity of soap employed.

2. The method of emulsifying paraffin wax, which consists in heating the wax with a soap and sufficient water to produce a viscous soap paste with the quantity of soap employed, and after the emulsion is thus formed, extending it by the additon of water.

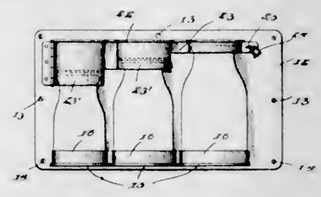
3. The method of emulsifying paraffin wax, which consists in heating the wax with a soap and a quantity of water initially in excess of that which effectuates the emulsification of the paraffin wax, and evaporating the excess of water until the critical emulsification proportion thereof is reached.

4. A paraffin wax emulsion consisting of paraffin wax, water, and soap.

5. A paraffin wax emulsion composed of the wax, a soap, and water in quantity sufficient to produce a viscous paste with the quantity of soap used

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1,168,535. MILK-BOTTLE HOLDER. NICHOLAS A. MOLTRUM, Chicago, Ill. Filed Nov. 28, 1914. Serial No. 874,473. (Cl. 232—41.)



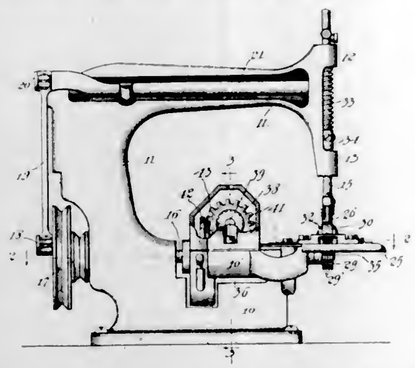
1. A milk bottle holder comprising a back plate, shelves formed on the lower edge of said plate and projecting outwardly therefrom at right angles thereto and designed to receive the lower ends of the milk bottles, a cap plate hinged to the upper edge of said back plate and designed to inclose the mouths of the bottles, and a flange formed on the marginal edge of said cap plate and depending therefrom and formed of semicircular sections corresponding in number with the said sleeves and decreasing in length progressively from one end of said back plate to the other.

2. A milk bottle holder comprising a back plate, a shelf formed on said plate adjacent to the lower edge thereof and projecting outwardly therefrom at right angles thereto and designed to receive the lower end of the milk bottle, a flange formed on the marginal edge of said shelf and projecting upwardly therefrom and designed to inclose the lower end of the milk bottle, a cap plate mounted upon said back plate adjacent to the upper end thereof, a flange formed on the lower edge of said cap plate and depending therefrom and designed to inclose the mouth of the milk bottle, a hinge connection between one end of said flange and the back plate, a keeper secured to said back plate adjacent to the remaining end of the flange on said cap plate, the keeper end of the flange on said cap plate being formed to engage said keeper, and a lock for locking said flange to said keeper.

1,168,536. INTERMITTENT FEED MECHANISM FOR SEWING-MACHINES. ALBERT MORLEY, Three Oaks, Mich., assignor to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Jan. 8, 1914. Serial No. 810,925. (Cl. 112—8.)

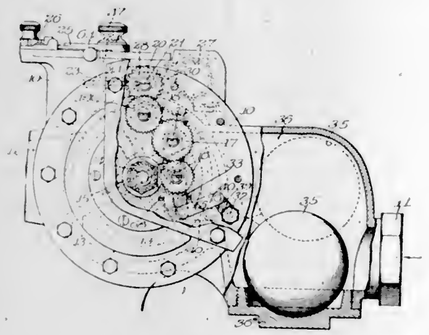
In a sewing machine, the combination with a knurled feed drum, of a roller, a presser foot carrying said roller and said roller coöperating with said feed drum to hold

fabric therebetween, a shaft on which the feed drum is secured, a skew gear on said shaft, a transverse shaft and a skew gear thereon meshing with the skew gear on the feed drum shaft, a plane gear on said transverse shaft, a main driving shaft and a disk thereon, said disk having a gear ridge extending from one of its faces and around its axis, said ridge being continuous with its ends over-



lapping and pitch displaced in correspondence with the pitch of said gear, said overlapping ends extending in the arcs of circles and the remainder of said ridge continually varying in radius whereby said feed drum will be rotated when said gear is in mesh with the varying radius section of said ridge and will be locked against rotation when said gear is in mesh with the circular sections of said disk.

1,168,537. LIQUID-METER. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Jan. 16, 1911. Serial No. 602,826. (Cl. 73—167.)



1. In a liquid meter, the combination of a casing, a rotatable element therein, said element being rotatable by the passage of the liquid through the casing, a register, means connecting the rotary element with the register for operating the latter, a chamber in the casing adjacent the inlet thereof, a float in the chamber, means operatively related to the float and the said connecting means for controlling the register, said chamber having an opening in one wall through which access may be had to the float, and a removable closure for said opening.

2. In a liquid meter, the combination of a rotary piston, a register, means operatively connecting the piston with the register and embodying as a component part a shiftable gear, and means controlled by the height of the liquid in the meter for shifting said gear to render the register active or inactive.

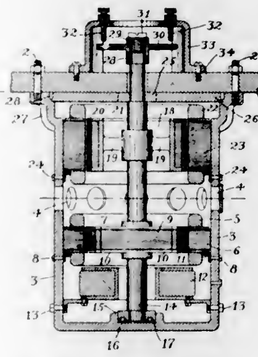
3. In a liquid meter, the combination of a rotary piston, a register, means operatively connecting the piston with the register and embodying as a component part a shiftable gear, and a float controlled by the supply of liquid for shifting the gear to control the register.

4. In a liquid meter, the combination of a rotary piston, a register, a gear connection between the said piston and register for operating the latter, said connection including as a component part a gear shiftable into and out of mesh with its coöperating gear, and means controlled by the height of the liquid in the meter for automatically shifting the shiftable gear.

5. In a liquid meter, the combination of a rotary piston, a register, a gear connection between the said piston and register for operating the latter, said connection including as a component part a gear shiftable into and out of mesh with its coöperating gear, and a float controlled by the liquid for automatically shifting the shiftable gear.

[Claims 6 to 10 not printed in the Gazette.]

1,168,538. ELECTRICITY-RECTIFIER. THOMAS J. MURPHY, Rochester, N. Y. Filed Mar. 15, 1910, Serial No. 549,467. Renewed May 28, 1915. Serial No. 31,083. (Cl. 175—363.)



1. In a rectifier of alternating currents, the combination of a source of alternating current, a pair of circuits having a common return and a translating device located in the common return of the said circuits, means for completing the said circuits alternately through the said common return, the said means having a conductor, a synchronous motor and an induction motor mechanically connected together, the stators of the motors being connected in parallel and means for changing the potential of one of the said stators.

2. In a rectifier of alternating currents, the combination of a source of alternating current, a pair of circuits having a common return and translating device located in the common return of the said circuits, means for completing the said circuits alternately through the common return, the said means having a conductor, a synchronous motor and an induction motor mechanically connected together, the stators of the motors being connected in parallel, means for changing the potential of the synchronous motor.

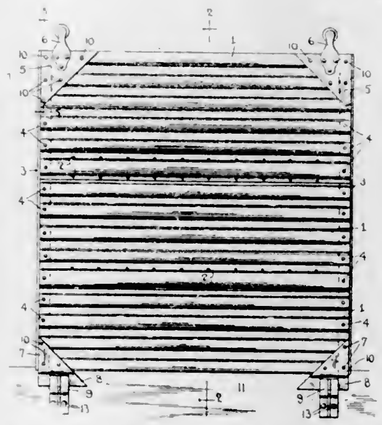
3. In a rectifier of alternating currents, the combination of a source of alternating current, a pair of circuits connected to said source having common return, and a translating device located in the common return, means adapted to complete the said circuits alternately and having a conductor and a synchronizing device, the said parts being mechanically connected together, means for reducing the electro motive force on the actuating coils of the said synchronous device when the said conductor reaches synchronism with the alternating current.

4. In a rectifier of alternating electric currents, the combination of a source of alternating current, a pair of

circuits connected to said source having a common return, a pair of electrodes connected in the said circuit, high resistance bodies connected in shunt with the said electrodes and a translating device connected in the common return to the said circuits and a transformer having two secondaries, one of the said secondaries having a large number of windings to produce a high potential and connected with the said electrodes and terminals connected to the said transformer and to the said electrodes and a rotatable conductor movable across the said terminals to complete the high potential circuit from the transformer to the electrodes alternately and a synchronizing device having actuating coils, the second secondary of the said transformer connected to the said actuating coils, and a switch for including one or more sets of coils to the second secondary for impressing relatively high or low potential on the actuating coils.

5. The combination of an induction motor, a synchronous motor, said motors connected in parallel, a shaft rotatable by the joint operation of said induction motor and said synchronous motor, and a rectifying device, connected in parallel with the motors, provided with fixed parts and a rotatable part driven by said shaft.

1,168,539. CAR-DOOR. WALTER P. MURPHY, Chicago, Ill. Filed Dec. 27, 1913. Serial No. 809,031. (Cl. 189—46.)



1. A metal car door comprising a plurality of corrugated sheets the adjacent marginal edges of which overlap whereby a corrugation of one sheet interlocks with a corrugation of the next adjacent sheet, means securing the adjacent sheets together through the sides of the overlapped corrugations.

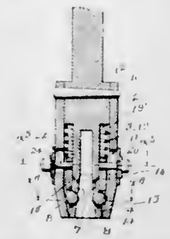
2. A metal car door comprising a plurality of corrugated sheets, the adjacent marginal edges of which overlap, whereby a full corrugation of one sheet interlocks with a full corrugation of an adjacent sheet, and rivets passing through each side wall of the interlocked corrugation to secure the sheets firmly together so that the heads of the rivets are within the outline of the door as a whole.

3. A metal car door comprising a plurality of corrugated sheets overlapping at their adjacent edges, pressed steel angle bars secured to the sides of the doors, each angle bar having one leg corrugated to fit the corrugations of the sheets of the door.

4. In a sheet metal car door, a marginal member for said door comprising an angle iron one leg of which is corrugated.

5. A car door comprising a plurality of corrugated sheet metal sections overlapping at their adjacent marginal edges, marginal binders comprising an angle iron, one leg of each of which is corrugated, the ends of said sections being secured to said corrugated leg, the other leg of the binders abutting against the extreme edges of the said sections.

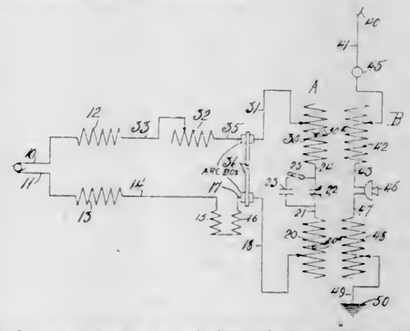
1,168,540. CHUCK. JOHN F. MUSSELMAN, Los Angeles, Cal. Filed May 7, 1912, Serial No. 695,771. Renewed June 14, 1915. Serial No. 34,072. (Cl. 145—84.)



1. A chuck comprising a body having a tool socket the wall of which is provided with a longitudinal slot and a straight longitudinal outer surface surrounding said slot; an outer shell secured to inclose the socketed part of said body, and provided internally with an inwardly inclined part opposite the slot of said body; a gripping member mounted to move longitudinally in said slot; and means engaging and guided by said straight longitudinal surface, and operable from the exterior of the shell for positively moving the gripping member longitudinally within the slot.

2. A chuck comprising a main body having a socket non-circular in cross section adapted to receive and positively rotate the shank of a tool, said socketed member having a longitudinally extending slot opening into the tool engaging wall of the socket, and a straight longitudinal outer surface; an outer sleeve inclosing said main body and provided internally with an inwardly tapered or inclined wall; a gripping member mounted to move in said slot; a slide interposed between the outer sleeve and socketed part of the main body; means engaging and guided by said straight surface and positively engaging said gripping member to move the latter in its slot; a coiled spring surrounding the socketed portion of the main body and operatively engaging the slide; an outer ring movably mounted upon the sleeve; and operative connections between said ring and slide.

1,168,541. APPARATUS FOR WIRELESS TELEPHONY. ELMAN B. MYERS, New York, N. Y. Filed Dec. 27, 1911. Serial No. 668,047. (Cl. 250—6.)

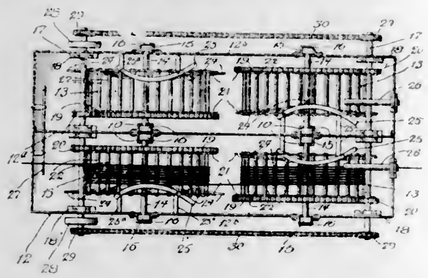


1. In an apparatus for wireless telephony the combination in a sending station of a pair of transformers comprising a pair of primary and a pair of secondary coils, a condenser in shunt between the accompanying ends of the primary coils, a transmitter in series between the secondary coils and means to conduct an electric current to the primary coils.

2. In an apparatus for wireless telephony the combination in a sending station, a pair of transformers for the station, primary coils of the transformers in series with each side of the line, the secondary coils of the transformers in series with each other and a transmitter between the latter coils, each primary coil rotatable on an axis to adjust the couples between said primary and secondary coils and thereby assist in balancing or tuning said coils.

3. In an apparatus for wireless telephony the combination of a sending station, a pair of transformers for the station, primary coils in series with each other for the transformers, a variable condenser and a stationary condenser between said coils, a switch between the coils, a pair of secondary coils in series with each other for the transformers, an aerial for one of the secondary coils, a ground wire for the other secondary coil, a transmitter between the two secondary coils, a pair of main line wires for electric current for the primary coils and an arc box connected up with the latter wires.

1,168,542. INSULATED-WIRE-SATURATING MACHINE. PAUL A. NEHRING, Sycamore, Ill. Filed Aug. 7, 1914. Serial No. 855,690. (Cl. 91—32.)



1. In a wire saturating machine, a compound containing tank having an upright slot in its side wall, an upright housing secured on the outside of said wall and covering said slot, an elongated bearing block mounted in said housing and vertically movable therein, a shaft, one end of which is journaled in said bearing block, and an insulated wire dipping drum mounted on said shaft.

2. In a wire saturating machine, a compound receiving tank, a rotary wire dipping drum journaled therein, wire shifting members carried by said drum and having portions extending through the drum face, and a stationarily supported cam coöperating with said wire shifting members to move them crosswise of the drum face.

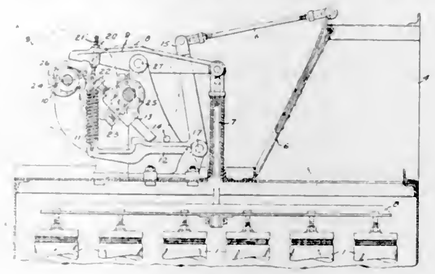
3. In a wire saturating machine, a compound receiving tank, a rotary wire dipping drum journaled therein, and having an open work drum face, a plurality of wire shifting members carried by said drum and having portions projecting beyond and movable across the drum face, and a cam supported by the tank and lying in the path of movement of said wire shifting members, said cam having a cam face concentric with the axis of rotation of said drum and running from one side of the drum toward the other and back.

4. In a wire saturating machine, a compound receiving tank, a rotary wire dipping drum journaled thereon and having a drum face comprising a plurality of circumferentially arranged transverse struts, a plurality of wire shifting arms having portions projecting between the struts and movable transversely of the drum face, and means for actuating said wire shifting members.

5. In a wire saturating machine, a compound receiving tank, a rotary wire dipping drum journaled therein and having a drum face comprising a plurality of circumferentially arranged transversed struts, a plurality of wire shifting arms having portions projecting between the struts and movable transversely of the drum face, a stationarily supported cam having a cam face concentric with respect to the axis of rotation of said drum and acting to move said wire shifting members in one direction across the face of the drum, and springs bearing against the wire shifting arms and acting to move them in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,168,543. METHOD OF AND APPARATUS FOR SEPARATING SOLIDS FROM GAS. RAY C. NEWHOUSE, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Apr. 29, 1915. Serial No. 25,328. (Cl. 83—47.)



1. The method of separating solids and gas which comprises, passing the mixture of solids and gas through a loosely suspended fabric filter, and removing the solids from said filter by periodically successively suddenly stretching and gradually reslackening said filter.

2. The method of separating solids and gas which comprises, passing the mixture of solids and gas through a loosely suspended fabric filter, periodically reversing the flow of gas through said filter, and successively suddenly stretching and gradually reslackening said filter during said period of reversed flow.

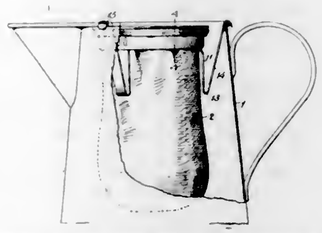
3. The method of separating dust from air which comprises, loosely suspending a fabric bag with its lower end open, passing the dust laden air successively through said lower open end and through the sides of said bag, periodically reversing the flow of air through said bag, and successively suddenly stretching and gradually reslackening said bag during said period of reversed flow.

4. In combination, a normally loosely suspended filter, means for inducing a flow of air through said filter, and means for periodically successively suddenly stretching and gradually reslackening said filter.

5. In combination, a normally loosely suspended filter, means for inducing a flow of air through said filter, means for periodically reversing the flow of air through said filter, and means for successively suddenly stretching and gradually reslackening said filter during said period of reversed flow.

[Claim 6 not printed in the Gazette.]

1,168,544. COFFEE AND TEA STRAINER. HARVEY N. NEWLIN, New York, N. Y. Filed Dec. 17, 1913. Serial No. 807,211. (Cl. 210—16.)

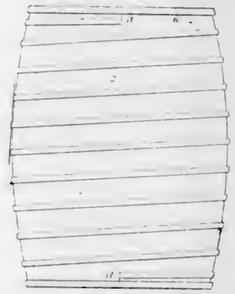


1. A strainer of the class described, comprising a ring-like frame having its upper end bent inwardly approximately at right angles and then upwardly and outwardly,

a straining bag having its upper end passed through the frame and over the upper end of the same with its edge extending below the upper bent portion of the frame, a clamping ring fitting in the mouth of the bag and clamping it in the frame, and means attached to the frame for suspending the strainer in a vessel.

2. A strainer of the class described comprising a ring-like frame, having an exterior bead at its upper end, a plurality of supporting arms on the frame, said arms extending approximately vertically downward from the frame, and then bent upwardly and outwardly and terminating in hooks adapted to engage the upper edge of a vessel to support the strainer suspended in the vessel, a straining bag having its upper end passed through the frame and folded over the upper end of the same, and a clamping ring fitting in the mouth of the bag and clamping the same in the said frame.

1,168,545. METAL BARREL AND THE LIKE. JOHN H. NICHOLSON, Pittsburgh, Pa., assignor of one-fifth to Samuel E. Duff, Pittsburgh, Pa. Filed Oct. 9, 1912. Serial No. 724,748. (Cl. 220—1.)



1. A metal barrel or keg formed of a spirally wound sheet metal strip and a spirally wound locking and reinforcing bar interposed between and uniting adjacent spiral edges of the strip, the leading edge of the strip from each end of the barrel to the center point being longer than the opposite edge, while the length of each coil from each end of the barrel to the center of the barrel is shorter than the length of the adjacent preceding coil, whereby the barrel is bilged from each end toward the center; substantially as described.

2. A metal barrel or keg consisting of a spirally wound sheet metal strip and a spirally wound locking and reinforcing bar interposed between and uniting adjacent spiral edges of the strip, the edge portions of said strip being unequally stretched, whereby the leading edge of the strip is longer than its opposite edge from one end of the barrel to the center thereof, and is shorter than the opposite edge from said center point to the opposite end of the barrel, while the coils of the strip and bar at the center of the barrel are of greater diameter than the coils of the strip and bar at each end, whereby the barrel is bilged from each end toward the center; substantially as described.

3. A metallic barrel or keg formed from a spirally wound sheet metal strip and a spirally wound locking and reinforcing member interposed between and uniting adjacent spiral edges of the strip, said member terminating at its ends at a distance from the end edges of the barrel body, and heads secured within the end portions of the body; substantially as described.

4. A metallic barrel or keg formed from a spirally wound sheet metal strip and a spirally wound locking and reinforcing member interposed between and uniting adjacent spiral edges of the strip, said member being shorter than the strip, and inset heads seated within the end portions of the barrel body beyond the point where the locking member terminates; substantially as described.

5. A metallic barrel or keg formed from a spirally wound sheet metal strip and a spirally wound locking and reinforcing member interposed between and uniting adjacent spiral edges of the strip, said member being shorter than the strip, the strip having an inward offset at the points where the said locking member terminates; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,168,546. CURVE-SCRIBER. CHARLES F. ODIN, Elmira, N. Y., assignor of one-half to James R. Spillan, Elmira, N. Y. Filed July 3, 1914. Serial No. 848,820. (Cl. 33—30.)



In a device of the class described, the combination of a non-revolving leg of normally fixed length, a telescopic two-jointed leg pivoted thereto and adapted to be revolved therearound, a semi-circular guiding member pivoted to said non-revolving leg on an axis extending transversely thereof and having a circular guiding surface engaged by said revoluble leg, a screw for clamping said member on said non-revolving leg in different positions, and spring means for holding said revoluble leg against said member.

1,168,547. METHOD OF PREVENTING EROSION OF RIVER-BANKS. WILLIAM E. PEDLEY, Riverside, Cal. Filed Oct. 28, 1914. Serial No. 868,999. (Cl. 61—30.)

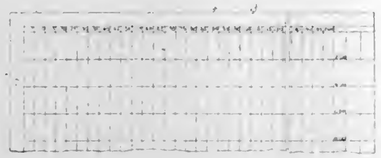


A method of preventing the erosion of the banks of streams, consisting in running an anchored cable parallel with the edge of the stream spaced therefrom on the bank thereof, tying the live shrubbery and trees growing on the bank adjacent the stream on to said cable, and attaching weights to all or part of said trees and shrubbery sufficient to sink or submerge said trees and shrubbery upon erosion of the bank.

1,168,548. METHOD OF ASCERTAINING TIME COSTS. JOHN T. QUIGLEY, San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 22, 1909. Serial No. 484,911. (Cl. 234—53.)

1. The method of producing comparable records of time costs of different operations under different rates which

consists in placing a plurality of continuous recording strips in coöperative relation each to a length determining element, causing a progressive advancing movement between the strips and their respective length-determining elements concurrently with the performing of the respective operations, the rate in each case being proportioned both to elapsing time and the characteristic rate of time cost for the particular operation being performed, applying the length-determining element to the strip to mark the beginning and the end of the operation, and applying each marked off strip to a common, linear, time-cost, multiple rate scale and ascertaining therefrom the time cost represented by each portion of any given strip irrespective of the time cost rate associated therewith.



2. The method of producing comparable records of time costs of different operations under different rates which consists in placing a plurality of continuous recording strips in coöperative relation each to a length-determining element, causing a progressive advancing movement between the strips and their respective length-determining elements concurrently with the performing of the respective operations, each portion of a strip after passing its length-determining element being withdrawn from any further operative association therewith, the rate in each case being proportioned both to elapsing time and the characteristic rate of time cost for the particular operation being performed, applying the length-determining element to the strip to mark the beginning and the end of the operation, and applying each marked off strip to a common, linear, time-cost, multiple rate scale and ascertaining therefrom the time cost represented by each portion of any given strip irrespective of the time cost rate associated therewith.

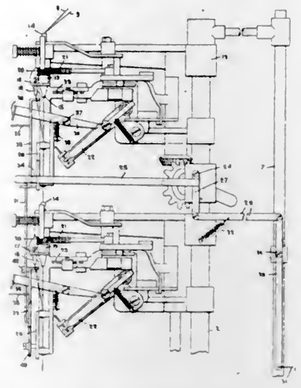
3. The method of recording the time cost of different operations at different rates which consists in producing concurrently with the performance of the respective operations successive record elements, varying said elements by some measurable, physical property irrespective of arbitrary or predetermined proportions, but proportional both to elapsed time and the time cost rate associated with that particular operation and then measuring the said physical property of each element by a common standard of value and ascertaining therefrom the time cost represented thereby irrespective of the different time cost rates associated with said operations.

4. The method of ascertaining the time costs of a plurality of operations under different rates which consists in first producing in each case, concurrently with the performance of the operation, a record of the cost, the length of which record is proportional both to the time elapsing during said operation and to the particular rate of time cost for that operation and represents the money value of the time interval and then applying said records to a common multiple rate scale of money values to graphically disclose the money values represented by said records.

5. The method of ascertaining the time costs of a plurality of operations under different rates which consists in first producing in each case a record of the cost, the length of which is automatically determined and is proportional both to the time elapsing during said operation and to the particular rate of time cost for that operation, and represents the money value of the time interval and then applying said records to a common multiple rate scale of money values to graphically disclose the money values represented by said records.

[Claims 6 to 11 not printed in the Gazette.]

1,168,549. YARN-FEEDING MECHANISM FOR KNITTING-MACHINES. EDISON E. RANDALL, Kankakee, Ill., assignor to Paramount Knitting Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 20, 1914. Serial No. 857,759. (Cl. 66—7.)



1. A machine of the character described comprising in combination, main yarn-feeding mechanism, reinforcing yarn-feeding mechanism, means for automatically bringing into action said reinforcing yarn-feeding mechanism, stop motion mechanism, and means for actuating said stop motion mechanism upon the failure of the reinforcing yarn to feed in when its feeding mechanism is brought into action.

2. In a machine of the character described comprising in combination, main yarn-feeding mechanism, reinforcing yarn-feeding mechanism, means for automatically bringing into action said reinforcing yarn-feeding mechanism, stop motion mechanism, and means for actuating said stop motion mechanism upon the failure of the reinforcing yarn to feed in when its feeding mechanism is brought into action or upon the failure of the reinforcing yarn while being fed in.

3. A machine of the character described, comprising in combination, main yarn-feeding mechanism, reinforcing yarn-feeding mechanism, means for automatically causing the reinforcing yarn to engage and be tied to the main yarn to feed along therewith, stop motion mechanism, means for actuating said stop motion mechanism upon the failure of the reinforcing yarn to engage and be tied to and fed along with the main yarn.

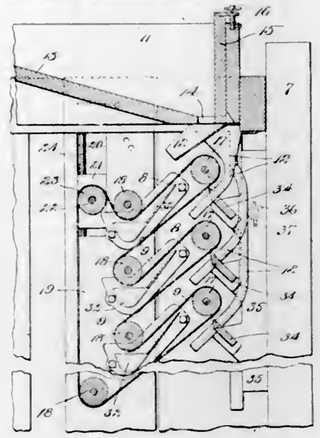
4. A machine of the character described, comprising in combination, main yarn-feeding mechanism, reinforcing yarn-feeding mechanism, means for automatically causing the reinforcing yarn to engage and be tied to the main yarn to feed along therewith, stop motion mechanism, means for actuating said stop motion mechanism upon the failure of the reinforcing yarn to engage and be tied to and feed along with the main yarn or upon the failure of the reinforcing yarn while being fed in.

5. A machine of the character described, comprising in combination, main yarn-feeding mechanism, reinforcing yarn-feeding mechanism, means for automatically causing the reinforcing yarn to engage the main yarn to feed along therewith, stop motion mechanism, means for actuating said stop motion mechanism upon the failure of the reinforcing yarn to engage and feed along with the main yarn.

[Claims 6 to 16 not printed in the Gazette.]

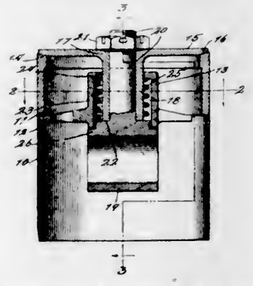
1,168,550. GRAIN AND SEED SEPARATOR AND CLEANER. WILLIAM A. RICE, Jerseyville, Ill. Filed June 21, 1915. Serial No. 35,306. (Cl. 130—18.)

1. The improved seed separator and cleaner, comprising a suitable frame, a series of rolls mounted one above the other in fixed bearings carried by said frame, another series of rolls mounted one above the other in bearings which may be moved up or down simultaneously, an endless-belt mounted on said rolls and extending in a zigzag manner from said rolls which are mounted in fixed bearings to said rolls which have simultaneously movable bearings, means for imparting motion to said rolls in fixed bearings, means for feeding grain or seed to said endless-belt, and means for tightening said belt.



2. In a seed and grain separating and cleaning machine, an endless belt, a series of rolls on which said belt is mounted in zigzag sections inclined in the direction of their movement, means for raising and lowering like edges of all said sections simultaneously, a scraper-frame, a series of scrapers carried by said scraper-frame, one scraper of said series being located to engage beneath each of said sections, to remove adhering particles from said endless belt, and means for adjusting said scraper-frame.

1,168,551. PISTON. GEORGE ROBERT RICH, Oak Park, Ill., assignor to Rich Tool Company, Chicago, Ill., a Corporation of Illinois. Filed May 15, 1915. Serial No. 28,256. (Cl. 74—85.)



1. A piston for motors, comprising a hollow piston body having an annular seat upon one end, a piston head of less diameter than said body, seated upon said annular seat, and means for holding said piston head on said seat.

2. A piston for motors, comprising a hollow piston body having an annular tapered seat on one end, a disk-like piston head having its edge portion tapered to fit and seat upon said seat of the piston body, said piston head being of less diameter than that of the piston body, a shouldered stem secured to said piston head, an abutment member for a spring in the hollow of said piston body, and a coiled compression spring confined under compression between said shouldered stem and abutment member for holding said head on the seat of said body.

3. A piston for motors, comprising a hollow piston body having an annular tapered seat on one end, a disk-like piston head of less diameter than said piston body having a tapered edge portion seated on said seat of the piston body, a wrist-pin-bearing member having a stem fixedly secured to said piston head, a spring-abutment member in the hollow of said piston body, and a coiled compression spring confined under compression between said wrist-pin-bearing member and abutment member, said spring acting to hold said piston head on the seat of said piston body.

4. A piston for motors, comprising a hollow piston body having an annular seat at one end, a disk-like head of less diameter than said piston body, seating upon said seat of the piston body, a wrist-pin-bearing member having a stem rigidly secured to said piston head, a spring-abutment member bearing against a shoulder on the internal wall of the piston body and having a housing surrounding said stem and formed with an inturned flange, and a coiled compression spring confined under compression between said wrist-pin-bearing memebr and the inturned flange of said housing, said spring acting to hold said piston head upon the seat of the piston body.

5. A piston for motors, comprising a hollow piston body formed with an annular internal shoulder, and formed with a tapered annular seat at one end, a disk-like piston head of less diameter than that of said piston body, having a tapered edge portion seating upon said tapered seat of the piston body and formed with a centrally disposed sleeve-like member projecting into the hollow of the piston body, a wrist-pin-bearing member having a shouldered portion, and having a stem extending up through said sleeve and fixedly secured to said piston head, a spring-abutment member bearing against said shoulder of the piston body and having a housing surrounding said sleeve and formed with an inturned flange, and a coiled compression spring surrounding said sleeve and confined in said housing between its inturned end and the shoulder of the wrist-pin-bearing member, said spring acting to hold said piston head upon the seat of the piston body.

[Claims 6 to 9 not printed in the Gazette.]

1,168,552. LURE FOR FLIES AND OTHER INSECTS. GEORGE C. RICHARDS, Berkeley, Cal. Filed Dec. 28, 1914. Serial No. 879,310. (Cl. 99—11.)



1. A lure for insects consisting of bisulfid of carbon and a vegetable acid allowed to ferment.

2. A lure for insects consisting of the following ingredients in approximately the following proportions: bisulfid of carbon 5 c. c., 1 gallon of water, 10 ounces of a vegetable acid, and 1 pound of sugar.

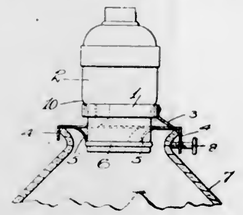
3. A volatile lure containing a fermented liquor having bisulfid of carbon and a vegetable acid as ingredients, together with an essence of banana.

4. A lure for insects comprising bisulfid of carbon, a fermented acidulated liquid, and a saccharine substance.

1,168,553. ELECTRIC SHADE-HOLDER. NORMAN S. RICHMOND and ROBERT W. PAIN, Chicago, Ill. Filed June 3, 1914. Serial No. 842,609. (Cl. 240—114.)

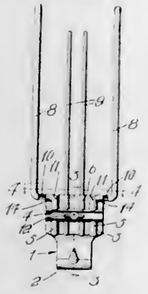
1. A shade holder for electric lamp sockets, comprising a cylindrical portion into which the end of the shade pro-

jects, shade engaging means connected therewith, a series of separated inwardly projecting socket engaging parts projecting from said cylindrical portion and having their free ends bent toward the lamp end of the socket, said socket engaging parts adapted to slide past and engage a projection on the socket when the shade holder is placed in position, and a second series of separated inwardly projecting parts bent in an opposite direction to the said socket engaging parts, and an annulus to which said second series of projecting parts are connected.



2. A shade holder for electric lamp sockets, comprising a cylindrical portion into which the end of the shade projects, shade engaging means connected therewith, a series of separated inwardly projecting socket engaging parts projecting from said cylindrical portion and having their free ends bent toward the lamp end of the socket, said socket engaging parts adapted to slide past and engage a projection on the socket when the shade holder is placed in position, and a second series of separated inwardly projecting parts bent in an opposite direction to the said socket engaging parts, and an annulus to which said second series of projecting parts are connected, the upper end of said cylindrical portion being intermediate the ends of said socket engaging parts and said second series of separated inwardly projecting parts.

1,168,554. ADJUSTABLE CROCHETING-FORK. CHARLES OWEN RILEY, Covington, Ky. Filed Oct. 12, 1914. Serial No. 866,328. (Cl. 66—6.)



1. A crochet-needle comprising a hand piece, a pair of spaced needles mounted in said hand piece, one of said needles having a pivot offset from its lower end to adapt it for adjustment to and from the other needle, and means for locking said needles in adjusted position in said hand piece.

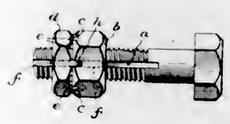
2. A crochet-needle comprising a hand piece, a pair of spaced needles mounted in said hand piece, one of said needles having an offset lower end revoluble in said hand piece to adapt said needle for adjustment to and from the other needle, means for preventing said needle from revolving, and means for locking said needles in said hand piece.

3. A crochet-needle comprising a sectional hand piece having a guide, a pair of spaced needles, one of said needles having its lower end offset and revolubly mounted in said guide, means for preventing said needle from revolving in said guide, and means for locking said needles in said hand piece.

4. A crochet-needle comprising a sectional hand piece having upright guides, lateral seats extending radially from one of said guides, a pair of spaced needles mounted in said guides, one of said needles having its lower end offset and revolubly mounted in said guide, the portion of the needle adjacent the offset end adapted to rest in said seats whereby said needle is prevented from revolving, and means for locking said needles in said hand piece.

5. A crochet-needle comprising a hand piece composed of a pair of clamping plates united at their lower ends and having outwardly bulged upright portions forming guides, lateral seats extending radially from one of said guides, a plurality of needles having their lower ends positioned in said guides, one of said needles having an offset lower end revolubly mounted on the last named guide, the portion of said needle adjacent said end adapted to rest in said seats whereby to prevent the same from revolving, and means whereby the two plates may be moved toward the other.

1,168,555. NUT-LOCK. HARRY ROBINSON, Sheffield, Ala., assignor of one-half to C. E. Buek, Chattanooga, Tenn. Filed Apr. 17, 1915. Serial No. 22,117. (Cl. 151—15.)



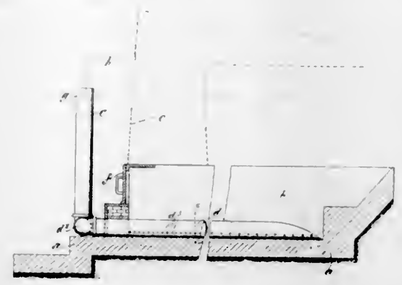
1. In combination, a threaded bolt provided with a longitudinal groove, main nut provided with a series of grooves in its outer face, a lock nut provided with a similar series of grooves in its inner face, and a locking key having a pin or pins adapted to lie in the groove in the bolt and also a pair of radial members normally tending to spring apart and adapted respectively to engage the grooves in the adjacent faces of the two nuts, for the purpose set forth, the outer ends of the radial members being connected together by a spring member and extended beyond the sides of the nuts and said groove in the main nut being deep enough to receive both of said members when they are pressed together.

2. In combination, a threaded bolt provided with a longitudinal groove, a main nut provided with a series of grooves in its outer face, a lock nut provided with a similar series of grooves in its inner face, each of said grooves having its rear wall beveled off, and a locking key having a pin or pins adapted to lie in the groove in the bolt and also a pair of radial members normally tending to spring apart and adapted respectively to engage the grooves in the adjacent faces of the two nuts, for the purpose set forth, the outer ends of the radial members being connected together by a spring member and extended beyond the sides of the nuts and said groove in the main nut being deep enough to receive both of said members when they are pressed together.

3. In combination, threaded bolt provided with a longitudinal groove extending through its threaded portion, a main nut provided with a series of radial grooves in its outer face, a lock nut provided with a series of grooves in its inner face, and a locking key consisting of a pair of radial members g connected together at their outer ends by a spring normally tending to spread said members apart, each of said members g being provided at its inner end with a pin or bar f adapted to lie in the aforesaid groove in the bolt.

1,168,556. BRICK-KILN. HENRY O. ROBINSON, Brookline, Mass., and CHRISTOPHER STEADMAN, Huguenot Park, N. Y. Filed Apr. 17, 1911. Serial No. 621,672. (Cl. 25—148.)

1. In a brick kiln, the combination with a fuel-support, of downwardly delivering draft means arranged above the same but below the normal level of fuel thereon so as to be covered by the fuel, whereby the draft may be delivered within the fuel mass and in a direction toward said fuel-support.



2. In a brick kiln, the combination with the arches, of a fuel-space at the end of each arch and below the same, a pipe running along the bottom of each fuel-space so as normally to be covered with fuel and having openings to deliver downwardly into said fuel-space.

3. In a brick kiln, the combination with a fire-arch of a fuel-space therefor, draft-proof walls on each side of said fuel-space, and means supported at the bottom of said fuel-space and provided with openings to deliver a forced-draft thereto in a downward direction.

4. In a brick kiln, the combination with a fire-arch of a fuel-space therefor, draft-proof walls on each side of said fuel-space, and a pipe supported at the bottom of said fuel-space and provided with openings to deliver a forced-draft thereto in a downward direction.

5. In a brick kiln, the combination with the arches, of a fuel-space at the end of each arch and below the same and having draft-tight side walls, a pipe supported upon the bottom of each fuel-space and having openings to deliver downwardly into said fuel-space.

[Claims 6 to 12 not printed in the Gazette.]

1,168,557. BRICK-BURNING. HENRY O. ROBINSON, Brookline, Mass., and CHRISTOPHER STEADMAN, Huguenot Park, N. Y. Filed Apr. 17, 1911. Serial No. 621,673. (Cl. 25—157.)

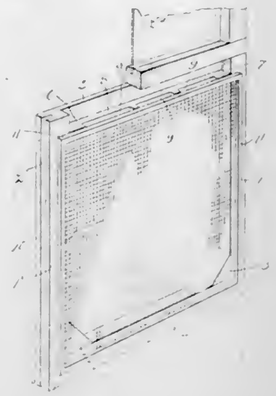
1. The method of promoting combustion of fuel in brick kilns, which consists in discharging from within the fuel bed a supply of air or other suitable gas, and scattering the air or other gas throughout the fuel bed so as to cause it to be disseminated among the particles of fuel before it issues from the fuel bed, whereby the air or other gas may be combined with the fuel to effect development of combustible gases uniformly throughout the entire fuel area.

2. The method of distributing a forced draft throughout the fuel in a brick kiln, which consists in conveying the draft into the interior of each fuel bed, delivering the draft therein at a number of points throughout the fuel bed, and scattering the draft before it reaches the surface of the fuel bed, thereby effecting comminution of the draft and promoting uniform and complete combustion of the fuel without blowing holes in its surface.

3. The method of distributing a forced draft throughout the fuel in a brick kiln, which consists in delivering the draft into the interior of a fuel bed, discharging the draft into the fuel substantially at the bottom of the fuel bed, and causing the draft so discharged to reverse its course to a substantial extent before reaching the surface of the fuel bed, thereby scattering the draft throughout the particles of fuel and promoting uniform and complete combustion of the fuel.

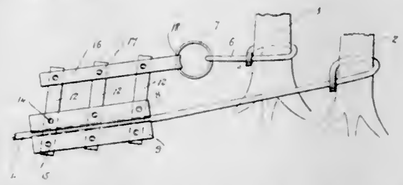
4. The method of burning brick in a forced draft furnace, which comprises the conveying of the draft within the fuel bed in the furnace, delivering it downwardly therein, and subjecting the brick to be burned to the gases of combustion developed thereby.

1,168,558. WINDOW-SCREEN. CHARLES ROCHON, Fall River, Mass. Filed Nov. 11, 1914. Serial No. 871,567. (Cl. 156—37.)



A window screen comprising a frame consisting of side bars and upper and lower cross bars, the said upper cross bar being L-shaped in cross section and having a plurality of elongated openings in the horizontal portion thereof, the said upper bar having a chamber therein, the ends of which are formed by the upper ends of the side bars, and being constructed in such manner that the lower portion of the upper sash on the window will close the upper side of said chamber, a piece of screening extending over the frame and over one side of said openings and a plurality of strips securing the said piece of screening to the said frame.

1,168,559. STUMP-PULLER. CHARLES RODIN, Cambridge, Minn. Filed June 16, 1915. Serial No. 34,449. (Cl. 254—68.)



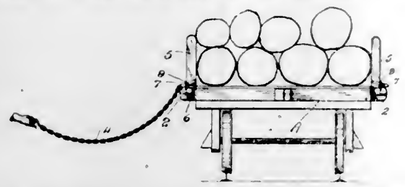
In stump pulling devices, a pulling cable for attachment to a stump, a ring provided with means for securing it to a second stump, and a clamp comprising two parallel jaws for engaging the pulling cable, a series of levers pivoted to the jaws and arranged crosswise of them, and a bar pivoted to the projecting free end portions of the levers and having a loop at one end which engages with the said ring.

1,168,560. CAR-STAKE. LOUIS ROSEBUSH, Linwood, Mich., assignor of one-half to Thomas R. Boyle, Linwood, Mich. Filed Mar. 12, 1915. Serial No. 13,867. (Cl. 105—173.)

1. A car stake construction comprised of supporting brackets having sides spaced apart and each provided with a notch in its upper edge, a stake pivotally mounted between the sides, and means mounted on the stake adapted to seat in the said notches to retain the stake in upright position, substantially as described.

2. In combination, supporting brackets having adjacent sides spaced apart and each provided with a notch in its upper edge, a stake pivotally mounted between the brackets, and a catch pivotally mounted on the stake adapted to detachably engage the sides of the brackets and

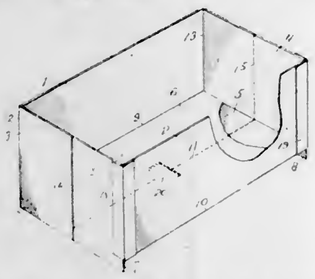
seat in the notches thereof, to retain the stake in rigid relation to the brackets, substantially as described.



3. In combination, a support including spaced apart vertical side members, each provided with a notch in its upper edge, a stake pivotally mounted between the side members, spaced apart arms lying one at either side of the stake and pivotally connected thereto and a plate secured to and carried between the arms adapted to seat in the said notches when the stake is in upright position, substantially as described.

4. In combination, a support including spaced apart vertical side members each provided with a notch in its upper edge, a stake pivotally mounted between the side members, arms lying one at either side of the stake and pivotally connected thereto, the free ends of the arms extending a distance in front of the stake, a handle connecting the free ends of the arms, and a plate secured to and carried between the arms adapted to seat in the said notches when the stake is in upright position but readily disengageable therefrom to release the stake, substantially as described.

1,168,561. COLLAPSIBLE BOX. LUCIAN ROSENWALD, Kansas City, Mo. Filed June 22, 1914. Serial No. 846,488. (Cl. 229—23.)



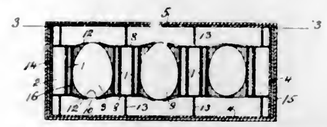
1. A collapsible box having one side provided with a vertical flexible joint, the bottom being connected with two of the sides by flexible joints, and having a flexible joint intermediate of the joints connecting it with said two sides, the bottom having a hole therethrough, and a removable bottom adapted for insertion between and for bolding the sides extended and covering said hole, the hole being adapted for the insertion of a finger for the lifting and removal of the removable bottom.

2. A collapsible box having a bottom integral with the sides of the box, the bottom having a hole therethrough, and a removable bottom adapted for insertion between the sides of the box and for covering the hole in the bottom, whereby the removable bottom holds the box extended and is readily rendered removable therefrom by the insertion of a finger through said hole.

3. A collapsible box having flexible joints in two opposite sides and in the bottom disposed in alinement with each other, the bottom having a hole therethrough extending across the joint therein, and means extending across said hole transversely to the joint in the bottom for holding the bottom from bending.

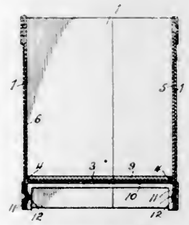
1,168,562. EGG-CASE. LUCIAN ROSENWALD, Kansas City, Mo. Filed June 29, 1914. Serial No. 847,822. (Cl. 217—27.)

1. An egg case comprising a box, a filler located therein comprising crossed flexible partitions arranged to form egg cells, some of the partitions being disposed in pairs, the members of which are spaced apart parallel with each other, each cell being separated from each adjoining cell by a pair of partitions, vertical tubular egg holders disposed respectively in said cells, a flexible sheet member at one side of said filler and at one set of ends of said cells, and provided with yielding seats adapted to respectively receive the ends of eggs contained in said cells, and a spacing member comprising crossed partitions forming spaces adapted to register with said cells, said spacing member resting against said flexible sheet member.



2. An egg case comprising a box, a filler located therein comprising crossed flexible partitions arranged to form egg cells, some of the partitions being disposed in pairs, the members of which are spaced apart parallel with each other, each cell being separated from each adjoining cell by a pair of said partitions, vertical tubular egg holders disposed respectively in said cells, two flexible sheet members disposed respectively above and below said filler and provided each with yielding seats adapted to respectively receive the ends of eggs contained in said holders, and two spacing members comprising each crossed partitions forming spaces adapted to register with said cells, said spacing members being disposed respectively above and below said sheet members.

1,168,563. COLLAPSIBLE BOX. LUCIAN ROSENWALD, Kansas City, Mo. Filed July 24, 1914. Serial No. 852,919. (Cl. 229—23.)



1. A collapsible box having a plurality of sides flexibly connected at the corners so as to collapse to flat form, and having a member located between the sides, said member having a bottom portion and two flaps respectively flexibly connected to opposite edges of the bottom portion and extending upwardly therefrom and respectively secured to opposite sides of the box adjacent to the upper edges thereof, said member being provided transversely across with two parallel flexible joints extending obliquely between opposite edges of said member, whereby said member may collapse to flat form when the sides are collapsed.

2. A collapsible box having a plurality of sides flexibly connected at the corners so as to collapse to flat form, and having a member located between the sides above the lower edges thereof, said member having a bottom portion and two flaps respectively flexibly connected to opposite edges of the bottom portion and extending upwardly therefrom and respectively secured to opposite sides of the box adjacent to the upper edges thereof, said member having two parallel flexible joints extending obliquely between opposite edges and arranged to permit the member to collapse to flat form when the sides are collapsed.

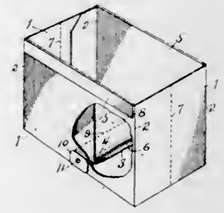
3. A collapsible box having a plurality of sides flexibly connected at the corners so as to collapse to flat form, and having a member located between the sides, said member having a bottom portion and two flaps respectively connected to opposite edges of said portion and extending upwardly therefrom and respectively secured to opposite sides of the box adjacent to the upper edges thereof, said member having two parallel flexible joints extending obliquely between opposite edges and arranged to permit the member to collapse when the sides are collapsed, and means adapted to extend between opposite sides of the box for holding said sides and member from collapsing.

4. A collapsible box comprising two rectangular strips disposed at right angles to each other, one strip having its ends secured to each other and provided with transverse flexible joints located at the corners of the box, so as to permit of the collapse to flat form of the strip, the other strip having its opposite ends respectively secured to the opposing strip adjacent to the upper edge thereof and at opposite sides of the box and provided with two parallel transverse flexible joints disposed at equal distances from the upper edge of the box.

5. A collapsible box comprising a rectangular strip having its ends secured to each other and provided with transverse flexible joints at the corners of the box, the strip forming the sides of the box, and a second strip forming the bottom of the box and disposed at right angles to the first strip and having its ends secured to the other strip adjacent to the upper edge thereof and at opposite sides respectively of the box, the second strip having two transverse flexible joints disposed at equal distances from the upper edge of the box and above the lower edge thereof.

[Claim 6 not printed in the Gazette.]

1,168,564. FOLDING BOX. LUCIAN ROSENWALD, Kansas City, Mo. Filed July 24, 1914. Serial No. 852,920. (Cl. 229—23.)



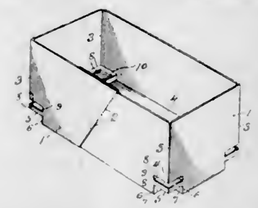
1. A folding box comprising a plurality of sides flexibly connected at the corners of the box, two opposite sides having each a vertical flexible joint intermediate of adjacent corners, two flaps secured respectively at their upper ends to opposite sides of the box adjacent to the upper edges thereof, and having a bottom portion provided with a transverse flexible joint in alinement with said vertical joints, the bottom portion being disposed above the lower edges of the box and flexibly connected at opposite edges with the lower ends respectively of said flaps, and an inverted U shaped member having its transverse portion disposed below said bottom portion, each of the arms of the U shaped member being U shaped and adapted to clamp the adjacent side of the box.

2. A folding box comprising a plurality of sides flexibly connected at the corners of the box, two opposite sides having each a flexible vertical joint intermediate of adjacent corners of the box, and having a bottom portion flexibly connected at opposite edges with opposite sides of the box and disposed above the lower edges of the box and provided with a flexible transverse joint in alinement with said vertical joints, and a U shaped member having its transverse portion disposed transversely to said transverse joint, each arm of the U shaped member being U shaped and adapted to clamp the adjacent side of the box.

3. A folding box comprising a plurality of sides flexibly connected at the corners of the box, two opposite sides having each a vertical flexible joint intermediate of adjacent corners of the box, and having a bottom portion flexibly connected at opposite edges with opposite sides of the box and disposed above the lower edges of the box and provided with a flexible transverse joint in alinement with said vertical joints, and an inverted U shaped member having its transverse portion disposed transversely to said transverse joint and adapted to support said bottom portion, the arms of said member each being U shaped and said arms being adapted to respectively clamp opposite sides of the box.

4. A folding box having a plurality of sides flexibly connected at the corners, two opposite sides having each a central vertical flexible joint, the box having a bottom flexibly connected with the other two sides of the box and having a flexible joint in alinement with said vertical joints, and an inverted U-shaped brace disposed below and adapted to support said bottom, the arms of said brace being U-shaped and adapted to clamp two opposite sides of the box.

1,168,565. COLLAPSIBLE FRUIT OR BERRY BOX. LUCIAN ROSENWALD, Kansas City, Mo. Filed July 27, 1914. Serial No. 853,260. (Cl. 229—23.)



1. A collapsible box body comprising a strip having its ends secured together and provided with a plurality of transverse flexible joints extending vertically from one longitudinal edge of the strip to the other, and provided with a plurality of longitudinal slits respectively crossing said joints, and having respectively at opposite sides of each of said joints two flexible joints extending from one longitudinal edge of the strip parallel with the first named joints to the adjacent slit.

2. A collapsible box having a body comprising a strip having its ends secured together and provided with a plurality of transverse flexible joints extending from one longitudinal edge of the strip to the other, and provided with a plurality of longitudinal slits respectively crossing said joints, and having respectively at opposite sides of each of said joints two flexible joints extending from one longitudinal edge of the strip parallel with the first named joints to the adjacent slit, and a removable bottom adapted to be fitted within said body, the portions of the strip which are located between said slits and the adjacent longitudinal edge of the strip and which extend between the shorter joints being movable into positions adapted to support said bottom.

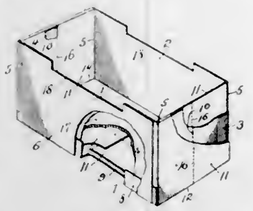
3. A collapsible box comprising a body having at each corner two inwardly extending angular portions spaced apart and disposed one above the other, and adapted to be swung into alinement with the walls of the box, and a bottom member adapted to be mounted between the upper and lower angular portions and to be supported by the latter when they are inwardly extending.

4. A collapsible box comprising a body having at each corner three longitudinal slits disposed one above the other and extending across the adjacent corner, the portions between the two upper slits and between the lower slits and the lower edge of the box having vertical flexible joints at the ends of the slits and at the corners of the body, whereby said portions may be bent inwardly from alinement with the sides of the box to angular positions respectively, the lower portion and the upper portion at each corner being spaced apart, and a bottom member adapted to rest upon said lower portions under the upper portions, when the said portions are bent inwardly to the angular positions.

5. A box provided at each corner with a longitudinal slit, which extends across the corner, the portions between the said slits and the lower edge of the box being provided

at the ends of the slits and at the corners of the box with vertical flexible joints which extend from the lower edge of the box to the adjacent slits respectively, whereby said portions may be bent inwardly from alinement with the sides of the box to an angular position, and a bottom member adapted to be supported upon said inwardly bent portions.

1,168,566. FOLDING BOX. LUCIAN ROSENWALD, Kansas City, Mo. Filed July 27, 1914. Serial No. 853,262. (Cl. 229—23.)



1. A folding box comprising a body having sides flexibly connected with each other, two opposite sides having each intermediate of the adjacent corners a vertical flexible joint, a bottom flexibly connected at opposite edges with two sides and having a flexible joint disposed in alinement with said vertical flexible joints, and two flaps respectively flexibly connected to opposite edges of said bottom and adapted to be extended upwardly and folded over the upper edges of said sides provided with said vertical joints.

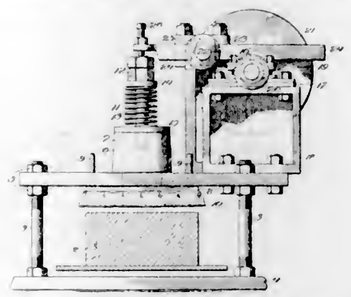
2. A folding box comprising a body having sides flexibly connected with each other, two opposite sides having each intermediate of the adjacent corners a vertical flexible joint, a bottom flexibly connected at opposite edges with two other sides respectively and having a flexible joint extending between opposite edges in alinement with said vertical joints, and two flaps respectively flexibly connected to opposite edges of said bottom and adapted to be extended upwardly outside of the body and folded over the upper edges respectively of said sides having said vertical joints, the ends of said flaps being adapted to be bent inwardly adjacent to the lower edges of said sides having the vertical flexible joints and to rest upon the upper side of said bottom.

3. A folding box comprising a body having sides flexibly connected with each other, two opposite sides having each intermediate of the adjacent corners a flexible vertical joint, a bottom flexibly connected at opposite edges respectively with two other opposing sides and having a flexible joint extending between two other opposite edges in alinement with said vertical flexible joints, and two flaps respectively flexibly connected to the edges at which terminates the flexible joint of the bottom, said flaps having respectively flexible joints in alinement with the flexible joint of the bottom, and being adapted to be extended upwardly and folded over the upper edges of the sides having said vertical joints.

4. A folding box comprising a body having sides flexibly connected with each other, two opposite sides having each a vertical flexible joint intermediate of the adjacent corners, a bottom having two opposite edges respectively flexibly connected with two other sides and having a flexible joint extending between two other edges in alinement with said vertical joints, two flaps respectively flexibly connected with opposite edges of said bottom and adapted to be extended upwardly and to be folded over the upper edges respectively of the sides having said vertical joints, and a removable bottom member adapted to be fitted in said body and to rest upon said bottom.

5. A folding box comprising a body having sides flexibly connected with each other, two opposite sides having each a vertical flexible joint intermediate of the adjacent corners, a bottom having two opposite edges respectively flexibly connected to two other opposing sides and having extending between opposite edges a flexible joint in alinement with said vertical joints, and two flaps respectively flexibly connected with the edges of the bottom at which terminates the joint thereof, and adapted to be extended upwardly outside the body and to be folded respectively over the upper edges of the sides having said joints and to be extended downwardly to the bottom and then bent inwardly so as to rest upon the bottom, and in the last named position overlapping each other.

1,168,567. BRICKMAKING-MACHINE. THOMAS S. ROUSE, Brazil, Ind., assignor to Hydraulic-Press Brick Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 13, 1915. Serial No. 50,432. (Cl. 25—1.)



1. In a machine of the character described, in combination, a support over which a relatively slow moving clay stream is adapted to pass continuously, a second support adjacent said first mentioned support, a reciprocating plunger carried by said second mentioned support having a platen face substantially equal to the face of the clay stream with which it is adapted to co-act, and means for causing a relatively rapid reciprocation of the platen toward and from the face of the clay stream comprising a rapidly rotating shaft and intermediate mechanism between the shaft and the plunger to actuate the latter.

2. In a machine of the character described, in combination, a support over which a relatively slow moving clay stream is adapted to pass, a table above said support, a plurality of reciprocating plungers mounted on said table, means for yieldingly holding said plungers in raised position with their effective surfaces out of contact with the clay stream, means for alternately depressing said plungers at a relatively rapid speed, and means for adjusting the throw of the plungers and the force with which their effective surfaces coact with the clay stream.

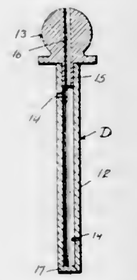
3. In a machine of the character described, in combination, a support over which a relatively slow moving clay stream is adapted to pass, a table above said support, a plurality of reciprocating plungers mounted on said table, means for yieldingly holding said plungers in raised position with their effective surfaces out of contact with the clay stream, means for alternately depressing said plungers at a relatively rapid speed, and means for adjusting the throw of the plungers and the force with which their effective surfaces coact with the clay stream, said means comprising an adjustment permitting a relative movement of the table carrying the plungers toward and from the clay stream.

4. In a machine of the character described, in combination, a support over which a relatively slow continuously moving clay stream is adapted to pass, a table adjacent said support, a plurality of plungers carried by the table having platens at their effective ends substantially equal to the width of the clay stream, a rapidly revolving shaft adjacent the table and intervening means between the shaft and the plungers adapted to rapidly depress said plungers to cause the platens to have a tapping engagement with the surface of the clay stream, and spring means adapted to return the platens to normal position after each depression.

5. In a machine of the character described, in combination, a support over which a relatively slow continuously moving clay stream is adapted to pass, a table adjacent said support, a plurality of plungers carried by the table having platens at their effective ends substantially equal to the width of the clay stream, a rapidly revolving shaft adjacent the table and intervening means between the shaft and the plungers adapted to rapidly depress said plungers to cause the platens to have a tapping engagement with the surface of the clay stream, and means associated with the platen and table adapted to prevent relative rotation of the platen with respect to the clay stream.

[Claim 6 not printed in the Gazette.]

1,168,568. LUBRICATING-PINTLE. BARNET RUDOLFF, Bayonne, N. J., assignor to Fannie Dorison, Jersey City, N. J. Filed Dec. 3, 1914. Serial No. 875,391. (Cl. 16—107.)

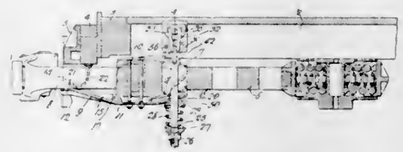


1. A hinge pintle including a tubular body having one end closed and a knob on the open end of the tubular body, said knob having a passage formed therethrough communicating with a tubular body, said body having discharge openings opening out upon the outer face thereof and communicating with the interior thereof.

2. A hinge pintle, comprising a tubular body having one end closed and being provided with openings communicating with the outer face thereof and the interior of the body, a knob, a tubular extension carried by said knob and arranged to extend into the open end of said body, said knob having a lubricating passage formed therethrough and communicating with the tubular extension.

3. A hinge pintle including a tubular body, and a knob removably mounted upon one end of said body, said knob having a passage formed therethrough communicating with the body, and said body having discharge openings formed therein.

1,168,569. DRAFT-GEAR. GEORGE W. SCHNEIDER, Argenta, Ark., assignor of one-third to Monroe Merrett, Argenta, Ark. Filed July 17, 1915. Serial No. 40,450. (Cl. 213—42.)



1. In a device of the class described, a car; opposed brackets mounted on the car and provided with downwardly concaved seats extended longitudinally of the car; a cross member having its ends slidably mounted in the seats; a draft rigging; and means for connecting the draft rigging with the cross member.

2. In a device of the class described, a car; a cross member carried thereby and having a downwardly concaved upper edge; a draft rigging; and means for supporting the draft rigging, said means engaging the concaved upper edge of the cross member.

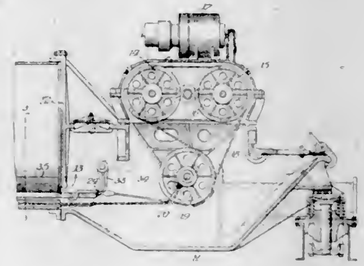
3. In a device of the class described, a car; opposed brackets mounted on the car and provided with downwardly concaved seats extended longitudinally of the car; a cross member having its ends slidably lodged in the seats, the upper edge of the cross member being downwardly concaved; a draft rigging; and supporting means for the draft rigging, the supporting means being slidably engaged with the concaved upper edge of the cross member.

4. In a device of the class described, a car; a draft rigging embodying a draft beam and a coupler assembled therewith; an arm secured intermediate its ends to the draft beam and bearing at its forward end against the coupler; a support extended through the arm and the beam; means for assembling the upper end of the support with the car; an abutment on the lower end of the support; and a spring interposed between the abutment and the arm.

5. In a device of the class described, a car; a draft rigging carried by the car and comprising a draft beam and a coupler assembled with the draft beam, the draft beam being provided with an opening; an arm bearing at its forward end against the lower face of the coupler; a securing element uniting the coupler, the draft beam and the arm; and the arm being provided with projections, one of which engages the forward end of the beam, the other of which engages the beam within the contour of the opening.

[Claims 6 and 7 not printed in the Gazette.]

1,168,570. TAR-DRAG. SAMUEL B. SHELDON, Duluth, Minn. Filed Apr. 1, 1915. Serial No. 18,535. (Cl. 48—127.)



1. In a device of the class described, the combination of a gas main, an angular guide rigidly secured to the interior of said main, a drag adapted to be guided and limited in vertical and lateral movement thereby, and means for moving said drag and reversing the direction of movement thereof, substantially as described.

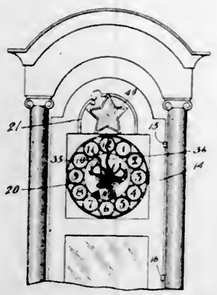
2. In a device of the class described, the combination of a gas main having a curved lower wall, an angular guide extending from end to end of the main, a drag, the lower portion of which is shaped to correspond to the shape of the lower wall of the main, said drag being guided and limited in vertical and lateral movement by said angular member, and means for reciprocating said drag, substantially as described.

3. In a device of the class described, the combination of a gas main having partially open ends, tar seals provided for said partially open ends, a tar drag reciprocable in said main, an angular guide adapted to limit the vertical and lateral movement of the drag and an endless element connected to said drag and a prime mover and adapted to cause the reciprocation of said drag, substantially as described.

4. In a device of the class described, the combination of a gas main, a guiding member providing an open space therein, a tar drag reciprocable on said guiding member, said drag being limited in its movement and caused to

travel in a substantially fixed path by coöperation with said guiding member, and an endless cable connected to said drag, the return portion of said cable occupying the space in said guiding member, substantially as described.

1,168,571. ELK'S CLOCK. THOMAS W. SHEPHERD, Waltham, Mass. Filed Dec. 10, 1913. Serial No. 805,841. (Cl. 177—346.)

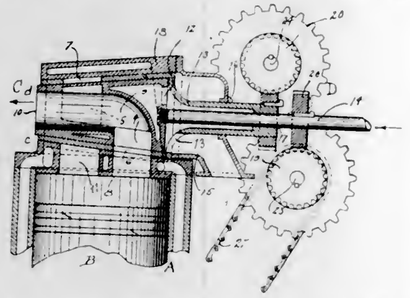


1. A clock having a dummy clock-dial and hands and an insignia arranged for detachable connection in front of the regular clock-dial and hands, and means for electrically illuminating said insignia at a predetermined time arranged for operation by the regular hands of the clock, substantially as described.

2. A clock having a dial and hands, a dummy dial and hands adapted for movement to and from a position to conceal the first mentioned dial, an electrically operated insignia controlled by the position of the hands of the first mentioned dial.

3. A time-piece having a regular dial and hands, a dummy dial and hands adapted to be disposed to conceal the regular dial and hands, and electrically operated means involving a circuit closed in the predetermined position of one of the regular hands and of the dummy dial.

1,168,572. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. GLENN R. SMITH, Los Angeles, Cal., assignor of one half to Nellie R. Smith, Los Angeles, Cal., and one-half to Russel F. Grenfell, San Diego, Cal. Filed Jan. 23, 1913. Serial No. 743,778. (Cl. 123—190.)



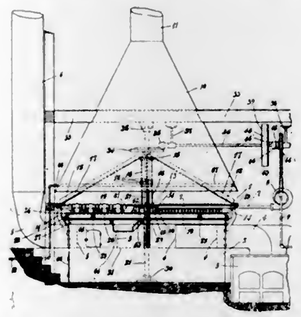
1. An engine provided with valve means comprising two truncated conical coaxially arranged valve members, each of which is provided with an inlet port and an exhaust port, the inlet ports being adapted to jointly register with an inlet passage to the cylinder, and the exhaust ports to jointly register with an exhaust passage from the cylinder; means for admitting pressure medium to one end of the inner member, and means for oppositely rotating both said members; said outer member being provided with a rotating spider upon which such member is mounted, and said inner member being provided with a shaft journaled in said spider and upon which such inner member is mounted.

2. An engine provided with valve means comprising two truncated conical coaxially arranged valve members, each of which is provided with an inlet port and an exhaust port, the inlet ports being adapted to jointly register with an inlet passage to the cylinder, and the exhaust ports to jointly register with an exhaust passage from the cylinder; means for admitting pressure medium to one end of the inner member, and means for oppositely rotating both said members; said outer member being provided with a rotating spider upon which such member is mounted, and said inner member being provided with a shaft journaled in said spider and upon which such inner member is mounted; and an inlet chamber within which said spider is journaled and through which the pressure medium is fed through said spider and to said inner valve member through said end thereof.

3. An engine provided at one end with a valve casing, coaxial valve members rotatably mounted in the casing and provided each with an exhaust port and an inlet port, the exhaust ports being adapted to register with each other and the inlet ports being adapted to register with each other in proper sequence and to respectively register with exhaust and inlet passages from and to the cylinder, a pressure medium inlet chamber, a spider journaled in the same and carrying one valve member, a shaft journaled in the spider and carrying another valve member, said last named valve member being perforated at one end, and means for oppositely rotating the spider and the shaft.

4. An engine provided at one end with a valve casing, coaxial valve members rotatably mounted in the casing and provided each with an exhaust port and an inlet port, the exhaust ports being adapted to register with each other and the inlet ports being adapted to register with each other in proper sequence and to respectively register with exhaust and inlet passages from and to the cylinder, a pressure medium inlet chamber, a spider journaled in the same and carrying one valve member, a shaft journaled in the spider and carrying another valve member, said last named valve member being perforated at one end, and means for oppositely rotating the spider and the shaft; there being an exhaust pipe within the latter valve member and adapted to register with said exhaust ports.

1,168,573. EVAPORATOR. JOHN SNOW, Cincinnati, Ohio. Filed Feb. 26, 1915. Serial No. 10,767. (Cl. 34—23.)



1. In an evaporator or drier, a substantially circular disk or plate having a substantially flat horizontal surface, a vertical shaft fixed to said plate centrally of and extending above and below the plate, heating means below the plate around said shaft, means for rotating said shaft and plate, means for feeding substance onto said surface of the plate near its center, stationary scrapers mounted at various radial distances from said shaft and engaging the substance on the plate with edges inclined to the direction of circular travel of the substance as carried around by the plate, whereby the substance is fed from the central part of the plate toward the periphery of the plate, and crushing rollers mounted at various radial distances from said shaft to coöperate with said plate and crush the substance on the plate.

2. In an evaporator or drier, a substantially circular disk or plate having a substantially flat horizontal surface, a vertical shaft fixed to said plate centrally of and extending above and below the plate, heating means below the plate around said shaft, means for rotating said shaft and plate, means for feeding substance onto said surface of the plate near its center, a stationary bar mounted above said flat surface of the plate and extending from near said shaft out toward the periphery of the plate, and scrapers mounted at intervals along said bar and engaging with the substance on said surface of the plate with edges inclined to the direction of circular travel of the substance as carried around by the plate, to feed said substance from the central part of the plate out toward the periphery of the plate and crushing rollers mounted on said bar at intervals therealong, to coöperate with said plate and crush the substance on said surface.

3. In an evaporator or drier, a substantially circular disk or plate having a substantially flat horizontal surface, a vertical shaft fixed to said plate centrally of and extending above and below the plate, heating means below the plate around said shaft, means for rotating said shaft and plate, means for feeding substance onto said surface of the plate near its center, a stationary hub around said shaft near said flat surface of the plate, another stationary hub around said shaft and spaced upwardly from the first mentioned hub, a plurality of bars fixed to the first mentioned hub and extending along above the flat surface of the plate out past the periphery of the plate, stationary means supporting said bars past said periphery, and braces extending from the parts of the bars past the periphery upward and inward to the collar that is spaced upward on the shaft, and fixed to said collar, and a tension member from the upper collar to the first mentioned collar, whereby said first mentioned collar is supported by the upper collar through said braces from the means that supports said bars and braces past the periphery of the plate, and feeding means mounted on said bars and engaging with the substance on the flat surface of the plate to feed the substance along said surface.

4. In an evaporator or drier, a substantially circular disk or plate having a substantially flat horizontal surface, a vertical shaft fixed to said plate centrally of and extending above and below the plate, heating means below the plate around said shaft, means for rotating said shaft and plate, means for feeding substance onto said surface of the plate near its center, stationary feeding means engaging with the substance on the surface of the plate, and trussed supporting means for the stationary feeding means.

5. In an evaporator or drier, a substantially circular plate or disk, a substantially cylindrical shell under said plate, a flange on the lower side of said plate lapping down over the rim of said shell, a ledge on the exterior of said shell near its rim below the flange on the disk, and rollers mounted on said flange and bearing on said ledge and supporting the disk out of contact with the rim of the shell for rotation with respect to the shell, means for rotating said plate, and means for supplying a heating medium to the interior of said shell under said plate, said flange overlapping the rim of the shell retarding escape of the heating medium between the shell and plate.

[Claims 6 to 14 not printed in the Gazette.]

1,168,574. LIP-RETRACTOR. FRANK SPUHR, St. Paul, Minn. Filed Mar. 20, 1915. Serial No. 15,779. (Cl. 32—10.)

1. A lip retractor, comprising, in combination, a head band to be secured over the forehead of a patient, and having a guide extending longitudinally thereof, a clamping element mounted upon and secured to said guide, a pair of arms secured longitudinally thereof by said clamp depending from said guide, and bars carried by the lower portions of said arms and engaging the upper and lower lips of the patient to hold the lips distended apart.

2. A lip retractor, comprising, in combination, a head band to be mounted on the forehead of a patient to form a supporting element, an arm attached to said supporting element and depending therefrom, and a bail carried by said arm and engaging the lip of the patient to hold the lip in distended position.

3. A lip retractor, comprising, in combination, a supporting element adapted to be fastened about the head of a patient, a supporting arm extending from said supporting element, means for attaching said supporting arm to said supporting element, and means detachably carried by said arm for engaging and holding a lip of the patient distended.

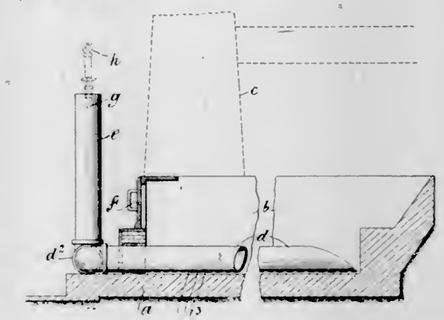


4. A lip retractor, comprising, in combination, a head band extending over the forehead of a patient and having a guide extending longitudinally thereof, a supporting element slidably carried by said guide, means for fastening said supporting element in position upon said guide, a pair of arms depending from said supporting element, extensible means for fastening said arms in different extended positions, to said supporting element, and bails carried by the extending ends of said arms and engaging the upper and lower lips of the patient to hold them spread apart.

5. A lip retractor, comprising, in combination, a head band extending over the forehead of a patient having a guide extending longitudinally thereof, a clamp slidably mounted upon and adapted to be secured to said guide, an arm longitudinally slidable upon and adapted to be secured to said clamp and a bail carried by said arm having a hook portion forming a broad bearing surface and a shank portion by which the bail is secured to said arm, said bail being formed by a loop of wire.

[Claims 6 to 11 not printed in the Gazette.]

1,168,575. BRICK-KILN. CHRISTOPHER STEADMAN, Huguenot Park, N. Y., and HENRY O. ROBINSON, Brookline, Mass. Filed Feb. 6, 1913. Serial No. 746,477. (Cl. 25—148.)

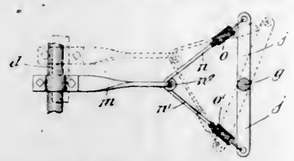


A brick kiln comprising a series of fire-chambers built within its wall, opening to the outside and having also each an opening to the interior of the kiln, a hollow burner in each of said chambers, having discharge passages underneath, an air duct set along the outside of said wall, and a feeder therefrom to each burner.

1,168,576. AUTOMOBILE-HEADLIGHT ADJUSTER. LOUIS E. STEVENS and ELBRIDGE J. FAIRBROTHER, Haverhill, Mass. Filed Jan. 9, 1915. Serial No. 1,435. (Cl. 240—62.)

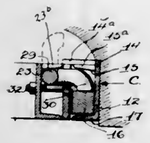
1. In combination with the longitudinally movable steering rod of an automobile, a vertically disposed, lamp-sup-

porting shaft mounted independently of said rod, a pair of arms mounted on said shaft and projecting equally therefrom in oppositely disposed positions, a bracket mounted on said rod disposed at approximately the level of the ends of said arms, and a pair of elastic links yieldingly connecting each of said arms and said bracket.



2. In combination with the longitudinally movable steering rod of an automobile, a vertically disposed, lamp-supporting shaft mounted independently of said rod, a pair of arms mounted in said shaft and projecting equally therefrom in oppositely disposed positions, a bracket mounted on said rod and extending into proximity to said shaft to a position normally equidistant from the ends of said arms, and a loop-shaped wire having a coiled middle portion slidably movable in the end of said bracket, and having its legs yieldingly connected to the ends of said arms.

1,168,577. WINDOW-GUARD. HENRY C. STRUCHEN, White Bear, Minn. Filed July 27, 1914. Serial No. 853,346. (Cl. 16—126.)



1. In a window locking device, a swiveled rod concealed within the window structure and formed with a handle and latch bolts rigidly attached thereto, a housing carried upon the window to inclose said handle, a stop and an abutment located on the window frame and arranged to form a recess between them which is adapted to be covered by the window when closed, said bolts being designed to enter said recess and engage said abutment to clamp the window against said stop.

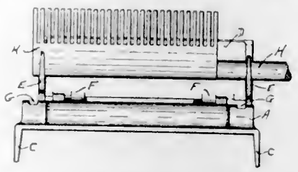
2. The combination of a stop and an abutment located on a window frame, a plurality of swinging latch bolts carried upon a window, a revoluble rod on the window for shifting said latch bolts to press the same against said abutment and secure the window against said stop, a handle on the rod for turning the same and a guard shutter adapted to impinge against said handle and hold it in locked position.

3. In a window locking device, a stop and an abutment located upon a window frame, latch bolts carried upon a window, said stop and abutment being arranged to form a recess adapted to receive said bolts and also adapted to be covered by said door, a handle connected with said latch bolts to turn the same and press them against the abutment, whereby the window may be clamped against the stop, and means carried by the window for completely inclosing said handle and holding the same in locked position.

4. In a window locking device, a stop and an abutment upon a window frame, a rod adapted to be revolubly mounted upon a window, latch bolts integral with said rod, a handle on the rod for turning the same to press said bolts against said abutment and thereby clamp the window against said stop, a housing for the handle, carried by the window, said housing having an opening therein through which the handle may pass and a closure for said opening, impinging against the handle to confine the bolts in clamped position.

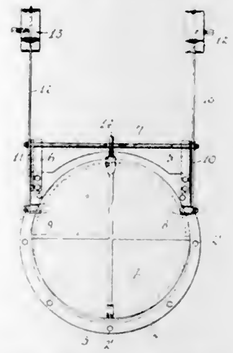
5. In a window locking device a stop and an abutment located on a window frame, a rod adapted to be revolubly mounted upon a window and having latch bolts and a resilient handle formed thereon, said handle being adapted to turn said rod and press the latch bolts against said abutment, whereby the window may be clamped against said stop, a housing for the handle carried by the window and a closure for said housing arranged to forcibly secure the handle therein and guard the same when the window is closed.

1,168,578. HEATER FOR METALLIC COMBS AND CURLING-IRONS. GEORGE W. THOMPSON, Indianapolis, Ind., assignor to Joe Wolf, Indianapolis, Ind. Filed May 7, 1915. Serial No. 26,628. (Cl. 126—229.)



In a curling iron and metal-comb heater, the combination of a container formed with a cavity adapted to contain asbestos saturated with a liquid fuel, and with slots adjacent to the ends of said cavity, and an adjustable lid provided with curling iron and metal comb supporting racks on its under side, said slots being adapted to receive said rack when the lid is closed.

1,168,579. FLOOD-GATE. KARL JOHAN THORSBY, Oakland, Cal., assignor to California Corrugated Culvert Company, Oakland, Cal., a Corporation of California. Filed Aug. 17, 1914. Serial No. 857,104. (Cl. 61—47.)



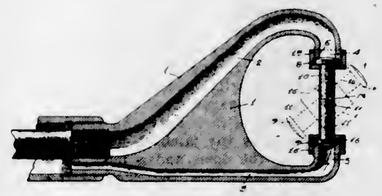
1. A flood-gate comprising a conduit; a gate-seating member carried by the conduit; a gate; and gate-supporting links symmetrically disposed with relation to the vertical center line of said gate, one on each side thereof, pivotally connected at their lower ends to said gate in a horizontal line above its center of gravity, and at their upper ends pivotally connected, in a horizontal line, with the gate-seating member in such position with relation thereto that said gate when closed is substantially in a state of equilibrium with respect to said pivotal connections.

2. A flood-gate comprising a conduit; a gate-seating member carried by the conduit; a gate; and gate supporting links symmetrically disposed with relation to the vertical center line of said gate, one on each side thereof, pivotally connected at their lower ends to said gate in a horizontal line above its center of gravity, and at their upper ends pivotally connected, in a horizontal line, with the gate-seating member in such position with relation thereto that said gate when closed is substantially in a state of equilibrium with respect to said pivotal connections, said links being extended beyond their pivotal connections with said gate seating member, and provided with counterweights.

3. A flood-gate comprising a conduit; a gate-seating member carried by the conduit; extensions rising from said member; a rod carried between said extensions; a gate; gate-supporting links pivotally connected with said gate and pivoted on said rod; and a stop pin on the gate-top coacting with said rod.

4. A flood-gate comprising a conduit; a gate-seating member carried by the conduit; extensions rising from said member; a rod carried between said extensions; a gate; gate-supporting links pivotally connected with said gate and pivoted on said rod, said links being extended above said rod and provided with counterweights; and a stop pin on the gate-top coacting with said rod.

1,168,580. OIL-BURNER TIP. WALTER M. TROLL, Baltimore, Md. Filed Oct. 6, 1915. Serial No. 55,348. (Cl. 158—78.)



1. An oil burner tip comprising a double channeled body portion having opposed outlets to the channels therein; a pair of tubular burner tips each having a suitable aperture therein for the discharge of oil and steam respectively, seated within the opposed outlets; and means adapted to secure each tip to its respective outlet.

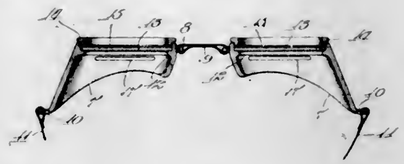
2. An oil burner tip comprising a double channeled body portion having opposed outlets to the channel therein, each outlet being provided with a concave seat; a pair of tubular burner tips each having a suitable aperture therein for the discharge of oil and steam respectively and convex ends adapted to engage the concave seats of the opposed outlets; and means adapted to retain each tip within its respective seat.

3. An oil burner tip comprising a double channeled body portion having opposed outlets to the channels therein, each outlet being provided with a concave seat; a pair of alined burner tips arranged between the outlets, each tip having one end thereof closed, and a suitable aperture near said closed end for the discharge of steam and oil respectively, the other end of each tip being convex and adapted to seat in the concave seat of its respective outlet; and suitable means adapted to retain each tip within its respective seat.

4. An oil burner comprising a double channeled body portion having opposed outlets to the channels therein, each outlet having an arcuate concave seat, the radius of the arcuate portion of each seat being equal to one-half the distance between said seats; a pair of alined hollow burner tips arranged between the seats, said tips having closed abutting ends and suitable apertures near said closed ends for the discharge of steam and oil respectively, the opposite ends of said tips being convex and adapted to seat within the concave seats of the opposed outlets, the combined lengths of said tips being approximately equal to the distance between the arcuate seats of the opposed outlets; and means adapted to retain each tip within its respective seat.

5. An oil burner comprising a double channeled body portion having opposed outlets to the channels therein, each opposed outlet being provided with an arcuate concave seat, the radius of each arcuate seat being equal to one-half the distance between said seats; a pair of alined hollow burner tips arranged between the seats and having closed abutting ends and an aperture in each tip near said closed ends for the discharge of steam and oil respectively, the opposite ends of said tips being provided with convex flanges adapted to seat within the opposed outlets, the combined length of said tips being equal to the distance between the seats; and means adapted to engage the convex flanges of the tips and retain the same onto the concave seats.

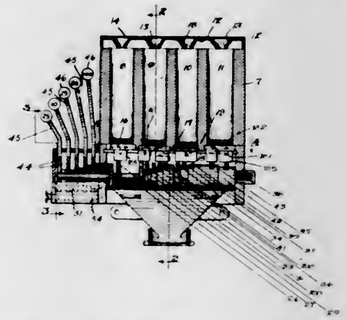
1,168,581. GOGGLES OR EYE-PROTECTOR. CHARLES J. TROPPMAN, Chicago, Ill., assignor to F. A. Hardy & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1915. Serial No. 1,484. (Cl. 2—149.)



1. In an eye protector or goggle, an eye cup the walls of which at the top and bottom have vertically alining slots of less width than the thickness of the walls of the cup, a window in the front of said cup, said slots being positioned substantially adjacent said window whereby rays of light entering said slots are directed against the opposite wall of the cup instead of into the eyes of the wearer.

2. In an eye protector or goggle, an eye cup comprising an integral shell, the rear edges of the walls whereof are adapted to conform to the face of the wearer about the eye and the front edges of the walls whereof are adapted to retain a window, said walls being provided at their respective top and bottom with a pair of vertically alining slots of less width than the thickness of the walls of the cup substantially adjacent said window, which communicate directly with the exterior and the interior of said cup, whereby rays of light entering the cup through said slots are directed against the opposite wall of the cup instead of into the eyes of the wearer.

1,168,582. CHANGE-MAKING MACHINE. CLYDE C. VOGLESONG, Oakland, Cal., assignor to American Coin Register Company, a Corporation of California. Filed Nov. 25, 1914. Serial No. 873,944. (Cl. 133—4.)



1. A change making machine, comprising a plurality of coin receiving tubes, a coin ejector arranged below each of said tubes, a plurality of concentric shafts arranged adjacent to said ejectors, pins on said shafts adapted to engage and operate certain predetermined ejectors, means for rotating any one of said shafts, and means for preventing the remaining shafts from being rotated by the rotation of said shaft.

2. A change making machine, comprising a plurality of coin receiving tubes, a coin ejector arranged below each tube, a plurality of concentric shafts arranged adjacent to said ejectors, means on said shafts adapted to engage

certain predetermined ejectors, a flange on the end of each shaft, and springs engaging said flanges arranged to oppose rotation of the shafts.

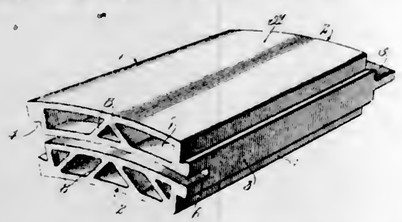
3. A change making machine, comprising a plurality of coin receiving tubes, a coin ejector arranged below each tube, a plurality of concentric shafts arranged adjacent to said ejectors, means on said shafts adapted to engage certain predetermined ejectors and cause the discharge of certain coins for a rotation of the corresponding shaft, a flange on the end of each shaft, an abutment on each flange, a spring engaging each abutment and serving to oppose rotation of each shaft, and means for rotating said shafts.

4. A change making machine, comprising a plurality of coin receiving tubes, coin ejectors arranged below said tubes, a plurality of concentric shafts arranged adjacent said ejectors, pins on said shafts adapted to engage certain predetermined ejectors, means for rotating any one of said shafts, said rotation serving to eject the desired coin or coins, and means for locking said shafts against rotation.

5. A change making machine, comprising a plurality of coin receiving tubes, coin ejectors arranged below said tubes, a plurality of concentric shafts arranged adjacent said ejectors, means on said shafts adapted to engage certain predetermined ejectors means for rotating any one of said shafts, said rotation serving to eject the desired coin or coins, an abutment on each of said shafts, and a latch arranged to be moved into the path of said abutments and thereby lock said shafts against rotation.

[Claims 6 and 7 not printed in the Gazette.]

1,168,583. HOLLOW TILE AND TILE STRUCTURE. WILLIAM J. VOLZ, St. Louis, Mo. Filed May 8, 1914. Serial No. 837,289. (Cl. 72—51.)

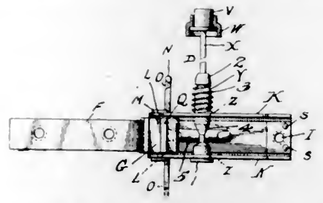


1. A new article of manufacture consisting of a hollow tile of substantially rhomboidal shape in outline and segmental shape in cross section, a dove-tailed rib that extends longitudinally along one edge of the tile, a dove-tail shaped recess formed in the other longitudinal edge of the tile, a flange projecting from one end of the tile and having one of its ends terminating flush with the top face of said rib, a slot formed in the other end of the tile and intersecting the opposite end of said rib, and webs arranged inside of the tile intermediate the top and bottom walls of same to reinforce and strengthen the tile.

2. A new article of manufacture consisting of a hollow tile of substantially rhomboidal shape in outline and approximately segmental shape in cross section, a dove-tailed rib that extends longitudinally along one edge of the tile, a dove-tail shaped recess formed in the other longitudinal edge of the tile, a flange projecting from one end of the tile and having one of its ends terminating flush with the top face of said rib, a slot formed in the other end of the tile and intersecting the opposite end of said rib, and angularly-disposed webs arranged inside of the tile between the top and bottom walls of same so as to form two inverted V-shaped trusses that extend longitudinally of the tile, one within the other.

1,168,584. LOCK FOR DOORS. GEORGE W. WELLS, Amesbury, Mass. Filed Feb. 11, 1915. Serial No. 7,643. (Cl. 70—43.)

1. The combination with a door and jamb, of a yielding catch, a rotary latch having teeth, a plate spring having one end fixed and the other movable for bending the spring plate out of the path of a tooth of the latch and locking the latch, and means for releasing the latch.



2. The combination with a door and jamb, of a yielding catch, a rotary latch with teeth projecting from a circumferential surface, a plate spring the free end of which is adapted to bear against different teeth whereby the latch is normally locked against rotation in one direction, and means for releasing the latch.

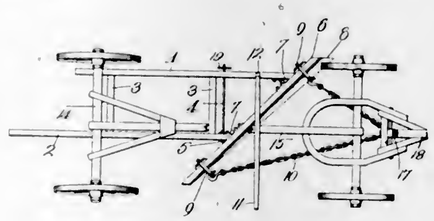
3. The combination of a door and jamb, a yielding catch on one of said members, a rotary latch with teeth on the other member, a spring which automatically locks the latch against rotation in one direction, and push button mechanism for temporarily releasing the latch so it can rotate and become disengaged from the catch.

4. The combination with a door and jamb, of a yielding catch supported by the jamb, a spring locked rotary latch supported by the door, and a push button mechanism for releasing the latch; the push button being located at the top edge of the door.

5. The combination of a casing; a rotary latch supported by a shaft in connection with the casing; a locking spring secured to the casing, one end of which engages a tooth and locks the latch so it cannot rotate in one direction; and means for moving the spring from the path of the latch so it may rotate in both directions.

[Claims 6 to 10 not printed in the Gazette.]

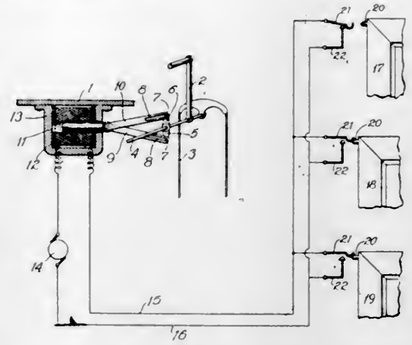
1,168,585. COMBINED ROAD GRADER AND DRAG. JOHN W. WOOLERY, Oxford township, Johnson county, Kans. Filed June 15, 1912. Serial No. 703,958. (Cl. 37—7.)



A road grader, comprising a pair of bars spaced apart, one projecting a greater distance forward and depending to a lower plane than the other and an obliquely-extending blade connecting the front ends of said bars and tapering upward at its lower or cutting edge from one end to the other; said cutting edge occupying substantially the same inclined plane as the lower edges of said bars in combination with a four-wheeled vehicle overlying the grader, a flexible connection between the obliquely extending blade and the front end of the wheeled vehicle, and a flexible connection between the rear axle of the wheeled vehicle and the inner bar of the pair forming the frame of the grader.

1,168,586. SAFETY CONTROL SYSTEM. JOHN C. A. ANDERSON, Chicago, Ill. Filed Nov. 24, 1913. Serial No. 802,843. (Cl. 187—31.)

1. A system of the character described comprising an elevator car, a control lever, an operating cable actuated by said control lever, a door for permitting access to said car, and means controlled by said door when in an open position to govern the actuation of said lever, said means including a solenoid, a plunger, a pair of arms associated with said lever, and a pair of links associating said arms with said plunger.



2. A system of the character described comprising an elevator car, a control lever, an operating cable actuated by said control lever, a door for permitting access to said car, and means controlled by said door when in an open position to retract said lever into neutral position, said means including a solenoid, a plunger, a pair of arms associated with said lever, and a pair of links associating said arms with said plunger.

3. A system of the character described comprising an elevator car, a control lever, an operating cable actuated by said control lever, a door for permitting access to said car, and means controlled by said door when in an open position to govern the actuation of said lever, said means including a solenoid, a plunger, a pair of arms associated with said lever, and a pair of links associating said arms with said plunger, there being lost motion between said links and said arms.

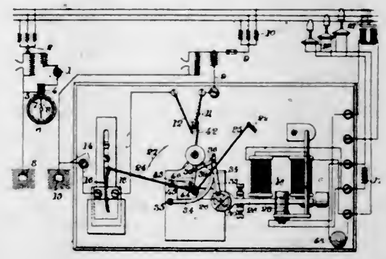
4. A system of the character described comprising an elevator car, a control lever, an operating cable actuated by said control lever, a door for permitting access to said car, and means controlled by said door when in an open position to retract said lever into neutral position, said means including a solenoid, a plunger, a pair of arms associated with said lever, and a pair of links associating said arms with said plunger, there being lost motion between said links and said arms.

5. A system of the character described comprising an elevator car, a control lever, an operating cable actuated by said control lever, a door for permitting access to said car, and means controlled by said door when in an open position to govern the actuation of said lever, said means including a solenoid, a plunger, a pair of arms associated with said lever, and a pair of links associating said arms with said plunger, there being lost motion between said links and said arms, said last means also including a switch associated with said door, and means movable with said door to control said switch.

[Claims 6 to 14 not printed in the Gazette.]

1,168,587. MEANS FOR INDICATING FAULTS AND BREAKS IN ELECTRIC CONDUCTORS. ERNEST BAILLAT, Pont de Beauvoisin, France. Filed May 4, 1914. Serial No. 836,269. (Cl. 175—294.)

1. In apparatus for the purpose set forth the combination with transformers, of means for sending into the line a continuous current passing through the neutral point of the transformers and the earth, an indicating device, a series of switches distributed along the line, severally adapted to close the circuit of said continuous current through said indicating device when said switches are rendered operative by a disturbance in the line, said switches being timed so that the period of indication increases with the distance of the respective switch from the indicator, and a series of main line circuit breakers severally associated with said switches, the period of interruption of the main line by the several circuit breakers decreasing in proportion as the respective circuit breakers are distant from the indicator, and the indicating action being independent of the interruption so that these two operations can take place simultaneously or in succession.



2. In apparatus for the purpose set forth the combination with transformers, of means for sending into the line a continuous current passing through the neutral point of the transformers and the earth, an indicating device, a series of switches distributed along the line, severally adapted to close the circuit of said continuous current through said indicating device when said switches are rendered operative by a disturbance in the line, said switches being timed so that the period of indication increases with the distance of the respective switch from the indicator, and a series of main line circuit breakers severally associated with said switches, the period of interruption of the main line by the several circuit breakers decreasing in proportion as the respective circuit breakers are distant from the indicator, and the indicating action being independent of the interruption so that these two operations can take place simultaneously or in succession, said indicating device comprising a chronograph having a dial with divisions corresponding to sections of the line, a hand, a pusher adapted to actuate said hand, an electro-magnet adapted to actuate said pusher, and an auxiliary hand which records all movements of the first mentioned hand.

3. In apparatus for the purpose set forth the combination with transformers, of means for sending into the line a continuous current passing through the neutral point of the transformers and the earth, an indicating device, and switch stations distributed along the line, severally adapted to close the circuit of said continuous current through said indicating device and to break the main line circuit, the switch devices at said station being timed so that the period of indication increases with the distance of the respective station from the indicator, the period of interruption of the circuit decreasing in proportion as the stations are distant, and the indicating action being independent of the interruption so that these two operations can take place simultaneously or in succession, each switch station comprising an ammeter connected to the line, a local circuit including an electro-magnet and adapted to be closed by said ammeter, an electro-magnetic main line circuit breaker, and a clock-work adapted to be released by the electro-magnet in said local circuit, and a switch actuated by said clockwork, adapted to first close and then break the continuous current circuit, and then switch current from the local circuit into the electro-magnet of the circuit breaker, all the members returning to normal position on cessation of disturbance in the line.

4. In apparatus for the purpose set forth, the combination with transformers, of means for sending into the line a continuous current passing through the neutral point of the transformers and the earth, an indicating device, and switch stations distributed along the line, severally adapted to close the circuit of said continuous current through said indicating device and to break the

main line circuit, the switch devices at said stations being timed so that the period of indication increases with the distance of the respective station from the indicator, the period of interruption of the circuit decreasing in proportion as the stations are distant, and the indicating action being independent of the interruption so that these two operations can take place simultaneously or in succession, each switch station comprising an ammeter connected to the line, a local circuit including an electro-magnet and adapted to be closed by said ammeter, an electro-magnetic main line circuit breaker, a clockwork adapted to be released by the electro-magnet in said local circuit, and a switch actuated by said clockwork, adapted to first close and then break the continuous current circuit, and then switch current from the local circuit into the electro-magnet of the circuit breaker, all the members returning to normal position on cessation of disturbance in the line, the release of the clockwork movement being produced by a lever operated by an auxiliary mechanism, the said lever releasing the balance of the principal mechanism and acting by means of a rocking arm upon contacts closing the continuous circuit, the clockwork movement thus released displacing arms carrying connecting members, one closing the continuous current circuit upon the indicator and interrupting it at the end of a given period which can be adjusted as desired, the other closing the circuit of the main line circuit breaker at the end of a different period of time also predetermined and adjustable at will.

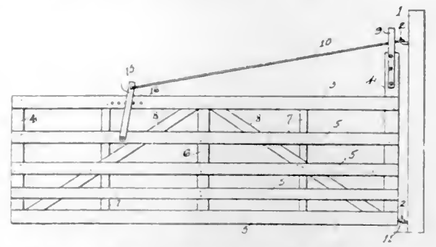
1,168,588. UNION GARMENT. FRANK D. BAKER and PETER HOVLAND, Sioux City, Iowa. Filed Oct. 23, 1914. Serial No. 868,232. (Cl. 2—144.)



1. A union garment comprising a jacket and trousers having a drop seat portion, the upper edge of the seat portion being overlapped by and detachably secured to the inner side of the back of the jacket, and suspenders comprising straps adapted to pass over the shoulders of the wearer and disposed inside the jacket, the front ends of the straps being secured to the inner side of the front of the trousers, and their rear ends being secured to the inner side of the portion of the jacket which overlaps the seat portion, whereby the trousers are supported from the shoulders by the suspenders, thereby permitting the jacket to blouse.

2. A union garment comprising a jacket and trousers having a drop seat portion, the upper edge of the seat portion being overlapped by and detachably secured to the inner side of the back of the jacket, short straps secured at their lower ends to the inner side of the front of the trousers, and suspenders comprising straps adapted to pass over the shoulders of the wearer and disposed inside the jacket, the front ends of the latter straps being detachably secured to said first straps, and their rear ends being secured to the inner side of the portion of the jacket which overlaps the seat portion, whereby the trousers are supported from the shoulders by the suspenders, thereby permitting the jacket to blouse.

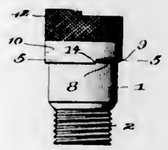
1,168,589. FARM-GATE. IRVING BARKER, Springfield, Ill. Filed Aug. 17, 1914. Serial No. 857,261. (Cl. 39—82.)



1. In a farm gate, the combination with a gate framework, of a hanger for the gate comprising spaced apart hooks carried by a gate post, an eye-bolt carried by the gate and engaged to the lowermost of said hooks, an eye-rod engaged to the uppermost of the hooks and extending diagonally downward to the center of the gate, bracing means for the eye-rod comprising a U-shaped strap iron attached to the gate and adapted to receive the eye-rod therethrough, a swinging link carried by the gate and pivoted to said eye-rod, and adjustable stop means for said link.

2. In a farm gate, the combination with the gate framework comprising parallel stringers, of hanger means for the gate comprising spaced apart hooks carried by the gate post, an eye-bolt carried by the gate and engaged to the lowermost of said hooks, an eye-rod engaged to the uppermost of the hooks and extending diagonally to the center of the gate, a link pivoted at its lower end to the second stringer on the gate, the upper stringer provided with adjusting holes therethrough, a removable pin engaging the rear side of the link and adapted to engage selectively in the holes in the upper stringer, and the upper end of the link pivoted to the inner end of the eye-rod, substantially as described.

1,168,590. LUBRICATOR. CHARLES S. BARNARD, Bridgeport, Conn., assignor to The Burns & Bassick Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 9, 1915. Serial No. 20,210. (Cl. 184—92.)



1. In a lubricator, a body having a threaded open end and having a top on its opposite end provided with a lubricant inlet, said top having a screw-driver receiving slot to one side of the inlet and said body having an arcuate groove the ends of which form stops, and a cap on the body having a segmental top and a flange which rotates over the body, the free edge of the flange having an arcuate lip which projects into the groove, the ends of said lip forming stops which coact with the first named stops whereby the cap when engaged with one of the first named stops uncovers the inlet and when engaged with the other of the first named stops the chord of the segment alines with said screw-driver receiving slot.

2. In a lubricator, a hollow body having a top with a lubricant inlet therein and having its opposite end threaded, said top having a screw-driver receiving slot therein, and a cap rotatable on the body and having a segmental top, the chord of which in one position of the cap alines with said slot and in a second position uncovers the inlet.

3. A lubricator composed of a hollow body having a top with an inlet in the latter and having screw threads on its bottom end, said top having a tool receiving slot therein, and a closure for the top having a segmental top which in one position covers the inlet and in a second position the chord of the closure top registers with the slot.

4. A lubricator composed of a hollow body having a top provided with a slot and an inlet and having screw threads on its bottom end, and a closure for the top having a cutaway part enabling same to completely expose the slot in one position and to cover the inlet in a second position.

5. A lubricator composed of a hollow body having a top provided with a slot and an inlet and having screw threads on its bottom end, and a closure for the top, said closure being rotatable on the top so as to cover the inlet in one position and to completely expose the slot in a second position.

1,168,591. ANIMAL-HOLDING IMPLEMENT. NELS L. BECK, Exira, Iowa. Filed Jan. 29, 1915. Serial No. 5,050. (Cl. 119—153.)



1. An implement for holding animals comprising a frame, a rod and a loop forming members, said frame having a main portion and an arm at each end thereof, said arms projecting in opposite direction from said main portion and at right angles thereto, a bearing on said main portion and a bearing at the extremity of each arm, said bearing being in alinement so as to form guides for said rod, said loop forming member being secured to one end of said rod and to the adjacent arm respectively.

2. An implement for holding animals comprising a Z-shaped frame, a slidable member and a flexible loop forming member, said frame having a plurality of bearings for said slidable member arranged in alinement and situated on the free ends of the frame and on its middle portion, said loop forming member being attached to one end of said slidable member and to one of the angles of the Z-shaped frame.

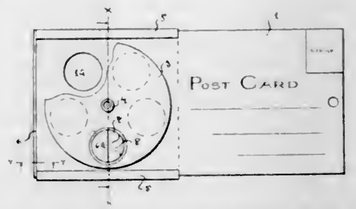
3. An implement for holding animals comprising a Z-shaped frame, a slidable member and a flexible loop forming member, said frame having a plurality of bearings for said slidable member arranged in alinement and situated on the free ends of the frame and on its middle portion, said loop forming member being attached to one end of said slidable member and to one of the angles of the Z-shaped frame, a handle being provided at the other end of said slidable member, said handle constructed to form a stop against said frame in order to prevent said slidable member from sliding out of the frame.

4. An implement for holding animals comprising a frame, a slidable member and a loop member, said frame being constructed of metal wire bent approximately in the shape of the letter Z with a large eyelet at one of the bends to form a handle, the ends of the wire as well as the middle portion thereof being twisted around to form bearings for said slidable member, said loop member being made of flexible material and attached to said frame at its other bend and also to the adjacent end of said slidable member, a stop formed at the opposite end of said slidable member, said stop also serving as a handle.

1,168,592. COIN-HOLDING POST-CARD. SINGLETON B. BEDINGER, Fort Worth, Tex. Filed June 5, 1914. Serial No. 843,189. (Cl. 229—69.)

1. In a device of the character described, the combination with a post-card formed with an orifice proportioned to receive a coin, of metallic plates secured to the card at each side of the orifice covering the orifice, one of said plates being formed with an aperture through which a coin may be introduced into the orifice.

2. In a device of the character described, the combination with a card formed with an orifice proportioned to receive a coin, of metallic plates secured to the card at each face thereof, covering the orifice, one of said plates being angularly displaceable and being formed with an aperture, through which a coin may be partially introduced into the orifice, the angular motion of said plate serving to permit the coin to be completely introduced into the orifice.

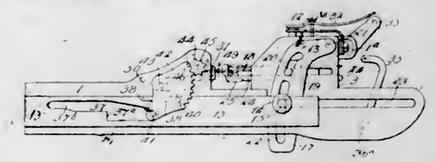


3. In a device of the character described, the combination with a post-card formed with a series of orifices each proportioned to receive a coin and arranged in the arc of a circle, of metallic plates secured to the card at each face thereof, covering said orifices, one of said plates being rotatable about a point coincident with the center of the circle of orifices, the rotatable plate being formed with an aperture disposed to permit a coin to be introduced into any orifice when said aperture is brought adjacent to said orifice by rotation of the plates.

4. In a device of the character described, the combination with a post-card formed with a series of orifices each proportioned to receive a coin, and arranged in the arc of a circle, of metallic plates covering said orifices at each face of the card and secured to the card, one of said plates being triangular and having its top and bottom edges engaging the corresponding edges of the card, and the other plate being circular and revoluble about a point coincident with the center of the series of orifices, the revoluble plate being formed with an aperture, through which a coin may be introduced into any orifice with which said aperture is made to communicate through rotation of the plates.

5. In a device of the character described, the combination with a card formed with a series of orifices each proportioned to receive a coin, and arranged in the form of a circular arc, of metallic plates covering said orifices and secured to the card, one of said plates being revoluble about a point coincident with the center of the circle of orifices, the revoluble plate being formed with an aperture, through which a coin may be introduced into any orifice with which said aperture is made to communicate by rotation of the plate, said aperture being so formed that it will admit a coin into an orifice but will not permit the withdrawal of the coin.

1,168,593. SEWING-MACHINE FOR BOOT-SOLES AND THE LIKE. GEORG BEER, Wiesbaden, Germany. Filed Mar. 7, 1913. Serial No. 752,610. (Cl. 112—28.)



1. In a sewing machine, the combination of a supporting clamp adapted to be secured to a support, a guide frame secured to said clamp for pivotal movement between a horizontal and vertical position, means for locking said guide frame to the clamp in a horizontal position, and stitching mechanism mounted on said guide frame.

2. In a sewing machine, a shuttle, shuttle actuating mechanism including a toothed segment, rollers mounted

on said segment, a reciprocating slide provided with means for engaging with said rollers, a needle bar, and a lever coöperating with said needle bar and with the slide whereby movement of the slide simultaneously operates the shuttle and the needle bar, the lever being so positioned that the power generated by the movement of the slide is multiplied in the movement of the needle bar, in combination with means whereby said slide is operated.

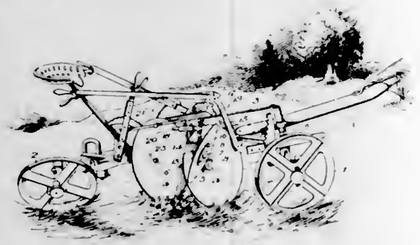
3. In a sewing machine, a shuttle, shuttle actuating mechanism including a toothed segment, a reciprocating slide, means mounted on the segment and coöperating with the slide for imparting movement to the shuttle when the slide is reciprocated, a reciprocating needle bar, and a pivoted lever having loose connection with the needle bar and with the slide whereby the movement of the slide simultaneously imparts movement to the shuttle and needle bar, said lever being so formed that the power generated by the movement of the slide is multiplied in the needle bar, in combination with means whereby said slide is reciprocated.

4. In a sewing machine, the combination of a shuttle, shuttle actuating mechanism including a toothed segment, rollers mounted on the toothed segment, a reciprocating slide having surfaces coacting with the rollers to actuate the segment, said surfaces being so formed that the segment is moved with an interval of rest during the movement of the slide in one direction, and is also moved, with an interval of rest, during the movement of the slide in the opposite direction, a needle bar, and means including a lever connecting said slide with said needle bar, whereby the movement of the slide simultaneously actuates the shuttle and needle bar.

5. In a sewing machine, the combination of a shuttle, shuttle actuating mechanism including a toothed segment, a work feeder actuated by said toothed segment, a needle bar, a lever loosely connected to said needle bar, and a slide having loose connection with the lever and with the segment whereby the needle bar, shuttle and work feeder are simultaneously operated when the slide is reciprocated.

[Claims 6 to 9 not printed in the Gazette.]

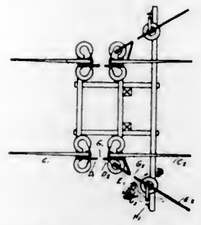
1,168,594. DISK PLOW. FREDERICK BERENDES, Evansville, Ind. Filed Oct. 1, 1915. Serial No. 53,490. (Cl. 97—79.)



As an attachment for disk plows or cultivators, a supplemental disk adapted to be disposed in different positions in relation to a plow or cultivator disk, combined with a yoke and spindle, a stem having a head on which said yoke is rockably mounted, means for securing the yoke in different positions in relation to the head, a mounting in which the stem is slidably and rotatably mounted, means for securing the stem in said mounting, a slidable and rockable support for said mounting, and means for connecting said last-named support to the frame of the plow or cultivator.

1,168,595. LIGHTNING-ARRESTER. AUGUSTUS JESSE BOWIE, Jr., San Francisco, Cal. Filed Feb. 26, 1910. Serial No. 546,180. (Cl. 175—30.)

1. In a horn type lightning arrester, a plurality of air gaps in series, primary horns substantially vertical at the gap limits, secondary horns mounted in electrical connection with said primary horns, the horns mounted on insulated supports.



2. In a horn type lightning arrester, a plurality of air gaps in series, primary horns substantially vertical at the gap limits, secondary horns mounted in electrical connection with said primary horns, the horns mounted on insulated supports, the primary horns on one side of the gaps diverging from the primary horn mounted on the opposite side of the gap.

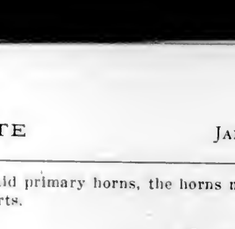
3. In a horn type lightning arrester, a plurality of air gaps in series, primary horns substantially vertical at the gap limits, secondary horns mounted in electrical connection with said primary horns, the horns mounted on insulated supports, a conductor between one or more of the pairs of said horns in which is interposed a resistance.

4. A plurality of horn-type, single pole, lightning arresters, with resistances between corresponding horns and a common electrical connection, in combination with an air gap connected between said connection and ground.

5. A plurality of horn-type, single-pole, lightning arresters, with resistances between corresponding horns and a common electrical connection, in combination with an air gap and resistance connected between said connection and ground.

[Claims 6 to 24 not printed in the Gazette.]

1,168,596. CABLE-BONDING DEVICE. EDWIN L. BROCKWAY, Glenside, Pa. Filed Jan. 16, 1915. Serial No. 2,591. (Cl. 173—273.)



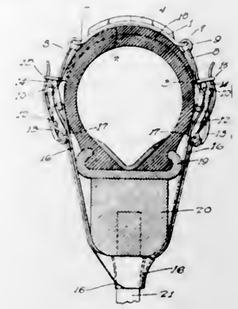
1. A device of the class described embracing a frame of thin, pliable, conducting material which frame is connected by a series of spaced cross-bars to form a grid to receive in interlaced fashion a connecting element, the underside of which grid has depending therefrom a series of projections or points.

2. A device of the class described formed from a single piece of metal and embracing a frame of thin, pliable material which frame is connected by a series of spaced cross-bars to form a grid to receive in interlaced fashion a connecting element, the underside of which grid has depending therefrom a series of projections or points.

3. A device of the class described embracing a frame of thin, pliable conducting material, which frame is integrally connected by a series of spaced cross-bars to form a grid, said grid having struck out therefrom depending projections or points.

4. In combination, a cable, a grid of thin, pliable conducting material, and a connecting element having interlaced relation with the grid, the spaces formed between the bars of the grid and between the edges or sides of the connecting element and the grid frame being of maximum size.

1,168,597. ANTISLIPPING ATTACHMENT FOR TIRES. HENRY O. BRUNTON, Cincinnati, Ohio. Filed Mar. 26, 1915. Serial No. 17,256. (Cl. 152—14.)



1. In a device of the character described, in combination with a wheel comprising a tire and an internal fixed part, a tread piece lying across the tread of the tire and disposed substantially equally on each side of a radial line outward from said internal fixed part, flexible tension means connected to one end of the tread piece at one side of the tire and passed substantially radially inward to and engaged with said internal fixed part of the wheel and back to and fastened to said end of the tread piece, and another flexible tension means connected to the other end of the tread piece at the other side of the tire and passing substantially radially inward to and engaging with said first-mentioned tension means adjacent to said internal fixed part and passing back to said other end of the tread piece and connected to said other end, and binding said tread piece to the tire in the aforesaid position.
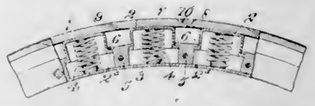
2. In a device of the character described, in combination with a wheel comprising a tire and an internal fixed part, a tread piece lying across the tread of the tire and disposed substantially equally on each side of a radial line outward from said internal fixed part, flexible tension means connected to one end of the tread piece at one side of the tire and passed substantially radially inward and around said internal fixed part and back to and fastened to said end of the tread piece, and another flexible tension means connected to the other end of the tread piece at the other side of the tire, and passing substantially radially inward around said internal fixed part and around parts of the first-mentioned tension means adjacent to said internal fixed part, and passing back to said other end of the tread piece and connected to said other end, and binding said tread piece to the tire in the aforesaid position.

3. In a device of the character described, in combination with a wheel comprising a tire and an internal fixed part, a rigid tread piece lying across the tread of the tire and disposed substantially equally on each side of a radial line outward from said internal fixed part, flexible tension means connected to one end of the tread piece at one side of the tire and passed substantially radially inward and around said internal fixed part and back to and fastened to said end of the tread piece, and another flexible tension means connected to the other end of the tread piece at the other side of the tire, and passing substantially radially inward around said internal fixed part and around parts of the first-mentioned tension means adjacent to said internal fixed part, and passing back to said other end of the tread piece and connected to said other end, and binding said tread piece to the tire in the aforesaid position.

4. In a device of the character described, in combination with a wheel comprising a tire and a spoke, a rigid tread piece lying across the tread of the tire, flexible tension means connected to one end of the tread piece and passed around the spoke and back to and fastened to said end of the tread piece, and another flexible tension means connected to the other end of the tread piece and passing around the spoke and around parts of the first mentioned tension means adjacent to the spoke, and passing back to said other end of the tread piece and connected to said other end and binding said tread piece to the tire in the aforesaid position.

5. In a device of the character described, in combination with a wheel comprising a tire and a spoke, a tread piece lying across the tread of the tire, tension means at one side of the tire, articulated means connecting one end of this tension means to the adjacent end of said tread piece at this side of the tire, this tension means passing around the spoke and back to said end of the tread piece, articulated means connecting this end thus brought back to said end of the tread piece, tension means at the other side of the tire, articulated means connecting one end of this other tension means to the adjacent end of the tread piece at this end of the tire, this other tension means passing down around the spoke and around parts of the first mentioned tension means adjacent to the spoke, and back to said other end of the tread piece, and articulated means at this other end of the tread piece connecting this end of the tension means thus brought back to this other end of the tread piece, said two tension means binding said tread piece to the tire in the aforesaid position.

1,168,598. RESILIENT WHEEL. WILLIAM A. BUCKNAM, Truckee, and WILLIAM STICKEL, Greenwood, Cal. Filed Aug. 2, 1915. Serial No. 43,193. (Cl. 152—8.)



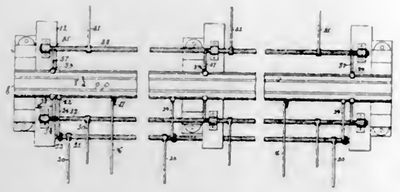
1. The combination with a wheel having a channel rim, of a circumferential series of casings independently slidable in the channel of the rim, resilient means supporting the casings for independent movement, and a tread shoe carried by each casing in abutting relation with the adjacent shoes to form a continuous tread, the abutting ends of the shoes being leveled and one end being provided with a tongue extending entirely across the same while the other end is provided with a groove to receive the tongue and thus lock the abutting shoes in alinement.

2. The combination with a wheel having a channeled rim, of rectangular interspaced hollow casings closed at their outer ends and fitting between the sides of the rim, the inner edges of the casings being provided with flanges turned outwardly toward the adjacent casings, a spiral spring for each casing having its inner end resting in the channel and its outer end extending within and resting on the closed outer end of the casing, wedge-shaped filling blocks secured to the rim sides and forming guide spaces within which the casings are slidable, the outer portion of each filling block being provided with oppositely projecting flanges overlying the flanges of the adjacent casings, and a tread shoe carried by each casing and abutting the adjacent tread shoes with the abutting ends lying in overlapping relation, one of the abutting ends of adjacent shoes being formed with a tongue extending across the end and the other end being formed with a groove normally receiving the tongue.

1,168,599. METHOD AND APPARATUS FOR COVERING RIGID METAL ARTICLES WITH FIBROUS MATERIAL. JAMES H. CAFFREY, Beaver Falls, Pa., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa., a Corporation of Massachusetts. Filed Jan. 16, 1915. Serial No. 2,560. (Cl. 154—41.)

1. The method of providing rigid metal articles with a protective covering of fibrous material, which consists in immersing the rigid metal article in a bath of adhesive material, placing the article thus coated upon a layer of fibrous material, applying pressure to the metal article to firmly press the metal article upon a portion of the fibrous layer, folding the fibrous layer over upon the metal article to envelop the latter with the fibrous layer, and applying pressure to the folded over portions of the fibrous layer to firmly press such portions to the metal article.

2. The method of providing rigid metal articles with a protective covering of fibrous material, which consists in coating the rigid article with an adhesive material, placing the coated article upon a layer of fibrous material, folding the free side portions of the fibrous layer over upon the rigid article, and pressing the fibrous layer into firm contact with the rigid article.



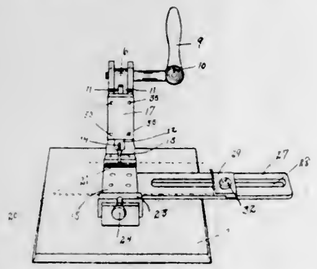
3. In a machine of the character described, in combination, a table, presser bars supported by and spaced apart on said table, one of said presser bars being movable toward the other, folding bars located above and movable on said presser bars, a rock shaft to which said movable presser bar is connected, rock shafts to which said folding bars are connected, and means for rocking said shafts.

4. In a machine of the character described, in combination, a table to support a covering layer and the coated bar to be covered, presser bars supported by and spaced apart on said table, means to move one of said presser bars toward the other to press the covering onto the sides of the coated bar, folding bars located above the presser bars and movable in a plane parallel with said presser bars and beyond the latter and over the portion of the coated bar between the presser bars to fold the covering layer over upon the upper surface of said portion, and means to move said folding bars.

5. In a machine of the character described, in combination, a table to support a covering layer and a coated metal bar to be covered by said layer, presser devices spaced apart on said table and one of which is movable toward the other, and a lever pivoted to be moved transversely of said table to engage the coated bar and force it and the covering layer down on said table, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,168,600. RULE-PUNCH. EUGENE R. CANFIELD, Utica, N. Y., assignor to Chicago Lino Tabler Company, Chicago, Ill., a Corporation of Illinois. Filed July 10, 1911. Serial No. 637,643. (Cl. 164—96.)



1. In a device of the character described, a base having an overhanging member, a plate mounted on the base and having an elevated platform, a groove in said platform, said groove being adapted for the insertion of a ridge on a rule, means to hold said ridge of said rule in said groove, means for holding said rule in any given longitudinal position, and means for punching triangular notches in the ridge of said rule.

2. In a rule punch, a base having an overhanging portion, a plate mounted thereon and having an elevated port, a groove in the side of said port for the insertion of a ridge on a rule and means to hold in lateral manner said ridge of said rule in said groove, and means for punching triangular notches in the ridge of said rule, substantially as described.

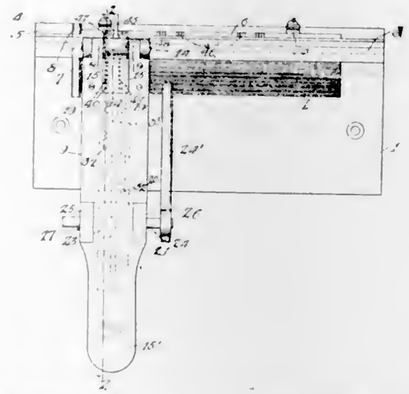
3. In a rule punch of the character described, a base portion with an overhanging portion, a plate having a platform, a longitudinal groove in the side of said platform for the insertion of a ridge on a rule, means to hold in lateral manner said ridge of said rule in said groove, said means comprising a bridge and set screw, and means for punching triangular notches in the ridge of said rule held in any given longitudinal position, substantially as described.

4. In a rule punch of the character described, a base having an overhanging portion, a plate having a platform supported by said base, a triangular shaped groove in the side of said platform for the insertion of a ridge of a lino-tabler rule, a bridge pivotally supported to said base and held in adjusted position by a set screw whereby said ridge may be held in lateral manner in said groove, substantially as described.

5. In a rule punch, a base having an overhanging member, a plate having a platform, a groove in the side of said platform, for the insertion of a ridge on a lino-tabler rule, a bridge pivotally mounted to said base, a set screw bearing against said bridge, whereby to hold said bridge in adjusted position against said lino-tabler rule to confine said ridge of said rule in said groove, and a gage adjustably held along a bracket, whereby to hold said lino-tabler rule in given longitudinal position, to be punched.

[Claims 6 and 7 not printed in the Gazette.]

1,168,601. RULE-BROACH. ASHTON G. STEVENSON, Chicago, Ill., assignor to Chicago Lino-Tabler Company, Chicago, Ill., a Corporation of Illinois. Filed June 17, 1912. Serial No. 704,142. (Cl. 164—10.5.)



1. A broaching device for perforating the upper edge of a rule-holding member for receiving lino-tabler rules comprising a clamping member having a groove for receiving the upper edge of the member to be broached, a broach carried by said clamping member, and means for adjusting said clamping member relatively to the member to be broached.

2. A multiple punch for perforating printing-rule holding-members comprising means for holding a plurality of members in position to be perforated in combination with a broach for making rule receiving openings in the upper edges of the members so held, means for guiding the punch relatively to the members, and means for adjusting the guiding means relatively to the members to be perforated for the purpose of making rule receiving openings at different points in said members.

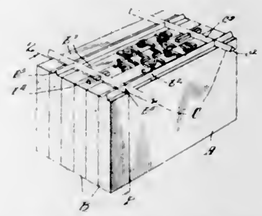
3. A punch for perforating the upper edge of a substantially type-high rule-holding member to receive a plurality of lino-tabler rules, comprising a clamping member adapted to receive the edge of the member to be perforated, a punch mounted in said clamping member to reciprocate substantially at right angles to said members, and means for adjusting said clamping member relatively to said rule-holding member for spacing the rule receiving openings along the upper edge of the rule holding member.

4. In a punching device for simultaneously preparing a plurality of printers' slugs for receiving line printing rules, a clamping device for holding the slugs to be punched, a die carried by the clamping device and having a plurality of parallel grooves in its lower face substantially fitting the upper edges of the slugs, a V-shaped punch carried by the clamping device and adapted to be projected through a suitable groove in the lower face of the die, and means for moving the punch back and forth at right angles to the plane of the slugs.

5. In a punching device for simultaneously preparing a plurality of printers' slugs for receiving line printing rules, a clamping device for holding the slugs to be punched, a die carried by the clamping device and having a plurality of parallel grooves in its lower face substantially fitting the upper edges of the slugs, a V-shaped punch carried by the clamping device and adapted to be projected through a suitable groove in the lower face of the die, and means for moving the punch back and forth at right angles to the plane of the slugs, the die being provided with clearance openings through which the punch is adapted to force the chips cut from the slugs.

[Claims 6 to 11 not printed in the Gazette.]

1,168,602. RULED TYPE-FORM AND METHOD OF PRODUCING SAME. ASHTON G. STEVENSON, Chicago, Ill., assignor to Chicago Lino-Tabler Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 17, 1912, Serial No. 704,142. Divided and this application filed Oct. 17, 1914. Serial No. 867,180. (Cl. 101—179.)



1. A ruled type form, which comprises a plurality of lino-type slugs, certain of which are provided with longitudinally disposed type-high ribs and others of which are provided with less than type-high integral projections, separable printing rules disposed at right angles to said rigid integral ribs and projections, and held in openings provided therefor in said ribs and projections, the side walls of said openings overhanging the bases of the rules.

2. A ruled type form which comprises a plurality of associated printing slugs in combination with interposed slugs having integral longitudinal printing ribs on their upper edges, other interposed-slugs which have less than type height ribs on their upper edges, and separable line printing rules arranged at right angles to the longitudinal printing ribs and held in transverse openings provided therefor in said printing and non-printing ribs, the side walls of said openings overhanging the bases of the rules.

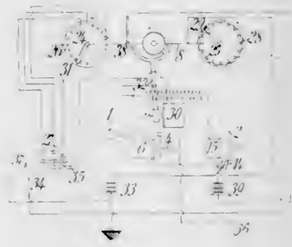
3. A quad-high slug having a longitudinal rib on its upper edge, the upper surface of the rib being adapted to be below the printing surface of the type form in which the slug is used said rib being provided with transverse holes to receive a lino-tabler rule, the walls of said opening projecting over the base of the rule.

4. A quad-high linotype slug having a longitudinal rib on its upper edge the combined height of the slug and rib being less than type height, said rib being provided with transverse openings adapted to receive and to hold lino-tabler rules.

5. A quad-high linotype slug having a longitudinal rib on its upper edge, the combined height of the slug and rib being less than type height, said rib being provided with transverse openings extending from its upper edge to its base and said openings being constricted at their upper edges to hold lino-tabler rules.

[Claims 6 and 7 not printed in the Gazette.]

1,168,603. PRINTING-TELEGRAPH. LUIGI CEREBOTANI, Munich, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Apr. 24, 1913. Serial No. 763,448. (Cl. 178—23.)



1. In an electrical type-printing telegraph a transmitting apparatus comprising a set of keys, only one rotatable type-wheel and means for causing the depression of the said keys to result in the making of impressions of the said types, means for causing the type-wheel to be brought back from any position into its initial position and a special key for operating the said latter means and receiving apparatus comprising similar parts to those of the said transmitting apparatus, adapted to coact simultaneously with those parts.

2. In an electrical type-printing telegraph a transmitting apparatus comprising a set of keys, a rotatable shaft, a type-wheel mounted on the said shaft, means whereby the type-wheel is adapted to be coupled with the said shaft and other means for causing the depression of the said keys to result in the making of impressions of the said types, a special key, a source of current controlled by the said key, an electromagnet capable of being energized by the said current and adapted to uncouple the type-wheel from its shaft, a spring adapted to be put in tension by the rotatory motion of the said type-wheel and quickly to return the type-wheel from any position into its initial position and receiving apparatus comprising similar parts to those of the said transmitting apparatus, adapted to coact simultaneously with those parts.

3. In an electrical type-printing telegraph a transmitting apparatus comprising a set of keys, a rotatable shaft, a type-wheel mounted on the said shaft, means whereby the type-wheel is adapted to be coupled with the said shaft and other means for causing the depression of the said keys to result in the making of impressions of the said types, a special key, a source of current controlled by the said key, an electromagnet capable of being energized by the said current and adapted to uncouple the type-wheel from its shaft, a spring adapted to be put in tension by the rotatory motion of the said type-wheel and quickly to return the type-wheel from any position into its initial position, a spring-controlled stop adapted to prevent the type-wheel from recoiling at the end of its quick return and receiving apparatus comprising similar parts to those of the said transmitting apparatus adapted to coact simultaneously with those parts.

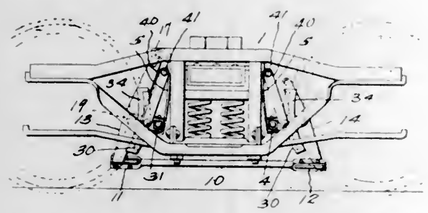
4. In an electrical type-printing telegraph a transmitting apparatus comprising a set of keys, a rotatable shaft, a sleeve rotatable and slidable on this shaft, means whereby the sleeve is adapted to be coupled with the said shaft, a type-wheel fixed on the said sleeve, a toothed wheel fixed on the said sleeve, a longitudinally slidable and spring-controlled rack adapted to mesh with the said toothed wheel and having a portion of some of its teeth missing.

means for stopping the motion of the said rack, means for causing the depression of the said keys to result in the making of impressions of the said types, a special key, a source of current controlled by the said key, an electromagnet capable of being energized by the said current and adapted to uncouple the sleeve from its shaft, a spring adapted to be put in tension by the rotatory motion of the said type-wheel and quickly to return the type-wheel from any position into its initial position, a spring-controlled stop adapted to prevent the type-wheel from recoiling at the end of its quick return and receiving apparatus comprising similar parts to those of the said transmitting apparatus, adapted to coact simultaneously wtih those parts.

5. In an electrical type-printing telegraph a transmitting apparatus comprising a set of keys, a rotatable shaft, a sleeve rotatable and slidable on this shaft, means whereby the sleeve is adapted to be coupled with the said shaft, a type-wheel fixed on the said sleeve, a toothed wheel fixed on the said sleeve, a longitudinally slidable and spring-controlled rack adapted to mesh with the said toothed wheel and having a portion of some of its teeth missing, means for stopping the motion of the said rack, means for causing the depression of the said keys to result in the making of impressions of the said types, a special key, a source of current controlled by the said key, an electromagnet capable of being energized by the said current and adapted to uncouple the sleeve from its shaft, a spring adapted to be put in tension by the rotatory motion of the said type-wheel and quickly to return the type-wheel from any position into its initial position, a line-battery adapted to be put in circuit by the said special key and to cause a current to flow, a relay adapted to act on this current flowing and to close the circuit containing the said electromagnet, a second relay connected up with the first relay, but operated with reversed polarity, and adapted to act, on any key of the said set of keys being depressed, a second battery adapted to be put in circuit in place of the said line-battery and to cause a current to flow in the opposite direction to the current from the said line-battery and to cause the said second relay to act, and receiving apparatus comprising similar parts to those of the said transmitting apparatus, adapted to coact simultaneously with those parts.

[Claim 6 not printed in the Gazette.]

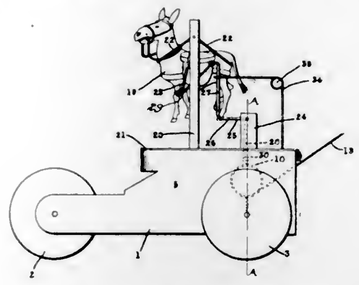
1,168,604. RAILWAY-BRAKE. WILLARD R. CHANDLER, Sumter, S. C. Filed Apr. 12, 1915. Serial No. 20,892. (Cl. 188—24.)



1. The combination with a suitable supporting frame and a pair of resilient straps attached thereto each having its free end bent to form a rectangular yoke, of a beam fixed in said yokes, a brake fixed at each end of the beam, and hangers pivoted to said frame and brakes, whereby the brakes are returned to normal position when released from the wheels.

2. The combination with a supporting frame and a pair of resilient straps attached thereto each having its free end bent to form a yoke, of a beam fixed in the yokes, a brake fixed to each end of the beam, supporting hangers on the frame for the brakes, and a second set of straps, hangers, brakes and a beam at the opposite side of the frame, a fulcrum bar pivoted to the frame and to one beam, a lever pivoted to the other beam, and a pivoted connecting bar between the fulcrum bar and the lever.

1,168,605. TOY. STANISLAO CILETTI, Newark, N. J. Filed Nov. 19, 1914. Serial No. 872,964. (Cl. 46—45.)



1. In a toy, a vehicle having a driving wheel, a gear wheel for driving said driving wheel, a drum, means for rotating said drum in one direction, means for rotating said drum in the opposite direction, means for driving said gear wheel from the drum when said drum rotates in one direction, a movable member pivoted on said frame, an arm fast with respect to said member, a rocking lever pivoted to said frame and connected to said arm to swing the same, and an arm on said drum adapted to engage and swing said rocking lever as the drum rotates.

2. In a toy, a vehicle having a driving wheel, a gear wheel for driving said driving wheel, a drum, means for rotating said drum in one direction, means for rotating said drum in the opposite direction, means for driving said gear wheel from the drum when said drum rotates in one direction, a movable member pivoted on said frame, an arm fast with respect to said member, a rocking lever pivoted to said frame and connected to said arm to swing the same, an arm on said drum adapted to engage and swing said rocking lever from normal position to one side at each revolution of the drum, and a spring for returning said rocking lever to normal position.

3. In a toy, a body portion, a member pivoted on said body portion, an arm for swinging said member, a rocking lever mounted on the body portion, a link connecting said rocking lever to said arm, a spring holding said rocking lever in normal position, a motor, and means on said motor for tripping said rocking lever.

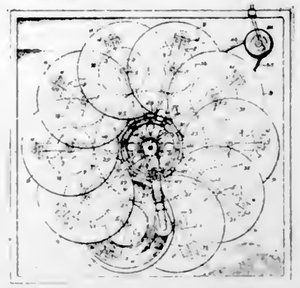
4. In a toy, a body portion having wheels, a shaft extending between the sides of said body portion, a drum loose on said shaft having a closed end providing a bearing therefor and its other end being open, an annular guide on the frame for said open end, a helical spring on said shaft within said drum having one end fast to the closed end of the drum and its other end fast to the body portion, a cord wound on said drum, and means for transmitting motion from said drum to the wheels of the body portion.

1,168,606. TALKING-MACHINE. WILLIAM H. DAILY, Tucson, Ariz. Filed Feb. 23, 1915. Serial No. 10,073. (Cl. 181—4.)

1. A talking machine comprising a circular series of record supports, operating means therefor, a reproducer mounted concentrically within said circular series of record supports, and means operating automatically to move the reproducer successively from one record to another.

2. A talking machine comprising a circular series of record supports, means for rotating said supports successively, a reproducer mounted concentrically within said circular series of record supports, and means for moving said reproducer successively from one record to another.

3. A talking machine comprising a circular series of record supports, driving means common to all of said supports, means operating automatically to bring said supports into and out of operative relation to said driving means successively, a reproducer mounted concentrically within said circular series of record supports, and means operating automatically to shift said reproducer successively from record to record.

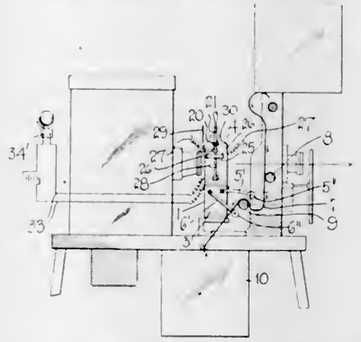


4. A talking machine comprising a circular series of overlapping inclined record disks, a support for each disk, means for rotating said supports successively, a reproducer mounted concentrically within said circular series of record supports, and means operating automatically to shift said reproducer successively from one record disk to another.

5. A talking machine comprising a plurality of supports for record disks, means for rotating said supports, a pivotally mounted horn arm, a member hinged to said horn arm, a reproducer carried by said hinged member, a weighted arm connected with said hinged member, and means with which said weighted arm coöperates to raise the reproducer from one record disk and deposit it upon another, and means for simultaneously moving said reproducer and its horn arm laterally.

[Claims 6 to 13 not printed in the Gazette.]

1,168,607. ATTACHMENT FOR MOTION-PICTURE MACHINES. DOSSEY D. DANIEL, Richmond, Va., assignor of one-half to Charles B. Haynes, Richmond, Va. Filed Mar. 24, 1915. Serial No. 16,701. (Cl. 88—17.)



1. The combination with a motor driven motion picture machine and the film thereof, of means for automatically opening the motor circuit upon the stopping or breaking of the film, said means comprising rollers arranged respectively near the slack portion of the film and in contact with a taut portion thereof, a switch arm, means tending to move the switch arm to open circuit position, means for holding the switch arm in closed circuit position, an operative connection between said rollers, and releasing means arranged to release said holding means upon the changing of the slack portion of the film to a taut portion and the breaking of the film respectively, said releasing means being controlled by said rollers.

2. An attachment for motion picture machines comprising a support, independently movable shafts mounted therein, arms carried by the respective shafts and arranged respectively to be operated by the stopping or breaking of the film, a switch arm, means tending to move the switch arm to a position to open the circuit of the motor of the machine, a trip arm engageable with the switch arm to hold the same against such movement, and operative connections between said shafts and said trip arm.

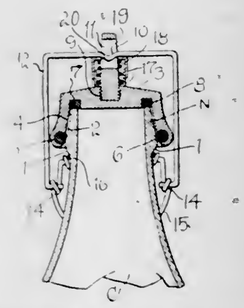
3. An attachment for motion picture machines comprising a support, independently movable shafts mounted therein, arms carried by the respective shafts and arranged respectively to be operated by the stopping of the film and the breaking thereof, a switch arm, means tending to move the switch arm to a position to open the circuit of the motor of the machine, a trip arm engageable with the switch arm to hold the same against such movement, arms pivotally mounted upon the support and arranged for simultaneous operation, a connection between one of said pivoted arms and the trip arm, and means carried by the respective shafts and engageable with said pivoted arms, for the purpose specified.

4. An attachment for motor driven motion picture machines, comprising a support, shafts journaled in said support, arms carried by the respective shafts and arranged in juxtaposition to the film of the machine, said arms being adapted to be moved upon the stopping or breaking of the film, arms pivotally mounted on said support and arranged for simultaneous operation, means carried by said shafts and engaging with the respective arms to move the same, a switch arm, means tending to move the switch arm to a position to open the circuit of the motor, a keeper carried by said switch arm, and a trip connected to one of the pivoted arms and engageable with said keeper to hold the switch arm in a position to maintain the circuit closed.

5. An attachment for motor driven motion picture machines, comprising a support, independently movable shafts mounted in said support and arranged to be turned by the stopping or breaking of the film, a switch arm, means tending to move the switch arm to a position to open the motor circuit, a keeper carried by said switch arm and provided with an opening extending therethrough, the support being formed with a slot through which the keeper is adapted to protrude, a trip arm movable longitudinally on the support and engageable in the opening of the keeper to hold the switch arm in a position to maintain the circuit closed, and operative connections between said trip arms and the shafts whereby upon the turning of either of the shafts the trip arm will be moved out of the opening in the keeper and permit the switch arm to open.

[Claims 6 to 11 not printed in the Gazette.]

1,168,608. CLOSURE DEVICE. ELIJAH H. DAVIS, Midland, Md. Filed Mar. 22, 1915. Serial No. 16,162. (Cl. 215—48.)

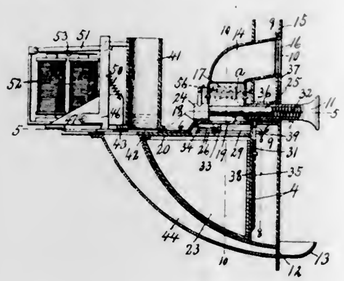


1. In combination with a container provided with a discharge neck, a closure member therefor, a post projecting from the closure member at substantially its axial center and provided with an elongated slot, a clamping member disposed through the slot of the post, operating means carried by the container coacting with the clamping member, reversely disposed cups loosely mounted upon the post and interposed between the clamping member and the closure

member, the outer cap being provided with a perforation, the portion of the clamping member disposed through the slot of the post being provided with an extension directed within the opening of the cap, and an expansible member interposed between the caps.

2. In combination with a container provided with a discharge neck, a closure member therefor, a post projecting from the closure member at substantially its axial center and provided with an elongated slot, a clamping member disposed through the slot of the post, operating means carried by the container coacting with the clamping member, reversely disposed caps loosely mounted upon the post and interposed between the clamping member and the closure member, and an expansible member interposed between the caps, the portion of the clamping member disposed through the slot of the post being provided with an extension interlocking with the adjacent cap.

1,168,609. COIN-CONTROLLED LOCK. THOMAS A. DELANEY and EUGENE H. MALANY, Syracuse, N. Y. Filed Apr. 23, 1912. Serial No. 692,682. (Cl. 194—78.)



1. In combination with a cabinet having a door provided with a keeper, a coin-controlled lock supported by the cabinet separately from the door and comprising a pivoted locking member, a lever for withdrawing said locking member, a toggle connected to said lever for operating the same to withdraw the locking member from the keeper, a hand-operated plunger, means for conducting a coin edgewise into the path of the plunger to be displaced thereby, and means actuated by the displacement of the coin by the plunger for operating the toggle.

2. In combination with a cabinet having a door provided with a keeper, a coin-controlled lock mounted on the cabinet separately from the door and provided with a locking member for engaging the keeper, a hand-operated plunger, a coin guide for conducting a coin edgewise into the path of the plunger to be displaced thereby, a sliding plate operated by the displaced coin and provided with an outlet passage therefor, means actuated by the plate for withdrawing the locking member from the keeper, and separate means also actuated by the plate when displaced by the coin for preventing the entrance of a coin to the guide.

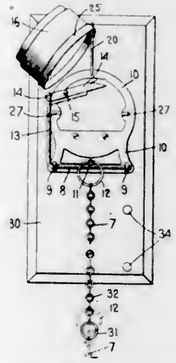
3. A coin-controlled lock comprising a spring-projected locking bolt, a spring-retracted plunger operated by hand against the action of its retracting spring, means for conducting a coin edgewise into the path of the plunger to be displaced thereby when moved against the action of the retracting spring, a sliding plate actuated by the coin when displaced by the plunger and having a passage for the escape of the released coin therethrough, and means actuated by said plate for withdrawing the locking bolt and permitting it to return to its locking position while the coin and plate are still displaced by the plunger.

4. A coin-controlled lock comprising a spring-projected locking bolt, a spring-retracted plunger operated by hand against the action of its retracting spring, means for conducting a coin edgewise into the path of the plunger to be displaced thereby when moved against the action of the retracting spring, a sliding plate actuated by the coin when displaced by the plunger and having a coin passage therethrough, means actuated by said plate for withdrawing the locking bolt and permitting it to return to its locking position while the coin and plate are still displaced by the plunger, and separate means actuated by the plate for preventing the entrance of a coin to the conducting means.

5. In a spring-controlled lock, a spring-projected locking bolt, a hand-operated plunger, means for conducting a coin edgewise into the path of the plunger to be displaced thereby, a sliding plate actuated by the displaced coin and having a slot for the passage of the coin therethrough, means actuated by said plate for withdrawing the locking bolt and permitting it to return to its locking position while the coin and plate are still displaced by the plunger, an automatically operating detent for holding the plate in its displaced position independently of the plunger, and means actuated by said plate when displaced for preventing the entrance of a coin into the conducting means.

[Claims 6 to 10 not printed in the Gazette.]

1,168,610. DAMPER-REGULATOR. JOHN DEMAREST, Springfield, Mass. Filed Oct. 25, 1913. Serial No. 797,331. (Cl. 161—8.)

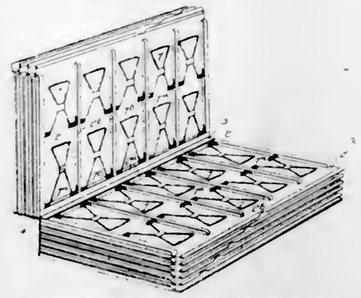


1. In a device of the class described, the combination with a supporting frame, of a damper-locking mechanism mounted thereon, a clock having on its rear face a winding key acting as a lock-tripping device, and a clock-supporting arm extending from the supporting frame and on which the clock is slidably mounted, said arm having a goose-neck portion whereby when the clock is moved on the arm of said goose-neck portion the clock can be turned to provide access to its winding key, while still mounted on said arm, and means on said arm for preventing unintentional removal of the clock therefrom.

2. In a device of the class described, the combination with a supporting frame, of a shaft pivotally mounted thereon and provided with a pin to receive the damper chain, a latch arm extending from said shaft, a latch lever pivoted to the frame and adapted to engage said latch arm, a clock having a winding key acting as a lock tripping member, said clock being normally sustained with its lock tripping member in position to trip the latch lever, substantially as described.

3. As an article of manufacture, a device comprising a supporting frame, a damper-locking member mounted on the frame, and a clock-supporting arm extending from the frame and provided with a goose-neck portion to permit the clock to be moved bodily away from the supporting frame and the goose-neck portion allowing the clock to be turned to provide access to its winding key, said clock-supporting arm being so constructed that as the clock is returned to normal position it will take a definite position relative to said supporting member said frame being provided with lugs to engage said cloak to hold it in a definite predetermined position.

1,168,611. FILING APPLIANCE. SAMUEL H. DODSON, Des Moines, Iowa, assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Filed Aug. 18, 1911. Serial No. 644,871. (Cl. 129—34.)



1. In a device of the class described, a series of frames, each hinged to the next adjacent panel by a strip of flexible material secured to rear side of the forward frame and extending beneath the edge of the next rearward frame.

2. In a device of the class described, a series of frames spaced apart, and each having a bar extending along the rear side of its lower edge, a strip of canvas secured to the rear surface of the bar on one frame, and secured to the lower edge of the next adjacent frame, whereby the frames are hinged to each other, spaced transverse bars on the frames and spring clips between said bars.

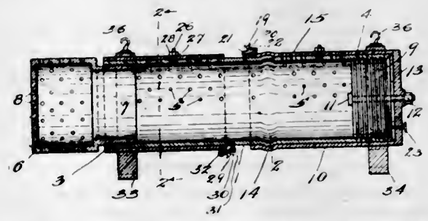
3. In a device of the class described, a series of frames, each hinged to the next rearward frame by a strip of flexible material secured to the rear of the forward frame and to the lower edge of the next rearward frame and a strip of like material, extending wholly over the entire lower edge of all of the frames and outside the first named strips.

4. In a device of the class described, a frame, comprising a plate and a plurality of partition strips arranged on one surface thereof, and a spring clip formed of wire having coils near the opposite ends thereof, and the free ends of the wire beyond said coils each being mounted in one of said partition strips on the plate.

5. In a device of the class described, a frame, comprising a plate and a plurality of partition strips arranged one one surface thereof, and a spring clip formed of wire having coils near the opposite ends thereof, and the free ends of the wire beyond said coils each being mounted in one of said partition strips on the plate, and the coils of said clip being bodily movable in normal operation relative to said plate.

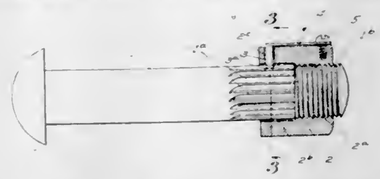
[Claims 6 to 10 not printed in the Gazette.]

1,168,612. BOILER COMPOUND HOLDER. ROBERT E. DURNING, Avalon, Pa., assignor of one-half to William H. Morse, Pittsburgh, Pa. Filed Sept. 3, 1915. Serial No. 48,926. (Cl. 210—19.)



The combination with a perforated barrel having a removable screw plug closing one end, of a perforated casing, a longitudinal bolt in the plug, and said casing having a head revoluble on the bolt and provided with a circumferential slot, and a bolt fixed in the barrel protruding through said slot with a lock nut to hold the parts in adjusted position.

1,168,613. NUT-LOCK. GEORGE E. EBERLY, Shreve, Ohio. Filed Aug. 13, 1915. Serial No. 45,274. (Cl. 151—11.)



1. A nut lock, comprising a bolt provided with a toothed section and a reduced threaded section, and a nut having a threaded portion terminating in an enlarged opening receiving said toothed section, said nut having a radial opening in one side intersecting said enlarged opening, and a spring pressed pin mounted in said radial opening in coöperative relation to said toothed section.

2. A nut lock, comprising a bolt having a longitudinally serrated section and a reduced threaded end section, a nut having threaded and unthreaded openings receiving and corresponding in diameter to said threaded and serrated sections, respectively, said nut also having a radial opening leading from said unthreaded opening, and a detachably mounted exterior spring member carrying a depending pin freely movable in said radial opening and having a beveled head resiliently bearing on said serrated section.

3. In a nut lock, a bolt having a ratchet section terminating in a reduced threaded section at one end, a nut provided with an opening having threaded and unthreaded sections receiving and corresponding in diameter to said threaded and serrated sections, respectively, said unthreaded section being intersected by a radial pawl receiving opening, and a spring member detachably secured at one end to the outer side of said nut and provided at its free end with a depending pawl movable in said opening in cooperative relation to said ratchet section.

4. In a nut lock, the combination with a bolt provided with longitudinal rearwardly beveled ratchet serrations terminating in a reduced threaded portion at one end of the bolt; of an elongated nut threaded on the latter and provided with an enlarged opening on its inner side receiving and containing said ratchet serrations, said nut having a radial opening intersecting said enlarged opening and leading to said serrations, and an exterior spring member removably secured to said nut near the outer edge thereof and terminating in a beveled pin movable in said radial opening in coöperative relation to said serrations.

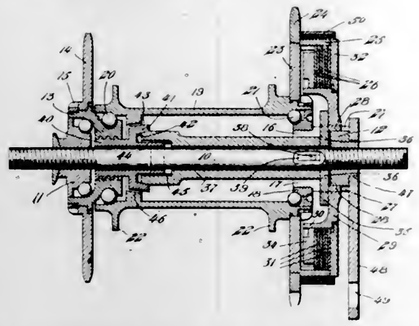
5. In a nut lock, a bolt having a longitudinally serrated section terminating in a reduced threaded section at the outer end thereof, an elongated nut having threaded and unthreaded openings mounted on and corresponding in diameter to said threaded and serrated sections, respectively, said nut having a radial pin receiving opening intersecting said unthreaded opening, and a detachably and adjustably mounted spring member on the outer side of said nut carrying a pin moving in said opening in cooperative relation to said serrated section.

1,168,614. BRAKE MECHANISM. FREDERICK S. ELLETT, Elmira, N. Y. Filed Aug. 19, 1913. Serial No. 785,571. (Cl. 208—57.)

1. The combination of a non-rotatable axle member, a wheel hub rotatable relatively thereto, a driving wheel secured to the hub and provided with an axially extending flange, a friction member carried by said flange on the interior thereof, a non-rotatable friction member adapted to be pressed against the first-mentioned member to retard the hub, a bracket secured to said non-rotatable friction member and adapted to hold the same against rotation, and a band brake anchored to said bracket and arranged to engage the exterior of said flange.

2. In a motorcycle, the combination of a non-rotatable axle member, a driving member rotatable thereon, a rotatably mounted hub, a second driving member rigidly connected with the hub, said driving members being at op-

posite ends of the hub, a friction member carried by said second driving member, a non-rotatable friction member cooperating with the first-mentioned friction member, means actuated by the first driving member to form a driving connection between the same and said hub, means whereby said driving member effects the gripping and ungripping of said friction members, and a band brake operating on said second driving member.



3. In a motorcycle, the combination of an axle member, a hub rotatable thereon and having an axial extension at one end, a friction member carried by said extension, a non-rotatable friction member coöperating with the first mentioned friction member to form a brake for the hub, a bracket secured to the motorcycle frame and connected with said non-rotatable friction member to hold the same against rotation, a brake band archored to said bracket and adapted to engage the exterior of said extension to act as a brake for the hub, and an actuating lever for said band pivoted to said bracket.

4. In a motorcycle, the combination of an axle member, a hub rotatable thereon and having an axial extension at one end, a friction member carried by said extension, a non-rotatable friction member coöperating with said first mentioned friction member to form a brake for the hub, a bracket secured to the motorcycle frame and connected with said non-rotatable friction member to hold the same against rotation, a brake-band adjustably anchored to said bracket and adapted to engage the exterior of said extension to act as a brake for the hub, an actuating lever for said brake band pivotally connected with said bracket, and spring means coöperating with said actuating lever and said bracket to disengage said band from said extension.

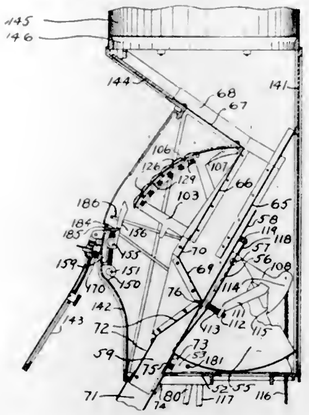
5. In a motorcycle, the combination of an axle member, a hub rotatable thereon and having an axial extension at one end, friction members carried by said extension, non-rotatable friction members coöperating with the first-mentioned friction members to form a brake for the hub, a bracket secured to the motorcycle frame and connected with said non-rotatable friction members to hold the same against rotation, and a brake band anchored to said bracket and adapted to engage the exterior of said extension to act as a brake for the hub.

[Claims 6 and 7 not printed in the Gazette.]

1,168,615. MEASURING-MACHINE. FRANCIS K. FASSETT, Dayton, Ohio, assignor to The National Granometer Company, Limited, Patterson, La. Filed Apr. 5, 1911. Serial No. 619,085. (Cl. 221—113.)

1. In a measuring machine, the combination of a measuring compartment, means for varying its capacity, means for checking the variation thereby effected when the compartment has attained a predetermined capacity, means for adjusting said checking means, and means which indicates the capacity for which said checking means is set.

2. In a measuring machine, the combination of a measuring compartment, means for varying its capacity, means for checking the variation thereby effected when the compartment has attained the selected one of two or more predetermined capacities, means for adjusting said checking means, and means which indicates the capacity for which said checking means is set.



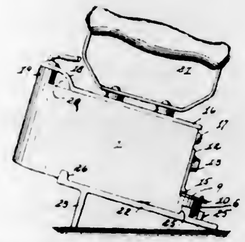
3. In a measuring machine, the combination of a measuring compartment, means for varying its capacity, a plurality of checking means, each adapted to check the variation thereby effected when the compartment has attained a predetermined capacity, means for adjusting each of said checking means, and means which indicate the capacity for which each checking means is set.

4. In a measuring machine, the combination of a measuring compartment, means for varying its capacity, a plurality of manually actuated checking means, each adapted to check the variation thereby effected when the compartment has attained a predetermined capacity, the said means being normally ineffective, means for adjusting each of said checking means, and means which indicate the capacity for which each checking means is set.

5. In a measuring machine, the combination of a measuring compartment, means for varying its capacity, adjustable means for checking the variation thereby effected, and a graduated scale and index associated with said checking means, the former representing units of volume attainable by the compartment, whereby the checking means may be set so it will check said variation when the compartment has attained a predetermined capacity.

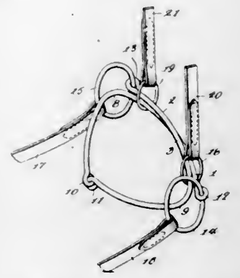
[Claims 6 to 26 not printed in the Gazette.]

1,168,616. SAD-IRON. JOHN W. FERGUSON, Bloomfield, N. J. Filed May 28, 1915. Serial No. 30,894. (Cl. 68—26.)



A hollow sad iron, comprising a main body portion, a removable cover therefor, with a flue formed at their front ends, openings or air inlets in the rear wall of said iron forming draft openings, an ash pit integrally formed with the body of the iron and located at the rear thereof, provided with a recess formed in its upwardly curved flange, a removable cover for said ash pit, a sliding damper for regulating the size of the draft openings in the rear wall of said iron, said sliding damper located entirely above the removable cover and provided with a ledge on its lower end adapted to be engaged by the inner edge of the said removable cover and a finger piece integrally formed with said removable cover adapted to rest in the recess formed in the upwardly curved flange of the ash pit for holding said removable cover in position and forming means for removing said cover from said ash pit.

1,168,617. DRIVING OR BRIDLE BIT. JESSE FIELDS, Fulton, Ky. Filed Mar. 10, 1914. Serial No. 823,771. (Cl. 54—9.)



1. A bit comprising a pair of bit bars pivotally connected together and looped in opposite directions in their body portions to have the free ends thereof lie in an overlapping and oppositely extending relation, and independent means received around the overlapped portions of said bit bars to hold the same in the proper relation and to yet permit movement of the bars longitudinally one with respect to the other.

2. A bit comprising a pair of bit bars pivotally connected together at one end and looped in opposite directions in their body portions to have the free ends lie in an overlapped and oppositely extending relation, and independent means received around said bit bars in their overlapped portions to maintain the overlapped relation and to permit longitudinal movement of the one bar with respect to the other, and rein-attaching means on the free ends of said bit bars.

3. A bit comprising a pair of bit bars pivotally connected together at one end and looped in opposite directions in their body portions to have the free ends thereof lie in an overlapped and oppositely extending relation, and positioning rings received around said bit bars in the overlapped portion thereof.

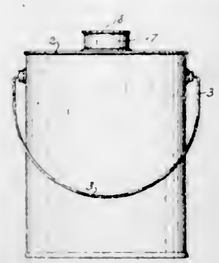
4. A bit comprising a pair of bit bars pivotally connected together at one end and looped in opposite directions in their body portions to have the free ends thereof lie in an overlapped and oppositely extending relation, positioning rings received around said bit bars in the overlapped portions thereof, and rein-attaching rings on the free ends of said bars.

5. A bit comprising a pair of bit bars each provided with a loop at the one end thereof and said loops pivotally connected together, said bit bars curved in opposite directions in their body portions to have the free ends thereof lie in an overlapped and oppositely extending relation, and positioning rings received around the overlapped portions of said bit bars near opposite sides of the bit structure to hold the parts in an assembled and operative relation.

[Claim 6 not printed in the Gazette.]

1,168,618. PAINT-MIXING DEVICE. GEORGE P. FITZSIMMONS, Newark, N. J. Filed Dec. 15, 1914. Serial No. 877,295. (Cl. 91—57.)

1. In a device of the kind described, a can-body, a centrally located vertically disposed rotatable yoke-member having an opening forming a longitudinal slot therein, bearings therefor, and a transverse mixing element mounted in the slot of said yoke-member so as to be revolved thereby, said mixing element being capable of compression and expansion in a vertical plane within said slot of said yoke-member.



2. In a device of the kind described, a can-body, a centrally located vertically disposed rotatable yoke-member, bearings therefor, a transverse mixing element mounted in said yoke-member so as to be revolved thereby, said mixing element being capable of compression and expansion in a vertical plane, and means for retaining said mixing element compressed to normally remove its lower end from the bottom of the can.

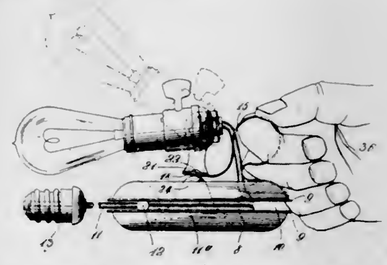
3. In a device of the kind described, a can-body, a centrally located vertically disposed rotatable yoke-member, bearings therefor, a transverse mixing element mounted in said yoke-member so as to be revolved thereby, said mixing element being capable of compression and expansion in a vertical plane, means for retaining said mixing element compressed to normally remove its lower end from the bottom of the can, and means for rotating said yoke-member.

4. In a device of the kind described, a can-body, a centrally located vertically disposed rotatable yoke-member, bearings therefor, a transverse mixing element mounted in said yoke-member so as to be revolved thereby, and a plurality of downwardly projecting scraping fingers connected with the lower end of said mixing element, said mixing element being capable of compression and expansion in a vertical plane.

5. In a device of the kind described, a can-body, a centrally located vertically disposed rotatable yoke-member, bearings therefor, a transverse mixing element mounted in said yoke-member so as to be revolved thereby, a plurality of downwardly projecting scraping fingers connected with the lower end of said mixing element, said mixing element being capable of compression and expansion in a vertical plane, and means for retaining said mixing element compressed to normally raise said scraping-fingers above the can-bottom.

[Claims 6 to 10 not printed in the Gazette.]

1,168,619. ELECTRIC-LAMP MOUNTING. ALFRED FORNANDER, Brooklyn, N. Y., assignor of one-half to Joseph W. Helmsoth, New York, N. Y. Filed Sept. 14, 1914. Serial No. 861,718. (Cl. 240—52.)



1. An electric lamp mounting comprising a spool, a flexible conductor partially wound thereupon, a flat spring secured to said spool and bent to form a loop serving as a handle, a lamp supported by said spring and connected to

said flexible conductor, and a suction cup carried by said spring, said suction cup and said spool being so disposed that they may respectively be readily grasped by the operator's two hands and applied to a fixture.

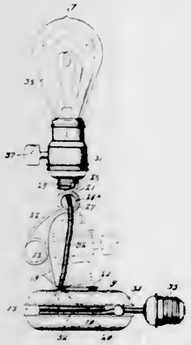
2. An electric lamp mounting comprising a spool, a flat leaf spring secured thereto and said leaf spring also having openings therein, a flexible conductor partially wound upon said spool and extending through said openings, supporting members mounted upon said spring, and a lamp carried by said supporting members and connected to said flexible conductor.

3. An electric lamp mounting comprising a spool of annular form, a spring mounted upon said spool, a suction cup carried by said spring and normally housed within the center thereof, a lamp, means for supporting the lamp upon said spring, said spool and said suction cup being arranged so that they may be drawn apart and caused to grip opposite faces of a supporting member.

4. In an electric lamp mounting the combination of a spool of annular form and having a central opening, a spring secured thereto, a suction cup carried by said spring and adapted to move through said opening in the spool, a flexible conductor partially wound upon said spool, and a lamp supported by said spring and connected to said flexible conductor.

5. A lamp mounting, comprising a spool, a looped leaf spring mounted thereupon and provided with a flat end portion, a suction cup secured to said flat portion, a bracket mounted upon said flat portion, a fastening member extending through said flat portion and engaging said suction cup, mechanism carried by said bracket for supporting a lamp, and a flexible conductor partially wound upon said spool and leading to said lamp.

1,168,620. MOUNTING FOR ELECTRIC LAMPS. ALFRED FORNANDER, New York, N. Y., assignor of one-half to Joseph W. Heimsoth, New York, N. Y. Filed Apr. 2, 1914. Serial No. 829,046. (Cl. 240—53.)



1. A mounting for electric lamps comprising a member serving as a base, a spring stem connected with said member and extending therefrom, said spring stem being provided with a convolution, a friction ring engaging said convolution, a lamp socket supporting member made of wire and provided with a convolution engaging said friction ring, and a lamp socket carried by said last mentioned member and movable into different angular positions relatively to said friction ring.

2. A device of the character described comprising a base member, a stem connected with said base member and extending therefrom, a friction ring engaging said stem, a lamp socket, a member connected with said lamp socket, and provided with a portion partially encircling said friction ring, and formed so as to exert pressure thereupon in order to hold said lamp socket in various angular positions relatively to said stem, and a lamp cord extending through said friction ring and guided thereby, said lamp cord being connected with said lamp socket and with said base.

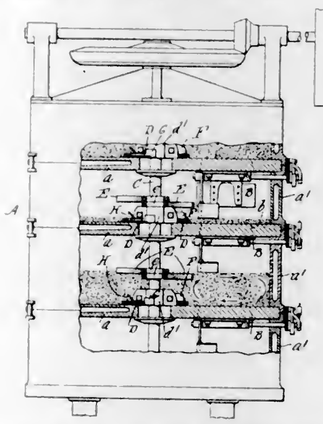
3. A device of the character described comprising a pair of spool members provided with flat bottoms, a stem provided with an annular portion for engaging one of said bottoms, means for supporting a lamp upon said stem, a clamping disk engaging said annular portion of said stem, and a bolt extending through said clamping disk and through said bottoms.

4. A device of the character described comprising, a pair of spool members fitted together, one of said spool members being provided with a hole, a clamping disk provided with a hook for extending into said hole in order to prevent said clamping disk from turning relatively to said spool members, a stem provided with a portion located between said clamping disk and one of said spool members, and means for mounting a lamp upon said stem.

5. In a mounting for electric lamps, the combination of a spool adapted for use as a base, a spring stem mounted upon said spool and extending therefrom, said spring member being provided with a portion which may be sprung into different positions relatively to said spool, and a suction cap mounted upon said portion of said spring stem.

[Claim 6 not printed in the Gazette.]

1,168,621. STIRRER FOR MEAL-COOKERS AND THE LIKE. ALFRED W. FRENCH, Piqua, Ohio. Filed July 5, 1913. Serial No. 777,599. (Cl. 87—6.)



1. A rotary stirrer for heating chambers and the like, comprising a lower part constructed to cause an inward motion of the material in the lower portion of the chamber, a part constructed to cause an upward motion of the material in the central portion of the chamber, and a part constructed to cause an outward motion of the surface portion of the material, substantially as set forth.

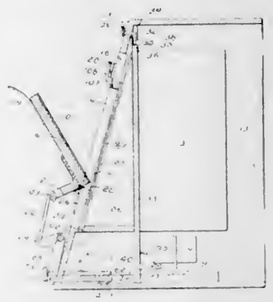
2. A rotary stirrer for heating chambers and the like, comprising a lower arm which inclines forwardly with respect to its direction of rotation and causes an inward motion of the material in the lower portion of the chamber, an upper arm which inclines rearwardly with respect to its direction of rotation and causes an outward motion of the surface portion of the material, and a part which is inclined upwardly and rearwardly to cause an upward motion of the material in the central portion of the chamber, substantially as set forth.

3. A stirrer for heating chambers and the like, comprising upper and lower rotary arms, said lower arm being inclined forwardly and said upper arm rearwardly with respect to the direction of rotation thereof, and a wing on the inner portion of said lower arm which is arranged to cause an upward motion of the material at the central portion of the chamber, substantially as set forth.

4. A rotary stirrer for heating chambers and the like, comprising long lower arms which scrape the bottom of the chamber and incline forwardly with respect to the direction of rotation of the stirrer, a plurality of shorter upper arms which move in planes one above the other and incline rearwardly with respect to the direction of rotation of the stirrer, an upwardly and rearwardly inclined wing at the inner portion of one of the lower arms, and an upwardly projecting part on the outer portion of one of said lower arms.

5. A rotary stirrer for the material in heating chambers and the like, comprising upper and lower laterally extending arms arranged to rotate in the same direction at different elevations, said lower arm extending outwardly from the axis of rotation and bent forwardly from a radial line passing through said axis and said upper arm extending outwardly from the axis of rotation and bent rearwardly from a radial line passing through said axis with respect to the direction of rotation of said arms, whereby the material is caused to circulate in the chamber and is moved gradually inwardly toward the axis of rotation of the stirrer by the lower arm and outwardly away from such axis by the upper arm.

1,168,622. PHOTOGRAPHIC-PRINTING MACHINE. PHILIP A. FRIEDELL, New York Mills, Minn. Filed Mar. 22, 1913. Serial No. 756,245. (Cl. 95—73.)



1. In an automatic photographic printing machine, a printing chamber, a negative carrier, means for admitting either artificial or daylight to said negative carrier, means for closing out said light from said negative carrier, said means consisting of leaves or segments which are normally closed in a position back of said negative carrier, means for opening and closing said leaves or segments, means for holding said leaves or segments in an open position for a predetermined time, a platen, means for transmitting power to mechanism for operating said printing machine through the closing of said platen, means for automatically locking said platen during an exposure, means for automatically unlocking said locking means at the completion of an exposure, a timer for regulating the duration of exposure, and means for automatically resetting said printing machine for the next exposure.

2. In an automatic photographic printing machine, in combination, a light chamber, a negative carrier, clamping means on said negative carrier for immovably holding a negative in said negative carrier, so any desired part of said negative may be printed from, and for holding said negative carrier in position, a platen, automatic locking means for said platen, a spring for normally holding said platen in an open position, means in combination with said platen for transmitting power to mechanism for operating said printing machine, leaves or segments for normally closing communication of light to said negative carrier, means for automatically opening and closing said leaves or segments, means for holding said leaves or segments in an open position for a predetermined period, and means for automatically unlocking said platen at the completion of an exposure, means for automatically resetting said mechanism for the next exposure, and a timer consisting of a multiplicity of gear wheels for regulating the duration of exposure.

3. In an automatic photographic printing machine, a light chamber, a negative carrier, spring members for holding said negative carrier in position and immovably holding a negative in said negative carrier, a platen, means for normally holding said platen in an open position, means for automatically holding said platen in a closed position during an exposure, means for automatically releasing said holding means at the completion of an exposure, means for closing out light from said negative carrier, said means consisting of leaves or segments back of said negative carrier, means for automatically operating said printing machine by the transmission of power through the closing of the platen, by springs or other means, whereby all other operations of the printing machine are carried out automatically, said mechanism being automatically released at the instant the platen is entirely closed, simultaneously automatically locking said platen in a closed position and opening the leaves or segments, means for holding said leaves or segments in an open position for time exposures, means for releasing said mechanism, means for holding said leaves or segments open for a predetermined time, means for regulating the duration of exposure, and means for closing said leaves or segments, and means for automatically resetting the mechanism for the next exposure.

4. In an automatic photographic printing machine, in combination, a printing chamber, a negative carrier, a platen, means for normally holding said platen in an open position, means for automatically locking said platen in a closed position, means for transmitting power to mechanism for operating the printing machine whereby all operations of said printing machine are carried out automatically, leaves or segments normally closing out light from said negative carrier, means for automatically opening said leaves or segments, means for automatically holding said leaves or segments in an open position for a predetermined time, means for holding said leaves or segments open for long time exposures, means for releasing said holding means, means for automatically closing said leaves or segments, means for moving said holding means out of engagement with said mechanism for instantaneous exposures, means for regulating the duration of exposure, means for automatically unlocking the platen, allowing said platen to return to an open position at the completion of an exposure, simultaneously automatically resetting said mechanism for the next exposure.

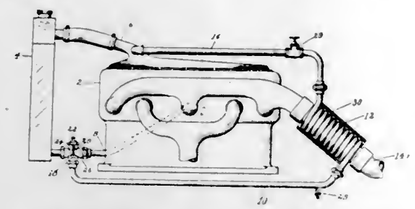
5. In an automatic photographic printing machine, a printing chamber, an exposure opening, leaves or segments for opening and closing said exposure opening a negative carrier, a platen, locking and unlocking means for said platen, a spring carried by said platen for normally keeping said platen in an open position a lever carried by said platen, whereby the act of closing said platen transmits power to a mechanism for opening and closing said leaves and operating a timing device, a timing device consisting of a multiplicity of gear wheels connected to a fan arrangement, a lever carried by said timer, a pawl on said lever for engaging the teeth of the main gear wheel, means for controlling the movement of said lever in one direction, movement of the lever in the opposite direction being performed by the mechanism for opening and closing the leaves or segments, whereby the act of closing said leaves or segments is retarded for a determined period, means for putting out of engagement with said mechanism said timer, for instantaneous exposures and time exposures, automatic means for locking said leaves or segments in an open position for time exposures, means for releasing said mechanism whereby the mechanism closes said leaves or segments, means for regulating the duration of exposure, means for unlocking said platen whereby said platen returns to an open position, in turn resetting said mechanism for the next exposure.

[Claim 6 not printed in the Gazette.]

1,168,623. TEMPERATURE-CONTROLLING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. FREDERICK M. FURBER, Revere, Mass. Filed Aug. 4, 1915. Serial No. 43,690. (Cl. 123—178.)

1. In an automobile, the combination with an internal combustion engine and a water cooling system therefor, of

means for utilizing the heat of the exhaust from the engine to raise the temperature of the water in said system, and thermostatic mechanism for controlling the action of said means.



2. In an automobile, the combination with an internal combustion engine and a water cooling system therefor, of means for utilizing the heat of the exhaust from the engine to raise the temperature if the water in said system, and mechanism controlled by the temperature of the circulating water for controlling the action of said means.

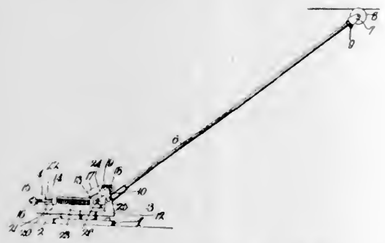
3. In an automobile, the combination with an internal combustion engine and a water cooling system therefor, of means for utilizing the heat of the exhaust from the engine to raise the temperature of the circulating water, and mechanism controlled by the temperature of the water in said system arranged to operate automatically to render said means operative when the temperature of the water falls below a predetermined point and to render said means inoperative again when the temperature of the water has risen above a predetermined point.

4. In an automobile, the combination with an internal combustion engine and a water cooling system therefor, of a water conduit supplemental to said system arranged to be heated by the exhaust from the engine, and means responsive to changes in the temperature of the water in said system for controlling the flow of water through said conduit.

5. In an automobile, the combination with an internal combustion engine and a water cooling system therefor, of a water conduit supplemental to said system arranged to be heated by the exhaust from the engine, and a thermostatic valve operative to permit the flow of water through said conduit when the temperature of the water in said system falls below a predetermined point and to cut off said flow when the temperature of the water in said system has risen above a predetermined point.

[Claims 6 to 10 not printed in the Gazette.]

1,168,624. TROLLEY-RETRIEVER. ROY E. GEARHART, Maryville, Mo., assignor, by direct and mesne assignments, to More-Jones Brass and Metal Company, St. Louis, Mo., a Corporation of Missouri. Filed May 8, 1915. Serial No. 26,733. (Cl. 191—88.)



1. A trolley retriever comprising a bracket provided with a slotted abutment, a rock bar pivoted to the bracket rearward of the abutment, a trolley pole carried by the rock bar, a trigger having a pin and slot connection at its rear end with the rock bar above the pivotal point thereof and extending at its front end through the slot of said abutment and provided near its front end with a shoulder, means for yieldingly pressing the trigger forwardly to hold its shoulder against said abutment, and the trolley pole yieldingly elevated, and means movable rearwardly as the trolley pole swings upward, to apply rearward pressure on the trigger, to trip the shoulder thereof from engagement with the said abutment.

2. A trolley retriever comprising a bracket provided with a slotted abutment, a rock bar pivoted to the bracket rearward of the abutment, a trolley pole carried by the rock bar, a trigger having a pin and slot connection at its rear end with the rock bar above the pivotal point thereof and extending at its front end through the slot of said abutment and provided near its front end with a shoulder, means for yieldingly pressing the trigger forwardly to hold its shoulder against said abutment, and the trolley pole yielding elevated, and means whereby upward movement of the pole beyond a predetermined point shall be caused to impose downward pressure to effect depression of the front end of the trigger to tripped position.

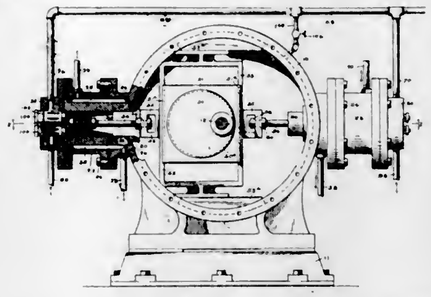
3. A trolley retriever comprising a bracket provided with a slotted abutment, a rock bar pivoted to the bracket rearward of said abutment, a trigger having a pin and slot connection at its rear end with the rock bar above the pivotal point thereof and extending slidingly through the slot of the abutment and provided with a forwardly-facing shoulder, a plate pivoted to the rock bar below the pivotal point of the same, rods extending rearwardly from said plate and slidingly through the trigger, springs mounted upon said rods and exerting force against said plate and trigger to hold the latter with its shoulder bearing against said abutment, and a cross bar secured to said rods and adapted under slight rearward movement thereof to impose rearward pressure upon the trigger to remove the pressure of the shoulder thereof from said abutment and leave the trigger free to drop downward and slide forwardly in said slot.

4. A trolley retriever comprising a bracket provided with an abutment at its front end, provided with a slot, and a pair of upwardly-projecting ears at its rear end, a rock bar pivoted between its ends to said ears, a trolley pole projecting rearwardly and upwardly from the rock bar, a trigger extending slidingly through the slot of the abutment and having a pin and slot connection at its rear end with the upper end of the rock bar, and provided near its front end with a forwardly facing shoulder and with laterally projecting ears, a plate pivoted at its rear end to the rock bar below the pivotal point thereof, a pair of rods extending forward from the plate and through the ears of said trigger and at opposite sides of said abutment, springs held under compression upon said rods by and between said plate and said ears, and a cross bar connecting said rods and disposed normally slightly out of contact with the front extremity of the trigger.

5. A trolley retriever comprising a bracket provided with an abutment at its front end, provided with a slot and a pair of upwardly-projecting ears at its rear end, a rock bar pivoted between its ends to said ears, a trolley pole projecting rearwardly and upwardly from the rock bar, a trigger extending slidingly through the slot of the abutment and having a pin and slot connection at its rear end with the upper end of the rock bar, and provided near its front end with a forwardly facing shoulder and with laterally projecting ears, a plate pivoted at its rear end to the rock bar below the pivotal point thereof, a pair of rods extending forward from the plate and through the ears of said trigger and at opposite sides of said abutment, springs held under compression upon said rods by and between said plate and said ears, a cross bar connecting said rods and disposed normally slightly out of contact with the front extremity of the trigger, an adjustable abutment, and an arm, one of said elements carried by said plate and the other movable with said rock bar and adapted to contact to effect positive tripping of the trigger from engagement with the abutment.

1,168,625. COMPRESSOR. LEE H. GEISENDORFF, Indianapolis, Ind., assignor of one-half to Frank M. Fauvre, Indianapolis, Ind. Filed Jan. 12, 1914. Serial No. 811,627. (Cl. 230—27.)

1. In a double acting compressor the combination of two cylinders in axial alinement with each other, reciprocating pistons in said cylinders, a yoke connecting said pistons, a cam-block arranged in said yoke, means on one side of said cam-block for limiting its introduction into said yoke, a revoluble cam, means on one side of said cam for limiting its introduction into said cam-block, and a single means for holding said cam, cam-block and yoke in operative relation.



2. In combination with a double acting compressor housing, of two cylinders in axial alinement with each other, reciprocating pistons in said cylinders, a yoke connecting said pistons, a cam-block arranged in said yoke, means on one side of said cam-block for limiting its introduction into said yoke, a revoluble cam, means on one side of said cam for limiting its introduction into said cam-block, and a single means comprising a side wall of the compressor housing for holding said cam, cam-block and yoke in operative relation.

3. In a double acting compressor the combination of two cylinders in axial alinement with each other, reciprocating pistons in said cylinders, piston rods for the pistons, a yoke provided with conically shaped apertures adapted to receive the adjacent ends of the piston rods, cone shaped means arranged on said piston rods adapted to engage the correspondingly shaped apertures in the yoke, and a single means for holding the cam, cam-block and yoke in operative relation.

4. In a double acting compressor, an air tight hollow housing, a pair of alined compression cylinders communicating with said housing, reciprocating pistons in said cylinders, a yoke connecting the pistons together, a cam-block arranged in said yoke, means on one side of said cam-block for limiting its introduction into said yoke, a revoluble cam arranged in said cam-block, means on one side of said cam for limiting its introduction into said cam-block, and means for establishing communication between said housing and cylinders.

5. In a double acting compressor, an air tight hollow housing, a pair of alined compression cylinders communicating with said housing, reciprocating pistons in said cylinders, piston rods for the pistons, a yoke provided with conically shaped apertures adapted to receive the adjacent ends of the piston rods, cone shaped means arranged on the piston rods adapted to engage the correspondingly shaped apertures in the walls of the yoke for self centering said piston rods in axial alinement of said cylinders, a single means for holding the cam, cam-block and yoke in operative relation, and means for establishing communication between said housing and cylinders.

1,168,626. COMPOSITION OF MATTER AND PROCESS OF MAKING THE SAME. BYRON B. GOLDSMITH, New York, N. Y. Filed Jan. 10, 1913. Serial No. 741,158. (Cl. 106—22.)

1. The process of producing an artificial resin which consists in causing a phenol to react upon a definite formaldehyde compound of an amin while heating the combined materials, and continuing the process until a definitely resinous mass is produced.

2. The process of producing an artificial resin which consists in causing carbolic acid to react upon a definite formaldehyde compound of an amin while heating the combined materials, and continuing the process until a definitely resinous mass is produced.

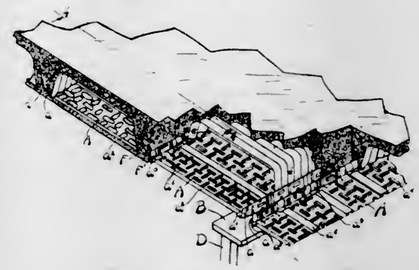
3. The process of producing an artificial resin which consists in causing a phenol to react upon anhydroformaldehydeanilin while heating the combined materials, and continuing the process until a definitely resinous mass is produced.

4. The process of producing an artificial resin which consists in causing carbolic acid to react upon anhydroformaldehydeanilin while heating the combined materials, and continuing the process until a definitely resinous mass is produced.

5. The process of producing an artificial resin which consists in causing a phenol to react upon anhydroformaldehydeanilin in the presence of heat, separating the anilin produced in the reaction from the remainder of the mass, and continuing the process until a definitely resinous mass is produced.

[Claim 6 not printed in the Gazette.]

1,168,627. CONCRETE FLOOR CONSTRUCTION. MAX S. GOLDSMITH, Cincinnati, Ohio. Filed Oct. 31, 1914. Serial No. 869,508. (Cl. 72—66.)



1. In a concrete floor in the course of construction, the combination of a series of parallel centering boards spaced apart a distance equal to the distance apart of the beams to be formed, a series of metal laths, each lath having upturned ends, each of the series consisting of a row of laths with the upturned ends in alinement, resting upon the centering boards, and with a space between the rows equal to the width of the lower end of the concrete beam which is to be formed, a series of arched forms with downturned ends, each of the series of arched forms being supported upon one of the series of laths, and each form having its ends contacting with the upturned ends of its supporting lath, and concrete supported upon the arched forms, filling in the space between the ends of the laths and embedding the upturned ends of the laths.

2. In a concrete floor, the combination of a series of metal laths laid with a space between each series of a width equal to the lower end of the concrete beam which is to be formed, each lath having in it a series of longitudinal upwardly projecting dove-tailed ribs, its ends upturned and the ribs flattened adjacent to the upturned ends, a series of arched forms with downturned ends, each of the series or arched forms being supported upon one of the series of laths, and each form having its ends contacting with the upturned ends of its supporting lath, and concrete supported upon the arched forms, filling in the space between the ends of the laths and embedding the upturned ends of the laths.

3. In a concrete floor, the combination of a series of metal laths laid with a space between each series of a width equal to the lower end of the concrete beam which is to be formed, each metal lath having longitudinal ribs, upturned ends, the ribs having their ends closed and flattened adjacent to the upturned ends to form transverse grooves in the lath, a series of arched forms with downturned ends, each of the series of arched forms being supported upon one of the series of laths, and each form having its ends contacting with the upturned ends of its supporting lath, and concrete supported upon the arched

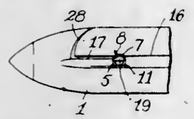
forms, filling in the space between the ends of the laths and embedding the upturned ends of the laths.

4. In concrete floor in the course of construction, the combination of a series of parallel centering boards spaced apart a distance equal to the distance apart of the beams to be formed, a series of metal laths, each lath having upturned perforated ends, each of the series consisting of a row of laths with the upturned ends in alinement, resting upon the centering boards, and with a space between the rows equal to the width of the lower end of the concrete beam which is to be formed, a series of arched forms with downturned ends, each of the series of arched forms being supported upon one of the series of laths, and each form having its ends contacting with the upturned ends of its supporting lath, and concrete supported upon the arched form, filling in the space between the ends of the laths, embedding the upturned ends of the laths, and projecting through the perforations.

5. As a new article of manufacture, a metal lath having longitudinal ribs, upturned ends, and the ribs flattened adjacent to the upturned ends to form transverse grooves in the lath.

[Claims 6 and 7 not printed in the Gazette.]

1,168,628. SELF-THREADING LOOM-SHUTTLE. HUDSON W. HAKES, Millbury, Mass. Filed Aug. 24, 1911. Serial No. 645,895. (Cl. 139—43.)



1. In a hand threading shuttle, a cylindrical delivery eye with a transverse slot in its upper side and an oblique slot extending from the forward lower portion of the transverse slot to the top of the delivery end of the eye, the inner end of the upper edge of the oblique slot being turned outwardly to form an eye retaining lip and to provide a triangular opening through the wall of the eye at the junction of the inner end of the oblique slot and the forward end of the transverse slot.

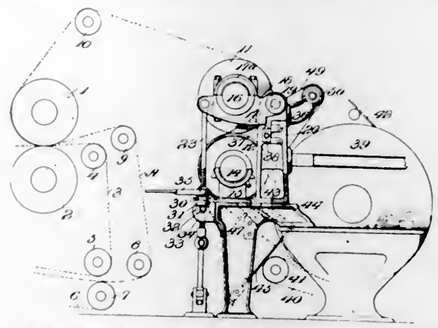
2. In a hand threading shuttle, a cylindrical delivery eye with a transverse slot in its upper side and an oblique slot extending from the forward lower portion of the transverse slot to the top of the delivery end of the eye, the inner end of the upper edge of the oblique slot being turned outwardly to form an eye retaining lip and to provide a triangular opening through the wall of the eye at the junction of the inner end of the oblique slot and the forward end of the transverse slot, one end of said retaining lip projecting over the transverse slot to assist in retaining the thread.

3. In a hand threading shuttle, a shuttle body, a delivery eye transverse to said shuttle body and having an opening at its top to receive the thread, and a plate spaced from the delivery end of said eye and integral therewith, with the lower side of said plate below the plane of the top of said eye, whereby the direct upward movement of the thread from said eye is prevented, and with the upper edge of said plate curved to correspond with the curvature of the inner wall of the eye.

4. In a hand threading shuttle, a shuttle body with a transverse cylindrical opening, a cylindrical delivery eye inserted in said opening, a plate held in front of the delivery end of said eye, the outer surface of said plate being smaller than the adjacent end of said eye, the lower edge of said plate being arranged to prevent the direct upward movement of the thread when in position in said eye, and the upper edge of said plate being curved concentrically with the adjacent end of the eye.

5. In a hand threading shuttle, a shuttle body, a delivery eye transverse to said shuttle body, an arm extending outwardly from the delivery end of said eye, a semicircular plate carried by said arm in front of said eye, with the outer curved edge of said plate concentric with and having a smaller radius than the delivery end of said eye, and with the straight edge of said plate extending across the delivery end of said eye.

1,168,629. SMOOTHING-PRESS FOR PAPER-MAKING MACHINES. HERMAN R. HARRIGAN, Wilmington, Del. Filed June 15, 1915. Serial No. 34,305. (Cl. 92—49.)



1. The combination with the final press rolls and the initial drier roll of a paper-making machine, of a pair of smoothing rolls interposed between the said press and drier rolls and having their peripheral parts formed respectively of soft resilient rubber and of hard unyielding material, and a mechanism for pressing the rolls together when in operation to cause the last said roll to indent the first said roll and for separating them when not in operation to prevent injury to the rubber.

2. The combination with the final press rolls and the initial drier roll of a paper-making machine, of a pair of smoothing rolls interposed between the said press and drier rolls and having their peripheral parts formed respectively of soft resilient rubber and of hard unyielding material, means for pressing the rolls together to cause the last said roll to indent the first said roll, and means for rotating the rolls at the nip toward the press rolls, the said rolls being so positioned that the paper passes from the press rolls part way around one smoothing roll to the nip and from the nip part way around the other smoothing roll to the drier roll.

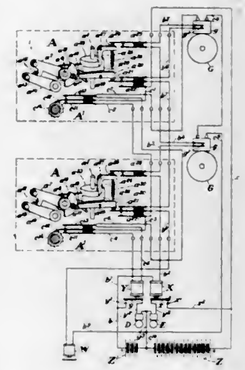
3. The combination with the final press rolls and the initial drier roll of a paper-making machine, of a pair of smoothing rolls interposed between the said press and drier rolls and normally engaging each other and means for rotating at the nip toward the press rolls, the peripheral part of the first smoothing roll around which the papes passes to the nip being formed of soft resilient rubber and the peripheral part of the second smoothing roll around which the paper passes from the nip being formed of hard unyielding material whereby the second roll is enabled to indent the first.

4. The combination with the final press rolls and the initial drier roll of a paper-making machine, of a pair of smoothing rolls interposed between the said pressing and drier rolls and normally engaging each other and means for rotating the smoothing rolls at the nip toward the press rolls, the peripheral part of the upper smoothing roll over and around which the paper passes to the nip being formed of soft resilient rubber and the peripheral part of the lower smoothing roll around and under which the paper passes from the nip being formed of hard unyielding material whereby the second roll is enabled to indent the first.

5. The combination with the final press rolls and the initial drier roll of a paper-making machine, of a pair of smoothing rolls interposed between the said press and drier rolls and normally engaging each other and means for rotating the smoothing rolls at the nip toward the press rolls, the peripheral part of the first smoothing roll around which the paper passes to the nip being formed of soft resilient rubber and the peripheral part of the second smoothing roll around which the paper passes from the nip being formed of hard unyielding material whereby the second roll is enabled to indent the first, the said smoothing rolls being arranged with the first said roll engaging the wire side of the paper and with the second said roll engaging the felt side of the paper.

[Claims 6 to 17 not printed in the Gazette.]

1,168,630. SIGNAL SYSTEM. BENJAMIN B. HATCH, Boston, Mass. Filed July 16, 1915. Serial No. 40,330. (Cl. 177—361.)



1. In a system of the character described the combination of a plurality of signal circuits; a source of power for each of said circuits; indicating means in each circuit; means controlled by the source of power of one of said circuits for operating the indicating means of the remaining circuits.

2. In a system of the character described the combination of a plurality of signal circuits; a source of power for each of said circuits; indicating means in each circuit; means controlled by the source of power of each one of said circuits for operating the indicating means of the remaining circuits.

3. In a system of the character described the combination of two signal circuits; a source of power for each circuit; indicating means in each circuit; and means controlled by, but having a source of power independent of, the source of power of one circuit for operating the indicating means in the other circuit.

4. In a system of the character described the combination of two signal circuits; a source of power for each circuit; indicating means in each circuit; and means controlled by, but having a source of power independent of, the source of power of each circuit for operating the indicating means in the other circuit.

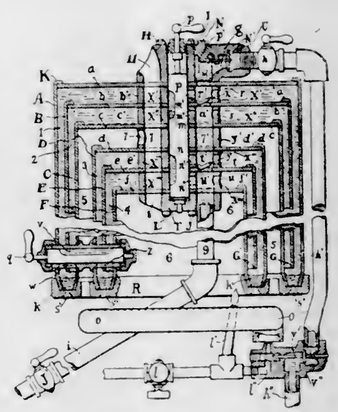
5. In a system of the character described the combination of two signal circuits; a source of power for each circuit; and two indicators, each controlled by one of said sources of power but operated by the other sources of power.

[Claim 6 not printed in the Gazette.]

1,168,631. HOT-WATER HEATER AND STEAM-GENERATOR. LARS OLOF HEDBLOM, New Brunswick, N. J. Filed Apr. 8, 1915. Serial No. 19,968. (Cl. 122—161.)

1. In a water heater or steam generator, including a water container having two substantially plane walls spaced apart, a water inlet in one of said walls and an outlet in the other, a water baffle wall within the container spaced between and parallel to the walls thereof, a union of said walls beyond the extreme edge of said baffle wall, and independent heat flues running axially through the walls of said water container, substantially as described.

2. In an apparatus as described, including water container units, the combination in each said unit of a substantially plane water deflecting wall and a pair of substantially plane walls spaced from and inclosing the same, means located at the circumference or edge of the baffle wall providing for the passage of water through or beyond said edge, a water inlet in one inclosing wall and an outlet in the other wall in positions provided to locate the water baffle wall relatively between said water inlet and outlet, and independent heat flues passing axially through the walls of said water container unit and terminating on the exterior exposed surfaces of the same, as described.



3. In an apparatus as described, including a water container having two walls spaced apart and water inlet ports in one of said walls and outlet ports in the other; a water baffle wall in said water container between the inlet and outlet ports and a plurality of independent heat flues running through said water container directly through the spaced walls thereof and included water baffle wall, substantially as described.

4. In an apparatus as described, including a pair of spaced parallel walls with a pipe fitted to each in the central portion thereof and a wall or junction uniting said walls at their peripheries; a water baffle wall spaced between said parallel walls, the edge of the baffle wall being spaced from and within the peripheral junction, independent heat flues running through said parallel walls and included baffle wall, substantially as described.

5. In the exterior water circuit of an apparatus as described, a valve containing a valve piston retained against a helical spring mounted on the shank of said piston in open position by obstructive contact of the butt of said shank with an inward projection of a threaded cap fitted in said valve in a position directly above a strainer located within said valve, said strainer being accessible and said valve simultaneously closable upon removal of said threaded cap, substantially as described.

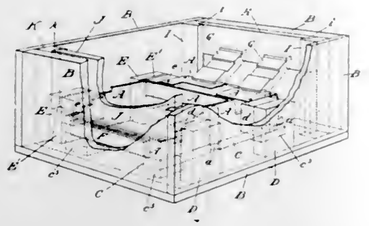
[Claims 6 to 13 not printed in the Gazette.]

1,168,632. PACKING-BOX FOR TYPE-WRITING AND LIKE MACHINES. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1914. Serial No. 810,281. (Cl. 217—53.)

1. A packing box provided with stationary padded blocks to engage the sides of a machine frame, a movable block also adapted to engage one end of the frame of the machine, a locking board engaging the movable block and means for holding the locking board in place.

2. A packing box provided with stationary blocks adapted to engage one side of a machine-frame, blocks adapted to engage the opposite side of the machine frame, wedges for forcing said last mentioned blocks against the frame of the machine, movable blocks adapted to engage the frame of the machine, a locking board engaging said movable blocks and means for holding the locking board in place.

3. A packing box having a lid and provided with stationary padded blocks to engage the sides of a machine-frame, a movable block also adapted to engage one end of the frame of the machine, and a locking board engaging the movable block and held in place by the lid.

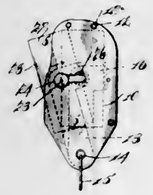


4. A packing box having a lid and provided with stationary blocks adapted to engage one side of a machine-frame, blocks adapted to engage the opposite side of the machine-frame, wedges for forcing said last mentioned blocks against the frame of the machine, movable blocks adapted to engage the frame of the machine, and a locking board engaging said movable blocks and held in place by the box lid.

5. A packing box having a lid and provided with padded blocks adapted to engage opposite sides of a machine-frame, movable blocks adapted to engage the machine-frame at its rear end, a locking board engaging said blocks and which is pressed downwardly by the box lid, and a locking board at the front of the box engaged by the box lid and adapted to engage the front portion of the machine-frame.

[Claims 6 to 10 not printed in the Gazette.]

1,168,633. CUTTING DEVICE. SUSAN M. HEYWOOD, Arden, N. C. Filed Aug. 25, 1915. Serial No. 47,240. (Cl. 30—14.)



1. In a cutting device, the combination of a supporting member, a cutting blade pivotally supported on and guarded by said member with its knife edge presented in the direction in which said blade is movable to cutting position, means for projecting said blade beyond said member to cutting position, and means for confining the movement of said blade to position alongside said supporting member and to such position that one corner only of said blade is protruded beyond said member.

2. In a cutting device, the combination of a supporting member, a considerably narrower blade holder pivoted at one end to one end of said member and having a closed position between opposite edges of said member, said holder being provided with means for positioning a cutting blade therein with its knife edge directed outwardly toward the adjacent edge of said holder to be projectable beyond said edge to cutting position, said holder being movable in said outward direction only, from its said closed position, means for moving said holder in said direction, and means for stopping the backward movement of said holder when it is in said closed position.

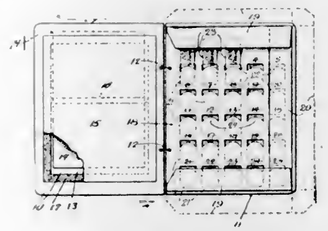
3. In a cutting device, the combination of a supporting member, a blade holder pivoted at one end to one end of said member, a cutting blade of the thin safety razor type, means for positioning said blade on said holder with its inner end close to the pivot of said holder, and with its knife edge projecting from said holder and directed outwardly toward the adjacent edge of said holder to be projectable beyond said edge to cutting position, said holder and blade being movable in said outward direction, means for moving said holder and blade in said direction, means for limiting the said outward movement to a partial protrusion of said blade from said holder, and means for stopping the backward movement of said holder and blade when they are alongside said member.

4. In a cutting device, the combination of a supporting plate or member, a pivoted blade holder, said plate having two spaced abutments, a blade supported by said holder with its knife edge presented for movement outwardly, a bolt passing through said holder and blade and between said abutments, and an adjusting nut on the shank of said bolt.

5. In a cutting device, the combination of a supporting member, a blade holder having spring side walls and pivoted to said member, and means guided by said member for acting on said walls for compressing the sides of said holder to clamp a blade to said holder, said supporting member being provided with means for guiding said compressing means and for limiting its movement between opposite edges of said supporting member.

[Claims 6 and 7 not printed in the Gazette.]

1,168,634. COUPON-REGISTER. MORRIS J. HOFFMAN, Chicago, Ill. Filed Dec. 21, 1914. Serial No. 878,329. (Cl. 129—20.)

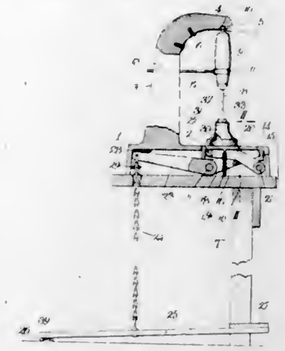


1. In a coupon register, a coupon receiving member comprising an imperforate backing, and a facing having a plurality of slots formed therein, the upper edges of said slots being straight and the lower edges of said slots being curved toward the upper edges of the slots, to form lips which may be bent outward to facilitate the insertion of coupons through the said slots, the backing and facing being pasted together along continuous lines along the marginal edges at the tops and sides of the slots, to form coupon receiving pockets below the slots.

2. In a coupon register, a coupon receiving member having an imperforate backing, and a facing formed with a plurality of slots and pasted or glued to said backing along lines between the slots, there being unsecured places below the slots constituting coupon receiving pockets, and the backing having edge portions projecting beyond the marginal edges of the facings and foldable down thereon; substantially as and for the purpose specified.

3. In a coupon register, a pair of covers hingedly secured together, one of said covers having a pocket therein for the reception of a time card, and a coupon receiving member hingedly secured to said covers and formed on both sides with coupon receiving pockets opening out through the sides of said member, there being ordinals printed in the spaces adjacent said openings and arranged in numerical order, whereby the total number of coupons received by the register may be ascertained by glancing at the first exposed ordinal, said time card having spaces in which the value of said total number of coupons contained in the register may be written.

1,168,635. DENTAL-MATERIAL-CONDENSING APPARATUS. JEPTHA G. HOLLINGSWORTH, Kansas City, Mo. Filed Jan. 7, 1915. Serial No. 1,024. (Cl. 78—13.)



1. A dental material condensing apparatus, comprising a suitably supported tool, a plate for the support of a mold, and means for effecting relative rapid vibratory approaching movement between the tool and plate whereby filling material in the mold may be tamped therein by the said tool.

2. A dental material condensing apparatus, comprising a suitably supported tool, a plate for the support of a mold, means for effecting relative rapid approaching movement between the tool and plate whereby filling material in the mold may be tamped therein by said tool, and yielding means for quickly effecting reverse movement between said tool and plate.

3. A dental material condensing apparatus, comprising a suitably supported tool, means for supporting a mold in longitudinal alinement and in a tilted position with respect to the tool, and means for effecting relative rapid vibratory approaching movement between the tool and mold-holding means whereby filling material in the mold may be tamped therein by said tool.

4. A dental material condensing apparatus, comprising a suitably supported tool, a plate provided with a circular recess in its upper side for the support of a mold tool so that the latter shall be capable of rotatable adjustment, and means for effecting relative rapid vibratory movement between the tool and plate whereby filling material in the mold may be tamped therein by the tool.

5. A dental material condensing apparatus, comprising a pendantly supported tool, a base provided with an opening underlying said tool, a plate for up and down sliding movement in said opening and for the support of a mold containing material to be tamped, foot-lever actuated means for effecting quick upward movement of the plate in said opening, and a spring for reversing such movement.

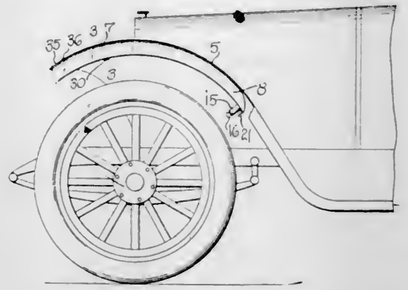
[Claims 6 to 8 not printed in the Gazette.]

1,168,636. GASOLENE-SUPPLY RESERVOIR FOR MOTOR-VEHICLES. WALLACE J. HOTCHKISS, Alpena, S. D. Filed Nov. 18, 1914. Serial No. 872,871. (Cl. 21—23.)

1. The combination with a support, of a reservoir mounted for bodily vertical movement on the support and having a filling opening in one end accessible in the lowered position of the reservoir, means for retaining the reservoir in an elevated position upon the support, and additional means to seal the filling opening and preventing access thereto in the latter position of the reservoir.

2. The combination with the mud guard of a vehicle, of a reservoir approximately conforming to the longitudinal contour of said guard and having a filling opening, and means for mounting the reservoir upon the under side of the guard for limited vertical movement with respect thereto, whereby the reservoir may be moved into position to be filled.

3. The combination with a support, of a reservoir bodily movable upon the support and having a filling opening in one end unobstructed by the support when the reservoir is disposed in a lowered position thereon, means on the support for retaining said reservoir in an elevated position thereon, and additional means on the support adapted to project over said filling opening in the latter position of the reservoir and prevent access thereto.

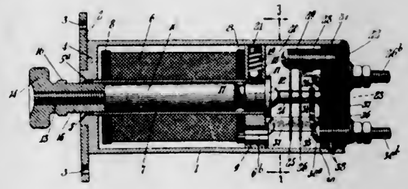


4. The combination with the mud guard of a vehicle, of a reservoir approximately conforming to the longitudinal contour of said guard, means for mounting the reservoir upon the under side of the guard for limited vertical movement with respect thereto, and means for clamping the reservoir against the under side of the guard to hold the same against movement with respect thereto.

5. The combination with the mud guard of a vehicle, of a reservoir movably mounted beneath the top of the mud guard and extending longitudinally thereof, said reservoir having a filling opening in its forward end accessible in one position of the reservoir, and means for supporting the reservoir upon the mud guard against movement with respect thereto and in such position that the top wall of the guard extends over the filling opening whereby access to the latter is prevented.

[Claims 6 to 16 not printed in the Gazette.]

1,168,637. SELF-RESTORING SWITCH FOR IGNITION SYSTEMS OF INTERNAL-COMBUSTION ENGINES. FRANCIS R. HOYT, East Orange, N. J., assignor to Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Jan. 29, 1915. Serial No. 4,979. (Cl. 123—165.)



1. In an ignition system for internal combustion engines, the combination with an induction apparatus having primary and secondary coils, a source of electricity, and an engine driven contact breaker in the primary circuit, and a spark plug in the secondary circuit, of a switch for closing the primary circuit provided with a manually operated member, an electromagnetic device for positively moving said manually operated switch member into open circuit position, circuit controlling means in circuit with said electromagnetic device, normally held in open position, and thermostatically operated means having a part in the primary circuit for bringing the said circuit controlling means into closed position.

2. In an ignition system for internal combustion engines, the combination with an induction apparatus hav-

ing primary and secondary coils, a source of electricity, and an engine driven contact breaker in the primary circuit, and a spark plug in the secondary circuit, of a switch for closing the primary circuit having a manually operated member freely movable into and out of operative position, and adapted to remain in any position to which it is moved, an electromagnetic device for positively moving said manually operated member into open circuit position, normally inoperative circuit controlling devices for said electromagnetic device, a thermostatic element for operating said circuit controlling devices and a heating coil for the thermostatic element in the primary circuit.

3. In an ignition system for internal combustion engines, the combination with an induction apparatus having primary and secondary coils, a battery and an engine driven contact breaker in the primary circuit, and a spark plug in the secondary circuit, of a switch for closing the primary circuit including a manually operated member, a solenoid, a movable core therefor operatively connected with the manually operated member of the switch, a normally open circuit from the battery to said solenoid, a thermostatic element for closing said circuit, and a heating coil in said primary circuit operatively associated with said thermostatic element.

4. In an ignition system for internal combustion engines, the combination with an induction apparatus having primary and secondary coils, a battery and an engine driven contact breaker in the primary circuit, and a spark plug in the secondary circuit, of a switch provided with normally separated contacts electrically connected in the primary circuit, and a manually operated member for closing said contacts, a solenoid, a movable core therefor operatively connected with the manually operated member of the switch, a normally open circuit from the battery to the solenoid around the primary coil of the induction apparatus, normally separated contacts in said circuit, a thermostatic element for closing the circuit through said contact, and a heating coil surrounding said thermostatic element and located in the primary circuit.

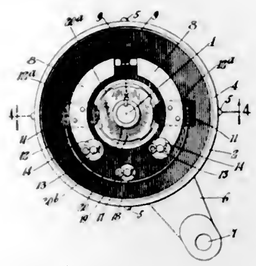
5. In an ignition system for internal combustion engines, the combination with an induction apparatus having primary and secondary coils, a source of electricity, and an engine driven contact breaker in the primary circuit, and a spark plug in the secondary circuit, of a switch for closing the primary circuit provided with a manually operated member freely movable in either direction into and out of operative position, and adapted to remain in any position to which it is moved, means for temporarily securing the manually operated switch member against accidental displacements when in circuit closed position, and an electromagnetic device brought into operation by the stopping of the engine and contact breaker for overcoming said securing means and positively restoring said manually operated switch member to open circuit position.

[Claims 6 to 16 not printed in the Gazette.]

1,168,638. PERIODIC INTERRUPTER FOR IGNITION SYSTEMS OF INTERNAL-COMBUSTION ENGINES. FRANCIS R. HOYT, East Orange, N. J., assignor to Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Jan. 29, 1915. Serial No. 4,980. (Cl. 123—165.)

1. In a circuit breaker for ignition systems, the combination with a pair of opposed contact members, each movable toward and from the other and provided with a contact to engage the contact carried by the other member, means for moving said members to bring said contacts into engagement, and means for simultaneously moving said contact members in opposite directions to separate said contacts.

2. In a circuit breaker for ignition systems, the combination with a pair of opposed contact members, each movable toward and from the other and provided with a contact to engage the contact carried by the other member, yielding means engaging said members for normally forcing said contacts toward each other, and holding them in engagement, and means for simultaneously moving said members in opposite directions away from each other to separate said contacts.



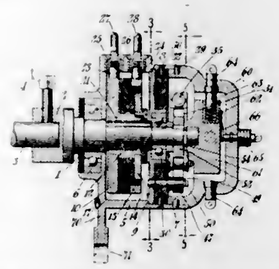
3. In a circuit breaker for ignition systems, the combination with a pair of pivoted contact members, each provided with a contact, yielding means for normally forcing said contacts toward each other holding them normally in engagement, and means interposed between said contact members for engaging them simultaneously and moving them in opposite directions away from each other to separate said contacts.

4. In a circuit breaker for ignition system, the combination with a pair of pivoted contact members, each provided with a contact, yielding means for normally forcing said contacts toward each other, and holding them in engagement, a cam for separating said contacts, said cam and said contact members being relati e.y rotatable one with respect to the other, and said cam being provided with actuating portions for engaging and simultaneously actuating both of said members in opposite directions to separate said contacts.

5. In a circuit breaker for ignition systems, the combination with a pair of pivoted contact members, each provided with a contact, yielding means for holding said contacts normally in engagement, a cam interposed between said members, said cam and said contact members being relatively rotatable one with respect to the other, and said cam being provided with oppositely disposed actuating portions for engaging and simultaneously moving said contact members away from each other to separate said contacts.

[Claims 6 to 12 not printed in the Gazette.]

1,168,639. BATTERY-ALTERNATOR FOR IGNITION SYSTEMS OF INTERNAL-COMBUSTION ENGINES. FRANCIS R. HOYT, East Orange, N. J., assignor to Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Feb. 2, 1915. Serial No. 5,602. (Cl. 123—166.)



1. In an ignition system for internal combustion engines the combination with a single induction coil having primary and secondary windings, a spark plug in circuit with said secondary winding, a contact breaker operatively connected with and operated by the engine, provided with separable contacts in circuit with the primary winding, and means for intermittently separating said contacts, of a source of electricity in circuit with said contacts and said primary winding, and an alternator operating in timed relation with said contact breaker for reversing the direction of the current passing between said contacts after each separation thereof.

2. In an ignition system for internal combustion engines, the combination with a contact breaker provided with separable contacts and means for intermittently separating the same, of a source of electricity in circuit with said contacts, and an alternator for intermittently reversing the direction of the current through said contacts, said alternator being timed to reverse the direction of current while said contacts are separated.

3. In an ignition system for internal combustion engines, the combination with a single induction coil provided with primary and secondary windings, a spark plug in circuit with said secondary winding, a contact breaker operatively connected with and operated by the engine provided with separable contacts in circuit with said primary winding, and means for intermittently separating said contacts, of a source of electricity in circuit with said contacts and said primary winding, and an alternator comprising brushes connected respectively with said contacts, and a rotary part operatively connected with and driven by the engine in predetermined relation to the contact breaker and provided with alternating contact portions electrically connected with the opposite poles of the source of electricity for reversing the direction of the current through said contacts after each separation thereof.

4. In an ignition system for internal combustion engines, the combination with a contact breaker provided with separable contacts and means for intermittently separating the same, of a source of electricity in circuit with said contacts, and an alternator comprising brushes connected respectively with said contacts and a rotary part provided with alternating contact portions for engaging said brushes, said alternating contact portions being electrically connected with the opposite poles of the source of electricity for alternately reversing the direction of the current through said contacts when the contacts are closed, the rotary part of said alternator having a timed relation with the actuating means for separating the contacts of the circuit breaker for reversing the direction of the current while said contacts are in separated relation.

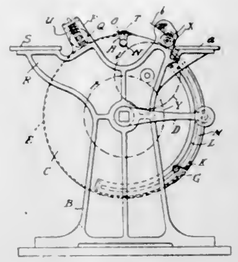
5. In an ignition system for internal combustion engines, the combination with a circuit breaker comprising rotary and non-rotary parts, one of said parts being provided with separable contacts and the other of said parts being provided with means for actuating the same to separate said contacts, and a source of electricity in circuit with said contacts, of an alternator for intermittently reversing the direction of current through said contacts, comprising brushes connected with said contacts and a rotary part provided with alternate contact surfaces separately connected with the opposite poles of the electrical source and arranged to engage said brushes, and means adapted to be connected with the engine for simultaneously actuating the rotatable part of said contact breaker and the rotatable part of said alternator.

[Claims 6 to 14 not printed in the Gazette.]

1,168,640. DUPLICATING-MACHINE. DAVID HYAMS, New York, N. Y. Filed May 15, 1914. Serial No. 838,628. (Cl. 101—172.)

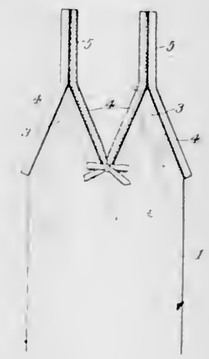
1. A duplicating machine comprising in combination a drum, a sheet of gelatinous material secured to the surface of said drum, a presser roller, a feeding member on said drum arranged to be compressed by said presser roller, and stripping rollers for stripping the paper of said gelatinous material.

2. A duplicating machine comprising in combination a drum, a sheet of gelatinous material secured to the surface of said drum, a presser roller for pressing the paper in contact with said gelatinous material, stripping rollers for stripping the paper off said gelatinous material, and a feeding member on said drum for feeding said paper into the stripping rolls, said feeding member being arranged to be compressed by said presser roller as it passes under the same.



3. A duplicating machine comprising in combination a drum, a sheet of gelatinous material secured to the surface of said drum, a presser roller for pressing the paper in contact with said gelatinous material, stripping rollers for stripping the paper off said gelatinous material, and a feeding member on said drum for feeding said paper into the stripping rolls, said feeding member being arranged to be compressed by said presser roller as it passes under the same, and means on said feeding member for engaging said roller in starting position.

1,168,641. KNITTED GARMENT. RALPH R. JANES, New York, N. Y., assignor to Standard Knitting Mills Company, a Corporation of New York. Filed Nov. 8, 1913. Serial No. 799,861. (Cl. 2—41.)

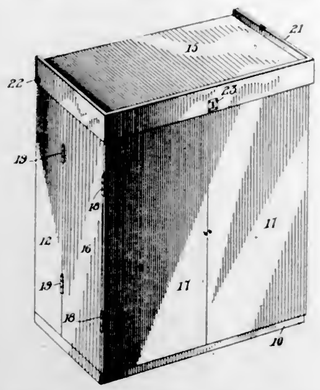


In a garment of the character described, a body portion consisting of a longitudinally ribbed knitted tube of uniform width throughout, and provided at the upper end, at both front and back, with two integral extensions in the form of isosceles triangles, the bases of which are equal to one-half the width of the tube, and all of the sides of which make substantially equal angles with the ribbing of the material, the upper apex of each front extension being connected to the upper apex of the corresponding back extension, for the purpose described.

1,168,642. SAFE. PETER JASINSKI, Welland, Ontario, Canada. Filed May 25, 1915. Serial No. 30,441. (Cl. 109—2.)

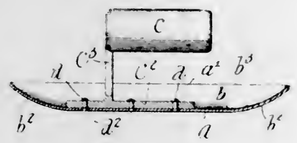
A safe including a receptacle having fixed top and bottom walls, a rear wall, end walls extending approximately half the depth of the bottom and top walls, front closure walls, each formed of sections closing the remaining end

portions of the receptacle and the front thereof, and a U-shaped locking member hinged to the upper edges of the



rear end walls adapted to overlie the upper edges of the front closure walls locking the same in closed position.

1,168,643. TROWEL. CHARLES E. JOHNSON, New York, N. Y. Filed Aug. 4, 1914. Serial No. 854,934. (Cl. 72—136.)



1. A trowel comprising an elongated body portion, the bottom surface of which is of the same convex curvature in cross section throughout its extent, extensions provided at the ends of said body portion, the under surfaces of which are upwardly curved both longitudinally and transversely, and a handle provided on said body portion.

2. A trowel comprising an elongated body portion, the bottom surface of which is of the same convex curvature in cross section throughout its extent, extensions provided at the ends of said body portion, the under surfaces of which are upwardly curved both longitudinally and transversely, the extensions being of diminishing width toward their outer extremities, and a handle provided on said body portion.

3. A trowel comprising an elongated body portion, the bottom surface of which is of the same convex curvature in cross section throughout its extent, extensions provided at the ends of said body portion, the under surfaces of which are upwardly curved both longitudinally and transversely, the extensions being of diminishing width toward their outer extremities and one of said extensions being reduced in transverse dimensions more than the other, and a handle provided on said body portion.

1,168,644. MILK-TESTING TUBE. HUGO JONE, Brooklyn, N. Y. Filed Nov. 9, 1915. Serial No. 60,616. (Cl. 23—3.)

1. A milk testing tube the interior of which is connected with the outside air by a capillary tube inserted in a rubber stopper which, in turn, is inserted in an opening of the testing tube and the bottom surface of which is sloping in such a way that the opening of the capillary bore is the highest point.

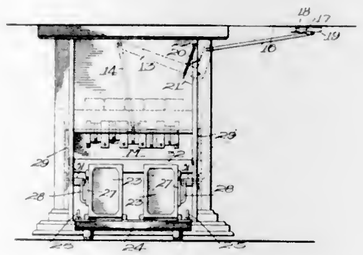
2. A milk testing tube the interior of which is connected with the outside air by a capillary tube and which contains glass beads of a milk white color.

3. A milk testing tube containing glass beads and the interior of which is connected with the outside air by a capillary tube inserted in a rubber stopper which, in turn, is inserted in an opening of the testing tube and the bottom surface of which is sloping in such a way that the opening of the capillary bore is the highest point.



4. A milk testing tube containing milk white glass beads and the interior of which is connected with the outside air by a capillary tube inserted in a rubber stopper which, in turn, is inserted in an opening of the testing tube.

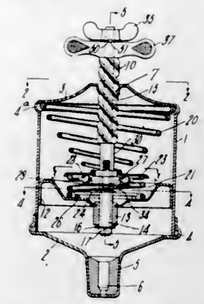
1,168,645. AUTOMATIC GRAND PIANO. WILLIAM J. KEELEY, New York, N. Y., assignor to Auto Pneumatic Action Company, a Corporation of New York. Filed Oct. 11, 1911. Serial No. 654,104. (Cl. 84—169.)



1. An automatic grand piano having, in combination, a depending casing positioned under the central portion of the key board and of substantially less depth from front to back than either width or height, said casing containing a pneumatic note-sheet-operating motor and having an opening in the front side of said casing, a door slidable into and out of position to close said opening, pneumatic feeders disposed horizontally closely adjacent the under side of the piano bed and extending forwardly into the upper part of said casing, and a pair of pedals operatively connected to the feeders and mounted to be swung upward into said casing, said casing also comprising means for supporting said motor within the casing and beneath said feeders.

2. An automatic grand piano having, in combination, a depending casing positioned under the central portion of the key board and of substantially less depth from front to back than either width or height, said casing containing a pneumatic note-sheet-operating motor and having an opening in the front side of said casing, a door slidable into and out of position to close said opening, pneumotic feeders disposed horizontally closely adjacent the under side of the piano bed and extending forwardly into the upper part of said casing, and a pair of pedals operatively connected to the feeders by substantially vertical links and mounted to be swung upward into said casing, said casing also comprising means for supporting said motor within the casing, beneath said feeders and above the position occupied by the pedals when in inoperative position.

1,168,646. LUBRICATOR. GEORGE RUSSELL KENNEDY, Pittsburgh, Pa., assignor of one-half to Grant McCargo, Pittsburgh, Pa. Filed Feb. 21, 1914. Serial No. 820,290. (Cl. 184—45.)



1. In a lubricator, the combination of a cup, a piston or plunger, a threaded rod or shaft, a pressure spring interposed between said threaded rod and piston, a nut engaging the threaded rod and non-rotatably supported on the cup, a shifting spring interposed between the cup and threaded rod and serving to move the latter longitudinally and thereby rotate the same in said nut, and means for adjusting the tension of said pressure spring.

2. In a lubricator, the combination of a cup, a piston or plunger, a threaded rod or shaft, a pressure spring interposed between said threaded rod and piston, a nut engaging the threaded rod and non-rotatably supported on the cup, a shifting spring interposed between the cup and threaded rod and serving to move the latter longitudinally and thereby rotate the same in said nut, and means extending to the outside of the cup and arranged when operated to adjust the tension of said pressure spring.

3. In a lubricator, the combination of a cup, a piston or plunger, a threaded rod or shaft, a pressure spring interposed between the threaded rod and piston, a nut engaging the threaded rod and non-rotatably supported on the cup, a shifting spring interposed between the cup and threaded rod and serving to move the latter longitudinally and rotate the same in said nut, escapement mechanism controlling the action of said last named spring, and means for adjusting the tension of said pressure spring.

4. In a lubricator, the combination of a cup, a piston or plunger, a threaded rod or shaft, a pressure spring interposed between the threaded rod and piston, a nut engaging the threaded rod and non-rotatably supported on the cup, a shifting spring interposed between the cup and threaded rod and serving to move the latter longitudinally and rotate the same in said nut, escapement mechanism controlling the action of said last named spring, and means extending to the outside of the cup and arranged when operated to adjust the tension of said pressure spring.

5. In a lubricator, the combination of a cup, a piston or plunger, a threaded rod carrying said piston or plunger, a nut engaging the threaded rod and non-rotatably supported on the cup, a presssure spring interposed between the threaded rod and piston, a shifting spring interposed between the cup and threaded rod and serving to move the latter longitudinally and rotate the same in said nut, escapement mechanism controlling the action of the last named spring and comprising an odd number of projections on said piston and spaced at intervals around the axis of said rod, and two escapement members cooperating therewith and movable with said rod and lying at opposite sides of the axis thereof, said escapement members coöperating alternately with the projections on opposite sides of the axis of the rod.

[Claims 6 to 14 not printed in the Gazette.]

1,168,647. HOLLOW SHEET-METAL STRUCTURE. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1915. Serial No. 22,077. (Cl. 122—498.)



1. A hollow sheet metal structure having an internal spacer, comprising a metal strip secured at its edges to opposite walls of the structure, the securing portion of the strip at at least one of its edges being formed by spaced edge projections, substantially as described.

2. A hollow sheet metal structure, comprising inner and outer plates, one of said plates having a series of slots or openings therein, and an internal spacer having separated projections engaging and welded in said slots or openings, the spacer being also secured to the other plate, substantially as described.

3. A hollow sheet metal structure, comprising inner and outer plates, one of said plates having a series of slots or openings therein, and an internal spacer having spaced projections extending in the edgewise plane of the strip and engaging and welded in said slots or openings, the spacer being also secured to the inner surface of the other plate, substantially as described.

4. A hollow sheet metal structure having a plurality of internal spacers, each of said spacers having a plurality of spaced projections engaging and welded in slots or openings in one wall of the structure, and a plurality of other spaced projections welded to the opposite wall of the structure, substantially as described.

5. A hollow sheet metal structure, having an internal spacer comprising a bar or strip formed with spaced projections at opposite edges thereof, said projections being welded to opposite walls of the structure, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

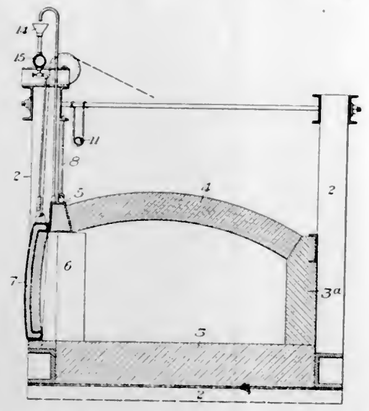
1,168,648. HOLLOW SHEET-METAL STRUCTURE. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1915. Serial No. 22,078. (Cl. 122—493.)



1. A hollow sheet metal structure provided with internal stay strips secured to opposite walls thereof and loosely overlapping each other, each strip being substantially equal in width to the distance between said opposite walls, and key means engaging said strips to tie them against relative movement in an edgewise direction, substantially as described.

2. A hollow sheet metal structure provided with overlapping internal stay strips, the two strips being welded at respectively opposite edges to the opposite walls of the structure, and each strip having its welded edge formed by a series of spaced projections, and key means engaging said strips, substantially as described.

1,168,649. FURNACE-DOOR FRAME. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1915. Serial No. 22,080. (Cl. 122—498.)



1. A furnace door frame, comprising a hollow water cooled member extending transversely over the door opening of the furnace, said member having an inner beveled side wall forming a skew back directly supporting the roof arch of the furnace, and having its bottom wall constituting the top of the furnace door opening; substantially as described.

2. A furnace door frame, comprising a hollow water cooled member extending transversely over the door opening of the furnace, said member having an inner beveled side wall forming a skew back directly supporting the roof arch of the furnace, and having its bottom wall constituting the top of the furnace door opening, the outer surface of said member forming a door seating and guiding surface; substantially as described.

3. A furnace door frame, comprising a hollow water cooled member extending transversely over the door opening of the furnace, said member having inwardly offset end portions, and separate water cooled leg members removably seating in said offsets; substantially as described.

4. A furnace door frame, comprising a hollow water cooled member extending transversely over the door opening of the furnace, said member having inwardly offset end portions, and separate water cooled leg members seating in said offsets, said leg members having outer guiding surfaces, and the central portion of the transverse member extending forwardly into the plane of said guiding surfaces; substantially as described.

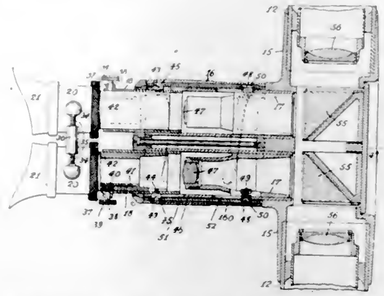
5. A furnace door frame, comprising a transverse member extending over the furnace door opening with its inner surface forming a skew back for the roof arch of the furnace, and its lower surface forming the top at the furnace door opening, together with leg members extending at either side of the outer opening, the central portion of said transverse member being extended forwardly between said leg members; substantially as described.

1,168,650. BINOCULAR TELESCOPE. FREDERICK L. G. KOLLMORGEN, Boonton, N. J., assignor to Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed May 3, 1913. Serial No. 765,222. (Cl. 88—32.)

1. In a binocular telescope, the combination with two sets of relatively adjustable optical erecting elements and coacting eye pieces, of means surounding the sets for relatively adjusting the same.

2. In a binocular telescope, the combination with two sets of relatively adjustable optical erecting elements and coacting eye pieces, of a tube rotatably surrounding both sets and having cam engagements therewith for relatively adjusting the same.

3. In a device of the character described, two pairs of tubes side by side, one of each pair being an eye-piece tube and the second of each pair containing erecting optical elements, the tubes of each pair being in alinement, each tube being provided with a projecting stud, in combination with a shell adapted to encircle both pairs of tubes and provided with cam slots, one slot adapted to engage the studs of each eye-piece tube and another slot adapted to engage the studs of each erecting element tube.

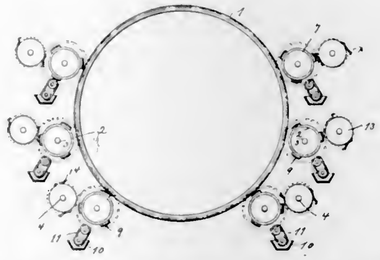


4. In a device of the character described, two pairs of tubes side by side, one of each pair being an eye-piece tube and the second of each pair containing erecting optical elements, and being arranged within a fixed tube provided with a longitudinal slot, the tubes of each pair being in alinement, each tube being provided with a projecting stud, in combination with a shell adapted to encircle both pairs of tubes and the fixed tubes and provided with cam slots, one cam slot and one longitudinal slot of the fixed tube adapted to engage the studs of each eye-piece tube, and the second cam slot and longitudinal slot of the second fixed tube being adapted to engage the studs of each erecting element tube.

5. In a binocular telescope, the combination with two eye pieces, each independently adjustable for pupillary distance and two optical means respectively associated therewith, of common means inclosing both eye pieces, and optical erecting means engaged with the inclosing means for simultaneously varying the distances between each eye piece and its erecting means to vary the magnification of the instrument.

[Claim 6 not printed in the Gazette.]

1,168,651. PRINTING-PRESS ATTACHMENT. RUDOLF KRAUS, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,049. (Cl. 101—89.)



1. In a printing press, a rotatable shaft, a member shiftable on the shaft, a printing device on said member, and means for imparting successive irregular impulses to said member.

2. In a printing press, a rotatable shaft, a band shiftable thereon, a printing device on the band, and a pusher adapted to impart successive irregular impulses to the band.

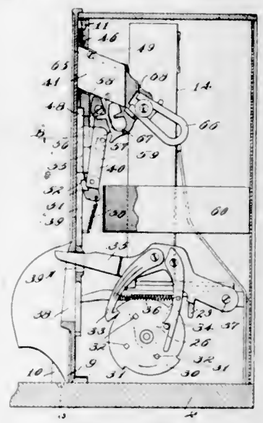
3. In a printing press, a rotatable shaft, a band shiftable thereon, a printing device on the band, a rack adapted to actuate the band, and a pusher adapted to spasmodically hit or miss the rack.

4. In a printing press, a shaft, a band rotatable thereon, a printing device on the band, a rack adapted to actuate the band, a transposing shaft intergeared with the first named shaft, and a pusher mounted on the transposing shaft and adapted to engage the rack.

5. In a printing press, a shaft, a band rotatable and laterally movable thereon, a printing device on the band, a rack adapted to actuate the band, a transposing shaft and a pusher mounted on the transposing shaft and adapted to engage the rack.

[Claims 6 to 10 not printed in the Gazette.]

1,168,652. VENDING-MACHINE. JOHN F. KRCMA, Chicago, Ill. Filed Nov. 2, 1910, Serial No. 590,395. Renewed June 5, 1915. Serial No. 32,312. (Cl. 211—8.)



1. In an ejecting mechanism of the class described a table for supporting the articles to be ejected, a rotatable shaft thereheneath, a plurality of cams thereon, slidable striker plates on said table, a pair of downwardly extending offset arms on each plate, said cams arranged in pairs and in offset relation on said shaft adapted to contact said arms successively to retract said plates, and a spring adapted to impel each plate forwardly when released from said arms to strike a sharp blow on the lowermost article of a pile to eject the same.

2. In a device of the class described a table for supporting the articles to be vended in piles, striker plates on said table adapted to strike a hammer blow on the lowermost article of a pile to discharge the same therefrom, spring fingers adapted to retain the lowermost article from discharge until impelled by said striker plate, depending arms on each of said striker plates arranged in offset relation, a shaft beneath said table, cams thereon, a pair for each striker plate arranged in offset relation, each adapted to contact one of said depending arms in successive order to retract the striker plate, and a spring adapted to impel the striker plate forwardly to strike the article to be discharged.

3. In a device of the class described a table for supporting the articles to be vended in piles, striker plates on said table adapted to strike a hammer blow on the lowermost article of a pile to discharge the same therefrom, means adapted to retain the lowermost article from discharge until impelled by said striker plate, arms on each of said striker plates arranged in offset relation, a cam shaft beneath said table, adapted to actuate said arms in successive order to retract the striker plate, and resilient means adapted to impel the striker plate forwardly to strike the article to be discharged.

4. A device of the class described embracing a supporting table, means supporting a plurality of piles of articles thereon for vending, a plurality of discharge plates adapted to be actuated in successive order to discharge the lowermost article of each pile, a pair of arms adapted to retract each discharge plate, and to retain said plate in retracted position for an instant before releasing the same, and means impelling said plate forwardly to strike said article a sharp blow to eject the same.

5. In a device of the class described a table, a plurality of compartments supported thereon to receive piles of articles to be vended, plates slidable on said table at the bottom of each compartment and normally supporting the pile of articles therein, means retracting said plates in successive order to permit the pile to rest on said table, and a spring adapted to impel said plate forwardly to strike the lowermost article from said pile and permit the pile to rest on said plate.

[Claims 6 to 10 not printed in the Gazette.]

1,168,653. DRESS-FORM. JULIUS A. KUBAL, Brooklyn, N. Y. Filed July 2, 1915. Serial No. 37,647. (Cl. 223—18.)



1. A dress form comprising a stand, a plate carried thereby, a plurality of rails pivoted to the center of the plate, a plurality of overlapping sector-shaped slides having grooved ways that engage the rails, and means for clamping the slides to the rails, the overlapping sector-shaped slides being adapted to form conjointly the cross-sectional outline of the dress.

2. A dress form comprising a base, a tube mounted thereon, a lower rod telescoped by the tube, means for clamping said rod to the tube, a socket mounted on the rod, an upper rod stepped into the socket, a plurality of spreaders carried by the lower rod, a series of contour straps connecting said spreaders, a plurality of spreaders carried by the upper rod, a series of contour straps connecting said last named spreaders, and means for detachably connecting said upper straps to one of the lower spreaders, whereby the dress form is made divisible into a lower and an upper section.

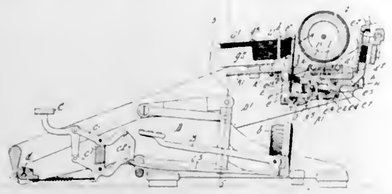
3. A dress form comprising a stand, a spreader carried thereby, a pair of arms pivoted to each side of said spreader, the two members of each pair being adapted to be set at different angles to each other, and flat shoulder blades movable along the arms, whereby the width and length of the shoulders is adjustable.

4. A dress form comprising a stand, a spreader carried thereby, apertured arms secured to the spreader, shoulder blades carried by the arms, and a neck band engaging the arm-apertures.

1,168,654. RIBBON MECHANISM. EMMIT G. LATTA, Syracuse, N. Y. Filed Nov. 21, 1911. Serial No. 661,516. (Cl. 197—151.)

1. In a typewriting machine, the combination of a series of type bars, a universal bar arranged at an elevation above the pivoted ends of the type bars in position to

be actuated by the type bars, a rock shaft in the upper part of the machine having arms which movably support said universal bar, a rock arm on said rock shaft, a ribbon vibrating lever, and an operative connection between said vibrating lever and said rock arm, substantially as set forth.



2. In a typewriting machine, the combination of a series of type bars, a universal bar arranged to be actuated by said type bars, a rock shaft having downwardly extending arms in rear of said universal bar, pivotal connections between said arms and said universal bar, a rearwardly extending arm on said rock shaft, a ribbon vibrating lever pivoted in rear of said universal bar, and an operative connection between said vibrating lever and said rearwardly extending arm, substantially as set forth.

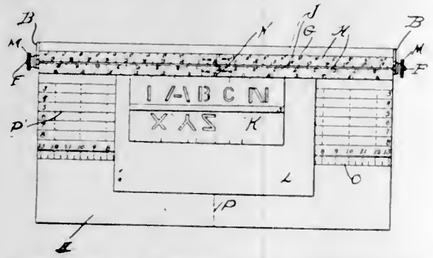
3. In a typewriting machine, the combination of a series of type bars, a universal bar arranged to be actuated by said type bars, a rock shaft having supporting arms in rear of said universal bar, pivotal connections between said arms and said universal bar, a rearwardly extending arm on said rock shaft, a ribbon vibrator, a vibrating lever pivoted at its rear end in rear of said rock shaft and connected at its front end to said vibrator, and an operative connection between the central part of said vibrating lever and said rearwardly projecting arm, substantially as set forth.

4. In a typewriting machine, the combination of a series of type bars, a rock shaft having downwardly extending arms, a universal bar movably supported by said arms in position to be actuated by said type bars, a rearwardly extending arm on said rock shaft, a ribbon vibrator arranged in front of said rock shaft, a vibrating lever pivoted in rear of said rock shaft and extending forwardly under said shaft and connected to said vibrator, and a link connecting said vibrating lever to said rearwardly extending arm, substantially as set forth.

5. In a typewriting machine, the combination of a series of type bars, a universal bar, a rock shaft which movably supports said universal bar in position to be actuated by said type bars, a ribbon vibrating lever, a pair of arms loosely mounted on said rock shaft, links connecting said arms to said vibrating lever at different distances from its fulcrum, and means for operatively connecting either of said arms to said rock shaft, substantially as set forth.

[Claims 6 to 32 not printed in the Gazette.]

1,168,655. STENCILING APPARATUS. HELLMUTH LEHMKUHL, St. Paul, Minn. Filed Nov. 30, 1914. Serial No. 874,894. (Cl. 101—132.)

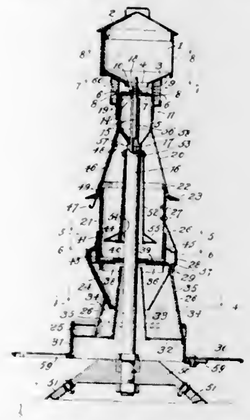


1. In a stenciling apparatus, the combination with a base for supporting material to be stenciled, of a head piece formed with a plurality of substantially flat sides having scales graduated thereon for assisting in positioning the material to be stenciled laterally upon the surface of said base, and supports on said base, in which said head piece is rotatable and movable up and down, whereby said head piece is adapted to be rigidly secured with either of its sides resting down upon and holding said material secured flat upon the base, said head having a series of straight edges against any one of which a stencil may be arranged for positioning the same longitudinally of said base.

2. In a stenciling apparatus, the combination with a base for supporting material to be stenciled, of a head piece formed with a plurality of substantially flat sides having graduated scales along the longitudinal edges of one of its sides for assisting in positioning the material to be stenciled on the surface of said base, and supports on said base in which said head piece is changeably supported end for end and freely movable up and down, whereby said head piece can be positioned with any of its scales on a side facing downwardly along the surface of said base and with its weight resting and holding the material positioned upon said base.

3. In a stenciling apparatus, the combination with a base for supporting material to be stenciled, of a head piece formed with a plurality of substantially flat sides having scales graduated along the longitudinal edges of each of its sides for assisting in positioning the material to be stenciled laterally upon the surface of said base, and supports on said base in which said head piece is rotatable and changeably supported end for end, whereby said head piece can be reversed and rotated with any of its scales facing downwardly along the surface of said base, for the purposes specified.

1,168,656. AUTOMATIC POULTRY FEEDER AND EXERCISER. FRANK LOOMIS, Machias, N. Y. Filed Apr. 24, 1915. Serial No. 23,689. (Cl. 119—54.)



1. An automatic poultry feeder and exerciser, comprising a hopper, feed controlling mechanism for said hopper, and a post or standard for supporting said hopper and its associated parts, said hopper being capable of having an oscillating tiltable movement imparted thereto for operating the feed controlling mechanism.

2. An automatic poultry feeder and exerciser, comprising a hopper provided with a depending neck having lateral discharge openings therein, said hopper open at its bottom to permit discharge of material therefrom to said neck, feed controlling mechanism carried by said neck and constituting the bottom for said hopper, and a standard for supporting said hopper and its associated parts, all of said parts, including the hopper and the feed controlling mechanism, being capable of having an oscillating movement imparted thereto for ejecting the material contained within the hopper through said lateral openings in the neck.

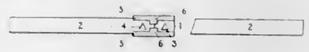
3. An automatic poultry feeder and exerciser comprising a hopper provided with a depending neck having lateral discharge openings therein, said hopper open at its bottom to permit the discharge of material from said hopper to the neck, a disk carried by said neck and having lugs projecting through the lateral openings in said neck, a feed controlling plate supported by said disk and centrally located with respect thereto, said disk and feed controlling plate constituting the bottom for said hopper, and a standard for supporting said hopper and its associated parts, all of said parts including the hopper and the feed controlling mechanism being capable of having an oscillating movement imparted thereto for ejecting the material contained within the hopper, through said lateral openings in the neck.

4. An automatic poultry feeder and exerciser, comprising a hopper provided with a depending neck having lateral discharging openings therein, said hopper open at its bottom to permit the discharge of material from said hopper to the neck, feed controlling mechanism carried by said neck and constituting the bottom for said hopper, a standard for supporting said hopper and its associated parts, and a guard independent of the neck and its associated parts surrounding said neck and projecting at all times below the lateral openings in the neck, said guard being spaced from the neck to permit the discharge of material through the lateral openings.

5. An automatic poultry feeder and exerciser, comprising a standard, a hopper pivotally mounted upon said standard and open at its bottom to permit the discharge of material therefrom, a funnel distributing member arranged in fixed relation with respect to the lower end of said hopper, a plate fixed to the distributing member and constituting the bottom for the hopper, said plate being spaced from the lower edge of said hopper for a sufficient distance to permit the discharge of material from the hopper at the periphery of said bottom plate and into the distributing member, and a trough arranged in fixed relation with respect to the funnel distributing member and adapted to receive the material discharged therefrom, all of said parts excepting the standard being capable of having an oscillating movement imparted thereto for permitting the discharge of material from the hopper into the trough.

[Claims 6 to 9 not printed in the Gazette.]

1,168,657. TAPE-SPLICE. MADISON J. LORRAINE, San Francisco, Cal. Filed Sept. 2, 1913. Serial No. 787,706. (Cl. 24—123.)



1. A means of accurately uniting and splicing, sections of metal tapes consisting of an infolding, perforated splice-sleeve, the sides of the perforations forming shoulders which engage with the edges of rigid tongues punched from and remaining integral with the metal of the tape sections and forced within the perforations to cause said engagement.

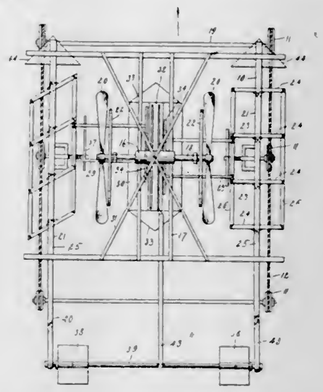
2. A means of accurately uniting and splicing, sections of metal tapes consisting of an infolding splice-sleeve having perforations in its base, said perforated base acting as a die-plate in the formation of rigid tongues from the metal of the tape sections the edges of which tongues engage with the sides of the perforations to secure the tape sections within and to the splice-sleeve.

3. A means of accurately uniting and splicing, sections of metal tapes consisting of an infolding splice-sleeve, the extremities of the tape sections abutting against each other within the sleeve to which they are secured by means of rigid tongues punched from the metal of the tape sections and forced into openings in the sleeve and their edges interlocking with the metal of the sleeve at the sides of the openings.

4. A means of accurately uniting and splicing, sections of metal tapes consisting of an infolding splice-sleeve within which the extremities of the tape sections abut against each other, one side of the splice-sleeve having lateral flanges and the opposite side being perforated and acting as a die-plate in the formation of rigid tongues from the metal of the tape sections, the said tongues being forced within the perforations and their edges engaging with the metal of the sleeve base at the sides of the perforations to secure the sections within and to the splice-sleeve.

5. A means of accurately uniting abutting sections of metal tapes consisting of a splice-sleeve closely infolding the tape sections, the splice-sleeve having perforations which act as dies the sides of which form shoulders; and tongues punched from and remaining integral with the infolded tape sections by means of the dies, and of like size and shape thereto, and forced within the perforations and remaining inclined and rigid therein their edges engaging with and bearing against the shoulders thereof to hold the tape sections fixed within the sleeve and prevent their longitudinal separation under tension.

1,168,658. AEROPLANE. LÁZÁR LUKÁCS, New York, N. Y. Filed Apr. 6, 1914. Serial No. 829,899. (Cl. 244—14.)



1. In an aerial vessel, the combination with a main frame, of glider frames upon the top thereof, a plurality of vertically disposed planes oscillatably mounted upon each longitudinal side thereof and below said glider frames, and a propeller associated with each set of planes, each propeller being located in close proximity to its corresponding set of planes and causing thus an unobstructed passage of air to its planes.

2. In an aerial vessel, the combination with a main frame, of glider frames upon the top thereof, a plurality of vertically disposed planes oscillatably mounted upon each longitudinal side thereof and below said glider frames, a propeller associated with each set of planes, each propeller being located in close proximity to its corresponding set of planes and causing thus an unobstructed passage of air to its planes, and means for shifting said planes around their pivots to vary their exposed surfaces relative to said propellers.

3. In an aerial vessel, the combination with a main frame, of glider frames upon the top thereof, a plurality of vertically disposed planes oscillatably mounted upon each longitudinal side thereof and below said glider frames, a propeller associated with each set of planes, each propeller being located in close proximity to its corresponding set of planes and causing thus an unobstructed passage of air to its planes, and means for independently shifting each set of planes around their pivots to vary their exposed surfaces relative to said propellers.

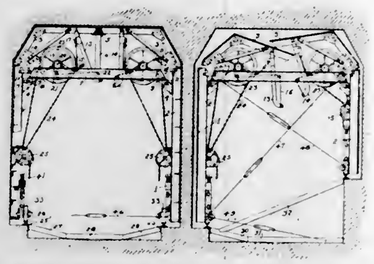
4. In an aerial vessel, the combination with a main frame, of glider frames upon the top thereof, a plurality

of vertically disposed planes oscillatably mounted upon each longitudinal side thereof and below said glider frames, a propeller associated with each set of planes, each propeller being located in close proximity to its corresponding set of planes and causing thus an unobstructed passage of air to its planes, and means for simultaneously shifting each set of said planes around their pivots to vary their exposed surfaces relative to said propellers.

5. In an aerial vessel, the combination with a main frame, of glider frames upon the top thereof, a plurality of vertically disposed planes oscillatably mounted upon each longitudinal side thereof and below said glider frames, and a propeller associated with each set of planes, said propellers rotating in planes parallel to said two sides of said frame, each propeller being located in close proximity to its corresponding set of planes and causing thus an unobstructed passage of air to its planes.

[Claims 6 to 8 not printed in the Gazette.]

1,168,659. COLLAPSIBLE FORM. CHARLES D. MCARTHUR, Pittsburgh, Pa., assignor to The Blaw Collapsible Steel Centering Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 3, 1910. Serial No. 590,566. (Cl. 25—131.6.)



1. In combination in a collapsible mold, a pair of parallel rails, a flanged wheel upon each rail, a side mold member upon each wheel mounted for movement in and out with respect to the wheel upon which it is mounted, and means for moving the members in and out, one side member and its wheel being independent of the other side member and wheel.

2. In combination in a collapsible mold; side members movable inwardly and outwardly; supporting wheels carried by the lower portions of the side members and with respect to which the side members are movable laterally; and means whereby the side members may be moved up and down with respect to the wheels.

3. In combination in a collapsible mold; side members movable inwardly and outwardly; and supporting wheels carried by the lower portions of the side members, and mounted upon such lower portions so that they the side members are movable laterally and vertically with respect thereto.

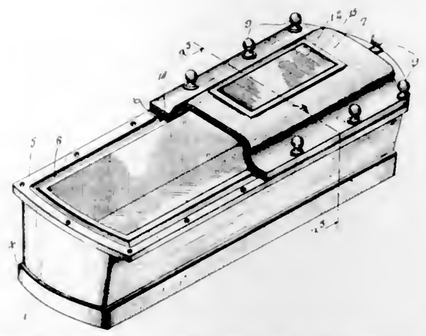
4. In combination in a collapsible mold; side members movable inwardly and outwardly; double flanged supporting wheels carried by the lower portions of the side members; rails upon which the wheels are mounted; and means whereby the side members may be moved in and out with respect to the wheels and rails.

5. In combination in a collapsible mold; side members movable inwardly and outwardly; double flanged supporting wheels carried by the lower portions of the side members; rails upon which the wheels are mounted; and means whereby the side members may be moved vertically and laterally with respect to the wheels and rails.

[Claims 6 to 13 not printed in the Gazette.].

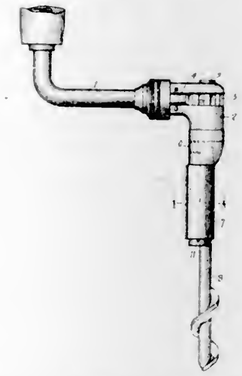
1,168,660. BURIAL-CASKET. ELIJAH D. MCDONALD, Los Angeles, Cal., assignor to McDonald Casket Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 29, 1912. Serial No. 694,011. (Cl. 27—8.)

A casket comprising a body and lid formed of reinforcing woven wire fabric embodied in a cementitious covering, the wires of the fabric being all immovably fastened together at their junctions, said fabric being formed into body and lid baskets, each of said baskets being bent outward at its rim to form a continuous flange, the adjacent



faces of said flanges coöperating with each other, the corner wires and the edge wires of the flanges together forming the entire frame of the casket, and the reinforcing fabric being uniform throughout the walls of the casket.

1,168,661. BRACE AND BIT. NORMAN MCINNES, Cape Gracias, Nicaragua, assignor of one-half to George C. Snyder. Continuation of application Serial No. 735,673, filed Dec. 9, 1912. This application filed Sept. 25, 1914. Serial No. 863,437. (Cl. 145—103.)

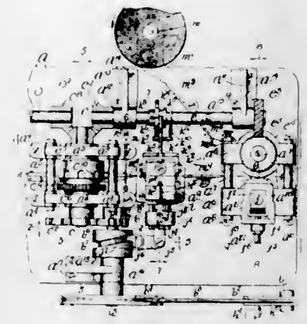


1. A bit-stock for carpenters' braces having a body portion and an extended cylindrical eccentric supporting stem having a lateral base recess continued as a groove lengthwise of the stem for the reception of a bit-shank bent over at the end, said groove being concentric with the axis of rotation of the stock, and a split retaining sleeve embracing said stem and rotatable thereon to open the groove or to close the groove and hold the bit-shank in place against the stem.

2. A bit-holding chuck for carpenters' braces having a stock-engaging shank, a cylindrical bit-holding stem eccentric to the shank and having a lateral base recess continued as a groove lengthwise of the stem for the reception of a bit-shank bent over at the end, said groove being concentric with the shank of the chuck, and a split retaining sleeve embracing said stem and rotatable thereon to open the groove or to close the groove and hold the bit-shank in place against the stem.

1,168,662. MACHINE FOR MAKING GARMENT-SECURING DEVICES. DAVIS MARINSKY, New York, N. Y. Filed June 24, 1915. Serial No. 35,990. (Cl. 112—32.)

1. In a machine of the class described, a frame, means for supporting a fabric strip roll in connection therewith, means for feeding said strip through the machine, means for slitting said strip at intervals, means for inserting fastening devices into the slits thus formed, and means for stitching said strip longitudinally and for securing the fastening devices thereto.



2. In a machine of the class described, a frame, means for supporting a fabric strip roll in connection therewith, means for feeding said strip through the machine step by step, means for forming slits in said strip at each movement thereof, means for inserting fastening devices into said slits, and means for stitching said strip longitudinally and securing the fastening devices thereto.

3. In a machine of the class described, a frame, means for supporting a fabric strip roll in connection therewith, means for feeding said strip through the machine, means for inserting fastening devices thereinto, and means for stitching said strip longitudinally and securing said fastening devices thereto.

4. In a machine of the class described, a frame, means for supporting a fabric strip roll in connection therewith, means for feeding said strip through the machine, means for inserting fastening devices into said strip, means for folding said strip and means for stitching said strip longitudinally and securing the fastening devices thereto.

5. In a machine of the class described, a frame, means for supporting a fabric strip roll in connection therewith, means for feeding said strip through the machine, means for slitting said strip at intervals, means for inserting fastening devices into the slits formed in said strip, means for applying a supplemental strip to the back thereof, and means for stitching said strips longitudinally to secure them together and to secure said fastening devices thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,168,663. METAL-COATED IRON OR STEEL ARTICLE. CLAYTON MARK, Jr., and CLARENCE MARK, Evanston, Ill., assignors to Anson Mark and Clayton Mark, Copartners as The Mark Manufacturing Company, Chicago, Ill. Filed Apr. 22, 1915. Serial No. 23,105. (Cl. 91—70.2.)

1. An iron or steel article, having a coating electropositive to iron, composed of lead, antimony and zinc, the antimony being present in percentages below 8 per cent., the zinc being present in percentages below 6 per cent., and the remainder being lead, the percentage of antimony being at least as great as the percentage of zinc.

2. An iron or steel article, having a coating electropositive to iron, composed of lead, antimony and zinc, the antimony being present between 1 and 8 per cent., the zinc being present in percentages between 1 and 6 per cent., and the remainder being lead, the percentage of antimony being at least as great as the percentage of zinc.

3. An iron or steel article, having a coating electropositive to iron, containing approximately the following percentages of lead, antimony and zinc: lead 92 per cent., antimony 4.5 per cent. and zinc 3.5 per cent.

1,168,664. METHOD OF APPLYING PROTECTIVE COATINGS TO METALLIC ARTICLES. CLAYTON MARK, Jr., and CLARENCE MARK, Evanston, Ill., assignors to Anson Mark and Clayton Mark, Copartners as The Mark Manufacturing Company, Chicago, Ill. Filed Apr. 22, 1915. Serial No. 23,106. (Cl. 91—70.2.)

1. The herein described process of applying protective coatings to metallic articles which consists in introducing the article to be coated into a molten bath consisting of lead, with small percentages of antimony and zinc, the zinc being present substantially up to the point of saturation of the bath, the molten metal being covered by a flux of sal ammoniac containing iron and zinc salts.

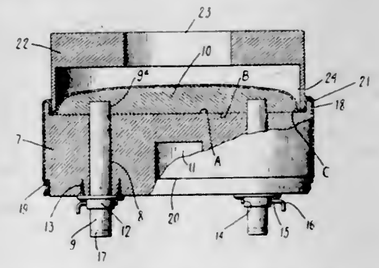
2. The herein described process of applying a protective coating to iron and steel articles which consists in introducing metallic articles into a bath, the temeprature of which is between 750° and 950° F., and being protected by a flux of sal ammoniac containing iron and zinc salts, the said bath containing mainly lead but having alloyed with it antimony and zinc, there being enough zinc to render the coating obtained from said bath electro-positive to iron.

3. The herein described process of applying protective coatings to metallic articles which consists in introducing the metallic articles to be coated into a bath of lead containing antimony and zinc, heated to between 750° and 950° F., and adding more zinc periodically so as to maintain the proportion of zinc in the alloy below six per cent. but above an amount necessary to render the coating formed from the bath electro-positive to iron.

4. The herein described process of applying protective coatings to metallic articles which consists in introducing metallic articles into a lead bath, containing antimony and zinc, covered with a flux of sal ammoniac, said flux containing zinc and iron salts, the bath forming upon the surface of the article a zinc-iron alloy and forming upon the zinc-iron alloy an alloy of lead, antimony and zinc.

5. A process of coating iron articles consisting in immersing then in a molten lead bath, said lead bath containing antimony under eight per cent. and zinc substantially up to the point of saturation of the bath at the operating temperature, the maintenance of the zinc content being provided by the periodic addition of zinc in such quantity that a portion of it floats upon the surface and thus furnishes an indication as to the condition of the bath.

1,168,665. HAT-FORMER. PIETRO V. MARTINO, New York, N. Y. Filed Oct. 15, 1914. Serial No. 866,744. (Cl. 223—21.)



1. A two-piece hat block comprising a body portion and a vertically adjustable head portion adapted to coöperate therewith to form a telescopic hat crown.

2. A hat block comprising a body portion and a head portion vertically adjustable relatively thereto and adapted to coöperate therewith to form a fabric guide and means arranged to coöperate with said body and head portions to produce a telescopic hat crown.

3. A hat block comprising a body portion and a head piece mounted thereon and vertically adjustable relatively thereto, means carried by said body portion to coöperate

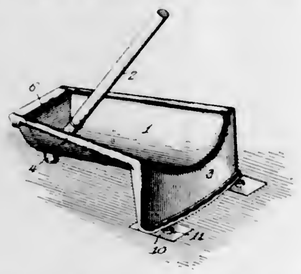
with said head piece to provide a die for a hat forming fabric and means normally independent of said block and arranged to coöperate therewith to produce a telescopic hat crown.

4. A hat block comprising a body portion and a head piece mounted thereon, guide ways formed in said body portion, rods rigidly secured to said head piece and movable within said guide ways to adjust said head piece relatively to said body portion and means for engagement with said rods to lock said head piece against movement.

5. A hat block comprising a body portion having an upwardly directed flange surrounding the upper edge thereof, a plurality of guide-ways formed in said body portion, a head piece adapted for seating upon said body portion to lie within said flange, rods rigidly secured to said head piece and movable in one direction within said guide-ways to raise said head piece from engagement with said body portion, whereby the work may be accurately positioned on the block for manipulation, and in the opposite direction to reseat, said head piece on said body portion upon the positioning of the work, and means for operating upon the work to shape the same relatively to the coöperating parts of said block.

[Claims 6 to 11 not printed in the Gazette.]

1,168,666. VAULTING-TROUGH. PHILIP S. MEDART, St. Louis, Mo., assignor to Fred Medart Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 22, 1915. Serial No. 51,961. (Cl. 46—69.)



1. A vaulting trough comprising, an open top member formed with a curved bottom web and having a transverse head at its rear end, substantially as set forth.

2. A vaulting trough comprising, an open top member having an inclined bottom and a transverse head at its rear end, substantially as set forth.

3. A vaulting trough comprising an open top member having a transverse head at its rear end, the sides of said member having a flare toward the forward end, substantially as set forth.

4. A vaulting trough comprising an open top member having an inclined bottom and a transverse head at its rear end, the sides of said member having a flare toward the forward end, substantially as set forth.

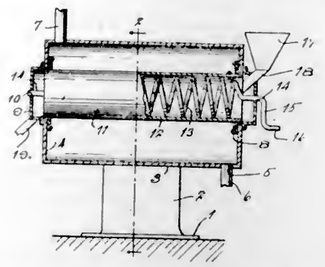
5. A vaulting trough comprising, an open top member having a transverse buffer plate hinged at its upper end to the rear end of said trough, and an elastic bumper supporting said buffer plate, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,168,667. GRAIN DRYING AND STERILIZING DEVICE. HENRY MONROE, Sabetha, Kans. Filed Oct. 31, 1914. Serial No. 869,605. (Cl. 34—5.)

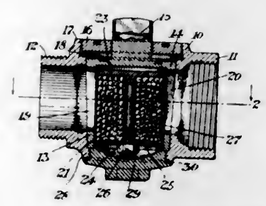
1. A drier comprising an outer drum, an inner drum rotatably mounted within the outer drum, a coil within the inner drum, extensions on the coil journaled in the ends of the outer drum and a crank at the outer end of one of the extensions to provide a means for rotating the inner drum.

2. A drier and sterilizer comprising an outer cylindrical drum, an inner cylindrical drum rotatably mounted in the outer drum, a coil extending longitudinally through the inner drum, and forming a support therefor, the ends of the coil being journaled in the ends of the outer drum, the said coil also forming an agitator to keep the material



which is being dried or sterilized in constant motion, and a crank formed at one end of the coil to provide a means for rotation of the inner drum.

1,168,668. CONTROL AND SHUT-OFF VALVE. HARLAN D. MORGAN, Hasbrouck Heights, N. J., assignor to Flushovalve Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1914. Serial No. 868,957. (Cl. 210—7.)



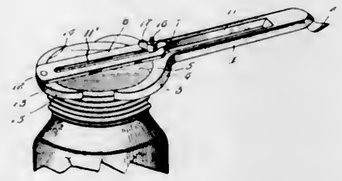
1. A control and shut off valve comprising a casing, a tapered plug valve with ports in opposite sides thereof within said casing, a perforated cylindrical shell fitting within the said plug valve, a head fixed in the end of the said cylindrical shell adjacent the larger end of the said plug valve, an adjustable head in the opposite end of the said cylindrical shell, a granular material within the said cylindrical shell, means for determining the position of the said adjustable head in the end of the said cylindrical shell to determine the density of the granular material therein, devices associated with the casing at the larger end of the said plug valve for maintaining the same in position therein, and a cap removably connected to the said casing at the smaller end of the said plug valve to gain access to the said adjustable head and said means for determining the position of the same.

2. A control and shut off valve comprising a casing, a tapered plug valve with ports therein fitted in a socket provided therefor in the said casing, a stem extending from the larger end of the said tapered plug valve by which the same is turned, a ring surrounding the said stem and removably connected to the said casing and maintaining the said plug valve in position in the socket therein, a perforated cylindrical shell fitted within the said plug valve, a head fixed in the end of the said cylindrical shell adjacent the larger end of the said plug valve, a movable head in the opposite end of the said cylindrical shell, a rod secured in the fixed head and extending through an aperture provided therefor in the said movable head, a granular material filling the said cylindrical shell, means adjustable to position on the said rod for determining the position of the said movable head, and a cap removably connected to the casing at the smaller end of the said plug valve in order to gain access to the said movable head and said means on the said rod for adjusting the same to position.

3. A control and shut off valve comprising a casing having a socket therein, a hollow plug valve having oppositely disposed ports in the walls thereof, and adapted to fit and turn within the socket in the casing, a perforated shell fitting within the said hollow plug valve, a head secured within the shell at one end thereof, a granular material filling the said shell, and a head adjustable within the shell at the opposite end thereof for regulating the compactness of the said granular material therein.

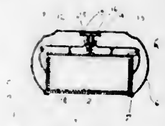
4. A control and shut off valve comprising a casing having inlet and outlet connections and a socket with openings at the opposite sides of the said casing, a hollow plug valve having oppositely disposed ports in the walls thereof and adapted to fit and turn within the said socket, a cover closing one of the openings in the said casing, a stem connected to the hollow plug valve and extending through the said cover, a perforated shell fitting within the said hollow plug valve, a head secured within the inner end thereof, a granular material filling the said perforated shell, a head adjustable within the said shell at the opposite end thereof and adapted to regulate the compactness of the said granular material, and a plug fitting within the opening at the opposite side of this casing and adapted to maintain the said plug valve and perforated shell in their relative positions therein.

1,168,669. JAR-WRENCH. ISRAEL H. MURDICK and CHARLES J. GAREY, Benton Harbor, Mich. Filed May 24, 1912, Serial No. 699,451. Renewed May 28, 1915. Serial No. 31,084. (Cl. 65—26.)



A tool comprising a shank having a longitudinal slot therein, a fixed jaw formed on the shank and disposed in advance of one end of the slot, a guide element rising from said jaw, a member slidable on said shank and slotted longitudinally to receive said guide element, a jaw pivoted to one end of said member, the opposite end of said member being reduced and extended downwardly through said slot of the shank, and said reduced portion being of an increased thickness below the plane of the shank to retain said slidable member operatively associated with said shank for the purpose specified.

1,168,670. MATCH-BOX. STEVE PERSE and ROBERT MAUSSER, East Helena, Mont. Filed Dec. 17, 1914. Serial No. 877,750. (Cl. 206—33.)



1. In a device of the class described, a casing; a receptacle slidable within the casing; spring means for advancing the receptacle; a cover secured to the casing and spaced from the top and the sides of the casing, the cover having an opening; a pair of levers fulcrumed intermediate their ends on the casing and located within the cover, the inner ends of the levers lying above the top of the casing and the outer ends of the levers extending along the sides of the casing, the casing and the receptacle being provided with openings in which the outer ends of the levers are received to hold the receptacle within the casing; a pin projecting from the casing; a push button slidable on the pin and adapted to engage the inner ends of the levers, the push button being located in alinement with the opening in the cover; a spring surrounding the pin and abutting against the button and the casing; and spring means for tilting the levers to cause the outer ends thereof to engage in the openings in the casing and the receptacle.

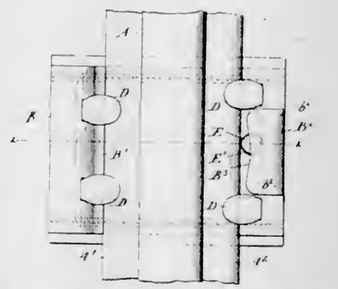
2. In a device of the class described, a casing; a receptacle slidable in the casing; spring means for advancing the receptacle; a cover secured to the casing and spaced from the top and the sides of the casing, the cover having an opening; a lever fulcrumed intermediate its ends on the casing, the inner end of the lever lying above the top of the casing and the outer end of the lever lying along the side of the casing, the casing and the receptacle being provided with openings in which the inner end of the lever engages; a push button slidably supported below the opening in the cover and engaging the inner end of the lever; and spring means for holding the outer end of the lever in the openings in the casing and the receptacle.

3. In a device of the class described, a casing; a receptacle slidable in the casing; a cover secured to the casing and spaced from the top and the sides of the casing, the cover having an opening in its top; a pair of oppositely disposed casing-carried locking members engaged at their outer ends with the sides of the casing and the receptacle; and means housed beneath the cover and accessible through the opening therein for actuating both locking members at once to effect a release of the locking members from the receptacle.

4. In a device of the class described, a casing; a receptacle slidable in the casing; spring means for advancing the receptacle; a cover secured to the casing and spaced from the top and the sides of the casing, the cover having an opening in its top; and a lever fulcrumed intermediate its ends on the casing, the inner end of the lever extending beneath the cover and above the top of the casing and below the opening, the outer end of the lever being extended along the side of the casing and being detachably interengaged with the casing and the receptacle.

5. In a device of the class described, a casing; a cover assembled therewith; a receptacle slidable in the casing; spring means for advancing the receptacle; two opposed movable locking devices within the cover and engaging the receptacle at opposed points; and a single movable means housed within the cover for actuating both locking devices at once to effect a release of the receptacle.

1,168,671. ANTICREEPING DEVICE FOR RAILWAY-RAILS. EDMUND B. POWERS, New York, N. Y., assignor to Empire Railway Appliance Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 24, 1914. Serial No. 878,966. (Cl. 238—2.)

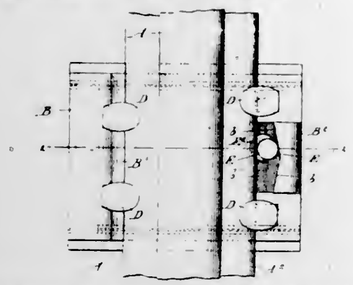


1. In a device of the character set forth, a tie-plate adapted to support a rail, a lug on said plate having an angular face adjacent to such rail, a cylindrical flangeless roller in the angular space between said angular face and rail and engaging the base-flange of the rail, and a lip on said lug constructed to overhang said angular space and roller and prevent vertical movement of the latter.

2. In a device of the character set forth, a tie-plate adapted to support a rail, a lug on said plate having two

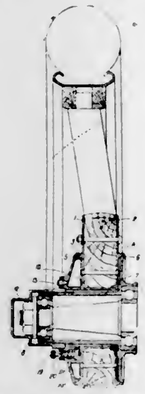
angular faces adjacent to such rail and forming an obtuse angle one with the other, a cylindrical flangeless roller in the angular space between said angular faces and rail and engaging the base-flange of the rail, and a lip on said lug constructed to overhang said angular space and roller and prevent vertical movement of the latter.

1,168,672. ANTICREEPING DEVICE FOR RAILWAY-RAILS. EDMUND B. POWERS, New York, N. Y., assignor to Empire Railway Appliance Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 22, 1915. Serial No. 3,679. (Cl. 238—2.)



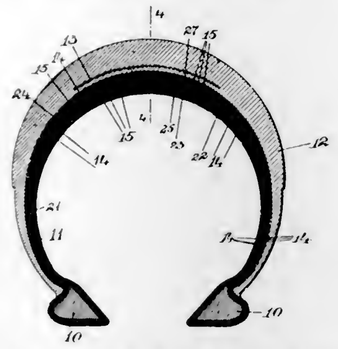
In a device of the character set forth, a tie-plate adapted to support a rail and having a recess in its upper face, a lug on said plate having an angular face adjacent to such rail, a rolling member having a body portion received in the angular space between said angular face and rail and engaging said lug and the base-flange of such rail, and having a flange projecting from one side only of said body portion, said flange received in said recess and extending beneath the base-flange of the rail to engage the latter and prevent vertical movement of said rolling member.

1,168,673. DETACHABLE WHEEL. LOUIS RENAULT, Billancourt, France. Filed Jan. 29, 1913. Serial No. 744,886. (Cl. 21—31.)



The combination with the hub of a wheel, of a detachable wheel proper having a central hub opening, said wheel provided on its opposite faces with circularly-disposed internally-beveled seating projections of equal diameter and disposed radially distant from said hub opening, said hub provided with a circularly-disposed beveled surface of a relatively large diameter compared to the diameter of the hub and upon which the projection on one side of the wheel is adapted to seat, a disk-like detachable member associated with said hub provided with a beveled surface of relatively large diameter compared to the diameter of the hub and upon which the projection on the opposite side of the wheel is adapted to seat, and a cap to hold said member in position, said member being independent of said cap and adapted to be positioned before the cap is positioned.

1,168,674. TIRE. GEORGE J. REUTER, Newark, N. J., assignor, by direct and mesne assignments, of five-twelfths to Abraham M. Herman, West Orange, N. J., and three-twelfths to Louis R. Freund, Newark, N. J. Filed Apr. 14, 1915. Serial No. 21,320. (Cl. 152—18.)



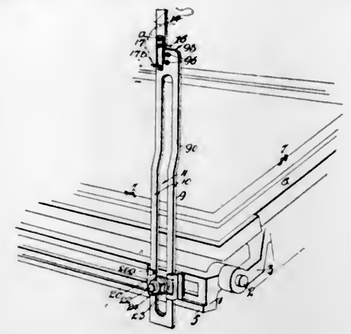
1. In a tire casing, a carcass forming the innermost portion and foundation of the casing, said carcass comprising a plurality of layers of fabric extending to the edges of the casing and a plurality of layers of rubber intermediate the layers of fabric with a layer of thin flexible substantially rectangular metallic plates embedded therein, said plates being apertured to permit the rubber to extend therethrough and the plates in separate layers breaking joints with one another, and an outer envelop comprising a tread portion secured directly to the carcass, substantially as set forth.

2. In a tire casing, a carcass forming the innermost portion and foundation of the casing, said carcass comprising a plurality of layers of fabric, layers of rubber therebetween and a layer of thin spring metallic plates in said rubber layers, said plates being spaced apart from one another and apertured, the rubber in which they are embedded passing through said apertures and between said plates, said plates being several times as long as they are wide and arranged with their lesser dimension transversely of the tire, and an outer rubber envelop comprising a tread portion secured directly to the carcass, substantially as set forth.

3. In a tire casing, a carcass making up the innermost portion of the casing and comprising a plurality of layers of fabric extending to the edges of the casing and layers of rubber therebetween, a plurality of said layers of rubber being thickened at the outer or tread portion and having separated metallic plates vulcanized therein, the plates being elongated longitudinally of the casing and being perforated and the rubber in which they are embedded extending through the perforations to form holding rivets, the carcass so made up being thickest at the tread portion and thinner at the sides and toward the edges, and an envelop comprising the tread of the tire vulcanized direct to said carcass, substantially as set forth.

1,168,675. GRIPPER FOR PRINTING-PRESSES. HENRY C. RICHARDSON, Richmond, Va., assignor of one-half to William C. Noland, Richmond, Va. Filed Aug. 11, 1914, Serial No. 856,176. Renewed Dec. 10, 1915. Serial No. 66,222. (Cl. 101—115.)

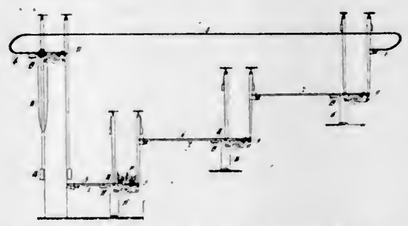
1. A gripper for printing presses consisting of a bar, a carriage in which the said bar is longitudinally adjustable, means for adjustably securing said bar and the said carriage to the gripper bar of a printing press, an extension piece hinged to the free end of the bar, the said bar extending beyond the hinged joint and having a plurality of latch recesses and a spring latch carried by the said extension piece having a lug to enter either of the said recesses to hold said extension piece in any of its different adjustments.



2. In a printing press, the combination with the platen and an oscillating gripper bar that coöperates with the said platen; of a gripper, a carriage longitudinally slidable on said gripper bar, the said gripper comprising a flat member and projected from the carriage to lie flatwise over the platen and a single means for adjustably securing said gripper member and the carriage to the gripper bar, that portion of the gripper member that moves over the platen being bent in two planes, one of which is below the top face of the carriage to which the member is secured.

3. A gripper for printing presses consisting of a bar, a carriage on which the said bar is longitudinally adjustable, means for adjustably securing the said bar and the said carriage to the gripper bar of a printing press, the outer end of the said bar having a quadrant shaped recess on the inner edge thereof, an extension that includes a semi-circular shaped ear having a shouldered portion that forms a stop for engaging the outer edge of the gripper bar to hold the extension swung up lengthwise of the said bar, the said semi-circular shaped ear of the extension being pivotally mounted in the aforesaid recess of the bar, said bar having a plurality of latch recesses and a spring latch carried by the extension and having a lug for engaging either of the latch recesses for holding the extension piece in any of its different adjustments.

1,168,676. RAILWAY SYSTEM. JOHN ALEXANDER ROMER, London, England, assignor to Bernarr Macfadden, New York, N. Y. Filed May 19, 1915. Serial No. 29,072. (Cl. 104—62.)



1. In a railway system, a pair of floors; a platform; coöperating tracks and contact rails on said floors and platform; a car adapted to receive current from said rails and to be propelled thereby on said tracks; and means associated with the platform and adapted to be operated by the car to move said platform from one floor to the other.

2. In a railway system, the combination of a structure having a plurality of floors; tracks on said floors; cars on said tracks; lifts having tracks thereon and adapted to carry cars from the tracks of one floor to the tracks of the floor next above; a lowering device adapted to transfer cars from the track of the top floor to the track of the bottom floor; a motor for driving said car; and means operated by the drive wheel of the car for operating the lift.

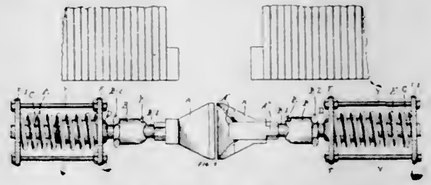
3. In a railway system, the combination of a structure having a plurality of floors; tracks on said floors; cars on said tracks; lifts having tracks thereon and adapted to carry cars from the tracks of one floor to the tracks of the floor next above; a lowering device adapted to transfer cars from the track of the top floor to the track of the bottom floor; a motor for driving said car; and means operated by the drive wheel of the car for operating the lift and the lowering device.

4. In a railway system, the combination of a structure having a plurality of floors; a car; tracks on said floors for said car; transferring means for transferring cars from the track of one floor to the track of the adjacent floor; means for transferring cars between the tracks of the floors most distant from each other; means for rotating a wheel of the car to drive the car; and means operated by said wheel to operate the transferring means.

5. In a railway system, the combination of sets of stationary tracks at different levels; a platform having a track adapted to coöperate with the stationary tracks; a car on said tracks; brake means for moving the platform from one level to the other; a friction wheel for operating said means and adapted to be rotated by the drive wheel of the car; holding means for holding the drive wheel off the track rail and in contact with the friction wheel; a brake for the moving means; means for automatically releasing the holding means and applying the brake when a car is carried to a track onto which it is to pass; and means for rendering inoperative said last named means when the car leaves the platform.

[Claim 6 not printed in the Gazette.]

1,168,677. AUTOMATIC TRAIN-PIPE COUPLING. GEORGE G. ROSS, HARRY E. ROSS, and LEO D. ROSS, Greensburg, Pa. Filed Mar. 8, 1915. Serial No. 12,833. (Cl. 188—13.)



1. An interlocking automatic train pipe coupling head of the impact type comprising in combination, an automatic coupling head, an oblique movable conduit joint, a parallel shiftable conduit joint, said automatic coupling head having an annular passage there-through, a flared guiding hood extending in an angular direction from said automatic coupling head, capable of guiding a beveled tongue, of adjunctive automatic coupling head into a socket, a beveled tongue capable of engaging a flared guiding hood of an adjunctive automatic coupling head, an automatic train pipe coupling head capable of interpenetration with an adjunctive automatic train pipe coupling head, an automatic coupling head capable of slidable engagement with an adjunctive automatic coupling head.

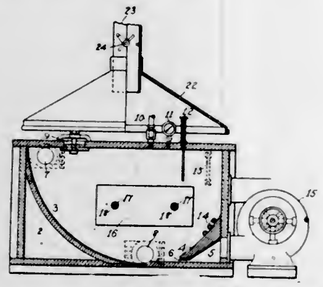
2. An interlocking automatic train pipe coupling head of the impact type comprising in combination, an adjunctive automatic coupling head, an oblique movable conduit joint, a parallel movable conduit joint, said automatic coupling head having an annular passage there-through, flared guiding hood extending in an angular direction from said automatic coupling head, capable of guiding a beveled tongue of adjunctive automatic coupling head into a socket, a beveled tongue capable of engaging a flared guiding hood of an adjunctive automatic coupling head, an automatic train pipe coupling head capable of inter-

penetration with an adjunctive automatic train pipe coupling head, an automatic coupling head capable of slidable engagement with an adjunctive automatic coupling head, an interlocking automatic train pipe coupling head of the character described and means provided for permitting to said interlocking automatic train pipe coupling head an oblique motion.

3. An interlocking automatic train pipe coupling head of the impact type comprising in combination, an automatic coupling head, an oblique movable conduit joint, a parallel shiftable conduit joint, said automatic coupling head having an annular passage there-through, a flared guiding hood extending in an angular direction from said automatic coupling head, capable of guiding a beveled tongue of an adjunctive automatic coupling head into a socket, a beveled tongue capable of engaging a flared guiding hood of an adjunctive automatic coupling head, an automatic train pipe coupling head capable of interpenetration with an adjunctive automatic train pipe coupling head, an automatic coupling head capable of slidable engagement with an adjunctive automatic coupling head, an automatic train pipe coupling of the character described and means for permitting to an automatic train pipe coupling head a reciprocating motion.

4. An interlocking automatic train pipe coupling of the impact type, an automatic coupling head, said automatic coupling head having an annular passage there-through, a flared guiding hood extending in an angular direction from said automatic coupling head, capable of guiding a beveled tongue of an adjunctive automatic coupling head into a socket, a beveled tongue capable of engaging a flared guiding hood of an adjunctive automatic coupling head, an automatic train pipe coupling head capable of interpenetration with an adjunctive automatic train pipe coupling head, an automatic coupling capable of slidable engagement with an adjunctive automatic coupling head, an interlocking automatic train pipe coupling head of the character described and means provided for making connection with fluid conduit lines provided with standard hand couplings to the automatic coupling head described.

1,168,678. ORE-REDUCING PROCESS. LEON ST. D. ROYLANCE, San Francisco, Cal. Filed Jan. 26, 1915. Serial No. 4,474. (Cl. 83—67.)

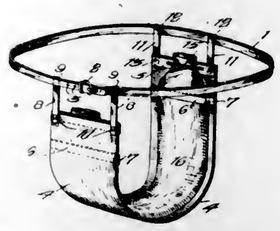


1. In an ore reducing process, disintegrating said ore by subjecting the same to electro-chemical action and at the same time scouring said ore, neutralizing the pulp so obtained, and then subjecting said pulp to amalgamation.

2. In an ore reducing process, disintegrating said ore by subjecting the same to electro-chemical action and at the same time scouring said ore, and then subjecting said pulp to amalgamation.

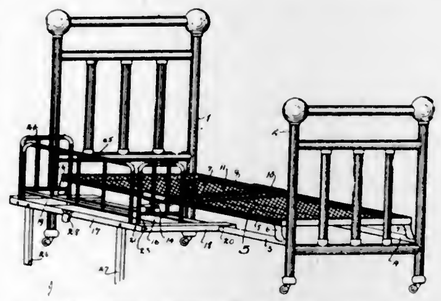
1,168,679. NAPKIN-HOLDER. CHARLES HAYES RUTHERFORD, Jerome, Ariz. Filed Aug. 20, 1914. Serial No. 857,691. (Cl. 128—5.)

A device of the character specified, comprising a strip of rubber of approximately rectangular outline, reinforcing straps secured transversely of the ends of the strip, a pair of tapes connected to the strip at each strap, the members of each pair being connected at one end and free at the other end, and adapted to be tied together to hold a pad in place on the strip, holding straps arranged transversely of the strip near the ends thereof, each strap having its ends secured to the strip at the opposite side edges thereof, and having the body portion thereof free from the strip, a belt, a plurality of pairs of tabs connected



with the belt, the members of each pair being spaced apart from each other and from the members of the other pair to register with the corners of one end of the strip, and coöperating releasable fasteners in connection with the tabs and the corners of the strip for connecting the strip to the tabs.

1,168,680. AUXILIARY BED. BENJAMIN SCHECHTER, New York, N. Y. Filed Jan. 22, 1915. Serial No. 3,755. (Cl. 5—58.)



1. An auxiliary bed having end and side frames in combination with a slotted bar secured to the springs of an ordinary bed, and a resilient and sliding connection between said slotted bar and said auxiliary bed for the purpose set forth.

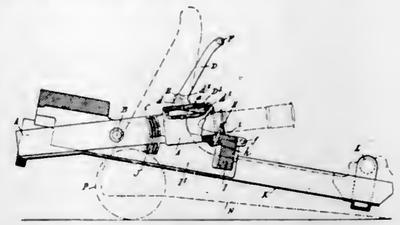
2. An auxiliary bed having side and end bars, slots in said end bars, and means for depressing said slots for engagement with the side bars of a bed in combination with a slotted bar adjustably engaged with the springs of a bed and adapted to support said auxiliary bed when in a non-operative position.

3. An auxiliary bed having in combination, end bars provided with slots, a slidable support, and a resilient means for engaging said bars upon the side bar of a bed as and for the purpose set forth.

4. An auxiliary bed having in combination with an ordinary bed a slotted cross-bar adjustably secured thereto, a side bar, a spring depressed slidable connection between said adjustable bar and said auxiliary bed, and means for disconnecting said auxiliary bed, allowing it to be differently positioned in relation to said bed as and for the purpose set forth.

1,168,681. ORDNANCE. EUGÈNE SCHNEIDER, Paris, France. Filed Apr. 13, 1915. Serial No. 21,162. (Cl. 89—37.)

1. The combination of a support, a breech-block mounted on the support, a barrel normally registering at its rear with the breech-blocks, and two oppositely disposed horizontal trunnions on the barrel engaging the support, the said support and barrel being provided with two oppositely disposed sets of interengaging curved projections concentric with the trunnions and remote from and independent of the breech-block for relieving the trunnions and the breech-block from stress resulting from reaction on the barrel during firing.



2. The combination with the gun carriage, of a cradle slidable longitudinally along the carriage, a breech-block mounted on the cradle, a barrel normally registering at its rear with the breech-block, and two oppositely disposed horizontal trunnions on the barrel engaging the support, the said support and barrel being provided with two oppositely disposed sets of interengaging curved projections concentric with the trunnions and remote from and independent of the breech-block for relieving the trunnions and the breech-block from stress resulting from reaction on the barrel during firing.

3. The combination of a support, a breech-block mounted on the support, a barrel normally registering at its rear with the breech-block, two oppositely disposed horizontal trunnions on the barrel engaging the support, a manually operable mechanism connected with the support and the barrel to move the barrel on its trunnions and to lock it in firing position, and two oppositely disposed sets of interengaging curved projections formed respectively on the support and the barrel and concentric with the trunnions and remote from and independent of the breech-block for the relieving of the trunnions and the breech-block from the stress of firing, the said projections permitting free movement of the barrel indefinitely in either direction, the extent of movement being entirely determined by the said manually operable mechanism.

4. The combination of a support, a breech block rigidly mounted on the support, a barrel pivotally mounted on the support and normally registering at its rear with the breech block, the barrel being formed with a longitudinal groove, a bell-lever horizontally pivoted to the support and having one arm manually operable, a pin on the other arm of the lever slidable in the groove, the lever serving when the first said arm is manually moved to move the barrel on its pivot and serving when the first said arm is perpendicular to the groove to lock the barrel against accidental movement by forces applied externally to the lever, and means carried by the breech block and movable into engagement with the lever to lock it in position with the barrel registering with the breech block.

5. The combination of a support, a breech block rigidly mounted on the support, a barrel pivotally mounted on the support and normally registering at its rear with the breech block, the barrel being formed with a longitudinal groove, a bell-lever horizontally pivoted to the support and having one arm manually operable, and a pin on the other arm of the lever slidable in the groove, the lever serving when the first said arm is manually moved to move the barrel on its pivot and serving when the first said arm is perpendicular to the groove to lock the barrel against accidental movement by forces applied externally to the lever, and a stop for engaging the lever to limit the movement of the barrel to loading position.

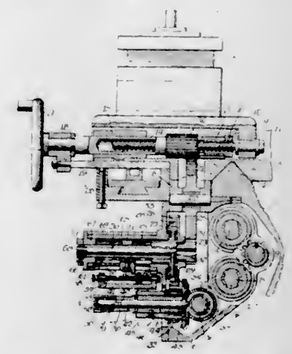
1,168,682. WRENCH. MAREK SEPREC, STEVEN SEPREC, and JOSEPH A. NOVÁK, Clarence, Pa. Filed Aug. 24, 1915. Serial No. 47,033. (Cl. 81—130.)

1. A wrench including a housing, a fixed inner jaw carried thereby, the front wall of said housing being open, an inner connecting strap for said housing, a shank slidably mounted within said housing, a jaw carried by the outer end of said shank coöperating with the inner jaw, rack teeth formed on the inner face of said shank, a pair of opposite lugs carried by the side walls of said housing, a transverse pin journaled in said lugs, a handle including a shank pivoted on said pin, a pair of spaced and rearwardly-directed shoulders carried by said shank on the inner and outer sides of said pivot, teeth formed on the faces of said shoulders opposing the shank, said toothed shoulders being arranged for free disengagement from the shank when the handle is in central position, and a removable inner jaw plate mounted on the inner jaw and retained in position thereon by the sliding shank, the said handle adapted to be moved in opposite directions to cause the teeth of the handle shank shoulders to selectively engage the teeth on the outer sliding jaw shank to lock the jaws from movement toward or from each other.



2. A wrench including a fixed inner jaw, a housing for supporting the same, an outer jaw including a toothed shank slidably mounted in the housing with the outer jaw in coöperative position with respect to the inner jaw, a handle pivoted within the housing and having spaced toothed shoulders on the inner and outer sides of the pivot adapted to selectively engage the teeth of the shank to prevent movement of the outer jaw in an inward or outward direction, said toothed shoulders being arranged for disengagement from the shank when the handle is in central position.

1,168,683. CARRIAGE-CROSS-FEED STOP MECHANISM FOR LATHES. ERNEST R. SEWARD, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a Corporation of Wisconsin. Filed July 28, 1915. Serial No. 42,328. (Cl. 82—24.)



1. In a lathe, the combination of a cross slide, a screw feed therefor, a driven shaft, a gear train, including a

pair of separable gears, intermediate said shaft and screw feed, a catch mechanism normally holding said separable gears in mesh, and a trip mechanism for releasing said catch mechanism and including an adjustable trip block, a trip dog coöperating with said trip block to release said catch mechanism, and mechanism for causing said trip dog to travel toward said trip block at a reduced speed relatively to the speed of said cross slide screw feed.

2. In a lathe, the combination of a cross slide, a screw feed therefor, a driven shaft, a gear train, including a pair of separable gears, intermediate said shaft and screw feed, a catch mechanism normally holding said separable gears in mesh, and a trip mechanism for releasing said catch mechanism and including an adjustable trip block, a revolving threaded shaft driven by a member of said gear train, a traveler nut on said threaded shaft, means holding said nut against rotation, and a trip dog carried by said nut and coöperating with said trip block to release said catch mechanism.

3. In a lathe, the combination of a cross slide, a screw feed therefor, a driven shaft, a gear train, including a pair of separable gears, intermediate said shaft and screw feed, a pivoted bracket carrying one of said separable gears, a catch member carried by said bracket, a lever, one arm of which carries a coöperating catch member serving to hold said bracket raised and said separable gears in mesh, an adjustable trip block carried by the other arm of said lever, a trip dog coöperating with said trip block to rock said lever and separate said catch members, and mechanism for causing said trip dog to travel toward said trip block at a speed bearing a fixed ratio to the speed of said cross slide screw feed.

4. In a lathe, the combination of a cross slide, a screw feed therefor, a driven shaft, a gear train, including a pair of separable gears, intermediate said shaft and screw feed, a pivoted bracket carrying one of said separable gears, a catch member carried by said bracket, a lever, one arm of which carries a coöperating catch member serving to hold said bracket raised and said separable gears in mesh, an adjustable trip block carried by the other arm of said lever, a revolving threaded shaft driven by a member of said gear train, a traveler nut on said threaded shaft, means holding said nut against rotation, and a trip dog carried by said nut and coöperating with said trip block to rock said lever and separate said catch members.

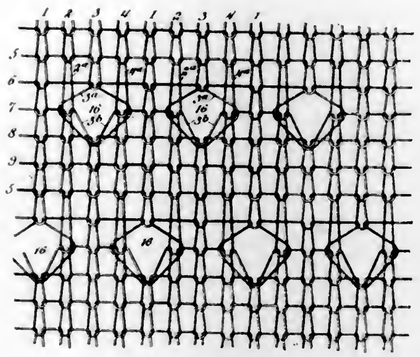
5. In a lathe, the combination of a cross slide, a screw feed therefor, a driven shaft, a gear train, including a pair of separable gears, intermediate said shaft and screw feed, a catch mechanism normally holding said separable gears in mesh, and trip mechanism for releasing said catch mechanism and including a plurality of independently adjustable trip blocks, a trip dog, and selective means for causing said dog to engage any one of said blocks whereby to release said catch mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,168,684. OPEN-MESH KNITTED FABRIC. BERNARD MICHEAL SHEA, Amsterdam, N. Y. Filed Oct. 3, 1914. Serial No. 864,921. (Cl. 66—4.)

1. An open-mesh knitted fabric having the yarn of predetermined courses formed at predetermined intervals into symmetrically elongated and spread loops each containing substantially as much yarn as would form three adjacent normal loops of the course, and each elongated and spread loop engaging adjacent loops of the next course and a corresponding loop of the second course in order therefrom and also being free from engagement with any loops of the course of which is is formed.

2. An open-mesh knitted fabric having the yarn of predetermined courses formed at predetermined intervals into symmetrically elongated and spread loops each containing substantially as much yarn as would form three adjacent normal loops of the same course, each of the elongated and spread loops engaging a corresponding loop of the same series in the second course therefrom and also the loop of the same series of the preceding course to the one containing the expanded loop, with those loops of the last-named course on opposite sides of the series containing the expanded loop prolonged beyond the course containing the expanded loop into engagement with the loops of the next course in order beyond that containing the expanded loop.



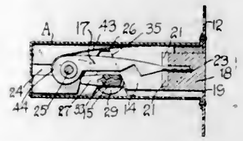
3. An open-mesh knitted fabric having courses of loops of like size arranged in series, with certain loops of predetermined courses each prolonged beyond the next course in order to the second course therefrom and there engaging the loop of the same series in said second course, and also laterally expanded into engagement with the loops of the series on opposite sides of the series in which the expanded loop is formed, with the loops of the preceding course on opposite sides of the series in which the expanded loop is formed prolonged beyond the course containing the expanded loop into engagement with the expanded loop and with the like loops of the next course in order to that containing the expanded loop.

4. An open-mesh knitted fabric composed of symmetrically spaced courses of symmetrically spaced loops of like size, with certain of the loops of predetermined courses prolonged and symmetrically spaced and expanded into loops of larger area than the others, with each enlarged loop engaging smaller loops of the next course in order on opposite sides of the series of loops of which it constitutes a member and also a smaller loop of the same series in the second course therefrom, said prolonged and expanded loop being free from engagement with any loops of its own course.

5. An open-mesh knitted fabric having the openings each formed by a prolonged and laterally expanded loop as wide as three adjacent series of loops and as long as two courses, and engaging loops of the preceding and the two succeeding courses in order and free from engagement with any loops of the same course in which the expanded loop is formed.

[Claim 6 not printed in the Gazette.]

1,168,685. LOCK. WARREN J. SMITH, St. Louis, Mo., assignor to John R. Morris, St. Louis, Mo. Filed Apr. 28, 1915. Serial No. 24,544. (Cl. 70—75.)

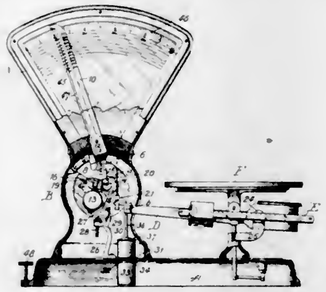


1. A lock including a casing, a lock bolt slidable therein, a head formed on the bolt and provided on its inner face with parallel grooves, there being bores extending into the head at right angles to the grooves and communicating with the same, a tumbler pivoted within the casing on each side of the bolt, the free ends of said tumblers being provided with tines adapted to seat in the bores of the bolt head when the bolt is retracted, said tines being adapted to seat in the lower ends of said grooves when the bolt is projected, whereby the bolt is held against retraction until the tumblers are swung upwardly to bring the tines into alinement with the bores the terminals of said tines being movable through the grooves at all times, whereby they are held against lateral displacement.

2. A lock including a tubular casing having transversely alined openings formed in opposite portions of its wall, parallel bearing flanges surrounding the openings, a driver rotatable in the casing and having its terminals seated in the openings and supported by the flanges, a slidable lock bolt mounted in the casing, and tumblers mounted in the casing and engageable by the driver.

3. A lock including a tubular casing, a driver rotatable therein, said casing being provided with transversely opposed openings receiving the terminals of the driver, annular stop flanges formed adjacent the terminals of the driver to bear against the inner face of the casing, for holding the driver against transverse movement therein, the terminals of said driver being located within the facial limits of the casing, a slidable lock bolt, and tumblers for the bolt, said tumblers being controlled by the driver.

1,168,686. SCALE. CHARLES G. STRUBLER, Elkhart, Ind., assignor to Strubler Computing Scale Company, Elkhart, Ind., a Corporation of Indiana. Filed Mar. 18, 1909, Serial No. 484,196. Renewed June 1, 1915. Serial No. 31,624. (Cl. 73—104.)



1. In a scale, a pivot-shaft, a lever rocking-arm movably mounted thereon, the companion indicator hands secured to said rocking-arm in working relation, a pendulum weight operatively connected with said rocking-arm, a cam provided with an arm extending downward therefrom and mounted on said shaft, and means for changing the relative position of said cam and the lever rocking arm.

2. In a scale, a pivot-shaft, a lever-arm adjustably mounted thereon, a cam having an arm extension, a screw inserted through said arm and threaded in a part of said lever-arm, whereby the position of said cam may be relatively changed with reference to the lever arm, and a second screw inserted through the cam-arm and having a locking bearing on said lever-arm for locking said cam in the required position.

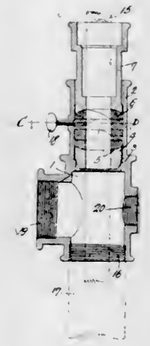
3. In a scale, a lever-rocking-arm, a cam mounted on an axis common to said arm, the indicating hands secured to one end of said rocking arm, a strap secured to said cam, a stirrup suspended from said strap, a conical agate socket bearing inserted in said stirrup, and the scale beam extending into said stirrup and provided with a conical point adapted to engage said socket bearing.

4. In a scale, a base, a bracket fixed thereon, a buffer secured to the upper end thereof, the rocking-arm and a screw set in said bracket and adapted to engage said arm and lock the same against movement.

5. In a scale, a pivot shaft, a lever-arm adjustably mounted thereon, a cam having an arm extension, a screw inserted through said arm and threaded in a part of said lever-arm, whereby the position of said cam may be relatively changed with reference to the lever arm, and a second screw inserted through the cam-arm and having a locking bearing on said lever-arm for locking said cam in the required position.

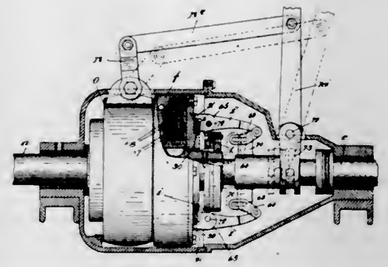
[Claims 6 to 11 not printed in the Gazette.]

1,168,687. STUFFING-BOX FOR OIL-WELLS. RICHARD TITUS, Bowling Green, Ohio. Filed May 18, 1914. Serial No. 839,378. (Cl. 137—115.)



In a stuffing box for oil-wells, the combination with a casing having an upstanding tubular guide arm, of a bushing mounted to rock within the lower portion of the arm and having a concaved end, a tubular follower adjustably mounted within the arm and having a concaved inner end, said bushing and follower having openings therein for the reception of a polish rod, flexible packing washers filling the space between the bushing and follower and fitting snugly within the tubular arm, radially disposed screws extending through the wall of the arm and disposed in the same plane, said screws being adjustable toward each other to separate certain of the washers and constitute backings for those washers between the screws and the bushing, and yieldable means for exerting a constant pressure upon the follower.

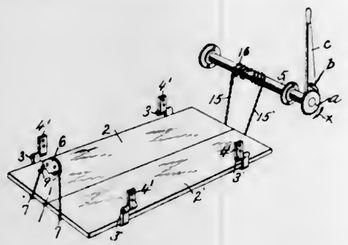
1,168,688. CLUTCH MECHANISM FOR REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping and Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed Feb. 18, 1915. Serial No. 9,141. (Cl. 192—10.)



1. A clutch-mechanism for reversing-gearing having an axially movable clutch-operating member, clutch-operating means associated with said member comprising pivoted levers arranged longitudinally of the clutch, slotted links, a sliding-sleeve and a shifting-lever, said parts being connected and arranged to admit of a movement of the shifting-lever and sleeve independently of said levers, and springs arranged to yieldingly hold said levers against outward movement.

2. A clutch-mechanism for reversing-gearing having an axially movable clutch-operating member, clutch-operating means associated with said member comprising pivoted levers arranged longitudinally of the clutch, links having elongated slots, a sliding-sleeve having pins arranged in said slots and a shifting-lever associated with said sleeve, and springs interposed between said levers and clutch-operating member for yieldingly holding said levers against outward movement.

1,168,689. DUMP-BOX FOR DUMP-WAGONS. WALTER A. UNDERHILL, Auburn, N. Y. Original application filed Jan. 23, 1912, Serial No. 672,879. Divided and this application filed Dec. 30, 1914. Serial No. 879,707. (Cl. 21—20.)



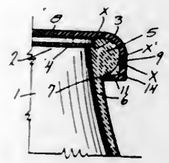
1. In combination with the bottom doors of a dump box, means for controlling the operation of said doors comprising underrunning cables, means on the rear end of the box for supporting the rear ends of the cables, a drum at the front end of the box for winding the corresponding ends of the cables thereon, the portion of one of the cables which is wound on the drum being considerably larger than the corresponding portion of the other cable to cause its door to close in advance of the other door.

2. In combination with the bottom doors of a dump box, one of the doors having its inner longitudinal edge overlapping upon the adjacent edge of the other door, means for controlling the operation of said doors comprising cables running lengthwise under both doors, means on the rear end of the box for supporting the rear ends of the cables, a drum at the front end of the box for winding the adjacent ends of the cables thereon, the portion of one of the cables which is wound upon the drum consisting of links of considerably greater size than the corresponding portion of the other cable which is wound upon the drum to cause the corresponding door to close first.

3. In combination with the bottom doors of a dump box, means for controlling the operation of said doors comprising cables running lengthwise thereunder, a flexible connection for the rear ends of the cables, a stationary sheave supporting said connection and permitting the same to slide thereon, stops on the rear ends of the cables co-acting with the sheave to limit such sliding movement, and a drum at the front end of the box for winding the adjacent ends of the cables thereon, the portion of one of the cables which is wound on the drum being relatively larger than the corresponding portion of the other cable to cause its door to close in advance of the other door.

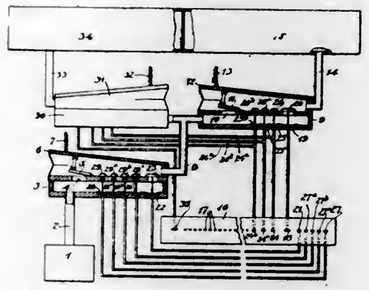
1,168,690. CAP-CLOSURE FOR BOTTLES. ELIZABETH J. WELCH, Spokane, Wash., assignor of one-half to Thomas W. Soevyn, Spokane, Wash. Filed Feb. 1, 1915. Serial No. 5,488. (Cl. 215—9.)

1. A cap designed to fit over the mouth of a beaded bottle comprising, a cap body of yielding material having a substantially flat covering portion and a cylindrical flange depending therefrom, said flange terminating in a rim at substantially right angles to said flange for engagement with its edge against the neck of the bottle below the bead, said flange having an internal diameter sufficiently reduced with respect to the external diameter of the beaded portion of the bottle to distort said flange from its normal contour to a form complemental to the beaded portion of the bottle to fit closely against the upper portion of the latter, the lower portion of said flange and said rim forming with the bottle an air space between the points of close engagement of the flange with the beaded portion of the bottle and the point of edge engagement of said rim with the neck of the bottle, substantially as described.



2. In a closure for bottles having beaded and disk recessed mouth portions, a closure fitting over the mouth of the bottle, a disk cap seated in said recess and disposed in subjacent spaced relation from said closure, and attaching means loosely connecting said disk with said closure and comprising a stem having a head embedded in said closure and stem projecting through said cap and having a head engaging the bottom of the latter, substantially as described.

1,168,691. PNEUMATIC PLAYER MECHANISM. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed May 15, 1915. Serial No. 28,250. (Cl. 84—16S.)



1. In a pneumatic player mechanism, an air tension regulating system comprising a chamber from which air is to be exhausted, an exhauster, a wind-way leading from the former to the latter, and two governor regulator pneumatics arranged in series in said wind-way and means for controlling one of said regulator pneumatics to vary its tension regulating effect.

2. In a pneumatic player mechanism, an air tension regulating system comprising a chamber from which air is to be exhausted, an exhauster, a wind-way leading from the former to the latter, and two governor regulator pneumatics arranged in series in said wind-way, a tracker board, a normally closed shunt passage for one of said regulators with means controllable from the tracker for opening said shunt passage.

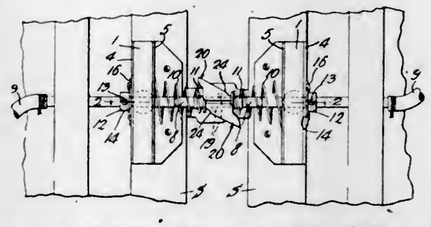
3. In a pneumatic player mechanism, an air tension regulating system comprising a chamber from which air is to be exhausted, an exhauster, a wind-way leading from the former to the latter, and two governor regulator pneumatics arranged in series in said wind-way, one of said regulator pneumatics being arranged to offer normally greater resistance to the passage of air than the other regulator, the regulator offering the greater resistance being nearer to the chamber from which air is to be exhausted.

4. In a pneumatic player mechanism, an air tension regulating system comprising a chamber from which air is to be exhausted, an exhauster, a wind-way leading from the former to the latter, two governor regulator pneumatics arranged in series in said wind-way and normally operating to partially throttle the passage of air from said chamber to said exhauster, and a normally closed shunt passage to modify the action of one of the regulators, with means for opening and closing said shunt passage at will.

5. In a pneumatic player mechanism, an air tension regulating system comprising a chamber from which air is to be exhausted, an exhauster, a wind-way leading from the former to the latter, two governor regulator pneumatics arranged in series in said wind-way and normally operating to partially throttle the passage of air from said chamber to said exhauster, and a normally closed shunt passage to modify the action of one of the regulators, with means for opening and closing said shunt passage at will, said means comprising a pneumatic, a tracker board having a duct leading to the last mentioned pneumatic to control the same.

[Claims 6 to 26 not printed in the Gazette.]

1,168,692. AUTOMATIC COUPLING. SAM B. WHITE, Portsmouth, Ohio. Filed June 10, 1915. Serial No. 33,363. (Cl. 188—13.)



1. In an appliance of the character described, a pair of supporting members, spherical members carried thereby for oscillations in various directions, tubular members of non-circular cross section slidable through said spherical members, the adjacent ends of the tubular members having coöperating guiding means for guiding the tubular members into abutment, means for yieldably projecting the tubular members, movable plates carried by the supporting members and having non-circular openings through which the tubular members extend, means for preventing the rotation of the said plates, and means for limiting the movement of the tubular members.

2. In a coupling, a pair of tubular members having oblique end faces adapted to abut, each tubular member having an outstanding lug at the outer end of its face, a guiding wing having its basal portion attached to each tubular member at the inner end of its face, the wing having a curved body portion increasing in width from its basal to its free end, said body portion diverging from said face and having inturned flanges at its edges, and said body portion of the wing having an outstruck portion adjacent said face for receiving the lug of the other tubular member.

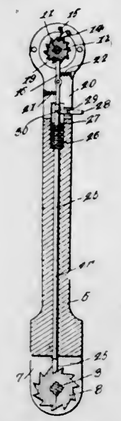
1,168,693. BALL-BEARING. SVEN GUSTAF WINQUIST, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Original application filed Apr. 27, 1912, Serial No. 693,735. Divided and this application filed Feb. 26, 1913. Serial No. 750,876. (Cl. 64—59.)



1. A ball retainer formed of sheet metal and comprising a ring formed as a series of cups for engaging the balls, the ring having lips at its respective edges curved into the spaces between the balls and bent transversely, the flat face of the sheet metal forming the inner faces of the lips, the lips being curved so that said faces conform more or less closely to, and engage the sides of, the balls.

2. A ball retainer formed of sheet metal and comprising a ring formed as a series of cups for inclosing the balls, the ring having lips at its respective edges curved into the spaces between the balls and bent transversely, the edges of the lips practically meeting, the flat face of the sheet metal forming the inner faces of the lips and conforming more or less closely to, and engaging the sides of, the balls.

1,168,694. SAFETY CRANKING DEVICE. LUDY W. WOOLWINE, Hawks Nest, W. Va., assignor of one-half to Daniel Boone, Hawks Nest, W. Va. Filed Oct. 13, 1914. Serial No. 866,495. (Cl. 123—185.)



1. In a safety cranking device for internal combustion engines, the combination with a shaft, of a crank arm rotatably mounted thereon, gripping means rigidly mounted on the shaft, a handle rotatably mounted on the arm, gripping means rigidly mounted on the handle, slidably mounted engaging means associated with said arm and in removable engagement with the gripping means on the shaft, and tripping means pivotally mounted on the arm and in engagement with the gripping means on the handle and the slidable engaging means actuatable by the reverse movement of the handle due to back-firing of the engine to release the slidable engaging means from the gripping means on the shaft.

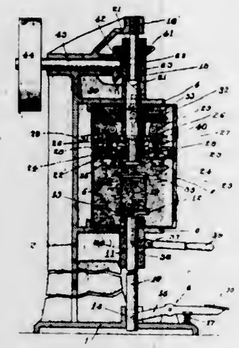
2. In a safety crank device for internal combustion engines, the combination with a shaft, of a crank arm rotatably mounted thereon, a handle rotatably mounted on the arm, gripping means carried by the shaft and the handle, slidably mounted means associated with the arm for removable engagement with the gripping means on the shaft, tripping means pivotally mounted on the arm for removably holding the said engaging means in position and for engagement with the gripping means on the handle, and actuatable upon back-firing of the engine to release the slidable engaging means from the gripping means on the shaft, means associated with the arm and in connection with the slidably mounted engaging means for resetting the engaging means, and means for resetting the tripping means after the rod has been reset.

3. In a safety cranking device for internal combustion engines, the combination with a shaft, of a crank arm rotatably mounted thereon, a ratchet wheel rigidly mounted on said shaft, a handle rotatably mounted on the arm, a ratchet wheel rigidly carried by said handle, a rod slidably mounted on said arm and in removable engagement with the ratchet wheel on the shaft, a trip lever pivotally

mounted on the arm and in engagement with the ratchet wheel on the handle and the rod and actuatable by the reverse movement of the handle due to back-firing of the engine to release said rod from the ratchet wheel on the shaft, a hand lever pivoted on the arm and pivotally connected to the rod for returning the rod into engagement with the ratchet wheel on the shaft, and resilient means associated with the arm and the trip lever for returning the trip lever into engagement with the ratchet wheel on the handle and the rod when the rod has been reset.

4. In a safety device for internal combustion engines, the combination with a shaft, of a crank arm rotatably mounted thereon, a ratchet wheel rigidly mounted on the shaft, a handle rotatably mounted on the arm, a ratchet wheel carried by the handle, means for preventing movement of said ratchet wheel in one direction, a rod slidably mounted in said arm and in removable engagement with the ratchet wheel on the shaft, a trip lever pivotally mounted on said arm and in removable engagement with the ratchet wheel on the handle and the upper end of the rod, said trip lever being actuated by reverse movement of the handle due to back-firing of the engine, resilient means for facilitating the disengagement of the rod from the ratchet wheel on the shaft when the trip has been actuated, and means for resetting said rod.

1,168,695. ART OF PRESERVING FOOD PRODUCTS AND APPARATUS THEREFOR. JOHN M. YOUNG, San Francisco, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Oct. 21, 1914. Serial No. 867,785. (Cl. 99—8.)



1. The means for preserving food products, the same comprising a receptacle for receiving a filled container with a cover loosely applied thereto, devices for charging the container with a preserving medium, and mechanism within the receptacle for hermetically sealing the charged container by permanently uniting the cover thereto.

2. An apparatus for preserving food products, the same comprising a receptacle for receiving a filled container having a cover loosely applied thereto, means for delivering a preserving medium into the receptacle for charging the container held therein, and mechanism within the receptacle for hermetically sealing the charged container by double seaming the flange of the cover thereto.

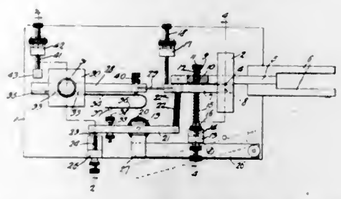
3. An apparatus for preserving food products, comprising a normally closed receptacle for receiving a filled can or container with a cover loosely applied thereto, means for admitting a preserving medium under pressure into the said receptacle for charging the contents of the filled container therein, and means within the receptacle for hermetically securing the cover to the can or container while positioned within said receptacle.

4. An apparatus for preserving food products, comprising a normally closed receptacle for receiving a filled can or container with a cover loosely applied thereto, means for admitting a preserving gas under pressure into the receptacle for charging the filled can or container therein, means within the receptacle for hermetically sealing the cover to the filled can or container, and devices for positioning the charged container and cover closing means relative to each other.

5. An apparatus for preserving food products, comprising a normally closed receptacle for receiving a filled can with a cover loosely applied thereto, means for admitting a preserving gas under pressure into the said receptacle for charging the filled can or container therein, and mechanism within the receptacle for double seaming the can cover to the filled can.

[Claims 6 to 12 not printed in the Gazette.]

1,168,696. TELEGRAPHIC TRANSMITTING DEVICE. JOHN HOWARD ABERNETHY, Danville, Va. Filed Apr. 17, 1915. Serial No. 22,170. (Cl. 178—82.)



1. In a telegraphic transmitting device, a vibrator having a contact, means for actuating said vibrator, a contact operable with the aforesaid contact, and means for moving the second mentioned contact toward the first mentioned contact when the vibrator is set in motion, and for normally moving the second mentioned contact away from the first mentioned contact.

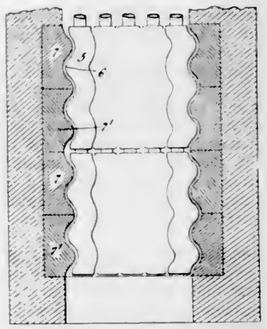
2. In a telegraphic transmitting device, a vibrator, means for setting the same in motion, a contact carried by the vibrator, a second contact, a movable member having a contact coöperable with the second contact and a contact coöperable with the first mentioned contact, and means operatively connecting said member and said means, whereby when said means is actuated for setting the vibrator in motion the fourth mentioned contact is moved toward the first mentioned contact, while the other contacts are separated, said means being operable for swinging the second contact and third mentioned contacts into engagement and whereby the fourth mentioned contact will be moved away from the first mentioned contact.

3. In a telegraphic transmitting device, an actuating lever, a vibrator operatively connected to said lever to be set in motion thereby and having a contact, a second lever having a contact coöperable with the first mentioned contact, and an operative connection between the two levers, whereby when the actuating lever is moved for setting the vibrator in motion the second lever will be swung to move its contact toward the first mentioned contact.

4. In a telegraphic transmitting device, an actuating lever, a vibrator operatively connected thereto to be set in motion thereby and having a contact, a second lever having a contact coöperable with aforesaid contact and another contact, a fourth contact coöperable with the third mentioned contact, and an operative connection between the two levers, whereby when the actuating lever is swung in one direction for setting the vibrator in motion the second lever will be swung to move the second mentioned contact toward the first mentioned contact and to move the third mentioned contact away from the fourth mentioned contact, and whereby when the actuating lever is swung in the other direction the second mentioned contact will be moved away from the first mentioned contact while the third mentioned contact is moved into engagement with the fourth mentioned contact.

5. In a telegraphic transmitter device, an actuating lever, an oscillating arm arranged to be engaged and swung by the actuating lever when the actuating lever is swung in one direction, a vibrator carried by said arm and having a contact, spring means for moving said arm toward said lever, a stop against which said arm is seatable under the influence of said spring means, a second lever having a contact coöperable with the aforesaid contact and another contact, a link connecting the two levers whereby when the actuating lever is swung in the said direction the second mentioned contact will be moved toward the first mentioned contact and when the actuating lever is swung in the other direction the second mentioned contact will be moved away from the first mentioned contact, a fourth contact coöperating with the third mentioned contact whereby when the actuating lever is swung to move the second mentioned contact away from the first mentioned one, the third mentioned contact will be moved toward the fourth mentioned contact, and spring means between said actuating lever and arm tending to move the actuating lever and arm together.

1,168,697. BOILER-BRICK. ROBERT J. ALLEN, New York, N. Y. Filed Sept. 25, 1915. Serial No. 52,733. (Cl. 110—1.)



1. A boiler brick provided with a sinuously disposed face for engaging and conforming to the sinuous side of a boiler header, such sinuous face embodying a plurality of reverse curves, and equal in height to a plurality of ordinary brick.

2. A boiler brick comprising a body portion and a protruding portion obliquely disposed thereon, equal in height to a plurality of ordinary brick, said protruding portion being provided with a sinuously disposed face for engaging and conforming to the sinuous side of a boiler header and embodying a plurality of reverse curves.

1,168,698. SAFETY-GARMENT. HERBERT P. ANDREWS, Portland, Oreg. Filed Feb. 4, 1915. Serial No. 6,158. (Cl. 2—61.)



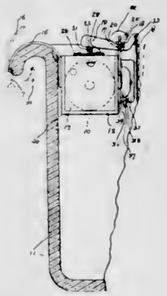
1. A garment of the character described, comprising in combination, a plurality of separate garment sections, the edge of each section to be joined to a corresponding section provided with one part of the usual snap or glove fastener to be engaged with the other part thereof on the edge of its adjoining section, whereby on a pull on one section, the fastening devices may be readily separated and a section wholly removed from the garment without tearing said garment.

2. A garment of the character referred to, comprising in combination, a plurality of separate garment sections, and means yieldably joining the meeting edges of said sections together, said means being especially designed to yield under direct unusual pull on one of said garment sections, whereby said garment section can be wholly detached from the garment without tearing the garment sections.

3. A garment of the character referred to comprising a plurality of separate garment sections yieldably secured together along the meeting edges of said sections, and means joining the meeting edges of said garment sections together and adapted to yield under direct pull on one section in the line of its plane, whereby a garment section can be wholly removed from the garment by a pull thereon without tearing the garment proper.

4. A workman's garment of the character referred to, comprising in combination, a plurality of separate garment sections, the meeting edges of said sections being provided, respectively, with the parts of two-part yieldable fasteners, adapted to yeld under pull, whereby a section of said garment can be wholly removed by pull thereon without tearing the garment.

1,168,699. WATER-LEVEL-ACTUATED MECHANISM. ARTHUR ARBIB, New York, N. Y. Filed Nov. 12, 1913. Serial No. 800,482. (Cl. 177—311.)

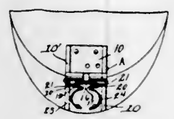


In a device of the class described, in combination, a support, an audible alarm, a source of current, actuating means for said alarm, a normally arranged circuit traversing said actuating means and said source of current, a controller carried by said support adapted when in one disposition to rearrange said circuit and when in another disposition to be ineffective to rearrange said circuit, a buoyant member, means whereby said controller and said member may be detachably but effectively arranged adjacent a collection of liquid and a connection between said member and said controller whereby said member normally maintains said controller in one of its said dispositions and whereby said member, upon a lifting of the same by the surface level of said collection of liquid, permits said controller to assume the other of its said dispositions, said controller including a pivoted member from one arm of which is suspended said member and said arm being so formed that the point from which said member is suspended, is, with the device effectively arranged as aforesaid, higher than the point whereat said pivoted member is pivoted.

1,168,700. LAMP-HOLDING ATTACHMENT FOR MINERS' CAPS. LOVELL M. ASHLEY, Jr., Winona, W. Va. Filed Mar. 15, 1915. Serial No. 14,511. (Cl. 240—60.)

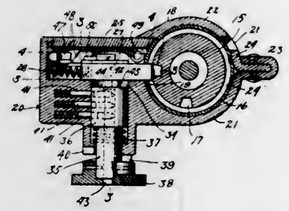
1. A lamp holder for miners' caps consisting of a bracket including laterally bent terminal portions adapted to be attached to the top and vizor of the cap respectively, a band slidably mounted on the intermediate portion of the bracket, means for locking said band against sliding movement, and lamp holding arms carried by said band.

2. A lamp holder for miners' caps consisting of a bracket including laterally bent terminal portions adapted to be attached to the top and vizor of the cap respectively, a band slidably mounted on the intermediate portion of



the bracket, a lever pivoted on the band, a toe on said lever adapted in one position of the lever to press against the bracket and lock the band against sliding movement, and lamp holding arms carried by the band.

1,168,701. LOCKING DEVICE FOR STEERING-GEARS. EDWIN B. BABBITT, Washington, D. C. Filed May 1, 1915. Serial No. 25,197. (Cl. 70—90.)



1. A lock comprising a casing, a normally projected bolt slidable within the casing, a rotatable and bodily movable member mounted in the casing and adapted during its rotation to retract the bolt, and automatic means for moving the member bodily into interlocking relation with the casing when the bolt is fully retracted.

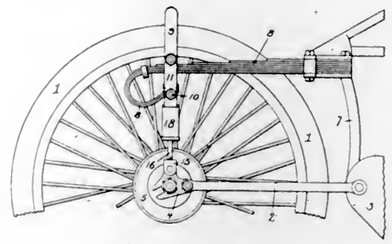
2. A lock comprising a casing, a normally projected bolt slidable in the casing, a rotatable and bodily movable member adapted to interlock with and retract the bolt during its rotation and to detachably interlock with the casing by bodily movement thereof when the bolt is fully retracted, and key released means for locking said member against rotation when the bolt is in projected position.

3. A lock comprising a casing, a normally projected bolt slidable in the casing, a rotatable member mounted in the casing and adapted during each revolution to successively engage, retract and disengage from the bolt, means for releasably locking the member against rotation when same is engaged with the bolt and the latter is fully retracted, and key released means for locking the member against rotation when same has reached a predetermined position after the release of the bolt.

4. A lock comprising a casing having a recess in the wall thereof, a normally projected bolt slidable in the casing, a rotatable and bodily movable member mounted in the casing and adapted during its rotation to interlock with and retract the bolt, means constantly tending to move the member bodily inwardly of the casing, a head on said member exteriorly of the casing for limiting its bodily movement under the influence of said means, and a lug on said head engageable in the recess in the casing when the bolt is fully retracted to lock the member against rotation and the bolt against projection.

5. A lock comprising a casing, a normally projected bolt slidable within the casing, a rotatable and bodily movable member mounted in the casing and adapted during its rotation to retract the bolt, and automatic means for moving the member bodily into interlocking relation with the casing when the bolt is fully retracted, said member being operated out of interlocking relation with the casing by manually effected bodily movement thereof in the opposite direction.

1,168,702. SHOCK-ABSORBING DEVICE FOR MOTOR-CYCLES. JOHN BABIS, Jr., Philadelphia, Pa. Filed Oct. 13, 1914. Serial No. 866,433. (Cl. 208—94.)

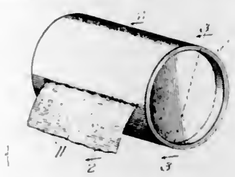


1. The combination of the axle of a motor cycle wheel, a leaf spring having a free end, and a member inserted between the axle and said free end of the leaf spring, said member having as elements a rod moving with the axle, means for guiding said rod, a spring interposing an elastic resistance to upward movements of the rod, and means whereby upward thrust of said spring is transmitted to the free end of the leaf spring.

2. The combination of the axle of a motor cycle wheel, a backwardly extending leaf spring having a forwardly projecting free end, and a shock absorbing member having as elements a stop for contacting with the back of the rearwardly extending main portion of the leaf spring, a rod moving with the axle, means for guiding said rod, a spring interposing a yielding resistance to upward movements of said rod, and means whereby upward thrust of said spring is transmitted to the free end of the leaf spring.

3. The combination of the axle of a motor cycle wheel, a leaf spring having a free end, and a member inserted between the axle and said free end of the leaf spring, said member having as elements a rod moving with the axle, means for guiding said rod, upper and lower springs, the former interposing an elastic resistance to upward movements of the rod and the lower spring interposing elastic resistance to downward movements of said rod, and means whereby the upward thrust of the upper spring and the downward thrust of the lower spring are transmitted to the free end of the leaf spring.

1,168,703. SURGICAL-BANDAGE PACKAGE. PERRY S. BAUER, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Mar. 8, 1913. Serial No. 752,971. (Cl. 206—52.)

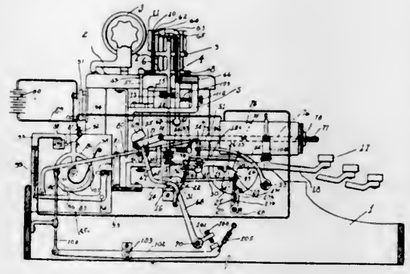


1. A surgical bandage package comprising a cylindrical casing adapted to contain a roll of surgical bandage or the like and provided with a slot through which the bandage may be drawn, end pieces each consisting of a disk substantially equal in circumference to the inner perimeter of said casing and another disk substantially equal in circumference to the outer perimeter of said casing, each inner disk being permanently secured within the casing and the outer disk to the inner disk, and a sealing sheet disposed about said cylindrical casing and secured to the edges of the outer disks.

2. The combination of a surgical bandage and a container for the same, said container comprising a cylindrical casing having a slot therein through which an end of said bandage protrudes, and a paper sealing sheet disposed over said slot and secured to the protruding end of said bandage and to the surface of the container around the same, whereby said container is securely sealed.

3. A surgical bandage package comprising an outer permanently closed casing having a slot, a roll of non-adhesive gauze bandage within said casing of a width substantially equal to the width of the casing, having an end disposed through said slot, and having a coating of adhesive material applied to the edge of said bandage at an end of said roll whereby accidental unwinding of the roll is prevented.

1,168,704. TYPE-OPERATING MECHANISM FOR TYPE-WRITING MACHINES. ORIN BENNETT, Placerville, Cal. Filed Jan. 18, 1915. Serial No. 2,840. (Cl. 197—12.)



1. A device of the character described comprising the combination with a type rack and type bars, of a means for striking such type bars, such means comprising a pivoted hammer capable of engaging said type bars, a lever fulcrumed independently of said hammer and adapted to engage the same, a solenoid pivotally mounted, the core of said solenoid being flexibly connected with said lever and means for electrifying said solenoid to cause it to operate to pull said lever into engagement with said hammer, as described.

2. A device of the character described comprising the combination with a type rack and type bars, of a means for striking such type bars, such means comprising a pivoted hammer capable of engaging said type bars, a lever fulcrumed independently of said hammer and adapted to engage the same, a solenoid pivotally mounted, the core of said solenoid being flexibly connected with said lever and means for electrifying said solenoid to cause it to operate to pull said lever into engagement with said hammer, such means comprising a pivoted key, a switch board, a fixed contact point and a movable contact point on such switch board, means operable between said key and said movable contact point to move said movable contact point into engagement with said fixed contact point when said key is moved, a source of electrical energy, and wired connections from said source of electrical energy to said contact points and from said contact points to said solenoid to complete an electrical circuit through the solenoid when said contact points move together, as described.

3. A device of the character described comprising the combination with a rotary type rack carrying type bars and type, of a key for turning said type rack, a lever on said key, means operable between said lever and said type rack for turning said rack a predetermined distance, and means for adjusting this predetermined distance, such means comprising an inclined cam on said lever, an adjustment screw projecting adjacent said inclined cam, a turnable shaft, a finger member on said shaft adapted to engage said cam with the movement of said lever, the amount of such movement being limited by said set screw, such turnable shaft being operatively connected with said type rack whereby, with the movement of said turnable shaft, said type rack will turn, as described.

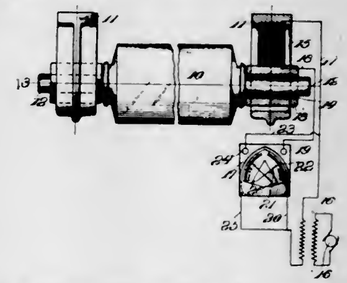
1,168,705. REINFORCEMENT-BAND FOR MILL-STONES OR MILL-BURS. WILLIAM BICKER, White Earth, N. D. Filed Mar. 16, 1914. Serial No. 824,964. (Cl. 83—3.)



1. A device for repairing millstone comprising a circular metal band having a pair of spaced apart apertures, and being scored in three places adjacent to and alternating with the apertures to indicate where the band may be cut and bent, said band being fitted to the stone, thereby constituting means for affording a secure bond.

2. A method of repairing millstones, which first consists in severing a band while on the millstone intermediate two apertures of the band, then bending the severed ends at points beyond said apertures, and connecting the severed bent ends and drawing the band tight about the stone.

1,168,706. TENSION-INDICATOR FOR FELTS, FOURDRINIER WIRES, AND PAPER SHEETS. JOHN W. BRASSINGTON, Wilmington, Del. Filed June 9, 1915. Serial No. 33,209. (Cl. 177—351.)



1. In a paper-making machine, the combination of a movable element such as a felt, Fourdrinier wire or paper sheet, a roller around which said element passes, an abutment associated with said roller and in relation to which said roller is bodily movable, an electric circuit including a compressible and expansible member mounted between said roller and abutment, a source of electric current, and an instrument for indicating the degree of compression of said member.

2. In a paper-making machine, the combination of a movable element such as a felt, Fourdrinier wire or paper sheet, a roller around which said element passes, an abutment associated with said roller and in relation to which said roller is bodily movable under variations of tension in said element, and a series of disks mounted between said roller and abutment, and means indicating the degree of compression of said disks.

3. In a paper-making machine, the combination of a movable element such as a felt, Fourdrinier wire or paper sheet, a roller around which said element passes, an abutment associated with said roller and in relation to which said roller is bodily movable, a journal box associated with one end of said roller, a resistance element interposed between said journal box and abutment, and electrically-actuated means indicating the degree of compression of said member.

4. In combination, a movable element such as a felt, Fourdrinier wire or paper sheet, a roller around which said element passes, a journal associated with one end of said roller, a frame along which said journal box is movable in response to variations in tension of said element, and an electric circuit including a compressible and expansible member mounted between said journal box and frame, a source of electric current, and an instrument indicating the degree of compression of said member.

5. In combination, a movable element such as a felt, Fourdrinier wire or paper sheet, a roller around which said element passes, a journal box in which one end of said roller rotates, a frame along which said journal box is movable in response to variations of tension in said element, and an electric circuit including a series of disks interposed between said journal box and frame, a source of electric current, and an instrument for indicating the degree of compression of said disks.

[Claims 6 to 12 not printed in the Gazette.]

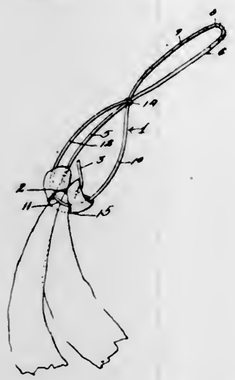
1,168,707. SUBMARINE. RENE BRUNET, New York, N. Y. Filed July 31, 1915. Serial No. 42,979. (Cl. 114—16.6.)



1. In a submarine a plurality of safety compartments provided with a plurality of bars spaced a short distance away from said walls, means for communicating with the interior of the submarine and said safety compartments, sliding doors for said safety compartments communicating with the outside, means for operating said latter doors, means for controlling the operating means of said doors.

2. In a submarine a plurality of safety compartments, the inner walls of which are provided with a plurality of bars spaced away a short distance from the walls.

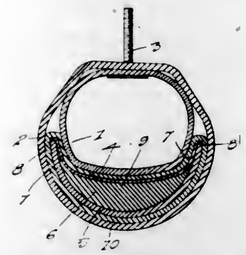
1,168,708. DISH-CLOTH HOLDER. DAVID R. BYRAM, Tupper Lake, N. Y. Filed Mar. 11, 1915. Serial No. 13,629. (Cl. 141—10.)



1. A dish cloth holder comprising a single length of spring wire curved upon itself to form a broad loop at one end of the holder and a narrow loop at the other end of the holder, one side of the broad loop formed into an eye where the sides of both loops intersect, so that the sides of both loops will pass through the eye, the narrow loop constituting a handle, and one side of this narrow loop being extended within and conforming substantially to the contour of the broad loop and terminating in a dish cloth holding hook, to which and the end of the broad loop, the loop of a dish cloth is connected.

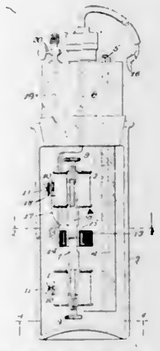
2. A dish cloth holder comprising a single length of wire having one end bent to form a dish cloth engaging hook, one side of the hook merging into an extension extending from the hook forming one side of a handle, which side merges into a short curve at the rear of the handle and merges into a second extension forming the other side of the handle, which other side of the handle crosses the first side and extend forwardly of the handle forming a substantially elliptical shaped guard approximately conforming to the shape of said hook and surrounding the hook, the opposite sides of the guard beyond the hook being designed to be engaged by the fold or loop of the dish cloth, the part of the dish cloth beyond the fold or loop thereof being passed through the hook and through the loop of the folded cloth, one side of the guard terminating in a hook to engage the crossing portions of the sides of the handle.

1,168,709. TIRE FOR AUTOMOBILES. WILLIAM H. CLAY, Cameo, Colo. Filed May 12, 1915. Serial No. 27,577. (Cl. 152—18.)



A tire of the class described including an inflatable inner tube and a protecting unit comprising a metallic strip or band extending circumferentially around the tire and having inclined side portions provided with laterally projecting flanges forming supporting ledges, a circumferentially arranged layer of approximately semi-tubular form supported at its side edges upon the said ledges, an elastic cushioning section interposed between the metallic strip or band and the said layer and a covering for the said unit retaining the layer on the said ledges.

1,168,710. APPARATUS FOR SECURING GEMS TO ARBORS. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Nov. 25, 1912. Serial No. 733,421. (Cl. 51—11.)



1. Apparatus for securing gems in arbors comprising a suitable frame, arbor holding means carried thereby, gem holding means carried thereby and adapted to hold the gem in the cement containing end of the arbor in proper alinement with the arbor, and heating means for baking the cement while the gem is so held to secure the gem to the arbor.

2. Apparatus for securing gems in arbors comprising a suitable frame, arbor holding means carried thereby, gem holding means carried thereby and adapted to hold the gem in the cement containing end of the arbor in proper alinement with the arbor, and heating means for baking the cement while the gem is so held to secure the gem to the arbor, and a container adapted to inclose said gem and cement in a non-oxidizing atmosphere.

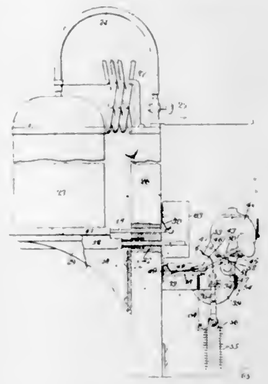
3. Apparatus for transferring gems from one gem-holder to another, having in combination means for holding the gem-holders in axial alinement with the portion of the gem projecting from one inserted into the cement-containing socket of the other, and a source of heat adjacent the holders for baking the cement.

4. Apparatus for transferring gems from one gem-holder to another, having in combination means for holding the gem-holders in axial alinement with the portion of the gem projecting from one inserted into the cement-containing socket of the other, an electric furnace adjacent the holders for baking the cement, and a sealed container for the device, whereby the parts may be kept in a non-oxidizing atmosphere.

5. Means for transferring gems from one arbor to another comprising two arbor holders arranged to hold the arbors in axial alinement with their socket ends adjacent, one of the holders being movable toward and from its coöperative holder along the common axial line to insert the portion of the gem projecting from the first arbor into the cement-containing socket of the second arbor, and a source of heat at the puncture of the two arbors sufficient to bake the cement.

[Claims 6 to 12 not printed in the Gazette.]

1,168,711. DIAMOND-POLISHING APPARATUS. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Dec. 20, 1912. Serial No. 737,782. (Cl. 51—11.)



1. The combination of a gem-holding arbor having a cement-containing socket for the gem, means for inserting the gem in the cement-containing socket of the arbor, means for subjecting the cement-containing socket to heat, and means for gradually increasing the intensity of the heat until the maximum is reached and the cement is baked.

2. The combination of a gem-holding arbor having a cement-containing socket for the gem, means for inserting the gem in the cement-containing socket of the arbor, means for subjecting the cement-containing socket to heat, and means for gradually increasing the intensity of the heat until the maximum is reached and the cement is baked, and then gradually diminishing the heat until the cement has cooled.

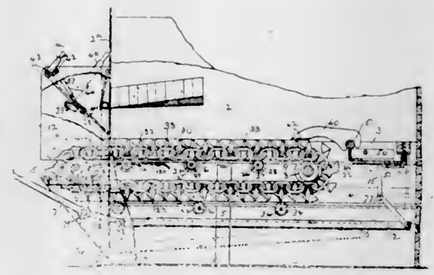
3. The combination of a gem holder having a cement-containing socket for the gem, a source of heat for baking the cement, and heat-regulating means operative to cause the intensity of the heat to gradually increase in the baking operation.

4. The combination of a gem holder having a cement-containing socket for the gem, a source of heat for baking the cement, and heat-regulating means operative to cause the intensity of the heat to gradually decrease during the latter part of the baking operation.

5. The combination of a gem holder having a cement-containing socket for the gem, a source of heat for baking the cement, and heat-regulating means operative to cause the intensity of the heat to gradually increase in the baking operation, and then to decrease during the latter part of the baking operation.

[Claims 6 to 18 not printed in the Gazette.]

1,168,712. CHAIN-GRATE MECHANISM. PAUL L. CROWE, Jersey City, N. J. Filed May 6, 1909. Serial No. 494,315. (Cl. 110—40.)



1. The combination of a traveling grate, means for operating said grate including mechanism for releasing the power from said traveling chain grate when said grate is unduly obstructed, consisting of an upper and lower head piece having each a central orifice, a coil spring engaging said heads, a locking lever pivotally mounted on one of said heads and adapted to engage the other head for releasing said lever when said grate is obstructed, a guide tube secured to said upper head, a stem passing through said tube and heads, said stem attached to the actuating mechanism of said traveling grate, and said tube connected to the rod driving mechanism of the stoker.

2. The combination of a traveling grate frame, chain supporting rollers similarly positioned in said frame, each roller having a plane and a grooved portion, a chain grate mounted in the grate frame comprising grate bars, chains upon which the bars are mounted, the chains in operative position having links positioned at substantially 45° to the horizontal, said links supported on the rollers with the alternate links engaging the grooved portions of the roller, and the other links engaging the plane portions whereby the grate is given an undulating motion as it travels along the grate frame.

3. In a stoker mechanism, a furnace, upper and lower angle irons mounted within said furnace, a dump plate frame pivoted on said upper angle iron, a dump plate pivoted on said angle iron adapted to act against said dump plate frame, means for opening and closing said dump plate comprising a rod pivoted to the lower angle iron, said rod having an upper and a lower member, said upper member resting against the upper side of said plate, said lower member pivotally connected to the operating angle bar, a lever fulcrumed on the outside of said furnace, said operating bar connected to said lever, means for tilting said frame, and means for feeding ashes on said dump plate consisting of a progressive feed grate operating within the furnace, means for operating said grate.

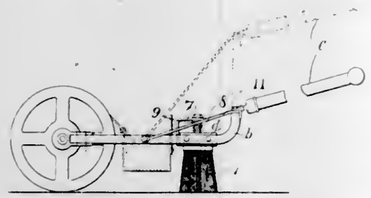
4. In a stoker mechanism, a furnace, upper and lower angle irons mounted within said furnace, a shaft pivotally mounted on said upper angle irons, a dump plate frame mounted on said shaft, lap bars loosely pivoted on said frame, a dump plate having end off-set, a lever arm mounted on said frame, said arm passing into said off-set in said dump plate, so that said plate when open will depress said lever thereby automatically agitate said frame and lap bars, means for opening and closing said dump

plate, and means for feeding ashes on said dump plate consisting of the progressive feed grate of said stoker.

5. In a stoker mechanism comprising a furnace, a grate mounted therein, upper and lower angle irons mounted within said furnace, a divided housing, a housing secured to said furnace on the outside of same, the lower members of said divided housing being triangular in shape, the upper portion of said housing comprising a fuel hopper, mechanism for feeding the fuel in said housing hopper, consisting of a hopper plate pivotally mounted in said housing hopper, a sliding plate mounted on said hopper plate, means for moving said sliding plate consisting of a lever arm pivotally connected to said plate and fulcrumed within said housing, means of raising and lowering the lower end of said hopper plate consisting of an arm mounted on a fulcrumed lever, said arm adapted to act against the underside of said hopper plate, said lever of said arm adapted to be operated outside said housing hopper.

[Claims 6 to 10 not printed in the Gazette.]

1,168,713. TURF-BRUSH. TANCRED DISRAELI CUMMINS, Shirley, England. Filed Oct. 3, 1914. Serial No. 864,909. (Cl. 55—145.)

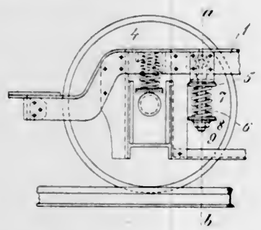


1. A turf brushing and aerating machine, comprising rollers, brushes positioned forward of said rollers, said brushes being capable of horizontal and vertical movements, and means, acting in a vertical plane, adapted to press said brushes downward.

2. A turf brushing and aerating machine, comprising rollers, brushes positioned forward of said rollers, said brushes being capable of horizontal and vertical movements, and means whereby to limit such movements.

3. A turf brushing and aerating machine, comprising rollers, brushes positioned forward of said rollers, a frame for connecting the brushes and roller, said brushes being capable of a horizontal and vertical movement, means, for limiting the movement thereof, comprising a plurality of pins secured to the brush backs, slots disposed in the frame, said pins being passed through the slots in said frame, and spring for controlling movement of the brushes and pins within the confines of said slots.

1,168,714. TRUCK FOR RAILROAD-CARS AND THE LIKE. KARL DINGERTZ, Arlöf, Sweden. Filed May 13, 1913. Serial No. 767,264. (Cl. 105—239.)

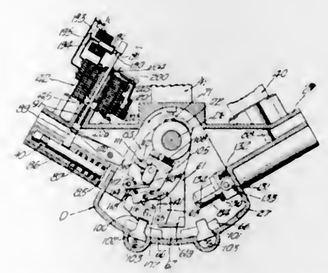


1. In car-trucks, the combination of equalizers, springs directly between said equalizers and the axle-boxes of said trucks, the frame of said trucks being composed of parallel members between which the equalizers are arranged, the ends of the equalizers resting against said springs placed directly between said equalizers and said axle-boxes.

2. In car-trucks, the combination of equalizers, springs intermediate said equalizers and the axle-boxes of said trucks, a truck-frame, said truck-frame being connected to said equalizers by springs, the side parts of said truck-frame consisting of parallel members between which the equalizers are arranged, the ends of said equalizers being formed into caps.

3. In trucks for railroad cars and the like, the combination of a cross-bar, a beam, springs directly between and connected with said beam and said cross-bar, equalizers, a link connecting said beam and said equalizers, axle boxes, and springs between and fastened to said equalizers and the axle boxes of said trucks, and a truck-frame connected to said equalizers, said springs intermediate said equalizers and said axle boxes bearing the entire weight of said equalizers and of said truck-frame, said equalizers oscillating freely on said springs.

1,168,715. AUTOMATIC SELECTIVE CHANGE-GEAR MECHANISM. GERALD A. EDDY, Los Angeles, Cal., assignor, by direct and mesne assignments, of thirty one hundredths to A. B. Dodge and thirty one-hundredths to E. G. Beik, Los Angeles, Cal. Filed Jan. 12, 1914. Serial No. 811,749. (Cl. 74—58.)



1. In an automobile, the combination of a driving gear comprising a motor and a change speed mechanism driven by the motor capable of effecting different speed ratios between the motor and the driving wheels of the automobile, a speed shifting mechanism adapted for manual operation capable of being set for different subsequent speed shifting operations while the change speed mechanism is in operation, and automatic selective means connected to and controlled by the speed of the driving gear for selectively setting said shifting mechanism for different subsequent speed shifting operations.

2. In an automobile, the combination of a driving gear comprising a motor and a change speed mechanism driven by the motor capable of effecting different speed ratios between the motor and the driving wheels of the automobile, a manually operable speed shifting member, a series of connecting media capable of being set into and out of operative relation between said member and said change speed mechanism and adapted to cause different speed changes in said mechanism by virtue of movement of said member, and automatic selective means connected to and controlled by the speed of the driving gear for setting said connecting media into and out of operative relation.

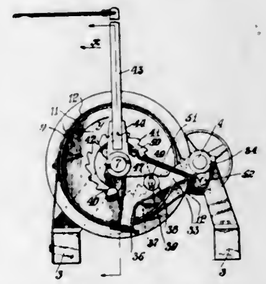
3. In an automobile, the combination of a driving gear comprising a motor and a change speed mechanism driven by the motor capable of effecting different speed ratios between the motor and the driving wheels of the automobile, a speed shifting member, a mechanism embodying a series of connecting media capable of being set into and out of operative relation between said member and said change speed mechanism and adapted to cause different speed changes in said mechanism by virtue of movement of said member, and automatic selective means connected to and controlled by the speed of the driving gear for setting said connecting media into and out of operative relation, said means and connective media coöperating so that one of said connective media is always in operative relation to the change speed mechanism and the speed shifting member.

4. In an automobile, the combination of a driving gear embodying a motor, a clutch and a transmission mechanism adapted to be driven thereby and embodying shiftable change speed gears, a gear shifting mechanism capable of being set for different selected gear changes, selective means connected to and controlled by the speed of the driving gear for selectively setting said shifting mechanism, and means operative to disengage said clutch and actuate said shifting mechanism to shift said gears to produce the selected gear change when moved in one direction.

5. In an automobile, the combination of a driving gear embodying a motor and a transmission mechanism through which the automobile is driven from the motor embodying shiftable change speed gears, a gear shifting mechanism capable of being set for different selected gear changes while a previously selected gear is in operation, selective means connected to and automatically controlled by the speed of the driving gear for effecting the selective setting of said shifting mechanism, and means manually operable at will to actuate said shifting mechanism to shift said gears to produce the selected gear change.

[Claims 6 to 29 not printed in the Gazette.]

1,168,716. HOISTING-DRUM AND BRAKE FOR THE SAME. JOHN FARRELL, Newton, N. J. Filed Feb. 19, 1915. Serial No. 9,386. (Cl. 74—46.)



1. The combination with a hoisting drum and a shaft on which it is mounted to slide lengthwise, of a driving cog wheel, a friction clutch interposed between said drum and driving cog wheel and operable by moving the drum lengthwise, a sleeve mounted on the shaft of the drum for moving the drum lengthwise, a manipulating handle on the said sleeve, a brake operating arm on said sleeve, a brake lever upon which the said arm can act and a spring connecting said sleeve with the brake lever, substantially as set forth.

2. The combination of a hoisting drum and a clutch for the same, means for shifting the same in relation to the clutch, a shaft for the drum, a sleeve mounted on the shaft, an arm on the sleeve for manipulating a brake lever, a pivoted brake lever, a band brake connected with one end of said lever, an arm on the pivoted end of said brake lever and a spring connecting this arm with the sleeve, substantially as set forth.

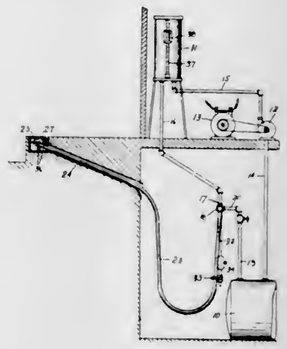
3. The combination of a hoisting drum and a clutch for the same, means for shifting the same in relation to the clutch, a shaft for the drum, a sleeve mounted on the shaft, an arm on the sleeve for manipulating a brake lever, a pivoted brake lever, a band brake connected with one end of said lever, an arm on the pivoted end of said brake lever and a spring connecting this arm with the sleeve and a pedal formed on an extension of the brake lever opposite the pivoted end, substantially as forth.

4. The combination of a hoisting drum and a clutch for the same, means for shifting the same in relation to the clutch, a shaft for the drum, a sleeve mounted on the shaft, an arm on the sleeve for manipulating a brake lever, a pivoted brake lever, a band brake connected with one end of said lever, an arm on the pivoted end of said brake lever and a spring connecting this arm with the sleeve, the brake manipulating arm on the sleeve having a curved recess at its free end on the underside and a roller on the side of the brake lever, on which roller the arm on the sleeve rests, substantially as set forth.

5. The combination of a hoisting drum and a clutch for the same, means for shifting the same in relation to the clutch, a shaft for the drum, a sleeve mounted on the shaft, an arm on the sleeve for manipulating a brake lever, an angular brake lever provided at its angle with a hub by which it is mounted to turn, a brake band attached to this lever, and a spring attached to the end of the short arm of this lever and to the sleeve connected with the operating handle, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,168,717. LIQUID-DISPENSING APPARATUS. DUFFY WILCOX FLINT, Cranston, R. I. Filed Feb. 13, 1915. Serial No. 8,054. (Cl. 221—67.)



1. In an apparatus for dispensing volatile liquids, the combination with a sidewalk having an opening therein near its curb, of a supply tank located to one side of said walk and a readily extendible delivery pipe leading from said tank on an incline to said opening and located below the surface of said walk, said curb opening forming a receptacle for the hose nozzle.

2. In an apparatus for dispensing volatile liquids, the combination with a sidewalk having an opening therein, of a supply tank located to one side of said walk and a flexible pipe leading from said tank to said opening and arranged to be moved through said opening and means for permitting said pipe to drain when in its inner position.

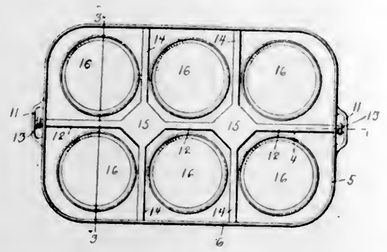
3. An apparatus for dispensing volatile liquids comprising a sidewalk provided with an opening near its curb, a supply tank set to one side and below the surface of said walk, a pipe leading from said tank beneath said walk to said opening and means for permitting that portion of the pipe beneath the walk to drain after each filling operation.

4. An apparatus for dispensing volatile liquids comprising, a sidewalk provided with an opening near its curb, a supply tank set to one side and below the surface of said walk, a pipe leading from said tank beneath said walk through said opening and capable of being readily extended through and withdrawn from said opening.

5. An apparatus of the character described, comprising a sidewalk, a supply tank set to one side and below the surface of said walk, a chamber in the walk adjacent the curbing, an inclined conduit leading from said chamber beneath the walk, a readily extendible pipe leading from said tank through said conduit into said chamber, and means for covering the opening to the chamber, when the end of the pipe is housed therein.

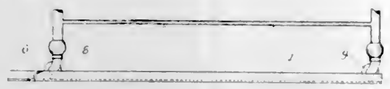
[Claims 6 to 10 not printed in the Gazette.]

1,168,718. BREAD-RAISER. ALFRED L. FRAIL, Wellsville, Ohio. Filed Mar. 25, 1915. Serial No. 16,924. (Cl. 126—281.)



A dough raiser comprising a body receptacle and a plurality of intersecting communicating water carrying members forming spaced compartments for receiving bread pans.

1,168,719. EXHIBITION DEVICE FOR ARTICLES HAVING CASTERS. ELSAMUR S. FRENCH. Denver, Colo. Filed Jan. 16, 1915. Serial No. 2,741. (Cl. 104—45.)

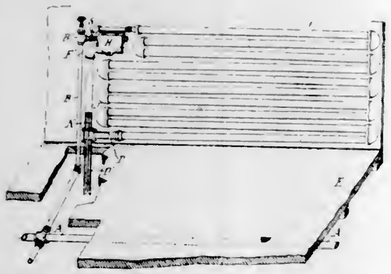


1. An exhibition device for articles having casters, consisting of a channel member including a flat floor and upright sides, one side being bent down into the plane of the floor of the channel and for a distance from the open end of said channel.

2. An exhibition device for articles having casters, consisting of a channel member having one end thereof closed and the other end open and having sides extending from the closed end toward the open end, one side extending to the open end but the other side being shorter than the first mentioned side.

3. In an exhibition device for articles having casters, a channel member having a closed end and sides extending therefrom toward the other end, one of said sides extending substantially to said other end but the other side being bent, at a point back from said other end, so as to form a slanting guide.

1,168,720. STEAM-HEATING SYSTEM. EDWARD E. GOLD, New York, N. Y., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Oct. 7, 1915. Serial No. 54,555. (Cl. 236—19.)



1. A steam heating system having a supply pipe, a radiator and a return pipe, a valve in one of said pipes, a thermostat and a valve stem operatively connecting said thermostat and said valve, a casing for said thermostat located above the outlet of said return pipe, a discharge pipe leading from said outlet upward to said casing and means dividing said pipe into two longitudinal passages, one of said passages adapted to conduct escaping steam to said casing and the other passage adapted to discharge air from said casing, said dividing means terminating within said pipe.

2. A steam heating system having a supply pipe, a radiator and a normally open return pipe, a valve in said supply pipe, a thermostat and a valve stem operatively connecting said thermostat and said valve, a casing for said thermostat located above the outlet of said return pipe, a discharge pipe leading from said outlet upward to said casing and means dividing said pipe into two longitudinal passages, one of said passages adapted to conduct escaping steam to said casing and the other passage adapted to discharge air from said casing, said dividing means terminating within said pipe.

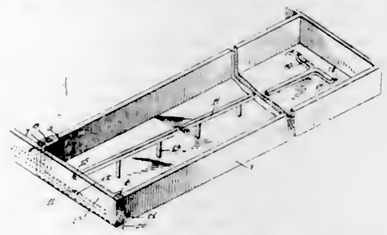
3. A steam heating system having a radiator, a supply pipe and a return pipe, an adjustable thermostat, a casing therefor above the outlet of said return pipe, a valve stem operatively connected to said thermostat, a valve disk located in one of said pipes and mounted on said stem and removable sidewise therefrom while said stem is within said casing, and said pipe having an aperture in its side adapted to permit the withdrawal of said valve disk, a cover for said aperture detachable from said pipe to permit the withdrawal of the valve disk, a pipe connected to the outlet from said radiator and leading upward to said casing and two passages in said pipe, one adapted to conduct escaping steam to said casing and the other to discharge air from said casing.

4. A valve casing, a thermostatically actuated valve stem entering said casing and having an enlarged head, a valve disk having a slot to receive said head whereby said disk is mounted on said stem and is removable therefrom while said stem is in said casing, said casing having an aperture adjacent said valve disk and a cover for said aperture detachable from said casing to permit the withdrawal of said valve disk through said aperture and means for adjusting said valve stem whereby the valve disk may be removed without disturbing said adjustment.

5. A valve casing, a thermostatically operated valve stem entering said casing, means for adjusting said valve stem, a valve disk, means for mounting said valve disk on said stem so as to be removable therefrom while said stem is in said casing, said casing having an aperture adjacent said valve disk, and a cover for said aperture detachable from said casing to permit the withdrawal of said disk through said aperture without disturbing the adjustment of said stem.

[Claims 6 to 9 not printed in the Gazette.]

1,168,721. DRY-KILN. NICHOLAS GREENER, Bude, Miss. Filed Apr. 25, 1914. Serial No. 834,460. (Cl. 34—46.)



1. A dry kiln having an air outlet near the floor, an air inlet placed at a point above the floor, and an air pipe connected around said air inlet and extended to conduct the air to the interior of the kiln at a point away from the wall through which the inlet is provided.

2. A dry kiln having an air outlet near the floor, an air inlet through one of the walls of said kiln at a point above the floor, and an air pipe connected around said inlet to extend in a gradual incline to a point away from said outlet opening and to substantially the same level therewith.

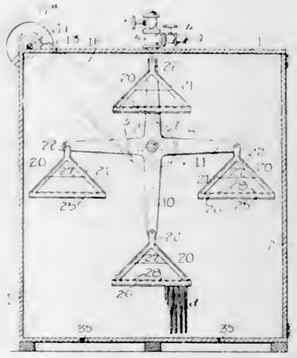
3. A dry kiln having an air outlet near the floor thereof, a flue to cause suction from said outlet, an air inlet through one of the walls of said kiln at a point above the floor, and an air pipe connected around said air inlet to extend in a gradual slope to discharge the air into the kiln at a point away from the outlet.

4. A dry kiln having an air outlet near the floor thereof, an inlet placed at a point above the floor, an air pipe connected around said air inlet and extended to discharge the air into the kiln at a point away from said outlet, and a fluid blast connected to induce suction through said outlet.

5. A dry kiln having an air outlet near one of the walls thereof located in proximity to the floor, an air inlet formed through said wall at a point above the floor, an air pipe connected around said air inlet to extend in a gradual incline toward the opposite wall of the kiln and having the discharge end thereof at substantially the level of the outlet opening, and means to induce a suction through said outlet to exhaust the contents of the kiln.

[Claims 6 to 9 not printed in the Gazette.]

1,168,722. APPARATUS FOR DRYING ALIMENTARY PASTE. EMANUEL GUANO, Chelsea, N. J. Filed May 29, 1914. Serial No. 841,788. (Cl. 34—28.)



1. In a drier, the combination with a casing of a removable, revoluble frame or reel mounted therein on short stub shafts having means for turning them.

2. In a drier, the combination with a casing, of a removable, revoluble frame or reel mounted at each end on a short detachable shaft, supporting or carrier frames for goods pivotally connected to the main frame, and operating gearing.

3. In a drier, the combination with a casing, of a removable revoluble frame having short sleeve shafts at each end, short detachable stub shafts adapted to engage with said sleeve shafts, supporting frames for goods pivotally connected to the main frame and operating mechanism.

4. In a drier, the combination with a revoluble frame, of a goods supporting frame or carrier pivotally connected to said frame and having notched cross bars, and having detachable supporting rods provided with annular grooves and end-heads, said rods resting at their grooved portions in the notches, for supporting macaroni in pendant position.

5. In a drier, the combination with a casing, of a removable revoluble frame or reel mounted therein on short stub shafts, and goods supporting frames pivotally connected to said revoluble frame and each having a series of detachable rods for supporting macaroni strips or stems in pendant position.

1,168,723. ROAD-GRADER. ELIE B. HARRIS, Eustace, Tex., assignor of one-half to S. L. Reese, Corsicana, Tex. Filed Feb. 7, 1914. Serial No. 817,160. (Cl. 37—5.)



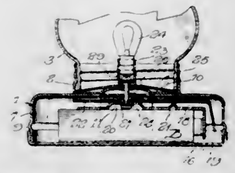
1. In a road grader, the combination with a scraper, of means for applying draft to the same, brackets mounted upon the scraper extremities, one of said brackets being free to swing at one end upon a substantially vertical axis, means for adjustably limiting the swing of said bracket, bell-crank levers pivoted at the free end of said brackets, and a colter carried by one arm of each lever.

2. In a road grader, the combination with a scraper, of means for applying draft to the same, brackets mounted upon the scraper extremities, one of said brackets being free to swing at one end upon a substantially vertical axis, means for adjustably limiting the swing of said bracket, bell-crank levers pivoted at the free end of said brackets, a colter carried by one arm of each lever, and means carried by the brackets for holding said levers adjusted in various positions of angular displacement.

3. In a road grader, the combination with a scraper, of means for applying draft thereto, brackets mounted upon the scraper extremities, bell-crank levers pivoted upon said brackets, means carried by the brackets for holding said levers adjusted in various positions of angular displacement, colters one of which is mounted upon one arm of each lever, and means for varying the spaced relation between one of said colters and the scraper.

4. In a road grader, the combination with a scraper, of means for applying draft thereto, brackets mounted upon the scraper extremities, one of said brackets being free to swing at one end upon a substantially vertical axis, means for adjustably limiting the swing of said bracket, means for varying the spaced relation between the other of said brackets and the scraper, bell-crank levers pivoted at the free end of said brackets, means carried by the brackets for holding said levers adjusted in various positions of angular displacement, and colters one of which is mounted upon one arm of each lever.

1,168,724. ELECTRIC LANTERN. WILLIAM PRESTON HARTFORD and CLARENCE MONROE RICKOFF, Chicago, Ill.; said Rickoff assignor to said Hartford. Filed Aug. 7, 1915. Serial No. 44,301. (Cl. 240—8.5.)

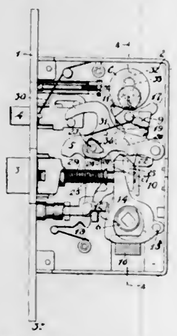


1. An electric lantern comprising a base including a receptacle having a detachable bottom portion, a battery disposed transversely in said receptacle, a substantially U-shaped spring clamp secured to the upper portion of said receptacle and adapted to hold the battery between its arms, an incandescent lamp positioned above said receptacle, a metallic strip connected to one terminal of the battery extending across the upper portion of the receptacle and insulated therefrom, a screw extending through the top of said receptacle connecting the lamp and metallic strip, and a movable contact point carried by the receptacle for engagement with the other terminal of the battery.

2. An electric lantern comprising a base, including a receptacle having a detachable bottom portion, a battery disposed transversely in said receptacle, a substantially U-shaped spring clamp secured to the upper portion of said receptacle and adapted to hold the battery between its arms, an incandescent lamp positioned above said receptacle, a metallic strip connected to one terminal of the battery extending across the upper portion of the receptacle and insulated therefrom, a screw extending through the top of said receptacle connecting the lamp and metallic strip, said upper portion of the receptacle having an aperture through the side thereof adjacent the other terminal of the battery, and a contact screw positioned through the same and movable in and out of engagement with the said terminal.

3. An electric lantern comprising a base including a receptacle having a detachable bottom, a battery disposed transversely in said receptacle, a substantially U-shaped clamp having S-shaped spring arms to hold said battery secured to the said receptacle, a socket and incandescent lamp positioned above said receptacle, a curved apertured reflector plate surrounding said socket and resting on the upper surface of the receptacle, a screw extending downwardly from the lamp socket through the top of the receptacle, a metallic strip positioned at right angles to the clamp connected at one end to one terminal of the battery and at the other to the screw, said strip being bent to form a flat battery receiving surface, an insulating strip between the metallic strip and the receptacle and clamp, and a contact screw carried by the receptacle and movable in and out of engagement with the other terminal of the battery.

1,168,725. LOCK. NORMAN B. HERD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 23, 1915. Serial No. 57,405. (Cl. 20—92.)



1. In a lock, a movable latch bolt, means for projecting the same, means for retracting the same, means operable by a key for operating said retracting means, and means independent of said retracting means to lock said latch bolt in its retracted position by the same key.

2. In a lock, a case, a latch bolt movable to and fro therein, yielding means for normally projecting said bolt, means for retracting the latch bolt through the medium of a key, and means independent thereof for holding said latch bolt in its retracted position by the operation of said key.

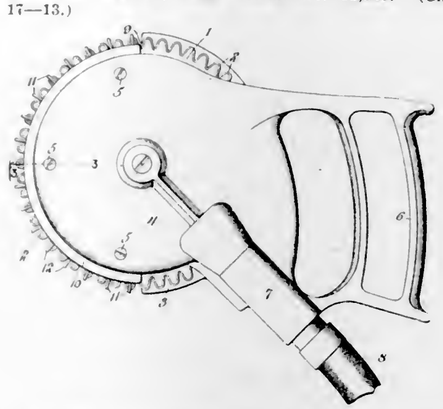
3. In a lock, a case, a latch bolt movable therein, means for normally projecting the latch bolt, said case having a key-passage, means operable by a key adapted to retract the latch, and means independent thereof for holding said latch in its retracted position by the operation of a key through said aforesaid key passage.

4. In a lock, a case, a cylinder lock, a latch bolt movable therein with means for yieldingly projecting said bolt, means for retracting said bolt, means independent of said retracting means for holding said bolt retracted, with means carried by said cylinder lock and operable by a key for controlling the operation of the latch retracting means and the latch holding means.

5. In a lock, a case, a normally projected spring latch bolt mounted therein, a device mounted in said case and movable therein for retracting the latch, another device also mounted in said case and independent of the latch retracting device for holding the latch retracted, with a key controlled means for operation of either of said devices.

[Claims 6 to 18 not printed in the Gazette.]

1,168,726. SKINNING-TOOL. FRANK JACKSON, Chicago, Ill. Filed Mar. 5, 1915. Serial No. 12,349. (Cl. 17—13.)



1. A skinning tool provided with a rotary knife with a pair of spaced guards receiving the knife between them and having the peripheral portions connected by loops constituting teeth closed at their outer ends about the cutting edge of the knife, said loops being sufficiently short to permit the knife to freely engage and sever the tissue connecting the hide with the flesh when the said loops are embedded in the tissue.

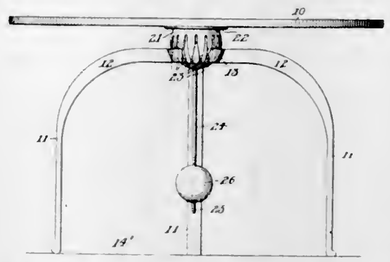
2. A skinning tool including a thin flat rotary blade and spaced guards consisting of flat plates arranged in parallelism and receiving the knife between them, said guards being joined at their outer edges by circumferentially spaced radially projecting loops having their closed ends outward and said loops being in spaced relation to the cutting edge of the knife and projecting beyond the same, whereby the knife is prevented from coming in contact with the skin or hide and the connective tissue is prevented from finding lodgment between the knife and the guard plates.

3. A skinning toll provided with a rotary knife and inner and outer guards in parallel spaced relation to each other and to the knife with the knife located between them, said guards having their outer edges joined at spaced points by loops closed at the outer ends, and said loops being of rounded cross-section and tapering toward the outer or closed ends and said loops also being in spaced relation to the cutting edge of the knife.

1,168,727. SHIP'S TABLE. STEPHEN JENIGAN, Cambridge, Ohio. Filed Aug. 30, 1915. Serial No. 48,023. (Cl. 114—195.)

1. A ship's table comprising a support having a centrally arranged mounting collar circular in cross section and provided with spaced angular sockets in the inner side thereof, anti-friction balls within the said sockets, a cover plate for the said sockets provided with receiving openings for the said balls, a table top, and a mounting member carried by the said top guidingly shiftably mounted upon the said balls.

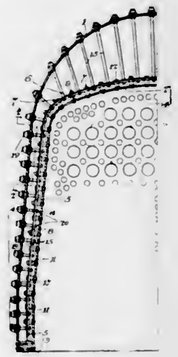
2. A ship's table comprising a support having a centrally arranged mounting collar circular in cross section and provided with spaced angular sockets in the inner side thereof, anti-friction balls within the said sockets, a cover plate for the said sockets provided with receiving openings for the said balls, a table top, a spherical mount centrally secured to the under side of the said top and having substantially parallel grooves arranged in the periphery thereof and terminating adjacent the said top, the said mount being positioned within the said collar with the said balls seated within the said grooves, a pendulum rod projecting from the said mount beneath the said collar perpendicularly to the said top and a return weight adjustably arranged upon the said rod.



3. A ship's table comprising a mounting collar having a grooved inner face, the lower edge of which is of less diameter than the upper edge thereof, a table top, a spherical mount carried by the said top and shiftably positioned within the said collar, and rotation preventing means for the said top provided upon the said collar and mount.

4. A ship's table comprising a mounting collar having a grooved inner face, the lower edge of which is of less diameter than the upper edge thereof, a table top, a spherical mount carried by the said top and shiftably positioned within the said collar, anti-friction members for the said mount carried by the said collar, the said mount being provided with relative rotation preventing guide grooves receivingly engaging the said anti-friction members and a pendulum rod and weight attached to the said mount beneath the plane of the said collar.

1,168,728. FLEXIBLE STAY-BOLT. WALTER A. KEITH, Los Angeles, Cal. Filed Oct. 28, 1914. Serial No. 869,010. (Cl. 122—493.)



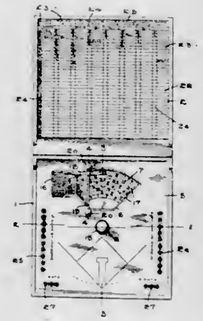
1. The combination with a fire box comprising side and crown sheets and a wrapper sheet, of an anchoring band secured to the outer surface of the fire box, crown and side sheets, and stay means pivotally secured to the wrapper sheet and having a sliding connection to the anchoring band.

2. A fire box, comprising side and crown sheets and a wrapper sheet, a band rigidly secured to the crown and side sheet between the two latter and the wrapper sheet, said band being provided with a plurality of elongated openings, and stay bolts connecting the wrapper sheet to the crown and side sheets, said stay bolts having shanks passing through the openings in the anchor band, being pivotally connected with the wrapper sheet, and having heads on their inner ends of greater length than the width of said openings.

3. In combination with a pair of spacing plates, a strip secured to one of said plataes, said strip being provided with an elongated opening, the other of said plataes being provided with an opening alined with the first mentioned opening, and a bolt passing through said openings, said bolt having a sliding connection with the strip and a universal connection with the second mentioned plate.

4. A stay bolt comprising a T-shaped bolt, a ball nut threaded onto one end of said bolt, a sleeve having a socket to accommodate said ball nut, and a cap threaded on the outer end of said sleeve.

1,168,729. BASE-BALL-GAME APPARATUS. FREDERICK J. KREBS, Philadelphia, Pa. Filed Apr. 22, 1915. Serial No. 23,211. (Cl. 46—63.)



1. In a baseball game apparatus, the combination with a field having an opening therein, of a column of spaces beside the opening containing captions indicating various arrangements of base runners, a rotary disk below the opening having a plurality of concentric series of numbered spaces thereon corresponding in number to the number of spaces in the first-mentioned column, a movable pointer registering with both of said series of spaces, and a chart containing a plurality of columns of numbered spaces captioned like the first-mentioned spaces and having numbered captions indicating plays on a baseball field, said numbers corresponding with numbers on the disk, substantially as described.

2. In a game apparatus, the combination with a field having an opening therein, a column of spaces on the field containing captions indicating various arrangements of base runers, a rotary disk below the opening having a plurality of concentric series of numbered spaces thereon corresponding in number to the number of spaces in the first-mentioned column, a pointer movable across the opening and registering with both of said series of spaces, and a chart, said chart containing a plurality of columns of numbered spaces, said columns corresponding in number and captioned like the first-mentioned spaces, and each of said chart columns containing captions indicating plays on a baseball field, and said spaces in the chart columns numbered in accordance with the numbers of the series of spaces on the disk, substantially as described.

1,168,730. PAINT. SAMUEL LOWY, New York, N. Y., assignor of one-half to Pincus Schrank, New York, N. Y. Filed June 10, 1913. Serial No. 772,749. (Cl. 134—51.)

1. A composition intended for mixture with lead paint and comprising shellac, borax, caustic soda and water, substantially in the proportions described.

2. A composition intended for mixture with lead paint and comprising shellac, borax, caustic soda, zinc sulfate and wataer, substantially in the proportions described.

3. A composition intended for mixture with lead paint and comprising five pounds of powdered white or brown shellac, four ounces of caustic soda, six ounces of borax, one-quarter ounce of zinc sulfate and ten gallons of water.

1,168,731. JELLY-CONTAINER. WILLIE MAY MCKEE, Chicago, Ill. Filed Dec. 1, 1914. Serial No. 875,045. (Cl. 217—26.)

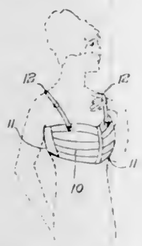


1. A container comprising a tray including a base plate and an upstanding encompassing rim, a plurality of receptacles formed integral with, and depending from, said base plate and provided with flattened bottom walls, the upper extremities of said receptacles projecting above the plane of said base plate and terminating short of the plane of the top of the encompassing rim.

2. A container comprising a tray including a base plate with an upstanding encompassing rim, receptacles formed integral with said tray and depending therebeneath, said base plate provided with alined perforations extending entirely therethrough and encompassing each receptacle, said perforations of a size preventing the passage of hot paraffin therethrough and providing for the separation of each receptacle from the adjoining portion of said tray.

3. An article of the class described comprising a tray including a base plate and an upstanding encompassing rim, a plurality of receptacles formed integral with said tray and depending therebeneath and provided with flattened bottom walls, the upper extremities of said receptacles projecting above the plane of the base plate of said tray and stopping short of the plane of the upper edge of said rim, said base plate provided with alined perforations completely encompassing each receptacle, providing for the separate detachment of the receptacles and adjoining portions of the tray.

1,168,732. BRASSIÈRE. CLARENCE MAYER, Chicago, Ill., assignor to Natures Rival Company, Chicago, Ill., a Corporation of Illinois. Filed June 10, 1914. Serial No. 844,122. (Cl. 2—73.)



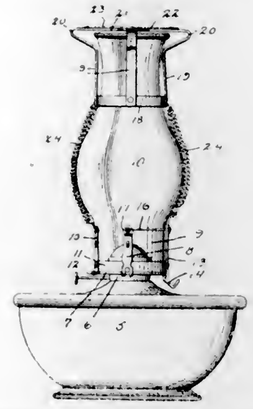
1. A brassière having an elastic cup-shaped bust section composed of a plurality of elastic strips overlapped at their margins throughout their length and joined throughout the length of their overlapped parts by stitches which extend through said overlapped portions.

2. A brassière having an elastic cup-shaped bust section composed of a plurality of elastic strips joined at their marginal portions by lines of stitches so disposed as to offer no restraint to the free stretching of said elastic bust section in all directions.

3. A brassière comprising a back section and elastic bust sections, said bust sections each comprising a plurality of elastic strips overlapped at their margins and joined together at their overlapped portions by lines of stitches arranged to permit free stretching of the section in the direction of the length of the said strips.

4. A brassière having an elastic cup-shaped breast lobe supporting section composed of a plurality of flat elastic strips joined throughout their length by stitches which permit free stretching of the strips in the direction of their length, said strips being fashioned relatively to each other to produce a cup-shaped lobe supporting section.

1,168,733. LAMP-CHIMNEY ATTACHMENT. DAVID ALEX MERRITT, Abbeville, Ala. Filed Apr. 24, 1915. Serial No. 23,712. (Cl. 126—256.)



1. In combination with a lamp burner and chimney, a ring engaging the lower portion of the chimney and pivotally connected with the burner, an upwardly extending spring finger secured on each side of said ring, a spring catch formed on one of said fingers and engaging said burner, a frame disposed over the upper end of the chimney and adapted to support an article to be heated and a pair of coil springs connected with said spring fingers and said frame.

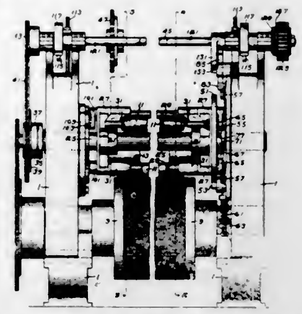
2. In combination with a lamp burner and chimney, the burner being provided with upstanding spring fingers, a ring disposed upon the lower portion of the chimney and hingedly connected with the burner, a pair of diametrically oppositely disposed upstanding spring fingers secured upon said ring intermediate of said first named spring fingers, a spring catch formed on the lower end of one of said second named spring fingers and detachably engaging said burner, a resilient wire secured upon said last named spring finger and detachably connected with said first named spring fingers, an article supporting frame disposed upon the upper end of the chimney, and a pair of coil springs connected with said frame and said second named spring fingers.

1,168,734. WINDING-MACHINE. EDWIN MOREY, Nashua, N. H., assignor to Improved Paper Machinery Company, Nashua, N. H., a Corporation of Maine. Filed May 8, 1913. Serial No. 766,300. (Cl. 92—66.)

1. A machine of the class described comprising, in combination, mandrels; means for winding material thereon; a mandrel carrier; arms pivoted to the latter for supporting said mandrels; and means for actuating said carrier to move the mandrels to and from winding position.

2. In a machine of the class described, the combination of a carrier; mandrel supporting arms thereon; and means for actuating said carrier to move said arms progressively to active position; and means controlled by movement of one of said arms for initiating such actuation of said arms.

3. In a machine of the class described, the combination of a carrier; mandrel supporting arms pivoted thereon; means for turning said carrier to move said arms successively to active position; guide means for said arms; locking means for said carrier; and means operated by said arms for releasing said locking means to permit rotation of said carrier.

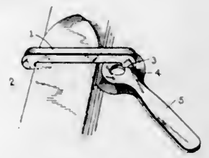


4. In a machine of the class described, the combination of a carrier; mandrel supporting arms supported thereon; frictional driving means tending to rotate said carrier; locking means to prevent rotation of said carrier; cam guides for controlling the shifting movements of said arms; and means for automatically releasing said locking means to permit the rotation of said carrier.

5. In a machine of the class described, the combination of a carrier; mandrel receiving arms thereon; means for turning said carrier to shift the arms to and from active position; guides; and arms connected to said mandrel arms and coöperating with said guides to control the shifting movements of said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,168,735. LEAF-SPRING-SEPARATING DEVICE. BERNARD MORGAN, Newport, R. I., assignor to Clarence E. Norton, Guilford, Conn. Filed Jan. 14, 1914. Serial No. 811,964. (Cl. 81—3.)



1. In a device of the type set forth, a bar having a knife-edge wedge shaped inturned end, the opposite end of the bar having an enlargement which extends on the same side of the bar with said inturned end, a pin extending outwardly from the enlargement, and an operating member having a knife edged circular head eccentrically mounted on the pin and having a handle which extends outwardly from the head.

2. In combination with a bar having an inturned wedge shaped end portion to engage between two of the leaves of a spring, wedge shaped means on the opposite end of the bar to engage between said leaves on the opposite sides thereof, and means whereby said means may be moved toward the inturned end portion of the bar.

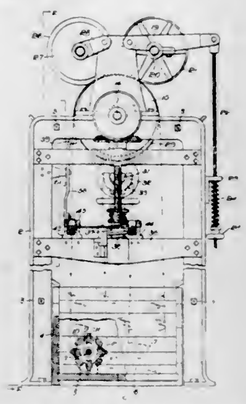
3. In combination with wedge shaped means to engage between two of the leaves of a spring at one side thereof, a rotatable member having a wedge-shaped portion connected to the said means and being for engagement between said two leaves at the opposite sides thereof.

4. In a spring separating device, a frame including two upright arms, a wedge member carried by one arm facing the other arm and a swinging wedge member carried by the other arm and facing the first mentioned wedge.

5. In a spring separating device, a frame including two upright arms, a wedge member carried by one arm facing the other arm, and a movable wedge member carried by the other arm and facing the first mentioned wedge, said movable wedge member being pivoted intermediate its ends.

[Claims 6 to 9 not printed in the Gazette.]

1,168,736. WASHING OR RINSING MACHINE FOR TEXTILE MATERIAL. ISAAC E. PALMER, Middletown, Conn.; Townsend Palmer and Nathalie T. Palmer, Middletown, Conn., administrators of said Isaac E. Palmer, deceased. Filed Mar. 4, 1914. Serial No. 822,256. (Cl. 8—19.)



1. A washing or rinsing apparatus comprising in combination, a tank, a master feeding roller located above the tank and over which the material is adapted to pass, a roll supported adjacent said feeding roller and over which the material is also adapted to pass, and means to adjust the bearings of said second roll, so that the material passing over said roll may be squeezed between it and said feeding roller or may pass therebetween in unsqueezed condition.

2. A washing or rinsing apparatus comprising in combination, a tank, a master feeding roller located above the tank and over which the material is adapted to pass, a roll suported below the feeding roller and over which the material is also adapted to pass, and means vertically to adjust the bearings of said roll so that the material passing thereover may be squeezed between it and said feeding roller or may pass therebetween in unsqueezed condition.

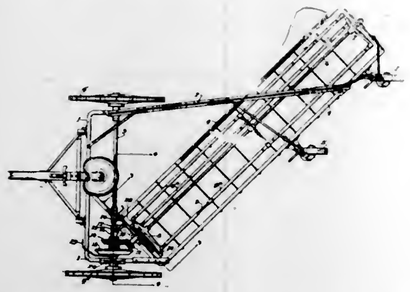
3. A washing or rinsing apparatus comprising in combination, a tank, a master feeding roller over which the material is adapted to pass, a roller adjacent the feeding roller and over which the material is also adapted to pass, adjustable bearings for said roll, and means yieldingly to support said adjustable bearings, whereby the material passing over said roll may be yieldingly squeezed between it and said feeding roller or may pass therebetween in unsqueezed condition.

4. A washing or rinsing apparatus comprising in combination, a tank, a master feeding roller located above said tank, a loose shell mounted upon said roller, a support having a series of guides to direct the material in a corresponding series of spaced paths or runs about said feeding roller, a movable guide adjacent said shell, connections between said movable guide and said support, and means to impart to and fro movement to said support.

5. A washing or rinsing apparatus comprising in combination, a master feeding roller located above the tank, rolls located within the tank and about which the material passes, a loosely mounted tensioning and tension-reversing roll located in proximity to said master feeding roller and adapted to receive the material from one of said tank rolls and deliver it to the other, and means to move said tensioning roll into squeezing relation to said master feeding roller.

[Claim 6 not printed in the Gazette.]

1,168,737. GEARING. CHARLES H. PELTON, Springfield, Ohio, assignor to The Thomas Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed June 23, 1915. Serial No. 35,776. (Cl. 74—58.)



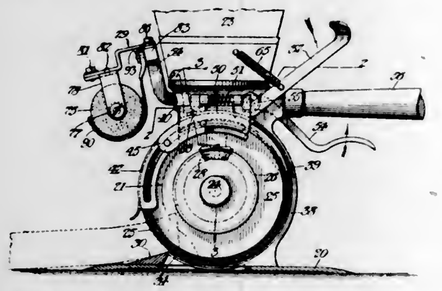
1. In a machine of the character described, a rotary mechanism, a pinion connected therewith, a driving axle, two independent shiftable gears connected with said axle located, respectively, on opposite sides of said pinion, a coil spring between said gears, and means for throwing said gears alternately into engagement with said pinion against the tension of said spring.

2. In a machine of the character described, a rotary mechanism, a pinion connected therewith, a driving axle, two independent shiftable gears connected with said axle located respectively on opposite sides of said pinion, a coil spring between said gears, and cams associated with each gear for throwing the same into engagement with said pinion against the tension of said spring.

3. In a machine of the character described, a rotary mechanism, a pinion connected therewith, a driving axle, a sleeve rotatably connected therewith, independent slidable gears rotatably connected with said sleeve arranged respectively on opposite sides of said pinion, a coil spring between said gears, and cams associated with each of said gears for throwing the same into engagement with said pinion against the tension of said spring.

4. In a machine of the character described, a rotatable shaft, a beveled pinion connected with said shaft, a driving axle, two independent shiftable beveled gears connected with said axle and arranged respectively on opposite sides of said pinion, a coil spring between said gears, and means for throwing said gears alternately into engagement with said pinion.

1,168,738. CLOTH-CUTTING MACHINE. DAVID PERLMAN, New York, N. Y. Filed June 15, 1915. Serial No. 34,183. (Cl. 164—76.)



1. The combination with a circular knife, of a curved cloth lifting member disposed adjacent to the periphery thereof and movable circumferentially to vary the elevation of the goods in respect to the axis of the knife.

2. The combination with a circular knife and a support therefor, of a curved cloth lifting member carried by the support and movable circumferentially, the said member having a radius of curvature slightly larger than the radius of said knife.

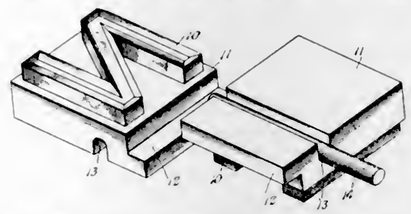
3. The combination with a circular knife, of a support therefor, disposed closely adjacent to one surface of the knife and having a curved recess in the face thereof toward said knife and opposite the cutting edge of the latter, and a member disposed within said recess and movable along said recess, one extremity of said member being adapted to engage with the material to be cut to vary the elevation of the latter in respect to the axis of the knife.

4. The combination with a circular knife, of a support therefor, and a curved member supported and guided by said knife support and movable along a path approximately following the cutting edge of the knife, one extremity of said member being normally disposed beneath the path of movement of the material to be cut and when operated, serving to lift the goods along the cutting edge of the knife.

5. The combination with a circular knife, of a member supported independently thereof and movable along the periphery of the knife, one portion of said member projecting out radially beyond the edge of the knife and presenting a cloth lifting surface and another portion of said member extending transversely across the cutting edge of the knife and constituting a guard for the latter.

[Claims 6 to 61 not printed in the Gazette.]

1,168,739. CARD-PRINTING OUTFIT. EDWARD E. POLLOCK, New York, N. Y., assignor to Daylock Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1915. Serial No. 194. (Cl. 101—169.)



1. A card printing outfit comprising in combination a plurality of cutting and embossing type having alining grooves extending transversely in the backs of the type, and an alining rod adapted to lie within said grooves and extend across a series of said type.

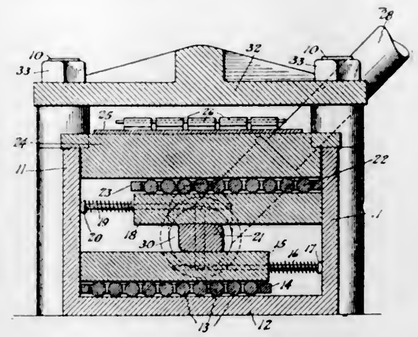
2. A card printing outfit comprising in combination a plurality of type having alining grooves extending in the same relative direction in the backs of the several type, and an alining rod adapted to lie within said grooves and engage a plurality of said type to maintain their alinement.

1,168,740. CARD PRINTING AND EMBOSSING PRESS. EDWARD E. POLLOCK, New York, N. Y., assignor to Daylock Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 2, 1915. Serial No. 195. (Cl. 101—13.)

1. A press of the character described, comprising in combination a stationary bed plate, bed and pressure plates movable transversely of the application of pressure, a cam bar working between said plates to develop pressure, a stationary platen, and a pressing table moved by said pressure plate toward said stationary platen.

2. A press of the character described, comprising in combination a stationary platen, a stationary bed plate, bed and pressure plates movable transversely of the application of pressure, a cam bar working between said plates to develop pressure, a manually actuated arm for rocking said cam bar, and a pressing table moved by said pressure plate toward said stationary platen.

3. A press of the character described, comprising in combination a stationary bed plate, bed and pressure plates, movable transversely of the application of pressure, a cam bar working between said plates to develop pressure, a stationary platen, a pressing table moved by said pressure plate toward said stationary platen, and anti-friction rollers between said stationary and movable bed plates and between said pressure plate and pressing table.



4. A press of the character described, comprising in combination a stationary bed plate, bed and pressure plates, movable transversely of the application of pressure, return springs tending to restore said movable plates to normal position, a cam bar working between said plates to develop pressure, a stationary platen, and a pressing table moved by said pressure plate toward said stationary platen.

1,168,741. GARMENT-HANGER. HARRIET M. POTTER, Allendale, N. J. Filed May 5, 1915. Serial No. 25,874. (Cl. 211—13.)

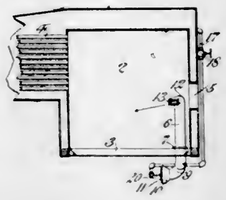


In a garment hanger, having a garment supporting bar, and suspending means therefor, in combination, a spring plate centrally attached to said bar and having a forked central portion, a perfume receptacle extending inwardly through an aperture in the bar and supported therein by attachment to the aforesaid central forked portion of the spring plate whereby the receptacle may be removed by removing the spring plate from the bar, and disks of soft material adjacent the ends of the spring plate and attached thereto to prevent damage to garments under the spring clip.

1,168,742. HEATER-BOX. HOWARD L. PYLE, Wilmington, Del. Filed Feb. 21, 1912. Serial No. 679,100. (Cl. 110—61.)

1. In a device of the character stated, a boiler, a fire box therefor, a suitable grate, a heater box in said fire box adapted to direct air thereinto and spiral flanges projecting from the inner wall of said heater box forming spiral passages and a central passageway with which the said spiral passages communicate throughout their entire extent.

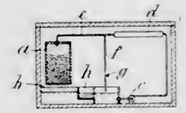
2. In a device of the character stated, a boiler, a fire-box therefor, a suitable grate, a heater box in said fire-box adapted to direct air thereinto, and spiral flanges projecting from the inner wall of said heater box forming spiral passages and a central passageway with which the said spiral passages communicate.



3. In a device of the character stated, a boiler, a fire-box therefor, a suitable grate, heater boxes in said fire-box adapted to direct air thereinto, spiral flanges projecting from the inner wall of each of said heater boxes forming spiral passages and a central passageway with which the said spiral passages communicate, and offset discharge portions for said heater boxes arranged to discharge air above the bed of fuel in the direction of the draft and so that the discharge therefrom will commingle with each other.

4. In a device of the character stated, a boiler, a fire-box therefor, a suitable grate, heater boxes in said fire-box adapted to direct air thereinto, spiral flanges projecting from the inner wall of each of said heater boxes forming spiral passages and a central passageway with which the said spiral passages communicate, and offset discharge portions for said heater boxes arranged to discharge air above the bed of fuel in the direction of the draft, said discharge portions being flat and elongated, whereby the discharge therefrom is in sheet form and arranged to commingle with each other.

1,168,743. REFRIGERATING DEVICE. JOHAN GUSTAF RICHERT, Stockholm, Sweden. Filed Dec. 18, 1913. Serial No. 807,477. (Cl. 62—106.)



1. In a refrigerating device, a refrigerating member, an ice receptacle, a salt receptacle, a pump for the circulation of brine through the refrigerating member, a pump basin, a return pipe leading through said ice receptacle and salt receptacle and a second return pipe leading directly to the pump basin.

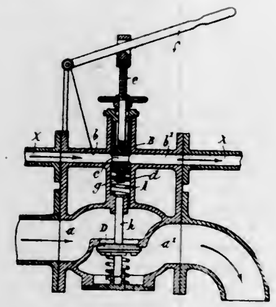
2. In a refrigerating device, a refrigerating member, an ice and salt receptacle, a pump for the circulation of brine through the refrigerating member, a pump basin, a return pipe leading through the ice and salt receptacle and a second return pipe leading directly to the pump basin.

1,168,744. DISTRIBUTION SYSTEM FOR INFLAMMABLE LIQUIDS. JEAN FRANCOIS ROLLAND and PIERRE ANDRE PAUL MAUCLÈRE, Paris, France. Filed Mar. 26, 1913. Serial No. 756,886. (Cl. 221—74.)

1. A safety system for distribution of liquids, comprising a liquid reservoir, a liquid distributing pipe leading therefrom, a plurality of outlets from said distributing pipe, a pipe connected to said liquid distributing pipe adapted to admit inert gas thereto for returning the liquid in said distributing pipe to said reservoir, and means for controlling the passage through said outlets and through said gas-pipe.

2. A safety system for distribution of liquids, comprising a liquid reservoir, a liquid distributing pipe leading therefrom, a plurality of outlets from said distributing pipe, a pipe connected to said liquid distributing pipe

adapted to admit inert gas thereto for returning the liquid in said distributing pipe to said reservoir, means in conjunction with each outlet for controlling the passage therethrough and through said gas pipe, said means leaving the passage through said gas pipe normally open and operating to close said passage before opening the passage through said outlets, the closing of the passage in said gas-pipe effecting the cutting off of said gas-pipe from said liquid distributing pipe, whereby said liquid distributing pipe is cut off from said gas-pipe and liquid may flow in said liquid distributing pipe and from the outlets connected thereto free from the effects of the gas-pressure in said gas-pipe.



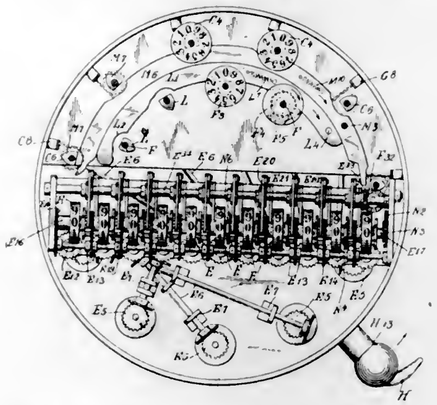
3. A safety system for distribution of liquids comprising a liquid reservoir, a liquid distributing pipe leading therefrom, a plurality of outlets from said distributing pipe, valves in said outlets, a pipe connected to said liquid distributing pipe adapted to admit inert gas thereto for returning liquid in said distributing pipe back to said reservoir, a plurality of valves in said gas pipe, means for operating a gas valve in conjunction with said outlet valves, said valves in said gas pipe being normally open and adapted to be closed before said outlet valves are opened, the closing of said valves in said gas pipe effecting the cutting off of said gas pipe from said liquid distributing pipe, whereby said liquid distributing pipe is cut off from said gas pipe and liquid may flow in said liquid distributing pipe and from said outlets connected thereto free from the effects of the gas pressure in said gas pipe.

4. A safety system for distribution of liquids, comprising a liquid reservoir adapted to contain an inert gas above the level of the liquid therein, a liquid distributing pipe leading therefrom, a plurality of outlets from said distributing pipe, a pipe leading from said reservoir to said liquid distributing pipe adapted to admit gas from said reservoir to said distributing pipe for returning liquid in said distributing pipe to said reservoir, means for controlling the passage through said gas and liquid distributing pipes, said means leaving the passage through said gas pipe normally open and operating to close said passage before opening the passage through said distributing pipe, whereby said distributing pipe is cut off from said gas-pipe, a liquid may flow in said liquid distributing pipe free from the effects of the gas pressure in said gas pipe.

5. A safety system for distribution of liquids, comprising a liquid reservoir adapted to contain an inert gas above the level of the liquid therein, a liquid distributing pipe leading therefrom, a plurality of outlets from said distributing pipe, a pipe connected to said liquid distributing pipe adapted to admit inert gas thereto for returning liquid in said distributing pipe to said reservoir, means in conjunction with each outlet for controlling the passage through said gas and liquid distributing pipe, said means comprising a valve adapted to leave the passage through said gas pipe normally open, and operating to close said passage before opening the passage through said distributing pipe, whereby said liquid distributing pipe is cut off from said gas pipe, and liquid may flow in said liquid distributing pipe free from the effects of the gas pressure in said gas pipe.

[Claims 6 to 12 not printed in the Gazette.]

1,168,745. CALCULATING-MACHINE. LEON W. ROSENTHAL, New York, N. Y. Filed Feb. 14, 1911, Serial No. 608,622. Renewed June 16, 1915. Serial No. 34,550. (Cl. 235—62.)



1. In a calculating machine having an adding mechanism, means for setting up a multiplicand factor, means for setting up a multiplier factor having more than one digit, means including a motor for automatically effecting the multiplication of said factors, and means positioned by the multiplier setting means for automatically stopping said motor upon completion of the multiplying operation; substantially as described.

2. In a calculating machine, an adding mechanism, a member forming one element having a plurality of relatively fixed actuating means arranged in lines containing different numbers thereof, a plurality of gears forming a second element and adapted to be axially rotated upon engagement with said actuating means, and transmitting connections from said gears to said adding mechanism, one of said elements being adapted to move in order to axially rotate said gears and thereby advance said adding mechanism; substantially as described.

3. In a calculating machine, an adding mechanism comprising a plurality of denominations, a member having a plurality of circularly disposed series of actuating means, and transmitting mechanism from said member to said adding mechanism, each of said series being adapted to coöperate with said transmitting mechanism to effect the regiseration of 0 to 9 digits on a denomination of said adding mechanism.

4. In a calculating machine, an adding mechanism comprising a plurality of denominations, a member having a plurality of series of actuating means fixed with respect to each other, and transmitting mechanism adapted to coöperate with each of said series to effect the registration of 0 to 9 digits on a denomination of said adding mechanism.

5. In a calculating machine, an adding mechanism, a member having a plurality of series of actuating means wherein each series comprises 1 to 9 of said actuating means in circular alinement with 1 to 9 respectively of the remaining series, and transmitting mechanism adapted to advance said adding mechanism upon engagement with said actuating means.

[Claims 6 to 99 not printed in the Gazette.]

1,168,746. COMPOSITION FOR DETONATING EXPLOSIVE CHARGES. WALTER RUNGE, Chester, Pa., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed June 12, 1913. Serial No. 773,199. (Cl. 52—3.)

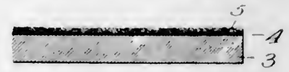
1. A charge for blasting caps containing a mixture of 70 to 95 parts of lead azid and 5 to 30 parts of trinitrotoluene.

2. A priming charge for blasting caps containing a mixture of 70 to 95 parts of lead azid and 5 to 30 parts of trinitrotoluene.

3. A charge for blasting caps containing a mixture of 80 parts of lead azid and 20 parts of trinitrotoluene.

4. A priming charge for blasting caps containing a mixture of 80 parts of lead azid and 20 parts of trinitrotoluene.

1,168,747. ORNAMENTAL FLOCKED DESIGN. ADOLF SCHMIDT, Chicago, Ill., assignor to Columbian Three Color Co., Chicago, Ill., a Corporation of Illinois. Filed May 11, 1914. Serial No. 837,796. (Cl. 41—36.)



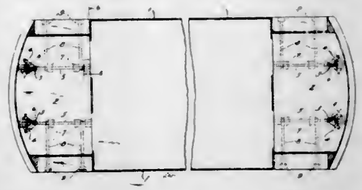
As a new article of manufacture, a sheet provided on one surface with a solid variegated flock design having a fuzzy or textile like appearance, and composed of registering applications of cementitious size each forming a portion of the design to be produced, and flock of varying colors applied to said applications of cementitious size, each flock-portion of the design registering with and extending edge-wise to the adjacent differently colored flock-portion thereof.

1,168,748. WATER-TUBE BOILER. WILHELM SCHMIDT, Wilhelmshöhe, near Cassel, Germany, assignor to Schmidt'sche Heissdampf-Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed Jan. 25, 1915. Serial No. 4,392. (Cl. 122—478.)

In a water tube boiler, in combination with a pair of lower drums and an upper drum, two sets of water tubes connecting the lower drums with the upper drum one set being smaller than the other set, a flue laterally of each set of water tubes, a feed water heater in the flue adjacent to the smaller set of tubes, a steam superheater between the feed water heater and the smaller set of tubes and in the same flue, and an air heater in the flue adjacent to the larger set of tubes.

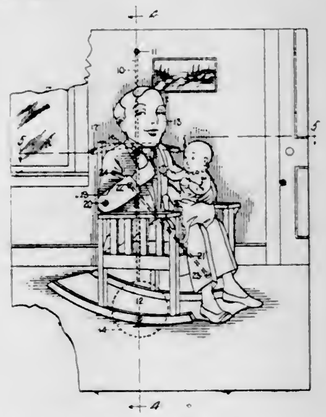
1,168,749. EXTENSIBLE CAR-STEP. HERMAN F. SCHRAGE, Palatine, Ill. Filed Feb. 19, 1915. Serial No. 9,307. (Cl. 105—86.)

A device of the type described, comprising an initial step fixed to a car platform and having its ends provided upon their inner surfaces with inwardly extending portions supporting the tread of the step, said step ends having downwardly extending apertured lugs, a foldable step having upstanding apertured lugs near its rear corner edges and depending apertured lugs upon its underside near the forward corner edges, a riser of rectangular plate outline, having upper and lower edge apertured lugs, with their apertures extending parallel with the longitudinal edges of the riser, the lower edge apertured lugs extending about in alinement with the corresponding edge of the riser, said edge of the riser being notched adjacent said bottom edge lugs, pivoting pins inserted in opposed



apertured lugs of said initial step, riser and foldable step, pitmen having pivotal connection with the forward lower edge lugs of said foldable step, and actuating mechanism for said pitmen, operable from the car-platform.

1,168,750. AUTOMATON. RICHARD J. SCHUHMANN, Louisville, Ky., assignor of one-half to George N. Bosler, Louisville, Ky. Filed Jan. 15, 1915. Serial No. 2,373. (Cl. 46—40.)



1. An automaton comprising a back board having a guide slot therein; a card shaped and imprinted to represent human figures seated in a rocking chair, said card being mounted on the face of said board; a pivot connecting said board and card, said pivot being concentric with the guide slot in said board; a pendulum pivotally mounted upon said board to swing at the back thereof; a connecting bracket pivotally mounted on said card and having a perforation engaging said pendulum, said bracket being extended through said slot in said board; a rocking member pivotally mounted on said card; and means operatively connecting said rocking member and said board to rock said member relative to said card.

2. An automaton comprising a back board having a guide slot therein; a card shaped and imprinted to represent human figures seated in a rocking chair, said card being mounted on the face of said board; a pivot connecting said board and card, said pivot being concentric with the guide slot in said board; a pendulum pivotally mounted upon said board to swing at the back thereof; a connecting bracket pivotally mounted on said card and having a perforation engaging said pendulum, said bracket being extended through said slot in said board; a rocking member pivotally mounted on said card; and a connecting rod pivotally mounted on said board and adjacent the free end of said rocking member, for limiting the movement of said free end.

3. An automaton comprising a back board having a guide slot therein; a card shaped and imprinted to represent human figures seated in a rocking chair, said card being mounted on the face of said board; a pivot con-

necting said board and card, said pivot being concentric with the guide slot in said board; a pendulum pivotally mounted upon said board to swing at the back thereof; a connecting bracket pivotally mounted on said card and having a perforation engaging said pendulum, said bracket being extended through said slot in said board; a rocking member pivotally mounted on said card; a connecting rod pivotally mounted on said board and adjacent the free end of said rocking member, for limiting the movement of said free end; and means provided in said card for controlling the movement of the free end of said rocking member.

4. An automaton comprising a back board having a guide slot therein; a card shaped and imprinted to represent human figures seated in a rocking chair, said card being mounted on the face of said board; a pivot connecting said board and card, said pivot being concentric with the guide slot in said board; a pendulum pivotally mounted upon said board to swing at the back thereof; a connecting bracket pivotally mounted on said card and having a perforation engaging said pendulum, said bracket being extended through said slot in said board; a rocking member pivotally mounted on said card; and means operatively connecting said rocking member and said board to rock said member relative to said card, said means embodying a curved slot formed in said card concentric with the pivot of said rocking member.

1,168,751. AUTOMATON-SIGN. RICHARD JOSEPH SCHUHMANN, Louisville, Ky., assignor of one-half to George N. Bosler, Louisville, Ky. Filed May 25, 1915. Serial No. 30,267. (Cl. 40—138.)

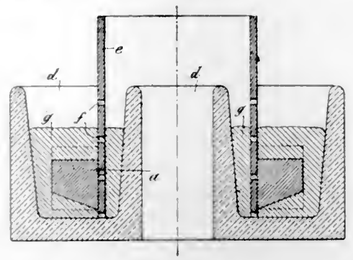


1. A sign as characterized comprising a panel, having imprinted thereon inactive pictorial sections; a plurality of active pictorial sections pivotally mounted on said panel in corresponding relation to said inactive sections; power means embodying a swinging weighted member suspended in spaced relation to said panel; flexible transmission devices operatively connecting said weighted member and said active sections; means for mounting said weighted member, said means embodying a yoke for limiting the swinging of said weighted member; and means embodying clamping jaws and a contracting screw therefor, for mounting said yoke permanently in service.

2. A sign as characterized comprising a panel, having imprinted thereon inactive pictorial sections; a plurality of active pictorial sections pivotally mounted on said panel in corresponding relation to said inactive sections; power means embodying a swinging weighted member suspended in spaced relation to said panel; and flexible transmission devices operatively connecting said weighted member and said active sections, said transmission devices embodying a pull cord mounted on said panel, a wire mounted on said power means and a hook and eyelet for operatively connecting said pull cord and wire for establishing service relation therebetween.

3. A sign as characterized comprising power means, embodying a pivot block; means for permanently mounting said block on a vehicle structure; a weighted member pendulously connected with said block; and a yoke fixedly mounted on said block for limiting the extent of operation of said weighted member.

1,168,752. PROCESS OF MANUFACTURING BIMETALLIC COMPOSITE OBJECTS OR BODIES. HUGO SEIDLER, Berlin-Dahlem, Germany. Filed Aug. 16, 1915. Serial No. 45,743. (Cl. 22—203.)



1. A process of manufacturing bimetallic composite bodies, comprising enveloping a body composed of the one metal with the other metal in a molten state, heating the same to the welding temperature of the said body metal, and gradually cooling the same, whereby the said molten metal is solidified, contracts, subjects the enveloped body to high pressure and is intimately united with the same, substantially as described.

2. A process of incasing a metallic body with another metal having a lower melting point, comprising pouring the molten metal of lower melting point around all sides of the body metal, heating the same to the welding temperature of the body metal, and gradually cooling the same, whereby the molten metal is solidified, contracts, exercises high pressure on the heated body and is intimately united therewith.

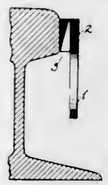
3. A process of covering the top and bottom of a metallic body with another metal of lower melting point, comprising mounting the body on a hollow, cylindrical, perforated member, surrounding the body on all sides with the said metal of lower melting point in a molten state, heating the same to the welding temperature of the said body, gradually cooling the same, whereby the said molten metal is solidified, contracts, subjects the body to high pressure and is intimately united with the top, bottom and outer periphery of the same, removing the body covered with metal from the said member, and removing the covering metal from the outer periphery of the body, substantially as described.

4. A process of manufacturing composite metal objects, comprising applying a metal in molten condition to a solid body of higher melting point, heating the object to the welding temperature of the body metal, and cooling the object so as to cause pressure to unite the metals.

5. A process of manufacturing composite metal objects, comprising incasing a core with a metal of a lower melting point, heating the object to the welding temperature of the core metal, and cooling the object so as to cause pressure to unite the metals.

[Claims 6 not printed in the Gazette.]

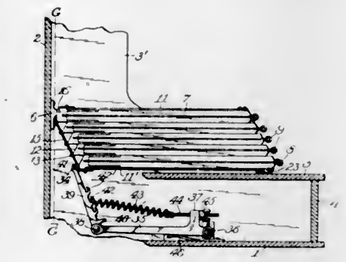
1,168,753. RAIL-BOND. BENJAMIN F. SILLIMAN, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 17, 1913. Serial No. 768,241. (Cl. 173—262.)



A rail bond, comprising a flexible copper body having a bonding terminal at either end of rectangular cross-section, and a triangularly shaped iron strip integrally joined

to and extending the full length of each of such terminal portions of said body, each of such strips having one face lying against one side of such terminal, and another face extending at substantially right angles from the bottom of such terminal, adapting said strip to form a V-shaped trough between the rail and said strip upon said bond being positioned vertically adjacent to said rail.

1,168,754. CREDIT-ACCOUNTING REGISTER. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (Incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Mar. 4, 1911. Serial No. 612,269. (Cl. 45—2.)



1. A credit-accounting register including a plurality of bill-holding leaves arranged in upright position, links pivotally connected to the lower forward portions of the leaves and extending forwardly under and connected to the forward portion of adjacent leaves respectively, and movable means for normally drawing the links yieldingly to forwardly extended position.

2. A series of bill holders, a series of links, one for each holder, pivotal connections between the links, and pivotal connections between each link and the adjacent holder permitting the latter to swing relative thereto and relative to adjoining holders.

3. A series of bill holders having their lower ends inclined rearwardly and upwardly, a series of articulated links, one for each holder, for supporting the holders in stepped relationship, and pivotal connections between the front lower end of each holder and the adjacent link permitting the holder to swing relative thereto and relative the next rearward holder.

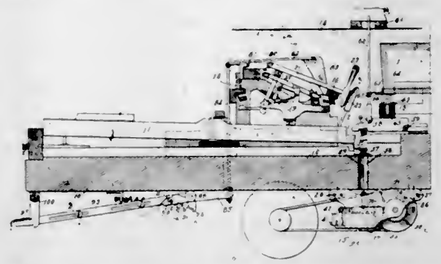
4. A credit-accounting register including a plurality of leaves hingedly connected together, the rearmost leaf being pivotally supported at its hingedly connected end, and an articulated arm pivotally supported and pivotally connected with the foremost leaf and provided with a spring normally forcing the pivotally connected portion of the arm away from the pivotal support of the rearmost leaf.

5. A credit-accounting register including a plurality of leaves arranged normally in upright position, links pivotally connected together and to the lower portions of adjacent leaves, the links together extending from the rearmost one forwardly to the foremost one of the leaves, the rearmost one of the leaves being pivotally supported, and yielding means for normally holding the links in forwardly extended position.

[Claims 6 to 10 not printed in the Gazette.]

1,168,755. ELECTRICALLY-OPERATED MUSICAL INSTRUMENT. IRVING B. SMITH, Philadelphia, Pa. Filed May 26, 1910. Serial No. 563,602. (Cl. 84—231.)

1. The combination of sound-producing elements, a hammer action, key levers, a key bed for said key levers, a magnet rail made of a single bar secured adjacent to the underside of said key bed including magnet coils located on the bar, actuating shoes actuated by said coils disposed adjacent to said coils and in close proximity to said bar, and striker rods connected by one of their ends with said shoes and detachable therefrom by a lateral movement, and extending up through said key bed, said rods having their other ends in position to strike and operate said key levers.



2. The combination of a casing, sound-producing elements including a hammer action and key levers contained therein, a frame work exterior to and below said casing and hinged thereon at one side, means on the other side of the frame work for removably securing it to the casing, a magnet bar carried in said frame, including magnets supported by said bar, armatures for said magnets pivotally mounted on said bar, actuating shoes each pivotally connected to an armature, and striker rods connected to said actuating shoes and extending into said casing in position to strike said key levers when the shoes are actuated, said striker rods being unconnected with the key levers.

3. The combination of a casing, a hammer action located therein, key levers for actuating said hammer action, striker rods for moving said key levers extending through the bottom of said casing, said key levers manually movable independently of said striker rods, said striker rods unattached to said key levers, mechanism for actuating said striker rods located on the exterior of the casing, a frame work carrying said mechanism pivotally attached under said casing to enable said frame work to swing down and away from the lower ends of said striker rods, and removable means for attaching said frame work to said casing to hold said frame work normally against said casing with said mechanism in operative connection with said striker rods.

4. The combination of a casing, sound-producing elements disposed within said casing, a hammer action located within said casing, key levers provided at their rear ends with clips extending in different directions, connections from said key levers to said hammer action, striker rods engaging said clips, and means operated automatically through the movement of a music sheet for actuating said striker rods.

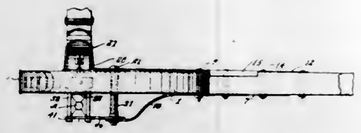
5. The combination of a hammer action, key levers connected with said hammer action for actuating the same, striker rods connected with said key levers and provided with T-shaped members, actuating shoes provided with openings for receiving said T-shaped members, leaf springs mounted upon said actuating shoes and provided with portions engaging said T-shaped members to yieldingly hold them connected to said actuating shoes, and means for actuating said shoes.

[Claims 6 to 28 not printed in the Gazette.]

1,168,756. FIFTH-WHEEL CONSTRUCTION. KELLER SMITH, Aldrich, Mo. Filed Aug. 3, 1914. Serial No. 854,803. (Cl. 21—24.)

1. In a device of the class described, a wheel comprising two sections detachably secured together; said wheel being of inverted U-shape formation, inwardly extending flanges on the legs of the U-shaped wheel, an arcuate rod mounted between the legs of the said wheel, roller bearings on the said rod, adapted to bear upon the upper portion of the U-shaped wheel and against the flanges to facilitate the movement of said arcuate rod within the wheel, means to secure the axle to the ends of said rod,

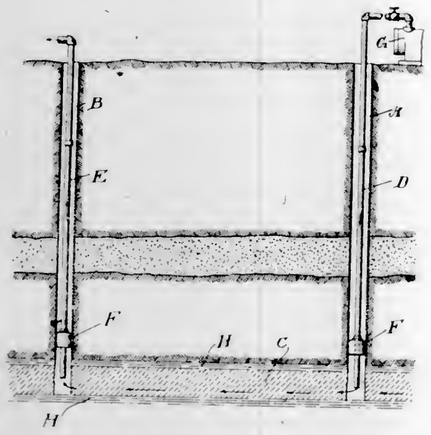
and means to space the axles from the flanges, a transverse bar secured to the upper face of the wheel, a spring support secured to said transverse bar, means to attach the reach rigidly to the said wheel, projections extending from said means, a king pin connecting said projections, a U-shaped clip pivotally supported on said king pin and arranged to encircle the axle between the flanges of connection of the axle to the arcuate member.



2. In a device of the class described, a wheel of hollow formation, an arcuate rod slidably mounted within the wheel, a slot formed in the under face of said wheel, bolts extending from the ends of said arcuate rod arranged to attach an axle thereto, roller bearings mounted on the said arcuate rod and adapted to bear on the lower portion of the wheel to facilitate the sliding movement of the arcuate member therein, means to connect a reach rigidly to said wheel, projections on said last mentioned means and a king pin extending therebetween, and means pivotally connected to said king pin for attachment to the axle of the vehicle.

3. In a device of the class described, a hollow wheel member, outwardly extending arms secured to the rear portion of said wheel, projections on said arms extending within the periphery of the wheel, a king pin extending through said projections, a transverse bar secured to the uppermost of said projections, a flange on said bar, a flange on the adjacent projection, means for attaching a spring support to said flanges, a U-shaped clip rotatably mounted on said king pin and adapted to secure an axle thereto, a rod rotatably mounted within said wheel, means to secure the ends of the axle to said rod, and rollers on said rod to facilitate the movement thereof within the wheel.

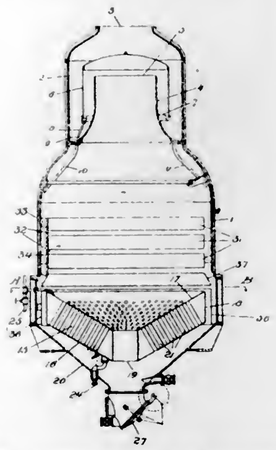
1,168,757. METHOD OF LOCATING NATURAL GAS. FREDERICK SQUIRES, McConnelsville, Ohio, assignor to Walter Squires, Zanesville, Ohio. Filed Apr. 19, 1915. Serial No. 22,523. (Cl. 166—21.)



1. The method of determining the location and probable direction of extent of gas or oil bearing strata which consists in sinking three or more wells to such strata at relatively remote points, creating an artificial pressure at one well which shall be observable at the other wells when the wells communicate with a common stratum, and recording the pressures at all of the wells, whereby the general idrection of flow of the fluid in the stratum is indicated.

2. The method of determining the proper direction of extension of gas or oil bearing strata, which consists in sinking two or more wells to an oil or gas bearing stratum, introducing a pressure creating fluid into all of them at the same degree of pressure, removing the source of pressure, and measuring the volumes taken by each well as an indication of the direction of the continuation of the stratum beyond it.

1,168,758. VACUUM EVAPORATING APPARATUS. GEORGE STADE, Schloss Hubertusberg, Germany, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Mar. 29, 1913. Serial No. 757,497. (Cl. 127—18.)



1. A vacuum evaporating apparatus including in combination a closed vacuum chamber, heating means arranged at the bottom part of said chamber, a circulating ring within said chamber and of less diameter than the chamber, and means for directing the heated liquid from all parts of said heating means, including the sides and bottom thereof, within said cylindrical member.

2. A vacuum evaporating apparatus including in combination a closed vacuum chamber, heating means arranged at the bottom part of said chamber, a circulating ring within said chamber and of less diameter than the chamber, and means for directing the heated liquid from all parts of said heating means, including the sides and bottom thereof, within said cylindrical member, and for separating said heated liquid from the cooler liquid returning to said heating means.

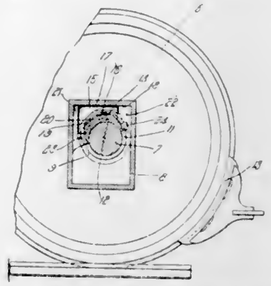
3. A vacuum evaporating apparatus including in combination a closed vacuum chamber, heating means arranged at the bottom part of said chamber, a circulating ring above said heating means within said chamber and of less diameter than the chamber and a partition open at the bottom and encircling said heating means for keeping the heated liquid flowing from said heating means from the returning cooler liquid flowing toward said heating means.

4. A vacuum evaporating apparatus including in combination a closed vacuum chamber, a heating device within and near the bottom of said chamber with a passage way for the fluid therebetween, a hollow cylindrical member within and of less diameter than said chamber and located above said heating device, and means in said passageway for separating the heated liquid flowing upwardly outside said heating device and the cooler liquid returning thereto and for directing said heated liquid within said hollow cylindrical member.

5. A vacuum evaporating apparatus including in combination a closed chamber, a heating device having upwardly directed fluid passages within and near the bottom of said chamber with a passage way for the fluid between the heating device and the side walls and bottom of the chamber, a circulating ring within said chamber above said heating device, and means for directing the heated liquid flowing upwardly outside said heating device from beneath and around said heating device, within said circulating ring and for keeping said heated liquid and the cooler liquid returning from the heating means separate from each other.

[Claims 6 to 17 not printed in the Gazette.]

1,168,759. JOURNAL-BOX. GEORGE F. STARBUCK, Waltham, Mass. Filed Mar. 31, 1915. Serial No. 18,255. (Cl. 64—20.)



1. In combination, an axle, a wheel attached to said axle, a brake shoe adapted to engage a portion of the periphery of said wheel, and a journal bearing arranged against said axle in opposed relation to said brake shoe.

2. In combination, an axle, a wheel attached to said axle, a brake shoe adapted to engage a portion of the periphery of said wheel, a journal bearing arranged against said axle in opposed relation to said brake shoe, a journal box constructed and arranged to contain said journal bearing, and means within said journal box adapted to guide said journal bearing radially relatively to the axis of said shaft and at an angle to a vertical plane containing said axis.

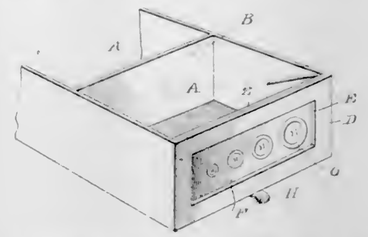
3. In combination, a journal box, a journal arranged within said box, a wheel co-axially disposed with said journal, a brake shoe adapted to engage a portion of the periphery of said wheel, a journal bearing mounted upon said journal with the major portion of the journal contacting surface of said bearing disposed upon the opposite side of a vertical plane containing the axis of said journal, with respect to said brake shoe and constructed and arranged to oppose said brake shoe, said journal bearing having a supporting surface arranged at right angles to said vertical plane, and a journal bearing key surmounting said journal bearing in contact with said supporting surface.

4. In combination, a journal box, a journal arranged in said box, a wheel coaxially disposed with said journal, a brake shoe adapted to engage a portion of the periphery of said wheel, a journal bearing arranged upon said journal at a substantial angle to a vertical plane containing the axis of said journal, said journal bearing being arranged upon the opposite side of said vertical plane with respect to said brake shoe and constructed and arranged to oppose pressure from said shoe, and a key constructed and arranged to position said bearing at said angle relatively to said journal.

5. In combination, a journal box, a journal arranged in said box, a wheel coaxially disposed with said journal, a brake shoe constructed and arranged to engage the periphery of said wheel, a journal bearing mounted upon said journal at a substantial angle to a vertical plane containing the axis of said journal, in opposed relation to said brake shoe and constructed and arranged to substantially directly oppose the pressure applied to said wheel by said brake shoe during the application of the brakes, guides disposed upon opposite sides of said journal and arranged substantially parallel with the central axial plane of said bearing, said guides being constructed and arranged to engage and guide said bearing within said journal box obliquely with respect to said vertical plane, a key interposed between said bearing and said journal box, and guides arranged substantially parallel with a vertical plane containing the axis of said journal, said guides adapted to prevent a lateral movement of said journal box relatively to said journal.

[Claim 6 not printed in the Gazette.]

1,168,760. DISPLAY-CABINET. MORRIS SWORZYN, Washington, D. C. Filed Oct. 16, 1913. Serial No. 795,502. (Cl. 211—9.)

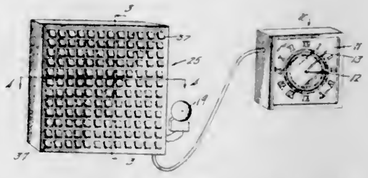


1. A receptacle having an apertured wall, a member mounted in the receptacle for swinging movement behind said apertured wall, and said member having inwardly disposed extensions at its ends serving to limit the inward swinging movement of the member.

2. A merchandise container having an apertured front wall, a member pivoted in said container behind said apertured front wall, a card interposed between said member and said front wall, means for limiting inward swinging movement of said member, and means carried by said limiting means to hold said member against said card.

3. A merchandise container including an apertured front wall, an inwardly movable member pivoted in said container behind said apertured front wall, angular extensions on said member for limiting inward movement of the latter, said container having concave recesses in its sides, and spring keepers carried by said angular extensions having curved ends adapted to engage in said concave recesses to yieldably hold said member in parallel relation to said apertured front wall.

1,168,761. ELECTRIC ALARM MECHANISM. ERNEST A. TREAX, Inglewood, Cal. Filed May 16, 1914. Serial No. 839,034. (Cl. 161—5.)

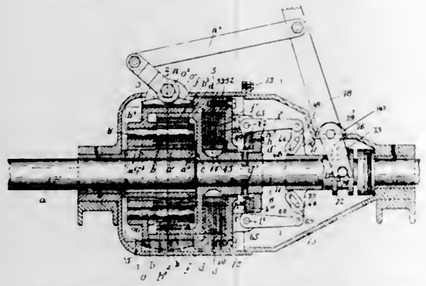


1. In a time controlled signal apparatus having a series of circuits closed by the hour hand, and another series closed by the minute hand, the combination of parallel spaced bus bars connected to one of the clock controlled series of circuits, keys pivoted to said bus bars, a second set of parallel spaced bus bars connected to the other clock controlled series of circuits and arranged at substantially right angles to the first mentioned set of bus bars, and spring clips on the second set of bus bars arranged to receive said pivoted keys.

2. In a time controlled signal apparatus having a series of circuits closed by the hour hand, and another

series closed by the minute hand, the combination of a group of bus bars connected to one of the clock controlled series of circuits, a second group of bus bars connected to the other clock controlled series of circuits and arranged adjacent the first-mentioned group of bus bars and spaced therefrom, means for connecting any one of the bus bars of one group with any one of the bus bars of the other group, comprising a series of arms pivoted on each of the bus bars of one group, and a series of contact members on each of the bus bars of the other group adapted to engage said arms, and means for normally maintaining said arms out of connection with the contact members on the bus bars.

1,168,762. REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed May 26, 1911. Serial No. 629,596. (Cl. 74—34.)



1. In a reversing-gearing, the combination of a driving-shaft, a driven-shaft, gearing connecting said shafts including a spur gear on the driving-shaft and pinions engaging said gear and an internal gear on the driven-shaft, an axially movable inclosing-case for said gearing, said case bearing said pinions, means for holding said case against rotation to secure reverse drive, and clutching-means arranged for operation by an axial movement of said case to hold the component parts of the gearing against relative rotation and secure direct drive, substantially as described.

2. In a reversing-gearing, the combination of a driving-shaft, a driven-shaft, gearing connecting said shafts including a spur-gear on the driving-shaft and pinions engaging said spur-gear and an internal gear on the driven-shaft engaging said pinions, an axially movable inclosing-case for said gearing, said case bearing said pinions, clutch-mechanism arranged within said case to connect said case with one of the shafts for direct drive and to disconnect it therefrom, said clutch-mechanism being adapted for operation by an axial movement of said case, and means to hold said case against rotation for reverse drive, substantially as described.

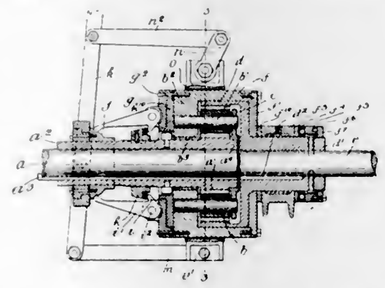
3. In a reversing-gearing, the combination of a driving-shaft, a spur-gear thereon, pinions engaged by said spur-gear, an internal gear engaged by said pinions, a driven-shaft to which said internal-gear is secured, an axially movable inclosing-case for the gearing supported at one end by the driving-shaft and at the opposite end by the driven-shaft, having an end wall bearing said pinions, a clutch-mechanism arranged within said case to connect said case with and disconnect it from the driven-shaft, and means to move said case axially to operate said clutch-mechanism, substantially as described.

4. In a reversing-gearing, the combination of a driving-shaft, a spur-gear thereon, pinions engaged by said spur-gear, an internal-gear engaged by said pinions, a driven-shaft to which said internal-gear is secured, an axially movable inclosing-case for said gearing, said case bearing said pinions, means for holding said case against rotation to secure reverse drive, and clutching-means arranged for operation by an axial movement of said case to hold the component parts of the gearing against relative rotation and secure direct drive, substantially as described.

5. In a reversing-gearing, the combination of a driving-shaft, a spur-gear thereon, pinions engaged by said spur-gear, an internal-gear engaged by said pinions, a driven-shaft to which said internal-gear is secured, an axially movable inclosing-case for the gearing supported at one end by the driving-shaft and at the opposite end by the driven-shaft, having an end wall bearing said pinions, a plurality of axially movable friction clutch-plates arranged between the opposite end wall of said case and the crown of the internal-gear, and means to move said case axially to in turn move said clutch-plates thereby to connect said case with and disconnect it from the driven-shaft, substantially as described.

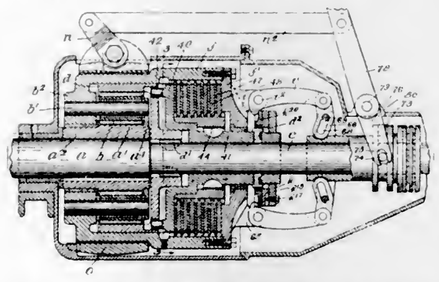
[Claims 6 to 25 not printed in the Gazette.]

1,168,763. REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed Feb. 5, 1912. Serial No. 675,441. (Cl. 74—34.)



In reversing-gearing, the combination of a driving-shaft and a driven-shaft, a sleeve secured to the driving-shaft, a spur-gear on said sleeve, pinions engaging said spur-gear, an internal gear surrounding the driving-shaft and engaging said pinions and having an elongated hub secured to the driven-shaft, a bearing frame through which said hub is extended, a carrier for the pinions, a clutch to connect the pinion-carrier with the sleeve on the driving-shaft, actuating-means for the clutch arranged on the sleeve bearing the spur-gear, and a brake arranged for arresting the pinion-carrier, substantially as described.

1,168,764. REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed Feb. 19, 1912. Serial No. 678,569. (Cl. 74—34.)



1. A reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts comprising brake-mechanism to secure reverse drive, and clutch-mechanism to secure forward drive, including a non-axially movable

inclosing-case which is associated with both mechanisms, said clutch-mechanism, including its operating member, being arranged within the case, and its operating-member being rotatable with the driven-shaft but slidable with respect thereto, and extended outward through the end of the case and actuating-means for said operating-member and brake-mechanism.

2. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts comprising brake-mechanism to secure reverse drive, and clutch-mechanism to secure forward drive, including a non-axially movable inclosing-case which is associated with both mechanisms, said clutch-mechanism, including its operating-member, being arranged within the case, and its operating-member being rotatable with the driven-shaft but slidable with respect thereto, and extended outward through the end of the case, and having an abutment and actuating-means for said operating-member and brake-mechanism and co-operating with said abutment.

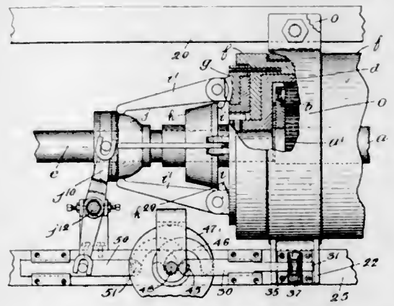
3. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts comprising brake-mechanism to secure reverse drive, and clutch-mechanism to secure forward drive, including a non-axially movable inclosing-case which is associated with both mechanisms, said clutch-mechanism, including its operating-member, being arranged within the case, and its operating-member being rotatable with the driven-shaft but slidable with respect thereto, and extended outward through the end of the case, and actuating-means for the operating-member and brake-member.

4. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts comprising brake-mechanism to secure reverse drive, and clutch-mechanism to secure forward drive, including an inclosing-case which is associated with both mechanisms, said clutch-mechanism comprising clutch-members and an operating-member arranged within the case, its operating-member being arranged for rotation with, but movable with respect to the driven-sha t, and extended outward through the end of the case and actuating-means for said operating-member and brake-mechanism.

5. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts comprising brake-mechanism to secure reverse drive, and clutch-mechanism to secure forward drive, including an inclosing-case which is associated with both mechanisms, said clutch-mechanism comprising clutch-members and an operating-member arranged within the case, its operating-member being arranged for rotation with, but movable with respect to the drivent-shaft, and extended outward through the end of the case, and actuating-means for said operating-member which is arranged to operate the brake-member.

[Claims 6 to 23 not printed in the Gazette.]

1,168,765. ACTUATING MECHANISM FOR REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass. Filed Aug. 3, 1912. Serial No. 713,020. (Cl. 74—34.)



1. In a reversing-gearing having a clutch-mechanism for forward drive, a brake-mechanism for reverse drive, and separate actuators therefor, the combination with an oscillatory shaft, means for connecting the actuators with the shaft whereby, when the shaft is oscillated in one direction, one actuator will be moved for operating the clutch-mechanism without moving the actuator of the brake-mechanism, and when the shaft is oscillated in its opposite direction, one actuator will move for operating the brake-mechanism without moving the actuator of the clutch-mechanism, substantially as described.

2. In an operating-mechanism for reversing-gearing, the combination with a brake-mechanism for reverse drive and a clutch-mechanism for forward drive, of rods operatively connected respectively with said brake-mechanism and clutch-mechanism, an oscillatory-shaft, means for connecting the rods with the shaft, and means for oscillating said shaft, whereby the rods will move radially from the shaft, for operating the clutch-mechanism and brake-mechanism independently, substantially as described.

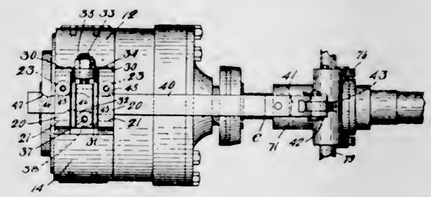
3. In an actuating-mechanism for reversing-gearing, the combination of a brake-mechanism for reverse drive and a clutch-mechanism for forward drive, a support for said gearing, rods adapted to slide horizontally upon said support and having one of their ends connected respectively to the brake-mechanism and the clutch-mechanism, a vertical shaft supported upon said support, and cams carried by the said shaft for moving said bars independently, whereby the clutch-mechanism and brake-mechanism may be operated, substantially as described.

4. In an actuating mechanism for reversing-gearing, the combination with a clutch-mechanism for forward drive and a brake-mechanism for reverse drive, sliding-bars connected to said brake-mechanism and clutch-mechanism, a pair of horizontally arranged disks having grooves formed therein, means for connecting the slidable bars with the disks and means for oscillating said disks, whereby the bars may be moved independently for operating the clutch-mechanism and brake-mechanism, substantially as described.

5. In an actuating-mechanism for reversing-gearing, the combination of a clutch-mechanism for forward drive and a brake-mechanism for reverse drive, a clutch-lever operatively connected to the clutch-mechanism, a brake-bar operatively connected to the brake-mechanism, an oscillatory-shaft, a pair of spaced horizontally arranged disks mounted upon said shaft, said disks having grooves formed therein and each groove having a concentric and an eccentric portion, a slidable bar connected with the clutch-lever, the said bars having pins formed on one end thereof and slidable within said grooves, means for oscillating said shaft, whereby the pin of one bar will travel on the eccentric portion of one groove for moving said bar, and the pin carried by the other said bar adapted to travel on the concentric portion of one of the grooves whereby said bar will remain idle, substantially as, and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,168,766. BRAKE MECHANISM FOR REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass. Filed Oct. 15, 1914. Serial No. 866,820. (Cl. 74—13.)



1. A reversing-gearing and brake-mechanism therefor consisting of a pair of pivoted brake-members having engaging portions, a longitudinal movable bar arranged horizontally with respect to the gearing, a pivoted acutating-lever for the clutch actuating-mechanism of the gearing to which one end of said bar is loosely connected, said

bar having at its other end recesses to receive the engaging-portions of the brake-members, each recess comprising an elongated portion and an inclined portion, the elongated-portions being arranged to permit longitudinal movement of the bar without exerting pressure upon the engaging-portions, to enable the actuating-lever to be moved to operate the clutch-mechanism, and the inclined-portions being arranged to act to move the engaging-portions to operate the brake-members.

2. A reversing-gearing and brake-mechanism therefor comprising a pair of brake-members having engaging-portions, a horizontally-arranged bar adapted for longitudinal reciprocation, a pivoted actuating-lever for the clutch-mechanism to which one end of said bar is loosely connected, the other end of said bar having recesses, each recess having an elongated portion and an inclined portion, the engaging-portions of the brake-members normally occupying positions in the recesses substantially at the junction of the engaging-portions and inclined-portions, so that when the bar is moved in one direction from normal, said engaging-portions will engage the inclined-portions, and will be moved to operate the brake-members, and when the bar is moved in the other direction from normal, said engaging-portions will remain at rest.

3. The brake-mechanism for reversing-gearing herein described, consisting of a pair of brake-members movable toward and from each other, having alined guiding and supporting means provided with engaging-portions, a sliding-bar arranged for connection with the clutch-mechanism of the gearing, said bar having its end-portion guided and supported by said means, and having recesses in its end-portion to receive said engaging-portion, each recess comprising an elongated-portion and an inclined-portion, the elongated-portions permitting longitudinal movement of the bar without exerting pressure upon the engaging-portions, and the inclined-portions acting to move the engaging-portions to operate the brake-members.

4. The brake-mechanism for reversing-gearing herein described, consisting of a pair of brake-members arranged for rocking engagement with each other at their lower ends, and having engaging-portions at their upper ends, and a longitudinal movable bar arranged for connection with the clutch actuating-mechanism of the gearing, said bar having recesses in its edges for the engaging-portions of the brake-members, each recess comprising an elongated-portion and an inclined-portion, the elongated-portions of the recesses permitting longitudinal movement of the bar without exerting pressure upon the engaging-portions, and the inclined-portions acting to move the engaging-portions to rock the brake-members.

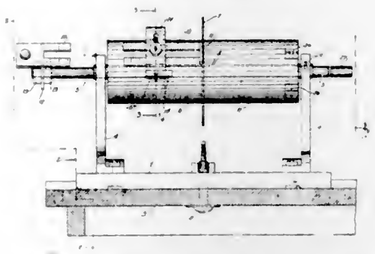
5. The brake-mechanism for reversing-gearing herein described, consisting of a pair of brake-members arranged for rocking engagement with each other at their lower ends, and having engaging-portions at their upper ends, and a longitudinal movable cam-bar arranged for connection with the clutch actuating-mechanism of the gearing, said bar having recesses in its edges for the engaging-portions of the brake-members, each recess comprising an elongated-portion, a depression, and an inclined-portion, the elongated portions and depressions of the recesses permitting longitudinal movement of the bar without exerting pressure upon the engaging-portions, and the inclined-portions acting to move the engaging-portions to rock the brake-members.

[Claims 6 to 8 not printed in the Gazette.]

1,168,767. LEATHER-CUTTER. CHRISTIAN UNRUH, Glen Ullin, N. D. Filed June 5, 1915. Serial No. 32,427. (Cl. 164—60.)

1. In a leather cutter, a sectional roll, a knife carried thereby, a shaft journaled in suitable bearings and supporting said roll, a gage carried by said knife and shaft and extending longitudinally of said roll, a guide slidably carried by said gage and a leather-engaging finger carried by said guide.

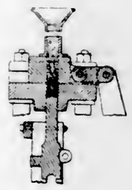
2. In a leather cutter, a sectional roll, a knife carried thereby, a shaft journaled in suitable bearings and supporting said roll, a gage carried by said knife and shaft and extending longitudinally of said roll, a guide slidably carried by said gage and a sectional adjustable leather-engaging finger carried by said guide.



3. In a leather cutter, a sectional roll, a two-edged reversible knife carried by said roll, a shaft supporting said roll and projected therebeyond, a gage adjustably carried by said shaft, a guide movable longitudinally of said gage and an adjustable leather-engaging finger carried by said guide.

4. In a leather cutter, a sectional roll, a two-edged knife carried by said roll, a shaft supporting said roll and projected therebeyond and formed with a socket in one end, an auxiliary roll, rods terminally carried thereby for insertion in the sockets of the sectional roll and shaft, a shaft supporting said auxiliary roll, a gage adjustably carried by the first named shaft, a guide movable longitudinally of said gage and an adjustable finger carried by said guide.

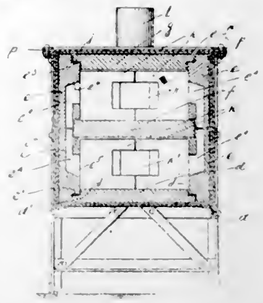
1,168,768. PROCESS FOR MANUFACTURING COMPRESSED ASPHALT BLOCKS. GEORGE B. UPHAM, Boston, Mass. Filed July 5, 1910. Serial No. 570,266. (Cl. 18—48.)



The process of manufacturing compressed bituminous paving blocks which consists in forming a prolonged, confined column of heated bituminous material, the lower portion of said column being of substantially constant cross sectional dimensions, the lower end of said column resting in a mold; compressing from beneath the lower end of said column that is in the mold, thereby expelling entrained air through said column, while opposing to such compression the resistance of a portion of the column above the mold; dividing the column transversely, adjacent the top of the mold and covering the latter; subjecting the covered contents of the mold to final compression to produce the compressed block, and cooling the compressed block to preserve its shape.

1,168,769. OVEN. LEONHARD VOLLMER, New York, N. Y. Filed Mar. 29, 1915. Serial No. 17,627. (Cl. 126—275.)

1. In a portable oven, the combination with a separable metal casing divided into superposed baking compartments, of individual stones or bricks composing the top, bottom and walls of each compartment, the stones of the side walls each being hollow and having an opening on the inner face communicating with one end of the hollow and an opening in one of the longitudinal edges communicating with the opposite end of the hollow, the stones of one of the compartments being adapted to rest on the stones of the other compartment so that the openings in their longitudinal edges coincide with one another and the hollows in the superposed stones constitute passages through which the heat of one compartment is transmitted to the other.



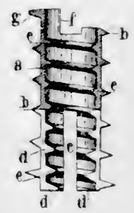
2. In a portable oven, the combination with a separable metal casing divided into superposed baking compartments, of individual stones or bricks comprising the top, bottom and walls of each compartment, the stones of the side walls each being hollow and having a tapered opening on the inner face communicating with one end of the hollow and an opening in one of the longitudinal edges communicating with the opposite end of the hollow, the stones of one of the compartments being adapted to rest on the stones of the other compartment so that the openings in their longitudinal edges coincide with one another and the hollows in the superposed stones constitute passages through which the heat of one compartment is transmitted to the other.

3. In a portable oven, the combination with a separable metal casing divided into superposed baking compartments, of individual stones or bricks composing the top, bottom and walls of each compartment, the stones of the side walls each being hollow, and the hollows in the superposed stones or bricks forming vertical passages through which the heat is transmitted from one compartment into the other, the stones composing the top and bottom of each compartment being shorter in width than the width of the compartment, leaving free spaces between their ends and the sides of the casing for the accommodation of the stones of the side walls.

4. In an oven, the combination with a separable metal casing, divided into superposed baking compartments, of a lining of heat retaining material on the inside of said casing and individual stones composing the top, bottom and walls of each compartment, the stones or bricks of the bottom and top of each compartment being shorter in width than that of the respective compartments, leaving free spaces between their ends and the sides of the casing for the accommodation of the stones of the said side walls, the stones of the side walls being hollow and the hollows in the superposed stones forming passages connecting the different compartments, and a common flue at the rear of the casing, the stones or bricks forming the rear wall of each compartment, having openings communicating with said common flue.

1,168,770. EXPANSION-SOCKET. RAOUL DIAZ WAGNER, Paris, France. Filed Jan. 16, 1912. Serial No. 671,493. (Cl. 85—2.4.)

1. An expansion fastening, comprising in combination, a hollow body solid at its upper end and split at its lower end, said split lower end consisting of several expansible and contractible elements, an external wood thread extended throughout the length of the body, an internal thread independent of said external thread also extending from top to bottom of said body, and a bolt adapted to be screwed into said hollow body and having a body portion adapted to bear against said internal thread with expansion pressure, the cutting edge of the entire external thread lying substantially in a cylindrical curve when the expansion elements are contracted and lying in a concholdal curve when said expansible elements are expanded into the wood when said bolt is screwed into the hollow body.



2. An expansion socket, comprising a hollow body split at its lower end and solid at its upper end, an external screw flange extending the entire length of the body, said split lower end constituting a plurality of expansion members which may be bent inwardly when said body is screwed into an opening therefor, an internal screw flange extending throughout the length of said body, a sleeve member fitted to the upper end of said body and a shoulder at the end of said sleeve member adapted to support one side of the head of a bolt screwed into the socket.

3. An expansion fastening comprising a hollow body split at its lower end and solid at its upper end, an external thread of uniform depth on the solid portion and increasing in diameter downwardly from an intermediate point to the bottom of said body, and an internal thread formed on said body but being absolutely independent from the first mentioned thread, also projecting progressively from an intermediate point to the bottom of said body, the said lower split portion constituting several extensible elements adapted to be contracted inwardly when said body is screwed into a hole and to be expanded into the material when an expanding member is passed through said body.

4. An expansion fastening, comprising in combination, a hollow body split at its lower end and solid at its upper end, an external thread extending throughout the length of the body, and internal projections formed on said body, the lower split portion constituting several expansible elements adapted to be contracted inwardly when said body is screwed into a hole and to be expanded into the material when an expanding element is passed through said body, and the cutting edge of the external thread adapted to lie substantially in a cylindrical curve when the expansion elements are contracted and to lie in a concholdal curve when said expansible elements are expanded into the material by the projection of said expanding element through the body.

5. An expansion fastening, comprising a hollow body split at its lower end and solid at its upper end, a series of external projections extending from the bottom of said body toward the top thereof, and internal projections also formed on said body, said split lower end constituting several expansible elements adapted to be contracted inwardly to prepare said body for insertion into a hole, and to be expanded into the material when an expanding element is passed through said body, the extremities of said external projections being adapted to lie substantially in a cylindrical curve when the expansion elements are contracted and to lie in a concholdal curve when said expansible elements are expanded into the material.

1,168,771. BOOT AND SHOE FASTENING. STUART WEATHERLEY, Loudon, England. Filed May 12, 1915. Serial No. 27,697. (Cl. 24—203.)

1. In a device of the class described, a unitary bent wire member, having an intermediate portion composed of a plurality of flattened spring coils and having off-set from each end thereof a hook portion, one of said hooks being arranged in an oblique plane with respect to the other hook.

2. In a device of the class described, a unitary bent wire member, having an intermediate portion composed of a plurality of flattened spring coils and having offset

from each end thereof a hook portion, one of said hooks being arranged in an oblique plane with respect to the other hook, each of said hooks consisting of an extension of the wire bent first at right angles to said intermediate portion, then bent back upon itself in the form of a loop with a portion parallel with said first portion, and having its end wound about said first portion.



3. In a device of the class described, a unitary bent wire member, having an intermediate portion composed of a plurality of flattened spring coils and having offset from each end thereof a hook portion, one of said hooks being arranged in an oblique plane with respect to the other hook, each of said hooks consisting of an extension of the wire bent first at right angles to said intermediate portion and then bent back upon itself, its end being wound about said first portion, the free end being in the form of a loop having a comparatively wide lateral dimension, the plane of the loop of one hook being oblique to that of the other and the plane of the loop of said last named hook being parallel with the plane of maximum lateral dimension of said spring coil.

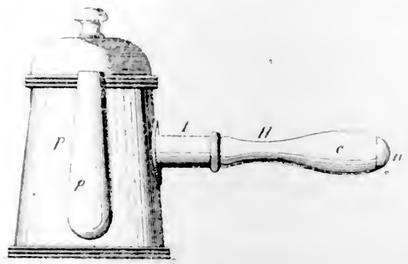
4. In a device of the class described, a unitary bent wire member, having an intermediate portion composed of a plurality of flattened spring coils and having offset from each end thereof a hook portion, one of said hooks being arranged in an oblique plane with respect to the other hook, each of said hooks consisting of an extension of the wire of said coils bent first at right angles to said intermediate portion and then bent back upon itself, its end being wound about said first bent portion, the free end being in the form of a loop having a comparatively wide lateral dimension, the plane of the loop of one hook being oblique to that of the other and the plane of the loop of said last named hook being parallel with the plane of the maximum lateral dimension of said spring coil and extending longitudinally of the center line of said coil spring but parallel with and slightly below the bottom surface thereof.

5. In a device of the class described, a unitary bent wire member, having an intermediate portion composed of a plurality of flattened spring coils and having offset from each end thereof a hook portion, one of said hooks being arranged in an oblique plane with respect to the other hook, each of said hooks consisting of an extension of the wire of said coils bent first at right angles to said intermediate portion and then bent back upon itself, its end being wound about said first bent portion, the free end being in the form of a loop having a comparatively wide lateral dimension, the plane of the loop of one hook being oblique to that of the other and the plane of the loop of said last named hook being parallel with the plane of the maximum lateral dimension of said intermediate portion and extending longitudinally of the center line of said portion and slightly below the bottom surface thereof under the adjacent end of said intermediate portion.

1,168,772. HANDLE FOR COFFEE-POTS AND SIMILAR UTENSILS. ARTHUR WOLFERMAN, New York, N. Y. Filed Apr. 17, 1915. Serial No. 21,945. (Cl. 16—169.)

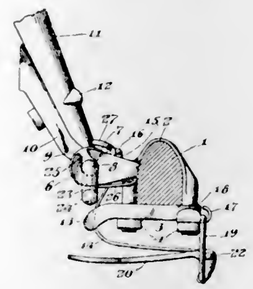
1. In combination with a cooking utensil of the character designated, a handle therefor comprising a recessed ferrule having an extended bearing surface engaging the wall of said utensil and a threaded reinforcing stud rigidly attached to the utensil, a contact sleeve of relatively low heat conductivity fitting on said stud and formed at its inner end to fit into the recess in the ferrule and also formed with a recess in its outer extremity, and a cap screw engaging the thread on the stud and fitting in the recess in the outer end of the contact sleeve, for the purpose described.

2. A cooking utensil, a laterally projecting stud, means at one end of said stud having an extended bearing surface rigidly attached to the outer wall of the utensil, a



contact sleeve on said stud and engaging said means, and a cap nut at the other end of said stud and having a shoulder engaging the adjacent end of the said sleeve.

1,168,773. THILL-COUPLING. HENRY B. YOST, Green Lane, Pa. Filed Apr. 8, 1915. Serial No. 19,869. (Cl. 21—57.)



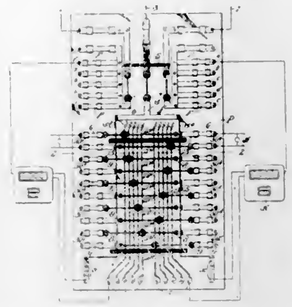
1. In a thill coupling, the combination with a pair of shackle ears, and a thill iron located between the ears, of a coupling pin positioned in registering openings in the shackle ears and thill iron, one of said ears having a slot therein, and a recess in one side of the ear connecting the opening in the ear and the slot, said pin having a lug thereon adapted to be moved through the recess into the slot and turned in the slot, and a spring catch in the slot adapted to engage the lug and hold the same against the end wall of the slot, substantially as described.

2. In a thill coupling, the combination with a pair of shackle ears, and a thill iron located between the ears, of a coupling pin positioned in registering openings in the shackle ears and thill iron, one of said ears having a slot therein, and a recess in one side of the ear connecting the opening in the ear of the slot, said pin having a lug thereon adapted to be moved through the recess into the slot and turned in the slot, a spring catch in the slot adapted to engage the lug and hold the same against the end wall of the slot, said pin at one end having a relatively heavy crank arm constituting a handle and adapted to hold the lug by gravity out of register with the recess, substantially as described.

3. In a thill coupling, the combination with a pair of shackle ears, and a thill iron located between the ears, of a coupling pin positioned in registering openings in the shackle ears and thill iron, one of said ears having a slot therein, a recess in one side of the ear connecting the opening in the ear and the slot, said pin having a lug thereon adapted to be moved through the recess into the slot and turned in the slot, a spring catch secured to the ear and normally engaging the lug holding the pin against turning movement, a tongue secured to the spring catch and projecting through the slot with its upper end above the ear, said pin at one end having a relatively heavy

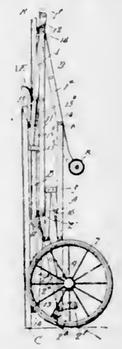
crank arm constituting a handle and adapted to hold the lug by gravity out of register with the recess, substantially as described.

1,168,774. METERING PANEL-BOARD. FREDRICK B. ADAM, St. Louis, Mo., assignor to Frank Adam Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 1, 1911. Serial No. 618,334. (Cl. 247—13.)



In a panel board, a slab of insulating material, vertically-disposed meter bus bars arranged on said slab, a set of return wire meter terminals connected to said meter bus bars, a plurality of circuit bus bars arranged transversely of said meter bus bars and spaced away therefrom, adjustable connecting devices for establishing electrical connection between selected meter and circuit bus bars, pairs of circuit terminals arranged on the front face of said slab, adjacent the side edges of same, one terminal of each pair being connected to one of said circuit bus bars, a support of insulating material for the free end of each of said circuit bus bars, a neutral bus bar arranged on the front face of said slab and having branches that extend parallel to the meter bus bars and which are connected to the other terminals of each of said pairs of circuit terminals, and transversely arranged strips of insulating material connected to the front face of said slab, each of said strips being provided on its underside with spaced slots that receive said meter bus bars and said neutral bus bar branches and thus hold said bars in a certain spaced relation to each other.

1,168,775. PORTABLE SERVING-TABLE. ARTHUR J. ADAMS, Bay City, Mich., assignor to Fulton Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1915. Serial No. 15,872. (Cl. 21—65.)



1. A tray-wagon comprising a pair of parallel tables, collapsible supports spacing said tables in superposed relation, a running gear, and collapsible supports spacing the lowermost table above the running gear.

2. A structure of the character set forth, comprising a collapsible upright frame, an upper table, an intermediately disposed table, and a lower frame, all pivotally connected with the collapsible upright frame, whereby the upper table and the lower frame may be brought into collapsed parallel relation with the intermediately disposed table.

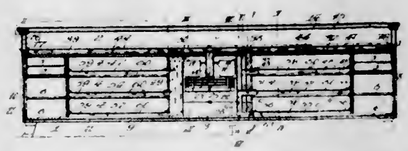
3. A structure of the character set forth, comprising an upper table, an intermediate table, a lower frame, and a folding upright frame connecting said parts, the intermediate table being adapted to shift longitudinally with relation to the upper table and the lower frame in the collapsing operation.

4. A structure of the character set forth, comprising an upper table, an intermediate table, a lower frame and a folding upright frame connecting said parts, said upright frame comprising upper and lower sets of links pivotally connected at their meeting ends to the intermediate table, stops adapted to prevent the joints at the intermediate table from breaking in one direction, and locking braces adapted to rigidly hold the structure in extended position.

5. A structure of the character set forth, comprising a lower substantially horizontal frame, an intermediate table and an upper table, all disposed in parallel relation, and a folding upright frame connecting and spacing said parts, said frame comprising corner-standards pivotally connected with the lower frame and the upper table and having intermediate joints in the vicinity of the intermediate table adapted to break in one direction to permit the upper table and the lower frame to move in the same direction with relation to the intermediate table in the collapsing operation, and means for locking the upright frame in extended position.

[Claims 6 to 15 not printed in the Gazette.]

1,168,776. COMBINED REFRIGERATOR, SHOW-CASE, AND COUNTER. WILLIAM AMENDA, St. Louis, Mo. Filed Aug. 19, 1912. Serial No. 715,811. (Cl. 62—37.)



1. In a refrigerator counter, the combination of a series of compartments located therein, with an air cooling section located in said counter, one of said compartments located above said cooling section, a passageway leading from said cooling section to each compartment, each of said passageways forming means for conveying air from the bottom of said cooling section to said compartment, and means for discharging air from said compartments at a point adjacent the top of said cooling section.

2. In a refrigerator show case and counter, the combination of a series of compartments located therein, an air cooling section located in said counter, horizontal passageways located in said compartments, said horizontal passageway traversing the length of said compartments on one side, and returning along the other side, said horizontal passageways connecting with said cooling section at the bottom and having discharging communication with said cooling section adjacent the top thereof.

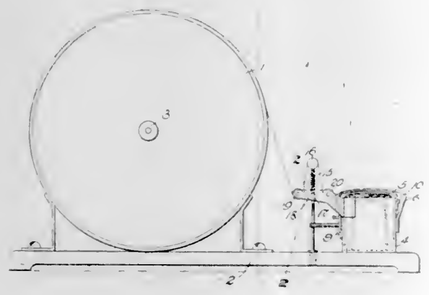
3. In a refrigerator show case and counter, the combination of a series of compartments located therein, an air cooling section located in said counter, horizontal passageways located in said compartments, removable trays located above said horizontal passageways and forming the top walls thereof, said horizontal passageways traversing the length of said compartments on one side and returning along the other side, said horizontal passageways communicating with said cooling section at the bottom, and having a discharge communication with said cooling section adjacent the top thereof.

4. In a refrigerator show case and counter the combination of a series of compartments located therein, an air cooling section located in said counter, horizontal return passage ways located in said compartments communicating with the bottom of said cooling section, a hollow member located longitudinally in each horizontal passage way, a series of holes formed on one side of said hollow member, the holes of said hollow members forming means of communication with the return side of each of said horizontal passage ways, the return side of said horizontal passage ways and hollow members communicating with said cooling section adjacent the top thereof.

5. In a combined show case and refrigerator, the combination of a series of compartments, and an air cooling section, horizontally arranged air circulating passageways located in said compartments, each of said passageways extending to and being in receiving communication with the lower end of said air cooling section and in discharging communication with the upper end of said air cooling section.

[Claim 6 not printed in the Gazette.]

1,168,777. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Boston, Mass., assignor to National Binding Machine Company, Boston, Mass., a Corporation of Maine. Filed Feb. 1, 1908. Serial No. 413,798. (Cl. 91—14.5.)



1. A strip serving device comprising in combination a strip support, means to render the strip adhesive, a movable inclosure for said means adapted to intervene between the strip and said means to prevent contact of the strip and said means, and means controlled by draft upon the strip to move said inclosure, thereby to expose for operation said means to render the strip adhesive.

2. A strip serving device comprising in combination, a strip support, a strip moistener, a movable shield for the moistener, and means controlled by the strip to move said shield, thereby to expose the moistener.

3. A strip serving device comprising in combination, a strip support, a strip moistener, a shield movable transversely of the moistening face of the moistener, and means controlled by draft upon the strip to move said shield, thereby to expose the moistener.

4. A strip serving device comprising a strip support, a bodily stationary moistener in operative relation thereto, and movable means between the strip and moistener to expose the moistener for use upon delivery of material from said support, said means being movable into moistener exposing and non-exposing positions by movement of the strip in its true service path.

5. A strip serving device comprising in combination a strip support, a strip moistener, and means controlled by non-deflecting draft upon the free end of the strip for use to uncover the moistener, thereby avoiding the necessity of deflection of the free end of the strip from its service path.

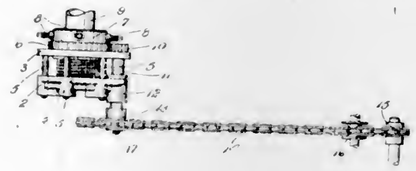
[Claims 6 to 25 not printed in the Gazette.]

1,168,778. HOOK FOR HOOKS AND EYES. CHRISTIAN ANDRESEN, Chicago, Ill., assignor to Andresen Hook & Eye Company, St. Louis, Mo. Filed May 27, 1912, Serial No. 699,886. Renewed May 7, 1915. Serial No. 26,657. (Cl. 24—228.)



A hook for hooks and eyes formed of a single length of wire bent to form a bill member, the free end portions of the bill member being extended downwardly and continued to form stitching loops that project outwardly from the sides of the bill member, the inner sides of the loops having humps which underlie the legs of the bill member, the free extremities of the outer sides of the loops terminating at the downwardly extending portions of the bill member, and clenched to the said downwardly extending portions of the bill member.

1,168,779. ATTACHMENT FOR PIPE-DIES. AMOS F. BACON, Fremont, Mich. Filed Sept. 27, 1915. Serial No. 52,867. (Cl. 10—89.)



1. In combination with pipe dies, a sprocket wheel attached to the dies to rotate the same, a driving sprocket pinion, and a chain connecting the pinion and wheel and arranged with sufficient slack to permit ready detachment of the chain from the wheel to permit the wheel to be manually rotated.

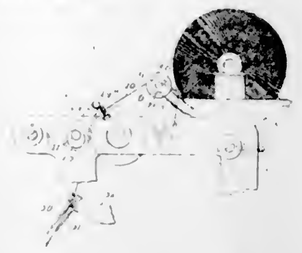
2. In combination with pipe dies having planetary gearing, a sprocket wheel connected to the dies and having planetary movement, a stationary driving sprocket pinion, and a chain connecting the gear and pinion and having length enough to provide slack to permit the planetary movement of the gear and ready removal of the chain from the gear to permit manual rotation of the gear.

3. In combination with pipe dies having a fixed gear concentric with the axis of the dies and a planetary pinion to rotate the dies, a sprocket wheel connected to the pinion and also having a planetary movement about the axis of the dies, a stationary sprocket pinion, a chain connecting the sprocket gear and the sprocket pinion and provided with slack enough to permit said planetary movement of the sprocket gear and an idler pulley to carry the slack side of the chain in contact with the under side of the sprocket pinion.

1,168,780. MOVABLE FEED-ROLL CARRIER. CHARLES S. BATDORF, Brooklyn, N. Y., assignor to Automatic Coin-Wrapping Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 11, 1910. Serial No. 554,643. (Cl. 242—55.)

1. In a wrapper feeding mechanism, the combination with a wrapper supply of a feed roll and presser roll coöperating therewith, a shaft for said presser roll, a rotatable support for one end of said shaft, a universal joint between said support and said shaft, a rotatable support for the opposite end of said shaft, upon which said shaft

is eccentrically mounted and means for rotating the latter support to move said presser roll into and out of engagement with said feed roll.



2. In a wrapper feeding mechanism, the combination with a wrapper supply of a feed roll and a presser roll coöperating therewith, a shaft for said presser roll, a rotatable support for one end of said shaft, a universal joint connecting said support and shaft, a pinion on said support, a gear fixed to said feed roll and meshing with said pinion, means for operating said gear to rotate said feed roll and presser roll respectively, a rotatable support for the opposite end of said presser roll in which said shaft is eccentrically mounted, and manually operable means for rotating said latter support to move said presser roll into and out of engagement with said feed roll.

3. In a wrapper feeding mechanism, the combination with a wrapper supply of a feed roll and a presser roll coöperating therewith, a shaft for said presser roll, a rotatable support for said shaft in which one end of the latter is eccentrically mounted, means for rotating said support to move said presser roll into and out of engagement with said feed roll, and an adjustable stop in the path of said rotating means to determine the degree of pressure of said presser roll on said feed roll.

4. In a wrapper feeding mechanism, the combination with a wrapper supply of a feed roll and a presser roll coöperating therewith, a shaft for said presser roll, a rotatable support for one end only of said shaft in which said shaft is eccentrically mounted, means for rotating said support to move said presser roll into and out of engagement with said feed roll and means for holding said presser roll yieldingly in engagement with said feed roll.

5. In a wrapper feeding mechanism for wrapper rolls, the combination with a wrapper roll support and feeding devices, of a wrapper straightening mechanism comprising an angularly adjustable bar angular in cross section and interposed between said support and said device in such a manner as to deflect the line of feed of the wrapper strip between said support and said device.

[Claims 6 to 8 not printed in the Gazette.]

1,168,781. WIRE TIE FOR TWISTING BAGS. ADELMER M. BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Sept. 8, 1913. Serial No. 788,517. (Cl. 24—30.5.)



1. A wire tie for bags comprising two separate sections of wire with their ends twisted together, one pair of said ends twisted so as to form a key loop, and the other twisted ends projected inwardly toward the center of the tie.

2. A wire tie for bags comprising two separate sections of wire with their ends twisted together, one pair of said ends twisted so as to form a key loop with the twisted ends brought into a condition of safety, and the other twisted ends projected inwardly toward the center of the tie.

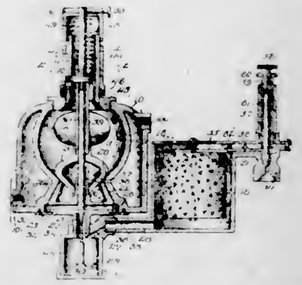
3. A wire tie for bags comprising two separate sections of wire with their ends twisted together, one pair of said ends twisted so as to form a key loop with the twisted ends bent inwardly toward the center of such key loop and the other twisted ends projected inwardly toward the center of the tie.

4. A wire tie for bags comprising two separate wire sections twisted together to form a loop and separated twisted portions.

5. A wire tie for bags comprising two separate wire sections twisted together to form a loop and separated twisted portions, one of said twisted portions extending inwardly into the loop.

[Claims 6 to 9 not printed in the Gazette.]

1,168,782. CARBURETER. MERLE BUCKER, Chicago, Ill. Filed Jan. 15, 1912. Serial No. 671,331. (Cl. 48—154.1.)



1. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, said chamber having a central opening in its bottom wall, a central air valve for substantially closing said opening and providing an annular air inlet passage between its outer surface and the inner faces of the adjacent chamber walls, means for guiding said valve in its movements independently of said chamber walls, liquid fuel inlets extending through said adjacent chamber walls and opening into said air inlet passage, a fuel supply passage leading to said fuel inlets, and a taper valve for regulating the supply of fuel to said fuel inlets in accordance with the operation of said air valve.

2. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, said chamber having a central opening in its bottom wall, a central air valve movable downward to substantially close said opening by engaging inwardly projecting portions of the side walls of said chamber, said valve and projecting portions forming an annular air inlet passage between them, means for guiding said valve in its movements independently of said chamber walls, liquid fuel inlets extending through said side walls into communication with said annular air inlet, a supply passage to said inlets having a portion directly beneath said central valve, and a taper valve located in said portion of said passage and operative to regulate the supply of fuel to said fuel inlets in accordance with the operation of said air valve.

3. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, said chamber having a central opening in its bottom wall, a central air valve for substantially closing said opening and providing an annular air inlet passage between its outer surface and the inner faces of the adjacent chamber walls, means for guiding said valve in its movements independently of said chamber walls, liquid fuel inlets extending through said adjacent chamber walls and opening into said air inlet passage, a fuel supply passage leading to said fuel inlets, a taper valve for regulating the supply of fuel to said fuel inlets in accordance with the operation of said air valve, and a heating jacket surrounding that portion of said chamber walls through which said inlets extend.

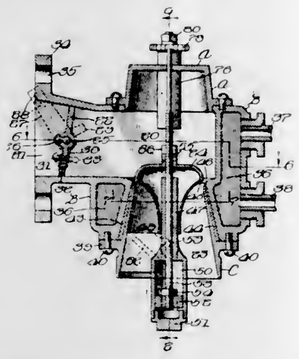
4. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, said chamber having a central opening in its bottom wall, a central air

valve movable downward to substantially close said opening by engaging inwardly projecting portions of the side walls of said chamber, said valve and projecting portions forming an annular air inlet passage between them, means for guiding said valve in its movements independently of said chamber walls, liquid fuel inlets extending through said side walls into communication with said annular air inlet, a supply passage to said inlets having a portion directly beneath said central valve, a taper valve located in said portion of said passage and operative to regulate the supply of fuel to said fuel inlets in accordance with the operation of said air valve, and a heating jacket surrounding that portion of said chamber walls through which said inlets extend.

5. A carbureter comprising a casing having a chamber adapted to communicate with an engine to be supplied and a central vertical passage for supplying air to said chamber from beneath, a vertical guide secured at its lower end to said casing and extending upward in said vertical passage, a central vertically movable suction-operated valve fitted over the upper end of said guide and guided thereon in its to-and-fro vertical movements, portions of the peripheral walls of said casing extending inwardly into the path of movement of said valve and forming a coöperating valve seat therefor outwardly of said valve, a plurality of liquid fuel inlets in said valve seat in position to be substantially closed by said valve when the latter is in its lowermost position, and a fuel supply passage in the body of the casing leading to said fuel inlets.

[Claims 6 and 7 not printed in the Gazette.]

1,168,783. CARBURETER. MERLE BUCKER, Chicago, Ill. Filed Feb. 10, 1913. Serial No. 747,456. (Cl. 48—150.1.)



1. A carbureter comprising a passage open to atmosphere at one point and at another point adapted to communicate with an engine to be supplied, a valve intermediate of said points for opening and closing said passage, a plurality of long, wide and shallow fuel spaces located along said passage, a jacket for applying a fuel heating medium to the side of said spaces throughout practically their entire length and breadth, fuel inlets in the passage walls leading from said spaces into said passage at points adjacent to the closing edges of said valve when in its closed position, and passages for supplying different fuel ingredients to the different fuel spaces, whereby the air drawn through said passage by the suction of the engine is caused by said valve to sweep over said inlets at an increased velocity and take up fuel ingredients therefrom and thoroughly mix them in said passage.

2. A carbureter comprising a passage open to atmosphere at one point and at another point adapted to communicate with an engine to be supplied, a plurality of long, wide and shallow fuel spaces located along said passage, a jacket for applying a fuel heating medium to the side of said spaces throughout practically their entire length and breadth, fuel inlets in the passage walls leading from said spaces into said passage at points intermediate of the first mentioned points, fuel passages for supplying different fuel ingredients to the different fuel spaces, a valve in said first mentioned passage having its closing edges movable in close proximity to said inlets to cause the air drawn through said passage to pass over said inlets at increased velocity to take up the fuel ingredients therefrom and thoroughly mix them in said passage, fuel control valves in said fuel passages movable as a unit with said first mentioned valve, and means for adjusting each of said fuel control valves relative to said first mentioned valve to vary the amount of the fuel ingredients admitted to said passage.

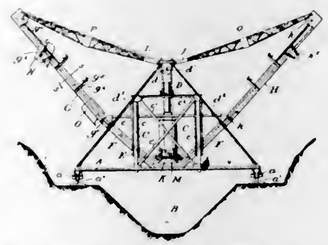
3. A carbureter comprising a passage open to atmosphere and adapted to communicate with an engine to be supplied, a plurality of long, wide and shallow fuel spaces located along said passage, a jacket for applying a fuel heating medium to the side of said spaces throughout practically their entire length and breadth, fuel inlets leading from said spaces into said passage, passages for supplying different fuel ingredients to the different fuel spaces, a valve in said passage having its edges movable toward and from said fuel inlets to vary the velocity of the air passing over them, and fuel control valves carried by said first mentioned valve and adjustable relative thereto and operating in said fuel passages to vary the amount of the fuel ingredients supplied to said fuel inlets.

4. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, an air inlet to said chamber, fuel inlets to said chamber, passages for supplying different fuel ingredients to different fuel inlets, and three directly connected valves, one for varying the supply of air through said air inlet and the two remaining for varying the supply of the fuel ingredients through said passages and fuel inlets.

5. A carbureter comprising a chamber adapted to communicate with an engine to be supplied, a substantially horizontal fuel supply passage, a substantially vertical passage extending downward from said supply passage, an additional passage leading from said vertical passage at a point below the entrance of said supply passage, a series of relatively small fuel inlets to said chamber in communication with said additional passage, and a taper-valve in said vertical passage having its tapered portion normally extending from a point above said supply passage to a point below said additional passage.

[Claims 6 to 12 not printed in the Gazette.]

1,168,784. DRAINAGE-EXCAVATOR. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Dec. 28, 1910. Serial No. 599,665. (Cl. 37—39.)



1. In an excavator, a pivoted runway, an excavating bucket adapted to travel back and forth thereon, a flexible connection for operating the bucket on the runway, extending a distance along the runway, in front and rear of the bucket, wheels on said flexible connection, traveling on said runway, cables connected with said connection, and drums for operating said cables.

2. In an excavator, a pair of oppositely facing and alternately operating buckets, a runway for said buckets, wheels for said buckets, a pair of flexible connections for operating said buckets in a back and forth manner upon the said runway, wheels on said flexible connections, traveling on said runway, cables attached to the ends of said connections, and drums for operating said cables.

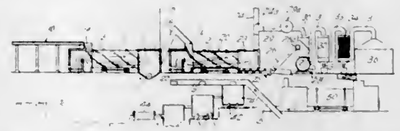
3. In an excavator, an excavating bucket, a runway therefor, a pair of parallel flexible connections for operating the bucket on the runway, spreaders for spacing the two flexible connections apart, means on said spreaders for engaging said runway, and means including cables and drums for operating said flexible connections to cause said buckets to travel back and forth on the runway.

4. In an excavator for making a ditch, an excavating bucket, a runway therefor adapted to be lowered into the ditch to determine the cross sectional contour thereof, a pair of flexible connections for operating said bucket on the runway, spreaders for spacing the two flexible connections apart, means on said spreaders for engaging said runway, and means including cables secured to the ends of said connections for operating the flexible connections to cause the bucket to travel back and forth on the runway from one side of the ditch to the other, said spreaders supporting the said flexible connections.

5. In an excavator, a double track runway, a pair of chains spaced apart and provided outside thereof with wheels traveling in the tracks of said runway, and an excavator bucket pivoted upon and disposed between said chains, together with means for tilting the bucket to dumping position, and cables and drums for operating said chains.

[Claims 6 to 11 not printed in the Gazette.]

1,168,785. PROCESS FOR TREATING KELP. JOHN W. CHENEY, Los Angeles, Cal. Filed Dec. 15, 1913. Serial No. 806,716. (Cl. 23—22.)



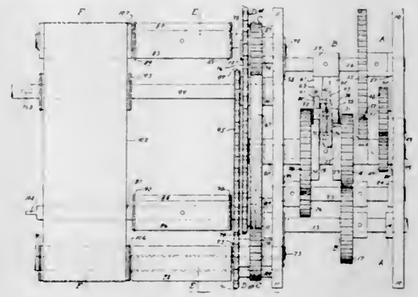
1. The herein described continuous process of treating kelp or the like, comprising first drying the kelp to remove contained moisture, roasting the dried remainder at a temperature below incineration temperature to drive off volatile products, and then incinerating the remainder of the ash, and keeping the material in constant agitation during incineration, and then dissolving out the mineral salts from the ash.

2. The herein described continuous process of treating kelp or the like, comprising first drying the kelp to remove contained moisture, roasting the dried remainder at a temperature below incineration temperature but sufficiently high to drive off the volatile constituents, incinerating the remainder to ash and keeping the material in constant agitation during incineration, dissolving out the mineral salts from the ash, crystallizing the salts out from solution, and then distilling the iodin from the remaining liquid.

1,168,786. EXHIBITOR. THOMAS JEROME COE, Brooklyn, N. Y. Filed June 1, 1912, Serial No. 700,968. Renewed Aug. 9, 1915. Serial No. 44,609. (Cl. 40—93.)

1. An exhibitor comprising a plurality of curtains adapted for travel in opposite directions, rolls on and off which said curtains respectively wind and unwind, a driving shaft, reversible shaft, loose gears revolved in opposite directions on said reversible shaft from said driving shaft, ratchets moved by said loose gears, pawls secured to the reversible shaft alternately acted upon by said ratchets, a reverse controlling shaft geared with the reversible shaft, said controlling shaft having arms operating to throw said pawls successively into engagement with their respective ratchets and thereby drive the reversible shaft alternately in opposite directions, and mechanism intermittently and alternately connecting the reversible shaft with one or another set of said rolls whereby one curtain is moved while another is at rest.

2. In an exhibitor of the class described, the combination of a driving shaft, a reversible shaft, a third shaft, oppositely rotatable gears actuated by the driving shaft and provided with engaging means, other means operating to rotate the reversible shaft alternately in opposite directions including a resiliently pressed connection having a plurality of operative positions between said reversible shaft and said engaging means, being adapted for alternate engagement with the latter, shiftable means carried by the third shaft having a plurality of operative positions adapted for contacting with said resiliently pressed connection so as to change its operative position and thereby reverse the direction of motion of said reversible shaft, a plurality of curtains adapted for travel successively in one direction and then in another, and operative connections transmitting the motion intermittently from the reversible shaft to said curtains.



3. In an exhibitor, the combination of a driving shaft which may be rotated continuously in one direction, another shaft capable of rotation in both directions, a pinion fixed on said driving shaft, gears loosely mounted on said other shaft, one of said gears being in mesh with said pinion and rotated thereby, intermediate shafting and pinions operating to rotate another one of said loose gears in a direction opposite to said first loose gear, rims secured to the loose gears and having each a ratchet-tooth formed thereon, a hub on the reversible shaft located between said rims, pawl-carrying arms on said hub, the pawls on said arms being adapted alternately to engage the ratchet-tooth on the rim of the corresponding loose gear, intermediate gears and shiftable means actuated by the reversible shaft and operating to control the direction of motion thereof first in one direction and then in the other, a plurality of curtains, rolls for said curtains, and intermittent mechanism transmitting the motion from the reversible shaft to said rolls whereby the latter and curtains thereon are afforded consecutive periods of motion and rest.

4. In an exhibitor, the combination of a driving shaft, a reversible shaft, loose gears revolved in opposite directions on said reversible shaft from said driving shaft, rims secured to said loose gears, having each a ratchet-tooth formed thereon, pawls carried by the reversible shaft adapted for engagement with the ratchet-teeth on said rims, one of said pawls being provided with an arm, a spring anchored to said arm and capable of maintaining either pawl in engagement with the corresponding ratchet-tooth, change gears and shiftable means connected up with said reversible shaft and, operating to control the direction of motion thereof alternately in opposite directions, a plurality of curtains, rolls therefor, and intermittent gears connecting the reversible shaft with said rolls.

5. In an exhibitor, the combination of a driving shaft, a reversible shaft, loose gears revolved in opposite directions on said reversible shaft from said driving shaft, a ratchet-tooth carried by each of said loose gears, an arm fixed to the reversible shaft between said loose gears, pawls carried by said arm in position to engage alternately each the ratchet-tooth on the adjacent loose gear, a third shaft, arms secured to said third shaft, springs on said arms revolved therewith so as to drive said pawls

into alternate engagement with their respective ratchet-teeth, change gears receiving their motion from said reversible shaft and transmitting it to said third shaft whereby the arms and springs thereof are directed against the pawls to control the movement of either loose gear and corresponding motion of the arm on the reversible shaft, a plurality of curtains, rolls therefor, and intermittent mechanism operating to turn said rolls from the reversible shaft rotated in either direction.

[Claims 6 to 12 not printed in the Gazette.]

1,168,787. COMBINED PAY-ENVELOP, TIME-CARD, AND RECEIPT. JACOB M. COHN, Chicago, Ill. Filed Feb. 8, 1915. Serial No. 6,695. (Cl. 11—23.)

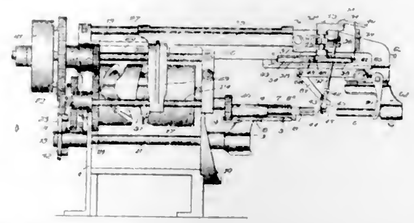


1. A combined pay envelop, time card and record and receipt member made of a single sheet of paper or like material, said sheet having a panel and side and end flaps to constitute the inclosing envelop, said panel bearing lines to produce appropriate spaces to receive in and out records for morning, noon and extra time from the printing members of a time clock and the record and receipt member extending from one of the flaps and divided therefrom by a weakened line and being provided with a space to receive the total hours and total wage and with a space to receive the receipt of the payee, said record and receipt member being printed on the same side of the constituent sheet as the time card.

2. A combined pay envelop, time card and record and receipt member made of a single sheet of paper or like material, said sheet having a front panel and side and end flaps to constitute the inclosing envelop, said panel being provided with a space to receive the name of the payee, the number of the time clock and data relative to the pay period and provided therebelow with a time card form to receive a detail time record from the recording and printing elements of a time clock and below said time card form with a space to receive the total hours and total wage, and with a record and receipt member extending from one of said flaps and divided therefrom by a weakened line, and having a space to receive the total hours and total wage and the receipt of the payee, said record and receipt member being so arranged relatively to the time card space that the entire device may be printed by a single impression of one form, and that the record and receipt member of the complete device is on the same side of the envelop as and below the time card form.

1,168,788. PARING-MACHINE. BURTON C. COONS, Rochester, N. Y. Filed May 20, 1915. Serial No. 29,273. (Cl. 146—8.)

1. In combination in a paring machine, a main frame, a rotary fork for supporting an apple during the paring thereof, a carriage movable in the direction of the length of the fork, a turn-table mounted on said carriage, driving connection between the turn-table and the main frame, a knife carried by said turn-table, and spring means acting on the turn-table to hold the same against loose movement at the limits of its movements.



2. In combination in a paring machine, a main frame, a rotary fork for supporting an apple during the paring thereof, a carriage movable in the direction of the length of the fork, a turn-table mounted on said carriage, a knife carried by the turn-table, a gear on the turn-table, a rack on the main frame, guides on opposite sides of the rack, and a spring acting on the turn-table to hold the latter against the guides after it has passed out of engagement with the rack.

3. In combination in a paring machine, a main frame, a rotary fork for supporting an apple during the paring thereof, a carriage movable in the direction of the length of the fork, a turn-table mounted on said carriage, a knife carried by the turn-table, a gear on the turn-table, guide faces arranged on said turn-table on opposite sides of the gear, a rack arranged on the main frame and engaged by the gear, guide faces on opposite sides of the rack, and a spring acting to hold one of the guide faces on the turn-table against one of the guide faces on the main frame after the gear has disengaged with the rack.

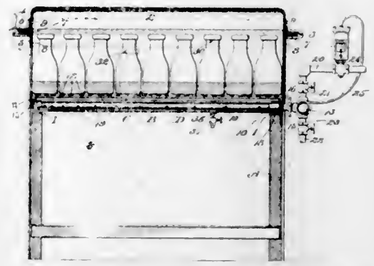
4. In combination in a paring machine, a main frame, a rotary fork for supporting an apple during the paring thereof, a carriage movable in the direction of the length of the fork, a turn-table mounted on said carriage, a knife carried by the turn-table, a gear on the turn-table, converging faces arranged on the turn-table on opposite sides of the gear, a rack arranged on the main frame and engaged by the gear, guide faces on opposite sides of the rack, and a spring acting to hold one of the converging faces against one of the guide faces after the gear has disengaged with the rack.

5. In combination in a paring machine, a main frame, a rotary fork for supporting an apple during the paring thereof, a carriage movable in the direction of the length of the fork, a turn-table mounted on said carriage, a knife carried by the turn-table, a gear on said turn-table, guide faces arranged on said turn-table on opposite sides of the gear, the width of the guide faces being less than the width of the teeth of the gear and the ends of the guide faces being spaced from the gear teeth, a rack arranged on the main frame for engagement by the gear teeth and two guide faces arranged on each side of the rack, one of said guide faces being in the plane of the bases of the teeth of the rack to coöperate with the guide faces on the turn-table, and the other being substantially in the plane of the apexes of the teeth to coöperate with end teeth of the gear in order to prevent the turning of the turn-table after the latter passes out of engagement with the rack.

[Claims 6 to 16 not printed in the Gazette.]

1,168,789. ART OF PASTEURIZING LIQUIDS. LOUIS J. CRECELIUS, St. Louis, Mo., assignor, by direct and mesne assignments, of one-fourth to John H. Sasseen, one-fourth to Alexander E. Forbes, and one-fourth to Edward G. Bornemann, John W. O'Brien, and George F. Kerwin, St. Louis, Mo. Filed Mar. 3, 1915. Serial No. 11,683. (Cl. 99—15.)

1. The method of pasteurizing which comprises placing the substance to be pasteurized in containers, placing said containers in a tank and introducing liquid into said tank so that the lower portions of the containers are submerged in said liquid, heating said liquid to produce a hot vapor which surrounds the upper portions of the containers, and closing said tank to confine the hot vapor.



2. The method of pasteurizing which comprises placing the substance to be pasteurized in containers, placing said containers in a tank and introducing liquid into said tank so that the lower portions of the containers are submerged in said liquid, heating said liquid to produce a hot vapor which surrounds the upper portions of the containers, and closing said tank to confine the hot vapor, and thereafter cooling the pasteurized substance by introducing a cooler liquid into said tank to almost completely submerge the containers, the upper ends of the containers being exposed above the surface of said liquid.

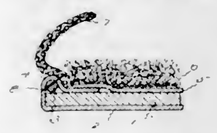
3. The method which comprises heating bottled milk for the purpose described, and thereafter gradually cooling it by first cooling the lower portions of the bottles and then gradually cooling the upper portions of the bottles.

4. The method which comprises heating bottled milk for the purpose described, and thereafter cooling it by subjecting the hot bottles to the action of a cooler fluid which primarily surrounds the lower portions of the bottles and then gradually rises to a plane near the upper ends of the bottles.

5. The method which comprises heating bottled milk in a pasteurizing tank, and thereafter cooling the milk by gradually introducing a comparatively cool liquid into said tank so that said liquid will primarily surround the lower portions of the bottles and then gradually rise to a level near the upper ends of said bottles.

[Claims 6 to 8 not printed in the Gazette.]

1,168,790. SOLE FOR SLIPPERS. ERIK DILLBERG, Hartford, Conn., assignor to The William H. Wiley & Son Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 10, 1915. Serial No. 60,674. (Cl. 36—26.)

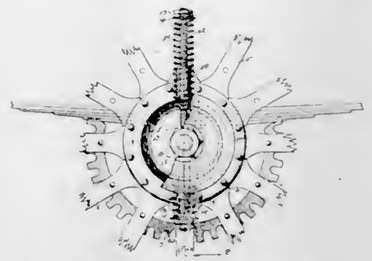


1. A sole consisting of a stiffening layer, a covering layer with the edge of the covering layer passing around the edge of the stiffening layer and onto the top thereof, and a cord arranged along the edge between the stiffening layer and the covering layer so as to form a raised welt on the top at the edge of the sole.

2. A sole formed of a stiffening layer, a covering layer with its edge passing around the edge of the stiffening layer and onto the top thereof, a cord extending along the edge on top of the stiffening layer between the stiffening layer and the covering, and an insole of lambs' wool on top of the stiffening layer.

3. A slipper having a sole with a stiffening layer, a covering layer, a cord extending around the edge on top of the stiffening layer and between the stiffening layer and the covering, and a soft upper with its lower edge fastened to the sole by stitching which passes through the covering, the cord and the lower edge of the upper.

1,168,791. SPRING-MOUNTED SKEIN. ALFRED DUVAL, Chicopee Falls, Mass. Filed July 24, 1914. Serial No. 852,846. (Cl. 21—187.)



1. In a device of the character described, a vertically movable skein, a fixed axle spindle mounted therein and of less diameter than the interior thereof, plates carried thereby and adapted to constantly close the ends of the skein, rods secured in the said spindle and projecting through the sides of the said skein, springs mounted about the outer portions of the said rods and adapted to suspend the skein, means for securing the said springs in position, and a hub rotatably mounted about the center of the said skein.

2. In combination; an axle spindle; a skein concentric therewith and spaced therefrom and provided with two integral diametrically opposite nipples, and having an integral outer annular flange provided with a rounded channel, at its inner end, the said skein being further provided, near its outer end, with two diametrically opposite bores in horizontal alinement with the said nipples; a sleeve band provided with integral nipples adapted to be matched with the bores of the skein, secured about the outer end of the said skein; a band provided with a channeled inner face secured on the said skein, inside of the said sleeve band; a hub mounted about the central portion of the said skein and provided, on its sides, with annular grooves adapted to coöperate with the channels of the said band and the flange of the skein to form raceways; ball bearings mounted in the raceways thus formed; vertical rods secured through the said axle spindle and extending through the nipples of the said skein and sleeve band; coil springs mounted about the extended ends of the said rods; means for securing the said springs in position; a plate integral with the said spindle and adapted to close the inner end of the said skein; a second plate mounted on the outer end of the said spindle and adapted to close the outer end of the said skein; and means for securing the said second plate in operative position.

1,168,792. EXIT-DOOR LOCK. HARRY W. DYER, East Orange, N. J. Filed May 12, 1911. Serial No. 626,809. Renewed May 29, 1914. Serial No. 841,958. (Cl. 70—120.)



1. The combination of a door adapted to swing outwardly, a pressure plate yieldably mounted on said door, a locking bolt for locking said door against outward movement, a link pivoted to said bolt and to said pressure plate, and a spring pivoted on the pivot pin on which the outer end of the link is pivoted, whereby force applied

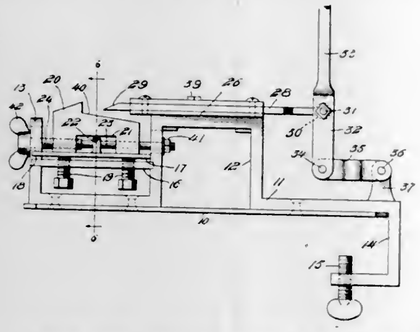
to said pressure plate will release said locking bolt and when said force is released said spring will force said locking bolt to its locking position.

2. In combination with a door adapted to swing outwardly, a pair of locking bolts vertically mounted on the door for engagement with the door frame at the upper and lower edges of the door, said bolts having their inner ends adjacent and in overlapping relation, a pressure plate mounted on the inner side of the door and extending horizontally across the same for movement toward and from the door, and links pivotally connected to the plate and the ends of said bolts respectively adapted to draw said bolts upon movement of the plate toward the door.

3. In combination with a door adapted to swing outwardly, a pressure plate mounted on said door for movement toward and from the same in a horizontal plane, a pair of bolts mounted for vertical movement on said door and having their inner ends underlying said plate, a link pivoted on said plate and downwardly and outwardly inclined from its pivotal point, a pivotal connection between the end of said link and said upper bolt, a similar connection upwardly and outwardly inclined on said plate through said lower bolt, whereby pressure on said plate will straighten said links and draw said bolts.

4. In combination with a door adapted to swing outwardly, a pair of bolts mounted on said door for engagement with the door frame at the upper and lower edges of said door, said bolts having their inner ends adjacent and in overlapping relation, a pair of toggle links connected at their opposite ends to the ends of said bolts, and a pressure member mounted on said door and extending horizontally across the same and operatively engaging the joint of said links to straighten said toggle on movement of the pressure member toward the door.

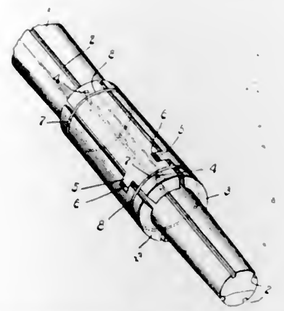
1,168,793. WEDGE-CUTTER. ELIJAH B. ECHOLS, Belton, and HERMAN J. ZINDLER, Schwertner, Tex. Filed July 14, 1915. Serial No. 39,850. (Cl. 144—125.)



1. A wedge cutter comprising a base, a bar bent to provide an inverted U-shaped medial portion, horizontal portions on opposite sides thereof, a vertical bearing rising from the outer end of one of the horizontal portions, and a depending jaw at the outer end of the other horizontal portion, means securing the horizontal portions to the base, a vertically and horizontally adjustable abutment block supported between the bearing and the inverted U-shaped portion, and having a recess, a guide fixed to the inverted U-shaped portion, and a reciprocatory cutting bit slidable in the guide toward and away from the recess in the block.

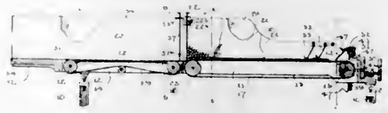
2. A wedge cutter comprising a base, a bar bent to provide an inverted U-shaped medial portion, horizontal portions on opposite sides thereof, a vertical bearing rising from the outer end of one of the horizontal portions, and a depending jaw at the outer end of the other horizontal portion, means securing the horizontal portions to the base, a vertically and horizontally adjustable abutment block supported between the bearing and the inverted U-shaped portion, and having a recess, a guide fixed to the inverted U-shaped portion, and a reciprocatory cutting bit slidable in the guide toward and away from the recess in the block, and a lever linked to the horizontal portion formed with the jaw, and pivoted to the bit.

1,168,794. EXPANDING MANDREL. JOHN ENOCH, Springfield, Ohio, assignor to The Western Tool & Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 4, 1912. Serial No. 688,427. (Cl. 82—44.)



In an expanding mandrel, a tapered arbor, an expansible sleeve on said arbor comprising a plurality of segments, provided at their side edges with matching tongues and notches for holding the segments from endwise movement relative to each other, and a pair of spring binding rings encircling said sleeve, each of said segments being provided with a pair of grooves in its outer face for the reception of said spring binding rings, and one of said spring binding rings being provided with an inturned end portion which extends entirely through one of said segments and projects from the inner face of the latter.

1,168,795. RECEIVING AND ASSORTING MECHANISM FOR CIGARETTE-MACHINES. ALEXANDER L. EWENS, Durmid, Va., assignor to United Cigarette Machine Co., Ltd., London, England, a Corporation of Great Britain and Ireland. Filed Apr. 26, 1913. Serial No. 763,766. (Cl. 131—39.)



1. In a cigarette making machine, the combination with a cigarette deliverer, of a trough having a continuously traveling carrier in the bottom thereof upon one part of which cigarettes are deposited directly from the deliverer, continuously traveling means between said deliverer and carrier for transporting each alternate cigarette to another part of said carrier, a receptacle to receive the cigarettes, conveyers at the bottom of said receptacle onto which the cigarettes are deposited from the carrier, and gates extending transversely over the carrier with the lower edges of the gates disposed near the carrier to obstruct the movement of the cigarettes with the carrier and thereby cause an accumulation of the cigarettes in said trough.

2. In a cigarette making machine, the combination with a cigarette deliverer, a traveling carrier upon one part of which alternately issuing cigarettes are deposited directly from the deliverer, continuously traveling means having spaced supports between said deliverer and the carrier for transporting the intermediately issuing cigarettes to another part of said carrier, means for removing the cigarettes from said spaced supports, conveying means having two separated traveling collecting surfaces onto which the separate cigarettes are transferred respectively from said carrier, and a receptacle having a movable gate under which the cigarettes pass, for taking the cigarettes from said conveying means and in which said cigarettes are stored by the collecting surfaces in two separate rows.

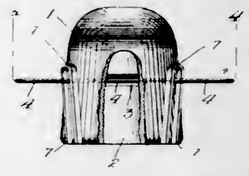
3. In a cigarette making machine, the combination with a cigarette deliverer, of a continuously traveling carrier divided longitudinally by a fixed partition upon one side of which partition cigarettes are deposited from the deliverer, continuously moving means between said deliverer and the carrier for receiving and transporting each alternate cigarette to the opposite side of said partition, means for removing said cigarette from the transporting means to the carrier, a longitudinally divided receptacle into which said cigarettes are delivered by the carrier, and a traveling means at the bottom of said receptacle on each side of the division therein for stacking the cigarettes in the receptacle.

4. In a cigarette making machine, the combination with a cigarette deliverer, a trough below said deliverer having a central longitudinal partition therein, a traveling carrier at the bottom of said trough, and extending substantially the full width of the same upon one part of which cigarettes are deposited from the deliverer, and continuously traveling shelves to receive the alternate cigarettes from the deliverer and deposit them on the belt on the side of the partition opposite those first deposited.

5. In a cigarette machine in combination, a trough, a smooth endless belt in the bottom of said trough adapted to receive the cigarettes lying transversely thereupon, means for continuously advancing said belt, a gate at the end of said trough adapted to arrest the advance of the cigarettes when closed and adapted to permit the passage of the cigarettes when the gate is open, a belt beyond said first belt and adapted to receive the cigarettes therefrom, means for continuously driving said last belt, and a receptacle having an opening in the bottom thereof adapted to receive said last belt so that the cigarettes on said last belt may be advanced into the bottom of said receptacle beyond said opening.

[Claim 6 not printed in the Gazette.]

1,168,796. WIRE HOLDER AND INSULATOR. CLARKSON S. FRENCH, Salem, Ohio. Filed Sept. 5, 1912. Serial No. 718,610. (Cl. 173—313.)



In a wire holder and insulator, the combination of outer and inner members, said outer member formed hollow and adapted to fit over and upon the inner member, said inner member provided with an annular groove and said outer member provided with slots, said slots being inclined toward each other at their lower extremities, the upper ends of said slots terminating in wire retaining recesses disposed toward each other, said recesses being so located with relation to the periphery of the annular groove that a straight line drawn through both of said recesses would intersect the periphery of the annular groove at a point adjacent each of the recesses.

1,168,797. TIME-INDICATING DEVICE. NICOLA GIUSTO, New York, N. Y. Continuation of application Serial No. 623,096, filed Apr. 24, 1911. This application filed June 6, 1913. Serial No. 772,129. (Cl. 58—43.)

1. The combination of a watch case, three concentric revolving disk shaped dials bearing respectively the hours, minutes and seconds divisions of time, a main graduation on said case concentric thereto, comprising a number of segments equal to the number of hours on said dial, an auxiliary graduation of longitude comprising fifteen segments and subdivisions of the same, revoluble hand operated means adjustable in reference to said main graduation automatically pointing out the different times on the hour dial according to the different longitudes, and revoluble hand operated means, adjustable in reference to said auxiliary graduation, automatically pointing out the different readings on the minutes and seconds dials, according to the smaller variations of longitude.



2. The combination of a watch case, concentrically revolving disk shaped dials bearing the divisions and subdivisions of time, a main longitude graduation concentric thereto, an auxiliary longitude graduation also concentric thereto bearing the subdivisions of longitude corresponding to an entire revolution of the minutes dial, a transparent disk shaped covering, and hand operated means adjustable in reference to said longitude graduations, automatically pointing out the different times according to the different longitudes.

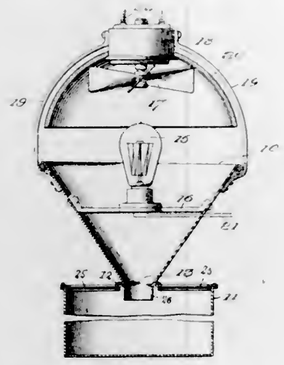
3. The combination of a plurality of disk shaped revolving dials bearing divisions and subdivisions of time, a watch case bearing a graduation corresponding to divisions and subdivisions of longitude, a disk shaped covering of transparent material, hand operated means adjustable in reference to said graduation of longitude automatically pointing out the different readings of time according to the different longitudes, and a mark on said covering corresponding to the standard meridian of said longitude graduation, pointing out at the same time the standard time of the places of which said adjustable means point out the local time.

4. The combination of a watch case, concentrically revolving disk shaped dials bearing the divisions and subdivisions of time, a main longitude graduation concentric thereto, an auxiliary longitude graduation also concentric thereto bearing the subdivisions of longitude corresponding to an entire revolution of the minute's dial, a disk shaped transpartent covering, hand operated means adjustable in reference to said longitude graduations, automatically pointing out the different times according to the different longitudes, and a mark on said covering corresponding to the standard meridian of said longitude graduation, pointing out at the same time on the minute's dial the standard time of the places of which said adjustable means point out the local time.

1,168,798. INSECT-TRAP. DAVID H. GLASS, Rushville, Ill. Filed Dec. 10, 1914. Serial No. 876,541. (Cl. 43—1.)

1. In a device of the class described, a receiver for insects having a converging inlet, an insect attracting medium centrally of the inlet of the receiver, a shield of transparent material corresponding in diameter with the inlet of the receiver and spaced at its lower edge above the same, and means located within the shield for inducing artificial air currents through the receiver.

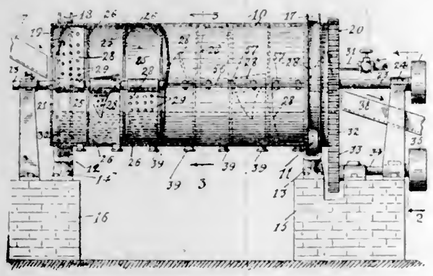
2. In a device of the class described, a receiver for insects having a converging inlet, an insect attracting medium centrally of the inlet of the receiver, a hollow shield opening downwardly with its lower edge substantially in vertical alinement with the upper edge of the inlet of the receiver and spaced at its lower open side from the same, and means located within the shield for inducing artificial air currents through the receiver.



3. In a device of the class described, a receiver for insects, an insect attracting medium associated with the receiver, a motor having an annular flange, and a fan driven by the motor supported above the receiver, whereby induced air currents are caused to flow through the receiver, and a shield suspended from the flange of the motor and inclosing the fan, said shield being open at the lower side and spaced above the receiver.

4. A device of the class described comprising a receiver for the insects having a converging inlet, an insect attracting medium within the inlet, a motor having an annular flange, a fan device located beneath said motor and operated thereby, a plurality of supports connected at one end to the receiver inlet and at their other ends to the motor above the flange, a downwardly opening shield having an opening engaging around said motor and bearing upon the flange thereof and inclosing the fan, the lower edge of said shield being substantially in vertical alinement with the rim of the receiver inlet and spaced above the same.

1,168,799. FRUIT WASHING AND BLANCHING MACHINE. GEORGE E. GRIER, South Pasadena, Cal. Filed Nov. 23, 1914. Serial No. 873,496. (Cl. 146—14.)



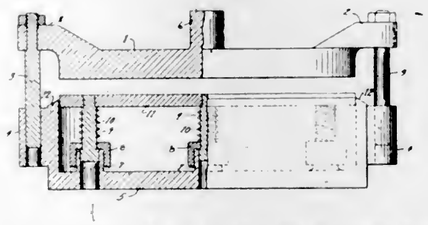
1. A fruit treating machine comprising a cylinder having a series of compartments therein arranged in open communication with each other centrally of the cylinder and adapted to contain a body of liquid, a revoluble shaft extending through the cylinder, a series of projected screw blades of relatively great pitch offset and angularly disposed to each other mounted on said shaft, and means for rotating said shaft whereby fruit delivered at one end of the cylinder will be engaged by a blade and advanced successively from one compartment to another throughout the length of the cylinder.

2. In a fruit treating machine, a cylinder, a series of partitions in said cylinder formed with central openings, said partitions dividing the cylinder into a series of communicating compartments adapted to contain a body of liquid, a revoluble shaft extending axially of the cylinder, a series of perforated projected screw blades of relatively great pitch offset and angularly disposed to each other mounted on said shaft, one blade in each compartment, adapted on rotation of the shaft to pick up the fruit deposited in one compartment and eject it into the adjacent compartment through the opening in the partition, and whereby the fruit may be advanced step-by-step throughout the length of the cylinder and finally discharged therefrom.

3. A fruit treating machine, comprising a rotatable cylinder having a series of compartments therein arranged in open communication with each other centrally of the cylinder and adapted to contain a body of liquid, a revoluble shaft extending through the cylinder, a series of projected screw blades of relatively great pitch offset and angularly disposed to each other mounted on said shaft, and means for rotating said shaft whereby fruit delivered at one end of the cylinder will be engaged by a blade and advanced successively from one compartment to another throughout the length of the cylinder.

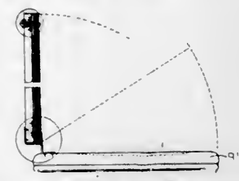
4. In a fruit treating machine, a rotatable cylinder, a series of partitions in said cylinder formed with central openings, said partitions dividing the cylinder into a series of communicating compartments adapted to contain a body of liquid, a revoluble shaft extending axially of the cylinder, a series of perforated projected screw blades of relatively great pitch offset and angularly disposed to each other mounted on said shaft, one blade in each compartment, adapted on rotation of the shaft to pick up the fruit deposited in one compartment and eject it into the adjacent compartment through the opening in the partition, and whereby the fruit may be advanced step-by-step throughout the length of the cylinder and finally discharged therefrom.

1,168,800. LEATHER-BLANK-CUTTING DIE. MARTIN HAGSTROM, Hartford, Conn. Filed June 17, 1914. Serial No. 845,561. (Cl. 164—33.)



In a leather cutting die, a female member formed with terminal sockets, hollow threaded interior studs made integral with said member, caps for said studs, plungers extending through said caps and into said studs, a receiving plate carried by said plungers, springs encircling said plungers and abutting said caps and receiving plate, a cutting edge formed upon said female member adjacent to said receiving plate, posts slidably carried in the sockets of said female member, and a male member comprising a plate in alinement with and of the same shape as said receiving plate and formed with terminal extensions in engagement with said posts and with a centrally disposed upwardly extending stem whereby said male member may be positively depressed into engagement with said receiving plate to depress the same below the cutting edge of the said female member.

1,168,801. TOILET-SEAT PAPER AND HOLDER. ERNEST R. HAMMER, St. Louis, Mo. Filed Apr. 19, 1915. Serial No. 22,414. (Cl. 4—18.)



1. In a device of the character described toilet tissue, a hook, having a shank threaded at its extremity, a cup shaped casting, a coil spring, and a threaded cap, said coil spring being placed around the shank of said hook and adjacent the inner surface of said cup shaped casting, said cap screwing on the threaded extremity of the shank of said hook, said toilet tissue positioned between said hook and said cup shaped casting, said spring being normally in compression thereby holding the point of said hook in close contact with said toilet tissue.

2. In a device of the character described, a toilet seat, a seat back, toilet tissue, a pintle, a flat spring firmly secured to said seat back, at one extremity between said tissue and said back, the other extremity of said spring free to vibrate in an aperture in said seat back, hinge members, one of which is firmly secured to said seat back at its one extremity another of said hinge members being firmly secured to said seat at its one extremity, the other extremities of said hinge members revolubly secured to said pintle, a bent rod revolubly secured to said pintle at one end its other extremity extending through apertures in said toilet tissue.

3. In a device of the character described, a seat back, toilet tissue, a cup shaped casting firmly secured to said seat back, a hook having a knife edge point extending through a hole in said tissue, a coil spring and a cap, said spring encircling the shank of said hook and slidably positioned in said cup, said cap slidably secured in said cup, and firmly secured to the shank end of said hook, said spring being normally in compression so as to hold the knife edge point of said hook in contact with said toilet tissue.

1,168,802. HOISTING AND SIMILAR SLING. NOBLE C. HARRISON, Trenton, N. J., assignor to John A. Roebling's Sons Company, a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,595. (Cl. 57—11.)



1. A sling having a loop formed of wire rope and a flexible protecting sleeve sliding freely on the rope for protecting the rope from wear and to permit inspection of the entire length of the loop rope by sliding the sleeve on the rope.

2. A sling having a loop formed of wire rope and a flexible protecting sleeve sliding freely on the rope for protecting the rope from wear and formed in sections to permit inspection of the entire length of the loop rope by sliding the sections on the rope.

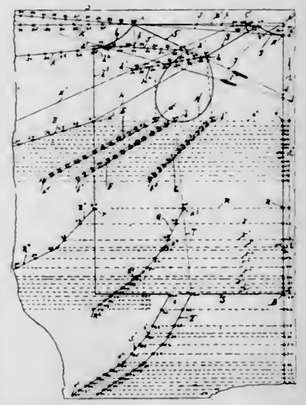
3. A sling having a loop formed of wire rope and a flexible protecting sleeve for protecting the rope from wear and formed of short cylinders sliding freely on the loop independently of each other, the total combined length of the cylinders being such as to permit inspection of the entire length of the loop rope by sliding the cylinders on the rope.

4. A sling having a loop formed of wire rope and a flexible protecting sleeve sliding freely on the rope for protecting the rope from wear and formed to permit inspection of the entire length of the loop rope, and a hook carrying or receiving member sliding on the sleeve.

5. A sling having a loop formed of double wire rope with its two parts side by side, each part being provided with a flexible protecting sleeve sliding freely on the rope and formed to permit inspection of the entire length of the loop rope.

[Claims 6 to 11 not printed in the Gazette.]

1,168,803. TAILOR'S DRAFTING-CHART. GEZA J. HAVRILLA, Erie, Pa. Filed Feb. 5, 1915. Serial No. 6,296. (Cl. 33—13.)



1. A chart for designing garment patterns having thereon a line representing the center back line the upper end of which indicates the neck-line, a series of points on said back-line from which bust measurement lines are projected at right angles to said back-line a distance of one-half of the bust measurement and terminate in a bust scale, a rear neck scale on line C, commencing at the point c^2, thereon, and extending forwardly therefrom; a rear shoulder scale extending from a point in line H, to a point in line H'; a front neck scale commencing at the point c, in line J, and extending forwardly thereon; and a front shoulder scale extending forwardly from a point in line I, to a point in line I', so arranged and positioned with relation to each other that the front and rear shoulder lines of a pattern may be determined therefrom, substantially as set forth.

2. A chart for designing garment patterns having thereon a line representing the center back-line, the upper end of which indicates the back neck-line, a series of bust measure points on said line, from which bust measure lines are projected at right angles to said back-line a distance of one-half of a bust measure and terminate in a bust measure scale, a rear-neck scale commencing at a point c^2, on the line C, and extending forwardly thereon; a rear shoulder scale commencing at the point h, in the line H, and extending forwardly to the point h', in the line H'; a front neck scale commencing at the point c, in the line J, and extending forwardly therefrom; and a front shoulder scale commencing at the point d', in the line I, and extending forwardly to the point d^3, in the line I', so arranged and positioned with relation to each

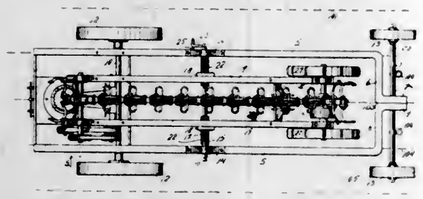
other that the front and rear shoulder lines of a pattern may be determined therefrom; waist-line measurement points on said back-line from which waist measurement lines are projected at right angles one-half of a waist-line measurement and terminate in a waist-line scale, and a front neck scale having points thereon in line with the scale points in the bust and waist scales, substantially as described.

3. A chart for designing garment patterns having a line thereon representing the back-line of a pattern, a series of bust measurement points on said line numbered from 24 upward, bust measure lines projected forwardly from each of said points at right angles to said back-line one-half of the bust measure which terminate in a bust scale, front and rear arm-hole scales between said bust scale and said back-line, and a scale between said arm-hole scales for locating the lower edge of the arm-hole, substantially as set forth.

4. A chart for designing garment patterns having thereon a back-line numbered from 24 upward, waist measurement points on said line from which waist measure lines project at right angles a distance of one-half of the waist measurement, said waist-line points being progressively closer together as they near the lower end of said back-line, and a side line scale between said waist line and back-line substantially as described.

5. A chart for designing garment patterns having a back-line, a waist line scale on said back-line, a hip-line scale thereon below said waist scale, the points in said hip-line scale on said back-line being equi-distant from each point in said waist line scale thereon, lines projecting forward from each point on said hip-line scale and terminating in an irregular front hip scale and a side hip-line scale between said front hip-line scale and said back-line, substantially as and for the purpose set forth.

1,168,804. BEET-HARVESTING MACHINE. GEORGE B. HAYES and WALTER A. HAYES, Denver, Colo. Filed Oct. 16, 1912. Serial No. 725,979. (Cl. 55—108.)

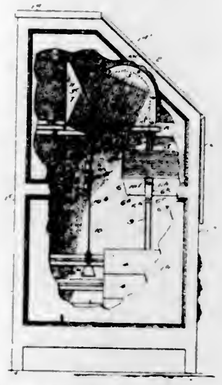


1. In a harvesting machine, a frame mounted upon a pivot extending transversely of the machine, a wheel at one end of the frame arranged to contact with the earth, said frame being slightly over-balanced upon the wheel side of the pivot, and an endless conveyer adapted to be operated by the movement of said wheel over the earth said frame being adjustable bodily transversely of the machine.

2. In a harvesting machine, a main frame, a shaft pivotally mounted transversely of said frame, said shaft being threaded between its bearings in the frame, internally threaded gear sectors engaging the threads of said shaft, an auxiliary frame secured upon said sectors, a comparatively long pinion mounted upon the main frame in mesh with one of said sectors and means for rotating said pinion.

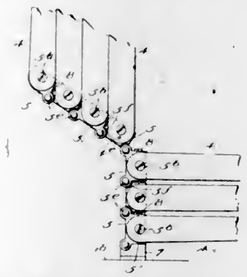
1,168,805. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Apr. 15, 1911. Serial No. 621,392. (Cl. 45—2.)

1. In a filing appliance, stationary supporting means including uprightly and horizontally disposed guide-ways, a horizontal table frame movable upward and downward and an upright back frame movable to and fro in the respective guide-ways and being held against tilting thereby, a series of leaves hinged together at their lower-rear edges, the upper-rearmost leaf being connected with the back frame and the lower-foremost leaf being connected with the table frame, whereby the series of frames is carried by the back, and table frames free from contact with the stationary supporting means, and can be bodily swung singly or collectively from a face to face upright position against the back frame to a face to face reclined position upon the table frame, and vice versa.



2. In a filing appliance, stationary supporting means including uprightly and horizontally disposed guide-ways, a horizontal table frame movable upward and downward and an upright back frame movable to and fro in the respective guide-ways and being held against tilting thereby, a series of leaves hinged together at their lower-rear edges, the upper-rearmost leaf being connected with the back frame and the lower-foremost leaf being connected with the table frame, whereby the series of frames is carried by the back and table frames free from contact with the stationary supporting means, and can be bodily swung singly or collectively from a face to face upright position against the back frame to a face to face reclined position upon the table frame, and vice versa, and means for counter-balancing the table frame and the weight of the leaves superposed thereon.

1,168,806. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed June 1, 1911. Serial No. 630,610. (Cl. 45—2.)



1. In a filing appliance, the combination of a series of supports, pivotal connections between the supports, permitting them to swing relatively to each other, and a series of holders each pivotally mounted on and having limited movement relative to an adjacent support during movement from one position to the other.

2. In a filing appliance, the combination of a series of supports, pivotal connections between the supports permitting them to swing relatively to each other, a series of holders each pivotally mounted relative to an adjacent support, and counterbalancing means between each holder and the adjacent support.

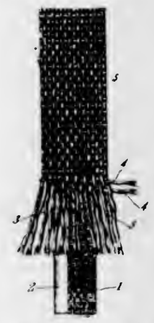
3. In a filing appliance, the combination of a series of supports, pivotal connections between the supports permitting them to swing relatively to each other, a series of holders each pivotally mounted on and having movement relative to an adjacent support during movement from one position to the other, and means between each of said holders and the adjacent support therefor for limiting the movement of said holder relative to said support in opposite directions.

4. In a filing appliance, the combination of a series of supports, a series of holders, each pivotally mounted on one of said supports, pivotal connecting means between the supports permitting them to swing relatively to each other, and means permitting each holder to swing a limited distance in one direction relative to the adjacent holder during operation of said holder from one position to the other.

5. In a filing appliance, the combination of a series of supports arranged side by side, means for supporting said supports normally in an inclined position, pivotal connections between the supports, permitting them to swing relatively to each other into a vertical position, and a series of holders each pivotally mounted on and having limited movement relative to an adjacent support, during the operation of said holder, whereby they are arranged normally in stepped relationship to each other.

[Claims 6 to 29 not printed in the Gazette.]

1,168,807. PACKING AND PROCESS OF MAKING THE SAME. CHESTER L. HILL, Lancaster, Pa., assignor to United States Asbestos Company, Manheim, Pa., a Corporation of Pennsylvania. Filed Feb. 20, 1915. Serial No. 9,538. (Cl. 154—2.)



1. The herein described process of making packing, which consists in forming a compressible core, applying thereto a plurality of warps disposed longitudinally of and entirely surrounding the core, and interweaving with said warps, weft coils extending continuously around the core substantially perpendicular to the warps, and drawing said weft coils tightly around the core at the time of interweaving each coil of the same with the warps, to form a non-stretching seamless woven inclosing casing tightly embracing said core.

2. The herein described process of making packing, which consists in forming a compressible core of superimposed layers of fabric, adhesively united, adhesively applying a rubber cushion member thereto, and then applying longitudinal warps entirely around the composite core, and interweaving with said warps, weft coils extending continuously around the core and substantially perpendicular to the warps, and drawing said weft coils tightly around the core to form a seamless non-stretching inclosing casing upon the core.

3. The herein described process of making packing, which consists in forming a compressible core and weaving directly thereon a seamless inclosing casing, by applying a plurality of longitudinally extending warps entirely around the core and transversely disposed continuous weft coils, substantially perpendicular to the said warp and weft coils being impregnated with vulcanizable material, and drawing said weft coils tightly around the core as they are interwoven with said warps.

4. As a new article of manufacture, a packing consisting of a core comprising a plurality of plies of asbestos fabric, and a rubber cushion member united thereto, and an inclosing seamless non-stretching woven casing consisting of longitudinally extending asbestos warps entirely surrounding said core and transversely disposed asbestos weft coils extending continuously around the core and interwoven with said warps, each weft coil being tightly drawn upon and embracing the inclosed core.

5. As a new article of manufacture, a packing consisting of a core comprising a plurality of plies of asbestos fabric and a rubber cushion member united thereto, and an inclosing seamless non-stretching woven casing consisting of longitudinally extending asbestos warps, entirely surrounding said core and transversely disposed asbestos weft coils extending continuously around the core and interwoven with said warps, each weft coil being tightly drawn upon and embracing the inclosed core, said warps and weft coils being impregnated with vulcanizable adhesive material.

[Claim 6 not printed in the Gazette.]

1,168,808. TOY OR GAME DEVICE. GEORGE E. VON HOFFMANN, Chicago, Ill., assignor of one-half to Glenn S. Noble, Chicago, Ill. Filed Nov. 2, 1910. Serial No. 590,278. (Cl. 46—59.)



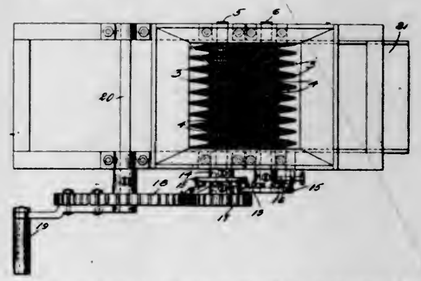
1. In a device of the character set forth, the combination of a rod or stick, a handle at one end of said stick, a substantially spherical ball having a hole therethrough for engagement with said stick, the bore of said hole being but slightly greater than the diameter of the stick, whereby the ball will slide freely along the stick and may be thrown therefrom by centrifugal force when the stick is swung by the operator.

2. In a device of the character set forth, the combination of a tube, a handle at one end of said tube, a projectile having a hole therethrough adapted to slidably fit over said tube, and a dart or arrow adapted to fit within said tube, the arrangement being such that said projectile or said dart may be thrown by a proper swinging movement of the tube.

3. A throwing device for arrows or balls, comprising a tube open at one end and having a handle at the opposite end, the balls being adapted to fit over the tube.

4. The combination with a throwing rod or stick of the character set forth, of an adjustable stop adapted to be secured at any point along said rod or stick and a ball or missile having a hole therethrough adapted to slide over the stick.

1,168,809. POTATO-MILL. ROBERT HÖGBERG, Brattbacken, Sweden. Filed June 9, 1913. Serial No. 772,674. (Cl. 83—12.)

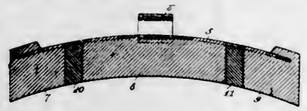


1. A grinding mill, including series of rotatively driven grinding disks and grinder rings, each series comprising

beveled and radially toothed disks and intermediate grinder rings, the disks and grinder rings of the separate series alternately fitting in between each other.

2. A grinding mill consisting of a support, parallel shafts thereon, a series of grinding disks on each shaft, each series consisting of oppositely beveled and radially toothed disks, the disks of one shaft alternately fitting between the disks of the other shaft, grinder rings on the shafts to oppose the peripheral portions of the beveled disks, and means for operating the shafts.

1,168,810. BRAKE-SHOE. HARRY JONES, Mahwah, N. J., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed Nov. 23, 1915. Serial No. 62,941. (Cl. 188—27.)

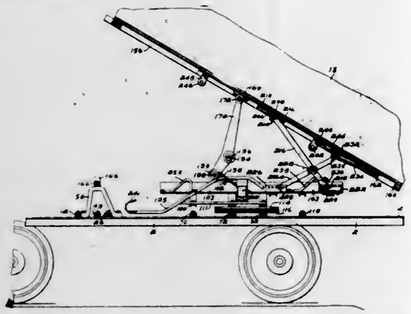


1. A brake shoe comprising wearing sections and a supplemental section extending entirely across the body of the shoe and formed of a material adapted to smear along the wearing surface of the shoe and cause the same to wear with a high polish.

2. A brake shoe comprising wearing sections of gray cast iron containing a high percentage of free carbon, extending entirely across the body of the shoe and adapted to cause the same to wear with a high polish.

3. A brake shoe comprising a wearing section of hard metal, and a supplemental section of gray cast iron containing a high percentage of free carbon and extending entirely across the body of the shoe and substantially equal in thickness to that of the wearing sections.

1,168,811. LOAD-HANDLING APPARATUS. GUSTAF KELLGREN, Boston, Mass. Filed June 7, 1913. Serial No. 772,243. (Cl. 21—20.)



1. A dumping motor vehicle including, in combination, a body; a chassis on which said body is rotatable; an engine shaft through which said vehicle is propelled; mechanism for raising and tilting said body relatively to said chassis; mechanism for rotating said body on said chassis; and intermediate connections between each of said mechanisms and said engine shaft for actuating both of said mechanisms at will from said shaft.

2. A dumping motor vehicle including, in combination, a chassis; a turn-table mounted thereon; a body carried by said turn-table; an engine shaft through which said vehicle is propelled; body raising and tilting means supported by said turn-table and turning therewith; a shaft operatively connected with said last-named means and journaled concentric with said turn-table; driving connections between said last-named shaft and said engine shaft; means for turning said turn-table including a member concentric therewith; and driving connections between said member and said engine shaft.

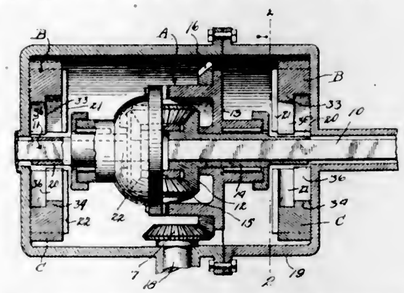
3. A load handling apparatus including, in combination, a body; a suitable support on which said body is sustained; mechanism for raising said body upon said support; mechanism for turning said body upon said support; a common actuator for said body raising and body turning mechanisms; means operatively and selectively to connect said body turning mechanism and said body raising mechanism with said common actuator; and means automatically to arrest the operation of said body raising mechanism when the body has been raised to the desired height.

4. A load handling apparatus including, in combination, a body; a suitable support on which said body is sustained; mechanism for raising said body upon said support; mechanism for turning said body upon said support; a common actuator for said body raising and body turning mechanisms; clutch mechanism and operating means therefor operatively to connect said common actuator and said body raising mechanism; clutch mechanism and operating means therefor operatively to connect said common actuator and said body turning mechanism; and means automatically to throw out the clutch that connects said common actuator and said body raising mechanism when the body has reached a predetermined height.

5. A load-handling apparatus comprising, in combination, a suitable support; a turn-table mounted thereon; a frame supported on said turn-table; a load-supporting body normally resting on said frame; a plurality of inclined guide rails on said frame; a plurality of corresponding rolls carried by said body and adapted to coöperate with said guide-rails, respectively; a pair of inclined guide-rails on said frame; a pair of push-bars pivotally attached at one pair of ends to said body; a pair of rollers journaled on the other pair of ends of said push-bars and adapted to coöperate with the rails of said pair; a second pair of rollers journaled on said push-bars intermediate their ends and adapted to coöperate with the rails of said pair; a pair of grooved rollers journaled on said push-bars, respectively; a pair of cables attached at one pair of ends to said frame and having bights engaging said grooved rollers, respectively; a pair of cable-winding drums to which the other pair of ends of said cables are secured, said drums being journaled on said frame; a pair of gears on said drums, respectively; a pinion meshing with said gears; a shaft to which said pinion is secured, said shaft being journaled in a suitable bearing on said frame concentric with said turn-table; and means for rotating said shaft including a gear secured thereto; and means for turning said turn-table including a gear secured to said frame concentric with said turn-table.

[Claims 6 to 15 not printed in the Gazette.]

1,168,812. LOCKING DEVICE FOR DIFFERENTIAL GEARS. GEORGE W. KING, Rio Grande, Tex. Filed Mar. 24, 1914. Serial No. 826,892. (Cl. 74—34.)



1. The combination with rotatable axle sections, a differential gear connecting said sections, and a fixed member overlying the adjacent ends of said sections, of means carried by the fixed member and engageable respectively with the axle section to lock the latter against rotation.

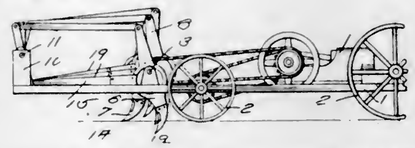
2. The combination with rotatable axle sections, a differential gear connecting said sections, and a fixed member overlying the adjacent ends of said sections, of a pair of locking blocks slidably mounted on the fixed member adjacent each axle section and adapted to interlock with the latter when moved toward each other to secure the axle section against rotation, and means for moving the blocks of each pair toward and away from each other.

3. The combination with rotatable axle sections, a differential gear connecting said sections, and a fixed member overlying the adjacent ends of said sections, of a pair of locking blocks slidably mounted on the fixed member adjacent each axle section, spaced arms on the adjacent ends of said locking blocks adapted to move into embracing relation to a squared portion of an adjacent axle section and into overlying relation with respect to each other, and means for moving the locking blocks of each pair toward and away from each other.

4. The combination with rotatable axle sections, a differential gear connecting said sections, and a fixed member overlying the adjacent ends of said sections, of spaced guide members mounted on the fixed member on respective sides of each axle section, a locking block slidably mounted between each pair of guide members, a pair of locking blocks coöperating with the same axle section and having their adjacent ends oppositely reduced and recessed to form arms adapted to move into embracing relation with a squared portion of the adjacent axle section and into overlying relation with respect to each other, and means for moving said locking blocks toward and away from each other.

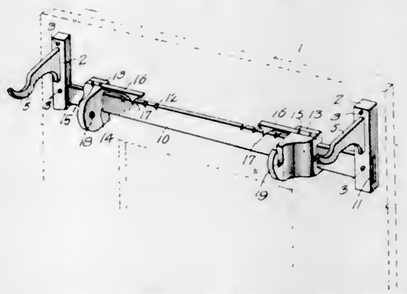
5. The combination of rotatable axle sections, a differential gear connecting said sections, and means for locking either of said sections against rotation.

1,168,813. MACHINE FOR WORKING DIRT. JOEL KLOPFENSTEIN, Preble, Ind. Filed Jan. 19, 1915. Serial No. 3,129. (Cl. 97—53.)



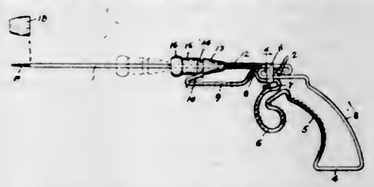
In a dirt working machine, the combination with a frame having a shaft extending transversely thereof, of a plurality of cams mounted thereon, cam straps mounted on said cams and having downwardly extending implement carrying arms thereon and upwardly extending projections, a second shaft mounted on the frame and having collars loosely mounted thereon, the said collars having oppositely extending arms thereon, rods pivotally connected to said arms on each of said collars, one of said rods being connected to one of the aforementioned cam straps and the other of said rods being connected to the projection on the adjacent cam strap and means for rotating the first mentioned shaft.

1,168,814. ADJUSTABLE CURTAIN-POLE AND SHADE HANGER. ROD R. LYNK, Van Buren, Me. Filed Feb. 11, 1915. Serial No. 7,525. (Cl. 156—23.)



An adjustable curtain pole and shade hanger comprising a plurality of hanger members, a connecting bar secured to said hanger members, adjustable shade brackets secured to said bar, a curtain pole supporting arm secured to each hanger member, each hanger member provided with a vertically extending slot terminating in a pocket at each end thereof formed upon the rear face of said hanger member, each curtain pole supporting arm provided with a plurality of tongues fitting in said notches for preventing the accidental removal of said curtain pole supporting arm from said hanger member, and means for securing said hanger members to a support.

1,168,815. TOY GUN. OLIVER C. MADISON, Omaha, Nebr. Filed Mar. 31, 1913. Serial No. 758,012. (Cl. 124—12.)



1. In a toy pistol, an integral wire frame comprising a rectilinear barrel-portion, a looped breech-body adjoining the rear of the barrel, a grip-portion adjoining the breech-body, a trigger-loop adjacent to the grip, and a lever-portion fulcrumed on the breech-body, the end of the lever-portion being engageable with a projectile on the barrel-portion, and the lever-portion being tiltable on its fulcrum by distortion of the grip.

2. In a toy gun, an integral wire frame comprising a barrel-portion, a breech-body adjoining the rear end of the barrel, a grip-portion adjoining the breech-body, a trigger-loop adjacent to the grip, and a lever-portion having a hooked end adapted to engage and retain a projectile sliding on the barrel, the lever-portion connecting with the trigger-loop and contacting slidably with the breech-body, and retaining means embracing the breech-body and the contacting portion of the lever, the lever being movable to release the projectile by distortion of the trigger-loop and grip, whereby either of said parts may be employed to effect the release of the projectile.

3. In a toy gun, an integral wire barrel, breech-body, grip and trigger, a projectile-detent lever connected with the trigger, means for holding said lever in slidable contact with the breech-body, the said contacting parts having curved portions whereby their relative movement causes a tilting of the lever, a perforate projectile slidably disposed on the barrel, and a spring disposed around the barrel and connected with the breech-body, the projectile having a conical portion with the base of which the end of the detent-lever is engageable to retain the projectile in fixed position and with the spring under compression thereby.

1,168,816. TOY RIFLE. OLIVER C. MADISON, Omaha, Nebr. Filed May 27, 1915. Serial No. 30,845. (Cl. 124—12.)



1. In a toy rifle, the combination of a breech member formed as a cylindrical casing, a barrel member consisting of a rectilinear rod disposed parallel with and projecting forwardly of the casing while mounted therein, a spiral spring carried by said rod and a hollow cone shaped projectile adapted to be moved for retracting the spiral spring while circumscribing said rod, a wire of uniform diameter having an end portion disposed in said casing and extended to form a stock with a forwardly projecting portion disposed within and bent downwardly at the front end of the casing to form a curved mainspring with a rearwardly extending arm disposed below and substantially parallel with said casing, and bent to provide a trigger member

formed as a loop extending below and rearwardly from the arm of said mainspring, and extended forwardly from the loop to provide an operating arm with an upwardly bent terminal portion disposed below and intermediate the ends of said rod to provide a catch for engaging the base of said projectile when the spiral spring is retracted, and a sleeve engaging the rearwardly extending arm of said mainspring and the forwardly extending operating arm for maintaining said last named arms parallel when the trigger is actuated.

2. In a toy rifle, the combination of a breech member formed as a cylindrical casing, a barrel member consisting of a rectilinear rod disposed parallel with and projecting forwardly of the casing while mounted therein, a spiral spring on said rod connected with the casing and a hollow cone shaped projectile adapted to be moved for compressing the spiral spring while circumscribing said rod, a wire of uniform diameter having an end portion disposed in said casing and extended to form a stock with a forwardly projecting portion disposed within and bent downwardly at the front end of the casing to form a curved mainspring with a rearwardly extending arm disposed below and substantially parallel with said casing and bent to form a loop extending below and rearwardly from the arm of said mainspring to provide a trigger, and extended forwardly from the loop to provide an operating arm with an upwardly bent portion disposed below and intermediate the ends of said rod to provide a terminal facet disposed parallel with its longitudinal axis for engaging the base of said projectile when the spiral spring is compressed, and means connected with the rearwardly extending arm of said mainspring and engaging said forwardly extending operating arm for maintaining said arms stationary with respect to each other when the trigger is actuated.

3. A toy rifle, comprising, in combination with a stock provided with a cylindrical breech, a rectilinear rod mounted upon and projecting forwardly from the breech, a spiral spring carried by said rod and a projectile adapted to have a slidable movement on said rod for compressing said spiral spring, an elastic metallic strand of uniform diameter mounted in said cylindrical breech and bent to provide a curved mainspring projecting forwardly and having a rearwardly extending arm disposed below and substantially parallel with said cylindrical breech, and bent to the form of a loop to provide a trigger projecting from and below said rearwardly extending arm, and extending forwardly from said loop adjacent to said rearwardly extending arm to provide an operating arm with an upwardly projecting part disposed intermediate the ends of said rod to provide a catch for engagement with said projectile, and a member mounted on the rearwardly extending arm of the mainspring to provide a fulcrum for said operating arm.

4. A toy rifle, comprising, in combination with a stock provided with a cylindrical casing at its inner end, a rectilinear rod mounted upon and projecting forwardly from the casing, a spiral spring upon said rod and a projectile adapted to have a slidable movement on the rod for compressing the spiral spring, an elastic wire of uniform diameter mounted in said casing and bent to provide a curved mainspring projecting forwardly and having a rearwardly extending arm disposed below said casing, and bent in the form of a loop to provide a trigger projecting below and rearwardly from the arm of the mainspring, and extended forwardly from said loop adjacent to and below the mainspring to provide an operating arm with an upwardly projecting part disposed below and intermediate the ends of said rod to provide a catch for engagement with said projectile, and a member mounted on the arm of the mainspring to provide a fulcrum for said operating arm.

1,168,817. SNAP-LINK. CLIFFORD W. MARSH, Bridgeport, Conn. Filed May 20, 1915. Serial No. 29,321. (Cl. 24—236.)

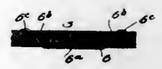
1. A snap link comprising a body curved in the direction of its length and having at its ends respectively connecting and holding hooks lying in planes approximately at right angles to each other, and a closing spring secured to the tip of the holding hook and coacting with the tip of the connecting hook.



2. A snap link comprising a body provided at one end with a connecting hook and at the other end with a holding hook, the connecting hook extending approximately at right angles to the body, the holding and the connecting hooks lying in planes approximately at right angles to each other, and a spring secured to one end of the holding hook, the other end of the spring being in engagement with the inner side of the connecting hook.

3. A snap link comprising a body having one end extended at right angles to the body to form a connecting hook, the other end of said body having a bent portion forming a holding hook, the tip of which extends outward obliquely from the body, the holding hook and the connecting hook lying in planes approximately at right angles to each other, and a closing spring secured to the tip of the holding hook and coacting with the tip of the connecting hook.

1,168,818. BOOK OR PAD. BERT C. MAXWELL, Canton, Ohio, assignor to Julius Whiting, Jr., trustee, Canton, Ohio. Original application filed Jan. 16, 1908, Serial No. 411,156. Patented July 28, 1914, No. 1,105,571. Divided and this application filed Mar. 21, 1914. Serial No. 826,233. (Cl. 11—11.)

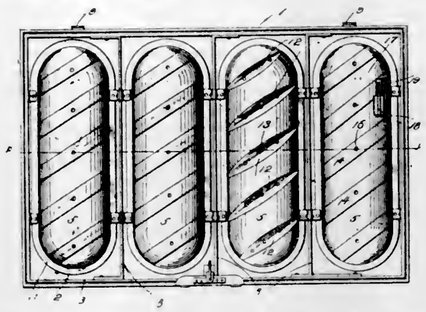


1. In a manifolding book, the combination with a series of superposed slips, of means for binding the slips in pad form, the said means comprising a single staple having a base engaging with and extending across a portion of the back of the pad and limbs connected to and extending from the opposite ends of the base in a direction inclined relative thereto and diverging from each other, whereby the slips remaining in the pad are bound together irrespective of the removal of the uppermost slip or slips, the free ends of said limbs being bent laterally in opposite directions into engagement with the top of the pad.

2. In a manifolding book, the combination of a series of superposed slips, and a device for binding the slips together in pad form having a base engaging the back of the pad and limbs connected to the opposite end of the base and extending through the slips, the said limbs being inclined relative to the base and diverging from each other at their free ends, whereby they coöperate to bind the slips together and prevent the slips from riding upwardly on said limbs.

1,168,819. BREAD-BAKING PAN. GUSTAV A. F. MILDT, Cincinnati, Ohio. Filed May 3, 1912, Serial No. 694,969. Renewed Sept. 2, 1915. Serial No. 48,732. (Cl. 153—6.)

A device of the kind described comprising a base a plurality of separable pan sections mounted on said base, each of said upper pan sections being formed with a plurality of V-shaped elongated recesses extending across the body thereof, each recess having a plurality of perforations in the bottom thereof and provided with a strap covering said recess and extending down the sides of said



upper sections, each of said straps provided with a small opening registering with the V-shaped recesses.

1,168,820. VULCANIZING APPARATUS FOR REPAIRING RUBBER TIRES AND OTHER ARTICLES. WILLIAM HENRY MILES, Longton, England. Filed Feb. 15, 1915. Serial No. 8,298. (Cl. 18—18.)

1. In vulcanizing apparatus the combination of a clamping device comprising two jaws; a metal plate upon one of said jaws; a second metal plate adapted to be pressed toward said first metal plate by the second of said jaws; a block of slow-burning heat producing substance; and means for retaining said block upon said second metal plate.

2. In vulcanizing apparatus the combination of a block of slow-burning heat producing substance, having a hole through it; a metal plate provided with a pin upon which said block is adapted to be placed; and means for holding said plate against the part that is to be vulcanized.

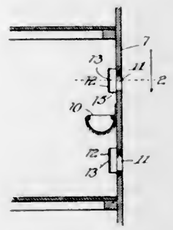
3. In vulcanizing apparatus the combination of a perforated heating block; a removable plate; a pin upon said plate adapted to retain said block; and means for applying said plate to the part that is required to be vulcanized.

4. In vulcanizing apparatus the combination of a block of slow burning heating material such as is employed in Vesuvian matches; a metal plate upon which said block is disposed; and means for holding said plate against the part that is to be vulcanized.

5. In vulcanizing apparatus the combination of a clamp; a removable plate; a perforated heating block; and a pin upon said plate adapted to retain said block and to be acted upon by said clamp.

[Claim 6 not printed in the Gazette.]

1,168,821. POULTRY-CAR. FRANK N. MUDD and WALDO P. JOHNSON, Chicago, Ill.; said Johnson assignor to said Mudd. Filed Sept. 23, 1915. Serial No. 52,243. (Cl. 119—12.)



1. In a poultry-car containing tiers of coops, an aisle, and a state-room extending across the coops and aisle, walls common to the state-room and the coops adjacent thereto and provided with ventilating openings therethrough, and ventilating bars secured to said walls in spaced relation thereto and covering the apertures in the latter.

2. In a poultry-car containing tiers of coops, an aisle, and a state-room extending across the coops and aisle, walls common to the state-room and the coops adjacent thereto and provided with ventialating openings therethrough, and apertured bars secured to said walls in spaced relation thereto and covering the apertures in the latter.

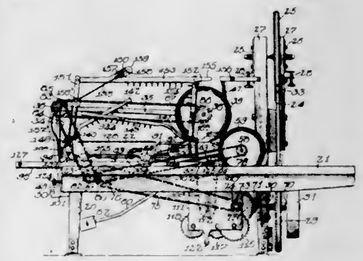
3. In a poultry-car containing tiers of coops, an aisle, and a state-room extending across the coops and aisle, walls common to the state-room and the coops adjacent thereto and provided with ventilating openings therethrough, and apertured bars provided with offsets through which they are fastened in spaced relation to said walls to cover the apertures therein.

4. In a poultry-car containing tiers of coops, an aisle, and a state-room extending across the coops and aisle and having troughs on the inner sides of the walls common to the state-room and the adjacent coops and provided with rows of ventilating apertures outside the planes of the troughs, and ventilating bars secured to said walls in spaced relation thereto to extend lengthwise of and cover said apertures.

5. In a poultry-car containing tiers of coops, an aisle, and a state-room extending across the coops and aisle, and having troughs on the inner sides of the walls common to the state-room and the adjacent coops, the said walls being provided with rows of ventilating apertures above and below the planes of the troughs, and bars containing relatively-small ventilating apertures and offsets through which they are secured to said walls to extend in spaced relation thereto and lengthwise of said rows of apertures to cover them.

[Claims 6 to 9 not printed in the Gazette.]

1,168,822. MEAT AND BONE CUTTING MACHINE. ATWOOD M. NEWELL, Irwin, Pa., assignor to U. S. Slicing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 1, 1912. Serial No. 694,305. (Cl. 17—24.)



1. In a machine of the class described, the combination of a pair of oppositely disposed meat cutting devices, and a bone cutting device coöperating with such devices.

2. In a machine of the class described, the combination of a pair of oppositely disposed meat cutting devices adapted to operate on opposite sides of a bone in the meat, and a bone cutting device coöperating with said devices for cutting the bone, all of said devices operating in alinement.

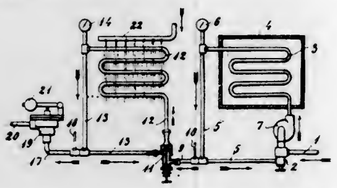
3. In a machine of the class described, the combination of a pair of oppositely disposed meat cutting devices adapted to operate on opposite sides of a bone in the meat and to be deflected by a bone in the meat, and a bone cutting device for cutting the bone in the meat.

4. In a machine of the class described, the combination of a pair of oppositely disposed rotary meat cutting devices adapted to operate on opposite sides of a bone in the meat and to be deflected by a bone in the meat, and a bone cutting device for cutting the bone after the meat has been cut around the bone.

5. In a machine of the class described, the combination of a pair of oppositely disposed rotary meat cutters adapted to operate on opposite sides of a bone in the meat and to be automatically deflected by the bone, a bone cutting saw, and means for presenting the meat and the cutters and saw in cutting relation.

[Claims 6 to 70 not printed in the Gazette.]

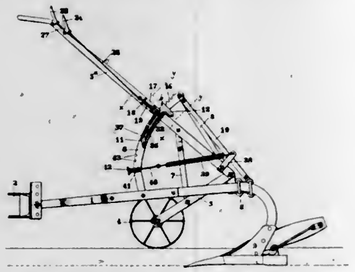
1,168,823. METHOD AND MEANS FOR THE TREATMENT OF FLUIDS CONTAINING FAT GLOBULES, CASEIN, AND SUGAR. NIELS JONAS NIELSEN, Aarhus, Denmark. Filed Feb. 27, 1914. Serial No. 821,462. (Cl. 99—15.)



1. The method of treating liquids containing fat globules, casein and lactine, consisting in circulating two bodies of the liquid in closed circuits maintaining the pressure and temperature of the liquid in one of said circuits above the pressure and temperature in the other of said circuits, introducing said liquid into said circuit having the higher temperature, leading liquid from said last mentoned circuit into said cooler circuit, and discharging liquid from said cooler circuit, the circulation in said two circuits being maintained at high speed, and the relative pressures and temperatures being such that the fat globules will be bursted.

2. An apparatus for treating liquids containing fat globules, casein and lactine, comprising in combination two closed circuits for the liquid, means for circulating the liquid in said circuits, means for heating one circuit and cooling the other circuit, means for leading liquid into the heated circuit, means for leading liquid from the heated circuit to the colder circuit, means for discharging liquid from said colder circuit, and means for intimately mixing the liquid in said circuits with the liquid introduced thereinto.

1,168,824. LEVER MECHANISM. WESLEY A. PAUL, Moline, Ill., assignor to Deere & Company, Ottumwa, Iowa, a Corporation of Illinois. Filed Mar. 27, 1914. Serial No. 827,610. (Cl. 74—39.)



1. The combination with a lever and its quadrant, of means to lock the lever to the quadrant, a member on the quadrant and in engagement therewith and adapted to limit the movement of the lever, and means on the lever to disengage said member from the quadrant to change the position of said member by movement of the lever.

2. The combination with a lever and its notched quadrant, of means to lock the lever to the quadrant by engagement with any one of said notches, a member on the quadrant held in position by engagement with one of said notches and adapted to limit the movement of said lever, and means on the lever to disengage said member from the quadrant to change the position of said member by movement of the lever.

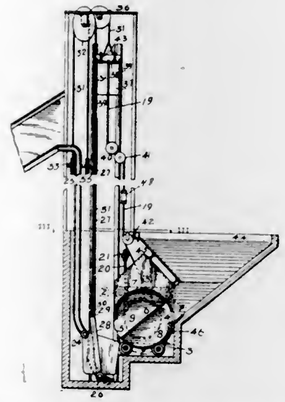
3. The combination with a lever and its notched quadrant, a member on the quadrant held in position by engagement with one of said notches, a notch in said member registrable with any one of the notches in the quadrant, means to close the remaining notches on the quadrant, means on said member to limit the movement of the lever, and a latch on the lever to engage with the notch in said member and the adjacent notch in the quadrant to lock the lever to the quadrant at the limit of its movement.

4. The combination of a lever and its notched quadrant, a member on the quadrant adapted to be moved to different positions by the lever, means on said member to retain it in varying positions on the quadrant, a notch in said member registrable with a notch in the quadrant, said member closing the remaining notches in the quadrant, a latch on said lever to engage with the notch in said member and the adjacent notch in the quadrant, and means on the lever to disengage said member and latch from the quadrant simultaneously.

5. The combination of a lever and its notched quadrant, a member on the quadrant adapted to be moved to different positions by the lever, means on said member to retain it in varying positions on the quadrant, a notch in said member registrable with any one of the notches in the quadrant, the remaining notches being closed by said member, a stop on said member to limit the movement of the lever, and a latch on the lever to engage with the notch in said member and the adjacent notch in the quadrant to lock the lever to the quadrant at the limit of its movement.

[Claims 6 to 10 not printed in the Gazette.]

1,168,825. LOADING AND UNLOADING APPARATUS. HOWARD M. PEIGHTEL, Crafton, Pa., assignor to Des Moines Bridge and Iron Works, Pittsburgh, Pa., a Corporation of Iowa. Filed June 19, 1914. Serial No. 846,073. (Cl. 214—12.)



1. In a loading and unloading apparatus, a horizontal rotatable drum, a hoisting-bucket arranged to receive material from the drum, a hoisting mechanism connected to the hoisting-bucket, means including a clutch device operated by the said mechanism for rotating the bucket always in the same direction, and means for returning the said clutching device to its initial position after each operation of the drum.

2. In a loading and unloading apparatus, a horizontal rotary drum, a hoisting bucket arranged to receive material from the drum, a counter-weight for the bucket, a cable connecting the bucket and the counter-weight, means for operating the cable, a clutching device for rotating the drum, means actuated by the counter-weight for driving the clutching device in a direction to deliver material from the drum to the bucket, and means for causing the clutching device to resume its initial position after each operation of the drum.

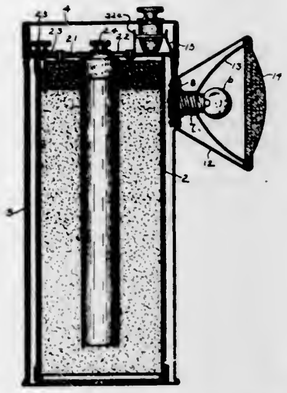
3. In a loading and unloading apparatus, a horizontal rotary drum, having a peripheral opening, a hoisting bucket arranged to receive material from the drum when the latter has been rotated so as to discharge material therefrom through the said opening and into the bucket, means for hoisting the bucket, and means controlled by the hoisting mechanism for automatically rotating the drum always in the same direction from charging position to discharging position.

4. In a loading and unloading apparatus, a horizontal drum rotatable in one direction only, a hoisting mechanism including a hoisting bucket arranged to receive material from the drum, and means controlled by the said mechanism for causing the drum to move from charging position to discharging position.

5. In a loading and unloading apparatus, a pair of hoisting buckets, each serving as a counter-weight for the other, separate drums rotatable in one direction only and arranged to receive material in one position and to deliver the same to their respective buckets when rotated to another position, a clutching device for driving each drum in the said one direction, means for simultaneously hoisting one bucket and lowering the other, means whereby the drum for supplying one bucket is rotated by the other bucket to discharging position when the latter bucket is at or near its upper limit of travel.

[Claims 6 to 8 not printed in the Gazette.]

1,168,826. ELECTRIC LANTERN. JOHANN G. PETERSON, Jersey City, N. J., assignor to Manhattan Electrical Supply Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 28, 1915. Serial No. 30,885. (Cl. 240—8.5.)



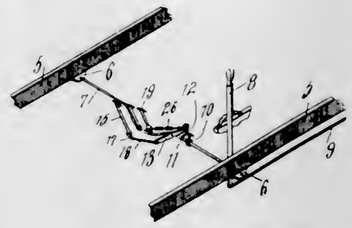
1. An electric lantern comprising a transportable case adapted to receive a battery therein, contacts adapted for electrical connection with the terminals of the battery, and a connector movable to electrically bridge across the contacts, the connector having lobes at its ends, one lobe being wider than the other to thereby prevent the connector simultaneously accidentally engaging both contacts.

2. An electric lantern comprising a case having a battery therein, contacts electrically connected with the terminals of the battery, and circuit controlling means, said circuit controlling means comprising a spindle having a collar, insulating members and a connector between the insulating members, the spindle being provided with means for clamping the insulating member and the connector together with one of the insulating members against said collar, the spindle being disposed between the contacts and movable to cause the connector to assume circuit opening and circuit closing positions.

3. An electric lantern comprising a case of conducting material, a lamp receiving shell in electrical connection with said case, an attaching member in the case, a contact between the attaching member and the case insulated from both, the attaching member being provided with lugs extending through the case for securing said lamp receiving shell in position, a battery in the case having two contacts, one of which coöperates with said other contact and is electrically connected with one terminal of the battery, and the other of which is electrically connected with the other terminal of the battery and is electrically connected with the case.

4. An electric lantern comprising a case of conducting material, a contact member in the case, insulating material between the contact member and the case, a lamp supporting shell exteriorly of the case, having a circumferential flange, an attaching plate in the case, insulating material between the attaching plate and the contact member, the attaching plate having projections and the two pieces of insulating material and said flange having openings to receive said projections, the latter being bent over the flange to hold the several parts together, the first mentioned piece of insulating material having an opening to receive the central end contact of a lamp, and a battery in the case having contacts, one of which is electrically connected with one terminal of the battery and coöperates with said contact member, and the other of which is electrically connected with the other terminal of the battery and is connected electrically with said case.

1,168,827. BRAKE-PEDAL ATTACHMENT. CLARK R. REID, Danville, Ill. Filed Mar. 15, 1915. Serial No. 14,591. (Cl. 74—81.)



1. An attachment for connecting the brake pedal and clutch mechanism controlling swinging lever carrying a bolt provided with a clamp nut, comprising a member to surround the brake pedal and be secured thereto, a plate having a slot to receive the bolt and to be held thereon by the clamp nut, and a relatively nonextensible flexible element connecting the member and the plate, substantially as described.

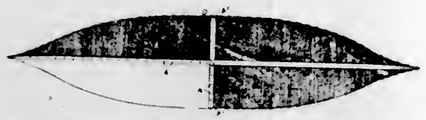
2. An attachment for connecting the brake pedal and clutch mechanism controlling swinging lever carrying a bolt, comprising a sleeve to be arranged upon the brake pedal, means to clamp the sleeve to the brake pedal, a member having an opening to receive the bolt, and a flexible relatively nonextensible element connecting the sleeve and member.

3. An attachment for connecting the brake pedal and clutch mechanism controlling swinging lever carrying a bolt, comprising a sleeve to be secured upon the brake pedal, a flanged plate having a slot to receive the bolt and adapted to be clamped to the bolt, and a flexible relatively nonextensible element attached to the sleeve and the flange.

4. In combination, a clutch pedal, a brake pedal, a swinging lever controlling the operation of clutch mechanism, a pitman pivotally connecting the clutch pedal and one end of the swinging lever, a bolt extending through an aperture in the opposite end of the swinging lever, a slotted plate adapted to be arranged upon the end of the lever to receive the bolt in the slot, a clamping nut carried by the bolt to bind the slotted plate to the lever, an

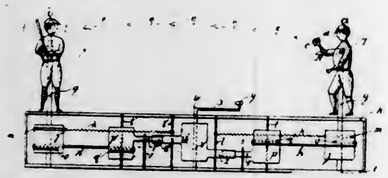
apertured flange carried by the slotted plate, an eye bolt secured within the aperture of the flange, a flexible element having one end attached to the eye bolt, a sleeve clamped upon the brake pedal, and means for attaching the opposite end of the flexible element to the sleeve.

1,168,828. BOAT STRUCTURE. MAXIMILIAN SCHMITT, Paterson, N. J. Filed May 28, 1915. Serial No. 30,882. (Cl. 9—6.)



The hereindescribed boat-like structure of the class having its fore and aft halves substantial counterparts of each other including a frame and a composite shell attached to the frame, said shell including two pairs of stiff sheet concavo-convex sections and the sections of each pair being diagonally opposite to each other and being also substantial counterparts of each other in size and shape.

1,168,829. MECHANICAL TOY. JOHN B. SHEPPARD, New York, N. Y. Filed Nov. 16, 1914. Serial No. 872,472. (Cl. 46—59.)

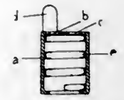


1. The combination of a base adapted to support two movable devices, one adapted as described to hold a ball and the other to hold a bat, said two devices separated by an appreciable distance, and adapted as described to turn on their supports, means substantially as set forth in the form of drums, cords and a rotating arm for turning said supports, and provided with limited engaging devices adapted as described to disengage from the actuating means at different predetermined intervals, timed as set forth, the interval being proportioned to the distance between the figures, and means for reversing the said holding devices.

2. The combination of a base adapted to support two movable devices, one adapted as described to hold a ball and the other to hold a bat, said two devices separated by an appreciable distance, and adapted as described to turn on their supports, the height of the ball holding device adjusted as set forth whereby the bat is adapted to meet a ball projected from the ball holding device, means substantially as set forth for turning said supports, and provided with limited engaging devices adapted as described to disengage from the actuating means at different predetermined intervals, timed as set forth, the interval being proportioned to the distance between the figures, and means for reversing the said holding devices.

3. The combination of a base adapted to support two movable devices, one adapted as described to hold a ball and the other to hold a bat, said two devices separated by an appreciable distance, and adapted as described to turn on their supports, means substantially as set forth for turning said supports and consisting of drums, cords passing about them and to the oscillatory figures, engaging arms projecting toward each other, a rotary tappet provided with crank and engaging arms adapted as set forth to engage the arms of the drums and set and proportioned as set forth whereby they will pass the ends of said drum arms sequentially, and provided with limited engaging devices adapted as described to disengage from the actuating means at different predetermined intervals, timed as set forth, the interval being proportioned to the distance between the figures, and means for reversing the said holding devices.

1,168,830. SEAL FOR BAGS, &c. CAMILLO SISMONDI, Turin, Italy. Filed Nov. 29, 1912. Serial No. 734,126. (Cl. 70—98.)



In combination, a cord, a seal comprising a rectangular body of hollow compressible material open at one end, said body having an opening at its opposite end to receive one end of the cord aforesaid for connection with said body upon preliminary compression of the same, the body also having a second opening adjacent to the last-mentioned opening to receive the other end of the cord preliminary to subsequent compression for connecting the last-mentioned cord end with the seal body, a projection extending adjacent to the second opening aforesaid and adapted to be folded against the body for temporarily clamping the last-mentioned cord end thereagainst, and a toothed clamping member disposed within the body and comprising a strip of relatively hard material bent into spiral form and inserted in the open end of the body, the edges of the open end of said body being adapted to retain the clamping member therewithin, whereby to seal the cord within the body upon final compresston of the same.

1,168,831. PROCESS OF MOLDING A COMPRESSED FIBER COMPOSITION. FRANK SKALLA, Niles, Mich. Filed Jan. 23, 1915. Serial No. 4,018. (Cl. 18—55.)

1. The herein described process of molding a fibrous composition, which consists in making an adhesive solution consisting of a suitable adhesive and a solvent, then mixing said adhesive with comminuted wood, to produce a wet coherent mass, then subjecting the mass to a drying action until the major portion of the solvent is driven off, leaving the mass in a slightly adhesive, moist and plastic granular condition, then remoistening the mass with the solvent, and then subjecting the mass to the action of heating dies.

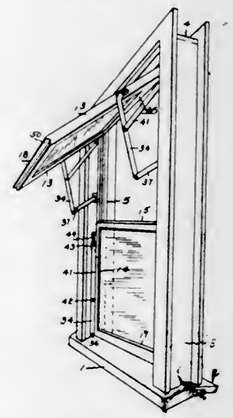
2. The herein described process of molding a fibrous composition, which consists in preparing an adhesive solution of glue, one part, and water, eight parts; mixing the adhesive solution with comminuted wood, in the proportion of a suitable amount of the adhesive to about one-half its weight of wood, so as to form a wet coherent mass, then drying the mass until reduced to a plastic consistency and slightly adhesive under pressure, while still preserving its coherency, then moistening the mass with water, and then subjecting the mass to the action of hot dies under heavy pressure.

1,168,832. PORTABLE DISPLAY-FRAME. MORRIS SMERNOFF, New Haven, Conn. Filed Jan. 21, 1915. Serial No. 3,471. (Cl. 40—156.)



In a portable display frame, the combination with a one-piece molded frame of initially plastic material, having its inner edge formed with a continuous rabbet, of a metal reinforce embedded in said initially plastic material so as to be completely inclosed thereby, the said reinforce being formed at intervals in its rear face with threaded holes, and the said frame being formed at its back with openings in line with said threaded holes, studs mounted in said threaded holes and projecting through the back of the frame, and retaining fixtures swiveled upon the said studs and adapted to co-act with said rabbet in holding a picture, card, or other object in place therein.

1,168,833. WINDOW-SASH MOUNTING. ARTHUR C. SOULE, San Francisco, Cal. Filed Nov. 30, 1914. Serial No. 874,939. (Cl. 20—42.)



1. A window sash mounting including a frame; a sash slidably pivoted in said frame; support arms pivoted to said frame; control arms pivoted to opposite sides of said sash and to said support arms intermediate the ends of the control arms; connecting links pivoted to the said control arms and to said frame.

2. A window sash mounting including a frame having grooves in the opposite sides thereof; strips in said grooves in the frame; a sash having pivots slidably engaging said strips; control arms having one end pivoted to opposite sides of said sash; links pivoted to said frame and said control arms; and support arms pivoted to said frame and to said control arms intermediate their ends.

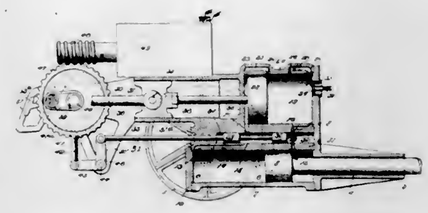
3. A window sash mounting including a window sash; grooved guide strips on opposite sides of said sash; resilient pivots engaging said sash and slidably engaging the grooves in said strips; support arms engaging pivots fixed adjacent to said strips; control arms pivoted intermediate their ends to said support arms, the upper ends of said control arms being pivoted to opposite sides of said sash; and connecting links pivoted to the lower ends of said control arms and engaging pivots fixed to the frame near said guide strips.

4. A window sash mounting including a frame having grooves in the opposite sides thereof; strips in said grooves; plates fixed on said strips and hingeably attached to said frame; a sash having pivots slidably engaging said strips; springs interposed between said strips and the bottoms of said grooves; control arms having one end pivoted to opposite sides of said sash; links pivoted to said frame and the other ends of said control arms; and support arms pivoted to said frame and to said control arms intermediate their ends.

5. A window sash mounting including a frame having grooves in the opposite sides thereof; strips in said grooves; plates fixed on said strips and hingeably attached to said frame, and having hooks thereon; a sash having pivots slidably engaging said strips; control arms pivoted to opposite sides of said sash, and pivotally connected to said frame; and support arms pivoted to said control arms intermediate their ends and to plates engaging said hooks on the hinge plates fixed to said strips.

[Claims 6 to 8 not printed in the Gazette.]

1,168,834. RECIPROCATING-TOOL MECHANISM. WALTER F. TROTTER, Charleston, W. Va., assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Sept. 20, 1907, Serial No. 393,835. Renewed June 17, 1915. Serial No. 34,739. (Cl. 125—14.)



1. In a reciprocating tool mechanism, the combination with the tool cylinder and the piston therein, of a compressor comprising a cylinder and a piston, ducts leading from said compressor cylinder to the front and rear ends, respectively, of the tool cylinder, and means controlling the passage of air through said ducts timed to subject the front side of the tool piston to a relatively low effective pressure throughout one stroke of the compressor piston and the rear side of the tool piston to a relatively high effective pressure during a part only of a succeeding stroke of the compressor piston.

2. In a reciprocating tool mechanism, the combination with the tool cylinder and the piston therein, of a compressor comprising a cylinder and a piston, ducts leading from said compressor cylinder to the front and rear ends, respectively, of the tool cylinder, and positively actuated means controlling the passage of air through said ducts timed to subject the front side of the tool piston to a relatively low effective pressure during one stroke of the compressor piston and the rear side of the said tool piston to a relatively high effective pressure during a part only of a succeeding stroke of the compressor piston.

3. In a reciprocating tool mechanism, the combination with the tool cylinder and the piston therein, of a compressor comprising a cylinder and a piston, ducts leading from said compressor cylinder to the front and rear ends, respectively, of the tool cylinder, and positively actuated means controlling the passage of air through said ducts to subject the front side of the tool piston to a relatively low effective pressure during one stroke of the compressor piston and the rear side of the tool piston to a relatively high effective pressure in a succeeding stroke of the compressor piston.

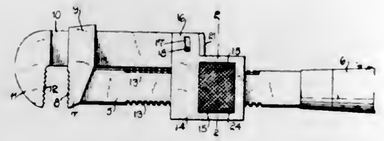
4. In a reciprocating tool mechanism, the combination with the tool cylinder and the tool piston therein, of an air compressor comprising a cylinder and a piston, ducts leading from said compressor cylinder to the front and rear ends, respectively, of the tool cylinder, one of the ducts being open to conduct air from the compressor cylinder to one end of the tool cylinder during an entire stroke of the compressor piston, means for closing said duct during the first part of the succeeding stroke of the compressor piston, and means for closing the other duct to prevent passage of air from the compressor cylinder to the other end of the tool cylinder during the first part of said succeeding stroke of the said compressor piston.

5. In a reciprocating tool mechanism, the combination with the tool cylinder and the piston therein, of a double acting compressor comprising a cylinder and piston, ducts leading from the respective chambers of said compressor cylinder to the front and rear ends, respectively, of the tool cylinder, means controlling the passage of air through said ducts to subject the front side of the tool piston to a relatively low effective pressure during one stroke of the compressor piston and the rear side of the said tool piston to a relatively high effective pressure in a succeeding stroke of the compressor piston, and means com-

prising a duct operative in at least one position of the compressor piston for placing the two chambers of the compressor cylinder in communication with each other when said chambers are in communication with the front and rear ends, respectively, of the tool cylinder.

[Claims 6 to 19 not printed in the Gazette.]

1,168,835. WRENCH. RICHARD UMLAH, Turkey, Ariz. Filed Oct. 30, 1915. Serial No. 58,879. (Cl. 81—100.)



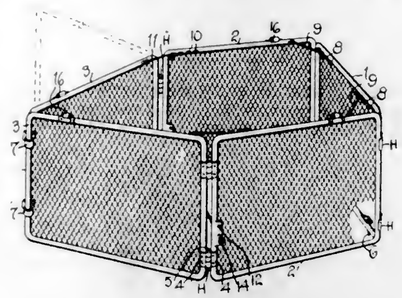
1. In a wrench, the combination with a shank provided with a fixed jaw having a laterally projecting guide sleeve, an adjustable jaw opposed to the fixed jaw and having a shank slidable in said sleeve, a yoke member longitudinally shiftable upon the main shank, means operatively connecting the inner end of the slidable shank to said yoke member for lateral shifting movement with respect thereto, a spring fixed at one end to the end of said adjustable shank and at its other end to the yoke member to yieldingly urge the adjustable shank toward the fixed shank, and means for locking the yoke member in its adjusted position upon the main shank.

2. In a wrench, the combination of a main shank, having a fixed jaw and a guide sleeve projecting laterally therefrom, an adjustable jaw having a shank slidable through said sleeve, a yoke member slidable upon the main shank, a slot and pin connection between the inner end of the adjustable shank and said yoke member permitting of lateral movement of the adjustable shank with respect to the main shank, a spring fixed at one end to said yoke member and extending longitudinally thereof, the other end of the spring being angularly extended and fixed to the end of the adjustable shank to normally urge said shank toward the main shank, and means for locking the yoke member in an adjusted position upon the main shank.

3. In a wrench, the combination of a main shank having a fixed jaw and a guide sleeve projecting laterally therefrom, an adjustable jaw having a shank slidable through said sleeve, a yoke member slidable upon the main shank, a slot and pin connection between the inner end of the adjustable shank, and said yoke member permitting of lateral movement of the adjustable shank with respect to the main shank, a spring fixed at one end to said yoke member and extending longitudinally thereof, the other end of the spring being angularly extended and fixed to the end of the adjustable shank to normally urge said shank toward the main shank, and a trust bearing plate secured to the end of the adjustable shank over the ends of said spring and slidably engaged upon the yoke member, and means for locking said yoke member in an adjusted position upon the main shank.

4. In a wrench, the combination of a main shank having a fixed jaw on one end and a guide sleeve projecting laterally therefrom, an adjustable jaw having a shank slidable through said sleeve, a yoke member slidable on the main shank and provided on one end with laterally projecting parallel arms, a pin and slot connection between the inner end of the adjustable shank and the arms of said yoke member permitting of lateral shifting movement of the adjustable shank with respect to the main shank, a leaf spring fixed at one end to the inner side of the yoke member and extending longitudinally thereof, the other end of said spring being angularly extended and fixed to the end of the adjustable shank, a thrust bearing plate also secured to the end of the adjustable shank over the end of said spring and having sliding bearing engagement upon the arms of the yoke member, and means for locking the yoke member in its adjusted position upon the main shank.

1,168,836. STOCK. ERNEST L. VETTE, Waterville, Kans. Filed Apr. 17, 1915. Serial No. 22,110. (Cl. 119—20.)



1. A stock comprising a plurality of sections hinged one to the other, and penetrating prongs pivotally engaged with one of the sections.

2. A stock comprising a plurality of sections hinged one to the other, and penetrating prongs pivotally engaged with the lower marginal portion of one of the intermediate sections.

1,168,837. METHOD OF PRODUCING ELECTRICAL OSCILLATIONS. EGBERT VON LEPEL, Berlin-Wilmersdorf, Germany. Filed Dec. 29, 1914. Serial No. 879,587. (Cl. 250—37.)



1. The method of producing electric oscillations of high frequency which comprises charging a condenser from a source of current, establishing a spark discharge across a suitable spark gap by periodically discharging the condenser over said spark gap, and extinguishing each spark after the first half oscillation or after the first train of oscillations of the discharge energy, feeding during the spark extinction the charging current solely to the condenser and maintaining said current at an approximately constant strength so that the combined effect of the spark extinction and substantially constant strength of the charging current will render the potential of the condenser, with any frequency of sparks, as much above the potential of the charging source at the moment of discharge as it is below after the discharge.

2. The method of producing electric oscillations of high frequency which comprises charging a condenser from a source of direct current and through suitable self inductances, establishing a spark discharge across a quenched spark gap by periodically discharging the condenser over said spark gap, and extinguishing each spark after the first half oscillation or after the first train of oscillations of the discharge energy, feeding the charging current during the spark extinction solely to the condenser and maintaining said current at an approximately constant strength by the self inductance in the supply circuit so that the combined effect of the spark extinction and substantially constant strength of the charging current will render the potential of the condenser, with any frequency of sparks, as much above the potential of the charging source at the moment of discharge as it is below after the discharge.

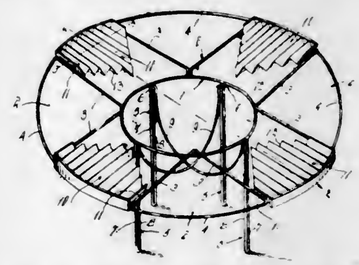
3. The method of producing electric oscillations of high frequency which comprises charging a condenser from a source of direct current which current is supplied to said condenser through inertia self induction coils, establishing a spark discharge across a quenched spark gap by periodically discharging the condenser over said spark gap, extinguishing each spark after the first half oscillation or after the first train of oscillations of the discharge energy, feeding the charging current during the spark extinction solely to the condenser and maintaining said current at an approximately constant strength so that the combined effect of the spark extinction and substantially constant strength of the charging current will render the potential of the condenser, with any frequency of sparks, as much above the potential of the charging source at the moment of discharge as it is below after the discharge.

4. The method of producing electric oscillations of high frequency which comprises charging a condenser from a source of direct current and establishing a spark discharge by periodically discharging said condenser through an oscillation circuit containing a blocking condenser and a spark gap, and extinguishing each spark after the first half oscillation or after the first train of oscillations of the discharge energy, the current charging said condenser being maintained at substantially constant strength during the period between successive spark discharges.

5. The method of producing electric oscillations of high frequency which comprises charging a plurality of condensers in parallel, from a direct current supply and through suitable self-induction coils, establishing spark discharges across suitable spark gaps by periodically discharging said condensers in series over said spark gaps, extinguishing each spark after the first half oscillation or after the first train of oscillations of the discharge energy, feeding the charging current during the spark extinction solely to the charging condensers and maintaining said current at an approximately constant strength by said self-induction coils during the period between successive spark discharges, so that by the combined effect of the spark extinction and the substantially constant strength of the charging current, the potential of the charging condensers, with any frequency of sparks, will be as much above the potential of the charging source at the moment of discharge as it is below after the discharge.

[Claims 6 to 10 not printed in the Gazette.]

1,168,838. FRUIT-CUTTER. JULIA WEBER, New York, N. Y. Filed May 4, 1914, Serial No. 836,343. Renewed June 23, 1915. Serial No. 35,941. (Cl. 146—7.)

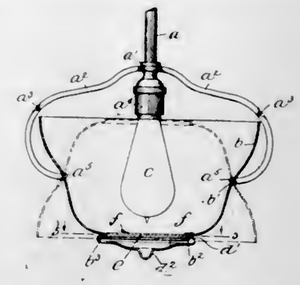


1. In a fruit cutter comprising a ring for encircling the fruit, frames supported by the ring, and cutting blades slidably supported by the frames for movement toward each other for cutting the fruit.

2. A fruit cutter comprising a ring, legs for supporting the ring, downwardly curved bars supported by the legs and having their centers intersecting for supporting the fruit when inclosed by the ring, frames supported by the ring, each frame having its side bar disposed in parallel relation with the side bar of the adjacent frame, cutting blades having guides connected to their sides for slidably engaging said bars, as and for the purpose set forth.

1,168,839. LIGHTING-FIXTURE. ERNEST C. WHITE, Evanston, Ill., assignor of one-half to Charles Amiguet, New York, N. Y. Filed Mar. 31, 1915. Serial No. 18,221. (Cl. 240—92.)

1. In combination with a source of light, a lighting fixture having an opaque reflector, means to support the reflector in inverted position to throw rays of light upward, said reflector having an opening formed in its bottom to give a useful element of direct downward lighting and a flat translucent plate mounted in the opening.



2. In combination with a source of light, a lighting fixture having an opaque reflector, means to support the reflector in inverted position to throw rays of light upward, said reflector having an opening formed in its bottom to give a useful element of direct downward lighting, a flat translucent plate mounted in the opening, and removable opaque devices normally covering the opening.

3. In combination with a fixed source of light, an invertible reflector and relatively fixed supporting arms to engage the reflector in inverted position or, at the same points of engagement, in depending position to support the reflector in inverted position in desired focal relation to the light or in depending position in substantially the same focal relation, respectively.

4. In combination with a fixed source of light, an invertible reflector, relatively fixed supporting arms for the reflector and means to engage the supporting arms with the reflector in inverted position to support the reflector in inverted position in desired focal relation to the light, said arms being engageable with the reflector at the same points of engagement in depending position to support the reflector in depending position in substantially the same focal relation to the light and said reflector being invertible without disturbing the fixed source of light or the supporting arms.

5. In combination with a fixed source of light, an invertible reflector provided with an opening in its bottom, relatively fixed supporting arms to engage the reflector in inverted position, or at the same points of engagement in depending position, to support the reflector in inverted position in desired focal relation to the light or in depending position substantially in the same focal relation, respectively, an opaque cap to close the opening and cut off the element of direct lighting when the reflector is in inverted position, and means to support the cap detachably on the reflector.

[Claims 6 to 8 not printed in the Gazette.]

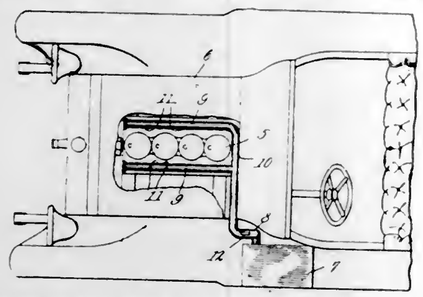
1,168,840. AIR-HEATER. NEIL O. WILDER, Grand Rapids, Mich. Filed Sept. 2, 1914. Serial No. 859,791. (Cl. 123—170.)

1. The combination with a multiple cylinder internal combustion engine; of an air heater having an outlet provided with horizontal branches between which the engine cylinders are located, said branches having discharge openings facing the cylinders.

2. The combination with a multiple cylinder internal combustion engine; of a pair of hot air discharge pipes located horizontally alongside the engine cylinders on opposite sides thereof and having outlets directed toward the cylinder walls, and a hot air heater to which said pipes are connected.

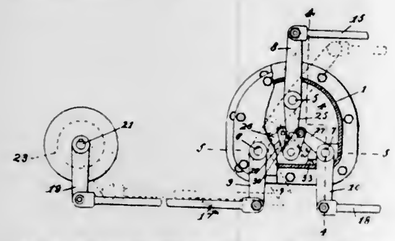
3. The combination with a multiple cylinder internal combustion engine; of an air heater having an outlet provided with horizontal branches between which the engine cylinders are located, said branches having discharge openings facing the cylinders, and a shut off device in said outlet.

4. The combination with a multiple cylinder internal combustion engine; of an air heater remote from the engine and having an outlet provided with horizontal



branches between which the engine cylinders are located, said branches having discharge openings facing the cylinders.

1,168,841. ENGINE-VALVE-OPERATING MECHANISM. EDWIN W. ALBERS, Dover, Ohio. Filed Mar. 18, 1915. Serial No. 15,279. (Cl. 121—98.)



1. Valve operating mechanism for engines comprising a lever, means for actuating said lever in timed relation to the piston movement, two cranks on a shaft mounted in suitable bearings, connecting means from one of said cranks to the lever, a link connected with the other of said two cranks, rocker arms on shafts mounted in bearings parallel to the first named shaft, links connecting said rocker arms with the first named link, secondary cranks attached to the last named shafts, and connecting means from the last named cranks to cranks on the valves.

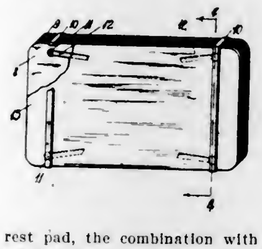
2. In valve operating mechanism for engines the combination of a lever; means for actuating said lever in timed relation to the piston movement; a housing adapted to be attached to the engine; a series of three parallel crank shafts mounted in said housing; cranks on each of said shafts; a three link toggle connection between said cranks; a second crank on one of said shafts; connecting means from said second crank to the lever; secondary cranks on each of the other shafts; and connecting means from the last named cranks to cranks attached to the valves.

3. In valve operating mechanism for engines the combination of the valves; a casing; a series of levers mounted in said casing; a three link toggle connection between said levers; levers on the valves; connecting means from the valve levers to levers mounted in the casing; a lever mounted between the casing and crank-shaft of the engine; means for actuating the last named lever in timed relation to the piston movement; and connecting means from the last named lever to a lever mounted in the casing, whereby the valves are alternately opened and closed in timed relation to the operation of the piston.

4. In valve operating mechanism for engines the combination of the piston; the crank-shaft; an eccentric rod actuated by an eccentric on said crank-shaft; a lever to which said eccentric rod is connected; a casing adapted to be attached to the engine; a series of levers mounted in said casing; a three link toggle connection between said levers; connecting means from one of the levers mounted in the casing to the eccentric-rod lever; valves connected with the cylinder; levers on said valves; and connecting means from the valve levers to levers mounted in the casing, whereby the valves are alternately opened and closed in timed relation to the operation of the piston.

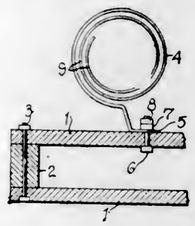
5. In valve operating mechanism for engines the combination of a lever; means for actuating said lever in timed relation to the piston movement; a casing adapted to be attached to the engine; a series of shafts mounted in said casing; levers on each of said shafts within the casing; links connected with each of said levers and having a universal connection with each other; stop members for limiting the throw of the levers; levers on said shafts outside the casing; connecting means from the first named lever to one of the external casing levers; the cylinder valves; levers attached to said valves; and connecting means from said levers to external casing levers.

1,168,842. PAD FOR HEAD-RESTS. BELA ALBRECHT, New York, N. Y. Filed Jan. 19, 1915. Serial No. 3,190. (Cl. 155—10.)



In a head rest pad, the combination with a stiff rectangular plate and a cover sheet therefor, of a plurality of sheets superposed on said plate, and elastic tapes passing over the lateral edges of said sheets and plate, the ends of said tapes being passed through perforations in the corners of said sheets and secured to said plate below said cover sheet.

1,168,843. PERCUSSION MUSICAL INSTRUMENT. JEFF BAKER, Wardell, Ark. Filed June 6, 1914. Serial No. 843,473. (Cl. 84—31.)



In combination, a sound chest comprising spaced normally imperforate members, elongated blocks interposed between the members adjacent the longitudinal margins thereof, the opposite ends of the chest being open, an adhesive for connecting the blocks and members, bolts passing through the members and the blocks to afford an additional means for maintaining the same in assembled relation, and a sonorous member secured directly to one of the spaced members of the chest.

1,168,844. WRENCH. JOHN J. BARTENSTEIN, Cleveland, Ohio, assignor to The Vichek Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 31, 1913. Serial No. 771,127. (Cl. 81—130.)

1. A wrench comprising a handle member terminating in a jaw and having rigidly secured to its shank a strap enfolding a portion of its rearward face, an adjustable jaw member fitted to slide lengthwise between said handle member and strap and to rock in the wrench plane with its fulcrum on said strap, locking means normally coöperating to engage said members with each other, and means whereby said adjustable jaw member may be released from said locking means by rocking it by hand upon its fulcrum on said strap.



2. A wrench comprising a handle member terminating in a jaw and having rigidly secured to its shank a strap enfolding a portion of its rearward face, an adjustable jaw member adapted to slide lengthwise between said handle member and strap and to rock with its fulcrum on the forward edge of said strap, tongue and groove means coactive between said handle and adjustable jaw members to prevent lateral displacement of said members, locking means normally engageable by spring pressure between said members, and means whereby said adjustable jaw member may be released from said locking means by rocking it by hand upon its fulcrum on said strap.

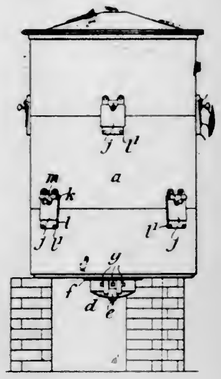
3. A wrench comprising a handle member terminating in a jaw and having rigidly secured to its shank a strap enfolding a portion of its rearward face, an adjustable jaw member fitted to slide lengthwise between said handle member and strap and to rock in the wrench plane with its fulcrum on the forward edge of said strap, one or more teeth projecting from the handle member structure toward the adjustable jaw member and teeth adapted to engage therewith upon the shank of the said adjustable jaw member, and a spring device operating to hold said adjustable jaw member normally against the said strap with the said teeth interlocking, said spring device being capable of compression by hand sufficient to release said teeth from engagement with each other.

4. In a spanner wrench, a handle member terminating in an integrant jaw disposed at an acute angle to the main axis of the wrench, said handle member having rigidly secured to its shank a strap enfolding a portion of its rearward edge, an adjustable jaw member comprising a straight shank fitted to slide lengthwise and to rock between said handle member and its strap, said jaw member having its forward end bent inwardly toward the handle member and terminating in a lug projecting substantially at right angles to said bent end and normally parallel to the face of said handle member jaw, spring operated locking means normally engageable between said members, and means whereby said adjustable jaw member may be released from said locking means by rocking it by hand upon its fulcrum on the forward end of said strap.

1,168,845. CHARCOAL-KILN. ALFRED ROWE BELLAMY, Grantham, England. Filed Feb. 2, 1915. Serial No. 5,761. (Cl. 202—10.)

1. A charcoal kiln comprising a body, and a conical bottom provided with a discharge opening, a door controlling the said discharge opening, a grate located above the door and beneath the discharge opening and means for regulating the inlet of air independently of the door.

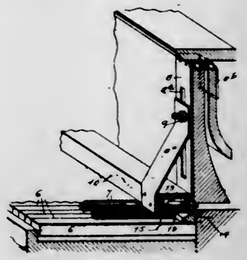
2. A charcoal kiln comprising a body, and a conical bottom provided with a discharge opening, a door controlling the said discharge opening, a grate located above the door and beneath the discharge opening and means for regulating the inlet of air through the grate independently of the door.



3. A charcoal kiln comprising a body, a conical bottom to the said body provided with a discharge opening, the said bottom having a grate located beneath said discharge opening, a discharge door located below the grate and means whereby the admission of air through the grate can be regulated independently of the door.

4. In charcoal kilns of the kind described, the combination with the kiln body, of a conical bottom therefor, a grate having a plurality of fire bars slidable in holes in a frame below the said grate, and a drop-down door hinged to said frame below said holes.

1,168,846. ELECTRIC-BELL ATTACHMENT FOR PIANOS. ROBERT A. BESSINGER, Wellington, Ohio. Filed July 16, 1915. Serial No. 40,177. (Cl. 84—81.)

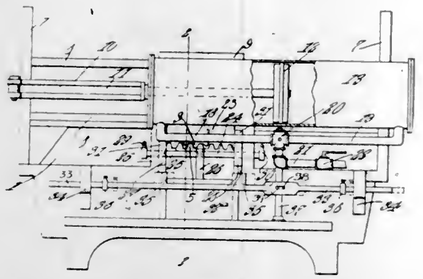


1. An electric bell attachment for pianos, comprising, in combination, a casing, supporting hangers therefor provided with means at their upper ends to detachably engage the fall board of a piano and support the casing above the keyboard, contact devices in the casing, including pins depending from the casing and resting on the keys to lift and drop therewith, and bells in circuit with said devices.

2. An electric bell attachment for pianos, comprising, in combination, a casing adapted to extend across a keyboard, adjustable hangers for the same, having hooks at their upper ends engageable with the fall board of a piano, contact devices supported by said casing and including pins resting on the keys and operated thereby, and bells in circuit with said devices.

3. An electric bell attachment for pianos, comprising in combination a casing extending across the keyboard, headed pins depending through the casing and resting on the keys, contacts supported in the casing under the heads of the pins and adapted to be bridged thereby when the pins drop, and bells in circuit with said contacts.

1,168,847. DUMPING-CAR. ALEX BODNER, Duquesne, Pa. Filed Mar. 26, 1915. Serial No. 17,269. (Cl. 105—190.)



1. In a dumping car, a tilting member, a reciprocatory member operatively connected thereto and movable in either direction for tilting the tilting member in one direction or the other, and a pair of latches, the reciprocatory member being normally disposed between said latches so that it cannot move in either direction, the latches being independent so that either one can be released from said reciprocatory member to allow said member to move in one direction.

2. In a dumping car, a tiltable member, a reciprocatory cross head operatively connected thereto and movable in either direction from a neutral position to tilt said member in one direction or the other, and a pair of oscillatory latches, said cross head being normally disposed between said latches to prevent the movement of the cross head in either direction, the latches being adapted to be swung independently away from said cross head, whereby when one latch is released, the cross head can move in one direction, and when the cross head is returned to neutral position it will strike the other latch.

3. In a dumping car, a tilting member, a cross head operatively connected thereto for tilting the same, a pair of latches operable independently, said cross head being normally disposed between said latches to be held against movement in either direction, and detent means coöperable with the latches and operable for holding one or both of the latches in operative position.

4. In a dumping car, a tilting member, a cross head operatively connected thereto for tilting the same, a pair of devices one of which is arranged to prevent the movement of the cross head in one direction and the other of which is arranged to prevent the movement of the cross head in the other direction, and means whereby one of said devices is always held in active position and whereby both of said devices can be held in active position.

5. In a device of the character described, a tilting member, a sliding member operatively connected thereto, a cylinder, a piston working within the cylinder and connected to said sliding member, means for allowing pressure fluid to be admitted into and discharged from the opposite ends of the cylinder, a pair of devices coöperable with the sliding member, one of said devices being arranged to prevent the said member from moving in one direction while the other device is arranged to prevent the said member from moving in the other direction, and means coöperable with said devices for always holding one of them in active position and arranged to hold both of said devices in active position, the last mentioned means being operatively connected to the aforesaid means, whereby when one of said devices is released, the first mentioned means will be operated to permit the pressure fluid to flow into the respective end of the cylinder.

[Claims 6 to 10 not printed in the Gazette.]

1,168,848. ANKLE-BRACE FOR SKATES. FRANK E. BROWN, Webster City, Iowa. Filed July 9, 1913. Serial No. 778,143. (Cl. 46—53.)

1. An ankle brace for skaters comprising a supporting bar having means pivoted near the upper end thereof for attachment to the leg of the wearer, a base member adapted to be clamped at the rear end of the skate, said base member being provided with an upwardly and forwardly extended arm which pivotally supports said bar at the side of the leg whereby the bar may be moved longitudinally of the skate, said pivotal connection between said arm and the supporting bar being at a point to one side of the foot of the wearer and above the heel plate, and means to rigidly hold said base member against movement when the skate is clamped to the foot of the wearer.



2. An ankle brace for skaters comprising a heel engaging member secured to the body of the skate and provided with an outwardly, forwardly and upwardly extended arm terminating above the horizontal plane of the heel plate of a skate and to one side of the heel of the wearer, a supporting bar pivoted at its lower end to said arm and near the upper extremity of said heel plate, means for encircling the leg of the skater pivoted to the upper end of said bar, and means to rigidly hold the heel engaging member against movement when the skate is clamped to the foot of the wearer.

3. An ankle brace for skaters comprising a supporting bar, means pivoted near the upper extremity of said bar for holding the bar substantially parallel with and to one side of the leg of the skater, and a heel engaging member pivotally mounted near the lower extremity of the bar, said heel member being clamped between a clamping bar and its support on a skate, said heel member comprising a base member and an outwardly, forwardly and upwardly extended arm.

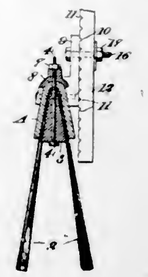
4. An ankle brace for skaters comprising a supporting bar, means pivoted near the upper extremity of said bar for holding the bar substantially parallel with the leg of the skater and at the side thereof, and a heel engaging member near the lower extremity of the bar and slidably mounted at the heel of a skate, means to lock said heel engaging member, said heel engaging member comprising a substantially straight base provided with an aperture for skate clamping means, a depending lug, and a forwardly and upwardly extended arm connected to said base to serve as a pivot to said supporting bar at the side of the heel of the skater.

5. An ankle brace for skaters comprising a supporting bar, means pivoted near the upper extremity of said bar, for holding the bar substantially parallel with the leg of the skater, and a heel engaging member pivotally mounted near the lower extremity of the bar and slidably mounted at the heel of a skate, means to lock said heel engaging member, said heel member comprising a substantially straight base, a depending lug to be engaged by clamping means for a skate, a channeled plate retaining member extending from said lug and adapted to be clamped by means on the skate, and a curved forwardly and upwardly extended arm integral with the heel member and provided with a bearing surface near its free end for engaging said supporting bar at a point to support the bar at the side of the foot and leg of the wearer.

[Claims 6 to 8 not printed in the Gazette.]

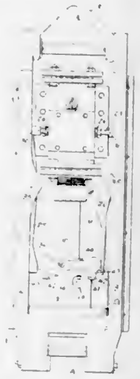
1,168,849. ROTARY BROOM. CHARLES H. BUTLER, Oakland, Cal. Filed May 5, 1913. Serial No. 765,491. (Cl. 15—37.)

A rotary broom comprising flange members, radial arms secured to the flange members, each of the arms having notches in one of the side faces thereof, a relatively long bracket member secured to each arm, said bracket members having projections engaging within the notches of the arms, each of said bracket members including a right angle portion having its under side cut out to form a seat, a curved back fitted in the cut out portions of the



brackets, broom bristles supported by the back, saddle members, means extending longitudinally of the bristles and through the saddle members for holding the broom bristles to the back, means adapted to hold the back in engagement with the cut out portions of the brackets, and independent means for securing the brackets to the radial arms.

1,168,850. POWER-HAMMER. COLIN CAMPBELL, Newark, N. J. Filed June 13, 1913. Serial No. 773,389. (Cl. 121—19.)



1. In a power hammer, a body providing a slideway, a ram adapted to reciprocate in said slideway, a cylinder mounted on said body, a piston in said cylinder connected to said ram, a slide valve for said cylinder arranged transversely of the slideway, and levers arranged longitudinally of the slideway at opposite sides thereof and fulcrumed intermediate said valve and ram, said levers adapted to be engaged by the ram at one end and to engage the slide-valve at the other end.

2. In a power hammer, a body providing a slideway, a ram adapted to reciprocate in said slideway, a cylinder mounted on said body, a piston in said cylinder connected to said ram, a slide valve for said cylinder arranged transversely of the slideway, and levers arranged longitudinally of the slideway at opposite sides thereof and fulcrumed between the ram and said slide valve, said levers being adapted at their upper ends to operate said slide valve and having at their lower ends cam surfaces adapted to be engaged by the ram to swing said levers.

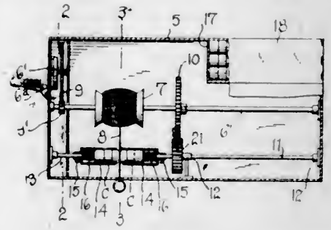
3. In a power hammer, a body providing a slideway, a ram adapted to reciprocate in said slideway, a cylinder mounted on said body, a piston in said cylinder connected to said ram, a slide valve for said cylinder arranged transversely of the slideway, levers arranged longitudinally of the slideway at opposite sides thereof and fulcrumed between the ram and slide valve, said levers engaging at their upper ends the slide valve rod and adapted at their lower ends to be engaged by the ram, and springs forcing the upper ends of said levers against said slide valve rod.

4. In a power hammer, a body providing an inner slideway, a ram adapted to reciprocate on said slideway, a cylinder mounted in said body, a piston in said cylinder connected to said arm, a slide valve for said cylinder, a member movably mounted upon said body within the same and adapted to be engaged by the ram to move it in one direction, means for moving said member in the other direction, and means for transmitting movement from said member to the slide valve.

5. In a power hammer, a body providing a slideway, a ram adapted to reciprocate in said slideway and be guided thereby, a stationary cylinder fixed in said body, a piston adapted to reciprocate in said cylinder and be guided thereby, a rod connecting said piston to said ram, a slide valve for said cylinder, and a member mounted upon said body intermediate said slide valve and ram adapted at one end to operate said slide valve and at its other end to be engaged by said ram, said ram adapted to engage said member direct by its longitudinal movement and at a certain point thereof impart movement to said member.

[Claims 6 to 15 not printed in the Gazette.]

1,168,851. CHALK-LINE MARKER. GEORGE P. CARTER, Fairfield, N. C. Filed Mar. 6, 1915. Serial No. 12,617. (Cl. 33—87.)



1. A chalk line marker including a spring held drum, a line wound upon said drum, spaced axially alined shafts, cylinders fixed on said shafts, spring pressed chalk disks in said cylinders, means for guiding said line in contact with the chalk disks, and gearing connecting the drum shaft to one of said latter shafts, whereby the chalk containing cylinders are positively rotated as the line is unwound from the drum.

2. A chalk marker including a casing, a shaft mounted in said casing, a drum fixed upon said line and a line wound upon said drum, a second shaft in the casing, a pinion fixed upon the first named shaft, a relatively large gear on the second shaft meshing with said pinion, a spiral spring fixed to the case at one end and connected to the second shaft at its other end to rotate the same in one direction, a pair of spaced axially alined shafts mounted in said casing, cylinders removably secured upon the opposed ends of said shaft, spring pressed chalk disks arranged in each of the cylinders, said line being adapted for passing between the outermost chalk disks, and gearing connecting one of the latter shafts with the drum shaft whereby the chalk cylinders are rotated as the line is unwound from the drum, said spiral spring being simultaneously placed under tension.

1,168,852. GRATE FOR GAS-RANGES. ROBERT B. CAVERLY, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed July 20, 1915. Serial No. 40,816. (Cl. 126—214.)

1. The combination with a top frame of a range adapted to be given a flat enamel finish and having an opening

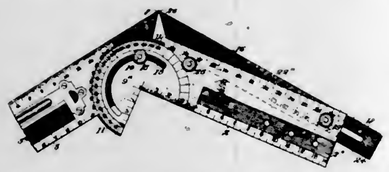
therethrough, of a grate mounted across the opening, comprising a single sheet of pressed metal having openings therethrough, downturned edge flanges resting on said top frame adjacent the opening therein to form the support for the grate, and having baffle plates secured to its under surface, said baffle plates having vertical flanges extending downwardly within the top frame opening and parallel to and adjacent to edges thereof, but spaced from said edges and from said downturned edge flanges, substantially as set forth.



2. The combination with a top frame of a range having an opening therethrough, of a pair of grates mounted across the opening side by side with abutting inner edges, said grates having openings therethrough, downturned outside edge flanges resting on said top frame to form the supports for the grates and having baffle plates extending downwardly from their under surfaces parallel to but spaced from the edge flanges on the three outer sides of each, to form a complete baffle around the two grates, said baffle plates extending into the top frame opening adjacent to but spaced from the edges thereof, substantially as set forth.

3. A top grate for gas ranges formed of a sheet of metal having opening therethrough and pressed to shape with its edges turned down to form supports for the grate, adapted to rest on a top frame of a range adjacent to the opening therein, and flanged baffle plates secured to the under side of the grate parallel to three edges thereof, said baffle plates having downwardly extending flanges joining at the corners, spaced sufficiently from the downturned edges to permit the same to extend into the opening in the top frame adjacent to the corresponding edges thereof, substantially as set forth.

1,168,853. MEASURING INSTRUMENT. THEODORE CHABRE, Alameda, Cal. Filed Jan. 5, 1915. Serial No. 618. (Cl. 33—118.)



1. In a measuring instrument, an arm having an arc-shaped pocket extending through a side of the arm and also having an arc-shaped rabbeted groove one of the ends of which extends through said side of the arm, a raised arc-shaped bearing member disposed in part between the groove and pocket, a second arm having an arc-shaped projection engaged in said pocket and having a groove receiving said bearing member, and a flange on the projection received in said groove.

2. In a measuring instrument, an arm having an arc-shaped rabbeted groove the top of which is open and having a pocket spaced from the groove, and a second arm having an arc-shaped projection the outer end of which projection is insertible in said groove from the outer end of the latter and having a part received in the pocket.

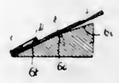
3. In a measuring instrument, a pair of arms and an interlocking arc-shaped turret having spaced inner and outer bearings for pivotally connecting the arms and allowing of the disconnection of the arms by relative turning movement of the arms.

4. In a measuring instrument, a pair of arms one of which has a pocket, a bearing member and a rabbeted groove all of the form of an arc, and a projection, with a groove and a flange on the other arm to engage with the respective parts on the first arm.

5. In a measuring instrument, an arm having an arc-shaped rabbeted groove the top of which is open, an arc-shaped bearing member adjacent the groove, a second arm having a flange received in the groove and having a cut-out part to receive said bearing.

[Claim 6 not printed in the Gazette.]

1,168,854. GAME APPARATUS. JEROME WARREN CHASE, Portland, Me. Filed Apr. 7, 1915. Serial No. 19,651. (Cl. 46—59.)

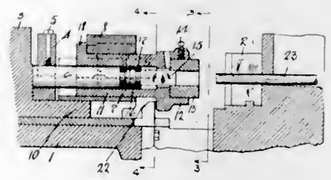


1. A catapult for projecting rings consisting of a wedge-shaped base block, the inclined face of which has a transverse ridge or angle, a ring projecting member pivoted on said ring or angle and adapted to tilt thereon.

2. A catapult for projecting rings consisting of a wedge-shaped base block, the inclined face of which has a transverse ridge or angle, a ring projecting member having a transverse groove in its upper surface and a staple fitting in said groove and extending into said block at each side of the member for pivoting the same on the ridge or angle.

3. A catapult for projecting rings consisting of a wedge-shaped base block, the inclined face of which has a transverse ridge or angle, a ring projecting member pivoted on said ridge or angle and having at its lower end a projecting flange for holding a ring in place.

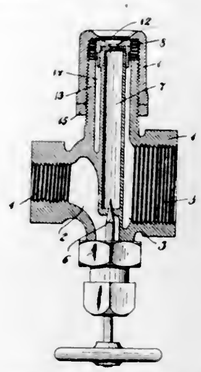
1,168,855. MACHINE FOR MAKING BOLTS AND THE LIKE. JOHN R. BLAKESLEE, Cleveland, Ohio, assignor to The Ajax Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 25, 1911. Serial No. 651,016. (Cl. 10—26.)



1. In mechanism of the class described, the combination with dies for gripping the stock; of a reciprocable slide; a forward extension fixed to said slide; a housing fixed to said slide; a reciprocable sleeve interiorly bearing on said extension and exteriorly bearing in said housing, said sleeve being provided with a projection adapted, in the forward position of the sleve, to engage said housing; a heading die removably secured to the forward end of said sleeve and having a bore adapted to inclose the stock and of the cross-sectional form desired; an up-setting tool removably secured to the forward end of said extension and reciprocably fitted in the bore of said heading die; and a relatively fixed projection adapted to engage said sleeve to limit its retraction.

2. In mechanism of the class described, the combination with dies for gripping the stock; of a reciprocable slide; a heading die reciprocably mounted on said slide and adapted to abut against said gripping dies, said heading die having a bore adapted to inclose the stock and of the cross-sectional form desired; an upsetting tool fixedly secured to said slide and reciprocably fitted in such bore; resilient means tending to advance said heading die; and means adapted during retraction of the slide, to limit retraction of the heading die and permit further retraction of the slide.

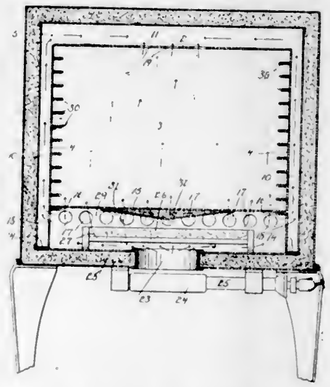
1,168,856. OIL-BURNER. ARTHUR HAROLD WYLD CLEAVE, Ottawa, Ontario, Canada. Filed Apr. 21, 1914. Serial No. 833,453. (Cl. 158—76.)



1. In an oil burner, the combination of a valve casing having an outwardly-extending threaded portion, a cap threaded on said extending portion, a lock nut securing said cap on said portion, a cylindrical extending portion within the bore of said extending portion, a needle valve actuating at one end of said cylindrical portion, a spraying disk having a plurality of angularly set ducts merging into a central orifice on the outer surface thereof, and a cap nut securing said spraying disk to said cylindrical portion.

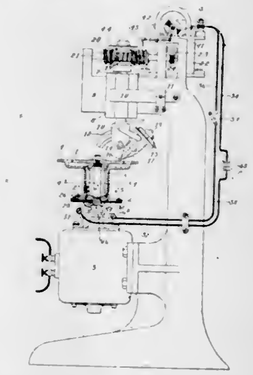
2. In an oil burner, the combination of a valve casing having an outwardly-extending threaded portion, a cap threaded on said extending portion, a cylindrical portion within the bore of said extending portion, a valve controlling the passage of fluid through said cylindrical portion, and a spraying disk at the discharge end of the cylindrical portion, said disk having a plurality of angularly set ducts merging into a central orifice on the outer surface of the disk.

1,168,857. HEAT-DISTRIBUTER FOR COOKING-COMPARTMENTS. HAROLD V. COES, New Haven, Conn., assignor to The Sentinel Mfg. Co., New Haven, Conn., a Corporation. Filed Apr. 12, 1915. Serial No. 20,847. (Cl. 126—39.)



In a cooking apparatus for conjoint fire and fireless cooking, the combination with an insulated cooking compartment having an insulated front door, an egress draft-passage in its upper portion, and a burner-opening in its lower portion, of a closure for the said egress draft-passage, a burner co-acting with the said burner-opening, an open-front removable heat-distributer smaller in size than the said compartment in which it is positioned to form air-spaces between its exterior surfaces and the interior surfaces of the said compartment, a baffle-plate mounted in the lower end of the said heat-distributer for deflecting the heated air into the said air-spaces from which it reaches the said egress draft-passage, an equalizer centrally located upon the lower face of the said baffle-plate, and a heat-conserver adapted to be interposed between the said baffle plate and the bottom of the said compartment and arranged over the burner-opening therein.

1,168,858. GEM-POLISHING. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Nov. 25, 1912. Serial No. 733,419. (Cl. 51—11.)



1. A machine for locating the grain of a diamond comprising a friction surface, means for holding a diamond in contact with such surface, means for producing relative traveling movement between the friction surface and diamond in the plane of the friction surface at its point of contact with the diamond, and means for taking cognizance of differences in physical effects produced in the different rotative positions of the diamond when rotated about an axis perpendicular to said friction surface.

2. An arrangement of the class described having in combination a relatively movable friction surface, means for rotating the facet of a gem upon said surface, and indicating mechanism immediately responsive to differences in the physical effects produced as the facet is rotated, substantially for the purpose specified.

3. A machine for locating the grain of a diamond comprising a friction surface, means for holding a diamond in contact with such surface, means for producing relative traveling movement between the friction surface and diamond in the plane of the friction surface at its point of contact with the diamond, means for producing relative rotation between the diamond and friction surface about an axis perpendicular to the friction surface at the point of contact of the diamond therewith, and means for measuring the frictional resistance produced between the diamond and the friction surface by the traveling movement while the rotary movement is also taking place.

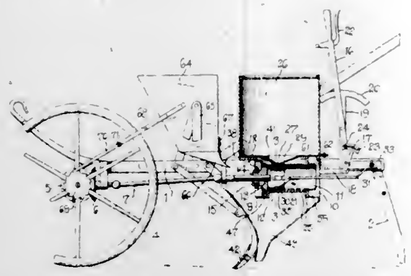
4. A machine for locating the grain of a diamond, comprising a rotative friction member provided with a friction surface, means for holding the diamond in frictional contact with the friction surface at an eccentric point on the friction member, means for rotating the friction member, means for rotating the diamond on an axis perpendicular to the friction surface at the point of contact of the diamond therewith, and means for indicating the torque required to rotate the friction member in the different rotative positions of the diamond relative to the friction member.

5. In an apparatus of the class described, means for holding a diamond, a suitable surface in engagement therewith, means for moving said surface relatively to the dia-

mond, and means for taking cognizance of differences in physical effect produced with the diamond in different rotative positions about an axis perpendicular to said surface.

[Claims 6 to 10 not printed in the Gazette.]

1,168,859. SEED-PLANTER. JOHN T. COMPTON, Lineville, Ala. Filed Nov. 9, 1914. Serial No. 871,131. (Cl. 111—33.)



1. In a planting mechanism, a rotatable cylindrical seed dropper having a circumferentially extending series of seed pockets, a casing inclosing the dropper and having a receiving opening and a discharge opening with which said pockets are adapted to register, an annular seed dropper carried upon one end of the cylindrical dropper and having a circumferential series of pockets, a container, and means whereby seed may be directed from the container either to the first named seed pockets or the second named seed pockets.

2. In a planting machine, a driving shaft, a cylindrical member mounted upon the driving shaft for rotation therewith, an annular seed dropping member mounted upon one end of the cylinder and having a circumferential series of pockets, a gear wheel mounted upon the shaft, a container having its bottom cut away above the gear wheel and having an opening disposed over the annular seed dropping member, and a rotatable agitator detachably mounted within the container and having gear teeth meshing with the gear teeth on said gear wheel.

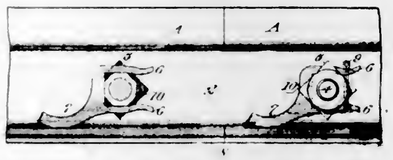
3. In a planting machine, a rotatable shaft, a cylinder mounted upon the shaft for rotation therewith, a gear wheel formed at one end of the cylinder and through which the shaft passes, an annular seed dropper mounted upon the other end of the cylindrical member, a container disposed over the cylindrical member and having an opening through which the gear wheel projects, and an opening registering with the seed dropper and an agitator detachably mounted within the container and meshing with said gear wheel.

4. In a planting machine, a rotatable cylindrical seed dropper having a plurality of circumferential series of pockets, a shaft upon which the seed dropper is mounted for independent longitudinal movement but unitary rotation, an annular seed dropper detachably mounted upon one end of the cylindrical seed dropper and having a circumferential series of pockets, a container mounted over the cylindrical seed dropper and extending over the annular seed dropper, said container having an opening above the cylindrical seed dropper and an opening above the annular seed dropper, means for closing said last named opening, means adapted to be disposed within the container for directing seed to one of said series of openings, and an agitator disposed within the container for rotation in a horizontal plane, said agitator being adapted to be operatively engaged by and rotated with said shaft, said last named means and agitator being interchangeable, and means for shifting the cylindrical seed container longitudinally along the shaft to bring any one of the desired series of openings in operative position with relation to the first-named seed directing means.

5. In a planting mechanism, a supporting frame including a cylindrical casing formed with diametrically disposed upper and lower receiving and discharge openings, one end of the casing being formed with an annular flange, a container for which the casing forms a bottom, that portion of the casing forming the bottom of the container being cut away at the middle of the container and adjacent the margin thereof, a driving shaft extending into the cylindrical portion of the casing, a rotatable cylindrical seed dropper and carrier mounted within the cylindrical casing and having a plurality of series of seed pockets, the seed dropper being longitudinally shiftable upon the casing to thereby bring any one of said series of pockets into alinement with the receiving and discharge openings of said casing, a gear wheel mounted upon the cylindrical seed dropper and normally disposed beneath the central opening in the bottom of the container, an annular seed dropper detachably mounted upon the end of the rotatable seed dropper and when in place bearing against the flange of the casing, said second-named seed dropper being beneath the opening on the margin of the container, means for closing this marginal opening, a false bottom adapted to be disposed within the container and formed to direct the seed from the container to the receiving opening of the casing, and an agitator adapted to be disposed within the container and interchanged for the false bottom and adapted to be engaged by the gear wheel.

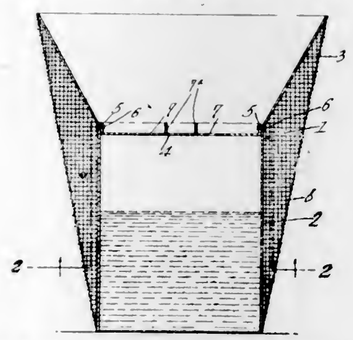
[Claims 6 and 7 not printed in the Gazette.]

1,168,860. NUT-LOCK. JOHN A. COROTTO, San Jose, and ADOLPH A. ZOLEZZI, Sunnyvale, Cal. Filed May 5, 1915. Serial No. 25,964. (Cl. 151—63.)



In a nut lock in combination with a nut having opposed parallel flat parts formed independent of its wrench engaging faces, a locking device composed of a pair of spaced parallel spring arms having free outer ends adapted to be sprung by engagement with said parallel flat parts to receive the latter in the space between said arms, said arms being connected at their rear ends, and a tang secured to the connection between the rear ends of the arms and having a foot portion disposed considerably beyond and to the rear of said connection and below the plane of the lower arm and adapted to rest against an extraneous stationary part, the lower of said arms being disposed in spaced relation to the extraneous stationary part.

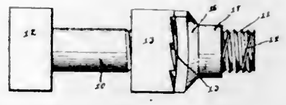
1,168,861. TRAP. MARTIN E. CURRENT, Queen City, Mo. Filed July 8, 1915. Serial No. 38,727. (Cl. 43—24.)



In a trap, a funnel-shaped receptacle having a cylindrical body and a flared rim, a trap door disposed within

the upper portion of the body immediately below the rim and having diametrically opposite upturned ears pivoted to the body, and a frusto-conical reticulated ladder surrounding the receptacle and having its larger end attached to the edge of said rim and its smaller end attached to the lower end of said body.

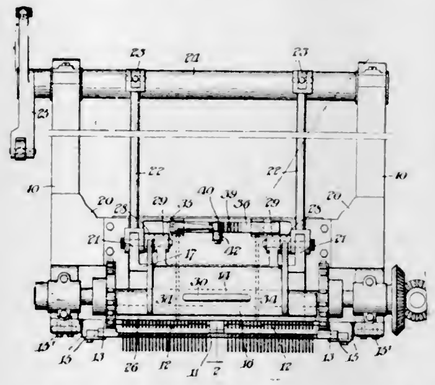
1,168,862. NUT-LOCK. WILLIAM R. DILLON, Cherokee, Okla. Filed July 7, 1915. Serial No. 38,548. (Cl. 151—17.)



1. In a nut lock, the combination with a bolt screw threaded a portion of its length and provided with a spiral groove extending in an opposite direction to said screw threads, a main nut member operative on said bolt and engaging said screw threads, the upper face of said nut provided with a series of ratchet teeth, an auxiliary nut loosely mounted on said bolt with respect to said screw threads, a collar carried by said auxiliary nut and provided with inwardly projecting lugs for engagement with said spiral groove, the inner face of said auxiliary nut being concave to exert a clamping action and provided with a series of cam faced projections for engagement with said ratchet teeth to positively lock said main nut in place, as and for the purpose specified.

2. A nut lock including in combination, a bolt screw threaded a portion of its length and having a spiral groove extending oppositely to said screw threads, a main nut member operative on the screw threaded portion of said bolt, one end of said main nut member being provided with a plurality of ratchet teeth, an auxiliary nut member having a bore of slightly greater diameter than the diameter of said bolt, a collar formed on said auxiliary nut and forming a portion that may be gripped by a wrench, one face of said auxiliary nut being concaved, the concave face of said auxiliary nut having a plurality of cam faced projections for engagement with the ratchet teeth on said main nut member whereby when said nuts are brought together a clamping action will be exerted by the concaved face of said auxiliary nut to more securely retain the nuts against independent movement.

1,168,863. DISCHARGING MECHANISM FOR MATCH-MACHINES. JOSEPH C. DONNELLY, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1914. Serial No. 834,904. (Cl. 144—62.)



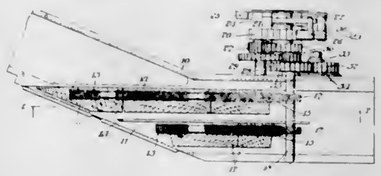
1. In discharge mechanism for match machines, the combination with a progressively movable carrier for successive rows of matches, of a carriage reciprocative at right angles to the path of travel of said carrier, means for actuating said carriage, a match-ejecting punch head hingedly mounted on said carriage and movable therewith toward and from the match carrier, and means for locking said head in operative position on the carriage.

2. In discharge mechanism for match machines, the combination with a progressively movable carrier for successive rows of matches, of a carriage reciprocative at right angles to the path of travel of said carrier, means for actuating said carriage, a head hingedly mounted at its rearward end on said carriage and movable therewith toward and from the match carrier, match-ejecting punches projecting outward from the forward part of the said head, and means for locking the forward part of the head to the carriage.

3. In discharge mechanism for match machines, a reciprocating carriage, a head hingedly mounted at its rearward end on said carriage and having at its forward end locking members, punches projecting outward from the forward part of said head, locking-pins extending from front to rear of said carriage adapted to be engaged with and disengaged from said locking members, and means for actuating said pins.

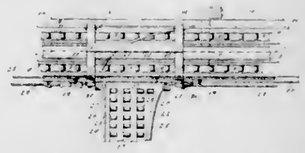
4. In discharge mechanism for match machines, a reciprocating carriage, a head hingedly mounted at its rearward end on said carriage and having at its forward end locking members, locking pins extending from front to rear of said carriage adapted to be engaged with and disengaged from said locking members, a gear rack bar having a cam connection with said pins, and a manually-operated gear element engaged with said bar.

1,168,864. BLOCK-FEEDING MECHANISM FOR MATCH-MACHINES. JOSEPH C. DONNELLY, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1914. Serial No. 834,906. (Cl. 144—50.)



In block-feeding mechanism for match machines, the combination with a block-feeding trough having a longitudinal side-guide for the contained blocks, of feed-screws extending adjacent to and longitudinally of the bottom and top respectively of the trough, the threads of said screws being oppositely pitched, and means for rotating said screws in opposite directions to each other, whereby the threads of the said screws engage the opposing lower and upper surfaces respectively of the blocks and impel the blocks along the trough and in lateral contact with the said side-guide.

1,168,865. SIDE-DELIVERY CONVEYER. ROLLIN L. DRAKE, Port Arthur, Tex., assignor to The Texas Company, a Corporation of Texas. Filed June 23, 1913. Serial No. 775,176. (Cl. 193—8.)



1. In combination, a way along which articles may be conveyed, a side guard along one side of said way, a side

guard along the other side of said way, said second guard having an open section for passage of articles from said way, and being movable lengthwise of the way to locate said open section at different points along the way.

2. In combination, a movable conveyer for conveying articles, a way along which said conveyer travels, a side guard along one side of said way and independent of the conveyer, a movable side guard along the other side of said way and independent of the conveyer, said movable side guard having an open section for passage of articles from the conveyer and said way.

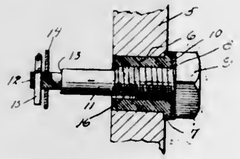
3. In combination, a conveyer for conveying articles, a side guard along one side of said conveyer and independent thereof, a movable side guard along the other side of said conveyer and independent thereof, said movable side guard having an open section for passage of articles from said conveyer and means for automatically ejecting articles through the open section of the movable side guard.

4. A conveying means comprising a way for conveying articles, an article conveying mechanism movable lengthwise of said way, a guard along one side of the way and independent of the conveyer, a cage member movable lengthwise of the way independently of the conveyer and having an open side, a flexible member passing over guides on opposite sides of the cage, said flexible member having its free ends connected to the cage and constituting a guard for said conveyer.

5. In combination, a conveying mechanism, and a side guard for said mechanism consisting of a flexible member, guide pulleys for the same, and an open sided cage connected to said member, and movable lengthwise of the conveying mechanism.

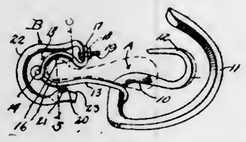
[Claims 6 to 16 not printed in the Gazette.]

1,168,866. AIR-VENT FOR BARRELS. CLARENCE N. EASTER, West Chester, Iowa. Filed Oct. 13, 1914. Serial No. 866,482. (Cl. 217—99.)



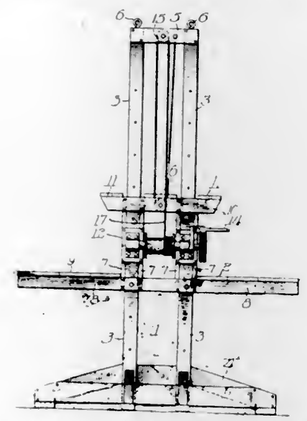
A device of the character described comprising, a sleeve secured upon a barrel and extending thereinto, said sleeve being internally screw threaded, a screw threaded member disposed in said sleeve, a head on said member, a reduced portion formed on said screw threaded member, a second reduced portion extending from said first named reduced portion and forming therewith a shoulder, a washer on said second named reduced portion and a cotter pin extending through said second named reduced portion for preventing withdrawal of said washer, said screw threaded portion of said member being provided with a cutaway portion extending from said first named reduced portion and terminating short of the head of said screw member.

1,168,867. ANTIKICKING DEVICE FOR COWS. ARTHUR O. ERICKSON, Greenwood, N. Y. Filed Nov. 9, 1914. Serial No. 871,148. (Cl. 119—127.)



An anti-kicking device for cows, comprising a leg engaging member provided with means to embrace the hind leg of a cow above and below the hock joint, a stationary clamping element secured at one end to said member, and extending rearwardly therefrom, a movable clamping element pivoted at the free end of, and coöperating with the stationary element to retain the device in applied position, a wedge plate arranged transversely of said stationary element and having notches formed therein, and a substantially U-shaped keeper, normally disposed in the plane of, and embracing said fixed and movable elements, said keeper being swingingly secured at one end to the free end of the movable element, with its other end movable transversely of said stationary element, and adjustably engageable in said notches.

1,168,868. ADJUSTABLE SCAFFOLD. HENRY ERICSSON, Chicago, Ill. Filed Apr. 4, 1910. Serial No. 553,363. (Cl. 20—81.5.)



1. A device of the kind described, comprising a platform, a vertical guide positioned at each end of said platform, each comprising a pair of substantially independent parallel bars and a plurality of substantially independent shoes mounted upon said platform and engaging said guides to direct said platform and maintain the same in position, in combination with independent means for each guide mounted upon and extending between the shoes for said guide and arranged to coöperate with means upon said bars for adjusting and controlling the vertical position of said platform.

2. A device of the kind described, comprising a platform, a vertical guide positioned at each end of said platform, each comprising a pair of substantially independent parallel bars one near each corner of said platform and a plurality of substantially independent shoes mounted upon said platform and engaging each guide to direct said platform and maintain the same in position, in combination with independent means for each guide mounted upon and extending between the shoes for said guide and arranged to coöperate with means upon said bars for adjusting and controlling the vertical position of said platform.

3. In a scaffold a plurality of platforms, a guide for each end of said platforms, each comprising a pair of substantially parallel bars each positioned near the corner of said platforms, and a pair of shoes secured to and rigidly connecting said platforms and engaging said bars to direct said platforms and maintain said platforms in position, in combination with mechanism mounted upon said shoes and extending between said bars for controlling the position of said platforms.

4. A device of the kind described, comprising a plurality of connected substantially parallel platforms a vertical guide for each end of said platforms consisting of a substantially independent bar positioned near each corner of the smaller of said platforms substantially independent shoes extending between and rigidly secured to said platforms for rigidly connecting the platforms and engaging each guide to direct said platforms, in combination with independent means mounted jointly upon and extending between said shoes for each pair of bars arranged to coöperate with means upon said bars for adjusting and controlling the position of said platform.

1,168,869. TREATED MATCH-SPLINT AND PROCESS OF PRODUCING THE SAME. WILLIAM A. FAIRBURN, Short Hills, N. J., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1913. Serial No. 774,314. (Cl. 52—5.)

1. A process of treating match splints to impart flaming and non-glowing properties thereto, which comprises grinding an anti-glowing material into a greasy, heavy bodied oleaginous substance, mixing the same with an unctuous, waxy, inflammable material in a heated condition, the melting point of said oleaginous substance being materially lower than that of said inflammable material, and dipping the splint into said mixture while said mixture is molten.

2. A process of treating match-splints to impart flaming and non-glowing properties thereto, which consists in grinding an anti-glowing material into a heavy-bodied oleaginous product, mixing the same with melted paraffin wax at a temperature of about 250° Fahr., and dipping the splints thereinto.

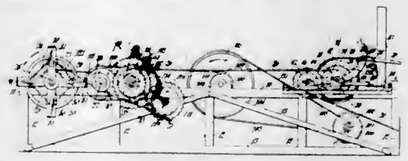
3. A process of treating match-splints to impart flaming and non-glowing properties thereto, which consists in subjecting the splints to a bath of melted paraffin with which is incorporated an intimate mixture of petrolatum and an anti-glowing material.

4. A process of treating match splints to impart flaming and non-glowing properties thereto, which consists in subjecting the splints to a bath of melted paraffin wax with which is incorporated a mixture comprising boric acid ground into petrolatum.

5. As a new article of manufacture, a match splint impregnated with a mixture containing a waxy, unctuous, inflammable material, a heavy-bodied, greasy oleaginous substance and a finely divided anti-glowing material.

[Claim 6 not printed in the Gazette.]

1,168,870. ROPE-TESTING MACHINE. ALBERT N. FAULKNER, New York, N. Y., assignor to Chesebro Whitman Co., a Corporation of New York. Filed Nov. 20, 1914. Serial No. 873,141. (Cl. 73—51.)



1. A rope-testing machine, comprising rope-advancing means, rope-retarding means spaced therefrom, and comprising a slidably-mounted Prony-brake mechanism, and a scale connected with said mechanism and exerting a constant pull thereon away from the advancing-means.

2. A rope-testing machine, comprising rope-advancing means, rope-retarding means spaced therefrom, and comprising a slidably-mounted Prony-brake mechanism, a scale connected with said mechanism and exerting a constant pull thereon away from the advancing means, means for driving said advancing means at constant speed, and a winding-reel beyond the advancing means.

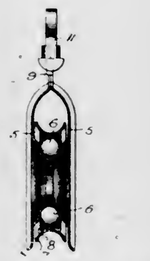
3. A rope-testing machine, comprising rope-advancing means, rope-retarding means spaced therefrom, and comprising a slidably-mounted Prony-brake mechanism, a scale connected with said mechanism and exerting a constant pull thereon away from the advancing means, means for driving said advancing-means at constant speed, a winding-reel beyond the advancing means, and a slip-belt connecting said winding-reel with said driving-means.

4. A rope-testing machine, comprising rope-advancing means, and rope-retarding means spaced therefrom, and consisting of parallel shafts, means connecting the same at a fixed distance, rope-pulleys, one on each shaft, gears between said shafts for causing them to turn simultaneously at the same speed, a friction-drum secured to one shaft, a friction-band applied to said drum, a lever connected with the end of said band for tightening or loosening the same on the drum, bearings for said shafts, shiftable toward and away from the advancing means, and a pulling-means connected with one set of said bearings and exerting a constant pull thereon away from the rope-advancing means.

5. A rope-testing machine, comprising rope-advancing means, and rope-retarding means spaced therefrom and consisting of parallel shafts, means connecting the same at a fixed distance, rope-pulleys, one on each shaft, gears between said shafts for causing them to turn simultaneously at the same speed, a friction-drum secured to one shaft, a friction-band applied to said drum, a manually-operable lever connected with the ends of said band for tightening or loosening the same on the drum, bearings for said shafts, shiftable toward and away from the advancing means, and a pulling-means connected with one set of said bearings and exerting a constant pull thereon away from the rope-advancing means, said pulling means comprising a scale-beam and weights adjustable thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,168,871. PULLEY. ANTHONY B. FERDINAND, Milwaukee, Wis. Filed Sept. 23, 1912. Serial No. 721,949. (Cl. 254—192.)



1. A pulley comprising a shell provided with an interior bearing race, a sheave having its inner surface convexed, an annular channel band having a concave surface and carried by and interlocking with the convex surface of the sheave, and bearings interposed between the race of the shell and the channel band.

2. A pulley comprising a shell having a flaring exterior and provided interiorly with a bearing race, suspending means for the shell, a sheave within the shell, a bearing channel band rigidly interlocked with the inner surface of the sheave, and bearings interposed between the channel band and the race.

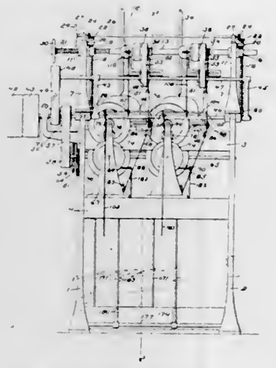
1,168,872. MACHINE FOR MAKING CUT GLASS. EDWIN HALDEMAN FINNIE, Corning, N. Y. Filed Sept. 14, 1914. Serial No. 861,570. (Cl. 5—11.)

1. In a glass-cutting machine, the combination with a rotary cutter, of a work holder, means for reciprocating the one past the other, indexing mechanism for the work holder, and means actuated by the reciprocation of the said elements in respect to each other for causing an angular feeding movement in the indexing mechanism.

2. In a glass-cutting machine, the combination with a rotary cutter, of a work holder, means for reciprocating the work-holder past the rotary cutter with a slow speed of feed in one direction and with a fast return stroke in the opposite direction.

3. In a glass-cutting machine, the combination with a rotary cutter, of a work-holder, means for reciprocating the work-holder in respect to the cutter, a removable indexing plate attached to the work holder, and means for feeding the indexing plate through angular distances determined by its characteristics, upon the reciprocation of the work-holder.

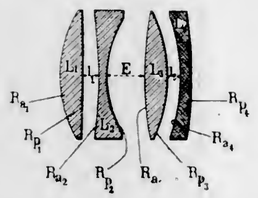
4. In a glass-cutting machine the combination with a rotary cutter, of a work-holder, means for reciprocating the work holder in respect to the cutter, an indexing mechanism for the work-holder, means for effecting a movement of the indexing mechanism, and of the work-holder upon the reciprocation of the work holder, means actuated by the indexing mechanism upon the completion of a predetermined angular movement for arresting reciprocation of the work-holder.



5. In a glass-cutting machine, the combination with a rotary cutter, of a work-holder, means for reciprocating the work-holder past the cutter, an indexing mechanism for the work-holder including a removable indexing plate having feeding notches therein corresponding in number and angular displacement to the lines of the design to be cut, and a feeding mechanism engaging therewith, means for actuating the feeding mechanism upon the reciprocation of the holder and means for stopping the reciprocation of the holder upon the completion of a predetermined angular movement of the indexing mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,168,873. OBJECTIVE. CHARLES HENRI FLORIAN, Paris, France, assignor to Société Anonyme des Etablissements Lacour-Berthiot, Paris, France. Filed June 4, 1913. Serial No. 771,690. (Cl. 88—57.)

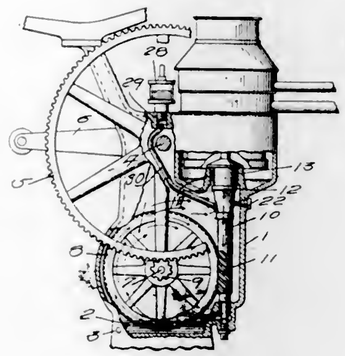


1. An objective of large relative opening, corrected from chromatic, spherical, field curvative and astigmatic aberrations, comprising substantially four lenses, the three first lenses forming a system of large opening the aberrations of which are positive, the fourth lens being a meniscus correcting said aberrations.

2. An objective comprising four lenses, the indices of refraction of the glasses of the first, third, second and fourth lens, having successively decreasing values, the indices of the first and third lens being at the upper and lower limits respectively equal to one another, while the dispersive power decreases from the third to the first lens, then to the fourth, then to the second, these quotients being at the upper and lower limits respectively equal for the third and first lens.

3. An objective of large relative opening, corrected from chromatic, spherical, field curvature and astigmatic aberrations, comprising substantially four lenses, the three first lenses forming a system of large opening the aberrations of which are positive, the fourth lens being a meniscus correcting said aberrations, the meniscus being separated from the preceding lens by a concave-convex film of air of suitable thickness and at least equal to ¼ of the axial thickness of the meniscus.

1,168,874. OILING MECHANISM FOR CREAM-SEPARATORS. EDGAR LEE FLOWERS, Hickory, N. C., assignor to J. L. Blodgett, Alexandria, Minn. Filed Dec. 11, 1914. Serial No. 876,729. (Cl. 64—56.)



1. A cream separator including a bowl-driving spindle provided with a bearing and including, also, means for feeding a lubricant through said bearing in the direction of the bowl whereby foreign matter from the bowl will be prevented from entering between the bearing and spindle, and a shed at the top of the bearing for receiving the foreign matter after it has been excluded from the bearing by said means.

2. A cream separator including a bowl-driving spindle, a bearing member having a shed extending continuously about the spindle at the bowl end of the bearing, means disposed to catch matter from the shed, the said separator including, also, means for maintaining an oil packing between the spindle and shed end of the bearing whereby foreign matter is excluded from the bearing, the said shed being constructed and arranged to receive the foreign matter after it has been excluded from the bearing by the oil packing.

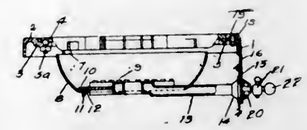
3. A cream separator including a bowl-driving spindle, a bearing for the spindle having a closed spindle encircling chamber in the end of its bearing face toward the bowl end of the spindle, and including also means for feeding a lubricant between the bearing faces of the spindle and bearing to said chamber.

4. A cream separator including a bowl-driving spindle, a bearing for the spindle having a spindle encircling chamber in the end of its bearing face toward the bowl end of the spindle, and including also means for feeding a lubricant between the bearing faces of the spindle and bearing to said chamber, the bearing having an oil conveying duct leading from the chamber, the said chamber being closed except for the oil conveying duct.

5. A cream separator having a bowl-driving spindle, a bearing member for the spindle having a spindle encircling chamber in its bearing face toward the bowl end of the spindle, said bearing member having an oil conveying duct leading from the chamber and having a passage leading through its bearing surface and ranging in the direction of rotation of the spindle therein, the spindle having a trough extending helically thereof from said passage to said chamber and extending in a direction opposite to that of rotation of the spindle.

[Claims 6 to 17 not printed in the Gazette.]

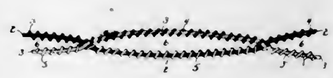
1,168,875. HOT-PLATE. CONRAD FRANZ, Erie, Pa., assignor to Germer Stove Company, Erie, Pa., a Corporation of Pennsylvania. Filed Dec. 16, 1914. Serial No. 877,515. (Cl. 126—214.)



1. In a hot plate, the combination of a top plate; a burner below the top plate; a mixer tube extending laterally from the burner; a protecting ring around the burner supported on one side on the mixer tube and at the opposite side by the top plate; a connection between the burner and the protecting ring at the side opposite the mixer tube; and means for supporting the mixer tube outside the protecting ring.

2. In a hot plate, the combination of a frame comprising a top plate; a burner below the top plate; a mixing tube extending laterally from the burner; a protecting ring around the burner supported on one side on the mixing tube and at the opposite side by the top plate; a connection between the burner and the protecting ring at the side opposite the mixing tube; and a connection between the mixing tube and the frame comprising means for locking the mixing tube against rotation.

1,168,876. BELTLIKE CARTRIDGE-CARRIER FOR MACHINE-GUNS. FRANK H. FRISSELL, Middletown, Conn., assignor to The Russell Mfg. Co., Middletown, Conn., a Corporation. Continuation in part of application Serial No. 20,816, filed Apr. 12, 1915. This application filed Aug. 10, 1915. Serial No. 44,795. (Cl. 139—72.)



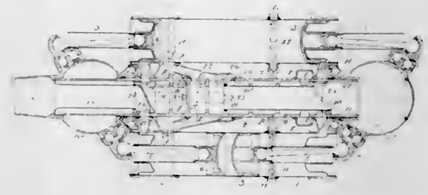
1. As a new article of manufacture, a woven belt-like machine-gun cartridge-carrier having two sets of warp threads crossing each other at regularly spaced intervals so as to alternately appear upon the opposite sides of the fabric and produce a series of cartridge-pockets reinforced by the crossing of the said warp threads, and weft threads interwoven with the said warp threads.

2. As a new article of manufacture, a woven belt-like machine-gun cartridge-carrier having two sets of warp threads crossing each other at regularly spaced intervals so as to alternately appear upon opposite sides of the fabric and produce a series of cartridge-pockets reinforced by the crossing of the said warp threads, weft threads interwoved with the said warp threads, and supplemental warp threads reinforcing the edges of the fabric to stiffen them and prevent them from hugging together.

3. As a new article of manufacture, a woven belt-like machine-gun cartridge-carrier consisting of two sets of warp threads crossing each other at regularly spaced intervals so as to alternately appear upon the opposite sides of the fabric, and of weft threads alternately interwoven with the respective sets of warp threads but not changing sides therewith.

4. As a new article of manufacture, a woven belt-like machine-gun cartridge-carrier consisting of two sets of warp threads crossing each other at regularly spaced intervals and thus alternately appearing upon opposite sides of the fabric, and of two weft threads alternately interwoven with the respective sets of warp threads but not changing sides therewith, the outer edges of the fabric being stiffened by special warp threads to prevent them from hugging together.

1,168,877. TWO-STROKE-CYCLE INTERNAL-COMBUSTION MOTOR. WILHELM FROEHLICH, Wannsee, near Berlin, Germany. Filed Jan. 26, 1915. Serial No. 4,558. (Cl. 123—58.)

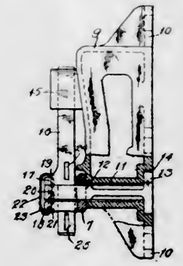


1. In a two-stroke cycle motor, the combination of a hollow shaft, a plurality of cylinders arranged around said shaft, pistons within the cylinders, means connected with the pistons for rotating the shaft, separate intermediate storage chambers and suction chambers for scavenging air and for a mixture of gas and air within the shaft, passages for conducting scavenging air, and said mixture from the shaft to the cylinders, means for introducing mixture into a cylinder and means for immediately thereafter connecting said suction chamber for the mixture with the mixture passage.

2. In a two-stroke cycle motor, the combination of a hollow shaft, a plurality of cylinders arranged around said shaft, pistons within the cylinders, means connected with the pistons for rotating the shaft, separate intermediate storage caambers and suction chambers for scavenging air and for a mixture of air and gas within said shaft, passages for conducting scavenging air, and said mixture from the shaft to the cylinders, means for introducing the mixture into a cylinder, means for immediately thereafter connecting said mixture suction chamber with the mixture channel, and means for simultaneously connecting the mixture channel with the intermediate storage chamber for scavenging air.

3. In a two-stroke cycle internal combustion motor, the combination of a hollow shaft, a plurality of cylinders arranged around the shaft, pistons within the cylinders, means connected with the pistons for rotating the shaft, separte intermediate storage chambers and suction chambers for scavenging air and for a mixture of gas and air arranged within the shaft, a casing surrounding the shaft, passages in said casing for conducting scavenging air, and a mixture of gas and air from the shaft to the cylinders, compressed mixture chambers in the fixed casing surrounding the shaft, annular grooves in the joints between the walls of the last said chambers and the shaft, and a connection between said grooves and the suction chamber within the shaft.

1,168,878. DOOR-SECURING DEVICE. FREDERICK S. GALLAGHER, Yonkers, N. Y., assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Filed Mar. 23, 1915. Serial No. 16,317. (Cl. 70—23.)



1. In door securing devices, the combination of a fixed frame member, a staple secured thereto, having a hole through the outer portion thereof, a hasp, adapted to

encircle said staple, and a bolt slidable into position to extend through said hole in the staple, said bolt having a lug on the outer side thereof, above said staple and adapted to seat thereon, and said hasp having a lug thereon, in alinement with said bolt lug, immediately below said staple, and at the front side of said bolt, both of said lugs and said staple having alined openings therethrough, through which securing means may be passed, the said opening in the staple being at the outer side of the hole therethrough, through which said bolt extends, substantially as set forth.

2. In door securing devices, the combination of a fixed frame member, a staple secured thereto, having a hole through the outer portion thereof, a hasp carried by a door adapted to encircle said staple, and a bolt slidable into position to extend through said hole in the staple, said bolt having a lug on the outer side thereof, and said hasp having a lug in alinement with said bolt lug, said lugs having alined openings therethrough, when the parts are operatively positioned, through which securing means may be passed, substantially as set forth.

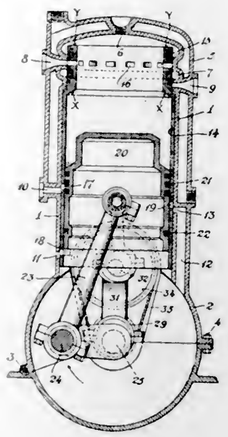
3. In door securing devices, the combination of a fixed frame member, a staple secured thereto, having a hole through the outer portion thereof, a hasp carried by a door, adapted to encircle said staple, and a bolt vertically slidable into position to extend through said hole in the staple, said hasp having a lug thereon at the front side of said bolt, immediately below and in alinement with the front end of said staple, so that said bolt, when operatively positioned, extends between the main portion of said hasp and said lug, said lug and the front end of said staple having alined openings therethrough, through which securing means may be passed, said bolt also having an opening therethrough, through which the securing means may additionally be passed, substantially as set forth.

4. In door securing devices, the combination of a fixed frame member, a staple secured thereto, having a hole through the outer portion thereof, a hasp carried by a door, adapted to encircle said staple, and a bolt slidable into position to extend through said hole in the staple, said bolt having a lug on the outer side thereof, and said hasp having a lug in alinement with said bolt lug, said lugs having alined openings therethrough, and said bolt having openings therethrough, above and below said staple, when the parts are operatively positioned, substantially as set forth.

5. In door securing devices, the combination of a frame member, a casting removably secured thereto, a staple extending outwardly through an opening in the casting having a hole in the outer portion thereof, said staple having a flange on its inner end seated in a recess in the inner face of the casting, a movable member, a hasp thereon adapted to encircle the staple, and a locking member adapted to extend through the hole in said staple, substantially as set forth.

1,168,879. INTERNAL-COMBUSTION ENGINE. CHARLES A. GASS, Redrock, Ariz., assignor of one-half to Frederick C. Tatum and Tom K. Richey, Tucson, Ariz. Filed Apr. 21, 1914. Serial No. 833,361. (Cl. 123—91.)

1. In an internal combustion engine, the combination with a reciprocating piston and a crank shaft, of a stationary cylinder, the upper or explosion end of which is of reduced internal area and provided with intake and exhaust ports located in different planes, said reduced portion of the cylinder being also provided with two annular channels opening inwardly one above the exhaust port and the other between the exhaust port and the intake port, a reciprocating sleeve, between the piston and cylinder, the upper end of which is of reduced area to pass up within the reduced area of the cylinder, this reduced area of the sleeve being provided with ports in the same plane, said ports being adapted to register either with said exhaust or with said intake port in said cylinder, and means operable by said shaft for reciprocating said sleeve through two different extremes of movement alternating with each revolution of the shaft, for bringing the ports in said sleeve into registry with the intake and exhaust ports of said cylinder in predetermined sequence, said annular channels being adapted to permit balanced pressure on said sleeve.



2. In an internal combustion engine, the combination with a reciprocating piston, and a crank shaft, of a stationary cylinder having a reduced internal area at the upper end, just below the head, said reduced area being substantially of the same diameter as the outside diameter of the piston and provided with an intake port and an exhaust port located in different planes, said reduced portion of the cylinder being also provided with an annular channel, opening inwardly, between the head and the exhaust port, and another annular channel, opening inwardly, between the exhaust port and the intake port; said cylinder having an auxiliary exhaust port near the lowest point reached by the piston, a scavenging port at the lowest point reached by the piston and an air inlet port at a point below the scavenging port; a reciprocating sleeve fitting closely within said cylinder and outside of said piston, with a reduced outside area at the upper end fitting closely in the aforesaid reduced internal area of the said fixed cylinder and provided with ports in the same plane adapted for registry with said sleeve being also provided in the lower portion thereof with auxiliary exhaust, the scavenging and air inlet ports adapted for registry respectively with the auxiliary exhaust, scavenging and air inlet port in said cylinder and means operable by said shaft for reciprocating said sleeve through two different extremes of movement alternating with each revolution of the shaft, for bringing the ports in said sleeve into registry with said ports in said fixed cylinder in predetermined sequence, said annular channels being adapted to permit balanced pressure on said sleeve.

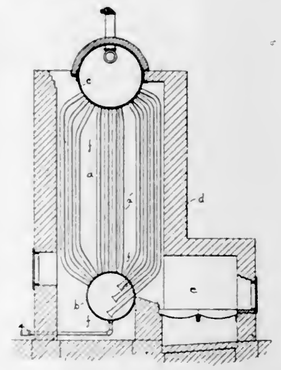
3. In an internal combustion engine, the combination with a reciprocating piston and a crank shaft of a stationary cylinder, the upper end of reduced inside area provided with intake and exhaust ports located in different planes said cylinder being provided with annular channels opening inward one above the exhaust port and one between the exhaust and the intake ports, a reciprocating sleeve, between the piston and said cylinder, the upper outside area reduced to pass up snugly within the reduced inside area of the aforesaid cylinder, provided with a plurality of ports in the same plane adapted to coöperate with either the intake or exhaust ports or to lie over the annular channel between the exhaust and intake ports, packing rings on each side of said plurality of ports in said sleeve and means for reciprocating said sleeve through different extremes of movement alternating with each revolution of the shaft, one extreme of movement being adapted to bring said ports in the sleeve into registry with said exhaust and intake ports respectively and the other to keep them in communication with the lower annular channel, said annular channels being adapted to permit balanced pressure on said sleeve.

4. In an internal combustion engine, the combination with a reciprocating piston and a crank shaft, of a stationary cylinder, provided with an integral head, the upper or explosion end just below the head being of reduced internal area and provided with intake and exhaust ports located in different planes and two annular channels opening inwardly, one above the exhaust port and one between the exhaust and the intake port, said stationary cylinder being connected with a closed crank case and provided with a by-pass communicating with the crank case and with a scavenging port in said cylinder, of a reciprocating sleeve fitting closely within said cylinder and outside of said piston provided with a reduced outside area at the upper end fitting closely within the aforesaid reduced internal area of the fixed cylinder and provided with ports in the same plane adapted for registry with said intake and said exhaust ports in said cylinder and a scavenging port adapted for registry with said scavenging port in said fixed cylinder to permit entrance of air from the crank case for scavenging purposes in said cylinder and means, operable by said crank shaft, including an eccentric and eccentric pinion fastened to said shaft, intermediate gearing and a pitman for reciprocating said sleeve alternately through two different extremes of movement for bringing the ports in said sleeve into registry respectively with the corresponding ports in said cylinder in predetermined sequence, substantially as described.

5. In an internal combustion engine, the combination with a reciprocating piston, a crank shaft and a stationary cylinder provided with intake and exhaust ports located in different planes and an annular channel between said ports, opening inward, of a reciprocating sleeve between the piston and said cylinder, provided with a plurality of ports in the same plane adapted to coöperate with either the exhaust or intake ports or to lie over said annular channel and means, operable by said shaft, for reciprocating said sleeve to bring said ports therein into the plane of the exhaust port of said cylinder, then into the plane of the intake port for registry therewith respectively during one revolution of said shaft and for holding said ports in the sleeve in communication with said annular channel during the succeeding revolution of said shaft, whereby, during the explosion, the pressure on said sleeve will be balanced.

[Claim 6 not printed in the Gazette.]

1,168,880. WATER-TUBE BOILER. F WALTER GUIBERT, Detroit, Mich. Filed July 11, 1914. Serial No. 850,373. (Cl. 122—406.)

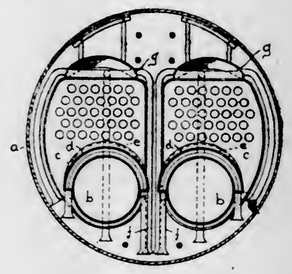


1. A water tube boiler, having in combination, an upper and a lower drum, and tubes connecting the two drums, a number of the up-going tubes protruding into the interior of the lower drum having their mouths in the lower parts of the lower drum.

2. A water tube boiler, having in combination, an upper drum, a lower drum, and tubes connecting the two drums, a number of the up-going tubes protruding into the interior of the lower drum having their mouths located at different levels in the lower drum from the bottom upward.

3. The combination with a furnace provided with zones of greater and less heat, of a water tube boiler comprising, an upper drum, a lower drum, and tubes connecting the drum, several of the tubes located in the zone of greater heat protruding into the interior of the lower drum having their mouths in the lower portions of the lower drum.

1,168,881. CIRCULATOR. F WALTER GUIBERT, Detroit, Mich. Filed July 11, 1914. Serial No. 850,374. (Cl. 122—410.)



1. In combination with a boiler provided with a furnace chamber and a combustion chamber, a circulator system comprising one or more circulators adapted to rest on the furnace and arranged to discharge in one way alone, and a circulator located on the combustion chamber materially above the circulator or circulators on the furnace and arranged to discharge in directly opposite direction to the direction of discharge of the circulator or circulators upon the furnace.

2. A circulator, having in combination, a saddle of inverted U shape, open upon the inside and at one end and closed at the other end and both of the lower extremities, and a plurality of tubular up-going legs of materially less cross-sectional area than the saddle, leading into the closed lower extremities and having flaring or bell-shaped intake mouths, the said circulating water being drawn up through the legs and discharged through the open end of the saddle.

1,168,882. ART OF DECORATING VITRIFIED SURFACES. JOHN W. HASBURG, Chicago, Ill. Filed Dec. 22, 1914. Serial No. 878,560½. (Cl. 41—26.)



1. The art of decorating an article having a vitrified glazed surface with vitrifiable decorative materials which consists in applying to such surface a coating having a paper-like surface, said coating being volatilizable at a temperature below the firing temperature of the vitrifiable colors; subsequently applying a vitrifiable decorative material on the coating; and firing the article to volatilize the coating and subsequently fuse the decorative material onto the vitrified surface.

2. The art of decorating an article having a vitrified glazed surface with vitrifiable decorative material which consists in applying to said surface a composition comprising, a solution of ammoniated mercury, water and a water soluble adhesive material, to provide a fugitive unglazed paper-like surface; subsequently applying a vitrifiable decorative material having a liquid vehicle re-

pellent to the materials in said solution and subsequently firing the article to first dissipate the fugitive coating and then fuse the decorative material to the vitrified surface.

3. The art of decorating an article having a vitrified glazed surface with vitrifiable decorative material which consists in applying to said surface a composition comprising, ammoniated mercury, a liquid and a binder soluble in said liquid, to provide a fugitive unglazed paper-like surface; subsequently applying a vitrifiable decorative material having a liquid vehicle repellent to the materials in the aforesaid composition; and firing the article to volatilize the fugitive coating and then fusing the decorative material to the vitrified surface.

1,168,883. BUCKLE. WILLIAM V. HAUPT, Shelton, Conn., assignor to Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Continuation of application Serial No. 654,780, filed Oct. 14, 1911. This application filed June 15, 1915. Serial No. 34,306. (Cl. 24—191.)



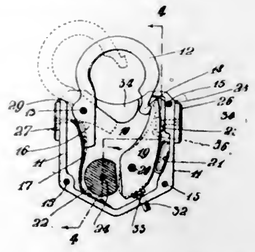
1. A buckle comprising a back member made out of a sheet metal plate having its body portion sheared and depressed to form an opening, the metal along one side of said opening being offset and the sides of said plate being bent up to reinforce the metal at the sides of said opening, and a web-locking lever member pivotally connected to said sides and arranged to swing upwardly from in front of said opening, whereby the said plate can be engaged by swaging tools after the back and lever members are assembled to close said opening on running webbing.

2. The combination with a running webbing, of a buckle comprising a sheet metal plate having side ears turned at an angle thereto and having its body portion sheared and depressed to form an opening between said ears leaving a depression in the face of said plate, and a web-locking lever pivotally connected to said ears on one side of said opening, one extremity of said webbing being passed into said depression through said opening which latter is closed on the webbing to permanently attach the same to the buckle, and the said webbing being then passed over said depression to cover said extremity and between said lever and plate.

3. The combination with a running webbing, of a buckle comprising a sheet metal plate having its body portion sheared and depressed to form an opening and its sides struck up to reinforce the metal at the sides of said opening, and a web-locking lever pivotally connected to said plate on one side of said opening, the said opening being closed on said webbing to permanently attach the same to the buckle and the said webbing being then folded around one of the edges of said plate and passed between the lever and plate.

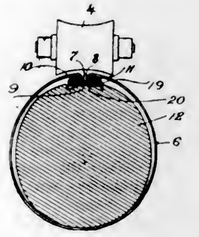
1,168,884. PADLOCK. LOUIS HEE, South River, N. J. Filed May 25, 1915. Serial No. 30,322. (Cl. 70—112.)

1. In a padlock, the combination with a body, a bow pivoted therein and an open hook formed with said bow, of a detent engageable with said hook, said detent having a longitudinal recess formed in its outer edge, means for disengaging said detent, a rotatable stop normally preventing said disengaging means from operating and means for registering said stop with the mentioned recess whereby said disengaging means may be operated.



2. In a padlock, the combination with a casing, of a shackle-bow pivoted therein, said bow having a part whereby its motion is limited, an open hook formed with said bow, a pivoted detent engageable with said hook, plates pivoted on the sides of said casing, a stop combined with one of said plates operatively engageable with said detent, a bar pivoted on the face of said casing for actuating said plates and means for actuating said detent when released from engagement by said stop.

1,168,885. METHOD OF MAKING METALLIC TUBE-JOINTS. GEORGE HOLDEN, Flushing, N. Y., assignor to The Newark Spring Mattress Company, a Corporation of New Jersey. Filed Jan. 13, 1914. Serial No. 811,836. (Cl. 113—34.)

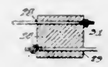


1. The method of forming seam joints for metallic tubes which consists in bending the edges of the tube in opposite directions away from each other and applying thereto an auxiliary strip having its longitudinal edges oppositely bent toward each other and engaging over the bent edges of the tube, and then compressing the metal of the component parts of the resulting seam joint into a substantially integral mass toward the center line of the joint in directions normal to and also from the laterally opposite sides of said line.

2. The method of forming seam joints for metallic tubes which consists in bending the edges of the tube seam in opposite directions from each other and applying an auxiliary strip with oppositely turned flanges in embracing relation with respect to the bent edges of the tube, and then applying pressure to the assembled components of the joint in a direction toward and normal to the line of the seam and also from the laterally opposite sides of and toward the seam line, thereby compressing the metal of the component parts of the joint into a substantially integral mass.

3. The method of forming seam joints for metallic tubes which consists in bending the edges of the tube seam in opposite directions from each other and applying an auxiliary metal strip with oppositely turned flanges in embracing relation with respect to the bent edges of the tube, then applying pressure to the assembled components of the joint in a direction toward and normal to the line of the seam, and unyieldingly resisting such pressure, and also applying pressure toward the line of the seam from the laterally opposite sides thereof, whereby the metal of the component parts of the joint is compressed into a substantially integral mass.

1,168,886. BUILDING STRUCTURE OR SILO. HARRIS HULEN, Kansas City, Mo., and CHARLES F. BROWN, South Ridge, Kans. Filed Dec. 7, 1914. Serial No. 875,969. (Cl. 217—4.)

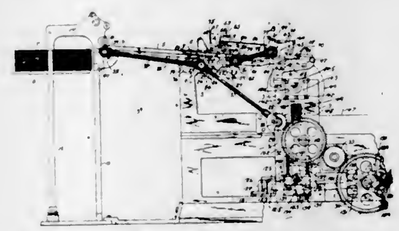


1. In a building structure of the character described, a circular frame composed of a series of independent frames each composed of vertical standards and transverse segment bars connecting one standard with another, said structure having horizontal grooves in the outer surface of said segment bars, and flexible cables or bands within said grooves and lying below the plane of the outer surface of the circular frame, and means for applying tension to the ends of said bands or cables.

2. In a building structure or silo, a circular frame composed of a series of independent upright frames, each independent frame having parallel standards, and segment bars secured at their ends to the respective standards, said circular frame having horizontal concentric grooves extending below the allned surfaces of the standards, and warping plates having depressed portions extending from one standard of an independent frame to another standard of an adjacent frame in contiguity, and within said grooves.

3. In a building structure or silo the combination with a circular frame composed of a series of independent upright frames, each independent frame having parallel standards, and segment bars secured at their ends to the respective standards, said standards having vertical grooves in their opposing surfaces and a slip tongue within said grooves, said circular frame having concentric grooves in the outer surface of the frame, and flexible cables within said grooves lying below the plane of the outer surface of the frame and adjacent the said slip tongues, and adjustable connecting devices connected with the end portions of said flexible cables.

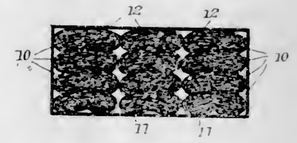
1,168,887. CONVERTIBLE FLAT-BED PRINTING-PRESS. WINFIELD S. HUSON, Derby, Conn., assignor to The Whitlock Printing Press Mfg. Co., Derby, Conn., a Corporation. Filed Mar. 21, 1914. Serial No. 826,408. (Cl. 101—4.)



1. In a printing press, the combination with an impression mechanism having an impression-cam, of detector mechanism, tripping mechanism for suspending the operation of the impression mechanism upon the improper presentation of a sheet to the detector mechanism, resetting mechanism operated directly by the said impression-cam for automatically resetting the tripping mechanism, and manually operable means co-acting with the tripping mechanism for stopping the press without interfering with the action of the said automatic resetting means.

2. In a convertible flat-bed printing press, the combination with an automatic feeder, of a feed-table having pivotal front and back flaps and a fixed intermediate section, two independently organized series of sheet-conveyers respectively located above the planes of the said flaps and adapted to be driven independently of each other, removable semi-automatic feed and detector heads, an impression mechanism including an impression-cam, tripping mechanism controlled by the detector heads and co-acting with the impression mechanism to suspend the operation thereof, and means operated by the said cam for automatically resetting the impression and tripping mechanisms.

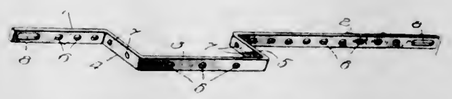
1,168,888. OPEN-SHRED CEREAL BISCUIT. JOHN LEONARD KELLOGG, Battle Creek, Mich. Filed Apr. 2, 1915. Serial No. 18,697. (Cl. 99—10.)



1. A cereal biscuit made with a concave top of the general character of a longitudinal cylindrical segment.

2. A cereal biscuit made with a top and bottom both of the general character of a longitudinal cylindrical segment one being convex and the other concave.

1,168,889. CONSTRUCTION-CLEAT. ALEXANDER M. KNAUBER, Oak Park, Ill., assignor to Margaret Knauber, Oak Park, Ill. Filed Mar. 11, 1914. Serial No. 823,909. (Cl. 248—30.)



1. A construction cleat comprising a perforated bar having a portion between its ends displaced laterally and lying parallel with the end portions of the bar, the laterally-displaced portion being connected to the end portions by legs extending at right angles to the end portions of the bar and being at a distance from said end portions approximately equal to the depth of a standard electrical wall connection or switch box, and a length of said displaced portion being considerably greater than the width of such a box, at least one of said end portions being considerably longer than the width of the aforesaid box, the width of the bar being no greater than the spacing between the usual knock-out openings distributed about the center of the aforesaid box.

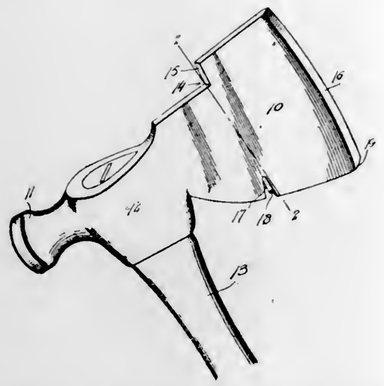
2. A construction cleat comprising a bar having between its ends a portion displaced laterally a distance approximately equal to the depth of a standard electrical wall connection or switch box, the length of said displaced portion being considerably greater than the width of such a box, and one of the end portions of the bar being longer than the displaced portion and the other end portion being shorter than the displaced portion.

3. A construction cleat comprising a narrow flat bar having between its ends a portion displaced laterally a distance approximately equal to the depth of a standard electrical wall connection or switch box, said displaced portion being considerably longer than the width of such box and being also longer than one of the end portions of said bar and shorter than the other end portion.

1,168,890. SHINGLING-HATCHET. WILLIAM H. KOEHLER, Jackson, Mo. Filed Dec. 2, 1914. Serial No. 875,139. (Cl. 7—9.)

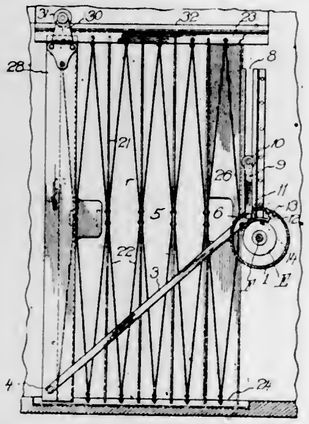
1. In a shingling hatchet, the combination with its cutting edge, of a supplemental cutter forming a continua-

tion thereof, said cutter being formed by grooving a side edge of the blade longitudinally from its outer end and sharpening the latter in the usual manner.



2. In a shingling hatchet, the combination with its cutting edge, of a supplemental cutter forming a continuation thereof, whereby the blade and cutter may be sharpened at the same operation.

1,168,891. ELEVATOR-GATE. JOHN V. KRANEBIEL, Williamsville, N. Y. Filed Jan. 14, 1914. Serial No. 812,039. (Cl. 187—49.)



1. The combination with an elevator door and an elevator controller, of means connected to the door and adapted to be moved into and out of engagement with the controller by the opening and closing of the door, and means for engaging the controller to prevent the operation thereof, said last named means being operated to release the controller by the movement of the first named means into engagement with the controller.

2. The combination with an elevator door and an elevator controller, of means for preventing the opening of the door adapted to be held in operative position by the controller when said controller is actuated, means for locking the controller against actuation adapted to be actuated to unlock the controller when the means for preventing the operation of the door is moved by the closing of the door into position to be held by the controller.

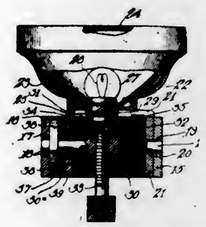
3. The combination with an elevator door and an elevator controller, of a member connected to the door to be moved by the opening and closing movement of the door from and toward the controller, means on the controller to prevent the opening of the door moved into engagement with said member by the actuation of the controller to start the elevator, and a locking member adapted to be moved out of locking engagement with the controller by the movement of said member which is connected to the door.

4. The combination with an elevator car, of a controller on the car, a collapsible door movable toward and from the controller, a locking bar for the door pivotally connected to the forward edge thereof, a member on the rear end of the bar for engaging the controller, means on the controller for engaging said member when the controller is actuated to prevent the movement of the bar and hold the door in closed position, and means for locking the controller adapted to be unlocked by the movement of the member on the bar into engagement with the controller.

5. The combination with an elevator car, of an elevator controller upon the car, a sliding door movable toward and from the controller, a locking bar pivotally attached at one end to the door and having an upward and downward movement at its rear end toward and from the controller, a member carried by the controller having an opening therein, a member on the bar to enter said opening and to be engaged by said member having the opening when the controller is actuated, and a locking member for the controller adapted to be unlocked by the movement of the bar toward the controller and the entrance of the member thereon through the opening in the member carried by the controller.

[Claims 6 to 10 not printed in the Gazette.]

1,168,892. BATTERY-LAMP. NICOLAS KRIBS, Dundee, Ill. Filed May 10, 1915. Serial No. 26,945. (Cl. 240—8.5.)

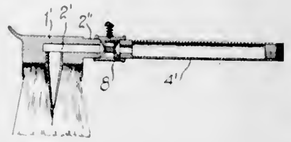


1. In a lamp, the combination with a container having one of its ends open, of a cover for said end, an electric generator located within the container and electrically connected thereto, a pair of spaced apart standards mounted on said cover, a block of insulating material rotatably mounted on and between said standards and having an opening extended transversely therethrough and another opening extended from one of its ends longitudinally therewith and intersecting the first named opening, a pair of lamp carrying brackets mounted on said block, one of said brackets being in electrical contact with one of said standards and the other of said brackets being insulated therefrom, a lamp mounted on the outer portions of said brackets and having a post extended into one end of said transverse opening, a rod or pin extended from one of the standards into the longitudinal opening of said block and having a transverse opening to register with the transverse opening of the block, a screw located in the transverse openings in said block and rod to contact with said post of the lamp, and a circuit closer for the electric generator.

2. In a lamp, the combination with a container having one of its ends open, of a cover for said end, an electric generator within the container and electrically connected thereto, a pair of spaced apart standards mounted on said cover, a block of insulating material rotatably mounted on and between said standards and having an opening extended transversely therethrough and another opening extended from one of its ends longitudinally therewith and intersecting the first named opening, a pair of lamp carrying brackets mounted on said block and extended therefrom, one of said brackets being in electrical contact with one of said standards and the other of said brackets being insulated from the other standard, a lamp mounted on the outer portions of said brackets and having a post extended into one end of said transverse opening, a rod or pin extended from one of the standards into the longitudinal openings of said block and having a transverse opening to register with the transverse opening of the block, a screw located in the transverse openings in said block and rod, a spring actuated contact interposed between the inner end of said screw and the said post of the lamp, and a circuit closer for the generator.

3. In a lamp, the combination with a container having one of its ends open, of a cover for said end, a pair of battery cells located one on the other within the container and having electrical connection with one another as well as with the container, a pair of spaced apart standards mounted on said cover, a block of insulating material rotatably mounted on and between said standards and having an opening extended transversely therethrough, a pair of lamp carrying brackets mounted on said block and extended therefrom, one of said brackets being in electrical contact with one of said standards and the other of said brackets being insulated from the other of said standards, a lamp mounted on the outer portions of said brackets and having a post at one end of said transverse opening, a journal for one end of said block extended from one of said standards but insulated from the bracket adjacent thereto, a screw located in the transverse opening of said block and electrically connected to said journal, a spring actuated contact interposed between the inner end of said screw and the said post of the lamp, and means to open and close the electric circuit.

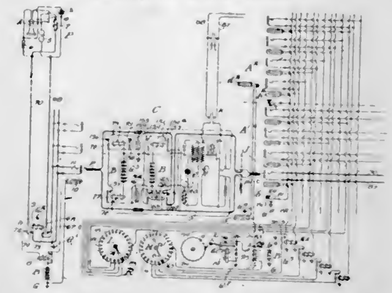
1,168,893. VALVE STRUCTURE FOR FOUNTAIN-BRUSHES. JULIUS J. LORZING, Elmsford, N. Y. Original application filed July 28, 1913, Serial No. 781,583. Divided and this application filed Mar. 20, 1915. Serial No. 15,948. (Cl. 137—5.)



In a valve adapted for use as a coupling between two conduit members, a valve casing having internal threads at each end to receive the conduit members, an internal valve seat formed in the valve body and provided with an orifice, a relatively fixed valve member provided with an orifice which alines with the orifice in the valve seat, an internal shoulder formed in the valve body, said fixed valve being disposed to abut against said shoulder and being removable from the valve body, the inner end of one conduit being engageable with the valve body for holding the same against the shoulder, whereby the fixed valve member is maintained in parallel spaced relation to the inner face of the valve seat, and a movable member slidably mounted between the valve seat and the fixed valve, said movable valve member being provided with a passage, and means normally holding the valve member in closed position, wherein the passage is out of alinement with the orifices of the valve seat and fixed valve member.

1,168,894. TELEPHONE-EXCHANGE TRUNKING SYSTEM. FRITZ LUBBERGER, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 29, 1909. Serial No. 530,400. (Cl. 179—27.)

1. In a telephone system, a calling line, a trunk, means including a manual switchboard for extending a connection from said line to said trunk including also automatic means controlled at said board for bringing said trunk into use, and substation-controlled means for restoring said trunk to non-busy or idle condition.



2. In a telephone system, a calling line, a trunk, means including a manual switchboard for extending a connection from said line to said trunk including also automatic means controlled at said board for bringing said trunk into use, calling substation-controlled means for restoring said trunk to non-busy or idle condition, and automatic means for giving a signal when the trunk is released.

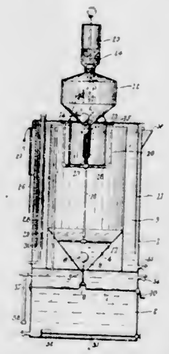
3. In a telephone system, a subscriber's line, a trunk, means including a manual switchboard for extending a connection from said line to said trunk including also means controlled at said board for bringing said trunk into use, substation-controlled means for restoring said trunk to non-busy or idle conditions, another manual board to which said trunk leads, and means for connecting said last-mentioned board with the called line.

4. In a telephone system, a calling line, a trunk, means including a manual switchboard for extending a connection from said line to said trunk including also automatic means controlled at said board for bringing said trunk into use, calling substation-controlled means for restoring said trunk to non-busy or idle condition, another manual board to which said trunk leads, and means for connecting said last-mentioned board with the called line.

5. In a telephone system, a subscriber's line, a trunk, means including a manual switchboard for extending a connection from said line to said trunk including also means controlled at said board for bringing said trunk into use, substation-controlled means for restoring said trunk to non-busy or idle conditions, a set of switchboard cords, and an automatic switch for said trunk adapted to automatically select idle cords.

[Claims 6 to 73 not printed in the Gazette.]

1,168,895. ACETYLENE-GAS GENERATOR. JAMES A. MCCLAIN, Alva, Okla. Filed Feb. 28, 1914. Serial No. 821,632. (Cl. 48—53.2.)



1. In a gas generator, the combination with a generating chamber, and a bell relatively movable thereto, of a receptacle carried by said bell, a substantially spher-

ical valve loosely mounted in said receptacle, and means comprising a pointed member carried by said bell and movable relatively thereto for engaging said valve to simultaneously move it upwardly and laterally.

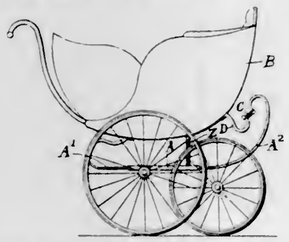
2. In a gas generator, the combination with a generating chamber, and a receptacle having an opening communicating therewith, of a loosely mounted valve for controlling said opening, and means for engaging said valve whereby it is moved simultaneously upwardly and laterally.

3. In a gas generator, the combination with a generating chamber, and a receptacle having an opening communicating therewith, of a substantially spherical valve loosely mounted in said receptacle for controlling said opening, and a longitudinally movable member for engaging said valve to move it upwardly and laterally simultaneously.

4. In a gas generator, the combination with a generating chamber, and a container having an opening communicating therewith, of a substantially spherical valve loosely mounted in said opening, and a movable member having a pointed portion for engaging said valve to move it upwardly and laterally simultaneously in accordance with the volume of gas in said generator.

5. In a gas generator, the combination with a generating chamber comprising a movable bell, and a carbid container carried by said bell for supplying carbid to said chamber, of means for automatically controlling the supply of carbid, said means comprising a substantially spherical valve loosely mounted in said container, a pointed member for engaging said valve, and means for causing said member to engage said valve when the volume of gas in said generator reaches a predetermined minimum.

1,168,896. LIGHT ROAD-VEHICLE. FREDERICK J. MCKENZIE, London, England. Filed Feb. 25, 1914. Serial No. 820,940. (Cl. 21—12.)



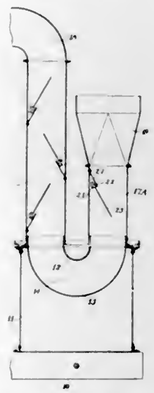
1. A frame or frame member for each side of a carriage, constructed of a plurality of parts which collectively form the total length of said frame or frame member and which are arranged and adapted to slide telescopically or otherwise along one another to form said frame or frame member, of the desired length to suit any particular length of carriage body or any particular length of wheel base, the end parts of the frame member directly connected to the body of the carriage being shaped to form C-springs on which the said body rests, and means to secure said parts firmly together in any position to which they are adjusted, substantially as described.

2. A frame or frame member for each side of a carriage, constructed of a plurality of parts which collectively form the total length of said frame or frame member and which are arranged and adapted to slide telescopically or otherwise along one another to form said frame or frame member, of the desired length to suit any particular length of carriage body or any particular length of wheel base, the end parts of the frame member directly connected to the body of the carriage being shaped to form C-springs on which the said body rests, means to secure said parts firmly together in any position to which they are adjusted, and journals or bearings (or housings for said journals or bearings) for the axles of the wheels, so mounted on the said parts of said frame or frame member that said journals or bearings (or the housings thereof) are capable of adjustment toward and away from one another, substantially as described.

3. A frame or frame member for each side of a carriage constructed of a plurality of parts which collectively form the total length of said frame or frame member and which are arranged and adapted to slide telescopically or otherwise along one another to form said frame or frame member, of the desired length to suit any particular length of carriage body or any particular length of wheel base, means to secure said parts firmly together in any position to which they are adjusted, and bearings for the wheel axles firmly attached to the central part of said frame, substantially as described.

4. A frame or frame member for each side of a carriage constructed of a plurality of parts which collectively form the total length of said frame or frame member and which are arranged and adapted to slide telescopically or otherwise along one another to form said frame or frame member, of the desired length to suit any particular length of carriage body or any particular length of wheel base, means to secure said parts firmly together in any position to which they are adjusted, bearings for one of the wheel axles fixedly attached to the central part of said frame, and bearings for the other wheel axle adjustably attached to said central part, substantially as described.

1,168,897. APPARATUS FOR CLEANING COTTON. IVAR MEURLING, Brooklyn, N. Y., assignor to Empire Duplex Gin Company, New York, N. Y., a Corporation of Arizona. Filed May 22, 1915. Serial No. 29,716. (Cl. 13—19.)



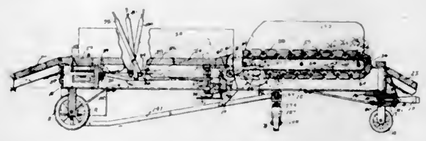
1. A cotton cleaning apparatus built up of a plurality of units, each comprising a dust box with a curved screen dividing the upper from the lower portion thereof, and a pair of vertical casings having oppositely inclined sets of spring fingers therein; and connecting casings between the upper ends of adjacent casings of adjacent units.

2. A cotton cleaning apparatus built up of a plurality of units, each comprising a dust box having a top constructed with two alining openings therein, and a vertical casing over each of the openings, a screen in each box curved from the farthest edges of said openings and forming the bottom of a continuous air passage through said casings, said casings having therein oppositely inclined sets of spring fingers; and curved connecting casings joining said units at the top of the vertical casings.

3. A cotton cleaning apparatus built up of a plurality of units, each comprising a dust box forming the base of the unit, each dust box having a top constructed with two rectangular openings therein, a semi-circular plate between the adjacent edges of said openings, a semi-circular screen between the opposite edges of said openings and

concentric with said plate, a glass covered port light above the screen and an air tight door below the screen, and a vertical casing over each of said openings, said casings having therein oppositely inclined sets of spring fingers and a glass covered removable port light opposite said fingers; and curved connecting casings joining said units at the top of the vertical casings.

1,168,898. PORTABLE GRAIN-ELEVATOR. GEORGE B. NELSON, Redfield, Iowa. Filed Aug. 31, 1908. Serial No. 451,063. (Cl. 214—11.)



1. In a machine of the class described, the combination of a frame, a tilting wagon platform pivotally mounted on said frame, a rock shaft mounted in said frame and having a depending crank section capable of moving under the rear of the tilting platform, an upright member pivoted to the front end of said platform, a block connected to said upright member and having a screw-threaded opening therein, a screw shaft passing through said block, an upright shaft, means for gearing said upright shaft to said screw shaft, power mechanism for rotating said upright shaft in either direction, a lever, and means connected with said lever for controlling the movement of said power mechanism, said controlling means being arranged to withdraw said crank section from beneath the rear end of the tilting platform when the screw shaft is moved in a direction to lift the front end of said platform.

2. In a machine of the class described, the combination of a frame, a tilting wagon platform pivotally mounted thereon, means for operating said platform about its point of pivot, mechanism for locking said platform in horizontal position consisting of a rock shaft journaled in said frame and provided with a depending crank section capable of movement under the rear end of said platform to prevent the same from tilting downwardly, a spring for normally holding said crank section in position under said platform, and means for simultaneously controlling said platform operating means and said locking mechanism.

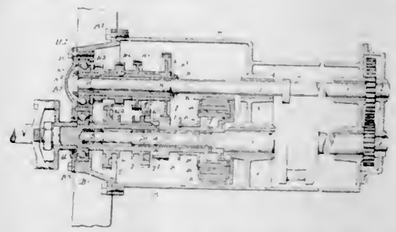
3. In a device of the class described, the combination of a frame, a tilting wagon platform pivotally mounted within said frame, a screw threaded shaft journaled upon said frame and operatively connected to said platform near one end on the underside thereof, power mechanism operatively connected to said shaft below said platform for operating said shaft, and a reversing mechanism below said platform for controlling the upward and downward movement of said shaft, and a retaining means at the opposite end of said platform for holding said platform in its normal position and a lever extending above said platform and operatively connected below said platform to said retaining means and said reversing mechanism, whereby said retaining means and said reversing mechanism may be simultaneously operated at the initial movement of either the raising or lowering operations of the platform.

4. In a device of the class described the combination of a frame, a tilting wagon platform pivotally mounted thereon, means positioned below one end of said platform and connected with the underside thereof for raising and lowering said platform, a reversing mechanism positioned below said platform for controlling said raising and lowering mechanism, a retaining member at the opposite end of said platform for holding said platform in its normal position and a lever operatively connected with said reversing mechanism and said retaining means whereby said reversing mechanism and said retaining means are simultaneously operated at the initial movement of either the raising or lowering operation.

5. In a machine of the class described, the combination of a frame, of a tilting platform pivotally mounted on said frame, a depending bracket carried by one end of said platform on the under side thereof, a block pivotally mounted within said bracket, a stationary bracket carried by the frame and having a screw threaded shaft journaled therein, said block operating upon said screw threaded shaft, and means below said platform for rotating the said shaft whereby the platform may be tilted.

[Claim 6 not printed in the Gazette.]

1,168,899. CHANGE-SPEED GEARING. BOUDEWIJN B. NEUTEBOOM, Detroit, Mich. Filed Apr. 29, 1911. Serial No. 624,072. (Cl. 123—197.)



1. In combination with the main shaft and cam shaft of a gas engine, a gear connection between said shafts whereby the cam shaft is driven at half the speed of the main shaft, and a driven shaft, of a change speed gearing between the main shaft and driven shafts, said change speed gearing including a gear wheel loosely mounted upon the cam shaft, a gear connection between said gear and the main shaft for driving said gear at the same angular velocity as that of the cam shaft, and gear connections between the gear on the cam shaft and the said driven shaft for transmitting motion from the said gear to the said driven shaft.

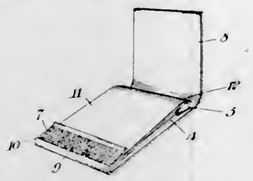
2. In combination with the main shaft and cam shaft of a gas engine, a gear connection between said shafts whereby the cam shaft is driven at half the speed of the main shaft, and a driven shaft, of a change speed gearing between the main shaft and driven shaft, said change speed gearing including a sleeve loosely mounted upon the cam shaft, a gear connection between said sleeve and the main shaft for driving the sleeve at the same angular velocity as that of the cam shaft, and gear wheels on the sleeve and driven shaft for transmitting motion from the sleeve to said driven shaft.

3. In combination with the main shaft and cam shaft of a gas engine, a gear connection between said shafts whereby the cam shaft is driven at half the speed of the main shaft, and a driven shaft, of a change speed gearing between the main shaft and the driven shaft, said change speed gearing including a sleeve loosely mounted upon the cam shaft, a gear connection between said sleeve and the main shaft for driving the sleeve at the same angular velocity as that of the cam shaft, said gear connection comprising a gear wheel fixed to said sleeve, a gear wheel loosely mounted upon the main shaft and meshing with the first mentioned gear wheel, means for coupling the gear wheel on the main shaft to said shaft to rotate therewith, and for uncoupling the same from the shaft, and gear wheels on the sleeve and driven shaft for transmitting motion from the sleeve to said driven shaft.

4. In combination with the main shaft and cam shaft of a gas engine, a gear connection between said shafts whereby the cam shaft is driven at half the speed of the main shaft, and a driven shaft, of a change speed gearing between the main shaft and the driven shaft, said change speed gearing including a sleeve loosely mounted upon the cam shaft, a gear connection between said sleeve and the main shaft for driving the sleeve at the same angular velocity as that of the cam shaft, said gear connection comprising a gear wheel fixed to said sleeve, a gear wheel loosely mounted upon the main shaft and meshing with

the first mentioned gear wheel, means for coupling the gear wheel on the main shaft to said shaft for rotation therewith and for uncoupling the same from the shaft, a second gear wheel fixed on the sleeve, a gear wheel slidably mounted upon the driven shaft to rotate therewith, means on said slidable gear and the gear wheel on the main shaft to couple the same together, said slidable gear being adapted to be positioned to mesh with the said second gear on the sleeve, or to be positioned to couple the same with the gear wheel on the main shaft, substantially as described.

1,168,900. BOOK-MATCHES. JOHN R. NOLAN, Yonkers, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1914. Serial No. 870,760. (Cl. 206—29.)



1. A book-match package comprising a margin strip having extending therefrom a row of matches with ignitible heads, a flame-protective member composed of a separate piece of flexible material having one end secured in close relation to said strip and the other end extended freely upward therefrom and upon the match heads, and a cover including a marginal portion secured in close relation to the said strip, a back portion for the matches and a flap portion, said marginal portion having a free upper edge throughout its width and said flap portion being substantially the same length as the matches and being adapted to be flexed about the heads of the matches and the free end of said protective member and tucked under the free edge of said marginal portion.

2. A book-match package comprising a card of matches having ignitible heads, a flame-protective member on the card covering the match heads, and a cover having an end folded upon the margin of the card and secured thereto and to the proximate end of the said member, and having also a flap portion adapted to be flexed about the heads of the matches and the free end of said protective member and tucked between the marginal fold of the cover and the proximate end of the said member.

3. A book-match package comprising a card of matches having ignitible heads, a flame protective member secured at its basal end to the margin of the card and of a length to extend to and cover the match heads, a cover having an end folded upon the margin of the card and the proximate end of the said member, and having also a flap portion adapted to be flexed about the heads of the matches and the free end of the protective member and tucked between the marginal fold of the cover and the proximate end of said member, and a common fastening device for the margin of the card, the marginal fold of the cover and the basal end of the said member.

4. A book-match package comprising a card of matches having ignitible heads, a flame-protective member on the card having one end inturned to hug the match heads, and a cover folded at one end upon and secured to the proximate parts of the card and the protective member, and having a flap portion adapted to be flexed about the heads of the matches and the free end of the protective member and tucked between the superposed parts of the cover fold and the protective member.

1,168,901. PROCESS OF TREATING MATCH-SPLINTS. JOHN R. NOLAN, Yonkers, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1915. Serial No. 13,141. (Cl. 52—5.)

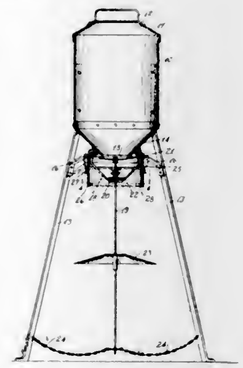
1. A process of treating match splints to impart a non-glowing property thereto, which consists in coating the splints with a finely-divided anti-glowing material with which is incorporated a finely-divided material which serves as a vehicle to carry the anti-glowing material into the splints.

2. A process of treating match splints to impart a non-glowing property thereto, which consists in coating the splints with a finely divided anti-glowing material with which is incorporated a finely divided material which is fusible by heat, and then in heating the coated splints.

3. A process of treating match splints which consists in coating the splints with finely-divided anti-glowing material with which is incorporated a finely-divided inflammable material which is fusible by heat, and then in heating the coated splints.

4. A process of treating match splints which consists in heating the splints; coating them with a finely-divided anti-glowing material with which is incorporated a finely-divided wax, and then heating the coated splints.

1,168,902. POULTRY-FEEDER. LUCIAN R. OAKES, Tipton, Ind., assignor to The Oakes Manufacturing Company, Tipton, Ind., a Corporation. Filed Oct. 3, 1914. Serial No. 864,884. (Cl. 119—70.)



1. A chicken feeder having a hopper with an outlet, means for supporting the hopper in an elevated position, means suspended from the hopper for controlling the outlet thereof and extending down to the lower end of the means for supporting the hopper, and chains extending loosely from the lower end of said hopper outlet controlling means to the lower end of the hopper supporting means.

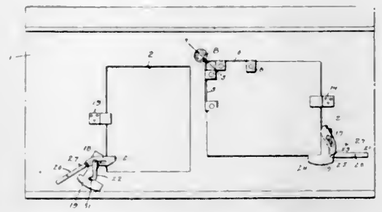
2. A chicken feeder having a hopper with an outlet, legs for supporting said hopper, a rod suspended from said hopper down to the lower end of the legs, means on said rod for controlling the outlet of the hopper, and chains loosely extending from the lower end of said rod to the lower ends of said legs.

3. A chicken feeder having an elevated hopper with an outlet opening, means connected with said hopper and suspended therefrom for controlling the outlet, and means removably mounted in connection with the lower part of said hopper for preventing access to the outlet of the hopper and having perforations large enough to permit the escape of the grain from the hopper.

4. A chicken feeder having a hopper, means for supporting said hopper, a tubular projection surrounding the outlet at the lower end thereof, a pan open at the top and surrounding said projection and having a screen bottom for protecting the grain in said outlet, means within said pan for feeding the grain from the hopper, a bead surrounding said pan, and springs attached to said hopper for engaging said bead and removably supporting said pan.

5. A chicken feeder having a hopper, means for supporting said hopper, a pendulum rod, a plate secured to the upper end of said rod, a downwardly extending bracket secured to said hopper and having a slot therein for receiving said rod, a rectangular plate through which said rod extends and having downwardly turned flanges for engaging said bracket, and a nut secured to said rod and adapted to rest on said rectangular plate so that said rod and plate may be readily removed from said bracket.

1,168,903. AUTOMATIC LOCK. JOHN OESTREICH, North Platte, Nebr. Filed May 19, 1915. Serial No. 29,117. (Cl. 70—102.)



1. In combination with a door mounted for pivotal movement in a vertical plane a lock comprising a pivotally mounted locking bolt to engage one corner of the door, a gravity acting latch to hold said locking bolt in engaged position, and a pivotally and slidably mounted lever to release the latch.

2. In combination with a door mounted for pivotal movement in a vertical plane a lock comprising a pivotally mounted locking bolt to engage one corner of the door, a gravity acting latch to hold said locking bolt in engaged position, and a pivotally and slidably mounted lever to release the latch, the pivot of the locking bolt also forming the pivot for the lever and said lever having a slot to permit its longitudinal movement on said pivot.

3. In combination with a door mounted for pivotal movement in a vertical plane a lock comprising a pivotally mounted locking bolt to engage one corner of the door, a gravity acting latch to hold said locking bolt in engaged position, and a pivotally and slidably mounted lever to release the latch, the pivot of the locking bolt also forming the pivot for the lever and said lever having a slot to permit its longitudinal movement on said pivot, a sealing hook also mounted on said pivot, and having a bill at its free end, the pivot which connects the lever with the latch having an eye for engagement by the bill of the sealing hook.

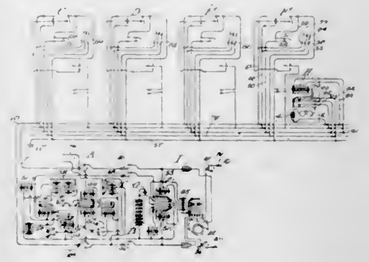
4. In combination with a door pivotally mounted at one upper corner for vertical angular movement, and reversely arranged locks one for securing the door in closed and the other for securing the door in opened position, each of said locks comprising a pivotally mounted bolt to engage under one corner of the door, a latch to hold the bolt in engaged or locking position, and a lever pivotally and slidably mounted and also pivotally connected to the latch.

1,168,904. EXTENSION OR PARTY-LINE TELEPHONE. ROY OWENS, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed July 5, 1906. Serial No. 324,915. (Cl. 179—17.)

1. In a telephone exchange system, the combination of a telephone line, a plurality of telephones connected therewith, automatic switches at the exchange or central station, a ground releasing circuit for each telephone, and means for opening all of said releasing circuits when any telephone is used.

2. In a telephone exchange system, the combination of a telephone line, a plurality of telephones connected therewith, automatic switches at the exchange or central station, a ground releasing circuit for each telephone, each releasing circuit including a ground common to all of the telephones, and means for disconnecting the ground from all of said circuits when any telephone is used.

3. In a telephone exchange system, the combination of a telephone line, a plurality of telephones connected therewith, automatic switches at the exchange or central station, a ground common to all of the telephones, a set of releasing springs for each telephone, one spring in each set being normally connected with the said ground, grounded release circuits controlled by said springs, and means for disconnecting the ground from all of said springs when any telephone is used.

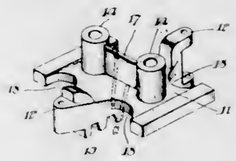


4. In a telephone exchange system, the combination of a telephone line, a plurality of telephones connected therewith, automatic switches at the exchange or central station, a ground common to all of the telephones, a set of releasing springs for each telephone, one spring in each set being normally connected with the said ground, a relay common to all of said telephones, provided with contacts through which the said ground is connected with the said releasing springs, as many grounded energizing circuits for said relay as there are telephones, each energizing circuit controlled by its allotted telephone, whereby the use of any telephone energizes said relay and cuts off the ground from all of said releasing springs.

5. In a telephone exchange system, the combination of a telephone line, a plurality of telephones connected therewith, automatic switches at the exchange or central station, a ground releasing circuit for each telephone, and means for opening all of said releasing circuits when any telephone is used, said switches including first-selectors, and the exchange comprising a battery for operating said selectors.

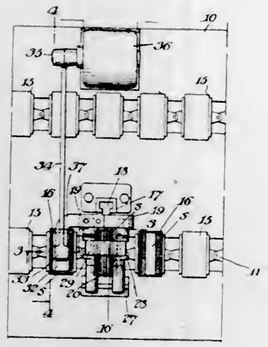
[Claims 6 to 32 not printed in the Gazette.]

1,168,905. BOX-TRAY CARRIER FOR MATCH-PACKING MACHINES. MICHAEL PARDON, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,559. (Cl. 193—2.)



A match-box-tray-carrier of the character described comprising a series of hingedly-connected links and a series of vertically-movable tray holders thereon, said links each including a plate having hinge connections at its front and back portions, and having spaced upstanding guide posts and a transverse partition wall between the posts, the front and back edges of the plate being recessed inwardly adjacent the sides of the respective hinge connections, and the space remaining between the partition wall and said inward recesses being less than the length of a match for the purpose described, and the said tray holders each comprising a member having spaced depending pins slidingly fitted to the guide posts.

1,168,906. MACHINE FOR PACKING MATCHES. MICHAEL PARIDON, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,560. (Cl. 144—61.)



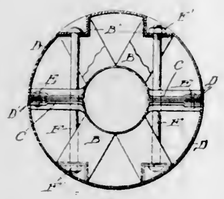
1. In a machine for packing matches, the combination with means for feeding filled box-trays having protection strips, of an ironing member arranged to bear upon the protection strips of the successive trays, and means for reciprocating said member upon the strips.

2. In a machine for packing matches, the combination with means for feeding filled box-trays having protection strips, of an ironing member, means for raising and lowering said member from and upon the protection strips of the filled trays, and means for reciprocating said member longitudinally of the protection strips.

3. In a machine for packing matches, the combination with means for feeding filled box-trays having protection strips, of an ironing member, means for horizontally reciprocating the same, a vertically-reciprocating member, and a loose connection between said element and the ironing member.

4. In a machine for packing matches, the combination with means for feeding filled box trays having protection strips, of a slotted body having an ironing foot thereon, means for horizontally reciprocating said body, a vertically-reciprocating element, and an actuating arm extending from said element into the slot of said body.

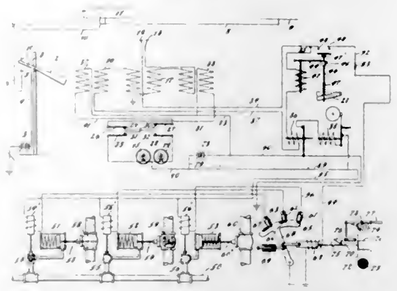
1,168,907. PULLEY. WILLIAM R. PATTEN, New York, N. Y. Filed Oct. 12, 1910. Serial No. 586,776. (Cl. 64—18.)



1. A pulley comprising two rim sections having oppositely disposed depressions, and a pair of hub sections having integral spokes, the outer ends of said spokes being up-set to receive the rim depressions, bolts passing through the depressed portions of rim sections and upset ends of spokes, and nuts upon the projecting ends of said bolts, the head of bolts and nuts resting within the rim depressions, as set forth.

2. A pulley comprising rim sections having oppositely-disposed depressions and inwardly extending end portions, hub sections having integral spokes, one set of spokes having upset ends adapted to engage the rim depressions, the other set of spokes being adapted to engage the inwardly extending end portions, and bolts passing through the rim sections and spokes as set forth.

1,168,908. CAB CONTROL SYSTEM. FRANKLIN M. RAYMOND, Saugatuck, Conn. Filed Apr. 23, 1913. Serial No. 762,979. (Cl. 246—58.)



1. In combination, electrically controlled "clear" and "danger" signals carried by a car, separate circuits for said signals, separate relays for closing each circuit, each of said circuits having contacts therein controlled by the armature of the relay for the other circuit and arranged to be opened when said armature is attracted to close its corresponding signal circuit, ramps along the trackway, one for each of said signals, means for energizing each of said ramps, and means for energizing each of said relays upon the passage of a car over a corresponding ramp when said ramp is in energized condition.

2. In combination, electrically controlled "clear" and "danger" signals carried by a car, separate circuits for said signals, separate relays for closing each circuit, each of said circuits having contacts therein controlled by the armature of the relay for the other circuit and arranged to be opened when said armature is attracted to close its corresponding signal circuit, ramps along the trackway, one for each of said signals, means for energizing said ramps, means for energizing each of said relays upon the passage of a car over a corresponding ramp when said ramp is in energized condition, and means for locking the armature of each of said relays in closed position until the circuit to the corresponding signal has been opened.

3. In combination, electrically controlled "clear" and "danger" signals carried by a car, separate circuits for said signals, separate relays for closing each circuit, each of said circuits having contacts therein controlled by the armature of the relay for the other circuit and arranged to be opened when said armature is attracted to close its corresponding signal circuit, ramps along the trackway, one for each of said signals, means for energizing said ramps, means for energizing each of said relays upon the passage of a car over a corresponding ramp when said ramp is in energized condition, and means for locking the armature of each of said relays in closed position until the circuit to the corresponding signal has been opened, said means comprising an electro-responsive device directly connected to the signal circuit.

4. In combination, train controlling means carried by the car, electrically-controlled operating means therefor, two energized ramps spaced along the trackway, means controlled by the passage of the car over the first of said ramps to initially control the operation of said operating means, and by the passage of the train over the second of said ramps to complete the operation of the same and means for preventing said operating means from actuating said train controlling means while the car is passing over the first of said ramps.

5. In combination, train controlling means carried by a car, electrically controlled operating means therefor, two devices spaced along the trackway, means controlled by the passage of the car over the first of said devices to initially control the operation of said operating means and by the passage of said car over the second of said devices to complete the operation of the same, and means for positively preventing said operating means from actuating said train controlling means while the car is passing over the first of said devices.

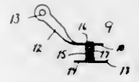
[Claims 6 to 10 not printed in the Gazette.]

1,168,909. CONSTRUCTION OF TUBULAR MEMBERS. WILLIAM H. ROOK, Jr., Akron, Ohio, assignor to The American Sewer Pipe Company, Akron, Ohio, a Corporation of New Jersey. Filed Dec. 23, 1913. Serial No. 808,343. (Cl. 72—53.)



A tubular member embodying in its construction a plurality of hollow units having longitudinally-extending ribs running from end to end of said units, the lower unit of said member being provided with concave end walls, the upper unit of said member being provided with convex end walls, the remaining units of said member being each provided at its lower end with a convex end wall and at its upper end with a concaved end wall whereby to form a series of concave receiving pockets, each of said members being provided in its end walls at points substantially opposite to the reinforcing wall with bond-receiving pockets, and bonding material filling said pockets.

1,168,910. SOUND-RECORD CLEANER. JAMES D. ROSTRON, Germantown, Pa. Filed June 16, 1915. Serial No. 34,353. (Cl. 181—15.)



1. A sound record cleaner comprising two parallel plates attached together and one of which is movable with relation to the other, means carried by one of said plates for attaching the device to some suitable portion of the talking machine, and means carried by the other plate for attaching a cleaning cloth thereto.

2. A sound record cleaner comprising a plate provided with attaching means, another plate provided with means for fastening a cleaning cloth thereto, and means for movably attaching said second plate to the first named plate.

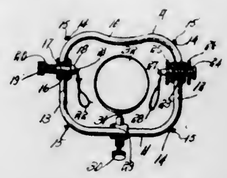
3. A sound record cleaner comprising a plate provided with attaching means, another plate provided with means for fastening a cleaning cloth thereto, means for movably attaching said second plate to the first named plate, and means for normally forcing said last named plate from the first named plate.

4. A sound record cleaner comprising a top plate having holes therein, attaching means carried thereby, a bottom plate provided with prongs, means carried by said bottom plate and slidably mounted in the holes in the top plate, and resilient means for forcing said bottom plate from the top plate.

5. A sound record cleaner comprising a top plate having holes therein, an attaching arm formed integral with one edge of said plate intermediate its ends and projecting outwardly and upwardly therefrom, said arm having a spiral therein and provided with a screw receiving opening at its outer end, a bottom plate provided with prongs and having means slidably mounted in the holes in the top plate, whereby said bottom plate is attached to said top plate and resilient means for normally forcing the bottom plate from the top plate.

[Claims 6 and 7 not printed in the Gazette.]

1,168,911. DENTAL INSTRUMENT. ALEXANDER SCHUTT, Bismarck, N. D. Filed May 21, 1915. Serial No. 29,647. (Cl. 32—20.)

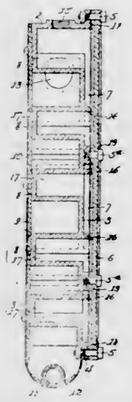


1. A dental instrument comprising a frame, members adjustably mounted in opposite sides of said frame, and wire loops secured on the inner ends of said members respectively.

2. A dental instrument comprising a frame, members adjustable in opposite sides of said frame, wire loops secured to the inner ends of said members respectively, and a mirror mounted on the bottom member of the frame for rotatable and slidable adjustment.

3. A dental instrument comprising a frame, a plurality of lateral projections on the frame having headed outer ends, members adjustably mounted in opposite sides of the frame, and wire loops secured on the inner end of the member respectively.

1,168,912. WATER-HEATER. SAMUEL J. SHARP, Warwood, W. Va. Filed June 16, 1915. Serial No. 34,480. (Cl. 122—230.)



1. In a water heater, a body portion having side walls, a vertical division wall extending from one side wall to the other and located adjacent to the front edges of said side walls; a back fixed on the rear edges of said side walls; a plurality of receptacles extending rearward from said division wall toward the plane of said back, said receptacles opening outward through said division wall and constituting pockets; said division wall, back and receptacles being relatively disposed to form a tortuous passage for heat; a face-plate mounted on the front edges of said side walls; said face-plate, division wall and pockets being relatively disposed to form a passage for water.

2. In a water heater, a body portion having side walls, a vertical division wall extending from one side wall to the other and located adjacent to the front edges of said side walls; a back fixed on the rear edges of said side walls; a plurality of receptacles extending rearward from said division wall toward the plane of said back, said receptacles opening outward through said division wall and constituting pockets; said receptacles being directed laterally from opposite side walls and being of less length than the distance between the latter; said division wall, back and receptacles forming an inclosed tortuous passage for heat; and a face-plate mounted on the front edges of said side walls; said face-plate, division wall and pockets forming an inclosed passage for water.

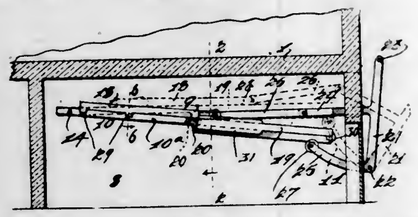
3. In a water heater, a body portion having side walls, a vertical division wall extending from one side wall to the other and located adjacent to the front edges of said side walls; a back fixed on the rear edges of said side walls; a plurality of receptacles extending rearward from said division wall toward the plane of said back, said receptacles opening outward through said division wall and constituting pockets; said receptacles being directed laterally from opposite side walls and being of less length than the distance between the latter; said division wall, back and receptacles forming an inclosed tortuous passage for heat; a face-plate mounted on the front edge of said side walls; said face-plate, division wall and pockets forming an inclosed passage for water; and deflecting ribs formed on the front face of said division wall whereby said water passage is rendered tortuous.

4. In a water heater, a body portion having side walls, a vertical division wall extending from one side wall to the other and located adjacent to the front edges of said side walls; a back fixed on the rear edges of said side walls; a plurality of receptacles extending rearward from said division wall toward the plane of said back, said receptacles opening outward through said division wall and constituting pockets; said receptacles being upwardly inclined and being disposed in staggered relation; said division wall, back and receptacles forming an inclosed tortuous passage for heat; and a face-plate mounted on the front of said body; said face-plate, division wall and pockets forming an inclosed passage for water.

5. In a water heater, a body portion having side walls, a vertical division wall extending from one side wall to the other and located adjacent to the front edges of said side walls; a back fixed on the rear edges of said side walls; a plurality of receptacles extending rearward from said division wall toward the plane of said back, said receptacles opening outward through said division wall and constituting pockets; said receptacles being upwardly inclined and being disposed in staggered relation; said division wall, back and receptacles forming an inclosed tortuous passage for heat; a face-plate mounted on the front of said body; said face-plate, division wall and pockets forming an inclosed passage for water; and deflecting ribs formed on the face of said division wall whereby said water passage is rendered tortuous.

[Claims 6 and 7 not printed in the Gazette.]

1,168,913. ASH-SIFTER FOR BAKERS' OVENS. ISAAC SHAPO, New York, N. Y. Filed May 13, 1915. Serial No. 27,957. (Cl. 126—245.)



1. A sifting device consisting of a plurality of grids arranged in horizontal planes one above the other, a hinged frame therefor, the upper grid being movably mounted on said frame, the lower grid being held against movement upon said frame, means to slide said movable grid over said fixed grid, and means to rock said frame upon its hinged support simultaneously with the movement of said movable grid.

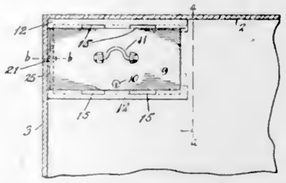
2. A sifting device consisting of a plurality of grids arranged in horizontal planes one above the other, a frame therefor, said frame being hinged at one end thereof, a rocking lever to support said frame at its free end, whereby said frame is swung upon its hinged support when said lever is rocked, the upper of said grids being slidably mounted on said frame, the lower grid being fixed to said frame, and means connecting the rocking lever and the movable grid.

3. A sifting device consisting of a frame hinged at one end to a support, a plurality of grids carried by said frame, the lower grid being fixed to said frame, the upper grid being slidably mounted on said frame and arranged to slide over the fixed grid, a rocking lever pivotally supported adjacent the free end of said frame, an arm carried by said lever, a roller carried by said arm arranged to engage said frame, and a link pivotally secured at one end thereof to said lever and at the other end to said movable grid.

4. A sifting device comprising a frame consisting of a plurality of members offset intermediate the ends thereof, a grid fixed to said frame and resting upon the offset portions of said frame members, a grid slidably mounted upon the other portion of said frame members and arranged to slide over the fixed grid, a rocking lever pivotally supported adjacent the free end of said frame, an arm carried by said lever, a roller carried by said arm arranged to engage said frame, and a link pivotally secured at one end thereof to said lever and at the other end to said movable grid.

5. A sifter comprising a frame, hinged at one end to a support, a grid slidably mounted on the hinged frame, means to impart to the slidable grid a longitudinal movement, and means to impart to the frame, simultaneously with the longitudinal movement of the grid, a swinging movement in a vertical plane.

1,168,914. SAFE-DEPOSIT RECEPTACLE OR BOX FOR USE IN TRUNKS AND THE LIKE. THOMAS S. SPIVEY, Cincinnati, and GEORGE A. HATTERSLEY, Norwood, Ohio, assignors to The Victor Safe & Lock Company, Norwood, Ohio, a Corporation of Ohio. Filed Sept. 14, 1912. Serial No. 720,423. (Cl. 190—19.)



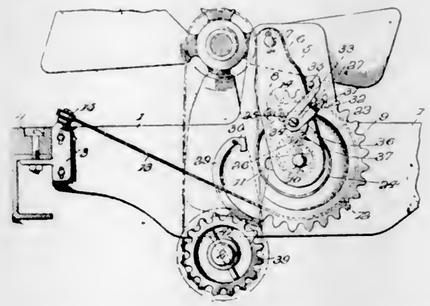
1. A removable safety-deposit box or casket for use in trunks and like receptacles comprising end walls, side walls, a bottom having lateral extensions along its longitudinal edges, a lid having a lock, a pair of floor-strips having inwardly-disposed upper flanges adapted to engage the said lateral extensions along the longitudinal edges of the box, and a hook attached to the end wall of the trunk adjacent one end wall of the box and adapted to engage said last-named end wall of the box when the lid is in locked position to prevent the sliding of the box endwise from locked-relation with said floor-strips.

2. A removable safety-deposit box or casket for use in trunks and like receptacles comprising end walls, side walls, a bottom having notched lateral extensions along its longitudinal edges, a lid having a suitable lock and, also, having one of its ends extending beyond the adjacent end wall of the box, a pair of floor-strips suitably attached to the bottom of the trunk and having inwardly-disposed upper flanges that are notched to coincide with the notched

lateral extensions along the box bottom and adapted to engage the said lateral extensions along the longitudinal edges of the box, and a hook having a shank attached to the end wall of the trunk adjacent said last-named end wall of the box that lies beneath the said extended end of the lid and adapted to engage a recess or gain in the upper edge of said last-named end wall of the box when the lid is in locked position to prevent the endwise sliding of the box from locked relation with said floor-strips.

3. In combination, a removable safety-deposit box or casket adapted for use in trunks and like receptacles and comprising end-walls, side-walls, a bottom and a top lid having locking-means, detent-means on the horizontal-bottom and on one of the vertical-walls of the trunk or receptacle, and means on the box or casket adapted to contact and interlock with said deten-means on the trunk bottom and vertical-wall, whereby both the horizontal and vertical movements of the said box within the trunk are prevented until the lid of the box in unlocked and thrown open.

1,168,915. MECHANICAL STARTER FOR AUTOMOBILES. EDGAR B. STOCKING, Washington, D. C. Filed May 20, 1913. Serial No. 768,894. (Cl. 123—185.)



1. A mechanical starter comprising a movable support, a starting member mounted to rotate thereon, means for moving said starting member into different positions, means for rotating said starting member when in different positions in opposite directions, and means carried by said support for locking said starting member in inoperative position.

2. A mechanical starter having a support mounted to swing on an arc, a gear carried by said supporting member adapted to intersect the path of travel of the pinion on the engine shaft, means for moving said starting gear into engagement with the pinion on the engine shaft and for rotating said gear in one direction, and means for automatically throwing said gear out of mesh with the pinion on the engine shaft by the rotation thereof at the completion of its operative rotation.

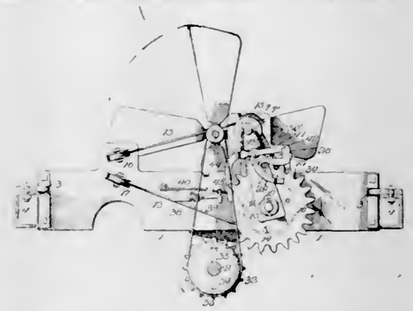
3. In a mechanical starter, an engine shaft having a pinion, a revoluble starting member capable of intersecting the path of travel of said pinion on the engine shaft, a spring for returning said starting member to initial position, and means coöperating with said starting member on final rotation thereof for returning said starting member to its original position.

4. A starting mechanism for explosive engines comprising a revolubly mounted spring-returned member mounted to move into and out of the path of a coöperating member carried by the engine shaft, a projection carried by said spring-returned member, a cam coöperating with said projection for moving said spring-returned member into inoperative position, and means for automatically locking said member in inoperative position.

5. A mechanical starter having a revolubly mounted starting member adapted to move in different paths, one of said paths intersecting the path of travel of a coöperating member carried by the engine shaft, means for rotating said starting member when in engagement with the coöperating member, means for throwing said starting member out of engagement with the coöperating member, means for revolving said starting member in a reverse direction when out of engagement with the coöperating member, and means for locking said starting member out of engagement with the coöperating member.

[Claims 6 to 36 not printed in the Gazette.]

1,168,916. MECHANICAL STARTER FOR AUTOMOBILES. EDGAR B. STOCKING, Washington, D. C. Filed Mar. 10, 1915. Serial No. 13,518. (Cl. 123—185.)



1. In a mechanical starter, the combination with an engine shaft having a pinion mounted thereon, of a revoluble starting member mounted to intersect the path of travel of the pinion of the engine shaft, means for moving said gear into engagement with the pinion of the engine shaft and for rotating the same, and a movable member arranged in the path of travel of said starting member for throwing said starting member out of engagement with the pinion of the engine shaft upon the reverse movement thereof.

2. A mechanical starter, comprising a suspended member, having a revolubly mounted starting member mounted therein, a cable for moving said starting member into different positions and for rotating said starting member when in adjusted position, and a movable member arranged in the path of travel of said starting member for initially moving said starting member in one direction by the reverse rotation thereof.

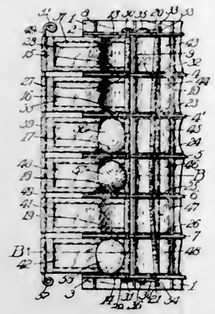
3. In a mechanical starter, the combination with an engine shaft, a pinion mounted thereon, of a revoluble starting member mounted to intersect the path of travel of the pinion of the engine shaft, a cable connected to said revoluble starting member, a lever having a connection with said cable, a spring for normally holding said lever in initial position, and a movable member arranged in the path of travel of said starting member and adapted to move said starting member out of engagement with the pinion of the engine shaft upon the reverse movement thereof.

4. A starting mechanism for explosive engines, comprising a revolubly mounted member mounted to move into and out of the path of a coöperating member carried by the engine shaft, means for moving and rotating said member in different directions, and a movable member arranged in the path of travel of said starting member and adapted to move said starting member out of engagement with the coöperating member of the engine shaft upon the reverse movement of said starting member.

5. A mechanical starter having a revolubly mounted starting member adapted to move in different paths, one of said paths intersecting the path of travel of a coöperating member carried by the engine shaft, means for rotating said starting member when in engagement with the coöperating member, and a movable member arranged in the path of travel of said starting member and adapted to move said starting member out of engagement with the coöperating member of the engine shaft when moved in a reverse direction.

[Claims 6 to 35 not printed in the Gazette.]

1,168,917. EGG-CARRIER. MILTON W. STOREY, Indianapolis, Ind. Filed Jan. 31, 1914. Serial No. 815,630. (Cl. 217—28.)



1. A carrier appliance including a plurality of compartments arranged in series, opposite walls of the compartments having each a recess in the top thereof, two rods removably supported in each of the recesses, and a plurality of flexible hammocks spaced apart, one for each compartment, and connected at one end to one of the rods and at its opposite end to the other one of the two rods.

2. A carrier appliance including a main rod having two supporting arms, a plurality of flexible hammocks spaced apart and connected at one end to the main rod, a controlling rod connected to the opposite end of each of the hammocks, two walls pivotally supporting the arms of the main rod and removably supporting the controlling rod, and partitions supporting both the main rod and the controlling rod between the hammocks.

3. A carrier appliance including a plurality of supporting walls having each a recess in the top thereof, a main rod having two arms pivotally connected to the walls to permit the rod to be moved into or out of the recesses, a flexible hammock connected at one end to the rod, and a controlling and supporting rod connected to the opposite end of the hammock and movable into or out of the recesses.

4. A carrier appliance including a compartment comprising four connected walls, two opposite walls having each a recess in the top thereof, the sides of the recesses being undercut, two stiff rods removably supported in the recesses of the two opposite wall, a flexible hammock removably arranged in the compartment and connected at one end to one of the rods, the opposite end being connected to the other one of the rods, a bottom for supporting all the walls, and a cover for the walls and the hammock.

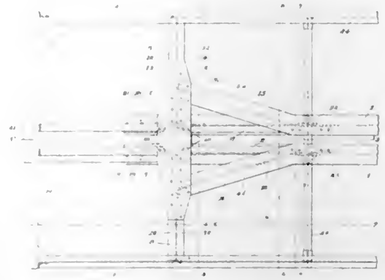
5. An egg carrier including a plurality of compartments arranged in series, a main rod having arms pivotally connected to the outer compartment walls, the rod being normally supported upon the partitional walls of the compartments, a plurality of flexible hammocks, one for each compartment, connected at one end to the main rod, and a supporting and controlling rod connected to the opposite end of each of the hammocks and normally supported also on the partitional walls adjacent the main rod.

1,168,918. CENTER-SILL CONSTRUCTION. JOHN F. STREIB, Avalon, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 20, 1912. Serial No. 732,494. (Cl. 105—76.)

1. In a car underframe, a center sill consisting of two webbed metal longitudinal members, each member having the end of its web slit, one portion of such slit end being displaced from its original vertical plane and away from the other portion.

2. In a car underframe, a center sill consisting of two webbed metal longitudinal members, each member having the ends of its web slit, one portion of each slit end being displaced from its original vertical plane and out of contact with the other portion of said slit end.

3. In a car underframe, a center sill consisting of two webbed metal longitudinal members, having their ends slit, portions of such ends being displaced laterally in opposite directions.

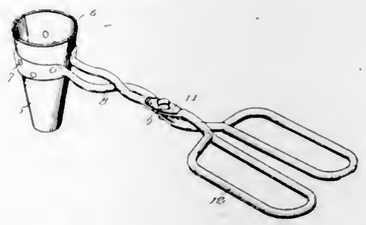


4. In a car underframe, a center sill consisting of two webbed metal longitudinal members, having the ends of their webs slit, portions of such ends being displaced from their original vertical plane in opposite directions.

5. In a car underframe, a center sill consisting of two webbed metal longitudinal members, each member having the ends of its web slit, one portion of each slit end being spread away from the remaining portion of said end.

[Claims 6 to 42 not printed in the Gazette.]

1,168,919. ICE-CREAM DISHER. SAMUEL ELLSWORTH SURFACE, Stickney, S. D., assignor to Melvin O. McLaughlin, York, Nebr. Filed Dec. 9, 1913. Serial No. 805,518. (Cl. 107—48.)



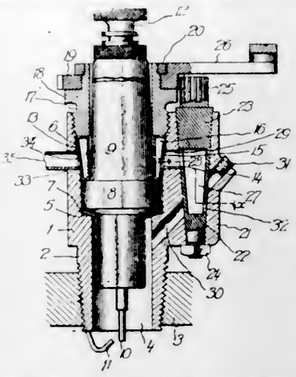
The herein described ice cream disher comprising a pair of twisted shanks pivotally connected together and crossing each other at points on both sides of and spaced from the pivot point, said shanks being extended and looped at one end to form handles and at their opposite ends being provided each with an arcuate terminal, and a pair of independent similarly shaped scoop members secured each to one of the arcuate terminals.

1,168,920. PRIMING DEVICE FOR EXPLOSIVE-ENGINES. SAMUEL J. TODD, Highland Park, Mich., assignor of three-fourths to Ben C. Hughes, Detroit, Mich. Filed Nov. 30, 1914. Serial No. 874,649. (Cl. 123—187.5.)

1. In a priming device for explosive engines, a spark plug, a valve body carried thereby, a fuel supply normally in communication with said valve body, an auxiliary reservoir interposed between said valve body and said fuel supply and adapted to be heated by said spark plug, and means in said valve body for delivering predetermined quantities of heated fuel to said spark plug.

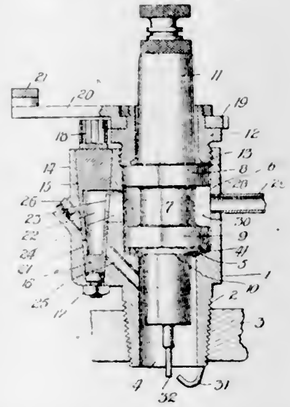
2. In a combined spark plug and priming device, a spark plug body, a valve body carried thereby, a porcelain body in said spark plug body, an auxiliary fuel reservoir in said spark plug body aroung said porcelain body, and a valve plug in said valve body adapted to establish communication between said auxiliary fuel reservoir and said spark plug body.

3. In a combined spark plug and priming device, a spark plug body, a valve body carried thereby, a porcelain body in said spark plug body, an auxiliary fuel reservoir in said spark plug body around said porcelain body,



a valve plug in said valve body adapted to establish communication between said auxiliary fuel reservoir and said spark plug body, and means supported by said spark plug for imparting movement to said valve plug.

1,168,921. SPARK-PLUG. SAMUEL J. TODD, Highland Park, Mich., assignor of three-fourths to Ben C. Hughes, Detroit, Mich. Filed Dec. 17, 1914. Serial No. 877,738. (Cl. 123—169.)



1. In a combined spark plug and priming device, a spark plug body, an electrode and a body of insulation material in said spark plug body for said electrode and coöperating with said body in forming a reservoir adapted to receive fuel for priming purposes.

2. In a combined spark plug and priming device, a spark plug body, and electrode and an insulator for said electrode in said spark plug body coöperating with said body in forming an annular reservoir adapted to receive fuel to be heated by said insulator for priming purposes.

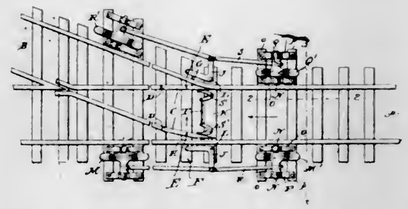
3. In a combined spark plug and priming device, a spark plug body, an electrode, a porcelain body in said spark plug body as an insulator for said electrode and providing an annular fuel reservoir, and means carried by said spark plug body for transferring measured quantities of fuel from the reservoir to the inner end of said body.

4. The combination with a spark plug body and an electrode, of an insulator therein for said electrode and providing an annular fuel reservoir, and means carried by said spark plug body controlling the outlet of fuel from the reservoir.

5. The combination with a spark plug body, and an electrode of a porcelain body therein as an insulator for said electrode, collars carried by said porcelain body and coöperating with said spark plug body in providing a reservoir, and a valve in communication with the reservoir for controlling the outlet thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,168,922. SWITCHING MECHANISM. RINALDO VITI, St. Louis, Mo. Filed Nov. 18, 1914. Serial No. 872,706. (Cl. 104—12.)



1. In combination with a main and branch line of a railroad, pivoted switch points coöperating therewith, means for throwing the switch points to opposite positions, and means unattached to the points and independent of said throwing means for riding against and reinforcing the free ends of the switch points, said reinforcing means comprising pivoted means freely associated with the switch points and adapted to be shifted by the movement of the latter and consisting of a pair of pivoted levers mounted independently of the switch points, each having one arm abutting against the switch points and the other arms thereof being connected together, substantially as and for the purpose described.

2. The combination with a main and branch line of a railroad, pivoted switch points coöperating therewith, means for throwing the switch points to opposite positions, a plurality of members unattached to the switch points and one member lying adjacent each point and independent of the switch throwing means for reinforcing the ends of the switch point, and connecting means for said reinforcing members whereby they act in unison, substantially as and for the purposes described.

3. The combination with a main and branch line of a railroad, pivoted switch points coöperating therewith, means for throwing the switch points to opposite positions, and members independent of said throwing means arranged adjacent each switch point for reinforcing the free weakened ends of the switch points, said reinforcing members comprising pivoted levers having a connecting member therewith so that they act in unison, movably associated with the switchpoints and adapted to be shifted by a movement of the latter, substantially as and for the purpose described.

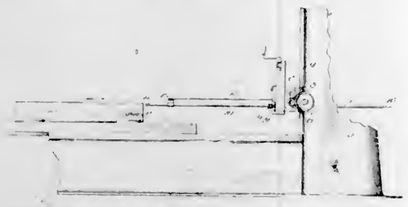
4. The combination with the main and branch line of a railroad, pivoted switch points coöperating therewith, means for throwing the switch points to opposite positions, a reinforcing member lying adjacent each switch point and adapted to bear against the weakened ends of the points, a connecting member arranged between the reinforcing members and connected therewith, whereby the reinforcing members act in unison, the said reinforcing members adapted to be shifted by a movement of the switch points.

5. The combination of a main and branch line of a railroad, pivoted switch points coöperating therewith, means for throwing the switch points to opposite positions, and means unattached to the points and independent of said throwing means for riding against and reinforcing the ends of the switch points, said reinforcing means comprising pivoted bell crank levers each having an arm associated with a switch point and adapted to be shifted by the movement of the latter, a connecting rod arranged be

tween said levers and connected to one of their arms whereby the levers move in unison upon the actuation of the switch points, substantially as described.

[Claim 6 not printed in the Gazette.]

1,168,923. DOWEL-SAWING MACHINE. HERBERT W. WEEKS, Coopers Mills, Me. Filed Sept. 26, 1914. Serial No. 863,625. (Cl. 144—113.)



1. In a dowel sawing machine, the combination with a carriage provided with a head, of a tubular arbor mounted in said head, a tubular saw connected to said arbor, an arm secured to said head in a plane below said arbor extending upwardly and outwardly and provided with an opening to receive said arbor, and an obliquely arranged depending bearing carried by the free end of said arm for supporting said saw.

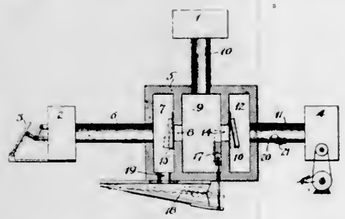
2. In a dowel sawing machine, the combination with a tubular saw, of an arm extending above said saw, and a depending obliquely arranged bearing carried by said arm through which said saw extends.

3. In a dowel sawing machine, the combination with a movable table, of a movable carriage provided with a tubular arbor, a tubular saw connected to said arbor, a supporting arm extending in a plane above said saw, and a depending obliquely arranged bearing carried by said arm through which said saw extends.

4. In a sawing machine, the combination with a reciprocating table, of a movable carriage mounted at one end of said table, a tubular arbor carried by said carriage, a tubular saw connected to said arbor, an arm extending in a plane above said tubular saw, and a depending obliquely arranged bearing carried by said arm through which said saw extends.

5. In a dowel sawing machine, the combination with a movable carriage provided with a head, of a tubular arbor mounted in said head, a tubular saw connected to the free end of said arbor, an arm having a depending angled end secured to said head, the angled portion of said arm being provided with an opening to receive said arbor, said arm extending parallel to said arbor in a plane above the same, and a bearing secured to said arm at its free end and extending obliquely downward therefrom, forming a support for said arbor.

1,168,924. PNEUMATIC PLAYER MECHANISM. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Apr. 2, 1915. Serial No. 18,687. (Cl. 84—168.)



1. In a pneumatic player apparatus, an action, a power driven exhauster in communication therewith, a manually driven exhauster, also in communication therewith, means operating to prevent the power driven exhauster from drawing air from the manually driven exhauster side, and means to prevent the manually driven exhauster from drawing air from the apparatus on the power driven exhauster side, and means for automatically choking off the power exhauster upon the operation of the manual exhauster.

2. In a pneumatic player apparatus, an action, a power driven exhauster in communication therewith, a manually driven exhauster also in communication therewith and partially through a common passage, check valves between said common passage and each of said exhausters, said valves opening toward said exhausters respectively whereby the exhausting of air from said common passage by one exhauster will tend to close the check valve for the other exhauster, and means for automatically choking off the power exhauster upon the operation of the manual exhauster operable by the air tension created by the operation of the manually driven exhauster.

3. In a pneumatic player apparatus, an action, a power driven exhauster in communication therewith, a manually driven exhauster also in communication therewith and partially through a passage in common to both exhausters, check valves between said common passage and each of said exhausters, said valves opening toward said exhausters respectively whereby the exhausting of air from said common passage by one exhauster will tend to close the check valve for the other exhauster, and means for automatically choking off the power exhauster upon the operation of the manual exhauster, said means being operable by the air tension created by the operation of the manually driven exhauster, and comprising a valve coacting with the passage leading to the power driven exhauster.

4. In a pneumatic player apparatus, an action, a power driven exhauster in communication therewith, a manually driven exhauster also in communication therewith and partially through a passage in common to both exhausters, check valves between said common passage and each of said exhausters, said valves opening toward said exhausters respectively whereby the exhausting of air from said common passage by one exhauster will tend to close the check valve for the other exhauster, and means for automatically choking off the power exhauster upon the operation of the manual exhauster, said means being operable by the air tension created by the operation of the manually driven exhauster and comprising a valve co-acting with the passage leading to the power driven exhauster and between the check valve therein and the passage in common.

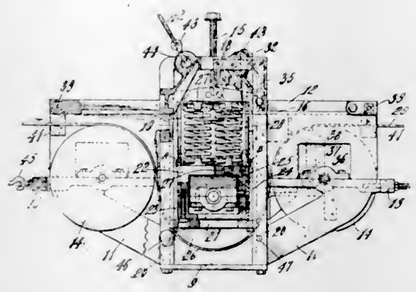
5. In a pneumatic player apparatus, an action, a power driven exhauster in communication therewith, a manually driven exhauster, also in communication therewith, means operating to prevent the power driven exhauster from drawing air from the manually driven exhauster, and means to prevent the manually driven exhauster from drawing air from the power driven exhauster, and means to lessen the effect of the power driven exhauster on the action while said exhauster is running to thereby relatively increase the effect of the manually driven exhauster when the same is operated simultaneously with the power driven exhauster.

[Claims 6 to 8 not printed in the Gazette.]

1,168,925. PORTABLE DYNAMOMETER. FRANK C. ZANZIG, Milwaukee, Wis. Filed Jan. 2, 1914. Serial No. 809,910. (Cl. 73—15.)

1. A dynamometer, comprising a generator adapted to be driven with the machine being tested, a rheostat having an adjustable arm controlled by the torque of the machine being tested and having its resistance included in the circuit of the generator, and a volt meter spanning that portion of the resistance winding of the rheostat which is marked off by the adjustable arm thereof.

2. A dynamometer, comprising a speed meter consisting of a generator driven with the machine being tested and provided with a volt meter connected therewith, and a torque meter for connection between the machine being tested and the driving means therefor, said torque meter comprising a rheostat having an adjustable arm controlled by the torque of the machine being tested, said rheostat having connection with the generator and having the volt meter spanning the portion of the resistance winding set off by its adjustable arm.



3. A dynamometer, comprising a pair of pulleys adapted to have the belt of the machine being tested travel thereon, a spring actuated pulley having the portion of the belt between the other pulleys passing around it and yielding to the pull of the belt against the action of its spring, means consisting of a rheostat operated by the yielding movements of said pulley for indicating the degree of yielding movement of the last mentioned pulley to the pull of the belt when the machine being tested is driven, an electrical circuit including the resistance winding of the rheostat and a source of electrical supply, and a volt meter spanning the portion of the resistance winding of the rheostat traversed by the contact arm of the rheostat due to the operation thereof by the yielding movements of the pulley.

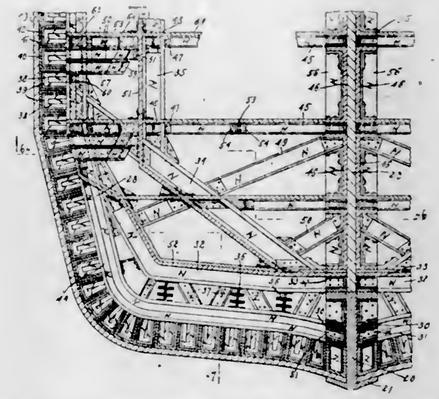
4. A dynamometer, comprising a pair of pulleys adapted to have the belt of the machine being tested travel thereon, a pulley having the portion of the belt between the other pulleys passing around it, means for causing said pulley to yield, with resistance to the pull of the belt, a generator driven by one of the pulleys, a rheostat having its contact arm controlled by the yielding movements of the yielding pulley and having its resistance winding included in the circuit of the generator, and a volt meter spanning the portion of the resistance winding of the rheostat traversed by the contact arm thereof.

5. A dynamometer, comprising a pair of pulleys adapted to have the belt of the machine being tested travel thereon, a third pulley having the portion of the belt between the other pulleys passing around it, means for causing said third pulley to yield, with resistance to the pull of the belt, a generator driven by one of the pulleys, a rheostat having its contact arm controlled by the yielding movements of the yielding pulley and having its resistance winding included in the circuit of the generator, a volt meter spanning the portion of the resistance winding of the rheostat traversed by the contact arm thereof to indicate the horse power of the machine being tested, a switch for connecting the volt meter across the terminals of the generator to indicate the speed of the belt, an independent constant potential circuit, and a switch for substituting the constant potential circuit for the generator when the first mentioned switch is in position to include the rheostat in the circuit for indicating on the volt meter the relative degree of movement of the contact arm of the rheostat to measure the torque of the machine being tested.

[Claims 6 to 13 not printed in the Gazette.]

1,168,926. CONSTRUCTION OF MARINE VESSELS. EUGENE AMBROZY, New York, N. Y. Filed May 11, 1915. Serial No. 27,355. (Cl. 114—79.)

1. An iron vessel comprising an outer and an inner hull having a common keel, a longitudinal bulk-head resting upon said keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates and said bulkhead, thereby forming the transverse frames of said inner hull, deck-beams held upon said bulk-head and the transverse frames of said inner hull, and bracing girders between the two hulls.



2. An iron vessel comprising an outer and an inner hull having a common keel, a longitudinal bulk-head resting upon said keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates and said bulkhead, thereby forming the transverse frames of said inner hull, deck-beams held upon said bulk-head and the transverse frames of said inner hull, and bracing girders attached to the skin of the inner hull and to the transverse frames of the outer hull.

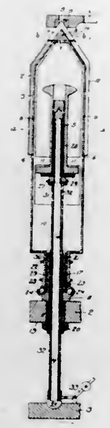
3. An iron vessel comprising an outer and an inner hull having a common keel, an intermediate bottom disposed between the bottoms of said two hulls, a longitudinal bulk head resting upon said keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates forming the transverse frames of said inner hull, and struts carried by said plates and attached to said intermediate bottom and said bulk-head.

4. An iron vessel comprising an outer and an inner hull having a common keel, an intermediate bottom disposed between the bottoms of said two hulls, a longitudinal bulk head resting upon said keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates forming the transverse frames of said inner hull, struts connecting said intermediate bottom with said bulk-head, and struts between the bottom of the inner hull and said bulk-head, said struts being carried by said plates.

5. An iron vessel comprising an outer and an inner hull having a common keel, a longitudinal bulk-head resting upon said keel, transverse plates fastened to said keel, channel-irons disposed along the outer edges of said plates and attached to the latter and to said keel, thereby constituting the transverse frames of said outer hull, a second set of channel-irons secured to said plates and said bulkhead, thereby forming the transverse frames of said inner hull, deck-beams held upon said bulk-head and the transverse frames of said inner hull, and bracing girders between the two hulls, said bracing girders dividing the space between said two hulls into longitudinal water-tight compartments.

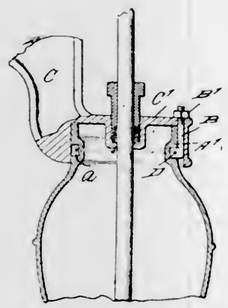
[Claims 6 to 9 not printed in the Gazette.]

1,168,927. FLIER SPINNING DEVICE. JAMES J. BIBBY, Philadelphia, Pa., assignor of one-half to Daniel Snyder, Philadelphia, Pa. Filed Oct. 1, 1913. Serial No. 792,745. (Cl. 118—29.)



The combination, in a flier spinning device, of a rotatable flier, a non-rotating spindle, a sleeve rotatable on said spindle, a spool carried by said sleeve, a friction device acting upon said sleeve, another sleeve carrying said friction device, and a lever with adjustable weight for imparting a variable amount of lifting force to said second sleeve.

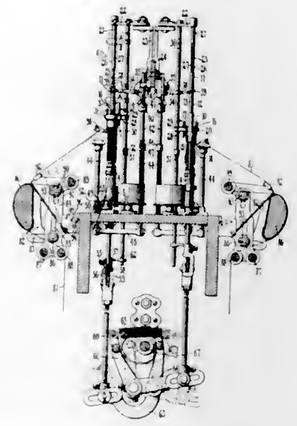
1,168,928. PUMP ATTACHMENT. WINFIELD SCOTT BRIGGS, Omaha, Nebr. Filed Mar. 1, 1915. Serial No. 11,208. (Cl. 103—65.)



1. The combination with a pump casing having an annular groove adjacent its upper end, and a standard including a cap fitting the upper end of the pump casing, of bolts extending into and through the cap around the upper portion of the pump casing, having angular portions extending into the said grooves, and means for connecting the said bolts and holding the same around the pump casing independent of the said cap, whereby the latter may be readily associated with, and disassociated from, the said pump casing.

2. The combination with a pump casing having an annular groove adjacent its upper end, and a standard including a cap fitting the said upper end of the pump casing, of bolts extending into and through the cap around the upper end of the pump casing, having angular portions extending into the said groove and provided with apertures, and a wire connecting ring also extending around in the annular groove and through the apertures of the angular portions of the bolts, whereby to connect the said bolts independent of the said cap in order that the latter may be readily disassociated from and associated with the said pump casing.

1,168,929. QUILLING-MACHINE. EDWARD E. BRADLEY, Stonington, Conn., assignor to The Atwood Machine Company, Stonington, Conn., a Corporation of New Jersey. Filed Apr. 19, 1913. Serial No. 762,378. (Cl. 242—30.)



1. In a quilling machine, a traverse rod, means for reciprocating it, a guide for the top of the rod, the said guide being provided with thread carrier supporting means, a thread carrier adapted to move upward on the traverse rod on to the said guide and provided with means adapted to coact with the supporting means on the guide to hold the carrier elevated, and a stop in coöperative relation to said guide and thread carrier support.

2. In a quilling machine, a traverse rod, means for reciprocating it, a tubular guide for receiving the upper end of the rod, the guide and the rod being provided with series of ratchet teeth on their faces, a thread carrier support adapted to slide along the rod and guide and provided with a pawl arranged to engage the series of ratchet teeth to hold the carrier support elevated, and a stop mechanism in coöperative relation to the thread carrier support and guide.

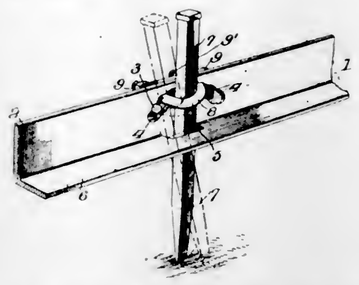
3. In a quilling machine, the combination with a traverse rod and thread carrier, of a tube having the twofold function of a guide for the upper end of the traverse rod and a temporary support for the thread carrier, and a stop mechanism in coöperative relation to said guide and thread carrier.

4. In a quilling machine, a vertically movable thread carrier support, a pivoted latch, a tripping pin carried by the said support in position to engage the latch, a spring-actuated rod controlled by the latch, a brake lever controlled by the spring actuated rod and a spindle under the control of the brake lever to be stopped and released.

5. In a quilling machine, a vertically movable thread carrier support, a pivoted latch, a vertically adjustable tripping pin carried by the said support in position to engage the latch, a spindle and its whirl, a brake lever the head of which is arranged to be tilted into engagement with the whirl, an arm engaged with the tail of the brake lever, a push rod to which the arm is attached, a spring actuated rod controlled by the latch and a yoke uniting the spring actuated rod and push rod causing them to operate as one.

[Claims 6 and 7 not printed in the Gazette.]

1,168,930. HARROW-TOOTH FASTENING. JOHN HOOD BROWN, Morley, Mo. Filed Dec. 11, 1913. Serial No. 806,009. (Cl. 55—94.)



1. The combination with a harrow frame, the said frame constructed of an L-shaped beam, a quadrant slot cut in the vertical portion of the beam and extending longitudinally thereof, a rectangular slot cut in the horizontal portion of the beam, the said slots arranged one above the other, said horizontal slot arranged between the ends of the quadrant slot, of a harrow tooth, and means engaging the harrow tooth passing through the quadrant slot for holding the said tooth thereto.

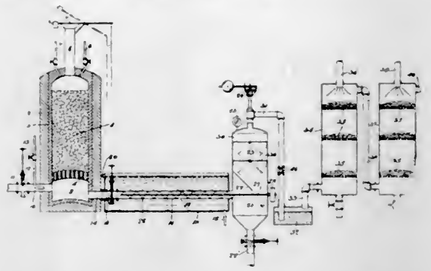
2. The combination with a harrow frame, the said frame constructed of an L-shaped beam, a quadrant slot cut in the vertical portion of the beam and extending longitudinally thereof, a rectangular slot cut in the horizontal portion of the beam, said slots arranged one above the other, of a harrow tooth, and means engaging the harrow tooth passing through the quadrant slot for holding the said tooth thereto.

3. The combination with a harrow-frame, the said frame constructed of an L-shaped beam, a quadrant slot having corrugations on the edges thereof cut in the vertical portion of the beam and extending longitudinally thereof, a rectangular slot cut in the horizontal portion of the beam, the said slots arranged one above the other, of a harrow tooth passing through the rectangular slot in the horizontal portion, a U-shaped bolt embracing and engaging said tooth and having its ends projecting through the said quadrant slot, and a plate having oppositely arranged openings adapted to receive the extending ends of the U-shaped bolt, and nuts threaded on the ends of the said bolts, whereby the said plate may be clamped against the outside of the vertical portion of the beam and thereby hold the U-shaped bolt and the harrow tooth in its adjusted position, the parts arranged as and for the purpose described.

4. The combination with a harrow frame, the said frame constructed of an L-shaped beam, a quadrant slot having corrugations on the edges thereof cut in the vertical portion of the beam and extending longitudinally thereof, a rectangular slot cut in the horizontal portion of the beam, the said slots arranged one above the other, of a harrow tooth passing through the rectangular slot in the horizontal portion, a U-shaped bolt embracing and engaging the said tooth and having its ends projecting through the said quadrant slot and means applied to the said projecting ends of the U-shaped bolt to prevent the spreading thereof and to adjustably clamp the harrow tooth to the beam.

1,168,931. PROCESS FOR THE MANUFACTURE OF HYDROGEN AND CARBON-BLACK. ROY H. BROWNLEE and ROY H. UHLINGER, Pittsburgh, Pa., assignors to American Nitro-Products Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Mar. 12, 1915. Serial No. 14,011. (Cl. 134—60.)

1. The process of making carbon black consisting in decomposing a suitable hydrocarbon by bringing it into contact with highly heated refractory material within an inclosing chamber in the absence of air and at a pressure materially in excess of atmospheric pressure, and then separating the carbon from the hydrogen.



2. The process of making carbon black consisting in decomposing a suitable hydrocarbon by bringing it into contact with highly heated refractory material within an inclosing chamber in the absence of air and at a pressure materially in excess of atmospheric pressure, and then cooling the products to separate the carbon from the hydrogen.

3. The process of making carbon black consisting in decomposing a suitable hydrocarbon by bringing it into contact with highly heated refractory material within an inclosing chamber in the absence of air and at a pressure materially in excess of atmospheric pressure, then cooling the products to separate the carbon from the hydrogen, and then subjecting the hydrogen to cleansing operations to eliminate impurities.

4. The process of making carbon black and hydrogen consisting in heating refractory material within an inclosing chamber by combustion of a suitable fuel therein, and then passing a suitable hydrocarbon through the chamber at a pressure materially in excess of atmospheric pressure and in contact with the highly heated refractory material in the absence of air.

5. The process of making carbon black and hydrogen consisting in heating refractory material within an inclosing chamber by combustion of a suitable fuel therein, then passing a suitable hydrocarbon through the chamber at a pressure materially in excess of atmospheric pressure and in contact with the highly heated refractory material in the absence of air, and then cooling the products to separate the carbon from the hydrogen.

[Claims 6 to 12 not printed in the Gazette.]

1,168,932. FEEDING MECHANISM FOR ENSILAGE-CUTTERS. FRED J. BULLOCK and FRED F. BILLINGS, Shortsville, N. Y., assignors to Papec Machine Company, Shortsville, N. Y., a Corporation of New York. Filed Oct. 25, 1915. Serial No. 57,883. (Cl. 146—34.)

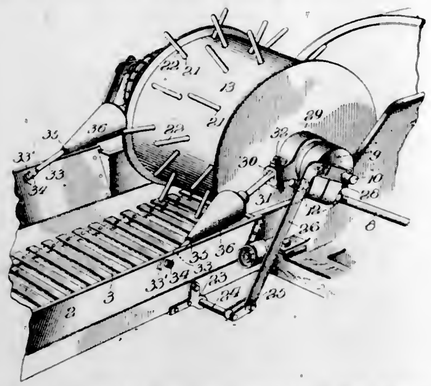
1. In a feeding mechanism for ensilage cutters, the combination with a revolubly mounted feeding drum, of movable supports for said drum, obliquely arranged shafts loosely connected to said drum, and conical guide rollers revolubly mounted upon said shafts.

2. In an ensilage cutter, the combination with the feed trough and feed rollers thereof, of a movably mounted rotating flanged feeding drum, and conical revolubly mounted guide rollers disposed obliquely within said trough projecting inwardly beyond the flanges of said drum.

3. In an ensilage cutter, the combination with the feed trough and feed roller therefor, of collars carried by the shaft of the feed roller, rods carried by said collars, collars carried by said rods, trunnions mounted in said collars, a crank shaft carried by said trunnions, a rotating feed drum mounted upon said trunnions provided with peripheral openings, and fingers loosely mounted upon said crank shaft within said drum and projecting outwardly through said openings.

4. A feeding mechanism for ensilage cutters, comprising a revolubly mounted feeding drum, movable supports for said drum, and movably mounted revoluble guide rollers

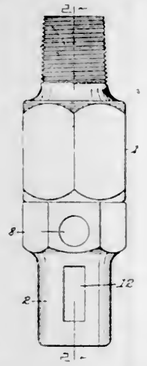
disposed obliquely within the trough and having a connection with said drum for moving vertically therewith.



5. In an ensilage cutter, the combination with the feed trough thereof, of a movably mounted rotating feed drum, and movably mounted rotating guide rollers disposed within said trough having their peripheral edges extending inwardly beyond the edges of said drum.

[Claims 6 to 23 not printed in the Gazette.]

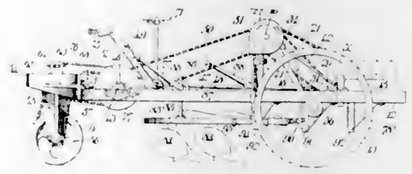
1,168,933. CYLINDER-COCK. HARRY J. BURKLEY and CHARLES E. BURKLEY, Cameron, W. Va. Filed Sept. 17, 1915. Serial No. 51,189. (Cl. 137—32.)



1. Drain mechanism for engine cylinders, comprising upper and lower separable casing sections, the upper section having a valve chamber therein adapted to be in open communication with the interior of a cylinder, said lower section having a vertical socket in its upper end and having a port opening laterally outward from said socket adjacent to the lower end of the latter, a valve seat formed at the upper end of said socket, a ball valve within said valve chamber and normally disposed on said seat, a vertically movable plunger located in said socket and adapted to permit the passage of water thereby, said lower section having a transverse guideway therethrough and having a vertical passage leading from said socket into said guideway, a stem carried by said plunger and protruding into said guideway through said passage, and a tapered lever extending through said guideway in engagement with said stem and adapted for movement to effect the elevation of the plunger into unseating relation to said valve, said lever having a downwardly extending lug on its lower end.

2. Drain mechanism for engine cylinders, comprising upper and lower separable casing sections, the upper section having a valve chamber therein adapted to be in open communication with the interior of a cylinder, said lower section having a vertical socket in its upper end and having a port opening laterally outward from said socket adjacent to the lower end of the latter, a valve seat formed at the upper end of said socket, a ball valve within said valve chamber and normally disposed on said seat, a vertically movable plunger located in said socket and adapted to permit the passage of water thereby, said lower section having a transverse guideway therethrough and having a vertical passage leading from said socket into said guideway, a stem carried by said plunger and protruding into said guideway through said passage, and a lever extending through said guideway having its upper edge in sliding engagement with said stem, said lever being adapted for movement to effect the elevation of the plunger into unseating relation to said valve, said lever being provided with a downward lug aparted to engage the casing for preventing its withdrawal from said guideway, the vertical thickness of the free end of said lever, including said lug, being less than the vertical height of said guideway.

1,168,934. TRACTOR. EDWARD W. COOK, Galion, Ohio. Filed Apr. 19, 1915. Serial No. 22,341. (Cl. 21—114.)



1. In a device of the class described, a tractor comprising a frame mounted on wheels, a motor on said frame, a pair of sprocket shafts, sprocket wheels on each of said shafts, each of said tractor wheels having sprocket teeth in its periphery, chains connecting said sprocket wheels with said tractor wheels, clutches on said sprocket shafts coöperating with said sprocket wheels, means for simultaneously operating all of said clutches, and means for transmitting power from said motor to each of said sprocket shafts, substantially as described.

2. A tractor comprising a frame mounted on wheels, a motor on said frame, a jack shaft, a pair of sprocket shafts, a power connection between said sprocket shafts and each of said wheels, means for transmitting power from said motor to said sprocket shafts and to said jack shaft, a clutch on said jack shaft, and means operating simultaneously for making and breaking the power connection between said sprocket shafts and said wheels when said clutch is operated, substantially as described.

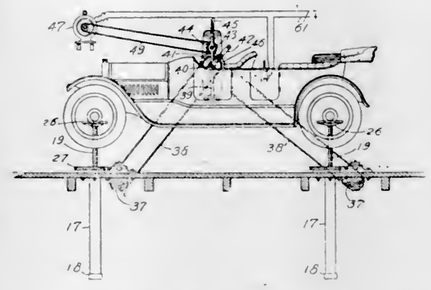
3. A tractor comprising a frame mounted on wheels, a guide wheel for said tractor and means for turning the same in various guiding positions, a motor on said frame, a sprocket shaft, means for transmitting power from said motor to said sprocket shaft, sprocket teeth on said guide wheel, a pair of idlers secured adjacent said guide wheel, and a chain passing around said guide wheel and idlers and over said sprocket wheel, substantially as described.

4. A tractor comprising a frame mounted on wheels, a motor on said frame, a sprocket shaft, a power connection between said motor and sprocket shaft, sprocket wheels loosely mounted on said shaft and provided on their opposite sides with clutch faces, clutch members secured to rotate with said shaft and capable of longitudinal movement thereon to engage or disengage said sprocket wheels, a chain connecting each sprocket wheel with one of the tractor wheels, and means for operating said clutches, substantially as described.

5. A tractor comprising a frame mounted on wheels, a motor on said frame, a sprocket shaft, a power connection between said motor and sprocket shaft, sprocket wheels loosely mounted on said shaft and provided on their opposite sides with clutch faces, clutch members secured on opposite sides of said sprocket wheels to rotate with said shaft and capable of longitudinal movement thereon to engage with or be disengaged from said sprocket wheels, a housing connecting said clutch members and inclosing the same and said sprocket wheel, a chain connecting each sprocket wheel with one of said tractor wheels, and means for moving said housing to engage said clutch members with the adjacent sprocket wheel and for simultaneously establishing, breaking or reversing said power connection, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,168,935. AUTOMOBILE-JACK. CHARLES EDWARD DAVIDSON, Ozona, Tex. Filed Apr. 7, 1915. Serial No. 19,717. (Cl. 254—92.)



1. In an automobile jack, the combination of a plurality of vertically movable lifting members, a lubricant containing casing surrounding each of said members, guide strips extending longitudinally thereof, a guide plate carried by each lifting member and engaging said strips to prevent turning of said member, a worm wheel engaging said member and operable to lift the same, a secondary driven shaft engaging the worm wheel, a primary driven shaft operating said secondary shaft, and means for operating said primary shaft.

2. In an automobile jack, the combination of a plurality of vertically movable lifting members mounted in and extending beneath the flooring, a lubricant containing casing surrounding each of said members, guide strips extending longitudinally thereof, a guide plate carried by each lifting member and having grooves therein for receiving said strips to prevent turning of said member, a worm wheel engaging said member and operable to lift the same, a bearing for said worm wheel secured to said flooring, a secondary driven shaft engaging said worm wheel, a primary driven shaft operating said secondary shaft and means for operating said primary shaft.

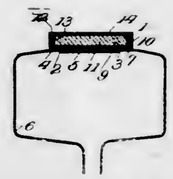
3. In an automobile jack, the combination with a pair of lifting members and a cog wheel for each of said members; of secondary driven shafts operating said cog wheel, primary driven shafts connected to said secondary driven shafts, a chain drive for said primary driven shafts, a shaft for operating said chain drive, means including a source of current for operating the last named shaft, and means operated by the upward movement of the vehicle on said lifting members for stopping said last-named shaft.

4. In an automobile jack, the combination with a pair of lifting members and a cog wheel for each of said members; of secondary driven shafts operating said cog wheel, primary driven shafts connected to said secondary driven shafts, a chain drive for said primary driven shafts, a shaft for operating said chain drive, means including a source of current for operating the last-named shaft, and automatically operated means for stopping said last-named shaft.

5. In an automobile jack, the combination with a pair of lifting members and a cog wheel for each of said members; of secondary driven shafts operating said cog wheel, primary driven shafts connected to said secondary driven shafts, a chain drive for said primary driven shafts, a shaft for operating said chain drive, means including a source of current for operating the last-named shaft, and adjustable automatically operated means for stopping said last-named shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,168,936. FIBER-CASE RAILWAY-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 28, 1915. Serial No. 31,034. (Cl. 246—20.)



1. A railway torpedo comprising a case having an open face, an explosive tablet within the case, a sealing composition filling the case above the explosive tablet, and a disk embedded in the sealing composition.

2. A railway torpedo comprising a case having an open face, a band extending around the vertical wall of the case, an explosive tablet within the case, a sealing composition within the case above the tablet, and a disk embedded within the sealing composition and resting upon the upper edge of the case flush with the upper edge of the band.

3. A railway torpedo comprising a case having an open face, a rail-attaching strap secured to the case, a sealing composition in the bottom of the case, a disk embedded in said sealing composition, an explosive tablet within the case resting upon the disk, a sealing composition filling the case above the explosive tablet, and a disk embedded in the sealing composition.

4. A railway torpedo comprising a case having an open face, a rail-attaching strap carried by the bottom of the case, a sealing composition in the bottom of the case, an explosive tablet within the case, a sealing composition filling the case above the tablet, and a disk embedded in said sealing composition.

5. A railway torpedo comprising a case having an open face, a rail-attaching strap secured to the bottom of the case, a sealing composition in the bottom of the case, a disk embedded in said sealing composition, an explosive tablet within the case and resting upon the disk, a band surrounding the vertical walls of the case and extending a slight distance above the upper edge of the case, an explosive tablet within the case, a sealing composition filling the case above the explosive tablet and a disk forced within said sealing composition and resting upon the upper edge of the case and having its upper edge flush with the upper edge of the band.

[Claims 6 to 15 not printed in the Gazette.]

1,168,937. CAGE FOR ANTIFRICTION-BEARINGS. BERTHOLD EITNER, Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany, a Corporation of Germany. Filed Nov. 7, 1914, Serial No. 870,863. Renewed Dec. 14, 1915. Serial No. 66,819. (Cl. 64—59.)

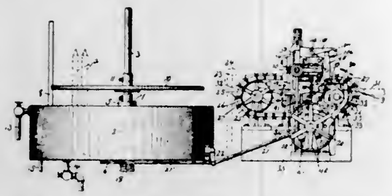


1. A ball holding cage for ball bearings, comprising a strip folded back and forth on itself to produce between the folds, two series of loops facing alternately in opposite directions and constituting two circumferential series

of ball-pockets extending side by side, with two thicknesses of the material of the strip separating adjacent pockets in each series, at the entrance ends of the pockets.

2. A ball holding cage for ball bearings, comprising a strip folded back and forth on itself to produce between the folds, two series of loops facing alternately in opposite directions and constituting two circumferential series of ball-pockets extending side by side, the material of the folds between the adjacent pockets, being spread apart to contract the entrance openings to the pockets to prevent the escape of the balls.

1,168,938. CANDLE-MAKING MACHINE. EVALD J. ENGMAN, Syracuse, N. Y., assignor to The Will & Baumer Company, Syracuse, N. Y., a Corporation of New York. Filed July 22, 1914. Serial No. 852,397. (Cl. 18—27.)



1. In a machine for molding the ends of candles, a die having a socket, means for gripping a candle and forcing it endwise into said socket and a conveyer for feeding the candles to the gripping means.

2. In a machine for molding the ends of candles, a socketed die and a candle gripping device movable one in relation to the other for forcing one end of the candle into the die, means for effecting such movement, and additional means for conveying the candles to the gripping device.

3. In a machine for molding the ends of candles, a socketed die and a candle gripping device movable one in relation to the other for forcing one end of a candle into the die, means for effecting such movement, and means for feeding the candles sidewise into the gripping device.

4. In a machine for molding the ends of candles, a socketed die and a candle gripping device movable one in relation to the other for forcing one end of a candle into the die, means for effecting such movement, additional means for conveying the candles to the gripping device and relatively movable die sections having semicircular meeting faces enlarged at their ends adjacent the die to receive the candle material forced up by the entrance of the candle into said die.

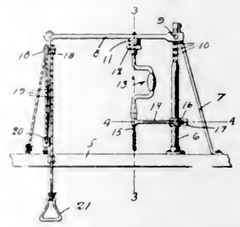
5. In a machine for molding the ends of candles, a die having a conical socket, opposed die sections movable radially across the open end of said socket and provided with semicircular meeting faces enlarged at their ends adjacent the die, mechanism for gripping a candle and advancing it endwise between said die-sections and into the socket, mechanism for feeding the candles to the gripping device and additional mechanism for operating the die sections all of said mechanisms being synchronized and deriving motion from the same source.

[Claims 6 to 17 not printed in the Gazette.]

1,168,939. DRILL-PRESS ATTACHMENT FOR AUGER-BRACES. CLARENCE P. EVERS, Brookings, S. D. Filed July 7, 1914. Serial No. 849,592. (Cl. 77—30.)

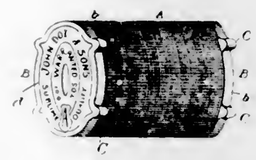
1. A device of the class described comprising a standard, an arm slidably adjustable thereon, and apertured at its free end to slidably receive a brace bit and means carried by the standard for loosely engaging a brace and pressing it downwardly.

2. A device of the character described comprising the combination of an auger brace with a drill press attachment comprising a base, a vertical standard mounted thereon, a bar vertically adjustably pivoted upon said standard, a socket member carried by said bar and adapted to engage the hand engaging knob of the auger brace, a flexible member connected with the free end of said



bar, a stirrup secured upon said flexible member, and an arm engaging the shank of a boring tool carried by said auger brace, said arm being vertically adjustable upon said upright.

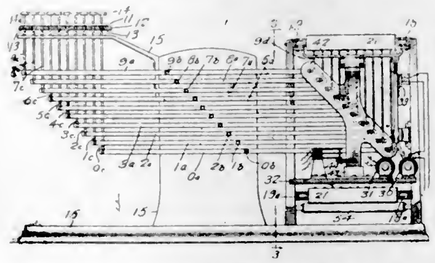
1,168,940. SPOOL. CHARLES FISHER, San Francisco, Cal. Filed Nov. 30, 1912. Serial No. 734,233. (Cl. 242—118.)



1. A spool for sewing thread having a solid body with heads substantially circular in outline, from the peripheral edges of which extend low projections, such projections being integral with the material of the heads, substantially as set forth.

2. A spool for thread having heads or flanges at its ends substantially circular in outline and from the edges of which extend projections or bosses integral therewith, the material of the flanges or heads of the spools between the said projections being compressed and reduced in diameter.

1,168,941. INDICATING DEVICE. JOHN WM. FRITCH and DELIA E. HOOPES, Washington, D. C. Filed Mar. 29, 1915. Serial No. 17,705. (Cl. 40—28.)



1. The combination with a keyboard having a plurality of keys, of a separate lever associated with each of said keys, and adapted to be operated thereby, a series of units forming an endless chain, each of said units being provided with a series of spring pressed members bearing characters corresponding to those of the complete keyboard, means associated with each of said levers for releasing its corresponding spring pressed member and bringing it into view, and electro-magnetic means for simultaneously moving the endless chain of units to bring another unit into operative relation with the levers.

2. The combination with a keyboard having movable keys, of a series of levers associated with said keys, an

endless chain of units, means for supporting said endless chain, each unit comprising a casing having a plurality of spring pressed members normally held inside the casing, said members bearing characters corresponding with those on the complete keyboard, and means associated with each of said levers for releasing one of said spring pressed members and bringing the latter into view.

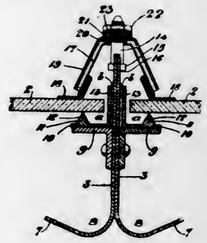
3. The combination with a keyboard having movable keys, of a series of levers associated with said keys, an endless chain of units, means for supporting said endless chain, each unit comprising a casing having a plurality of spring pressed members normally held inside the casing, said members bearing characters corresponding with those on the complete keyboard, and means associated with each of said levers for releasing one of said spring pressed members and bringing the latter into view, said last-named means comprising a push rod associated with each lever, and a trip associated with each of said spring pressed members and adapted to be engaged by its individual push rod.

4. The combination with a keyboard having movable keys, of a series of levers associated with said keys, an endless chain of units, means for supporting said endless chain, each unit comprising a casing having a plurality of spring pressed members normally held inside the casing, said members bearing characters corresponding with those on the complete keyboard, means associated with each of said levers for releasing one of said spring pressed members and bringing the latter into view, said last-named means comprising a push rod associated with each lever, and a trip associated with each of said spring pressed members and adapted to be engaged by its individual push rod, and electro-magnetic means for simultaneously moving the endless chain forward at each operation of any of the levers.

5. The combination with a keyboard having movable keys, of a series of levers operatively associated with said keys, an endless chain of units, each unit comprising a casing, a series of spring pressed pivoted plates carried by said casing, each of said plates bearing a character corresponding to one on the keyboard, means including a trip associated with each plate for retaining the plates within the casing, a push rod associated with each lever and adapted to engage its corresponding trip and release a spring pressed plate, thereby permitting the latter to be brought into view by the action of the spring.

[Claims 6 to 11 not printed in the Gazette.]

1,168,942. SKYLIGHT CONSTRUCTION. THOMAS W. IRWIN, Pittsburgh, Pa. Filed Apr. 14, 1915. Serial No. 21,337. (Cl. 108—16.)



1. In skylight construction, the combination with a stationary supporting base, of a soft metal plate-supporting bar having a flat base slidably mounted on said base provided with an upwardly extending knife edge ridge, and a skylight plate resting on said knife edge.

2. In a skylight construction, the combination with a stationary supporting base, of a soft metal plate-supporting bar having a flat base slidably mounted on said base provided with an upwardly extending knife edge ridge, a skylight plate resting on said knife edge, and a covering plate bearing on the upper surface of the skylight plate and pressing it against the knife edge ridge.

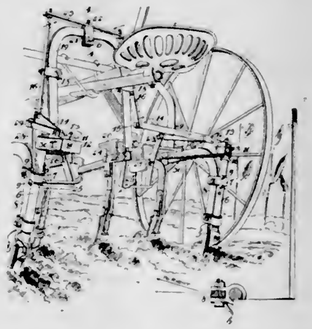
3. In skylight construction, the combination with a stationary supporting base, of a soft metal plate-supporting bar having a flat base slidably mounted on said base provided with an upwardly extending knife edge ridge and an integral longitudinal flange extending upwardly from the base providing a gutter between the flange and said ridge, and a skylight plate resting on said knife edge.

4. In skylight construction, the combination with a stationary supporting base, of a soft metal plate-supporting bar having a flat base slidably mounted on said base provided with an upwardly extending ridge having a compressible bearing edge adapted under pressure to intimately conform to and make adhering engagement with the skylight plate, and a skylight plate resting on and movable with said ridge.

5. In skylight construction, the combination with a stationary supporting base, of a soft metal plate-supporting bar having a flat base slidably mounted on said base provided with an upwardly extending ridge having a compressible bearing edge adapted under pressure to intimately conform to and make adhering engagement with the skylight plate, a skylight plate resting on and movable with said ridge, and a covering plate bearing on the upper surface of the skylight plate and pressing it against the bearing edge of said ridge.

[Claims 6 to 11 not printed in the Gazette.]

1,168,943. CULTIVATOR. ALLEN JEROME KIEFFER, Nevada, Ohio. Filed Sept. 4, 1915. Serial No. 49,027. (Cl. 97—35.)



1. The combination with a cultivator having a plurality of gangs, of a rigid yoke connecting the gangs, a horizontal centrally pivoted lever carried by the yoke, a pair of vertically arranged centrally pivoted levers having loose connections with the horizontal lever at their upper ends, a substantially vertical shank rotatably connected with one of the cultivator arms in each gang, a guiding element carried at the lower end of each shank, an inwardly extending arm carried at the upper end of each shank, a link connecting each inwardly extending arm with the lower portion of the adjacent vertical lever, a stirrup pivotally connected with each gang, a link connecting each stirrup with one of the first of said links, and a retractile spring connected with each inwardly extending arm at one end and with the adjacent cultivator gang at the opposite end for normally retaining the guiding element in such position as to prevent shifting movement of the cultivator gangs relative to the direction of travel of the cultivator.

2. The combination with a cultivator having a plurality of gangs, of a rigid yoke connecting the gangs, a horizontally arranged centrally pivoted lever supported by the yoke, a pair of vertically arranged centrally pivoted levers having loose connections with said horizontally arranged lever at their upper ends, pivoted guide elements associated each with one of the gangs, and including a laterally extending arm, a link connection between each laterally extending arm and the adjacent vertical lever, a stirrup

pivotally connected with each gang, connecting means between each stirrup and the adjacent lateral arm, and resilient means for normally retaining the guiding elements in position to prevent shifting movement of the gangs relative to the direction of travel of the cultivator.

3. The combination with a cultivator having a plurality of gangs, of a pivoted ground engaging guide member connected with each gang, means for normally maintaining the guide members in position to prevent shifting movement of the gangs relative to the direction of travel of the cultivator, rigid connecting means between the gangs, a foot operable stirrup connected with each gang having a link and arm connection with the adjacent guiding element whereby to shift it at will, and a lever and a link connecting means supported by said rigid gang connecting means whereby shifting movement imparted to one of the guiding elements will be simultaneously imparted to the other.

4. The combination with a cultivator including a plurality of gangs, of a pivoted ground engaging guiding element associated with each gang, a foot operable device connected with each guiding element for shifting it at will into inclined position with respect to the direction of travel of the cultivator whereby to move the gangs relative to the direction of travel of the machine, and means connecting the guide members whereby shifting movement imparted to one of them will be simultaneously imparted to the other.

5. The combination with a cultivator including a plurality of gangs, of a pivoted ground engaging guiding element connected with each gang, connecting means between the guiding elements whereby shifting movement imparted to one of them will be simultaneously imparted to the other for moving it into analogous position, a foot operable stirrup pivotally connected with each gang, and connecting means between each stirrup and the adjacent guiding element whereby the latter may be shifted at will.

[Claims 6 to 9 not printed in the Gazette.]

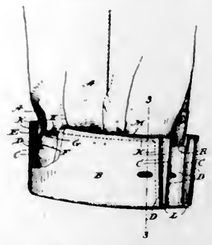
1,168,944. METHOD OF IMPREGNATING WOOD. RICHARD LAMB, New York, N. Y. Filed Feb. 17, 1915. Serial No. 8,896. (Cl. 99—12.)

1. The method of impregnating wood and other porous materials, which consists in placing the material to be treated in a hermetically sealed cylinder, and subjecting same to steam pressure, then under a greater pressure, and with as high a degree of heat injecting the impregnating material into the material to be treated, then withdrawing the impregnating material from the cylinder, when the steam pressure will eject the surplus impregnating material from the material treated substantially as described.

2. The method of impregnating wood and other porous material, which consists in placing the material to be treated in a hermetically sealed cylinder and subjecting same to steam pressure, then under a greater pressure and with as high a degree of heat injecting the impregnating material into the material to be treated, then withdrawing the impregnating material from the cylinder when the steam pressure will eject the surplus impregnating material from the material treated, then producing a vacuum in the cylinder to assist in ejecting the surplus impregnating material substantially as described.

1,168,945. FOLDABLE CUFF. JOHN L. G. LEHMAN, Kansas City, Mo. Filed May 20, 1915. Serial No. 29,357. (Cl. 2—79.)

In combination with a shirt sleeve, a reversible foldable cuff therefor having an outer ply formed to constitute a folded upper portion free with reference to the sleeve, marginal stitching to retain the edge of the folded portion in flat condition, said stitching passing through the said folded portion only of the cuff, and not through the sleeve, the inner layer of said folded portion extending downwardly a substantial distance below the stitched marginal edge thereof, and stitching securing the lower edge of said inner layer to the adjacent lower end portion of the sleeve independently of the outer layer of the folded portion, so that said folded portion is loosely related to the sleeve to a substantial depth extending below the stitched marginal edge of the folded portion, the central portion



of the body of the cuff being free relative to the sleeve to permit folding of said body upon itself in either direction to present a rounded exposed or wearing edge projected below the sleeve, substantially as described.

1,168,946. BARREL-RACK. ALBERT S. LEO, Atchison, Kans. Filed June 19, 1915. Serial No. 35,010. (Cl. 21—121.)



1. A barrel rack including a pair of side bars having their forward ends downturned at right angles to form supporting legs, and having their rear ends bent downwardly and curved to form rockers and then bent upwardly at an angle and connected with the side bars to form braces, brace irons connected with said braces and legs near the lower ends thereof and with the side bars, transversely arranged concave barrel supports connecting the side bars at points intermediate the ends thereof, an arched lifting foot connecting the runners adjacent the upper ends thereof, a hook having a link connection with the barrel support nearer the forward end of the rack, and crossed bars and a horizontal bar connecting the first said braces, and adapted to form a foot rest for the operator of the device.

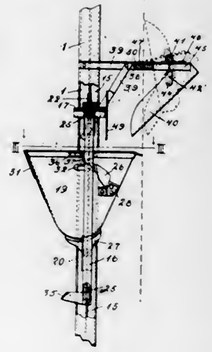
2. A barrel rack including a pair of side bars having their forward ends downturned to form supporting legs, and having their rear ends downturned and curved to form runners and subsequently bent upwardly at an angle and connected with the side bars to form braces, brace irons connected with said braces and legs and with the side bars, transversely arranged barrel supports connecting the side bars, a lifting foot arranged adjacent the upper ends of the rockers, a hook having a link connection with the barrel support adjacent the front end of the rack, braces connecting the first said braces and forming a foot rest, and wheels connected with the rockers at a point intermediate the ends thereof, said legs being of such length as to allow the side bars to be inclined forwardly when the rack is in barrel supporting position.

3. A barrel rack including side bars having their forward ends downturned to form legs, and having their rear ends downturned and curved to form rockers and subsequently bent upwardly and connected with the side bars to form braces, transversely arranged barrel supports connecting the side bars, a lifting foot arranged adjacent the upper ends of the rockers, a barrel chine engaging member connected with one of the barrel supports, and braces connecting the first said braces and adapted to serve as a foot support.

4. A barrel rack including a pair of side bars having their forward ends downturned to form supporting legs and having their rear ends downturned and curved to form rockers and subsequently bent upwardly and connected with said side bars to form braces, barrel engaging and supporting means associated with the side bars, braces connecting the first said braces and forming a foot support, said legs being of a length to allow forward inclination of said side bars when the rack is in barrel supporting position.

5. A barrel rack including a pair of side bars having their forward ends downturned to form supporting legs and having their rear ends downturned and curved to form rockers and subsequently bent upwardly and connected with the side bars to form braces, means for connecting and bracing the side bars together, means associated with the side bars for supporting a barrel, said legs being of such length as to allow inclination of the side bars when the rack is in barrel supporting position.

1,168,947. SELF-DUMPING ELEVATOR. CHRISTOPHER W. LEVALLEY, Milwaukee, Wis. Filed May 16, 1912. Serial No. 697,652. (Cl. 214—12.)



1. In a self-dumping material elevator, an upright frame, a bucket frame vertically movable in the said upright frame, a bucket pivotally supported in the bucket frame and arranged to dump by gravity when left free, a latch for holding the bucket in upright position, means for slightly moving the bucket as it approaches the place for dumping in order to relieve the latch, and means for moving the latch, leaving the bucket free to tilt.

2. In a self-dumping material elevator, an upper supporting frame, a receiving hopper supported by the frame, a movable bucket frame, a bucket pivotally supported in the bucket frame and arranged when left free to tilt by gravity, means for moving the bucket to free the latch from strain as the bucket approaches the receiving chute or hopper, and means for moving the latch to free the bucket immediately after it is released.

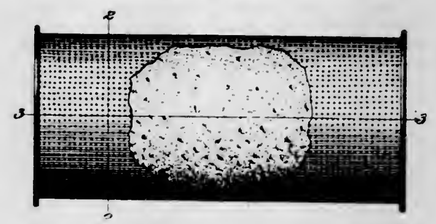
3. In a self-dumping material elevator, the combination of an upright frame, a bucket frame movable therein, a bucket pivoted in the bucket frame and arranged to tilt into discharging position when left free, a latch for holding the bucket in upright position, stationary rub pieces with which the bucket engages arranged to slightly move the latter in order to free the latch from strain, and a stationary trip bar with which the latch engages and by which it is moved to free the bucket, the bar being arranged to move the latch immediately after the bucket is moved to free the latch.

4. In a self-dumping material elevator, an upright supporting frame, a receiving hopper or chute supported by the frame near its upper end, a vertically movable bucket frame mounted in the supporting frame, a bucket pivoted in the bucket frame and arranged to tilt by gravity into discharging position, a latch for holding the bucket in upright position, elastic rub pieces for moving the bucket to relieve the latch from strain immediately before the bucket reaches the position to dump into the said hopper or chute, and a trip bar carried by the stationary frame arranged to move the latch to release the bucket immediately after the latter has been moved by the rub pieces.

5. In a self-dumping material elevator, an upright supporting frame, a receiving hopper or chute supported by the frame near its upper end, a vertically movable bucket frame mounted in the supporting frame, a bucket pivoted in the bucket frame and arranged to tilt by gravity into discharging position, a latch for holding the bucket in upright position, and a cross bar at the edge of the receiving hopper or chute upon which the bucket is adapted to rest as it gradually tilts to discharge.

[Claims 6 to 10 not printed in the Gazette.]

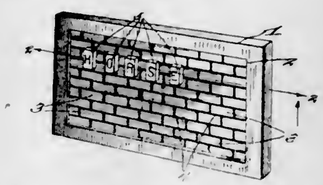
1,168,948. HUMIDIFIER. HERMAN L. LOHEIDE, St. Louis, Mo., assignor to Loheide Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 22, 1915. Serial No. 29,736. (Cl. 131—30.)



1. A core body for humidifiers composed of a mass of diatomaceous earth and particles of cork and baked to incinerate the cork particles.

2. A core body for humidifiers composed of diatomaceous earth and cork, having cells formed therein by incorporating the cork in the mass and subsequently exposing the mass to heat sufficient to incinerate the cork.

1,168,949. MAGNETIC EDUCATIONAL APPLIANCE. GEORGE MCKITTRICK and PIUS B. HUMPHREY, Caney, Kans. Filed May 14, 1912. Serial No. 697,330. Serial No. 697,330. (Cl. 35—12.)

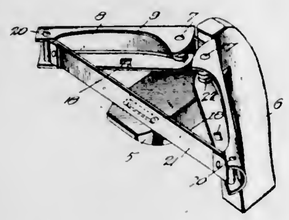


1. An educational appliance comprising a frame having a recess, a series of oblong shaped block magnets embedded in said recess, the marginal oblong block magnets having beveled edges, half of the marginal wall of the recess being correspondingly beveled to fit and engage the beveled edge of the marginal block magnets, the other half of the marginal wall of the recess being straight or at right angles to the flat surface of the frame, thereby causing the marginal wall of the recess to partially over-

lle the marginal block magnets to hold the magnets in place, said magnets being arranged to break joints in a brick like fashion, insulating material in said joints for holding the block magnets separated and insulated from one another.

2. An educational appliance comprising a frame having a recess, a series of block shaped magnets embedded in said recess, the marginal wall of the recess partially overlying the marginal magnets and acting to hold the magnets in place, said magnets being arranged to break joints in a brick-like effect, insulating material in said joints for holding the magnets separated and insulated from one another.

1,168,950. TOY GUN. OWEN W. MALONEY, Tulsa, Okla. Filed Mar. 26, 1915. Serial No. 17,189. (Cl. 124—1.)



1. A device of the character described comprising pivoted members, means releasably engaging said members for retaining the free ends thereof together, a projectile propelling device carried by said members, and means for ejecting the projectile from said propelling device when said releasable means is actuated.

2. A device of the character described comprising a pair of channeled menibers pivoted at adjacent ends thereof, means releasably engaging said members for retaining the free ends thereof together, a projectile propelling device carried by said members, and means for ejecting the projectile from said propelling device when said releasable means is actuated:

3. A device of the character described comprising a pair of channeled members pivoted at adjacent ends thereof, means releasably engaging said members for retaining the free ends thereof together, a projectile propelling device carried by said members, and means engaging said members for forcing them apart to eject the projectile from said propelling device when said releasable means is actuated.

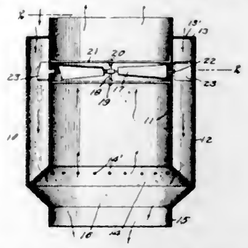
4. A device of the character described comprising a pair of channeled members pivoted at adjacent ends thereof, means releasably engaging said members for retaining the free ends thereof together, a projectile propelling device carried by said members, and a trigger for operating said releasable means.

5. In a device of the character described, the combination of a stock, pivoted members secured at one end thereof to said stock, releasable means for retaining the other ends of said members together, means for actuating said releasable means, and means for propelling a projectile from said members when the releasable means is operated.

[Claims 6 to 13 not printed in the Gazette.]

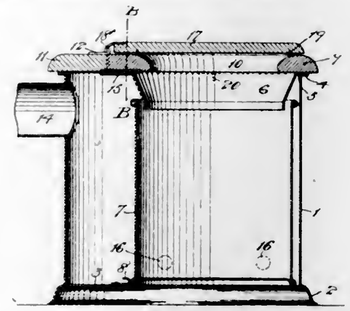
1,168,951. FUEL-SAVER. JACOB MANDEL, New York, N. Y. Filed Apr. 8, 1915. Serial No. 19,937. (Cl. 110—58.)

In a fuel saver, the combination of a shell through which an outward draft is adapted to pass, a shell surrounding the first mentioned shell and spaced therefrom, a rotary device journaled within the inner shell and movable in a plane perpendicular to the axis of said shell, said rotary device including a series of wings inclined so as to be acted upon in a certain direction by the force of the draft through the inner shell, auxiliary wings connected to the main wings and sweeping around the inner shell within the space between the two shells, the auxiliary wings being inclined in a direction to cause a current of



air through said space between the shells in a direction opposite to the direction of draft and to the space within the inner shell, and means to support the two shells.

1,168,952. COMMODE. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed July 24, 1913. Serial No. 780,934. (Cl. 4—32.)



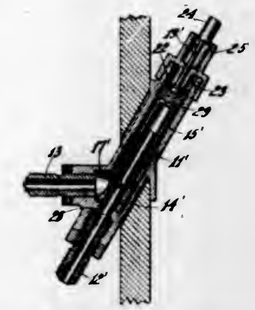
1. A commode comprising a ventilated body, a ventilating flue therefor, a receiving vessel, a seat, a cover for said seat, a plate having a hopper depending therefrom, said plate being interposed between said body and seat, a rearwardly directed passage formed between said plate and seat, positioning means for said plate, and means forming a seal between the cover and seat.

2. A commode comprising a ventilated body, a ventilating flue therefor, a receiving vessel, a seat, an inverted channel formed in said seat, a cover for said seat, a plate having a hopper depending therefrom, said plate being interposed between said body and seat, a channel in said plate adapted to coact with aforesaid inverted channel in the seat to form a passage therebetween, positioning means for said plate, and means forming a seal between the cover and seat.

3. A commode comprising a ventilated body, a ventilating flue therefor, a receiving vessel, a seat, a rearwardly directed inverted channel formed in said seat, a cover for said seat, a plate having a hopper depending therefrom, said plate being interposed between said body and seat, a rearwardly directed channel in said plate adapted to coact with aforesaid inverted channel in the seat to form a passage therebetween, positioning means for said plate, and means forming a seal between the cover and seat.

1,168,953. LUBRICATING-SYSTEM INDICATOR. GEORGE WILLIAM MORRIS, Racine, Wis. Filed Oct. 10, 1914. Serial No. 866,030. (Cl. 116—31.)

1. An indicator for lubricating systems, comprising a casing, a pump connection terminating in a tube within the casing, a tubular plunger surrounding the tube, there being an outlet passageway leading from the casing, said tube having an opening covered by the plunger in one position thereof and uncovered in another position thereof to which it is moved by the pressure of the lubricant through the pump connection, and external means operated by the plunger to indicate the position of the plunger.



2. An indicator for lubricating systems, comprising a casing, a pump connection nipple removably secured to the end thereof and constituting an inlet passageway, a tube forming an extension of the pump connection nipple communicating with the inlet passageway and provided with an opening in the side thereof, a tubular plunger slidably fitting around the tube and in one position closing the said opening but capable of movement under the pressure of lubricant through the inlet passageway to a position uncovering the said opening, there being an outlet passageway from the casing through which the lubricant is discharged, and external means operated by the plunger to indicate the position of the plunger.

3. An indicator for lubricating systems, comprising a casing, a pump connection threaded to the lower end of the casing, a tube on the pump connection with its bore forming a continuation of the inlet passageway through the pump connection, a tubular plunger slidably fitting around the tube and adapted to be lifted by the pressure of the lubricant admitted through the inlet passageway, there being an opening in the tube covered by the plunger in its lower position and uncovered by the plunger in its upper position, a screw cap threaded on the upper end of the casing, and a stem moved by the plunger and passing through the screw cap.

4. An indicator for lubricating systems, comprising a casing, a pump connection threaded in the lower end thereof and forming an inlet passageway, a tube forming an extension of the pump connection with its bore constituting a continuation of the inlet passageway, a tubular plunger slidably fitting upon the tube and adapted to be lifted by the pressure of the lubricant pump through the inlet passageway, there being an opening in the tube covered by the plunger in its lower position and uncovered by the plunger in its upper position, there being an outlet passageway leading from the casing, a screw cap fitting on the upper end of the casing, a stem slidably passing through the screw cap, and a piston fitting within the upper end of the casing and engaging the stem and the tubular plunger respectively.

5. An indicator for lubricating systems, comprising a casing, a pump connection threaded on the lower end thereof and forming an inlet passageway and having a tapering end, there being a flaring seat formed within the casing near the lower end thereof, a tube having a flaring end fitting upon the flaring seat and engaged by the tapering end of the pump connection, a tubular plunger slidably fitting on the tube and adapted to be lifted by the pressure of the lubricant admitted through the inlet passageway, there being an opening in the tube covered by the plunger in its lower position and uncovered by the plunger in its upper position, a screw cap threaded on the upper end of the casing, a stem passing therethrough, and a grooved piston fitting in the upper end of the casing and engaging the stem and the tubular plunger respectively.

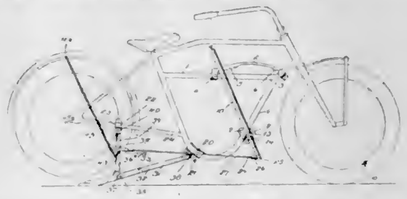
1,168,954. RAIL-BRACE. LEO A. MUNDWILLER and HERBERT A. NOEDEL, Berger, Mo. Filed Sept. 16, 1915. Serial No. 50,995. (Cl. 238—5.)



1. Bracing means for a pair of rails consisting of two sections extending under the bases of both rails and having their inner adjacent ends adjustably connected and axially alined; the outer end portion of each section beyond where it passes under the base of a rail being bent upon itself, the bent portion being welded integrally to the upper face of the section, a wedging or bracing member T-shaped in cross-section and being angular in elevation and having its outer base portion welded integrally to the bent part of the section, the inner part of the wedging member being spaced apart from the section and designed to overlie against the upper face of the outer part of the base of the rail, and a compound angular plate welded integrally to the upper end of the bracing or wedging member to receive and wedge against the under face of the outer part of the tread of the rail to support the same, and to wedge against the web of the rail.

2. Bracing means for a pair of rails consisting of two sections extending under the bases of both rails and having their inner adjacent ends adjustably connected and axially alined; the outer end portion of each section beyond where it passes under the base of a rail being bent upon itself, the bent portion being welded integrally to the upper face of the section, a wedging or bracing member T-shaped in cross-section and being angular in elevation and having its outer base portion welded integrally to the bent part of the section, the inner part of the wedging member being spaced apart from the section and designed to overlie against the upper face of the outer part of the base of the rail, a compound angular plate welded integrally to the upper end of the bracing or wedging member to receive and wedge against the under face of the outer part of the tread of the rail to support the same, and to wedge against the web of the rail, said bent portion of the outer end of the section terminating short of the outer edge of the base of the rail, to form a space into which the base of the rail is designed to wedge, said compound angular plate being additionally riveted to the upper part of the wedging member, the adjusting of the two sections axially toward each other causing the wedging member to more firmly wedge or brace between the base of the rail and the under face of the tread, to withstand the tendency of the rail leaning or bending outwardly, and means for locking said adjustable means for the sections.

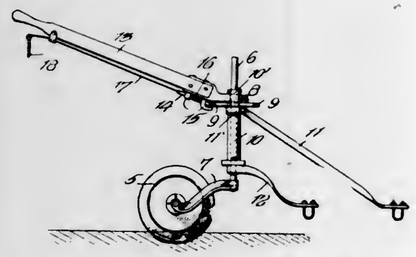
1,168,955. MOTOR-CYCLE SUPPORT. RAMÓN ORIOL NAVARRETE, Manila, Philippine Islands. Filed June 30, 1914. Serial No. 848,288. (Cl. 208—78.)



In combination with a motor-cycle frame, a supporting frame therefor U-shaped in plan view and having a pivotal connection with the depending part of the motor-cycle frame, the legs of said U-shaped supporting frame extending rearwardly, one upon each side of the rear wheel of the motor-cycle and terminating in a foot, a pair of toggle-links on each side of the rear wheel of the motor-cycle, de-

signed to collapse rearwardly and being pivotally suspended from the rear lower part of the motor-cycle frame, the lower link of each pair being pivotally connected to one of the legs of the U-shaped supporting frame, one of the links of each pair having a shoulder adjacent its pivotal connection to the coöperating link, to stop the toggle-links when thrown forwardly and in alinement, a rod connected to and extending from the pivotal connections of each pair of toggle-links, a yoke connecting the adjacent forward ends of both of said rods, a lever pivoted on the motor-cycle frame and having its lower end connected to said yoke to operate the toggle-links to raise and lower said U-shaped supporting frame, means for holding the lever in adjusted positions, said shoulders of the toggle-links acting to reinforce and hold the links in alinement and the feet of the U-shaped frame in contact with the ground, and springs connected to the frame of the cycle and in turn to the links to assist in collapsing them to raise the U-shaped frame.

1,168,956. STEERING DEVICE. NELS P. NELSON, Newberg, Oreg. Filed Oct. 19, 1915. Serial No. 56,748. (Cl. 21—202.)



1. A steering device of the character described comprising a caster-wheel, a spindle therefor, a bearing mounted on said spindle and having brackets extending therefrom adapted for attachment to a machine, a plate formed integral with said bearing and having oppositely disposed series of teeth, a handle associated with said spindle, a spring pressed pawl carried by said handle and adapted for engagement with either series of teeth whereby to retain said handle in adjusted position and rotate said spindle, and means for withdrawing said pawl from engagement with said teeth.

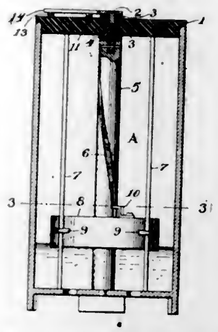
2. A steering device of the character described comprising a caster-wheel, a spindle therefor, bearings mounted on said spindle and having brackets extending therefrom adapted for attachment to a machine, a plate formed integral with said bearing and having oppositely disposed series of teeth, a handle associated with said spindle, and means carried by the handle and adapted for releasable engagement with said teeth whereby to retain said handle in adjusted position and rotate said spindle.

3. A steering device of the character described comprising a rotatable element, a bearing associated therewith, a plate carried by the bearing and including oppositely disposed toothed segments, and an operating handle having means engaging said plate whereby to guide said rotatable element.

4. A steering device of the character described comprising a rotatable element, a bearing associated therewith, a plate carried by the bearing and including oppositely disposed toothed segments, an operating handle having means engaging said plate whereby to guide said rotatable element, and means for vertically adjusting said rotatable element.

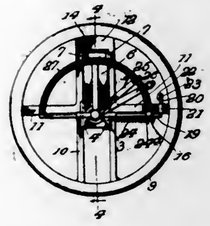
1,168,957. INDICATING APPARATUS. NELIUS JULIAN NESSA, Sioux Falls, S. D. Filed Sept. 9, 1914. Serial No. 860,924. (Cl. 177—351.)

1. A circuit closer comprising a disk of insulating material formed centrally with an opening, a pin rotatably mounted within said opening and having the upper and lower ends thereof flanged to hold the pin against longitudinal movement within the opening, a collector ring on one face of said disk concentrically of the opening therein, an annular row of contacts on said face of the disk concentrically of said ring, a finger carried by said pin and rotatable therewith and bridging said contacts and ring, a shaft secured to said pin and depending therefrom and having a longitudinally extending spiral groove formed therein, a float slidably mounted upon said shaft and capable of vertical movement along the shaft, and a tooth on said float engaging in said groove to rotate said shaft in the movement of the float.



2. A circuit closer comprising a disk of insulating material formed centrally with an opening, a pin rotatably mounted within said opening and having the upper and lower ends thereof flanged to hold the pin against longitudinal movement within the opening, a collector ring on one face of said disk concentrically of the opening therein, an annular row of contacts on said face of the disk concentrically of said ring, a finger carried by said pin and rotatable therewith and bridging said contacts and ring, a shaft secured to said pin and depending therefrom and having a longitudinally extending spiral groove formed therein, a float slidably mounted upon said rod and capable of vertical movement along the rod, a tooth on said float engaging in said groove to rotate said shaft in the movement of the float, guide rods depending from said disk and disposed adjacent to the outer edge of said float, and wires carried by the outer edge of said float and engaging said guide rods.

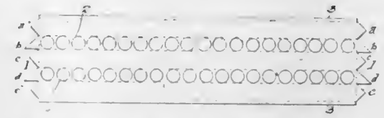
1,168,958. STEERING-WHEEL FOR AUTOMOBILES. ASA G. NEVILLE, Wellsburg, W. Va. Filed Dec. 31, 1913. Serial No. 809,749. (Cl. 74—33.)



1. The combination with an upwardly inclined shaft having a head thereon, of a steering wheel having spaced parallel guides between which the head is received and with which the head has sliding engagement, the space between said guides being unobstructed, of means for locking the wheel in a lowered position concentric to the shaft, and an upward extension carried by said head and forming a stop limiting the downward movement of the wheel under the action of gravity to a position where the wheel is concentric to the shaft, said extension having sliding engagement with the guides.

2. The combination with a shaft having a rectangular head thereon provided at its outside edges with guide grooves and having a web extending therefrom on one side, said web on its extremity being formed with guide grooves, of a steering wheel having spaced parallel guides between which the head is received, the space between said guides being entirely unobstructed, said guides engaging said guide grooves in the head and web, the extension on the head limiting the downward movement of the wheel with relation to the head to a position where the wheel is concentric to the head, and latching means for detachably holding the wheel concentric to the head.

1,168,959. WINDOW-VENTILATOR. RICHARD M. PANCOAST, Camden, N. J. Filed Mar. 3, 1915. Serial No. 11,699. (Cl. 98—31.)



1. A window ventilator comprised of a main body portion of sheet metal having integral ears at the ends, air admission perforations and air deflectors, and extensions in connection with the ears at the ends; the said main body portion and ears being formed of a single sheet of metal having parallel lines of perforations and the projecting ears, the metal being bent lengthwise on lines each side of the lines of perforations to form alternate longitudinal air deflecting and air admission parts angularly disposed to one another, the integral ears bent at right angles to the said longitudinal parts, and the extensions secured to the ears at opposite ends of the body portion.

2. A window ventilator comprised of a main body portion of sheet metal having integral ears at the ends, air admission perforations and air deflectors; metallic end pieces; and extensions in connection with the metallic end pieces; the said main body portion and ears being formed of a single sheet of metal having parallel lines of perforations and the projecting ears, the metal being bent lengthwise on lines each side of the lines of perforations to form alternate longitudinal air deflecting and air admission parts angularly disposed to one another, the integral ears being at right angles to the said longitudinal parts, the said metallic end pieces secured to the ears at each end, and the extensions secured to the metallic end pieces.

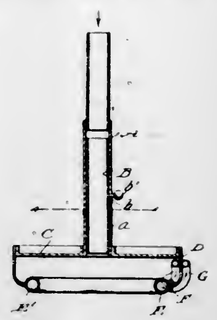
3. A window ventilator comprised of a main body portion of sheet metal having a plurality of deflecting and perforated air admission parts angularly and longitudinally disposed relative to one another, ears at the ends of the said body portion, and extensions in connection with the ears.

4. A window ventilator comprised of a main body portion of sheet metal having a plurality of air deflecting and perforated air admission parts angularly and longitudinally disposed relative to one another, ears at the ends of the body portion, metallic end pieces secured to the ears, and additional pieces in connection with the end pieces.

5. A window ventilator comprised of a main body portion of sheet metal having a plurality of air deflecting and perforated air admission parts angularly and longitudinally disposed relative to one another, integral ears at the ends of the body portion, end pieces secured to the ears, and wooden pieces in connection with the end pieces.

1,168,960. DRAWING-BAIT FOR WINDOW-GLASS MACHINERY. PIERRE J. PAQUET, Jeannette, Pa. Filed Aug. 3, 1915. Serial No. 43,383. (Cl. 49—17.1.)

1. A drawing bait for window glass machinery having a lower collecting ring and an upper pipe, and a vertically adjustable interior tube within and carried by said pipe and having a limited movement with respect thereto, which tube, when in lowered position, protects the collecting ring from direct action of air from the lower end of the said pipe.



2. A drawing bait for window glass machinery having a lower collecting ring, and an upper pipe provided with a vertically adjustable interior tube which, when in lowered position, protects the collecting ring from direct action of air from the lower end of the said pipe, and coöperating means carried by said pipe and said tube for supporting said tube in upper and lower positions.

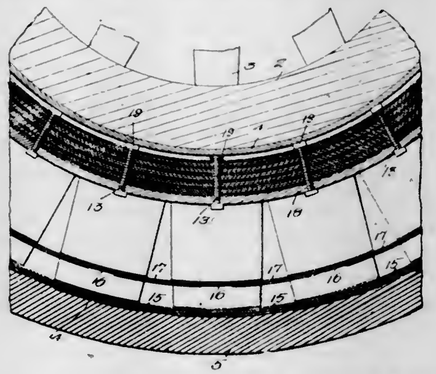
3. A drawing bait for window glass machinery having a lower collecting ring and an upper pipe provided with a vertically adjustable interior tube which, when in lowered position, protects the collecting ring from direct action of air from the lower end of the said pipe, said pipe having a bayonet slot and said tube having a stud projecting exteriorly through said pipe slot whereby to support the tube in upper and lower positions.

4. A drawing bait for window glass machinery having a hollow lower collecting ring, the space within which communicates with both the interior and exterior of the bait.

5. A drawing bait for window glass machinery having a hollow lower collecting ring, and a nipple communicating with the hollow of the ring and the interior of the bait above the ring.

[Claims 6 and 7 not printed in the Gazette.]

1,168,961. TIRE. JOHN E. PARRISH, Richmond, Va. Filed Jan. 7, 1915. Serial No. 979. (Cl. 152—8.)



1. A tire cushion comprising an unbroken ring-shaped holding frame; larger and smaller groups of resilient rings transverse to and inclosing said frame and the larger group loosely inclosing the smaller, each group made up of more than two series of such rings disposed in staggered relation to each other, each ring formed of a strip of sheet metal of one width throughout and having

its ends lapped over each other across said frame and standing edge to edge against the lapping ends of the next rings in the same series; and means for connecting all rings loosely to the frame to permit their lapping ends to slide thereon.

2. A tire cushion comprising a ring-shaped holding frame; a plurality of groups of resilient rings transverse to and inclosing said frame and each made up of a multiplicity of series of rings disposed in staggered relation to each other, each ring formed of a strip of sheet metal having its ends lapped over each other across said frame and standing edge to edge against the lapping ends of the next rings in the same series, said ends in one series having registering openings at the transverse center of the strip and said ends in the next series having notches at both edges of the strip registering with such openings; and bolts through the frame and the alined openings and notches.

3. A tire cushion comprising a ring-shaped holding frame; a plurality of series of resilient rings transverse to and inclosing said frame and disposed in staggered relation to each other, each ring formed of a strip of sheet metal having its ends lapped over said frame and standing edge to edge against the lapping ends of the next rings in the same series, said ends in one series having registering openings at the transverse center of the strip and elongated lengthwise thereof and said ends in the next series having elongated notches at both edges of the strip elongated lengthwise thereof and registering with such openings; and screw-bolts threaded through the frame radially inward of the tire and passing through the alined openings and notches.

4. A tire cushion comprising a ring-shaped holding frame; two groups of resilient rings transverse to and inclosing said frame, each group made up of a multiplicity of series of such rings disposed in staggered relation to each other, each ring formed of a strip of sheet metal having its ends lapped over the inner face of said frame and standing edge to edge against the lapping ends of the next rings in the same series, said ends in one series having registering openings at the transverse center of the strip elongated lengthwise thereof and said ends in the next series having notches at both edges of the strip elongated lengthwise thereof and registering with such openings; and screw-bolts threaded through the frame radially inward of the tire and passing loosely through the alined openings and notches with their heads adjacent the outer face of said frame and their nuts adjacent the lapping ends most remote from said frame.

5. A tire cushion made up of individual resilient rings standing transverse to the length of the tire and each ring consisting of a metal strip bent into circular form with its ends lapping each other, said cushion comprising a larger group of the rings and a smaller group within the larger, and each group being made up of a multiplicity of series of such rings closely inclosing each other with the individual rings in each layer contacting edge to edge where their ends are lapped and breaking joint with the rings in the contiguous layer throughout the series; and fastening bolts passing from within the smaller group through the lapping ends of rings in one of its series between the rings of the next series, and so on throughout all its series, and similarly throughout the series of the larger group.

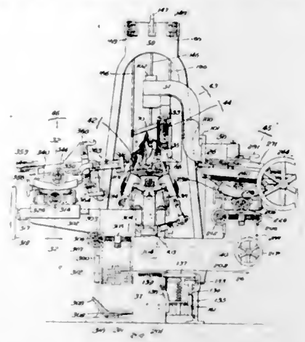
[Claim 6 not printed in the Gazette.]

1,168,962. COPPER ALLOY. WILLIAM C. PEASE, Marietta, Ohio. Filed Jan. 25, 1915. Serial No. 4,356. (Cl. 75—1.)

1. The herein described alloy of copper consisting of the following ingredients in substantially the following proportions, copper, 88.4 oz., aluminium, 6.6 oz., antimony, 1.26 oz., iron, 1.96 oz., and silicon, 1.60 oz.

2. An alloy of copper containing the following ingredients in substantially the following proportions, namely, 88.4 per cent. of copper; 6.6 per cent. of aluminium; 1.96 per cent. of iron; and 1.60 per cent. of silicon.

1,168,963. LASTING-MACHINE. ANGELO PERRI, Groveland, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Aug. 26, 1915. Serial No. 47,437. (Cl. 12—10.)



1. A shoe lasting machine including in combination means for holding a shoe and for shifting it between pulling-over operation and lasting operation, means for pulling-over the upper before such shifting, said pulling-over means being secured against shifting with the shoe but adapted to release the shoe before the latter is shifted, and means for wiping the shoe after the latter is shifted.

2. A shoe lasting machine including in combination, a shoe holder, mechanism for pulling-over the edges of the upper of a shoe in said holder and then releasing the same, said holder with the shoe adapted to be shifted relatively to the pulling-over mechanism after release therefrom, and wiping mechanism arranged to operate upon the shoe after such shifting.

3. A shoe lasting machine including in combination, a shoe holder, mechanism for pulling-over the edges of the upper of a shoe in said holder and then releasing the same, said holder with the shoe adapted to be shifted relatively to the pulling-over mechanism after release therefrom, means for clamping the pulled-over upper upon the last after the pulling-over is performed and maintaining it clamped during such shifting, and wiping mechanism arranged to operate upon the shoe after such shifting.

4. A shoe lasting machine including in combination means for giving underneath support to a shoe, means for pulling-over the upper while so supported, means for clamping the upper against the last, before the upper is released from the pulling-over means and maintaining it so clamped until the completion of the lasting, means for inverting the shoe in the machine after the pulling-over and clamping operations, and means for wiping the margins of the upper about the bottom of the last while still clamped in the machine.

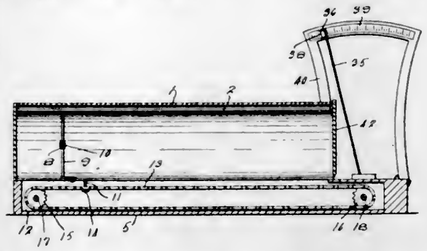
5. A shoe-lasting machine including in combination an invertible jack comprising means operable before inversion for clamping the shoe upper and last therein, pulling-over mechanism for shaping the upper about the last while upper side upmost, and wiping mechanism for shaping the clamped upper about the last after the jack and shoe have been inverted in the machine.

[Claims 6 to 48 not printed in the Gazette.]

1,168,964. CHEESE CUTTER AND CABINET. WELBY M. RICE and JOHN I. RANDALL, Manassas, Va. Filed Apr. 3, 1915. Serial No. 18,995. (Cl. 31—68.)

1. In a device as set forth, a retaining casing composed of spaced inner and outer casings, a feeder positioned within said interior casing, a supporting base, and means carried by said supporting base for moving said feeder longitudinally through said interior casing.

2. In a device as set forth, a retaining casing composed of spaced inner and outer casings, a feeder positioned within said interior casing, a supporting base, means carried by said supporting base for moving said feeder longitudinally through said interior casing, a knife pivotally connected to the open end of said casing and forming a closure therefor.



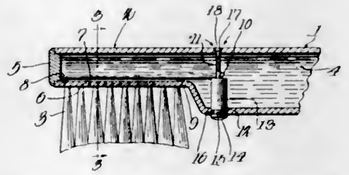
3. In a device as set forth, a supporting base, a casing mounted upon said base and composed of inner and outer casings, said inner casing being spaced inwardly from the interior of said outer casing, air ducts extending through said supporting base and communicating with the space between said inner and outer casings for permitting of the circulation of air therein.

4. In a device as set forth, a supporting base, a casing mounted upon said base and composed of inner and outer casings, said inner casing being spaced inwardly from the interior of said outer casing, air ducts extending through said supporting base and communicating with the space between said inner and outer casings for permitting of the circulation of air therein, a feeder mounted within said interior casing, means carried by said base for moving said feeder longitudinally within said interior casing.

5. In a device as set forth, a supporting base, a casing mounted upon said base and composed of inner and outer casings, said inner casing being spaced inwardly from the interior of said outer casing, air ducts extending through said supporting base and communicating with the space between said inner and outer casings for permitting of the circulation of air therein, a feeder mounted within said interior casing, means carried by said base for moving said feeder longitudinally within said interior casing, a knife pivotally connected to the open outlet end of said casing, said knife normally forming a closure for said casing, and means for registering the quantity of the food stuff fed out of said casing.

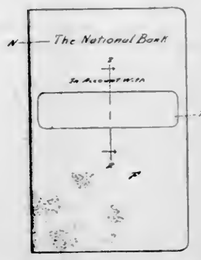
[Claims 6 to 10 not printed in the Gazette.]

1,168,965. FOUNTAIN TOOTH-BRUSH. ESTHER ROSENBLUM, Los Angeles, Cal. Filed May 5, 1915. Serial No. 25,952. (Cl. 15—52.)



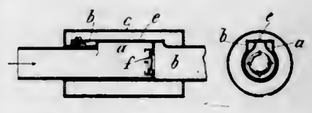
A fountain tooth brush comprising a cylindrical handle, a semi-cylindrical head formed integral with said handle and provided with bristles, a longitudinal bore extending through said handle and head, ports extending outwardly from the bore in the head to the bristles, a valve in the form of a flat spring adapted to normally close said ports, a slot formed in the outer end of said valve, a gasket between the valve and ports, a valve stem extending transversely of said bore and having an air valve upon the upper end thereof, a shoulder upon said stem, one end of said stem extending through an opening in the underside of the handle, a gasket upon said stem fitting in said opening, and the slot formed in said first mentioned valve operatively engaging the shoulder upon said stem to simultaneously open said valves.

1,168,966. PASS-BOOK. WALTER ROYSTONE, Fort Worth, Tex., assignor to M. P. Exline, Dallas, Tex., independent executor of A. S. Exline, deceased. Filed June 24, 1914. Serial No. 847,113. (Cl. 11—18.)



A book whose cover is unbroken and provided in its front with a depressed portion whose edges are beveled and merge into the face of the cover, said face having a poor writing surface; combined with a sheet of material filling said depressed portion and adhering to the face of the same, its edges being undercut over said bevels, the thickness of said sheet being such that its entire surface lies in a plane behind that of the exposed surface of the cover.

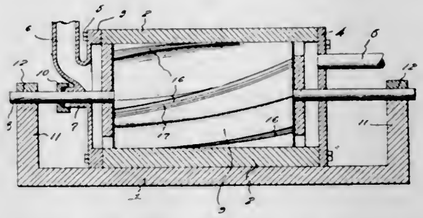
1,168,967. SOUND-PRODUCER. LOUIS SAVART, Paris, France. Filed Jan. 13, 1915. Serial No. 2,052. (Cl. 116—19.)



1. In a sound producer, an air supply pipe and an emission pipe co-extensive therewith, said pipes having adjoining orifices, a vibrating tongue covering and controlling said orifices and an air tight chamber completely surrounding the portions of said pipes in which the adjoining orifices are formed.

2. In a sound producer, an air supply pipe and an emission pipe axially in line, said pipes having adjoining rectangular orifices, a vibrating metal tongue controlling both said orifices, a partition located between the pipes, and a valve in said partition for permitting the return of air from said emission pipe to said supply pipe.

1,168,968. ROTARY ENGINE. EUGENE O. SEAWRIGHT, Hamlin, Ky. Filed Apr. 23, 1915. Serial No. 23,390. (Cl. 121—56.)



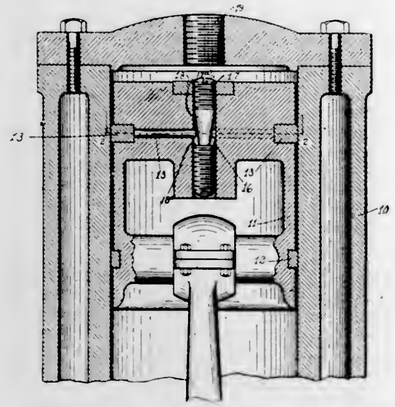
1. In a rotary engine, a cylinder, a rotor rotatably mounted within said cylinder, a plurality of spiral blades formed upon said rotor, a disk mounted within the inlet end of said cylinder and being provided with a plurality of cutout portions extending inwardly from the periphery thereof, said openings corresponding in number to the spiral blades of said rotor, a second disk mounted in the exhaust end of said cylinder and being provided with

openings extending radially inwardly from the periphery thereof, said openings in said outlet end disk being substantially one-half as many as the blades of said rotor, said spiral rotor blades being provided with longitudinally extending recesses formed in their edges, a plurality of spiral springs carried by said rotor blades and communicating with the base of said recesses, and blades loosely seated in said recesses and engaged by said springs.

2. In a rotary engine, a cylinder, a rotor rotatably mounted within said cylinder, a plurality of spiral blades formed upon said rotor, a disk mounted in the inlet end of said cylinder and being provided with a plurality of cut-out portions extending inwardly from the periphery thereof, said openings corresponding in number to the spiral blades of said rotor, and a second disk mounted in the exhaust end of said cylinder and being provided with openings extending radially inwardly from the periphery thereof, said openings in said outlet end disk being substantially one half as many as the blades of said rotor.

3. In a rotary engine, a cylinder, a rotor rotatably mounted within said cylinder, a plurality of spiral blades formed upon said rotor, a disk mounted in the inlet end of said cylinder and being provided with a plurality of cut-out portions extending inwardly from the periphery thereof, said openings corresponding in number to the spiral blades of said rotor, a second disk mounted in the exhaust end of said cylinder and being provided with openings extending radially inwardly from the periphery thereof, said openings in said outlet end disk being substantially one half as many as the blades of said rotor, a bed plate for supporting said cylinder, said bed plate having its ends bent upwardly and forming bearings, and a shaft carried by said rotor and rotatably seated in said bearings.

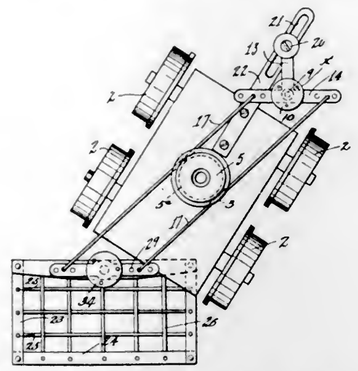
1,168,969. PISTON-RING. SAMUEL J. SHAW, Chicago, Ill., assignor of one-half to Isaac G. Reading, Terre Haute, Ind. Filed Apr. 25, 1914. Serial No. 834,407. (Cl. 121—108.)



1. The combination with a piston and an expansible piston ring mounted in connection therewith, of radially disposed pins in said piston in engagement with the ring, a threaded spreader screwed axially in said piston, said spreader provided intermediate the ends thereof with a tapering portion and a shoulder or offset, said tapering portion engaging the inner ends of said pins for forcing the same outward to expand the ring, the inner ends of the pins being located in the path of the shoulder or offset.

2. The combination with a piston, of an expansible piston ring, radially movable pins engaging the ring for expanding the same, and spreading means for forcing the pins outward in engagement with the rings, said pins being of material having greater expansion under temperature changes than the material of the piston and ring, and retaining heat longer.

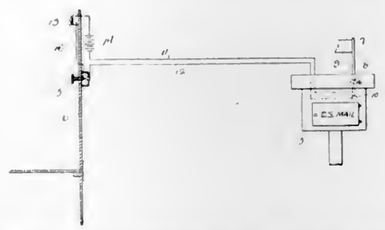
1,168,970. DIRIGIBLE FENDER FOR STREET-CARS. THOMAS SHEPPARD, Agnewville, Va. Filed Mar. 3, 1914, Serial No 822,198. Renewed Nov. 27, 1915. Serial No. 63,905. (Cl. 105—249.)



1. An automatically operated dirigible car fender, comprising a fender pivotally mounted underneath the front of a car, a wheel truck pivotally mounted under the car, a slotted bar extending from said truck, a tiller pivotally mounted in the slot of said bar, a front tiller rigidly connected to the fender frame, and parallel connecting bars pivoted at their ends in said tillers, whereby the fender frame is moved upon its pivotal point in the direction of movement of the car in rounding curves.

2. An automatically operable car fender comprising a rectangular frame, a sleeve rigidly connected to one of the bars of the frame, a standard projecting through said sleeve, said standard being rigidly connected to the car frame, a tiller on the upper end of said sleeve, a wheel truck carrying a slotted bar, a tiller pivotally connected in the slot of said bar and provided with oppositely extending arms at the upper end thereof, and connecting rods attached to the tillers at their ends for moving the fender on its pivotal point in the direction of movement of the car in rounding curves.

1,168,971. MAIL-BOX SIGNAL. ANTHONY SINICKI, Pittsburgh, Pa. Filed Feb. 27, 1915. Serial No. 10,929. (Cl. 177—339.)



In a signal, the combination of a mail box, a signal including a movable member attached to the mail box, a rotatable member mounted upon the mail box and insulated therefrom, said movable member being adjustable in said rotatable member, means for holding the movable member in its adjusted position, a contact member arranged in the path of the movable member for the engagement therewith when the signal is in indicative position, said contact member being out of the path of the movement of the movable member when the latter is in one of its adjusted positions, a bell, a normally open switch, a battery, and conductors connecting the movable member, contact member, battery, bell and switch in circuit.

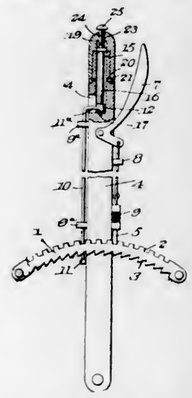
1,168,972. FLY-TRAP. GROVER C. SKELTON, Victor, Colo., assignor of one-half to Walter A. Schoen, Victor, Colo. Filed Mar. 18, 1915. Serial No. 15,210. (Cl. 43—22.)



1. A fly trap comprising a frame having a central screen disposed thereon, a cross piece disposed in spaced relation to one end of the frame, the central screen terminating at one end at said cross piece, a receptacle removably disposed above the cross piece and provided with a plurality of entrance openings registering with a plurality of openings in the cross piece, and screen covered runways provided on opposite sides of the central screen and leading to the openings in the cross piece.

2. A fly trap comprising a frame having a central screen disposed thereon, a cross piece disposed in spaced relation to one end of the frame, said central screen terminating at one end at said cross piece, a receptacle removably disposed above the cross piece and provided with a plurality of entrance openings registering with a plurality of openings in the cross piece, and screen covered runways extending downwardly from the cross piece and terminating at their lower ends above the lower end of the central screen, said runways having wide lower ends occupying substantially the width of the central screen, and having restricted upper ends leading to the openings in the cross piece.

1,168,973. LOCKING-LEVER. ALFRED C. SMITH and FREDERICK E. HENRY, Dobbs Ferry, N. Y. Filed Feb. 19, 1915. Serial No. 9,462. (Cl. 74—39.)

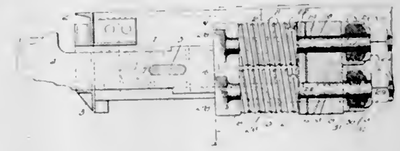


1. In a device for the purpose set forth, a rack bar, a pivoted lever for the rack bar, said lever having its outer end provided with a channel, a screw journaled in bearings in the channel, said screw having its outer end provided with a square or rectangular portion, a handle upon the lever and rotatable thereon, said handle having its outer end provided with a central opening, a key adapted to engage with the walls of the said opening and to also engage with the end of the screw, a dog for co-acting with the teeth of the rack bar, a rod upon the dog, said rod having an angular portion passing through an elongated slot in the lever and having a head provided with a bore engaging the screw, substantially as and for the purpose set forth.

2. A device of the class described, the combination of a double rack segment, of a lever pivoted for operation over the segment and having a main operated locking dog associated therewith and arranged to engage one face of the segment, an auxiliary locking dog arranged to engage the opposite face of the segment, a screw journaled in the lever, an operative connection between the screw and the auxiliary locking dog, a rotatable handle on the lever and a key removably connected with the handle and adapted to have operative connection with the screw, whereby the auxiliary locking dog may be positively operated in either direction.

3. A device of the class described, the combination with a rack segment, a lever pivoted for operation over said segment, a shiftable dog carried by the lever for engagement with said segment, and means for operating said dog in both directions, said means comprising a screw journaled in the lever, a rotatable handle on the lever, and a removable connection between the handle and screw.

1,168,974. DRAFT AND BUFFING GEAR FOR CARS. FRANK E. STEBBINS, Washington, D. C. Filed May 3, 1911. Serial No. 624,749. (Cl. 213—42.)



1. The combination in a draft and buffing gear, of slotted sills united by a fixed abutment; a movable abutment having two rods in connection therewith, their free ends threaded and passed through the fixed abutment; nuts on the rods; helical springs on the rods disposed in a vertical plane between the two abutments; a slotted draw bar; a yoke disposed in vertical planes each side of the movable abutment and back of the springs with its free ends slotted; and a key passed through the slot in the draw bar and slots at the free ends of the yoke and with its ends movably supported within the slots in the sills.

2. The combination in a draft and buffing gear, of slotted sills united by a fixed abutment; a movable abutment having two rods in connection therewith, their free ends threaded and passed through the fixed abutment; nuts on the rods; cushioning means between the nuts and the fixed abutment and supported by the rods; helical springs on the rods disposed in vertical planes between the two abutments; a slotted draw bar; a yoke disposed at the sides of the movable abutment and back of the springs with its ends slotted; and a key passed through the slot in the draw bar, and slots at the ends of the yoke and with its ends movably supported within the slots in the sills.

3. The combination in a draft and buffing gear, of slotted draft members united by a fixed abutment having an opening; a movable abutment; a bar or rod secured at one end to the movable abutment and its free end movably supported within the opening in the fixed abutment; means at the free end of the bar or rod to prevent the withdrawel of the same from the fixed abutment; cushioning means located between the two abutments; a slotted draw bar; a yoke with slotted ends passed around the cushioning means; and a key passed through the draw bar and the slots at the ends of the yoke, the end

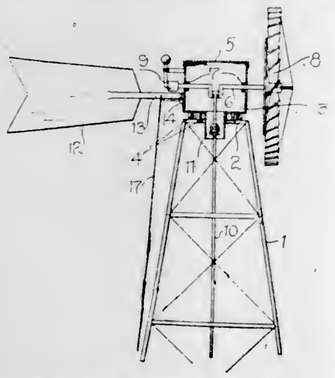
of said key being movably supported within the slots in the draft members, and the drawbar being movable away from said movable abutment in drawing.

4. The combination in a draft and buffing gear, of slotted draft members united by a fixed abutment provided with a horizontal opening for a rod; movable abutment; a rod independent of the draw bar secured to and movable with said abutment and its free end passed through the opening in the fixed abutment; means at the end of the rod to prevent the withdrawal of the rod from the fixed abutment; springs located between the two abutments and supported on the rod; a slotted draw bar; a yoke with slotted ends passed around the springs; and a key passed through the draw bar and the slots in the ends of the yoke, the ends of said key being movably supported within the slots in the draft members, and the draw bar being movable away from said movable abutment in drawing.

5. The combination in a draft and buffing gear, of draft members united by a fixed abutment; a movable abutment; rods in connection with the movable abutment and supported by the fixed abutments so they can move rearwardly relative to said fixed abutment; cushioning means at the rear of the movable abutment; a slotted draw bar; a yoke with slotted ends passed around the cushioning means; and a key uniting the draw bar and the ends of the yoke.

[Claims 6 to 20 not printed in the Gazette.]

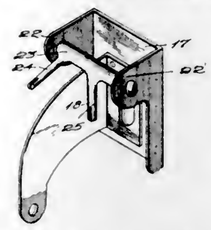
1,168,975. WINDMILL. VADEN S. STEPHENS, Marston, Mo. Filed Nov. 15, 1913, Serial No. 801,309. Renewed Dec. 1, 1915. Serial No. 64,579. (Cl. 170—37.)



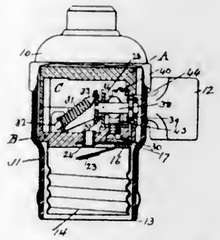
A device of the class described including a derrick having a platform at the upper end thereof, a housing rotatably mounted upon the derrick, roller bearings disposed between the housing and the platform, a crank shaft rotatably mounted within said housing and having a pitman connected thereto, a wind wheel mounted upon one end of said shaft, a rudder having its inner end hingedly connected to the housing, a spring member having its medial portion bearing against the under side of the rudder and its ends extended over the pintle portion of the hinge and thence downwardly and secured to the housing whereby the rudder will be yieldably retained in its normal position.

1,168,976. VALVE-GEAR. MARK L. TALBERT, Macon, Ga. Filed Apr. 20, 1915. Serial No. 22,721. (Cl. 121—98.)

In a valve gear of the character described, a bracket to be secured to a locomotive and having spaced ears, a rock-shaft arranged between the ears and pivotally connected therewith and carrying approximately horizontal and vertical arms, a support-arm secured to the bracket between its spaced ears and arranged between said arms and extending downwardly therebelow, a support link pivotally connected with the lower end of the support-arm, a suspension link pivotally connected with the upper portion of the support link, a pitman pivotally connected with the lower end of the suspension link and extending forwardly therebeyond for a substantial distance, a connecting link between the forward end of the pitman and the approximately horizontal arm of the rock-shaft, a valve rod connected with the approximately vertical arm of the rock-shaft, a vertically swinging operating member having connection with the upper end of the support link to swing it in opposite directions, manually operated means to shift the operating member, and means to drive the pitman.



1,168,977. ELECTRIC SWITCH. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 28, 1913. Serial No. 757,361. (Cl. 173—346.)



An electric switch comprising an oscillating switch piece and a rotary spindle lying at an angle to the axis of oscillation of the switch piece for controlling the oscillation thereof, in combination with a rotary actuating key and gearing operatively interposed between the latter and the switch operating spindle to impart switch actuating rotation to said spindle upon a quarter turn of the switch key.

1,168,978. TOY. GEORGE EICHMAN THOMAS, Atlantic City, N. J. Filed Nov. 6, 1914. Serial No. 870,645. Renewed June 22, 1915. Serial No. 35,696. (Cl. 46—40.)

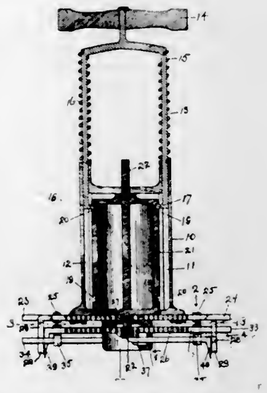


1. In combination with an upstanding member, a drum, a cord wound around the drum, an elevator slidable on the upstanding member and having the cord connected therewith whereby the elevator will be actuated upon operation of the drum, a figure connected with the elevator, a tiltable platform on the upstanding member and adapted to

be engaged by the elevator to tilt the platform, and a body normally disposed on the platform and adapted to be projected on to the figure when the platform is tilted.

2. In combination with an upstanding member, a drum, a cord wound around the drum, an elevator slidable on the upstanding member and having the cord connected therewith whereby the elevator will be actuated upon operation of the drum, a figure connected with the elevator, a tiltable platform on the upstanding member and adapted to be engaged by the elevator to tilt the platform, a body normally disposed on the platform and adapted to be projected on to the figure when the platform is tilted, rungs on the said upstanding member, and a leg wheel revolubly carried by the figure to operate upon said rungs as the figure is caused to ascend or descend the upstanding member through the medium of the said elevator and the operating mechanism therefor.

1,168,979. CAN-OPENER. KAMETARO URAKAWA, Seattle, Wash. Filed Aug. 18, 1915. Serial No. 46,170. (Cl. 30—3.)



1. In a can opener, an upright shaft having fast on its lower end a drum provided with parallel openings through it on opposite sides of its center and at different heights, and means for rotating said shaft at will; combined with parallel rack bars slidable through said openings, a long pinion loose on the shaft within the drum and engaging the teeth of both bars, and a knife depending from one end of each bar for the purpose set forth.

2. In a can opener, an upright shaft having fast on its drum provided with parallel openings through it on opposite sides of its center, and means for rotating said shaft at will; combined with parallel rack bars slidable through said openings, a pinion within the drum and engaging the teeth of both bars, a keeper near one end of each bar through which the other bar slides, a set screw in one keeper for engaging the bar within it, and a knife depending from one end of each bar for the purpose set forth.

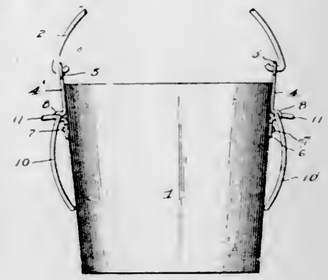
3. In a can opener, a body, racks slidable substantially diametrically relative to the body and provided at their opposite ends with supporting members, a pinion interposed between the racks whereby the racks move in unison, other bars substantially diametrical relative to the body and provided with racks, a pinion interposed between the racks, cutters carried at the extremities of the bars, a member attached to the cutter bars and provided with spiral slots, and a frame movable vertically having lugs engaging in the spiral slots.

4. In a can opener, a body, racks slidable substantially diametrically relative to the body, a pinion interposed between the bars engaging the racks, supports carried at the extremities of the bars and provided with means for engaging the peripheral bead of a can, other bars slidable substantially diametrically relative to the body and provided at their opposite ends with cutters, a pinion interposed between the racks and interengaging therewith, a cylinder rigidly connected with the latter-mentioned bars and provided with circumferential spiral grooves, a frame slidable vertically relative to the body, and lugs carried by the vertically sliding frame engaging in the spiral grooves.

5. In a can opener, a body having opposite vertical grooves, a frame slidable in said grooves and having inturned lugs, an upright shaft journaled in said body, and a cylinder fast on the shaft and having spiral grooves engaged by said lugs; combined with a support carried by said body, a drum fast on the lower end of the shaft, rack bars passing transversely through the drum and having depending knives at their outer ends, and means for permitting the simultaneous longitudinal movement of said bars.

[Claim 6 not printed in the Gazette.]

1,168,980. PAIL-SUPPORTER. FRANK VANDERLAAN, Holmen, Wis. Filed Oct. 5, 1914. Serial No. 865,163. (Cl. 31—14.)



1. The combination with a pail and pail handle, of a pair of handle carrying ears formed of a single piece of wire looped centrally and provided with outwardly diverging legs, which are offset outward, terminal ends terminating into rivet receiving eyelets, for securing the same to a pail, intermediate loops adapted to hold supporting members therein, its upper loop adapted to receive the ends of the pail handle when the same is in use.

2. The combination with a pail and pail handle, of a pair of handle carrying ears formed of a piece of wire looped centrally thereof forming two arms, said arms having outwardly offset loops intermediate their ends their terminal ends terminating into rivet receiving eyelets for securing the ears to the side of a pail, a plurality of pail supporters secured through the intermediate loop, means at the inner ends of the supporting members adapted to engage the sides of the pail to prevent the upward movement of the same when in use.

3. The combination with a pail and handle thereof, of a pair of handle carrying ears formed of wire, said ears looped centrally forming two outwardly diverging arms, said arms being offset outwardly intermediate their ends forming supporting loops, the terminal ends of said arms terminating into rivet receiving loops for securing the ears to the side of a pail, a pair of L-shaped supporting members having their inner ends curved upwardly secured through the intermediate loops, their upturned ends adapted to engage the outer surface of a pail and limit the upward movement of said supporting members, the longer arm or main portion of said L-shaped members being curved to conform to the legs for supporting a pail therebetween when in use.

1,168,981. CENTRIFUGAL PUMPING MECHANISM. MARVIN B. VAN NESS, Welsh, La. Filed May 25, 1914. Serial No. 840,784. (Cl. 253—199.)

1. In a centrifugal pumping apparatus, the combination with a centrifugal pump, a well casing in which said pump is suspended, a pit top on said casing, a pump head mount-

ed on said pit top and having a water discharge outlet, a discharge pipe consisting of a plurality of sections removably coupled together and coupled with said pump head and with the pump bowl of said centrifugal pump, said centrifugal pump including a pump neck bearing, a head bearing mounted on said pump head, a line shaft extending through said head bearing and coupled with the impeller shaft section of the centrifugal pump, said line shaft comprising a plurality of sections coupled together, a line shaft casing surrounding said line shaft and consisting of a plurality of sections coupled together, the end ones of said sections being coupled respectively to the head bearing and the pump neck bearing, said shaft casing being of greater diameter than the greatest diameter of the line shaft and its couplings whereby to provide a free passage through which the line shaft may be endwise drawn without obstruction.



2. In an apparatus of the class described, the combination with the centrifugal pump which includes a bowl, an impeller, a stub or impeller shaft section and a pump neck bearing for said shaft section, of a sectional water discharge duct for suspending said pump bowl, a pit top, a pump head mounted on said pit top to which said water discharge duct is secured, a head bearing, a sectional shaft casing secured to said head bearing and to said pump neck, said shaft casing having an uninterrupted passage from end to end, and a sectional line shaft projecting through said shaft casing and secured to said impeller shaft section, said line shaft passing through said head bearing and a drive pulley mounted on said line shaft.

3. A centrifugal pump comprising the following elements in combination, a discharge casing suspending said pump in the well, a pump shaft passing through said discharge casing to the top of the well, a shaft casing incasing said shaft, a drive pulley and a bearing therefor mounted at the top of the well, a water jacket for said bearing, said jacket being in communication with the discharge column of water and means for conveying the water from said jacket into the shaft casing.

4. A centrifugal pump comprising the following elements in combination, a sectional discharge casing, a sectional pump shaft passing through said casing from the pump to the top of the well, a sectional shaft casing inclosing said shaft, a driving pulley, and a bearing therefor mounted at the top of the well, a water jacket for said pulley bearing, said jacket being in communication with the discharge column of water, means for conveying the water from said jacket into the shaft casing, and means for separating the sand and detritus from the water prior to conveying the water into the shaft casing.

5. In a centrifugal pumping apparatus the following elements in combination, a pump having a pump neck bearing, a pump head, a line shaft extending from the pump to the pump head, a closed pipe incasing said shaft, a discharge casing surrounding said pipe from the pump to the top of the well, and means for maintaining said shaft pipe filled with clean water, said shaft pipe having its walls of substantially uniform diameter from the top to the bottom and composed of a plurality of sections coupled together, and said shaft rotating freely within said pipe.

[Claims 6 to 13 not printed in the Gazette.]

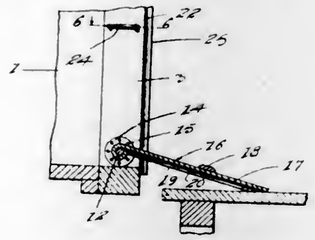
1,168,982. SALVAGE APPARATUS FOR VESSELS. CLARINE M. WALKER, Pensacola, Fla. Filed June 24, 1915. Serial No. 36,077. (Cl. 114—0.5.)



1. The combination with the hull of a vessel, of a series of salvage plates secured to the exterior of said hull and provided with inwardly-projecting chambered portions, with bolts masked in said chambered portions and firmly held in said plates, substantially as described.

2. A salvage plate adapted to be applied to the exterior of the hull of a vessel, comprising a metal plate provided with a flanged periphery, and a chambered central portion, with a stout bolt extending across said chambered central portion and masked therein and firmly secured to said plate, substantially as and for the purposes described.

1,168,983. DOOR-BRIDGE FOR RAILWAY-CARS. HENRY WALLINGFORD, Bonaparte, Iowa. Filed Apr. 16, 1915. Serial No. 21,785. (Cl. 57—18.)

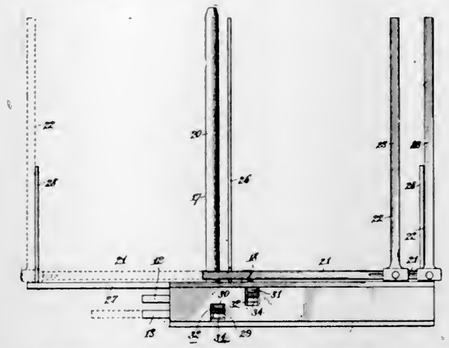


1. The combination with an ordinary railway freight or stock car having a doorway and side sills framing said doorway, of a yieldable plate carried by one of said side sills, a retaining plate carried by said side sill exteriorly of said yieldable plate, said yieldable plate being provided with an arcuate recess formed in its lower end for coaction with the lower arcuate end of a slot formed in said retaining plate for forming a bearing for a rod, a bearing plate carried by the opposite sill of said doorway, a rod having one end journaled in said second named bearing, and a plate carried by said rod for movement therewith into or out of an approach forming position.

2. The combination with an ordinary railway freight or stock car having a doorway and side sills framing said doorway, of an approach bridge structure including a plate, a rod secured to one edge of said plate for movement therewith, a yieldable plate carried by one of said sills and having an arcuate recess formed in its lower end, a retaining plate carried by said sill exteriorly of said yieldable plate and being provided with a longitudinally extending slot having an arcuate lower end, the end of said rod being seated in said arcuate end and said arcuate recess for yieldably and rotatably supporting one end of the rod, a bearing plate carried by the opposite sill and having the end of said rod journaled therein opposite to the one journaled in said yieldable bearing.

3. The combination with an ordinary railway freight or stock car having a doorway and side sills framing said doorway, of an approach bridge structure including a plate, a rod secured to one edge of said plate for movement therewith, a yieldable plate carried by one of said sills and having an arcuate recess formed in its lower end, a retaining plate carried by said sill exteriorly of said yieldable plate and being provided with a longitudinally extending slot having an arcuate lower end, the end of said rod being seated in said arcuate end and said arcuate recess for yieldably and rotatably supporting one end of the rod, a bearing plate carried by the opposite sill and having the end of said rod journaled therein opposite to the one journaled in said yieldable bearing, and means carried by said car sills for holding said bridge plate in a vertical position.

1,168,984. MUSIC-LEAF TURNER. ANDREW J. WESTENHAVER, North Mankato, Minn. Filed Feb. 20, 1915. Serial No. 9,668. (Cl. 84—17.)

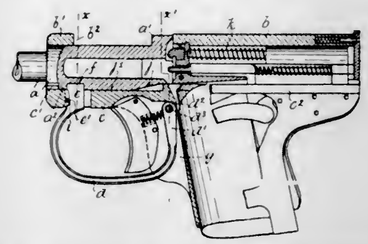


1. A music leaf turner comprising a casing having a vertical transverse partition therein, upper and lower horizontally disposed bars slidable through the partition and one end of the casing, coiled retractile springs connected within the casing and to said bars for moving the same, vertically disposed shafts journaled in said casing and rising above the same, rack bars formed on said shafts interiorly of the casing, rack teeth formed on the slidable bars and meshing with the respective rack gears, arms fixed to the vertical shafts, split clamping fingers adjustably mounted on the arms, and keys projected through the front of the casing and pivoted for movement to engage with the bars for locking the same under the tension of the spring.

2. A music leaf turner comprising a casing having a vertical transverse partition therein, upper and lower horizontally disposed bars slidable through the partition and one end of the casing, coiled retractile springs connected within the casing and to said bars for moving the same, vertically disposed shafts journaled in said casing and rising above the same, rack gears formed on said shafts interiorly of the casing, rack teeth formed on the slidable bars and meshing with the respective rack gears, arms fixed to the vertical shafts, split clamping fingers adjustably mounted on the arms, keys projected through the front of the casing and pivoted for movement to engage with the bars for locking the same under the tension of the spring, and extensions on the said casing and forming stops for limiting the swinging movement of the arms.

1,168,985. BARREL-FASTENING FOR AUTOMATIC PISTOLS. WILLIAM JOHN WHITING, Handsworth, Birmingham, England. Filed July 20, 1914. Serial No. 851,998. Renewed Nov. 23, 1915. Serial No. 63,138. (Cl. 42—3.)

1. In an automatic pistol of the kind herein described, the combination of a sliding, detachable barrel having a lower cam surface; a frame provided with a cam; and a combined barrel-fastening and cushioning device comprising a spring trigger guard applied in a tensioned condition to said frame and having a barrel-engaging head which coacts with the barrel can and is formed with a cam surface for coaction with the frame cam, whereby, when the guard is depressed to release the barrel, the coaction between the cam on said head and the said frame cam will further tension said guard, said head automatically assuming its normal position after the barrel has been removed, and when said barrel is slid back into said frame the coaction between its cam and the said head will again subject said guard to further tension, so that when the barrel reaches its prescribed position in said frame it will be automatically reëngaged by said head.



2. In an automatic pistol of the kind herein described, the combination of a sliding, detachable barrel whose base is formed with a recess and with a cam surface at the rear thereof; a frame having an aperture whose front wall is provided with a cam; and a combined barrel-fastening and cushioning device comprising a spring trigger guard applied in a tensioned condition to said frame and provided at its front end with a head which projects through said aperture and is adapted to enter said recess when the barrel occupies its prescribed position in said frame, said head having a cam-shaped front surface for coaction with the cam in said aperture, whereby, when the guard is depressed to withdraw said head from said recess, such coaction will further tension said guard, said head automatically assuming its original position after the barrel has been removed, and when said barrel is slid back into said frame, the cam on said barrel will engage the top of said head and again subject said guard to further tension, so that said head will automatically reënter said recess when said barrel reaches its said prescribed position.

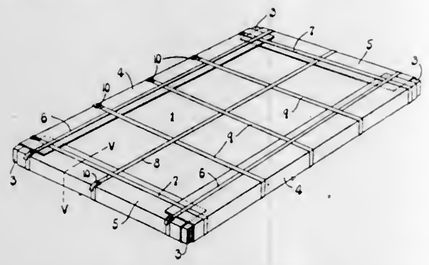
3. In an automatic pistol of the kind herein described, the combination of a sliding barrel having a recess; a frame wherein said barrel is mounted; and a barrel-fastening device comprising a spring trigger guard applied in a tensioned condition to said frame and having a locking head adapted to enter said recess when said barrel is in its prescribed position in said frame, said frame and head having coacting means for subjecting the guard to increased tension when depressed to withdraw said head from said recess, whereby said head will automatically assume its original position after the barrel has been removed, and said head and barrel having coacting portions for depressing the former and again subjecting the guard to increased tension when the barrel is slid back into said frame, whereby said head will be caused to automatically reënter said recess when said barrel reaches its said prescribed position.

4. In an automatic pistol of the kind herein described, the combination of a sliding barrel having a recess; a frame wherein said barrel is mounted having a seat at the back of the trigger; and a barrel-fastening and cushioning device comprising a spring trigger guard applied in a tensioned condition to said frame and having its front end provided with a locking head adapted to enter said recess when said barrel is in its prescribed position in said frame, and its rear end extended to form an upright arm which is pivoted in said seat, said frame and head having coacting means for subjecting the guard to increased tension when depressed to withdraw said head from said recess, whereby said head will automatically assume its original position after the barrel has been removed, and said head and barrel having coacting portions for depressing the former and again subjecting the guard to increased tension when the barrel is slid back into said frame, whereby said head will be caused to automatically reënter said recess when said barrel reaches its said prescribed position.

5. An automatic pistol of the kind herein referred to, comprising a detachable barrel having flat bottomed base which is formed with a recess and an inclined or beveled rear end, a body or frame having a cam-fronted aperture in the barrel-supporting part, and a spring trigger-guard

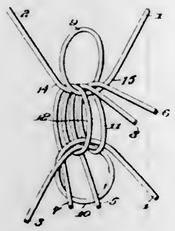
that serves as a barrel-fastening and as a buffer or cushioning device having its rear end pivoted to the frame and its forward end formed with a barrel-engaging head, the face of which is held, by the normal spring tension of the guard, in contact with said cam in said aperture the arrangement being such that the said head is capable of both a rearward and downward movement within said aperture to permit the fastening and releasing of the barrel to be effected, and also admit of the guard performing its cushioning or shock-absorbing function when the barrel is fastened to the frame.

1,168,986. HOLDER FOR SHIPPING WALL-BOARDS. AUDENRIED WHITTEMORE, St. Louis, Mo., assignor to General Roofing Manufacturing Company, a Corporation of Illinois. Filed Feb. 1, 1915. Serial No. 5,449. (Cl. 206—60.)



A holder for shipping piled wall-boards comprising upper and lower packing sheets, separable triangular corner pockets into which the corners of the pile and upper and lower packing sheets are inserted, folded marginal side and end packing sheets overlapping the body and ends of the pile and upper and lower packing sheets and the corner pockets and overlapped at the corner pockets, and longitudinal and transverse tie members surrounding the body and edges of the packing sheets and the folds of the marginal side and end packing sheets.

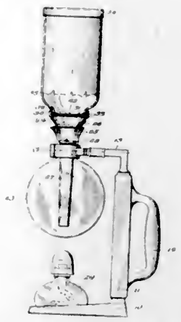
1,168,987. PUZZLE. CLAUDIOUS BONNER WIXOM, Hagerman, N. Mex. Filed Nov. 11, 1913. Serial No. 800,362. (Cl. 46—41.)



A puzzle comprising identical members, each member consisting of a single piece of wire bent to provide converging branches, said branches terminating in convoluted portions which merge into a loop disposed between said branches and having an inside diameter equal approximately to one-half of the distance between the free ends of the converging branches.

1,168,988. PERCOLATOR. ARTHUR ZIMMERMANN, Brooklyn, N. Y. Filed Aug. 5, 1914. Serial No. 855,314. (Cl. 53—3.)

1. In a percolator, the combination with an infusor, a spout flared at its upper portion and there having an upwardly facing shoulder surrounded by an upstanding wall, a flaring rubber collar surrounding said portion, and an urn having a flaring neck closely surrounding said collar; of a strainer removably supported by said shoulder, and a strainer cloth overlying the body of the strainer and passing around its edges in contact with said wall and thence inward over said shoulder.

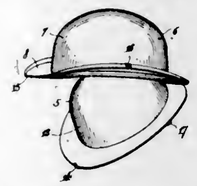


2. In a percolator, the combination with an urn having a neck, a spout also having a neck whose upper end is formed with an upwardly facing shoulder surrounded by an upstanding wall, and packing between said necks; of a strainer resting at its edge upon said shoulder and inclosed by said wall, an infusor having a reduced lower end fitting closely within said wall for holding the strainer in place, and means for detachably connecting the infusor with the neck of the spout.

3. In a percolator, the combination with an urn having a flared neck, a spout also having a flared neck whose upper end is formed with an upwardly facing shoulder surrounded by an upstanding wall, a flaring rubber collar between said necks, and a support for the urn; of a strainer resting at its edge upon said shoulder and inclosed by said wall, gaskets above and below said strainer, an infusor having a reduced lower end fitting closely within said wall for holding the strainer in place, and means for detachably connecting the infusor with the neck of the spout.

4. In a percolator, the combination with an urn having a flared neck, a spout also having a flared neck whose upper end is formed with an upwardly facing shoulder surrounded by an upstanding wall, a flaring rubber collar between said necks, and a support for the urn; of a strainer resting at its edge upon said shoulder and inclosed by said wall, an infusor having a reduced lower end fitting closely within said wall for holding the strainer in place, lugs at intervals around the infusor, and clamps pivoted in said lugs and having their lower ends inturned for detachable engagement with the neck of the spout.

1,168,989. COMBINED HOLDER AND SHAPE-RETAINER FOR HATS. BENJAMIN ZITKA, Detroit, Mich. Filed Apr. 30, 1915. Serial No. 25,028. (Cl. 223—31.)

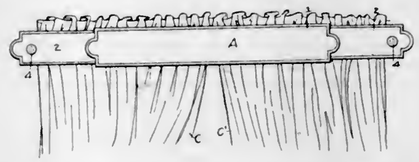


1. As a new article of manufacture, a combined holder and shape retainer for hats comprising a hat receiving member of receptacle form, and a hat supporting member movably connected with the hat receiving member and extending thereinto and serving to hold the hat in pressing contact with the walls of the receiving member.

2. As a new article of manufacture, a combined holder and shape retainer for hats comprising a hat receiving member of receptacle form, and a hat supporting member hingedly connected with the hat receiving member and extending thereinto and serving to hold the hat in pressing contact with the walls of the receiving member, and means for locking the hat receiving member upon the hat supporting member.

3. As a new article of manufacture, a combined holder and shape retainer for hats comprising a hat receiving member having an apertured brim engaging portion, a hat supporting member having a brim engaging and pressing portion, formed with an aperture, the hat receiving member being hingedly connected with the hat supporting member at a point diametrically opposite their apertured brim engaging portions and the supporting member adapted to extend within the hat receiving member and serving to hold the hat in pressing contact with the walls of the receiving member, the apertures of the brim engaging portions of the respective hat receiving and supporting members, adapted to register with one another when said members are in closed position, permitting the devices to be suspended from a support and the like.

1,168,990. CURTAIN-ROD. PAUL ALTSCHUL, New York, N. Y. Filed Apr. 27, 1915. Serial No. 24,220. (Cl. 156—19.)

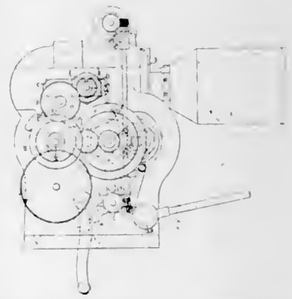


1. A curtain supporting rod consisting of front and rear members, each member consisting of a channeled middle section and slidable end sections, means for drawing the rods together at their ends for clamping curtains between the rods, and means adjacent the middle of the rod for independently clamping the curtains.

2. A curtain supporting rod consisting of front and rear members, means for drawing the members together at their ends for clamping curtains between them, and an adjustable element at the middle of one of the members and movable toward the other member to clamp the curtains.

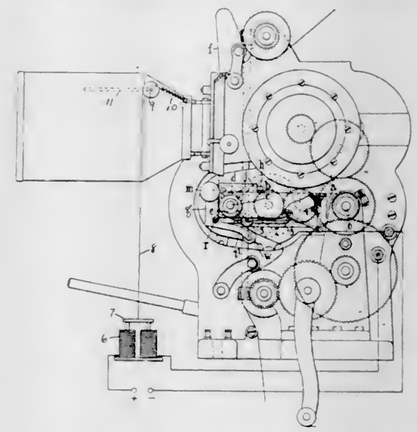
3. A curtain supporting rod consisting of front and rear members each composed of central and end sections longitudinally adjustable one on another for lengthening or shortening the rod, a plate on one of the inner sections, screws for moving the plate toward the central section of the other member for clamping curtains, and means on the end sections for drawing the members together for clamping curtains.

1,168,991. LENS-ADJUSTING MEANS FOR CINEMATOGRAPH APPARATUS. WALTER HILLIER ANDERSON, London, England. Filed Sept. 11, 1914. Serial No. 861,231. (Cl. 88—18.3.)



A cinematograph apparatus comprising a machine frame provided with a horizontal slot and groove, a shutter casing, a rotatable shutter with lens therein, a gear wheel on spindle thereof, a train of gear wheels geared thereto, a film, film sprocket wheels geared to said train of wheels, a cam and Maltese cross motion geared to said gearwheels, in combination wth a hollow spindle and a boss integral with the shutter casing which slide within the said slot and groove, a radius arm rotatable about one end concentrically with one of the train of gear wheels and carrying at the other end another of the said gear wheels which gears with the spur wheel on the shutter spindle, and means for adjusting and securing the said radial arm in any position to correspond with the adjustment of the shutter and lens.

1,168,992. CINEMATOGRAPH-MACHINE. WALTER HILLIER ANDERSON, London, England. Filed Sept. 11, 1914. Serial No. 861,233. (Cl. 88—17.)



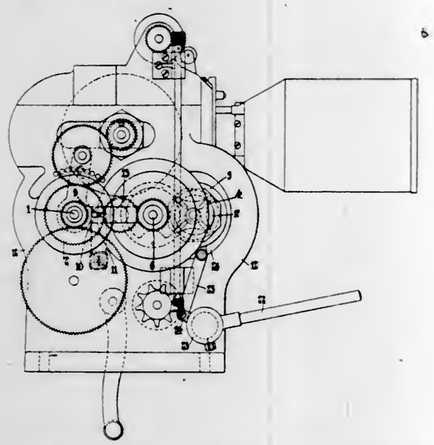
1. A cinematographic apparatus comprising a machine frame, a film, a film sprocket wheel, a sliding gate, a bell crank lever, an insulated terminal upon the frame, a safety shutter, an electro-magnet, an electric circuit connecting with the electro-magnet and the terminal, and connecting means between said shutter and the electro-magnet in combination with horns on the said gate, rollers on the said horns over which the film passes, a roller on one arm of the bell crank lever which rests upon the film, and means on the gate whereby when the gate is opened the said means locks the bell crank lever preventing the other arm from contacting with the terminal.

2. A cinematographic apparatus comprising a machine frame, a film, a film sprocket wheel, a casing or cradle carrying said sprocket wheel, parallel bosses on the cradle, a sliding gate, runners on the gate sliding in said bosses, a helical spring adapted to open the gate, a spindle pivoted to the gate, hooks or pawls mounted on the spindle engaging notches on the cradle, a shoe hinged on the gate partially embracing the sprocket wheel and having grooves coincident with the pins on the sprocket wheel, a milled head on spindle, a helical spring surrounding the spindle, horns on the gate, rollers on the said horns, over which the film passes, a bell crank lever pivoted on the cradle, a roller on one arm of said lever, an insulated terminal or switch on the frame, an arm secured to the gate, a safety shutter, an electro-magnet, an electric circuit connecting with the electro-magnet and the terminal, and connecting means between said shutter and the electro-magnet whereby when the gate is opened the said arm locks the bell crank lever preventing the other arm from contacting with the terminal.

3. A cinematographic apparatus comprising a machine frame, a film, a film sprocket wheel, a casing or cradle carrying said sprocket wheel, parallel bosses on the cradle, a sliding gate, runners on the gate sliding in said bosses, a helical spring adapted to open the gate, a spindle pivoted

to the gate, hooks or pawls mounted on the spindle engaging notches on the cradle, a shoe hinged on the gate partially embracing the sprocket wheel and having grooves coincident with the pins on the sprocket wheel, a milled head on spindle, a helical spring surrounding the spindle, horns on the gate, rollers on the said horns over which the film passes, a bell crank lever pivoted on the cradle, a roller on one arm of said lever, an insulated terminal or switch on the frame, an arm secured to the gate, a safety shutter, an electro-magnet connected thereto, an electric circuit connecting with the electro-magnet and the terminal whereby should the film break or run off the sprocket wheel the bell crank lever contacts with the terminal and the safety shutter is automatically closed.

1,168,993. CINEMATOGRAPH APPARATUS. WALTER HILLIER ANDERSON, London, England. Filed Mar. 5, 1915. Serial No. 12,461. (Cl. 88—18.)

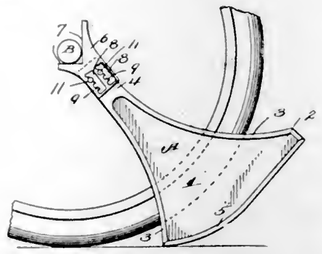


A mechanism for the masking or registration of the film with the opening in the shutter of a cinematograph machine, comprising in combination a main frame member, a driving wheel axle, a wheel thereon, a shutter with opening operated through the medium of said axle, a cam shaft, a cam wheel thereon, a Maltese cross gearing with said cam wheel, a rocking member pivoted on the main frame at the said driving wheel axle, a radius arm carried by the shaft of the cam wheel, a bracket secured to the main frame, a pin or pivot fixed in the said bracket and engaging with the outer end of the radius arm, a pinion on the cam wheel shaft, and a differential wheel pivoted on the radius arm which engages both the driving wheel and the said pinion whereby the film is caught up sooner or later as the rocking member is reciprocated, the masking being thereby effected.

1,168,994. LIFTING-JACK. SCOTT C. APPLEWHITE, San Antonio, Tex. Filed June 17, 1915. Serial No. 34,667. (Cl. 254—94.)

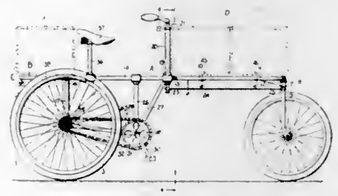
1. A device of the character described comprising a quadrantal supporting member being formed with an eccentric rocking portion adapted to engage with the ground, a bearing head formed with a bifurcated end adapted to engage with portions of a vehicle, said head being formed with a plurality of slots therein, a series of notches formed in each slot, and a plurality of lugs projecting from said supporting member and adapted to be adjustably received in the recesses formed between said notches for supporting said bearing head in position, said jack being adapted to raise the vehicle when the latter is rocked upon its eccentric rocking portion.

2. A jack for vehicles comprising a sheet metal supporting member being formed with an eccentric rocking portion adapted to engage the ground, a solid shank formed on said supporting member opposite said rocking portion, lugs projecting from one side of said shank and a bearing head formed with means for adjustable and removable engagement with said lugs and for supporting said head upon said shank.



3. In a device of the character described, comprising, a quadrantal supporting member formed with an eccentric rocking portion adapted to engage with the ground, a bearing head formed with a slot therein, a series of notches formed in said slot, and lugs projecting from said supporting member and adapted to be adjustably received in the recesses formed between said notches for supporting the bearing member in position.

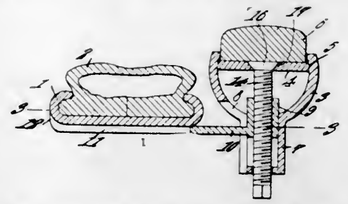
1,168,995. DELIVERY-TRICYCLE. WILLIAM A. BARNES, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,120. (Cl. 208—45.)



1. A vehicle of the class described comprising a frame including a front platform having side members bent inwardly toward each other at the rear, and said inwardly-bent members being extended rearwardly in the form of closely disposed bars, and said bars being bent outwardly in opposite directions and having downwardly extending extremities, and a rear platform carried by the outwardly-bent portions of the said bars; a front steering wheel connected with the front end of the front platform; a rear axle attached to the said downwardly extending extremities of the said bars; wheels on the rear axle; a hanger fastened to the bars of the said frame; driving mechanism supported by the said hanger and connected with the rear axle; a seat supported on the said bars; a fixed hollow post mounted on the said bars at a point in front of the hanger and at the rear of the front platform; a steering handle having a rod journaled in the said post; and connections between the said rod and steering wheel and located under the front platform.

2. A vehicle of the class described comprising a frame formed with a horizontal platform at its front, said platform having side members bent inwardly toward each other at the rear ends and thence downwardly, said downwardly bent portions being extended rearwardly in the form of spaced parallel bars, said bars having their rear portions bent oppositely and terminating in axle bearings, a rear platform connected with the rear portions of the said bars, and braces between the rear part of the front platform and the forward portions of the said bars; a front steering wheel connected with the front part of the platform; a rear axle mounted in the said axle bearings; wheels connected with the axle; a driving mechanism supported by the said parallel bars and operatively connected with the rear wheels; a seat mounted on the said bars; a fixed hollow post fastened to the frame at a point between said parallel bars and the front platform; and a steering device mounted in the post and operatively connected with the steering wheel.

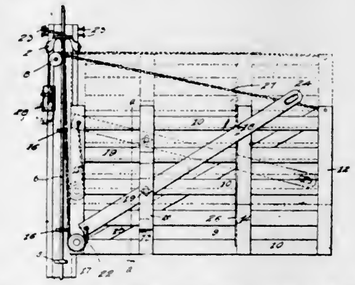
1,168,996. WHEEL. WILLIAM E. BINKLEY, Polo, Ill. Filed Sept. 15, 1915. Serial No. 50,832. (Cl. 152—23.)



1. In an emergency wheel for vehicles, a rim; screws journaled for rotation in the rim and held therein against endwise movement; and laterally extended brackets into which the screws are threaded, the brackets being interengaged with the rim against movement transversely of the axis of rotation of the screws; one of the screws being longer than the remaining screws, whereby said screw and its bracket may be employed as a jack.

2. In an auxiliary wheel for vehicles, a rim provided with nipples having slots; tubular sleeves mounted for right line sliding movement in the nipples and provided with rigid lateral brackets passing outwardly through the slots; and screws threaded into the sleeves, the screws being held against endwise movement in the rim, the brackets coacting with the slots to prevent a swinging of the brackets when the screws are rotated.

1,168,997. GATE. CALVIN O. BOND, Columbus Junction, Iowa. Filed May 26, 1915. Serial No. 30,601. (Cl. 39—14.)



In a device of the class described comprising a post, a bracket provided with spaced apertures therein and secured to said post adjacent the top thereof, an eye secured to said post adjacent the lower end thereof, a hinged bar having its upper end passed through one of the apertures of said bracket and its opposite end passed through said eye and into engagement with the ground, a gate hingedly and slidably mounted upon said hinged bar, a pulley journaled on the lower corner of the gate adjacent the post, a lever bar pivotally secured to said gate, a chain attached to one end of said lever bar and passed under the pulley and through one of the apertures of said bracket, means for securing said chains to the top of the post and means for locking the lever bar in a desired position.

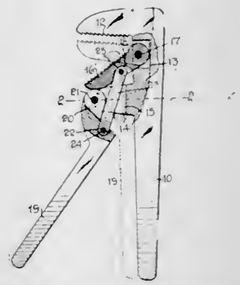
1,168,998. TOOTH-CLEANER. CLYDE K. BRANDENBURG, Klamath Falls, Oreg. Filed Oct. 13, 1914. Serial No. 866,490. (Cl. 15—39.)

A tooth cleaner comprising a flexible strip, an elastic cot or finger stall mounted upon one end of said strip, a split ring upon the opposite end of said strip, said flexible strip adapted to lie along the under side of the finger, two sets of bristles mounted upon the outer surface of said



flexible strip and being spaced apart to permit flexure of the strip between the sets of bristles and at a point approximately opposite the middle joint of the forefinger when in position for use.

1,168,999. PIPE-WRENCH. LEONARD BRANHAM, Orlando, Fla. Filed Nov. 18, 1915. Serial No. 62,196. (Cl. 81—84.)



1. A wrench of the character described including a shank having a fixed jaw, a movable jaw pivoted to the shank, said shank having an outwardly projecting arm below the movable jaw, a handle pivoted to said arm and being thereby movable toward or from the shank, and a link pivoted to the upper end of the handle between the free end thereof and its point of pivotal connection to the arm, the upper end of the link being pivoted to the movable jaw.

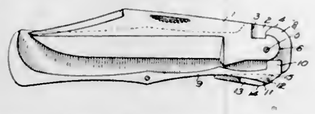
2. A wrench of the character described including a shank having a fixed jaw, a movable jaw pivoted to the shank, said shank having an outwardly projected bifurcated arm disposed below the movable jaw, a handle having an extension pivoted in said bifurcated arm, said handle being thereby movable toward or from the shank, and a link pivoted to the upper end of the handle, passing upward through the bifurcated arm and pivoted to the movable jaw.

3. A wrench of the character described including a shank having at one end a fixed jaw and recessed adjacent the fixed jaw upon its inside face, a movable jaw having a reduced portion disposed within said recess and pivoted to the shank, said shank below the movable jaw being formed with a bifurcated arm, a handle having an upward extension pivotally mounted in the extremity of the bifurcated arm, the upper end of the handle inward of said extension being recessed and the confronting face of the movable jaw being also recessed, and a link having its ends inserted in said recessed and pivoted operatively to the handle and jaw, said link passing through the bifurcated arm and being guided thereby.

4. A wrench of the character described including a shank having at one end a fixed jaw and recessed adjacent the fixed jaw upon its inside face, a movable jaw having a reduced portion disposed within said recess and pivoted to the shank, said shank below the movable jaw being formed with a bifurcated arm, a handle having an upward extension pivotally mounted in the extremity of the bifurcated arm, the upper end of the handle inward of said extension being recessed and the confronting face of the movable jaw being also recessed, and a link having its ends inserted in said recesses and pivoted operatively to the handle and jaw, said link passing through the

bifurcated arm and being guided thereby, the extremities of said link bearing at all times against the walls of the recesses in the movable jaw and handle respectively.

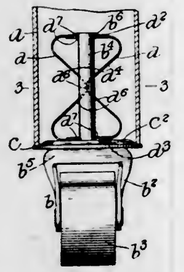
1,169,000. KNIFE. WALLACE RUSSELL BROWN, Olean, N. Y. Filed May 25, 1915. Serial No. 30,262. (Cl. 30—10.)



1. A knife, comprising a handle, a blade pivotally mounted in said handle, said blade being formed with a notch, a spring arranged in the back of said handle formed with a lug adapted to fit into said handle when said blade is open, said spring being formed also with a projection on the opposite side thereof to said lug, and a lever pivotally mounted on said projection formed with a cam surface on the face opposite that engaging the handle whereby the lever must be turned completely over before the cam will engage said handle for raising said spring and with it said lug so as to disengage the lug from said notch.

2. A knife comprising a handle, a blade pivotally mounted in said handle, said blade having a notch in the shank thereof on the side opposite to the back when the blade is closed, a spring arranged on said back formed with a lug, said lug being adapted to be forced into said notch by said spring when the blade is open, said spring being formed with a projection on the back thereof, and a lever member pivotally mounted on said spring projection, said lever being formed with a cam engaging said handle for moving said lug out of engagement with said notch when the blade is being closed.

1,169,001. CASTER. ADOLPH BALLENBERG, New York, N. Y. Filed Sept. 17, 1915. Serial No. 51,139. (Cl. 16—4.)



1. A caster for use in connection with a tubular or hollow leg or support, said caster being provided with a pintle on which is loosely mounted a plate adapted to bear on the bottom of the leg or support, and two separate spring devices mounted on the opposite sides of the pintle, said spring devices being provided with inwardly directed top, bottom and central members, the top and bottom members overlapping and the central members abutting, and said top, bottom and central members being provided with apertures through which the pintle loosely passes, and the top and bottom portions of said spring devices being adapted to bear at different points on the inner walls of the leg or support.

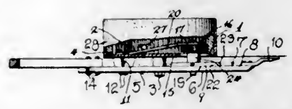
2. A caster for use in connection with the hollow leg or support for articles of furniture or other articles, said caster being provided with a pintle on which is loosely mounted a plate which bears on the bottom of the leg or support, and the pintle being provided with two oppositely arranged spring devices having top, bottom and central portions through which the pintle loosely passes and which are adapted to bear at different points on the inner walls of the leg or support at the top and bottom of the pintle.

3. A caster for use in connection with a leg or support for an article of furniture or other article, said caster being provided with a pintle, two oppositely arranged spring devices loosely mounted on said pintle and provided with outwardly and inwardly directed loops and the top and bottom loops of which are adapted to bear on the inner walls of the leg or support and the other loops being adapted to form central bearings for said spring devices.

4. A caster for use in connection with a leg or support for an article of furniture or other article, said caster being provided with a pintle, two oppositely arranged spring devices loosely mounted on said pintle and each provided with three loops, two of said loops of each spring device being adapted to bear on the inner walls of the leg or support while the other loops bear on each other.

5. An attaching device for use in connection with a leg or support for an article of furniture or other article, said attaching device presenting four spring loops which bear on the inner walls of the leg or support.

1,169,002. LAWN-TRIMMER. FRED J. BUTLER, Enid, Okla. Filed Oct. 20, 1915. Serial No. 56,954. (Cl. 56—19.)



1. A lawn trimmer comprising a substantially vertically disposed bar having its forward margin provided with a cutting edge, a traction wheel rotatably supported by the bar, a rotary cutter carried by the bar and coacting with the cutting edge thereof, an operative connection between the cutter and wheel, a plate interposed between the bar and wheel and secured to said bar, said plate snugly fitting within the rim of the wheel, and a flat spring anchored to the plate and bearing against the rotary cutter for urging the same toward the bar.

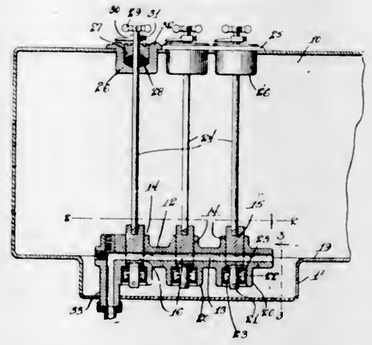
2. A lawn trimmer comprising a substantially vertically disposed bar having its forward margin provided with a cutting edge, a traction wheel rotatably supported by the bar, a rotary cutter carried by the bar and coacting with the cutting edge thereof, an operative connection between the cutter and wheel, a plate interposed between the bar and wheel and secured to said bar, said plate snugly fitting within the rim of the wheel, a flat spring anchored to the plate and bearing against the rotary cutter for urging the same toward the bar, and means for regulating the tension of the flat spring.

1,169,003. VALVE. JAMES R. BURKHARDT, Davenport, Iowa. Filed Sept. 3, 1914. Serial No. 860,104. (Cl. 137—27.)

1. The combination with a tank formed with a depression in the bottom thereof, of means for controlling the discharge from said tank including a casing positioned within said depression and leading from the tank, a longitudinal bore in the casing, valves provided with registering bores to intersect the casing bore, a stem for each valve projecting through the upper portion of the tank, and permutation means associated with each individual valve stem.

2. The combination with a fuel tank having an offset portion formed in the bottom thereof, of a valved casing seated in said offset portion, flanges formed on said valved casing for securement to said tank, valves rotatably positioned within said casing, extensions for said valves, resilient means coöperating with said extension to correctly seat said valves, stems for said valves, dials surrounding said stems, and means coacting with said dials and adjustably mounted upon said stems to indicate the position of each separate valve.

3. The combination with a fuel tank having an offset portion formed in the bottom thereof, of a valve casing provided with a longitudinal bore and positioned in said offset portion, transversely bored rotatable valves mounted in said casing to intersect the bore of the latter and to form means for interrupting or continuing said bore, stems for said valves, turning members for said stems, dials surrounding said stems relatively fixed thereto, adjustable collars mounted on said stems, pointer extensions formed on said collars to coact with said dials in indicating the position of said valved bores, and a conveying pipe communicating with said casing bore at one end and adapted to conduct fuel from the tank that has passed all of said valves.



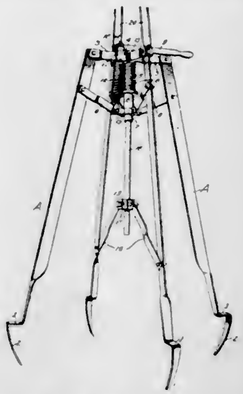
4. The combination with a tank having a depression formed in the bottom thereof, of means for controlling the discharge from the tank including a casing, arms straddling the depression to support the casing therein, an offset end leading from the casing through the bottom of the depression, a longitudinal bore in the casing being connected with a similar bore through the offset end, a plurality of valves intersecting the longitudinal bore and provided with registering bores, a stem for each valve projecting through the tank, a packing cup for each valve stem provided on its upper face with characters, and a pointer adjustably mounted upon each valve stem to coact with respective characters in determining the opening of the bore.

5. The combination with a tank, of means for controlling the discharge from said tank including a casing positioned in the bottom of said tank, said casing having a longitudinal bore, a plurality of valves intersecting the longitudinal bore and provided with registering bores, a stem for each valve projecting through the tank, a packing for each valve stem provided on one face with characters, and a pointer adjustably mounted upon each valve stem to co-act with respective characters in determining the opening of the bore.

1,169,004. WELL-TILE-PLACING TOOL. GEORGE H. CARGIN, Marcus, Iowa. Filed Apr. 3, 1915. Serial No. 18,918. (Cl. 57—9.)

1. A tool of the class described comprising a plurality of tile-carrying elements, a head to which the upper ends of the elements are pivoted, a movable head disposed under the first-mentioned head, links connected with the movable head and with the elements for moving the latter inwardly and outwardly, means acting on the movable head and tending to move the latter in a direction to contract the tool, an automatically locked operating device connected with the movable head for moving the same to expand the tool, said elements having means for engaging a tile previously laid, whereby the elements are moved to a position for releasing the tile carried by the tool, and means actuated by the initial movement of the element and engaged with a laid tile for unlocking the said operating means to permit the tool to contract.

2. A tile laying tool comprising a plurality of elements adapted to hold a tile to be laid and lie within the tile, the lower ends of the elements being curved inwardly to form tile-centering means by engaging a tile already laid, a device for holding the elements of the tile in expanded position, means operating on the device and connected with the elements for receiving motion therefrom when the elements engage a laid tile, whereby the device is unlocked, and means for operating on the elements to contract the tool when the said device is unlocked.



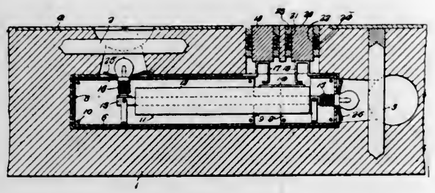
3. A tool of the class described comprising a plurality of tile-carrying elements, a head to which the elements are pivotally connected, a movable head connected with the elements to move the same inwardly and outwardly by the movable head moving toward and from the first-mentioned head, a spring operating between the heads to move the movable head in a direction tending to contract the tool, a longitudinally movable rod guided through the heads, links connected with the elements and adjustably connected with the rod for imparting movement thereto, a lever pivotally mounted on the first-mentioned head, means connecting the lever with the movable head, such means including a spring which locks the lever in a position with the said elements expanded and operatively related with the said rod, whereby the latter begins the unlocking movement of the lever while the last-mentioned spring completes the unlocking movement, whereby the tool is automatically contracted by the first-mentioned spring.

4. A tile laying tool comprising a head, inwardly and outwardly swinging hook-shaped tile-carrying elements pivotally mounted on the head and having their lower extremities shaped to engage a laid tile and thereby center the tile carried by the tool, a movable head disposed under the first-mentioned head, a guide carried by the first-mentioned head and on which the second head is slidable, links connecting the second head with the said elements, a compression spring surrounding the guide and interposed between the heads to contract the tool, an extension spring connected with the movable head, a link connected with the spring, an operating lever fulcrumed on the first head and pivotally connected with the link to operate through the latter and spring to move the movable head in a direction to expand the tool, said link and spring being adapted to assume an off dead center position, whereby the lever is locked with the tool expanded, and means operating on the lever to throw the same beyond dead center position when the lower ends of the tile-carrying element engage a laid tile, whereby the compression spring effects the contraction of the tool.

5. A tile laying tool comprising a head, inwardly and outwardly swinging hook-shaped tile-carrying elements pivotally mounted on the head and having their lower extremities shaped to engage a laid tile and thereby center the tile carried by the tool, a movable head disposed under the first-mentioned head, a guide carried by the

first-mentioned head and on which the second head is slidable, links connecting the second head with the said elements, a compression spring surrounding the guide and interposed between the heads to contract the tool, an extension spring connected with the movable head, a link connected with the spring, an operating lever fulcrumed on the first head and pivotally connected with the link to operate through the latter and spring to move the movable head in a direction to expand the tool, said link and spring being adapted to assume an off dead center position, whereby the lever is locked with the tool expanded, and a longitudinally movable rod movable to engage the lever for unlocking the same, an adjustable cross-head on the rod, and links connected with the cross-head and said elements whereby the inward movement of the latter, due to engagement with a laid tile, operates the rod to start the unlocking of the lever while the extension spring completes the unlocking for permitting the tool to contract and release the tile.

1,169,005. COMBINED LEVEL AND PLUMB. GEORGE W. CASWELL and CHARLES E. WELT, Cliftondale, Mass. Filed Sept. 15, 1915. Serial No. 50,862. (Cl. 240—8.4.)

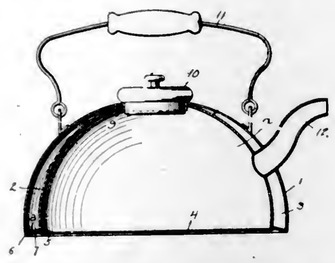


1. In a device of the class described, the combination of a supporting stock having sight openings therein and bulb tubes arranged one in each of the sight openings and visible from the exterior of the stock, a lamp adjacent each of the bulbs, a single battery for both of the lamps, said battery including a body having its center carbon electrode projecting beyond the ends and connected with the lamps, a contact plate communicating with the zinc of the battery electrode, spring contact members arranged adjacent the contact plate, and a push button for each of the said contact springs.

2. In a device of the class described, the combination of a supporting stock having bubble tubes therein visible from the exterior of the stock, said stock having a central receptacle, a box within the receptacle, a closure to one side of the stock for the box, a battery box removably secured in the first named box, said battery box comprising two sections, a longitudinally arranged battery removably secured in the battery box, said battery comprising an outer zinc casing, a carbon electrode which is surrounded by the zinc casing and which extends centrally of the casing and projects through the opposite ends thereof, a contact plate upon the casing, a contact spring carried by each of the sections of the battery box and disposed above the contact plate, a push button for each of the springs, a lamp connected with each of the ends of the center carbon or electrode, a reflector for each of the lamps, and each of said lamps being disposed adjacent one of the bubble tubes.

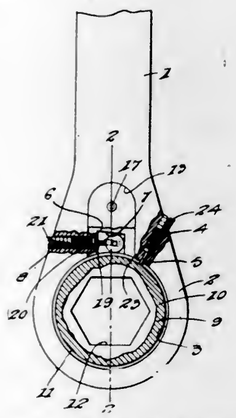
1,169,006. WATER-KETTLE. WALTER R. CEFERLY, Chicago, Ill. Filed May 21, 1915. Serial No. 29,591. (Cl. 53—9.)

A water kettle comprising an inner and outer member spaced apart providing an intermediate heat chamber, said inner member being slightly shorter than the outer member, a bottom connected to the lower edges of the outer and inner members, said bottom being provided with a shoulder extending entirely around the bottom to receive the lower edge of inner member, said bottom being inclined downwardly from the shoulder to the lower edge of the outer member and provided with perforations



extending entirely around the heat chamber, and an interior water chamber.

1,169,007. WRENCH. WALLACE CHADWICK, Schenectady, N. Y. Filed Oct. 31, 1914. Serial No. 869,627. (Cl. 81—58.)

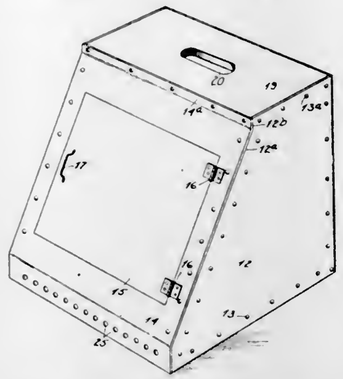


A wrench comprising a handle, an enlargement formed on one end of said handle, said enlargement provided with a central circular aperture therethrough, a recess formed in said handle and communicating with said opening, a jaw member rotatably mounted within the aperture of the handle, a roller provided with trunnions on opposite sides thereof seated in said recess, a pair of cover plates for said recess and provided with elongated openings adapted to receive the trunnions of the roller, and means for holding the roller within the recess whereby upon movement in one direction of the handle, the roller will be wedged against the rear wall of the recess and against the movable jaw member and hold the same against further movement.

1,169,008. MILKING-STOOL. LEVI H. CHASE, Soda Springs, Idaho. Filed Oct. 22, 1914. Serial No. 868,007. (Cl. 155—22.)

1. A milking stool, comprising metallic side frames formed of angle bars and trapezoidal in shape; a sheet metal covering at the sides, back and front secured to said frames, and extending to the bottom thereof forming a boxlike structure; said stool presenting a sloping front portion; and a top forming the seat of the stool, the sheet metal covering projecting above the top of the frame and the said top consisting of a board fitting in between the said projecting ends of the covering, the said seat resting on the top members of the frames and being secured between the said projecting ends of the covering.

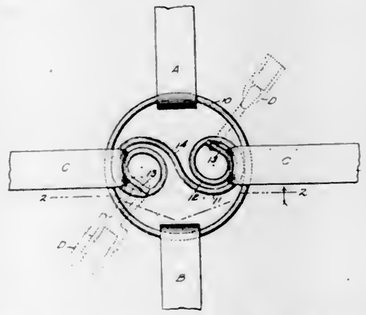
2. A milking stool, comprising angle iron side frames of general trapezoidal shape, each frame presenting a broad base, a narrow top, approximately vertical back members, and sloping front portions; sheet metal sides and a sheet metal back secured to said frames; a sheet metal covering on the frames, at the front, said front comprising a sheet metal frame and a door, said sheet metal coverings extending to the bottom of the frames forming a box-like structure; and a board top on the top members of the frame, said top forming a seat, the sheet metal sides presenting front edges sloping for the most part, the upper ends of said edges being vertical, the sheet metal front frame conforming to the said front edges of the sides, and the board top fitting between the upper ends of the sheet metal sides, back and front, and being secured thereto.



3. A milking stool made in form of a box of general trapezoidal shape and having its smaller end uppermost and presenting a sloping front portion, a door in said sloping front portion, horizontal guides projecting from the side walls within the stool to receive and support a water pan, a foraminous support below the pan, guides to support a heating device, said stool having air inlets adjacent its base to support combustion of the heating device.

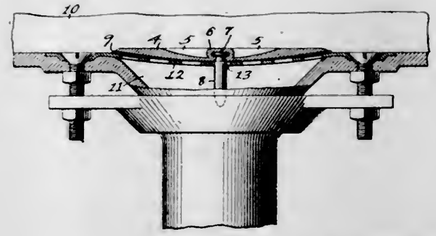
4. A milking stool made in form of a box of general trapezoidal shape and having its smaller end uppermost and provided with an opening to form a hand hold, and presenting a sloping front, said front having a hinged door, guides within the stool at each side to receive and support a water pan, and a support below said pan guides to hold a heating device.

1,169,009. TRACE-CARRIER. LEVI H. CHASE, Denver, Colo. Filed July 16, 1915. Serial No. 40,206. (Cl. 54—56.)



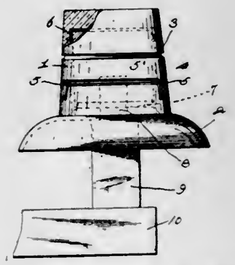
A trace carrier consisting of a harness ring adapted to receive a back strap and a crupper strap at the front and back respectively, and to receive hip straps at opposite sides whereby to connect the said four straps, and an element formed in a single piece, presenting volute members at opposite ends adjacent to opposite sides of the ring, the bases of the volute members following the curvature of the ring and lying against the same and being united thereto, so that the hip straps embrace the ring and the bases of the said volute members, the respective bases merging and forming a cross-bar therebetween from which said members curve oppositely, the cross-bar thus serving to connect the said volute members and constituting a transverse brace across the ring, said cross-bar lying substantially in the plane of the ring while the volute members rise in helical form above the ring.

1,169,010. DRAIN-COVER. DANIEL JOSEPH CONNELL, Butte, Mont. Filed Nov. 18, 1915. Serial No. 62,167. (Cl. 4—35.)



In a cover for a sink drain, a metal disk provided with radial grooves in its upper surface forming a handle, a headed pin embedded in said handle and projecting downwardly from said disk, and a resilient ring around the edge of said disk at the under side thereof.

1,169,011. INSULATOR. HARRY A. COOK, Dixon, Nebr. Filed Sept. 26, 1914. Serial No. 863,729. (Cl. 173—28.)



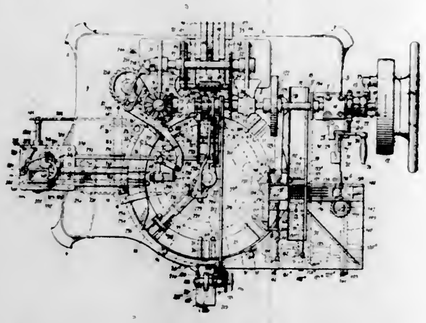
1. In an insulator structure, an insulator body constructed of glass and having a metallic cup shaped reinforcing member molded within the body of the insulator for strengthening the same, and tie wires carried by said insulator body and connected to said metallic reinforcing member.

2. In an insulator structure, an insulator body constructed of glass, a metallic reinforcing member molded within said insulator, said metallic reinforcing member having a plurality of tongues formed thereupon for engagement with the glass, and tie wires secured to said metallic reinforcing member and projecting out of said insulator body.

1,169,012. MACHINE FOR PACKAGING CIGARETTES AND OTHER ARTICLES. ROSS V. CRAGGS, Baltimore, Md., assignor to Richard H. Wright, Durham, N. C. Filed June 3, 1913. Serial No. 771,555. (Cl. 93—4.)

1. In a machine for packaging cigarettes and other articles, the combination of a mold wheel having a step ro-

tation imparted thereto and provided with a plurality of pockets, means for successively feeding blanks to the mold wheel, a shaping device for pressing the successive blanks into the pockets of the mold wheel to form inclosures, mechanism for separating cigarettes into bunches of a specific number and shifting the individual bunches to a point of discharge over the mold wheel and pressing said bunches downwardly into the shaped blanks in the pockets, and mechanism for regularly expelling the charged inclosures from the mold wheel and completing the said inclosures.



2. In a machine for packaging cigarettes and other articles, the combination of a mold wheel having a step rotation imparted thereto and provided with a plurality of pockets, mechanism for feeding blank inclosures to and shaping said inclosures in the pockets, mechanism for separating cigarettes from a loose mass of the latter into bunches of a specific number and feeding the bunches individually to a point of discharge and pressing the bunches downwardly into the shaped inclosures, mechanism for folding portions of the inclosures during the movement of the mold wheel, and mechanism for expelling the charged inclosures and completing the latter.

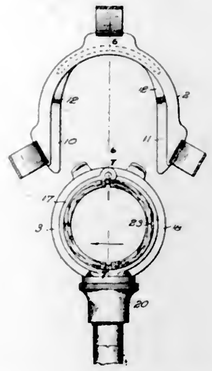
3. In a machine for packaging cigarettes and other articles, the combination of a mold wheel having a plurality of pockets, mechanism for feeding blank inclosures to and shaping said inclosures in the successive pockets, mechanism for separating a predetermined number of cigarettes by endwise movement from a mass of cigarettes at intervals to form bunches and conveying the bunches individually to a point of discharge and pressing them downwardly into the shaped inclosures, and mechanism for discharging the charged inclosures from the mold wheel and completing said inclosures in commercially vendable condition, all of said mechanisms being simultaneously operative at intervals of rest of the mold wheel.

4. In a machine for packaging cigarettes and other articles, the combination of a mold wheel having a plurality of pockets, mechanism for feeding blank inclosures to and shaping said inclosures in the successive pockets, mechanism for separating predetermined numbers of cigarettes by endwise movement from a loose mass of cigarettes to form bunches which are individually conveyed in planes at right angles from their point of separation to a point of discharge and pressed downwardly into the shaped inclosures, and mechanism for discharging the charged inclosures from the mold wheel and completing said inclosures in commercially vendable condition, all of said mechanisms being simultaneously operative.

5. In a machine for packaging cigarettes and other articles, the combination of a mold wheel having a step rotation imparted thereto and provided with a plurality of pockets, mechanism for feeding blank inclosures to and shaping said inclosures in the pockets, mechanism for separating specific numbers of cigarettes at intervals from beneath a mass of loose cigarettes to form bunches which are individually conveyed to a point of discharge over the mold wheel and pressed downwardly into the shaped inclosures, mechanism for folding portions of the inclosures over the charges of cigarettes, and mechanism for discharging the charged inclosures from the mold wheel, all of said mechanisms simultaneously operating to perform their specific functions.

[Claims 6 to 34 not printed in the Gazette.]

1,169,013. BRACKET FOR GLASS PERCOLATORS. RICHARD S. DARLING, New York, N. Y., assignor to Paramount Glass Percolator Mfg. Co., New York, N. Y., a Corporation of Delaware. Filed July 15, 1915. Serial No. 40,137. (Cl. 248—20.)



1. In a percolator of the character described, a fixed bracket provided with a pair of runways having beveled end portions, said bracket being formed with a groove adjacent one end, and a globe supporting ring formed with interlocking hook members, said ring being adapted to slide along said runways and be guided by said inclined portions so that the hook members will project into said groove.
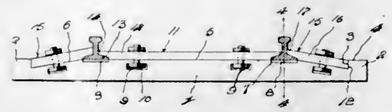
2. In a percolator of the character described, a fixed bracket provided with runways and a groove, a supporting ring adapted to rest on said runways and be guided thereby in back and forth movement when applying and removing, and a pair of hook members extending from said ring, said hook members having their upper edges inclined so that the lower part thereof will fit beneath the fixed bracket in order to slightly depress the hooks when applying the ring, whereby the hooks will pass under said part of said bracket and then into said groove for preventing accidental disengagement of the ring.

3. In a device of the character described, a supporting bracket, a removable ring structure carried by said bracket, said ring structure being formed in parts and hinged together, each of said parts being provided with a plurality of lugs intermediate their height and a lug adjacent the bottom, and a packing member of cork pressed into position on each of said parts, said packing being caused to partially surround said lugs whereby the packing is prevented from accidental removal.

4. In a device of the character described, a supporting bracket for a percolator provided with a grooved portion near one end and a pair of supporting runways, a ring for suporting a globe, said ring normally resting on said runways, hook members extending from said ring and fitting into said groove for preventing accidental removal of the ring, cushioning members arranged in said ring, and means extending from said ring and interlocking the cushioning members for preventing accidental removal of the cushioning members.

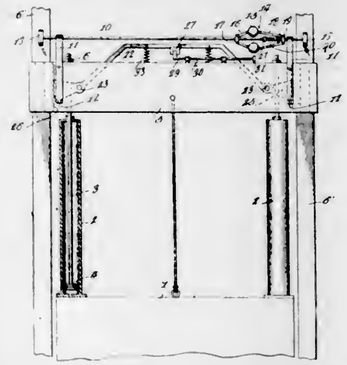
1,169,014. RAILROAD-TIE. FLOYE A. DAVIS, Sonestown, Pa. Filed Aug. 14, 1915. Serial No. 45,540. (Cl. 238—5.)

1. A railroad tie comprising a body, shoulders formed at the ends of the body, the upper face of the central portion of the body extending in a plane with the upper face of each shoulder for a distance equal to a gage of the track, downwardly inclined faces formed on the body at the ends of the central portion, the body being formed at the points where the inclined faces join the central portion with recesses and also having keyhole slots extending transversely of its upper face, cushioning blocks positioned in the recesses, rail securers on the upper face of the tie and bolts slidable in the keyhole slots and extending through the securers to hold the same in place on a tie.



2. A railroad tie comprising a body, shoulders formed at each end of the body, the upper face of the tie lying in a plane with the upper face of the shoulders between the rails, the portions of the tie intermediate the upper face and the shoulders being downwardly inclined, the point where the inclined faces join the upper face of the tie being provided with recesses, cushioning blocks within the recesses, the tie being formed at spaced intervals with transversely extending keyhole slots, bolts in the slots and means secured to the tie by means of the bolts to hold railroad rails in place on the cushioning blocks.

1,169,015. ELEVATOR SAFETY DEVICE. ISAAC P. DRAWBAUGH, De Queen, Ark. Filed May 24, 1913. Serial No. 769,670. (Cl. 187—90.)



1. An emergency brake for elevator cars including a plurality of friction rollers, guide beams upon which the rollers ride, rack carrying brake shoes movable into and out of engagement with said beams, and means controllable by movement of said rollers adapted to engage the shoe racks to force the shoes against the beams.

2. An emergency brake for elevator cars including a wedge shaped shoe, teeth formed upon the shoe, a guide beam extending longitudinally of the elevator shaft, a segment engaging the teeth of said shoe, means normally maintaining the segment inoperative, means controlled through movement of the elevator to actuate said last mentioned means, and means operating automatically to move the shoe in engagement with the beam upon a release of the control means for the segment.

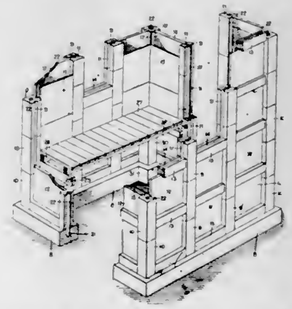
3. An emergency brake for elevator cars including a pair of wedge shaped shoes, guide beams extending longitudinally of the elevator shaft, teeth formed upon the respective shoes, a segment engaging the teeth of each shoe, trip means normally maintaining the segments inoperative, and means controlled through movement of the elevator car to actuate said trip means to provide for movement of the respective shoes into engagement with the respective guide beams, as and for the purpose set forth.

4. An emergency brake for elevator cars including a wedge shaped shoe, teeth formed upon the said shoe, a guide beam extending longitudinally of the elevator shaft, a segment engaging the teeth of said shoe, trip means normally maintaining the segment inoperative, a friction roller engaging the said beam, and means controlled through movement of said roller to actuate said trip means and provide for movement of said shoe in engagement with said beam.

5. An emergency brake for elevator cars including a pair of wedge shaped shoes, teeth formed upon the respective shoes, guide beams extending longitudinally of the elevator shaft, a segment engaging the teeth of each shoe, spring actuated levers rigid with the respective segments, trip means engaging the respective levers to hold the latter inoperative, and means controlled through movement of the elevator car to actuate said trip means.

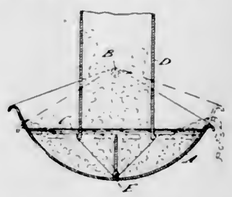
[Claims 6 to 8 not printed in the Gazette.]

1,169,016. BUILDING CONSTRUCTION. ARTHUR DUARTE, Rio de Janeiro, Brazil, assignor of forty one-hundredths to Humberto Banho, New York, N. Y. Filed Apr. 8, 1915. Serial No. 19,924. (Cl. 72—1.)



A construction as characterized comprising, a plurality of segmental superposed blocks having laterally disposed vertical grooves and centrally disposed open-ended passages; a plurality of facing tiles adapted for extension within, to be held by said lateral grooves of said blocks; an anchoring column disposed in said passages, said column being formed from a pouring setting material and introduced within said passages after the said blocks are disposed in service relation; a plurality of inner facing slabs structurally connected with said blocks to form a flush surface therewith; frames for openings in the walls of said construction; and means adapted to have said frames fastened thereto, said means being disposed within the grooves of said blocks, as a filling therefor.

1,169,017. DISCHARGING VERTICAL RETORTS. ARTHUR MCDOUGALL DUCKHAM, Ashtead, England. Filed July 28, 1915. Serial No. 42,378. (Cl. 202—9.)



1. Means for discharging carbonized material from a vertical retort, comprising in combination a trough forming a water seal for the retort, means for imparting a to-and-fro movement to the said trough, and means for preventing this movement from being fully imparted to the material in the trough.

2. Means for discharging carbonized material from a vertical retort, comprising in combination a trough forming a water seal for the retort, means for imparting a to-and-fro movement to the said trough and a stationary scraper in the trough adapted to prevent the movement of the trough from being fully imparted to the material therein.

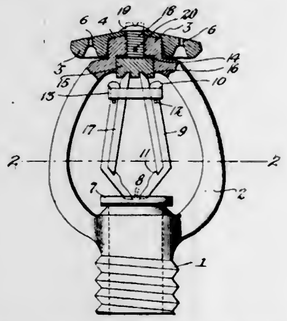
3. Means for discharging carbonized material from a vertical retort, comprising in combination a trough forming a water seal for the retort, means for imparting a to-and-fro movement to the said trough and a stationary scraper secured to the vertical retort and adapted to prevent the movement of the trough from being fully imparted to the material therein.

4. Means for discharging carbonized material from a vertical retort, comprising in combination a trough forming a water seal for the retort, means for imparting a to-and-fro movement to the said trough and a stationary scraper in the trough, substantially bisecting the discharge opening of the retort whereby the movement of the trough in each direction becomes effective in discharging the carbonized material.

5. Means for discharging carbonized material from a vertical retort, comprising in combination a trough pivoted about a horizontal axis and forming a water seal for the retort, means for imparting an oscillatory motion to the trough about the said axis and means for preventing this movement from being fully imparted to the material in the trough.

[Claim 6 not printed in the Gazette.]

1,169,018. SPRINKLER. HARLEY H. DULEY, New York, N. Y. Filed Feb. 24, 1915. Serial No. 10,303. (Cl. 169—5.)

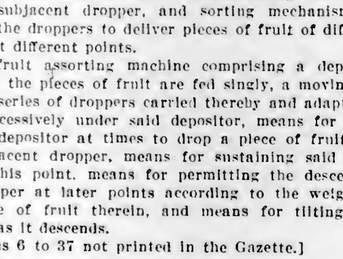


1. A sprinkler comprising a nipple having a frame mounted thereon, a block movably mounted with relation to the frame, means for moving the block with relation to the frame, a valve arranged to seat upon the nipple, legs arranged to engage the valve and provided at their inner sides with shoulders, bars bearing at their lower ends against the shoulders and at their upper ends engaging the block the end portions of the legs and bars overlapping each other and lying longitudinally in contact with each other and a fusible band surrounding the legs and the bars.

2. A sprinkler comprising a nipple having a frame mounted thereon, a block movably mounted with relation to the nipple, means for moving the block with relation to the nipple, a valve arranged to seat upon the nipple, legs adapted to engage at their lower ends with the said valve, said legs having upper portions diverging downwardly from each other and lower portions converging toward each other, said legs being provided at the inner edges of said converging portions with shoulders, bars bearing at their lower ends against the shoulders and at their upper ends engaging the block and a fusible band surrounding the legs and the bars.

3. A sprinkler comprising a nipple having a frame mounted thereon, a block movably mounted with relation to the frame, means for moving the block with relation to the frame, a valve adapted to seat upon the nipple, legs engageable with the valve for holding the same in position upon the nipple said legs being provided at their upper ends with heads and provided with pins located below the heads, bars engaging at their lower ends the said legs and engaging at their upper ends the blocks and a fusible band surrounding the bars and the legs between the heads of the legs and the said pins.

1,169,019. FRUIT-ASSORTING MACHINE. FREDERICK W. DUSTAN, Clarkston, Wash. Filed Feb. 3, 1915. Serial No. 5,965. (Cl. 130—32.)



1. A fruit assorting machine comprising a conveyer including a guide through which the pieces of fruit are fed, a depositor beneath said guide, a moving dropper adapted to pass under said depositor, means for opening the depositor to drop a piece of fruit into the subjacent dropper, and means for permitting the descent of the dropper and the delivery of the piece of fruit therein at one of several later points according to the weight of such piece.

2. A fruit assorting machine comprising a moving element, a series of droppers carried by such element, a depositor for delivering pieces of fruit to the droppers at a certain point, means actuated by said element for opening the depositor at said point, and means at successively later points according to the weight of the fruit for causing the dumping of the droppers.

3. A fruit assorting machine comprising a conveyer including a belt, a chute, and a guide through which the pieces of fruit are fed singly, a depositor beneath said guide, a moving element, a series of droppers thereon adapted to pass successively under said depositor, means for opening the depositor at intervals, and sorting mechanism for causing the delivery of pieces of fruit of different weight at different points.

4. A fruit assorting machine comprising a conveyer including a belt and a guide through which the pieces of fruit are fed singly, a depositor beneath said guide, a moving element, a series of droppers pivotally supported thereby and adapted to pass successively under said depositor, means for opening the depositor at intervals, means beneath said depositor for preventing the tilting of the subjacent dropper, and sorting mechanism for causing the droppers to deliver pieces of fruit of different weight at different points.

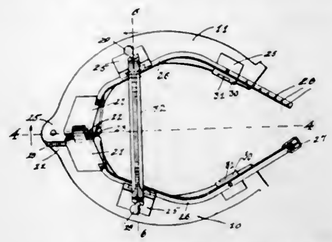
5. A fruit assorting machine comprising a depositor to which the pieces of fruit are fed singly, a moving element, a series of droppers carried thereby and adapted to pass successively under said depositor, means for opening the depositor at times to drop a piece of fruit into the subjacent dropper, means for sustaining said dropper at this point, means for permitting the descent of the dropper at later points according to the weight of the piece of fruit therein, and means for tilting said dropper as it descends.

[Claims 6 to 37 not printed in the Gazette.]

1,169,020. HORSESHOE. RUEL H. EAVES, Meeker, Okla. Filed June 25, 1915. Serial No. 36,283. (Cl. 168—191.)

In a horse shoe of the class described, a pair of shoe sections hinged together at the toe, upwardly projecting

rearwardly inclined guard plates fixed to respective sections and hingedly connected, spaced guard plates carried by each of said sections and inwardly inclined, straps



each connecting the upper ends of the plates on the respective sections means to connect the ends of said straps adjustably, and set screws extending through certain of said guard plates.

1,169,021. [WITHDRAWN.]

1,169,022. COLLAPSIBLE BARREL. JOSEPH D. ELDRIDGE and WALTER W. GEHR, Philadelphia, Pa. Filed Nov. 7, 1914. Serial No. 870,842. (Cl. 220—4.)



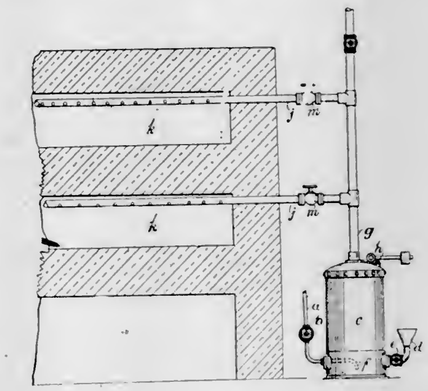
1. A barrel constructed of a plurality of similar metal sections, each of said sections having one of its longitudinal edges bent inwardly and extended outwardly to provide a substantially V-shaped socket, the opposite longitudinal edge of each of the sections being bent inwardly at an angle and curved outwardly to contact with the inner face of the said section to provide a substantially V-shaped tongue and a spring therefor, the said tongue of each of the sections being received within the pocket of the adjacent section, means for connecting the sections, said means adapted to force the tongues firmly within the pockets, and heads removably connected with the barrel.

2. A barrel constructed of a plurality of similar metal sections, each of said sections having one of its longitudinal edges formed with a V-shaped pocket, the walls of which being resilient, the opposite longitudinal edge of each of the said sections being provided with a V-shaped tongue, the walls of which are resilient, said tongue being further provided with a spring member which forces the same from the sections, and the tongues of each section adapted to be received within the pocket of the adjacent section, means for removably connecting the sections, said means adapted to compress the tongues within the pocket, and removable heads for the barrel.

3. A metallic barrel comprising a plurality of segmental sections, each of said sections having one of its ends bent inwardly and extending outwardly to provide a substantially V-shaped groove which extends the entire length of the said section, the opposite end of each of the sections being bent angularly to provide a V-shaped tongue, the inner end of which being curved inwardly of the V-shaped tongue to provide a spring between the members comprising the tongue and the said tongue and spring extending the entire longitudinal length of the section, and means arranged upon one of the sections co-acting with the adjacent section for forcing the spring tongue of one of the said sections into frictional engagement with the pocket of the co-acting section.

4. A metallic barrel comprising a plurality of segmental sections, each of said sections having one of its ends bent inwardly and extending outwardly to provide a substantially V-shaped groove which extends the entire length of the said section, the opposite end of each of the sections being bent angularly to provide a V-shaped tongue, the inner end of which being curved inwardly of the V-shaped tongue to provide a spring between the members comprising the tongue and the said tongue and spring extending the entire longitudinal length of the section and means for locking the sections, said means including swinging members having adjustable elements arranged adjacent the end of each of the sections and spaced lug members adjacent the opposite end of each of said sections and adapted to receive the swinging member of the adjacent section to be contacted by the adjustable element thereon.

1,169,023. BAKING. LAURENCE EMBREY, Fenton, England. Filed Oct. 5, 1915. Serial No. 54,243. (Cl. 107—54.)



1. The method of baking bread and the like which consists in placing the dough to be baked in an oven, passing steam through water and injecting the vapor so generated into the oven chamber.

2. The method of baking bread and the like which consists in placing the dough to be baked in an oven, passing steam through water and injecting the vapor so generated into the oven chamber during placing of the dough therein.

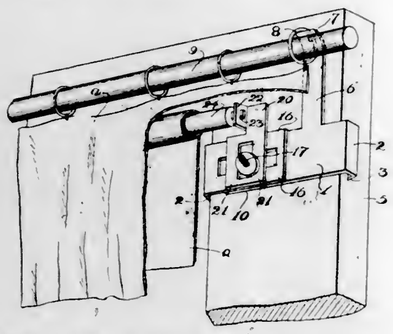
3. The method of baking bread and the like which consists in placing the dough to be baked in an oven, passing steam through water, collecting the vapor so generated externally of the oven and admitting controlable quantities of said vapor into the oven.

4. The method of baking bread and the like which consists in placing the dough to be baked in an oven, passing pressure steam in a downward direction into a body of water, collecting the vapor so generated under moderate pressure and admitting controlable quantities of said collected vapor into the oven during and for a variable time subsequent to placing of the dough in the oven.

5. In combination with a baker's oven, means for moistening the atmosphere thereof, comprising a vaporizing

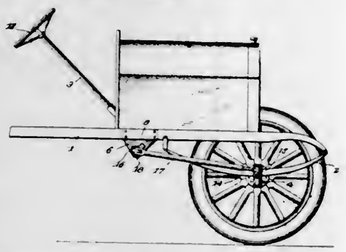
tank external to the oven, a steam supply pipe thereto, means for controlling said steam supply, means for supplying water to said vaporizer tank, an internal pipe leading from said steam supply and opening downwardly beneath the water level, a vapor discharge pipe from said tank, means in said pipe for controlling the discharge of vapor therethrough and a distributer pipe leading from said vapor discharge pipe and opening within the oven chamber.

1,169,024. COMBINED WINDOW-SHADE BRACKET AND LACE-CURTAIN HANGER. GEORGE B. FLETCHER, Dott, W. Va. Filed Mar. 27, 1915. Serial No. 17,462. (Cl. 156—24.)



A shade bracket including a pair of members their inner ends overlapping one another and means for holding the same together their opposite ends bent downwardly and inwardly and adapted to engage the opposite sides of a window frame, an arm formed on the upper edge of one of said members and extending upwardly therefrom, the upper end of said arm curved outwardly and provided with an opening adjacent its outer end and located centrally between the side edges a ring mounted through said opening and depending therefrom, said ring adapted to support the curtain pole and curtain.

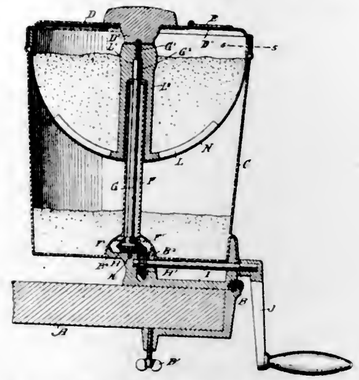
1,169,025. AUTOMOBILE STEERING-GEAR. CHARLES L. FLORA, Toledo, Ohio. Filed Mar. 16, 1915. Serial No. 14,733. (Cl. 21—198.)



1. In a steering gear of the class described a link rod mounted for longitudinal movement in fixed bearings and provided with rack teeth, in combination with a steering shaft having a pinion engaging the rack teeth of the link rod steering knuckles and longitudinally extensible connections between the steering knuckles and the link rod, said longitudinally extensible connections including yieldable means to normally longitudinally extend them.

2. In combination with chassis bars and the front axle, springs and steering knuckles of an automobile vehicle, fixed supports carried by the chassis bars a link rod mounted for longitudinal movement in said fixed supports and having rack teeth, a steering shaft having a pinion engaging the rack teeth of the link rod, sleeves pivotally mounted on the ends of the link roller, tubular sleeves pivotally connected to the first named sleeves and angularly movable at right angles to the pivotal axis of said first named sleeve, rods pivotally connected to the knuckles and slidably arranged in the bores of said tubular sleeves and expanding cushioning springs in the bores of said tubular sleeves and engaged and compressed by said rod.

1,169,026. APPARATUS FOR AGITATING MATERIALS. JACOB H. GENTER, Newburgh, N. Y. Filed May 29, 1913. Serial No. 770,653. (Cl. 107—30.)

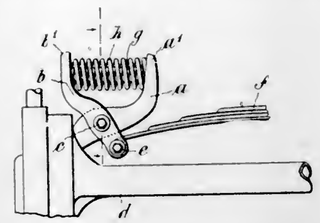


1. An apparatus of the class described, comprising a support provided with means for detachably securing it to a table, a vessel mounted on the support and having an open ended central tube extending to within a short distance of the top of the vessel, a perforated receptacle supported in the vessel above the bottom thereof, a vertical shaft having its lower end mounted in the support, said shaft extending through the tube of the vessel and having a polygonal portion adjacent its upper end and above the tube, a stirrer provided with an elongated hub having arms at it lower end shaped to fit the receptacle and a longitudinal bore, said hub fitting upon the tube and receiving the polygonal portion of the shaft with the end of the shaft projecting through the hub, a removable cover having on its inner face a central projection engaging the hub and in which the upper end of the shaft is mounted, a horizontal shaft mounted in the support and having a crank at its outer end, and gearing between the horizontal and vertical shafts.

2. In a device of the class described, a support provided with lugs, a vessel mounted upon the support and provided with a central open ended tube, the tube having an inverted cup-shaped lower end and provided on its inner face with lugs between which and the wall of the cup-shaped end the lugs of the support project, a cover for the vessel, a vertical shaft extending through the tube and journaled in the support and cover, a gear wheel on the shaft within the cup-shaped end of the tube, a stirrer secured upon the upper end of the shaft below the cover, and a horizontal shaft mounted in the support and having at its inner end a gear wheel meshing with the gear wheel of the vertical shaft.

1,169,027. SHOCK-ABSORBER. LUCIEN GULES GINNETT, London, England. Filed Dec. 5, 1913. Serial No. 804,893. (Cl. 267—19.)

A shock absorber for motor and other vehicles comprising two levers, a stationary lever and a pivotally movable lever, each comprising a substantially vertical portion and a lower forked portion extending toward and intersecting the lower forked portion of the opposite lever, the forked portion of one being between the forks of the other, both forked portions extending near forty-five degree angles across one another, means for pivoting the forked portions together, the lower extremity of the forked portion of one lever being secured to a part of the axle of the vehicle, the lower extremity of the other forked portion being secured to the chambered end of the vehicle spring, so that when the spring is depressed the movable lever will pivot toward the stationary lever, the opposite faces of the substantially vertical portions being provided



with sockets having concentric lugs therein, said sockets and the lugs being axially alined and directly opposite, a pair of helical springs, one arranged within the other, the inner spring engaging said lug of said sockets, the outer spring engaging within the peripheral flange of the socket, as set forth.

1,169,028. COMB. EDWIN W. GROVE, St. Louis, Mo. Filed Jan. 12, 1915. Serial No. 1,816. (Cl. 132—3.)



1. A comb comprising a comb body having companion halves articulated for movement toward and away from one another and each provided with teeth formed and arranged similarly to comb teeth, an absorbent element proportioned to be fitted between the halves of the comb body and having teeth-like projections corresponding in number and arrangement to said teeth but of slightly greater area whereby to project slightly beyond said teeth, and means for causing said companion halves of said comb body to exert a clamping action on said absorbent element.

2. A comb comprising a comb body having companion halves articulated for movement toward and away from one another and each provided with teeth formed and arranged similarly to comb teeth, an absorbent element proportioned to be fitted between the halves of the comb body and having teeth-like projections corresponding in number and arrangement to said teeth but of slightly greater area whereby to project slightly beyond said teeth, and means for causing said companion halves of said comb body to exert a clamping action on said absorbent element, said teeth being provided with inwardly projecting prongs to grip and secure said absorbent element.

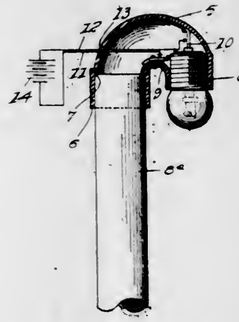
3. A comb comprising a comb body having companion halves, hinges connecting said halves and arranged between the inner faces and substantially below the back edges thereof, each of said companion halves being provided with teeth formed and arranged similarly to comb teeth, the portions of said halves above said hinges providing spring leaves, an absorbent element proportioned to be fitted between the halves of the comb body and having teeth-like projections corresponding in number and arrangement to said teeth but of slightly greater area whereby to project slightly beyond said teeth, and means removably associated with said spring leaves for springing the same and thereby causing said teeth to exert clamping pressure upon said absorbent element.

4. A comb comprising a comb body having companion halves, hinges connecting said halves and arranged between the inner faces and substantially below the back edges thereof, each of said companion halves being provided with teeth formed and arranged similarly to comb teeth, the portions of said halves above said hinges providing spring leaves, an absorbent element proportioned to be fitted between the halves of the comb body and having teeth-like projections corresponding in number and arrangement to said teeth but of slightly greater area whereby to project slightly beyond said teeth, and a bar removably fitted between said spring leaves and forming the back of the comb, said bar when fitted between said leaves springing the same and thereby causing said teeth to exert clamping pressure upon said absorbent element.

5. A comb comprising a comb body having companion halves, hinges connecting said halves and arranged between the inner faces and substantially below the back edges thereof, each of said companion halves being provided with teeth formed and arranged similarly to comb teeth, the portions of said halves above said hinges providing spring leaves, an absorbent element proportioned to be fitted between the halves of the comb body and having teeth-like projections corresponding in number and arrangement to said teeth but of slightly greater area whereby to project slightly beyond said teeth, and a bar having a wedge-shaped cross-section and having a conformable wedge fit between said leaves, said bar when fitted between said leaves forming the back of the comb, and springing said leaves to thereby cause said teeth to exert clamping pressure upon said absorbent element.

[Claims 6 to 15 not printed in the Gazette.]

1,169,029. PENCIL ATTACHMENT. LUTHER M. GUNNERSON, Stanwood, Wash., assignor of one-half to Nels P. Gunnerson, Stanwood, Wash. Filed Mar. 23, 1915. Serial No. 16,361. (Cl. 240—2.)



1. An attachment for pencils and the like comprising a tubular U-shaped body having open ends, an internal shoulder formed adjacent one end adapted to limit the inward movement of a pencil relative thereto, illuminating means removably secured in the opposite end of said body.

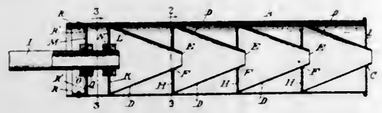
2. An attachment for pencils and the like comprising a tubular U-shaped body, an internal shoulder formed adjacent one end of said body adapted to limit the inward movement of a lead pencil relative thereto, an electric lamp removably secured in the opposite end of said body, contacts secured in said body for engaging the electrodes of said lamp, and wires secured to said cantacts and extending exteriorly of said body.

3. An attachment for pencils and the like comprising a tubular U-shaped body having open ends, internal screwthreads at one end of said body, the opposite end of said body being adapted to receive a lead pencil or the like, an electric lamp removably secured in the screwthreaded end of said body, and contacts secured in said body for engaging the electrodes of said lamp.

4. An attachment for pencils and the like comprising a tubular U-shaped body having open ends, an internal shoulder formed adjacent one end of said body adapted to limit the inward movement of a lead pencil, internal screwthreads formed in the opposite end of said body, an electric lamp removably secured in the threaded end of

said body, contacts secured in said body engaging the electrodes of said lamp, and wires secured to said electrodes and extending exteriorly of said casing.

1,169,030. SILENCING-MUFFLER. LYLE V. HARDY, Lowville, N. Y. Filed Mar. 23, 1915. Serial No. 16,359. (Cl. 121—116.)



1. A silencing muffler comprising a shell having a series of conical-shaped members mounted therein, each having an apex opening and a central aperture in its closed bottom, the open apex end of each member extending through an aperture in the bottom of an adjacent member, an exhaust pipe fastened in an aperture in the bottom of the end of the series of members and ip alinement with the openings through the apices of said members.

2. A silencing muffler comprising a shell having a series of conical-shaped members mounted therein, each having an apex opening and a central aperture in its closed bottom, the open apex end of each member extending through an aperture in the bottom of an adjacent member, an apertured disk within the muffler, an exhaust pipe passing through the aperture of said disk and an opening in the bottom of the adjacent conical-shaped member, and means for fastening the pipe to said disk and apertured bottom.

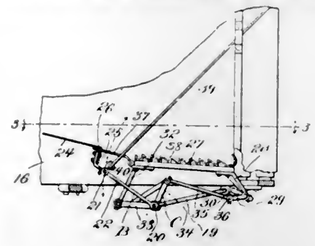
3. A silencing muffler comprising a shell having a series of conical-shaped members mounted therein, each having an apex opening and a central aperture in its closed bottom, the open apex end of each member extending through an aperture in the bottom of an adjacent member, an apertured disk within the muffler, a circumferentially threaded exhaust pipe passing through the aperture of said disk and an opening in the bottom of the adjacent conical-shaped member, lock nuts mounted upon the pipe and engaging the apertured disk and bottom of the adjacent member, and means for holding the disk within the shell.

4. A silencing muffler comprising a shell having a series of conical-shaped members mounted therein, each having an apex opening and a central aperture in its closed bottom, the open apex end of each member extending through an aperture in the bottom of an adjacent member, an apertured disk within the muffler, a circumferentially apertured pipe passing through the aperture of said disk and an opening in the bottom of the adjacent conical-shaped member, lock nuts mounted upon the pipe and engaging the apertured disk and bottom of the adjacent member, and a collar fitted within the shell and holding the disk in place.

5. A silencing muffler comprising a shell having a centrally apertured end, a series of conical-shaped members, each having an open apex extending through the bottom of a central aperture in the bottom of an adjacent member, the apex of the end member of the series extending through the aperture in the end of the shell and the marginal edges of the members frictionally engaging the inner surface of the shell, an apertured disk within the shell in registration with the openings in the bottoms of the members, a threaded pipe passing through said disk and the aperture in the bottom of the adjacent member, lock nuts mounted upon the pipe and engaging said disk and bottom of the adjacent member, and a flanged collar fastened within the shell and bearing against said disk.

1,169,031. BUTT-BOARD FOR GRAIN-BINDERS. JAMES HARTMAN, Bern, Kans. Filed Apr. 26, 1915. Serial No. 23,900. (Cl. 56—36.)

1. A frame, a bell crank fulcrumed on one end member of said frame, a shaft supported for rotation and having a crank provided with a wrist pin, a butt board having a bracket pivoted on the crank, a link connecting the wrist pin with one arm of the bell crank, a link connecting the butt board with the other arm of the bell crank, and means for rotating the shaft having the crank, whereby imparting an orbital movement to the butt board.

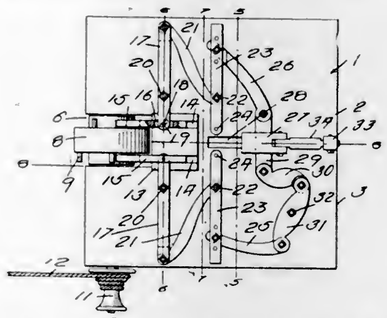


2. A swingingly supported frame, a bell crank fulcrumed on one end member of said frame, a shaft supported for rotation and having a crank provided with a wrist pin, a butt board having a bracket pivoted on the crank, a link connecting the wrist pin with one arm of the bell crank, a link connecting the butt board with the other arm of the bell crank, and means for rotating the shaft having the crank, thereby imparting an orbital movement to the butt board; in combination with means for securing the swingingly supported frame at various adjustments.

3. A butt board supported for orbital movement, a swingingly supported frame with which the butt board is connected, a shield carried by the frame and having a slot, a tail piece connected pivotally with the butt board and guided through the slot of the shield, means for adjusting the swingingly supported frame and for securing it at various adjustments, and means for actuating the butt board.

4. In a grain binding harvester, a swingingly supported frame, a butt board supported for orbital movement, a link connection between the butt board and the swingingly supported frame, means for effecting adjustment of said frame and for securing it at various adjustments, a slotted shield carried by the swingingly supported frame and relatively stationary with respect to the butt board, and a tail piece pivotally connected with the butt board and guided by the slotted shield.

1,169,032. OPERATING MECHANISM FOR STUMP-PULLERS. JOHN S. HAYDEN, Plantation, Cal. Filed Dec. 30, 1914. Serial No. 879,715. (Cl. 74—54.)

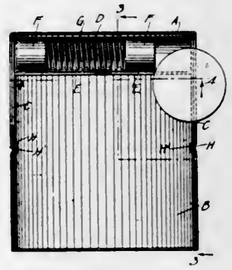


1. In a device of the class described, a base plate, a fly wheel mounted on one end thereof and having outwardly extending pins on the sides thereof, shoes slidably mounted on the plate and arranged on the opposite sides of said fly wheel to engage the pins thereon, and means to alternately cause the shoes to engage the said pins.

2. In a device of the class described, a base plate, a fly wheel mounted on a horizontal shaft on one end thereof and having pins on its opposite faces, shoes slidably mounted on the base plate arranged to engage said pins, means to alternately cause said shoes to engage the said pins including levers pivoted to said shoes and to the base plate, additional levers pivoted to the base plate at certain of their ends, links connecting said levers, the said links being connected to certain of the ends of the said first mentioned levers and between the ends of the last mentioned levers, an operating block, means connecting the operating block and one of the last mentioned levers in such manner that as the block moves forwardly the adjacent shoe will be moved forwardly, and means connecting the other of said last mentioned levers to the said block so that upon the forward movement of the block the other of the said shoes will be moved rearwardly.

3. In a device of the class described, a base plate, a fly wheel rotatably mounted thereon and having pins on the opposite faces thereof, shoes slidably mounted on the base plate, an operating lever pivotally mounted on the base plate, means connecting said shoes whereby when the operating lever is moved forwardly one of said shoes will be moved forwardly and the other simultaneously rearwardly.

1,169,033. TOY SAVINGS-BANK. CHARLES ANTHONY HILL, New York, N. Y. Filed Nov. 7, 1914. Serial No. 870,833. (Cl. 232—4.)

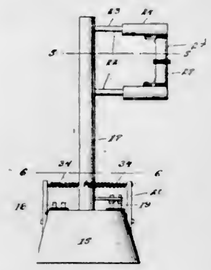


1. A savings bank, comprising a container made in telescoping outer and inner sections of cup shape, the open end of one section being adjacent the closed end of the other section, the sides of the said sections being provided with registering coin slots adjacent one end of the container, the slots extending in the direction of the height of the container, a tubular guideway secured to the inner faces of the inner section at the open end thereof and extending diametrically across the said section, the said guideway having a slot in its bottom in transverse alinement with the said registering slots, and a spring-pressed plunger slidable in the said guideway and normally closing the upper portion of the said registering coin slots.

2. A savings bank, comprising a container made in telescoping outer and inner sections of cup shape, the open end of one section being adjacent the closed end of the other section, the sides of the said sections being provided with registering coin slots adjacent one end of the container, the coin slots extending in the direction of the height of the container, the sides of the said sections being provided with struck-up registering lugs and indentations to lock the sections together, a tubular guideway extending diametrically across the open end of the inner section, the said guideway having a slot in transverse alinement with the said registering slots, and a spring-pressed plunger slidable in the said guideway and normally closing the upper portion of the said registering coin slots.

3. A savings bank, comprising two telescoping cup-shaped sections having vertical registering coin slots in opposite sides adjacent one end, a tubular guideway in the upper portion of the sections and extending from side to side of the sections, said guideway having in its bottom a slot registering with the coin slots, plungers in the guideway, and a spring in the guideway between the plungers.

1,169,034. TRAIN-STOPPING APPARATUS. CHARLEY HIPPMAN, Kuhns Crossing, Colo. Filed May 4, 1915. Serial No. 25,757. (Cl. 246—59.)



1. In train stopping apparatus, a track obstacle comprising a vertical post capable of rotary movement, elastic means holding said post normally stationary, pairs of contacts disposed at the opposite sides of said post, contacts carried by said post and movable into engagement with either pair of said first contacts according to the direction of movement of the post, contact rollers carried by said post and connected with the contacts thereon respectively, and a source of energy connected in circuit with said first-mentioned contacts.

2. In train stopping apparatus, a track obstacle comprising a vertical post capable of rotary movement, elastic means holding said post normally stationary, pairs of contacts disposed at the opposite sides of said post, contacts carried by said post and movable into engagement with either pair of said first contacts according to the direction of movement of the post, contact rollers carried by said post and connected with the contacts thereon respectively, a source of energy, and means for connecting said source of energy with either pair of the first-mentioned contacts.

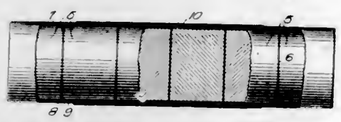
3. In train stopping apparatus, a track obstacle comprising a vertical post capable of rotary movement, means holding said post normally stationary, pairs of contacts disposed at the opposite sides of said post, contacts carried by said post and movable into engagement with either pair of said first contacts according to the direction of movement of said post, arms carried by said post and spaced apart vertically and formed of relatively movable sections, contact rollers carried by said arms and insulated from each other and connected with the respective contacts on said post, and a source of energy connected in circuit with said first contacts.

4. In train stopping apparatus, a track obstacle comprising a vertical post capable of rotary movement, means holding said post normally stationary, pairs of contacts disposed at the opposite sides of said post, contacts carried by said post and movable into engagement with either pair of said first contacts according to the direction of movement of said post, arms carried by said post and spaced apart vertically and formed of relatively movable sections, contact rollers carried by said arms and insulated from each other and connected with the respective contacts on said post, a source of energy connected in circuit with said first contacts, and means acting upont he sections of said arms to hold said sections normally distended.

5. In train stopping apparatus, a track obstacle comprising contact rollers insulated from each other, means carrying said rollers and capable of rotary movement, a source of electrical energy, means operable in the rotary movement of the first-mentioned means to connect said rollers with said source of electrical energy.

[Claim 6 not printed in the Gazette.]

1,169,035. CANDY-PACKAGE. LEO HIRSCHFELD, New York, N. Y., assignor to Stern & Saalberg Co., New York, N. Y., a Corporation of New York. Filed Oct. 5, 1915. Serial No. 54,161. (Cl. 127—4.)

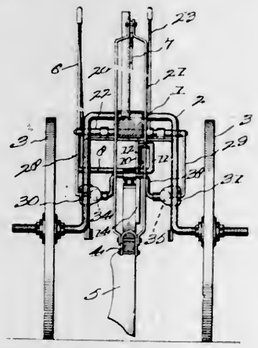


1. A candy package comprising, a plurality of sections, uniform in size and shape, and united by transversal, separable joints which prevent direct contact between the adjoining sections.

2. A candy package comprising, a plurality of separate sections of uniform size and shape, and paraffined joints uniting the sections.

3. A candy package comprising, a plurality of separate, cylindrical sections of uniform size, paraffined disks uniting the ends of the adjoining sections, a paraffined wrapper inclosing all of said sections and a protecting cover for said paraffined wrapper.

1,169,036. PLOW ATTACHMENT. JOSEPH E. HITTER, New Iberia, La. Filed June 9, 1915. Serial No. 33,169. (Cl. 97—36.)



1. The combination of a supporting structure, cross heads slidably mounted on said supporting structure, a shaft journaled in said cross heads, means for shifting said cross heads to tilt said shaft, and a plow connected to move with said shaft, substantially as described.

2. The combination of a supporting structure, cross heads slidably mounted on said supporting structure, bearings loosely mounted in said cross heads, a shaft journaled in the bearings on said cross heads, means for shifting said cross heads to tilt said shaft, and a plow connected to move with said shaft, substantially as described.

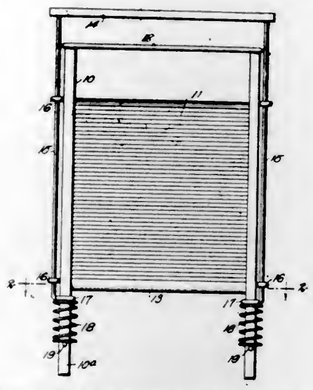
3. The combination of a supporting structure, cross heads slidably mounted on said supporting structure and provided with sockets therein, balls fitted in said sockets and forming universal joints therewith, bearings on said balls, a shaft journaled in said bearings, means for shifting said cross heads to tilt said shaft, and a plow connected to move with said shaft, substantially as described.

4. The combination of a supporting structure, cross heads mounted to slide on said supporting structure, a crank shaft journaled in said cross heads, a plow supported to move with said crank shaft, a rock shaft journaled in said supporting structure, means for actuating said rock shaft, and links connecting said rock shaft and cross heads for operating to tilt the crank shaft in either direction, substantially as described.

5. The combination of a supporting structure, cross heads mounted to slide on said supporting structure, a crank shaft journaled in said cross heads, a plow supported to move with said crank shaft, a rock shaft journaled in said supporting structure, oppositely disposed crank arms on said rock shaft, links connecting said cross heads with the oppositely disposed crank arms on said rock shaft, and means for actuating said rock shaft to shift the cross heads in opposite directions and tilt said crank shaft, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

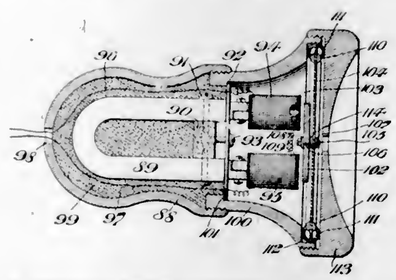
1,169,037. WASHBOARD. JAMES WARD HOLLAND, Newark, N. J. Filed Oct. 12, 1915. Serial No. 55,469. (Cl. 68—29.)



1. A washboard having yielding means at the top thereof to receive the pressure of a person bearing against the board in washing, said means including a cross bar above the top of the board and movable relatively thereto, coil springs supported on and embracing the legs of the washboard below the rubbing surface thereof, and lateral members extending from the said cross bar and engaged by said springs to yieldingly sustain the cross bar in position.

2. An attachment for application to a washboard to afford a yielding bearing member against which the person using the board may exert pressure, said attachment comprising a cross bar adapted to be disposed above the washboard, guide rods extending forwardly from the said cross bar and of a length to position their lower ends at the legs of the board, means adapted to be secured to a washboard at the side and affording guides for the said rods, and springs adapted to be positioned on the legs of a washboard, the said guide rods having members to bear against said springs; together with means to secure the springs in position on the legs of the board.

1,169,038. TELEPHONE-RECEIVER. ALVA D. JONES, Philadelphia, Pa., assignor of one-fourth to Eugene S. Cochran, Washington, D. C., and one-fourth to E. Hayward Fairbanks, Merchantville, N. J. Filed May 7, 1913. Serial No. 766,080. (Cl. 179—114.)



1. A telephone receiver, comprising a casing, electromagnets within the casing, a diaphragm, a sectional ring through which said diaphragm extends, a resilient ring

having its inner periphery split to receive the peripheral portion of the diaphragm and having its edges engaging the sectional ring, and an armature carried by said diaphragm.

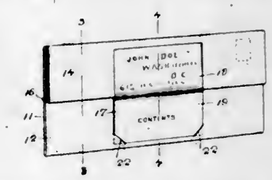
2. A telephone receiver, comprising a casing, electromagnets within the casing, a diaphragm, a sectional ring through which said diaphragm extends, a resilient ring having its inner periphery split to receive the peripheral portion of the diaphragm and having its edges engaging the sectional ring, and an armature secured to and insulated from said diaphragm.

3. A telephone receiver, comprising a casing, electromagnets within the casing, a diaphragm, a sectional ring through which said diaphragm extends, a resilient ring having its inner periphery split to receive the peripheral portion of the diaphragm and having its edges engaging the sectional ring, and a permanently magnetized armature secured to said diaphragm.

4. A telephone receiver, comprising a casing, electromagnets within the casing, a diaphragm, a sectional ring through which said diaphragm extends, a resilient ring having its inner periphery split to receive the peripheral portion of the diaphragm and having its edges engaging the sectional ring, and an armature spaced from, carried by, and insulated from said diaphragm.

5. A telephone receiver, comprising a casing, electromagnets within the casing, a diaphragm, a sectional ring through which said diaphragm extends, a resilient ring having its inner periphery split to receive the peripheral portion of the diaphragm and having its edges engaging the sectional ring, and a permanently magnetized armature spaced from, carried by, and insulated from said diaphragm.

1,169,039. CORRESPONDENCE AND ARTICLE CARRIER. FLOYD W. KIEFER, Sellersville, Pa. Filed Jan. 15, 1915. Serial No. 2,471. (Cl. 229—76.)



1. A correspondence and article carrier comprising a carrier body formed to provide a back and a front, with the latter adapted to be folded upon the former, an extension having a portion folded upon itself, said extension being formed with the back and adapted to be folded with respect thereto and overlap the front to form a closure for the carrier body, a binder passing along the folded portion of the extension and around the back to hold the extension in closed relation to the carrier body, an identification tab carried by the extension and foldable therewith, said identification tab being engaged by the binder to secure it in closer relation to said carrier body, and means for sealing said binder.

2. A correspondence and article carrier comprising a carrier body formed to provide a back and a front, with the latter adapted to be folded upon the former, an extension having a portion folded upon itself, said extension being formed with the back and adapted to be folded with respect thereto and overlap the front to form a closure for the carrier body, a binder passing along the folded portion of the extension and around the back to hold the extension in closed relation to the carrier body, an identification tab carried by the extension and foldable therewith, said identification tab being engaged by the binder to secure it in closed relation to said carrier body, a loop on one end of said binder and through which the other end of the binder is passed, and means associated with the binder and the carrier body adjacent said loop to seal said binder upon the carrier body.

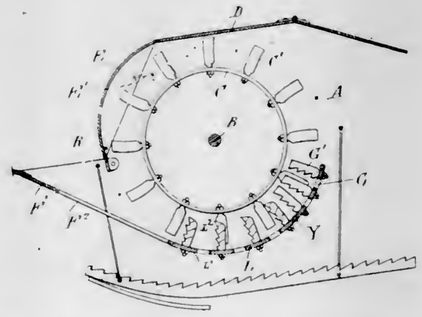
3. In a correspondence and article carrier, in combination with a body, an extension foldable on said body to form a closure therefor and also foldable along its medial portion and overlying a portion of said body, and an identification tab struck from said extension and foldable along its medial portion to coincide with the other portion and lie beneath the same.

4. In a correspondence and article carrier, in combination wth a body, a foldable extension thereon, said extension being folded along its medial portion, and a binder lying in the medial folded portion of the extension and extending longitudinally thereof to pass around the body for holding the extension in its folding position and against the body.

5. In a correspondence and article carrier, in combination with a body, a foldable extension integral therewith, said extension being folded, a binder lying in the fold of the extension and extending longitudinally thereof to pass around the body for holding the extension in its folded position and against the body, and an identification tab struck from said extension and folded to coincide with the fold of the extension, with said binder lying in the fold of said identification tab to secure said tab in folded relation to said extension and body.

[Claims 6 and 7 not printed in the Gazette.]

1,169,040. CONVERTIBLE COW-PEA AND SMALL-GRAIN THRESHER. JOHN J. KOGER, Morristown, Tenn. Filed July 26, 1915. Serial No. 42,003. (Cl. 130—27.)



A convertible cowpea and small grain thresher, comprising a casing, a stationary concave and a second concave pivoted thereto and provided with teeth, a hinged table section and a central feed table hingedly connected thereto and to said pivotal concave.

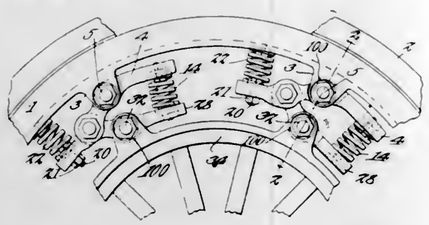
1,169,041. CASTER-SLIDE. PHILLIP KRAKAUER, New York, N. Y. Filed Aug. 16, 1913. Serial No. 785,178. (Cl. 155—33.)



A metallic caster slide constructed from a single blank of material of circular outline, and formed to provide a ring of substantially U-shaped cross sectional configuration, the innermost annular wall of which merges toward the center of said ring and provides a centrally arranged semi-spherical portion reversely disposed with respect to the U-curvature of said ring, said segment providing a bearing surface for the article to which the slide is attached and lying in the same plane with the upper edge of the outermost wall, thereby quickly distributing the

weight of said article over the entire area of the caster, and attaching prongs rising from said outer wall at diametrically opposite points.

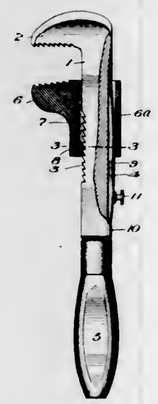
1,169,042. SPRING-WHEEL. DAVID H. LAPP, Aberdeen, S. D. Filed May 17, 1915. Serial No. 28,663. (Cl. 152—32.)



1. In a device of the class described, coöperating elements comprising a felly and a rim; a primary lever fulcrumed intermediate its ends on one of said coöperating elements; a secondary lever fulcrumed intermediate its ends on the other of said coöperating elements and pivoted to the primary lever; a spring forming an operative connection between one end of the primary lever and the corresponding end of the secondary lever; and a spring forming an operative connection between the other end of the primary lever and one of said coöperating elements.

2. In a device of the class described, a felly; a rim; a primary lever fulcrumed intermediate its ends on the rim; a secondary lever fulcrumed intermediate its ends on the felly, one end of the secondary lever being pivotally connected to the primary lever adjacent one end of the primary lever; a compression spring interposed between said end of the primary lever and the rim; and a compression spring interposed between the other ends of the levers.

1,169,043. WRENCH. JOHN S. LIGHT, Electric Mills, Miss., assignor of one-half to Frederick J. Hughes, Electric Mills, Miss. Filed July 7, 1915. Serial No. 38,407. (Cl. 81—146.)



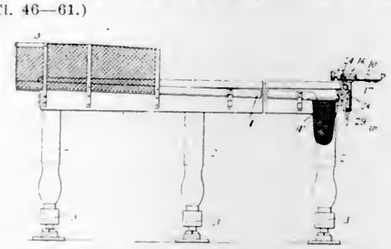
The combination in a wrench, of a shank having a fixed jaw extending forwardly therefrom and also having beveled teeth on its forward edge and a longitudinal groove in its rear edge, a sliding and rocking jaw having a sleeve relatively larger than and receiving the shank, a dog carried by the jaw in said sleeve thereof and opposed to the forward toothed edge of the shank, and a longitudinally-disposed bowed spring fixedly connected at its inner end with the shank and arranged in the longitudinal groove thereof and housed in part in the sleeve of the sliding and rocking jaw, and having its outer portion disposed and movable longitudinally in said groove of the shank.

1,169,044. PACKAGE-TIE. CHARLES J. LIPPOLD, Washington, D. C. Filed May 7, 1910. Serial No. 559,917. (Cl. 24—17.)



A package tie comprising an endless wire bent back upon itself to form two yoke terminals, a cord connecting both yoke terminals to cause them to approach each other for adjusting and tightening the tie, the portions of the endless wire to each side of said yoke terminals being extensible and contractible for longitudinally adjusting the tie, the whole arranged in such manner that the tie is extensible and contractible transversely and extensible and contractible longitudinally substantially as described and for the purposes set forth.

1,169,045. TENPIN APPARATUS. JOHN EDWARD LOCK, Lawrence, Mass. Filed July 28, 1915. Serial No. 42,447. (Cl. 46—61.)



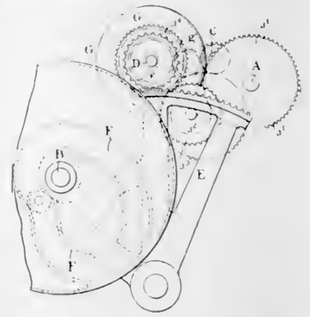
1. A tenpin ball firing apparatus, comprising a table, a slotted plate fastened to the latter, a pivotal cylinder and mounting therefor movable within said plate, a spring-pressed member within the cylinder, the latter having slots with offsets at the ends thereof, projections upon said member which are in alinement with said offsets to hold the member retracted, and a trigger mechanism for releasing the latter.

2. A tenpin firing apparatus, comprising a table, a slotted plate fastened to the latter, a pivotal cylinder and mounting therefor movable within said plate, a spring-pressed member within the cylinder, the latter having slots with offsets at the ends thereof, projections upon said member which are in alinement with said offsets to hold the member retracted, a pivotal spring-pressed lever adapted to impart an axial movement to said member to release the pins from the slots.

3. A tenpin firing apparatus, comprising a table, a slotted plate fastened to the latter, a hollow boss having a T-shaped projection movable within said plate, a cylinder, a post connected thereto and swiveled in said boss, a ball firing member having a stem movable through an apertured end of said cylinder, a hollow threaded member within said cylinder and through which said stem is guided, a collar upon said stem, a spring interposed between said member and collar, said cylinder having oppositely disposed slots terminating in offsets, pins upon said collar and movable through said slots and adapted to engage said offsets, and a spring-pressed lever adapted to engage one of said pins to impart a rotating movement to the stem to release the pins from said offsets.

4. A tenpin apparatus, comprising a table, a slotted plate at one end of the table, a hollow boss with an integral T-shaped projection movable within the slot of said plate, a cylinder, a post fastened thereto pivotally mounted in said boss, said cylinder having an apertured end and longitudinal slots in the wall thereof, a ball firing member, a stem thereto movable through apertured end of the cylinder, a collar upon said stem with pins projecting therefrom and guided in said slots, the latter having offsets for the reception of the pins, a hollow threaded member in one end of the cylinder within which the stem is guided, a spring interposed between said threaded member and collar, and a spring-pressed lever mounted upon the collar and adapted to contact with one of said pins to impart a rotating movement to the stem and allow the spring to act to drive the ball actuating member.

1,169,046. COMBING-MACHINE. ROBERT H. LUNN, Bowdon, England. Filed Feb. 10, 1913. Serial No. 747,435. (Cl. 19—6.)

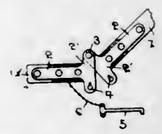


1. In a combing machine the combination with the detaching rollers of a differential gear, mechanism for producing reciprocal motion driving one member of the gear and a source of uniform motion coupled and giving constant driving motion to another member of the differential gear.

2. In a combing machine the combination with the detaching rollers of a differential gear and means for driving the same in which the differential gear has one of its gear elements driven reciprocally, a second gear element driven constantly in one direction, and the third gear element connected with the detaching rollers.

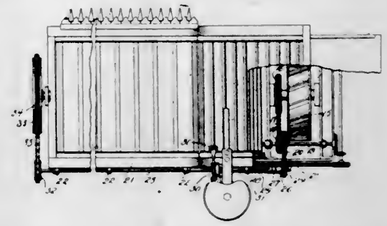
3. In a combing machine, the combination with the detaching rollers and a differential gear for driving the rollers of a cam by which a reciprocating motion is imparted, and gearing by which a constant motion is imparted, the ratio between the reciprocating motion of rotation and the constant motion of rotation being such that the detaching rollers have a small backward motion at one stage of the phase.

1,169,047. EVENER OR DRAFT-EQUALIZER. GEORGE B. MCCLELLAN, Avoca, Iowa. Filed June 17, 1914. Serial No. 845,632. (Cl. 55—150.)



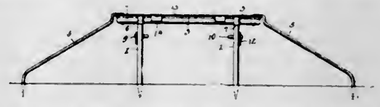
The combination with a sectional harrow, of an evener, comprising a plurality of beams connected to said harrow by means of rings, links and hooks; hinge plates, rigidly secured to the ends of said beams, the top end of the vertical portion of said hinge plates being pivotally connected, and the lower ends thereof having key openings therethrough, said openings registering with each other and a key having a cross piece at one end and the opposite end turned at a right angle, whereby the lower ends of the vertical portions of the hinge plates are held in separable relation.

1,169,048. SELF-BINDING HARVESTER. DANIEL MCINTYRE, Swan River, Manitoba, Canada. Filed Feb. 13 1915. Serial No. 8,021. (Cl. 56—33.)



In a binder, a bull wheel, a grain wheel, a grain platform, a shaft supported in bearings mounted on the grain platform, means including a spring actuated clutch for transmitting motion from the bull wheel to the shaft means including a shipping lever having a treadle for operating the spring actuated clutch to interrupt the transmission of motion to the shaft, and means for transmitting motion from the shaft to the grain wheel; said means including a transmission chain and sprocket teeth extending radially from the rim of the grain wheel for direct engagement with said chain.

1,169,049. STOVE. PRESSLEY MCPEAK, Willits, Cal. Filed Apr. 10, 1915. Serial No. 20,491. (Cl. 126—30.)



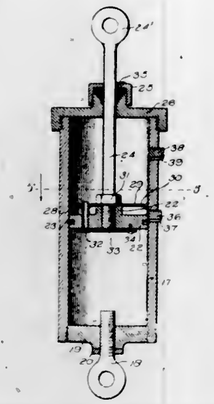
1. A camp stove comprising a rectangular frame, cross bars extending across and rigidly connected to the sides of the frame, legs pivotally mounted upon the frame and having laterally offset lugs constituting driving heads braces, laterally extending parallel fingers arranged at opposite ends of the braces, said legs having apertures to receive one of the fingers, and auxiliary braces removably connected to the frame and having downwardly pointed outer ends arranged to be driven in the ground.

2. A camp stove comprising a rectangular frame, cross bars extending across and rigidly connected to the sides of the frame, legs slidably and pivotally mounted upon the frame and having laterally offset lugs constituting driving heads, braces, laterally extending parallel fingers arranged at opposite ends of the braces, said legs having apertures to receive one of the fingers, auxiliary braces removably connected to the frame and having downwardly pointed outer ends arranged to be driven in the ground, an auxiliary top arranged to rest upon the cross pieces, and depending ears on opposite sides of the auxiliary top adapted to engage over the frame to prevent lateral movement of said top.

1,169,050. AUTOMATIC AIR-CUSHION. GEORGE W. MACKINNON, Boston, Mass. Filed June 18, 1915. Serial No. 34,817. (Cl. 21—105.)

1. In an automatic air cushion, the combination of a rigid cylinder, means to anchor one end of the cylinder in position fixed from longitudinal movement, said cylinder having adjustable inlet and outlet ports, a piston slidable within the cylinder with an airtight fit, a piston rod se-

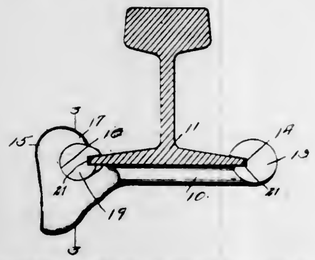
cured to the piston and extending thence through the opposite end of the cylinder, a packing gland surrounding the piston rod, a plate secured to the piston and providing an oil space between the plate and the piston, and an air port tube extending through the piston and plate, the upper end of the tube reaching above the upper surface of the plate.



2. In an automatic air cushion for automobiles, the combination of a cylinder having variable inlet and outlet air ports, the outlet port being substantially at the longitudinal center of the cylinder, a piston slidably fitted in the cylinder with an airtight fit and operated normally just below the outlet port, said piston having an upwardly projecting hub, a perforated plate applied against the upper end of the hub providing an oil space between the plate and the main portion of the piston, a piston rod extending through the plate and into the hub and locking the plate thereto, an air port tube extending through the piston and plate parallel to the axis of the piston rod, a valve secured to the lower portion of the piston and adapted to close the lower end of the tube but opening downwardly on the upstroke of the piston, and means to supply oil into the upper portion of the cylinder whence it passes through the plate into the aforesaid space.

3. The combination of an air cushion comprising a cylinder, a piston reciprocating therein in an airtight manner, means to admit air in regulatable quantities into the upper end of the cylinder, the piston being provided with a passageway for the air to pass downwardly through the piston, a check valve to prevent the air to pass upwardly through the piston, and means adjacent the middle portion of the cylinder to regulate automatically the quantity of air below the piston according to the load sustained by the piston irrespective of any variations thereof.

1,169,051. ANTICREEPER. VENA A. MILLER, Bloomdale, Ohio, assignor of one-fourth to Merle Rearick and one-fourth to Carl W. Brown, Bloomdale, Ohio. Filed June 1, 1914. Serial No. 842,299. (Cl. 238—4.)



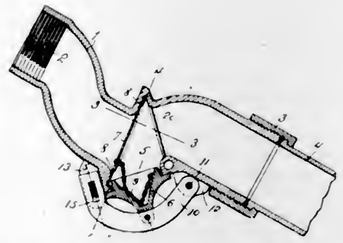
An anti-creeping device comprising a shank disposed transversely beneath the basal flange of a rail, a flange engaging hook member carried by one end of the shank, a larger hook member carried by the opposite end of the shank for the reception of the opposite side of the basal flange, a channeled wedge key disposed between the larger hook and the basal flange and receiving the said flange in the channel, the smaller hook member and the channel of the key being formed with teeth for biting engagement with the edge faces of the basal flange of the rail, and a lip formed on the smaller end of the wedge key bent at right angles to the key and against one side face of the larger hook member.

1,169,052. TWINE-CUTTER. NAOMI E. NICHOLSON, Los Angeles, Cal. Filed Nov. 30, 1914. Serial No. 874,587. (Cl. 30—14.)



A twine cutter, comprising a loop member of elongate form provided with an off-set ear on one side for engagement by a finger, and an off-set jaw member oppositely disposed to said ear at one end thereof, said body member comprising a pair of spaced jaws having registering grooves formed therein lying in a plane substantially parallel to the plane of the jaws and open at the closed end of the jaw member, a cutting plate disposed in said grooves, and a set screw mounted on the member for detachably securing the knife in place.

1,169,053. DIRT TRAP AND STRAINER FOR LOCOMOTIVE-TANK CONNECTIONS. WILLIAM F. POTTS, Kansas City, Mo. Filed June 17, 1914. Serial No. 845,614. (Cl. 210—16.)



1. A dirt trap and strainer comprising a tubular conductor having a lateral clean-out opening and a removable closure for said opening, a screen adapted to extend interiorly across said conductor and removable through said opening, and a connecting device secured to said screen and to the inner side of said conductor, and serving to hold the screen attached to the conductor when the screen has been removed therefrom.

2. A dirt trap and strainer comprising a tubular conductor having a lateral clean-out opening and a removable closure for said opening, a screen adapted to extend interiorly across said conductor and removable through said opening, and a flexible device secured to the inner side of said conductor and to said screen.

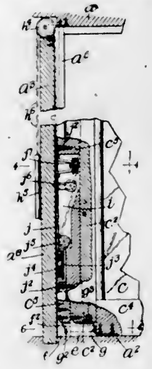
3. A dirt trap and strainer comprising a tubular conductor having a lateral clean-out opening and a removable closure for said opening, a screen adapted to extend interiorly across said conductor and removable through said opening, and a connecting device secured to said screen and said closure, and serving to hold the screen attached to the conductor when the screen has been removed therefrom.

4. A dirt trap and strainer comprising a tubular conductor having a lateral clean-out opening and a removable closure for said opening, a screen adapted to extend interiorly across said conductor and removable through said opening, and a flexible device secured to said closure and to said screen.

5. A dirt trap and strainer comprising a tubular conductor having a seat and provided with a lateral clean-out opening and a removable closure for said opening, a screen adapted to extend across said conductor and rest in said seat, and removable through said opening, and held in said seat, by said closure when the latter is in the closed position, and a connecting device secured to said screen and to the inner side of said conductor and serving to hold the screen attached to the conductor when the screen has been removed therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,169,054. WINDOW. GEORGE SABINI, New York, N. Y. Filed May 5, 1915. Serial No. 25,890. (Cl. 20—49.)

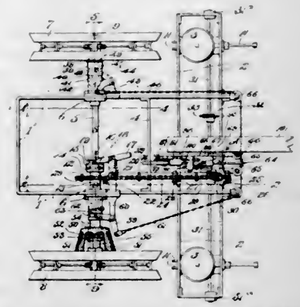


1. A window provided with a counter-balanced sash having a supplemental counter-balanced stile movable vertically with said sash and between the bead strips, said supplemental stile being pivoted to said sash and a supplemental counter-balance weight having a flexible member which is passed around a pulley at the top of the window frame and carried down and passed around a guide pulley arranged at right angles to the sash and then up and around a guide pulley arranged in the plane of said sash and then over and around a guide pulley arranged at right angles to the sash and secured to said sash, said guide pulleys being secured in the supplemental stile whereby the sash may be moved vertically and swung in a plane at right angles to the plane of the window and held at any desired angle to the window frame.

2. In an apparatus of the class described, an attachment for the opposite sides of window sashes comprising a plate having a pulley counter-sunk in the lower outer side thereof and in a plane parallel therewith, another pulley mounted on the inner side thereof above the last named pulley and at right angles to the plane thereof, another pulley mounted above the last named pulley and in the same plane therewith, and another pulley mounted above the last named pulley and in a plane at right angles thereto.

1,169,055. PLANTER. ALFRED SCHAEFFER, St. Louis county, Mo. Filed June 10, 1915. Serial No. 33,273. (Cl. 111—46.)

1. A seed planter comprising a carriage frame, an axle rotatably mounted on said frame, a pair of running wheels mounted on said axle, means borne by said frame adapted to contain seed therein, valve-mechanism borne by said means, means adapted to be operated by said axle for intermittently operating said valve-mechanism, and means adapted releasably to hold said valve-operating means in operative position; in combination with mechanism borne by said frame adapted to measure the distance traveled by the planter, and means releasably holding the measuring mechanism in operative engagement with driven parts of the seed planting mechanism, said means including a movable member adapted releasably to engage a driven part of said seed-planting mechanism to throw said measuring mechanism into and out of operative engagement with the driven parts of said planter.



2. A seed planter comprising a carriage frame, an axle rotatably mounted on said frame, a pair of running wheels mounted on said axle, hollow means borne by said frame adapted to contain seed, valve-mechanism for said means, means adapted to be operated by said axle for intermittently operating said valve mechanism, and means adapted releasably to hold said valve-operating means in operative engagement with said axle; in combination with mechanism borne by said frame adapted to measure the distance traveled by the planter, and means releasably holding the measuring mechanism in operative engagement with driven parts of the seed planting mechanism, said means including a movable member adapted releasably to engage a driven part of said seed-planting mechanism to throw said measuring mechanism into and out of operative engagement with the driven parts of said planter.

3. A seed planter comprising a carriage frame, an axle rotatably mounted on said frame, a driving wheel rigidly mounted on said axle, a running wheel loosely mounted on said axle, hollow means borne by said frame adapted to contain seed, valve-mechanism for said means adapted operatively to communicate with the interior of said means, means adapted to be operated by said axle for intermittently operating said valve-mechanism, said valve-operating means consisting of a sprocket wheel loosely mounted on said axle, an endless chain adapted to be driven by said sprocket wheel, said chain extending from said sprocket wheel to the forward portion of the seed planter, rotatable means borne by the forward portion of said frame adapted to support a portion of said chain, a plurality of spaced members protruding from said chain, a rock-shaft operatively connected with said valve-mechanism, a trigger rigidly borne by said rock-shaft, said spaced members being adapted successively to trip said trigger to rock said rock-shaft as said chain is driven by said sprocket wheel, and means adapted releasably to hold said sprocket wheel in rigid engagement with said axle; in combination with mechanism borne by said frame adapted to measure the distance traveled by the planter, and means releasably holding the measuring mechanism in operative engagement with driven parts of the seed planting mechanism, said means including a movable member adapted releasably to engage a driven part of said seed-planting mechanism to throw said measuring mechanism into and out of operative engagement with the driven parts of said planter.

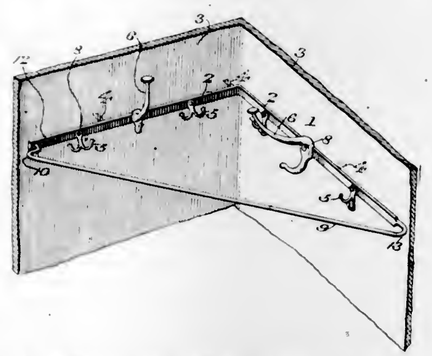
4. In a seed planter comprising a carriage frame mounted on a rotatable axle, said axle having a running wheel rigidly mounted thereon adjacent one end and a running wheel loosely mounted thereon adjacent the other end, and hollow means borne by said frame adapted to contain seed, the combination with valve-mechanism adapted to communicate with the interior of said hollow means, of

means adapted to operate said mechanism as the planter is driven along, said operating means consisting of a sprocket wheel loosely mounted on said axle, a clutch member rigidly borne by the hub of said sprocket wheel, a clutch member slidably mounted on said axle and adapted to be movable longitudinally of said axle into and out of engagement with said first-named clutch member, said slidable clutch member being rigidly mounted in relation to the axis of rotation of said axle, an endless belt adapted to be driven by said sprocket wheel, rotatable means borne adjacent the forward portion of said frame adapted to guide and support a looped position of said belt, the other looped portion of said belt being borne by said sprocket wheel, a plurality of spaced members borne by said belt, a rock-shaft adapted to be operatively connected with said valve-mechanism, spring-pressed means adapted to coöperate with said rock-shaft to hold said valve mechanism normally in closed position, and means rigidly borne by said rock-shaft, said spaced member being adapted successively to trip said rigidly borne means as said belt is driven by said sprocket wheel to rock said shaft in one direction to open said valve-mechanism, said spring-pressed means being adapted, also, to rock said shaft in the reverse direction to restore said rigidly borne means and said valve-mechanism to initial position after each of said spaced members pass successively out of tripping engagement with said rigidly borne means; in combination with mechanism borne by said frame adapted to measure the distance traveled by the planter, and means releasably holding the measuring mechanism in operative engagement with driven parts of the seed planting mechanism, said means including a movable member adapted releasably to engage a driven part of said seed-planting mechanism to throw said measuring mechanism into and out of operative engagement with the driven parts of said planter.

5. In a seed planter having an axle rotatably mounted thereon, said axle having a carriage wheel rigidly mounted thereon adjacent one end and a carriage wheel loosely mounted thereon adjacent the other end, and hollow means borne by said planter adapted to contain seed, the combination with valve-mechanism adapted to communicate with the interior of said hollow means, of means adapted to operate said mechanism as the planter is driven along, said valve-operating mechanism consisting of a sprocket-wheel loosely mounted on said axle, a clutch member rigidly borne by said sprocket-wheel, a slidable clutch member adapted to be releasably engaged with said first-named clutch member, means borne by said slidable clutch member and means borne by said axle adapted coöperately to engage each other to mount said slidable clutch member on said axle rigidly in relation to the axis of rotation of said axle, means adapted to slide said slidable clutch into and out of engagement with said first-named clutch member, an endless member adapted to have one looped portion borne by said sprocket-wheel and another looped portion extend toward the forward portion of the planter, rotatable means borne by the forward portion of the planter adapted to support said forward loop, rotatable means borne by said planter between said forward loop and said sprocket-wheel adapted to support a portion of said endless member in horizontal position, said endless member being adapted to be driven by said sprocket-wheel, a plurality of spaced members borne by said endless member, a rock-shaft adapted to be operatively connected with said valve-mechanism, spring-pressed means adapted to coöperate with said rock-shaft to hold said valve-mechanism normally in closed position, and means rigidly borne by said rock-shaft adapted to be tripped by each of said spaced members as said endless member is driven by said sprocket-wheel to rock said shaft in one direction to open said valve-mechanism, said spring-pressed means being adapted, also, to rock said shaft in the reverse direction to restore said rigidly borne means and said valve-mechanism to initial position after each of said spaced members pass successively out of tripping engagement with said rigidly borne means; in combination with mechanism borne by said frame adapted to measure the distance traveled by the planter, and means releasably holding the measuring mechanism in operative engagement with driven parts of the seed planting mechanism, said means including a movable member adapted releasably to engage a driven part of said seed-plapting mechanism to throw said measuring mechanism into and out of operative engagement with the driven parts of said planter.

[Claims 6 to 12 not printed in the Gazette.]

1,169,056. CLOTHES-HANGER. OLIVER T. SCHWEPPENHEISER, Philadelphia, Pa., and ABRAHAM FREIRICH, Demarest, N. J. Filed Nov. 7, 1913, Serial No. 799,664. Renewed June 15, 1915. Serial No. 34,313. (Cl. 45—37.)

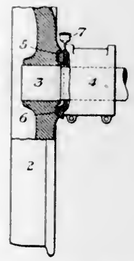


1. A hanger of the character stated comprising angularly connected limbs, one of said limbs having an opening therein near its outer end, a resilient stretcher which is adapted to extend from the outer end of the other limb and a stub on the free end of said stretcher, said stub comprising a laterally deflected continuation of said stretcher integral therewith, and adapted to occupy firmly said opening.

2. A hanger of the character stated, comprising angularly-connected limbs, one of said limbs having an opening near its outer end, a resilient stretcher, the latter extending from the outer end of the other limb, an offset near the free end of said stretcher, and a stub at said free end adapted to enter said opening.

3. A hanger of the character stated, comprising two limbs angularly connected at their inner ends and provided with article-suspending means and one of said limbs having a series of openings in its outer portion, and a transversely resilient stretcher flexibly connected at one end to the outer end of the other limb, and having an offset near its free end, and a stub on said end adapted to engage one of said openings.

1,169,057. HUB-LINER. SAMUEL G. THOMSON, Reading, Pa. Filed Oct. 4, 1915. Serial No. 54,058. (Cl. 105—146.)



1. The combination of a wheel and a journal box, of a loose ring arranged between the journal box and the wheel, and adapted to rotate freely relative to the wheel about its axis, said ring having a carrying portion projecting beyond one of the vertical hub faces of the wheel or journal box.

2. The combination of a wheel, an axle and a journal box, and a loose ring between the journal box and the wheel arranged to rotate freely relative to the wheel about its axle, said ring having a conical face.

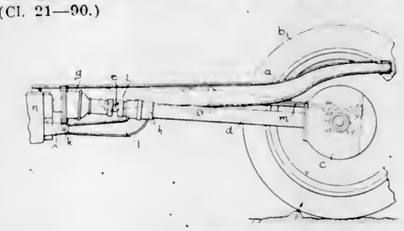
3. The combination of a wheel, an axle and a journal box, and a loose ring between the journal box and the wheel arranged to rotate about the axle and carried free of the axle, said ring having a conical face.

4. The combination of a wheel, an axle and a journal box, and a loose ring between the wheel and the journal box arranged to revolve around the axle, said ring being arranged to rotate freely relative to the wheel about its axis, and and a circular face carrying the ring free of the axle.

5. The combination of a wheel and an axle, of a journal box for said axle, a loose ring arranged to revolve about the axle between the wheel and the journal box, said ring being arranged to rotate freely relative to the wheel, and a circular face spaced at a substantial distance from the axle for supporting the ring.

[Claims 6 to 13 not printed in the Gazette.]

1,169,058. AUTOMOBILE. ARTEMUS WARD, Jr., and THERON P. CHASE, Detroit, Mich., assignors to King Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 20, 1914. Serial No. 846,230. (Cl. 21—90.)



In an automobile, a transmission shaft, a power shaft, said transmission shaft being connected to said power shaft by a universal joint, a casing for said transmission shaft, a sleeve fitting and adapted to slide longitudinally on said casing, an arm extending from said sleeve below the transmission shaft and having its end remote from said sleeve pivoted to a stationary support, below the pivot of the universal joint.

1,169,059. HORSESHOE-CALKING MACHINE. JOHN M. WATSON, Omaha, Nebr. Filed Mar. 4, 1915. Serial No. 12,161. (Cl. 59—65.)



1. A calking machine of the specified class, comprising a table on which the shoe is to be laid, means for clamping the shoe to the table, a pair of movable outside dies seated on the table, means for setting these dies at a variable distance apart equal to the width of the shoe between them, a pair of inside dies secured to the table, means for guiding the inside dies, a plunger actuating the inside dies to engage the shoe, a bender and a die-plate which are vertically reciprocable at the margin of the table, and a plunger actuating the bender and the die-plate.

2. A calking machine of the specified class, comprising a table for the support of the shoe, a stop gage spaced an adjustable distance from the table, and means for clamping the shoe to the table in a location regulated by the adjustment of the gage.

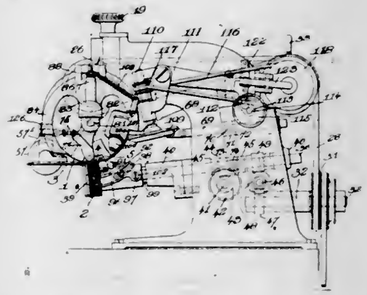
3. A calking machine of the specified class, comprising a table for the support of the shoe, a pair of vertically reciprocable clamping members working through the table to engage the limbs of the shoe respectively, a link connecting the clamps, and an actuating lever connected with the link.

4. A calking machine of the specified class, comprising a table for the support of the shoe, a block movable vertically above the table, means for adjusting the block to clamp the shoe to the table, and means for afterward pressing the upturned shoe calk formatively forward against the clamping block.

5. A calking machine of the specified class, comprising a table for the support of the shoe, a plunger working vertically through a hole in the table, and carrying a pair of hammers adapted formatively to engage the end surfaces of the calks respectively and means for compressing horizontally against the hammers the shoe-calks in process of formation.

[Claim 6 not printed in the Gazette.]

1,169,060. SKIVING-MACHINE. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 3, 1913. Serial No. 798,935. (Cl. 69—9.)



1. A skiving machine having, in combination, a cylindrical skiving knife mounted to rotate about an axis inclined to the direction of the feed, a work support mounted in rigid relation to the knife edge to determine the angle of the skiving, and a yielding presser for pressing the work uniformly against the work-engaging surface of the work support.

2. A skiving machine having, in combination, a work supporting feed roll, a presser, and a cylindrical skiving knife above the roll mounted to rotate about an axis inclined upwardly with relation to the direction of the feed.

3. A skiving machine having, in combination, a cylindrical skiving knife mounted to rotate about an axis inclined to the direction of feed, a feed roll mounted below the knife in rigid relation thereto to determine the angle of skiving, and a presser foot mounted to yield bodily and angularly with relation to the periphery of the roll.

4. A skiving machine having, in combination, a cylindrical skiving knife, a feed roll mounted below the knife in rigid relation thereto to determine the angle of the

skiving, and a presser above the roll mounted to yield bodily and angularly with relation to the periphery of the roll.

5. A skiving machine having, in combination, a cylindrical skiving knife, a feed roll below the knife, a coöperating feed disk, a presser above the roll, and means for adjusting the feed roll laterally to determine the angle of the skiving and for moving the disk and presser with the feed roll.

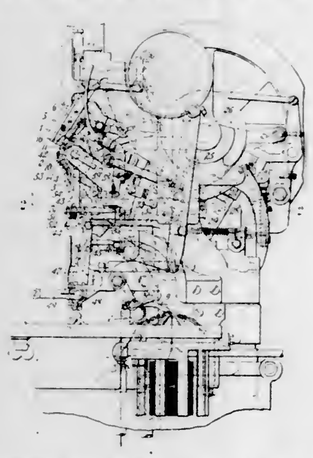
[Claims 6 to 30 not printed in the Gazette.]

1,169,061. ABRADING DEVICE. ERNEST G. K. ANDERSON, Chicago, Ill. Filed Apr. 3, 1912. Serial No. 688,226. (Cl. 120—89.)



As a new article of manufacture, an abrading device comprising a flat holder formed of springy material and being comparatively thin in cross-section and provided at one end with a handle, a flexible strip of abrading material folded over the opposite end of said holder and having its free ends extending rearwardly to a point near the handle, and lying contiguous to the flat surface of said holder, and means for securing the free ends of the abrading material to the holder, whereby when the device is tapped against an object the holder will spring to cause the abraded material to be snapped out of the flexible strip.

1,169,062. OUTSOLE SHOE-SEWING MACHINE. FRED ASHWORTH, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 3, 1910. Serial No. 585,116. Divided and this application filed May 24, 1912. Serial No. 699,364. (Cl. 112—20.)



1. An outsole shoe sewing machine, having, in combination, stitch forming devices including a needle, a work support, a presser foot, means for actuating the presser foot to intermittently clamp and release the work, a welt cutting knife mounted to vibrate in the direction of the seam, work feeding mechanism, a support for said knife mounted independently of the feeding mechanism, and a connection between the feeding mechanism and the knife for actuating the knife from the feeding mechanism to cut the welt while the work is clamped between the work support and presser foot.

2. An outsole shoe sewing machine, having, in combination, stitch forming devices including a needle, a work support, a presser foot, work feeding mechanism, a knife mounted independently of the feeding mechanism arranged to act on the side of the work opposite the needle, and a connection between said knife and the feeding mechanism for vibrating the knife from the feeding mechanism in the direction of the seam.

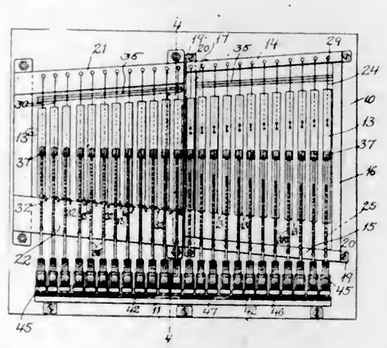
3. An outsole shoe sewing machine, having, in combination, stitch forming devices including a needle, a work support, a presser foot, work feeding mechanism, a pivotally mounted arm having its pivot at right angles to the direction of feed, a knife mounted on the arm and arranged to act on that side only of the work that is opposite the needle, and means for vibrating the arm on its pivot to vibrate the knife in the direction of the seam.

4. An outsole shoe sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, work feeding mechanism, means for actuating the presser foot to intermittently clamp and release the work, a welt cutting knife mounted independently of the feeding mechanism, and connections between said knife and the work feeding machinsm for actuating the knife with the feeding mechanism to cut the welt while the work is clamped between the work support and the presser foot.

5. An outsole shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, means for oscillating the awl carrier, a welt cutting knife, actuating mechanism common to said pin and the knife for moving the pin longitudinally in opposite directions to cause the awl to feed the work and for moving the knife in the direction of the seam simultaneously with the longitudinal movement of the pin to cause the knife to cut the welt during the return movement of the awl.

[Claims 6 to 14 not printed in the Gazette.]

1,169,063. MECHANICAL-ACTION XYLOPHONE. HUGH R. ACLD, Boston, Mass. Filed Feb. 20, 1913. Serial No. 749,610. (Cl. 84—31.)



1. A xylophone comprising a plurality of resonant members, means for supporting said members and a hammer mechanism for each member, said hammer mechanisms each comprising two hammers embracing the member and a finger-operated key so connected with said hammers as when depressed to cause both hammers to strike the resonant member in close succession.

2. In a xylophone the combination with a resonant member of a pair of connected hammers on opposite sides of said member, mounted to travel in unison and each adapted to strike the member, and a finger-operated key connected with hammers and operable to move the same in first one and then the opposite direction.

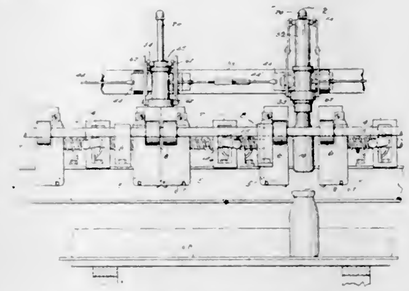
3. A xylophone comprising in its construction a resonant member, a hammer mounted adjacent to said member and adapted to strike the same, a finger-operated key, and a resilient connection between said key and hammer and fastened to both, said connection being so shaped and under such stress as normally to hold the key in raised position and the hammer removed from the resonant member.

4. A xylophone comprising in its construction a resonant member, a hammer mounted adjacent to said member and adapted to strike the same, a finger-operated key, a resilient connection between and fastened at its opposite ends respectively to said key and hammer, said connection being so shaped and under such stress as normally to hold the key in raised position and the hammer removed from the resonant member, and a stop for limiting the depression of the key at a point less than sufficient to cause the key to bring the hammer against the resonant member without distortion of the spring.

5. In a musical instrument, the combination with a resonant member of an oscillatively mounted hammer arranged in position to strike said member, a rocker by which said hammer is carried, a key, said rocker and key being pivoted upon parallel axes, and a strap spring secured at its opposite ends to the key and rocker respectively at points on the same side of the pivots of said key and rocker.

[Claims 6 to 9 not printed in the Gazette.]

1,169,064. BOTTLE-MAKING MACHINE. HARRY C. AYERST, Seattle, Wash., assignor to Sanitary Pulp Products Company, Seattle, Wash., a Corporation of Washington. Filed Oct. 29, 1914. Serial No. 869,243. (Cl. 92—54.)



1. In a machine of the class described, a plurality of two-part molds, supporting and guiding means for the members of said molds, a slotted block interposed between the adjacent molds, a power-driven crank engaging in the slot of each such block, and yielding connections between the mold-members and the adjacent blocks whereby the mold members after being brought together are held in juxtaposition during a portion of the revoluble movements of the respective cranks.

2. In a machine of the class described, a plurality of two-part molds, power-actuated means interposed between the adjacent molds whereby the members of the alternate molds are successively drawn apart and brought together and yielding connections provided on said means whereby the mold members after being brought together are held for a time in juxtaposition without interrupting the operation of said means.

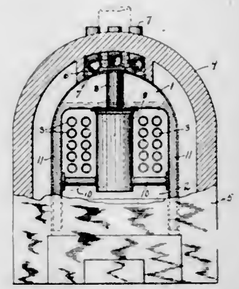
3. In a machine of the class described, a two-part mold, power-driven means for affecting the movements of the members of said mold toward and from each other, means associated with the aforesaid means to retain said mold in closed conditions during a portion of the time the first-named means is tending to move the mold members, and an expansible core arranged to be operated within the mold.

4. In a machine of the class described, a mold comprising a pair of complementary parts, means to move said parts into opened and closed relations, an expansible core for said mold, means to effect the expansion of said core, means to supply in a single charge a definite quantity of bottle-forming material into said mold and about the core to afford an entire bottle from such charge, and means for forming the mouth of a bottle being pressed within said mold.

5. In a machine of the class described, a mold comprising a pair of perforated mold-members, means to reciprocate said members to and from juxtaposed positions, a hollow core formed of an expansible material, and means to supply a predetermined quantity of hydrated bottle-making material into the space surrounding and below the bottom of the core in the mold, of means to inflate said core to primarily afford suitable space to accommodate material to make an entire bottle and to ultimately exercise sufficient pressure against said material to expel the water from said material through the perforations of the mold.

[Claims 6 to 8 not printed in the Gazette.]

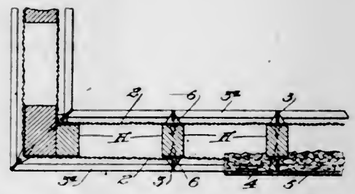
1,169,065. BOILER. MICHAEL JOSEPH CARNEY, Kewanee, Ill. Filed Aug. 7, 1915. Serial No. 44,320. (Cl. 122—70.)



1. A device of the class described, comprising a boiler; a fire-box therein; an air-chamber supported above the fire-box; means for introducing a supply of air into said air-chamber; a pipe projected from said air-chamber into the fire-box; and a water-drum inclosing that part of said pipe which extends into the fire-box, and communicating with the main body of water in said boiler.

2. In a device of the class described, a boiler; a fire-box therein; an air-chamber supported above said fire-box; means for introducing a supply of air into said air-chamber; a pipe projected from said air-chamber through the boiler and into said fire-box; a water-drum, inclosing that portion of said pipe which extends into the fire-box, and communicating at its upper end with said boiler; and means of communication between the lower end of said water-drum and said boiler.

1,169,066. COMBINATION PLASTER-GAGE CORNER AND FURRING STRIP. MARTIN H. CARRICK, San Francisco, Cal. Filed Oct. 14, 1914. Serial No. 866,614. (Cl. 72—118.)



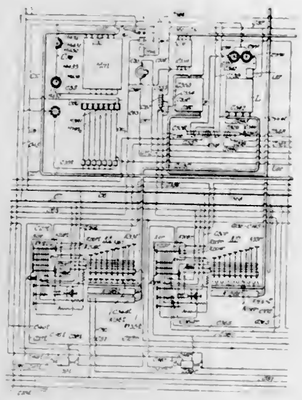
1. A combination plaster gage corner and furring strip comprising a metal strip having slots formed in one edge, shouldered projections formed at intervals along the other edge, and a spike-like extension on each of said shouldered projections.

2. In a device of the class described, a supporting device composed of an integral head and shank, the shank being sharpened to enable driving thereof into a wall structure

or the like and the base of the head forming shoulders which engage the wall structure and both limit the extent of movement into said structure and when engaged with the latter bracing the entire device, said heads having approximately central slots in their driving ends adapted to receive furring strips.

3. A device of the class described comprising a plurality of supporting devices, each consisting of a tapered shank and triangular shaped head formed integral therewith to provide shoulders upon opposite sides of the shank and at the base of the head, said head having a slot alined with the shank, said shanks being adapted to be driven into a wall structure so that said shoulders engage the wall structure, and brace the heads, and a metal strip extending through and secured in the slots of the heads.

1,169,067. METHOD AND MEANS FOR AUTOMATIC ACCOUNTING. WILLIAM J. CRUMPTON, Superior, Wis., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed Aug. 4, 1908, Serial No. 446,895. Renewed June 19, 1915. Serial No. 35,127. (Cl. 234—41.5.)



1. In a device of the class described, the combination of a plurality of registers, a master machine for involving any connected register with an entry, means for controlling the operative connection of any selected register with the master machine, a time factor controller, a rate factor controller, and automatic means governed by the time and rate factor controllers to control the operation of the master machine in accordance with the product of time and rate.

2. In a device of the class described, the combination of a plurality of registers, a master machine for involving any connected register with the entry, a keyboard for controlling the operative connection of any selected register with the master machine, a rate factor controller, means whereby the rate factor controller is governed by the register selecting keyboard, a time factor controller (a clock for governing operation of the time factor controller) and automatic means governed by the time and rate factor controllers to control the operation of the master machine in accordance with the product of the time and rate.

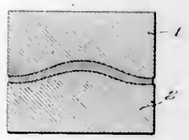
3. In a device of the class described, the combination of a plurality of registers, a master machine for involving any connected register with the entry, a keyboard for controlling the operative connection of any selected register with the master machine, a rate factor controller, means whereby the rate factor controller is governed by the register selecting keyboard, a time factor controller, and automatic means governed by the time and rate factor controllers to control the operation of the master machine in accordance with the product of the time and rate.

4. In a device of the class described, the combination of a plurality of registers, a master machine for involving any connected register with an entry, debit an dcredit keyboards, one adapted operatively to connect in one direction any selected register with the master machine, and the other operatively to connect in the reverse direction any other selected register with the master machine, a time factor controller (a clock for governing the time factor controller) a rate factor controller (means for governing the rate factor controller by one of the selecting keyboards), and automatic means governed by the time and rate factor controllers to control the operation of the master machine in accordance with the product of time and rate.

5. In a device of the class described, the combination of a plurality of registers, a master machine for involving any connected register with an entry, debit and credit keyboards, one adapted operatively to connect in one direction any selected register with the master machine, and the other operatively to connect in the reverse direction any other selected register with the master machine, a time factor controller (a clock for governing the time factor controller), a rate factor controller, and automatic means governed by the time and rate factor controllers to control the operation of the master machine in accordance with the product of time and rate.

[Claims 6 to 126 not printed in the Gazette.]

1,169,068. METHOD OF MAKING BOOTS AND SHOES. HERMAN A. DAVENPORT, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 28, 1915. Serial No. 24,442. (Cl. 12—142.)



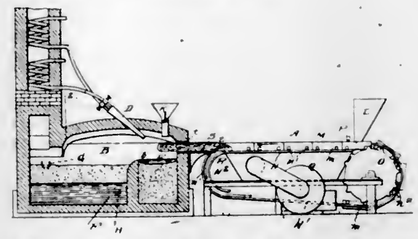
1. The method of making boots and shoes which comprises molding a flat sole to impart a predetermined transverse curvature to the central portion of the sole and a reverse curvature to the marginal portion of the sole to cause the margin of the sole to stand out from the lasted upper when the sole is laid and laying the molded sole upon a lasted shoe while maintaining the predetermined curvature which has been imparted thereto.

2. The method of making boots and shoes which comprises molding a flat block sole larger than the final desired size to impart a predetermined transverse curvature to the central portion of the sole, and a reverse curvature to the opposite marginal portions of the sole to cause the margins of the sole to stand out from the lasted upper when the sole is laid, and laying the molded sole upon a welted shoe with the outstanding margins of the sole engaging with the welt while maintaining the predetermined curvature which has been imparted to the sole.

1,169,069. DESULFURIZING AND SMELTING ORES. ARTHUR S. DWIGHT, New York, N. Y. Filed June 25, 1908, Serial No. 440,404. Renewed May 12, 1913. Serial No. 767,188. (Cl. 75—17.)

1. The herein described process of sintering and smelting ore initially in a fine condition, which consists in continually forming a relatively thin stream or layer of the ore, sintering the said stream into a relatively strong and rigid sinter cake at a point relatively remote from the region of smelting, continual moving the cake horizontally away from the region of the forming and sintering, projecting the forward part of the cake into the region of smelting, and subjecting it to smelting action.

2. The herein described process of sintering and smelting ore initially in a fine condition, which consists in continually forming a relatively thin stream or layer of the ore, sintering the said stream into a porous cake at a point relatively remote from the region of smelting, continually moving the porous cake away from the region of forming and sintering, and subjecting the forward part of the said cake to a smelting action.



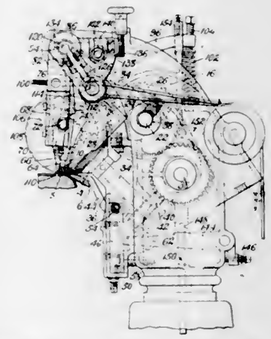
3. The herein described process of sintering and smelting ore initially in a fine condition, which consists in continually forming a relatively thin stream or layer of the ore, sintering the said stream into a cake at a point relatively remote from the region of smelting, causing a gas to pass through the ore during the process of sintering whereby the resulting sinter cake is made porous, continually moving the sinter cake away from the region of forming and sintering, and subjecting the forward end of the porous cake to the action of a smelting furnace.

4. The herein described process of obtaining metal from ore initially in a fine condition and free of foreign binding material, it consisting in first forming a layer, cake or block of sinter, then slowly advancing the said block or layer of sinter into a furnace region and subjecting it to the action of a smelting flame, and gradually advancing it during the smelting action.

5. The herein described process of obtaining metal from ore initially in a fine condition and free of foreign binding material, it consisting in forming a relatively thin layer or block of sinter and then feeding the sinter edgewise into a smelting region, and subjecting it to the action of smelting flame applied to and around the advancing edge of the sinter.

[Claims 6 to 25 not printed in the Gazette.]

1,169,070. INSEAM-TRIMMING MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 12, 1914. Serial No. 818,280. (Cl. 12—82.)



1. An inseam trimming machine, having, in combination, a crease guide and feed roll for engaging opposite sides of the welt, a trimming knife, and a laterally yielding guide for engaging the sole and the inside of the inseam.

2. An inseam trimming machine, having, in combination, a crease guide, a frusto-conical feed roll for engaging the welt, a trimming knife having its cutting edge acting across the edge of the roll adjacent to its point of engagement with the welt, and a laterally yielding guide for engaging the sole and inside of the inseam.

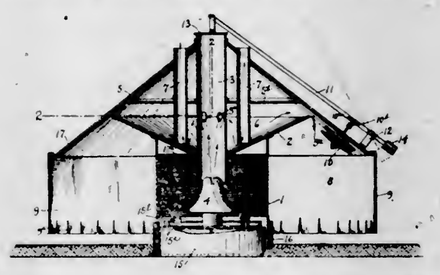
3. An inseam trimming machine, having, in combination, a crease guide, a frusto-conical feed roll for engaging the welt, a trimming knife having its cutting edge acting across the edge of the roll adjacent to its point of engagement with the welt, a laterally yielding guide for engaging the sole and inside of the inseam, and a guide above the edge of the feed roll for lifting and supporting the upper.

4. An inseam trimming machine, having, in combination, a crease guide, a frusto-conical feed roll for engaging the welt, a trimming knife having its cutting edge acting across the edge of the roll adjacent to its point of engagement with the welt, a laterally yielding guide for engaging the sole and inside of the inseam, and a guide above the edge of the feed roll for lifting and supporting the upper having a projection extending over the edge of the knife.

5. An inseam trimming machine, having, in combination, a crease guide roll, a coöperating frusto-conical feed roll having a dished upper end, a frusto-conical knife having its cutting edge acting across the edge of the feed roll adjacent to its point of engagement with the welt, and an inside guide for engaging the sole and inside of the inseam.

[Claims 6 to 22 not printed in the Gazette.]

1,169,071. BROODER. ANDREW ESSIG, Cleveland, Ohio. Filed Apr. 5, 1915. Serial No. 19,132. (Cl. 119—32.)



1. In a brooder, the combination with a conical shaped hover provided with a centrally located hot air flue and an inverted conical shaped member carried by said flue forming a hot air receiving and distributing chamber, said hover being spaced from the outer periphery of said inverted conical shaped member forming an annular hot air distributing space leading from said chamber and provided with adjustably mounted counterbalanced thermostatic valve mechanism adapted to automatically regulate the air passing through said hot air flue.

2. In a brooder, a tubular hot air flue provided with outlet ports and carrying a pair of oppositely arranged spaced conical shaped members forming an intermediate hot air receiving and distributing chamber, the upper one of said conical shaped members forming a hover provided with a depending flexible skirt forming a brooder chamber beneath said hot air receiving and distributing chamber, ventilating flues extending through said hover and into the lower portion of said hot air receiving and distributing chamber, a thermostat within said brooder chamber, and valve mechanism operatively connected with said thermostat and adapted to open and close said hot air flue.

3. In a brooder, a central foraminous lamp receiving compartment terminating at its top in an inverted conical shaped head, said head being provided at its apex portion with a tubular hot air conduit provided with outlet ports adapted to discharge above said inverted conical shaped head and carrying a conical shaped hover extending above and spaced from the outer periphery of said head and provided with a depending skirt, said hover forming con-

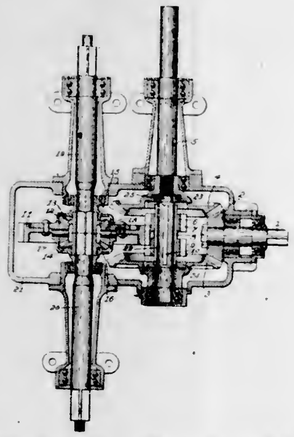
jointly with said head a hot air receiving and distributing chamber having an annular distributing space about its outer periphery and said skirt forming conjointly with said lamp receiving compartment a brooder chamber adapted to receive hot air from above as discharged through said annular distributing space.

4. In a brooder, a central lamp receiving compartment provided with a hot air flue, said hot air flue being provided with spaced conical shaped members forming a communicating hot air receiving and distributing chamber, one of said conical shaped members extending outwardly above the other forming a hover and being provided with a depending flexible skirt forming an annular brooder chamber about said lamp receiving compartment and beneath said hot air receiving and distributing chamber, a thermostat carried by said hover within said brooder chamber and provided with an adjustable actuating stem, a counterbalanced valve lever mounted outside of said hover in coöperative relation to said adjustable actuating stem, and a valve carried by said valve lever above said hot air flue and adapted to open and close the same.

5. A brooder, comprising a central lamp receiving foraminous compartment provided with an overhanging inverted cone shaped head, a tubular flue carried by said cone shaped head and communicating with said lamp receiving compartment, a conical shaped hover carried by said tubular flue and spaced above and projecting beyond said inverted conical shaped head and forming conjointly therewith a heater chamber, said tubular flue being provided with openings leading to said heater chamber, and said hover being provided with ventilating flues leading to the central bottom portion of said heater chamber, an outer skirted portion carried by said hover and forming an annular brooder chamber surrounding said lamp receiving compartment and receiving hot air from said superposed heater chamber, and a thermostatic valve for opening and closing the top of said tubular flue.

[Claims 6 and 7 not printed in the Gazette.]

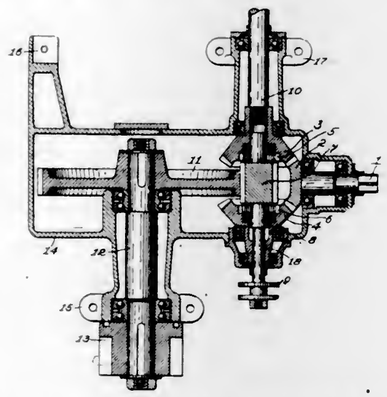
1,169,072. POWER-TRANSMISSION DEVICE. THOMAS L. FAWICK, Sioux Falls, S. D. Filed Jan. 25, 1915. Serial No. 4,319. (Cl. 74—58.)



1. A power transmission device, comprising a rotatable driving shaft, a bevel-pinion mounted thereon, bevel-gear wheels intermeshing with opposite sides of said pinion, a driven-shaft on which one of said bevel-gear wheels is mounted, a stub-shaft on which the other bevel-gear wheel is mounted and extending thereheyond toward the said driven-shaft in alinement therewith, a pinion slidably and non-rotatably mounted on the stub-shaft, said bevel-gear wheels having like clutch-elements thereon, and the last-mentioned pinion being movable oppositely alternately on the stub-shaft to have the outer ends of its teeth intermeshed with the said clutch elements of said bevel-gear wheels.

2. A power transmission device, comprising a rotatable driving-shaft, a bevel-pinion mounted thereon, bevel-gear wheels intermeshing with opposite sides of said pinion, a driven-shaft on which one of said bevel-gear wheels is mounted, a stub-shaft on which the other bevel-gear wheel is mounted and extending therebeyond toward the said driven-shaft in alinement therewith, a pinion slidably and non-rotatably mounted on the stub-shaft and having an annular groove intersecting its teeth medially and circumferentially and adapted to receive movable shifting-means, said bevel-gear wheels having like clutch-elements thereon, the last-mentioned pinion being movable along the stub-shaft oppositely to intermesh the outer ends of its teeth with the said clutch-elements alternately, and a gear-wheel intermeshed with the teeth of the last-mentioned pinion at all times.

1,169,073. POWER-TRANSMISSION DEVICE. THOMAS L. FAWICK, Sioux Falls, S. D. Filed Jan. 25, 1915. Serial No. 4,320. (Cl. 74—58.)

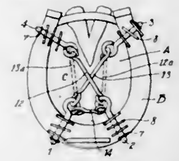


1. A power transmission device, comprising a casing having shaft-bearings, a driving bevel-pinion, a driving-shaft seated in one of said bearings on which said driving bevel-pinion is mounted, like bevel-gear wheels intermeshing with teeth on opposite sides of said pinion, said bevel-gear wheels having clutch-elements on their opposed faces and alined central orifices, a rotatable shaft seated rotatably and slidably in said orifices, a pinion fixed on said shaft between said bevel-gear wheels and slidable with said shaft to be intermeshed with the teeth of either of the said clutch elements on said bevel-gear wheels, means on the last-mentioned shaft without said casing adapted to shift it longitudinally to and fro, and a gear-wheel always in mesh with the last mentioned pinion.

2. A power transmission device, comprising a casing having shaft bearings, a driving bevel-pinion, a driving-shaft seated in one of said bearings on which said driving bevel-pinion is mounted, like bevel-gear wheels intermeshing with teeth on opposite sides of said pinion, said bevel-gear wheels having clutch-elements on their opposed faces, and alined central openings, a rotatable shaft seated rotatably and slidably in said openings, a pinion fixed on said shaft between said bevel-gear wheels and slidable with said shaft to have the ends of its teeth intermeshed respectively with either of said clutch elements, or to be seated idly between the bevel gears out of mesh with both, means on the last-mentioned shaft without said casing adapted to shift it longitudinally, a gear-wheel always intermeshed with the last mentioned pinion, and a rotatable shaft mounted axially in one of the said bevel-gear wheels.

3. A power transmission device, comprising a casing, a driving-shaft extended thereinto and mounted rotatably therein, a bevel-pinion mounted on said driving-shaft, like bevel-gear wheels intermeshed with teeth on opposite sides of said pinion, said bevel-gear wheels having clutch-elements on their opposed faces, and having alined central openings, a shaft extended into said casing and seated slidably and rotatably in the openings of said bevel-gear wheels, means on the last-mentioned shaft without said casing adapted for use in shifting the shaft longitudinally, a spur-gear wheel fixedly mounted on the last-mentioned shaft between said bevel-gear wheels and having relatively wide teeth whose opposite ends may be respectively intermeshed with the adjacent clutch-elements of said bevel-gear wheels when the last-mentioned shaft is shifted appropriately, the last-mentioned pinion being idle when seated out of mesh with both said internal-gears, a rotary shaft fixedly axially mounted on one of said bevel-gear wheels to extend without said casing, a spur-gear wheel always intermeshed with the last-mentioned pinion, a rotary shaft fixedly axially mounted in the said spur-gear wheel and extending out of said casing, and said casing having three bearing lugs located on opposite sides thereof to provide a three-point suspension-means therefor.

1,169,074. SAFETY-TREAD. JONATHAN O. FOWLER, New York, N. Y. Filed Oct. 25, 1910. Serial No. 588,995. (Cl. 168—1.)



1. In an overshoe of the class described, a separable safety tread comprising the following elements: a non-slipping calk to bear upon and act in coöperation with the tread portion and having means to engage and disengage the same at will, means for attachment of the tread to the hoof, an intermediate holder for the calk having means to engage and disengage both the calk and hoof attachment means at will, and calk positioning means located exterior and lying at one side of a calk contact face to prevent movement of the calk and to engage and disengage the tread at will and to secure the calk and holder in operative position.

2. In an overshoe of the class described, a separable safety tread comprising the following elements: a non-slipping calk to bear upon and act in coöperation with the tread portion and having means to engage and disengage the same at will, means for attachment of the tread to the hoof, an intermediate holder for the calk lying across the toe of the hoof and having means to engage both the calk and hoof attachment means, and calk positioning means located exterior and lying at one side of a calk contact face and having means to prevent movement of the calk and to engage and disengage the tread at will and to secure the device together in operative position as an entirety.

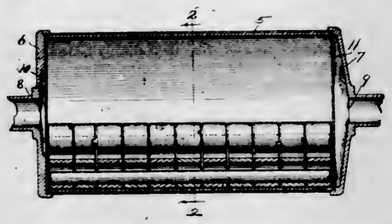
3. In an overshoe of the class described, a non-slipping calk having a plurality of spaced and non-alined contact faces and arranged to bear upon and act in coöperation with the tread portion and having means to engage and disengage the same at will, means for attachment of the tread to the hoof, an intermediate holder for the calk having means to engage both the calk and hoof attachment means at will, and calk positioning means located exterior and lying at one side of a calk contact face to engage and disengage the tread at will and to secure the device together in operative position as an entirety.

4. In an overshoe of the class described, a non-slipping calk having a plurality of contact faces and arranged to bear upon and to act in coöperation with the tread portion and having means to engage and disengage the same at will, means for attachment of the tread to the hoof, an intermediate holder for the calk lying across the toe of the hoof and having means to engage both the calk and hoof attachment means at will, and calk positioning means located exterior and lying at one side of a calk contact face and having means to prevent movement of the calk, and to engage and disengage the tread at will and to secure the device together in operative position as an entirety.

5. In an overshoe of the class described, a non-slipping calk to bear upon and act in coöperation with the tread portion and having means to engage and disengage the same at will, hoof attachment means, intermediate metallic calk holding means comprising a support for the calk lying under the hoof and tread holding means passing up over a part of the hoof intermediate the calk and hoof attachment means and having means to engage both of the same, calk positioning means located exterior and lying at one side of a calk contact face to engage and disengage the tread at will.

[Claims 6 to 9 not printed in the Gazette.]

1,169,075. PULVERIZER. OSCAR GERLACH, La Salle, Ill. Filed May 18, 1914. Serial No. 839,202. (Cl. 83—9.)



1. In a device of the class described, a cylindrical container, a plurality of groups of tumblers within said container, held in contact with each other by force of gravity, each of said groups comprising a plurality of rings and a shaft extending through said rings to retain them in a group and permit their free individual movement about the shaft.

2. In a device of the class described, a cylindrical container, a plurality of groups of tumblers within said container held in contact with each other by force of gravity, each of said groups comprising a plurality of rings each having a notch in one edge and a shaft extending through said rings to retain them in a group and permit their free individual movement about the shaft.

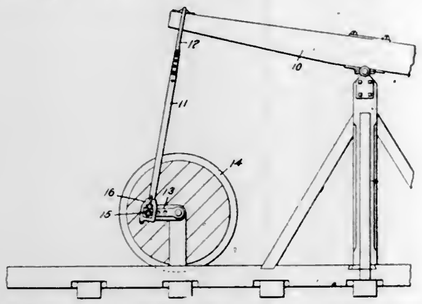
3. In a device of the class described, a cylindrical container arranged to rotate on its axis, a plurality of shafts within said container extending parallel to the axis of the container from end to end thereof and free to tumble about therein, and a plurality of flat rings strung upon each of said shafts.

1,169,076. PITMAN CONNECTION FOR OIL-WELL APPARATUS. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1915. Serial No. 6,338. (Cl. 74—17.)

1. The combination with a pitman having an opening, and a crank, of means for adjustably connecting the crank and pitman, said means comprising an assembled wrist pin structure adapted to be bodily entered in the pitman opening, said structure including the operating journal and its bearing and having a non-circular peripheral configuration substantially complemental to the pitman opening.

2. The combination with a pitman having an opening, and a crank, of means for adjustably connecting the crank and pitman, said means comprising an assembled wrist pin structure adapted to be bodily entered in the pitman opening, said structure including the operating journal and its bearing and having a non-circular peripheral configuration substantially complemental to the pitman opening, said journal being circular in cross section.

3. The combination with a pitman having an opening, and a crank, of means for detachably connecting the crank and pitman, said means comprising a wrist pin structure insertible within the pitman opening, said structure having a non-circular peripheral configuration substantially complemental to the pitman opening, said pitman opening being flared toward its rear.

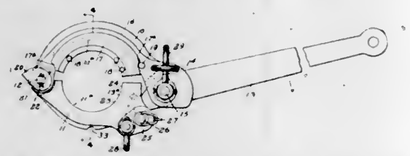


4. The combination with a pitman having an opening, and a crank, of means for detachably connecting the crank and pitman, said means comprising a wrist pin structure insertible within the pitman opening, said structure having a non-circular peripheral configuration substantially complemental to the pitman opening, and a latch device for detachably connecting the pitman and wrist pin structure.

5. In combination, a pitman having an opening, a crank, and means for detachably connecting the pitman and crank, said means comprising an assembled wrist pin structure carried by the crank and having a non-circular peripheral configuration complemental to the pitman opening, said structure including a pair of members having coacting journal faces, and means for detachably connecting one of said members to the pitman, said wrist pin structure adapted to be bodily entered in the pitman opening.

[Claims 6 to 25 not printed in the Gazette.]

1,169,077. PIPE-TONGS. EDGAR E. GREVE, Pittsburgh, Pa., assignor to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1915. Serial No. 15,806. (Cl. 81—67.)



1. A pipe tongs or wrench comprising a pair of hinged jaws, an operating handle carried by one jaw and adapted to coöperate with the other jaw to effect clamping action, one of said jaws having a wall eccentric with the gripping surfaces of the tongs or wrench, and a movable slip in contact with said wall, said slip having a gripping face and movable in a path eccentric to its gripping face to decrease the distance between the jaws during the application of gripping pressure.

2. A pipe tongs or wrench comprising a pair of hinged jaws, an operating handle carried by one jaw and adapted to coöperate with the other jaw to effect clamping action, one of said jaws having a wall eccentric with the gripping surfaces of the tongs or wrench, and a movable slip in contact with said wall, said slip having a gripping face and movable in a path eccentric to its gripping face to decrease the distance between the jaws during the application of gripping pressure, and means actuated by the movement of the other jaw to cause the slip to retrace its said movement.

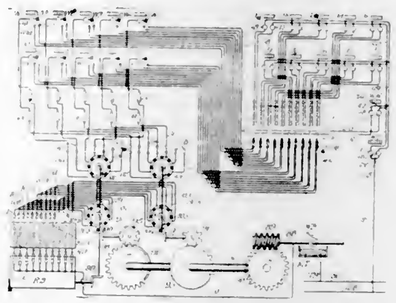
3. A pipe tongs or wrench comprising a pair of hinged jaws, an operating handle carried at the free end of one jaw, said handle having an extension, said handle carrying jaw having a wall eccentric with the gripping surfaces of the tongs or wrench and a movable slip carried by this jaw and disposed in contact with the wall, said slip movable in one direction in a path eccentric with the gripping surfaces of the tongs to decrease the distance between said surfaces, the other of said jaws having its free end provided with a recess and a shoulder, said shoulder coöperating with the handle extension to provide gripping pressure, and means actuated by the movement of the last mentioned jaw to cause the slip to move in an opposite direction.

4. A pipe tongs or wrench comprising a pair of jaws, a pin connecting said jaws, said pin being fixedly secured to one of the jaws and movable with respect to the other jaw, a movable slip carried by one of said jaws, means on the pin for effecting a movement of the slip, an operating handle, and means whereby said handle may act to provide a gripping pressure by said jaws.

5. A pipe tongs or wrench comprising a pair of hinged jaws, said jaws having their inner faces curved with the radius of the curve greater in one jaw than in the other to provide a jaw face eccentric with respect to the face of the other jaw, an operating handle carried by one jaw and adapted to coöperate with the other jaw to provide clamping action, and a slip positioned in contact with said eccentric face and having a gripping face curved on approximately the radius of the other jaw, said slip being movable in a direction to decrease the distance between the gripping faces during movement of both jaws relative to the structure being gripped in providing the gripping pressure.

[Claims 6 to 13 not printed in the Gazette.]

1,169,078. ACCOUNTING SYSTEM. FREDERICK O. HEUSER, Chicago, Ill., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed Jan. 3, 1910, Serial No. 536,120. Renewed June 18, 1915. Serial No. 34,957. (Cl. 235—92.)



1. In an accounting system, the combination of a first indicating register, an actuating mechanism for said register, means for selectively varying the numerical value of the actuations of said register, a second register, a plurality of actuating mechanisms for said second register, and means for connecting the actuating mechanism of the first register with one of the actuating mechanisms of the second register so that the numerical value of the actuations of said registers will be the same.

2. In an accounting system, the combination of a first indicating register, an actuating mechanism for said register, means for selectively changing the value of the actuations of said register, a second indicating register, a plurality of actuating mechanisms associated with said register, and means for selectively connecting the actuating mechanism of the first register with one of the actuating mechanisms of the second register so that the actuations of said registers will have the same numerical value.

3. In an accounting system, the combination of a wage register, an actuating mechanism for said register, means for selectively varying the numerical value of the indications of said register, a job register, a plurality of actuating mechanisms for said job register, and means for connecting the actuating mechanism of the wage register with one of the actuating mechanisms of the job register so that the actuations of said registers will have the same numerical value.

4. In an accounting system, the combination of a plurality of indicating registers, an actuating mechanism for each of said registers, means for selectively varying the numerical value of the actuations of each of said registers, a totalizing register, a plurality of actuating mechanisms adapted to be operatively connected with said totalizing register, and means for selectively connecting the actuating mechanism of each indicating register with one of the actuating mechanisms of said totalizing register, so that the actuations of the totalizing register will have the same numerical value as the sum of the actuations of the individual indicating registers.

5. In an accounting system, the combination of a source of electric current, an indicating register, an electromagnetic actuating mechanism for said register, means for selectively varying the numerical value of the actuations of said register, a second register, a plurality of electromagnetic actuating mechanisms for said second register, and means for selectively connecting the actuating mechanism of the first register with one of the actuating mechanisms of the second register so that the actuations of said registers will have the same numerical value.

[Claims 6 to 28 not printed in the Gazette.]

1,169,079. INSULATING-BOARD AND METHOD OF PRODUCING THE SAME. JAMES E. LAPPEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed May 15, 1913. Serial No. 767,857. (Cl. 106—18.)

1. The method of producing insulating boards which consists in mixing melted petroleum tailings, paraffin wax, mineral wool, and alum with a watery stock of de-gummed flax fibers and shives and a partially pulped short-fibered vegetable straw, and then forming the product into boards.

2. The method of producing insulating boards which consists in first forming a watery stock of de-gummed flax fibers and shives and a partially pulped short-fibered vegetable straw reduced to a mushy condition, then mixing the same with melted petroleum tailings and paraffin wax, and then adding mineral wool and beating the mixture, then adding alum and forming the product into boards.

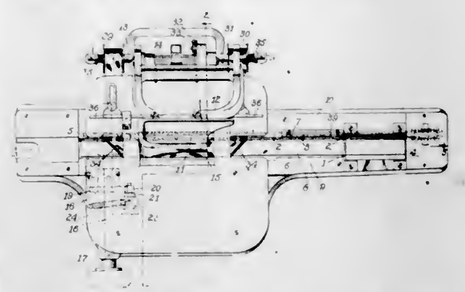
3. The method of producing insulating boards which consists in first forming a stock of de-gummed flax fibers and shives and softened short-fibered vegetable straw and washing the same, then beating the stock in water to about the consistency of half stock, then mixing petroleum tailings and paraffin wax therewith, then adding mineral wool and beating it up with the other ingredients, then adding alum and agitating the mixture, and forming the product into boards.

4. The method of producing insulating boards which consists in first forming a stock of de-gummed flax fibers and shives and a softened short-fibered vegetable straw, then mixing about five hundred pounds of this stock in water with about forty pounds of melted petroleum tailings, twenty pounds of crude paraffin wax, five hundred pounds of mineral wool and about seven pounds of alum, and then forming the product into boards.

5. The method of producing insulating boards which consists in first forming a watery stock of de-gummed flax fibers and shives and a softened short-fibered vegetable straw and washing the same, and then mixing the stock in water with an equal amount of mineral wool and sufficient melted petroleum tailings and paraffin wax to impregnate the mass, then adding alum and finally forming the product into boards.

[Claims 6 to 8 not printed in the Gazette.]

1,169,080. OFFICE ADDRESSING-MACHINE. ULYSSES GRANT LEE, Chattanooga, Tenn., assignor to Montague Mailing Machinery Company, a Corporation of Tennessee. Filed May 26, 1913, Serial No. 769,974. Renewed Sept. 23, 1915. Serial No. 52,283. (Cl. 101—1.)



1. In an addressing machine, a table having a runway for individual printing plates, an impression arm, inking ribbon mechanism operating in unison therewith, and an address plate feeder consisting of an endless member having plate engaging means, said feeder moving the plates along the runway to and past the impression point, a rotary handle for operating the said member and a feeler device for determining the location of an address plate at the printing point.

2. In an addressing machine, a table having a runway for individual printing plates, an impression arm, inking ribbon mechanism operating in unison therewith, an endless member for feeding address plates, a drive wheel for said member to operate the same to move the plates along the runway to and past the impression point, a shaft for the drive wheel extending to the front of the machine, a rotary handle on the shaft, and a feeler device consisting of a disk on the shaft having notches and a spring pressed arm engaging said notches, substantially as described.

3. In combination, an impression arm pivoted at its rear end and swinging downwardly and forwardly to make the impressions, an inking ribbon operated therefrom, and a plate feed for independent address plates consisting of an endless member having means to engage the plates, a drive wheel for the endless member and a shaft for the drive wheel, extending to the front of the machine and having a knob thereon for turning it, and a feeler device for determining the location of the independent address plates at the printing point, substantially as described.

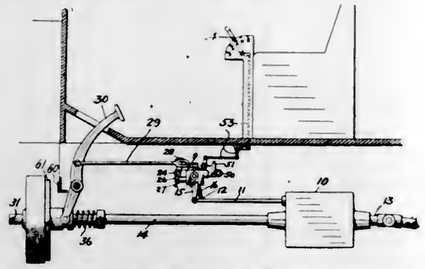
4. In combination a pivotally mounted impression arm, a pivotally mounted handle, said arm and handle turning about the same pivot, means for arresting the movement of the handle, a loose connection between the handle and the impression arm to allow the latter to continue its impression stroke after the handle is arrested, and spring means for raising the impression arm from the impression point, said spring means serving to lift the handle also, substantially as described.

1,169,081. MECHANICALLY-OPERATED GEAR-CHANGING MECHANISM FOR AUTOMOBILES. DEAN C. LEWIS, Philadelphia, Pa., assignor to Lewis Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1915. Serial No. 20,136. (Cl. 74—58.)

1. In a gear-changing mechanism for automobiles, the combination with a gear-shifting hub and a hub-actuating disk, both turnable on a common axis, of a dog interposed between the hub and disk and movable into and out of position to lock the hub and disk together, means to turn the disk, and selecting means to control the position of the dog.

2. In a gear changing mechanism for automobiles, the combination with a gear shifting hub and two hub-actuating disks on opposite sides of the hub, all turnable on a

common axis, of means to turn the disks simultaneously in opposite directions, and selectively controlled means to lock either or neither disk to the hub.



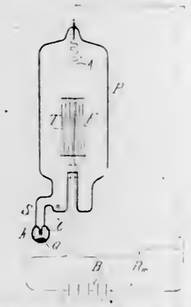
3. In a gear changing mechanism for automobiles, the combination with two gear-shifting hubs and an intermediate disk, all turnable on a common axis, of means to turn the disk, and selectively controlled means to lock either or neither hub to the disk.

4. In a gear-changing mechanism for automobiles, the combination with a gear shifting hub and two hub-actuating disks, one on each side of the hub, and all turnable on a common axis, of two dogs, one between each disk and the hub, each dog being movable into and out of position to lock its corresponding disk to the hub, means to turn the disks simultaneously in opposite directions, and selecting means to control the positions of the dogs.

5. In a gear-changing mechanism for automobiles, the combination with two gear shifting hubs and an intermediate disk, all turnable on a common axis, of two dogs, one between each hub and the disk, each dog being movable into and out of position to lock its corresponding hub to the disk, means to turn the disk, and selecting means to control the positions of the dogs.

[Claims 6 to 26 not printed in the Gazette.]

1,169,082. DISCHARGE-TUBE. ROBERT VON LIEBEN, EUGEN REISZ, and SIEGMUND STRAUSS, Vienna, Austria-Hungary, assignors to the Firm of Relais-Gesellschaft M. B. H., Vienna, Austria-Hungary. Filed June 29, 1912. Serial No. 706,760. (Cl. 250—35.)

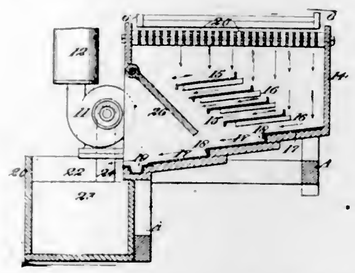


1. The method of increasing the duration of incandescent metallic oxid cathode discharge tubes having gas therein, consisting in lowering the ionizing and discharge voltages and reducing the occlusion of the gas molecules by operatively exposing the cathode to the vapor of an electro-positive substance, and regulating the pressure by varying the temperature of said substance.

2. The method of increasing the duration of incandescent metallic oxid cathode discharge tubes having gas therein, consisting in lowering the ionizing and discharge voltages and reducing the occlusion of the gas molecules by depositing a thin layer of an electro-positive substance on the wall of the discharge tube to develop a vapor which is exposed to the cathode, and varying the pressure of the vapor by modifying the thickness of the layer.

3. A discharge tube of the character set forth, comprising a metallic oxid cathode and provided with a tubular projection arranged on the tube near the cathode, the said tubular projection terminating in a spherical enlargement having a comparatively low temperature, and a vaporizing electro-positive substance in the enlargement to expose the vapor of said substance to the cathode to lower the ionizing and discharge voltages and reduce the occlusion of the gas molecules.

1,169,083. COMBINED CONCENTRATING AND AMALGAMATING MACHINE. WARREN L. MCLEAN, San Francisco, Cal., assignor of one-half to John A. Van Beal, San Francisco, Cal. Filed Jan. 5, 1915. Serial No. 605. (Cl. 83—68.)



1. In a machine of the character described, a plurality of inclined superposed amalgamating plates, means for adjusting said plates longitudinally with relation to each other, a baffle plate adjacent the discharge ends of the plates swingable toward and away from the latter, and means to hold the baffle plate rigidly in any selected position thereof.

2. In a machine of the character described, a plurality of inclined superposed amalgamating plates, means for adjusting said plates longitudinally with relation to each other, and a baffle plate adjustably mounted with relation to the discharge ends of the amalgamating plates.

3. In a machine of the character described, a plurality of inclined superposed amalgamating plates, means for adjusting said plates longitudinally with relation to each other, a plurality of stationary amalgamating plates offset with relation to each other mounted below the first named plates, and a baffle plate adjustably mounted with relation to the discharge ends of the amalgamating plates.

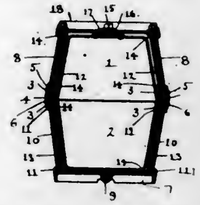
4. In combination with a plurality of inclined superimposed amalgamating plates, baffle means disposed adjacent the discharge ends of said plates and being common to all of the latter, and means to allow said baffle means to be set at varying angular positions with respect to said plates.

5. In a machine of the type set forth, a lower inclined amalgamating plate, a series of upper longitudinally adjustable superposed amalgamating plates arranged above the lower plate and having their ends spaced from the respective ends of the lower plate, an inlet above the upper plates extending the length of the lower plate and baffle means arranged in front of the upper plates and above the lower plate and disposed between the front ends of the upper plates and the front end of the lower plate.

[Claim 6 not printed in the Gazette.]

1,169,084. METALLIC CASK. MICHAEL BROCHU, Grand Rapids, Mich., assignor of one-third to John D. Raab and one-third to Anthony Disk, Grand Rapids, Mich. Filed Oct. 24, 1913. Serial No. 797,026. (Cl. 220—4.)

1. In a device of the character described, a cask comprising two separable parts respectively provided with detachable clamping rings adapted to be drawn together to tightly connect the separable cask parts; heads outside the ends of said separable parts; cask-protecting members extending between the respective rings and heads; and means for detachably connecting the respective heads, rings and protecting members together.



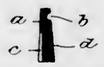
2. In a device of the character described, a cask comprising two separable parts each having a peripheral flange, detachable clamping rings adapted to engage the respective flanges and to be drawn together to tightly connect the separable cask parts; heads outside the ends of said separable parts; cask-protecting members extending between the respective rings and heads; and means for detachably connecting the respective heads, rings and protecting members together.

3. In a device of the character described, a cask comprising two separable parts respectively provided with detachable clamping rings adapted to be drawn together to tightly connect the separable cask parts; heads outside the ends of said separable parts; cask-protecting members extending between the rings and heads; shells inside the cask-protecting members and extending between the respective heads and clamping rings, whereby an air chamber outside the cask is formed in the assembled position of the device; and means for detachably connecting the respective heads, rings, shells and protecting members together.

4. In a device of the character described, a cask comprising two separable parts respectively provided with detachable clamping rings adapted to be drawn together to tightly connect the separable cask parts; heads outside the ends of the said separable parts, the rings and heads having annular grooves; and shells detachably connected to the respective heads and clamping rings and engaging in said grooves, whereby an air chamber outside the cask is formed in the assembled position of the device.

5. In a device of the character described, a cask comprising two separable parts respectively provided with detachable clamping rings adapted to be drawn together to tightly connect the separable cask parts; heads outside the ends of the said separable parts, the rings and heads having annular grooves and sockets; cask-protecting members extending between the rings and heads and let into said socket; shells inside the cask-protecting members, extending between the heads and rings and let into said grooves, whereby an air chamber outside the cask is formed in the assembled position of the device; and screw-threaded bolts extending between the respective rings and heads to detachably connect them and the cask-protecting members and shells together.

1,169,085. WELT-STRIP. OSCAR C. DAVIS, Brockton, Mass., assignor of one-half to George E. Keith, Brockton, Mass. Filed Oct. 9, 1914. Serial No. 865,793. (Cl. 36—78.)



1. An article of manufacture consisting of a welt strip composed of rubber, one side of said strip having a plain upper-engaging marginal surface and a series of transversely extending molded grooves, the opposite side of said strip having a longitudinally extending molded stitch-receiving groove.

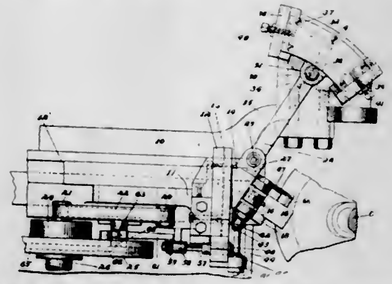
2. An article of manufacture consisting of a welt strip composed of rubber, and reinforcing means embedded therein, one longitudinal marginal portion of said strip having a plain upper-engaging surface on one side and a longitudinally extending molded stitch-receiving groove in the opposite side, said reinforcing means being arranged to receive stitches sewn in said groove, the body of said strip having a series of transversely extending molded grooves in said one side.

3. An article of manufacture consisting of a welt strip composed of rubber, and reinforcing means embedded therein, one longitudinal marginal portion of said strip having a plain upper-engaging surface on one side and a longitudinally extending molded stitch-receiving groove in the opposite side, the body of said strip having a series of transversely extending molded grooves in said one side, said reinforcing means being arranged to receive the stitches sewn through said body portion.

4. An article of manufacture consisting of a welt strip composed of rubber, and reinforcing means embedded therein, one side of said strip having a longitudinally extending molded stitch-receiving groove in one marginal portion and a plain sole-engaging surface on the opposite marginal portion, the opposite side of said strip having a plain upper-engaging surface on said one marginal portion and a series of transversely extending molded grooves in said opposite marginal portion.

5. An article of manufacture consisting of a molded welt strip composed of rubber, and reinforcing means embedded therein, the upper-engaging side of said strip having a smooth molded inner marginal portion and a corrugated molded outer marginal portion.

1,169,086. GEAR-CUTTING MACHINE. HENRY A. GARVEY, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed June 24, 1913. Serial No. 775,558. Divided and this application filed June 1, 1914. Serial No. 842,144. (Cl. 90—9.)



1. In a machine of the class described, the combination of a reciprocating head, a tool support carried by the head and having a tool holder adapted to be lifted from the work on the return stroke of the head, a pair of meshing bevel gears carried by said head, means actuated by one of said gears for lifting the tool holder, a shaft operatively connected with the other bevel gear and alined therewith, a rocking lever, means for transmitting the movements to said shaft, and cam means operated in timed relation to the movements of the head for rocking said lever.

2. In a machine of the class described, the combination of a reciprocating head, a tool support carried by said head and having a tool holder adapted to be lifted from the work on the return stroke of the head, a pair of meshing gears carried by said head, means actuated by one of said gears for lifting the tool holder, a shaft operatively connected with the other bevel gear, a rocking lever carried by the frame of the machine, means for transmitting the movement of said lever to said shaft, and cam means operated in timed relation to the movements of the head for rocking said lever.

3. In a machine of the class described, the combination of a reciprocating head, a tool support carried by said head and having a tool holder adapted to be lifted from

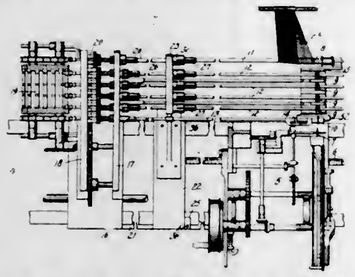
the work on the return stroke of the head, a pair of meshing bevel gears carried by said head, a shaft carried at one end of the tool support and at the other end in one of said gears, means whereby the tool holder is lifted by a rocking movement of said shaft, a second shaft supported on the frame of the machine and having a sliding connection with the other of said gears, a bevel gear on said second shaft, a rocking lever having teeth engaging said last mentioned gear, and cam means operated in timed relation to the movements of the head for rocking said lever.

4. In a machine of the class described, the combination of a reciprocating head, a tool support carried by said head and having a tool holder adapted to be lifted from the work on the return stroke of the head, means for reciprocating the tool support transversely of the head, a pair of meshing bevel gears carried by the head, a shaft having one end supported on said tool support and its other end operatively connected with one of said gears, the shaft being slidable through said gear as the support is reciprocated on the head, means whereby the rocking of said shaft is adapted to lift the tool holder, and means for actuating the other of said bevel gears.

5. In a machine of the class described, the combination of a reciprocating head, a tool support carried by said head and having a tool holder adapted to be lifted from the work on the return stroke of the head, means for reciprocating the tool support on the head and means for lifting the tool holder comprising a stub shaft on the support, a shaft rotatably supported by said stub shaft and movable with the support, an operating gear carried by the head and having a sliding connection with the second mentioned shaft, a coöperating means movable with the tool holder and the second mentioned shaft adapted to lift the tool holder when the second mentioned shaft is rocked.

[Claims 6 to 8 not printed in the Gazette.]

1,169,087. MACHINE FOR SEPARATING AND SELECTING WARP-THREADS OR THE LIKE. EDGAR F. HATHAWAY, Dorchester, and CHARLES LEA, Boston, Mass., assignors to American Warp Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed Sept. 16, 1908. Serial No. 453,224. (Cl. 139—94.)



1. In a machine for separating and selecting warp threads, the combination with separating and selecting mechanism movable relatively to the warp threads, a separator shaft for actuating the same, supports for the opposite ends of the said shaft and movable relatively to the warp threads with the said mechanism, and an intermediate support for the said shaft relative to which said separating mechanism and actuating shaft have a traveling movement.

2. In a machine of the class described, the combination with separating and selecting mechanism, of an actuating shaft therefor, a support for each end of said shaft, and an intermediate support relatively to which said shaft is longitudinally movable during a part of the operation of the machine, but longitudinally fixed for the remaining part of the operation thereof.

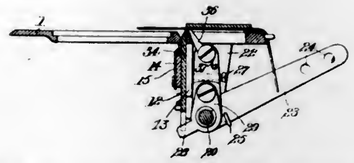
3. In a machine of the class described, the combination with a separating and selecting device, an actuating shaft therefor, a support for the end of said shaft, an intermediate support, means for causing the separation of the intermediate and end supports during the first part of the operation of the machine, but for holding them relatively fixed during the remainder of the operation thereof.

4. In a warp drawing machine, the combination with a plurality of separating and selecting devices, actuating shafts therefor, a pattern control head operatively related to said shafts at one end, an intermediate support for said shaft, and means permitting the separation of said pattern head and intermediate support during the first part of the operation of the machine, but for holding the same at a fixed distance relatively thereto during the remaining portion thereof.

5. In a machine of the class described, the combination with a plurality of separating devices, a plurality of actuating shafts therefor, a sliding support for the ends of said shaft, an intermediate relatively movable support, and means for locking the intermediate support to move with the said end support.

[Claims 6 to 18 not printed in the Gazette.]

1,169,088. STAY-CUTTING ATTACHMENT FOR SEWING-MACHINES. BENJAMIN V. KERSHNER, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1910. Serial No. 572,449. (Cl. 112—33.)



1. In a stay cutting attachment, the combination of a movable cutting blade, a shearing blade coöperating therewith, a spring for normally holding said movable blade retracted, a rock lever for operating said movable blade, a feeding finger operated by said rock lever, and an independent spring for controlling said rock lever.

2. In a stay cutting attachment, the combination with a stationary shearing blade underneath which the tape is guided, a movable cutting blade coöperating with said stationary blade, a spring for depressing said movable blade, a stop for limiting the downward movement of said blade, a rock lever for raising said blade, a spring for moving said rock lever in a direction to release the movable blade and a stop for limiting the movement of said rock lever by said spring.

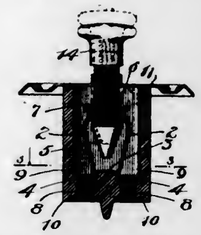
3. In a stay cutting attachment, the combination of a movable cutting blade, a shearing blade coöperating therewith, a spring for normally holding said blades in contact, and means located on the opposite side of the material from the shearing blade whereby the spring pressure of one blade against the other is increased as said movable cutting blade moves forward to perform its cutting action, and means for operating said movable cutting blade.

4. In a stay cutting attachment, the combination of a movable cutting blade, a shearing blade coöperating therewith, a spring for pressing said movable cutting blade against the shearing blade, a tapered pin carried by said movable blade and adapted to be engaged by said spring for increasing the spring pressure of the movable blade against the shearing blade as the movable blade moves forward for its cutting action, and means for operating said movable cutting blade.

5. In a stay cutting attachment, the combination of a movable cutting blade, a shearing blade coöperating therewith, a spring for pressing said movable cutting blade against the shearing blade, a tapered pin carried by the movable blade and adapted to be engaged by said spring for increasing the spring pressure of the movable blade against the shearing blade as the movable blade moves forward for its cutting action, a spring for normally retracting said movable cutting blade, means coöperating with said tapered pin for limiting the retracted movement of said blade, and means for moving said blade for its cutting action.

[Claim 6 not printed in the Gazette.]

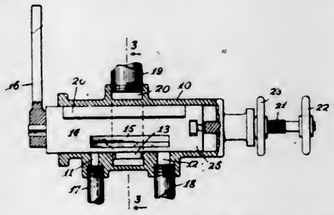
1,169,089. ELECTRIC SWITCH. BURTON L. LAWTON and BENJAMIN A. SPITZER, Meriden, Conn., assignors to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed July 6, 1915. Serial No. 38,074. (Cl. 175—282.)



1. In an electric switch of the character described, a block of insulating material having a longitudinal cavity therein open at one end, a pair of spring contacts seated in the bottom of said cavity, each of said spring contacts having a laterally extending foot at its lower end, with means engaging said foot for holding said contact against turning in said cavity, a tubular connecting member for each of said contacts, each of said members passing through said foot and through the lower end of said block and upset externally of the latter, with means for holding said tubular member against turning relatively to its contact, said means comprising a flanged shoulder at the inner end of said tubular member, said flange bearing against that part of the contact just above said foot.

2. In an electric switch of the character described, a block of insulating material forming an insulating base, a spring contact mounted on said base having a laterally extending foot portion engaging the base, a shoulder on the base engaging said foot portion and holding the contact against turning on the base and a tubular connecting member passed through the base and the laterally extending foot portion of the contact, said connecting member having a flanged shoulder engaging the contact above the foot portion thereof to secure said tubular member against turning on the base.

1,169,090. MIXING AND PROPORTIONING VALVE. CHARLES E. LUCKE, New York, N. Y., assignor to Gas and Oil Combustion Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 8, 1913. Serial No. 740,884. (Cl. 137—26.)



1. A valve embodying therein valve-seat-forming means having a plurality of intake ports therein for supplying different fluids, a valve block seated against said valve seat and ported to simultaneously establish communication between said intake ports and an offtake, adjusting means for adjusting the valve to vary the relative capacity of said intake ports, and means independent of said adjusting means whereby all of said intake ports may be simultaneously and proportionately opened without affecting the adjustment of the valve for the relative capacity of said ports.

2. A valve embodying therein valve-seat-forming means having a plurality of intake ports therein for supplying different fluids, a valve block seated against said valve seat and ported to establish communication between said intake ports and an offtake, the relative capacity and arrangement of said intake and valve block ports being such as to cause a simultaneous opening of all said intake ports and a proportionate variance in volume of flow with a continued movement of said valve block, adjusting means for adjusting said valve block to vary the relative capacity of said intake ports, and means independent of said adjusting means whereby said valve block may be moved to simultaneously and proportionately open all of said intake ports without affecting the adjustment of the valve block for relative capacity of the intake ports.

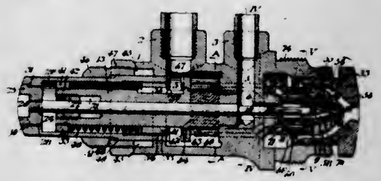
3. A valve embodying therein a casing having a cylindrical bore and two intake ports communicating therewith for supplying different fluids, a rotary plug mounted in said bore and ported to simultaneously establish communication between said intake ports and an offtake, adjusting means for adjusting said plug axially of said casing to vary the relative capacity of said intake ports and the relative proportions of the fluids passing therethrough and entering into the mixture when the valve is open, and means independent of said adjusting means whereby said plug may be rotated to vary the volume of flow through the valve without affecting the adjustment of the plug for relative capacity of the intake ports

4. A valve embodying therein a casing having a cylindrical bore and two intake ports for supplying different fluids and an offtake port communicating therewith, a rotary plug mounted in said bore having therein a port adapted to simultaneously establish communication between both of said intake ports and said offtake ports, adjusting means for adjusting said plug axially of said casing to vary the relative capacity of said intake ports and the relative proportions of the fluids passing therethrough and entering into the mixture when the valve is open, and means independent of said adjusting means whereby said plug may be rotated to vary the volume of flow through the valve without affecting the adjustment of the plug for relative capacity of the intake ports.

5. A valve embodying therein a casing having a cylindrical bore and two intake ports for supplying different fluids and an offtake port communicating therewith, a rotary plug mounted in said bore ported to simultaneously establish communication between both of said intake ports and said offtake port, an adjusting screw having a swivel connection with said plug whereby said plug may be adjusted axially of said casing to vary the relative capacity of said intake ports and the relative proportions of the fluids passing therethrough and into the mixture, and means independent of said adjusting screw whereby said plug may be rotated to vary the volume of flow through the valve without affecting the adjustment of the plug for relative capacity of the intake ports.

[Claims 6 and 7 not printed in the Gazette.]

1,169,091. OIL-BURNER. WILLIAM MELAS, Philadelphia, Pa., assignor of one-half to David Townsend, Philadelphia, Pa. Filed Mar. 10, 1913. Serial No. 753,400. (Cl. 158—76.)



1. In an oil burner, the combination with a cylindrical tubular casing having a tubular member extending axially

therein, having a collar at the outer end thereof, an oil chamber in said tubular member, an air chamber surrounding said tubular member, an oil inlet communicating with said oil chamber, and an air inlet communicating with said air chamber; of a stationary oil nozzle at the inner end of said oil chamber having an internal conical valve seat; an axially adjustable discharge nozzle at the inner end of said air chamber, in concentric relation with said oil nozzle; a nozzle axially adjustable in said air chamber between said oil nozzle and discharge nozzle, having sectional shanks extending axially in said air chamber upon opposite sides of said oil chamber, with a left hand internal screw threaded at their outer ends; an annular nozzle nut in engagement with said screw thread, mounted to rotate, without axial movement, on said tubular member and having a crown clutch at its outer end; a valve fitted to said seat, having a tip fitted to reciprocate in and clean said oil nozzle, and a stem mounted to axially reciprocate in said tubular member and having a head at the outer end thereof; a piston rigidly connected with the head on said valve stem, mounted to axially reciprocate in said burner casing, and having an internal right hand screw thread at its inner end; an annular piston nut engaged with said piston screw thread, mounted to reciprocate on said tubular member and carrying a crown clutch at its inner end, adapted to engage the nozzle nut clutch aforesaid; means for preventing rotation of said piston nut on said tubular member; a spring encircling said tubular member, abutting against a collar at the outer end thereof and against said piston nut, tending to shift said piston and valve inward, to close the latter in opposition to fluid pressure in said air chamber; whereby, said piston is automatically shifted, with said valve, relatively to said valve seat, to vary the volume of oil being emitted, in accordance with the fluid pressure in said air chamber, but is manually adjustable to vary the position of said valve with respect to said seat, and consequent oil emission, at any given pressure; said valve being automatically closed by said spring when the latter is not counterbalanced by the fluid pressure in said air chamber.

2. In an oil burner, the combination with a tubular casing having an axial tubular member with an oil chamber in said tubular member, an air chamber surrounding said tubular member, an oil inlet communicating with said oil chamber, and an air inlet communicating with said air chamber; of an oil nozzle at the inner end of said oil chamber, having an internal valve seat; an axially adjustable discharge nozzle at the inner end of said air chamber, in concenrtic relation with said nozzle; a nozzle axially adjustable in said air chamber between said oil nozzle and discharge nozzle, having shanks extending axially in said air chamber upon opposite sides of said oil chamber, with a left hand internal screw thread at their outer ends; an annular nozzle nut in engagement with said screw thread, mounted to rotate, without axial movement, on said tubular member and having a crown clutch at its outer end; a valve fitted to said seat, having a tip fitted to reciprocate in and clean said oil nozzle, and a stem mounted to axially reciprocate in said tubular member and having a piston rigidly connected with its outer end, mounted to axially reciprocate in said burner casing, and having an internal right hand screw thread at its inner end; an annular piston nut engaged with said piston screw thread, mounted to reciprocate on said tubular member and having a crown clutch at its inner end, adapted to engage the nozzle nut clutch aforesaid; means for preventing rotation of said piston nut on said tubular member; a collar at the outer end of said tubular member; a spring encircling said tubular member, abutting against said collar at the outer end thereof and against said piston nut, tending to shift said piston and valve inward, to close the latter in opposition to fluid pressure in said air chamber; whereby, said piston is automatically shifted, with said valve, relatively to said valve seat, to vary the volume of oil being emitted, in accordance with the fluid pressure in said air chamber, but is manually adjustable to vary the position of said valve with respect to said seat, and consequent oil emission, at any given pressure; said valve being automatically closed by said spring when the latter is not counterbalanced by the fluid pressure in said air chamber.

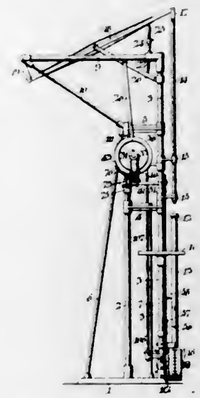
3. In an oil burner, the combination with a tubular casing having an axial tubular member with an oil chamber in said tubular member, an air chamber surrounding said tubular member, an oil inlet communicating with said oil chamber, and an air inlet communicating with said air chamber; of an oil nozzle at the inner end of said oil chamber, having an internal valve seat; an axially adjustable discharge nozzle at the inner end of said air chamber, in concentric relation with said oil nozzle; a nozzle axially adjustable in said air chamber between said oil nozzle and discharge nozzles, having a left hand internal screw thread at its outer end; an annular nozzle nut in engagement with said screw thread, mounted to rotate, without axial movement, on said tubular member and having a clutch at its outer end; a valve fitted to said seat, having a tip fitted to reciprocate in and clean said oil nozzle, and a stem mounted to axially reciprocate in said tubular member and having a piston rigidly connected with its outer end, mounted to axially reciprocate in said burner casing, and having an internal right hand screw thread at its inner end; an annular piston nut engaged with said piston screw thread, mounted to reciprocate on said tubular member and having a clutch at its inner end, adapted to engage the nozzle nut clutch aforesaid; means preventing rotation of said piston nut on said tubular member; a collar at the outer end of said tubular member; a spring encircling said tubular member, abutting against said collar at the outer end thereof and against said piston nut, tending to shift said piston and valve inward, to close the latter in opposition to fluid pressure in said chamber; whereby, said piston is automatically shifted, with said valve, relatively to said valve seat, to vary the volume of oil being emitted, in accordance with the fluid pressure in said air chamber, but is manually adjustable to vary the position of said valve with respect to said seat, and consequent oil emission, at any given pressure; said valve being automatically closed by said spring when the latter is not counterbalanced by the fluid pressure in said air chamber.

4. In an oil burner, the combination with a tubular casing having an axial tubular member with an oil chamber in said tubular member, an air chamber surrounding said tubular member, an oil inlet communicating with said oil chamber, and an air inlet communicating with said air chamber; of an oil nozzle at the inner end of said oil chamber, having an internal valve seat; an axially adjustable discharge nozzle at the inner end of said air chamber, in concentric relation with said oil nozzle; a nozzle axially adjustable in said air chamber between said oil nozzle and discharge nozzle, having an internal screw thread at its outer end; an annular nozzle nut in engagement with said screw thread, mounted to rotate, without axial movement, on said tubular member and having a clutch at its outer end; a valve fitted to said seat, having a stem mounted to axially reciprocate in said tubular member and having a piston connected with its outer end, mounted to axially reciprocate in said burner casing, and having an internal screw thread at its inner end, pitched oppositely to the first named screw thread; an annular piston nut engaged with said piston screw thread, mounted to reciprocate on said tubular member and having a clutch at its inner end, adapted to engage the nozzle nut clutch aforesaid; means preventing rotation of said piston nut on said core; a collar at the outer end of said tubular member; a spring encircling said tubular member, abutting against said collar at the outer end thereof and against said piston nut, tending to shift said piston and valve inward, to close the latter in opposition to fluid pressure in said air chamber; whereby, said piston is automatically shifted, with said valve, relatively to said valve seat, to vary the volume of oil being emitted, in accordance with the fluid pressure in said air chamber, but is manually adjustable to vary the position of said valve with respect to said seat, and consequent oil emission, at any given pressure; said valve being automatically closed by said spring when the latter is not counterbalanced by the fluid pressure in said air chamber.

5. In an oil burner, the combination with a tubular casing having an axial tubular member with an oil chamber in said tubular member, an air chamber surrounding said tubular member, an oil inlet communicating with said oil chamber, and an air inlet communicating with said air chamber; of an oil nozzle at the inner end of said oil chamber, having an internal valve seat; a discharge nozzle at the inner end of said air chamber, in concentric relation with said oil nozzle; a nozzle axially adjustable in said air chamber between said oil nozzle and discharge nozzle, having an internal screw thread at its outer end; an annular nozzle nut in engagement with said screw thread, mounted to rotate, without axial movement, on said tubular member and having a clutch at its outer end; a valve fitted to said seat, having a stem mounted to axially reciprocate in said tubular member and having a piston connected with its outer end, mounted to axially reciprocate in said burner casing, and having an internal screw thread at its inner end pitched oppositely to the first named screw thread; an annular piston nut engaged with said piston screw thread, mounted to reciprocate on said tubular member and having a clutch at its inner end, adapted to engage the nozzle nut clutch aforesaid; means preventing rotation of said piston nut on said tubular member; a collar at the outer end of said tubular member; a spring encircling said tubular member, abutting against said collar at the outer end thereof and against said piston nut, tending to shift said piston and valve inward, to close the latter in opposition to fluid pressure in said air chamber; whereby, said piston is automatically shifted, with said valve, relatively to said valve seat, to vary the volume of oil being emitted, in accordnace with the fluid pressure in said air chamber, but is manually adjustable to vary the position of said valve with respect to said seat, and consequent oil emission, at any given pressure; said valve being automatically closed by said spring when the latter is not counterbalanced by the fluid pressure in said air chamber.

[Claims 6 to 18 not printed in the Gazette.]

1,169,092. MACHINE FOR INVERTING AND BUNDLING HOSIERY. BERTRAND A. PARKES, Philadelphia, Pa., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 24, 1915. Serial No. 30,055. (Cl. 139—47.)



1. In a machine of the class described, the combination of a fixed ring; a plunger reciprocating in axial relation to the ring; a rotary drum; connections whereby rotation of the drum effects reciprocation of the plunger; a rotating pulley; a friction clutch, capable of engaging the pulley with the drum; and means for effecting engagement of the clutch at the will of the operator.

2. In a machine of the class described, the combination of a fixed ring; a plunger reciprocating therethrough; a drum which by its rotation effects reciprocation of the plunger; a rotary pulley capable of frictionally engaging said drum to effect reciprocation of the plunger; means for exerting fixed tension tending to effect such frictional engagement; and means opposing such frictional engagement including a trigger, which when sprung permits the engagement to take place.

3. In a machine of the class described, the combination of a ring; a plunger reciprocating therethrough; and means for actuating the plunger, including a friction clutch held in engagement under yielding pressure.

4. In a machine of the class described, the combination of a ring; a plunger reciprocating therethrough; means for effecting complete reciprocation of the plunger, said means including a clutch, a lever operatively connected therewith, adapted to throw said clutch into or out of operative position, an arm pivoted to said lever, a spring attached to said arm normally tending to throw said clutch into operative position, a trigger bar, a notch in said arm adapted to engage said trigger bar and hold said clutch out of operative position, and means for releasing said trigger bar, at the will of the operator.

5. In a machine of the class described, the combination of a ring; a plunger reciprocating therethrough; a drum for effecting reciprocation of the plunger; a rotary pulley capable of engaging said drum; a lever adapted to move said pulley into or out of engagement with said drum; an arm pivoted to said lever; a spring attached to said arm normally tending to hold said clutch in engagement with said drum; a trigger bar; a notch in said arm adapted to engage said trigger bar, whereby the action of said spring is overcome and said pulley held out of engagement with said drum; and means whereby said trigger bar is released from said notch and not reset until reciprocation of the plunger is completed.

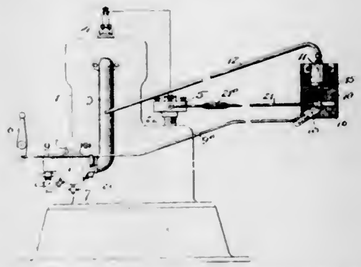
[Claims 6 to 10 not printed in the Gazette.]

1,169,093. PROCESS FOR PRODUCING IRON SULFID. NAPOLEON PETINOT, New York, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Oct. 21, 1915. Serial No. 57,098. (Cl. 23—13.)

1. The method of producing iron sulfid, which comprises melting together iron and iron pyrites ore containing slag-forming impurities.

2. The method of producing iron sulfid, which comprises melting together iron, iron pyrites ore, and a slag-forming material.

1,169,094. SPARK-CONTROLLING MEANS FOR INTERNAL-COMBUSTION ENGINES. CHARLES E. STAHL, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Meriden, Conn., a Corporation of Connecticut. Filed Aug. 26, 1915. Serial No. 47,431. (Cl. 123—117.)



1. In a combined throttle and spark control for internal combustion motors, a spark timing device, means for manually adjusting the same, and means controllable by variations in the load on the motor for modifying the action of said timing device in its various positions of manual adjustment and independent of any change of the speed of the motor.

2. In a combined throttle and spark controlling means for internal combustion motors, a motor cylinder, a fuel intake pipe leading thereto, a throttle therefor, ignition mechanism including a movable timer for advancing or retarding the moment of ignition, a manually controllable means for shifting the position of said throttle, and automatic means controlled partially by said throttle controlling means and partially by the vacuum in said fuel pipe for shifting said timer.

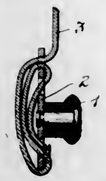
3. In a spark control for internal combustion engines, a spark timing device movable to advance and retard the spark, manually operable means for shifting said spark timing device, a pneumatic device connected with the intake of the engine, and means operated by said pneumatic device for modifying the connection between said manually operable means and the spark timing device.

4. In a spark control for internal combustion engines, a spark timing device movable to advance and retard the spark, manually operable means for shifting said spark timing device, a pneumatic device connected with the intake of the engine, and means operated by said pneumatic device for modifying the connection between said manually operable means and the spark timing device, a throttle, said manually controllable means being also connected to said throttle for simultaneously operating the same while shifting said spark timing device.

5. In a spark control for internal combustion engines, a spark timing device movable to advance and retard the spark, manually operable means for shifting said spark timing device, a pneumatic device connected with the intake of the engine, means operated by said pneumatic device for modifying the connection between said manually operable means and the spark timing device, said means comprising a movable member constituting a guide, the angular position of which may be shifted, and a connection between said guide and the timing device, whereby said guide will operate on said timing device simultaneously with the operation of the pneumatic thereon.

[Claims 6 to 13 not printed in the Gazette.]

1,169,095. TAB END. HENRY J. STUART, Derby, Conn., assignor to The Robert N. Bassett Company, Derby, Conn., a Corporation of Connecticut. Filed June 10, 1914. Serial No. 844,164. (Cl. 24—245.)

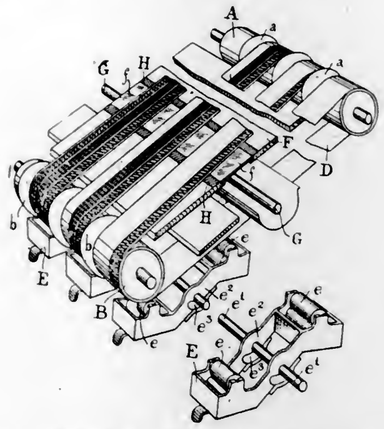


In a tab end, a button, a supporting plate having two transverse slots therein above the button and one transverse slot therein below the button, a tape threaded through said slots as follows: through the uppermost slot from the front to the rear, thence down to and around the lower edge of the plate and up to and through the lowermost slot from the front to the rear, thence up to and again through the uppermost slot from the rear of the front, thence down to and through the intermediate slot from the front to the rear.

1,169,096. APPARATUS FOR DEVELOPING AND FINISHING CINEMATOGRAPH COLOR-FILMS. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed May 9, 1913. Serial No. 766,595. (Cl. 95—94.)

1. In a machine for developing multi-color cinematograph or motion picture films, the combination of means for advancing the film, and means for applying a plurality of developers of different colors side by side simultaneously to different sections of the film without mixing or overlapping of the developers.

2. In apparatus for developing multi-color cinematograph or motion picture films, the combination of means for advancing the film, means for applying to the film a plurality of developers of different colors side by side, and means for interrupting the application of one or more of the developers to control the color and density of the different sections of the film.



3. In apparatus for developing multi-color cinematograph or motion picture films, the combination of means for continuously advancing a printed or exposed film in a series of helical laps, and means for applying dye or color thereto in succession as the film is continuously advanced.

4. In apparatus for developing multi-color cinematograph or motion picture films, the combination of means for traversing a printed or exposed film in a series of helical laps, means for applying dye or color to the several color sections of the moving film in rotation and in succession, means for applying a mordant or fixing solution to the moving film, and means for washing the film as the latter is continuously advanced.

5. In apparatus for developing multi-color cinematograph or motion picture films in different colors arranged side by side, the combination of means for advancing such film, means for applying developers of different colors to the different color sections of the film, and a color gage arranged adjacent to the traveling film.

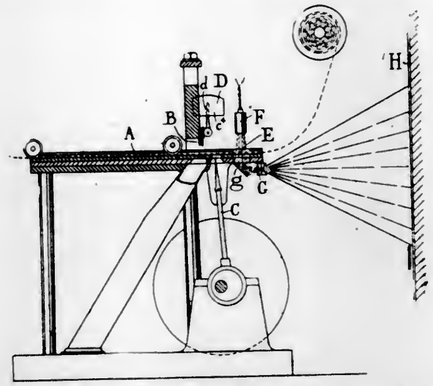
[Claim 6 not printed in the Gazette.]

1,169,097. APPARATUS FOR PERFORATING CINEMATOGRAPHIC FILMS. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed May 9, 1913. Serial No. 766,596. (Cl. 88—24.)

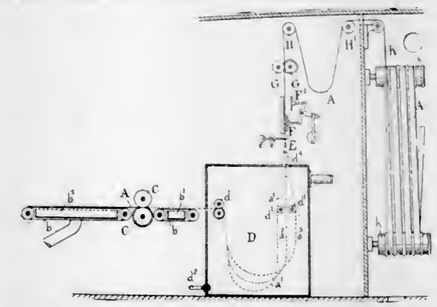
1. In a machine for perforating printed cinematographic films, the combination of film punching devices, gaging means located in predetermined relation to the punching devices for affording visual inspection of the pictures on the printed film during perforation thereof, and mechanism coöperative with perforations previously made in the film by the punching devices for advancing the film to receive perforations for the successive pictures, said mechanism being adjustable to vary the extent to which the film is advanced at each operation.

2. In a machine for perforating printed cinematographic films, the combination of film perforating devices, gaging means in predetermined relation to the perforating devices for transmitting light to the printed film during the perforating operation and to afford optical inspection thereof, means coöperative with perforations previously made in the film by the perforating devices for advancing the film to receive perforations for the successive pictures, and means for varying the extent to which the film is advanced at each operation by the feeding means.

3. In a machine for perforating printed cinematographic films, the combination of film perforating means, film feeding means coöperative with the perforations previously made by the perforating means, and picture-gaging means in predetermined relation to the perforating means for projecting an enlarged image of the picture on the printed film during the perforating operation.



1,169,098. APPARATUS FOR PRODUCING POSITIVES FOR NATURAL-COLOR CINEMATOGRAPHY. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed May 9, 1913. Serial No. 766,597. (Cl. 154—2.)



1. Apparatus for producing single-width complete color picture films for cinematograph or motion pictures from two or more superimposed color sections comprising in its construction cutters by which the film is slit into two or more sections, means by which the several sections are superimposed, and registering appliances whereby the pictures are brought into correct register before the sections are secured together substantially as described.

2. In apparatus for producing single-width complete color picture films for cinematograph or motion pictures from two or more superimposed color sections, the combination of reciprocating apparatus arranged to enter perforations in all the sections and operative to advance such sections simultaneously in correct register, and means for pressing the registered sections into contact.

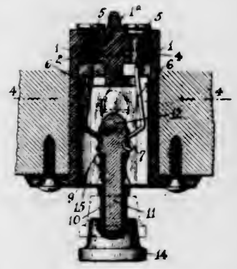
3. In apparatus for producing single-width complete color picture films for cinematograph or motion pictures from two or more superimposed color sections, the combination of reciprocating pins arranged to enter perforations in all the sections and operative to advance them simultaneously in correct register, and dabbers for pressing the several registered sections into contact.

4. In apparatus for producing single-width complete color picture films for cinematograph or motion pictures from two or more superimposed color sections, the combination with means for feeding the film forward, of cutters to slit the film into two or more sections, guides to prevent the tacky surfaces of the several sections of film coming into contact before they are accurately registered, registering pins by which the sections are fed forward and dabbers to press the several sections into contact substantially as described.

5. Apparatus for producing a single width complete color picture film for cinematograph or motion pictures from a multi-width film with two or more series of section color pictures comprising in its construction suction feed boxes to feed forward the film, cutters to slit the film into several sections, means for rendering the film adhesive, apparatus for placing the film sections in correct register one upon another and moving the film sections forward, and apparatus to squeeze and unite the film sections.

[Claim 6 not printed in the Gazette.]

1,169,099. SNAP-SWITCH. ERNEST C. WILCOX and BENJAMIN A. SPITZER, Meriden, Conn., assignors to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed June 22, 1914. Serial No. 846,454. (Cl. 175—283.)



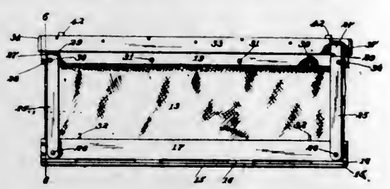
1. A quick-throw plunger switch comprising a substantially tubular insulating base having closed sides, a closed bottom and an open front end, spring contact fingers mounted on said closed bottom inside said tubular base, internally screw threaded tubular anchorages engaged with the base portions of said contact fingers and extended out through the bottom of the base, external terminal screws outside the base engaged in said threaded tubular outwardly extended anchorages, a face plate secured to the base and closing the open front end of the same, said face plate having a guide opening therethrough and a plunger working in the guide opening in said face plate, provided with conducting and non-conducting portions engaging the spring contact fingers.

2. A plural unit quick throw switch comprising a plurality of associated switch units, each of said units comprising a hollow insulating base having a closed bottom and an open front end, spring contact fingers seated in said hollow base, internally screw threaded tubular anchorages secured to the base portions of said contact fingers and extended out through the bottom of said base, external terminal screws on the bottom of the base engaged in said threaded tubular outwardly extended anchorages and a plunger provided with conducting and non-conducting portions to engage the spring contact fingers, a face plate secured to the insulating bases of the several units and closing the open front ends of said bases, said face plate having guide openings therethrough for the plungers of the several units, and a bus bar connecting the several units and secured to the bottoms of the units by the terminal screws of the units.

1,169,100. COLLAPSIBLE CRATE FOR CASKETS. JACOB H. WUNDERLICH, Baltimore, Md., assignor to National Casket Company, New York, N. Y., a Corporation of New York. Filed Oct. 21, 1914. Serial No. 867,731. (Cl. 150—49.)

1. A collapsible crate having in combination, a bottom section provided with a rectangular frame; standard bars

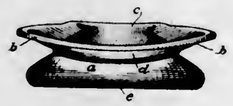
each having one end pivoted to the outer side of said bottom-section frame so as to swing up to a vertical position and each standard provided at its free end with a side notch 28; a top section provided at its side and near its end with projecting pins 30, which engage said side notches on the standard bars to sustain said top section; two brace bars 21, each of which has one end pivoted to the inner side of said bottom-section frame and the free ends of said two braces adapted to swing upwardly to oppositely-inclined positions and said free ends engaging the said top section when the crate is expanded.



2. A collapsible crate having in combination, a bottom section provided with a rectangular frame; standard bars 25, having one end pivoted to the outer side of said bottom-section frame so as to swing to either a vertical or an inclined position, and each standard provided near its free end with two side notches one 28, being in one edge and the other 29, in the opposite edge; a top section provided on its outer side near each end with a projecting pin 30, for the engagement of one notch on said standard when the latter is swung to a vertical position to sustain said top section, and said top section also provided intermediate its ends with additional projecting pins 31, for the engagement of the other notch on the standard when the latter is swung to an inclined position to secure the top and bottom sections together when the crate parts are in collapsed position.

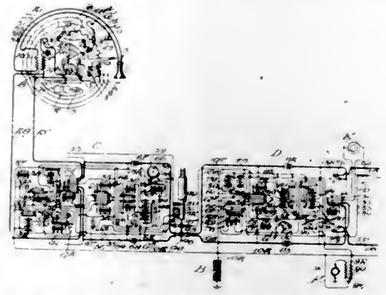
3. A collapsible crate having in combination, a bottom section provided with a rectangular frame; standard bars each having one end pivoted to the outer side of said bottom-section frame so as to swing up to a vertical position and each standard bar provided at its free end with a side notch 28 below its upper free extremity 27; a top section provided at its side and near its ends with projecting pins 30, which engage said side notches on the standard bars and sustain said top section when the latter is raised; means connecting between the bottom section and top section when the crate is expanded to secure longitudinal rigidity between the two sections; and a cover resting on the top section and having down-projecting side bars provided on their inner lower edge with notches 37, which when the crate is expanded receive the said upper free extremities of said pivoted standards, whereby said cover prevents the standard-notches disengaging from said pins on the top section.

1,169,101. BED-PAN. DANIEL HOGAN, Hoboken, N. J., assignor to Meinecke & Company, New York, N. Y., a Corporation of New Jersey. Filed June 7, 1915. Serial No. 32,501. (Cl. 4—19.)



A bed pan comprising a lower body portion and an upper thigh and buttock supporting portion, said body portion having a base, the outer edge of which is substantially in line with the outer edge of the thigh and buttock supporting portion, and having side and front walls extending inwardly and upwardly to the inner edge of said thigh and buttock supporting portion, and said thigh and buttock supporting portion being of a substantial width at the front and sides of the pan.

1,169,102. MEASURED-SERVICE TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Jan. 17, 1907. Serial No. 352,693. (Cl. 179—9.)



1. In a telephone exchange system, the combination of calling and called telephone lines, an automatic switch controlled over the calling line, means for registering the call as soon as the called subscriber answers, and means including said called telephone line and a differentially wound relay individual to the calling line, but normally disconnected therefrom, for controlling the registering operations of said means.

2. In a telephone exchange system, the combination of connectors for making the final connections with called telephone lines, automatic means for trunking calling common battery telephone lines into connection with said connectors, call-registering devices allotted to the different telephone lines for registering the calls as soon as the called subscribers answer, and means including a differentially wound relay individual to the calling line, but normally disconnected therefrom, by which the called subscribers cause said devices to register the calls.

3. In a telephone exchange system, the combination of telephone lines, automatic means for connecting calling lines with called lines, including common battery connectors for finding the called lines, call registering devices allotted to the different telephone lines, responsive to the called subscribers for the registration of calls, and means including the called telephone lines and a differentially wound relay individual to the calling line, but normally disconnected therefrom, for controlling the said devices and causing the same to register all successful calls.

4. In a telephone exchange system, the combination of a calling telephone line, a called telephone line, a common battery or centralized source of talking current, a call-registering device allotted to the calling line, a hook-switch for the called line, means responsive to the action of said hook-switch for admitting talking current to the calling line, means including a differentially wound relay responsive to said hook-switch for causing the said registering device to register the call, and means for locking said device against further operation while the two lines are connected.

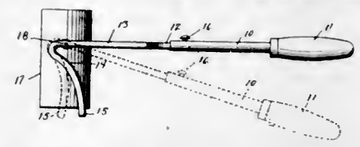
5. In a telephone exchange system, the combination of calling and called telephone lines, a plurality of trunks, an individual automatic trunk-selecting switch for the calling telephone line, a relay temporarily energized to maintain the continuity of the talking connection between the two lines, a call-registering device allotted to the said individual switch and adapted for registering the call when the called subscriber answers, and means including line relays by which the called subscriber causes said device to register the call.

[Claims 6 to 31 not printed in the Gazette.]

1,169,103. SOLDERING APPLIANCE. HERBERT W. RICHDALE, Cannon Station, Conn., assignor of one-third to Ammon S. Green and one-third to Howard E. Cable, Westport, Conn. Filed Sept. 9, 1914. Serial No. 860,861. (Cl. 113—111.)

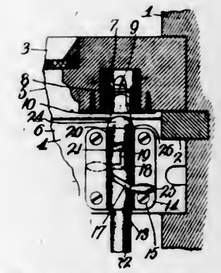
A soldering appliance comprising a handle having one end bifurcated to form spaced arms, a soldering container

eccentrically pivoted between the arms whereby same will assume a substantially perpendicular position at all times,



and legs on said arms respectively, said legs coöperating with the end of the handle remote from the container to support the latter in elevation.

1,169,104. SIDE SASH-LOCK. ALBERT TURNEY, Kansas City, Mo. Filed Feb. 20, 1915. Serial No. 9,574. (Cl. 16—143.)



1. The combination with relatively movable parts of a keeper, mounted on one of said parts, provided with an elongated eye, a sheath mounted on the other part and provided with a tortuous slot comprising a transverse portion, a longitudinal portion communicating at one end with one end of the transverse portion and a pair of oblique portions extending in opposite directions from the remote ends of said longitudinal and transverse portions, a bolt extending slidingly and rotatably in said sheath provided with an elongated portion capable of passing through the eye of the keeper and a handle projecting radially from the bolt through the slot of the keeper and occupying one extremity of the tortuous slot when the bolt is withdrawn and the other extremity of the tortuous slot when the bolt is fully advanced, the bolt fitting loosely in the keeper but not in the eye thereof when the said handle occupies the transverse portion of the tortuous slot or the adjacent end of the communicating oblique portion of the slot.

2. The combination with relatively movable parts, of a sheath mounted on one of the parts, provided with a tortuous slot and a pocket opening into the said slot at a bending point thereof, a bolt fitting slidingly and rotatably in said sheath and adapted to engage the other of said parts to lock the same, and a handle projecting from the bolt through said slot, said handle being of oblong rectangular form at the point where it extends through the slot so as to be incapable of turning in the slot except when engaged with said pocket.

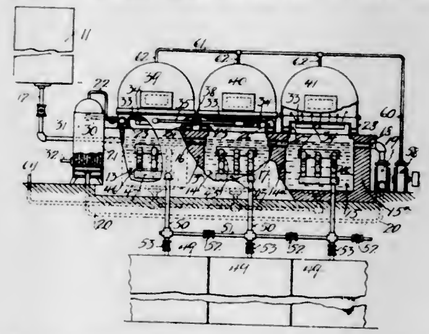
3. The combination with the upper and lower sashes of a window, of a hollow keeper mounted within one of the sashes and a bolt sheath mounted on the other sash, the sheath having a tortuous slot and provided at one or more of the bending points thereof with an offset or pocket, a bolt fitting slidingly and rotatably in the sheath, and a handle swiveled to and projecting radially from the bolt and through said slot; the portion of the handle extending through the slot being of substantially elliptic form in cross section and of such proportion that it cannot rotate in the slot in its travel therethrough to advance or withdraw the bolt except when it enters a pocket.

4. In a locking device, a sheath provided with a tortuous slot having three bending points and a pair of pockets each opening into the slot at a bending point thereof, a bolt fitting slidingly and rotatable in said sheath, and a radial handle for and swiveled to said bolt and extending through the slot of the sheath; said handle at the point within the slot being of oblong rectangular form and so proportioned that it cannot travel past the said pockets without entering the same and being given swivel movement in the bolt while occupying a pocket.

5. The combination with two movable parts, of a sheath carried by one of said parts, provided with a tortuous slot, a bolt fitting in the sheath and capable of sliding and turning therein until engaged with the other part, and a handle swiveled to and projecting from the bolt and through the tortuous slot of the sheath; said handle being of oblong-rectangular form in cross section where it extends through said slot and so proportioned that it can travel through the slot without swivel action except at the bending points of the slot, but to pass such points must be given rotatable movement.

REISSUES.

14,050. STILL. CECIL L. TURNER, New York, N. Y., assignor, by direct and mesne assignments, to Improved Still Company, a Corporation of Delaware. Filed July 8, 1915. Serial No. 38,757. Original No. 1,091,781, dated Mar. 31, 1914, Serial No. 689,700. (Cl. 196—25.)



1. A still comprising a plurality of evaporating chambers, each having a spreading table disposed between troughs for receiving and delivering the oil in each chamber, said chambers being connected in series, means for delivering oil from the trough of the last of the series of chambers, a steam-heating system for said chambers embodying a radiator disposed adjacent the spreading table of each of said chambers and means for regulating the temperature of said radiators.

2. A still comprising a plurality of evaporating chambers, each chamber having a spreading table disposed between troughs for receiving and delivering the oil in each chamber, said chambers being connected in series, means for delivering oil from the trough of the last of the series of chambers, a steam-heating system for said chambers embodying a radiator adjacent the floor of each of said chambers, means for regulating the temperature of said radiators, means for conveying away from said chambers the vapors generated therein, and means for condensing said vapors by passing the same through the oil supplied to said chambers prior to introduction thereof to the first of said chambers.

3. In a still such as described, the combination with the oil supply source, basins in communication with said source, a series of evaporating chambers, means in each of said chambers for spreading the oil in a thin layer while passing therethrough, and an apparatus for maintaining circulation of said oil through said series of chambers, a steam-heating system embodying a plurality of radiators disposed under and adjacent to the spreading means of said chambers, a heater for the oil preliminary to the introduction thereof to the initial evaporating

chamber, means for regulating independently the heat medium supplied to said radiators, means for applying steam to said radiators to cause the steam to travel in a direction transverse to the flow of the oil through said chambers, and a plurality of condensing coils, one of such coils being situated in each of said basins, said coils being in communication with corresponding evaporating chambers, said coils being adapted to transfer the heat of the vapors flowing from said chambers to the oil in the corresponding basins.

4. In a still such as described, the combination with an oil supply source, basins in communication with said source, a series of evaporating chambers, means in each of said chambers for spreading the oil in a thin layer while passing therethrough, and an apparatus for maintaining circulation of said oil through said series of chambers, a steam-heating system embodying a plurality of radiators disposed under and adjacent to the spreading means of said chambers, a heater for the oil preliminary to the introduction thereof to the initial evaporating chamber, means for regulating independently the heat medium supplied to said radiators, means for applying steam to said radiators to cause the steam to travel in a direction transverse to the flow of the oil through said chambers, a plurality of condensing coils, one of such coils being situated in each of said basins, said coils being in communication with corresponding evaporating chambers, said coils being adapted to transfer the heat of the vapors flowing from said chambers to the oil in the corresponding basin, and means in communication with said coils for accelerating the passage of the vapors from said chambers to said coils.

5. A still comprising an evaporating chamber, a spreading table therein, troughs on either side of said table for receiving and delivering the oil in said chamber, means for feeding oil to be treated to one of said troughs whereby the oil in passing from one trough to the other will be spread in a thin layer over said table, means for draining water from the troughs without disturbing the flow of oil over said table, heating means for said chamber embodying a radiator adjacent said spreading table, and means for regulating the temperature of said radiator.

6. A still comprising an evaporating chamber, a spreading table therein, troughs on either side of said table for receiving and delivering the oil in said chamber, means for feeding oil to be treated to one of said troughs whereby the oil in passing from one trough to the other will be spread in a thin layer over said table, heating means for said chamber embodying a radiator under the spreading table, means for feeding the heating fluid through the radiator so as to cause it to travel in a direction transverse to the flow of oil over said spreading table, whereby said table is maintained at a uniform temperature, and means for regulating the temperature of said radiator.

7. A plurality of independent evaporating chambers, each having a spreading table, troughs on either side of each of said tables for receiving and delivering the oil in each chamber, means for feeding oil to be treated to one of said troughs whereby the oil in passing from one trough to the other in said chambers will be spread in a thin layer over the corresponding spreading table, said troughs being connected in series whereby the oil will travel successively through the several evaporating chambers, over the corresponding spreading tables, heating means for said chambers embodying a radiator under respective spreading tables, and means for regulating the temperatures of said radiators independently, and means for taking and condensing the vapors from the several chambers.

8. A still comprising an evaporating chamber having a spreading table, troughs on either side of said table arranged whereby the oil in flowing from one trough to the other will be spread in a thin layer over said table, means for heating said table, means for condensing the vapor from said chamber by bringing it into juxtaposition to the oil before it is fed to said troughs, whereby said oil is heated, and means adapted to bring the residual oil from said chamber into juxtaposition to the oil after the latter has been heated by said vapor and before it is fed to said troughs, to preheat the oil.

9. A still comprising a plurality of evaporating chambers each having an evaporating table, troughs on either side of the table, arranged whereby the oil in passing from one trough to the other will be spread in a layer over the table, the several chambers being connected in series, means for feeding oil to the troughs in the first chamber for successive passage through said chambers, heating means for each chamber for heating the oil therein, means for separately condensing the vapors from said chambers by bringing them into juxtaposition to the oil which is fed to said first chamber and whereby said separate vapors will act on said oil successively and in the order in which the chambers in which they are derived are arranged in the said series, and means adapted to bring the residual oil from the last chamber of the series into juxtaposition to the oil after the latter has been heated by said vapors and before it passes through said chambers, to preheat the oil.

10. A still comprising an oil supply source, a plurality of evaporating chambers connected in series, each chamber having a spreading table and troughs on either side of the table arranged whereby the oil in passing from one trough to the other will be spread in a layer over said table, a plurality of basins outside the chambers, said basins being in communication with said source of supply and with each other, means for heating the oil in the evaporating chambers, a condensing coil for each chamber arranged each in a different basin and so disposed that they will act successively on the oil passing through said basins, in the same order in which their respective chambers are arranged in their series, means for delivering the oil from said chambers, and means for conducting vapors from said basins.

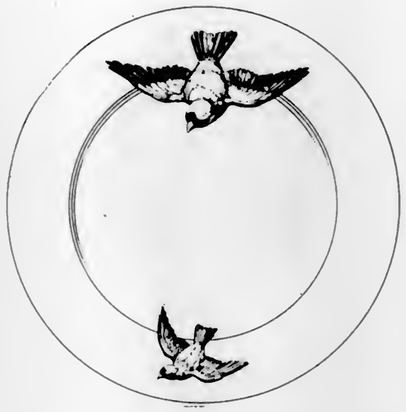
DESIGNS.

48,462. PLATE OR SIMILAR ARTICLE OF MANUFACTURE. WILLIAM ABRAMS, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Sept. 24, 1915. Serial No. 52,540. Term of patent 3½ years.



The ornamental design for a plate or similar article of manufacture as shown.

48,463. PLATE OR SIMILAR ARTICLE OF MANUFACTURE. WILLIAM ABRAMS, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Oct. 11, 1915. Serial No. 55,358. Term of patent 3½ years.



The ornamental design for a plate or similar article of manufacture as shown.

48,464. CUP OR SIMILAR ARTICLE. WILLIAM A. BLAIR, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Sept. 24, 1915. Serial No. 52,539. Term of patent 3½ years.



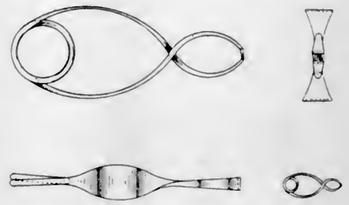
The ornamental design for a cup or similar article as shown.

48,465. HANGER FOR LIGHTING-BOWLS. FRANK M. BROOKS, Brooklyn, N. Y., assignor to Matchless Brass Mfg. Company, Brooklyn, N. Y. Filed Nov. 1, 1915. Serial No. 59,153. Term of patent 3½ years.



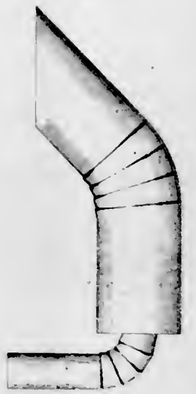
The ornamental design for a hanger for lighting bowls as shown.

48,466. MARK-TAG FOR LAUNDRY. JOSEPH DOMECQ, Los Angeles, Cal. Filed July 31, 1915. Serial No. 43,032. Term of patent 14 years.



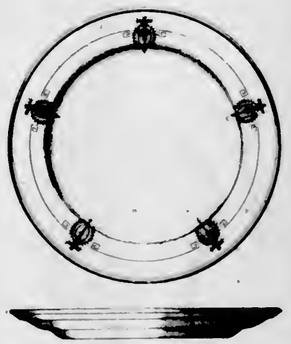
The ornamental design for a mark tag for laundry, as shown.

48,467. TANK-HEATER. HOWARD J. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed July 28, 1915. Serial No. 42,428. Term of patent 14 years.



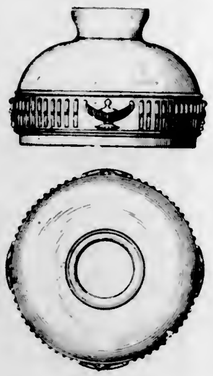
The ornamental design for a tank-heater, as shown.

48,468. PLATE OR SIMILAR ARTICLE. AUGUST J. FONDEVILLE, East Orange, N. J. Filed Oct. 26, 1915. Serial No. 58,087. Term of patent 7 years.



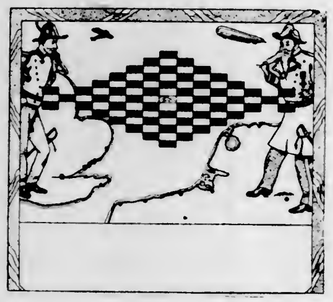
The ornamental design for a plate or similar article, as shown.

48,469. LAMP-SHADE. IHNA T. FRARY, Hudson, Ohio. assignor to The Hocking Glass Company, Lancaster, Ohio, a Corporation of Ohio. Filed Sept. 14, 1915. Serial No. 50,715. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

48,470. BOARD FOR PLAYING A GAME. ALBERT HUNT, London, England. Filed Oct. 14, 1915. Serial No. 55,906. Term of patent 3½ years.



The ornamental design for a board for playing a game, as shown.

48,471. HORSESHOE. WILLIAM J. KENT, New York, N. Y. Filed Dec. 5, 1914. Serial No. 875,729. Term of patent 14 years.



The ornamental design for a horse shoe, as shown.

48,472. HORSESHOE. WILLIAM J. KENT, New York, N. Y. Filed Dec. 8, 1914. Serial No. 876,151. Term of patent 14 years.



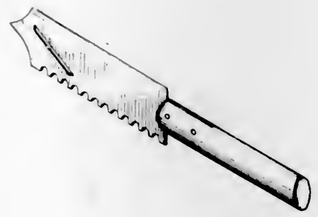
The ornamental design for a horse shoe, as shown.

48,473. ELASTIC FABRIC. CHARLES A. LAPWORTH, West Bridgewater, Mass., assignor to The Lapworth Webbing Company, Brockton, Mass. Filed Oct. 7, 1915. Serial No. 54,679. Term of patent 7 years.



The ornamental design for an elastic fabric as shown and described.

48,474. COMBINATION CULINARY TOOL. FREDERICK LEHRMANN, Turtle Creek, Pa. Filed June 12, 1915. Serial No. 33,808. Term of patent 14 years.



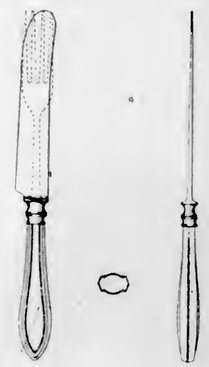
The ornamental design for a combination culinary tool, substantially as shown.

48,475. TOY FIGURE. ELLEN DEAN CHILD NICHOLS, Helena, Mont. Filed Oct. 5, 1915. Serial No. 54,290. Term of patent 3½ years.



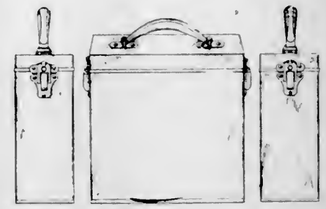
The new and ornamental design for a toy figure, substantially as shown.

48,476. HANDLE FOR KNIVES, FORKS, OR SIMILAR ARTICLES. FREDERICK M. SPENCER, Meriden, Conn., assignor to Meriden Cutlery Company, Meriden, Conn., a Corporation of Connecticut. Filed May 8, 1915. Serial No. 26,917. Term of patent 3½ years.



The ornamental design for a handle for knives, forks and similar articles as shown.

48,477. SANITARY SUITCASE-CAN. ALBERT J. VAN BRYCK, New York, N. Y. Filed May 6, 1915. Serial No. 26,432. Term of patent 7 years.



The ornamental design for a sanitary suit-case can, as shown.

48,478. PLATE OR SIMILAR ARTICLE OF MANUFACTURE. AKSEL WESTERLIND, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Sept. 24, 1915. Serial No. 52,538. Term of patent 3½ years.



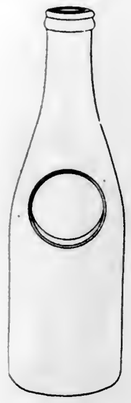
The ornamental design for a plate or similar article of manufacture as shown.

48,479. ARTICLE OF MANUFACTURE. JOHN T. WIGLEY, Syracuse, N. Y., assignor to Onondaga Pottery Co., Syracuse, N. Y., a Corporation of New York. Filed Nov. 18, 1915. Serial No. 62,252. Term of patent 7 years.



The ornamental design for an article of manufacture as shown and described.

48,480. BOTTLE. ARTHUR ZIMMERMAN, Brooklyn, N. Y. Filed Dec. 14, 1914. Serial No. 877,244. Term of patent 3½ years.



The ornamental design for a bottle as shown.

TRADE-MARKS

PUBLISHED JANUARY 18, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 74,202. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ACME LACE & EMBROIDERY CO. INC., New York, N. Y. Filed Nov. 26, 1913.



The word "Production" appearing in the drawing and specimens is disclaimed.

Particular description of goods.—Embroideries, Dress-Trimmings, Lace Trimmings, and Fur Trimmings Exclusive of Tapes and Bindings.

Claims use since about Oct. 1, 1910.

Ser. No. 75,934. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) GEORGI & VITAK MUSIC CO., Chicago, Ill. Filed Feb. 16, 1914.



Particular description of goods.—Reed Musical Instruments—Namely, Concertinas.

Claims use since on or about Jan. 1, 1902.

Ser. No. 77,245. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FANNY L. MAJER, Spokane, Wash. Filed Apr. 6, 1914.



Particular description of goods.—Plaited Fabrics, Shirred Fabrics, Braided Fabrics, Hemmed Fabrics, Pinked Fabrics, Stamped Fabrics, Perforated Fabrics, Cleaned and Blocked and Resewed Hats.

Claims use since July 1, 1906.

Ser. No. 81,398. (CLASS 2. RECEPTACLES.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Sept. 22, 1914.



Particular description of goods.—Canvas Washbasins, Canvas Water-Buckets, Wall-Pockets, Folding Shelves, Rubber Match-Boxes, Friction-Top Cans, Friction-Top Tins, Wood Salt-Shakers, Canteens, Medicine Cases and Canvas Shelves, Flasks for Drinking, Not Out of Glass or Precious Metal.

Claims use since January, 1900.

Ser. No. 81,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEACH & GAMBLE CO., Wahpeton, N. D. Filed Oct. 14, 1914.



Particular description of goods.—Canned Fruits, Canned Vegetables, Cheese, Vinegar, Tea, Coffee, Spices, Candy, Catsup, Olives, and Olive-Oil.

Claims use since April 18, 1912.

Ser. No. 82,535. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. H. BENJAMIN COAL CO., Milwaukee, Wis. Filed Nov. 12, 1914.



Exclusive use of the word "Semi-Anthracite" not being claimed apart from the mark as shown in the drawing.

Particular description of goods.—Coal.

Claims use since Apr. 1, 1914.

Ser. No. 83,180. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 9, 1914.



The trade-mark consists in the green color of the upper portion of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Argon, Coal-Gas, and Air.

Claims use since Oct. 8, 1914.

Ser. No. 83,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 9, 1914.



The trade-mark consists of an elliptical figure having a narrow border and divided lengthwise into two parts. No claim is made to the words "Linde-lized Air Products" apart from the elliptical figure.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, and Air.

Claims use since Oct. 8, 1914.

Ser. No. 83,327. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 16, 1914.



The trade-mark consists in the red color of the upper portion of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, Argon, and Air.

Claims use since Nov. 9, 1914.

Ser. No. 83,328. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 16, 1914.



The trade-mark consists in the white color of the upper part of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, Argon, and Air.

Claims use since Nov. 17, 1914.

Ser. No. 83,329. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 16, 1914.



The trade-mark consists in the orange color of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, Argon, and Air.

Claims use since Nov. 6, 1914.

Ser. No. 83,330. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 16, 1914.



The trade-mark consists in the black color of the upper portion of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, Argon, and Air.

Claims use since Nov. 6, 1914.

Ser. No. 83,331. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LINDE AIR PRODUCTS COMPANY, New York, N. Y. Filed Dec. 16, 1914.



The trade-mark consists in the blue color of the upper part of the container, usually in the form of an elongated cylinder. No claim is made to the representation of a cylinder or other container.

Particular description of goods.—Compressed Gases—to wit, Oxygen, Hydrogen, Nitrogen, Coal-Gas, Argon, and Air.

Claims use since Nov. 6, 1914.

Ser. No. 83,421. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK STEARNS & CO., Detroit, Mich., and New York, N. Y. Filed Dec. 19, 1914.

EPATANT

Comprising the word "Epatant."

Particular description of goods.—Perfumes, Toilet Lotions, Powders, and Creams and Tonics for the Hair.

Claims use since Dec. 1, 1914.

Ser. No. 84,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CABELL COMPANY, Baltimore, Md. Filed Feb. 3, 1915.

DELISHUS

No claim being made to the word "Delishus" except in association with the mark as shown.

Particular description of goods.—Bread Cake.

Claims use since November, 1914.

Ser. No. 84,314. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FRANK J. ROWSE, Pawtucket, R. I. Filed Feb. 5, 1915.

SANASEAL

Particular description of goods.—Face-Cloths or Towels and Handkerchiefs.

Claims use since Jan. 11, 1915, as to face-cloths and in connection with handkerchiefs since Feb. 2, 1915.

Ser. No. 84,552. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed Feb. 16, 1915.

CRYSTILLA

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 21, 1915.

Ser. No. 84,564. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ERNEST LEOPOLD BOTTENWIESER, London, England. Filed Feb. 17, 1915.

STRAT

Particular description of goods.—Games.
Claims use since Oct. 20, 1914.

Ser. No. 85,030. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ANNIN & CO., New York, N. Y. Filed Mar. 9, 1915.

PATRIOT

Comprising the word "Patriot."
Particular description of goods.—All-Wool Double-Warp Bunting.
Claims use since Feb. 10, 1913.

Ser. No. 85,845. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES A. GOELL, St. Louis, Mo. Filed Apr. 10, 1915.



Particular description of goods.—A Paste for Removing Oil, Grease, and Dirt-Stains from Cloth and other Textiles.
Claims use since about Jan. 15, 1915.

Ser. No. 87,023. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE MICHIGAN STOVE COMPANY, Detroit, Mich. Filed June 1, 1915.

GARLAND

Particular description of goods.—Nickel-Polish, Stove-Luster, Stove-Polish, Metal-Polish, Paste Polish for Stoves, and Aluminum Preservative in Liquid and Paste Form.
Claims use since 1900.

Ser. No. 87,178. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WRIGHT & DITSON, Boston, Mass. Filed June 7, 1915.



Particular description of goods.—Hip, Shoulder, Elbow, Knee, Spine, and Kidney Pads, Combination Foot-Ball Gloves and Wrist-Supporters, Pucks, Snow-Shoes, Ball Mitts and Gloves, Striking-Bag Gloves and Boxing-Gloves, Foot-Balls; Foot-Ball Bladders; Thigh and Shin Guards; Head-Harness; Tackling-Dummy; Shoulder and Collar-Bone Protectors; Knee-Supporters; Jockey Straps and Supporters; Wrestling Supporters and Belt; Athletic Supporters; Ankle-Supporters; Basket-Balls; Hockey-Sticks; Goal-Tenders' Leg-Guards; Body-Protectors for Hockey Goal-Keepers; Shin and Knee Guards; Toboggans; Toboggan-Cushions; Toboggan Toe-Cups; Skees; Skee-Poles; Table-Squash; Shinny in the Box; Indoor Base-Balls; Playground-Balls; Recreation-Balls; Volley-Balls; Volley-Ball Net and Standards; Medicine-Balls; Tether-Ball Games; Golf-Balls; Caddie-Bags; Golf-Clubs; Golf-Irons; Squash-Tennis Rackets; Squash-Tennis Balls; Base-Ball Masks; Catchers' Protectors; Striking-Bags; Dumb-Bells; Indian Clubs; Doorway-Bars; Wrestling-Mats; Lawn-Tennis Balls; Rackets; Nets and Posts; Reels for Tennis-Posts; Guy-Ropes and Pegs; Marking-Tapes for Tennis-Courts; Racket-Cases; Tennis-Markers; Marking-Plates; Umpire-Chair; Umpire Body-Protector; Sliding-Pads; Umpires' Indicators; Shoe-Plates; Base-Plates; Bat-Bags; Sleeping-Bags.
Claims use since 1891.

Ser. No. 87,339. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 16, 1915.

GOOD LUCK

Particular description of goods.—Dry and Ready-Mixed Paints, Wall-Paints, Lacs, Stains, Enamels, Varnishes, and Fillers.
Claims use since May 5, 1915.

Ser. No. 87,584. (CLASS 39. CLOTHING.) GEO. BORGFELDT & CO., New York, N. Y. Filed June 25, 1915.

MERITAS

Particular description of goods.—Knitted Hosiery, Knitted Sweaters, Knitted Underwear, Knitted Jerseys, Knitted Caps, Knitted and Fabric Gloves.
Claims use since June 7, 1915.

Ser. No. 87,631. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CHARLES H. HALL, Springfield, Mass. Filed June 28, 1915.



No claim is made to the words "Trade Mark" except as associated with the other features of the mark.
Particular description of goods.—The Following: Hand-Painted Artistic Novelties, Door-Stops, Door-Knockers, Tea-Trays, Fire-Screens, Hearth-Pans, Flower-Pails, Vase-Holders, Bird-Cage Brackets.
Claims use since June 14, 1915.

Ser. No. 87,907. (CLASS 2. RECEPTACLES.) GEO. BORGFELDT & CO., New York, N. Y. **Filed July 13, 1915.**

MY JITNEY

Particular description of goods.—A Glass Receptacle Formed to Represent an Automobile and Manufactured for Use as a Container in Which Candy is Sold.
Claims use since June 17, 1915.

Ser. No. 88,075. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GRADY MFG. CO., Long Island City, N. Y. Filed July 21, 1915.

U-RE-KA

Particular description of goods.—Metal-Polishes.
Claims use since the year 1910.

Ser. No. 88,484. (CLASS 39. CLOTHING.) IRVING VALENTINE, New York, N. Y. Filed Aug. 7, 1915.

VALCO

Comprising the word "Valco."
Particular description of goods.—Dress, Negligée, Work, and Flannel Shirts and Night-Shirts and Pajamas.
Claims use since on or about May 1, 1915.

Ser. No. 88,616. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GARNER PRINT WORKS AND BLEACHERY, West Haverstraw, Wappingers Falls, and New York, N. Y. Filed Aug. 14, 1915.

LINTEX

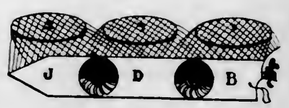
Comprising the word "Lintex."
Particular description of goods.—Cotton Piece Goods.
Claims use since about July, 1911.

Ser. No. 88,812. (CLASS 39. CLOTHING.) ALBERT V. OSTERHOUT, Port Washington, N. Y. Filed Aug. 25, 1915.

Everywoman's

Particular description of goods.—Ladies' Shoes Made Wholly or Partly of Leather, Rubber, Canvas, Satin, Velvet, and Cloth.
Claims use since May 1, 1915.

Ser. No. 88,817. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JULIUS D. BERNSTEIN, New York, N. Y. Filed Aug. 26, 1915.



Particular description of goods.—Brandy, Cognac.
Claims use since July 21, 1915.

Ser. No. 88,971. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM J. ROBERTS, Gasport, N. Y. Filed Sept. 1, 1915.



No claim being made to the words "Liquid Duster" apart from the mark shown in the drawing.
Particular description of goods.—Liquid Compound Employed in Cleaning and Polishing Furniture, Painted and Varnished Surfaces.
Claims use since Jan. 25, 1915.

Ser. No. 89,083. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STRATHMORE PACKING HOUSE CO., Strathmore, Cal. Filed Sept. 7, 1915.



No claim being made to the word "Strathmore" except in association with the mark as shown.

Particular description of goods.—Citrus Fruits.

Claims use since November, 1912.

Ser. No. 89,159. (CLASS 12. CONSTRUCTION MATERIALS.) SANTA CRUZ PORTLAND CEMENT COMPANY, San Francisco, Cal. Filed Sept. 11, 1915.



The trade-mark consists of the mark shown in the drawing, no claim being made to the words "Santa Cruz Portland Cement" and "Davenport, Cal." apart from the mark shown on the drawing.

Particular description of goods.—Portland Cement.

Claims use since May 17, 1907.

Ser. No. 89,317. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LOCKWOOD-ASH MOTOR CO., Jackson, Mich. Filed Sept. 20, 1915.

LA

Particular description of goods.—Hydrocarbon-Engine Starters, Stationary and Marine Hydrocarbon-Motors, Outboard Hydrocarbon Boat-Motors, and Their Parts.

Claims use since about August, 1913.

Ser. No. 89,492. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN T. STANLEY CO., INC., New York, N. Y. Filed Sept. 27, 1915.

BLUE BOY

Comprising the words "Blue Boy."

Particular description of goods.—Soap.

Claims use since 1905.

Ser. No. 89,495. (CLASS 12. CONSTRUCTION MATERIALS.) PETER J. SEIPPEL LUMBER CO., Dubuque, Iowa. Filed Sept. 27, 1915.



No claim is made to the words "Dubuque, Iowa" apart from the mark shown in the drawing.

Particular description of goods.—Finished Lumber, Millwork, Compressed-Fiber Wall-Board, Shingles, Building-Papers and Insulating Papers and Felts, Felt or So-Called "Rubber" Roofing.

Claims use since Feb. 1, 1915.

Ser. No. 89,756. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE HUGRO MFG. CO., Warsaw, Ind. Filed Oct. 9, 1915.

"BLUE BIRD"

Particular description of goods.—Clothes-Line Reels.

Claims use since Feb. 1, 1915.

Ser. No. 89,842. (CLASS 39. CLOTHING.) THE BEST-FIT PETTICOAT CO., INC., Philadelphia, Pa. Filed Oct. 14, 1915.



No claim being made to the use of the words "Best Fit."

Particular description of goods.—Underskirts and Petticoats.

Claims use since July 1, 1915.

Ser. No. 89,850. (CLASS 39. CLOTHING.) FRANKLIN SIMON & CO. INC., New York, N. Y. Filed Oct. 14, 1915.

"Carmoor"

Particular description of goods.—Men's Furnishings and Undergarments—Namely, Bath and Smoking Robes, Overcoats, Sweaters, Shirts and Drawers, Mufflers, Collars, Gloves, Pajamas Made Out of Textile Material, and Sweaters, Mufflers, and Gloves Made Out of Knitted Materials.

Claims use since the 1st day of September, 1915.

Ser. No. 89,861. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) LOUIS M. GRAUBARTH, New York, N. Y. Filed Oct. 15, 1915.

GRAUPERL

Comprising the word "Grauperl."

Particular description of goods.—Jewelry for Personal Wear—viz., Link-Buttons, Shirt-Studs, Collar-Buttons, Scarf-Pins, Necklaces, Hat-Pins, and Ear-Rings.

Claims use since Sept. 28, 1915.

Ser. No. 89,882. (CLASS 37. PAPER AND STATIONERY.) CHARLES M. HARRIS, Augusta, Ga. Filed Oct. 16, 1915.

Harris - S

The same being in the handwriting of the applicant.

Particular description of goods.—Loose-Leaf Binders and Loose-Leaf-Binder Sheets.

Claims use since Aug. 1, 1915.

Ser. No. 89,933. (CLASS 39. CLOTHING.) STEIN BROS. MFG. CO., Williamsport, Pa. Filed Oct. 18, 1915.

Truetex

Particular description of goods.—Clothing—viz., Men's and Boys' Suits, Consisting of Coat, Vest, and Trousers.

Claims use since Nov. 25, 1914.

Ser. No. 89,945. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) A. B. DICK COMPANY, Chicago, Ill. Filed Oct. 19, 1915.

MIMEOSCOPE

Particular description of goods.—Apparatus for Use in Making Tracings or Drawings on Paper or Stencil-Sheets, Comprising a Stand or Support Having a Transparent Surface Over Which Such Sheets May be Placed.

Claims use since July 28, 1915.

Ser. No. 89,976. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BON AMI CO., New York, N. Y., assignor to The Bon Ami Company, a Corporation of Delaware, certificate of incorporation filed Nov. 27, 1915. Filed Oct. 21, 1915.



The mark consisting of the words "Bon Ami" in association with the pictorial matter shown. No claim is made to the other wording shown on the drawing apart from the mark shown in the drawing.

Particular description of goods.—Scouring-Soap in Cake or Powder Form.

Claims use since July 5, 1892.

Ser. No. 90,041. (CLASS 38. PRINTS AND PUBLICATIONS.) THE YOUNG DRY GOODS COMPANY, Alton, Ill. Filed Oct. 22, 1915.



Particular description of goods.—Trading-Stamps.

Claims use since Oct. 8, 1915.

Ser. No. 90,049. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARSON, PIRIE, SCOTT & CO., Chicago, Ill. Filed Oct. 23, 1915.

SAXON

Particular description of goods.—Turkish and Huck Towels.

Claims use since about Apr. 5, 1913.

Ser. No. 90,061. (CLASS 37. PAPER AND STATIONERY.) NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal., and Carthage, N. Y. Filed Oct. 23, 1915.



No claim being made to the words "Public Service" apart from the mark as shown, the picture of the man being fanciful.

Particular description of goods.—Paper Towels.

Claims use since Aug. 15, 1915.

Ser. No. 90,074. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BOOTH PACKING CO., Baltimore, Md. Filed Oct. 25, 1915. Under ten-year proviso.

Maxwell

Particular description of goods.—Canned Fruits.
Claims use for ten years next preceding Feb. 20, 1905.

Ser. No. 90,089. (CLASS 37. PAPER AND STATIONERY.) INLAND EMPIRE PAPER COMPANY, Millwood, Wash. Filed Oct. 25, 1915.

BARONET BOND

Disclaiming, however, the word "Bond" as a part of the trade-mark.
Particular description of goods.—Writing and Bond Papers.
Claims use since Apr. 1, 1914.

Ser. No. 90,101. (CLASS 37. PAPER AND STATIONERY.) ROYAL LACE PAPER WORKS, Brooklyn, N. Y. Filed Oct. 25, 1915.

Roylace

Particular description of goods.—Shelf-Papers, Lace Papers, Doilies, Napkins, Confetti, Fancy Printed and Embossed Paper in Rolls and Sheets, Tissue-Paper, Bells, Fans, Garlands, Wreaths, Hats, and Serpentines.
Claims use since May, 1915.

Ser. No. 90,105. (CLASS 32. FURNITURE AND UPHOLSTERY.) SAM'L. B. COFFIN, INC., High Point, N. C. Filed Oct. 23, 1915.

"PREMIER PERIOD" LIBRARY SUITS MANUFACTURED BY Saml B. Coffin Inc.

No claim is made to the words "Library Suits, Manufactured by Sam'l B. Coffin, Inc."
Particular description of goods.—Settees, Chairs, Rockers, and Tables.
Claims use since July 1, 1915.

Ser. No. 90,165. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) AUTOMOBILE TIRE CO., INC., New York, N. Y. Filed Oct. 28, 1915.

NOMAD

Particular description of goods.—Rubber Pneumatic Automobile Tires and Tubes.
Claims use since Sept. 13, 1915.

Ser. No. 90,187. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NORTH AMERICAN COPPER CO., New York, N. Y. Filed Oct. 28, 1915.



Particular description of goods.—Brass, Copper-Bronze, German-Silver, and Zinc Plates, and Copper and Zinc Engravers' Raw-Metal Plates, and Photo-Engravers' Copper and Zinc.
Claims use since about ten years.

Ser. No. 90,282. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) PACIFIC FOUNDRY COMPANY, San Francisco, Cal. Filed Nov. 1, 1915.

CORROSIRON

Particular description of goods.—Metal Castings Made of an Iron Mixture or Alloy.
Claims use since about the 12th day of February, 1915.

Ser. No. 90,351. (CLASS 31. FILTERS AND REFRIGERATORS.) GEORGE L. MCKAY, Chicago, Ill. Filed Nov. 2, 1915.

"Official"

Particular description of goods.—Refrigerator Cream-Cooling Tank.
Claims use since July, 1915.

Ser. No. 90,367. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STRONG, KENNARD & NUTT COMPANY, Cleveland, Ohio. Filed Nov. 2, 1915.

Adjustoglas

Particular description of goods.—Eyeglasses and Goggles.
Claims use since May 1, 1915.

Ser. No. 90,399. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN MANGANESE STEEL COMPANY, Chicago, Ill. Filed Nov. 4, 1915.

AMSCO

Consisting of the word "Amsco."
Particular description of goods.—Steel.
Claims use since Oct. 10, 1915.

Ser. No. 90,427. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN RANDOLPH BRAY, New York, N. Y. Filed Nov. 5, 1915.

THE POLICE DOG

Particular description of goods.—Moving-Picture Films Showing Animated Cartoons.
Claims use since October, 1914.

Ser. No. 90,476. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE LINOGRAPH COMPANY, Augusta, Me., and Davenport, Iowa. Filed Nov. 6, 1915.

LINOGRAPH

Particular description of goods.—Machines for Composing Matrices, Type-Setting, Type-Casting, and Line-Casting and the Parts Thereof.
Claims use since about July 15, 1913.

Ser. No. 90,500. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) M. HARTLEY DODGE, New York, N. Y. Filed Nov. 8, 1915.

W. W. S.

Particular description of goods.—Paper Shot-Shells.
Claims use since the 10th day of October, 1915.

Ser. No. 90,515. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE LAVIGNE MANUFACTURING COMPANY, Detroit, Mich. Filed Nov. 8, 1915.



Particular description of goods.—Metallic Valves and Their Parts.
Claims use since Oct. 13, 1915.

Ser. No. 90,530. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) BENJAMIN SCHUMSKY, Philadelphia, Pa. Filed Nov. 8, 1915.



No claim being made for the use of the words "The Modern School Companion" apart from the mark shown in the drawing.
Particular description of goods.—Satchels Known as School-Companions.
Claims use since the 14th of October, 1915.

Ser. No. 90,551. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Nov. 10, 1915.

"Thorntweed"

Particular description of goods.—Woolen Cloth for Making Men's and Women's Clothes—viz., Coats, Outer Skirts, Bloomers, Knickerbockers, Riding-Habits, Hats, Shirts, Long Trousers, Riding-Breeches, Vests, Caps, Leggings.
Claims use since January, 1900.

Ser. No. 90,582. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WALTER E. IRVING, Long Island City, N. Y. Filed Nov. 11, 1915.

W. IRVING

No claim is made to the exclusive use of the words "W. Irving" except in connection with such trade-mark.
Particular description of goods.—Ornamental Iron Products—Namely, Door-Handles; Door-Hinges; Knockers; Shutter Hardware Consisting of Adjusters, Holdbacks, Rings, and Hinges; Coat-Hooks; Shoe-Scrapers; Brackets; Holders for Fireplace Equipment; Letters; Andirons; Fireplace-Forks, Fireplace-Stickers for Toasting Marshmallows, Frankfurters, &c.; Fireplace-Toasters; Fireplace-Grills; Fireplace-Broilers; Fireplace-Screens; and Bells.
Claims use since Oct. 19, 1915.

Ser. No. 90,625. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY K. WAMPOLE AND COMPANY, INCORPORATED, Philadelphia, Pa. Filed Nov. 12, 1915.

ORGANIDIN

Particular description of goods.—A Medicinal Iodin Preparation for Internal Use.
Claims use since October, 1915.

Ser. No. 90,633. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS. JOHN C. MCGUIRE, Detroit, Mich. Filed Nov. 13, 1915.



No claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Rolled and Hammered Bars and Forgings of Carbon and Alloy Steels.
Claims use since Sept. 1, 1915.

Ser. No. 90,677. (CLASS 38. PRINTS AND PUBLICATIONS.) INTERNATIONAL HARVESTER COMPANY OF AMERICA, Chicago, Ill. Filed Nov. 16, 1915.



Particular description of goods.—A Monthly Periodical.
Claims use since Nov. 1, 1915.

Ser. No. 90,686. (CLASS 39. CLOTHING.) FRANK W. WHITCHER COMPANY, Portland, Me., and Boston, Mass. Filed Nov. 16, 1915.

FI-CRO

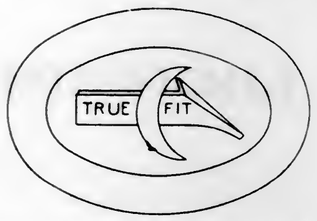
Particular description of goods.—Rubber Heels, Rubber Soles, and Rubber Taps.
Claims use since Mar. 27, 1915.

Ser. No. 90,810. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES W. BOLEN, Alexandria, La. Filed Nov. 22, 1915.



The same being the portrait of the applicant.
Particular description of goods.—Remedy for Salt-Rheum, Bites and Stings of Insects, Sunburn, Old Sores, and for Bleaching the Skin.
Claims use since Nov. 2, 1914.

Ser. No. 90,820. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CRESCENT FORGE & SHOVEL CO., Havana, Ill. Filed Nov. 22, 1915.



No claim being made to the words "True Fit" except in association with the mark as shown.
Particular description of goods.—Plowshares, Lister-Shares, Middle Breaker-Shares, and Cultivator-Shovels.
Claims use since July 1, 1910.

Ser. No. 90,917. (CLASS 37. PAPER AND STATIONERY.) THE MARCUS W. WOLF COMPANY, Baltimore, Md. Filed Nov. 24, 1915.



Particular description of goods.—Writing and Wrapping Papers.
Claims use since Oct. 20, 1915.

Ser. No. 90,958. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, INC., New York, N. Y. Filed Nov. 26, 1915.

LaJerz

Particular description of goods.—Silk Piece Goods.
Claims use since the 30th day of April, 1915.

Ser. No. 90,959. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, INC., New York, N. Y. Filed Nov. 26, 1915.

SPORTSILK

Particular description of goods.—Silk Piece Goods.
Claims use since the 30th day of April, 1915.

Ser. No. 90,993. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 29, 1915. Under ten-year proviso.

NIAGARA

Particular description of goods.—Fertilizers.
Claims use since 1893.

Ser. No. 90,999. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DUDLO MANUFACTURING CO., Fort Wayne, Ind. Filed Nov. 29, 1915.



Particular description of goods.—Enameled Wire and Insulated Wire, High-Tension Coils, Meter Coils and Windings, and Ignition-Coils.
Claims use since October, 1909.

Ser. No. 91,015. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL SWEEPER COMPANY, Torrington, Conn. Filed Nov. 29, 1915.

Puritan

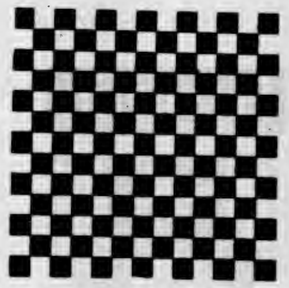
Particular description of goods.—Combined Hand Vacuum-Cleaners and Sweepers.
Claims use since Jan. 8, 1914.

Ser. No. 91,028. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE V-RAY COMPANY, Marshalltown, Iowa. Filed Nov. 29, 1915.

PETRIFLINT

Particular description of goods.—Spark-Plug Cores.
Claims use since Sept. 15, 1915.

Ser. No. 91,029. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE V-RAY COMPANY, Marshalltown, Iowa. Filed Nov. 29, 1915.



Particular description of goods.—Spark-Plugs.
Claims use since Sept. 15, 1915.

Ser. No. 91,034. (CLASS 39. CLOTHING.) THE KROHN, FECHHEIMER CO., Cincinnati, Ohio. Filed Nov. 30, 1915.



Consisting of spaced block figures displaying an arch, with the key-block predominating, and each block containing a letter of the compound word "Arch-Flex," no claim being made to the exclusive use of the words "Arch-Flex" apart from the mark.
Particular description of goods.—Leather Boots and Shoes.
Claims use since Apr. 6, 1915.

Ser. No. 91,050. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) RALPH WILSON, New York, N. Y. Filed Nov. 30, 1915.



COLLIE BRAND

No claim being made to the word "Brand" apart from the mark shown in the drawing.
Particular description of goods.—Silk, Ribbon, Net, and Velvet Trimmings for Hats.
Claims use since July, 1903.

Ser. No. 91,051. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN ALLOYS COMPANY, Newark, N. J. Filed Dec. 1, 1915.

AMALOY

Particular description of goods.—Electrical Contact Metal.
Claims use since Oct. 20, 1915.

Ser. No. 91,078. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed Dec. 1, 1915.

Prosperity



Particular description of goods.—Electric Batteries.
Claims use since Nov. 17, 1915.

Ser. No. 91,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FANNY ISAACKOWITZ, Jersey City, N. J. Filed Dec. 3, 1915.

GAZONE
HARD CARBON REMOVER

No claim is made for the use of the words "Hard Carbon Remover" as shown on the accompanying drawing.
Particular description of goods.—A chemical Hard-Carbon Remover.
Claims use since Nov. 6, 1915.

Ser. No. 91,149. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE VAILE-KIMES COMPANY, Dayton, Ohio. Filed Dec. 3, 1915.

"V&K"

Particular description of goods.—Power-Driven Pumps,
Claims use since July 17, 1907.

Ser. No. 91,150. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GLEN H. HAINES, Cuyahoga Falls, Ohio. Filed Dec. 3, 1915.

PICURA

Particular description of goods.—A Salve-Like Medicine for the Treatment of Piles.
Claims use since on or about the 1st day of November 1915.

Ser. No. 91,206. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915.

The Belle-de-Cygne

Particular description of goods.—Silk Piece Goods and Mixed Silk and Cotton Piece Goods.
Claims use since May, 1914.

Ser. No. 91,209. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

BELDING BROS. & CO.

Particular description of goods.—Silk Piece Goods and Mixed Silk and Cotton Piece Goods.
Claims use since January, 1863.

Ser. No. 91,210. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

BELDING'S

Particular description of goods.—Silk Piece Goods and Mixed Cotton and Silk Piece Goods.
Claims use since January, 1863.

Ser. No. 91,224. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) KELLY MANUFACTURING COMPANY, Corpus Christi, Tex. Filed Dec. 6, 1915.

Kel-Kola
IT HAS THE KICK

Particular description of goods.—A Non-Alcoholic Beverage Sold as a Soft Drink and Syrup for Making the Same.
Claims use since Oct. 1, 1914.

Ser. No. 91,299. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. F. GALLUN & SONS, Milwaukee, Wis. Filed Dec. 8, 1915.

EBONY

Particular description of goods.—Leather.
Claims use since February, 1897.

Ser. No. 91,300. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. F. GALLUN & SONS, Milwaukee, Wis. Filed Dec. 8, 1915.

MANDARIN

Particular description of goods.—Leather.
Claims use since February, 1897.

Ser. No. 91,311. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) KOHLER CO., Kohler, Wis. Filed Dec. 8, 1915.

VICEROY

Particular description of goods.—Bath-Tubs.
Claims use since Sept. 21, 1914.

Ser. No. 91,720. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) I. GOLDBERG, INC., New York, N. Y. Filed Dec. 23, 1915.

26

Particular description of goods.—Brandy.
Claims use since 1895.

Ser. No. 91,817. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOSSELSON BROTHERS, Catlettsburg, Ky. Filed Dec. 29, 1915.

Legal Tender

Particular description of goods.—Whisky.
Claims use since 1903.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 18, 1916.

108,073. FLOUR, PARTICULARLY WHEAT-FLOUR. THE ACME MILLS, Hopkinsville, Ky.
Filed September 5, 1913. Serial No. 72,683. PUBLISHED MAY 12, 1914.

108,074. MOVING-PICTURE OR CINEMATOGRAPH FILMS. THE AMERICAN CORRESPONDENT FILM CO., INC., New York, N. Y.
Filed September 17, 1915. Serial No. 89,258. PUBLISHED NOVEMBER 9, 1915.

108,075. CAMERAS AND FILM. ANSCO COMPANY, Binghamton, N. Y.
Filed September 18, 1915. Serial No. 89,281. PUBLISHED NOVEMBER 9, 1915.

108,076. MEDICINAL FOOD CONSISTING OF A COMBINATION OF CARBOHYDRATES, PROTEIDS, AND PEPTONES. ARMOUR AND COMPANY, Chicago, Ill.
Filed September 24, 1915. Serial No. 89,426. PUBLISHED NOVEMBER 2, 1915.

108,077. MACARONI. THE ATLANTIC MACARONI CO., Long Island City, N. Y.
Filed July 21, 1915. Serial No. 88,062. PUBLISHED NOVEMBER 9, 1915.

108,078. PEANUT-CANDY AND ROASTED AND SALTED PEANUTS. BOSMAN & LOHMAN CO., Norfolk, Va.
Filed May 1, 1915. Serial No. 86,309. PUBLISHED NOVEMBER 9, 1915.

108,079. INSECT-POWDER FOR THE EXTERMINATION OF INSECTS. BOTANICAL MANUFACTURING CO., Wilmington, Del., and Philadelphia, Pa.
Filed August 7, 1915. Serial No. 88,472. PUBLISHED OCTOBER 5, 1915.

108,080. PREPARED FOOD FOR HORSES, CATTLE, SHEEP, AND POULTRY. CHAPIN & COMPANY, INCORPORATED, Hammond, Ind.
Filed May 20, 1915. Serial No. 86,766. PUBLISHED NOVEMBER 9, 1915.

108,081. ARMBANDS, BIB-HOLDERS, BELTS FOR PERSONAL WEAR, SUSPENDERS, AND SUPPORTERS FOR HOSE AND HALF-HOSE. THE CLARK MANUFACTURING CO., Boston, Mass.
Filed September 17, 1915. Serial No. 89,264. PUBLISHED NOVEMBER 9, 1915.

108,082. SUPPORTERS FOR HOSE AND HALF-HOSE. THE CLARK MANUFACTURING CO., Boston, Mass.
Filed September 17, 1915. Serial No. 89,265. PUBLISHED NOVEMBER 9, 1915.

108,083. PAINT-BRUSHES. E. CLINTON & CO., INCORPORATED, Philadelphia, Pa.
Filed June 17, 1915. Serial No. 87,357. PUBLISHED NOVEMBER 9, 1915.

108,084. CANNED ARTICHOKES. CUSIMANO & CO., New York, N. Y.
Filed November 10, 1914. Serial No. 82,505. PUBLISHED NOVEMBER 9, 1915.

108,085. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed March 29, 1915. Serial No. 85,508. PUBLISHED MAY 11, 1915.

108,086. MIXED FEEDS FOR HORSE, MULE, AND DAIRY USE. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed July 15, 1915. Serial No. 87,942. PUBLISHED NOVEMBER 9, 1915.

108,087. MIXED FEEDS FOR HORSE, MULE, AND DAIRY USE. THE ALBERT DICKINSON COMPANY, Chicago, Ill.
Filed July 15, 1915. Serial No. 87,944. PUBLISHED NOVEMBER 9, 1915.

108,088. BOATS. THE ELCO COMPANY, Bayonne, N. J.
Filed February 16, 1915. Serial No. 84,549. PUBLISHED NOVEMBER 9, 1915.

108,089. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. EMACITIN CO., New York, N. Y.
Filed April 16, 1915. Serial No. 85,983. PUBLISHED OCTOBER 19, 1915.

108,090. WOOL AND COTTON CRASH PIECE GOODS. N. ERLANGER, BLUMGART & CO., New York, N. Y.
Filed September 30, 1915. Serial No. 89,537. PUBLISHED NOVEMBER 9, 1915.

108,091. WOOLEN, WORSTED, SILK, MOHAIR, AND COTTON PIECE GOODS AND PIECE GOODS MADE OF A COMBINATION OF TWO OR MORE OF THOSE FIBERS. GEO. J. GEER, New York, N. Y.
Filed June 16, 1915. Serial No. 87,343. PUBLISHED AUGUST 3, 1915.

108,092. WOOLEN, WORSTED, SILK, MOHAIR, AND COTTON PIECE GOODS AND PIECE GOODS MADE OF A COMBINATION OF TWO OR MORE OF THOSE FIBERS. GEO. J. GEER, New York, N. Y.
Filed June 16, 1915. Serial No. 87,344. PUBLISHED AUGUST 3, 1915.

108,093. CANDIES. JAMES P. GRIFFIN, Portland, Oreg.
Filed March 26, 1915. Serial No. 85,436. PUBLISHED OCTOBER 19, 1915.

108,094. MALT BEVERAGES. G. HEILEMAN BREWING CO., La Crosse, Wis.
Filed September 22, 1915. Serial No. 89,379. PUBLISHED NOVEMBER 9, 1915.

108,095. CERTAIN NAMED CONFECTIONS AND CANDIES. HERMAN HENSCHEL, New York, N. Y.
Filed May 5, 1915. Serial No. 86,392. PUBLISHED NOVEMBER 9, 1915.

108,096. COMPLEXION-POWDER. ROBERT HORNER, Chicago, Ill.
Filed October 16, 1915. Serial No. 89,883. PUBLISHED NOVEMBER 9, 1915.

108,097. CANDY. HYGRADE WINE COMPANY, New York, N. Y.
Filed July 22, 1915. Serial No. 88,114. PUBLISHED NOVEMBER 9, 1915.

108,098. ENVELOPS. INTERNATIONAL MAILING TUBE AND WRAPPER CO., New York, N. Y.
Filed September 21, 1915. Serial No. 89,352. PUBLISHED NOVEMBER 9, 1915.

108,099. FIRE-EXTINGUISHERS. H. W. JOHNS-MANVILLE CO., New York, N. Y.
Filed September 22, 1915. Serial No. 89,380. PUBLISHED NOVEMBER 9, 1915.

108,100. CERTAIN NAMED JAMS, JELLIES, CANNED GOODS, AND CONSERVES. H. JONES & CO. LTD., Hobart, Tasmania, Australia.
Filed March 21, 1914. Serial No. 76,818. PUBLISHED NOVEMBER 9, 1915.

108,101. LEATHER AND CANVAS SHOES. JORDAN MARSH COMPANY, Boston, Mass.
Filed September 13, 1915. Serial No. 89,164. PUBLISHED NOVEMBER 9, 1915.

108,102. CAYENNE PEPPER AND PAPRIKA. JOHANN KOTÁNYI, Vienna, Austria-Hungary.
Filed July 22, 1915. Serial No. 88,115. PUBLISHED NOVEMBER 9, 1915.

108,103. FIBROUS AND POWDERED MINERAL COMPOUND TO BE MIXED WITH MATERIALS FOR PRODUCING A CONCRETE. PAUL MENDE, New Rochelle and New York, N. Y.
Filed August 20, 1915. Serial No. 88,714. PUBLISHED NOVEMBER 9, 1915.

108,104. WIRE ROPE. GEORGE C. MOON COMPANY, INC., New York, N. Y.
Filed January 20, 1915. Serial No. 83,975. PUBLISHED NOVEMBER 2, 1915.

108,105. CANDIES COMPOSED OF OR CONTAINING CHOCOLATE. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed September 11, 1915. Serial No. 89,150. PUBLISHED NOVEMBER 9, 1915.

108,106. BAGS OR RECEPTACLES MADE OF CLOTH, SILK, OR OTHER MATERIALS AND KNOWN AS SOCIETY-BAGS. SIMON S. NEWMAN, New York, N. Y.
Filed September 14, 1915. Serial No. 89,187. PUBLISHED NOVEMBER 9, 1915.

108,107. WHEAT-FLOUR, PANCAKE-FLOUR, CORN-MEAL, BUCKWHEAT-FLOUR, COMPOUND BUCKWHEAT AND WHOLE-WHEAT FLOUR. THE ODENWELLER MILLING CO., Ottoville, Ohio.
Filed November 24, 1914. Serial No. 82,895. PUBLISHED APRIL 6, 1915.

108,108. PRESERVATIVE PAINT FOR STEEL. JAS. H. PRINCE PAINT CO., Boston, Mass.
Filed August 14, 1915. Serial No. 88,629. PUBLISHED NOVEMBER 9, 1915.

108,109. MOPS, POLISHING-MOPS, AND POLISHING-BRUSHES. H. G. SAAL COMPANY, Chicago, Ill.
Filed October 2, 1915. Serial No. 89,614. PUBLISHED NOVEMBER 2, 1915.

108,110. BOTTLED BEER. W. SCHNEIDER WHOLESALE WINE & LIQUOR CO., St. Louis, Mo.
Filed October 4, 1915. Serial No. 89,646. PUBLISHED NOVEMBER 9, 1915.

108,111. ANGELICA, CLARET, BURGUNDY, PORT, SHERRY, ZINFANDEL, MUSCAT, CATAWBA, RIESLING, VIRGINIA SEEDLING, AND RHINE WINES. W. SCHNEIDER WHOLESALE WINE & LIQUOR CO., St. Louis, Mo.
Filed October 4, 1915. Serial No. 89,647. PUBLISHED NOVEMBER 9, 1915.

108,112. TOILET ARTICLES CONSISTING OF PREPARATIONS FOR STIMULATING, NOURISHING, AND BEAUTIFYING THE SKIN, MUSCLES, AND HAIR. MABEL WILHELMINA SHAND, New York, N. Y.
Filed June 5, 1915. Serial No. 87,154. PUBLISHED SEPTEMBER 14, 1915.

108,113. CANDY SUCKERS. SHOEMAKER & VOLKERT, Buffalo, N. Y.
Filed August 30, 1915. Serial No. 88,909. PUBLISHED NOVEMBER 9, 1915.

108,114. CERTAIN NAMED FOODS. STEELE-WEDELES COMPANY, Chicago, Ill.
Filed May 17, 1915. Serial No. 86,680. PUBLISHED NOVEMBER 9, 1915.

108,115. MISSES' COATS AND SUITS. M. I. STEWART & CO. INC., New York, N. Y.
Filed September 14, 1915. Serial No. 89,191. PUBLISHED NOVEMBER 9, 1915.

108,116. LINIMENT. JAMES L. THOMPSON, Jr., New York, N. Y.
Filed September 7, 1915. Serial No. 89,087. PUBLISHED NOVEMBER 2, 1915.

108,117. PAPERS KNOWN TO THE TRADE AS BOOK-PAPERS AND FOR WRITING-PAPERS. TICONDEROGA PULP AND PAPER COMPANY, Ticonderoga and New York, N. Y.
Filed August 19, 1915. Serial No. 88,697. PUBLISHED NOVEMBER 9, 1915.

108,118. EGG-BEATERS. THE TURNER & SEYMOUR MANUFACTURING CO., Torrington, Conn.
Filed October 14, 1915. Serial No. 89,851. PUBLISHED NOVEMBER 9, 1915.

108,119. OPHTHALMIC MOUNTINGS AND PARTS THEREOF. T. A. WILLSON & CO. INC., Reading, Pa.
Filed August 20, 1915. Serial No. 88,722. PUBLISHED NOVEMBER 9, 1915.

108,120. EGG-ALPHABETS, EGG-NOODLES, MACARONI, MACARONI-ELBOWS, MACARONI-RINGS AND SPAGHETTI. A. ZEREGA'S SONS, CONS'L'D, Brooklyn, N. Y.
Filed August 11, 1915. Serial No. 88,555. PUBLISHED NOVEMBER 9, 1915.

108,121. EGG-ALPHABETS, EGG-NOODLES, MACARONI, MACARONI-ELBOWS, MACARONI-RINGS AND SPAGHETTI. A. ZEREGA'S SONS, CONS'L'D, Brooklyn, N. Y.
Filed August 11, 1915. Serial No. 88,556. PUBLISHED NOVEMBER 9, 1915.

108,122. BED-SPRINGS AND SPRING FABRIC FOR BED-SPRINGS. FRANCIS W. ADAMS, Chicago, Ill.
Filed February 20, 1915. Serial No. 84,644. PUBLISHED NOVEMBER 9, 1915.

108,123. SUGAR. CALIFORNIA AND HAWAIIAN SUGAR REFINING COMPANY, San Francisco, Cal.
Filed April 16, 1915. Serial No. 85,977. PUBLISHED AUGUST 3, 1915.

108,124. LEDGER-PAPER. CHEMICAL PAPER MANUFG. CO., Holyoke, Mass.
Filed September 27, 1915. Serial No. 89,481. PUBLISHED NOVEMBER 9, 1915.

108,125. BEER. THE CLEVELAND & SANDUSKY BREWING COMPANY, Cleveland, Ohio.
Filed May 15, 1915. Serial No. 86,637. PUBLISHED AUGUST 3, 1915.

108,126. BALANCED-RATION HORSE FEED COMPOSED OF CERTAIN NAMED INGREDIENTS. THE EARLY & DANIEL CO., Cincinnati, Ohio.
Filed June 12, 1915. Serial No. 87,268. PUBLISHED AUGUST 17, 1915.

108,127. FRUIT PRESERVES, FIGS, MARMALADES, AND JELLIES. EAST COAST PRESERVING COMPANY, Daytona, Fla.
Filed August 6, 1915. Serial No. 88,461. PUBLISHED NOVEMBER 9, 1915.

108,128. CERTAIN NAMED FOODS. ENGELKE & FEINER MFG. CO., St. Louis, Mo.
Filed September 7, 1915. Serial No. 89,059. PUBLISHED OCTOBER 19, 1915.

108,129. FRESH EGGS. EWIG POULTRY CO., Agawam, Mass.
Filed July 20, 1915. Serial No. 88,035. PUBLISHED NOVEMBER 9, 1915.

108,130. CEMENTITIOUS MATERIALS SUITABLE FOR FLOORS, WALLS, WAINSCOTS, AND STAIR-TREADS. GERNERT-STUMP COMPANY, INC., Hoboken, N. J.
Filed April 5, 1915. Serial No. 85,713. PUBLISHED NOVEMBER 9, 1915.

108,131. DRESS, NEGLIGÉE, AND WORK SHIRTS. HALL, HARTWELL & CO., Troy, N. Y.
Filed October 27, 1914. Serial No. 82,210. PUBLISHED NOVEMBER 9, 1915.

108,132. COLD-CREAM. ELEANOR MILLER HERRICK, San Francisco, Cal.
Filed August 21, 1915. Serial No. 88,738. PUBLISHED OCTOBER 5, 1915.

108,133. CANNED SALMON. HIDDEN INLET CANNING CO., Ketchikan, Alaska, and Seattle, Wash.
Filed March 17, 1915. Serial No. 85,210. PUBLISHED NOVEMBER 2, 1915.

108,134. HYDRAULIC PRESSES, SHOCK-ALLEVIATORS, VALVES, AND FITTINGS. METALWOOD MANUFACTURING CO., Detroit, Mich.
Filed September 13, 1915. Serial No. 89,167. PUBLISHED NOVEMBER 9, 1915.

108,135. CANNED FRUITS AND CANNED VEGETABLES, PACIFIC COAST CANNING CO., Oakland, Cal.
Filed July 30, 1915. Serial No. 88,309. PUBLISHED NOVEMBER 9, 1915.

108,136. SPECIALLY-PREPARED STOCK AND POULTRY FOOD. E. RAUH & SONS FERTILIZER COMPANY, Indianapolis, Ind.
Filed September 10, 1915. Serial No. 89,134. PUBLISHED NOVEMBER 9, 1915.

108,137. RUBBERIZED SHEETING OR FABRIC. ROSENWALD & WEIL, Chicago, Ill.
Filed July 17, 1915. Serial No. 87,993. PUBLISHED NOVEMBER 2, 1915.

108,138. HAT-BLEACH. SUNSHINE PANAMA BLEACH MFG. CO., New York, N. Y.
Filed October 14, 1915. Serial No. 89,849. PUBLISHED NOVEMBER 9, 1915.

108,139. LEDGER, RECORD, BOND, BOOK, AND COVER PAPER, ENVELOPS, VELLUM, TEXT, WALL, AND COATED PAPERS. TAYLOR-LOGAN CO. PAPERMAKERS, Holyoke, Mass.
Filed September 16, 1915. Serial No. 89,255. PUBLISHED NOVEMBER 9, 1915.

108,140. LEDGER, RECORD, BOND, BOOK, AND COVER PAPER, ENVELOPS, VELLUM, TEXT, WALL, AND COATED PAPERS. TAYLOR-LOGAN CO. PAPERMAKERS, Holyoke, Mass.
Filed September 16, 1915. Serial No. 89,256. PUBLISHED NOVEMBER 9, 1915.

108,141. BRONCHIAL TABLET. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 9, 1915. Serial No. 89,775. PUBLISHED NOVEMBER 9, 1915.

108,142. TONIC PILL. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 15, 1915. Serial No. 89,867. PUBLISHED NOVEMBER 9, 1915.

108,143. TEA. JOHN FREDERICK VAUGHAN, Boston, Mass.
Filed November 25, 1914. Serial No. 82,898. PUBLISHED FEBRUARY 23, 1915.

108,144. HAIR TONIC AND RESTORER. FRITZ VOIGT, Hoboken, N. J.
Filed August 28, 1915. Serial No. 88,865. PUBLISHED NOVEMBER 9, 1915.

108,145. ENVELOPS. WESTERN STATES ENVELOPE CO., Milwaukee, Wis.
Filed January 11, 1915. Serial No. 83,787. PUBLISHED NOVEMBER 9, 1915.

108,146. VENEER. WILTS VENEER COMPANY, Plymouth, N. C.
Filed September 22, 1915. Serial No. 89,392. PUBLISHED NOVEMBER 9, 1915.

108,147. COFFEE. AMERICAN COFFEE COMPANY OF NEW ORLEANS, LTD., New Orleans, La.
Filed February 24, 1915. Serial No. 84,728. PUBLISHED SEPTEMBER 28, 1915.

108,148. PIECE GOODS OF FABRIC COMPOSED OF WOOL AND COTTON. AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass.
Filed July 2, 1915. Serial No. 87,700. PUBLISHED NOVEMBER 9, 1915.

108,149. PIECE GOODS OF CLOTH COMPOSED OF COTTON, MOHAIR, AND SILK. AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass.
Filed September 24, 1915. Serial No. 89,425. PUBLISHED NOVEMBER 9, 1915.

108,150. CERTAIN NAMED CHEMICAL PREPARATIONS. BERGÈRE ET COMPAGNIE, New York, N. Y.
Filed September 8, 1915. Serial No. 89,092. PUBLISHED NOVEMBER 9, 1915.

108,151. NON-SAPONACEOUS NON-INFLAMMABLE CLEANING FLUID. BLOOMINGDALE BROS., New York, N. Y.
Filed June 21, 1915. Serial No. 87,455. PUBLISHED NOVEMBER 9, 1915.

108,152. ALUMINUM HOLLOW AND FLAT WARE. GEO. BORGFELDT & CO., New York, N. Y.
Filed February 11, 1915. Serial No. 84,443. PUBLISHED OCTOBER 19, 1915.

108,153. CERTAIN NAMED PAPER AND STATIONERY. GEO. BORGFELDT & CO, New York, N. Y.
Filed April 15, 1915. Serial No. 85,959. PUBLISHED NOVEMBER 9, 1915.

108,154. LAXATIVE PREPARATION. BRISTOL-MYERS COMPANY, Brooklyn, N. Y.
Filed October 9, 1915. Serial No. 89,751. PUBLISHED NOVEMBER 9, 1915.

108,155. MUSIC-SHEETS FOR MUSICAL-INSTRUMENT PLAYERS. THE CABLE COMPANY, Chicago, Ill.
Filed August 2, 1915. Serial No. 88,351. PUBLISHED OCTOBER 19, 1915.

108,156. PORTLAND CEMENT. CLINCHFIELD PORTLAND CEMENT CORPORATION, Kingsport, Tenn.
Filed July 19, 1915. Serial No. 88,004. PUBLISHED NOVEMBER 9, 1915.

108,157. LADIES', MEN'S, INFANTS', AND CHILDREN'S HOSIERY. COOPER, COATE & CASEY DRY GOODS CO., Los Angeles, Cal., and New York, N. Y.
Filed August 19, 1915. Serial No. 88,684. PUBLISHED NOVEMBER 9, 1915.

108,158. CHEWING-GUM AND CANDY. CLARENCE A. CRANE, Cleveland, Ohio.
Filed August 11, 1915. Serial No. 88,533. PUBLISHED NOVEMBER 9, 1915.

108,159. CITRUS FRUITS. CRUTCHFIELD & WOOLFOLK, Pittsburgh, Pa., and Jacksonville and Orlando, Fla.
Filed September 7, 1915. Serial No. 89,053. PUBLISHED NOVEMBER 9, 1915.

108,160. PREPARATION FOR CANCERS. FIERBAUGH & BROWN, Hanger, Va.
Filed September 4, 1915. Serial No. 89,029. PUBLISHED NOVEMBER 9, 1915.

108,161. TIN, TETRACHLORID OF TIN, BICHLORID OF TIN, TIN OXID, AND TIN CRYSTALS. GOLDSCHMIDT DETINNING COMPANY, Chrome, N. J., and New York, N. Y.
Filed September 7, 1915. Serial No. 89,062. PUBLISHED NOVEMBER 9, 1915.

108,162. SELF-RISING WHEAT-FLOUR. HIGHLAND MILLING COMPANY, Highland, Ill.
Filed June 1, 1915. Serial No. 87,013. PUBLISHED NOVEMBER 9, 1915.

108,163. DISINFECTANTS. ROBERT HOUBEN, Brussels, Belgium.
Filed November 18, 1913. Serial No. 74,054. PUBLISHED NOVEMBER 9, 1915.

108,164. COLD-CREAM. RICHARD HUDNUT, New York, N. Y.
Filed July 1, 1913. Serial No. 71,458. PUBLISHED NOVEMBER 9, 1915.

108,165. COLD-CREAM. RICHARD HUDNUT, New York, N. Y.
Filed July 1, 1913. Serial No. 71,459. PUBLISHED NOVEMBER 9, 1915.

108,166. ENAMELED METAL TABLE AND CABINET TOPS. INGRAM-RICHARDSON MANUFACTURING COMPANY, Beaver Falls, Pa.
Filed March 19, 1915. Serial No. 85,256. PUBLISHED NOVEMBER 9, 1915.

108,167. COMBINATION OF MINT CANDY AND CHOCOLATE. WALTER L. JONES, Cincinnati, Ohio.
Filed April 13, 1915. Serial No. 85,928. PUBLISHED AUGUST 3, 1915.

108,168. PROCESS-BUTTER. LINCOLN PURE BUTTER COMPANY, Lincoln, Nebr.
Filed September 7, 1915. Serial No. 89,066. PUBLISHED NOVEMBER 9, 1915.

108,169. EGGS. J. W. MELONEY CO., New York, N. Y.
Filed September 3, 1915. Serial No. 89,010. PUBLISHED NOVEMBER 9, 1915.

108,170. MIXED STOCK FEED SUITABLE FOR HORSES, STOCK, CATTLE, AND POULTRY. NOWAK MILLING CORPORATION, Buffalo, N. Y.
Filed September 7, 1915. Serial No. 89,072. PUBLISHED NOVEMBER 9, 1915.

108,171. MIXED STOCK FEED SUITABLE FOR HORSES, STOCK, CATTLE, AND POULTRY. NOWAK MILLING CORPORATION, Buffalo, N. Y.
Filed September 7, 1915. Serial No. 89,073. PUBLISHED NOVEMBER 9, 1915.

108,172. HOSIERY. PARKER HOSIERY MILL & DYE WORKS, INC., Portsmouth, Va.
Filed August 19, 1915. Serial No. 88,692. PUBLISHED NOVEMBER 9, 1915.

108,173. COUGH-SYRUP. THE E. L. PATCH CO., Boston, Mass.
Filed October 8, 1915. Serial No. 89,740. PUBLISHED NOVEMBER 9, 1915.

108,174. TOILET-PAPERS. PHOENIX TOILET AND PAPER MANUFACTURING COMPANY, Phoenix, N. Y.
Filed April 6, 1915. Serial No. 85,734. PUBLISHED NOVEMBER 9, 1915.

108,175. SALVE FOR EXTERNAL USE. ANTONINO PITONZO, Chicago, Ill.
Filed October 11, 1915. Serial No. 89,806. PUBLISHED NOVEMBER 9, 1915.

108,176. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. J. D. RIEDEL, ACTIENGESELLSCHAFT, Berlin-Britz, Germany.
Filed June 30, 1914. Serial No. 79,463. PUBLISHED NOVEMBER 9, 1915.

108,177. FRESH POTATOES, ONIONS, CABBAGE, BEETS, TURNIPS, AND CARROTS IN THEIR NATURAL STATE. ABE ROSENBLUM, New York, N. Y.
Filed July 24, 1915. Serial No. 88,171. PUBLISHED NOVEMBER 9, 1915.

108,178. CRACKERS OR BISCUITS. SANITARY FOOD MANUFACTURING COMPANY, St. Paul, Minn.
Filed July 31, 1913. Serial No. 72,087. PUBLISHED NOVEMBER 2, 1915.

108,179. CLEANSING AND POLISHING LIQUID FOR AUTOMOBILES, FURNITURE, AND OTHER VARNISHED OR PAINTED SURFACES. ALBERT W. SCOVILLE, Hartford, Conn.
Filed October 1, 1915. Serial No. 89,591. PUBLISHED NOVEMBER 16, 1915.

108,180. SHEETS AND PILLOW-CASES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed September 7, 1915. Serial No. 89,080. PUBLISHED NOVEMBER 9, 1915.

108,181. RAIN-COATS. C. B. SHANE COMPANY, Chicago, Ill.
Filed September 24, 1915. Serial No. 89,450. PUBLISHED NOVEMBER 9, 1915.

108,182. MEN'S AND BOYS' COATS, VESTS, AND TROUSERS. THE SNELLENBURG CLOTHING COMPANY, Philadelphia, Pa.
Filed October 11, 1915. Serial No. 89,808. PUBLISHED NOVEMBER 16, 1915.

108,183. LIQUID PETROLATUM, ALSO KNOWN AS WHITE OIL. STANDARD OIL COMPANY, Richmond, Cal.
Filed September 20, 1915. Serial No. 89,330. PUBLISHED NOVEMBER 2, 1915.

108,184. LADIES' DRESSES. DAVID I. ULLMAN INC., New York, N. Y.
Filed October 2, 1915. Serial No. 89,617. PUBLISHED NOVEMBER 9, 1915.

108,185. DISINFECTANTS AND INSECTICIDES. WEST DISINFECTING COMPANY, New York, N. Y.
Filed August 30, 1915. Serial No. 88,914. PUBLISHED NOVEMBER 9, 1915.

108,186. GLOVES. THE BEEBE GLOVE CO., Richmond, Ind.
Filed October 5, 1915. Serial No. 89,656. PUBLISHED NOVEMBER 16, 1915.

108,187. WATCHES AND WATCH-MOVEMENTS. JULES RACINE & CO., New York, N. Y.
Filed March 24, 1915. Serial No. 85,379. PUBLISHED NOVEMBER 16, 1915.

108,188. CERTAIN NAMED FOODS. AMERICAN OYSTER CO., Providence, R. I.
Filed May 12, 1915. Serial No. 86,557. PUBLISHED NOVEMBER 9, 1915.

108,189. PACKING-FORMS FOR GARMENTS AND GARMENT-DISPLAY FORMS. THE ARROW-PAK CO., INC., New York, N. Y.
Filed September 16, 1915. Serial No. 89,230. PUBLISHED NOVEMBER 16, 1915.

108,190. TOILET, MEDICINAL, AND SHAVING SOAPS. BARCLAY & CO., Wilmington, Del., and New York, N. Y.
Filed January 28, 1915. Serial No. 84,159. PUBLISHED AUGUST 3, 1915.

108,191. CORSETS AND CORSET-STAYS. BARCLEY CORSET CO., Newark, N. J.
Filed October 5, 1915. Serial No. 89,659. PUBLISHED NOVEMBER 16, 1915.

108,192. MONTHLY TRADE JOURNAL FOR CONFECTIONERS. EMMET BOYLES, Chicago, Ill.
Filed August 3, 1915. Serial No. 88,382. PUBLISHED NOVEMBER 9, 1915.

108,193. LIQUID DETERGENT OR SOAP. GIOVANNI BOZZOLA, Mount Airy, N. C.
Filed March 11, 1915. Serial No. 85,072. PUBLISHED NOVEMBER 16, 1915.

108,194. LADIES' OUTER GARMENTS—VIZ., WAISTS AND SKIRTS MADE FROM COTTONS, SILKS, LINENS, LACES, AND EMBROIDERIES. WILLIAM BRILL, New York, N. Y.
Filed August 5, 1915. Serial No. 88,430. PUBLISHED NOVEMBER 16, 1915.

108,195. COTTON PIECE GOODS. CAMPERDOWN MILLS, Greenville, S. C.
Filed August 28, 1915. Serial No. 88,856. PUBLISHED NOVEMBER 16, 1915.

108,196. DRY, PASTE, AND READY-MIXED PAINTS. THE PHILIP CAREY MANUFACTURING COMPANY, Lockland, Ohio.
Filed August 27, 1915. Serial No. 88,834. PUBLISHED NOVEMBER 16, 1915.

108,197. LEATHER BOOTS AND SHOES. THE COMMONWEALTH SHOE AND LEATHER COMPANY, Portland, Me., and Boston, Mass.
Filed August 20, 1915. Serial No. 88,707. PUBLISHED NOVEMBER 9, 1915.

108,198. FRESH FRUITS AND VEGETABLES. THE DOVER FRUIT FARMS, INC., Dover, Del.
Filed August 6, 1915. Serial No. 88,460. PUBLISHED OCTOBER 19, 1915.

108,199. CALCULATING-MACHINES, MULTIPLYING-MACHINES, ACCOUNTING AND TABULATING MACHINES. AUGUST ESSMANN, Hamburg, Germany.
Filed June 21, 1915. Serial No. 87,484. PUBLISHED NOVEMBER 16, 1915.

108,200. CHEMICAL REMOVERS OF ALL OIL-CONTAINING PRESERVATIVES, SUCH AS VARNISHES, PAINTS, AND DRIERS. CHAS. H. GILLESPIE & SONS, Jersey City, N. J.
Filed October 7, 1914. Serial No. 81,708. PUBLISHED NOVEMBER 16, 1915.

108,201. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. CHAS. H. GILLESPIE & SONS, Jersey City, N. J.
Filed October 7, 1914. Serial No. 81,710. PUBLISHED NOVEMBER 16, 1915.

108,202. RUBBER TUBES AND TIRES. GLOBE RUBBER TIRE MFG. CO. INC., Trenton, N. J.
Filed September 2, 1915. Serial No. 88,983. PUBLISHED NOVEMBER 16, 1915.

108,203. PERFUMES, TOILET WATERS, LIQUID COMPLEXION-POWDER, TOILET CREAMS, AND SPECIAL TREATMENT FOR VENEREAL DISEASES. DRUGGISTS' COÖPERATIVE ASSOCIATION, INC., Jersey City, N. J., and Detroit, Mich.
Filed June 9, 1913. Serial No. 70,970. PUBLISHED NOVEMBER 9, 1915.

108,204. LINEN PIECE GOODS AND COTTON PIECE GOODS AND LINEN AND COTTON PIECE GOODS. M. GARDNER & CO., New York, N. Y.
Filed September 2, 1915. Serial No. 88,981. PUBLISHED NOVEMBER 16, 1915.

108,205. MEN'S DRESS, NEGLIGÉE, WORK, AND UNDER SHIRTS. MAX GOLDBERG, Seattle, Wash.
Filed September 22, 1915. Serial No. 89,378. PUBLISHED NOVEMBER 16, 1915.

108,206. LARD, HAMS, BACON, DRIED BEEF, AND LOINS. HAMMOND, STANDISH & CO., Detroit, Mich.
Filed July 18, 1913. Serial No. 71,825. PUBLISHED MAY 18, 1915.

108,207. COTTON PIECE GOODS. HUNTER MANUFACTURING & COMMISSION CO., New York, N. Y.
Filed August 13, 1915. Serial No. 88,594. PUBLISHED NOVEMBER 16, 1915.

108,208. LEATHER, CANVAS, AND CLOTH BOOTS AND SHOES. H. JANTZEN SHOE CO., New York, N. Y.
Filed September 30, 1915. Serial No. 89,546. PUBLISHED NOVEMBER 16, 1915.

108,209. OLEOMARGARIN. JOHN F. JELKE COMPANY, Chicago, Ill.
Filed September 4, 1915. Serial No. 89,045. PUBLISHED OCTOBER 19, 1915.

108,210. TOILET SOAPS. THE ANDREW JERGENS CO., Cincinnati, Ohio.
Filed October 14, 1915. Serial No. 89,845. PUBLISHED NOVEMBER 16, 1915.

108,211. CORNMEAL AND CRACKED CORN. JULIETTE MILLING COMPANY, Macon and Juliette, Ga.
Filed July 10, 1915. Serial No. 87,866. PUBLISHED SEPTEMBER 7, 1915.

108,212. COTTON GOODS IN THE PIECE AND COTTON SHEETS. KELSEY TEXTILE CORPORATION, New York, N. Y.
Filed September 17, 1915. Serial No. 89,272. PUBLISHED NOVEMBER 16, 1915.

108,213. LADIES' CLOAKS, COATS, DRESSES, SKIRTS, WAISTS, COLLARS, CORSETS, AND BRASSIÈRES. MILDRED JOHNSTON LANDONE, New York, N. Y.
Filed May 14, 1915. Serial No. 86,612. PUBLISHED NOVEMBER 16, 1915.

108,214. COCKTAIL, RICKEY, FIZZ, PUNCH. THE E. G. LYONS & RAAS CO., INC., New York, N. Y.
Filed September 23, 1915. Serial No. 89,415. PUBLISHED NOVEMBER 16, 1915.

108,215. CERTAIN NAMED CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. QUALS MCDANIEL, Rogers, Ark.
Filed October 16, 1915. Serial No. 89,892. PUBLISHED NOVEMBER 16, 1915.

108,216. EXTERNAL APPLICATION FOR RELIEF OF ECZEMA, PILES, ITCH, BURNS, BRUISES, AND CUTS. CHARLES A. MARMONT, Iola, Kans.
Filed August 9, 1915. Serial No. 88,505. PUBLISHED NOVEMBER 16, 1915.

108,217. METAL-POLISHES. LOUIS MAY, New York, N. Y.
Filed September 9, 1915. Serial No. 89,115. PUBLISHED NOVEMBER 9, 1915.

108,218. HAIR-NETS. MILLS & GIBB, New York, N. Y.
Filed September 11, 1915. Serial No. 89,148. PUBLISHED NOVEMBER 16, 1915.

108,219. STOMACH, LIVER, AND BLOOD MEDICINE. EUDORA B. MULHOLAND, Toledo, Ohio.
Filed October 11, 1915. Serial No. 89,802. PUBLISHED NOVEMBER 9, 1915.

108,220. DRESSED POULTRY. NATIONAL POULTRY & EGG CO., Atchison, Kans.
Filed June 17, 1915. Serial No. 87,367. PUBLISHED SEPTEMBER 21, 1915.

108,221. PERIODICALLY-PUBLISHED SECTION FOR NEWSPAPERS. NEWSPAPER FEATURE SERVICE, New York, N. Y.
Filed September 10, 1915. Serial No. 89,131. PUBLISHED NOVEMBER 16, 1915.

108,222. PERIODICALLY-PUBLISHED SECTION FOR NEWSPAPERS. NEWSPAPER FEATURE SERVICE, New York, N. Y.
Filed September 10, 1915. Serial No. 89,132. PUBLISHED NOVEMBER 16, 1915.

108,223. SECTION FOR NEWSPAPERS. NEWSPAPER FEATURE SERVICE, New York, N. Y.
Filed September 27, 1915. Serial No. 89,485. PUBLISHED NOVEMBER 16, 1915.

108,224. MEDICATED SOAP. THE OMEGA CHEMICAL COMPANY, New York, N. Y.
Filed August 6, 1915. Serial No. 88,467. PUBLISHED NOVEMBER 16, 1915.

108,225. MEN'S AND BOYS' PAJAMAS. OSHINSKY & VALENTINE, New York, N. Y.
Filed May 13, 1915. Serial No. 86,600. PUBLISHED AUGUST 3, 1915.

108,226. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed August 30, 1915. Serial No. 88,890. PUBLISHED NOVEMBER 2, 1915.

108,227. UNDERSHIRTS, DRAWERS, AND UNION SUITS. STADIUM UNDERWEAR CO., Baltimore, Md.
Filed October 6, 1915. Serial No. 89,694. PUBLISHED NOVEMBER 16, 1915.

108,228. FUEL-OIL AND ROAD-OIL. STANDARD OIL COMPANY, Richmond, Cal.
Filed October 4, 1915. Serial No. 89,644. PUBLISHED NOVEMBER 16, 1915.

108,229. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed September 10, 1915. Serial No. 89,135. PUBLISHED NOVEMBER 16, 1915.

108,230. STOVE-POLISH. THE STÖN CO., North Canaan, Conn.
Filed June 10, 1915. Serial No. 87,228. PUBLISHED NOVEMBER 16, 1915.

108,231. LIQUID LINIMENT FOR TREATING BARB-WIRE CUTS, HARNESS AND SADDLE SORES ON LIVE STOCK. ROY M. THOMPSON, Malad, Idaho.
Filed October 7, 1915. Serial No. 89,725. PUBLISHED NOVEMBER 9, 1916.

108,232. WATCHES AND CLOCKS. WESTERN CLOCK CO., Peru, Ill.
Filed September 10, 1915. Serial No. 89,141. PUBLISHED NOVEMBER 9, 1915.

108,233. STOVE-POLISH, DUSTLESS DUST-CLOTHS, POLISHING-CLOTHS, MOP-CLEANING PREPARATION, AND CARPET-CLEANING SWEEPING COMPOUND. WIZARD PRODUCTS CO., Chicago, Ill.
Filed May 7, 1915. Serial No. 86,463. PUBLISHED NOVEMBER 9, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

12,938. LAUNDRY AND TOILET SOAP. LAUTZ BROS. & CO., Buffalo, N. Y.
Registered January 12, 1886. Renewed January 12, 1916.

12,939. LAUNDRY AND TOILET SOAP. LAUTZ BROS. & CO., Buffalo, N. Y.
Registered January 12, 1886. Renewed January 12, 1916.

12,950. LAUNDRY AND TOILET SOAP. LAUTZ BROS. & CO., Buffalo, N. Y.
Registered January 12, 1886. Renewed January 12, 1916.

LABELS

REGISTERED JANUARY 18, 1916.

18,980.—*Title:* "MANUALIZED PLAYER MUSIC." (For Piano-Player Music.) THE BALDWIN PIANO COMPANY, Cincinnati, Ohio. Filed December 14, 1915.

18,981.—*Title:* "BEN'S BALSAMIC MENTHOLATED COUGH DROP." (For Cough-Drops.) BEN'S CONFECTION COMPANY, Chicago, Ill. Filed November 3, 1915.

18,982.—*Title:* "RED WHITE & BLUE." (For Macaroni.) THE C. S. FOULDS-BRIGGS CO., Cincinnati, Ohio. Filed October 7, 1915.

18,983.—*Title:* "RED CROWN." (For Canned Peas.) GEO. GEIGER & CO., Milwaukee, Wis. Filed December 22, 1915.

18,984.—*Title:* "HEMET." (For Apricots.) HEMET CANNING COMPANY, Hemet, Cal. Filed November 12, 1915.

18,985.—*Title:* "MISSION INN." (For Peaches.) HEMET CANNING COMPANY, Hemet, Cal. Filed November 12, 1915.

18,986.—*Title:* "IOWA BRAND MACARONI." (For Macaroni.) IOWA MACARONI MFG. CO., Des Moines, Iowa. Filed November 11, 1915.

18,987.—*Title:* "SUPREME BRAND GENUINE GUATEMALA COFFEE." (For Coffee.) NORTH TROPIC PRODUCTS ENTERPRISE, Guatemala, Guatemala, and New Orleans, La. Filed November 30, 1915.

18,988.—*Title:* "VERY TROPICAL PEPPER SAUCE FOR TABLE." (For Sauce.) NORTH TROPIC PRODUCTS ENTERPRISE, Guatemala, Guatemala, and New Orleans, La. Filed November 30, 1915.

18,989.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

18,990.—*Title:* "TISSERA'S TEA-FIZ." (For Tea Fiz.) VINCENT L. TISSERA, Chicago, Ill. Filed November 4, 1915.

18,991.—*Title:* "BETTER MADE CIGAR." (For Cigars.) THE UNITED STATES DISTRIBUTING CO., New York, N. Y. Filed May 28, 1914.

18,992.—*Title:* "WHITNEY'S VALENTINE MATERIAL." (For Valentines.) THE GEO. C. WHITNEY CO., Worcester, Mass. Filed November 17, 1915.

18,993.—*Title:* "TRENTO TRIESTE." (For Liquor.) LUIGI ZAROSI, Chicago, Ill. Filed September 29, 1915.

PRINTS

REGISTERED JANUARY 18, 1916.

4,173.—*Title:* "BLUE LABEL KETCHUP." (For Catchup.) THOS. CUSACK COMPANY, Chicago, Ill. Filed December 16, 1915.

4,174.—*Title:* "BLUE LABEL CHILI SAUCE." (For Chilli Sauce.) THOS. CUSACK COMPANY, Chicago, Ill. Filed December 16, 1915.

4,175.—*Title:* "DEL DUBLEGRIPPE GARTER." (For Garters.) DOUBLE GRIP GARTER COMPANY, INC., New York, N. Y. Filed December 17, 1915.

4,176.—*Title:* "USE CRÉME ELCAYA AND BE COMPLIMENTED ON YOUR COMPLEXION." (For Complexion-Cream.) THE ELCAYA CO. INC., New York, N. Y. Filed December 1, 1915.

4,177.—*Title:* "RELY ON RELIANCE." (For Shirts.) RELIANCE MANUFACTURING COMPANY, Chicago, Ill. Filed September 20, 1915.

4,178.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

4,179.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

4,180.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

4,181.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

4,182.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

4,183.—*Title:* "THE CHICAGOAN SHOE." (For Shoes.) J. P. SMITH SHOE CO., Chicago, Ill. Filed December 21, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE POPE.

Decided May 27, 1915.

1. PATENTABILITY—RULE OF REASONABLE DOUBT.

The rule of reasonable doubt means that the existence and method of operation of an alleged anticipation must be established beyond a reasonable doubt; not that, on the question of patentability over a reference thus established, every reasonable doubt must be resolved in favor of the subsequent inventor.

2. SAME—SAME—RESOLVING DOUBT IN FAVOR OF APPLICANTS NOT COMPULSORY.

The common Office practice of resolving doubts in favor of applicants, while a good working rule, is not required by any rule of law, and its universal application is of doubtful wisdom.

3. SAME—SAME—SAME—OLD APPLICATIONS.

Where the history of the application showed consistently dilatory prosecution by the applicant, *Held* that it was unreasonable to resolve doubts in his favor.

APPEAL from Examiners-in-Chief.

ELECTRIC IGNITER.

Mr. Park Benjamin for the applicant.

EWING, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the rejection by the Primary Examiner of the following claims:

1. An internal combustion engine, a generator of continuously-maintained periodic alternating current, a fixed igniting device for the charge in said engine in circuit with said generator, and means for isochronizing the instant of attainment of a selected electromotive force and a predetermined piston position of the engine.

2. An internal combustion engine, a generator of continuously-maintained periodic alternating current, a fixed igniting device for the charge in said engine in circuit with said generator, and means for isochronizing the instant of attainment of a maximum electromotive force and a predetermined piston position of the engine.

3. An internal combustion engine, a generator of continuously-maintained periodic alternating current, a fixed igniting device for the charge in said engine in circuit with said generator, means for isochronizing the instant of attainment of maximum electro-motive force and a predetermined piston position of the engine, and means for augmenting said electro-motive force.

4. An internal combustion engine, a generator of continuously-maintained periodic alternating current, a fixed igniting device for the charge in said engine in circuit with said generator, and transmitting mechanism between said engine and said generator; the said engine mechanism and generator being timed to isochronize the instant of attainment of a selected electro-motive force and a predetermined piston position of said engine.

5. An internal combustion engine, a generator of continuously-maintained periodic alternating current, a fixed igniting device for the charge in said engine in circuit with said generator, means for operating said generator at a speed bearing a constant ratio to the speed of said engine, and means for changing the relation of the wave peak of said current with respect to a predetermined piston position.

6. An internal combustion engine, a generator of continuously-maintained periodic alternating current, fixed electrodes for igniting the charge in said engine in circuit with said generator, and means for isochronizing the instant of attainment of an electro-motive force sufficient to overcome the air gap between said electrodes and a predetermined piston position of said engine.

The references cited are: Marcus, 286,030, October 2, 1883; McInnerney, 608,895, August 9, 1898.

The rule of reasonable doubt invoked by the attorney in a supplemental brief filed November 25, 1914, means that the existence and method of operation of an alleged anticipation must be established beyond a reasonable doubt. It does not mean that on the question of patentability over such an anticipation once established every reasonable doubt must be resolved in favor of the subsequent inventor. It is quite a common practice of the Office to resolve any doubt in favor of an applicant for patent; but there is no rule of law compelling this, and, though doubtless the practice works well in many cases, a universal application of it is of questionable wisdom.

This present application was filed May 10, 1899, fifteen years before the present appeal was taken. It was acted upon by the Office in June, 1900, the action being responded to by the applicant in June, 1901. Thereafter the applicant took substantially his full year each time until in April, 1907, when the application was held abandoned for lack of proper prosecution. This holding was set aside by the Assistant Commissioner, and the same slow prosecution by the applicant was resumed and continued until December, 1913, since which time the application has been prosecuted diligently.

A review of all the actions will show that during the first fourteen years of the life of this application the prosecution thereof was prolonged by the applicant to the full extent permissible under the statute. Meanwhile, according to the showing of the applicant himself, the invention in question has gone into very wide use, the public having knowledge of it not merely because the owners of the application have manufactured devices embodying it, but because of the publication of foreign patents thereon.

Under such circumstances it would seem to be unreasonable to say that all reasonable doubt should be resolved in favor of the applicant on the question whether the production of the combination claimed involved invention at the time of the filing of the application.

The construction claimed is the combination of an internal-combustion engine of familiar type, an alternating-current generator of familiar type, fixed electrodes, and an adjustment whereby the attainment of a high potential in the motor is isochronized with the position of the piston in which it is desired that the explosion take place.

Applicant contends that his is the first application of a magneto to produce the spark in the engine of a motor-vehicle. The applicability, broadly speaking, of a magneto to an engine on a motor-vehicle as distinguished from a stationary internal-combustion engine seems to me to be obvious. Marcus shows a magneto of what was in 1899 an archaic construction applied to a stationary internal-combustion engine. The selection in 1899 of a more modern type of magneto would not involve invention, and it is admitted in the supplemental brief that at the date of the present application it was not new to take off the maximum or any other desired potential from an alternating-current generator.

Spark-plugs with fixed contacts were familiar, as shown by the Baker patent of record.

The general introduction of high-tension systems has been due to the growth of the art in various lines, not to the suggestion of any individual, particularly not to suggestions as obvious as on the record here presented the combination of the claims appealed is shown to be. Even now in the cheaper forms of machines, owing to lack of proper protection, the high-tension ignition devices do not always work satisfactorily.

The discussion of the specific references by the lower tribunals seems to me to be satisfactory and need not be repeated.

The Examiners-in-Chief are sustained.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

THE MANSFIELD TIRE & RUBBER COMPANY v. FORD MOTOR COMPANY.

Decided November 29, 1915.

1. TRADE-MARK—NAME OF A CORPORATION.
   The word "Ford" *Held* unregistrable as a trade-mark because the principal characteristic word in the name of the Ford Motor Company, (citing *Asbestone Co.* v. *Philip Carey Mfg. Co.*, 41 App. D. C., 507; 200 O. G., 857.)

2. SAME—SAME—DISTINCTIVE DISPLAY IMMATERIAL.
   The name of a corporation is unregistrable to another regardless of the peculiar manner in which it may be written or printed.

Mr. C. Hugh Duffy for the appellant.

Mr. O. F. Barthell and *Mr. Theo. K. Bryant* for appellee.

ROBB, *J.:*

Appeal from a decision of the Patent Office sustaining the opposition of the Ford Motor Company, the appellee herein, to the registration of the word "Ford" as a trade-mark to The Mansfield Tire & Rubber Company, the appellant.

In the notice of opposition it is alleged that this mark is the same as the mark owned and in use by the appellee and by the appellee appropriated to merchandise of the same descriptive properties, "to wit, for automobiles and their parts, not including engines." It is further set forth that the word "Ford" is "the principal characteristic word of the corporate name of the opposer." It appearing that the Ford Motor Company was incorporated prior to the adoption and use of the word "Ford" by the appellant, the Patent Office denied registration upon the authority of the decision of this court in the case of *Asbestone Co.* v. *Philip Carey Mfg. Co.*, (41 App. D. C., 507.) The decision clearly was right. In that case the court, speaking through Mr. Justice Van Orsdel, said:

> The statute takes from the realm of possible registration the name of an individual, firm, corporation, or association, except under conditions not existing in this case. This limitation is founded upon sound principles of public policy. "A man's name is his own property, and he has the same right to its use and enjoyment as he has to that of any other species of property." (*Brown Chemical Co.* v. *Meyer*, 139 U. S., 540.) The same rule applies to a corporation. * * * It is not the business which the statute in this particular aims to protect. It is the corporate name, and it is sufficient that possible damage may be inferred from invading the corporate right which the corporation possesses in its name.

Here, as there, it is sought to register as a trade-mark the principal and distinguishing word of the corporate name of the appellee. Whether that word is to be written or printed in a peculiar manner is of no consequence for, however it is written, the letters still will spell "Ford" and the domain of the appellee will be encroached upon.

The decision must be affirmed.

Affirmed.

Court of Appeals of the District of Columbia.

GRIFFIN AND PEACOCK v. YOUNG, TROYER, AND BUHLES.

Decided December 4, 1915.

INTERFERENCE—DISSOLUTION ON UNPATENTABILITY—NOT APPEALABLE TO COURT.

Where two of the four parties, being under an order to show cause why judgment on the record should not be entered against them, moved to dissolve and the motion was granted by each of the Office tribunals in turn on the ground that the issue was unpatentable over the prior art, *Held* that the question will not be reviewed on *inter partes* appeal to the court.

Mr. Julian C. Dowell and *Mr. Arthur E. Dowell* for the appellants.

Mr. H. N. Low, *Mr. J. W. Munday*, and *Mr. P. B. Turpin* for the appellees.

SHEPARD, *C. J.:*

This in an interference proceeding involving a process of canning fruits, fish, etc., and has four parties, as follows: Buhles, who filed August 10, 1910; Griffin and Peacock, who filed May 3, 1911; Troyer, who filed February 15, 1912; and Young, who filed March 1, 1912.

The case is before us on motion to dismiss the appeal for want of jurisdiction.

The Examiner of Interferences entered notice that Young and Troyer having failed to show conception of the issue before the filing date of Buhles, the senior party, judgment on the record would be entered against them thirty days later, unless good cause be shown. Young and Troyer both moved to dissolve the interference on the ground that the issue was not patentable by reference to certain patents to Symonds. The Primary Examiner, to whom the motion was referred, held that the issue was not patentable, and dissolved the interference. The proceedings on the interference were delayed pending these proceedings. Buhles, and Griffin and Peacock, appealed to the Examiners-in-Chief, who affirmed the decision. They further appealed to the Commissioner, who reëxamined the question in the light of affidavits presented on each side, and affirmed the decree of the Examiners-in-Chief. There was no decision of priority. Griffin and Peacock appealed from the Commissioner's decision.

The motion to dismiss is well taken. (See *in re Fullagar*, 32 App. D. C., 222; *Cosper* v. *Gold*, 34 App. D. C., 194–198; *Mann* v. *Brown*, 43 App. D. C., 457–461.)

The appeal is dismissed, and this decision will be certified to the Commissioner of Patents.

Dismissed.

Court of Appeals of the District of Columbia.

IN RE BOND.

Decided December 6, 1915.

PATENTABILITY—CORK COMPOSITION—DEGREE OF COMPRESSION.

A cork composition composed of granular cork and a binder and the method of making it *Held* unpatentable over the prior art because the applicant's disclosure and claims draw no line of distinction between the degree of compression applied by him and that described in the references.

Mr. Marshall A. Christy for the appellant.

Mr. M. E. Porter for the Commissioner of Patents.

VAN ORSDEL, *J:*

This appeal brings up for review the decision of the Commissioner of Patents refusing applicant Letters Patent for an alleged new method of manufacture of cork articles.

The claims illustrative of the invention are as follows:

> 1. The method herein described, which consists in applying a binder to a mass of pieces of cork, packing the mass in a mold without substantial densification of the cork, and then heating the mass while confined within the mold.
>
> 6. The method herein described, which consists in applying a binder to a mass of pieces of cork, gradually building up an article therefrom, by successively feeding and tamping portions of the mass in a mold without substantial densification of the cork, and then finishing the articles by heat and internal pressure.
>
> 10. As a new article of manufacture, a molded body composed of small pieces of cork and a binder, the pieces being cemented together and the article formed without substantial densification of the cork, and the article as a whole characterized by a density substantially the same as that of an integral body of natural cork.

The article of manufacture consists of a stick of compressed cork granules held together by a solution which forms a binder, having substantially the density of natural cork. The sticks thus formed are cut into small disks, which are inserted into metal caps used for sealing bottles. The process of manufacture is described in the opinion of the Examiners-in-Chief, as follows:

> In carrying out this method the cork granules are mixed with a suitable binder, in this case a mixture of water, glue, and glycerin; exposed in a mass or in a closed box to the air to allow the binder to gelatinize or become but slightly adhesive; treated with a coagulant to render the binder insoluble; tamped into a mold without substantial densification of the cork and confined therein by a plug; heated and allowed to expand without change of its total volume and finally treated to a hot bath of water and glycerin to remove the surplus coagulant.

The tribunals of the Patent Office refused applicant a patent on reference to a patent to one Jones, dated November 17, 1908, and a British patent to one Rodes, of 1905. The machine used by applicant for producing the article of manufacture is very similar to that used by Jones. In the Jones patent, the cork granules are mixed with the binder and exposed to the air or heated to allow the volatile solvent to escape, and thus coagulate. Then it is tamped into a mold consisting of a tube similar to that used by applicant; then, by an additional process, Jones compresses the contents of the mold to about one-third of its original volume, when it is heated in the mold.

The British patent describes two methods of making compressed cork. A mold is filled with the cork solution; then closed and heated; thus, in the same manner described by applicant, expanding the cork within the mold sufficiently to solidify the cork and produce a regular, uniform mass. The patent describes an additional method by which the same result can be obtained in a greater degree by compressing the material in the mold to reduce it to about one-half its original bulk.

Applicant attempts to distinguish the references, in that his article is made "without substantial densification of the cork." He does, however, to some extent densify the cork by the tamping process employed in filling the tube, and still more by inserting the stopper into the tube before subjecting it to the heat. True, Jones, in his specification, indicates that considerable pressure is applied to the cork composition; but elsewhere he refers to the packing being done without substantial densification of the cork, and he also says that articles produced—

> have great elasticity in the direction of the line of compression, that is to say, in the direction of the thickness of the cork disks.

He also specifies that his cork has "substantially the same resiliency as natural cork."

Of course, the object of all these inventors is to produce an article with just the strength and resiliency necessary to meet the requirements of the particular use to which the finished article is put. This may vary; but either Rodes, Jones or applicant, by application of the simplest sort of mechanical skill, can so adjust the process of manufacture as to produce an article with the exact amount of density required. Applicant's disclosure and claims draw no line of distinction between the degree of compression applied by him and that used by Rodes and Jones. It is, after all, a mere matter of degree, which can be attained easily by the application of mechanical skill.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

STANDARD BREWERY CO. *v.* INTERBORO BREWING CO.

222 O. G., 728.

Notice of Change in Decision by Court.

OFFICE OF THE CLERK,
COURT OF APPEALS OF THE DISTRICT OF COLUMBIA,
Washington, D. C., January 14, 1916.

Honorable Commissioner of Patents, Washington, D. C.

SIR: In the case of *Standard Brewery Company* v. *Interboro Brewing Company*, No. 972 Patent Appeals, (cancelation No. 257,) certified copy of the opinion and judgment in which case was issued to you on December 17, 1915, I have the honor to advise you that the court has changed the third from the last sentence in said opinion to read as follows: "If that party deems itself injured by the registration it may invoke the provisions of this statute, but certainly a mere interloper has no standing to invoke it."

Yours respectfully,

HENRY W. HODGES,
Clerk.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Boenning patent, No. 709,864, for a machine for edge-uniting veneers, *Held* valid. *Veneer Machinery Co.* v. *Grand Rapids Chair Co.*, 227 Fed. Rep., 419.

(U. S. C. C. A.) The Hassam patent, No. 819,652, relating to a pavement and method of laying same, *Held* not anticipated and valid. *Consolidated Contract Co.* v. *Hassam Paving Co.*, 227 Fed. Rep., 436.

(U. S. C. C. A.) The Hassam patent, No. 851,625, relating to a pavement and method of laying same, *Held* not anticipated and valid. *Consolidated Contract Co.* v. *Hassam Paving Co.*, 227 Fed. Rep., 436.

(U. S. C. C. A.) The Hassam patent, No. 861,650, relating to a pavement and method of laying same, *Held* not anticipated and valid. *Consolidated Contract Co.* v. *Hassam Paving Co.*, 227 Fed. Rep., 436.

(U. S. D. C.) The Singer patent, No. 880,410, for a combined carton and display device, *Held* not anticipated and valid. *Singer* v. *Lamont, Corliss & Co.*, 227 Fed. Rep., 462.

(U. S. C. C. A.) The Roest patent, No. 897,018, for a knife-guard for meat-slicing machines, is void for lack of patentable novelty and invention, in view of the prior art. *U. S. Slicing Mach. Co.* v. *G. S. Blakeslee & Co.*, 227 Fed. Rep., 442.

(U. S. D. C.) The Parker patent, No. 980,431, for a box-making machine, *Held* not anticipated and valid. *Parker* v. *Automatic Mach. Co.*, 227 Fed. Rep., 449.

(U. S. C. C. A.) The Harmatta patent, No. 1,046,066, for a process of electric welding, *Held* not anticipated and valid. *Thomson Electric Welding Co.* v. *Barney & Berry*, 227 Fed. Rep., 428.

(U. S. D. C.) The Baldwin reissue patent, No. 13,543, (original No. 821,850,) for acetylene-gas-generating lamp, claim 4 *Held* valid. *Baldwin* v. *Abercrombie & Fitch Co.*, 227 Fed. Rep., 455.

Amendment of Rules Relating to Trade-Marks.

(ORDER No. 2,240.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 11, 1916.

Acting under the provisions of section 483 of the Revised Statutes and section 26 of the Trade-Mark Act of February 20, 1905, and with the approval of the Secretary of the Interior, the rules of the Patent Office relating to the registration of trade-marks are amended as follows:

By canceling Rule 49 and substituting therefor the following:

49. Motions to dissolve an interference upon the ground that no interference in fact exists, or that there has been such irregularity in declaring the same as will preclude a proper determination of the question of the right of registration, or which deny the registrability of an applicant's mark, should contain a full statement of the grounds relied upon, and should, if possible, be made not later than the thirtieth day after the notices of the interference have been mailed. Such motions, and all motions of a similar character, if in the opinion of the Commissioner they are in proper form, will be heard and determined by the Examiner in charge of trade-marks, due notice of the day of hearing being given to all parties. If in the opinion of the Commissioner the motion is not in proper form, or is not brought within the time specified and no satisfactory reason is given for the delay, it will not be considered and the parties will be so notified. Setting the motion for hearing by the Examiner of Trade-Marks will act as a stay of proceedings pending the determination of the motion.

When the motion has been decided by the Examiner in charge of trade-marks, the files and papers, with his decision, will be sent at once to the docket clerk.

Motions to shift the burden of proof should be made before, and will be determined by, the Examiner in charge of interferences. No appeal from the decision on such motion will be entertained, but the matter may be reviewed on appeal from the final decision upon the question of priority.

THOMAS EWING,
Commissioner.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 222—No. 4. TUESDAY, JANUARY 25, 1916. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF JANUARY 25, 1916.

Patents	650	No. 1,169,105 to No. 1,169,754, inclusive.
Designs	None.	
Trade-Marks	87	No. 108,234 to No. 108,320, inclusive.
Labels	17	No. 18,994 to No. 19,010, inclusive.
Prints	8	No. 4,184 to No. 4,191, inclusive.
Reissues	6	No. 14,051 to No. 14,056, inclusive.
Total	768	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	North Carolina		
Arizona	1		North Dakota	3	
Arkansas	2	1	Ohio	46	6
California	34	2	Oklahoma	2	
Colorado	7	1	Oregon	8	1
Connecticut	28	1	Pennsylvania	44	5
Delaware	1		Rhode Island	4	1
Florida	2		South Carolina		
Georgia	1	2	South Dakota	2	
Idaho	2		Tennessee	3	4
Illinois	66	6	Texas	5	
Indiana	10	3	Utah	2	
Iowa	12		Vermont		
Kansas	4		Virginia	3	2
Kentucky	6	2	Washington	12	2
Louisiana	5	3	West Virginia	10	
Maine	1	1	Wisconsin	13	7
Maryland	6	2	Wyoming		
Massachusetts	31	9			
Michigan	29		Alaska, District of		
Minnesota	7	2	Canal Zone		
Mississippi	2		District of Columbia	3	2
Missouri	21	1	Hawaii Territory		
Montana	3		Philippine Islands		
Nebraska	6		Porto Rico	1	
Nevada	1		U. S. Army		
New Hampshire	2		U. S. Navy		
New Jersey	27	2			
New Mexico			Total to residents of the United States	569	109
New York	88	40			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina			Natal		
Austria-Hungary	6		Netherlands	1	
Belgium	2		New South Wales		
British India			New Zealand		
British West Indies			Norway		
Canada	5	2	Portugal		
Cape Colony			Queensland		
Chile			Roumania		
Costa Rica			Russia	1	
Cuba	1		Scotland	1	
Denmark	1		South Australia		
England	20		Spain		
Finland			Sweden	5	
France	2		Switzerland		
Germany	27	1	Transvaal, South Africa		
Guatemala			Victoria	1	
India			Western Australia		
Ireland					
Isle of Jersey					
Italy	4		Total to residents of foreign countries	79	3
Mexico	2				

Notaries Public—Amended Law.

[PUBLIC—No. 362.]

An act to amend section five hundred and fifty-eight of the Code of Law for the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section five hundred and fifty-eight of the Code of Law for the District of Columbia, relating to notaries public, be amended by adding at the end of said section the following: "*Provided,* That the appointment of any person as such notary public, or the acceptance of his commission as such, or the performance of the duties thereunder, shall not disqualify or prevent such person from representing clients before any of the Departments of the United States Government in the District of Columbia or elsewhere, provided such person so appointed as a notary public who appears to practice or represent clients before any such Department is not otherwise engaged in Government employ, and shall be admitted by the heads of such Departments to practice therein in accordance with the rules and regulations prescribed for other persons or attorneys who are admitted to practice therein: *And provided further,* That no notary public shall be authorized to take acknowledgments, administer oaths, certify papers, or perform any official acts in connection with matters in which he is employed as counsel, attorney, or agent or in which he may be in any way interested before any of the Departments aforesaid."

Approved, June 29, 1906.

Remittances to the Patent Office.

Checks should be certified. Cash should be registered; if by ordinary mail at risk of sender. Postage stamps not receivable.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 22, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences: Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 18	Nov. 26	334
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Flies and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	July 13	Nov. 26	....
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Jan. 10	Jan. 12	51
2	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Oct. 4	Jan. 3	396
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 4	Dec. 17	294
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	May 22	Nov. 19	466
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Oct. 9	Dec. 10	436
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 1	Dec. 1	1096
142	9. Air and Gas Pumps Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	June 14	Dec. 15	520
235	10. Carriages and Wagons.....	Sept. 1	Jan. 10	688
151	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nalling and Stapling; Whips and Whip Apparatus.	Nov. 24	Jan. 13	138
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 20	Dec. 22	473
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 3	Dec. 13	475
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Sept. 2	Dec. 14	194
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Oct. 20	Jan. 6	342
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Sept. 1	Dec. 30	451
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Oct. 25	Jan. 3	149
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Nov. 3	Dec. 6	218
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Nov. 11	Dec. 29	197
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 18	Dec. 29	145

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 4	Dec. 15	278
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov.	Dec. 18	356
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 31	Dec. 12	427
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Aug. 21	Dec. 21	429
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Dec. 27	Jan. 3	115
106	26. Electricity, Generation; Motive Power.	June 4	Sept. 21	516
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 18	Dec. 9	204
65	28. Internal-Combustion Engines....	Sept. 13	Nov. 22	422
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Sept. 18	Dec. 22	349
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 26	Jan. 3	287
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 15	Dec. 8	280
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	June 15	Jan. 3	680
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 1	Oct. 7	434
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Oct. 1	Dec. 21	240
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Aug. 30	Jan. 10	564
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Sept. 22	Dec. 7	708
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	June 24	Nov. 6	606
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Oct. 11	Dec. 30	252
321	39. Water Distribution.....	Sept. 8	Nov 26	350
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 3	Nov. 18	922
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 2	Dec. 20	354
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 25	Sept. 22	856
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 14	Nov. 2	226

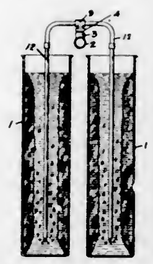
Oldest new case, May 32; oldest amended, Sept. 21.
Total number of applications awaiting action..... 17,793

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Nov. 18	Jan. 3	699
	Designs.....	Aug. 25	Dec. 8	531
	Labels and Prints.....	Jan. 6	Jan. 8	113

PATENTS

GRANTED JANUARY 25, 1916.

1,169,105. PIPE CONNECTION AND VALVE. JAMES ALLAN, Omaha, Nebr., assignor to Baker Ice Machine Company, a Corporation of Nebraska. Filed Oct. 13, 1913. Serial No. 794,939. (Cl. 261—3.)



1. In a device of the character stated, a supply pipe, a chambered body having downwardly extending feeding pipes in suitable connection therewith, a coupling member connected with the supply pipe having a chamber therein provided with a valve seat, and having a tapered conical bore communicating with the chamber, a valve freely movable in the chamber, and a tapered conical plug connected with the body having a suitable passage and freely slidable in the bore of the coupling, said plug in one position being adapted to engage and unseat the valve and in another position to release it, whereby the said valve is forced against said seat by the fluid pressure.

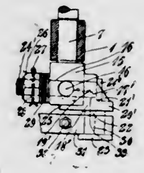
2. In a device of the character stated, comprising in combination, a supply pipe, a chambered body having downwardly extending feeding pipes in suitable connection therewith, a coupling member connected with the supply pipe having a tapering bore terminating in a relatively small opening and a chamber communicating with the bore and having a valve seat around said opening, a ball valve freely movable in the chamber and adapted to be forced against the seat by the fluid pressure, and a tapering plug extending from said chambered body having a bore adapted to be seated in the tapering bore of the coupling to form a ground joint therewith, with the end of the plug passing through the opening into the chamber and in engagement with the valve to hold the same from the seat.

3. In a device of the character stated, comprising in combination, a supply pipe, a chambered body having downwardly extending feeding pipes in suitable connection therewith, a coupling member connected with the supply pipe having a tapering bore terminating in a relatively small opening and a chamber communicating with the bore and having a valve seat around said opening, a ball valve freely movable in the chamber and adapted to be forced against the seat by the fluid pressure, and a tapering plug extending from said chambered body having a bore and lateral passages communicating therewith adapted to be seated in the tapering bore of the coupling with the end thereof passing through said opening and in engagement with the valve to unseat the same and with the said lateral openings situated in said chamber.

4. In ice making apparatus, the combination with a plurality of freezing-vessels and a fluid supply pipe extending adjacent to said vessels, of a plurality of coupling members connected with the air pipe adjacent to the freezing-vessels, and formed to provide chambers leading into and out of the fluid supply pipe, each coupling member having a valve seat disposed in the chamber thereof, a valve in the chamber of each coupling member which is forced normally against the seat thereof by the fluid pressure in the fluid supply pipe, pipes dipping into the freezing-vessels, and a device connecting said pipes to the respective coupling members and releasing the respective valves when connected to the coupling members to establish communication between the fluid supply pipe and the freezing-vessels and whereby escape of fluid from the fluid supply pipe is prevented when said connecting device is disconnected from the coupling members.

5. In a device of the character described, a supply pipe, a coupling member connected with the supply pipe having a chamber therein provided with a valve seat, a valve in the chamber held normally in engagement with said seat by the pressure of the fluid in the supply pipe, and a chambered device having downwardly extending feeding pipes in suitable connection therewith and having detachable connection with said chambered coupling member and having a part for engagement with said valve to force the same away from said seat when said device is connected to said member so as to establish communication between the feeding pipes and the supply pipe.

1,169,106. SWITCH-STAND CRANK MECHANISM. FRANK C. ANDERSON, Cincinnati, Ohio, assignor to The American Valve & Meter Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 7, 1915. Serial No. 44,165. (Cl. 104—25.)



1. In switch stand crank mechanism, in combination with a switch stand, means operatively connecting the switch stand to the switch comprising a shaft and a crank, means for connecting said crank to said shaft in any one of four positions according to the position of the switch stand relative to the switch and to the direction of turnout of the switch.

2. In switch stand crank mechanism, in combination with a switch stand, means operatively connecting the switch stand to the switch comprising a shaft and a crank, means for connecting said crank to said shaft in any one of four positions according to the position of the switch stand relative to the switch and to the direction of turnout of the switch, and comprising a connecting rod, a crank pin integral with said crank, a head on said crank pin integral with said crank pin, and a strap holding the end of said connecting rod to said crank pin between said crank and said head of said crank pin.

3. In switch stand crank mechanism, in combination with a switch stand, means operatively connecting the switch stand to the switch comprising a shaft and a crank, means for connecting said crank to said shaft in any one of four positions according to the position of the switch stand relative to the switch and to the direction of turnout of the switch, and a series of spacing means between said shaft and said connecting means of said crank adapted to be variously positioned with respect to

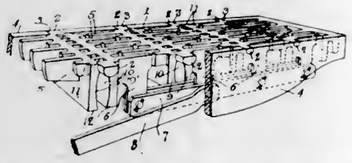
said shaft, and connecting means to vary the radius or throw of said crank.

4. In switch stand crank mechanism, in combination with a switch stand comprising a switch-operating shaft, a head on said shaft having openings through it in two different directions, a crank having a shank adapted to extend through either one of the openings in either one of two directions, and means for holding said shank in the opening in which it is inserted.

5. In switch stand crank mechanism, in combination with a switch stand comprising a switch-operating shaft, a head on said shaft having openings through it in two different directions, a crank having a shank adapted to extend through either one of the openings in either one of two directions, means for holding said shank in the opening in which it is inserted, and a projection on said crank engaging with a side of said head to prevent the turning of said crank with its shank in the opening.

[Claims 6 to 24 not printed in the Gazette.]

1,169,107. GRATE-BAR. WILLIAM C. ARMSTRONG, Springfield, Ohio. Original application filed May 20, 1912, Serial No. 698,366. Divided and this application filed Nov. 2, 1914. Serial No. 869,749. (Cl. 126—179.)



1. In a grate bar, a substantially inverted U-shaped body portion comprising a horizontal, fuel-supporting surface and depending spaced apart ribs projecting from the longitudinal edges of said horizontal surface, said ribs being of increasing thickness from their central portions toward their lower edges.

2. In a grate bar, a substantially inverted U-shaped body portion comprising a horizontal, fuel-supporting surface and depending spaced apart ribs projecting from the longitudinal edges of said horizontal surface, and said ribs being thickened at their upper and lower portions.

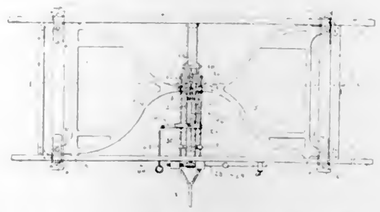
3. In a grate bar, a body portion to support the fuel, having laterally extending fingers and also having truss-like ribs extending downward from said body portion, arranged longitudinally of said body portion and spaced apart to form a chamber between them, said ribs being thickened at their upper and lower edges.

4. In a grate bar, a substantially inverted U-shaped body portion comprising a horizontal, fuel-supporting surface, depending spaced apart ribs projecting from the longitudinal edges of said horizontal surface, a series of fingers projecting from each side of said body portion, the alternate fingers of each series being of different lengths, and said fingers being tapered from the body of the bar toward their ends.

1,169,108. WAGON-SCALE. MARTIN E. ANDERSON, De Kalb, Ill., assignor to Jacob Haish Company, De Kalb, Ill. Filed Nov. 20, 1914. Serial No. 873,229. (Cl. 73—8.)

1. A device of the class described, comprising a suitably supported frame; a pair of frames fulcrumed with their inner ends in proximity to each other; a pair of bolsters normally supported on said main frame and capable of being elevated therefrom by the outer ends of said pivoted frames upon the inner ends thereof being forced downwardly; weighing devices carried on the side of the main frame; a transverse lever fulcrumed centrally of said main frame and connected at its outer end with said weighing devices; means for depressing the inner ends of said pivoted frames; and means for connecting the same with the inner end of said transverse lever.

2. A device of the class described, comprising a suitably supported main frame; a pair of frame levers fulcrumed therein, and having their inner ends in proximity to each other at a central point; a pair of bolsters normally supported on said main frame and adapted to be raised by the outer ends of said frame-levers upon the inner ends thereof being lowered; weighing mechanism carried on said main frame; a transverse lever fulcrumed centrally of said frame and connected with said weighing mechanism; connecting means attached to the inner end of said transverse lever adapted to engage the inner ends of said frames; and means for rocking said frames to cause such engagement.



3. In a device of the class described, a suitably supported main frame; a pair of lever frames fulcrumed therein, with their inner ends in proximity at a central point; a pair of bolsters normally supported on said main frame and capable of being raised above the same by the outer ends of said lever frames upon the inner ends thereof being lowered; weighing devices mounted on said main frame; a lever fulcrumed centrally of said main frame, and connected at its outer end with said weighing devices; means for connecting said lever with the inner ends of said lever frames upon the lowering thereof; and a hand-lever, fulcrumed centrally of said main frame and operatively connected with the inner ends of said lever frames to cause a downward movement thereof.

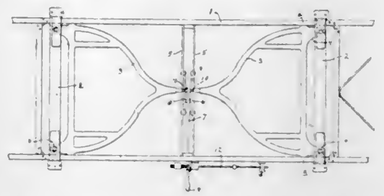
4. A device of the class described, comprising a main frame, suitably mounted; lever-frames fulcrumed therein; bolsters normally supported on said main frame, and capable of being elevated by the outer ends of said lever frames upon the same being suitably rocked; weighing devices carried on said main frame; a lever fulcrumed centrally of said main frame and connected with said weighing devices; means for connecting said lever with said lever frames upon the rocking thereof; a hand-lever fulcrumed in said main frame and operatively connected with said lever frames so as to suitably rock the same; and means for disconnecting said first-named lever and said lever-frames.

5. A device of the class described, comprising a main frame; lever frames rockingly mounted therein, and having their inner ends in proximity at a central point; load-supporting means normally supported on said main frame and capable of being elevated above the same by the outer ends of said lever frames upon the same being suitably rocked; a lever fulcrumed centrally of said main frame and operatively connected with said weighing devices; spring-controlled catches carried by said lever and capable of engaging the inner ends of said lever frames upon the same being lowered; a hand-lever fulcrumed in said frame and operatively connected with said lever frames to suitably rock the same; means for disconnecting said catches and lever frames; and means for holding said hand-lever in or out of operative position.

[Claims 6 to 12 not printed in the Gazette.]

1,169,109. WAGON-SCALE. MARTIN E. ANDERSON, De Kalb, Ill., assignor to Jacob Haish Company, De Kalb, Ill. Filed Nov. 30, 1914. Serial No. 874,585. (Cl. 73—8.)

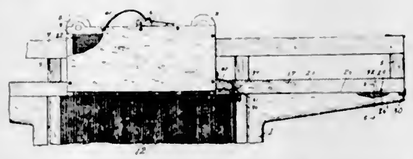
1. A wagon scale, comprising a suitably mounted frame; load-carrying means normally supported thereon; a pair of frame levers fulcrumed in said frame, adapted to engage said load-supporting mechanism at their outer ends, and having their inner ends in proximity at a central point; a hand-lever connected with the inner ends of said frame-levers; weighing devices mounted on said frame; and means for detachably connecting the outer end of said hand-lever with said weighing devices to impart the weight of the load thereto.



2. A wagon scale, comprising a suitably mounted frame; load-carrying devices normally supported thereon; frame-levers fulcrumed in said frame, adapted to coöperate with said load-carrying devices at their short ends; a hand-lever operatively connected with said frame-levers; weighing devices mounted on said frame; and a frame depending from said weighing devices and provided with means for holding said weighing devices in operative connection with said hand-lever when said frame-levers are in engagement with said load-carrying devices, to hold the same in elevated position.

3. A wagon scale, comprising a portable frame; load-carrying devices normally mounted thereon; frame-levers fulcrumed in said frame, adapted to coöperate with said load-bearing devices at their outer ends, and having their inner ends in proximity at a central point; a hand-lever fulcrumed centrally of said main frame and operatively connected with said frame-levers; a scale-beam fulcrumed on the side of said frame; and a frame depending from the short arm of said scale-beam and adapted to coöperate with said hand-lever when such hand-lever is in an operative position to cause a raising of the load above said main frame.

1,169,110. DISTRIBUTER FOR TYPE-SETTING MACHINES. ARTHUR G. BAKER and FRANK W. KNOTT, Detroit, Mich., assignors to The Universal Machine Company, Detroit, Mich. Filed Aug. 20, 1910, Serial No. 578,079. Renewed June 21, 1915. Serial No. 35,427. (Cl. 101—193.)



1. In a type distributer for typesetting machines, the combination of the frame of the machine with suitable type channels with open mouths at their upper ends; a carriage rail; a suitable carriage with vertical channels for the type to be distributed suitably guided above said channels; a wedge-shaped longitudinal bar arranged on the top of the said type channels, within a suitable longitudinal groove in the bottoms of the type channels of the said carriage, the same having V-shaped notches; suitable stops for limiting the movement of the said wedge-shaped bar; a pawl with a double beveled tooth to engage said V-shaped notches in said bar, whereby the bar will be yieldingly engaged and retained under the carriage during the return thereof over the mouths of the type channels and which will be moved away from over said channels by the advance of the carriage; ratchet toothed rack bars on the top of the frame of the said type setting machine with teeth pointing in opposite directions; actuating pawl means for engaging one of the said rack bars for advancing the carriage; detent pawls pivoted to said carriage to engage the opposite ratchet rack bar and limit the advance of said carriage; a suitable armature pivoted on the said carriage and carrying said actuating pawl means; an electromagnet for acting on the said armature; a suitable source of electric supply with an open circuit leading to said magnet; a finger secured to the said armature; a link connection therefrom to the detent pawls to throw the same into engagement with said ratchet rack bar when the carriage is advanced; a pendulum means; a spring carried by the said pendulum means suitably insulated therefrom and having a contact point thereon; a spring connection from said spring to the armature; and a contact finger actuated by the said pendulum and moving into yielding contact with the said contact point, whereby the pendulum, when swinging in one direction, will close the circuit, and will be actuated in the opposite direction by the impulse of the magnet, whereby the interval of operation of the said apparatus is controlled, all coacting substantially as described and for the purpose specified.

2. In a type distributer for typesetting machines, the combination of the frame of the machine with suitable type channels with open mouths at their upper ends; a carriage rail; a suitable carriage with vertical channels for the type to be distributed suitably guided above said channels; a wedge-shaped longitudinal bar arranged on the top of the said type channels, within a suitable longitudinal groove in the bottoms of the type channels of the said carriage, the same having V-shaped notches; suitable stops for limiting the movement of the said wedge-shaped bar; a pawl with a double beveled tooth to engage said V-shaped notches in said bar, whereby the bar will be yieldingly engaged and retained under the carriage during the return thereof over the mouths of the type channels and which will be moved away from over said channels by the advance of the carriage; and means for advancing said carriage step-by-step, all coacting substantially as described and for the purpose specified.

3. In a type distributer for typesetting machines, the combination of the frame of the machine with suitable type channels with open mouths at their upper ends; a suitable carriage with vertical channels for the type to be distributed, suitably guided above said channels; a wedge-shaped longitudinal bar arranged on the top of said type channels within a suitable longitudinal groove in the bottoms of the type channels of the said carriage, the same having V-shaped notches; suitable stops for limiting the movement of the said wedge-shaped bar; a pawl with a double beveled tooth to engage said V-shaped notches in said bar, whereby the bar will be yieldingly engaged and retained under the carriage during the return thereof over the mouths of the type channels, and which will be moved away from over said channels by the advance of the carriage; and means for advancing said carriage step-by-step, all coacting substantially as described and for the purpose specified.

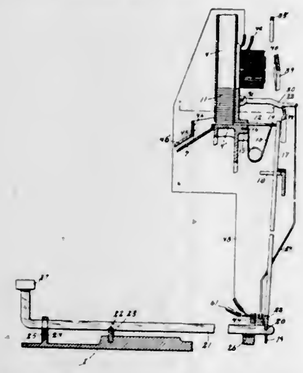
4. In a type distributer for typesetting machines, the combination of the frame of the machine with suitable type channels with open mouths at their upper ends; a suitable carriage with vertical channels for the type to be distributed suitably guided above said channels; a wedge-shaped longitudinal bar arranged on the top of the said type channels; suitable stops for limiting the movement of the said wedge-shaped bar; means carried by said carriage to yieldingly engage said bar, whereby the bar will be yieldingly engaged and retained under the carriage during the return thereof over the mouths of the type channels and which will be moved away from over said channels by the advance of the carriage; and means for advancing said carriage step-by-step, all coacting substantially as described and for the purpose specified.

5. In a type distributer for typesetting machines, the combination of the frame of the machine with suitable type channels with open mouths at their upper end; a suitable carriage with vertical channels for the type to be distributed guided above said channels; a pair of ratchet toothed rack bars on the top of the frame of the said type setting machine with teeth pointing in opposite directions;

actuating pawl means for engaging one of the said rack bars for advancing the carriage; detent pawls pivoted to said carriage to engage the opposite ratchet rack bar and limit the advance of said carriage; a suitable armature pivoted on the said carriage and carrying said actuating pawl means; an electromagnet for acting on the said armature; a suitable source of electric supply with an open circuit leading to said magnet; a finger secured to the said armature; a link connection therefrom to the detent pawls to throw the same into engagement with said ratchet rack bar when the carriage is advanced; a pendulum means; a spring carried by the said pendulum insulated therefrom by a suitable binding post and having a contact point thereon; a spring connection from said spring to the armature; and a contact finger actuated by the said pendulum and moving into yielding contact with the said contact point, whereby the pendulum, when swinging in one direction, will close the circuit, and will be actuated in the opposite direction by the impulse of the magnet, whereby the interval of operation of the said apparatus is controlled, all coacting substantially as described and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,169,111. TYPE-SETTING MACHINE. ARTHUR G. BAKER and FRANK W. KNOTT, Detroit, Mich., assignors to The Universal Machine Company, Detroit, Mich. Filed Aug. 20, 1910. Serial No. 578,080. Renewed June 21, 1915. Serial No. 35,428. (Cl. 101—195.)



1. In a typesetting machine, the combination of a machine with suitable base and frame with type channels arranged and supported therein; an apron for the type in front of the said channels with a suitable guide for the type at the front thereof; a type ejector plunger at the bottom of each channel; a corresponding spring for returning each of said plungers to initial position; a key-board made up of key levers for the machine; vertical bars, corresponding to said plungers, suitably guided at the back of said machine in position to be raised into operative relation therewith; a key lever corresponding to each of said bars and pivotally connected at its rear end to its corresponding vertical bar; a transverse plunger-actuating bar disposed to the rear of the machine, supported on suitable pivoted arms; an armature operatively associated with said actuating bar; an electromagnet for actuating the said plunger actuating bar; a catch for the said actuating bar for holding it in the initial inoperative position; a universal bar above the keys of the key-board with a connection to said catch for releasing the same on the actuation of any key; a transverse universal contact bar connected and in open electric circuit with said electromagnet, the same being arranged to close the circuit whenever any key is actuated; a type setting-up means arranged to cooperate with the said type guide consisting of a setting-up segment arranged in the said type guide; means for actuating the said setting-up segment, consisting of a pin on the said segment; a slotted lever for actuating the same; an armature on the said lever; an electromagnet arranged to act upon the said armature, the circuit of which is connected to the aforesaid circuit closing bar in the rear of the said machine, whereby, when any key is depressed, said setting-up means will be actuated; a galley support for the type set up by said machine; a line support for the type to be delivered to the galley, consisting of a vertical depressible plate through a slot in the said support; and a line moving plate suitably guided to force the line of type into the galley, when the line-supporting plate is depressed, all coacting substantially as described and for the purpose specified.

2. In a typesetting machine, the combination of a machine with suitable base and frame with type channels arranged and supported therein; an apron for the type in front of the said channels with a suitable guide for the type at the front thereof, a type ejector plunger at the bottom of each channel; a corresponding spring for returning each of said plungers to initial position; key-board made up of key levers for the machine; vertical bars, corresponding to said plungers, suitably guided at the back of said machine in position to be raised into operative relation therewith; a key lever corresponding to each of said bars and pivotally connected at its rear end to its corresponding vertical bar; a transverse plunger-actuating bar disposed to the rear of the machine, supported on suitable pivoted arms; an armature operatively associated with said actuating bar; an electromagnet for actuating the said plunger actuating bar; a catch for the said actuating bar for holding it in the initial inoperative position; a universal bar above the keys of the key-board with a connection to said catch for releasing the same on the actuation of any key; a transverse universal contact bar connected and in open electric circuit with said electromagnet, the same being arranged to close the circuit whenever any key is actuated; a type setting-up means arranged to coöperate with the said type guide consisting of a setting-up segment arranged in the said type guide; means for actuating the said setting-up segment, consisting of a pin on the said segment; a slotted lever for actuating the same; an armature on the said lever; an electromagnet arranged to act upon the said armature, the circuit of which is connected to the aforesaid circuit closing bar in the rear of the said machine, whereby, when any key is depressed, said setting-up means will be actuated; a galley support for the type set up by said machine; a line support for the type to be delivered to the galley, consisting of a vertical depressible plate through a slot in the said support; and a line moving plate suitably guided to force the line of type into the galley, when the line-supporting plate is depressed, all coacting substantially as described and for the purpose specified.

3. In a typesetting machine, the combination of a machine with suitable base and frame with type channels arranged and supported therein; an apron for the type in front of the said channels with a suitable guide for the type at the front thereof; a type ejector plunger at the bottom of each channel; a corresponding spring for returning each of said plungers to initial position; a key-board made up of key levers for the machine; vertical bars, corresponding to said plungers, suitably guided at the back of said machine in position to be raised into operative relation therewith, a key lever corresponding to each of said bars and pivotally connected at its rear end to its corresponding vertical bar; a transverse plunger-actuating bar disposed to the rear of the machine, supported on suitable pivoted arms; an armature operatively associated with said actuating bar; an electromagnet for actuating the said plunger actuating bar; a catch for the said actuating bar for holding it in the initial inoperative position; a universal bar above the keys of the key-board with a connection to said catch for releasing the same on the actuation of any key; a transverse universal bar connected and in open electric circuit with said electromagnet, the same being arranged to close the circuit whenever any key is actuated; a type setting-up means arranged to coöperate with the said type guide; and a galley support for the type set up by said machine, all coacting substantially as described and for the purpose specified.

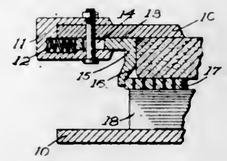
4. In a typesetting machine, the combination of a machine with suitable base and frame with type channels arranged and supported therein; an apron for the type in front of the said channels with a suitable guide for the type at the front thereof; a type ejector plunger at the

bottom of each channel; a corresponding spring for returning each of said plungers to initial position; a key-board made up of key levers for the machine; vertical bars, corresponding to said plungers, suitably guided at the back of said machine in position to be raised into operative relation therewith; a key lever corresponding to each of said bars and pivotally connected at its rear end to its corresponding vertical bar; a transverse plunger-actuating bar disposed to the rear of the machine, supported on suitable pivoted arms; an armature operatively associated with said actuating bar; an electromagnet for actuating the said plunger actuating bar; a catch for the said actuating bar for holding it in the initial inoperative position; a universal bar above the keys of the key-board with a connection to said catch for releasing the same on the actuation of any key; a transverse universal contact bar connected and in open electric circuit with said electromagnet, the same being arranged to close the circuit whenever any key is actuated; a type setting-up means arranged to coöperate with the said type guide; a galley support for the type set up by said machine; a line support for the type to be delivered to the galley, consisting of a vertical depressible plate through a slot in the said support; and a line moving plate suitably guided to force the line of type into the galley, when the line-supporting plate is depressed, all coacting substantially as described and for the purpose specified.

5. In a typesetting machine, the combination of a machine with suitable base and frame with type channels arranged and supported therein; an apron for the type in front of the said channels with a suitable guide for the type at the front thereof; a type ejector plunger at the bottom of each channel; a corresponding spring for returning each of said plungers to initial position; a key-board made up of key levers for the machine; vertical bars, corresponding to said plungers, suitably guided at the back of said machine in position to be raised into operative relation therewith; a key lever corresponding to each of said bars and pivotally connected at its rear end to its corresponding vertical bar; a transverse plunger-actuating bar disposed to the rear of the machine, supported on suitable pivoted arms; an armature operatively associated with said actuating bar; an electromagnet for actuating the said plunger actuating bar; a catch for the said actuating bar for holding it in the initial inoperative position; a universal bar above the keys of the key-board with a connection to said catch for releasing the same on the actuation of any key; a transverse universal contact bar connected and in open electric circuit with said electromagnet, the same being arranged to close the circuit whenever any key is actuated; a type setting-up means arranged to coöperate with the said type guide; a galley support for the type set up by said machine; a line support for the type to be delivered to the galley, consisting of a vertical depressible plate through a slot in the said support; and a line moving plate suitably guided to force the line of type into the galley, when the line-supporting plate is depressed, all coacting substantially as described and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,169,112. EQUALIZING DEVICE FOR OIL-PRESS CAKES. JOHN W. BANKS, Torreón, Mexico. Filed Apr. 28, 1915. Serial No. 24,581. (Cl. 100—54.)



1. The combination of an oil press having a plurality of plates forming the bottoms and tops of the boxes, of equalizing devices located at the rear ends of the plates for engaging the oil cakes when moved in and preventing their being moved in too far.

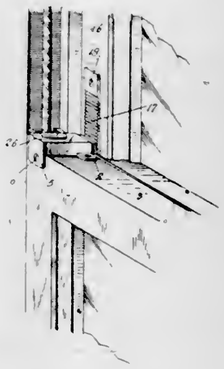
2. In an oil press, the combination with the plates for forming the tops and bottoms of the boxes, the yielding means located at the rear of the plates for limiting the rearmost positions of the oil cakes.

3. As an article of manufacture, an equalizer for an oil press comprising a member adapted to be secured to the end of a press box plate and having a yielding plunger therein for receiving the end of a press cake.

4. As an article of manufacture, a U-shaped member having a top and a bottom flange, the top flange being adapted to rest on the top of a press box plate, and the bottom flange being spaced from the bottom of the plate, means for securing said U-shaped member in fixed position to the plate, springs carried by said U-shaped member under the plate and a plunger movable between the bottom of said plate and member and engaging said springs, said plunger having a vertical flange for receiving the end of the press cake, and a beveled end for engaging the end of the mat and limiting the position of the plunger.

5. As an article of manufacture, a U-shaped member having a top and a bottom flange, the top flange being adapted to rest on the top of a press box plate, and the bottom flange being spaced from the bottom of the plate, means for securing said U-shaped member in fixed position to the plate, springs carried by said U-shaped member under the plate and a plunger movable between the bottom of said plate and member and engaging said springs.

1,169,113. SASH-LOCK. MAX BARRINGER, New York, N. Y., assignor to Albert Sonnenschein, New York, N. Y. Filed Sept. 3, 1915. Serial No. 48,788. (Cl. 16—52.)



1. A sash lock provided with a casing adapted to be fastened to the top edge of the lower sash, a notched bar secured to the upper sash, locking members within said casing adapted to be forcibly thrust apart and lugs projecting from said members for engaging the casing and parting stops respectively of the window, one of said members being provided with means for engaging the notched bar on the upper sash whereby the sash may be locked together and to the window stops in any desired relative position.

2. A sash lock provided with a casing adapted to be fastened to the top edge of the lower sash, a notched bar secured to the upper sash, locking members slidably mounted within said casing and provided with lugs for engaging the casing and parting stops respectively of the window, one of said members having means for engaging the notched bar on the upper sash and a cam for simultaneously thrusting said members apart for locking the sash together and to the window stops in any desired relative position.

3. A sash lock provided with a casing adapted to be fastened to the top edge of the lower sash, a notched bar secured to the upper sash, locking members slidably mounted within said casing and provided with lugs for engaging the casing and parting stops respectively of the window, one of said members having means for engaging the notched bar on the upper sash, a cam for simultaneously thrusting said members apart for locking the sash to-

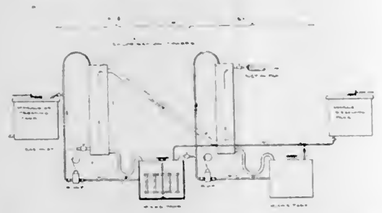
gether and to the window stops in any desired relative position, and manually operable means exterior of said casing for operating said cam.

4. In a sash lock the combination with a casing adapted to be secured to the top edge of the lower sash, of a notched bar secured to the upper sash, a pair of bolt members slidably mounted in said casing, lugs projecting laterally from said members provided with roughened faces adapted to engage the casing and parting stops respectively of the window when said slidable members are thrust apart, one of said members being provided with an engaging portion adapted to engage the notched bar on the upper sash simultaneously with the engagement of the window stops by said lugs and manually operable means for sliding said bolt members in opposite directions to lock and unlock the sash.

5. In a sash lock the combination with a casing adapted to be secured to the top edge of the lower sash, of a pair of members slidable longitudinally of said casing in opposite directions, lugs extending laterally of the respective members and adapted to engage the window stops when said members are thrust apart, one of said members being provided with a toothed face adapted to project through the casing, a toothed plate on the upper sash frame adapted to be engaged by said toothed face of the sliding member, and manually operable cam means between the inner ends of said members for thrusting the latter apart and holding them in locking position.

[Claims 6 and 7 not printed in the Gazette.]

1,169,114. METHOD OF MANUFACTURING ARSENATE OF LEAD. EDWIN O. BARSTOW, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed Aug. 1, 1912. Serial No. 712,676. (Cl. 23—13.)



1. The method of making an insoluble metallic arsenate, which consists in reacting in the presence of water between arsenious oxid, a halogen, a compound to form a haloid with such halogen, and a compound of the metal of which the arsenate is desired, such last-named compound being adapted to produce such arsenate upon being added to a solution of arsenic acid.

2. The method of making an insoluble metallic arsenate, which consists in reacting in the presence of water between arsenious oxid, chlorin, a compound to form a chlorid with such chlorin, and a compound of the metal of which the arsenate is desired, such last-named compound being adapted to produce such arsenate upon being added to a solution of arsenic acid.

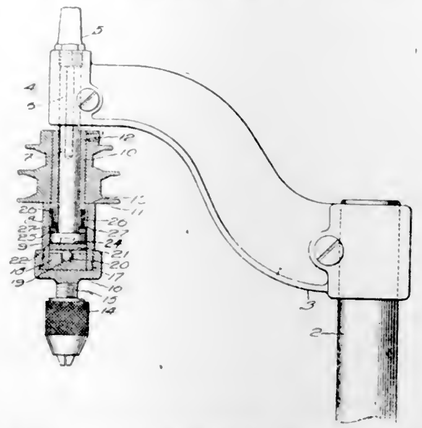
3. The method of making an insoluble metallic arsenate, which consists in reacting in the presence of water between arsenious oxid, chlorin, an alkali, and a compound of the metal of which the arsenate is desired, such last-named compound being adapted to produce such arsenate upon being added to a solution of arsenic acid.

4. The method of making an insoluble metallic arsenate, which consists in reacting in the presence of water between arsenious oxid, chlorin, an alkali, and an oxid of the metal of which the arsenate is desired.

5. The method of making lead arsenate, which consists in reacting in the presence of water between arsenious oxid, a halogen, a compound to form a haloid with such halogen, and a lead compound, adapted to produce such arsenate upon being added to a solution of arsenic acid.

[Claims 6 to 14 not printed in the Gazette.]

1,169,115. POWER-TRANSFERRING MECHANISM. WILLIAM J. BAYER, Hartford, Conn., assignor to The Henry & Wright Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed May 10, 1915. Serial No. 26,998. (Cl. 64—49.)



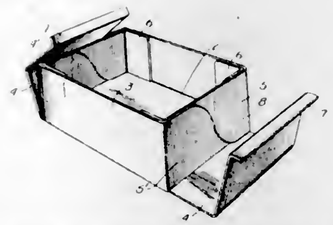
1. Power transferring mechanism comprising a stationary stud, a sleeve rotary around the stud, a cap closing one end of the sleeve, an anti-friction bearing between the cap and the stud, and yieldable means in the sleeve for forcing the sections of the bearing toward each other.

2. Power transferring mechanism comprising a stud, a sleeve rotative about the stud, a cap closing the stud, an anti-friction bearing between the cap and the stud, and springs, the chamber of the sleeve having sockets to receive the springs, the springs acting against the stud to yieldingly force the sections of the anti-friction bearing toward each other.

3. Power transferring mechanism comprising a fixed stud and a rotary sleeve supported by the stud, one end of the sleeve being closed, whereby said sleeve constitutes an oil reservoir and the stud constituting the sole support for the sleeve.

4. Power transferring mechanism comprising a fixed stud and a rotary sleeve surrounding said stud and one end closed, whereby said sleeve constitutes an oil reservoir, the stud having an oil receiving duct in communication with the space between the stud and the sleeve to thus supply oil to said space.

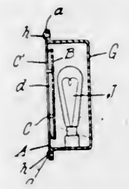
1,169,116. FOLDING BOX. ERNST A. G. BIERWIRTH, Kansas City, Mo. Filed May 10, 1915. Serial No. 27,114. (Cl. 229—34.)



1. A folding box formed from a single sheet of material comprising bottom, side and end portions, each side portion being longer than the bottom and turned at the corners of the box to form supplemental end portions, and each side portion having a lip at its free end located within the box and lying against the body of the opposite side, the said supplemental end portions having edge notches whereby said portions are crossed to form a lock and locate said free ends within the box, and each end portion of the box being folded over the adjacent supplemental end portions to house the same.

2. A folding box formed from a single sheet of material comprising bottom, side and end portions, each side portion being longer than the bottom and turned at the corners of the box to form supplemental end portions, and each side portion having a lip at its free end located within the box and lying against the body of the opposite side, the said supplemental end portions having edge notches whereby said portions are crossed to form a lock and locate said free ends within the box, and each end portion of the box being folded over the adjacent supplemental end portions to house the same, and having a lip lying on the bottom of the box.

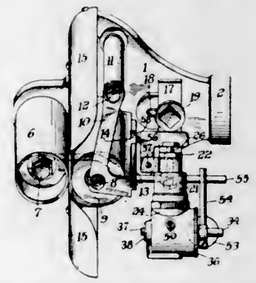
1,169,117. ILLUMINATING SIGN OR NUMBER-PLATE. SYDNEY BORMAN, New York, N. Y., assignor of one-half to Louis C. Jandorf, Port Washington, N. Y. Filed Dec. 29, 1914. Serial No. 879,462. (Cl. 40—133.)



1. In a sign, a metal sign plate provided with an opening, a display plate adjacent the sign plate and spaced therefrom having a contour similar to the contour of the opening but of greater dimensions than the opening, the sign plate being provided with reflective and non-reflective surfaces upon its opposite sides, the display plate being provided with like surfaces upon its opposite sides, but reversely to surfaces of the sign plate, and spaced webs connecting the two plates.

2. In a sign the combination with a housing and a lamp in the housing, of a metal sign plate detachably mounted upon the housing adjacent the lamp, a display plate adjacent the sign plate and spaced therefrom having a contour similar to the contour of the opening but of greater dimensions than the opening, a white coating upon one side of the sign plate, a black coating on the other side of said plate, a white coating on one side of the display plate, and a black coating on the other side of the display plate, the coatings on each plate being arranged reversely to the coatings on the other plate, and spaced webs connecting the two plates.

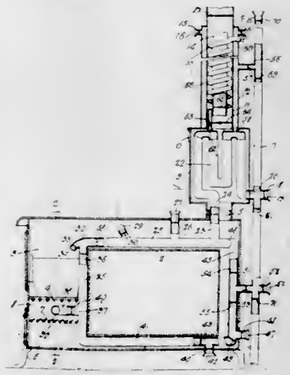
1,169,118. GUIDE MECHANISM FOR CLOTH. HERMAN C. BREHMER, Philadelphia, Pa., assignor to H. W. Butterworth & Sons Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 12, 1914. Serial No. 844,635. (Cl. 26—18.)



1. In a device of the character stated, the combination of a suitable frame, a pair of rolls rotatably mounted thereon in a substantially horizontal plane and relatively movable to and from each other, a vertically arranged cylinder and reciprocable piston therein supported by said frame, an operating lever positioned so as to be actuated by movement of said piston and adapted to transmit movement of said piston to one of said rolls in a direction at an angle to the direction of movement of the piston to vary the distance between said rolls, means to shift the fulcrum of said lever relatively to the rolls to regulate the extent of relative movement between the rolls, a trip finger located adjacent to the rolls and in the path of movement of the material being guided, and means controlled by the movement of said finger to actuate said piston.

2. In a device of the character stated, the combination of a suitable frame, a pair of rolls rotatably mounted thereon and relatively movable to and from each other in a substantially horizontal plane, a vertically arranged cylinder and reciprocable piston therein supported by said frame, an operating lever positioned so as to be actuated by a vertical movement of said piston and adapted to transmit movement of said piston to one of said rolls in a horizontal direction to vary the distance between said rolls, a pivoted trip finger located adjacent to the rolls and in the path of movement of the material being guided thereby, a valve device for controlling the pressure to and from the cylinder and piston provided with a counterweighted arm in which the counter weight is located substantially in a horizontal plane with the valve device whereby it is operated by gravity in one direction, said trip finger having a movable connection with the counterweighted arm for operating the latter against the gravity action of the weight.

1,169,119. FUEL AND HEATING SYSTEM. JACOB BREWER, Hazleton, Pa. Filed Apr. 22, 1915. Serial No. 23,265. (Cl. 126—15.)



1. In a device of the class described, a heater; a grate in the heater; an outlet for the products of combustion; a flue in the outlet and having an air inlet, the flue comprising branches, one of which discharges above the grate, the other of which discharges below the grate; and a movable closure extended transversely of the heater below the grate and defining a compartment into which said other branch discharges.

2. In a device of the class described, a heater; a drum communicating with the heater; a flue in the drum and communicating with the heater, the flue having an air inlet; a stack communicating with the drum; a jacket surrounding the stack and defining a compartment; means for establishing communication between the compartment and the flue; an air pipe; means for establishing communication between the air pipe and the compartment; and means for establishing communication between the air pipe and the flue within the contour of the heater.

3. In a device of the class described, a heater; a drum communicating with the heater; a flue in the drum and communicating with the heater; a stack communicating

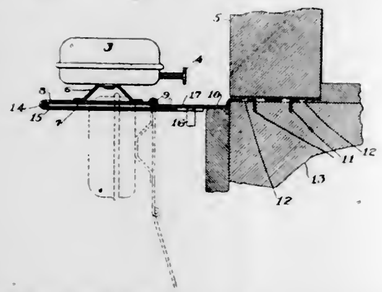
with the drum; a jacket surrounding the stack and defining a compartment; means for establishing communication between the compartment and the flue; an air pipe; means for establishing communication between the air pipe and the compartment; and means for establishing communication between the air pipe and the flue.

4. In a device of the class described, a heater; an outlet for the products of combustion; a drum communicating with the outlet; a flue in the drum, the flue discharging into the heater and having an air inlet; a main stack communicating with the drum; an auxiliary stack in the main stack; a jacket surrounding the main stack and defining a compartment; means for establishing communication between the compartment and the flue; a damper controlling each stack; a coil surrounding the auxiliary stack; means for establishing communication between the coil and the flue; an inlet for the coil; and an inlet for the compartment.

5. In a device of the class described, a heater; an outlet for the products of combustion; a drum communicating with the outlet; a flue in the drum, the flue discharging into the heater; a main stack communicating with the drum; an auxiliary stack in the main stack; a jacket surrounding the main stack and defining a compartment; means for establishing communication between the compartment and the flue; means for establishing communication between the coil and the flue; an air pipe; means for establishing communication between the air pipe and the flue; and means for establishing communication between the air pipe and the compartment.

[Claims 6 and 7 not printed in the Gazette.]

1,169,120. PORTABLE BURGLAR-ALARM. HARRY B. BROADWELL, St. Louis, Mo. Filed Apr. 27, 1915. Serial No. 24,364. (Cl. 116—44.)

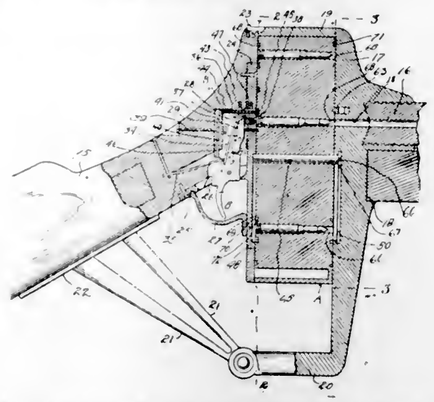


1. The improved portable burglar alarm, comprising an attaching plate having means whereby it may be attached to a door or window sash, a base plate hinged to the outer end of said attaching plate, a bell carried by said base plate, a contact connected to said bell and adapted to be contacted by the moving door or sash whenever the latter is surreptitiously opened, a clamping plate hinged to the outer end of said base plate, and a screw for securing said clamping plate to the said attaching plate.

2. The improved portable burglar alarm, comprising an attaching plate having means whereby it may be attached to a door or sash, a base plate movably connected to the said attaching plate, a bell, a contact connected to said bell and adapted to ring the same when engaged by a moving door or sash, said base plate having a series of holes or slots therein, screws for attaching said bell to said base plate, a clamping plate hinged to the outer end of said base plate and having an elongated slot, and a flat headed screw for securing said clamping plate to the said attaching plate.

1,169,121. FIREARM. EDWARD W. BRYN, New York, N. Y. Filed Nov. 25, 1914. Serial No. 873,986. (Cl. 42—59.)

1. In a magazine firearm, the combination of a rotatable and bodily movable magazine, means for intermittently rotating the magazine, and means for simultaneously moving said magazine bodily in a plane at right angles to the longitudinal axis of the firearm.



2. In a magazine firearm, the combination of a rotatable and bodily movable magazine, a firing mechanism including a trigger, means operated by the retraction of the trigger for rotating the magazine, and means for simultaneously moving said magazine bodily in a plane at right angles to the longitudinal axis of the firearm.

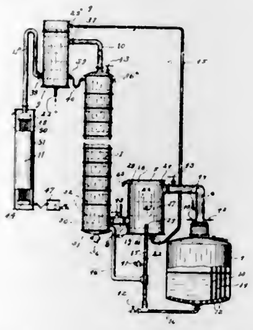
3. In a magazine firearm, the combination of a rotatable and bodily movable magazine, means for intermittently rotating the magazine, means for simultaneously moving said magazine bodily in a plane at right angles to the longitudinal axis of the firearm, and means for maintaining the axis of rotation of the magazine during its bodily movement in a given plane extending longitudinally of the firearm.

4. In a magazine firearm, the combination of a rotatable magazine, means for rotating the magazine, and means for automatically discharging the magazine from the firearm after the last cartridge therein has been fired.

5. In a magazine firearm, the combination of a rotatable magazine, a firing mechanism including a trigger, means operated by the retraction of the trigger for rotating the magazine, and means operated by the retraction of the trigger after the last cartridge has been fired for discharging the magazine from the firearm.

[Claims 6 to 8 not printed in the Gazette.]

1,169,122. DISTILLING APPARATUS. JACOB BUCHERT, Newport, Ky. Filed June 19, 1914. Serial No. 846,064. (Cl. 195—15.)



1. In a distilling apparatus, the combination of a kettle still, a fractional separator, gas pipes connecting the kettle still and said separator, return pipes leading from said separator to the kettle still, a refining column, gas pipes leading from the fractional separator into said column, return pipes leading from said column into the kettle still, and means for maintaining the column at a higher temperature than the fractional separator.

2. In a distilling apparatus, the combination of a kettle still, a fractional separator, gas pipes connecting the kettle still and said separator to the kettle still, a refining column, gas pipes leading from the fractional separator into said column, return pipes leading from said column into the kettle still, and a water cooling system for the fractional separator and for the column, adapted to maintain the column at a higher temperature than the fractional separator.

3. In a distilling apparatus, the combination of a kettle still, a fractional separator, gas pipes connecting the kettle still and said separator, return pipes leading from said separator to the kettle still, a refining column, gas pipes leading from the fractional separator into said column, return pipes leading from said column into the kettle still, means for maintaining the column at a higher temperature than the fractional separator, a condenser, gas pipes connecting the condenser and the refining column, and return pipes leading from the condenser back into the column.

1,169,123. HEAD ATTACHMENT. MARGARET E. BURNS, Chicago, Ill. Filed Mar. 17, 1915. Serial No. 14,964. (Cl. 128—39.)



1. A device of the class described comprising a band adapted to encircle the head; a hot water container detachably mounted on said band; a cap detachably connected with said band; and an ice container in said cap, substantially as described.

2. A device of the class described comprising a band adapted to encircle the head; a plurality of hot water containers detachably mounted on said band; a cap detachably connected with said band; and an ice container in said cap, substantially as described.

3. A device of the class described comprising a band in the form of a channel adapted to encircle the head; and a hot water container detachably mounted in said channel, substantially as described.

4. A device of the class described comprising a band in the form of a channel adapted to encircle the head; a hot water container detchably mounted on said band; a cap detachably connected with said band; and an ice container in said cap, substantially as described.

5. A device of the class described comprising a band in the form of a channel adapted to encircle the head; a plurality of hot water containers detachably mounted in said channel; a cap detachably connected with said band; and an ice container in said cap, substantially as described.

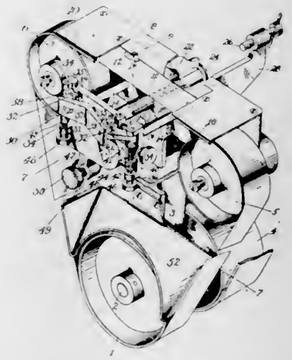
[Claim 6 not printed in the Gazette.]

1,169,124. CORRUGATED METAL FASTENER. SPENCER C. CARY, New York, N. Y. Filed Mar. 6, 1907. Serial No. 360,920. (Cl. 85—11.)



As a new article of manufacture, a fastening device consisting of a metallic strip provided with corrugations, one edge of said strip having a series of pointed members corresponding in number to the number of said corrugations, the points of said members being in substantially a straight line which is located in a plane intermediate two planes, one of which connects the crests of the corrugations on one face of the fastener, and the other of which planes connects the crests of the corrugations on the other face of said fastener, the bases of said pointed members extending obliquely between said two planes.

1,169,125. HEEL-BREASTING MACHINE. JAMES CAVANAGH, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 27, 1910. Serial No. 579,242. (Cl. 12—47.)



1. In a heel breasting machine, breasting means comprising a knife and a tread rest mounted for rocking movement about an axis perpendicular to the plane of the knife and arranged in proximity to and movable transversely of the knife edge.

2. A heel breaster comprising in combination an edgewise moving breasting knife, a V-shaped tread rest formed to engage the shank on two separate lines and supports under the ends of the rest permitting it to rock to bring opposite corners of the breast against the knife alternatively.

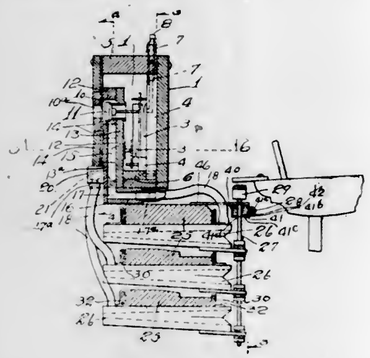
3. A heel breaster comprising a belt knife, a shoe support, means for holding the knife in extended position with a portion thereof running transversely of a shoe on the support, a back guide for said knife presenting a bearing against the rear edge of the knife only and presenting an unobstructed space under spbstantially the full width of the knife, and means permitting and controlling the direction of relative movement of the support and knife in the plane of the knife.

4. A heel breaster comprising a belt knife, a shoe support mounted for reciprocation in the plane of the knife and for oscillation in a definite path, means for holding the knife extended in position with a portion transverse the longitudinal median line of the heel of a shoe on the support, means whereby the belt knife may be driven, and means preventing transverse movements of the knife.

5. In a heel breasting machine, the combination of breasting means and shank engaging means constructed and arranged to engage marginal portions only of the tread face of a transversely curved shank and adapted to apply substantial pressure to the marginal portions only of the tread face of the shank during the operation of the breasting means.

[Claims 6 to 50 not printed in the Gazette.]

1,169,126. PNEUMATIC ACTION FOR INTERIOR PIANO-PLAYERS. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed June 24, 1914. Serial No. 847,008. (Cl. 84—178.)



1. In a pneumatic action for piano players, a primary exhaust chamber and a row of primary pneumatics therein of bellows form, alternate pneumatics being offset slightly from each other in the direction of their expansion and contraction, whereby the bellows sides of consecutive pneumatics may overlap without interference.

2. In a pneumatic action for piano players, a primary exhaust chamber and a row of primary pneumatics therein of bellows form, and valves in rows at the moving ends of their vibrating members respectively, actuated thereby, alternate pneumitics being hinged at opposite ends, whereby the consecutive valves in each row may be spaced between centers as far as the space allotted to the width of two primary pneumatics.

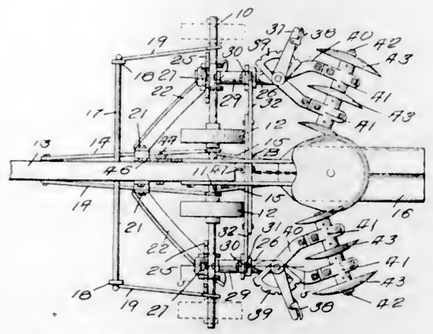
3. In a pneumatic action for piano players, a primary exhaust chamber and a row of primary pneumatics therein of bellows form, valves at the moving ends of the vibrating members of said pneumatics respectively actuated thereby, alternate pneumatics being hinged at opposite ends and offset slightly from each other in the direction of their expansion and contraction.

4. In a pneumatic action for piano players, a primary pneumatic chamber and a horizontal row of primary pneumatics therein of bellows form, comprising pneumatics hinged at the upper end alternating with pneumatics hinged at the lower ends, those hinged at opposite ends being also slightly offset from each other in the direction of their expansion and contraction; valves carried by the moving ends of the vibrating members of said pneumatics respectively, one wall of the primary pneumatic chamber having valve chambers for said valves in two horizontal rows; ducts leading from said valve chambers in said wall toward the lower edge of the chamber, and thence out to an outer surface of the same, and nipples terminating said ducts for connection of flexible tubes leading to motor pneumatics to be controlled by the primary pneumatics, respectively.

5. In a pneumatic action for piano players, motor pneumatics and a fixed support for the same along which transversely to their lengths the motor pneumatics are movably distributed; strikers connected to the vibrating members of the motor pneumatics respectively; guide pieces for the strikers respectively; a member in which the guide pieces are slidably mounted, said member being adapted and provided with associated means for clamping the guide pieces releasably to permit them to be moved to new positions along said member.

[Claims 6 to 8 not printed in the Gazette.]

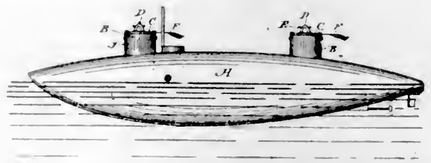
1,169,127. DISK CULTIVATOR. JOHN E. CRADDOCK, Hedley, Tex. Filed Dec. 30, 1914. Serial No. 879,721. (Cl. 97—37.)



1. A cultivator comprising an axle, a U-shaped member rotatably mounted on the axle, a shaft journaled in the arms of said U-shaped member, means for rotating said shaft, a bearing on the rear end of said shaft, a vertical shaft rotatably mounted in said bearing, means for rotating said vertical shaft, a U-shaped member fixed on the vertical shaft, and a disk gang carried by the U-shaped member.

2. A cultivator comprising an axle having an arch central portion, a draft tongue secured to said arch portion, a U-shaped member rotatably mounted on the axle on each side of the arch portion, traction wheels journaled on said axle, a shaft journaled in the arms of each U-shaped member, means for rotating said shaft, an arch member connecting the shafts journaled in the U-shaped members, a lever pivoted on the tongue, connections between said lever and the arch member whereby the movement of said lever will swing the arch member to rotate the U-shaped members on the axle, a bearing on the rear end of each shaft, vertical shafts rotatably mounted in each of said bearings, means for rotating each vertical shaft, a U-shaped member fixed on each vertical shaft, and a disk gang carried by the U-shaped member.

1,169,128. APPLIANCE FOR VESSELS. EDWARD F. CRANE, Hoboken, N. J., assignor of one-half to Arthur J. Grymes, East Orange, N. J. Filed May 24, 1915. Serial No. 29,977. (Cl. 114—16.5.)



1. The combination with a vessel, a container mounted on its hull, the bottom of the container and the hull having registering openings with packing therein, a cable having its lower end secured in the hull and its body passing through one of said openings and stored within the container, and a tubing stored within the hull and its body passing through the other of said openings; of a buoy normally closing the upper end of the container, the upper end of the cable being attached to said buoy and the upper end of the tubing passing through said buoy, and means within the vessel for releasing the buoy from the container.

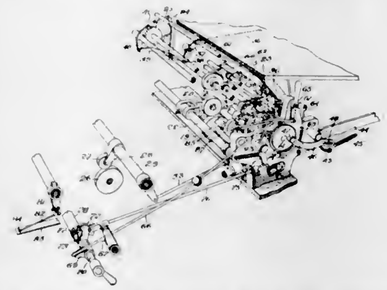
2. The combination with a vessel, a container mounted thereon, the bottom of the container and the hull of the vessel having registering openings, a heavy cable whose lower end is fast within the hull and whose body passes through said openings and is stored within the container, and a light rope secured to the upper end of the cable and also stored within the container; of a buoy mounted above said ropes and having its top overlying the upper end of said container and packed for making a close joint therewith, and means operable from within the vessel for maintaining the buoy in position or releasing it.

3. The combination with a container carried by the hull of a vessel, and a stop on the wall of the container; of a buoy mounted on the container, a flexible line connecting them, a rod pivotally mounted on the buoy and having one end weighted and resting on said stop when the buoy is in place, and a signal at the other end of the rod raised by the descent of said weighted end as the buoy rises.

4. The combination with a container carried by the hull of a vessel, and a stop on the wall of the container; of a buoy mounted on the container, a flexible line connecting them, a rock shaft journaled in the buoy, a rod secured across one end of the shaft and having a weight resting on said stop when the buoy is in place, the body of said buoy being hollow, electric lights carried upon such buoy, a generator therefor mounted within the hollow body, a circuit connecting it with the lights, contacts arranged within said circuit, and a switch at the inner end of said rock shaft adapted to close the circuit between such contacts when said weight falls.

5. The combination with a support mounted on the hull of a vessel, a pin on said support, and a hollow floating element mounted on the support and carrying a spider; of a rock shaft journaled in said element, a rod fast across its outer end and having a signal at one extremity and a weight at the other extremity resting on said pin to depress said flag when the element is in position on the support, an electric signal on said spider, a generator for such signal located within the element, and switching means for closing the circuit from the generator to the signal, said means being carried by the inner end of the rock shaft.

1,169,129. SHEET-FEEDING MACHINE. FRANK L. CROSS, Port Washington, N. Y., assignor to Cross Paper Feeder Company, a Corporation of Maine. Filed Aug. 13, 1914. Serial No. 856,577. (Cl. 101—36.)



1. A sheet feeding machine, having, in combination, combing wheels, mechanism for raising and lowering the wheels, bank feeding mechanism, and sheet-controlled throwout mechanism for retaining the wheels in raised position and for discontinuing the normal operation of the bank feeding mechanism.

2. A sheet feeding machine, having, in combination, combing wheels, mechanism for raising and lowering the combing wheels, delivery rolls including drop rolls, mechanism for raising and lowering the drop rolls, bank feeding mechanism, and sheet-controlled throwout mechanism for retaining the drop rolls in raised position and for discontinuing the normal operation of the bank feeding means.

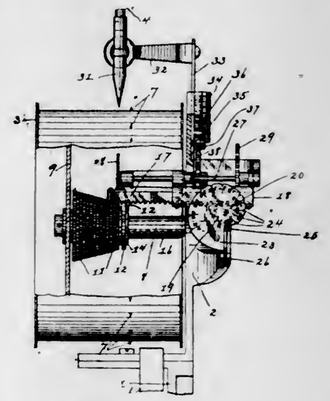
3. A sheet feeding machine having, in combination, combing wheels, mechanism for raising and lowering the wheels, bank feeding mechanism and sheet controlled throw-out mechanism for discontinuing the normal operation of the bank feeding mechanism.

4. A sheet feeding machine having, in combination, combing wheels, tail clamps, mechanism for alternately raising and lowering the combing wheels and tail clamps, and sheet controlled mechanism for retaining the combing wheels in raised position and disconnecting the tail clamps from their actuating mechanism.

5. A sheet feeding machine having, in combination, combing wheels, mechanism for raising and lowering the combing wheels, delivery rolls including drop rolls, mechanism for raising and lowering the drop rolls, bank feeding mechanism and sheet controlled throw-out mechanism for retaining the combing wheels and drop-rolls in raised position and for discontinuing the normal operation of the bank feeding means.

[Claims 6 to 17 not printed in the Gazette.]

1,169,130. STRIP-MARKER. OLIVER W. CURTIS, Watertown, N. Y. Filed May 16, 1914. Serial No. 838,974. (Cl. 33—134.)



1. In a strip-marker, and in combination, a rotatory drum; a frame movable toward and from the axis of the durm; a shaft rotatively mounted in said frame; a pair of gear-elements, one mounted upon said shaft, and the other mounted to rotate in unison with said drum, one of said elements comprising a gang of gears of different diameters adapted to be severally engaged by the other of said elements; means for simultaneously shifting one of said gear-elements to locate a selected gear of said gang opposite the other gear-element, and for moving said frame to locate one gear-element in proper position with reference to the diameter of the selected gear of said gang; a marking-device coöperative with said drum and means whereby it is adapted to be intermittently operated by rotation of said shaft.

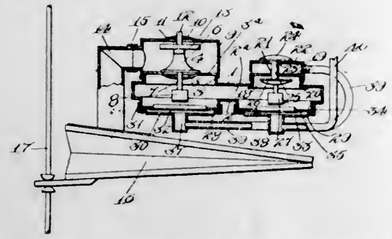
2. In a strip-marker, and in combination, a rotatory drum; a frame movable toward and from the axis of the durm; a shaft rotatively mounted in said frame; a pair of gear-elements, one mounted upon said shaft, and the other mounted to rotate in unison with the drum, one of said elements comprising a gang of gears of different diameters adapted to be severally engaged by the other gear-element; a marking-device coöperative with said drum; means whereby it is adapted to be intermittently operated by rotation of said shaft; another shaft rotatively mounted in said frame; a pinion and a notched spiral cam on said other shaft; a gear-rack slidably mounted on said frame in engagement with said pinion; a connection between said gear-rack and one of said gear-elements for shifting the latter to locate a selected gear of said gang opposite the other gear-element; and a stationary sup-

port for said cam adapted to engage the several notches therein.

3. In a strip-marker, and in combination, a rotatory drum; a frame movable toward and from the axis of the drum; a shaft rotatively mounted in said frame; a pair of gear-elements, one mounted upon said shaft, and the other mounted to rotate in unison with the drum, one of said elements comprising a gang of gears of different diameters adapted to be severally engaged by the other gear-element; a marking-device coöperative with said drum; means whereby it is adapted to be intermittently operated by rotation of said shaft; another shaft rotatively mounted in said frame; a pinion and a spiral cam on said last-mentioned shaft; and a stationary support for said cam, said cam being provided with peripheral notches severally engageable with said support, spaced apart and numbered in accordance with different lengths of strip-sections to be marked.

4. In a strip-marker, and in combination, a rotatory drum; a frame movable toward and from the axis of the drum; a shaft rotatively mounted in said frame; a gear-wheel fixed on said shaft; a gang of gears of different diameters mounted to rotate in unison with the drum and capable of sliding movement longitudinally of the axis of the drum, the gears of said gang being adapted to be severally engaged by said gear-wheel; a marking-device co-operative with the drum; means whereby it is adapted to be intermittently operated by rotation of said shaft; another shaft mounted in said frame; a pinion and a spiral cam on said last-mentioned shaft; a pinion-engaging gear-rack slidably mounted upon said frame parallel with the axis of the drum; a member projecting from said gear-rack for slidably shifting said gang of gears; and a stationary support for said cam.

1,169,131. ACTION FOR PIANO-PLAYERS. CHARLES L. DAVIS, Detroit, Mich., assignor, by mesne assignments, to A. Miller Belfield and John P. Mentzer, trustees, Chicago, Ill. Filed July 27, 1905. Serial No. 271,408. (Cl. 84—178.)



1. A pneumatic piano player action, comprising a casing forming a pneumatic trunk and adapted for connection with the wind-inducing apparatus, primary and secondary valve casings mounted on the top of and having threaded connection with said casing and provided with primary and secondary valves, primary and secondary pouch boards hung below said casing, a tracker board tube connected with the primary pouch board, and a tube connection running from the primary valve casing to the secondary pouch board.

2. A pneumatic piano player action, comprising a casing forming a pneumatic chamber, primary and secondary valve casings mounted upon said first mentioned casing and provided with primary and secondary valves, the said first-mentioned casing forming the valve seat for the secondary valve, and the primary casing forming the valve seat for the primary valve, primary and secondary pouch boards hung from the lower side of said first mentioned casing, a tracker board tube running to the primary pouch board, and a tube connection extending from the primary valve casing to the secondary pouch board.

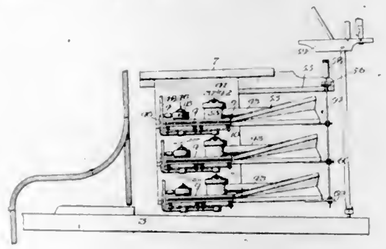
3. A pneumatic action, comprising a pneumatic chamber adapted for connection with the wind-inducing apparatus, primary and secondary valve casings mounted detachably upon the top of said chamber, a primary valve supported by the primary valve casing, a secoudary valve located within the secondary valve casing, pouches below said valves, pouch boards below said pouches, detachable rings for detachably connecting the pouch boards with said pneumatic casing, and a tube extending from the primary valve casing to the secondary valve pouch board.

4. A pneumatic action, comprising a casing forming a pneumatic chamber for connection with the wind-inducing apparatus, primary and secondary valve casings mounted upon and having screw-threaded connection with the top of said pneumatic chamber casing, a primary valve supported by said primary valve casing, a secondary valve inclosed within the secondary valve casing, pouches below said valves, pouch boards below said pouches, threaded rings having screw-threaded connections with said pneumatic chamber casing, and a tube connection between the primary valve casing and the secondary pouch board.

5. A pneumatic action, comprising a casing providing a chamber for connection with the wind-inducing apparatus, a thimble 18 for the primary valve, said thimble having a screw-threaded connection with said casing, a cap 22 having a threaded connection with the thimble 18, a primary valve puppet having valves 24 and 26, the upper one of which rests upon the top of the cap 22 and the lower one of which is located below the top 19 of the thimble 18, a secondary valve casing 9 having a threaded connection with the casing formed in said pneumatic chamber, a secondary valve 6 located in said casing 9, pouches 32 and 35 below said valves, pouch boards 30 and 33 below said pouches, rings 31 and 34 having threaded connections with the casing forming said pneumatic chamber and supporting said pouch boards, a tube connection 39 extending between the cap 22 and pouch board 30, a tube 40 extending from the pouch board 23 to the tracker board, and a power pneumatic tube connection 14.

[Claims 6 to 67 not printed in the Gazette.]

1,169,132. AUTOMATIC MUSICAL INSTRUMENT. CHARLES L. DAVIS, Detroit, Mich., assignor, by mesne assignments, to A. Miller Belfield and John P. Mentzer, trustees, Chicago, Ill. Filed Feb. 23, 1907. Serial No. 358,823. (Cl. 84—233.)



1. A pneumatic action comprising a flat horizontally disposed metallic tray serving as a wind trunk, valve casings arranged upon the top of said wind trunk, and pouch supporting devices suspended from the bottom of the same, and a series of striking pneumatics extending from the edge of said tray in the direction of the width thereof.

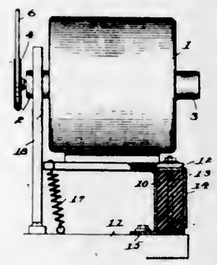
2. The combination of a tray having holes in its bottom for pouches, pouches for said holes, pouch disks arranged below said holes, pins secured to and extending down through from the bottom of the tray, a supporting member for each pouch disk supported by said pins, and extending crosswise of the same and engaging said pouch disks and valve mechanisms controlled by said pouches.

3. A pneumatic action comprising a casing or tray forming a pneumatic passage or windway, said tray having an elevated projection 31 formed thereon, a cylindric casing 33 having a threaded connection with said projection 31, which latter is adapted to form a valve seat, a valve 38 confined within said casing 33, and a cap 34 having a threaded connection with the casing 33 and carrying a guideway for said valve.

4. A pneumatic action comprising a casing or tray forming a pneumatic passage or windway, said tray having an elevated projection 31 formed thereon, a cylindric casing 33 having a threaded connection with said projection 31, which latter is adapted to form a valve seat, a valve 38 confined within said casing 33, and a cap 34 having a threaded connection with the casing 33 and having a bridge 37 to form a guideway, and said valve 38 having a valve stem 39 provided with an adjustable head 42 fitted in said bridge 37.

5. In a pneumatic action, a pouch-holding cup 25, a ring 27 engaging the outer edge of said cup, pins 28 with nuts 29 for holding said ring in place, and a valve mechanism under the control of said pouch.

1,169,133. MOUNTING FOR ELECTRIC MOTORS. AUGUST DE KLEIST and SELVIYOR A. SWANSON, North Tonawanda, N. Y., assignors to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Apr. 23, 1915. Serial No. 23,435. (Cl. 64—52.)



1. A motor-mounting comprising means for supporting one end of the motor, and a resilient block supporting the other end thereof.

2. The combination of a motor, a driving belt for suspending one end of the motor, a tension device connected with the suspended end of the motor, and a resilient block supporting the other end of the motor.

3. The combination of a motor, a driving belt for suspending one end of the motor, a resilient block supporting the other end of the motor, and a tension spring connected with the suspended end of the motor and tending to tighten said belt.

4. The combination of a support, a resilient block secured between its ends to said support, a motor having one end of its base mounted on the end-portions of said block, and means for suspending the other end of the motor.

5. The combination of a support, a resilient block secured to said support, a motor having one end of its base mounted on the end-portions of said block, means for fastening said base to the block, said means being detached from said support, and means for carrying the opposite end of the motor.

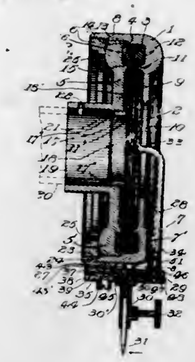
[Claims 6 to 9 not printed in the Gazette.]

1,169,134. SOUND-BOX FOR TALKING-MACHINES. WILBURN N. DENNISON, Merchantville, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed May 27, 1909. Serial No. 498,697. (Cl. 181—11.)

1. A stylus bar having a member provided with an aperture, a tubular arm fitting in said aperture, and means within said tubular arm for holding the same in position.

2. A stylus bar having a member provided with an aperture, a tubular arm fitting in said aperture and tubular means fitted tightly within said tubular arm for holding the same in position.

3. A stylus bar having a member provided with an elliptical aperture, an arm elliptical in transverse section fitting tightly in said aperture and an elliptical tubular bushing fitted tightly into said arm to hold said arm and said member rigidly together.

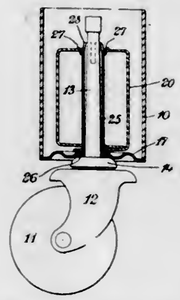


4. A stylus bar having a member provided with an aperture, a tubular arm fitted tightly in said member and a bushing fitted tightly in said arm to hold said arm and said member rigidly together, said arm tapering away from said member and said bushing having its inner end tapered.

5. A gasket for supporting a diaphragm in a sound box comprising a yielding member substantially rectangular in transverse section and having an annular rib projecting therefrom.

[Claims 6 to 12 not printed in the Gazette.]

1,169,135. CASTER FOR TUBULAR LEGS OF FURNITURE AND OTHER USES. ALBERT B. DISS, Newark, N. J., assignor to Universal Caster & Foundry Company, New York, N. Y., a Corporation of New Jersey. Filed June 1, 1914. Serial No. 842,302. (Cl. 16—4.)



1. In a caster for tubular legs having a pintle sleeve and a pintle detachable therefrom and a leg supporting plate and frame around the pintle sleeve, the improvement which comprises the pintle sleeve having one or more spring fingers or members extending upward through a perforation in the frame and adapted to act on the pintle to retain it with a limited resilient play within the perforation restricted thereby sufficiently to prevent undue straining of the spring action, the said sleeve also having one or more outturned ears or projections above the said perforation by which the frame is confined on the pintle tube.

2. In a caster for tubular legs having a pintle sleeve and a pintle detachable therefrom and a leg supporting plate and frame around the pintle sleeve, the improvement which comprises the pintle sleeve having one or more spring fingers or members extending upward through a perforation in the frame and adapted to act on the pintle to retain it with a limited resilient play within the perforation, restricted thereby sufficiently to prevent

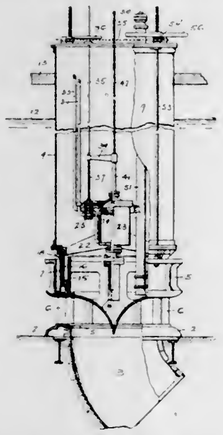
undue straining of the spring action of the spring members.

3. In combination in a caster, a leg supporting plate and frame adapted for laterally supporting the pintle tube in a tubular leg, a pintle sleeve on which the leg supporting plate and frame are loosely mounted and movable in respect thereto, a pintle detachably held in the pintle sleeve, the said sleeve extending through a perforation in the upper part of the frame and having one or more outward projections above said perforation for confining the frame at its upper end, the caster having means for preventing the leg supporting plate falling from the sleeve.

4. In a caster of the detachable pintle type having a pintle sleeve and a frame surrounding it, the improved means of downwardly confining the frame and supporting the sleeve therein comprising the sleeve extending upward through a perforation in the upper portion of the frame and thereby supported and having one or more ears or enlargements above the perforation and having spring retaining means for acting on the appropriate pintle.

5. In a caster of the detachable pintle type having a pintle sleeve and surrounding frame and leg supporting plate, the combination of the sleeve surrounded and externally supported and strengthened at its respective ends by the leg supporting plate and a portion of the frame respectively, the said sleeve in turn being enlarged at its respective ends and thereby confining between its respective ends the said plate and frame with some freedom of play.

1,169,136. INTAKE-VALVE. WILLIAM A. DOBLE, San Francisco, Cal., assignor to Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed May 12, 1913. Serial No. 766,947. (Cl. 137—4.)



1. An intake valve comprising a base ring, a needle arranged above and axially alined with said base ring, a cylinder arranged above said needle, a piston in said cylinder dividing it into two chambers, a valve for controlling the inflow and discharge of fluid into and from said chambers, a screw threaded valve stem for operating said valve, means for rotating said valve stem, and a screw-threaded boss attached to said piston engaging the screw-threaded portion of said valve system.

2. An intake valve adapted to be arranged below the level of a body of water, comprising a base ring, an open structure mounted on said base ring, a cylindrical structure mounted on said open structure and adapted to extend above the level of the water, a needle arranged above and axially alined with said base ring, means for moving said needle, means for locking said needle in any desired position, and a rod attached to said needle and extending upward through the top of said cylindrical structure, said rod adapted to indicate the position of the needle.

3. An intake valve adapted to be arranged below the level of a body of water, comprising a base ring, an open structure mounted on said base ring, a cylindrical structure mounted on top of said open structure and adapted to extend above the level of the water, a vertically movable needle arranged at the lower end of said cylindrical structure, and a packing arranged between said structure and said needle.

4. An intake valve adapted to be arranged below the level of a body of water, comprising a base ring, an open structure mounted on said base ring, a cylindrical structure mounted on top of said open structure and adapted to extend above the level of the water, a vertically movable needle arranged at the lower end of said cylindrical structure, a packing arranged between said structure and said needle, and means for allowing water to enter said structure.

5. An intake valve adapted to be arranged below the level of a body of water comprising a base ring, an open structure mounted on said base ring, a cylindrical structure mounted on top of said open structure and adapted to extend above the level of the water, a vertically movable needle arranged at the lower end of said cylindrical structure, a packing between said needle and said structure, controllable means for permitting water to flow into said structure, and means for exhausting the water from said structure.

[Claims 6 to 9 not printed in the Gazette.]

1,169,137. THERMOMETER-CASING. CHARLES M. DOLAND, Spokane, Wash. Filed June 9, 1914. Serial No. 844,009. (Cl. 73—52.)



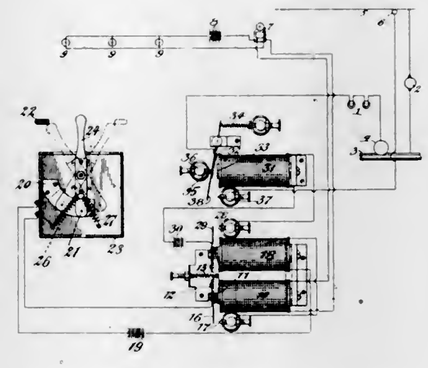
1. In a thermometer structure, a casing, a wick-like thermometer container in said casing having originally open ends, means for closing one end at different lengthwise points of the container to vary the containing length thereof, and ferrule means secured to the remaining end of the container and proportioned to originally hold such remaining end in a spread or open position at a cross section exceeding the normal cross section of the container, substantially as described.

2. In a thermometer structure, a casing having an open end, and a wick-like thermometer container of originally reduced cross section with respect to the interior cross section of said casing, and a ferrule secured to the open end of said casing and having an interior cross section exceeding the cross section of the thermometer to be used and connected with the container to flare the mouth thereof outwardly from the normal cross section of the container, substantially as described.

3. In a thermometer structure, a casing having an open enlarged end and provided with an interior shoulder disposed inwardly with respect to the marginal edge of said open end and said open end being threaded for a portion of its length toward said shoulder, a wick-like container of originally reduced cross section with respect to the interior cross section of the casing, a ferrule adapted to seat on the shoulder of the open end of said casing and having an interior cross section exceeding the cross section of the thermometer to be used and connected with the container to flare the mouth thereof outwardly, and a cap having interior threaded connection with the open end of said casing and extending downwardly therein for engagement with said ferrule to seat the same upon said shoulder, substantially as described.

4. In a thermometer structure, a casing having an open end and of a length exceeding the length of the thermometer to be used, a fabric-like container of reduced length with respect to the thermometer to be used, said casing and container being provided with coacting portions for limiting insertion of the later into the former to a predetermined position therein, and adjustable means for gathering and closing the lower end of the container to neutralize the shock of and limit projection of thermometer therein and insure projection of a portion of the thermometer from the open end of the casing when the thermometer is fully inserted into the container, said gathered end acting as a reservoir to collect and hold the disinfectant and promote capillary attraction upwardly in said container, substantially as described.

1,169,138. SAFETY SIGNAL DEVICE. BENJAMIN M. DOWNS, Buffalo, and WALTER S. COOK, Lackawanna, N. Y. Filed Mar. 15, 1915. Serial No. 14,351. (Cl. 177—339.)



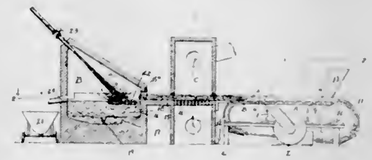
1. A signal apparatus comprising an electric safety signal circuit containing a safety signal, an electric generator and a holding switch, a holding electro-magnet operating said holding switch and having its coil arranged in a holding circuit containing a transferring switch and an electric generator, a transferring electro-magnet which holds said transferring switch closed and has its coil arranged in a transferring circuit containing an electric generator and a manually operated cut-off switch and a starting switch, a starting electro-magnet which closes said starting and transferring switches and which is arranged in a starting circuit containing an electric generator and an initial switch.

2. A signal apparatus comprising an electric safety signal circuit containing a safety signal, an electric generator and a holding switch, a holding electro-magnet operating said holding switch and having its coil arranged in a holding circuit containing a transferring switch and an electric generator, a transferring electro-magnet which holds said transferring switch closed and has its coil arranged in a transferring circuit containing an electric generator and a manually operated cut-off switch and a starting switch, a starting electro-magnet which closes said starting and transferring switches and which is arranged in a starting circuit containing an electric generator and an initial switch, and a stop signal arranged in said last mentioned circuit and to be operated upon closing said initial switch.

3. A signal apparatus comprising an electric safety signal circuit containing a safety signal, an electric generator and a holding switch, a holding electro-magnet operating said holding switch and having its coil arranged in a holding circuit containing a transferring switch and an electric generator, a transferring electro-magnet which holds said transferring switch closed and has its coil arranged in a transferring circuit containing an electric generator and a manually operated cut-off switch and a starting switch, a starting electro-magnet which closes said starting and transferring switches and which is arranged in a starting circuit containing an electric generator and an initial switch, and a stop signal arranged in said last mentioned circuit and to be operated upon closing said initial switch, said cut-off switch having a movable switch lever which is yieldingly held in its central position.

4. A signal apparatus comprising an electric safety signal circuit containing a safety signal, an electric generator and a holding switch, a holding electro-magnet operating said holding switch and having its coil arranged in a holding circuit containing a transferring switch and an electric generator, a transferring electro-magnet which holds said transferring switch closed and has its coil arranged in a transferring circuit containing an electric generator and a manually operated cut-off switch and a starting switch, a starting electro-magnet which closes said starting and transferring switches and which is arranged in a starting circuit containing an electric generator and an initial switch, said cut-off switch having a movable switch lever which is yieldingly held in its central position, and an operating lever movable past said switch lever in two directions and to shift the latter while moving in one direction so as to open the starting circuit and while moving in the opposite direction to maintain said cut-off switch in its closed position.

1,169,139. APPARATUS FOR AND PROCESS OF ORE TREATMENT. ARTHUR S. DWIGHT, New York, N. Y. Filed June 30, 1911. Serial No. 636,295. (Cl. 75—17.)



1. The herein described process of treating a metalliferous material that is initially in a fine condition, which consists in forming it into coherent, rigid cakes having extensive substantially parallel smooth top and bottom surfaces and being highly and substantially uniformly porous between said surfaces, and then, preparatory to any smelting operation, passing through the pores of the said blocks while they are maintained intact and at a high temperature, a gaseous body adapted to react upon the material of the blocks causing chemical reactions to take place therein.

2. The herein described process of treating a metalliferous material that is initially in a fine condition, which consists in forming it into coherent, highly porous, pieces, subjecting these to a moving stream of gas adapted to react upon the material of the said pieces causing chemical reactions to take place therein, and after such reactions introducing the said pieces into a furnace and there smelting them.

3. The herein described continuous process of treating a metalliferous material that is initially in a fine condition to recover the metal, which consists in forming the

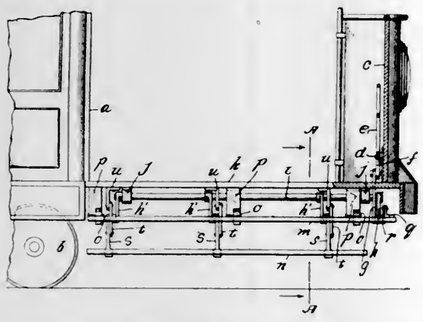
material into a highly porous coherent mass, advancing the mass as formed and adding thereto, causing a gaseous body capable of reacting upon the material of the mass to pass through the pores thereof while in process of being advanced, and immediately thereafter passing the treated mass into a furnace and subjecting its end to smelting.

4. The herein described process which consists in agglomerating fine metal-bearing material into highly and uniformly porous rigid masses, subjecting these to an intermediate treatment by gas that reacts thereon and causes chemical changes therein to take place, and after such reactions have taken place introducing the material so treated into a reverberatory furnace and there immediately smelting it.

5. In an apparatus for ore treatment, the combination of a mechanism for forming a mass of ore into a porous cake and for raising the temperature of the cake, a duct for the passage of reaction producing gas, means for supplying gas to the duct, and means for causing the cake to be moved from the forming and heating mechanism into and through the duct.

[Claims 6 and 7 not printed in the Gazette.]

1,169,140. FOLDABLE CAR-STEPS. JAMES H. FASSETT, Nashua, and JOHN E. WARREN, Greenfield, N. H., assignors of one-half to William H. Cheever, Nashua, N. H. Filed Nov. 8, 1915. Serial No. 60,370. (Cl. 105—86.)

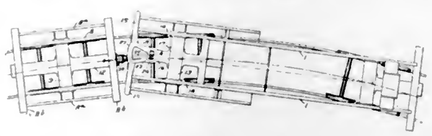


1. A structure of the class described, including a suitable support; a pair of steps movable toward and from the same; and mechanism by which said steps are simultaneously moved toward said support and one of said steps is folded into a substantially edgewise-lying inoperative position and the other of said steps is moved into a substantially flatwise-lying inoperative position.

2. A foldable step including a suitable support, a shaft rotatably supported therefrom; a step pivotally fastened to said shaft; a step pivotally fastened to said support; and mechanism by which the last-named step is folded into a substantially vertical edgewise-lying and inoperative position and said shaft is rocked and the first-named step is carried into a substantially horizontal flatwise lying and inoperative position close to the first-named step and the edge of said support.

1,169,141. LOCOMOTIVE AND TENDER. WILLIAM M. FAWCETT, Erie, Pa., assignor to Heisler Locomotive Works, Erie, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1915. Serial No. 23,051. (Cl. 105—17.)

1. In a locomotive and tender, the combination of a main frame; a wheel support for said frame; a tender; a wheel support for the tender, the wheel support of the tender being shorter than that of the main frame; and a connecting bar between the main frame and the tender and fixed in alinement on a horizontal plane with the tender comprising a joint with a vertical axis, said joint being between the end of the main frame and the rear point on the main frame maintained in constant lateral relation to the track by the wheel support.



2. In a locomotive and tender, the combination of a main frame; a wheel support for said frame; a tender; a wheel support for the tender, the wheel support of the tender being shorter than that of the main frame; and a connecting bar between the main frame and the tender and fixed in alinement on a horizontal plane with the tender comprising a joint with a vertical axis, said joint being between the end of the main frame and the rear point on the main frame maintained in constant lateral relation to the track by the wheel support, said connecting bar having a transverse pivotal joint with a horizontal axis at the front end of the tender.

3. In a locomotive and tender, the combination of a main frame; a wheel support for said frame; a tender; a wheel support for the tender, the wheel support of the tender being shorter than that of the main frame; a connecting bar between the main frame and the tender and fixed in alinement on a horizontal plane with the tender comprising a joint with a vertical axis, said joint being between the end of the main frame and the rear point on the main frame maintained in constant lateral relation to the track by the wheel support; and a support at one side vertically of said connecting bar and at the rear end of said main frame, said support permitting a lateral sliding movement of the connecting bar on the support.

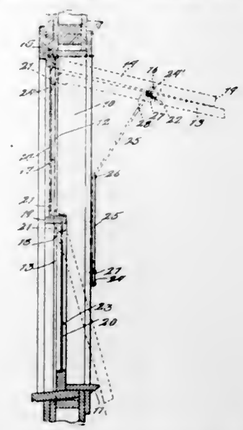
4. In a locomotive and tender, the combination of a main frame; a wheel support for said frame; a tender; a wheel support for the tender, the wheel support of the tender being shorter than that of the main frame; a connecting bar between the main frame and the tender and fixed in alinement on a horizontal plane with the tender comprising a joint with a vertical axis, said joint being between the end of the main frame and the rear point on the main frame maintained in constant lateral relation to the track by the wheel support; and a support for said connecting bar above and below said bar at the rear end of said main frame, said support permitting a lateral sliding movement of the bar on the support.

5. In a locomotive and tender, the combination of a main frame; a wheel support for said frame; a tender; a wheel support for the tender, the wheel support of the tender being shorter than that of the main frame; a connecting bar between the main frame and the tender and fixed in alinement on a horizontal plane with the tender comprising a joint with a vertical axis, said joint being between the end of the main frame and the rear point on the main frame maintained in constant lateral relation to the track by the wheel support; a support at one side vertically of said connecting bar at the rear end of said main frame, said support permitting a lateral sliding movement of the connecting bar relatively to the support; and a shoulder on said bar engaging the rear face of said support and acting as a buffer for the connection.

[Claims 6 to 13 not printed in the Gazette.]

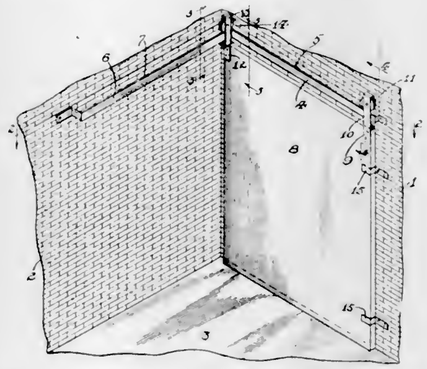
1,169,142. WINDOW CONSTRUCTION. SAMUEL P. FREE, Perry, Iowa. Filed Aug. 4, 1915. Serial No. 43,519. (Cl. 20—42.)

A window embodying a frame having its vertical side walls provided with a longitudinal groove therein, a sash pivotally mounted in the upper portion of the frame, a lower sash, means connected with the lower sash and movable in the said grooves, the said means coöperating with the grooves to form a pivot about which the lower sash swings when the latter is moved above the sill, a stop coöperating with the said means to limit the lowering movement of the sash, a support coöperating with the frame and the upper sash for holding the latter in an



open position, and means for holding the lower sash in open position and in close proximity to the upper sash.

1,169,143. DOOR. MIKE J. FURLONG, Trenton, Mo. Filed Mar. 4, 1915. Serial No. 12,178. (Cl. 20—19.)



In a device of the class described, a track secured upon one wall of a building, another track secured on another wall of the building but terminating short of said first track to permit the passage of a roller thereon, a door, a bracket pivoted thereto, a roller journaled in said bracket directly above said door to move upon said first-mentioned track, a support secured at the other end of the door and flanged outwardly therefrom, a bracket pivoted thereto, and a roller journaled in said bracket outside of the vertical line of the door and engaged upon the second track.

1,169,144. MUSIC-LEAF TURNER. ANNIBALE GASPERETTI and CARLO DALBONI, New York, N. Y. Filed Dec. 4, 1914. Serial No. 875,457. (Cl. 84—17.)

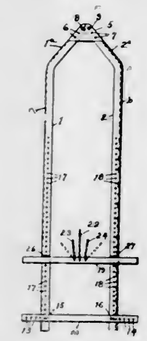
1. In a device of the kind described, the combination of a body secured to a sheet to be turned, and having a portion free to move with respect to the sheet, a member adapted to be first passed behind the body, and means movable with reference to said member after said member passes behind the body, to coöperate with said member in the engagement of the body, whereby the body can be actuated to turn the sheet.

2. A turning device for sheets of music, comprising an arm movable on a pivot at one end thereof, a lever pivoted on the arm remote from the said end, means for revolving the arm and the lever bodily around the pivot of said arm, means for locking the arm and lever to each other, engaging means carried by the device and actuated to move into operative position with respect to a sheet of music when the arm and the lever come together, means for then revolving the arm and the lever in the opposite direction to turn the sheet, and means for unlocking the arm and the lever from each other and releasing the sheet when the turning has been effected.



3. In a device of the kind described, the combination of a music rest, a rotatable head carried by a plate supporting the rest, a short arm connected to the head by a pivot parallel to the plate, an arm connected to the first arm, a lever pivoted to the second arm intermediate the ends of the latter, an upstanding pin and a perforated locking dog on the outer end of the lever, a finger on the second arm to actuate the dog, a bolt for locking the second arm and lever together, means on the rest for releasing the second arm and lever, a track piece having a sloping end on the plate to support the first arm, a bridge piece providing a drop for the second arm at the end of the track piece, and a finger actuated by the first arm, located adjacent the track piece.

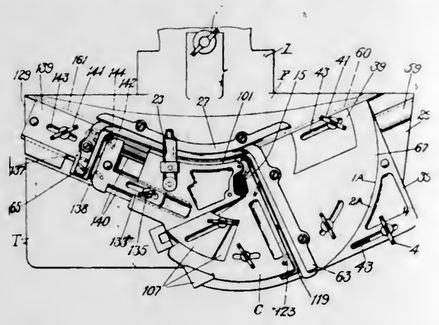
1,169,145. PELT STRETCHING AND DRYING DEVICE. JESSE L. GIBSON, Centerville, Ind. Filed Feb. 13, 1915. Serial No. 7,933. (Cl. 149—21.)



A pelt stretching and drying device, comprising in combination, a pair of arms having rounded outer edges and whose upper ends curve inwardly toward each other and having threaded apertures formed through said end portions, a triangular plate adapted to contact with the faces of said end portions of the arms, there being two lines of apertures formed through said plate, screws

adapted to be inserted in said apertures in the plate and secured in said threaded apertures of the curved portions of the arms whereby the curved portions of the arms are made adjustable with relation to each other, a spreader-bar having two open slots therein opening out at the ends and adapted to allow said arms to operate therein, there being a plurality of apertures formed through the outer portions of said bars, removable pins adapted to be inserted in said apertures in the spreader-bar to hold the spreader bar in place, there also being a plurality of apertures formed in the arms to receive said pins, a stretcher-bar having slots in its ends in which may operate the main portions of the arms, a stationary double hook secured in the center of the stretcher-bar, movable hooks pivoted in the stretcher bar and located on each side of the double hook, and pins adapted to be inserted in apertures in the arms to hold the stretcher-bar in adjusted position, all substantially as shown and described.

1,169,146. FOLDING-MACHINE. ANTON HAAHR, Copenhagen, Denmark, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 9, 1912. Serial No. 696,119. (Cl. 12—55.)



1. In a machine of the class described, a folder, a former and a supporting table, each comprising a main section and an angularly adjustable section, and means for holding said adjustable sections in position.

2. In a machine of the class described, a folder comprising a main section, a slidably adjustable section connected with said main section, an angularly adjustable section, also connected with said main section, and means for holding said adjustable sections in adjusted position.

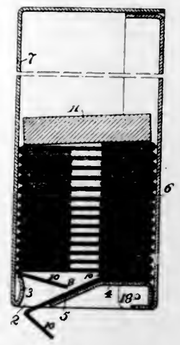
3. In a machine of the class described, a folder comprising a main section, an edge gage mounted thereon, an adjustable section, and a second edge gage mounted on said adjustable section, the outline of the operative faces of said gages corresponding to the outline of the portion of the blank to be folded, the construction and arrangement being such that the continuity of the outline presented by said gages is preserved in the different positions of said adjustable sections.

4. In a machine of the class described, a folder comprising a main section, an edge gage mounted thereon, an angularly adjustable section, and a second edge gage mounted on said adjustable section, the outline of the operative faces of said gages corresponding to the outline of the portion of the blank to be folded, the construction and arrangement being such that the continuity of the outline presented by said gages is preserved in the different positions of said angularly adjustable section.

5. In a machine of the class described, a folder comprising a main section, an edge gage mounted thereon, an adjustable section slidable with respect to said main section in a direction parallel to the adjacent face of said gage, and a second edge gage mounted upon said adjustable section, the end of said second gage being approximately in contact with the face of the said first gage in the different positions of said slidable section.

[Claims 6 to 19 not printed in the Gazette.]

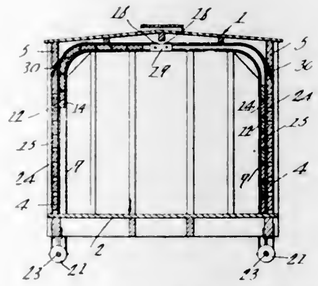
1,169,147. DISPENSING-CABINET FOR PAPER TOWELS, &c. ERNEST A. HAMILTON, Philadelphia, Pa., assignor to Scott Paper Company, a Corporation of Pennsylvania. Original application filed Mar. 28, 1914, Serial No. 827,808. Divided and this application filed July 21, 1915. Serial No. 41,092. (Cl. 211—29.)



1. In a dispensing cabinet, a body of rectangular shape having a suitable closure, said cabinet having its bottom formed with an opening extending along the length of the cabinet and close to one side, said opening being bounded on one side by a narrow support close to one interior wall of the cabinet and bounded on the other side by an inclined support terminating at its upper end in a substantially horizontal wide shelf sufficient to support the paper package of sheets to be dispensed, and the space between the narrow support and the shelf being greatly wider than the width of the opening between the narrow support and the lower edge of the inclined support.

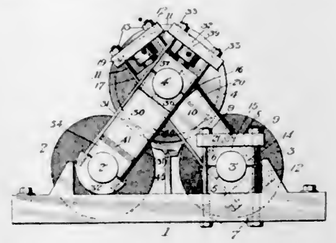
2. In a dispensing cabinet, a body of rectangular shape having a suitable closure, said cabinet having its bottom formed with an opening extending along the length of the cabinet and close to one side, said opening being bounded on one side by a narrow support close to one interior wall of the cabinet and having its supporting edge considerably above the opening, and bounded on the other side by a bottom plate extending away from the opening and terminating in a wide shelf adjacent to the opposite wall of the cabinet and at a higher elevation than the opening, the space between the shelf and the support being much greater than the width of the opening in the bottom of the cabinet.

1,169,148. STOCK AND BOX CAR. CHARLES R. HAVERLY, Springfield, Mo. Filed Apr. 2, 1915. Serial No. 18,814. (Cl. 119—8.)



A combined box and stock car having open sides; tracks extended transversely of the car and embodying inner and outer flanges; direction-changing idlers located adjacent the center of the car; flexible closures for the open sides of the car and mounted to move between the flanges; guides on the outer face of the car; flexible elements secured to the closures, the flexible elements being looped around the idlers and being extended outwardly along the outer flanges and resting thereon, the flexible elements being extended through the side walls of the car and downwardly through the guides; and shafts journaled on the car adjacent its longitudinal edges, the flexible elements being operatively connected with the shafts.

1,169,149. SUGAR-CANE MILL. ALEXANDER GILCHRIST HAWES, Las Delicias, Cuba. Filed Jan. 29, 1915. Serial No. 5,029. (Cl. 100—47.)



1. In a sugar-cane mill, the combination with the upper roll and two lower rolls, of regulable means for imposing compound pressure on the upper roll, the resultant of which pressure is constant as to direction and intensity for varying conditions of feed.

2. In a sugar-cane mill, the combination with the upper roll and two lower rolls, of regulable means for imposing two component pressures on the upper roll normal respectively to the axes of the upper and the two lower rolls, whereby the resultant pressure on said upper roll is maintained constant for varying conditions of feed.

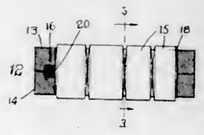
3. In a sugar-cane mill, the combination with the upper roll and the two lower rolls, of links pivotally connected to the lower rolls and having journal bearings in which the upper roll is supported, and regulable means carried by each link for imposing pressure on the upper roll.

4. In a sugar-cane mill, the combination with the upper roll and the two lower rolls, of two pairs of links pivotally connected to the lower rolls and having journal bearings in which the upper roll is supported, and regulable means carried by each link for imposing pressure on the upper roll.

5. In a sugar-cane mill, the combination with the upper roll and the two lower rolls, of two pairs of links pivotally connected to the lower rolls and having journal bearings in which the upper roll is supported, and a regulable hydraulic jack carried by each link for imposing pressure on the upper roll.

[Claims 6 and 7 not printed in the Gazette.]

1,169,150. ROLLER-BEARING. LEWIS R. HEIM, Danbury, Conn., assignor to The Ball and Roller Bearing Company, Danbury, Conn., a Corporation of Connecticut. Filed Mar. 6, 1915. Serial No. 12,525. (Cl. 64—50.)

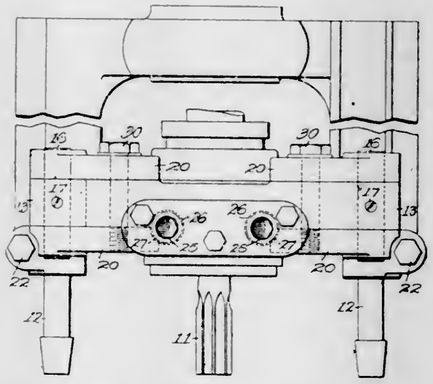


1. A bearing of the character described comprising plates having undercut radial slots, corresponding slots in the respective plates forming sockets, rollers of different lengths in said sockets, said plates being provided on their inner faces with corresponding circular grooves which form a circular socket intersecting the outer ends of the radial sockets, and a thrust ring in the circular socket which takes the end thrust of the rollers.

2. A bearing of the character described comprising plates having radial sockets formed therein and extending through the plates and a circular socket intersecting the ends of the radial sockets, rollers in the radial sockets and a thrust ring in the circular socket which takes the end thrust of the rollers.

3. In a roller bearing the combination of plates having radial sockets and a circular socket intersecting the outer ends of the radial sockets, said sockets being half formed in each plate, rollers in the radial sockets and a thrust ring in the circular socket which receives the end thrust of the rollers and holds the plates concentric.

1,169,151. PROFILING-MACHINE. FRED K. HENDRICKSON, Worcester, Mass., assignor to Reed-Prentice Company, a Corporation of Massachusetts. Filed June 9, 1915. Serial No. 33,203. (Cl. 90—13.2.)



1. In a profiling machine, the combination with a supporting head having fixed means for guiding and holding a profiling tool and provided with a horizontal shelf, of a guide pin holder pivoted on said shelf resting on its upper surface and projecting under its lower surface for supporting a guide pin, said holder being adapted to guide the pin toward and from the profiling tool about said pivot for adjusting purposes.

2. In a profiling machine, the combination with a supporting head, having a curved surface on its outer side and provided with a projection extending to the center of the curve and a pivot on said projection, of a guide pin holder mounted to swing about said pivot and to fit said curved surface.

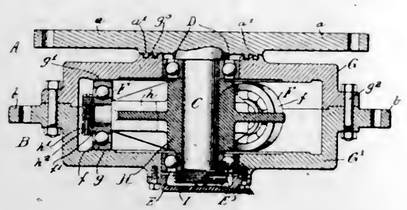
3. In a profiling machine, the combination with a supporting head having fixed means for guiding and holding a profiling tool, of a guide pin holder pivoted on said head for supporting a guide pin, said holder being adapted to swing the guide pin toward and from the profiling tool about said pivot for adjusting purposes and a binding screw carried by the holder for securing it in fixed position to the head.

4. In a profiling machine, the combination with a supporting head having fixed means for guiding and holding a profiling tool and provided with a horizontal projection and an arcuate surface extending from said projection, of a guide pin holder pivoted on said projection at the center of said arcuate surface and having means for supporting a guide pin, and a surface fitting said arcuate surface, said holder being adapted to swing toward and from the profiling tool about said pivot, while said surfaces are in contact.

5. In a profiling machine, the combination with a supporting head having a curved outer surface, a guide pin holder supported on said head and having a surface fitting said curved surface for steadying the guide pin holder, and means for adjusting said guide pin holder along said curved surface.

[Claims 6 and 7 not printed in the Gazette.]

1,169,152. VEHICLE FIFTH-WHEEL. HENRY HESS, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 9, 1911. Serial No. 664,707. (Cl. 21—24.)



1. A vehicle fifth-wheel comprising in combination the upper and lower members adapted to be connected to the vehicle body and axle respectively, said lower member having a hollow construction closed beneath, said upper member having rigid with it a central stud projecting downwardly into the lower member, an upper and a lower horizontal radial bearing interposed between said stud and said lower member, and three or more spaced-apart vertical roller wheels within and near the periphery of said lower member, having rim contact with only the hollow lower member and having their hubs supported by rigid connection to the upper member.

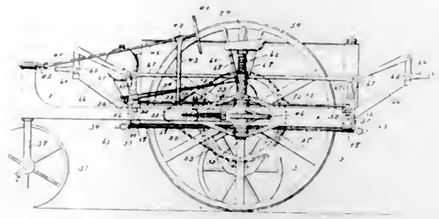
2. A vehicle fifth-wheel comprising in combination two coöperating members adapted to be connected to the vehicle body and axle respectively, one of said members having an annular peripheral flange constituting of it a hollow housing, the second member having rigid with it a central stud projecting vertically into the hollow of the first member, an upper and a lower horizontal radial bearing located in the hollow of the first member and interposed between said stud and said first member, and three or more spaced-apart vertical roller wheels located in the hollow of said first member, having rim contact with the first only of said members and having their hubs supported by rigid connection to the other member.

3. A vehicle fifth-wheel comprising in combination two coöperating members, the first of said members having a hollow construction, the second member having rigid with it a central stud projecting vertically into the first member, an upper and a lower horizontal radial bearing interposed between said stud and said first member, and three or more spaced-apart vertical roller wheels between and near the peripheries of said members, having rim contact with one only of said members and having their hubs supported by rigid connection to the other member, the said first member formed with internal tracks both above and below said wheels, spaced apart slightly more than the wheels' diameters.

4. A vehicle fifth-wheel comprising in combination two coöperating members, the first of said members having a hollow construction, the second member having rigid with it a central stud projecting vertically into the first member, an axially elongated bearing device interposed between said stud and said first member, and three or more spaced-apart vertical roller wheels within and near the peripheries of said hollow first member, having rim contact with one only of said members and having their hubs supported by rigid connection to the other member, and the parts so constructed as to afford a housing inclosing said wheels both above and below and protecting the same.

5. A vehicle fifth-wheel comprising in combination two coöperating members, the first of said members having a hollow construction, the second member having rigid with it a central stud projecting vertically into the first member, an axially elongated bearing device interposed between said stud and said first member, and three or more spaced-apart vertical roller wheels between and near the peripheries of said members, having rim contact with one only of said members and having their hubs supported by rigid connection to the other member, the said first member formed with internal tracks both above and below said wheels, spaced apart slightly more than the wheels' diameters.

1,169,153. TRACTOR. GEORGE HIRACSKO, Schenectady, N. Y. Filed Apr. 17, 1915. Serial No. 22,096. (Cl. 21—114.)



1. In a tractor, and in combination, a main-truck having a traction-wheel; a reversible steering-truck-frame pivotally mounted upon a vertical axis on the main-truck; an adjustable steering-wheel mounted upon the steering-truck-frame; a motor mounted upon the main-truck; and reversible gear-connections between said motor and said traction-wheel.

2. In a tractor, and in combination, a main-truck having a traction-wheel; a reversible steering-truck-frame pivotally mounted upon a vertical axis on the main-truck on one side of said traction-wheel; a motor mounted upon said main-truck on the opposite side of said traction-wheel; reversible gear-connections between said motor and said traction-wheel; and an adjustable steering-wheel mounted upon said steering-truck-frame.

3. In a tractor, and in combination, a main-truck-frame; a traction-wheel and an auxiliary wheel mounted upon said frame; a motor mounted upon said frame between said wheels; reversible gear-connections between said motor and said traction-wheel; a reversible steering-truck-frame pivotally mounted upon a vertical axis on said main-truck-frame on the opposite side of said traction-wheel from said motor; and an adjustable steering-wheel on the steering-truck-frame.

4. In a tractor, and in combination, a main-truck-frame having at its opposite ends steering-truck-frame-engaging seats; a traction-wheel mounted on said main-truck-frame; a motor mounted on said main-truck-frame; reversible gear-connections between said motor and said traction-wheel; a reversible steering-truck-frame pivotally mounted upon a vertical axis on said main-truck-frame and adapted to engage severally said seats on the main-truck-frame; and an adjustable steering-wheel on said steering-truck-frame.

5. In a tractor, and in combination, a main-truck-frame having on one side at its opposite ends outwardly flaring seats adapted to engage a steering-truck-frame; a traction-wheel mounted upon said main-truck-frame; a motor mounted on said main-truck-frame; reversible gear-connections between said motor and said traction-wheel; a reversible steering-truck-frame pivotally mounted upon a vertical axis on said main-truck-frame and adapted to engage severally said seats on the main-truck-frame; and an adjustable steering-wheel on said steering-truck frame.

[Claims 6 to 13 not printed in the Gazette.]

1,169,154. METHOD OF REFINING OIL. GEORGE M. HOLBROOK, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1915. Serial No. 61,502. (Cl. 87—12.)

1. The process of refining crude cotton-seel oil and the like, consisting in subjecting the oil to a mixture of an aqueous solution of caustic alkali and an aqueous solution of a silicate in such proportions that the caustic alkali neutralizes either wholly or in part the free fatty acids of the oil before the silicate can set or fix the coloring matter of the oil, and separating the refined oil from the soap-stock produced, substantially as described.

2. The process of refining crude cotton-seed oil and the like, consisting in subjecting the crude oil to a mixture of an aqueous solution of sodium hydroxid and an aqueous solution of sodium silicate in such proportions that the hydroxid neutralizes the free fatty acids either wholly or in part before the silicate can have a setting or fixing effect on the coloring matter, and separating the refined oil from the soap-stock produced, substantially as described.

3. The process of refining crude cotton-seed oil and the like, consisting in adding to the crude oil a mixture of an aqueous solution of caustic alkali and an aqueous solution of a silicate in such proportions that the caustic alkali neutralizes the free fatty acids of the oil either wholly or in part before the silicate sets or fixes the color, agitating the mixture and gradually raising its temperature, and separating the refined oil from the soap-stock produced, substantially as described.

4. The process of refining crude cotton-seed oil and the like containing approximately one (1%) per cent. of free fatty acids, consisting in adding to the oil to be treated a mixture composed of approximately four (4%) per cent. by weight of the oil under treatment of an aqueous solution of sodium hydroxid, 18 Baumé and approximately three-fourths (¾) of one (1%) per cent. by weight of the oil to be treated of an aqueous solution of sodium silicate, 41 Baumé, agitating the mixture and gradually raising its temperature until the soap-stock settles, and then separating the refined oil from the soap-stock produced, substantially as described.

1,169,155. PROCESS OF REFINING OIL. GEORGE M. HOLBROOK, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 15, 1915. Serial No. 61,503. (Cl. 87—12.)

1. The process of refining crude cotton-seed oil and the like, consisting in substantially neutralizing the free fatty acids of the oil by caustic alkali, then treating the oil with a mixture of caustic alkali and a silicate, and separating the refined oil from the soap-stock formed, substantially as described.

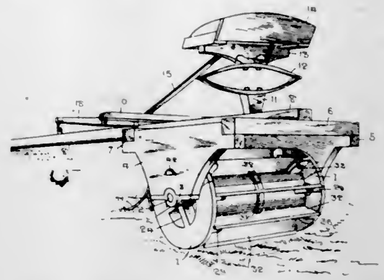
2. The process of refining crude cotton-seed oil and the like, consisting in substantially neutralizing the free fatty acids of the oil by an aqueous solution of caustic alkali, then treating the oil with a mixture of an aqueous solution of caustic alkali and an aqueous solution of a silicate, and separating the refined oil from the soap-stock formed, substantially as described.

3. The process of refining crude cotton-seed oil and the like, consisting in substantially neutralizing the free fatty acids of the oil out of contact with a silicate, then producing compacted or condensed soap-stock or foots in the presence of a silicate, and separating the refined oil from such soap-stock or foots, substantially as described.

4. The process of refining crude cotton-seed oil and the like, consisting in substantially neutralizing the free fatty acids of the oil by a sodium hydroxid solution, then subjecting the oil to a mixture of an aqueous solution of sodium hydroxid and an aqueous solution of sodium silicate, and separating the refined oil from the soap-stock or foots produced, substantially as described.

5. The process of refining crude cotton-seed oil and the like having approximately 1% of free fatty acids, consisting in adding to the crude oil approximately 1% by weight of a sodium hydroxid solution, 18 Baumé, and agitating the same until the free fatty acids are substantially neutralized, then adding a mixture of approximately 3% by weight of the oil treated of an aqueous solution of sodium hydroxid, 18 Baumé, and approximately ¾ of 1% by weight of the oil treated of an aqueous solution of sodium silicate, 44 Baumé, agitating the mixture, and slowly raising the temperature to approximately 115° Fahrenheit, and then separating the refined oil from the soap-stock produced, substantially as described.

1,169,156. STALK-CUTTER. HENRY T. HOLTON and WILLIAM J. JEWELL, Fitzgerald, Ga. Filed Jan. 13, 1915. Serial No. 2,011. (Cl. 55—61.)



1. A stalk cutter comprising a drum composed of a plurality of sections, a plurality of cutter blades attached to said drum, each section of said drum comprising a body section, end flange sections, and cutter blade flanges attached to said end flange sections, said cutter blades being attached to said cutter blade flanges.

2. In a stalk cutting device, a plurality of semi-cylindrical sections, said sections when assembled forming a complete drum, and comprising a cylindrical body section, a plurality of spoke-like sections running from the body section to a center, an axle bearing groove running longitudinally of said central spoke section, right angular extended flanges projecting from said body section at the ends thereof, and a plurality of cutter-blade flanges projecting at right angles from said end flanges, and a plurality of cutter blades attached to said cutter blade flanges and having their cutting edges projecting beyond the periphery of the end flanges.

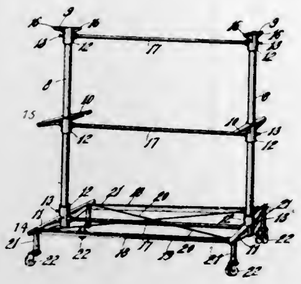
3. In a stalk cutting device, a drum-like structure comprising a plurality of sections, a plurality of spokes to each section having apertures through said spokes, a flange upon each end of said section forming a portion of a disk, a plurality of flanges projecting from each end flange having apertures centrally disposed therein, and a plurality of cutter blades attached to said last mentioned flanges through said last mentioned apertures, said sections being bolted together to form a completed drum by means of the apertures in the afore mentioned spokes.

4. In a stalk cutting device, a drum-like structure comprising a plurality of sections, a plurality of spokes to each section having apertures through said spokes, a flange upon each end of said section forming a portion of a disk, a plurality of flanges projecting from each end flange having apertures centrally disposed therein, a plurality of cutter blades attached to said last mentioned flanges through said last mentioned apertures, said sections being bolted together to form a completed drum by means of the apertures in the afore mentioned spokes, and spacing blocks arranged centrally around said drum for reinforcing said blades intermediate of their ends.

1,169,157. CASKET-DISPLAY RACK. GOTTLOB F. HONOLD, Sheboygan, Wis. Filed Sept. 6, 1912. Serial No. 718,791. (Cl. 211—14.)

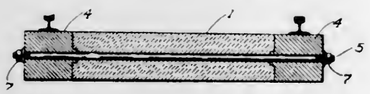
A casket display rack comprising a pair of spaced upright posts, brackets adjustably connected to the lower ends of the posts and provided with horizontal arms extending outwardly from opposite sides of the posts for supporting caskets thereon on both sides of said posts and provided with depending portions forming supporting legs, transverse members connecting the brackets together in

spaced relation, and upper brackets connected together and to the upper end portions of the posts and provided



with outwardly horizontally extending casket supporting arms for supporting a single casket thereon.

1,169,158. RAILROAD-TIE. HORATIO G. HOUGHTON, Green Bay, Wis. Filed July 20, 1915. Serial No. 40,914. (Cl. 238—3.)



1. A tie of the class described, comprising a rectangular block composed of plastic material, shock absorbing means adapted to form a bed for rails secured at each end of the said rectangular block, and a tie bolt adapted to pass longitudinally through the said shock absorbing means and rectangular block for securely binding the said parts together.

2. A tie comprising a rectangular block composed of plastic material, shock absorbing rail beds composed of a fibrous material and adapted to be secured to each end of the said rectangular block and a tie bolt adapted to pass centrally and longitudinally through the said shock absorbing blocks and rectangular block for binding the said parts together.

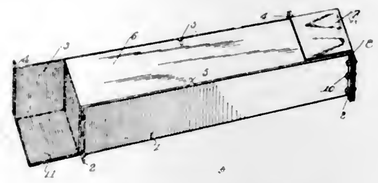
3. A tie comprising a rectangular block composed of plastic material, transverse slots in the ends of said block, shock absorbing bed blocks composed of a fibrous material and provided with transverse tongues adapted to fit the slots in the ends of said rectangular block, and a tie bolt adapted to pass longitudinally through the said parts for securely binding them together.

4. A tie comprising a concrete rectangular block having transverse slots in the ends thereof, wooden rail beds or blocks secured adjacent the ends of said concrete block, said wooden blocks provided with transverse tongues adapted to engage the said transverse slots for the purpose of holding the said wooden blocks in alinement therewith, and a tie bolt adapted to pass longitudinally through the said wooden blocks and concrete block for binding the same together.

1,169,159. RAILROAD-TIE. HORATIO G. HOUGHTON, Green Bay, Wis. Filed Nov. 13, 1915. Serial No. 61,279. (Cl. 238—5.)

1. A tie comprising a pair of side members each provided with a flange, an elongated block of wear resisting material arranged between said side members, said flanges extending into said elongated block, shock absorbing means adapted to form a bed for the rails provided adjacent each end of said elongated block, and means for securely holding the said parts together.

2. A tie comprising a pair of side members arranged in staggered relation to each other, a filler block of concrete provided between said side members and extending between the overlapping portions of said side members, shock absorbing means adapted to form a bed for the rails provided adjacent each end of said filler block and abutting the same, and means for securely holding the said parts together.



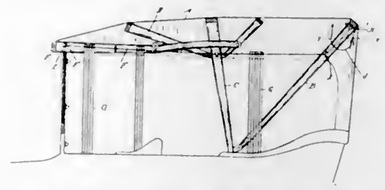
3. A tie comprising a pair of side members arranged in staggered relation to each other, a rectangular block of concrete provided between said side members and having a length equal to the length of the overlapping portions of said side members, rail bed blocks composed of fibrous material abutting the ends of said rectangular block and forming extensions thereof, and means for securely holding said parts together.

4. A tie comprising a pair of side member arranged in staggered relation to each other, a rectangular block of concrete provided between said side members and having a length equal to the length of the overlapping portions of said side members, rail bed blocks composed of fibrous material abutting the ends of said rectangular block and contacting with the projecting ends of one of said side members, and means for securely holding said parts together.

5. A tie comprising a pair of side members arranged in staggered relation to each other, a rectangular block of concrete provided between said side members, rail bed blocks composed of fibrous material abutting the ends of said rectangular block and forming extensions and angle plates contacting with two sides of said rail bed blocks, said angle plates being secured to adjacent ends of said side members.

[Claim 6 not printed in the Gazette.]

1,169,160. CURTAIN. FRANK H. ILSE, Detroit, Mich., assignor to Jiffy Auto Curtain Company, Detroit, Mich., a Corporation of Delaware. Filed Oct. 31, 1914. Serial No. 869,567. (Cl. 156—41.)



1. The combination with a vehicle canopy top having a depending "quarter" of a curtain, a storage pocket for said curtain beneath the canopy top, and a cable on which said curtains are strung extending from said pocket downward to the lower edge of the "quarter," and parallel to the latter, the curtain being slidingly displaceable on to the inclined portion of the cable to permit of its disposal in the storage pocket.

2. The combination with a vehicle canopy top having a depending "quarter" of side curtains therefor, a cable on which said curtains are strung having one end attached adjacent to the plane of the top of the canopy, and a guide with which said cable is detachably engaged for holding the main portion thereof parallel to and substantially in the plane of the lower edge of the "quarter," the curtains being slidable upon said cable to a position adjacent the canopy top, subsequent to disengagement of the cable from said guide.

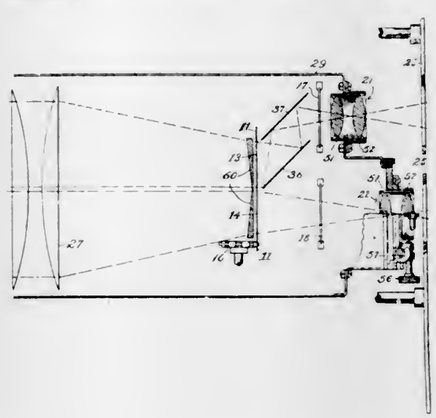
3. The combination with a vehicle canopy having an inclined rear bow and a depending "quarter," of side curtains, a cable on which said curtains are strung extending parallel to the lower edge of said "quarter" and having an extension to the cross-bar of said rear bow, and a guide with which said cable is detachably engaged for holding the suspension portion parallel to and substantially in the plane of the lower edge of said "quarter."

4. The combination with a vehicle canopy provided with an inclined rear bow having its cross-bar in the plane of the canopy top and a depending "quarter," of a cable extending parallel to the side, curtains strung upon said cable, a guide on the inclined portion of said rear bow for holding said cable below the plane of the canopy top and substantially in the plane of the lower edge of said "quarter," and an extension of said cable beyond said guide attached to the cross-bar of the bow on which said curtains may be slid to storage position.

5. The combination with a vehicle canopy having an inclined rear bow with its cross-bar in the plane of the canopy top and a depending "quarter," of a curtain storage pocket secured to said cross-bar, a cable extending from said pocket substantially in the plane of the canopy top, down the inclined portion of the bow and horizontally parallel to the lower edge of the "quarter," a guide on said bow with which said cable is detachably engaged for holding the same in position, and curtains strung upon said cable and movable thereon into engagement with said storage pocket when said cable is detached from said guide.

[Claims 6 to 9 not printed in the Gazette.]

1,169,161. MOTION-PICTURE APPARATUS. FREDERIC EUGENE IVES. Woodcliffe-on-Hudson, Bergen county, N. J. Filed July 26, 1913. Serial No. 781,319. (Cl. 88—16.4.)



1. Color motion picture apparatus including in combination, mechanism for advancing a single strip of film having a plurality of adjacent series of image spaces representing the colors selected, a plurality of adjustable and relatively large sized lenses in front of the film, and spaced apart with parallel axes separated further than the centers of the respective image spaces, and optical lateral parallel displacement means between film and lens for bringing lens and image space into optical registry while maintaining the direction of the light axis.

2. Color motion picture apparatus including in combination, mechanism for advancing a single strip of film having a plurality of adjacent series of image spaces representing the colors selected, a plurality of relatively large lenses in front of the film, and spaced apart with parallel axes separated further than the centers of the respective image spaces, means for effecting relative lateral adjustment of a lens while maintaining its parallelism, and optical lateral parallel displacement means between film and lens for bringing lens and image space into optical registry while maintaining the direction of the light axis.

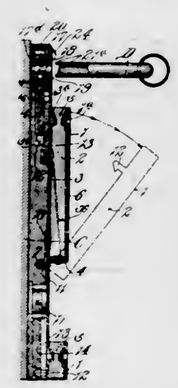
3. Color motion picture apparatus including in combination, a single strip of film having a plurality of adjacent series of image spaces representing the colors selected, mechanism for advancing said film, a plurality of adjustable and relatively large sized lenses in front of the film, and spaced apart with parallel axes separated further than the centers of the respective image spaces, and optical lateral parallel displacement means between film and lens for bringing lens and image space into optical registry while maintaining the direction of the light axis.

4. Color motion picture apparatus including in combination, a single strip of film having a plurality of adjacent series of image spaces representing the colors selected, mechanism for advancing said film, a plurality of lenses in front of the film, and spaced apart with parallel axes separated further than the centers of the respective image spaces, and optical lateral parallel displacement means between film and lens for bringing lens and image space into optical registry while maintaining the direction of the light axis, and a second optical displacement means located in front of the lenses and between them and a single front aperture or light axis.

5. Color motion picture apparatus including in combination, a single strip of film having a plurality of adjacent series of image spaces representing the colors selected, mechanism for advancing said film, a plurality of lenses in front of the film, and spaced apart with parallel axes separated further than the centers of the respective image spaces, and optical lateral parallel displacement means between film and lens for bringing lens and image space into optical registry while maintaining the direction of the light axis, and a second optical displacement means, including a transparent reflector coöperating with other reflectors, located in front of the lenses and between them and a single front aperture or light axis.

[Claims 6 and 7 not printed in the Gazette.]

1,169,162. CHECK-HOLDER. WILLIAM W. KAY, St. Louis, Mo. Filed Feb. 11, 1914. Serial No. 818,062. (Cl. 40—15.)



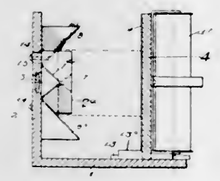
1. A check-holder comprising a base portion, a movable portion hinged thereon that coöperates with said base portion to form a receptacle for a check, coöperating parts on said portions that form a chute, and a key-controlled means for locking said movable portion in its closed position.

2. A check-holder comprising a face-plate provided with a hinged member that forms part of a check receptacle, said plate and member having coperating chute portions, a boss on said face-plate surrounding a key-opening, a locking device arranged on the under side of said face-plate for locking said hinged member in its closed position, and a key-actuated element rotatably mounted on the boss on the face-plate and adapted to move said locking device into an inoperative position.

3. A check-holder comprising a face-plate provided with a movable member that forms part of a check receptacle, coöperating portions on said face-plate and member that constitute a receiving chute, a boss on said face-plate surrounding a key-opening, a locking device arranged on the under side of said face-plate for locking said movable member in its closed position, a key-actuated element rotatably mounted on the boss on the face-plate and adapted to move said locking device into an inoperative position, and a cylindrical stud that extends through said boss so as to necessitate the use of a tubular key.

4. A check-holder comprising a face-plate provided at its edge with an angularly-disposed flange, a door hinged to said face-plate and provided with side flanges that bear against the face-plate, said door and face-plate being provided with coöperating portions that form a contracted receiving chute for the check that is introduced into the holder, and means arranged under the face-plate for locking said door in its closed position.

1,169,163. STEREOSCOPIC APPLIANCE. GUSTAV A. HERMANN KELLNER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Original application filed May 31, 1907, Serial No. 376,515. Divided and this application filed Aug. 7, 1909. Serial No. 511,743. (Cl. 88—31.)



1. A stereoscope adapted to hold a picture comprising picture units that are arranged in different horizontal planes, and provided with reflecting surfaces which are so arranged that they will displace said picture units into apparent optical coincidence; substantially as described.

2. A stereoscope provided with means for supporting a picture comprising images or picture units located in different horizontal planes, lenses and reflecting surfaces so arranged relatively to the lenses that they will displace the images or picture units of said picture into apparent optical coincidence; substantially as described.

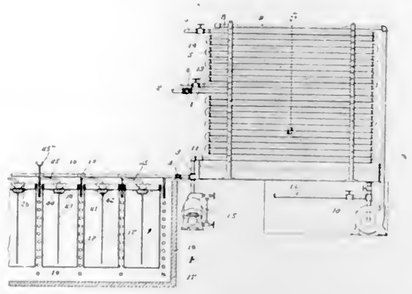
3. A stereoscope provided with lenses, a picture comprising picture units that are arranged in different horizontal planes, and reflecting surfaces for displacing said picture units into apparent optical coincidence; substantially as described.

4. A stereoscope provided with means for holding a picture that comprises a pair of picture units arranged in different horizontal planes, said stereoscope being provided with inclined reflecting surfaces which cause both picture units to appear to be in optical coincidence; substantially as described.

5. A stereoscope provided with lenses, and a pair of parallel reflecting surfaces coöperating with each lens for displacing images or pictures located in different horizontal planes into apparent optical coincidence; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,169,164. APPARATUS FOR MANUFACTURING ICE. WILLIS B. KIRKPATRICK, Baltimore, Md., assignor to Independent Ice Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Feb. 9, 1915. Serial No. 6,987. (Cl. 62—159.)



1. In an apparatus for making can ice from raw water, means for agitating the water by aeration consisting of an air supply pipe, an air delivery pipe connected thereto, and means in the air passage thus formed for throttling the air in the form of a pointed member with a minute orifice at the point for the pasage of the air.

2. In an apparatus for making can ice from raw water, means for agitating the water by aeration consisting of an air supply pipe, an air delivery pipe connected thereto and means in the air passage thus formed for throttling the air consisting of a member in the air passage for obstructing the flow of air, the said member having a small aperture for the passage of the air and an inclined surface sloping backward from said orifice to prevent the accumulation of foreign matter tending to close the orifice.

3. In an apparatus for making can ice from raw water, means for agitating the water by aeration consisting of an air pipe leading toward the cans and means for throttling the air consisting of a plug in the pipe having a pointed surface, the point being disposed in a direction opposing the air current and the plug having a minute orifice through which the air passes, the entrance to the orifice being located at the vertex or point.

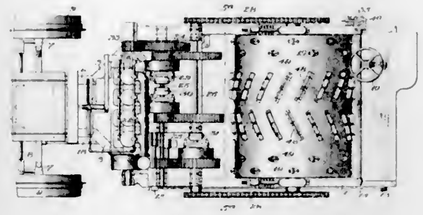
4. In an apparatus for making can ice from raw water, means for agitating the water by aeration consisting of a supply of compressed air, an air passage for leading the air toward the cans, an obstruction in the air passage having a point extending backward in a direction contrary to the air current, the point having a minute orifice for the passage of the air.

5. In an apparatus for making can ice from raw water, means for agitating the water by aeration consisting of air supply pipe, an air delivery pipe, means connecting the two pipes, means in the air passage thus formed for reducing the pressure of the air for delivery, the same being in the form of an obstruction to the air passage, the said member having a minute aperture for the passage of air which normally serves as a means for reducing the delivery pressure but in case the air passage beyond the orifice becomes closed, permits the building up of the delivery pressure until it equals the supply pressure.

1,169,165. TRACTOR. WALTER C. KNAPP, Rochester, N. Y., assignor, by mesne assignments, to Joseph W. Gray, Minneapolis, Minn. Filed Aug. 30, 1912. Serial No. 777,857. (Cl. 21—114.)

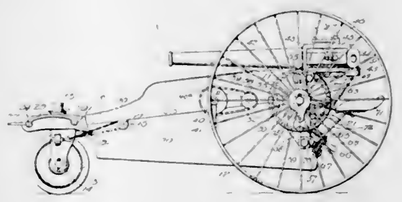
1. A tractor comprising a frame, an axle and combined steering and rolling wheels at the front, and a driving wheel having a tread as wide as the distance between the front wheels, said driving wheel being journaled near the rear of the frame.

2. A tractor comprising an axle and combined steering and rolling wheels at the front, a frame having a reduced forward portion arranged intermediate said steering wheels and to which the axle is attached, a driving wheel having a tread as wide as the distance between the steering wheels, said driving wheel being journaled near the rear of the frame, an engine disposed on the frame between the driving wheel and the steering wheels an axle on which the driving wheel is mounted, a sprocket wheel attached to each end of the last mentioned axle, and transmission gearing connecting the engine and said sprocket wheels.



3. A tractor comprising a frame, an axle and combined steering and rolling wheels arranged at the forward part of the frame, a driving wheel disposed in rear of the steering wheels having a tread as wide as the distance between the steering wheels, said driving wheel being journaled in the frame at its widest part and having its edges adjacent to the sides of the frame, an engine between the steering wheels and the driving wheel, and transmission gearing connecting the engine and the driving wheel.

1,169,166. ORDNANCE. JOSEPH S. KNOWLES, Atlanta, Ill. Filed Aug. 14, 1915. Serial No. 45,500. (Cl. 89—41.)

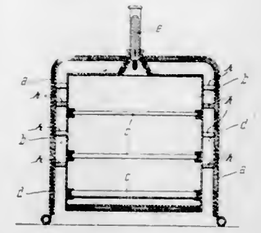


1. In a gun, the combination of the barrel, a vertically tiltable support to which the barrel is pivoted to swing laterally, an elevating screw for the barrel, a non-traveling nut on the screw, operating means for the nut, a slide carrying the nut and the operating means, and a tiltable support for the slide parallel to the barrel support.

2. In a gun, the combination of the barrel, a vertically tiltable support to which the barrel is pivoted to swing laterally, an elevating screw for the barrel, a non-traveling nut on the screw, a gear on the nut, a slide carrying the nut, a gear carried by the slide and meshing with the first-mentioned gear, and a tiltable support for the slide parallel to the barrel support.

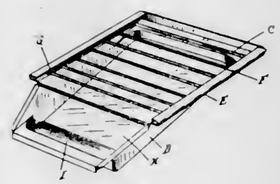
3. In a gun, the combination of the barrel, a vertically tiltable support to which the barrel is pivoted to swing laterally, a tiltable cross-bar parallel to the support and having a longitudinal slot, a slide mounted on the cross-bar and having spaced parts straddling the cross-bar and apertures in line with the slot, an elevating screw connected to the barrel and passing through the apertures and the slot, a non-traveling nut on the screw, said nut having a gear, and an actuating gear on the slide and in mesh with the first-mentioned gear.

1,169,167. PORTABLE BOILING, ROASTING, AND BAKING APPARATUS. CARL LAMPERT, Frankfort-on-the-Main, Germany. Filed Oct. 5, 1911. Serial No. 652,973. (Cl. 126—275.)



A portable boiling, roasting and baking apparatus adapted to be removably set upon a stove or the like and comprising an insulated container completely open at the bottom and having an apertured end wall and an opening in its top wall, a chamber supported in said container and having one end sealed by an end wall of the container and its other end open and located in said end wall aperture, said chamber having uninsulated side and top walls spaced respectively from the side and top walls of the container to form a heating space between said container and chamber and having no communication with the latter, said chamber being further provided with an insulated bottom arranged to extend over the stove or the like, an insulated closed channel bridging the space between the top walls of the chamber and container and connecting the opening in the top wall of the container with the interior of the chamber, said channel being adapted to receive a temperature indicating device, an insulated door for and fitting into the open end of said chamber whereby the latter is sealed against the atmosphere and baffle plates located in the heating space between the side walls of the container and chamber for retarding the upward travel of the hot gases.

1,169,168. DRIP-PAN. JOHN H. LANE and JOHN C. SCHENK, Detroit, Mich., assignors to Peninsular Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 5, 1914. Serial No. 870,432. (Cl. 53—5.)

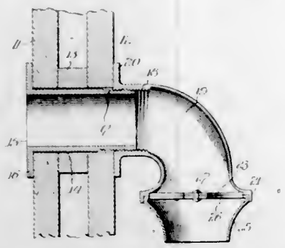


1. The combination with a drip pan having laterally extending flanges upon opposite sides thereof, forming supports for the pan and provided with rebent portions forming guides at opposite sides of the pan, and a grid engageable with said guides by a movement longitudinally of the pan.

2. The combination with a drip pan provided with laterally extended supporting portions shaped to form guides, of a grid having its lateral edges engageable with said guides, the rear wall of the drip pan forming an abutment at its upper edge limiting rearward movement of the grid in said guides.

1,169,169. [WITHDRAWN.]

1,169,170. ADJUSTABLE EXHAUST OR RESPIRATOR FOR CARS. GEORGE F. LAUGHLIN, Chicago, Ill., assignor of one-half to George B. Robbins, Chicago, Ill. Filed Nov. 6, 1912. Serial No. 729,712. (Cl. 98—22.)



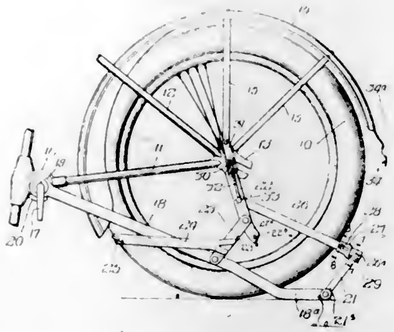
1. A respirator device for temperature modified cars, comprising a pipe communicating horizontally between the interior upper area of a car and the exterior of the car, said pipe having an outer terminal portion opening downwardly and provided with a web partially closing the open end of the same, a nozzle member formed as a downwardly tapering truncated cone and having at its upper end a web adapted to coöperate with the first named web to form a valve, means to secure the nozzle member rotatably within the lower end of the pipe, the said nozzle member having concave exterior side faces arranged to receive horizontal atmospheric currents and deflect the same downwardly parallel to the axis of said member and adjacent the lower mouth of the same whereby to induce a suction through said nozzle and pipe, substantially as described.

2. A respirator device for temperature modified cars, comprising a pipe communicating horizontally between the interior upper area of a car and the exterior of the car, said pipe having an outer terminal portion opening downwardly and provided with a web partially closing the open end of the same, a nozzle member formed as a downwardly tapering truncated cone and having at its upper end a web adapted to coöperate with the first named web to form a valve, lips depending from the periphery of the pipe and inwardly bent into engagement with the nozzle member whereby to mount the latter within the open end of the pipe for rotary movement, the nozzle member having concave exterior side faces arranged to receive horizontal atmospheric air currents and deflect the same downwardly parallel to the axis of said member and adjacent the lower mouth of the same whereby to induce a suction through said nozzle and pipe, substantially as described.

3. In a temperature modified car, means to provide for respiration of the car interior comprising a pair of pipes establishing communication horizontally between the upper interior area of the car and the exterior on the two sides thereof, each of the pipes having an outer terminal portion opening downwardly and provided with a web partially closing the open end of the same, a nozzle member formed as a downwardly tapering truncated cone and having at its upper end a web adapted to coöperate with the first named web to form a valve, means to secure the nozzle member rotatably within the lower end of the pipe, the said nozzle member having concave exterior side faces arranged to receive horizontal atmospheric currents and deflect the same downwardly parallel to the axis of said member and adjacent the lower mouth of the same whereby to induce a suction through said nozzle and pipe, substantially as described.

1,169,171. MOTOR-CYCLE SUPPORT. AXEL LEVEDAHL, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Delaware. Filed May 2, 1914. Serial No. 835,830. (Cl. 208—78.)

1. A supporting device for motor vehicles, comprising a side bar member pivotally mounted on the vehicle frame and adapted to engage the ground at its free end, and means for raising and lowering said side bar member, comprising a toggle lever pivotally connected to said vehicle frame and said side bar member, and a foot-operated lever arm rigidly attached to one of the members of the toggle lever.



2. A supporting device for motor vehicles, comprising a side bar member pivotally mounted on the vehicle frame and having its free end adapted for contact with the ground, a toggle lever consisting of pivotally connected link members connected with said vehicle frame and with said side bar member, and a foot-operated lever arm rigidly attached to one of said link members of the toggle lever for straightening said members, said link members being provided with co-acting locking members acting to lock the same in straightened position.

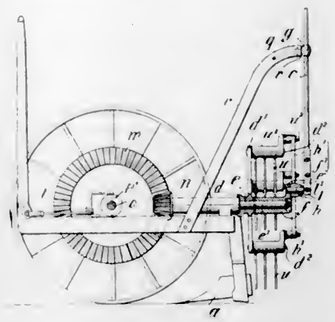
3. A supporting device for motor vehicles, comprising a side bar member pivotally mounted on the vehicle frame and having its free end adapted for contact with the ground, a toggle lever pivotally connected with the vehicle frame and with said side bar member, a lever arm rigidly connected with one of the members of said toggle lever and adapted to receive pressure to straighten said toggle lever in one direction, and a spring connected with said vehicle frame and with the other of said members of the toggle lever, acting to flex the toggle lever in the opposite direction.

4. A supporting device for motor vehicles, comprising a side bar member pivotally mounted on the vehicle frame and having its free end adapted for contact with the ground, a toggle lever pivotally connected with the vehicle frame and with said side bar member, a lever arm rigidly connected with one of the members of said toggle lever and adapted to receive pressure to straighten said toggle lever in one direction, a spring connected with said vehicle frame and with the other of said members of the toggle lever, acting to flex the toggle lever in the opposite direction, and means for locking said members of the toggle lever in straightened position.

5. A supporting device for motor vehicles, comprising a side bar member pivotally mounted on the vehicle frame and adapted to engage the ground at its free end, and means for raising and lowering said side bar member, comprising a toggle lever pivotally mounted on said vehicle frame and said side bar member, and comprising pivotally connected link members adapted to assume an angular relation when the free end of said side bar member is substantially level with the ground, a foot-operated lever arm rigidly attached to one of the members of the toggle lever and adapted to receive downward pressure to depress said side bar member, and a spring connected with said toggle lever and the vehicle frame, acting to raise said side bar member from contact with the ground when the pressure is released from said lever arm.

[Claims 6 to 20 not printed in the Gazette.]

1,169,172. POTATO-DIGGER. WILHELM ADALBERT LIPPITZ, Posen, Germany, assignor to the Firm of Gebruder Lesser, Posen, Germany. Filed June 15, 1914. Serial No. 845,118. (Cl. 55—56.)



1. In a potato digger, a driving shaft carrying a star wheel, crank forks journaled on the arms of said star wheel, a sleeve loosely journaled on said driving shaft and provided with a radial arm, a journal pin carried by this arm, another star wheel journaled on this journal pin and pivotally connected to the crank arms of the forks, and depending means connected to the frame of the vehicle and to the rear end of said journal pin for holding said journal pin against lateral swinging.

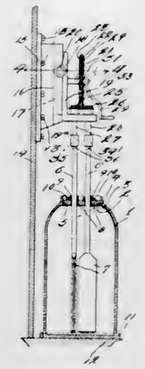
2. In a potato digger, a vehicle frame, a driving shaft, a star wheel affixed to the driving shaft and carrying pivotally mounted crank forks, a journal pin and means for supporting it entirely upon said driving shaft, this journal pin being supported eccentrically to said driving shaft, a star wheel journaled on said pin and pivotally connected to the crank arms of the forks, and an adjustable rod depending from the frame of the vehicle for holding said journal pin against lateral movement.

3. In a potato digger, a vehicle frame, a driving shaft, a star wheel affixed to the driving shaft and carrying pivotally mounted crank forks, a journal pin and means for supporting it entirely upon said driving shaft, this journal pin being supported eccentrically to said driving shaft, a star wheel journaled on said pin and pivotally connected to the crank arms of the forks, and means depending from the frame of the vehicle for holding said journal pin against lateral movement, said means embodying a rod constructed of material which is easily breakable as compared with the aforesaid mechanism.

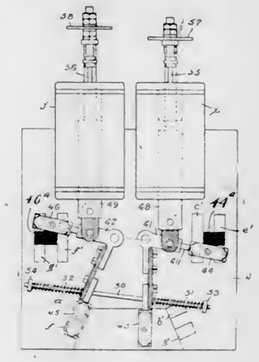
4. In a potato digger, a vehicle frame, a driving shaft, a star wheel affixed to the driving shaft and carrying pivotally mounted crank forks, a journal pin and means for supporting it entirely upon said driving shaft, this journal pin being supported eccentrically to said driving shaft, a star wheel journaled on said pin and pivotally connected to the crank arms of the forks, and means depending from the frame of the vehicle for holding said journal pin against lateral movement, said means embodying a depending rod affixed at its lower end to said journal pin and means whereby the upper end of said rod may be laterally adjusted on the frame.

1,169,173. CHURN. WILLIAM J. MCINISH, Tallassee, Ala. Filed June 30, 1915. Serial No. 37,235. (Cl. 31—44.)

In combination, a churn receptacle, a pair of churning elements operable in said receptacle and having shanks penetrating through and revoluble in the top of the receptacle and terminating at their upper extremities in squared ends, a pair of revoluble members alined axially with the upper end of said shanks and having squared sockets to receive said squared ends, means for operating said revoluble members, and a pair of collars, one adjustable upon each shank, said collars having set screws to hold the collars in adjusted positions on the shanks, and which collars constitute means to engage the top of the receptacle as the shanks rotate, to support the churning elements as they rotate in raised or lowered positions, said collars while acting to hold the shanks and the churning elements axially in raised and lowered positions constitute means to hold the squared ends of the shanks constantly in the squared sockets.



1,169,174. ELECTRIC DRIVING APPARATUS. MARTIN B. MCLAUTHLIN, Malden, and ARTHUR K. TYLEE, Brookline, Mass. Filed July 9, 1909. Serial No. 506,760. (Cl. 172—152.)



1. An electric motor control comprising, in combination with a motor, switches for causing said motor to drive in opposite directions, magnets for shifting said switches, a main circuit including said magnets and having normally open manually controlled switches, means for breaking said circuit when either magnet is energized, and a normally open shunt circuit of greater resistance than the main circuit arranged to furnish current to said magnet when the main circuit is broken.

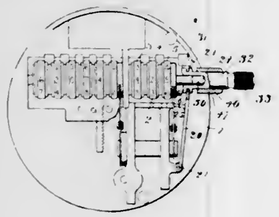
2. An electric motor control comprising, in combination with a motor, switches for causing said motor to drive in opposite directions, solenoid magnets for shifting said switches, each having a core, a main circuit including said magnets and having normally open manually controlled switches, a switch in said circuit adjacent to each

of said magnets, means for causing the core of each magnet to strike the adjacent switch a sharp blow when energized, to open the switch and breake the arc, and a normally open shunt circuit of greater resistance than the main circuit arranged to furnish current to said magnet when the main circuit is broken.

3. An electric motor control comprising, in combination with a motor, switches for causing said motor to drive in opposite directions, solenoid magnets for shifting said switches, a main circuit including said magnets and having normally open manually controlled switches, means for breaking said circuit when either magnet is energized, and an auxiliary circuit for supplying current to said magnet when the main circuit is broken.

4. An electric motor control system comprising in combination with a motor armature circuit of a plurality of switches for controlling the direction of current passing through said circuit, two solenoid magnets for shifting said switches, a primary circuit for said solenoids, manually operated switches in said primary circuit, a circuit breaking device for each solenoid in said primary circuit, a striker arranged for operation by the core of each solenoid for operating said circuit breaker, a shunt circuit for said solenoids, and means rendered operative by the manual completion of the primary circuit for completing said shunt circuit, and thereby causing the active one of said solenoids to remain in an energetic condition after operation of its corresponding circuit breaker to interrupt the primary circuit.

1,169,175. ODOMETER. RAY H. MANSON, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 12, 1912. Serial No. 725,423. (Cl. 235—144.)



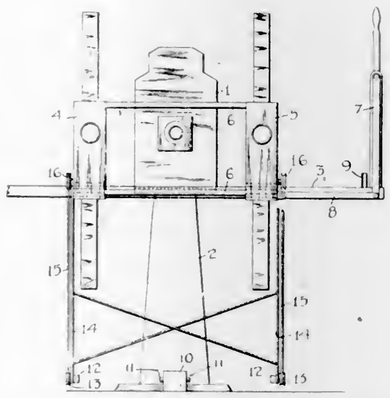
1. In an odometer, the combination of registering means, driving mechanism therefor, including a ratchet wheel and a driving pawl adapted to drive the registering means to any one of a plurality of positions, holding means for the registering means including a holding pawl and teeth on the ratchet wheel, apparatus for releasing the ratchet wheel from the pawls and assuming control thereof independently of the pawls including a pivoted lever provided with a cam for camming the pawls away from the ratchet wheel, and a manually operable sliding member to engage the ratchet wheel to operate the same.

2. In an odometer, the combination of registering means, including rotary reference carrying members, a ratchet wheel associated with the registering means, mechanism for driving said registering means, including a driving pawl and teeth on the ratchet wheel, mechanism for holding said registering means in driven position including a holding pawl and teeth on the ratchet wheel, apparatus for removing said registering means from the control of said driving mechanism and said holding means, including a cam adapted when operated to move said pawls from engagement with the teeth on the ratchet wheel, means to assume control of said registering means when the pawls have been disengaged from the ratchet wheel and a device for operating both the cam and the last named means to move the registering means in either direction when it has been released from the pawls.

3. In an odometer, the combination of registering mechanism including a ratchet wheel, a driving pawl and a holding pawl therefor, a lever carrying a cam for releasing said ratchet wheel from said pawl, said ratchet wheel being provided with a plurality of slots, a plunger controlling said lever to move said cam to engage said pawls to release said ratchet wheel from said pawls and a catch on said plunger for engaging one of the slots in the ratchet wheel and adapted to drive the same independently of the pawls to cause said registering mechanism to show any desired indication.

4. In an odometer, the combination of registering means, including rotary reference carrying members and a ratchet wheel, a driving and a holding pawl, a lever pivoted in said odometer, a cam member on said lever projecting at an angle from said lever, said cam member carrying two cam surfaces adapted to engage said pawls to disengage them from the ratchet wheel, said ratchet wheel being provided with a plurality of slots, means for engaging a slot to drive said registering mechanism independently of said pawls and a device controlling said lever and said last named means.

1,169,176. MOVING-PICTURE APPARATUS. WILLIAM C. MARTIN, New York, N. Y. Filed July 15, 1915. Serial No. 39,963. (Cl. 88—16.)



1. Moving picture apparatus, comprising a lamp house, two film mechanisms movably supported and guided so as to be movable alternately into operative relation to the lamp house, and driving means adapted to be connected automatically with each of said mechanisms when brought into said operative relation.

2. Moving picture apparatus, comprising a lamp house, a track, two film mechanisms mounted for movement on said track, a driving motor, and means for shifting said mechanisms alternately into operative relation to the lamp house and the motor.

3. Moving picture apparatus, comprising a single lamp house, two film mechanisms, mechanical provisions for relative guided movement between said lamp house and film mechanisms, a single driving motor, and means whereby said motor is automatically connected and disconnected with the film mechanisms according as the latter are in or out of operative relation to the lamp house.

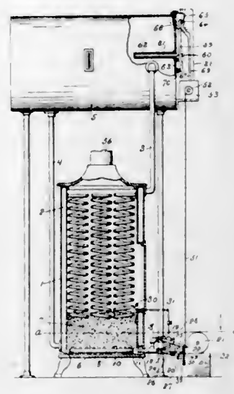
4. Moving picture apparatus comprising two film mechanisms, a single motor for driving the same, a single lamp house, and mechanical provisions for relative guided movement between said film mechanisms, lamp house and motor whereby to establish operative relations between said film mechanisms alternately, on the one hand, and the lamp house and motor on the other hand.

5. Moving picture apparatus comprising a single motor and a single lamp house, two film mechanisms, and means

for supporting and guiding said film mechanisms for movement so that either may be brought into operative relation to the lamp house and motor.

[Claim 6 not printed in the Gazette.]

1,169,177. CONFINED-COMBUSTION GAS-BURNING APPARATUS. LEE B. METTLER, Kansas City, Mo. Filed Aug. 7, 1912. Serial No. 713,853. (Cl. 158—119.)



1. In a furnace, a mixer having a gas inlet and an air inlet, means for supplying gas to the gas inlet, means for forcing air into the mixer through said air inlet, a motor for operating said air forcing means, means for controlling the flow of gas through said gas inlet, and means controlled by said gas controlling means for controlling the operation of the motor.

2. In a furnace, a mixing having a gas inlet and an air inlet, means for controlling the flow of gas through the gas inlet, means for forcing air through the air inlet, and means controlled by the gas inlet controlling means for controlling the operation of the air forcing means.

3. In a furnace, a mixer having a gas inlet and an air inlet, a valve controlling the gas inlet, means for opening and closing the valve, means for supplying the air inlet with air under pressure, a motor for operating the air supplying means, and means controlled by the valve opening and closing means for controlling the operation of the motor.

4. In a furnace, a mixer having a gas inlet and an air inlet, a valve controlling the gas inlet, a compressor for forcing air into said air inlet, a motor for operating said compressor, means for operating said valve, and means controlled by the valve operating means controlling the operation of the motor.

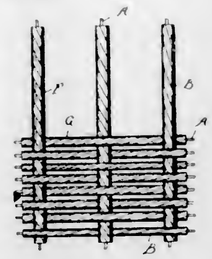
5. In a furnace, a mixer having a gas inlet and an air inlet, a valve controlling the gas inlet, means for operating the valve, means for forcing air into the air inlet, and means controlled by the valve operating means for controlling said air forcing means to permit the flow of air to the air inlet after the valve has been opened and to shut off the supply of air from said air inlet after the valve has been closed.

1,169,178. ARTIFICIAL REED. JOHN D. MILLER, Jackson, Mich., assignor of one-half to A. D. McBurney and one-half to H. L. Hitchcock, Jackson, Mich. Filed Dec. 4, 1914. Serial No. 875,504. (Cl. 28—5.)

1. An artificial reed, comprising a resilient core and a spiral wrapping of fibrous material thereon.

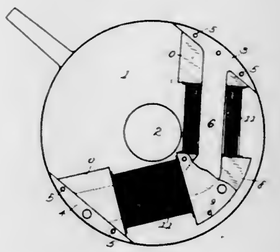
2. An artificial reed, comprising a core formed of a resilient metallic wire, and a spiral wrapping of fibrous material covering said core.

3. A woven fabric formed of interlaced strands each comprising a resilient metallic core, and a spiral wrapping of fibrous material.



4. A woven fabric comprising interlaced warp and woof strands exerting a lateral tension upon each other, each formed of a resilient core and a spiral wrapping of fibrous material, said warp strands being of larger diameter than the woof strands and being substantially straight.

1,169,179. MAGNETO-ARMATURE. HERMAN C. MUELLER, Milwaukee, Wis., assignor to Evinrude Motor Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed June 1, 1915. Serial No. 31,353. (Cl. 171—207.)



1. A magneto armature, comprising a supporting centrally apertured disk, in combination with armature head pieces secured to the outer marginal portions of said disk at diametrically opposite points, an elbowed core extending around said aperture and connecting the head pieces, a supporting and spacing member connecting the elbowed portion of the core with the disk, and windings upon the core on each side of said member between it and the head pieces.

2. A magneto armature, comprising a supporting centrally apertured disk, in combination with a V-shaped armature core having a winding upon each leg thereof, and connected with the disk between the windings, head pieces connected with said core and located upon said disk at points diametrically opposite each other.

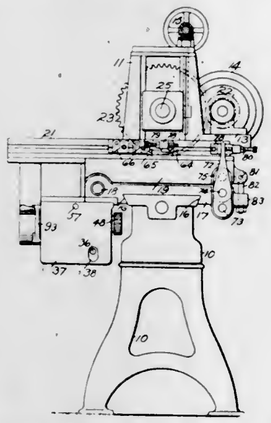
3. A magneto armature, comprising a supporting centrally apertured disk, in combination with a V-shaped armature core having a winding upon each leg thereof, and connected with the disk between the windings, head pieces connected with said core and located upon said disk at points diametrically opposite each other, and a set of triangular spacers between the windings and the respective head pieces.

4. A magneto armature, comprising a supporting centrally apertured disk, in combination with a V-shaped armature core, having a winding upon each leg thereof and connected with the disk between the windings, and head pieces connected with said core and located upon said disk at points diametrically opposite each other, said head pieces and core being integrally formed.

5. A magneto armature, comprising a supporting centrally apertured member, a set of armature head pieces

secured to said supporting member on diametrically opposite sides of said aperture and provided with segmeutally curved outer surfaces, an elbowed core extending around said aperture on one side and connecting said head pieces, a spacing connector securing the elbowed portion of said core to the supporting member, and a winding between the spacing connector and each head piece.

1,169,180. DROP-TABLE MECHANISM FOR MILLING-MACHINES. ALBERT E. NEWTON and FRED K. HENDRICKSON, Worcester, Mass., assignors to Reed-Prentice Company, a Corporation of Massachusetts. Filed Dec. 21, 1914. Serial No. 878,270. (Cl. 90—18.)



1. In a milling machine, the combination with a drop work table, of positive means for automatically raising it, holding it at a constant level throughout the working stroke, and then allowing it to descend and means carried by the table for actuating said positive means.

2. In a milling machine, the combination with a work table support pivoted at one end, and a sliding work table supported thereon, of means for raising the free end of said work table, and means operated by the sliding work table for causing said work table to drop when it moves to a predetermined point.

3. In a milling machine, the combination with a drop work table mounted to move up and down, and a sliding work-table supported thereon, of a toggle joint connected with said work table for raising it and means connected with the sliding table for operating said toggle joint.

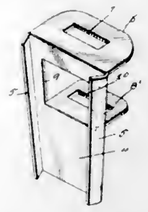
4. In a milling machine, the combination with a drop work table pivoted near one end, of a toggle joint connected with the other end for raising it, and reciprocating means supported on said table for operating said toggle joint.

5. In a milling machine, the combination with a pivoted work table support, of a link connected with the free end thereof, a lever pivoted to a stantionary part of the machine and also connected to said link, whereby when said lever is operated the end of the table support will be raised, or lowered, means for operating the lever, and means connected with said table support for holding it firmly in position when elevated so as to prevent chattering.

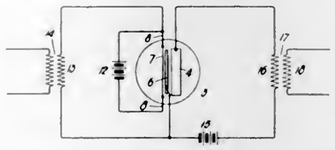
[Claims 6 to 12 not printed in the Gazette.]

1,169,181. BRAKE-BLOCK HOLDER. JOHN S. NICHOLS, Batesville, Ark. Filed Jan. 17, 1914. Serial No. 812,750. (Cl. 21—82.)

As a new article of manufacture, a brake block holder formed from a blank sheet of material comprising a body, said body provided with a pair of side flanges being slightly inturned and converging toward the lower end of said body, said body provided with a rearwardly extending flange upon the upper end thereof and bent at right angles to said body, said body provided with an outwardly struck flange arranged in spaced relation from said first-mentioned flange, and said flanges provided with apertures for receiving a securing bolt whereby said brake block holder may be efficiently connected to a brake beam.



1,169,182. THERMIONIC TRANSLATING DEVICE. ALEXANDER MCLEAN NICOLSON, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 19, 1915. Serial No. 22,306. (Cl. 179—171.)



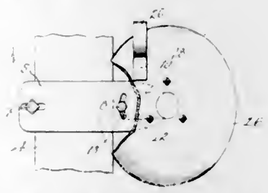
1. In a thermionic translating device, a heated input electrode, and a cathode surface made thermionically active by heat radiation from said input electrode.

2. In a thermionic translating device, a thermionically active cathode surface and a heated electrode adjacent said surface and serving the double purpose of an input electrode and a heater for said surface.

3. A thermionic translating device comprising an evacuated vessel, a cathode and an input electrode within said vessel and means outside said vessel for incandescing said input electrode.

4. A thermionic translating device comprising an evacuated vessel, an equi-potential cathode within said vessel, an input electrode also within said vessel and in close proximity to said cathode, and means outside said vessel for heating said input electrode and thereby rendering said cathode thermionically active.

1,169,183. FURROWING ATTACHMENT. OSCAR F. ORNDOFF, Council Bluffs, Iowa. Filed Jan. 29, 1915. Serial No. 5,015. (Cl. 111—11.)



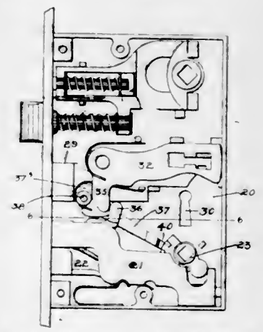
1. A furrowing attachment comprising a block having bearing extensions extending laterally at opposite sides thereof; a disk journaled in each of said extensions; supporting plates disposed on opposite sides of said block and having perforations engaging said extensions and arcual slots concentric with the perforations; and a bolt passing through said block and said arcual slots adjustably securing the block between the plates.

2. A furrowing attachment comprising a block having two laterally diverging bearing extensions thereon adjacent one of its edges; a disk journaled in each of said extensions; plates disposed on opposite sides of said block and each plate having an end portion perforated and disposed over one of the extensions, and an arcual slot substantially concentric with said perforation; a bolt passing through said block and the arcual slots of the plates adjustably securing the latter to said block; a support extending between said plates, the latter being provided with longitudinal slots at the edge of the support opposite said block; and a bolt passing through said longitudinal slots clamping the plates to the support.

3. A furrowing attachment comprising a supporting plate; a block adjustably secured to said plate and having a bearing extension disposed laterally at an angle thereto; a disk journaled in said bearing extension; a vertical extension on said block having its lateral sides substantially parallel with the plate; and a scraper secured to said vertical support and extending over and engaging the disk angularly.

4. A furrowing attachment comprising a block having a bearing extension disposed laterally at an angle to the block; a disk journaled in said bearing extension; a supporting plate secured to said block; a vertical extension on said block having its lateral sides substantially parallel with the plate; and a scraper secured to said vertical support and extending over and engaging the disk angularly.

1,169,184. LOCK. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Dec. 4, 1913. Serial No. 804,638. (Cl. 70—74.)



1. In a lock, the combination of a pair of thumb bolts, a key controlled bolt, and a lever carried by said latter bolt to engage and thereby retract either or both of the thumb bolts as the key bolt is retracted; substantially as described.

2. In a lock, the combination of two bolts, and a movable member carried bodily by one bolt, and adapted to engage the other bolt to retract such other bolt as said first bolt is retracted; substantially as described.

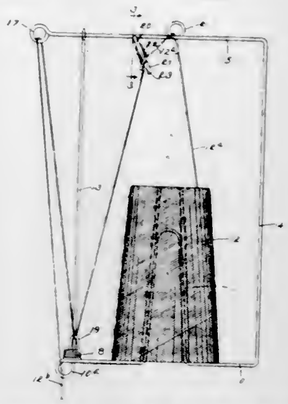
3. In a lock, the combination of two bolts, and a movable lever carried by and movable bodily with one bolt, and adapted to engage the other bolt to retract such other bolt as said first bolt is retracted; substantially as described.

4. In a lock, the combination of a thumb bolt, a key bolt, tumbler mechanisms for said bolts, means for releasing said tumbler mechanisms simultaneously, and means for retracting the thumb bolt as the key bolt is retracted; substantially as described.

5. In a lock, the combination of a thumb bolt, a key bolt, tumbler mechanisms for the respective bolts, means associated with the key bolt for releasing said tumbler mechanisms simultaneously when the key bolt is operated, and a movable member bodily carried by said key bolt and adapted to retract the thumb bolt as the key bolt is retracted; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,169,185. TWINE-HOLDER. CHARLES J. PASUBKA, Chicago, Ill. Filed Aug. 3, 1914. Serial No. 854,733. (Cl. 242—143.)



1. The combination of a pair of twine guides, an upwardly opening tension crotch therebetween, and an annular weight surrounding the crotch and movable longitudinally thereof.

2. The combination of a pair of twine guides, an upwardly opening tension crotch positioned therebetween and at a level below that of either of the guides, and an annular weight surrounding the crotch and movable longitudinally thereof.

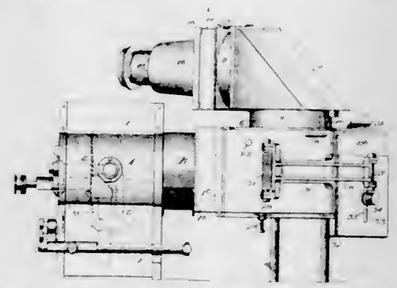
3. The combination of a pair of twine guides, an upwardly opening tension crotch positioned therebetween, and a weight movable longitudinally of the crotch and having twine engaging portions on opposite sides of said crotch.

4. The combination of a pair of twine guides, a tension crotch therebetween, a weight movable longitudinally of the crotch and having twine engaging portions on opposite sides of said crotch, and a stop limiting the movement of the weight in the direction of the point of the crotch.

5. The combination of a pair of twine guides, an upwardly opening tension crotch positioned therebetween, a weight movable longitudinally of said crotch and having twine engaging portions on opposite sides of the crotch, and a stop below the point of the crotch limiting the downward movement of the weight.

[Claims 6 to 13 not printed in the Gazette.]

1,169,186. PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Co., Rochester, N. Y., a Corporation of New York. Filed Sept. 2, 1910. Serial No. 580,153. (Cl. 88—26.)



1. The combination with a chamber, and means for directing light rays therein, of a reflector arranged in said chamber, an object-holder rotatable relatively to said re-

flector about an axis of the beam of rays reflected thereby, and a projector for the object-holder.

2. The combination with a suitable light source and a reflector arranged to receive the rays therefrom, of a reflector receiving rays directly from the first-named reflector, arranged at an oblique angle to the axis of the rays from said first-named reflector and rotatable about said axis, an object-holder rotatable with the last-named reflector, and a projector for the object-holder.

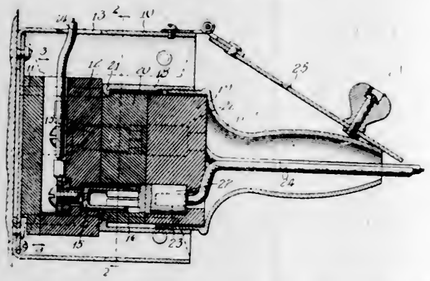
3. The combination with a casing and a condenser directing light rays therein, of a reflector arranged in the casing to reflect rays from the condenser upwardly, a member rotatable relatively to the casing about the axis of the rays from the reflector, an object-holder carried by said member, and a projector for said object-holder.

4. The combination with a chamber, means for directing light rays therein horizontally and a reflector arranged at an oblique angle to the light rays, of a second reflector arranged above the first and disposed to redirect the light rays horizontally away from the chamber in a path divergent to that along which said light rays entered the casing and an object holder and projector cooperating with the second named reflector.

5. The combination with a casing, a reflector arranged therein, of means for directing light rays to the reflector, a second casing rotatable on the first named casing about the axis of the rays from the reflector, a reflector in the second-named casing receiving rays from the first-named reflector, an object-holder receiving rays from the second-named reflector, and a projector on the rotary casing for projecting the image of an object at the object-holder.

[Claims 6 to 26 not printed in the Gazette.]

1,169,187. PLUG SWITCHING DEVICE. ALLEN S. PEARL, Maywood, and CHARLES A. JANSEN, Chicago, Ill., assignors to Delta-Star Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1912. Serial No. 738,598. (Cl. 173—338.)



1. In a plug switching device, the combination of a block of insulating material, a casing member in which said block is mounted, a plug contact mounted in said block and extending therefrom, a second block of insulating material having a recess into which said contact plug extends, one of said blocks having an opening for the insertion of a wire adapted to be connected to said contact plug, and a second casing member mounted upon said second-named block having a screw-threaded connection with said first-named casing member whereby said two blocks are clamped together.

2. In a plug switching device, the combination of a block of insulating material, a contact plug mounted therein and extending therefrom, a second block of insulating material having a recess into which said contact plug extends, said first-named block having an opening therein for the insertion of a wire adapted to be connected to said contact plug, and means independent of said contact plug for clamping said two blocks together, said second named block extending beyond the end of said contact plug and the recess in said second-named block being larger than the end of said contact plug, whereby a contact receptacle can be inserted over said contact plug and inside of said recess.

3. In a plug switching device, the combination of a contact receptacle, means for holding said receptacle in fixed position, means for connecting a wire to said contact receptacle, a block of insulating material, a contact plug mounted in a recess in said block and extending therefrom, means for connecting a wire to said contact plug within said recess, a second block of insulating material having a recess into which the extending end of said contact receptacle extends, and means acting independently of said contact plug for clamping said blocks of insulating material together for holding the contact plug removably in position extending into the recess of said second named block into engagement with said contact receptacle.

1,169,188. GOLF-BALL-ADDRESSING DEVICE. ARTHUR E. PECK, Minneapolis, Minn. Filed Jan. 20, 1915. Serial No. 3,281. (Cl. 46—4.)



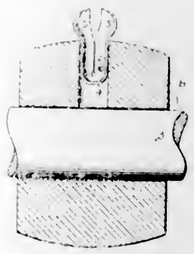
1. A device of the class described comprising a sight having means for mounting it on the head of a golf player in the line of vision between the player's eyes and the ball.

2. As a new article of manufacture, a guide for addressing the golf ball comprising a member having means for supporting it on the head of the player above the mouth and depending in the line of vision of the player's eyes on the ball.

3. A device of the class described comprising a rod having means for mounting it on a golf player's hat, and a guide hinged on the outer portion of said rod and depending therefrom.

4. A device of the class described comprising a sight device having an attaching means for mounting it on the head of the golf player and normally depending in the line of vision between the player and the ball, said sight device being capable of adjustment toward and from the face of the player.

1,169,189. PLUG FOR OIL-HOLES. ERNEST P. PIERCE, Lorain, Ohio. Filed Oct. 18, 1915. Serial No. 56,514. (Cl. 184—88.)



1. A plug for oil holes consisting of sheet metal and having a hollow tapered body and a round head in one piece.

2. A plug for oil holes as described consisting of sheet metal and having opposite sides and a divided head and said sides and head spaced at their edges.

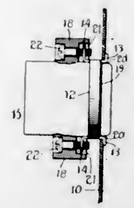
3. A plug for oil holes as described formed in a single piece of metal and having two sides with body and head portions circular in cross section and said sides integral at their lower ends.

4. A plug for oil holes as described having a tubular body divided lengthwise at its middle and having a rounded portion at one end uniting said sides and a head portion on each side.

5. A plug for oil holes having a tubular body split lengthwise and an integral portion at the bottom of said split drawn to a rounded shape and provided with a head portion on each side of said split.

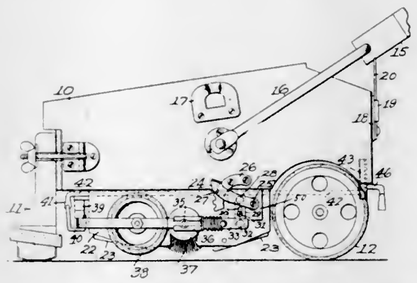
[Claims 6 and 7 not printed in the Gazette.]

1,169,190. SIGN-RECEPTACLE. CLARENCE D. PLATT, Bridgeport, Conn. Filed Aug. 10, 1914. Serial No. 855,978. (Cl. 173—339.)



The combination with a U-shaped spring holding clamp adapted to engage a hole in a sign plate and having lips for engaging the front of the plate, and ears, of a receptacle having ears provided with tapering sockets adapted to receive the ears upon the clamp and center said ears and means for locking the ears of the receptacle to the ears of the clamp.

1,169,191. CARPET-CLEANER. FRANK J. QUIST, Worcester, Mass. Filed Nov. 2, 1914. Serial No. 869,791. (Cl. 15—60.)



1. In a carpet cleaner, the combination of a casing, a frame pivoted at a point near the rear thereof, a brush and operating rollers carried by said frame, means independent of said rollers for supporting said casing, yielding means for holding said frame down, positive means for moving the frame up in opposition to said yielding means, and a handle at the rear of said casing for operating said positive means.

2. In a carpet cleaner, the combination of a casing, a frame pivoted to the casing, a brush, a roller carried by said frame for operating the brush, yielding means for holding said frame down, and positive means for holding the frame up in opposition to said yielding means, said positive means comprising a rod extending from the free end of said frame to the rear of the casing, and a handle at the rear of the casing for operating it.

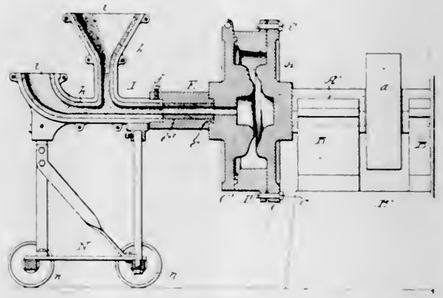
3. In a carpet cleaner, the combination of a movable frame, a brush carried by said frame, a rod having an arm on the end thereof connected with one end of said frame for raising it, and an arm on the opposite end thereof, said opposite end of the rod extending to the rear and a lever having one arm constituting a handle for operating it and the other arm engaging the last named arm on said rod for turning the rod.

4. In a carpet cleaner, the combination of a casing, a frame pivoted on the casing, a brush and operating rollers carried by said frame, means for moving the frame up about its pivots, a handle at the rear of said casing for operating said means, and means for vertically adjusting the pivots of said frame.

5. In a carpet cleaner, the combination of a support, a frame pivoted thereon, a brush carried by said frame, means for swinging said frame about its pivots to raise and lower the brush into operative and inoperative positions, and means for vertically adjusting the pivots of said frame.

[Claims 6 to 9 not printed in the Gazette.]

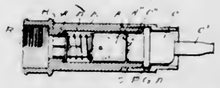
1,169,192. MACHINE FOR CASTING WHEELS AND LIKE ARTICLES. ROBERT RADFORD, Philadelphia, and JAMES E. SHEAFFER, Burnham, Pa. Filed Mar. 2, 1912. Serial No. 681,122. (Cl. 22—65.)



1. The combination in a rotary machine for casting wheels and like articles, of a mold; means for rotating said mold, said mold having a central pouring opening; a single passage leading to the mold; a pouring head having two independent mouths; a passage leading from each mouth, one passage being below the other and communicating with the passage leading to the mold so that molten metal in one of said passages may immediately follow the molten metal in the other passage.

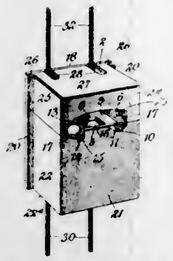
2. The combination in a rotary machine for casting wheels and like articles, of a shaft; bearings for the shaft; a rotary mold carried by the shaft; means for rotating the mold; a pouring head having a passage therein leading to the mold and having two independent mouths; a passage leading from each mouth to the passage communicating with the mold, one passage being below the other; and a coupling secured to the head and having a passage therein communicating with the passage in the pouring head and with the center of the mold.

1,169,193. AUTOMATIC SAFETY-CLUTCH. EMILE H. RAMELLI, New Orleans, La. Filed Apr. 8, 1915. Serial No. 20,082. (Cl. 192—9.)



A clutch adapted to yield when overloaded, comprising a casing, a rotatable member held against axial movement by the casing, a second member mounted for rotatable and axial movement in the casing, yielding means interposed between the casing and the second member for forcing said second member into engagement with said first member, the contacting portions of said members being provided with coöperating semi-spherical projections and recesses.

1,169,194. SWITCH DEVICE FOR FIRE-ALARMS. GEORGE B. RATTERMANN and WALTER W. GARRISON, Birmingham, Ala. Filed Aug. 3, 1914. Serial No. 854,735. (Cl. 200—33.)



1. A fire alarm fuse box comprising a casing, a block housed therein and having a slotted wall adjacent to the front of the casing and the latter having an opening therethrough matching the slot in the wall of the block, electric contacts carried by the inner face of the portion of the block adjacent to the front of the casing and provided with extensions, one of which projects through both the slot in the block and the front of the casing, a bracket fast to the block and extending through the slot in the front of the casing, and a fuse strip carried by the bracket and extended contact, the said extended contact having a normal tendency toward the other contact and held from engagement therewith by the fuse strip.

2. A fire alarm fuse box comprising a block having a slot at one end and side wings for spacing the block from a supporting member, electric contacts carried by the inner face of the block between the wings with one contact having a normal tendency toward the other, and provided with an extension projecting through the slot and there having a curved extremity with an entering slot thereat, a bracket fast to the outer face of the block and having an outstanding part with a curved extremity having an entering slot, and a fuse strip provided with enlarged heads at the ends adapted to engage behind the curved extremities of the contact and bracket with the fuse strip spacing the contacts apart.

3. A fire alarm fuse structure comprising a block having a slot therethrough and provided with side wings constituting spacing members, electric contacts carried by the inner face of the block between the wings, and one contact having a normal tendency toward the other and provided with an extension projecting through the slot, a bracket carried by the block and matching the extension of the extended contact, a fuse strip adapted to engage the connections and hold the extended contact out of engagement with the other contact, and a casing inclosing the block and through which the bracket and extended contact project to carry the fuse strip exterior to the casing.

4. A fire alarm fuse structure comprising a U-shaped block with a slot through the intermediate wall, an electric contact carried by the block between the sides thereof near one end of the slot, another contact having a normal tendency toward the first contact and provided with an extension projecting through the slot, a bracket carried by the block near the other end of the slot and exterior thereto, said bracket and extended contact having seats at the outer extremities, a fuse strip with heads at the ends adapted to the seats and of a length to hold the extended contact out of engagement with the other contact, and a casing housing and carrying the block with the fuse strip exterior to the front wall of the casing.

1,169,195. GAS-VALVE. GEORGE T. ROSENGREN, Chicago, Ill., assignor to Enterprise Tool & Metal Works, Chicago, Ill., a Corporation. Filed Sept. 14, 1914. Serial No. 861,506. (Cl. 240—123.)

1. In a valve, the combination with a casing, a plug-valve rotatable therein and having its stem extending laterally from the casing, a ratchet-wheel secured to said stem, a lever mounted to swing around said stem, a pawl for operating the ratchet in one direction on the lever, a spring connected to the casing and to said lever, a rigid dog pivoted to the casing, for holding the ratchet against retraction, and a stop-lug integral with and projecting laterally from the casing, for limiting the movement of the dog.



2. In a valve, the combination with a casing, a plug-valve rotatable therein and having its stem extending laterally from the casing, a ratchet-wheel secured to said stem, a lever mounted to swing around said stem, a pawl for operating the ratchet in one direction on the lever, a convolute spring having one of its ends connected to the casing and its other end to the lever, and an abutment eccentrically disposed on the lever around which the inner coil of the spring passes.

3. In a valve, the combination with a casing, a plug-valve rotatable therein and having its stem extending laterally from the casing, a ratchet-wheel secured to said stem, a lever mounted to swing around said stem, a pawl for operating the ratchet in one direction on the lever, a convolute spring having its outer end connected to the casing and its inner end to the lever, and a laterally projecting eccentric stud on the lever around which the inner coil of the spring passes.

4. In a valve, the combination with a casing, a plug-valve rotatable therein and having its stem extending laterally from the casing, a ratchet-wheel secured to said stem, a lever mounted to swing around said stem, a pawl on the lever for operating the ratchet in one direction, a spring connected to the casing and to said lever, and a cup-shaped cap secured to the stem adjacent the outer end thereof and rotatable therewith and inclosing said spring and its connections to the lever and to the casing.

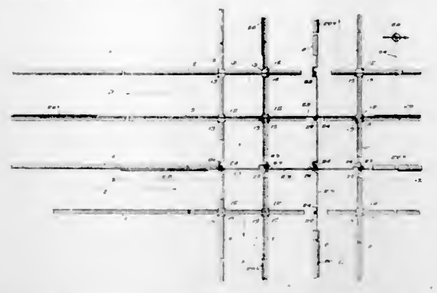
5. In a valve, the combination with a casing, a plug valve rotatable therein and having its stem extending laterally from the casing, a ratchet-wheel secured to said stem, a lever mounted to swing around said stem, a pawl on the lever for operating the ratchet in one direction, a spring connected to the casing and to said lever, a cup-shaped cap through which the stem is extended; and inclosing said spring and the connections between the spring and the casing and the lever, a shoulder on the stem against which one side of the cap bears, and a nut for removably holding the cap on the stem and against said shoulder.

1,169,196. RAILROAD-CROSSING. LUTHER SADLER and ROBERT C. GECKLER, Oakland, Cal. Filed Nov. 9, 1914. Serial No. 871,016. (Cl. 104—117.)

1. The combination with a plurality of intersecting railroad rails, of a casing formed at each intersection, a grooved turntable arranged in each casing, a recessed shank depending from said turntable, a ball bearing arranged in said recessed shank, and means for rotating said turntable.

2. The combination with a plurality of intersecting railroad rails, of a casing formed at each intersection, a grooved turntable arranged in each casing, a hollow shank depending centrally from said turntable, a post having a concave upper end extending from the bottom of said casing into the hollow portion of said shank, a ball arranged between the roof of said hollow portion and said post, and means for rotating said turntable.

3. The combination with a plurality of intersecting railroad rails, of a casing formed at each intersection, a grooved turntable arranged in each casing, a hollow shank depending centrally from said turntable, a ball between the turntable and said casing arranged in said hollow portion, a plate secured to said shank, and means for rotating said turntable.

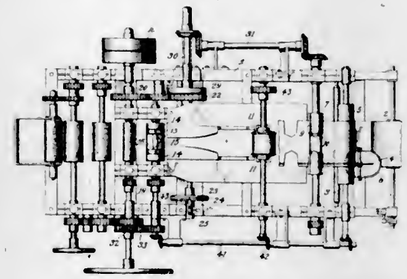


4. The combination with a plurality of intersecting railroad rails, of a casing formed at each intersection, a grooved turntable arranged in each casing, a hollow shank depending centrally from said turntable, a ball between the turntable and casing arranged in said hollow portion, a plate secured to the lower end of said shank and extending outward therefrom to the casing, said casing being provided with apertures adjacent the ends of said plate, and means for rotating said turntable.

5. The combination with a plurality of intersecting railroad rails, of a casing formed at each intersection, a grooved turntable arranged in each casing, a hollow shank depending centrally from said turntable, a ball in said hollow shank disposed between the turntable and the casing, a pinion secured to said turntable, a reciprocating rack rod engaging said pinion, a plunger adapted to be depressed arranged on one of said rails, a lever engaging said plunger, and a link secured to said rack rod and attached to the free end of said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,169,197. WEB-CUTTING MECHANISM FOR ENVELOP-MACHINES AND SIMILAR MACHINES. CHARLES B. SANDERS, Montclair, N. J., assignor to The Union Bag & Paper Company, New York, N. Y., a Corporation of New Jersey. Filed May 14, 1914. Serial No. 838,596. (Cl. 93—63.)

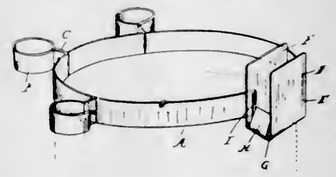


1. In a machine of the class described, the combination of a pair of rollers for feeding the web, means for continuously driving said rollers at various speeds, a pair of rollers carrying devices adapted to engage and operate upon said web at intervals in the rotation of said rollers, and means for driving said last mentioned rollers comprising a variable speed gearing whereby the surface speed of said rollers during the interval of their engagement may be varied without varying the time of rotation of said rollers, said means comprising a rotatable crank, a disk driven thereby, and means for varying the relative positions of the centers of rotation of said crank and said disk.

2. In a mechanism of the class described, the combination of a pair of coöperating rolls, a pair of draw rolls for feeding the web between said first mentioned rolls, means for driving said first mentioned rolls comprising a driving member having a crank pin, a driven disk having a transverse slot engaged by said crank pin, and means for bodily adjusting the shaft of said driving member relative to the center of rotation of said driven disk.

3. In a machine of the class described, the combination of a pair of rolls, a pair of draw rolls for feeding a web through said first mentioned rolls, a driving shaft, a change gear between said driving shaft and said draw rolls, means for driving said first mentioned rolls comprising a supporting shaft having a stub axle eccentric thereto, a driving gear supported on said stub axle and driven from said driving shaft, a driven shaft out of alinement with said supporting shaft, a disk mounted on said driven shaft and having a transverse slot, a crank pin carried by said driving gear and engaging said slot, driving connections between said disk and said rolls, and means for rotatably adjusting said supporting shaft and locking the same in adjusted position.

1,169,198. COMBINED PIPE AND MATCH HOLDER FOR TOBACCO-JARS. EDWARD B. T. SCHUMACHER, Detroit, Mich., assignor to John J. Bagley & Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 16, 1914. Serial No. 867,030. (Cl. 131—59.)



1. The combination with a metallic band for surrounding a jar having returnbent hooks at its opposite ends, of a match box holder struck up from a single sheet metal blank, having L-shaped slits therein for detachable engagement with said hooks while said band surrounds the jar and forming a tie connection therebetween.

2. The combination of a resilient metallic band for surrounding a jar, and having a loop formed in the intermediate portion thereof constituting a pipe holder, and a match-box holder having L-shaped slits for detachably engaging the ends of said band and forming a tie connection therebetween.

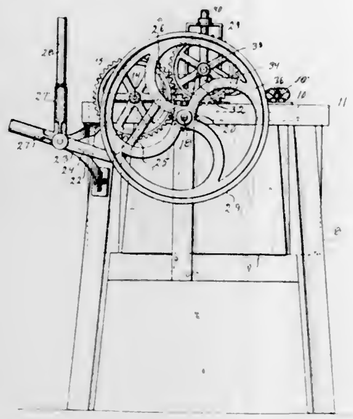
3. The combination with a resilient metallic band for surrounding a jar having returnbent hooked ends and an intermediate portion bent to form a plurality of outwardly-extending closed loops, and a match-box holder struck up from sheet metal having L-shaped slits for detachable engagement with said returnbent hooks and forming a tie connection therebetween.

1,169,199. WASHING-MACHINE MECHANISM. JOHN G. SEELIG, Ripon, Wis. Filed Oct. 31, 1914. Serial No. 869,507. (Cl. 74—50.)

1. A washing machine mechanism, comprising a support provided with a hinged portion, a vertical shaft carried by the hinged portion, a horizontal shaft carried by the hinged portion and having a gear wheel mounted on one end and a driving connection with the vertical shaft at its opposite end, a driving gear wheel mounted in a position to revolve concentrically with relation to the hinge pintles of the hinged portion and being in constant mesh with the hinged portion gear wheel, a fly wheel having a geared connection with the driving gear wheel, and means for rotating one of said wheels.

2. A washing machine mechanism, comprising a support provided with a hinged portion, a vertical shaft carried by the hinged portion, a horizontal shaft carried by the hinged portion and having a gear wheel mounted

on one end and a driving connection with the vertical shaft at its opposite end, a driving gear wheel mounted in a position to revolve concentrically with relation to the hinged pintles of the hinged portion and being in constant mesh with the hinged portion gear wheel, a fly wheel having a geared connection with the driving gear wheel, and a lever having a connection with the driving gear wheel for rotating said wheels.



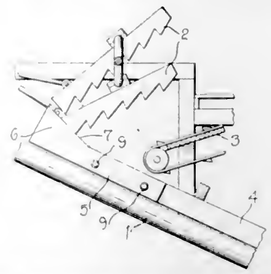
3. A washing machine mechanism, comprising a support, having a hinged portion, a vertical shaft carried by the hinged portion, a horizontal shaft carried by the hinged portion and having a gear wheel mounted on its outer end and a driving connection with the vertical shaft at its inner end, a driving gear wheel journaled on the support and having its axis of revolution concentric with relation to the hinge pintles of the hinged portion and being in constant mesh with the hinged portion gear wheel, a fly wheel mounted on the support and having a geared connection with the driving gear wheel, and a lever fulcrumed on the support and having a connection with the driving gear wheel for rotating said wheels.

4. A washing machine mechanism, comprising a support, having a hinged portion, a vertical shaft carried by the hinged portion, a horizontal shaft carried by the hinged portion and having a gear wheel mounted on its outer end and a driving connection with the vertical shaft at its inner end, a driving gear wheel journaled on the support and having its axis of revolution concentric with relation to the hinge pintles of the hinged portion and being in constant mesh with the hinged portion gear wheel, a fly wheel mounted on the support and provided with a pinion in constant mesh with the driving gear, a lever fulcrumed on the support, and a member pivotally connected to the lever and having a wrist pin connection with the driving gear.

5. A washing machine mechanism, comprising a support, having a hinged portion, a vertical shaft carried by the hinged portion, a horizontal shaft carried by the hinged portion and having a gear wheel mounted on its outer end and a driving connection with the vertical shaft at its inner end, a driving gear wheel journaled on the support and having its axis of revolution concentric with relation to the hinge pintles of the hinged portion and being in constant mesh with the hinged portion gear wheel, a fly wheel mounted on the support and provided with a pinion in constant mesh with the driving gear, a bracket projecting from the support, a three arm bell crank lever fulcrumed on the bracket, two of the arms of said lever being of tubular form, an operating handle removably extending into one of the tubular arms, and a member pivotally connected to the lever and having a wrist pin connection with the driving gear.

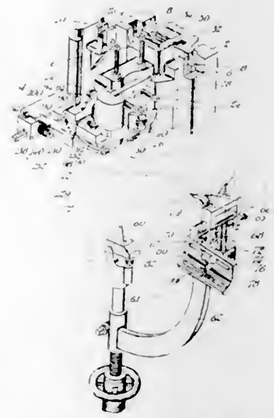
[Claims 6 and 7 not printed in the Gazette.]

1,169,200. CORN SHREDDING AND HUSKING MACHINE. JOHN SEUBERT, Sioux Falls, S. D. Filed Sept. 12, 1914. Serial No. 861,458. (Cl. 130—5.)



The herein described divider bar for corn husking machines consisting of a bar having one end gradually increasing in width to provide a relatively forward edge extending at ringht angles to the base edge thereof for engagement with the stalks in the forward movement of the bar, the upper edge of said widened portion of said bar being obliquely inclined downward toward the rear end thereof, substantially as and for the purpose described.

1,169,201. SHOEMAKING-MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 25, 1912. Serial No. 686,042. (Cl. 12—47.)



1. A heel breasting machine having, in combination, a breasting knife and shoe positioning means comprising a heel support and a forepart rest adapted to engage the shoe externally and formed with inclined shoe engaging faces to center the shoe automatically on it, said rest being supported for limited movement laterally in either direction to position right and left shoes relatively to the knife for the heels on each to be breasted at equal but opposite angles to the median line of the heel.

2. A heel breasting machine having, in combination, a breasting knife and shoe positioning means comprising a heel support, means connected with the support for positioning the heel laterally relatively to the knife, a forepart rest engaging externally the forepart of the shoe and having provision for positioning the shoe toe laterally, sustaining means on which said rest is laterally movable, and means for adjustably limiting such lateral movement in either direction.

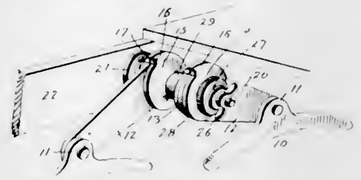
3. A heel breasting machine having, in combination, a breasting knife and shoe positioning means comprising a last support, means engaging the sides of the heel for positioning the heel laterally relatively to the knife, said means being mounted for angular movement with the shoe laterally about a center located in the heel part of the shoe, and means for adjustably limiting such lateral angular movement in either direction.

4. A machine having, in combination, means for operating upon the heel portion of a shoe and shoe positioning means comprising a heel support and a rest engaging the exterior of the forepart and formed with inclined forepart engaging faces to center the forepart laterally on the rest and movable laterally with the forepart relatively to the heel support to change the angular relation of the median line of the shoe to said operating means, and adjustable means for limiting said lateral movement in each direction.

5. A machine having, in combination, means for operating upon the heels of shoes, including a heel tread plate, and shoe supporting means comprising a last support and a forepart rest which is independently yielding to maintain contact with the forepart during movement to bring the heel tread into parallelism with the face of the tread plate.

[Claims 6 to 30 not printed in the Gazette.]

1,169,202. GARMENT-HANGER. OBERLIN SMITH, Bridgeton, N. J. Filed Mar. 31, 1914. Serial No. 828,525. (Cl. 211—15.)



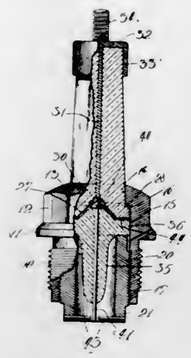
1. A garment hanger, comprising a side by side series of garment-engaging members having a form to receive and support a garment, a movable arm for each of said members shiftable to project its said member from a position alongside its neighbor to one beyond it to afford convenient access to said garment supporting member for applying or removing a garment, a pivotal connection between each member and its arm, whereby in all positions of said arm said member remains in proper garment-supporting position, a common support for the arms on which each arm has an independent to and fro movement, which movement is in a plane perpendicular to the support, and means to hold said arm in the various positions to which it is movable.

2. A garment hanger, comprising a horizontally extending shaft, a series of arms mounted on said shaft to swing to and fro thereon, means to limit the swing of said arms through an arc less than a circle, a garment-engaging member proper having a form to receive and support a garment pivotally suspended from each of said arms so that it remains in garment-supporting position at all points of the swinging of the arm, and means to hold each arm in the various positions to which it is movable.

3. A garment hanger comprising a series of garment-engaging members proper, arms suspending said members to swing on horizontal axes, a support for said arms upon which they are placed side by side and upon which they are movable to shift the position of the garment-carrying members proper in a vertical plane and independently of each other, friction devices for said arms, and a common adjusting means for said devices.

4. A garment hanger, comprising a garment-supporting member proper, an arm suspending said member to swing on a horizontal axis, said arm also being pivoted on a horizontal axis, a pivotal support for said arm, friction disks between which the arm is mounted, and means to prevent the turning of said friction disks.

1,169,203. SPARK-PLUG. ABBE SPRUNG, New York, N. Y. Filed July 3, 1914. Serial No. 848,705. (Cl. 123—169.)



1. In a spark plug, the combination with a chambered body, of an insulator therein composed of upper and lower sections, the upper section extending above the confines of said body and having a conical cavity therein, the other section being suited to enter the mentioned cavity, electrode elements extending through each section interengaging in the mentioned cavity and a sleeve containing other electrode elements screw-threaded into said chambered body.

2. In a spark plug, the combination with a chambered body, of a sectional insulator therein, one section extending thereabove, enlarged bases formed with said sections, the upper section containing a conical cavity, the lower being suited thereto, electrode elements extending through each section and interengaging in the cavity, a sleeve screw-threaded into said chambered body adapted to support and hold the electrode sections in electrical contact and maintain said insulator in position within said body and one or more opposite pole electrodes secured in said sleeve, said opposite pole electrodes extending radially within said sleeve and above the lower surface thereof.

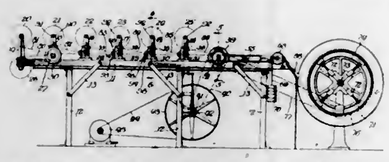
3. In a spark plug, the combination with a body having securing means and a chambered opening therethrough, of upper and lower insulating elements therein, said upper element having an axial depression in its base, the element extending unconfinedly above said body, the lower element being suited to the mentioned depression, an electrode, one section terminating in the upper insulating element and formed with a depression in its lower end, the other section having a correspondingly shaped enlargement, means for maintaining said lower electrode and insulating element in position and one or more opposite pole electrodes carried by said means.

4. In a spark plug, the combination with a body having securing means and a chambered opening therethrough, of upper and lower insulating elements therein, the upper element having a stepped conical depression in its base, the lower being provided with a conical projection flattened at its top, forming a seat, electrode elements so contained in the insulating elements as to maintain a space between the adjacent surfaces thereof, internal screw threads formed in the mentioned chamber opening in said body, a removable clamping means for said insulating elements, said clamping means engaging with the screw-threads, and opposite pole electrodes rigidly set in said clamping means, in such manner as to be shielded thereby.

5. In a spark plug, the combination with a hollow, chambered metallic body, of an insulator therein comprising two members having on their adjacent faces interengaging surfaces, compressible dielectric washers between portions of said surfaces and above the upper member thereof, an electrode in each of said insulator members having metallic contact at their engaging ends, a sleeve surrounding the lower member of said insulator, said sleeve being adjustably engaged with said body and

acting as a clamping means for said insulator, opposite pole electrodes carried by said sleeve and a guard element for said electrodes formed with said sleeve, said guard element extending below the lowermost plane of said electrodes.

1,169,204. TIRE-FLAP-MAKING MACHINE. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed July 31, 1913. Serial No. 782,175. (Cl. 154—9.)



1. In a machine of the character described, the combination of a series of supply spools carrying fabric, a series of sets of feed and pressure rolls arranged to receive adhering strips of fabric from the preceding rolls and a superposed strip of fabric from a supply spool, and a take-up drum having a grooved periphery of less width than the flap whereby to cup the latter, and means to drive the feed rolls and drum, substantially as described.

2. In a machine of the character described, the combination of a series of supply spools carrying fabric, a series of sets of feed and pressure rolls each arranged to receive adhering strips of fabric from the preceding rolls and a strip of superposed fabric from a supply spool, means to drive the successive rolls at a progressively increasing peripheral speed, a take-up drum having a grooved periphery of less width than the flap whereby to cup the latter, and means to drive the drum at a peripheral speed in excess of that of the last feed roll, substantially as described.

3. In a machine of the character described, the combination of a series of supply spools carrying fabric of progressively decreasing width, a series of sets of feed and pressure rolls arranged to receive adhering strips of fabric from the preceding rolls and a strip of superposed fabric from a supply spool, successive rolls having a progressively greater diameter, means to drive the successive rolls in unison, a take-up drum having a grooved periphery of less width than the flap whereby to cup the latter, and means to drive the drum at a peripheral speed in excess of that of the last feed roll, substantially as described.

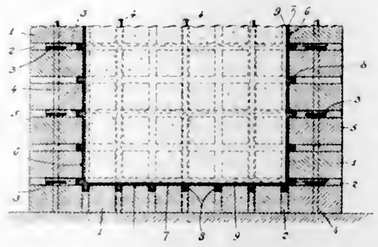
4. In a machine of the character described, the combination of a series of supply spools carrying fabric, a series of sets of feed and pressure rolls arranged to receive adhering strips of fabric from the preceding rolls and a superposed strip of fabric from a supply spool, a dusting box traversed by the flap, means therein to apply the contents of the box to the flap, and a take-up drum having a grooved periphery of less width than the flap whereby to cup the latter, and means to drive the feed rolls and drum, substantially as described.

5. In a machine of the character described, the combination of a series of supply spools carrying fabric, a series of sets of feed and pressure rolls arranged to receive adhering strips of fabric from the preceding rolls and a superposed strip of fabric from a supply spool, a dusting box traversed by the flap, a vane wheel therein to throw the contents of the box upon the flap, and a take-up drum having a grooved periphery of less width than the flap whereby to cup the latter, and means to drive the feed rolls and drum, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,169,205. LEACHING-TANK. HARRY H. STOUT, New York, N. Y., assignor to Nichols Copper Company, New York, N. Y., a Corporation of New York. Filed Mar. 8, 1915. Serial No. 12,829. (Cl. 75—86.)

1. A tank comprising walls of bricks, means for binding said bricks together in spaced relation, said binding means extending to a point at a distance from the inner faces of the bricks whereby recesses are formed on the inner surfaces of the walls and a chemically resistant material in said recesses and protecting the surfaces of the binding means therein.



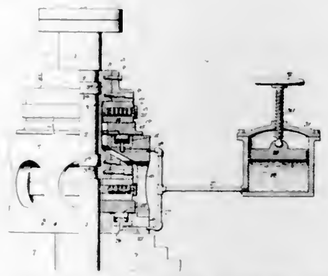
2. A tank comprising walls of bricks, means for binding said bricks together in spaced relation, said binding means extending to a point at a distance from the inner faces of the bricks whereby recesses are formed on the inner surfaces of the walls and a chemically resistant material covering said inner surfaces of the walls and filling said recesses.

3. A tank comprising walls of bricks, means for binding said bricks together in spaced relation, said binding means extending to a point at a distance from the inner faces of the bricks whereby recesses are formed on the inner surfaces of the walls, a priming material in said recesses and in contact with the surfaces of the binding means therein and a chemically resistant material covering said priming material.

4. A tank comprising walls of bricks, means for binding said bricks together in spaced relation, said binding means extending to a point at a distance from the inner faces of the bricks whereby recesses are formed on the inner surfaces of the walls, a priming material in contact with the inner brick faces and the surfaces of said recesses and a chemically resistant material covering said priming material.

5. A tank comprising walls of acid resistant bricks, means for binding said bricks together in spaced relation, said binding means extending to a point at a distance from the inner faces of the bricks whereby recesses are formed on the inner surfaces of the walls, a priming material in contact with the inner brick faces and the surfaces of said recesses and an acid resistant material entirely covering said priming material and filling said recesses.

1,169,206. BEARING. SIDNEY J. SYDNEY, Philadelphia, Pa. Filed June 12, 1908. Serial No. 438,123. (Cl. 64—47.)



1. The combination of a vertically disposed shaft having annular grooves, a plurality of supporting flanges secured to said shaft adjacent its grooves, a plurality of anti-friction bearings upon which said flanges rest comprising rollers concentrically arranged and disposed between relatively fixed plates, a sectional base, part of which is in the form of a hollow shell encircling one of said supporting flanges and the bearing therefor, a plurality of movable rings supported by said base, disks interposed between said rings and the bearings upon which the latter rest, said base being provided with circular recesses to receive said rings, flexible material connected to said rings and the base and providing fluid tight chambers having flexible walls beneath said rings, and means for directing fluid under pressure to said chambers to act upon said rings.

2. In a thrust bearing, the combination of a shaft, a collar thereon provided with a thrust face, a thrust abutment, an annular pressure-actuated diaphragm surrounding the shaft and mounted on said abutment; load-carrying means supported by the diaphragm, and rollers between said means and said collar.

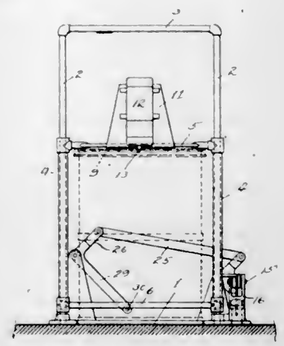
3. In a thrust bearing, the combination of a vertical shaft, a collar thereon provided with a thrust face, a relatively fixed thrust abutment, an annular pressure-actuated flexibly mounted diaphragm surrounding the shaft and supported by the thrust abutment and giving support to the thrust face, a plurality of disk plates interposed between the diaphragm and said thrust face, and rollers mounted between a pair of said plates.

4. In a thrust bearing, the combination of a shaft, a collar thereon provided with a thrust face, a relatively fixed thrust abutment, and an annular pressure actuated flexibly mounted diaphragm surrounding the shaft and supported by the thrust abutment and giving support to the thrust face, and rollers interposed between said diaphragm and said collar.

5. In a thrust bearing, the combination of a shaft, a collar thereon provided with a thrust face, a thrust abutment, an annular pressure actuated diaphragm surrounding the shaft and supported by the thrust abutment, a plurality of annular plates mounted on said diaphragm, one of which is a bearing plate, and rolling element interposed between said bearing plate and the thrust face of the collar.

[Claim 6 not printed in the Gazette.]

1,169,207. RECEPTACLE-COVER-OPERATING MECHANISM. WALTER JAMES SYKES, San Francisco, Cal. Filed Nov. 26, 1913. Serial No. 803,290. (Cl. 220—115.)



1. A closure for garbage receptacles and the like, and operating means therefor, comprising a cover, movable supports for the cover between which a garbage receptacle may be placed, connecting means for the supports extending laterally therefrom to pass around the receptacle space, and pivoted means having a part adapted to ride against said connecting means to effect the raising and lowering of the cover supports to correspondingly position the cover, substantially as described.

2. In a cover controlling means, the combination with a guiding means adjacent which the receptacle is adapted to be positioned, a sliding member associated with said guiding means adapted to carrying the receptacle cover, a foot operated lever, and a link connection between said lever and cover carrying means whereby a movement of the foot operated lever raises or lowers the covering member on said guiding means.

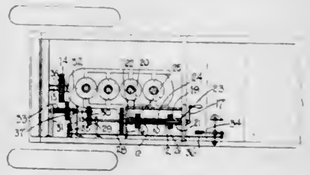
3. In a receptacle cover controlling means, the combination with spaced guiding standards adjacent which the receptacle is positioned, a member slidably associated with each of said guiding standards and having a connecting part extending laterally therefrom to pass around the receptacle, means for securing a receptacle cover to said slidably mounted member, a foot operated lever, and means coöperating with said lever, and the laterally extending connecting part of the sliding frame for raising and lowering said cover relative to the receptacle.

4. In a receptacle closure controlling means, a pair of spaced supporting standards projecting from a base plate, between which receptacle is adapted to be positioned a sliding frame mounted on said supporting standards, a connecting bar carried by the sliding frame extending around the receptacle, means for supporting the receptacle cover to the frame, and mechanism carried by the base plate and coöperating with the sliding frame for raising and lowering said frame on said standards to move the cover relative to the receptacle.

5. In a receptacle closure operating means, the combination with spaced supporting standards between which a receptacle is adapted to be positioned, tubular members slidably mounted on said standards, a supporting member connecting said tubular members at their upper portions thereof and to which the receptacle cover is adapted to be attached, a connecting member carried by said tubular members, a foot operated lever, and means associated therewith and coöperating with said connecting member for operating the same on said standards to raise and lower the receptacle cover relative to the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,169,208. STARTER FOR AUTOMOBILES. ACHILLES B. TOGNINI, Cayucos, Cal. Filed Apr. 19, 1915. Serial No. 22,434. (Cl. 74—7.)



1. The combination with an automobile engine having a crank shaft, of a manually operable starting device including a cranking shaft rotatable a plurality of times in either direction, and means operatively connecting the cranking shaft to the crank shaft to automatically cause a rotation of the crank shaft in a constant direction regardless of the direction of rotation of the cranking shaft.

2. The combination with an automobile engine, of a manually operable starting device including a cranking shaft rotatable a plurality of times in either direction, and means for operatively connecting the cranking shaft to the crank shaft of the engine, said means causing a rotation of the crank shaft in a constant direction regardless of the direction of rotation of the cranking shaft.

3. The combination with an automobile engine, of a cranking device including a cranking shaft, a pair of parallel driven shafts, means operatively connecting the cranking shaft and driven shafts, said means being automatically operable for positively connecting the cranking shaft and one of the driven shafts when the cranking shaft is rotated in a clockwise direction and for positively connecting the cranking shaft to the other driven shaft upon the rotation of the cranking shaft in a counter-clockwise direction, and means for operatively connecting the driven shafts to the crank-shaft of the engine.

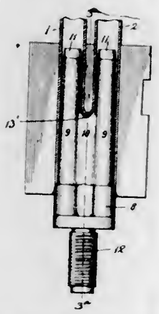
4. The combination with an automobile engine, of a cranking device including a cranking shaft, a pair of

parallel driven shafts, means operatively connecting the cranking shaft and driven shafts, said means being automatically operable to positively connect the cranking shaft and one of the driven shafts when the cranking shaft is rotated in a clockwise direction, and to positively connect the cranking shaft to the other driven shaft upon the rotation of the cranking shaft in a counter-clockwise direction, means operatively connecting the driven shafts, and means for operatively connecting the driven shafts to the crank shaft.

5. In a construction of the character described, a main shaft, a driving shaft rotatable a plurality of revolutions in either direction, means for rotating the driving shaft, and transmission gearing operatively engaging the driving shaft with the main shaft at all times and causing the rotation of the main shaft in one constant direction upon a rotation of the driving shaft in either direction.

[Claims 6 to 9 not printed in the Gazette.]

1,169,209. METHOD OF MAKING PIPE-BENDS. CHARLES H. TRUE, Hammond, Ind., and NEAL TRIMBLE MCKEE, Dobbs Ferry, N. Y., assignors to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 30, 1914. Serial No. 835,360. (Cl. 29—157.)



1. The method of making pipe bends which comprises taking two pipes and slitting the wall of each longitudinally for a suitable distance from the pipe end, pressing the pipe walls on each side of said slits outwardly, causing the edges of the two slitted parts of one pipe to abut against corresponding edges of the other pipe and then welding said edges together, and finally closing the end of the incomplete bend thus formed.

2. The method of maging pipe bends which comprises taking two pipes and slitting the wall of each longitudinally for a suitable distance from the pipe end, pressing the pipe walls on each side of said slits outwardly, pressing the edges of the two slitted parts of one pipe forcibly against corresponding edges of the other pipe while said eges are at welding heat thereby causing them to be united, and finally closing the end of the incomplete bend thus formed.

3. The method of making pipe bends which comprises holding two pipe lengths to be joined in the relative position they are to occupy when the bend is completed, simultaneously slitting neighboring walls of both pipes for a suitable distance from the ends of said pipes and at the same time pressing the slitted parts outwardly until they abut in pairs, welding said abutting edges together, and finally closing the end of the incomplete bend thus formed.

4. The method of making pipe bends which comprises holding two pipe lengths to be joined in the relative position they are to occupy when the bend is completed, simultaneously slitting the juxtaposed walls of both pipes in the axial plane common to said pipes and for a suitable distance from the ends of the pipes and simultaneously pressing the slitted parts outwardly until they abut in pairs, welding said abutting edges together, and finally closing the end of the incomplete bend thus formed.

5. The method of making pipe bends which comprises holding two pipe lengths to be joined in the relative position they are to occupy when the bend is completed and with their ends at welding heat, slitting neighboring walls of both pipes for a suitable distance from said ends, pressing the pipe walls on each side of each slit outwardly until said edges are abutted forcibly together in pairs thereby uniting them by a weld, and finally closing the end of the incomplete bend thus formed.

1,169,210. FIRE-EXTINGUISHING SYSTEM. MARTIN J. WALSH, New York, N. Y. Filed Mar. 15, 1915. Serial No. 14,394. (Cl. 169—21.)



1. A fire extinguishing system comprising a fusible support, finely divided noncombustible material located upon said support, and means for maintaining said support in an elevated position, whereby the fusing of said support from heat beneath it will permit said material to drop by gravity.

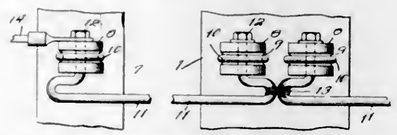
2. A fire extinguishing system comprising a fusible support, finely divided noncombustible material maintained in an elevated position by said support, whereby the fusing of said support from heat beneath it will permit said material to drop by gravity.

3. A fire extinguishing system comprising a wire mesh, means for maintaining said wire mesh in an elevated position, a fusible support sustained by said wire mesh, and finely divided noncombustible material located upon said support.

4. A fire extinguishing system comprising a fusible support, finely divided noncombustible material maintained upon said fusible support and means for maintaining said support in an elevated position adjacent the ceiling.

5. A fire extinguishing system comprising a perforated support in an elevated position, a fusible support sustained by said perforated support and finely divided noncombustible material maintained in an elevated position by said perforated and fusible supports.

1,169,211. ELECTRIC CONDUCTOR. CARL J. E. WAXBOM, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Dec. 16, 1910, Serial No. 597,640. Renewed June 17, 1915. Serial No. 34,740. (Cl. 191—33.)



1. In a conductor of the class described, the combination of a series of conductor sections each consisting of a single rod substantially inflexible under its own weight, means for forming fixed electrical connections directly between the adjacent ends of adjacent sections, and means for rigidly supporting the said sections solely at their ends, substantially as set forth.

2. In a conductor of the class described, the combination of a series of conductor sections each consisting of a single rod substantially inflexible under its own weight,

fixed but readily disconnectible means for forming electrical connections directly between the adjacent ends of adjacent sections, and means for rigidly supporting the said sections solely at their ends, the said supporting means being adapted to permit the sections to be readily attached thereto or detached therefrom, substantially as set forth.

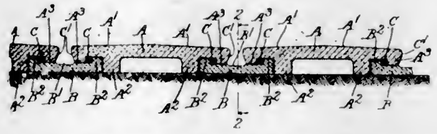
3. In a conductor of the class described, the combination of a series of conductor sections each consisting of a single metallic rod substantially inflexible under its own weight and each having its end parts bent at angles to the main part, means for electrically connecting the said end parts, and devices for supporting the sections by means of the said end parts, substantially as set forth.

4. In a conductor of the class described, the combination of a series of conductor sections each substantially inflexible under its own weight and each having its end parts bent at angles to the main part, devices for supporting the sections by means of the said end parts, and means for electrically connecting the adjacent end parts of each two adjacent sections comprising a flexible conductor wire wrapped about the said adjacent end parts, substantially as set forth.

5. In a conductor of the class described, the combination of a series of alined conductor sections each substantially inflexible under its own weight an each having its end parts bent at angles to the main part, devices for supporting the sections by means of the said end parts, and means for electrically connecting adjacent sections comprising a flexible conductor wire engaging with each of them, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,169,212. ASSEMBLED CONCRETE FLOOR. CARL WEBER, Chicago, Ill., assignor to Cement-Gun Construction Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1914. Serial No. 828,115. (Cl. 94—1.)



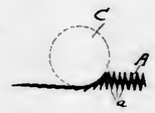
1. A concrete floor made up of a series of alternately arranged interlocking tread and drainage sections, the drainage sections being channeled, the tread sections being provided with hooks along their outer edges to engage said channels, and supporting ribs carried by the tread sections to raise them above the drainage sections.

2. A concrete floor made up of a series of separate separated flat upwardly channeled members having a shallow groove in the center of the channel, a series of tread members interposed between said channel members, said tread members having downwardly projecting hooks extending into said channel along side of said flat shallow groove to form with the channel members a series of drainage passages larger at the bottom than at the top.

3. A concrete floor made up of a series of separate separated flat upwardly channeled members having a shallow groove in the center of the channel, a series of tread members interposed between said channel members, said tread members having downwardly projecting hooks extending into said channel alongside of said flat shallow groove to form with the channel members a series of drainage passages larger at the bottom than at the top, supporting ribs on the bottom of said members of such height as to support said members independent of the channel members.

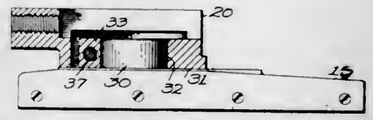
1,169,213. ELECTRIC HEATING UNIT. HARRY G. WEEKS, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 10, 1912. Serial No. 670,418. (Cl. 219—19.)

1. An electric heating unit in the form of a coil of wire having the convolutions inclined and overlapping each other shingle fashion to avoid abrupt bends in the wire and provide a substantially flat resistance element for heating purposes.



2. An electric heating unit in the form of a coil of bare wire having the convolutions inclined and overlapping each other shingle fashion to avoid abrupt bends in the wire and provide a substantially flat resistance element for heating purposes, said convolutions being insulated from each other only by the superficial oxid of the metal thereof.

1,169,214. COMPOUND TOOL-SUPPORT. ALONZO W. WHITCOMB, Worcester, Mass. Filed Nov. 27, 1914. Serial No. 874,157. (Cl. 82—12.)



1. A compound tool support, comprising a base having a vertical cylindrical projection on its upper surface, an angularly adjustable tool support comprising a slide and a swivel block, said block having a cylindrical recess in its lower surface fitting said projection, and means for holding said block in adjusted angular position on said base, said block having a continuous rigid outer wall and said means comprising an arc-shaped resilient member entirely inclosed by said wall and forming an integral portion of the side of said recess and binding means extending through said rigid wall and effective to force said resilient member against said projection.

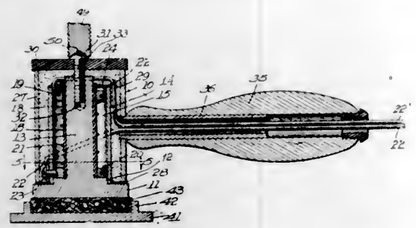
2. A compound tool support comprising a base having a vertical cylindrical projection on its upper surface, an angularly adjustable tool support comprising a slide and a swivel block, said block having a cylindrical recess in its lower surface fitting said projection, and means for holding said block in adjusted angular position on said base, said block having a continuous rigid outer wall having a recess in the lower surface of said block within said wall and supplemental to said cylindrical recess, and said means comprising an arc-shaped resilient binder forming an integral part of said block, movable within said supplemental recess and connected to said block at one end only and means extending through said continuous wall and operative upon the free end of said binder to force said binder against said projection to clamp the block to the base.

3. A compound tool support comprising a base, a swivel block mounted thereon, and clamping means for securing said members together, one of said members having a continuous rigid outer wall and having a cylindrical recess in the face which engages the other member, a portion of the side wall of said recess being rigid and continuous with said outer wall and the remaining portion of said side wall of said recess being yieldingly movable and being joined to said outer wall at one end only, the other member having a cylindrical projection fitting said cylindrical recess, and said clamping means comprising a screw extending through said outer wall and engaging the yielding end of said movable side wall portion to force the same against said cylindrical projection.

1,169,215. ELECTRIC VULCANIZER. EDWARD J. WIGGINS, Chicago, Ill., assignor to David Albert Heyman, Chicago, Ill. Filed July 27, 1914. Serial No. 853,327. Renewed June 16, 1915. Serial No. 34,551. (Cl. 219—19.)

1. A portable electric vulcanizer, consisting of a frame comprising a base, vertical posts, a bridge movable to span

said posts or open the space therebetween, and a pressure screw carried by said bridge; and an applicator providing a heating-head exposed toward the base, an electrical heating unit associated with said head, and a shell heat-insulated from said heating unit, said shell providing means coöperating with the screw to center the shell upon the base and transmit the screw pressure to the heating-head.



2. In a portable electric vulcanizing apparatus, an applicator comprising a heating head, concentric spaced apart walls forming an annular chamber therebetween, said walls being formed of a material having high heat conducting qualities, and the ends thereof adjacent the heating head being intimately connected therewith, an electric heating coil positioned in the said annular chamber, and a casing surrounding and heat-insulated from said walls.

3. In a portable electric vulcanizing apparatus, an applicator comprising a heating head, concentric spaced-apart walls forming an annular chamber therebetween, said walls being formed of a material having high heat conducting qualities and the ends thereof adjacent the heating head being intimately associated therewith, a removable annular cartridge comprising an insulating cylinder and an electric heating coil wound thereon, positioned in said annular chamber and a casing surrounding and heat-insulated from said walls and having a handle.

4. A portble element, comprising, in combination, a vulcanizer head; separated concentric walls extending at right angles to said head; a removable annular cartridge in the space between said walls, comprising an insulating cylinder, a coil of resistance wire wound thereon, and conducting rings mounted adjacent the ends of said insulating cylinder and to which the ends of the heat coil are connected; and a casing surrounding and heat-insulated from said walls and having a handle.

5. In a portable electric vulcanizer, the combination of a frame comprising a base and a bridge connected thereto; an electrically heated applicator providing a heating head exposed toward the base, and means carried by said bridge and coöperating with the applicator for pressing said heating head toward the base.

[Claims 6 to 9 not printed in the Gazette.]

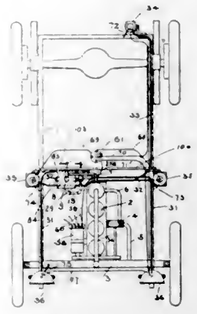
1,169,216. AUTOMOBILE-LIGHTING APPARATUS. OTTO C. F. WILCKE, Dayton, Ohio. Filed Jan. 24, 1912. Serial No. 673,208. (Cl. 123—198.)

1. In an automobile, the combination with a heat engine including a water circulating cooling system, of a carbid gas generator, a water pump driven by the engine for putting the water under pressure, and means connecting the water system to the generator and devices for utilizing the gas from the generator.

2. In an automobile, the combination with a carbid gas generator, of a heat engine having a water cooling system, and means connecting the water cooling system and generator and devices for utilizing the gas from the generator.

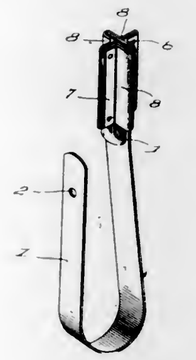
3. In an automobile the combination with a carbid gas generator, of a heat engine having a water cooling system, lamps for the machine, means connecting the water system and generator and means connecting the lamps and generator.

4. In an automobile the combination with a carbid gas generator, of a heat engine having a water cooling system, means for utilizing the gas of the generator pipes connecting the water system and generator, and means controlled by the engine for igniting the carbid gas.



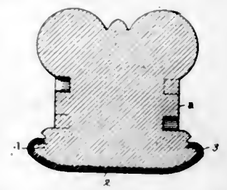
5. In an automobile the combination with a gas engine having a forced water cooling system, a gas generator connected to the water system, and automatically controlled thereby and devices for utilizing the gas from the generator.

1,169,217. CAR-SEAL. ORLA O. WILCOX, Denver, Colo., assignor of one-third to Peter I. Venard and one-third to Charles W. Loomis, Denver, Colo. Filed June 1, 1915. Serial No. 31,527. (Cl. 70—99.)



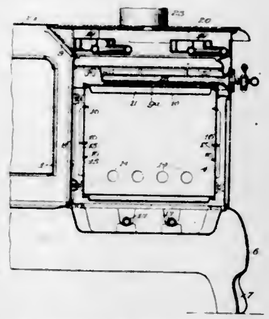
A seal comprising a flat strip of metal having one end thereof bent backwardly upon itself to provide two thicknesses of metal, said end being disposed in a plane parallel to said strip and spaced therefrom, said two thicknesses of metal having alined slots therethrough, the other end of said strip being provided with an aperture, a U-shaped spring slidable in said slots and disposed in a plane at right angles to said strip, the free ends of the former being turned inwardly toward each other and projected through said slots and the opening in the last mentioned end of said strip upon the insertion of said end between the two thicknesses of metal, a rectangular wing extending laterally from one side of said strip opposite the two thicknesses of metal, said wing being carried transversely around the latter and said spring, the portions of the wing between the edges of the strip and the edges of the spring being bent inwardly to provide right angular walls disposed substantially in contact with the sides of said strip and the sides of said fastener, and means for anchoring the free ends of said wing, substantially as described.

1,169,218. RUBBER TIRE FOR VEHICLES. WILLIAM W. WILDMAN and EDGAR A. TINSMAN, Barberton, Ohio, assignors to The Portage Rubber Company, Barberton, Ohio, a Corporation of Ohio. Filed May 25, 1914. Serial No. 840,674. (Cl. 152—1.)



A rubber tire of the solid type and slightly stretchable having side enlargements along its base and semi-hard non-stretchable rubber strips vulcanized into said base at regular intervals and the ends of said strips substantially hook shape and engaged over said side enlargements of the base and said strips diagonally disposed transversely of the tire and flush with the surface thereof.

1,169,219. COMBINATION COAL AND GAS STOVE. FREDERICK WILL, Sr., and HUGO BECKER, Rochester, N. Y., assignors to Sill Stove Works, Rochester, N. Y., a Corporation of New York. Filed Dec. 28, 1911. Serial No. 668,213. (Cl. 126—36.)

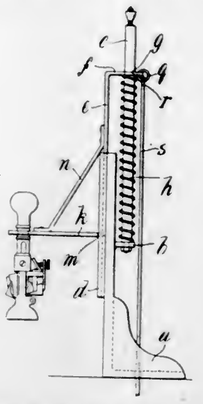


In a stove, the combination with a coal burning section, of a gas burning section, a wall separating said sections, the gas burning section including an oven, a burner arranged above the oven, and a removable top for the oven comprising an upper wall having an opening in its rear end, and a lower wall having an opening at its front end, the upper and lower walls affording a space therebetween.

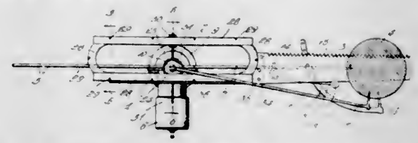
1,169,220. TREADLE OPERATING MECHANISM FOR STAMPS AND THE LIKE. ADAM WILSON, Hanwell, London, England. Filed Nov. 11, 1914. Serial No. 871,512. (Cl. 101—56.)

1. An apparatus comprising in combination a treadle-operated slide working in guideways on the face of a suitable standard attached by suitable means to a table, such slide being provided at one end with an arm furnished with a perforation working over a rod attached to the standard, a compression spring around the said rod and between the said arm and the standard, another bent arm at the other end of the slide provided with means to which an ordinary hand stamp can be readily attached substantially as described.

2. An apparatus comprising in combination a treadle-operated slide working in guideways on the face of a suitable standard attached by suitable means to a table, such slide being provided at one end with an arm furnished with a perforation working over a rod attached to the standard, a compression spring around the said rod and between the said arm and the standard, another bent arm at the other end of the slide and means for attaching the plate, said plate being adapted to carry a plurality of hand stamps substantially as described.



1,169,221. POWER-TRANSMITTING MEANS. THOMAS N. WILSON, Spokane, Wash., assignor of one-half to Aaron G. Witmer, Portland, Oreg. Filed July 22, 1915. Serial No. 41,330. (Cl. 74—27.)



1. In combination, an endless rack having teeth to be engaged by a driven pinion, a driven shaft adapted to carry the aforesaid pinion, a circular member carried by the shaft and having in one side an annular groove disposed concentric to the shaft, a ball disposed partially in said groove, and an endless track carried by the rack and having an endless groove receiving the remainder of the ball therein.

2. In combination, an endless rack, a driven shaft, a pinion secured to said shaft and meshed with the rack, a circular plate adjacent one end of said pinion, mounted on the shaft concentric therewith, and having in its outer side an annular groove, a ball partially received in said groove, and an endless track carried by the rack and receiving the remainder of said ball.

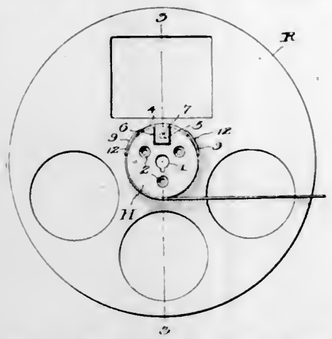
3. In combination, an endless rack, a driven shaft, a pinion secured to said shaft and meshed with the rack, a circular plate adjacent each end of the pinion, mounted on the shaft concentric therewith and each having an annular groove in its outer face, a pair of balls partially received in said grooves, and a pair of endless tracks carried by the rack and each having an endless groove receiving the remaining portions of said balls.

4. In combination, an endless rack, a driven shaft, a pinion secured to said shaft and meshed with the rack, a circular plate adjacent one end of said pinion, mounted on the shaft concentric therewith, and having in its outer side an annular groove, a ball partially received in said groove, an endless track carried by the rack and having in its inner side an endless groove receiving the remainder of the ball, and a pair of axially shiftable rollers upon which the outer sides of said tracks bear.

1,169,222. FILM-CLAMP FOR MOTION-PICTURE REELS. CHARLES F. WOODS, Princeton, Ind. Filed July 12, 1915. Serial No. 39,342. (Cl. 242—74.)

1. A device of the character described including a hub with a recess in its outer periphery, a covering for said

recess having a finger opening and a slot therethrough, a lever fulcrumed intermediate its ends, a portion of the lever projecting through said slot to engage the outer surface of said hub, and the other portion of said lever positioned in the recess below the finger opening.



2. A device of the character described including a hub with a recess in its outer periphery, a covering for said recess having a finger opening and a slot therethrough, a lever fulcrumed intermediate its ends extending through said slot, the portion of the lever projecting through said slot being curved to engage the outer surface of the hub, an enlarged head formed on the other portion of said lever positioned in the recess, and a spring in said recess below the enlarged head of the lever.

3. A device of the character described including a hub with a recess in its outer periphery, a cover for said recess having a central opening therethrough, a pair of oppositely extending fulcrumed levers having one end portion positioned in said recess and registering with the opening in the cover, and the other end portion of said levers extending through the cover to engage the outer surface of the hub.

4. A device of the character described including a hub with a recess in its outer periphery, a cover for said recess, a pair of oppositely extending levers with enlarged abutting heads positioned in said recess, the other portion of said levers extending through the cover at diametrically opposite points and engaging the outer surface of said hub, a spring positioned in said recess below the abutting heads of the levers, and said cover having a finger opening above the same.

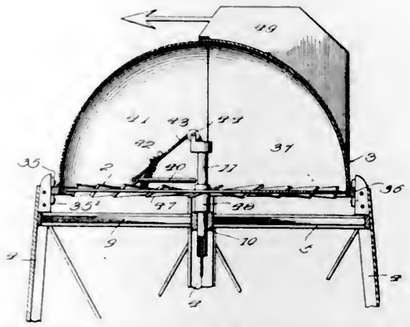
5. A device of the character described including a hub having a recess in its outer periphery, a circumferentially extending covering for said recess having a central opening therethrough, means to secure said covering to the hub, said covering having a pair of diametrically opposed laterally extending slots therethrough, levers fulcrumed intermediately of their ends extending through said slots and curved to engage the outer surface of the hub, enlarged heads with depending abutting extremities on the portions of the levers in said recess, and a coil spring positioned between the enlarged heads of said levers and the recess.

1,169,223. WINDMILL. HALSEY C. ABERN, Minot, N. D. Filed Aug. 6, 1914. Serial No. 855,495. (Cl. 170—12.)

1. A wind mill comprising a supporting structure, a wind wheel supported thereby to revolve in a horizontal plane, a hollow shaft depending therefrom, a hood supported above said wheel to revolve in a horizontal plane, said hood having a section pivoted to swing upwardly, and an operating element connected with said section and depending through said hollow shaft, whereby access may be given into the hood through one of its sides.

2. A wind mill comprising a supporting structure, a wind wheel supported thereby to revolve in a horizontal plane, a hood normally covering said wheel and revoluble in a horizontal plane, said hood having a section pivoted to be swung into its interior, and means whereby said section may be turned around its pivot.

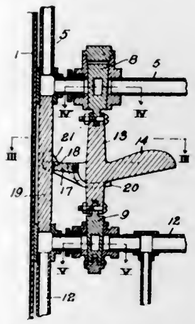
3. A wind mill comprising a supporting structure, a wind wheel supported thereby to revolve in a horizontal plane, a substantially semi-globular hood supported above said wheel to revolve in a horizontal plane, and formed in two sections, one being pivoted to swing into the other, and means for swinging the movable section around its pivot.



4. A wind mill comprising a supporting structure, an upright hollow shaft revolubly mounted therein, a wind wheel carried by said shaft, a substantially semi-globular hood supported above said wheel to revolve in a horizontal plane and formed in two sections, one being pivoted to swing into the other, a crank shaft extending across said hood and constituting the pivot for the movable section, and a flexible operating element attached to the crank of said crank shaft and depending through said hollow shaft.

5. A wind mill comprising a supporting structure, an upright hollow shaft revolubly mounted therein, a horizontal wind wheel keyed to the upper portion of said shaft, a number of guides on said structure, a horizontal ring revolubly supported by said guides, a substantially quarter globular hood section having one of its open ends secured to said ring, its other end standing upright above said ring, a vane on said section, a transverse crank shaft journaled through opposite sides of said section, a flexible operating element attached to the crank of the crank shaft and depending through said hollow shaft, and a second substantially quarter globular hood section secured to said crank shaft and adapted to be swung into the interior of the first mentioned section by rotation of the crank shaft.

1,169,224. WATER-HEATER. FRANCIS J. ALBRECHT, Pittsburgh, Pa. Filed May 4, 1915. Serial No. 25,769. (Cl. 126—351.)



1. In a water heater, the combination of a casing, a burner and heating coil therein, fuel and water supply pipes connected respectively to said burner and coil, valves for controlling the flow of fluid through such pipes, a three-position operating member for said valves effective when in one position to close both valves and when in its other positions to effect a variable relative opening of the valves, means for locking the operating member in valve-closing position, and adjustable stops for controlling said other positions of the operating member.

2. In a water heater, the combination of a casing, a burner and heating coil therein, fuel and water supply pipes connected respectively to said burner and coil, valves for controlling flow through such pipes, a three-position operating member for said valves effective in one position to close both valves and in its other positions to cause variable relative openings thereof, a detent borne by the casing, a latch pivoted to the operating member and adapted to engage said detent at the valve-closing position of the operating member, and adjustable stops for controlling said other positions of the operating member.

3. In a water heater, the combination of a casing, a burner and heating coil therein, fuel and water supply pipes connected respectively to said burner and coil, valves for controlling flow through such pipes, a three-position operating member for said valves effective in one position to close both valves and in its other positions to cause variable relative openings thereof, said member having laterally extending wings provided at their outer ends with adjustable stops for controlling the range of movement of the operating member, and a locking latch pivotally secured to said operating member.

1,169,225. BACK-REST ATTACHMENT FOR SEATS. ARNOLD ANDERSEN, Harris, Iowa. Filed Feb. 6, 1915. Serial No. 6,613. (Cl. 155—27.)

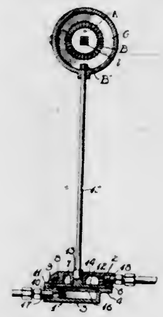


1. A back rest attachment for seats, including a pair of clamps each of which comprises a clamping block formed with a toe portion adapted to engage the seat and a heel portion projecting rearwardly from the seat, a notched seat being provided between the heel portion and toe portion, a clamping finger having one end thereof in engagement with the notched seat while the opposite end thereof coöperates with the toe of the block to grip the edge of the seat, and a clamping bolt engaging the clamping finger and clamping block, a back rest frame formed with side bars adjustably mounted upon the heel portions of the clamping blocks, and a back rest bar applied to the said frame.

2. A back rest attachment for seats, including corresponding clamping blocks formed with toe portions adapted to fit against the exterior of the edge of the seat and heel portions adapted to project rearwardly from the seat, each of the clamping blocks being provided at an intermediate point in its length with a pair of notched seats, one of which receives the flange of the seat, a clamping finger for each of the clamping blocks, said clamping fingers being formed with two angularly disposed arms one of which is seated in the other notched seat of the clamping block, while the other arm coöperates with the toe portion of the clamping block to grip the edge of the seat, clamping bolts connecting the clamping fingers and clamping blocks, a back rest frame formed with side bars which are adjustably mounted upon the heel portions of the clamping blocks, and a back rest bar mounted upon the said frame.

3. A back rest attachment for seats, including corresponding clamping blocks formed with toe portions adapted to engage the exterior of the sides of the seat and heel portions adapted to project rearwardly from the seat, each of the clamping blocks being formed at an intermediate point in its length with a pair of notch seats one of which receives the edge flange of the seat, a clamping finger for each of the clamping blocks, said clamping finger being formed with two angularly disposed arms one of which is seated in the other notched seat of the clamping block while the other arm coöperates with the toe portion of the clamping block to grip the edge of the seat, clamping bolts connecting the clamping fingers and clamping blocks, a back rest frame formed with side bars which are adjustably mounted upon the heel portions of the clamping blocks and have the lower ends thereof provided with forwardly extending arms which engage the bottom of the seat, and a back rest bar mounted upon the said frame.

1,169,226. VALVE FOR CONTROLLING THE FLOW OF FUEL TO CARBURETERS AND FOR STRAINING SUCH FUEL. CHRISTIAN C. ANDERSEN, Davenport, Iowa, assignor of one-fourth to Sam Norgordt and one-fourth to Peter O. Paaske, Davenport, Iowa. Filed Mar. 1, 1915. Serial No. 11,365. (Cl. 137—7.)

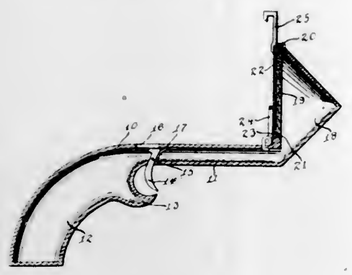


1. A valve comprising a casing having a cup-shaped reservoir in its lower end and an annular valve seat at the upper end of said reservoir, a port leading from said upper end of the reservoir to one side of the seat, an additional port alined with the aforesaid port and leading from the opposite side of the seat, a rotatable valve disk in said seat and having a port adapted to register with the aforesaid ports, an inlet into the reservoir, and a screen extending across said reservoir and disposed between the inlet and the port therein.

2. A valve comprising a casing having upper and lower fuel reservoirs, and an annular valve seat between the two, an inlet into the lower reservoir and an outlet from the upper reservoir, a horizontal screen extending across the lower reservoir above the inlet, a port above the screen and leading from the lower reservoir to the valve seat, an additional port leading from the seat to the upper reservoir and alined with the aforesaid port, and a rotatable valve disk in the seat and having a port adapted to establish communication between the two aforesaid ports when the disk is rotated to a predetermined point.

3. A valve comprising a flat circular casing formed of a lower cup-shaped section having in a plane below its upper edge a horizontal liquid straining screen, a liquid inlet into said lower section below the screen, the upper edge of said section being formed with a groove extending laterally from the interior of said section, an upper inverted cup-shaped section having its lower edges secured in contact with the upper edge of the lower section, the interior diameter of said upper section being increased at its lower extremity to form a circular valve seat, the curved wall of said upper section being formed with a port leading from a point on the seat above the aforesaid groove into the interior of said section, a hollow boss depending centrally from the top of said upper section, a horizontal valve disk in the seat and contacting with the upper edge of the lower section, said disk having a port for registration with the aforesaid port and groove, an integral hub rising from said disk through the boss, a shaft secured to said hub, and a liquid outlet from the upper section.

1,169,227. FLY-TRAP. FRANK J. ANDERSON, Box Elder, Mont. Filed Sept. 18, 1915. Serial No. 51,378. (Cl. 43—1.)



1. A fly trap including a hollow handle, a bait receptacle at the outer end of said handle having an open rear face, a perforated closure for said receptacle, a striking element hingedly mounted adjacent said closure, resilient means yieldably holding said striking element in engagement with said closure, a trigger mounted in said hollow handle beneath an opening formed therein and yieldably held in a set position, and a catch carried by said striking element and passing through the opening of the handle to engage said trigger when said striking element is moved to extend along said handle.

2. A fly killing machine comprising a handle, a bait receptacle carried by said handle and provided with an open face, a perforated closure for the open face of said receptacle, a striking element hingedly connected with said handle adjacent said closure and yieldably held in engagement therewith, a catch carried by said striking element, and a trigger carried by said handle and yieldably held in a position for engaging said catch when said striking element is moved to extend along said handle.

3. A fly killing device comprising a handle, a conical receptacle carried by said handle, a perforated closure for said receptacle, a striking element movably mounted adjacent said receptacle and yieldably held in engagement with said closure, a trigger carried by said handle, and means carried by said striking element for engaging said trigger to releasably hold said striking element out of engagement with said closure.

4. A fly killing device comprising a body portion, a bait receptacle provided with a perforated closure, a striking element movably mounted and held in engagement with said closure, and means for releasably holding said striking element out of engagement with said closure.

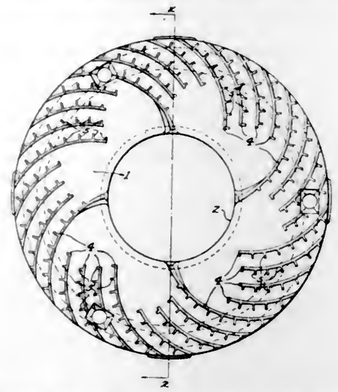
5. A fly killing device comprising a body portion, a bait receptacle carried by said body portion, a perforated closure for said receptacle, means for releasably holding said closure in a closed position, a movably mounted seriking element yieldably held in engagement with said closure, and means for releasably holding said striking element out of engagement with said closure.

[Claim 6 not printed in the Gazette.]

1,169,228. GRINDING-PLATE. GEORGE G. BARKER, Springfield, Ohio, assignor to The Bauer Brothers Company, Springfield, Ohio, a Corporation of Ohio. Filed May 6, 1915. Serial No. 26,362. (Cl. 83—3.)

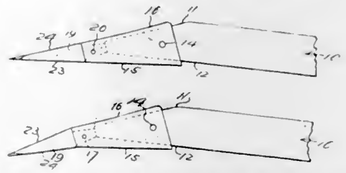
1. In a grinding plate, a series of curved ribs on said plate, and a series of auxiliary ribs extending from one side only of each of said curved ribs, each of said auxiliary ribs extending in such direction relatively to the curved ribs as to form an obtuse angle with an intersecting radius line on said plate.

2. In a grinding plate, a series of curved ribs on said plate, all of said ribs being formed upon the arcs of circles the centers of which are substantially equi-distant from one point on said plate, and a series of auxiliary ribs on one side only of each of said curved ribs, each of said auxiliary ribs extending in such direction relatively



to its curved ribs as to form an obtuse angle with an intersecting radius line of said plate.

1,169,229. BEET-HARVESTER. ALFRED G. BIMSON, Berthoud, Colo. Filed July 24, 1915. Serial No. 41,654. (Cl. 55—106.)



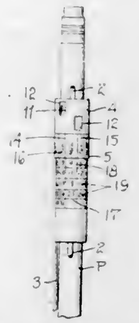
1. In a beet harvester, a frame, standards thereon, extracting bars secured to the standards, said extracting bars having beveled upper edges at the front end forming tapered extensions, sleeves having sockets with upper and lower walls at different angles, said sockets being adapted to receive the ends of the extracting bars and to fit the upper and lower surfaces thereof, said sleeves having tapered sockets in their front ends, and points having shanks fitted to the last mentioned sockets.

2. In a beet harvester, a frame, standards thereon, extracting bars secured to the standards, said extracting bars having beveled upper edges at the front end forming tapered extensions, sleeves having sockets with upper and lower walls at different angles, said sockets being adapted to receive the ends of the extracting bars and to fit the upper and lower surfaces thereof, said sleeves having tapered sockets in their front ends, and points having upper and lower surfaces at different angles and provided with shanks fitted to the last mentioned sockets.

3. In a beet harvester, a frame, standards thereon, extracting bars secured to the standards, said extracting bars having beveled upper edges at the front end forming tapered extensions, sleeves having sockets with upper and lower walls at different angles, said sockets being adapted to receive the ends of the extracting bars and to fit the upper and lower surfaces thereon, said sleeves having tapered sockets in their front ends, and points having upper and lower surfaces at different angles and provided with shanks, the upper and lower walls of which are of different pitch fitted to the last mentioned sockets.

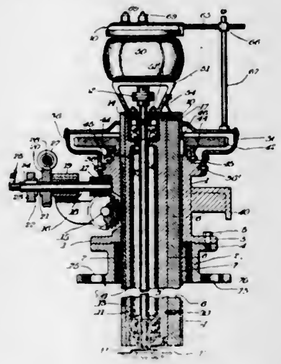
4. In a beet harvester, extracting bars, means by which the said extracting bars are mounted, sleeves connected to the ends of the extracting bars, means whereby the angle of inclination of the sleeves may be changed with relation to the extracting bars, points on the said sleeves, and means whereby the angle of inclination of the said points may be changed.

1,169,230. PERPETUAL CALENDAR. GUY W. BLAKELY, Saxman, Kans. Filed Feb. 27, 1915. Serial No. 11,014. (Cl. 40—108.)



The herein described calendar attachment for pencils and the like, which includes a tubular member provided at its extremities with means for resilient frictional engagement upon the pencil, monthly indicia arranged on said tubular member, a pair of sleeves of equal diameter engaged upon said tubular member for independent rotation thereon, the opposed ends of said sleeves being in abutting engagement, said sleeves being also provided with means upon their corresponding ends coöperatively engaged with means on said tubular member whereby the sleeves are held against relative longitudinal shifting movement thereon, one of said sleeves being provided with sight openings through which the monthly indicia on the tubular member may be viewed, and the other of said sleeves being provided upon its periphery with daily indicia, said tubular member being further provided upon its medial portion with numerals indicative of a calendar month with relation to which the indicia upon the latter sleeve are adapted to be disposed.

1,169,231. GRINDING-MACHINE. HAROLD A. BOXILL, Cincinnati, Ohio. Filed Apr. 9, 1915. Serial No. 20,212. (Cl. 51—4.)



1. In a machine for grinding cylinders, a cylindrical housing, a cylindrical member therein, means to rotate the member, means to simultaneously or independently feed the member longitudinally, a grinding wheel spindle mounted in said member and movable therewith, means to adjust the spindle parallel to the axis of said member, and independent means for rotating the spindle.

2. In a machine for grinding cylinders, a cylindrical housing, a cylindrical member therein, means to rotate the member, means to automatically continuously feed the latter longitudinally either simultaneously or independently of its rotation, a grinding wheel spindle mounted in said member and movable longitudinally therewith, means to adjust the spindle parallel to the axis of said member, and independent means for rotating the spindle.

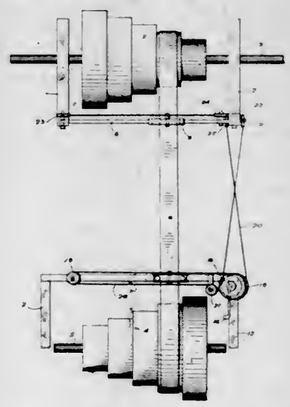
3. In a machine for grinding cylinders, a cylindrical housing, a cylindrical member mounted therein, means to rotate the member, means to simultaneously or independently feed the member longitudinally, a grinding wheel spindle mounted eccentrically in said member and movable therewith, independent means for rotating the spindle movable therewith and means for adjusting the eccentricity of the spindle and its rotating means with respect to the cylindrical member.

4. In a machine for grinding cylinders, a cylindrical housing, a cylindrical member rotatable and longitudinally movable in the housing, a bearing tube mounted eccentrically in the cylindrical member and movable therewith, a grinding wheel spindle journaled eccentrically in the bearing tube and movable therewith, means for rotating the cylindrical member, means to move the latter longitudinally, and means to rotate the spindle.

5. In a machine for grinding cylinders, a cylindrical housing, a cylindrical member rotatable and longitudinally movable in the housing, a bearing tube mounted eccentrically in the cylindrical member and movable therewith, a grinding wheel spindle journaled eccentrically in the bearing tube and movable therewith, means for rotating the cylindrical member, means to move the latter longitudinally, means to connect the rotating and moving means, and means to rotate the spindle.

[Claims 6 to 12 not printed in the Gazette.]

1,169,232. BELT-SHIFTER. SIMON BREMNER and FRANK F. SLICK, Braddock, Pa. Filed Sept. 12, 1914. Serial No. 861,425. (Cl. 64—4.)

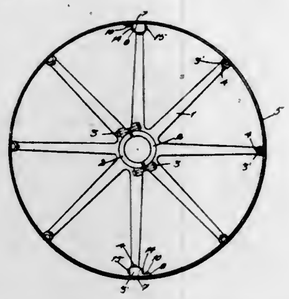


1. A belt shifter comprising a belt, cone pulleys connected by said belt, guides for moving the belt from one to another of the steps of the driving and the driven cone pulley, slides on which the guides are movably mounted, said slides extending lengthwise parallel to planes coincident with a line touching the corners of the steps of said pulleys, flexible connections extending between said guides, drums to which the flexible connections are fastened, and a crank shaft on which the drums are rotatably mounted, said shaft having means whereby the guides are moved separately and independently in shifting the belt on said pulleys.

2. A belt shifter comprising a belt, cone pulleys connected by said belt, guides for moving the belt from one to another of the steps of the driving and the driven cone pulley, slides on which the guides are movably mounted, said slides extending lengthwise parallel to planes coincident with a line touching the corners of the steps of said pulleys, flexible connections extending between said guides, drums to which the flexible connec-

tions are fastened, and a crank shaft on which the drums are movably mounted, said shaft having means for actuating the drums in moving the guides.

1,169,233. RIM-FASTENING FOR SPLIT PULLEYS. JULIEN A. BRIED, Oakland, Cal. Filed July 24, 1915. Serial No. 41,677. (Cl. 64—18.)



1. A joint for divided pulleys comprising rim supporting spokes, a divided rim, the coöperating ends of which terminate adjacent to one of the rim supporting spokes, and one of said ends overhanging the side face of said spoke, an attaching means carried by the coöperating end projecting beyond the end thereof for engagement under the overhanging end secured to said spoke, and means for detachably securing said attaching means to said spoke.

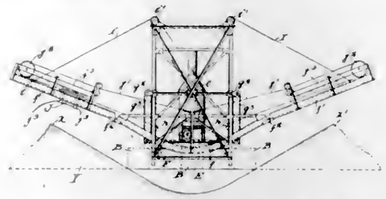
2. A joint for divided pulleys comprising rim supporting spokes, coöperating rim sections, the coöperating ends of certain of said sections terminating adjacent to one of the rim supporting spokes and the end of one of said coöperating sections overhanging the side face of said spoke and secured thereto, an attaching member secured to the other of said coöperating rim sections and projecting beyond the end thereof and adapted when in position to engage under the overhanging portion of said coöperating rim sections and means for detachably securing said attaching member to said spoke with the coöperating ends of the rim sections in substantial meeting relation, and the meeting edges of said rim being in staggered relation to the meeting surfaces of said attaching member and spoke.

3. A joint for divided pulleys comprising rim supporting spokes, coöperating rim sections with the coöperating ends of certain of said sections terminating adjacent to one of the rim supporting spokes and the end of one of said coöperating sections secured to said spoke, an attaching member carried by the end of the other coöperating rim section for engaging the side face of the spoke, the engaging faces of the attaching member and spoke being correspondingly beveled to aline the outer surface of the rim sections when drawn together, and means for detachably securing the attaching member to the spoke with their faces in meeting relation.

4. A joint for divided pulleys comprising rim supporting spokes, a rim divided into sections with the ends of the sections terminating adjacent to certain of the rim supporting spokes and certain ends of said sections secured to said spokes, an attaching member carried by the other end of said sections for engaging the side faces of the spoke to which the end of a coöperating section is secured, the engaging faces of said attaching member and coöperating spoke lying in a plane parallel to the axis of the pulley and converging outwardly with the radius of the said spoke, and means for detachably securing said attaching member to its coöperating spoke.

1,169,234. DRAINAGE-EXCAVATOR. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed July 1, 1909. Serial No. 505,345. (Cl. 37—39.)

1. In an excavator, a runway consisting of middle and outer sections, means for raising and lowering the middle section, a frame above the middle section, means for imposing some of the weight of the outer sections on the said frame, by connections extending over the said frame and down to the middle sections, whereby the entire weight of the runway does not fall on the raising and lowering means, the said outer sections tending to counterbalance the said middle section.



2. In an excavator, a runway consisting of inner and outer sections, means for raising and lowering the inner section, a body frame, means for imposing some of the weight of the outer section on the body frame, by causing the outer section to counterbalance the inner section, whereby the entire weight of the runway does not fall on the raising and lowering means, and excavating means adapted to travel on said runway.

3. In an excavator, a body, means for supporting the body entirely in advance of the excavation, permitting any depth and width of ditch in rear thereof, a transverse runway overhanging the rear of said body, having bodily up and down adjustment, means for holding the runway against displacement, a bucket mounted on said runway, movable thereon from one side of the ditch to the other, a cutter operating on the breast of the excavation, directly below the rear end of said body, means for operating said bucket in one direction, means for returning the bucket in the opposite direction, along the same path, said runway being adapted to form a ditch with sloping sides, and means for causing said bucket to discharge on to the ground at the side of the ditch.

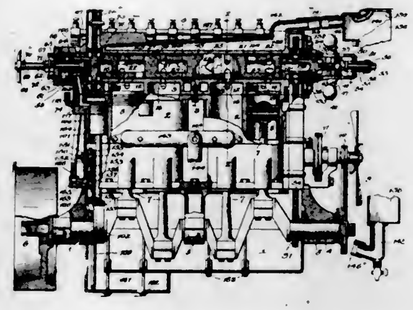
4. In an excavator, a body, means for supporting the body entirely in advance of the excavation, permitting any depth and width of ditch in rear thereof, a transverse runway overhanging the rear of said body, having vertical adjustment, means for holding the runway against displacement, excavating means on said runway, adapted to carry the dirt from one side of the ditch to the other, by traveling entirely across the ditch, a cutter operating on the breast of the excavation, directly below the rear end of said body, said runway being adapted to form a ditch with sloping sides, and said excavating means discharging on to the ground at the side of the ditch.

5. In an excavator, a runway consisting of middle and outer sections, means for raising and lowering the middle section, a frame above the middle section, means for imposing some of the weight of the outer sections on the said frame, by connections extending over the said frame and down to the middle sections, whereby the entire weight of the runway does not fall on the raising and lowering means, the said outer sections tending to counterbalance the said middle section, said raising and lowering means comprising a sliding frame on which the runway is carried.

[Claims 6 to 10 not printed in the Gazette.]

1,169,235. INTERNAL-COMBUSTION ENGINE. FRANK D. BUTLER, Burlington, Iowa. Filed Sept. 14, 1914. Serial No. 861,605. (Cl. 123—59.)

1. In an internal combustion engine and in combination with a crank shaft, pistons and cylinders thereof, a chamber or compartment communicating with the cylinders, a valve member mounted to rotate in said chamber or compartment, said valve member having a plurality of chambers or compartments therein, one being provided for each cylinder and in constant communication therewith, inlet and exhaust ports provided in said valve member to each of said chambers or compartments, means for rotating said valve member and for controlling its longitudinal position so as to vary the timing of the inlet and exhaust of the gases.



2. In an internal combustion engine and in combination with a crank shaft, pistons and cylinders thereof, a chamber or compartment having communication with each cylinder and having a rotatable valve member mounted therein, connections between said crank shaft and said valve member to rotate the same, said valve member having a plurality of chambers or compartments one for each cylinder and also an inlet and exhaust port for each of said chambers or compartments, corresponding inlet and exhaust ports being located in said first mentioned chamber or compartment and means for regulating the longitudinal position of said valve member whereby the timing of the inlet and exhaust is controlled.

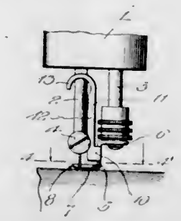
3. In an internal combustion engine and in combination with the cylinders, pistons and crank shaft, a chamber or compartment having communication with each cylinder, an elongated valve member located in said chamber or compartment and having a plurality of chambers or compartments therein, one being provided for each cylinder and having constant communication therewith, means operated by the crank shaft for rotating the said valve member, said valve member having an inlet and exhaust port for each of said chambers or compartments and having resilient rings each having ports corresponding to said inlet and exhaust ports and adapted to fit said first mentioned chamber or compartment tightly, and means for controlling the longitudinal position of said valve member, whereby when the speed of the engine increases, the time of the inlet and exhaust of the gases will be advanced and vice versa.

4. In an internal combustion engine and in combination with the cylinders, pistons and crank shaft, a rotary valve member for controlling the inlet and exhaust of the gases, said valve member being rotated from said crank shaft, connections from said rotary valve member to drive the magneto, means for moving said rotary valve member longitudinally so as to vary the timing of the inlet and exhaust and also to vary the timing of the spark.

5. In an internal combustion engine and in combination with the cylinders, pistons and crank shaft, a rotary valve member for controlling the inlet and exhaust of the gases, said valve member being rotated from said crank shaft, connections from said rotary valve member to drive the magneto, means for moving said rotary valve member longitudinally so as to vary the timing of the inlet and exhaust and also to vary the timing of the spark, said connections comprising a chain and sprocket connection, said sprocket being driven by said rotary valve member and having worm like grooves on the inside of its hub and plug members connected to said rotary valve member and having correspondingly worm like edges to engage said grooves, whereby when the valve member is moved longitudinally the sprocket wheel will be rotated partially by means of the engagement of the plugs with the grooves therein.

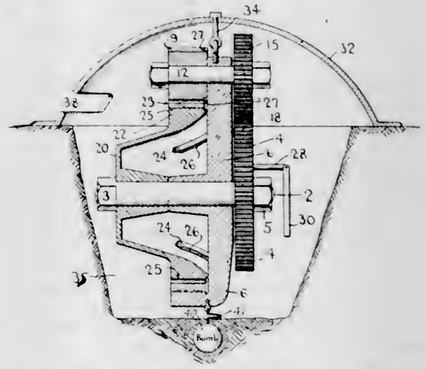
[Claims 6 to 12 not printed in the Gazette.]

1,169,236. EMBROIDERING AND DARNING ATTACHMENT FOR SEWING-MACHINES. ALFRED CARR, Dayton, Ohio. Filed Apr. 29, 1915. Serial No. 24,724. (Cl. 112—13.)



An attachment for sewing machines comprising a shank having a laterally extending bifurcated arm projecting from its upper end for attachment to the presser foot thereof, a laterally extending foot at the other end projecting in the direction opposite to that of said arm, said foot being substantially annular in form and having a lip projecting from the front portion thereof, said lip being provided with an aperture for guiding the needle to prevent breakage of the latter, an arm extending from one side edge of said shank and integral therewith, an additional arm projecting forwardly from the first named arm, a stem projecting upwardly from additional arm, the free end of said stem being integrally connected with a forwardly extending hook disposed in the path of the clamping screw of the needle bar, whereby the attachment is automatically raised by the latter.

1,169,237. MACHINE-GUN. ALFRED L. CLARK, Dubuque, Iowa. Filed Dec. 30, 1914. Serial No. 879,631. (Cl. 89—9.)



1. In a device of the character described, a cover plate adapted to fit over an earth pit and having a projectile opening, a machine gun suspended from the cover, and within the pit, and means for automatically varying the directions taken by the projectiles through said opening.

2. In a device of the character described, a cover plate adapted to fit over an earth pit and having a projectile opening, a machine gun suspended from the cover and within the pit and including a moving part, and means set into operation by said part to cause swinging of said gun to vary the directions taken by the projectiles through the opening.

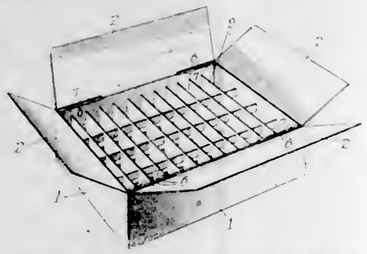
3. In a device of the character described, a body member, a pair of rotating members carried by said body member, said rotating members having registering cartridge holding recesses, firing means, one of said rotating members having an internal cartridge chamber, and means for delivering the cartridge from said chamber to said recesses.

4. In a device of the character described, a body member, a pair of rotating members carried by said body member, said rotating members having registering cartridge-holding recesses, one of said rotating members having rim firing projections adjacent its recesses to fire the cartridge when the recesses of both of said rotating members register, one of said rotating members having an internal cartridge chamber, and means for delivering the cartridge from said chamber to said recesses.

5. In a device of the character described, a body member, a pair of rotating members carried by said body member, said rotating members having registering cartridge holding recesses, firing means, one of said rotating members having an internal cartridge chamber, a rim of said body member partially surrounding the chambered rotating member, means for causing the cartridges to pass from the interior of said chambered rotating member to the exterior thereof and upon said rim in position to be picked up by the recessed portions of the chambered rotating member.

[Claims 6 and 7 not printed in the Gazette.]

1,169,238. PACKING AND SHIPPING BOX. JAMES E. CLENNY, Chicago, Ill., assignor to The Sefton Manufacturing Company, Chicago, Ill., a Corporation of Indiana. Filed Sept. 28, 1912. Serial No. 722,836. (Cl. 229—14.)



1. A shipping box made of corrugated paper board waterproofed as to its outer face and comprising a bottom and side walls hinged thereto, and rigid fillers within such box.

2. A shipping box made of corrugated paper board waterproofed as to its outer face and comprising a bottom and side walls hinged thereto, a top closure waterproofed as to its inner face which is exposed to the interior of the box and having marginal extensions enveloping the top portions of the side walls, and rigid fillers within such box.

3. A shipping box made of double faced corrugated paper board water-proofed as to its outer facing strip only and comprising a bottom, and side walls hinged thereto, and rigid fillers within such box.

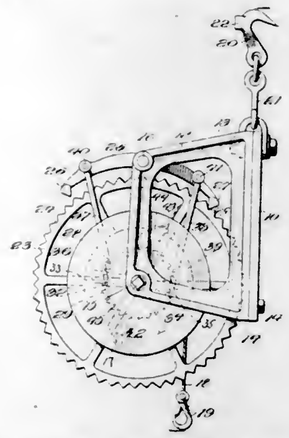
4. A shipping box made of double faced corrugated paper board water-proofed as to its outer facing strip only and comprising a bottom, side walls hinged thereto and corner folds hinged to the side walls and faces of the side walls, the corrugations of such corner folds being crushed down, and rigid fillers within such box.

5. A shipping box made of double faced corrugated paper board waterproofed as to its outer facing strip only and comprising a bottom, and side walls hinged thereto, a closure made of the same character of double faced corrugated paper board and fitting upon the top of such box to seal it against the escape or leaking of liquid from within the box.

[Claims 6 and 7 not printed in the Gazette.]

1,169,239. RETARDING DEVICE FOR FIRE-ESCAPES. HARNEY C. CODER, Okmulgee, Okla. Filed May 11, 1915. Serial No. 27,431. (Cl. 74—13.)

1. In an apparatus of the class described, a toothed wheel adapted to be coupled to a winding drum, an arm pivoted intermediate its ends, a pawl device pivoted intermediate its ends and alternately engaging the teeth by its terminals, and connecting means between said pawl device at each side of its pivot and to said arm at each side of its pivot.



2. In an apparatus of the class described, a wheel, a pawl pivoted intermediate its ends and adapted to be alternately engaged at each side of its center of movement with said wheel, a governor device mounted to oscillate, an arm partaking of the movement of said governor device, and connecting means pivoted to said pawl at each side of its center of movement and pivoted to said arm at each side of its center of movement.

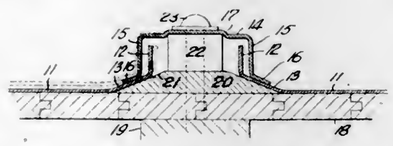
3. In an apparatus of the class described, a toothed wheel adapted to be coupled to a winding drum, a governor device mounted to oscillate independently of said wheel, an arm movable with said governor device, a pawl device pivoted intermediate its ends and adapted to alternately engage the teeth by its terminals, and coacting connecting means between said pawl device at each side of its center of movement and to said arm at each side of its center of movement.

4. In an apparatus of the class described, a wheel, a pawl pivoted intermediate its ends and adapted to be alternately engaged at each side of its center of movement with said wheel, an arm pivoted intermediate its ends, and coupling means pivoted to said pawl device at each side of its center of movement and pivoted to said arm at each side of its center of movement.

5. In an apparatus of the class described, a wheel, a pawl pivoted intermediate its ends and adapted to be alternately engaged at each side of its center of movement with said wheel, a governor device mounted to oscillate, an arm partaking of the movement of the governor device, and connecting means pivoted to said pawl device at each side of its center of movement and pivoted to said arm at each side of its center of movement.

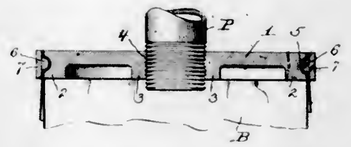
[Claims 6 to 12 not printed in the Gazette.]

1,169,240. CAR-ROOF. JAMES M. COLEMAN, Montreal, Quebec, Canada. Filed Jan. 25, 1915. Serial No. 4,220. (Cl. 105—5.)



In a car roof, transverse roof plates vertically flanged at their edges, supports for the edges of said plates sloped slightly from the horizontal, sloping portions on said plates intermediate the vertical flanges and plate bodies, said sloping portions curving very gradually into the plate body, and a cap mounted on the plate edge support covering the vertical plate flanges, and providing a normal clearance between said plates and said cap and having side flanges sloping similarly to the plates and supported above the sloping portion of the plate.

1,169,241. BAG-HOLDER. HARRY R. CONKLIN, Joplin, Mo. Filed July 29, 1915. Serial No. 42,555. (Cl. 83—26.)



1. A bag holder comprising a plate having a central supply orifice and a peripheral groove, a retaining band coöperating with said groove to retain a bag between said plate and groove, and a securing band placed over the retaining band.

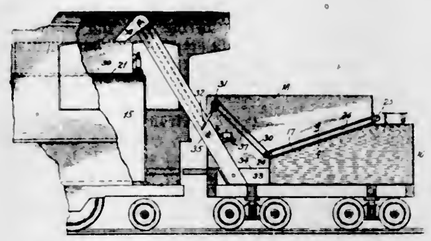
2. A bag holder, comprising a plate having a supply orifice and a peripheral groove, a split retaining band having overlapping ends and fitting into said groove, a split securing band having overlapping ends fitting over said retaining band and means to draw the ends of the securing band together.

3. A bag holder comprising a supporting plate for engagement by the mouth of the bag, said plate having a supply orifice and means for the attachment of a filling tube and provided with means forming a recess between said orifice and the periphery of the plate for engagement by a lifting and supporting member.

4. A bag holder comprising a plate having a peripheral groove and a supply orifice, a retaining band coöperating with said groove, a split securing band coöperating with said retaining band, a bolt pivoted on one end of said band, a nut on said bolt and a slotted forcing member on the other end of said band engaged by said bolt and nut.

5. A bag holder comprising a supporting plate for engagement by the mouth of the bag, said plate having a supply orifice, and means for the attachment of a filling tube, and provided with means integral with said plate and forming an annular recess between said orifice and the periphery of the plate for engagement by a lifting and supporting member.

1,169,242. BOILER-FURNACE-FEEDING DEVICE. JOHN G. CRAWFORD, Chicago, Ill., assignor of one-half to Otis N. Terry, Chicago, Ill. Filed Jan. 21, 1913. Serial No. 743,287. (Cl. 105—260.)



1. In a device of the class described, a locomotive tender comprising a water tank with a downwardly and forwardly sloping upper wall, a chain conveyer extending along said wall, and means to actuate said conveyer to move coal above the same toward the forward end of the tender.

2. In a device of the class described, a locomotive tender comprising a water tank with a downwardly and forwardly sloping upper wall, a chain conveyer extending along said upper wall and passing around horizontal transverse shafts at the ends of said wall, and means to rotate the foward shaft and thereby cause the conveyer to move coal resting on the said sloping wall toward the forward end of the tender.

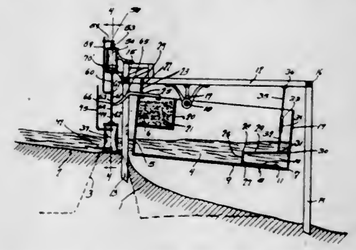
3. In a device of the class described, a locomotive tender comprising a water tank with a downwardly and forwardly sloping upper wall, an endless conveyer extending adjacent the upper surface of said wall, and means to impart a forward movement to the portion of said conveyer adjacent the surface of said wall to move the coal toward the forward end of the tender.

4. In a device of the class described, a locomotive tender comprising a water tank with a downwardly and forwardly sloping upper wall, a pit in front thereof, a screen across said pit, and an elevator sloping upwardly and forwardly from said pit.

5. In a device of the class described, a locomotive tender comprising a water tank with a downwardly and forwardly sloping wall, a false wall spaced slightly above the same, parallel horizontal shafts at the upper and lower ends of said false wall, a conveyer extending around said shafts and around said false wall, and means to actuate said conveyer so as to advance coal upon the false wall downwardly along the same.

[Claim 6 not printed in the Gazette.]

1,169,243. PUMP. FREDERICK C. CROWE, Spokane, Wash. Filed July 2, 1914. Serial No. 848,590. (Cl. 253—13.)



1. In a water motor for streams, a motor bucket having an open ingress end and an egress end, means tiltably supporting said bucket between its ends with its ingress end opening toward the current, a valve for the egress end of said bucket, counterweight means normally acting to lower the ingress end into the stream to fill the bucket and cause the latter to thereafter tilt under the load of the contents to elevate the ingress and lower the egress end, and means for opening said valve to empty the bucket on descent of the egress end thereof, substantially as described.

2. In a water motor for streams, a motor bucket having an open ingress end and an egress end, means tiltably supporting said bucket between its ends with its ingress end opening toward the current, a valve for the egress end of said bucket, counterweight means normally acting to lower the ingress end into the stream to fill the bucket and cause the latter to thereafter tilt under the load of the contents to elevate the ingress and lower the egress end, and means for quickly opening said valve just prior to the limit of descent of the egress end of said bucket, substantially as described.

3. In a water motor for streams, a motor bucket having an open ingress end and an egress end, means tiltably supporting said bucket between its ends with its ingress end opening toward the current, a valve for the egress end of said bucket, counterweight means normally acting to lower the ingress end into the stream to fill the bucket and cause the latter to thereafter tilt under the load of the contents to elevate the ingress and lower the egress end, and a lost motion connection between said valve and

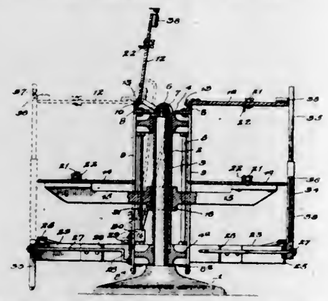
supporting means for opening the former on descent of the egrees end of said bucket, substantially as described.

4. In a water motor for streams, a motor bucket having a normally open ingress end and an egress end, means connected with the bucket nearer the ingress than the egress end for tiltably supporting the bucket with the ingress end opening toward the current, a valve for the egress end of said bucket, means normally acting to lower the ingress end into the stream to fill the bucket and thereby cause the contents to tilt the egress end downwardly, and means for opening said valve to empty the bucket on descent of the egress end thereof, substantially aa described.

5. In a combined water motor and pump, a reciprocating pump structure disposed in a stream and having a pump piston rod structure, a dash pot piston and a dash pot cylinder therefor with the dash pot piston connected with said rod structure, a valve for controlling egress from said dash pot cylinder, an operating member actuated by said rod structure for operating said valve, and a water motor operated by said stream for actuating said rod structure, substantially as described.

[Claim 6 not printed in the Gazette.]

1,169,244. CLAMPING-MACHINE FOR PACKING-BOXES. CHARLES T. DUNN, Newark, Ohio. Filed July 26, 1915. Serial No. 42,009. (Cl. 93—36.)



1. In a box clamping machine, an upright standard, a head member carried thereby including a horizontal bar, a series of upright rods depending from said bar and disposed in an upright plane to engage a box when clamped in the machine, an upper horizontal clamping plate pivoted at one edge to said bar, a lower horizontal clamping plate below the upper plate, and means to lock said upper plate against movement.

2. In a box clamping machine, an upright standard, a head member carried thereby including a horizontal bar, a series of upright rods depending from said bar and disposed in an upright plane to engage a box when clamped in the machine, an upper horizontal clamping plate pivoted at one edge to said bar, a lower horizontal clamping plate below the upper plate, a cleat carried by the inner face of one of said plates and shiftable toward and away from the upright rods, and means to lock the upper plate against movement.

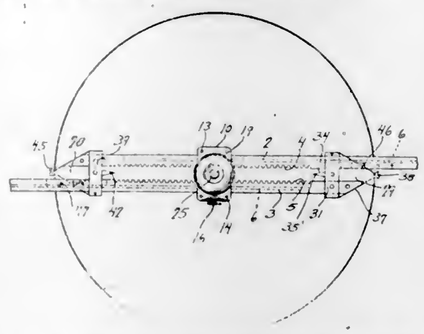
3. In a box clamping machine, an upright standard, an upper and a lower head member thereon, a series of alined upright rods secured at their ends to said members and disposed in an upright plane to engage a box when clamped in the machine, an upper horizontal pivotally mounted clamping plate carried by the upper head member, a lower horizontal clamping plate below the upper plate, and means for locking said upper plate against movement.

4. In a box clamping machine, an upright standard, an upper and a lower head member thereon each including a horizontal bar, a plurality of upright rods secured at their ends to the two bars and disposed in an upright plane to engage a box when clamped in the machine, an upper horizontal clamping plate pivoted to the upper bar, a lower horizontal clamping plate beneath the upper plate, and means to lock the upper plate against movement.

5. In a box clamping machine, an upright standard, an upper and a lower head member thereon, a series of alined upright rods secured at their ends to said members, an upper horizontal pivotally mounted clamping plate carried by the upper head member, a slide shiftable vertically on the standard, an arm projecting horizontally from the slide between certain of the upright rods, a lower horizontal clamping plate carried by said arm, means to lock the slide against movement on the standard, and additional means for locking the upper clamping plate against movement.

[Claims 6 to 11 not printed in the Gazette.]

1,169,245. ADJUSTABLE CURVE. CHESTER A. FINCH, Spokane, Wash. Continuation of application Serial No. 821,903, filed Mar. 2, 1914. This application filed May 21, 1914. Serial No. 840,036. (Cl. 33—177.)



1. In an adjustable curve instrument of the class described, an endless resilient one-piece ruler, bars connected with said ruler, and means for shifting said bars with respect to each other to cause said ruler to assume the desired curve, substantially as described.

2. In an adjustible curve instrument of the class described, an endless resilient ruler, bars for shifting said ruler to cause the same to assume the desired curve, a guide frame engaging said bars between their ends, means between said bars and mounted in said frame for shifting said bars with respect to each other to shape said structure to the desired curve, and devices slidably connected with said bars on opposite sides of said frame for coaction therewith to hold said bars in predetermined relation with respect to each other, substantially as described.

3. In an adjustable curve instrument of the class described, an endless resilient ruler, blocks pivoted to said ruler, adjusting bars having the alternate ends fixed and slidably connected with said blocks, and means between said blocks for shifting said bars to shape said ruler to the desired curve, substantially as described.

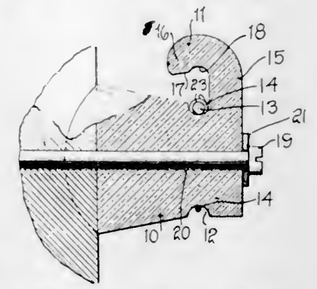
4. In an adjustable curve instrument of the class described, an endless resilient ruler, blocks pivoted to said ruler, adjusting bars each having one end rigidly connected with one block and its other end slidably connected with the other block, and means for shifting said bars to shape said ruler to the desired curve, substantially as described.

5. In an adjustable curve instrument of the class described, an endless resilient ruler, adjusting bars, devices pivoted to said ruler and connected with said bars to hold the latter in parallel relation with respect to each other, and means for shifting said bars to shape said ruler to the desired curve, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

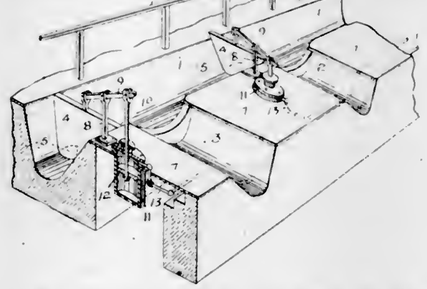
1,169,246. INSULATOR. ALMER J. FOLSTAD, Balaton, Minn. Filed Mar. 22, 1915. Serial No. 16,127. (Cl. 173—315.)

1. An insulator of the character described including a body member having an annular facial groove formed adjacent its outer end, a guard hook formed integrally with the body member and the shank of the hook extending at right angles to the longitudinal axis of the body member, and a bill extending toward and at an acute angle with repsect to the adjacent face of the body member, said shank being disposed on one side of the groove and the bill being extended beyond the other side of the groove.



2. An insulator of the character described including a body member having an annular facial groove formed adjacent its outer end, a guard hook formed integrally with the body member and the shank of the hook extending at right angles to the longitudinal axis of the body member, and a bill extending toward and at an acute angle with respect to the adjacent face of the body member, the inner face of said bill being provided adjacent the junction of the bill and shank with a transverse groove which is transversely alined with the groove of the body member.

1,169,247. CONTROLLING APPARATUS FOR METAL FLOWING FROM BLAST-FURNACES. JAMES S. FRASER, Charleroi, Pa. Filed June 16, 1915. Serial No. 34,373. (Cl. 75—194.)



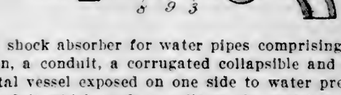
1. The combination with an open trough for the passage of molten metal from a blast furnace having a branch runner communicating therewith, of a gate located in the trough behind the branch runner, a toe carried by the gate for breaking the dam banked in front of the said gate, power mechanism for operating the gate, and means arranged remotely of the trough for controlling the gate operating mechanism.

2. The combination with a trough for the passage of molten metal from a blast furnace having a branch runner communicating therewith, of a gate located in the trough behind the branch runner, dam breaking means connected with the gate for breaking the dam banked in front of said gate, mechanism for operating the gate, and means arranged remotely of the trough for controlling the gate operating mechanism.

3. The combination with a trough for the passage of molten metal from a blast furnace having a branch runner communicating therewith, of a gate located in the trough behind the branch runner, dam breaking means connected with the gate for breaking the dam in front of the trough when the said gate is raised and means for operating the gate.

4. The combination with a trough for the passage of molten metal from a blast furnace having a branch runner communicating therewith, a toe connected by said gate and projecting therefrom for breaking the dam banked in front of the gate when the gate is raised, and means for raising and lowering the gate.

1,169,248. EJECTOR FOR FIREARMS. RUDOLF FROMMER, Budapest, Austria-Hungary. Filed Nov. 7, 1913. Serial No. 799,649. (Cl. 42—25.)

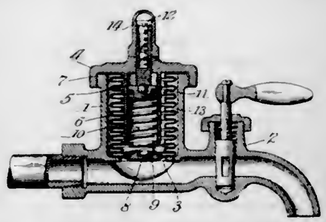


In combination with the breech-casing of fire-arms an ejecting lever pivotally inserted in the breech-casing with its forward end and having at its rear end a hook portion adapted to project into said breech casing into the path of the empty cartridge, and a spring acting on said ejecting lever so as to normally force its hook portion into the breech casing.

1,169,249. AUTOMATIC FIREARM. RUDOLF FROMMER, Budapest, Austria-Hungary. Filed Nov. 7, 1913. Serial No. 799,650. (Cl. 42—4.)

An automatic fire-arm having a sliding barrel, a breech block, a spring actuated catch adapted to retain the said breech block in its retracted position, a projection on the said barrel adapted to disengage the said catch from the said breech block in the foremost position of the said barrel, and means to render the said catch inoperative at will, substantially as and for the purpose set forth.

1,169,250. SHOCK-ABSORBER FOR WATER-PIPES. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed May 9, 1914. Serial No. 837,443. (Cl. 137—71.)



1. A shock absorber for water pipes comprising in combination, a conduit, a corrugated collapsible and expansible metal vessel exposed on one side to water pressure in said conduit which tends to collapse the vessel, and means for applying to the said vessel a resistance to balance the normal water pressure and adapted to yield with increasing resistance for pressures above said normal pressure.

2. A shock absorber for water pipes comprising in combination, a conduit, a corrugated collapsible and expansi-

ble metal vessel exposed to water pressure in said conduit which tends to collapse the vessel, means for applying to said vessel a resistance equal to and in opposition to the normal water pressure in the conduit and adapted to yield with increasing resistance to pressures above said normal pressure, and means for preventing the extension and collapse of said wall beyond its elastic limits.

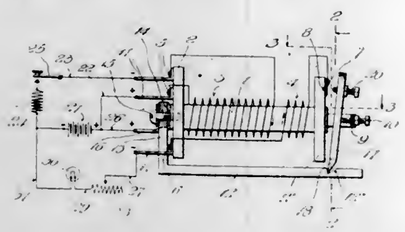
3. A shock absorber for water pipes comprising in combination, a conduit having a chamber open thereto, a corrugated collapsible and expansible metal vessel in said chamber exposed to water pressure in said conduit which tends to collapse the same, and a spring for applying to the vessel a pressure equal to and in opposition to the normal water pressure in the conduit.

4. A shock absorber for water pipes comprising in combination, a conduit having a chamber opening into said conduit, a corrugated collapsible and expansible metal vessel in said chamber exposed to the water presure in said conduit which tends to collapse the vessel, a spring for applying to the vessel a pressure equal to and in opposition to the normal water pressure in the conduit, and a tubular stop for limiting the vibratory movements of said vessel.

5. A shock absorber for water pipes comprising in combination, a conduit having a chamber opening into said conduit, a corrugated collapsible and expansible metal vessel in said chamber exposed to water pressure in the conduit which tends to collapse the vessel, a spring for applying to the vessel pressure equal to and in opposition to the normal water pressure in the conduit, means for adjusting the tension of the spring for different normal water pressures, and means limiting the vibratory movements of said vessel in both directions.

[Claim 6 not printed in the Gazette.]

1,169,251. ELECTRIC RELAY. JAMES F. GAFFNEY, Steelton, Pa. Filed May 24, 1915. Serial No. 30,088. (Cl. 175—320.)



1. The combination with an electro-magnet having a movable armature, of a line helix disposed upon the core of said magnet to energize the latter and actuate said armature, an external circuit controlled by said armature, and a neutralizing coil included therein and tending to produce opposite polarity in the core of said magnet, said coil being disposed in series in the external circuit substantially as and for the purpose set forth.

2. The combination with an electro-magnet having a movable armature, of a line helix disposed upon the core of said magnet to energize the latter and actuate said armature, an energizing circuit for said line helix, and a signal circuit controlled by said armature and including a neutralizing coil tending to produce opposite polarity in the core of said magnet, said coil having such resistance as not to detract from the efficiency of said signal substantially as and for the purpose set forth.

3. The combination with an electro-magnet having a movable armature, of a line helix disposed upon the core of said magnet to energize the latter and actuate said armature, an energizing circuit for said line circuit, a lamp circuit controlled by said armature, a neutralizing coil disposed upon the core of said magnet and included in series in said lamp circuit, said neutralizing coil tending to produce opposite polarity in said core and having a resistance insufficient to detract from the efficiency of said lamp circuit substantially as and for the purpose set forth.

4. In a relay of the character described the combination with a magnetizable core, insulated heads disposed upon the extremities thereof, a metallic base supporting said heads and an armature movably mounted on said base, a line helix disposed upon said core to magnetize the latter and actuate said armature, an energizing battery for said line helix, an adjustable stop carried by said armature, means for conducting electrical energy from the positive pole of said battery to said adjustable stop, a stationary contact mounted upon one of said heads for coöperation with said adjustable stop, a neutralizing coil disposed upon said core to produce opposite polarity therein, a connection between one extremity of said coil and said stationary contact, a signal lamp, a connection between one terminal of the latter and the negative pole of said battery, and an additional connection between the remaining terminal of said lamp and the free extremity of said neutralizing coil substantially as and for the purpose set forth.

5. In a relay of the character described the combination with a magnetizable core, insulated heads disposed upon the extremities thereof, a metallic base supporting said heads and an armature movably mounted on said base, a line helix disposed upon said core to magnetize the latter and actuate said armature, an energizing battery for said line helix, an adjustable stop carried by said armature, a connection between the positive pole of said battery and said metallic base whereby electrical energy may be conveyed to said adjustable stop, a stationary contact mounted upon one of said heads for coöperation with said adjustable stop, a neutralizing coil disposed upon said core to produce opposite polarity therein, a connection between one extremity of said coil and said stationary contact, a signal lamp, a connection between one terminal of the latter and the negative pole of said battery, and an additional connection between the remaining terminal of said lamp and the free extremity of said neutralizing coil substantially as and for the purpose set forth.

1,169,252. CLIP. JAMES H. GAMBLE, Kenosha, Wis. Filed Oct. 21, 1914. Serial No. 867,833. (Cl. 5—29.)



The combination with a wire element having a crimped portion, of a clip having a cut-out portion for the reception of said crimped portion, tongues on said clip to embrace said wire element at each side of said crimped portion, an upstanding lug on said clip, the upper edge of said lug being curved to conform with the contour of the upper edge of said crimped portion to prevent turning thereof, one end of said clip being curved to form a sleeve adjacent said wire and to overlie the ends of said tongues, substantially as described.

1,169,253. PIGMENT AND PROCESS OF MAKING THE SAME. HENRY A. GARDNER, Washington, D. C. Filed Mar. 9, 1915. Serial No. 13,277. (Cl. 134—58.)

1. A precipitate of predetermined composition and suitable for use as a pigment, said precipitate consisting essentially of intimately commingled carbonates of lead and barium.

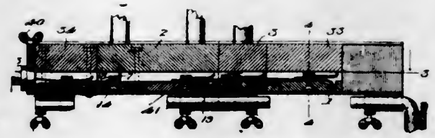
2. The hereindescribed method of making a pigment containing insoluble salts of lead and barium in predetermined proportions which consists in preparing a mixture of lead and barium compounds in the desired proportions one at least of said compounds being a water-soluble salt, and simultaneously precipitating the metals from said mixture in the form of insoluble salts.

3. The hereindescribed method of making pigments containing insoluble carbonates of lead and barium in predetermined proportions, which consists in preparing a mixture of compounds of lead and barium, one at least of said compounds being a water-soluble salt, and simultaneously precipitating the metals from said mixture in the form of their carbonates.

4. The hereindescribed method of making pigments containing insoluble carbonates of lead and barium in predetermined proportions, which consists in preparing a mixture of lead and barium compounds in the desired proportions, one at least of said compounds being a water-soluble salt, and reacting on said mixture with carbon dioxid.

5. The herein-described method of making a pigment containing lead and barium carbonates, which consists in forming a basic carbonate of lead and precipitating barium carbonate in intimate association therewith.

1,169,254. ELECTRIC-SIGN STRUCTURE. ADOLPH WILLIAM GAST, Chicago, Ill., assignor to Chicago Miniature Lamp Works, Chicago, Ill., a Corporation of Illinois. Filed Oct. 10, 1911. Serial No. 653,859. (Cl. 40—130.)



1. A sign structure, comprising a supporting member, a plurality of separable units of insulating material removably engaged on said supporting member, current conducting members carried by each unit, terminals carried by the current conducting members formed at one end with a tongue projecting beyond the unit, and formed at the other end into a socket within the unit for the tongue of the corresponding member of the adjacent unit, whereby the units may be brought into abutting engagement when the terminals of adjacent units are interengaged.

2. The combination of a plurality of lamp and letter units, each formed with a rectangular base and having connectors therein, with a supporting structure in the form of a channeled member, the connectors of one unit engaging with the connectors of an adjacent unit.

3. An electric sign comprising a hollow, trough-like support, a plurality of separately formed electrically illuminated letters rising perpendicularly from said support, a plurality of bases there being a base secured to each letter, each base being constructed to seat in said support, and conductors in said bases, the conductors of one base engaging with the conductors of an adjacent base and being adapted to hold said bases in abutting engagement.

4. An electric sign comprising a hollow support, rectangular in cross section, a plurality of separately formed letter units, a plurality of bases, one for each letter unit, means for securing each letter unit in a perpendicular position upon its associated base, said base being constructed to seat in said hollow support, and means for illuminating said letters electrically.

5. An electric sign comprising a support, substantially rectangular in cross section, a plurality of separately formed bases constructed to seat in said support, a plurality of hollow electrically illuminated designs, there being one design rigidly attached to and erected perpendicularly upon each base, and conductors in each base, the conductors of one base engaging with the conductors of an adjacent base and being adapted to hold said bases in abutting engagement.

[Claims 6 to 10 not printed in the Gazette.]

1,169,255. AUTOMOBILE-HOIST. JASON FRED GRAHAM, Evansville, Wis. Filed Feb. 8, 1915. Serial No. 6,964. (Cl. 254—2.)

1. A device of the class described comprising a pair of parallel wheel supported tracks having channels on their inner opposed faces, an axle rest rising above one end of said tracks, a pair of parallel transverse rods having their ends mounted to slide in said channels, and a pair of axle rests rising from said rods and adjustable longitudinally thereon.

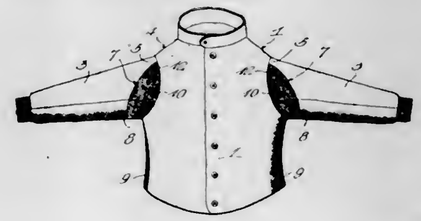


2. A device of the class described comprising a pair of parallel tracks having channels on their inner opposed faces, an axle rest rising above one end of said tracks, a pair of parallel transverse rods having their ends mounted to slide in said channels, two pairs of independent bearings mounted on the ends of said rods to slide longitudinally thereon, upwardly converging bars rising from said bearings, and inverted V-shaped axle rests secured to said bars for vertical adjustment.

3. A device of the class described comprising a pair of parallel tracks having channels on their inner opposed faces, an axle rest rising above one end of said tracks, a pair of parallel transverse rods having their ends mounted to slide in said channels, two pairs of independent bearings mounted on the ends of said rods to slide longitudinally thereon, upwardly converging bars rising from said bearings, and inverted V-shaped axle rests having hollow legs adjustably receiving said bars.

4. A device of the class described comprising a pair of parallel longitudinal wheel supported tracks formed of channel iron with the channels thereof disposed inwardly, a pair of transverse parallel rods disposed at each end of the device and having their opposite ends mounted slidably in the channels of the tracks, and a pair of axle rests rising from each pair of rods.

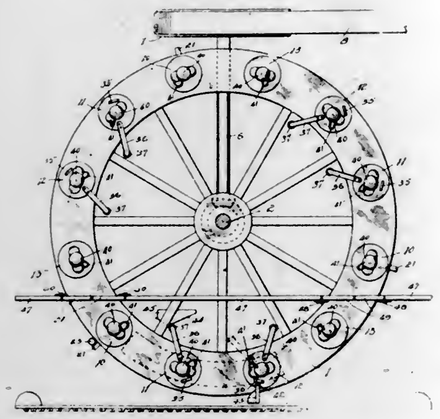
1,169,256. GARMENT. LOUIS GRIMM and HERBERT H. KANT, Milwaukee, Wis. Filed July 1, 1915. Serial No. 37,481. (Cl. 2—98.)



The combination with a body garment having an ordinary armhole or scye; of a sleeve having a portion of its inner end cut away to form a concave edge terminating at its opposite ends adjacent the top of the sleeve on opposite sides thereof, the ends of said concave portion being spaced from each other a sufficient distance to form a longitudinally extending narrow inelastic tongue, an arcuate elastic strip having its convex edge secured to the concave edge of the sleeve and its concave edge secured to the scye of the garment, the tapered ends of the strip fitting in the ends of the concave portion of the sleeve and arranged adjacent the free end of said tongue with their outer concave edges flush with the terminal of said tongue, said tongue terminal being secured to the shoulder of the garment, and the arcuate strip when the sleeve is applied extending around the entire arm scye except at the shoulder line thereof where the inelastic tongue is secured to said shoulder, whereby the sleeve is unyieldingly connected at the shoulder only and is held against longitudinal displacement while permitted

to yield throughout the remainder of its connection with the garment, thereby adapting a single garment to fit and be comfortably worn by persons of varying chest and shoulder measurements.

1,169,257. AMUSEMENT GAME. LOUIS B. HEEP, Denver, Colo. Filed Aug. 23, 1915. Serial No. 46,771. (Cl. 46—27.)



1. In an amusement game, the combination with a revolving table, of a wall spanning said table, appropriate figures movably mounted upon said revolving table, and swinging-doors in the path of travel of said figures adapted to be opened for the passage of said figures.

2. In an amusement game, the combination of a constantly revolving table, a scenic wall spanning said table, a plurality of appropriate figures mounted upon said revolving table, swinging-doors arranged in said wall adapted to be opened for the passage of said figures, and means of subjecting said figures to various movements during a period of their travel in each revolution of said table.

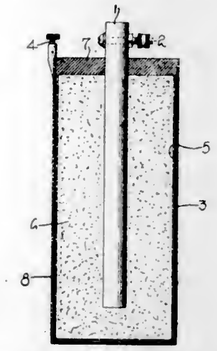
3. In an amusement game, the combination of a constantly revolving table, a stationary wall spanning said table, a plurality of swinging doors arranged in said wall adjacent the outer edge of said revolving table, a series of appropriate figures mounted upon said table in alinement with said swinging doors and adapted to travel with said revolving table, means of subjecting each series of figures to a different movement during a period of their travel in each revolution of the table, and appropriate headgear for each figure adapted to be knocked off if possible during a period of travel in each revolution of the revolving table.

4. In an amusement game, the combination of a constantly revolving table, appropriate dummies movably mounted upon said table, a stationary wall spanning said table, swinging doors arranged in said wall adapted to be opened by said dummies, and an appropriate head-gear for each dummy adapted to be knocked off if possible during a period of their travel.

5. In an amusement game, the combination of a constantly revolving table, a plurality of differently constructed dummies movably mounted upon said table near the edge thereof and adapted to be arranged in spaced relation with one another, a wall spanning said revolving table, swinging doors arranged in said wall in the path of travel of said dummies and adapted to be opened by means of the dummies coming in contact with them, means of subjecting said dummies to various movements during a period of their travel in each revolution of the table, and an appropriate head-gear for each dummy adapted to be knocked off if possible during a period of travel in each revolution of the table.

[Claims 6 to 12 not printed in the Gazette.]

1,169,258. CELL. WILLIAM HOPPIE, Lawndale, Cal. Filed June 1, 1915. Serial No. 31,550. (Cl. 204—38.)



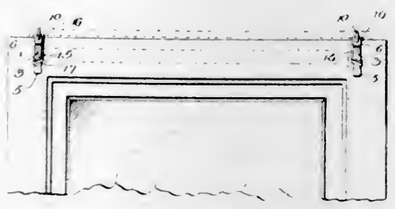
1. In a dry cell, coating for one of the electrodes consisting of a mixture of an organic syrup and a powdery material.

2. In a dry cell, coating for one of the electrodes consisting of a mixture of a carbohydrate syrup and a powdery material.

3. In a dry cell, coating for one of the electrodes consisting of a mixture of glucose and a powdery material.

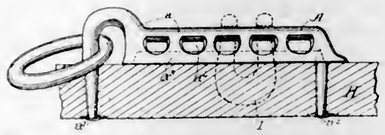
4. The process of coating a dry cell part which consists in applying a layer of an organic syrup thereto and then adding a dry powder to such applied layer.

1,169,259. COMBINED SHADE-ROLLER AND CURTAIN-POLE SUPPORT. DELL HOUSTON, Boyce Station, Pa. Filed June 1, 1915. Serial No. 31,549. (Cl. 156—24.)



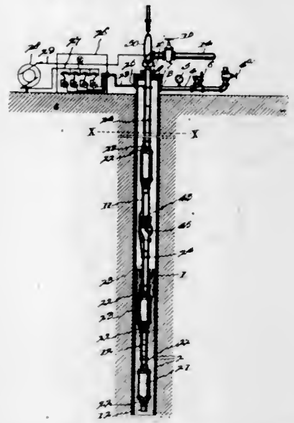
A combined shade roller and curtain pole support comprising a one-piece truncated substantially V-shaped resilient sheet metal bracket, the arms of which have frame engaging elements at their terminals, and a strap having its ends slidably engaging said arms for adjustably connecting them, said strap being apertured to receive a shade roller pintle, and said bracket carrying a curtain pole holder.

1,169,260. ADJUSTABLE HAME-DRAFT. JAMES M. HUDSON, Blanchester, Ohio, assignor to The Star Hame Manufacturing Company, Blanchester, Ohio. Filed July 2, 1913. Serial No. 776,998. (Cl. 54—31.)



As an article of manufacture for the adjustable connection of tug-links with hames, a member comprising a longitudinally-extending bar and webs diverging therefrom and connected to each other at opposite ends, said member being rigid with projections for fastening the member to the hames, the divergent sides of said member being perforated in alinement for the reception and attachment of a link in adjusted positions, and a strip of resilient material of substantially arched form in cross section adapted to seat on the hames and to be confined in the housing formed between the inner walls of the divergent sides and the closed ends of said member.

1,169,261. CLEANING OIL-WELLS. WILLIAM DANIEL HUFF, La Fayette, La., assignor of three-fourths to Louise Guidry Moss, New Iberia, La. Original application filed Apr. 6, 1915, Serial No. 19,607. Divided and this application filed Apr. 28, 1915. Serial No. 24,463. (Cl. 166—21.)



1. The method of operating oil wells provided with a gas-tight casing having a closed top and a screen in the lower portion thereof, and a central delivery pipe and an injector therein inclosed in said casing, with means for closing said pipe, which consists in applying sufficient heat to the liquid in the lower end of said casing to generate therefrom gaseous pressure in said casing, which rising in said casing above said heated liquid will force part of the liquid so heated back through said screen into the oil-bearing strata, thereby warming same and thinning the oil, and incidentally cleansing said screen, in then relieving said pressure and allowing the well to resume its flow, and finally lifting the liquid flowing from the well into the bottom of said casing by means of gaseous pressure flowing through said injector, said gaseous pressure being generated by heating part of the liquid contained in said casing, substantially as described.

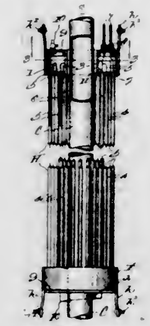
2. The method of operating oil wells provided with a gas-tight casing having a closed top and a screen in the lower portion thereof, and a central delivery pipe and an injector therein inclosed in said casing, with means for closing said pipe, which consists in applying sufficient heat to the liquid in the lower end of said casing to generate therefrom gaseous pressure in said casing, which rising in said casing above said heated liquid will force part of the liquid so heated back through said screen into the oil-bearing strata, thereby warming same and thinning the oil, and incidentally cleansing said screen, and in then relieving said pressure and allowing the well to resume its flow, and in repeating said operation of heating the liquid in the casing, generating pressure, and causing said pressure to discharge the liquid from said casing back into the oil-bearing strata until the latter are sufficiently warmed to secure the proper flow of oil therefrom, and finally lifting the liquid flowing from the well into the bottom of said casing by means of gaseous pressure flowing through said injector, said gaseous pressure being generated by heating part of the liquid contained in said casing, substantially as described.

3. The method of cleansing oil wells provided with a gas-tight casing having openings in the lower portion thereof, and a closed top, and means for supplying liquid therethrough; which consists in supplying liquid through said top to the interior of said casing, in applying sufficient heat to the liquid in the lower end of said casing to generate therefrom gaseous pressure in said casing, which rising in said casing above said heated liquid will force part of the liquid so heated, and also part of the steam and other gases so generated, back into the oil-bearing strata, thereby warming same and thinning the oil, and in then relieving said pressure and allowing the well to resume its flow, substantially as described.

4. The method of cleansing oil wells provided with a gas-tight casing having openings in the lower portion thereof, and a closed top, and means for supplying liquid therethrough, which consists in supplying liquid through said top to the interior of said casing, and in applying sufficient heat to the liquid in the lower end of said casing to generate therefrom gaseous pressure in said casing, which rising in said casing above said heated liquid will force part of the liquid so heated, and also part of the steam and other gases so generated, back into the oil-bearing strata, thereby warming same and thinning the oil, and in then relieving said pressure and allowing the well to resume its flow, and in repeating said operation of supplying fresh liquid through the top of said casing, heating the liquid in the casing, generating pressure, and causing said pressure to discharge the liquid from said casing, and also part of the steam and other gases so generated, back into the oil-bearing strata until the latter are sufficiently warmed to secure the proper flow of oil therefrom, substantially as described.

5. The method of operating oil wells provided with a gas-tight casing having openings in the lower portion thereof, and a closed top, and means for supplying liquid therethrough which consists in supplying liquid through said top to the interior of said casing in applying sufficient heat to the liquid in the lower end of said casing to generate therefrom gaseous pressure in said casing, which rising in said casing above said heated liquid will force part of the liquid so heated, and also part of the steam and other gases so generated, back into the oil-bearing strata, thereby warming same and thinning the oil, and in then relieving said pressure and allowing the well to resume its flow, and finally lifting the liquid from said casing after the well resumes its flow, by an injector operated by gas pressure generated from the liquid that has flowed into the well, substantially as described.

1,169,262. ELECTRIC HEATER. WILLIAM DANIEL HUFF, La Fayette, La. Filed May 27, 1915. Serial No. 30,784. (Cl. 219—38.)



1. An electric heater comprising two hollow annular heads adapted to be placed around a central pipe, tubes connecting said heads, the joints in said heads and tubes being substantially air-tight, heating wires rove through said tubes, and means for conveying an electric current to said wires, substantially as described.

2. An electric heater comprising two hollow annular heads, tubes connecting said heads, the joints in said heads and tubes being substantially air-tight, heating wires rove through said tubes, a cock opening into one of said heads and adapted to exhaust the air from the interior of said heads and said tubes, and to charge same with an inert gas, and means for conveying an electric current to said wires, substantially as described.

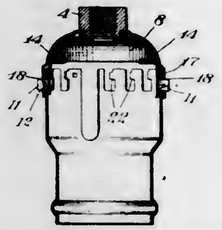
3. An electric heater comprising two hollow annular heads adapted to be placed around a central pipe, tubes connecting said heads, the joints in said heads and tubes being substantially air-tight, heating wires rove through said tubes, and means for conveying an electric current to said wires, with nitrogen gas filling the hollow portions of said heads and said tubes, substantially as and for the purposes described.

4. An electric heater comprising two hollow annular heads, tubes connecting said heads, the joints in said heads and tubes being substantially air-tight, heating wires rove through said tubes, a cock opening into one of said heads and adapted to exhaust the air from the interior of said heads and said tubes, and to charge same with an inert gas, and means for conveying an electric current to said wires, with nitrogen gas filling the hollow portions of said heads and said tubes, substantially as and for the purposes described.

5. An electric heater comprising two hollow heads, tubes connecting said heads, the joints in said heads and tubes being substantially air-tight, heating wires rove through said tubes and spaced therefrom by insulating material, a cock opening into one of said heads and adapted to exhaust the air from the interior of said heads and said tubes, and to charge same with an inert gas, and means for conveying an electric current to said wires, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,263. CASING FOR ELECTRICAL APPARATUS AND REMOVABLE LOCKING AND INSULATING MEANS. JOSEPH KEEFE, Boston, Mass., assignor to The Zee Socket & Mfg. Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1912. Serial No. 692,814. (Cl. 173—362.)



1. In electric socket casings, the combination of a cap provided with a locking aperture to coöperate with and support a removable insulating lining in the cap, a shell provided with a locking aperture to register with the locking aperture in the cap, and a removable insulating lining provided with means to coöperate with the aperture in the cap to support the insulating lining in the cap, the same means being adapted to coöperate with the aperture in the shell to lock the cap and shell together.

2. In electric socket casings, the combination of a cap provided with a locking aperture to coöperate with and support a removable insulating lining in the cap, a shell provided with a locking aperture to register with the locking aperture in the cap, and a removable insulating lining provided with inclined means to coöperate with the aperture in the cap to support the insulating lining in the cap, the same inclined means being adapted to cooperate with the aperture in the shell to lock the cap and shell together.

3. In electric socket casings, the combination of a cap provided with one or more locking surfaces, a shell provided with one or more locking surfaces, and a removable insulating lining for the cap provided with permanently connected laterally extending means to coöperate with the locking surfaces in the cap and shell and to lock them together.

4. In electric socket casings, the combination of a cap provided with one or more openings, a shell provided with one or more angular slots provided with open throats, and a removable locking member removably mounted in the casing provided with lugs permanently connected to it to coöperate with the openings and slots in the cap and shell to lock them together.

5. In electric socket casings, the combination of a cap provided with one or more openings, a shell provided with one or more angular slots provided with open throats and a removable locking member removably mounted in the casing provided with a lug and a shorter inclined or wedge member to coöperate with the shell and with the openings and slots in the cap and shell to lock them together.

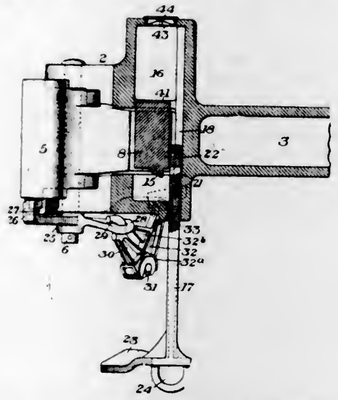
[Claims 6 to 13 not printed in the Gazette.]

1,169,264. CLOSURE DEVICE. HENRY C. KESTEL, Toledo, Ohio. Filed Mar. 1, 1915. Serial No. 11,133. (Cl. 215—9.)



A cover for a lipped vessel embodying a disk provided with an annular flange having intermediate its extent away from the disk, an endless series of yieldable inwardly extending projections, said flange having beyond said projections a return bend stiffening portion whereby the projections are firmly held to coact with the vessel lip and yieldably draw the disk theretoward.

1,169,265. CAR-COUPLING. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 6, 1910. Serial No. 575,956. (Cl. 213—10.)



1. A car coupler having a head, a pivoted knuckle, a lock, a lock-lifting device, actuating connections between the lock and the lock-lifting device, a toggle connected to the coupler head and also to the knuckle, and means on the lock lifter for actuating the toggle, substantially as described.

2. A car coupler having a head, a pivoted knuckle, a lock, a lock-lifting device, actuating connections between the lock and the lock-lifting device, and a toggle pivoted to the coupler head and connected to the knuckle, the lock-lifter having a part coöperating with the toggle, a part of the head co-acting with the lock to move the lock to release it from its operative connection with the lock lifter for lock-setting, the lifter being adapted to be raised after disconnection with the lock to actuate the toggle and thereby throw the knuckle, substantially as described.

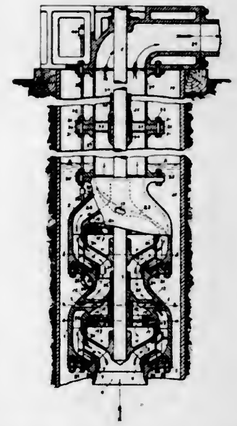
3. A car coupler having a head, a pivoted knuckle, a lock, a lock-lifting device, actuating connections between the lock and the lock-lifting device, members forming a toggle joint pivoted to the coupler head, and a bell crank lever forming a connection between one of said toggle members and the knuckle, substantially as described.

4. A car coupler having a pivoted knuckle and a lock, a lifter engaging the lock, and a knuckle-throwing member actuated by the lifter and comprising a bell crank lever pivoted on the knuckle pin and engaging the knuckle, substantially as described.

5. In a car coupler, a coupler head, a knuckle pivoted thereto, a lock, a lock lifter, a toggle device for throwing the knuckle, said toggle device forming an elbow joint, and means on the lock lifter adapted to engage the elbow joint and throw the knuckle, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,266. DEEP-WELL PUMP. FERDINAND W. KROGH, San Francisco, Cal. Filed Mar. 14, 1912. Serial No. 683,674. (Cl. 253—199.)



1. In a centrifugal vertical pump, the combination with the impeller and its casing, a discharge passage in said casing, inwardly projecting annular flanges upon said impeller and said casing communicating with said discharge passage and recesses upon said flanges forming therebetween pressure chambers when said flanges come together.

2. In a centrifugal pump, the combination with the impeller and its casing, an annular flange on the upper part of said impeller, projecting inwardly from the outer edge thereof, a corresponding flange on the casing, facing said impeller flange and each provided with a plurality of recesses upon their outer faces adapted to form pressure chambers therebetween when said flanges come together.

3. In a centrifugal pump, the combination with the impeller and its casing, a receiving chamber in said impeller and a discharge chamber in said casing in communication with said receiving chamber, inwardly projecting annular flanges upon said impeller and said casing and recesses upon said flanges forming therebetween pressure chambers when said flanges come together.

4. In a centrifugal pump, the combination with the impeller and its casing, a receiving chamber at the upper end of said impeller adapted to receive leakage from the running joints, a discharge chamber provided with an outlet in communication with said receiving chamber and inwardly projecting flanges on the edges of said receiving and discharge chambers having means adapted to form a pressure chamber therebetween.

5. In a centrifugal pump, the combination with the impeller and its casing, a receiving chamber in the impeller, an auxiliary chamber in the casing, flanges projecting inwardly from the edge of said chambers and provided with interspaced recesses adapted to form pressure chambers therebetween, and a channel in said casing chamber adapted to discharge leakage under pressure into the well from said chambers.

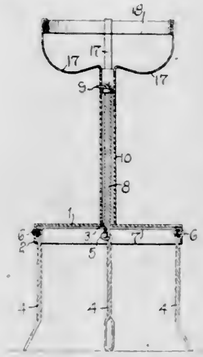
[Claims 6 to 9 not printed in the Gazette.]

1,169,267. DYEING ARTIFICIAL SILK. FELIX KUNERT, Offenbach-on-the-Main, Germany, assignor to the Corporation of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Filed Aug. 5, 1914. Serial No. 855,305. (Cl. 8—5.)

1. In the art of producing ice colors on artificial silk the improvement consisting in impregnating the artificial silk with a solution of an arylamid of 2:3-oxynaphthoic acid and treating it with a non-sulfonated diazo compound.

2. The art of dyeing artificial silk with a previously prepared non-sulfonated diazo compound, which comprises impregnating the artificial silk with a solution having a great affinity for the artificial silk, namely a solution of an arylamid of 2:3-oxynaphthoic acid, and then treating the thus impregnated artificial silk with a previously prepared non-sulfonated diazo compound, whereby the arylamid is coupled directly with the diazo compound.

1,169,268. WASHSTAND. CORA E. KYTE, Montrose, Kans. Filed June 15, 1915. Serial No. 34,180. (Cl. 45—38.)

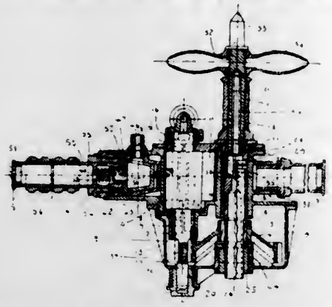


A wash-stand comprising a table with an opening at substantially its center, supporting legs for said table provided with extensions disposed through the opening of the table and terminating a distance thereabove, said extensions being interlocked and one of said extensions terminating in a lateral projection, a sleeve surrounding the extensions of the supporting legs and provided with a slot through which the lateral extension is disposed, said slot having a communication therewith spaced offset slots produced in the sleeve in which the lateral extension is adapted to be received for holding the sleeve in vertical adjustment, arms radiating from the upper end of the sleeve, and a rim member supported by said arms.

1,169,269. MOTOR FOR ROTARY MACHINES. SILVIO B. LANDÒ and LUIGI MONTEVERDE, Genoa, Italy. Filed Dec. 16, 1912. Serial No. 737,006. (Cl. 136—2.)

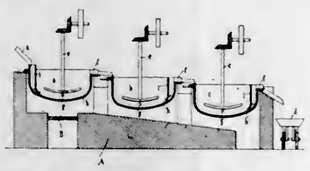
In a motor of the character described, a casing having a tubular extension, a valve casing mounted in said exten-

sion and provided with ribs to form inlet and exhaust passages between the casing and extension, said extension having a supply opening and said casing having a similar supply opening registering therewith, said casing further having ports communicating with said passages, a hollow plug valve revolubly mounted in said casing and provided



with a diametrically disposed partition arranged to divide the valve into two chambers, said valve further having a pair of ports leading from each chamber and arranged to bring either of the ports in the casing into communication with the supply opening, and said valve further having a third port constituting an exhaust port leading from one of said chambers, and means for rotating said valve.

1,169,270. APPARATUS FOR THE TREATMENT OF ORES. ERICH LANGGUTH, Neerpelt, Belgium. Original application filed Feb. 10, 1912, Serial No. 676,869. Divided and this application filed Oct. 4, 1912. Serial No. 726,820. (Cl. 75—57.)

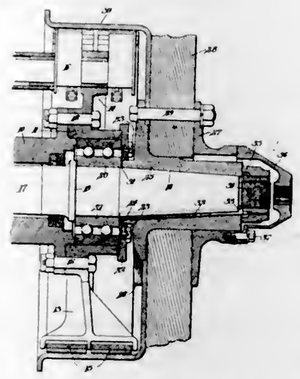


An apparatus for the treatment of an ore containing silver, comprising an integral vat provided with a curved side wall and a bottom wall merged into said side wall by a curved connection and being divided into a main compartment of circular cross section and a secondary compartment of crescent cross section by an integral diaphragm extending to the bottom of the vat and provided with an aperture near said vat bottom to establish communication between said compartments, the said diaphragm being of the same convexity as that of the side wall of said main compartment and being merged into said bottom wall by a curved connection of the same convexity as that of the curved connection first mentioned, whereby the entire inner surface of the diaphragm constitutes an unbroken continuation of the inner surface of said main compartment side and bottom walls, and the outer wall of said secondary compartment being curved so as to merge into the side and bottom walls of the main compartment.

1,169,271. BEARING-CLAMP. ARTHUR MAUNDER LAYCOCK. Kingston, Pa. Filed Oct. 9, 1915. Serial No. 55,056. (Cl. 64—36.)

1. The combination of a tubular axle, a driving shaft therein having an abutment adjacent the end of said axle and a tapered end portion, a roller bearing for supporting said shaft between said abutment and said tapered end, a wheel hub secured on said tapered end, a key extending through said hub and engaging said bearing, said key cooperating with said abutment to secure the bearing against axial movement on said shaft, and means for securing said key.

2. The combination of a tubular axle, a driving shaft therein having an abutment adjacent the end of said axle and a tapered end portion, a roller bearing for supporting said shaft between said abutment and said tapered end, a wheel hub on said tapered end, a key extending through said hub and engaging said bearing, said key coöperating with said abutment to secure the bearing against axial movement on said shaft, means for securing said key, and means for securing said hub.



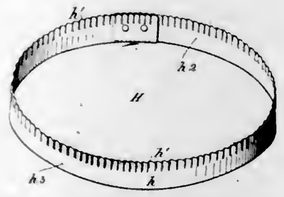
3. The combination of a tubular axle, a driving shaft therein having a tapered end portion, a bearing between said shaft and said tubular axle held against inward movement on said shaft, a wheel hub secured on said tapered end of the shaft, a key extending through said hub and engaging said bearing to hold the latter against outward movement relative to the shaft, and means for securing said key.

4. The combination of a tubular axle, a driving shaft therein having a tapered end portion, a bearing between said shaft and said tubular axle held against inward movement on said shaft, a wheel hub secured on said tapered end of the shaft, a key extending through said hub and engaging said bearing to hold the latter against outward movement relative to the shaft and a nut on the end of said shaft engaging the end of said key and securing the latter against outward movement.

5. The combination of a tubular axle, a driving shaft therein having a tapered end portion, a bearing between said shaft and said tubular axle held against inward movement on said shaft, a wheel hub secured on said tapered end of the shaft, a key extending through said hub and engaging said bearing to hold the latter against outward movement relative to the shaft, a nut on said shaft engaging the end of said key and securing the key against outward movement and a nut for securing said hub.

[Claim 6 not printed in the Gazette.]

1,169,272. METALLIC HOOP FOR BARRELS. MAX E. LOBLEY, New York, N. Y., assignor to Brooklyn Cooperage Co., Brooklyn, N. Y. Filed Oct. 19, 1914. Serial No. 867,285. (Cl. 217—91.)

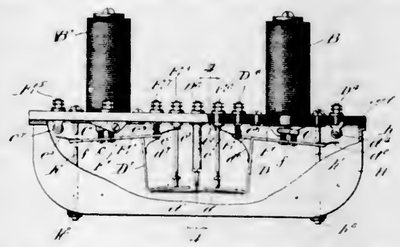


1. A hoop of the character designated, comprising a strip of sheet metal formed with a driving edge consisting of a continuous series of sinuous, undulatory corrugations protuberant upon the outer face only of the hoop so as to leave the inner surface of the inner crests of the corrugations in alinement with the flat inner face of the hoop, said corrugations being of substantially equal width with parallel edges extending transversely toward the longitudinal center of the hoop for a distance not exceeding one-third the width of the hoop, the overlapping ends of the strip being united to complete the hoop.

2. A hoop of the character designated, comprising a strip of sheet metal formed with a driving edge consisting of a continuous series of sinuous, undulatory corrugations protuberant upon the outer face only of the hoop so as to leave the inner face of the inner crests of the corrugations in alinement with the flat inner face of the hoop, said corrugations being of substantially equal width with parallel edges extending transversely toward the longitudinal center of the hoop for a distance not exceeding one third of the width of the hoop and merging into the body of the latter at their inner ends in the form of reversed curves, the overlapping ends of the strip being united to complete the hoop.

3. A hoop of the character designated, comprising a strip of sheet metal formed with a driving edge consisting of a continuous series of sinuous, undulatory corrugations protuberant upon the outer face only of the hoop so as to leave the inner face of the inner crests of the corrugations in alinement with the flat inner face of the hoop, said corrugations being of substantially equal width with parallel edges extending transversely toward the longitudinal center of the hoop for a distance not exceeding one third of the width of the hoop and merging into the body of the latter at their inner ends in the form of reversed curves of less length than the corrugation width, the overlapping ends of the strip being united to complete the hoop.

1,169,273. INTERLOCKING RELAY FOR RAILWAY-SIGNALS. CHARLES E. MASON, Chicago, Ill. Filed Sept. 13, 1907. Serial No. 392,614. (Cl. 246—32.)

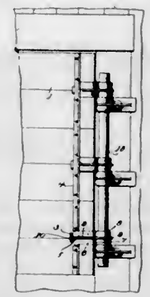


1. In a relay, a pair of vertical magnets, a pair of armatures pivotally mounted beneath said magnets so as to swing about horizontal axes, a contact piece arranged between said armatures, interlocking contact arms carried by said armatures in planes at right angles to the axes of the magnets and coöperating with said contact piece, additional contact pieces arranged on opposite sides of each of said armatures, and switch arms carried by each of said armatures and arranged to engage at their one end with the coöperating contacts on one side of the armatures when the magnets are deënergized and at their other end with the coöperating contacts on the other side of the armature when the magnets are energized.

2. In a relay, a pair of vertical magnets, a pair of armatures pivotally mounted beneath said magnets so as to swing about horizontal axes, a contact piece arranged between said armatures, and contact arms carried by said armatures in planes at right angles to the axes of the magnets and having interlocking contact with each other and coöperating with said contact piece.

1,169,274. HINGE. FRANK F. MILLER, Yankton, S. D. Filed May 27, 1914. Serial No. 841,309. (Cl. 16—106.)

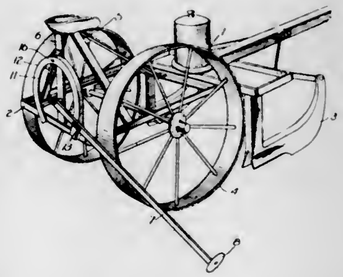
1. As a new article of manufacture, a hinge member comprising a web having door-face engaging cheek portions integral with its lateral edges, and having an eye integral with one end of one of said cheek portions and laterally offset with respect thereto.



2. As a new article of manufacture, a hinge member comprising an attaching portion having an eye and provided with a reinforcing web integral with one face of the portion and formed at a point in the line of juncture with the said face with a notch, the said attaching portion being formed with an opening located opposite the notch.

3. As a new article of manufacture, a hinge member comprising an attaching portion having an eye and provided with a reinforcing web integral with one face of the portion and formed at a point in the line of juncture with the said face with a notch, the said attaching portion being formed with an opening located opposite the notch, the said opening having its wall of an outline approximately corresponding to the outline of a vertical section through the head and of a bolt.

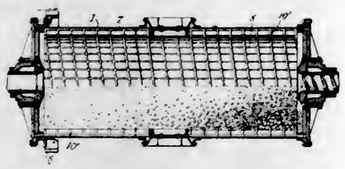
1,169,275. ROW-MARKER FOR CORN-PLANTERS. CLINTON MOLL, Olathe, Kans. Filed Aug. 2, 1915. Serial No. 43,125. (Cl. 111—24.)



1. The combination with a frame, of an arc-shaped guide arranged vertically on the frame and provided with apertures, an arm pivoted on the frame concentrically with the guide and bearing thereagainst, a marker on the outer end of said arm, a keeper on said arm lying along the side of the guide opposite the arm, and a latch on said arm having a tooth adapted for projection into the guide apertures.

2. The combination with a frame, of an arc-shaped guide comprising a body L-shaped in cross section with one member secured to the frame and the other member forming a flat bearing face having its free edge at the interior of the arc, an arm pivoted to the frame concentrically with the guide, a marker at the free end of the arm, and a keeper attached to the arm and having a lip lying at the side of the flat face member of the guide opposite the arm, to hold the arm to the guide while permitting free pivotal movement of the arm.

1,169,276. CONSTRUCTION OF TUBE-MILLS AND LININGS THEREFOR. DAVID JACK NEVILL, Denver, Colo., assignor to The Stearns-Roger Manufacturing Company, Denver, Colo., a Corporation of Colorado. Filed Mar. 18, 1913. Serial No. 755,074. (Cl. 83—9.)



1. In a grinding mill, a shell or casing, a lining therefor comprising a plurality of juxtapositioned sections, each section comprising a plurality of segments provided with longitudinal teeth and a transverse reinforcing rib, and means to expand said segments circumferentially in said shell or casing, said means comprising wedge shaped keys adapted to be inserted in position laterally of the sections and having their outer faces substantially flush with the outer face of the lining sections.

2. In a tube mill, a lining comprising a plurality of circumferential segments the adjacent edges of which form key ways, and wedge shaped keys adapted to be inserted in said key ways, said segments being provided with flanges directed over the wedge shaped keys, substantially as described.

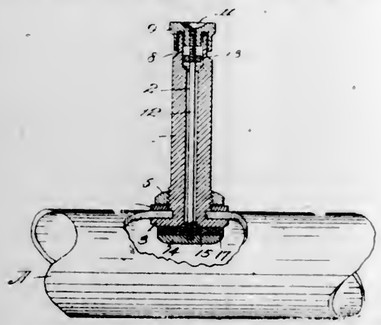
3. In a tube mill, a lining comprising a plurality of circumferential segments the adjacent edges of which form key ways, and wedge shaped keys adapted to be inserted in said key ways the outer and inner surfaces of said keys being substantially flush with the outer and inner surfaces respectively of the segments, and said segments having flanges directed over the inner faces of said keys.

4. In a tube mill, a lining provided with longitudinal teeth and means projecting beyond the level of the inner edges of said teeth to convey the coarser material toward the feed end of the mill.

5. In a tube mill, a lining provided with longitudinal teeth and members projecting beyond the level of the inner edges of the teeth and inclined to the longitudinal axis of the mill to convey the coarser particles of the contents of the mill toward the feed end thereof.

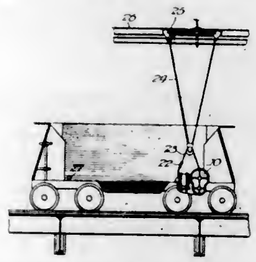
[Claims 6 to 8 not printed in the Gazette.]

1,169,277. VALVE FOR PNEUMATIC TIRES. JOSEPH N. NEWSOM, St. Louis, Mo., assignor, by mesne assignments, to William H. Morgens, St. Louis, Mo. Filed Dec. 9, 1912. Serial No. 735,641. (Cl. 152—12.)



In a valve of the class described, a tubular valve housing, a disk on the lower end thereof, the underface of which disk is flat and the end of the opening into the tubular housing being counter-sunk, a valve rod in the opening through the valve housing, a disk fixed to the lower end of said valve rod, a lug projecting upwardly from the center of said disk, which lug receives the lower end of the valve rod, the upper end of said lug being conical and adapted to engage in the counter-sunk lower end of the opening through the valve housing, the top of the disk on the lower end of the valve rod being flat, and a gasket arranged on the flat face of said disk, the upper face of which gasket is flat and adapted to engage the flat lower face of the disk on the valve housing, and the lug on the disk carried by the valve rod being of such length as to permit the conical upper end of the lug to project above the top of the gasket when the parts are assembled.

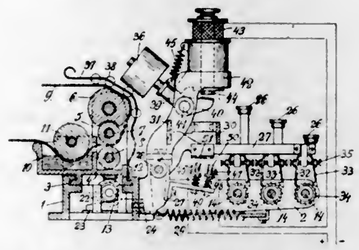
1,169,278. CAR-DOOR-OPERATING DEVICE. WILLIAM NICHOLLS, Coleraine, Minn. Filed Feb. 23, 1915. Serial No. 9,907. (Cl. 214—1.)



1. The combination with a car having a door of a rotatable shaft for closing said door, a clutch on one end of the shaft, an overhead support and a trolley running on said support, a motor flexibly suspended from the trolley, a second shaft, speed reducing mechanism between the motor and said second shaft, and a clutch on the end of said second shaft adapted to flexibly engage with the clutch on the end of said car shaft, substantially as described.

2. The combination with a car having a door of a rotatable shaft for closing said door, a clutch on one end of said shaft, a support and a trolley running on said support, a motor flexibly mounted on said support, a second shaft, speed reducing mechanism between the motor and shaft, and a clutch on the end of said second shaft adapted to flexibly engage with the clutch on the end of the car shaft, substantially as described.

1,169,279. STEREOTYPE-MATRIX MACHINE. ANDREAS OTT, Oberkassel-Siegkreis, Germany. Filed Nov. 15, 1913. Serial No. 801,239. (Cl. 197—6.)



1. In a stereotype-matrix machine, the combination with a carriage and with a plurality of key-levers, of a plurality of shafts arranged under said key-levers at right angles thereto, a ratchet wheel mounted on one of said shafts for each key-lever, two spring pawls connected to each lever so as to act on the ratchet wheel for turning the latter and the shaft, one pawl being adapted to act when the key is depressed and the other when the lever is restored to normal position, and means for transmitting the movement of the shafts to the carriage for feeding the latter.

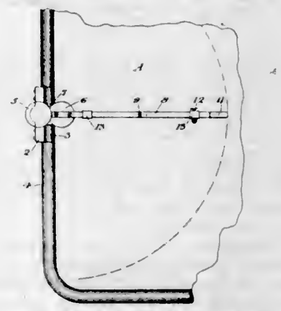
2. In a stereotype-matrix machine, the combination with a carriage and a plurality of key-levers, of a plurality of shafts arranged under said key-levers at right angles thereto, a ratchet wheel mounted on one of said shafts for each key-lever, two spring pawls connected to each lever so as to act on the ratchet-wheel for turning the latter and the shaft, one pawl being adapted to act when the key is depressed and the other when the key is restored to normal position, means for adjusting the pawls so as to turn the wheel through a variable number of tooth spaces, and means for transmitting the movement of the shafts to the carriage for feeding the latter.

3. In a stereotype-matrix machine, the combination with a carriage and with a plurality of key-levers, of a plurality of shafts arranged under said levers at right angles thereto, a ratchet-wheel mounted on one of said shafts for each lever, two spring-pawls connected to each lever so as to act on the ratchet wheel for turning the latter and the shaft, one pawl being adapted to act when the lever is depressed and the other when the lever is restored to normal position, a rack connected to the carriage, a worm meshing with said rack, and means for transmitting the movement of said shaft to said worm for feeding the carriage.

4. In a stereotype-matrix machine the combination with a carriage and with a plurality of key-levers, of a plurality of shafts arranged under said levers at right angles thereto, a ratchet-wheel mounted on one of said shafts for each key-lever, two spring pawls connected to each lever so as to act on the ratchet wheel for turning the latter and the shaft, one pawl being adapted to act when the wheel is depressed and the other when the wheel is restored to normal position, a rack connected to the carriage, a worm arranged so as to to mesh normally with said rack, means for transmitting the movement of said shafts to said worm for feeding the carriage, and means for tripping the worm shaft so as to disengage the worm from the rack for setting the carriage free.

5. In a stereotype-matrix machine, the combination with a type wheel and with a plurality of key-levers, of a spring-actuated operating lever holding said type wheel, an electromagnet, an armature arranged under the magnet and connected to said operating lever so as to turn the latter for applying the wheel to the matrix when it is attracted by the magnet, the core of the magnet being arranged so as to form an abutment for limiting the working stroke of the operating lever, means for varying the position of the core so as to regulate the depth of the impressions, and means for closing the circuit of the magnet when the key is depressed.

1,169,280. WIPER FOR AUTOMOBILE WINDSHIELDS. GEORGE W. OUSLEY, San Francisco, Cal. Filed Apr. 7, 1915. Serial No. 19,720. (Cl. 15—59.)



1. An automobile wind shield glass cleaner, comprising a clamp removably attached to the wind shield frame, intermeshing gears journaled upon opposite sides of the clamp and turnable in unison, arms fixed to the innermost gears and extending upon opposite sides of the glass, springs carried by each arm, and wiper holders upon which the springs press to maintain a wiping contact with the glass.

2. In a wind shield glass cleaner, a clamp removably attached to the shield frame, a pair of gears fixed to opposite ends of a shaft extending across the clamp, and turnable in unison, a second pair of gears independently journaled to the clamp and meshing with the first-named gears; arms fixed to said second gears; and extending parallel upon opposite sides of the glass, wiper carriers extending parallel with the glass and interior to the arms, and springs carried by the arms and acting to maintain the wipers in contact with the glass.

3. In a wind shield glass cleaner, a clamp removably attached to the shield frame, a pair of gears fixed to opposite ends of a shaft extending across the clamp, and turnable in unison, a second pair of gears independently journaled to the clamp and meshing with the first-named gears; arms fixed to said second gears and extending parallel upon opposite sides of the glass, wiper carriers extending parallel with the glass and interior to the arms, and springs carried by the arms and acting to maintain the wipers in contact with the glass, and guides connecting the arms and wiper holders, within which said holders are movable to allow them to be removed and replaced.

1,169,281. METALLIC HOOP FOR BARRELS, &c. ROBERT M. PARKER, New York, N. Y., assignor to Brooklyn Cooperage Co., Brooklyn, N. Y. Filed Oct. 19, 1914. Serial No. 867,317. (Cl. 217—91.)



1. A fastening for barrels and the like, comprising a relatively flat thin metallic hoop formed with transversely corrugated edges one of which constitutes the drive edge of the hoop, and a second hoop having a substantially circular cross section and contacting with the other corrugated edge of the said flat metal hoop, for the purpose described.

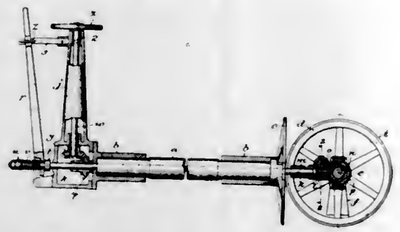
2. A fastening for barrels and the like, comprising a metallic hoop of substantially circular cross section, and a supplemental metallic hoop of relatively flat, thin cross section formed with transversely corrugated edges constituting the driving edge and the other contacting with the aforesaid hoop circular in cross section, the protuberance of the said corrugations on the edges of the relatively flat hoop being on the outer side thereof only, for the purpose described.

3. A fastening for barrels and the like, comprising a wire binding hoop and a relatively flat supplementary retaining hoop consisting of a strip of sheet metal corrugated laterally on both edges to form continuous series of undulatory curves extending around said sheet metal hoop, the protuberance of the corrugations being on the outer side of said sheet metal hoop only, and one edge thereof constituting the driving edge and the other contacting with said wire binding hoop, for the purpose described.

1,169,282. FRICTION-GEARING. GEORGE M. PELTON, Milwaukee, Wis., assignor to The Filer & Stowell Company, Milwaukee, Wis., a Corporation of Wisconsin. Original application filed July 25, 1910, Serial No. 573,726. Divided and this application filed Jan. 30, 1914. Serial No. 815,328. (Cl. 74—26.)

1. In friction gearing the combination with friction wheels having their axes at right angles to each other, one being movable transversely to its axis into and out of engagement with the other, of a longitudinally movable rod coaxial with the stationary wheel and connected with the shiftable wheel for throwing it into and out of engagement with the stationary wheel, and a lever connected with said rod.

2. In friction gearing the combination with friction wheels having their axes at right angles to each other, one being movable lengthwise of its axis toward and from the center of the other, of a rotary rod coaxial with the stationary wheel and connected with the shiftable wheel, and means for turning said rod.



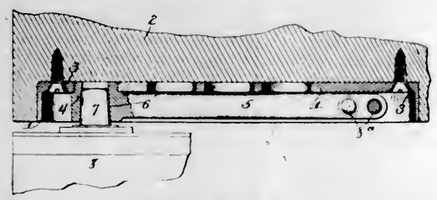
3. In friction gearing the combination with friction wheels having their axes at right angles to each other, one being movable transversely to its axis into and out of engagement with the other, of a longitudinally movable rod coaxial with the stationary wheel and connected with the shiftable wheel, and a lever having a yielding connection with said rod and adapted to shift said rod lengthwise and to carry the shiftable wheel into and out of engagement with the stationary wheel.

4. In friction gearing the combination with friction wheels having their axes at right angles to each other, one being movable lengthwise of its axis toward and from the center of the other, of a rotary rod coaxial with the axis of the stationary wheel, a pinion on said rod, a rack connected with the shiftable wheel parallel with its axis and meshing with said pinion, and means for turning said rod.

5. In friction gearing the combination with friction wheels having their axes at right angles to each other, one being movable transversely to its axis into and out of engagement with the other and lengthwise of its axis toward and from the center of the other, of a rotary and longitudinally movable rod coaxial with the stationary wheel and having a swivel connection with the axis of the shiftable wheel, and a rack and pinion connection with said shiftable wheel, means for manually turning said rod, and means for shifting it lengthwise.

[Claims 6 and 7 not printed in the Gazette.]

1,169,283. FLOOR-HINGE FOR DOORS. JOSEPH C. PETERICK, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed June 17, 1915. Serial No. 34,621. (Cl. 16—25.)

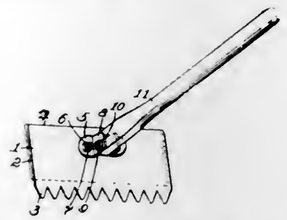


1. The combination of a door closer shaft, a housing adapted to be set into the end of the door and provided with a bearing, a lever having a hub mounted to turn in said bearing, the said hub having a bore to receive the end of the door closer shaft so as to turn with the same, the bearing in the housing being in the vertical plane of the shaft, and two opposing screws having threaded engagement with said lever near its free end and passing loosely through the side of the housing.

2. The combination of a door closer shaft having an angular end, a housing adapted to be set into the edge of a door, a lever having a hub mounted to rotate in a bearing in said housing, the said hub having a bore conforming in shape to the end of the door closer shaft, and two screws located at opposite sides of the lever, each screw having threaded engagement with the lever and passing loosely through a side of the housing.

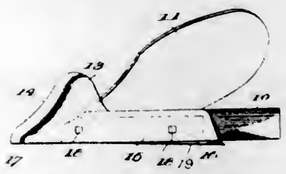
3. The combination of a door close shaft having an angular end, a housing adapted to be set into the edge of a door, and provided with a coutnersunk opening at each side, a lever provided at one end with a hub mounted to rotate in a bearing in said housing, the said hub having a bore conforming in shape to the end of the door closer shaft so as to rotate with the latter, and screws passing loosely through the contersunk openings in the sides of the housing and having threaded engagement with the lever near the free end of the latter.

1,169,284. STABLE-RAKE. JOHN POTTER, Winthrop, Iowa. Filed April 7, 1915. Serial No. 19,702. (Cl. 55—39.)



A stable rake, comprising a flat plate doubled upon itself to have one longitudinal edge extend marginally beyond the adjacent longitudinal edge of the overlapping part, with the said marginal part longitudinally dentated, and the double parts flattened throughout into complete contact to provide a convex scraping edge opposite to the said dentated edge and a handle fixed angularly to one side of said rake.

1,169,285. ATTACHMENT FOR PLOWS. WESLEY L. REEVES, Tyler, Tex. Filed June 5, 1914. Serial No. 843,237. (Cl. 97—6.)

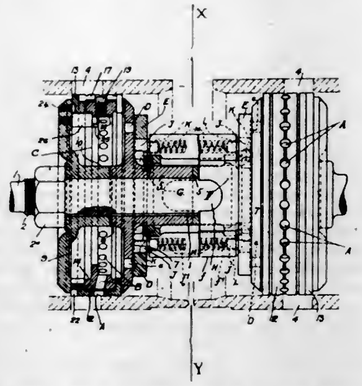


1. The combination with a plow including a landside having a socket closed at the ends and at the upper side and opening downwardly and laterally, a cutter device having a rearward extension bearing against said landside, a lateral projection upon said cutter extension and engaging in the socket of the landside whereby the cutter and its extension are supported from upward and longitudinal movement relative to the landside, and fastening devices connecting said cutter extension and its projection to the landside.

2. The combination with a plow including a landside having a socket closed at the ends and at the upper side and opening downwardly and laterally, a cutter device having a rearward extension bearing against said landside and having a lateral projection engaging in the socket of the landside whereby the cutter and its extension are supported from upward and longitudinal movement relative to the landside, fastening devices connecting said cutter extension and its projection to the landside, and a bearing shoe upon the lower edge of the cutter extension projecting laterally therefrom and sloping rearwardly and downwardly.

3. As a new article of manufacture, a combined cutter and landside attachment comprising a body extended vertically at the forward end, the forward extension having a cutting edge and the rear portion formed with a bearing shoe projecting laterally therefrom and sloping rearwardly and downwardly, said shoe having a longitudinal channel in its bearing face.

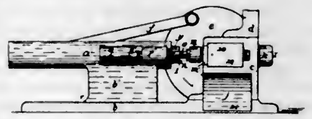
1,169,286. PISTON-VALVE FOR LOCOMOTIVES. JOHN GEORGE ROBINSON, Manchester, England. Filed Mar. 16, 1915. Serial No. 14,869. (Cl. 136—5.)



1. A valve casing provided with a cylinder supply port, a piston valve controlling the supply port, said piston valve being provided with a chamber having an inlet for communicating with the said supply port and having a series of outlet holes for communicating with the pressure space of the valve casing; and an annular relief valve arranged outside the chamber of the piston valve in the pressure space of the valve casing and provided with seats at its edges which normally close the series of outlet holes, said relief valve opening automatically when the pressure on its face between its said seats exceeds that on its back in the pressure space.

2. A valve casing provided with cylinder supply ports, two piston valves controlling the said supply ports, each piston valve being provided with a chamber having an inlet for communicating with one of the supply ports and having a series of outlet holes for communicating with the pressure space of the valve casing, a distance-piece arranged in the said pressure space between the two piston valves, and two annular relief valves arranged outside the chambers of the piston valves in the said pressure space and provided with seats at their edges which normally close the said series of outlet holes, said relief valves opening automatically when the pressure on their faces between their said seats exceeds that on their backs in the said pressure space.

1,169,287. MACHINE FOR DECAPPING SHELLS. SILAS E. SELLECK, Cold Spring, N. Y. Filed Mar. 15, 1912. Serial No. 684,024. (Cl. 86—36.)



1. In a machine for decapping shells the combination of a cylinder containing a reciprocating spindle for removing the cap, a rotating means for giving a reciprocating motion to the said spindle, means in line with the cylinder and means attached to the spindle for securing the shells in position, and means attached to the spindle for operating shell cut-off devices, the shell holding and cut-off devices comprising a chute for the passage of the shells, shell supporting and cut-off arms within said chute the cut-off arms operative means contiguous to the chute operated by the means uniting said parts with the main reciprocating spindle.

2. In a machine for decapping shells means for supporting the shell comprising a standard having a channel for the passage of the shells through it, a countersunk bushing therein for holding the head end of the shell in line with the decapping spindle, a sleeve on the decapping spindle countersunk to receive one end of the shell, and a spring on the spindle to impel the sleeve against the shell.

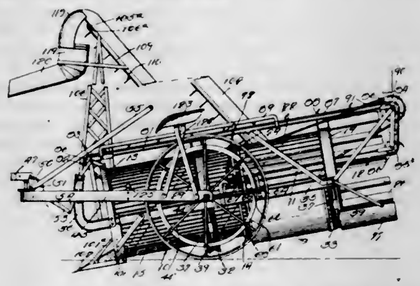
3. In a machine for decapping shells, combined means for supporting and releasing shells, the shell comprising a standard having a channel for the passage of the shells through it, a countersunk bushing in the channel in line with the decapping spindle, a sleeve on the decapping spindle countersunk to receive one end of the shell, a spring on the said spindle to impel the sleeve on the spindle against the shell, and a slot in the spindle and a feather in the sleeve to engage with the slot in the spindle to move the sleeve away from the shell.

4. The combination in a machine for decapping shells of means for holding and dropping the shells in the shell race-way, comprising a fixed countersunk recess to support the closed end of the shell, and a movable spindle and sleeve with a countersunk recess in the end of the sleeve for holding the open end of the shell, and spring actuated bolts in the said recesses to push the shells from the recesses after the decapitation of the shell.

5. The combination in a machine for decapping shells of a cylinder, a crosshead having a reciprocating motion in the cylinder, a decapping spindle attached to the crosshead, a sliding sleeve on the outer end of the spindle for grasping the shell between its outer end and a support for the other end of the shell, a feather in the sleeve extending into a slot in the spindle for limiting the outward movement of the sleeve and withdrawing the sleeve from the shell, and a spring on the spindle between the spring and the cross-head.

[Claims 6 to 8 not printed in the Gazette.]

1,169,288. ROTARY POTATO-SORTER. THEODORE H. SEXTON, Garden, Mich. Filed Jan. 26, 1914. Serial No. 814,495. (Cl. 130—32.)



1. In a potato sorting machine, the combination with a pair of spaced circular bands, of slats pivotally mounted in and extending between the same, sweeps secured to and extending outwardly from one of said bands, rods secured to and extending outwardly from the other of said bands, means for supporting said rods and a gear secured to the last mentioned band by means of which both of the said bands may be rotated.

2. In a potato sorting machine, a pair of spaced bands, a plurality of slats of elongated cross section having alined pintles extending outwardly from the ends thereof adjacent one edge and pivotally mounted in said bands, an additional band circumscribing one of said first mentioned bands and slidable thereon, a pintle on one end of each of said slats adjacent the other edge thereof and

pivotally mounted in the last mentioned band, whereby when the said band is moved with relation to the first mentioned band on which it is mounted the slats will be swung about the first mentioned pintles as a pivot and means for securing the slats in their adjusted positions.

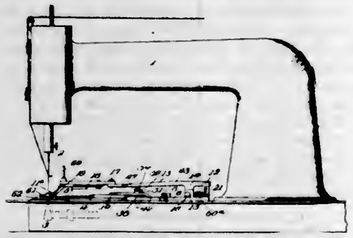
1,169,289. PROCESS OF TREATING WOODS. CHARLES H. SHATTUCK, Moscow, Idaho. Filed Sept. 12, 1914. Serial No. 861,451. (Cl. 99—12.)

1. The herein described process of lightening and coloring wood which consists in heating the wood under pressure and while submerged in an acid liquor produced by the destructive distillation of wood.

2. The herein described method of lightening and coloring wood, which consists in placing the wood in a retort with acid liquor derived from the deatructive distillation of wood, and subjecting the contents of the retort to heat and pressure.

3. The herein described method of lightening and coloring wood, which consists in placing the wood in a retort with acid liquor derived from the destructive distillation of wood, and subjecting the contents of the retort to heat and pressure to give the wood a color of one shade and then gradually increasing the heat and pressure to darken the color of the wood.

1,169,290. BUTTON-SEWING MECHANISM. CHARLES A. SIBBALD and WILBUR H. CANEY, Troy, N. Y. Filed Feb. 23, 1915. Serial No. 9,966. (Cl. 112—32.)



1. In combination, button sewing mechanism, button holding means, material holding means, and means for creating relative lateral movement between the button holding means and the material holding means during the sewing operation, whereby to cause the stitches to bite a greater width of the material than the distance between the holes in the button.

2. In combination, button sewing mechanism including a needle and looper, means for holding a button, means for holding the material to receive the button, means for creating relative movement between the needle, button holding means and the cloth holding means during the sewing operation, whereby to cause the stitches to bite a greater width of material than the distance between the holes in the button.

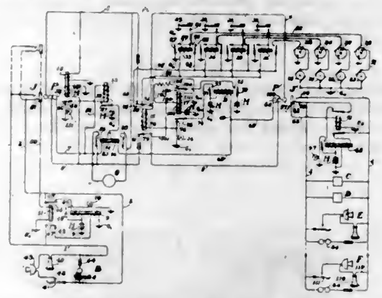
3. In combination, button sewing mechanism, a material clamp, a button holder, and means for bodily moving the button holder and material clamp, and in addition to said movement imparting a greater amplitude of movement to the material clamp than to the button holder during the sewing operation.

4. In combination, button sewing mechanism, a material clamp, a button holder, means for bodily moving the button holder and material clamp, and simultaneously imparting a greater amplitude of movement to the material clamp than to the button holder during the sewing operation.

5. In combination, button sewing machanism, a material clamp, a button holder, means for bodily longitudinally and laterally moving the material holder and the button holder and imparting a greater amplitude of movement to the material holder than to the button holder during the sewing operation.

[Claims 6 to 15 not printed in the Gazette.]

1,169,291. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 18, 1913. Serial No. 795,922. (Cl. 179—35.)



1. In a telephone system, the combination of a main station, a telephone line leading to the main station, a plurality of substations on said line, telephone line connecting apparatus at the main station, switching means for connecting said apparatus to said telephone line, a calling signal device at each substation, a plurality of current producing means at the main station, each adapted to supply current to operate one of said calling signal devices, conductors for connecting said current generating means to said switching apparatus, a plurality of manually operable switches, one for each of said current generating means, conductors for said switches, said last named conductors being independent of the conductors for connecting the current generating means to the switching apparatus, mechanism controlled by said switches and means including a local circuit at the main station controlling the application of current generated by said current generating means to the telephone line controlled by said manually operable switches and said mechanism.

2. In a telephone system, the combination of a called telephone line, a plurality of substations on said line, a ringer at each substation, a main station to which said called line leads, a cord circuit at the main station, a plug for the cord and a jack for the line by which the cord and line are connected together, a plurality of current generators at the main station, each adapted to supply current to operate one of the ringers at one of the substations, a plurality of conductors for connecting said generators to the plug of the cord, a plurality of manually controlled switches, one for each current generator, conductors for said switches independent of the conductors connecting the current generating means to the plug, a plurality of relays, one for each switch, each relay being controlled by a corresponding one of said switches and means including a local circuit controlling the application of current generated by said generators to the telephone line controlled by said manually operated switches and said relays.

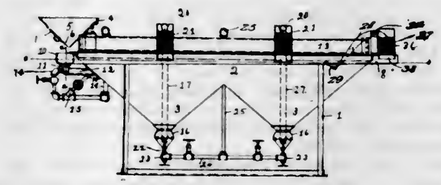
3. In a telephone system, the combination of a main station, a called telephone line leading to the main station, a plurality of substations on the line, a ringer at each substation, a cord circuit at the main station, a plug for the cord and a jack for the line through which the line and cord are connected, a plurality of current generators at the main station, conductors for connecting each generator to the plug, a plurality of relays, one controlling the connection of each of said generators to the plug, a circuit local to the main station, including a plurality of branches, one of said relays being in each of said branches, a plurality of manual switches, one in each branch removed from the conductors connecting the generators to the plug and means for locking up each of said relays when its corresponding switch is operated.

4. In a telephone system, the combination of a main station and a plurality of substations, telephone lines connecting said substations to said main station, apparatus at the main station for connecting two of said telephone lines together, switching means for connecting said apparatus to a called telephone line, calling signal devices at the substations, current generators at the main station for supplying current to operate said calling devices, a plurality of ringing switches and a plurality of relays each controlled by a companion ringing switch, a circuit including a plurality of branches, each branch including a relay and a companion ringing switch, means including a portion of said circuit for locking up each relay when its companion ringing switch has been operated, and conductors for connecting the generators to the switching means, said conductors being independent of said circuit branches including said relays and ringing switches.

5. In a telephone system, the combination of a main station, a cord circuit at the main station, a called line leading to the main station, a plurality of substations on said line, a ringer at each substation, a plug for the cord and a jack for the line, by which they are connected together, a plurality of current generating means at the main station, associated with the cord circuit thereat and adapted to supply current to operate the ringers, a ringing circuit including a plurality of ringing leads, one of said generating means being in each of said leads, a ringing relay controlling the ringing circuit, a plurality of branches of said circuit, a relay in each of said branches controlling one of said ringing leads, and a manual switch in each of said branches controlling said ringing relay circuit through its branch and the relay therein, and means for locking the circuit of the ringing relay after any of said switches have been operated.

[Claims 6 to 18 not printed in the Gazette.]

1,169,292. SEPARATOR. FRANK W. SMITH, Portland, Me. Filed Dec. 26, 1914. Serial No. 879,073. (Cl. 130—32.)



1. In an apparatus of the character described, a tank adapted to contain a liquid medium, a collector having an open receiving end adapted to be partly submerged in said medium and means for passing a fluid under pressure into and through said collector, the entrance point of the fluid being beyond the receiving end of the collector, whereby the liquid and substances in the tank, floating thereon near the mouth of said collector, are drawn into and carried through said collector.

2. In an apparatus of the character described, a tank adapted to contain a liquid medium, a pivotally mounted collector hving its open receiving end adapted to float in said medium, its open end partially submerged, means for passing a fluid under pressure into and through said collector, the entrance point of the fluid being beyond the receiving end of the collector, whereby liquid and substances floating thereon are drawn into and carried through said collector.

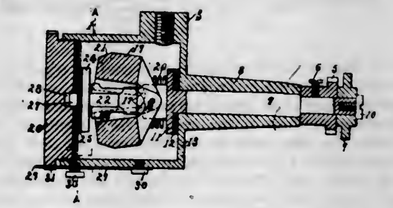
3. In an apparatus of the character described, a tank adapted to contain a liquid medium, a collector having its receiving end partially submerged and a portion of the passage in said collector entirely submerged and means for passing a fluid under pressure into and through said collector, the entrance point of the fluid being beyond the receiving end of the collector, whereby liquid and substances floating thereon are drawn into and carried through said collector.

4. In an apparatus of the character described, a tank adapted to contain a liquid medium, a pivotally mounted collector having a receiving open end adapted to float in said medium, means for maintaining said open end at a constant elevation relative to the surface of said medium and means for passing a fluid under pressure into and through said collector, the entrance point of the fluid being beyond the receiving end of the collector, whereby the liquid and substances floating thereon are drawn into and carried through said collector.

5. In an apparatus of the character described, a tank adapted to contain a liquid medium, a pivotally mounted collector having its open receiving end adapted to float partially submerged in said medium, a portion of the passage in said collector being entirely submerged and means for introducing a fluid under pressure into said collector beyond its open end, whereby liquid and substances floating thereon are drawn into and carried through said collector.

[Claims 6 to 12 not printed in the Gazette.]

1,169,293. SPEED-GOVERNOR FOR TYPE-WRITING MACHINES. JAMES A. SMITH, East Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 24, 1911. Serial No. 622,852. (Cl. 74—45.)



1. In a speed governor, the combination with a casing and a two-part spindle mounted therein and extending from side to side thereof, means on each of said parts for engagement with the wall of the casing, and speed controlled means for extending the length of said spindle so as to bring said means into contact with the walls of the casing and thereby regulate speed.

2. In a speed governor, the combination with a casing and a two-part spindle mounted therein and extending across from one side to the other thereof, of speed-actuated means for extending said spindle lengthwise in response to speed of rotation, means on each part of said spindle for engaging the walls of said casing, and an adjustable device within one of said walls for controlling the degree of extension of said spindle.

3. In a speed governor, the combination with a casing and a two-part spindle mounted therein and extending across from one side to the other thereof, of speed-actuated means for extending said spindle lengthwise in response to speed of rotation, means on each part of said spindle for engaging the walls of said casing, an adjustable device within one of said walls for controlling the degree of extension of said spindle, and means to lock said adjustable means.

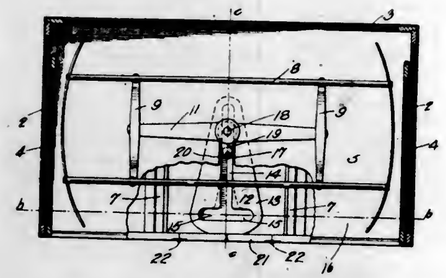
4. In a speed governor, the combination with a casing and a two-part spindle mounted therein and extending across from one side to the other thereof, of speed-actuated means for extending said spindle lengthwise in response to speed of rotation, means on each part of said spindle for engaging the walls of said casing, and a cap threading into one of the casing sides and adjustable in the direction of the axis to limit the extension of said spindle.

5. In a speed governor, the combination with a casing and a two-part spindle mounted therein extending from wall to wall thereof, of weights pivotally mounted on one part of said spindle, means on the other part of said spindle with which said weights are in engagement, friction means on said other part adapted to engage a wall of said casing, and friction means on the first part adapted to engage another wall of the casing, the arrangement being such that when the speed of rotation exceeds a cer-

tain degree, centrifugal force causes the weights to push the two parts of the spindle apart into engagement with the respective walls of the casing.

[Claims 6 to 19 not printed in the Gazette.]

1,169,294. ROTATING RACK FOR SHOW-CASES. OSCAR L. SMITH, Grand Rapids, Mich. Filed Feb. 7, 1913, Serial No. 746,710. Renewed June 19, 1915. Serial No. 35,125. (Cl. 211—16.)



1. A display device comprising a case or compartment, a rack for supporting goods mounted in the case or compartment, said rack being rotatable to present different supporting portions of the rack to front position, means whereby the rack may be bodily moved to and from a position within the case or compartment, and means associated with the rack for controlling its rotation, said means permitting the continuous rotation of the rack in either direction after the rack has been moved forward in the case and preventing rotation when the rack is within the case and simultaneously causing bodily movement of the rack as it is rotated.

2. A display device comprising a case or compartment, a rack for supporting goods located in the case or compartment, said rack being rotatable to present different supporting portions of the rack to front position, means whereby the rack may be bodily moved to and from a position within the case or compartment, and means connected to the case and associated with the rack for controlling its rotative movements, said means permitting the continuous rotation of the rack in either direction concurrently with bodily movement of the rack back and forth in the case caused by said controlling means.

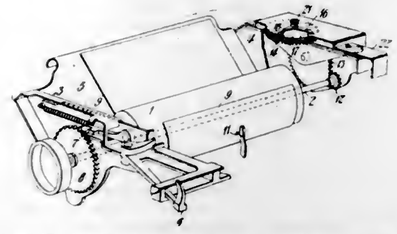
3. A display device comprising a case or compartment, a rack for supporting goods and rotatable to present different supporting portions of the rack to front position located in the case or compartment, means whereby the rack may be bodily moved to and from a position within the case or compartment, means for controlling the rotative movements of the rack, said means including elements permitting the continuous rotation of the rack in either direction and simultaneously causing concurrent bodily movement of the rack.

4. A display device comprising a case or compartment, a rack for supporting goods rotatable to present different supporting portions of the rack to front position located in the case or compartment, means whereby the rack may be bodily moved to and from a position within the case or compartment, and means for controlling the rotative movements of the rack, said means including elements permitting the continuous rotation of the rack in either direction and simultaneously compelling forward bodily movement of the rack through one half of each revolution and rearward bodily movement through the remaining half revolution.

5. A display device comprising a case or compartment, a rack for supporting goods mounted for rotation and for bodily movement to and from a position within the case or compartment, means preventing contact of the rack with the case, means permitting the continuous rotation of the rack in either direction when bodily moved forward in the case, said means simultaneously compelling limited bodily movement of the rack during the rotation thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,169,295. TYPE-WRITING MACHINE. STEPHEN T. SMITH, Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 16, 1912. Serial No. 731,671. (Cl. 197—189.)



1. In an indicating mechanism for typewriting machines, in combination with a rotary platen, a dial graduated to accord with line spaces on the platen, a pointer adapted to move over said dial, gearing on the shaft of said platen adapted to cause movement of said pointer in time with line-spacing movement of the platen, a second pointer, adjustable about the dial, into positions to indicate limit of permissible movement of the first pointer over the dial and means whereby said second pointer is held fixed but yielding in said positions.

2. In an indicating mechanism for typewriting machines, in combination with a rotary platen, a dial graduated to accord with line spaces of the platen, a pointer adapted to be moved over said dial, gearing on the shaft of said platen adapted to cause movement of said pointer in time with line-spacing movement of the platen, and a second pointer yieldingly adjustable over the dial into fixed but yielding positions, and means on said dial cooperating with said second pointer in maintaining its fixed but yielding position.

3. In an indicating mechanism for typewriting machines, the combination of a dial plate having a series of notches or depressions, a pointer adjustable over the dial plate and yieldingly held by said depressions in adjusted position, and a second pointer geared with the platen axle to travel over said dial plate.

4. In an indicating mechanism for typewriting machines, the combination of a dial plate provided with an annular series of notches, a shaft journaled in said plate, gearing connecting said shaft with the platen shaft, a pointer fixed to said shaft to rotate over the plate, and a second pointer loosely mounted on said shaft to yieldingly engage said notches to thereby hold it in any position of adjustment.

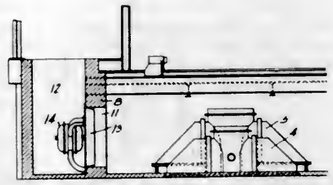
5. In combination with a platen, a page-end indicating device comprising a dial, a pointer geared to the platen shaft to move over the dial as the platen is rotated, to progressively denote the number of lines written, and an auxiliary pointer capable of being set at different positions over said dial and held in set position by means of its point entering a depression of the dial, to indicate the full number of lines to be written, and the completion thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,169,296. REGENERATIVE FURNACE. ALFRED STEINBART, Pittsburgh, Pa. Filed Nov. 20, 1914. Serial No. 873,159. (Cl. 75—94.)

1. In a regenerative furnace, the combination of an air valve connected to the furnace regenerators, an inclosed valve pit in which the air valve is positioned, and means connecting with the exterior of the valve pit for supplying air under pressure to said valve pit.

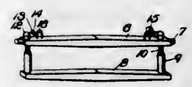
2. In a regenerative furnace, the combination of an air valve connected to the furnace regenerators, an inclosed valve pit in which the air valve is positioned, and a fan or blower connecting with the exterior of the valve pit for supplying air under pressure to said valve pit.



3. In a regenerative furnace, the combination of a valve pit in which the furnace air valves are located, and from which the air supply is drawn into said valves, and means connecting with the exterior of the valve pit for supplying air under pressure to said valve pit.

4. In a regenerative furnace, the combination of valve pit in which the furnace air valves are located and from which the air supply is drawn into said valves, an air shaft connecting the interior of the valve pit with the atmosphere, and a fan or blower in said air shaft for causing the flow of air through said air shaft into said valve pit.

1,169,297. TOWEL CABINET AND CLAMP. GEORGE ADOLPH STEINER, Salt Lake City, Utah. Filed May 4, 1914. Serial No. 836,129. (Cl. 45—32.)



1. The combination with a support, of a clamp comprising bars of unequal length, with the bar of greater length pivotally mounted on the support, and the bar of lesser length carried by the longer bar, both of said bars being tapered from intermediate points toward their ends, for the purpose set forth.

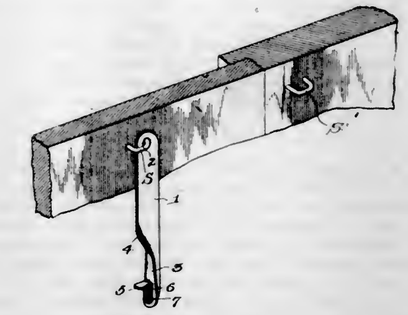
2. The combination with a suitable support, of a clamp comprising bars of unequal length, the ends of the bar of greater length being pivotally mounted on the support, sleeves on one of said bars, screws on the other bar threaded into said sleeves to connect the bars, and means for locking said screws to maintain the locking connections between the screws and sleeves.

3. The combination with a cabinet having an open compartment, and having guide members at opposite sides of the compartment, a clamp comprising a supporting bar having trunnion members slidably and pivotally mounted in said guide, and a clamping bar adjustably mounted on the supporting bar.

4. The combination with a cabinet having an open compartment provided with facing grooves, of a clamp comprising a supporting bar having trunnion members adapted for sliding travel in said grooves and for pivotal support in the bases of the grooves, and a clamping bar of lesser length than the supporting bar and having adjustable connection therewith, whereby the said clamping bar may move freely within the cabinet, substantially as set forth.

1,169,298. COMBINED DOOR HASP AND HOOK. JACOB H. STULL, Fremont, Ohio. Filed Feb. 8, 1915. Serial No. 6,786. (Cl. 70—83.)

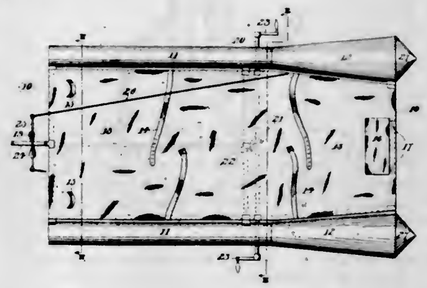
1. A combined hasp and hook comprising a flat metal bar having an aperture in one end and its other end bent laterally intermediately of the width thereof to form a flange, said flange projecting outwardly from said bar and extending longitudinally, and a hook-shaped tongue depending from said flange and having a notch in one edge thereof formed adjacent its junction with said flange.



2. A combined hasp and hook comprising a flat metal bar adapted to rest flat against a door and frame, one end being bent intermediately of its width from the bottom edge thereof to form a laterally projecting longitudinally disposed flange, said flange having a hook shaped member depending from the lower face thereof and provided with an aperture in advance of said hook-shaped member.

3. A combined hasp and hook comprising a flat metal bar adapted to rest flat against a door and frame, one end being provided with an aperture and the other end being bent intermediately of its width from the bottom edge thereof to form a laterally projecting longitudinally disposed flange, said flange being provided with a U-shaped slit near its outer end to form a tongue, said tongue being notched on one edge adjacent its junction to said flange and being bent downwardly therefrom to form an aperture.

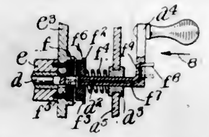
1,169,299. LIFE-RAFT. MIKE SZCR. St. Catherines, Ontario, Canada. Filed Oct. 15, 1915. Serial No. 56,106. (Cl. 9—11.)



1. A device of the class described comprising a substantially rectangular frame having a tapered head portion, cylindrical floats secured to the longitudinal edges of the said frame and having enlarged ends adjacent the said head portion, a rear propeller, oppositely arranged operating cranks for the said propeller, an elevating head rest upon the said frame, a flexible covering for the said frame, and securing straps carried by the said frame above the said covering.

2. A life raft comprising a rectangular frame, tubular side floats carried by the said frame, normally inclined when in floating position and having enlarged heads at their forward ends terminating in conical ends projecting at the bow of the raft, a canvas covering for the said frame, a head rest carried by the said frame at the elevated end thereof, body securing straps carried by the frame and manually operated propelling and steering means carried by the frame.

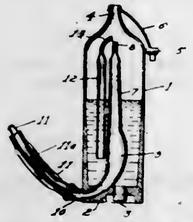
1,169,300. INTEREST AND TIME CALCULATOR. WILLIAM H. TILLY, Brooklyn, N. Y. Filed Nov. 1, 1913. Serial No. 798,612. (Cl. 235—86.)



1. In a computing machine having a spring rewound gear, a combined lock and brake device consisting of a pivotally mounted pawl, a spring for normally retaining said pawl in engagement with said gear, a lever integral with said pawl for disengaging the same from said gear to allow its spring to rewind the same, and a brake integral with said pawl and adapted to bear upon the periphery of said gear when the pawl is disengaged for regulating the speed at which the gear is revolved.

2. In a computing machine having a spool loosely mounted on a slotted shaft, an internal gear mounted on said spool, a gear movable longitudinally of and rotatable with said shaft and adapted to engage said internal gear, a pin slidably mounted in the slot of the shaft and connected to said shaft gear, a flexible shaft connected to said pin and extending through an aperture in said shaft and a handle provided upon the outer end of said flexible shaft, said shaft being also provided with a lock slot in which said handle is adapted to be moved.

1,169,301. VALVELESS ATOMIZER. SAMPSON TRASK, San Francisco, Cal. Filed Nov. 6, 1912. Serial No. 729,764. (Cl. 128—2.)

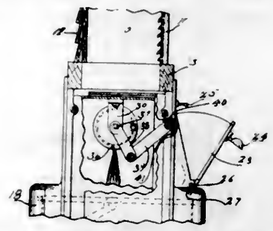


1. In an atomizer, an open mouthed receptacle, a tube extending through the lower portion thereof and having an air chamber and nozzle within said receptacle, a liquid supply tube within the receptacle and having a nozzle in the path of the blast from the first nozzle, and a stiffly flexible tube connected with the first tube and extending laterally away from said receptacle for retaining the receptacle upright in a pocket, substantially as described.

2. In an atomizer, an open mouthed receptacle, a tube extending through the lower portion thereof and having an air chamber and nozzle within said receptacle, a liquid supply tube within the receptacle and having a nozzle in the path of the blast from the first nozzle, a stiffly flexible tube connected with the first tube and extending laterally away from said receptacle for retaining the receptacle upright in a pocket, and a wire loop within the rubber tube to give greater resiliency to the tube, substantially as described.

1,169,302. WALL GARBAGE-RECEPTACLE. JAMES M. TRIGGS, Huntington, Ind., assignor to Majestic Furnace & Foundry Company, Huntington, Ind., a Corporation of Indiana. Filed May 9, 1914. Serial No. 837,384. (Cl. 220—119.)

1. In combination, a garbage receptacle provided with a door, a movable disinfectant holder supported within said garbage receptacle separately from the door, and connections between said disinfectant holder and the door whereby operation of the door moves such disinfectant holder bodily to discharge disinfectant therefrom.



2. In combination, a garbage receptacle provided with a swinging door, a pivoted disinfectant holder supported in said receptacle separately from the door, said disinfectanet holder being provided with an opening through which the disinfectant can be discharged, and connections between said disinfectant holder and said door whereby the swinging of the door moves the disinfectant holder to discharge disinfectant through such opening, and means for limiting the outward swinging of the door so that when the door reaches its limiting position the disinfectant holder is jarred to promote the discharge of disinfectant.

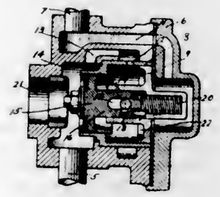
3. In combination, a garbage receptacle provided with a swinging door, a pivoted disinfectant holder supported in said receptacle separately from the door, said disinfectant holder being provided with an opening through which the disinfectant can be discharged, and connections between said disinfectant holder and said door whereby the swinging of the door moves the disinfectant holder to discharge disinfectant through such opening.

4. In combination, a garbage receptacle, a disinfectant can provided with a notch, a member pivoted within said receptacle and provided with a pocket for receiving said can, and a spring pressed button carried by said member for engaging said notch in the can and locking said can in place in such pocket so that said can and said member turn together as a unit.

5. In combination, a garbage receptacle, a disinfectant can, a member pivoted within said receptacle and provided with a pocket for receiving said can, and a spring-pressed button carried by said member for locking said can in place in such pocket so that said can and said member turn together as a unit.

[Claims 6 and 7 not printed in the Gazette.]

1,169,303. QUICK-RELEASE VALVE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Mar. 6, 1914. Serial No. 822,845. (Cl. 188—10.)



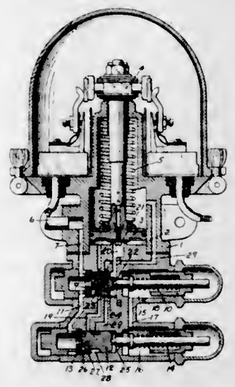
1. The combination with a cylinder and a valve for controlling the admission and release of fluid to and from the cylinder, of a quick release valve device comprising a piston open on one side to the controlling valve and operated by the flow of fluid from said controlling valve for opening communication for supplying fluid to the cylinder, a direct exhaust valve having a piston head of less area than the piston and adapted to be actuated by said piston, the piston having a movement relative to said valve, means for equalizing the fluid pressures on opposite sides of said piston, and a spring for moving said piston to close said communication upon equalization of pressures.

2. A quick release valve device comprising a collapsible piston having differential piston heads and carrying a release valve and operated by fluid supplied to one side for opening a supply communication and closing said valve, said communication being closed by movement of one piston head relative to the other upon equalization of fluid pressures and said exhaust valve being opened by further movement of the piston head upon the release of fluid from one side thereof.

3. The combination with a receptacle and a valve for controlling the admission and release of fluid to and from said receptacle, of a quick release valve device comprising a collapsible piston having differential piston heads and carrying a release valve, said valve device being operated by flow of fluid from the controlling valve for closing said exhaust valve and opening communication to said receptacle, means for equalizing the fluid pressure in the space intermediate the piston heads, and a spring for moving one piston head relatively to the other for closing said communication.

4. The combination with a receptacle and a valve for controlling the admission and release of fluid to and from said receptacle, of a quick release valve device comprising a collapsible piston having a small piston head provided with a release valve for directly releasing fluid from said receptacle and a large piston head operated by the flow of fluid from said controlling valve for moving said small piston head to close the exhaust valve and for for opening communication for suplying fluid to said receptacle, means for equalizing the fluid pressure in the space between the piston heads, and a spring for moving the large piston head to close said communication.

1,169,304. ELECTRIC PUMP-GOVERNOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1914. Serial No. 873,891. (Cl. 230—24.)



1. A pump governor comprising a pump controlling device, a piston for actuating same, a cut-out valve piston for controlling a passage through which fluid under pressure is admitted to the control piston, a cut-in valve piston for controlling a passage through which fluid is released from the control piston, and an exhaust passage communicating with an annular groove in the cut-out valve piston for venting fluid leaking around the cut-out valve piston.

2. A pump governor comprising a pump controlling device, a piston for actuating same, a cut-out valve piston subject to the opposing pressures of the pump and an adjustable spring for controlling a passage through which fluid is supplied to the control piston, and a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring for controlling a passage through which fluid is released from the control piston, the cut-in valve piston being adapted to be operated by an increase in pump pressure, before the cut-out valve piston is operated, to close communication from the control piston release passage to a restricted exhaust port.

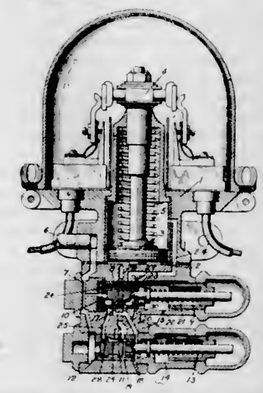
3. A pump governor comprising a pump controlling device, a piston for actuating same, a cut-out valve piston subject to the opposing pressures of the pump and an adjustable spring contained in a chamber, and a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring contained in a chamber, both spring chambers being in constant communication with a restricted exhaust port.

4. A pump governor comprising a pump controlling device, a piston for actuating same, a cut-out valve piston subject to the opposing pressures of the pump and an adjustable spring contained in a chamber, a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring contained in a chamber, both spring chambers being in constant communication with a restricted exhaust port, a passage for relensing fluid from the control piston chamber through said restricted exhaust port, which is closed upon movement of the cut-in valve piston to the cut-out position, and a passage adapted to be opened upon movement of the cut-out valve piston to cut-out position for admitting fluid to the control piston chamber.

5. A pump governor comprising a pump controlling device, a piston for actuating same, a cut-out valve piston for controlling a passage through which fluid is admitted to the control piston chamber, and a cut-in valve piston for controlling a passage through which fluid is released from the control piston chamber, the release passage being controlled by the switch piston.

[Claims 6 and 7 not printed in the Gazette.]

1,169,305. ELECTRIC PUMP-GOVERNOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1914. Serial No. 873,892. (Cl. 230—24.)



1. A pump governor comprising a pump controlling device, a piston for actuating said device, a cut-in and a cut-out valve piston each having a cut-in and a cut-out position, communication through which fluid is admitted to the control piston being established when the cut-in valve piston is in its cut-out position and the cut-out valve in its cut-in position.

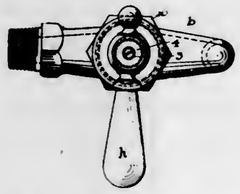
2. A pump governor comprising a pump controlling device, a piston for actuating said device, a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring and operated by pump pressure for opening a communication through which fluid is admitted to the control piston, and a cut-out valve piston subject to the opposing pressures of the pump and an adjustable

spring operated by the spring for also opening said communication.

3. A pump governor comprising a pump controlling device, a piston for actuating said device, a cut-out valve piston subject to the opposing pressures of the pump and an adjustable spring for controlling a passage through which fluid is admitted to the control piston, and a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring contained in a spring chamber having a restricted exhaust port and adapted in one position to admit fluid to said passage and in another position to open communication between the spring chambers of the cut-in and cut-out springs.

4. A pump governor comprising a pump controlling device, a piston for actuating said device, a cut-out valve piston subject to the opposing pressures of the pump and an adjustable spring, and a cut-in valve piston subject to the opposing pressures of the pump and an adjustable spring and operated upon movement of the cut-out valve piston to cut-out position to admit fluid to a passage for supplying fluid to the control piston, the cut-out valve piston being shifted upon movement of the cut-in valve piston to the fluid supplying position, to a position in which communication is opened through said supply passage to the control piston.

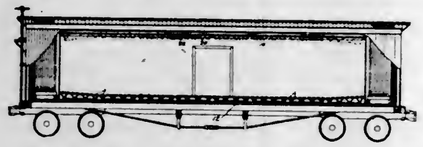
1,169,306. QUICK-COMPRESSION FAUCET. WILLIAM S. VALMORE, Lakewood, Ohio, assignor to United Brass Manufacturing Company, a Partnership composed of William J. Schoenberger and Benjamin F. Klein. Filed May 9, 1914. Serial No. 837,448. (Cl. 137—4.)



1. A faucet having a screw threaded valve member with a cavity in its top, a rotatable shaft having an extremity slidably engaged in said cavity, a screw threaded bolt projected through said shaft and adjustable therein to serve as a stop for said valve member, a handle removably mounted on the outer end of sad shaft and a cap nut to lock said bolt and handle jointly in fixed position upon said shaft.

2. A faucet body and an externally threaded valve member adjustable in said body and having an angular cavity in its top, a rotatable shaft having an angular extremity slidably engaged in said cavity and a packing nut sleeved upon said shaft and in engaging relation with said body above said valve, in combination with a screw threaded bolt projecting through said shaft at both ends and adjustable to limit the opening of said valve, a handle on said shaft and means to fasten said handle and said bolt jointly in fixed position on said shaft.

1,169,307. LOOSE FLOORING AND MEANS FOR STORING THE SAME IN RAILWAY-CARS. WILLIAM T. VAN DORN, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,772. (Cl. 65—15.)



1. A floor section of the character described, comprising spaced open-work girders and flooring strips extending across and secured upon said girders in spaced relation to each other.

2. A floor section of the character described, comprising spaced open-work girders, flooring strips extending across and secured upon said girders in spaced relation to each other, and facing strips extending lengthwise of the section at the ends of said strips in order to make the edges of the section at the ends continuous.

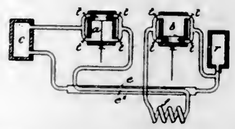
3. A floor section of the character described, comprising spaced open-work metal girders and wooden flooring strips extending across and secured upon said girders in spaced relation to each other.

4. A floor section of the character described, comprising spaced open-work metal girders, wooden flooring strips extending across and secured upon said girders in spaced relation to each other, and metal facing strips extending throughout the length of the section across the end edges of the flooring strips.

5. A floor section of the character described, comprising spaced girders each formed of parallel upper and lower angle irons and connecting pieces between the angle irons, and flooring strips extending across and secured upon the upper angle irons of the girders in spaced relation to each other.

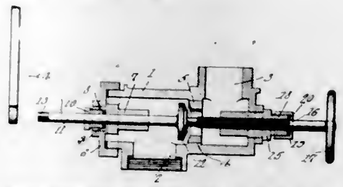
[Claims 6 to 20 not printed in the Gazette.]

1,169,308. HOT-AIR ENGINE WITH CLOSED CIRCUIT. TRAJAN VUIA, Neuilly-on-Seine, France. Filed Jan. 6, 1909. Serial No. 470,943. (Cl. 60—17.)



A thermodynamic process which consists in subjecting a constant mass of a gaseous medium to the following cycle of operations: 1st, imparting heat to said mass at a constant high temperature and pressure while enlarging its volume in the performance of work through the conversion of said heat into dynamic effect; 2nd, reducing the volume of said mass after the performance of said work, at a constant lower temperature and pressure, by passing it successively through a regenerator and a refrigerator, and 3rd, restoring said mass to its original high pressure and temperature by repassing it through said regenerator and then through a heater, preliminarily to the conversion of the heat into work.

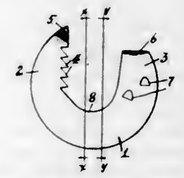
1,169,309. VALVE CONSTRUCTION. ERNEST G. WAGNER, Lewiston, Idaho, assignor of one-half to Miles D. Taylor, Lewiston, Idaho. Filed Nov. 12, 1913. Serial No. 800,634. (Cl. 137—4.)



In a valve construction, a cylindrical casing having one end open, a lateral inlet port adjoining the said end, a lateral outlet port adjoining the other end, and an inner annular rib intermediate said ports and forming a contracted opening smaller in diameter than said open end of the casing, a cap engaged over the open end of the casing, a valve seat fitted within said rib, a relatively long plug threaded through the other end of the casing, a relatively long guide sleeve threaded through the cap, a valve disposed between the valve seat and cap and seatable against the valve seat, the valve having a smooth

stem slidable and rotatable freely through the guide sleeve, a valve unseating screw threaded through the said plug and adapted to be projected through the said valve seat and abut against the valve, and packing means carried by the outer ends of the said plug and sleeve and embracing the screw and valve stem, respectively, said plug and sleeve projecting to points near the valve seat.

1,169,310. NUT-LOCK. EDWIN C. WAKELAND, Oakland, Cal., assignor, by direct and mesne assignments, of one-third to Job Edwin Ericson and one-third to John W. Hurley, Oakland, Cal. Filed June 2, 1915. Serial No. 31,678. (Cl. 151—2.)



1. A nut-lock comprising a washer bifurcated to straddle a bolt and having the inner edge of one of its prongs formed with teeth having a bite in one direction and a slip in the other, the extremity of said prong being laterally offset to lie in the path of rotation of a nut on said bolt.

2. A nut-lock comprising a washer bifurcated to straddle a bolt and having the inner edge of one of its prongs formed with teeth having a bite in one direction and a slip in the other, the extremity of said prong being laterally offset to lie in the path of rotation of a nut on said bolt, and the other prong of said washer being helically distorted from the first to approximately conform to the pitch of the bolt-thread.

3. A nut-lock comprising a washer bifurcated to straddle a bolt, the inter-prong space tapering inwardly and rounded at its base, said washer having the inner edge of one of its prongs formed with teeth having a bite in one direction and a slip in the other, the extremity of said prong being laterally offset to lie in the path of rotation of a nut on said bolt.

4. A nut-lock comprising a washer bifurcated to straddle a bolt, the inter-prong space tapering inwardly and rounded at its base, said washer having the inner edge of one of its prongs formed with teeth having a bite in one direction and a slip in the other, the extremity of said prong being laterally offset to lie in the path of rotation of a nut on said bolt, and the other prong of said washer being helically distorted from the first to approximately conform to the pitch of the bolt-thread.

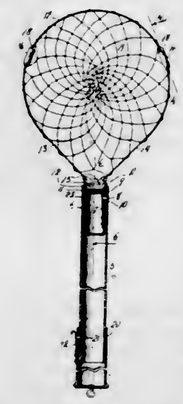
5. A nut-lock comprising a washer bifurcated to straddle a bolt and having the inner edge of one of its prongs formed with teeth having a bite in one direction and a slip in the other, the extremity of said prong being laterally offset to lie in the path of rotation of a nut on said bolt, and the other prong of said washer having its extremity formed with a biting bur laterally offset in a direction opposite to that in which the extremity of the first prong is offset, said bur being operative in the same direction as the bite of the teeth of said first prong.

[Claims 6 to 9 not printed in the Gazette.]

1,169,311. FISH-NET HOLDER. GUY C. WALTER, Denver, Colo. Filed Dec. 15, 1914. Serial No. 877,321. (Cl. 43—9.)

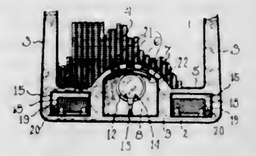
1. An article of the class described comprising a tubular handle, a fitting detachably connected with one extremity of the latter, two spring sections pivotally connected at their inner extremities with the said fitting, sockets mounted upon their outer extremities, a third spring section, a plug mounted upon each extremity of the latter, and each plug adapted to be detachably connected with one of said sockets, for the purpose set forth.

2. An article of the class described comprising a tubular handle, a sleeve mounted upon said handle in telescopic relation therewith, a fitting detachably connected with one extremity of the handle, two spring sections pivotally connected at their inner extremities with the said fitting, sockets mounted upon their outer extremities, a third section, a plug mounted upon each extremity of the latter, and each plug adapted to be detachably connected with one of said sockets, for the purpose set forth.



3. A fish net holder comprising a handle, a member detachably connected with one extremity of the latter, two spring sections having their inner extremities connected with said member, a third spring section detachably connected with the first named sections, and a net supported by said sections, for the purpose set forth.

1,169,312. AUTOMOBILE-RADIATOR HEATER. LOUIS WINTER, Detroit, Mich., assignor of one-half to J. M. Schaeffer, Detroit, Mich. Filed Aug. 30, 1915. Serial No. 47,929. (Cl. 123—174.)

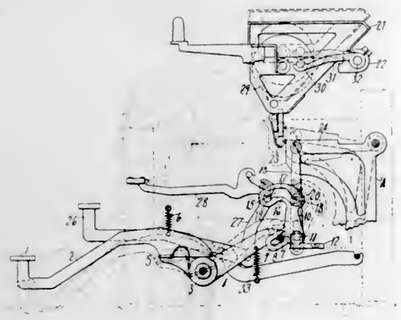


1. A radiator having a lower tank portion provided with three heating compartments, heating devices in the compartments, means at the rear side of said radiator whereby easy access can be had to two of said compartments, and means at the front side of said radiator whereby easy access can be had to the other of said compartments.

2. A radiator having a lower tank portion with the top wall thereof arched, shells transversely of the lower tank portion of said radiator coöperating with the front and rear walls thereof in providing compartments and one of said shells having an arched roof in proximity to the arched top wall of the lower tank portion of said radiator, and heating devices in said compartments.

3. A radiator having the lower tank portion thereof provided with compartments, heating means in one of said compartments adapted to serve functionally as a light, electric heating devices in the other of said compartments, a bull's eye in the front side of said radiator and in front of said heating means, and slide doors at the rear side of said radiator whereby easy access can be had to the electric heating devices.

1,169,313. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 29, 1911. Serial No. 646,579. (Cl. 197—79.)



1. The combination with a shift frame, of a shift frame key lever, a link pivotally connected to said shift frame, a stud on said link, a locking lever having a slot therein through which said stud extends, a pivot shaft for said locking lever, said link having a slot therein through which said pivot shaft extends, and a sub-lever actuated by said key lever for actuating said locking lever.

2. The combination with a shift frame, of a shift frame key lever, a link pivotally connected to said shift frame, a stud on said link, a locking lever having a slot therein through which said stud extends, a pivot shaft for said locking lever, said link having a slot therein through which said pivot shaft extends, and a sub-lever actuated by said key lever for actuating said locking lever; said first-mentioned slot having offset portions forming sockets or rests into which said stud may slip to lock said link against movement relatively thereto.

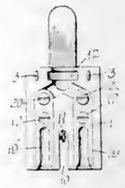
3. The combination with a shift frame, of a shift frame key lever, a link pivotally connected to said shift frame, a stud on said link, a locking lever having a slot therein through which said stud extends, a pivot shaft for said locking lever, said link having a slot therein through which said pivot shaft extends, and a sub-lever actuated by said key lever for actuating said locking lever; said first-mentioned slot having offset portions located adjacent each end thereof, whereby said stud can slip into the sockets thus formed to prevent up and down movement of said shift frame in either position thereof.

4. The combination with a shift frame, of a shift frame key lever, a pivotally mounted locking lever operatively connected to said shift key lever so as to be actuated thereby, said locking lever having a slot therein, the ends of which are vertically and horizontally spaced from each other, a link pivotally connected to said shift frame, and a stud on said link engaging in said slot, said slot having offset portions at each end thereof forming sockets into which said stud can slip, said locking lever being movable from right to left and vice versa, whereby the marginal edges of said slot will cam said stud up and down and thus manipulate said shift frame up and down, the sockets of said slot being located in alinement at each end of the swing of said locking lever with the pivot point of said locking lever and the pivot point of said link, so as to form a dead center lock.

5. The combination with a shift frame pivoted on the frame of the machine, of a pair of links pivotally connected to said shift frame near the ends thereof, a stud on each of said links, a pair of levers for actuating said links, said levers being secured together, so as to act in unison, and one or more shift key levers operatively connected to said first-mentioned levers.

[Claims 6 to 11 not printed in the Gazette.]

1,169,314. TERMINAL PLUG. ROBERT E. ZANNOTH and VERNA B. DICKESON, Detroit, Mich. Filed Apr. 12, 1915. Serial No. 20,651. (Cl. 173—361.)

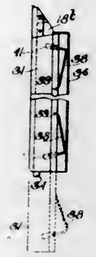


1. A terminal plug comprising sections having the ends thereof pivotally connected together, finger pieces carried by the pivoted ends of said sections, and a cord guard supported by the pivoted ends of said sections.

2. A terminal plug comprising sections having ends thereof connected whereby other ends of said sections can be separated, contact members carried by the confronting faces of said sections, means at an end of said plug to facilitate moving said sections relative to each other, and means connecting said sections to hold said sections normally closed.

3. A terminal plug comprising sections having ends thereof connected whereby said sections can be separated to facilitate placing said plug on terminals, a cord guard having an end thereof held between said sections, contact members carried by the confronting faces of said sections, and means connecting said sections adapted to hold the contact members of one section normally in engagement with the contact members of the other section.

1,169,315. WINDOW FRAME AND SASH. JACOB BRAFF, Boston, Mass., assignor of one-half to Wolf Berman, Boston, Mass. Continuation of application Serial No. 866,661, filed Oct. 14, 1914. This application filed Oct. 23, 1914. Serial No. 868,228. (Cl. 20—12.)



1. A window frame provided with an upright stile having a removable section, a spring casing attached to said removable section, a movable parting bead section carried by the removable stile section, and springs within said casing acting to normally hold said parting bead section in operative position, said stile section, movable bead section and spring case being removable from the frame as a single unit.

2. A window frame provided with an upright stile having a removable section, a spring casing attached to said removable section, a movable parting bead section carried by the removable stile section, springs attached to said bead section and bearing against said casing, to normally hold the bead section in operative position, said bead section and said springs being removable from said stile section and casing, said stile section, movable bead section and spring casing being removable from the frame as a single unit.

3. A window frame provided with an upright stile having a removable section, the latter being provided with a longitudinal slot, a spring casing behind said slot, having an open end, and a parting bead section movable in said slot from a projected sash-guiding position to a retracted sash-releasing position, and provided with springs bearing on said casing to normally hold the bead section operatively projected, the stile section, bead section, casing, and springs being removable as a single unit, the bead section and its springs being removable through the open end of said casing.

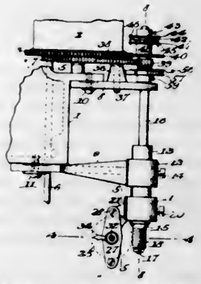
1,169,316. CAMPHOR COMPOUNDS. JÜRGEN CALLSEN, Elberfeld, and RICHARD STÜSSER, Dentz, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Dec. 29, 1914. Serial No. 879,539. (Cl. 23—24.)

1. The new products being chemically nor-camphors obtainable by decomposition of ketopinic acid compounds, which are generally oils forming semicarbazones, yielding solutions suitable for subcutaneous injection with salt solutions, substantially as described.

2. The new products being chemically nor-camphors containing only two asymmetric carbon atoms, forming semicarbazones, and yielding solutions suitable for subcutaneous injection with salt solutions, substantially as described.

3. The new product being chemically a nor-camphor $C_9H_{14}O$ and being an oil boiling at 105° C. under a pressure of 13 mm., yielding a semicarbazone $C_{10}H_{17}N_3O$ melting at 167° C. and forming with sodium salicylate solution liquid suitable for subcutaneous use, substantially as described.

1,169,317. RECORD-METER FOR TALKING-MACHINES. PLINY CATUCCI, Newark, N. J., assignor to A. F. Meisselbach & Brother, a Corporation of New Jersey. Filed Apr. 17, 1915. Serial No. 22,000. (Cl. 185—44.)



1. In a record meter, the combination of a spring motor, with an index dial and a pointer mounted over said dial, means actuated by said motor to cause said pointer to traverse the face of said dial in one direction while said motor is running, and means for causing said pointer to traverse said dial in the opposite direction when said spring motor is being wound up.

2. In a record meter, the combination of a spring motor with means for winding up the spring of said motor, an index dial and pointer, means actuated by said motor for causing said pointer to traverse said dial in one direction when said motor is running, and means actuated by said winding means for causing said pointer to traverse said dial in the opposite direction when said winding means is operated to wind up the spring of said motor.

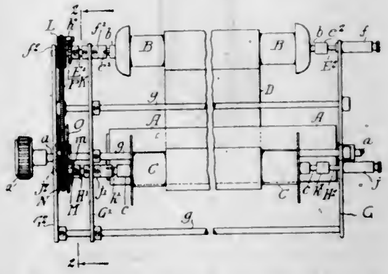
3. In a record meter, the combination of a spring motor with means for winding up the spring of said motor, an index dial and pointer therefor, a shaft geared to said pointer for causing the same to traverse said dial in either direction, means connecting said shaft with said motor for rotating said shaft in one direction, and means connecting said shaft with said winding means for rotating said shaft in the opposite direction.

4. In a record meter, the combination of a spring motor, a winding shaft geared to the spring of said motor for winding up said spring, an index shaft geared to said motor, and a train of gearing from said winding shaft to said index shaft, an index dial and a pointer for traversing said dial and gear connections between said pointer and said index shaft whereby the running of said motor will cause said pointer to traverse said dial in one direction and the rotation of said winding shaft will cause said pointer to traverse said dial in the opposite direction.

5. In an energy meter, the combination of a motor, with means for storing energy therein, an index dial and a pointer, means actuated by the discharge of energy by said motor for operating said pointer to indicate upon said dial the amount and rate of such discharge, and means actuated by the storing means for operating said pointer to indicate upon said dial the amount of energy stored in said motor.

[Claims 6 to 10 not printed in the Gazette.]

1,169,318. TYPE-WRITING MACHINE. JOHN JOSEPH COOPER, London, England, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 25, 1911. Serial No. 662,260. (Cl. 197—133.)



1. In a typewriting machine, the combination with a rotatable platen, of a pair of spools, movement-multiplying connections between the platen and the spools, including a belt driven by the rotary platen, and a pulley for each spool, over which said belt passes, the relation of the diameters of the pulleys to those of the platen and spools being such that either spool when used as the winding spool will tend to draw a web faster than the platen delivers it, and a pawl-and-ratchet connection between each pulley and its spool arranged to drive the spool onto which a web is being wound, but to let the other spool run idle.

2. In a typewriting machine, the combination with a rotatable platen, of a pulley driven by said platen, a spool driven by said pulley, a slip belt so driving said pulley, and a one-way clutch between the pulley and the spool, said pulley operative for positively driving the platen when the pulley is rotated in one direction, the pulley being free to rotate independently of the platen in the reverse direction, said belt having a slip driving connection with the pulley.

3. In a typewriting machine, the combination with a rotatable platen, of a pair of spools, a pulley fast to the platen, a pulley for each spool, a slip belt running over said pulleys arranged to over-drive a spool with reference to the platen, a pawl and ratchet connection between each pulley and its spool, and an idle pulley over which said belt runs.

4. In a typewriting machine, the combination with a rotatable platen, of a roll holder, a pair of spools in said holder, a pulley for each spool, a one-way driving connection between each spool and its pulley, a pulley on the platen arranged to over-drive said spools relatively to the platen, and an elastic belt for so driving said spools.

5. In a typewriting machine, the combination with a revoluble platen, of two paper-spools from which a paper-strip or web is led around the platen, one end of the strip being wound on one spool, and the other end being wound on the other spool, and connections from the platen to both spools separate from said web or paper-strip to cause one spool to wind and the other spool to pay out idly

when the platen is turning in one direction, and to cause reverse movements of the spools when the platen is turned in the other direction.

[Claims 6 to 22 not printed in the Gazette.]

1,169,319. SANITARY GARBAGE-CHUTE. ERNEST P. DARGIN, Los Angeles, Cal., assignor of one-half to Charles S. Brown, Los Angeles, Cal. Filed Mar. 8, 1915. Serial No. 13,066. (Cl. 193—32.)



1. A garbage chute comprising in combination with the body of the chute, a receptacle in the bottom of the chute, a hood connected with the lower extremity of the body of the chute, extending below the same and having an opening extending upwardly from its lower extremity and extending at least half way around the same, a door slidably connected with the hood for closing said opening, the door being adapted by virtue of its slidable connection with the hood to open in an upward direction, whereby the garbage receptacle is released.

2. A garbage chute of the class described comprising in combination with the body of the chute, a receptacle at the bottom of the chute, a hood connected with the lower extremity of the chute body, extending below the same and having an opening extending upwardly from its lower extremity and extending approximately half way around the same, a door slidably connected with the hood at its vertical edges for opening and closing purposes, and being arranged to normally cover the said opening, the lower part of the hood and a corresponding part of the door each having a member fitting closely over the top of the garbage receptacle, and forming in conjunction a complete closure therefor.

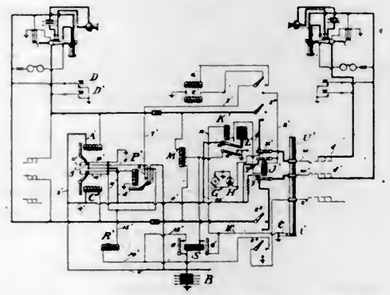
3. A garbage chute comprising in combination with the body of the chute, a receptacle at the bottom thereof, a hood connected with the lower extremity of the body of the chute, extending below the same and having an opening extending upwardly from its lower extremity and extending half way around the chute circumferentially, a door vertically slidable on the hood and arranged to normally close the said opening, the lower part of the hood and a corresponding part of the door each having a half frusto-conical member, the two members in conjunction serving to tightly close the top of the said receptacle.

4. A garbage chute comprising in combination with the body of the chute, a receptacle at the bottom thereof, a hood connected with the lower extremity of the body of the chute, extending below the same and having an opening extending upwardly from its lower extremity, a door slidably connected with the hood for closing the said opening, the lower extremity of the body of the chute within the hood being normally open, a valve plate adapted to close the same, the said plate being normally in the open position, and an operative connection between said valve plate and the door, whereby as the door is opened, the said plate is thrown to the closed position.

5. A garbage chute of the class described comprising in combination with the body of the chute, a receptacle at the bottom thereof, a hood connected with the lower extremity of the body of the chute, extending below the same and having an opening extending upwardly from its lower extremity, a door vertically slidable on the hood and normally closing the said opening, the lower extremity of the body of the chute within the hood being normally open, a valve plate adapted to close the same, said plate being normally in the open position, and an operative connection between said valve plate and the door, whereby as the door is opened, the said plate is thrown to the closed position.

[Claims 6 to 11 not printed in the Gazette.]

1,169,320. TELEPHONE-EXCHANGE SYSTEM. WILLIAM W. DEAN, Elyria, Ohio, assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed May 20, 1907. Serial No. 374,754. (Cl. 179—20.)



1. In a telephone exchange system, a calling and a called subscriber's line and an automatic switch for interconnecting the same, a release magnet for said switch normally disabled, and means controlled by the called subscriber in answering a call for removing the disability of said magnet and for rendering it operative for clearing-out purposes.

2. In a telephone exchange system, a calling and a called subscriber's line and an automatic switch for interconnecting them, a normally disabled release magnet for the switch, a relay connected to the interconnecting circuit through said switch so as to be responsive to the act of a called subscriber, and a device responsive to the act of the calling subscriber for actuating said relay after a predetermined lapse of time only, said relay when energized acting to render the release magnet operative, and to keep it operative until the final release and restoration of the switch.

3. In an automatic telephone exchange system, a calling and a called subscriber's line, means for interconnecting them, a normally disabled means for restoring the connecting means to its inoperative condition, and means under the control of the called subscriber for removing the disability of the restoring means, such removal serving to deprive the called subscriber of further control over the connection.

4. In an automatic telephone exchange system, a calling and a called subscriber's line, means for interconnecting them, a normally disabled means for restoring the connecting means to its inoperative condition, and means under the control of the called subscriber for removing the disability of the restoring means, the operating circuit of such removing means extending from the called substation over both sides of the called line to the removing means and back to the called substation by means of a third conductor.

5. In an automatic telephone exchange system, a calling and a called subscriber's line, means for interconnecting them, a normally disabled means for restoring the connecting means to its inoperative condition, and a relay under the control of the called subscriber, such relay adapted by its operation to close one break in the energizing circuit of the restoring means when the called subscriber responds to the call.

[Claims 6 to 17 not printed in the Gazette.]

1,169,321. PROCESS FOR FERMENTING SUGARS. KONRAD DELBRÜCK and KURT MEISENBURG, Elberfeld, Germany, assignors to Synthetic Patents Co. Inc., New York, N. Y., a Corporation of New York. Filed June 23, 1914. Serial No. 846,887. (Cl. 23—24.)

1. The new process comprising the fermenting of a sugar containing material by means of the *Bacillus macerans*, which process consists in carrying out this fermentation with the addition of an indifferent substance presenting a large surface to the fermenting mass, substantially as described.

2. The new process comprising the fermenting of a sugar containing material by means of the *Bacillus macerans*, which process consists in carrying out this fermentation with the addition of an indifferent substance presenting a large surface to the fermenting mass and at a temperature of about 40° C., substantially as described.

3. The new process comprising the fermenting of a sugar containing material by means of the *Bacillus macerans*, which process consists in carrying out this fermentation with the addition of an indifferent substance presenting a large surface and a nitrogenous nutritive material to the fermenting mass, substantially as described.

4. The new process comprising the fermenting of a sugar containing material by means of the *Bacillus macerans*, which process consists in carrying out this fermentation with the addition of an indifferent substance presenting a large surface and a nitrogenous nutritive material to the fermenting mass and at a temperature of about 40° C., substantially as described.

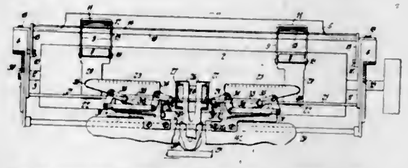
5. The new process comprising the fermenting of a sugar containing material by means of the *Bacillus macerans*, which process consists in carrying out this fermentation with the addition of peat to the fermenting mass, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,169,322. FOOD FOR CATTLE. KONRAD DELBRÜCK, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 5, 1914. Serial No. 870,527. [Cl. 99—11.)

A new food for cattle comprising a residue obtainable by distilling a carbohydrate mixture which has been fermented by means of the *Bacillus macerans*, said residue containing albuminous substances, unchanged starch and inorganic nutritive salts.

1,169,323. TYPE-WRITING MACHINE. ADOLPHUS S. DENNIS, Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 20, 1913. Serial No. 755,586. (Cl. 197—127.)



1. In a typewriting machine, the combination of a traveling platen; means to shift the platen to upper and lower case positions; a guide supported entirely by the frame of the machine and stationary during the travel of the platen; and means separate from said shifting means for moving said guide up and down with said platen.

2. In a typewriting machine, the combination, with a carriage and a platen movable in letter-feed direction; of a stationary support on the machine frame; a paper guide mounted on said support; means to shift said platen up and down; and means separate from said shifting means to move said guide up and down with said platen.

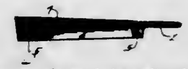
3. In a front-strike typewriting machine, the combination of a traveling platen frame and platen shiftable up and down, and a non-traveling guide in front of the platen and operated directly by the platen frame to shift therewith.

4. In a typewriting machine, the combination of a traveling platen shiftable to upper and lower case positions, a non-traveling paper guide in front of the platen, and means traveling with the platen to shift said guide with the platen.

5. In a front-strike typewriting machine, the combination of a traveling platen shiftable to upper and lower case positions, a ribbon vibrator in front of the platen, stationary guides on opposite sides of the ribbon vibrator, spring means to move said guides with the platen to one of said positions, and positive means to move the guides with the platen to the other position.

[Claims 6 to 49 not printed in the Gazette.]

1,169,324. HORSESHOE-PAD. CHARLES WILLIAM DUNNING, Los Angeles, Cal. Filed June 28, 1915. Serial No. 38,366. (Cl. 168—28.)

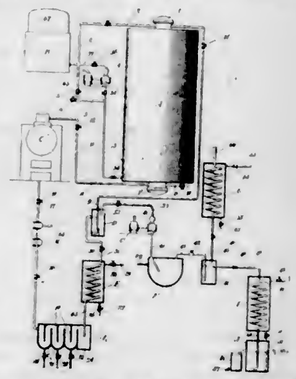


1. A pad for horse shoes integrally formed of rubber with a flat flanged portion extending over the entire area of the foot and gradually increasing in thickness from the front to the heel, a depending bead arranged beneath the frog of the foot and fitting the inner curve of the horse shoe, and a relatively thin and highly resilient inner flat portion forming a cushion for the frog of the foot.

2. A pad for horse shoes consisting of an integral flanged and beaded member adapted to be interposed between the foot and the horse shoe and secured to the foot, said flange being substantially thicker at the front than and tapered toward the heel and provided with a heavy canvas backing, said bead extending downwardly from said flange to a point substantially lower than the shoe and forming a pocket therewithin, and the bottom of said pocket being relatively thinner than said flange and resilient for cushioning the sensitive portions of the foot and for preventing the slipping of the pad, as set forth.

3. A pad for horse shoes consisting of an integral flange and bead reinforced by a heavy canvas backing for preventing the breaking thereof and formed of rubber, said flange being of varying thickness at different points for providing additional resiliency beneath the points of greatest impact, said bead extending downwardly therefrom to a point substantially lower than the shoe and forming a pocket therewithin, and the bottom of said pocket being relatively thinner than said flange for providing a maximum resiliency beneath the frog of the foot.

1,169,325. PROCESS AND APPARATUS FOR HARVESTING THE VOLATILE CONSTITUENTS OF WOOD AND VEGETABLE SUBSTANCES. WALTER K. FREEMAN, Oscawana, N. Y., assignor to Hydrolose Process Corporation, a Corporation of New York. Filed Sept. 18, 1912. Serial No. 721,061. (Cl. 92—2.)



1. In an apparatus for cleansing wood intended for reduction to pulp, of substances injurious to the ultimate

fiber, the combination with a digester provided with an opening for receiving chips, comminuted wood or vegetable materials, an inlet for gas and an outlet for the discharge of the volatile products and vapor at the top, and an opening at the bottom for discharging the pulp and separate inlets for the admission of cooking solution, supply of steam and hydrogen gas, connected with their respective sources or generators to the digester, by means of suitable pipes fitted with valves to control them, and to direct the flowing gas into the digester or to a pump, for increasing the pressure of the gas above normal, a separator connected between the volatile product outlet located at the top of the digester, and an intake opening at the bottom of the steam generator, and a vacuum pump connected with such separator in a proper manner for drawing off the vapor that contains the volatile substances, and cause them to flow through another separator connected with a condenser having a coil terminating with an orifice open to the atmosphere, and a pipe leading from the side of the separator to a condenser for liquifying the products of volatilization substantially as shown, described and set forth in this specification.

2. The herein described process employed for treating wood and vegetable substances, for cleansing them of deleterious matter harmful to the process of their reduction to pulp which consists in circulating a part of the cooking solution through the digester, a separator and steam generator, and drawing off from the separator, the product-bearing vapor and gases and then flowing the vapor to and through another separator connected to a coil of a condenser, which coil is open to the atmosphere to provide a means for the escape of aromatic gases, and separating in the products of condensation, the oil from the water.

3. The process of recovering the oil or turpentine from resinous woods, by placing blocks, chips or comminuted material in a closed digester and expelling the air by means of hydrogen gas, and then allowing a suitable cooking solution to flow into the bottom of the digester to force the gas out, then admitting steam to heat the contents sufficiently to liberate the oil by vaporizing it, and continuously circulating a part of the cooking solution through the digester, a separator and the steam generator so that the vapor conveying the oleoresinous products will be continuously drawn from the hot cooking solution.

4. In an apparatus of the character described, a digester provided at the top for the admission of materials to be treated, means for supplying hydrogen gas and having an outlet for product-bearing gases and vapors, and at the bottom an outlet for the discharge of the converted material, and admission of cooking fluid and steam, and an outlet for gas through a pipe connected with a gasometer, a branch of such pipe being properly connected with a pump for reversing the flow of gas and increasing the pressure to cause it to flow into the bottom of the digester, and means whereby it may be confined there or allowed to escape through an opening at the top, or directly to the atmosphere, substantially as described and for the purposes set forth.

5. In an apparatus of the character described a digester, means for supplying to said digester, gas, cooking solution and steam, said digester being provided with a pipe for leading off the vapor and gases produced by the steam, a primary separator to which said pipe leads, a vacuum pump in said pipe, a modifying chamber, a secondary chamber for separating the volatile gases from the distillate, and a final separator wherein the distillate is separated into water and oil, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

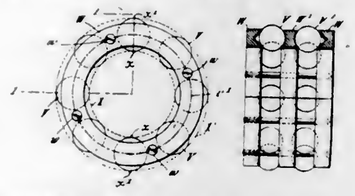
1,169,326. FLUSHING-VALVE. HENRY G. GRIFFIN, Grand Rapids, Mich. Filed Mar. 27, 1914. Serial No. 827,525. (Cl. 137—69.)

In a flushing valve, a long, vertically disposed barrel having a direct connection with a water main, a pipe extending upward from the upper end of the barrel forming a housing for a long valve rod, a long valve rod in said housing, a cylindrical valve secured to the lower end of said rod, a spring connected with said rod to hold said valve normally closed against the passage of water from the water main into the valve barrel, a discharge opening through the side of the valve barrel above the normal



position of the valve, a second opening through the side of the barrel above the discharge opening the space between the two side openings to perfectly seat the valve, and means for raising and lowering the valve from any desired distance above the valve barrel.

1,169,327. GAGE. HENRY HESS, Philadelphia, Pa. Filed Dec. 9, 1910. Serial No. 596,432. (Cl. 33—178.)



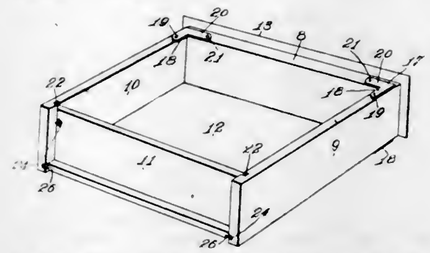
1. A fixed-dimension caliper gage comprising in combination a support, and in immovable connection with and secured to said support a circularly arranged series of three or more spheres located to afford all the gaging contacts, and the support shaped to permit objects to be gaged to pass between such spheres for gaging the exterior, or outside of such spheres for gaging the interior or bore.

2. In a fixed-dimension caliper gage the combination of a rigid support for a series of more than two preformed spheres, and, in immovable connection with said support, a circularly arranged series of more than two preformed spheres held by said support in an exactly known manner whereby to coöperate in determining the correspondence of a circular surface with said gage, said support consisting of two separate opposed, rigid, sphere-clamping parts, at least one of which is provided with an annular sphere receiving recess, and the two parts held rigidly in mutually opposed relation with the spheres clamped rigidly and immovably between them.

3. In a fixed-dimension caliper gage the combination of a rigid support for a series of more than two preformed spheres, and, in immovable connection with said support a circularly arranged series of three or more preformed spheres held by said support in an exactly known manner whereby to coöperate in determining the correspondence of a circular surface with said gage, and a second similar series of spheres similarly held by said support for determining a slightly different circular size, said support comprising three substantially parallel circular support pieces spaced axially from each other, the first and second holding the first set of spheres between them and the second and third the second set of spheres.

4. In a fixed-dimension caliper gage the combination of a rigid support for a series of more than two preformed spheres, and, in immovable connection with said support, a circularly arranged series of more than two preformed spheres held by said support in an exactly known manner whereby to coöperate in determining the correspondence of a circular surface with said gage, said support consisting of two separate, opposed, rigid, sphere-clamping parts arranged facing each other at opposite sides of the plane of the spheres, and at least one of which parts is provided with an annular sphere-receiving recess, and the two parts held rigidly in mutually opposed relation with the spheres clamped rigidly and immovably between them.

1,169,328. KNOCKDOWN DRAWER. HENRY M. HOLTGREWE, St. Louis, Mo. Filed July 6, 1912. Serial No. 708,055. (Cl. 45—7.)

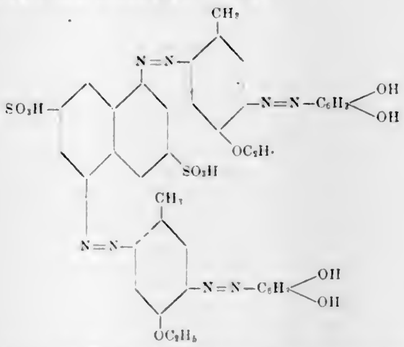


1. A drawer of the class described comprising a front piece, a pair of side pieces, a tail piece and a bottom, the same being suitably grooved to permit each member to be connected to the other and L-shaped strips acting as hinges connecting the top and bottom edges of the front piece to the top and bottom edges of the side pieces for permitting the said side pieces to be folded against the front piece and over each other, substantially as specified.

2. A drawer of the class described comprising a head piece, the ends being suitably tongued and grooved, a single pair of side pieces being correspondingly tongued and grooved and arranged to interlock with the ends of the front piece and L-shaped strips acting as hinges connecting the top and bottom edges of the side pieces with the top and bottom edges of the front piece so as to permit said side pieces to fold over each other and against the front piece for arranging the drawer in a compact knock-down and folded position for shipping purposes, and recesses formed in the edges to allow the hinges to be countersunk forming a flush joint, substantially as specified.

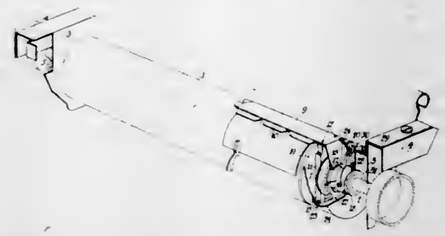
1,169,329. BLUE-VIOLET AZO DYE. MATTHIAS LATTEN, Leverkusen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 23, 1915. Serial No. 16,470. (Cl. 8—1.)

The herein described new azodyestuff which has in a free state most probably the formula:



and which is after being dried and pulverized in the shape of its alkaline salt a grayish-black powder, soluble in hot water with a reddish-violet coloration and in concentrated sulfuric acid with a greenish-blue coloration; by treating it with stannous chlorid and hydrochloric acid it is broken up into 1.5-naphthylenediamin-3.7-disulfonic acid, aminocresidin and aminoresorcin; dyeing cotton violet shades which are rendered fast to washing by an aftertreatment with formic aldehyde, substantially as described.

1,169,330. TYPE-WRITING MACHINE. JOSEPH LINDBURG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 31, 1914. Serial No. 859,314. (Cl. 197—136.)



1. In a typewriting machine having a rotatable platen, a shaft for said platen, a support fixed to rotate on said shaft, and means carried by said support and pivoted astride thereof, for holding the work-piece against said platen.

2. In a typewriting machine having a rotatable platen, a shaft for said platen, a support fixed to rotate on said shaft, and means pivoted upon said support for holding the work-piece against said platen.

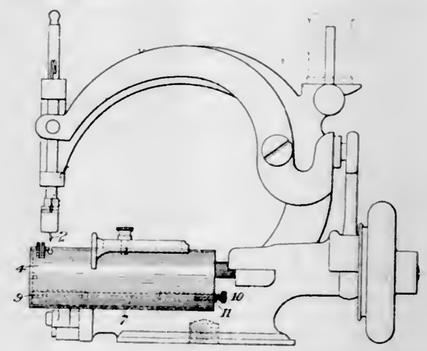
3. In a typewriting machine having a rotatable platen, a shaft for said platen, a support rotatably mounted on said shaft, and means including a pivoted lever, and a link carried by said support for holding the work-piece against said platen.

4. In a typewriting machine having a rotatable platen, a shaft for said platen, a support rotatably mounted on said shaft, and means including a pivoted yoke lever mounted upon said support, a link connected to said lever, a clamp, and a supporting member for said clamp connected to said link.

5. In a typewriting machine, a rotatable platen, a shaft for said platen, a support fixed to rotate on said shaft, means carried by said support for holding a work-piece against said platen, and a device mounted on said platen shaft adapted to be frictionally engaged by said means.

[Claims 6 to 33 not printed in the Gazette.]

1,169,331. SEWING-MACHINE. CHARLES LURZ, New York, N. Y. Filed Aug. 6, 1915. Serial No. 43,957. (Cl. 112—29.)



1. In combination with a sewing machine having a tubular work support arranged with its front end projecting forward of the sewing machine looper, and a guard plate for closing the front end of the work support, said guard plate having an eccentrically attached rod supported to have longitudinal and turning movements for moving the guard plate to and from its closing position.

2. In combination with a sewing machine having a tubular work support arranged with its front end projec

ing forward of the sewing machine looper, and a guard plate for closing the front end of the work support and being removably seated therein when in closing position, said guard plate having an eccentrically attached rod support to have longitudinal and turning movements for moving the guard plate to and from its closing position.

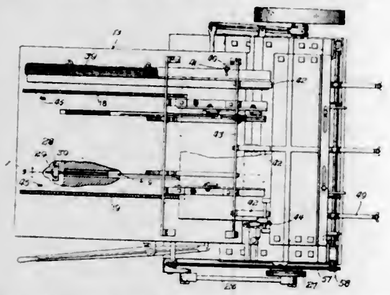
3. In combination with a sewing machine having a tubular work support arranged with its front end projecting forward of the sewing machine looper, a guard plate for closing the front end of the work support and being removably seated therein when in closing position, said guard plate having an eccentrically attached rod supported to have longitudinal and turning movements for moving the guard plate to and from its closing position, and a spring for holding the guard plate in its closed position.

4. In combination with a sewing machine having a tubular work support arranged with its front end projecting forward of the sewing machine looper, a guard plate for closing the front end of the work support and being removably seated therein when in closing position, said guard plate having an eccentrically attached rod supported in bearings on the work support to have longitudinal and turning movements for moving the guard plate to and from its closing position.

5. In combination with a sewing machine having a tubular work support arranged with its front end projecting forward of the sewing machine looper, a guard plate for closing the front end of the work support and being removably seated therein when in closing position, said guard plate having an eccentrically attached rod supported in bearings on the inner wall of the work support for longitudinal and turning movement in moving the guard plate to and from its closing position and at its rear end extending rearwardly of the work support to provide an operating handle.

[Claim 6 not printed in the Gazette.]

1,169,332. METAL-SHEARING MACHINE. CHARLES D. MCDONALD, Chicago, Ill., assignor to McDonald Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 11, 1914. Serial No. 861,209. (Cl. 164—21.)



1. In a machine of the class described, the combination of shearing means, reciprocating feed means for carrying the work to the shearing means and a positive stop to limit the forward movement of said feeding means, substantially as described.

2. In a machine of the class described, the combination of shearing means, a reciprocating feed bar for feeding the work to the shearing means, a member on said bar, and a stop held with respect to the movements of the bar against which said member strikes to limit the movement of the bar, substantially as described.

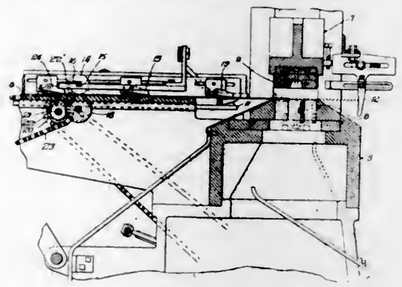
3. In a machine of the class described, the combination of shearing means, a reciprocating feed bar for feeding the work to the shearing means, a table across which the work is fed, an adjustable member on said bar and a stop fixed with respect to the movement of the feed bar against which said member strikes to limit the movement of the feed bar, substantially as described.

4. In a machine of the class described, the combination of shearing means, a reciprocating feed bar for feeding the work to the shearing means, a member on the end of said bar, and a stop held with respect to the movements of the bar, against which said member strikes to limit the movement of the feed bar, said member and stop coöperating to center the work with respect to the shearing means to produce a trimming cut, substantially as described.

5. In a machine of the class described, the combination of shearing means, a reciprocating feed bar for feeding the work to the shearing means, a table across which the work is fed, an adjustable member adjacent the end of said bar, a stop fixed with respect to the movement of the feed bar against which said member strikes to limit the movement of the feed bar, the initial movement of the feed bar placing the work with respect to the shearing means to produce a trimming cut, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,169,333. METAL-SHEARING MACHINE. CHARLES D. MCDONALD, Chicago, Ill., assignor to McDonald Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1915. Serial No. 31,246. (Cl. 164—48.)



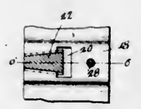
1. In a machine of the class described, the combination of shearing mechanism, means for advancing the work into position to be acted upon by the shearing mechanism, and means for centering the work with respect to the shearing mechanism prior to a trimming operation, comprising a fixed stop member and means operating independently of the feeding means for placing the work against said stop member after the completion of the initial feeding movement, substantially as described.

2. In a machine of the class described, the combination of shearing mechanism, means operatively connected for feeding the work into position to be acted upon by the shearing mechanism, means for centering the work with respect to the shearing mechanism prior to a trimming operation, comprising a fixed stop member and continuously actuating means adapted to shift the work rearwardly after the completion of the initial feeding movement thereof, and against said fixed stop member, substantially as described.

3. In a machine of the class described, the combination of shearing mechanism, means for feeding the work into position to be operated upon by said shearing mechanism, means for centering the work with respect to the shearing mechanism prior to a trimming operation thereof, consisting of a fixed stop member, an upper and a lower revoluble member arranged above and below the work respectively, means for revolving said members, and one of said members being of cam-formation with the high part thereof arranged to engage the work subsequent to the end of the first feeding movement to deflect the work rearwardly and against the fixed stop member, substantially as described.

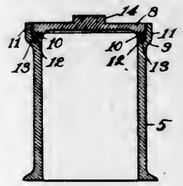
4. In a machine of the class described, the combination of shearing mechanism, means for feeding the work into position to be acted upon by the shearing mechanism, means for centering the work with respect to the shearing mechanism prior to a trimming operation, said means comprising a fixed stop member, a roller arranged above the work, a roller arranged below the work, means for positively driving one of said members, tension mechanism for holding one of said rollers in engagement with the work, and one of said rollers being of cam-formation with the high portion thereof arranged and adapted to engage with the work subsequent to the completion of the initial feeding movement to deflect the work rearwardly and against the fixed stop member, substantially as described.

1,169,334. GIG-SADDLE-TREE. ALEXANDER MCKENZIE, Kippen, Ontario, Canada. Filed Dec. 27, 1913. Serial No. 809,044. (Cl. 54—42.)



A gig saddle tree comprising a base plate provided with a tapered undercut slot terminating at its rear end in an enlarged pocket, a hook having a wedge-shaped base having side surfaces normal to said base plate engaged in said slot, and a securing plate having an opening closely fitting said wedge-shaped base to hold the hook in position.

1,169,335. CLEAN-OUT DEVICE FOR WASTE OR SOIL PIPES. STEPHEN B. MCMANAMIN, Fredericton, New Brunswick, Canada, assignor of one-half to William H. Irvine, Fredericton, New Brunswick, Canada. Filed Sept. 21, 1914. Serial No. 862,648. (Cl. 137—13.)



1. A clean-out device for pipes or traps, comprising in combination a tubular projecting portion having an opening communicating with the pipe or trap, an annular seat in the end of said portion, the outer wall of which seat extends beyond the inner wall and is provided with internal screw threads, and a cap to close said opening having a screw threaded portion to have screw threaded connection with the screw threads of the outer wall and having a portion to engage in the seat, substantially as and for the purpose specified.

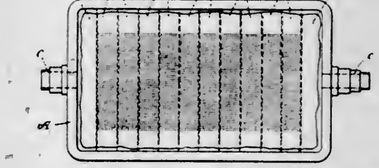
2. A clean-out device for pipes or traps, comprising in combination a tubular projecting portion having an opening communicating with the pipe or trap, an annular recess in the end of said portion, the outer wall of which recess extends beyond the inner wall of the recess and provided with internal screw threads and the outer face of the inner wall of the recess being a continuation of the inner face of the tubular portion, and a cover to close said opening having a flange provided with a screw threaded portion to have screw threaded connection with the screw threads of the outer wall of the recess and an unthreaded portion to engage in the recess, and said cover being constituted to receive releasing means, substantially as and for the purpose specified.

3. A clean-out device for pipes or traps, comprising in combination a tubular projecting portion having an opening communicating with the pipe or trap, an annular recess in the end of said portion, the outer wall of which recess extends beyond the inner wall and is provided with internal screw threads, packing seated in the bottom of the recess, a cover to close said opening having a portion screw threaded to have screw threaded connection with the screw threads of the outer wall of the recess and an unthreaded portion to engage in the recess and with the packing therein, substantially as and for the purpose specified.

4. A device of the class specified, comprising in combination a tubular member adapted to be calked into a waste pipe or trap; an annular recess in the outer end of said member the inner face of the outer wall of which recess is threaded adjacent its outer end; and a cover to close the outer end of said member having a flange with external screw threads to have screw threaded connection with the screw therads of the annular recess and an unthreaded portion to engage in the unthreaded portion of the recess, substantially as and for the purpose specified.

5. The combination with a waste pipe or trap therein, of a tubular member to engage in an opening in the pipe or trap and communicate therewith; a lip adjacent the outer end of the member extending inwardly and then in a plane parallel with said member forming an annular recess the outer wall of which extends beyond the inner wall; internal screw threads on the outer wall of the recess packing seated in the bottom of the recess; a cover for the outer end of the tubular member having an annular screw threaded flange adapted to have connection with the screw threads of the outer wall and having an unthreaded portion to extend in the recess and engage the packing, and said cover having means for the application of a wrench, substantially as and for the purpose specified.

1,169,336. SINTERING DEVICE. MAX MCMURRAY, Cleveland, and BENJAMIN J. MULLEN, Leetonia, Ohio; said Mullen assignor to United Iron and Steel Company, Cleveland, Ohio, a Corporation of Pennsylvania. Original application filed Oct. 14, 1913, Serial No. 795,143. Divided and this application filed Dec. 20, 1913. Serial No. 807,982. (Cl. 75—134.)



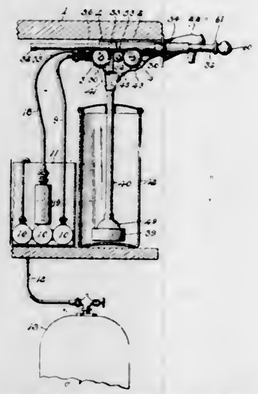
1. A sintering pan comprising the combination with the main or body portion forming the ends and sides; of a bottom structure composed of perforated grate-bars; a substantial portion of said bottom structure contiguous to said ends and sides being imperforate, and extending a distance from the sides or ends of said pan substantially greater than the imperforate distance between the individual grate bars.

2. In a sintering pan, the combination with a main or body portion forming the ends and sides; of a bottom structure composed of perforated grate bars; a substantial portion of such bottom structure contignous to said ends and sides and exposed to the space beneath said bottom structure, being imperforate, and extending a distance from the sides or ends of said pan substantially greater than the imperforate distance between the individual grate bars.

1,169,337. LIQUID-DISPENSING APPARATUS. ROBERT GEO. MARSH, Detroit, Mich., assignor to The Marsh Automatic Soda Fountain Co., Detroit, Mich., a Corporation of Michigan. Filed Oct. 23, 1911. Serial No. 656,110. (Cl. 225—21.)

1. In a liquid dispensing apparatus, the combination with a liquid supply receptacle, a measuring receptacle, a valve for controlling the flow of liquid from one to the other of said receptacles, a discharge nozzle, and a valve controlling the flow of fluid from the measuring receptacle into the nozzle; of a single longitudinally reciprocable member adapted to open one valve and to close the other and vice versa whenever shifted from one limit of its movement to the other.

2. In a liquid dispensing apparatus, the combination with a liquid supply receptacle, a measuring receptacle, a valve for controlling the flow of liquid from one to the other of said receptacles, a discharge nozzle, and a valve controlling the flow of liquid from the measuring receptacle into the nozzle; of gears connected to said valve to actuate the same, and a reciprocable rack bar to successively engage and turn said gears in the same direction to alternately open and close said valve.



3. In a liquid dispensing apparatus, the combination with a liquid supply receptacle, a measuring receptacle, a valve for controlling the flow of liquid from one to the other of said receptacles, a discharge nozzle and a valve controlling the flow of liquid from the measuring receptacle into the nozzle, of gears each connected to a valve and adapted to open and close the same, and a reciprocable rack bar adapted to engage first one gear to open one valve and then the other gear to close the other valve when moved in one direction, and open the last mentioned valve and close the first mentioned valve when moved in an opposite direction, between its limits of motion.

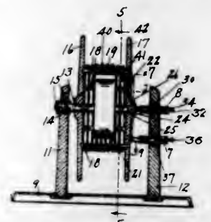
4. In a liquid dispensing apparatus, the combination with a liquid supply receptacle, a measuring receptacle, a valve for controlling the flow of liquid from one to the other of said receptacles, a discharge nozzle and a valve controlling the flow of liquid from the measuring receptacle into the nozzle; of gears each connected to a valve to open and close the same, and a reciprocable member having a rack bar adapted to successively engage said gears to open one valve and then close the other when moved from one limit of motion to the other and vice versa and provided with stops to engage and hold the gears at each end of its reciprocation.

5. In a liquid dispensing apparatus, the combination with a liquid supply receptacle, a measuring receptacle, a valve for controlling the flow of liquid from one to the other of said receptacles, a discharge nozzle, and a valve controlling the flow of liquid from the measuring receptacle into the nozzle; of gears connected to said valves to actuate the same, a reciprocable slotted operating tube, a rack bar within said tube adapted to engage said gears, a rod secured to said rack bar and extending to one end of the tube, and means engaging the end of the rod to move the same and actuate the rack bar in the tube longitudinally thereof.

[Claims 6 to 12 not printed in the Gazette.]

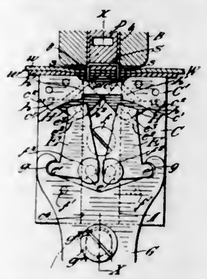
1,169,338. ELECTRIC LIGHTING DEVICE. JOHN A. MARTIN, Spokane, Wash., assignor of one-half to Harry W. Martin, Spokane, Wash. Filed May 11, 1914. Serial No. 837,907. (Cl. 173—367.)

In an extensible electric cable reel device, journal and supporting posts disposed in spaced relation, a spindle carried by said journal post and extending toward but not into engagement with said supporting post, a cable reel revolubly mounted on said spindle in spaced relation with respect to said supporting post and having a shoulder abutment engaging said spindle to limit shifting movement of said reel longitudinally on said spindle toward said journal post, a cable for said reel, collectors mounted



on that outside face of said reel nearest said supporting post and having connections for attachment to said cable, and spring actuated brush devices carried by said supporting post and engaging said collectors to complete circuit therewith and hold said reel in shoulder abutting engagement with said spindle, substantially as described.

1,169,339. STAPLING-MACHINE. ARTHUR H. MAYNARD, Warwick, R. I., assignor to Boston Wire Stitcher Company, Portland, Me., a Corporation of Maine. Filed June 30, 1915. Serial No. 37,183. (Cl. 1—2.)



1. In a stapling-machine, the combination with means for driving the staple through the work, of clencher-means for bending over the legs of the staple, and an auxiliary forming-anvil having prongs around which the ends of the legs of the staple are bent by the action of the clencher-means.

2. In a stapling-machine, the combination with the staple driving and clenching-mechanisms, of a resiliently-mounted anvil adapted to yieldingly coöperate with the clenching mechanism to provide for clenching the ends of the legs of the staple thereagainst.

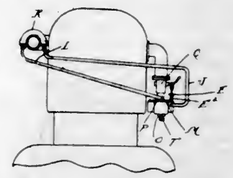
3. In a staple-machine, the combination with the staple driving and clenching-mechanisms, of resiliently-mounted means arranged to engage the legs of the staple as they protrude from the work being operated upon to yieldingly resist the pressure of the clenching mechanism during the operation of clenching the ends of the legs thereagainst.

4. In a stapling-machine, the combination with means for driving the staple through the work, of an anvil arranged to engage the legs of the staple to force them apart and maintain them in proper relation as they protrude through the material, and clencher-means for bending the ends of the legs of the staple around the anvil.

5. In a stapling-machine, the combination with means for driving the staple through the work, of a clencher-plate arranged below the work and formed with a staple-receiving throat, a forming-anvil having prongs projecting across the throat of the clencher-plate to engage the legs of the staple projecting through the work, and clencher-means coöperating with the anvil to bend the ends of the legs of the staple around its prongs.

[Claims 6 to 9 not printed in the Gazette.]

1,169,340. CARBURETER. DAVID C. MEARA, Detroit, Mich., assignor, by direct and mesne assignments, of eleven-twentieths to James H. Means, Detroit, Mich. Filed Nov. 21, 1914. Serial No. 873,322. (Cl. 48—148.)



1. In a carbureter, the combination with a float chamber, of an air suction conduit passing centrally therethrough, a conduit adjacent to said float chamber open at one end to the atmosphere and extending indirectly to said suction conduit, said indirect conduit including a member attachable to the engine to be under the heat thereof, a throttle valve in said air suction conduit, a valve controlling a passage from said float chamber to said indirect conduit, and means for simultaneously and correspondingly adjusting said valves.

2. In a carbureter, the combination with a float-chamber, of an air suction conduit passing centrally through said float chamber and being rotatively adjustably secured thereto, a cover for said float chamber formed integral with said suction conduit, a throttle valve in said suction conduit, a conduit adjacent to said float chamber open at one end to the atmosphere and extending indirectly to said suction conduit including a member attached to the engine to be under the heat thereof, a valve controlling admission of liquid fuel from said float chamber to said indirect conduit, and a common actuating connection for said throttle valve and liquid valve, by which they may be simultaneously and correspondingly adjusted.

3. In a carbureter, the combination with a float chamber and an air suction conduit, of a conduit open at one end to the atmosphere having a liquid jet connection with said float chamber and extending indirectly to said suction conduit, said indirect conduit including a segmental fitting adapted to be hung over the exhaust manifold of the engine to be heated thereby.

4. In a carbureter, the combination with an air suction conduit and a float chamber for the liquid fuel, of a valve for normally closing said suction conduit, a conduit open at one end to the atmosphere having a liquid jet connection with said float chamber and extending indirectly to said suction conduit, said indirect connection including a member attachable to the engine to be under the heat thereof, a valve controlling the liquid jet, a throttle valve in said suction conduit, and connections between said liquid valve, throttle valve and valve for closing said suction conduit, by which all of said valves are simultaneously and correspondingly opened and closed.

5. In a carbureter, the combination with an air suction conduit and a reservoir for the liquid fuel, of a conduit open at one end to the atmosphere and extending indirectly from said reservoir to said air suction conduit, a valve controlling the discharge of liquid from said reservoir to said indirect conduit, a throttle valve in said suction conduit, a cam upon the stem of said throttle valve for operating the liquid controlling valve, means for adjusting said cam to vary the opening of said valve, and independent means for adjusting said valve to vary its opening in idling position.

[Claim 6 not printed in the Gazette.]

1,169,341. ALKALI-METAL ACETONES. GEORG MERLING, OTTO CHRZESCIUSKI, and OTTO PFEFFER, Elberfeld, Germany, assignors to Synthetic Patents Co. Inc., New York, N. Y., a Corporation of New York. Filed July 7, 1914. Serial No. 849,608. (Cl. 23—24.)

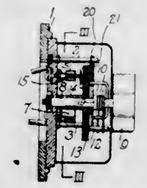
1. The new alkali metal ketones being colorless crystalline products more or less soluble in ether and being very chemically active substances by means of which the oxyisopropyl or similar groups can be introduced into hydrocarbons, substantially as described.

2. The new sodium acetone having most probably the formula:

$$CH_3 \diagdown C{-}ONa \quad CH_3 \diagup$$

being a colorless crystalline compound, stable only below 0° C., soluble in ether and being a chemically very active substance; forming 3-methylbutinol with acetylene, substantially as described.

1,169,342. MECHANICAL MOVEMENT FOR ELECTRICAL SWITCHES AND SIMILAR DEVICES. GEORGE H. MORSE, Wheeling, W. Va., assignor to Mutual Electric and Machine Company, a Corporation of West Virginia. Filed Apr. 6, 1914, Serial No. 829,855. Renewed Dec. 8, 1915. Serial No. 65,854. (Cl. 74—14.)



1. A mechanical movement comprising a plurality of stationary stops, a manually rotatable member provided with an arm, a driven member provided with a post, resilient means interposed between the arm and said post upon the driven member that is subjected to strain when the manually rotatable member is rotated, and similar oppositely arranged cam plates rotatable with the driven member and having opposing shoulders upon their outer edges adapted to engage the stationary stops upon opposite sides thereof and faces adapted to be engaged by the arm carried by the manual rotatable member whereby the shoulders upon said plates are disengaged from the stationary stop, and are caused to reëngage them upon rotation of the driven member.

2. A mechanical movement comprising a plurality of stationary stops, a manually rotatable member provided with an arm, a driven member, resilient means interposed between the said members that is subjected to strain when the manually rotatable member is rotated, and cam plates rotatable with the driven member and having opposing shoulders adapted to engage the stationary stops upon opposite sides thereof and faces adapted to be engaged by the arm carried by the manually rotatable member whereby the shoulders upon said plates are disengaged from the stationary stops and are caused to reëngage them upon the rotation of the driven member.

3. A mechanical movement comprising a plurality of stationary stops, a manually rotatable member provided with an arm, a driven member, resilient means interposed between the said members that is subjected to strain when the manually rotatable member is rotated in either direction, and cam plates rotatable with the driven member and having opposing shoulders adapted to engage the stationary stops upon opposite sides thereof and faces adapted to be engaged by the arm carried by the manually rotatable member whereby the shoulders upon said plates are disengaged from the stationary stops and are caused to reëngage them upon the rotation of the driven member.

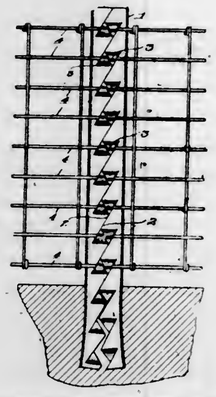
4. A mechanical movement comprising a plurality of stantionary stops, a manually rotatable member provided with an arm, a driven member, resilient means interposed between the said members that is subjected to strain when the manually rotatable member is rotated, and cam plates rotatable with the driven member and having opposing shoulders adapted to engage the stationary stops upon opposite sides thereof, faces adapted to be engaged in succession by the arm carried by the manually rotatable member to cause the said shoulders to disengage the said

stops, and cam faces also adapted to be engaged by the said arm whereby the said shoulders are caused to re-engage the said stops upon rotation of the driven member.

5. A mechanical movement comprising a plurality of stationary stops, a manually rotatable member provided with an arm, a driven member, resilient means interposed between the said members that is subjected to strain when the manually rotatable member is rotated, and cam plates rotatable with the driven member and having opposing shoulders adapted to engage the stationary stops upon opposite sides thereof and faces adapted to be engaged by the arm carried by the manually rotatable member whereby the shoulders upon the said plates are disengaged in succession from the stationary stops and are caused to reëngage them upon rotation of the driven member.

[Claims 6 and 7 not printed in the Gazette.]

1,169,343. FENCE-POST. JAMES H. MOSHER, Rochester, N. Y. Filed Nov. 3, 1914. Serial No. 870,040. (Cl. 256—58.)



1. A post bent from sheet metal into hollow form and having its meeting edges unconnected, bendable tongues extending outwardly from a face of the post on opposite sides of the joint, a tongue on one side of the joint projecting downwardly and lying in a horizontal plane with an upwardly extending tongue on the opposite side of the joint and both tongues being connected to the post by horizontal bends in the stock, and each of said tongues having an edge forming a part of the meeting edge of the stock, such edge on a downwardly extending tongue being parallel with and opposite to a like edge on an upwardly-extending tongue so that such tongues act to prevent the collapsing of the post.

2. A post formed from sheet metal into hollow form and having its meeting edges provided with projections, the projections on one edge extending between the projections on the other edge to provide an interlocking joint, and bendable tongues formed from said projections and connected thereto by horizontal bends in the stock.

3. A post formed from sheet metal into hollow form and having its meeting edges provided with projections, the projections one one edge extending between the projections on the other edge to provide an interlocking joint, tongues formed from portions of said projections and connected thereto by horizontal bends, and the tongues on one side of the joint extending upwardly while those on the other side extend downwardly.

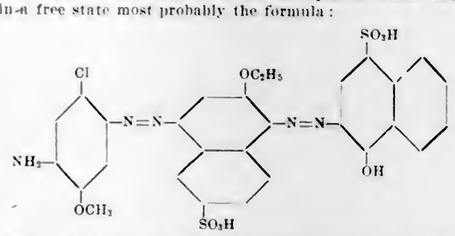
1,169,344. BLUE DISAZO DYE. WILHELM NEELMEIER, HEINRICH JORDAN, and KARL HEUSNER, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 29, 1915. Serial No. 5,032. (Cl. 8—1.)

1. The herein described new disazo dyestuffs which are after being dried and pulverized in the shape of their alkali metal salts dark powders soluble in water generally with a bluish coloration; yielding upon reduction with zinc powder and acetic acid an ortho-disubstituted para-phenylenediamin, an 1.4-diamino-2-naphtholether-6-sulfonic acid and 1-hydroxy-2-aminonaphthalene-4-sulfonic acid; dyeing cotton generally blue shades which can be converted by diazotizing them on fiber and after treatment with beta-naphthol into bright greenish-blue shades fast to washing which can be discharged with hydrosulfite to a pure white, substantially as described.

2. The herein described new disazo dyestuffs which are after being dried and pulverized in the shape of their alkali metal salts dark powders soluble in water generally with a bluish coloration; yielding upon reduction with zinc powder and acetic acid a 2-alkoxy-1.4-phenylenediamin substituted in the 5-position, an 1.4-diamino-2-naphtholether-6-sulfonic acid and 1-hydroxy-2-aminonaphthalene-4-sulfonic acid; dyeing cotton generally blue shades which can be converted by diazotizing them on fiber and after-treatment with beta-naphthol into bright greenish-blue shades fast to washing which can be discharged with hydrosulfite to a pure white, substantially as described.

3. The herein described new disazo dyestuffs which are after being dried and pulverized in the shape of their alkali metal salts dark powders soluble in water generally with a bluish coloration; yielding upon reduction with zinc powder and acetic acid a 2-alkoxy-1.4-phenylenediamin substituted in the 5-position, an 1.4-diamino-2-naphtholethylether-6-sulfonic acid and 1-hydroxy-2-aminonaphthalene-4-sulfonic acid; dyeing cotton generally blue shades which can be converted by diazotizing them on fiber and aftertreatment with beta-naphthol into bright greenish-blue shades fast to washing which can be discharged with hydrosulfite to a pure white, substantially as described.

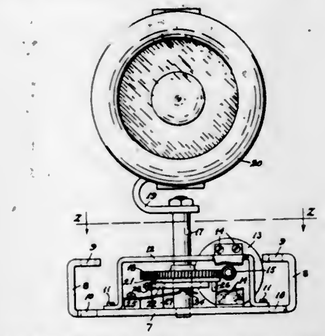
4. The herein described new disazo dyestuff which has in a free state most probably the formula:



and which is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in concentrated sulfuric acid with a bluish coloration; yielding upon reduction with zinc powder and acetic acid 2.5-diamino-4-chloro-1-anisol, 1.4-diamino-2-ethoxynaphthalene-6-sulfonic acid and 2-amino-1-naphthol-4-sulfonic acid; dyeing cotton blue shades which after diazotation and development with beta-naphthol change into a beautiful bright greenish-blue fast to washing, substantially as described.

1,169,345. ADJUSTABLE LAMP-SUPPORT. LYMAN E. NELSON, Seattle, Wash. Filed May 27, 1915. Serial No. 30,830. (Cl. 240—61.)

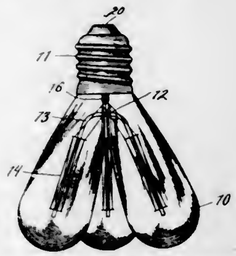
1. In an adjustable lamp-support of the class described, the combination with a base-plate, of a shaft associated with said base-plate and disposed vertically to be rotatable; a lamp secured to the upper end of said shaft; a worm gearwheel securely mounted on said shaft concentrically therewith; an electrically insulated metal ring associated with said shaft and said worm gearwheel in a position concentric therewith; an electric motor whose shaft is provided with a worm screw and which is mounted on said base-plate in a position so that said worm-screw engages with said worm gear-wheel; two contact-springs secured to and insulated from said base-plate and disposed to engage with one side surface of said insulated metal ring; an insulated stud associated with said worm gear-wheel and adapted to engage with each of said contact-springs to force it from engagement with said insulated ring in response to a rotation of said worm gear-wheel; another contact-spring secured to and insulated from said base-plate and disposed to engage with said insulated metal ring; a source of electricity; an electric pole-changing switch; and electric conducting circuits disposed to connect all of said contact-springs, said electric motor, said pole-changing switch and said source of electricity.



2. An adjustable lamp-support which embodies a base-plate; a vertically disposed shaft rotatably mounted on said base-plate; a lamp secured to the upper end of said shaft; an electric motor mounted on said base-plate and adapted to rotate said shaft; a source of electricity; a combined circuit breaking and pole-changing switch; electric circuits connecting said switch, said motor and said source of electricity; and means associated with said shaft for opening and closing one of said circuits in response to a rotation of said shaft.

3. An adjustable lamp-support which embodies an electric motor and an electric switch, said switch comprising five contact points, a pivoted switch-arm, a lever articulated with said switch-arm, an insulated contact-spring secured to said switch-arm, an insulated contact-spring secured to said lever, said contact-points being disposed in the circular path of said contact-springs and elastic means for normally maintaining said lever in such position as will prevent its attached contact-spring from engaging with any of said contact-points.

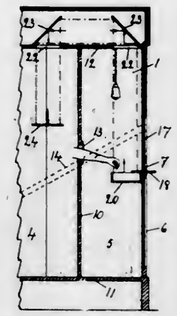
1,169,346. ELECTRIC CLUSTER-LAMP. THOMAS O'DONNELL, Ironwood, Mich. Filed Sept. 30, 1914. Serial No. 864,287. (Cl. 176—26.)



An electric lamp, comprising a common neck having a plurality of outwardly diverging bulbs, a filament support embodying outwardly diverging arms arranged within the bulbs, filaments strung upon their arms, and means carried by the neck to supply current to the filaments.

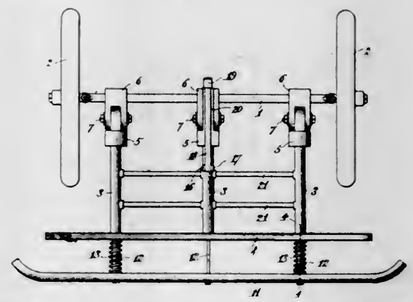
1,169,347. MAGICAL SELLING-KIOSK. CARL JOHAN FREDRIK OHLSSON, Stockholm, Sweden. Filed Apr. 7, 1915. Serial No. 19,771. (Cl. 46—70.)

1. In a magical selling kiosk the combination of a house, one wall of which is provided with window-glass and an opening, a column in the house, which column has an opening for the thrusting through of the hand and arm, vertical mirrors extending from said column and placed at an angle with each other, dividing the house into two rooms, a front room and a back room, and lamps arranged in the front room.



2. In a magical selling kiosk the combination of a house, one wall of which is provided with window-glass and an opening, a column in the house, which column has an opening for the thrusting through of the hand and arm, vertical mirrors extending from said column and placed at an angle with each other, dividing the house into two rooms, a front room and a back room, lamps arranged in the front room, a slab arranged in the front room with an opening in the wall, and mirrors arranged at such an angle that the image from the slab is visible in the back room.

1,169,348. FENDER. WILLIAM PEARSON, Spokane, Wash. Filed June 18, 1915. Serial No. 34,926. (Cl. 105—130.)



The combination with a wheeled vehicle, of a fender comprising parallel tubular members extending in a fore and aft direction and connected at their rear extremities by knuckle joints to the vehicle, a yoke bar extending at a right angle to the forward extremities of said tubular members which are fixedly secured thereto, said yoke bar being formed with guide openings in line with the bores of said tubular members, a pilot fender bar parallel to and in advance of said yoke bar, rods fixedly attached to said pilot bar and slidable through the yoke bar and within said tubular members, coiled expansion springs encircling said rods between the pilot bar and yoke bar, a trip lever in co-operative relation to one of said rods, a latch bar connected to and actuated by said lever, and a fixed latch shoulder with which said latch is held in engagement by the expansive action of said springs to support the fender in a raised position.

1,169,349. METHOD OF TREATING WOOD AND PRODUCT THEREOF. JULIO PINAL Y ICAZA, Mexico, Mexico. Filed Aug. 28, 1915. Serial No. 47,836. (Cl. 99—12.)

1. The herein described method of treating wood or the like, which consists in impregnating the same with a

strong solution consisting predominantly of magnesium chlorid, said solution having a density of at least 15° Bé.

2. The herein described method of treating wood or the like, which consists in impregnating the same with a solution consisting predominantly of magnesium chlorid, then providing the impregnated wood with an external water-resistant coating.

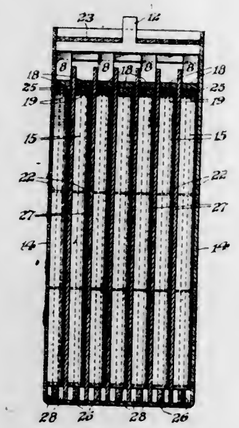
3. The herein described method of treating wood or the like, which consists in impregnating the same with a solution consisting predominantly of magnesium chlorid, then providing the impregnated wood with an external water-resistant coating containing magnesium silicate.

4. As a new article of manufacture, wood or the like material impregnated with a strong solution consisting predominantly of magnesium chlorid, said solution having a density of at least 15° Baumé, said article provided with an external water-resistant coating.

5. As a new article of manufacture, wood or the like material impregnated with magnesium chlorid and provided with an external water-resistant coating containing magnesium silicate.

[Claim 6 not printed in the Gazette.]

1,169,350. ELECTRICAL ACCUMULATOR. LEON W. PULLEN, Philadelphia, Pa. Filed June 16, 1911. Serial No. 633,583. (Cl. 204—29.)



1. An electrode for an electrical accumulator, comprising a perforated tube of non-conducting material, a core extending longitudinally through said tube and unconnected with it at one end and provided with an enlargement forming a bearing at its free end within the tube, and a column of active material within said tube bearing at one end upon one end of the tube and at the other end upon the bearing on the free end of the core.

2. An electrode for an electrical accumulator comprising a perforated tube of non-conducting material sealed at its upper end, a core extending longitudinally through said tube and projecting at its upper end through the sealed end of the tube and having its lower end unconnected with the tube and provided with an enlargement within the tube forming a bearing, and a column of active material within the tube supported at its lower end upon the bearing on the free end of the core.

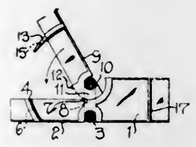
3. An electrode for an electrical accumulator, comprising a perforated tube of non-conducting material sealed at its ends, a core extending longitudinally through said tube, projecting at one end through one of the sealed ends of the tube, and having its other end unconnected with the tube and provided with a disk or enlargement within the tube, a column of active material within the tube supported at one end upon the disk or enlargement on the free end of the core, and one or more non-conducting disks loose upon the core and tightly fitting the tube between its ends within the column of active material and acting to brace the inner wall against external pressure.

4. A plate for an electrical accumulator composed of a plurality of electrodes arranged side by side and each consisting of a long tubular non-conducting casing containing active material, a brace of non-conducting material fitting snugly within the casing between its ends and within the contained column of active material, and a core extending through the column of active material and the brace piece, the brace-pieces in adjacent electrodes being located in the same relative position so as to act against one another.

5. An electric accumulator composed of a casing having a rectangular interior, a series of plates each consisting of a plurality of tubes of non-conducting material arranged in a row and having their lower ends sealed, said tubes provided with metallic cores electrically connected at the top by a metal bar and said tubes having a filling of active material about the cores, a non-conducting partition between each pair of plates and extending below the bottom of said plates and resting on the bottom of the inclosing casing, a flat strip secured to the bottom of the plate and removable therewith, said strip supporting the plate and arranged in parallel relation with the width thereof and with respect to the adjacent partitions and also of a lateral thickness greatly less than the thickness of the plate, the length of said strip approximating the width of the plate and partitions, whereby said partitions and strips are arranged parallel and alternately and provide a plurality of separate parallel compartments beneath the plates to hold any active material which collects in the several compartments in the bottom of the accumulator from shifting into direct association.

[Claims 6 and 7 not printed in the Gazette.]

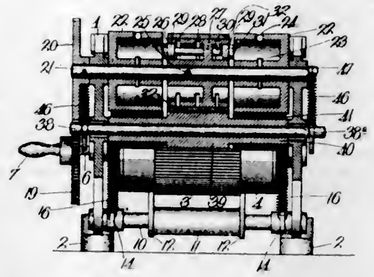
1,169,351. CONVEYER CLEAT OR FLIGHT. SAMUEL F. QUAY, Flagstaff, Ariz. Filed May 19, 1915. Serial No. 29,153. (Cl. 193—8.)



1. The combination with a conveyer chain, of a flight comprising a lower member having a link-receiving groove, a boss integral therewith and having a curved tongue-receiving recess, an upper member seating on said lower member and having a link-receiving groove coöperating with said first-mentioned groove to retain said flight or cleat in a link, a tongue integral with said upper member and entering said tongue-receiving recess to hold said members in position, and means for securing said tongue in said recess, substantially as described.

2. The combination with a conveyer chain, of a flight comprising a lower member having a link-receiving groove in one side intermediate its ends and the opposite side thereof cut out on a horizontal plate to a point substantially above said groove and thence curved upwardly in a 90 degree arc, a boss integral with said lower part and having a tongue-receiving recess therein, an upper part provided on its upper side with a link-receiving groove for coöperation with said first-mentioned groove to retain said flight or cleat in a link and having its lower side shaped to seat against the cut-out or said lower member whereby the inner end of said upper member may be placed in a vertical position against the link and rotated into its seated position, a tongue on said lower member arranged to enter said tongue-receiving recess to retain said members in seated relation, and means for securing said tongue in said recess, substantially as described.

1,169,352. CHECK-CANCELING MACHINE. PERLEY E. REES and FREDERICK C. SCHMIDT, Kansas City, Mo. Filed Sept. 8, 1914. Serial No. 860,526. (Cl. 101—57.)



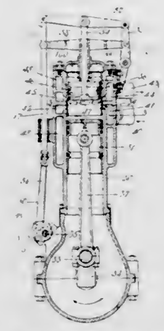
1. In a check canceling machine, a driven shaft, a pair of spaced rolls secured thereon, a cylinder secured thereon between said rolls, a printing plate secured on the cylinder, a shaft paralleling the first-named shaft, and provided with cylindrical feed treads for coöperation with said feed rolls in feeding a check between said shafts, and a cylinder mounted on the second shaft between said cylindrical tread surfaces for coöperation with said printing plate in imprinting and simultaneously feeding a check between said shafts; said cylinder and printing plate coöperating when feeding and imprinting a check in holding said feed rolls and cylindrical tread surfaces spaced apart.

2. In a check canceling machine, a driven shaft, a pair of spaced rolls secured thereon, a cylinder secured thereon between said rolls, a printing plate secured on the cylinder, a shaft paralleling the first-named shaft, and provided with cylindrical feed treads for coöperation with said feed rolls in feeding a check between said shafts, and a cylinder mounted on the second shaft between said cylindrical tread surfaces for coöperation with said printing plate in imprinting and simultaneously feeding a check between said shafts; said cylinder and printing plate coöperating when feeding and imprinting a check in holding said feed rolls and cylindrical tread surfaces apart, and yielding means tending to press said shafts toward each other.

3. A check canceling machine, comprising a suitable frame, a driven shaft journaled in said frame, a cylinder secured on said shaft, a printing plate secured on the cylinder, and having its printing face circumferentially corrugated, a pair of feed rolls mounted on the shaft at opposite sides of said cylinder, a shaft paralleling and below the first-named shaft, and adjustable sidewise toward and from the first-named shaft and extending through and held from forward or rearward movement by the frame, spring-actuated levers forming a lower journal for and tending to press said shaft toward the first-named shaft, a circumferentially corrugated cylinder rigidly secured on the said second shaft, and adapted to engage and coöperate with the corrugated printing surface of the first-named cylinder in shredding and feeding a check interposed between them, and rubber treads rotatable with and disposed at opposite sides of the said corrugated cylinder and below the said feeding rollers, and adapted when the said second shaft is raised through disengagement between the corrugated cylinder thereon and the printing plate, to engage the marginal portions of the check and clamp the same against said feed rollers, whereby the latter and said treads shall effect feeding movement of the check when the same is not fed by the corrugated cylinder and printing plate.

4. A check canceling machine, comprising a suitable frame, a driven shaft journaled in said frame, a cylinder secured on said shaft, a printing plate secured on the cylinder, and having its printing face circumferentially corrugated, a pair of feed rolls mounted on the shaft at opposite sides of said cylinder, a shaft paralleling and below the first-named shaft, and adjustable sidewise toward and from the first-named shaft and extending through and held from forward or rearward movement by the frame, spring-actuated levers forming a lower journal for and tending to press said shaft toward the first-named shaft, a circumferentially corrugated cylinder rigidly secured on the said second shaft, and adapted to engage and coöperate with the corrugated printing surface of the first-named cylinder in shredding and feeding a check interposed between them, rubber treads rotatable with and disposed at opposite sides of the said corrugated cylinder and below the said feeding rollers, and adapted when the said second shaft is raised through disengagement between the corrugated cylinder thereon and the printing plate, to engage the marginal portions of the check and clamp the same against said feed rollers, whereby the latter and said treads shall effect feeding movement of the check when the same is not fed by the corrugated cylinder and printing plate, and an ink-applying roller for applying ink to the printing surface of said printing plate whereby the latter shall ink the check coincidentally with the shredding lines thereof.

1,169,353. INTERNAL-COMBUSTION ENGINE. SIDNEY A. REEVE, New Haven, Conn., assignor, by mesne assignments, to Charles W. Brown, trustee, Pittsburgh, Pa. Filed June 10, 1909. Serial No. 501,262. (Cl. 123—75.)



1. In a four-cycle explosion motor, the combination of a cylinder having belts of admission and exhaust ports each extending more than half-way around the combustion-chamber, and a pair of longitudinally-reciprocating cylindrical half-speed slide-valves working one within the other and controlling said ports.

2. In a four-cycle explosion motor the combination of a cylinder having belts of admission and exhaust ports adjacent in an axial direction, and a pair of cylindrical half-speed slide-valves controlling said ports and reciprocated in line with the cylinder bore.

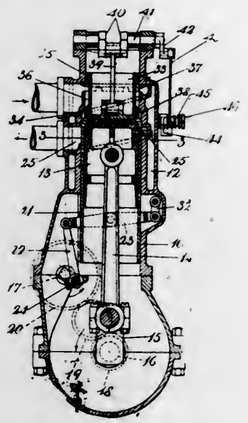
3. In a four-cycle explosion motor, the combination with the cylinder and working piston, of a pair of axially-reciprocating half-speed slide-valves alined with the cylinder bore, one of which is a sleeve-valve and the other an axially-unbalanced plug or piston valve working within the sleeve-valve.

4. In a four-cycle explosion motor, the combination with the cylinder and working piston, of a pair of unbalanced slide-valves controlling the admission and exhaust of said cylinder, reciprocating axially of said cylinder and arranged concentric with each other, and means for employing the outward movement of said slide-valves in the development of power.

5. In a four-cycle explosion motor, the combination with the cylinder and working piston, of a pair of unbalanced slide-valves controlling the admission and exhaust of said cylinder, reciprocating axially of said cylinder and arranged concentric with each other, and half-speed connections for driving one of said valves comprising a stem extending from said valve through the head end of the cylinder.

[Claims 6 to 17 not printed in the Gazette.]

1,169,354. SLIDING-VALVE EXPLOSION-MOTOR. SIDNEY A. REEVE, New Haven, Conn., assignor, by mesne assignments, to Charles W. Brown, trustee, Pittsburgh, Pa. Filed June 10, 1909. Serial No. 501,263. (Cl. 123—75.)



1. In an explosion motor, the combination of a combustion cylinder having inlet and exhaust ports circumscribing its axis, a working piston, and an individually-acting valve controlling each of said ports, at least one of which is a tubular slide-valve, reciprocated in line with the cylinder bore and the other of which works within said tubular slide-valve.

2. In a four-cycle explosion motor, the combination of a cylinder having circumferential admission and exhaust ports in different zones, a working piston, a single axially-movable half-speed sleeve valve surrounding the piston and reciprocating between the piston and the cylinder wall and controlling the exhaust-port, and an independent valve mounted on the cylinder and controlling the admission-port.

3. In a four-cycle explosion motor, the combination of a combustion cylinder having circumferential admission and exhaust ports in different zones, a working piston, a half-speed sleeve valve surrounding the piston and reciprocating between the cylinder and piston and controlling the exhaust-port, said valve having an open end in the combustion-chamber, and an independent half-speed valve controlling the admission-port.

4. In a four-cycle explosion motor, the combination of a cylinder having circumaxial admission and exhaust ports in different zones, a working piston, and independent half-speed cylindrical slide-valves controlling the respective ports, the exhaust valve being an unbalanced sleeve reciprocated axially between the piston and cylinder.

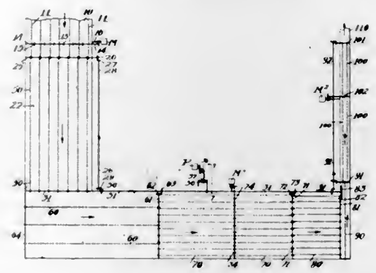
5. In a four-cycle explosion motor, the combination of a cylinder and piston, and independent cylindrical admission and exhaust slide-valves reciprocated in line with the cylinder bore, the admission-valve being unbalanced and opening inwardly.

[Claims 6 to 13 not printed in the Gazette.]

1,169,355. ICE-CUTTING MACHINE. RICHARD W. RICH, Worcester, Mass. Filed June 4, 1914. Serial No. 843,069. (Cl. 143—49.)

1. An ice cutting machine having, in combination, two sets of saws arranged on shafts at right angles to each other, separate means for feeding a float of ice past each set of saws in a direction parallel to the line of cut of each set, and additional means to transfer the float automatically from the first feeding means to the second feeding means by successive movements at right angles to each other and in predetermined time relation to each other, whereby the direction of travel of said float may be changed 90° without interference of successive floats.

2. An ice cutting machine having, in combination, two sets of saws arranged on shafts at right angles to each other, separate means for feeding a float of ice past each set of saws in a direction parallel to the line of cut of each set, and additional means to transfer the float automatically from the first feeding means to the second feeding means by successive movements at right angles to each other and in predetermined timed relation to each other, said additional means comprising two separate sets of conveying devices intermediate said sets of feeding means, said two sets of conveying devices operating at right angles to each other and being each provided with float-engaging devices mounted and actuated to move in predetermined spaced relation with each other, whereby the direction of travel of said float may be changed 90° without interference of successive floats with each other.



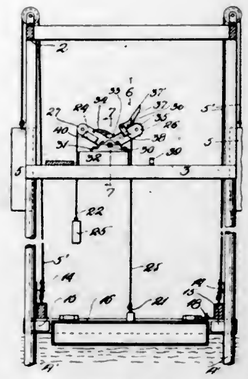
3. An ice cutting machine having, in combination, a set of saws to which floats of ice may be presented in a continuous line, a second set of saws operating at right angles to the first set, separate means to feed the floats past each set of saws, conveying means formed in two parts, and means to drive all of said feeding and said conveying means at predetermined relative speed ratios, the first part of said conveying means being longitudinally alined with the first feeding means and being so positioned and speeded that it is effective to receive floats presented continuously from said first feeding means and to present them transversely in spaced relation to the second part of said conveying means, said second part being disposed at right angles to said first part and being longitudinally alined with the second feeding means, the two parts of said conveying means and the second feeding means being driven in such relative speed ratios that the floats presented in spaced relation to said second conveying means will be presented in a substantially continuous line to the second feeding means and to the second set of saws.

4. An ice cutting machine having, in combination, a set of saws for cutting a square float of ice into strips, feeding means having driving devices thereon spaced apart by substantially the width of the float, conveying means operating at higher speed than said feeding means and having driving devices thereon spaced twice as far apart, a second conveying means operating at right-angles to the first conveying means and with the same speed and spacing, a second set of saws, and feeding means for said second set having the same speed and spacing as the first feeding means.

5. An ice cutting machine having, in combination, two sets of saws operating at rightangles to each other, feeding means for each set of saws, means to convey the ice from one feeding means to the other, said conveying means being made in two parts, driving mechanism, and power transmitting devices between said mechanism, said separate feeding means and said separate conveying means effective to drive said feeding means and said conveying means at predetermined relative speeds fixed in such ratios that the line of travel of the ice may be changed 90° and that the ice will pass each set of saws in a substantially continuous line.

[Claim 6 not printed in the Gazette.]

1,169,356. WAVE-MOTOR. GEORGE W. SANDERSON, Long Beach, Cal. Filed Mar. 8, 1915. Serial No. 12,979. (Cl. 253—11.)



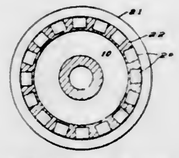
1. A wave motor comprising a frame, suspended and balanced in proximity to the surface of the water, a shaft, a plurality of ratchet wheels fixed on said shaft, a plurality of walking beams having spools journaled thereon, a plurality of floats, hingedly secured at one end to said frame and having their free ends disposed in the path of the waves, said floats lying in the same horizontal plane and behind each other whereby to successively receive the impact of waves, a cable wound on one of the spools on each of said walking beams, and running over the other spool, weights on the ends of said cables, the other ends of said cables being connected with the free ends of said floats, means to prevent said spools over which said cables are wound from turning, and means to release said means to permit said spools to turn when the tide falls below a fixed normal.

2. A wave motor comprising a frame, a guide therefor, a plurality of weighted cables to hold said frame in balanced suspension, a plurality of floats hingedly connected at one end to said frame and disposed in the path of waves to be successively operated thereby, a shaft, an oscillatory operating means for said shaft carrying spools, a cable wound on one of the spools of each of said operating means and running over the other spool, said cables carrying weights and connected to the free ends of said floats, means to hold said spools over which said cables are wound against revolution, and means to release said means.

3. A wave motor comprising a guide, a frame movable therein, means to suspend said frame, means to balance said frame, a shaft, ratchet wheels thereon, a plurality of walking beams loose on said shaft having spools and provided with means for engaging and operating said ratchet wheels in one direction, and means for operating said walking beams, comprising cables, each wound on one of the spools of each walking beam and running over the other spool and carrying a weight at one end, a plurality of floats hingedly attached to said frame, the other end of each cable being attached to said floats, pawls to hold the spools on which the cables are wound against revolution, and means operable by the movement of said walking beams to disengage said pawls from said spools.

1,169,357. POWER-TRANSMISSION MECHANISM. NORBERT H. SCHICKEL, Stamford, Conn. Filed Nov. 29, 1911. Serial No. 663,112. (Cl. 64—17.)

1. As a new article of manufacture, a pulley adapted for use in connection with a belt of varying tension, said pulley having a hard, smooth, cylindrical, peripheral surface which may freely slip within the belt without burning the pulley or the belt when the latter is loose, and said pulley having portions of its periphery without frictional contact with the belt when the latter is loose, and serving to aid in preventing the relative slipping of the pulley and the belt upon the tightening of the latter and said portions forming good frictional contact with the belt to prevent slipping, upon receiving foreign particles which would tend to cause the belt to slip on the hard surface of the pulley.



2. As a new article of manufacture, a pulley adapted for use in connection with a belt of varying tension, said pulley having a smooth, cylindrical, peripheral surface which may freely slip within the belt without burning the pulley or the belt when the latter is loose, and said pulley having an insert of soft material, the outer surface of which is without frictional contact with the belt when the latter is loose and serving to aid in preventing the relative slipping of the pulley and the belt upon the tightening of the latter.

3. As a new article of manufacture, a belt pulley having a hard, smooth, cylindrical, peripheral surface and inserts in said surface made of a material softer than the face and being slightly below the normal surface of the face and so arranged that when the belt is loose it may slip over the hard part of the face, but when tightened it will be drawn into frictional contact with the softer inserts.

4. As a new article of manufacture, a pulley in combination with a belt of varying tension, said pulley having a hard, smooth, cylindrical peripheral surface which may freely slip within the belt without burning the pulley or the belt when the latter is loose, and said pulley having portions of its peripheral surface made of a material softer than the said cylindrical peripheral surface and slightly below said surface, without frictional contact with the belt when the latter is loose, and serving to aid in preventing the relative slipping of the pulley and the belt upon the tightening of the latter and said portions forming good frictional contact with the belt to prevent slipping, upon receiving foreign particles which would tend to cause the belt to slip on the hard surface of the pulley.

1,169,358. MUSICAL PIPE INSTRUMENT. NIKLAS SCHILZONYI, Whittier, Cal. Filed Apr. 16, 1913. Serial No. 761,618. (Cl. 84—7.)



1. A mouth-blown musical pipe instrument comprising two tubes each having normally open and normally closed vents for a full chromatic scale of two or more octaves, said pipe being provided with parts upon which

the fingers press for controlling the vents; such finger-receiving parts for the normally open vents being located so close together that all the normally open vents of the same tube can be simultaneously closed by the one hand for which such tube is fitted, and such parts for the normally closed vents being grouped together so that said normally closed vents of such tube can be successively opened by shifting the finger of the hand while said normally open vents are closed by such hand.

2. A mouth-blown musical pipe instrument comprising two tubes each having normally open and normally closed vents for a full chromatic scale of two or more octaves, said pipe being provided with parts upon which the fingers press for controlling the vents; such parts for the normally open vents being located close together so that one hand can simultaneously close all the normally open vents of one tube, and such parts for the normally closed vents being located close together and comprising keys having finger pieces that are overlapped so that the normally closed vents can be successively played by shifting the finger of one hand over the finger pieces of such keys successively.

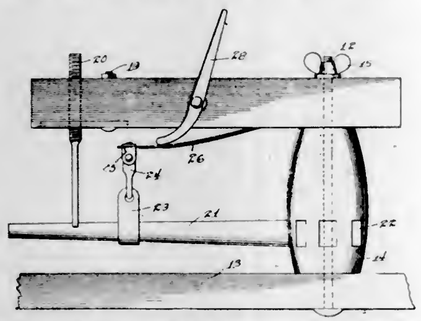
3. In a mouth-blown musical pipe instrument, two tubes each provided with vents and keys arranged to play a full chromatic scale of two or more octaves and to be played by one hand; a single mouth-piece fitted to said tubes and provided with two mouths; reeds for said mouths, and a rib between the reeds of said mouths to prevent escape of wind, so that said reeds may be properly vibrated.

4. A mouth-blown musical pipe instrument comprising a tube having normally open and normally closed vents arranged to produce a full chromatic scale of more than one octave so positioned and arranged and provided with keys substantially as set forth that all of the normally open vents can be simultaneously closed by one hand and the normally closed vents can be successively opened by the fingers of the same hand.

5. A mouth-blown musical pipe instrument comprising a tube having normally open and normally closed vents arranged to produce a full chromatic scale of more than one octave so positioned and arranged and provided with keys that all the normally open vents can be simultaneously closed by one hand and the normally closed vents can be successively opened by said hand; some of the keys being grouped and overlapped for successive playing by shifting the fingers substantially as set forth.

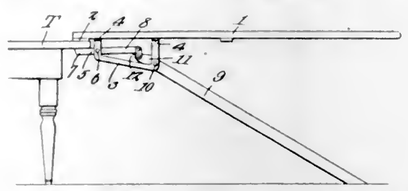
[Claims 6 to 24 not printed in the Gazette.]

1,169,359. SPOKE-GAGE. DAVID NEWTON SHAUM and JAMES H. KELLEY, St. James, Ark. Filed July 20, 1914. Serial No. 852,037. (Cl. 157—4.)



A spoke gage comprising a body portion, a leaf spring carried by said body portion, a clevis carried by the free end portion of said leaf spring, a lever carried by said body portion and engaging said leaf spring to move the leaf spring to a releasing position, a hook pivotally connected with said clevis, a spoke engaging hook carried by said first mentioned hook, and other spoke engaging means adjustably carried by said body portion.

1,169,360. IRONING-BOARD. HARRY AMAZON SILLS and LAFAYETTE SILLS, Montpelier, Ind. Filed July 9, 1915. Serial No. 38,925. (Cl. 68—10.)



1. In a device of the character described, a board, a depending frame secured thereto, a lever pivoted to the frame and having a short arm coöperable with the board for gripping a suport, said lever having a long arm, a leg pivoted to the frame and having a short arm projecting from its pivot, said short arm of the leg being operatively connected to said long arm.

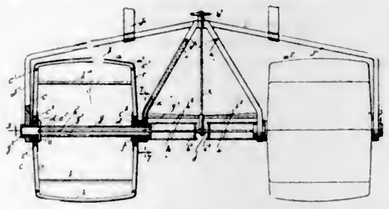
2. In a device of the character described, a board, a lever pivoted thereto and having an arm coöperable with the board to grip a support, said lever having a second arm, a leg pivotally connected to the board and having an arm projecting beyond its pivot, and a link connecting said arm of the leg and the second mentioned arm of said lever.

3. In a device of the character described, a board, a frame secured to and depending from said board, a lever pivoted to said frame and having a short arm coöperable with said board for gripping the support, said lever having a long arm, a leg pivoted to said frame and having a short arm projecting beyond its pivot, and a link connecting said short arm of the leg and the long arm of the lever.

4. In a device of the character described, a board, a pair of approximately U-shaped frames terminally secured to said board, and depending therefrom, and a lever and leg pivoted between opposite portions of said frames, the lever having an arm coöperating with the board for gripping a support, and said lever and leg having coöperating arms projecting within said frames.

5. In a device of the character described, a board, a pair of approximately U-shaped frames terminally secured to and depending from said board, a lever and a leg pivoted between opposite portions of said frames, the lever having a short arm coöperating with the board for gripping a support and having a long arm projecting within the frames, the leg having a short arm projecting within the frames, and links connecting said arm of the leg and the long arm of said lever.

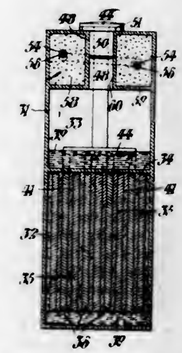
1,169,361. FLOATING DEVICE FOR FLYING-MACHINES. PAUL SIPTROTT, Brooklyn, N. Y. Filed Aug. 7, 1915. Serial No. 44,146. (Cl. 244—2.)



1. The combination with a flying machine, of two inflatable buoyant bodies, a hollow shaft extending centrally through each body, sliding members on the ends of each shaft connected with their respective bodies, movable members extending centrally through said shafts and connected to said sliding members and common means operable from the driver's seat and serving to operate said movable members so as to collapse or inflate both said bodies simultaneously.

2. The combination with a flying machine, of two inflatable buoyant bodies, a hollow shaft extending centrally through each body, sliding members on the ends of each shaft, connected with their respective bodies, racks extending centrally through said shafts, each rack being connected at one end to one of the sliding members of its own shaft and at the opposite end to the sliding member of the other shaft and a pinion operable from the driver's seat and meshing with both said racks so as to collapse or inflate both said bodies simultaneously.

1,169,362. ELECTRIC STORAGE BATTERY. JAMES MORTIMER SKINNER and VICTOR ROLES BOTTONE, Philadelphia, Pa. Filed Apr. 9, 1914. Serial No. 830,623. (Cl. 204—53.)



1. An electric storage battery including a rectangular casing; a vent device including an outer opening in the top wall of said casing, a conduit in communication with said opening extending horizontally in said casing, successively parallel with the sides thereof, and in communication with said gas compartment, formed of a flexible rubber tube; means holding said tube rigid, including a plastic compound, and a horizontal partition supporting said compound, above said gas compartment; the bottom of said conduit being inclined downwardly from said outer opening toward its inner end; and porous, splash preventing, material in said conduit; whereby gas arising in said gas chamber from electrolytic action in said casing may escape through the tortuous passageway beginning with the inner end of said conduit and terminating with said vent opening to the atmosphere, without permitting the escape of the electrolyte.

2. An electric storage battery including a casing; a vent device including an outer opening in the wall of said casing, a conduit in communication with said opening extending transversely in said casing, successively parallel with the sides thereof, and in communication with said gas compartment, formed of a tube; and means holding said tube rigid, including a plastic compound, and a horizontal partition supporting said compound, above said gas compartment; the bottom of said conduit being inclined downwardly from said outer opening toward its inner end; whereby gas arising in said gas chamber from electrolytic action in said casing may escape through the tortuous passageway beginning with the inner end of said conduit and terminating with said vent opening to the atmosphere, without permitting the escape of the electrolyte.

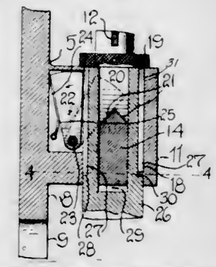
3. An electric storage battery including a casing; a vent device including an outer opening in the wall of said casing, a conduit in communication with said opening extending transversely in said casing, successively parallel with the sides thereof, and in communication with said gas compartment, formed of a tube; and means holding said tube rigid, including a plastic compound, above said gas compartment; the bottom of said conduit being inclined downwardly from said outer opening toward its inner end; whereby gas arising in said gas chamber from electrolytic action in said casing may escape through the tortuous passageway beginning with the inner end of said conduit and terminating with said vent opening to the atmosphere, without permitting the escape of the electrolyte.

4. An electric storage battery including a casing; a vent device including an outer opening in the top wall of said casing, a conduit in communication with said opening extending horizontally in said casing, successively parallel with the sides thereof, and in communication with said gas compartment, formed of a tube; and means holding said tube rigid, above said gas compartment; the bottom of said conduit being inclined downwardly from said outer opening toward its inner end; whereby gas arising in said gas chamber from electrolytic action in said casing may escape through the tortuous passageway beginning with the inner end of said conduit and terminating with said vent opening to the atmosphere, without permitting the escape of the electrolyte.

5. An electric storage battery including a casing; a vent device including an outer opening in the top wall of said casing, a conduit in communication with said opening extending horizontally in said casing, successively parallel with the sides thereof, and in communication with said gas compartment, formed of a tube; and means holding said tube rigid, above said gas compartment; whereby gas arising in said gas chamber from electrolytic action in said casing may escape through the tortuous passageway beginning with the inner end of said conduit and terminating with said vent opening to the atmosphere, without permitting the escape of the electrolyte.

Claims 6 to 8 not printed in the Gazette.]

1,169,363. LOCK-HINGE. TAYLOR E. SLEDD and JOSEPH T. DIXON, East Radford, Va. Filed Feb. 6, 1915. Serial No. 6,530. (Cl. 16—110.)



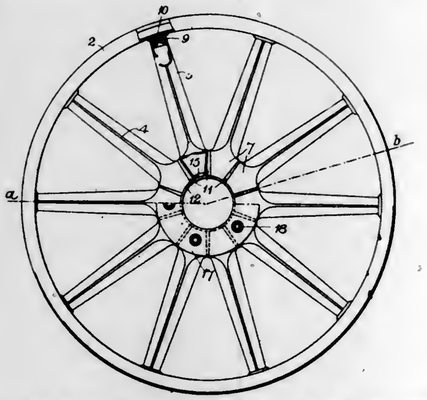
1. The combination with a hinged member having a rotatable pintle and a knuckle therefor, of a spring pressed locking dog coöperating with the pintle to hold the same against rotation and retain said member in either of two positions, a key adapted to be inserted into said knuckle to engage the dog and move the same to its released position, said key being adapted for rotation in the knuckle to move the hinged member from one position to the other, and means projecting into the bore of the knuckle coöperating with means formed upon the key shank to prevent the extraction of the shank before said member has completed its movement to one position or the other.

2. The combination with a hinged member having a rotatable pintle and a knuckle therefor, of a spring pressed locking dog coöperating with the pintle to hold the same against rotation and retain said member in either of two positions, a key adapted to be inserted into said knuckle to engage the dog and move the same to its released position, said key having a longitudinal bore to receive the pintle whereby, upon rotation of the key shank, said member is moved to one position or the other, and means in the bore of the knuckle coöperating with the key shank to prevent the extraction of the latter before the movement of said member to either position has been completed.

3. The combination with a hinged member having a rotatable pintle and a knuckle therefor, of a spring pressed locking dog mounted in the knuckle, said pintle having a longitudinal slot to normally receive said dog whereby

the pintle is locked against rotation, said knuckle being provided with a stud projecting into the bore thereof, and a key having a longitudinal bore to receive the pintle and provided with longitudinally extending peripheral grooves on opposite sides, the key shank being further provided with an annular groove with which the inner ends of said longitudinal grooves communicate, said key shank being adapted to be inserted into the knuckle and engaged with the locking dog to move the same to its released position and then turned to rotate the pintle and move the hinged member from one position to the other, said stud at the end of the turning movement being disposed in the annular groove of the key shank in line with one of the longitudinal grooves and acting to prevent the extraction of the key before the hinged member has been moved to one position or the other.

1,169,364. WHEEL FOR VEHICLES. WILLIAM STARLEY, Coventry, England. Filed May 25, 1914. Serial No. 840,832. (Cl. 21—69.)



1. In a wheel of the character described, the combination of a rim, a plurality of metal spokes secured thereto and having free wedge-shaped inner ends, a series of metal wedges forcibly driven into permanently tight positions between said inner ends of the spokes in a direction radiating from the center of the wheel, and a plain cylindrical metal liner forced into a permanently tight position within the open center of the wheel formed by the free inner extremities of the spokes and wedges substantially as described.

2. In a wheel of the character described, the combination of a rim, a plurality of hollow metal spokes secured thereto and having free wedge-shaped inner ends, notches formed in said inner ends of said spokes, a series of metal wedges forcibly driven into permanently tight positions between said inner ends of said spokes in a direction radiating from the center of the wheel, notches in said inner ends of said wedges, and a plain cylindrical metal liner forced into a permanently tight position within the open center of the wheel formed by the notched inner extremities of said spokes and wedges, said liner being subsequently expanded intermediate of its inner ends into engagement with said notches in the inner ends of the spokes and wedges, substantially as described.

3. In a wheel of the character described, the combination of a rim, a plurality of metal spokes secured thereto and having free wedge-shaped inner ends, a series of longitudinally corrugated metal wedges forcibly driven into permanently tight positions between said inner ends of the spokes in a direction radiating from the center of the wheel, and a plain cylindrical metal liner forced into a permanently tight position within the open center of the wheel formed by the free inner extremities of the spokes and wedges, substantially as described.

4. In a wheel of the character described, the combination of a rim, a plurality of hollow spokes secured thereto and having free wedge-shaped inner ends, notches formed in said inner ends of said spokes, a series of metal wedges forcibly driven into permanently tight positions between said inner ends of said spokes in a direction radiating from the center of the wheel, said wedges each comprising a piece of metal corrugated so as to gradually increase the effective thickness of the piece of metal toward one end, notches formed in the inner ends of said wedges, and a plain cylindrical metal liner forced into a permanently tight position within the open center of the wheel formed by the inner extremities of the spokes and wedges, said liner being subsequently expanded intermediate of its ends into engagement with said notches in the inner ends of the spokes and wedges, substantially as described.

1,169,365. MANUFACTURE OF REDUCTION PRODUCTS OF SULFUROUS ACIDS AND SALTS THEREOF. HEINRICH SPECKETER and EDUARD MARBURG, Griesheim-on-the-Main, Germany, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed Feb. 2, 1914. Serial No. 816,063. (Cl. 23—13.)

1. The process of reducing sulfurous acid compounds which comprises subjecting the same to the reducing action of spongy electrolytically prepared zinc.

2. The process of reducing sulfurous acid and its salts which comprises subjecting the same to the reducing action of spongy electrolytically prepared zinc to form zinc hydrosulfite, converting the zinc hydrosulfite into alkali hydrosulfite, and further reducing the alkali hydrosulfite in the form of alkali-hydrosulfite-formaldehyde by spongy zinc to form alkali formaldehyde-sulfoxylate.

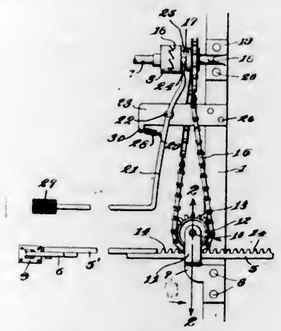
3. The process of producing hydrosulfurous acid compounds from sulfurous acid compounds which comprises reducing such sulfurous acid compounds by means of spongy zinc.

4. The process of producing alkali formaldehyde-sulfoxylate which comprises reducing an alkali-formaldehyde-bisulfite by means of spongy zinc electrolytically prepared.

5. The process of producing alkali formaldehyde-sulfoxylate which comprises reducing an alkali-formaldehyde hydrosulfite by means of spongy zinc electrolytically prepared.

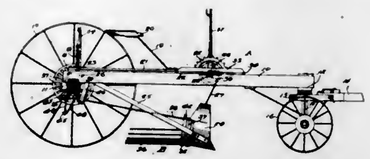
[Claims 6 and 7 not printed in the Gazette.]

1,169,366. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CYRUS A. STOUFFER, Dayton, Pa. Filed Mar. 29, 1913. Serial No. 757,646. (Cl. 74—53.)



A starting mechanism comprising in combination a frame, a main shaft rotatably mounted in the frame, a sprocket wheel carried by said shaft, a substantially U-shaped bracket secured to the frame, the inner wall of said bracket recessed adjacent one of the vertical arms to provide a guideway, a rotatable member supported between the vertical arms of the bracket, said member having a double row of teeth, one of which is in vertical alinement with the guideway, means operable in the guideway and engaging said row of teeth for imparting movement thereto, and flexible means connecting the second row of teeth with the said sprocket wheel.

1,169,367. POTATO-DIGGER. LOU V. THAYER, Jamestown, Pa. Filed July 7, 1915. Serial No. 38,533. (Cl. 55—112.)



1. A potato digging machine comprising a frame, hanger bars carried by said frame, a digging element carried by said bars, a shaking basket oscillatably connected with said digging element, a hanger bracket carried by said bars, a rocker shaft oscillatably carried by said hanger bracket, said shaker basket being rigidly mounted upon said rocker shaft, and means for rocking said shaft to cause said shaker basket to oscillate.

2. A potato digging machine comprising a frame, a digging element, a bearing carried by said digging element, a movably mounted support for said digging element, a bearing carried by said support, a rocker shaft oscillatably carried by said bearing, a shaking basket oscillatably carried by said digging element and rigidly mounted upon said rocker shaft, and actuating means for said rocker shaft to operate the same and cause said shaking basket to oscillate.

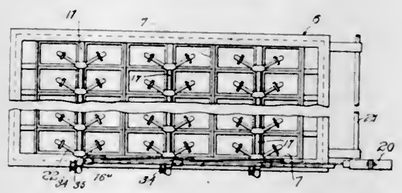
3. A potato digging machine comprising a frame, a digging element, an oscillatably mounted rocker shaft, a shaking basket oscillatably carried by said digging element and rigidly connected with said rocker shaft, and means for oscillating said rocker shaft to cause said shaking basket to oscillate.

4. A potato digging machine comprising a frame, a digging element, a shaker basket comprising a collar, teeth extending from said collar, a sleeve carried by said digging element and engaging the collar of said shaker basket to oscillatably connect the basket with said digging element, and means for oscillating said shaker basket.

5. A potato digger comprising a frame, a digging element, a shaker basket, a rocker shaft connected with said shaker basket and having one end portion bent to provide a crank, and actuating means connected with the crank of said crank shaft to move said crank shaft and cause said shaker basket to oscillate.

[Claims 6 to 8 not printed in the Gazette.]

1,169,368. APPLIANCE FOR ARTIFICIAL-ICE PLANTS. CLARENCE W. VOGT, Louisville, Ky. Filed Nov. 19, 1914. Serial No. 872,991. (Cl. 62—159.)



1. In an appliance of the class described, the combination of a header pipe, a series of branch pipes from said header pipe, a suction pipe, a pressure pipe and means operatively connected for establishing communication between the suction pipe and header pipe and cutting off communication between the pressure pipe and header pipe, and then establishing communication between the pressure pipe and header pipe and cutting off communication between the suction pipe and header pipe, substantially as described.

2. In an appliance of the class described, the combination of a header pipe, a series of branch pipes from said header pipe, means for alternately creating a suction and pressure in said header pipe, and means for controlling the degree of suction and pressure transmitted to the header pipe, substantially as described.

3. In an appliance of the class described, the combination of a header pipe, a series of branch pipes from said header pipe, means for alternately creating a suction and pressure in said header pipe, means for controlling the degree of suction and pressure transmitted to the header pipe, and means for moving said branch pipes independent of the header pipe, substantially as described.

4. In an appliance of the class described, the combination of a header pipe, a series of branch pipes from said header pipe, means for alternately creating a suction and pressure within said header pipe, means for controlling the degree of suction and pressure transmitted to the header pipe, means for moving said branch pipes independent of said header pipe, and means for cutting off communication through said branch pipe when so moved, substantially as described.

5. In an appliance of the class described, comprising a series of headers, a series of branch pipes for each header, a suction pipe, a pressure pipe, valvular means for controlling communication between said suction and pressure pipes and said header pipes, and means operated from a single source of power for actuating said valvular means, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,169,369. DRILL. WILLIAM HENRY WAKFER, South Norwood, England, assignor of one-half to Samuel Peck, Wallington, England. Filed Feb. 14, 1914. Serial No. 818,690. (Cl. 255—63.)

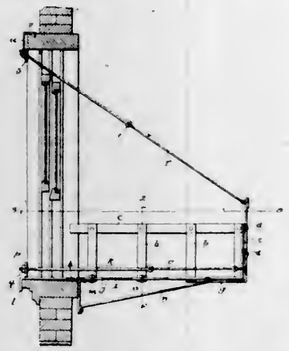


1. Drills, bits and the like for boring in earth, rock and the like, comprising in combination a tubular boring head, a plurality of longitudinally disposed projections on said head, a plurality of cutting edges formed on one end of said head and along the ends of said projections, a center bit, and a tapered shank on said bit adapted to be driven into the cutting end of said tubular head, said shank being formed with axially directed recesses adapted to communicate between the interior of the tubular head and the atmosphere when said bit is in position substantially as and for the purpose set forth.

2. Drills, bits and the like for boring in earth, rock and the like, comprising in combination a tubular boring head, a plurality of longitudinally disposed projections on said head, a plurality of cutting edges formed on one end of said head and along the ends of said projections, a center bit, a shank thereon adapted to be secured in the cutting end of said tubular head, said shank being formed with recesses extending into the faces of the bit, said recesses

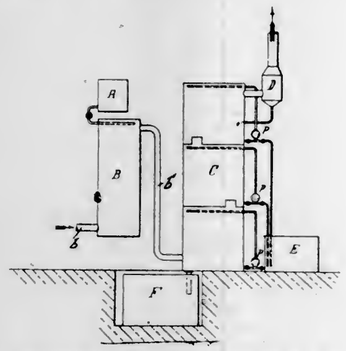
being adapted to communicate with the interior of the tubular head and the atmosphere when said bit is in position substantially as set forth.

1,169,370. WINDOW-SCAFFOLD. WADE WASHINGTON, Huntington, W. Va. Filed Oct. 7, 1915. Serial No. 54,502. (Cl. 20—87.)



The combination with a balcony and means thereon for engaging the window sill, of a suspending means embodying two pairs of stay rods connected at their outer ends to the outer end of the balcony, one pair extending to the upper part of the window frame and the other pair extending directly inwardly to the lower end of the window frame, a cross bar in engagement with the inner ends of each pair of stay rods and adapted to lie against the inner edges of the vertical members of the window frame, means for tensioning the stay rods, and hooks attached to the upper one of said bars for detachable engagement with the inwardly-projecting upper edge of the window frame.

1,169,371. METHOD OF DRYING AIR FOR METALLURGICAL USES. WILHELM WENSE, Griesheim-on-the-Main, Germany, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed June 13, 1912. Serial No. 703,540. (Cl. 34—24.)



1. The hereindescribed method of drying air for metallurgical uses, comprising exposing the air to the action of a strong solution of caustic alkali.

2. The hereindescribed method of drying air for metallurgical uses comprising preliminary treating the air to remove carbon dioxid therefrom and subsequently exposing the air to the action of a solution of caustic alkali.

3. The hereindescribed method of drying air for metallurgical uses comprising circulating the air through a chamber in which it is subjected to the action of a spray of a caustic alkali solution.

4. The hereindescribed method of drying air for metallurgical uses comprising circulating the air through a chamber in which it is subjected to the action of a spray of a caustic alkali solution, the air and spray moving through said chamber in opposite directions.

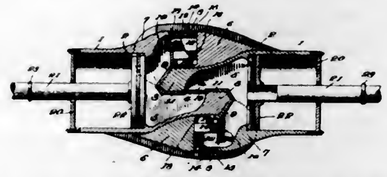
1,169,372. BUSHING FOR COVERED WIRES. HOWARD J. WHITE, San Francisco, Cal. Filed Feb. 25, 1914. Serial No. 820,960. (Cl. 247—1.)



1. A spring of size and shape to encircle a flexible nonmetallic conduit and to be held firmly thereon by spring pressure and having parts spaced apart sufficiently to extend on opposite sides of a hole in a box or the like, the terminal portions of said spring crossing each other and the ends being spaced apart a sufficient distance that, when pressed together, the spring is removed from the flexible conduit sufficiently to permit said conduit to pass freely therethrough.

2. A bushing consisting of a spring metal cylinder slit longitudinally and having a portion thereof partly cut away and bent outwardly to form a spring tongue, and, at an end thereof, an outwardly extending portion, which and the tongue can engage opposite sides of the edge of a hole through a box or the like through which the bushing is passed, said bushing having means extending beyond the slit and crossing each other to permit the bushing to be expanded by a pair of pincers applied to the ends of said means.

1,169,373. TRAIN-PIPE COUPLING. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Filed July 2, 1912, Serial No. 707,386. Renewed June 9, 1915. Serial No. 33,204. (Cl. 188—13.)



1. A train-pipe coupling comprising a coupler head having a port in its inner side, a longitudinally disposed cylinder at its rear end communicating with said port, a guide arm spaced laterally from the said port and containing a transverse cylinder, a piston in said transverse cylinder adapted to be engaged by the body of an opposed coupler head, a piston in the longitudinal rear cylinder, and a passage leading from said longitudinal rear cylinder to the transverse cylinder in the guide arm whereby the pressure fluid may expand between and against the two pistons to hold the heads in engagement and pass through the ports of the engaged heads.

2. A train-pipe coupling comprising a coupler head having a longitudinal fluid-pressure cylinder in its rear end, a body and a guiding arm extending forwardly from the said cylinder and spaced apart laterally, the body being provided with ports in its side facing the guiding arm, a piston working longitudinally in said cylinder and means for transmtting fluid pressure from said piston transversely through the guiding arm against the side of an opposed coupler head entering between said arm and the said body.

3. A train-pipe coupling comprising a coupler head having its outer surface inclined forwardly toward the central longitudinal line of the head and provided with a port in its inner wall, a guiding arm spaced laterally from the said body and connected with the said body by an integral transverse web, the inner surface of said arm being inclined rearwardly toward the central longitudinal line of the head whereby the engagement of the body and the guide arm of opposed heads will effect lateral movement of the heads, a longitudinally disposed cylinder formed at the rear end of the head, a transversely disposed cylinder formed in the guiding arm, means for conveying air from the said longitudinal cylinder through the body of the head and the port therein to an opposed coupler head, a piston slidably fitted in the transverse cylinder and having a projection adapted to extend through the inner end thereof to impinge against an opposed coupler head, a piston in said longitudinal cylinder and means for conveying air from the said longitudinal cylinder in advance of the piston therein into the transverse cylinder at the outer side of the piston therein.

4. A train-pipe coupling comprising a coupler head having a forwardly extending body and a forwardly extending guide arm spaced laterally from the said body, the space between the body and the guide arm being adapted to receive the forwardly projecting body of an opposed coupler head, a floating piston mounted transversely in the guide arm, a longitudinally disposed cylinder in the rear end of the coupler head, a hollow piston in said longitudinally disposed cylinder, and passages leading from said cylinder to the outer side of the floating piston and to ports located in the inner side of the body whereby pressure fluid may pass through opposed coupler heads and also act upon the floating piston to prevent lateral displacement of the coupler heads.

1,169,374. HANGER FOR TRAIN-PIPE COUPLINGS. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Original application filed June 25, 1912, Serial No. 705,818. Divided and this application filed Dec. 28, 1912, Serial No. 739,139. Renewed June 9, 1915. Serial No. 33,205. (Cl. 188—13.)

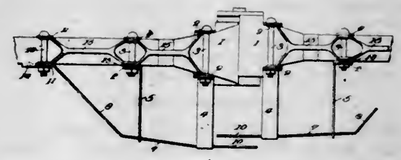
1. A hanger for train-pipe couplings comprising side bars having their upper ends adapted to be secured to the protruding webs of I-beams on the cars, braces having their upper ends adapted to engage and be secured to the flanges of said beams, a shelf carried by the lower ends of said side bars and said braces, a central brace extending upwardly and rearwardly from the shelf, and a cross bar secured to the upper end of said brace and to the flanges of the I-beams.

2. A hanger for train-pipe couplings comprising channeled side bars having their upper ends adapted to be secured to the protruding webs of I-beams on the cars, a shelf carried by the lower ends of said side bars, a pipe carrier fitted in said channeled side bars and extending between the same, and braces extending between and secured to the said side bars and the I-beams.

3. A hanger for train-pipe couplings comprising side bars, a shelf carried by the lower ends of said side bars, diverging straps extending from the upper ends of said side bars and having their uper extremities adapted to be secured to the protruding webs of I-beams on the cars, braces secured to said side bars and extending upwardly and rearwardly therefrom and having their upper portions diverging, flange-engaging members at the upper extremities of the said diverging portions of the braces, and clips secured to said flange-engaging members and adapted to engage the flanges of the I-beams.

4. A hanger for train-pipe couplings comprising side bars having their upper ends secured to the protruding ends of I-beams on the cars, a shelf carried by the lower ends of said side bars, braces extending upwardly and rearwardly from the side bars, members at the upper ends of said braces to engage the flanges at one side of the I-beams, clips secured to the ends of the braces and engaging the flanges at the opposite sides of the I-beams, a cross bar secured to and extending between the I-beams, and a central brace secured to the shelf and extending upwardly and rearwardly therefrom and secured to the said cross bar.

1,169,375. HANGER. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 25, 1913, Serial No. 744,214. Renewed June 9, 1915. Serial No. 33,206. (Cl. 188—13.)



1. A hanger for train-pipe couplings comprising a shelf adapted to extend under the train-pipe coupler head, a U-shaped frame passing under said shelf and extending upwardly at the sides of the same, an abutment plate disposed in rear of the U-shaped frame, and a brace rigid with the shelf and with the abutment plate.

2. A hanger for train-pipe couplings comprising a U-shaped frame, an abutment plate disposed in rear of said frame, and a longitudinal brace connected with the abutment plate and having its forward end formed into a shelf within the U-shaped frame.

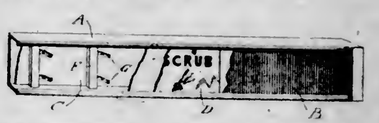
3. A hanger for train-pipe couplings comprising a U-shaped frame adapted to be secured to a car coupling, an abutment plate adapted to be secured to the draw bar in rear of the U-shaped frame, and a brace extending past the abutment plate and provided at its front end with a transversely extending projection fitting within the U-shaped frame and having a forwardly extending arm at one side, the rear portion of the brace being adapted to be secured to the draw bar.

4. A hanger for train-pipe couplings comprising a shelf, an abutment plate disposed in rear of the shelf and having a train-pipe-receiving opening in its central vertical line, means for maintaining the shelf and the abutment plate in fixed spaced relation and means for securing the shelf and the abutment plate below a car coupling.

5. A hanger for train-pipe couplings comprising a coupler head support, an abutment plate in rear of said support, suspending devices for said support and said abutment plate, and spacing bars fitted to and extending between said suspending devices.

[Claim 6 not printed in the Gazette.]

1,169,376. MOTION-PICTURE APPARATUS. SYDNEY B. AUSTIN, Baltimore, Md., assignor to Ad-Display Machine Corporation, a Corporation of Virginia. Filed Nov. 20, 1914. Serial No. 873,181. (Cl. 88—16.)



1. In a motion picture apparatus, a transparent screen member having opaque lines with clear spaces between, an

endless carrier, and composite pictures mounted on said endless carrier, said composite pictures moving in proximity to the screen member to expose the different parts of said composite pictures thorugh the clear spaces of the screen, substantially as described.

2. In combination a screen member, an endless carrier having composite pictures, and means for pressing the composite pictures against the screen member as the said pictures travel along the screen member, substantially as described.

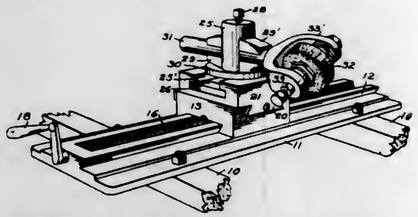
3. In combination a trough or box having a screen member at the front thereof, an endless carrier within the box having composite pictures thereon, said composite pictures moving in close proximity to the screen member to expose different parts thereof through the clear spaces of the screen, substantially as described.

4. In combination a rigid screen member, a flexible traveling member of transparent material having a composite picture thereon, and means for guiding the flexible member in its movement in close proximity to the screen member, substantially as described.

5. A motion picture apparatus comprising a relatively fixed screen member and a traveling composite picture member, with means for moving the latter to cause repetitions of the motion picture effect at different points along the screen, substantially as described.

[Claim 6 not printed in the Gazette.]

1,169,377. GRINDING-MACHINE. WALTER C. BARNHART, Seattle, Wash. Filed Mar. 8, 1915. Serial No. 13,048. (Cl. 51—4.)



1. In a machine for grinding a pulley face, the combination of a rotary abrasive-wheel, a holder therefor, a carrier for said holder, means to afford movements to said carrier in directions parallel and rectangular to the axis of the pulley to be ground, and means for adjustably securing said holder to the carrier in selected rotary positions with respect to an axis extending diametrically through said wheel; whereby the rotation of said pulley effects the rotation of the abrasive wheel at a peripheral speed greater than that of the pulley.

2. In a machine for grinding a pulley face, the combination with a pulley, and means to rotate the same, of a carriage movable parallel to the axis of said pulley, a block connected to said carriage and movable rectangular to the axis of the pulley, a tool post carried by said block, an abrasive wheel, a holder therefor, and means provided in said tool-post for supporting said holder in predetermined rotary positions to present said abrasive wheel in positions so that the latter will be rotated through the instrumentality of the pulley at a peripheral speed different from the peripheral speed of the latter to thereby cause the face of the pulley to be ground by the abrasive wheel when the latter is moved transversely thereof.

3. In a machine for grinding the face of a pulley, an abrasive wheel, a holder supporting said wheel for rotative movements on the wheel axis, means for positioning said wheel to have its axis inclined with respect to the axis of the pulley, and means whereby the wheel is adapted to be fed toward and parallel with the axis of the pulley and without varying the inclination of the wheel axis with respect to the pulley.

4. In a machine for grinding a pulley face, a bed-plate, adapted to be secured in fixed relation with respect to the axis of a pulley to be ground, a carriage mounted for travel on said bed-plate, means for propelling the carriage on said bed-plate, an abrasive wheel, a shaft therefor, a holder for said shaft, means for securing said holder to the carriage whereby the shaft is rotated about an axis intermediate its ends to present the wheel in skew relations to the pulley so as to be rotated by frictional contact with said pulley and be driven by the latter so as to grind the pulley-face when the carriage is caused to travel through the agency of the propelling means.

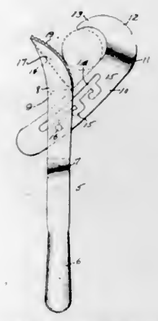
1,169,378. PROCESS OF MAKING CARTRIDGE-SHELLS. EDWARD C. BELL and RAYMOND S. CASE, Unionville, Conn. Filed Aug. 15, 1914. Serial No. 856,978. (Cl. 93—94.)

1. The process of making a cartridge tube that consists in forming the tube from paper by rolling several plies one upon another, drying out the tube, then treating the completed tube with a water-proofing material, and then treating both its outer and inner surfaces to a coating of paraffin.

2. The process of making a cartridge tube that consists in forming the tube from the proper material by rolling several plies one upon another, then drying out the tube, then treating the completed tube to a water-proofing material with coloring matter forming a part thereof, and then treating both the outer and inner surfaces of said tube to a thin coating of paraffin.

3. The process of making a cartridge tube that consists in forming the tube by rolling several plies of paper one upon another, then treating the outside of the tube with a water-proofing material, and then treating the whole tube to a coating of paraffin.

1,169,379. PIPE-WRENCH. PETER BROWN, Selleck, Wash. Filed Aug. 16, 1915. Serial No. 45,760. (Cl. 81—109.)

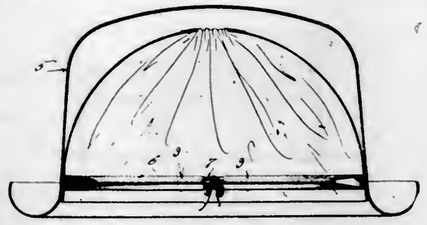


1. In a wrench, a shank, a handle grip formed upon one end of said shank, a slotted jaw enlarged upon the other end of said shank and provided with a slot, a slidable jaw also provided with a slot, and movable in the slot of the fixed jaw, bayonet slots being provided in said sliding jaw in communication with the first said slot thereof, and a pin transfixing the slots of both jaws and having adjustable engagement with said bayonet slots.

2. In a wrench, the combination of a shank, a fixed jaw formed in continuance of the shank and longitudinally slotted, the extremity of said jaw being recessed, a slotted jaw slidable in the slot of the fixed jaw, means carried by said fixed jaw to project through the slots of both of said jaws and to be in adjustable relation with the movable jaw, and a removable jaw portion formed with corrugations and adapted to be seated in said fixed jaw recess.

1,169,380. SELF-ADJUSTING HAT CONFORMER AND RETAINER. LEON COHEN, St. Louis, Mo. Filed Oct. 31, 1914. Serial No. 869,586. (Cl. 2—108.)

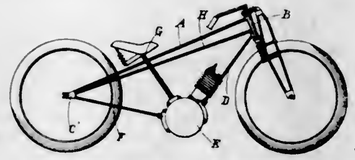
1. A self-attaching hat conformer and retainer, comprising a flexible member, an elastic cord arranged at one of the side margins of the flexible member, and an elastic strip, having pointed projections, at the margin of the flexible member opposite the elastic cord, said strip having its ends unattached to each other.



2. As a new article of manufacture, a self attaching hat conformer and retainer, comprising an open ended flexible tube, an elastic cord having greater length than the tube and inserted therethrough, a strip of spring material inserted through the tube, said strip having greater length than the tube so that its one end will extend beyond the tube for insertion into the opposite open end of the tube, pointed projections carried by the strip for engaging a hat crown for the retention of the device and means carried by the strip other than said projections for securing the strip to the flexible tube.

3. As a new article of manufacture, a self-attaching hat conformer and retainer, comprising an open ended flexible tube, a strip of spring material, arranged within the flexible tube, with its one end projecting beyond the tube, means for securing the tube against longitudinal movement relative to the strip, pointed projections carried by the strip, and an elastic cord for insertion through the tube, the ends of said strip being unattached to each other substantially as shown and for the purpose stated.

1,169,381. CONSTRUCTION OF MOTOR-CYCLES. FRANK WILLOUGHBY COTTON, Ledbury, England. Filed July 6, 1915. Serial No. 38,278. (Cl. 208—93.)



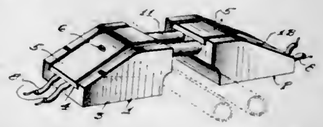
1. In a motor cycle frame, a steering head, a pair of top stays extending backward from the top of said steering head, a pair of bottom stays extending downward from the bottom of the steering head, chain stays, rear fork end lugs connecting said chain stays to said top stays, a seat pillar tube attached to said top stays, and central stays extending rearward from the bottom of said steering head, substantially as set forth.

2. In a motor cycle frame, a steering head, a pair of top stays extending backward from the top of said steering head, a pair of bottom stays extending downward from the bottom of the steering head, chain stays, rear fork end lugs connecting said chain stays to said top stays, a seat pillar tube attached to said top stays, and central stays extending from the bottom of said steering head to said rear fork end lugs substantially as set forth.

1,169,382. BRIDGE FOR ELECTRICAL CONDUCTORS. LIONEL W. CROMPTON and EARLE N. OLIVER, Tampa, Fla. Filed Dec. 18, 1914. Serial No. 877,935. (Cl. 247—4.)

1. A bridge for electrical conductors including a pair of relatively movable non-conductive bridge sections, means for fastening the sections immovable, and means for fastening the conductors thereto.

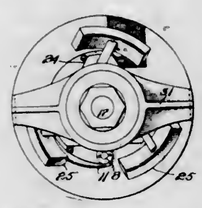
2. A bridge for electrical conductors including a pair of relatively movable bridge sections, each section being provided with a longitudinal groove, and means for fastening the electrical conductors acted upon within the grooves of the respective sections, as and for the purpose set forth.



3. A bridge for electrical conductors including a pair of relatively movable bridge sections, the said sections being adapted to be placed end to end, each section being provided with a longitudinal recess, a retaining plate fitting the recess of each section, each section being provided with a longitudinal groove open to the recess aforesaid, said plates being adapted to fasten the electrical conductors to the respective sections and within the respective grooves, as and for the purpose set forth.

4. A bridge for electrical conductors including a pair of relatively movable non-conductive bridge sections adapted to be placed end to end, the adjacent extremity of each section being provided with a recess, the respective recesses being alined, a non-conductive tubing arranged to extend from one to the other of the said sections, the respective tubing terminals fitting the recesses aforesaid, each bridge section being provided with a longitudinal recess and further provided with a longitudinal groove open to the recess and in line with the terminal recesses aforesaid, and a retaining plate carried by each bridge section, the respective plates being adapted to fit the respective longitudinal recesses to hold the electrical conductor acted upon within the respective longitudinal grooves and the said tubing immovable relatively to the respective sections, as and for the purpose set forth.

1,169,383. TIMER MECHANISM FOR GAS-ENGINE IGNITION. WILLARD E. DOW, Braintree, Mass. Filed Jan. 16, 1914. Serial No. 812,537. (Cl. 123—117.)



1. A spark timer, comprising a pair of contacts having provision for holding the same normally closed, one of said contacts being fixed and the other contact mounted for reciprocating movement toward and from said fixed contact, an engine driven element, a controller connected with said element for moving said reciprocating contact to contact opening position, said controller being constructed and arranged to vary the duration of opening of said contacts according to the position thereof, and a centrifugal device symmetrically disposed at angularly spaced apart points about said controller for adjusting the same to different positions to vary the duration of contact opening.

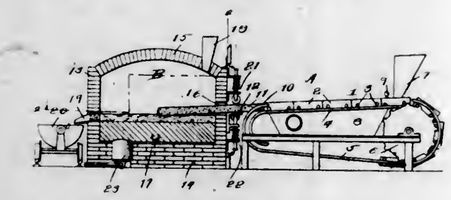
2. A spark timer, comprising a housing, an engine driven shaft extended therethrough, a pair of contacts normally closed, one thereof fixed to said housing and the other carried by an arcuate arm pivoted to said housing and curved about said shaft, a controller fitted to slide endwise on said shaft and formed to engage said arm to open said contacts for variable periods according to its position on said shaft, and a centrifugal device composed of a plurality of elements symmetrically disposed about said shaft and engaging said controller to slide it on said shaft.

3. A spark timer, comprising a pair of contacts, one thereof being mounted on a movable arm with provision to

be spring pressed against the other, an engine driven element, a controller collar slidable thereon and mounted to turn therewith, and a centrifugal device for sliding said collar, composed of a plurality of elements arranged to act on said collar at symmetrically spaced apart points about its circumference, said collar having alternating raised and depressed portions relatively varied in extent along its length adapted to engage said contact carrying arm, and having yielding provision acting against said centrifugal device for normally keeping it at one limit of its sliding movement.

4. A spark timer, comprising a pair of contacts, one carried by a swinging arm, and normally spring pressed against the other, an engine driven element, a collar mounted to turn with and slide endwise on, said engine driven element, and a centrifugal device composed of a plurality of elements arranged to act on said collar at symmetrically spaced apart point about its circumference, there being a spring acting on said collar in opposition to said centrifugal device, said collar having a plurality of alternating raised and recessed portions of relatively varied extent along its length, adapted to engage said contact carrying arm, said raised and recessed portions being separated by shoulders parallel with the collar at one side, and by shoulders inclined to the length of the collar at the other side.

1,169,384. APPARATUS FOR SINTERING AND SMELTING ORES. ARTHUR S. DWIGHT, New York, N. Y. Filed Mar. 31, 1910, Serial No. 552,579. Renewed June 12, 1915. Serial No. 33,809. (Cl. 204—64.)



1. In an apparatus of the class described the combination of a moving platform adapted for the conveying of a continuous layer of ore, means for sintering the ore on the platform into a continuous cake, and means for passing an electric current through a portion of the cake adjacent its advance end, substantially as set forth.

2. In an apparatus of the class described, the combination of a means for forming and continually advancing a continuous layer of ore, means for sintering the advancing layer into a continuous cake, and means for passing an electric current through a portion of the cake adjacent its advance end, substantially as set forth.

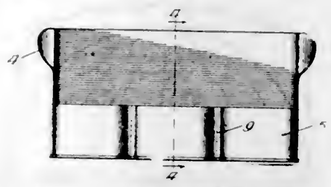
3. In an apparatus of the class described, the combination of a means for forming and continually advancing a continuous layer of ore, means for sintering the advancing layar into a continuous cake, means for connecting the cake intermediate its ends to one terminal of an electric generator, and an electrode connected to the other terminal of the said generator and separated from the advance end of the cake, substantially as set forth.

4. In an apparatus of the class described, the combination of a means for forming and continually advancing a continuous layer of ore, means for sintering the advancing layer into a continuous cake, a relatively stationary electrode so arranged relative to the advance end of the cake as to permit the formation of an electric connection between the end of the cake and the electrode, and means for passing an electric current through the cake intermediate its ends, substantially as set forth.

5. In an apparatus of the class described, the combination of a means for the continual formation of a continually advancing continuous cake of sintered ore, and stationarily located electrical terminals adapted to connect a part of the moving cake into an electric circuit, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

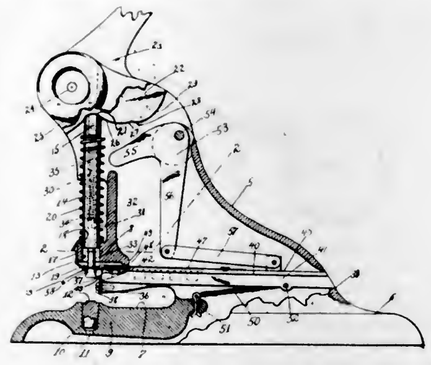
1,169,385. AUTOMOBILE-ROBE. ST. CLAIR EDE, Dubuque, Iowa, assignor to Edes Robe Tanning Co., Dubuque, Iowa, a Corporation of Iowa. Filed Feb. 8, 1915. Serial No. 6,885. (Cl. 2—80.)



1. In a robe of the character described, the combination of a body portion, a lower strip, and a series of webs between the body portion and the lower strip, said webs being separted from one another, and extending in a direction crosswise of the body portion and strip, said webs serving in the completed robe as the bottoms of box pockets, the lower strip serving as the sides and back of said pockets, and the body serving as the front of said pockets.

2. In a robe of the character described, the combination of a body portion, a lower strip, and a series of webs joining the lower strip and body portion and integral therewith, said webs being separated from one another and extending in a direction crosswise of the body portion and strip, and said webs serving, when the robe is formed, as the bottoms of box pockets, the lower strip serving as the sides and back of said pockets, the body serving as the front of said pockets, substantially as described.

1,169,386. EYELETING-MACHINE. ARTHUR FRANCIS ENGEL, New York, N. Y. Filed Jan. 22, 1915. Serial No. 3,687. (Cl. 218—15.)



1. An eyeleting machine comprising a body, eyelet fastening means provided upon the body, actuating means therefor, eyelet feeding means including a movable guide member adapted to contain a strip of eyelets for sliding movement therethrough, one end of the said guide member being adapted to be positioned normally in operative relation to the fastening means, means adapted to engage each foremost eyelet as it reaches its operative position automatically to secure the same against retrograde movement, and means operatively connected with the said actuating means for moving the said guide member into and out of operative position.

2. An eyeleting machine comprising a body, eyelet fastening means provided upon the body, actuating means therefor, eyelet feeding means including a movable guide member adapted to contain a strip of eyelets for sliding movement therethrough, one end of the said guide member being adapted to be positioned normally in operative relation to the fastening means, means adapted to engage each foremost eyelet as it reaches its operative position

automatically to secure the same against retrograde movement, means operatively connected with the said actuating means for moving the said guide member into and out of operative position, and means for severing each foremost eyelet from the strip at the completion of each movement of the guide member into inoperative position.

3. An eyeleting machine comprising a body, eyelet fastening means provided upon the body, actuating means therefor, eyelet feeding means including a movable guide member adapted to contain a strip of eyelets for sliding movement therethrough, one end of the said guide member being adapted to be positioned normally in operative relation to the fastening means, means adapted to engage each foremost eyelet as it reaches its operative position automatically to secure the same against retrograde movement, means operatively connected with the said actuating means for moving the guide member into inoperative position at each operation of the fastening means, and yieldable means for retracting the guide member.

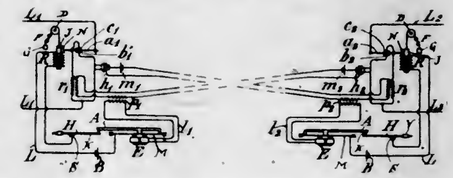
4. An eyeleting machine comprising a body including upper and lower jaws, an anvil carried by the lower jaw, a plunger mounted for reciprocation within the upper jaw and being adapted to engage the anvil, means for feeding the eyelets of a connected strip successively into operative position in the path of the plunger, a stationary cutting blade for severing the eyelets arranged adjacent to the path of the plunger, the said plunger having relatively separated power stages of movement when it is operating forcibly upon an eyelet and speed stages preceding the respective power stages, and an operating handle pivotally mounted upon the body and having an actuating cam surface adapted for operative engagement with the upper end of the plunger, the said cam surface including portions arranged substantially radially extending with respect to the handle pivot and other portions which are arranged more nearly concentric to the pivot, the latter surfaces being adapted for successive engagement with the plunger during the depression of the same by the cam surface at the stages when the eyelet is brought into operative relation with the cutting blade and then with the anvil, the former surfaces being adapted for engagement with the plunger during the other stages of its movement.

5. An eyeleting machine comprising a body including upper and lower jaws, an anvil carried by the lower jaw, a plunger mounted for reciprocation within the upper jaw and being adapted to engage the anvil, means for feeding the eyelets of a connected strip successively into operative position in the path of the plunger, a stationary cutting blade for severing the eyelets arranged adjacent to the path of the plunger, the said plunger having relatively separated power stages of movement when it is operating forcibly upon an eyelet and speed stages preceding the respective power stages, an operating handle pivotally mounted upon the body and having an actuating cam surface adapted for operative engagement with the upper end of the plunger, the said cam surface including portions arranged substantially radially extending with respect to the handle pivot and other portions which are arranged more nearly concentric to the pivot, the latter surfaces being adapted for successive engagement with the plunger during the depression of the same by the cam surface at the stages when the eyelet is brought into operative relation with the cutting blade and then with the anvil, the former surfaces being adapted for engagement with the plunger during the other stages of its movement, and resilient retracting means for the plunger adapted to maintain the upper end of the same in engagement with the said cam surface.

[Claims 6 to 14 not printed in the Gazette.]

1,169,387. AUTOMATIC SWITCH FOR TELEPHONE SYSTEMS. KNUT ERIC ERICSSON, Saltsjö-Storängen, and GUSTAF WILHELM DAHLSTRÖM, Stockholm, Sweden. Filed July 16, 1913. Serial No. 779,350. (Cl. 179—170.)

1. In a telephone repeating system in combination, two lines each adapted to either send or receive, a switch relay for each line, a line switch for each line, the relay acting upon the line switch and arranged to switch each line so as to allow the speaking currents to flow in the one or the other direction only, an auxiliary circuit for each line, a magnifier associated with each line for connecting each auxiliary circuit to the other line circuit so as to obtain magnified speaking currents in the said auxiliary circuits, and intermediate means between the switch relay of one line and the said auxiliary circuit of the other line for operating said relay of one line by the said magnified currents from the magnifier of the other station.



2. In a telephone repeating system in combination, two lines each adapted to either send or receive, a switch relay for each line, a line switch for each line, each relay acting upon a line switch and arranged to switch each line so as to allow the speaking currents to flow in one or the other direction only, an auxiliary circuit for each line, a magnifier for connecting each auxiliary circuit to the other line circuit so as to obtain magnified speaking currents in the said auxiliary circuit, and intermediate means between the switch relay of one line and the said auxiliary circuit of the other line for operating said relay of one line by the aid of the magnified currents from the magnifier of the other line, said auxiliary circuit being inductively connected to the relay.

3. In a telephone repeating system in combination, a receiving line, a sending line, an auxiliary circuit for each line, a magnifier for each line, a line switch for each line, means for operating said switch for one line by the magnifier for the other line, said line switch short circuiting the magnifier of its own line in one of its positions.

4. In a telephone repeating system in combination, a receiving line, a sending line, an auxiliary circuit for the sending line, a line switch for each line, a magnifier for each line, a switch relay, said relay being adapted to operate a line switch, means for operating said relay by the aid of the magnified currents of the other line, a transformer for said sending line, said line switch short circuiting the magnifier of the sending line in one position, and short circuiting the secondary of said transformer in its other position, the primary of said transformer being inserted in the magnifier circuit of the other line.

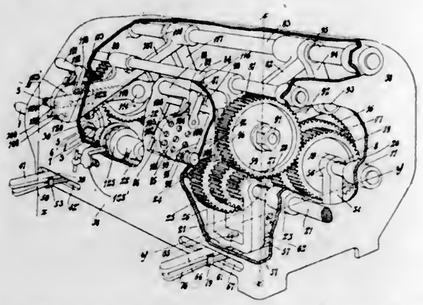
5. In a telephone repeating system in combination, a sending line, a receiving line, an auxiliary circuit for each line, a line switch for each line, a magnifier for each line, two transformers for each line, an interrupter for each line, and a switch relay for each line, the secondary of one of the said transformers being in circuit with said interrupter, each of said line switches connecting the secondary of the remaining transformer of the other line with the two branches of its own line, and said switch simultaneously short circuiting the magnifier of its own line.

1,169,388. CHANGE-SPEED MECHANISM. ALPHEUS FAY, Louisville, Ky. Filed Apr. 6, 1914. Serial No. 829,981. (Cl. 74—58.)

1. In change-speed mechanism, the combination of two sets of gears on parallel axes and an idler gear, each gear of a set being of a different diameter, and supporting means for said sets of gears and said idler gear whereby the gears of both sets are slidable axially, so that any gear of either set may be brought opposite any gear of the other set, and whereby the idler gear is adjustable axially and transversely and permitted to mesh with any two of all of the gears of the respective sets.

2. In change-speed mechanism, the combination of two sets of gears on parallel axes and an idler gear, each gear of a set being of a different diameter, and means for vary-

ing the relative positions of said gears and said idler gear, whereby the idler gear is meshed with any two of all of said gears of the respective sets.



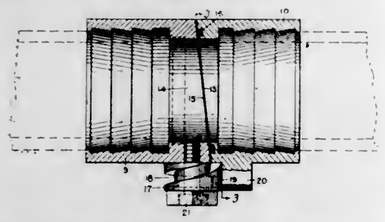
3. In change-speed machanism, the combination of two sets of gears on parallel axes, each gear of a set being of different diameter, and the gears of both sets being slidable axially, manipulative means for sliding the gears of the respective sets simultaneously in opposite directions, an idler gear, and supporting means for the idler gear whereby it may be adjusted to mesh with different combinations of the gears of the two sets when said gears are given different relative positions as moved by said manipulative means.

4. In change-speed mechanism, the combination of two sets of gears on parallel axes, each gear of a set being of different diameter, and the gears of both sets being slidable axially, manipulative means for sliding the gears of the respective sets simultaneously in opposite directions, an idler gear, and supporting means for said idler gear whereby said idler gear is adjustable axially and transversely, to mesh with different combinations of the gears of the two sets.

5. In change-speed mechanism, the combination of two parallel shafts, a plurality of gears on one of said shafts, each of different diameter, said gears being slidable along said shaft, a plurality of gears on the other shaft, each of different diameter, these gears being slidable along this shaft, manipulative means for sliding the gears on the respective shafts simultaneously in opposite directions, an idler gear, a yoke slidable parallel with said shafts, a link pivoted to slide with said yoke, an arm pivoted to said link, supporting means for said idler gear on said arm, and means for holding said arm stationary in different positions with respect to said yoke, as the arm swings on and with said link.

[Claims 6 to 17 not printed in the Gazette.]

1,169,389. HOSE-PIPE COUPLING. HERMAN FORSMAN, Fresno, Cal. Filed Mar. 10, 1915. Serial No. 13,362. (Cl. 137—28.)



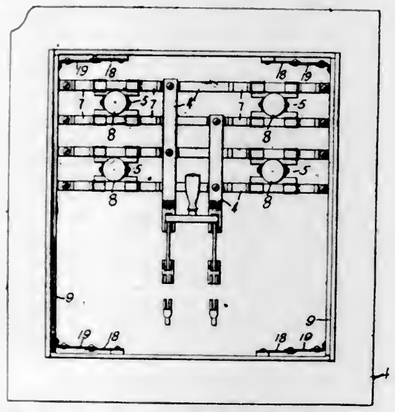
1. A coupling as characterized, comprising a female member having a transverse slot, the side edges of said slot overhanging; a male member having a dovetailed projection for coöperating with said slot, said projection being cam-shaped to engage the overhanging edges, for drawing said male and female members into closer relation; an abutment mounted on one of said members adjacent the slot therein; and a screw pivotally mounted on the other member, the thread of said screw operatively engaging said abutment.

2. A coupling as characterized, comprising a female member having a transverse slot, the side edges of said slot overhanging; a male member having a dovetailed projection for coöperating with said slot, said projection being cam-shaped to engage the overhanging edges, for drawing said male and female members into closer relation; an abutment mounted on one of said members adjacent the slot therein; and a screw pivotally mounted on the other member, the thread of said screw operatively engaging said abutment, said screw having a level section at the end of the inclined portion thereof for holding said abutment in locked relation to said screw.

3. A coupling as characterized, comprising a female member; a male member, the former member having a transverse slot the sides whereof are undercut, and the latter member having a dovetailed projection the sides whereof correspond with the sides of said slot, the engaged faces of said slot and said projection being inclined to the axes of said members; a pin mounted on one of said members and extending through the other of said members; and a screw pivotally mounted on the other member for engaging said pin, to move said members lengthwise of the inclined faces thereof.

4. A coupling as characterized, comprising a female member; a male member, the former member having a transverse slot the sides whereof are undercut, and the latter member having a dovetailed projection the sides whereof correspond with the sides of said slot, the engaged faces of said slot and said projection being inclined to the axes of said members; a pin mounted on one of said members and extending through the other of said members; and a screw pivotally mounted on the other member for engaging said pin, to move said members lengthwise of the inclined faces thereof, the thread of said screw having a sharp entrance section, an evenly-pitched inclined section adjacent said entrance section, and a level section adjacent said inclined section for engaging said pin, for moving said male and female members into engagement with diminishing speed.

1,169,390. PANEL-BOX. HARRISON J. L. FRANK and LEON H. FRANK, Wheeling, W. Va. Filed Feb. 20, 1912. Serial No. 678,877. (Cl. 175—282.)



1. The combination with a panel box, and a cover therefor, of a switch contained within the box and having a handle that projects through the cover, and a mounting for the cover which permits of moving the same to clear the switch handle and of then moving it to one side while still securing it to the box.

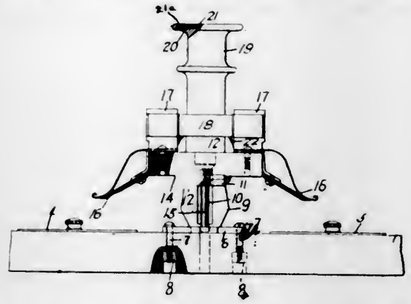
2. The combination with a panel box, and a cover therefor, of a switch contained within the box and having a handle that projects through the cover, a mounting for the cover which permits of moving the same to clear the switch handle and of then moving it to one side while still securing it to the box, and means carried by the cover for locking the switch handle in either its open or closed position.

3. The combination with a panel box, and a switch contained therein having a longitudinally movable operating handle, of a cover for the box having an aperture through which the handle projects when the cover is in closed position, and links that are pivoted to each other and are also respectively pivoted to the box and to the cover, thereby permitting the cover to move to clear the switch handle and then to move to one side of the box.

4. The combination with a panel box and a switch contained therein having a longitudinally movable operating handle, of a cover for the box having an aperture through which the handle projects when the cover is in closed position, pivotally-connected links that are also respectively pivoted to the box and to the cover, and a device carried by the cover for locking the switch in either its closed or its open position.

5. The combination with a panel box, and a switch contained therein having a longitudinally movable operating handle, the said handle being provided with slots corresponding respectively to the open and closed positions of the switch, of a cover for the box having an aperture through which the handle projects when the cover is in closed position, pivotally-connected links that are also respectively pivoted to the box and to the cover, and a locking device carried by the cover that is movable into and out of the slots in the switch handle.

1,169,391. ELECTRICAL SWITCH. HARRISON J. L. FRANK and LEON H. FRANK, Wheeling, W. Va. Filed Feb. 20, 1912. Serial No. 678,878. (Cl. 175—284.)



1. A switch comprising an insulating panel, spaced terminals mounted thereon having their contact faces substantially parallel to the plane of the panel, a post extending perpendicularly to the panel, a bridge piece mounted upon the post and movable longitudinally thereof with a snap action, and brush contact members carried by the bridge piece and adapted to engage the terminals.

2. A switch comprising an insulating panel, spaced terminals mounted thereon having their contact faces substantially parallel to the plane of the panel, a post extending perpendicularly to the panel, means removable from the front of the panel for detachably securing the post thereto, a bridge piece mounted upon the post and movable longitudinally thereof with a snap action, and brush contact members carried by the bridge piece and adapted to engage the terminals.

3. A switch comprising an insulating panel, spaced terminals mounted thereon having their contact faces substantially parallel to the plane of the panel, a post extending perpendicularly to the panel, a bridge piece mounted upon the post and movable longitudinally thereof with a snap action, brush contact members carried by the bridge piece and adapted to engage the terminals, and fuse terminals also carried by the bridge piece and connected to the contact members.

4. A switch comprising an insulating panel, spaced terminals mounted thereon, a base detachably secured to the panel, a bridge piece movable toward and away from the base, insulating blocks, clamping bolts that secure the insulating blocks to the bridge piece and extend through the base thereby serving as guides, and contact members carried by the insulating blocks and adapted to engage the terminals.

5. A switch comprising spaced terminals, a base, a bridge piece movable toward and away from the terminals, insulating blocks, clamping bolts that secure the insulating blocks to the bridge piece and extend through the base thereby serving as guides, and contact members carried by the insulating blocks and adapted to engage the terminals.

[Claims 6 to 20 not printed in the Gazette.]

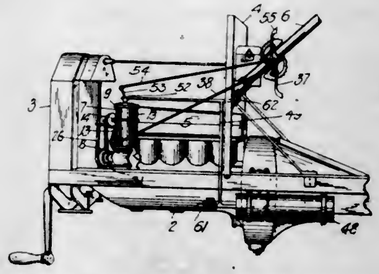
1,169,392. COMPOSITION OF COPPER ALLOYS AND PROCESS OF MANUFACTURING THE SAME. FRANCIS C. FRARY, Minneapolis, and STERLING TEMPLE, St. Paul, Minn. Filed Sept. 22, 1915. Serial No. 51,984. (Cl. 75—1.)

1. As a new article of manufacture, a hard alloy of copper with a metal of the alkaline earths.

2. As a new article of manufacture, a hard metallic alloy, containing a main body of copper, and in addition thereto containing a metal of the alkaline earths.

3. As a new article of manufacture, a hard alloy containing copper and calcium.

1,169,393. ENGINE-STARTER. HENRY GOEDDERTZ, Denver, Colo. Filed July 27, 1915. Serial No. 42,191. (Cl. 123—179.)



1. An engine starter of the character described, comprising a piston chamber, a rotary element, a piston in the piston chamber operatively connected with the said element, and mechanism to establish a driving connection between the said element and a rotary engine-shaft, including a primary transmission member, a clutch for the conjunctive movement of the said transmission member and the said element in one direction, a secondary transmission member having a driving connection with the said element, a bearing for the said secondary transmission-member, means for the adjustment of said bearing whereby to vary the distance between the axes of the members, and adjustable, normally inactive means for transmitting the movement of the primary transmission-member to the secondary transmission member.

2. An engine starter of the character described comprising a piston-chamber, a support for said chamber, bolts on said support, a head closing an end of the chamber, a rotary element, a piston in the piston chamber operatively connected with the said element, and mechanism to establish a driving connection between the said element and a rotary engine-shaft, including a primary transmission-member, a clutch for the conjunctive movement of the said transmission member and the rotary element in one direction, a secondary transmission member having a driving connection with the said element, a bearing for the said secondary transmission member, nuts on the said bolts adjustably securing said bearing, and ad-

justable, normally inactive means for transmitting the movement of the primary transmission member to the secondary transmission member.

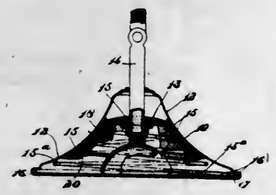
3. An engine starter of the character described, comprising a piston chamber, a rotary element, a piston in the piston chamber operatively connected with the said element, and mechanism to establish a driving connection between the said element and a rotary engine-shaft, comprising a primary rotary transmission member including a sheave, a clutch for the conjunctive movement of the said element and the said member in one direction, a secondary rotary transmission member in driving connection with the primary transmission-member, and including a sheave, a belt on the said sheaves, and an adjustable belt-tightener to tension the belt.

4. In an engine starter of the character described, a piston chamber, a rotary element, a piston in the piston chamber operatively connected with said element, mechanism for transmitting the movement of the said element in one direction to a rotary engine-shaft, and resilient means for determining the normal position of the said element, composed of a rod having a wrist-connection with the element, an oscillating abutment in which said rod has a sliding motion, and a spring coiled around the rod in engagement with the abutment.

5. In an engine starter of the character described, a piston chamber, a rotary element, a piston in the piston chamber operatively connected with said element, mechanism for transmitting the movement of the said element in one direction to a rotary engine-shaft, and resilient means for determining the normal position of the said element, composed of a rod having a wrist-connection with the element, an oscillatory abutment in which said rod has a sliding motion, and a spring coiled around the rod and adjustably secured to the said bearing at one of its ends.

[Claims 6 to 11 not printed in the Gazette.]

1,169,394. PORTABLE ELECTRIC LAMP. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed May 13, 1915. Serial No. 27,806. (Cl. 240—81.)



1. In a portable electric lamp, the combination with a thin sheet metal base, of a stiff metal washer located within said base and provided with an arm or extension, and a volute wire spring a median coil of which is attached to said arm or extension leaving other parts loose.

2. In a portable electric lamp, the combination with a thin sheet metal base, of a stiff metal washer located within said base and provided with an arm or extension, a volute wire spring a median coil of which is attached to said arm or extension leaving other parts loose, a sliding stem with which the upper end of said volute spring is connected so as to exert a lifting influence thereon, and a suction cup carried by said sliding stem.

1,169,395. SAFETY-RAZOR. PERCY R. GREIST and EMANUEL J. BOYLER, New Haven, Conn., assignors to The Greist Manufacturing Company, a Corporation of Connecticut. Filed May 31, 1913. Serial No. 770,906. (Cl. 30—12.)

1. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, of a guard and blade-holding member adapted to fit beneath said head, a blade mounted at the top or outer face of said guard and blade-holding member, the latter being provided with a spring shank having a catch adapted to be detachably engaged with the said handle member so as to maintain said guard and blade-holding member in place, with the said blade clamped between the said head and the said guard and blade-holding member, the said shank having a steadying knuckle or member engaging said handle member at a point between said catch and the said guard and blade-holding member.



2. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, of a detachable guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided at its ends with overhanging blade-holding clips and with a thumb or finger notch at its rear edge, and being also provided with a spring shank having a catch adapted to engage said handle member to maintain said guard and blade-holding member in place, said guard and blade-holding member being provided at its front edge with stops for positioning the edge portion of said blade.

3. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, and with two slots or openings, of a guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided at its ends with blade-holding clips and with a thumb or finger notch at its rear edge, and being also provided with a spring shank having a catch adapted to engage said handle member at one of said slots or openings to maintain said guard and blade-holding member in place, said shank having a steadying member engaging said handle member at the other of said slots or openings.

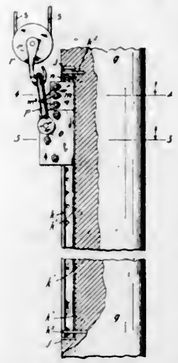
4. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, and with two slots or openings, of a guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided with a spring shank having a catch adapted to engage said handle member at one of said slots or openings to maintain said guard and blade-holding member in place, said shank having a steadying member engaging said handle member at the other of said slots or openings.

1,169,396. SPUD LOWERING AND HOISTING MEANS FOR DREDGES. HUGH T. GROVES and D. ROY GROVES, Portland, Oreg. Filed Apr. 29, 1914. Serial No. 835,297. (Cl. 37—18.)

1. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop on the rail at the top, in combination, with hoisting means including a cable fastened to said traveler.

2. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop adjustably fastened on the rail at the top, in combination with hoisting means including a cable fastened to said traveler.

3. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop on the rail at the top, an auxiliary stop, in combination with hoisting means including a cable fastened to said traveler.



4. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop adjustably fastened on the rail at the top, an auxiliary stop fastened on the rail above said other stop, in combination with hoisting means including a cable fastened to said traveler.

5. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, thrust-plates affixed in the ends of the groove, a traveler mounted on said rail, a stop on the rail at the top, in combination with hoisting means including a cable fastened to said traveler.

[Claims 6 to 9 not printed in the Gazette.]

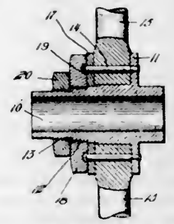
1,169,397. PROCESS FOR THE OXIDATION OF SMOOTH IRON SURFACES. BERARDO GUERINI, Brescia, Italy. Filed May 10, 1915. Serial No. 27,095. (Cl. 148—41.)

1. A process for oxidation of iron surfaces consisting in the immersion of iron objects in a bath containing sodium picrate and an excess of hydrate of sodium.

2. A process for effecting the surface oxidation of iron or steel consisting in immersing the articles to be treated in a bath containing a solution of an alkaline picrate and gradually raising the temperature of the bath while the articles are exposed to the action of the same.

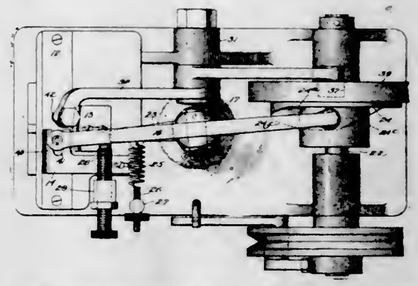
3. A process for effecting the surface oxidation of iron or steel consisting in immersing the articles to be treated in a bath containing a solution of an alkaline picrate with alkali in excess and gradually raising the temperature of the bath while the articles are exposed to the action of the same.

1,169,398. WHEEL-HUB. WINFIELD S. HANCOCK, Washington, D. C., assignor of three-fifths to Augusta V. Mitchell, Washington, D. C. Filed Mar. 24, 1913. Serial No. 756,471. (Cl. 21—31.)



In a wheel hub, the combination of a body member having a radially extending flange formed integrally therewith, a plurality of axially extending pins secured to said flange, spokes engaging said pins, an axially movable plate having openings therein through which said pins may extend to coöperate with said flange to hold the spokes against movement, a nut having threaded engagement with said body member and adapted to secure said plate in position, said nut having a groove in the side thereof adjacent said plate for receiving the ends of said pins, and means for securing said nut against rotation.

1,169,399. EYELETING-MACHINE. FRANK L. HARMON, Beverly, Mass. Filed Apr. 20, 1914. Serial No. 833,014. (Cl. 218—15.)



1. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a set equipped with a spindle, movably mounted in coöperative relation with said clenching surface, a punch movably mounted to punch holes in the material against said punch block and also for lateral movement to bring it with the punched hole at one limit thereof in line with said set and at the other limit thereof laterally away therefrom the distance the eyelets are to be spaced, and mechanism for imparting said movements of the punch and set.

2. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a punch mounted for movement against and away from said punch block and also for lateral movement while engaged in the material, the extent of such lateral movement being such as to position the punched hole over the clenching surface at the limit thereof, means for imparting said movements, a set with a spindle projecting therefrom mounted to clench the eyelets in the punched holes against said clenching surface, and operating means for said set, the mounting and operating means of said punch being such as to move it alternately under said set and laterally away therefrom.

3. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a punch mounted and equipped with operating means for punching holes in the material against said punch block and also for lateral movement while engaged in the material to position the punched hole over said clenching surface, and a set with a spindle projecting therefrom separately mounted and equipped with operating means for moving it toward and from said clenching surface to clench the eyelets in the punched holes against said clenching surface.

4. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a set movably mounted to coöperate with said clenching surface, a punch movably mounted to operate against said punch block for punching holes in the material and also for lateral movement to feed the material, said lateral punch movement being such as to bring it and the punched hole

justable, normally inactive means for transmitting the movement of the primary transmission member to the secondary transmission member.

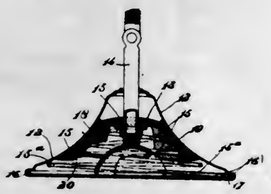
3. An engine starter of the character described, comprising a piston chamber, a rotary element, a piston in the piston chamber operatively connected with the said element, and mechanism to establish a driving connection between the said element and a rotary engine-shaft, comprising a primary rotary transmission member including a sheave, a clutch for the conjunctive movement of the said element and the said member in one direction, a secondary rotary transmission member in driving connection with the primary transmission-member, and including a sheave, a belt on the said sheaves, and an adjustable belt-tightener to tension the belt.

4. In an engine starter of the character described, a piston chamber, a rotary element, a piston in the piston chamber operatively connected with said element, mechanism for transmitting the movement of the said element in one direction to a rotary engine-shaft, and resilient means for determining the normal position of the said element, composed of a rod having a wrist-connection with the element, an oscillating abutment in which said rod has a sliding motion, and a spring coiled around the rod in engagement with the abutment.

5. In an engine starter of the character described, a piston chamber, a rotary element, a piston in the piston chamber operatively connected with said element, mechanism for transmitting the movement of the said element in one direction to a rotary engine-shaft, and resilient means for determining the normal position of the said element, composed of a rod having a wrist-connection with the element, an oscillatory abutment in which said rod has a sliding motion, and a spring coiled around the rod and adjustably secured to the said bearing at one of its ends.

[Claims 6 to 11 not printed in the Gazette.]

1,169,394. PORTABLE ELECTRIC LAMP. HUBERT M. GREIST, New Haven, Conn., assignor to The Greist Manufacturing Company, a Corporation of Connecticut. Filed May 13, 1915. Serial No. 27,806. (Cl. 240—81.)



1. In a portable electric lamp, the combination with a thin sheet metal base, of a stiff metal washer located within said base and provided with an arm or extension, and a volute wire spring a median coil of which is attached to said arm or extension leaving other parts loose.

2. In a portable electric lamp, the combination wtih a thin sheet metal base, of a stiff metal washer located within said base and provided with an arm or extension, a volute wire spring a median coil of which is attached to said arm or extension leaving other parts loose, a sliding stem with which the upper end of said volute spring is connected so as to exert a lifting influence thereon, and a suction cup carried by said sliding stem.

1,169,395. SAFETY-RAZOR. PERCY R. GREIST and EMANUEL J. BOYLER, New Haven, Conn., assignors to The Greist Manufacturing Company, a Corporation of Connecticut. Filed May 31, 1913. Serial No. 770,906. (Cl. 30—12.)

1. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, of a guard and blade-holding member adapted to fit beneath said head, a blade mounted at the top or outer face of said guard and blade-holding member, the latter being provided with a spring shank having a catch adapted to be detachably engaged with the said handle member so as to maintain said guard and blade-holding member in place, with the said blade clamped between the said head and the said guard and blade-holding member, the said shank having a steadying knuckle or member engaging said handle member at a point between said catch and the said guard and blade-holding member.



2. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, of a detachable guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided at its ends with overhanging blade-holding clips and with a thumb or finger notch at its rear edge, and being also provided with a spring shank having a catch adapted to engage said handle member to maintain said guard and blade-holding member in place, said guard and blade-holding member being provided at its front edge with stops for positioning the edge portion of said blade.

3. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, and with two slots or openings, of a guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided at its ends with blade-holding clips and with a thumb or finger notch at its rear edge, and being also provided with a spring shank having a catch adapted to engage said handle member at one of said slots or openings to maintain said guard and blade-holding member in place, said shank having a steadying member engaging said handle member at the other of said slots or openings.

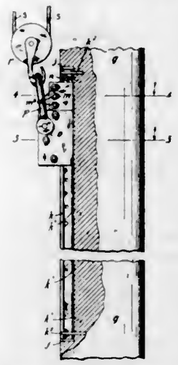
4. In a safety razor, the combination with a handle member provided with a head portion extending at an angle from said handle member, and with two slots or openings, of a guard and blade-holding member adapted to fit beneath said head, said guard and blade-holding member being provided with a spring shank having a catch adapted to engage said handle member at one of said slots or openings to maintain said guard and blade-holding member in place, said shank having a steadying member engaging said handle member at the other of said slots or openings.

1,169,396. SPUD LOWERING AND HOISTING MEANS FOR DREDGES. HUGH T. GROVES and D. ROY GROVES, Portland, Oreg. Filed Apr. 29, 1914. Serial No. 835,297. (Cl. 37—18.)

1. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop on the rail at the top, in combination, with hoisting means including a cable fastened to said traveler.

2. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop adjustably fastened on the rail at the top, in combination with hoisting means including a cable fastened to said traveler.

3. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop on the rail at the top, an auxiliary stop, in combination with hoisting means including a cable fastened to said traveler.



4. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, a traveler mounted on said rail, a stop adjustably fastened on the rail at the top, an auxiliary stop fastened on the rail above said other stop, in combination with hoisting means including a cable fastened to said traveler.

5. In a device of the character described, a spud provided with a longitudinal groove, a rail secured in such groove, thrust-plates affixed in the ends of the groove, a traveler mounted on said rail, a stop on the rail at the top, in combination with hoisting means including a cable fastened to said traveler.

[Claims 6 to 9 not printed in the Gazette.]

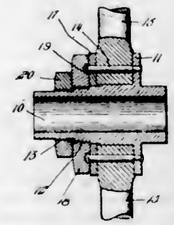
1,169,397. PROCESS FOR THE OXIDATION OF SMOOTH IRON SURFACES. BERARDO GUERINI, Brescia, Italy. Filed May 10, 1915. Serial No. 27,095. (Cl. 148—41.)

1. A process for oxidation of iron surfaces consisting in the immersion of iron objects in a bath containing sodium picrate and an excess of hydrate of sodium.

2. A process for effecting the surface oxidation of iron or steel consisting in immersing the articles to be treated in a bath containing a solution of an alkaline picrate and gradually raising the temperature of the bath while the articles are exposed to the action of the same.

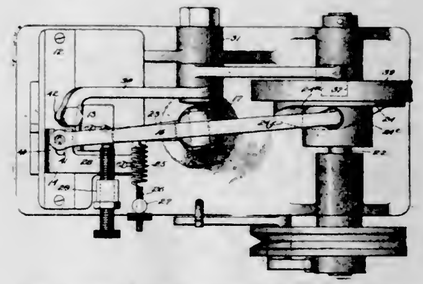
3. A process for effecting the surface oxidation of iron or steel consisting in immersing the articles to be treated in a bath containing a solution of an alkaline picrate with alkali in excess and gradually raising the temperature of the bath while the articles are exposed to the action of the same.

1,169,398. WHEEL-HUB. WINFIELD S. HANCOCK, Washington, D. C., assignor of three-fifths to Augusta V. Mitchell, Washington, D. C. Filed Mar. 24, 1913. Serial No. 756,471. (Cl. 21—31.)



In a wheel hub, the combination of a body member having a radially extending flange formed integrally therewith, a plurality of axially extending pins secured to said flange, spokes engaging said pins, an axially movable plate having openings therein through which said pins may extend to coöperate with said flange to hold the spokes against movement, a nut having threaded engagement with said body member and adapted to secure said plate in position, said nut having a groove in the side thereof adjacent said plate for receiving the ends of said pins, and means for securing said nut against rotation.

1,169,399. EYELETING-MACHINE. FRANK L. HARMON, Beverly, Mass. Filed Apr. 20, 1914. Serial No. 833,014. (Cl. 218—15.)



1. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a set equipped with a spindle, movably mounted in coöperative relation with said clenching surface, a punch movably mounted to punch holes in the material against said punch block and also for lateral movement to bring it with the punched hole at one limit thereof in line with said set and at the other limit thereof laterally away therefrom the distance the eyelets are to be spaced, and mechanism for imparting said movements of the punch and set.

2. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a punch mounted for movement against and away from said punch block and also for lateral movement while engaged in the material, the extent of such lateral movement being such as to position the punched hole over the clenching surface at the limit thereof, means for imparting said movements, a set with a spindle projecting therefrom mounted to clench the eyelets in the punched holes against said clenching surface, and operating means for said set, the mounting and operating means of said punch being such as to move it alternately under said set and laterally away therefrom.

3. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a punch mounted and equipped with operating means for punching holes in the material against said punch block and also for lateral movement while engaged in the material to position the punched hole over said clenching surface, and a set with a spindle projecting therefrom separately mounted and equipped with operating means for moving it toward and from said clenching surface to clench the eyelets in the punched holes against said clenching surface.

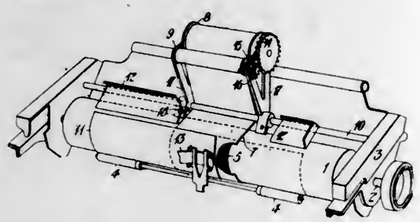
4. An eyeleting machine, comprising a material support having a substantially continuous, smooth, and plane surface, a portion of which constitutes a punch block and with a stationary clenching surface formed thereon, a set movably mounted to coöperate with said clenching surface, a punch movably mounted to operate against said punch block for punching holes in the material and also for lateral movement to feed the material, said lateral punch movement being such as to bring it and the punched hole

at one limit in line with the set and at its other limit a lateral distance therefrom corresponding to the spacing of the eyelets, mechanism for imparting said movements of the punch and set, and means for varying one of the limits of punching movement to vary the eyelet spacing.

5. An eyeleting machine, comprising a material support equipped with a punch block and a clenching surface, a punch and a set having lever mountings side by side for cooperation with said punch block and clenching surface respectively, the lever carrying said punch being swiveled to move the punch laterally, means for operating the set, mechanism for operating the punch to punch the holes and also to move the punch laterally to bring it at one limit of movement while engaged in the work in line with the set, separate yielding means for returning the punch to its other limit of movement, and an adjustable stop for varying the last named limit of movement to determine the punching position and vary the spacing of the eyelets.

[Claims 6 and 7 not printed in the Gazette.]

1,169,400. TYPE-WRITING MACHINE. JOSEPH C. HARVEY, Chicago, Ill., assignor to John Thomas Underwood, Brooklyn, N. Y. Filed Feb. 1, 1913. Serial No. 745,573. (Cl. 197—132.)



1. The combination with a platen, a platen frame and a sheet-positioning tablet mounted on said frame and adjustable along the delivery portion of the platen, of a mount secured to said tablet, and a tally strip spool carried on said mount; whereby said mount and spool are adjustable along the platen together with said sheet-positioning tablet.

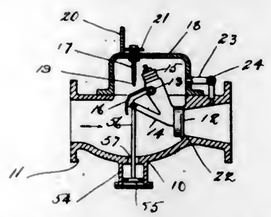
2. The combination with a platen frame and a rotary platen mounted thereon, said frame comprising a paper shelf behind the platen, of a sheet-positioning tablet supported on the frame at the delivery side of and above the platen, in position to gage the leading edge of a work-sheet extending around the platen and over the printing point, a mount secured to said tablet, and a tally strip spool carried on said mount, whereby said tablet and spool are adjustable together lengthwise of the platen in a single operation.

3. The combination with a platen frame and a rotary platen mounted thereon, said frame comprising a paper shelf behind the platen, of a sheet-positioning tablet supported on the frame at the delivery side of and above the platen, in position to gage the leading edge of a work-sheet extending around the platen and over the printing point, a mount secured to said tablet, and tally strip receiving and supply spools carried on said mount, said tablet and mount adjustable together in a single operation along the platen to adjust the tally strip to different positions along the platen.

4. A typewriter combining a platen, a sheet-positioning tablet above the platen to coöperate with a work-sheet at the delivery side of the platen, a mount secured to the tablet, and a tally strip spool carried on said mount, said tablet and spool being adjustable together in a single operation along the platen in a letter-spacing direction.

1,169,401. VALVE. JOHN LAWRENCE HODGSON, London, England. Filed Sept. 16, 1912. Serial No. 720,683. (Cl. 50—14.)

1. A cut-out valve comprising a casing, a closure pivotally supported therein normally in open position, an adjustable stop for controlling the extent of opening of said closure, whereby the latter may be moved to its closed position by the flow at any predetermined rate therethrough.



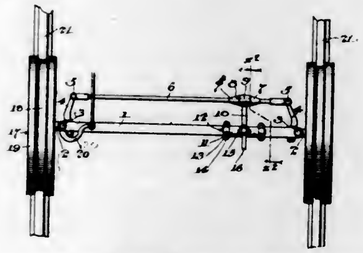
2. A cut-out valve comprising a casing, a closure pivotally supported therein normally in open position, an adjustable stop for controlling the extent of opening of said closure, whereby the latter may be moved to its closed position by the flow at any predetermined rate therethrough and means for controlling the movement of said closure to its seat.

3. A cut-out valve comprising a casing, a closure pivotally supported therein to normally hang in open position, an adjustable stop for controlling and determining the extent of opening of said closure whereby the latter may be moved to its closed position by the flow at any predetermined rate therethrough, and a dash pot for controlling the movement of said closure to its seat.

4. A cut-out valve comprising a casing, a closure pivotally supported therein normally in open position, an adjustable stop for controlling the extent of opening of said closure, whereby the latter may be moved to its closed position by the flow at any predetermined rate therethrough, and a by-pass connecting both sides of the closure seat for equalizing the pressures on both sides to permit said closure to open after having been closed.

5. A cut-out valve comprising a casing, a closure pivotally supported therein to normally hang in open position, an adjustable stop for controlling and determining the extent of opening of said closure whereby the latter may be moved to its closed position by the flow at any predetermined rate therethrough, a dash-pot for controlling the movement of said closure to its seat, and a by-pass connecting both sides of the closure seat for equalizing the pressures on both sides to permit said closure to open after having been closed.

1,169,402. STEERING-BAR LOCK. WILLIAM F. HOLT, Redlands, Cal. Filed June 7, 1915. Serial No. 32,496. (Cl. 21—192.)

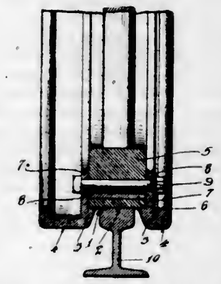


1. In combination, a main axle, stub axles pivoted to the main axle and provided with wheels, steering arms for the stub axles, a steering bar connecting the steering arms to one another and provided with a notch, a lever designed to releasably engage the notch to prevent endwise movement of the steering bar, and means to move the lever.

2. In combination, a main axle, stub axles pivoted to the main axle and provided with wheels, steering arms for the stub axles, a steering bar connecting the steering arms to one another, spaced apart outwardly tapered collars on the steering bar, a lever having a fork designed to engage the steering bar between the collars, and means to operate the lever to disengage the fork from the steering bar.

3. In combination, a main axle, stub axles pivoted to the main axle and provided with wheels, steering arms for the stub axles, a steering bar connecting the steering arms to one another, collars fixed on the steering bar, a bell crank pivoted to the axle and provided with a fork designed to engage the axle between the collars and bear against said collars to prevent endwise movement of the steering bar, and an operating rod pivoted to the bell crank lever.

1,169,403. VEHICLE-WHEEL. WILLIAM F. HOLT, Redlands, Cal. Original application filed June 7, 1915, Serial No. 32,495. Divided and this application filed Sept. 20, 1915. Serial No. 51,584. (Cl. 105—143.)



A vehicle wheel comprising a felly, a rim formed in three sections, the side sections having radially extending flanges and laterally extending flanges and inwardly extending annular flanges embracing the felly, the intermediate section forming a rail-engaging tread and seated at its edges against the side sections, and bolts passing through said inwardly extending annular flanges and through the felly to hold said sections and felly together.

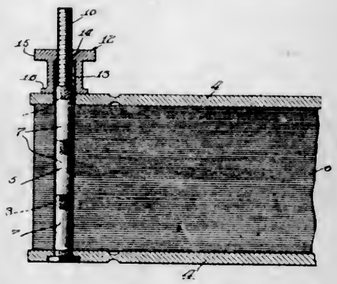
1,169,404. BLUE-GRAY TO GREEN-GRAY VAT DYES. MAX HENRY ISLER, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Apr. 24, 1914. Serial No. 834,148. (Cl. 8—1.)

1. The new coloring matters of the anthracene series which are derivatives of a dibenzanthrone and which consist when dry of dark violet-black powders, are insoluble in water and in dilute acids and alkalis, yield dull violet solutions in concentrated sulfuric acid, are soluble in nitrobenzene giving blue-green to red-violet solutions and in quinolin yielding green-blue to black-blue solutions and dissolve in alkaline hydrosulfite solution yielding blue vats which dye cotton from blue-gray to green-gray shades of excellent fastness against the action of chlorin.

2. The new coloring matter of the anthracene series which is a derivative of a dibenzanthrone and which consists when dry of a dark powder, is insoluble in water and in dilute acids and alkalis, yields a dull violet solution in concentrated sulfuric acid, a red violet solution in nitrobenzene, a black-blue solution in quinolin, and dissolves in alkaline hydrosulfite giving a blue vat which dyes cotton bluish-gray shades of excellent fastness against the action of chlorin.

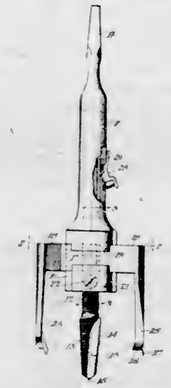
1,169,405. COMPRESSION DEVICE FOR POST-BINDERS. GEORGE H. JENKINS, Oak Park, and SHEA SMITH, Chicago, Ill. Filed June 9, 1914. Serial No. 843,968. (Cl. 129—12.)

1. The combination with a post binder, of an exteriorly threaded extension member having a diameter no greater than the binder post, and capable of interlocking with said post to constitute in effect an extension thereof, and a compression member having an axial bore therethrough, the outer end portion of which is threaded to engage with said extension member, and the remaining portion of which is enlarged to not engage the post, whereby said compression member, when rotated, may advance a portion of its body over a portion of the post, substantially as described.



2. The combination with a post binder, of an extension member having a diameter no greater than the binder post, and capable of interlocking with said post to constitute in effect an extension thereof, and a compression member arranged to maintain a threaded engagement with said extension member, and when moved thereupon to advance a portion of its body over a portion of the post, substantially as described.

1,169,406. BORING-BIT. FRANK KONIECZKA, Chicago, Ill. Filed May 14, 1914. Serial No. 838,505. (Cl. 145—121.)

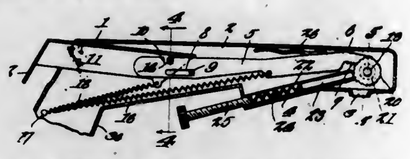


In a boring bit, a shank, a threaded stem on which said shank feeds, an arm associated with said shank, a cutter carried by said arm revolving about said stem at a substantial distance therefrom, and a boring and anchoring member associated with said stem having a plurality of cutting edges at the end thereof for cutting and loosening material in advance of said member, said boring and anchoring member being provided with screw cutting threads for feeding it downwardly and preventing its withdrawal, and a plurality of channels leading from said cutting edges and extending across said threads affording passages for the material cut and loosened by said cutting edges.

1,169,407. GAS-LIGHTER. CHARLES F. LARSEN, Portland, Oreg. Filed Oct. 2, 1915. Serial No. 53,796. (Cl. 67—6.1.)

1. In a device of the class described, a support having the general outline of a pistol and embodying a barrel and an angularly disposed grip, the barrel being pro-

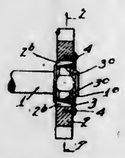
vided adjacent its muzzle with an outlet; an abrasive wheel journaled in the barrel adjacent the outlet; a pinion mounted to move with the abrasive wheel; a rack bar housed in the barrel and meshing with the pinion; means accessible from the outside of the support and at the breech of the barrel for actuating the rack bar; a pyrophoric element slidable in the barrel and coacting with the abrasive wheel; spring means for advancing the pyrophoric element; and mechanism carried by the barrel and located below a portion of the barrel, for adjusting the spring means.



2. In a device of the class described, a support; an abrasive wheel journaled for rotation in the support; a pinion assembled with the abrasive wheel; a pyrophoric element pressed against the abrasive wheel; a rack bar meshing into the pinion; a guide wherewith the rack bar engages directly; a means for retracting the rack bar; and an actuating member slidable in the support, the actuating member and the rack bar being provided with interengaging elements which conct to advance the rack bar, the actuating member being beveled on its forward end to engage with the guide when the actuating member is advanced, thereby to elevate the actuating member and to break the engagement between said interengaging elements and to permit a retraction of the rack bar by the said means.

3. In a device of the class described, a support; an abrasive wheel journaled therein; a pyrophoric element pressed against the abrasive wheel; a pinion mounted to move with the abrasive wheel; a rack bar engaged with the pinion, the rack bar being provided with a slot, and having a notch in its edge; a pin projecting from the support and received slidably in the slot; and an actuating member slidable in the support and embodying a projection adapted to engage the notch, the forward edge of the actuating member being beveled to engage with the pin, thereby to disengage the projection from the notch; and spring means for retracting the rack bar and the actuating member.

1,169,408. SECURING DEVICE FOR PINIONS. EDWARD A. LARSON, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Apr. 24, 1914. Serial No. 834,059. (Cl. 74—8.)



1. In combination with a shaft having a noncircular terminal, a device for mounting thereon for rotation thereby consisting of a disk-like body member having a noncircular central aperture adapted to receive the noncircular terminal of the shaft, and a securing device lodged against one face of the body member, and having tangs extending into the aperture of the latter alongside the shaft terminal, and having their ends inturned for engagement with the shaft substantially within the thickness of said body member.

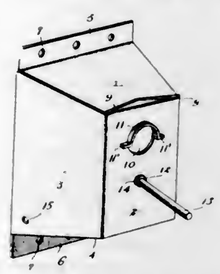
2. In combination with a shaft having a noncircular terminal, a device for mounting on the shaft comprising a disk-like body having a noncircular central aperture adapted to receive the noncircular shaft terminal and be rotatively engaged thereby, and a securing device having a noncircular aperture adapted to be similarly engaged by the shaft terminal, said securing device being lodged on the face of the body member lapping thereon surrounding the aperture, and having tangs extending into said aperture alongside the shaft terminal therein and adapted for engagement with the shaft terminal against longitudinal displacement.

3. A device to be mounted on a shaft for rotation thereby, comprising a body member having a noncircular central aperture and a retaining device of annular form encompassing the aperture on the outer side of the body member, and having tangs extending from the margin of its central aperture into the aperture of said body, the margins of the aperture of the body being notched to accommodate the tangs, the tangs having their ends inturned approximately at the plane of the opposite face of the body member for engagement with the shaft.

4. A device for mounting on a shaft for rotation thereby, comprising a body member having a noncircular central aperture and a retaining device consisting of an annular disk having spring tangs struck out of its aperture and bent to substantially right-angular position with respect to the disk, the ends of the tangs being bent inwardly to form pawl ends for engaging the shaft.

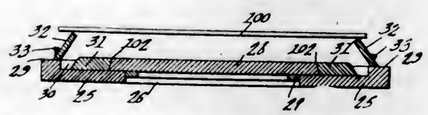
5. In combination with a non-circular shaft, the terminal having a tapered outer end and a groove back of the end, a member to be rotated by the shaft having a non-circular aperture for receiving the shaft terminal and a securing device abutting on the face of said member and comprising a spring tang extending into the aperture of said member and engaging the groove of the shaft.

1,169,409. BIRD-HOUSE. LOUIS T. LARSON, Stanton, Iowa. Filed Feb. 18, 1915. Serial No. 9,014. (Cl. 119—23.)



A bird house comprising a box open at the rear and having its top and bottom relatively inclined, flanges integral with the top and bottom of said box, a front wall provided with a circular opening, means formed by bending outward a portion of the edge of said circular opening terminating with laterally projecting ends for excluding water from the circular opening, and means in the shape of an inverted V, integral at the top thereof for shedding water to both sides of the front wall.

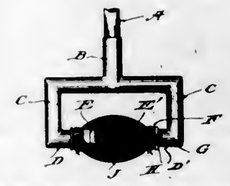
1,169,410. COVER-MOLD. WILLIAM G. LERCH, Easton, Pa. Original application filed Feb. 25, 1915, Serial No. 10,594. Divided and this application filed May 13, 1915. Serial No. 27,905. (Cl. 25—130.)



1. A cover mold including a base having an opening; a core comprising a central section having a flange engaged within the opening, and end sections coöperating with the central section, the central section being in the form of a blunted triangle, and the transverse edges of the end sections being inclined to coöperate with the transverse edges of the central section.

2. In a cover mold, a bed having an opening; a core supported by the bed and provided with a projection received in the opening; and end plates detachably assembled with the bed, the end plates constituting straight edge guides, and the extremities of the end plates being free and exposed.

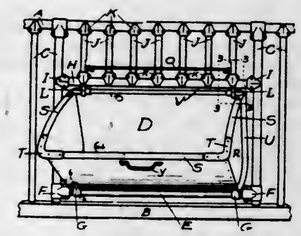
1,169,411. VAPOR-LAMP. JAMES E. LOCKWOOD, Peoria, Ill., assignor to Edward Seitz, Peoria, Ill. Filed Sept. 16, 1912. Serial No. 720,450. (Cl. 67—50.)



1. A vapor lamp burner-structure consisting of a vapor conduit divided into two branches or arms each branch or arm having a place of discharge, one facing the other, the structure being otherwise imperforate, the places of discharge of each branch being covered by a perforate diaphragm.

2. A vapor lamp comprising a vapor conduit terminating in two imperforate branches placed in opposed positions and each provided with an opening, one facing the other, a perforate diaphragm covering each opening, a fabric mantle carried at one end on one of the branches, and a removable portion slidably engaging the other branch and carrying the opposite end of the mantle.

1,169,412. MANGER FOR ANIMAL-PENS. WILLIAM LOUDEN, Fairfield, Iowa. Filed Aug. 3, 1914. Serial No. 854,709. (Cl. 119—63.)



1. In mangers for animal pens comprising a series of upright posts, two of the posts being spaced apart to provide an opening for the manger, a horizontally disposed member having its ends abutting against and clamped to the posts at the sides of the opening, a manger having castings secured to its under side and pivotally mounted on the horizontal member, whereby the manger may be tilted inwardly and outwardly in the opening, and means to limit the tilting movement of the manger.

2. In mangers for animal pens comprising a series of upright posts, two of the posts being spaced apart to provide an opening for the manger, a horizontally disposed member having its ends abutting against and clamped to the posts at the sides of the opening, a manger having castings secured to its under side and pivotally mounted on the horizontal member, whereby the manger may be tilted inwardly and outwardly in the opening, and a latch secured to the frame of the pen above the manger and adapted to catch on its upper edges and limit the movement of the manger.

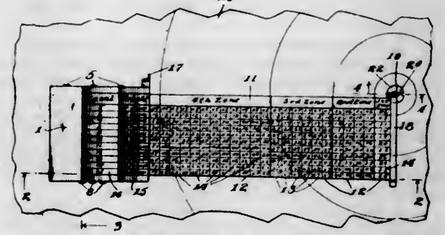
3. In a device of the character described, a panel having vertically disposed posts set a distance apart, upper and lower horizontally disposed members connected to said posts so as to leave an opening in the panel, the upper members having one or more vertically disposed holes therein, vertically disposed tubular members connected thereto immediately over said holes, a manger pivoted to the lower member and adapted to tilt inwardly and outwardly in the opening, and gravity pins loosely inserted in said holes and extending upwardly into said tubular members and adapted to drop between the inner edges of the manger and limit the movement of the manger.

4. In a device of the character described, the combination with a tilting manger of a horizontally disposed member located above the manger and having two vertically disposed holes therein, vertically disposed tubular members connected thereto immediately above the holes and having slots in the adjacent sides, gravity pins inserted in said holes having lateral lugs with eyes extending out through said slots and means connecting the eyes together whereby the pins may be raised to clear the edges of the manger or allowed to drop and come in contact with the edges of the manger.

5. In a device of the character described, the combination with a tilting manger of a horizontally disposed member located above the manger and having two vertically disposed holes therein, vertically disposed tubular members connected thereto immediately above the holes and having slots in the adjacent sides, gravity pins inserted in said holes having lateral lugs with eyes extending out through said slots and a rod connecting the eyes together whereby the pins may be raised to clear the edges of the manger or allowed to drop and come in contact with the edges of the manger.

[Claims 6 and 7 not printed in the Gazette.]

1,169,413. PARCEL-POST CALCULATOR. JAMES LYONS, New York, N. Y. Filed Feb. 14, 1913. Serial No. 748,502. (Cl. 33—75.)



1. In a device of the class described, the combination of a tape divided into zones and provided with coöperative indicia proportioned to the zones, a housing for the tape bearing coöperating indicia for completing a calculation upon the displaying of the required zone, and a map engaged by the outer end of the tape, the map bearing cooperating indicia representing zones across which the housing is adapted to be moved for the displaying of the tape on the map.

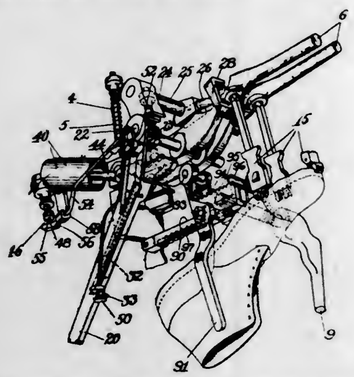
2. In a device of the class described, the combination of a tape bearing indicia, a housing therefor bearing cooperating indicia, and a map also bearing coöperating indicia, said tape being connected to the housing and to the map and movable relative to each.

3. In a device of the class described, the combination of a tape bearing indicia, a housing therefor bearing cooperating indicia, and a map also bearing coöperating indicia, said tape being connected at one end portion within the housing, and at the other end portion to the map.

1,169,414. PULLING-OVER MACHINE. RONALD F. McFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 26, 1911. Serial No. 635,448. (Cl. 12—4.)

1. A pulling-over machine having, in combination, a plurality of grippers for seizing an upper, power driven mechanism for actuating the grippers to stretch the upper, a spring in which the power is stored and from which it

is transmitted to a gripper, a rock-shaft having an arm arranged to govern the movement of a gripper in the direction for stretching the upper, and a hand lever connected with said rock-shaft and operating therethrough to govern the rate at which the gripper shall be moved by the power in pulling the upper.



2. A pulling-over machine having, in combination, a plurality of grippers for seizing an upper, power driven mechanism for actuating the grippers to stretch the upper, a spring in which the power is stored and from which it is transmitted to a gripper, a rock-shaft having an arm arranged to hold the gripper down, a hand lever connected with the rock-shaft, a ratchet, and a pawl on the hand lever normally out of contact with the ratchet and arranged to be set by the hand on said lever to lock the gripper before the movement initiated by the power is completed.

3. A pulling-over machine having, in combination, a plurality of grippers for seizing an upper, power driven mechanism for actuating the gripping to stretch the upper, yielding means tensioned by the power and reacting to move the grippers, updraw levers through which the grippers are so moved, means moving with the updraw levers in the upper stretching stroke, and a manual control therefor including locking means arranged to be set during the pulling movement to arrest that movement.

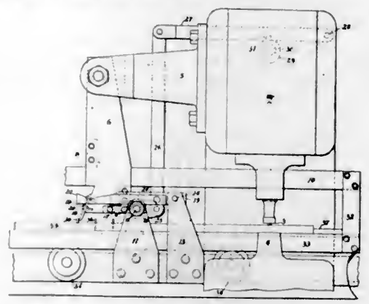
4. A pulling-over machine having, in combination, a plurality of grippers for seizing an upper, power driven mechanism for actuating the grippers to stretch the upper, yielding means tensioned by the power and reacting to move the grippers, updraw levers through which the grippers are so moved, a rock-shaft 25 having an arm 26 with a broad end overlying a plurality of the updraw levers, and arm being mounted in the rock-shaft to turn about its own axis to equalize action on updraw levers connected with opposed side grippers, a segment toothed arms 24 on the rock-shaft, and a hand lever 20 engaging the toothed arm and arranged to enable the operator by a pull on the control lever to govern or arrest the power driven movement of the updraw levers in stretching the upper.

5. A pulling-over machine having, in combination, a plurality of pairs of grippers and automatic mechanism for causing the grippers yieldingly to pull simultaneously and to hold under tension the upper at opposite sides of the last, and a single hand lever arranged at the side of the machine for engagement and control by the operator during the operation of the automatic mechanism for governing positively the extent of the movement of a plurality of the grippers.

[Claims 6 to 63 not printed in the Gazette.]

1,169,415. SPACING DEVICE FOR PUNCHING-MACHINES. JAMES W. R. MCLAUGHLIN, Canonsburg, Pa. Filed Apr. 7, 1915. Serial No. 19,834. (Cl. 164—117.)

1. In spacing apparatus for punching machine, the combination of a carriage or carrying device adapted to carry a templet, a locking bar secured to the carriage, a swinging arm having locking devices adapted to engage with the locking bar to prevent the forward movement of the same, a device for imparting movement to the swinging arm to release the locking bar, stop fingers, and devices for operating the stop fingers.



2. In spacing apparatus for punching machine, the combination of a carriage or carrying device, a locking bar secured thereto, a swinging arm having an opening through which the locking bar passes and having locking blocks adapted to engage with the locking bar, devices for imparting motion to the swinging arm, stop fingers, and devices for operating the stop fingers.

3. In spacing apparatus for punching machine, the combination of a carrying device or carriage, a locking bar secured thereto, a swinging arm adapted to lock the bar, devices for intermittently imparting motion to the swinging arm, a device for intermittently locking the rearward movement of the swinging arm, and a device for raising and lowering the stop fingers.

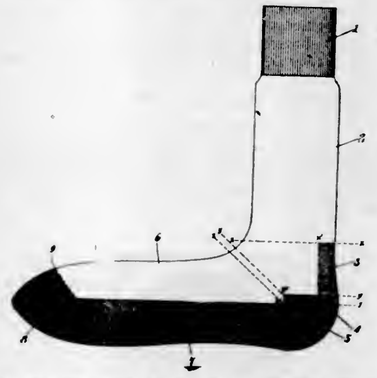
4. In spacing apparatus for punching machine, the combination of a carrying device or carriage, a locking bar secured thereto, a swinging arm having a locking block above and below the bar adapted to lock the same, a cam adapted to retract the swinging arm, a locking dog adapted to prevent the rearward movement of the swinging arm, a device adapted to operate the locking dog, stop fingers adapted to engage with a templet, and a cam for operating the stop fingers.

5. In spacing apparatus for punching machine, the combination of a carrying device, a locking bar, a swinging arm adapted to lock the bar, a dog for locking the swinging arm, movable stop fingers, a cam for releasing the locking dog, a cam for releasing the locking bar, and operating mechanism.

1,169,416. SEAMLESS HOSIERY AND PROCESS OF KNITTING THE SAME. JOHN WYCKOFF METTLER, East Millstone, and WILLIAM E. SMITH, Milltown, N. J., assignors to Kilbourn Manufacturing Corporation, New Brunswick, N. J., a Corporation of New Jersey. Filed July 2, 1914. Serial No. 848,532. (Cl. 66—4.)

1. A seamless circular knit stocking having the leg and top of the foot knit with a fine thread and tight stitch as a fine fabric, the rear portion of the leg above the heel having a narrow vertically disposed reinforced portion comprising a plurality of consecutive courses, all the reinforced stitches in each course being knit with a continuous thread, and being restricted to a small number of stitches at the extreme rear portion of the leg, less than half the number of stitches in the first course of the heel, whereby the high spliced portion protects the extreme back of the stocking leg, but does not show materially at either side of the stocking when worn with low shoes.

2. A seamless circular knit stocking having the leg and top of the foot knit with a fine thread and tight stitch as a fine fabric, the rear portion of the leg above the heel having a narrow vertically disposed reinforced portion comprising a plurality of consecutive courses, all the reinforced stitches in each course being knit with a continuous thread, and being restricted to a small number of stitches at the extreme rear portion of the leg, less than half the number of stitches in the first course of the heel, whereby a narrow high spliced portion is provided to protect the back only of the stocking without showing materially at the sides thereof, and whereby a heavier fabric is provided in the leg below said narrow high splice in a position where it is not materially visible, to which the heel is united.



3. A seamless stocking having the leg and top of the foot knit with a fine thread and tight stitch as a fine fabric, the rear portion of the leg above the heel having a reinforced portion comprising a plurality of courses, the reinforced stitches in each course being considerably less in number than the first course of the heel, to form a narrow high spliced portion, extending only a short distance around the sides of the ankle portion, the back of the leg of the stocking having an auxiliary reinforced portion between the said narrow high spliced portion and the heel comprising a plurality of courses, the reinforced stitches of which correspond substantially in number and location with the first course of the heel, said auxiliary high spliced portion being reinforced with a thread of different material from that used to reinforce the narrow high spliced portion, and the heel being formed by narrowing and widening and being a heavier fabric than the leg portion, whereby the auxiliary high spliced portion provides a heavier fabric at the rear of the leg of the stocking immediately above the heel to which the heel is united.

4. A seamless stocking having the leg and top of the foot knit with a fine thread and tight stitch as a fine fabric, the rear portion of the leg above the heel having a reinforced portion comprising a plurality of courses, the reinforced stitches in each course being considerably less in number than the first course of the heel, to form a narrow high spliced portion, extending only a short distance around the sides of the ankle portion, the back of the leg of the stocking having an auxiliary reinforced portion between the said narrow high spliced portion and the heel comprising a plurality of courses, the reinforced stitches of which correspond substantially in number and location with the first course of the heel, said auxiliary high spliced portion being reinforced with a thread of the same material as that used in knitting the heel, and the heel being formed by narrowing and widening and being a heavier fabric than the leg portion, whereby the auxiliary high spliced portion provides a heavier fabric at the rear of the leg of the stocking immediately above the heel to which the heel is united.

5. A seamless stocking having the leg and top of the foot knit with a fine thread and tight stitch as a fine fabric, the rear portion of the leg above the heel having a reinforced portion comprising a plurality of courses, the reinforced stitches in each course being considerably less in number than the first course of the heel, to form a narrow high spliced portion, extending only a short distance around the sides of the ankle portion, the back of the leg of the stocking having an auxiliary reinforced portion between the said narrow high spliced portion and the heel comprising a plurality of courses, the reinforced stitches of which correspond substantially in number and location with the first course of the heel, said narrow high spliced portion being reinforced with a thread of one material and the auxiliary high spliced portion being reinforced with a thread of a different material, and the heel being formed by narrowing and widening and being a heavier fabric than the leg portion, whereby the auxiliary high spliced portion provides a heavier fabric at the rear of the leg of the stocking immediately above the heel to which the heel is united.

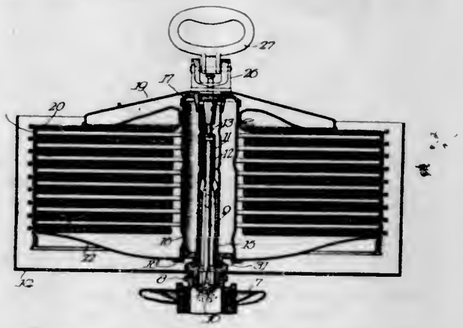
[Claims 6 to 9 not printed in the Gazette.]

1,169,417. CEMENT-BLOCK MOLD. ALBERT D. MILLER, Goshen, Ind. Filed Jan. 28, 1915. Serial No. 4,881. (Cl. 25—121.)



A mold comprising a pair of spaced upright rectangular end wall sections having laterally bent flanges on their upright edges and notches in their upper edges to receive therein a reinforcing rod, an additional pair of upright rectangular end wall sections resting one on each of the aforesaid sections and having laterally bent flanges on their upper edges alining with the aforesaid flanges, and notches in their lower edges registering with the aforesaid notches, a pair of longitudinally spaced parallel side walls bearing at their ends against the inner sides of the upright flanges, and independent fasteners uniting the independent end wall sections with the side walls.

1,169,418. FILTER-VALVE. WILLIAM L. MORRIS, Fort Wayne, Ind. Filed July 18, 1914. Serial No. 851,680. (Cl. 137—30.)



1. The combination with the fluid container and a valve therefor, of a receptacle removably supported by the container communicating therewith through the valve and having a movable handle to control the valve which insures that the valve is closed before the article can be removed from communication with the container by means of a handle.

2. The combination with a fluid container and a valve therefor, of a receptacle removably supported by the container communicating therewith through the valve, and having a pivoted handle rotatable to engage and open the valve when the receptacle is supported by the container and operative to close the valve before the receptacle can be removed by the said handle from the container.

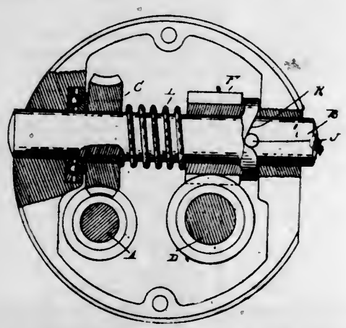
3. The combination with a fluid container and a spring-pressed valve therefor, of a receptacle having a slip-joint connection with the container and communicating therewith through the valve, and a rotatable handle on the receptacle adapted to engage and open the valve when the receptacle is supported by the container and operative to allow the valve to close by the rotation of the handle in lifting the receptacle from the slip connection.

4. The combination with a fluid container, of a valve therefor having a protruding stem, a receptacle to receive fluid from the container through the valve, and a pivoted handle by means of which the receptacle is moved without rotation to and from its connection with the container and adapted to be rotated on its pivot to engage the said stem and open the valve by rotation about its pivot only when the receptacle is supported by the container.

5. The combination with a fluid container, of a tubular member projecting therefrom having an inwardly disposed valve seat, a spring-pressed valve having an outwardly projecting stem and adapted to coöperate with said seat, a fluid receptacle having a portion adapted to make a slip-joint with the said tubular member, and a handle for the receptacle rotatably mounted and having a cam portion by means of which the valve stem is engaged to open the valve when the handle is turned in one direction, the valve being closed by its spring when the handle is rotated to a position for lifting the receptacle from the slip connection.

[Claim 6 not printed in the Gazette.]

1,169,419. TRANSMISSION MECHANISM. THEODOR M. MUELLER, Detroit, Mich., assignor to Maximum Electrical Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 27, 1913. Serial No. 797,380. (Cl. 123—179.)



1. In a transmission device for starting motors, the combination with two rotary members of a transmission therebetween, including spiral gears and a clutch, one of said spiral gears being transversely movable relative to the other gear and adapted to couple said clutch when actuated by one of said rotary members, and to uncouple said clutch when the speed of rotation of the other of said members is greater than that of the first named member.

2. In a transmission device for starting motors, the combination with drive and driven rotary members of transmission mechanism therebetween, including an irreversible gearing and a reversible spiral gearing, and a clutch operated by the longitudinal movement of one of said spiral gears.

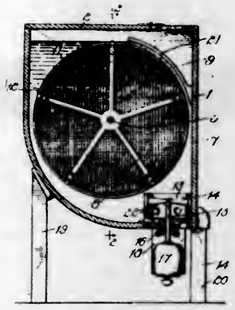
3. In a transmission device for starting motors, the combination with drive and driven rotary members of transmission mechanism therebetween, including an irreversible gearing and a reversible spiral gearing, a normally disengaged clutch intermediate said spiral gearing and the driven shaft operated to be automatically coupled when driven from one of said rotary members and automatically released when the speed of rotation of the other of said rotary members is greater than that of the first-named member.

4. In a transmission device for starting motors, the combination of parallelly-arranged drive and driven shafts, a transversely-arranged intermediate shaft, an irreversible gearing between the drive shaft and said intermediate shaft, a reversible spiral gearing between said intermediate shaft and driven shaft, a clutch for coupling said spiral gearing and the driven shaft engaged when actuated by said drive shaft and disengaged from said gearing when the speed of said driven shaft is greater than that of the drive shaft.

5. In a transmission device for starting motors, the combination of a parallelly-arranged drive and driven shafts, a transversely-arranged intermediate shaft, an irreversible worm gearing between said drive and intermediate shafts, a reversible spiral gearing between said intermediate shaft and driven shaft, one of said spiral gears being longitudinally movable, and a clutch coupled by the longitudinal movement of said spiral gear in one direction and uncoupled by the movement in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,169,420. WASHING-MACHINE. GEORGE H. MYRICK, Chicago, Ill., assignor to Capital Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 4, 1913. Serial No. 782,785. (Cl. 68—18.)

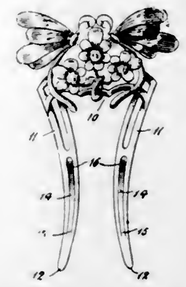


1. A machine for washing fabrics comprising in combination an openwork cylindrical fabric container, a propeller disposed on one side of the axis of the fabric container, a deflector disposed on the side of the container axis opposite the propeller, a tank inclosing and supporting the fabric container, propeller and deflector, said tank having its walls lying immediately adjacent to the ends and cylindrical surface of the fabric container and adapted to contain washing solution to a depth immersing the propeller, deflector and fabric container, said propeller rotatable about an axis substantially normal to the axis of the fabric container and adapted when operated to project a continuous stream of washing solution through the fabric container and against the same to cause rotation thereof, and means for rotating said propeller.

2. A machine for washing fabrics comprising in combination an openwork cylindrical fabric container, a propeller disposed on one side of the fabric container, a tank inclosing and supporting the fabric container and propeller, said tank having its walls lying immediately adjacent to the cylindrical surface of the fabric container and adapted to contain washing solution to a depth immersing the propeller and fabric container, said propeller rotatable about an axis substantially normal to the axis of the fabric container and adapted when operated to project a continuous stream of washing solution toward and through the fabric container, and means for rotating said propeller.

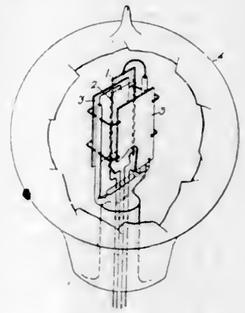
3. In a device of the class described, the combination of an openwork cylindrical container mounted upon a substantially horizontal axis, a tank inclosing and supporting the cylindrical container, said tank having its walls lying immediately adjacent to the cylindrical surface of the container and adapted to contain washing solution, a propeller disposed in the bottom of the tank rotatable around an axis substantially at right angles to the axis of the cylindrical container and arranged when operated to project a continuous stream of washing solution against and through the cylindrical container, and a deflector supported by the tank at the top thereof, said deflector disposed adjacent to the cylindrical surface of the container and in a line with the axis of the aforesaid propeller.

1,169,421. HAIR ORNAMENT. JOSEPH NEUHAUS, Forest Hills, N. Y. Filed Apr. 27, 1915. Serial No. 24,187. (Cl. 132—22.)



In a hair ornament, the combination with a resilient plate member curved to conform to a wearer's head, a pair of flexible depending prongs integral therewith, having slotted openings through the upper part thereof, said prongs being curved, and tongues formed interiorly of said prongs, below said openings, said tongues being attached at their lower ends, extending upwardly and adapted to engage hair strands between their inner surfaces and the surfaces of said prongs.

1,169,422. THERMIONIC REPEATER. ALEXANDER MCLEAN NICOLSON, Tarrytown, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Continuation of application Serial No. 843,502, filed June 6, 1914. This application filed Sept. 23, 1914. Serial No. 863,209. (Cl. 250—27.)



1. A thermionic repeater having its input electrode and cathode entwined.

2. A thermionic repeater having its cathode wound upon its input electrode.

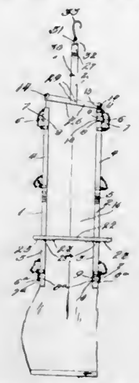
3. A thermionic repeater having its cathode entwined upon its input electrode.

4. A thermionic repeater having its input electrode in the form of a wire and having its cathode entwined about said wire.

5. A thermionic repeater having its input electrode in the form of a plurality of wires and having its cathode entwined about said wires.

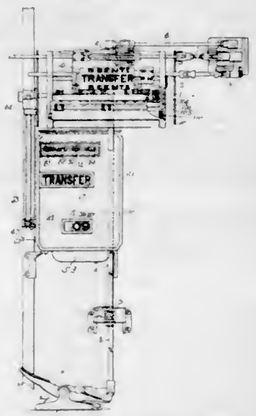
[Claims 6 to 22 not printed in the Gazette.]

1,169,423. COMBINATION GARMENT HANGER AND CREASER. WILLIAM H. NUDING, Brownsboro, Oreg. Filed May 15, 1915. Serial No. 28,438. (Cl. 223—19.)



In combination, two pair of creasing strips, one strip of each pair having upper and lower guide eyes, the other strip of each pair having laterally extending tongues engaging the guide eyes to hold the strips of each pair in registration, one of the strips of each pair upon one face adjacent its lower end having an additional eye, a spreader having teeth upon one of its edges adjacent both ends to engage said additional eyes to hold both pair of strips separated and the trousers stretched, the upper end of one strip of each pair having an upwardly extending hook, and a combination hanger and clamp device engaging said hooks for suspending the creasing strips and the trousers, said hanger and clamp device comprising spring arms having transverse clamping members at their lower ends to engage opposite faces of the lower end of the trousers and engage said hooks, and a loop on said spring arms to draw the clamps tight against the trousers.

1,169,424. INDICATOR. WILFRED I. OHMER and JOHN E. MCALLISTER, Dayton, Ohio, assignors to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed July 25, 1912. Serial No. 711,431. (Cl. 235—44.)



1. In an indicator, a casing having an opening, a plurality of indicating members mounted within said casing and supported normally out of alinement with said opening, each of said indicating members being movable independently of the other indicating members, of a reciprocatory operating rod, an operating device carried by said operating rod and having reciprocatory movement there-

with to move one of said indicating members into alinement with said opening, said operating device being movable about the axis of said rod to enable it to be brought into operative relation with any one of said indicating members.

2. In an indicator, a casing having an opening, a plurality of indicating members mounted within said casing and supported normally out of alinement with said opening, each of said indicating members being movable independently of the other indicating members, a vertically movable operating rod, an actuating device carried by said rod and having vertical movement in unison therewith, said operating device being movable relatively to said rod to bring the same into operative relation with any one of said indicating members.

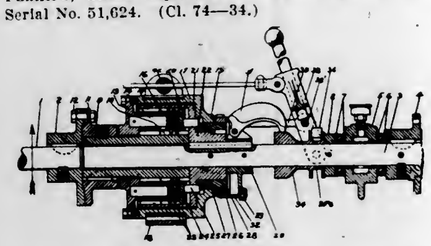
3. In an indicator, a casing having an opening, a plurality of indicating members mounted within said casing and supported normally out of alinement with said opening, each of said indicating members being movable independently of the other indicating members, an operating rod, an operating member mounted on said operating rod and having vertical movement therewith and having movement about the axis of said rod to bring the same into operative relation with any one of said indicating members.

4. In an indicator, a casing having an opening, a plurality of indicating members mounted within said casing and supported normally out of alinement with said opening, each of said indicating members being movable independently of the other indicating members, an operating rod, an operating member mounted on said operating rod and having vertical movement therewith and having movement about the axis of said rod to bring the same into operative relation with any one of said indicating members, and setting mechanism to move said operating device relatively to said operating rod.

5. In an indicator, a casing having an opening, a plurality of indicating members mounted in said casing and supported normally out of alinement with said opening, each of said indicating members being movable independently of the other indicating member or members, supporting devices connecting the respective indicating members with a fixed support and arranged to support said indicating members at all times in substantial horizontal positions, and means to actuate a selected one of said indicating members to move it into alinement with said opening.

[Claims 6 to 31 not printed in the Gazette.]

1,169,425. REVERSE-GEAR MECHANISM. HARRY J. PERKINS, Grand Rapids, Mich. Filed Sept. 20, 1915. Serial No. 51,624. (Cl. 74—34.)



1. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a planetary gear cage with pinions therein carried by the driven shaft, a brake drum casing disposed around the same, an orbit gear with a hub on said driven shaft disposed within the casing and meshing with the planetary gear pinions within said case, a disk clutch disposed within the crown of said gear to coact between the same and the said planetary gear cage, thrust pins disposed in perforations through the crown of said gear, a thrust collar with an internal annular recess disposed on the hub of said orbit gear, a spring within the recess in said collar disposed to react against said crown, an adjustable screw threaded bearing ring on the said thrust ring, a collar with toggle levers thereon, a sliding cone journaled on the driven shaft to actuate the toggle levers, a control lever for controlling said cone, coacting for the purpose specified.

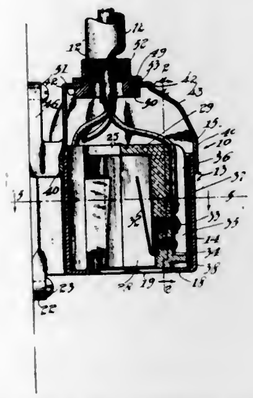
2. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a planetary gear cage with pinions therein carried by the driven shaft, a brake drum casing disposed around the same, an orbit gear with a hub on said driven shaft disposed within the casing and meshing with the planetary gear pinions within said case, a disk clutch disposed within the crown of said gear to coact between the same and the said planetary gear cage, thrust pins disposed in perforations through the crown of said gear, a thrust collar disposed on the hub of said orbit gear, an adjustable screw threaded bearing ring on the said thrust ring, a collar with toggle levers thereon, a sliding cone journaled on the driven shaft to actuate the toggle levers, a control lever for controlling said cone, coacting for the purpose specified.

3. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a planetary gear cage with pinions therein carried by the driven shaft, a brake drum casing disposed around the same, an orbit gear with a hub on said driven shaft disposed within the casing and meshing with the planetary gear pinions within said case, a disk clutch disposed within the crown of said gear to coact between the same and the said planetary gear cage, thrust pins disposed in perforations through the crown of said gear, a thrust collar with an internal annular recess disposed on the hub of said orbit gear, a spring within the recess in said collar disposed to react against said crown, a collar with toggle levers thereon, a sliding code journaled on the driven shaft to actuate the toggle levers, a control lever for controlling said cone, coacting for the purpose specified.

4. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a planetary gear with reverse brake and clutch, a thrust ring for actuating said clutch, a screw threaded bearing ring on said thrust ring, a collar with toggle levers fulcrumed to act on said thrust ring, a locking finger carried by said collar for locking the thrust ring in adjusted position, as specified.

5. In a reverse gear mechanism, the combination of a driving shaft, a driven shaft, a planetary gear with reverse brake and clutch, a recessed thrust ring for actuating said clutch, a spiral spring disposed within said recess to force said ring outward, a control lever and connections to act on said thrust ring, as specified.

1,169,426. PLUG-SWITCH. FREDERICK J. RAVLIN and JOHN LOFGREN, Chicago, Ill. Filed Dec. 3, 1914. Serial No. 875,276. (Cl. 173—338.)



1. In a plug switch, the combination of a casing providing a number of radiating chambers more than two, an insulating base mounted therein and retained in position by contact with the casing, having a like number of recesses jointly forming a socket, contacts on the back walls of said recesses, and a plug providing a like number of radiating wings, and coöperating contacts on the appropriate faces of said wings.

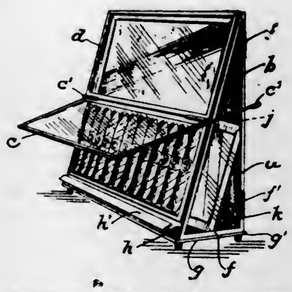
2. A three wire plug switch receptacle comprising more than two insulating base sections radially disposed, recessed from one end along their confronting faces, and meeting at their adjoining edges, a receptacle casing providing a similar plurality of radiating chambers respectively receiving and holding against radial and downward displacement the said base sections, a head member telescopically interfitting with said casing body and affording end bearings for the upper ends of said base sections, said head member having a wiring orifice, and said base sections respectively carrying contact springs upon their inwardly facing back walls.

3. In a structure of the character described the combination of a two piece receptacle casing having its upper and lower sections telescopically interfitted, an insulating base therein having an end opening socket, the upper casing having therein a wiring orifice, and means to connect the upper casing member with a conduit, said means comprising a stem, externally and internally threaded, projecting through said orifice and flanged below the top of the casing, and a nut on the threaded stem above the casing.

4. In a structure of the character described the combination of a two piece receptacle casing having its upper and lower sections telescopically interfitted, insulating base sections arranged within and positioned by contact with said casing sections, said base sections having recesses in their confronting faces jointly to form a socket and being endwise removable from the lower casing section when said casing sections are separated, the upper casing having therein a wiring orifice, and means to connect the upper casing member with a conduit, said means comprising a stem, externally and internally threaded, projecting through said orifice and flanged below the top of the casing, and a nut on the threaded stem above the casing.

5. A three wire plug switch comprising a shell having a three-lobed star opening, with a projection 20; a three-chambered socket base having a contact in each chamber, and a three-lobed plug, having a groove 21, and bearing a contact on each lobe.

1,169,427. DISPLAY-CABINET. EDWARD REUKAUF, Philadelphia, Pa., assignor to Meyer Bayuk, Philadelphia, Pa. Filed Dec. 8, 1914. Serial No. 876,007. (Cl. 211—25.)



1. A cabinet comprising a rear wall, end walls and front walls, forming an upper lid-receiving portion and a lower box-receiving portion in open inter-communication, the front walls comprising three sections, the upper section adapted to overlie the lid, the intermediate section adapted to overlie the contents of the box and hinged to the lower edge of the upper section, and the lower section hinged to the front edge of the cabinet bottom, whereby the intermediate and lower sections may be swung away from their normal closed positions to permit the box and lid to be inserted in the cabinet while opening only the intermediate section allows access to the contents of the box.

2. A cabinet comprising a relatively narrow bottom, a relatively high back wall and an upright but somewhat rearwardly inclined front, the latter comprising a fixed wall above and a movable cover below, and a box-engaging rest located between and spaced from the front and rear of the bottom and adapted to engage the lower front edge of the contained box.

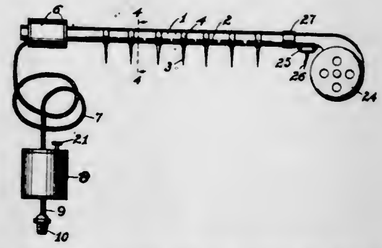
3. A cabinet comprising a relatively narrow bottom, a relatively high back wall and an upright but somewhat rearwardly inclined front, the latter comprising a fixed wall above and a movable cover below, a box-engaging rest located between the front and rear of the bottom for engagement with the lower front edge of the contained box, and springs on the inside of the back wall adapted to engage the lower rear edge of the contained box.

4. A cabinet comprising a relatively narrow bottom, a relatively high back wall and an upright but somewhat rearwardly inclined front, the latter comprising a fixed wall above and a movable cover below, and a closure hinged along the front of the base of the cabinet provided with an inwardly extending flange at its free end.

5. A cabinet comprising a lower box-receiving chamber and communicating therewith an upper lid-receiving chamber, an upright wall closing the rear of both chambers, a transparent stationary wall closing the front of the lid-receiving chamber, a transparent movable cover for the box-receiving chamber adapted to overlie the contents of the contained box and through which access may be had to such contents, and an end closure the rear edge of which extends along the upright edge of the rear wall and the front edge of which extends along one edge of the fixed front wall of the lid receiving chamber and along one edge of the movable cover of the box receiving chamber, said closure being movable to permit the insertion or removal in an endwise direction of the box and lid into or from the respective chambers.

[Claim 6 not printed in the Gazette.]

1,169,428. MEANS FOR REMOVING STATIC ELECTRICITY FROM MATERIALS. GEORGE D. ROGERS, Lakewood, Ohio. Filed Jan. 14, 1915. Serial No. 2,098. (Cl. 175—264.)



1. A method of neutralizing and removing static electricity from materials in motion, consisting of arranging electrical distributers adjacent the surfaces of the materials, and directing a blast of hot air against the surfaces of the materials, substantially as described.

2. In an apparatus for neutralizing and removing static electricity from materials in motion, the combination of a tube, means for electrifying the tube, distributing points carried by the tube and adapted to be arranged adjacent the surfaces of the materials, means for forcing hot air through the tube, and the tube being provided with openings for directing the hot air against the surfaces of the materials, substantially as described.

3. In an apparatus for neutralizing and removing static electricity from materials in motion, the combination of a tube, means for electrifying the tube, distributing points carried by the tube and adapted to be arranged adjacent the surfaces of the materials, a blower fixed to the end of the tube, an electrical heating coil for heating the air

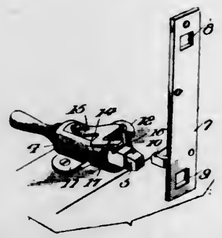
being forced into the tube by the blower, and the tube being provided with a plurality of longitudinal slots for directing the hot air against the surfaces of the materials, substantially as described.

4. In an apparatus for neutralizing and removing static electricity from materials in motion, the combination of a tube, means for electrifying the tube, distributing points carried by the tube and adapted to be arranged adjacent the surfaces of the materials, and means for permitting longitudinal adjustment of the distributing points but preventing rotation thereof, substantially as described.

5. In an apparatus for neutralizing and removing static electricity from materials in motion, the combination of a tube, means for electrifying the tube, means for forcing air through the tube, the tube being provided with longitudinal slots for directing the air against the surfaces of the materials, spring clips for engaging the tube, distributing points carried by the spring clips and adapted to be arranged adjacent the surfaces of the materials, and nibs projecting from the spring clips for entering said longitudinal slots in the tube to permit longitudinal adjustment thereof but prevent rotation of the same, substantially as described.

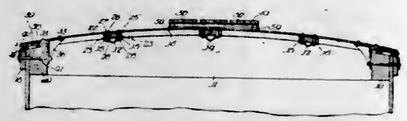
[Claim 6 not printed in the Gazette.]

1,169,429. SASH-LOCK. AARON ROTHSCHILD, Richmond, Va. Filed Dec. 17, 1914. Serial No. 877,693. (Cl. 16—145.)



A sash lock of the character described comprising a cylinder, attaching means therefor, a sliding bolt within the cylinder and normally outwardly spring held, a spring plate secured to the upper face of the cylinder and having a downwardly turned portion extending over the end of the barrel and over the end of the bolt, a laterally extending ear carried by the plate and having an outwardly extending lug extending parallel with the bolt and beyond the end of the barrel and adapted to be engaged by the upper sash for raising the plate to release the bolt, substantially as shown and described.

1,169,430. CAR-ROOF. THOMAS NATHAN RUSSELL, Chicago, Ill., assignor to Chicago Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed July 21, 1913. Serial No. 780,358. (Cl. 108—5.4.)



1. A roof comprising, in combination, roofing sheets having upturned margins, exterior carlines of inverted U-shape covering the joints between said sheets, purlins, filler blocks at the point of crossing of the carlines and purlins, and through members for securing together said carlines, filler blocks and purlins riveted to the webs of the carlines.

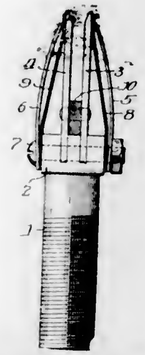
2. In a car roof, in combination with a plate and a carline of inverted U-shaped cross section, a pair of filler blocks having depending portions adapted to bear against opposite sides of the plate and means for clamping together said filler blocks and said depending portions.

3. In a car roof, in combination with a plate and a carline, a device for attaching the carline to the plate, comprising a body adapted to be secured to the carline, said body having a depending portion adapted to bear against the plate and a socket for a bolt head, a block adjacent the end of the carline provided with a depending portion parallel to the depending portion of said body, a bolt having a head disposed in said socket and engaging said block, and a second bolt engaging said depending portions for securing them together with the plate therebetween.

4. In a car roof, in combination with a plate and a carline, a device for attaching the carline to the plate, comprising a body adapted to be secured to the carline, said body having a depending portion adapted to bear against the plate and a socket for a bolt head, a block adjacent the end of the carline provided with a depending portion parallel to the depending portion of said body, a bolt having a head disposed in said socket and engaging said block, and means for engaging said depending portions for securing them together with the plate therebetween.

5. A pitched carline having a substantially horizontal, transverse web surface and separate spaced members secured thereto on opposite sides of the ridge-line providing vertical faces, in combination with a running board saddle having a vertical face adapted to bear against said face of the members, and means for securing it thereto.

1,169,431. ELECTRICAL CONNECTOR. GEORGE A. SCHAEFER, Chicago, Ill., assignor of one-half to Fred W. Irving, Chicago, Ill. Filed Apr. 23, 1914. Serial No. 833,871. (Cl. 175—282.)



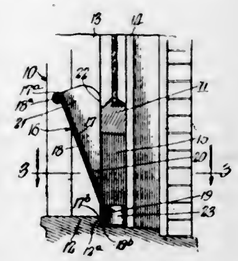
1. In an electrical connector, the combination of a base, contact blades extending from the base, flat springs supported by the base outside of the contact blades tending to force the ends of said blades together, and insulating material between said springs and said plates to prevent electrical contact between them, said insulating material being practically coextensive with the springs to protect the latter from the heat of the blades.

2. In an electrical connector, the combination of a base, two flat contact plates extending from the base, a sheet of insulating material outside of each contact plate and the base, a spring outside of each sheet of insulating material, and fastening devices extending through the base, the insulating sheets and the springs for exerting spring pressure upon the outer faces of the contact plates, said insulating material being practically coextensive with the springs to protect the latter from the heat of the plates.

3. In an electrical connector, the combination of a cylindrical threaded rod, a rectangular block of conducting material carried by the rod, two parallel contact plates secured in the block and extending therefrom, a sheet of refractory insulating material outside of each contact plate and extending over one face of said block, a curved leaf spring disposed outside of each sheet of insulating material and extending adjacent to one of the faces of said block, and a bolt or bolts extending through said block, said sheets of insulating material and said springs to force the springs into a position exerting an inward pressure upon the contact plates, said insulating material being practically coextensive with the springs to protect the latter from the heat of the plates.

4. In an electrical connector, the combination of a conducting base, contact plates extending from said base, flat springs supported by the base for exerting inward pressure upon said contact plates, and insulating material between said springs and the remaining parts of the connector for preventing current flow through said springs, said insulating material being so disposed and formed as to prevent the communication of heat from said plates to said springs.

1,169,432. VENTILATOR OR STORM-SHIELD FOR WINDOWS. ULYSSES G. SCHWARTZ, Chicago, Ill. Filed Dec. 10, 1914. Serial No. 876,448. (Cl. 98—31.)

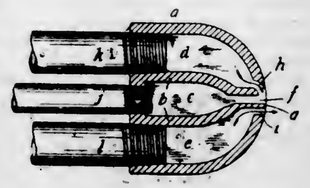


1. A ventilator having an upright base wall and a shield wall inclined upwardly and away from the plane of said base wall, the inclined shield wall having end flanges which extend toward the upright plane of said base wall, said ventilator being provided with elastic integral tongues forming substantially right angular extensions of said base wall which are located beyond said end flanges and with other tongues extending substantially in the plane of said base wall and being located above the level of said first named tongues.

2. A ventilator made in two parts, each stamped from sheet metal and the two being constructed to telescope one upon the other so that the ventilator is adjustable in length for windows of different widths, said ventilator having an upright base wall and a shield wall inclined upwardly and away from the plane of said base wall, the inclined shield wall having end flanges which extend toward the plane of said base wall, said ventilator being provided with elastic integral tongues forming substantially right angular extensions of said base wall which are located beyond said end flanges and with other tongues extending substantially in the plane of said base wall and being located above the level of the first named tongues.

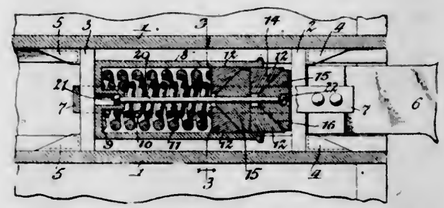
3. A ventilator made in two parts, each stamped from sheet metal and the two being constructed to telescope one upon the other so that the ventilator is adjustable in length for windows of different widths, said ventilator having an upright base wall and a shield wall inclined upwardly and away from the plane of said base wall, the inclined shield wall having end flanges which extend toward the upright plane of said base wall with their forward edges in which are formed stop shoulders substantially in the same upright plane, the upright base wall being provided at its ends beyond said flanges with integral extensions bent to form elastic tongues extending substantially at right angles to said base wall and said flanges being provided with integral extensions bent to form other tongues located substantially in the upright plane of said base wall and above the level of said first named tongues.

1,169,433. OIL-BURNER. WILLIAM A. SHELLEY, Portland, Oreg., assignor to Joseph L. Hoffman, Portland, Oreg. Filed June 18, 1914. Serial No. 845,948. (Cl. 158—75.)



In a fuel-oil burner, a nozzel consisting of a body provided with internal, longitudinal, horizontal partitions dividing the body into three independent chambers arranged in vertical alinement, the discharge end of said chambers being contracted into substantially equal size, slot-like, horizontally extending orifices, the discharge orifices of the upper two chambers merging into a single discharge orifice at the front of the burner, and the discharge orifice of the lowermost chamber being below and independent of said single or combined orifice, the central chamber constituting the fuel-oil spout, the chambers on either side of the fuel-oil spout constituting the atomizing fluid-spouts, the upper atomizing spout being adapted to so discharge its jet, as to intersect the jet of fuel-oil, and means for varying the relative force of the jets delivered by the atomizing fluid-spouts.

1,169,434. FRICTION DRAFT-RIGGING. CLIFTON W. SHERMAN, Buffalo, N. Y., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 20, 1911. Serial No. 603,672. (Cl. 213—64.)



1. In a frictional shock absorbing mechanism, a longitudinally-extending friction member having at one end a broad flat base adapted to impart movement in one direction to the friction member, sets of shoes in frictional engagement with said member, each set of shoes consisting of at least three shoes and being arranged radially about a common longitudinal axis, and each shoe having two longitudinally-extending faces which converge toward said axis, wedge members engaging said shoes, and a compression spring, said wedges and sets of shoes being arranged alternately and in tandem; a wedge between successive sets of shoes having a wedging engagement with the set of shoes between it and the compression spring and having substantially non-wedging engagement with the set of shoes remoter from said spring.

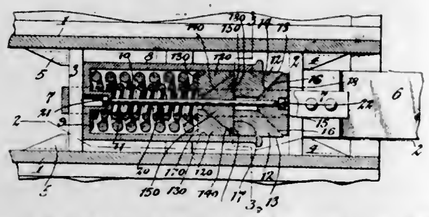
2. In frictional shock absorbing mechanism, a longitudinally-extending friction member having its friction surface substantially parallel with the longitudinal movement of the friction parts, sets of shoes in frictional engagement with said member, each set of shoes consisting of at least three shoes arranged radially about a common longitudinal axis, each shoe being intersected by a longitudinally-extending plane coinciding with said axis, said plane being out of coincidence with any other plane passing through said axis and through any two of the other shoes in the same set, wedge members in engagement with said shoes, and a compression spring, said wedges and sets of shoes being arranged alternately and in tandem

each wedge having a wedging engagement with only one set of shoes.

3. In frictional shock absorbing mechanism, a longitudinally-extending friction member having at one end a broad flat base adapted to impart movement in one direction to the friction member, sets of friction shoes, each set of shoes consisting of at least three shoes and being arranged radially about a common longitudinal axis and each shoe having two longitudinally-extending faces which converge toward said axis, wedge members engaging said shoes, and a compression spring, said wedges and sets of shoes being arranged alternately and in tandem, the said wedges having inclined wedging faces coöperating with inclined wedging faces on said shoes for forcing the sets of shoes into frictional engagement with said member, each wedge being provided with a flat transverse bearing to prevent sticking during the releasing operation.

4. In frictional shock absorbing mechanism, a main friction member having longitudinally-extending surfaces, sets of friction shoes in frictional engagement with said surfaces, each of said sets comprising at least three shoes arranged radially about a common longitudinal axis, wedge members engaging said shoes, said wedges and sets of shoes being arranged alternately and in tandem, and a compression spring, the intermediate wedge between successive sets of shoes having wedging surfaces engaging corresponding surfaces on the set of shoes between it and said spring, said engaging surfaces extending at an acute angle to the longitudinally-extending surfaces of the said main friction member, said intermediate wedge also having non-wedging surfaces engaging corresponding surfaces on the set of shoes farthr removed from said spring, said surfaces extending substantially at right angles to the surfaces on the main friction member.

1,169,435. DRAFT-RIGGING FOR RAILWAY-CARS. CLIFTON W. SHERMAN, Buffalo, N. Y., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 6, 1911. Serial No. 606,917. (Cl. 213—64.)



1. In a draft gear, a shell having an internal cylindrical friction face, a plurality of sets of segmental friction blocks arranged end to end within the shell, a wedge within each set of friction blocks, each set of friction blocks having external faces frictionally engaging the shell, internal forward angular friction faces engaging the wedge and flat rear faces, each wedge comprising a single non-collapsible member and the coöperating inclined faces of one set of friction blocks and wedge being of a different angle from the angle of the coöperating inclined faces of the blocks and wedge of the other set.

2. A draft rigging for railway cars comprising a cylinder forming an outer friction member, a plurality of sets of inner friction members, said sets being arranged tandem in one end of said cylinder and each set comprising a plurality of shoes arranged in an annular row and each shoe having a curved outer face which engages the bore of the cylinder, a flat rear face arranged at right angles to the axis of said cylinder and an inclined front face, and a wedge or spreader having inclined rear faces engaging with the inclined front faces of the companion shoes and a flat front face arranged at right angles to the axis of the cylinder, and a spring arranged in the opposite end of the cylinder and operating to resist longitudinal movement of said inner and outer friction members relatively to each other, the rear faces of the shoes of the rear set bearing against the front end of the spring and the rear faces of the shoes of the front set engaging with the front face of the wedge of the rear set and the coöperating inclined faces of the front shoes and wedge being of a greater angle than the angle of the coöperating inclines of the rear shoes and wedge.

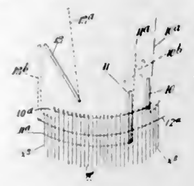
3. In frictional shock absorbing mechanism, a member having a friction surface, a plurality of sets of friction shoes in frictional engagement therewith, a plurality of wedge members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, and a spring, the angle of wedging engagement between the wedge and set of shoes nearest said spring being more acute than the angle of wedging engagement between the wedge and set of shoes farthest from said spring, whereby the amount of frictional work absorbed by the nearer set is relatively increased, and the amount of work absorbed by the remoter set is relatively diminished.

4. In frictional shock absorbing mechanism, a member having a friction surface, a plurality of sets of friction shoes in frictional engagement therewith, a plurality of wedge members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, and a spring, the acuteness of the wedging angle between successive sets of contacting wedges and shoes being progressively increased toward the spring, whereby the amount of frictional work absorbed by the sets of segments is substantially equalized.

5. In frictional shock absorbing mechanism, a member having a frictional surface, a plurality of sets of friction shoes in frictional engagement therewith, a plurality of wedge members in wedging engagement with said shoes, said wedges and sets of shoes being arranged alternately and in tandem, and a spring, the angle of wedging engagement between the wedge and set of shoes nearest the spring being more acute than the angle of wedging engagement between the wedge and set of shoes farthest from the spring, and the frictional bearing surface of the set of segments nearest the spring being less in ared than the frictional bearing surface of the set farthest from the spring, whereby the amount of frictional work performed by the nearer set of segments is increased, and the intensity of pressure on their friction surfaces is increased, and the amount of frictional work and the intensity of pressure on the set of segments more remote from the spring are decreased.

[Claims 6 to 8 not printed in the Gazette.]

1,169,436. CIRCULAR-KNITTING MACHINE. WILLIAM E. SMITH, Millitown, N. J., assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J., a Corporation of New Jersey. Filed June 2, 1914. Serial No. 842,398. (Cl. 66—21.)



1. In a circular stocking knitting machine, the combination with a circular series of needles, switch forming cam mechanism for actuating the same during circular and reciprocating work, and narrowing and widening mechanism, of means for feeding a reinforcing thread during circular work to a plurality of consecutive needles only, disposed substantially centrally of the group of needles which knit the back of the leg, the sole, heel, and toe pockets, and being considerably less in number than the number of needles in said group, and means for feeding a reinforcing thread to a larger number of needles of said group, including the aforesaid consecutive needles and additional needles located on opposite sides thereof, whereby a narrow high spliced portion is formed at the back of the leg and a number of reinforced courses of greater length are formed between the narrow high spliced portion and the heel pocket.

2. In a circular stocking knitting machine, the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular and reciprocating work, and narrowing and widening mechanism, of a thread guide movable into and out of operative position for feeding a reinforcing thread during circular work to a plurality of consecutive needles only, disposed substantially centrally of the group of needles which knit the back of the leg, the sole, heel, and toe pockets, and being considerably less in number than the number of needles in said group, and a separate thread guide movable into and out of operative position for feeding a separate reinforcing thread to a larger number of needles of said group including the aforesaid consecutive needles and additional needles located on opposite sides thereof, whereby a narrow high spliced portion is formed at the back of the leg, and a number of reinforced courses of greater length are formed between the narrow high spliced portion of the heel pocket.

3. In a circular stocking knitting machine, the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular work and reciprocating work, and narrowing and widening mechanism, of means for elevating a plurality of consecutive needles disposed substantially centrally of the group of needles which knit the back of the leg, the sole, and heel and toe pockets to a greater extent than the needles of said group on either side of said centrally disposed consecutive needles, said consecutive needles being considerably less in number than said group, and an auxiliary thread guide for feeding, during circular work, a reinforcing thread to said consecutive needles when elevated, at a point above the hooks of the remaining needles of said group.

4. In a circular stocking knitting machine, the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular and reciprocating work, and narrowing and widening mechanism, a plurality of consecutive needles, disposed substantially centrally of the group of needles knitting the back of the leg, sole, and heel and toe pockets, and considerably less in number than said group, being provided with longer cam engaging nibs than the needles of said group at either side thereof, an auxiliary cam in advance of the knitting cam mechanism for said group of needles, constructed to engage said longer nibs and elevate the said consecutive needles so provided, above the plane of the adjacent needles of the said group, a main thread guide for delivering the main knitting thread to all of the needles of the circular series during circular work, and an auxiliary thread guide for delivering a reinforcing thread to said consecutive needles only, when in elevated position, and at a point above the hooks of the other needles of said group.

5. In a circular stocking knitting machine, the combination with a circular series of needles, stitch forming cam mechanism for actuating the same during circular and reciprocating work, and narrowing and widening mechanism of means for elevatng a plurality of consecutve needles of the group of needles knitting the back of the leg, sole, and heel and toe pockets, said consecutive needles being located centrally of said group and being considerably less in number than said group, a main thread guide for feeding a main knitting thread during circular work at all of the needles of the circular series, an auxiliary thread guide operable during circular work and movable into and out of operative position, for feeding a reinforcing thread to said consecutive needles only, when in elevated position, at a point above the hooks of the remaining needles of said group, and a second auxiliary thread guide operable during circular work and movable into and out of operative position, for delivering a reinforcing thread to a larger number of the needles of said group including said consecutive needles, whereby a narrow high spliced portion of less width than the longest course of the heel pocket may be formed at the back of the leg above the heel, and a number of longer reinforced courses may be formed between said narrow high spliced portion and the heel pocket.

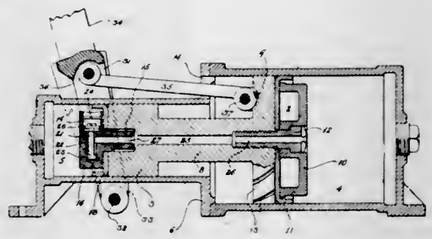
[Claims 6 to 11 not printed in the Gazette.]

1,169,437. PROCESS OF DEVULCANIZING RUBBER. GRAY STAUNTON, Muskegon, Mich. Filed June 13, 1914. Serial No. 844,903. (Cl. 18—52.)

1. The process of devulcanizing rubber contained in rubber waste, which consists in grinding the waste; mixing it, while dry, with a substantially dry salt of an alkaline metal, in a powdery form; sreading out the loose, dry, powdery mixture in relatively thin layers, and subjecting the mixture, while in the dry, loose, powdery condition, to the direct action of steam, under 60 pound pressure, or less.

2. The process of devulcanizing rubber contained in rubber waste, which consists in grinding the waste; mixing it, while dry, with substantially dry carbonate of potassium, in a powdery form; spreading out the loose, dry powdery mixture in relatively thin layers, and subjecting the mixture, while in the dry, loose, powdery condition, to the direct action of steam, under 60 pound pressure, or less.

1,169,438. AIR-PUMP. CLAYTON S. STEVENS, New Britain, Conn. Filed Jan. 17, 1913. Serial No. 742,527. (Cl. 230—32.)



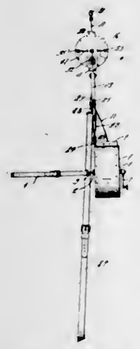
1. An air pump comprising a primary cylinder, a secondary cylinder of less diameter than the primary cylinder, the two cylinders being rigidly connected to each other in end to end relation, being coaxial and their adjacent ends being open, primary and secondary pistons reciprocative in the respective cylinders, a stem rigidly connected with the respective pistons and reciprocative through the open end portions thereof, a member provided with a valve chamber, supported on the outer side of the secondary piston, a gravity closable valve in said valve chamber, movable in a direction transverse to the line of movement of the pistons, and passage means connecting the compression space of the primary cylinder with said valve chamber.

2. An air pump comprising primary and secondary connected cylinders disposed end to end, primary and secondary pistons in the respective cylinders, a packing fitted against the secondary piston and engaging the inner wall of the secondary cylinder, a valve supporting member connected with the secondary piston, for holding said packing in place and having a passage open at its outer end and of two different diameters, a gravity closable valve in the enlarged portion of said passage, provided with a stem mounted in the reduced part of said passage, said stem having a portion slidable in said reduced part, and passage means connecting the compression space of the primary cylinder with said passage.

3. An air-pump comprising primary and secondary connected cylinders disposed end to end, primary and secondary pistons in the respective cylinders, a valve-supporting member comprising a body and a shank, the shank being fitted into said secondary piston and having a longitudinal passage, said body having a radial passage open at its

outer end to connect with the compression space of the secondary cylinder, intersected by the other passage and enlarged to present a valve chamber, a gravity-closable valve freely fitted in the enlarged portion of said radial passage, provided with a stem mounted in the reduced part of said radial passage, said stem having a portion slidable in said reduced part, and passage means connecting the compression space of the primary cylinder with said longitudinal passage.

1,169,439. FIRE-ESCAPE. OSCAR STEVENSON, River Grove, Ill. Filed July 12, 1915. Serial No. 39,347. (Cl. 227—29.)



1. In a fire escape, an incased shafted reel provided with a handle, an incased sheave, connection between said reel and sheave, hand rods carried by said sheave, connection between said hand rods, a strap carried by said hand rod connection, a seat strap carried by said reel casing and oppositely disposed brake shoes operatively connected to said hand rods and having a bearing upon said sheave.

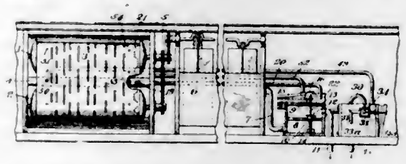
2. In a fire escape, an incased shafted reel provided with a handle, an incased sheave, connection between said reel and sheave including a cable, brake shoes carried by said sheave casing and having a bearing upon said sheave, means yieldingly retaining said brake shoes in operative relation, manually operable means carried by said sheave casing for increasing the friction of said brake shoes upon said sheave, a strap carried by the last named means and a seat strap carried by the said reel casing.

3. In a fire escape, an incased sheave, an incased reel carried thereby, a cable connecting said reel and sheave, brake shoes carried by said sheave casing for engagement with said sheave and being disposed in a plane at right angles to the plane of rotation of said sheave, manually operable governors for said brake shoes, a strap carried by said governors, a seat strap carried by said reel casing and adjustable rotary brake shoes carried by said sheave casing for engagement with said sheave and disposed in the plane of rotation of the same.

4. In a fire escape, an incased sheave, an incased reel carried thereby, a cable connecting said reel and sheave, rotary brake shoes carried by said sheave casing and bearing upon said cable to press the same against said sheave, means carried by said sheave casing and associated with said rotary brake shoes for regulating the tension of the same upon said cable, hand rods carried by said sheave casing, brake shoes carried and operable by said hand rods and in engagement with said sheave, connection between said hand rods, a strap carried by said connection and a seat strap carried by said reel casing.

5. In a fire escape comprising an incased sheave and a cable passing thereover, bolts movably carried by said sheave casing, rotary brake shoes carried by said bolts in engagement with said cable and adjusting means for said bolts carried by said sheave casing and including spring pressed bolts terminally connected to the first named bolts.

1,169,440. PIANO-PLAYER. EUGENE T. TURNEY, New York, N. Y., assignor, by mesne assignments, to American Player Action Company, New York, N. Y., a Corporation of New York. Filed Feb. 8, 1912. Serial No. 676,254. (Cl. 84—168.)



1. A piano player adapted to cause the playing of music under control of an advancing note sheet, said player itself including means for stopping the advance of the sheet at a predetermined point and means for automatically continuing the same forward from the same point at which it stopped.

2. A piano player in which the playing is controlled by the passage of a perforated music sheet, in combination with means controlled by said sheet for stopping its own movement and for continuing said movement from the point at which it stopped and in the same direction in which it was previously moving.

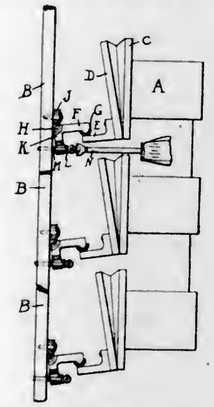
3. A piano player including in combination, a single note sheet, a motor for moving said note sheet and means controlled by said single note sheet for automatically starting its said motor.

4. A piano player including in combination, a single note sheet, a pneumatic motor for moving said note sheet, means controlled by said single note sheet for automatically closing an air passage to stop its said motor and for reopening said passage.

5. A piano player including in combination a note sheet, a motor, a bellows which controls the speed of said motor, means controlled by said note sheet for cutting off air from said bellows to cause the stoppage of the motor and means for admitting air to said bellows to cause the restarting of the motor.

[Claims 6 to 8 not printed in the Gazette.]

1,169,441. ADJUSTABLE ACTION FOR PIANO-PLAYERS. EUGENE T. TURNEY, New York, N. Y., assignor to American Player Action Company, New York, N. Y., a Corporation of West Virginia. Filed Nov. 21, 1913. Serial No. 802,229. (Cl. 84—233.)

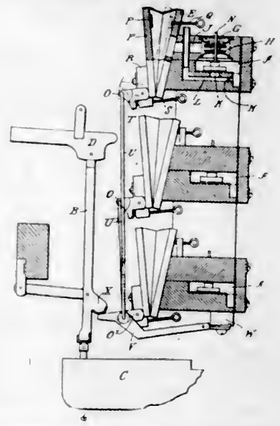


1. Piano-player mechanism including in combination stickers, pneumatics in front of said stickers and having movable members adapted to operate the stickers and means for effecting an adjustment of the relative positions of the contacting parts of the stickers and their pneumatics, said adjusting means comprising screws attached to the stickers, extending horizontally, and located, when the stickers are at rest, in line with spaces between the pneumatics so as to be readily accessible for adjustment from the front.

2. The combination with stickers and pneumatics of a player piano, of means for effecting an adjustment of the relative positions of the contacting parts of the stickers and the pneumatics, said adjusting means comprising a shoe carried by the sticker and adapted to be engaged by the movable member of the pneumatic, and an adjusting device for said shoe including a horizontal screw screwing into the sticker and means for transmitting the movement of said screw to said shoe to adjust the latter vertically.

3. Means for effecting an adjustment of the relative positions of the contacting parts of the stickers and the pneumatics of a piano player comprising a shoe pivotally mounted on the sticker, an approximately vertical arm K connected to said shoe, and a screw M having a threaded engagement with said sticker and having a shoulder engaging said arm.

1,169,442. ACTUATING MECHANISM OF PIANO-PLAYERS. EUGENE T. TURNEY, New York, N. Y., assignor to American Player Action Company, a Corporation of West Virginia. Filed Dec. 26, 1913. Serial No. 808,823. (Cl. 84—233.)

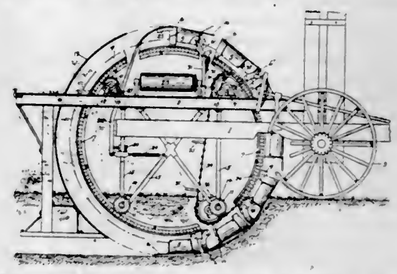


1. In combination a wind chest, pneumatics mounted in upright position on the back of said wind chest and arms attached at approximately or substantially a right angle to the movable members of the pneumatics near the hinged end thereof, the fixed members of the pneumatics having their ends opposite the hinges inclined forwardly so as to permit the shortening of said arms and the bringing of the pneumatics close to the piano action whereby to secure compactness and a powerful stroke.

2. In combination a wind chest and a set of pneumatics mounted at the back of said wind chest in approximately upright positions with the fixed members of the pneumatics projecting forwardly and the movable members positioned to swing to the front and rear of a vertical position as the pneumatics are collapsed and expanded, and arms attached to said movable members near the hinged end thereof and extending therefrom at approximately or substantially a right angle so as to swing above and below a horizontal position as the pneumatics are collapsed and expanded.

3. In combination a wind chest and a set of pneumatics mounted at the back of said wind chest, the movable members of the pneumatics being positioned so as to swing to the front and rear of a vertical position as the pneumatics are collapsed and expanded, and arms attached to said movable members near the hinged end thereof and extending therefrom at approximately or substantially a right angle so as to swing above and below a horizontal position as the pneumatics are collapsed and expanded.

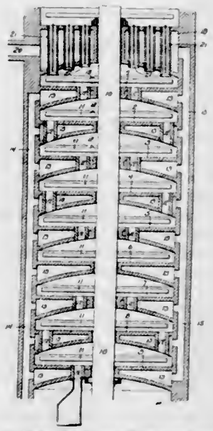
1,169,443. EXCAVATING-MACHINE. HIRAM WALTERS and NATHAN BUMPUS, Curtice, Ohio. Filed Feb. 20, 1915. Serial No. 9,485. (Cl. 37—29.)



1. The combination of an excavating machine, having buckets thereon with gates hinged to the rear end of each bucket, and adapted to have its opening and closing movements in the plane of rotation of the wheel, an endless chain belt with lugs attached to act on each of said hinged gates at the lower part of trench to prevent an opening thereof, except at a predetermined point in a revolution thereof.

2. The combination of an excavating machine having buckets thereon with gates hinged to the rear end of each bucket and adapted to have its opening and closing movements in the plane of rotation of the wheel, a driving sprocket applying power to endless chain belt with lugs attached at proper point, to act on hinged gates at lower part of driven sprocket, then with the arc of movement of said wheel to driving sprocket allowing a free opening of said hinged gates.

1,169,444. TREATING METALLIC SULFIDS, &c. UTLEY WEDGE, Ardmore, Pa. Filed June 5, 1913. Serial No. 771,886. (Cl. 75—60.)

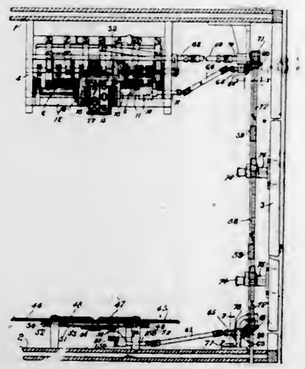


1. The within described continuous process of producing metal from sulfur compounds containing the same, said process consisting in first subjecting the compound, at a temperature sufficient to vaporize the sulfur, to an atmosphere containing a reagent which will oxidize the metal without promoting the oxidation of the sulfur, and then continuing the subjection of the oxid thus formed to a reducing atmosphere at a temperature sufficient to convert the oxid to metallic form.

2. The within described continuous process of producing metal from sulfur compounds containing the same,

said process consisting in passing the material progressively through a series of zones, subjecting it in the initial zone, at a temperature sufficient to vaporize the sulfur, to an atmosphere containing a reagent which will oxidize the metal without promoting the oxidation of the sulfur, and, in a later zone, subjecting the oxid thus formed to a reducing atmosphere at a temperature sufficient to convert the oxid to metallic form.

1,169,445. INDICATING AND OPERATING MECHANISM. DAVID B. WHISTLER and JOHN E. MCALLISTER, Dayton, Ohio, assignors to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Nov. 8, 1912. Serial No. 730,150. (Cl. 235—44.)



1. A fare indicator comprising a units drum and a tens drum, and a third drum supported adjacent to said first-mentioned drums and having fare indications thereon, means for adjusting the first-mentioned drums to indicate a given fare, and means controlled by the movement of one of said first-mentioned drums to move said third drum into a position to exhibit one of the indications thereon and to conceal the indication on the first-mentioned drums.

2. In a fare indicator, a units drum and a tens drum capable of relative movement and each having a series of figures thereon, means for actuating said units drum, means controlled by said units drum for actuating said tens drum, a third drum having a part movable over the first-mentioned drums, said part having a fare designation thereon, and means actuated by the movement of said first-mentioned drums to impart movement to the third drum to cause it to exhibit said fare designation and conceal the first-mentioned drums.

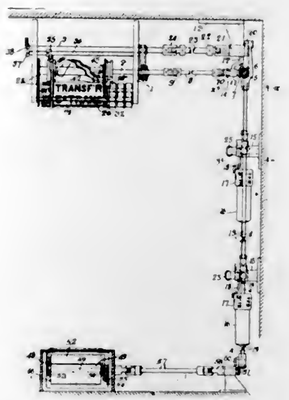
3. In a fare indicator, a units drum and a tens drum, each of said drums having a series of figures thereon, driving mechanism connected with one of said drums, means controlled by the movement of the first-mentioned drum for imparting movement to the second drum, a third drum having a part provided with a series of designations thereon and movable over the first-mentioned drums, and means controlled by the movement of one of said first-mentioned drums to impart the initial movement to said third drum, and means controlled by the other of said first-mentioned drums to impart further movement to said third drum.

4. In a fare indicator, a shaft, a drum secured thereto and having figures on the periphery thereof, a second drum loosely mounted on said shaft, gearing connecting said second drum with said shaft to cause it to advance one step for each two steps the first-mentioned drum is advanced, a third drum rotatably mounted on said shaft on a longer radius than the first-mentioned drums and having designations on the periphery thereof, and means movable with said second drum to engage a part carried by the third drum and impart movement thereto when said second drum has been moved past a predetermined position.

5. In a fare indicator, a shaft, a drum secured thereto and having figures on the periphery thereof, a second drum loosely mounted on said shaft, gearing connecting said second drum with said shaft to cause it to advance one step for each two steps the first-mentioned drum is advanced, a third drum rotatably mounted on said shaft on a longer radius than the first-mentioned drums and having designations on the periphery thereof, means movable with said second drum and adapted to engage a part carried by the third drum to impart movement thereto when said second drum has been moved past a predetermined position, and driving mechanism connected with said shaft and normally disconnected from said drum but adapted to be connected with said drum by the first movement of the latter.

[Claims 6 to 16 not printed in the Gazette.]

1,169,446. OPERATING MECHANISM FOR FARE-RECORDERS, FARE-INDICATORS, AND THE LIKE. DAVID B. WHISTLER, Dayton, Ohio, assignor to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Jan. 30, 1913. Serial No. 745,104. (Cl. 235—44.)



1. A hand grip for a rotatable setting rod comprising a body portion to be grasped by the hand and having at one end of said body portion a part forming a drum, said drum being provided on its periphery with fare indications.

2. The combination, with a fare indicator, of a rotatable setting rod operatively connected with said indicator, a hand grip mounted on said rod to rotate the same and provided at one end with an enlarged portion having fare indications thereon, and a pointer mounted on a fixed support adjacent to said enlarged portion of said hand grip and coöperating therewith to guide the operator in setting said indicator.

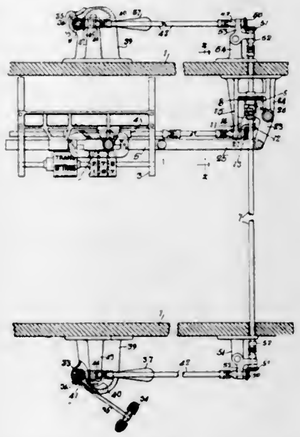
3. An operating mechanism of the character described comprising a rotatable setting rod, and a reciprocatory operating rod, a hand grip mounted on said setting rod and having at one end a drum provided on its periphery with fare indications, a bracket mounted on a fixed support adjacent to said hand grip, a pointer carried by said bracket and coöperating with said drum, and a lever pivotally mounted on said bracket, connected with said reciprocatory rod and having one end arranged to form a handle.

4. The combination, with two fare indicating mechanisms spaced apart, of operating mechanism to simultaneously actuate both fare indicators, said operating mechanism comprising a rotatable rod having a series of handles for imparting rotation thereto, indicator drums mounted on said rod close to the ends of the respective handles, fixed pointers mounted adjacent to the respective indicator drums, a reciprocatory rod operatively connected with said indicators, and a series of actuating levers connected with said reciprocatory rod at intervals between said indicators and adjacent to said handles.

5. The combination, with a fare recorder, a fare indicating mechanism arranged adjacent to said recorder, and a second fare indicating mechanism arranged at a point remote from said recorder, each indicating mechanism comprising a rotatable drum, and a flash arranged to normally conceal the indication on the drum, of a setting rod connected with said indicator and both of said drums to set the same to register and indicate, respectively, a particular fare, a series of hand grips mounted on said setting rod, guiding indicators arranged adjacent to the respective hand rigs, and a longitudinally reciprocal rod operatively connected with said register to register said fare and with the flashes of both indicating mechanisms to move the same into an inoperative position, and a series of handles connected with said operating rod and arranged adjacent to the respective hand grips on said setting rod.

[Claim 6 not printed in the Gazette.]

1,169,447. OPERATING MECHANISM FOR FARE-RECORDERS. DAVID B. WHISTLER, Dayton, Ohio, assignor to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Mar. 17, 1913. Serial No. 754,684. (Cl. 235—44.)



1. The combination, with a fare recorder having a setting member and an operating member, both of said members having rotary movement, of a single actuating rod connected with both said setting member and said operating member and having two distinct movements, one of said movements being adapted to impart rotary movement to said setting member without affecting said operating momber and the other of said movements being adapted to impart rotary movement to said operating member without affecting said setting member.

2. The combination, with a fare recorder having a setting member and an operating member, both of said members having rotary movement and each of said members having an extension projecting beyond the end of said recorder, of a single actuating rod, a gear connection between the extension of one of said members and said actuating rod, and a pivoted connection between the extension to the other of said members and said rod, whereby the rotary movement of said rod will impart rotatory movement to one of said members and the reciprocatory movement of said rod will impart rotatory movement to the other of said members.

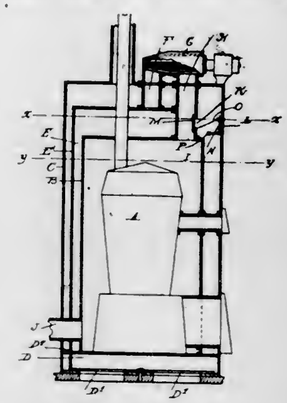
3. The combination, with a fare recorder having both a setting member and an operating member, of a single rod having both a reciprocatory movement and a rotatory movement, a connecting device connected with said rod and with one of said members, whereby the reciprocatory movement of said rod will impart movement to said member, a shaft journaled adjacent to said rod and having a gear, a gear carried by said rod and meshing with the gear on said shaft, a second gear on said shaft, and a gear connected with the other of said members and meshing with said second gear.

4. The combination, with a fare recorder having both a setting member and an operating member, of an operating rod having both a reciprocatory and a rotatory movement, a connecting device interposed between said rod and one of said members, a gear carried by said rod, a shaft journaled adjacent to said rod, a gear carried by said shaft and meshing with the gear on said rod, said rod having longitudinal movement relatively to the gear on said shaft, and gearing connecting said shaft with the other of said members.

5. The combination, with a fare recorder having both a setting member and an operating member, of a single operating rod connected with both said setting member and said operating member and having both a reciprocatory and a rotatory movement, a vertical rod having both a reciprocatory and a rotatory movement, and a connection between said vertical rod and said operating rod, whereby said movements may be separately transmitted to said first-mentioned rod.

[Claims 6 and 7 not printed in the Gazette.]

1,169,448. HOT-AIR HEATER. HARRY S. WILLIAMS, Detroit, Mich., assignor to Peter Smith Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 30, 1912. Serial No. 728,653. (Cl. 126—117.)



1. The combination with a hot air heater having an outer and an inner heating chamber, of a mechanically-operated fan for drawing air from said outer chamber and forcing it downwardly into said inner chamber, a conduit passing through said outer chamber and connecting with the upper end of said inner chamber, through which the air is forced downward, and a pair of connected dampers controlling registering openings in said conduit and outer casing, and adapted to automatically open to provide an exit for the heated air, the inner damper when open obstructing the path of air through said conduit, whereby said dampers will be closed when the air is mechanically propelled.

2. The combination with a hot air heater having inner and outer heating chambers, of a fan for drawing air from the outer chamber and forcing it downwardly through the inner chamber, a conduit through which the air is propelled, passing through said outer chamber and connecting with the upper end of said inner chamber, a damper in said conduit controlling a lateral opening therein, and in its open position obstructing said conduit, a damper controlling an opening in the outer casing and connected with the first-mentioned damper to operate simultaneously therewith, and means for automatically opening said dampers, said means adapted to be over-

come by the force of air against the inner damper when the fan is in operation.

3. A heater of the character specified comprising an inner casing, a heating element arranged therein, an outer casing, means for causing the air to circulate through the outer casing inwardly into and through the inner casing, there being a hot air outlet from the inner casing, said inner casing and outer casing having openings whereby communication may be established between the inner casing and the atmosphere, a plurality of connected damper members operated simultaneously by the blast of air from said air circulating means to cut off communiaction between the inner casing and the atmosphere, and a weight acting simultaneously upon both of said damper members when the circulating means is idle to establish communication between said inner casing and the atmosphere.

4. A heater including an inner casing; a heat producing element arranged in said casing, an outer casing surrounding the inner casing, the outer casing and inner casing each having a natural draft egress opening, vertically swinging members, a connection between the members whereby the same move simultaneously, one of said members forming a closure for the egress opening in the outer casing and the other forming a closure for the egress opening in the inner casing, a fan for forcibly introducing air into the upper part of the inner casing and downwardly through the same, the inner casing being provided at its bottom with a hot air outlet, the blast from said fan acting to operate the connected members whereby the same close the egress openings in the outer casing and inner casing, and means acting upon said members when the fan is idle to simultaneously open the egress openings to allow for a natural draft circulation.

5. A heater including an outer casing and an inner casing, a mechanicallly operated fan for forcing air into and downwardly through said inner casing, the inner casing and outer casing each being formed with a natural draft egress opening, a heating element arranged within the inner casing, the inner casing at its base being provided with an outlet for the heated air which is forced downwardly through the same by said fan, a conduit passing through the outer casing and communicating with the inner casing, the blast from the fan passing through said conduit, a pair of connected dampers one of which controls the conduit passage and the egress opening of the inner casing, the other of said dampers controlling the egress opening of the outer casing, a weight acting simultaneously upon both of said members when the fan is idle to establish communication through the egress openings between the outer casing and the atmosphere, the first mentioned damper member when in open position obstructing the conduit passage whereby the air is deflected through the egress opening of the inner casing.

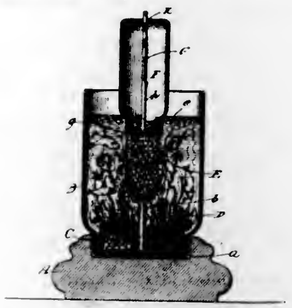
[Claims 6 and 7 not printed in the Gazette.]

1,169,449. AQUARIUM. JACOB WILLIAMSON, Chicago, Ill. Filed July 12, 1915. Serial No. 39,273. (Cl. 119—5.)

1. An aquarium comprising a suitable water container, in combination with a tray adapted to contain foreign substances and removably seated in the bottom of said container, a post secured to and arising from said tray, and a fountain having a tubular body extending above the water and supported by said post having a valve controlled lower end.

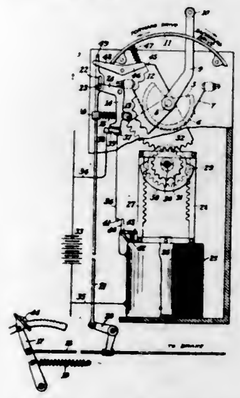
2. An aquarium comprising a suitable water container, in combination with a tray adapted to contain foreign substances, and removably seated in the bottom of said container, a post secured to and arising from said tray, and a cage supported by said post and made of foraminous material and adapted to contain foreign substances and serve as a medium with which to raise and lower said tray.

3. An aquarium comprising a suitable water container, in combination with a tray adapted to contain foreign substances which is removably seated in the bottom of said container, a post secured to and arising from said tray, a cage supported by said post made of foraminous material, and a tubular fountain the lower end of which is fitted in the upper end of said cage and has a valve controlling the discharge therefrom.



4. An aquarium comprising a suitable water container the transverse dimensions of the bottom of which is reduced, in combination with a tray which is removably seated in said bottom and conforms in shape thereto and has its edges built upward, a vertical post the lower end of which is secured to and which arises from said tray, a woven wire cage mounted upon and secured to said post with the axis of which its axis alines, an inverted bottle-shaped fountain inserted in the upper open end of said cage, and a valve-controlled closure for the lower end of said fountain.

1,169,450. CONTROLLING MECHANISM FOR ELECTRIC-MOTOR VEHICLES. SAMUEL S. AMDURSKY, Rochester, N. Y. Filed Dec. 17, 1914. Serial No. 877,687. (Cl. 172—179.)



1. The combination, with the brake-mechanism of an electric vehicle, and the speed-controlling means manually operable independently of the brake-mechanism, of means, connected with and controlled by the brake-mechanism, for moving the speed-controlling means automatically to neutral position when the brake is applied.

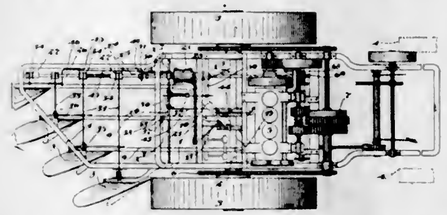
2. The combination, with the circuit-controller and the brake-mechanism of an electric vehicle, of means, connected with and controlled by said brake-mechanism, for moving the controller automatically to neutral position when the brake is applied, and for locking the controller, so long as the brake is in operation, against movement, in at least one direction, from said position.

3. The combination, with the circuit-controller and the brake-mechanism of an electric vehicle, of means for retaining the controller in operative position; connections, between the brake-mechanism and the retaining-means, for throwing the latter out of operation when the brake is applied; and means for returning the controller automatically to neutral position when released from the action of the retaining-means.

4. The combination, with the circuit-controller and the brake-mechanism of an electric vehicle, of an electromagnetic device connected with the controller and adapted, when energized, to return the controller to neutral position; a source of electricity; and means, actuated by the brake-mechanism, for connecting the electromagnetic device in circuit with the source of electricity when the brake is applied.

5. The combination, with the controller and the brake-mechanism of an electric vehicle, of means for retaining the controller in operative position; connections, between the brake-mechanism and the retaining-means, for throwing the latter out of operation when the brake is applied; and means, connected with and controlled by the brake-mechanism, for returning the controller automatically to neutral position when the brake is applied.

1,169,451. ADJUSTING MECHANISM FOR GANG-PLOWS. JOHN A. ANDERSON, Minneapolis, Minn. Filed Aug. 14, 1912. Serial No. 715,125. (Cl. 97—70.)



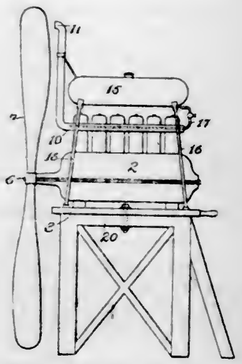
1. The combination with a truck, of a plow having the front of its beam connected to said truck, a beam-lifting connection between the front end of said plow beam and truck including an operating clutch, a plow-lifting connection between said plow and truck including a second operating clutch, a motor with connections for transmitting power to the said two operating clutches, a clutch controlling lever with connections for throwing said two clutches into and out of action, and an automatic trip operating to release the first operated clutch and to permit the other clutch to be thrown into action.

2. The combination with a truck and an engine carried thereby, of plows having beams connected to the truck frame with freedom for pivotally raising and lowering movements and for vertical adjustments of the front ends of said beams, of means for vertically adjusting the front ends of the plow beams and for raising the plows bodily, said beams comprising two engine driven clutches, and a controlling lever with connections for throwing said clutches into action, the first engaged clutch serving to hold the other temporarily out of action, and the said connections including an automatic trip for releasing the first operated clutch and thereby permitting the second clutch to be thrown into action, the first operated clutch serving to vertically move the front ends of said plow beams and the second actuated clutch serving to raise said plows bodily from the ground.

1,169,452. VAPOR PRODUCING AND DISTRIBUTING APPARATUS. HARRY N. ATWOOD and FRANK W. SATTERTHWAITE, Reading, Pa. Filed May 18, 1915. Serial No. 29,009. (Cl. 126—59.5.)

1. A vapor-producing-and-distributing apparatus comprising a gas engine, a fan driven thereby, and means for continuously subjecting suitable material to vaporizing action of the exhausting products of combustion of the engine and for presenting the produced vapor to the action of said fan.

2. A vapor-producing-and-distributing apparatus comprising a gas engine, a fan driven thereby, and means for continuously subjecting suitable material to vaporizing action of the exhausting products of combustion of the engine and for presenting the produced vapor to the action of said fan, all of said elements being secured to a rotatably mounted supporting frame.



3. A vapor-producing-and-distributing apparatus comprising a gas engine, a fan driven thereby, a conduit for the exhausting products of combustion of the engine, a contiguous conduit for vaporizable material, and means for delivering the produced vapor to the distributing action of the fan.

4. A vapor-producing-and-distributing apparatus comprising a gas engine, a fan driven thereby, a conduit for the exhausting products of combustion of the engine, means for delivering a flow of vaporizable material into said conduit, and means for delivering the combined flows to the distributing action of the fan.

1,169,453. AUTOGRAPHIC REGISTER. ENGLAND J. BARKER, Chicago, Ill. Filed July 15, 1912. Serial No. 709,387. (Cl. 11—36.)



1. An autographic register comprising side-frames, a platen carried thereby, means for supplying paper in strips across said platen, a clamping device supported on the register that is normally in engagement with the free ends of said paper, a slide movable toward and from said platen, and means carried by said slide that release said clamping device from the paper when said slide is in its position nearest said platen.

2. An autographic register comprising a platen, means for supplying paper across said platen, a slide movable toward and from said platen, a pair of telescopic tubes secured on each edge of said platen, a piston within the inner tube of each pair of tubes, devices carried by said slide that grip the paper and withdraw the same from the register, and means for adjusting the throw of said slide.

3. An autographic register comprising a platen, means for supplying paper across said platen, a clamping device supported on the register that is normally in engagement with the free end of said paper, a slide movable toward and from said platen, means carried by said slide that automatically release said clamping device from the paper when said slide is in its position nearest said platen, and gripping devices carried by said slide that are adapted to engage the paper and withdraw the same from the register.

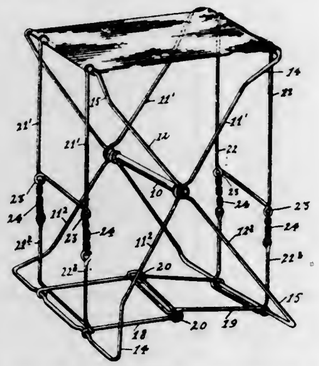
4. An autographic register comprising a suitable supporting frame, a platen interposed between the sides of said frame, means for supplying paper across said platen, a pair of telescopic tubes secured on each edge of said platen, a piston within the inner tube of each pair of tubes, a plate connecting the outer ends of said pistons

that is mounted on said platen the outer end of which is movable toward and from one end of said platen, and gripping-jaws carried by said plate that are adapted to grip the adjacent end of the paper and withdraw it from said register.

5. An autographic register comprising a suitable supporting-frame, a platen interposed between the sides of said frame, means for supplying paper across said platen, a pair of stationary tubes that are secured to the underside of said platen, a pair of telescopic tubes coöperating therewith, and pistons in each telescopic tube, a plate connecting the outer ends of said pistons and movable toward and away from the end of said platen, gripping-jaws carried on said plate that are adapted to automatically grip the adjacent end of the paper and withdraw it from the register.

[Claims 6 to 19 not printed in the Gazette.]

1,169,454. FOLDING CAMP-STOOL. MARVIN V. BAXTER, Los Angeles, Cal., assignor of one-half to George W. Zimmerman, Los Angeles, Cal. Filed June 21, 1915. Serial No. 35,197. (Cl. 155—32.)

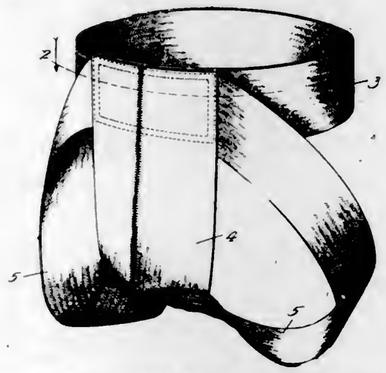


1. In a folding camp stool, the combination of a frame made of steel wire, said frame comprising a central horizontal rod, diagonal supporting members pivoted to the outer ends of said rod, said diagonal members being of the shape of a rectangle, the short sides thereof forming the top and bottom, respectively, a folding seat extending between the upper sides of said diagonal supporting members, a pair of U-shaped bottom brace members, said brace members being pivoted at the ends of the lateral sides thereof to the bottom sides of said diagonal members at points spaced equi-distantly from the ends thereof, the transverse members of said brace members being in interlocking engagement with each other, a pair of vertical lateral U-shaped supporting members, said lateral members being pivoted at the ends of the lateral sides thereof to the upper sides of said diagonal supporting members at points equi-distant from the ends thereof, the width of said lateral members corresponding to that of said brace members, the transverse sides of said lateral members passing below and engaging the ends of said brace members adjacent to the bottom sides of said diagonal members.

2. In a folding camp stool the combination of a frame made of steel wire, said frame comprising a central horizontal rod, diagonal supporting members pivoted to the outer ends of said rod, said diagonal members being of the shape of a rectangle, the short sides thereof forming the top and bottom, respectively, a folding seat extending between the upper sides of said diagonal members, a pair of U-shaped bottom brace members pivoted to the bottom sides of said diagonal members, the transverse sides thereof being in interlocking engagement with each other, a pair of vertical lateral U-shaped supporting members pivoted to the upper sides of said diagonal members, the transverse sides of said lateral members passing below and engaging the ends of said brace members adjacent to the bottom sides of said diagonal members.

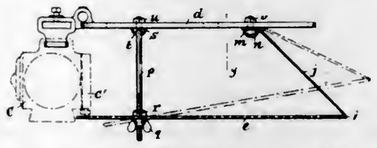
3. A folding camp stool comprising the combination of a frame made of steel wire, said frame comprising a central horizontal rod, diagonal supporting members pivoted to the outer ends of said rod, said diagonal members being of the shape of a rectangle, the short sides thereof forming the top and bottom, respectively, a folding seat extending between the upper sides of said diagonal members, a pair of U-shaped bottom brace members pivoted to the bottom sides of said diagonal members, the transverse sides of said brace members being in interlocking engagement with each other, a pair of upper lateral U-shaped supporting members pivoted to the upper sides of said diagonal members, a pair of lower U-shaped lateral supporting members, the transverse sides thereof passing below and engaging the ends of said brace members adjacent to the bottom sides of said diagonal members, and flexible means connecting the outer ends of the lower lateral supporting members with the inner ends of said upper lateral supporting members.

1,169,455. SUPPORTER. CHARLES F. BENNETT, Chicago, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Aug. 26, 1915. Serial No. 47,517. (Cl. 128—38.)



A supporter comprising an elastic belt of such width and strength as to exert material pressure on the abdomen of the wearer, a pouch having its upper end crossing the belt and secured thereto, whereby the portion of the belt crossed by the pouch is rendered substantially inelastic, a pair of elastic thigh circlets secured at one end to the lower end of the pouch and extending rearwardly, upwardly and forwardly therefrom and attached at their other ends to the inelastic portion of the belt, said elastic thigh circlets being of such width and strength as to add a material pressure to the inelastic portion of the belt on the abdomen of the wearer.

1,169,456. SIGN. WILLIAM H. BOMM and JOHN T. BRENT, Westwood, N. J. Filed Jan. 5, 1915. Serial No. 596. (Cl. 40—131.)

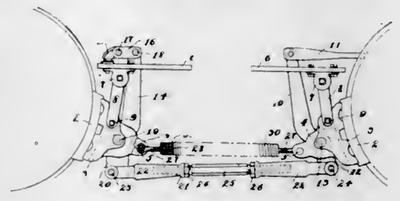


1. In combination, supporting member, a sign-plate member spaced therefrom and movable edgewise, means to connect said members including pivotally connected parts the axis of whose pivotal connection is substantially parallel with the sign-plate member, one of said parts being connected to one of said members and means, spaced from the first means, to secure the sign-plate member in different positions to which it may be moved edgewise.

2. In combination, a sign plate, a support, and separate means to connect the sign plate at spaced points thereof with the support at spaced points of said support, one of said means including a post projecting rigidly from the support and having nuts screwed thereon, the sign plate having a slot receiving the post and being clamped between the nuts thereof, and the other of said means having a pivotal connection with and being foldable against the sign plate.

3. In combination, a sign plate, a support extending approximately parallel with the sign plate and spaced therefrom, a lamp carried by the support and arranged to throw its light between the sign plate and support and close to one end of the sign plate, means, extending rigidly from the support and having a laterally sliding connection with the sign plate, for connecting the sign plate to the support, and means, lateral of the first means, for connecting the sign plate and support, the last-named means being pivoted to the support.

1,169,457. BRAKE MECHANISM FOR CAR-TRUCKS. JAMES A. BROOKS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed June 7, 1912, Serial No. 702,143. Divided and this application filed Feb. 27, 1913. Serial No. 750,989. (Cl. 188—24.)

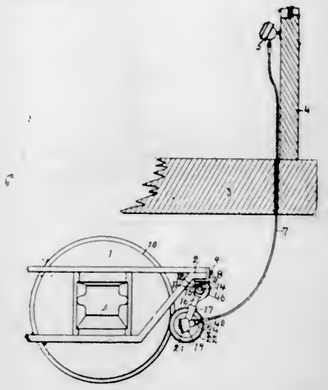


In a brake mechanism, the combination with oppositely disposed brake shoes, of hangers pivotally connected at their lower ends to the brake heads, a live lever, the upper end of which is connected to a brake rod, the lower end connected to and projecting through a brake head and extending below the same, a dead lever pivotally connected with the other brake head and extending below the same, paired links from which the dead lever is supported, extensions on the brake heads, a coil spring extending between said extensions and a turnbuckle connecting the lower ends of the live and dead levers below the break heads and being parallel with the coil spring.

1,169,458. TRANSMISSION FOR SPEED-INDICATORS. JAMES H. BULLARD and EDWIN W. BULLARD, Springfield, Mass.; Frederick H. Bullard and Edwin W. Bullard, executors of said James H. Bullard, deceased, assignors to Allen Webster, Springfield, Mass. Filed Jan. 2, 1909. Serial No. 470,321. (Cl. 235—96.)

1. The combination of a railroad car, in which, when traveling, there is both vertical and horizontal movements as between car body and truck and as between truck and wheels, the wheels having metallic treads, a member having movement toward and from the tread of one of the wheels, a roller mounted on said member and held in yielding contact with the tread approximately at the level of the axle, an indicator on the car body and flexible driving connections between said roller and said indicator.

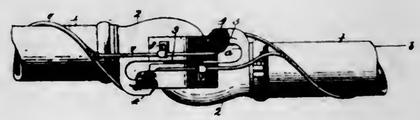
2. The combination of a railway car having car wheels with metallic treads and in which, when traveling, there is both vertical and horizontal movements as between car body and truck, a hanger mounted on the car body and arranged to swing toward and from the tread of one of the car wheels, means to force said hanger toward said tread, a roller supported by said hanger and bearing against said tread, a speed indicator on the car body and flexible driving means extending between said roller and said indicator.



3. In combination, a railroad car, a hanger pivotally mounted and depending adjacent the tread of one of the car wheels, a gear case mounted on the hanger, a roller supported by the hanger and arranged to bear against said face, an indicator mounted on the car body and a flexible shaft extending between the mechanism in the gear case and the indicator.

4. The combination with a railroad car, a hanger, a rotatable roller suitably supported by the hanger, a gear case supported by the hanger, said gear case being adjustable, a spring to force the hanger toward the tread of one of the car wheels, means for securing the gear case in different positions, an indicator on the car body and flexible driving means between the mechanism in the gear case and the indicator.

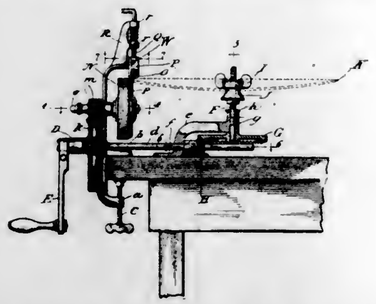
1,169,459. TRAIN-SERVICE COUPLING. ALBERT J. CAMPBELL, Marion, Iowa. Filed Jan. 25, 1915. Serial No. 4,192. (Cl. 173—333.)



1. In a signaling device of the character specified, an air-brake hose in several sections, each section having at each end a coupling-head with complemental clutch members, an electrical conductor in each section extending from one coupling-head to the other and branched at each end, an electrical terminal for each branch, one terminal secured to the inner face of one clutch member and the other terminal at the same end secured to the outer face of the other clutch member, the terminals on coacting clutch members being located to contact when companion heads are interlocked.

2. In a signaling device of the character specified, an air-brake hose in several sections, each section having at each end a coupling-head with complemental clutch members, an electrical conductor in each section extending from one coupling-head to the other and branched at each end, an electrical terminal for each branch, one terminal secured to the inner face of one clutch member and the other terminal at the same end secured to the outer face of the other clutch member, the terminals on coacting clutch members being located to contact when companion heads are interlocked, and clips adapted to hold said electrical conductors in position on said heads.

1,169,460. COLTER OR CULTIVATOR-DISK SHARPENER. FREDERICK ALBERT CARPENTER, Chicago, Ill. Filed June 21, 1915. Serial No. 35,267. (Cl. 51—7.)



1. A sharpening machine comprising a grinding-wheel, speed increasing gearing for revolving the same, a shaft the axis of which is at an angle to that of said grinding-wheel, speed reducing gearing for actuating the same, and means including a nut on said shaft, a head loosely mounted on said shaft having a funnel-shaped bore and having a depression in its bottom that fits over said nut and having the lower portion of its side coniform, and a nut adapted to be screwed onto the upper screw-threaded portion of said head.

2. A sharpening machine comprising a grinding-wheel, a shaft the axis of which is at an angle to that of said wheel, means mounted on said shaft for sustaining and centering a disk, and a device engaging the circumference of said disk opposite said grinding-wheel for removing the bur therefrom.

3. A sharpening machine comprising a grinding-wheel, a shaft the axis of which is at an angle to that of said wheel, means for sustaining and centering a disk on said shaft, a presser-foot for holding the margins of said disk against said wheel, and a device engaging the same side of the disk as said presser-foot for removing the bur from the edge of the disk.

4. A sharpening machine comprising a grinding-wheel, a shaft the axis of which is at an angle to that of said wheel, means for sustaining and centering a disk on said shaft, a presser-foot for holding said disk against said wheel, and an arm projecting from said presser-foot, a shoe on the end of said arm, and a suitable grinding device carried by said shoe and adapted to engage the disk and remove the bur from the edges thereof.

5. A sharpening machine comprising a grinding-wheel, speed increasing gearing for revolving the same, a shaft the axis of which is at an angle to that of said wheel, speed reducing gearing for revolving the same, means mounted on said shaft for loosely sustaining and centering a disk, a presser-foot for holding said disk against said wheel, and a device engaging the edge of the disk opposite said wheel for removing the bur therefrom.

[Claims 6 to 9 not printed in the Gazette.]

1,169,461. METAL FRAME STRUCTURE. ELMER A. CLARK, Joliet, Ill. Filed Jan. 20, 1913. Serial No. 743,041. (Cl. 189—36.)



1. A joint comprising two angle bars wherein the end and side of a flange of one member is recessed to receive the flanges of the other member, one edge of one flange of the second mentioned member is recessed to receive the unrecessed flange of the first-mentioned member, and one of said members provided with a tongue adapted to engage an aperture in the adjacent portion of the other member.

2. A corner joint consisting of two angle bars, 5 and 6, a portion of the end edge and bottom edge of the vertical flange of the bar 5 being cut away, a tongue extending therefrom, a portion of the top of the vertical flange of the bar 6 being cut away, said vertical flange being provided with an aperture to receive said tongue, the horizontal flange of the bar 5 engaging the cutaway portion of the vertical flange of the bar 6, the vertical and horizontal flanges of the bar 6 coöperating with the cut away portions of the vertical flange of the bar 5.

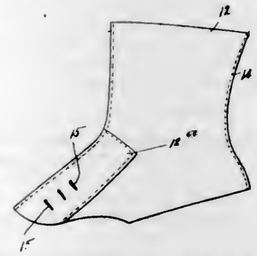
1,169,462. EXPANDED-METAL PACKAGE-ROLL. NORRIS ELMORE CLARK, Plainfield, Conn. Continuation in part of application Serial No. 295,810, filed Jan. 12, 1906. This application filed June 12, 1914. Serial No. 844,628. (Cl. 206—59.)



1. As an article of manufacture, reticulated expanded metal consisting of strands connected together at intervals in staggered arrangement and coiled into a tight roll suitable for handling and shipment.

2. As a new article of manufacture, a tightly coiled roll of longitudinally expanded metal consisting of a plurality of zigzag strands extending from end to end of the roll and connected together at intervals in staggered relation.

1,169,463. TEMPORARY PROTECTOR FOR LASTED SHOE-UPPERS. CHARLES TRAFTON COLE, Brockton, Mass., assignor to Geo. E. Keith Company, Brockton, Mass., a Corporation of Massachusetts. Filed Aug. 17, 1915. Serial No. 45,909. (Cl. 36—72.)

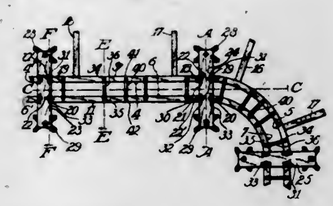


1. A temporary protector composed of a flexible jacket having a tubular portion shaped to conform to and cover the top parts of a lasted shoe upper, and having means at its lower portion whereby it may be coupled to upper closing means employed to hold the upper closed on the last, said lower portion being shaped to cover other parts of the upper.

2. A temporary protector composed of a flexible jacket having a tubular portion shaped to conform to and cover the top parts of a lasted shoe upper, and having a hole or holes in its lower portion formed and arranged to receive one or more of the usual devices employed to hold the upper closed upon the last, said lower portion being shaped to cover other parts of the upper.

3. A temporary protector composed of a flexible jacket having a tubular portion shaped to conform to and cover the top parts of a lasted shoe upper, and having one or more button-holes in one side of the lower portion formed and arranged to receive one or more of the usual buttons of a button shoe, said lower portion being shaped to cover other parts of the upper.

1,169,464. CONCRETE-CURBING FORM. HENRY D. CORNELIUS, Indianapolis, Ind. Filed May 7, 1915. Serial No. 26,624. (Cl. 25—118.)



1. A cement-mold including a side mold form provided with vertically and laterally adjustable suspension devices and a laterally-extending guide and plumbing beam rigidly secured to the mold.

2. A cement-mold including a plurality of trestles comprising each a supported beam having four vertical longitudinal slots therein, and side mold forms provided each with adjusting suspension bolts extending through the slots, a bolt to a slot, and supported by the beam.

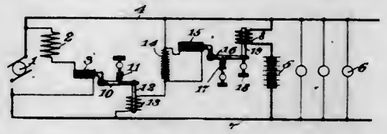
3. A cement-mold including a sectional side mold form comprising an upper section provided with suspension devices and also a plurality of lateral beams, and a lower section provided with hangers for suspending the section on the lower portion of the upper section.

4. A cement-mold including a plurality of oppositely arranged side form sections, a plurality of trestles extending over and suspending the sections, and a plurality of foundation side mold forms removably connected to and suspended by the form sections respectively.

5. A cement-mold including a plurality of side mold forms arranged end to end, each form being provided with a laterally-extending guide and plumbing beam rigidly secured to the beam, the form having also vertically adjustable suspension devices, and means for detachably securing the contiguous ends of the forms rigidly together.

[Claims 6 to 10 not printed in the Gazette.]

1,169,465. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Dec. 29, 1910. Serial No. 599,872. (Cl. 171—313.)



1. Means for regulating a generator comprehending a compressible regulating element; voltage responsive means for controlling the same; and means, including a compressible resistance, for varying the current in the said voltage responsive means depending upon current fluctuations beyond a predetermined value only.

2. Means for regulating a generator comprehending a regulating element; voltage responsive means for actuating the same; a compressible regulating element for affecting the current in said voltage responsive means; and means for controlling the same responsive to current fluctuations beyond a predetermined limit only.

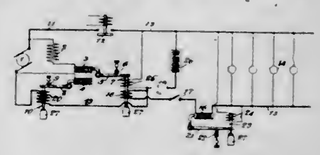
3. Means for regulating a generator comprehending a regulator therefor, comprising compressible means and electroresponsive means tending to hold the generator voltage constant; combined with means for modifying the current in said regulating means depending upon the current beyond a predetermined value only flowing in a circuit supplied by said generator.

4. The combination with a generator and a supply circuit, of a regulator for the generator responsive to voltage fluctuations across the supply circuit, and a controller including a series coil for varying the action of the regulator by current above a predetermined limit supplied by said generator.

5. Means for regulating a generator comprehending a voltage regulator operable above a predetermined generator output, means for electrically varying the adjustment of said voltage regulator, and current operated means governing said last mentioned means and being inoperative below a certain predetermined current.

[Claims 6 to 9 not printed in the Gazette.]

1,169,466. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Apr. 13, 1911. Serial No. 620,741. (Cl. 171—313.)



1. The combination with a generator and a work circuit, of means for regulating the generator responsive to current fluctuations, means for regulating the generator responsive to voltage fluctuations and means for assisting the voltage responsive means affected by fluctuations in the work circuit.

2. The combination of a generator and means for regulating the same responsive to voltage fluctuations, with a work circuit and means whereby the current in the work circuit lowers the voltage generated.

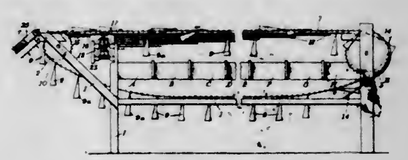
3. The combination with a generator and means for regulating the same responsive to voltage fluctuations, a translation circuit and means whereby the current in said translation circuit affects the voltage regulator to lower the voltage held constant thereby.

4. The combination with a generator and means whereby both current and voltage fluctuations affect the regulation thereof, a translation circuit and means whereby the current in said translation circuit affects the voltage regulation of the generator only.

5. The combination with a generator, a work circuit and means for regulating the generator in accordance with current and voltage fluctuations, of means whereby the voltage regulations only is affected responsive to variations in the work circuit.

[Claims 6 to 12 not printed in the Gazette.]

1,169,467. FRUIT-ASSORTING MACHINE. FRANK W. CUTLER, Hood River county, Oreg., assignor to Cutler Fruit Grader Co., a Corporation of Oregon. Filed Mar. 25, 1915. Serial No. 16,897. (Cl. 130—32.)



1. In an assorting machine, in combination, a traveling conveyer, a series of article carriers moving therewith,

and movable relative thereto, a series of receptacles, and a scale mechanism interposed in the path of travel of said conveyer, and adapted to yieldingly support each carrier as it is moved across said scale mechanism, and to position it relative to the conveyer, according to the weight of the article being carried.

2. In an assorting machine, in combination, a traveling conveyer, a series of article carriers moving therewith, and movable relative thereto, a series of receptacles, a plurality of guide members leading to said receptacles, and a scale mechanism interposed in the course of travel of said conveyer, and adapted to yieldingly support each carrier as it is moved across said scale mechanism, and to select a guide member therefor.

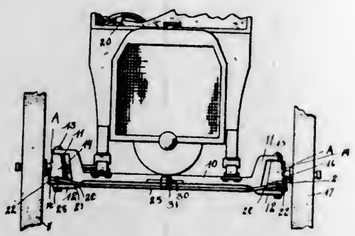
3. In an assorting machine, of the character described, a flexible traveling conveyer, a series of article carriers connected to travel therewith, and movable relative thereto, a series of receiving bins, a plurality of guide members extending successively to each of said several bins, and a scale mechanism positioned to support said carriers as they are moved thereupon, said scale mechanism being adapted to yield according to the weight of the carrier and its contents, and thereby select a guide member therefor.

4. In a fruit assorting machine, in combination, a flexible traveling conveyer, a series of fruit carriers movably attached thereto, a scale mechanism adjacent said conveyer and across which said carriers are moved, said scale mechanism yielding under the weight thereof, a series of fruit bins, and a plurality of superimposed guide members adjacent said scale mechanism, adapted to receive the fruit carriers from said scale mechanism at different vertical positions.

5. A fruit assorting machine comprising in combination, a supporting structure, one or more endless traveling conveyers mounted thereon, a series of fruit carriers attached thereto, and movable relative thereto, a series of fruit receiving bins, a plurality of guide members and a scale mechanism adjacent the receiving ends of said guide members, adapted to receive and yieldingly support said carriers as they are moved across said scale mechanism, said scale mechanism being adapted to yield according to the weight of the carrier and its contents, and to correspondingly direct the carrier to one of said guide members, substantially as described.

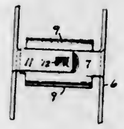
[Claims 6 to 15 not printed in the Gazette.]

1,169,468. STEERING-GEAR FOR AUTOMOBILES. MICHAEL J. DEVANNEY, Bloomsburg, Pa. Filed July 11, 1913, Serial No. 778,542. Renewed Dec. 6, 1915. Serial No. 65,419. (Cl. 21—192.)



In a steering gear, the combination of an axle, a pin mounted on each end of the axle at right angles to the latter, knuckles rotatably mounted on said pins respectively, said knuckles being each provided with a tapered passage through which the pins pass and the major end of said passage being disposed at the lower end of the knuckle whereby said knuckles may be swung bodily in a lateral direction at their lower ends, means for rotating said knuckles simultaneously in the same direction, and means operated by the actuation of the first named means for simultaneously swinging the lower ends of the knuckles in a direction opposite to the direction of steering.

1,169,469. ROLLER-BEARING. ELMER DWIGHT DUNNING, Detroit, Mich. Filed Aug. 30, 1915. Serial No. 47,920. (Cl. 64—62.)



1. In a roller bearing, the combination of inner and outer bearing rings, a series of rollers mounted between the bearing rings, cage rings co-axial with the bearing rings and having resilient interlocking fingers extending across between the bearing rings and between the rollers, said fingers being adapted to be detached at will.

2. In a roller bearing, the combination of inner and outer bearing rings having circumferential thrust shoulders, cylindrical rollers mounted between said rings and each having spherical ends whose center is in the axis of the roller midway its ends, and means to keep the rollers properly spaced between the rings.

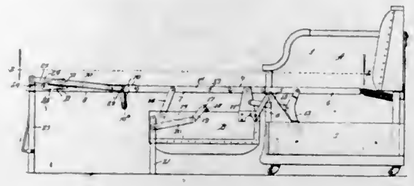
3. In a roller bearing, the combination of inner and outer bearing rings, a series of cylindrical rollers mounted between the rings, sheet metal rings concentric with and between the ends of the bearing rings, and having resilient interlocking fingers extending across between said rings and between the rollers.

4. In a roller bearing, the combination of inner and outer cylindrical bearing rings, a series of cylindrical rollers evenly spaced between the bearing rings, a cage ring between each end of the inner ring and the outer ring adjacent the ends of the rollers, and having a resilient finger extending inwardly from each cage ring between each two rollers and interlocking with a corresponding finger extending from the other cage ring to form guiding and spacing members for the rollers.

5. In a roller bearing, the combination of cylindrical inner and outer bearing rings, a series of cylindrical rollers evenly spaced between the bearing rings, and a cage for holding the rollers in engagement with the inner bearing ring consisting of a radial ring at each end of said rollers and resilient fingers extending at right angles from each ring parallel to each other, the fingers on the one ring having depression and the fingers on the other ring having tongues adapted to be forced into the depressions by the resiliency of the fingers, one of the fingers of each pair having inclined fins extending into contact with said rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,169,470. SOFA-BED, LOUNGE-BED, &c. DARRELL FRANK DYKE, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed July 21, 1913. Serial No. 780,227. (Cl. 5—51.)

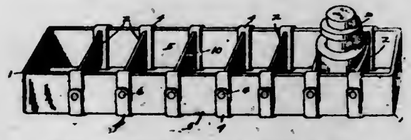


1. In a folding-bed structure, the combination of three main bed-sections, spacing-sections connecting them, pivotal supporting-means for the inner spacing-section, supporting means for the inner main section and the intermediate section, legs connected with the outer main section, links connecting said legs with the outer spacing section, latch-members pivotally connected with the outer bed-section, links connecting said latch-members with the outer spacing-section, and latch-engaging devices carried by the intermediate main section.

2. In a folding-bed structure, the combination with an intermediate main bed-section, an outer main bed-section and a spacing-section connecting them, of legs joined to the outer section and connected together, links connecting said legs to the spacing section, latch-members pivotally connected with the outer section, links connecting the latch-members to the spacing-section, and latch-engaging means carried by the intermediate main section.

3. In a sofa-bed, the combination of a frame, a seat adapted to swing to an inverted position in front of the frame, a folded bed comprising a head-section linked to the frame, an intermediate section linked to the seat, a connecting spacing-section pivotally connected with the seat, an outer main section, an outer spacing-section connecting the outer main section with the intermediate main section, legs connected with the outer main section and linked to the outer spacing-section, latching-devices pivotally connected to the outer main section and links connecting said latch-devices to the outer spacing-section.

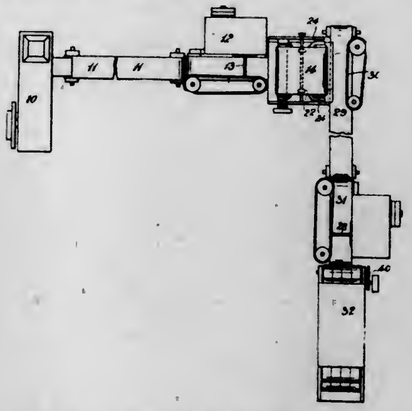
1,169,471. PACKING-FRAME. GERRY E. EMANUEL, Edgerton, Ohio. Filed June 16, 1915. Serial No. 34,394. (Cl. 217—31.)



1. A frame of leather having partitions secured to straps along their centers, the partitions and frame being slightly elastic to cause the straps to turn relative to the sides of the frame and to adhere to the sides when the partitions press against objects in the chambers formed by the partitions.

2. The combination of a frame, leather partitions, and straps of leather, the partitions secured to the straps at central points and operating to turn the straps from the planes of the sides of the frames when the partitions are fixed to cause the straps to bind on the frame.

1,169,472. DOUGH-WORKING MACHINE. LAURENCE EMBREY, Fenton, Stoke-upon-Trent, England. Filed July 26, 1915. Serial No. 42,037. (Cl. 107—9.)



1. Apparatus for working dough having means operable within the mass of a lump of dough for molding said dough by stretching the gluten thereof and means for subsequently imparting shape to said molded lump of dough.

2. Apparatus for working dough having a rotary spindle for molding a lump of dough by coiling the dough under tension thereon, a second rotary spindle, and means for delivering the coiled roll from the first spindle in "end-on" position to the second spindle.

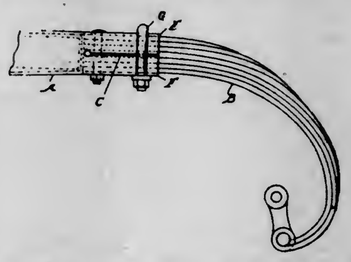
3. Apparatus for working dough having a rotary spindle for molding a lump of dough by coiling the dough under tension thereon, means for extending the coiled roll axially, a second rotary spindle and means for feeding said extended-roll in the "end-on" position to said second roll.

4. Means for shaping a molded piece of dough comprising a plurality of superposed pairs of continuous strips, dividing knives located to operate between said pairs of strips and means for driving the upper set of strips at a lesser speed than the lower set.

5. Means for shaping a molded piece of dough comprising a plurality of superposed pairs of flexible bands having their adjacent faces moving in opposite directions and spaced apart, a plurality of shaped backing bars for the adjacent faces of each of the bands, means for adjusting said bars and means for driving said bands at different circumferential speds.

[Claims 6 to 8 not printed in the Gazette.]

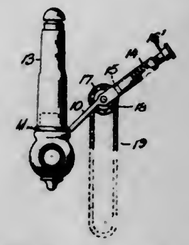
1,169,473. VEHICLE-FRAME. DONALD M. FERGUSON, Detroit, Mich., assignor to General Motors Company, Detroit, Mich., a Corporation of New Jersey. Filed July 23, 1914. Serial No. 852,580. (Cl. 21—182.)



1. In a vehicle frame, the combination with a side sill of channel section, of a cross member engaging the channel of said sill, an extension of said sill beyond said cross member having its web portion slitted, a leaf spring arm inserted in the end of the channel abutting against said cross member, and clamping means for the channel upon said spring arm.

2. In a vehicle frame, the combination of a sill of channel section having the end portion of its connecting web slitted, a spring arm engaging within the end of said sill, a bolt passing through the flanges of the sill and through said arm, and a member clamping the flanges of the sill against said arm, having a portion extending across the open side of the channel.

1,169,474. GAS-IGNITER. PETER PERDOMO FIGUEROA, New York, N. Y. Filed Jan. 26, 1915. Serial No. 4,477. (Cl. 67—20.1.)

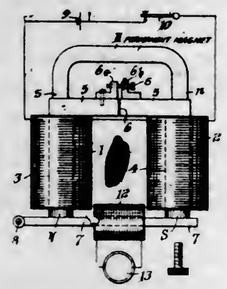


1. In a gas igniter, the combination with a pyrophoric block secured to a gas burner, of a friction wheel impinging the block, a ratchet wheel connected with the friction

wheel, and a chain on the ratchet wheel adapted to operate the wheel in one direction and slip when pulled in the other direction.

2. In a gas igniter, the combination with a pyrophoric block secured adjacent the burner, of a friction wheel impinging on the block and journaled in a bracket carried by the burner, a ratchet wheel on the shaft of the friction wheel and having saw teeth, and an endless chain on the ratchet wheel and adapted to act on the teeth when pulled in one direction and slide over them when reversed.

1,169,475. MAGNETIC APPARATUS. GEORGE P. FINNIGAN, Wilton-on-James, near Richmond, Va. Filed Mar. 26, 1914. Serial No. 827,348. (Cl. 175—323.)



1. The combination with an electro-magnet, of an armature therefor normally held thereby in magnetic contact with a pole thereof in opposition to a force continuously exerted on said armature, and an opposing source of magneto-motive-force operative while said electro-magnet is energized and associated with the magnetic circuit of said electro-magnet for reducing the residual magnetism of said electro-magnet when deënergized, whereby said armature is removed by said force before said opposing source reëstablishes substantial flux.

2. The combination with an electro-magnet, of an armature therefor normally held thereby in contact with a pole thereof in opposition to a force continuously exerted on said armature, and an opposing source of magneto-motive-force operative while said electro-magnet is energized and associated with the magnetic circuit of said electro-magnet reducing the flux through said pole and armature when said electro-magnet is deënergized, whereby said armature is removed by said force before said opposing source reëstablishes substantial flux, the magnetic circuit of least reluctance of said auxiliary source of magneto-motive-force being throgh a pole and the armature of said electro-magnet.

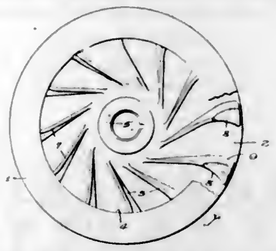
3. The combination with an electro-magnet, of an armature therefor normally held thereby in contact with a pole thereof in opposition to a force continuously exerted on said armature, means producing magnetic reluctance in the magnetic circuit of said electro-magnet, an opposing source of magneto-motive-force operative while said electro-magnet is energized and associated with the magnetic circuit of said electro-magnet, and a magnetic circuit for said auxiliary source including said armature and a pole of said electro-magnet and excluding said magnetic reluctance producing means said opposing source of magneto-motive-force reducing the flux through said pole and armature upon deënergization of said electro-magnet, whereby said armature is removed by said force before said source reestablishes substantial flux.

4. The combination with an electro-magnet, of an armature therefor normally held thereby in contact with a pole thereof in opposition to a force continuously exerted on said armature, and a permanent magnet associated with the magnet circuit of said electro-magnet and having its poles so disposed with respect thereto as to reduce the residual magnetism of said electro-magnet when deënergised.

5. The combination with an electro-magnet having a pair of cores and a yoke therefor, of an armature adapted to be held by said electro-magnet when energized in magnetic contact with the poles thereof, means introducing magnetic reluctance into said yoke, and a permanent magnet associated with the magnetic circuit of said electro-magnet for reducing the residual magnetism thereof when deenergized, whereby said armature is removed by said force before said permanent magnet reëstablishes substantial flux.

[Claims 6 to 9 not printed in the Gazette.]

1,169,476. CENTRIFUGAL FAN. JACOB E. GRAMLICH, Syracuse, N. Y., assignor to Chase Motor Truck Co., Syracuse, N. Y., a Corporation of New York. Filed Mar. 14, 1914. Serial No. 824,691. (Cl. 230—11.)



1. A centrifugal fan comprising a body including front and rear heads, the front head at the receiving end of the fan having an opening, the rear head closing the rear end of the fan, and vanes between the heads of the fan, the portions of the vanes exposed through the receiving opening inclining and having a lead in a forward direction as they approach the axis of the fan, and the portions of the vanes behind the front head extending in radial directions, substantially as and for the purpose set forth.

2. A centrifugal fan comprising a body including front and rear heads, the front head at the receiving end of the fan having an opening, and the rear head closing the rear side of the fan, and vanes between the heads of the fan, the vanes extending in a tangential direction relatively to the axis of the fan and terminating at their inner ends near the center of the fan, the portions of the vanes exposed through the receiving opening having their inner portions cut away along lines extending from the inner margin of the front head at the receiving end of the fan and extending toward the rear head of the fan and inwardly to the inner ends of the vanes, the outer end portions of the vanes lying directly behind the front head, extending in radial directions, substantially as and for the purpose described.

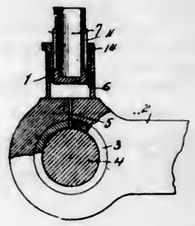
3. A centrifugal fan comprising a body including front and rear heads, the front head at the receiving end of the fan having an opening, and the rear head closing the rear end of the fan, and vanes between the heads of the fan, the vanes extending in tangential directions relatively to the axis of the fan and terminating at their ends near the center of the fan, the vanes being thickened at their outer ends, and the front faces of the thickened outer ends being concave the rear sides of the vanes at their outer ends being convex, substantially as and for the purpose described.

4. A centrifugal fan comprising a body including front and rear heads, the front head at the receiving end of the fan having an opening, the rear head closing the rear end of the fan, and vanes between the heads of the fan, the portions of the vanes exposed through the receiving opening inclining and having a lead in a forward direction as they approach the axis of the fan, and the portions of the vanes between the front end being thickened and extending in radial directions, substantially as and for the purpose specified.

5. A centrifugal fan comprising a body including front and rear heads, the front head at the receiving end of the face having an opening, the rear head closing the rear end of the fan, and vanes between the heads of the fan, the portions of the vanes exposed through the receiving opening inclining and having a lead in a forward direction as they approach the axis of the fan, and the portions of the vanes behind the front head being thickened and extending in radial directions, and the front faces of the thickened portions being concave and forming continuations of the front faces of the inclined leading portions of the vanes, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,169,477. GREASE-CUP. ROBERT B. GREENWAY, San Bernardino, Cal. Filed Apr. 15, 1915. Serial No. 21,516. (Cl. 184—48.)



1. In a grease cup, an outer internally screw-threaded shell, an internally and externally threaded bushing fitted in said shell and provided with a transverse slot, a screw-threaded plug fitted in said bushing and provided with a longitudinal groove, and a spring having one end secured to said shell and having a free end normally extending into said slot and adapted to be normally forced by its tension into said groove when the groove is in register with said slot.

2. In a grease cup, an outer internally screw-threaded shell, an internally and externally threaded bushing fitted in said shell and provided with a transverse slot, a screw-threaded plug fitted in said bushing and provided with a longitudinal groove, a spring having one end secured to said shell and having a free end extending into said slot and adapted to be normally forced by its tension into said groove when the groove registers with said slot, and a lever fulcrumed on said bushing and engaging said spring and adapted to withdraw said spring from said groove.

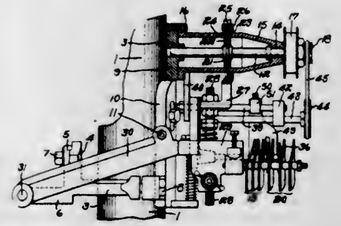
3. In a grease cup, an outer internally screw-threaded shell, an internally and externally threaded bushing fitted in said shell and provided with a transverse slot, a screw-threaded plug fitted in said bushing and having a longitudinal groove, a lever fulcrumed on said bushing and having a slot, and a spring having one end secured to said shell and extending through and slidable in said slot in said lever and having its free end extending into the slot of the bushing and adapted to enter said groove when the groove registers with the slot in the bushing, the lever being adapted, when swung, to withdraw the spring from said groove.

4. In a grease cup, an outer internally screw-threaded shell, an internally and externally threaded bushing fitted in said shell and having a transverse slot, a screw-threaded plug fitted in said bushing and having a longitudinal groove adapted to register with said slot, a lever fulcrumed on said bushing, and a spring having one end secured to said shell and having a free end extending into said slot and adapted to enter said groove and adapted to be withdrawn from said groove by said lever, the tension of said spring normally forcing it into said groove, the spring being interlocked with said lever so as to retain the lever fulcrumed on the bushing.

5. In a grease cup, an outer internally screw-threaded shell, an internally and externally threaded bushing fitted in said shell and having a transverse slot and a peripheral recess, a screw-threaded plug fitted in said bushing and having a longitudinal groove adapted to register with said slot, a lever fulcrumed in said recess, and a spring secured to said shell and interlocking with said lever so as to retain said lever fulcrumed in said recess, the spring having a free end normally extending into said slot and adapted to enter said groove, the tension of the spring normally forcing it into said groove, the lever being adapted to withdraw the spring from said groove.

[Claims 6 to 10 not printed in the Gazette.]

1,169,478. CIRCULAR COMBING-MACHINE. EDGAR GREENWOOD, Bradford, England, assignor to Hiram J. Potter, Brookline, Mass., and John W. Coggeshall, Cranston, R. I. Filed Jan. 12, 1912. Serial No. 670,752. (Cl. 19—17.)



1. A circular combing machine having in combination, large and small circular combs, traveling comb traps or boxes, comb dabbing knives having inclined entrant or receiving edges, means to impart up and down movement to said knives, movable means anterior in action to the said knives and located beneath the inclined edges thereof to position the fibers for the action of said dabbing knives, means to impart surface movement to said anterior means in excess of the speed of movement of said comb traps or boxes, and means to vary the position of said anterior means with respect to the fibers.

2. A circular combing machine having in combination, large and small circular combs, comb dabbing knives having inclined entrant or receiving edges, a driving shaft, connecting means between said shaft and said dabbing knives to impart up and down movement to the latter, rotary adjunctive means anterior in action to said knives and located beneath the inclined edges thereof, and connecting means from said shaft to drive said adjunctive means at a surface speed in excess of the speed of said large circular comb, thereby properly to position fibers for the action of the dabbing knives.

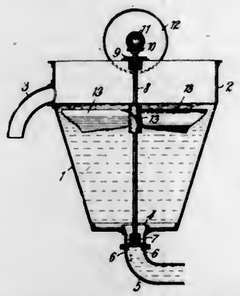
3. A circular combing machine having in combination, large and small circle combs, comb dabbing devices, means to impart up and down movement to said devices, means movable with the large circle comb to direct the fibers to said inclined edges, rotary adjunctive means anterior in action to said dabbing devices and having a surface speed in excess of the speed of said large circle comb, thereby properly to position the fibers for the action of the dabbing devices, and means to vary the position of said rotary adjunctive means with respect to the fibers.

4. A circular combing machine having in combination, large and small circle combs, comb dabbing knives having forward, inclined edges, means to impart up and down movement to said knives, means movable with the large circle comb to direct the fibers thereto, and rotary means anterior in action to said dabbing knives and located in proximity to the forward, inclined edges thereof to position the fibers for the action of said knives and means to drive said rotary means at a speed in excess of that of said combs, thereby to position said fibers.

5. A circular combing machine having in combination, large and small circle combs, traveling comb traps or boxes, comb dabbing devices, means to impart up and down movement thereto, movable means anterior in action to the dabbing devices to position the fibers for the action of said dabbing devices, means to impart surface movement to said means in excess of the speed of movement of said comb traps or boxes, and means to vary the position of said movable means with respect to the fibers.

[Claims 6 to 17 not printed in the Gazette.]

1,169,479. APPARATUS FOR SEPARATING SUBSTANCES OF DIFFERENT SPECIFIC GRAVITIES. ALFRED GRÜNDLER, Berlin, Germany. Filed July 29, 1913. Serial No. 781,723. (Cl. 83—82.)



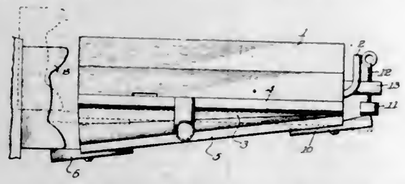
1. A hydraulic classifier consisting of an upwardly expanding receptacle, hydraulic supply means centrally connected to the bottom thereof, said receptacle being provided with a peripheral overflow, a centrally located vertical shaft carrying agitator blades of slight S-shape in transverse view, said blades being located slightly below the overflow level, and the receptacle being free from agitators below the above-specified agitators.

2. A separator comprising a container having an overflow at its upper portion and an inlet at its lower portion for an upwardly directed stream of separating liquid, and blades located in the container below the level of the overflow and mounted to turn about an upright axis, alternate blades being tapered toward the center and toward the periphery respectively.

3. A separator comprising a container having an overflow at its upper portion and an inlet at its lower portion for an upwardly directed stream of separating liquid, and a plurality of blades mounted to turn about an upright axis in the container directly below the level of the overflow, so as to work in the upper layer of the liquid only and to leave the lower layers practically undisturbed, alternate blades being tapered toward the center and toward the periphery respectively.

4. A separator comprising a container having an overflow at its upper portion and an inlet at its lower portion for an upwardly directed stream of separating liquid, and blades mounted to turn in the container below the level of the overflow, alternate blades being tapered toward the center and toward the periphery respectively.

1,169,480. LOST-MOTION DEVICE FOR PLAYER-PIANO ACTIONS. ADOLPH PETER GUSTAFSON, Chicago, Ill., assignor to M. Schulz Co., Chicago, Ill. Filed May 19, 1913. Serial No. 768,492. (Cl. 84—233.)



1. The combination of a pneumatic having its hinged end provided with a projection and a stationary abutment coöperating with said projection and engaging the same when the pneumatic is expanded.

2. The combination of a pneumatic having a movable member, a striking mechanism, said movable member engaging said striking mechanism, a stationary abutment, said movable member having a portion which engages the stationary abutment, and said portion normally resting against said abutment.

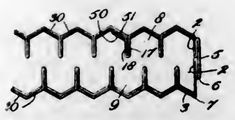
3. The combination with a pneumatic having a swinging leaf, of a projection at the hinged end of said swinging leaf, a screw having its end provided with a device positioned to engage said projection, and a fixed support for fixedly holding said screw so as to cause the same to serve as an abutment for said projection.

4. The combination of a support, a pneumatic secured thereto, a projection on the swinging leaf of said pneumatic at the hinged end thereof, a pin secured to and projecting from said support and a screw passing through said pin and having its end in engagement with said projection on the pneumatic swinging leaf.

5. The combination of an action chest, a pneumatic secured to the under side thereof with the swinging leaf of said pneumatic underneath, a projection at the hinged end of said pneumatic, an abutment carried by said action chest and positioned to engage the projection on said swinging leaf, and a piano action sticker provided with a projecting member adapted for engagement with the free end of said swinging leaf.

[Claims 6 to 12 not printed in the Gazette.]

1,169,481. PROCESS OF MAKING AUTOMOBILE-RADIATOR SECTIONS. HERBERT CHAMPION HARRISON, Lockport, N. Y. Filed Mar. 1, 1915. Serial No. 11,387. (Cl. 113—116.)



1. The method of forming radiator units, which consists in providing a uniformly shaped metal strip of slightly more than twice the length of the finished radiator unit; folding one end of said strip back over on to the main body portion to form an integral end for the finished radiator unit; oppositely folding another portion of said strip on to said main body portion to form another integral end for said unit; placing a suitable division plate between said body portion and folded parts to provide a plurality of cells; securing said folded members together between the ends of the finished unit; and finally soldering together the edges of said folded strip and division plate, substantially as described.

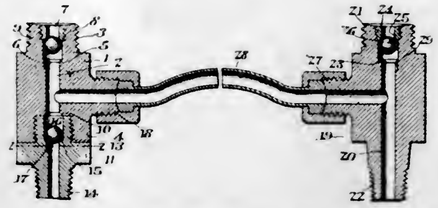
2. The method of forming radiator units which consists in uniformly shaping from end to end a metal strip of sufficient length to form the finished radiator unit; folding the metal of said strip back upon itself a plurality of times at a predetermined point nearer to one end of said strip than to the other to form an integral end member for the finished unit and thereby segregating a portion of said strip from the main body portion; folding the metal of said strip back upon itself a plurality of times, at another predetermined point to form a second integral end member for the finished unit and thus segregating a second portion of said strip from the main body portion; placing in contact with said main body portion a suitable division plate to provide a plurality of cells in the finished unit; folding back onto said division plate both of said segregated portions; and fixing the parts in place by applying solder to the edges of said plates, substantially as described.

3. The steps in the method of making complete radiator units which consists in providing a radiator strip of a length sufficient to form the finished radiator unit; providing said strip from end to end with alternating folded and bent wall members; flattening out at a predetermined point nearer to one end of said strip than to the other a pair of said bent wall members; bending the adjacent folded wall members toward each other to contact with said flattened wall members to form an integral end portion for the finished unit; and suitably finishing said unit, substantially as described.

4. The steps in the method of making complete radiator units which consists in providing a radiator strip of

a length sufficient to form the finished radiator unit; providing said strip from end to end with alternating folded and bent wall members; flattening out at a predetermined point nearer to one end of said strip than to the other a pair of said bent wall members; bending the adjacent folded wall members toward each other to contact with said flattened wall members to form an integral end portion for the finished unit; folding the portion of said strip thus segregated upon the main body portion; forming at a second predetermined point in the length of said strip a similar second integral end member for the finished radiator unit; providing a suitable division plate; and suitably finishing said unit, substantially as described.

1,169,482. LUBRICATOR. HARRY G. HAUPT and CHESTER K. CLAUS, Missoula, Mont. Filed Feb. 12, 1915. Serial No. 7,783. (Cl. 184—58.)



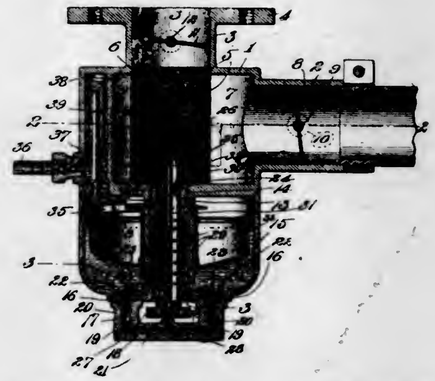
1. A lubricating device for compound pumps comprising a casing connected to the high pressure cylinder and formed with an oil passage, a casing connected to the low pressure cylinder and formed with an oil passage, a conduit establishing communication between said passages and connected with the respective passages between the ends thereof, a valve in the cylinder end of the first passage adapted to close on the discharge stroke of the high pressure piston, a valve in the other end of said passage adapted to open on the discharge stroke of the high pressure piston and the intake stroke of the low pressure piston.

2. A lubricating device for compound pumps comprising a casing connected to the high pressure cylinder and formed with an oil passage, a casing connected to the low pressure cylinder and formed with an oil passage, a conduit establishing communication between said passages and connected with the respective passages between the ends thereof, a valve in the cylinder end of the first passage adapted to close on the discharge stroke of the high pressure piston, a valve in the other end of said passage adapted to open on the discharge stroke of the high pressure piston and the intake stroke of the low pressure piston, and a valve in the outer end of the passage in the second-named casing adapted to close on the compression stroke of the low pressure piston and open on the intake stroke of such piston.

3. A lubricating device for compound pumps comprising a casing connected with the high pressure cylinder and having a lubricant passage therethrough, a valve in said passage adapted to open on the suction stroke of the high pressure piston and close on the compression stroke thereof, a connection between said casing and the low pressure cylinder, and a second valve in said passage adapted to close on the compression stroke of the low pressure piston and open on the intake stroke of said last piston.

4. A lubricating device for compound pumps comprising a casing, connections between said casing and the high and low pressure cylinders respectively of the pump, a valve in said casing under the control of the high pressure piston adapted to close when said piston is on its compression stroke and open when said piston is on its suction stroke, and a valve in said casing under the control of the low pressure piston and adapted to open when the low pressure piston is on its suction stroke and close when said piston is on its compression stroke.

1,169,483. CARBURETER. JOSEPH V. HENLEY, St. Louis, Mo. Filed Apr. 16, 1915. Serial No. 21,681. (Cl. 48—155.1.)



1. In a carbureter, the combination with a casing having an air-inlet, an outlet, and an opening in its bottom, and a central mixing chamber having an open top and bottom and having communication with said outlet, of a perforated wall surrounding said mixing chamber, a fuel atomizer extending through said opening into the said mixing chamber, and means for removably supporting said atomizer adjustably in place.

2. In a carbureter, the combination with a casing having an air-inlet, an outlet, and an opening in its bottom, and a central mixing chamber having an open top and bottom and having communication with said outlet, of a perforated wall surrounding said mixing chamber, a fuel atomizer extending through said opening into the said mixing chamber, means for removably supporting said atomizer rotatably adjustable, and means borne by the lower end of said atomizer for rotatably adjusting said atomizer.

3. In a carbureter, the combination with a casing having an air-inlet, an outlet, and an opening in its bottom, and a central mixing chamber having an open top and bottom and having communication with said outlet, of a perforated wall surrounding said mixing chamber, a bearing in said opening, and a fuel atomizer rotatably supported adjustably in said bearing and extending into the bottom of said mixing chamber.

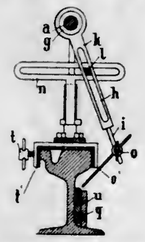
4. In a carbureter, the combination with a casing having an air-inlet, an outlet, and an opening in its bottom, and a central mixing chamber having an open top and bottom and communicating with said outlet, of a perforated wall surrounding said mixing chamber, a bearing in said opening, a hollow member borne by said bearing and having an enlarged chamber extending downwardly therefrom, said chamber having an open bottom, and a fuel atomizer removably supported rotatably adjustable in said bearing, said atomizer extending upwardly into the bottom of said mixing chamber and extending downwardly through said enlarged chamber, the portion of said atomizer in said enlarged chamber being perforated to establish communication from said enlarged chamber to the interior of said atomizer.

5. In a carbureter, the combination with a casing having an air-inlet, an outlet, and an opening in its bottom, and a central mixing chamber having an open top and bottom and communicating with said outlet, of a perforated wall surrounding said mixing chamber, a bearing in said opening, a hollow member borne by said bearing and having an enlarged chamber extending downwardly therefrom, said chamber having an open bottom, a fuel atomizer removably supported adjustably in said bearing, the discharge end of said atomizer extending upwardly into said mixing chamber and the lower end thereof extending downwardly through said enlarged chamber, the portion of said atomizer in said enlarged chamber being perforat-

ed to establish communication from said enlarged chamber to the interior of said atomizer, a fuel receptacle supported by said hollow member, a jet located in said atomizer and having communication with said receptacle, and screw-threaded means borne by the lower end of said atomizer adapted for adjusting the discharge end of said atomizer relative to said jet.

[Claims 6 to 9 not printed in the Gazette.]

1,169,484. PROCESS AND APPARATUS FOR MAKING BRAZED JOINTS. FRIEDRICH WILHELM HEUSER, Gross-Lichterfelde, near Berlin, Germany. Filed Feb. 6, 1914. Serial No. 816,903. (Cl. 219—12.)



1. The method of brazing by use of the electric arc which comprises holding the working carbon so that its axis intersects, at all times, the molten end of the brazing material and simultaneously moving said carbon in a direction parallel to the line of the joint to be brazed while, at the same time, rapidly absorbing heat from portions of the materials to be brazed which lie adjacent to the line of the proposed joint.

2. The method of brazing by use of the electric arc which comprises holding the working carbon so that its axis intersects, at all times, the molten end of the brazing material and simultaneously moving said carbon in a direction parallel to the line of the joint to be brazed while, at the same time, arranging a strip of good heat conducting material adjacent to the materials to be brazed and to the line of the proposed joint whereby the arc is stabilized and heat is rapidly transferred to said heat conducting material.

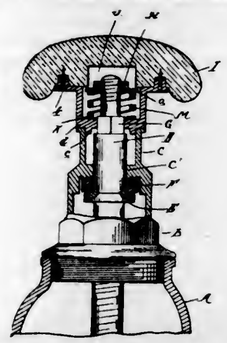
3. An apparatus for producing brazed joints comprising, in combination, means for holding the working carbon at a definite angle with respect to the work, means for moving said carbon in a direction parallel to the line of the joint, and means for rapidly absorbing heat from portions of the materials to be brazed which lie adjacent to the line of the proposed joint.

4. An apparatus for producing brazed joints comprising, in combination, means for holding the working carbon at a definite angle with respect to the work, means for moving said carbon in a direction parallel to the line of the joint, and a strip of good heat conducting material adjacent to the materials to be brazed and to the line of the proposed joint.

5. An apparatus for producing brazed joints comprising, in combination, means for holding the working carbon at a definite angle with respect to the work, means for moving said carbon in a direction parallel to the line of the joint, and a strip of copper adjacent to the materials to be brazed and to the line of the proposed joint.

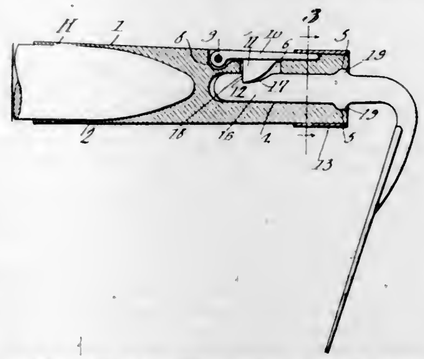
1,169,485. VALVE. FREDERICK W. HODGES, Detroit, Mich., assignor to Detroit Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 11, 1913. Serial No. 747,663. (Cl. 137—4.)

1. In a valve, the combination with a bonnet having an extension, of a valve stem passing centrally through said extension and having a squared portion opposite the outer end of the extension, said end being recessed to form a rim spaced from said stem, opposed shoulders on the bonnet and valve stem, retaining the stem against outward movement, a tubular member seated upon said rim of said extension, a wall at the inner end of said tubular member, having a central aperture engaging the squared portion of the stem, an abutment upon the outer end of the stem, a spring coiled within said tubular member and compressed between said wall and said abutment, and a handle secured to the outer end of the tubular member.



2. In a valve, the combination with a bonnet having an extension, of a valve stem passing centrally through said extension and formed with a squared portion adjacent the outer end of the extension, opposed shoulders on the bonnet and valve stem, retaining the latter against outward movement, a tubular member seated at one end upon said extension, said end being flanged inwardly and engaged with the squared portion of the stem, and the other end of said tubular member being outwardly flanged, a nut upon the outer end of the stem, a spring compressed between said nut and the inwardly extending flange, and a handle secured to the outwardly-extending flange, its inner face recessed to receive the end of said stem.

1,169,486. COMBINATION FARM AND GARDEN TOOL HANDLE. WILLIE ROBERT HOLMES, Lansing, W. Va. Filed Mar. 13, 1915. Serial No. 14,152. (Cl. 55—43.)

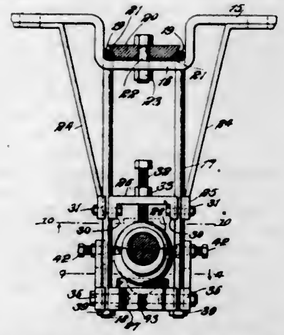


1. In a device of the class described, a handle member having a bore; a tool shank fitted into the said bore; a lever hingedly secured to the handle member and having a lug which is adapted to operably engage the said tool shank; a ferrule oscillatively mounted on the said handle member for retaining the hinged lever in its locked position, and having a slot formed therein to allow the free end of the said lever to pass therethrough to unlocked position when the said ferrule has been oscillated so as to move the said slot into the path of travel of the free end of the hinged lever.

2. In a device of the character described, a handle member having an axial bore; a tool shank fitted into the said bore; means for holding the tool shank against rotation relative to the said handle member; a transverse shoulder formed in the said tool shank; a lever hingedly secured to the said handle member and having a lug adjacent its hinged end, which lug is adapted to engage the said transverse shoulder to lock the tool shank to the said handle member; a ferrule oscillatively secured to the said handle member and adapted to engage the free end of the hinged lever to retain the said lever in its locked position, said ferrule having a longitudinal slot formed therein to allow the free end of the hinged lever to pass therethrough to unlocked position, when the ferrule has been oscillated so as to move the said longitudinal slot into the path of travel of the free end of the hinged lever.

3. In a device of the class described, a handle; a casing secured to the handle, said casing having a relatively shallow elongated peripheral groove, an axial bore extending inwardly from one end thereof and a radial recess communicating with both the groove and the bore, said axial bore communicating adjacent its open end, with a plurality of radial slots; a lever hingedly secured to the cylindrical casing; an outstanding lug secured to said lever; a shank having a tool secured thereto; a shoulder formed in one end of the shank, said shoulder to be operably engaged by the outstanding lug of the lever; a plurality of radial lugs extending from the shank to operably engage the radial slots of the casing; a ferrule having diametrically opposed transversely elongated slots and a relatively broad longitudinal slot extending inwardly from one end thereof; diametrically opposed radial pins secured to the cylindrical casing to operably engage the transversely elongated slots of the ferrule to oscillatively secure the ferrule to the cylindrical casing, in order to permit the relatively broad longitudinal slot to be moved to and from registration with the free end of the lever.

1,169,487. SHAFT-HANGER. CHARLES J. JACKSON, Easton, Pa. Filed July 6, 1915. Serial No. 38,058. (Cl. 64—14.)



1. A shaft hanger comprising a base plate, rod-like standards carried thereby, a cross head and saddle plate carried by said standards and adapted to support a bearing, and side braces extending between the remote ends of said base plate and the intermediate portions of said standards.

2. A device of the class described comprising a base plate with a bridged central portion, U-shaped standards carried by the bridged portion of said base plate and projecting therefrom, and means carried by said standards adapted to support a bearing.

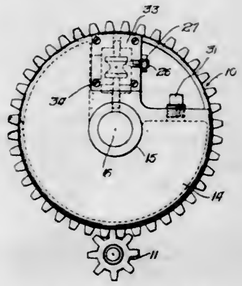
3. A device of the class described comprising a base plate with a bridged central portion, connected standards carried by said base plate with the connected portions thereof extending beneath the bridged portion of said base plate, an anchoring plate with beveled sides carried by the bridged portion of said base plate and wedgedly engaging the connected portions of said standards and means carried by said standards adapted to support a bearing.

4. A device of the class described comprising a base plate with a bridged central portion, connected standards carried by said base plate with the connected portions thereof extending within the bridged portion of said base plate, and an anchoring plate with beveled sides carried by the bridged portion of said base plate and wedgedly engaging the connected portions of said standards, means carried by said standards adapted to support a bearing, and side braces engaging the ends of said base plate and the intermediate portions of said standards.

5. A device of the class described comprising a base plate with a bridged central portion, U-shaped bolts secured to the bridged central portion and forming outstanding standards, and an anchoring plate secured to the bridged portion of said base plate and wedgedly engaging said standards.

[Claims 6 to 8 not printed in the Gazette.]

1,169,488. SELF-LUBRICATING GEAR-WHEEL. AUGUST E. JOHNSON, Elgin, Ill. Filed Dec. 18, 1914. Serial No. 877,844. (Cl. 64—26.)



1. A gear wheel provided with a self-contained reservoir, and provided in its toothed rim with a feed opening, and a feed pin adapted to reciprocate through said opening to feed a lubricant from said reservoir to the toothed periphery of the wheel.

2. A hollow gear wheel formed to provide a self-contained reservoir and a feed chamber in communication therewith, and provided with a feed opening leading from said feed chamber to the toothed periphery of the wheel, a lubricant feeding piece freely slidable through said chamber and said opening and a guide for the inner end of said piece.

3. A gear wheel provided with a self-contained reservoir, and provided in its toothed rim with a feed opening, a feed pin adapted to reciprocate through said opening to feed a lubricant from said reservoir to the toothed periphery of the wheel, and means to vary the throw of said feed pin.

4. A gear wheel provided with a self-contained reservoir and provided in its toothed rim with a feed opening, a feed pin adapted to reciprocate through said feed opening to feed a lubricant from said reservoir to the toothed periphery of the wheel, and means to adjust the throw of said feed pin comprising a part on the pin having opposed tapered surfaces and a screw-threaded adjusting stud adapted to extend between said opposed tapered surfaces.

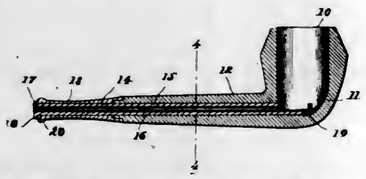
5. A gear wheel and a shaft on which said wheel rotates, with means for lubricating the toothed periphery of said wheel and the shaft bearing, comprising a self contained reservoir in said wheel with feed openings leading therefrom to said toothed periphery and said bearing, and a feed member adapted to reciprocate alternately through said openings.

[Claims 6 to 11 not printed in the Gazette.]

1,169,489. TOBACCO-PIPE. MELVIN N. JORDON and ALFRED GOAD, Stringtown, Okla. Filed Sept. 18, 1914. Serial No. 862,369. (Cl. 131—12.)

A tobacco pipe having a cleaning device consisting of upper and lower stem sections providing a tubular pas-

sage, said lower stem section projecting beyond the upper stem section and having its inner end extending into the bowl, a projection on the inner end of the lower stem section and adapted to engage the inner end of the upper stem section to work the removal of the upper stem section from the shank of the bowl of the pipe and mouthpiece of the pipe when the lower stem section is removed from the shank and mouthpiece, the projection on the in-



ner end of the lower section being normally spaced a distance from the inner end of the upper section for permitting nicotin and the like being collected in the extended portion of the lower stem section, and said projection when engaging with the upper stem section serving to close the inner end of the tubular passage for preventing any accidental displacement of the nicotin therefrom during the removal from the pipe.

1,169,490. SANITARY PAD OR BANDAGE. IDA M. JOSEPH, Chicago, Ill., assignor to Sol. H. Shoninger, Chicago, Ill. Filed May 18, 1912. Serial No. 698,331. (Cl. 128—5.)



1. A sanitary pad or bandage comprising a filling made of relatively narrow strips of absorbent paper, one or more surface layers of absorbent paper and a reinforcing paper running substantially the entire length of the bandage for strengthening the same.

2. A sanitary pad or bandage comprising a filling composed of a mass of narrow absorbent paper strips, one or more relatively wide surface layers of absorbent paper and a layer or layers of reinforcing paper placed between said narrow strips and said surface layers and running substantially the entire length of the bandage.

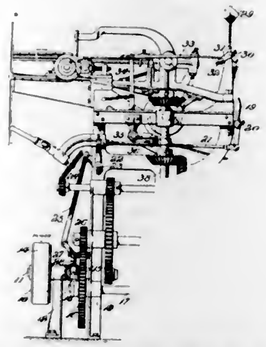
3. A sanitary bandage comprising a pad portion consisting of a mass of relatively narrow strips of absorbent paper inclosed in an inner wrapping of absorbent paper of substantially the same length as the mass of strips and an outer wrapping of absorbent paper inclosing the strips and the inner wrapping and extending beyond the same at each end of the bandage.

4. A sanitary pad or bandage composed entirely of paper, comprising a filling of loose, fluffy absorbent paper, one or more surface layers of absorbent paper and a layer or layers of reinforcing paper extending substantially the entire length of the bandage.

5. A sanitary pad or bandage comprising one or more relatively wide receptive surface layers of absorbent paper adapted to rapidly diffuse fluid discharges thereon and a filling composed of a fluffy mass of relatively narrow absorbent paper strips adapted to receive said discharges from the receptive surface layers, the said pad or bandage being adapted to be readily compressed when immersed in water.

1,169,491. AUTOMATIC STOP MECHANISM. EDWARD R. KAST, Pearl River, N. Y., assignor to Kast Inserting & Gathering Machine Company, New York, N. Y., a Corporation of Delaware. Original application filed Mar. 10, 1913, Serial No. 753,362. Divided and this application filed July 14, 1915. Serial No. 39,811. (Cl. 74—46.)

1. In a device of the character described, the combination of a clutch, mechanism for automatically operating the same including a normally stationary member, a second member rotatable above the first but normally out of engagement therewith, and non-rotating means normally out of engagement with the second member and operable to move the said member into engagement with the first member, whereby the latter participates in the movement of the former to operate the clutch.



2. In a device of the character described, the combination of a clutch, mechanism for automatically operating the same including a normally stationary member, a second member rotatable above the first but normally out of engagement therewith, a pin carried by said second member, and non-rotating means normally out of engagement with said pin and operable to move the pin into position to engage said first member, whereby the latter participates in the movement of the former to operate the clutch.

3. In a device of the character described, the combination of a clutch, mechanism for automatically operating the same, including a normally stationary member, a second member rotatable above the first but normally out of engagement therewith, a pin carried by said second member, means moving said pin into position to engage said first member, whereby the latter participates in the movement of the former to operate the clutch, and a cam engaging said pin and returning it to its original position.

4. In a device of the character described, the combination of a clutch, mechanism for automatically operating the same including a normally stationary member, a second member rotatable above the first but normally out of engagement therewith, a vertically movable pin carried by said second member, means engaging the upper end of said pin and moving the same into position to engage said first member, said first member being provided with a cam surface that engages the lower end of said pin and returns it to its original position.

5. In combination, a movable element, mechanism for automatically operating the same including a normally stationary member, a second member rotatable above the first but normally out of engagement therewith, and non-rotating means normally out of engagement with the second member and operable to move the said member into engagement with the first member, whereby the latter participates in the movement of the former to operate the movable element.

[Claims 6 to 9 not printed in the Gazette.]

1,169,492. APPARATUS FOR FACILITATING READING. IGNACZ KAUFMANN, London, England. Filed Dec. 29, 1913. Serial No. 809,410. (Cl. 88—39.)

1. A portable device for facilitating reading comprising a support adapted to hold a paper or other matter to be read and permit the said matter to be moved relative thereto, an arm pivoted to the support, a lens pivoted to the arm and adapted to swing substantially in its plane, and a second pivot supporting the lens permitting the lens to rotate substantially upon its major axis.

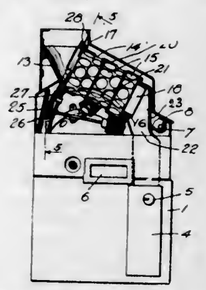
2. A portable device for facilitating reading comprising a handle formed in two parts between which the matter to be read may be inserted, means for separating said parts, a lorgnette, eye-glass, or the like and a support therefor hingedly secured to one of said members.



3. A portable device for facilitating reading comprising a handle formed in two parts hingedly secured to one another, a spring for normally holding said parts together, means for separating said parts for the purpose of inserting between them the matter to be viewed, a lorgnette, eye-glass, or the like, and a support therefor hingedly secured to one of said members.

4. A portable device for facilitating reading comprising a handle consisting of two members hingedly secured together, means for separating said members for the purpose of inserting between them the matter to be viewed, a support hingedly secured to one of said members and a lorgnette, eye-glass, or the like, pivotally connected to said support.

1,169,493. COIN AND TICKET SEPARATING MACHINE. FRANK B. KENNEDY, New Haven, Conn., assignor to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed July 5, 1912. Serial No. 707,662. (Cl. 133—3.)



1. In an apparatus for separating coins from tickets, a separator provided with discharge apertures of a size to permit the passage of coins but to prevent the passage of tickets, and with another discharge aperture for tickets, said separator having means to retard the passage of the coins toward said ticket discharge aperture without preventing tickets from passing through such aperture.

2. In an apparatus for separating coins from tickets, a separator provided with discharge apertures of a size to permit the passage of coins but to prevent the passage of tickets and with another discharge aperture for tickets located beyond the discharge apertures for the coins, and means arranged between the two kinds of apertures for retarding the movement of the coins toward the ticket discharge aperture without preventing the movement of the tickets toward said ticket discharge aperture.

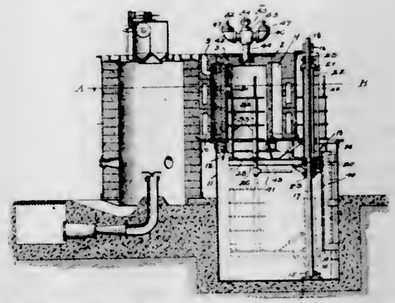
3. In an apparatus for separating coins from tickets, a separator provided with discharge apertures of a size to permit the passage of coins but to prevent the passage of tickets and with another discharge aperture for tickets located beyond the discharge aperture for the coins, said separator having movement tending to cause both coins and tickets to move toward said ticket discharge aperture, and means arranged between the two kinds of apertures for retarding the movement of coins toward the ticket discharge aperture and causing the coins to pass through the coin discharge aperture.

4. In coin and ticket separating apparatus, the combination of a rotary separator provided with discharge apertures for the coins, a discharge aperture for tickets, and means for obstructing the movement of the coins away from their discharge apertures toward the ticket discharge apertures.

5. In apparatus for separating coins and tickets, the combination of a separator provided with discharge openings for the coins and a larger discharge opening for tickets, means for supporting and rotating the separator on an inclined axis, whereby the direction of gravitation of the coins and tickets is across the coin apertures toward the ticket aperture, and means located between the coin apertures and the ticket aperture for obstructing the flow of coins toward the ticket discharge aperture.

[Claims 6 to 19 not printed in the Gazette.]

1,169,494. ANNEALING-FURNACE. CHARLES F. KENWORTHY, Waterbury, Conn. Filed Sept. 28, 1914. Serial No. 863,811. (Cl. 148—16.)



1. In a device of the character described, the combination with an annealing chamber; means for heating the same without admitting the products of combustion thereto; means for automatically freeing said chamber from steam or liquid comprising a valve held on its seat by means that will withstand a predetermined pressure; and means for breaking a vacuum if formed therein comprising a valve similar to the one above referred to, but operating in the opposite direction.

2. In a device of the character described, the combination with an annealing chamber; of a liquid tank beneath said annealing chamber; means for loading and unloading said annealing chamber, said means comprising a plurality of platforms; means for operating said platform, whereby the same may be moved in a line substantially parallel with said annealing chamber and in a path at substantially a right angle thereto, a portion of said means being upon the outside of said annealing chamber and substantially parallel therewith.

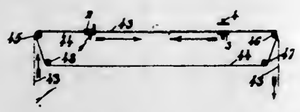
3. In a device of the character described, the combination with an annealing chamber; of a liquid tank beneath said annealing chamber; means for loading and unloading said annealing chamber, said means comprising a movable cylinder, a fixed piston, a piston head on said piston and within said cylinder, a plurality of platforms connected with said cylinder at one end; means for limiting the rotary movement of said platforms about said piston; and means for preventing the rotation of said platforms about said piston when the same are being moved in a direction substantially parallel therewith.

4. In a device of the character described, the combination with an annealing chamber; of a liquid tank beneath

said annealing chamber; means for loading and unloading said annealing chamber, said means comprising a plurality of platforms having a fixed relation to each other; means for operating said platforms, whereby the same may be moved as a unit in a line substantially parallel with said annealing chamber, and in a path at substantially a right angle thereto; and means for securing a pyrometer thermo-couple to each of said platforms and protecting the leads thereto from contact with the liquid in said tank during the movement of said platforms.

5. In a device of the character described, the combination with an annealing chamber; of a liquid tank beneath said annealing chamber; means for loading and unloading said annealing chamber, said means comprising a platform; means for operating the same; a pyrometer thermo-couple and means for securing the same to said platform and protecting the leads thereto from contact with the liquid in said tank during the movement of said platform.

1,169,495. MACHINE FOR MARKING WEBS OF FABRIC, PAPER, AND THE LIKE. ERNST KESSLER, Stuttgart, Germany. Filed Dec. 30, 1914. Serial No. 879,725. (Cl. 216—29.)



1. In a machine for marking webs of fabric or the like, the combination with a pair of clamping means reciprocating in line with each other and in opposite directions toward and away from each other, of means to throw the clamping means alternately in clamping engagement with the web for feeding the same, a movable carrier adapted to support the web being fed substantially over the whole part thereof which is engaged by the clamping means and located in position to have the web clamped thereto by the clamping means, and means to apply marks to the web while being fed by the clamping means.

2. In a machine for marking webs of fabric or the like, the combination with a pair of clamping members, of means to reciprocate said clamping members in line with each other and in opposite directions toward and away from each other, means for alternately throwing the clamping members into clamping engagement with the web being fed between the same, and means to apply marks to the web while being fed through the plane.

3. In a machine for marking webs of fabric or the like, the combination with a pair of clamping members, of connections between said clamping members for movement in opposite directions, common means to reciprocate said clamping members in line with each other and in opposite directions toward and away from each other, means for alternately throwing the clamping members into clamping engagement with the web being fed between the same, and means to apply marks to the web while being fed through the plane.

4. In a machine for marking webs of fabric or the like, the combination with a pair of clamping means reciprocating in line with each other and in opposite directions toward and away from each other, of means to throw the clamping means alternately in clamping engagement with the web for feeding the same, a movable carrier adapted to support the web being fed substantially over the whole part thereof which is engaged by the clamping means and located in position to have the web clamped thereto by the clamping means, a connection between one of said clamping means and the carrier adapted when reciprocating the clamping means and during both strokes thereof to impart to the carrier movement in the feeding direction, and means to apply marks to the web while being fed by the clamping means.

5. In a machine for marking webs of fabric or the like, the combination with a pair of clamping means reciprocating in line with each other and in opposite directions toward and away from each other, of means to throw the clamping means alternately in clamping engagement with the web for feeding the same, a movable band adapted to support the web being fed substantially over the whole part thereof which is engaged by the clamping means and located in position to have the web clamped thereto by the clamping means, rolls on which said band is wound, chain gearings and clutches connecting one of said clamping means and rolls and adapted during both strokes of the clamping means to impart to the roll unwinding rotary movement in the same direction for feeding the band together with the web, and means to apply marks to the web while being fed by the clamping means.

[Claims 6 to 12 not printed in the Gazette.]

1,169,496. FOLDING STREET-WRENCH. HARRY A. KNAUFF, Pittsburgh, Pa. Filed Jan. 27, 1915. Serial No. 4,727. (Cl. 81—177.)

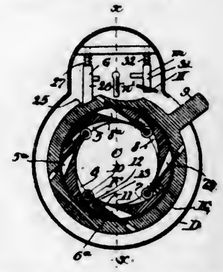


1. In a device of the character described, a plurality of rod members connected by a hinge member, one of said rod members being of less cross sectional area than the hinge member, a sleeve member surrounding the joined contiguous ends of the rod members and hinge member, said sleeve member having internal means of support on the hinge member.

2. In a device of the character described, a plurality of rod members connected by a hinge member, a sleeve member surrounding the joined contiguous ends of the rod members and hinge member, said hinge member having a shouldered face, and said sleeve member having an internal stop adapted to engage said face of the hinge member.

1,169,497. DEVICE FOR FASTENING ELECTRIC-LIGHT BULBS TO A SOCKET. CLARENCE E. KOHLMANN, Fresno, Cal. Filed May 20, 1915. Serial No. 29,430. (Cl. 173—356.)

1. The combination of an inclosed box having a circular hole therein, a ring member within and attached to such box with the hole in such member registering with the hole in such box, having elongated recesses in the inner walls of such ring with the depth at one end greater than the depth at the other end and a hole through such ring member connecting with the large end of such recess, a roller fitted into such recess, such roller being of such diameter that when it is within the larger end of such recess it is between the inner wall and outer wall of such ring member and as it is moved toward the smaller end of such recess a section thereof extends beyond the inner wall of such ring, a collar normally free to rotate around such ring member, a wire pivoted to the roller at one end and slidingly pivoted to the collar at the other end, means for limiting the rotation of such collar means for locking such collar so it cannot rotate, means for connecting such box to an electric light socket, all substantially as described.

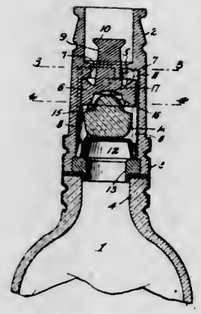


2. In combination, an electric light socket, an electric light bulb, screw threads on such socket and bulb constructed to coöperate, an auxiliary member consisting of an inclosed box, a ring within such box and attached thereto, such ring having an inside diameter to permit free access of the screw portion of such bulb, a hole through the top and bottom of such box registering with the hole in the ring, a collar constructed to fit around the outside of the lower portion of such socket and attached to such box so the hole in the ring will register with the screw hole in such socket, means for attaching such collar to the socket, a plurality of rollers, a plurality of elongated recesses in the inner wall of such ring of uniformly increasing depth, the depth at the deepest end being not less than the diameter of such rollers, and the width of such recess being the length of such roller, a collar normally free to rotate around said ring, holes from the larger ends of such recesses through the outside walls of such ring, wires slidingly fitted within such holes slidingly pivoted at one end to such collar, and pivoted at the other end to such rollers, means for holding such rollers normally in a position so an arc thereof is outside of the inside wall of such ring, means for locking such collar to such box, all substantially as described.

3. In combination, an electric light socket, an electric light bulb, screw threads on such socket and bulb constructed to coöperate, an auxiliary member consisting of an inclosed box, a ring within such box and attached thereto, such ring having an inside diameter to permit free access of the screw portion of such bulb, a hole through the top and bottom of such box registering with the hole in the ring, a collar constructed to fit around the outside of the lower portion of such socket and attached to such box so the hole in the ring will register with the screw hole in such socket, a strap attached to one side of the box, which is passed over the top of the socket and through a hole in such box, and means for locking such strap within such hole, a plurality of rollers, a plurality of elongated recesses in the inner wall of such ring of uniformly increasing depth, the depth at the deepest end being not less than the diameter of such rollers, and the width of such recesses being the length of such roller, a collar normally free to rotate around said ring, holes from the larger ends of such recesses through the outside walls of such ring, wires slidingly fitted within such holes, slidingly pivoted at one end to such collar and pivoted at the other end to such rollers, means for holding such rollers normally in a position so an arc thereof is outside of the inside wall of such ring, means for locking such collar to such box, all substantially as described.

4. In combination, an electric light socket, an electric light bulb, screw threads on such socket and bulb constructed to coöperate, an auxiliary member consisting of an inclosed box, a ring within such box and attached thereto such ring having an inside diameter to permit free access of the screw portion of such bulb, a hole through the top and bottom of such box registering with the hole in the ring, a collar constructed to fit around the outside of the lower portion of such socket and attached to such box so the hole in the ring will register with the screw hole in such socket, means for attaching such collar to the socket a plurality of rollers, a plurality of elongated recesses in the inner wall of such ring of uniformly increasing depth, the depth at the deepest end being not less than the diameter of such rollers, and the width of such recess being the length of such roller, a collar normally free to rotate around said ring, holes from the larger ends of such recesses through the outside walls of such ring, wires slidingly fitted within such holes, slidingly pivoted at one end to such collar, and pivoted at the other end to such rollers, means for holding such rollers normally in a position so an arc thereof is outside of the inside wall of such ring, means for locking such collar to such box consisting of an indent in the outside wall of such collar, a sliding member normally held in engagement with such indent, a keyhole through such box, and an independent key constructed to enter such keyhole and release such sliding member from such recess and means for moving such collar in a position to hold such rollers in the deepest portion of such recesses, all substantially as described.

1,169,498. NON-REFILLABLE BOTTLE. JOSEPH D. LACROIX, Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Mar. 4, 1912. Serial No. 681,403. (Cl. 215—62.)

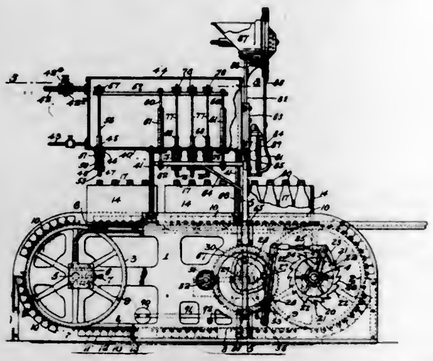


1. In a non-refillable bottle, the combination, with a bottle body having a neck-portion, a separate valve seat member arranged to rest on the body portion of the bottle, and a neck-portion having a rebate at its lower end within which the valve seat is recessed, and having a plurality of inward projecting arms at its upper portion below the mouth, of a baffle device arranged to be introduced from the lower end of the neck portion and to be secured with its upper surface in contact with the inward projecting arms, said baffle device having an upward extending portion projecting into the upper neck portion of the bottle and provided with an outward extending flange, means for securing the neck portion to the bottle and valve mechanism below the baffle and arranged to close the valve seat opening.

2. In a non-refillable bottle, the combination, with a bottle body having a neck-portion, a valve seat member arranged to rest on the body portion of the bottle, and a neck-portion arranged to engage the valve seat, said neck-portion having a plurality of inward projecting arms at its upper portion and below its mouth, of a baffle device arranged to be introduced from the lower end of the neck-portion and to be secured with its upper surface in contact with the inward projecting arms, said baffle device having a socket in its lower face, a weight having an enlarged lower end with a convexly curved bottom and having a contracted cam-like projection at its upper end arranged to enter and rock in the socket, and a valve arranged to rest on the valve seat and having an upwardly sloping periphery on which it may tilt against the inside of the neck-portion, the cam-like projection and socket being so constructed and arranged relative to each other that as the bottle is tilted said weight will rock freely in said socket and slidingly engage the valve in radial lines

between the center of the valve and that side of the valve which is uppermost in the tilted position of the bottle, and also, at or about the horizontal position of the bottle, will be abruptly tilted to or from the valve as the case may be.

1,169,499. PACKAGING-MACHINE. NORBERT M. LA PORTE, Baltimore, Md., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Aug. 6, 1910. Serial No. 575,922. (Cl. 226—28.)



1. A machine for packaging liquids, including, in combination, a primary filling apparatus arranged to deliver to a container a primary filling charge, a secondary filling mechanism arranged to remove a part of the primary charge or to supply a supplemental charge thereto, whereby each container is finally charged to a predetermined level, and means for advancing containers while open, from the primary filling mechanism to the secondary filling mechanism.

2. A packaging machine including in combination a filling mechanism, an endless carrier provided with a plurality of positioning platforms each adapted to support a case holding a plurality of containers, each platform being less in size than the interior of the case placed thereon and being made up of a plurality of flexibly connected blocks, and means for giving the carrier a step-by-step advancing movement to present the containers in the cases to the filling mechanism.

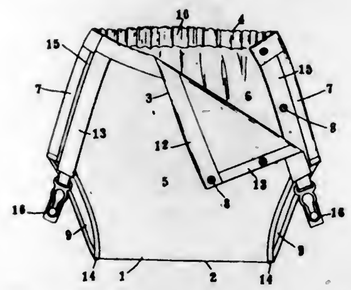
3. A packaging machine including in combination a filling mechanism, an endless carrier provided with a plurality of positioning platforms each adapted to support a case holding a plurality of containers, each platform being less in size than the interior of the case placed thereon and being made up of a plurality of flexibly connected grooved blocks, and means for giving the carrier a step-by-step advancing movement to present the containers in the cases to the filling mechanism.

4. A packaging machine including in combination a filling mechanism, an endless carrier provided with a plurality of positioning platforms each adapted to support a case holding a plurality of containers, each platform being less in size than the interior of the case and being made up of a plurality of flexibly connected grooved removable blocks, and means for giving the carrier a step-by-step advancing movement to present the containers in the cases to the filling mechanism.

5. A packaging machine including in combination an endless carrier provided with a plurality of positioning platforms each adapted to support a case holding a plurality of containers, each platform being less in size than the interior of the case and consisting of a plurality of flexibly connected blocks, means for giving the carrier a step-by-step variable advancing movement to compensate for the spaces between the cases, and a filling mechanism comprising a row of filling devices arranged crosswise of the line of movement of the carrier.

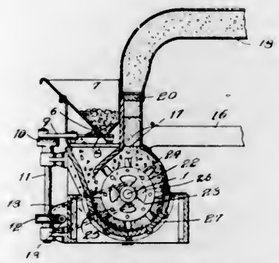
[Claims 6 to 20 not printed in the Gazette.]

1,169,500. CHILD'S GARMENT. NATHAN C. LEAVITT, Newark, N. J., and ISADORE MINK, Brooklyn, N. Y.; said Mink assignor to said Leavitt. Filed Mar. 24, 1915. Serial No. 16,796. (Cl. 2—131.)



The hereindescribed child's garment, comprising a body portion adapted to be folded transversely of its middle and having reinforcing hems at the end portions of its side edges, the middle portions of said side edges being adapted to form leg holes and the hem at one end portion of each side edge adapted to superpose flatwise upon the opposite end portion of the same edge, means on said hems for fastening the end portions of each side edge flatwise together when so superposed, and garters secured to the ends next the leg holes of two of said hems at the opposite side edges and projecting therefrom in substantial alinement with said hems, whereby when the garment is worn with the pairs of hems fastened together as described the said garters hang downward from the lower end of said pairs of superposed hems thus fastened together in substantial alinement therewith and are supported thereby.

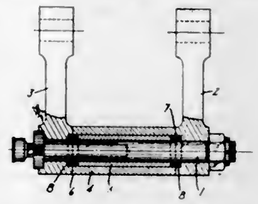
1,169,501. PULVERIZING APPARATUS. WILLIAM K. LIGGETT, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Original application filed Feb. 18, 1907, Serial No. 357,914. Divided and this application filed Apr. 9, 1908, Serial No. 426,150. Renewed June 17, 1915. Serial No. 34,738. (Cl. 83—11.)



1. In a pulverizing apparatus, the combination of a casing having a grinding surface, a rotary horizontal shaft mounted in the casing, a hammer-carrying mechanism mounted on the shaft and formed with a chamber 26 concentric with the axis and open at both ends, the chamber having radial openings at intervals throughout its length, a series of hammers mounted on the hammer-carrying mechanism, and adapted to coöperate with the said grinding surface, means in the planes of rotation of the hammers for supplying to the casing material to be pulverized, and means for feeding material to the said chamber 26 at both ends thereof, the material fed to the chamber passing out through the radial openings to be acted upon by the hammers.

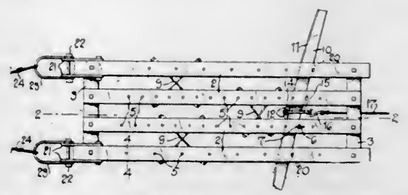
2. In a pulverizing apparatus, the combination of a casing, a rotating pulverizing element mounted therein, arranged to act also as a fan, a duct through which the material is carried along with the air currents produced by said rotating element, the duct expanding immediately above the casing, and a deflector 20 situated in the duct directly above and opposite the opening into the casing and concaved downward to arrest the larger particles of material carried out of the casing and to return them thereto through the said duct, substantially as set forth.

1,169,502. SHACKLE. HENRY G. MCCOMB, New York, N. Y., assignor to General Vehicle Company, Incorporated, a Corporation of New York. Filed Nov. 1, 1913. Serial No. 798,673. (Cl. 267—37.)



The combination in a shackle, of a pair of parallel links having openings, a bolt extending through the openings, a member having an eye which surrounds the bolt between the links and is adapted to oscillate thereon, the ends of said member being in engagement with the links, a bearing sleeve in the eye which terminates short of the ends of the eye to form annular recesses, the opposed faces of the links being counterbored to also form annular recesses which coöperate with the first named recesses to define a chamber surrounding the bolt at each end of the eye, and a washer in each chamber, said washer being entirely covered by the eye and links thereby preventing the admission of dirt to the bearing surfaces between the sleeve and the bolt.

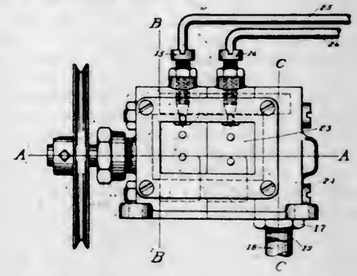
1,169,503. STUMP-EXTRACTOR. FRANK MCCORMICK, Monroe, Wash. Filed Sept. 26, 1914. Serial No. 863,734. (Cl. 254—68.)



A device of the character described comprising a base member, a removable fulcrum coacting with the base, a sweep, spaced lugs carried by the sweep adapted to receive the fulcrum therebetween, the face of the sweep opposite to the lugs being provided with a reinforcing strip and having spaced lugs projecting therefrom, the portion of the sweep immediately adjacent the last named lugs having a metallic block embedded therein.

1,169,504. OILING-MACHINE. WALTER J. MCVICKER, Minneapolis, Minn. Filed June 26, 1915. Serial No. 36,512. (Cl. 184—31.)

1. In a machine of the kind described a drive shaft and means for driving the same, a driven shaft, a pumping unit comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for connecting said pumping unit with a source of oil supply, a chamber and means for connecting the same with said pumping unit, said chamber being adapted to receive the oil pumped by said pumping unit, a valve in said chamber adapted to permit the escapement of oil therefrom when filled and upon the attainment of a predetermined pressure in said chamber, several outlets, a regulating valve upon each of said outlets adapted to provide a means for regulating the amount of oil permitted to pass through each of said outlets, from said chamber, means for connecting each of said outlets with a separate pump member comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for distributing the oil pumped from each of said pump members.



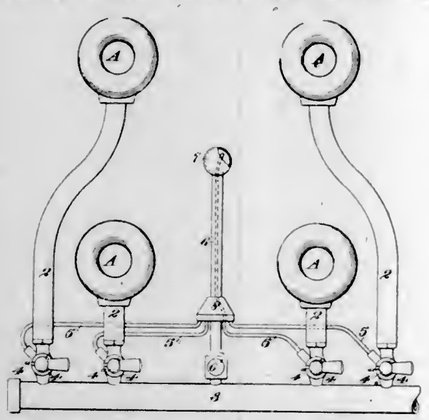
2. In a machine of the kind described a drive shaft and means for driving the same, a driven shaft, a pumping unit comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for connecting said pumping unit with a source of oil supply, a chamber and means for connecting the same with said pumping unit, said chamber being adapted to receive the oil pumped by said pumping unit, a valve in said chamber adapted to permit the escapement of oil therefrom when filled and upon the attainment of a predetermined pressure in said chamber, several outlets, a regulating valve upon each of said outlets adapted to provide a means for regulating the amount of oil permitted to pass through each of said outlets, from said chamber, means for connecting each of said outlets with a separate pump member comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for distributing the oil pumped from each of said pump members.

3. In a machine of the kind described a drive shaft and means for driving the same, a driven shaft, a pumping unit comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for connecting said pumping unit with a source of oil supply, a chamber and means for connecting the same with said pumping unit, said chamber being adapted to receive the oil pumped by said pumping unit, a valve in said chamber adapted to permit the escapement of oil therefrom when filled and upon the attainment of a predetermined pressure in said chamber, means for adjusting said valve adapted to change the pressure at which the oil is permitted to escape from said chamber through said valve, several outlets from said chamber, means for connecting each of said outlets with a separate pump member comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for distributing the oil pumped from each of said pump members.

4. In a machine of the kind described a drive shaft and means for driving the same, a driven shaft, a pumping unit comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gear, means for connecting said pumping unit with a source of oil supply, a chamber and means for connecting the same with said pumping unit, said chamber being adapted to receive the oil pumped by said pumping unit, a valve in said chamber adapted to permit the escapement of oil therefrom when filled and upon the attainment of a predetermined pressure in said chamber, means for adjusting said valve adapted to change the pressure at which the oil is permitted to escape from said chamber through said valve, several outlets, a regulating valve upon each of said outlets adapted to provide a means for regulating the amount of oil permitted to pass through each of said outlets from said chamber, means for connecting each of said outlets with a separate pump member comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for distributing the oil pumped from each of said pump members.

5. In a machine of the kind described a drive shaft and means for driving the same, a driven shaft, a pumping unit comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for connecting said pumping unit with a source of oil supply, a chamber and means for connecting the same with said pumping unit, said chamber being adapted to receive the oil pumped by said pumping unit, a valve in said chamber adapted to permit the escapement of oil therefrom when filled and upon the attainment of a predetermined pressure in said chamber, means for adjusting said valve adapted to change the pressure at which the oil is permitted to escape from said chamber through said valve, several outlets, a regulating valve upon each of said outlets adapted to provide a means for regulating the amount of oil permitted to pass through each of said outlets from said chamber, means for connecting each of said outlets with a separate pump member comprising a gear upon the drive shaft, a gear upon the driven shaft, and a housing about said gears, means for distributing the oil pumped from each of said pump members, each of said last mentioned pump members being similarly constructed and adapted to be built sectionally.

1,169,505. GAS STOVE AND BURNER LIGHTING DEVICE. LUCIEN AUGUSTUS MARSH, San Francisco, Cal. Filed Apr. 26, 1915. Serial No. 23,957. (Cl. 158—115.)



1. A gas burner light device including main burners and a source of supply, independent pipes with controlling cocks, a pilot light with direct connecting pipe, and jet nozzles directed to each main burner, independent pipes leading from each main burner cock to the pilot supply jets, independent passages in the cock casings leading to the main and pilot head, and plugs turnable in the casings to connect first with the pilot jets and discharge a jet of flame against the main burner heads and upon further turning thereof to subsequently deliver gas to the main burner heads to be ignited at said heads without discharge of unburned gas.

2. In a gas burner igniting device of the character described, main burner heads, a pilot light burner head with jet openings in alinement with the main burners, a small constant gas supply pipe to the pilot head, pipes connecting the main heads with a source of supply, other independent pipes connecting with the pilot head, and coacting means to first deliver gas to the pilot burner jets and subsequently to the main burners.

3. In a gas burner igniting device, main burners, a source of supply, and independent pipes from the supply to the burners, a centrally located pilot pipe having an independent valve-controlled connection from the supply, small pipes within the pilot pipe with nozzles directed toward each of the main burners and connected with the controlling cocks of the main burners diagonally between the direct main burner supply openings, and controlling plugs by which gas is first delivered through the igniting nozzles of the pilot head and subsequently to the main burners upon further movement of said plugs.

4. A gas burner igniting device including main burners, a pilot light head, and unitary means associated with each main burner to first discharge ignited jets through the pilot head against the main burners upon initial movement of said means, and subsequently upon further movement of said means to supply gas to the main burner and cut off the ignition supply.

5. The combination in a gas burner igniting device, of main burners, a supply manifold, pipes leading from the manifold to said main burners and having casings with main passages, a pilot torch intermediate of the main burners having an independently controlled gas supply pipe, pipes extending through said pilot pipe, with nozzles directed toward the main burners, and having their opposite ends connected with the respective main cock casings between the main passages thereof, and plugs turnable in said casings to first deliver gas to the nozzles to be ignited by the pilot torch and by further turning to open the passages to the main burners.

[Claim 6 not printed in the Gazette.]

1,169,506. PROCESS FOR TREATING MINERAL SUBSTANCES. SAMUEL W. OSGOOD, Chicago, Ill. Filed June 22, 1914. Serial No. 846,439. (Cl. 252—6.)

1. The process of treating mineral matter, consisting in bringing highly heated mineral matter into contact with a fusible silicate in finely divided condition, thereby separating said mineral matter into granules, and combining the granules and silicate by the heat contained in the granules in divided condition.

2. The process of treating granulated mineral matter, consisting in coating the granules with a comparatively fusible silicate, treating the silicate with coloring matter and maintaining the granules in divided condition.

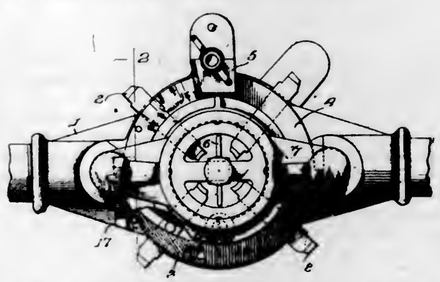
3. The process of treating mineral matter, consisting in bringing highly heated mineral matter into contact with a fusible silicate in finely-divided condition, thereby separating said mineral matter into granules, and combining the granules and silicate and a finely-divided hardening salt by the heat contained in the granules in divided condition.

4. The process of treating granulated mineral matter, consisting in coating the granules with a comparatively fusible silicate, treating the silicate with coloring matter, hardening the coating of silicate by the addition of a hardening chemical salt and maintaining the granules in divided condition.

5. The process of treating mineral granules, which consists in immersing the highly heated granules in a solution of a comparatively fusible silicate.

[Claims 6 to 24 not printed in the Gazette.]

1,169,507. PIPE-THREADING TOOL. JOHN B. PHILLIPS, Warren, Ohio, assignor to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed Apr. 26, 1915. Serial No. 23,901. (Cl. 10—120.5.)



1. In a tool for cutting tapered threads, a rotatable and longitudinally movable chaser-carrier, a series of radially arranged chasers, a single element common to all the chasers and rotatable with and independently of said chaser-carrier, means rotatable with the chaser-carrier, but not partaking of the longitudinal travel thereof, for causing the independent rotation of such chaser-engaging element and constructed to permit the latter to be moved to throw the chasers outwardly after or during the cutting operation after said element has been moved independently of its rotation of the chaser-carrier, and means for automatically returning the chasers to their starting points as the last mentioned means is returned to its normal position.

2. In a tool for cutting tapered threads, the combination with a rotatable and longitudinally movable chaser-carrier, of a series of chasers mounted in the carrier, a chaser-engaging plate rotatable with and independently of said chaser-carrier, said plate having a lateral projection, a post rotatable with the chaser-carrier, but not partaking of the longitudinal travel thereof, said post having a diagonal wall with which said projection is designed to engage and by which the plate is forced in the direction to effect the recession of the chasers, said plate being capable of being turned to throw the chasers outwardly at any point during the cutting operation, and means for automatically restoring the chasers to their normal positions as the post and chaser-carrier resume their initial positions.

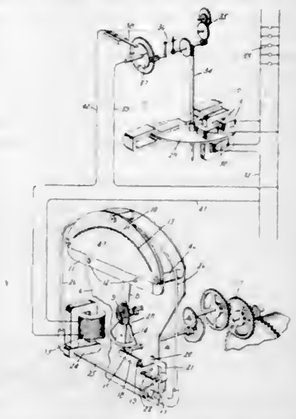
3. In a tool for cutting tapered threads, the combination with a rotatable and longitudinally movable chaser-carrier, of a series of chasers mounted in the carrier, a chaser engaging plate rotatable with and independently of said chaser-carrier, said plate having a lateral projection, a post rotatable with the chaser-carrier, but not partaking of the longitudinal travel thereof, said post having a diagonal wall with which said projection is designed to engage and by which the plate is forced in the direction to effect the recession of the chasers, said plate being capable of being turned to throw the chasers outwardly at any point during the cutting operation, and an element pivoted to said post for engaging said lateral projection to return said plate and chasers to their normal positions as the post and chaser-carrier resume their initial positions.

4. In a tool for cutting tapered threads, the combination with a rotatable and longitudinally movable chaser-carrier, of a series of chasers mounted in the carrier, a chaser-engaging plate rotatable with and independently of said chaser-carrier, said plate having a lateral projection, a post rotatable with the chaser-carrier, but not partaking of the longitudinal travel thereof, said post having a diagonal wall with which said projection is designed to engage and by which the plate is forced in the direction to effect the recession of the chasers, said plate being capable of being turned to throw the chasers outwardly at any point during the cutting operation, a pivoted element carried by the post for engaging said lateral projection, and means mounted on the carrier for causing said element to return the chaser-engaging plate and the chasers to their normal positions.

5. In a tool for cutting tapered threads, the combination with a rotatable and longitudinally movable chaser-carrier, of a series of chasers mounted in the carrier, a chaser-engaging plate rotatable with and independently of said chaser carrier, said plate having a lateral projection, a post rotatable with the chaser-carrier, but not partaking of the longitudinal travel thereof, said post having a diagonal wall with which said projection is designed to engage and by which the plate is forced in the direction to effect the recession of the chasers, a trigger pivoted to said post and designed to parallel said diagonal wall during the starting of the threading operation, said trigger being capable of being moved laterally when the chaser-engaging plate is turned to throw the chasers outwardly, and means acting on said trigger to return the chasers and the chaser-engaging plate to their starting position when the post and chaser-carrier are returned to their initial positions.

[Claim 6 not printed in the Gazette.]

1,169,508. DEMAND APPARATUS. WILLARD E. PORTER, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 18, 1913. Serial No. 755,135. (Cl. 234—5.5.)



1. A demand instrument comprising a movable element, a gear member secured to said element, a pinion arranged to normally engage with said gear member, means for driving said pinion, means for interrupting the operative engagement of said pinion with said gear member at intervals, means for returning said element to an initial position at the end of each interval, and a spring member coöperating with said pinion and arranged to maintain the pinion and the gear member disengaged until the element has returned to its initial position.

2. A demand instrument comprising a movable element, a driving mechanism operatively arranged to normally move said element, means for interrupting the operative arrangement of said driving mechanism and said element at intervals, means for returning said element to an initial position when the operative arrangement of the driving mechanism and the element is interrupted, and a spring member arranged to hold said driving mechanism and said element in inoperative relation until the element has returned to its initial position.

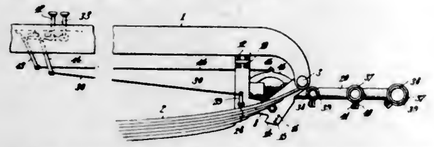
3. A demand instrument comprising a movable element, a recording means on said element, a sector shaped gear secured to said element, a pinion arranged to operatively engage with said sector shaped gear, means for driving said pinion, an electromagnet having a movable armature, a framework secured to said armature and operatively related to said element and said pinion whereby a movement of said armature causes said recording means to make a record mark on a suitable record sheet and interrupts the operative engagement of said pinion with said sector shaped gear, means for returning the element to an initial position after the recording means has made the record mark on the record sheet, and a spring member adapted to press lightly against said pinion and arranged to maintain the pinion and the sector shaped gear disengaged until the element has returned to its initial position.

4. The combination with an electric meter of a demand instrument comprising a movable element, a gear member operatively related to said element, a driving member arranged to operatively engage with said gear member, means for driving said driving member at substantially constant speed, means tending to return said element to an initial position, means for interrupting the operative engagement of said driving member and said gear member at equal intervals of metered energy, a spring member lightly engaging said driving member and arranged to hold said driving member out of operative engagement with said gear member for a definite time interval when the operative engagement between the driving member and the gear member is interrupted, and means for re-

cording the extent of movement of said element during each of a number of equal intervals of metered energy.

5. A demand instrument comprising a movable element, a driving member arranged to operatively engage said element, means for driving said driving member, means for interrupting the operative engagement between said element and said driving member at intervals, means tending to return said element to an initial position when the operative engagement between the element and the driving member is interrupted, and a spring member lightly engaging said driving member and arranged to hold said driving member out of operative engagement with said element while the element is returning to its initial position.

1,169,509. AUTOMOBILE-FENDER. LEWIS C. PRITCHARD, Parkersburg, W. Va., assignor of four-fifths to William M. Miller, Parkersburg, W. Va. Filed May 4, 1915. Serial No. 25,786. (Cl. 105—253.)



1. The combination with the body-supporting frame of an automobile, of a fender supported at the front thereof, said fender comprising a pair of knuckles having a pivotal relation to said frame, fender arms carried by and projecting forwardly from said knuckles, latches engaging said knuckles to hold the fender arms raised, and means for tripping said latches to release the knuckles and permit the fender to drop to catching position.

2. The combination with the body-supporting frame of an automobile, of a fender supported at the front thereof, said fender comprising a pair of knuckles having a pivotal relation to said frame, fender arms carried by and projecting forwardly from said knuckles and having a slidable relation to said knuckles, and latches engaging said knuckles to hold the fender arms raised and arranged to be tripped by said fender arms as the latter are thrust rearwardly.

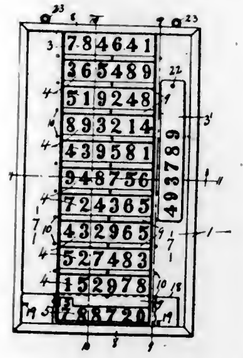
3. The combination with the body-supporting frame of an automobile, of a fender supported at the front thereof, said fender comprising a pair of knuckles having a pivotal relation to said frame, fender arms carried by and projecting forwardly from said knuckles and having a slidable relation to said knuckles, latches engaging said knuckles to hold the fender arms raised and arranged to be tripped by said fender arms as the latter are thrust rearwardly, and springs for yieldingly sustaining said fender arms at the forward limit of their movement in relation to the knuckles.

4. The combination with the body-supporting frame of an automobile, of a fender supported at the front thereof, said fender comprising a pair of knuckles having a pivotal relation to said frame, knuckle-supporting brackets pivotally attached to said frame, means for adjusting the angle of said brackets in relation to said frame, stops on said brackets coöperating with said knuckles to limit the tripping movement of the fender, fender arms carried by and projecting forwardly from said knuckles, latches engaging said knuckles to hold the fender arms raised, and means for tripping said latches to release the knuckles and permit the fender to drop to catching position.

5. The combination with the body-supporting frame of an automobile, of a fender supported at the front thereof, said fender comprising a pair of knuckles having a pivotal relation to said frame, fender arms carried by and projecting forwardly from said knuckles and having a slidable relation to said knuckles, latches engaging said knuckles to hold the fender arms raised and arranged to be tripped by said fender arms as the latter are thrust rearwardly, and adjustable latch-tripping plunger pins carried by said fender arms.

[Claim 6 not printed in the Gazette.]

1,169,510. EDUCATIONAL APPLIANCE. HORACE D. RICKARD, Syracuse, N. Y. Filed Oct. 8, 1915. Serial No. 54,728. (Cl. 35—2.)



1. In an educational device of the character described, a frame having a sight opening, a plurality of factor plates slidably mounted in the frame, one above the other across the opening and bearing numerical factors exposed through said opening and columnized for adding, and means for simultaneously shifting said plates to conceal portions of their factors behind a portion of the frame and to expose other portions of the factors of different values through the sight opening.

2. In an educational device of the character described, a frame having a sight opening, a plurality of factor plates mounted in the frame one above the other across the opening and bearing numerical factors exposed through said opening and columnized for adding, a result plate underlying the factor plates and bearing the sum of those factors, means for shifting all of the plates simultaneously to bring the units figures of each plate behind a portion of the frame to cut off such figures from view and produce numerical factors of different values, one of said factor plates being reversible and bearing upon its reverse side a numerical factor which, when added to the remaining factors, will produce the sum indicated by the exposed portion on the result plate.

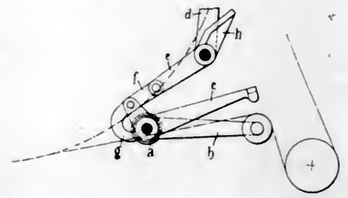
3. In an educational device of the character described, the combination of a frame having a sight opening, a carriage slidable on the frame, separate factor plates arranged in sequence one above the other and provided with numerical factors columnized for adding and exposed through said opening, a result plate underlying the factor plates and bearing the numerical sum of the factors, all of said plates being attached to the carriage to move therewith.

4. In an educational device of the character described, the combination of a frame having a sight opening and guide-ways one above the other, a series of factor plates slidable in said guide-ways and bearing different numerical factors exposed through said opening and columnized for adding, a result plate slidable in the lowermost guide-way and bearing the numerical sum of the factors, and a shutter movable to and from a position across said numerical sum.

5. In an educational device of the character described, the combination of a frame having a sight opening and guide-ways one above the other, a series of factor plates slidable in said guide-ways and bearing different numerical factors exposed through said opening and columnized for adding, a result plate slidable in the lowermost guide-way and bearing the numerical sum of the factors, a shutter movable to and from a position across said numerical sum, and means for shifting all of the plates simultaneously in their respective guide-ways to change the numerical value of the factors appearing through the opening, one of the factor plates being reversible in its guide and bearing upon its reverse side a number, which, when added to the remaining numerical factors, will produce the numerical sum appearing on the result plate through the sight opening.

[Claims 6 and 7 not printed in the Gazette.]

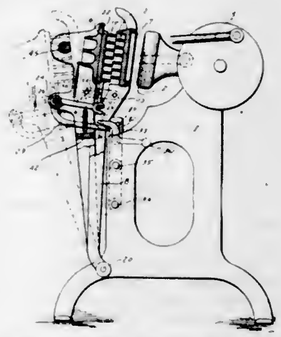
1,169,511. BELT-CONTROLLING MEANS. MAX ROCKSTROH, Klein Sedlitz, near Pirna, Germany. Filed Jan. 15, 1915. Serial No. 2,460. (Cl. 74—46.)



1. A belt controlling means comprising in combination, a pulley, a belt gripping and a tensioning lever, a coiled spring engaging with its ends both of said levers, a brake lever, means for connecting said brake lever and said gripping lever, means for limiting the movement of said belt gripping and tensioning levers in one direction, said pulley being adapted to limit their movements in the other direction, substantially as described.

2. A belt controlling means comprising in combination, a pulley, a belt gripping lever having an arm and a tensioning lever, a coiled spring engaging said levers with its ends, a brake lever having an arm, a link connecting said brake lever to the arm of said gripping lever, a tail piece on said link for limiting the movements of said belt gripping and tensioning levers in one direction, said pulley limiting this movement in the other direction, substantially as described.

1,169,512. SAFETY DEVICE. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed Feb. 6, 1915. Serial No. 6,420. (Cl. 164—107.)



1. The combination with a duplex work performing element and its actuating means, of normally collapsible connections between the parts of the duplex element including a sliding member operable to permit said parts to collapse, and means whereby said member is operated during the operative movement of the duplex work performing element and just prior to the engagement of said element with the work and when the path of the element is free to render said connections rigid against collapsing.

2. The combination with a duplex work performing element and its actuating means, of normally collapsible connections between the parts of the duplex element comprising a sliding corrugated member operable to permit said parts to collapse, and means whereby said member is operated during the operative movement of the duplex work performing element and just prior to the engagement of said element with the work and when the path of the element is free to render said connection rigid against collapsing.

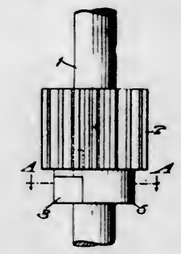
3. The combination with a duplex moving element of a machine and its actuating means, of normally yieldable connections between the parts of the duplex element adapted to yield when movement of said element is resisted, one of the parts of said duplex element being provided with corrugations, said connection comprising a sliding corrugated member and means to automatically render said connection operable to prevent the parts of said duplex member from yielding and to permit said parts to yield when it encounters resistance in its operative movement prior to contacting with the work.

4. The combination with a duplex moving element of a machine and its actuating means, the duplex element comprising normally yieldable and relatively movable parts, a sliding member to rigidly connect said parts at a predetermined point in the operative movement of said duplex element, and means whereby the parts of said duplex element may move relatively to each other when movement of said duplex element is resisted by an extraneous obstruction before said predetermined point is reached.

5. In combination with a duplex reciprocating member, means to actuate said duplex member, a sliding member interposed between the parts of the duplex member, and automatic means to actuate said sliding member to force it to a position to permit the parts of the duplex member to collapse if it meets with resistance before it reaches a predetermined point in its operative movement.

[Claims 6 to 17 not printed in the Gazette.]

1,169,513. SHAFT-LOCKING DEVICE. JOHN ROYLE, Jr., Paterson, N. J. Filed Nov. 3, 1914. Serial No. 870,078. (Cl. 74—8.)



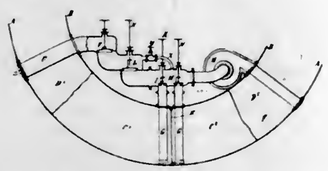
1. The combination with a shaft provided with a recess on its exterior having the form of the segment of a cylinder, of a locking element constructed to seat in said recess, a portion of said locking element having a cross section corresponding to the cross section of the recess and another portion of similar cross section projecting outwardly from said recess beyond the plane of the surface of the shaft for engaging an element carried by the shaft.

2. The combination with a shaft having a recess on its exterior, said recess having the form of the segment of a cylinder and an element fitted to slide on the shaft and provided with a notch in the end of its hub, said notch having the shape of the segment of a cylinder, of a locking element fitted to seat in the recess in the shaft, one portion of said locking element having a cross section corresponding to the cross section of the recess in the shaft and another portion constructed to fit the notch in the hub of the said element carried by the shaft.

1,169,514. DEVICE FOR CONTROLLING THE WATER BALLAST IN SUBMERGIBLE VESSELS. CESARE SACERDOTI, Genoa, Italy, assignor to Società Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Filed May 22, 1915. Serial No. 29,941. (Cl. 114—16.)

1. Means for controlling the water ballast for operating submergible vessels, comprising a single flooding and exhausting tube controlled by valves and levers, the seata

of which are respectively formed in a valve casing fitted in the interior of the vessel and provided with a valve communicating with the sea, and an aperture communicating with a suction pump, the said vessel being provided with an outside and inner plating defining the double bottom divided into compartments by a longitudinal keelson and transverse bulkheads, in each of which compartments a flooding and exhausting tube is placed.



2. In a device for controlling the water ballast in submergible vessels comprising a double bottom in said vessel; means for dividing said double bottom into separate compartments; a single flooding and exhausting tube communicating with said compartments; valves in said tube and a suction pump communicating with said tube and having an outlet at the exterior of the vessel.

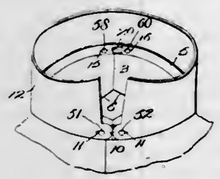
3. In a device as described, a double bottom; means for dividing said double bottom into compartments; a single flooding and outlet tube; separate flooding and outlet connection in said compartments and communicating with said tube, and means for expelling the water ballast from the double bottom.

4. In means for controlling the water ballast in submergible vessels comprising a double bottom; means for dividing said double bottom into separate compartments; a single flooding and exhausting tube having connections with said compartments; valves mounted in said tube; a controlling mechanism for said valves and a suction pump in connection with said flooding and exhausting tube.

5. Means for controlling the water ballast in submergible vessels, comprising a double bottom in said vessel; means for dividing said double bottom into separate compartments; a suction pump; a single flooding and exhausting tube having one end extending to the exterior of the vessel and the other end connected with said suction pump and having connections with said separate compartments; valves mounted in said flooding and exhausting tube; means for mounting said valves in the interior of the boat and a mechanism for controlling said valves.

[Claims 6 and 7 not printed in the Gazette.]

1,169,515. SHIRT. RAY P. SAFFOLD, San Francisco, Cal. Filed Oct. 28, 1914. Serial No. 869,042. (Cl. 2—41.)



1. A garment open front and back having a neck band continuous at the front and provided with the usual central front button hole for attaching a collar and with a pair of auxiliary front button holes spaced at the respective sides of the central button hole for attachment to a collar independently of said central hole.

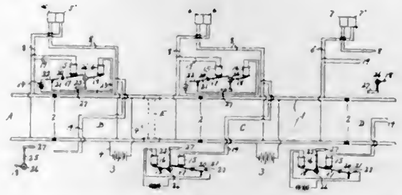
2. A garment open front and back having a neck band provided with the usual central button holes at the front and back and with auxiliary button holes spaced at each side of the said central button holes for attachment to a collar independently of said central holes.

3. A garment having a neck band continuous at the front and provided with the usual central button hole at the back and with a pair of auxiliary button holes spaced at the respective sides of the central button hole, and a collar provided with a central button hole at the back, and with a pair of auxiliary button holes spaced similarly to said pair of auxiliary holes of the neck band.

4. A garment open at both front and back and having a neck band continuous in front and separated only at the back opening, said neck band being provided with the usual central front and back button holes and with a pair of button holes spaced at each side of the said usual central button hole for attaching the collar.

5. A garment having a continuous collar band at the front but opening at the front and back and provided with a triangular cut in each of the edges of the back opening in proximity to the neck band.

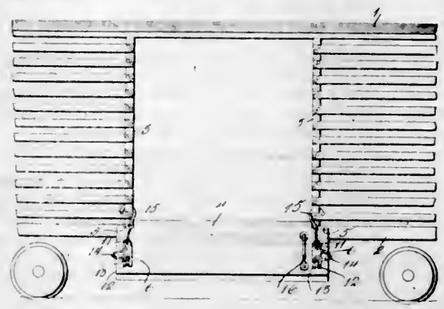
1,169,516. BRAKE-CONTROL AND SIGNAL SYSTEM FOR SINGLE-TRACK RAILWAYS. PETER SCHNEIDER Oswego, N. Y. Filed Oct. 17, 1913. Serial No. 795,675 (Cl. 246—59.)



1. In a brake-control and signal system for single track railways, the combination of a track divided into blocks insulated from each other and separate energizing circuits connected across the rails of the several blocks, separate pairs of electrically controlled signals at adjacent ends of the blocks for trains moving in opposite directions, the signal facing each block being electrically connected across the rails of the next adjacent block, separate pairs of movable brake-controlling members in the several blocks, each self-adjustable to its operative position, one pair for each block for trains moving in opposite directions, separate local electric circuits, one for each brake-controlling member, each local circuit including therein a self-opening electric switch and an electromagnet normally holding the brake-controlling members in their inoperative positions, separate electrical devices, one for each switch connected across the signal-controlling circuits for normally closing the switches, each of said devices being rendered inoperative by the short circuiting of the block circuit through the presence of a car therein, thereby allowing the corresponding switch to open the adjacent local circuits for deënergizing the magnets corresponding to the opened local circuits and allowing the corresponding brake-controlling members to assume their operative positions, and means actuated by each opened switch for locking the brake-controlling member in its operative position.

2. In a brake-control and signal system for single track railways, the combination with a single track electrically energized railway divided into blocks insulated from each other, each block having associated therewith separate brake-controlling members for trains moving in opposite directions and separate local electric circuits, one for each brake-controlling member, each local circuit including therein means for normally holding the corresponding brake-controlling member in its inoperative position, and a self-opening electric switch, separate electro-magnetic devices for said switches, each electrically connected across the rails of the next adjacent block, whereby when a car is present in that block it will short circuit the corresponding rails and thereby deënergize such switch-holding magnet to allow the opening of the switch and consequent opening of the corresponding local circuit to release the adjacent brake-controlling member, and co-operative means between each switch and its brake-controlling member for locking the latter in its operative position when the switch is opened.

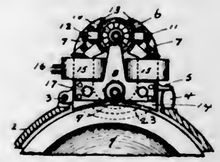
1,169,517. SAFETY-BRIDGE. ALBERT SILVER, Ellis, Kans. Filed June 30, 1915. Serial No. 37,399. (Cl. 57—18.)



1. In a safety bridge for stock cars the combination of a bracket comprising an elongated body, said body being adapted to be carried upon a safety bridge, a lip formed upon said bracket and extending upwardly and slightly rearwardly therethrough, said lip provided with a V-shaped notch thereby forming a pair of claws, a chain secured to said bracket and provided with a hook, said hook being adapted to engage a door frame of a stock car at which time said chain may be drawn tautly and passed into said notch of said lip so as to be engaged by said claws, whereby said chain will be held at a desired length so as to retain a safety bridge in a desired set position.

2. In a device of the class described, the combination of an elongated body, said body being adapted to be secured to a safety bridge, said body having a coiled tongue formed upon one side thereof, a ring carried by said tongue, a chain carried by said ring and provided with a hook, said body provided with a laterally extending lip at its opposite end, said lip extending upwardly and slightly rearwardly, said lip provided with a V-shaped notch thereby forming claws, said hook being adapted to engage the door frame of a stock car, at which time a portion of the chain may be drawn tautly and passed between said claws, whereby said claws will positively engage the chain for holding the same from slipping, and thereby retaining a safety bridge in a desired set position.

1,169,518. ELECTRIC STARTER FOR AUTOMOBILE-ENGINES. ALBERT W. SMITH, Washington, D. C. Filed Nov. 20, 1915. Serial No. 62,583. (Cl. 172—239.)

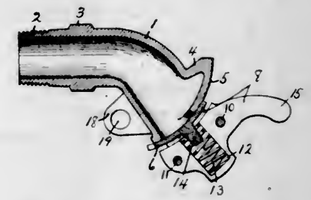


1. In a fly wheel starter, movably mounted with relation to the engine fly wheel, in combination, a yokeless field magnet, in magnetic relation with said fly wheel; a frictional driving pinion, in operative relation with said fly wheel; an armature operatively connected with said driving pinion; and non-magnetic supports for said yokeless field magnet, forming bearings for said driving pinion and armature; said yokeless field magnet acting, when the starter is in use, to pull it toward said fly wheel, and to force its driving pinion into engagement therewith; and retracting means for retaining the starter, when idle, away from said fly wheel.

2. In a fly wheel starter movably mounted with relation to the engine fly wheel, in combination, a yokeless field magnet, formed of two magnetically separate cores, having auxiliary poles shaped to conform to the engine fly wheel; a frictional driving pinion, in operative relation with said fly wheel; an armature operatively connected with said driving pinion; and non-magnetic supports for said yokeless field magnet, forming bearings for said driving pinion and armature; said yokeless field magnet acting, when the starter is in use, to pull it toward said fly wheel, and to force its driving pinion into engagement therewith; and retracting means for retaining the starter, when idle, away from said fly wheel.

3. In a fly wheel starter movably mounted with relation to the engine fly wheel, in combination, a yokeless field magnet, formed of two magnetically separate cores, having auxiliary poles shaped to conform to the engine fly wheel; a frictional driving pinion, in operative relation with said fly wheel, said driving pinion having knurling teeth, acting to form a knurling on the fly wheel when in use; an armature operatively connected with said driving pinion; and non-magnetic supports for said yokeless field magnet, forming bearings for said driving pinion and armature; said yokeless field magnet acting, when the starter is in use, to pull it toward said fly wheel, and to force its driving pinion into engagement therewith; and retracting means for retaining the starter, when idle, away from said fly wheel.

1,169,519. FAUCET. EDWARD C. STEARNS, Syracuse, N. Y. Filed Mar. 17, 1914. Serial No. 825,205. (Cl. 137—5.)



A faucet comprising a cylindrical casing having a substantially horizontal portion and a downwardly curved discharge end provided with a vertically elongated curved sliding face and a discharge orifice at the lower portion of said face, a curved slide valve for said opening having a laterally projecting boss, a swinging support for sliding said valve vertically comprising arms pivoted to opposite sides of the cylindrical casing to swing substantially about a center determined by the curvature of said sliding face, said arms connected together at their free ends and formed in a recess adapted to receive, and of greater diameter than, the boss upon said slide valve, a spring in said recess bearing against said slide valve to hold the same in liquid-tight relation with said sliding face and allowing the valve to tilt in adjusting itself to said sliding face, one of said arms provided with a lug projecting laterally therefrom between the pivot of the arm and the recess formed by the united arms and having a transverse opening, a lug projecting substantially tangentially from the cylindrical casing and lying between the pivot of the adjacent arm and said discharge opening and having a transverse opening adapted to register with the transverse opening in the lug formed upon the adjacent arm to receive a locking device for positively preventing operation of the faucet.

1,169,520. STENCIL FABRIC AND PROCESS OF PRODUCING THE SAME. ALBERT E. STRIPPEL, New York, N. Y. Original application filed July 1, 1913, Serial No. 776,893. Divided and this application filed Feb. 17, 1914. Serial No. 819,296. (Cl. 41—38.6.)

1. The process of producing a stencil fabric which consists in treating a long fiber fabric, first, with a solution of a colloid of animal origin, glycerin, a hydroscopic nitrate and a chrome salt; second, partially drying the fabric; third, again treating the fabric with the said solution; fourth, drying the fabric; fifth, applying thereto a solution of glycerin; and sixth, again drying the fabric.

2. The process of producing a stencil fabric which consists in treating a long fiber fabric, first, with a solution of a colloid of animal origin, glycerin, a hydroscopic nitrate and a chrome salt; second, partially drying the fabric; third, again treating the fabric with the said solution; fourth, drying the fabric; fifth, applying thereto a solution of glycerin, alcohol and aluminum chlorid; and sixth, again drying the fabric.

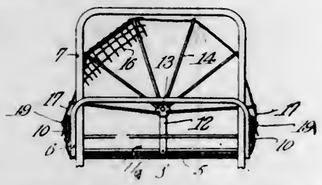
3. The process of producing a stencil fabric which consists in treating a long fiber fabric, first, with a solution of a colloid of animal origin, glycerin, a hydroscopic nitrate and a chrome salt; second, partially drying the fabric; third, again treating the fabric with said solution; fourth, drying the fabric; fifth, applying thereto a solution of glycerin, alcohol and aluminum chlorid in substantially the following proportions, by weight; glycerin, 5 parts; alcohol, 1 part; aluminum chlorid, 1 part; and sixth, again drying the fabric.

4. The process of producing a stencil fabric which consists in treating a long fiber fabric, first, with a solution of gelatin, glycerin, sodium nitrate and bichromate of potash; second, partially drying the fabric; third, again treating the fabric with the said solution; fourth, drying the fabric; fifth, applying thereto a solution of glycerin; and sixth, again drying the fabric.

5. The process of producing a stencil fabric which consists in treating a long fiber fabric, first, with a solution of gelatin, glycerin, sodium nitrate and bichromate of potash; second, partially drying the fabric; third, again treating the fabric with the said solution; fourth, drying the fabric; fifth applying thereto a solution of glycerin, alcohol and aluminum chlorid; and sixth, again drying the fabric.

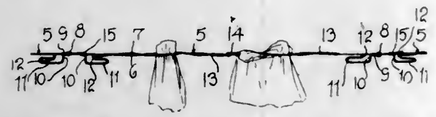
[Claims 6 to 9 not printed in the Gazette.]

1,169,521. BED. ARTHUR K. TAYLOR, Jacksonville, Fla., assignor to Taylor Nursery Baby Bed Company, Jacksonville, Fla., a Corporation of Florida. Filed Aug. 23, 1909. Serial No. 514,226. (Cl. 5—14.)



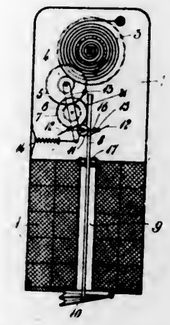
The combination with a crib, of a centrally disposed upstanding bar secured to each end portion of the crib, a disk-like head centrally mounted upon the upper end portion of each bar and adapted to rotate, a plurality of bows frictionally engaging the outer faces of the heads and pivotally connected to said heads, said bows constituting connections between the heads, the connections between the bows and heads being concentrically disposed about the pivots of the heads and said bows being adapted to fold one upon the other and to extend toward either side of the crib, a coarse fabric connected to the bows, and means for holding the fabric taut and with the bows extended out of folded positions.

1,169,522. CLOTHES-LINE. JOHN CLYDE TROUT, Oakdale, Tenn. Filed Mar. 29, 1915. Serial No. 17,845. (Cl. 68—3.)



A clothes line constructed from a length of resilient wire bent upon itself to form two strands, said strands being twisted adjacent the intermediate portion of the wire to form an eye, one of said strands being offset at right angles to the other, thence longitudinally extended to provide an elongated loop, said strand being thence returned from the inner end of the loop and bent upon itself to form an obliquely inclined tongue, said strand being then turned around the other strand to provide a spiral twist, the central portions of said strands being tightly twisted upon each other, the second strand having a returned end portion providing a loop, and the first strand having its end bent to provide a second obliquely inclined guide tongue and its extremity tightly coiled upon the return end portion of the second strand.

1,169,523. SUBFLOATING BODY, SUCH AS A MINE, TORPEDO, AND THE LIKE. NILS WILHELM UHR, Gottenborg, and JOHAN HJALMAR SANDBERG, Stockholm, Sweden, assignors to Aron Andersson, Stockholm, Sweden, and Thor Carlander, Gottenborg, Sweden. Filed Sept. 26, 1914. Serial No. 863,658. (Cl. 102—3.)



1. In a subfloating body adapted to perform an oscillating movement about a position of equilibrium below the surface of the water, the combination of a spring motor, means acted upon by said motor to cause the body to move up and down in the water, and a hydrostat controlling the operation of the spring motor.

2. In a subfloating body adapted to perform an oscillating movement about a position of equilibrium below the surface of the water, the combination of a spring motor, means acted upon by said motor for varying the volume of the subfloating body, and a hydrostat controlling the operation of the spring motor.

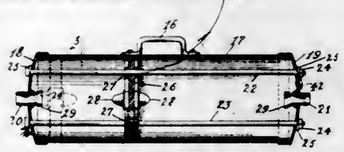
3. In a subfloating body adapted to perform an oscillating movement about a position of equilibrium below the surface of the water, the combination of a hydrostat, a spring motor, bellows actuated by said motor and the outside water, and means connecting said spring motor and bellows under the control of the hydrostat.

4. In a subfloating body adapted to perform an oscillating movement about a position of equilibrium below the surface of the water, the combination of a hydrostat, a spring motor, means for varying the volume of the body by constant weight thereof, and means for connecting said volume varying means with the spring motor under the control of the hydrostat.

5. In a subfloating body adapted to perform an oscillating movement about a position of equilibrium below the surface of the water, the combination of a hydrostat, a spring motor, means for varying the volume of the body by constant weight thereof, a longitudinally movable rod connected to said volume varying means and adapted to be connected with the spring motor under the control of the hydrostat, and means for guiding said rod and retarding the inward movement thereof.

1,169,524. SPRAYER. LITTLETON S. BAKER, Pasadena, Cal. Filed June 23, 1915. Serial No. 35,795. (Cl. 137—67.)

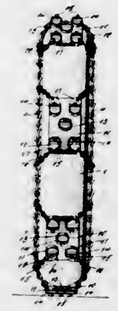
1. A sprayer comprising a tubular casing, a cap disposed on one end thereof for closing the same, a threaded nipple carried by said cap, whereby the sprayer may be attached to a hose, a cap disposed on the opposite end of said casing, a threaded nipple carried by said last-named cap whereby the spraying nozzle may be connected with said sprayer, a piston reciprocating between the ends of said casing, a pair of valves attached to said piston on opposite sides thereof, a pair of valve seats on the inner ends of said nipples coöperating with said valves, and a pair of closable apertures in said caps.



2. A sprayer comprising a cylinder, a cap on one end thereof for closing the same, a threaded nipple carried by said cap, whereby the sprayer may be attached to a hose, a cap disposed on the opposite end of said cylinder, a threaded nipple carried by said last-named cap whereby a spraying nozzle may be connected with said sprayer, a piston reciprocating between the ends of said cylinder, and a pair of valves attached to said piston on opposite sides thereof for closing the inner ends of said nipples.

3. A sprayer comprising a cylinder, a cap disposed on one end of said cylinder for closing the same, a threaded nipple carried by said cap whereby the sprayer may be attached to a hose, a cap disposed on the opposite end of said cylinder, a threaded nipple carried by said last-named cap whereby a spraying nozzle may be connected with said sprayer, a piston reciprocating between the ends of said cylinder, and a pair of valves on opposite sides of said piston and operated by the latter for closing the inner ends of said nipples.

1,169,525. ANTISKIDDING DEVICE. MILO P. BIXBY and FRANK C. REIMER, Great Falls, Mont. Filed May 29, 1915. Serial No. 31,206. (Cl. 152—14.)

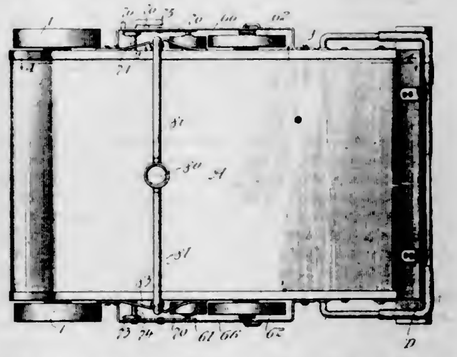


1. In an anti-skidding device of the class described, the combination of a plurality of plates, each of said plates comprising a body having flat inner surfaces being adapted to rest upon the outer periphery of a tire, a body portion formed integral upon said plate adjacent each corner thereof, a central base formed upon said plate, transversely extending ribs formed upon said bodies and base, said ribs extending for a considerable distance beyond the outer surfaces of said plate, said ribs being adapted to hold the plate against slipping, and means for holding the plates in engagement with the outer portion of a tire.

2. In an anti-skidding device of the class described, the combination of a plurality of plates, each plate provided with a plurality of bodies formed integral thereon adjacent the corners thereof, ribs formed integral upon said bodies and extending transversely of the plate, spurs extending from the central portion of said ribs, said spurs being adapted to dig into ice or hard surfaces for holding the plate against slipping or skidding, said ribs being adapted to hold the plate against slipping, and means for holding the plates in engagement with the outer periphery of a tire whereby the plates may constitute an anti-skidding device.

3. In an anti-skidding device of the class described, the combination of a plurality of plates, each plate provided with a thickened body adjacent each corner, digging means formed upon said bodies, for digging into a supporting surface for preventing the plate from slipping, said plate provided with notches adjacent each corner, said plate also provided with a plurality of openings adjacent its corner portions communicating with the inner portions of said notches, chains fitting within said notches and passing through said openings for holding the plates upon a tire, said plates having even inner surfaces for preventing wear upon a tire, and means engaging said chains for retaining the plates in their correct positions when in use.

1,169,526. CARPET-SWEEPER. CHARLES A. BOYER, Warsaw, Ind., assignor to Hugro Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1914. Serial No. 871,912. (Cl. 15—60.)



1. In a carpet sweeper, the combination of a casing and means for supporting it as it is moved to and fro on the carpet, bridge plates fastened to the opposite sides of said casing, a shaft journaled in said plates and extending through the casing and provided at its ends with drive wheels, a transverse brush carrying friction wheels at its ends adapted to engage with the aforesaid drive wheels, a pair of levers pivotally mounted on said bridge plates and having the shaft of the aforesaid brush journaled in their forward ends, means mounted on the casing for simultaneously raising and lowering the rear ends of said levers to thus raise and lower the brush, and means for resiliently pressing the drive wheels toward the floor and the friction wheels on the brush shaft so that when the brush is in its lowered position it will be driven by said drive wheels.

2. The combination of a body structure, wheels yieldably mounted thereon, a rotary brush, a lever supporting the brush, and means for actuating said lever to bodily shift the brush into and out of driving relation to said wheels and toward and from the floor.

3. The combination of a frame, wheels mounted thereon, a rotary brush having wheel-engaging means by which it is rotated, a pair of levers pivotally mounted on said frame and supporting said brush at one end, a transverse shaft, and means thereon for actuating said levers to shift the brush relatively to the floor and into and out of driving relation to said wheels.

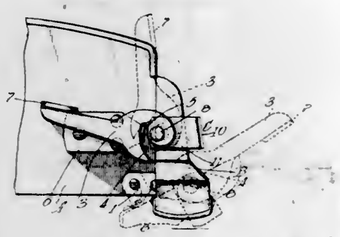
4. The combination of a casing, a pair of wheels yieldingly mounted thereon for contact with the floor, a rotary brush disposed on an axis parallel with the wheel axes and having rollers at its ends for frictional driving connection with said wheels, a lever pivotally mounted on the casing adjacent each end of the brush and supporting the brush at one of its ends, a transverse shaft common

to and having an eccentric connection with the other ends of said levers for rocking the levers to adjust the brush.

5. In a carpet sweeper, the combination of a casing mounted on traction wheels, a brush extending transversely of the casing and driven from said wheels, a tray pivotally supported at each side of the brush and within the casing, and a lever for simultaneously dumping the trays, said lever being pivotally connected to both trays and extending backwardly underneath the casing, its rear end being accessible for depression by the foot of the operator.

[Claims 6 to 8 not printed in the Gazette.]

1,169,527. VACUUM-CLEANER. CHARLES A. BOYER, Warsaw, Ind., assignor to Hugro Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1915. Serial No. 24,651. (Cl. 15—60.)



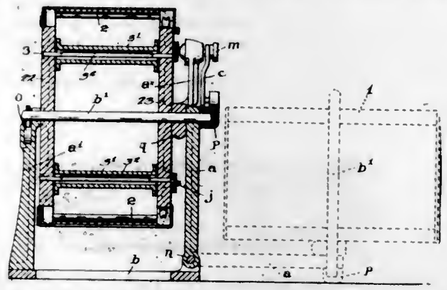
1. The combination of a vacuum cleaner casing, a nozzle pivoted to the front lower corners thereof and extending across the end of the casing, a pair of straps fastened to the front face of the nozzle, each strap having a resilient portion extending beyond the adjacent end of the nozzle, this outwardly-extending part having a rearward extension lying close to the end of the nozzle, a lug fastened to the casing at each side thereof near the rear end of said spring extension, and a lever pivoted on each of said extensions on an axis parallel with the axis of the nozzle hinges, each of these levers having a cam slot opening downwardly, the cam surface of the slot facing forwardly, for the purpose set forth.

2. The combination of a vacuum cleaner casing, a nozzle pivoted to the front lower corners thereof and extending across the end of the casing, a pair of straps fastened to the front face of the nozzle, each strap having a resilient portion extending beyond the adjacent end of the nozzle, this outwardly-extending part having a rearward extension lying close to the end of the nozzle, a lug fastened to the casing at each side thereof near the rear end of said spring extension, and a lever pivoted on each of said extensions on an axis parallel with the axis of the nozzle hinges, each of these levers having cam means for engagement with the aforesaid lug.

1,169,528. AUTOGRAPHIC REGISTER. ULYSSES GRANT CAVE, Louisville, Ky., assignor to Multiplex Sales Register Company, Louisville, Ky., a Corporation of South Dakota. Filed Nov. 7, 1914. Serial No. 870,848. (Cl. 11—22.)

1. In an autographic register, a stationary support, a hollow casing pivotally mounted upon said support and having a plurality of faces each of which is provided with a platform plate, a paper supply spindle and a record spindle for each of said faces and an operating device mounted upon said support and common to and having a movable clutch member for releasable driving connection successively with each of the record spindles.

2. In an autographic register, a stationary support, a casing pivotally mounted upon said support and having a plurality of faces each of which is provided with a platform plate, a paper supply spindle and a record spindle for each face of the casing and an operating crank mounted upon said support and common to and having a spring-pressed clutch head for releasable driving connection successively with each of the record spindles, said operating device and clutch head when in driving connection with the spindle acting to hold the casing stationary with a platform plate uppermost.



3. In an autographic register, a stationary support, a hollow casing pivotally mounted upon said support, and having a plurality of faces each of which is provided with a platform plate, a paper supply spindle and a record spindle for each face of the casing, and an operating device mounted upon said support and common to and having a movable clutch member for releasable driving connection successively with each of the record spindles, said support having a hinged standard and a stationary standard and said casing having releasable pivoted engagement with said stationary standard, whereby the casing may be turned down upon one side thereof, the opposite side of the casing being removable.

4. In an autographic register, a stationary support, a casing pivotally mounted in standards of said support and having a plurality of faces each of which is provided with a platform plate, a paper supply spindle and a record spindle for each face of the casing, one of said standards having an upper extension above the casing pivot, and an operating device mounted upon said upper extension and common to and having a movable clutch member for releasable driving connection successively with each of the record spindles.

5. In an autographic register, a stationary support having standards, a casing pivotally mounted in said standards and having a plurality of faces each of which is provided with a platform plate, a paper supply spindle and a record spindle for each face of the casing, one of said standards having an upper extension located above the casing pivot, and an operating device mounted upon said upper extension and common to and having a movable clutch member for releasable driving connection successively with all of the record spindles, said upper extension being pivoted to and having a releasable clamp connection with the standard whereby it may be pivotally adjusted, with the said operating device.

[Claim 6 not printed in the Gazette.]

1,169,529. PROCESS OF SHERARDIZING. EDGAR F. COLLINS and JOHN A. CAPP, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,431. (Cl. 91—70.1.)

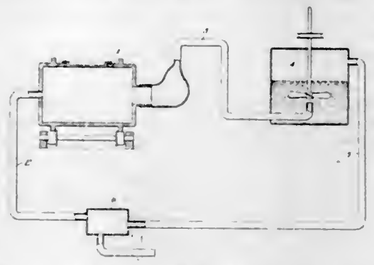
1. The method of sherardizing which consists in submitting the articles to be sherardized to the action of zinc dust or powder containing not less than 80% nor more than 92% metallic zinc, the remainder being mainly zinc oxid while maintained at a working temperature which does not fall below 350° C. nor rise above 375° C.

2. The method of sherardizing which consists in so correlating the composition of the zinc dust or powder and the working temperature of treatment that the percentage of zinc in the dust lies within the limits of about 80% to 92%, while the temperature of treatment lies within the range between about 350° C. and 375° C.

3. The improvement in the art of sherardizing which consists in maintaining the sherardizing temperature so that it does not exceed 375° C. or fall below 350° C. while the zinc dust is maintained substantially free from impurities and with a percentage of metallic zinc within the limits of 80% to 92%.

4. A metallic article having a sherardized zinc coating capable of resisting rusting influences indefinitely, said coating having a specific gravity of not less than 6.5, a color approximating that of an ordinary malleable iron casting and a union with the metallic article such that the coating does not crack, flake or peel off when the article is deformed by bending, swaging or the like.

1,169,530. PROCESS OF VOLATILIZING ORES. SELDEN IRWIN CLAWSON, Salt Lake City, Utah. Filed May 24, 1911. Serial No. 629,190. (Cl. 75—18.)

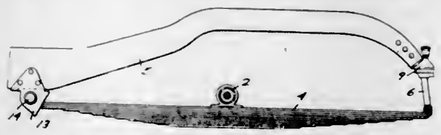


1. A process for the removing of the volatile compounds or metals in a volatilization extraction which consists in associating a carrier gas or gases with ore to absorb and convey the volatile compounds or metals to their proper place and extract part or all of the compounds and return the carrier gases to the presence of the ore for re-use.

2. A process for the removing of the volatile compounds or metals in a volatilization extraction, which consists in the volatilization of the metals in ore in a closed chamber passing a carrier gas through said chamber, whereby the volatile compounds may be absorbed thereby, passing the carrier gas with the volatile compounds therein to a closed fume arrester, wherein a part or all of the volatile compounds are arrested, and passing the carrier gas with any uncaught volatile compounds from the fume arrester back again to the volatilization chamber, whereby said carrier gas may be re-used as a conveyer for the volatile compounds.

3. A process for the removing of the volatile compounds or metals in a volatilization extraction, which consists in passing nitrogen gas and a halogen gas into a closed heated chamber containing the crushed ore to be volatilized, wherein said ore is chemically acted upon by the halogen gas and the volatile compounds formed absorbed by the nitrogen gas, passing the nitrogen gas with the volatile compounds therein to a closed fume arrester wherein a greater portion of the volatile compounds are separated from the nitrogen gas, passing the nitrogen gas with the remaining volatile compounds therein to a mixing chamber and supplying said mixing chamber with additional halogen gas and passing the mixed gases from the mixing chamber to said closed volatilization chamber.

1,169,531. AUTOMOBILE SPRING SUSPENSION. HENRY MIDDLEBROOK CRANE, New York, N. Y. Filed Aug. 13, 1915. Serial No. 45,302. (Cl. 267—37.)



1. In an automobile, the combination with a frame, an axle, and an interposed longitudinal body spring, of a laterally swinging connection between one end of the spring and the frame, a laterally sliding connection between the opposite end of the spring and the frame, and resilient means opposing transverse movement between the body spring and the frame.

2. In an automobile suspension, the combination with the frame, an axle, and a body spring fastened intermediate its ends to the axle, of a link at one end of the spring jointed to the frame so as to be capable of swinging transversely as well as longitudinally, a connection permitting of relative transverse sliding movement between the other end of the spring and the frame, and resilient means resisting such movement.

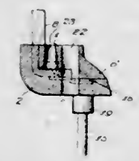
3. In an automobile suspension, the combination with a longitudinal frame member, an axle, and a body spring fastened intermediate its ends to the axle, of a link pivotally connected with one end of said spring and having a ball at its upper end, a socket on the end of said frame member receiving said ball, a transversely sliding pivotal connection between the opposite end of the spring and the frame member, and springs resisting sliding movement at said connection.

4. In an automobile suspension, the combination with a longitudinal frame member, an axle, and a body spring fastened intermediate its ends to the axle, of a link pivotally connected with one end of said spring and having a ball at its upper end, a socket on the end of said frame member receiving said ball, a bracket on the frame member adjacent the other end of the spring, a pivot on said bracket slidably receiving the said end of the spring, and springs encircling said pivot at opposite sides of the body spring to resist sliding movement thereof on the pivot.

5. In an automobile suspension, the combination with the frame, an axle, and a body spring fastened intermediate its ends to the axle, of a link pivotally connected to one end of the spring and having a universal joint connection with the frame, a transversely sliding pivotal connection between the opposite end of the spring and the frame, resilient means resisting sliding movement at said connection, and means for limiting the degree of relative transverse movement between the body spring and frame.

[Claims 6 to 11 not printed in the Gazette.]

1,169,532. ELECTRIC ATTACHMENT DEVICE. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 15, 1911. Serial No. 660,371. (Cl. 173—361.)



1. An electric attachment device comprising an insulating base divided into two parts, a pair of offset plug connectors, each comprising two plug contacts extending in opposite directions in offset relation and connected together by a detachable member, said connectors being located in said base so that the detachable connecting member is between the two sections of said base whereby when one section is removed the connecting member may be readily detached.

2. An electric attachment device comprising in combination, a sectional insulating base having a plurality of pairs of plug contacts protruding from opposite sides thereof in an offset relation and a removable conducting member between the sections of said base for electrically connecting certain of said opposite contacts.

3. An electric attachment device comprising in combination, a sectional insulating base having pairs of plug contacts protruding from opposite sides thereof in offset relation and a pair of conducting members between the sections of said base for removably securing corresponding contacts of each of said pairs together, each pair of

said contacts being removable independently of the other pair.

4. An electrical connector comprising in combination, a sectional insulating base having clamped between the parts thereof a pair of contacts with extensions protruding from opposite sides of said base, and conducting means between the parts of said base for electrically connecting certain of said contacts together, each pair of said contacts being removable independently of the other pair and said conducting means being removable independently of both pairs of said contacts.

5. An electrical connector comprising in combination, a divided insulating base, a pair of contacts clamped between the parts of said base and protruding from opposite sides thereof, terminal posts at the extremity of each of said contacts within said base and conducting members removably secured to certain opposite contacts by said terminal posts, said base having an opening extending adjacent said terminal posts whereby line wires may enter the same for attachment to said terminal posts when said corresponding conducting member is removed.

[Claim 6 not printed in the Gazette.]

1,169,533. DEVICE FOR APPLYING PRESSURE. WALTER S. DUWELIUS, Cincinnati, Ohio. Continuation of application Serial No. 39,511, filed July 12, 1915. This application filed Aug. 30, 1915. Serial No. 48,055. (Cl. 254—42.)



1. A device for applying pressure comprising a hollow frame-member slotted lengthwise thereof, a plurality of contacting devices arranged in line within the frame-member, and means operable from outside the frame-member for moving the contacting devices in the direction of the length of the frame-member, certain of said contacting devices being blocks having parallel front and rear faces extending lengthwise of the frame-member and having their ends curved on radii decreasing in length toward the rear faces of the blocks; substantially as described.

2. A device for applying pressure comprising a hollow casing of rectangular cross-section closed at its ends and provided with a plurality of lengthwise slots in its face, a plurality of blocks in the casing one located at each of the slots and each having parallel front and rear faces extending lengthwise of the casing and the ends of the blocks being so shaped that the blocks are of greater length adjacent to their front faces than adjacent to their rear faces, rollers in the casing engaging the ends of the blocks, spaces movable within the casing and located in the portions thereof lying between said slots, and means operated from outside the casing for applying pressure to the blocks, rollers and spacers in the direction of the length of the casing, substantially as described.

3. A device for applying pressure, comprising a hollow casing of rectangular cross-section closed at its ends and slotted along its face, the width of the slotted opening being less than the width of the interior of the casing, blocks in the casing each having parallel front and rear faces extending lengthwise of the casing and lengthwise flanges located at opposite sides adjacent to the rear face to prevent escape of the block from the casing, the ends length adjacent to their front faces than adjacent to their rear faces, rollers in the casing co-acting with the ends of the blocks, and means operated from outside the casing for subjecting the blocks and rollers to pressure in the direction of the length of the casing, substantially as described.

4. A device for applying pressure, comprising a hollow casing of rectangular cross-section closed at its ends and slotted along its face, a plurality of blocks within the casing having parallel front and rear faces and flanged to prevent escape of the blocks from the casing, a strip lying within the casing between the rear faces of the blocks and the wall of the casing, means operated from outside the casing for moving the blocks lengthwise of the casing, and means co-acting with the blocks to project them through the slotted opening in the casing when they are so moved; substantially as described.

5. A device for applying pressure, comprising the combination of a hollow casing of rectangular cross-section closed at its ends and provided with a plurality of lengthwise slots in its face, a plurality of blocks in the casing one located at each of the slots and having parallel front and rear faces extending lengthwise of the casing, a strip lying within the casing and adapted to co-act with the rear face of each block to hold the front face of the block flush with the surface of the casing, means operable from outside the casing for moving the blocks in the direction of the length of the casing, and means actuated by such lengthwise movement of the blocks for projecting the blocks through the slots in the casing; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,534. FOLDING UMBRELLA. CHARLES H. ELY, East Orange, N. J. Filed Oct. 23, 1914. Serial No. 868,150. (Cl. 135—26.)

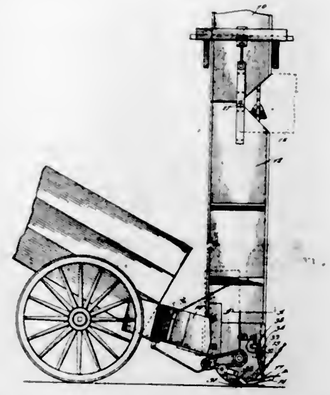


1. A folding umbrella comprising a staff, sleeve, stretcher and ribs, each rib being formed of two telescoping sections, a latch on each rib for holding the sections in expanded position, a rod on each rib projecting beyond the free end thereof, said rod being associated with the latch for disengaging the latter by means of the longitudinal movement of the rod, and means associated with the sleeve for simultaneously actuating all of said rods to disengage the latches, and a spring associated with each rod to normally move the latter in the direction of the end of the rib.

2. A folding umbrella comprising a staff, sleeve, stretcher and ribs, each rib being formed of two telescoping sections, a latch on each rib for holding the sections in expanded position, a rod on each rib projecting beyond the free end thereof, said rod being associated with the latch for disengaging the latter by means of the longitudinal movement of the rod, a spring associated with each rod to normally move the latter in the direction of the end of the rib, a second sleeve surrounding the first and movable in relation thereto, and a disk carried by said sleeve adapted to engage with all of the aforesaid rods to move the same by the sliding of the sleeve.

1,169,535. LOCKING MECHANISM FOR CUP ELEVATORS. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed June 9, 1915. Serial No. 33,031. (Cl. 70—49.)

1. In an elevator, the combination with a depending frame pivoted at its upper end, of a fixed locking lug secured adjacent the position occupied by the bottom of the frame when in its vertical position but out of engagement therewith, a locking lever pivoted to the bottom of the frame, coöperating with the lug, the lever being pivoted on the frame so that it extends substantially parallel to the line of movement of its pivot when the frame is swung, and detent mechanism for holding the lever in locking position and pressing down upon the lug, thereby causing the lever to react against the lug to lock the frame against any tendency to swing in either direction.



2. In an elevator, the combination with a depending frame hinged at its upper end to a stationary support, of a stationary member secured adjacent the position occupied by the bottom of the frame when the latter is in its vertical position, a locking lever pivoted to the bottom of the frame and coöperating with the stationary member to hold the frame from movement, and a pivoted detent bar and catch coöperating therewith, with one end of the bar reacting against the lever and the other against the frame through the catch to hold the frame supported on the lever and thrusting the latter against the stationary member.

3. In an elevator, the combination with a depending frame pivoted at its upper end, of a fixed locking lug secured adjacent the position occupied by the bottom of the frame when in its vertical position, a locking lever pivoted to the bottom of the frame, coöperating with the lug, detent mechanism for holding the lever in locking position consisting of a toothed bar pivoted to the lever, guiding means for the bar on the frame, and a dog pivoted on the frame and adapted to coöperate with the teeth on the bar.

4. In an elevator, the combination with a depending frame pivoted at its upper end, of a fixed locking lug secured adjacent the position occupied by the bottom of the frame when in its vertical position, a locking lever pivoted to the bottom of the frame, coöperating with the lug, detent mechanism for holding the lever in locking position or out of possible engagement with the lug, said detent mechanism consisting of a bar having a shoulder and a series of teeth pivoted to the lever, guiding means for the bar on the frame, and a reversible dog pivoted on the frame and adapted to coöperate with the shoulder when reversed and with the teeth when in its normal position.

5. In an elevator, the combination with a depending frame pivoted at its upper end, of a fixed locking lug secured adjacent the position occupied by the bottom of the frame when in its vertical position, a locking lever pivoted to the bottom of the frame, coöperating with the lug and having a cam surface thereon engaging the lug as the frame swings to vertical position to lift it and allow it to fall into locking position after it passes the lug, and detent mechanism for holding the lever in locking position.

[Claims 6 to 8 not printed in the Gazette.]

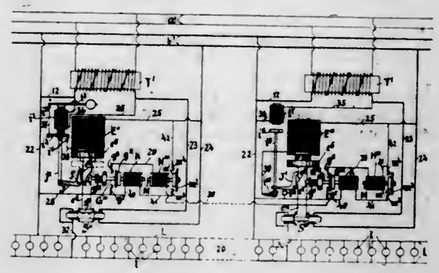
1,169,536. ALLOY. EDWARD D. GLEASON, New York, N. Y., assignor to New-Metals and Process Company, Brooklyn, N. Y., a Corporation of New York. Original application filed Nov. 16, 1912, Serial No. 731,863. Divided and this application filed Jan. 20, 1915. Serial No. 3,382. (Cl. 75—1.)

1. Copper containing boron material in excess of a trace.

2. Copper containing boron material occluded throughout its mass in excess of a trace.

3. A composition containing approximately 99% copper and boron material in substantial excess of a trace.

1,169,537. COMBINED ALTERNATING AND DIRECT CURRENT DISTRIBUTING SYSTEM. JULIUS H. GUGLER and GEORGE W. COLLES, Milwaukee, Wis.; said Colles assignor to said Gugler. Filed Feb. 8, 1911. Serial No. 607,323. (Cl. 171—97.)



1. The combination of an alternating-current circuit, a direct-current circuit, a service-circuit, a switch adapted to connect said service-circuit with either of the other circuits alternatively, an electromagnetic-device for operating said switch, said electromagnetic-device being energized whenever current is turned into the alternating-current circuit and deënergized when there is no current therein, and said electromagnetic-device when energized acting to move said switch so as to connect said service-circuit with one of the other circuits and when deënergized with the other, and an electrically-operated device acting automatically to hold said switch in the position corresponding to the energized position of said electromagnetic device and simultaneously cut off current from the latter so long as there is current in said alternating-current circuit, and to release said switch when the alternating-current is shut off from said circuit.

2. The combination of an alternating-current circuit, a direct-current circuit, a service-circuit, a switch having two positions in one of which said service-circuit is connected with said alternating-current circuit, and in the other with said direct-current circuit, an electromagnetic-device operating said switch to shift it to one position or the other and acting when energized to move it into one of said positions and when deënergized into the other, a make-and-break intercalated in the energizing circuit of said electromagnetic-device, an electromagnetic-device connected up with said alternating-current circuit and operating said make-and-break, and a device arranged to mechanically engage and retain some part movable with the switch when the latter is in the position corresponding to the energized condition of said first-named electromagnetic-device and simultaneously to cut off current from the latter, said engaging-device being operated to move into, and being retained in its engaging position by the attraction of said second electromagnetic-device when energized, and being released therefrom when the latter is deënergized.

3. The combination of an alternating-current circuit, a direct-current circuit, a service-circuit, a switch having two positions in one of which said service-circuit is connected with said alternating-current circuit and in the other with said direct-current circuit, an electromagnetic-device operating said switch to shift it to one position
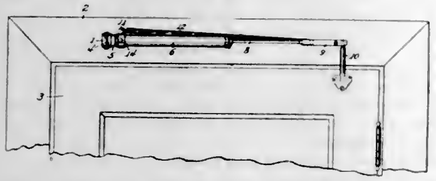
or the other, and acting when energized to move it into one of said positions and when deënergized into the other, a second electromagnetic-device, a mechanical-device operated by the attraction of said electromagnetic-device and adapted to mechanically engage some part connected with said switch in the position corresponding to the energized condition of said first-named electromagnetic-device, and to hold it mechanically in said position, and two make-and-breaks operated by said second electromagnetic-device, and intercalated in series in the circuit of said first-named electromagnetic-device, one of said make-and-breaks being closed by the attraction of said second electromagnetic-device when the latter is energized, and opened when it is deënergized, and the other being closed when said mechanically-engaging device is in the disengaging position, and opened when it is in the engaging position.

4. The combination of an alternating-current circuit, a direct-current circuit, one or more service-circuits, a plurality of changeover-switches mechanically detached from each other and adapted to connect said service-circuits with either of the other circuits alternatively, electromagnetic-devices actuated from the alternating-current circuit and adapted when energized to move said switches to one side and when deënergized to move said switches to the other side, and a plurality of interlocking electrical devices connected up in joint electrical relation and governing electrically the movements of the respective switches; said interlocking-devices being adapted to prevent the shifting of any of said switches unless all are shifted simultaneously.

5. The combination of an alternating-current circuit, a direct-current circuit, one or more service-circuits, a plurality of changeover-switches having each two positions and connected with the service-circuits, so that in one position they connect the later to the alternating-current circuit and in the other to the direct-current circuit, a plurality of electromagnetic devices operating the respective switches and connected in circuit with a source of electrical energy, a second set of electromagnetic devices permanently connected to the alternating-current circuit and each actuating a make-and-break intercalated in the circuit of one of said first-named electromagnetic devices, and a plurality of interlocking-electrical devices connected up in joint electrical relation and governing the movements of the respective switches; said interlocking-devices being adapted to prevent the shifting of any of said switches unless all are shifted simultaneously.

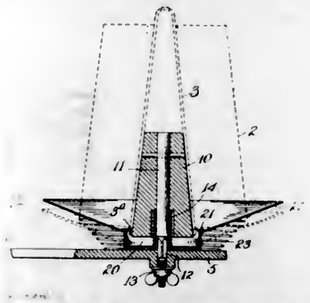
[Claims 6 to 13 not printed in the Gazette.]

1,169,538. DOOR-CHECK. JOHN HEBER, New Martinsville, W. Va. Filed June 16, 1915. Serial No. 34,337. (Cl. 16—87.)



The combination with a door and a door-casing, of a door check comprising a cylinder, a yoke mounted upon the front end of said cylinder and having pivotal connection with a similar yoke mounted upon the door casing whereby is constituted a hinge connection between the cylinder and door-casing; a piston reciprocable within said cylinder, a rod extending from said piston through the rear end of said cylinder, an outstanding bracket carried by said door adjacent to the hinged edge thereof, a yoke pivotally connecting the outer end of said rod with said bracket, a retractile coil spring located substantially parallel to said cylinder and between the latter and the door casing so as to be partially concealed by the latter, said spring normally maintaining said piston in a forwardly thrust position in said cylinder, said spring having its ends detachably mounted, and a valve provided at the front end of said cylinder for permitting air to enter and exhaust from the latter.

1,169,539. COP-MOUNTING. WILLIAM A. HOUCK, Reading, Pa. Filed Feb. 4, 1915. Serial No. 5,998. (Cl. 242—141.)



1. In combination with a supporting base, a thread supporting disk mounted thereon, a central cop support comprising a spindle having a screw-threaded end projecting through said base and a cop-engaging sleeve fixed to the spindle above said base, a spring seating between said base and sleeve, and a nut to perpendicularly adjust said spindle upon said base.

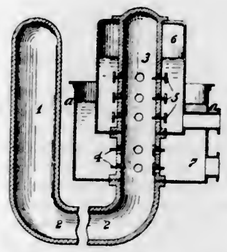
2. In combination with a supporting base, a cop support fixed thereto arranged to rigidly carry the cop, and a spring-pressed disk of dished form adapted to automatically maintain contact with the outer bottom edge of the cop.

3. In combination with a base plate, a cop support perpendicularly adjustable thereon, and a concentric spring-pressed thread-supporting disk carried thereby.

4. In combination with a base plate, a flanged-rim cup thereon, a central cop support fixed thereto, and a spring-pressed thread-supporting disk slidable on said flanged cup.

5. In combination with a base plate, a flanged-rim cup thereon, a central cop support perpendicularly adjustable on said plate and a spring-pressed thread-supporting disk slidable on said flanged cup.

1,169,540. RAISING OR FORCING LIQUID. HERBERT ALFRED HUMPHREY, London, England, assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed June 27, 1911. Serial No. 635,572. (Cl. 160—1.)



1. In an apparatus for raising or forcing liquid, the combination of a play pipe for the reciprocation of a column of liquid, one movement of said reciprocation being due to an expansible charge, a return movement due to energy stored, and means for utilizing the said return movement to effect an intake of fresh liquid.

2. In an apparatus for raising or forcing liquid, the combination of a play pipe for the reciprocation of a column or liquid, one movement of said reciprocation being due to the expansive force of compressed combustible charge communicated to one end of the column, a return movement due to energy stored, and means for utilizing the said return movement of the column to effect an intake of liquid at approximately the other end thereof.

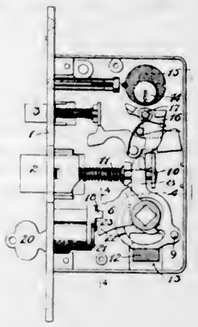
3. In apparatus for raising or forcing liquid, the combination of a play pipe for the reciprocation of a column of liquid, one movement of said reciprocation being due to an expansive force communicated to said column of liquid at approximately one end thereof, and means for utilizing the movement of the column of liquid whereby fresh liquid at low pressure is introduced at the other end of said column.

4. In apparatus for raising or forcing liquid, the combination of a play pipe for the reciprocation of a column of liquid, one movement of said reciprocation being due to an expansion of an expansible charge, a return movement due to energy stored, means for utilizing said return movement to effect the intake of fresh liquid and means for controlling the intake.

5. In apparatus for raising or forcing liquid, the combination of a play pipe for the reciprocation of a column of liquid, one movement of said reciprocation being due to an expansive force communicated to said liquid column at approximately one end thereof, and means for utilizing said reciprocative movements of the liquid whereby liquid is discharged and fresh liquid introduced at the other end of said liquid column.

[Claims 6 to 11 not printed in the Gazette.]

1,169,541. LOCK. NORMAN B. HURD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed July 29, 1915. Serial No. 42,468. (Cl. 70—14.)



1. In a lock, a case, a face plate, a spring latch projecting through said face plate, means including a roll-back for manually retracting the latch from one side of said case, and means operable by a key for engaging and disengaging said roll-back, said key operable means having a key-way opening through said face plate.

2. In a lock, a case, a face plate, a spring latch projecting through said face plate, means including a roll-back for manually retracting the latch from one side of said case, and a key operable means for engaging and disengaging said roll-back, said key operable means having a key-way opening through said face plate, said blocking means coöperating with said roll-back to block it in a plurality of positions.

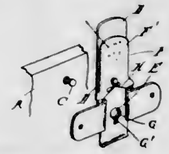
3. In a lock, a case, a face plate, a spring latch projecting through said face plate, means including a roll-back for manually retracting the latch from one side of said case, and means operable by a key for engaging and disengaging said roll-back, said key operable means having a key-way opening through said face plate, said key-operable means comprising a rotatable cylinder lock plug.

4. In a lock, a case, a face plate, lock mechanism within the case, rotatable means arranged to coöperate with said lock mechanism to lock and unlock the same, said means being key-operable in both directions and having a key-way opening through said face plate.

5. In a lock, a case, a face plate, a spring latch projecting through said face plate, means including two independently operable roll-backs for manually retracting said latch from either side of said case, and means arranged within the case and operable by a key to engage and disengage one of said roll-backs, said key operable means having a key-way opening through said face plate.

[Claims 6 and 7 not printed in the Gazette.]

1,169,542. FASTENER FOR VEHICLE-CURTAINS. FRANK H. ILSE, Detroit, Mich. Filed Oct. 31, 1914. Serial No. 869,568. (Cl. 24—211.)



1. In a fastener for securing a curtain to a member overlapped by said curtain, the combination with a button or stud adapted to be mounted upon said member, of a locking eyelet adapted to be interiorly attached to the overlapping portion of the curtain, and comprising relatively movable parts having registrable apertures for engaging the stud, and respectively having portions adapted to extend beyond an edge of said member, forming finger grasps, for displacing said parts oppositely to register said apertures and allow disengagement of the eyelet from the stud.

2. In a fastener for securing a curtain to a member overlapped by said curtain, the combination with a button or stud adapted to be mounted upon said member, of a locking eyelet adapted to be interiorly attached to the overlapping portion of the curtain and comprising relatively movable parts, respectively having apertures, normally imperfectly registered, to engage a reduced portion of the stud, and respectively having projecting adjacent parallel portions adapted to similarly extend beyond an edge of said member, forming finger grasps for displacing said parts oppositely to register said apertures and allow disengagement of the eyelet from the stud.

3. In a fastener for securing a curtain to a member overlapped by the curtain, the combination with a button or stud adapted to be mounted upon said member, of a locking eyelet adapted to be carried by the curtain, comprising two relatively movable parts, one of which is adapted to be secured to the curtain and forms ways in which the other is mounted to slide, said parts being formed with apertures to engage said stud, normally imperfectly registered, a pin mounted upon the sliding part, and a spring mounted upon said pin having its ends bearing upon corresponding edge portions of the other part tending to maintain the two parts in their normal relation.

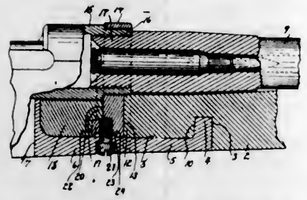
4. In a fastener for securing a curtain to a member overlapped by said curtain, the combination with a button or stud adapted to be mounted upon said member, of a locking eyelet adapted to be carried by the curtain primarily comprising two relatively movable parts having apertures for engagement with said stud, normally imperfectly registered, and having finger grasps for accomplishing a relative motion of said parts, one of the parts being formed with ways in which the other part slides, one of the parts being formed with a stop, encountering the other part when the two said apertures register.

5. In a fastener for securing a curtain to a member overlapped by the curtain, the combination with a button or stud adapted to be mounted upon said member, of a locking eyelet adapted to be carried by the curtain, comprising relatively movable parts having apertures for engagement with said stud, normally imperfectly registered, said parts being formed with parallel and adjacent finger

grasps for relatively moving said members into complete registration or moving the same as a unit into or out of engagement with the stud.

[Claims 6 to 8 not printed in the Gazette.]

1,169,543. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 5, 1915. Serial No. 59,801. (Cl. 42—75.)



1. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed in its lower face with a locking-recess, and a tang connected to the receiver and provided with a forward extension entering the said recess for holding the said forestock against longitudinal forward displacement.

2. In a military shoulder-arm, the combination with the receiver thereof, of a receiver-extension, a forestock provided in its lower face with a locking-recess, and a tang secured to the said receiver-extension and formed with an integral locking-arm provided at its forward end with an upstanding locking-lug entering the recess in the forestock for holding the same against forward longitudinal displacement.

3. In a military shoulder-arm, the combination with the receiver thereof, of a receiver-extension, a forestock provided in its lower face with a locking-recess, and a tang secured to the said receiver-extension, provided with a forwardly extending locking arm entering the said recess in the forestock, and also provided with a locking-boss entering the said receiver-extension.

4. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed in its lower face with a locking-recess, and a box-magazine provided with a forwardly extending tang having an integral locking-arm entering the said recess for holding the said forestock against longitudinal forward displacement.

1,169,544. ROLLER-BEARING CAGE. HERMANN KAPPER, Rathenow, Germany. Filed Jan. 15, 1915. Serial No. 2,431. (Cl. 64—62.)

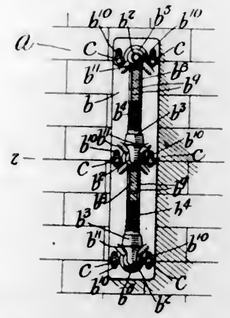


1. A roller bearing cage comprising in combination two U-shaped cage rings having perforated bottoms, auxiliary rings connected to said cage ring and provided with cup-like projections adapted to receive the trunnions of the rollers and coaxially disposed to the perforated bottoms of the cage ring, substantially as described.

2. In roller bearing cages the combination of U-shaped cage rings provided with a series of holes, auxiliary wave-like-shaped rings, the waves corresponding in number and shape to the holes in the cage rings, means for properly connecting up the cage rings, comprising means for fastening the connecting means to the cage rings and means for preventing the auxiliary from displacement in tne cage ring.

3. In roller bearing cages the combination of U-shaped cage rings 1 and 2, having a perforated bottom 4 and side walls 9, webs 3 for connecting the cage rings, flanges 3′ on the said web 3 to be bent over and around the said side walls 9, wave-like shaped auxiliary rings 6, to be inserted into the cage rings from above in such a manner that the open sides of the cups, formed by the waves, coincide with the holes in the bottom of the cage ring comprising means for securing the auxiliary ring agains displacement in the cage ring.

1,169,545. INSULATOR-BRACKET. FRANK P. KOBERT, Milldale, Conn. Filed Jan. 21, 1915. Serial No. 3,588. (Cl. 173—321.)



1. A bracket support for electric wires, comprising a plate provided at intervals with counter-sunk back parts and corresponding raised front parts having apertures, and insulator arms provided with necks which are passed backwardly through said apertures and which are riveted to form heads which are flush with the back of said plate, said plate being also provided between said arms with longitudinal slots having forwardly directed side flanges.

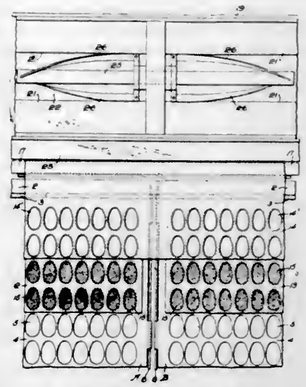
2. A bracket support for electric wires, comprising a plate provided at intervals with counter-sunk back parts and corresponding raised front parts having apertures, and insulator arms provided with necks which are passed backwardly through said apertures and which are riveted to form heads which are flush with the back of said plate, said plate being also provided between said arms with longitudinal slots having forwardly directed side flanges, and in the opposite side edge portions and adjacent to the ends thereof with short longitudinal slots.

3. A bracket support for electric wires, comprising a plate provided at intervals with countersunk back parts and corresponding raised front parts having apertures and insulator arms provided with necks which are passed backwardly through said apertures and which are riveted to form heads which are flush with the back of said plate, said plate being also provided between said arms with longitudinal slots having forwardly directed side flanges, means for securing said plate to a support, said means being provided with threaded members which are passed forwardly through said slots and provided with nuts and washers which bear on said flanges.

1,169,546. MECHANISM FOR FORMING FILLED WAFERS. EDWARD E. LAWRENCE, Cambridge, Mass., assignor to Loose Wiles Biscuit Company, Kansas City, Mo., a Corporation of Missouri. Filed Jan. 25, 1912. Serial No. 673,355. (Cl. 107—1.)

1. Mechanism for forming filled wafers comprising in combination, a wafer sheet supporting plate having sections relatively movable into a face to face relation, a die or stencil plate mounted to be superposed thereon, and means for supplying filling through said die or stencil plate to the wafer sheet upon the supporting plate.

2. Mechanism for forming filled wafers comprising in combination, a wafer sheet supporting plate having spaced concavities, a die or stencil plate adapted to be superposed upon said supporting plate, and means for supplying filling through said die or stencil plate to the concavities of wafer sheet upon the supporting plate.



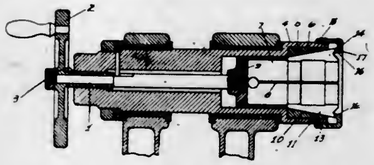
3. Mechanism for forming filled wafers comprising in combination, means to receive a pair of matching wafer sheets, a die or stencil plate adapted to be superposed upon said means, means for supplying filling through said die or stencil plate to said wafer sheets, and means to superimpose one of said sheets upon the other.

4. Mechanism for forming filled wafers comprising in combination, a wafer supporting plate having a pair of members shaped to receive matching wafer sheets, a die or stencil plate adapted to be superimposed upon said plate, and means for supplying filling through said die or stencil plate to the wafer sheet upon said supporting plate.

5. Mechanism for forming filled wafers comprising, in combination, a wafer sheet supporting plate having spaced concavities, a die or stencil plate superimposed upon said plate and adapted thus to contact with the exposed surface of said wafer sheet, the openings in the die or stencil plate registering with said concavities and means for supplying filling through the openings of said die or stencil plate to the concavities of said wafer sheet.

[Claims 6 to 30 not printed in the Gazette.]

1,169,547. POSITIVELY-OPENING CHUCK. ERNEST J. LEES, Cleveland, Ohio, assignor to The Lees-Bradner Co., Cleveland, Ohio. Filed May 12, 1915. Serial No. 27,627. (Cl. 29—114.)



1. A positively opening chuck comprising a hollow head, a chuck block having expansible jaws and movable therein, and means associated with said head and adapted positively to expand said jaws during the outward travel of said block and to be functionless during the inward travel of said block.

2. A collet chuck comprising gripping jaws and means including a conical surface with a given inclination whereby said jaws may be positively closed by a relative movement between said jaws and said means—in one direction, and means including a distinct conical surface with a greater inclination than that of said first mentioned conical surface whereby they may be positively opened by relative movement in the opposite direction.

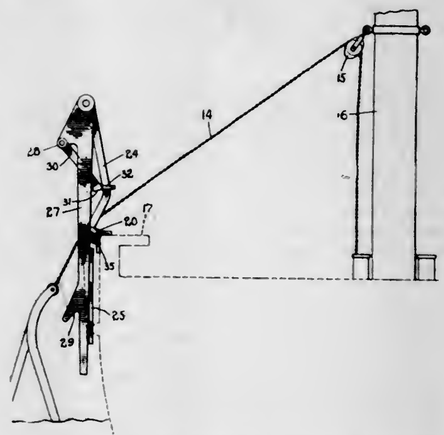
3. A positively opening chuck comprising a hollow head, a chuck block movable therein and carrying relatively movable jaws, and means adjustably carried by said head and adapted positively to open said jaws at different stages of the outward travel of said block.

4. A positively opening chuck comprising a hollow head fashioned interiorly with surfaces inclined toward the axis, a chuck block having expansible jaws and movable through said head, and a member carried on the forward end of said head, said member projecting into the path of forward movement of said jaws and fashioned with rearwardly presented surfaces inclined toward the axis, said jaws being fashioned with distinct surfaces likewise inclined toward the axis and adapted to engage the inclined surfaces of said head and member respectively, the engagement of one engaging pair of surfaces adapted positively to open and the other positively to close said jaws.

5. A positively opening chuck comprising a hollow head, a chuck block movable therein and provided with expansible jaws, and a member carried upon the open end of said head and provided with an inwardly projecting flange, said jaws and flange having similarly tapered and opposed surfaces inclined rearwardly toward the axis whereby to open said jaws.

[Claims 6 to 18 not printed in the Gazette.]

1,169,548. APPARATUS FOR DUMPING AND THROWING OYSTER-DREDGES. HENRY L. LEWIS, Stratford, Conn. Filed Mar. 8, 1915. Serial No. 12,818. (Cl. 43—11.)



1. Apparatus of the character described comprising a swinging dredge-carrying frame, levers pivoted to the frame and links pivoted to the levers and provided with yokes which engage and slide on the frame and with shoulders adapted to be engaged by a dredge, whereby the apparatus is tilted and then the levers are swung upward to dump the dredge.

2. Apparatus of the character described comprising a swinging dredge-carrying frame and pivoted means carried thereby and adapted to be engaged by a dredge, and links for causing said pivoted means to swing the dredge into dumping position when the dredge-carrying frame is swung inward.

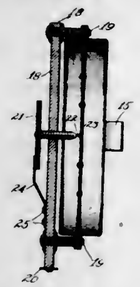
3. Apparatus of the character described comprising a swinging dredge-carrying frame, levers adapted to be engaged by a dredge and pivoted to the frame, and links also adapted to be engaged by a dredge and pivoted to the levers an having sliding engagement with the frame.

4. Apparatus of the character described comprising a swinging dredge-carrying frame, levers pivoted to the frame and having shoulders adapted to be engaged by the club of a dredge and links pivoted to the levers and provided with yokes which engage and slide on the frame and with shoulders adapted to be engaged by the frame of a dredge.

5. Apparatus of the character described comprising a swinging dredge-carrying frame, levers pivoted to the frame and having shoulders near their lower ends adapted to be engaged by the club of a dredge and links pivoted to the levers and offset therefrom, said links being provided with yokes adapted to engage and slide on the frame and with shoulders adapted to be engaged by a dredge, so that when a dredge is drawn into engagement with the shoulders the apparatus will tilt, the levers will be swung upward, the club of the dredge will engage the shoulders and the contents of the dredge will be dumped.

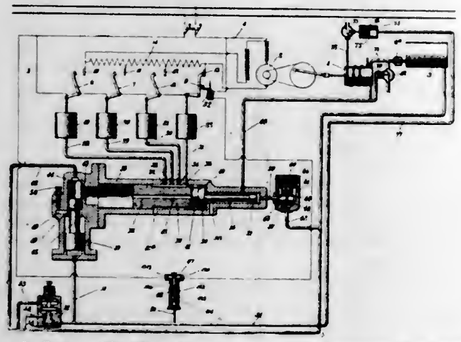
[Claims 6 to 12 not printed in the Gazette.]

1,169,549. ELECTROTHERMOSTAT. TIODOLF LIDBERG, Chicago, Ill., assignor to Chicago Surgical & Electrical Co., Chicago, Ill., a Corporation of Illinois. Filed May 19, 1914. Serial No. 839,619. (Cl. 200—31.)



A device of the character described comprising two flanged diaphragm supporting rings; a diaphragm comprising a hard rubber disk and a metal disk clamped together at their peripheries, between said rings; means for securing said disks together within the area inclosed by said rings; an electric contact near the center of said diaphragm, movable therewith; an insulated bar crossing said diaphragm and secured to said rings; and an adjustable contact carried by said bar for electric coöperation with the contact relatively movable by said diaphragm.

1,169,550. REGULATING DEVICE FOR MOTOR-DRIVEN COMPRESSORS. FREDERICK L. LUCKER, Brooklyn, and ALLAN O. CARPENTER, Corning, N. Y., assignors to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 27, 1912. Serial No. 738,801. (Cl. 230—24.)



1. In combination, a compressor, its receiver, a motor for driving the compressor, resistance in the motor circuit, a series of switches for progressively varying said resistance, fluid actuated motors for actuating said switches, a fluid operated unloader for said compressor, a controlling valve having portions serving to admit fluid to said switch motors, and to operate said unloader, a magnetic latch to hold one of said switches in closed position to operate said motor, a fluid operated switch controlling said magnetic latch, a fluid actuated water circulation valve, and auxiliary valve mechanism for admitting fluid pressure to operate said controlling valve, said magnetic latch switch, and said water valve, at predetermined receiver pressures.

2. In combination, a compressor, its receiver, a motor for driving the compressor, resistance in the motor circuit, a series of switches for progressively varying said resistance, a magnetic latch for holding one of said switches in closed position to close the motor circuit, fluid operated motors for operating said switches, a fluid operated unloader for said compressor, a valve having a portion serving to progressively admit fluid pressure to said switch motor and a portion serving to operate said unloader, a fluid operated switch for controlling said magnetic latch, and means for supplying fluid to actuate said valve and said latch switch at predetermined receiver pressures.

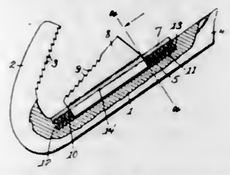
3. In combination, a compressor, its receiver, a motor for driving the compressor, resistance in the motor circuit, a series of switches for progressively varying said resistance, fluid actuated motors for operating said switches, a fluid operated unloader for the compressor, a fluid actuated valve having one portion serving to admit fluid pressure progressively to said switch motors and another portion serving to control said unloader and means to admit fluid pressure to actuate said valve at predetermined receiver pressures.

4. In combination, a compressor, its receiver, a motor for driving the compressor, resistance in the motor circuit, switch mechanism for cutting in the motor and said resistance, fluid actuated motor mechanism for actuating said switch mechanism, a fluid operated unloader for the compressor, a fluid actuated controlling valve having one portion serving to supply fluid progressively to said motor mechanism, and another portion serving to operate said unloader, a fluid operated switch for cutting out said motor and auxiliary valve mechanism for actuating said controlling valve and said fluid actuated switch at predetermined receiver pressures.

5. In combination, a compressor, its receiver, a motor for driving the compressor, resistance in the motor circuit, a series of switches for cutting in the motor and decreasing said resistance, fluid actuated motors for operating said switches, fluid ducts to said motors, a valve chest from which said fluid ducts lead, a valve in said chest for serially admitting fluid to said motors, said valve having differential operating areas, means to admit receiver pressure constantly to the small operating surface, means operating at predetermined receiver pressures to expose the other surface to receiver pressure to operate the valve, and to the atmosphere to restore it to position, and means to vary the exhaust from the smaller surface to vary the speed of valve movement.

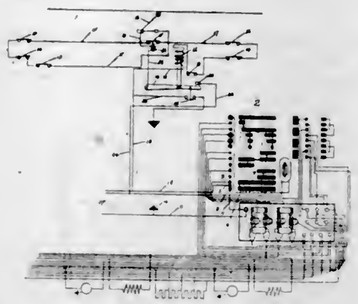
[Claims 6 to 15 not printed in the Gazette.]

1,169,551. PIPE-WRENCH. CHARLES MCCROBA, Bellaire, Ohio. Filed Feb. 16, 1914, Serial No. 818,824. Renewed Dec. 1, 1915. Serial No. 64,580. (Cl. 81—179.)



A wrench comprising a body having a handle at one end and a rearwardly inclined fixed jaw at the other end and overhanging the body, a slideway in the body having integral rigid seats formed at each end, the walls of the slideway having their upper edges formed with inwardly directed beads which extend the entire length of the walls, a movable jaw having grooves in its sides and extending the entire length thereof and slidably engaging the beads, and coils springs each having one end engaged with the end of a movable jaw and the other end engaged with the adjacent seat for normally holding said jaw with its ends spaced from the seats, said beads overhanging and being engaged with the springs to prevent accidental displacement thereof from the slideway.

1,169,552. OPERATING CIRCUIT AND SWITCH ARRANGEMENT FOR CAR-MOTORS. JOHN S. MCWHIRTER, New York, N. Y., assignor to Prepayment Car Sales Company, New York, N. Y., a Corporation of West Virginia. Filed Oct. 9, 1913. Serial No. 794,221. (Cl. 172—179.)



1. In an operating circuit and switch arrangement for car motors, a working circuit, a controller therefor, a switch arranged in said circuit, an operating circuit to control said switch, means to complete said operating circuit only when the controller is moved to its "first" running position from "off" position and an auxiliary circuit for said switch and operated thereby for maintaining said operating circuit closed after the controller moves beyond its "first" running position.

2. In a circuit and switch arrangement for car motors, a working and an operating circuit, a controller and a switch in the working circuit, means in the operating circuit to control said switch, and means in the working circuit to open the operating circuit when the controller is moved toward "off" position from any "on" or running position.

3. In a circuit and switch arrangement for car motors, a working and an operating circuit, a controller and a switch in the working circuit, means in the operating circuit to control said switch, means controlled by the controller to close said operating circuit only when the controller is moved to its "first" running position from its "off" position, and an auxiliary circuit connection for the operating circuit arranged to be closed only when the switch in the working circuit is closed.

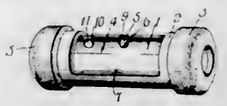
4. In a circuit and switch arrangement for car motors, a working circuit, a switch therefor, means to close said switch, a circuit for said means, a ground connection for the last mentioned circuit completed only when the motor controller is in its "first" running position, and an auxiliary ground connection for the circuit of the switch closing means arranged to be closed by said working circuit switch.

5. The combination with a working circuit having a controller and a switch therein, of means for controlling said switch, an operating circuit therefor, means to close the operating circuit only when the controller is in its "first" running position, and a trip switch to open the operating circuit, said trip switch arranged to be actuated by a movement of the controller toward "off" position.

[Claims 6 to 8 not printed in the Gazette.]

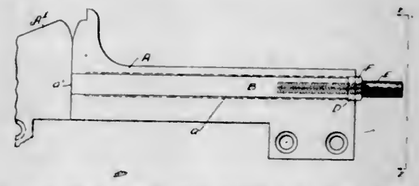
1,169,553. LOCKING DEVICE FOR CASH-CARRIERS IN DESPATCH-TUBES. DUNCAN MACMILLAN, Brooklyn, N. Y. Filed Aug. 20, 1914. Serial No. 857,713. (Cl. 243—34.)

A carrier comprising a pair of nested relatively rotatable members each having an elongated opening therein adapted for registration with one another, the inner member having a guide groove formed therein in one edge of said elongated opening, and adjacent the inner end of said groove is stamped a concave socket, the opposite edge of the opening of said inner member being provided with a notch alined with said guide groove and socket, a stud



carried by the inner walls of the outer member and having formed thereon a rounded head adapted to be received by the guide groove and socket when the members are rotated toward a closed position, and to rest in said socket when the members are fully closed, the aforesaid notch receiving said stud when the openings of said members register.

1,169,554. DEVICE FOR CASTING BORDERS, SLUGS, LEADS, AND THE LIKE. WILLIAM J. MAHONEY, Amenia, N. Y. Filed Mar. 24, 1915. Serial No. 16,799. (Cl. 199—7.)



1. In a device of the class described, a vise jaw having an undercut groove located in the same and running longitudinally therof to receive a matrix block and being open at the end distant from the vise jaw, and contracted adjacent to the jaw, and a matrix slide to register with the said groove and having a shoulder to engage the said contracted portion to form a closure at the inner end of the jaw flush with the face of the same, in combination with means to close the outer end of the groove and to hold the said slide in operative relation.

2. In a device of the class described, a vise jaw having an undercut groove located in the same and running longitudinally thereof to receive a matrix block and contracted adjacent to the jaw thereof to form a rectangular recess, and a matrix slide to register with the undercut portion of the groove and having means comprising a rectangular end portion to engage the said contracted portion to form a closure for, and flush with, the inner end of the jaw.

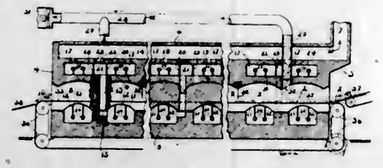
3. In a device of the class described, a vise having a groove located in the same and running longitudinally thereof to receive a matrix block, and a matrix slide to register with the said groove, in combination with means to detachably lock the said slide in the vise comprising a screw to engage the vise, a key adapted to swing on the screw, and a nut to hold the key in operative position.

4. In a device of the class described, a vise jaw having an undercut groove located in the same and running longitudinally thereof to receive a matrix block and being contracted adjacent the jaw meeting face to form a recess, and a matrix slide to register with the said groove, the said slide having means to close the recess, and a face portion narrower than the body thereof projecting outwardly from the side face of the jaw, the said projecting part being extended laterally to overlap the side face of the other and opposing vise jaw, when in a closed relation.

1,169,555. BAKE-OVEN. BEHR MANISCHEWITZ, Cincinnati, Ohio; Jacob Uriah Manischewitz, Joseph Manischewitz, and Max Manischewitz, executors and trustees of said Behr Manischewitz, deceased. Filed Oct. 28, 1911. Serial No. 657,331. (Cl. 107—57.)

1. A traveling-carrier bake-oven for matzos, crackers, bread, cakes and like bakery goods comprising suitable main walls, a longitudinal series of transverse, independ-

ently-partitioned firing-chambers within said main-walls, and a longtiudinal tunneled baking-chamber provided within said main-walls and composed of an independent tunneled iron structure that is arranged in heating-relation with said firing-chambers.



2. A traveling-carrier bake-oven comprising suitable main-walls, a longitudinal tunneled baking-chamber, and a longitudinal series of transverse independent firing-chambers arranged in connection with the upper face of said tunneled baking-chamber.

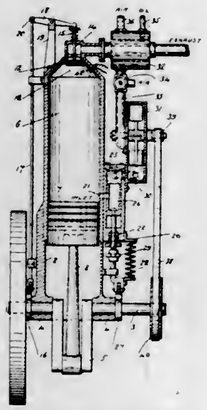
3. A traveling-carrier bake-oven comprising suitable main-walls, a longitudinal tunneled baking-chamber arranged and suported within said walls and composed of a metallic substance, and a longitudinal series of transverse independent firing-chambers arranged in connection with both the upper and lower faces of said tunneled baking-chamber.

4. A traveling-carrier bake-oven comprising main-walls, a longitudinal series of transverse upper and lower firing-chambers within said walls, and a longitudinal tunneled baking-chamber arranged between said upper and lower series of firing-chambers and having a longitudinal continuous series of transverse upwardly-disposed or convex roof-arches.

5. A traveling-carrier bake-oven comprising outside walls, a lingitudinal series of transverse firing-chambers arranged within said walls, and a longitudinal tunneled baking-chamber also arranged within said walls and having a longitudinal continuous series of transverse convex floor-arches.

[Claims 6 to 10 not printed in the Gazette.]

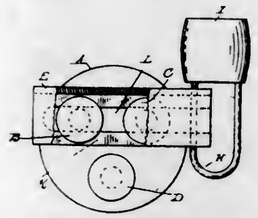
1,169,556. INTERNAL-COMBUSTION ENGINE. JOHN W. MITCHELL, Ellsworth, Pa., assignor of one-half to James V. Mitchell, Ellsworth, Pa. Filed Jan. 23, 1915. Serial No. 3,995. (Cl. 123—65.)



1. In an internal combustion engine, a cylinder, a piston reciprocating in the cylinder, the cylinder being provided with an inlet port overrun by the piston at the end of the working stroke, and a valve controlled exhaust at the other end of the cylinder, a valve casing communicating with the inlet port, a slide valve in the valve casing controlling the cylinder inlet port, means for operating the valves from the crank-shaft, and a fan blower discharging into the valve casing.

2. In an internal combustion engine, a cylinder, a piston reciprocating in the cylinder, a crank shaft, the cylinder being provided with an inlet port overrun by the piston at the end of the working stroke, and a valve controlled exhaust port at the other end of the cylinder, a valve casing communicating with the inlet port, a hollow piston valve slidable in the valve casing open to the top of the casing and closed at the bottom and provided with a port adapted to register with the cylinder inlet port, a fan blower discharging into the upper end of the valve casing, a carbureter connected to the fan blower, and means for operating the valves from the crank shaft.

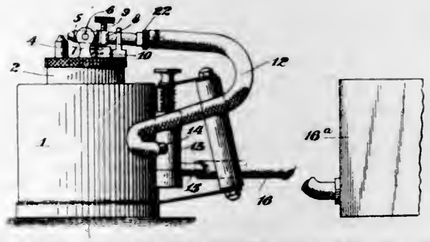
1,169,557. MOTOR-VEHICLE-LOCKING DEVICE. ANTOINE MOORE, Wayne, Mich., assignor of one-half to William A. Moore, Wayne, Mich. Filed Oct. 15, 1915. Serial No. 56,008. (Cl. 70—90.)



1. A locking device, comprising a bar having a T-shaped slot extending longitudinally thereof from one end, the stem of said T being engageable with the shank and the head of the T with the head of a control button, and a locking bolt engageable with cross apertures in said bar to close the entrance to said T-shaped slot.

2. A locking device, comprising a channel bar having one of the flanges thereof longitudinally slotted from one end and engageable with the shank of a control button, the channel of said bar receiving the head of said button and the opposite flange forming a guard above said head, and a locking bolt engageable with cross apertures in the slotted flange of said bar.

1,169,558. SPRAYING DEVICE FOR LIQUID PAINT AND THE LIKE. GEORGE MORE, Richmond Hill, and EDWARD W. SPIES, New York, N. Y. Filed May 4, 1915. Serial No. 25,680. (Cl. 91—45.)



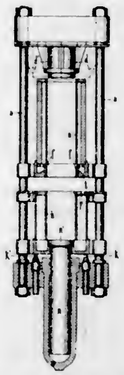
1. A device for spraying liquid paint and the like, the same comprising a receptacle, a stationary vertical paint delivery nozzle communicating with the interior of said receptacle, an air nozzle horizontally disposed and directed toward the vertical axis of said paint delivery nozzle, a pivotal support for said air nozzle enabling it to swing vertically, relatively to said paint delivery nozzle to vary the degree of suction force exerted upon said paint delivery nozzle, and means for adjusting said air nozzle in its vertical swinging movement.

2. A device for spraying liquid paint and the like, the same comprising a receptacle, a paint delivery nozzle communicating with the interior of said receptacle, an air nozzle in communication with a source of air pressure supply, the axes of said nozzles being in interaecting relation, and means for swinging one of said nozzles relatively to the other, to vary the degree of suction force exerted by pressure from said air nozzle upon said paint delivery nozzle.

3. In a device for spraying liquid paint and the like, having a receptacle, the combination of a paint delivery nozzle communicating with the interior of said receptacle, an air nozzle pivotally supported upon said receptacle, and in communication with a source of air pressure supply, a spring normally holding said air nozzle in a set position relatively to said paint delivery nozzle, a threaded portion upon said air nozzle, and a thumb screw engaged in said threaded portion and bearing upon said receptacle, for the purpose of regulating the position of said air nozzle relatively to said paint delivery nozzle, to vary the degree of suction force exerted in atomizing.

4. In a device for spraying liquid paint and the like, having a receptacle, and a removable cover therefor, the combination of a fixed paint delivery nozzle on said cover, communicating with the interior of the receptacle, a pivotal air nozzle, also mounted on said cover and movable with relation to said paint delivery nozzle, to vary the suction force directed thereon, means controlled by one hand of the operator to actuate said air nozzle, an air controlling valve, and a handle, both mounted on the rear portion of the receptacle, near each other, whereby said valve may be operated by the operator's other hand which grasps the handle in holding and manipulating the device, means communicating compressed air to said valve, and a tube connecting said valve and air nozzle.

1,169,559. PRESS. FRITZ MÜLLER, Esslingen-on-the-Neckar, Germany. Filed Apr. 3, 1914. Serial No. 829,164. (Cl. 100—50.)

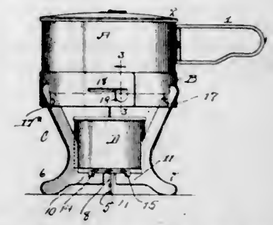


1. In a press, the combination of a perforated drum, an auxiliary chamber movable relatively thereto and disposed below the main drum in axial alinement therewith, a movable cover for the upper end of the main drum and a plunger adapted to be reciprocated within the auxiliary chamber and main drum to transfer the contents of the auxiliary chamber into the main drum and thereby expel the contents of said drum.

2. In a press the combination of a perforated drum, a table disposed below said drum and movable relatively thereto, an auxiliary chamber carried by said table and disposed coaxially with the main drum, mechanism for moving the table and auxiliary chamber away from and into contact with the lower open end of the main drum and a reciprocating plunger adapted to transfer the contents of the auxiliary chamber into the main drum and thereby expel the contents of said drum.

3. In a press the combination of a perforated drum, a removable cover for the upper open end of said drum, a reciprocating table disposed below said drum, an auxiliary chamber carried by said table disposed in axial alinement with the main drum, means for reciprocating the table and chamber away from and into contact with the lower open end of the main drum and a reciprocating plunger disposed below the auxiliary chamber adapted to transfer the contents of the auxiliary chamber into the main drum and thereby expel the contents of said drum.

1,169,560. PORTABLE HEATING DEVICE. JOSEPH B. MURRAY, Brooklyn, N. Y. Filed June 28, 1915. Serial No. 36,729. (Cl. 126—43.)

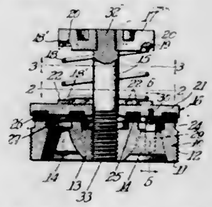


1. A portable heating device of the type set forth, comprising a cup, a tripod having its legs pivotally connected for movement in a common horizontal plane, said legs having shoulders at their upper ends, and a spring ring having its ends slidably connected; the said ring being variable in diameter to fit within said cup or to receive said cup when in engagement with said legs.

2. A portable heating device of the type set forth, comprising a cup, a stand having a support, a plurality of legs foldable one upon the other and connected to said support, and an adjustable supporting ring having notches engaging the upper extremities of said legs when in open position; the said ring being variable in diameter to fit within said cup or to receive said cup when in engagement with said legs.

3. A portable heating device of the type set forth, comprising a cup, a plate, legs having lateral projections pivoted to said plate and shoulders at their upper ends, and a spring ring having its ends free and slidable upon one another, and having notches in its edge constructed to receive and rest upon said shoulders: the said ring being adapted to hold said cup.

1,169,561. VALVE. FREDRICK Y. NICHOLS, Chicago, Ill. Filed Oct. 10, 1914. Serial No. 866,006. (Cl. 103—66.)



1. In a valve, a fixed seat part; a coöperating valve part; means to prevent relative rotation of said parts; a spring yieldingly holding said valve seated; a screw-threaded spring-retaining means secured to the body part and means associated with the spring to prevent separation of the retaining means from the body part by relative rotation of said parts.

2. In a valve, a fixed seat part; a coöperating, non-rotatable valve part; an open coil spring, to yieldingly hold said valve closed; a central valve-guiding stud, having a screw threaded part to hold said spring in place, the direction of the thread and the coil of the spring being opposite and means on the respective parts to prevent rotation of the spring when the threaded part is turned in direction to cause disengagement of the threaded parts.

3. In a valve, a seat part; a coöperating valve part; means to prevent relative rotation of the parts; a central stud projecting from the body part; a head on the free end of said stud, said head or stud secured in place by

screw threaded engagement; an open coil spring, having its convolutions coiled in direction opposite to the direction of said screw thread and having one end abutting against said valve and the other against said head and teeth arranged in the circumferential path of the ends, respectively, of said spring, on the head and on the valve, to engage the ends of said spring when the parts are rotated in direction to disengage the threaded members.

1,169,562. OVERSHOE. FREELAND W. OSTROM, Newark, N. J. Filed Jan. 17, 1911. Serial No. 603,135. (Cl. 36—7.)



1. An overshoe, having a yielding resistance member comprising a strip of non-abrading elastic material arranged in its toe portion and secured by its opposite ends to said toe portion and having its intermediate portion free to yield under pressure of the toe of an inner shoe in the act of applying the overshoe to such inner shoe and thereby draw the heel portion of the overshoe into fitting position on the inner shoe and hold the overshoe against accidental displacement with respect to the inner shoe and adapted for use without requiring a larger size overshoe than one normally required for an inner shoe of given size.

2. An overshoe, provided with a resistance member consisting of a strip of elastic material arranged lengthwise in the toe portion of the overshoe, and having one end secured to the upper of the overshoe and its other end secured to the sole and its intermediate part free, so that when acted on by an inner shoe it yieldingly holds said overshoe against accidental displacement with respect to the inner shoe.

3. An overshoe, provided with a resistance member consisting of a strip of non-metallic elastic material having non-elastic end sections, said strip secured by its non-elastic end sections in the toe portion of the overshoe with the elastic portion free to respond to pressure when acted upon by an inner shoe in the act of applying the overshoe to such inner shoe and serving to draw the heel portion of the overshoe into fitting position on the inner shoe and hold the overshoe against accidental displacement with respect to the inner shoe.

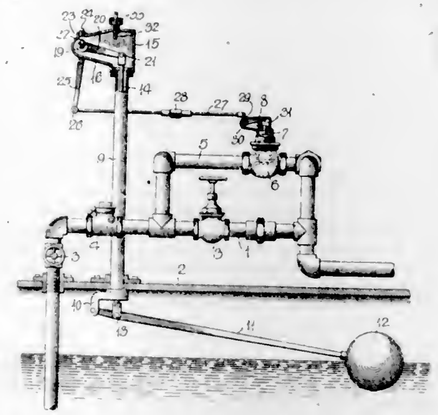
4. An overshoe, provided with a resistance member consisting of a strip of elastic material arranged lengthwise of the overshoe in its toe portion and provided with non-elastic ends one of which is secured to the upper and the other to the sole, the intermediate elastic part being free to respond by the inner shoe to hold the overshoe thereon against accidental displacement.

5. An overshoe, having secured inside its toe portion a yielding resistance member of little bulk and of a material that will conform to the contour of the toe portion of the inner shoe as the overshoe is fitted to such inner shoe and adapted for use without requiring a larger size overshoe on an inner shoe of given size and free to yield toward the overshoe toe when engaged by the toe of the inner shoe, whereby the heel portion of the overshoe is snugly seated upon the heel portion of the inner shoe.

[Claim 6 not printed in the Gazette.]

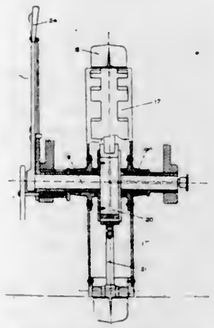
1,169,563. FEED-WATER REGULATOR. MICHAEL OWEN, Detroit, Mich. Filed Feb. 13, 1915. Serial No. 7,928. (Cl. 137—101.)

1. In a feed water regulator for boilers, the combination with a water supply pipe provided with a base valve adapted to control the supply of water to a boiler, of a bonnet on said valve, a crank shaft journaled in said bonnet and having a crank adapted to close said ball valve, a crank on the outer end of said shaft, a hollow upright, adapted for communication with the boiler, a casing at the upper end of said upright, a reach rod extending through said hollow upright, a rock shaft supported by said casing and adapted to be rocked by said reach rod, means actuated by said rock shaft adapted to move the last mentioned crank to close the ball valve of said water supply pipe, and means at the lower end of said upright adapted to automatically move said reach rod.



2. In a feed water regulator, the combination with a boiler, a water supply pipe therefor, and a ball valve for controlling the supply of water to said boiler, of an upright in communication with said boiler, an angle bracket on the lower end of said upright against the inner side of said boiler, a casing carried by the upper end of said upright, a rock shaft supported by said casing, means actuated by a movement of said rock shaft adapted to close said ball valve, a reach rod extending through said upright for imparting movement to said rock shaft, and a float arm carried my said angle bracket above the water in said boiler and adapted to raise and lower said reach rod.

1,169,564. MOTOR-PLOW. UGO PAVESI and GIULIO TOLOTTI, Turin, Italy, assignors, by mesne assignments, to A. M. Leoni Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Jan. 23, 1912. Serial No. 672,968. (Cl. 21—210.)

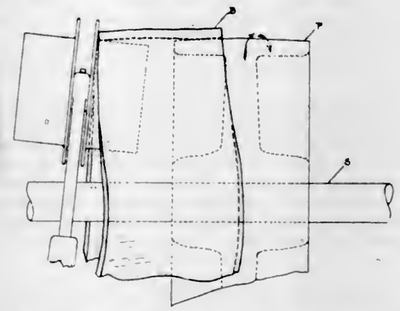


1. In a traction wheel, the combination of an axle, a hub mounted thereon, a rim, members rigidly connecting the hub and rim, a plurality of levers pivotally mounted on said rim, a sharpened blade integral with and substantially perpendicular to each of said levers, an eccentric mounted on the axle, a strap encircling the eccentric and

links connecting the levers to the strap, whereby the successive blades normally enter and leave the ground in a substantially vertical plane.

2. In a traction wheel, the combination of an axle, a hub mounted thereon, a rim, members rigidly connecting the hub and rim, a plurality of levers pivotally mounted on said rim, a sharpened blade integral with and substantially perpendicular to each of said levers, an eccentric mounted on the axle, a strap encircling the eccentric and provided with an arm operatively connected with the rim to cause the strap and rim to rotate together and links connecting the levers to the strap, whereby the successive blades normally enter the ground in a substantially vertical plane.

1,169,565. BELT-POLE. CHESTER L. PEPPER, Chelsea, Mass. Filed Feb. 26, 1915. Serial No. 10,857. (Cl. 64—51.)



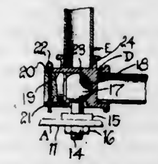
1. A belt pole having a pulley of substantial size journaled at its extremity with a belt applying flange at the inner side of said pulley, said pulley being comparable in dimension with the belt receiving pulleys with which the pole is to coöperate, and adapted to apply a belt in a manner similar to a shifting between loose and tight pulleys.

2. A belt pole having a pair of belt applying pulleys of substantial size journaled at its extremity, each of said pulleys having a belt applying flange at its inner side.

3. A belt pole having a laterally bent portion at its extremity constituting a rigid support for a belt applying pulley, and a pulley of substantial size journaled at the end of said bent portion with a belt applying flange at its inner side, said pulley being comparable in dimension with the belt receiving pulleys with which the pole is to coöperate, and adapted to apply a belt in a manner similar to a shifting between loose and tight pulleys.

4. A belt pole having a laterally bent portion at its extremity, and belt applying pulleys journaled at each side of the end of said bent portion, each of said pulleys having a belt engaging flange at its inner side.

1,169,566. HINGE. ROMÉO W. PRIESKORN, Somonauk, Ill. Filed June 9, 1915. Serial No. 33,163. (Cl. 16—49.)



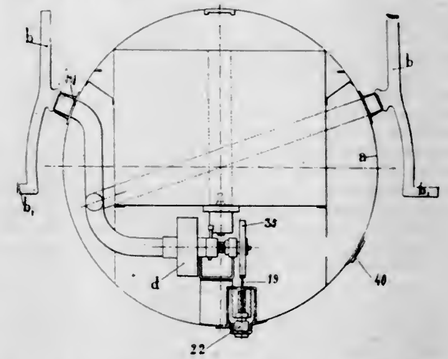
1. A hinge including a body member adapted for attachment to the article to be supported, a socket formed in the body member, a shank adapted to be secured to the structure upon which the article to be supported is mounted, a ball head formed on the terminal of the shank, said head being seated within the socket for universal movement therein, and a removable plug seated in the body member for maintaining the ball head against withdrawal from the socket.

2. A hinge including a supporting bracket adapted for attachment to a supporting member, a shank removably mounted in the bracket, a ball head formed in the terminal of the shank, a body member adapted for attachment to the article to be supported, there being a ball receiving socket formed in the body member, said socket conforming to the head member but being adapted to form a partial seat for the ball head, and a plug removably mounted in the body member and having a concave terminal engageable with the ball member for completing the seat and maintaining the ball against withdrawal from the socket.

3. The combination with a gate having a tubular frame, of a hinge including a body member, right-angularly disposed sleeves formed integral therewith, said sleeves being adapted to receive the terminals of a pair of right-angularly disposed frame members, there being a socket formed in the body member, a shank adapted to be attached to the structure upon which the gate is supported, a ball head formed on the terminal of the shank, said head being seated in the socket, and a removable plug seated in the body member for holding the head against withdrawal therefrom.

4. A hinge including a body member adapted for attachment to the article to be supported, a socket formed in the body member, a shank adapted to be secured over the structure to which the article to be supported is mounted, a ball head formed on the terminal of the shank, said head being seated within the socket for universal movement therein, and a removable plug disposed with its axis at approximate right angles to the shank for maintaining the ball head against withdrawal from the socket.

1,169,567. SUBMARINE MINE OR TORPEDO. AUGUSTE C. E. RATEAU, Paris, France. Filed May 27, 1913. Serial No. 770,100. (Cl. 102—3.)



1. In a submarine mine, firing means including a turbine adapted to be operated by water and means for introducing water into the mine and conducting it to said turbine.

2. In a submarine mine, firing means adapted to be operated by the introduction of water, means for conducting the water to said firing means, said mine being sealed and the pressure therein reduced below the normal atmospheric pressure.

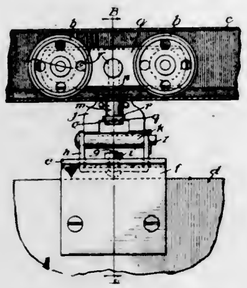
3. In a submarine mine, firing means including a turbine adapted to be operated by water introduced thereto through suitable conduits, a percussion device and intermediate gear mechanism between said turbine and the percussion device adapted to control the operation of the latter.

4. In a submarine mine, firing means including a turbine adapted to be operated by water, conduits within the mine for conducting water to said turbine and means for introducing water to said conduits.

5. In a submarine mine, firing means including a turbine adapted to be operated by water, means for introducing water into said mine and for conducting it to said turbine and supporting means connected with said last named means.

[Claims 6 to 10 not printed in the Gazette.]

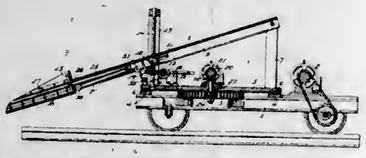
1,169,568. DOOR-HANGER. GEORGE HAROLD RICHARDS, Aurora, Ill., assignor to Aurora Door Hanger and Specialty Company, Aurora, Ill., a Corporation of Illinois. Filed Oct. 6, 1913. Serial No. 793,556. (Cl. 16—90.)



1. In a door hanger, the combination with a track, of a truck frame, wheels journaled in said frame coöperating with the track, a nut mounted in the frame and held thereby from turning in a horizontal plane, an inverted headed bolt threaded through the nut, a hanger yoke having a long horizontal bearing and a vertical bearing above it by which it is supported by the bolt head, and having an inverted T-shaped recess between said bearings coöperating with the head thereof and preventing the bolt from turning when it rests on the head and permitting the bolt to be turned when the door is raised to bring the wider portion of the recess into the horizontal plane of the head, a stirrup pivotally connected with the yoke, and a door secured to the stirrup.

2. In a door-hanger, the combination with a truck-frame having a pair of wheels journaled at each end thereof, of a nut supported in and held by the frame from rotation in a horizontal plane, but mounted to rotate on a horizontal axis parallel to the axis of the wheels, a bolt having its threaded end screwed into the nut, and a hanger suspended upon the nut, and having a recess with which the head of the bolt coöperates to prevent it from turning when the weight of the door is on the frame, and from which it is released as the door is lifted to permit the adjustment of the bolt.

1,169,569. MACHINE FOR LOADING EARTH AND LIKE MATERIALS. AARON C. E. ROBERTS, Rayland, Ohio. Filed Dec. 29, 1914. Serial No. 879,464. (Cl. 37—16.)



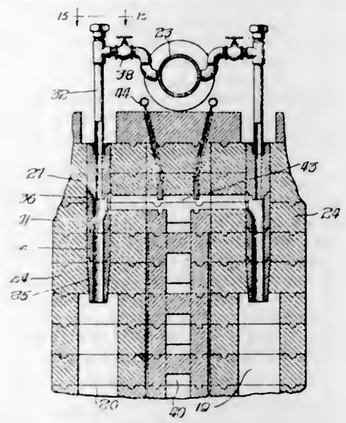
1. In a loading device, a pivotally mounted hollow arm, a scoop carried thereby having guide grooves in its inner side faces, a pusher within the scoop having lateral arms slidably engaged in the guide grooves thereof, a handle extending rearwardly from the pusher in telescopic relation to the arm, spaced pulleys on the arm, a cable taking over the pulleys and fastened at one end to the handle for sliding the pusher on relative movement between the arm and cable, a winding drum connected with the opposite end of the cable, and means for moving the arm about its pivot to effect actuation of the pusher.

2. In a loading device, a pivotally mounted hollow arm, a scoop carried thereby having guide grooves in its inner side faces, a pusher within the scoop having lateral arms slidably engaged in the guide grooves thereof, a handle extending rearwardly from the pusher in telescopic relation to the arm, spaced pulleys on the arm, a cable taking over the pulleys and fastened at one end to the handle for sliding the pusher on relative movement between the arm and cable, a winding drum connected with the opposite end of the cable, means for operating the arm about its pivot, and means for actuating the pusher while the arm is at rest and by and during movement of the latter.

3. In a loading device, a scoop, a pusher slidable in the scoop, a handle extending rearwardly from the pusher for sliding the latter, a pivoted hollow arm carrying the scoop and provided with a longitudinal opening, said handle being slidable in the arm, means for sliding the handle to actuate the pusher operable through the longitudinal opening of the arm, means for swinging the arm about its pivot, and means for operating the first means when the arm is at rest and also by and during movement of the arm.

4. In a loading device, a scoop, a hollow arm supporting the scoop and consisting of oppositely facing channel members secured together, a pulley supported between and by the lower flanges of the channel members, a pusher slidable within the scoop, a handle extending rearwardly from the pusher and within the hollow arm, and a flexible member secured to the handle and taking over the pulley for actuating the pusher.

1,169,570. COKE-OVEN BURNER. ARTHUR ROBERTS, Evanston, Ill. Original application filed Sept. 8, 1914, Serial No. 860,583. Divided and this application filed Mar. 18, 1915. Serial No. 15,286. (Cl. 158—99.)



1. A burner, comprising lower, intermediate, and upper circular sections, each of said sections being provided with a central bore, the bores of the lower and intermediate sections being of substantially equal diameter, and the bore of the upper section being of smaller diameter than the bore of the lower and intermediate sections, the upper face of the lower section and the lower face of the intermediate section having complementary surfaces, and the upper face of the intermediate section and the lower face of the upper section having complementary surfaces, the outer peripheral surface of the lower section being tapered downwardly to seat into a tapered socket, and the intermediate section having a side opening extending down from its upper edge for the admission of air.

2. A burner, comprising lower, intermediate, and upper circular sections, the lower and intermediate sections being provided with circular central bores of equal size, and the upper section being provided with a circular central bore of smaller size than the bores of the intermediate and lower sections, a collar on the lower end of the upper section adapted to seat into the bore of the intermediate section, and the upper faces of the lower and intermediate sections being of like contour, and the lower faces of the upper and intermediate sections being of like contour, and said upper and lower faces having complementary surfaces, the outer peripheral surface of the lower section being tapered to seat into a stationary socket.

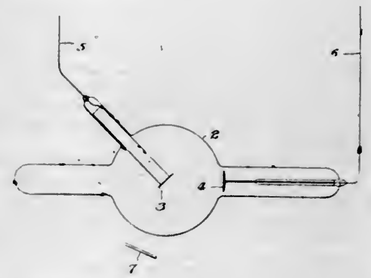
3. A burner, comprising lower, intermediate, and upper sections, the lower and intermediate sections having central bores of equal size and like contour, and the upper section having a central bore of smaller size than the size of the lower and intermediate sections, a collar on the lower end of the upper section of suitable size and contour to seat down into the bore of the intermediate section, the upper faces of the lower and intermediate sections being of like contour, and the lower faces of the upper and intermediate sections being of like contour and having surfaces complementary to those of the lower and intermediate sections.

4. A burner, comprising lower, intermediate and upper sections, the lower and intermediate sections having bores of like contour and equal size, and the upper section having a bore of smaller size than those of the lower and intermediate sections, all of said bores alining centrally with respect to each other when all of the sections are brought in alinement, the upper faces of the lower and intermediate sections being of like contour, and the lower faces of the intermediate and upper sections being of like contour and having surfaces complementary to those of the lower and intermediate sections, whereby when the several sections are brought into engagement with respect to each other, their upper and lower faces bring them into alinement with each other.

5. A burner comprising lower, intermediate and upper sections, each of said sections being provided with a central bore, the bores of the lower and intermediate sections being of substantially equal diameter and the bore of the upper section being of smaller diameter than the bores of the lower and intermediate sections, the outer peripheral surface of the lower section being tapered downwardly to seat into a tapered socket.

[Claims 6 to 12 not printed in the Gazette.]

1,169,571. ART OF COLORING GLASS. HARRY ROSENTHAL, Camden, N. J. Filed Jan. 21, 1914. Serial No. 813,605. (Cl. 49—77.)

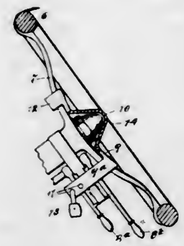


1. The art of tinting glass which consists in subjecting the glass to artificially produced short wave lengths of light.

2. The art of tinting glass which consists in placing the glass adjacent to an X-ray tube and subjecting the glass to the action of X-rays from said tube.

3. The art of tinting glass which consists in subjecting the glass to artificially produced short wave lengths of light emanating from a container inclosing metallic electrodes.

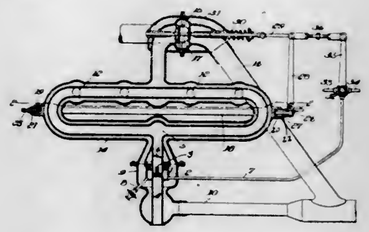
1,169,572. LOCKING DEVICE FOR THE CONTROLLING-LEVERS OF MOTOR-VEHICLES. JOSEPH A. SCHMITT, South Newburg, Ohio. Filed Mar. 29, 1915. Serial No. 17,680. (Cl. 70—90.)



1. A locking device for the control levers of motor vehicles, comprising a plate having depending ears adapted to embrace therebetween said levers and the arm of a steering wheel, said ears having holes to receive a lock, and said plate having a cap adapted to fit over a nut at the center of the steering wheel.

2. A locking device for the control levers of an automobile, comprising a plate having a cap to receive the central nut of a steering wheel, and also having depending ears adapted to embrace said levers and the arm of the wheel, said ears having openings to receive the shackle of a padlock or the like.

1,169,573. VAPORIZER. CARL F. SCHULZ, New York, N. Y. Filed Jan. 20, 1911. Serial No. 603,777. (Cl. 48—148.)



1. In an apparatus for vaporizing hydrocarbon fuels, the combination with the carbureter and the delivery chamber, of a casing inclosing said chamber, means for conducting a heating fluid to said casing, and means operated by the thermal variations of said casing caused by the heating fluid, for controlling the supply of heating fluid.

2. In an apparatus for vaporizing hydrocarbon fuels, the combination with the carbureter and the delivery chamber, of a casing inclosing said chamber, means for conducting a heating fluid to the interior of said casing, means operated by the thermal variations of said casing for controlling the supply of heating fluid, a source of light hydrocarbon supply, a source of heavy hydrocarbon supply, and means also operated by the thermal variations of said casing for admitting a hydrocarbon from one of said sources of supply to said carbureter according to the thermal condition of said casing.

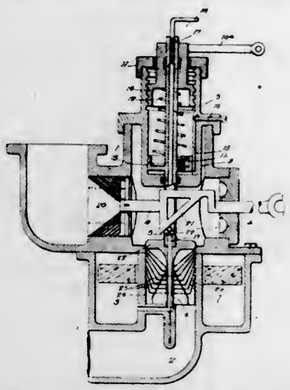
3. In an apparatus for vaporizing hydrocarbon fuels, a carbureter, a delivery chamber, a casing inclosing said chamber, ears on either end of said casing, a yoke having end pieces supported by said ears, a lever fulcrumed on one of said end pieces, means for admitting fluid to said casing, a valve controlling said fluid supply and having its stem connected to said lever, means tending to hold said lever unseated, and a movable pin carried by said end piece to which said lever is fulcrumed, said pin being moved by the expansion of said casing for acting on said lever to close said valve.

4. In an apparatus for vaporizing hydrocarbon fuels, a carbureter, a plurality of engine cylinder ports, a delivery chamber surrounding all of said ports, a casing inclosing said chamber, a yoke or frame secured to said casing, a lever fulcrumed on said yoke, a pin movable in said yoke and contacting with said casing and an arm of said lever, means for admitting a heating fluid to said casing, a valve controlling said fluid supply and having its stem connected to said lever, and means tending to hold said valve unseated, whereby the expansion of said casing forces said pin against said lever and swings the latter to close said valve.

5. In an apparatus of the character described, the combination with the carbureter, sources of light and heavy hydrocarbon, a valve establishing communication between either of said sources and said carbureter, a plurality of engine cylinder ports, a delivery chamber surrounding all of said ports, a casing inclosing said chamber, means for supplying heating fluid to said casing, and a valve controlling said supply, of a lever mounted adjacent said casing, a connection between asid lever and the hydrocarbon supply valve, a connection between said lever and said heating fluid valve, and means actuated by the expansion and contraction of said casing for shifting said lever and moving said valves.

[Claims 6 and 7 not printed in the Gazette.]

1,169,574. CARBURETER. CARL F. SCHULZ, Corona, N. Y. Filed July 30, 1907, Serial No. 386,304. Renewed Dec. 8, 1914. Serial No. 876,164. (Cl. 48—154.1.)



1. In a carbureter, the combination of a casing provided with an air inlet and a mixture outlet, an inspirator nozzle, a valve controlling said nozzle, a mixture valve movable by suction toward open position, a throttle valve, and means for limiting the movement of the inspirator nozzle valve, the mixture valve being movable by suction toward open position approximately proportionate to the degree of opening of the throttle valve, the mixture valve being movable toward closed position independently of the movement of the throttle and means connected with the throttle arranged to limit the extent of opening around the inspirator nozzle proportionate to the degree of opening of the throttle.

2. In a carbureter provided with an air inlet passage, an inspirator nozzle therein, a mixture outlet passage, a throttle valve interposed between the air inlet passage and the outlet passage, a mixture inlet valve surrounding the tip of the inspirator nozzle and varying the area of the opening around said tip according to the degree of movement of said valve toward open position, a needle valve controlling the outlet aperture of the inspirator nozzle and movable with the mixture inlet valve and designed to vary the said opening of the inspirator nozzle proportionately directly to the area of the space surrounding the tip of the nozzle, and means limiting the movement of the mixture inlet valve and inspirator nozzle valve toward open position at points proportionate to the degree of opening of the throttle valve.

3. A carbureter, comprising a casing provided with an air inlet passage and a mixture outlet passage and a mixture chamber interposed between the two, an inspirator nozzle in the air inlet passage, a mixture inlet valve surrounding the inspirator nozzle and designed to provide a space around the same increasing in area according to the degree of opening of said mixture inlet valve, a plunger rod to which the mixture inlet valve and needle valve are connected for simultaneous movement, said plunger rod being provided with an engaging element, and a throttle provided with a throttle valve designed to vary the opening between the mixture chamber and the outlet passage according to the position of the throttle, the said throttle being provided with a cam surface with which the engaging element on the plunger rod is designed to abut whereby to limit the upward movement of the rod proportionate to the degree of opening of the throttle.

4. A carbureter provided with an inspirator nozzle, a mixture inlet valve surrounding the inspirator nozzle, manually operable throttling means, said mixture inlet valve being arranged to vary the opening around the inspirator nozzle up to a limit determined by the position of the manually operable throttling means, the carbureter being also provided with a mixture chamber and the mixture inlet valve being formed to permit the passing therethrough into the mixture chamber of a series of annular air currents that, due to suction, take up contiguous positions as they enter the carbureting chamber, and a tapering valve mounted in and controlling the inspirator nozzle and movable with and controlled by the mixture inlet valve, whereby the inspirator nozzle will also be opened to various degrees up to a limit determined by the position of the throttling means and proportionate to the area of the air space around the inspirator nozzle.

5. In a carbureter provided with a mixture chamber and an air inlet passage communicating therewith, a mixture inlet valve mounted in said passage and comprising a series of annular portions, and means for holding said annular portions together in spaced relation to each other, said valve being formed to permit the passing therethrough into the carbureting chamber of a series of annular air currents that, due to suction, take up contiguous positions as they enter the carbureting chamber, an inspirator nozzle, and a fuel valve therefor connected to and movable with said mixture inlet valve.

[Claims 6 to 18 not printed in the Gazette.]

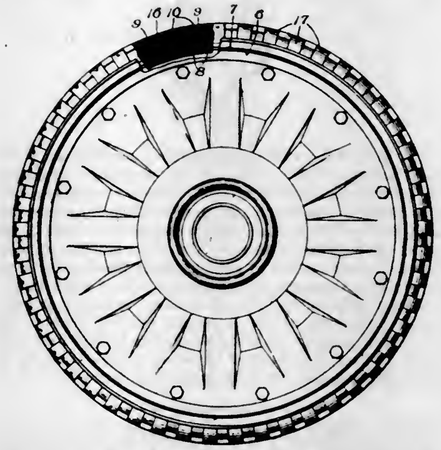
1,169,575. WHEEL-TREAD. WILLIAM SEIDEL, Chicago, Ill. Filed Nov. 12, 1914. Serial No. 871,840. (Cl. 152—2.)

1. A tire tread comprising a body of resilient material, a metallic rim for receiving said body, said rim being pressed outward at intervals to form metallic members extending crosswise of the material, metallic members affixed to said crosswise extending members, and said affixed members embodying divergently extending arms extending to the outer portion of the body, substantially as described.

2. A tire tread comprising a body of resilient material, a rim for receiving said resilient material, members carried by said rim and extending outwardly therefrom and crosswise of the material, members affixed to said crosswise extending members, and said affixed members comprising divergently arranged arms extending to the outer portion of the body, substantially as described.

3. A tire tread comprising a body of resilient material, reinforcing members embedded in said material and arranged transversely of the wheel tread to form a circumferential series, each of said reinforcing members consisting of a spring wire bent medially to provide outwardly extending divergent arms, each of said arms terminating at the outer portion of the body, each member being formed with a loop at the point of bend therein, means for anchoring said members in place within said body, and said anchoring means extending through the loop portion of said reinforcing members, substantially as described.

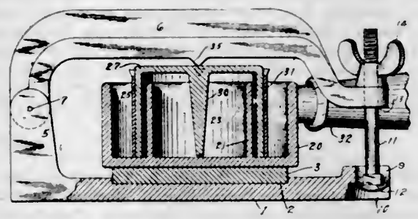
4. A tire tread comprising a body portion of resilient material, members extending crosswise of said material at periodic intervals and embedded in said material, a resilient wire associated with each of said crosswise extending members, said wires passing beneath the crosswise extending members with which it is associated and bent to extend across the top of said members from opposite directions and with the free end of said wires extending to the outer portion of the resilient material, substantially as described.



5. A tire tread comprising a body of resilient material, members embedded in said material and extending crosswise thereof, a section of resilient metal secured to each of said crosswise extending members, each of said sections of resilient metal extending beneath the crosswise extending member with which it is associated and bent at each side to extend across the top of said crosswise extending member from opposite sides thereof and then bent to have the free ends extending outwardly in a diverging relation to one another to the outer portion of said body, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,169,576. VULCANIZER. CLARENCE A. SHALER, Waupun, Wis. Filed Jan. 6, 1913. Serial No. 740,358. (Cl. 18—18.)



1. The combination with a cup shaped vulcanizing member sub-divided into a plurality of cavities, and a closed cap covering one of said cavities and having a wall extending into another cavity with its lower margin resting upon the bottom thereof, said wall subdividing said other cavity, the outer portion of which is open to the exterior and constitutes a combustion chamber; the covered cavity being adapted to contain a quantity of combustible fluid and said cap being adapted to permit vapor from the covered cavity to pass downwardly in the other cavity underneath the margin of the cap wall and upwardly in said combustion chamber.

2. The combination with a vulcanizing plate having a fuel retaining cup upon its upper surface, and a closed cap covering said cup and having a depending flange bearing upon said plate at the sides of the cup and beneath the margin of which gas may escape from the cup.

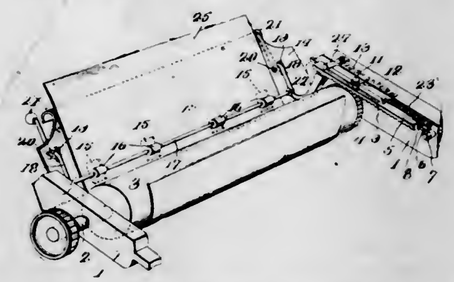
3. The combination with a vulcanizing plate having upwardly projecting flanges forming a plurality of open cavities, one concentric with another, and a cap covering one of said cavities and having a depending flange in another cavity concentric thereto, said flange having a wick exposed upon its outer surface to facilitate ignition and preliminary heating.

4. The combination with a vulcanizing plate having upwardly projecting flanges forming a plurality of open cavities, one concentric with another and a cap covering one of said cavities and having a depending flange in another cavity concentric thereto, a base plate and a clamping lever connected with the base and adapted to engage said cap.

5. The combination with a base plate, of a non-heat-conducting plate mounted thereon, a vulcanizing plate in clamping relation to the non-heat-conducting plate and provided with a cup for liquid fuel on its upper surface, a closed cap covering the cup and having downwardly projecting margins bearing upon said plate, a clamping device for holding the cap in position, and a projection extending downwardly from the cap into the cup.

[Claims 6 and 7 not printed in the Gazette.]

1,169,577. PAGE-END LOCK FOR TYPE-WRITERS. CHARLES E. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 19, 1913, Serial No. 755,369. Renewed July 11, 1914. Serial No. 850,351. (Cl. 197—141.)



1. In a page-end lock for typewriters, a platen-shaft; a gear-wheel carried fast thereon; a rack engageable with said gear-wheel and having a longitudinally extending groove therein; and means for arresting movement of said rack at a predetermined period after engagement thereof with said gear-wheel, comprising a stop adjustably positioned in said groove.

2. In a page-end lock for typewriters, a platen-shaft; a gear-wheel carried fast thereon; a rack engageable with said gear-wheel and having a longitudinally-extending groove therein; and two coöperating stops, one thereof comprising a screw-threaded member seated in said groove and a cap-member screwed onto said screw-threaded member.

3. In a page-end lock for typewriters, a platen-shaft; a gear-wheel carried fast thereon; a rack engageable with said gear-wheel and having a longitudinally-extending groove therein; two coöperating stops, one thereof comprising a screw-threaded member seated in said groove and a pointer-carrying cap-member screwed onto said screw-threaded member; and a scale coöperating with said pointer.

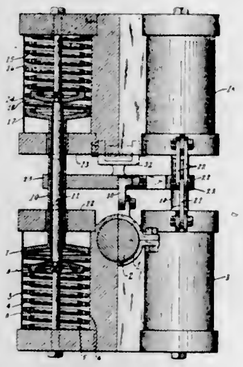
4. In a page-end lock for typewriters, a platen-shaft; a gear-wheel carried fast thereon; a rack engageable with said gear-wheel; means for temporarily maintaining the rack out of engagement with said gear-wheel, including

a member carrying rollers, and an arm carried by said member and engageable with said rack; and means for arresting movement of said rack at a predetermined period after engagement thereof with said gear-wheel.

5. In a page-end lock for typewriters, a platen-shaft; a gear-wheel carried fast thereon; a rack engageable with said gear-wheel; means for temporarily maintaining the rack out of engagement with said gear-wheel, comprising a member carrying rollers, an arm carried by said member and engageable with said rack, and fulcrumed crank-levers carrying said member; and means for arresting movement of said rack at a predetermined period after engagement thereof with said gear-wheel.

[Claims 6 to 22 not printed in the Gazette.]

1,169,578. SHOCK-ABSORBER. ANTHONY STOWASSER, Milwaukee, Wis. Filed May 29, 1915. Serial No. 31,138. (Cl. 267—19.)



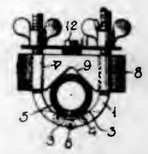
1. Shock absorbing apparatus for vehicles comprising a clamping bracket adapted to engage the vehicle axle, a set of spring containing cylinders connected with the bracket and respectively disposed in front and at the rear of said axle, a set of superposed spring containing cylinders linked to the first mentioned cylinders and adapted to move vertically with reference thereto, a set of coiled springs in each of the cylinders, a spring compressing plunger for each of said coiled springs, rods connecting the spring compressing plungers in each lower cylinder with the corresponding plungers in the upper cylinder, an equalizing bar centrally connected with one of said plunger connecting rods for each pair of superposed cylinders, a main spring connected with one end of said equalizing bar, and a link connecting the other end of said bar with the axle, substantially as described.

2. Shock absorbing apparatus for vehicles including the combination with a main spring and an axle, of a plurality of sets of superposed shock absorbing cushions supported from the axle in front and in the rear thereof, and an equalizing bar arranged to distribute the pressure exerted upon said cushions, the upper cushions being arranged to conteract the reactionary movements of the lower ones, substantially as described.

3. A shock absorber including the combination with a vehicle axle, of a pair of superposed spring cages carried thereby, springs in said cages, plungers adapted to compress the springs in opposite directions, a rod connecting said plungers, a tubular rod loosely inclosing the first mentioned rod and provided with spring compressing plungers, auxiliary springs in said cages, against which said last mentioned plungers are cushioned, and means for supporting a vehicle frame from said tubular rod.

4. A shock absorber including the combination with a vehicle axle, of a pair of superposed spring cages carried thereby, springs in said cages, plungers adapted to compress the springs in opposite directions, a rod connecting said plungers, a tubular rod loosely inclosing the first mentioned rod and provided with spring compressing plungers, auxiliary springs in said cages, against which said last mentioned plungers are cushioned, and means for supporting a vehicle frame from said tubular rod, each set of plungers being adapted to engage and actuate the other set after limited independent movement.

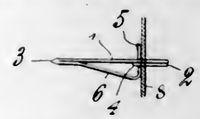
1,169,579. GLASS-TUBE CUTTER. FREDERICK M. STRAUSS, Detroit, Mich. Filed May 10, 1915. Serial No. 27,084. (Cl. 49—52.)



1. A glass tube cutter comprising a member shaped to accommodate a tube, inwardly and outwardly projecting revoluble cutters carried by said member, a clamping member adjustable relative to the first mentioned member and adapted to retain a glass tube in engagement with the inwardly projecting cutters of the first mentioned member, and means carried by said clamping member for yieldably holding the same in engagement with a glass tube.

2. In a glass tube cutter, a member, inwardly and outwardly projecting revoluble cutters carried thereby, and a clamping member movably supported by the first mentioned member and adapted to retain a glass tube in engagement with the inwardly projecting cutters.

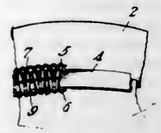
1,169,580. HOOK-AND-EYE FASTENER. EMMA HELENA TERESIA STRÖMBÄCK, Stockholm, Sweden. Filed Sept. 28, 1915. Serial No. 53,009. (Cl. 24—88.)



1. In hook and eye fasteners the combination of a fastener part, a needle-shaped part extending from the same and adapted to be inserted into the cloth, a yielding part extending from the needle-shaped part and toward the fastener, an arm extending from the said yielding part and transversally of the needle-shaped part in the vicinity of the fastener, and means for guiding the transverse arm.

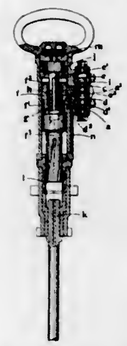
2. In hook and eye fasteners the combination of a fastener part, a needle-shaped part extending from the same and adapted to be inserted into the cloth, a yielding part extending from the needle-shaped part and toward the fastener, an arm extending from the said yielding part and transversally of the needle-shaped part in the vicinity of the fastener, and means for guiding the transverse arm, the said means consisting of a loop located close to the needle-shaped part and formed at the end of the wire forming the proper fastener.

1,169,581. GARMENT. REUBEN B. THOMPSON, Cohoes, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 9, 1911. Serial No. 601,657. (Cl. 2—41.)



A garment comprising sections formed of knitted material, said sections having overlapping meeting edges, an inelastic tape covering said overlapping edges on one face of the garment, a line of stitching passing centrally through the tape and said overlapping edges, a line of stitching at each side of said central line of stitching and passing through the knitted sections and covering threads joining all of said lines of stitching, said covering threads lying on the outer face of the tape and covering the same and on the opposite face of the garment.

1,169,582. DRILLING OR BORING TOOL. WILLIAM MAINE TREGLOWN and WILLIAM NOBLE, London, England, assignors to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 21, 1912. Serial No. 685,292. (Cl. 120—20.)



1. In a pneumatic percussive drill, a cylinder, a piston, a hollow drill steel actuated by said piston, passages for conveying fluid from both ends of said cylinder to the bore of said steel, and means for throttling the exhaust of the drill.

2. In a pneumatic percussive drill, a cylinder, a piston, a hollow drill steel actuated by said piston, a passage through said piston to convey fluid to said drill steel from the rear end of said cylinder, means to convey fluid from the front end of said cylinder to said drill steel, and means for throttling the exhaust from said cylinder.

3. The combination in a pneumatic tool of means for the passage of live fluid from the rear of the working piston directly to the bore of a hollow drill or cutter carried by the tool for the purpose of removing debris from the working face and means for throttling the exhaust from the tool for the control of the operation of the tool and of the flow of live fluid for the removal of the debris from the working face, substantially as described.

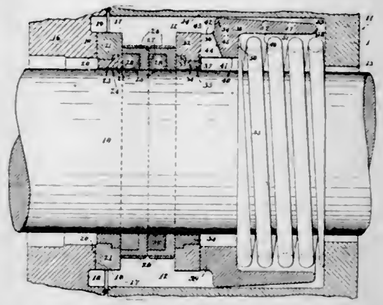
4. A pneumatic tool comprising a cylinder having ports for the admission and exhaust of fluid, a piston within said cylinder, a hollow drill or cutter carried by the cylinder, means for the direct passage of live fluid from the rear of the piston to the bore of the hollow drill or cutter, means for the control of the admission and exhaust of fluid to and from the fore and rear ends of the piston and means for throttling the exhaust from the tool substantially as described.

5. A pneumatic tool comprising a cylinder having ports for the admission and exhaust of fluid, a piston within said cylinder having a longitudinal passage or small cross-section, a hollow drill or cutter carried by the cylinder, means for the control of the admission and exhaust of fluid to and from the fore and rear ends of the piston for the operation of the piston, and means for throttling the exhaust from the tool, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,169,583. METALLIC PACKING. ADRIAN O. VAN DERVOORT, Troy, N. Y. Filed Nov. 24, 1914. Serial No. 873,679. (Cl. 137—116.)

1. In a packing for a piston rod, packing rings on said piston rod, an end ring on each side of said packing rings and mounted on said piston rod, a follower mounted on said piston rod, said follower having an annular recess on its forward outer end and having an inner peripheral wall of greater diameter than the diameter of said piston rod, there being a plurality of recesses in the forward end of said follower adjacent to one of said end rings and extending from the inner peripheral wall of said follower to the outer annular recess, the side walls of said plurality of recesses forming scraping edges to scrape the face of said adjacent end ring as said end ring and follower creep relative to one another in the operation of the piston rod.



2. In a packing, in combination with a housing forming an annular cylindrical chamber having a cylindrical wall, a rear annular wall, and a front annular wall, through which housing a piston rod is freely movable, packing rings in said chamber and mounted on said piston rod, a follower disposed between said rear annular wall and said packing rings, the inner periphery of said follower being of greater diameter than the periphery of the piston rod, means disposed between said follower and said rear annular wall normally pressing said follower forwardly to press said packing rings tightly together, there being an annular recess on the rear outer end of said follower, the resulting diminished portion of said follower being divided into a plurality of segments spaced from one another, said segments being disposed adjacent to said packing rings so that the space between said segments will form passages between said follower and said packing rings for the free passage of steam therethrough into contact with said packing rings to press them against said piston rod.

3. In a packing, in combination with a housing forming an annular cylindrical chamber having a cylindrical wall, a rear annular wall, and a front annular wall, through which housing a piston rod is freely movable, a passage being formed between the rear annular wall of said housing and said piston rod to afford communication from the cylinder of an engine into said housing, packing rings in said chamber and mounted on said piston rod, a follower disposed between said rear annular wall and said packing rings, the inner peripheral wall of said follower being of greater diameter than said piston rod and forming a chamber therebetween, means disposed between said follower and said rear annular wall normally pressing said follower forwardly to press said packing rings tightly together, there being an annular recess on the rear outer end of said follower, the resulting diminished portion of said follower being divided into a plurality of segments spaced from one another, said segments being disposed adjacent to said packing rings so that the spaces between said segments will form passages between said follower and said packing rings thereby enabling the free passage of steam from the passage in said rear annular wall, through said latter spaces into contact with the packing rings to press them onto said piston rod.

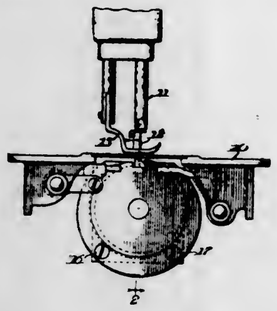
4. In a packing, in combination with a housing forming an annular cylindrical chamber having a cylindrical wall, a rear annular wall, and a front annular wall, through which housing a piston rod is freely movable,

a passage being formed between the rear annular wall of said housing and said piston rod to permit the passage of steam from the cylinder of an engine into said housing; packing rings in said chamber and mounted on said piston rod, an annular chamber being formed between said cylindrical wall and said packing rings, a follower disposed between said rear annular wall and said packing rings, the end of said follower nearest said packing rings having an annular recess on its outer edge forming a diminished portoin, a number of steam passages through said diminished portion to permit the free passage of steam into the annular chamber surrounding said packing rings where said steam exercises a pressure in a radial direction on said packing rings to clamp them onto said piston rod, a limited bearing zone on said follower in contact with said cylindrical wall, the outer portion of said follower tapering from said bearing zone and narrowing as it approaches the rear end of said follower, on which bearing zone the follower is adapted to tilt with respect to said cylindrical wall in the operation of said piston rod.

5. In a packing, in combination with a housing forming an annular cylindrical chamber having a cylindrical wall, a rear annular wall, and a front annular wall, through which housing a piston rod is freely movable, a passage being formed between the rear annular wall of said housing and said piston rod to permit the passage of steam from the cylinder of an engine into said housing; packing rings in said chamber and mounted on said piston rod, an annular chamber being formed between said cylindrical wall and said packing rings, a follower disposed between said rear annular wall and said packing rings, a limited bearing zone on said follower in contact with said cylindrical wall, the outer portion of said follower tapering from said bearing zone and narrowing as it approaches its rear end, on which bearing zone the follower is adapted to tilt with respect to said cylindrical wall in the operation of said piston rod.

[Claims 6 to 10 not printed in the Gazette.]

1,169,584. SEWING-MACHINE. VANDIVER J. VAN HORN, Chicago, Ill. Filed Dec. 8, 1913. Serial No. 805,262. (Cl. 112—5.)



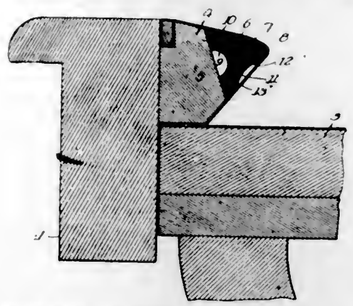
1. In a sewing machine, in combination, a race member, a segmental loop-holder mounted to revolve in the race member, and a revoluble member within the loop-holder and having a loop-deflecting lug projecting into the path thereof.

2. In a sewing machine, in combination, a race member, a segmental loop-holder mounted to revolve in the race member, and a revoluble member within the loop-holder and having a slotted loop-deflecting lug projecting in line with the rearward end thereof.

3. In a sewing machine, in combination, a race member, a segmental loop-holder mounted to revolve in the race member, and a circular revoluble member within the loop-holder and having a loop-deflecting lug projecting in line with the rearward end thereof, the perimeter of the circular member being recessed back of the lug.

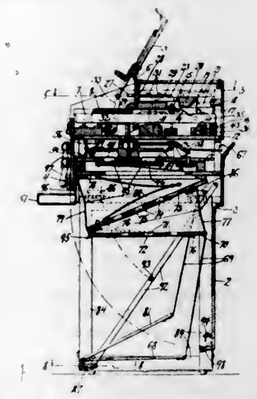
4. In a sewing machine, in combination, a race member, a segmental loop-holder mounted to revolve in the race member, and a revoluble member within the loop-holder and having a slotted loop-deflecting lug projecting in line with the rearward end thereof, the revoluble member being laterally recessed back of the lug.

1,169,585. GAME-TABLE. MICHAEL J. WHELAN, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed May 14, 1915. Serial No. 28,047. (Cl. 46—11.)



In a game table, the combination of a cushion rail having a flat side, and a substantially triangular-shaped rubber cushion mounted with its back against the flat side of the rail, said cushion having a groove in its back forming an open channel alongside the rail and a groove in its working face forming with the groove in the back a contracted neck above the basal apex of the cushion, for the purpose described.

1,169,586. PRACTICE-KEYBOARD APPARATUS. ALBERT L. WHITE, Chicago, Ill. Filed Dec. 7, 1910. Serial No. 596,020. (Cl. 84—92.)



1. A practice keyboard device comprising a series of keys, a spring connected with each of said keys and having a projecting part, a sliding bar engaging the projecting parts of said springs, guides for said bar, a cam in proximity to said bar and when actuated moving it toward the projecting parts of said springs, and means separate from said cam, for insuring an equal forward movement of said bar throughout its length.

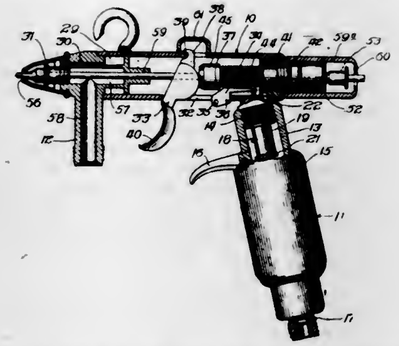
2. A practice keyboard device comprising a series of keys, a spring connected with each of said keys and having a projecting part, a sliding bar engaging the projecting parts of said springs, guides for said bar, a cam in proximity to said bar and when actuated moving it toward the projecting parts of said springs, and means separate from said cam, for insuring an equal forward movement of said bar throughout its length, said bar and cam being in the same horizontal plane, and a series of rollers through which the pressure due to the movement of the cam is transmitted to the bar.

3. A practice key-board device comprising a series of keys, a resisting part adapted when in predetermined positions to resist the movement of said keys in varying degrees, a cam piece in proximity to said resisting part and when actuated, moving it to various positions, a handle connected with said cam piece and projecting within reach of the operator, and a scale along which said handle is adapted to be moved, said handle adjustably connected with the cam piece whereby the distance it projects therefrom may be varied.

4. A practice key-board device comprising a series of keys, a resisting part adapted when in predetermined positions to resist the movement of said keys in varying degrees, a cam piece in proximity to said resisting part and when actuated, moving it to various positions, and a retracting device associated with said resisting part and adapted to move it toward the cam piece as the engaging face of the cam piece is moved away from the resisting part.

5. A practice key-board device comprising a series of keys, a resisting part adapted when in predetermined positions to resist the movement of said keys in varying degrees, a cam piece in proximity to said resisting part and when actuated, moving the resisting part to various positions, two retracting springs connected with said resisting part, one on each side of said cam piece, said springs adapted to keep the resisting part in contact with the engaging face of the cam piece.

1,169,587. AIR-BRUSH. OLAUS C. WOLD, Chicago, Ill. Filed May 24, 1915. Serial No. 30,078. (Cl. 91—45.)



1. In a device of the class described the combination with a suitable casing, of a pigment connection in the forward portion of the casing, a handle downwardly depending from the rear portion of the casing, said handle being hollow and provided with an air connection at its lower end, an air valve in the upper portion of the handle, a nozzle on the front end of the device, a connection from the pigment connection to said nozzle, a needle rod for controlling the nozzle, a sleeve slidably mounted on the needle rod, means for clamping said sleeve to the needle rod at any desired position of adjustment, a second sleeve outside of the first mentioned sleeve, a spring acting between said sleeves and tending to carry the first mentioned sleeve forward and the second mentioned sleeve rearward, an abutment, a spring acting between the second mentioned sleeve and the abutment and tending to carry said sleeve forward, a trigger, an operative connection between the trigger and the second mentioned sleeve, and an operative connection from the second mentioned sleeve to the air valve.

2. In a device of the class described the combination with a suitable casing having a pigment connection in its forward portion and an air valve in its rear portion, of a needle rod for controlling the delivery of pigment from the pigment connection, a sleeve slidably mounted on the needle rod, means for securing said sleeve to the rod at any desired position of adjustment, a second sleeve slidably mounted on the first mentioned sleeve, a spring acting between said sleeves and tending to carry the first mentioned sleeve forward and the second mentioned sleeve backward, an abutment, a spring acting between the second mentioned sleeve and the abutment and tending to carry said sleeve forward, a trigger, an operative connection between the trigger and the second mentioned sleeve, and an operative connection between the second mentioned sleeve and the air valve.

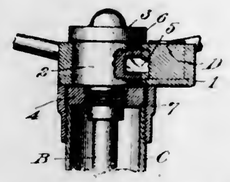
3. In a device of the class described the combination with a suitable casing, of a pigment connection in the forward portion of the same, an air valve in the rear portion of the casing, a needle rod for controlling the delivery of pigment from the pigment connection, a sleeve slidably mounted on the needle rod, means for securing said sleeve to the needle rod at any desired position of adjustment, a second sleeve slidably mounted on the first mentioned sleeve, a spring acting between said sleeves and tending to carry the first mentioned sleeve forward and the second mentioned sleeve rearward, there being coöperating parts on said sleeves to limit the extent of such relative movement, an abutment, a spring acting between said abutment and the second mentioned sleeve and tending to carry said sleeve forward, an operative connection between the second mentioned sleeve and the air valve, and means for operating the second mentioned sleeve against the force of the second mentioned spring, the parts being relatively so proportioned that when the second mentioned sleeve is operated the air valve opens before the relative movement between the two sleeves ceases.

4. In a device of the class described the combination with a suitable casing, of a pigment valve in the forward portion of the same and an air valve in the rear portion of the casing, a needle rod for controlling the opening of the pigment valve, a sleeve slidably mounted on the needle rod, means for securing said sleeve to the needle rod at any desired position of adjustment, a second sleeve slidably mounted on the first mentioned sleeve, a spring acting between both of said sleeves and tending to carry the first mentioned sleeve forward and the second mentioned sleeve rearward, coöperating parts between the sleeves tending to limit the extent of such relative movement, an abutment, a spring acting between said abutment and the second mentioned sleeve and tending to carry said sleeve forward, a lever pivoted to the casing and acting on the air valve, a trigger mounted in position to engage the second mentioned sleeve, and a part carried by the second mentioned sleeve in position to engage the lever for the purpose of rocking the same to thereby open the air valve when the rearward movement of the second mentioned sleeve commences, the parts being so proportioned that the lever is fully rocked before the completion of the relative movement between the two sleeves.

5. In a device of the class described the combination with a suitable casing, of a pigment valve in the forward portion of the same, an air valve in the rear portion of the casing, a needle rod for controlling the opening of the pigment valve, a part secured to the needle rod, a sleeve slidably mounted with respect to said part, a spring acting between the sleeve and said part and tending to carry the needle rod forward and the sleeve rearward, means for limiting the extent of such relative movement, an abutment, a spring acting between the abutment and the sleeve and tending to carry the sleeve forward, a trigger mounted in position to engage the sleeve to move the same rearward against said spring, a lever pivoted to the casing and mounted in position to engage the air valve, and a part on the sleeve adapted to engage the lever to rock the same when the movement of the sleeve against its spring commences, the parts being so proportioned that the lever is fully rocked before the relative movement between the needle rod and the sleeve ceases.

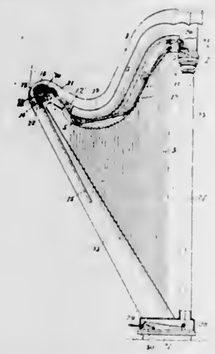
[Claim 6 not printed in the Gazette.]

1,169,588. LOCKING DEVICE FOR AUTOMOBILES. CHARLES M. WRIGHT and WILLIAM L. SHAB, Altamont, Ill. Filed May 15, 1915. Serial No. 28,425. (Cl. 70—90.)



A steering mechanism for automobiles, comprising a steering column having a hub portion which is provided at its upper end with a cap piece, a steering wheel loosely mounted on said hub portion under said cap piece and provided with an integral web extending between two of the spokes thereof, a mortised lock arranged in said web and provided with a plunger that is adapted to enter a notch or recess in said hub portion, a nut on said steering column arranged underneath said steering wheel so as to clamp said wheel between said nut and the cap piece on the hub portion, a casing or housing for said steering column which bears against the underside of said nut, and a screw-threaded sleeve on the upper end of said housing that incases said nut.

1,169,589. MUTE MECHANISM FOR HARPS. ALFRED ZAMARA and JOHANN PERL, Vienna, Austria-Hungary. Filed Mar. 16, 1915. Serial No. 14,753. (Cl. 84—14.)



1. In a harp, the combination with a frame, having a sounding board and springs attached to the frame and lying adjacent the sounding board, of a mute supported by said frame and extending across the strings, a double arm lever carried by the frame, means connecting said lever with said mute whereby the mute is moved into and out of engagement with the strings, comprising a stud on one arm of the lever and a second rocking lever having a cam groove therein engaging said stud.

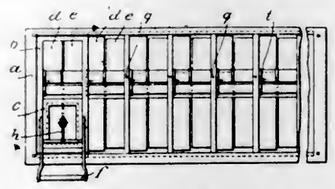
2. In a harp, the combination with a frame having a sounding board, strings carried by the frame, a mute attached to said frame, a hand lever supported by the frame at one end, a foot lever secured to the lower end of the frame, an operating mechanism for the mute having an operative connection therewith, and means connecting the foot and band levers with the operating mechanism for moving the mute toward or from the strings upon the actuation of either of said levers.

3. In a harp, the combination with a frame, strings carried thereby, a mute carried by said frame having a plurality of elongated shanks extending therefrom, actuating mechanism for said mute consisting of a plurality of operating members having slots passing therethrough for the passage of the elonated shanks carried by the mute and a cam-way arranged in each of said operating members, engaging members carried by the elongated shanks and riding in the cam ways, and means for actuating said operating members to cause a movement of the mute toward or from the strings.

4. In a harp, the combination with a frame having strings carried thereby, a pair of plates supported by said frame, a mute carried by said plates, a series of operating members journaled in one of said plates, connections between said operating members and said mute, and a lever for actuating said operating members to move the mute toward and from the strings.

5. In a harp, the combination with a frame having a sounding board, strings carried by said frame, of a mute supported by the frame and extending across said strings, a hand lever secured to the frame at one end thereof, a foot lever near the lower portion of the frame, and operating means connected with the mute and including slotted links connected with the hand lever and the foot lever and being adapted to be actuated by either the hand lever or the foot lever to move the mute toward and from the strings.

1,169,590. APPARATUS FOR PRINTING TICKETS AND THE LIKE. ADOLF ZÖLLIN, Jr., Badenweiler, Germany. Filed Jan. 14, 1915. Serial No. 2,258. (Cl. 101—187.)



1. In an apparatus for printing tickets, in combination, a plurality of rolls adapted to support paper webs arranged side by side, a movable and depressible printing device having exchangeable printing disks and adapted to be moved above each paper web in two directions at right angles to each other, substantially as and for the purpose set forth.

2. In an apparatus for printing different tickets, of the type specified, the combination of a movable printing device, a printing block thereon, a hand-lever adapted to move the latter up and down, an exchangeable insertion in said printing block, and exchangeable printing disks in said insertion containing different price indications and adapted to be automatically adjusted upon a lateral displacement of the printing device, substantially as and for the purpose set forth.

3. In an apparatus for printing different tickets, of the type specified, the combination of a movable printing device, a printing block thereon, a slide to carry the printing device, a hand-lever to operate said printing block, a guiding-roller on said hand-lever to bear upon said slide and adapted to leave the latter support upon the printing device being completely advanced and thereby to allow the depression of the latter, substantially as and for the purpose set forth.

4. In an apparatus for printing different tickets, of the type specified, the combination of a movable printing device, a casing for the latter, a cover for said casing having guiding-slots therein, and a hand-lever for said printing device adapted to be guided in said slots, substantially as and for the purpose set forth.

1,169,591. EXTENSION-PIN. WALTER R. AHRENS, Chicago, Ill. Filed Mar. 19, 1915. Serial No. 15,409. (Cl. 24—150.)

1. An extension pin comprising a shank and a blade, said shank being forked and said blade being pivoted between the arms of said shank at a point nearer one end of said blade than the other; one end of said blade being tapered; when folded the tapered end of said blade being adjacent the outer ends of said arms, the said ends of said arms being tapered to conform to the tapering surface of the adjacent sharpened end of said blade, and means for preventing folding of said blade in one direction.



2. A folding pin comprising a shank and a blade, said blade being pointed at each end and being pivoted to said shank; means for locking said blade in said shank with either end of the blade extending in line with said shank, and when so locked the pin having a smooth outer surface from its point to and beyond said pivot and said locking means; said pin with one end of the blade extended being longer than with the other end of the blade extended.

3. A folding pin comprising a shank and a blade; means for locking said shank and blade together with one end of the blade extending a material distance beyond and in line with the shank; means for locking the shank and blade together with the other end of the blade extending beyond and in line with but adjacent to the shank; when in either position the blade and shank having a smooth surface pointed at the end.

4. An extension pin comprising a shank and a blade, said shank being bifurcated and said blade being pivoted to said shank between the arms of said shank at a point nearer one end of said blade than the other; each end of said blade being sharpened for insertion in a fabric, when folded one end of said blade being adjacent the ends of said arms, and the ends of said arms being tapered to conform to the tapering surface of the adjacent sharpened end of said blade; and means for locking said blade in a closed or open position.

5. A folding pin comprising a smooth shank and a smooth blade, said blade being pointed at each end and being pivoted to said shank; means for locking said shank and blade together with one of the ends of the blade extending in line with said shank; means for locking said shank and blade together with the other end of said blade extending in line with said shank; when locked in one position the projecting end of said blade being a material distance beyond the end of said shank; when locked in the other position the projecting end being adjacent the end of said shank, and the surfaces of the two ends forming a continuous tapering pointed end.

1,169,592. PROCESS FOR THE MANUFACTURE OF BROWN WOOD-PULP AND HALF-CELLULOSE FROM RESINOUS KINDS OF WOOD. JACOUB AKTSCHOURIN, Aktschourin-Tupik, Russia. Filed Dec. 18, 1911. Serial No. 666,554. (Cl. 92—2.)

1. A process for making wood-pulp from resinous wood, which consists of diminuting the wood and subjecting the same under pressure to the action of an alkalinous lye having a density of approximately 4° to 7° Bé., said lye being not sufficiently concentrated to decompose the incrusting substances, and of treating the material after this step with alkalinous lye under coaction of steam.

2. A process for manufacturing wood-pulp from resinous wood, consisting of diminuting the wood, treating the same with an alkalinous lye having a density of approximately 4° to 7° Bé. at a temperature below 100°, drawing off the solution, removing the saponified resin and free resin from the solution and subjecting the wood again to the action of the same solution.

3. A process for the manufacture of a wood-pulp from resinous wood, which consists of diminuting the wood, treating the same with an alkalinous lye having a density of approximately 4° to 7° Bé. at a pressure of 3–5 atmospheres, separating the resins extracted by said solution from the solution and subjecting the wood to the action of the same solution at a pressure of 5–6 atmospheres under coaction of steam.

4. A process for the manufacture of wood-pulp from resinous wood, which consists in diminuting the wood, subjecting the same to the treatment of a diluted alkalinous lye having a density of approximately 4° to 7° Bé. at a low temperature, extracting the resins after this step from the solution by means of filtration and subjecting the wood to the action of the filtered solution at a pressure of 5–6 atmospheres under coaction of steam.

5. The herein described steps in a process for making wood pulp from resinous wood, which consists in reducing the wood to a finely divided condition, treating the wood at comparatively a low temperature and low pressure with dilute alkali solution capable of dissolving the resinous substances, but not the incrusting substances of the wood pulp and drawing off the solution containing the resinous substances from the mass.

[Claims 6 to 8 not printed in the Gazette.]

1,169,593. PUZZLE. JOHN L. ALLEN, San Diego, Cal., assignor to Hugh Allen, Hamilton, Ontario, Canada. Filed May 8, 1915. Serial No. 26,770. (Cl. 46—41.)



1. A puzzle, comprising a casing provided with a smooth floor and a transparent cover, and a movable object therein consisting of a ball and an inverted box concealing the same of less depth than the diameter of said ball though of greater width and length than the diameter of said ball.

2. A puzzle, comprising a casing provided with a smooth floor and a transparent cover, and a movable object therein consisting of a ball and an inverted box concealing the same of less depth than the diameter of said ball though of greater width and length, and a partition in said box limiting the relative movements of said ball and box whereby said box may at times be supported by said ball clear of said floor.

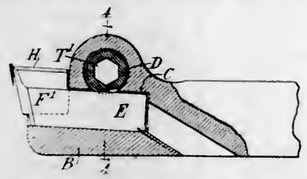
3. A puzzle, comprising a casing provided with a smooth floor and a transparent cover, an inclosure of definite size between said floor and cover and provided with an opening at one side thereof, an angular object in said casing of slightly less width than said opening but of greater length, and a ball beneath said object of a diameter exceeding the depth thereof.

1,169,594. TOOL-HOLDER. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N.Y., a Corporation of New York. Filed Jan. 4, 1913. Serial No. 740,102. (Cl. 29—99.)

1. A tool-holder having a one-piece head with an opening therein extending longitudinally and adapted to embrace the shank of a tool so as to prevent lateral escape of said shank in any direction, the lower part of said head projecting forward beyond the upper part and the upper part having a squared end face adapted to be engaged by the rear face of an enlarged head of a tool whose shank is located in said opening and clamping means located in said upper part of the head and adapted to bear on the shank of the tool to clamp the latter in place.

2. A tool holder having a one-piece head with an opening therein extending longitudinally and adapted to receive the shank of a tool, the sides of said head projecting forward beyond the upper part and forming horizontal shoulders on opposite sides of said opening to form sup-

ports for the laterally projecting heads of both right-handed and left-handed tools, and means bearing directly on the shank of the tool for clamping the tool in place.



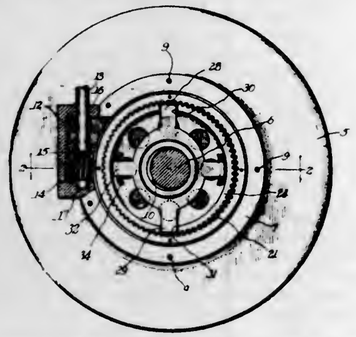
3. A tool holder having a one-piece head B with an opening C therein extending longitudinally and adapted to receive the shank of a tool, the lower part of said head projecting forward and forming horizontal shoulders F at opposite sides of the head of the tool in planes above the bottom of said opening.

4. A tool holder having a one-piece head B with an opening C therein extending longitudinally and adapted to receive the shank of a tool, the lower part of said head projecting forward and forming horizontal shoulders F at opposite sides of the head of the tool in planes above the bottom of said opening, and a cam D extending horizontally through the head of said holder and serving to clamp said tool in place.

5. A tool holder provided with clamping means comprising a cam member extending entirely through the holder, and having a polygonal socket extending entirely through such cam member, so as to be accessible at the middle of the axial length of the cam and from both sides of the holder.

[Claims 6 and 7 not printed in the Gazette.]

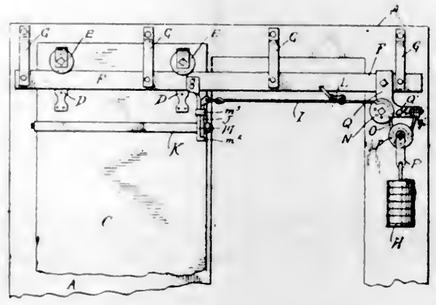
1,169,595. GEARING. VINCENT G. APPLE, Dayton, Ohio, assignor to Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Original application filed Oct. 2, 1911, Serial No. 652,381. Divided and this application filed Feb. 27, 1913. Serial No. 750,949. (Cl. 74—35.)



A reduction gearing comprising a rotatable shaft provided with an eccentric part; an internally geared annulus positioned for concentric rotation around the true axis of said shaft; an externally geared member overlying said eccentric part having some of its teeth intermeshing with the teeth of the overlying member, said members having different numbers of teeth; means to permit free lateral and vertical movement of the inner geared member and to prevent rotation thereof; a worm gear on the outer surface of said internally geared annulus and a shaft carrying a pinion driven by said worm.

1,169,596. FIRE-DOOR AND OTHER CLOSURE. GEORGE C. AVERY, Louisville, Ky.; Kate Shindler Avery executrix of said George C. Avery, deceased. Filed Apr. 13, 1911. Serial No. 620,930. (Cl. 189—47.)

1. The combination with a closure, of a power element adapted automatically to close the same, means for holding the power element normally out of operation, an attaching element, means connected with the attaching element and in constant operative engagement with the power element, the closure being normally free from connection with and movable relatively to the attaching element and having a part which in the movement of the closure travels adjacent to the attaching element, and said attaching element being adapted operatively to engage the adjacent portion of said part when the power element is released for operation.



2. A closure and a means including an attaching element and arranged for automatically closing the same, said closure having a member which extends transversely thereof and is adapted to be engaged by the attaching element of the closing means, and said attaching element being normally free from union with said member and adapted to engage the latter at different places in the length of the same, the closing means having a power-element which has connection with said attaching element and means for holding the power-element normally non-operative, the power element serving when releaaed to effect an operative engagement of said attaching element with said transverse member of the closure and to move the closure into aperture-closing position.

3. A closure and a means for automatically closing the same, said closure having a member intermediate its ends and in which extends transversely thereof, and said closing means comprising a power-element, a dog having connection with the power-element and adapted to engage said closure-member at different places in the length of the closure member, the dog being normally free from operative engagement with said closure-member, and means for holding the power-element normally non-operative.

4. In combination, a closure, a power element adapted to close the same automatically, said power element being normally free from connection with the closure and having means comprising a fusible member for holding it normally out of operation and means for automatically connecting the power element to the closure under predetermined conditions, said means comprising an attaching element, a connection between the attaching element and the power element, the closure having a member which travels therewith relatively to the attaching element and always adjacent to the latter so as to be engageable by the attaching element in any position of the closure and means for normally holding the attaching element in position to permit said member to move relatively thereto, said means being arranged to release the attaching element when the power element is released for operation and said attaching element being arranged to be fixedly attached to said power element.

5. A closure and a means for automatically closing the same, said closure having a member intermediate its ends and which extends transversely thereof and said closing means comprising a power element, a dog adapted to engage said closure-member at different places in the length of the closure-member and a flexible means connecting the dog with the power element, the dog being normally free from operative engagement with said closure-member, and means for holding the power-element normally non-operative.

[Claims 6 to 18 not printed in the Gazette.]

1,169,597. METHOD OF PREPARING WOOD-PULP. CARL BACHE-WEG, Berlin, N. H., assignor of one-half to Berlin Mills Company, Portland, Me., a Corporation of Maine. Filed Dec. 14, 1912. Serial No. 736,705. (Cl. 92—11.)

1. The herein described process of preparing wood pulp for paper which consists in confining the wood, in the form of blocks, in a digester, withdrawing the air from them, and while the air is withdrawn from them pressing into them for a substantial depth a gas by which the outer portions thereof are bleached and the ligninous matter softened but not destroyed, then injecting a pulp-forming liquor and cooking the mass, whereupon a salt is formed by the association of the pulp forming liquor and gas which aids in softening and bleaching and prevents discoloration of the fibers at the inner portions of the blocks and then grinding up theb locks.

2. The herein described process of preparing wood pulp for paper which consists in confining the wood, in the form of blocks, in a digester, withdrawing the air from them, and while the air is withdrawn from them pressing into them for a substantial depth sulfur dioxid by which the outer portions thereof are bleached and the ligninous matter softened but not destroyed, then injecting a pulp-forming liquor and cooking the mass, whereupon a salt is formed by the association of the pulp forming liquor and sulfur dioxid which aids in softening and bleaching, and prevents discoloration of the fibers at the inner portions of the blocks and then grinding up the blocks.

3. The herein described process of preparing wood pulp for paper which consists in confining the wood, in the form of blocks, in a digester, withdrawing the air from them, and while the air is withdrawn from them pressing into them for a substantial depth a gas by which the outer portions thereof are bleached and the ligninous matter softened but not destroyed, then injecting a solution of sodium chlorid and cooking the mass, whereupon a salt is formed by the association of the sodium chlorid and gas which aids in softening and bleaching, and prevents discoloration of the fibers at the inner portions of the blocks and then grinding up the blocks.

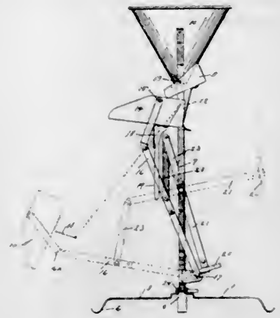
4. The herein described process of preparing wood pulp for paper which consists in confining the wood, in the form of blocks, in a digester, withdrawing the air from them, and while the air is withdrawn from them pressing into them for a substantial depth sulfur dioxid by which the outer portions thereof are bleached and the ligninous matter softened but not destroyed, then injecting a solution of sodium chlorid and cooking the mass, whereupon a salt is formed by the association of the sodium chlorid and sulfur dioxid which aids in softening and bleaching, and prevents discoloration of the fibers at the inner portions of the blocks and then grinding up the blocks.

5. The herein described process of preparing wood pulp for paper which consists in confining the wood in the form of blocks in a digester, pressing into them for a substantial depth a gas by which the outer portions thereof are bleached and the ligninous matter softened but not destroyed, then injecting a pulp-forming element and cooking the mass, said pulp-forming element by association with the gas when the mass is heated to a high temperature forming a salt which prevents discoloration of the fibers at the inner portions of the blocks and then grinding up the blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,169,598. MECHANICAL TOY. BENJAMIN F. BAIN, Pittsburgh, Pa. Filed Aug. 23, 1915. Serial No. 46,986. (Cl. 46—37.)

1. A toy, comprising a base, a frame mounted to turn about a vertical axis on said base, a bucket carried by said frame and arranged to swing on a horizontal axis thereon in a vertical plane from an upper loading position adjacent said vertical axis to a lower dumping position located outwardly therefrom, and means located in said vertical axis for automatically depositing a load in said bucket in its loading position for moving it to dumping position.



2. A toy, comprising a base, a frame mounted to turn about a vertical axis on said base, a bucket carried by said frame and arranged to swing in a vertical plane from an upper loading position to a lower dumping position, and means carried by said frame and turning therewith and arranged to automatically deposit a load in said bucket in any position of said frame for moving said bucket to dumping position.

3. A toy, comprising a base, a frame mounted to turn about a vertical axis on said base, a hopper located in said vertical axis, a bucket carried by said frame and pivoted to swing in a vertical plane thereon from a position adjacent said axis to a dumping position located outwardly therefrom and adapted in any position of said frame to receive loads from said hopper in said first position and move downwardly to dumping position, and means whereby said frame may be rotated.

4. A toy, comprising a base, a frame mounted to turn about a vertical axis on said base, a bucket carried by said frame and arranged to swing in a vertical plane from an upper loading position adjacent said axis to a lower dumping position located outwardly therefrom, and a hopper lying in said vertical axis and provided with means to automatically deposit a load in said bucket when it reaches loading position, said means being operable irrespective of the position of said frame about its axis.

5. A toy, comprising a base, a frame mounted to turn about a vertical axis on said base, a hopper carried by said frame and turning therewith and lying in said vertical axis, a bucket on said frame pivoted to swing in a vertical plane and adapted to receive loads from said hopper and move downwardly to dumping position, a movable delivery gate for controlling the discharge of material from said hopper into said bucket and operable by said bucket in any position of said frame about said axis, and hand-operated means movably mounted on said base for rotating said frame.

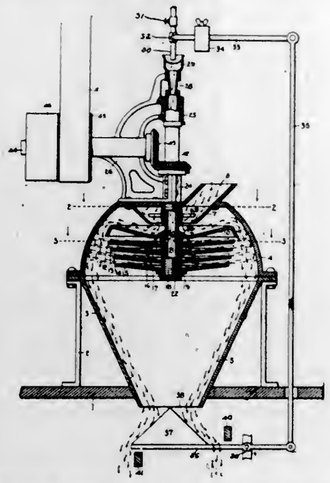
[Claims 6 to 14 not printed in the Gazette.]

1,169,599. GRAIN CONDITIONING AND TEMPERING MACHINE. WILLIAM SANDERS BARKER, Auburn, Ky. Filed Mar. 19, 1915. Serial No. 15,426. (Cl. 83—27.)

1. In a machine of the character described, a housing, means for directing grain into said housing, means for distributing said grain in a loose state, a water supplying member, and a plurality of movable plates for dividing the water supplied by the water supply member into a finely divided state or mist, said water in the finely divided state being forced by said plates into the path of movement of said loose grain so that the grain may absorb a certain proportion of water.

2. In a machine of the character described, a casing, means for directing grain into said casing, a rotating shaft extending into said casing, a stirring member connected with said shaft and arranged in the path of move-

ment of the grain for stirring and loosening the grain as the same pass into the machine, a deflecting member for deflecting and spreading the grain so that the same will move under gravity adjacent the sides of the casing, and means for forcing a spray or mist into the path of movement of the grain whereby the grain is subjected to moisture while the grain is in a loose state.



3. In a machine of the character described, a casing, a rotating power member extending into said casing, said casing being provided with a grain inlet, a stirring member operated from said power member for stirring the grain as the same enters the casing, a distributing member adapted to receive grain from said stirring member and projecting the grain to a point adjacent the periphery of the casing, a plurality of disks connected with said power member and rotated thereby, and means for supplying water to each of the disks whereby the water is forced radially and discharged into the path of movement of the grain as the grain leaves said distributing member.

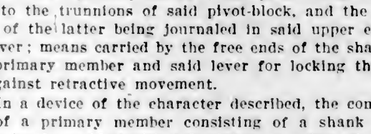
4. In a machine of the character described, a casing substantially circular in cross section, said casing being formed with an inlet opening, a stirring member arranged adjacent said opening, a distributing member adapted to receive the grain from said stirring member and directing the same to the periphery of the casing whereby the grain is distributed so that the same will fall in a loose state under the action of gravity, a rotating plate arranged below the distributing member, and means for supplying water to said rotating plate, whereby the water will be distributed by centrifugal action to the grain while passing through the air adjacent said plate.

5. In a machine of the character described, a casing substantially circular in cross section, a rotating shaft extending into said casing, a stirring member arranged in said casing and operated by said shaft, said casing being provided with an opening which guides grain entering the casing to said stirring member, a disk operated by said shaft designed to receive the grain from said stirring member and project the same against the upper side walls of the casing, after which the grain is allowed to fall under the action of gravity to the lower part of the casing, said lower part of the casing being provided with an outlet opening, a plurality of rotating disks operated by said shaft, and means for supplying all of said disks with water whereby the water is forced into the path of movement of the grain.

[Claims 6 to 11 not printed in the Gazette.]

1,169,600. CLAMPING-WRENCH. AUGUST H. BASTIAN, Hillsdale, Oreg. Filed Feb. 19, 1915. Serial No. 9,437. (Cl. 81—85.)

1. In a device of the character described, the combination of a primary member consisting of a shank made with a head provided with a fixed jaw; a coöperating jaw reciprocably supported by said head of said primary member; means for moving the reciprocable jaw toward and from said fixed jaw, a shaft included in such means, such shaft having reciprocable movement in the head of said primary member; a pivot-block carried by said reciprocating shaft, such block made with trunnions, a lever pivoted at its upper end to the shank of said primary member, the pivot being located close to the trunnions of said pivot-block, and the trunnions of the latter being journaled in said upper end of the lever.



2. In a device of the character described, the combination of a primary member consisting of a shank made with a head provided with a fixed jaw; a coöperating jaw reciprocably supported by said head of said primary member; means for moving the reciprocable jaw toward and from said fixed jaw; a shaft included in such means, such shaft having reciprocable movement in the head of said primary member; a pivot-block carried by said reciprocating shaft, such block made with trunnions, a lever pivoted at its upper end to the shank of said primary member, the pivot being located close to the trunnions of said pivot-block, and the trunnions of the latter being journaled in said upper end of the lever; means carried by the free end of the shank on said primary member and said lever for locking the latter against retractive movement.

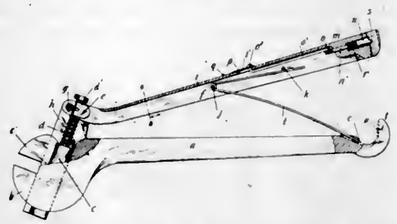
3. In a device of the character described, the combination of a primary member consisting of a shank made with a head provided with a fixed jaw; a coöperating jaw reciprocably supported by said head of said primary member; a shaft reciprocable in said head of the primary member; a rotatable screw carried by said shaft and operating to reciprocate said movable jaw; a pivot-block made with lateral trunnions and a longitudinal hole, the longitudinal axis of the latter intersecting approximately the axis of said trunnions, such pivot-block being slidably mounted on said shaft; a lever pivoted at its upper end to the shank of said primary member, the pivot being located close to the trunnions of said pivot-block and the trunnions of the latter being journaled in said upper end of the lever.

4. In a device of the character described, the combination of a primary member consisting of a shank made with a head provided with a fixed jaw; a coöperating jaw reciprocably supported by said head of said primary member; a shaft reciprocable in said head of the primary member, a rotatable screw carried by said shaft and operating to reciprocate said movable jaw, a pivot-block made with lateral trunnions and a longitudinal hole, the longitudinal axis of the later intersecting approximately the axis of said trunnions, a lever pivoted at its upper end to the shank of said primary member, the pivot being located close to the trunnions of said pivot-block, and the trunnions of the latter being journaled in said upper end of the lever; means carried by the free ends of the shank of said primary member and said lever for locking the latter against retractive movement.

5. In a device of the character described, the combination of a primary member consisting of a shank made with a head provided with a fixed jaw; a coöperating jaw reciprocably supported by said head of said primary member; a shaft reciprocable in said head of the primary member, a rotatable screw carried by said shaft and operating to reciprocate said movable jaw, a pivot-block carried by said reciprocating shaft, such block made with trunnions, a lever pivoted at its upper end to the shank of said primary member, the pivot being located close to the trunnions of said pivot-block, and the trunnions of the latter being journaled in said upper end of the lever.

[Claim 6 not printed in the Gazette.]

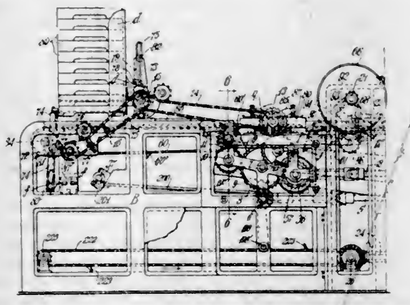
1,169,601. LOCKING MEANS FOR CLAMPING-WRENCHES. AUGUST H. BASTIAN, Hillsdale, Oreg. Filed Feb. 19, 1915. Serial No. 9,438. (Cl. 81—45.)



1. In combination with a tool comprising a primary member and a companion member hinged together, of means for locking the two members together, such means consisting of a perpendicularly projecting locking-head provided on the free end of one member and arranged for being placed in contact with the corresponding end of the other member, said projecting head being made with a serrated inner face, the corresponding end of the other member being made with a spring-controlled reciprocating locking-bolt adapted to engage with the serrated inner face of said locking-head, a rod fastened at one end to the locking-bolt, means for supporting the free end of said rod, such means adapted to permit the longitudinal movement of the rod for correspondingly moving the locking bolt, and means for engaging said free end of the rod, thereby to lock the locking-bolt in its retracted position.

2. In combination with a tool comprising a primary member and a companion member hinged together, of means for locking the two members together, such means consisting of a perpendicularly projecting-locking-head provided on the free end of one member and arranged for being placed in contact with the corresponding end of the other member, said projecting head being made with a serrated inner face, the corresponding end of the other member being made with a spring-controlled reciprocating locking-bolt adapted to engage with the serrated inner face of said locking-head, a rod fastened at one end to the locking-bolt, means for supporting the free end of said rod, such means adapted to permit the longitudinal movement of the rod for correspondingly moving the locking-bolt, a latch-plate secured to the free end of said rod, one end of such latch-plate being made with a perforation, and a stud located for being engaged by the perforated end of said latch-plate.

1,169,602. MACHINE FOR AUTOMATICALLY MOLDING CONFECTIONERY. ALONZO LINTON BAUSMAN, Springfield, Mass. Filed Apr. 17, 1915. Serial No. 21,995. (Cl. 107—3.)



1. An apparatus for molding confections, comprising in combination, means to fill a continuing series of trays with suitable material, as starch, devices to level and form rows of recesses of a desired shape in the starch to prepare the latter for the molding operation, a depositor operable to successively fill transverse rows of recesses with confection for molding, and two sets of conveying mechanisms, one intermittently operable to move the trays at least their own length to and from said means and devices, and the other operable to receive trays from the first and move them under the depositor in appropriate steps corresponding to the distance between successive transverse rows of recesses in the same and successive trays, adjustable driving means for the first conveying mechanism to time its movements in accordance with the number of transverse rows made in a tray, and adjustable driving means for the second conveying mechanism to time its movements in accordance with the distance between transverse rows, said driving means being constructed and arranged so that the trays all move a given distance in a given time, and a supplementary driving device connected to said conveying mechanisms and operable on the movement of one to drive the other during its normal period of rest whenever the conveying mechanisms are out of proper timed relation.

2. An apparatus for molding confections, comprising in combination, a depositor for the goods to be molded, a conveyer to successively move trays under the depositor, driving means for the conveyer operable to intermittently move the latter a series of steps each substantially equal to the distance between transverse rows of recesses in a tray and periodically a distance between transverse rows in successive trays, adjustable devices for said driving means to limit the movement thereof in accordance with the arrangement of recesses in a tray, mechanisms to fill the trays with starch or the like and form molding recesses therein including a conveying means operable to feed trays one by one to the depositor, adjustable driving means therefor to regulate the time of feeding a tray to the depositor and a supplementary driving device connected to an operable part of the conveying means and engageable with an operable part of said conveyer and constructed and arranged to impart a supplementary movement to the conveyer to keep it in proper timed relation with said conveying means.

3. An apparatus for molding confections, comprising in combination, two sets of mechanisms adapted to handle the trays for molding, one set arranged to fill trays with starch or the like, and form suitable recesses therein for the molded goods, the other set including a depositor to fill said recesses, driving mechanism for the second set operable to move the trays forward step by step in accordance with the longitudinal distance between recesses in a tray, driving devices for the first set adjustable to move the successive trays into the depositor in a single step in periods substantially equal to the movement of said driving means to advance each tray its own length and a supplementary driving device operable on the movement of said driving devices to move said driving means a distance to correct any lag between the respective movements of the trays in the two sets of mechanisms.

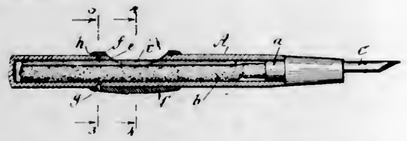
4. An apparatus for molding confectionery, comprising in combination, a framework having a trackway, a series of trays arranged to fit said trackway, two sets of conveying chains having sprockets therefor, one set arranged in line with the other to move the trays along the trackway, a power shaft, separate driving means between the latter and each set of conveying chains, a series of speed changing gears interposed in the driving means to one set, and a pawl and ratchet driven by a link motion mechanism interposed in the driving means of the other set and including adjusting devices to correspond with the series of speed changing gears whereby the ratio of the separate driving means may be approximately determined and a supplementary driving device arranged in part on each driving means and operable when the ratio is not accurately determined to step forward one set of conveying chains to accurate timed relation with the other at frequent intervals by engagement of one part with the other and various mechanisms associated with and connected with the driving means for timed operation with the respective conveying chains.

5. In an apparatus for molding confectionery, a depositor, a power shaft therefor, a conveyer operable to

move trays step by step under the depositor, a driving shaft therefor, a ratchet wheel keyed to the driving shaft, a bell crank lever loose on said shaft, a pawl on the end thereof operable to drive the ratchet wheel, a rock arm pivoted to the frame, a crank on the power shaft, link connections between the rock arm and the lever and crank, said rock arm being provided with curved slots in which said links are connected and each having respectively a radius equal to the link connected to it, whereby the degree of movement of the ratchet wheel may be conveniently adjusted, conveying chains having sprockets loose on said driving shaft to deliver trays to the depositor, operable at different intervals than the depositor chains, driving means therefor connected to said power shaft, and means between the sprockets engageable to drive said conveyer whenever the conveying chains operate to deliver a tray to the depositor before the conveyer has been moved a proper distance to receive it.

[Claims 6 to 8 not printed in the Gazette.]

1,169,603. FOUNTAIN-PEN. DAVID W. BEAUMEL, Brooklyn, N. Y. Filed Nov. 4, 1911. Serial No. 658,546. (Cl. 120—46.)



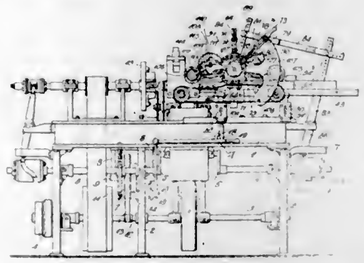
In a self-filling fountain pen, the combination of a barrel having an opening in its side and having its periphery practically uniform for the greater part of the length of the barrel, a collapsible and expansible ink-holding tube located within the barrel and upon which pressure may be applied through said opening in the side of the barrel, a non-split sleeve mounted upon the periphery of said barrel with capacity of rotation thereon and with a snug fit so as to itself maintain its position of angular adjustment on said barrel, the said sleeve being provided with an opening in its side adapted to register with the opening in said barrel by rotating said sleeve, the said barrel having its walls of practically uniform thickness in the vicinity of said sleeve and being provided with a peripheral pin-receiving groove, and a pin located upon the interior of said sleeve at a point remote from the opening in said sleeve and engaging with said groove for holding the sleeve against longitudinal movement, the said sleeve covering the said groove and thereby reinforcing the barrel against breaking strains at the groove, substantially as described.

1,169,604. BRACE FOR WINDOW FOOD-BOXES. ANTHONY FRANCIS BERNADAC, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,121. (Cl. 45—104.)

1. The combination of a window, a food box hingedly mounted at one side of the window to swing in a horizontal plane, and a bracing device movable in a horizontal plane and having its extremities loosely pivotally connected with the said box and sill of the window, said device consisting of two members having their inner ends loosely pivotally connected for permitting the said inner ends of the members to have a limited vertical movement, and interlocking means for normally holding the members in alinement and preventing breaking of the bracing device at the inner pivotal joint, said interlocking means being engageable and disengageable by the limited vertical movement of the members, the force of gravity acting on the inner ends of the members serving to maintain them interlocked.

2. The combination of a window, a food box hingedly mounted at one side of the window to swing in a horizontal plane, and a bracing device movable in a horizontal plane and having its extremities loosely pivotally connected with the said box and sill of the window, said device consisting of two members having their inner ends loosely pivotally connected for permitting the said inner ends of the members to have a limited vertical movement, interlocking means for normally holding the members in alinement and preventing breaking of the bracing device at the inner pivotal joint, said interlocking means being engageable and disengageable by the limited vertical movement of the members, and interlocking means between the window sill and the member connected with the window sill, said last-mentioned interlocking means being engageable and disengageable by the vertical movement of the members, the force of gravity acting on the inner ends of the members serving to maintain them interlocked.

1,169,605. FEED AND PRESSURE MECHANISM. ARTHUR BLACK, York, Pa. Filed June 11, 1913, Serial No. 772,952. Renewed June 16, 1915. Serial No. 34,559. (Cl. 144—248.)



1. In a machine of the character described, a bed, a transverse shaft arranged above the same, rotatable feeding elements arranged above the bed, driving connecting means between the transverse shaft and the rotatable feeding elements, manually operated means to intermittently rotate the transverse shaft in either direction, means whereby the manually operated means may be disconnected from the shaft so that the shaft may rotate without affecting a movement of the manually operating means, and automatic means for effecting a step by step rotary movement of the transverse shaft.

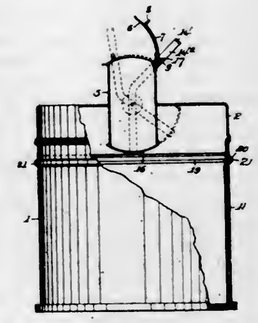
2. In a machine of the character described, a bed, a rotatable transverse shaft arranged above the same, rotatable feeders arranged upon opposite sides of the rotatable shaft, driving connecting means between the rotatable shaft and rotatable feeders, a pair of ratchet wheels rigidly mounted upon one end of the transverse shaft, a manually operated pivoted lever arranged near the pair of ratchet wheels, pawls pivoted to the manually operated lever and adapted to engage and disengage the pair of ratchet wheels, means whereby one pawl may be moved into engagement with the corresponding ratchet wheel and the other pawl moved out of engagement with the corresponding ratchet wheel and both pawls moved out of engagement with the two ratchet wheels, a third ratchet wheel rigidly connected with the opposite end of the transverse shaft, a second pivoted lever, a pawl pivoted to the second pivoted lever and engaging the third ratchet wheel, and automatic means to affect an oscillatory movement of the second pivoted lever.

3. In a machine of the character described, a bed, a transverse rotatable shaft arranged above the bed, vertically swinging supports arranged upon opposite sides of the shaft and pivoted thereto, rotatable feeding means carried by the swinging supports, driving connecting means between the transverse shaft and the feeding means, manually operated means adapted to have operative and inoperative connection with one end of the shaft to rotate the same, and automatic mechanically operated means connected with the opposite end of the shaft to rotate the same.

4. In a machine of the character described, a bed, a transverse shaft arranged near the same, a rotatable feeding element arranged above the bed, driving connecting means between the transverse shaft and the rotatable feeding element, a manually operated swinging lever pivotally mounted upon the transverse shaft, pawl and ratchet means adapted to form operative and inoperative connecting means between the swinging lever and transverse shaft, and automatic mechanically operated means for rotating the transverse shaft.

5. In a machine of the character described, a bed, a transverse shaft arranged near the bed, a rotatable feeding element arranged above the bed, driving connecting means between the transverse shaft and the rotatable feeding element, a swinging lever adapted when manually operated to effect the rotation of the transverse shaft, means whereby the swinging movement of the lever may alternately rotate the shaft in opposite directions in a step-by-step manner and automatic mechanically operated means connected with the shaft to effect a step-by-step rotatable movement thereof.

1,169,606. GARBAGE-CAN. JOHN H. BLANK and CLARK S. DUNCAN, Follansbee, W. Va. Filed Apr. 19, 1915. Serial No. 22,292. (Cl. 220—115.)



1. In a garbage receptacle, the combination with a main receptacle, of a cover therefor, a casing supported by said cover, said casing having open upper and lower ends, closures for said ends, and a pivoted lever for operating said closures to and from closing positions said lever maintaining the bottom closure in closing position when the top closure is withdrawn, and vice versa.

2. In a garbage receptacle, the combination with a main receptacle, of a cover therefor, a casing supported by said cover, said casing having open upper and lower ends, closures for said ends, and a pivoted lever associated with said closures whereby movement of the latter is accomplished, said top closure being opened after the bottom closure has been closed and being closed before the bottom closure begins to open.

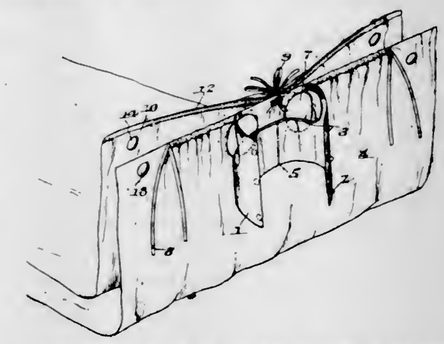
3. In a garbage receptacle, the combination with a main receptacle, of a cover therefor, a casing supported by said cover, said casing having open upper and lower ends, closures for said ends, and means interposed between said closures which permits of opening of but one at a time, said means comprising a pivoted lever.

4. In a garbage receptacle, the combination with a main receptacle, of a cover therefor, a casing supported by said cover, and casing having open upper and lower ends, closures for said ends, and a pivoted lever associated with said closures whereby the latter may be moved to and from closing position, said lever maintaining the top closure against opening movement until the bottom closure occupies closing position.

5. In a garbage receptacle, the combination with a main receptacle, of a cover therefor, a casing supported by said cover, a hinged closure for the upper end of said casing, a lever pivotally mounted on said casing and having a portion extending into said receptacle, a closure for the bottom end of said casing carried by said lever, the last mentioned closure being movable to and from closing position with rocking movement of said lever, and means adapted to be engaged by said lever for opening said hinged closure only when said lever assumes a position causing the lower closure to occupy closing position.

[Claims 6 to 9 not printed in the Gazette.]

1,169,607. SLEEPING-GARMENT. FLORENCE J. BLENIS, Valhalla, N. Y. Filed Nov. 27, 1914. Serial No. 874,293. (Cl. 5—3.)



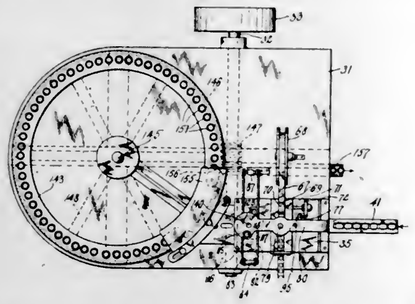
1. A garment comprising a jacket provided at its upper forward portion with an opening, a sheet secured to the jacket and provided at its upper forward portion with arm openings which register with the opening in the jacket, elastic cords secured to the sheet beyond the openings therein and securing tapes connected with the sheet beyond the ends of the said elastic cords.

2. A garment comprising a jacket provided at its upper forward portion with an opening, a sheet secured to the jacket and having at its upper portion arm openings which register with the opening in the jacket, elastic cords secured to the sheet beyond the openings therein, tapes attached to the sheet portion securing the same to the frame of a bed, a blanket detachably connected with the sheet, and an elastic section attached to the edge portion of the blanket.

1,169,608. MACHINE FOR THE MANUFACTURE OF BOTTLE-CLOSURES. ALEXANDER BOGDÁNFFY, New York, N. Y., assignor to The International Cork Company, Brooklyn, N. Y., a Corporation of New York. Filed July 5, 1913. Serial No. 777,466. (Cl. 113—80.)

1. In a machine for the manufacture of bottle closures of the cap variety, the combination with means for subjecting the inner face of the head of a metallic cap to heat, of means for inserting a binding material into the cap, means for applying heat directly to the exposed face of the binding material, means for depositing a sealing

disk into the cap on top of the fused binding material, and means for conveying the cap in succession to each of the elements mentioned.



2. In a machine for the manufacture of bottle closures of the cap variety, the combination with means for subjecting the inner face of the head of a metallic cap to heat, of means for inserting a binding material into the cap, means for applying heat directly to the exposed face of the binding material, means for depositing a sealing disk into the cap on top of the fused binding material, means for holding the sealing disk under pressure within the cap after the parts are assembled and while the binding material is hardening, and means for conveying the cap in succession to each of the elements mentioned.

3. In a machine for the manufacture of bottle closures of the cap variety, the combination with transporting means for a metallic cap, of means for depositing a sealing disk into the cap, a conveyer for carrying the sealing disk to said depositing means, a swinging lever connected to said conveyer, a continuously reciprocating slide, a second slide, coacting means upon said two slides adapted to connect the same, whereby said slides are caused to move together, means upon said second slide for actuating, when moving in one direction, said lever, whereby said conveyer brings a sealing disk into registering position with said depositing means, and means cooperating with said connecting means upon said second slide and actuated by the caps upon said transporting means, whereby said last named connecting means is brought into operative position in relation to said connecting means upon said first slide when said transporting means brings a cap into registering position with said depositing means.

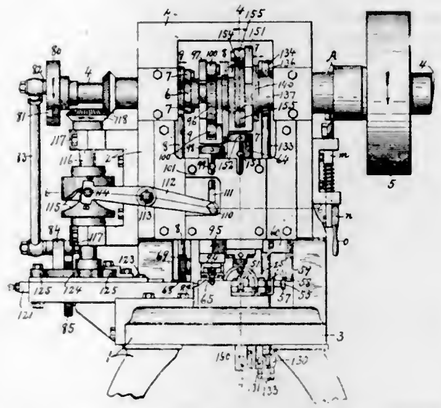
4. In a machine for the manufacture of bottle closures of the cap variety, the combination with transporting means for a metallic cap, of means for depositing a sealing disk into the cap, a conveyer for carrying the sealing disk to said depositing means, a swinging lever connected to said conveyer, a continuously reciprocating slide, a second slide, a pawl upon said first slide, a catch upon said second slide adapted to coact with said pawl so as to connect said two slides, whereby they are caused to move together, means upon said second slide for actuating, when moving in one direction, said lever, whereby said conveyer brings a sealing disk into registering position with said depositing means, and means coöperating with said catch and actuated by the caps upon said transporting means, whereby said catch is brought into operative position in relation to said pawl when said transporting means brings a cap into registering position with said depositing means.

5. In a machine for the manufacture of bottle closures of the cap variety, the combination with transporting means for a metallic cap, of means for cutting a disk from a strip of binding material and inserting it into the cap, a roller for feeding the strip to said cutting means, a clutch connected with said roller, a continuously reciprocating slide, a second slide, coacting means upon said two slides adapted to connect the same, whereby said slides are caused to move together, means upon said second slide for rendering, when moving in one direction, said clutch operative whereby said roller advances the strip of binding material toward said cutting means, and means coöperating with said connecting means upon said second slide and actuated by the caps upon said transporting means, whereby said last named connecting means is brought into operative position in relation to said connecting means upon said first slide when said transporting means brings a cap into registering position with said inserting means.

[Claim 6 not printed in the Gazette.]

1,169,609. [WITHDRAWN.]

1,169,610. MACHINE FOR MAKING BEAD CHAINS. WILLIAM W. BRADLEY, Syracuse, N. Y., assignor of one-half to William L. Day, Syracuse, N. Y. Filed Feb. 9, 1915. Serial No. 7,132. (Cl. 59—2.)



1. In a machine for making bead chains, the combination of a rotary link-heading device, means for feeding a wire intermittingly into said device to be operated upon thereby when the wire is at rest, dies for cutting bead blanks, means for intermittingly feeding a strip of sheet metal to the dies, additional means for cupping the bead blanks after being cut, means for feeding the cupped blanks into registration with the heads of the links, and a separate set of dies for closing the cupped blanks upon the heads of the links.

2. In a machine for making bead chains, a rotary cutter for forming links with end heads, means for intermittingly feeding a wire through the cutter, means for gripping the wire to hold it during the cutting operation, coöperative dies for cutting and cupping bead blanks, means for intermittingly feeding a strip of metal to said dies, additional means for feeding the cupped blanks into registration with the heads of adjacent links, and means for closing the cupped blanks upon said heads.

3. In a machine for making bead chains, a rotary cutter for forming links with end heads, means for intermittingly feeding a wire through the cutter, means for gripping the wire to hold it during the cutting operation, coöperative dies for cutting and cupping bead blanks, means for intermittingly feeding a strip of metal to said dies, additional means for feeding the cupped blanks into registration with the heads of adjacent links, means for closing the cupped blanks upon said heads, and means for additionally pressing the closed beads into spherical form after being operated upon by said closing means.

4. In a machine for making bead chains, a rotary cutter for forming links with end heads, guides at opposite ends of the cutter, means for intermittingly feeding a wire along said guides and into the cutter, means for holding the wire against movement during the cutting operation, coöperative dies for cutting and cupping bead blanks, means for intermittingly feeding a strip of sheet metal to said dies, additional means for feeding the cupped blanks into registration with the heads of the links, and cooperative dies for closing the bead blanks upon said heads.

5. In a machine for making chains, the combination of a rotary cutter having a central lengthwise opening therethrough and provided with means for cutting a wire into links and forming end heads thereon, means for intermittingly feeding a wire endwise in one direction through the cutter, coöperative dies for cutting and cupping bead blanks, means for intermittingly feeding a strip of sheet metal to said dies, means for feeding the cupped blanks into registration with the heads of the links, and separate means for closing the cupped blanks upon said heads.

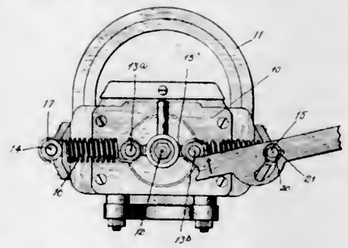
1,169,611. THERMO-ELECTRIC COUPLE. WILLIAM H. BRISTOL, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1915. Serial No. 25,648. (Cl. 171—73.)



1. A compound thermo-electric couple consisting of a primary portion, one part of which is an alloy containing nickel and a relatively small proportion of alluminum, and the other a nickel-chromium alloy; and an extension portion, one part of which is copper, the same being combined with the nickel-chromium part of the primary portion, and the other an alloy of copper and nickel and combined with the nickel-aluminum alloy of the said primary portion.

2. A compound thermo-electric couple consisting of a primary portion, one part of which is an alloy containing nickel and approximately two (2%) per cent. of aluminum, and the other an alloy containing nickel and approximately ten (10%) per cent. of chromium; and an extension portion, one part of which is copper, the same being combined with the nickel-chromium part of the primary portion, and the other an alloy containing copper and forty (40%) per cent. of nickel and combined with the nickel-aluminum alloy of the said primary portion.

1,169,612. MAGNETO-MACHINE. WALTER BROWN, Racine, Wis., assignor to Webster Electric Company, Racine, Wis., a Corporation of West Virginia. Filed May 3, 1915. Serial No. 25,416. (Cl. 123—149.)



1. In an ignition apparatus the combination of a current generator comprising a rotor, spring mechanism for quickly returning the rotor to normal position when the latter is moved from normal position and released, and a manually actuated lever having pin and slot connection with means fixed relative to the generator frame-work adapted when moved in one direction to engage the rotor, move and release the same, and when moved in the other direction to clear the rotor.

2. In an ignition apparatus the combination of a current generator comprising a frame-work and rotor, means for quickly returning the rotor to normal position when the latter is moved from normal position and released, and a manually operable device having pin and slot connection with means fixed relative to the frame-work adapted when moved in one direction to engage the rotor, move and release the latter, and when moved in the opposite direction to clear the rotor.

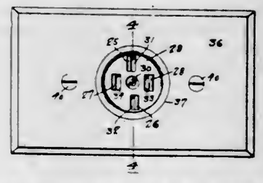
3. In an ignition apparatus the combination of a current generator comprising a rotor, means for quickly returning the rotor to normal position when the latter is moved from normal position and released, and a device for manually actuating the rotor adapted when moved in one direction to engage the rotor, move and release the latter, and when moved in the opposite direction to clear the rotor and leave the latter unaffected thereby.

4. In an ignition apparatus the combination of a current generator comprising a frame-work, rotor and means for quickly returning the rotor to normal position when the latter is moved from normal position and released, and a manually operable lever having a pivotal pin and slot connection with a generator frame-work adapted when moved in one direction to engage the rotor, move and release the latter, and when moved in the opposite direction to clear the rotor, leaving the latter unaffected thereby.

5. In an ignition apparatus the combination of a current generator comprising a frame-work, rotor and means for quickly returning the rotor to normal position when the latter is moved from its normal position and released, an arm carried by the generator frame-work and a manually operable lever adapted to releasably engage the rotor, said lever provided with an elongated slot fitting over said arm, said lever adapted when moved in one direction to engage the rotor, move and release the latter, and when moved in the other direction to clear the rotor.

[Claims 6 to 10 not printed in the Gazette.]

1,169,613. ATTACHMENT-PLUG RECEPTACLE. FRANK V. BURTON, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 23, 1915. Serial No. 35,924. (Cl. 173—330.)



1. An attachment plug receptacle having receiving terminal means having contacts suitably arranged to engage either substantially parallel or substantially tandem jack blades on a coöperating plug.

2. An attachment plug receptacle having a pair of base plates and receiving terminal means thereon having contacts suitably arranged to engage either substantially parallel or substantially tandem jack blades on a coöperating plug.

3. An attachment plug receptacle having an insulating base, upwardly-projecting terminal means having contacts suitably arranged to engage either substantially parallel or substantially tandem jack blades on a coöperating plug, and an independent cover block of insulation inclosing said terminal means and recessed to form insulated contact chambers for terminals of different polarity.

4. An attachment plug receptacle having an insulating base, upwardly-projecting terminal means having contacts suitably arranged to engage either substantially parallel or substantially tandem jack blades on a coöperating plug, and an independent cover block of insulation inclosing said terminal means and pierced to form an independent contact chamber for each receiving terminal.

5. An attachment plug receptacle having an insulating base, a pair of conductor straps mounted on the lower face of said base and a pair of terminal means on the upper face of said base respectively electrically connected

to said conductor straps, each of said terminal means having contacts suitably arranged to receive an attachment plug having its blades arranged either substantially in parallel or substantially in tandem.

1,169,614. INDEXED FILING-PIN AND FOLLOWER. JAMES WILLIAM BURTON, Welch, W. Va. Filed May 14, 1915. Serial No. 28,067. (Cl. 129—4.)



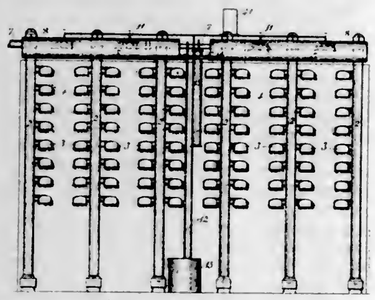
1. In a filing-pin and follower, in combination, a filing-pin, a follower detachably mounted on said pin, and a hook member mounted on said follower.

2. In combination with a filing-pin, a follower, a member mounted on said follower adapted to engage with said pin, and means mounted on said follower whereby said filing pin may be suspended upon a support.

3. In a device of the kind described, the combination with a filing-pin, of a follower rectangular in form, said follower formed with a notch in one face thereof, and means mounted within said notch for securing said follower upon said pin.

4. In a filing-pin and follower, in combination, a filing-pin, a rectangular follower, said follower formed with a notch in one face thereof, an engaging member mounted upon said follower and adapted to engage with said pin at a point within said notch, and a hook member mounted upon said follower.

1,169,615. APPARATUS FOR TREATING COAL-GAS. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1915. Serial No. 7,037. (Cl. 48—135.)



1. The combination of a gas container, a closed liquid circulation system in which the container is included and with the liquid adapted to pass through the container and in contact with the gas, means for maintaining circulation of the liquid through the closed system, and temperature-controlled means for determining the rate of flow of liquid through the system.

2. The combination of a gas container, a cooling-liquid inlet for the container and means for inducing an inflow of liquid therethrough, a gas inlet and a gas outlet for the container, means controlled by the temperature of the cooled gas for determining the flow of the cooling liquid, and a liquid outlet for the container.

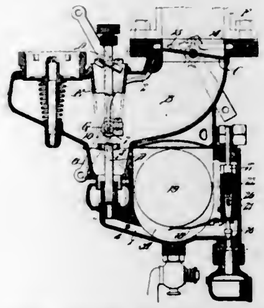
3. The combination of a gas container, a retort-bench stand-pipe adapted to discharge gas into the container, means for discharging gas-cooling liquid into the container, and a thermostat in the path of the gas for regulating the flow of the cooling liquid.

4. The combination of a gas container, a retort-bench stand-pipe adapted to discharge gas into the container, means for discharging gas-cooling liquid into the container, and means controlled by the temperature of the cooled gas for regulating the flow of the cooling liquid.

5. The combination of a gas container, means for subjecting the gas to a flowing cooling fluid, a thermostat under the influence of the gas, and variable flow-inducing means for the cooling fluid operatively connected to and regulated by the thermostat.

[Claims 6 to 22 not printed in the Gazette.]

1,169,616. CARBURETER. WILLIAM C. CARTER, St. Louis, Mo., assignor to Carter Carburetor Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 3, 1913. Serial No. 745,949. (Cl. 48—150.3.)



1. A carbureter provided with a passageway that leads from a supply of raw fuel to a point above the throttle valve, means for supplying air to said passageway so as to convert the fuel in same into a combustible mixture, and means for cutting off the flow of raw fuel through said passageway and for establishing communication between said passageway and the mixing chamber of the carbureter after the motor has started to run properly.

2. A carbureter provided with a main suction passageway and a throttle valve for controlling the flow of the mixture through said passageway to the engine, a duct that leads from a supply of liquid fuel to a point above said throttle valve, means for admitting air to said duct at a point above the place where the liquid fuel enters same so as to convert the fuel in same into a combustible mixture, and means for stopping the flow of liquid fuel through said duct without interrupting the flow of air through said duct.

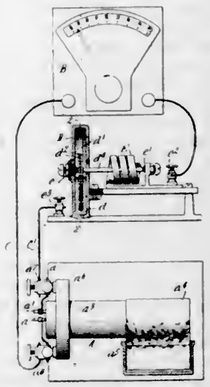
3. A carbureter provided with a passageway that leads around the throttle valve and establishes communication between the mixing chamber and the intake pipe of the motor, means for supplying raw fuel to said passageway so as to produce a rich starting charge of fuel and air, and means that is adapted to be actuated after the motor is running properly for cutting off the supply of raw fuel to said passageway.

4. A carbureter provided with a duct leading from the mixing chamber to a point above the throttle valve for insuring sufficient suction in the mixing chamber when the motor is throttled down to prevent the liquid fuel from collecting in the mixing chamber, and manually operated means under control of the operator for enabling a rich combustible mixture of raw fuel and air to be supplied to the motor through said duct to facilitate easy starting, and for positively cutting off the supply of liquid fuel to said duct after the motor has gained headway.

5. A carbureter provided with a passageway that leads from a supply of raw fuel to a point above the throttle-valve, and means for cutting off the flow of raw fuel through one part of said passageway without interferring with the flow of air through the remaining part of said passageway after the motor is running properly.

[Claims 6 to 12 not printed in the Gazette.]

1,169,617. THERMO-ELECTRIC HUMIDITY INSTRUMENT. EDWARD W. COMFORT, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed Feb. 1, 1909. Serial No. 475,539. (Cl. 73—24.)



1. The combination of a thermoelectric battery, one junction portion of which is influenced by the dry bulb temperature of the air, means for subjecting another junction portion thereof to the wet bulb temperature of the air, a device operated by the current generated by said battery, and a device for altering said current in response to changes in the dry bulb temperature of the air, substantially as set forth.

2. The combination of a thermoelectric battery, one junction portion of which is influenced by the dry bulb temperature of the air, means for subjecting another junction portion thereof to the wet bulb temperature of of the air, a humidity indicating device operated by the current generated by said battery, and means for altering said current in proportion to changes in the dry bulb temperature of the air, substantially as set forth.

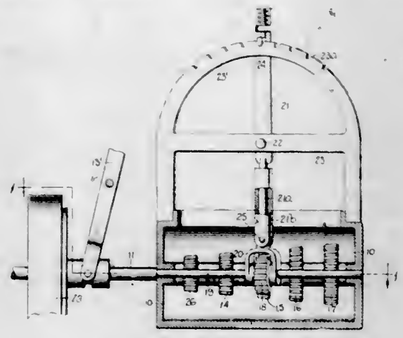
3. The combination of a thermoelectric battery, one junction portion of which is influenced by the dry bulb temperature of the air, means for subjecting another junction portion thereof to the wet bulb temperature of the air, a device connected in circuit with said battery and operated by the current generated by the battery, and a device for automatically varying the resistance in said circuit in proportion to changes in the dry bulb temperature of the air, substantially as set forth.

4. The combination of a thermoelectric battery, one junction portion of which is influenced by the dry bulb temperature of the air, means for subjecting another junction portion thereof to the wet bulb temperature of the air, a humidity indicating device connected in circuit with said battery and operated by the current generated by the battery, a rheostat for varying the resistance in said circuit, and a thermic motor for operating said rheostat, substantially as set forth.

5. The combination of a battery composed of a group of thermoelectric couples arranged with opposite junctions at opposite ends of the battery, a wick surrounding one end of said battery, means for wetting said wick, a device operated by the current generated by said battery, and a device for automatically altering said current in proportion to changes in the dry bulb temperature of the air, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,169,618. CHANGE-SPEED GEARING. RICHARD W. COMPTON, Higbee, Mo. Filed Dec. 19, 1914. Serial No. 878,066. (Cl. 74—58.)



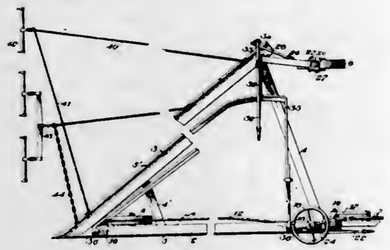
1. In change speed gearing, the combination with a casing, a driving shaft and a driven shaft journaled in said casing, a series of different sized gear wheels secured to each of said shafts, a larger gear of each shaft being paired with a smaller gear of the other shaft, and spaced therefrom, of a fixed supporting rod secured at its ends to the casing, and located in the space between the two series of gear wheels, an idler pinion mounted to slide loosely along the fixed supporting rod, to make operative engagement between a gear on the driving shaft and a corresponding gear on the driven shaft, a yoke embracing said pinion and having hubs through which the fixed supporting rod projects, and a lever for controlling the position of the pinion, the lever having an adjustable section pivotally connected with said yoke.

2. In a change speed gearing, the combination with a casing, a driving shaft, and a driven shaft journaled in said casing, and a series of different sized gear wheels on each shaft and spaced apart, a larger gear of each shaft being paired with a smaller gear of the other shaft and spaced therefrom, of a supporting rod fixed at its ends in the side walls of the casing and extending in the space between the series of gear wheels, a pinion slidable loosely on the said fixed rod, the teeth of said gear wheels being shaped on their edges to insure easy mesh of the pinion with said gear wheels, a bracket arranged substantially in the plane of the axis of the fixed rod, the bracket having a segmental notched upper member terminating in side members secured to the sides of the casing, and a cross member connecting the side members, the notches of the segmental member of the bracket corresponding in number with the pairs of gear wheels and the spaces between adjacent pairs, a lever pivoted to the cross member of the bracket at the center thereof and movable substantially in the plane of the axis of said fixed rod, a yoke embracing the pinion and having hubs slidable loosely along said rod, the lower end of said lever having an adjustable section pivotally connected with said yoke, and the upper portion of said lever having a keeper adapted to engage the notches of said segment to lock the pinion in the predetermined position.

1,169,619. ROAD-MACHINE. AMBROSE CONKLE, Luray, Mo. Filed Nov. 28, 1908. Serial No. 464,824. (Cl. 37—5.)

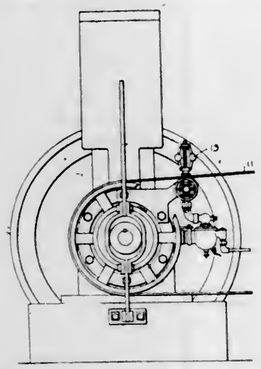
1. In a road machine, the combination with a land-side and mold-board portion converging to a point, of a ditch-

runner hinged to the land side in a manner to swing laterally or vertically above the latter.



2. In a road machine, the combination with a land-side and mold-board portion converging to a point, of a ditch-runner, hinged to the machine at points longitudinal thereof and in a manner to swing laterally to gage the position of the machine with respect to the furrow or ditch previously cut.

1,169,620. ENGINE CONTROL. LESTER J. CRAWFORD, Electra, Tex. Filed May 29, 1915. Serial No. 31,236. (Cl. 123—106.)



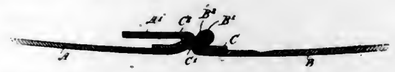
1. In combination, an internal combustion engine including a carbureter or mixing chamber, a governor, means for transmitting power from the engine adapted to drive the governor, an arm adapted to participate in the movement of the governor, said carbureter or mixing chamber having an air damper, and an operative extension from the arm to the damper.

2. In combination, an internal combustion engine having a carbureter, a belt for transmitting power from the engine, a governor, a pulley for driving the goverenor engaging the belt, an arm adapted to participate in the movement of the governor, said carbureter or mixing chamber having an air damper, and an extension carried by the arm and operatively engaging said air damper.

3. An internal combustion engine control comprising a governor, a pulley for driving the same adapted to be operated by the means for transmitting the power from the engine, an arm associated with the governor and adapted to participate in the movements thereof, and an extension from said arm adapted to operatively engage the fuel mixture supplying means of the engine.

4. In combination, an internal combustion engine having a carbureter or mixing chamber, a belt for transmitting power from the engine, a governor, a pulley for driving said governor engaging the under side of the belt, an arm extending laterally from said governor and adapted to participate in the movements thereof, means for guiding said arm, said carbureter or mixing chamber having an air damper, and an extension pivotally mounted on said arm and adapted to engage said damper, whereby said damper can be optionally maintained either closed or open in the inoperative position of the governor.

1,169,621. ADJUSTING DEVICE. WILLIAM DEUTSCH, New York, N. Y. Filed May 22, 1914. Serial No. 840,228. (Cl. 24—198.)

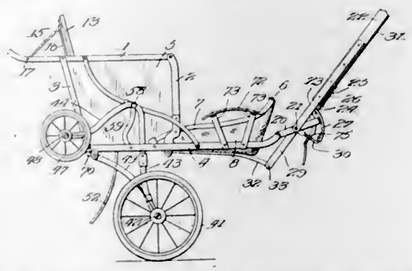


1. An adjusting device, comprising flexible members, a buckle plate having a slot and a struck-up angularly disposed tongue extending from one side wall of the slot, the said flexible members passing through the said slot and one of the said flexible members having an enlarged clamping terminal of such size that it cannot pass through the slot when the other flexible member is in position therein, but is adapted to clamp the other flexible member against the said tongue.

2. An adjusting device, comprising flexible members and a buckle formed of a plate having a slot and a struck-up tongue extending rearwardly from one side wall of the slot at an angle to one face of the plate, both of the said flexible members passing through the said slot from the other face of the plate and one of the said flexible members being doubled up over the said tongue and the terminal of the other flexible member having a thickened portion forming a clamping member adapted when strain is exerted in opposite directions on the flexible members, to bear against the other flexible member and clamp the latter against the said tongue.

3. An adjusting device, comprising flexible members and a buckle formed of a plate having a slot and a struck-up tongue extending rearwardly from one side wall of the slot at an angle to the rear face of the plate, the space between the edge of the tongue and the opposite side wall of the slot corresponding approximately to the aggregate thickness of the said flexible members, the said flexible members passing through the said slot from the front face of the plate, and one of the said flexible members being doubled up over the said tongue and the terminal of the other flexible member having a thickened portion preventing it from being drawn through the slot when the other flexible member is in position, the said thickened portion forming a clamping member bearing against the other flexible member directly opposite the edge of the tongue and clamping the said flexible member against the said tongue.

1,169,622. BABY-CARRIAGE. GOLA DICK, Waukesha, Wis. Filed Apr. 17, 1915. Serial No. 22,017. (Cl. 21—83.)



1. A carriage of the character specified, comprising a body, a pedestal pivoted to the body at each side thereof, each pedestal being approximately V-shaped and comprising a body pivoted to the carriage body and arms diverging forwardly and rearwardly, each arm having at the free end thereof, a laterally extending journal pin, a wheel journaled on each journal pin, a sliding frame arranged below the body of the carriage and mounted to slide thereon, a connection between the frame and the forward arms of the pedestals for simultaneously swinging said pedestals when the frame is moved longitudinally of the carriage to bring the four wheels of the pedestals into contact with the supporting surface of the carriage when the pedestals are swung forward or to lift the rear wheels out of contact with the ground when the pedestals are swung rearwardly, latch mechanism engaging the sliding frame for holding the pedestals with the four wheels in contact with the supporting surface of the carriage, means at the front of the carriage for releasing said latch mechanism, a tongue pivoted to the carriage at the front thereof, means at the front of the carriage for operating the sliding frame, and a releasable connection between the tongue and the said operating mechanism for permitting the said mechanism to be operated by the tongue.

2. A carriage of the character specified, comprising a body, a pedestal pivoted to the body at each side thereof, each pedestal being approximately V-shaped and comprising a body pivoted to the carriage body and arms diverging forwardly and rearwardly, each arm having at the free end thereof a laterally extending journal pin, a wheel journaled on each journal pin, a sliding frame arranged below the body of the carriage and mounted to slide thereon, a connection between the frame and the forward arms of the pedestals for simultaneously swinging said pedestals when the frame is moved longitudinally of the carriage to bring the four wheels of the pedestals into contact with the supporting surface of the carriage when the pedestals are swung forward or to lift the rear wheels out of contact with the ground when the pedestals are swung rearwardly, a tongue pivoted to the carriage at the front thereof, means at the front of the carriage for operating the sliding frame, and a releasable connection between the tongue and the said operating mechanism for permitting the said mechanism to be operated by the tongue.

3. A carriage of the character specified, comprising a body, a pedestal pivoted to the body at each side thereof, each pedestal being approximately V-shaped and comprising a body pivoted to the carriage body and arms diverging forwardly and rearwardly, each arm having at the free end thereof a laterally extending journal pin, a wheel journaled on each journal pin, a sliding frame arranged below the body of the carriage and mounted to slide thereon and connected to the pedestals, a substantially U-shaped bracket at the front of the carriage and rigid with the carriage, a lever pivoted to the bracket, a connection between the lever and the sliding frame for operating said frame to swing the pedestals with respect to the carriage to move the rear wheels into and out of contact with the supporting surface of the carriage, a tongue pivoted to the bracket, coöperating latch mechanism in connection with the tongue and the lever for connecting the tongue to the lever to operate said lever by the tongue, and independent and releasable latch mechanism for holding the pedestals in either position.

4. A carriage of the character specified, comprising a body, a pedestal pivoted to the body at each side thereof, each pedestal being approximately V-shaped and comprising a body pivoted to the carriage body and arms diverging forwardly and rearwardly, each arm having at the free end thereof a laterally extending journal pin, a wheel journaled on each journal pin, a sliding frame arranged below the body of the carriage and mounted to slide thereon and connected to the pedestals, a substantially U-shaped bracket at the front of the carriage and rigid with the carriage, a lever pivoted to the bracket, a connection between the lever and the sliding frame for operating said frame to swing the pedestals with respect to the carriage to move the rear wheels into and out of contact with the supporting surface of the carriage, a tongue pivoted to the bracket, coöperating latch mechanism in connection with the tongue and the lever for connecting the tongue to the lever to operate said lever by the tongue.

5. A carriage of the character specified, comprising a body, pedestals pivoted to the opposite sides of the body, each pedestal being approximately V-shaped, the arms thereof diverging from each other, and the forward arm of each pedestal being of greater length, a wheel journaled on each arm of each pedestal, a frame mounted to slide on the body of the carriage at the under side thereof, a connection between the frame and each pedestal for simultaneously swinging the pedestals when the frame is moved longitudinally of the carriage to bring the wheels of the rear arms of the pedestals into and out of contact with the supporting surface for the carriage, a lever at the front of the carriage body, a bracket fixed with respect to the body and to which the lever is pivoted, a connection between the lever and the sliding frame for operating the said frame when the lever is swung on its pivotal connection, a tongue pivoted to the lever, releasable latch mechanism in connection with the tongue and lever for rigidly connecting said tongue and lever, latch mechanism engaging the sliding frame when it is at the end of its movement in a rearward direction, means at the front of the body for releasing the said latch mechanism, and latch mechanism in connection with the lever and the bracket for locking the lever and the bracket with the sliding frame in forward position.

[Claims 6 to 19 not printed in the Gazette.]

1,169,623. THERMOMETER. FAIRLEIGH S. DICKINSON, Rutherford, N. J. Filed Dec. 13, 1910. Serial No. 597,177. (Cl. 73—52.)



1. The combination of a carrying case made in tubular form and adapted for the reception of a clinical thermometer or the like, and a resilient shaking attachment slidable on the case and operable for use in shaking the same for lowering the mercurial column of the inclosed thermometer when extended beyond the mouth end of the casing member in position to be grasped by the hand, the attachment being prevented from separating from the case by its end abutting against a stop near the end of the case.

2. A device of the character described comprising a carrying-case open at one end, a thermometer in said case provided with a head forming a closure for the latter, a yielding support for said thermometer operating to center it in the case, and a resilient sleeve slidable along the case beyond the thermometer's head therein, whereby said sleeve is enabled to be used as a flexible handle to shake the thermometer while it rests yieldingly supported in the case.

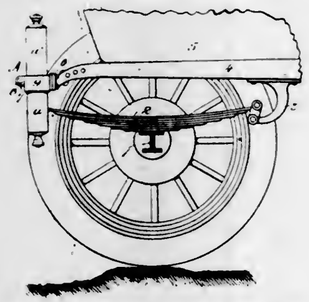
3. A device of the character described comprising a clinical thermometer, a carrying-case therefor open at one end to receive the same, said thermometer being provided with a handle constituting a closure for the case, and a three-part shaking attachment carried by the case and slidable thereon past said closure, said attachment including a socket adapted to limit the movement of the case, at the time the shaking attachment reaches an extended position on the said case, an outwardly slidable handle member to be grasped by the hand, and flexible wire-coil connecting said socket and said handle member.

4. A device of the character described comprising a clinical thermometer, a carrying-case open at one end to

receive said thermometer and having a lateral aperture through which the thermometer's graduations may be viewed, the thermometer being provided with a head forming a closure for said open end of the case by frictional engagement therewith, and an intermediately-resilient sleeve normally covering said aperture and slidable aloog the case over the thermometer's head, whereby the sleeve becomes adapted for use as a flexible handle to shake the thermometer while it rests in the case, with its graduations exposed to view.

5. In a device of the character described, a tubular case closed at one end open at the other end, a thermometer having a bulb at one end and an integral handle on the other end, the said handle being adapted to be slipped into and seated in the said open end of the case to form a closure for the same, a sleeve having a limited sliding motion on the said case toward the closed end and adapted to be moved beyond the open end and the said thermometer handle seated therein, a socket having a limited sliding motion on the said case in the direction of open end thereof, and a flexible connection attached at its ends to the said sleeve and the said socket.

1,169,624. SHOCK-ABSORBER. BENJAMIN JAMES DRYER, New York, N. Y. Filed Feb. 19, 1914, Serial No. 819,727. Renewed Dec. 18, 1915. Serial No. 67,080. (Cl. 21—50.)



1. A shock absorber comprising relatively movable parts, a compressible cushioning element disposed between and yieldingly opposing the relative movement of the said parts, one of said parts forming a guide for the cushioning element, and means for preventing the cushioniug element from expanding into frictional engagement with the guide.

2. A shock absorber comprising relatively movable parts, a compressible cushioning element disposed between and yieldingly opposing the relative movement of the said parts, one of said parts forming a guide for the cushioning element, said element consisting of a plurality of resilient bodies disposed in a line, and a member surrounding each of the bodies of the said element and slidable in the guide for preventing the element from expanding into frictional engagement with the guide.

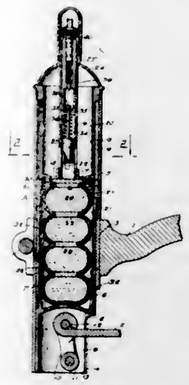
3. A shock absorber comprising a pneumatic flexible-walled body, a guide in which said body is held, a valve whereby said body may be inflated, and means surrounding said body and preventing its expansion against the guide.

4. A shock absorber comprising a plunger and a casing, respectively connected to relatively movable parts of a vehicle, a pneumatic cushioning-element having a flexible wall, in said casing, and means surrounding said element and preventing its expansion against the casing.

5. A shock absorber comprising a plunger and a casing, respectively connected to relatively movable parts of a vehicle, a pneumatic cushioning element having a flexible wall, in said casing, a ring surrounding said element and preventing its expansion into engagement with the casing, and means permitting inflation of said body.

[Claims 6 and 7 not printed in the Gazette.]

1,169,625. SHOCK-ABSORBER. BENJAMIN JAMES DRYER, New York, N. Y. Filed May 8, 1915. Serial No. 26,736. (Cl. 267—49.)



1. A shock absorber comprising relatively movable elements, an air chamber, a liquid-containing flexible sack, a valve-controlled communicating means between the sack and chamber, whereby liquid can pass freely into the latter and retardedly therefrom, said sack being longitudinally compressible, and means surrounding the sack for preventing the same from expanding into binding frictional contact with the surrounding wall of the device.

2. A shock absorber comprising an air-containing chamber, a liquid-containing chamber relatively movable with respect to the air-containing chamber, a valve-controlled port between the chambers, a sack in the second chamber for holding the liquid, said sack having an open end communicable with the air chamber through the port, whereby liquid can pass from the sack to the air chamber, and vice versa, and means for preventing the sack from expanding into contact with the second-mentioned chamber when the sack is compressed by the relative movement of the chambers.

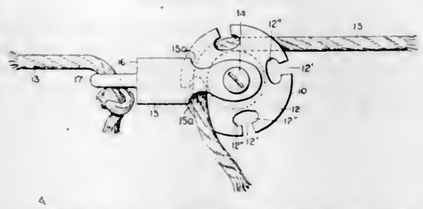
3. A shock absorber comprising an air-containing chamber, a liquid-containing chamber relatively movable with respect to the air-containing chamber, a valve-controlled port between the chambers, a sack in the second chamber for holding the liquid, said sack having an open end communicable with the air chamber through the port, whereby liquid can pass from the sack to the air chamber, and vice versa, said sack consisting of axial alining approximately spherical cells, and a ring surrounding each cell for maintaining the same out of binding contact with the surrounding wall of the sack-containing chamber.

4. A shock absorber comprising an air chamber, a liquid-containing chamber relatively movable with respect to the air-containing chamber, a tube extending through the air chamber and having a ported end through which the two chambers communicate, a valve in the ported end of the tube for controlling communication between the chambers, a hollow element threaded in the tube, a spring interposed between the valve and element whereby the latter adjusts the tension of the spring, and an air-admitting valve disposed in the said element, whereby air under pressure can be introduced into the air-containing chamber.

5. A shock absorber comprising an air chamber, a liquid-containing chamber relatively movable with respect to the air-containing chamber, a tube extending through the air chamber and having a ported end through which the two chambers communicate, a valve in the ported end of the tube for controlling communication between the chambers, a hollow element threaded in the tube, a spring interposed between the valve and element whereby the latter adjusts the tension of the spring, an air-admitting valve disposed in the said element, whereby air under pressure can be introduced into the air-containing chamber, and a stem connected with the first mentioned valve and movably attached to the said element, whereby the latter and valve are insertible or removable from the tube as a unit, and the said stem serving to hold the spring in place.

[Claims 6 to 9 not printed in the Gazette.]

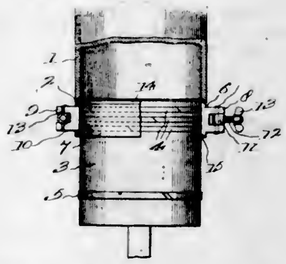
1,169,626. SLACK-ADJUSTER FOR CLOTHES-LINES. THOMAS TREGONING DUNN, Wallingford, Conn. Filed July 31, 1915. Serial No. 42,960. (Cl. 24—132.)



1. In a device of the character set forth, the combination of a pulley having a hub and a flange at the end of the hub, said flange having a radial notch terminating in a circumferential extension adjacent the hub, a frame of substantially U-shape embracing the ends of the pulley, means pivoting the pulley in the frame, and a line acting over the pulley and through the frame, said line being seated laterally in said notch extension and adapted to bear against one leg of the frame, substantially as set forth.

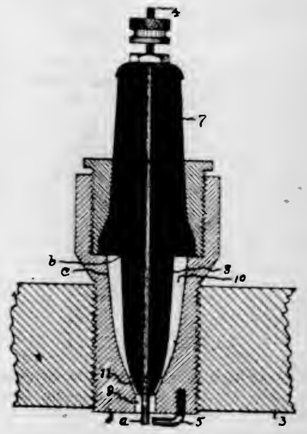
2. In a device of the character set forth, the combination of a U-shaped frame having parallel side legs each having an edge seat, means to support the closed end of the frame, a pulley journaled in the frame between the legs, said pulley having end flanges coöperating closely with the inner surfaces of the legs and each flange being provided with radial notches terminating in circumferential extensions registering with said seats, and a line acting over the pulley and through the frame, the free end of the line being passed laterally from the pulley through one of said notches and adapted to seat automatically against the adjacent seat of the frame, substantially as set forth.

1,169,627. PISTON-RING CLAMP. JOHN LOUIS EARL, Morgan City, La. Filed May 24, 1915. Serial No. 30,188. (Cl. 29—84.)



In a device of the character described, the combination of an annular collar comprising a pair of complementary half sections fitted together to form the same adapted to embrace the piston and confine the piston rings in contracted position, said assembled collar being provided with an outwardly beveled upper end adapted to fit within the cylinder counterbore and the inner surface of said collar adapted to form a continuous and unbroken surface with the cylinder bore, the lower edge of said assembled collar being beveled inwardly to encounter the oil ring when the cylinder is moved downwardly and contract the same, pairs of spaced ears projecting radially from the free ends of said half sections and being fitted in close contact with the adjacent ears, blocks pivoted in certain of said ears and arranged to swing within the complemental ears of the opposite half section and be snugly received therein, threaded bolts on said blocks, and nuts on said bolts for engaging the opposite sides of the corresponding ears to bind the sections together, substantially as described.

1,169,628. SPARK-PLUG. ALBERT C. FERRIER, Lincoln, Nebr., assignor of one-half to William J. Hill, Lincoln, Nebr. Filed May 24, 1915. Serial No. 30,032. (Cl. 123—169.)



1. A spark plug, comprising, in combination with a cylinder, a metallic part having a chamber communicating with the cylinder, an insulating plug having a cylindrical stem formed convergent from its inner end to its terminal and provided with an electrical conductor, said insulating plug being adapted to be disposed with its stem traversing the chamber of said metallic part to form an annular, convergent chamber circumscribing and extending the entire length of said stem, the degree of convergence of said chamber increasing throughout its entire length in a direction of the terminal of said stem.

2. A spark plug, comprising, in combination with a cylinder, a metallic part having a chamber communicating with the cylinder, an insulating plug provided with an electrical conductor and having a cylindrical stem formed convergent toward its terminal, said insulating plug being disposed with its stem traversing the chamber of said metallic part to form an annular chamber extending substantially to the end and circumscribing the stem with a gradually increasing degree of convergence toward the terminal thereof.

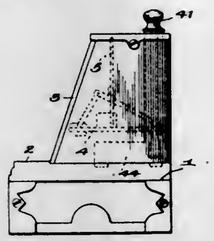
3. A spark plug, comprising, in combination with a metallic part having a longitudinally convergent chamber, an insulating plug having a cylindrical stem formed convergent from its inner end to its terminal and provided with an electrical conductor, said insulating plug being adapted to be disposed with its stem traversing the chamhber of said metallic part to form a chamber gradually decreasing in area and extending substantially to the terminal of said stem.

4. A spark plug, comprising, in combination with a cylinder, a metallic part formed with a convergent chamber and a cylindrical passageway opening on the cylinder and said chamber, an insulating plug having a convergent stem and provided with an electrical conductor having a projecting finger disposed in line with the longitudinal axis of said stem, said insulating plug being disposed with its stem centrally traversing said chamber to pro-

vide an annular chamber having an area in cross-section constantly decreasing from the inner end of the stem toward the cylindrical passageway, the electrical conductor being disposed centrally of said cylindrical passageway.

5. A spark plug, comprising, in combination with a cylinder, an electrode formed with a convergent chamber and a cylindrical passageway opening on the cylinder and communicating with the chamber, an insulating plug having a convergent stem and provided with an electrical conductor having a finger extending beyond the stem, said insulating plug being disposed with its stem traversing and terminating substantially at the end of said chamber with its finger disposed centrally of the cylindrical passageway, a longitudinal part of said stem, adjacent to its terminal, being disposed equi-distant from the wall of the electrode to provide a constricted passageway opening on said cylindrical passageway.

1,169,629. CIGAR-LIGHTER. ANDREW LLOYD GEARHART, Clearfield, Pa. Filed Mar. 17, 1915. Serial No. 14,932. (Cl. 67—4.1.)



1. In a cigar lighter, a depressible pivoted vertically reciprocal torch operated sparking media carrier, a second spark media carrier movable relatively to the first named carrier, and means whereby when the first carrier is actuated by the torch and is in its depressed position the second carrier will be actuated to cause a wiping action between the two sparking media to cause a spark.

2. In a cigar lighter, a tensioned reciprocal sparking medium carrier, a tensioned reciprocal torch operated sparking medium carrier, and means whereby when the second carrier is actuated the first carrier will be moved in one direction against its tensioning means and then released to move to complete its reciprocation and have its sparking medium act on the sparking medium of the second carrier to produce a spark.

3. In a cigar lighter, a sparking block carrier pivoted for vertical swinging, a dog pivoted to the carrier, a spring connected to the carrier and dog for normally holding both in up position, a horizontal reciprocal spring tensioned carriage having a projection engageable with the nose of the dog, a spring tensioned sparking block carrier on the carriage, a vertical rod adjacent the vertical carrier, a tubular torch receivable over the rod and engageable with the vertical carrier, and means to engage the nose of the dog to raise the latter out of engagement with the carriage projection to release the carriage at a predetermined time.

4. In a cigar lighter, a pivoted vertically reciprocal torch operated sparking media carrier, a dog pivoted to said carrier, means to normally hold the dog and carrier in up position, a horizontally reciprocal spring tensioned carriage, a laterally movable spring tensioned sparking media carrier on the carriage, a torch for operating the pivoted carrier, means on the carriage for engagement with the dog whereby movement of the latter will actuate the carriage in one direction, and means to release the dog from the carriage means at a predetermined period to enable the carriage to be restored to normal position and to form a spark.

5. In a lighter, a sparking element mounted for movement from a normal position, a slidably mounted sparking element normally arranged adjacent the path of the first element to contact therewith, spring means retaining the sliding element in normal position, a connection between the sparking elements whereby on movement of the first element from normal position the second element will be moved from the path of the first element and against the action of the spring means, said first element moving into the path of the second element when the latter is moved from the path of the first element through the connection, and means to release the second element from the connection to permit of said last element moving under the action of the spring to normal position for contacting with the first element.

[Claims 6 to 14 not printed in the Gazette.]

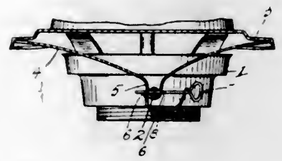
1,169,630. SELF-LOCKING SAFETY-CATCH FOR HAND-BAGS. GUSTAV HENRY GENTZEL, Hoboken, N. J., assignor to Springmeyer, Pattberg & Co., Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 21, 1915. Serial No. 57,049. (Cl. 70—116.)



1. The combination in a handbag, of a pair of jaws movable toward each other for closing, a pair of snap balls carried by the respective jaws, a spring-operated catch carried by one of the jaws and having a free end extending across the upper edge of the other jaw and beyond the same, and a stud carried by the latter mentioned jaw coöperating with the catch for locking the jaws shut, said spring-operated catch being releasable from the stud by the force of the thumb simultaneously with the opening of the snap balls.

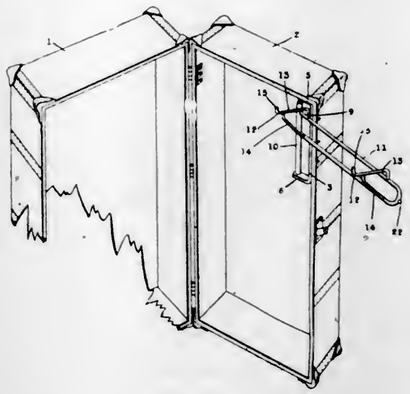
2. The combination with a handbag having a pair of jaws shutting toward each other and snap means carried by the respective means to hold them temporarily closed, of a bell crank spring-operated catch pivoted to one of the jaws and having the main catch portion thereof extending forwardly from the pivot over and in contact with the other jaw, the end of the catch extending beyond the latter mentioned jaw, and means carried by the latter jaw to coöperate with the main catch portion to lock the jaws closed.

1,169,631. LAMP-BURNER ATTACHMENT. CHARLES E. GIBERSON, Almonesson, N. J. Filed Feb. 6, 1913. Serial No. 746,499. (Cl. 67—66.)



The combination with a lamp burner including a wick controlling shaft, and a body plate provided at its periphery with a downwardly and inwardly extending annular flange, of a burner attachment including a strap formed of resilient sheet metal bent centrally to define a U-shaped loop to receive the said shaft and divergent end portions engaging under said peripheral flange, said shaft and U-shaped loop having apertures therein adapted to be moved into alinement by the rotation of the shaft, and a locking pin removably engaged in said alined apertures for locking said shaft against rotation in said U-shaped loop.

1,169,632. GARMENT-SUPPORT FOR WARDROBE-TRUNKS. NATHAN GOLDSMITH, Newark, N. J., assignor to L. Goldsmith & Son, Newark, N. J., a Firm composed of David Osterweil, Nathan Goldsmith, Sydney Osterweil, and Leon Osterweil. Filed May 10, 1915. Serial No. 27,021. (Cl. 190—13.)



1. The combination with a trunk, of a support pivoted to the inner wall of the trunk near one end thereof and having a rack adapted to extend transversely across the interior chamber of the trunk section, and brackets upon said rack in spaced substantially parallel relation adapted to receive upon themselves a plurality of garment hangers each having a two-point suspension, said support arranged and adapted to be removed from its bearings with said hangers upon said brackets and hung upon a wall or the like.

2. The combination with a trunk, of a support pivoted to the inner wall of the trunk near one end thereof and having a rack adapted to extend transversely across the interior chamber of the trunk section, and fixed brackets on said rack adapted to project therefrom toward the back walls of the trunk section when the support is swung thereinto, said brackets adapted to receive a plurality of garment hangers with a two-point suspension and said support adapted to be removed from its bearings with said hangers upon said brackets and hung upon a wall or the like.

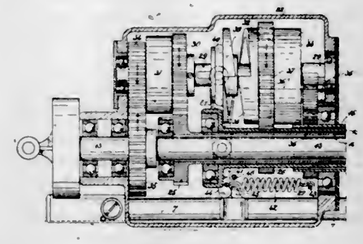
3. The combination with a trunk, of a support pivoted to the inner wall of the trunk near one end thereof and adapted to extend transversely across the interior chamber of the trunk section, said support arranged and adapted to receive a plurality of garment hangers and to be removed from its bearings with said hangers upon it when opened out of the trunk, and means for preventing removal of said support from its bearings when closed into the trunk.

4. The combination with a trunk, of a support pivoted to the inner wall of the trunk near one end thereof and having a rack adapted to extend transversely across the interior chamber of the trunk section, said support arranged and adapted to be removed from its bearings when opened out of the trunk, and brackets upon said rack adapted to receive a plurality of garment hangers and to prevent removal of the support from its bearings when closed into the trunk.

5. The combination with a trunk, of a support pivoted to said trunk and having a rack adapted to swing into the interior chamber of the trunk, and brackets upon said rack adapted to receive a plurality of garment hangers with a two-point suspension, said support arranged and adapted to be removed from its bearings with said hangers upon said brackets and hung upon a wall or the like with said rack flatwise thereagainst.

[Claims 6 to 15 not printed in the Gazette.]

1,169,633. CHANGE-SPEED GEARING. AUGUST GOTTL and FRANZ LOOS, Fischern, near Carlsbad, Austria-Hungary. Filed Mar. 1, 1913. Serial No. 751,639. (Cl. 74—59.)



1. In a change speed gearing the combination of a driving shaft; a casing connected to be driven from said driving shaft; a driven shaft; a plurality of co-axial countershafts mounted on the driven shaft; friction wheels mounted on said counter-shafts, respectively; friction rings mounted in said casing and adapted to engage with said friction wheels; selective means for moving said friction rings to engage with said friction wheel; driving connections between said counter-shafts and the driven shaft; and a direct driving connection between said driving and driven shafts, substantially as described.

2. In a change speed gearing the combination of a driving shaft; a casing connected to be driven from said driving shaft; a driven shaft; a plurality of co-axial countershafts mounted on the driven shaft; friction wheels mounted on said counter-shafts, respectively; friction rings mounted in said casing and adapted to engage with said friction wheels, respectively; clamping jaws slidably mounted on said casing; means for actuating said clamping jaws to selectively engage and move said friction rings to engage said friction wheels; driving connections between said counter-shafts and the driven shaft; and a direct driving connection between said driving and driven shafts, substantially as described.

3. In a change speed gearing the combination of a driving shaft; a casing connected to be driven from said driving shaft; a driven shaft; a plurality of co-axial countershafts mounted on the driven shaft; friction wheels mounted on said counter-shafts, respectively; friction rings mounted in said casing and adapted to engage with said friction wheels, respectively; rocker shafts mounted on said casing; clamping jaws mounted on said rocker shafts and adapted to engage with said friction rings, respectively; means for shifting said rocker shafts whereby to position said clamping jaws to selectively engage with said friction rings; a device associated with said rocker shafts for automatically actuating said clamping jaws; driving connections between said counter-shafts and the driven shaft; and a direct driving connection between said driving and driven shafts, substantially as described.

4. In a change speed gearing the combination of a driving shaft; a casing connected to be driven from said driving shaft; a driven shaft; a plurality of co-axial countershafts mounted on the driven shaft; friction wheels mounted on said counter-shafts, respectively; friction rings mounted in said casing and adapted to engage with said friction wheels; rocker shafts slidably mounted on said casing; clamping jaws mounted on said rocker shafts and adapted to engage with and actuate said friction rings; means for sliding said rocker shafts to position said clamping jaws; a sleeve slidably mounted on said co-axial counter-shafts; gearing connections between said sleeve and said rocker shafts automatically operable to actuate said clamping jaws to engage said friction rings; driving connections between said counter-shafts and the driven shaft; and a direct driving connection between said driving and driven shafts, substantially as described.

5. In a change speed gearing the combination of a driving shaft; a casing connected to be driven from said driv-

ing shaft; a driven shaft; a plurality of co-axial counter-shafts mounted on the driven shaft; friction wheels mounted on said counter-shafts, respectively; friction rings mounted in said casing and adapted to engage with said friction wheels; rocker shafts slidably mounted on said casing; clamping jaws mounted on said rocker shafts and adapted to engage with and actuate said friction rings; means for sliding said rocker shafts to position said clamping jaws; a sleeve slidably mounted on said co-axial counter-shafts and provided with a rack; gear elements journaled on said casing and meshing with said rack; gear elements mounted on said rocker shafts and meshing with said rack gear elements whereby to actuate the clamping jaws through the sliding movement of said sleeve; driving connections between said counter-shafts and the driven shaft; and a direct driving connection between said driving and driven shafts, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,169,634. PROCESS FOR THE MANUFACTURE OF ALBUMINOUS PRODUCTS FROM THE RESIDUES OBTAINED IN THE OIL MANUFACTURE. VIKTOR GRAFE and KUNO PECHE, Vienna, Austria-Hungary. Filed Mar. 23, 1915. Serial No. 16,423. (Cl. 99—11.)

1. A process for the preparation of albuminous products from the residues remaining in the oil manufacture, consisting in treating in the warmth the residues with alkali for the purpose of saponifying the oil, transforming the free sebacic acids into soaps and eliminating other admixtures objectionable to the taste, the odor and the aspect of the albuminous material, and in precipitating thereupon the albumin dissolved in the alkaline soap-solution.

2. A process for the preparation of albuminous products from the residues in the oil manufacture, consisting in treating in the warmth the residues of the oil manufacture with alkali, and in neutralizing, for the purpose of precipitating the proteins dissolved in the soap-solution, the mixture by acids without previously separating the soap-solution, in which a part of the protein is dissolved, from the solid parts containing the unsolved albuminous substances and in separating thereupon the soap-solution from the solid parts, and carefully washing the solid residue.

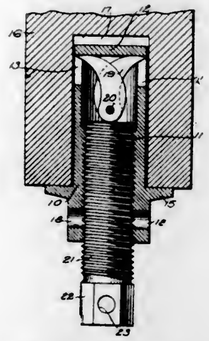
3. A process for the preparation of albuminous products from the residues in the oil manufacture, consisting in treating in the warmth the residues of the oil manufacture with alkali, separating the soap-solution from the solid parts, separating the proteins by neutralizing the soap-solution, and carefully washing the precipitated proteins.

4. A process for the preparation of albuminous products from the residues in the oil manufacture, consisting in treating in the warmth the residues of the oil manufacture with alkali, separating the soap-solution from the solid parts, separating the proteins by neutralizing the soap-solution, and treating the precipitated proteins together with the albuminous substances remaining in the ungreased residues.

1,169,635. PIPE-HANGER. LESTER A. GRIMES, Orange, N. J. Filed July 7, 1915. Serial No. 38,410. (Cl. 85—3.)

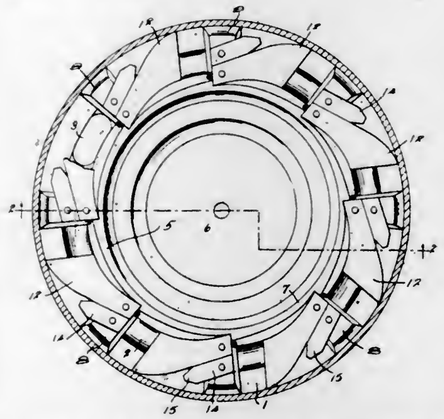
1. The herein described pipe hanger comprising a sleeve having oppositely arranged openings adjacent one end and having a central screw threaded bore, said end of the sleeve being closed, a pair of prongs mounted loosely within the opening of the sleeve and pivoted permanently together at their inner ends but adapted to project outwardly through said openings, and a plunger acting upwardly in the sleeve against the pivoted ends of the prongs to cause the points thereof to project outwardly forcibly into holding position and serving by reaction against said closed end of the sleeve to lock the prongs and the sleeve in place.

2. In a pipe hanger, the combination of a hollow internally threaded sleeve having a closed end and side openings adjacent said end, said sleeve also having at its opposite end a horizontally projecting flange, a pair of claws mounted loosely within the sleeve and pivoted permanently together, a plunger having threaded engagement with the inner portion of the sleeve bearing at its upper end against the pivoted ends of the prongs whereby the points of the prongs are forcibly projected outwardly in opposite directions through said sleeve openings, and hanger means adjustably connected to said plunger.



3. In a pipe hanger, the combination of a hollow sleeve having a closed upper end adjacent which are formed oppositely arranged side openings, said sleeve having at its opposite end a horizontally projecting flange adjacent which is provided a sight opening in the same vertical plane as the openings first mentioned, a pair of prongs located within the sleeve and pivoted together at their adjacent ends but bearing upwardly against said closed end of the sleeve, a plunger movable upwardly into the interior of the sleeve against the pivoted ends of the prongs causing the same to be projected forcibly outwardly through said first mentioned openings causing said flange to be drawn firmly against the supported structure, and pipe supporting means extending into the lower end of the plunger and adjustable as to length with respect thereto, said plunger being provided with a sight opening to indicate that proper connection is made between it and the hanger means.

1,169,636. SEED-DROPPING PLATE. ALBERT N. GRINSTEAD, Royston, Tex., assignor of one-half to J. R. Watts, Royston, Tex. Filed July 16, 1915. Serial No. 40,208. (Cl. 111—6.)



1. In a seed dropping mechanism, a planting plate including a bottom plate formed of a ring having an annular groove formed in its upper surface, said bottom plate being provided with an opening communicating with said groove, a rotary plate positioned interiorly of said ring, an upstanding circular projection formed upon said rotary plate, a plurality of radiating fingers formed upon said projection and extending over the upper surface of said bottom plate, said fingers being provided with recesses formed in their under surfaces communicating with said annular groove, means carried by said fingers for guiding a peanut into the groove formed in the under surface of the fingers next thereto, and means for retaining peanuts within said groove until they reach said opening.

2. In a seed dropping mechanism, a dropping plate structure including a bottom plate formed of a ring having an annular groove formed in its upper surface, said ring being provided with an opening communicating with said groove, a rotary plate positioned interiorly of said ring, an upstanding circular projection formed about the outer edge of said rotary plate, a plurality of radiating fingers formed upon said projection and overlying the upper surface of said ring, said fingers having recesses formed in their under surfaces, guiding plates secured to the upper surfaces of said fingers and extending rearwardly toward the finger next thereto, said guiding plates being curved for forming grooves for guiding a peanut into the recess of the finger next to the one to which it is attached, and a spring secured to each of said fingers for engaging a peanut and holding it within the recess formed in the finger until the peanut reaches said opening.

1,169,637. ATTACHMENT FOR RAZORS. EDWIN W. GROVE, St. Louis, Mo. Filed Jan. 12, 1915. Serial No. 1,817. (Cl. 30—12.)



1. The combination with a razor blade of an attachment therefor comprising a plate for confining an absorbent pad in a position whereby a longitudinal edge of said pad will adjoin the cutting edge of the razor blade along a line in the rear of said blade and means carried by said plate for holding it in spaced relation to that side of the razor blade which is adjoined by said pad.

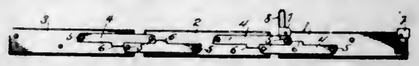
2. The combination with a razor blade of an attachment therefor comprising a plate for confining an absorbent pad in a position whereby a longitudinal edge of said pad will adjoin the cutting edge of the razor blade along a line in the rear of said blade and spring fingers carried by said plate for holding it in relation to the razor blade.

3. The combination with a razor blade of an attachment therefor comprising a plate for confining an absorbent pad in a position whereby a longitudinal edge of said pad will adjoin the cutting edge of the razor blade along a line in the rear of said blade, means carried by said plate for holding it in relation to the razor blade, and an absorbent pad confined under said plate and covered by said plate except for an operative edge portion which projects slightly beyond the plate.

4. The combination with a razor blade of an attachment therefor comprising a plate for confining an absorbent pad in a position whereby a longitudinal edge of said pad will adjoin the cutting edge of the razor blade along a line in the rear of said blade, spring fingers carried by said plate for holding it in relation to the razor blade, and an absorbent pad confined under said plate and covered by said plate except for an operative edge portion which projects slightly beyond the plate.

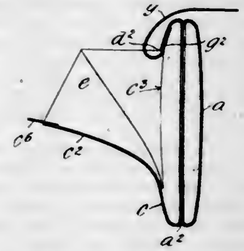
1,169,638. TRAY. MARY M. HAMMOND, Kansas City, Mo. Filed Mar. 14, 1914. Serial No. 824,625. (Cl. 190—17.)

1. In a tray mechanism, two trays, and two pairs of parallel connecting bars, each pair having it ends respectively pivoted to adjacent ends of the trays, the distance between the pivots of said bars being such as to permit one tray to swing from a superposed position directly above and resting upon the other tray to a position at one side of and in the same plane as the other tray, each of said bars being provided at one edge with a projection arranged to contact with the adjacent end of the adjacent bar when the trays are in the stretched out position, thereby preventing endwise movement of the bars relative to each other when in the last named position.



2. In a tray mechanism, two trays, and two pairs of parallel connecting bars, each pair having its ends respectively pivoted to adjacent ends of the trays, the distance between the pivots of said bars being such as to permit one tray to swing from a position directly above and superposed upon the other tray to a position at one side of and in the same plane as the other tray, each of said bars in the superposed and in the stretched out position having one edge disposed against the adjacent edge of the adjacent bar, each of said bars being provided at one edge with a projection arranged to contact with the adjacent end of the adjacent bar when the trays are in the stretched out position, thereby preventing endwise movement of the bars relative to each other when in the last named position.

1,169,639. TOBACCO-POUCH AND PURSE. CHARLES JAMES HATHAWAY, Walsall, England, assignor to Frank Percy Ault and Howard Gladstone Ault, West Bromwich, England. Filed Sept. 4, 1914. Serial No. 860,261. (Cl. 150—28.)



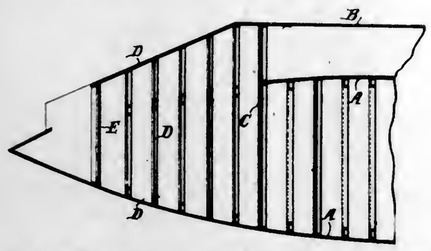
1. A pouch or purse comprising side members secured together, one of said members being formed with an opening, an inner flap adapted to close said opening, foldable pieces connecting said flap with the side edges of the opening, an outer flap adapted to close over and entirely cover the inner flap and throw back, and means for holding the outer flap in its closed position.

2. A receptacle comprising side members secured together to form a containing chamber therebetween, one of said members being formed with a slit forming a flapped opening therein, the flap of said opening being adapted to close the latter, foldable gussets connecting the side edges of said flap with the edges of said opening, thereby forming a definite mouth-piece to said opening when the pouch is open, an outer flap carried by said receptacle and adapted to entirely cover said inner flap, and means for holding the outer flap in its closed position.

3. A receptacle comprising two side members connected together at the boundary edges thereof, one of said side members being completely closed and the other side member being formed with an opening, an inner flap cut from the material of said last-mentioned side member and adapted to provide said opening in said member, an extension provided on said flap and adapted to tuck under the upper edge of the opening, gussets connecting the side edges of said flap with the edges of said opening, an outer flap adapted to close over and entirely cover the inner flap, and means for holding the outer flap in closed position.

4. A receptacle comprising two side pieces connected together all-around at the boundary edges thereof, one side piece being the completely closed side of the receptacle, while the other side piece is formed with a central opening, an inner flap carried by the side piece formed with said opening and of a size corresponding to said opening, flexible and foldable gussets connecting said flap with the edges of said opening, an outer flap adapted to close over and entirely cover the inner flap, and means for holding the outer flap in its closed position.

1,169,640. HULL FOR SUBMARINES. MARLEY FOTHERINGHAM HAY, The Hague, Netherlands. Filed Sept. 23, 1915. Serial No. 52,288. Cl. 114—16.)

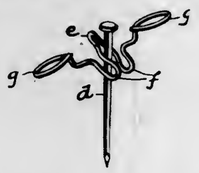


1. A hull for submarines comprising an amidships portion and bow and stern portions, the amidships portions consisting of a pressure-resisting hull proper and a non-pressure resisting superstructure, while in the bow and stern portions the hull proper and the superstructure merge to form a pressure resisting whole.

2. A hull for submarines comprising an amidships portion and bow and stern portions, the amidships portions consisting of a pressure-resisting hull proper and a non-pressure resisting superstructure, while in the bow and stern portions the hull proper and the superstructure merge to form a pressure resisting whole, and bulkheads at the points of merging of superstructure and hull proper.

3. A hull for submarines comprising an amidships portion and bow and stern portions, the amidships portions consisting of a pressure-resisting hull proper and a non-pressure resisting superstructure, while in the bow and stern portions the hull proper and the superstructure merge to form a pressure resisting whole, and ballast tanks formed in the merged fore and aft portions.

1,169,641. RETAINING AND REINFORCING DEVICE FOR PLASTER-BOARD AND STUCCO CONSTRUCTION. ELMENDORF J. HEDDEN, Bala, Pa. Filed Mar. 22, 1915. Serial No. 16,019. (Cl. 72—120.)



1. A retining and reinforcing device for plastic board construction comprising a length of wire having end portions in the same plane and spaced apart and a connecting portion between the end portions and located in a different plane therefrom, the central part of said connecting portion being shaped to form a loop located substantially midway between the end portions and which is adapted to receive the shank of a nail and to be confined by the nail head against the face of the board.

2. A retaining and reinforcing device for plaster board construction comprising a length of wire having end loops in the same plane and spaced apart, and a connecting portion between the end loops, said connecting portion being shaped to form a central loop located midway between the end loops in a plane different from that in which the end loops extend and which is adapted to receive the shank of a nail and to be confined by the nail head against the face of the board.

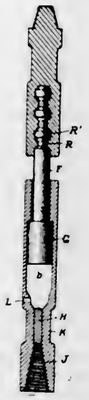
3. A retaining and reinforcing device for plaster board construction comprising a length of wire the central portion of which is formed into an elongated loop whose mouth is substantially closed and which between its opposite ends is somewhat spread apart to receive the nail shank, the wire from both sides of the mouth of the loop extending outward and thence formed with offset portions laterally distant from the central loop and extending in a plane different from, and parallel to, that in which the central loop extends.

4. A retaining and reinforcing device for plaster board construction comprising a length of wire the central portion of which is formed into an elongated loop to receive the shank of a nail, the wire beyond each end of said loop being bent upon itself to form another and shorter loop and thence bent outward and back upon itself to form an end loop, the central loop and end loops being in different planes.

5. A retaining and reinforcing device for plaster board construction comprising a length of wire the central portion of which is formed into a loop to receive the shank of a nail, the wire beyond each end of said central loop being bent outward, thence angularly, and thence outward and back upon itself to form an end loop, the central loop and end loops being in different planes.

[Claims 6 and 7 not printed in the Gazette.]

1,169,642. METHOD OF MAKING WELL-TOOLS. CHARLES M. HEETER, COLONEL C. HEETER, and JOSEPH W. HEETER, Butler, Pa., assignors to C. M. Heeter, Sons & Company, Inc., Butler, Pa., a Corporation of Pennsylvania. Filed Sept. 17, 1914. Serial No. 862,239. (Cl. 76—101.)



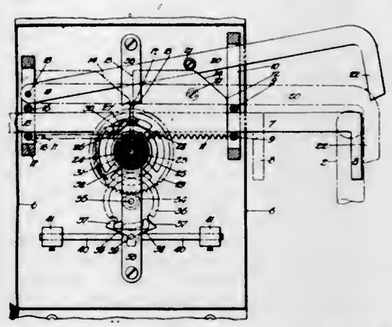
1. The method herein described of uniting two parts of a swivel well tool, consisting in forming one part with a through longitudinal passage of reduced diameter for a portion of its length, entering a headed swivel stem in said passage with the stem extending through the reduced portion of the passage and with the head larger than said reduced portion and having a turning fit in the larger diameter portion of said passage, contracting a portion of said passage of larger diameter and thereby confining said head therein, and shaping said contracted portion to form a coupling member.

2. The method herein described of uniting two parts of a well tool, consisting in forming one part with a through longitudinal passage which is of reduced diameter for a portion of its length, entering a headed swivel stem in said passage with the stem extending through the reduced portion of the passage and with the head larger than the said reduced portion, and contracting that portion of the passage-formed part through which the larger end of the passage extends and thereby inclosing the stem head.

3. The method herein described of forming a swivel well tool consisting in forming a tool part with a through cavity of reduced diameter adjacent one end, forming a stem with a head at one end and with surface irregularities adjacent its opposite end, entering the stem in the through passage with the portion thereof of irregular form extending through the reduced portion of the passage and with the stem head of larger diameter than said reduced portion, contracting the extremity of the passage-formed part through which the larger end of the passage opens and thereby confining the stem head within said larger passage portion, forming another tool part with a passage open through an end thereof and entering in said passage the portion of the stem formed with irregularities, and finally forging the passage-formed portion of the last mentioned tool part into the irregularities of the stem and thereby forming a permanent union therewith.

4. The method herein described of constructing a swivel tool, consisting in forming a tool part with a through longitudinal passage with one end of the passage contracted and with the wall of the opposite portion of the passage abnormally thick, entering a headed stem in the through passage with the stem extending through the contracted portion thereof and with the stem head confined in said passage, forging the relatively thick wall of the passage-formed part and thereby contracting the passage and confining the stem head therein, shaping the contracted extremity of the tool part to provide a coupling member, and forming a forged connection between another tool part and the projecting portion of the stem.

1,169,643. GATE-CONTROLLING DEVICE. WALTER STUART HICKENBOTHAM, Cheltenham, Victoria, Australia. Filed Sept. 22, 1915. Serial No. 52,044. (Cl. 161—1.)



1. A gate or the like controlling device consisting in the combination with a self-closing gate, of a casing, a slide bar projecting from the casing and engaged by the gate, time controlling mechanism operatively connected to the slide bar, a pivoted catch carried by the casing and which engages the gate, and means for controlling the catch by the movement of the slide bar.

2. A gate or the like controlling device consisting in the combination with a self-closing gate, of a casing, a slide bar projecting from the casing, a pivoted catch carried by the casing and which is adapted to engage the gate to hold it open, means controlling the catch whereby said catch is brought quickly to a gate engaging position when the slide bar moves in one direction and whereby said catch is slowly moved to gate disengaging position when the slide bar moves in the opposite direction.

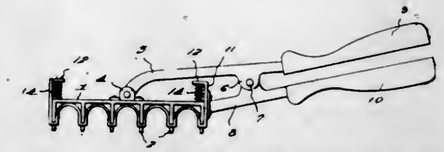
3. A gate controlling device including a resilient member, a slide bar engaged by the gate, a catch for holding the gate in open position, means operable upon a movement of the slide bar in one direction for permitting said catch to move into gate engaging position and for placing the resilient member under strain, said resilient member tending to return the slide bar to its original position and move the catch to gate releasing position, and means for retarding said movement.

4. A gate or the like controlling device consisting in the combination with a self-closing gate of a spring, a slide bar operated by the gate to wind the spring when moved in one direction, said bar being moved in the opposite direction by the spring when unwinding, a retaining catch for holding the gate, means on the slide bar for operating the catch to release the gate as the spring unwinds, and means for governing the unwinding speed of the spring.

5. A gate or the like controlling device consisting in the combination with a self-closing gate, of a casing, a slide bar projecting therefrom, a rack carried by the slide bar, a spring wound by the rack, a pivoted catch lever controlled by the slide bar, and an adjustable escapement means for governing the unwinding of the spring.

[Claims 6 to 9 not printed in the Gazette.]

1,169,644. CURRYCOMB. MICHAEL A. HOFFMAN, Roca, Nebr. Filed Apr. 20, 1915. Serial No. 22,612. (Cl. 119—88.)



In a curry comb structure, a plate, a plurality of currying teeth secured to the under surface of said plate in spaced laterally extending rows, a bar pivotally secured to said plate, a semi-handle section formed upon the outer end of said bar, a second plate being bent to form guard members spaced for receiving said spaced rows or currying teeth, said guard members being provided with a plurality of openings extending therethrough, through which said currying teeth extend, a bar connected to said second named plate and having a semi-handle connected thereto for coaction with said first named semi-handle for forming a handle for the curry comb, said second named plate having its ends bent upwardly and transversely for forming flanges, springs positioned between the upper surface of said first named body plate and said flanges for normally holding said teeth extended through said openings, said bars being pivotally connected for moving said carrying teeth upwardly through said opening for cleaning them upon movement of said semi-handle sections toward each other.

1,169,645. EXPANSIBLE BAND SUCH AS A BRACELET. HARRY ERNEST HYDE and JOSEPH JOHN HART, Birmingham, England. Filed Dec. 21, 1914. Serial No. 878,436. (Cl. 59—79.)



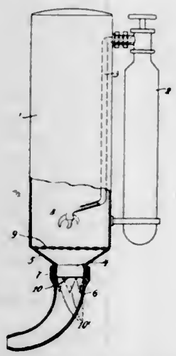
1. An expansible bracelet or band comprising a succession of opposite hollow first links, a succession of hollow second links placed intermediate said first links, a succession of third links, each passing transversely through the first and second links and being freely movable therein, and coil springs arranged in the first and second links to operate reversely against the ends of the first and second links and against the third links, substantially as described.

2. An expansible bracelet or band comprising a succession of opposite hollow first links, a succession of hollow second links placed intermediate said first links, a suc-

cession of third links, each passing transversely through the first and second links and being freely movable therein, and two coil springs arranged in the first and second links to operate reversely against the ends of the first and second links and against the third links, said third links connecting the first and second links and adapted to exert a pull on the springs substantially central of the latter and piston-like through the ends of the first link, substantially as described.

3. A flexible chain comprising an intermediate succession of hollow chain sections, a succession of hollow chain sections arranged on opposite sides of said intermediate succession of sections and adapted to overlap the ends of said intermediate succession of sections, said intermediate chain sections being formed with diametrically opposite slots therein, said side chain sections being formed with a slot in their inner sides, a pair of U-shaped members adapted to have their closed ends loosely engaged and extend through the slots of said intermediate sections and their free ends extend through the slots of the opposed side chain sections, enlarged heads formed on the free ends of said U-shaped members, said U-shaped members being arranged in pairs to connect the opposite outer chain sections with two adjacent intermediate chain sections, and a coil spring arranged within each of said chain sections and adapted to yieldingly engage a portion of said U-shaped member extending therethrough.

1,169,646. DRY FIRE-EXTINGUISHER. RICHARD JARETZKI, Berlin, Germany, assignor to Internationale Feuerlöscher Gesellschaft M. B. H., Berlin, Germany, a Firm. Filed July 7, 1913. Serial No. 777,715. (Cl. 169—12.)

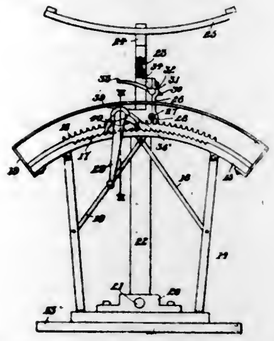


In a dry fire extinguisher, the combination of a receptacle for holding dry fire extinguishing powder and provided with an outlet at the bottom thereof, a gas tank, a pipe connecting said gas tank with the interior of said receptacle and having the delivery end thereof arranged directly above and in proximity to the outlet, and a distributing head mounted on the delivery end of said pipe and comprising a plurality of radial arms bent spirally downward, substantially as described.

1,169,647. HAY-SPREADER. FRANK JERKA, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,512. (Cl. 214—2.)

1. In a hay spreader, a plurality of spaced supports, segmental racks carried by the supports, a shaft journaled concentrically of said racks, housings carried by said shaft, a crank shaft journaled to the upper ends of said housings, gears on said crank shaft meshing with said racks, and a hay rack supported by the housings.

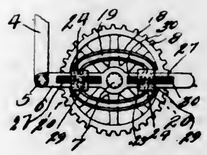
2. In a hay spreader, a plurality of spaced supports, segmental racks carried by the supports, a shaft journaled concentrically of said racks, housings carried by said shaft, a crank shaft journaled to the upper ends of said housings, gears on said crank shaft meshing with said racks, ratchet bars slidable into and out of said housings, a hay rack carried by the upper ends of the ratchet bars, and means to elevate the ratchet bars.



3. In a hay spreader, a plurality of spaced supports, segmental racks carried by the supports, a shaft journaled concentrically of said racks, housings carried by said shaft, a crank shaft journaled to the upper ends of said housings, gears on said crank shaft meshing with said racks, ratchet bars slidable into and out of said housings, a hay rack carried by the upper ends of the ratchet bars, a second crank shaft journaled adjacent the upper ends of the housings, gears on the second crank shaft meshing with the ratchet bars, and pawls carried by the housings and engaging the ratchet bars.

4. In a hay spreader, a plurality of spaced supports, segmental racks carried by the supports, a shaft journaled concentrically of said racks, housings carried by said shaft, a crank shaft journaled to the upper ends of said housings, gears on said crank shaft meshing with said racks, ratchet bars slidable into and out of said housings, a hay rack carried by the upper ends of the ratchet bars, a second crank shaft journaled adjacent the upper ends of the housings, gears on the second crank shaft meshing with the ratchet bars, pawls carried by the housings and engaging the ratchet bars, other pawls on the first crank shaft, and a segmental ratchet carried by one of said supports and engageable by the last mentioned pawls, the teeth on one side of the center of the ratchet being inclined in one direction and the teeth on the opposite side of said center being inclined in the opposite direction.

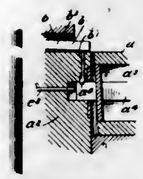
1,169,648. MEANS OF CONNECTION BETWEEN A WIND-WHEEL AND DYNAMO FOR STORING ELECTRICITY. ARVID VICTOR JOHNSON, Napoleon, N. D. Filed May 21, 1915. Serial No. 29,664. (Cl. 74—29.)



In combination, a wind wheel operated reciprocating rod, a dynamo for generating electricity to be stored in a storage battery, said dynamo having a pinion on its shaft, a stub shaft, a spur gear loosely on said stub shaft and in mesh with the pinion, and yielding connections between the large spur gear and the rod adapted to be overcome incident to excessive reciprocation of the rod, said connections comprising an elliptically grooved rim carried on the spur gear, the opposite end of the groove being curved inwardly toward the stub shaft to form pockets, a bar loose on the stub shaft and having slots in its opposite end portions, blocks mounted in the slots and having spring tensioned means to hold them substantially centered in the slots, said blocks carrying anti-frictional

means engaging said pockets of the groove, and adapted to follow the contour of the groove, when the bar revolves substantially independent of the spur gear, and when the tension of the spring tensioning means is overcome, and a pitman rod connection between the bar and the first rod.

1,169,649. LOCK AND LATCH. JAMES O. KAFADER and FRANK KERR, Fort Bidwell, Cal. Filed May 26, 1914. Serial No. 841,030. (Cl. 70—14.)



1. The combination with a door, door frame, and lock having a sliding bolt; of means connected with said door frame for engaging said bolt to arrest the same intermediate its full movement, means for releasing said engaging means, a slide adapted to bear against the outer end of said bolt, and means for actuating said slide to retract said bolt when released from said engaging means.

2. The combination with a door, door frame, and lock having a sliding bolt; of means connected with said door frame for engaging said bolt to arrest the same intermediate its full movement, means for releasing said engaging means, means for making said engaging means inoperative, a slide adapted to bear against the outer end of said bolt, and means for actuating said slide to retract said bolt when released for side engaging means.

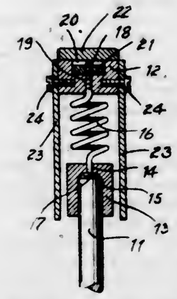
1,169,650. CURTAIN-HOOK. WILLIAM G. KENDALL, Newark, N. J., assignor of one-half to Kenneth A. Shepard, East Orange, N. J. Filed June 6, 1914. Serial No. 843,523. (Cl. 24—130.)



A fastening device formed from resilient wire bent to provide a V-shaped hook having a body portion, a bill portion and a shank portion extending at substantially right angles to the bisector of the angle of the hook between the bill and body portions, the bill portion of the hook so formed, being bent laterally to extend at an acute angle to the plane of the body and shank portions of the hook and being formed in its outer face with a transverse groove adapted, when a cord is wedged in the V-shaped bight portion of the hook with that stretch of the cord subject to strain, wound about the bill of the hook to receive said wound portion of the cord, whereby when the cord is under strain, the groove will hold the cord against movement toward the mouth of the hook and the strain on the hook will swing the bill toward the plane of the body and shank portions of the hook to additionally wedge the cord and hold it against movement through the hook.

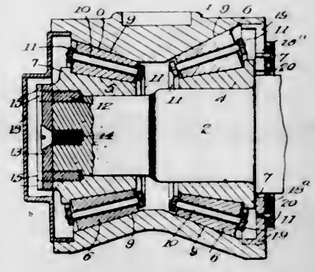
1,169,651. AUTOMOBILE-WHEEL. PATRICK KELLEHER and CHARLES SCHAFFER, Wilmington, Del. Filed Feb. 26, 1914. Serial No. 821,201. (Cl. 152—49.)

In a vehicle wheel the combination with the rim and spokes the former being provided with a circumferential channel and having an opening therethrough communicating with the channel, of a nut immovably seated within said channel and registering with said opening, a cap recessed to fit removably over the end of each of the spokes, and a coil spring arranged between said cap and ring with its ends disposed in a line centrally of the coil, one of said ends being swivelly engaged through said cap and terminating in a head seated within the recess, with



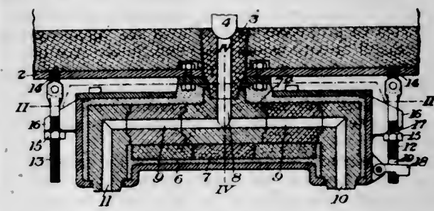
the other of said ends loosely inserted through the opening in the rim and threadedly engaging said nut.

1,169,652. ROLLER-BEARING. NATHAN GOLD KIMBERLEY, Tottenham, England. Filed No. 18, 1914. Serial No. 872,764. (Cl. 64—62.)



In a roller bearing of the type indicated, the combination with the axle and a tapered bed or roller path applied thereto and a screw threaded ferrule which is in engagement with both the axle and roller path, the said ferrule and roller path having end recesses, of a locking device consisting of a cross bar which projects into the said recesses and a screw securing said cross bar to the axle, as described.

1,169,653. MULTIPLE-POURING ATTACHMENT FOR LADLES AND THE LIKE. FRANK A. KING, Youngstown, Ohio. Filed May 13, 1915. Serial No. 27,778. (Cl. 22—85.)



1. A multiple pouring device for ladles, etc., comprising a container or shell having a refractory lining formed with branch pouring passages or sprues arranged to communicate with the nozzle of the ladle and to supply different molds, together with means for attaching the container to a ladle, substantially as described.

2. A pouring attachment for ladles, etc., comprising a metal shell or container having a refractory lining pro-

vided with a plurality of outlets and having separate passages or sprues leading from the outlets to the nozzle of the ladle, together with means for attaching the container to a ladle, substantially as described.

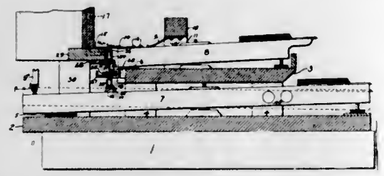
3. The combination with a ladle having a single bottom pouring nozzle, of a pouring attachment adapted to fit said nozzle and having a plurality of pouring passages or sprues which communicate with the nozzle and which are adapted to supply different molds, together with means for connecting the attachment to the ladle, substantially as described.

4. The combination with a ladle having a single bottom nozzle, of a multiple pouring attachment adapted to fit said nozzle and having a plurality of separate outlets, and means for detachably connecting said attachment to the ladle, substantially as described.

5. The combination with a ladle having a bottom pouring nozzle, of a multiple pouring attachment adapted to fit the nozzle and having a plurality of outlets, and depending hangers secured to the ladle and supporting and holding the attachment in place below the bottom of the ladle, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,654. COUPLER FOR MUSICAL INSTRUMENTS. ERNEST J. KNABE, Jr., Cincinnati, Ohio. Filed Feb. 13, 1915. Serial No. 8,106. (Cl. 84—9.)



1. In couplers for musical instruments, the combination of a lower key, an upper key, a valve moved by said upper key, a fixed rail, a movable rail, a connection between said lower key and said valve mounted to slide in both of said rail and means for moving said movable rail.

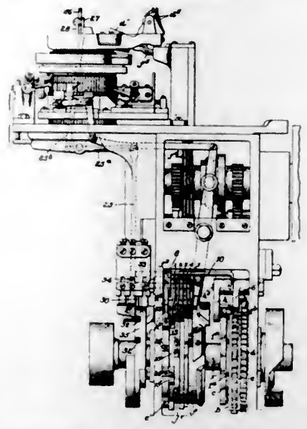
2. In couplers for musical instruments the combination of a lower key, an upper key, a spring mounted on said upper key, a valve mounted on said spring and a connection between said lower key and said spring whereby said valve can be moved without moving said upper key.

3. In couplers for musical instruments the combination of a lower key, an upper key, a spring mounted on said upper key, a valve mounted on said spring, a spring for yieldingly holding said upper key in its normal position against the stress of said first named spring, and a connection between said lower key and said first named spring whereby said valve can be moved without moving said upper key.

4. In couplers for musical instruments the combination of a lower key, an upper key, a valve moved by said upper key, a step on said lower key having a flat top and a surface inclined to said top, a fixed rail, a movable rail, a connection mounted to slide in both of said rails and means for moving said movable rail so that one end of said connection will slide up said inclined plane and to said top, when the front end of said lower key is depressed.

5. In couplers for musical instruments, the combination of an upper key and key frame, a lower key and key frame, a valve mounted on said upper key, a fixed rail, a movable rail, a connection between said lower key and said valve mounted to slide in said movable and fixed rails, links each having one end pivoted to said upper key frame and the other end pivoted to said movable rail, said links having their pivoted ends so positioned that said links guide said movable rail forwardly and to one side to bring said connection into position to move said valve, and rearwardly and to the opposite side to bring said connection into a position in which it does not move said valve.

1,169,655. PATTERN MECHANISM FOR KNITTING-MACHINES. ALDEI LANDAY, Central Falls, R. I., assignor to Hemphill Manufacturing Co., Pawtucket, R. I., a Corporation of Rhode Island. Filed July 19, 1915. Serial No. 40,718. (Cl. 66—12.)



1. In combination in a knitting machine a series of yarn fingers movable to and from position for feeding yarn to the needles, a split pattern drum, the sections of which are located next to each other and coaxially, levers overlying the periphery of the sections of the split pattern drum, connections extending upwardly from said levers for controlling the yarn fingers, a timing or pattern chain arranged coaxially with the split pattern drum and on the side thereof opposite that upon which the supplemental section is located, means for operating the said pattern chain, a main and a supplemental controller operated from blocks on said pattern chain, a pawl and ratchet mechanism for the main section of the split pattern drum and a pawl and ratchet mechanism for the supplemental section of the split pattern drum, said pawl and ratchet mechanisms being controlled respectively from the main and supplemental controller and said supplemental controller having a connection extending therefrom past the main section of the split pattern drum to control the pawl of the supplemental section, substantially as described.

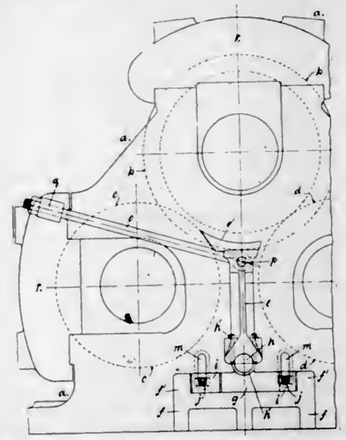
2. In combination a series of yarn fingers, a main pattern drum, a supplemental pattern drum coaxially arranged with the main pattern drum, a pair of levers controlled by the supplemental pattern drum in alternation whereby one yarn is in work while the other yarn is out, and vice versa, and a third lever connected to one of the levers first mentioned and operated from the main pattern drum whereby said lever may be put out of work at the same time that the other lever of the pair first mentioned is out of work, and a lever also controlled by the main pattern drum and connected to one of the yarn fingers for operating the same, substantially as described.

3. In combination a plurality of yarn fingers, a plurality of levers controlling said yarn fingers, a main and a supplemental pattern drum arranged side by side and coaxially, pawl and ratchet means for each pattern drum, a pivotally mounted controller arm for the pawl of the supplemental pattern drum, a main controller for the pawl of the main pattern drum, a supplemental controller connected with the controller arm for the pawl of the supplemental pattern drum, a pattern chain carrying two series of blocks for operating the main and supplemental controller, a ratchet for moving the pattern chain step by step, a pawl for operating the said ratchet, an oscillating segment for imparting rotary reciprocating movements to the movable member of the knitting head, the said segment carrying the pawl for operating the main pattern drum, and carrying the pawl for operating the ratchet of the pattern chain, a gear, a pitman connection between said gear and the oscillating segment, a crank disk connected with the pawl of the supplemental pattern drum, and gearing between the said crank disk and the gear first mentioned for driving the same, substantially as described.

4. In combination a plurality of yarn fingers, a main and supplemental pattern drum arranged side by side and coaxially, pawl and ratchet means for operating each of the drums, connections between the drums and the yarn fingers for controlling the latter, a pattern chain, a main and a supplemental controller operated by said pattern chain for controlling respectively the pawl of the main drum and the pawl of the supplemental drum, connections for operating the thread binder and cutter within the needle circle, said connections being operated from the supplemental drum, and cam means coaxially arranged with the main and supplemental drums for also operating the said connections, substantially as described.

5. In combination a plurality of yarn fingers, a main pattern drum, a supplemental pattern drum arranged coaxially with the main drum, a plurality of levers connected with the yarn fingers, certain of said levers being operated by the main pattern drum, and certain of said levers by the supplemental pattern drum, a pattern chain, means for operating the main and supplemental pattern drums independently, controlling means for timing the operation of the main and supplemental pattern drums, said supplemental pattern drums, when in operation, moving step by step and throwing one yarn finger in and the other out of work, and vice versa, and connections operated from the supplemental pattern drum for controlling the yarn end which is out of work, and means also controlling said connections and timed to operate with the main pattern drum for controlling the yarn end of any yarn fingers thrown out of operation by said main drum, substantially as described.

1,169,656. SUGAR-CANE AND LIKE MILL RETURNER-BAR. ARCHIBALD MCA. LANG, Liverpool, England. Filed Jan. 16, 1915. Serial No. 2,682. (Cl. 100—47.)



1. In a sugar cane or like mill, the combination of side frames or headstocks; an adjustable returner bar; stools on the inside of the said frames or headstocks; returner bar bearing blocks adapted to be adjusted parallel with the side frames or headstocks, having inclined ends and resting on the stools; wedge shaped adjusting means at the ends of the bearing blocks, and adapted to act on same; and bolts connecting the said wedges, and disposed parallel with the general plane of the returner bar, substantially as described.

2. In a sugar cane or like mill, the combination of the side frames or headstocks, stools formed on the inside of same; movable bearing blocks resting on the said stools; returner bars beam carried at each end on the said bearing blocks; wedges; screw bolts and nuts connected with the wedges and adapted to move same in either direction; substantially as described.

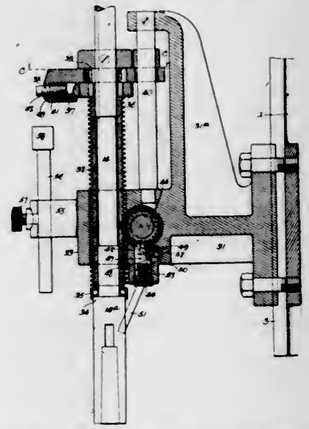
3. In a sugar cane mill, the combination with the returner bar, of a beam for supporting the returner bar, means pivotally engaging the beam for supporting the beam, means for moving the supporting means in a direction at right angles to the longitudinal axis of the returner bar, and means for rocking the returner bar and beam on its supporting means.

4. In a sugar cane mill, the combination with the returner bar, of a beam for supporting the returner bar, bearing blocks having pivotal engagement with the beam at each end thereof, and adapted to support the same, means for moving the bearing blocks simultaneously in a direction at right angles to the longitudinal axis of the returner bar, and means for rocking the returner bar and beam on the bearing blocks.

5. In a sugar cane mill, the combination with the returner bar, of a supporting beam therefor, bearing blocks for supporting the beam, pedestals having a smooth upper surface upon which the bearing blocks are adapted to be supported in sliding engagement, means for sliding the bearing blocks upon the pedestals in a direction at right angles to the longitudinal axis of the returner bar, and means for rocking the beam on the bearing blocks.

[Claims 6 to 9 not printed in the Gazette.]

1,169,657. DRILL. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 13, 1914. Serial No. 844,931. (Cl. 77—32.)



1. The combination in a drill, of a standard, having a bearing at its upper end; a horizontal driving shaft; a vertical spindle; gearing between the driving shaft and the spindle; a feed screw on the spindle; a bracket through which the feed screw and spindle extend; a transverse toothed spindle on the bracket, the teeth of the spindle directly engaging the feed screw; means for turning the spindle; and means for clamping the spindle to the bracket so that it will act as a nut.

2. The combination of a standard; a bearing at the upper end of the standard; a horizontal driving shaft mounted in the bearing; a vertical spindle, also mounted in the bearing; a feed screw on the spindle; a bracket through which the spindle and feed screw extend, ratchet mechanism for actuating the feed screw; an eccentric on the spindle for actuating the ratchet mechanism; a transversely arranged spindle on the bracket having teeth directly engaging the feed screw; means for turning the spindle; and means for clamping the spindle to the bracket.

3. The combination in a drill, of a standard; a spindle; a bracket; a feed screw on the spindle and extending through the bracket; ratchet mechanism for turning the feed screw from the spindle; a horizontal spindle having

teeth meshing with the teeth of the feed screw; a bolt for locking the spindle in position; means for shifting the bolt so that the toothed spindle will act either as a nut for the feed screw or as a means for raising or lowering the spindle by hand.

4. The combination in a drill, of a spindle; a feed screw on the spindle; means for turning the feed screw; a spindle having teeth meshing with the teeth of the feed screw; a bolt having teeth arranged to engage the teeth of the spindle; a spring back of the bolt, said bolt being notched at one side; and a shifter flattened at one side and arranged to engage the bolt and to hold it out of mesh with the teeth of the spindle.

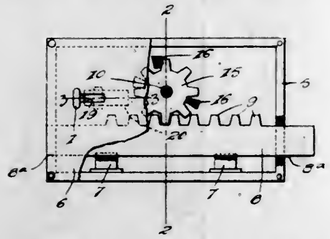
1,169,658. METHOD FOR REPAIRING SCORED CYLINDERS. LEONARD LORENTOWICZ, Irvington, N. J. Filed July 9, 1914. Serial No. 849,972. (Cl. 22—203.)



1. The method described, which consists in subjecting scores in a cylinder to a suitable flux, filling the scores with block tin, and then reducing the filling to the contour of the wall of the cylinder.

2. The method described, which consists in subjecting scores in a cylinder to a suitable flux, filling the scores with block tin and silver, and then reducing the filling to the contour of the wall of the cylinder.

1,169,659. LOCK. CLARK N. LOWELL, Bellaire, Ohio. Filed Oct. 13, 1915. Serial No. 55,681. (Cl. 16—64.)



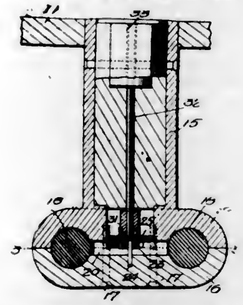
1. A lock including a casing, a bolt slidably mounted in said casing, a gear wheel associated with said bolt for actuating the latter, means normally retaining said gear wheel out of coöperative relation with said bolt, and means for positively locking said gear wheel out of cooperative relation with said bolt.

2. A lock including a casing, a bolt slidably mounted in said casing, a shaft slidably and rotatably mounted in said casing, a gear wheel keyed upon said shaft, and movable into and out of coöperative relation with said bolt, means normally retaining said shaft in extended position, and means for locking said gear wheel out of coöperative relation with said bolt.

3. A lock including a casing, a bolt slidably mounted in said casing, a gear wheel associated with said bolt for actuating the latter, means normally retaining said gear wheel out of coöperative relation with said bolt, and means operable independently of said retaining means and extended exteriorly of said casing for positively locking said gear wheel out of coöperative relation with said bolt.

1,169,660. TRANSMISSION-LOCK. JAMES MCDONALD, Dallas, Tex., assignor of one-half to Matthew C. Cameron, Dallas, Tex. Filed Sept. 1, 1915. Serial No. 48,453. (Cl. 70—90.)

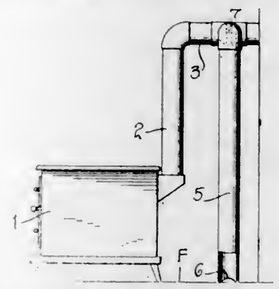
1. In a transmission lock, the combination with gear shifting rods, of a sectional casing having depressions in the opposed faces of the sections for receiving said rods, one of said sections being provided with slots extending transversely to said rods, locking bolts slidable in said grooves for engagement with said rods for locking the same, means for operating said bolts, the other section of said casing having a lateral extension, and means mounted in said extension for operating the last-named means.



2. In a transmission lock, the combination with gear shifting rods; of a lock casing in which said rods are mounted in parallel relation, a locking bolt for each of said rods, said bolts being adapted for simultaneous operation in opposite directions, an oscillating lever operated to actuate said bolts, a rotary disk having a pin engaging said lever, and key operating means for rotating said disk to oscillate said lever.

3. In a transmission lock, the combination with gear shifting rods; of a lock casing in which said rods are mounted in parallel relation, a locking bolt for each of said rods, said bolts being adapted for simultaneous operation in opposite directions, an oscillating lever operated to actuate said bolts, a rotary disk having a pin engaging said lever, and a key operated shaft mounted in said lock casing and provided with an extension adapted to rotate said disk to oscillate said lever.

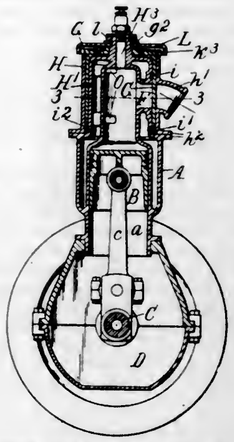
1,169,661. VENTILATING ATTACHMENT FOR STOVE-PIPES. HUGH F. MCKEEVER, Jackson, Nebr. Filed Mar. 6, 1915. Serial No. 12,713. (Cl. 126—312.)



The combination with a stove and its flue, of a stand in communication with the flue, and a narrow flat member intersecting the extremity of the bore of the stand in communication with the flue and affording spaces at the opposite sides of the member, the width of the member being disposed transversely of the stand, said member being also disposed transversely of the flue.

1,169,662. INTERNAL-COMBUSTION ENGINE. DONALD J. MCKINNON, Toronto, Ontario, Canada, assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Oct. 16, 1909, Serial No. 522,909. Divided and this application filed Sept. 8, 1913. Serial No. 788,693. (Cl. 123—59.)

1. In a multiple cylinder internal combustion engine, the combination of a plurality of cylinders side by side, a rotary valve in each of said cylinders and having worm gear teeth formed on its periphery and integral therewith, a valve operating shaft arranged longitudinally of the engine parallel with the engine crank shaft and having worms in mesh with said worm gear teeth and adapted to rotate the several valves simultaneously, bearings for said shaft in an upward extension of said cylinders and positive driving connections from the engine crank shaft to said valve shaft.

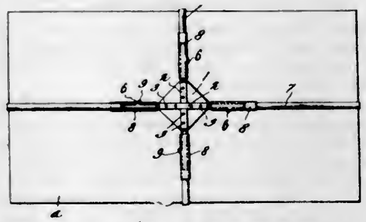


2. In an internal combustion engine, the combination of a cylinder having spaced inner and outer walls forming an annular valve chamber, a rotary sleeve valve in said chamber and having gear teeth formed on its periphery thereof and integral therewith and positive driving connections from the engine crank shaft to said gear teeth.

3. In an internal combustion engine, the combination of a cylinder having inner and outer wall forming an annular valve chamber, a rotary sleeve valve in said chamber having worm gear teeth on its periphery at one end thereof, a valve operating shaft arranged parallel with the engine crank shaft and having worms in mesh with the said teeth, bearings for said shaft in an upward extension of said cylinder and positive driving connections from the engine crank shaft to said valve shaft.

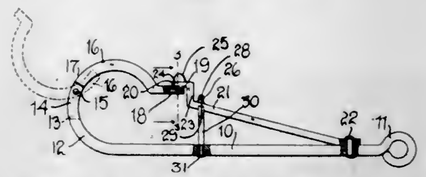
4. In a multiple cylinder internal combustion engine, the combination of a plurality of cylinders side by side, a rotary valve in each of said cylinders and having worm gear teeth directly thereon, a valve operating shaft arranged longitudinally of the engine parallel with the engine crank shaft and having worms in mesh with said worm gear teeth and adapted to rotate the several valves simultaneously, bearings for said shaft in an upward extension of said cylinders, chain wheels arranged on the engine crank shaft and said valve shaft respectively, at the fly wheel end of the engine, and chain connections between said chain wheels for driving the valve shaft from the crank shaft.

1,169,663. PACKAGE-TIE. WILLIAM M. MANSFIELD, Orange Grove, Miss., assignor of one-third to Torcel Torgerson and one-third to Marvin G. Hanson, Irvington, Ala. Filed May 4, 1915. Serial No. 25,744. (Cl. 24—17.)



A package tie comprising a rectangular plate, a pair of intercrossing arms secured to and extending from each corner of the rectangular plate, said arms provided with an elongated slot therein, a tongue formed on the side of said arms intermediate the ends of the elongated slot and adapted to engage a socket carried by an elastic webbing.

1,169,664. DRAW-BOLT. JOHN W. MARTIN, Lake Placid, N. Y., assignor of one-tenth to Edwin H. Ford, Lake Placid, N. Y. Filed Mar. 20, 1915. Serial No. 15,868. (Cl. 24—241.)



1. A device of the character described including a shank, a bill pivoted thereto, a latch member pivotally attached to the shank, the free end of the latch member being engageable with the free end of the bill for maintaining the same in closed position, and being movable transversely with respect to the bill for releasing the same, and means for yieldably holding the latch in engagement with the bill.

2. A device of the character described including a shank, a bill pivoted thereto, a lug extending from the free end of the bill, said lug being disposed in parallel spaced relation to the shank when the bill is in closed position, a latch movably attached to the shank and having an L-shaped extension formed on its free terminal, said extension being engageable with the lug of the bill for holding the bill against swinging movement when in closed position, and means for normally holding the latch in locking engagement with the lug of the bill.

3. A device of the character described including a shank, a bill pivoted thereto, a lug extending from the free end of the bill, said lug being disposed in parallel spaced relation to the shank when the bill is in closed position, a latch movably attached to the shank and having an L-shaped extension formed on its free terminal, said extension being engageable with the lug of the bill for holding the bill against swinging movement when in closed position, and fixed means for normally holding the latch in locking engagement with the lug of the bill.

4. A device of the character described including a shank, a bill pivoted thereto, a latch pivoted to the shank and engageable with the bill for normally holding the same in closed position, and means for yieldably holding the latch in locking position, said means including a substantially rectangular resilient frame attached to the shank and arranged in spaced relation thereto, said frame being disposed to receive the latch member and being adapted to limit the swinging movement thereof.

5. A device of the character described including a shank, a bill pivoted thereto, a latch pivoted to the shank, and engageable with the bill for normally holding the same in closed position, a rib formed on the latch intermediate the length thereof, and means engageable by the rib for yieldably maintaining the latch in locking relation to the bill, said means including a substantially rectangular resilient frame attached to the shank, the latch being projected through the frame and being adapted to swing therethrough, one member of the frame being provided with a notch adapted to receive the rib of the latch for yieldably maintaining the latch in locking position.

1,169,665. SAFETY-RAZOR. RICHARD MARX, Philadelphia, Pa., assignor to John B. Stetson, Ashbourne, Pa. Filed Jan. 9, 1913. Serial No. 740,985. (Cl. 30—12.)

1. The combination in a safety razor, of a handle; a guard plate mounted thereon having guard teeth at one edge, two portions of the opposite edge of said plate being turned up and having their adjacent ends beveled; a blade having a projection from the edge opposite its cut-

ting edge provided with undercut ends fitting the beveled ends of the turned up portions on the guard plate and also having end projections; with a cover plate for holding the blade in place having end clips engaging the blade projections and abutting on the turned up portions of the guard plate.



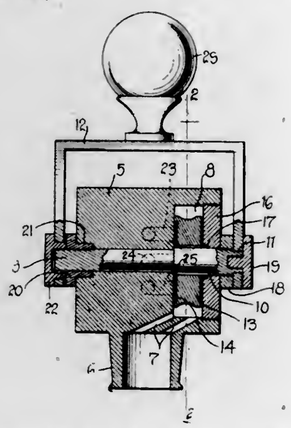
2. The combination in a safety razor, of a handle, a guard plate mounted thereon having guard teeth on one edge and a portion of its opposite edge turned up; a blade formed to have holding engagement with said turned up edge portion and provided with laterally projecting lugs at its opposite ends; with a cover plate having clips at its ends formed to frictionally engage the guard plate and abutting on the laterally projecting lugs of the blade when the latter is in its operative position.

3. A razor blade having an undercut projection on its rear edge and formed with projecting lugs on the rear portions of its opposite ends respectively.

4. A razor blade of rhomboidal outline having a projection at its back edge formed with undercut ends; with lugs at the opposite ends of the blade adjacent its rear edge.

5. The combination in a safety razor, of a handle; a guard plate mounted thereon having guard teeth at one edge and provided with two upturned portions at its opposite edge; a blade abutting said upturned portions and provided with a projection extending between the same, said blade also having projections at its ends adjacent its rear edge; with a cover plate slidably engaging the blade and having end clips respectively engaging opposite ends of the guard plate, said cover plate also abutting on the upturned edge portions of the guard plate and the clips positively engaging the end projections of the blade to hold the same in place.

1,169,666. MIXING-VALVE. HENRY K. MAYER, Fort Collins, Colo. Filed June 24, 1914. Serial No. 847,092. (Cl. 225—26.)



1. A mixing valve for soda fountains comprising a body provided with a plurality of syrup supply ports and a water supply port, said body having a mixing chamber, a rotary valve disk mounted in said chamber and provided with spaced inlet ports to receive syrup from one of the ports in the body and water from another of said ports and separately discharge the same into said mixing chamber, the ports in the valve disk being so spaced with respect to the ports in the valve body that the supply of water to the mixing chamber is continued after the supply of syrup is cut off, whereby the walls of the mixing chamber are cleansed, and means for rotating said valve disk.

2. A mixing valve for soda fountains comprising a body provided with a mixing chamber and spaced syrup and water supply ports communicating therewith, a rotary valve member provided with spaced ports to receive syrup and water from the ports in the valve body in a segregated state, said valve disk being provided with a series of relatively small auxiliary ports communicating with each receiving port and adapted to discharge each of the two fluids in a plurality of directions into the mixing chamber, said body having discharge ports for the fluid communicating with said chamber, and means for rotating said valve.

3. A mixing valve for soda fountains comprising a body having a mixing chamber and syrup and water supply ports communicating therewith, a flat rotary disk valve mounted within said chamber and having spaced ports to receive the syrup and water from the ports in the valve body, the ports in said disk being spaced apart to a less extent than the adjacent syrup and water supply ports in the valve body, said disk being further provided with a plurality of relatively small auxiliary ports leading from each of the receiving ports to the periphery of said disk and ejecting the segregated fluids in small streams in a plurality of directions into said mixing chamber, the supply of water to one of the ports in said valve continuing after the supply of syrup to the other port thereof has been cut off, whereby the walls of the mixing chamber will be cleansed, said body having discharge ports communicating with the mixing chamber, and means for rotating said valve disk.

1,169,667. GOLF-CLUB. WILLIAM HENRY MEGUYER, Cowes, Isle of Wight, England. Filed Apr. 13, 1915 Serial No. 21,078. (Cl. 46—4.)

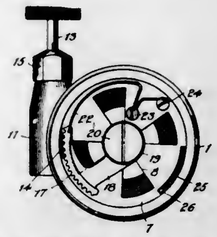


A golf club comprising, a tubular shaft substantially cylindrical in cross section and formed with a plurality of slits therein arranged in staggered relation.

1,169,668. ROTARY VALVE. WILLIAM E. MERRITT, Portland, Oreg., assignor of one-half to Joseph L. Hoffman, Portland, Oreg. Filed Apr. 26, 1915. Serial No. 24,069. (Cl. 137—7.)

1. In a valve mechanism the combination with a valve case and ported valve seat, of a ported rotary valve, means for rotating said valve to bring said ports into register, and oppositely disposed inclines interposed between said valve and its rotating means in alinement with the inlet and outlet through the openings in the ported valve seat and rotary valve, whereby the valve may be more effectually seated after closing.

2. In a valve mechanism the combination with a valve case and ported valve seat, of a correspondingly ported removable wear plate secured to said seat, means for rotating said valve to bring said ports into register, and oppositely disposed inclines interposed between said valve and its rotating means in alinement with the inlet and outlet through the openings of said ported valve seat and rotary valve, whereby the valve may be more effectually seated after closing.



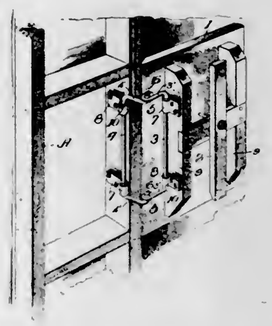
3. In a valve mechanism the combination with a valve case a ported valve seat and a ported rotary valve, of means for rotating said valve including an actuating lever yieldingly connected with the valve, and oppositely disposed inclines interposed between said lever and valve in alinement with the inlet and outlet through the openings in the said ported valve seat and rotary valve, whereby the valve may be more effectually seated after closing.

4. In a valve mechanism the combination with a valve case a ported valve seat and a ported rotary valve, of means for rotating said valve including an actuating lever connected to said valve by a projecting leaf spring, and oppositely disposed inclines interposed between said lever and the surface of said valve whereby the latter may be forced into closer contact with its seat after closing.

5. In a valve mechanism the combination with a valve case a ported valve seat and a ported rotary disk valve, of means for rotating said valve including an actuating lever connected to said valve by a projecting leaf spring, and oppositely disposed inclines interposed between said lever and valve about the axial center thereof whereby the valve may be forced into closer contact with its seat by continued rotation after closing.

[Claim 6 not printed in the Gazette.]

1,169,669. HINGE FOR SILO-DOORS. CHARLES S. MITCHELL, Grandview, Wash. Filed Sept. 9, 1915. Serial No. 49,789. (Cl. 16—106.)

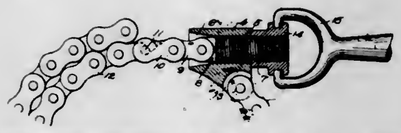


1. A silo hinge comprising two main members, the ends of which are extended at an angle to the main or center portions and hinged together, and straps embracing the central members and within which the latter turn, forming means by which the hinge is attached to the silo and part to be hinged thereto.

2. A silo hinge composed of two members, the arms of which terminate in eyes and pintles, by which they are pivotally joined, and straps having oppositely extending inclines at the bearings, down which the arms of the hinge ride in the operation of the hinge.

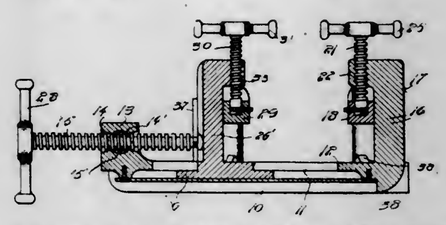
3. The combination of a hinge and door, the hinge comprising two members, the center portions of which are vertical and the ends in the form of arms, the arms of one member terminating in eyes and the other in pintles, and straps for connecting the vertical members to the door and door jamb, the outer edges of the uppermost and lowermost straps on the jamb and door having inclines at the bearings upon which the adjacent arm of the hinge turns and rides, whereby the assistance of gravity is utilized in the closing of the door.

1,169,670. PIPE-CLAMP. GEORGE H. NAYLOR, Nevada, Mo. Filed June 10, 1915. Serial No. 33,290. (Cl. 81—66.)



A pipe clamp comprising a head having a longitudinal bore a portion of which is enlarged and of angular cross section, a chain connected to said head, a bolt in the bore of the head having its head within the enlarged portion of the bore, a hook pivotally connected to the head of the bolt, said chain having means adapted to be engaged by the hook, a nut engaging the bolt and a swinging handle engaging the nut for turning the same, whereby the bolt is moved within the head, substantially as and for the purpose set forth.

1,169,671. MITERING-CLAMP. ARTHUR NIHLEN, New York, N. Y., assignor of one-half to Peter Nelson, Yonkers, N. Y. Filed Sept. 4, 1913. Serial No. 788,127. (Cl. 144—293.)

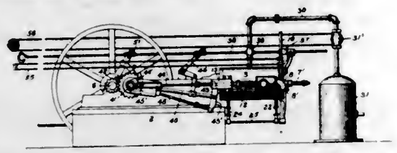


In a miter clamp, a frame, a standard formed on one end thereof, a clamping member slidably mounted on said standard, a plate slidably mounted on said frame, a standard formed on said plate, a clamping member on said standard, means for transmitting force to the last mentioned standard to move the same toward the first mentioned standard, and means for adjusting the said first mentioned means in such manner that the point of application of the force to the second mentioned standard may be varied at the will of the operator.

1,169,672. COMBINED GAS AND AIR ENGINE. VICTOR H. PALM, Butler, Pa. Filed May 18, 1915. Serial No. 28,963. (Cl. 123—20.)

1. The combination of an engine cylinder and piston, fuel admission and exhaust valves for the cylinder for explosive engine operation, reversible mechanism for actuating the exhaust valve, the cylinder having ports leading to opposite ends thereof, a source of compressed air, a valve for controlling the passage of air to and from said ports, means for reversing said valve, and means common to the exhaust valve actuating mechanism and to said air valve reversing means for reversing the former and shifting the latter.

2. The combination of a gas engine cylinder and piston, a fuel inlet valve and an exhaust valve for the cylinder, the cylinder having ports leading to opposite ends thereof, an air chest with which said ports communicate, an exhaust port for the air chest, a valve for controlling the air chest ports, a normally closed valve adapted when open to admit air to the air chest, a normally closed valve for the chest exhaust port, and means for opening said normally closed valves.



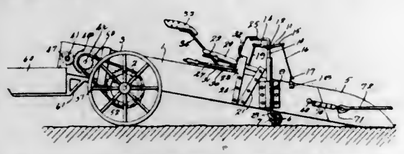
3. The combination of an engine cylinder and piston, a fuel inlet valve and an exhaust valve for one end of the cylinder, an air chest and ports extending therefrom to opposite ends of the cylinder, a normally closed valve controlling the port extending to the fuel-receiving end of the cylinder, a normally closed air inlet valve for the opposite end of the cylinder, an exhaust port for the air chest and a valve for controlling communication between said exhaust port and the respective ports leading to opposite ends of the cylinder, a compressed air receiver adapted to communicate with the air chest, a normally closed valve controlling said communication and adapted to open toward the receiver, a normally closed valve for the air chest exhaust port adapted to open toward the chest, and means for opening said last two mentioned valves.

4. The combination of an engine cylinder and piston, an air chest in ported communication with opposite ends of the cylinder, an exhaust port for the air chest, a valve within the air chest and controlling communication between said exhaust port and the respective ports leading to opposite ends of the cylinder, a compressed air inlet for the air chest, normally closed valves for said inlet port and for the air chest exhaust port, means common to said valves for holding them open, and a fuel inlet valve and an exhaust valve for one end of the cylinder.

5. The combination of an engine cylinder and piston, a fuel inlet valve for the cylinder, an exhaust valve for the cylinder, a carrier, two reversely-acting exhaust valve-actuating devices mounted on the carrier, and means for shifting the carrier to place either of said devices in operative relation with the exhaust valve.

[Claims 6 to 9 not printed in the Gazette.]

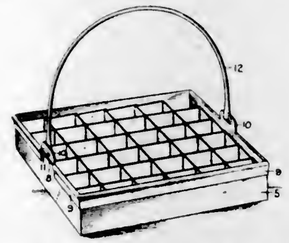
1,169,673. BEET-HARVESTER. EDWIN L. K. PEEBLES, Clever, Mo. Filed Apr. 7, 1915. Serial No. 19,735. (Cl. 55—137.)



1. In a beet harvester structure, a body, a scoop removably secured to the forward end of said body, a plurality of guiding straps secured to the sides of said body at the forward end thereof, vertical standards rotatably and slidably carried by said guiding straps, collars mounted upon the upper ends of said standards, arms projecting radially from said collars, the forwardly extending arms being connected to said body, levers connected to the rearwardly extending arms for moving said body vertically with respect to said wheels, the upper ends of said vertical rods being angled, a cross bar connecting said angled ends, a lever connected to said cross bar for horizontal oscillatory movement for rotating said standards for positioning said wheels for guiding the travel of the beet harvester, and a conveyer carried by said body for elevating beets therethrough.

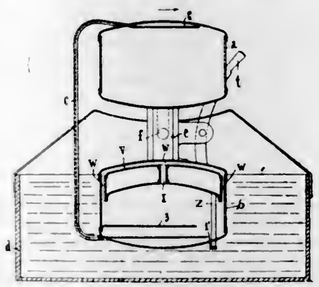
2. In a beet harvester structure, a body, a scoop removably secured to the forward end of said body, a plurality of guiding straps secured to the sides of said body at the forward end thereof, vertical standards rotatably and slidably carried by said guiding straps, collars mounted upon the upper ends of said standards, arms projecting radially from said collars, the forwardly extending arms being connected to said body, levers connected to the rearwardly extending arms for moving said body vertically with respect to said wheels, the upper ends of said vertical rods being angled, a cross bar connecting said angled ends, a lever connected to said cross bar for horizontal oscillatory movement for rotating said standards for positioning said wheels for guiding the travel of the beet harvester, and a conveyer carried by said body for elevating beets therethrough, a transversely extending auxiliary body secured to the rear end of said body and having its upper edge positioned beneath the bottom of the rear end of said body, a conveyer mounted within said auxiliary body for travel transversely to the direction of travel of the beet harvester, and means for operating said conveyers by the travel of the beet harvester.

1,169,674. TRANSPLANTER. CHILION T. PELTON, Fallon, Nev. Filed Mar. 20, 1915. Serial No. 15,941. (Cl. 47—34.)



In a device of the class described, a rectangular frame having inwardly directed marginal flanges at the lower edge thereof, a removable bail associated with the upper edge of the frame, a removable bottom adapted to rest on the marginal flanges within the frame, a plurality of separate and disconnected zig-zag shaped fillers each removably associated with the bottom and frame and disposed diagonally on said frame, said zig-zag shaped fillers forming with each other rectangular receptacles, each filler having projections at its ends for preventing them from wedging in the frame.

1,169,675. REFRIGERATING AND ICE-MAKING APPARATUS. WALTER PFLEIDERER, London, England. Filed May 17, 1915. Serial No. 28,784. (Cl. 62—120.)



1. Refrigerating and ice-making apparatus comprising a cooling tank, standards rising alongside the same and

having upright slots, a generating vessel and a refrigerating vessel, a framework connecting said vessels and having trunions projecting through said slots, toggle link mechanisms connecting the extremities of said trunnions with the standards, and levers for actuating said mechanisms to raise the trunnions in the slots and permit their rotation so that said vessels may be alternately immersed in said cooling tank.

2. Refrigerating and ice-making apparatus comprising a cooling tank, standards rising alongside the same and having upright slots, a generating vessel and a refrigerating vessel, a framework connecting said vessels and having trunnions projecting through said slots, toggle link mechanism connecting the extremities of said trunnions with the standards, a spur wheel fast on one of said trunnions, a pinion fast on the link connected therewith and engaging the spur wheel, a driving pinion with which said pinion is adapted to be engaged, and means for actuating said toggle link mechanism, for the purpose set forth.

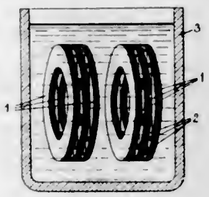
3. Refrigerating and ice-making apparatus comprising in combination a generating vessel, a refrigerating vessel, a pipe connection between said vessels, a cooling tank, means for mechanically reversing the positions of said vessels so that they may be alternately immersed in the cooling tank, and a hollow drum disposed within and of smaller dimensions than but conforming in shape with the refrigerating vessel, said drum having an aperture through it, for the purpose set forth.

4. Refrigerating and ice-making apparatus comprising in combination a generating vessel, a refrigerating vessel, a pipe connection between said vessels, a cooling tank, means for mechanically reversing the positions of said vessels so that they may be alternately immersed in the cooling tank, a hollow drum of smaller dimensions than but conforming in shape to the refrigerating vessel placed interiorly thereof and a pipe extending from the interior of said hollow drum to the exterior of the refrigerating vessel.

5. Refrigerating and ice-making apparatus comprising a generating vessel and a refrigerating vessel arranged one above the other, a pipe connection between said vessels, a framework supporting said vessels and having trunnions, standards having slots into which said trunnions project, a cooling tank and means for raising and then rotating said trunnions and framework so that said vessels may be alternately immersed in said cooling tank.

[Claim 6 not printed in the Gazette.]

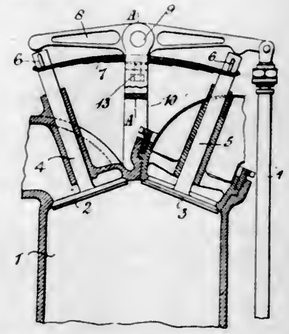
1,169,676. FREQUENCY-CONVERTER. PAUL FERNAND PICHON and ALEXANDER MEISSNER, Berlin, Germany, assignors to Gesellschaft für Drahtlose Telegraphie M. B. H., Berlin, Germany. Filed July 19, 1913. Serial No. 780,037. (Cl. 175—356.)



1. An iron core for frequency converters being magnetically highly saturated and an iron volume relatively to the energy converted of not more than 0.5 kilogram per kilo-volt-ampere converted energy.

2. An iron core for frequency converters being magnetically highly saturated and an iron volume relatively to the energy converted of not more than 0.5 kilogram per kilo-volt-ampere converted energy, and means for cooling said core.

1,169,677. VALVE OF INTERNAL-COMBUSTION ENGINES. FERDINAND PORSCHE, Wiener-Neustadt, Austria-Hungary. Filed Apr. 10, 1914. Serial No. 830,881. (Cl. 121—97.)



1. In an internal combustion engine, the combination of admission and exhaust valves, opening means for actuating said valves alternately to open them alternately, and elastic means tending to close said valves controlled by the operation of said opening means so that the tension and load on a closing valve is increased, while the load on an opening valve is diminished.

2. In an internal combustion engine, the combination of admission and exhaust valves, an oscillating lever for actuating said valves alternately to open them alternately, and elastic means for closing said valves alternately and partaking of the oscillating movements of said lever, whereby the load on a closing valve is increased while the load on an opening valve is diminished.

3. In an internal combustion engine, the combination of admission and exhaust valves, an oscillating lever for opening said valves alternately, and a plate spring for closing each of said valves, when said valves are released by said lever, said spring partaking of the oscillating movements of said lever, whereby the load on a closing valve is increased while the load on an opening valve is diminished.

4. In an internal combustion engine, the combination of admission and exhaust valves, an oscillating lever for opening said valves alternately, and a plate spring adapted when said lever is in mid-position, to hold both of said valves closed with equal pressure, and to oscillate in unison with said lever, as it moves from said mid-position, whereby the load on a closing valve is increased while the load on an opening valve is diminished.

5. In an internal combustion engine, the combination of admission and exhaust valves, an oscillating lever for opening said valves alternately, and a plate spring tending to close said valves, and secured to said lever so as to partake of its oscillating movements, thereby increasing the load on one of said valves when closed and diminishing the load on the other valve.

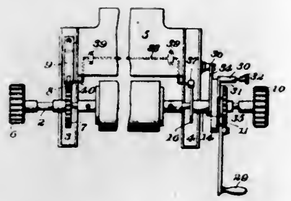
[Claims 6 to 8 not printed in the Gazette.]

1,169,678. TYPE-WRITER. GEORGE W. RAMSEY, Peoria, Ill. Filed Apr. 27, 1910. Serial No. 557,994. (Cl. 197—117.)

1. In a device of the class described, a platen, line spacing devices, said line spacing devices including a line space wheel, and a detent normally in engagement with said line space wheel, in combination with mechanism for turning said platen in a forward direction and then in a backward direction, and means operated by said mechanism for removing said detent from said wheel during the operation of turning said platen in both directions.

2. In a device of the class described in combination, a platen, a line space wheel, a roller detent normally in engagement with the line space wheel, a rotatable cam adjacent said line space wheel and having the same axis of rotation as said line space wheel, mechanism for turn-

ing said platen in a forward direction and then in a backward direction, and means connecting said mechanism and said cam to rotate said cam and remove said detent from said line space wheel when said mechanism is operated.



3. In a typewriting machine, a revoluble platen, a line space wheel mounted adjacent one end of said platen to revolve therewith, a detent normally in engagement with said line space wheel, driving means adjacent the other end of said platen for rotating the platen one or more line spaces, and mechanism extending from one end of said platen to the other and actuated by said driving means to remove said detent from said line space wheel.

4. In a typewriting machine in combination, a carriage, a shaft mounted to rotate in said carriage, a line space wheel mounted upon said shaft, a detent normally in engagement with said line space wheel, mechanism constructed to rotate said line space wheel in a forward direction and also in a backward direction, and devices operated by said mechanism for rendering said detent inoperative.

5. In a typewriting machine in combination, a carriage, a line space wheel mounted upon said carriage at one side thereof, a detent normally in engagement with said line space wheel, mechanism mounted adjacent the opposite side of said carriage to rotate said line space wheel through one or more line spaces, and means extending across said carriage and operatively connecting said mechanism with said detent to render said detent inoperative when said mechanism is operated.

[Claim 6 not printed in the Gazette.]

1,169,679. METHOD OF GATHERING PEAT. THOMAS RIGBY, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Filed May 23, 1911. Serial No. 628,974. (Cl. 44—3.)

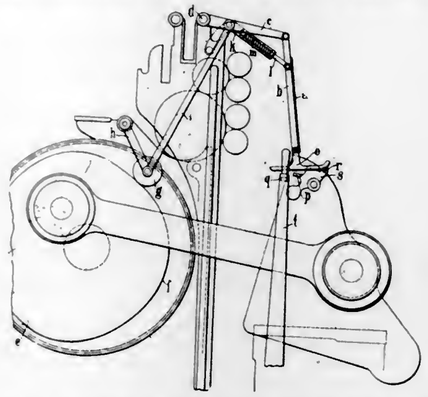


1. A method of gathering peat, consisting in excavating the peat, pulverizing the same while containing the same quantity of water as it did in the natural state in the undrained bog, thereby reducing it to a pulp of watery fluidity, and in thereafter pumping the watery pulp through a pipe line to the required locality.

2. A method of gathering peat, consisting in excavating the peat, comminuting the peat while containing substantially the same quantity of water as in its original state in the bog to such an extent that by comminution alone it is rendered pumpable, and thereupon pumping the resulting pulp through a pipe line to the desired locality.

1,169,680. PROTECTIVE DEVICE FOR PRINTING AND EMBOSSING PRESSES. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed Apr. 10, 1914. Serial No. 830,959. (Cl. 101—13.)

A protective device for printing and embossing presses comprising in combination, a substantially vertical guard grate, in front of the inking rollers of the press, means for raising said grate and holding it in its elevated position against rearward movement, and means for lowering the grate and allowing a rearward and upward move-



ment of the same for the protection of the hands of the operator.

1,169,681. MANUFACTURE AND PRODUCTION OF REFRACTORY VITREOUS SUBSTANCES. HENRY JULIUS SALOMON SAND, Nottingham, England. Filed June 6, 1914. Serial No. 843,455. (Cl. 49—78.1.)



1. The method of manufacturing bodies of refractory vitreous material, which consists in incasing such material in an envelop of vitreous material, exhausting the latter and heating the same until the inclosed material is fused, said envelop being rendered plastic and collapsing upon the said material under the influence of said fusing heat.

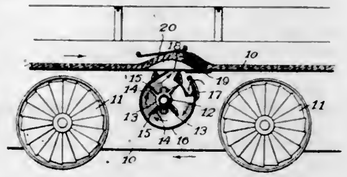
2. The method of manufacturing bodies of refractory vitreous material which consists in incasing said material in an envelop of substantially like material, exhausting said envelop and heating the latter until the inclosed material is fused, said envelop being rendered plastic and collapsing upon the said material under the influence of said fusing heat.

3. The method of manufacturing bodies of quartz or analogous refractory material, which consists in incasing said material in a protective envelop of substantially like material, exhausting the latter, and heating the same until the inclosed material is fused, said envelop being rendered plastic and collapsing upon the said material under the influence of said fusing heat.

4. The method of manufacturing bodies of quartz or analogous refractory material, which consists in incasing said material in a divided state in a protective envelop of substantially like material, exhausting the latter, and heating the same until the inclosed material is fused, said envelop being rendered plastic and collapsing upon the said material under the influence of said fusing heat.

5. The method of manufacturing bodies of quartz or analogous refractory material, which consists in incasing said material in a protective envelop of substantially like material, removing the impurities from said material within the envelop, exhausting the latter, and heating the same until the inclosed material is fused, said envelop being rendered plastic and collapsing upon the said material under the influence of said fusing heat.

1,169,682. STOCK-AGITATOR FOR DRYING-MACHINES. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Feb. 1, 1913. Serial No. 745,560. (Cl. 34—12.)



1. In a drying apparatus for fibrous materials, the combination with a traveling conveyer for the material to be dried, and a rotary fan located transversely with respect to said conveyer and extending across the same below it, a casing for said fan eccentrically located with respect thereto having the space between the casing and the center of the fan narrowing toward the outlet for causing a uniform current of air to pass upwardly through the conveyer all the way across it, the casing having an outlet just under the conveyer opening forwardly with respect to the direction of travel of the conveyer, an inlet opening downwardly at the forward side of the casing, and a plate just under the conveyer and above said inlet.

2. In a machine for drying fibrous materials, the combination with a traveling conveyer for supporting the material to be dried, of a shaft arranged transversely to the conveyer and at a short distance below the same, a fan on the shaft from side to side of the conveyer for causing a current of air to pass upwardly through the conveyer from below, and a casing around said fan having outlets directly under the bottom of said conveyer and slanted forwardly with respect to the direction of motion of the conveyer, and a deflector above the conveyer slanted upwardly in the same direction.

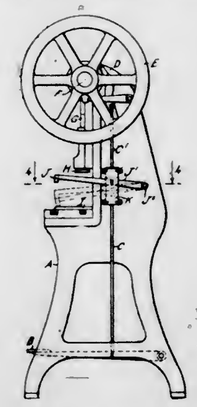
1,169,683. SPOON. JOHN A. SEBENIUS, Bremerton, Wash. Filed Aug. 3, 1915. Serial No. 43,381. (Cl. 43—30.)



1. A spoon of the character specified, comprising a body having at one end a longitudinal extension provided at the end remote from the body with oppositely extending propeller blades for rotating the spoon when the spoon is drawn through the water, said spoon being arched longitudinally to give the illusion of a rounded body when the body is rotated, the extension being given a half turn between the blades and the body, a swivel connection connected with the body at the junction of the blades with the extension, and a leader carrying a hook connected with the said connection.

2. A spoon of the character specified, comprising a body having at one end a longitudinal extension provided at the end remote from the body with oppositely extending propeller blades for rotating the spoon when the spoon is drawn through the water, said spoon being arched longitudinally to give the illusion of a rounded body when the body is rotated.

1,169,684. SAFETY DEVICE FOR POWER-PRESSES. NOHA SHEFF, New York, N. Y. Filed Apr. 9, 1915. Serial No. 20,179. (Cl. 164—107.)



1. The combination with a power-operated press having a movable press head, and a controlling device for the same including members one of which has a limited movement relative to the other, of a safety device pivotally mounted on the press to move up and down in front of the said press head and fixed press die, the said safety device being normally positioned at a distance above the press die, and an actuating connection between the said safety device and one of the members of the said controlling device to normally impart an up and down swinging motion to the said safety device and to render the said controlling device inoperative on an obstruction in the downward path of the said safety device.

2. In a power-operated press, the combination of a treadle, a clutch mechanism for connecting and disconnecting the movable press head relatively to the driving member of the press, a two-part rod connecting the treadle with the clutch mechanism, the rod parts having heads slidable one on the other, and a safety device pivoted on the said press to swing up and down in front of the press, the safety device being connected with one of the said rod part heads.

3. In a power-operated press, the combination of a treadle, a clutch mechanism for connecting and disconnecting the movable press head relatively to the driving member of the press, a two-part rod connecting the treadle with the clutch mechanism, the rod parts having heads, of which one has a limited sliding movement on the other, a casing fixed on the press and in which the head of the rod part connected with the treadle has a limited sliding movement, and a safety guard pivoted on the press and connected with the said head on the treadle part, the said safety guard extending in front of the press and being adapted to swing up and down at each stroke of the press.

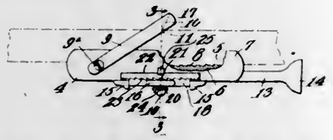
4. A press guard, comprising a lever pivoted on the press and having a guard arm extending horizontally

across the front of the press, a bearing attached to the press, and a rod connecting the treadle with the clutch of the press, the rod being made in two parts having heads, of which the head of the clutch part of the rod has a limited slidable motion in the head of the treadle part of the rod, and the said head of the treadle part has a limited sliding motion in the said bearing and is pivotally connected with the said guard lever.

5. A press guard, comprising a lever pivoted on the press and having a guard arm extending horizontally across the front of the press, a bearing attached to the press, and a rod connecting the treadle with the clutch of the press, the rod being made in two parts having heads, of which the head of the clutch part of the rod has a limited slidable movement in the head of the treadle part of the rod and the said head of the treadle part has a limited sliding motion in the said bearing and is provided with a notch, and a button pivoted on the guard lever and engaging the said notch.

[Claims 6 and 7 not printed in the Gazette.]

1,169,685. JACK AND FLOOR-CLAMP. HORACE NEWTON SIBLEY, Shreveport, La., assignor of one-half to Thomas E. Collins, Shreveport, La. Filed Mar. 7, 1913. Serial No. 752,729. (Cl. 254—16.)



A jack and floor clamp embodying a stock of L-shaped cross section, the inner face of the wide flange being toothed, an arm pivoted to the outer face of the narrow flange adjacent one end of the stock, and having an angular extension at its free end coöperating with the said toothed flange, the length of the extension and width of said wide flange being the same, the extension being wedge shaped in cross section and having its sharp edge serrated and projecting toward the pivot of the said arm, a pressure bar slidably carried by the outer face of the wide flange and projecting from the other end of the stock, and means carried by the outer face of the wide flange for actuating the pressure bar, the said arm being adapted to serve as a brace when the stock is set on the first mentioned end and the said extension serving as a foot piece.

1,169,686. CARTRIDGE FOR EXPLODING GASOLENE FOR BREAKING UP LAND. JUSTIN F. SIMONDS, Riverdale, Md. Filed June 25, 1915. Serial No. 36,274. (Cl. 102—5.)



1. A cartridge of the class described comprising a shell closed at its lower and upper ends, provided at points intermediate its ends with outlet openings, having an opening at the upper end for the reception of a fuse, and adapted to contain a charge of volatile liquid hydrocarbon.

2. A cartridge of the class described comprising a shell closed at its lower and upper ends, provided at points intermediate its ends with outlet openings, having an opening at the upper end for the reception of a fuse, and adapted to contain a charge of volatile liquid hydrocarbon, said shell being made of paper or straw board and being provided with an external waterproofing coating at its lower end.

3. A cartridge of the class described comprising a tube having outlet openings at points between its ends said tube being made of paper or the like, heads of paper or the like in the ends of said tube and the upper head being provided with a fuse receiving opening, and waterproof coatings on said heads and securing them at the ends of the tube, said tube being adapted to contain a charge of volatile hydrocarbon.

4. A cartridge of the class described comprising a tube having outlet openings at points between its ends said tube being made of paper or the like, heads of paper or the like in the ends of said tube and the upper head being provided with a fuse receiving opening, and waterproof coatings on said heads and securing them at the ends of the tube, one of said coatings also extending up exteriorly of the tube from its lower end, said tube being adapted to contain a charge of volatile hydrocarbon.

5. The method of breaking up ground consisting in forming a hole in the ground, placing a perforated shell in the hole, placing a quantity of volatile hydrocarbon in the shell, closing the hole above the shell, allowing some of the mixture of air and hydrocarbon vapor formed in the shell to pass from the shell through the openings therein into the ground about the hole, and exploding the mixture of air and vapor in the shell and ground.

[Claim 6 not printed in the Gazette.]

1,169,687. ORGAN-PIPE. ERNEST M. SKINNER, Dorchester, Mass. Filed Mar. 26, 1915. Serial No. 17,153. (Cl. 84—22.)

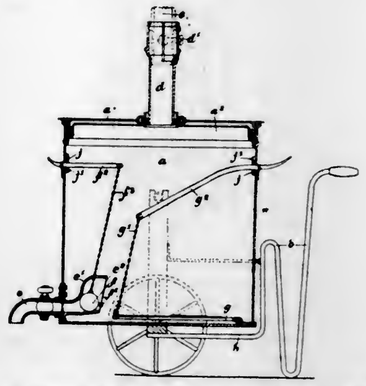


1. In a reed pipe, a barrel or resonator having an opening forming a pocket at its upper end, in combination with a shallot having a pocket in its lower end.

2. A reed pipe comprising a barrel having a pocket in its upper end and a tuning slit in its side, a foot, and a shallot in said foot having a pocket in its lower end with a side opening above such lower end and a tongue extending over the opening.

3. A reed pipe for organs designed to speak with the characteristic tone of the French horn, comprising a body formed with its upper end wholly closed and having a side opening, thereby providing a pocket, a reed or shallot in line with the bottom end of the body, said shallot being closed at its bottom and having an opening in its side, thereby providing a pocket, a tongue extending over said opening, and the usual foot.

1,169,688. PORTABLE TANK, CESSPOOL, AND THE LIKE. BASIL ALFRED SLADE, London, and FREDERICK WILLIAM THOMPSON, Ashford, England, assignors of forty-five one-hundredths to said Slade, twenty-seven and one-half one-hundredths to said Thompson, and twenty-seven and one-half one-hundredths to Residential Small Holdings Company Limited, London, England, a Corporation of England. Filed June 10, 1913. Serial No. 772,762. (Cl. 71—8.)



1. A portable sealed tank wherein human excreta are disintegrated, comprising an oscillating mechanical disintegrating appliance and means arranged to actuate said appliance, substantially as described.

2. A portable sealed tank wherein human excreta are disintegrated, comprising an oscillating mechanical disintegrating appliance, a discharge opening in said tank, and means arranged in said discharge opening to reduce the solid excreta to the required consistency, substantially as described.

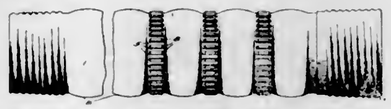
3. A portable tank wherein human excreta are disintegrated, comprising a mechanical disintegrating appliance, and a discharge valve in said tank adapted to control the rate of flow from the contents of said tank, substantially as described.

4. A portable sealed tank wherein human excreta are disintegrated, comprising a hinged grating adapted to stir up the contents of the tank, and means for vibrating said hinged grating, substantially as described.

5. A portable sealed tank wherein human excreta are disintegrated, comprising a grating hinged to the bottom of said tank, a lever projecting inside and outside of said tank, and means for connecting the free end of said lever to the free end of said grating, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

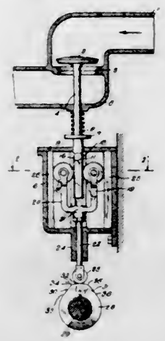
1,169,689. DRAINAGE-CASING FOR CULVERTS, DRAIN-TILING, WELLS, &c. ANDREW SMITH, San Mateo, Cal. Filed July 23, 1914. Serial No. 852,655. (Cl. 61—9.)



1. A drainage casing comprising a cylindrical sheet metal body having a plurality of sheared slits, the alternate strips of metal between said slits projecting beyond the plane of the sheet metal body and having both ends connected therewith, and the intermediate strips being in the plane of the body, thereby forming slots between the adjacent edges of adjacent strips.

2. A drainage casing comprising a cylindrical sheet metal body having a plurality of sheared slits, the alternate strips of metal between said slits projecting beyond the plane of the sheet metal body and having both ends connected therewith, and forming slots between its opposite edges and the edges of the adjacent strips, the wall of the casing on the opposite side from said projecting strips being substantially smooth and unobstructed.

1,169,690. VALVE-GEAR. RONALD BRINKERHOFF SMITH, East Orange, N. J. Filed June 18, 1915. Serial No. 34,849. (Cl. 121—97.)



1. In a valve gear of the character described, the combination with a puppet valve and a cam for operating the same, of a multiplying mechanism interposed between the cam and the valve for multiplying the movement caused by the cam.

2. In a valve gear of the character described, a multiplying mechanism, a valve connected with said mechanism and adapted to be actuated thereby, an operating rod connected with said mechanism for actuating the mechanism, and a cam for actuating said rod, said cam being formed with a pair of inclined faces and a bearing face joining the outer part of said inclined faces, said bearing face being constructed on the arc of a circle with the center coincident with the center of the cam.

3. A valve gear comprising a valve operating rod for opening and closing the valve, a rack connected with said rod, a gear meshing with said rack, a stationary rack meshing with said gear, a power rod for actuating said gear, and a cam for actuating said power rod.

4. In a valve gear of the character described, a valve adapted to be opened and closed, a rod extending from said valve provided with a plurality of racks, a gear wheel meshing with each of said racks, a stationary rack meshing with each of the gear wheels, a power rod connected with said gear wheels for actuating the same, a cam for actuating said rod in one direction, and means for moving said rod in the opposite direction.

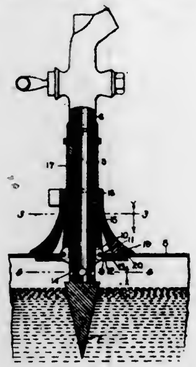
5. In a valve gear of the character described, the combination with a valve member, of a plurality of racks connected therewith, resilient means for resiliently retaining said valve closed and for moving the same to a closed position when moved therefrom, a gear wheel meshing with each of said racks, a stationary rack member meshing with each of said gear wheels, an operating rod connected with all of said gear wheels, and a cam for moving said operating rod in one direction.

[Claims 6 to 10 not printed in the Gazette.]

1,169,691. COUPLING FOR CONNECTING PIPES AND FAUCETS TO RECEPTACLES. WALTER M. ST. ELMO, San Juan, Porto Rico. Filed Mar. 4, 1915. Serial No. 12,212. (Cl. 137—128.)

1. In a coupling of the class described, a hollow shank having at one end a point, the base of which is greater in diameter than the top of the shank, there being an opening through the side of the shank adjacent the said base, a plurality of bell crank levers pivoted at the outside of the shank and disposed therearound, one set of

arms of the bell crank levers being adapted to be disposed against the shank and within the plane at the sides of the base, and a member disposed around the shank for movement longitudinally thereof, the inner sides of the member diverging in the general direction of the bell crank levers and being adapted to engage one set of arms of the bell crank levers for pressing them against the hollow shank for the purpose specified.



2. In a coupling of the class described, a hollow shank pointed at one end with an opening through the side of the shank adjacent the said end, a plurality of bell crank levers pivoted at the outer side of the shank and disposed therearound, and a member disposed around the shank for moving longitudinally thereof, the inner sides of the member diverging in the general direction of the bell crank levers and being adapted to engage one set of arms of the bell crank levers for pressing them against the hollow shank, there being an annular recess in the outer face of the member, and a gasket in the annular recess for engaging the side of a receptacle around an opening made by the pointed end of the shank.

3. In a coupling of the class described, a hollow shank pointed at one end with an opening through one side of the shank adjacent the said end, a plurality of bell crank levers fulcrumed outside of and around the shank, and a member disposed around the shank for engaging one set of arms of the bell crank levers and for pressing against one side of a receptacle, and with the other set of arms of the bell crank levers in engagement with the other side of the receptacle.

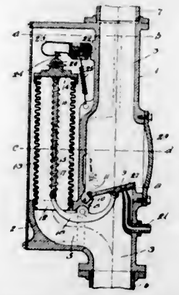
4. In a coupling of the class described, a hollow shank having at one end a point the base of which is greater in diameter than the shank, a plurality of bell crank levers disposed at the outer side of the shank and pivoted thereto, one set of arms of the bell crank levers being adapted to be disposed against the shank and within the planes of the sides of the base and a member on the shank for engaging the other set of arms of the levers for holding them adjacent the shank.

5. In a coupling of the class described, a hollow shank having an outer thread, there being an opening through the side of the shank, a lever fulcrumed to the side of the shank and having an arm adapted to close the opening and to move to a position at an angle to the shank for engaging the inner side of a receptacle, and a nut meshing with the thread on the shank and having an opening for receiving the other arm of the lever when the nut is turned home against the outer side of the receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,169,692. ALARM-CONTROLLER FOR SPRINKLER SYSTEMS. NATHAN H. SUREN, Needham, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 6, 1914. Serial No. 829,886. (Cl. 177—382.)

1. An alarm-controller for sprinkler-systems or the like, including a balanced automatic check-valve controlling direct communication between the supply and service sides of said system, having movable balancing means open to the pressure from the supply side of the system connected flexibly to the check-valve and arranged to control an alarm only when the balancing means moves downward, substantially as described.



2. An alarm-controller for sprinkler-systems or the like including a check-valve controlling direct communication between the supply and service sides of said system, and means open to the pressure from the supply side of the system, including an alarm-controlling element, and a yielding connection between said element and check-valve, substantially as described.

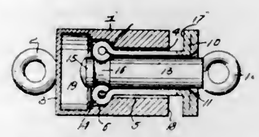
3. An alarm-controller for sprinkler systems and the like, including a balanced automatic check-valve controlling direct communication between the supply and service sides of said system, having balancing means open to the pressure from the supply side of the system and connected with the check-valve, and a circuit controller operated when the check-valve opens and the balancing means contracts, substantially as described.

4. An alarm-controller for sprinkler-systems and the like including a check-valve controlling direct communication between the supply and service sides of said system, movable means open to the pressure from the supply side of the system and connected to the check-valve, and a circuit-controller operative by said means, said circuit-controller being mounted for a limited movement in correspondence with the movement of said means, substantially as described.

5. An alarm-controller for sprinkler systems and the like including a check-valve controlling direct communication between the supply and service sides of the system, movable means open to the pressure from the supply side of the system, a yielding connection between said means and the check-valve, and a circuit-controller for an alarm operative by said means, said circuit-controller being arranged for a limited movement in correspondence with the movement of said means, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,169,693. CLASP. ERICK J. SWEDLUND, Williston, N. D. Filed May 25, 1915. Serial No. 30,346. (Cl. 24—230.)



1. In a clasp of the character described, an outer shell having a longitudinal opening with tapered wall and an annular enlargement with resultant shoulder, a sleeve slidable in said shell and having a resilient bead at its inner end received in said annular enlargement and engageable with said shoulder and a locking member slidable within the sleeve and removable therefrom and having at its inner end a head and an annular groove adjacent thereto, said sleeve and locking member being swiveled within the shell.

2. In a clasp of the character described, an outer shell having a longitudinal opening with tapered wall and annular enlargement with resultant shoulder, a sleeve slidable in said shell and having a resilient bead at its inner end received in said annular enlargement and engageable with said shoulder and a locking member slidable within the sleeve and removable therefrom and having at its inner end a head and an annular groove adjacent thereto, said sleeve and locking member being swiveled within the shell and the sleeve provided with longitudinal slits.

3. In a clasp of the character described, an outer shell having a longitudinal opening with tapered wall and an annular enlargement with resultant shoulder, a sleeve slidable in said shell and having a resilient bead at its inner end received in said annular enlargement and engageable with said shoulder and a locking member slidable within the sleeve and removable therefrom and having at its inner end a head and an annular groove adjacent thereto, said sleeve and locking member being swiveled within the shell and the sleeve provided with longitudinal slits, and a flange upon its outer end engageable with the adjacent end of the sleeve.

1,169,694. OVEN-VENTILATOR. GEORGE A. SWISHER, Mount Vernon, Ill. Filed July 26, 1915. Serial No. 42,012. (Cl. 126—21.)

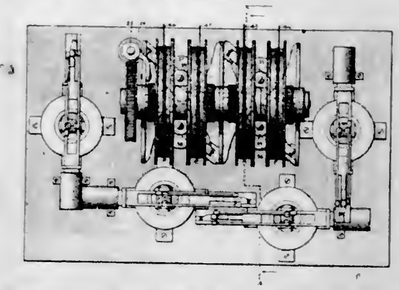
1. In combination with an oven provided with a door having a ventilator therein, and a rear wall provided with openings, of a rear ventilator embodying a frame secured over the openings in said near wall and having a recess in one face, a plate provided with slots mounted to reciprocate in said recess, and a deflector hood secured to and spaced from said frame on the side opposite to said recess.

2. In combination with an oven provided with a door having a ventilator therein, and a rear wall provided with openings, of a rear ventilator embodying a frame secured over the openings in said rear wall and having a recess in one face, a plate provided with slots mounted to reciprocate in said recess, and a deflecting hood secured to and spaced from said frame on the side opposite to said recess, said hood being closed at one end.

3. The combination with an oven provided with a door for closing the same and affording access to the interior thereof, of front and rear ventilators arranged in said door and rear wall of the oven respectively, each of said ventilators being provided with an adjustable means operable from the exterior of said oven for regulating the size of the ventilator openings, said rear ventilator having a deflecting hood on its rear side directly in vertical alinement with the smoke flue opening, said hood being closed at its end nearest the fire-box.

1,169,695. STABILIZER FOR AEROPLANES. ALEXANDER BLAIR THAW, Pittsburgh, Pa. Filed Jan. 14, 1914. Serial No. 812,021. (Cl. 244—29.)

1. A stabilizer as characterized, having a continuously operating driving shaft; a plurality of winding drums operatively mounted thereon; a plurality of cables adapted to be connected to balancing members of an aeroplane; a plurality of cables arranged for manual manipulation, each of said cables having correspondence with one of the above-mentioned drums; and a plurality of engaging members interposed between said drums and manually-manipulated cables, to rotate said drums in correspondence with the manipulation of said second-mentioned cables, to wind said first-mentioned cables, said engaging members being adapted for disengagement when said shaft and said drums are engaged.



2. A stabilizer as characterized, having a continuously driven shaft; a plurality of winding drums rotatively mounted on said shaft; means for temporarily operatively connecting said shaft and said drums, embodying wheels fixedly mounted on said shaft in juxtaposed relation to said drums; driving surfaces, one on each of said drums in corresponding relation to said wheels, rotary members continuously connecting said wheels and surfaces, to travel about said wheels when said drums are stationary; and means to arrest the travel of said members to rotate said drums.

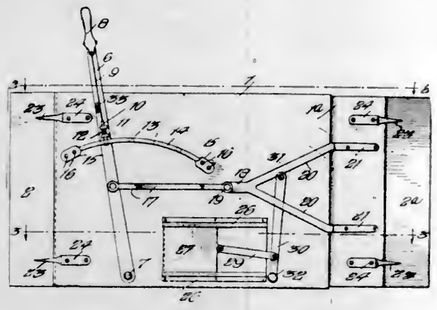
3. A stabilizer as characterized, having a continuously driven shaft; a plurality of winding drums rotatively mounted on said shaft; means for temporarily operatively connecting said shaft and said drums, embodying wheels fixedly mounted on said shaft in juxtaposed relation to said drums; driving surfaces, one on each of said drums in corresponding relation to said wheels; rotary members continuously connecting said wheels and surfaces, to travel about said wheels when said drums are stationary; and means for arresting the travel of said rotary members, said means embodying an electro-magnet, an engaging member to hold said rotary members; and a gravity-actuated pawl for completing the electric circuit through said magnet.

4. A stabilizer as characterized, having a continuously driven shaft; a plurality of cable winding drums rotatively mounted on said shaft and operatively connected with the balancing planes of an aeroplane; means for temporarily engaging said shaft and drums, embodying gear wheels fixedly mounted on said shaft, one juxtaposed to each of said drums, internally gear-toothed rings, one mounted on each of said drums in a plane coincident with said wheels and spaced apart therefrom, a plurality of frames, each rotatively mounted in juxtaposed relation to one of said wheels and its corresponding ring, and a plurality of pinions mounted on said frames, operatively engaging said wheels and said rings; and means for automatically arresting said frames to rotate said drums.

5. A stabilizer as characterized, having a continuously driven shaft; a plurality of cable winding drums rotatively mounted on said shaft and operatively connected with the balancing planes of an aeroplane; means for temporarily engaging said shaft and said drums, embodying gear wheels fixedly mounted on said shaft, one juxtaposed to each of said drums, internally gear-toothed rings, one mounted on each of said drums in a plane coincident with said wheels and spaced apart therefrom, a plurality of frames, each rotatively mounted in juxtaposed relation to one of said wheels and its corresponding ring, and a plurality of pinions mounted on said frames, operatively engaging said wheels and said rings; and a plurality of mechanisms for arresting said frames, embodying each an electro-magnet and a gravity-closed normally-open electric circuit therefor.

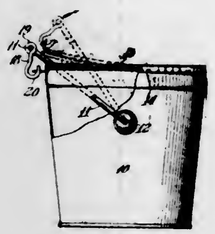
[Claims 6 to 10 not printed in the Gazette.]

1,169,696. DOOR. WILLIAM OSCAR THORP, Brainerd, Minn. Filed Jan. 6, 1915. Serial No. 733. (Cl. 20—30.)



A freight car door adapted to be applied to the ordinary doorway of a freight car and composed of two metal plates sliding one upon the other, the upper and lower edges of one of the plates being bent over the like edges of the other, whereby the plates are held together telescopically, each of said plates being provided at its outer end with an inwardly offset portion having an intermediate shoulder or flange to abut the doorway wall and a rigid extension flange to lap within the doorway, spurs on both of said plates near their upper and lower edges and projecting beyond the shoulder of the offset portions and adapted to be forced into the wall of the doorway, a lever pivoted to one of the plates, and means connecting said lever to theo ther plate, all substantially as and for the purpose set forth.

1,169,697. COVER-RELEASER. WILBER TOWNSEND, Los Angeles, Cal. Filed June 8, 1914. Serial No. 843,862. (Cl. 220—22.)



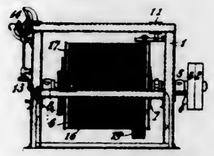
1. In combination, a sheet metal container, a metal cover arranged in sealing engagement therewith, a bail pivoted on the container and adapted to serve as a supporting handle therefor, means carried by said bail adapted to be brought into engagement with one portion of the lower edge of the metal cover to force it outwardly from the wall of the container and then disengage the cover from the container by actuating the bail.

2. In combination, a sheet metal container, a metal cover therefor in sealing engagement therewith, a bail pivoted on the container and adapted to serve as a supporting handle therefor, cover engaging means carried on the bail arranged and adapted to engage with the cover to force a portion thereof outwardly from the container and then lift the same from the container by a movement of the bail.

3. In combination, a container, a sealing cover secured thereto, a bail loosely pivoted at either side of said container and extending upwardly in such a position as to serve as a supporting handle for the container, and means slidably mounted on said bail adapted to engage the under edge of said sealing cover to loosen the same from said container.

4. In combination, a container, a flanged sealing cover on such container, a bail pivoted on such container, a hook slidably carried on such bail having means adapted to be brought into engagement with the lower edge of the flange of the cover when said hook is centrally located on said bail to forcibly detach the flange of the cover from engagement with the rim of the container.

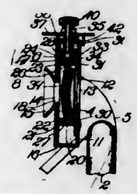
1,169,698. PROCESS OF MANUFACTURING STAPLES. JOSEF VON VASS, Charlottenburg, Germany. Filed Apr. 22, 1914. Serial No. 833,749. (Cl. 59—77.)



1. A process for manufacturing staples which consists in forming a length of wire into a helix, connecting together the convolutions of the wire by rows of some easily breakable material, said rows being disposed upon the convolutions in a direction parallel to the axis of the helix, severing convolutions of the wires at points midway between two rows of breakable material to form a strip of connected staple blanks, and finally bending the ends of the staple blanks toward each other to form a bank of connected staples.

2. The herein described process of manufacturing staples which consists in first winding a length of wire around a drum to form a helix of wire whose convolutions are closely spaced, depositing rows of solder on the convolutions, said rows of solder being disposed thereon in a direction parallel to the axis of the helix, cutting the convolutions of the wire at a point midway between two rows of solder, thereby producing a strip of short lengths of wire whose intermediate portions are connected by solder, and finally bending the ends of the said short lengths toward each other to form a bank of staples.

1,169,699. APPARATUS FOR TESTING MUSCLES OF THE EYE. FRANK C. WAHLENMAIER, Kansas City, Mo. Filed Aug. 4, 1913. Serial No. 782,830. (Cl. 88—20.)



1. An instrument of the character described, comprising lenses of opposite refractive effect, and means for moving each of said lenses laterally relative to the other and means for rotating both of the lenses simultaneously.

2. An instrument of the character described, comprising lenses of opposite refractive effect, adapted for simultaneous lateral movement relative to each other to vary their combined prismatic effect, and means for revolving said lenses together independently of said variable movement.

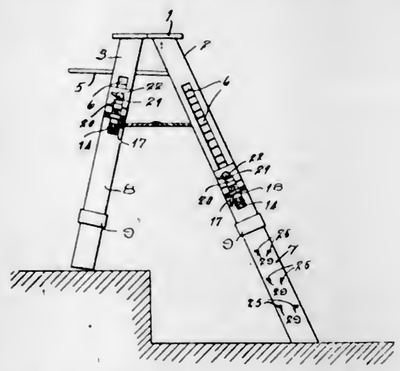
3. In an instrument of the character described, a casing, parallel track members in said casing, plano-spherical lenses slidably mounted in said track members, and means for sliding said lenses in said track members, and revolving said track members in said casing, for the purpose set forth.

4. In an instrument of the character described, a casing, parallel track members in said casing, lens holders slidably mounted in said track members, plano-spherical lenses in said holders, and actuating mechanism for moving said lens holders transversely, and having operative connection with said track members for revolving the tracks, the lens holders and said lenses in said casing.

5. In an instrument of the character described, a casing having a circumferential slot, an eye piece on one side of said casing, an apertured cover for the other side of said casing, a plate revolubly mounted in said casing, parallel tracks on said plate, a guide plate adjacent one of said tracks, a shaft revolubly mounted in said guide plate and projecting through said circumferential slot, a gear wheel rigidly mounted on said shaft and projecting beyond said guide plate, a pair of lens mountings slidably mounted on said tracks, offset, facing rack portions on said lens mountings adapted to mesh with said gear wheel, and lenses for said lens mountings, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

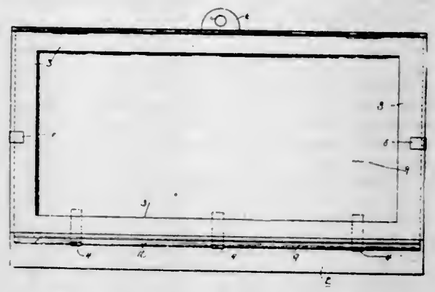
1,169,700. ADJUSTABLE STEP-LADDER. CHARLES S. WALTOWER, Ensley, Ala. Filed Aug. 26, 1914. Serial No. 858,675. (Cl. 228—19.)



1. A step ladder of the character described consisting of pairs of legs hingedly secured with one another at their upper ends and provided on their outer faces with rack teeth or notches, guide rings hingedly secured adjacent the lower ends of said legs on the inner face thereof, extension legs slidably mounted upon the outer faces of said first legs and through said rings and also provided with openings therein adjacent their upper ends, pawls hingedly mounted within the openings and arranged to engage the rack teeth on the outer face of the first mentioned legs, spring means secured to the extension legs to hold the pawls into coöperative engagement with the teeth or notches, means carried by the extension legs to hold the pawls out of engagement with the teeth.

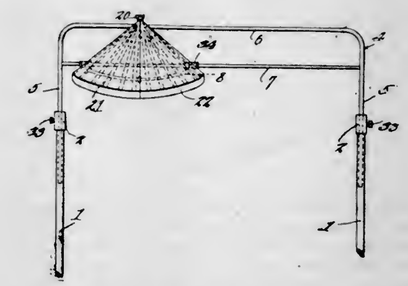
2. A step ladder of the character described comprising pairs of legs hingedly secured with one another at their upper ends and provided on their outer faces with rack teeth or notches, guide rings positioned over the lower ends of said legs, means secured to the inner face of said legs and to the guide rings for holding the same in position, extension legs slidably mounted through the guide rings and upon the outer faces of said first legs, said extension legs having openings therein adjacent to their upper ends, guide collars secured around the upper ends of the extension legs, pawls hingedly mounted within the openings in their legs to engage the rack teeth on said first legs, spring means to hold the pawls into coöperative engagement with the teeth, means carried by said extension legs for holding said pawls out of coöperative engagement with the teeth, said legs are slidable upon the first mentioned legs.

1,169,701. FLY-PAPER HOLDER. AMY J. WARNER, Middlefield, Conn. Filed Mar. 24, 1915. Serial No. 16,543. (Cl. 43—22.)



A holder for the purpose specified comprising a back and a frame connected together at the top, the back deeper than the frame and provided below the frame with a series of malleable fingers adapted to be curved outward and upward.

1,169,702. WEATHER-SHIELD. LILLIAN E. WASHBURN, Blue Stores, N. Y. Filed May 11, 1915. Serial No. 27,372. (Cl. 135—5.)



1. In a weather shield, a supporting frame comprising upper and lower bars; an arcuate support mounted on the lower bar; a brace forming a connection between the arcuate support and the upper bar; a canopy upheld by the support and the brace; means for connecting the ends of the canopy to the lower bar; and means for connecting the intermediate portion of the canopy with the lower bar.

2. In a weather shield, a main frame; an auxiliary frame projecting therefrom; a canopy carried by the auxiliary frame; means for securing the rear portions of the canopy; a flexible element comprising terminal portions and a rearwardly extended intermediate portion; means for securing the rearwardly extended intermediate portion of the flexible element to the main frame; means on the canopy for receiving the terminal portions of the flexible element slidably; and means for securing the extremities of the terminal portions of the flexible elements to the canopy.

3. In a weather shield, a supporting structure comprising a pivot stem; a plurality of superposed ribs mounted pivotally upon the stem and adapted to open and close fanwise; a covering carried by the ribs, the covering and the ribs coöperating to form an approximately semi-conical canopy; and means for securing the rear edges of the canopy detachably to the supporting structure.

4. In a weather shield, a vertically extensible main frame; an auxiliary frame horizontally slidable on the main frame; an expansible, approximately semi-conical canopy detachably and pivotally mounted on the auxiliary frame for opening and closing; and means for holding the canopy in open position.

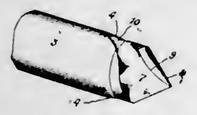
1,169,703. PROCESS FOR THE CATHODIC PRODUCTION OF SOLID PEROXID COMPOUNDS. WALTER WEBER, Dusseldorf, Germany, assignor to the Firm of Henkel & Cie., Dusseldorf, Germany. Filed Mar. 1, 1915. Serial No. 11,338. (Cl. 204—9.)

1. Process for the continuous cathodic production of solid peroxid compounds, which consists in electrolyzing a watery electrolyte containing oxygen gas, adding suitable soluble compounds adapted to form with the hydrogen peroxid generated at the cathode peroxid compounds substantially insoluble in water, continuously supplying fresh oxygen and removing the peroxid compounds separated out.

2. Process for the continuous cathodic production of solid peroxid compounds, which consists in electrolyzing a watery electrolyte containing oxygen gas and cooled down to about 0 degr. C., preventing the accumulation of hydrogen peroxid by adding suitable soluble compounds adapted to form with the hydrogen peroxid generated at the cathode peroxid compounds substantially insoluble in water, continuously supplying fresh oxygen and removing the insoluble peroxid compounds formed.

3. Process for the continuous cathodic production of solid peroxid compounds, which consists in electrolyzing a watery electrolyte containing oxygen gas, adding suitable soluble compounds adapted to form with the hydrogen peroxid generated at the cathode peroxid compounds substantially insoluble in water, adding suitable stabilizing compounds, continuously supplying fresh oxygen and removing the insoluble peroxid compounds separated out.

1,169,704. PROJECTILE. MARTIN WESNER, Cleveland, Ohio. Filed Sept. 17, 1915. Serial No. 51,162. (Cl. 102—28.)



1. A projectile having a tapering nose with a peripheral portion of relatively softer material, said nose furthermore carrying at its extremity a drill of relatively harder material and forming a smooth continuation of said tapering nose, said peripheral portion being fashioned with a groove forming a continuation of the cycle of one of the grooves of said drill.

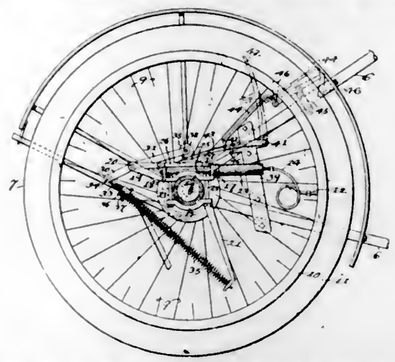
2. A projectile including a main body portion and a nose of lesser diameter in the form of a drill, a flute of the latter being extended into such body portion whereby to be adapted to be put in relative engagement with the land of the rifling.

3. A projectile comprising a body portion having a tapered nose provided centrally with a hole, and a drill of relatively smaller circumference separately fitted in said hole and merging with the end of said nose, said body being fashioned with a narrow groove forming a continuation of one flute in said drill whereby the rotation imparted by the rifling is initiated along said groove.

4. A projectile having a body portion adapted to take to the rifling of the gun barrel, and a drill carried by said body portion, said body portion being fashioned with a groove of like twist as and merging with a flute in said drill whereby the rifling impression imparts rotation to said body portion in lineal cycle with said flute.

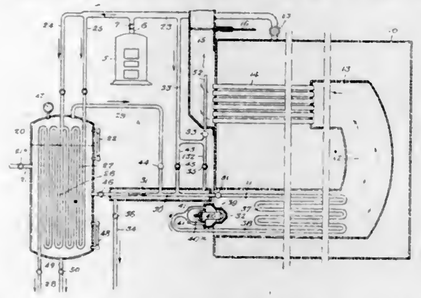
1,169,705. TIRE-PUMP. WALTER G. WILKES, Biloxi, Miss. Filed Jan. 15, 1915. Serial No. 2,375. (Cl. 152—11.)

The combination in a vehicle having a frame and a wheel provided with a hub, spokes, and a pneumatic tire; of a clamping member secured on said hub provided with a threaded collar at one end and a lug and projecting arms at the other end, a pump threaded into said collar, a pump-rod projected therefrom, and guided in said lug, a pivot carried by said arms, a sleeve revoluble on said pivot, provided with three arms, a roller on one sleeve arm, a link connecting another sleeve arm with said pump-rod, a spring resisted rod pivoted to the other sleeve arm, means for guiding said rod and for supporting said spring, and a track carried by said frame arranged tangentially



of the path of said roller and in said path, whereby said roller arm is moved to revolve said sleeve to actuate said pump-rod against the resistance of said spring, said spring serving to return said parts to initial positions when said roller reaches the outer end of said track.

1,169,706. APPARATUS FOR GENERATING COMBUSTIBLE VAPOR. ZABDIEL A. WILLARD, Brookline, Mass., assignor to Caroline West, Brookline, Mass. Filed Aug. 31, 1912. Serial No. 718,049. (Cl. 158—5.)

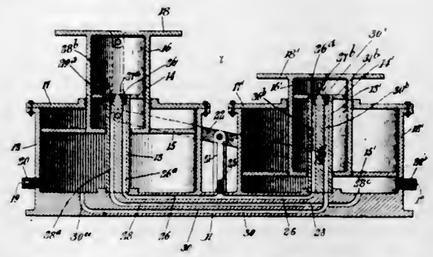


An apparatus for the purpose specified, comprising a closed, pressure-sustaining, oil-fuel reservoir, a burner, a fuel-feed pipe arranged to conduct oil and oil vapor from said reservoir to said burner, said pipe having two fuel-receiving branches, the receiving end of one of said branches being below the oil level in said reservoir, and the receiving end of the other one of said branches being above said oil level, said branches having valves to regulate the flow of oil and vapor respectively, a source of steam under pressure, a steam pipe arranged to conduct steam from said source into said fuel feed pipe between said retort and the junction of said branches, and a steam pipe arranged to conduct steam from said source into the oil in said reservoir.

1,169,707. PUMP. SWAYNE W. WILLIAMS, East Orange, N. J. Filed Nov. 14, 1914. Serial No. 872,121. (Cl. 230—27.)

1. A pump comprising a pair of main casings, each having a movable piston working therein, a hollow stem for each of said pistons forming a secondary casing, fixed pistons in said main casings extending into said secondary casings, and means for conducting the initially compressed fluid from each of said main casings to the other of said secondary casings for further compression therein and discharge therefrom, substantially as specified.

2. A pump comprising a pair of main casings, each having a movable piston working therein, hollow stems for each of said pistons forming secondary casings of smaller area than said main casings, fixed pistons in said main casings, extending into said secondary casings, and means for conducting the initially compressed fluid from one of said main casings to the other of said secondary casings for further compression therein and discharge therefrom, substantially as specified.



3. A pump comprising a pair of main casings, each having a movable piston therein, a hollow stem for each of said pistons forming a secondary casing, fixed pistons mounted in said main casings and extending into said secondary casings, and means for alternately conducting the initially compressed fluid from one of said main casings to the other of said hollow stems forming said secondary casings for further compression therein and discharge therefrom, substantially as specified.

4. A pump comprising a base, a pair of main casings mounted thereon, a discharge outlet for said casings, a hollow, movable piston arranged to work in each of said main casings and forming a secondary casingy, fixed pistons centrally secured within said main casings and extending upwardly from the base thereof and into said hollow pistons; said fixed pistons having outlets therein communicating with each other and with said discharge outlet, and said main casings having outlets therein each communicating with the interior of the other of said hollow pistons, and valve means provided in said fixed pistons for controlling the passage of fluid from each of said main casings to the other of said secondary casings, substantially as specified.

5. A pump comprising a base, a pair of main casings, each having a movable piston therein, a hollow stem for each of said pistons forming a secondary casing, fixed pistons mounted in said main casings, and extending into said secondary pistons, a support arranged upon said base intermediate said main cylinders, a member pivotally mounted upon said support having its opposite ends pivotally secured to the hollow stems of said pistons, and means for alternately conducting the initially compressed fluid from one of said main casings to the other of said hollow stems forming said secondary casings for further compression therein and discharge therefrom, substantially as specified.

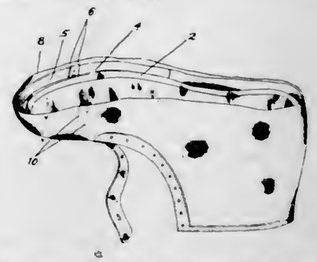
[Claims 6 and 7 not printed in the Gazette.]

1,169,708. INCUBATOR. JOSEPH D. WILSON, Stockton, N. J. Filed June 23, 1915. Serial No. 35,891. (Cl. 119—35.)



In an incubator, a hatching compartment having heating means at the top thereof, a frame at the bottom of the compartment having a face of felt, an egg tray mounted on slides in the center of the compartment, a sheet of loosely woven material arranged horizontally in the compartment above the egg tray and below the heating means, a valved opening in the top of the compartment, and a diaphragm arranged in the compartment below the loosely woven sheet and above the egg tray having a member connected therewith and with the valve.

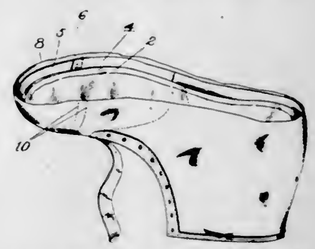
1,169,709. METHOD FOR USE IN THE MANUFACTURE OF SHOES. EMERSON F. WYLIE, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 19, 1910, Serial No. 587,944. Divided and this application filed Feb. 23, 1915. Serial No. 9,976. (Cl. 12—145.)



1. That improvement in methods of making shoes which consists in assembling an upper and a lining, stitching through the upper and the lining along the tip line of the upper, bringing the stitched upper and lining into assembled relation to a sole with the lining outside of the upper, pulling over and lasting the upper and lining and in the pulling-over and lasting operations locating the ends of the row of lining stitches in the relation to the sole desired for the ends of the tip line of the upper, securing the upper to the sole, and turning the shoe right side out.

2. That improvement in methods of making shoes which consists in assembling shoe materials comprising an upper and a lining, extending through the lining adjacent to its bottom edges at the tip seam line means to serve as visible indications of the tip line of the upper, bringing said materials into assembled relation to a sole with the lining outside of the upper, pulling over and lasting the upper and lining and in the pulling-over and lasting operations so locating the upper and lining as to bring the indications of the location of the tip seam on the lining side of the materials into the relation to the sole desired for the ends of the tip line of the upper, securing the upper to the sole, and turning the shoe right side out.

1,169,710. TURN-SHOE. EMERSON F. WYLIE, Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 19, 1910. Serial No. 587,944. (Cl. 36—55.)

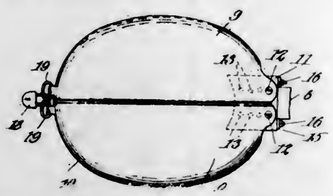


1. In a turn shoe, an upper, a lining and a tip assembled with the lining outside the upper for attachment to the sole of the shoe, said parts having means penetrating the lining and visible on the outer side of the lining adja-

cent to its bottom edges at the tip seam line in position to indicate the location of the tip line of the upper in order to facilitate adjustment of the shoe materials upon the last in the pulling over operation.

2. In a turn shoe, an upper and a lining assembled with the lining outside the upper for attachment to the sole of the shoe, said parts having a row of tip seam stitches extending through the lining in position to indicate visually the location of the tip line in the pulling over operation.

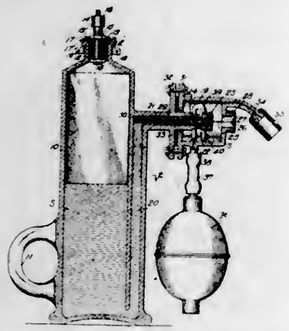
1,169,711. WATER-CLOSET-BOWL COVER. ABRAHAM M. ZIMMERS, Baltimore, Md. Filed May 17, 1915. Serial No. 28,525. (Cl. 4—18.)



1. The combination with a closet bowl; of a swinging closure therefor located over the top of the bowl, locking means for said closure, and a support for the closure attached to the bowl, said support comprising a shelf seating on top of the bowl at the rear thereof and having laterally spaced depending branches, and an inverted yoke adjustably secured to said branches, the bowl having a projecting part which is straddled by the branches and the yoke.

2. The combination with a closet bowl; of a swinging closure therefor located over the top of the bowl, locking means for said closure, and a support for the closure attached to the bowl, said support comprising a shelf seating on top of the bowl at the rear end thereof, pivots passing through the shelf and the closure, said pivots being adjustable forwardly and rearwardly with respect to the bowl, the shelf having laterally spaced depending branches, and an inverted yoke adjustably secured to said branches, the bowl having a projecting part which is straddled by the branches and the yoke.

1,169,712. LATHERING DEVICE. GIOVANNI ZINGALI, Montclair, N. J. Filed Oct. 11, 1915. Serial No. 55,362. (Cl. 132—15.)

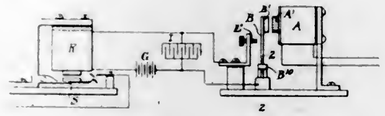


1. The combination of a container for a body of liquid soap, a mixing chamber carried by the container and having an ejection exit, means to deliver a modicum of liquid soap from the container into the mixing chamber, and air pressure means to cause the soap within the chamber to be generated into a mass of lather and ejected therefrom through said exit, substantially as set forth.

2. The combination of a container for a quantity of liquid soap, said container having a rigid neck extending laterally therefrom, the neck being provided with a tubular passageway constituting an outlet, a mixing chamber carried by the neck and surrounding the outlet end thereof, said mixing chamber having an ejection exit, means whereby to control the delivery of soap from the container to the mixing chamber, and air pressure means to transform the soap in the chamber into a mass of lather and eject the same therefrom through said exit.

3. The combination of a container for a quantity of liquid soap, a rigid neck leading from the container, said neck and container being provided with a tubular delivery passageway, a valve at the end of the neck controlling the delivery of the soap therethrough, a mixing chamber secured to the neck and surrounding the delivery end thereof and having an opening in axial alinement with said passageway, said chamber also having an ejection exit, means whereby to control the position of the valve, flexible means surrounding the outside of the chamber opening hermetically sealing the same, and means to forcibly jet air into the bottom of the mixing chamber transforming the soap therein into a mass of later filling the chamber and ejecting the lather therefrom through said exit, substantially as set forth.

1,169,713. ELECTRIC SELECTIVE INSTRUMENT. THEODORE BODDE, Westfield, N. J., assignor of one-half to himself and one-half to Archie G. Shaver, Westfield, N. J. Filed Dec. 30, 1907. Serial No. 408,514. (Cl. 175—323.)



1. A selective instrument for responding to electromagnetic impulses of predetermined frequency, comprising in combination a member free to vibrate and having a natural frequency of vibration corresponding to said predetermined frequency and tending to be set in vibration by said electro-magnetic impulses, means for subjecting said member to electromagnetic impulses of said predetermined frequency, an electric circuit including a source of current and having a gap closed by said vibrating member once in each vibration of predetermined amplitude, a condenser in shunt to said gap, and means responding to a flow of current through said circuit.

2. A selective instrument for responding to a particular non-continuous electric current, including in combination a winding along which the current passes, an armature within the electro-magnetic influence of said winding and free to vibrate and having a vibration frequency corresponding to the frequency of magnetic impulses produced by said particular current, an electric circuit including an electro-magnet winding, a source of direct current, a stationary contact surface, and a movable contact surface caused to engage the stationary contact surface and close the circuit at each armature vibration of the amplitude produced by said particular current, and a condenser in shunt to said contact surfaces.

3. In a selective instrument, the combination of a winding through which the current to be responded to may pass, an armature in electro-magnetic relation to said winding and free to vibrate and having a natural period of vibration corresponding to the frequency of the magnetic impulses produced in said winding by the current to be responded to, a contact adapted to be engaged by said armature at one limit of its vibration when the vibrations are of the predetermined amplitude, a winding of an electro-magnet, and a source of direct current connected in series between the armature and said contact, and a condenser in shunt to said contact and armature.

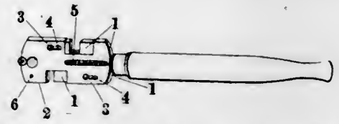
4. In combination, an armature having one end free and the other resiliently supported whereby said body is free to vibrate and has a natural vibration frequency,

means for magnetizing it in the direction of its length, and means for creating a magnetic field adjacent its free end extending transverse to the direction of the armature, one of said magnetizations being produced by a variable current, whereby when said variable current is of the proper frequency relatively large vibrations of the armature are produced, and a contact engaged by said armature at one limit of each of said large vibrations, a source of direct current and an electro-magnet winding in series with said contact and armature, and a condenser in shunt to said contact and armature.

5. In combination, an armature having one end free and the other resiliently supported whereby said body is free to vibrate and has a natural vibration frequency, means for magnetizing it in the direction of its length, and means for creating a magnetic field adjacent its free end extending transverse to the direction of the armature, one of said magnetizations being produced by a variable current, whereby when said variable current is of the proper frequency relatively large vibrations of the armature are produced, and a pair of contacts, one engaged at each limit of said large vibrations, and electric flow controlling means actuated by and dependent on the alternate engagements of said armature with the two contacts.

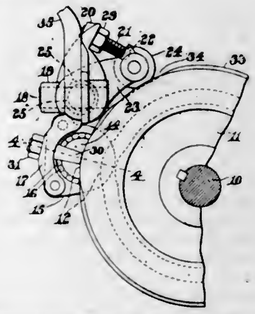
[Claims 6 and 7 not printed in the Gazette.]

1,169,714. GLASS-CUTTER. SIMON LOUIS BRAUN, Antwerp, Belgium. Filed May 3, 1912. Serial No. 694,886. Renewed Dec. 20, 1915. Serial No. 67,943. (Cl. 49—52.)



In a glass cutting tool the combination with a flat metal head having a pin or pivot for supporting a rowel or cutter screwed into its extremity, with a sliding plate movable longitudinally between two positions on the said flat head, the said plate having a hole through which the rowel or cutter supported on the pivot can be removed, when the plate is in the first or non-working position, said plate covering the pivot and retaining the rowel or cutter in place when in the second or working position.

1,169,715. MECHANICAL MOVEMENT. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1915. Serial No. 24,136. (Cl. 74—14.)



1. The combination of a revoluble disk having a peripheral cam path and a peripheral cam throw on one side thereof; a pivoted member provided with an arm; a roll on said arm coacting with the periphery of said disk; a lever pivotally mounted on said member and having two parallel projections thereon; a ball revoluble between said projections and positioned within said cam path; and a raceway for said ball carried by said lever and interposed between said projections.

2. The combination of a revoluble disk having a peripheral cam path and a peripheral cam throw on one side thereof; a pivoted member provided with an arm, a roll on said arm coacting with the periphery of said disk; a lever pivotally mounted on said member and having two parallel projections thereon; a ball revoluble between said projections and positioned within said cam path; a raceway for said ball carried by said lever and interposed between said projections; and a plurality of antifriction members in said raceway engaging said ball.

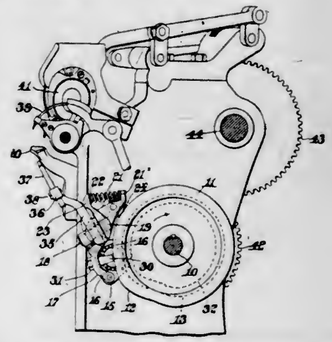
3. The combination of a revoluble disk having a peripheral cam path and a peripheral cam throw on one side thereof; a pivoted member provided with an arm, a roll on said arm coacting with the periphery of said disk; a lever pivotally mounted on said member and having two parallel projections thereon; a ball revoluble between said projections and positioned within said cam path; a member secured to said lever midway of said projections and having a concaved annular raceway; a plurality of small balls in said raceway; and a large ball positioned between said projections in the center of said raceway and adapted to coact with said cam path.

4. The combination of a revoluble disk having a peripheral cam path and a peripheral cam throw on one side thereof; a pivoted member provided with an arm, a roll on said arm coacting with the periphery of said disk; a lever pivotally mounted on said member and having two parallel projections thereon; a ball revoluble between said projections and positioned within said cam path; a member secured to said lever midway of said projections and having a concaved annular raceway; a plurality of small balls in said raceway; and a large ball positioned between said projections in the center of said raceway and adapted to coact with said cam path, said projections terminating at the center of said ball.

5. The combination of a revoluble disk having a peripheral cam path and a peripheral cam throw on one side thereof; a pivoted member provided with an arm; a roll on said arm coacting with the periphery of said disk; a lever pivotally mounted on said member having two tapered projections thereon; a ball revoluble between said projections and positioned within said cam path; and a raceway for said ball carried by said lever and interposed between said projections.

[Claims 6 to 20 not printed in the Gazette.]

1,169,716. LOOPER MECHANISM FOR SEWING-MACHINES. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1915. Serial No. 24,137. (Cl. 112—20.)



1. In a looper mechanism for sewing machines, the combination of a revoluble disk having a peripheral cam path; a pivoted lever provided with a thin plate extension hav-

ing therein an annular raceway; a looper secured to the end of said lever; a large ball in said raceway adapted to coact with said cam path; and means carried by said lever on each side of said extension for positioning said ball in said raceway.

2. In a looper mechanism for sewing machines, the combination of a revoluble disk having a peripheral cam path; a pivoted lever provided with an annular raceway having a plurality of antifriction members; a looper secured to the end of said lever; a large ball in said raceway movable on said antifriction members and adapted to coact with said cam path; and means carried by said lever on each side of said raceway for positioning said ball therein.

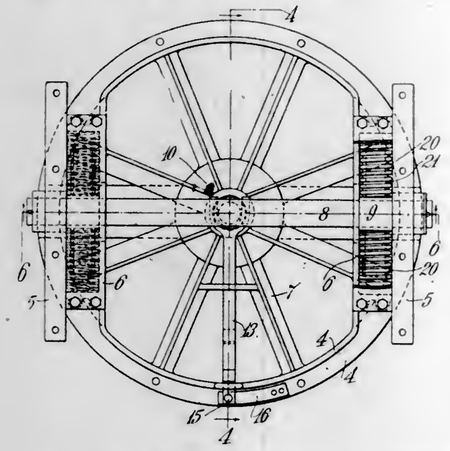
3. In a looper mechanism for sewing machines, the combination of a revoluble disk having a peripheral cam path; a pivoted lever provided with a thin plate extension having therein an annular raceway; a looper secured to the end of said lever; a large ball in said raceway adapted to coact with said cam path; and a tapered projection from said lever on each side of said extension for positioning said ball in said raceway.

4. In a looper mechanism for sewing machines, the combination of a revoluble disk having a peripheral cam path; a pivoted lever provided with a thin plate extension having therein an annular raceway; a looper secured to the end of said lever; a large ball in said raceway adapted to coact with said cam path; and means carried by said lever on each side of said extension for positioning said ball in said raceway and terminating opposite the center of said ball.

5. In a looper mechanism for sewing machines, the combination of a revoluble disk having a peripheral cam path and a peripheral cam throw; an oscillating device provided with a roll coacting with the periphery of said disk and having a transverse slot therein; a lever pivotally mounted in said slot and having two tapered projections thereon; a looper on the upper end of said lever; a ball revoluble between said projections and positioned within said cam path; and a raceway for said ball carried by said lever and interposed between said projections.

[Claims 6 to 19 not printed in the Gazette.]

1,169,717. FIFTH-WHEEL CONSTRUCTION. HERMAN G. FARR, Springfield, Mass., assignor to Charles H. Martin, Springfield, Mass. Filed June 4, 1915. Serial No. 32,076. (Cl. 21—114.)



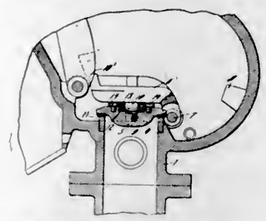
1. Tractor and trailer connecting apparatus, comprising, a circular member having parallel box portions along opposite sides thereof, a diametrically arranged rock shaft, shaft supporting members for the shaft slidably arranged in the boxes, springs between the sides of the supporting members and the ends of the boxes to normally hold the former in central position, and means fixed to the shaft to connect it to a vehicle.

2. Tractor and trailer connecting apparatus, comprising, a member adapted for permanent connection to one vehicle and having a king pin portion, a coöperating member having means to receive said portion to pivotally connect the members and on each side thereof box portions, slidably mounted shaft supporting members one in each box and provided with central projections on each side parallel to the boxes, springs loosely wound around the projections and bearing against the ends of the boxes and the sides of the supporting members, a transversely arranged rock shaft mounted in the supporting members to move therewith against the force of the springs and means to connect the shaft and the other vehicle.

3. Tractor and trailer connecting apparatus comprising a circular fifth wheel member having a transversely arranged member with a centrally positioned king pin portion all adapted to be connected to one vehicle and a cooperating circular fifth wheel member adapted to be connected to the other vehicle and having spoked thereto a central portion to receive the king pin portion, a pair of parallel bearing boxes, one fixed adjacent the circumference on opposite sides of the central portion, shaft supporting members slidably arranged one in each box, a transversely arranged rock shaft mounted in the supporting members and extending beyond the boxes, projections on the sides of each supporting member extending along the boxes, springs loosely mounted over the projections and abutting against the sides of the supporting members and the ends of the boxes to normally hold the shaft in central position, and parallel plates one fixed to each end of the shaft to attach the shaft for movement with the vehicle.

4. Tractor and trailer connecting apparatus, comprising relatively pivoted fifth wheel portions, one of which is provided with a pair of spring boxes, shaft supporting members slidably arranged in the boxes having projections thereon to abut the ends of the boxes and limit their movement therein, coiled springs loosely mounted over the projections and abutting the ends of the boxes and sides of the supporting members to normally hold the latter in central position, a transversely arranged rock shaft mounted at opposite ends in the supporting members to move therewith and adapted to connect the apparatus with one of the vehicles.

1,169,718. VALVE. CHARLES B. GARRETT, Cincinnati, Ohio, assignor to The Globe Automatic Sprinkler Company, Cincinnati, Ohio, a Corporation of Pennsylvania. Original application filed Jan. 26, 1914, Serial No. 814,306. Divided and this application filed Oct. 15, 1915. Serial No. 55,930. (Cl. 137—82.)



1. A device of the nature disclosed, combining a casing having a valve-seat-equipped opening, a disk-valve therefor having a hub protuberance at one side within its circumferential seat margin, a lever fulcrumed within the casing adapted to swing across said opening, an adjustable member axially engaged into said valve having a socketed head loosely engaging with said lever, and of polygonal contour, and a retaining member removably fixed upon said valve graspingly engaged with said lever and interlockingly housing said adjustable member.

2. A device of the nature disclosed combining a casing forming a part of the conduit of a fire extinguishing system, having a valve-seat-equipped opening as an entrance into said casing, a valve for said opening, a lever fulcrumed to swing across said opening comprising an element of a system of levers for holding the valve under pressure upon its seat, a member axially adjustable within one side of said valve having a socketed engagement with said lever, and a clip member secured to said valve inclosing said adjustable member for connecting said valve and lever.

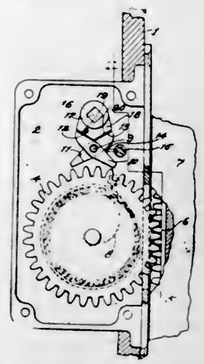
3. A device of the nature disclosed combining a casing forming a part of the conduit of a fire extinguishing system having a valve-seat-equipped opening as an entrance into said casing, a valve for said opening, a lever fulcrumed to swing across said opening, an adjustable member axially engaged with said valve having a head of polygonal contour, and socketed axially with said lever, and a nut-lock anchoring member secured to said valve embracing said head and engaged with said lever.

4. A device of the nature disclosed, combining a casing having a valve-seat-equipped opening, a valve for said opening axially provided with an adjustable abutment-plug, and a lever mounted to swing across said opening secured to said valve and engaged with said abutment plug.

5. In a device of the nature disclosed, a casing forming a part of a conduit of a fire extinguishing system, having a valve-seat-equipped opening as an entrance into said casing, a lever fulcrumed to swing across said opening, a valve, means intervening between said lever and valve and axially with said valve flexibly spacing the same and adjustable to change the spacing, and anchor means for uniting said lever and valve and locking said spacing means to its adjustment.

[Claims 6 to 9 not printed in the Gazette.]

1,169,719. SASH-BALANCING MECHANISM. EVAN GEORGEFF, San Francisco, Cal. Filed Nov. 10, 1914. Serial No. 871,242. (Cl. 16—150.)



1. In a device of the character described in combination with a spring controlled balancing means, a gear wheel, a pair of pawls coöperating with said gear wheel and controlling the rotation thereof in either direction, and cam surfaces coöperating with said pawls for controlling the engagement of either of said pawls with said gear wheel.

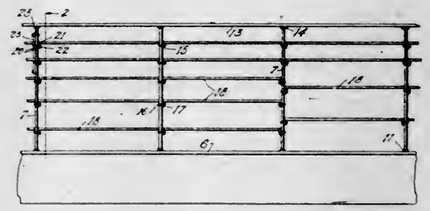
2. In a device of the class described in combination with a spring controlled balancing means, a gear wheel, a pair of oppositely disposed pawls coöperating with said gear wheel and controlling the rotation of the same in either direction, and a rotary cam coöperating with said pawls for controlling the engagement of either of said pawls with said gear wheel.

3. In a device of the class described in combination with a spring controlled balancing means, a gear wheel, a pair of crossed spring pressed pawls carried by a common pivot and coöperating with said gear wheel and controlling the rotation thereof in either direction, and operating means for controlling the engagement of either of said pawls with said gear wheel.

4. In a device of the class described in combination with a spring controlled balancing means, a gear wheel, a pair of crossed pawls carried by a common pivot and coöperating at one end with said gear wheel, a common spring for normally maintaining each of said pawls in engagement with said gear wheel and a rotary cam for coöperating with the other end of said pawls and positioned between the same for controlling the engagement of either of said pawls with said gear wheel.

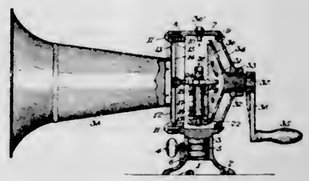
5. In a device of the character described in combination with a spring controlled balancing means, a gear wheel, a pair of crossed pawls carried by a common pivot point and coöperating with said gear wheel, means for normally maintaining said pawls in engagement with said gear wheel, and operating means for disengaging either or both of said pawls from contact with said gear wheel.

1,169,720. DISPLAY-SHELVING. MANSE M. HARRIS, Bakersfield, Cal., assignor to Pioneer Mercantile Company, Bakersfield, Cal., a Corporation of California. Filed May 2, 1914. Serial No. 835,876. (Cl. 211—27.)



A knock-down shelving structure, comprising a base member formed of a plurality of sockets, standards formed of pipe sections seated in said sockets and arranged in pairs, a top panel formed on the underside thereof with sockets into which the upper ends of the standards project, flat cross bars slidably mounted on and connected to each pair of standards, U-bolts for securing said cross bars against movement, a plurality of shelves longitudinally supported on said cross bars, said shelves formed with notches on their edges engageable with the standards to tie the structure longitudinally, and diagonal brace rods detachably connected to the standards of a pair for bracing the structure laterally, the ends of said brace rods passing through slots formed in the standards, whereby the brace rods will be interposed between the ends of adjacent shelves.

1,169,721. MECHANICALLY-ACTUATED DIAPHRAGM-HORN. MILLER REESE HUTCHISON, Summit, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of New Jersey. Filed Oct. 25, 1909. Serial No. 524,558. (Cl. 116—1.)



1. A horn or signal having a diaphragm, a member rotatable about an axis normal to said diaphragm at the center of the latter and having teeth on the face thereof toward said diaphragm and spaced circularly with respect to said axis and means arranged between said rotatable member and said diaphragm substantially radially in respect to said axis for operatively engaging said teeth and said diaphragm at the center of the latter and imparting vibrations to said diaphragm upon the rotation of said rotatable member.

2. A horn or signal having a diaphragm, a drive shaft normal thereto, a rotor having face projections and mounted concentric with said shaft and radially disposed means between said rotor and said diaphragm and operatively engaging with said projections and said diaphragm at the center of the latter for imparting vibrations to said diaphragm upon the rotation of said shaft and rotor.

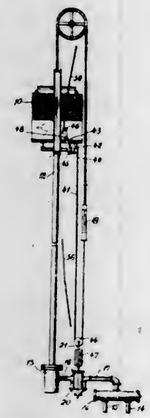
3. A horn or signal having a diaphragm, a rotor movable about an axis normal to said diaphragm at the center of the latter and having an annular row of projections concentric with said axis and a movable member between said rotor and said diaphragm, said movable member receiving movement from said projections and imparting vibration to said diaphragm at the center of the latter upon the rotation of said rotor.

4. A horn or signal having a diaphragm, a rotor movable about an axis normal to said diaphragm and having an annular row of projections concentric with said axis and means for vibrating said diaphragm upon the rotation of said rotor, said means including a movable member disposed between said rotor and said diaphragm and arranged radially in respect to said axis, said movable member having operative engagement with said projections and with said diaphragm.

5. A horn having a diaphragm, a wear piece secured thereto at the center thereof, a rotor movable about an axis normal to said diaphragm and having an annular row of projections concentric with said axis and means for vibrating said diaphragm upon the rotation of said rotor, said means including a movable member disposed between said rotor and said diaphragm and arranged radially in respect to said axis, said movable member having operative engagement with said projections and with said wear piece.

[Claims 6 to 17 not printed in the Gazette.]

1,169,722. AUTOMATIC STOP FOR ELEVATORS. KARL E. OSSIAN JANSSON, Flushing, N. Y., assignor, by mesne assignments, to Standard Plunger Elevator Company, a Corporation of Massachusetts. Filed June 1, 1909, Serial No. 499,503. Renewed Sept. 20, 1912. Serial No. 721,521. (Cl. 138—14.)



1. An elevator-car, an automatic stop device therefor, an automatically actuated lever on the car for actuating the stop device, stationary cams near the ends of travel of the car, both of said cams being arranged to cause the movement of the car to actuate the lever in one direction to stop the movement of the car in one direction or the other, and a rope between said stop device and the actuating lever.

2. An elevator-car, an automatic stop device therefor, a lever on the car for actuating the stop device, stationary cams near the ends of travel of the car for causing the movement of the car to actuate the lever, adjustable supports for the cams, and a rope arranged to run with the car, connecting said stop device and the actuating lever.

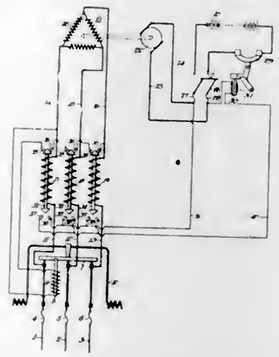
3. An elevator-car, a hydraulic hoisting mechanism, an automatic stop-valve therefor, means for holding said valve open, a lever on the car for moving the stop-valve into closed position, stationary cams near the ends of travel of the car for causing the movement of the car to actuate the lever in one direction, and a rope between the stop-valve and the actuating lever to close the valve against the action of said holding means.

4. An elevator-car, a hydraulic hoisting mechanism, an automatic stop-valve therefor, a lever on the car for moving the stop valve in one direction to close said valve, stationary cams near the ends of travel of the car for causing the movement of the car to actuate the lever, adjustable supports for the cams, a rope between the stop-valve and the actuating lever, and a weight arranged to hold the lever over and the valve open when the latter is not acted upon by said cams.

5. An elevator-car, a hydraulic hoisting mechanism, a controlling valve and an automatic stop-valve therefor, stationary cams near the ends of travel of the car, means coöperating therewith actuated by the movement of the car in either direction for moving the stop-valve in one direction, to thereby stop the car, and said stop-valve comprising means dependent upon the position of the controlling valve when the stop-valve is actuated for allowing the car to be started in the opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

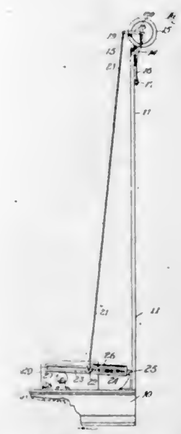
1,169,723. PROTECTIVE DEVICE FOR THREE-PHASE MOTORS. NELS JOLEEN, Chicago, Ill., assignor to Associated Engineers Company, Chicago, Ill. Filed May 12, 1913. Serial No. 767,046. (Cl. 175—294.)



1. A protective device for a multi-phase circuit having a switch element for all phases, electromagnetic means respectively for each phase and operatively actuated by a no-current condition of its allotted phase, means whereby the operative actuation of either electromagnetic means aforesaid causes said switch element to operate, a second switch element, a consumption circuit controlled thereby, means for supplying current to said consumption circuit from said multi-phase circuit, and means for operating the second switch element through the agency of either electromagnetic means aforesaid, to prevent injury to apparatus connected with said consumption circuit.

2. A protective device for a multi-phase circuit having a switch element for all phases, electromagnetic means respectively for each phase and operatively actuated by a no-current condition of its allotted phase, means whereby the operative actuation of either electromagnetic means aforesaid causes said switch element to operate, a second switch element, a consumption circuit controlled thereby, means for supplying current to said consumption circuit from said multi-phase circuit, and means for operating the second switch element through the agency of either electromagnetic means aforesaid to prevent injury to apparatus connected with said consumption circuit, said last aforesaid means including a plurality of pairs of contacts connected in bridge.

1,169,724. CALCULATING-MACHINE. CASS L. KENNICOTT, Chicago Heights, Ill., assignor to The Kennicott Company, Chicago Heights, Ill., a Corporation of Illinois. Filed Mar. 22, 1915. Serial No. 16,155. (Cl. 234—53.)



1. In a calculating machine of the type described, a time-controlled driving-motor, an integrating indicator driven from the said motor, and a step-by-step speed adjusting means for the said indicator, each step of adjustment representing a time cost unit, whereby the total time cost is integrated.

2. In a machine for the purpose described a movable indicator, a continuously operated time controlled motor and driving connections between said motor and said indicator, the said connections including a plurality of removable elements arranged to govern the speed of movement of the said indicator, whereby movement of the indicator may be a function of the time and of the presence or absence of the said removable elements.

3. In a machine for the purpose described a movable indicator, a continuously operating time controlled motor, intermittently acting driving connections between said motor and said indicator, and a plurality of removable elements for varying the amplitude of motion of said intermittently acting means.

4. In a machine for the purpose described an indicator, a rocker arm, connections for continuously moving said indicator from the oscillatory movement of said rocker arm, time controlled means for oscillating said rocker arm, and a plurality of removable elements arranged to vary proportionately to their number the movement of said indicator at each oscillation of the rocker arm.

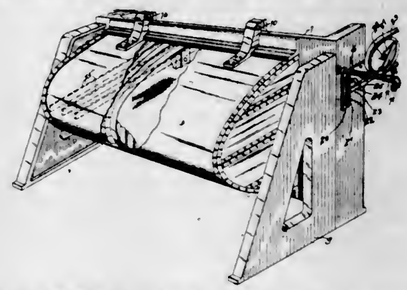
5. In a machine for the purpose described, an indicator, an oscillatory arm for moving the said indicator, time controlled means for oscillating the said arm, and a plurality of removable elements adapted to vary the amplitude of oscillation of the said arm.

[Claims 6 to 10 not printed in the Gazette.]

1,169,725. FILTER-CLEANING DEVICE. HERBERT N. KILBY, Cleveland, Ohio. Filed Jan. 16, 1915. Serial No. 2,743. (Cl. 210—13.)

1. In a filter, an inclosing casing structure, a plurality of spaced filter plates supported therein, a plurality of suitably supported cleaner members movable over the filtering surfaces of said plates and out from a position between them when not in use, and means for imparting cleaning movement to said members.

2. In a filter, an inclosing casing structure, a plurality of filter plates supported therein, a plurality of spray devices movable over the filtering surfaces of said plates, supporting means attached to one end of each of said devices, said means being arranged beyond the edges of the plates to avoid passage through the plates, and means for imparting swinging movement to said devices.



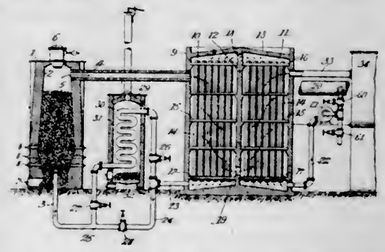
3. In a filter, an inclosing casing structure, a plurality of spaced filter plates supported therein, a rotatably mounted pipe extending the length of said casing, means for spraying a series of streams of water from said pipe over said plates, a plurality of brushes rigidly carried by said pipe, means for oscillating said pipe, and means for inflating said plates.

4. In a filter, an inclosing casing structure, a plurality of spaced filter plates supported therein, a rotatably mounted water pipe extending the length of said casing, means for spraying a series of streams of water from said pipe on said plates, a plurality of cleaner devices rigidly carried by said pipe, and means for oscillating said pipe.

5. In a filter, an upright back plate, a semi-oval casing fitting against said plate, a plurality of spaced filter plates within said casing, said casing being pivotally mounted at its upper end adjacent said back, a rotatably mounted water pipe supported in the upper portion of said casing directly adjacent said plate, means for spraying a series of streams of water from said pipe on said filter plates, a plurality of cleaner devices rigidly carried by said pipe, and means for oscillating said pipe.

[Claims 6 to 14 not printed in the Gazette.]

1,169,726. PROCESS FOR RECOVERING ELEMENTAL SULFUR FROM SULFUR GASES. WILLIAM F. LAMOREAUX, Isabella, Tenn. Filed Feb. 8, 1915. Serial No. 6,909. (Cl. 23—10.)



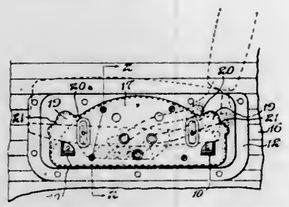
1. The process of reducing sulfur oxids to elemental sulfur, which consists in maintaining the sulfur oxid in contact with incandescent carbon for a predetermined period, and supplying the increment of heat necessary to secure practically complete reduction of the sulfur oxid to the gas stream before bringing the same into contact with the incandescent carbon.

2. The process of reducing sulfur oxids to elemental sulfur, which consists in maintaining the sulfur oxid in contact with incandescent carbon for a predetermined period, and supplying the increment of heat necessary to secure practically complete reduction of the sulfur oxid

to the gas stream before bringing the same into contact with the incandescent carbon, a portion at least of said increment of heat being derived, by heat-interchange, from the out-flowing gases from the reduction chamber.

3. The process of reducing sulfur oxids to elemental sulfur, which consists in maintaining the sulfur oxid in contact with incandescent carbon for a predetermined period, and supplying the increment of heat necessary to secure practically complete reduction of the sulfur oxid to the gas stream before bringing the same into contact with the incandescent carbon, a portion of said increment of heat being derived, by heat-interchange, from the out-flowing gases from the reduction chamber, and further preheating at least a portion of the heated gases.

1,169,727. WALL END FOR CAR-SEATS. EDWARD COPELAND LANG, Melrose, Mass., assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass., a Corporation of New Jersey. Filed Apr. 12, 1913. Serial No. 760,656. (Cl. 155—2.)



1. Means for attaching the end of a seat comprising a wall fixture adapted to be affixed to the wall of a car, and consisting of a sheet metal plate formed with a base flange and with a concavo-convex protuberant member segmental in face view, a concave sheet metal end plate secured to said seat and adapted to fit over said protuberant member, fasteners for securing said base flange to the car wall, and fasteners for detachably securing said end plate to said wall fixture.

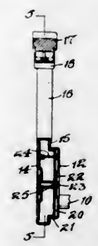
2. A car seat having rails, an end consisting of a sheet metal plate provided with a protuberance, and end plate attached to said rails and having a marginal flange to inclose and fit over said protuberance, and means for fastening said end and said end plate together, the overlapping upper portions of said flange and protuberance forming a guide for the car seat back.

3. A car seat comprising rails, a sheet metal end plate attached thereto and having a marginal flange, a wall fixture adapted to be permanently attached to the car wall and consisting of a sheet metal plate formed with a base flange and a protuberant member to extend into and interlock with said end plate, fasteners for attaching said base flange to the car wall, and independent means for detachably fastening said end plate and said wall fixture together.

4. A car seat comprising rails, a segmental sheet metal end plate attached thereto and having a marginal flange, a wall fixture adapted to be permanently attached to the car wall and consisting of a sheet metal plate formed with a base flange and a segmental protuberant member to extend into and interlock with said end plate, and means for detachably fastening said end plate and said wall fixture together, said marginal flange of said end plate being extended laterally beyond said protuberant member and being formed to provide stops for limiting the movement of the back of the seat.

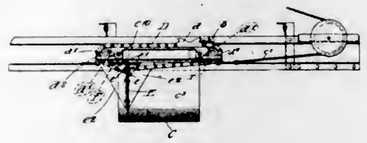
1,169,728. AISLE END FOR CAR-SEATS. EDWARD COPELAND LANG, Melrose, Mass., assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass., a Corporation of New Jersey. Filed Apr. 12, 1913. Serial No. 760,657. (Cl. 155—2.)

1. A car seat comprising an aisle end plate to which the rails are secured, said plate being approximately segmental and having an outwardly projecting continuous marginal flange, the upper curved portion of which constitutes a back guide, a hollow aisle end having a complemental segmental protuberance on its inner wall extending into and embraced by the said marginal flange, said marginal flange being extended away from the protuberance at the ends thereof and forming a stop for limiting the movement of the seat back.



2. A car seat comprising rails, an end plate secured thereto, a hollow sheet metal aisle end provided with an arm, and having an inner wall and an outer wall, said end plate and said inner wall being formed one with a segmental protuberance and the other with a segmental flange to fit over and embrace the said protuberance, and fastenings for securing said wall and said end plate together.

1,169,729. EXCAVATOR. WILLIAM G. LAWRENCE, Martinton, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Oct. 3, 1912. Serial No. 723,656. (Cl. 37—39.)



1. An excavator comprising a runway, a bucket traveling thereon, means for operating said bucket, whereby the bucket moves forward and back on said runway, without turning around, the said bucket having a movable back or end wall, a track on which the said back or end wall slides, and mechanism whereby said back or end wall expels the load while the bucket is moving forward.

2. An excavator comprising a runway, a bucket traveling thereon, means for operating said bucket, the said bucket having a movable back or end wall, mechanism whereby said back or end wall expels the load while the bucket is moving forward, said mechanism including a gear connection between the bucket and end wall, and means on the runway for engaging said gear connection to cause the said back or end wall to move faster than the body of the bucket.

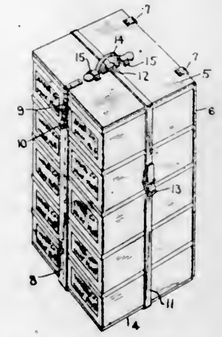
3. An excavator comprising a runway, a bucket traveling thereon, means for operating said bucket, the said bucket having a movable back or end wall, mechanism whereby said back or end wall expels the load while the bucket is moving forward, said mechanism comprising a sprocket chain connection carried by the bucket and connected with said back or end wall, and means on the runway for engaging said sprocket chain connection, whereby the said back or end wall is caused to move faster than the bucket.

4. An excavator comprising a bucket, a runway upon which the bucket travels back and forth, mechanism for causing the bucket to discharge the load gradually, from the front end thereof, while moving forward and before reversal of movement thereof, said mechanism including a wall movably mounted within the bucket, a track on which said wall slides, and means whereby in dumping the load the said wall travels faster than the body of the bucket.

5. An excavator comprising a runway, a bucket traveling thereon, means for operating said bucket, the said bucket having a movable back or end wall, mechanism whereby said back or end wall expels the load while the bucket is moving forward, said mechanism including a sprocket chain attached to said back or end wall, and sprockets for said chain, disposed at opposite ends of said bucket.

[Claims 6 to 12 not printed in the Gazette.]

1,169,730. CARTON-CARRIER. FRANK MELVILLE, Jr., New York, N. Y. Filed June 7, 1915. Serial No. 32,649. (Cl. 224—50.)



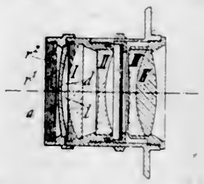
1. In a device of the character set forth, a bottom wall, a top wall and a side wall hinged to the rear edges of the bottom and top walls, a strap for detachably connecting the front portions of the top and bottom walls, and a strap extending across the top and bottom walls and across the spaces between their opposite side edges, the space between said front portions and side edges being otherwise open.

2. In a device of the character set forth, an angular bottom wall and a corresponding top wall respectively of substantially the cross sectional area of a set of cartons to be carried, a side wall hinged to the top and bottom walls at one edge of each, straps extending across the space between the other corresponding edges of the top and bottom walls for connecting the same, and a handle secured to the top wall, the space between said other corresponding edges being otherwise substantially open and unobstructed.

3. In a device of the character set forth, an angular bottom wall, and a corresponding top wall respectively of substantially the cross sectional area of a set of cartons to be carried, a side wall hinged to the top and bottom walls at one edge of each, a relatively broad strap for connecting the opposite edges of the top and bottom walls and comprising sections respectively secured to the top and bottom and a connector between said sections, a handle mounted on the top wall, and a strap extending across the top and bottom walls and across the space between the opposite side edges thereof, said strap having means for adjustably connecting its terminals.

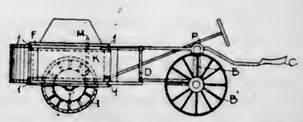
1,169,731. LENS FOR PLACING BEFORE A PHOTOGRAPHIC OBJECTIVE. GUIDO MENGEL, Dresden, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Aug. 4, 1915. Serial No. 43,679. (Cl. 88—57.)

Meniscus shaped, simple, dispersive lens for placing before a photographic objective and intended to face, when in use, the said objective with its concave surface, the radius of curvature of the said concave surface being at least one and a half times and at most four and a half times as great as the distance of the said surface, when



the lens is in use, from the entrance pupil of the objective in front of which it is placed.

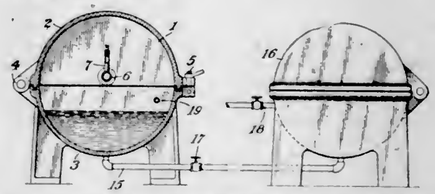
1,169,732. FARM-TRACTOR. FRANK L. OGDEN, Gower, Mo. Filed Feb. 15, 1915. Serial No. 8,201. (Cl. 21—114.)



1. A farm tractor comprising a main frame a lower and an upper plate connected rigidly together by means of a drum and grooved to receive main frame ball bearings in the grooves to facilitate the movements between the plates and the frame, the lower plate provided with a plurality of cogs on its top to receive any suitable steering device, a power unit on the upper plate, a drive wheel connected with the lower plate so that when the lower plate revolves the drive wheel, upper plate and power unit on the upper plate will always remain in the same relative position to each other the power unit on the upper plate transmitting its power to the drive wheel in the lower plate by means of a gear drive.

2. A farm tractor having a front unit comprising a lower and an upper circular plate, a drum connecting the same rigidly together, said plates having grooved peripheries to receive the main frame, ball bearings in said grooves, the lower plate provided with a plurality of cogs on its top to receive a steering device, a power unit on the upper plate, a drive wheel connected with the lower plate so that when the lower plate revolves the drive wheel, upper plate and power unit on the upper plate will always remain in the same relative position to each other, the power unit on the upper plate transmitting power to the drive wheel in the lower plate by means of a gear drive, a gear drive, a detachable rear arch, the axles thereof and the wheels thereon.

1,169,733. APPARATUS FOR PRODUCING VULCANIZED ARTICLES. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed May 3, 1915. Serial No. 25,401. (Cl. 18—24.)



1. A dipping and drying apparatus comprising a dipping chamber adapted to contain material used in the manufacture of articles, a support on which forms for said articles are carried, means for moving said support to carry said forms into and out of said material, and means for producing a reduced fluid pressure about said forms.

2. A dipping and drying apparatus comprising a dipping chamber adapted to contain material used in the manufacture of articles, a support on which forms for said articles are carried, means for heating said forms interiorly, means for moving said support to carry said forms into and out of said material, and means for producing a reduced fluid pressure about said forms.

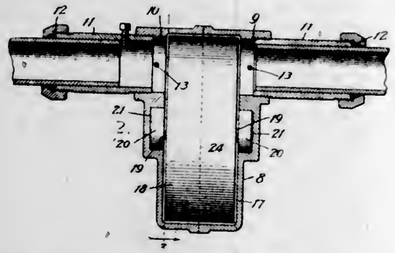
3. A dipping and drying apparatus comprising a dipping chamber adapted to contain material used in the manufacture of articles, a support on which forms for said articles are carried, means for moving said support to carry said forms into and out of said material, and means for intermittently producing a reduced fluid pressure about said forms between the dipping operations.

4. A dipping and drying apparatus comprising a dipping chamber adapted to contain material used in the manufacture of articles, a support on which forms for said articles are carried, means for withdrawing said material from the presence of said forms, and means for producing a reduced fluid pressure about said forms when said material is removed.

5. A dipping and drying apparatus comprising a dipping chamber adapted to contain the material used in the manufacture of articles, a support on which forms for said articles are carried, means for heating said forms interiorly, means for withdrawing said material from the presence of said forms, and means for producing a reduced fluid pressure about said forms when said material is removed.

[Claims 6 to 10 not printed in the Gazette.]

1,169,734. DEVICE FOR REGULATING THE DISCHARGE OF EXHAUST-GASES. AUGUSTUS F. PRIEST, Akron, Ohio, assignor to Motor-Aid Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1914. Serial No. 873,883. (Cl. 123—194.)



1. A device of the character set forth, comprising a casing provided with an inlet and outlet alining with each other and disposed intermediate the center of said casing and its peripheral wall, and a fan adapted to be revolved by impingement of gases thereupon journaled in said casing and provided with obliquely disposed vanes opposing said inlet, the sides of said fan being disposed closely adjacent to the sides of said casing.

2. A device of the character set forth comprising a casing provided with an inlet and outlet alining with each other and disposed intermediate the center of said casing and its peripheral wall, and a fan adapted to be revolved by impingement of gases thereupon journaled in said casing to extend transversely of said inlet and said outlet and formed of radially and obliquely extending vanes opposing said inlet, with a continuous rim connected with the outer ends of said vanes.

3. A device of the character set forth comprising a casing containing an inlet and an outlet alining with each other and disposed intermediate the center of said casing and its peripheral wall, and a fan adapted to be revolved by impingement of gases thereupon journaled in said casing to extend transversely of said inlet and said outlet and formed of radially and obliquely extending vanes opposing said inlet, with a continuous rim connected with the outer ends of said vanes, the sides of said fan being disposed closely adjacent to the sides of said casing.

4. In combination the exhaust pipe of an engine having an intermitteut exhaust, a substantially cylindrical casing having a diameter greater than the diameter of the pipe, and a revoluble element within and closely fitting the casing; said casing having an inlet in one side adjacent its outer and communicating with said exhaust pipe, and an outlet in the other side in substantial alinement with the inlet, and said rpvoluble element being provided with vanes disposed so that the gases from said exhaust pipe impinge obliquely thereupon and revolve said element.

1,169,735. SELF-ADJUSTING FINGER-RING. WILLIAM AMBROSE SALT and THOMAS SIMON BENNETT, Providence, R. I. Filed Dec. 17, 1914. Serial No. 877,767. (Cl. 63—16.)



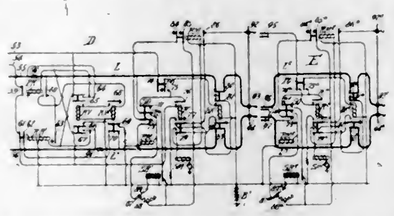
1. A finger ring having a head having a depression in the base of the head, a groove in the bottom of the depression, a stop-shoulder at one end of the groove and an aperture adjacent the stop-shoulder, a contracted expansible band with a free end which extends through the aperture and fits into the groove, a plate shaped to fit the depression and which fits into the depression and closes the same, and means on the free end of the band adapted to engage with the stop-shoulder for limiting the expansion movement of the band, all formed integral.

2. A finger ring having a head having a shallow depression in the base of the head, a longitudinal groove in the bottom of the depression, a stop-shoulder at one end of the groove and an aperture adjacent the stop-shoulder, an expansible band with a free end which extends through the aperture and fits into the groove, a stop on the free end of the band and a plate shaped to fit the depression and which fits into the depression and closes the same, all formed integral.

3. An adjustable finger ring having a comparntively large head, a shallow depression in the base of the head, a longitudinal groove in the bottom of the depression, a narrow band having a free end free to move in the groove and a plate which fills the depression and closes the groove, all formed integral.

4. An adjustable finger ring formed from a blank having a comparatively large head, a shallow depression in the head underneath, a longitudinal groove in the bottom of the depression, an aperture in one end of the head extending into one end of the groove, a plate adapted to fill the depression and close the groove and a narrow band extending from the other end of the head and having a free end adapted to extend through the aperture into the groove in the head, all formed integral.

1,169,736. TELEPHONE-EXCHANGE SYSTEM. FRED SCHOENWOLF, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Dec. 16, 1908. Serial No. 467,814. (Cl. 179—18.)



1. A telephone system including a telephone line, a pair of relays connected with said telephone line, a selective switch, an armature for one of said relays serving

to adjust said switch and adapted to vibrate responsive to circuit changes produced in said telephone line, a local maintaining circuit for the second relay held closed while said armature vibrates, an electromagnet provided with a slow release armature, and a circuit for said electromagnet closed and opened responsive to the vibration of said armature, said electromagnet holding said maintaining circuit closed while said armature vibrates.

2. A telephone system including a telephone line, a pair of relays connected with said telephone line, a selective switch, an armature for one of said relays serving to adjust said switch and adapted to vibrate responsive to circuit changes produced in said telephone line, a local maintaining circuit for the second relay held closed while said armature vibrates, an electromagnet provided with a slow release armature, a circuit for said electromagnet closed and opened responsive to the vibration of said armature, said electromagnet holding said maintaining circuit closed while said armature vibrates and opened responsive to the cessation of vibration.

3. An automatic telephone system including a telephone line, a selective switch, a pair of relays connected in the circuit of said line for controlling said switch, one of said relays serving to control directive adjustment of said switch, mechanism for restoring said switch to normal controlled by said other relay, armature mechanism for said first relay adapted to be vibrated responsive to circuit changes produced in said telephone line, a local maintaining circuit for said second relay, a third relay slow to release its armature having its circuit in controllable relation with said first mentioned relay and unresponsive to successive vibrations of said armature, and a switch contact of said third relay included in said maintaining circuit.

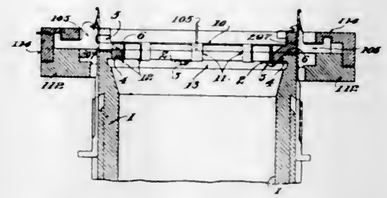
4. An automatic telephone system including a telephone line, a selective switch, a pair of relays connected in the circuit of said line for controlling said switch, one of said relays serving to control directive adjustment of said switch, mechanism for restoring said switch to normal controlled by said other relay, armature mechanism for said first relay adapted to be vibrated responsive to circuit changes produced in said telephone line, a local maintaining circuit for said second relay, a third relay slow to release its armature having its circuit in controllable relation with said first mentioned relay and unresponsive to successive vibrations of said armature, a switch contact of said third relay included in said maintaining circuit, and means controlled by said third relay effective when said armature ceases to vibrate to open said maintaining circuit.

5. An automatic telephone system including a telephone line, a selective switch, a pair of relays connected in the circuit of said line for controlling said switch, one of said relays serving to control directive adjustment of said switch, mechanism for restoring said switch to normal controlled by said other relay, armature mechanism for said first relay adapted to be vibrated responsive to circuit changes produced in said telephone line, a local maintaining circuit for said second relay, a third relay slow to release its armature having its circuit in controllable relation with said first mentioned relay and unresponsive to successive vibrations of said armature, a switch contact of said third relay included in said maintaining circuit, means controlled by said third relay effective when said armature ceases to vibrate to open said maintaining circuit, secondary adjusting mechanism for said switch, and connections altered by said third relay when said armature ceases to vibrate to transmit an impulse to initiate operation of said mechanism.

[Claims 6 to 24 not printed in the Gazette.]

1,169,737. WEB-HOLDER MECHANISM FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams Incorporated, Camden, N. J., a Corporation of New Jersey. Filed July 24, 1914. Serial No. 852,894. (Cl. 66—26.)

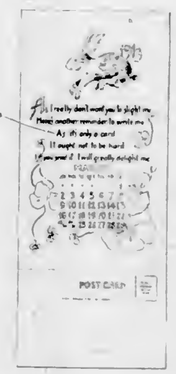
1. In a web-holder device for knitting machines, the combination with web-holders of a grooved guide-ring to position the web-holders with a hold-down ring lying above said web-holders having spaced feet engaging a surface of said guide ring beneath said web-holders.



2. A hold-down ring for a web-holder device made as a thin annulus having depending spaced feet adapted to interlock in use with a guide ring for the web-holders.

3. In a knitting machine, the combination of a needle cylinder and a slotted guide ring for movable web-holders held on said cylinder by cleats taking into an internal groove in the said cylinder.

1,169,738. CORRESPONDENCE-REMINDER. RALPH WILLIAM SMILEY, New York, N. Y. Filed Aug. 19, 1912. Serial No. 715,955. (Cl. 120—1.)



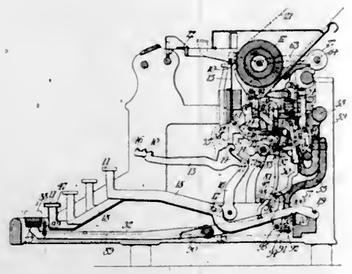
1. The combination of a series of leaves having successive calendars thereon, each leaf having a legend thereon suggesting the writing of a message, and a post card integral with but detachable from each of said leaves.

2. A correspondence reminder consisting of the combination of a series of leaves, each leaf having a different calendar thereon, and each leaf having a different legend thereon, such legends suggesting the writing of a message, and a post card integral with but detachable with said leaves.

1,169,739. TYPE-WRITING MACHINE. J FRANK ALLARD, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 12, 1913. Serial No. 760,617. (Cl. 197—1.)

1. A typewriter for the Korean or analoguos language, comprising consonant and vowel types all mounted crosswise so as to make the written characters appear in cumbent positions, a carriage, letter-feeding mechanism silent during the writing of the consonants and accompanying vowels; each of said consonants occupying about an entire letter-feeding space or subdivision of the writing line, and the consonant types mounted to strike all in the same place, so that their impressions would be superposed;

and a key for feeding the carriage a letter-space at a time, whereby after writing a consonant and its accompanying single or double vowel, said space-key may be operated to re-position the carriage to enable the writing of the same logogram or grouping to be completed.



2. A typewriter for the Korean or analogous language, comprising consonant and vowel types all mounted crosswise so as to make the written characters appear in cumbent positions, a carriage, letter-feeding mechanism silent during the writing of the consonants and accompanying vowels; each of said consonants occupying about an entire letter-feeding space or subdivision of the writing line, and the consonant types mounted to strike all in the same place, so that their impressions would be superposed, a key for feeding the carriage a letter-space at a time, whereby after writing a consonant and its accompanying single or double vowel, said space-key may be operated to re-position the carriage to enable the writing of the same logogram or grouping to be completed, and a second key for feeding the carriage two spaces at each operation of said second key.

3. A typewriter for the Korean or analogous language, comprising consonant and vowel types, all mounted crosswise on the type-bars so as to make the written characters appear in cumbent positions, keys to operate the type-bars, a ribbon-vibrating mechanism operated by said keys at every type stroke, a carriage, letter-feeding mechanism silent during the writing of the consonants and accompanying vowels; each of said consonants occupying about an entire letter-feeding space or subdivision of the writing line, and the consonant types mounted to strike all in the same place, so that their impression would be superposed, and a key for feeding the carriage a letter-space at a time.

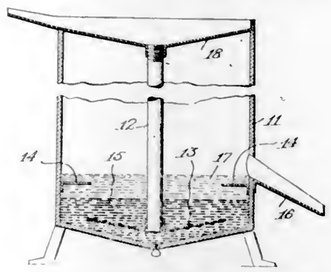
4. A typewriter for the Korean or analogous language, comprising consonants and vowel types, all mounted crosswise on the type-bars so as to make the written characters appear in cumbent positions, keys to operate the type-bars, a ribbon-vibrating mechanism operated by said keys at every type stroke, a carriage, letter-feeding mechanism silent during the writing of the consonants and accompanying vowels; each of said consonants occupying about an entire letter-feeding space or sub-division of the writing line, and the consonant types mounted to strike all in the same place, so that their impressions would be superposed, a key for feeding the carriage a letter-space at a time, and a second key for feeding the carriage two spaces at each operation of said second key.

5. A typewriting machine having a set of Korean types and a set of English types, the Korean types being set crosswise relatively to the English types.

[Claims 6 to 91 not printed in the Gazette.]

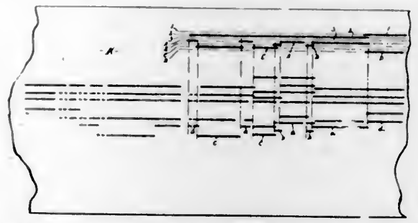
1,169,740. ORE-AMALGAMATOR. JAMES E. DICK, Akron, Ohio. Filed Oct. 21, 1914. Serial No. 867,919. (Cl. 83—67.)

In an amalgamator, a chamber containing a body of mercury, a supply pipe entering therein and terminating at its lower end beneath the surface of the mercury body, and an annular upwardly dished deflector fixed to



the lower end of said pipe having a smooth under surface merging into a corrugated edge.

1,169,741. NOTE-SHEET FOR SELF-PLAYING MUSICAL INSTRUMENTS. LEWIS BENJAMIN DOMAN, East Syracuse, N. Y., assignor to The Amphion Piano-Player Company, a Corporation of New York. Filed Sept. 17, 1915. Serial No. 51,168. (Cl. 84—162.)



1. A note-sheet having octave-selecting perforations and group-selecting perforations running simultaneously with certain note-perforations.

2. A note-sheet having note-perforations representing different parts of a musical composition, said sheet being provided with octave-selecting perforations and group-selecting perforations running in parallel lines simultaneously with the note-perforations representing one of said parts.

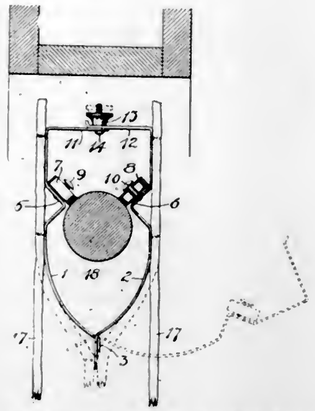
3. A note-sheet having note-perforations representing the parts of a musical composition, said sheet being provided with an octave-selecting aperture, and a coöperative group-selecting aperture occurring simultaneously with each other and with the advance end of one of the note-perforations.

4. A note-sheet having note-perforations representing different parts of a musical composition, said sheet being provided with octave-selecting apertures in different lengthwise lines, and coöperative group-selecting apertures also arranged in separate lengthwise lines and running simultaneously with portions of certain note-perforations.

1,169,742. TRAVERSE-RING. WILLIAM H. EDSALL, Wallingford, Conn., assignor to H. L. Judd Company, Wallingford, Conn., a Corporation of New York. Filed July 22, 1915. Serial No. 41,438. (Cl. 156—21.)

1. In a curtain ring, two side bars loosely connected at the lower side of said ring and shaped to form a curtain pole passage between them, an anti-friction device carried by each of said side bars and a bridging connection for said side bars above said anti-friction devices, said bridging connection being separable whereby said ring may be opened and closed to facilitate application to and removal from a rod support.

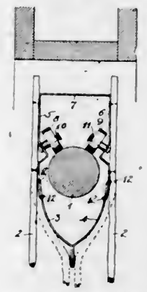
2. In a traverse ring, two side bars loosely and separably connected at or near their lower ends, a separable bridge connection for the upper parts of said bars, an anti-friction device carried by each of said bars below said separable connection and arranged to rest on the upper part of a curtain rod.



3. In a traverse ring, two side bars separably connected at or near their lower ends, an anti-friction device carried by each of said side bars and relatively movable therewith, a separable bridge connection between said side bars above said anti-friction devices, said anti-friction devices comprising rollers, a separate pivotal support for each roller, said supports being carried by said side bars respectively, and mounted to stand obliquely to each other when the ring is in operative position.

4. In a traverse ring two sheet metal side bars connected at their upper and lower ends, the upper connection comprising an overlapped detachable bridge, means for holding said overlapped portions in operative relation, inwardly directed bends in the side bars approximately midway in the length thereof, said inward bends comprising supports, an anti-friction device rotatably mounted on each of said supports, said anti-friction devices standing obliquely to each other.

1,169,743. TRAVERSE-RING. WILLIAM H. EDSALL, Wallingford, Conn., assignor to H. L. Judd Company, Wallingford, Conn., a Corporation of New York. Filed July 23, 1915. Serial No. 41,439. (Cl. 156—21.)

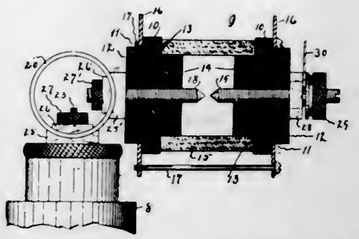


1. In a traverse ring, two side arms, said arms affording means for attachment of a curtain thereto, a solid bridge connection for the upper ends of said side arms, an anti-friction device carried by each of said side arms below said bridge connection, and a separable connection for said ring below said anti-friction devices, whereby said ring may be opened for attachment to or detachment from a curtain pole.

2. In a traverse ring, side members, each embodying two arms affording means for attachment of a curtain thereto, with means for detachably connecting said arms, a solid bridge connecting the upper ends of said side members, an anti-friction device carried by each side member below said bridge and above the detachable connection for said arms, said anti-friction devices comprising rollers arranged obliquely to each other.

3. In a traverse ring, two side members affording means for attachment of a curtain to said ring, a solid bridge connecting the upper part of said side member, anti-friction devices carried by said side members, the lower part of said ring comprising a removable section.

1,169,744. SPARK-INTENSIFIER FOR SPARK-PLUGS. ALEXIS F. GILLET, Omaha, Nebr., assignor to Jubilee Manufacturing Company, Omaha, Nebr., a Corporation. Filed Dec. 17, 1914. Serial No. 877,671. (Cl. 175—183.)



1. In a spark intensifier, the combination of a pair of electrical insulating disks disposed end to end adjacent to each other each being provided with a pair of annular recesses openings respectively on each of its ends and side, a transparent sleeve disposed in one of the recesses of each disk intermediate said disks, a pair of rims disposed in the other recess and projecting outwardly of the side of each disk, keepers disposed outwardly of the sides of the disks and connected with said rims for pressing the disks against the sleeve, and a pair of electrodes formed as screws disposed axially of and traversing the disks, each being provided, adjacent to its outer end, with devices for clamping an electrical conductor.

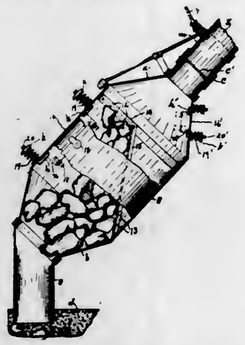
2. In a spark intensifier, the combination of a pair of electrical insulating disks disposed end to end adjacent to each other, a transparent sleeve having its respective ends disposed intermediate the respective ends of each disk, a pair of rims each being disposed intermediate the ends and projecting outwardly of the side of a disk, means on said rims and disposed outwardly of the sides of the disks and sleeve for pressing the rims toward each other, and a pair of electrodes formed as screws disposed axially of and traversing the disks, each being provided, adjacent to its outer end, with devices for clamping an electrical conductor.

3. In a spark intensifier for spark plugs, the combination of a pair of electrical insulating disks disposed end to end adjacent to each other, a transparent sleeve disposed intermediate the ends of each disk, a pair of rims each being disposed intermediate the ends and projecting outwardly of the side of a disk, means on said rims and disposed outwardly of the sides of the disks and sleeve for pressing the rims toward each other, a pair of electrodes formed as screws disposed axially of and traversing the disks, a band having a curved part with a slot formed longitudinally therein, coöperative devices for mounting the band upon the spark plug, coöperative devices for mounting the intensifier on said band with one of its electrodes disposed in said slot, and means on the other electrode of the intensifier for clamping an electrical conductor.

1,169,745. SUCTION-PIPE ATTACHMENT. VIRGIL M. HADDON, Louisville, Nebr., assignor to Charles A. Richey, Omaha, Nebr. Filed Nov. 19, 1914. Serial No. 873,012. (Cl. 37—45.)

1. In combination with a suction pipe having a rectilinear part, an apertured cylindrical casing provided be-

tween its ends with a grating, disposed inclined to the longitudinal axis of said casing, its lower end being provided with an angularly disposed intake pipe, a hingeably mounted door normally disposed in the aperture of said casing, pintles traversing the casing and provided at their inner ends with projections for engaging the door, springs mounted on the pintles for resisting an inward swinging movement of the door, means for adjusting the tension of the springs, said casing being mounted at its inner end upon the suction pipe at the intake thereof with its axis disposed approximately in alinement with the axis of the rectilinear part of the suction pipe.



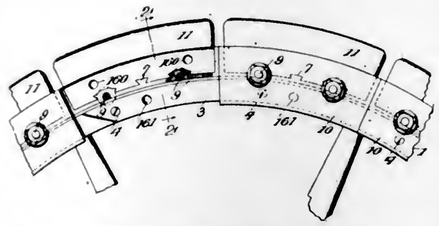
2. In combination with a suction pipe having a rectilinear part, an apertured cylindrical casing provided between its ends with a grating, its outer end being provided with an angularly disposed intake pipe, a door normally disposed in the aperture of said casing, pintles traversing the casing and provided with projections for engaging the door, springs for resisting an inward movement of the door, said casing being mounted at its inner end upon the suction pipe at the intake thereof with its axis disposed substantially in alinement with the axis of the rectilinear part of the suction pipe.

3. In combination with a suction pipe having a rectilinear part, an apertured cylindrical casing provided between its ends with a grating, its outer end being provided with an angularly disposed intake pipe, a door arranged to swing inwardly of the aperture of the casing by the force of suction, resilient means tending to resist an inward movement of the door, said casing being mounted at its inner end upon the suction pipe at the intake thereof with its axis disposed substantially in alinement with the axis of the rectilinear part of the suction pipe.

4. An attachment for the suction pipe of a sand pump, comprising a cylindrical casing provided intermediate its ends with a grating and formed with an outwardly convergent part, said casing being provided with an intake pipe disposed inclinedly to its longitudinal axis to open upon said convergent part, and provided between the grating and intake pipe with an aperture, a door normally disposed in said aperture and mounted hingeably to permit a swinging movement inwardly of the casing by force of suction, and resilient means connected with the door for resisting said swinging movement.

1,169,746. SECTIONAL TIRE. CHARLES F. LIGHTHOUSE, New York, N. Y., assignor to Lighthouse Tire Company, Guttenberg, N. J., a Corporation of Delaware. Filed Aug. 21, 1914. Serial No. 857,836. Renewed Dec. 17, 1915. Serial No. 67,489. (Cl. 152—9.)

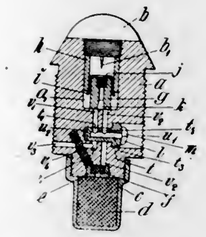
1. A sectional tire section comprising a base plate having outwardly extending radial end flanges and open sides, and between said flanges transverse dove-tail ribs, a tread block between such end flanges and narrower than the base plate, the block engaging said ribs and vulcanized to the base plate, opposite sectional side plates extending below the base plate and having inward wheel engaging flanges at their inner edges, and similar flanges at their outer edges fitting over the edges of the base plate, and bolts connecting the side plate.



2. The combination with a wheel rim, of sectional tire sections, each section comprising a base plate having outer radial end flanges, intermediate ribs, there being bolt grooves open throughout their length in the ribs, opposite sectional side plates having wheel-rim engaging flanges and base plate engaging flanges, and bolts occupying said open grooves and connecting the side plates.

3. In combination, a wheel rim comprising metal rings on its opposite edges, sectional tire sections each section having a tread block, and a holder therefor consisting of a base plate with outer radial end flanges and open sides, and opposite sectional side plates engaging said rings and said block and holder, and bolts between the wheel rim and said base plates and between and connecting said side plates.

1,169,747. FUSE FOR HIGH-EXPLOSIVE SHELLS. HUGO KARL MORÉN, Bofors, Sweden, assignor to Aktiebolaget Bofors-Gullspang, Bofors, Sweden, a Company Limited. Filed Oct. 24, 1914. Serial No. 868,395. (Cl. 102—39.)

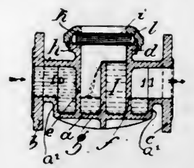


1. In shell fuses, an elongated body, a primary igniting charge carried by the body, a bursting charge, said body having a plurality of longitudinal channels forming communication between said charges, a radially displaceable plunger member normally crossing said channels so as to cut off the communication, said plunger member being displaceable in such direction as to open said channels successively when displaced by centrifugal action, and a controlling member serving to arrest the plunger member in successive positions.

2. In shell fuses, an elongated body, a primary igniting charge carried by the body, a bursting charge, said body having two longitudinal channels forming communication between said charges, a radially displaceable plunger member crossing said channels to cut off the communication normally and having a longitudinal channel and two cross channels communicating therewith and normally registering with the end portions of each of said first named channels which communicate with the igniting charge, the plunger being displaceable by centrifugal action to open the communication between charges, and a controlling member normally engaging said plunger so as to prevent its longitudinal displacement.

3. In shell fuses, an elongated body, a primary igniting charge carried by the body, a bursting charge, said body having two longitudinal channels forming communication between said charges, a radially displaceable plunger member crossing said channels and having one longitudinal channel and two cross channels communicating with the longitudinal channel and normally registering with each of said first named channels, and a rotatable and longitudinally displaceable controlling member having different locking surfaces which enable it to check the plunger member either in a position for cutting off both of the first named channels, or in a position for leaving one of said channels free or in a position leaving both channels free.

1,169,748. DEVICE FOR OBSERVING THE FLOW OF FLUIDS AND VAPORS THROUGH CONDUITS. GUSTAV SCHACKE, Augsburg, Germany. Filed Sept. 17, 1912. Serial No. 720,890. (Cl. 182—12.)



1. A device of the character specified, comprising a casing having oppositely disposed inlet and outlet passages, curved walls the entire height of said casing extending from diametrically opposite sides of the passages inwardly and across the corresponding passages and then parallel to the adjacent walls of said casing, and a septum traversing said casing substantially at its center line, said septum being lower than said curved walls and connecting the latter near their ends, whereby a water trap is formed in the space above and at each side of said septum in whatever position said device may be placed.

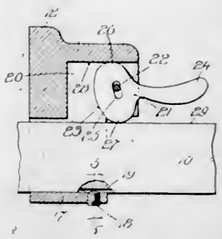
2. A device of the character specified, comprising a substantially annular casing having oppositely disposed inlet and outlet passages, curved walls the entire height of said casing extending from diametrically opposite sides of the passages inwardly and across the corresponding passages and then parallel to the adjacent walls of said casing, said walls having their inner ends extending in opposite directions beyond the center line of said casing, and a straight septum traversing said casing substantially at its center line, said septum being lower than said curved walls and connecting the latter near their ends, whereby a water trap is formed in the space above and at each side of said septum in whatever position said device may be placed.

3. A device of the character specified, comprising a casing having oppositely disposed inlet and outlet passages, curved walls the entire height of said casing extending from diametrically opposite sides of the passages inwardly and across the corresponding passages and then parallel to the adjacent walls of said casing, a straight septum traversing said casing substantially at its center line, said septum being lower than said curved walls and connecting the same near their inner ends whereby a water trap is formed in the space above and at each side of said septum in whatever position said device may be placed, and an observation window in the casing arranged over the water trap therein.

1,169,749. WRENCH. JOHN L. WALSH, Chicago, Ill., signor of one-half to Thomas J. Conley, Chicago, Ill. Filed May 3, 1915. Serial No. 25,392. (Cl. 81—150.)

1. A wrench comprising a handle having smooth edge portions and having a fixed jaw on one end, a movable jaw having a part surrounding said handle and slidably mounted thereon, a locking member fulcrumed on said movable jaw and having oppositely disposed gripping edges adapted to engage with oppositely disposed portions of the movable jaw and handle, said locking member having a pin and slot connection with the movable jaw, whereby the locking member may be swung into locking position with the pin out of engagement with either end of said slot.

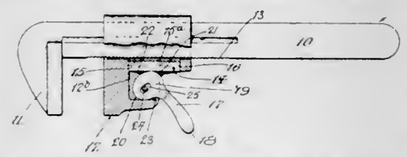
2. A wrench comprising a handle having a fixed jaw at one end, a movable jaw having a portion surrounding said handle and slidably mounted thereon, said jaw having a recess formed therein, a pin secured in said movable jaw and extending transversely through said recess, a loosely fulcrumed locking member having an elongated slot for the reception of said pin and having two oppositely disposed, curved, bearing edges capable of frictionally engaging an edge of the handle and an oppositely disposed face on the movable jaw.



3. A wrench comprising a handle having a fixed jaw at one end, and a movable jaw, slidably mounted on said handle, said handle having a longitudinally extending groove in one edge, said movable jaw having a projection of slightly larger diameter than said groove and arranged to engage with the edges thereof when the movable jaw is in locked position, and a locking member loosely fulcrumed upon said movable jaw and having oppositely disposed, curved, bearing faces adapted to engage with oppositely disposed faces of the movable jaw and handle.

4. A wrench comprising a handle having a fixed jaw at one end, and a movable jaw, slidably mounted on said handle, said handle having a longitudinally extending groove in one edge, said movable jaw having a screw, threaded therein, said screw being of slightly larger diameter than said groove and arranged to engage with the edges thereof when the movable jaw is in locked position, and a locking member loosely fulcrumed upon said movable jaw and having oppositely disposed, curved, bearing faces adapted to engage with oppositely disposed faces of the movable jaw and handle.

1,169,750. WRENCH. JOHN L. WALSH, Chicago, Ill., assignor of one-half to Thomas J. Conley, Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,150. (Cl. 81—143.)

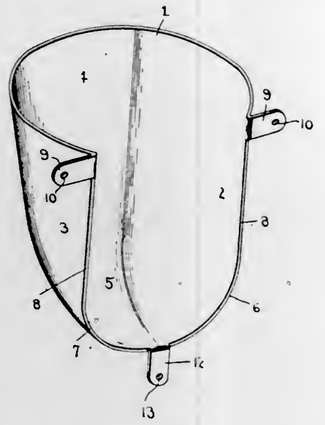


1. A wrench, comprising a handle having a fixed jaw on one end, a movable jaw, co-acting with said fixed jaw and slidably mounted on said handle, a gripping block movably secured in a recess in said movable jaw, said handle and gripping member having teeth adapted to interlock with each other, and a locking lever having an elongated head loosely pivoted in said recess and bodily movable therein along its major axis, said lever having a handle projecting out therefrom, said head lying between said gripping bar and a face of said recess, and its elongated portion being adapted to engage the gripping bar and said face of the recess, and acting to force the toothed bar into interlocked condition with the wrench handle when the locking lever is moved to its locking position.

2. A wrench, comprising a handle having a fixed jaw on one end, a movable jaw co-acting with said fixed jaw and slidably mounted on said handle, a gripping bar loosely secured in a recess in said movable jaw, with its ends abutting against end faces of said recess, said handle and gripping bar having teeth adapted to interlock, a locking lever having an elliptical head located in said re-

cess between said gripping bar and a face of said recess, and having also a handle projecting out beyond said recess, and a pin and slot connection between said movable jaw and lever for loosely connecting the two, said locking lever being capable of movement from an inactive position to an active position, wedging the gripping bar into interlocked condition with the wrench handle.

1,169,751. BIRD'S-NEST HOLDER. LOUIS T. LARSON, Stanton, Iowa. Filed July 1, 1915. Serial No. 37,457. (Cl. 119—45.)



1. A device of the character described comprising a cup-shaped sheet metal member of substantially circular cross-section having a portion of its vertical walls cut away to form vertical edges, and supporting means integral with the sheet metal member and projecting beyond the vertical edges.

2. A device of the character described comprising in combination with a suitable support, a cup-shaped sheet metal member having a portion of its vertical walls cut away to form vertical edges, and means integral with the vertical edges for connecting the device to a support, said supporting means adapted to space the device from the support.

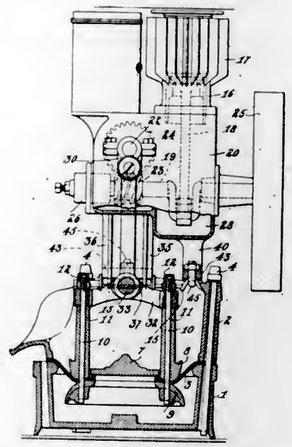
3. In combination with a suitable support, a cup-shaped sheet metal member of substantially circular cross-section having a portion of its vertical walls cut away to form vertically extending edges, said support covering the open side and a plurality of integral lugs projecting from said vertical edges, and provided with perforations for attaching the device to the support leaving a narrow space between said edges and the support.

4. In combination with a suitable support, an egg-shaped sheet metal member open on top and having its rear walls cut away to form vertically extending edges, and means projecting rearward and to the side from the vertically extending edges for attaching the sheet metal member to said support and spacing said member from the support.

1,169,752. PUMPING UNIT. GEORGE D. LOUD, Boston, Mass. Filed Dec. 5, 1914. Serial No. 875,698. (Cl. 103—62.)

1. A pumping unit, having in combination, a pump casing, a diaphragm supported in the casing, a motor having a crank case detachably secured to and supported by the pump case, a motor crank shaft and a pump crank shaft supported in the crank case directly above the diaphragm, reducing gears connecting the two shafts, a crosshead located outside of the crank case and connected to the diaphragm, and connections between the crosshead and pump shaft.

2. A pumping unit, having in combination, a pump casing, a movable pump member supported in the casing, a motor crank case, a motor crank shaft and a pump crank shaft supported at right angles to one another in the crank case, worm gearing connecting the two shafts, a crosshead secured to the movable member of the pump, and rods connecting the opposite ends of the pump shaft outside of the crank case with the crosshead.



3. A pumping unit comprising a pump casing, a motor crank case detachably secured to and supported by the pump casing, a motor crank shaft and a pump shaft supported in the crank case, reducing gears connecting the two shafts, a connecting rod secured to the pump shaft, and a crosshead supported by the rod outside of the crank case and adapted for attachment to a movable pump member.

4. A pumping unit comprising a pump casing having a series of inturned lugs, a motor crank case, a plurality of legs formed upon the crank case and arranged to coöperate with the corresponding lugs formed upon the pump casing, a motor crank shaft and a pump crank shaft supported in the crank case, connecting rods secured to the pump shaft outside of the crank case, a crosshead supported by the connecting rods, and guide members supported by the crank case and coöperating with the crosshead.

5. A pumping unit, having in combination, a pump casing provided with a series of inturned supports at its upper edge, a movable diaphragm supported in the casing, a motor crank case having feet coöperating with the supports to support the crank case upon the pump casing above the pump, a motor crank shaft, a crosshead secured to the diaphragm, and connections between the motor crank shaft and the crosshead.

[Claims 6 and 7 not printed in the Gazette.]

1,169,753. PRECIOUS-METAL ALLOY. RUDOLPH JOHN PESCHKO, York, Pa. Filed Mar. 12, 1915. Serial No. 13,897. (Cl. 75—1.)

1. An alloy containing 10 parts of platinum, 30 parts of palladium and 60 parts of gold.

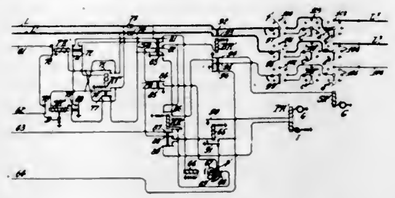
2. An alloy containing platinum, palladium, gold and a metal having the property of increasing the tensile strength of the alloy, the gold being in excess.

3. An alloy containing platinum, palladium, and an excess of gold.

4. An allow containing platinum, palladium, and an excess of gold, with from $\frac{1}{10}$% to 2% of a hardening metal.

5. An alloy containing platinum, palladium, and an excess of gold, with from $\frac{1}{10}$% to 2% of iridium.

1,169,754. AUTOMATIC TELEPHONE SYSTEM. FRED SCHOENWOLF, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Aug. 3, 1908. Serial No. 446,645. (Cl. 179—18.)



1. A selector for automatic systems including a traveling switch controlling member adjustable responsive to directive impulses, an auxiliary switch member traveling when said first member travels, and controlling means for automatically transmitting a secondary impulse after adjustment of said first member is completed.

2. A selector for automatic systems including a traveling switch controlling member adjustable responsive to directive impulses, switch wipers and adjusting mechanism to move said wipers, and means for stopping said wipers when said mechanism engages said member, whereby the extent of adjustment of the latter controls that of the former, such engagement also serving to automatically transmit a secondary impulse.

3. A selector for automatic systems including a traveling switch controlling member adjustable responsive to directive impulses, switch wipers and adjusting mechanism to move said wipers, means effective on initiation of travel of said member to cause operation of said adjusting mechanism whereby said mechanism overtakes said member after adjustment of the latter is completed, and an auxiliary selector circuit having its connections automatically changed responsive to such overtaking.

4. A connector for automatic systems including a traveling switch controlling member adjustable responsive to directive impulses, an auxiliary switch member traveling when said first member travels and temporarily coördinated therewith, and a test relay having its electrical condition altered when travel of both members is completed by coöperative action between said members.

5. A connector for automatic systems including a traveling switch controlling member adjustable responsive to directive impulses, an auxiliary switch member traveling when said first member travels and temporarily coördinated therewith, and a test relay controlled by joint action of said members.

[Claims 6 to 59 not printed in the Gazette.]

REISSUES.

14,051. ELECTRIC BATTERY. FELIPPE SABOIA BANDEIRA DE MELLO, Rio de Janeiro, Brazil. Filed Nov. 20, 1915. Serial No. 62,628. Original No. 1,148,152, dated July 27, 1915, Serial No. 796,949. (Cl. 204—38.)

1. The method of manufacturing electrodes of the kind described for battery cells, consisting in taking a copper compound reducible by hydrogen, then reducing said compound by hydrogen and oxidizing the reduced copper by exposure to the air at ordinary temperature.

2. The method of manufacturing electrodes of the kind described for battery cells, consisting in reducing an insoluble copper compound which is reducible by hydrogen by the action of electrolysis to a highly porous mass of metallic copper and oxidizing said mass by exposure to the air at ordinary temperature.

3. The process of manufacturing electrodes of the kind described for primary or secondary battery cells, consisting in reducing copper sulfid by electrolysis, and oxidizing the resulting mass.

4. The process of manufacturing electrodes of the kind described for primary or secondary battery cells, consisting in reducing copper sulfid by electrolysis in an alkaline solution, and oxidizing the resulting mass by exposure to the air.

5. The process of manufacturing electrodes of the kind described for primary or secondary cells, consisting in introducing copper sulfid into a support, reducing said copper sulfid by electrolysis in an alkaline solution to the state of a porous mass, and oxidizing said mass by exposing same to the air.

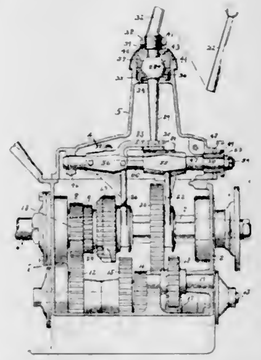
6. The process of manufacturing electrodes of the kind described for primary or secondary cells, consisting in introducing copper sulfid into a receptacle of metallic netting, reducing said copper sulfid by electrolysis in a solution of caustic soda to the state of a porous mass, and oxidizing said mass by exposure to the air at ordinary temperature.

7. The method of manufacturing electrodes of the kind described for battery cells, consisting in taking a copper salt which is reducible by hydrogen, reducing said copper salt by hydrogen, and oxidizing the reduced copper by exposure to the air.

8. An electrode for battery cells of the kind described, comprising a receptacle containing a finely divided highly porous mass of copper in molecular condition.

9. An electrode for battery cells of the kind described, comprising a receptacle containing a finely divided highly porous mass of copper oxid in molecular condition, oxidized by exposure to the atmosphere at ordinary temperature.

14,052. GEAR-SHIFTING MECHANISM. FRANK JOHNSON, Detroit, Mich. Filed Nov. 15, 1915. Serial No. 61,687. Original No. 1,156,405, dated Oct. 12, 1915, Serial No. 36,634. (Cl. 74—58.)



1. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved from neutral position, and means to shift the heads, forks and gears.

2. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, means for longitudinally adjusting said shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

3. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said

gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, said shaft having a transverse hole, said heads being each provided with a depression in alinement with said hole when the heads and yokes are in neutral positions, a pin slidable in said hole of such greater length than the diameter of the shaft that it extends into at least one of said depressions and always prevents the simultaneous movement of both of the heads, and means to shift the heads, forks and gears.

4. In a change-speed gearing, the combination of a gear box having a cover, a pedestal mounted on the cover, a shaft and gears mounted in said gear box, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads from being moved at the same time, and a shifting lever mounted intermediate its ends at the top of the pedestal and extending into engagement with said heads to shift the heads, forks and gears.

5. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads independently slidable on said second shaft, said second shaft having a longitudinal key-way, means mounted on one of the heads and extending into said key-way to prevent said head from turning on the shaft, means to prevent relative rotation between said heads, forks extending from said head into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously, and means to shift the heads, forks and gears.

6. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, means to hold each head and the gear slidable thereby in neutral position, an interlock to prevent both heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

7. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, the second shaft revolubly substantially parallel to the first, means for longitudinally adjusting said shaft, two heads slidable on said second shaft, means to hold each head at neutral position and at predetermined positions at either side of its neutral position, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

8. In a change-speed gearing, the combination of a gear box, a series of gears mounted therein, two of said gears being slidable, a shaft revolubly mounted in said gear box, two heads slidable on said shaft, forks extending from said heads into engagement with the slidable gears, an interlocking pin to prevent both of the heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

9. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on said shaft, second shaft revolubly mounted in said gear box, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, a longitudinal guide groove formed in one head, a guide bar mounted in the other head and extending into said groove to prevent relative rotation between said heads, an interlock to prevent both of the heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

10. In a change speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted in said gear box and provided with a longitudinal guide groove, two heads slidable on said second shaft, one of said heads having a projection extending into said guide groove to prevent relative rotation between said head and shaft, means to prevent relative rotation between said heads, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

11. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted adjacent the first, two heads slidable on said second shaft, a longitudinal guide groove formed in each head adjacent the bore for the shaft, a guide bar mounted in each head and extending into the groove in the other head to prevent relative rotation between the heads, forks extending from said heads into engagement with the slidable gears, an interlocking pin mounted in said shaft and adapted to slide transversely thereof into depressions in said guide bars when the forks and gears are in neutral position, said pin being of such length as to prevent simultaneous movement of said heads from neutral position, and means to shift the heads, forks and gears.

12. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted adjacent the first, two heads slidable on said second shaft and having longitudinal flanges provided with pockets in their adjacent faces, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from a position where said pockets register with each other, and a shifting lever extending into said pockets and movable transversely from one pocket into the other and longitudinally of said shaft with either of said heads to shift the heads, forks and gears.

13. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved from neutral position, and means to shift the heads, forks and gears.

14. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first, means for longitudinally adjusting said shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

15. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, said shaft having a transverse hole, said heads being each provided with a depression in alinement with said hole when the heads and yokes are in neutral positions, a pin slidable in said hole of such greater length than the diameter of the shaft that it extends into at least one of said depressions and always prevents the simultaneous movement of both of the heads, and means to shift the heads, forks and gears.

16. In a change-speed gearing, the combination of a gear box having a cover, a pedestal mounted on the cover, a shaft and gears mounted in said gear box, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads from being moved at the same time, and a shifting lever mounted intermediate its ends at the top of the pedestal and extending into engagement with said heads to shift the heads, forks and gears.

17. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first, two heads independently slidable on said second shaft, said second shaft having a longitudinal key-way, means mounted on one of the heads and extending into said key-way to prevent said head from turning on the shaft, means to prevent relative rotation between said heads, forks extending from said head into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously, and means to shift the heads, forks and gears.

18. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, means to hold each head and the gear slidable thereby in neutral position, an interlock to prevent both heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

19. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft substantially parallel to the first, means for longitudinally adjusting said shaft, two heads slidable on said second shaft, means to hold each head at neutral position and at predetermined positions at either side of its neutral position, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

20. In a change-speed gearing, the combination of a gear box, a series of gears mounted therein, two of said gears being slidable, a shaft mounted in said gear box, two heads slidable on said shaft, forks extending from said heads into engagement with the slidable gears, an interlocking pin to prevent both of the heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

21. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on said shaft, a second shaft mounted in said gear box, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, a longitudinal guide groove formed in one head, a guide bar mounted in the other head and extending into said groove to prevent relative rotation between said heads, an interlock to prevent both of the heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

22. In a change speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted in said gear box and provided with a longitudinal guide groove, two heads slidable on said second shaft, one of said heads having a projection extending into said guide groove to prevent relative rotation between said head and shaft, means to prevent relative rotation between said heads, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

23. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted adjacent the first, two heads slidable on said second shaft, a longitudinal guide groove formed in each head adjacent the bore for the shaft, a guide bar mounted in each head and extending into the groove in the other head to prevent relative rotation between the heads, forks extending from said heads into engagement with the slidable gears, an interlocking pin mounted in said shaft and adapted to slide transversely thereof into depressions in said guide bars when the forks and gears are in neutral position, said pin being of such length as to prevent simultaneous movement of said heads from neutral position, and means to shift the heads, forks and gears.

24. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft mounted adjacent the first, two heads slidable on said second shaft and having longitudinal flanges provided with pockets in their adjacent faces, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from a position where said pockets register with each other, and a shifting lever extending into said pockets and movable transversely from one pocket into the other and longitudinally of said shaft with either of said heads to shift the heads, forks and gears.

25. In a change speed gearing, the combination of a gear box, two engaging members slidable therein, a shaft revolubly mounted adjacent said engaging members, two heads movable longitudinally of said shaft, means to prevent the movement of both heads at the same time, means to slide said heads on the shaft, and means to connect said engaging members and said heads into pairs.

26. In a change speed gearing, the combination of a gear box, two engaging members slidable therein, a shaft mounted adjacent said engaging members, two heads movable longitudinally of said shaft, means to prevent the movement of both heads at the same time, means to slide said heads on the shaft, and means to connect said engaging members and said heads into pairs.

27. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a cover for said gear box, a second shaft mounted in said cover substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, means to hold each head and the gear slidable thereby in neutral position, an interlock to prevent both heads being simultaneously moved from neutral position, and means to shift the heads, forks and gears.

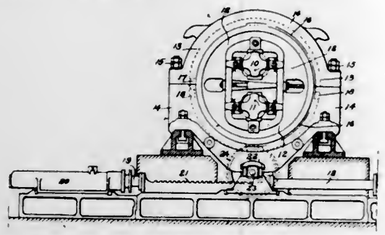
28. In a change-speed gearing, the combination of a gear box, a series of gears mounted therein, two of said gears being slidable, a cover for said gear box, a shaft mounted in said cover of the gear box, two heads slidable on said shaft, forks extending from said heads into engagement with the slidable gears, an interlocking pin to prevent both of the heads being simultaneously moved from neutral position, and means to shift the head, forks and gears.

29. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a cover for said gear box, a second shaft mounted in said gear box cover adjacent the first, two heads slidable on said second shaft, a longitudinal guide groove formed in each head adjacent the bore for the shaft, a guide bar mounted in each head and extending into the groove in the other head to prevent relative rotation between the heads, forks extending from said heads into engagement with the slidable gears, an interlocking pin mounted in said shaft and adapted to slide transversely thereof into depressions in said guide bars when the forks and gears are in neutral position, said pin being of such length as to prevent simultaneous movement of said heads from neutral position, and means to shift the heads, forks and gears.

30. In a change speed gearing, the combination of a series of driving members, two of said members being longitudinally movable, two heads, a supporting bar on which said heads are slidable parallel to the movement of said driving members, means on said heads connecting them and the driving members into pairs, means to

shift said heads and driving members, and means carried by the supporting bar permitting either one of the heads to be moved at will but preventing simultaneous movement of both of them.

14,053. TWO-HIGH REVERSING ROLLING-MILL AND LIKE MACHINE. ANDREW LAMBERTON, Coatbridge, Scotland. Filed June 15, 1915. Serial No. 34,315. Original No. 1,024,475, dated Apr. 23, 1912, Serial No. 657,318. (Cl. 80—33.)



1. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the horizontal planes of the roll axes, a driving shaft for said gear shaft and universal couplings between said driving and gear shafts.

2. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the horizontal planes of the roll axes, a second similarly arranged gear shaft coupled to the said second roll, means for driving said gear shafts and universal couplings between said gear shafts and said means.

3. In a two-high reversing rolling mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the horizontal planes of the roll axes, a second similarly arranged gear shaft coupled to the second roll, the pinions on said gear shafts intermeshing, a driving shaft and universal couplings between said driving shaft and one gear shaft.

4. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes and lying in a horizontal plane intermediate the horizontal planes of the roll axes, a second similarly arranged gear shaft, means for driving said gear shafts, universal couplings between said gear shafts and said means, a transmission shaft between each gear shaft and its corresponding roll, and a counterbalancing device between said transmission shafts comprising a flexible member connected to said shafts and a pulley mounted over the shafts and over which said flexible member passes.

5. In a two-high reversing rolling-mill, a pair of shaping rolls, means for rotating the same around a common axis to reverse their relative positions for the purpose described, in combination with a gear shaft lying in a horizontal plane intermediate the horizontal planes of said roll axes in working position, an intermediate transmission member and universal couplings connecting the latter at one end to said gear shaft and at the other end to one of said shaping rolls.

6. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, means for rotating the housings through an arc of 180 degrees, and means for driving the rolls comprising a shaft parallel with the roll axes and having its axis in a horizontal plane intermediate the horizontal planes of the roll axes, said shaft being coupled to one of the rolls, and means for rotating said shaft.

7. In a two-high reversing rolling mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, means for rotating the housings through an arc of 180 degrees, and means for driving the rolls comprising shafts parallel with the roll axes and lying in a horizontal plane intermediate the horizontal planes of the rolls, and coupled to said rolls, and means for rotating said shafts and rolls in opposite directions.

8. In a two-high reversing rolling mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, means for rotating the housings through an arc of 180 degrees, means for driving the rolls comprising shafts parallel with the roll axes and lying in a horizontal plane intermediate the horizontal planes of the rolls and coupled to said rolls, means for rotating one of said shafts, and means operated by the latter for rotating the other shaft in the opposite direction.

9. In a two-high reversing rolling mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, means for rotating the housings through an arc of 180 degrees, means for driving the rolls comprising shafts parallel with the roll axes and lying in a horizontal plane intermediate the horizontal planes of the rolls, transmitting shafts having their respective ends connected by universal members to the rolls and the parallel shafts, and means interposed between the transmitting shafts whereby one shaft serves as a counter-balance for the other shaft.

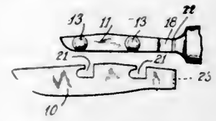
10. In a two-high reversing rolling mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, means for rotating the housings through an arc of 180 degrees, means for driving the rolls comprising shafts parallel with the roll axes and lying in a horizontal plane intermediate the horizontal planes of the rolls, transmitting shafts having their respective ends connected by universal members to the rolls and the parallel shafts and a counterbalancing device comprising a flexible member passing over a pulley and having its ends connected to the transmitting shafts.

11. In a two-high reversing rolling mill, a pair of rolls, means for rotating the rolls around a common axis to reverse their relative positions, in combination with a rotating member lying in a horizontal plane intermediate the horizontal planes of the roll axes in working position, and a transmitting shaft having its ends connected respectively with one of the rolls and with the rotating member.

12. In a rolling mill, the combination of a pair of rolls, means for so shifting said rolls that their axes are in relatively reversed positions in a vertical plane, thus reversing the direction of reduction by the rolls, in combination with a rotating member lying in a horizontal plane intermediate the horizontal planes of the axes of said rolls when in operative position, and an intermediate transmission member flexibly connected to one of the rolls and to the rotating member.

14,054. DETACHABLE-BLADE KNIFE. MORGAN PARKER, Newport, R. I. Filed Aug. 7, 1915. Serial No. 44,353. Original No. 1,139,796, dated May 18, 1915, Serial No. 833,347. (Cl. 30—9.)

1. A detachable blade knife comprising a handle, a blade-supporting member projecting from one end of the handle in substantial continuation of the handle and having a blade-supporting surface which is flat throughout the major portion thereof and is inclined in the direction of its length at the end thereof adjacent to the handle, a thin flexible blade, and means for securing the blade to the handle in contact with said surface and flexed in the direction of its length by the shape of said surface; substantially as set forth.



2. A detachable blade knife comprising a handle, a blade-supporting member projecting from one end of the handle and having a blade-supporting surface which is flat throughout the major portion thereof and is inclined in the direction of its length at its end adjacent to the handle, a thin flexible blade, means for securing the blade to the handle in contact with said surface and flexed in the direction of its length by the shape of the surface, and a retainer for preventing disengagement of the blade from said securing means; substantially as set forth.

3. A detachable blade knife comprising a handle having a blade-supporting surface at one end which is flat throughout the major portion thereof and is inclined at one end, headed studs projecting from said surface, and a thin flexible blade having slots therein opening at the rear edge of the blade, said blade being adapted to be held by the headed studs in flexed condition in contact with the flat and inclined portions of said surface; substantially as set forth.

4. A detachable blade knife comprising a handle having a blade-supporting surface at one end which is flat throughout the major portion thereof and is inclined at one end, headed studs projecting from said surface, a thin flexible metallic blade having slots therein to coact with said studs, said blade being adapted to be held in contact with the flat and inclined portions of said surface by said studs, and coacting parts on the handle and blade for preventing movement of the blade to detach it from the studs; substantially as set forth.

5. A detachable blade knife comprising the combination of a handle having a supporting surface thereon which is flat throughout its major portion and inclined at one end, headed studs projecting from said surface, a thin flexible blade slotted to coact with said studs and adapted to be held against the flat and inclined portions of said surface in flexed condition by said studs, and a retainer for holding the blade against movement in a direction to detach it from the handle consisting of coacting parts on the blade and handle which are brought into coaction by movement of the blade into position upon the supporting surface and which are held in engagement by the tension of the blade; substantially as set forth.

6. A detachable blade knife comprising a handle having a blade-supporting surface which is flat throughout the major portion thereof and the minor portion of which is inclined relatively to said flat portion, a thin flexible blade, and means for securing the blade to the handle in contact with said surface and flexed in the direction of its length by the shape of said surface by movement of the blade upon said surface while the blade is in flexed condition; substantially as set forth.

7. A detachable blade knife comprising a handle having a blade-supporting surface which is flat throughout the major portion thereof and the minor portion of which is inclined relatively to said flat portion in the direction of the length of the surface, a thin flexible blade, means for securing the blade to the handle in contact with said surface and flexed in the direction of its length by the shape of said surface by movement of the blade upon said surface while the blade is in flexed condition and retaining means dependent upon the flexure of the blade for holding the blade in coaction with the securing means; substantially as set forth.

8. A detachable blade knife comprising a handle having a blade-supporting surface, undercut blade-securing means projecting upwardly from the blade-supporting surface, a blade which is flexible in the direction of its length and which has edges adapted to coact with the undercut securing means as the blade is moved upon the supporting surface, means for flexing the blade solely in a longitudinal direction and transverse to its general plane as it is moved upon the supporting surface into coaction with the securing means, and retaining means for holding the blade against movement in the direction of its length to disengage it from the securing means and requiring that the blade be flexed longitudinally and transverse to its general plane to effect such disengagement; substantially as set forth.

9. A detachable blade knife comprising a handle having a blade-supporting surface, blade-securing means upstanding upon said surface and provided with undercut recesses, a longitudinally flexible blade shaped for coaction with the recesses of the securing means and adapted to be secured upon the blade-supporting surface by movement in the direction of its length upon said surface, means for flexing the blade solely in a longitudinal direction and transverse to its general plane as it is so moved upon the supporting surface in coaction with the securing means and retaining means for holding the blade in the position to which it is moved, said retaining means being dependent upon the flexure of the blade caused by its movement upon the supporting surface and requiring that the blade be flexed longitudinally and transverse to its general plane to permit its detachment from the handle; substantially as set forth.

10. A detachable blade knife comprising a handle having a blade-supporting surface, undercut blade-securing means projecting upwardly from the blade-supporting surface, a longitudinally flexible blade having edges adapted to coact with the undercut securing means as the blade is moved upon the supporting surface, means for automatically flexing the blade solely in a longitudinal direction and transverse to its general plane as the blade is moved upon the supporting surface into coaction with the securing means and before gaining its final position upon the supporting surface, and retaining means for holding the blade against movement in a direction to disengage it from the securing means rendered operative by release of the flexure of the blade and requiring that the blade be reversely flexed longitudinally and transverse to its general plane to effect such disengagement; substantially as set forth.

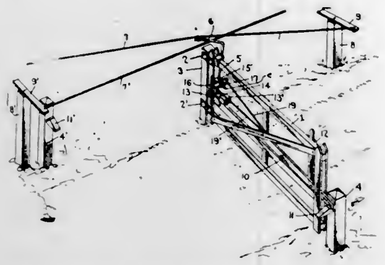
11. A detachable blade knife comprising a handle having a blade-supporting surface, a projection upstanding upon said surface and having grooves at its sides, a longitudinally flexible metallic blade having edges for coaction with said grooves and adapted to be secured upon said surface by a lengthwise movement of the blade upon the surface carrying said edges into the coacting grooves, and coöperating parts upon the blade and surface including walls extending transversely of the blade and surface arranged to cause flexure of the blade solely in the direction of its length and transverse to its general plane as it is moved upon the supporting surface and then become interlocked by relieving the said longitudinal flexure of the blade to lock the blade against movement; substantially as set forth.

12. A detachable blade knife comprising a handle having a blade-supporting surface, two headed studs rising from said surface, a longitudinally flexible blade having edges for coaction with said studs, means for causing flexure of the blade solely in the direction of its length and transverse to its general plane as the blade is moved in the direction of its length upon the supporting surface to carry said edges into coaction with the studs, and transverse walls on the blade and surface brought into coaction by relieving the longitudinal flexure of the blade to lock the blade against movement and requiring that the blade be flexed longitudinally and transverse to its general plane to permit its detachment from the handle.

14,055. GATE-OPERATING ATTACHMENT. JOHN N. TIPP, Carters Bridge, Va. Filed Sept. 30, 1915. Serial No. 53,457. Original No. 1,134,563, dated Apr. 6, 1915, Serial No. 867,596. (Cl. 39—36.)

1. The combination with a swinging gate, of a pivoted latch bar therefor, a vertical rod mounted on said gate

adjacent to its pivoted end, a crank arm on its upper end, a tongue rigidly carried on said vertical rod adjacent to its lower end, a keeper for said tongue rigidly carried on the gate within which the tongue is loosely carried to afford limited lateral motion, a cross bar adjustably carried on said vertical rod intermediate its ends, connecting rods between the ends of said bar and the pivoted latch bar for releasing the latch bar by the action of the vertical rod within the limits imposed by said keeper, and levers connected with the crank arm offset from the gate for actuating said crank, substantially as described.



2. The combination with a movable gate, of means for normally holding the same against movement, a vertical rod mounted on said gate, a crank arm on the upper end of the rod, a tongue rigidly carried on said vertical rod adjacent to its lower end, a keeper for said tongue rigidly carried on the gate within which the tongue is loosely carried to afford limited lateral motion, a cross bar adjustably carried on said vertical rod between its ends, connecting rods between the ends of said bar and the gate holding means for releasing the latter by the action of the vertical rod within the limits imposed by said keeper, and means connected with the crank arm and offset from the gate for actuating said crank arm.

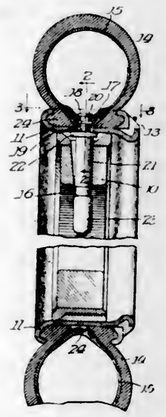
3. The combination with a vertical rod, of means for mounting the same on a swinging gate adjacent to its pivoted end, a crank arm on the upper end of said rod, a tongue rigidly carried on said vertical rod adjacent to its lower end, a keeper for said tongue within which the tongue has a limited loose play, means for rigidly securing the keeper to the gate, a cross bar adjustably carried on the vertical rod between its ends, means for connecting the ends of said cross bar with the gate holding means for releasing the same by the action of the vertical rod within the limits imposed by the keeper, and means connected with the crank arm for operating the same.

4. As an operating attachment for gates, the combination with a rock shaft, of bearing devices for journaling the same upon a gate, one of said bearing devices including a keeper, a tongue mounted on the rock shaft and having a limited play in the keeper, means on the rock shaft for operating the gate holding means within the limited movement of the rock shaft allowed by the keeper, and means for rotating the rock shaft.

5. As an operating attachment for gates, the combination with a rock shaft, of bearing devices for journaling the same upon the gate, one of said bearing devices including a keeper, a tongue mounted on the rock shaft and adjustable to different fixed positions thereon, said tongue engaging in and having a limited play with respect to the keeper, means on the rock shaft for operating the gate holding means therefrom within the limited movement of said rock shaft allowed by the keeper, and means for rotating the rock shaft.

6. As an operating attachment for gates, the combination with a rock shaft having an offset crank arm at one end, of upper and lower bearing devices for supporting and journaling said rock shaft upon a gate, means for securing said devices to a gate, a keeper formed upon the lower of said bearing devices, said rock shaft having an angular portion adjacent said lower bearing device, a tongue having a socket detachably and adjustably receiving the angular portion of the rock shaft, said tongue engaging and having a limited play in the keeper, a cross bar mounted on the vertical rod, operating devices for the gate holding means connected to the cross bar on opposite sides of the rock shaft, and means for operating the rock shaft connected to the crank arm.

14,056. SELF-ADJUSTING TIRE INNER-TUBE PROTECTOR. CLEMENT L. WITSAMAN, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Dec. 11, 1915. Serial No. 66,401. Original No. 1,096,980, dated May 19, 1914, Serial No. 616,926. (Cl. 152—21.)



1. A tire of the inflatable, inner-tube type, having a valve stem and a spreader head thereon, and also provided with means to prevent pinching of the inner tube between the edges of the outer tube, consisting of a strip of flexible material capable of conforming to the changing shape of the tire longitudinally and transversely during inflation and lying between and unconnected with the inner and outer tubes and bridging the space between the edges of the outer tube, said strip extending entirely around the tire and having its ends overlapped, said strip associated with the valve stem to hold the strip against creeping and at the same time permit longitudinal sliding of the ends of the strip upon one another during inflation of the tire, said overlapped ends of the strip being smooth to facilitate the sliding of the ends upon one another.

2. A tire of the inflatable, inner-tube and clencher type, having a valve stem and a spreader head thereon, and also provided with means to prevent pinching of the inner tube between the edges of the outer tube, consisting of a strip of flexible material capable of conforming to the changing shape of the tire longitudinally and transversely during inflation and lying between and unconnected with the inner and outer tubes and bridging the space between the edges of the outer tube; said strip extending entirely around the tire and having its ends overlapped and associated with the valve stem to hold the strip against creeping and at the same time permit longitudinal sliding of the ends of the strip upon one another during inflation of the tire, said overlapped ends of the strip being smooth to facilitate the sliding of the ends upon one another.

TRADE-MARKS

PUBLISHED JANUARY 25, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 73,911. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ALEX. D. SHAW & CO., New York, N. Y. Filed Nov. 11, 1913.

SHAW

Particular description of goods.—Brandy and other Spirits.
Claims use since Nov. 6, 1913.

Ser. No. 75,363. (CLASS 39. CLOTHING.) LOUIS MEYERS & SON, New York, N. Y., assignors to Louis Meyers & Son, New York, N. Y., a Firm composed of Edwin L. Meyers, David F. Meyer, and Wallace E. Meyers. Filed Jan. 22, 1914.

PERFECT FITTING

No claim being made to the words "Perfect Fitting" apart from the mark shown in the drawing.
Particular description of goods.—Leather Gloves.
Claims use since Jan. 1, 1887.

Ser. No. 75,364. (CLASS 39. CLOTHING.) LOUIS MEYERS & SON, New York, N. Y., assignors to Louis Meyers & Son, New York, N. Y., a Firm composed of Edwin L. Meyers, David F. Meyer, and Wallace E. Meyers. Filed Jan. 22, 1914.

L&M SON

Particular description of goods.—Leather Gloves.
Claims use since about January, 1894.

Ser. No. 80,379. (CLASS 37. PAPER AND STATIONERY.) THRIFT SERVICE COMPANY, Rockford, Ill. Filed Aug. 6, 1914.

THRIFT

Particular description of goods.—Savings Club Cards.
Claims use since June 1, 1914.

Ser. No. 82,889. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL SCHELLER & CO. A. G., Zurich, Switzerland. Filed Nov. 24, 1914.



Particular description of goods.—Chemicals, Medicines and Pharmaceutical Preparations for the Treatment of Constipation; Diarrhea; Diseases and Anomalous Function of the Digestive Organs in General; Cardiac Diseases and Troubles of Blood Circulation; Affections of the Respiratory, Urinary, and Sexual Organs; Cutaneous Diseases; Rheumatism, Neuralgia, Lumbago, and the Like; Tuberculosis, Syphilis, Arthritis, Arterio-Sclerosis; Affections of the Eyes; Anemia, Exhaustion; Chemicals, Medicines, and Pharmaceutical Preparations for External and Internal Disinfection, the Latter Having to do with the Respiratory, Digestive, and Urinary Organs, and in the Case of Subcutaneous Injection (*i. e.*, in the treatment of Beri-Beri, Intermittent Fever, Syphilis, Etc.) the Blood; Chemicals, Medicines, and Pharmaceutical Preparations for Producing General or Local Anesthesia; Chemicals, Medicines, and Pharmaceutical Preparations Adapted to Modify the Metabolic Assimilation; Anthelmintic, Antiparasitic, Antipyretic, Anaphrodisiac, Anti-Epileptic, Antihysteric, Narcotic, Sedative, Soporiferous, Analeptic, Stimulating, Exciting, Aphrodisiac, Styptic, Astrictive, and Diaphoretic Chemicals, Medicines, and Pharmaceutical Preparations; Chemicals, Medicines, and Pharmaceutical Preparations Adapted to Increase, Diminish, or Modify the Secretions. All or Any of These Articles are Sold in Various Forms—as, for Instance, Pills, (Coated or Uncoated,) Gelatin Pearls, Lozenges, Compressed Tablets, Sterilized Ampullæ, Grains, and the Ethyl Chlorid in Spray-Tubes with Spring-Levers or Screw-Caps.
Claims use since January, 1910.

Ser. No. 83,899. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed Jan 16, 1915.

CHECKMATE

Particular description of goods.—Wheat-Flour.
Claims use since August, 1894.

Ser. No. 84,620. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY COOLEY, Madison, Wis. Filed Feb. 19, 1915.

SANOLENE

Particular description of goods.—A Non-Inflammable, Non-Poisonous, Odorless Chemical Destroyer of Cockroaches, Bedbugs, Buffalo-Moths, and other Household Vermin.
Claims use since Aug. 1, 1914.

Ser. No. 84,747. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ALEXANDER SAMPSON, New York, N. Y. Filed Feb. 24, 1915.

CAMEO

Particular description of goods.—Soaps.
Claims use for at least five years prior to Mar. 5, 1907.

Ser. No. 85,224. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) K-G WELDING & CUTTING COMPANY INC., New York, N. Y. Filed Mar. 17, 1915.

K-G

Particular description of goods.—Cutting-Torches, Welding-Torches, Expansion-Tanks, Handles for Cutting and Welding Apparatus.
Claims use since prior to Feb. 1, 1915.

Ser. No. 85,935. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WEST DISINFECTING COMPANY, New York, N. Y. Filed Apr. 13, 1915.



No claim is made to the exclusive use of the words "Sewer Gas," "Typhus," "Cholera," "Disease," "Diphtheria," and "Pestilence" appearing on said drawing.
Particular description of goods.—Disinfectants; Aromatic Disinfecting Fluids; Insecticides; Deodorants; Perfumed Deodorants; Antiseptic Fluids; Antiseptic Powders; Dips and Washes for Cattle, Sheep, Swine, Horses, Mules, Dogs, Poultry; Germicides; Specifics for Removal of Organic Matter in Plumbing; Absorbing-Powders for Deodorizing, Disinfecting, or Antiseptic Purposes.
Claims use since the 15th day of July, 1899.

Ser. No. 86,355. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GEO. RAHMANN & Co., New York, N. Y. Filed May 3, 1915.

COMBER

The trade-mark "Comber."
Particular description of goods.—Leather Belting.
Claims use since the 6th day of August, 1913.

Ser. No. 87,585. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) GEO. BORGFELDT & Co., New York, N. Y. Filed June 25, 1915.

Caricatype

Particular description of goods.—Statuettes.
Claims use since May 20, 1915.

Ser. No. 88,019. (CLASS 31. FILTERS AND REFRIGERATORS.) THE KENNICOTT COMPANY, Chicago Heights and Chicago, Ill. Filed July 19, 1915.

AEROX

Particular description of goods.—Water-Coolers.
Claims use since on or about the 24th day of March, 1915.

Ser. No. 88,396. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. T. ROBERTSON Co., Manchester, Conn. Filed Aug. 3, 1915.

JayTee

Particular description of goods.—Toilet Soap.
Claims use since Jan. 25, 1915.

Ser. No. 88,552. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THRIFT COUPON COMPANY OF AMERICA, San Francisco, Cal. Filed Aug. 11, 1915.

THRIFT

Particular description of goods.—Redeemable Trade-Checks Made of Metal.
Claims use since on or about Nov. 20, 1914.

Ser. No. 88,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES C. BRIGADELL, Atlantic City, N. J. Filed Aug. 13, 1915.

Camphorole

Particular description of goods.—An Ointment.
Claims use for about three years.

Ser. No. 88,744. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAGNETIC PIGMENT COMPANY, New York, N. Y. Filed Aug. 21, 1915.

MAPICO

Particular description of goods.—Pigments for General Use.
Claims use since October, 1914.

Ser. No. 89,038. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SMITH FORM-A-TRUCK COMPANY, Seattle, Wash. Filed Sept. 4, 1915.

Form-a-Truck

No claim being made to the word "Truck" apart from the mark shown in the drawing.
Particular description of goods.—Automobiles and Trucks.
Claims use since Mar. 15, 1915.

Ser. No. 89,077. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STANDARD LIME AND STONE COMPANY, Baltimore, Md. Filed Sept. 7, 1915.

"A"

Particular description of goods.—Dolomite.
Claims use since the 23d day of August, 1915.

Ser. No. 89,078. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STANDARD LIME AND STONE COMPANY, Baltimore, Md. Filed Sept. 7, 1915.

"AA"

Particular description of goods.—Dolomite.
Claims use since the 23d day of August, 1915.

Ser. No. 89,106. (CLASS 39. CLOTHING.) OZARK GARMENT MANUFACTURING CO., Chicago, Ill. Filed Sept. 8, 1915.

OZARK

No claim is made to the exclusive right to the use of the word "Ozark" apart from the mark shown in the drawing. The parallel lines appearing on the drawing are intended to represent shading and not the color red.
Particular description of goods.—Children's Garments—Namely, Rompers, Play-Suits, Wash-Suits, and Blouses.
Claims use since a date prior to Jan. 1, 1908.

Ser. No. 89,172. (CLASS 39. CLOTHING.) PERRY-MALCOLM CO., Haverhill, Mass. Filed Sept. 13, 1915.

PYMAL

Particular description of goods.—Shoes Made of Either Rubber, Leather, Cloth, or a Combination of All Three.
Claims use since Jan. 1, 1911.

Ser. No. 89,337. (CLASS 12. CONSTRUCTION MATERIALS.) THE UNION PAPER AND TWINE COMPANY, Cleveland, Ohio. Filed Sept. 20, 1915.

DURO

Particular description of goods.—Roofing-Paper.
Claims use since May 1, 1911.

Ser. No. 89,520. (CLASS 5. ADHESIVES.) NATIONAL GUM & MICA CO., New York, N. Y. Filed Sept. 28, 1915.



No claim being made to the exclusive use of the words "Cold Glues" and "Do all of your work all of the time" except in connection with the other features shown on the drawing herewith presented.
Particular description of goods.—Cold Glues, Adhesive Gums, and Adhesive Pastes.
Claims use since December, 1911.

Ser. No. 89,549. (CLASS 38. PRINTS AND PUBLICATIONS.) OUTING PUBLISHING CO., New York, N. Y. Filed Sept. 30, 1915.



Particular description of goods.—Magazines Published Monthly and Books Published Periodically.
Claims use since Sept. 1, 1915.

Ser. No. 89,551. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SPARTAN MEDICINE COMPANY, Spartanburg, S. C. Filed Sept. 30, 1915.

WHOOP NOT

Particular description of goods.—A Remedy for Whooping-Cough.
Claims use since Sept. 12, 1912.

Ser. No. 89,562. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WHITNEY-ECKSTEIN SEED CO., Buffalo, N. Y. Filed Sept. 30, 1915.

FRONTIER

The trade-mark consists of the word "Frontier."
Particular description of goods.—Timothy, Clover, Alsike, Alfalfa, Red-Top, Grass, and Clover Seeds, Lawn-Seed, Lawn-Grass and Pasture Mixtures, Seed-Corn, Seed-Grain, and Field-Seeds of All Kinds.
Claims use since the 1st day of October, 1914.

Ser. No. 89,563. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WHITNEY-ECKSTEIN SEED CO., Buffalo, N. Y. Filed Sept. 30, 1915.

HERALD

The trade-mark consists of the word "Herald."
Particular description of goods.—Timothy, Clover, Alsike, Alfalfa, Red-Top, Grass, and Clover Seeds, Lawn-Seed, Lawn-Grass and Pasture Mixtures, Seed-Corn, Seed-Grain, and Field-Seeds of All Kinds.
Claims use since the 1st day of October, 1914.

Ser. No. 89,631. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN GRAF COMPANY, Milwaukee, Wis. Filed Oct. 4, 1915.

Lemon Life

Particular description of goods.—A Non-Alcoholic Carbonated Beverage Sold as a Soft Drink.
Claims use since August, 1915.

Ser. No. 89,794. (Class 39. CLOTHING.) HART SCHAFFNER & MARX, Chicago, Ill. Filed Oct. 11, 1915.

Dixie Weave

No claim is made for the word "Weave" except in connection with the word "Dixie."
Particular description of goods.—Men's Suits, Comprising Coats, Vests, and Trousers.
Claims use since the 7th day of October, 1915.

Ser. No. 89,839. (CLASS 12. CONSTRUCTION MATERIALS.) TRUSSED CONCRETE STEEL COMPANY, Detroit, Mich. Filed Oct. 13, 1915.

MASBESTIC

The word "Masbestic."
Particular description of goods.—A Bituminous Pipe-Joint Compound.
Claims use since September, 1915.

Ser. No. 89,855. (CLASS 12. CONSTRUCTION MATERIALS.) P. BANNON PIPE CO., Louisville, Ky. Filed Oct. 13, 1915.



Particular description of goods.—Vitrified Salt-Glazed Underground Conduits Inclosing Steam-Pipes.
Claims use since July 1, 1915.

Ser. No. 89,908. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BEDFORD MILLS, INC., New York, N. Y. Filed Oct. 18, 1915.

FLORINE

Particular description of goods.—Silk and Cotton Piece Goods.
Claims use since August, 1914.

Ser. No. 89,938. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) ATLAS POWDER COMPANY, Wilmington, Del. Filed Oct. 19, 1915.



No claim being made to the word "Brand."
Particular description of goods.—Powder and Dynamite.
Claims use since June 1, 1915.

Ser. No. 90,030. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE INTERNATIONAL RUBBER CO., Denver, Colo. Filed Oct. 22, 1915.

HALF-SOLE TIRE

No claim is made for the word "Tire" apart from the mark illustrated in the accompanying drawing.
Particular description of goods.—Rubber Tires.
Claims use since Sept. 1, 1915.

Ser. No. 90,035. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PIERCE-ORANGE COMPANY, Philadelphia, Pa., and Atlanta, Ga. Filed Oct. 22, 1915.



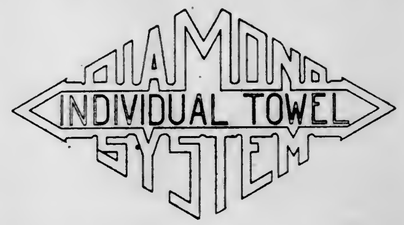
No claim being made to the word "Orange" except in association with the mark as shown.
Particular description of goods.—Non-Alcoholic Carbonated Beverage and Syrup for Making the Same.
Claims use since Mar. 1, 1915.

Ser. No. 90,364. (CLASS 12. CONSTRUCTION MATERIALS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Nov. 2, 1915.

VERSA-TILE

No claim being made to the word "Tile" except in connection with the remainder of the mark.
Particular description of goods.—Prepared Roofings.
Claims use since January, 1914.

Ser. No. 90,401. (CLASS 2. RECEPTACLES.) HENRY A. AMMANN, Spokane, Wash. Filed Nov. 4, 1915.



No claim being made for the words "Individual Towel."
Particular description of goods.—Wire Fork or Open Guide for Towel-Racks.
Claims use since the 23d day of October, 1915.

Ser. No. 90,429. (CLASS 12. CONSTRUCTION MATERIALS.) ROBERT F. CARPENTER, Cleveland, Ohio. Filed Nov. 5, 1915.

Sanymetal

"Sanymetal."

Particular description of goods.—Sheet-Metal Partitions.

Claims use since Sept. 18, 1915.

Ser. No. 90,478. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLER MEDICINE COMPANY, Palestine, Tex. Filed Nov. 6, 1915.



Particular description of goods.—A Medicated Tooth-Soap and a Preparation for Consumption, Kidneys, Chills, Diseases of Females, Granulated Liver, and Stomach.

Claims use since Sept. 1, 1915.

Ser. No. 90,484. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE MILLER RUBBER COMPANY, Akron, Ohio. Filed Nov. 6, 1915.

SANITATE

Particular description of goods.—Nipples, Non-Collapsible.

Claims use since Jan. 1, 1907.

Ser. No. 90,606. (CLASS 39. CLOTHING.) MANN & DILKS, Philadelphia, Pa. Filed Nov. 12, 1915.



HYLAND

No claim being made to the word "Hyland" apart from the mark shown in the drawing.

Particular description of goods.—Dress, Negligée, Work, and Night Shirts, Knitted Hosiery, Pajamas, Woven and Knitted Undershirts, Drawers, and Union Suits, Coats, Trousers, Vests, Jackets, and Dressing, Smoking, Lounging, and Bath Gowns and Robes.

Claims use since Jan. 1, 1911.

Ser. No. 90,624. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Nov. 12, 1915.



COLONIAL

Particular description of goods.—Hand-Bags, Children's Purses, Folding Purses, Bill-Folds, Week-End Cases, Dollar-Pockets, Card-Cases, Pocket-Books, Music-Rolls, Brief-Cases, Portfolios, Beaded Hand-Bags, Beaded Purses, Beaded Pouches.

Claims use since the year 1897.

Ser. No. 90,666. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) C. J. TAGLIABUE MANUFACTURING COMPANY, Brooklyn, N. Y. Filed Nov. 15, 1915.

TELAFEVER

Particular description of goods.—Clinical Thermometers.

Claims use since Sept. 1, 1915.

Ser. No. 90,672. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BADGER CHEESE COMPANY, Monroe, Wis. Filed Nov. 16, 1915.



Particular description of goods.—Cheese, Including Limburg and Brick Cheeses.

Claims use since the 1st day of May, 1905.

Ser. No. 90,726. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind. Filed Nov. 18, 1915.

Aunt Mandy

Particular description of goods.—Wheat-Flour.

Claims use since Sept. 28, 1915.

Ser. No. 90,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MONARCH MILLING CO., Hutchinson, Kans. Filed Nov. 18, 1915.

American Gentleman

Particular description of goods.—Wheat-Flour.

Claims use since September, 1914.

Ser. No. 90,729. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MONARCH MILLING CO., Hutchinson, Kans. Filed Nov. 18, 1915.

American Lady

Particular description of goods.—Wheat-Flour.

Claims use since March, 1906.

Ser. No. 90,732. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NORTHWESTERN ELEVATOR AND MILL CO., Toledo, Ohio. Filed Nov. 18, 1915.



Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since Oct. 1, 1915.

Ser. No. 90,737. (CLASS 17. TOBACCO PRODUCTS.) ROTH TOBACCO COMPANY, Cape Girardeau, Mo. Filed Nov. 18, 1915.



The same being lined to indicate red.

Particular description of goods.—Plug-Tobacco.

Claims use since Nov. 15, 1915.

Ser. No. 90,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TWIN FALLS MILLING & ELEVATOR CO., Twin Falls, Idaho, and Denver, Colo. Filed Nov. 18, 1915.



Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since Sept. 24, 1915.

Ser. No. 90,746. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) VEREINIGTE JAEGER, ROTHE & SIEMENS-WERKE AKTIENGESELLSCHAFT, Leipzig, Saxony, Germany. Filed Nov. 18, 1915.



Particular description of goods.—Heating-Stoves Operated by Gas.

Claims use since about the 25th day of April, 1894.

Ser. No. 90,749. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WILSON MILLING & ELEVATOR CO., Wilson, Kans., and Denver, Colo. Filed Nov. 18, 1915.



Particular description of goods.—Wheat-Flour.

Claims use since Oct. 16, 1915.

Ser. No. 90,750. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WILSON MILLING & ELEVATOR Co., Wilson, Kans., and Denver, Colo. Filed Nov. 18, 1915.

DIVIDEND

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 16, 1915.

Ser. No. 90,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DIRECT IMPORTING COMPANY, Boston, Mass. Filed Nov. 20, 1915.

COCORN

Particular description of goods.—A Preparation of Cocoa and Corn-Starch.
Claims use since Oct. 15, 1915.

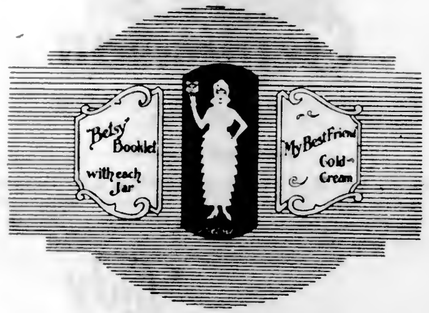
Ser. No. 90,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BENJAMIN H. GREEN, Bessemer, Ala. Filed Nov. 20, 1915.



B.H. GREEN'S
WILD WOODS

The portrait shown being that of myself.
Particular description of goods.—A Preparation for Cancers, Ulcers, and Tumors.
Claims use since 1892.

Ser. No. 90,802. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE EMIL SCHULT TOILET ARTICLE COMPANY, INC., New York, N. Y. Filed Nov. 20, 1915.



No claim being made for the use of the reading-matter appearing thereon apart from the mark shown in the drawing.
Particular description of goods.—Cold-Cream.
Claims use since Aug. 27, 1915.

Ser. No. 90,824. (CLASS 39. CLOTHING.) CRESTWOOD SALES CO., INC., Scarsdale, N. Y. Filed Nov. 22, 1915.

CRESALES
QUALITY

Comprising the words "Cresales Quality," no claim being made to the exclusive use of the word "Quality" apart from the mark shown in the drawing.
Particular description of goods.—Dress, Negligée, Work, and Flannel Shirts.
Claims use since Nov. 10, 1915.

Ser. No. 90,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FEDERAL MILLING COMPANY, Lockport, N. Y. Filed Nov. 23, 1915.

LASSIE

Particular description of goods.—Rye-Flour.
Claims use since Oct. 27, 1915.

Ser. No. 90,875. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ALFRED JOUANNET, Mount Pleasant, S. C. Filed Nov. 23, 1915.



No claim of exclusive trade-mark rights being made to the words "The Seal of Quality."
Particular description of goods.—Plants, Roots, Seeds.
Claims use since Oct. 26, 1915.

Ser. No. 90,926. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

JEWEL

Particular description of goods.—Oleomargarin.
Claims use since Dec. 1, 1904.

Ser. No. 90,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Boston, Mass. Filed Nov. 26, 1915.

LO-WI-CO.

Consisting of the word "Lo-Wi-Co."
Particular description of goods.—Cakes.
Claims use since about Sept. 10, 1915.

Ser. No. 90,982. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 29, 1915.

DEFENDER

Particular description of goods.—Fertilizers.
Claims use since Dec. 1, 1914.

Ser. No. 90,988. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 29, 1915.

SAMSON

Particular description of goods.—Fertilizers.
Claims use since Sept. 1, 1888.

Ser. No. 90,995. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE BLOCK GAS MANTLE COMPANY, Youngstown, Ohio. Filed Nov. 29, 1915.

T.B.

Particular description of goods.—Mantles for Incandescent Gas-Lamps.
Claims use since the 20th day of November, 1915.

Ser. No. 91,010. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY New York, N. Y., and Kansas City, Mo. Filed Nov. 29, 1915.

Cocolasses

Consisting of the word "Cocolasses."
Particular description of goods.—Cakes.
Claims use since about Sept. 24, 1915.

Ser. No. 91,046. (CLASS 15. OILS AND GREASES.) UNION OIL COMPANY OF CALIFORNIA, San Francisco, Cal. Filed Nov. 30, 1915.

ARISTO

Particular description of goods.—Lubricating-Oils.
Claims use since Nov. 17, 1915.

Ser. No. 91,048. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE UNITED STATES ASPHALT REFINING COMPANY, New York, N. Y. Filed Nov. 30, 1915.

RUBRAX

"Rubrax."
Particular description of goods.—Asphalt-Base Filler Used for Mixing with Rubber, &c.
Claims use since the 1st of September, 1915.

Ser. No. 91,049. (CLASS 21. ELECTRICAL APPARATUS, MACHINES AND SUPPLIES.) THE UNITED STATES ASPHALT REFINING COMPANY, New York, N. Y. Filed Nov. 30, 1915.

INFULAX

"Infulax."
Particular description of goods.—An Asphalt-Base Filler Used for Insulating Wire, &c.
Claims use since the 1st of September, 1915.

Ser. No. 91,055. (CLASS 39. CLOTHING.) CARSON, PIRIE, SCOTT & Co., Chicago, Ill. Filed Dec. 1, 1915.

LITTLE PRIDE

Particular description of goods.—Hosiery.
Claims use since about July 25, 1915.

Ser. No. 91,079. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER COMPANY, Bristol, R. I. Filed Dec. 1, 1915.

WEEK-END

Particular description of goods.—Rubber and Canvas Boots, Shoes, and Slippers.
Claims use since Sept. 24, 1914.

Ser. No. 91,098. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAD CHEMICAL COMPANY, New York, N. Y. Filed Dec. 2, 1915.

DENTILLA

Comprising the word "Dentilla."
Particular description of goods.—Toilet Preparations—viz., Tooth-Paste, Tooth-Powder, and Mouth-Wash.
Claims use since Apr. 26, 1915.

Ser. No. 91,112. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HENRY L. WHITMAN, Jr., St. Louis, Mo. Filed Dec. 2, 1915.

LUVIUM

Particular description of goods.—Alloy Metals.
Claims use since about December, 1914.

Ser. No. 91,142. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed Dec. 3, 1915.

IRIS

Particular description of goods.—Non-Alcoholic Beverages Sold as Soft Drinks.
Claims use since Nov. 15, 1915.

Ser. No. 91,143. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE PETER SCHOENHOFEN BREWING COMPANY, Chicago, Ill. Filed Dec. 3, 1915.

Edelweiss

Particular description of goods.—Cereal Beverages Sold as Soft Drinks.
Claims use since Nov. 15, 1915.

Ser. No. 91,146. (CLASS 17. TOBACCO PRODUCTS.) HARRY M. SMITH, Reading, Pa. Filed Dec. 3, 1915.

FINGER POINTS



Particular description of goods.—Cigars.
Claims use since about Nov. 25, 1913.

Ser. No. 91,168. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 4, 1915. Under ten-year proviso.

COON TAIL

Particular description of goods.—Knit and Felt Wool Boots, as Well as Knit Wool Socks.
Claims use since about Nov. 1, 1890.

Ser. No. 91,192. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN SHEET & TIN PLATE COMPANY, Pittsburgh, Pa. Filed Dec. 6, 1915.

THURITE

Particular description of goods.—Iron and Steel Sheets and Plates and Tin and Terne Plates.
Claims use since the 25th day of November, 1915.

Ser. No. 91,268. (CLASS 39. CLOTHING.) WHITE & SMITH GLOVE CO. INC., Gloversville, N. Y. Filed Dec. 7, 1915.

Whitesmith

Comprising the word "Whitesmith."
Particular description of goods.—Leather and Fabric Gloves and Mittens.
Claims use since Sept. 3, 1915.

Ser. No. 91,275. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TRIPPE, BARKER & Co., New York, N. Y. Filed Dec. 7, 1915.

DUROYCORD

Particular description of goods.—Cotton and Linen Piece Goods.
Claims use since about Nov. 9, 1915.

Ser. No. 91,290. (CLASS 31. FILTERS AND REFRIGERATORS.) HENRY N. CLARK Co., Boston, Mass. Filed Dec. 8, 1915.

CRESCENT

Particular description of goods.—Refrigerators.
Claims use since Jan. 1, 1895.

Ser. No. 91,307. (CLASS 39. CLOTHING.) ALFRED A. KOHN, New York, N. Y. Filed Dec. 8, 1915.

CONVERTO

Particular description of goods.—Boots and Shoes of Leather, Cloth, and Leather and Cloth.
Claims use since Nov. 10, 1915.

Ser. No. 91,316. (CLASS 39. CLOTHING.) MORAN-HOLMES SHOE COMPANY, Auburn, Me. Filed Dec. 8, 1915.

BETSY JANE

Particular description of goods.—Leather Shoes.
Claims use since Oct. 29, 1915.

Ser. No. 91,329. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SEARS, ROEBUCK AND Co., Chicago, Ill. Filed Dec. 8, 1915.

HYACEHIA

Particular description of goods.—Embroideries.
Claims use since Feb. 1, 1915.

Ser. No. 91,337. (CLASS 12. CONSTRUCTION MATERIALS.) PERRY W. TURNER, New Orleans, La. Filed Dec. 8, 1915.

Turnerised

Particular description of goods.—Plastic Insulating Composition for Buildings, Roofs, and Construction Materials.
Claims use since 1906.

Ser. No. 91,338. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass. Filed Dec. 8, 1915.



Particular description of goods.—Pennants and Banners.
Claims use since 1891.

Ser. No. 91,352. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 9, 1915.

PLATO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since Sept. 17, 1915.

Ser. No. 91,392. (CLASS 15. OILS AND GREASES.) BYRON BROOKS, New York, N. Y. Filed Dec. 11, 1915.

BROOKS © PENNSYLVANIA

No claim is made to the words "Brooks," "Co.," or "Pennsylvania" *per se.*
Particular description of goods.—Lubricating-Oils.
Claims use since Dec. 7, 1915.

Ser. No. 91,426. (CLASS 39. CLOTHING.) THE B. F. GOODRICH COMPANY, New York, N. Y. Filed Dec. 13, 1915.

DOUBLE DUTY

Particular description of goods.—Soles Composed of Rubber and a Fibrous Filler for Boots and Shoes.
Claims use since about Dec. 9, 1915.

Ser. No. 91,448. (CLASS 39. CLOTHING.) OPPENHEIM, COLLINS & COMPANY, NEW YORK, New York, N. Y. Filed Dec. 13, 1915.

Roselle

Particular description of goods.—Gloves.
Claims use since Nov. 26, 1915.

Ser. No. 91,474. (CLASS 5. ADHESIVES.) WILKINS U. GREENE, Ridgewood, N. J. Filed Dec. 14, 1915.

PORCE-LUTE

Particular description of goods.—Cement Used for the Purpose of Uniting Porcelain to Metals.
Claims use since Nov. 15, 1911.

Ser. No. 91,521. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 16, 1915.

KALO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 20, 1915.

Ser. No. 91,551. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NICHOLAS POWER COMPANY, New York, N. Y. Filed Dec. 17, 1915.

6B

Particular description of goods.—Apparatus for Projecting Motion-Pictures and Parts of Such Apparatus.
Claims use since about July 1, 1915.

Ser. No. 91,636. (CLASS 39. CLOTHING.) GEORGE F. DITTMANN BOOT & SHOE CO., St. Louis, Mo. Filed Dec. 21, 1915.

Select Circle

Particular description of goods.—Boots and Shoes of Leather.
Claims use since about Dec. 1, 1915.

Ser. No. 91,688. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 22, 1915.

ALCO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 15, 1915.

Ser. No. 91,689. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 22, 1915.

CORSO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 15, 1915.

Ser. No. 91,710. (CLASS 39. CLOTHING.) THE BEEBE-HOWES COMPANY, INC., New York, N. Y. Filed Dec. 23, 1915.

BE-HO-KO

Particular description of goods.—Hosiery.
Claims use since January, 1907.

Ser. No. 91,727. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 23, 1915.

BETH

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 21, 1915.

Ser. No. 91,728. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 23, 1915.

NEKO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 15, 1915.

Ser. No. 91,744. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 24, 1915.

HERO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 15, 1915.

Ser. No. 91,745. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 24, 1915.

INKA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 15, 1915.

Ser. No. 91,746. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 24, 1915.

NORA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 19, 1915.

Ser. No. 91,761. (CLASS 39. CLOTHING.) LENN A. DUCKWORTH, New York, N. Y. Filed Dec. 27, 1915.

PAL

Comprising the word "Pal."
Particular description of goods.—Knitted and Flat Underwear in One and Two Piece Garments.
Claims use since Dec. 20, 1915.

TRADE-MARK REGISTRATIONS GRANTED

JANUARY 25, 1916.

108,234. CARBON-PAPER. AMERICAN SALES BOOK COMPANY, LIMITED, Toronto, Ontario, Canada, and Niagara Falls, Elmira, and Glendale, N. Y.
Filed September 15, 1915. Serial No. 89,202. PUBLISHED NOVEMBER 9, 1915.

108,235. CARBON-PAPER. AMERICAN SALES BOOK COMPANY, LIMITED, Toronto, Ontario, Canada, and Niagara Falls, Elmira, and Glendale, N. Y.
Filed September 15, 1915. Serial No. 89,203. PUBLISHED NOVEMBER 9, 1915.

108,236. LOCK FOR BICYCLES AND MOTOR-VEHICLES WHERE THERE IS STRUCTURE TO ATTACH SAME. CLARENCE E. ANABLE, Sacramento, Cal.
Filed September 7, 1915. Serial No. 89,048. PUBLISHED NOVEMBER 9, 1915.

108,237. STOVE-POLISH. HILAIRE J. BEDARD, New Bedford, Mass.
Filed July 23, 1915. Serial No. 88,134. PUBLISHED NOVEMBER 9, 1915.

108,238. TIN-PLATE. BERGER BROS. COMPANY, Philadelphia, Pa.
Filed September 23, 1915. Serial No. 89,399. PUBLISHED NOVEMBER 16, 1915.

108,239. CERTAIN NAMED CLOTHING FOR WOMEN AND CHILDREN. HELEN A. BRANDON, Indianapolis, Ind.
Filed June 26, 1915. Serial No. 87,603. PUBLISHED NOVEMBER 16, 1915.

108,240. COTTON AND SILK SEWING-THREADS AND COTTON AND SILK YARNS. M. BRODSKY & CO., INC., New York, N. Y.
Filed October 22, 1915. Serial No. 90,014. PUBLISHED NOVEMBER 16, 1915.

108,241. COTTON AND SILK SEWING-THREADS AND COTTON AND SILK YARNS. M. BRODSKY & CO., INC., New York, N. Y.
Filed October 22, 1915. Serial No. 90,015. PUBLISHED NOVEMBER 16, 1915.

108,242. COTTON AND SILK SEWING-THREADS AND COTTON AND SILK YARNS. M. BRODSKY & CO., INC., New York, N. Y.
Filed October 22, 1915. Serial No. 90,016. PUBLISHED NOVEMBER 16, 1915.

108,243. COTTON AND SILK SEWING-THREADS AND COTTON AND SILK YARNS. M. BRODSKY & CO., INC., New York, N. Y.
Filed October 22, 1915. Serial No. 90,017. PUBLISHED NOVEMBER 16, 1915.

108,244. COTTON AND SILK SEWING-THREADS AND COTTON AND SILK YARNS. M. BRODSKY & CO., INC., New York, N. Y.
Filed October 22, 1915. Serial No. 90,018. PUBLISHED NOVEMBER 16, 1915.

108,245. TOILET POWDER. A. BOURJOIS & CO. INC., New York, N. Y.
Filed September 1, 1915. Serial No. 88,940. PUBLISHED NOVEMBER 16, 1915.

108,246. MEN'S OUTSIDE SHIRTS. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed October 19, 1914. Serial No. 81,972. PUBLISHED NOVEMBER 9, 1915.

108,247. CLOSET SKIRT-HANGERS. THE CLARK MANUFACTURING CO., Boston, Mass.
Filed September 17, 1915. Serial No. 89,267. PUBLISHED NOVEMBER 16, 1915.

108,248. SPARK-PLUGS. ECLIPSE MANUFACTURING COMPANY, Indianapolis, Ind., assignor to 3-X Spark Plug Co., Chicago, Ill., a Corporation of Illinois.
Filed March 25 1915. Serial No. 85,397. PUBLISHED APRIL 27, 1915.

108,249. SUBSTANCE TO PURIFY GASOLENE AND PREVENT FORMATION OF CARBON IN MOTOR-CYLINDERS. EFFECTO CO., Newark, N. J.
Filed October 15, 1915. Serial No. 89,858. PUBLISHED NOVEMBER 16, 1915.

108,250. OIL COMPOUND FOR USE IN CUTTING AND SHAPING OF METALS AND A RUST-PREVENTIVE. E. F. HOUGHTON & CO., Philadelphia, Pa.
Filed September 24, 1915. Serial No. 89,436. PUBLISHED NOVEMBER 16, 1915.

108,251. CLEANING-POWDER. THE HYGIENIC PRODUCTS COMPANY, Canton, Ohio.
Filed October 7, 1915. Serial No. 89,713. PUBLISHED NOVEMBER 16, 1915.

108,252. CANDY CATHARTIC TABLETS. THE JITNEY-LAX COMPANY, Macon, Ga.
Filed October 6, 1915. Serial No. 89,684. PUBLISHED NOVEMBER 9, 1915.

108,253. DETERGENT CLEANING PREPARATION IN THE FORM OF POWDER TABLETS. JOHN H. KINDT, Chicago, Ill.
Filed July 1, 1915. Serial No. 87,688. PUBLISHED NOVEMBER 16, 1915.

108,254. MEDICINE FOR TREATING OBESITY. THE KOREIN CO. INCORPORATED, Buffalo, N. Y.
Filed October 9, 1915. Serial No. 89,763. PUBLISHED NOVEMBER 16, 1915.

108,255. BABBITT METAL, WHITE BEARING AND ANTIFRICTION METALS, ELECTROTYPE, STEREOTYPE, AND LINOTYPE METALS. FRANK W. MILLER, New York, N. Y.
Filed September 28, 1915. Serial No. 89,516. PUBLISHED NOVEMBER 16, 1915.

108,256. ROUGH-QUARRIED ROCKS, SLABS, AND MARBLE. MORETTI-HARRAH MARBLE COMPANY, Sylacauga, Ala.
Filed April 10, 1915. Serial No. 85,860. PUBLISHED NOVEMBER 16, 1915.

108,257. WASHING-SODA. NATIONAL CHEMICAL COMPANY, Syracuse, N. Y.
Filed October 24, 1914. Serial No. 82,147. PUBLISHED NOVEMBER 16, 1915.

108,258. WATCHES, WATCHCASES, AND WATCH-MOVEMENTS. NORTH AMERICAN WATCH CO., INC., Mansfield, Ohio.
Filed July 12, 1915. Serial No. 87,898. PUBLISHED OCTOBER 26, 1915.

108,259. CANNED PEAS. NUTRICIA DAIRY FARM PRODUCTS CO., Thiensville, Wis.
Filed August 29, 1914. Serial No. 80,878. PUBLISHED NOVEMBER 9, 1915.

108,260. HAIR-CURLERS. EMIL OLLARIU, Philadelphia, Pa.
Filed August 24, 1915. Serial No. 88,789. PUBLISHED NOVEMBER 16, 1915.

108,261. FRUIT BEVERAGES. OLYMPIA BREWING CO., Olympia, Wash.
Filed May 14, 1915. Serial No. 86,619. PUBLISHED NOVEMBER 16, 1915.

108,262. SILVER-PLATED HOLLOW WARE. THE PAIRPOINT CORPORATION, New Bedford, Mass.
Filed July 2, 1915. Serial No. 87,716. PUBLISHED NOVEMBER 9, 1915.

108,263. REMEDY, PUT UP IN GELATIN CAPSULES, FOR TREATING CERTAIN NAMED DISEASES. HERMANUS ROLFF PLANTEN, New York, N. Y.
Filed September 21, 1915. Serial No. 89,358. PUBLISHED NOVEMBER 16, 1915.

108,264. HINGES. THE RACINE DETACHABLE HINGE Co., Racine, Wis.
Filed October 4, 1915. Serial No. 89,641. PUBLISHED NOVEMBER 16, 1915.

108,265. SHOE-CLEANING COMPOUNDS AND POLISHES. EDWARD J. REILLY, Baltimore, Md.
Filed July 30, 1915. Serial No. 88,314. PUBLISHED NOVEMBER 16, 1915.

108,266. FOOTWEAR—NAMELY, BOOTS, SHOES, AND MOCCASINS MADE OF LEATHER, RUBBER, AND CANVAS SEPARATELY OR COMBINED. ELIOT W. REMICK, Boston, Mass.
Filed September 24, 1915. Serial No. 89,446. PUBLISHED NOVEMBER 16, 1915.

108,267. CERTAIN NAMED CHEMICALS AND PHARMACEUTICAL PREPARATIONS. J. D. RIEDEL, ACTIENGESELLSCHAFT, Berlin-Britz, Germany.
Filed June 30, 1914. Serial No. 79,462. PUBLISHED NOVEMBER 16, 1915.

108,268. OILY CLEANING AND POLISHING COMPOSITION FOR AUTOMOBILES, FURNITURE, OR OTHER VARNISHED OR PAINTED SURFACES. HARRY G. ROBBINS, Minneapolis, Minn.
Filed July 23, 1915. Serial No. 88,145. PUBLISHED NOVEMBER 16, 1915.

108,269. SILKS IN THE PIECE. LOUIS ROESSEL & Co., New York, N. Y.
Filed September 2, 1915. Serial No. 88,989. PUBLISHED NOVEMBER 16, 1915.

108,270. JOURNAL COMPOUND IN POWDER FORM TO BE USED WITH OIL AS A LUBRICANT. JAMES O. SLOAN, Columbus, Ohio.
Filed September 24, 1915. Serial No. 89,448. PUBLISHED NOVEMBER 16, 1915.

108,271. CANNED VEGETABLES. STOKELY BROTHERS & Co., Newport, Tenn.
Filed July 28, 1915. Serial No. 88,261. PUBLISHED NOVEMBER 9, 1915.

108,272. CANNED VEGETABLES. STOKELY BROTHERS & Co., Newport, Tenn.
Filed July 28, 1915. Serial No. 88,262. PUBLISHED NOVEMBER 9, 1915.

108,273. CANNED VEGETABLES. STOKELY BROTHERS & Co., Newport, Tenn.
Filed July 28, 1915. Serial No. 88,263. PUBLISHED NOVEMBER 9, 1915.

108,274. CANNED VEGETABLES. STOKELY BROTHERS & Co., Newport, Tenn.
Filed July 28, 1915. Serial No. 88,264. PUBLISHED NOVEMBER 9, 1915.

108,275. INSULATED CABLES AND ELECTRIC CABLES AND CORDS. STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY, Rochester, N. Y.
Filed August 9, 1915. Serial No. 88,511. PUBLISHED NOVEMBER 16, 1915.

108,276. HIGH-FREQUENCY APPARATUS. THE VITA CORPORATION, Cleveland, Ohio.
Filed September 24, 1915. Serial No. 89,452. PUBLISHED NOVEMBER 16, 1915.

108,277. REMEDY FOR RHEUMATISM. LOUIS C. WEDGEFUTH, Yonkers, N. Y.
Filed September 10, 1915. Serial No. 89,140. PUBLISHED NOVEMBER 9, 1915.

108,278. IRON AND STEEL PIPE AND PIPE FITTINGS AND COUPLINGS. THE WESTERN CONDUIT Co., Youngstown, Ohio.
Filed September 30, 1915. Serial No. 89,557. PUBLISHED NOVEMBER 16, 1915.

108,279. WASHING-POWDERS. RALPH DOSSET WHITE, Conway, Ark.
Filed September 27, 1915. Serial No. 89,499. PUBLISHED NOVEMBER 16, 1915.

108,280. SARSAPARILLA, ROOT-BEER, FLAVORING-SYRUPS FOR NON-ALCOHOLIC BEVERAGES, AND SPEARMINT BEVERAGE. EMILE A. ZATARAIN, New Orleans, La.
Filed August 28, 1915. Serial No. 88,866. PUBLISHED NOVEMBER 16, 1915.

108,281. TRAVELING, HAND, CHATELAINE, AND PARTY BAGS, POCKET-BOOKS, PURSES, JEWEL-POCKETS, WALLETS, DRESSING AND SUIT CASES. BAIRD-NORTH Co., Providence, R. I.
Filed October 11, 1915. Serial No. 89,782. PUBLISHED NOVEMBER 16, 1915.

108,282. CIGARETTES. W. E. BEATTIE AND Co., New York, N. Y.
Filed August 21, 1915. Serial No. 88,724. PUBLISHED NOVEMBER 23, 1915.

108,283. LINIMENT (USED EXTERNALLY AND INTERNALLY) AND PILLS FOR CERTAIN NAMED DISEASES. GEORGE H. BECK, Staunton, Va.
Filed January 22, 1915. Serial No. 84,018. PUBLISHED NOVEMBER 2, 1915.

108,284. ELECTRIC-BATTERY CASINGS AND LIGHT-CASINGS. BRIGHT STAR BATTERY Co., New York, N. Y.
Filed October 7, 1915. Serial No. 89,701. PUBLISHED NOVEMBER 16, 1915.

108,285. MONTHLY PERIODICAL. CURTIS PUBLISHING COMPANY, Philadelphia, Pa.
Filed September 22, 1915. Serial No. 89,370. PUBLISHED NOVEMBER 23, 1915.

108,286. MINERAL WATERS. DRY RIDGE SANATORIUM AND HOTEL Co., Dry Ridge, Ky.
Filed October 23, 1915. Serial No. 90,054. PUBLISHED NOVEMBER 23, 1915.

108,287. PHONOGRAPHIC MACHINES AND SOUND-RECORDS. EMERSON PHONOGRAPH COMPANY, INC., New York, N. Y.
Filed August 4, 1915. Serial No. 88,411. PUBLISHED NOVEMBER 16, 1915.

108,288. COATS. H. GOLDMAN AND COMPANY, INC., New York, N. Y.
Filed September 30, 1915. Serial No. 89,544. PUBLISHED NOVEMBER 16, 1915.

108,289. ANTISEPTIC AND GERMICIDE MEDICINAL PREPARATIONS. WILLIAM PENN HAMMOND, Charlestown, Mass.
Filed August 27, 1915. Serial No. 88,839. PUBLISHED NOVEMBER 16, 1915.

108,290. TOILET-PAPER, PAPER NAPKINS, AND PAPER TOWELS. THE JOHN HOBERG Co., Green Bay, Wis.
Filed October 7, 1915. Serial No. 89,710. PUBLISHED NOVEMBER 16, 1915.

108,291. TOILET-PAPER, PAPER NAPKINS, PAPER TOWELS. THE JOHN HOBERG Co., Green Bay, Wis.
Filed October 7, 1915. Serial No. 89,711. PUBLISHED NOVEMBER 16, 1915.

108,292. TOILET-PAPER, PAPER TOWELS, AND PAPER NAPKINS. THE JOHN HOBERG Co., Green Bay, Wis.
Filed October 7, 1915. Serial No. 89,712. PUBLISHED NOVEMBER 16, 1915.

108,293. LAUNDRY STARCH. THE ARTHUR S. HOYT COMPANY, New York, N. Y.
Filed October 14, 1915. Serial No. 89,844. PUBLISHED NOVEMBER 16, 1915.

108,294. MEDICINAL COMPOUND FOR NOURISHING AND PURIFYING BLOOD. IDEAL BLOOD FOOD Co., Milwaukee, Wis.
Filed July 15, 1915. Serial No. 87,949. PUBLISHED NOVEMBER 16, 1915.

108,295. METAL WATER-STILLS. THE KENNICOTT COMPANY, Chicago, Ill.
Filed March 29, 1915. Serial No. 85,511. PUBLISHED NOVEMBER 16, 1915.

108,296. CIGARS, CIGARETTES, AND MANUFACTURED TOBACCO. E. KLEINER & Co., INC., New York, N. Y.
Filed September 28, 1915. Serial No. 89,511. PUBLISHED NOVEMBER 23, 1915.

108,297. CIGARS, CIGARETTES, AND MANUFACTURED TOBACCO. E. KLEINER & Co., INC., New York, N. Y.
Filed September 28, 1915. Serial No. 89,512. PUBLISHED NOVEMBER 23, 1915.

108,298. BRANDIES AND CORDIALS. LUCIEN LAVEDAN, New Orleans, La.
Filed July 1, 1915. Serial No. 87,689. PUBLISHED NOVEMBER 23, 1915.

108,299. WHISKY. VICTOR J. MCQUADE, New York, N. Y.
Filed July 21, 1915. Serial No. 88,079. PUBLISHED NOVEMBER 23, 1915.

108,300. LADIES', MISSES', AND CHILDREN'S DRESSES. MELHADO & Co., New York, N. Y.
Filed August 11, 1915. Serial No. 88,546. PUBLISHED NOVEMBER 23, 1915.

108,301. CERTAIN NAMED CLOTHING FOR LADIES AND CHILDREN. MILLER, BAKER & GOLDSMITH, Baltimore, Md.
Filed September 24, 1915. Serial No. 89,442. PUBLISHED NOVEMBER 23, 1915.

108,302. CERTAIN NAMED RUBBER FOOTWEAR. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed September 26, 1914. Serial No. 81,489. PUBLISHED NOVEMBER 16, 1915.

108,303. ROPE-CLAMPS. GEORGE C. MOON COMPANY, INC., New York, N. Y.
Filed January 20, 1915. Serial No. 83,976. PUBLISHED NOVEMBER 16, 1915.

108,304. CHILDREN'S UNDERGARMENTS MADE OF WOVEN FABRIC. PETERBORO MFG. Co., Gardner, Mass.
Filed July 29, 1915. Serial No. 88,284. PUBLISHED NOVEMBER 16, 1915.

108,305. LINIMENTS. SAMUEL PICK, Astoria, N. Y.
Filed September 18, 1915. Serial No. 89,300. PUBLISHED NOVEMBER 9, 1915.

108,306. LEATHER BELTING. GEORGE RAHMANN & Co., New York, N. Y.
Filed July 27, 1915. Serial No. 88,238. PUBLISHED NOVEMBER 23, 1915.

108,307. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. RARITAN COPPER WORKS, Perth Amboy, N. J.
Filed October 18, 1915. Serial No. 89,929. PUBLISHED NOVEMBER 16, 1915.

108,308. COTTON AND SILK BRAIDS. THE SANFORD NARROW FABRIC COMPANY, INC., New York, N. Y.
Filed June 10, 1915. Serial No. 87,233. PUBLISHED NOVEMBER 23, 1915.

108,309. COTTON AND SILK BRAIDS. THE SANFORD NARROW FABRIC COMPANY, INC., New York, N. Y.
Filed August 24, 1915. Serial No. 88,794. PUBLISHED NOVEMBER 23, 1915.

108,310. TOILET-PAPER. SAUQUOIT TOILET PAPER Co., INC., New Hartford, N. Y.
Filed July 26, 1915. Serial No. 88,218. PUBLISHED NOVEMBER 16, 1915.

108,311. COTTON PIECE GOODS. SMITH, HOGG & Co., New York, N. Y.
Filed October 23, 1915. Serial No. 90,068. PUBLISHED NOVEMBER 23, 1915.

108,312. NEWSPAPER-SECTION. STAR COMPANY, New York, N. Y.
Filed August 30, 1915. Serial No. 88,902. PUBLISHED NOVEMBER 23, 1915.

108,313. NATURAL MINERAL WATER. GEO. B. SWAN, Beaver Dam, Wis.
Filed September 4, 1915. Serial No. 89,039. PUBLISHED NOVEMBER 16, 1915.

108,314. HOSIERY. TAUBEL BROTHERS, Philadelphia, Pa.
Filed August 5, 1915. Serial No. 88,450. PUBLISHED NOVEMBER 9, 1915.

108,315. NON-ALCOHOLIC CARBONATED BEVERAGES SOLD AS SOFT DRINKS. ROLLAND ELLIS THOMPSON, Washington, D. C.
Filed September 30, 1915. Serial No. 89,651. PUBLISHED NOVEMBER 23, 1915.

108,316. NON-ALCOHOLIC CARBONATED BEVERAGES SOLD AS SOFT DRINKS. ROLLAND ELLIS THOMPSON, Washington, D. C.
Filed September 30, 1915. Serial No. 89,652. PUBLISHED NOVEMBER 23, 1915.

108,317. CERTAIN NAMED KNIT GOODS. TREINIS BROS., New York, N. Y.
Filed July 3, 1915. Serial No. 87,752. PUBLISHED NOVEMBER 23, 1915.

108,318. EGG-BEATERS. THE TURNER & SEYMOUR MANUFACTURING Co., Torrington, Conn.
Filed October 14, 1915. Serial No. 89,854. PUBLISHED NOVEMBER 16, 1915.

108,319. COTTON PIECE GOODS. WILMERDING & BISSET, New York, N. Y.
Filed October 16, 1915. Serial No. 89,902. PUBLISHED NOVEMBER 16, 1915.

108,320. GAS-STOVES AND GAS-HEATERS. AARON H. WOLFF, New York, N. Y.
Filed March 22, 1915. Serial No. 85,329. PUBLISHED NOVEMBER 23, 1915.

LABELS

REGISTERED JANUARY 25, 1916.

18,994.—*Title:* "SAFE HOSE." (For Hosiery.) THE BEEBE-HOWES COMPANY, INC., New York, N. Y. Filed December 30, 1915.

18,995.—*Title:* "QUADDY-ETTES." (For Toys, Games, and Novelties.) THORNTON W. BURGESS, Springfield, Mass. Filed December 8, 1915.

18,996.—*Title:* "PARLOR HORSE SHOE GAME." (For Games.) DE-FU MANUFACTURING CO., Kansas City, Mo. Filed December 6, 1915.

18,997.—*Title:* "TOM MORRIS." (For Scotch Whisky.) THE DELMARTIN DISTRIBUTING CO. LTD., New York, N. Y. Filed December 13, 1915.

18,998.—*Title:* "BIG 6." (For Gin.) HILMAR EHRMANN, Louisville, Ky. Filed December 8, 1915.

18,999.—*Title:* "EUCAPINE." (For a Salve.) EUCAPINE CHEMICAL COMPANY, Atlanta, Ga. Filed December 31, 1915.

19,000.—*Title:* "F. F. V." (For Canned Fresh Vegetables.) THE FULLER CANNERIES COMPANY, Cleveland, Ohio, and South Dayton, N. Y. Filed July 16, 1912.

19,001.—*Title:* "GELLMAN'S KOSHER SCOURING POWDER." (For Scouring-Powders.) HYMAN GELLMAN, New York, N. Y. Filed December 14, 1915.

19,002.—*Title:* "GEE BEE BREAD." (For Bread.) GENERAL BAKING COMPANY, New York, N. Y. Filed August 11, 1915.

19,003.—*Title:* "J-M GILSONITE PAVING CEMENT." (For Cement.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed December 11, 1915.

19,004.—*Title:* "DR. HALE'S HOUSEHOLD OINTMENT." (For Ointment.) KENYON & THOMAS CO., Adams, N. Y. Filed December 8, 1915.

19,005.—*Title:* "KAR-BO-LENE." (For Fire-Extinguishers.) KNIGHT & THOMAS, INC., Boston, Mass. Filed December 31, 1915.

19,006.—*Title:* "OVERNITE CARBON REMOVER." (For a Carbon-Remover.) OVERNITE CARBON REMOVER COMPANY, Chicago, Ill. Filed November 22, 1915.

19,007.—*Title:* "FOREST." (For Dried Prunes.) SALEM FRUIT UNION, Salem, Oreg. Filed November 26, 1915.

19,008.—*Title:* "SUPERIOR." (For Canned Salmon.) SUPERIOR TRADING CO., Seattle, Wash. Filed December 6, 1915.

19,009.—*Title:* "VICTORIOUS." (For Cigarettes.) M. G. TOPRAHANIAN, Fresno, Cal. Filed June 22, 1914.

19,010.—*Title:* "THE GREAT DIVIDE." (For Cigars.) FRED I. WATSON, Fort Collins, Colo. Filed April 5, 1915.

PRINTS

REGISTERED JANUARY 25, 1916.

4,184.—*Title:* "AS GOOD AS GOLD IS A GOOD RECOMMENDATION FOR GOLD. 'AS GOOD AS O-CEDAR' IS O-CEDAR'S BEST RECOMMENDATION." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed December 30, 1915.

4,185.—*Title:* "IT IS A SIMPLE THING TO KEEP YOUR FURNITURE AS CLEAN, BRIGHT AND SPARKLING AS NEW, SIMPLY USE O-CEDAR POLISH." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed December 30, 1915.

4,186.—*Title:* "THE CONNOISSEURS." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed December 28, 1915.

4,187.—*Title:* "L. KARL ERLICK CO. ARTISTS & SPECIALISTS IN WIGS AND TOUPEES." (For Wigs and Toupees.) LOUIS KARL ERLICK, Portland, Me. Filed October 11, 1915.

4,188.—*Title:* "POLISH- -INE." (For a Metal-Polish.) A. S. GREENBERG, Norfolk, Va. Filed August 10, 1914.

4,189.—*Title:* "BOULEVARD CLOTHES." (For Clothing.) SCHAFFNER & RUHSTADT, New York, N. Y. Filed May 6, 1915.

4,190.—*Title:* "CYPRESS 'THE WOOD ETERNAL.'" (For Cypress.) SOUTHERN CYPRESS MANUFACTURERS' ASSOCIATION, New Orleans, La. Filed November 18, 1915.

4,191.—*Title:* "THE WONDER-MIST WAY." (For a Cleansing and Polishing Compound.) THE WONDER-MIST CO., Boston, Mass. Filed November 17, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

PICKLES v. HOPKINS.

Decided November 29, 1915.

INTERFERENCE—PRIORITY.

Evidence considered and found to justify the award of priority to appellee.

Mr. J. D. Rippey, Mr. Geo. R. Hamlin, and *Mr. L. C. Kingsland* for the appellant.

Mr. L. S. Bacon, Mr. J. H. Milans, and *Mr. F. R. Cornwall* for the appellee.

ROBB, *J.:*

This appeal is from concurrent decisions of the Patent Office tribunals in an interference proceeding in which priority of invention was awarded the appellee.

The counts of the issue are as follows:

1. The combination with the type carriers, and the stops carried thereby, of key operated parts for moving said stops.

2. The combination with the type carriers, and the stops thereon, of a carriage, and key actuated devices in said carriage operable to move said stops to represent numbers.

3. A platen arranged to hold paper, a series of type carriers, and hammers operable to drive the type to record on paper held by said platen, in combination with a series of movable stops carried by each type carrier, a carriage, devices in said carriage operable effectively to position any desired stops, and keys operable to position said devices.

Appellant alleges conception of the invention in April, 1908, and reduction to practice by filing his application on June 7, 1909. Each of the tribunals of the Patent Office found that Hopkins had reduced the invention to practice as early as January, 1904, and that he had neither suppressed nor abandoned it thereafter. He introduced in evidence a machine known as "Hopkins first machine," which was in evidence in a prior interference that was before this court on appeal. (See *Hopkins* v. *Peters,* 41 App. D. C., 302.) The construction of that machine was commenced in September of 1903 and completed a few months thereafter. We ruled that the building and testing of this machine constituted a reduction to practice of the invention at issue in that interference. We agree with the Patent Office tribunals that—

> the successful operation of the part of the machine covered by the present issues is included in and must be inferred from the reduction to practice of the actuating devices set forth in the issue of that interference.

The conclusion of the Patent Office is so clearly right that we do not deem it necessary further to discuss the case.

The decision is affirmed.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Briggs patent, No. 609,954, for a paper-feeding machine, *Held* not anticipated and valid. *United Printing Machinery Co.* v. *Cross Paper Feeder Co.,* 227 Fed. Rep., 600.

(U. S. D. C.) The Marks patent, No. 635,141, for a process for devulcanizing rubber waste, *Held* void for lack of novelty and invention. *Philadelphia Rubber Works Co.* v. *Portage Rubber Co.,* 227 Fed., Rep., 623.

(U. S. C. C. A.) The device of Patent No. 1,080,135, for an underreamer for oil-wells, granted to R. E. Bole December 2, 1913, *Held* to have been the invention of Elihu C. Wilson and not of the patentee. *Wilson & Willard Mfg. Co.* v. *Bole,* 227 Fed. Rep., 607.

Changes in Classification.

(ORDER NO. 2,236.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 30, 1915.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 36, Boots, Shoes, and Leggings, (Division XI,) establish the following subclass and definition:

1.5. **Boots or shoes and detachable leg-covers.**

1.5. BOOTS OR SHOES AND DETACHABLE LEG-COVERS. A footless leg-covering detachably combined with and forming an extension of the upper of a boot, shoe, or overshoe, modified to coöperate with the leg-covering, or the leg-covering provided with means adapting it for detachable support by or connection with the upper of the boot, shoe, or overshoe.

The patents contained in this subclass have been taken from class 36, Boots, Shoes, and Leggings, subclasses 1, Miscellaneous; 2, Leggings and gaiters, and 45, Uppers.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER NO. 2,237.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 30, 1915.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 35, Educational Appliances, (Division VII,) establish subclass—

Models—

17. Design.

The patents contained in this subclass have been taken from class 35, Educational Appliances, subclass 16, Models; class 40, Card, Picture, and Sign Exhibiting, subclass 126, Signs, Dummies, and class 211, Store Furniture, subclass 35, Pattern-exhibitors.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,238.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 31, 1915.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 23, Chemicals, (Division VI,) establish subclass—

Apparatus—

31. Leaching.

The patents contained in this subclass have been taken from class 75, Metallurgy, subclass 86, Solution and precipitation, Apparatus, hereinafter abolished.

In class 49, Glass, (Division XV,) establish the following subclass and definition:

Processes—

77.5. Slag.

77.5. PROCESSES, SLAG. Process of treating or working slag in the solid, molten, or plastic condition.

Search Classes—

83—MILLS, subclass 91, Liquid comminuting and solidifying, for manipulative processes of comminuting and solidifying liquid slag.

106—PLASTIC COMPOSITIONS, subclass 25.5, Artificial stone, Hydraulic cement, Slag.

In same class abolish the following subclasses, with their definitions:

90. **Compositions—**

91. Enamel.

The patents formerly contained in these subclasses have been placed in class 106, Plastic Compositions, subclasses 36.1, Glass, and 36.2, Glass, Enamel, hereinafter established.

In same class abolish the main class definition and establish in lieu thereof the following definition:

The art of making glass articles or stock, working glass while in a molten, soft, or plastic state, reheating, annealing, and "cutting" it to sever it into parts while in a hard state.

Note.—Glass includes those vitreous masses formed by the fusion of materials at ordinary high furnace temperatures that when softened by heat pass through a plastic stage, in which they may be easily worked, drawn out into fine threads, and blown.

Note.—Among the materials worked or otherwise treated by the means classified in this class are included not only true glass but also pure and modified silica, such glasslike materials as slag, vitreous enamels, and materials formed, for example, by vitreous fusion of phosphoric acid, boracic acid, or arsenic acid with metallic oxids.

Note.—Glass stock which is not a mere composition of matter is in this class, under subclass 92, Structure; but specific glass articles are not included unless the article is defined merely by the structure and properties of the glass stock from which the article is made.

Note.—Instruments and processes of making electric incandescent lamps that are limited to the usual glass-working operations—such as blowing, drawing, perforating, reshaping, polishing, annealing, severing, welding, etc.—are classified in this class; but when these operations are combined with other operations not capable of general use—such as flashing, mounting, or welding the filaments, forming conductors from the joint, and the like—the invention belongs in class 176, ELECTRIC LAMPS. Uniting, welding, and sealing by operations on the glass while in a soft or plastic state are included in this class only when amounting to no more than the uniting of glass to glass or to wire and are excluded when involving in any degree the structure of the joint or the relative arrangement of the parts to the lamp.

Note.—For single operations of a general character carried out upon glass search should be made in the desired operation or functional class. For example, grinding glass to make "cut glass" is in class 51, GRINDING AND POLISHING; etching, frosting, and otherwise ornamenting glass is in class 41, ORNAMENTATION; coating glass is in class 91, COATING; drilling glass by means employed in drilling other substances in class 77, BORING AND DRILLING, etc.

Search Classes—

18—PLASTICS, for operations upon miscellaneous plastic materials: 41, ORNAMENTATION, for miscellaneous ornamentation of glass, etc., and 91, COATING, for means for applying vitreous enamels to surfaces.

25—PLASTIC BLOCK AND EARTHENWARE APPARATUS, for kilns and processes of firing.

106—PLASTIC COMPOSITIONS, subclass 36.1, Glass, and the subclasses indented thereunder, for glass compositions and processes of making and treating them.

204—ELECTROCHEMISTRY, for electric furnaces and electric furnace processes in which the electric heating means is more than a mere substitute for other forms of heating devices which might be used without changing the invention, such as those in which the electric arc is utilized.

In class 72, Masonry and Concrete Structures, (Division XXXIII,) establish the following subclass and definition:

15.5. **Checker-bricks.**

15.5. CHECKER-BRICKS. Masonry structures in which the bricks are so arranged as to furnish a large radiating or exposed surface.

Search Class—

263—HEATING, subclasses 19, Furnaces, Gas-heating, and 20, Furnaces, Gas-heating, Separate flues.

The patents contained in this subclass have been taken from the subclasses hereinafter abolished in class 75, Metallurgy.

In class 75, Metallurgy, (Division III,) abolish subclasses—

2. **Assaying.**
90. **Blowpipes.**
3. **Converters—**
148. Fixed,
149. Furnace,
188. Plants,
150. Runway,
151. Sectional,
152. Twyers and bottoms.
182. **Crucibles.**
107. **Cupolas—**
108. Drop-bottoms,
109. Forehearths,
110. Water-jackets,
111. Wind-chests and twyers.
112. **Finery-fires.**
113. **Fire-brick.**
Furnaces—
40. Blank—
189. Soaking-pits—
190. Covers,
191. Heated,
184. Tire,
5. Blast—
114. Charging devices—
115. Bell and hopper,
116. Protecting walls,
97. Twyers,
186. Crucible,
180. Forge—
181. Twyers,
84. Melting—
119. Open-hearth,
Reverberatory—
121. Heating air,
122. Necks and chimneys,
123. Water-walls and roofs,
196. Shields,
Tapping devices—
192. Iron or slag notches and spouts,
193. Pluggers and tapping-bars,
194. Runways,
195. Siphons and dippers.
Hot-blast ovens—
53. Double-surface,
52. Single-surface.
124. **Hot-blast valves.**
Iron and steel direct—
71. Apparatus,
72. Retorts and hearths.
127. **Mechanical puddlers—**
128. Rotary hearths,
129. Tools.
130. **Puddling-hearths—**
131. Chills and bottoms,
132. Doors and bits
Reducing and separating—
57. Apparatus.
Regenerators—
95. Double-surface,
94. Single-surface.
Roasters—
133. Blasting,
134. Hearths—
135. Rotary,
136. **Kilns,**
137. **Muffles,**
Revolving—
138. Cylinders,
139. Retorts,
140. Shaft-and-shelf,
Stirrers—
141. Endless-chain,
142. Reciprocating,
143. Rotary,
144. Screw.
25. **Roasting and smelting hearths.**
145. **Slag—**
146. Disintegrating,
91. Heaters,
147 Separators, centrifugal.
Solution and precipitation—
86. Apparatus.
Spelter—
154. Retorts,
155. Stacks.

The apparatus patents formerly contained in these subclasses have been placed in classes 263, Heating, and 266, Metallurgical Apparatus, and the other new subclasses established herein.

In same class, in subclass 19, Furnaces, Pigment, change the title to read:

19. **Pigment.**

In class 98, Pneumatics, (Division II,) establish subclass—

Ventilation—

55. Hoods.

The patents contained in this subclass have been taken for the most part from the subclasses abolished in classes 75, Metallurgy, and 148, Annealing and Tempering.

In class 106, Plastic Compositions, (Division VI,) establish the following subclasses and definitions:

Artificial stone—
Hydraulic cement—
25.5. Slag.
36.1. **Glass—**
36.2. Enamel,
36.3. Slag.

25.5. ARTIFICIAL STONE, HYDRAULIC CEMENT, SLAG. Compositions for hydraulic cement in which slag is an ingredient.

Search Classes—

106—PLASTIC COMPOSITIONS, subclass 36.3, Glass, Slag, for compositions not limited to cement making.

83—MILLS, subclass 91, Liquid comminuting and solidifying, for comminuting liquid slag.

36.1. GLASS. Compositions known as and substances resembling glass, defined by their ingredients, and processes of mixing the particular ingredients and treating the composition.

Note.—True glass consists of a double silicate or a combination of two or more silicates, of an alkali, and another metal, usually in combination with other materials, as coloring or decoloring oxids, which is fusible at ordinary high furnace temperatures and when softened by heat passes through a prolonged plastic stage, in which it may be easily worked, drawn out into fine threads, and blown, and when cold is hard and brittle and not easily acted upon by any acids except fluoric. It is usually formed by the fusion of silica with oxids of potassium, sodium, iron, lead, aluminum, calcium, etc., with other matter, as coloring or decoloring oxids.

Silica and silica modified by the addition of other materials are also deemed to be glass when intended to be fused and capable of manipulation in a plastic state and then solidified by cooling to a vitreous mass.

Other bodies than silica are capable of entering into vitreous fusion—as phosphoric acid, boracic acid, and arsenic acid—and the products of such fusion with the metallic oxids are called "glasses" and included in this class.

Search Class—

106—PLASTIC COMPOSITIONS, subclass 11, Fire-hardened.

36.2. GLASS, ENAMEL. Vitreous enamels for metal, ceramics, glass, etc.

Note.—Enamel is a glass within the definition contained in the note to subclass 36.1, Glass, above; but enamels are usually made from feldspar, boracic acid, silica, and some form of clay, with coloring metallic oxids, etc., and are used only for glazing surfaces of ceramics, metals, glass, and other materials.

36.3. GLASS, SLAG. Glasslike compositions of the general nature of the earthy matter that is separated in a completely hard and more or less vitrified condition in the reduction of ores.

Note.—Silicates, such as slag from metallurgical operations, are capable of entering into vitreous fusion, and the products of such fusion are deemed "glass," and inventions relating thereto are classified herein.

Search Class—

106—PLASTIC COMPOSITIONS, subclass 25.5, Artificial stone, Hydraulic cement, Slag.

The patents contained in subclass 25.5, above, have been taken from class 106, Plastic Compositions, subclass 25, Artificial stone, Hydraulic cement; those in subclasses 36.1 and 36.2 from class 49, Glass, subclasses 90, Compositions, and 91, Compositions, Enamel, hereinbefore abolished, and those in subclass 36.3 from class 75, Metallurgy, subclass 145, Slag, and the subclasses indented thereunder, hereinbefore abolished.

In class 110, Furnaces, (Division XIX,) establish the following subclasses and definitions:

Furnace structure—

3.5. Forge.
182.5. **Twyers—**
182.6. Forge.

3.5. FURNACE STRUCTURE, FORGE. Blacksmiths' forges consisting usually of an open fire pot and means for feeding air thereto, together with other features peculiar to such an organization, when not including special means for holding bodies to be heated.

Search Classes—

110—FURNACES, subclass 182.6, Twyers, Forge, for forge twyers.

96—PNEUMATICS, subclass 55, Ventilation, Hoods, for hoods for forges.

230—AIR AND GAS PUMPS, for air pumps.

263—HEATING, subclass 2, Articles, for a forge structurally modified to heat an article.

182.5. TWYERS. Conduits for feeding air to furnaces of the type defined in this class.

Search Classes—

110—FURNACES, subclass 75, Furnace structure, Feeding air, Fire-box.

122—LIQUID HEATERS AND VAPORIZERS, subclass 6.6, Industrial, Twyers.

266—METALLURGICAL APPARATUS, subclasses 29, Furnaces, Shaft, Feeding fluids, and the subclass indented thereunder, and 41, Twyers, for twyers limited for use in a metallurgical furnace.

182.6. TWYERS, FORGE. Twyers of a type used in a forge and in which the direction of the air blast is usually vertical.

Search Classes—

110—FURNACES, subclass 3.5, Furnace structure, Forge.

122—LIQUID HEATERS AND VAPORIZERS, subclass 6.7, Industrial, Twyers, Forge.

The patents contained in these subclasses have been taken from the subclasses hereinbefore abolished in class 75, Metallurgy.

In class 122, Liquid Heaters and Vaporizers, (Division XVIII,) establish the following subclasses and definitions:

Industrial—

6.6. Twyers—
6.7. Forge.

6.6. INDUSTRIAL, TWYERS. Conduits for feeding air to furnaces and provided with a closed water-circulation.

Search Classes—

110—FURNACES, subclass 182.5, Twyers, for twyers of general application and for other water circulation means therefor.

266—METALLURGICAL APPARATUS, subclass 41, Twyers, for twyers limited for use in a metallurgical furnace.

6.7. INDUSTRIAL, TWYERS, FORGE. Twyers with water circulation, of a type used in a forge and in which the direction of the air blast is usually vertical.

Search Class—

110—FURNACES, subclass 182.6, Twyers, Forge.

The patents contained in these subclasses have been taken from the subclasses hereinbefore abolished in class 75, Metallurgy.

In class 137, Water Distribution, (Division XXXIX,) establish subclasses—

Cocks and faucets—
Compound—
147. Reversing—
150. Reciprocating—
151. Horizontal,
148. Rotary—
149. Butterfly.

The patents contained in these subclasses have been taken from class 75, Metallurgy, subclass 124, Hot-blast valves, hereinbefore abolished.

In class 148, Annealing and Tempering, (Division III,) abolish subclasses—

13. **Annealing apparatus—**
14. Boxes and pots,
15. Clamps,
16. Muffles,
17. Ovens—
18. Rotary hearths,
13. **Annealing apparatus—**
19. Pits,
20. Wire and springs.
34. **Hardening apparatus—**
35. Bands and wire,
36. Clamps.

The apparatus patents formerly contained in these subclasses have been placed in classes 263, Heating, and 266, Metallurgical Apparatus, and the other new subclasses established herein.

In class 158, Liquid and Gaseous Fuel Burners, (Division XXX,) establish the following subclasses and definitions:

27.4. **Blowpipe—**
27.5. Flame-deflecting jet—
27.6. With pressure generator.
Furnaces—
Gas—
7.5. Regenerative—
7.6. Separate flues,
Liquid fuel—
4.5. Regenerative.

4.5. FURNACES, LIQUID FUEL, REGENERATIVE. Furnaces burning liquid fuel in which the air or liquid fuel is heated, usually by the waste heat of the furnace.

Search Class—

158—LIQUID AND GASEOUS FUEL BURNERS, subclass 7.5 Furnaces, Gas, Regenerative.

7.5. FURNACES, GAS, REGENERATIVE. Furnaces burning gaseous fuel in which the gas or air is heated, usually by the waste heat of the furnace.

Note.—The checker-brick type of regenerative furnace is included herein.

Search Classes—

158—LIQUID AND GASEOUS FUEL BURNERS, subclass 4.5, Furnaces, Liquid fuel, Regenerative.

110—FURNACES, subclasses 31, Furnace structure, Gas producer, for combined gas producer and regenerative furnace, and 56, Furnace structure, Feeding air and steam, Heaters.

122—LIQUID HEATERS AND VAPORIZERS, subclass 6.5, Industrial, Port, for water-cooled ports of gas furnaces.

137—WATER DISTRIBUTION, subclass 147, Cocks and faucets, Compound, Reversing, and the subclasses indented thereunder for reversing valves for regenerative furnaces.

263—HEATING, subclasses 15, Furnaces, With gas-heater, and the subclasses indented thereunder, for a heating furnace provided with a regenerator, and 19, Furnaces, Gas-heating, for the regenerator *per se*.

7.6. FURNACES, GAS, REGENERATIVE, SEPARATE FLUES. Furnaces in which the products of combustion and the gas or air to be heated pass through separate flues.

Search Classes—

110—FURNACES, subclass 56, Furnace structure, Feeding air and steam, Heaters.

263—HEATING, subclass 20, Furnaces, Gas-heating, Separate flues.

266—METALLURGICAL APPARATUS, subclass 14, With gas-heater.

27.4. BLOWPIPE. Burners having associated therewith a conduit through which a current of air or other gas or vapor is directed under pressure into or upon the flame to concentrate it upon and intensify the heat at the point to be heated.

Note.—Blowpipe burners are used for cutting, welding, or soldering metals, in glass working, chemical and metallurgical analysis, etc. One of the gases used may be and usually is a supporter of combustion. The gases may be mingled before combustion and issue from a single orifice at the point of combustion or one of them may enter the flame through a separate conduit or orifice.

Search Class—

266—METALLURGICAL APPARATUS, subclass 23, Blowpipes, for organizations for cutting metal involving more than a mere burner.

27.5. BLOWPIPE, FLAME-DEFLECTING JET. Blowpipe burners having a tube arranged to deliver a jet of air or other gas against or adjacent the flame, so as to deflect it from its normal position.

Note.—Are usually of the hand torch or jeweler's blowpipe type.

27.6. BLOWPIPE, FLAME-DEFLECTING JET, WITH PRESSURE GENERATOR. Provided with means for producing the pressure for projecting the deflecting jet.

The patents contained in subclasses 4.5, 7.5, and 7.6, above, have been taken for the most part from the subclasses herein abolished in class 75, Metallurgy; those in subclass 27.4 from various subclasses in class 158, Liquid and Gaseous Fuel Burners, and those in subclasses 27.5 and 27.6, respectively, from subclasses 13.5, Combined burner and blowpipe, and 34, Burners, Liquid fuel, Blast-lamp, Hand-torches, Automatic blow-pipe, hereinafter abolished.

In same class abolish the following subclasses, with their definitions:

13.5. **Combined burner and blowpipe.**
Burners—
Liquid fuel—
Blast lamp—
Hand torches—
34. Automatic blow-pipe.

The patents formerly contained in subclass 13.5 have been placed in subclass 27.5, Blowpipe, Flame-deflecting jet, and those in subclass 34 in subclass 27.6, Blowpipe, Flame-deflecting jet, With pressure generator, hereinbefore established in class 158, Liquid and Gaseous Fuel Burners.

In same class, in subclass 7, Furnaces, Gas, add to the definition the following note:

Search Class—
263—HEATING, for a furnace burning fluid fuel and having a holder for material to be heated.

In same class, in subclass 109, Burners, Gas, Pressure-burners, add to the definition, at the end of the first search note, the following words:

and subclass 27.4, Blowpipe, for pressure burners of the type generally used for concentrating a flame of intense heat on materials to be heated, as for burning metal.

In class 210, Water Purification, (Division XLIII,) establish subclass—

Filters—
37. Barrel.

The patents contained in this subclass have been taken from class 75, Metallurgy, subclass 86, Solution and precipitation, Apparatus, hereinbefore abolished.

Establish in Division III, classes 263, Heating, and 266, Metallurgical Apparatus, with the following subclasses and definitions, the patents contained in these classes having been taken for the most part from the subclasses hereinbefore abolished in classes 75, Metallurgy, and 148, Annealing and Tempering:

CLASS 263.—HEATING. (III.)

Subclasses.

2. Articles—
4. Circular—
5. Fluid-fuel,
3. Continuous strip,
9. Fluid-fuel,
6. Work manipulation—
8. Endless carrier,
7. Rotary carrier.
10. Furnaces—
21. Agitating—
24. Endless stirrer,
3. Reciprocating stirrer,
22. Rotary chamber,
25. Rotary stirrer—
26. Vertical,
27. Combined shaft and hearth,
44. Cooling,
Furnaces—
19. Gas-heating—
20. Separate flues,
46. Masonry structure,
36. Multiple chamber—
37. Externally heated—
38. Fluid-fuel,
39. Fluid-fuel,
11. Pot—
14. Fluid-fuel,
12. Rotary—
13. Fluid-fuel,
32. Rotary chamber—
33. Single—
34. Externally heated,
35. Vertical,
29. Shaft—
30. Baffle—
31. Moving,

CLASS 263.—HEATING. (III.)—Continued.

Subclasses.

Furnaces—
40. Single chamber—
41. Externally heated—
42. Fluid-fuel,
43. Fluid-fuel,
28. Traveling support,
45. Waste receptacles,
15. With gas heater—
17. Multiple chamber—
18. Externally heated,
Furnaces—
With gas heater—
16. Rotary chamber.
50. Heat screens.
1. Miscellaneous.
47. Receptacles—
49. Boxes,
48. Pots.

CLASS 266.—METALLURGICAL APPARATUS. (III.)

Subclasses.

29. Blowpipes.
9. Combined operation—
12. Leaching and precipitating,
10. Roasting and smelting,
11. Smelting and refining.
40. Forehearths.
24. Furnaces—
33. Melting,
25. Shaft—
27. Charging—
28. Pneumatic,
32. Cooling,
26. Explosion control,
29. Feeding fluids—
30. Air,
31. Tops and offtakes.
43. Linings.
1. Miscellaneous.
13. Plants.
42. Plugging and tapping.
22. Precipitating.
20. Roasting—
21. Grate.
34. Treating molten material—
35. Converters—
36. Rotary,
38. Discharging,
39. Receptacles,
37. Separating.
2. Treating solid metal—
3. Continuous strip,
5. Withheat,
4. With heat and liquid,
6. With liquid—
7. Pickling.
8. Treating with heat and liquid.
41. Twyers.
15. With fume-arrester—
16. Heating furnace—
19. Retort,
18. Rotary chamber,
17. Shaft.
14. With gas-heater.

THOMAS EWING,
Commissioner.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 7, 1916.

Anna H. McDonnald, her assigns or legal representatives, take notice:

A cancelation proceeding having been instituted by this Office upon the application of Richard Hudnut, of 115 East Twenty-ninth street, New York, N. Y., to effect the cancelation of the trade-mark registration of Anna H. McDonnald, of 351 State street, Albany, N. Y., No. 18,410, dated September 9, 1890, and the notice of such proceeding sent by registered mail to the said Anna H. McDonnald at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anna H. McDonnald, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Adverse Decisions in Interference.

PATENT No. 1,102,716.

On December 22, 1915, a decision was rendered that Carl Bosch was not the first inventor of the subject-matter covered by claim 4 of his Patent No. 1,102,716, subject, "Producing hydrogen and apparatus therefor," and no appeal having been taken within the time allowed such decision has become final.

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JANUARY, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*), and of the United States Circuit Court of Appeals by the letter d.

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

JANUARY, 1916.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*), and of the United States Circuit Court of Appeals by the letter d.]

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CANCELATION OF TRADE-MARK REGISTRATION.

RIGHT IN THIRD PARTY—APPLICATION DISMISSED.

Where an applicant for cancelation of a registration does not set up facts showing a superior right in himself to use the mark, but depends upon the showing of a superior right in a third party, *Held* that the application for cancelation should be dismissed [* The Standard Brewery Company of Baltimore City v. Interboro Brewing Company, Inc., 728.

COMMERCIAL SUCCESS.

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CONCURRENT DECISIONS OF PATENT OFFICE TRIBUNALS.

See Motion to Dissolve Interference.

CONSTRUCTION OF CLAIMS.

1. PATENTS—LIMITATION.

An element which expressly characterizes and limits one claim of a patent and by which alone it substantially differs from another claim will not be read into the latter when not necessary to make it operative. [d Cadillac Motor Car Co. *et al. v.* Austin, 379.

2. AMENDMENT OF APPLICATION.

That the claims of a patent as granted were introduced by a voluntary amendment and are broader than those in the original application does not deprive the patentee of the right to have them construed as broadly as their language implies nor of the right to hold as an infringer one who, with knowledge of the original claims, built a structure which avoided them, but which is within the broader claims. [d Id.

3. PATENTABILITY—CORK COMPOSITION—DEGREE OF COMPRESSION.

A cork composition composed of granular cork and a binder and the method of making it *Held* unpatentable over the prior art because the applicant's disclosure and claims draw no line of distinction between the degree of compression applied by him and that described in the references. [* *In re* Bond, 1057.

DELAY IN PROSECUTION OF APPLICATION.

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DISCLOSURE OF INVENTION.

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See Registration of Trade-Marks, 3.

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1. PATENTABILITY—RULE OF REASONABLE DOUBT.

The rule of reasonable doubt means that the existence and method of operation of an alleged anticipation must be established beyond a reasonable doubt: not that, on the question of patentability over a reference thus established, every reasonable doubt must be resolved in favor of the subsequent inventor. [*Ex parte* Pope, 1055.

2. SAME—SAME—RESOLVING DOUBT IN FAVOR OF APPLICANTS NOT COMPULSORY.

The common Office practice of resolving doubts in favor of applicants, while a good working rule, is not required by any rule of law, and its universal application is of doubtful wisdom. [Id.

ELEMENTS.

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INFRINGEMENT.

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INTERFERENCE.

See Motion to Dissolve Interference; Priority of Invention.

1. TESTIMONY AS TO DISCLOSURE OF APPLICATION.

It is not the practice of the Office to permit expert testimony to explain what an application discloses, and it should be permitted only in very exceptional cases, if at all. (Distinguishing from *Hopkins* v. *Newman*, 134 O. G., 2028; 30 App. D. C., 402.) [Cooper v. Downing, 727.

2. RES ADJUDICATA—SUBSEQUENT DECISIONS IN OTHER CASES IMMATERIAL.

Where in a trade-mark interference the Patent Office decided that the mark was unregistrable to an applicant and no appeal to the court was taken, *Held* that the question is *res adjudicata* and will not be reconsidered upon a new application merely because the applicant thinks a later decision by the court of appeals shows that the Office was wrong. [* *In re* Herbst, 727.

INVENTION.

NEW COMBINATION OF OLD ELEMENTS.

If the selection of elements from existing machines into a complete combination has for the first time produced from a practical and commercial aspect a new result, invention may well be predicated thereon.

[d Cadillac Motor Car Co. *et al. v.* Austin, 379.

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LIMITATION OF CLAIMS.

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MACHINE.

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MOTION TO DISSOLVE INTERFERENCE.

UNPATENTABILITY—NOT APPEALABLE TO COURT.

Where two of the four parties, being under an order to show cause why judgment on the record should not be entered against them, moved to dissolve and the motion was granted by each of the Office tribunals in turn on the ground that the issue was unpatentable over the prior art, *Held* that the question will not be reviewed on *inter partes* appeal to the court.

[*Griffin and Peacock *v.* Young, Troyer, and Buhles, 1056.

NAME OF CORPORATION.

See Registration of Trade-Marks.

NEW APPLICATION.

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NEW COMBINATION.

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NEW RESULTS.

See Invention.

OPERATIVENESS.

See Construction of Claims, 1.

PARTICULAR PATENTS.

AUSTIN—No. 1,091,618—CHANGE-SPEED GEARING—VALIDITY AND INFRINGEMENT.

The Austin patent, No. 1,091,618, for change-speed gearing for automobiles, was not anticipated and discloses invention, the device being the first practically-operative two-speed axle-drive gearing; also *Held* infringed as to claims 9 to 12, inclusive.

[d Cadillac Motor Car Co. *et al. v.* Austin, 379.

PATENTABILITY.

See Construction of Claims, 3; Doubts, 1; Motion to Dissolve Interference.

PRACTICE IN THE PATENT OFFICE.

See Doubts, 2; Interference, 1.

PRIORITY OF INVENTION.

AWARD—EVIDENCE.

Evidence considered and found to justify the award of priority to appellee. [*Pickles *v.* Hopkins, 1313.

PROSECUTION OF APPLICATION.

OLD APPLICATIONS—DOUBTS.

Where the history of the application showed consistently dilatory prosecution by the applicant, *Held* that it was unreasonable to resolve doubts in his favor. [*Ex parte* Pope, 1055.

REFERENCES.

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REGISTRATION OF TRADE-MARKS.

See Cancelation of Trade-Mark Registration, 1; Interference, 2.

1. NAME OF CORPORATION UNREGISTRABLE.

The word "Stork" *Held* unregistrable as a trade-mark in view of the existence of a corporation named The Stork Company, (citing *The Asbestone Co.* v. *The Philip Carey Mfg. Co.*, 41 App. D. C., 507; 200 O. G., 857.)

[**In re* United Drug Company, 729.

2. SAME.

The word "Ford" *Held* unregistrable as a trade-mark because the principal characteristic word is the name of the Ford Motor Company, (citing *Asbestone Co.* v. *Philip Carey Mfg. Co.*, 41 App. D. C., 507; 200 O. G., 857.)

[*The Mansfield Tire & Rubber Company *v.* Ford Motor Company, 1056.

3. SAME—DISTINCTIVE DISPLAY IMMATERIAL.

The name of a corporation is unregistrable to another regardless of the peculiar manner in which it may be written or printed.

[*Id.

RES ADJUDICATA.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

A. & W. Electric Sign Company, The. (See Hill, Elwin K., assignor.)
A. C. Clark & Company. (See Clark, Albert C., assignor.)
A. F. Meisselbach & Brother. (See Catucci, Pliny, assignor.)
A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
A. M. Leoni Manufacturing Company. (See Pavesi and Tolotti, assignors.)
Abbey, Eddie G., assignor of one-half to L. B. Durnil, Monett, Mo. Door-brace. No. 1,167,465; Jan. 11; Gaz. vol. 222; p. 421.
Abern, Halsey C., Minot, N. D. Windmill. No. 1,169,223; Jan. 25; Gaz. vol. 222; p. 1104.
Abernathy, George J., assignor of one-half to T. E. Amos, Ambrose, Tex. Jack. No. 1,168,141; Jan. 11; Gaz. vol. 222; p. 656.
Abernethy, John H., Danville, Va. Telegraphic transmitting device. No. 1,168,696; Jan. 18; Gaz. vol. 222; p. 886.
Abram Cox Stove Company. (See Mott and Van Buren, assignors.)
Abrams, Percy G., Philadelphia, Pa. Combined circular, coin-carrier, mailing, and return envelop. No. 1,167,245; Jan. 4; Gaz. vol. 222; p. 289.
Ackerman, Edward L., assignor of one-half to C. E. Chamberlin, Detroit, Mich. Wind-shield. No. 1,167,609; Jan. 11; Gaz. vol. 222; p. 471.
Acme Register Company. (See Williams, Frederick, assignor.)
Acme Wire Company, The. (See Underhill, Charles R., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Clément and Rivière, assignors.)
Ad-Display Machine Corporation. (See Austin, Sydney B., assignor.)
Adair, Claude D., Shell Rock, Iowa. Gasolene-sediment trap. No. 1,167,246; Jan. 4; Gaz. vol. 222; p. 289.
Adam, Fredrick B., assignor to Frank Adam Electric Company, St. Louis, Mo. Metering panel-board. No. 1,168,774; Jan. 18; Gaz. vol. 222; p. 913.
Adam, Harry C., St. Louis, Mo. Lighting-fixture. No. 1,166,878; Jan. 4; Gaz. vol. 222; p. 163.
Adams, Albert L., Cedar Rapids, Iowa. Handle. No. 1,168,267; Jan. 18; Gaz. vol. 222; p. 733.
Adams, Arthur J., Bay City, Mich., assignor to Fulton Manufacturing Company, Chicago, Ill. Portable serving-table. No. 1,168,775; Jan. 18; Gaz. vol. 222; p. 913.
Adams, George W. (See Robertson and Adams.)
Adams, Leland R., Lynn, Mass. Holding device for ropes. No. 1,167,610; Jan. 11; Gaz. vol. 222; p. 472.
Adams-Randall, Charles, assignor to F. G. Davison, Boston, Mass. Head-support for telephone-receivers. No. 1,167,368; Jan. 4; Gaz. vol. 222; p. 334.
Adams, William A., La Grange, Ky. Ensilage-protector. No. 1,167,871; Jan. 11; Gaz. vol. 222; p. 561.
Addison, Josiah, assignor of forty-five one-hundredths to F. W. Davis, Broughton, Ill. Fabric reeling and measuring apparatus. No. 1,168,268; Jan. 18; Gaz. vol. 222; p. 733.
Addometer Corporation. (See De Camp, Witsel R., assignor.)
Addometer Corporation. (See Fuhrmann, Warren, assignor.)
Addometer Corporation. (See Lotterhand, Jason C., assignor.)
Adell, John A. (See Starrett and Adell.)
Adriance, Benjamin. (See Calleson, Amos, assignor.)
Agnew, Clair M., Milwaukee, Wis. Electric welding-machine. No. 1,166,648; Jan. 4; Gaz. vol. 222; p. 85.
Agrell, Frans G., Stockholm, Sweden. Electromechanical exchange system. No. 1,167,872; Jan. 11; Gaz. vol. 222; p. 561.
Ahrens, Walter R., Chicago, Ill. Extension-pin. No. 1,169,591; Jan. 25; Gaz. vol. 222; p. 1232.
Airhart, Lewis, West Reading, assignor of one-half to The Textile Machine Works, Wyomissing, Pa. Combined central-energy telephone and watchman's clock system. No. 1,167,325; Jan. 4; Gaz. vol. 222; p. 317.
Aitken, James, assignor of one-half to R. Steven, Indianapolis, Ind. Vehicle-wheel. No. 1,166,961; Jan. 4; Gaz. vol. 222; p. 190.
Ajax Manufacturing Company, The. (See Blakeslee, John R., assignor.)
Akerly, Frank F., Chicago, Ill. Marking, registering, and record-printing machine. No. 1,167,733; Jan. 11; Gaz. vol. 222; p. 513.
Akins, Elmer, Fair Play, Mo. Fly-wheel. No. 1,168,142; Jan. 11; Gaz. vol. 222; p. 656.
Aktiebolaget Bofors-Gullspand. (See Morén, Hugo K., assignor.)
Aktiebolaget Elevator. (See Liljeblad, Karl R., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Wingquist, Sven G., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Wingquist and Junghans, assignors.)
Aktschourin, Jacoub, Aktschourin-Tupik, Russia. Manufacture of brown wood-pulp and half-cellulose from resinous kinds of wood. No. 1,169,592; Jan. 25; Gaz. vol. 222; p. 1233.
Alard, Louis, Paris, France. Apparatus for modifying the trajectory of a projectile. No. 1,166,879; Jan. 4; Gaz. vol. 222; p. 163.
Albers, Edwin W., Dover, Ohio. Engine-valve-operating mechanism. No. 1,168,841; Jan. 18; Gaz. vol. 222; p. 936.
Albert, Jacob P., Warren, and N. R. Buller, Harrisburg, Pa. Filtering apparatus. No. 1,166,802; Jan. 4; Gaz. vol. 222; p. 137.
Albert, John B., assignor of one-half to H. Botler, Danbury, Conn. Leaf-turner. No. 1,166,803; Jan. 4; Gaz. vol. 222; p. 138.
Albrecht, Bela, New York, N. Y. Pad for head-rests. No. 1,168,842; Jan. 18; Gaz. vol. 222; p. 936.
Albrecht, Francis J., Pittsburgh, Pa. Water-heater. No. 1,169,224; Jan. 25; Gaz. vol. 222; p. 1104.
Albrecht, William, assignor to Western Tablet Company, St. Joseph, Mo. Loose-leaf binder. No. 1,168,260; Jan. 11; Gaz. vol. 222; p. 697.
Albrecht, William F. (See Shebol and Albrecht.)
Albright-Nell Company, The. (See Kohlhepp, John W., assignor.)
Albright, Ralph D., and J. E. Lukehart, Oil City, Pa. Water-heater. No. 1,168,044; Jan. 11; Gaz. vol. 222; p. 623.
Alcorn, Harry W., and F. R. Gravatt, Barberton, Ohio. Tapping-machine. No. 1,168,143; Jan. 11; Gaz. vol. 222; p. 656.
Alden, Herbert W., and A. P. Brush, assignors to The Timken-Detroit Axle Company, Detroit, Mich. Automobile-steering-axle head. No. 1,166,649; Jan. 4; Gaz. vol. 222; p. 85.
Alderman, Clarence E., trustee. (See Stevens, George E., assignor.)
Aldrich Pump Company, The. (See Aldrich, Roscoe H., assignor.)
Aldrich, Roscoe H., assignor to The Aldrich Pump Company, Allentown, Pa. Metallic packing. No. 1,168,144; Jan. 11; Gaz. vol. 222; p. 656.
Alemite Metals Company. (See Goldberg, John S., assignor.)
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,169,060; Jan. 18; Gaz. vol. 222; p. 1009.
Alexander, Horace Q., Dayton, Ohio. Box-opener. No. 1,167,143; Jan. 4; Gaz. vol. 222; p. 254.
Alfreds, Torris H. (See Woods and Alfreds.)
Alfreds, Torris H., assignor to E. S. Woods, deceased, Chicago, Ill.; A. G. Welch, executor and trustee. Anti-friction-bearing. No. 1,168,369; Jan. 18; Gaz. vol. 222; p. 769.
Allano, Frank S., New York, N. Y. Punch-press guard. No. 1,167,611; Jan. 11; Gaz. vol. 222; p. 472.
Allan, Edward T., Cincinnati, Ohio. Staple-puller. No. 1,166,419; Jan. 4; Gaz. vol. 222; p. 3.
Allan, James, Omaha, Nebr., assignor to Baker Ice Machine Company. Pipe connection and valve. No. 1,169,105; Jan. 25; Gaz. vol. 222; p. 1061.

Allard, J. Frank, Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,169,739; Jan. 25; Gaz. vol. 222; p. 1283.
Allemann, Otto. (See Schmidt, Eichler, and Allemann.)
Allen, David E., Ardmore, Okla. Toy. No. 1,168,269; Jan. 18; Gaz. vol. 222; p. 733.
Allen, Hugh. (See Allen, John L., assignor.)
Allen, Jefferson, Kennebunk Port, Me. Scraper-vise and burnisher. No. 1,167,371; Jan. 11; Gaz. vol. 222; p. 389.
Allen, John L., San Diego, Cal., assignor to H. Allen, Hamilton, Ontario, Canada. Puzzle. No. 1,169,593; Jan. 25; Gaz. vol. 222; p. 1233.
Allen, Robert J., New York, N. Y. Boiler-brick. No. 1,168,697; Jan. 18; Gaz. vol. 222; p. 887.
Allen, William H., assignor to C. W. Parker, Detroit, Mich. Rust-proofing iron and steel. No. 1,167,966; Jan. 11; Gaz. vol. 222; p. 597.
Allis-Chalmers Manufacturing Company. (See Lincoln, Charles S., assignor.)
Allis-Chalmers Manufacturing Company. (See Newhouse, Ray C., assignor.)
Allis-Chalmers Manufacturing Company. (See Pfau, Arnold, assignor.)
Allison, J. E. (See Scroggins, Fred, assignor.)
Allwood Lime Company. (See Miner, Carl S., assignor.)
Almstedt, Paul. (See Finckh and Almstedt.)
Altgelt, Rudolph J., assignor to Oliver Chilled Plow Works, South Bend, Ind. Planter. No. 1,166,962; Jan. 4; Gaz. vol. 222; p. 190.
Altschul, Paul, New York, N. Y. Curtain-rod. No. 1,168,990; Jan. 18; Gaz. vol. 222; p. 987.
Alvey-Ferguson Company, The. (See Wear, Frank F., assignor.)
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Bar-holder for lathes. No. 1,166,804; Jan. 4; Gaz. vol. 222; p. 138.
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Tool-holder. No. 1,169,594; Jan. 25; Gaz. vol. 222; p. 1233.
Ambrozy, Eugene, New York, N. Y. Construction of marine vessels. No. 1,168,926; Jan. 18; Gaz. vol. 222; p. 965.
Amdursky, Samuel S., Rochester, N. Y. Controlling mechanism for electric-motor vehicles. No. 1,169,450; Jan. 25; Gaz. vol. 222; p. 1182.
Amenda, William, St. Louis, Mo. Combined refrigerator, show-case, and counter. No. 1,168,776; Jan. 18; Gaz. vol. 222; p. 913.
American Abrasive Metals Company. (See Sayre, William H., assignor.)
American Bank Note Company. (See Eaton, William S., assignor.)
American Brake Shoe & Foundry Company. (See Jones, Harry, assignor.)
American Can Company. (See Forry, Charles E., assignor.)
American Can Company. (See Tevander, Swan, assignor.)
American Can Company. (See Young, John M., assignor.)
American Car Roof Company. (See Brown, Christy, assignor.)
American Cement Tile Manufacturing Company. (See Freund, Jacob D., assignor.)
American Coin Register Company. (See Voglesong, Clyde C., assignor.)
American Hardware Corporation, The. (See Hurd, Norman B., assignor.)
American Nitro-Products Company. (See Brownlee and Uhlinger, assignors.)
American Player Action Company. (See Turney, Eugene T., assignor.)
American Radium Company, The. (See Junghans, Oskar, assignor.)
American Safety Device Company. (See Johnston, Frank B., assignor.)
American Seeding Machine Company, The. (See Faas and Eppley, assignors.)
American Sewer Pipe Company, The. (See Rook, William H., Jr., assignor.)
American Steel Foundries. (See Davis, James C., assignor.)
American Telephone and Telegraph Company. (See Campbell, Blackwell, and Colpitts, assignors.)
American Telephone and Telegraph Company. (See Hoyt, Ray S., assignor.)
American Valve & Meter Company, The. (See Anderson, Frank C., assignor.)
American Warp Drawing Machine Company. (See Hathaway and Lea, assignors.)
American Water Motor Company, The. (See Lewis and Taggart, assignors.)
American Well Works. (See Chapman, Matthew T. and M. C., assignors.)
American Well Works, The. (See Chapman, Matthew T., assignor.)
Ames, Bradford L., Boston, Mass. Smoke-preventer. No. 1,166,880; Jan. 4; Gaz. vol. 222; p. 164.
Amiguet, Charles. (See White, Ernest C., assignor.)
Ammo-Phos Corporation. (See Washburn, Frank S., assignor.)
Amos, T. E. (See Abernathy, George J., assignor.)
Amphion Piano Player Company, The. (See Doman, Lewis B., assignor.)
Anable, Frederick S., assignor to National Binding Machine Company, Boston, Mass. Strip-serving device. No. 1,168,777; Jan. 18; Gaz. vol. 222; p. 914.
Andersen, Arnold, Harris, Iowa. Back-rest attachment for seats. No. 1,169,225; Jan. 25; Gaz. vol. 222; p. 1105.
Andersen, Christian C., assignor of one-fourth to S. Norgordt and one-fourth to P. O. Paaske, Davenport, Iowa. Valve for controlling the flow of fuel to carbureters and for straining such fuel. No. 1,169,226; Jan. 25; Gaz. vol. 222; p. 1105.
Andersen, Fridtjov, Haaögen, near Tönsberg, Norway. System and apparatus of automatic elevation and lateral direction of one or more guns. No. 1,167,247; Jan. 4; Gaz. vol. 222; p. 289.
Andersen, Lauritz W., Waterbury, Conn. Socket-shell. No. 1,167,037; Jan. 4; Gaz. vol. 222; p. 217.
Anderson, Andrew F., and E. W. Olson, Minneapolis, Minn. Pipe-cutter. No. 1,166,570; Jan. 4; Gaz. vol. 222; p. 57.
Anderson, Burt M. (See Ayars and Anderson.)
Anderson, Carl A., Chicago, Ill. Speed indicator and recorder. No. 1,167,671; Jan. 11; Gaz. vol. 222; p. 493.
Anderson, Carl O., assignor to The Champion Blower & Forge Co., Lancaster, Pa. Centrifugal cream-separator. No. 1,168,452; Jan. 18; Gaz. vol. 222; p. 797.
Anderson, Carl O., assignor to The Champion Blower & Forge Company, Lancaster, Pa. Radial elliptical spring. No. 1,168,453; Jan. 18; Gaz. vol. 222; p. 798.
Anderson, Carl O., assignor to The Champion Blower & Forge Company, Lancaster, Pa. Centrifugal cream-separator. No. 1,168,454; Jan. 18; Gaz. vol. 222; p. 798.
Anderson, Carl O., assignor to The Champion Blower & Forge Co., Lancaster, Pa. Centrifugal cream-separator. No. 1,168,455; Jan. 18; Gaz. vol. 222; p. 799.
Anderson, Edward L., Attleboro, Mass. Cigar-cutter. No. 1,166,881; Jan. 4; Gaz. vol. 222; p. 164.
Anderson, Ernest G. K., Chicago, Ill. Abrading device. No. 1,169,061; Jan. 18; Gaz. vol. 222; p. 1010.
Anderson, Frank C., assignor to The American Valve & Meter Company, Cincinnati, Ohio. Switch-stand crank mechanism. No. 1,169,106; Jan. 25; Gaz. vol. 222; p. 1061.
Anderson, Frank J., Box Elder, Mont. Fly-trap. No. 1,169,227; Jan. 25; Gaz. vol. 222; p. 1106.
Anderson, Frederick D., Denver, Colo., assignor to Ansco Company, Binghamton, N. Y. Leveling device for photographic cameras. No. 1,167,967; Jan. 11; Gaz. vol. 222; p. 597.
Anderson, George L., and C. D. Bacon, Faribault, Minn.; said Bacon assignor to said Anderson. Milling attachment for lathes. No. 1,167,612; Jan. 11; Gaz. vol. 222; p. 472.
Anderson, Jens P., Jamestown, Kans. Clench-pincers. No. 1,166,420; Jan. 4; Gaz. vol. 222; p. 3.
Anderson, John, Mount Vernon, Me. Paper-clip. No. 1,167,734; Jan. 11; Gaz. vol. 222; p. 514.
Anderson, John A., Minneapolis, Minn. Adjusting mechanism for gang-plows. No. 1,169,451; Jan. 25; Gaz. vol. 222; p. 1183.
Anderson, John C. A., Chicago, Ill. Safety control system. No. 1,168,586; Jan. 18; Gaz. vol. 222; p. 844.
Anderson, John C. A., Chicago, Ill., assignor to E. V. Watson, Fishkill-on-the-Hudson, N. Y. Safety recording device. No. 1,168,370; Jan. 18; Gaz. vol. 222; p. 770.
Anderson, Martin E., assignor to Jacob Haish Company, De Kalb, Ill. Wagon-scale. No. 1,169,108; Jan. 25; Gaz. vol. 222; p. 1062.
Anderson, Martin E., assignor to Jacob Haish Company, De Kalb, Ill. Wagon-scale. No. 1,169,109; Jan. 25; Gaz. vol. 222; p. 1062.
Anderson, Nils H., assignor to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,166,805; Jan. 4; Gaz. vol. 222; p. 138.
Anderson, Oscar, Lancaster, Pa. Teat-cup. No. 1,167,968; Jan. 11; Gaz. vol. 222; p. 597.
Anderson, Raymond M., assignor to Stromberg Motor Devices Company, Chicago, Ill. Carbureter. No. 1,166,734; Jan. 4; Gaz. vol. 222; p. 113.
Anderson, Walter H., London, England. Lens-adjusting means for cinematograph apparatus. No. 1,168,991; Jan. 18; Gaz. vol. 222; p. 987.
Anderson, Walter H., London, England. Cinematograph-machine. No. 1,168,992; Jan. 18; Gaz. vol. 222; p. 987.
Anderson, Walter H., London, England. Cinematograph apparatus. No. 1,168,993; Jan. 18; Gaz. vol. 222; p. 988.
Anderson, William P., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Circuit-controller. No. 1,168,371; Jan. 18; Gaz. vol. 222; p. 770.
Andersson, Aron, *et al.* (See Uhr and Sandberg, assignors.)
Andresen, Christian, Chicago, Ill., assignor to Andresen Hook & Eye Company, St. Louis, Mo. Hook for hooks and eyes. No. 1,168,778; Jan. 18; Gaz. vol. 222; p. 914.
Andresen Hook & Eye Company. (See Andresen, Christian, assignor.)
Andrew, John E. (See Linberg, Andrew, and Wright.)
Andrew, John E. (See Wright and Andrew.)
Andrew, William E., Atlantic Highlands, N. J. Spring structure. No. 1,168,372; Jan. 18; Gaz. vol. 222; p. 770.
Andrews, Harold K. (See Neumann and Andrews.)
Andrews, Herbert P., Portland, Oreg. Safety-garment. No. 1,168,698; Jan. 18; Gaz. vol. 222; p. 887.

Angier, Edward H., Framingham, Mass. Binder-tape. No. 1,167,466; Jan. 11; Gaz. vol. 222; p. 421.
Anglo-American Patent Bottle Company, The. (See Lacroix, Joseph D., assignor.)
Annis, Fern E., Mattoon, Ill. Fruit-picker. No. 1,166,735; Jan. 4; Gaz. vol. 222; p. 114.
Ansco Company. (See Anderson, Frederick D., assignor.)
Apfel, Phillip F., Seattle, Wash. Electrically-heated radiator. No. 1,167,613; Jan. 11; Gaz. vol. 222; p. 473.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple Electric Company, The. (See Smith, Frank L., assignor.)
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Circuit-controller switch and casing therefor. No. 1,167,038; Jan. 4; Gaz. vol. 222; p. 217.
Apple, Vincent G., assignor to Apple Electric Company, Dayton, Ohio. Gearing. No. 1,169,595; Jan. 25; Gaz. vol. 222; p. 1234.
Appleman, William H., Belmont, N. Y. Steering-gear for motor-vehicles. No. 1,167,873; Jan. 11; Gaz. vol. 222; p. 562.
Appleton, Lewis W., assignor of one-half to I. Wortman, Philadelphia, Pa. Spindle-holding device for spools. No. 1,167,248; Jan. 4; Gaz. vol. 222; p. 289.
Applewhite, Scott C., San Antonio, Tex. Lifting-jack. No. 1,168,994; Jan. 18; Gaz. vol. 222; p. 988.
Arbetter Felling Machine Company. (See Moulton, Harley C., assignor.)
Arbib, Arthur, New York, N. Y. Water-level-actuated mechanism. No. 1,168,699; Jan. 18; Gaz. vol. 222; p. 887.
Arbogast, William C., Blanchester, Ohio. Combined drag and harrow. No. 1,167,969; Jan. 11; Gaz. vol. 222; p. 597.
Archer, George, Chicago, Ill. Dash-controlled carbureter-valve lock. No. 1,167,467; Jan. 11; Gaz. vol. 222; p. 422.
Arel, Hector A., Northampton, Mass. Window-ventilator. No. 1,167,249; Jan. 4; Gaz. vol. 222; p. 290.
Argo, Alfred G., Kenesaw, Nebr. Attachment for hay-rakes. No. 1,166,963; Jan. 4; Gaz. vol. 222; p. 191.
Armour and Company. (See Holbrook, George M., assignor.)
Armstrong, Edwin J., assignor to Ball Engine Company, Erie, Pa. Lubricating system for steam-engines. No. 1,166,421; Jan. 4; Gaz. vol. 222; p. 3.
Armstrong, Edwin J., assignor to Ball Engine Company, Erie, Pa. Steam-engine. No. 1,168,045; Jan. 11; Gaz. vol. 222; p. 623.
Armstrong, John, London, England. Apparatus for the manufacture of coke. No. 1,166,422; Jan. 4; Gaz. vol. 222; p. 4.
Armstrong, Thomas F. (See Dodge and Armstrong.)
Armstrong, William C., Springfield, Ohio. Grate-bar. No. 1,169,107; Jan. 25; Gaz. vol. 222; p. 1062.
Arnold, Harold D., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Protection device for electric circuits. No. 1,168,270; Jan. 18; Gaz. vol. 222; p. 734.
Arnold, Melville, Lima, Ohio. Coupling for air-conduits. No. 1,168,456; Jan. 18; Gaz. vol. 222; p. 799.
Aronson, Louis V., Newark, N. J. Container for perfume and the like. No. 1,166,806; Jan. 4; Gaz. vol. 222; p. 139.
Arragg, George M., Lawrence, Mass. Stop-motion. No. 1,168,457; Jan. 18; Gaz. vol. 222; p. 800.
Arrow Electric Company, The. (See Gauthier, George A., assignor.)
Arthur, Richard S. (See Rotter and Arthur.)
Asbestos Protected Metal Company. (See Caffrey, James H., assignor.)
Ash, Charles S. (See Gould and Ash.)
Ashcroft, George A. (See Corrie and Ashcroft.)
Ashley, Lovell M., Jr., Winona, W. Va. Lamp-holding attachment for miners' caps. No. 1,168,700; Jan. 18; Gaz. vol. 222; p. 887.
Ashton, Orrell, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stock manipulating and tacking apparatus for use in the manufacture of boots and shoes. No. 1,168,458; Jan. 18; Gaz. vol. 222; p. 800.
Ashworth, Fred, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Outsole shoe-sewing machine. No. 1,169,062; Jan. 18; Gaz. vol. 222; p. 1010.
Associated Engineers Company. (See Joleen, Nels, assignor.)
Astoria Iron Works. (See Troyer and Fox, assignors.)
Atlas Concrete Pipe Machinery Company. (See Tunison, Arthur C., assignor.)
Atlas Implement and Tool Company. (See Stowell, Edward S., assignor.)
Atwood, Albert A. (See Myers, Hubert A., assignor.)
Atwood, Harry N., and F. W. Satterthwaite, Reading, Pa. Vapor producing and distributing apparatus. No. 1,169,452; Jan. 25; Gaz. vol. 222; p. 1183.
Atwood Machine Company, The. (See Bradley, Edward E., assignor.)
Atwood, William S., Montreal, Quebec, Canada. Tread-surface. No. 1,166,423; Jan. 4; Gaz. vol. 222; p. 4.
Audiffren Refrigerating Machine Company. (See Myers, Thomas M., assignor.)
Auld, Hugh R., Boston, Mass. Mechanical-action xylophone. No. 1,169,063; Jan. 18; Gaz. vol. 222; p. 1010.
Ault, Frank P., *et al.* (See Hathaway, Charles J., assignor.)
Ault, Howard G., *et al.* (See Hathaway, Charles J., assignor.)
Aurora Automatic Machinery Company. (See Levedahl, Axel, assignor.)
Aurora Door Hanger and Specialty Company. (See Richards, George H., assignor.)
Austin, Basil G., assignor to Austin Organ Company, Hartford, Conn. Harp device for organs. No. 1,167,144; Jan. 4; Gaz. vol. 222; p. 254.
Austin, Frederick C. (See Bunnell, Morton G., assignor.)
Austin, Frederick C. (See Jacobs, Charles C., assignor.)
Austin, Frederick C. (See Lawrence, William G., assignor.)
Austin, Frederick C. (See Weeks, Harry G., assignor.)
Austin Organ Company (See Austin, Basil G., assignor.)
Austin, Sydney B., Baltimore, Md., assignor to Ad-Display Machine Corporation. Motion-picture apparatus. No. 1,169,376; Jan. 25; Gaz. vol. 222; p. 1155.
Auto Pneumatic Action Company. (See Keeley, William J., assignor.)
Auto Portrait Company, The. (See Pifer, George N., assignor.)
Automatic Coinwrapping Machine Company. (See Batdorf, Charles S., assignor.)
Automatic Electric Company. (See Lubberger, Fritz, assignor.)
Automatic Electric Company. (See Melvin, John H., assignor.)
Automatic Electric Company. (See Willis, Bernard D., assignor.)
Automatic Magazine Cigarette Box Company. (See Poeppel, Emil, assignor.)
Avery, Amariah, Manchester, N. H., assignor, by mesne assignments, to Draper Company, Hopedale, Mass. Spinning-machine. No. 1,168,237; Jan. 11; Gaz. vol. 222; p. 687.
Avery, George C., deceased, Louisville, Ky.; K. S. Avery, executrix. Fire-door and other closure. No. 1,169,596; Jan. 25; Gaz. vol. 222; p. 1234.
Avery, Kate S., executrix. (See Avery, George C.)
Avisus, Leopold, assignor to Brambach Piano Company, New York, N. Y. Pedal connection for grand pianos. No. 1,166,964; Jan. 4; Gaz. vol. 222; p. 191.
Ayars, Wallace R., and B. M. Anderson, Rome, N. Y. Motion-counter. No. 1,167,250; Jan. 4; Gaz. vol. 222; p. 290.
Ayerst, Ambrose B., and C. N. Waite, Wilmington, Del. Recovering solid by-products from wood-pulp liquor. No. 1,166,509; Jan. 4; Gaz. vol. 222; p. 35.
Ayerst, Harry C., assignor to Sanitary Pulp Products Company, Seattle, Wash. Bottle-making machine. No. 1,169,064; Jan. 18; Gaz. vol. 222; p. 1011.
Aylsworth, Jonas W., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Molded article. No. 1,167,468; Jan. 11; Gaz. vol. 222; p. 422.
Ayotte, Joseph R., Chicago, Ill. Resilient wheel. No. 1,168,238; Jan. 11; Gaz. vol. 222; p. 688.
B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)
B. F. Goodrich Company, The. (See Joseph, John F., assignor.) (Reissue.)
B. F. Sturtevant Company. (See Shaw, Raymond E., assignor.)
Babbitt, Edwin B., Washington, D. C. Locking device for steering-gears. No. 1,168,701; Jan. 18; Gaz. vol. 222; p. 888.
Babcock & Wilcox *et al.* (See Rosenthal and Carnt, assignors.)
Babis, John, Jr., Philadelphia, Pa. Shock-absorbing device for motor-cycles. No. 1,168,702; Jan. 18; Gaz. vol. 222; p. 888.
Babson, Henry B., Chicago, Ill., and A. Haug, Caldwell, assignors, by mesne assignments, to Victor Talking Machine Company, Camden, N. J. Talking-machine. No. 1,168,239; Jan. 11; Gaz. vol. 222; p. 688.
Bache-Wiig, Carl, Berlin, N. H., assignor of one-half to Berlin Mills Company, Portland, Me. Preparing wood-pulp. No. 1,169,597; Jan. 25; Gaz. vol. 222; p. 1235.
Backstrom, Charles A., Crafton, assignor to Pittsburgh Water Heater Company, Pittsburgh, Pa. Water-heater. No. 1,166,424; Jan. 4; Gaz. vol. 222; p. 4.
Backus, Clyde V., Jefferson, Ohio. Flying-machine. No. 1,167,874; Jan. 11; Gaz. vol. 222; p. 563.
Bacon, Amos F., Fremont, Mich. Attachment for pipe-dies. No. 1,168,779; Jan. 18; Gaz. vol. 222; p. 914.
Bacon, Charles D. (See Anderson and Bacon.)
Bacon, Charles V. (See Wilson and Bacon.)
Bacon, Charles V., New York, N. Y., and J. M. Wilson, Montclair, N. J., assignors to Wilson Remover Company, New York, N. Y. Finish-remover and making same. No. 1,167,469; Jan. 11; Gaz. vol. 222; p. 422.
Bade, Adolph G., Chicago, Ill. Feed-bag. No. 1,167,614; Jan. 11; Gaz. vol. 222; p. 473.
Badeau, Charles C., Winthrop, Mass., assignor, by mesne assignments, to General Electric Company. Automatic circuit-breaker. No. 1,166,650; Jan. 4; Gaz. vol. 222; p. 86.
Badische Anilin & Soda Fabrik. (See Blangey, Louis, assignor.)

Badische Anilin & Soda Fabrik. (See Holt, Henry S. A., assignor.)

Badische Anilin & Soda Fabrik. (See Isler, Max H., assignor.)

Badische Anilin & Soda Fabrik. (See Schmidt, Eichler, and Allemann, assignors.)

Baehr, George, McKeesport, Pa. Vehicle-wheel. No. 1,168,373; Jan. 18; Gaz. vol. 222; p. 771.

Bailey, Layman W., Warrensburg, Mo. Nut-lock. No. 1,166,736; Jan. 4; Gaz. vol. 222; p. 114.

Bailiat, Ernest, Pont de Beauvoisin, France. Means for indicating faults and breaks in electric conductors. No. 1,168,587; Jan. 18; Gaz. vol. 222; p. 845.

Bain, Benjamin F., Pittsburgh, Pa. Mechanical toy. No. 1,169,598; Jan. 25; Gaz. vol. 222; p. 1235.

Baird, Daniel S., assignor of one-half to T. P. Bowen, Toronto, Ontario, Canada. Magazine-wrapping machine. No. 1,166,737; Jan. 4; Gaz. vol. 222; p. 114.

Baird, Fred J., Cleveland, Ohio. Commutator-bar. No. 1,168,261; Jan. 11; Gaz. vol. 222; p. 697.

Baker, Arthur G., and F. W. Knott, assignors to The Universal Machine Company, Detroit, Mich. Distributer for type-setting machines. No. 1,169,110; Jan. 25; Gaz. vol. 222; p. 1063.

Baker, Arthur G., and F. W. Knott, assignors to The Universal Machine Company, Detroit, Mich. Type-setting machine. No. 1,169,111; Jan. 25; Gaz. vol. 222; p. 1064.

Baker, Edward P., Darien, Conn. Device for facilitating the removal of valves. No. 1,168,145.; Jan. 11; Gaz. vol. 222; p. 657.

Baker, Frank D., and P. Hovland, Sioux City, Iowa. Union garment. No. 1,168,588; Jan. 18; Gaz. vol. 222; p. 846.

Baker Ice Machine Company. (See Allan, James, assignor.)

Baker, Jeff, Wardell, Ark. Percussion musical instrument. No. 1,168,843; Jan. 18; Gaz. vol. 222; p. 936.

Baker, Littleton S., Pasadena, Cal. Sprayer. No. 1,169,524; Jan. 25; Gaz. vol. 222; p. 1208.

Ball Engine Company. (See Armstrong, Edwin J., assignor.)

Ball, John. (See Decker, Lemuel B., assignor.)

Ball, Lewis M. (See Brooks, James L., assignor.)

Ball and Roller Bearing Company, The. (See Helm, Lewis R., assignor.)

Ballard, George L., Norristown, Pa., assignor to Wildman Mfg. Co. Stripping attachment. No. 1,167,251; Jan. 4; Gaz. vol. 222; p. 290.

Ballard, George L., assignor to Wildman Mfg. Co., Norristown, Pa. Driving mechanism. No. 1,167,875; Jan. 11; Gaz. vol. 222; p. 563.

Ballenberg, Adolph, New York, N. Y. Caster. No. 1,169,001; Jan. 18; Gaz. vol. 222; p. 990.

Balser, Benjamin, Des Moines, Iowa. Shoe-shining footrest. No. 1,168,271; Jan. 18; Gaz. vol. 222; p. 734.

Balz, Robert J., assignor of one-half to G. C. Meyer, Syracuse, N. Y. Internal-combustion engine. No. 1,167,970; Jan. 11; Gaz. vol. 222; p. 597.

Banes, Walter D., assignor of one-fourth to T. L. Hacker, one-fourth to M. F. Oebbecke, one-fourth to S. Murray, and one-fourth to C. E. Rolfe, 2d, Philadelphia, Pa. Instrument-handle connection. No. 1,167,252; Jan. 4; Gaz. vol. 222; p. 291.

Bangs, Walter E., Worcester, Mass. Vacuum carpet-cleaner. No. 1,168,272; Jan. 18; Gaz. vol. 222; p. 734.

Banho, Humberto. (See Duarte, Arthur, assignor.)

Banks, John W., Torreón, Mexico. Equalizing device for oil-press cakes. No. 1,169,112; Jan. 25; Gaz. vol. 222; p. 1065.

Bankson, William R., Partridge, Kans. Gravity tray-carrier. No. 1,168,459; Jan. 18; Gaz. vol. 222; p. 801.

Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Means for maintaining clearances in rotary machines. No. 1,168,273; Jan. 18; Gaz. vol. 222; p. 735.

Barba, William P., assignor to The Midvale Steel Company, Philadelphia, Pa. Modifying the ash resulting from the combustion of powdered fuel. No. 1,167,470; Jan. 11; Gaz. vol. 222; p. 423.

Barba, William P., assignor to The Midvale Steel Company, Philadelphia, Pa. Modifying the ash resulting from the combustion of powdered fuel. No. 1,167,471; Jan. 11; Gaz. vol. 222; p. 423.

Barba, William P., assignor to The Midvale Steel Company, Philadelphia, Pa. Protecting metal articles heated by the combustion of powdered coal. No. 1,167,472; Jan. 11; Gaz. vol. 222; p. 423.

Barber, John W., Newton, Mass. Flexible waterproof leather and making it. No. 1,167,326; Jan. 4; Gaz. vol. 222; p. 318.

Barber, John W., Newton, Mass. Flexible and waterproof porous material and making the same. No. 1,167,327; Jan. 4; Gaz. vol. 222; p. 318.

Barber, John W., Newton, Mass. Waterproof leather welting. No. 1,167,328; Jan. 4; Gaz. vol. 222; p. 318.

Barco Brass & Joint Company. (See Bard, George M., assignor.)

Barco Brass & Joint Company. (See Everson, Harry J., assignor.)

Bard, George M., assignor to Barco Brass & Joint Company, Chicago, Ill. Valve device. No. 1,166,571; Jan. 4; Gaz. vol. 222; p. 57.

Bardwell, Francis N., Passaic, N. J. Wardrobe. No. 1,166,572; Jan. 4; Gaz. vol. 222; p. 57.

Barker, England J., Chicago, Ill. Autographic register. No. 1,169,453; Jan. 25; Gaz. vol. 222; p. 1183.

Barker, George G., assignor to The Bauer Brothers Company, Springfield, Ohio. Grinding-plate. No. 1,169,228; Jan. 25; Gaz. vol. 222; p. 1106.

Barker, George H., Los Angeles, Cal. Game-counter. No. 1,168,374; Jan. 18; Gaz. vol. 222; p. 771.

Barker, George H., assignor to Improved Sanitary Fixture Company, Los Angeles, Cal. Lavatory appliance. No. 1,168,375; Jan. 18; Gaz. vol. 222; p. 771.

Barker, Irving, Springfield, Ill. Farm-gate. No. 1,168,589; Jan. 18; Gaz. vol. 222; p. 846.

Barker, William S., Auburn, Ky. Grain conditioning and tempering machine. No. 1,169,599; Jan. 25; Gaz. vol. 222; p. 1235.

Barlevy, Abraham. (See Smith and Barlevy.)

Barnard, Charles S., assignor to The Burns & Bassick Company, Bridgeport, Conn. Lubricator. No. 1,168,590; Jan. 18; Gaz. vol. 222; p. 846.

Barnes, George H., Dunham, Quebec, Canada. Electric heater for steering-wheels. No. 1,168,146; Jan. 11; Gaz. vol. 222; p. 657.

Barnes, Henry C., Kalamazoo, Mich. Reinforcing in concrete. No. 1,167,615; Jan. 11; Gaz. vol. 222; p. 474.

Barnes, James, Rochester, assignor, by mesne assignments, to R. E. Dietz Company, New York, N. Y. Tubular lantern. No. 1,167,735; Jan. 11; Gaz. vol. 222; p. 514.

Barnes, James, Rochester, assignor, by mesne assignments, to R. E. Dietz Company, New York, N. Y. Tubular lantern. No. 1,167,736; Jan. 11; Gaz. vol. 222; p. 514.

Barnes, William A., New York, N. Y. Delivery-tricycle. No. 1,168,995; Jan. 18; Gaz. vol. 222; p. 988.

Barnhart, Walter C., Seattle, Wash. Grinding-machine. No. 1,169,377; Jan. 25; Gaz. vol. 222; p. 1156.

Barnhart, William D. (See Searcy and Barnhart.)

Barrett, Halsey M., *et. al.*, receivers. (See Fessenden, Reginald A., assignor.)

Barringer, Max, assignor to A. Sonnenschein, New York, N. Y. Sash-lock. No. 1,169,113; Jan. 25; Gaz. vol. 222; p. 1065.

Barron, William L., New York, N. Y., assignor to The Singer Manufacturing Company. Button-holding clamp. No. 1,167,616; Jan. 11; Gaz. vol. 222; p. 474.

Barry Company. (See Barry, Nicholas, assignor.)

Barry, Nicholas, assignor to Barry Company, Muscatine, Iowa. Shaft-hanger. No. 1,167,672; Jan. 11; Gaz. vol. 222; p. 493.

Barstow, Edwin O., assignor to The Dow Chemical Company, Midland, Mich. Manufacturing arsenate of lead. No. 1,169,114; Jan. 25; Gaz. vol. 222; p. 1066.

Bartenstein, John J., assignor to The Vichek Tool Company, Cleveland, Ohio. Wrench. No. 1,168,844; Jan. 18; Gaz. vol. 222; p. 936.

Bartholomae, William, New York, N. Y. Musical instrument. No. 1,166,425; Jan. 4; Gaz. vol. 222; p. 5.

Barti, Joseph, Chicago, Ill. Adjustable fastening device or sash-lock. No. 1,167,617; Jan. 11; Gaz. vol. 222; p. 474.

Bartlett, Andrew J., Revere, Mass. Motor-boat. No. 1,167,876; Jan. 11; Gaz. vol. 222; p. 563.

Bartley, Ben, New Haven, Ky. Balance means for machinery. No. 1,168,460; Jan. 18; Gaz. vol. 222; p. 801.

Barton, Louis E. (See Rossi and Barton.)

Bass, James O., Tulia, Tex. Bridle-bit. No. 1,167,541; Jan. 11; Gaz. vol. 222; p. 447.

Basset, Lucien P., Montmorency, France. Recovering sulfur dioxid. No. 1,168,046; Jan. 11; Gaz. vol. 222; p. 624.

Bastian, August H., Hillsdale, Oreg. Clamping-wrench. No. 1,169,600; Jan. 25; Gaz. vol. 222; p. 1236.

Bastian, August H., Hillsdale, Oreg. Locking means for clamping-wrenches. No. 1,169,601; Jan. 25; Gaz. vol. 222; p. 1237.

Batdorf, Charles S., Brooklyn, assignor to Automatic Coin-wrapping Machine Company, New York, N. Y. Automatic coin separating, adding, counting, and bagging machine. No. 1,168,461; Jan. 18; Gaz. vol. 222; p. 801.

Batdorf, Charles S., Brooklyn, assignor to Automatic Coin-wrapping Machine Company, New York, N. Y. Coin-package-sealing device. No. 1,168,462; Jan. 18; Gaz. vol. 222; p. 802.

Batdorf, Charles S., Brooklyn, assignor to Automatic Coin-Wrapping Machine Company, New York, N. Y. Movable feed-roll carrier. No. 1,168,780; Jan. 18; Gaz. vol. 222; p. 914.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Wire tie for twisting bags. No. 1,168,781; Jan. 18; Gaz. vol. 222; p. 915.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Tack supplying and inserting mechanism for pulling-over machines. No. 1,168,463; Jan. 18; Gaz. vol. 222; p. 802.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Batten, Gideon C., Cincinnati, Ohio, assignor to International Molding Machine Company, Chicago, Ill. Molding-machine clamping mechanism. No. 1,167,877; Jan. 11; Gaz. vol. 222; p. 563.

Bauer & Black. (See Bauer, Perry S., assignor.)

Bauer Brothers Company, The. (See Barker, George G., assignor.)

Bauer, Perry S., assignor to Bauer & Black, Chicago, Ill. Surgical-bandage package. No. 1,168,703; Jan. 18; Gaz. vol. 222; p. 888.

Bauer, William J., assignor to H. L. Marks, Chicago, Ill. Razor-blade sharpener. No. 1,168,047; Jan. 11; Gaz. vol. 222; p. 624.

Baumann, Arthur C., New York, N. Y. Educational toy. No. 1,168,274; Jan. 18; Gaz. vol. 222; p. 735.

Bausch & Lomb Optical Company. (See Grebe, Albert, assignor.)

Bausch & Lomb Optical Company. (See Kellner, Gustav A. H., assignor.)

Bausch & Lomb Optical Co. (See Patterson, William L., assignor.)

Bausch Machine Tool Company. (See Eden, James A., Jr., assignor.)

Bausman, Alonzo L., Springfield, Mass. Machine for automatically molding confectionery. No. 1,169,602; Jan. 25; Gaz. vol. 222; p. 1237.

Bausman, Alonzo L., assignor to National Equipment Company, Springfield, Mass. Starch-machine. No. 1,168,240; Jan. 11; Gaz. vol. 222; p. 689.

Baverey, François, Oullins, France. Butterfly-valve system for carbureters. No. 1,167,145; Jan. 4; Gaz. vol. 222; p. 255.

Baxter, Arthur R. (See Pyle, Robert H., assignor.)

Baxter, Marvin V., assignor of one-half to G. W. Zimmerman, Los Angeles, Cal. Folding camp-stool. No. 1,169,454; Jan. 25; Gaz. vol. 222; p. 1184.

Bay State Metal Wheel Company. (See Siebert and Turner, assignors.)

Bayer, Es Tarsa. (See Buchtala, Hans, assignor.)

Bayliss, Jerome Z., and C. Raus, Cleveland, Ohio. Switch-box. No. 1,167,879; Jan. 11; Gaz. vol. 222; p. 664.

Bayrer, William J., assignor to The Henry & Wright Manufacturing Company, Hartford, Conn. Power-transferring mechanism. No. 1,169,115; Jan. 25; Gaz. vol. 222; p. 1066.

Bayton, Albert, assignor to Reed Manufacturing Company, Erie, Pa. Headed rod. No. 1,166,738; Jan. 4; Gaz. vol. 222; p. 115.

Bayuk, Meyer. (See Reukauf, Edward, assignor.)

Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,168,048; Jan. 11; Gaz. vol. 222; p. 624.

Beacham, John W., Montgomery, and B. F. Powers, Birmingham, Ala. Automatic train-pipe coupling. No. 1,167,789; Jan. 11; Gaz. vol. 222; p. 532.

Beacon Miniature Electric Co. (See Benedict, Bernard, assignor.)

Beadle, E. R. (See Etter, Harvey V., assignor.)

Beard, Robert N., Omaha, Nebr. Portable display-book. No. 1,167,618; Jan. 11; Gaz. vol. 222; p. 475.

Beattie Manufacturing Company. (See Beattie, Walter J., assignor.)

Beattie, Walter J., assignor, by mesne assignments, to Beattie Manufacturing Company, Cohoes, N. Y. Folding-machine. No. 1,167,329; Jan. 4; Gaz. vol. 222; p. 319.

Beaumel, David W., Brooklyn, N. Y. Fountain-pen. No. 1,169,603; Jan. 25; Gaz. vol. 222; p. 1238.

Beaumont, William W., Westminster, London, England. Machine for straining paper-pulp. No. 1,166,882; Jan. 4; Gaz. vol. 222; p. 164.

Beck, Charles B. and J. M., Philadelphia, Pa. Electrical testing-standard. No. 1,166,426; Jan. 4; Gaz. vol. 222; p. 5.

Beck, Charles E. and H. E., El Monte, Cal. Submarine. No. 1,166,651; Jan. 4; Gaz. vol. 222; p. 86.

Beck, Edward E., assignor to Crown Die & Tool Co., Chicago, Ill. Post pipe-vise. No. 1,168,049; Jan. 11; Gaz. vol. 222; p. 625.

Beck, Harold E. (See Beck, Charles E. and H. E.)

Beck, Joseph M. (See Beck, Charles B. and J. M.)

Beck, Mae, Perry, Iowa. Steps for railway and street cars. No. 1,168,464; Jan. 18; Gaz. vol. 222; p. 802.

Beck, Nels L., Exira, Iowa. Animal-holding implement. No. 1,168,591; Jan. 18; Gaz. vol. 222; p. 847.

Becker, Emil A., Milwaukee, Wis. Motor-cycle signal. No. 1,166,652; Jan. 4; Gaz. vol. 222; p. 87.

Becker, Hugo. (See Will and Becker.)

Bedinger, Singleton B., Fort Worth, Tex. Coin-holding post-card. No. 1,168,592; Jan. 18; Gaz. vol. 222; p. 847.

Bedinger, William L., Springville, Ala. Fire-escape. No. 1,168,465; Jan. 18; Gaz. vol. 222; p. 803.

Beeler, Esten, assignor, by mesne assignments, of one-fourth to H. Beeler, New York, N. Y. Bubble-making machine. No. 1,167,619; Jan. 11; Gaz. vol. 222; p. 475.

Beeler, Herbert. (See Beeler, Esten, assignor.)

Beer, Georg, Wiesbaden, Germany. Sewing-machine for boot-soles and the like. No. 1,168,593; Jan. 18; Gaz. vol. 222; p. 847.

Beidler, George C., Oklahoma, Okla. Machine for exposing and developing sensitive films. No. 1,168,466; Jan. 18; Gaz. vol. 222; p. 803.

Belfield, A. Miller, *et al.*, trustees. (See Davis, Charles L., assignor.)

Belk, E. G., *et al.* (See Eddy, Gerald A., assignor.)

Bell, Alfred B. (See Lambert and Bell.)

Bell, Archibald W., Springfield, Ill., assignor to The Bell Supply Company, Fort Madison, Iowa. Oil-can. No. 1,166,739; Jan. 4; Gaz. vol. 222; p. 115.

Bell, Charles E., Weeks, La. Cane-cutting machine. No. 1,168,467; Jan. 18; Gaz. vol. 222; p. 804.

Bell, Edward C., and R. S. Case, Unionville, Conn. Making cartridge-shells. No. 1,169,378; Jan. 25; Gaz. vol. 222; p. 1156.

Bell, Elmer, assignor to Bryce Brothers Company, Mount Pleasant, Pa. Machine for cracking off glass blanks. No. 1,168,275; Jan. 18; Gaz. vol. 222; p. 735.

Bell, Harmon. (See Loftus, Thomas J., assignor.)

Bell Supply Company, The. (See Bell, Archibald W., assignor.)

Bellamy, Alfred R., Grantham, England. Charcoal-kiln. No. 1,168,845; Jan. 18; Gaz. vol. 222; p. 937.

Bellows, Warren S., Worcester, Mass. Socket-wrench. No. 1,167,542; Jan. 11; Gaz. vol. 222; p. 447.

Beman, Myron C., and F. A. Pilcher, assignors to Beman Symphonie Organ Company, Binghamton, N. Y. Automatic organ. No. 1,167,344; Jan. 4; Gaz. vol. 222; p. 324.

Beman Symphonie Organ Company. (See Beman and Pilcher, assignors.)

Bemiss, Orrin J., Ypsilanti, Mich. Signaling device for automobiles. No. 1,167,372; Jan. 11; Gaz. vol. 222; p. 389.

Benbow, Burnie L., Cleveland, Ohio, assignor to General Electric Company. Wire-drawing. No. 1,168,050; Jan. 11; Gaz. vol. 222; p. 625.

Bendall, Herbert C., Montreal, Quebec, Canada. Shelf-support for ovens. No. 1,166,653; Jan. 4; Gaz. vol. 222; p. 87.

Bender, William, New York, N. Y. Mold-clamp. No. 1,168,147; Jan. 11; Gaz. vol. 222; p. 657.

Bendzsa, Steve, Atlasburg, assignor of one-half to C. Farkas, Cherry Valley, Pa. Convertible reclining-chair. No. 1,168,276; Jan. 18; Gaz. vol. 222; p. 735.

Benedict, Bernard, assignor to Beacon Miniature Electric Co., Inc., New York, N. Y. Portable electric light. No. 1,167,878; Jan. 11; Gaz. vol. 222; p. 564.

Benedict, Bernard, assignor, by mesne assignments, to Beacon Miniature Electric Company, Inc., New York, N. Y. Flash-light. No. 1,168,241; Jan. 11; Gaz. vol. 222; p. 689.

Benford, Edward M., Mount Vernon, N. Y. Oil-gage. No. 1,168,468; Jan. 18; Gaz. vol. 222; p. 804.

Benham, William T., Norwood, Ohio. Dial for combination-locks. No. 1,166,883; Jan. 4; Gaz. vol. 222; p. 165.

Benjamin Eastwood Company. (See Eastwood, James, assignor.)

Benjamin Electric Mfg. Company. (See Benjamin, Reuben B., assignor.)

Benjamin, Reuben B., assignor to Benjamin Electric Mfg. Company, Chicago, Ill. Lamp-clamping socket. No. 1,167,473; Jan. 11; Gaz. vol. 222; p. 423.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Attachment-plug. No. 1,167,474; Jan. 11; Gaz. vol. 222; p. 423.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Safety device for presses. No. 1,167,475; Jan. 11; Gaz. vol. 222; p. 424.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Safety device for presses. No. 1,167,476; Jan. 11; Gaz. vol. 222; p. 424.

Bennan, John A., Chicago, Ill. Electrical-switch mounting. No. 1,167,880; Jan. 11; Gaz. vol. 222; p. 565.

Bennett, Charles F., assignor to Sharp & Smith, Chicago, Ill. Supporter. No. 1,169,455; Jan. 25; Gaz. vol. 222; p. 1184.

Bennett, Martin S., Minneapolis, Kans. Crate-making machine. No. 1,167,253; Jan. 4; Gaz. vol. 222; p. 291.

Bennett, Orin, Placerville, Cal. Type-operating mechanism for type-writing machines. No. 1,168,704; Jan. 18; Gaz. vol. 222; p. 889.

Bennett, Richard P., Chicago, Ill. Lock. No. 1,168,242; Jan. 11; Gaz. vol. 222; p. 689.

Bennett, Thomas S. (See Salt and Bennett.)

Bennington Scale Company. (See Moore and Brown, assignors.)

Bennington Scale Company. (See Moore and Hunter, assignors.)

Benson, Clarence E., Harris, Iowa. Anchoring device. No. 1,167,790; Jan. 11; Gaz. vol. 222; p. 532.

Benson, Edgar W., Richmond, assignor of one-half to G. X. Fleming, Sacramento, Cal. Cultivator standard and shovel. No. 1,168,469; Jan. 18; Gaz. vol. 222; p. 804.

Benson, Oscar, Altoona, Pa. Glass-cutting machine. No. 1,167,254; Jan. 4; Gaz. vol. 222; p. 292.

Berck, Alvin R., and F. Tjaden, Hastings, Nebr. Air-pump. No. 1,167,255; Jan. 4; Gaz. vol. 222; p. 292.

Berend, Ludwig, Amöneburg-on-the-Rhine, Germany. Solidifying emulsion products. No. 1,167,373; Jan. 11; Gaz. vol. 222; p. 390.

Berendes, Frederick, Evansville, Ind. Disk plow. No. 1,168,594; Jan. 18; Gaz. vol. 222; p. 848.

Berg, Louis D., Watertown, N. Y. Forced-draft device for locomotive-boilers. No. 1,167,374; Jan. 11; Gaz. vol. 222; p. 390.

Bergman, Charlotte, Los Angeles, Cal. Vibrator. No. 1,167,256; Jan. 4; Gaz. vol. 222; p. 292.

Bergman, Gustaf, Marlboro, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,168,470; Jan. 18; Gaz. vol. 222; p. 805.

Bergmann, George H. F. (See Van Dillen and Bergmann.)

Bergo, Otto J., assignor of one-half to T. J. White, Norfolk, Va. Blow-off valve. No. 1,166,884; Jan. 4; Gaz. vol. 222; p. 165.

Berlin Mills Company. (See Bache-Wiig, Carl, assignor.)

Berman, Wolf. (See Braff, Jacob, assignor.)

Bernadac, Anthony F., New York, N. Y. Brace for window food-boxes. No. 1,169,604; Jan. 25; Gaz. vol. 222; p. 1238.

Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Hand-tool. No. 1,168,051; Jan. 11; Gaz. vol. 222; p. 625.

Bernstein, Joseph. (See Crump and Bernstein.)

Berrien, Alfred J., and E. I. Bowe, Huron, S. D.; said Berrien assignor to said Bowe. Mud-jack for automobiles. No. 1,167,737; Jan. 11; Gaz. vol. 222; p. 515.

Berry, Jesse H., Boston, Mass. Securing device for the closures of pails, &c. No. 1,168,148; Jan. 11; Gaz. vol. 222; p. 657.

Berry, Joseph E., St. Joseph, Mo. Embroidery attachment for sewing-machines. No. 1,168,471; Jan. 18; Gaz. vol. 222; p. 805.

Bertram, William E., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,168,243; Jan. 11; Gaz. vol. 222; p. 690.

Bertram, William E., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,168,244; Jan. 11; Gaz. vol. 222; p. 690.

Beskow, Knut J., and A. Ramén, Helsingborg, Sweden. Mechanical roasting-furnace. No. 1,166,654; Jan. 4; Gaz. vol. 222; p. 87.

Bessett, Clayton M. (See Glover, Theodore S., assignor.)

Bessinger, Robert A., Wellington, Ohio. Electric-bell attachment for pianos. No. 1,168,846; Jan. 18; Gaz. vol. 222; p. 937.

Best, Charles L., Annapolis, Md. Safety appliance for gas water-heaters. No. 1,167,257; Jan. 4; Gaz. vol. 222; p. 293.

Best, William N., New York, N. Y. Furnace. No. 1,166,807; Jan. 4; Gaz. vol. 222; p. 139.

Bettendorf Company, The. (See Taylor and Clasen, assignors.)

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Stave-bending machine. No. 1,168,376; Jan. 18; Gaz. vol. 222; p. 771.

Beverly, James A., Topeka, Kans. Animal-trap. No. 1,166,573; Jan. 4; Gaz. vol. 222; p. 58.

Bibby, James J., assignor of one-half to D. Snyder, Philadelphia, Pa. Flier spinning device. No. 1,168,927; Jan. 18; Gaz. vol. 222; p. 966.

Bicker, William, White Earth, N. D. Reinforcement-band for millstones or mill-burs. No. 1,168,705; Jan. 18; Gaz. vol. 222; p. 889.

Bierwirth, Ernst A. G., Kansas City, Mo. Folding box. No. 1,169,116; Jan. 25; Gaz. vol. 222; p. 1066.

Biggs, John, Kimball, Nebr. Insect-exterminator. No. 1,168,149; Jan. 11; Gaz. vol. 222; p. 658.

Billings, Fred F. (See Bullock and Billings.)

Bimson, Alfred G., Berthoud, Colo. Beet-harvester. No. 1,169,229; Jan. 25; Gaz. vol. 222; p. 1106.

Binder, Russell T. (See Hall, George F., assignor.)

Binkley, William E., Polo, Ill. Wheel. No. 1,168,996; Jan. 18; Gaz. vol. 222; p. 989.

Birn, Ludwig J., Chewelah, Wash. Mixing-hoe. No. 1,167,971; Jan. 11; Gaz. vol. 222; p. 598.

Bishop, Carl E. and I. J., Mitchellville, Iowa. Adjustable screw-gearing. No. 1,167,330; Jan. 4; Gaz. vol. 222; p. 319.

Bishop, Ira J. (See Bishop, Carl E. and I. J.)

Bissell, Carl H., Syracuse, and D. C. Gidley, Boston, Mass., assignors to Crouse-Hinds Company, Syracuse, N. Y. Electric-conduit fitting and electrical appliance. No. 1,167,039; Jan. 4; Gaz. vol. 222; p. 217.

Bixby, Milo P., and F. C. Reimer, Great Falls, Mont. Antiskidding device. No. 1,169,525; Jan. 25; Gaz. vol. 222; p. 1209.

Bixler, Lewis S., Kenton, Ohio. Toy pistol. No. 1,168,150; Jan. 11; Gaz. vol. 222; p. 658.

Black, Arthur, York, Pa. Feed and pressure mechanism. No. 1,169,605; Jan. 25; Gaz. vol. 222; p. 1238.

Blackall, Robert H., Pittsburgh, Pa., assignor to Ratcher Brake Company, New York, N. Y. Ratchet brake mechanism. No. 1,167,258; Jan. 4; Gaz. vol. 222; p. 293.

Blackall, Robert H., Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y. Tunnel-brake. No. 1,167,260; Jan. 4; Gaz. vol. 222; p. 294.

Blackall, Robert H., Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y. Ratchet mechanism for blind-end cars. No. 1,167,261; Jan. 4; Gaz. vol. 222; p. 294.

Blackall, Robert H., Pittsburgh, Pa., assignor to Ratchet Brake Company, New York, N. Y. Back-off ratchet. No. 1,167,262; Jan. 4; Gaz. vol. 222; p. 294.

Blackstone, Clarence W., Chicago, Ill., assignor, by mesne assignments, to Burt Machine Company, Baltimore, Md. Can-labeling machine. No. 1,168,476; Jan. 18; Gaz. vol. 222; p. 807.

Blackwell, Charles O., Hanna, assignor of one-half to J. B. Yeager, Walker, W. Va. Cellular packing structure. No. 1,167,620; Jan. 11; Gaz. vol. 222; p. 475.

Blackwell, Otto B. (See Campbell, Blackwell, and Colpitts.)

Blaine, Joseph R., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Ink distribution for printing-presses. No. 1,168,277; Jan. 18; Gaz. vol. 222; p. 736.

Blake, Ralph V., Yonkers, N. Y. Bedclothes-clamp. No. 1,167,040; Jan. 4; Gaz. vol. 222; p. 218.

Blakely, Guy W., Saxman, Kans. Perpetual calendar. No. 1,169,230; Jan. 25; Gaz. vol. 222; p. 1107.

Blakeslee, John R., assignor to The Ajax Manufacturing Company, Cleveland, Ohio. Machine for making bolts and the like. No. 1,168,855; Jan. 18; Gaz. vol. 222; p. 940.

Blangey, Louis, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Pigment. No. 1,166,808; Jan. 4; Gaz. vol. 222; p. 139.

Blank, John H., and C. S. Dungan, Follansbee, W. Va. Garbage-can. No. 1,169,606; Jan. 25; Gaz. vol. 222; p. 1239.

Blaw Collapsible Steel Centering Company. (See McArthur, Charles D., assignor.)

Bleichrode, Jacob B., Brooklyn, assignor to Crystal Percolator Company, Inc., New York, N. Y. Percolator-strainer. No. 1,167,259; Jan. 4; Gaz. vol. 222; p. 293.

Blenis, Florence J., Valhalla, N. Y. Sleeping-garment. No. 1,169,607; Jan. 25; Gaz. vol. 222; p. 1239.

Blodgett, J. L. (See Flowers, Edgar L., assignor.)

Blodgett, John W., assignor to J. H. McElroy, trustee, Chicago, Ill. Machine for manufacturing belts. No. 1,166,574; Jan. 4; Gaz. vol. 222; p. 58.

Blodgett, Warren K. (See Stanley, Arthur M., assignor.)

Bloom, Joseph. (See Finberg, Isaac, assignor.)

Bloxton, Benjamin, Richmond, Va. Switch-throwing device. No. 1,168,472; Jan. 18; Gaz. vol. 222; p. 805.

Bloyd, Thomas E., Leavenworth, Kans. Collapsible crate. No. 1,167,621; Jan. 11; Gaz. vol. 222; p. 475.

Bodde, Theodore, assignor of one-half to himself and one-half to A. G. Shaver, Westfield, N. J. Electric selective instrument. No. 1,169,713; Jan. 25; Gaz. vol. 222; p. 1274.

Bodner, Alex, Duquesne, Pa. Dumping-car. No. 1,168,847; Jan. 18; Gaz. vol. 222; p. 938.

Bogda, Frank H., Burnett, Wis. Gate-latch. No. 1,167,477; Jan. 11; Gaz. vol. 222; p. 425.

Bogdánffy, Alexander, New York, assignor to The International Cork Company, Brooklyn, N. Y. Machine for the manufacture of bottle-closures. No. 1,169,608; Jan. 25; Gaz. vol. 222; p. 1239.

Böhm, Heinrich A., Hamburg, Germany. Turbine power plant. No. 1,166,809; Jan. 4; Gaz. vol. 222; p. 139.

Bohnert, Stephan, Cleveland, Ohio. Hinge. No. 1,167,881; Jan. 11; Gaz. vol. 222; p. 565.

Bolen, Patrick J., Wichita, Kans. Milk-strainer. No. 1,168,151; Jan. 11; Gaz. vol. 222; p. 658.

Bolls, William W., Washington, D. C. Dental instrument. No. 1,168,052; Jan. 11; Gaz. vol. 222; p. 626.

Bomm, William H., and J. T. Brent, Westwood, N. J. Sign. No. 1,169,456; Jan. 25; Gaz. vol. 222; p. 1184.

Bond, Calvin O., Columbus Junction, Iowa., Gate. No. 1,168,997; Jan. 18; Gaz. vol. 222; p. 989.

Bond, William A., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,168,473; Jan. 18; Gaz. vol. 222; p. 806.

Bonnel, Theodore J., Rosalia, Kans. Rail-joint. No. 1,168,152; Jan. 11; Gaz. vol. 222; p. 659.

Boone, Daniel. (See Woolwine, Ludy W., assignor.)

Booth, Schellinger and Williams Company. (See Lepper and Mattis, assignors.)

Boothe, John H., assignor of one-third to F. Clark and one-third to E. Clark, Indianola, Iowa. Non-refillable bottle. No. 1,167,791; Jan. 11; Gaz. vol. 222; p. 532.

Boozer, Ralph C., assignor to Joslyn Manufacturing & Supply Company, Chicago, Ill. Insulator-support. No. 1,167,041; Jan. 4; Gaz. vol. 222; p. 218.

Boozer, Ralph C., assignor to Joslyn Manufacturing & Supply Company, Chicago, Ill. Insulator-support. No. 1,167,042; Jan. 4; Gaz. vol. 222; p. 218.

Borden Company, The. (See Phillips, John B., assignor.)

Borman, Sydney, New York, assignor of one-half to L. C. Jandorf, Port Washington, N. Y. Illuminating sign or number-plate. No. 1,169,117; Jan. 25; Gaz. vol. 222; p. 1067.

Bornemann, Edward T., *et al.* (See Crecelius, Louis J., assignor.)

Bosch, Firm of Robert. (See Bosch, Robert, assignor.)

Bosch, Firm of Robert. (See Elsaesser, Victor, assignor.)

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Bosch, Robert, assignor to Firm of R. Bosch, Stuttgart, Germany. Washstand with fire-extinguisher. No. 1,166,810; Jan. 4; Gaz. vol. 222; p. 140.

Bosler, George N. (See Schuhmann, Richard J., assignor.)

Boss, John C., Elkhart, Ind. Brick-kiln. No. 1,167,882; Jan. 11; Gaz. vol. 222; p. 565.

Boston Wire Stitcher Company. (See Maynard, Arthur H., assignor.)

Boswell, Nathaniel B., and E. D. Wilber, Delanson, N. Y. Stringed musical instrument. No. 1,168,153; Jan. 11; Gaz. vol. 222; p. 659.

Botler, Harris. (See Albert, John B., assignor.)

Bottone, Victor R. (See Skinner and Bottone.)

Botts, Oscar T., Brookfield, Mo. Automobile attachment. No. 1,166,575; Jan. 4; Gaz. vol. 222; p. 58.

Bourdelles, Emile, assignor to Schneider & Cie., Paris, France. Wheeled gun-carriage. No. 1,167,673; Jan. 11; Gaz. vol. 222; p. 494.

Bourgeois, Albert, Lafourche Crossing, La. Resilient wheel. No. 1,168,474; Jan. 18; Gaz. vol. 222; p. 806.

Boutelle, Joseph, Paris, France. Internal-combustion engine. No. 1,167,376; Jan. 11; Gaz. vol. 222; p. 391.

Bowe, Elbert I. (See Berrien and Bowe.)

Bowen, Thomas P. (See Baird, Daniel S., assignor.)

Bowers, William F., San Francisco, Cal. Landing-mat. No. 1,166,811; Jan. 4; Gaz. vol. 222; p. 140.

Bowie, Augustus J., Jr., San Francisco, Cal. Lightning-arrester. No. 1,168,595; Jan. 18; Gaz. vol. 222; p. 848.

Bowley, Isaac V., Boston, Mass. Egg-carrier. No. 1,167,263; Jan. 4; Gaz. vol. 222; p. 295.

Bowman, Max, Cincinnati, Ohio. Fabric belt for trousers or the like. No. 1,166,965; Jan. 4; Gaz. vol. 222; p. 191.

Bowman, Samuel B., Blackwell, Okla. Glass-furnace. No. 1,166,576; Jan. 4; Gaz. vol. 222; p. 58.

Bowser, Allen A., Fort Wayne, Ind. Valve. No. 1,168,262; Jan. 11; Gaz. vol. 222; p. 697.

Boxill, Harold A., Cincinnati, Ohio. Grinding-machine. No. 1,169,231; Jan. 25; Gaz. vol. 222; p. 1107.

Boyden, George E., New York, N. Y., assignor to A. P. Browne, trustee, Boston, Mass. Vehicle signaling system. No. 1,168,053; Jan. 11; Gaz. vol. 222; p. 626.

Bover, Charles A., Warsaw, Ind., assignor to Hugro Manufacturing Company, Chicago, Ill. Carpet-sweeper. No. 1,169,526; Jan. 25; Gaz. vol. 222; p. 1209.

Boyer, Charles A., Warsaw, Ind., assignor to Hugro Manufacturing Company, Chicago, Ill. Vacuum-cleaner. No. 1,169,527; Jan. 25; Gaz. vol. 222; p. 1210.

Boyle, Thomas R. (See Rosebush, Louis, assignor.)

Boyler, Emanuel J. (See Greist and Boyler.)

Boyne, John J., Buffalo, N. Y. Water-closet. No. 1,167,738; Jan. 11; Gaz. vol. 222; p. 515.

Boynton, Arthur J., Lorain, Ohio. Charging blast-furnaces. No. 1,167,883; Jan. 11; Gaz. vol. 222; p. 566.

Bradley, Edward E., assignor to The Atwood Machine Company, Stonington, Conn. Quilling-machine. No. 1,168,929; Jan. 18; Gaz. vol. 222; p. 966.

Bradley, Michael T., Spokane, Wash. Shovel foot-rest. No. 1,166,427; Jan. 4; Gaz. vol. 222; p. 5.

Bradley, William W., assignor of one-half to W. L. Day, Syracuse, N. Y. Machine for making bead chains. No. 1,169,610; Jan. 25; Gaz. vol. 222; p. 1240.

Bradshaw, George B., Roselle Park, N. J. Making picric acid. No. 1,168,266; Jan. 11; Gaz. vol. 222; p. 699.

Braff, Jacob, assignor of one-half to W. Berman, Boston, Mass. Window frame and sash. No. 1,169,315; Jan. 25; Gaz. vol. 222; p. 1134.

Brager, Bernhardt, New York, N. Y. Wardrobe-fixture. No. 1,168,154; Jan. 11; Gaz. vol. 222; p. 660.

Bragstad, Adolph N., Canton, S. D. Silo-door construction. No. 1,166,740; Jan. 4; Gaz. vol. 222; p. 115.

Brambach Piano Company. (See Avisus, Leopold, assignor.)

Brandenburg, Clyde K., Klamath Falls, Oreg. Tooth-cleaner. No. 1,168,998; Jan. 18; Gaz. vol. 222; p. 989.

Brandetti, Alberto, Medina, N. Y. Wrench. No. 1,166,655; Jan. 4; Gaz. vol. 222; p. 87.

Branham, Leonard, Orlando, Fla. Pipe-wrench. No. 1,168,999; Jan. 18; Gaz. vol. 222; p. 989.

Brantford Computing Scale Company. (See Stephenson and Howard, assignors.)

Brassington, John W., Wilmington, Del. Tension-indicator for felts, Fourdrinier wires, and paper sheets. No. 1,168,706; Jan. 18; Gaz. vol. 222; p. 889.

Bratten, Joseph M., Jr., Earleys, N. C. Rail-joint. No. 1,167,674; Jan. 11; Gaz. vol. 222; p. 494.

Braun Corporation, The. (See Rorrison, William, assignor.)

Braun, Simon L., Antwerp, Belgium. Glass-cutter. No. 1,169,714; Jan. 25; Gaz. vol. 222; p. 1275.

Braverman, Abraham S. (See Friedman, Morris, assignor.)

Breeze, Frank A., Newburgh, Ontario, Canada. Machine for making plow-point molds. No. 1,167,675; Jan. 11; Gaz. vol. 222; p. 495.

Brehmer, Herman C., assignor to H. W. Butterworth & Sons Company, Philadelphia, Pa. Guide mechanism for cloth. No. 1,169,118; Jan. 25; Gaz. vol. 222; p. 1067.

Brell, Julius J., New York, N. Y. Self-closing safety-pin. No. 1,166,885; Jan. 4; Gaz. vol. 222; p. 165.

Bremner, Simon, and F. F. Slick, Braddock, Pa. Belt-shifter. No. 1,169,232; Jan. 25; Gaz. vol. 222; p. 1107.

Breneman, Samuel C. (See Giclas and Breneman.)

Brenizer, Orson W., Philadelphia, Pa. Coin-controlled apparatus. No. 1,168,278; Jan. 18; Gaz. vol. 222; p. 736.

Brennecke, Herman J., assignor of one-half to R. Malcolm, Chicago, Ill. Flexible goggles. No. 1,167,331; Jan 4; Gaz. vol. 222; p. 319.

Brent, John T. (See Bomm and Brent.)

Brenzinger, Julius, Mount Vernon, N. Y., assignor to The Max Ams Machine Company, Bridgeport, Conn. Can-heading machine. No. 1,167,345; Jan. 4; Gaz. vol. 222; p. 325.

Brenzinger, Julius, Mount Vernon, N. Y., assignor to The Max Ams Machine Company. Can-heading machine. No. 1,167,346; Jan. 4; Gaz. vol. 222; p. 326.

Brenzinger, Julius, assignor to Max Ams Machine Company, Mount Vernon, N. Y. Can-heading machine. No. 1,167,347; Jan. 4; Gaz. vol. 222; p. 326.

Brenzinger, Julius, assignor to Max Ams Machine Company, Mount Vernon, N. Y. Can-heading machine. No. 1,167,348; Jan. 4; Gaz. vol. 222; p. 326.

Brenzinger, Julius, assignor to The Max Ams Machine Company, Mount Vernon, N. Y. Can-heading machine. No. 1,167,349; Jan. 4; Gaz. vol. 222; p. 327.

Brenzinger, Julius, Mount Vernon, N. Y., assignor to The Max Ams Machine Company. Tool-carrier for can-heading machines. No. 1,167,350; Jan. 4; Gaz. vol. 222; p. 327.

Brenzinger, Julius, assignor to The Max Ams Machine Company, Mount Vernon, N. Y. Can-heading machine. No. 1,167,351; Jan. 4; Gaz. vol. 222; p. 328.

Brenzinger, Julius, assignor to The Max Ams Machine Company, Mount Vernon, N. Y. Automatic assembling and feeding device for can-heading machines. No. 1,167,352; Jan. 4; Gaz. vol. 222; p. 328.

Brewer, Jacob, Hazleton, Pa. Fuel and heating system. No. 1,169,119; Jan. 25; Gaz. vol. 222; p. 1067.

Brewitt, Walter, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y. Welding rails or the like. No. 1,167,043; Jan. 4; Gaz. vol. 222; p. 219.

Bried, Julien A., Oakland, Cal. Rim-fastening for split pulleys. No. 1,169,233; Jan. 25; Gaz. vol. 222; p. 1108.

Briggs, Winfield S., Omaha, Nebr. Pump attachment. No. 1,168,928; Jan. 18; Gaz. vol. 222; p. 966.

Brightson, George E., Oyster Bay, N. Y., assignor to Sonora Phonograph Corporation. Tone-moderator for talking-machines. No. 1,167,972; Jan. 11; Gaz. vol. 222; p. 598.

Brimhall, Lee H. (See Mortensen, Hans J., assignor.)

Brimson, James H., assignor of one-half to W. H. Hart, Saginaw, Mich. Variable-speed mechanism. No. 1,166,656; Jan. 4; Gaz. vol. 222; p. 88.

Briscoe Manufacturing Company. (See Groehn, Otto J., assignor.)

Bristol Company, The. (See Bristol, William H., assignor.)

Bristol, William H., assignor to The Bristol Company, Waterbury, Conn. Thermo-electric couple. No. 1,169,611; Jan. 25; Gaz. vol. 222; p. 1241.

Broadwell, Harry B., St. Louis, Mo. Portable burglar-alarm. No. 1,169,120; Jan. 25; Gaz. vol. 222; p. 1068.

Broady, Harry W., Bayside, N. Y., assignor to Welin Marine Equipment Company. Engaging and disengaging gear for ships' boats. No. 1,168,377; Jan. 18; Gaz. vol. 222; p. 772.

Brochetti, Amadio, and J. Familet, Dunkirk, N. Y. Duplex fountain-pen. No. 1,166,741; Jan. 4; Gaz. vol. 222; p. 116.

Brochu, Michael, assignor of one-third to J. D. Raab and one-third to A. Disk, Grand Rapids, Mich. Metallic cask. No. 1,169,084; Jan. 18; Gaz. vol. 222; p. 1018.

Brock, Ellis R., assignor of one-half to M. F. Day, Belton, S. C. Adjustable bearing. No. 1,167,375; Jan. 11; Gaz. vol. 222; p. 390.

Brockway, Edwin L., Glenside, Pa. Cable-bonding device. No. 1,168,596; Jan. 18; Gaz. vol. 222; p. 848.

Brooklyn Cooperage Co. (See Lobley, Max E., assignor.)

Brooklyn Cooperage Co. (See Parker, Robert M., assignor.)

Brooks, Aubrey, Heber, Cal. Grain-heading machine. No. 1,167,739; Jan. 11; Gaz. vol. 222; p. 515.

Brooks, Benjamin T., assignor to Gulf Refining Company, Pittsburgh, Pa. Stable rosin and making the same. No. 1,167,264; Jan. 4; Gaz. vol. 222; p. 295.

Brooks, George W., Topeka, Kans. Pressed-steel stair. No. 1,166,428; Jan. 4; Gaz. vol. 222; p. 5.

Brooks, James A., assignor to The J. G. Brill Co., Philadelphia, Pa. Brake mechanism for car-trucks. No. 1,169,457; Jan. 25; Gaz. vol. 222; p. 1185.

Brooks, James L., assignor of one-half to L. M. Ball, Douglas, Ariz. Wrench. No. 1,166,429; Jan. 4; Gaz. vol. 222; p. 6.

Brooks, Julius E., East Haven, assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,167,044; Jan. 4; Gaz. vol. 222; p. 219.

Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Self-locking car-seal. No. 1,166,657; Jan. 4; Gaz. vol. 222; p. 88.

Brosius, Edgar E., Pittsburgh, Pa. Grab-bucket. No. 1,168,279; Jan. 18; Gaz. vol. 222; p. 737.

Broune, Abraham, Brooklyn, N. Y. Window-guard. No. 1,168,155; Jan. 11, Gaz. vol. 222; p. 660.

Brown, Carl W., *et al.* (See Miller, Vena A., assignor.)

Brown, Charles F. (See Hulen and Brown.)

Brown, Charles S. (See Dargin, Ernest P., assignor.)

Brown, Charles W., trustee. (See Reeve, Sidney A., assignor.)

Brown, Christy, Wilmette, assignor to American Car Roof Company, Chicago, Ill. Car-roof. No. 1,166,510; Jan. 4; Gaz. vol. 222; p. 35.

Brown, Frank E., Webster City, Iowa. Ankle-brace for skates. No. 1,168,848; Jan. 18; Gaz. vol. 222; p. 938.

Brown, Harold W., Ithaca, N. Y., assignor to Westinghouse Electric and Manufacturing Company. Electrical protective device. No. 1,168,054; Jan 11; Gaz. vol. 222; p. 627.

Brown, Hiram E. (See Moore and Brown.)

Brown, Hugh, Battle Creek, Mich., assignor to The Greenstreet Folding Box Machine Co., Indianapolis, Ind. Crate. (Reissue.) No. 14,042; Jan. 11; Gaz. vol. 222; p. 699.

Brown, John H., Morley, Mo. Harrow-tooth fastening. No. 1,168,930; Jan. 18; Gaz. vol. 222; p. 967.
Brown, Lewis A., Horine, Mo. Padlock. No. 1,167,377; Jan. 11; Gaz. vol. 222; p. 391.
Brown, Peter, Selleck, Wash. Pipe-wrench. No. 1,169,379; Jan. 25; Gaz. vol. 222; p. 1156.
Brown, Ray M., Cleveland, Ohio, assignor to The Curtain Supply Company, Chicago, Ill. Car-diaphragm. No. 1,167,973; Jan. 11; Gaz. vol. 222; p. 598.
Brown, Rezeau B., Milwaukee, Wis., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Gas-generating apparatus. No. 1,168,055; Jan. 11; Gaz. vol. 222; p. 627.
Brown, Wallace R., Olean, N. Y. Knife. No. 1,169,000. Jan. 18; Gaz. vol. 222; p. 990.
Brown, Walter, assignor to Webster Electric Company, Racine, Wis. Magneto-machine. No. 1,169,612; Jan. 25; Gaz. vol. 222; p. 1241.
Brown, William H., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Calculating-machine. No. 1,167,332; Jan. 4; Gaz. vol. 222; p. 320.
Brown, William J., Pittsburgh, assignor of one-fourth to R. S. Kahl, Oakdale, Pa. Wall-paper-scraping machine. No. 1,166,886; Jan. 4; Gaz. vol. 222; p. 165.
Browne, Alexander P., trustee. (See Boyden, George E., assignor.)
Browning, William E., assignor to Hampdens Limited, London, England. Ice-making machine. No. 1,166,966; Jan. 4; Gaz. vol. 222; p. 192.
Brownlee, Roy H., and R. H. Uhlinger, assignors to American Nitro-Products Company, Pittsburgh, Pa. Manufacture of hydrogen and carbon-black. No. 1,168,931; Jan. 18; Gaz. vol. 222; p. 967.
Brubaker, George P., Berlin, Pa. Silo-door. No. 1,168,156; Jan. 11; Gaz. vol. 222; p. 660.
Brumley, Howard V., Plandome, assignor to Whitall Tatum Company, New York, N. Y. Nursing-nipple. No. 1,168,056; Jan. 11; Gaz. vol. 222; p. 627.
Brunet, Rene, New York, N. Y. Submarine. No. 1,168,707; Jan. 18; Gaz. vol. 222; p. 890.
Brünnow, Rudolph E., Princeton, N. J. Resilient wheel. No. 1,168,157; Jan. 11; Gaz. vol. 222; p. 660.
Brunton, Henry O., Cincinnati, Ohio. Antislipping attachment for tires. No. 1,168,597; Jan. 18; Gaz. vol. 222; p. 849.
Brunswick-Balke-Collender Company, The. (See Whelan, Michael J., assignor.)
Brush, Alanson P. (See Alden and Brush.)
Brush, Alanson P., Detroit, Mich. Rear axle. No. 1,168,245; Jan. 11; Gaz. vol. 222; p. 691.
Brush, Alanson P., Detroit, Mich. Cone-coupling. No. 1,168,246; Jan. 11; Gaz. vol. 222; p. 691.
Brusseau, Adolphus J., assignor of one-half to W. A. Kimball, Plymouth, N. H. Sewing-machine for base-ball covers. No. 1,167,265; Jan. 4; Gaz. vol. 222; p. 295.
Bryant Electric Company, The. (See Burton, Frank V., assignor.)
Bryant Electric Company, The. (See Thomas, George B., assignor.)
Bryant Electric Company, The. (See Trood, Samuel, assignor.)
Bryant, William C., Ivor, Va. Support for peanut-stacks. No. 1,167,676; Jan. 11; Gaz. vol. 222; p. 495.
Bryce Brothers Company. (See Bell, Elmer, assignor.)
Bryn, Edward W., New York, N. Y. Firearm. No. 1,169,121; Jan. 25; Gaz. vol. 222; p. 1068.
Bua, Frank A., Lodi, N. J. Music-lyre. No. 1,167,266; Jan. 4; Gaz. vol. 222; p. 296.
Bubenko, Steve. (See Warga, John, assignor.)
Buch, Newton W., New Castle, assignor to Safety Armorite Conduit Company, Pittsburgh, Pa. Method and apparatus for electroplating pipes and other articles of magnetic material. No. 1,168,280; Jan. 18; Gaz. vol. 222; p. 738.
Buch, Newton W., New Castle, assignor to Safety Armorite Conduit Company, Pittsburgh, Pa. Electroplating apparatus. No. 1,168,281; Jan. 18; Gaz. vol. 222; p. 738.
Buchanan, Leonard B., Woburn, Mass. Ground-terminal connection for electric conductors. No. 1,167,378; Jan. 11; Gaz. vol. 222; p. 391.
Buchert, Jacob, Newport, Ky. Distilling apparatus. No. 1,169,122; Jan. 25; Gaz. vol. 222; p. 1068.
Buchtala, Hans, Gratz, assignor to Bayer Es Tarsa, Budapest, Austria-Hungary. Mercury preparation for therapeutic purposes. No. 1,167,622; Jan. 11; Gaz. vol. 222; p. 476.
Buck, Wilmer G., Warren, Ohio. Friction transmission mechanism. No. 1,168,057; Jan. 11; Gaz. vol. 222; p. 628.
Bucker, Merle, Chicago, Ill. Carbureter. No. 1,168,782; Jan. 18; Gaz. vol. 222; p. 915.
Bucker, Merle, Chicago, Ill. Carbureter. No. 1,168,783; Jan. 18; Gaz. vol. 222; p. 916.
Buckingham, Fremont H., assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Scale. No. 1,166,658; Jan. 4; Gaz. vol. 222; p. 88.
Buckman, Jacob, New York, N. Y. Hood. No. 1,167,379; Jan. 11; Gaz. vol. 222; p. 391.
Bucknam, William A., Truckee, and W. Stickel, Greenwood, Cal. Resilient wheel. No. 1,168,598; Jan. 18; Gaz. vol. 222; p. 849.
Buek, C. E. (See Robinson, Harry, assignor.)
Buero, John J., Charleston, S. C. Cut-out and switch. No. 1,168,247; Jan. 11; Gaz. vol. 222; p. 692.
Buffalo Forge Company. (See Carrier, Willis H., assignor.)
Buffalo Forge Company. (See Comfort, Edward W., assignor.)
Buffaloe, Joseph H., Huntsville, Ala. Combined lister and fertilizer-distributer. No. 1,168,158; Jan. 11; Gaz. vol. 222; p. 661.
Buie, Daniel C., Wills Point, Tex. Hen's nest. No. 1,168,475; Jan. 18; Gaz. vol. 222; p. 806.
Bujewski, Albert, Nashville, Ill. Gate-closer. No. 1,167,267; Jan. 4; Gaz. vol. 222; p. 296.
Bulik, Michael, *et al.* (See Chupka, Miklos, assignor.)
Bull, George R., *et al.* (See Welliver, Jacob D., assignor.)
Bullard, Edwin H., *et al.*, executors. (See Bullard, James H. and E. W.)
Bullard, Edwin W. (See Bullard, James H. and E. W.)
Bullard, Frederick H., *et al.*, executors. (See Bullard, James H. and E. W.)
Bullard, James H., deceased, and E. W. Bullard; F. H. and E. W. Bullard, executors, assignors to A. Webster, Springfield, Mass. Transmission for speed-indicators. No. 1,169,458; Jan. 25; Gaz. vol. 222; p. 1185.
Buller, Nathan R. (See Albert and Buller.)
Bulley, George W., assignor to Mercury Manufacturing Company, Chicago, Ill. Controller-lock for vehicles. No. 1,168,248; Jan. 11; Gaz. vol. 222; p. 692.
Bullock, Fred J., and F. F. Billings, assignors to Papec Machine Company, Shortsville, N. Y. Feeding mechanism for ensilage-cutters. No. 1,168,932; Jan. 18; Gaz. vol. 222; p. 967.
Bullock, George, Grand Junction, Colo. Parcel-carrier. No. 1,167,623; Jan. 11; Gaz. vol. 222; p. 476.
Bullock Tractor Company. (See Houghton, Orley C., assignor.)
Bumpus, Nathan. (See Walters and Bumpus.)
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Drag-line-bucket excavator. No. 1,167,146; Jan. 4; Gaz. vol. 222; p. 255.
Bunnell, Morton G., assignor to Ivory Safety Razor Company, Chicago, Ill. Whistle. No. 1,167,147; Jan. 4; Gaz. vol. 222; p. 255.
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Drainage-excavator. No. 1,168,784; Jan. 18; Gaz. vol. 222; p. 916.
Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Drainage-excavator. No. 1,169,234; Jan. 25; Gaz. vol. 222; p. 1108.
Burger, Leopold F., Beloit, Wis., assignor, by mesne assignments, to International Harvester Corporation. Fuel-feed mechanism for internal-combustion engines. No. 1,166,967; Jan. 4; Gaz. vol. 222; p. 192.
Burgeson, Otto A., Nanson, N. D. Grain-separator. No. 1,168,282; Jan. 18; Gaz. vol. 222; p. 738.
Burkhardt, James R., Davenport, Iowa. Valve. No. 1,169,003; Jan. 18; Gaz. vol. 222; p. 990.
Burkholder, John D., Lancaster, Pa., assignor to Toledo Scale Company, Jersey City, N. J. Scale. No. 1,167,974; Jan. 11; Gaz. vol. 222; p. 599.
Burkley, Charles E. (See Burkley, Harry J. and C. E.)
Burkley, Harry J. and C. E., Cameron, W. Va. Cylinder-cock. No. 1,168,933; Jan. 18; Gaz. vol. 222; p. 968.
Burlingham, William, assignor to Engineering Products Corporation, Newport News, Va. Pneumatic-tool piston. No. 1,167,975; Jan. 11; Gaz. vol. 222; p. 599.
Burns & Bassick Company, The. (See Barnard, Charles S., assignor.)
Burns, Margaret E., Chicago, Ill. Head attachment. No. 1,169,123; Jan. 25; Gaz. vol. 222; p. 1069.
Burroughs Adding Machine Company. (See Chapin, John J., assignor.)
Burroughs Adding Machine Company. (See Vincent, Jesse G., assignor.)
Burt Machine Company. (See Blackstone, Clarence W., assignor.)
Burton, Charles S., Oak Park, assignor to Melville Clark Piano Company, Chicago, Ill. Pneumatic shifting device for movable members of an automatic musical instrument. No. 1,166,430; Jan. 4; Gaz. vol. 222; p. 6.
Burton, Frank V., assignor to The Bryant Electric Company, Bridgeport, Conn. Attachment-plug receptacle. No. 1,169,613; Jan. 25; Gaz. vol. 222; p. 1241.
Burton, James W., Welch, W. Va. Indexed filing-pin and follower. No. 1,169,614; Jan. 25; Gaz. vol. 222; p. 1241.
Burton, William M., Chicago, Ill., assignor to Standard Oil Company, Whiting, Ind. Petroleum product. No. 1,167,884; Jan. 11; Gaz. vol. 222; p. 566.
Busch-Sulzer Bros.-Diesel Engine Company. (See Reuter, Theodor, assignor.)
Busch-Sulzer Bros.-Deisel Engine Company. (See Roesti, Paul G., assignor.)
Bush, John A., Walla Walla, Wash. Car-truck. No. 1,167,148; Jan. 4; Gaz. vol. 222; p. 256.
Butler, Charles H., Oakland, Cal. Rotary broom. No. 1,168,849; Jan. 18; Gaz. vol. 222; p. 933.
Butler, Frank D., Burlington, Iowa. Internal-combustion engine. No. 1,169,235; Jan. 25; Gaz. vol. 222; p. 1108.
Butler, Fred J., Enid, Okla. Lawn-trimmer. No. 1,169,002; Jan. 18; Gaz. vol. 222; p. 990.
Butler, John F., and H. F. McCray, assignors of one-third to W. A. Massey, Reno, Nev. Gas-engine. No. 1,166,577; Jan. 4; Gaz. vol. 222; p. 59.

Button, Frank E., New York, N. Y. System for controlling the movements of vehicles. No. 1,167,333; Jan. 4; Gaz. vol. 222; p. 320.
Button Machinery Company. (See Zuleg, Joseph, assignor.)
Byram, David R., Tupper Lake, N. Y. Dish-cloth holder. No. 1,168,708; Jan. 18; Gaz. vol. 222; p. 890.
Byron, Orra E., assignor to S. A. Griggs, Walkerville, Ontario, Canada. Truck. No. 1,167,792; Jan. 11; Gaz. vol. 222; p. 533.
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)
C. M. Heeter, Sons & Company. (See Heeter, Charles M., C. C., and J. W., assignors.)
Cable, Howard E., *et al.* (See Richdale, Herbert W., assignor.)
Cade, Howard E., Pencoyd, and W. F. Cochrane, Philadelphia, Pa., assignors to Pioneer Smoke Indicator Company, Wilmington, Del. Electrical operating and indicating means. No. 1,167,045; Jan. 4; Gaz. vol. 222; p. 219.
Cadman, Addi B., assignor to Stewart-Warner Speedometer Corporation, Beloit, Wis. Flexible-shaft link. No. 1,167,380; Jan. 11; Gaz. vol. 222; p. 392.
Cadman, Addi B., assignor to Stewart-Warner Speedometer Corporation, Beloit, Wis. Flexible shaft. No. 1,167,381; Jan. 11; Gaz. vol. 222; p. 392.
Cadv, Orrin, *et al.* (See Schwemberger, Otto, assignor.)
Caffrey, James H., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa. Method and apparatus for covering rigid metal articles with fibrous material. No. 1,168,599; Jan. 18; Gaz. vol. 222; p. 849.
Calhoon, Daniel J., Charter Oak, Iowa. Animal-releasing device. No. 1,167,793; Jan. 11; Gaz. vol. 222; p. 533.
California Corrugated Culvert Company. (See Thorsby, Karl J., assignor.)
Callahan, William P., Oakland, Cal. Miter-box. No. 1,167,478; Jan. 11; Gaz. vol. 222; p. 425.
Calleson, Amos, assignor to B. Adriance, Brooklyn, N. Y. Can heading and shaping machine. No. 1,168,477; Jan. 18; Gaz. vol. 222; p. 807.
Callsen, Jürgen, Elberfeld, and R. Stüsser, Dentz, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Camphor compound. No. 1,169,316; Jan. 25; Gaz. vol. 222; p. 1135.
Camagni, Mario, Paterson, N. J. Shuttle. No. 1,166,742; Jan. 4; Gaz. vol. 222; p. 116.
Camel Company. (See Comee, Joseph F., assignor.)
Camel Company. (See Gallagher, Frederick S., assignor.)
Cameron, Matthew C. (See McDonald, James, assignor.)
Campbell, Albert J., Marion, Iowa. Train-service coupling. No. 1,169,459; Jan. 25; Gaz. vol. 222; p. 1185.
Campbell, Charles E., Lynn, Mass. Transformer bell device. No. 1,168,378; Jan. 18; Gaz. vol. 222; p. 772.
Campbell, Colin, Newark, N. J. Power-hammer. No. 1,168,850; Jan. 18; Gaz. vol. 222; p. 939.
Campbell, Duncan R., assignor of one-half to F. Rumrill, Boston, Mass. Machine for trimming the fin or overflow from molded articles. No. 1,167,976; Jan. 11; Gaz. vol. 222; p. 599.
Campbell, George A., Brooklyn, N. Y., O. B. Blackwell, Maplewood, and E. H. Colpitts, East Orange, N. J., assignors to American Telephone and Telegraph Company. System for measuring capacities. No. 1,167,677; Jan. 11; Gaz. vol. 222; p. 495.
Campbell, James W., South Kingston, R. I. Convertible case or stand. No. 1,167,046; Jan. 4; Gaz. vol. 222; p. 220.
Caney, Wilbur H. (See Sibbald and Caney.)
Canfield, Eugene R., Utica, N. Y., assignor to Chicago Lino Tabler Company, Chicago, Ill. Rule-punch. No. 1,168,600; Jan. 18; Gaz. vol. 222; p. 850.
Cant, William J. (See Craig, James A., assignor.)
Capewell Horse Nail Company, The. (See Cutter, Solomon M., assignor.)
Capitol Electric Company. (See Myrick, George H., assignor.)
Capp, John A. (See Collins and Capp.)
Capwell, Vernon L., Dorranceton, Pa. Detachable setting for precious stones. No. 1,166,431; Jan. 4; Gaz. vol. 222; p. 7.
Cargin, George H., Marcus, Iowa. Well-tile-placing tool. No. 1,169,004; Jan. 18; Gaz. vol. 222; p. 991.
Carkhuff, Norman W. (See Gregory and Carkhuff.)
Carlander, Thor, *et al.* (See Uhr and Sandberg, assignors.)
Carll, Edward E., (known as E. C. Edwards,) West Haven, Conn., assignor to Co-Operative Rubber Company. Heel and sole blank. No. 1,167,885; Jan. 11; Gaz. vol. 222; p. 566.
Carman, Frank V., Oakland, Cal. Truck. No. 1,166,812; Jan. 4; Gaz. vol. 222; p. 140.
Carney, Michael J., Kewanee, Ill. Boiler. No. 1,169,065; Jan. 18; Gaz. vol. 222; p. 1011.
Carnt, Edwin C. (See Rosenthal and Carnt.)
Carpenter, Allan O. (See Lucker and Carpenter.)
Carpenter, Frederick A., Chicago, Ill. Colter or cultivator-disk sharpener. No. 1,169,460; Jan. 25; Gaz. vol. 222; p. 1186.
Carpenter, Henry A., Sewickley, assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Treating coal-gas. No. 1,167,149; Jan. 4; Gaz. vol. 222; p. 256.
Carpenter, Henry A., Sewickley, assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Apparatus for treating coal-gas. No. 1,167,150; Jan. 4; Gaz. vol. 222; p. 256.
Carpenter, Henry A., and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Apparatus for treating coal-gas. No. 1,169,615; Jan. 25; Gaz. vol. 222; p. 1242.
Carpenter, John P. (See Cathcart and Carpenter.)
Carr, Alfred, Dayton, Ohio. Embroidering and darning attachment for sewing-machines. No. 1,169,236; Jan. 25; Gaz. vol. 222; p. 1109.
Carrelet, Jean, and L. D. De Lonlay, Paris, France. Inking device for printing-machines. No. 1,167,268; Jan. 4; Gaz. vol. 222; p. 297.
Carrick, Martin H., San Francisco, Cal. Combination plaster-gage corner and furring strip. No. 1,169,066; Jan. 18; Gaz. vol. 222; p. 1011.
Carrier, Willis H., assignor to Buffalo Forge Company, Buffalo, N. Y. Centrifugal fan. No. 1,166,659; Jan. 4; Gaz. vol. 222; p. 89.
Carrier, Willis H., assignor to Buffalo Forge Company, Buffalo, N. Y. Controlling the humidity of air under pressure. No. 1,167,740; Jan. 11; Gaz. vol. 222; p. 515.
Carson, Helen S., Chicago, Ill. Book-marker. No. 1,168,159; Jan. 11; Gaz. vol. 222; p. 661.
Carter Carburetor Company. (See Carter, William C., assignor.)
Carter, George P., Fairfield, N. C. Chalk-line marker. No. 1,168,851; Jan. 18; Gaz. vol. 222; p. 939.
Carter, James E., Morrow, La. Center-gage. No. 1,166,968; Jan. 4; Gaz. vol. 222; p. 193.
Carter, Theodore W., Silver City, N. Mex. Grease-cup No. 1,168,478; Jan. 18; Gaz. vol. 222; p. 807.
Carter, William C., assignor to Carter Carburetor Company, St. Louis, Mo. Carbureter. No. 1,169,616; Jan. 25; Gaz. vol. 222; p. 1242.
Cary, Spencer C., New York, N. Y. Metal fabric. No. 1,167,794; Jan. 11; Gaz. vol. 222; p. 534.
Cary, Spencer C., New York, N. Y. Corrugated metal fastener. No. 1,169,124; Jan. 25; Gaz. vol. 222; p. 1069.
Case, Raymond S. (See Bell and Case.)
Case, Raymond S., Unionville, Conn. Conduit for electric wires. No. 1,166,482; Jan. 4; Gaz. vol. 222; p. 7.
Cashman, Clarence G., Waynesboro, Pa. Reamer-head. No. 1,168,160; Jan. 11; Gaz. vol. 222; p. 661.
Casson, George A., assignor of one-half to R. H. Casson, Paterson, N. J. Machine for stripping, dyeing, and washing silk. No. 1,168,161; Jan. 11; Gaz. vol. 222; p. 662.
Casson, Robert H. (See Casson, George A., assignor.)
Castiglioni, Ferruccio, Wilmette, Ill. System of electrical distribution. No. 1,167,382; Jan. 11; Gaz. vol. 222; p. 392.
Casto, Charles W., assignor of one-third to H. Finkel and one-third to A. Goldfarb, Washington, Pa. Wire-twister machine. No. 1,166,813; Jan. 4; Gaz. vol. 222; p. 141.
Caswell, George W., and C. E. Welt, Cliftondale, Mass. Combined level and plumb. No. 1,169,005; Jan. 18; Gaz. vol. 222; p. 992.
Cathcart, Royal W., and J. P. Carpenter, Elkhart, Ind. Music-rack. No. 1,167,383; Jan. 11; Gaz. vol. 222; p. 393.
Catucci, Pliny, Newark, N. J., assignor to A. F. Meisselbach & Brother. Record-meter for talking-machines. No. 1,169,317; Jan. 25; Gaz. vol. 222; p. 1135.
Cavanagh, James, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. No. 1,169,125; Jan. 25; Gaz. vol. 222; p. 1069.
Cave, Ulysses G., assignor to Multiplex Sales Register Company, Louisville, Ky. Autographic register. No. 1,169,528; Jan. 25; Gaz. vol. 222; p. 1210.
Caverly, Robert B., assignor to Hale and Kilburn Company, Philadelphia, Pa. Grate for gas-ranges. No. 1,168,852; Jan. 18; Gaz. vol. 222; p. 939.
Cawley, Michael J., Buffalo, N. Y. Automobile-headlight. No. 1,168,058; Jan. 11; Gaz. vol. 222; p. 628.
Cement-Gun Construction Company. (See Weber, Carl, assignor.)
Centadriuk-Filters Company. (See Pein, Henry, assignor.)
Central Railway Signal Company. (See Dutcher, Frank, assignor.)
Ceperly, Walter R., Chicago, Ill. Water-kettle. No. 1,169,006; Jan. 18; Gaz. vol. 222; p. 992.
Cerebotani, Luigi, Munich, assignor to Firm of C. Zeiss, Jena, Germany. Printing-telegraph. No. 1,168,603; Jan. 18; Gaz. vol. 222; p. 851.
Chabre, Theodore, Alameda, Cal. Measuring instrument. No. 1,168,853; Jan. 18; Gaz. vol. 222; p. 940.
Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)
Chadwick, Wallace, Schenectady, N. Y. Wrench. No. 1,169,007; Jan. 18; Gaz. vol. 222; p. 992.
Chamberlain, Minor E., Lebanon, Mo. Reinforced concrete construction. No. 1,167,624; Jan. 11; Gaz. vol. 222; p. 476.
Chamberlin, Charles E. (See Ackerman, Edward L., assignor.)
Chambers, Charles A. (See Vincent, Louis N., assignor.)
Champion Blower & Forge Co., The. (See Anderson, Carl O., assignor.)
Champion Register Company. (See Marbach, Frank G., assignor.)

Champion Register Company, The. (See Todd, Charles H., assignor.)

Chandler, Willard R., Sumter, S. C. Railway-brake. No. 1,168,604; Jan. 18; Gaz. vol. 222; p. 852.

Chapin, John J., Detroit, Mich., assignor to S. A. Griggs, Walkerville, Canada. Motor-cycle. No. 1,167,625; Jan. 11; Gaz. vol. 222; p. 477.

Chapin, John J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Type-writing machine. No. 1,167,977; Jan. 11; Gaz. vol. 222; p. 600.

Chaplin, Alfred T., Leicester, England, assignor, to United Shoe Machinery Company, Paterson, N. J. Shoe-beating machine. No. 1,166,511; Jan. 4; Gaz. vol. 222; p. 35.

Chapman, Frank B., Columbus, Ohio. Window-fastener. No. 1,166,433; Jan. 4; Gaz. vol. 222; p. 7.

Chapman, Mark C. (See Chapman, Matthew T. and M. C.)

Chapman, Matthew T., assignor, to The American Well Works, Aurora, Ill. Pump. No. 1,167,047; Jan. 4; Gaz. vol. 222; p. 220.

Chapman, Matthew T. and M. C., assignors to American Well Works, Aurora, Ill. Pump. No. 1,167,886; Jan. 11; Gaz. vol. 222; p. 566.

Charbonneau, Octave, Providence, R. I. Tension device ior yarn-dressing machines. No. 1,167,978; Jan. 11; Gaz. vol. 222; p. 600.

Charles J. Tagliobue Manufacturing Co. (See Witham and Roesch, assignors.)

Charpentier, Joseph O., Concord, N. H. Smoke-cooling attachment for tobacco-pipes, &c. No. 1,167,384; Jan. 11; Gaz. vol. 222; p. 393.

Chase, Jerome W., Portland, Me. Game apparatus. No. 1,168,854; Jan. 18; Gaz. vol. 222; p. 940.

Chase, Levi H., Soda Springs, Idaho. Milking-stool. No. 1,169,008; Jan. 18; Gaz. vol. 222; p. 992.

Chase, Levi H., Denver, Colo. Trace-carrier. No. 1,169,009; Jan. 18; Gaz. vol. 222; p. 993.

Chase Motor Truck Co. (See Gramlich, Jacob E., assignor.)

Chase, Theron P. (See Ward and Chase.)

Chatain, Henri G., Erie, Pa., assignor, to General Electric Company. Engine-cooling and car-heating system. No. 1,167,151; Jan. 4; Gaz. vol. 222; p. 257.

Cheever, William H. (See Fassett and Warren, assignors.)

Chemische Fabric Griesheim-Elektron. (See Kunert, Felix, assignor.)

Chemische Fabrik Griesheim-Elektron. (See Specketer and Marburg, assignors.)

Chemische Fabrik Griesheim-Elektron. (See Wense, Wilhelm, assignor.)

Cheney, John W., Los Angeles, Cal. Treating kelp. No. 1,168,785; Jan. 18; Gaz. vol. 222; p. 917.

Chernack, Abel E., Providence, R. I. Lathe. No. 1,168,162; Jan. 11; Gaz. vol. 222; p. 662.

Chesebro Whitman Co. (See Faulkner, Albert N., assignor.)

Chester, Gifford W., Waterloo, Iowa. Power-transmission device. No. 1,166,660; Jan. 4; Gaz. vol. 222; p. 89.

Chevrolet Motor Company of New York. (See Mason and Sturt, assignors.)

Chicago Cleveland Car Roofing Company. (See Russell, Thomas N., assignor.)

Chicago Electric Meter Company. (See Willis, George M., assignor.)

Chicago Lino Tabler Company. (See Canfield, Eugene R., assignor.)

Chicago Lino-Tabler Company. (See Stevenson, Ashton G., assignor.)

Chicago Miniature Lamp Works. (See Gast, Adolph W., assignor.)

Chicago Railway Signal & Supply Co. (See Vogel, Eugene W., assignor.)

Chicago Surgical & Electrical Co. (See Lidberg, Tiodolf, assignor.)

Chila, Matias, Whiting, Ind. Sauce-powder. No. 1,166,887; Jan. 4; Gaz. vol. 222; p. 166.

Chipperfield, Walter, Romford, England. Type-case. (Reissue.) No. 14,043; Jan. 11; Gaz. vol. 222; p. 700.

Chisholm, Alexander C., Antigonish, Nova Scotia, Canada. Fabric-measuring device. No. 1,166,969; Jan. 4; Gaz. vol. 222; p. 193.

Choralcelo Manufacturing Company. (See Sinclair and Fiske, assignors.)

Christensen, Alfred, and C. Overgaard, Coulter, Iowa. Permutation-valve. No. 1,168,163; Jan. 11; Gaz. vol. 222; p. 662.

Chrzescluski, Otto. (See Merling, Chrzescluski, and Pfeffer.)

Chupka, Miklos, Johnstown, assignor of one-third to M. Bulik, Conemaugh, and one-third to S. Jarina, Johnstown, Pa. Spring-wheel. No. 1,168,283; Jan. 18; Gaz. vol. 222; p. 739.

Church, Alfred H., assignor to Pedograde Company Limited, Leicester, England. Apparatus for measuring feet, lasts, and the like. No. 1,167,269; Jan. 4; Gaz. vol. 222; p. 297.

Ciletti, Stanislao, Newark, N. J. Toy. No. 1,168,605; Jan. 18; Gaz. vol. 222; p. 852.

Cilley, Raymond, New York, N. Y. Photographic-printing apparatus. No. 1,167,795; Jan. 11; Gaz. vol. 222; p. 534.

Cincinnati Milling Machine Company, The. (See De Leeuw, Adolph L., assignor.)

Cirelli, Francesco, Philadelphia, Pa. Talking-machine. No. 1,167,796; Jan. 11; Gaz. vol. 222; p. 534.

Claremont, Ernest A., High Legh, J. Stratton, Bowdon, and C. S. Farmer, Salford, England. Coating glazing-bars and other implements with lead or other protective metal. No. 1,167,626; Jan. 11; Gaz. vol. 222; p. 477.

Claringburn, Charles, Hyson Green, Nottingham, England. Circular-knitting machine. No. 1,166,434; Jan. 4; Gaz. vol. 222; p. 7.

Clark, Albert C., assignor to A. C. Clark & Company, Chicago, Ill. Anesthetic apparatus. No. 1,167,353; Jan 4; Gaz. vol. 222; p. 329.

Clark, Alfred L., Dubuque, Iowa. Machine-gun. No. 1,169,237; Jan. 25; Gaz. vol. 222; p. 1109.

Clark, Bert V., assignor to A. St. Onge, Providence, R. I. Permutation-lock. No. 1,166,970; Jan. 4; Gaz. vol. 222; p. 193.

Clark, Elmer A., Joliet, Ill. Beater. No. 1,167,336; Jan. 4; Gaz. vol. 222; p. 322.

Clark, Elmer A., Joliet, Ill. Metal frame structure. No. 1,694,461; Jan. 25; Gaz. vol. 222; p. 1186.

Clark, Ernest, *et al.* (See Boothe, John H., assignor.)

Clark, Francis M., Garden City, N. Y. Mechanical stoker. No. 1,167,627; Jan. 11; Gaz. vol. 222; p. 478.

Clark, Fred, *et al.* (See Boothe, John H., assignor.)

Clark, Josiah F., Republic, Pa. Cutting device. No. 1,166,578; Jan. 4; Gaz. vol. 222; p. 59.

Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Pneumatic action for interior piano-players. No. 1,169,126; Jan. 25; Gaz. vol. 222; p. 1070.

Clark, Norris E., Plainville, Conn. Metal-working. No. 1,166,888; Jan. 4; Gaz. vol. 222; p. 166.

Clark, Norris E., Plainfield, Conn. Expanded-metal package-roll. No. 1,169,462; Jan. 25; Gaz. vol. 222; p. 1186.

Clarke, Benjamin F., Paso Robles, Cal. Breast-supporter. No. 1,167,741; Jan. 11; Gaz. vol. 222; p. 516.

Clarke, Charles J., Kingsburg, Cal. Short-turning truck. No. 1,167,270; Jan. 4; Gaz. vol. 222; p. 298.

Clarke, Frederick F., assignor to Colburn Machine Tool Company, Franklin, Pa. Drill-press. No. 1,167,887; Jan. 11; Gaz. vol. 222; p. 567.

Clarke, Harold E., Somerville, Mass. Antislipping device for shoes. No. 1,167,628; Jan. 11; Gaz. vol. 222; p. 478.

Clarke, Marcellus B., Akron, Ohio. Vaginal irrigator. No. 1,167,979; Jan. 11; Gaz. vol. 222; p. 600.

Clasen, Claus J. W. (See Taylor and Clasen.)

Claus, Chester K. (See Haupt and Claus.)

Clausing, Henry A., Lima, Ohio. Player-piano. No. 1,167,271; Jan. 4; Gaz. vol. 222; p. 288.

Claussen, Edward E., Hartford, Conn. Sanitary cover for telephone-mouthpieces. No. 1,168,284; Jan. 18; Gaz. vol. 222; p. 739.

Clawson, Perry, Hamilton, Ohio. Mold-form. No. 1,167,797; Jan. 11; Gaz. vol. 222; p. 535.

Clawson, Selden L., Salt Lake City, Utah. Volatilizing ores. No. 1,169,530; Jan. 25; Gaz. vol. 222; p. 1211.

Clay, Samuel, assignor of one-half to H. E. and R. H. Hoke, Hanover, Pa. Swivel-joint for hose-reels. No. 1,166,579; Jan. 4; Gaz. vol. 222; p. 59.

Clay, William H., Cameo, Colo. Tire for automobiles. No. 1,168,709; Jan. 18; Gaz. vol. 222; p. 890.

Cleave, Arthur H. W., Ottawa, Ontario, Canada. Oil-burner. No. 1,168,856; Jan. 18; Gaz. vol 222; p. 941.

Cleesattel, William, Buffalo, N. Y. Metal-forming machine. No. 1,166,814; Jan. 4; Gaz. vol. 222; p. 141.

Clement, Edward E. (See Wright, Joseph L., assignor.)

Clément, Louis, Paris, and C. Rivière, Pantin, near Paris, France, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Derivatives of cellulose containing the residue of an organic acid and nitrogen and making same. No. 1,168,164; Jan. 11; Gaz. vol. 222; p. 663.

Clendenning, James H., Gary, Ind. Drafting implement. No. 1,167,543; Jan. 11; Gaz. vol. 222; p. 447.

Clenny, James E., assignor to The Sefton Manufacturing Company, Chicago, Ill. Packing and shipping box. No. 1,169,238; Jan. 25; Gaz. vol. 222; p. 1110.

Climax Machine Company. (See Kelley, Alexander, assignor.)

Cline, Samuel, Philadelphia, assignor to G. A. Reach, Bala, Pa. Boxing-glove. No. 1,167,272; Jan. 4; Gaz. vol. 222; p. 298.

Clock, William A., Binghamton, N. Y. Mausoleum. No. 1,167,888; Jan. 11; Gaz. vol. 222; p. 567.

Clough, Enos M., Lakeport, N. H. Rake. No. 1,168,165; Jan. 11; Gaz. vol. 222; p. 663.

Clough, Otis H., Mechanicsburg, Ohio. Animal-feeding device. No. 1,167,385; Jan. 11; Gaz. vol. 222; p. 393.

Cluett, Peabody & Co. (See Cook, Orville E., assignor.)

Clyde Sealing Machine Company. (See Hanson, Clyde R., assignor.)

Co-Operative Rubber Company. (See Carll, Edward E., assignor.)

Cobb, John O., West, Tex. Automatic train-pipe coupling. No. 1,167,678; Jan. 11; Gaz. vol. 222; p. 496.

Cochran, Edward A., assignor of one-third to G. M. Davis, San Francisco, Cal. Salt-shaker. No. 1,166,743; Jan. 4; Gaz. vol. 222; p. 116.

Cochran, Eugene S., *et al.* (See Jones, Alva D., assignor.)

Cochrane, William F. (See Cade and Cochrane.)

Coder, Harney C., Okmulgee, Okla. Retarding device for fire-escapes. No. 1,169,239; Jan. 25; Gaz. vol. 222; p. 1110.

Coe, Thomas J., Brooklyn, N. Y. Exhibitor. No. 1,168,786; Jan. 18; Gaz. vol. 222; p. 917.

Coes, Harold V., assignor to The Sentinel Mfg. Co., New Haven, Conn. Heat-distributer for cooking-compartments. No. 1,168,857; Jan. 18; Gaz. vol. 222; p. 941.

Coffin, Howard E., assignor, by mesne assignments, to The Detroit Motor & Machine Company, Detroit, Mich. Rotary valve. No. 1,168,479; Jan. 18; Gaz. vol. 222; p. 808.

Cogger, William B., Cleveland, assignor to T. Kundtz, Lakewood, Ohio. Adjustable pedestal. No. 1,166,435; Jan. 4; Gaz. vol. 222; p. 8.

Coggeshall, John W., *et al.* (See Greenwood, Edgar, assignor.)

Cohen, Leon, St. Louis, Mo. Self-adjusting hat conformer and retainer. No. 1,169,380; Jan. 25; Gaz. vol. 222; p. 1156.

Cohen, Mellie. (See McGovern and Cohen.)

Cohn, Jacob M., Chicago, Ill. Combined pay-envelop, time-card, and receipt. No. 1,168,787; Jan. 18; Gaz. vol. 222; p. 918.

Colburn Machine Tool Company. (See Clarke, Frederick F., assignor.)

Cole, Charles T., assignor to Geo. E. Keith Company, Brockton, Mass. Temporary protector for lasted shoe-uppers. No. 1,169,463; Jan. 25; Gaz. vol. 222; p. 1186.

Cole, Samuel F., Purcellville, Va. Indicator for pneumatic tires. No. 1,167,980; Jan. 11; Gaz. vol. 222; p. 600.

Cole, William J., Marysville, Tex. Wagon-tongue support. No. 1,167,544; Jan. 11; Gaz. vol. 222; p. 448.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Apparatus for securing gems to arbors. No. 1,168,710; Jan. 18; Gaz. vol. 222; p. 890.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne asignments, to Stern-Coleman Diamond Machine Company, Inc. Diamond-polishing machine. No. 1,168,711; Jan. 18; Gaz. vol. 222; p. 891.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Gem-polishing. No. 1,168,858; Jan. 18; Gaz. vol. 222; p. 941.

Coleman, James M., Montreal, Quebec, Canada. Car-roof. No. 1,169,240; Jan. 25; Gaz. vol. 222; p. 1110.

Coles, Walter H., Troy, Ohio. Irrigation device. No. 1,167,629; Jan. 11; Gaz. vol. 222; p. 478.

Colestock, Harry B. (See Haas and Colestock.)

Colgate, Henry A., Orange, N. J. Container for shaving-sticks. No. 1,166,436; Jan. 4; Gaz. vol. 222; p. 8.

Colles, George W. (See Gugler and Colles.)

Collier, Lewis C., assignor of one-third to S. Collier, Toltec, Ark. Ratchet-wrench. No. 1,168,480; Jan. 18; Gaz. vol. 222; p. 808.

Collier, Soffie. (See Collier, Lewis C., assignor.)

Colling, Peter H., assignor of one-half to A. Warhurst, Albany, N. Y. Cuspidor. No. 1,167,273; Jan. 4; Gaz. vol. 222; p. 298.

Collins, Edgar F., and J. A. Capp, Schenectady, N. Y., assignors to General Electric Company. Sherardizing. No. 1,169,529; Jan. 25; Gaz. vol. 222; p. 1210.

Collins, Herbert G., assignor to Sargent & Company, New Haven, Conn. Plane. No. 1,166,437; Jan. 4; Gaz. vol. 222; p. 8.

Collins, Thomas E. (See Sibley, Horace N., assignor.)

Collison, George A., Burlington, Vt. Overhead washer for garages and the like. No. 1,167,479; Jan. 11; Gaz. vol. 222; p. 425.

Colpitts, Edwin H. (See Campbell, Blackwell, and Colpitts.)

Columbian Three Color Co. (See Schmidt, Adolf, assignor.)

Combs, Roy E., Des Moines, Iowa. Smoking-pipe. No. 1,168,481; Jan. 18; Gaz. vol. 222; p. 808.

Comee, Joseph F., assignor to Camel Company, Chicago, Ill. Car-door hanger. No. 1,166,661; Jan. 4; Gaz. vol. 222; p. 90.

Comee, Joseph F., assignor to Camel Company, Chicago, Ill. Door operating and locking device. No. 1,167,630; Jan. 11; Gaz. vol. 222; p. 479.

Comfort, Edward W., assignor, to Buffalo Forge Company, Buffalo, N. Y. Thermo-electric humidity instrument. No. 1,169,617; Jan. 25; Gaz. vol. 222; p. 1243.

Commercial Camera Co. (See Gregory and Carkhuff, assignors.)

Compton, John T., Lineville, Ala. Seed-planter. No. 1,168,859; Jan. 18; Gaz. vol. 222; p. 942.

Compton, Richard W., Higbee, Mo. Change-speed gearing. No. 1,169,618; Jan. 25; Gaz. vol. 222; p. 1243.

Condax, Basil A., New York, N. Y. Moisture-proof package. No. 1,167,048; Jan. 4; Gaz. vol. 222; p. 221.

Condell, Henry, P. E., and R., Troy, Idaho. Drill attachment. No. 1,167,545; Jan. 11; Gaz. vol. 222; p. 448.

Condell, Paul E. (See Condell, Henry, P. E., and R.)

Condell, Richard. (See Condell, Henry, P. E., and R.)

Cone, Frank L., assignor to Windsor Machine Company, Windsor, Vt. Spindle-bearing for multiple-spindle metal-working machines. No. 1,168,249; Jan. 11; Gaz. vol. 222; p. 693.

Cone, Frank L., assignor to Windsor Machine Company, Windsor, Vt. Spindle-bearing for multiple-spindle metal-working machines. No. 1,168,250; Jan. 11; Gaz. vol. 222; p. 693.

Conkle, Ambrose, Luray, Mo. Road-machine. No. 1,169,619; Jan. 25; Gaz. vol. 222; p. 1243.

Conklin, Harry R., Joplin, Mo. Bag-holder. No. 1,169,241; Jan. 25; Gaz. vol. 222; p. 1111.

Conley, Thomas J. (See Walsh, John L., assignor.)

Conn, Byron O. (See Root, Charles F., assignor.)

Conn, Charles G., Elkhart, Ind. Reed musical instrument. No. 1,166,971; Jan. 4; Gaz. vol. 222; p. 193.

Connally, Clarence W. (See McDonald, Charles W., assignor.)

Connecticut Telephone & Electric Company, The. (See Lawton and Spitzer, assignors.)

Connecticut Telephone & Electric Company, The. (See Stahl, Charles E., assignor.)

Connecticut Telephone & Electric Company. (See Wilcox and Spitzer, assignors.)

Connell, Daniel J., Butte, Mont. Drain-cover. No. 1,169,010; Jan. 18; Gaz. vol. 222; p. 993.

Connelly, Joseph W. (See Gross, John B., assignor.)

Conover, Henry V. (See Oishei, Charles, assignor.)

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gear-wheel. No. 1,167,742; Jan. 11; Gaz. vol. 222; p. 516.

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gear. No. 1,167,743; Jan. 11; Gaz. vol. 222; p. 517.

Consolidated Car Heating Company. (See McElroy, James F., assignor.)

Conzelman, John E., Webster Groves, assignor to Unit Construction Company, St. Louis, Mo. Concrete roof construction. No. 1,167,480; Jan. 11; Gaz. vol. 222; p. 426.

Coo, Thomas J., Toronto, Ontario, Canada, assignor to Underwood Typewriter Company, New York, N. Y. Attachment for type-writing machines. No. 1,166,438; Jan. 4; Gaz. vol. 222; p. 9.

Cook, Digby E., Sydney, New South Wales, Australia. Ventilation device for boots and other footwear. No. 1,168,166; Jan. 11; Gaz. vol. 222; p. 663.

Cook, Edward W., Galion, Ohio. Tractor. No. 1,168,934; Jan. 18; Gaz. vol. 222; p. 968.

Cook, Harry A., Dixon, Nebr. Insulator. No. 1,169,011; Jan. 18; Gaz. vol. 222; p. 993.

Cook, Orville E., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Electric-lamp fixture. No. 1,166,815; Jan. 4; Gaz. vol. 222; p. 141.

Cook, Walter S. (See Downs and Cook.)

Cooke, Charles E., Atlantic City, N. J. Hat-fastener. No. 1,168,167; Jan. 11; Gaz. vol. 222; p. 663.

Cooley, Fred O., and A. J. Milligan, Duluth, Minn. Automobile-jack. No. 1,167,049; Jan. 4; Gaz. vol. 222; p. 221.

Coons, Burton C., Rochester, N. Y. Paring-machine. No. 1,168,788; Jan. 18; Gaz. vol. 222; p. 918.

Cooper, Charles H., Wimbledon, England. Apparatus for lubricating internal-combustion engines. No. 1,166,816; Jan. 4; Gaz. vol. 222; p. 142.

Cooper Hewitt Electric Company. (See Thomas, Percy H., assignor.)

Cooper, John J., London, England, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,169,318; Jan. 25; Gaz. vol. 222; p. 1135.

Cooper, William, Denver, Colo. Coin-slot mechanism. No. 1,167,744; Jan. 11; Gaz. vol. 222; p. 517.

Copeland, Edwin T., New York, N. Y. Fusible-link heater. No. 1,167,481; Jan. 11; Gaz. vol. 222; p. 426.

Copithorn, Walter E., Natick, Mass. Wheel. No. 1,166,817; Jan. 4; Gaz. vol. 222; p. 142.

Corbin, Justus N., Fruita, Colo. Air-relief valve for watermains and the like. No. 1,166,439; Jan. 4; Gaz. vol. 222; p. 9.

Corliss, Cyrus. (See Winsor and Corliss.)

Cornelius, Henry D., Indianapolis, Ind. Concrete-curbing form. No. 1,169,464; Jan. 25; Gaz. vol. 222; p. 1187.

Corotto, John A., San Jose, and A. A. Zolezzi, Sunnyvale, Cal. Nut-lock. No. 1,168,860; Jan. 18; Gaz. vol. 222; p. 942.

Corrie, David, and G. A. Ashcroft, county of Stirling, assignors to Nobel's Explosives Company, Limited, Glasgow, Scotland. Detonator. No. 1,167,981; Jan. 11; Gaz. vol. 222; p. 601.

Cosseboom, Robert J., assignor of one-fourth to D. C. Sindlinger and one-fourth to C. A. Niles, Buena Vista, Colo. Butter-mold. No. 1,168,168; Jan. 11; Gaz. vol. 222; p. 664.

Costmeter Company. (See Quigley, John T., assignor.)

Cotton, Alfred, Newark, N. J. Automatic stoker. No. 1,167,982; Jan. 11; Gaz. vol. 222; p. 601.

Cotton, Frank W., Ledbury, England. Construction of motor-cycles. No. 1,169,381; Jan. 25; Gaz. vol. 222; p. 1157.

Cottrell, Frederick E., Pepperwood, Cal. Safety-hook. No. 1,168,482; Jan. 18; Gaz. vol. 222; p. 808.

Cowles, Edward P., Sparta, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,166,440; Jan. 4; Gaz. vol. 222; p. 10.

Cox, Abraham B., New York, N. Y. Wire-tightener. No. 1,167,050; Jan. 4; Gaz. vol. 222; p. 221.

Cox, George A., Brewster, Wash. Box-making machine. No. 1,166,818; Jan. 4; Gaz. vol. 222; p. 142.
Cox, John, *et al.* (See Kirk and Francisco, assignors.)
Coyne, Frank H., Bryn Mawr, Pa., assignor to The General Fiber Company, Cleveland, Ohio. Paper. No. 1,168,285; Jan. 18; Gaz. vol. 222; p. 739.
Crabtree, John I., assignor to Eastman Kodak Company, Rochester, N. Y. Treating photographic film. No. 1,168,286; Jan. 18; Gaz. vol. 222; p. 739.
Crabtree, Lawrence L., and T. C. Ripley, Sulphur Springs, Tex. Metallic cross-arm. (Reissue.) No. 14,040; Jan. 4; Gaz. vol. 222; p. 335.
Craddock, John E., Hedley, Tex. Disk cultivator. No. 1,169,127; Jan. 25; Gaz. vol. 222; p. 1070.
Crady, Charles C., Forth Worth, Tex. Silo. No. 1,167,354; Jan. 4; Gaz. vol. 222; p. 329.
Craggs, Ross V., Baltimore, Md., assignor to R. H. Wright, Durham, N. C. Machine for packaging cigarettes and other articles. No. 1,169,012; Jan. 18; Gaz. vol. 222; p. 993.
Craig, Fenton D., Memphis, Tenn. Handle-fastening device. No. 1,168,169; Jan. 11; Gaz. vol. 222; p. 664.
Craig, James A., Toronto, Ontario, Canada, assignor of two-thirds to W. J. Cant, Lancaster, N. Y. Grinding-head. No. 1,167,482; Jan. 11; Gaz. vol. 222; p. 426.
Craig, Richard M., San Antonio, Tex. Station-indicator. No. 1,168,170; Jan. 11; Gaz. vol. 222; p. 664.
Craine, Charles R. (See Morey and Craine.)
Crane Company. (See Richardson, Samuel, assignor.)
Crane, Edward F., Hoboken, assignor of one-half to A. J. Grymes, East Orange, N. J. Appliance for vessels. No. 1,169,128; Jan. 25; Gaz. vol. 222; p. 1070.
Crane, Henry M., New York, N. Y. Automobile spring suspension. No. 1,169,531; Jan. 25; Gaz. vol. 222; p. 1211.
Cranney, Willard D., Logan, Utah. Tie and means for securing a rail thereto. No. 1,168,483; Jan. 18; Gaz. vol. 222; p. 809.
Crawford, John G., assignor of one-half to O. N. Terry, Chicago, Ill. Boiler-furnace-feeding device. No. 1,169,242; Jan. 25; Gaz. vol; 222; p. 1111.
Crawford, Lester J., Electra, Tex. Engine control. No. 1,169,620; Jan. 25; Gaz. vol. 222; p. 1244.
Crecelius, Louis J., assignor of one-fourth to J. H. Sasseen, one-fourth to A. E. Forbes, and one-fourth to E. G. Bornemann, J. W. O'Brien, and G. F. Kerwin, St. St. Louis, Mo. Pasteurizing liquids. No. 1,168,789; Jan. 18; Gaz. vol. 222; p. 918.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,166,441; Jan. 4; Gaz. vol. 222; p. 10.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,166,442; Jan. 4; Gaz. vol. 222; p. 11.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,166,443; Jan. 4; Gaz. vol. 222; p. 11.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,169,465; Jan. 25; Gaz. vol. 222; p. 1187.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,169,466; Jan. 25; Gaz. vol. 222; p. 1187.
Criqui, Albert A., Buffalo, N. Y. Centrifugal fan. No. 1,167,152; Jan. 4; Gaz. vol. 222; p. 257.
Critchlow, Oscar B., Monaca, Pa. Window-screen. No. 1,167,153; Jan. 4; Gaz. vol. 222; p. 258.
Crocker, Howard M., Nora Springs, Iowa, assignor to Minnetonna Company. Intermittent driving mechanism. No. 1,167,337; Jan. 4; Gaz. vol. 222; p. 322.
Crocker-Wheeler Company. (See Fechheimer, Carl J., assignor.)
Cromarty, Samuel, assignor to J. M. Stuart, Aberdeen, Scotland. Guard for tram-cars and other vehicles. No. 1,166,744; Jan. 4; Gaz. vol. 222; p. 116.
Crompton, Lionel W., and E. N. Oliver, Tampa, Fla. Bridge for electrical conductors. No. 1,169,382; Jan. 25; Gaz. vol. 222; p. 1157.
Crook, James E., Chicago, Ill. Trolley-wheel. No. 1,167,631; Jan. 11; Gaz. vol. 222; p. 479.
Cross, Andrew J., New York, N. Y. Structure of metal and glass or the like. No. 1,167,798; Jan. 11; Gaz. vol. 222; p. 535.
Cross, Frank L., Port Washington, N. Y., assignor to Cross Paper Feeder Company. Sheet-feeding machine. No. 1,169,129; Jan. 25; Gaz. vol. 222; p. 1071.
Cross Paper Feeder Company. (See Cross, Frank L., assignor.)
Crossman, Martin R., Boston, Mass. Match-pocket. No. 1,167,799; Jan. 11; Gaz. vol. 222; p. 535.
Crouse, David E., and C. G. Eidson, Annapolis, and T. Davis, Baltimore, Md. Air-compressor motor. No. 1,168,251; Jan. 11; Gaz. vol. 222; p. 693.
Crouse-Hinds Company. (See Bissell and Gidley, assignors.)
Crow, Samuel L., assignor to Seymour Manufacturing Company, Seymour, Ind. Adjustable trace-fastener for hames. No. 1,167,632; Jan. 11; Gaz. vol. 222; p. 479.
Crowe, Frederick C., Spokane, Wash. Pump. No. 1,169,243; Jan. 25; Gaz. vol. 222; p. 1111.
Crowe, Paul L., Jersey City, N. J. Chain-grate mechanism. No. 1,168,712; Jan. 18; Gaz. vol. 222; p. 891.
Crowell, Charles H., Swampscott, Mass. Safety sealing-tape. No. 1,167,338; Jan. 4; Gaz. vol. 222; p. 322.
Crowley, Jeremiah, New York, N. Y. Dump-cart. No. 1,166,444; Jan. 4; Gaz. vol. 222; p. 12.
Crown Cork and Seal Company of Baltimore City, The. (See La Porte, Norbert M., assignor.)
Crown Die & Tool Co. (See Beck, Edward E., assignor.)
Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Heating means for corrugating-rollers. No. 1,168,171; Jan. 11; Gaz. vol. 222; p. 665.
Crump, Robert B., Hoboken, N. J., and J. Bernstein, New York, N. Y.; said Bernstein assignor to said Crump. Nozzle for syringes. No. 1,166,662; Jan. 4; Gaz. vol. 222; p. 90.
Crumpton, William J., Superior, Wis., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Method and means for automatic accounting. No. 1,169,067; Jan. 18; Gaz. vol. 222; p. 1012.
Crusius, Arthur A., New York, N. Y. Fuel-mixing device for internal-combustion motors. No. 1,167,386; Jan. 11; Gaz. vol. 222; p. 394.
Crutchfield, Paul, Portland, Oreg. Suction-base circle marking and cutting instrument. No. 1,166,889; Jan. 4; Gaz. vol. 222; p. 166.
Crystal Percolator Company. (See Bleichrode, Jacob B., assignor.)
Cuenot, Paul A., Harrisburg, and L. G. Fischer, Camp Hill, Pa. Drill-feed mechanism. No. 1,167,274; Jan. 4; Gaz. vol. 222; p. 299.
Culver, Edward P., Schenectady, N. Y. Cooling system. No. 1,168,172; Jan. 11; Gaz. vol. 222; p. 666.
Cumming, James B., Ellersile, Auckland, New Zealand. Wheel. No. 1,168,287; Jan. 18; Gaz. vol. 222; p. 739.
Cummins, Tancred D., Shirley, England. Turf-brush. No. 1,168,713; Jan. 18; Gaz. vol. 222; p. 892.
Cunningham, Ira, Grand Saline, Tex. Wrench. No. 1,167,275; Jan. 4; Gaz. vol. 222; p. 299.
Cuntz, Gregor R. F. H., Hamburg, Germany. Slide-rule calculator. No. 1,168,059; Jan. 11; Gaz. vol. 222; p. 629.
Current, Martin E., Queen City, Mo. Trap. No. 1,168,861; Jan. 18; Gaz. vol. 222; p. 942.
Currie, Walter C. (See Padgett. James L., assignor.)
Curry, Charles M., assignor of one-fourth to A. Y. Wright, Douglas, Ariz. Fly-trap. No. 1,167,339; Jan. 4; Gaz. vol. 222; p. 323.
Curtain Supply Company, The. (See Brown, Ray M., assignor.)
Curtis, Oliver W., Watertown, N. Y. Strip-marker. No. 1,169,130; Jan. 25; Gaz. vol. 222; p. 1071.
Cutler, Frank W., Hood River county, Oreg., assignor to Cutler Fruit Grader Co. Fruit-assorting machine. No. 1,169,467; Jan. 25; Gaz. vol. 222; p. 1187.
Cutler Fruit Grader Co. (See Cutler, Frank W., assignor.)
Cutler-Hammer Mfg. Co., The. (See Denhard, Harry W., assignor.)
Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)
Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Matson, Martin, assignor.)
Cutter, Solomon M., assignor to The Capewell Horse Nail Company, Hartford, Conn. Horse-nail machine. No. 1,166,890; Jan. 4; Gaz. vol. 222; p. 166.
Cuveller, Alexandre, Paris, France. Drawing apparatus. No. 1,166,445; Jan. 4; Gaz. vol. 222; p. 12.
Dahlström, Gustaf W. (See Ericsson and Dahlström.)
Daily, William H., Tucson, Ariz. Apparatus for utilizing heat from hot slag. No. 1,166,745; Jan. 4; Gaz. vol. 222; p. 117.
Daily, William H., Tucson, Ariz. Talking-machine. No. 1,168,606; Jan. 18; Gaz. vol. 222; p. 852.
Dalbey, Joel B., Nevada, Iowa. Automatic generator. No. 1,167,680; Jan. 11; Gaz. vol. 222; p. 496.
Dalboni, Carlo. (See Gasperetti and Dalboni.)
Dalton Adding Machine Company, The. (See Landsiedel, Harry, assignor.)
Dalton Adding Machine Company, The. (See Pickles, Charles K., assignor.)
Dalton, Cilos C., Star, Va. Folding shipping-crate for eggs. No. 1,168,484; Jan. 18; Gaz. vol. 222; p. 809.
Damascus Brake Beam Co., The. (See Schroeder, Frederick J., assignor.)
Dane Manufacturing Company, The. (See De Lukacsevics, Charles, assignor.)
Danheiser, Melvin B., Huntsville, Ala. Automobile tail-lamp. No. 1,167,546; Jan. 11; Gaz. vol. 222; p. 448.
Daniel, Dossey D., assignor of one-half to C. B. Haynes, Richmond, Va. Attachment for motion-picture machines. No. 1,168,607; Jan. 18; Gaz. vol. 222; p. 853.
Daniel, Percy G. E., Clevedon, England. Golf-club and the like. No. 1,167,387; Jan. 11; Gaz. vol. 222; p. 394.
Dannenfelser, Frederick M., Muskegon, Mich. Measuring instrument or tool. No. 1,166,512; Jan. 4; Gaz. vol. 222; p. 36.
Danz, Carl A., Tonica, Ill. Railway-tie. No. 1,166,663; Jan. 4; Gaz. vol. 222; p. 91.
Dargento, Louis, Rochester, N. Y. Curbing-block. No. 1,166,664; Jan. 4; Gaz. vol. 222; p. 91.
Dargle, James H. (See Derby and Dargle.)

Dargin, Ernest P., assignor of one-half to C. S. Brown, Los Angeles, Cal. Sanitary garbage-chute. No. 1,169,319; Jan. 25; Gaz. vol. 222; p. 1136.
Darling, Richard S., assignor to Paramount Glass Percolator Mfg. Co., New York, N. Y. Bracket for glass percolators. No. 1,169,013; Jan. 18; Gaz. vol. 222; p. 994.
Darlington, Philip J., Hartford, Conn. Rotary motor. No. 1,167,154; Jan. 4; Gaz. vol. 222; p. 258.
Darrow, Burgess, assignor to The Goodyear Tire and Rubber Company, Akron, Ohio. Vehicle-wheel rim. No. 1,166,972; Jan. 4; Gaz. vol. 222; p. 194.
Davenport, Herman A., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making boots and shoes. No. 1,169,068; Jan. 18; Gaz. vol. 222; p. 1012.
Davidson, Charles E., Ozona, Tex. Automobile-jack. No. 1,168,935; Jan. 18; Gaz. vol. 222; p. 969.
Davidson, Clarence Y., Hazleton, Ind. Hothouse-frame. No. 1,167,276; Jan. 4; Gaz. vol. 222; p. 300.
Davidson, Edgar C., Ogdensburg, N. Y. Slide-valve gasolene-engine. No. 1,167,547; Jan. 11; Gaz. vol. 222; p. 448.
Davidson, Frederick N., London, England. Razor. No. 1,168,288; Jan. 18; Gaz. vol. 222; p. 740.
Davies, Thomas, Toronto, Ontario, Canada. Groin. No. 1,166,580; Jan. 4; Gaz. vol. 222; p. 60.
Davis, Charles L., Detroit, Mich., assignor, by mesne assignments, to A. M. Belfield and J. P. Mentzer, trustees, Chicago, Ill. Action for piano-players. No. 1,169,131; Jan. 25; Gaz. vol. 222; p. 1072.
Davis, Charles L., Detroit, Mich., assignor, by mesne assignments, to A. M. Belfield and J. P. Mentzer, trustees, Chicago, Ill. Automatic musical instrument. No. 1,169,132; Jan. 25; Gaz. vol. 222; p. 1072.
Davis, Charles T., Brooklyn, N. Y. Sealed container of surgical ligatures and preparing same. No. 1,168,173; Jan. 11; Gaz. vol. 222; p. 666.
Davis, Charles T., Brooklyn, N. Y. Sterilizing and preserving surgical ligatures. No. 1,168,174; Jan. 11; Gaz. vol. 222; p. 666.
Davis, Elijah H., Midland, Md. Closure device. No. 1,168,608; Jan. 18; Gaz. vol. 222; p. 853.
Davis, Floye A., Sonestown, Pa. Railway-tie. No. 1,169,014; Jan. 18; Gaz. vol. 222; p. 994.
Davis, Francis W. (See Addison, Josiah, assignor.)
Davis, Frank, Cambridge, Mass. Metal filling-board. No. 1,167,548; Jan. 11; Gaz. vol. 222; p. 449.
Davis, Frank A., Sr., Blountstown, Fla. Cultivator. No. 1,166,446; Jan. 4; Gaz. vol. 222; p. 12.
Davis, George M. (See Cochran, Edward A., assignor.)
Davis, James C., Hinsdale, assignor to American Steel Foundries, Chicago, Ill. Making molds. No. 1,167,889; Jan. 11; Gaz. vol. 222; p. 568.
Davis, Oscar C., assignor of one-half to G. E. Keith, Brockton, Mass. Welt-strip. No. 1,169,085; Jan. 18; Gaz. vol. 222; p. 1019.
Davis, Ray L., and G. C. Moyers, Wheeling, W. Va. Pipe-bending apparatus. No. 1,167,983; Jan. 11; Gaz. vol. 222; p. 601.
Davis Sewing Machine Company, The. (See Gorman, George H., assignor.)
Davis, Thomas. (See Crouse, Eidson, and Davis.)
Davison, Frank G. (See Adams-Randall, Charles, assignor.)
Day, Medicus F. (See Brock, Ellis R., assignor.)
Day, William L. (See Bradley, William W., assignor.)
Daylock Corporation. (See Pollock, Edward E., assignor.)
Dayton Engineering Laboratories Co., The. (See Anderson, William P., assignor.)
Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)
De Camp, Witsel R., Roseland, N. J., assignor to Addometer Corporation, New York, N. Y. Keyboard control for calculators. No. 1,166,973; Jan. 4; Gaz. vol. 222; p. 194.
De Frehn, Charles H., Johnstown, Pa. Chair. No. 1,168,289; Jan. 18; Gaz. vol. 222; p. 740.
De Kleist, August, and S. A. Swanson, assignors to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Mounting for electric motors. No. 1,169,133; Jan. 25; Gaz. vol. 222; p. 1073.
De Laney, John C., Watertown, Mass. Molding blade and saw. No. 1,167,801; Jan. 11; Gaz. vol. 222; p. 536.
De Laney, John C., Watertown, Mass. Molding-machine. No. 1,167,802; Jan. 11; Gaz. vol. 222; p. 536.
De Leeuw, Adolph L., Plainfield, N. J., assignor to The Cincinnati Milling Machine Company, Oakley, Cincinnati, Ohio. Machine-tool control. No. 1,166,974; Jan. 4; Gaz. vol. 222; p. 194.
De Lonlay, Laurent D. (See Carrelet and De Lonlay.)
De Loss, Harry H. (See Litchfield, Isaac W., assignor.)
De Lukacsevics, Charles, West Nutley, assignor to The Dane Manufacturing Company, Newark, N. J. Siphon-head. No. 1,168,176; Jan. 11; Gaz. vol. 222; p. 667.
De Saulles, Charles A. H., New York, N. Y. Ore charges for retorts and treating the same. No. 1,166,447; Jan. 4; Gaz. vol. 222; p. 13.
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Take-up mechanism for sewing-machines. No. 1,167,634; Jan. 11; Gaz. vol. 222; p. 480.
De Yoanna, Aurelius, New York, N. Y. Means for labeling radiographs. No. 1,168,177; Jan. 11; Gaz. vol. 222; p. 667.
Deagan, John C., Chicago, Ill. Musical bars. No. 1,166,746; Jan. 4; Gaz. vol. 222; p. 117.
Dean, William W., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Telephone-exchange system. No. 1,169,320; Jan. 25; Gaz. vol. 222; p. 1136.
Deardorff, James E., Wichita, Kans. Vacuum street-cleaner. No. 1,168,175; Jan. 11; Gaz. vol. 222; p. 667.
Deardorff, Noble E., Wenatchee, Wash. Ladder. No. 1,166,747; Jan. 4; Gaz. vol. 222; p. 117.
Decker, Edward J., assignor to V. B. Decker, Lansdowne, Pa. Antirattle-fastening for doors and the like. No. 1,167,745; Jan. 11; Gaz. vol. 222; p. 517.
Decker, Lemuel B., assignor of one-half to J. Ball, Kenogami, Quebec, Canada. Apparatus for cooking wood-pulp. No. 1,167,800; Jan. 11; Gaz. vol. 222; p. 536.
Decker, Virginia B. (See Decker, Edward J., assignor.)
Deegans, W. E. (See Smoot, Samuel B., assignor.)
Deere & Company. (See Paul, Wesley A., assignor.)
Delaney, Thomas A., and E. H. Malany, Syracuse, N. Y. Coin-controlled lock. No. 1,168,609; Jan. 18; Gaz. vol. 222; p. 854.
Delbrück, Konrad, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Food for cattle. No. 1,169,322; Jan. 25; Gaz. vol. 222; p. 1137.
Delbrück, Konrad, and K. Meisenburg, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Fermenting sugars. No. 1,169,321; Jan. 25; Gaz. vol. 222; p. 1137.
Delta-Star Electric Company. (See Pearl and Jansen, assignors.)
Demarest, John, Springfield, Mass. Damper-regulator. No. 1,168,610; Jan. 18; Gaz. vol. 222; p. 854.
Demorest Edmurn L., Delaware, Ohio. Gearing. No. 1,168,290; Jan. 18; Gaz. vol. 222; p. 740.
Dengler, John A., Jr., New Ulm, Minn. Bread-pan lubricator. No. 1,168,291; Jan. 18; Gaz. vol. 222; p. 741.
Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric attachment device. No. 1,169,532; Jan. 25; Gaz. vol. 222; p. 1211.
Denison, Frederick S., assignor to Minneapolis Heat Regulator Co., Minneapolis, Minn. Electric motor. No. 1,167,890; Jan. 11; Gaz. vol. 222; p. 568.
Denman, Ira O., Toledo, Ohio. Vehicle-fender. No. 1,166,581; Jan. 4; Gaz. vol. 222; p. 60.
Dennis, Adolphus S., Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,169,323; Jan. 25; Gaz. vol. 222; p. 1137.
Dennis, Alfred A., assignor to Veneer Machinery Company, Grand Rapids, Mich. Glue-distributer for veneer-taping machines or machines for similar purposes. No. 1,167,633; Jan. 11; Gaz. vol. 222; p. 480.
Dennis, George A., Oakland, assignor of forty-nine one-hundredths to Malott & Peterson, San Francisco, Cal. Composition for use with raw linseed-oil for filling, smoothing, staining, and polishing wood. No. 1,168,485; Jan. 18; Gaz. vol. 222; p. 809.
Dennis, Thomas L., Jr., Prince Bay, N. Y. Wrench. No. 1,166,449; Jan. 4; Gaz. vol. 222; p. 13.
Dennison, Wilburn N., Merchantville, N. J., assignor to Victor Talking Machine Company. Sound-box for talking-machines. No. 1,169,134; Jan. 25; Gaz. vol. 222; p. 1073.
Dental Manikin Head Co. (See Weisse, Faneuil D., assignor.)
Depeyre, Louis N. (See Marchand, Charles, assignor.)
Deppeler, John H., Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y. Apparatus for facing the ends of pipes, &c. No. 1,168,060; Jan. 11; Gaz. vol. 222; p. 629.
Deppeler, John H., Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y. Producing aluminothermic mixtures. No. 1,168,061; Jan. 11; Gaz. vol. 222; p. 629.
Deppeler, John H., Jersey City, N. J., assignor to Goldschmidt Thermit Company, New York, N. Y. Sealing or luting molds. No. 1,168,062; Jan. 11; Gaz. vol. 222; p. 630.
Derby, Ashton P., assignor to P. Derby & Company, Inc., Gardner, Mass. Corner-joint. No. 1,167,155; Jan. 4; Gaz. vol. 222; p. 258.
Derby, Ashton P., and J. H. Dargie, assignor to P. Derby & Company, Inc., Gardner, Mass. Treating wood and other porous materials. No. 1,166,819; Jan. 4; Gaz. vol. 222; p. 143.
Derbyshire, Frederick W., Waltham, Mass. Tail-stock. No. 1,168,063; Jan. 11; Gaz. vol. 222; p. 630.
Des Isles, Leonard H., Chicago, Ill. Device for sampling grain and the like. No. 1,168,486; Jan. 18; Gaz. vol. 222; p. 809.
Des Moines Bridge and Iron Works. (See Peightel, Howard M., assignor.)
Désilets, Georges, Nicolet, Quebec, Canada. Wireless apparatus for producing and transmitting musical sounds. No. 1,166,582; Jan. 4; Gaz. vol. 222; p. 60.
Desing, August F., Elkhorn, Wis. Tool for clenching horse-shoe-nails. No. 1,167,803; Jan. 11; Gaz. vol. 222; p. 537.
Detroit Lubricator Company. (See Hodges, Frederick W., assignor.)
Detroit Motor & Machine Company, The. (See Coffin, Howard E., assignor.)

Deutsch, Henry, New York, N. Y. Stove. No. 1,168,380; Jan. 18; Gaz. vol. 222; p. 773.
Deutsch, William, New York, N. Y. Adjusting device. No. 1,169,621; Jan. 25; Gaz. vol. 222; p. 1244.
Deutsche Waffen- und Munitionsfabriken. (See Eltner, Berthold, assignor.)
Deutsche Waffen- und Munitionsfabriken. (See Heinemann, August A. K., assignor.)
Devanney, Michael J., Bloomsburg, Pa. Steering-gear for automobiles. No. 1,169,468; Jan. 25; Gaz. vol. 222; p. 1188.
Devlin, Mary E., administratrix. (See Devlin, Peter.)
Devlin, Peter, deceased; M. E. Devlin, administratrix, assignor of one-half to J. H. Seipp, Baltimore, Md. Shutter hinge and fastener. No. 1,166,748; Jan. 4; Gaz. vol. 222; p. 117.
Dewson, Edward H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Self-resetting trip-cock. No. 1,168,487; Jan. 18; Gaz. vol. 222; p. 810.
Dewson, Edward H., New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Trip-valve for air-brakes. No. 1,168,488; Jan. 18; Gaz. vol. 222; p. 810.
Di Domenico, Nicola. (See Radoccio, Pasquale, assignor.)
Diamond Match Company, The. (See Donnelly, Joseph C., assignor.)
Diamond Match Company, The. (See Fairburn, William A., assignor.)
Diamond Match Company, The. (See Nolan, John R., assignor.)
Diamond Match Company, The. (See Paridon, Michael, assignor.)
Diamond, Rubin L., Vestry, assignor of one-half to D. L. Walker, Clarence, Miss. Motor-vehicle. No. 1,167,549; Jan. 11; Gaz. vol. 222; p. 449.
Dice, George F. (See Lovelady and Kennedy, assignors.)
Dick, Burns, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Ignition system. No. 1,167,483; Jan. 11; Gaz. vol. 222; p. 427.
Dick, Gola, Waukesha, Wis. Baby-carriage. No. 1,169,622; Jan. 25; Gaz. vol. 222; p. 1244.
Dick, James E., Akron, Ohio. Ore-amalgamator. No. 1,169,740; Jan. 25; Gaz. vol. 222; p. 1284.
Dickeson, Verna B. (See Zannoth and Dickeson.)
Dickinson, Fairleigh S., Rutherford, N. J. Thermometer. No. 1,169,623; Jan. 25; Gaz. vol. 222; p. 1245.
Diehl Manufacturing Company. (See Marx, Gustave C., assignor.)
Dietsche, Oscar A., Gladstone, N. D. Poultry-fountain. No. 1,168,489; Jan. 18; Gaz. vol. 222; p. 811.
Dillberg, Erik, assignor to The William H. Wiley & Son Company, Hartford, Conn. Sole for slippers. No. 1,168,790; Jan. 18; Gaz. vol. 222; p. 919.
Dillon, William R., Cherokee, Okla. Nut-lock. No. 1,168,862; Jan. 18; Gaz. vol. 222; p. 943.
Dingerts, Karl, Arlöf, Sweden. Truck for railway-cars and the like. No. 1,168,714; Jan. 18; Gaz. vol. 222; p. 892.
Dinn, James F., Port Washington, assignor to Hall-Borchert Dress Form Company, New York, N. Y. Dress-form. No. 1,167,388; Jan. 11; Gaz. vol. 222; p. 394.
Disk, Anthony, *et al.* (See Brochu, Michael, assignor.)
Diss, Albert B., Newark, N. J., assignor to Universal Caster & Foundry Company, New York, N. Y. Caster for tubular legs of furniture and other uses. No. 1,169,135; Jan. 25; Gaz. vol. 222; p. 1073.
Divine, Bradford H., Utica, N. Y. Brake-shoe. No. 1,166,448; Jan. 4; Gaz. vol. 222; p. 13.
Dixon, Joseph T. (See Siedd and Dixon.)
Dixon, Robert M., East Orange, N. J., assignor to The Safety Car Heating & Lighting Company. Generator suspension. No. 1,167,389; Jan. 11; Gaz. vol. 222; p. 895.
Doak, Claude K. (See Miller and Doak.)
Doak, Frederick M. (See Irvin and Doak.)
Doak, John S., Fort Worth, Tex. Grass-cutter. No. 1,167,051; Jan. 4; Gaz. vol. 222; p. 222.
Doble, William A., assignor to Pelton Water Wheel Company, San Francisco, Cal. Intake-valve. No. 1,169,136; Jan. 25; Gaz. vol. 222; p. 1074.
Dodge, A. B., *et al.* (See Eddy, Gerald A., assignor.)
Dodge, Daniel L., Inwood, and T. F. Armstrong, Far Rockaway, N. Y. Driving and reversing mechanism. No. 1,167,984; Jan. 11; Gaz. vol. 222; p. 602.
Dodge, Harold A., Newark, N. J. Packaging toy balloons. No. 1,168,381; Jan. 18; Gaz. vol. 222; p. 773.
Dodson, Clement A. (See Spitz and Dodson.)
Dodson, Samuel H., Des Moines, Iowa, assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,168,611; Jan. 18; Gaz. vol. 222; p. 855.
Doherty, Henry L., New York, N. Y. Excavating earth. No. 1,166,820; Jan. 4; Gaz. vol. 222; p. 143.
Dolan, Wallace D., Linn township, Cedar county, Iowa. Hog-ringing chute. No. 1,166,450; Jan. 4; Gaz. vol. 222; p. 14.
Doland, Charles M., Spokane, Wash. Thermometer-casing. No. 1,169,137; Jan. 25; Gaz. vol. 222; p. 1074.
Dold, Victor-Charles, Vanves, assignor to Société La Sténophile Bivort, Paris, France. Paper-feeding mechanism for type-writers. No. 1,167,156; Jan. 4; Gaz. vol. 222; p. 258.
Dolejska, Frank, and L. M. Herzik, Houston, Tex., assignors of one-tenth to F. Herzik and one-tenth to L. Sonosky. Collapsible life-boat. No. 1,167,340; Jan. 4; Gaz. vol. 222; p. 323.
Doman, Lewis B., East Syracuse, N. Y., assignor to The Amphion Piano Player Company. Note-sheet for self-playing musical instruments. No. 1,169,741; Jan. 25; Gaz. vol. 222; p. 1284.
Donnelly, Joseph C., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Discharging mechanism for match-machines. No. 1,168,863; Jan. 18; Gaz. vol. 222; p. 943.
Donnelly, Joseph C., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Block-feeding mechanism for match-machines. No. 1,168,864; Jan. 18; Gaz. vol. 222; p. 943.
Doree, Frederick, Rex, Oreg. Bar trap-nest. No. 1,168,178; Jan. 11; Gaz. vol. 222; p. 668.
Dorison, Fannie. (See Rudolff, Barnet, assignor.)
Dougherty, Lewis A., Elkhart, Ind. Marine motor. No. 1,166,749; Jan. 4; Gaz. vol. 222; p. 118.
Douglas, Theodore, Scarboro, N. Y. Motor-vehicle speed-controller. No. 1,168,179; Jan. 11; Gaz. vol. 222; p. 668.
Douglas, William H., Belleville, N. J., assignor to Healey & Company, New York, N. Y. Power-transmission mechanism for vehicles. No. 1,167,052; Jan. 4; Gaz. vol. 222; p. 222.
Doujak, Maria, assignor of one-fourth to C. Heller, New York, N. Y. Wind-shield. No. 1,167,985; Jan. 11; Gaz. vol. 222; p. 602.
Dow Chemical Company, The. (See Barstow, Edwin O., assignor.)
Dow, Willard E., Braintree, Mass. Timer mechanism for gas-engine ignition. No. 1,169,383; Jan. 25; Gaz. vol. 222; p. 1157.
Dowagiac Drill Company. (See Fowle, Charles L., assignor.)
Downey, Richard F., assignor of one-half to H. Loewenbach, Milwaukee, Wis. Fire-extinguisher. No. 1,167,635; Jan. 11; Gaz. vol. 222; p. 480.
Downs, Benjamin M., Buffalo, and W. S. Cook, Lackawanna, N. Y. Safety signal device. No. 1,169,138; Jan. 25; Gaz. vol. 222; p. 1075.
Drake, Rollin L., Port Arthur, assignor to The Texas Company. Side-delivery conveyer. No. 1,168,865; Jan. 18; Gaz. vol. 222; p. 943.
Drapela, John, Taiton, Tex. Roller attachment for corn and cotton planters. No. 1,168,180; Jan. 11; Gaz. vol. 222; p. 668.
Draper Company. (See Avery, Amariah, assignor.)
Draper Company. (See Harris, George S., assignor.)
Draper Company. (See Lovejoy, Charles E., assignor.)
Draper Company. (See Rhoades, Alonzo E., assignor.)
Draper Company. (See Straw, William P., assignor.)
Drawbaugh, Isaac P., De Queen, Ark. Elevator safety device. No. 1,169,015; Jan. 18; Gaz. vol. 222; p. 995.
Dreffein, Henry A., and M. S. Flinn, Chicago, Ill. Burner construction. No. 1,166,451; Jan. 4; Gaz. vol. 222; p. 14.
Drey, Wilfred J., assignor of one-half to E. J. Wilks, Carlisle, Pa. Machine for forming shoes. No. 1,167,277; Jan. 4; Gaz. vol. 222; p. 300.
Droitcour, Michael A., Delphos, Ohio. Roll-separating means for printing-presses. No. 1,166,583; Jan. 4; Gaz. vol. 222; p. 61.
Dryer, Benjamin J., New York, N. Y. Shock-absorber. No. 1,169,624; Jan. 25; Gaz. vol. 222; p. 1246.
Dryer, Benjamin J., New York, N. Y. Shock-absorber. No. 1,169,625; Jan. 25; Gaz. vol. 222; p. 1246.
Duarte, Arthur, Rio de Janeiro, Brazil, assignor of forty one-hundredths to H. Banho, New York, N. Y. Building construction. No. 1,169,016; Jan. 18; Gaz. vol. 222; p. 995.
Duckham, Arthur M., Ashtead, England. Discharging vertical retort. No. 1,169,017; Jan. 18; Gaz. vol. 222; p. 995.
Duff, Samuel E. (See Nicholson, John H., assignor.)
Duley, Harley H., New York, N. Y. Sprinkler. No. 1,169,018; Jan. 18; Gaz. vol. 222; p. 996.
Duncan, Charles W., Joplin, Mo. Meter-orifice-disk valve. No. 1,168,490; Jan. 18; Gaz. vol. 222; p. 811.
Dungan, Clark S. (See Blank and Dungan.)
Dunham Company, The. (See Karl, George E., assignor.)
Dunn, Charles T., Newark, Ohio. Clamping-machine for packing-boxes. No. 1,169,244; Jan. 25; Gaz. vol. 222; p. 1112.
Dunn, Thomas T., Wallingford, Conn. Slack-adjuster for clothes-lines. No. 1,169,626; Jan. 25; Gaz. vol. 222; p. 1247.
Dunning, Charles W., Los Angeles, Cal. Horseshoe-pad. No. 1,169,324; Jan. 25; Gaz. vol. 222; p. 1137.
Dunning, Elmer D., Detroit, Mich. Roller-bearing. No. 1,169,469; Jan. 25; Gaz. vol. 222; p. 1188.
Dupin, Isidor, Groveton, Pa. Rail-joint. No. 1,167,390; Jan. 11; Gaz. vol. 222; p. 395.
Durfee, Charles G., Rochester, N. Y., assignor to General Electric Company. Maximum-indicator. No. 1,167,157; Jan. 4; Gaz. vol. 222; p. 259.
Durnil, Ludwell B. (See Abbey, Eddie G., assignor.)
Durning, Robert E., Avalon, assignor of one-half to W. H. Morse, Pittsburgh, Pa. Boiler-compound holder. No. 1,168,612; Jan. 18; Gaz. vol. 222; p. 855.
Duryee, Gustavus A. (See Evans and Duryee.)

Dustan, Frederick W., Clarkston, Wash. Fruit-assorting machine. No. 1,169,019; Jan. 18; Gaz. vol. 222; p. 996.
Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Fiber-case railway-torpedo. No. 1,168,936; Jan. 18; Gaz. vol. 222; p. 969.
Duval, Alfred, Chicopee Falls, Mass. Spring-mounted skein. No. 1,168,791; Jan. 18; Gaz. vol. 222; p. 919.
Duwelius, Walter S., Cincinnati, Ohio. Device for applying pressure. No. 1,169,533; Jan. 25; Gaz. vol. 222; p. 1212.
Dwelly, Charles W., Johnstown, N. Y. Rail-fastener. No. 1,168,292; Jan. 18; Gaz. vol. 222; p. 741.
Dwight, Arthur S., New York, N. Y. Desulfurizing and smelting ores. No. 1,169,069; Jan. 18; Gaz. vol. 222; p. 1012.
Dwight, Arthur S., New York, N. Y. Apparatus for and process of ore treatment. No. 1,169,139; Jan. 25; Gaz. vol. 222; p. 1075.
Dwight, Arthur S., New York, N. Y. Apparatus for sintering and smelting ores. No. 1,169,384; Jan. 25; Gaz. vol. 222; p. 1158.
Dyer, Harry W., East Orange, N. J. Exit-door lock. No. 1,168,792; Jan. 18; Gaz. vol. 222; p. 919.
Dyke, Darrell F., assignor to The Seng Company, Chicago, Ill. Sofa-bed, lounge-bed, &c. No. 1,169,470; Jan. 25; Gaz. vol. 222; p. 1188.
Dynamit-Actien-Gesellschaft. (See Reuter, Otto, assignor.)
Dyson, Alfred H., Montclair, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, Telephone system. No. 1,167,053; Jan. 4; Gaz. vol. 222; p. 222.
E. & B. Holmes Machinery Company. (See Beugler, Edwin F., assignor.)
E. I. du Pont de Nemours Powder Company. (See Runge, Walter, assignor.)
E. J. Brooks & Co. (See Brooks, Winfred M., assignor.)
E. J. Manville Machine Company, The. (See Gaess, Albert H., assignor.)
Eagle White Lead Company, The. (See Merrill, Robert A., assignor.)
Earl, John L., Morgan City, La. Piston-ring clamp. No. 1,169,627; Jan. 25; Gaz. vol. 222; p. 1247.
Easter, Clarence N., West Chester, Iowa. Air-vent for barrels. No. 1,168,866; Jan. 18; Gaz. vol. 222; p. 944.
Eastman Kodak Company. (See Crabtree, John I., assignor.)
Eastman Kodak Company. (See Robertson and Adams, assignors.)
Eastman, William E., Winchester, Mass. Spring suspension for vehicles. No. 1,167,054; Jan. 4; Gaz. vol. 222; p. 223.
Eastwood, James, assignor to Benjamin Eastwood Company, Paterson, N. J. Thread-tension device. No. 1,167,636; Jan. 11; Gaz. vol. 222; p. 481.
Eaton, William S., Sag Harbor, N. Y., assignor to American Bank Note Company. Geometrical machine. No. 1,166,513; Jan. 4; Gaz. vol. 222; p. 36.
Eaves, Ruel H., Meeker, Okla. Horseshoe. No. 1,169,020; Jan. 18; Gaz. vol. 222; p. 996.
Eberly, George E., Shreve, Ohio. Nut-lock. No. 1,168,613; Jan. 18; Gaz. vol. 222; p. 855.
Echols, Elijah B., Belton, and H. J. Zindler, Schwertner, Tex. Wedge-cutter. No. 1,168,793; Jan. 18; Gaz. vol. 222; p. 920.
Economy Food Products Company. (See Speare, Edward R., assignor.)
Economy Food Products Company. (See Tierney, Thomas F., assignor.)
Eddy, Gerald A., assignor of thirty one-hundredths to A. B. Dodge and thirty one-hundredths to E. G. Belk, Los Angeles, Cal. Automatic selective change-gear mechanism. No. 1,168,715; Jan. 18; Gaz. vol. 222; p. 892.
Ede, St. Clair, assignor to Edes Robe Tanning Co., Dubuque, Iowa. Automobile-robe. No. 1,169,385; Jan. 25; Gaz. vol. 222; p. 1158.
Edelmann, Georg. (See Hönigsberg and Edelmann.)
Eden, James A., Jr., Springfield, Mass., assignor to Bausch Machine Tool Company. Drilling-machine. No. 1,166,514; Jan. 4; Gaz. vol. 222; p. 36.
Edes Robe Tanning Co. (See Ede, St. Clair, assignor.)
Edey, Aubrey A., Mobile, Ala. Spark-plug. No. 1,167,804; Jan. 11; Gaz. vol. 222; p. 537.
Edison Storage Battery Company. (See Edison, Thomas A., assignor.)
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Utilizing waste heat in kilns. No. 1,167,637; Jan. 11; Gaz. vol. 222; p. 481.
Edison, Thomas A., Llewellyn Park, West Orange, N. J. Means for concentrating ores. No. 1,167,638; Jan. 11; Gaz. vol. 222; p. 482.
Edison, Thomas A., Llewellyn Park, assignor to Edison Storage Battery Company, West Orange, N. J. Production of nickel hydroxid. No. 1,167,484; Jan. 11; Gaz. vol. 222; p. 427.
Edison, Thomas A., Llewellyn Park, assignor to Edison Storage Battery Company, West Orange, N. J. Storage battery. No. 1,167,485; Jan. 11; Gaz. vol. 222; p. 427.
Edsall, William H., assignor to H. L. Judd Company, Wallingford, Conn. Traverse-ring. No. 1,169,742; Jan. 25; Gaz. vol. 222; p. 1284.
Edsall, William H., assignor to H. L. Judd Company, Wallingford, Conn. Traverse-ring. No. 1,169,743; Jan. 25; Gaz. vol. 222; p. 1285.
Edwards, Albert, New York, N. Y., assignor of one-half to R. C. Tuffin and one-half to J. J. McDermott, Jr. Receptacle for refuse and the like. No. 1,167,055; Jan. 4; Gaz. vol. 222; p. 223.
Egan, William P., *et al.* (See Woodward, Erastus, assignor.)
Eichler, Theodor. (See Schmidt, Eichler, and Allemann.)
Eidson, Charles G. (See Crouse, Eidson, and Davis.)
Eifel, Joseph, Chicago, Ill. Loose-leaf holder. No. 1,167,639; Jan. 11; Gaz. vol. 222; p. 482.
Eisenhart, William H., York, Pa. Electric-light shifter. No. 1,167,891; Jan. 11; Gaz. vol. 222; p. 568.
Eltner, Berthold, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Cage for antifriction-bearings. No. 1,168,937; Jan. 18; Gaz. vol. 222; p. 969.
Eklund, Alexander, Attleboro, assignor to Sturdy-Cummings Company, Attleboro Falls, Mass. Bracelet-link. No. 1,166,821; Jan. 4; Gaz. vol. 222; p. 144.
Eldridge, Joseph D., and W. W. Gehr, Philadelphia, Pa. Collapsible barrel. No. 1,169,022; Jan. 18; Gaz. vol. 222; p. 997.
Electric Compositor Company. (See Petri-Palmedo, David, assignor.)
Electric Railway Improvement Company, The. (See Silliman, Benjamin F., assignor.)
Electric Storage Battery Company, The. (See Flanders, Louis H., assignor.)
Elger, Joseph, Chicago, Ill. Radiator. No. 1,167,391; Jan. 11; Gaz. vol. 222; p. 395.
Elia, Giovanni E., Paris, France, assignor to Vickers Limited, London, England. Device for automatically anchoring submarine mines at a predetermined depth independently of the bottom of the sea. No. 1,167,278; Jan. 4; Gaz. vol. 222; p. 300.
Elkin, William G., French Camp, Miss. Insect-exterminator. No. 1,168,181; Jan. 11; Gaz. vol. 222; p. 668.
Ellett, Frederick S., Elmira, N. Y. Brake mechanism. No. 1,168,614; Jan. 18; Gaz. vol. 222; p. 855.
Elguth, Paul R., Chicago, Ill. Starter for induction-motors. No. 1,167,486; Jan. 11; Gaz. vol. 222; p. 427.
Elliot, Caleb, Clinton, Iowa. Sign. No. 1,167,279; Jan. 4; Gaz. vol. 222; p. 301.
Elliott, George S. (See Oldham, George T., assignor.)
Elliott, Richard P., Boston, Mass. Carbid-feed acetylene-generator. No. 1,167,986; Jan. 11; Gaz. vol. 222; p. 603.
Elliott, William E., Grand Rapids, Mich. Automatic button-attaching machine. No. 1,167,805; Jan. 11; Gaz. vol. 222; p. 538.
Ellis, Carleton, Montclair, N. J. Catalytic body and making the same. No. 1,167,280; Jan. 4; Gaz. vol. 222; p. 301.
Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 1,167,640; Jan. 11; Gaz. vol. 222; p. 482.
Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 1,167,641; Jan. 11; Gaz. vol. 222; p. 483.
Ellis, Claude, Springville, N. Y. Window screen and sash locker. No. 1,168,491; Jan. 18; Gaz. vol. 222; p. 811.
Ellis, Nathan, Syracuse, N. Y. Bottle cap and opener. No. 1,168,182; Jan. 11; Gaz. vol. 222; p. 669.
Elmer, Paul F., Philadelphia, Pa. Ratchet-drill. No. 1,166,665; Jan. 4; Gaz. vol. 222; p. 91.
Elsasser, Victor, Langerfeld, near Barmen, assignor to Firm of R. Bosch, Stuttgart, Germany. Search-light. No. 1,168,064; Jan. 11; Gaz. vol. 222; p. 630.
Ely, Charles H., East Orange, N. J. Folding umbrella. No. 1,169,534; Jan. 25; Gaz. vol. 222; p. 1212.
Emanuel, Gerry E., Edgerton, Ohio. Packing-frame. No. 1,169,471; Jan. 25; Gaz. vol. 222; p. 1189.
Embrey, Laurence, Fenton, England. Baking. No. 1,169,023; Jan. 18; Gaz. vol. 222; p. 997.
Embrey, Laurence, Fenton, Stoke-upon-Trent, England. Dough-working machine. No. 1,169,472; Jan. 25; Gaz. vol. 222; p. 1189.
Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)
Emerson, Oscar R. (See McVety and Emerson.)
Emerson Piano Company. (See Jameson, Alexander, assignor.)
Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. Method of and apparatus for generating power. No. 1,167,158; Jan. 4; Gaz. vol. 222; p. 259.
Emmons, Stephen A., Brooklyn, N. Y. Dredge. No. 1,168,293; Jan. 18; Gaz. vol. 222; p. 741.
Empire Duplex Gin Company. (See Meuriling, Ivar, assignor.)
Empire Railway Appliance Corporation. (See Powers, Edmund B., assignor.)
Empire Rubber Company, The. (See Mayers, Henry J., assignor.)
Engel, Arthur F., New York, N. Y. Eyeleting-machine. No. 1,169,386; Jan. 25; Gaz. vol. 222; p. 1158.
Engelmann, Max, and B. Merkel, Elberfeld, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Disinfecting agents. No. 1,167,642; Jan. 11; Gaz. vol. 222; p. 483.
Engert, Arthur, Brooklyn, N. Y. Water-heater and cooker. No. 1,166,822; Jan. 4; Gaz. vol. 222; p. 144.
Engineering Products Corporation. (See Burlingham, William, assignor.)

Engineer's Specialty Manufacturing Company. (See Jones, Edward A. and J. E., assignors.)
English, Analdo M., Brookline, and H. W. Gibbs, Boston, Mass., assignors to J. Spaulding & Sons Co., Rochester, N. H. Crimping or corrugating machine. No. 1,166,823; Jan. 4; Gaz. vol. 222; p. 145.
English & Mersick Co., The. (See Fink, George W., assignor.)
English & Mersick Co., The. (See Williams, Gordon, assignor.)
English, Peter, assignor to Mono-Rail Syndicate, Frost & Donovan, trustee, Detroit, Mich. Monorail system. No. 1,167,892; Jan. 11; Gaz. vol. 222; p. 569.
Engman, Evald J., assignor to The Will & Baumer Company, Syracuse, N. Y. Candle-making machine. No. 1,168,938; Jan. 18; Gaz. vol. 222; p. 970.
Enloe, Clyde B., Judson, N. C. Rail-fastener. No. 1,166,975; Jan. 4; Gaz. vol. 222; p. 195.
Enoch, John, assignor to The Western Tool & Manufacturing Company, Springfield, Ohio. Expanding mandrel. No. 1,168,794; Jan. 18; Gaz. vol. 222; p. 920.
Enos, Frank, Jr., Norwich, assignor to The Norwich Automatic Feeder Company, New London, Conn. Drinking-fountain for poultry. No. 1,167,056; Jan. 4; Gaz. vol. 222; p. 223.
Enterprise Tool & Metal Works. (See Rosengren, George T., assignor.)
Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Horizontal telemeter. No. 1,166,824; Jan. 4; Gaz. vol. 222; p. 145.
Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 1,169,070; Jan. 18; Gaz. vol. 222; p. 1013.
Eppley, Jacob. (See Faas and Eppley.)
Erdley, Clarence A., Mifflinburg, Pa. Trap. No. 1,168,252; Jan. 11; Gaz. vol. 222; p. 674.
Erickson, Albin J., Chicago, Ill. Vehicle-propelling device. No. 1,167,806; Jan. 11; Gaz. vol. 222; p. 538.
Erickson, Arthur O., Greenwood, N. Y. Antikicking device for cows. No. 1,168,867; Jan. 18; Gaz. vol. 222; p. 944.
Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Company, Boston, Mass. Mechanical movement. No. 1,169,715; Jan. 25; Gaz. vol. 222; p. 1275.
Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Company, Boston, Mass. Looper mechanism for sewing-machines. No. 1,169,716; Jan. 25; Gaz. vol. 222; p. 1275.
Ericson, Job E., *et al.* (See Wakeland, Edwin C., assignor.)
Ericsson, Henry, Chicago, Ill. Adjustable scaffold. No. 1,168,868; Jan. 18; Gaz. vol. 222; p. 944.
Ericsson, Knut E., Saltsjö-Storängen, and G. W. Dahlström, Stockholm, Sweden. Automatic switch for telephone systems. No. 1,169,387; Jan. 25; Gaz. vol. 222; p. 1159.
Erie City Iron Works. (See Moffat, Walter A., assignor.)
Eriez Stove & Manufacturing Company. (See Kling, Adolph G., assignor.)
Esmarian, Garabed, Paterson, N. J. Filing system. No. 1,166,825; Jan. 4; Gaz. vol. 222; p. 145.
Essig, Andrew, Cleveland, Ohio. Brooder. No. 1,169,071; Jan. 18; Gaz. vol. 222; p. 1013.
Estate Stove Company, The. (See Kahn, Bertrand B., assignor.)
Estep, William G., Duquesne, Pa. Valve. No. 1,166,584; Jan. 4; Gaz. vol. 222; p. 61.
Etablissements De Dion-Bouton (Société Anonyme). (See Gallet, Henri, assignor.)
Etheridge, Harry, Zellenople, Pa. Rail-joint bond. No. 1,166,826; Jan. 4; Gaz. vol. 222; p. 146.
Etter, Harvey V., assignor of one-half to E. R. Beadle, Norfolk, Va. Motor-cycle stand. No. 1,168,294; Jan. 18; Gaz. vol. 222; p. 742.
Evans, Enos, Edmonds, Wash. Device for adjusting the feed mechanism of shingle-machines. No. 1,166,666; Jan. 4; Gaz. vol. 222; p. 92.
Evans, Fred, and G. A. Duryee, Summit, N. J. Bottle-stopper. No. 1,167,807; Jan. 11; Gaz. vol. 222; p. 539.
Evans, Florence, near Clark, Mo. Fan attachment for doors. No. 1,167,281; Jan. 4; Gaz. vol. 222; p. 301.
Evans, Henry, Lewiston, Me. Spinning device. No. 1,167,681; Jan. 11; Gaz. vol. 222; p. 497.
Evans, Louis, *et al.* (See Mentzer, Claude E., assignor.)
Evans Stamping and Plating Company. (See Tuttle, Henry A., assignor.)
Everett, William H., Mount Pleasant, Pa. Wrench. No. 1,167,682; Jan. 11; Gaz. vol. 222; p. 497.
Evers, Clarence P., Brookings, S. D. Drill-press attachment for auger-braces. No. 1,168,939; Jan. 18; Gaz. vol. 222; p. 970.
Everson, Harry J., Louisville, Ky., assignor, by mesne assignments, to Barco Brass & Joint Company, Chicago, Ill. Flexible joint. No. 1,167,355; Jan. 4; Gaz. vol. 222; p. 330.
Evinrude Motor Company. (See Mueller, Herman C., assignor.)
Ewald, Paul, Clintonville, Wis. Plow. No. 1,167,683; Jan. 11; Gaz. vol. 222; p. 497.
Ewald, Paul, Clintonville, Wis. Draft adjustment. No. 1,167,684; Jan. 11; Gaz. vol. 222; p. 498.
Ewald, Paul, Clintonville, Wis. Plow-frame structure. No. 1,167,685; Jan. 11; Gaz. vol. 222; p. 498.
Ewers, Alexander L., Durmid, Va., assignor to United Cigarette Machine Co., Ltd., London, England. Receiving and assorting mechanism for cigarette-machines. No. 1,168,795; Jan. 18; Gaz. vol. 222; p. 920.
Ewing, Blaine, New York, N. Y. Window-shade. No. 1,167,987; Jan. 11; Gaz. vol. 222; p. 603.
Exline, Marcus P., assignor to C. L. Lobdell, Dallas, Tex. Kite. No. 1,166,750; Jan. 4; Gaz. vol. 222; p. 119.
Exline, M. P., executor. (See Roystone, Walter, assignor.)
F. A. Hardy & Company. (See Troppman, Charles J., assignor.)
F. N. Burt Company. (See Palmer, Lyndon C., assignor.)
F. W. Wakefield Brass Company, The. (See Wakefield, Frederick W., assignor.)
Faas, Henry N., and J. Eppley, assignors to The American Seeding Machine Company, Springfield, Ohio. Foldable lever. No. 1,168,382; Jan. 18; Gaz. vol. 222; p. 774.
Fairbanks, Alfred J., San Francisco, Cal. Sign-holder. No. 1,166,976; Jan. 4; Gaz. vol. 222; p. 195.
Fairbanks, E. Hayward, *et al.* (See Jones, Alva D., assignor.)
Fairbrother, Elbridge J. (See Stevens and Fairbrother.)
Fairburn, William A., Short Hills, N. J., assignor to The Diamond Match Company, Chicago, Ill. Treated match-splint and producing the same. No. 1,168,869; Jan. 18; Gaz. vol. 222; p. 945.
Fairfax, William M., Washington, D. C. System for distributing and regulating electrical energy in the form of alternating currents. No. 1,168,065; Jan. 11; Gaz. vol. 222; p. 630.
Fairweather, Frederick H., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Controlling device. No. 1,167,487; Jan. 11; Gaz. vol. 222; p. 428.
Familet, Joseph. (See Brochetti and Familet.)
Farkas, Charles. (See Bendzsa, Steve, assignor.)
Farmer, Charles S. (See Claremont, Stratton, and Farmer.)
Farmer, Oliver M., Lewistown, Mont. Back-bather. No. 1,167,282; Jan. 4; Gaz. vol. 222; p. 301.
Farnsworth, Hiland R., and T. H. Savery, Jr., Sandusky, Ohio. Screen-plate cleaner. No. 1,167,808; Jan. 11; Gaz. vol. 222; p. 539.
Farr, Herman G., assignor to C. H. Martin, Springfield, Mass. Fifth-wheel construction. No. 1,169,717; Jan. 25; Gaz. vol. 222; p. 1276.
Farrell, James E. (See Ware, Gastonguay, Linderson, Farrell, and Woodbury.)
Farrell, John, Newton, N. J. Hoisting-drum and brake for the same. No. 1,168,716; Jan. 18; Gaz. vol. 222; p. 893.
Fassett, Francis K., Dayton, Ohio, assignor to The National Granometer Company, Limited, Patterson, La. Measuring-machine. No. 1,168,615; Jan. 18; Gaz. vol. 222; p. 856.
Fassett, James H., Nashua, and J. E. Warren, Greenfield, assignors of one-half to W. H. Cheever, Nashua, N. H. Foldable car-steps. No. 1,169,140; Jan. 25; Gaz. vol. 222; p. 1076.
Faulkner, Albert N., New York, N. Y. Scaffold. No. 1,167,988; Jan. 11; Gaz. vol. 222; p. 603.
Faulkner, Albert N., New York, N. Y., assignor to Chesebro Whitman Co. Rope-testing machine. No. 1,168,870; Jan. 18; Gaz. vol. 222; p. 945.
Fauvre, Frank M. (See Geisendorff, Lee H., assignor.)
Favary, Ethelbert, New York, N. Y. Portable protector. No. 1,166,977; Jan. 4; Gaz. vol. 222; p. 195.
Fawcett, William M., assignor to Heisler Locomotive Works, Erie, Pa. Locomotive. No. 1,166,751; Jan. 4; Gaz. vol. 222; p. 119.
Fawcett, William M., assignor to Heisler Locomotive Works, Erie, Pa. Locomotive and tender. No. 1,169,141; Jan. 25; Gaz. vol. 222; p. 1076.
Fawick, Thomas L., Sioux Falls, S. D. Power-transmission device. No. 1,169,072; Jan. 18; Gaz. vol. 222; p. 1014.
Fawick, Thomas L., Sioux Falls, S. D. Power-transmission device. No. 1,169,073; Jan. 18; Gaz. vol. 222; p. 1014.
Fay, Alpheus, Louisville, Ky. Change-speed mechanism. No. 1,169,388; Jan. 25; Gaz. vol. 222; p. 1159.
Fay, John L., and S. B. Way, Milwaukee, Wis. Pole-elevation indicator. No. 1,168,295; Jan. 18; Gaz. vol. 222; p. 742.
Fay, Louis D. (See Mardon and Fay.)
Featherstone, Willard B., Washington, D. C. Projecting-machine. No. 1,167,643; Jan. 11; Gaz. vol. 222; p. 483.
Fechheimer, Carl J., Glen Ridge, assignor to Crocker-Wheeler Company, Ampere, N. J. Starting synchronous polyphase motors. No. 1,168,383; Jan. 18; Gaz. vol. 222; p. 774.
Feigenson Engineering Co. (See Feigenson, William H., assignor.)
Feigenson, William H., assignor to Feigenson Engineering Co., Seattle, Wash. Concrete construction. No. 1,166,891; Jan. 4; Gaz. vol. 222; p. 167.
Feldkamp, Frederick A., Newark, N. J. Egg boiling or coddling utensil. No. 1,167,057; Jan. 4; Gaz. vol. 222; p. 224.
Feldman, Lewis V., Trosky, Minn. Tank-heater. No. 1,166,585; Jan. 4; Gaz. vol. 222; p. 61.
Fellers, Oliver E., Holdenville, Okla. Collar. No. 1,168,183; Jan. 11; Gaz. vol. 222; p. 669.

Fenske, George, Walsenburg, Colo. Pantograph. No. 1,166,827; Jan. 4; Gaz. vol. 222; p. 146.
Ferdinand, Anthony B., Milwaukee, Wis. Pulley. No. 1,168,871; Jan. 18; Gaz. vol. 222; p. 945.
Ferguson, Donald M., assignor to General Motors Company, Detroit, Mich. Engine and transmission unit. No. 1,167,809; Jan. 11; Gaz. vol. 222; p. 539.
Ferguson, Donald M., assignor to General Motors Company, Detroit, Mich. Vehicle-frame. No. 1,169,473; Jan. 25; Gaz. vol. 222; p. 1189.
Ferguson, John W., Bloomfield, N. J. Sad-iron. No. 1,168,616; Jan. 18; Gaz. vol. 222; p. 856.
Ferguson, Marie A., New Haven, Conn. Chair. No. 1,167,488; Jan. 11; Gaz. vol. 222; p. 428.
Ferrier, Albert C., assignor of one-half to W. J. Hill, Lincoln, Nebr. Spark-plug. No. 1,169,628; Jan. 25; Gaz. vol 222; p. 1247.
Fessenden, Reginald A., Brant Rock, Mass, assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Apparatus for producing high-frequency oscillations. No. 1,166,892; Jan. 4; Gaz. vol. 222; p. 167.
Fessenden, Reginald A., Brant Rock, Mass, assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Producing high-frequency oscillations. No. 1,166,893; Jan. 4; Gaz. vol. 222; p. 168.
Fessenden, Reginald A., Brookline, assignor to Submarine Signal Company, Boston, Mass. Dynamo-electric machinery. No. 1,167,366; Jan. 4; Gaz. vol. 222; p. 334.
Fickinger, Presly J., Conneaut, Ohio. Compensating stairway. No. 1,167,893; Jan. 11; Gaz. vol. 222; p. 569.
Fields, Jesse, Fulton, Ky. Driving or bridle bit. No. 1,168,617; Jan. 18; Gaz. vol. 222; p. 857.
Figueroa, Peter P., New York, N. Y. Gas-igniter. No. 1,169,474; Jan. 25; Gaz. vol. 222; p. 1189.
Filer & Stowell Company, The. (See Pelton, George M., assignor.)
Finberg, Isaac, West Kensington, London, England, assignor to J. Bloom, New York, N. Y. Cape. No. 1,167,058; Jan. 4; Gaz. vol. 222; p. 224.
Finch, Chester A., Spokane, Wash. Adjustable curve. No. 1,169,245; Jan. 25; Gaz. vol. 222; p. 1112.
Finckh, Karl, Berlin, and P. Almstedt, Berlin-Baumschulenweg, Germany. Mechanism for upsetting heads on fastening-pins for artificial teeth. No. 1,167,341; Jan. 4; Gaz. vol. 222; p. 324.
Finizio, Thomas D., assignor to Kurz Electrical Company, Inc., New York, N. Y. Ball-joint for lamp-supports and the like. No. 1,166,752; Jan. 4; Gaz. vol. 222; p. 119.
Finizio, Thomas D., assignor to Kurz Electrical Company, Inc., New York, N. Y. Bracket for electric lamps and the like. No. 1,166,753; Jan. 4; Gaz. vol. 222; p. 120.
Fink, George W., assignor to The English & Mersick Co., New Haven, Conn. Lock-joint. No. 1,166,894; Jan. 4; Gaz. vol. 222; p. 168.
Finkel, Henry, *et al.* (See Casto, Charles W., assignor.)
Finnie, Edwin H., Corning, N. Y. Machine for making cut glass. No. 1,168,872; Jan. 18; Gaz. vol. 222; p. 945.
Finnigan, George P., Wilton-on-James, near Richmond, Va. Magnetic apparatus. No. 1,169,475; Jan. 25; Gaz. vol. 222; p. 1190.
Firestone Tire & Rubber Company, The. (See Stevens, William C., assignor.)
Firestone Tire & Rubber Company, The. (See Witsaman, Clement L., assignor. (Reissue.)
First Trust and Savings Bank, trustee. (See Martin, Talbot G., assignor.)
First Trust and Savings Bank, trustee. (See Owens, Roy, assignor.)
Fischer, Louis G. (See Cuenot and Fischer.)
Fiscus, George E. (See Widdrington, William P., assignor.)
Fisher, Charles, Bloomingdale, N. J. Valve. No. 1,166,754; Jan. 4; Gaz. vol. 222; p. 120.
Fisher, Charles, San Francisco, Cal. Spool. No. 1,168,940; Jan. 18; Gaz. vol. 222; p. 970.
Fiske, George I. (See Sinclair and Fiske.)
Fitzsimmons, George P., Newark, N. J. Paint-mixing device. No. 1,168,618; Jan. 18; Gaz. vol. 222; p. 857.
Flanagan, Edward, Philadelphia, Pa. Circuit-closer. No. 1,168,184; Jan. 11; Gaz. vol. 222; p. 670.
Flanders, Louis H., Edgewood Park, assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa. Automatic load-adjuster. No. 1,168,263; Jan. 11; Gaz. vol. 222; p. 698.
Flannery, William C., Washington, D. C. Construction of concrete sewers, aqueducts, &c. No. 1,167,159; Jan. 4; Gaz. vol. 222; p. 260.
Flatt, John W. (See Keller and Flatt.)
Fleck, Frank X., New York, N. Y. Wrench. No. 1,168,185; Jan. 11; Gaz. vol. 222; p. 670.
Fleming, George X. (See Benson, Edgar W., assignor.)
Fleming, Michael P., Chicago, Ill. Supplementary mattress. No. 1,167,989; Jan. 11; Gaz. vol. 222; p. 604.
Fletcher, George B., Dott, W. Va. Combined window-shade bracket and lace-curtain hanger. No. 1,169,024; Jan. 18; Gaz. vol. 222; p. 998.
Flickinger, Andrew G., Vallejo, Cal. Gun-sight. No. 1,167,283; Jan. 4; Gaz. vol. 222; p. 302.
Flickinger, Andrew G., Vallejo, Cal. Combined engine brake and starter. No. 1,167,284; Jan. 4; Gaz. vol. 222; p. 302.
Flinn, Melville S. (See Dreffein and Flinn.)
Flint, Dutee W., Cranston, R. I. Liquid-dispensing apparatus. No. 1,168,717; Jan. 18; Gaz. vol. 222; p. 893.
Floessell, Wilhelm F., Sydney, New South Wales, Australia. Advertising device. No. 1,166,515; Jan. 4; Gaz. vol. 222; p. 37.
Flogland, Gus O., Minocqua, Wis. Safety-coupling. No. 1,167,285; Jan. 4; Gaz. vol. 222; p. 302.
Flora, Charles L., Toledo, Ohio. Automobile steering-gear. No. 1,169,025; Jan. 18; Gaz. vol. 222; p. 998.
Flora, Ellsworth E., assignor, by mesne assignments, to Porter Counterfeit Detector Company, Chicago, Ill. Device for detecting counterfeit articles. No. 1,166,895; Jan. 4; Gaz. vol. 222; p. 168.
Florian, Charles H., assignor to Société Anonyme des Etablissements Lacour-Berthiot, Paris, France. Objective. No. 1,168,873; Jan. 18; Gaz. vol. 222; p. 946.
Flowers, Edgar L., Hickory, N. C., assignor to J. L. Blodgett, Alexandria, Minn. Oiling mechanism for cream-separators. No. 1,168,874; Jan. 18; Gaz. vol. 222; p. 946.
Flushovalve Company. (See Morgan, Harlan D., assignor.)
Folberth, Frederick G., Cleveland, Ohio. Power tire-pump. No. 1,168,296; Jan. 18; Gaz. vol. 222; p. 742.
Foley, Jeremiah C., New York, N. Y. Attachment for converting a bicycle into a tricycle. No. 1,167,286; Jan. 4; Gaz. vol. 222; p. 303.
Folger, Harry S., and C. L. Redfield, Chicago, Ill.; said Redfield assignor to said Folger. Self-inking hand-stamp. No. 1,166,667; Jan. 4; Gaz. vol. 222; p. 92.
Folstad, Almer J., Balaton, Minn. Insulator. No. 1,169,246; Jan. 25; Gaz. vol. 222; p. 1112.
Forbes, Alexander E., *et al.* (See Crecelius, Louis J., assignor.)
Forbes Lithograph Manufacturing Company, The. (See Ullrich, Simon B., assignor.)
Ford, Bruce, Philadelphia, Pa. Storage-battery jar. No. 1,167,810; Jan. 11; Gaz. vol. 222; p. 540.
Ford, Edwin H. (See Martin, John W., assignor.)
Ford, Edwin H., Wabash, Ind. Machine for testing water-meters. No. 1,167,392; Jan. 11; Gaz. vol. 222; p. 396.
Ford, Samuel W., Washington, D. C. Collar-fastening device. No. 1,167,393; Jan. 11; Gaz. vol. 222; p. 396.
Ford, Thomas B., New York, N. Y. Automatic emergency return-check and stop valve. No. 1,167,287; Jan. 4; Gaz. vol. 222; p. 303.
Forman-Breen Manufacturing Company. (See Forman, George L., assignor.)
Forman, George L., assignor to Forman-Breen Manufacturing Company, Louisville, Ky. Hame and trace connector. No. 1,167,160; Jan. 4; Gaz. vol. 222; p. 260.
Forman, George L., assignor to Forman-Breen Manufacturing Company, Louisville, Ky. Hame and trace connector. No. 1,167,161; Jan. 4; Gaz. vol. 222; p. 261.
Forman, George L., assignor to Forman-Breen Manufacturing Company, Louisville, Ky. Hame and trace connector. No. 1,167,162; Jan. 4; Gaz. vol. 222; p. 261.
Fornander, Alfred, Brooklyn, assignor of one-half to J. W. Helmsoth, New York, N. Y. Electric-lamp mounting. No. 1,168,619; Jan. 18; Gaz. vol. 222; p. 857.
Fornander, Alfred, assignor of one-half to J. W. Helmsoth, New York, N. Y. Mounting for electric lamps. No. 1,168,620; Jan. 18; Gaz. vol. 222; p. 858.
Forrest, Edwin C., New York, N. Y. Egg-crate. No. 1,168,186; Jan. 11; Gaz. vol. 222; p. 670.
Forry, Charles E., Oakland, assignor, by mesne assignments, to American Can Company, San Francisco, Cal. Can-end curling, can assembling and seaming machine. No. 1,167,059; Jan. 4; Gaz. vol. 222; p. 224.
Forsman, Herman, Fresno, Cal. Hose-pipe coupling. No. 1,169,389; Jan. 25; Gaz. vol. 222; p. 1160.
Forsyth, William D. (See Sheldon, Harry E., assignor.)
Forsyth, William R., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-rack. No. 1,167,550; Jan. 11; Gaz. vol. 222; p. 450.
Fortney, Ovedia B., Stratford, Wis. Non-refillable bottle. No. 1,166,755; Jan. 4; Gaz. vol. 222; p. 120.
Foster, Edwin W., Central Park, N. Y. Game. No. 1,167,394; Jan. 11; Gaz. vol. 222; p. 396.
Föttinger, Hermann, Zoppot, near Danzig, Germany. Turbine power plant. No. 1,166,756; Jan. 4; Gaz. vol. 222; p. 121.
Fowle, Charles L., assignor to Dowagiac Drill Company, Dowagiac, Mich. Disk grain-drill. No. 1,167,551; Jan. 11; Gaz. vol. 222; p. 450.
Fowler, Jonathan O., New York, N. Y. Heating apparatus. No. 1,167,894; Jan. 11; Gaz. vol. 222; p. 569.
Fowler, Jonathan O., New York, N. Y. Safety-tread. No. 1,169,074; Jan. 18; Gaz. vol. 222; p. 1015.
Fowler, J. Odell. (See Le Compte, William G., assignor.)
Fox, Frank C. (See Troyer and Fox.)
Fox, Herbert. (See Woolley and Fox.)
Fox, Thomas A., Newark, N. J., assignor to The Steffens-Amberg Co. Harness. No. 1,167,811; Jan. 11; Gaz. vol. 222; p. 540.
Fox, Thomas A., Newark, N. J., assignor to The Steffens-Amberg Co. Spud hip-loop for harness. No. 1,167,812; Jan. 11; Gaz. vol. 222; p. 540.

Fraad, Daniel, Brooklyn, N. Y. Means for disinfecting dumb-waiter shafts and the like. No. 1,166,757; Jan. 4; Gaz. vol. 222; p. 121.

Frail, Alfred L., Wellsville, Ohio. Bread-raiser. No. 1,168,718; Jan. 18; Gaz. vol. 222; p. 894.

Francisco, Leslie E. (See Kirk and Francisco.)

Frank Adam Electric Company. (See Adam, Fredrick B., assignor.)

Frank, Crosby F., Schenectady, N. Y., assignor to General Electric Company. Coherer. No. 1,167,163; Jan. 4; Gaz. vol. 222; p. 262.

Frank, Harrison J. L. and L. H., Wheeling, W. Va. Panel-box. No. 1,169,390; Jan. 25; Gaz. vol. 222; p. 1160.

Frank, Harrison J. L. and L. H., Wheeling, W. Va. Electrical switch. No. 1,169,391; Jan. 25; Gaz. vol. 222; p. 1161.

Frank, Leon H. (See Frank, Harrison J. L. and L. H.)

Franz, Conrad, assignor to Germer Stove Company, Erie, Pa. Hot-plate. No. 1,168,875; Jan. 18; Gaz. vol. 222; p. 947.

Franzmeier, Louis, Newton, Wis. Mower attachment. No. 1,168,384; Jan. 18; Gaz. vol. 222; p. 774.

Frary, Francis C., Minneapolis, and S. Temple, St. Paul, Minn. Composition of copper alloys and manufacturing the same. No. 1,169,392; Jan. 25; Gaz. vol. 222; p. 1161.

Fraser, James A., Lowell, Mass. Door-securer. No. 1,167,342; Jan. 4; Gaz. vol. 222; p. 324.

Fraser, James S., Charleroi, Pa. Controlling apparatus for metal flowing from blast-furnaces. No. 1,169,247; Jan. 25; Gaz. vol. 222; p. 1113.

Fred Medart Manufacturing Company. (See Medart, Philip S., assignor.)

Frederickson, Christian. (See Paulson and Frederickson.)

Free, Samuel P., Perry, Iowa. Window construction. No. 1,169,142; Jan. 25; Gaz. vol. 222; p. 1076.

Freeland, William C., Lomax, Ill. Means for steering automobile-headlights. No. 1,167,686; Jan. 11; Gaz. vol. 222; p. 498.

Freeman, Walter K., Oscawana, N. Y., assignor to Hydrolose Process Corporation. Process and apparatus for harvesting the volatile constituents of wood and vegetable substances. No. 1,169,325; Jan. 25; Gaz. vol. 222; p. 1137.

Freirich, Abraham. (See Schweppenheiser and Freirich.)

French, Alfred W., Piqua, Ohio. Stirrer for meal-cookers and the like. No. 1,168,621; Jan. 18; Gaz. vol. 222; p. 858.

French, Clarkson S., Salem, Ohio. Wire holder and insulator. No. 1,168,796; Jan. 18; Gaz. vol. 222; p. 921.

French, Elsamur S., Denver, Colo. Exhibition device for articles having casters. No. 1,168,719; Jan. 18; Gaz. vol. 222; p. 894.

Frensdorf, Sigmund, Deepwater, Mo. Fuse-igniter. No. 1,167,288; Jan. 4; Gaz. vol. 222; p. 304.

Freund, Jacob D., Beaver, assignor to American Cement Tile Manufacturing Company, Wampum, Pa. Making tiles. No. 1,168,492; Jan. 18; Gaz. vol. 222; p. 812.

Freund, Louis R., *et al.* (See Reuter, George J., assignor.)

Freund, Theodore. (See Röth, Andor, assignor.)

Frick, Frederick F. (See Laist and Frick.)

Fried. Krupp Aktiengesellschaft. (See Kästner and Stock, assignors.)

Fried. Krupp Aktiengesellschaft. (See Koch, Norbert, assignor.)

Fried. Krupp Aktiengesellschaft. (See Strauss, Benno, assignor.)

Fried. Krupp Aktiengesellschaft. (See Wieser, Karl, assignor.)

Fried. Krupp Aktiengesellschaft, Grusonwerk. (See Lehmann, Hermann, assignor.)

Fried. Krupp Aktiengesellschaft, Germaniawerft. (See Regenbogen and Ritter, assignors.)

Friedell, Philip A., New York Mills, Minn. Photographic-printing machine. No. 1,168,622; Jan. 18; Gaz. vol. 222; p. 859.

Friedman, Morris, assignor to A. S. Braverman, Avonmore, Pa. Resilient tire. No. 1,168,187; Jan. 11; Gaz. vol. 222; p. 670.

Friedman, Oscar J., Chicago, Ill. Safety-match folder. No. 1,167,990; Jan. 11; Gaz. vol. 222; p. 604.

Friel, Grant, Los Angeles, Cal. Back for motor-cycle saddles. No. 1,168,253; Jan. 11; Gaz. vol. 222; p. 694.

Frisch, Emil, and O. C. Miesaler, Chicago, Ill. Sanitary wrapper for bread and the like. No. 1,168,254; Jan. 11; Gaz. vol. 222; p. 695.

Frisch, Martin, St. Louis, Mo. Sole and heel inking machine. No. 1,167,687; Jan. 11; Gaz. vol. 222; p. 499.

Frissell, Frank H., assignor to The Russell Mfg. Co., Middletown, Conn. Beltlike cartridge-carrier for machine-guns. No. 1,168,876; Jan. 18; Gaz. vol. 222; p. 947.

Fritch, John W., and D. E. Hoopes, Washington, D. C. Indicating device. No. 1,168,941; Jan. 18; Gaz. vol. 222; p. 970.

Froehlich, Wilhelm, Wannsee, near Berlin, Germany. Two-stroke-cycle internal-combustion motor. No. 1,168,877; Jan. 18; Gaz. vol. 222; p. 947.

Frommer, Rudolf, Budapest, Austria-Hungary. Ejector for firearms. No. 1,169,248; Jan. 25; Gaz. vol. 222; p. 1113.

Frommer, Rudolf, Budanest, Austria-Hungary. Automatic firearm. No. 1,169,249; Jan. 25; Gaz. vol. 222; p. 1113.

Fuhrmann, Warren, Newark, N. J., assignor to Addometer Corporation, New York, N. Y. Signal-printing means for calculators. No. 1,166,978; Jan. 4; Gaz. vol. 222; p. 196.

Fulda, Edward, New York, N. Y. Attachment for electric welding-machines. No. 1,168,385; Jan. 18; Gaz. vol. 222; p. 775.

Fuller, Walton H., Sacramento, Cal. Vehicle-lock. No. 1,167,688; Jan. 11; Gaz. vol. 222; p. 499.

Fulton Company, The. (See Fulton, Weston M., assignor.)

Fulton, Eliza J., St. Louis, Mo. Water seal for refrigerators. No. 1,167,395; Jan. 11; Gaz. vol. 222; p. 397.

Fulton Manufacturing Company. (See Adams, Arthur J., assignor.)

Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Collapsible and expansible vessel. No. 1,167,895; Jan. 11; Gaz. vol. 222; p. 570.

Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Shock-absorber for water-pipes. No. 1,169,250; Jan. 25; Gaz. vol. 222; p. 1113.

Funsten, James J., San Francisco, Cal. Building block and construction. No. 1,167,746; Jan. 11; Gaz. vol. 222; p. 517.

Furber, Frederick M., Revere, Mass. Temperature-controlling apparatus for internal-combustion engines. No. 1,168,623; Jan. 18; Gaz. vol. 222; p. 859.

Furlong, Mike J., Trenton, Mo. Door. No. 1,169,143; Jan. 25; Gaz. vol. 222; p. 1077.

Gadd, Luther G., *et. al.* (See Stineman, William H. H., assignor.)

Gaess, Albert H., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Swinging die-cap for heading-machines. No. 1,166,668; Jan. 4; Gaz. vol. 222; p. 92.

Gaffney, James F., Steelton, Pa. Electric relay. No. 1,169,251; Jan. 25; Gaz. vol. 222; p. 1114.

Gal, Mathias, Cleveland, Ohio. Automobile-radiator. No. 1,167 896; Jan. 11; Gaz. vol. 222; p. 570.

Gall, Adolph F., assignor to New Jersey Patent Company, West Orange, N. J. Phonograph-reproducer. No. 1,167,489; Jan. 11; Gaz. vol. 222; p. 429.

Gallagher, Charles H., executor. (See Rites, Francis M.)

Gallagher, Frederick S., Yonkers, N. Y., assignor to Camel Company, Chicago, Ill. Door-securing device. No. 1,168,878; Jan. 18; Gaz. vol. 222; p. 947.

Gallet, Henri, assignor to Etablissements De Dion-Bouton (Société Anonyme), Puteaux, France. Stretching device for driving-chains from magnetos or lighting-dynamos in internal-combustion engines. No. 1,166,979; Jan. 4; Gaz. vol. 222; p. 196.

Galligan, Arthur L., Kenosha, Wis. Clip. No. 1,167,813; Jan. 11; Gaz. vol. 222; p. 540.

Gamber, Harry K. (See Oppelt, William, assignor.)

Gamble, James H., Kenosha, Wis. Clip. No. 1,169,252; Jan. 25; Gaz. vol. 222; p. 1114.

Gamewell Fire Alarm Telegraph Company. (See Suren, Nathan H., assignor.)

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Fabric for making tires. No. 1,166,669; Jan. 4; Gaz. vol. 222; p. 93.

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Making golf-balls. No. 1,167,396; Jan. 11; Gaz. vol. 222; p. 397.

Gammeter, William F., Cadiz, Ohio. Composite roll for textiles. No. 1,168,188; Jan. 11; Gaz. vol. 222; p. 671.

Gane, George W., Normanby, Taranaki, New Zealand. Seed and fertilizer sower. No. 1,167,814; Jan. 11; Gaz. vol. 222; p. 541.

Gardner, Henry A., Washington, D. C. Pigment and making the same. No. 1,169,253; Jan. 25; Gaz. vol. 222; p. 1114.

Gardner, John P., San Francisco, Cal. Pitman. No. 1,166,452; Jan. 4; Gaz. vol. 222; p. 14.

Garey, Charles J. (See Murdick and Garey.)

Garford Manufacturing Company, The. (See Dean, William W., assignor.)

Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)

Garford Manufacturing Company, The. (See Slough, Frank M., assignor.)

Garlock, William H., Seattle, Wash. Polishing-machine. No. 1,168,189; Jan. 11; Gaz. vol. 222; p. 671.

Garrett, Charles B., assignor to The Globe Automatic Sprinkler Company, Cincinnati, Ohio. Valve. No. 1,169,718; Jan. 25; Gaz. vol. 222; p. 1276.

Garrison, Obadiah M., Lutesville, Mo. Fruit-picker. No. 1,166,586; Jan. 4; Gaz. vol. 222; p. 61.

Garrison, Walter W. (See Rattermann and Garrison.)

Garvey, Christopher A., St. Louis county, Mo. Fountain-brush. No. 1,166,896; Jan. 4; Gaz. vol. 222; p. 168.

Garvey, Henry A., assignor to Packard Motor Car Company, Detroit, Mich. Gear-cutting machine. No. 1,169,086; Jan. 18; Gaz. vol. 222; p. 1019.

Garvin, George J. (See Nyberg, Frank R., assignor.)

Gas and Oil Combustion Company. (See Lucke, Charles E., assignor.)

Gasperetti, Annibale, and C. Dalboni, New York. N. Y. Music-leaf turner. No. 1,169,144; Jan. 25; Gaz. vol. 222; p. 1077.

Gass, Charles A., Redrock, assignor of one-half to F. C. Tatum and T. K. Richey, Tucson, Ariz. Internal-combustion engine. No. 1,168,879; Jan. 18; Gaz. vol. 222; p. 948.

Gast, Adolph W., assignor to Chicago Miniature Lamp Works, Chicago, Ill. Electric-sign structure. No. 1,169,254; Jan. 25; Gaz. vol. 222; p. 1115.

Gaston, William E., Torrington, Conn. Bottle-closure. No. 1,168,386; Jan. 18; Gaz. vol. 222; p. 775.

Gastonguay, Albert. (See Ware, Gastonguay, Linderson, Farrell, and Woodbury.)

Gathright, Josiah B., Louisville, Ky. Machine for stuffing horse-collars. No. 1,167,552; Jan. 11; Gaz. vol. 222; p. 450.

Gauldie, Kenneth, Glasgow, Scotland. Hydraulic device for compressing gases. No. 1,167,559; Jan. 11; Gaz. vol. 222; p. 453.

Gaumont, Léon, assignor to Société des Etablissements Gaumont, Paris, France. Film-driving device. No. 1,166,453; Jan. 4; Gaz. vol. 222; p. 14.

Gauthier, George A., assignor to The Arrow Electric Company, Hartford, Conn. Electric-lamp receptacle. No. 1,168,190; Jan. 11; Gaz. vol. 222; p. 671.

Gear Grinding Machine Company. (See Ward, Frederick A., assignor.)

Gearhart, Andrew L., Clearfield, Pa. Cigar-lighter. No. 1,169,629; Jan. 25; Gaz. vol. 222; p. 1248.

Gearhart, Roy E., Maryville, assignor to More-Jones Brass and Metal Company, St. Louis, Mo. Trolley-retriever. No. 1,168,624; Jan. 18; Gaz. vol. 222; p. 860.

Geckler, Robert C. (See Sadler and Geckler.)

Gehr, Walter W. (See Eldridge and Gehr.)

Gehre, Max, Dusseldorf-Rath, Germany. Device for measuring steam and other fluids. No. 1,166,980; Jan. 4; Gaz. vol. 222; p. 196.

Gehrung, Julien A., New York, N. Y. Gas-valve. No. 1,167,060; Jan. 4; Gaz. vol. 222; p. 225.

Geiger, David F., assignor of one-third to E. C. Wingire, Fargo, N. D. Loading-machine. No. 1,166,897; Jan. 4; Gaz. vol. 222; p. 169.

Geisendorff, Lee H., assignor of one-half to F. M. Fauvre, Indianapolis, Ind. Compressor. No. 1,168,625; Jan. 18; Gaz. vol. 222; p. 860.

General Briquetting Company. (See Kippe, Otto, assignor.)

General Electric Company. (See Badeau, Charles C., assignor.)

General Electric Company. (See Benbow, Burnie L., assignor.)

General Electric Company. (See Chatain, Henri G., assignor.)

General Electric Company. (See Collins and Capp, assignors.)

General Electric Company. (See Durfee, Charles G., assignor.)

General Electric Company. (See Emmet, William L. R., assignor.)

General Electric Company. (See Frank, Crosby F., assignor.)

General Electric Company. (See Lemp, Hermann, assignor.)

General Electric Company. (See Porter, Willard E., assignor.)

General Electric Company. (See Scherbius, Arthur, assignor.)

General Electric Company. (See Short, Frank, assignor.)

General Electric Company. (See Torsen, Tor A. R. W., assignor.)

General Electric Company. (See Ver Planck, William E., assignor.)

General Fiber Company, The. (See Coyne, Frank H., assignor.)

General Fibre Co. (See Marr, Robert A., assignor.)

General Machine Works. (See Grothey, Ivern W., assignor.)

General Motors Company. (See Ferguson, Donald M., assignor.)

General Railway Signal Company. (See Ross, Oscar A., assignor.)

General Roofing Manufacturing Company. (See Whittemore, Audenried, assignor.)

General Vehicle Company. (See McComb, Henry G., assignor.)

General Water-Proofing Co. (See Marr, Robert A., assignor.)

Genrich, Ernest F., Oconomowoc, Wis. Cultivator. No. 1,166,516; Jan. 4; Gaz. vol. 222; p. 37.

Genter, Jacob H., Newburgh, N. Y. Apparatus for agitating materials. No. 1,169,026; Jan. 18; Gaz. vol. 222; p. 998.

Gentzel, Gustav H., assignor to Springmeyer, Pattberg & Co., Hoboken, N. J. Self-locking safety-catch for handbags. No. 1,169,630; Jan. 25; Gaz. vol. 222; p. 1248.

Geo. E. Keith Company. (See Cole, Charles T., assignor.)

George H. Frothingham Company. (See Prescott, Arthur T., assignor.)

George P. Clark Company. (See Irrgang, William F., assignor.)

Georgeff, Evan, San Francisco, Cal. Sash-balancing mechanism. No. 1,169,719; Jan. 25; Gaz. vol. 222; p. 1277.

Gerard, Edgar R., assignor to Larned, Carter & Company, Detroit, Mich. Pencil-pocket for overalls. No. 1,168,387; Jan. 18; Gaz. vol. 222; p. 776.

Gerhardt, Henry, Hazleton, Pa. Shirt. No. 1,168,191; Jan. 11; Gaz. vol. 222; p. 672.

Gerlach, Oscar, La Salle, Ill. Pulverizer. No. 1,169,075; Jan. 18; Gaz. vol. 222; p. 1015.

Germer Stove Company. (See Franz, Conrad, assignor.)

Gesellschaft für Drahtlose Telegraphie m. b. H. (See Pichon and Meissner, assignors.)

Getson, Philip, Philadelphia, Pa. Automatic cut-off for gas-burners. No. 1,167,397; Jan. 11; Gaz. vol. 222; p. 397.

Gibbs, Howard W. (See English and Gibbs.)

Giberson, Charles E., Almonesson, N. J. Lamp-burner attachment. No. 1,169,631; Jan. 25; Gaz. vol. 222; p. 1248.

Gibson, George H., Montclair, N. J. Flow-controlling apparatus. No. 1,166,758; Jan. 4; Gaz. vol. 222; p. 121.

Gibson, George H., Montclair, N. J. Furnace regulation. No. 1,167,343; Jan. 4; Gaz. vol. 222; p. 324.

Gibson, George H., Montclair, N. J. Fluid-handling mechanism. No. 1,168,297; Jan. 18; Gaz. vol. 222; p. 743.

Gibson, George H., Montclair, N. J. Method of and apparatus for drying and superheating a vapor. No. 1,168,298; Jan. 18; Gaz. vol. 222; p. 743.

Gibson, Jesse L., Centerville, Ind. Pelt stretching and drying device. No. 1,169,145; Jan. 25; Gaz. vol. 222; p. 1077.

Gibson, Roscoe E., Pender, Nebr. Hog-holder. No. 1,167,398; Jan. 11; Gaz. vol. 222; p. 398.

Gichner, Frederick S., Washington, D. C. Border-guard. No. 1,167,689; Jan. 11; Gaz. vol. 222; p. 499.

Giclas, Harry J., and S. C. Breneman, Washington, D. C. Skylight. No. 1,167,553; Jan. 11; Gaz. vol. 222; p. 451.

Gidley, Daniel C. (See Bissell and Gidley.)

Gierding, Charles E., assignor to The Ohio Brass Company, Mansfield, Ohio. Frog for trolley-wires. No. 1,166,898; Jan. 4; Gaz. vol. 222; p. 169.

Giese, Clemens J., Ambia, Ind. Antirefillable bottle. No. 1,168,299; Jan. 18; Gaz. vol. 222; p. 743.

Gilbert, Guy G., Cushing, Okla. Well-plug. No. 1,167,289; Jan. 4; Gaz. vol. 222; p. 304.

Gilchrist, M. M., *et al.* (See Nathan, John, assignor.)

Gilchrist, William A., Memphis, Tenn. Steam-boiler furnace. No. 1,166,670; Jan. 4; Gaz. vol. 222; p. 93.

Gill & Company. (See Meara, James O., assignor.)

Gilliam, Manly M., Flushing, N. Y. Picture-projecting device. No. 1,167,399; Jan. 11; Gaz. vol. 222; p. 398.

Gillespie, Charles D., Oakland, Cal. Chock for vehicle-wheels. No. 1,166,828; Jan. 4; Gaz. vol. 222; p. 146.

Gillet, Alexis F., assignor to Jubilee Manufacturing Company, Omaha, Nebr. Gas-heated sad-iron. No. 1,166,829; Jan. 4; Gaz. vol. 222; p. 146.

Gillet, Alexis F., assignor to Jubilee Manufacturing Company, Omaha, Nebr. Spark-intensifier for spark-plugs. No. 1,169,744; Jan. 25; Gaz. vol. 222; p. 1285.

Gilliam, Wilfrid G., Boston, Mass. Portable-propeller-holding device. No. 1,168,192; Jan. 11; Gaz. vol. 222; p. 672.

Gilman, John H., assignor to King & Hamilton Company, Ottawa, Ill. Locking mechanism for cup elevators. No. 1,169,535; Jan. 25; Gaz. vol. 222; p. 1212.

Gilmore, Robert B., Morrow, Ohio. Gun-sight. No. 1,167,490; Jan. 11; Gaz. vol. 222; p. 429.

Gilowitz, Benjamin, Greenport, N. Y. Shoe-sole. No. 1,167,747; Jan. 11; Gaz. vol. 222; p. 518.

Gilson, John, Sr., Port Washington, Wis. Garden-tool. No. 1,167,491; Jan. 11; Gaz. vol. 222; p. 429.

Ginn, Carrollvernon B., assignor of one-half to P. D. Ginn, Brenham, Tex. Air-blast cotton-gin. No. 1,168,493; Jan. 18; Gaz. vol. 222; p. 812.

Ginn, Paul D. (See Ginn, Carrollvernon B., assignor.)

Ginnett, Lucien G., London, England. Shock-absorber. No. 1,169,027; Jan. 18; Gaz. vol. 222; p. 998.

Girardot, Raymond L., Detroit, Mich. Switch-lock. No. 1,168,066; Jan. 11; Gaz. vol. 222; p. 631.

Gisholt Machine Company. (See Seward, Ernest R., assignor.)

Giusto, Nicola, New York, N. Y. Time-indicating device. No. 1,168,797; Jan. 18; Gaz. vol. 222; p. 921.

Glass, David H., Rushville, Ill. Insect-trap. No. 1,168,798; Jan. 18; Gaz. vol. 222; p. 921.

Gleason, Edward D., New York, assignor to New-Metals and Process Company, Brooklyn, N. Y. Alloy. No. 1,169,536; Jan. 25; Gaz. vol. 222; p. 1213.

Gleason, Paul E., Toledo, Ohio. Safety-razor adjustment. No. 1,168,388; Jan. 18; Gaz. vol. 222; p. 776.

Gliddon, Arthur. (See Raczkowski, John F., assignor.)

Globe Autographic Register Company, The. (See Koneman, Harry, assignor.)

Globe Automatic Sprinkler Company, The. (See Garrett, Charles B., assignor.)

Glover, Theodore S., assignor of one-half to C. M. Bessett, Saranac Lake, N. Y. Carbureter. No. 1,167,290; Jan. 4; Gaz. vol. 222; p. 304.

Goad, Alfred. (See Jordon and Goad.)

Goblet, Jules, Valentigney, France. Apparatus for cleaning the strakes on the driving-wheels of traction-engines. No. 1,167,400; Jan. 11; Gaz. vol. 222; p. 399.

Goeddertz, Henry, Denver, Col. Engine-starter. No. 1,169,393; Jan. 25; Gaz. vol. 222; p. 1161.

Goelz, William J., Albany, N. Y. Curtain. No. 1,167,554; Jan. 11; Gaz. vol. 222; p. 451.

Goff, Henry J. (See Smith and Goff.)

Goff, Samuel B., Camden, N. J. Water-elevating apparatus. No. 1,166,671; Jan. 4; Gaz. vol 222; p. 93.

Gold Car Heating & Lighting Company. (See Gold, Edward E., assignor.)

Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Automatic valve. No. 1,167,815; Jan. 11; Gaz. vol. 222; p. 541.

Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Steam-heating apparatus. No. 1,167,816; Jan. 11; Gaz. vol. 222; p. 541.

Gold, Edward E., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Steam-heating system. No. 1,168,720; Jan. 18; Gaz. vol. 222; p. 894.

Goldberg, John S., assignor to Alemite Metals Company, Chicago, Ill. Grease-cup. No. 1,168,389; Jan. 18; Gaz. vol. 222; p. 776.

Goldberg, Maximilian M., assignor to The National Cash Register Company, Dayton, Ohio. Distant accounting mechanism. No. 1,166,517; Jan. 4; Gaz. vol. 222; p. 38.

Goldfarb, Abraham, *et al.* (See Castro, Charles W., assignor.)

Goldschmidt Thermit Company. (See Brewitt, Walter, assignor.)

Goldschmidt Thermit Company. (See Deppeler, John H., assignor.)

Goldsmith, Byron B., New York, N. Y. Apparatus for manufacturing rubber tubing. No. 1,168,390; Jan. 18; Gaz. vol. 222; p. 777.

Goldsmith, Byron B., New York, N. Y. Composition of matter and making the same. No. 1,168,626; Jan. 18; Gaz. vol. 222; p. 861.

Goldsmith, Harry N., Philadelphia, Pa. Reversible wall-tile. No. 1,166,672; Jan. 4; Gaz. vol. 222; p. 94.

Goldsmith, Max S., Cincinnati, Ohio. Concrete floor construction. No. 1,168,627; Jan. 18; Gaz. vol. 222; p. 861.

Goldsmith, Nathan, assignor to L. Goldsmith & Son, Newark, N. J. Garment-support for wardrobe-trunks. No. 1,169,632; Jan. 25; Gaz. vol. 222; p. 1249.

Goldsmith & Son, L. (See Goldsmith, Nathan, assignor.)

Gooden, Belmont, San Diego, Cal. Insect-trap. No. 1,167,897; Jan. 11; Gaz. vol. 222; p. 570.

Goodfellow, Samuel E., Columbus, Ohio. Rope-clamp. No. 1,166,673; Jan. 4; Gaz. vol. 222; p. 94.

Goodhue, James E., St. Charles, assignor to United States Wind Engine & Pump Company, Batavia, Ill. Feed-grinding mechanism. No. 1,166,899; Jan. 4; Gaz. vol. 222; p. 169.

Goodman, Leon, *et al.* (See Mentzer, Claude E., assignor.)

Goodspeed, Leland F., Wilkinsburg, Pa. Power-transmitting mechanism. No. 1,168,494; Jan. 18; Gaz. vol. 222; p. 812.

Goodyear Tire and Rubber Company, The. (See Darrow, Burgess, assignor.)

Goodyear Tire & Rubber Company, The. (See Nall, Edward, assignor.)

Gorman, George H., assignor to The Davis Sewing Machine Company, Dayton, Ohio. Propelling device for vehicles. No. 1,168,300; Jan. 18; Gaz. vol. 222; p. 743.

Gorton, George. (See Tausch, Joseph H., assignor.)

Goss, Oliver P. M., Seattle, Wash. Impregnating timber and other porous material with a preservative. No. 1,167,492; Jan. 11; Gaz. vol. 222; p. 430.

Gottl, August, and F. Looa, Fischern, near Carlsbad, Austria-Hungary. Change-speed gearing. No. 1,169,633; Jan. 25; Gaz. vol. 222; p. 1249.

Gottschalk, Albert, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill. Door-operating apparatus. No. 1,168,301; Jan. 18; Gaz. vol. 222; p. 744.

Gould, Harold P., Chicago, Ill. Advertising medium. No. 1,166,900; Jan. 4; Gaz. vol. 222; p. 170.

Gould, Ralph A., and C. S. Ash, San Francisco, Cal. Utilization of waste from pineapples. No. 1,166,674; Jan. 4; Gaz. vol. 222; p. 94.

Gracie, Charles R. (See Salz, Henrick, assignor.)

Graf, Christian, Paxico, Kans. Horse-detacher. No. 1,168,193; Jan. 11; Gaz. vol. 222; p. 672.

Grafe, Viktor, and K. Peche, Vienna, Austria-Hungary. Manufacture of albuminous products from the residues obtained in the oil manufacture. No. 1,169,634; Jan. 25; Gaz. vol. 222; p. 1250.

Graham, Andrew W., Buffalo, N. Y., assignor of one-half to E. M. Treat, Pittsburgh, Pa. Sepulchral memorial. No. 1,167,291; Jan. 4; Gaz. vol. 222; p. 305.

Graham, Andrew W., Buffalo, N. Y., assignor of one-half to E. M. Treat, Pittsburgh, Pa. Sepulchral memorial. No. 1,167,292; Jan. 4; Gaz. vol. 222; p. 305.

Graham, Benjamin J., Beverly, assignor of one-half to C. H. Sherburne, Boston, Mass. Safety device for punch-presses. No. 1,166,981; Jan. 4; Gaz. vol. 222; p. 197.

Graham, Jason F., Evansville, Wis. Automobile-hoist. No. 1,169,255; Jan. 25; Gaz. vol. 222; p. 1115.

Gramlich, Jacob E., assignor to Chase Motor Truck Co., Syracuse, N. Y. Centrifugal fan. No. 1,169,476; Jan. 25; Gaz. vol. 222; p. 1190.

Grand, Einar V., Leonia, N. J. Manufacturing barium chlorid. No. 1,167,061; Jan. 4; Gaz. vol. 222; p. 225.

Grasselli Chemical Company, The. (See Krickbaum, William M., assignor.)

Gravatt, Frederick R. (See Alcorn and Gravatt.)

Gray, Edward E., Piano, Ill., assignor to Gray Pneumatic Gear Shift Company. Power-storage device. No. 1,167,555; Jan. 11; Gaz. vol. 222; p. 451.

Gray, John J., Jr., Rockdale, Tenn. Blast-furnace process of producing phosphorus and phosphorus compounds. No. 1,168,495; Jan. 18; Gaz. vol. 222; p. 813.

Gray, Joseph W. (See Knapp, Walter C., assignor.)

Gray Pneumatic Gear Shift Company. (See Gray, Edward E., assignor.)

Grebe, Albert, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Variable-power telescope. No. 1,167,164; Jan. 4; Gaz. vol. 222; p. 262.

Grebe, Albert, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Illuminating means for telescope cross-hairs. No. 1,167,991; Jan. 11; Gaz. vol. 222; p. 604.

Green, Ammon S., *et al.* (See Riehdale, Herbert W., assignor.)

Green, Brigham Y., *et al.* (See Halford, William O., assignor.)

Greene, George M., South Somerville, N. J. Container for shaving-sticks. No. 1,166,454; Jan. 4; Gaz. vol. 222; p. 15.

Greener, Nicholas, Bude, Miss. Dry-kiln. No. 1,168,721; Jan. 18; Gaz. vol. 222; p. 894.

Greenleaf, Carl K., Santa Clara, Cal. Light-dimmer. No. 1,167,748; Jan. 11; Gaz. vol. 222; p. 518.

Greenstreet, Charles J., Webster Groves, Mo. Apparatus for treating oil. No. 1,166,982; Jan. 4; Gaz. vol. 222; p. 197.

Greenstreet Folding Box Machine Co., The. (See Brown, Hugh, assignor.) (Reissue.)

Greenway Robert B., San Bernardino, Cal. Grease-cup. No. 1,169,477; Jan. 25; Gaz. vol. 222; p. 1191.

Greenwood, Edgar, Bradford, England, assignor to H. J. Potter, Brookline, Mass., and J. W. Coggeshall, Cranston, R. I. Circular combing-machine. No. 1,169,478; Jan. 25; Gaz. vol. 222; p. 1191.

Gregory, Charles E., New Rochelle, assignor of one-half to R. E. Turner, Amsterdam, N. Y. Veneer barrel. No. 1,168,391; Jan. 18; Gaz. vol. 222; p. 777.

Gregory, Oscar T., and N. W. Carkhuff, Rochester, N. Y., assignors, by mesne assignments, to Commercial Camera Co., Providence, R. I. Photographic camera. No. 1,167,356; Jan. 4; Gaz. vol. 222; p. 330.

Greiner, Albert C., assignor of one-half to J. E. Kelly, Philadelphia, Pa. Harnessless loom. No. 1,167,401; Jan. 11; Gaz. vol. 222; p. 399.

Greist, Hubert M., New Haven, Conn., assignor to The Greist Manufacturing Company. Portable electric lamp. No. 1,169,394; Jan. 25; Gaz. vol. 222; p. 1162.

Greist Manufacturing Company, The. (See Greist, Hubert M., assignor.)

Greist Manufacturing Company, The. (See Greist and Boyler, assignors.)

Greist, Percy R., and E. J. Boyler, New Haven, Conn., assignors to The Greist Manufacturing Company. Safety-razor. No. 1,169,395; Jan. 25; Gaz. vol. 222; p. 1162.

Grenfell, Russel F., *et al.* (See Smith, Glenn R., assignor.)

Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Pitman connection for oil-well apparatus. No. 1,169,076; Jan. 18; Gaz. vol. 222; p. 1015.

Greve, Edgar E., assignor to Oil Well Supply Company, Pittsburgh, Pa. Pipe-tongs. No. 1,169,077; Jan. 18; Gaz. vol. 222; p. 1016.

Gridley, George O., Windsor, Vt. Multiple-spindle machine. No. 1,166,830; Jan. 4; Gaz. vol. 222; p. 147.

Grier, George E., South Pasadena, Cal. Fruit washing and blanching machine. No. 1,168,799; Jan. 18; Gaz. vol. 222; p. 922.

Griffin, Fredrick W., Rich Hill, Mo. Pipe-vise holder. (Reissue.) No. 14,044; Jan. 11; Gaz. vol. 222; p. 701.

Griffin, George G., Indianapolis, Ind. Hub-cap lock for vehicle-wheels. No. 1,166,983; Jan. 4; Gaz. vol. 222; p. 198.

Griffin, Henry G., Grand Rapids, Mich. Flushing-valve. No. 1,169,326; Jan. 25; Gaz. vol. 222; p. 1138.

Griffin, Henry S., Piqua, Ohio. Brass-screw nut-lock. No. 1,167,690; Jan. 11; Gaz. vol. 222; p. 500.

Griffin, James B., assignor to Griffin Manufacturing Company, Erie, Pa. Tablet for a plurality of tables. No. 1,166,675; Jan. 4; Gaz. vol. 222; p. 95.

Griffin Manufacturing Company. (See Griffin, James B., assignor.)

Griffith, Charles W., assignor of two-thirds to J. Neason and S. A. Trees, Altoona, Pa. Exhaust-heated vulcanizer. No. 1,167,165; Jan. 4; Gaz. vol. 222; p. 262.

Griggs, Stephen A. (See Byron, Orra E., assignor.)

Griggs, Stephen A. (See Chapin, John J., assignor.)

Grimes, Archie N., Chicago, Ill. Pneumatic action for piano-players. No. 1,166,455; Jan. 4; Gaz. vol. 222; p. 15.

Grimes, Lester A., Orange, N. J. Pipe-hanger. No. 1,169,635; Jan. 25; Gaz. vol. 222; p. 1250.

Grimm, Louis, and H. H. Kant, Milwaukee, Wis. Garment. No. 1,169,256; Jan. 25; Gaz. vol. 222; p. 1115.

Grinstead, Albert N., assignor of one-half to J. R. Watts, Royston, Tex. Seed-dropping plate. No. 1,169,636; Jan. 25; Gaz. vol. 222; p. 1250.

Grobl, Mathias A., Brookfield, assignor of one-half to G. Schlitt, Chicago, Ill. Flue-cleaner. No. 1,166,901; Jan. 4; Gaz. vol. 222; p. 170.

Groebli, Joseph A., New York, N. Y. Embroidering-machine. No. 1,166,676; Jan. 4; Gaz. vol. 222; p. 95.

Groebli, Joseph A., New York, N. Y. Device for supplying fabric to embroidering-machines. No. 1,167,817; Jan. 11; Gaz. vol. 222; p. 542.

Groehn, Otto J., assignor to Briscoe Manufacturing Company, Detroit, Mich. Forming sheet metal. No. 1,167,556; Jan. 11; Gaz. vol. 222; p. 452.

Groot, Pieter C. de, Rotterdam, Netherlands, assignor to U. S. Slicing Machine Company, Chicago, Ill. Sharpening device for slicing-machine knives. No. 1,168,370; Jan. 18; Gaz. vol. 222; p. 772.

Groshans, Ferdinand, Baltimore, Md. Dental salivaejector. No. 1,167,062; Jan. 4; Gaz. vol. 222; p. 225.

Gross, John B., New York, N. Y., assignor to J. W. Connelly, Jersey City, N. J. Aeroplane. No. 1,167,293; Jan. 4; Gaz. vol. 222; p. 305.

Grossman, Oris A., Plymouth, Ind. Hog-trough. No. 1,167,818; Jan. 11; Gaz. vol. 222; p. 542.

Grothey, Ivern W., assignor to General Machine Works, York, Pa. Stop-motion mechanism for knitting-machines. No. 1,168,194; Jan. 11; Gaz. vol. 222; p. 672.

Grotzky, Hugo, Chapman, Nebr. Weed-cutter. No. 1,166,831; Jan. 4; Gaz. vol. 222; p. 147.

Grove, Edwin W. (See Crumbaugh, George P., assignor.)

Grove, Edwin W., St. Louis, Mo. Comb. No. 1,169,028; Jan. 18; Gaz. vol. 222; p. 999.

Grove, Edwin W., St. Louis, Mo. Attachment for razors. No. 1,169,637; Jan. 25; Gaz. vol. 222; p. 1251.

Groves, D. Roy. (See Groves, Hugh T. and D. R.)

Groves, Hugh T. and D. R., Portland, Oreg. Spud lowering and hoisting means for dredges. No. 1,169,396; Jan. 25; Gaz. vol. 222; p. 1162.

Grubbs, Albert M., Portland, Oreg. Animal-trap. No. 1,167,493; Jan. 11; Gaz. vol. 222; p. 430.

Gruettner, Henry W. J., Vallejo, Cal. Cover for magazines. No. 1,168,392; Jan. 18; Gaz. vol. 222; p. 777.

Grundler, Alfred, Berlin, Germany. Apparatus for separating substances of different specific gravities. No. 1,169,479; Jan. 25; Gaz. vol. 222; p. 1192.

Grundman, Rudolf, Chicago, Ill. Railway track-scale. No. 1,168,496; Jan. 18; Gaz. vol. 222; p. 813.

Grundy, Frank, Jersey City, N. J. Attaching and concealing means for vehicle-curtains. No. 1,166,677; Jan. 4; Gaz. vol. 222; p. 95.

Grunow, William, Jr., New York, N. Y. Railway block-signaling system. No. 1,167,294; Jan. 4; Gaz. vol. 222; p. 306.

Grunow, William, Jr., New York, N. Y. Circuit-closing switch. No. 1,168,195; Jan. 11; Gaz. vol. 222; p. 673.

Grymes, Arthur J. (See Crane, Edward F., assignor.)

Guano, Emanuel, Chelsea, N. J. Apparatus for drying alimentary paste. No. 1,168,722; Jan. 18; Gaz. vol. 222; p. 895.

Guerini, Berardo, Brescia, Italy. Oxidation of smooth iron surfaces. No. 1,169,397; Jan. 25; Gaz. vol. 222; p 1163

Guggenheim, Edgar, assignor to M. W. Schloss, New York, N. Y. Brassière. No. 1,167,992; Jan. 11; Gaz. vol. 222; p. 605.

Gugler, Julius H., and G. W. Colles, Milwaukee, Wis.; said Colles assignor to said Gugler. Combined alternating and direct current distributing system. No. 1,169,537; Jan. 25; Gaz. vol. 222; p. 1213.

Guibert, F Walter, Detroit, Mich. Water-tube boiler. No. 1,168,880; Jan. 18; Gaz. vol. 222; p. 949.

Guibert F Walter, Detroit, Mich. Circulator. No. 1,168,881; Jan. 18; Gaz. vol. 222; p. 949.

Gulacshi, Esther, Youngstown, Ohio. Surgical bandage. No. 1,166,984; Jan. 4; Gaz. vol. 222; p. 198.

Gulf Refining Company. (See Brooks, Benjamin T., assignor.)

Gunnerson, Luther M., assignor of one-half to N. P. Gunnerson, Stanwood, Wash. Pencil attachment. No 1,169,029; Jan. 18; Gaz. vol. 222; p. 999.

Gunnerson, Nels P. (See Gunnerson, Luther M., assignor.)

Gunzendorfer, Jacob, San Francisco, Cal. Amusement apparatus. No. 1,167,993; Jan. 11; Gaz. vol. 222; p. 605.

Gustafson, Adolph P., assignor to M. Schulz Co., Chicago, Ill. Lost-motion device for player-piano actions. No. 1,169,480; Jan. 25; Gaz. vol. 222; p. 1192.

Gustafson, Carl J., assignor, by mesne assignments, to Hendee Manufacturing Company, Springfield, Mass. Friction-clutch. No. 1,166,832; Jan. 4; Gaz. vol. 222; p. 148.

H. H. Franklin Manufacturing Company. (See Brown, William H., assignor.)

H. K. Mulford Company. (See Higgins, Arthur C., assignor.)

H. L. Judd Company. (See Edsall, William H., assignor.)

H. W. Butterworth & Sons Company. (See Brehmer, Herman C., assignor.)

Haag, Alfred H., Newport News, Va. Phonographic-disk-record cabinet. No. 1,167,063; Jan. 4; Gaz. vol. 222; p. 226.

Haahr, Anton, Copenhagen, Denmark, assignor to United Shoe Machinery Company, Paterson, N. J. Folding-machine. No. 1,169,146; Jan. 25; Gaz. vol. 222; p. 1078.

Haas, Ferdinand G., and H. B. Colestock, said Haas assignor to G. G. Whitney, St. Paul, Minn. Washing-machine. No. 1,167,357; Jan. 4; Gaz. vol. 222; p. 331.

Haas, Joseph, Martinsburg, W. Va., assignor to Interwoven Mills, Inc., New Brunswick, N. J. Holder for cones or spools of artificial-silk and other thread. No. 1,168,393; Jan. 18; Gaz. vol. 222; p. 778.

Hacker, T. L., *et al.* (See Banes, Walter D., assignor.)

Hadaway, William S., Jr., New Rochelle, N. Y. Electric heating apparatus. No. 1,167,749; Jan. 11; Gaz. vol. 222; p. 518.

Hadaway, William S., Jr., New Rochelle, N. Y. Electric heater for laundry-rolls. No. 1,167,750; Jan. 11; Gaz. vol. 222; p. 518.

Haddon, Virgil M., Louisville, assignor to C. A. Richey, Omaha, Nebr. Suction-pipe attachment. No. 1,169,745; Jan. 25; Gaz. vol. 222; p. 1285.

Haefely, Emil, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company. Press. No. 1,168,067; Jan. 11; Gaz. vol. 222; p. 631.

Hager, Henry F. (See Rhenstrom and Hager.)

Hagstrom, Martin, Hartford, Conn. Leather-blank-cutting die. No. 1,168,800; Jan. 18; Gaz. vol. 222; p. 922.

Hajdu, Alex, Barnesboro, Pa. Bathing apparatus. No. 1,168,497; Jan. 18; Gaz. vol. 222; p. 813.

Hakes, Hudson W., Millbury, Mass. Self-threading loom-shuttle. No. 1,168,628; Jan. 18; Gaz. vol. 222; p. 862.

Hale and Kilburn Company. (See Caverly, Robert B., assignor.)

Hale & Kilburn Company. (See Kilburn, John E., assignor.)

Hale and Kilburn Company. (See Lambert and Bell, assignors.)

Halford, William O., assignor of one-fourth to A. Hawks and one-fourth to B. Y. Green, McCammon, Idaho. Agricultural implement. No. 1,167,898; Jan. 11; Gaz. vol. 222; p. 571.

Hall, Arthur C. (See Rosenhagen, Victor, assignor.)

Hall, Arthur J. (See Simmon and Hall.)

Hall-Borchert Dress Form Company. (See Dinn, James F., assignor.)

Hall, Edward M., Vian, Okla. Razor. No. 1,166,678; Jan. 4; Gaz. vol. 222; p. 96.

Hall, George F., Irvington, assignor to R. T. Binder, Orange, N. J. Soap-holder. No. 1,167,994; Jan. 11; Gaz. vol. 222; p. 605.

Hall, John S., Monticello, Iowa. Pulley-block. No. 1,167,295; Jan. 4; Gaz. vol. 222; p. 306.

Hall, William A., New York, N. Y. Pipe-coupling. No. 1,168,196; Jan. 11; Gaz. vol. 222; p. 673.

Halley, William F., Quinn, S. D. Trace-carrier. No. 1,168,197; Jan. 11; Gaz. vol. 222; p. 674.

Halligan, John B., Smoky Ordinary, Va. Aseptic drinking-cup holder. No. 1,166,759; Jan. 4; Gaz. vol. 222; p. 122.

Halligan, Raymond S. (See Hitchcock, George, assignor.)

Hallowell, Howard T., Philadelphia, Pa. Shaft-collar. No. 1,167,296; Jan. 4; Gaz. vol. 222; p. 307.

Hamer, Howard J., assignor to Jarecki Manufacturing Company, Erie, Pa. Pipe-cutting machine. No. 1,166,456; Jan. 4; Gaz. vol. 222; p. 15.

Hamilton, Ernest A., Philadelphia, Pa., assignor to Scott Paper Company. Dispensing-cabinet for paper towels, &c. No. 1,169,147; Jan. 25; Gaz. vol. 222; p. 1078.

Hammer, Ernest R., St. Louis, Mo. Toilet-seat paper and holder. No. 1,168,801; Jan. 18; Gaz. vol. 222; p. 923.

Hammerquist, Oscar W. (See Smith and Hammerquist.)

Hammond, Mary M., Kansas City, Mo. Tray. No. 1,169,638; Jan. 25; Gaz. vol. 222; p. 1251.

Hammond, Myron B., Bridgeport, Conn. Buckle. No. 1,167,751; Jan. 11; Gaz. vol. 222; p. 519.

Hammond, William P. (See Moses, Edmund Q., assignor.)

Hammond, William P., Passaic, N. J. Automobile. No. 1,167,166; Jan. 4; Gaz. vol. 222; p. 263.

Hampdens Limited. (See Browning, William E., assignor.)

Hancock, Winfield S., assignor of three-fifths to A. V. Mitchell, Washington, D. C. Wheel-hub. No. 1,169,398; Jan. 25; Gaz. vol. 222; p. 1163.

Handy, Arthur E., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Safety device for conveyers. No. 1,166,679; Jan. 4; Gaz. vol. 222; p. 96.

Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Pulley mechanism. No. 1,168,198; Jan. 11; Gaz. vol. 222; p. 674.

Hanson, Clyde R., assignor to Clyde Sealing Machine Company, Milwaukee, Wis. Moistener. No. 1,167,819; Jan. 11; Gaz. vol. 222; p. 542.

Hanson, Lewis P., London, Minn. Wheel-position indicator. No. 1,166,680; Jan. 4; Gaz. vol. 222; p. 97.

Hanson, Marvin G., *et al.* (See Mansfield, William M., assignor.)

Harbeck, Jervis R., Detroit, Mich. Explosive-engine. No. 1,166,902; Jan. 4; Gaz. vol. 222; p. 170.

Harcourt, Stillwell R., Chicago, Ill. Means for operating player-pianos. No. 1,167,752; Jan. 11; Gaz. vol. 222; p. 519.

Hardecker, Frank J., New York, N. Y. Highway-track. No. 1,167,494; Jan. 11; Gaz. vol. 222; p. 430.

Hardecker, Frank J., New York, N. Y. Highway-track. No. 1,167,495; Jan. 11; Gaz. vol. 222; p. 431.

Harders, Hartwig M. A., Milwaukee, Wis., assignor to The 20th Century Machinery Co., Chicago, Ill. Labeling-machine. No. 1,167,496; Jan. 11; Gaz. vol. 222; p. 431.

Harding, Philip O., Pittsburgh, Pa. Agglomerating ores. No. 1,166,903; Jan. 4; Gaz. vol. 222; p. 171.

Harding, Philip O., Pittsburgh, Pa. Machine for agglomerating ores. No. 1,166,904; Jan. 4; Gaz. vol. 222; p. 171.

Hardy, Jean A., Levallois-Perret, France. Two-stroke-cycle explosion-engine. No. 1,168,199; Jan. 11; Gaz. vol. 222; p. 674.

Hardy, Lyle V., Lowville, N. Y. Silencing-muffler. No. 1,169,030; Jan. 18; Gaz. vol. 222; p. 1000.
Harman, George H., Glen Ridge, N. J. Foot support and guide. No. 1,166,518; Jan. 4; Gaz. vol. 222; p. 38.
Harmon, Frank L., Beverly, Mass. Eyeleting-machine. No. 1,169,399; Jan. 25; Gaz. vol. 222; p. 1163.
Harrigan, Herman R., Wilmington, Del. Smoothing-press for paper-making machines. No. 1,168,629; Jan. 18; Gaz. vol. 222; p. 862.
Harrigan, John, New York, N. Y. Hfting device. No. 1,167,064; Jan. 4; Gaz. vol. 222; p. 226.
Harris Automatic Press Company, The. (See Harrold, Charles W., assignor.)
Harris, Elle B., Eustace, assignor of one-half to S. L. Reese, Corsicana, Tex. Road-grader. No. 1,168,723; Jan. 18; Gaz. vol. 222; p. 895.
Harris, George S., West Point, Ga., assignor to Draper Company, Hopedale, Mass. Builder-motion. No. 1,167,167; Jan. 4; Gaz. vol. 222; p. 263.
Harris, George S., West Point, Ga., assignor to Draper Company, Hopedale, Mass. Spinning-frame builder. No. 1,167,168; Jan. 4; Gaz. vol. 222; p. 264.
Harris, Manse M., assignor to Pioneer Mercantile Company, Bakersfield, Cal. Display-shelving. No. 1,169,720; Jan. 25; Gaz. vol. 222; p. 1277.
Harris, Mayme, Palisades, Colo. Oven-rack. No. 1,168,200; Jan. 11; Gaz. vol. 222; p. 675.
Harrison, Herbert C., Lockport, N. Y. Making automobile-radiator sections. No. 1,169,481; Jan. 25; Gaz. vol. 222; p. 1192.
Harrison, Morris, Brooklyn, N. Y. Spanner attachment for hose couplings and connections. No. 1,168,068; Jan. 11; Gaz. vol. 222; p. 632.
Harrison, Noble C., Trenton, N. J., assignor to John A. Roebling's Sons Company. Hoisting and similar sling. No. 1,168,802; Jan. 18; Gaz. vol. 222; p. 923.
Harrold, Charles W., Warren, assignor to The Harris Automatic Press Company, Niles, Ohio. Plate-holder for printing-presses. No. 1,168,498; Jan. 18; Gaz. vol. 222; p. 814.
Hart, Joseph J. (See Hyde and Hart.)
Hart, William H. (See Brinson, James H., assignor.)
Hart, William H., Jr., Philadelphia, Pa. Mailing-envelop. No. 1,166,805; Jan. 4; Gaz. vol. 222; p. 172.
Hartford, William P., and C. M. Rickoff, Chicago, Ill.; said Rickoff assignor to said Hartford. Electric lantern. No. 1,168,724; Jan. 18; Gaz. vol. 222; p. 895.
Hartman, Hans, New York, N. Y. Amusement device. No. 1,167,170; Jan. 4; Gaz. vol. 222; p. 264.
Hartman, James, Bern, Kans. Butt-board for grain-binders. No. 1,169,031; Jan. 18; Gaz. vol. 222; p. 1000.
Hartough, Edward W., St. Louis, Mo. Releasing device for car-couplings. No. 1,167,065; Jan. 4; Gaz. vol. 222; p. 227.
Hartough, Edward W., St. Louis, Mo. Releasing device for car-couplings. No. 1,167,066; Jan. 4; Gaz. vol. 222; p. 227.
Harvey, George L., Chicago, Ill. Draft-rigging. No. 1,166,906; Jan. 4; Gaz. vol. 222; p. 172.
Harvey, Joseph C., Chicago, Ill., assignor to J. T. Underwood, Brooklyn, N. Y. Type-writing machine. No. 1,169,400; Jan. 25; Gaz. vol. 222; p. 1164.
Hasburg, John W., Chicago, Ill. Decorating vitrified surfaces. No. 1,168,882; Jan. 18; Gaz. vol. 222; p. 949.
Haskett, Joseph D., and B. Sanders, Elizabeth City, N. C. Wheel-cultivator. No. 1,168,201; Jan. 11; Gaz. vol. 222; p. 675.
Haskett, Joseph D., and B. Sanders, Elizabeth City, N. C. Wheel-cultivator. No. 1,168,202; Jan. 11; Gaz. vol. 222; p. 675.
Hastings, Donald T., and A. J. Neerken, assignors to Hupp Motor Car Company, Detroit, Mich. Fastener for vehicle-tops. No. 1,168,394; Jan. 18; Gaz. vol. 222; p. 778.
Hatch, Benjamin B., Boston, Mass. Signal system. No. 1,168,630; Jan. 18; Gaz. vol. 222; p. 863.
Hathaway, Charles J., Walsall, assignor to F. P. and H. G. Ault, West Bromwich, England. Tobacco-pouch and purse. No. 1,169,639; Jan. 25; Gaz. vol. 222; p. 1251.
Hathaway, Edgar F., Dorchester, and C. Lea, assignors to American Warp Drawing Machine Company, Boston, Mass. Machine for separating and selecting warp-threads or the like. No. 1,169,087; Jan. 18; Gaz. vol. 222; p. 1020.
Hattersley, George A. (See Spivey and Hattersley.)
Haubold, Jr., G. m. b. H., C. H. (See Hirsch, Max J., assignor.)
Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Motor. No. 1,167,995; Jan. 11; Gaz. vol. 222; p. 606.
Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Rotary motor for driving tools. No. 1,167,996; Jan. 11; Gaz. vol. 222; p. 606.
Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Motor. No. 1,167,997; Jan. 11; Gaz. vol. 222; p. 606.
Haug, Andrew. (See Babson and Haug.)
Haupt, Harry G., and C. K. Claus, Missoula, Mont. Lubricator. No. 1,169,482; Jan. 25; Gaz. vol. 222; p. 1193.
Haupt, William V., assignor to Robert N. Bassett Company, Shelton, Conn. Buckle. No. 1,168,883; Jan. 18; Gaz. vol. 222; p. 950.
Hausner, Ben Zion, New York, N. Y. Snap-button. No. 1,167,753; Jan. 11; Gaz. vol. 222; p. 519.
Haverly, Charles R., Springfield, Mo. Stock and box car. No. 1,169,148; Jan. 25; Gaz. vol. 222; p. 1078.
Havranek, Joseph. (See Konsel, John, assignor.)
Havrilla, Geza J., Erie, Pa. Tailor's drafting-chart. No. 1,168,803; Jan. 18; Gaz. vol. 222; p. 923.
Hawes, Alexander G., Las Delicias, Cuba. Sugar-cane mill. No. 1,169,149; Jan. 25; Gaz. vol. 222; p. 1079.
Hawkinson, Amil. (See Hillstrom and Hawkinson.)
Hawks, Amos, *et al.* (See Halford, William O., assignor.)
Hawks, Moses L., New York, N. Y. Sharpening device. No. 1,168,302; Jan. 18; Gaz. vol. 222; p. 744.
Hay, Marley F., The Hague, Netherlands. Hull for submarines. No. 1,169,640; Jan. 25; Gaz. vol. 222; p. 1252.
Hayden, John S., Plantation, Cal. Operating mechanism for stump-pullers. No. 1,169,032; Jan. 18; Gaz. vol. 222; p. 1000.
Hayes, Charles N., Rochester, N. Y. Non-refillable bottle. No. 1,167,754; Jan. 11; Gaz. vol. 222; p. 519.
Hayes, Fay C., Altamont, N. Y. Collapsible bucket. No. 1,167,497; Jan. 11; Gaz. vol. 222; p. 431.
Hayes, George B. and W. A., Denver, Colo. Beet-harvesting machine. No. 1,168,804; Jan. 18; Gaz. vol. 222; p. 924.
Hayes Pump & Planter Company. (See Hayes, Ralph W. E., assignor.)
Hayes Pump & Planter Company. (See Hayes and Williams, assignors.)
Hayes, Ralph W. E., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill. Spray-rod. No. 1,167,297; Jan. 4; Gaz. vol. 222; p. 307.
Hayes, Ralph W. E., and P. P. Williams, assignors to Hayes Pump & Planter Company, Galva, Ill. Attachment for cross-reach trucks. No. 1,167,298; Jan. 4; Gaz. vol. 222; p. 307.
Hayes, Walter A. (See Hayes, George B. and W. A.)
Haynes, Charles B. (See Daniel, Dossey D., assignor.)
Hays, Lafayette A., Manchester, N. H. Clutch-releasing means for motor-cars. No. 1,167,171; Jan. 4; Gaz. vol. 222; p. 265.
Hayssen, Arthur H. (See Hayssen, Herman and A. H.)
Hayssen, Herman and A. H., Sheboygan, Wis. Dough-feeding machine. No. 1,166,519; Jan. 4; Gaz. vol. 222; p. 39.
Hayton, Roscoe L., Milton, Oreg. Hub. No. 1,166,985; Jan. 4; Gaz. vol. 222; p. 199.
Hazard, James S., Newport, R. I. Stand for crated bottles. No. 1,168,833; Jan. 4; Gaz. vol. 222; p. 148.
Hazel, Charles R., Charlerol, Pa. Casting and annealing table. No. 1,168,303; Jan. 18; Gaz. vol. 222; p. 744.
Healey & Company. (See Douglas, William H., assignor.)
Healy, William P. (See Mead, Howard G., assignor.)
Heath, Spencer, Washington, D. C. Propeller. No. 1,166,907; Jan. 4; Gaz. vol. 222; p. 172.
Heath, William R. (See Crumpton, William J., assignor.)
Heath, William R. (See Heuser, Frederick O., assignor.)
Heathcock, Maria F., Princeton, Ill. Cleaning device. No. 1,166,986; Jan. 4; Gaz. vol. 222; p. 199.
Heber, John, New Martinsville, W. Va. Door-check. No. 1,169,538; Jan. 25; Gaz. vol. 222; p. 1214.
Hechenbleikner, Ingenuin, Charlotte, N. C. Apparatus and process for oxidizing phosphorus. No. 1,167,755; Jan. 11; Gaz. vol. 222; p. 520.
Heck, Edward W., Toledo, Ohio. Meat-tenderer. No. 1,166,681; Jan. 4; Gaz. vol. 222; p. 97.
Hedblom, Lars O., New Brunswick, N. J. Hot-water heater and steam-generator. No. 1,168,631; Jan. 18; Gaz. vol. 222; p. 863.
Hedden, Elmendorf J., Bala, Pa. Retaining and reinforcing device for plaster-board and stucco construction. No. 1,169,641; Jan. 25; Gaz. vol. 222; p. 1252.
Hedrick, Clarence E., Newton, Kans. Silo. No. 1,166,987; Jan. 4; Gaz. vol. 222; p. 199.
Hee, Louis, South River, N. J. Padlock. No. 1,168,884; Jan. 18; Gaz. vol. 222; p. 950.
Heep, Louis B., Denver, Colo. Amusement game. No. 1,169,257; Jan. 25; Gaz. vol. 222; p. 1116.
Heeter, Charles M., C. C., and J. W., assignors to C. M. Heeter, Sons & Company, Inc., Butler, Pa. Making well-tools. No. 1,169,642; Jan. 25; Gaz. vol. 222; p. 1252.
Heeter, Colonel C. (See Heeter, Charles M., C. C., and J. W.)
Heeter, Joseph W. (See Heeter, Charles M., C. C., and J. W.)
Heftler, Victor R., Detroit, Mich., assignor to Societe du Carburateur Zenith, Lyon, France. Carbureter. (Reissue.) No. 14,045; Jan. 11; Gaz. vol. 222; p. 701.
Heilinger, Carl, and M. Lisatz, Los Angeles, Cal.; said Lisatz assignor to said Heilinger. Vegetable-cutting machine. No. 1,168,203; Jan. 11; Gaz. vol. 222; p. 676.
Heim, Lewis R., assignor to The Ball and Roller Bearing Company, Danbury, Conn. Roller-bearing. No. 1,169,150; Jan. 25; Gaz. vol. 222; p. 1079.
Heimsoth, Joseph W. (See Fornander, Alfred, assignor.)
Heinemann, August A. K., assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Machine-gun. No. 1,167,498; Jan. 11; Gaz. vol. 222; p. 432.
Heinig, William L., and M. A. Johnston, Denver, Colo. Vulcanizing-core. No. 1,167,172; Jan. 4; Gaz. vol. 222; p. 265.
Heinzer, Milton A., Absecon, N. J. Toy. No. 1,167,756; Jan. 11; Gaz. vol. 222; p. 520.

Heisler Locomotive Works. (See Fawcett, William M., assignor.)
Heizer, William A., Richmond, Va. Automobile-tire. No. 1,167,173; Jan. 4; Gaz. vol. 222; p. 265.
Helfenstein, Alois, Vienna, Austria-Hungary. Obtaining metals, such as lead or zinc, in an electric furnace. No. 1,167,998; Jan. 11; Gaz. vol. 222; p. 607.
Heller, Carl. (See Doujak, Maria, assignor.)
Hellstrom, Frank O., Bismarck, N. D. Heating system. No. 1,168,304; Jan. 18; Gaz. vol. 222; p. 745.
Helsel, Reuben H., assignor of one-half to J. Morgenthau, New York, N. Y. Horn. No. 1,166,760; Jan. 4; Gaz. vol. 222; p. 122.
Helstrom, John, Morristown, N. J. Wrench. No. 1,168,204; Jan. 11; Gaz. vol. 222; p. 676.
Hemleb, Martin, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Take-up mechanism for sewing-machines. No. 1,166,834; Jan. 4; Gaz. vol. 222; p. 149.
Hemme, William, Altoona, Kans. Water and gas separator. No. 1,167,691; Jan. 11; Gaz. vol. 222; p. 500.
Hemphill Manufacturing Co. (See Landry, Aldei, assignor.)
Hendee, Edward T., Chicago, Ill. Letter-opening machine. No. 1,167,999; Jan. 11; Gaz. vol. 222; p. 607.
Hendee Manufacturing Company. (See Gustafson, Carl J., assignor.)
Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electromagnetic separator. No. 1,166,682; Jan. 4; Gaz. vol. 222; p. 97.
Henderson, Robert P., New York, N. Y. Valve-lifter. No. 1,168,205; Jan. 11; Gaz. vol. 222; p. 676.
Henderson, Wilbert D., San Francisco, Cal. Partition-stud clamp. No. 1,167,899; Jan. 11; Gaz. vol. 222; p. 571.
Hendrickson, Fred K. (See Newton and Hendrickson.)
Hendrickson, Fred K., Worcester, Mass., assignor to Reed-Prentice Company. Profiling-machine. No. 1,169,151; Jan. 25; Gaz. vol. 222; p. 1079.
Henes, John E., assignor to Henes & Keller Company, Menominee, Mich. Bottle-filling machine. No. 1,166,520; Jan. 4; Gaz. vol. 222; p. 39.
Henes & Keller Company. (See Henes, John E., assignor.)
Henggi, Lewis O., Oakmont, Pa. Creep-check. No. 1,167,299; Jan. 4; Gaz. vol. 222; p. 307.
Henkel & Cie. (See Weber, Walter, assignor.)
Henley, Joseph V., St. Louis, Mo. Carbureter. No. 1,169,483; Jan. 25; Gaz. vol. 222; p. 1193.
Henry, Frederick E. (See Smith and Henry.)
Henry & Wright Manufacturing Company, The. (See Bayrer, William J., assignor.)
Henszey, Harold L., Haddonfield, N. J. Throttle-valve. No. 1,167,300; Jan. 4; Gaz. vol. 222; p. 308.
Hentschel, Oscar F., Michigan City, Ind. Grinding-machine. No. 1,168,206; Jan. 11; Gaz. vol. 222; p. 676.
Herman, Abraham M., *et al.* (See Reeter, George J., assignor.)
Herrmann, Paul E., New York, N. Y. Hair curler and waver. No. 1,168,000; Jan. 11; Gaz. vol. 222; p. 607.
Herz, Gustave L., Vienna, Austria-Hungary. Electric-cable terminal. No. 1,167,820; Jan. 11; Gaz. vol. 222; p. 543.
Herzik, Frank, *et. al.* (See Dolejska and Herzik, assignors.)
Herzik, Louis M. (See Dolejska and Herzik.)
Herzka, Emile, Arecibo, Porto Rico, assignor to A. I. Kaplan, New York, N. Y. Manufacturing fertilizer containing potassium, nitrogen, and phosphorous compounds from molasses refuse. No. 1,168,255; Jan. 11; Gaz. vol. 222; p. 695.
Hesa-Bright Manufacturing Company, The. (See Hess, Henry, assignor.)
Hess, Edward B., Brooklyn, assignor, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y. Paper-gage for type-writing machines. No. 1,168,207; Jan. 11; Gaz. vol. 222; p. 677.
Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Packing-box for type-writing and like machines. No. 1,168,632; Jan. 18; Gaz. vol. 222; p. 863.
Hess, Henry, Wawa, Pa. Vehicle-wheel. No. 1,167,757; Jan. 11; Gaz. vol. 222; p. 521.
Hess, Henry, assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa. Clamping device for anti-friction-bearings. No. 1,167,758; Jan. 11; Gaz. vol. 222; p. 521.
Hess, Henry, Philadelphia, Pa. Gage. No. 1,169,327; Jan. 25; Gaz. vol. 222; p. 1138.
Hess, Henry, assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa. Vehicle fifth-wheel. No. 1,169,152; Jan. 25; Gaz. vol. 222; p. 1080.
Hesser, Jacob R., Toledo, Ohio. Hog-trough. No. 1,167,557; Jan. 11; Gaz. vol. 222; p. 452.
Hester, Franklin C. (See Hester, Otho E., assignor.)
Hester, Otho E., Van Meter, assignor of one-half to F. C. Hester, Linden, Iowa. Rail-joint. No. 1,167,174; Jan. 4; Gaz. vol. 222; p. 266.
Hetherington, Carl F., Indianapolis, Ind. Concrete-mixer. No. 1,167,402; Jan. 11; Gaz. vol. 222; p. 399.
Heuser, Frederick O., Chicago, Ill., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Accounting system. No. 1,169,078; Jan. 18; Gaz. vol. 222; p. 1016.
Heuser, Friedrich W., Gross-Lichterfelde, near Berlin, Germany. Process and apparatus for making brazed joints. No. 1,169,484; Jan. 25; Gaz. vol. 222; p. 1194.
Heusner, Karl. (See Neelmeier, Jordan, and Heusner.)
Heylman, Edward M., assignor to Oliver Chilled Plow Works, South Bend, Ind. Wheeled plow. No. 1,168,208; Jan. 11; Gaz. vol. 222; p. 677.
Heyman, David A. (See Wiggins, Edward J., assignor.)
Heywood Brothers and Wakefield Company. (See Lang, Edward C., assignor.)
Heywood, Susan M., Arden, N. C. Cutting device. No. 1,168,633; Jan. 18; Gaz. vol. 222; p. 864.
Hibacsko, George, Schenectady, N. Y. Tractor. No. 1,169,153; Jan. 25; Gaz. vol. 222; p. 1080.
Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,168,805; Jan. 18; Gaz. vol. 222; p. 924.
Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,168,806; Jan. 18; Gaz. vol. 222; p. 924.
Hickenbotham, Walter S., Cheltenham, Victoria, Australia. Gate-controlling device. No. 1,169,643; Jan. 25; Gaz. vol. 222; p. 1253.
Hickey, William J., Reno, Nev. Automatic folding fender. No. 1,168,209; Jan. 11; Gaz. vol. 222; p. 678.
Hicks, Adrian A., Hillsboro, Ill. Window-sash lock. No. 1,167,175; Jan. 4; Gaz. vol. 222; p. 266.
Hicks, J. J. (See Treeland, Lewis, assignor.)
Hidy, Logan L. (See Hiner and Hidy.)
Higgins, Arthur C., assignor to H. K. Mulford Company, Philadelphia, Pa. Ampoule. No. 1,167,761; Jan. 4; Gaz. vol. 222; p. 122.
Higgins, Frank W., Spokane, Wash. Mail-bag-delivering apparatus. No. 1,166,587; Jan. 4; Gaz. vol. 222; p. 62.
Higgins, William H. C., Jr., assignor to M. Rumely Co., Laporte, Ind. Clutch. No. 1,166,457; Jan. 4; Gaz. vol. 222; p. 16.
Highfield, Frank W., Caversham, England. Smelting of ores and apparatus therefor. No. 1,167,176; Jan. 4; Gaz. vol. 222; p. 266.
Hill, Albert E., Atlanta, Ga. Variable friction-drive. No. 1,168,210; Jan. 11; Gaz. vol. 222; p. 678.
Hill, Charles A., New York, N. Y. Toy savings-bank. No. 1,169,033; Jan. 18; Gaz. vol. 222; p. 1001.
Hill, Chester L., Lancaster, assignor to United States Asbestos Company, Manheim, Pa. Packing and making the same. No. 1,168,807; Jan. 18; Gaz. vol. 222; p. 925.
Hill, Edward P., *et al.* (See Stineman, William H. H., assignor.)
Hill, Elwin K., assignor to The A. & W. Electric Sign Company, Cleveland, Ohio. Globe-holder. No. 1,166,908; Jan. 4; Gaz. vol. 222; p. 172.
Hill, Ernest R., East Orange, N. J., assignor, to The Westinghouse Air Brake Company, Pittsburgh, Pa. Automatic train-controlling system. No. 1,168,499; Jan. 18; Gaz. vol. 222; p. 814.
Hill, George D., Louisville, Ky. Shade, curtain, or awning roller. No. 1,166,683; Jan. 4; Gaz. vol. 222; p. 97.
Hill, Harry W., Southbridge, Mass. Lens-polishing machine. No. 1,166,639; Jan. 4; Gaz. vol. 222; p. 81.
Hill, Hugh S. (See Löwenstein, Harry F., assignor.)
Hill, John C., Erwin, Tenn. Grease-cup cap for locomotive-side-rod cups. No. 1,167,177; Jan. 4; Gaz. vol. 222; p. 267.
Hill, Ralph N., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Electromagnetic device. No. 1,167,067; Jan. 4; Gaz. vol. 222; p. 227.
Hill, Rollie C., Memphis, Tenn. Electrohydraulic gun. No. 1,167,178; Jan. 4; Gaz. vol. 222; p. 267.
Hill, William J. (See Ferrier, Albert C., assignor.)
Hillebrand, Hermann Werdohl, Germany. Annealing-furnace. No. 1,166,684; Jan. 4; Gaz. vol. 222; p. 98.
Hillis-Simler Brick Company. (See Hillis, William J., assignor.)
Hillis, William J., assignor to Hillis-Simler Brick Company, Johnstown, Pa. Furnace-brick. No. 1,168,211; Jan. 11; Gaz. vol. 222; p. 678.
Hillstrom, John, and A. Hawkinson, Chicago, Ill. Pneumatic action for piano-players. No. 1,168,001; Jan. 11; Gaz. vol. 222; p. 608.
Hiner, Gallord M., and L. L. Hidy, Jeffersonville, Ohio. Apparatus for swaging seamless crowns. No. 1,168,212; Jan. 11; Gaz. vol. 222; p. 678.
Hinkson, Daniel, Moody, N. Y. Combination trunk and dressing-table. No. 1,166,988; Jan. 4; Gaz. vol. 222; p. 199.
Hinton, George W., Hope, Ark. Bed-slat. No. 1,167,692; Jan. 11; Gaz. vol. 222; p. 500.
Hippman, Charley, Kuhns Crossing, Colo. Train-stopping apparatus. No. 1,169,034; Jan. 18; Gaz. vol. 222; p. 1001.
Hires, John E., Ardmore, Pa. Mechanical movement. No. 1,167,179; Jan. 4; Gaz. vol. 222; p. 267.
Hirsch, Max J., Schönau, near Chemnitz, assignor to C. G. Haubold, Jr., G. m. b. H., Chemnitz, Germany. Machine for pressing knitted garments. No. 1,168,069; Jan. 11; Gaz. vol. 222; p. 632.
Hirschfeld, Leo, assignor to Stern & Saalberg Co., New York, N. Y. Candy-package. No. 1,169,035; Jan. 18; Gaz. vol. 222; p. 1002.
Hirth, Albert, assignor to Norma Compagnie, Gesellschaft mit beschrankter Haftung, Cannstatt-Stuttgart, Germany. Packing for journals. No. 1,168,002; Jan. 11; Gaz. vol. 222; p. 608.

Hitchcock, George, assignor of one-third to R. S. Halligan, Flint, Mich. Check-valve. No. 1,167,180; Jan. 4; Gaz. vol. 222; p. 268.
Hitchcock, H. L., *et al.* (See Miller, John D., assignor.)
Hitter, Joseph E., New Iberia, La. Plow attachment. No. 1,169,036; Jan. 18; Gaz. vol. 222; p. 1002.
Hobart Manufacturing Company, The. (See Johnston, Herbert L., assignor.)
Hoberg, Frank H., Green Bay, Wis. Waxing paper. No. 1,167,403; Jan. 11; Gaz. vol. 222; p. 400.
Hoch, Otto, Neukölln, Germany. Making handles for knives, forks, and tools. No. 1,167,404; Jan. 11; Gaz. vol. 222; p. 400.
Hodges, Frederick W., assignor to Detroit Lubricator Company, Detroit, Mich. Valve. No. 1,169,485; Jan. 25; Gaz. vol. 222; p. 1194.
Hodgson, Harold C. (See Woodroffe and Hodgson.)
Hodgson, John L., London, England. Valve. No. 1,169,401; Jan. 25; Gaz. vol. 222; p. 1164.
Hodgson, Thomas. (See Kerr and Hodgson.)
Hoerr, Louis A., St. Louis, Mo. Brake mechanism. No. 1,167,068; Jan. 4. Gaz. vol. 222; p. 227.
Hoerr, Louis A., St. Louis, Mo. Releasing device for car-couplings. No. 1,167,069; Jan. 4; Gaz. vol. 222; p. 228.
Hoerr, Louis A., St. Louis, Mo. Hinge of flexible material. No. 1,167,070; Jan. 4; Gaz. vol. 222; p. 228.
Hoerr, Louis A., St. Louis, Mo. Angle-cock holder. No. 1,167,071; Jan. 4; Gaz. vol. 222; p. 228.
Hoffman, Addison F., New Cumberland, W. Va. Preserving fruit. No. 1,166,588; Jan. 4; Gaz. vol. 222; p. 62
Hoffman, Joseph L. (See Merritt, William E., assignor.)
Hoffman, Joseph L. (See Shelley, William A., assignor.)
Hoffman, Michael A., Roca, Nebr. Currycomb. No. 1,169,644; Jan. 25; Gaz. vol. 222; p. 1253.
Hoffman, Morris J., Chicago, Ill. Coupon-register. No. 1,168,634; Jan. 18; Gaz. vol. 222; 864.
Hoffmann, Wladimir, Chicago, Ill. Fender. No. 1,168,213; Jan. 11; Gaz. vol. 222; p. 679.
Hofheimer, Nathan. (See Liebmann, Alfred J., assignor.)
Hogan, Daniel, Hoboken, N. J., assignor to Meinecke & Company, New York, N. Y. Bed-pan. No. 1,169,101; Jan. 18; Gaz. vol. 222; p. 1026.
Hogan, George L., assignor to J. I. Leary, Chicago, Ill. Apparatus for moistening and printing gum tape. No. 1,167,301; Jan. 4; Gaz. vol. 222; p. 308.
Hogan, John D., San Francisco, Cal. Ironing-board. No. 1,168,500; Jan. 18; Gaz. vol. 222; p. 815.
Hogan, John J., West Haven, assignor to J. E. Hubinger, New Haven, Conn. Shaft-coupling. No. 1,166,835; Jan. 4; Gaz. vol. 222; p. 149.
Högberg, Robert, Brattbacken, Sweden. Potato-mill. No. 1,168,809; Jan. 18; Gaz. vol. 222; p. 925.
Högfeldt, Richard. (See Nylander and Högfeldt.)
Hoke, Harry A., Altoona, Pa. Brake-hanger. No. 1,166,521; Jan. 4; Gaz. vol. 222; p. 40.
Hoke, Harry E., *et al.* (See Clay, Samuel, assignor.)
Hoke, Ralph H., *et al.* (See Clay, Samuel, assignor.)
Holbrook, George M., assignor to Armour and Company, Chicago, Ill. Refining oil. No. 1,169,154; Jan. 25; Gaz. vol. 222; p. 1080.
Holbrook, George M., assignor to Armour and Company, Chicago, Ill. Refining oil. No. 1,169,155; Jan. 25; Gaz. vol. 222; p. 1081.
Holden, George, Flushing, N. Y., assignor to The Newark Spring Mattress Company. Making metallic tube-joints. No. 1,168,885; Jan. 18; Gaz. vol. 222; p. 950.
Holland, James W., Newark, N. J. Washboard. No. 1,169,037; Jan. 18; Gaz. vol. 222; p. 1002.
Holland, Newman H., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,167,500; Jan. 11; Gaz. vol. 222; p. 432.
Holland, Newman H., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Phonographic apparatus. No. 1,167,501; Jan. 11; Gaz. vol. 222; p. 433.
Holland, Walter E., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Primary battery. No. 1,167,499; Jan. 11; Gaz. vol. 222; p. 432.
Holland, William W., and G. H. Snyder, Baltimore, Md. Automobile-headlight. No. 1,166,685; Jan. 4; Gaz. vol. 222; p. 98.
Hollenberger, John A., Hagerstown, Md. Magazine-pencil. No. 1,167,181; Jan. 4; Gaz. vol. 222; p. 268.
Hollingsworth, Jeptha G., Kansas City, Mo. Dental-material-condensing apparatus. No. 1,168,635; Jan. 18; Gaz. vol. 222; p. 865.
Holmberg, Alfred E., Maple Lake, Minn. Jumping toy. No. 1,167,405; Jan. 11; Gaz. vol. 222; p. 400.
Holmes, Joseph P., Casper, Wyo. Wrench. No. 1,166,589; Jan. 4; Gaz. vol. 222; p. 63.
Holmes, Thomas J. (See Holmes, William H., assignor.)
Holmes, William H., Blue Island, assignor of one-half to T. J. Holmes, Chicago, Ill. Metallic packing. No. 1,166,686; Jan. 4; Gaz. vol. 222; p. 99.
Holmes, Willie R., Lansing, W. Va. Combination farm and garden tool handle. No. 1,169,486; Jan. 25; Gaz. vol. 222; p. 1194.
Holstein, Paul W., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Mine-cage. No. 1,168,501 Jan. 18; Gaz. vol. 222; p. 815.
Holt, Henry S. A., assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Manufacture of isoprene and homologues thereof. No. 1,168,070; Jan. 11; Gaz. vol. 222; p. 632.
Holt, William F., Redlands, Cal. Steering-bar lock. No. 1,169,402; Jan. 25; Gaz. vol. 222; p. 1164.
Holt, William F., Redlands, Cal. Vehicle-wheel. No. 1,169,403; Jan. 25; Gaz. vol. 222; p. 1165.
Holtgrewe, Henry M., St. Louis, Mo. Knockdown drawer. No. 1,169,328; Jan. 25; Gaz. vol. 222; p. 1139.
Holton, Birchard E., Los Angeles, Cal. Air-brush. No. 1,166,522; Jan. 4; Gaz. vol. 222; p. 40.
Holton, Henry T., and W. J. Jewell, Fitzgerald, Ga. Stalk-cutter. No. 1,169,156; Jan. 25; Gaz. vol. 222; p. 1081.
Holtz, August, Detroit, Mich. Signal for motor-cars. No. 1,167,821; Jan. 11; Gaz. vol. 222; p. 543.
Holub, Henry, assignor of one-third to I. H. Yyvial, Louise, Tex. Beet-harvesting machine. No. 1,166,762; Jan. 4; Gaz. vol. 222; p. 123.
Holwick, Bramwell C., Canton, Ohio. Adjustable steering-wheel for motor-vehicles. No. 1,166,458; Jan. 4; Gaz. vol. 222; p. 16.
Holzbaur, Walter S., White Horse, Hamilton township, Mercer county, assignor to J. E. Mathews, Trenton, N. J. Barber's chair. No. 1,168,071; Jan. 11; Gaz. vol. 222; p. 632.
Honig, Gustav, Alice, Tex. Post-card rack. No. 1,167,182; Jan. 4; Gaz. vol. 222; p. 268.
Hönigsberg, Robert, and G. Edelmann, Vienna, Austria-Hungary. Apparatus for impregnating laundried articles and like fabrics with fluid or pasty substances. No. 1,166,687; Jan. 4; Gaz. vol. 222; p. 99.
Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Coupling-fastener. No. 1,167,558; Jan. 11; Gaz. vol. 222; p. 453.
Honold, Gottlob F., Sheboygan, Wis. Casket-display rack. No. 1,169,157; Jan. 25; Gaz. vol. 222; p. 1081.
Honolulu Iron Works Company. (See Stade, George, assignor.)
Hood, Harry H., assignor to Sprague Canning Machinery Company, Chicago, Ill. Tamal-machine. No. 1,168,305; Jan. 18; Gaz. vol. 222; p. 745.
Hoopes, Delia E. (See Fritch and Hoopes.)
Hopkins, Arthur T., Cleveland, Ohio, assignor to The Mechanical Rubber Company. Making bulbs for tank-valves. No. 1,167,759; Jan. 11; Gaz. vol. 222; p. 521.
Hopple, William, Lawndale, Cal. Cell. No. 1,169,258; Jan. 25; Gaz. vol. 222; p. 1116.
Hormel, August. (See Wagner and Hormel.)
Horn, Morris M., Eau Claire, Wis. Garment. No. 1,168,395; Jan. 18; Gaz. vol. 222; p. 779.
Hornbeck, Henry S., assignor to Volotone Company, Elizabeth, N. J. Automatic piano-player. No. 1,168,396; Jan. 18; Gaz. vol. 222; p. 779.
Hornby, Frank, assignor to Meccano Limited, Liverpool, England. Toy or working model. No. 1,166,688; Jan. 4; Gaz. vol. 222; p. 99.
Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,168,003; Jan. 11; Gaz. vol. 222; p. 608.
Hotchkiss, Wallace J., Alpena, S. D. Gasolene-supply reservoir for motor-vehicles. No. 1,168,636; Jan. 18; Gaz. vol. 222; p. 865.
Houchin, Ernest A., New York, N. Y. Soap cutting and separating machine. No. 1,166,459; Jan. 4; Gaz. vol. 222; p. 16.
Houck, William A., Reading, Pa. Cop-mounting. No. 1,169,539; Jan. 25; Gaz. vol. 222; p. 1214.
Hough, George A., Oneida, N. Y. Garment. No. 1,166,689; Jan. 4; Gaz. vol. 222; p. 100.
Houghland, Frank H., Houston, Tex. Collapsible box. No. 1,168,072; Jan. 11; Gaz. vol. 222; p. 633.
Houghland, Frank H., Houston, Tex. Collapsible box. No. 1,168,073; Jan. 11; Gaz. vol. 222; p. 633.
Houghton, Holden R., Baltimore, Md. Match-box holder. No. 1,167,072; Jan. 4; Gaz. vol. 222; p. 228.
Houghton, Horatio G., Green Bay, Wis. Railway-tie. No. 1,169,158; Jan. 25; Gaz. vol. 222; p. 1082.
Houghton, Horatio G., Green Bay, Wis. Railway-tie. No. 1,169,159; Jan. 25; Gaz. vol. 222; p. 1082.
Houghton, John Q. A., Lowell, Vt. Ore-drying apparatus. No. 1,166,909; Jan. 4; Gaz. vol. 222; p. 173.
Houghton, Orley C., assignor to Bullock Tractor Company, Chicago, Ill. Traction-engine. No. 1,167,302; Jan. 4; Gaz. vol. 222; p. 308.
House, Frank. (See Keszthelyi and House.)
House, Henry A., Bridgeport, Conn. Mechanism for making sheet-metal links. No. 1,167,073; Jan. 4; Gaz. vol. 222; p. 229.
Houston, Dell, Boyce Station, Pa. Combined shade-roller and curtain-pole support. No. 1,169,259; Jan. 25; Gaz. vol. 222; p. 1116.
Hovland, Peter. (See Baker and Hovland.)
Howard, Guy C., Everett, Wash. Apparatus for treating paper-pulp. No. 1,168,502; Jan. 18; Gaz. vol. 222; p. 815.
Howard, Guy C., Everett, Wash., Paper-pulp shredder. No. 1,168,503; Jan. 18; Gaz. vol. 222; p. 816.
Howard, Joseph L. (See Stephenson and Howard.)
Howell, George W., Los Angeles, Cal. Muffler. No. 1,167,822; Jan. 11; Gaz. vol. 222; p. 543.

Hoyt, Albert M., Swampscott, and C. A. Matson, Lynn, Mass. Machine for feeding articles. No. 1,167,560; Jan. 11; Gaz. vol. 222; p. 454.
Hoyt, Francis R., assignor to Simms Magneto Company, East Orange, N. J. Self-restoring switch for ignition systems of internal-combustion engines. No. 1,168,637; Jan. 18; Gaz. vol. 222; p. 865.
Hoyt, Francis R., assignor to Simms Magneto Company, East Orange, N. J. Periodic interrupter for ignition systems of internal-combustion engines. No. 1,168,638; Jan. 18; Gaz. vol. 222; p. 866.
Hoyt, Francis R., assignor to Simms Magneto Company, East Orange, N. J. Battery-alternator for ignition systems of internal-combustion engines. No. 1,168,639; Jan. 18; Gaz. vol. 222; p. 866.
Hoyt, Ray S., Brooklyn, N. Y., asignor to American Telephone and Telegraph Company. Artificial line. No. 1,167,693; Jan. 11; Gaz. vol. 222; p. 500.
Hoyt, Ray S., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Artificial line. No. 1,167,694; Jan. 11; Gaz. vol. 222; p. 501.
Hubinger, Joseph E. (See Hogan, John J., assignor.)
Hudson, Edward F., Wilkes-Barre, Pa. Poultry-duster. No. 1,167,561; Jan. 11; Gaz. vol. 222; p. 454.
Hudson, James M., assignor to The Star Hame Manufacturing Company, Blanchester, Ohio. Adjustable hame-draft. No. 1,169,260; Jan. 25; Gaz. vol. 222; p. 1116.
Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Transmission-shaft for motor-vehicles. No. 1,167,695; Jan. 11; Gaz. vol. 222; p. 501.
Huff, William D., La Fayette, La. Electric heater. No. 1,169,262; Jan. 25; Gaz. vol. 222; p. 1117.
Huff, William D., La Fayette, assignor of three-fourths to L. G. Moss, New Iberia, La. Cleaning oil-wells. No. 1,169,261; Jan. 25; Gaz. vol. 222; p. 1117.
Huffman, Hugh, and E. J. Peck, Portland, Oreg. Scarecrow. No. 1,167,502; Jan. 11; Gaz. vol. 222; p. 433.
Huffman, John O., and E. J. Lauffer, assignors, by mesne assignments, to The White Sewing Machine Company, Cleveland, Ohio. Tension device for sewing-machines. No. 1,167,823; Jan. 11; Gaz. vol. 222; p. 544.
Huggins, Edward M. (See Mumford and Huggins.)
Hughes, Ben C. (See Todd, Samuel J., assignor.)
Hughes, Frederick J. (See Light, John S., assignor.)
Hughes, James W., Narberth, Pa. Making chain-links. No. 1,166,460; Jan. 4; Gaz. vol. 222; p. 17.
Hugro Manufacturing Company. (See Boyer, Charles A., assignor.)
Hulen, Harris, Kansas City, Mo., and C. F. Brown, South Ridge, Kans. Building structure or silo. No. 1,168,886; Jan. 18; Gaz. vol. 222; p. 951.
Hult, Carl A. and O. W., Stockholm, Sweden. Outboard-motor. No. 1,166,523; Jan. 4; Gaz. vol. 222; p. 40.
Hult, Oscar W. (See Hult, Carl A. and O. W.)
Humphrey Gas Pump Company. (See Humphrey, Herbert A., assignor.)
Humphrey, Herbert A., London, England, assignor to Humphrey Gas Pump Company. Raising or forcing liquid. No. 1,169,540; Jan. 25; Gaz. vol. 222; p. 1214.
Humphrey, Herbert S., Kalamazoo, Mich. Water-heater. No. 1,167,696; Jan. 11; Gaz. vol. 222; p. 501.
Humphrey, Herbert S., Kalamazoo, Mich. Water-heater. No. 1,168,504; Jan. 18; Gaz. vol. 222; p. 816.
Humphrey, Pius B. (See McKittrick and Humphrey.)
Hunt, John W., Washington, D. C. Dimmer for headlights. No. 1,167,824; Jan. 11; Gaz. vol. 222; p. 544.
Hunter, Everett L. (See Moore and Hunter.)
Hunter, Matthew A., Troy, N. Y. Electric-resistance material. No. 1,168,074; Jan. 11; Gaz. vol. 222; p. 634.
Huntley Manufacturing Company. (See Wolfe, Arthur P., assignor.)
Hupp Motor Car Company. (See Hastings and Neerken, assignors.)
Hupp Motor Car Company. (See Watts, Frank E., assignor.)
Hurd, Norman B., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,168,725; Jan. 18; Gaz. vol. 222; p. 896.
Hurd, Norman B., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,169,541; Jan. 25; Gaz. vol. 222; p. 1215.
Hurley, John P., Toledo, Ohio. Spring-seat. No. 1,167,074; Jan. 4; Gaz. vol. 222; p. 229.
Hurley, John W., *et al.* (See Wakeland, Edwin C., assignor.)
Huson, Winfield S., assignor to The Whitlock Printing Press Mfg. Co., Derby, Conn. Convertible flat-bed printing-press. No. 1,168,887; Jan. 18; Gaz. vol. 222; p. 951.
Hutchison, Charles J., Pittsburgh, Pa. Hydrocarbon-burner. No. 1,167,303; Jan. 4; Gaz. vol. 222; p. 309.
Hutchison, Miller R., Summit, N. J., assignor to Lovell-McConnell Manufacturing Company. Mechanically-actuated diaphragm-horn. No. 1,169,721; Jan. 25; Gaz. vol. 222; p. 1277.
Hutgen, John E., Pittsburgh, Pa. Roll-machine for reducing cereals to filamentous form. No. 1,168,075; Jan. 11; Gaz. vol. 222; p. 634.
Hutter, Josef, New York, N. Y. Starting-lever. No. 1,167,562; Jan. 11; Gaz. vol. 222; p. 455.
Huttig, Fred. (See Treiber, Theodore R., assignor.)
Hyams, David, New York, N. Y. Duplicating-machine. No. 1,168,640; Jan. 18; Gaz. vol. 222; p. 867.
Hyatt, Benjamin S., assignor of one-half to J. F. Watkins, Vinita, Okla. Lamp-burner. No. 1,166,590; Jan. 4; Gaz. vol. 222; p. 63.
Hyde, Charles A., Clear Spring, Md. Safety-bolt and safety-fastener therefor. No. 1,167,697; Jan. 11; Gaz. vol. 222; p. 502.
Hyde, Harry E., and J. J. Hart, Birmingham, England. Expansible band such as a bracelet. No. 1,169,645; Jan. 25; Gaz. vol. 222; p. 1253.
Hydraulic-Press Brick Company. (See Rouse, Thomas S., assignor.)
Hydraulic Press Manufacturing Company, The. (See Stevenson and Little, assignors.)
Hydroiose Process Corporation. (See Freeman, Walter K., assignor.)
Hymer, Julian B., Zarah, Kans. Vehicle-wheel. No. 1,168,076; Jan. 11; Gaz. vol. 222; p. 634.
I. T. S. Rubber Company, The. (See Tufford, John G., assignor.) (Reissue.)
Iceless Machine Company, The. (See Wolf and Southworth, assignors.)
Ide, Roy F., and R. M. West, Detroit, Mich. Guard for presses. No. 1,166,591; Jan. 4; Gaz. vol. 222; p. 63.
Ideal Clock Manufacturing Company, The. (See Petrillo, Joseph, assignor.)
Ilse, Frank H., Detroit, Mich. Fastener for vehicle-curtains. No. 1,169,542; Jan. 25; Gaz. vol. 222; p. 1215.
Ilse, Frank H., assignor to Jiffy Auto Curtain Company, Detroit, Mich. Curtain. No. 1,169,160; Jan. 25; Gaz. vol. 222; p. 1082.
Import Sales Company. (See Kahn, Walter, D., assignor.)
Improved Paper Machinery Company. (See Morey, Edwin, assignor.)
Improved Sanitary Fixture Company. (See Barker, George H., assignor.)
Improved Still Company. (See Turner, Cecil L., assignor. (Reissue.)
Independent Ice Company of Baltimore City. (See Kirkpatrick, Willis B., assignor.)
Ingersoll-Rand Company. (See Banner, Otto, assignor.)
Ingersoll-Rand Company. (See Lucker and Carpenter, assignors.)
Ingersoll-Rand Company. (See Treglown and Noble, assignors.)
Ingram, John B., Los Angeles, Cal. Fruit-snow. No. 1,167,563; Jan. 11; Gaz. vol. 222; p. 455.
Inman Manufacturing Company. (See Joslin, Frank M., assignor.)
Inman, William, Milwaukee, Wis., assignor to The Psarski Dyeing Machine Company, Cleveland, Ohio. Dyeing apparatus. No. 1,166,989; Jan. 4; Gaz. vol. 222; p. 200.
International Color & Chemical Company. (See Ramage, Alexander S., assignor.)
International Cork Company, The. (See Bogdánffy, Alexander, assignor.)
International Couplers Company. (See White, Walter C., assignor.)
International Harvester Corporation. (See Burger, Leopold F., assignor.)
International Harvester Company of New Jersey. (See Sharp, Charles S., assignor.)
International Molding Machine Company. (See Batten, Gideon C., assignor.)
International Precipitation Company. (See Schmidt, Walter A. assignor.)
International Typesetting Machine Company. (See Bertram, William E., assignor.)
Internationale Feuerlöscher Gesellschaft m. b. H. (See Jaretzki, Richard, assignor.)
Interwoven Mills. (See Haas, Joseph, assignor.)
Irrgang, William F., assignor to George P. Clark Company, Windsor Locks, Conn. Truck. No. 1,167,406; Jan. 11; Gaz. vol. 222; p. 400.
Irrgang, William F., assignor to George P. Clark Company, Windsor Locks, Conn. Lifting-truck. No. 1,167,564; Jan. 11; Gaz. vol. 222; p. 455.
Irvin, William C., and F. M. Doak, San Francisco, Cal. Metallic water-flume. No. 1,168,505; Jan. 18; Gaz. vol. 222; p. 816.
Irvine, William H. (See McManamin, Stephen B., assignor.)
Irving, Fred W. (See Schaefer, George A., assignor.)
Irwin, Thomas W., Pittsburgh, Pa. Skylight construction. No. 1,168,942; Jan. 18; Gaz. vol. 222; p. 971.
Ishikawa, Uichiro, Tokyo, Japan. Purifying electrolytic chlorin. No. 1,166,524; Jan. 4; Gaz. vol. 222; p. 41.
Isler, Max H., Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Blue-gray to green-gray vat dyes. No. 1,169,404; Jan. 25; Gaz. vol. 222; p. 1165.
Ives, Frederic E., Woodcliffe-on-Hudson, Bergen county, N. J. Motion-picture apparatus. No. 1,169,161; Jan. 25; Gaz. vol. 222; p. 1083.
Ivory, James W. (See Newlin, Freeman H., assignor.)
Ivory Safety Razor Company. (See Bunnell, Morton G., assignor.)
J. Samuel White & Company *et al.* (See Rosenthal and Carnt, assignors.)
J. Spaulding & Sons Co. (See English and Gibbs, assignors.)
J. G. Brill Co., The. (See Brooks, James A., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
Jackson, Charles J., Easton, Pa. Shaft-hanger. No. 1,169,487; Jan. 25; Gaz. vol. 222; p. 1195.

Jackson, Frank, Chicago, Ill. Skinning-tool. No. 1,168,726; Jan. 18; Gaz. vol. 222; p. 896.

Jackson, Jack, Broken Arrow, Okla. Pipe-laying machine. No. 1,167,565; Jan. 11; Gaz. vol. 222; p. 456.

Jacob Haish Company. (See Anderson, Martin E., assignor.)

Jacobs, Charles C., Amboy, assignor to F. C. Austin, Chicago, Ill. Track-shifting apparatus. No. 1,167,075; Jan. 4; Gaz. vol. 222; p. 229.

Jacobsen, Jorgen, Halma, Minn. Ballast-trimmer. No. 1,167,900; Jan. 11; Gaz. vol. 222; p. 571.

Jacoby, Philip I. (See Petterson, Clarence A., assignor.)

Jaeger, Adolph, Jackson, assignor of twenty-two and one-half one-hundredths to A. O. Knight and twenty-two and one-half one-hundredths to H. A. Knight, St. Louis, Mo. Treating grains. No. 1,166,592; Jan. 4; Gaz. vol. 222; p. 63.

Jaeger, Herman J., Weehawken, N. J. Incandescent lamp with concentrated metallic filament. No. 1,168,077; Jan. 11; Gaz. vol. 222; p. 634.

Jameson, Alexander, Indianapolis, Ind., assignor to Emerson Piano Company, Boston, Mass. Bellows-operating mechanism for player-pianos. No. 1,168,264; Jan. 11; Gaz. vol. 222; p. 698.

Jandorf, Louis C. (See Borman, Sydney, assignor.)

Janes, Ralph R., New York, N. Y., assignor to Standard Knitting Mills Company. Knitted garment. No. 1,168,641; Jan. 18; Gaz. vol. 222; p. 867.

Janney, Thomas A., Garfield, Utah. Ore-concentrating apparatus. No. 1,167,076; Jan. 4; Gaz. vol. 222; p. 230.

Jansen, Charles A. (See Pearl and Jansen.)

Jansson, Karl E. O., Flushing, N. Y., assignor, by mesne assignments, to Standard Plunger Elevator Company. Automatic stop for elevators. No. 1,169,722; Jan. 25; Gaz. vol. 222; p. 1278.

Jaques, Fernando O., Sr., Cranston, R. I. Amplifying measuring instrument. No. 1,167,644; Jan. 11; Gaz. vol. 222; p. 483.

Jarecki Manufacturing Company. (See Hamer, Howard J., assignor.)

Jaretzki, Richard, assignor to Internationale Feuerlöscher Gesellschaft m. b. H., Berlin, Germany. Dry fire-extinguisher. No. 1,169,646; Jan. 25; Gaz. vol. 222; p. 1254.

Jarina, Sandor, *et al.* (See Chupka, Miklos, assignor.)

Jasinski, Peter, Welland, Ontario, Canada. Safe. No. 1,168,642; Jan. 18; Gaz. vol. 222; p. 867.

Jefferson, Ernest W., Winnipeg, Manitoba, Canada. Terminal seal for batteries. No. 1,168,078; Jan. 11; Gaz. vol. 222; p. 635.

Jeffrey Manufacturing Company, The. (See Holstein, Paul W., assignor.)

Jeffrey Manufacturing Company, The. (See Liggett, William K., assignor.)

Jeffrey Manufacturing Company, The. (See Trotter, Walter F., assignor.)

Jeffrey Manufacturing Company, The. (See Waxbom, Carl J. E., assignor.)

Jelallian, Martin, Cranston, R. I. Fender for automobiles. No. 1,166,593; Jan. 4; Gaz. vol. 222; p. 64.

Jenigar, Stephen, Cambridge, Ohio. Ship's table. No. 1,168,727; Jan. 18; Gaz. vol. 222; p. 896.

Jenkins, Courtney M., Washington, D. C. Street-railway transfer-ticket. No. 1,167,566; Jan. 11; Gaz. vol. 222; p. 456.

Jenkins, George H., Oak Park, and S. Smith, Chicago, Ill. Compression device for post-binders. No. 1,169,405; Jan. 25; Gaz. vol. 222; p. 1165.

Jenne, Christian J., San Francisco, Cal. Pneumatic electric fire-alarm. No. 1,168,506; Jan. 18; Gaz. vol. 222; p. 817.

Jensen, Odin M., Norfolk Downs, Mass. Fire-escape. No. 1,167,825; Jan. 11; Gaz. vol. 222; p. 545.

Jerka, Frank, Chicago, Ill. Hay-spreader. No. 1,169,647; Jan. 25; Gaz. vol. 222; p. 1254.

Jerome, James A., Montpelier, Vt. Rolling-mill. No. 1,167,567; Jan. 11; Gaz. vol. 222; p. 456.

Jessen, Charles C., assignor to J. C. Rane, San Francisco, Cal. Amusement device. No. 1,167,077; Jan. 4; Gaz. vol. 222; p. 230.

Jewell, A. J. (See Osgood, Samuel W., assignor.)

Jewell, William J. (See Holton and Jewell.)

Jiffy Auto Curtain Company. (See Ilse, Frank H., assignor.)

John Church Company, The. (See Leisch, Joseph, assignor.)

John J. Bagley & Company. (See Schumacher, Edward B. T., assignor.)

John A. Roebling's Sons Company. (See Harrison, Noble C., assignor.)

Johnson, Alfred, Duluth, Minn. Rubber footwear. No. 1,168,306; Jan. 18; Gaz. vol. 222; p. 746.

Johnson, Amos E., Northumberland, Pa. Educational game device. No. 1,167,407; Jan. 11; Gaz. vol. 222; p. 401.

Johnson, Arvid V., Napoleon, N. D. Means of connection between a wind-wheel and dynamo for storing electricity. No. 1,169,648; Jan. 25; Gaz. vol. 222; p. 1254.

Johnson, August E., Elgin, Ill. Self-lubricating gear-wheel. No. 1,169,488; Jan. 25; Gaz. vol. 222; p. 1195.

Johnson, Charles E., New York, N. Y. Trowel. No. 1,168,643; Jan. 18; Gaz. vol. 222; p. 868.

Johnson, Charles K., Kossuth county, Iowa. Hay-unloader. No. 1,166,594; Jan. 4; Gaz. vol. 222; p. 64.

Johnson, Chester F., Detroit, Mich. Carbureter. No. 1,166,595; Jan. 4; Gaz. vol. 222; p. 64.

Johnson, Edward P., Chicago, Ill. Knife-sharpener. No. 1,168,507; Jan. 18; Gaz. vol. 222; p. 817.

Johnson, Frank, Detroit, Mich. Gear-shifting mechanism. (Reissue.) No. 14,052; Jan. 25; Gaz. vol. 222; p. 1289.

Johnson, Frank B., Detroit, Mich. Automatic lighting attachment for phonograph-cabinets. No. 1,167,304; Jan. 4; Gaz. vol. 222; p. 309.

Johnson, Frank P., Danville, Pa. Wheel-rim. No. 1,166,990; Jan. 4; Gaz. vol. 222; p. 200.

Johnson, Frederick G. L., Chelsea, London, England. Speed indicating and recording apparatus of the periodic-counter type. No. 1,166,596; Jan. 4; Gaz. vol. 222; p. 65.

Johnson, Gustaf A., Springfield, Mass. Fishing-reel. No. 1,168,307; Jan. 18; Gaz. vol. 222; p. 746.

Johnson, James G., Carthage, Ill. Concrete-mold for constructing burial-vaults and the like. No. 1,167,568; Jan. 11; Gaz. vol. 222; p. 457.

Johnson, John N., Albuquerque, N. Mex. Repeating camera. No. 1,166,763; Jan. 4; Gaz. vol. 222; p. 123.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,166,910; Jan. 4; Gaz. vol. 222; p. 173.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,169,543; Jan. 25; Gaz. vol. 222; p. 1216.

Johnson, Waldo P. (See Mudd and Johnson.)

Johnston, Emil E., Potlatch, Idaho. Automobile-fender. No. 1,167,698; Jan. 11; Gaz. vol. 222; p. 502.

Johnston, Frank B., Roselle Park, N. J., assignor to American Safety Device Company. Scaffolding device. No. 1,168,397; Jan. 18; Gaz. vol. 222; p. 779.

Johnston, Herbert L., assignor to The Hobart Manufacturing Company, Troy, Ohio. Grinding and refining mill. No. 1,166,597; Jan. 4; Gaz. vol. 222; p. 65.

Johnston, Marion A. (See Heinig and Johnston.)

Johnston, William, Washington, Pa. Fender. No. 1,167,408; Jan. 11; Gaz. vol. 222; p. 401.

Joleen, Nels, assignor to Associated Engineers Company, Chicago, Ill. Protective device for three-phase motors. No. 1,169,723; Jan. 25; Gaz. vol. 222; p. 1278.

Joncas, Philip, assignor to J. K. Lanning, Fall River, Mass. Shuttle-guard. No. 1,167,369; Jan. 4; Gaz. vol. 222; p. 335.

Jone, Hugo, Brooklyn, N. Y. Milk-testing tube. No. 1,168,644; Jan. 18; Gaz. vol. 222; p. 868.

Jones, Alva D., Philadelphia, Pa., assignor of one-fourth to E. S. Cochran, Washington, D. C., and one-fourth to E. H. Fairbanks, Merchantville, N. J. Telephone-receiver. No. 1,169,038; Jan. 18; Gaz. vol. 222; p. 1002.

Jones, David, Whareora, New Zealand. Boiler and other furnace. No. 1,166,911; Jan. 4; Gaz. vol. 222; p. 173.

Jones, Edward A. and J. E., Throop, assignors to Engineer's Specialty Manufacturing Company, Scranton, Pa. Lubricator. No. 1,168,508; Jan. 18; Gaz. vol. 222; p. 817.

Jones, Elmer M., assignor to Jones Signal System Company, Atlanta, Ga. Automatic air-controlling device for vehicle-brakes. No. 1,167,569; Jan. 11; Gaz. vol. 222; p. 457.

Jones, Frank T., assignor to The Jones Safety Train Control System Company, Baltimore, Md. Means for automatically controlling the speed of railway-vehicles. No. 1,168,256; Jan. 11; Gaz. vol. 222; p. 695.

Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Forming brake-shoes. No. 1,167,826; Jan. 11; Gaz. vol. 222; p. 545.

Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Forming brake-shoes. No. 1,168,509; Jan. 18; Gaz. vol. 222; p. 818.

Jones, Harry, assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Brake-shoe. No. 1,168,810; Jan. 18; Gaz. vol. 222; p. 926.

Jones, Isaac L., Bridgeport, Conn. Combined mask and light-concentrator for automobile-headlights. No. 1,167,078; Jan. 4; Gaz. vol. 222; p. 231.

Jones, John E. (See Jones, Edward A. and J. E.)

Jones, Mathew H., Cresco, Pa. Collapsible box. No. 1,167,570; Jan. 11; Gaz. vol. 222; p. 457.

Jones Safety Train Control System Company, The. (See Jones, Frank T., assignor.)

Jones, Sherman, Newark, N. J. Lineman's tool. No. 1,167,760; Jan. 11; Gaz. vol. 222; p. 522.

Jones Signal System Company. (See Jones, Elmer M., assignor.)

Jones, Thomas T., Liverpool, England. Ship's construction. No. 1,167,503; Jan. 11; Gaz. vol. 222; p. 433.

Jones, Vincent K., East Las Vegas, N. Mex. Water-controlling device. No. 1,166,991; Jan. 4; Gaz. vol. 222; p. 201.

Jordan, Heinrich. (See Neelmeier, Jordan, and Heusner.)

Jordon, Melvin N., and A. Goad, Stringtown, Okla. Tobacco-pipe. No. 1,169,489; Jan. 25; Gaz. vol. 222; p. 1195.

Joseph, Carl, Bayonne, N. J. Bolt-anchor blank. No. 1,166,525; Jan. 4; Gaz. vol. 222; p. 41.

Joseph, Ida M., assignor to S. H. Shoninger, Chicago, Ill. Sanitary pad or bandage. No. 1,169,490; Jan. 25; Gaz. vol. 222; p. 1196.

Joseph, John F., Akron, Ohio, assignor, by mesne assignments, to The B. F. Goodrich Company. Hose construction. (Reissue.) No. 14,046; Jan. 11; Gaz. vol. 222; p. 701.

Joslin, Frank M., assignor to Inman Manufacturing Company, Inc., Amsterdam, N. Y. Berry-basket. No. 1,167,409; Jan. 11; Gaz. vol. 222; p. 401.

Joslyn Manufacturing & Supply Company. (See Boozer, Ralph C., assignor.)

Journell, Elmer, Urbana, Ohio. Cycle-frame. No. 1,167,699; Jan. 11; Gaz. vol. 222; p. 502.

Jubilee Manufacturing Company. (See Gillet, Alexis F., assignor.)

Junghans, Erhard. (See Wingquist and Junghans.)

Junghans, Oskar, Schramberg, Germany, assignor to The American Radium Company. Indicator consisting of a stationary part and one or more movable parts. No. 1,166,461; Jan. 4; Gaz. vol. 222; p. 17.

Kafader, James O., and F. Kerr, Fort Bidwell, Cal. Lock and latch. No. 1,169,649; Jan. 25; Gaz. vol. 222; p. 1255.

Kahl, Roy S. (See Brown, William J., assignor.)

Kahn, Bertrand B., Cincinnati, assignor to The Estate Stove Company, Hamilton, Ohio. Cooking-stove. No. 1,168,510; Jan. 18; Gaz. vol. 222; p. 818.

Kahn, Walter D., New York, N. Y., assignor to Import Sales Company. Valve for fluid-containers. No. 1,166,690; Jan. 4; Gaz. vol. 222; p. 100.

Kaiser, Hans, assignor to Wolfram-Lampen Aktien Gesellschaft, Augsburg, Germany. Production of alloys of high melting-point having ductile properties. No. 1,167,827; Jan. 11; Gaz. vol. 222; p. 545.

Kaiser, Herman, East Oakland, Cal. Driving mechanism. No. 1,166,764; Jan. 4; Gaz. vol. 222; p. 124.

Kallom, Frank W., Malden, and P. S. Toennesen, Everett, Mass. Sand-box. No. 1,168,398; Jan. 18; Gaz. vol. 222; p. 779.

Kaminski, Paul, Spandau, assignor to Siemens & Halske A. G., Berlin, Germany. Apparatus for indicating at a distance the speeds of shafts or the like. No. 1,166,765; Jan. 4; Gaz. vol. 222; p. 124.

Kane, Peter W., San Pedro, Cal. Shock-absorber. No. 1,167,305; Jan. 4; Gaz. vol. 222; p. 309.

Kant, Herbert H. (See Grimm and Kant.)

Kantor, Joseph, assignor to Sanitary Sugar Dispenser Company, New York, N. Y. Dispensing device. No. 1,167,410; Jan. 11; Gaz. vol. 222; p. 402.

Kaplan, Abram I. (See Herzka, Emile, assignor.)

Kapp, Gisbert. (See Von Kramer and Kapp.)

Kapper, Hermann, Rathenow, Germany. Roller-bearing cage. No. 1,169,544; Jan. 25; Gaz. vol. 222; p. 1216.

Karger, Rose, Sealy, Tex. Button. No. 1,168,079; Jan. 11; Gaz. vol. 222; p. 635.

Karl, George E., assignor to The Dunham Company, Berea, Ohio. Land-pulverizer. No. 1,167,079; Jan. 4; Gaz. vol. 222; p. 231.

Karow, Willie C., Germantown township, Cottonwood county, Minn. Radiator-shield for automobiles. No. 1,167,571; Jan. 11; Gaz. vol. 222; p. 458.

Kast, Edward R., Pearl River, assignor to Kast Insetting & Gathering Machine Company, New York, N. Y. Automatic stop mechanism. No. 1,169,491; Jan. 25; Gaz. vol. 222; p. 1196.

Kast Insetting & Gathering Machine Company. (See Kast, Edward R., assignor.)

Kästner, Alfred, and F. Stock, assignors to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Ammunition-hoisting device. No. 1,166,836; Jan. 4; Gaz. vol. 222; p. 149.

Kaufmann, Ignacz, London, England. Apparatus for facilitating reading. No. 1,169,492; Jan. 25; Gaz. vol. 222; p. 1196.

Kaufmann, Jacob, assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa. Heddle-frame. No. 1,168,308; Jan. 18; Gaz. vol. 222; p. 746.

Kay, Roy L. (See Scheidt, Robert J., assignor.)

Kay, William W., St. Louis, Mo. Check-holder. No. 1,169,162; Jan. 25; Gaz. vol. 222; p. 1083.

Kazlow, Frank, Schenectady, N. Y. Electrically-operated saw. No. 1,166,526; Jan. 4; Gaz. vol. 222; p. 41.

Keating, Peter S., and W. A. Overley, Chicago, Ill. Stapling-tool. No. 1,167,080; Jan. 4; Gaz. vol. 222; p. 231.

Keefe, Joseph, assignor to The Zee Socket & Mfg. Company, Boston, Mass. Casing for electrical apparatus and removable locking and insulating means. No. 1,169,263; Jan. 25; Gaz. vol. 222; p. 1118.

Keefer, Samuel H., Plainfield, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Circuit-breaker. No. 1,167,411; Jan. 11; Gaz. vol. 222; p. 402.

Keeley, William J., New York, N. Y., assignor to Auto Pneumatic Action Company. Automatic grand piano. No. 1,168,645; Jan. 18; Gaz. vol. 222; p. 868.

Keelin, Frank, Oxley, W. Va. Dirigible lamp. No. 1,167,761; Jan. 11; Gaz. vol. 222; p. 522.

Keene, Archibald T., Chicago, Ill., assignor to Keene Hydraulic Transmission Company. Rotary motor. No. 1,166,598; Jan. 4; Gaz. vol. 222; p. 66.

Keene Hydraulic Transmission Company. (See Keene, Archibald T., assignor.)

Keeran, Charles R., Bloomington, Ill. Receptacle-closure. No. 1,167,306; Jan. 4; Gaz. vol. 222; p. 310.

Kefauver, Della M., Columbus, Ohio. Pastry-baking pan. No. 1,168,511; Jan. 18; Gaz. vol. 222; p. 819.

Keiffer, Harry F., Perrysburg, Ohio. Auxiliary valve for internal-combustion engines. No. 1,168,309; Jan. 18; Gaz. vol. 222; p. 747.

Keister, James, Steubenville, Ohio. Internal-combustion engine. No. 1,167,955; Jan. 11; Gaz. vol. 222; p. 592.

Keith, George E. (See Davis, Oscar C., assignor.)

Keith, Walter A., Los Angeles, Cal. Flexible stay-bolt. No. 1,168,728; Jan. 18; Gaz. vol. 222; p. 897.

Kelleher, Patrick, and C. Schaffer, Wilmington, Del. Automobile-wheel. No. 1,169,651; Jan. 25; Gaz. vol. 222; p. 1255.

Keller, Andreas R., Chicago, Ill. Mash and strainer tank machine. No. 1,166,599; Jan. 4; Gaz. vol. 222; p. 66.

Keller, Bert E., Toledo, and J. W. Flatt, West Toledo, Ohio. Floor-jack. No. 1,166,691; Jan. 4; Gaz. vol. 222; p. 100.

Keller, Joseph B., Scottdale, Pa. Aerator for coke-ovens. No. 1,167,901; Jan. 11; Gaz. vol. 222; p. 572.

Keller, Richard A., Chicago, Ill. Combined receipt and envelop. No. 1,168,004; Jan. 11; Gaz. vol. 222; p. 608.

Kelley, Alexander, assignor to Climax Machine Company, Wilmington, Del. Match-making machinery. No. 1,168,310; Jan. 18; Gaz. vol. 222; p. 747.

Kelley, Alexander, assignor to Climax Machine Company, Wilmington, Del. Match-machine. No. 1,168,311; Jan. 18; Gaz. vol. 222; p. 748.

Kelley, James H. (See Shrum and Kelley.)

Kellgreu, Gustaf, Boston, Mass. Load-handling apparatus. No. 1,168,811; Jan. 18; Gaz. vol. 222; p. 926.

Kellner, Gustav A. H., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Stereoscopic appliance. No. 1,169,163; Jan. 25; Gaz. vol. 222; p. 1084.

Kellogg, Daniel P., and H. W. Watkins, Los Angeles, Cal. Anti-friction coupling-carrier. No. 1,166,600; Jan. 4; Gaz. vol. 222; p. 67.

Kellogg, John L., Battle Creek, Mich. Open-shred cereal biscuit. No. 1,168,888; Jan. 18; Gaz. vol. 222; p. 951.

Kellogg Switchboard & Supply Co. (See Schoenwolf, Fred, assignor.)

Kellogg, Waldo S., New York, N. Y. Screening for balanced windows. No. 1,168,214; Jan. 11; Gaz. vol. 222; p. 679.

Kelly, Edward C., Jr., assignor to Kelly Separator Company, Boston, Mass. Strainer. No. 1,168,399; Jan. 18; Gaz. vol. 222; p. 780.

Kelly, James E. (See Greiner, Albert C., assignor.)

Kelly, Patrick J., Elizabeth, N. J. Gun. No. 1,166,837; Jan. 4; Gaz. vol. 222; p. 149.

Kelly Separator Company. (See Kelly, Edward C., Jr., assignor.)

Kelly, William J., Clinton, Iowa. Gearing system. No. 1,168,080; Jan. 11; Gaz. vol. 222; p. 635.

Kelsey, Harry E., Baltimore, Md. Orthodontic appliance. No. 1,166,766; Jan. 4; Gaz. vol. 222; p. 124.

Kempton, Willard H., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-wire apparatus. No. 1,166,912; Jan. 4; Gaz. vol. 222; p. 174.

Kendall, William G., Newark, assignor of one-half to K. A. Shepard, East Orange, N. J. Curtain-hook. No. 1,169,650; Jan. 25; Gaz. vol. 222; p. 1255.

Kendle, Hermann, Eatonville, Wash. Self filling and cleaning scraper or excavation-bucket; No. 1,166,601; Jan. 4; Gaz. vol. 222; p. 67.

Kenna, Michael P., Dubuque, Iowa. Mailing device. No. 1,166,767; Jan. 4; Gaz. vol. 222; p. 125.

Kennedy, Bernard J. (See Lovelady and Kennedy.)

Kennedy, Frank B., New Haven, Conn., assignor to The Recording and Computing Machines Company, Dayton, Ohio. Coin and ticket separating machine. No. 1,169,493; Jan. 25; Gaz. vol. 222; p. 1197.

Kennedy, George R., assignor of one-half to G. McCargo, Pittsburgh, Pa. Lubricator. No. 1,168,646; Jan. 18; Gaz. vol. 222; p. 869.

Kennedy, Joseph, New York, assignor to J. E. Ogden, Mountainville, town of Cornwall, N. Y. Toggle-bolt. No. 1,168,257; Jan. 11; Gaz. vol. 222; p. 695.

Kennedy, Julian, Pittsburgh, Pa. Flue structure for hot-blast stoves. No. 1,167,081; Jan. 4; Gaz. vol. 222; p. 232.

Kennedy, William D., assignor of one-third to J. W. Simons and one-third to W. E. Simons, Oakland, Cal. Door-securer. No. 1,166,692; Jan. 4; Gaz. vol. 222; p. 101.

Kennicott, Cass L., assignor to The Kennicott Company, Chicago Heights, Ill. Recording clock mechanism. No. 1,167,902; Jan. 11; Gaz. vol. 222; p. 572.

Kennicott, Cass L., assignor to The Kennicott Company, Chicago Heights, Ill. Calculating-machine. No. 1,169,724; Jan. 25; Gaz. vol. 222; p. 1279.

Kennicott Company, The. (See Kennicott, Cass L., assignor.)

Kent, Stanley B., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Loading-coil and case therefor. No. 1,168,312; Jan. 18; Gaz. vol. 222; p. 748.

Kenway, Percy N., Newton, Mass. Conduit. No. 1,168,400; Jan. 18; Gaz. vol. 222; p. 780.

Kenworthy, Charles F., Waterbury, Conn. Furnace. No. 1,168,313; Jan. 18; Gaz. vol. 222; p. 748.

Kenworthy, Charles F., Waterbury, Conn. Annealing-furnace. No. 1,169,494; Jan. 25; Gaz. vol. 222; p. 1197.

Kenworthy, William B., *et al.* (See Welliver, Jacob D., assignor.)

Kerr, Frank. (See Kafader and Kerr.)

Kerr, William J., and T. Hodgson, Buffalo, N. Y. Pipe-union. No. 1,167,572; Jan. 11; Gaz. vol. 222; p. 458.

Kershner, Benjamin V., assignor to Union Special Machine Company, Chicago, Ill. Stay-cutting attachment for sewing-machines. No. 1,169,088; Jan. 18; Gaz. vol. 222; p. 1020.

Kerwin, George F., *et al.* (See Crecelius, Louis J., assignor.)

Kessler, Ernst, Stuttgart, Germany. Machine for marking webs of fabric, paper, and the like. No. 1,169,495; Jan. 25; Gaz. vol. 222; p. 1198.

Kestel, Henry C., Toledo, Ohio. Closure device. No. 1,168,264; Jan. 25; Gaz. vol. 222; p. 1118.

Keszthelyi, Alexander S., and F. House, Los Angeles, Cal., assignors, by mesne assignments, to said Keszthelyi. Sound-box. No. 1,166,602; Jan. 4; Gaz. vol. 222; p. 68.

Kettering, Charles F., assignor to The National Cash Register Company, Dayton, Ohio. Registering mechanism. No. 1,166,527; Jan. 4; Gaz. vol. 222; p. 41.

Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,167,762; Jan. 11; Gaz. vol. 222; p. 522.

Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,168,314; Jan. 18; Gaz. vol. 222; p. 749.

Keuffel & Esser Company. (See Kollmorgen, Frederick L. G., assignor.)

Kidman, William, Jr., Mendon, Utah. Weed-cutter and pulverizing-machine. No. 1,167,645; Jan. 11; Gaz. vol. 222; p. 484.

Kiefer, Floyd W., Sellersville, Pa. Correspondence and article carrier. No. 1,169,039; Jan. 18; Gaz. vol. 222; p. 1003.

Kieffer, Allen J., Nevada, Ohio. Cultivator. No. 1,168,943; Jan. 18; Gaz. vol. 222; p. 971.

Kieffer, John E., Ewing, Ind. Machine for making corrugated paper. No. 1,166,992; Jan. 4; Gaz. vol. 222; p. 201.

Kiesel, William F., Jr., Altoona, Pa. Car-truck. No. 1,166,693; Jan. 4; Gaz. vol. 222; p. 101.

Kiesel, William F., Jr., Altoona, Pa. Car-brake. No. 1,166,694; Jan. 4; Gaz. vol. 222; p. 101.

Kiesel, William F., Jr., Altoona, Pa. Locomotive. No. 1,166,695; Jan. 4; Gaz. vol. 222; p. 102.

Kiesel, William F., Jr., Altoona, Pa. Locomotive. No. 1,166,696; Jan. 4; Gaz. vol. 222; p. 102.

Kilbourn Manufacturing Corporation. (See Mettler and Smith, assignors.)

Kilbourn Manufacturing Corporation. (See Smith, William E., assignor.)

Kilburn, John E., assignor to Hale & Kilburn Company, Philadelphia, Pa. Car-seat construction. No. 1,167,831; Jan. 11; Gaz. vol. 222; p. 546.

Kilby, Herbert N., Cleveland, Ohio. Filter-cleaning device. No. 1,169,725; Jan. 25; Gaz. vol. 222; p. 1279.

Kimball, William A. (See Brusseau, Adolphus J., assignor.)

Kimberley, Nathan G., Tottenham, England. Roller-bearing. No. 1,169,652; Jan. 25; Gaz. vol. 222; p. 1255.

Kinder, Garrett A., Worcester, Mass., assignor to Royal Worcester Corset Co. Corset-boning machine. No. 1,167,903; Jan. 11; Gaz. vol. 222; p. 573.

King, Frank A., Youngstown, Ohio. Multiple-pouring attachment for ladles and the like. No. 1,169,653; Jan. 25; Gaz. vol. 222; p. 1255.

King, George W., Rio Grande, Tex. Locking device for differential gears. No. 1,168,812; Jan. 18; Gaz. vol. 222; p. 926.

King & Hamilton Company. (See Gilman, John H., assignor.)

King, Joseph H., San Diego, Cal. Ankle-support. No. 1,167,183; Jan. 4; Gaz. vol. 222; p. 269.

King Motor Car Company. (See Ward and Chase, assignors.)

King, Thomas J., Richmond, Va. Breath-deflector. No. 1,166,462; Jan. 4; Gaz. vol. 222; p. 17.

King, Thomas J., Richmond, Va. Truck for cotton-pickers. No. 1,166,463; Jan. 4; Gaz. vol. 222; p. 18.

King, William J., Bulger, Pa. Gate-operating mechanism. No. 1,166,768; Jan. 4; Gaz. vol. 222; p. 125.

Kingsbury, Harry T., Keene, N. H. Lock for toy safes. No. 1,168,512; Jan. 18; Gaz. vol. 222; p. 819.

Kingston, George, Kokomo, Ind. Carbureter. No. 1,168,513; Jan. 18; Gaz. vol. 222; p. 819.

Kinnard, George W., Cleveland, Ohio. Bow holder or clamp for vehicle-tops. No. 1,167,082; Jan. 4; Gaz. vol. 222; p. 232.

Kinsman, Thomas H., St. Louis, Mo. Corner-bead. No. 1,166,603; Jan. 4; Gaz. vol. 222; p. 68.

Kintner, Samuel M., *et al.*, receivers. (See Fessenden, Reginald A., assignor.)

Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,166,993; Jan. 4; Gaz. vol. 222; p. 201.

Kippe, Otto, Osnabrück, Germany, assignor to General Briquetting Company, New York, N. Y. Making briquets from zinc ores and material containing zinc. No. 1,168,401; Jan. 18; Gaz. vol. 222; p. 780.

Kirby, Maurice J., assignor of one-half to A. M. Sauer, Cincinnati, Ohio. Shock-absorber for vehicles. No. 1,166,604; Jan. 4; Gaz. vol. 222; p. 68.

Kirk, Frank, and L. E. Francisco, assignors of one-fourth to T. Sullivan and one-fourth to J. Cox, Canon City, Colo. Ellipsograph. No. 1,168,081; Jan. 11; Gaz. vol. 222; p. 636.

Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Harp. No. 1,167,504; Jan. 11; Gaz. vol. 222; p. 434.

Kirkpatrick, Willis B., assignor to Independent Ice Company of Baltimore City, Baltimore, Md. Apparatus for manufacturing ice. No. 1,169,164; Jan. 25; Gaz. vol. 222; p. 1084.

Kirner, Josef, Stuttgart, assignor to Norma Compagnie Gesellschaft mit beschrankter Haftung, Cannstatt-Stuttgart, Germany. Apparatus for grinding the surface of rollers. No. 1,168,006; Jan. 11; Gaz. vol. 222; p. 609.

Kirstin, Alfred J., Escanaba, Mich. Stump-puller. No. 1,168,007; Jan. 11; Gaz. vol. 222; p. 610.

Kitts, Willard A., Sr., Oswego, N. Y. Steam-trap. No. 1,168,215; Jan. 11; Gaz. vol. 222; p. 680.

Klay, Andrew, Bluffton, Ohio. Variable-speed power-transmitting means. No. 1,166,838; Jan. 4; Gaz. vol. 222; p. 150.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,168,005; Jan. 11; Gaz. vol. 222; p. 609.

Klein, Rudolf. (See Simons and Klein.)

Kleine, William E., Highwood, N. J. Can-truck. No. 1,168,008; Jan. 11; Gaz. vol. 222; p. 610.

Kling, Adolph G., assignor to Erlez Stove & Manufacturing Company, Erie, Pa. Sheet-metal-edge-rolling machine. No. 1,166,994; Jan. 4; Gaz. vol. 222; p. 201.

Klopfenstein, Joel, Preble, Adams county, Ind. Machine for working dirt. No. 1,168,813; Jan. 18; Gaz. vol. 222; p. 927.

Knabe, Ernest J., Jr., Cincinnati, Ohio. Coupler for musical instruments. No. 1,169,654; Jan. 25; Gaz. vol. 222; p. 1256.

Knapp, Walter C., Rochester, N. Y., assignor, by mesne assignments, to J. W. Gray, Minneapolis, Minn. Tractor. No. 1,169,165; Jan. 25; Gaz. vol. 222; p. 1084.

Knauber, Alexander M., assignor to M. Knauber, Oak Park, Ill. Construction-cleat. No. 1,168,889; Jan. 18; Gaz. vol. 222; p. 951.

Knauber, Margaret. (See Knauber, Alexander M., assignor.)

Knauff, Harry A., Pittsburgh, Pa. Folding street-wrench. No. 1,169,496; Jan. 25; Gaz. vol. 222; p. 1198.

Knight, Arthur O., *et al.* (See Jaeger, Adolph, assignor.)

Knight, Harry A., *et al.* (See Jaeger, Adolph, assignor.)

Knipe, William A., and T. McKinney, Ward Hill, Mass.; said McKinney assignor to said Knipe. Apparatus for treating box-toe pieces. No. 1,167,904; Jan. 11; Gaz. vol. 222; p. 573.

Knoll and Company. (See Tambach, Rudolf, assignor.)

Knott, Frank W. (See Baker and Knott.)

Knowles, Joseph S., Atlanta, Ill. Ordnance. No. 1,169,166; Jan. 25; Gaz. vol. 222; p. 1085.

Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Hollow sheet-metal structure. No. 1,168,647; Jan. 18; Gaz. vol. 222; p. 869.

Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Hollow sheet-metal structure. No. 1,168,648; Jan. 18; Gaz. vol. 222; p. 869.

Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Furnace-door frame. No. 1,168,649; Jan. 18; Gaz. vol. 222; p. 870.

Knox Pressed & Welded Steel Company. (See Knox, Luther L., assignor.)

Knuntila, Charles A., Detroit, Mich. Safety cigar-holder. No. 1,167,184; Jan. 4; Gaz. vol. 222; p. 269.

Kobert, Frank P., Millidale, Conn. Insulator-bracket. No. 1,169,545; Jan. 25; Gaz. vol. 222; p. 1216.

Koch, Gotthardt, Chicago, Ill. Heating device for automobiles and the like. No. 1,168,315; Jan. 18; Gaz. vol. 222; p. 749.

Koch, Norbert, Essen-Rellinghausen, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Wheeled gun-carriage. No. 1,166,839; Jan. 4; Gaz. vol. 222; p. 150.

Koehler, William H., Jackson, Mo. Shingling-hatchet. No. 1,168,890; Jan. 18; Gaz. vol. 222; p. 951.

Koenig, William J., New York, N. Y. Boring-machine. No. 1,166,769; Jan. 4; Gaz. vol. 222; p. 125.

Koger, John J., Morristown, Tenn. Convertible cow-pea and small-grain thresher. No. 1,169,040; Jan. 18; Gaz. vol. 222; p. 1003.

Kohlhepp, John W., Chicago, Ill., assignor to The Albright-Nell Company. Carcass scraping and polishing mechanism. No. 1,167,573; Jan. 11; Gaz. vol. 222; p. 458.

Kohlmann, Clarence E., Fresno, Cal. Device for fastening electric-light bulbs to a socket. No. 1,169,497; Jan. 25; Gaz. vol. 222; p. 1198.

Kollberg, Frederic B., Bisbee, Ariz. Riffle-table for concentrating apparatus and constructing the same. No. 1,168,009; Jan. 11; Gaz. vol. 222; p. 610.

Kollmorgen, Frederick L. G., Boonton, assignor to Keuffel & Esser Company, Hoboken, N. J. Binocular telescope. No. 1,168,650; Jan. 18; Gaz. vol. 222; p. 870.

Konerman, Harry, Newport, Ky., assignor, by mesne assignments, to The Globe Autographic Register Company, Cincinnati, Ohio. Autographic register. No. 1,166,995; Jan. 4; Gaz. vol. 222; p. 202.

Konerman, Harry, Newport, Ky., assignor, by mesne assignments, to The Globe Autographic Register Company, Cincinnati, Ohio. Measured-delivery autographic register. No. 1,166,996; Jan. 4; Gaz. vol. 222; p. 202.

Konieczka, Frank, Chicago, Ill. Boring-bit. No. 1,169,406; Jan. 25; Gaz. vol. 222; p. 1165.

Konsel, John, assignor of one-fourth to J. Havranek, New York, N. Y. Automatic train control. No. 1,168,010; Jan. 11; Gaz. vol. 222; p. 611.

Korcok, Andy, Akron, Ohio. Animal-trap. No. 1,168,316; Jan. 18; Gaz. vol. 222; p. 750.

Kozell, Alexander S., Lorain, Ohio. Non-refillable bottle. No. 1,167,412; Jan. 11; Gaz. vol. 222; p. 403.

Krakau, Harry T., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,169,265; Jan. 25; Gaz. vol. 222; p. 1118.

Krakauer, Phillip, New York, N. Y. Caster-slide. No. 1,169,041; Jan. 18; Gaz. vol. 222; p. 1003.

Kranebiel, John V., Williamsville, N. Y. Elevator-gate. No. 1,168,891; Jan. 18; Gaz. vol. 222; p. 952.

Kraner, Louis M., Cloverdale, Oreg. Game apparatus. No. 1,168,082; Jan. 11; Gaz. vol. 222; p. 637.

Kratz, Carl O., Attleboro, Mass. Glass-holder. No. 1,168,265; Jan. 11; Gaz. vol. 222; p. 699.

Kraus, Rudolf, New York, N. Y. Printing-press attachment. No. 1,168,651; Jan. 18; Gaz. vol. 222; p. 870.

Krema, John F., Chicago, Ill. Vending-machine. No. 1,168,652; Jan. 18; Gaz. vol. 222; p. 871.

Krebs, Frederick J., Philadelphia, Pa. Base-ball-game apparatus. No. 1,168,729; Jan. 18; Gaz. vol. 222; p. 897.

Kreczkowski, Michael, New York, N. Y. Extension-table. No. 1,167,905; Jan. 11; Gaz. vol. 222; p. 573.

Kreider, Ucal S., Arcanum, Ohio. Automatic electric-winding clock. No. 1,166,605; Jan. 4; Gaz. vol. 222; p. 68.

Kribs, Nicholas, Dundee, Ill. Battery-lamp. No. 1,168,892; Jan. 18; Gaz. vol. 222; p. 952.

Krickbaum, William M., Cleveland Heights, assignor to The Grasselli Chemical Company, Cleveland, Ohio. Furnace for making hydrochloric acid and the like. No. 1,167,763; Jan. 11; Gaz. vol. 222; p. 523.

Krippendorf Kalculator Company. (See Krippendorf, Paul F. W. C., assignor.)

Krippendorf, Paul F. W. C., Lynn, Mass., assignor to Krippendorf Kalculator Company, Portland, Me. Calculator. No. 1,166,528; Jan. 4; Gaz. vol. 222; p. 42.

Kristensen, Sigvald A. C., Copenhagen, Denmark. Production of printing-blocks of slight weight. No. 1,166,840; Jan. 4; Gaz. vol. 222; p. 150.

Krnka, Karl, Hirtenberg, Austria-Hungary. Automatic firearm. No. 1,166,913; Jan. 4; Gaz. vol. 222; p. 174.

Krogh, Ferdinand W., San Francisco, Cal. Deep-well pump. No. 1,169,266; Jan. 25; Gaz. vol. 222; p. 1119.

Kromer, Emanuel, Spokane, Wash. Fly-killer. No. 1,166,606; Jan. 4; Gaz. vol. 222; p. 69.

Krost, John F., Mankato, Minn. Camera. No. 1,166,914; Jan. 4; Gaz. vol. 222; p. 174.

Kruse, Julius H., Chicago, Ill. Fish-hook guard. No. 1,166,529; Jan. 4; Gaz. vol. 222; p. 42.

Kubal, Julius A., Brooklyn, N. Y. Dress-form. No. 1,168,653; Jan. 18; Gaz. vol. 222; p. 871.

Kubicek, Edgar J., Chicago, Ill. Holder for neckwear. No. 1,167,083; Jan. 4; Gaz. vol. 222; p. 232.

Kundtz, Theodor. (See Cogger, William B., assignor.)

Kunert, Felix, Offenbach-on-the-Main, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Dyeing artificial silk. No. 1,169,267; Jan. 25; Gaz. vol. 222; p. 1119.

Kurth, Oscar W., Berlin, N. D. Telephone-protector. No. 1,167,185; Jan. 4; Gaz. vol. 222; p. 269.

Kurz Electrical Company. (See Finizio, Thomas D., assignor.)

Kwaysser, Emil. (See Scharf and Kwaysser.)

Kyte, Cora E., Montrose, Kans. Washstand. No. 1,169,268; Jan. 25; Gaz. vol. 222; p. 1119.

L. S. Starrett Company. (See Starrett and Adell, assignors.)

La Chapelle, Euclid I., Beverly, Mass. Machine for working an upper on a last. No. 1,168,011; Jan. 11; Gaz. vol. 222; p. 611.

La Chapelle, Euclid I., Beverly, Mass. Machine for working an upper on a last. No. 1,168,012; Jan. 11; Gaz. vol. 222; p. 612.

La Porte, Norbert M., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md. Bottle-filling mechanism. No. 1,166,607; Jan. 4; Gaz. vol. 222; p. 69.

La Porte, Norbert M., assignor to The Crown Cork and Seal Company of Baltimore City, Baltimore, Md. Packaging-machine. No. 1,169,499; Jan. 25; Gaz. vol. 222; p. 1200.

Lacroix, Joseph D., Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company, Limited, London, England. Non-refillable bottle. No. 1,167,413; Jan. 11; Gaz. vol. 222; p. 403.

Lacroix, Joseph D., Baltimore, Md., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company, Limited, London, England. Non-refillable bottle. No. 1,169,498; Jan. 25; Gaz. vol. 222; p. 1199.

Lagonda Manufacturing Company, The. (See Hauer, Elmer E., assignor.)

Laist, Frederick, and F. F. Frick, Anaconda, Mont. Extracting zinc from its ores. No. 1,167,700; Jan. 11; Gaz. vol. 222; p. 503.

Laist, Frederick, and F. F. Frick, Anaconda, Mont. Recovering zinc from its ores. No. 1,167,701; Jan. 11; Gaz. vol. 222; p. 503.

Lallement, Frank J., assignor of one-half to W. S. Pangborn, Los Angeles, Cal. Regulator. No. 1,168,013; Jan. 11; Gaz. vol. 222; p. 612.

Lamb, Richard, New York, N. Y. Impregnating wood. No. 1,168,944; Jan. 18; Gaz. vol. 222; p. 972.

Lambert, Albert L., and A. B. Bell, assignors to Hale and Kilburn Company, Philadelphia, Pa. Sheet-metal-door construction. No. 1,167,414; Jan. 11; Gaz. vol. 222; p. 403.

Lamberton, Andrew, Coatbridge, Scotland. Two-high reversing rolling-mill and like machine. (Reissue.) No. 14,053; Jan. 25; Gaz. vol. 222; p. 1292.

Lamoreaux, William F., Isabella, Tenn. Recovering elemental sulfur from sulfur gases. No. 1,169,726; Jan. 25; Gaz. vol. 222; p. 1279.

Lampert, Carl, Frankfort-on-the-Main, Germany. Portable boiling, roasting, and baking apparatus. No. 1,169,167; Jan. 25; Gaz. vol. 222; p. 1085.

Land, Henry S., county of Essex, England. Apparatus for turning, shaping, and screw-cutting. No. 1,167,186; Jan. 4; Gaz. vol. 222; p. 269.

Land, Joseph B., New Point, Ind. Tire-tightener. No. 1,167,358; Jan. 4; Gaz. vol. 222; p. 331.

Landgrebe, Karl L., Ensley, Ala. Hot-blast stove. No. 1,168,014; Jan. 11; Gaz. vol. 222; p. 613.

Landis, Israel L., Chicago, Ill. Locking-clamp for gates and the like. No. 1,167,828; Jan. 11; Gaz. vol. 222; p. 545.

Landò, Silvio B., and L. Monteverde, Genoa, Italy. Motor for rotary machines. No. 1,169,269; Jan. 25; Gaz. vol. 222; p. 1119.

Landreth, Fred, Arcola, Ill. Railway-tie. No. 1,166,997; Jan. 4; Gaz. vol. 222; p. 203.

Landry, Aldei, Central Falls, assignor to Hemphill Manufacturing Co., Pawtucket, R. I. Pattern mechanism for knitting-machines. No. 1,169,655; Jan. 25; Gaz. vol 222; p. 1256.

Landsiedel, Harry, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio. Adding and recording machine. No. 1,167,415; Jan. 11; Gaz. vol. 222; p. 404.

Landsiedel, Harry, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio. Recording-machine. No. 1,167,416; Jan. 11; Gaz. vol. 222; p. 404.

Lane, Elmer E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,168,514; Jan. 18; Gaz. vol. 222; p. 820.

Lane, John H., and J. C. Schenk, assignors to Peninsular Stove Company, Detroit, Mich. Drip-pan. No. 1,169,168; Jan. 25; Gaz. vol. 222; p. 1085.

Lang, Archibald M., Liverpool, England. Sugar-cane and like mill returner-bar. No. 1,169,656; Jan. 25; Gaz. vol. 222; p. 1257.

Lang, Edward C., Melrose, assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass. Wall end for car-seats. No. 1,169,727; Jan. 25; Gaz. vol. 222; p. 1280.

Lang, Edward C., Melrose, assignor to Heywood Brothers and Wakefield Company, Wakefield, Mass. Aisle end for car-seats. No. 1,169,728; Jan. 25; Gaz. vol. 222; p. 1280.

Lang, James K. (See Lippincott, Willis, assignor.)

Langguth, Erich, Neerpelt, Belgium. Apparatus for the treatment of ores. No. 1,169,270; Jan. 25; Gaz. vol. 222; p. 1120.

Lanning, James K. (See Joncas, Philip, assignor.)

Lanouette, William J., Roxbury, Vt. Self-registering calipers. No. 1,168,515; Jan. 18; Gaz. vol. 222; p. 820.

Lape, Willard E., assignor of one-half to W. J. Lewis, Syracuse, N. Y. Hydraulic power transmission. No. 1,168,216; Jan. 11; Gaz. vol. 222; p. 680.

Lapp, David H., Aberdeen, S. D. Spring-wheel. No. 1,169,042; Jan. 18; Gaz. vol. 222; p. 1004.

Lappen, James E., assignor to Union Fibre Company, Winona, Minn. Insulating-board and producing the same. No. 1,169,079; Jan. 18; Gaz. vol. 222; p. 1017.

Larkin Co. (See Morey and Craine, assignors.)

Larned, Carter & Company. (See Gerard, Edgar R., assignor.)

Larsen, Charles F., Portland, Oreg. Gas-lighter. No. 1,169,407; Jan. 25; Gaz. vol. 222; p. 1165.

Larsen, Werner R. B., Copenhagen, Denmark. Producing half-tone negatives. No. 1,167,505; Jan. 11; Gaz. vol. 222; p. 434.

Larsen, Werner R. B., Copenhagen, Denmark. Producing dot-screens for photographic work. No. 1,167,506; Jan. 11; Gaz. vol. 222; p. 434.

Larson, Edward A., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Securing device for pinions. No. 1,169,408; Jan. 25; Gaz. vol. 222; p. 1166.

Larson, Lars A., Elgin, Ill. Number and lamp box. No. 1,166,608; Jan. 4; Gaz. vol. 222; p. 70.

Larson, Louis T., Stanton, Iowa. Bird-house. No. 1,169,409; Jan. 25; Gaz. vol. 222; p. 1166.

Larson, Louis T., Stanton, Iowa. Bird's-nest holder. No. 1,169,751; Jan. 25; Gaz. vol. 222; p. 1288.

Latham Automatic Registering Company. (See Leethem, Frank C., assignor.)

Latham, Warren, Spokane, Wash. Apparatus for molding ice cakes. No. 1,166,770; Jan. 4; Gaz. vol. 222; p. 126.

Latta, Emmit G., Syracuse, N. Y. Ribbon mechanism. No. 1,168,654; Jan. 18; Gaz. vol. 222; p. 871.

Latten, Matthias, Leverkusen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Blue-violet azo dye. No. 1,169,329; Jan. 25; Gaz. vol. 222; p. 1139.

Lauffer, Emil J. (See Huffman and Lauffer.)

Laughlin, George F., assignor of one-half to G. B. Robbins, Chicago, Ill. Adjustable exhaust or respirator for cars. No. 1,169,170; Jan. 25; Gaz. vol. 222; p. 1086.

Lauter Company. (See Lynde, Frank G., assignor.)

Lauterbur, Frank X., Sidney, Ohio. Dough-molding machine. No. 1,167,187; Jan. 4; Gaz. vol. 222; p. 270.

Lawrence, Edward E., Cambridge, Mass., assignor to Loose Wiles Biscuit Company, Kansas City, Mo. Mechanism for forming filled wafers. No. 1,169,546; Jan. 25; Gaz. vol. 222; p. 1216.

Lawrence, John H., Sterling, Ill. Latch. No. 1,166,998; Jan. 4; Gaz. vol. 222; p. 203.

Lawrence, William G., Martinton, assignor to F. C. Austin, Chicago, Ill. Excavator. No. 1,169,729; Jan. 25; Gaz. vol. 222; p. 1280.

Lawrence, Willis, Yonkers, N. Y. Fire-extinguisher. No. 1,168,015; Jan. 11; Gaz. vol. 222; p. 613.

Lawton, Burton L., and B. A. Spitzer, assignors to The Connecticut Telephone & Electric Company, Meriden, Conn. Electric switch. No. 1,169,089; Jan. 18; Gaz. vol. 222; p. 1021.

Lay, Charles H., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,166,915; Jan. 4; Gaz. vol. 222; p. 175.

Laycock, Arthur M., Kingston, Pa. Bearing-clamp. No. 1,169,271; Jan. 25; Gaz. vol. 222; p. 1120.

Le Compte, William G., assignor of one-half to J. O. Fowler, New York, N. Y. Hinge. No. 1,167,906; Jan. 11; Gaz. vol. 222; p. 574.

Le Roy, Frank, assignor to Michigan Lubricator Company, Detroit, Mich. Lubricator. No. 1,167,829; Jan. 11; Gaz. vol. 222; p. 546.

Lea, Charles. (See Hathaway and Lea.)

Leal, Antone, Selma, Cal. Safety device for elevators. No. 1,167,702; Jan. 11; Gaz. vol. 222; p. 503.

Leary, James I. (See Hogan, George L., assignor.)

Leatherbee, Clifton F., Newton, Mass., assignor to Painting Machine Company, Kittery, Me. Wood-treating machine. No. 1,167,417; Jan. 11; Gaz. vol. 222; p. 405.

Leavitt, Nathan C., Newark, N. J., and I. Mink, Brooklyn, N. Y.; said Mink assignor to said Leavitt. Child's garment. No. 1,169,500; Jan. 25; Gaz. vol. 222; p. 1200.

Lechner, Charle, assignor of one-half to F. Schoenstein, Franklin, La. Nail and spike extractor. No. 1,167,574; Jan. 11; Gaz. vol. 222; p. 459.

Lee, Ulysses G., Chattanooga, Tenn., assignor to Montague Mailing Machinery Company. Office addressing-machine. No. 1,169,080; Jan. 18; Gaz. vol. 222; p. 1017.

Leech, Charles A., Kewanee, Ill. Paper receptacle. No. 1,166,841; Jan. 4; Gaz. vol. 222; p. 151.

Leeper, Isaac W., Monmouth, Ill. Hog-oiling device. No. 1,167,188; Jan. 4; Gaz. vol. 222; p. 270.

Lees-Bradner Co., The. (See Lees, Ernest J., assignor.)

Lees, Ernest J., Cleveland, Ohio. Gear-teeth-finishing tool. No. 1,168,402; Jan. 18; Gaz. vol. 222; p. 780.

Lees, Ernest J., assignor to The Lees-Bradner Co., Cleveland, Ohio. Positively-opening chuck. No. 1,169,547; Jan. 25; Gaz. vol. 222; p. 1217.

Leethem, Frank C., Middletown, N. Y., assignor to Latham Automatic Registering Company. Chase. No. 1,167,084; Jan. 4; Gaz. vol. 222; p. 233.

Lehman, John L. G., Kansas City, Mo. Foldable cuff. No. 1,168,945; Jan. 18; Gaz. vol. 222; p. 972.

Lehmann, Hermann, Magdeburg, assignor to Fried. Krupp, Aktiengesellschaft, Grusonwerk, Magdeburg-Buckau, Germany. Molding apparatus. No. 1,166,842; Jan. 4; Gaz. vol. 222; p. 151.

Lehmkuhl, Hellmuth, St. Paul, Minn. Stenciling apparatus. No. 1,168,655; Jan. 18; Gaz. vol. 222; p. 872.

Leibbrandt, Bertha, Santa Cruz, Cal. Manufacturing bread from whole grain. No. 1,167,703; Jan. 11; Gaz. vol. 222; p. 504.

Lein, Bernard, Powers Lake, N. D. Potato-planting attachment. No. 1,167,907; Jan. 11; Gaz. vol. 222; p. 574.

Leisch, Joseph, Tryon, N. C., assignor to The John Church Company, Cincinnati, Ohio. Player-piano. No. 1,166,609; Jan. 4; Gaz. vol. 222; p. 70.

Lemon, James F., and S. A. MacDonald, Syracuse, N. Y. Milking-machine. No. 1,168,016; Jan. 11; Gaz. vol. 222; p. 614.

Lemp, Hermann, Erie, Pa., assignor to General Electric Company. Variable-output two-cycle engine. No. 1,166,916; Jan. 4; Gaz. vol. 222; p. 175.

Lenders, Adolph W. H., Cedar Rapids, Iowa. Producing starch of angular configuration. No. 1,168,516; Jan. 18; Gaz. vol. 222; p. 821.

Leng, Christian F., New York, N. Y. Bottle-valve. No. 1,167,189; Jan. 4; Gaz. vol. 222; p. 270.

Lennon, William, Manitou, Colo. Clamping device. No. 1,167,418; Jan. 11; Gaz. vol. 222; p. 405.

Leo, Albert S., Atchison, Kans. Barrel-rack. No. 1,168,946; Jan. 18; Gaz. vol. 222; p. 972.

Leopold, George O., assignor to North Bro's. M'f'g. Co., Philadelphia, Pa. Drill. No. 1,169,657; Jan. 25; Gaz. vol. 222; p. 1257.

Lepel, Egbert von, Berlin-Wilmersdorf, Germany. Producing electrical oscillations. No. 1,168,837; Jan. 18; Gaz. vol. 222; p. 934.

Lepper, John G., Waterbury, Conn., and A. Mattis, Royersford, Pa., assignors to Booth, Schellinger and Williams Company. Bottle-making machine. No. 1,168,517; Jan. 18; Gaz. vol. 222; p. 821.

Lerch, William G., Easton, Pa. Cover-mold. No. 1,169,410; Jan. 25; Gaz. vol. 222; p. 1166.

Lesser Gebruder. (See Lippitz, Wilhelm A., assignor.)

Levalley, Christopher W., Milwaukee, Wis. Self-dumping elevator. No. 1,168,947; Jan. 18; Gaz. vol. 222; p. 973.

Levedahl, Axel, assignor to Aurora Automatic Machinery Company, Aurora, Ill. Motor-cycle support. No. 1,169,171; Jan. 25; Gaz. vol. 222; p. 1086.

Levey, Emile B., Flushing, N. Y. Ticket-holder. No. 1,167,908; Jan. 11; Gaz. vol. 222; p. 575.

Lewis, Dean C., assignor to Lewis Manufacturing Company, Philadelphia, Pa. Mechanically-operated gear-changing mechanism for automobiles. No. 1,169,081; Jan. 18; Gaz. vol. 222; p. 1017.

Lewis, Henry L., Stratford, Conn. Apparatus for dumping and throwing oyster-dredges. No. 1,169,548; Jan. 25; Gaz. vol. 222; p. 1217.

Lewis, James A., Minneapolis, Minn. Water-gage and thermostat. No. 1,168,518; Jan. 18; Gaz. vol. 222; p. 821.

Lewis, Llewelyn, and T. E. Taggart, assignors to The American Water Motor Company, Columbus, Ohio. Hydraulic motor. No. 1,168,317; Jan. 18; Gaz. vol. 222; p. 750.

Lewis, Lloyd V., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Controlling apparatus for railway cars or trains. No. 1,167,334; Jan. 4; Gaz. vol. 222; p. 321.

Lewis, Lloyd V., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-traffic-controlling apparatus. No. 1,167,335; Jan. 4; Gaz. vol. 222; p. 321.

Lewis Manufacturing Company. (See Lewis, Dean C., assignor.)

Lewis, William, East Chicago, Ind. Rail-shoe. No. 1,168,083; Jan. 11; Gaz. vol. 222; p. 637.

Lewis, William J. (See Lape, Willard E., assignor.)

Lidberg, Tiodolf, assignor to Chicago Surgical & Electrical Co., Chicago, Ill. Electrothermostat. No. 1,169,549; Jan. 25; Gaz. vol. 222; p. 1218.

Lieben, Robert von, E. Reisz, and S. Strauss, assignors to Relais-Gesellschaft m. b. H., Vienna, Austria-Hungary. Discharge-tube. No. 1,169,082; Jan. 18; Gaz. vol. 222; p. 1018.

Liebig, William G., Detroit, Mich. Wire-tensioning device. No. 1,167,764; Jan. 11; Gaz. vol. 222; p. 523.

Liebler, Henry B. (See Mehl, Liebler, Nall, and Nobbe.)

Liebmann, Alfred J., assignor to N. Hofheimer, New York, N. Y. Maintaining the efficiency of metallic-filament lamps. No. 1,166,464; Jan. 4; Gaz. vol. 222; p. 18.

Liggett, William K., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Pulverizing apparatus. No. 1,169,501; Jan. 25; Gaz. vol. 222; p. 1200.

Light, John S., assignor of one-half to F. J. Hughes, Electric Mills, Miss. Wrench. No. 1,169,043; Jan. 18; Gaz. vol. 222; p. 1004.

Lighthouse, Charles F., New York, N. Y., assignor to Lighthouse Tire Company, Guttenberg, N. J. Sectional tire. No. 1,169,746; Jan. 25; Gaz. vol. 222; p. 1286.

Lighthouse Tire Company. (Lighthouse, Charles F., assignor.)

Likely, Charles H., Woody, Cal. Spring-wheel. No. 1,166,697; Jan. 4; Gaz. vol. 222; p. 102.

Liljeblad, Karl R., assignor to Aktiebolaget Elevator, Järfva, near Stockholm, Sweden. Electromagnetic frequency-meter and the like. No. 1,168,519; Jan. 18; Gaz. vol. 222; p. 822.

Linaker, Frederick W., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa. Soot-cleaner for boilers. No. 1,167,765; Jan. 11; Gaz. vol. 222; p. 524.

Linaker, Frederick W., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa. Soot-cleaner for boilers. No. 1,167,766; Jan. 11; Gaz. vol. 222; p. 524.

Linberg, Adolph B. L., J. E. Andrew, and H. C. Wright, assignors to The Wallace Barnes Co., Bristol, Conn. Automatic spring-making machine. No. 1,166,917; Jan. 4; Gaz. vol. 222; p. 176.

Lincoln, Charles S., Wauwatosa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Rotary impact-pulverizer. No. 1,166,698; Jan. 4; Gaz. vol. 222; p. 103.

Lindburg, Joseph, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,169,330; Jan. 25; Gaz. vol. 222; p. 1139.

Lindeburg, Charles F., Newark, N. J. Beveling-machine. No. 1,166,918; Jan. 4; Gaz. vol. 222; p. 176.

Linderson, Charles J. (See Ware, Gastonguay, Linderson, Farrell, and Woodbury.)

Lindig, Charles E., New York, N. Y. Automatic door-releasing device. No. 1,167,085; Jan. 4; Gaz. vol. 222; p. 233.

Lindley, Benjamin F., Danville, Ill. Rail-joint. No. 1,168,520; Jan. 18; Gaz. vol. 222; p. 822.

Lindley, James, assignor of one-half to J. H. Lindley, Providence, R. I. Rail-bond. No. 1,167,370; Jan. 4; Gaz. vol. 222; p. 335.

Lindley, James H. (See Lindley, James, assignor.)

Lindsay Auto Parts Company. (See Lindsay, Thomas J., assignor.)

Lindsay, Thomas J., Indianapolis, Ind. Wheel and axle. No. 1,168,017; Jan. 11; Gaz. vol. 222; p. 614.

Lindsay, Thomas J., Indianapolis, Ind., assignor to Lindsay Auto Parts Company. Wheel. No. 1,168,018; Jan. 11; Gaz. vol. 222; p. 614.

Lindsey, George F., and G. A. Williams, assignors to H. G. Marsh, Birmingham, Ala. Canopy-frame. No. 1,167,767; Jan. 11; Gaz. vol. 222; p. 525.

Lindström, Charles A., Allegheny, Pa., assignor to Ratchet Brake Company, New York, N. Y. Brake-actuating mechanism. No. 1,166,771; Jan. 4; Gaz. vol. 222; p. 126.

Lippe, Samuel, New York, N. Y. Garment-simulator. No. 1,168,403; Jan. 18; Gaz. vol. 222; p. 781.

Lippert & Rhenstrom. (See Rhenstrom and Hager, assignors.)

Lippincott, Willis, assignor of one-half to J. K. Lang, Kalispell, Mont. Bath apparatus. No. 1,167,190; Jan. 4; Gaz. vol. 222; p. 271.

Lippitz, Wilhelm A., assignor to Gebruder Lesser, Posen, Germany. Potato-digger. No. 1,169,172; Jan. 25; Gaz. vol. 222; p. 1087.

Lippold, Charles J., Washington, D. C. Package-tie. No. 1,169,044; Jan. 18; Gaz. vol. 222; p. 1004.

Lisatz, Mathias. (See Heilinger and Lisatz.)

Litchfield, Isaac W., Boston, Mass., assignor of one-half to H. H. De Loss, Bridgeport, Conn. Clasp. No. 1,168,521; Jan. 18; Gaz. vol. 222; p. 822.

Little, Harry C. (See Stevenson and Little.)

Liversidge, Horace P., Bala, Pa. Pothead or connector for electrical conductors. No. 1,168,019; Jan. 11; Gaz. vol. 222; p. 615.

Lloyd, Burt E., New York, N. Y. Combined flying and spinning top. No. 1,167,507; Jan. 11; Gaz. vol. 222; p. 434.

Lobdell, Carrie L. (See Exline, Marcus P., assignor.)

Lobley, Max E., New York, assignor to Brooklyn Cooperage Co., Brooklyn, N. Y. Metallic hoop for barrels. No. 1,169,272; Jan. 25; Gaz. vol. 222; p. 1120.

Lochner, Adam, Pine, Colo. Combination tobacco-can and match-holder. No. 1,167,768; Jan. 11; Gaz. vol. 222; p. 525.

Lock, John E., Lawrence, Mass. Tenpin apparatus. No. 1,169,045; Jan. 18; Gaz. vol. 222; p. 1004.

Lockhart, Alexander M., Pittsburgh, Pa. Envelop. No. 1,166,772; Jan. 4; Gaz. vol. 222; p. 126.

Lockwood, Burns D., Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Car-underframe construction. No. 1,167,769; Jan. 11; Gaz. vol. 222; p. 525.

Lockwood, James E., assignor to E. Seitz, Peoria, Ill. Vapor-lamp. No. 1,169,411; Jan. 25; Gaz. vol. 222; p. 1167.

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

Locomotive Superheater Company. (See McKee, Neal T., assignor.)

Locomotive Superheater Company. (See True, Charles H., assignor.)

Locomotive Superheater Company. (See True and McKee, assignors.)

Loesser, Ernest, Glen Ridge, N. J., assignor to New Diamond Polishing Tool Company of America, Inc., New York, N. Y. Apparatus for grinding precious stones. No. 1,166,843; Jan. 4; Gaz. vol. 222; p. 151.

Loewenbach, Hugo. (See Downey, Richard F., assignor.)

Löfgren, Albert O. M., Stockholm, Sweden. Starting-vaporizer. No. 1,167,830; Jan. 11; Gaz. vol. 222; p. 546.

Lofgren, John. (See Ravlin and Lofgren.)

Lofts, John L., Clarinda, Iowa. Wire-reel. No. 1,167,704; Jan. 11; Gaz. vol. 222; p. 504.

Loftus, Thomas J., Castella, assignor of one-half to H. Bell, Oakland, Cal. Explosive-engine. No. 1,166,999; Jan. 4; Gaz. vol. 222; p. 203.

Loheide, Herman L., assignor to Loheide Manufacturing Company, St. Louis, Mo. Humidifier. No. 1,168,948; Jan. 18; Gaz. vol. 222; p. 973.

Loheide Manufacturing Company. (See Loheide, Herman L., assignor.)

Lombardy, Frank K., San Diego, Cal. Mechanical toy. No. 1,167,575; Jan. 11; Gaz. vol. 222; p. 459.

Long, John R., Akron, Ohio. Bench-vise. No. 1,168,318; Jan. 18; Gaz. vol. 222; p. 750.

Long, Robert E., administrator. (See Maloney, Philip M.)

Loomis, Charles W., *et al.* (See Wilcox, Orla O., assignor.)

Loomis, Frank, Machias, N. Y. Automatic poultry feeder and exerciser. No. 1,168,656; Jan. 18; Gaz. vol. 222; p. 872.

Loos, Franz. (See Gottl and Loos.)

Loose Wiles Biscuit Company. (See Lawrence, Edward E., assignor.)

Lorentowicz, Leonard, Irvington, N. J. Repairing scored cylinders. No. 1,169,658; Jan. 25; Gaz. vol. 222; p. 1258.

Loring, Charles F., Reno, Nev. Gearing. No. 1,168,522; Jan. 18; Gaz. vol. 222; p. 822.

Lorraine, Madison J., San Francisco, Cal. Tape-splice. No. 1,168,657; Jan. 18; Gaz. vol. 222; p. 873.

Lorzing, Julius J., Elmsford, N. Y. Valve structure for fountain-brushes. No. 1,168,893; Jan. 18; Gaz. vol. 222; p. 953.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Signal-printing means for calculating-machines. No. 1,167,000; Jan. 4; Gaz. vol. 222; p. 204.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Key mechanism for calculators. No. 1,167,001; Jan. 4; Gaz. vol. 222; p. 204.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Adding-machine. No. 1,167,002; Jan. 4; Gaz. vol. 222; p. 205.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Keyboard for calculators. No. 1,167,086; Jan. 4; Gaz. vol. 222; p. 233.

Loubery, Pierre U., Juvisy, France. Apparatus for propelling, elevating, and supporting ships, boats, submarines, and the like vessels. No. 1,167,191; Jan. 4; Gaz. vol. 222; p. 272.

Loud, George D., Boston, Mass. Pumping unit. No. 1,169,752; Jan. 25; Gaz. vol. 222; p. 1288.

Louden, William, Fairfield, Iowa. Gate-hinge. No. 1,168,523; Jan. 18; Gaz. vol. 222; p. 823.

Louden, William, Fairfield, Iowa. Manger for animal-pens. No. 1,169,412; Jan. 25; Gaz. vol. 222; p. 1167.

Lovejoy, Charles E. Lowell, assignor to Draper Company, Hopedale, Mass. Spinning-machine. No. 1,167,169; Jan. 4; Gaz. vol. 222; p. 264.

Lovekin, Luther D., Philadelphia, Pa. Turbine-blading and assembling same. No. 1,166,530; Jan. 4; Gaz. vol. 222; p. 42.

Lovekin, Luther D., Philadelphia, Pa. Water-heater. No. 1,166,531; Jan. 4; Gaz. vol. 222; p. 43.

Lovelady, Frederick W., Saginaw, and B. J. Kennedy, Detroit, assignors of one-third to G. F. Dice, Saginaw, Mich. Candy-machine. No. 1,166,610; Jan. 4; Gaz. vol. 222; p. 70.

Lovell-McConnell Manufacturing Company. (See Hutchison, Miller R., assignor.)

Lowell, Clark N., Bellaire, Ohio. Lock. No. 1,169,659; Jan. 25; Gaz. vol. 222; p. 1258.

Löwenstein, Harry F., assignor of one-half to H. S. Hill, Washington, D. C. Illuminated sign. No. 1,168,084; Jan. 11; Gaz. vol. 222; p. 637.

Lowy, Samuel, assignor of one-half to P. Schrank, New York, N. Y. Paint. No. 1,168,730; Jan. 18; Gaz. vol. 222; p. 897.

Lubberger, Fritz, assignor to Automatic Electric Company, Chicago, Ill. Telephone-exchange trunking system. No. 1,168,894; Jan. 18; Gaz. vol. 222; p. 953.

Luburg, Ellsworth N., Baltimore Md. Slack-adjuster. No. 1,166,465; Jan. 4; Gaz. vol. 222; p. 19.

Lucas, Owen D., assignor to Lucas's Low Pressure Oil Cracking Process, Limited, London, England. Manufacturing catalytic bodies. No. 1,168,404; Jan. 18; Gaz. vol. 222; p. 781.

Lucas's Low Pressure Oil Cracking Process. (See Lucas, Owen D., assignor.)

Lucke, Charles E., assignor to Gas and Oil Combustion Company, New York, N. Y. Mixing and proportioning valve. No. 1,169,090; Jan. 18; Gaz. vol. 222; p. 1021.

Lucker, Frederick L., Brooklyn, and A. O. Carpenter, Corning, N. Y., assignors to Ingersoll-Rand Company, Jersey City, N. J. Regulating device for motor-driven compressors. No. 1,169,550; Jan. 25; Gaz. vol. 222; p. 1218.

Ludwig Spitz & Co. G. m. b. H. (See Rein, Robert, assignor.)

Lukáš, Lázár, New York, N. Y. Aeroplane. No. 1,168,658; Jan. 18; Gaz. vol. 222; p. 873.

Lukehart, Jacob E. (See Albright and Lukehart.)

Luna-Lite Company of America, The. (See Wright, Arthur, assignor.)

Lund, Johan H. L., Christiania, Norway. Magnetic sundial. No. 1,166,611; Jan. 4; Gaz. vol. 222; p. 71.

Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company. Automatic telephone system. No. 1,166,466; Jan. 4; Gaz. vol. 222; p. 19.

Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic telephone-exchange system. No. 1,168,319; Jan. 18; Gaz. vol. 222; p. 751.

Lunn, Robert H., Bowdon, England. Combing-machine. No. 1,169,046; Jan. 18; Gaz. vol. 222; p. 1005.

Lunz, John, Belpre, Kans. Attachment for grain-separators. No. 1,166,532; Jan. 4; Gaz. vol. 222; p. 44.

Lurie, William A., Chicago, Ill. Door-lock. No. 1,168,524; Jan. 18; Gaz. vol. 222; p. 823.

Lurie, William A., Chicago, Ill. Door-lock. No. 1,168,525; Jan. 18; Gaz. vol. 222; p. 824.

Lurz, Charles, New York, N. Y. Sewing-machine. No. 1,169,331; Jan. 25; Gaz. vol. 222; p. 1139.

Lutz, Charles. (See Stanley, Richard E., assignor.)

Lutz, William D., Allendale, assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current magnet. No. 1,166,699; Jan. 4; Gaz. vol. 222; p. 103.

Lutz, William H., Philadelphia, Pa. Compression-wrench. No. 1,166,467; Jan. 4; Gaz. vol. 222; p. 20.

Lynde, Frank G., assignor to Lauter Company, Newark, N. J. Magnetic tracking device. No. 1,167,087; Jan. 4; Gaz. vol. 222; p. 234.

Lynk, Rod R., Van Buren, Me. Adjustable curtain-pole and shade hanger. No. 1,168,814; Jan. 18; Gaz. vol. 222; p. 927.

Lyon & Healy. (See Kirk, Walter I., assignor.)
Lyon, Julian P., Detroit, Mich. Radiator. No. 1,167,088; Jan. 4; Gaz. vol. 222; p. 234.
Lyon, Wallace C., Hyattsville, Md. Number license-tag. No. 1,168,217; Jan. 11; Gaz. vol. 222; p. 681.
Lyons, James, New York, N. Y. Parcel-post calculator. No. 1,169,413; Jan. 25; Gaz. vol. 222; p. 1167.
M. Rumely Co. (See Higgins, William H. C., Jr., assignor.)
M. Schulz Co. (See Gustafson, Adolph P., assignor.)
MacDonald, Samuel A. (See Lemon and MacDonald.)
MacKay, John F., Bordentown, N. J. Brooder. No. 1,166,773; Jan. 4; Gaz. vol. 222; p. 127.
MacKay, Vasil, Boston, Mass. Speed-controlling device. No. 1,168,527; Jan. 18; Gaz. vol. 222; p. 825.
MacKenzie, Clara L., Providence, R. I. Cooking utensil. No. 1,166,844; Jan. 4; Gaz. vol. 222; p. 152.
MacKenzie, Cyrus W., Waverly, Ind. Bucket for filling automobile-radiators. No. 1,167,580; Jan. 11; Gaz. vol. 222; p. 461.
MacKinnon, George W., Boston, Mass. Automatic air-cushion. No. 1,169,050; Jan. 18; Gaz. vol. 222; p. 1005.
MacMillan, Duncan, Brooklyn, N. Y. Locking device for cash-carriers in despatch-tubes. No. 1,169,553; Jan. 25; Gaz. vol. 222; p. 1219.
Macaulay, George, Brooklyn, N. Y. Hand-bag. No. 1,166,612; Jan. 4; Gaz. vol. 222; p. 71.
Macdonald, James R., Duluth, Minn. Water-circulating means for automobiles. No. 1,167,509; Jan. 11; Gaz. vol. 222; p. 435.
Macfadden, Bernarr. (See Romer, John A., assignor.)
Mackie, William J., St. Louis, Mo. Punch. No. 1,166,613; Jan. 4; Gaz. vol. 222; p. 71.
Madison, Oliver C., Omaha, Nebr. Toy gun. No. 1,168,815; Jan. 18; Gaz. vol. 222; p. 927.
Madison, Oliver C., Omaha, Nebr. Toy rifle. No. 1,168,816; Jan. 18; Gaz. vol. 222; p. 927.
Maggard, Elisha E., Morehead, Ky. Intermittent-motion device. No. 1,168,086; Jan. 11; Gaz. vol. 222; p. 638.
Magill, Herbert L., Chicago, Ill. Internal-combustion engine. No. 1,167,419; Jan. 11; Gaz. vol. 222; p. 405.
Magna, Russell W., Holyoke, Mass. Ball-marker. No. 1,167,004; Jan. 4; Gaz. vol. 222; p. 206.
Magor, Basil, assignor to Magor Car Company, New York, N. Y. Logging-car. No. 1,166,468; Jan. 4; Gaz. vol. 222; p. 20.
Magor Car Company. (See Magor, Basil, assignor.)
Mahieu, George J., Rio de Janeiro, Brazil. Method and apparatus for defibrating fibrous vegetable materials. No. 1,168,087; Jan. 11; Gaz. vol. 222; p. 638.
Mahoney, William J., Amenia, N. Y. Device for casting borders, slugs, leads, and the like. No. 1,169,554; Jan. 25; Gaz. vol. 222; p. 1219.
Majcherek, Ignac, Detroit, Mich. Railway-rail joint. No. 1,166,614; Jan. 4; Gaz. vol. 222; p. 72.
Majestic Furnace & Foundry Company. (See Triggs, James M., assignor.)
Makley, Alexander, assignor of one-fourth to V. J. Tatham, Saginaw, Mich. Spike. No. 1,168,088; Jan. 11; Gaz. vol. 222; p. 639.
Malany, Eugene H. (See Delaney and Malany.)
Malcolm, Robert. (See Brennecke, Herman J., assignor.)
Maley, William J., Chicago, Ill. Climbing device. No. 1,168,321; Jan. 18; Gaz. vol. 222; p. 752.
Maloney, Owen W., Tulsa, Okla. Toy gun. No. 1,168,950; Jan. 18; Gaz. vol. 222; p. 974.
Maloney, Philip M., deceased, Philadelphia, Pa.; R. E. Long, administrator. Lubricator for shock-absorbers. No. 1,168,407; Jan. 18; Gaz. vol. 222; p. 782.
Malott & Peterson. (See Dennis, George A., assignor.)
Mandel, Jacob, New York, N. Y. Fuel-saver. No. 1,168,951; Jan. 18; Gaz. vol. 222; p. 974.
Mandelbaum, M. Joseph, New York, N. Y. Signaling device. No. 1,167,308; Jan. 4; Gaz. vol. 222; p. 311.
Mangels, William F., New York, N. Y. Carousel. No. 1,168,089; Jan. 11; Gaz. vol. 222; p. 639.
Manhattan Electrical Supply Company. See Peterson, Johann G., assignor.)
Manischewitz, Behr, deceased, Cincinnati, Ohio; J. U., J., and M. Manischewitz, executors and trustees. Bake-oven. No. 1,169,555; Jan. 25; Gaz. vol. 222; p. 1219.
Manischewitz, Jacob U., *et al.*, executors and trustees. (See Manischewitz, Behr.)
Manischewitz, Joseph, *et al.*, executors and trustees. (See Manischewitz, Behr.)
Manischewitz, Max, *et al.*, executors and trustees. (See Manischewitz, Behr.)
Mansfeld, Victor L. P. A. M., Berlin-Steglitz, Germany. Cinematographic display apparatus. No. 1,166,701; Jan. 4; Gaz. vol. 222; p. 104.
Mansfield, William M., Orange Grove, Miss., assignor of one-third to T. Torgerson and one-third to M. G. Hanson, Irvington, Ala. Package-tie. No. 1,169,663; Jan. 25; Gaz. vol. 222; p. 1259.
Manson, Ray H., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Automobile-horn. No. 1,168,322; Jan. 18; Gaz. vol. 222; p. 752.
Manson, Ray H., assignor to The Garford Manufacturing Company, Elyria, Ohio. Odometer. No. 1,169,175; Jan. 25; Gaz. vol. 222; p. 1088.
Marbach, Frank G., assignor to Champion Register Company, Cleveland, Ohio. Register-case. No. 1,168,408; Jan. 18; Gaz. vol. 222; p. 782.
Marburg, Eduard. (See Specketer and Marburg.)
Marchand, Charles, New York, N. Y., assignor, by mesne assignments, to L. N. Depeyre, Colorado Springs, Colo. Making sterilized granulated meat fiber. No. 1,167,193; Jan. 4; Gaz. vol. 222; p. 272.
Marcuse, Moses M., New York, N. Y., assignor to West Disinfecting Company. Liquid-soap dispenser. No. 1,167,420; Jan. 11; Gaz. vol. 222; p. 406.
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Commode. No. 1,168,952; Jan. 18; Gaz. vol. 222; p. 974.
Mardon, John S., and L. D. Fay, Loyalton, Cal. Hinge. No. 1,166,702; Jan. 4; Gaz. vol. 222; p. 104.
Marinsky, Davis, New York, N. Y. Machine for making garment-securing devices. No. 1,168,662; Jan. 18; Gaz. vol. 222; p. 874.
Mark, Clarence. (See Mark, Clayton, Jr., and C.)
Mark, Clayton, Jr., and C., Evanston, assignors to The Mark Manufacturing Company, Chicago, Ill. Metal-coated iron or steel article. No. 1,168,663; Jan. 18; Gaz. vol. 222; p. 875.
Mark, Clayton, Jr., and C., Evanston, assignors to The Mark Manufacturing Company, Chicago, Ill. Applying protective coatings to metallic articles. No. 1,168,664; Jan. 18; Gaz. vol. 222; p. 875.
Mark Manufacturing Company, The. (See Mark, Clayton, Jr., and C., assignors.)
Marks, Harry L. (See Bauer, William J., assignor.)
Maronka, Francis J., Chicago, Ill. Monoplane. No. 1,167,581; Jan. 11; Gaz. vol. 222; p. 461.
Marr, Robert A., assignor to General Water-Proofing Co. Incorporated, Norfolk, Va. Treating leather and product thereof. No. 1,166,845; Jan. 4; Gaz. vol. 222; p. 152.
Marr, Robert A., assignor to General Water-Proofing Co. Incorporated, Norfolk, Va. Impregnated leather and making same. No. 1,166,846; Jan. 4; Gaz. vol. 222; p. 152.
Marr, Robert A., assignor to General Water-Proofing Co., Incorporated, Norfolk, Va. Impregnated fabrics and producing same. No. 1,166,847; Jan. 4; Gaz. vol. 222; p. 152.
Marr, Robert A., assignor to General Fibre Co., Incorporated, Norfolk, Va. Making pulp and paper. No. 1,166,848; Jan. 4; Gaz. vol. 222; p. 153.
Marsh Automatic Soda Fountain Co., The. (See Marsh, Robert G., assignor.)
Marsh, Clifford W., Bridgeport, Conn. Snap-link. No. 1,168,817; Jan. 18; Gaz. vol. 222; p. 928.
Marsh, H. G. (See Lindsey and Williams, assignors.)
Marsh, Lucien A., San Francisco, Cal. Gas stove and burner lighting device. No. 1,169,505; Jan. 25; Gaz. vol. 222; p. 1202.
Marsh, Robert G., assignor to The Marsh Automatic Soda Fountain Co., Detroit, Mich. Liquid-dispensing apparatus. No. 1,169,337; Jan. 25; Gaz. vol. 222; p. 1141.
Marsh, Wilbur W. (See Morgan, Thomas W., assignor.)
Marshall, Charles H., Omaha, Nebr. Cherry-pitting machine. No. 1,167,005; Jan. 4; Gaz. vol. 222; p. 206.
Marshall Field & Co. (See Winslow, Charlotte H., assignor.)
Marsico, Gerardo, New York, N. Y. Mechanical horn. No. 1,168,090; Jan. 11; Gaz. vol. 222; p. 640.
Marston, Charles F., Cedarhurst, N. Y. Rear-end signal for vehicles. (Reissue.) No. 14,041; Jan. 4; Gaz. vol. 222; p. 336.
Marston, Harry W., Everett, Mass. Automatic train-stopping device. No. 1,167,910; Jan. 11; Gaz. vol. 222; p. 576.
Martin, Charles H. (See Farr, Herman G., assignor.)
Martin, Harry W. (See Martin, John A., assignor.)
Martin, John A., assignor of one-half to H. W. Martin, Spokane, Wash. Electric-lighting device. No. 1,169,338; Jan. 25; Gaz. vol. 222; p. 1142.
Martin, John W., assignor of one-tenth to E. H. Ford, Lake Placid, N. Y. Draw-bolt. No. 1,169,664; Jan. 25; Gaz. vol. 222; p. 1259.
Martin, Morris A., Dayton, Ohio. Coupling device. No. 1,167,832; Jan. 11; Gaz. vol. 222; p. 547.
Martin, Talbot G., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Measured-service telephone system. No. 1,169,102; Jan. 18; Gaz. vol. 222; p. 1026.
Martin, William C., New York, N. Y. Moving-picture apparatus. No. 1,169,176; Jan. 25; Gaz. vol. 222; p. 1058.
Martino, Pietro V., New York, N. Y. Hat-former. No. 1,168,665; Jan. 18; Gaz. vol. 222; p. 875.
Marx, Charles O., New York, assignor of one-half to B. Spitzfaden, Brooklyn, N. Y. Safety-latch for elevator-doors. No. 1,167,194; Jan. 4; Gaz. vol. 222; p. 272.
Marx, Gustave C., Elizabeth, N. J., assignor to Diehl Manufacturing Company. Lubricated bearing for electric fans. No. 1,167,309; Jan. 4; Gaz. vol. 222; p. 311.
Marx, Richard, Philadelphia, assignor to J. B. Stetson, Ashbourne, Pa. Safety-razor. No. 1,169,665; Jan. 25; Gaz. vol. 222; p. 1259.
Maschinenfabrik Badenia, vorm. Wm. Platz Söhne A.-G. (See Simons and Klein, assignors.)
Mason, Arthur C., and A. T. Sturt, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y. Spring. No. 1,166,615; Jan. 4; Gaz. vol. 222; p. 72.

Mason, Arthur C., and A. T. Sturt, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y. Spring suspension. No. 1,166,616; Jan. 4; Gaz. vol. 222; p. 72.
Mason, Charles E., Chicago, Ill. Interlocking relay for railway-signals. No. 1,169,273; Jan. 25; Gaz. vol. 222; p. 1121.
Mason, Charles T., Sumter, S. C., assignor, by mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Interrupter mechanism for ignition-dynamos. No. 1,167,310; Jan. 4; Gaz. vol. 222; p. 311.
Mason, Edward H., White Marsh, Va. Hat-pin guard. No. 1,168,528; Jan. 18; Gaz. vol. 222; p. 825.
Mason, Orrin S., Valley City, N. D. Grain-carrier for harvesters. No. 1,167,911; Jan. 11; Gaz. vol. 222; p. 576.
Massachusetts Chocolate Company. (See Walker, John, assignor.)
Massey, William A. (See Butler and McCray, assignors.)
Mathews, John E. (See Holzbaur, Walter S., assignor.)
Matofij, John, Kato, Pa. Plow. No. 1,167,912; Jan. 11; Gaz. vol. 222; p. 576.
Matson, Carl A. (See Hoyt and Matson.)
Matson, Martin, assignor to The Cutler-Habber Mfg. Co., Milwaukee, Wis. Means for insulating lamp-sockets and the like. No. 1,168,258; Jan. 11; Gaz. vol. 222; p. 696.
Matter, Oskar, Bonn, Germany. Roof-covering. No. 1,167,195; Jan. 4; Gaz. vol. 222; p. 273.
Matthews, Edgar J., Paxton, Mass. Root-washer. No. 1,166,849; Jan. 4; Gaz. vol. 222; p. 153.
Mattis, Alvin. (See Lepper and Mattis.)
Mattox, Harry E., Sherman, Cal. Holder for trolley-poles. No. 1,166,617; Jan. 4; Gaz. vol. 222; p. 73.
Mauclère, Pierre A. P. (See Rolland and Mauclère.)
Maughmer, John W., Hume, Ill. Mechanical movement. No. 1,168,091; Jan. 11; Gaz. vol. 222; p. 640.
Mault, George H., assignor to Shure Grip Horse Shoe & Manufacturing Co. Inc., Amsterdam, N. Y. Horseshoe. No. 1,167,773; Jan. 11; Gaz. vol. 222; p. 526.
Mauntel, Vincent J., Washington, Mo. Utensil. No. 1,168,092; Jan. 11; Gaz. vol. 222; p. 640.
Maunula, Erik, Astoria, Oreg. Molding-machine for leads of nets, &c. No. 1,166,703; Jan. 4; Gaz. vol. 222; p. 104.
Maurer, Henry W., and F. K. Taylor, assignors to Taylor Instrument Companies, Rochester, N. Y. Pressure indicating and regulating device. No. 1,167,421; Jan. 11; Gaz. vol. 222; p. 406.
Mausser, Robert. (See Perse and Mausser.)
Max Ams Machine Company, The. (See Brenzinger, Julius, assignor.)
Maxim, Hosea F., assignor of one-half to O. Wells, Norfolk, Va. Connector for electric conductors. No. 1,168,529; Jan. 18; Gaz. vol. 222; p. 825.
Maximum Electrical Company. (See Mueller, Theodor M., assignor.)
Maxwell, Bert C., assignor to J. Whiting, Jr., trustee, Canton, Ohio. Book or pad. No. 1,168,818; Jan. 18; Gaz. vol. 222; p. 926.
Mayer, Clarence, assignor to Natures Rival Company, Chicago, Ill. Brassière. No. 1,168,732; Jan. 18; Gaz. vol. 222; p. 898.
Mayer, Emanuel, and M. E. Wolff, New York, N. Y. Sanitary ventilated garbage-can. No. 1,166,774; Jan. 4; Gaz. vol. 222; p. 127.
Mayer, Henry K., Fort Collins, Colo. Mixing-valve. No. 1,169,666; Jan. 25; Gaz. vol. 222; p. 1260.
Mayers, Henry J., Cleveland, Ohio, assignor to The Empire Rubber Company. Devulcanizing rubber. No. 1,167,359; Jan. 4; Gaz. vol. 222; p. 331.
Maynard, Arthur H., Warwick, R. I., assignor to Boston Wire Stitcher Company, Portland, Me. Stapling-machine. No. 1,169,339; Jan. 25; Gaz. vol. 222; p. 1142.
Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,166,533; Jan. 4; Gaz. vol. 222; p. 44.
Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-assembling and heel-seat-lasting machine. No. 1,167,913; Jan. 11; Gaz. vol. 222; p. 576.
Mays Accounting Machine Company. (See Mays, James F., assignor.)
Mays, James F., Birmingham, Ala., assignor to Mays Accounting Machine Company, Asheville, N. C. Mechanism for operating a type-writer from a calculating-machine. No. 1,166,704; Jan. 4; Gaz. vol. 222; p. 104.
Maytag Company, The. (See Snyder, Howard F., assignor.)
Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,166,469; Jan. 4; Gaz. vol. 222; p. 20.
Mazer, Joseph, McAlester, Okla. Winding-indicator. No. 1,167,582; Jan. 11; Gaz. vol. 222; p. 461.
McAllister, John E. (See Ohmer and McAllister.)
McAllister, John E. (See Whistler and McAllister.)
McAneny, Michael, assignor of one-half to G. H. Ten Broek, St. Louis, Mo. Cigar-lighter. No. 1,167,089; Jan. 4; Gaz. vol. 222; p. 234.
McArthur, Charles D., assignor to The Blaw Collapsible Steel Centering Company, Pittsburgh, Pa. Collapsible form. No. 1,168,659; Jan. 18; Gaz. vol. 222; p. 874.
McBerty, Frank R., Antwerp, Belgium, assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine telephone switching system. No. 1,167,646; Jan. 11; Gaz. vol. 222; p. 484.
McBurney, A. D., *et al.* (See Miller, John D., assignor.)
McCain, Paul H., assignor to Pheoll Manufacturing Company, Chicago, Ill. Toggle-bolt. No. 1,167,577; Jan. 11; Gaz. vol. 222; p. 459.
McCaleb, Samuel D., Louisville, Ky. Electric-traction-control system. No. 1,166,919; Jan. 4; Gaz. vol. 222; p. 177.
McCallum, Albert L., Spokane, Wash. Hand-brake for box-cars. No. 1,167,576; Jan. 11; Gaz. vol. 222; p. 459.
McCandless, Frank J., Charlton, Iowa. Vehicle-wheel. No. 1,167,307; Jan. 4; Gaz. vol. 222; p. 310.
McCargo, Grant. (See Kennedy, George R., assignor.)
McCarty, Joseph, Spokane, Wash. Newspaper-easel. No. 1,167,090; Jan. 4; Gaz. vol. 222; p. 235.
McCarty, William F. C. M., East Pleasantville, N. Y. Composition of matter to be added to internal-combustion-engine fuels and to be used for other purposes. No. 1,167,770; Jan. 11; Gaz. vol. 222; p. 525.
McCaskey Register Company, The. (See Dodson, Samuel H., assignor.)
McCaskey Register Company, The. (See Hick, Harry J., assignor.)
McCaskey Register Company, The. (See Silvius, Ellis T., assignor.)
McClain, James A., Alva, Okla. Acetylene-gas generator. No. 1,168,895; Jan. 18; Gaz. vol. 222; p. 953.
McClellan, George B., Avoca, Iowa. Evener or draft-equalizer. No. 1,169,047; Jan. 18; Gaz. vol. 222; p. 1005.
McCloskey, Robert F., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Punching and shearing mechanism. No. 1,167,771; Jan. 11; Gaz. vol. 222; p. 525.
McComb, Henry G., New York, N. Y., assignor to General Vehicle Company, Incorporated. Shackle. No. 1,169,502; Jan. 25; Gaz. vol. 222; p. 1201.
McCormick, Frank, Monroe, Wash. Stump-extractor. No. 1,169,503; Jan. 25; Gaz. vol. 222; p. 1201.
McCray, Harry F. (See Butler and McCray.)
McCroba, Charles, Bellaire, Ohio. Pipe-wrench. No. 1,169,551; Jan. 25; Gaz. vol. 222; p. 1218.
McDaniel, Omar, Sedalia, Mo. Table. No. 1,166,700; Jan. 4; Gaz. vol. 222; p. 103.
McDermott, James J., Jr., *et al.* (See Edwards, Albert, assignor.)
McDevitt, Amos W., Washington, D. C. Baby-carriage. No. 1,167,003; Jan. 4; Gaz. vol. 222; p. 205.
McDonald Casket Company. (See McDonald, Elijah D., assignor.)
McDonald, Charles D., assignor to McDonald Machine Co., Chicago, Ill. Metal-shearing machine. No. 1,169,332; Jan. 25; Gaz. vol. 222; p. 1140.
McDonald, Charles D., assignor to McDonald Machine Company, Chicago, Ill. Metal-shearing machine. No. 1,169,333; Jan. 25; Gaz. vol. 222; p. 1140.
McDonald, Charles W., Gallatin, Mo., assignor of one-half to C. W. Connally, Austin, Tex. Post-hole digger. No. 1,168,405; Jan. 18; Gaz. vol. 222; p. 781.
McDonald, Elijah D., assignor to McDonald Casket Company, Los Angeles, Cal. Burial-casket. No. 1,168,660; Jan. 18; Gaz. vol. 222; p. 874.
McDonald, Frank, Roaring Spring, Pa. Cathode for electrolytic cells. No. 1,167,705; Jan. 11; Gaz. vol. 222; p. 504.
McDonald, James, assignor of one-half to M. C. Cameron, Dallas, Tex. Transmission-lock. No. 1,169,660; Jan. 25; Gaz. vol. 222; p. 1258.
McDonald Machine Co. (See McDonald, Charles D., assignor.)
McDonald, Thomas, Youngstown, Ohio. Gas-washer. No. 1,167,909; Jan. 11; Gaz. vol. 222; p. 575.
McDonnall, James, Chicago, Ill. Ironing-board. No. 1,167,192; Jan. 4; Gaz. vol. 222; p. 272.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car Heating Company. Door-motor controller. No. 1,168,406; Jan. 18; Gaz. vol. 222; p. 782.
McElroy, John H., trustee. (See Blodgett, John W., assignor.)
McFarland, Harvey P. (See Moir and McFarland.)
McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Pulling-over machine. No. 1,169,414; Jan. 25; Gaz. vol. 222; p. 1167.
McGill, Andrew M., Toronto, Ontario, Canada. Combined lathe and drill. No. 1,167,091; Jan. 4; Gaz. vol. 222; p. 235.
McGovern, John C., and M. Cohen, South San Francisco, Cal. Third-rail support. No. 1,167,772; Jan. 11; Gaz. vol. 222; p. 526.
McGregor, Allan L., Chicago, Ill. Shock-absorber. No. 1,166,920; Jan. 4; Gaz. vol. 222; p. 177.
McInish, William J., Tallassee, Ala. Churn. No. 1,169,173; Jan. 25; Gaz. vol. 222; p. 1087.
McInnes, Norman, Cape Gracias, Nicaragua, assignor of one-half to G. C. Snyder. Brace and bit. No. 1,168,661; Jan. 18; Gaz. vol. 222; p. 874.
McIntyre, Daniel, Swan River, Manitoba, Canada. Self-binding harvester. No. 1,169,048; Jan. 18; Gaz. vol. 222; p. 1005.

McKee, Neal T. (See True and McKee.)
McKee, Neal T., Yonkers, assignor to Locomotive Superheater Company, New York, N. Y. Damper for locomotive-superheaters. No. 1,167,508; Jan. 11; Gaz. vol. 222; p. 435.
McKee, Willie M., Chicago, Ill. Jelly-container. No. 1,168,731; Jan. 18; Gaz. vol. 222; p. 898.
McKeever, Charles, Jersey City, N. J. Bottle-stopper. No. 1,167,092; Jan. 4; Gaz. vol. 222; p. 235.
McKeever, Hugh F., Jackson, Nebr. Ventilating attachment for stovepipes. No. 1,169,661; Jan. 25; Gaz. vol. 222; p. 1258.
McKelvey, John W., Chicago Junction, Ohio. Sewer-trap valve. No. 1,168,085; Jan. 11; Gaz. vol. 222; p. 638.
McKenzie, Alexander, Kippen, Ontario, Canada. Gig-saddletree. No. 1,169,334; Jan. 25; Gaz. vol. 222; p. 1141.
McKenzie, Frederick J., London, England. Light road-vehicle. No. 1,168,896; Jan. 18; Gaz. vol. 222; p. 954.
McKinney, Timothy. (See Knipe and McKinney.)
McKinnon, Donald J., Toronto, Ontario, Canada, assignor to Packard Motor Car Company, Detroit, Mich. Internal-combustion engine. No. 1,169,662; Jan. 25; Gaz. vol. 222; p. 1258.
McKittrick, George, and P. B. Humphrey, Caney, Kans. Magnetic educational appliance. No. 1,168,949; Jan. 18; Gaz. vol. 222; p. 973.
McLaughlin, James W. R., Canonsburg, Pa. Spacing device for punching-machines. No. 1,169,415; Jan. 25; Gaz. vol. 222; p. 1168.
McLaughlin, Melvin O. (See Surface, Samuel E., assignor.)
McLauthlin, Martin B., Malden, and A. K. Tylee, Brookline, Mass. Electric driving apparatus. No. 1,169,174; Jan. 25; Gaz. vol. 222; p. 1087.
McLean, Warren L., assignor of one-half to J. A. Van Beal, San Francisco, Cal. Combined concentrating and amalgamating machine. No. 1,169,083; Jan. 18; Gaz. vol. 222; p. 1018.
McManamin, Stephen B., assignor of one-half to W. H. Irvine, Fredericton, New Brunswick, Canada. Clean-out device for waste or soil pipes. No. 1,169,335; Jan. 25; Gaz. vol. 222; p. 1141.
McMillin, Stewart E., Lawrence, Kans. Railway-spike. No. 1,168,320; Jan. 18; Gaz. vol. 222; p. 751.
McMurray, Max, Cleveland, and B. J. Mullen, Leetonia; said Mullen assignor to United Iron and Steel Company, Cleveland, Ohio. Sintering device. No. 1,169,336; Jan. 25; Gaz. vol. 222; p. 1141.
McNally, John F., and E. Raymond, Newton, Kans. Railway-track-laying machine or derrick. No. 1,167,578; Jan. 11; Gaz. vol. 222; p. 460.
McPeak, Pressley, Willits, Cal. Stove. No. 1,169,049; Jan. 18; Gaz. vol. 222; p. 1005.
McPhee, Allen R., Chicago, Ill. Photographic shutter. No. 1,166,921; Jan. 4; Gaz. vol. 222; p. 177.
McPherson, Thomas C., Independence, Mo. Gate. No. 1,167,706; Jan. 11; Gaz. vol. 222; p. 504.
McVety, Joseph J., and O. R. Emerson, Newport, Me. Dirigible headlight. No. 1,168,526; Jan. 18; Gaz. vol. 222; p. 825.
McVicker, Walter J., Minneapolis, Minn. Oiling-machine. No. 1,169,504; Jan. 25; Gaz. vol. 222; p. 1201.
McVoy, Warren A., Tacoma, Wash. Cover-fastener. No. 1,168,020; Jan. 11; Gaz. vol. 222; p. 615.
McWhirter, John S., assignor to Prepayment Car Sales Company, New York, N. Y. Operating circuit and switch arrangement for car-motors. No. 1,169,552; Jan. 25; Gaz. vol. 222; p. 1219.
McWilliams, Arthur C., South Bend, Ind. Lamp-socket. No. 1,167,579; Jan. 11; Gaz. vol. 222; p. 460.
Mead, Howard G., St. Louis, Mo., assignor to W. P. Healy, Chicago, Ill. Wire-bound-box-blank machine. No. 1,167,914; Jan. 11; Gaz. vol. 222; p. 577.
Meahl, Philip J., Summit, N. J. Making perforated music-sheets. No. 1,166,618; Jan. 4; Gaz. vol. 222; p. 73.
Meaker, John W., Detroit, Mich. Flushing-valve mechanism. No. 1,168,530; Jan. 18; Gaz. vol. 222; p. 826.
Means, James H. (See Mears, David C., assignor.)
Mears, David C., assignor of eleven-twentieths to J. H. Means, Detroit, Mich. Carbureter. No. 1,169,340; Jan. 25; Gaz. vol. 222; p. 1143.
Mears, James O., assignor to Gill & Company, Incorporated, Philadelphia, Pa. Method and batch or mixture for making illuminating-glass. No. 1,166,922; Jan. 4; Gaz. vol. 222; p. 177.
Mebold, Frederick W., St. Louis, Mo. Portable self-contained electric lamp. No. 1,167,707; Jan. 11; Gaz. vol. 222; p. 504.
Meccano Limited. (See Hornby, Frank, assignor.)
Mechanical Rubber Company, The. (See Hopkins, Arthur T., assignor.)
Medart, Philip S., assignor to Fred Medart Manufacturing Company, St. Louis, Mo. Vaulting-trough. No. 1,168,666; Jan. 18; Gaz. vol. 222; p. 876.
Meguyer, William H., Cowes, Isle of Wight, England. Golf-club. No. 1,169,667; Jan. 25; Gaz. vol. 222; p. 1260.
Mehl, Charles F., H. B. Liebler, J. Nall, and E. J. Nobbe, Cleveland, Ohio. Safety device for moving-picture machines. No. 1,167,583; Jan. 11; Gaz. vol. 222; p. 462.
Meier, Edward C., Phoenixville, Pa. Boiler. No. 1,166,619; Jan. 4; Gaz. vol. 222; p. 73.
Meier, Edward C., Phoenixville, Pa. Furnace-tile. No. 1,167,510; Jan. 11; Gaz. vol. 222; p. 435.
Meinecke & Company. (See Hogan, Daniel, assignor.)
Meinhardt, Frederick A. B. (See Well, Hugo C., assignor.)
Meisenburg, Kurt. (See Delbrück and Meisenburg.)
Meissner, Alexander. (See Pichon and Meissner.)
Meister, Peter S., Camargo, Ill. Clothes-hanger. No. 1,168,531; Jan. 18; Gaz. vol. 222; p. 826.
Melas, William, assignor of one-half to D. Townsend, Philadelphia, Pa. Oil-burner. No. 1,169,091; Jan. 18; Gaz. vol. 222; p. 1021.
Mello, Felippe S. D. de, Rio de Janeiro, Brazil. Electric battery. (Reissue.) No. 14,051; Jan. 25; Gaz. vol. 222; p. 1289.
Meltz, Christian, Allenville, Wis. Milk-strainer. No. 1,168,532; Jan. 18; Gaz. vol. 222; p. 826.
Melville Clark Piano Company. (See Burton, Charles S., assignor.)
Melville Clark Piano Company. (See Clark, Melville, assignor.)
Melville, Frank, Jr., New York, N. Y. Carton-carrier. No. 1,169,730; Jan. 25; Gaz. vol. 222; p. 1281.
Melvin, John H., Columbus, Ohio, assignor to Automatic Electric Company, Chicago, Ill. Telephone calling mechanism and system. No. 1,166,620; Jan. 4; Gaz. vol. 222; p. 74.
Mengel, Guido, Dresden, assignor to Firm of C. Zeiss, Jena, Germany. Lens for placing before a photographic objective. No. 1,169,731; Jan. 25; Gaz. vol. 222; p. 1281.
Mentzer, Claude E., assignor of one-fourth to L. Goodman and one-fourth to L. Evans, Des Moines, Iowa. Nut-lock. No. 1,167,774; Jan. 11; Gaz. vol. 222; p. 526.
Mentzer, John P., *et al.*, trustees. (See Davis, Charles L., assignor.)
Mercantile Corporation. (See Stone, Wilbur M., assignor.)
Mercer, Charles B., North Pittston, Pa. Safety pencil-holder. No. 1,167,196; Jan. 4; Gaz. vol. 222; p. 273.
Mercury Manufacturing Company. (See Bulley, George W., assignor.)
Merkel, Benedikt. (See Engelmann and Merkel.)
Merkle, Paul W., London, England. Mounting for ring-knives for paring or splitting leather. No. 1,167,422; Jan. 11; Gaz. vol. 222; p. 407.
Merling, Georg, O. Chrzescluski, and O. Pfeffer, Elberfeld, Germany, assignors to Synthetic Patents Co. Inc., New York, N. Y. Alkali-metal acetones. No. 1,169,341; Jan. 25; Gaz. vol. 222; p. 1143.
Merrell, Luther, San Martin, Cal. Article-holder. No. 1,168,093; Jan. 11; Gaz. vol. 222; p. 641.
Merrett, Monroe. (See Schneider, George W., assignor.)
Merrill, Robert A., assignor to The Eagle White Lead Company, Cincinnati, Ohio. Gas-furnace. No. 1,166,470; Jan. 4; Gaz. vol. 222; p. 21.
Merritt, Arthur A., Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y. Treadle. No. 1,168,218; Jan. 11; Gaz. vol. 222; p. 681.
Merritt, David A., Abbeville, Ala. Lamp-chimney attachment. No. 1,168,733; Jan. 18; Gaz. vol. 222; p. 898.
Merritt, William E., assignor of one-half to J. L. Hoffman, Portland, Oreg. Rotary valve. No. 1,169,668; Jan. 25; Gaz. vol. 222; p. 1260.
Mertens, Eduard, Freiburg, Germany. Apparatus for varnishing roller-shaped bodies. No. 1,166,850; Jan. 4; Gaz. vol. 222; p. 153.
Mettler, Lee B., Kansas City, Mo. Confined-combustion gas-burning apparatus. No. 1,169,177; Jan. 25; Gaz. vol. 222; p. 1089.
Mettler, John W., East Millstone, and W. E. Smith, Milltown, assignors to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Seamless hosiery and knitting the same. No. 1,169,416; Jan. 25; Gaz. vol. 222; p. 1168.
Metzroth, William, Syracuse, N. Y. Tooth-brush holder. No. 1,167,833; Jan. 11; Gaz. vol. 222; p. 547.
Meurling, Ivar, Brooklyn, assignor to Empire Duplex Gin Company, New York, N. Y. Apparatus for cleaning cotton. No. 1,168,897; Jan. 18; Gaz. vol. 222; p. 954.
Meyer, Gertrude C. (See Balz, Robert J., assignor.)
Meyer, John H., Sherman, S. D. Gearing. No. 1,168,533; Jan. 18; Gaz. vol. 222; p. 827.
Michalis, Clarence G., East Orange, N. J., assignor to The Torsion Balance Company, New York, N. Y. Weighing-scale. No. 1,167,584; Jan. 11; Gaz. vol. 222; p. 462.
Michell, Anthony G. M., Melbourne, Victoria, Australia. Thrust-bearing element. No. 1,168,094; Jan. 11; Gaz. vol. 222; p. 641.
Michigan Lubricator Company. (See Le Roy, Frank, assignor.)
Michigan Stamping Company. (See O'Neill, James F., assignor.)
Middleton, John P., and H. D. Ross, Pittsfield, Mass. Cuff-button. No. 1,168,095; Jan. 11; Gaz. vol. 222; p. 641.
Midvale Steel Company, The. (See Barba, William P., assignor.)
Miehle Printing Press & Manufacturing Company. (See Blaine, Joseph R., assignor.)
Miessler, Oscar C. (See Frisch and Miessler.)
Mildt, Gustav A. F., Cincinnati, Ohio. Bread-baking pan. No. 1,168,819; Jan. 18; Gaz. vol. 222; p. 928.

Miles, George W., Belmont, assignor to Ross Chemical Company, Boston, Mass. Emulsified paraffin-wax and making same. No. 1,168,534; Jan. 18; Gaz. vol. 222; p. 827.
Miles, William H., Longton, England. Vulcanizing apparatus for repairing rubber tires and other articles. No. 1,168,820; Jan. 18; Gaz. vol. 222; p. 929.
Miller, Albert D., Goshen, Ind. Cement-block mold. No. 1,169,417; Jan. 25; Gaz. vol. 222; p. 1169.
Miller, Arthur, New York, N. Y. Sectional core-mold. No. 1,167,093; Jan. 4; Gaz. vol. 222; p. 236.
Miller, Carl E., Winnetka, Ill., assignor to Pressed Steel Tank Company, West Allis, Wis. Combination bung and faucet. No. 1,167,323; Jan. 18; Gaz. vol. 222; p. 752.
Miller, Charles A., and C. K. Doak, San Francisco, Cal. Concrete-curb armor. No. 1,167,585; Jan. 11; Gaz. vol. 222; p. 463.
Miller, Frank F., Yankton, S. D. Hinge. No. 1,169,274; Jan. 25; Gaz. vol. 222; p. 1121.
Miller, Franklin B., Los Angeles, Cal. Sprinkler. No. 1,168,219; Jan. 11; Gaz. vol. 222; p. 681.
Miller, Henry C., Waterford, N. Y. Buttonhole-machine. No. 1,167,197; Jan. 4; Gaz. vol. 222; p. 273.
Miller, Isaac E., Chicago, Ill. Percolator. No. 1,167,775; Jan. 11; Gaz. vol. 222; p. 526.
Miller, John D., assignor of one-half to A. D. McBurney and one-half to H. L. Hitchcock, Jackson, Mich. Artificial reed. No. 1,169,178; Jan. 25; Gaz. vol. 222; p. 1089.
Miller, John E., Olean, N. Y. Drip-edge. No. 1,167,198; Jan. 4; Gaz. vol. 222; p. 273.
Miller, Richard, New Berlin, Ohio. Bow-rest for vehicle-tops. No. 1,168,324; Jan. 18; Gaz. vol. 222; p. 753.
Miller Saw-Trimmer Company of Michigan. (See Wells, Pierson L., assignor.)
Miller, Thomas S., South Orange, N. J. Load-transfer apparatus. No. 1,167,586; Jan. 11; Gaz. vol. 222; p. 463.
Miller, Vena A., assignor of one-fourth to M. Rearick and one-fourth to C. W. Brown, Bloomdale, Ohio. Anti creeper. No. 1,169,051; Jan. 18; Gaz. vol. 222; p. 1006.
Miller, William M. (See Pritchard, Lewis C., assignor.)
Millett, Elmina, executrix. (See Woodward, Erastus.)
Milligan, Alfred J. (See Cooley and Milligan.)
Mills, Chester B., East McKeesport, Pa., assignor to Westinghouse Electric and Manufacturing Company. Brush-holder for dynamo-electric machines. No. 1,168,021; Jan. 11; Gaz. vol. 222; p. 615.
Milner, John D., Huntington, Tex. Draft-forming device for furnaces. No. 1,167,708; Jan. 11; p. 222; p. 505.
Minekime, William H., Water Valley, N. Y. Regulator. No. 1,167,776; Jan. 11; Gaz. vol. 222; p. 527.
Miner, Carl S., Chicago, Ill., assignor to Allwood Lime Company, Allwood Siding, Wis. Disinfectant. No. 1,167,360; Jan. 4; Gaz. vol. 222; p. 332.
Miner, William H., Chazy, N. Y. Manufacturing draft-yokes for railway-car draft-rigging. No. 1,166,471; Jan. 4; Gaz. vol. 222; p. 21.
Mink, Isadore. (See Leavitt and Mink.)
Minneapolis Heat Regulator Co. (See Denison, Frederick S., assignor.)
Minnetonna Company. (See Crocker, Howard M., assignor.)
Mintz, Alex, New York, N. Y. Coffee-making apparatus. No. 1,167,199; Jan. 4; Gaz. vol. 222; p. 273.
Mitchell, Augusta V. (See Hancock, Winfield S., assignor.)
Mitchell, Charles S., Grandview, Wash. Hinge for silo-doors. No. 1,169,669; Jan. 25; Gaz. vol. 222; p. 1261.
Mitchell, James Y. (See Mitchell, John W., assignor.)
Mitchell, John W., assignor of one-half to J. V. Mitchell, Ellsworth, Pa. Internal-combustion engine. No. 1,169,556; Jan. 25; Gaz. vol. 222; p. 1220.
Mitterreiter, William, Paris, Tenn. Shoe-shining device. No. 1,168,409; Jan. 18; Gaz. vol. 222; p. 783.
Moffat, Walter A., assignor of one-half to Erie City Iron Works, Erie, Pa. Water-tube steam-boiler. No. 1,167,361; Jan. 4; Gaz. vol. 222; p. 332.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Folder for sewing-machines. No. 1,167,777; Jan. 11; Gaz. vol. 222; p. 527.
Mohr, Alwin A., Red Bud, Ill. Vehicle-tire. No. 1,168,022; Jan. 11; Gaz. vol. 222; p. 616.
Moir, James, and H. P. McFarland, Burlington, Iowa. Combination tie-plate and anticreeper. No. 1,167,200; Jan. 4; Gaz. vol. 222; p. 274.
Moll, Clinton, Olathe, Kans. Row-marker for corn-planters. No. 1,169,275; Jan. 25; Gaz. vol. 222; p. 1121.
Moloney, Thomas O. (See Neeley, George S., assignor.)
Moltrum, Nicholas A., Chicago, Ill. Milk-bottle holder. No. 1,168,535; Jan. 18; Gaz. vol. 222; p. 827.
Monks, James, Hartford, Conn. Slotting-machine. No. 1,166,621; Jan. 4; Gaz. vol. 222; p. 74.
Mono-Rail Syndicate, Frost & Donovan, trustee. (See English, Peter, assignor.)
Monroe, Henry, Sabetha, Kans. Grain drying and sterilizing device. No. 1,168,667; Jan. 18; Gaz. vol. 222; p. 876.
Montague Mailing Machinery Company. (See Lee, Ulysses G., assignor.)
Monteverde, Luigi. (See Lando and Monteverde.)
Monti, Eudo, Turin, Italy. Exhausting unfermented grapes or berries. No. 1,167,006; Jan. 4; Gaz. vol. 222; p. 206.
Mooney, Thomas, Douglaston, N. Y. Door check and closer. No. 1,167,778; Jan. 11; Gaz. vol. 222; p. 528.
Moore, Antoine, assignor of one-half to W. A. Moore, Wayne, Mich. Motor-vehicle-locking device. No. 1,169,557; Jan. 25; Gaz. vol. 222; p. 1220.
Moore, Charles F., and H. E. Brown, assignors to Bennington Scale Company, Bennington, Vt. Scoop-balance for weighing-scales. No. 1,166,775; Jan. 4; Gaz. vol. 222; p. 128.
Moore, Charles F., and E. L. Hunter, assignors to Bennington Scale Company, Bennington, Vt. Weighing-scale. No. 1,167,311; Jan. 4; Gaz. vol. 222; p. 312.
Moore, George W., Tulsa, Okla. Washing-machine. No. 1,168,096; Jan. 11; Gaz. vol. 222; p. 641.
Moore, Gilbert G., Bryn Mawr, Pa. Funnel. No. 1,166,776; Jan. 4; Gaz. vol. 222; p. 128.
Moore, James D., North Wilkesboro, N. C. Separator. No. 1,167,709; Jan. 11; Gaz. vol. 222; p. 505.
Moore, Philip W., Evanston, assignor to The P. & M. Co., Chicago, Ill. Anticreeper for rails. No. 1,167,587; Jan. 11; Gaz. vol. 222; p. 463.
Moore, William A. (See Moore, Antoine, assignor.)
Morden, Elizabeth A. and R. B., Jefferson, Iowa. Fence-post. No. 1,166,705; Jan. 4; Gaz. vol. 222; p. 105.
Morden, Robert B. (See Morden, Elizabeth A. and R. B.)
More, George, Richmond Hill, and E. W. Spies, New York, N. Y. Spraying device for liquid paint and the like. No. 1,169,558; Jan. 25; Gaz. vol. 222; p. 1220.
More-Jones Brass and Metal Company. (See Gearhart, Roy E., assignor.)
Morehouse, Earl H., Culver City, Cal. Blow-out patch. No. 1,166,622; Jan. 4; Gaz. vol. 222; p. 74.
Morén, Hugo G. A., New York, N. Y. Sanitary closet-seat cover. No. 1,167,201; Jan. 4; Gaz. vol. 222; p. 274.
Morén, Hugo K., assignor to Aktiebolaget Bofors-Gullspand, Bofors, Sweden. Fuse for high-explosive shells. No. 1,169,747; Jan. 25; Gaz. vol. 222; p. 1286.
Morey, C. B., and C. R. Craine, assignors to Larkin Co., Buffalo, N. Y. Apparatus for making catalytic material. No. 1,167,915; Jan. 11; Gaz. vol. 222; p. 577.
Morey, Edwin, assignor to Improved Paper Machinery Company, Nashua, N. H. Winding-machine. No. 1,168,734; Jan. 18; Gaz. vol. 222; p. 898.
Morey, Max, Blissfield, Mich. Device for breaking and locking rims. No. 1,168,097; Jan. 11; Gaz. vol. 222; p. 641.
Morgan, Bernard, Newport, R. I. Piston-ring-compressing device. No. 1,167,588; Jan. 11; Gaz. vol. 222; p. 464.
Morgan, Bernard, Newport, R. I., assignor to C. E. Norton, Gulfport, Conn. Leaf-spring-separating device. No. 1,168,735; Jan. 18; Gaz. vol. 222; p. 899.
Morgan, Harlan D., Hasbrouck Heights, N. J., assignor to Flushovalve Company, New York, N. Y. Control and shut-off valve. No. 1,168,668; Jan. 18; Gaz. vol. 222; p. 876.
Morgan, Thomas W., assignor to W. W. Marsh, Waterloo, Iowa. Electromagnet. No. 1,166,706; Jan. 4; Gaz. vol. 222; p. 105.
Morgan, William H., Pomeroy, Ohio. Razor-sharpener. No. 1,167,589; Jan. 11; Gaz. vol. 222; p. 464.
Morgens, William H. (See Newsom, Joseph N., assignor.)
Morgenthau, Jesse. (See Heisel, Reuben H., assignor.)
Morley, Albert, assignor to The Warren Featherbone Company, Three Oaks, Mich. Intermittent feed mechanism for sewing-machines. No. 1,168,536; Jan. 18; Gaz. vol. 222; p. 827.
Morley, Joseph D., Utica, N. Y., assignor to Scott & Williams, Incorporated, Camden, N. J. Union suit. No. 1,168,023; Jan. 11; Gaz. vol. 222; p. 616.
Morley, Michael J., Hayden, Ariz. Concentrating-table. No. 1,167,779; Jan. 11; Gaz. vol. 222; p. 528.
Morris, George W., Racine, Wis. Lubricating-system indicator. No. 1,168,953; Jan. 18; Gaz. vol. 222; p. 974.
Morris, John R. (See Smith, Warren J., assignor.)
Morris, Roy H., Los Angeles, Cal. Stop for talking-machines. No. 1,166,851; Jan. 4; Gaz. vol. 222; p. 153.
Morris, William L., Fort Wayne, Ind. Filter-valve. No. 1,169,418; Jan. 25; Gaz. vol. 222; p. 1169.
Morrow, Ephraim, Bakerstown, Pa. Fence-wire stretcher. No. 1,168,098; Jan. 11; Gaz. vol. 222; p. 642.
Morse, George H., Wheeling, W. Va., assignor to Mutual Electric and Machine Company. Mechanical movement for electrical switches and similar devices. No. 1,169,342; Jan. 25; Gaz. vol. 222; p. 1143.
Morse Twist Drill & Machine Company. (See Riley and O'Connor, assignors.)
Morse, William H. (See Durning, Robert E., assignor.)
Mortensen, Hans J., assignor of one-half to L. H. Brimhall, Spanish Fork, Utah. Combined sash holder and lock. No. 1,167,007; Jan. 4; Gaz. vol. 222; p. 207.
Morton & Andrews. (See Rogers, Henry J., assignor.)
Morton, Henry E., Muskegon, Mich. Milling attachment for shaper-rams. No. 1,167,647; Jan. 11; Gaz. vol. 222; p. 484.
Morton, Henry E., Muskegon, Mich. Boring attachment for shaper-rams. No. 1,167,648; Jan. 11; Gaz. vol. 222; p. 485.
Morton, Henry E., Muskegon, Mich. Traveling-head shaper. No. 1,167,649; Jan. 11; Gaz. vol. 222; p. 485.
Mortrude, Oliver C. (See Vance and Mortrude.)

Moses, Edmund Q., New York, N. Y., assignor of one-half to W. P. Hammond, Passaic, N. J. Connector. No. 1,167,780; Jan. 11; Gaz. vol. 222; p. 529.

Mosher, George W., Newport, Ky. Intermittent power-controlling device. No. 1,167,916; Jan. 11; Gaz. vol. 222; p. 578.

Mosher, James H., Rochester, N. Y. Fence-post. No. 1,169,343; Jan. 25; Gaz. vol. 222; p. 1144.

Mosier, Frank C., Pittston, Pa. Poultry drinking vessel. No. 1,166,534; Jan. 4; Gaz. vol. 222; p. 44.

Moss, Clarence B., administrator. (See Moss, John H.)

Moss, John H., deceased; C. B. Moss, administrator, Glen Ridge, N. J. Clutch. No. 1,167,590; Jan. 11; Gaz. vol. 222; p. 464.

Moss, Louise G. (See Huff, William D., assignor.)

Motor-Aid Company. (See Priest, Augustus F., assignor.)

Motor Specialties Company. (See Wiley, Nathaniel T., assignor.)

Motsinger, Newell H., Greensburg, Pa. Rotary gas-engine. No. 1,168,099; Jan. 11; Gaz. vol. 222; p. 642.

Mott, Abram C., Jr., Philadelphia, Pa. Coal and gas range construction. No. 1,167,203; Jan. 4; Gaz. vol. 222; p. 275.

Mott, Abram C., Jr., Philadelphia, Pa., and J. S. Van Buren, Albany, N. Y., assignors to Abram Cox Stove Company, Philadelphia, Pa. Range. No. 1,167,202; Jan. 4; Gaz. vol. 222; p. 275.

Moulton, Harley C., Dorchester, assignor to Arbetter Felling Machine Company, Boston, Mass. Combined needle-bar and thread-guide for sewing-machines. No. 1,167,834; Jan. 11; Gaz. vol. 222; p. 547.

Moyers, Guy C. (See Davis and Moyers.)

Mudd, Frank X., and W. P. Johnson, Chicago, Ill.; said Johnson assignor to said Mudd. Poultry-car. No. 1,168,821; Jan. 18; Gaz. vol. 222; p. 929.

Mueller, Frederick W. (See Shirley and Mueller.)

Mueller, Herman C., assignor to Evinrude Motor Company, Milwaukee, Wis. Magneto-armature. No. 1,169,179; Jan. 25; Gaz. vol. 222; p. 1089.

Mueller, Theodor M., assignor to Maximum Electrical Company, Detroit, Mich. Transmission mechanism. No. 1,169,419; Jan. 25; Gaz. vol. 222; p. 1170.

Mulford, Logan W., Narberth, Pa. Sidewalk, vault-light, floor-light, and skylight construction. No. 1,167,917; Jan. 11; Gaz. vol. 222; p. 578.

Mullen, Benjamin J. (See McMurray and Mullen.)

Müller, Fritz, Esslingen-on-the-Neckar, Germany. Press. No. 1,169,559; Jan. 25; Gaz. vol. 222; p. 1221.

Müller, Valentine, New York, N. Y. Filler. No. 1,167,094; Jan. 4; Gaz. vol. 222; p. 236.

Mulligan, Thomas F., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Register-actuating mechanism for meters and the like. No. 1,168,325; Jan. 18; Gaz. vol. 222; p. 753.

Mulligan, Thomas F., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Liquid-meter. No. 1,168,537; Jan. 18; Gaz. vol. 222; p. 828.

Multiplex Sales Register Company. (See Cave, Ulysses G., assignor.)

Mumford, Edgar H., deceased, and E. M. Huggins, Plainfield, N. J.; said Huggins assignor to Mumford Molding Machine Company, Chicago, Ill.; R. S. Mumford, executrix. Jolt ramming-machine. No. 1,167,511; Jan. 11; Gaz. vol. 222; p. 436.

Mumford Molding Machine Company. (See Mumford and Huggins, assignors.)

Mumford, Rose S., executrix. (See Mumford and Huggins.)

Mundwiller, Leo A., and H. A. Noedel, Berger, Mo. Rail-brace. No. 1,168,954; Jan. 18; Gaz. vol. 222; p. 975.

Munroe, William, Hood River, Oreg. Fruit-picking sack. No. 1,166,707; Jan. 4; Gaz. vol. 222; p. 106.

Munsinger, Charles L., Lima, Ohio. Underreamer. No. 1,166,535; Jan. 4; Gaz. vol. 222; p. 45.

Munsinger, Charles L., Lima, Ohio. Wire-spool clamp. No. 1,166,536; Jan. 4; Gaz. vol. 222; p. 45.

Murdick, Israel H., and C. J. Garey, Benton Harbor, Mich. Jar-wrench. No. 1,168,669; Jan. 18; Gaz. vol. 222; p. 877.

Murphy, Thomas J., Rochester, N. Y. Electricity-rectifier. No. 1,168,538; Jan. 18; Gaz. vol. 222; p. 828.

Murphy, Walter P., Chicago, Ill. Car-door. No. 1,168,539; Jan. 18; Gaz. vol. 222; p. 829.

Murray, George, Cambridgeport, Mass. Refrigerating apparatus. No. 1,167,591; Jan. 11; Gaz. vol. 222; p. 465.

Murray, Henry, Virginia, Ill. Animal-control device. No. 1,166,708; Jan. 4; Gaz. vol. 222; p. 106.

Murray, Joseph B., Brooklyn, N. Y. Electric heater. No. 1,167,095; Jan. 4; Gaz. vol. 222; p. 237.

Murray, Joseph B., Brooklyn, N. Y. Portable heating device. No. 1,169,560; Jan. 25; Gaz. vol. 222; p. 1221.

Murray, Stewart, *et al.* (See Banes, Walter D., assignor.)

Murray, William L., McKenzie, Tenn. Heating system. No. 1,167,008; Jan. 4; Gaz. vol. 222; p. 207.

Murrill, Paul I., New York, N. Y., assignor to Revere Rubber Company. Vulcanizing rubber, rubber-like, or similar materials. No. 1,166,777; Jan. 4; Gaz. vol. 222; p. 128.

Musselman, John F., Los Angeles, Cal. Chuck. No. 1,168,540; Jan. 18; Gaz. vol. 222; p. 829.

Mustee, Albert, Lakewood, Ohio. Leaf-spring lubricator. No. 1,167,918; Jan. 11; Gaz. vol. 222; p. 578.

Mutual Electric and Machine Company. (See Morse, George H., assignor.)

Myers, Elman B., New York, N. Y. Apparatus for wireless telephony. No. 1,168,541; Jan. 18; Gaz. vol. 222; p. 829.

Myers, Guy H., Arcadia, Ind. Fly-paper holder. No. 1,166,709; Jan. 4; Gaz. vol. 222; p. 106.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Selecting gear-shifting mechanism. No. 1,167,096; Jan. 4; Gaz. vol. 222; p. 237.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Gear-shifting device. No. 1,167,097; Jan. 4; Gaz. vol. 222; p. 237.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Change-speed-gearing indicator. No. 1,167,098; Jan. 4; Gaz. vol. 222; p. 238.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Shifter. No. 1,167,099; Jan. 4; Gaz. vol. 222; p. 238.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Interchangeable controlling mechanism. No. 1,167,100; Jan. 4; Gaz. vol. 222; p. 238.

Myers, Hubert A., assignor of one-half to A. A. Atwood, Toledo, Ohio. Power-controlling mechanism. No. 1,167,101; Jan. 4; Gaz. vol. 222; p. 239.

Myers, Louis E., Chicago, Ill. Phonograph system for revolving auditoriums. No. 1,166,852; Jan. 4; Gaz. vol. 222; p. 154.

Myers, Thomas M., assignor to Audiffren Refrigerating Machine Company, New York, N. Y. Ice-can. No. 1,166,623; Jan. 4; Gaz. vol. 222; p. 75.

Myers, William M., Hannibal, Mo. Soap-dish. No. 1,167,710; Jan. 11; Gaz. vol. 222; p. 505.

Myrick, George H., assignor to Capitol Electric Company, Chicago, Ill. Washing-machine. No. 1,169,420; Jan. 25; Gaz. vol. 222; p. 1170.

Nachtigall, Paul F., Fort Wayne, Ind. Carousel. No. 1,167,650; Jan. 11; Gaz. vol. 222; p. 486.

Naef, John, Dermott, Ark. Evaporator. No. 1,167,204; Jan. 4; Gaz. vol. 222; p. 275.

Nakata, Masahachi, Crystalsprings, Wash. Rotary fan. No. 1,167,711; Jan. 11; Gaz. vol. 222; p. 505.

Nall, Edward, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio. Vulcanizer. No. 1,167,009; Jan. 4; Gaz. vol. 222; p. 207.

Nall, Jabez. (See Mehl, Liebler, Nall, and Nobbe.)

Nathan, John, assignor of one-third to M. M. Gilchrist and one-third to J. C. Spaulding, Los Angeles, Cal. Safety-valve. No. 1,167,919; Jan. 11; Gaz. vol. 222; p. 578.

National Binding Machine Company. (See Anable, Frederick S., assignor.)

National Cash Register Company, The. (See Goldberg, Maximilian M., assignor.)

National Cash Register Company. (See Kettering, Charles F., assignor.)

National Casket Company. (See Wunderlich, Jacob H., assignor.)

National Equipment Company. (See Bausman, Alonzo L., assignor.)

National Granometer Company, The. (See Fassett, Francis K., assignor.)

National Malleable Castings Company, The. (See Krakau, Harry T., assignor.)

National Malleable Castings Company, The. (See Sherman, Clifton W., assignor.)

National Pneumatic Company. (See Gottschalk, Albert, assignor.)

National Pneumatic Company. (See Rowntree, Harold, assignor.)

National Supply Company, The. (See Wright, Clyde S., assignor.)

Natsch, Elizabeth H., New York, N. Y. Garbage-holder. No. 1,167,920; Jan. 11; Gaz. vol. 222; p. 579.

Natures Rival Company. (See Mayer, Clarence, assignor.)

Nauman, Lawrence. (See Zweighaft and Nauman.)

Navarrete, Ramón O., Manila, Philippine Islands. Motorcycle support. No. 1,168,955; Jan. 18; Gaz. vol. 222; p. 975.

Naylor, George H., Nevada, Mo. Pipe-clamp. No. 1,169,670; Jan. 25; Gaz. vol. 222; p. 1261.

Neal, Elmer E., assignor to The New Departure Manufacturing Company, Bristol, Conn. Ball-gaging machine. No. 1,166,537; Jan. 4; Gaz. vol. 222; p. 45.

Neal, Everett A., Muncie, Ind. Rake-cleaner. No. 1,168,100; Jan. 11; Gaz. vol. 222; p. 643.

Neason, John, *et al.* (See Griffith, Charles W., assignor.)

Neel, Allen A. P., Marshall, Va. Band-clutch. No. 1,167,010; Jan. 4; Gaz. vol. 222; p. 208.

Neeley, George S., assignor of one-half to T. O. Moloney, St. Louis, Mo. Commutator-brush. No. 1,166,923; Jan. 4; Gaz. vol. 222; p. 178.

Neelmeier, Wilhelm, H. Jordan, and K. Heusner, Leverkusen, near Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Blue disazo dye. No. 1,169,344; Jan. 25; Gaz. vol. 222; p. 1144.

Neerken, Adrian J. (See Hastings and Neerken.)

Nehring, Paul A., Sycamore, Ill. Insulated-wire-saturating machine. No. 1,168,542; Jan. 18; Gaz. vol. 222; p. 830.

Neidermeyer, Martin, Herndon, Kans. Mail-box. No. 1,166,472; Jan. 4; Gaz. vol. 222; p. 21.

Nelswander, Thornton R., Mesa, Ariz. Water-motor. No 1,168,101; Jan. 11; Gaz. vol. 222; p. 643.

Nelson, Anthony, St. Paul, Minn. Annunciator for checkers and similar games. No. 1,167,423; Jan. 11; Gaz. vol. 222; p. 407.

Nelson, Charles A., assignor to Savage Arms Company, Utica, N. Y. Firearm. No. 1,168,024; Jan. 11; Gaz. vol. 222; p. 616.

Nelson, Charles A., assignor to Savage Arms Company, Utica, N. Y. Sight for firearms. No. 1,168,025; Jan. 11; Gaz. vol. 222; p. 617.

Nelson, Charles A., assignor to Savage Arms Company, Utica, N. Y. Firearm. No. 1,168,026; Jan. 11; Gaz. vol. 222; p. 617.

Nelson, Edwin T., St. Olaf, Iowa. Hay-loader. No. 1,167,651; Jan. 11; Gaz. vol. 222; p. 486.

Nelson, George B., Redfield, Iowa. Portable grain-elevator. No. 1,168,898; Jan. 18; Gaz. vol. 222; p. 955.

Nelson, James D., Cincinnati, Ohio. Alarm device for valves. No. 1,166,624; Jan. 4; Gaz. vol. 222; p. 75.

Nelson, John, Stamford, Nebr. Clothes-line. No. 1,168,102; Jan. 11; Gaz. vol. 222; p. 643.

Nelson, Lyman E., Seattle, Wash. Adjustable lamp-support. No. 1,169,345; Jan. 25; Gaz. vol. 222; p. 1144.

Nelson, Nels P., Newberg, Oreg. Steering device. No. 1,168,956; Jan. 18; Gaz. vol. 222; p. 976.

Nelson, Oscar A., Mora, Minn. Buggy-shaft holder and antirattler. No. 1,166,710; Jan. 4; Gaz. vol. 222; p. 106.

Nelson, Peter. (See Nihlen, Arthur, assignor.)

Nelson, Peter, Larchmont Manor, N. Y. Holder for shoe-polish and other boxes. No. 1,167,102; Jan. 4; Gaz. vol. 222; p. 239.

Nelson, William J., Brandon, S. D. Door-lock. No. 1,167,011; Jan. 4; Gaz. vol. 222; p. 208.

Nesbit, Joseph N. G., Atlanta, Ga. Nut-lock. No. 1,166,538; Jan. 4; Gaz. vol. 222; p. 46.

Nessa, Nelius J., Sioux Falls, S. D. Indicating apparatus. No. 1,168,957; Jan. 18; Gaz. vol. 222; p. 976.

Neuhaus, Joseph, Forest Hills, N. Y. Hair ornament. No. 1,169,421; Jan. 25; Gaz. vol. 222; p. 1171.

Neumann, Karl A., and H. K. Andrews, Bridgeport, Conn. Test-indicator. No. 1,167,592; Jan. 11; Gaz. vol. 222; p. 465.

Neuteboom, Boudewijn B., Detroit, Mich. Clutch. No. 1,167,012; Jan. 4; Gaz. vol. 222; p. 208.

Neuteboom, Boudewijn B., Detroit, Mich. Change-speed gearing. No. 1,168,899; Jan. 18; Gaz. vol. 222; p. 955.

Nevill, David J., assignor to The Stearns-Roger Manufacturing Company, Denver, Colo. Construction of tube-mills and linings therefor. No. 1,169,276; Jan. 25; Gaz. vol. 222; p. 1122.

Neville, Asa G., Wellsburg, W. Va. Steering-wheel for automobiles. No. 1,168,958; Jan. 18; Gaz. vol. 222; p. 976.

New Departure Manufacturing Company, The. (See Neal, Elmer E., assignor.)

New Diamond Polishing Tool Company of America. (See Loesser, Ernest, assignor.)

New Jersey Patent Company. (See Aylsworth, Jonas W., assignor.)

New Jersey Patent Company. (See Fairweather, Frederick H., assignor.)

New Jersey Patent Company. (See Gall, Adolph F., assignor.)

New Jersey Patent Company. (See Holland, Newman H., assignor.)

New Jersey Patent Company. (See Holland, Walter E., assignor.)

New-Metals and Process Company. (See Gleason, Edward D., assignor.)

New York Coil Company. (See Rhoades, Lewis T., assignor.)

Newark Spring Mattress Company, The. (See Holden, George, assignor.)

Newell, Atwood M., Irwin, Pa., assignor to U. S. Slicing Machine Company, Chicago, Ill. Meat and bone cutting machine. No. 1,168,822; Jan. 18; Gaz. vol. 222; p. 929.

Newhall, Henry B., Jr., Plainfield, N. J. Tool-holding floor-stand. No. 1,167,921; Jan. 11; Gaz. vol. 222; p. 579.

Newhouse, Ray C., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Method of and apparatus for separating solids from gas. No. 1,168,543; Jan. 18; Gaz. vol. 222; p. 830.

Newlin, Freeman H., Huntingdon, assignor to J. W. Ivory, Philadelphia, Pa. Rubber-dam clamp. No. 1,166,924; Jan. 4; Gaz. vol. 222; p. 178.

Newlin, Harvey N., New York, N. Y. Coffee and tea strainer. No. 1,168,544; Jan. 18; Gaz. vol. 222; p. 830.

Newman, Alexander M. (See Seelau, Franz, assignor.)

Newsom, Joseph N., assignor, by mesne assignments, to W. H. Morgens, St. Louis, Mo. Valve for pneumatic tires. No. 1,169,277; Jan. 25; Gaz. vol. 222; p. 1122.

Newton, Albert E., and F. K. Hendrickson, Worcester, Mass., assignors to Reed-Prentice Company. Drop-table mechanism for milling-machines. No. 1,169,180; Jan. 25; Gaz. vol. 222; p. 1090.

Newton, Edwin A. (See Slaybaugh, James, assignor.)

Nicholls, William, Coleraine, Minn. Car-door-operating device. No. 1,169,278; Jan. 25; Gaz. vol. 222; p. 1122.

Nichols Copper Company. (See Stout, Harry H., assignor.)

Nichols, Fredrick Y., Chicago, Ill. Valve. No. 1,169,561; Jan. 25; Gaz. vol. 222; p. 1221.

Nichols, John S., Batesville, Ark. Brake-block holder. No. 1,169,181; Jan. 25; Gaz. vol. 222; p. 1090.

Nicholson, Ezra, Cleveland, Ohio. Wave-motor. No. 1,166,473; Jan. 4; Gaz. vol. 222; p. 21.

Nicholson, John H., assignor of one-fifth to S. E. Duff, Pittsburgh, Pa. Metal barrel and the like. No. 1,168,545; Jan. 18; Gaz. vol. 222; p. 831.

Nicholson, Naomi E., Los Angeles, Cal. Twine-cutter. No. 1,169,052; Jan. 18; Gaz. vol. 222; p. 1006.

Nicolson, Alexander M., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Thermionic translating device. No. 1,169,182; Jan. 25; Gaz. vol. 222; p. 1090.

Nicolson, Alexander M., Tarrytown, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Thermionic repeater. No. 1,169,422; Jan. 25; Gaz. vol. 222; p. 1171.

Nielsen, Lauritz F., assignor to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn. Ink-distributing roller. No. 1,167,652; Jan. 11; Gaz. vol. 222; p. 486.

Nielsen, Lauritz F., assignor to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn. Front-feed guide for printing-presses. No. 1,167,653; Jan. 11; Gaz. vol. 222; p. 487.

Nielsen, Niels J., Aarhus, Denmark. Method and means for the treatment of fluids containing fat globules, casein, and sugar. No. 1,168,823; Jan. 18; Gaz. vol. 222; p. 930.

Nihlen, Arthur, New York, assignor of one-half to P. Nelson, Yonkers, N. Y. Mitering-clamp. No. 1,169,671; Jan. 25; Gaz. vol. 222; p. 1261.

Niles-Bement-Pond Company. (See Keefer, Samuel H., assignor.)

Niles, Charles A., *et al.* (See Cosseboom, Robert J., assignor.)

Nirdlinger, Max, Pittsburgh, Pa. Drinking vessel. No. 1,168,027; Jan. 11; Gaz. vol. 222; p. 617.

Nobbe, Edward J. (See Mehl, Liebler, Nall, and Nobbe.)

Nobel's Explosives Company. (See Corrie and Ashcroft, assignors.)

Noble, Glenn S. (See Von Hoffmann, George E., assignor.)

Noble, William. (See Treglown and Noble.)

Noedel, Herbert A. (See Mundwiller and Noedel.)

Noel, Eli, Kansas City, Mo. Device for driving front wheels of automobiles. No. 1,167,424; Jan. 11; Gaz. vol. 222; p. 408.

Noiseless Typewriter Company, The. (See Anderson, Nils H., assignor.)

Nolan, John R., Yonkers, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Book-matches. No. 1,168,900; Jan. 18; Gaz. vol. 222; p. 956.

Nolan, John R., Yonkers, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Treating match-splints. No. 1,168,901; Jan. 18; Gaz. vol. 222; p. 956.

Nolan, Michael J., Chicago, Ill. Heel-pad for shoes. No. 1,167,103; Jan. 4; Gaz. vol. 222; p. 239.

Noland, William C. (See Richardson, Henry C., assignor.)

Nordstrom, Charles, and F. H. Schwaibold, Milwaukee, Wis. Lathe taper attachment. No. 1,168,326; Jan. 18; Gaz. vol. 222; p. 754.

Norgordt, Sam, *et al.* (See Andersen, Christian C., assignor.)

Norma Compagnié Gesellschaft mit beschrankter Haftung. (See Hirth, Albert, assignor.)

Norma Compagnie Gesellschaft mit beschrankter Haftung. (See Kirmer, Josef, assignor.)

Norris, Dudley H., San Francisco, Cal. Apparatus for separating the metallic and rocky constituents of ores. No. 1,167,835; Jan. 11; Gaz. vol. 222; p. 548.

North Bro's M'f'g. Co. (See Leopold, George O., assignor.)

Norton, Clarence E. (See Morgan, Bernard, assignor.)

Norton, Edmund A., Niagara Falls, N. Y. Auto transmission. No. 1,168,103; Jan. 11; Gaz. vol. 222; p. 643.

Norton, George F., Fargo, N. D. Valve-grinding tool. No. 1,167,312; Jan. 4; Gaz. vol. 222; p. 312.

Norwich Automatic Feeder Company, The. (See Enos, Frank, Jr., assignor.)

Nothstine, Arthur C., Pittsburgh, Pa. Bottle cap and stopper. No. 1,168,410; Jan. 18; Gaz. vol. 222; p. 783.

Novák, Joseph A. (See Seprec and Novák.)

Novotny, James, Union Center, Wis. Combined brake and load-binder. No. 1,168,104; Jan. 11; Gaz. vol. 222; p. 644.

Nuding, William H., Brownboro, Oreg. Combination garment hanger and creaser. No. 1,169,423; Jan. 25; Gaz. vol. 222; p. 1171.

Nunamaker, James R., Hood River, Oreg. Fruit-grading machine. No. 1,167,512; Jan. 11; Gaz. vol. 222; p. 436.

Nyberg, Frank R., assignor of one-half to G. J. Garvin, Lamar, Colo. Wheel for traction-engines. No. 1,167,205; Jan. 4; Gaz. vol. 222; p. 276.

Nyberg, Nelson, Miami, Ariz. Blower for signaling devices. No. 1,168,105; Jan. 11; Gaz. vol. 222; p. 644.

Nye, Harry E., Akron, Ohio. Collapsible core. No. 1,166,625; Jan. 4; Gaz. vol. 222; p. 76.

Nylander, David, and R. Högfeldt, Strömsfors, Sweden. Paper or like box machine. No. 1,166,778; Jan. 4; Gaz. vol. 222; p. 128.

O'Brien, Andrew D. (See Ost, Frederick A., assignor.)

O'Brien, John F., assignor to The Piqua Machine and Boiler Co., Piqua, Ohio. Malt-turning machine. No. 1,167,362; Jan. 4; Gaz. vol. 222; p. 332.

O'Brien, John O. (See Thornton, John E., assignor.)

O'Brien, John W., *et al.* (See Crecelius, Louis J., assignor.)
O'Brien, William R., Peosta, Iowa. Veterinary surgical instrument. No. 1,167,014; Jan. 4; Gaz. vol. 222; p. 209.
O'Connor, Charles A. (See Riley and O'Connor.)
O'Donnell, Lewis G., Coscob, Conn. Air-pressure lubricator. No. 1,167,593; Jan. 11; Gaz. vol. 222; p. 465.
O'Donnell, Thomas, Ironwood, Mich. Electric filament-lamp. No. 1,168,411; Jan. 18; Gaz. vol. 222; p. 783.
O'Donnell, Thomas, Ironwood, Mich. Electric cluster-lamp. No. 1,169,346; Jan. 25; Gaz. vol. 222; p. 1145.
O'Neill, James F., assignor to Michigan Stamping Company, Detroit, Mich. Automobile-hood. No. 1,166,926; Jan. 4; Gaz. vol. 222; p. 179.
Oakes, Lucian R., Tipton, Ind. Poultry-brooder. No. 1,167,013; Jan. 4; Gaz. vol. 222; p. 209.
Oakes, Lucian R., assignor to The Oakes Manufacturing Company, Tipton, Ind. Poultry-feeder. No. 1,168,902; Jan. 18; Gaz. vol. 222; p. 956.
Oakes Manufacturing Company, The. (See Oakes, Lucian R., assignor.)
Ober, Ernest I., *et al.*, administrators. (See Ober, Frank S.)
Ober, Frank S., deceased, New York, N. Y., J. R. and E. I. Ober, administrators. Apparatus for recording and reproducing sound. No. 1,166,925; Jan. 4; Gaz. vol. 222; p. 178.
Ober, Josephine R., *et al.*, administrators. (See Ober, Frank S.)
Odin, Charles F., assignor of one-half to J. R. Spillan, Elmira, N. Y. Curve-scriber. No. 1,168,546; Jan. 18; Gaz. vol. 222; p. 831.
Oebbecke, M. F., *et al.* (See Banes, Walter D., assignor.)
Oestreich, Benjamin C., Bellingham, Minn. Combined egg tray and turner. No. 1,166,626; Jan. 4; Gaz. vol. 222; p. 76.
Oestreich, John, North Platte, Nebr. Automatic lock. No. 1,168,903; Jan. 18; Gaz. vol. 222; p. 957.
Offutt, John W., Ellwood City, Pa. Golf-club. No. 1,167,922; Jan. 11; Gaz. vol. 222; p. 580.
Ogden, Frank L., Gower, Mo. Farm-tractor. No. 1,169,732; Jan. 25; Gaz. vol. 222; p. 1281.
Ogden, John B., Lynchburg, Va. Cabinet for sound-records. No. 1,167,206; Jan. 4; Gaz. vol. 222; p. 276.
Ogden, J. Edward. (See Kennedy, Joseph, assignor.)
Ohio Brass Company, The. (See Gierding, Charles E., assignor.)
Ohio Brass Company, The (See Kempton, Willard H., assignor.)
Ohio Match Company, The. (See Weaver and Welker, assignors.)
Ohio Match Company, The. (See Young and Welker, assignors.)
Ohlsson, Carl J. F., Stockholm, Sweden. Magical selling-kiosk. No. 1,169,347; Jan. 25; Gaz. vol. 222; p. 1145.
Ohmer, Wilfred L., and J. E. McAllister, assignors to The Recording and Computing Machines Company, Dayton, Ohio. Indicator. No. 1,169,424; Jan. 25; Gaz. vol. 222; p. 1171.
Ohnstrand, Enoch, assignor to U. S. Steel Furniture Company, Syracuse, N. Y. Top for furniture. No. 1,168,106; Jan. 11; Gaz. vol. 222; p. 644.
Oil Well Supply Company. (See Greve, Edgar E., assignor.)
Oishei, Charles, assignor of one-half to H. V. Conover, Buffalo, N. Y. Seal-lock. No. 1,166,779; Jan. 4; Gaz. vol. 222; p. 129.
Okland, Olof, Detroit, Minn. Currycomb. No. 1,167,781; Jan. 11; Gaz. vol. 222; p. 529.
Olaneta, Harold. (See Wilhelm and Olaneta.)
Oldham, Arthur W., Ada, Ohio. Sandpaper-holder. No. 1,167,207; Jan. 4; Gaz. vol. 222; p. 277.
Oldham, George T., assignor of one-half to G. S. Elliott, New York, N. Y. Detachable combination-lock. No. 1,168,107; Jan. 11; Gaz. vol. 222; p. 645.
Oliver Chilled Plow Works. (See Altgelt, Rudolph J., assignor.)
Oliver Chilled Plow Works. (See Heylman, Edward M., assignor.)
Oliver, Doctor F., Oakland, Cal. Safety-clip for leaf-springs. No. 1,167,513; Jan. 11; Gaz. vol. 222; p. 437.
Oliver, Earle N. (See Crompton and Oliver.)
Oliver, Ellis S., Newark, N. J. Adapter-stylus for phonographs. No. 1,168,412; Jan. 18; Gaz. vol. 222; p. 783.
Olsen, August W., Portland, Oreg. Pneumatic flange-oiler for car-wheels. No. 1,167,514; Jan. 11; Gaz. vol. 222; p. 437.
Olson, Alfred A., Riverside, Ill. Boiler attachment. No. 1,166,539; Jan. 4; Gaz. vol. 222; p. 46.
Olson, Ed W. (See Anderson and Olson.)
Olson, Ernst, Ossining, N. Y. Brush. No. 1,167,923; Jan. 11; Gaz. vol. 222; p. 580.
Olsson, Axel H., and H. B. M. Pleijel, Stockholm, Sweden. Self-induction coils for duplex telephone connections according to the Pupin system. No. 1,167,654; Jan. 11; Gaz. vol. 222; p. 487.
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Looper mechanism for sewing-machines. No. 1,167,515; Jan. 11; Gaz. vol. 222; p. 438.
Oppelt, William, Metuchen, N. J., assignor of one-third to H. K. Gamber, Harrisburg, Pa. Insulator. No. 1,167,208; Jan. 4; Gaz. vol. 222; p. 277.
Orans, Louis A., New York, N. Y. Sensitized film for process printing. No. 1,166,540; Jan. 4; Gaz. vol. 222; p. 46.
Ord, Lewis C., Montreal, Quebec, Canada, assignor, by mesne assignments, to Ratchet Brake Company, New York, N. Y. Brake. No. 1,167,209; Jan. 4; Gaz. vol. 222; p. 277.
Orndoff, Oscar F., Council Bluffs, Iowa. Furrowing attachment. No. 1,169,183; Jan. 25; Gaz. vol. 222; p. 1090.
Orr, Stanley, Tarpon Springs, Fla. Rotary shaft or rod packing. No. 1,167,210; Jan. 4; Gaz. vol. 222; p. 278.
Osborne, Guy W., Massillon, Ohio. Riveting-machine. No. 1,166,711; Jan. 4; Gaz. vol. 222; p. 107.
Osgood, Samuel W., Chicago, Ill. Treating mineral substances. No. 1,169,506; Jan. 25; Gaz. vol. 222; p. 1202.
Osgood, Samuel W., assignor of one-half to A. J. Jewell, Chicago, Ill. Recovering flue-dust. No. 1,166,927; Jan. 4; Gaz. vol. 222; p. 179.
Ost, Frederick A., Minneapolis, assignor to A. D. O'Brien, Graceville, Minn. Combustion-engine. No. 1,167,313; Jan. 4; Gaz. vol. 222; p. 313.
Osterhoudt, Rodney B., Kingston, N. Y. Guard for wind-shields and the like. No. 1,168,108; Jan. 11; Gaz. vol. 222; p. 645.
Osterlind Printing Press and Manufacturing Company. (See Nielsen, Lauritz F., assignor.)
Osterlind Printing Press and Manufacturing Company. (See Smith and Hammerquist, assignors.)
Ostrom, Freeland W., Newark, N. J. Overshoe. No. 1,169,562; Jan. 25; Gaz. vol. 222; p. 1222.
Ostrom, John S., San Francisco, Cal. Sound-box. No. 1,166,627; Jan. 4; Gaz. vol. 222; p. 76.
Otero, Richard, Ossining, N. Y. Lawn-mower. No. 1,166,474; Jan. 4; Gaz. vol. 222; p. 22.
Otis Elevator Company. (See Handy, Arthur E.)
Otis Elevator Company. (See Lutz, William D., assignor.)
Otis Elevator Company. (See Strang, Walter C., assignor.)
Otis Elevator Company. (See Trezise, Arthur R., Sr., assignor.)
Ott, Andreas, Oberkassel-Siegkreis, Germany. Stereotype-matrix machine. No. 1,169,279; Jan. 25; Gaz. vol. 222; p. 1122.
Ott, Harvey N., assignor to Spencer Lens Company, Buffalo, N. Y. Microscope. No. 1,167,425; Jan. 11; Gaz. vol. 222; p. 408.
Ott, John P., Philadelphia, Pa. Furnace-casing. No. 1,167,104; Jan. 4; Gaz. vol. 222; p. 240.
Ott, John P., Philadelphia, Pa. Furnace. No. 1,167,105; Jan. 4; Gaz. vol. 222; p. 240.
Otterson, George W., Seattle, Wash. Apparatus for removing sediment from sumps and catch-basins. No. 1,166,712; Jan. 4; Gaz. vol. 222; p. 107.
Otterson, George W., Seattle, Wash. Settling-tank. No. 1,166,713; Jan. 4; Gaz. vol. 222; p. 107.
Ousley, George W., San Francisco, Cal. Wiper for automobile wind-shields. No. 1,169,280; Jan. 25; Gaz. vol. 222; p. 1123.
Overbury, Frederick C., Montclair, N. J. Roof. No. 1,166,541; Jan. 4; Gaz. vol. 222; p. 47.
Overgaard, Christ. (See Christensen and Overgaard.)
Overholt, Edward H., Galesburg, Ill. Engine-starter. No. 1,168,221; Jan. 11; Gaz. vol. 222; p. 682.
Overley, William A. (See Keating and Overley.)
Owen, Michael, Detroit, Mich. Feed-water regulator. No. 1,169,563; Jan. 25; Gaz. vol. 222; p. 1222.
Owens, Roy, assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Extension or party-line telephone. No. 1,168,904; Jan. 18; Gaz. vol. 222; p. 957.
Oxweld Acetylene Company. (See Winans, Milton E., assignor.)
P. & M. Co., The. (See Moore, Philip W., assignor.)
P. Derby & Company. (See Derby, Ashton P., assignor.)
P. Derby & Company. (See Derby and Dargie, assignors.)
Paaske, Peter O., *et al.* (See Andersen, Christian C., assignor.)
Packard Motor Car Company. (See Cowles, Edward P., assignor.)
Packard Motor Car Company. (See Garvey, Henry A., assignor.)
Packard Motor Car Company. (See Huff, Russell, assignor.)
Packard Motor Car Company. (See McKinnon, Donald J., assignor.)
Packer, Eben R., Wilmette, Ill., assignor to Q & C Company, New York, N. Y. Adjustable derail. No. 1,167,924; Jan. 11; Gaz. vol. 222; p. 580.
Padgett, James L., Mize, assignor of one-fifth to W. C. Currie, Raleigh, Miss. Whiffletree. No. 1,167,211; Jan. 4; Gaz. vol. 222; p. 278.
Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,169,184; Jan. 25; Gaz. vol. 222; p. 1091.
Page, Albert E. (See Scott and Page.)
Pain, Robert W. (See Richmond and Pain.)
Paine, Findley R., Albany, assignor to Standard Oil Company of New York, New York, N. Y. Nozzle. No. 1,167,712; Jan. 11; Gaz. vol. 222; p. 506.
Printing Machine Company. (See Leatherbee, Clifton F., assignor.)
Palm, Victor H., Butler, Pa. Combined gas and air engine. No. 1,169,672; Jan. 25; Gaz. vol. 222; p. 1261.

Palmer, Isaac E., deceased; T. and N. T. Palmer, Middletown, Conn., administrators. Washing or rinsing machine for textile material. No. 1,168,736; Jan. 18; Gaz. vol. 222; p. 899.
Palmer, Lyndon C., assignor to F. N. Burt Company, Limited, Buffalo, N. Y. Labeling-machine. No. 1,166,780; Jan. 4; Gaz. vol. 222; p. 129.
Palmer, Nathalie T., *et al.*, administratora. (See Palmer, Isaac E.)
Palmer, Oliver M., Montclair, N. J. Golf-club. No. 1,167,106; Jan. 4; Gaz. vol. 222; p. 240.
Palmer, Townsend, *et al.*, administrators. (See Palmer, Isaac E.)
Pancoast, Richard M., Camden, N. J. Window-ventilator. No. 1,168,959; Jan. 18; Gaz. vol. 222; p. 977.
Pangborn, Warren S. (See Lallement, Frank J., assignor.)
Papec Machine Company. (See Bullock and Billings, assignor.)
Paquet, Pierre J., Jeannette, Pa. Drawing-bait for window-glass machinery. No. 1,168,960; Jan. 18; Gaz. vol. 222; p. 977.
Paquette, Herman A., Chicago, Ill. Cover for cooking utensils. No. 1,166,475; Jan. 4; Gaz. vol. 222; p. 22.
Paramount Glass Percolator Mfg. Co. (See Darling, Richard S., assignor.)
Paramount Hosiery Form Drying Company. (See Tengdin, Charles G., assignor.)
Paramount Knitting Company. (See Randall, Edison E., assignor.)
Paridon, Michael, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Box-tray carrier for match-packing machines. No. 1,168,905; Jan. 18; Gaz. vol. 222; p. 957.
Paridon, Michael, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Machine for packing matches. No. 1,168,906; Jan. 18; Gaz. vol. 222; p. 958.
Park, William R., Taunton, Mass., assignor to United Injector Company, New York, N. Y. Carbureter. No. 1,167,426; Jan. 11; Gaz. vol. 222; p. 408.
Parker, Clark W. (See Allen, William H., assignor.)
Parker, Morgan, Newport, R. I. Detachable-blade knife. (Reissue.) No. 14,054; Jan. 25; Gaz. vol. 222; p. 1292.
Parker, Robert M., New York, assignor to Brooklyn Cooperage Co., Brooklyn, N. Y. Metallic hoop for barrels, &c. No. 1,169,281; Jan. 25; Gaz. vol. 222; p. 1123.
Parkes, Bertrand A., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa. Machine for inverting and bundling hosiery. No. 1,169,092; Jan. 18; Gaz. vol. 222; p. 1023.
Parks, Dennis, St. Louis, Mo. Machine for cutting pieced lifts and for building heel-blanks therefrom. No. 1,167,107; Jan. 4; Gaz. vol. 222; p. 241.
Parrish, Byron B., Mineral Wells, Tex. Pistol-holster. No. 1,166,781; Jan. 4; Gaz. vol. 222; p. 130.
Parrish, John E., Richmond, Va. Tire. No. 1,168,961; Jan. 18; Gaz. vol. 222; p. 977.
Parrish, Washington B., Kenbridge, Va. Hand fertilizer and seed broadcast distributer. No. 1,166,476; Jan. 4; Gaz. vol. 222; p. 22.
Parrish, Washington B., Kenbridge, Va. Seed and fertilizer distributer. No. 1,166,477; Jan. 4; Gaz. vol. 222; p. 23.
Parsons, Elmer R., Omaha, Nebr. Panel-operator for player-pianos. No. 1,168,109; Jan. 11; Gaz. vol. 222; p. 645.
Parsons, Walter L., Fort Bidwell, Cal. Revolving fish-screen. No. 1,166,628; Jan. 4; Gaz. vol. 222; p. 76.
Passig, Hans, Lake Benton, Minn. Game apparatus. No. 1,167,655; Jan. 11; Gaz. vol. 222; p. 487.
Pasurka, Charles J., Chicago, Ill. Twine-holder. No. 1,169,185; Jan. 25; Gaz. vol. 222; p. 1091.
Patten, William R., New York, N. Y. Pulley. No. 1,168,907; Jan. 18; Gaz. vol. 222; p. 958.
Patterson, Simon H., Santo, Tex. Lamp-burner. No. 1,167,212; Jan. 4; Gaz. vol. 222; p. 278.
Patterson, William L., assignor to Bausch & Lomb Optical Co., Rochester, N. Y. Projection apparatus. No. 1,169,186; Jan. 25; Gaz. vol. 222; p. 1091.
Paul, Wesley A., Moline, Ill., assignor to Deere & Company, Ottumwa, Iowa. Lever mechanism. No. 1,168,824; Jan. 18; Gaz. vol. 222; p. 930.
Paulson, Martin A., and C. Frederickson, Rice Lake, Wis. Safety-clutch for feed-cutters. No. 1,168,110; Jan. 11; Gaz. vol. 222; p. 645.
Pavesi, Ugo, and G. Tolotti, Turin, Italy, assignors, by mesne assignments, to A. M. Leoni Manufacturing Company, Philadelphia, Pa. Motor-plow. No. 1,169,564; Jan. 25; Gaz. vol. 222; p. 1222.
Pay-As-You-Enter Car Corporation, The. (See Remelius, Charles A., assignor.)
Pearce, George W., Philadelphia, Pa. Heat regulator and distributer. No. 1,167,516; Jan. 11; Gaz. vol. 222; p. 438.
Pearl, Allen S., Maywood, and C. A. Jansen, assignors to Delta-Star Electric Company, Chicago, Ill. Plug switching device. No. 1,169,187; Jan. 25; Gaz. vol. 222; p. 1092.
Pearlman, Martin M., Clarksburg, W. Va. Apparatus for the extraction of zinc. No. 1,167,925; Jan. 11; Gaz. vol. 222; p. 581.
Pearson, Walter, Whitman, Mass. Mercury seal. No. 1,167,517; Jan. 11; Gaz. vol. 222; p. 438.
Pearson, William, Spokane, Wash. Fender. No. 1,169,348; Jan. 25; Gaz. vol. 222; p. 1145.
Pease, William C., Marietta, Ohio. Copper alloy. No. 1,168,962; Jan. 18; Gaz. vol. 222; p. 978.
Peche, Kuno. (See Grafe and Peche.)
Peck, Arthur E., Minneapolis, Minn. Golf-ball-addressing device. No. 1,169,188; Jan. 25; Gaz. vol. 222; p. 1092.
Peck, Elmer E., Hugo, Okla. Suspender attachment. No. 1,166,478; Jan. 4; Gaz. vol. 222; p. 23.
Peck, Ernest J. (See Huffman and Peck.)
Peck, John E., Logan, W. Va. Hose-mending device. No. 1,168,222; Jan. 11; Gaz. vol. 222; p. 682.
Peck, Ralph, Vicksburg, Miss. Seed-harvesting attachment for mowing-machines. No. 1,167,213; Jan. 4; Gaz. vol. 222; p. 278.
Peck, Samuel. (See Wakfer, William H., assignor.)
Pedley, William E., Riverside, Cal. Preventing erosion of river-banks. No. 1,168,547; Jan. 18; Gaz. vol. 222; p. 831.
Pedograde Company Limited (See Church, Alfred H., assignor.)
Peebles, Edwin L. K., Clever, Mo. Beet-harvester. No. 1,169,673; Jan. 25; Gaz. vol. 222; p. 1262.
Peightel, Howard M., Crafton, assignor to Des Moines Bridge and Iron Works, Pittsburgh, Pa. Loading and unloading apparatus. No. 1,168,825; Jan. 18; Gaz. vol. 222; p. 930.
Pein, Henry, Jersey City, N. J., assignor, by mesne assignments, to Centadrink-Filters Company, Inc. Liquid-measuring device. No. 1,168,327; Jan. 18; Gaz. vol. 222; p. 754.
Peirce, Charles L., Jr., Pittsburgh, Pa. Insulator-supporting bracket. No. 1,166,928; Jan. 4; Gaz. vol. 222; p. 179.
Peiseler, Kuno, Frankfort-on-the-Main, Germany, assignor to Thomson Electric Welding Company, Lynn, Mass. Chain or ring manufacture. No. 1,168,328; Jan. 18; Gaz. vol. 222; p. 754.
Pelton, Charles H., assignor to The Thomas Manufacturing Company, Springfield, Ohio. Gearing. No. 1,168,737; Jan. 18; Gaz. vol. 222; p. 900.
Pelton, Chilton T., Fallon, Nev. Transplanter. No. 1,169,674; Jan. 25; Gaz. vol. 222; p. 1262.
Pelton, George M., assignor to The Filer & Stowell Company, Milwaukee, Wis. Friction-gearing. No. 1,169,282; Jan. 25; Gaz. vol. 222; p. 1123.
Pelton, Leander, Des Moines, Iowa. Broom-sewing machine. No. 1,167,713; Jan. 11; Gaz. vol. 222; p. 506.
Pelton Water Wheel Company. (See Doble, William A., assignor.)
Pembroke, Charles J., Rochester, N. Y. Opaque stencil-paper and making it. No. 1,168,223; Jan. 11; Gaz. vol. 222; p. 682.
Peninsular Stove Company. (See Lane and Schenk, assignors.)
Penny, George C. (See Penny, Gilbert A. and G. C.)
Penny, Gilbert A. and G. C., Good Ground, N. Y. Steering-wheel for boats. No. 1,167,108; Jan. 4; Gaz. vol. 222; p. 241.
Pepper, Chester L., Chelsea, Mass. Belt-pole. No. 1,169,565; Jan. 25; Gaz. vol. 222; p. 1223.
Peppers, Jerry C., Beaumont, Tex. Rail-joint. No. 1,167,109; Jan. 4; Gaz. vol. 222; p. 242.
Perkins, Harry J., Grand Rapids, Mich. Reverse-gear mechanism. No. 1,166,479; Jan. 4; Gaz. vol. 222; p. 23.
Perkins, Harry J., Grand Rapids, Mich. Reverse-gear mechanism. No. 1,166,480; Jan. 4; Gaz. vol. 222; p. 24.
Perkins, Harry J., Grand Rapids, Mich. Reverse-gear mechanism. No. 1,169,425; Jan. 25; Gaz. vol. 222; p. 1172.
Perl, Johann. (See Zamara and Perl.)
Perlman, David, New York, N. Y. Cloth-cutting machine. No. 1,168,738; Jan. 18; Gaz. vol. 222; p. 900.
Perri, Angelo, Groveland, assignor to Reece Shoe Machinery Company, Boston, Mass. Lasting-machine. No. 1,168,963; Jan. 18; Gaz. vol. 222; p. 978.
Perse, Steve, and R. Mausser, East Helena, Mont. Match-box. No. 1,168,670; Jan. 18; Gaz. vol. 222; p. 877.
Peschko, Rudolph J., York, Pa. Precious-metal alloy. No. 1,169,753; Jan. 25; Gaz. vol. 222; p. 1288.
Peter Smith Heater Company. (See Williams, Harry S., assignor.)
Peterick, Joseph C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Floor-hinge for doors. No. 1,169,283; Jan. 25; Gaz. vol. 222; p. 1124.
Petersen, Hans O., Newport, R. I. Delivery apparatus. No. 1,167,214; Jan. 4; Gaz. vol. 222; p. 279.
Peterson, Johann G., assignor to Manhattan Electrical Supply Company, Jersey City, N. J. Electric lantern. No. 1,168,826; Jan. 18; Gaz. vol. 222; p. 931.
Peterson, Walter E., San Diego, Cal. Combined saw set and clamp. No. 1,166,929; Jan. 4; Gaz. vol. 222; p. 179.
Petinot, Napoleon, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing iron sulfid. No. 1,169,093; Jan. 18; Gaz. vol. 222; p. 1023.
Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Matrix. No. 1,167,427; Jan. 11; Gaz. vol. 222; p. 409.
Petrie, John A., Westville, Conn. Telescopic combined portable flash-light and writing-pad. No. 1,166,930; Jan. 4; Gaz. vol. 222; p. 180.
Petrillo, Joseph, Meriden, assignor to The Ideal Clock Manufacturing Company, Waterbury, Conn. Clock. No. 1,166,853; Jan. 4; Gaz. vol. 222; p. 154.

Petterson, Clarence A., San Anselmo, assignor to P. I. Jacoby, San Francisco, Cal. Carton-wrapping machine. No. 1,166,782; Jan. 4; Gaz. vol. 222; p. 130.

Pfalzgraf, Charles F., Baltimore, Md. Bail and bail-ear for buckets. No. 1,167,926; Jan. 11; Gaz. vol. 222; p. 581.

Pfalzgraf, Charles F., Baltimore, Md. Sieve. No. 1,167,927; Jan. 11; Gaz. vol. 222; p. 581.

Pfau, Arnold, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Relief mechanism for hydraulic turbines. No. 1,167,714; Jan. 11; Gaz. vol. 222; p. 506.

Pfeffer, Otto. (See Merling, Chrzescluski, and Pfeffer.)

Pfleiderer, Walter, London, England. Refrigerating and ice-making apparatus. No. 1,169,675; Jan. 25; Gaz. vol. 222; p. 1262.

Pfleumer, Fritz, Dresden, Germany. Manufacturing froth fillings. No. 1,167,518; Jan. 11; Gaz. vol. 222; p. 439.

Phares, James T., Carlinville, Ill. Stand-up scrubbing-brush. No. 1,167,215; Jan. 4; Gaz. vol. 222; p. 279.

Pheoll Manufacturing Company. (See McCain, Paul H., assignor.)

Philadelphia Drying Machinery Company, The. (See Parkes, Bertrand A., assignor.)

Phillips, Ellis J. G., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill. Means for supporting trolley-tracks. No. 1,167,656; Jan. 11; Gaz. vol. 222; p. 488.

Phillips, John B., assignor to The Borden Company, Warren, Ohio. Pipe-threading tool. No. 1,169,507; Jan. 25; Gaz. vol. 222; p. 1202.

Pichon, Paul F., and A. Meissner, assignors to Gesellschaft für Drahtlose Telegraphie m. b. H., Berlin, Germany. Frequency-converter. No. 1,169,676; Jan. 25; Gaz. vol. 222; p. 1263.

Pickles, Charles K., St. Louis, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio. Type-writing machine. No. 1,167,428; Jan. 11; Gaz. vol. 222; p. 409.

Pickles, James, Ansonia, Conn., assignor to United Shoe Machinery Company, Paterson, N. J. Fastener-setting machine. No. 1,166,542; Jan. 4; Gaz. vol. 222; p. 47.

Pieper, Lewis H., Plymouth, Wis. Cheese-follower. (Reissue.) No. 14,048; Jan. 11; Gaz. vol. 222; p. 703.

Pierce, Ernest P., Lorain, Ohio. Plug for oil-holes. No. 1,169,189; Jan. 25; Gaz. vol. 222; p. 1092.

Pifer, George N., assignor, by mesne assignments, to The Auto Portrait Company, Cleveland, Ohio. Automatic photographing apparatus. No. 1,167,314; Jan. 4; Gaz. vol. 222; p. 313.

Pilcher, Frank A. (See Beman and Pilcher.)

Pinal é Icaza, Julio, Mexico, Mexico. Treating wood and product thereof. No. 1,169,349; Jan. 25; Gaz. vol. 222; p. 1145.

Pinder, John H., assignor of one-half to S. Haley and Son Limited, Cleckheaton, England. Machine for hammering wire-drawing dies. No. 1,166,931; Jan. 4; Gaz. vol. 222; p. 180.

Pioneer Mercantile Company. (See Harris, Manse M., assignor.)

Pioneer Smoke Indicator Company. (See Cade and Cochrane, assignors.)

Pioneer Suspender Company. (See Schoettle, Ferdinand, assignor.)

Piqua Machine and Boiler Co., The. (See O'Brien, John F., assignor.)

Pittsburg Brake Shoe Company. (See Kinzer, John J., assignor.)

Pittsburgh Electric Tool Company. (See Wendelburg, Alex, assignor.)

Pittsburgh Plate Glass Company. (See Spinasse, Arthur E., assignor.)

Pittsburgh Water Heater Company. (See Backstrom, Charles A., assignor.)

Piwonski, Stanislaus, Newark, N. J. Printer's chase. No. 1,166,543; Jan. 4; Gaz. vol. 222; p. 47.

Pizzorno, Giovanni. (See Vitali and Pizzorno.)

Platt, Clarence D., Bridgeport, Conn. Sign-receptacle. No. 1,169,190; Jan. 25; Gaz. vol. 222; p. 1093.

Pleijel, Henning B. M. (See Olsson and Pleijel.)

Plummer, William S., St. Louis, Mo. Motor plow and cultivator. No. 1,167,429; Jan. 11; Gaz. vol. 222; p. 410.

Poeppel, Emil, assignor to Automatic Magazine Cigarette Box Company, Chicago, Ill. Cigarette-case. No. 1,167,110; Jan. 4; Gaz. vol. 222; p. 242.

Poffenbarger, John C., Peoria, Ill. Inking attachment for printing-presses. No. 1,167,928; Jan. 11; Gaz. vol. 222; p. 582.

Pollock, Edward E., assignor to Daylock Corporation, New York, N. Y. Card-printing outfit. No. 1,168,739; Jan. 18; Gaz. vol. 222; p. 900.

Pollock, Edward E., assignor to Daylock Corporation, New York, N. Y. Card printing and embossing press. No. 1,168,740; Jan. 18; Gaz. vol. 222; p. 900.

Pope, Joseph W., Boston, Mass. Fuel-heating apparatus for internal-combustion engines. No. 1,168,111; Jan. 11; Gaz. vol. 222; p. 646.

Porsche, Ferdinand, Wiener-Neustadt, Austria-Hungary. Valve of internal-combustion engines. No. 1,169,677; Jan. 25; Gaz. vol. 222; p. 1263.

Portage Rubber Company, The. (See Wildman and Tinsman, assignors.)

Porter, Charles F., New York, N. Y. Hair-dressing foundation. No. 1,166,932; Jan. 4; Gaz. vol. 222; p. 180.

Porter, Charles F., New York, N. Y. Hair-dressing foundation. No. 1,166,933; Jan. 4; Gaz. vol. 222; p. 181.

Porter Counterfeit Detector Company. (See Flora, Ellsworth E., assignor.)

Porter, Lewis E., Los Angeles, Cal., assignor of one-half to H. E. Stock, Casper, Wyo. Electrolytic cell. No. 1,167,594; Jan. 11; Gaz. vol. 222; p. 466.

Porter, Willard E., Lynn, Mass., assignor to General Electric Company. Demand apparatus. No. 1,169,508; Jan. 25; Gaz. vol. 222; p. 1203.

Portsche, George, Sr., Lincoln, Nebr. Washing-machine. No. 1,168,028; Jan. 11; Gaz. vol. 222; p. 617.

Potter, Ellis M., New York, N. Y. Receptacle and closure therefor. No. 1,167,519; Jan. 11; Gaz. vol. 222; p. 439.

Potter, Harriet M., Allendale, N. J. Garment-hanger. No. 1,168,741; Jan. 18; Gaz. vol. 222; p. 901.

Potter, Hiram J., *et al.* (See Greenwood, Edgar, assignor.)

Potter, John, Winthrop, Iowa. Stable-rake. No. 1,169,284; Jan. 25; Gaz. vol. 222; p. 1124.

Potter, Joseph V., Louisville, Ky. Indicator. No. 1,167,657; Jan. 11; Gaz. vol. 222; p. 488.

Potts, William F., Kansas City, Mo. Dirt trap and strainer for locomotive-tank connections. No. 1,169,053; Jan. 18; Gaz. vol. 222; p. 1006.

Powell, Albert O., Reedsburg, Wis. Willow-twig-peeling machine. No. 1,167,015; Jan. 4; Gaz. vol. 222; p. 209.

Powers, Benjamin F. (See Beachman and Powers.)

Powers, Edmund B., assignor to Empire Railway Appliance Corporation, New York, N. Y. Anticreeping device for railway-rails. No. 1,168,671; Jan. 18; Gaz. vol. 222; p. 877.

Powers, Edmund B., assignor to Empire Railway Appliance Corporation, New York, N. Y. Anticreeping device for railway-rails. No. 1,168,672; Jan. 18; Gaz. vol. 222; p. 878.

Prankard, Charles J., Jr., Troy, N. Y. Collar folding and shaping machine. No. 1,166,783; Jan. 4; Gaz. vol. 222; p. 130.

Pratt, Alphonso C., Glen Ridge, N. J. Mileage-indicator for tires. No. 1,167,836; Jan. 11; Gaz. vol. 222; p. 548.

Pratt, Emil B., Lakewood, Ohio. Reducing iron ores and other metallic oxids to the metallic state. No. 1,167,016; Jan. 4; Gaz. vol. 222; p. 210.

Pratt, Henry B., St. Paul, Minn. Bracelet. No. 1,166,629; Jan. 4; Gaz. vol. 222; p. 77.

Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)

Preo, John L., New York, N. Y. Score-board. No. 1,167,715; Jan. 11; Gaz. vol. 222; p. 507.

Prepayment Car Sales Company. (See Tanner, Arnold J., assignor.)

Prepayment Car Sales Company. (See McWhirter, John S., assignor.)

Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Company, New York, N. Y. Chandelier-hoist. No. 1,166,544; Jan. 4; Gaz. vol. 222; p. 48.

Pressed Steel Car Company. (See Lockwood, Burns D., assignor.)

Pressed Steel Car Company. (See Streib, John F., assignor.)

Pressed Steel Tank Company. (See Miller, Carl E., assignor.)

Prestage, Edwin, Stoke Newington, London, England. High-pressure gas-compressor. No. 1,167,658; Jan. 11; Gaz. vol. 222; p. 488.

Preston, Charles A., Wichita, Kans. Bottle-carrier. No. 1,167,430; Jan. 11; Gaz. vol. 222; p. 410.

Prettyman, William H., Hyannis, Nebr. Motor-vehicle heating device. No. 1,166,630; Jan. 4; Gaz. vol. 222; p. 77.

Price, Edward W., Toronto, Ontario, Canada. Resilient tire. No. 1,168,413; Jan. 18; Gaz. vol. 222; p. 784.

Price, John W., Vivian, La. Means for journaling wheels to axles. No. 1,168,414; Jan. 18; Gaz. vol. 222; p. 784.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Revulcanizing rubber. No. 1,166,784; Jan. 4; Gaz. vol. 222; p. 131.

Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Apparatus for producing vulcanized articles. No. 1,169,733; Jan. 25; Gaz. vol. 222; p. 1281.

Pride, William S., Oakland, Cal. Reinforcement for plastering. No. 1,167,837; Jan. 11; Gaz. vol. 222; p. 549.

Prieskorn, Romeo W., Somonauk, Ill. Hinge. No. 1,169,566; Jan. 25; Gaz. vol. 222; p. 1223.

Priest, Augustus F., Akron, Ohio, assignor to Motor-Aid Company, Chicago, Ill. Device for regulating the discharge of exhaust-gases. No. 1,169,734; Jan. 25; Gaz. vol. 222; p. 1282.

Pritchard, Lewis C., assignor of four-fifths to W. M. Miller, Parkersburg, W. Va. Automobile-fender. No. 1,169,509; Jan. 25; Gaz. vol. 222; p. 1204.

Probst, James K., Lock Haven, Pa. Treating tobacco. No. 1,168,029; Jan. 11; Gaz. vol. 222; p. 618.

Probst, James K., Lock Haven, Pa. Vulcanizer for sweating and resweating tobacco. No. 1,168,030; Jan. 11; Gaz. vol. 222; p. 618.

Proksa, John, Chicago, Ill. Mechanism for converting motion. No. 1,167,017; Jan. 4; Gaz. vol. 222; p. 210.

Prout, John T., New York, N. Y. Sound-reproducing machine. No. 1,167,838; Jan. 11; Gaz. vol. 222; p. 549.

Pruszynski, Adolph J. (See Roebuck and Pruszynski.)

Psarski Dyeing Machine Company, The. (See Inman, William, assignor.)

Puff, John D., East St. Louis, Ill. Boring-machine. No. 1,168,224; Jan. 11; Gaz. vol. 222; p. 683.

Pullen, Barzillai, Philadelphia, Pa. Automatic gas cut-off. No. 1,168,415; Jan. 18; Gaz. vol. 222; p. 784.

Pullen, Leon W., Philadelphia, Pa. Electrical accumulator. No. 1,169,350; Jan. 25; Gaz. vol. 222; p. 1146.

Purcell, John, Topeka, Kans. Water-glass gage. No. 1,166,631; Jan. 4; Gaz. vol. 222; p. 77.

Pyle, Howard L., Wilmington, Del. Heater-box. No. 1,168,742; Jan. 18; Gaz. vol. 222; p. 901.

Pyle, Robert H., assignor of one-half to A. R. Baxter, Indianapolis, Ind. Turbine. No. 1,167,018; Jan. 4; Gaz. vol. 222; p. 210.

Q & C Company. (See Packer, Eben R., assignor.)

Quay, Samuel F., Flagstaff, Ariz. Conveyer cleat or flight. No. 1,169,351; Jan. 25; Gaz. vol. 222; p. 1146.

Quigley, John T., San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass. Ascertaining time costs. No. 1,168,548; Jan. 18; Gaz. vol. 222; p. 831.

Quinn, James P., Chicago, Ill. Window-screen. No. 1,167,929; Jan. 11; Gaz. vol. 222; p. 582.

Quist, Frank J., Worcester, Mass. Carpet-cleaner. No. 1,168,225; Jan. 11; Gaz. vol. 222; p. 683.

Quist, Frank J., Worcester, Mass. Carpet-cleaner. No. 1,169,191; Jan. 25; Gaz. vol. 222; p. 1093.

R. E. Dietz Company. (See Barnes, James, assignor.)

Raab, John D., *et al.* (See Brochu, Michael, assignor.)

Raabe, Herman J., New York, N. Y. Umbrella. No. 1,167,431; Jan. 11; Gaz. vol. 222; p. 410.

Raczkowski, John F., assignor of one-half to A. Gliddon, Plymouth, Pa. Stove-lid handle or lifter. No. 1,168,329; Jan. 18; Gaz. vol. 222; p. 754.

Radford, Robert, Philadelphia, and J. E. Sheaffer, Burnham, Pa. Machine for casting wheels and like articles. No. 1,169,192; Jan. 25; Gaz. vol. 222; p. 1093.

Radiguer, Charles, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France. Water-tube boiler. No. 1,166,481; Jan. 4; Gaz. vol. 222; p. 25.

Radiguer, Charles, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France. Liquid-fuel atomizer. No. 1,168,416; Jan. 18; Gaz. vol. 222; p. 784.

Radoccio, Pasquale, assignor of one-third to N. Di Domenico, Providence, R. I. Street-indicator for cars. No. 1,167,432; Jan. 11; Gaz. vol. 222; p. 411.

Ramage, Alexander S., Buffalo, N. Y., assignor to International Color & Chemical Company, Incorporated, Detroit, Mich. Preparing chromates of lead. No. 1,168,417; Jan. 18; Gaz. vol. 222; p. 785.

Ramage, Alexander S., Buffalo, N. Y., assignor to International Color & Chemical Company, Incorporated, Detroit, Mich. Preparing lead sulfate. No. 1,168,418; Jan. 18; Gaz. vol. 222; p. 785.

Ramelli, Emile H., New Orleans, La. Automatic safety-clutch. No. 1,169,193; Jan. 25; Gaz. vol. 222; p. 1093.

Ramén, Arthur. (See Beskow and Ramén.)

Ramesh, Matthew J., Kewaunee, Wis. Explosive-engine. No. 1,166,714; Jan. 4; Gaz. vol. 222; p. 107.

Ramsay, George G., Schenectady, N. Y. Hydrocarbon-burner. No. 1,167,111; Jan. 4; Gaz. vol. 222; p. 243.

Ramsey, George W., Peoria, Ill. Type-writer. No. 1,169,678; Jan. 25; Gaz. vol. 222; p. 1263.

Rand, Ed, Charleston, W. Va. Well-drilling apparatus. No. 1,168,226; Jan. 11; Gaz. vol. 222; p. 683.

Randall, Edison E., Kankakee, assignor to Paramount Knitting Company, Chicago, Ill. Yarn-feeding mechanism for knitting-machines. No. 1,168,549; Jan. 18; Gaz. vol. 222; p. 832.

Randall, John I. (See Rice and Randall.)

Randall, Karl C., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Suspension-type insulator. No. 1,168,031; Jan. 11; Gaz. vol. 222; p. 618.

Rane, John C. (See Jessen, Charles C., assignor.)

Rankin, Edmund, Lincoln, Ill. Boiler-cleaner. No. 1,167,520; Jan. 11; Gaz. vol. 222; p. 439.

Rasmussen, Arnold C., Chicago, Ill. Life-saving appliance. No. 1,167,930; Jan. 11; Gaz. vol. 222; p. 583.

Ratchet Brake Company. (See Blackall, Robert H., assignor.)

Ratchet Brake Company. (See Linström, Charles A., assignor.)

Ratchet Brake Company. (See Ord, Lewis C., assignor.)

Rateau, Auguste C. E., Paris, France. Submarine mine or torpedo. No. 1,169,567; Jan. 25; Gaz. vol. 222; p. 1223.

Rathsfeld, Berthold H. C. H., Nordhausen, Germany. Web-advancing mechanism for drying-frames. No. 1,167,216; Jan. 4; Gaz. vol. 222; p. 280.

Rattermann, George B., and W. W. Garrison, Birmingham, Ala. Switch device for fire-alarms. No. 1,169,194; Jan. 25; Gaz. vol. 222; p. 1094.

Raus, Charles. (See Bayliss and Raus.)

Ravlin, Frederick J., and J. Lofgren, Chicago, Ill. Plug-switch. No. 1,169,426; Jan. 25; Gaz. vol. 222; p. 1172.

Ray, F. M. (See Replogle, Daniel B., assignor.)

Raymond, Edward. (See McNally and Raymond.)

Raymond, Franklin M., Saugatuck, Conn. Cab control system. No. 1,168,908; Jan. 18; Gaz. vol. 222; p. 958.

Raymond, Joseph O., Concord, N. H. Pneumatic wheel. No. 1,166,854; Jan. 4; Gaz. vol. 222; p. 155.

Reach, George A. (See Cline, Samuel, assignor.)

Reading, Isaac G. (See Shaw, Samuel J., assignor.)

Rearick, Merle, *et al.* (See Miller, Vena A., assignor.)

Recording and Computing Machines Company, The. (See Kennedy, Frank B., assignor.)

Recording and Computing Machines Company, The. (See Ohmer and McAllister, assignors.)

Recording and Computing Machines Company, The. (See Whistler, David B., assignor.)

Recording and Computing Machines Company, The. (See Whistler and McAllister, assignors.)

Redfield, Casper L. (See Folger and Redfield.)

Reding, William C., Greenwood, Ark. Mopping device. No. 1,167,315; Jan. 4; Gaz. vol. 222; p. 314.

Reece Shoe Machinery Company. (See Perri, Angelo, assignor.)

Reed, Adam, Bozeman, Mont. Surgical sandal for treatment of bunions. No. 1,167,019; Jan. 4; Gaz. vol. 222; p. 211.

Reed, George H., assignor to Reed Metal Lath Co., Newark, N. J. Reinforcing member for concrete structures. No. 1,166,545; Jan. 4; Gaz. vol. 222; p. 48.

Reed Manufacturing Company. (See Bayton, Albert, assignor.)

Reed, Mary S., *et al.* (See Reikjer, Andrew H., assignor.)

Reed Metal Lath Co. (See Reed, George H., assignor.)

Reed-Prentice Company. (See Hendrickson, Fred K., assignor.)

Reed-Prentice Company. (See Newton and Hendrickson, assignors.)

Reed, William A., Chelsea, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Abrading-machine. No. 1,167,521; Jan. 11; Gaz. vol. 222; p. 439.

Reeder, Arthur S., Knoxville, Pa. Making molds. No. 1,166,934; Jan. 4; Gaz. vol. 222; p. 181.

Rees, Perley E., and F. C. Schmidt, Kansas City, Mo. Check-canceling machine. No. 1,169,352; Jan. 25; Gaz. vol. 222; p. 1147.

Reese, S. L. (See Harris, Elie B., assignor.)

Reeve, Sidney A., New Haven, Conn., assignor, by mesne assignments, to C. W. Brown, trustee, Pittsburgh, Pa. Internal-combustion engine. No. 1,169,353; Jan. 25; Gaz. vol. 222; p. 1147.

Reeve, Sidney A., New Haven, Conn., assignor, by mesne assignments, to C. W. Brown, trustee, Pittsburgh, Pa. Sliding-valve explosion-motor. No. 1,169,354; Jan. 25; Gaz. vol. 222; p. 1148.

Reeves, Wesley L., Tyler, Tex. Attachment for plows. No. 1,169,285; Jan. 25; Gaz. vol. 222; p. 1124.

Regenbogen, Conrad C., Kiel-Gaarden, and P. A. Ritter, Kiel, assignors to Fried. Krupp Aktiengesellschaft, Germaniawerft, Kiel-Gaarden, Germany. Safety device against explosions in the air-pipes of internal-combustion engines. No. 1,166,855; Jan. 4; Gaz. vol. 222; p. 155.

Reich, Ottmar, Jr., Lindenberg, Germany. Hat. No. 1,166,785; Jan. 4; Gaz. vol. 222; p. 131.

Reiche, Hermann, Millstone, N. J. Fountain-brush. No. 1,166,482; Jan. 4; Gaz. vol. 222; p. 25.

Reichenbach, Henry M., Rochester, N. Y. Carbureter. No. 1,167,217; Jan. 4; Gaz. vol. 222; p. 280.

Reichenberger, Benedict F., Purcell, Kans. Straw-spreading attachment for manure-spreaders. No. 1,166,632; Jan. 4; Gaz. vol. 222; p. 78.

Reichner, Louis I., Atlantic City, N. J. Juice-extractor. No. 1,168,032; Jan. 11; Gaz. vol. 222; p. 619.

Reid, Clark R., Danville, Ill. Brake-pedal attachment. No. 1,168,827; Jan. 18; Gaz. vol. 222; p. 931.

Reimer, Frank C. (See Bixby and Reimer.)

Rein, Robert, assignor to Ludwig Spitz & Co., G. m. b. H., Berlin, Germany. Calculating-machine. No. 1,166,715; Jan. 4; Gaz. vol. 222; p. 108.

Reinhold, Hugo F., assignor to Reinhold & Meyer Mfg. Co., Plymouth, Wis. Cheese-press. No. 1,168,330; Jan. 18; Gaz. vol. 222; p. 755.

Reinhold & Meyer Mfg. Co. (See Reinhold, Hugo F., assignor.)

Reisz, Eugen. (See Lieben, Reisz, and Strauss.)

Reiter, John, Beloit, Kans. Hay-rack fastener. No. 1,167,659; Jan. 11; Gaz. vol. 222; p. 489.

Reitinger, Henry, Chicago, Ill. Concrete-building apparatus. No. 1,167,595; Jan. 11; Gaz. vol. 222; p. 466.

Relais-Gesellschaft m. b. H. (See Lieben, Reisz, and Strauss, assignors.)

Remelius, Charles A., New York, N. Y., assignor to The Pay-As-You-Enter Car Corporation, Jersey City, N. J. Door-operating machanism. No. 1,167,433; Jan. 11; Gaz. vol. 222; p. 411.

Remington Typewriter Company, The. (See Yaw, Clio B., assignor.)

Renault, Louis, Billancourt, France. Detachable wheel. No. 1,168,673; Jan. 18; Gaz. vol. 222; p. 878.

Renken, Anton F., Kramer, Nebr. Gopher-trap. No. 1,167,218; Jan. 4; Gaz. vol. 222; p. 280.

Renner, Firm of Adolph. (See Scholz, Paul J. A., assignor.)

Replogle, Daniel B., Berkeley, assignor of one-third to F. M. Ray, Oakland, Cal. Portable vacuum-cleaner. No. 1,167,219; Jan. 4; Gaz. vol. 222; p. 281.

Residential Small Holdings Company Limited. (See Slade and Thompson, assignors.)

Reukauf, Edward, Philadelphia, Pa. Supplemental lid for boxed goods. No. 1,167,220; Jan. 4; Gaz. vol. 222; p. 281.

Reukauf, Edward, assignor to M. Bayuk, Philadelphia, Pa. Display-cabinet. No. 1,169,427; Jan. 25; Gaz. vol. 222; p. 1173.

Reuter, George J., Newark, assignor of five-twelfths to A. M. Herman, West Orange, and three-twelfths to L. R. Freund, Newark, N. J. Tire. No. 1,168,674; Jan. 18; Gaz. vol. 222; p. 878.

Reuter, Ludwig H., Torreon, Mexico. Producing casein and product thereof. No. 1,167,434; Jan. 11; Gaz. vol. 222; p. 411.

Reuter, Otto, Schlebusch-Manfort, assignor, by mesne assignments, to Dynamit-Actien-Gesellschaft, Hamburg, Germany. Producing a liquid explosive. No. 1,166,546; Jan. 4; Gaz. vol. 222; p. 48.

Reuter, Theodor, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Internal-combustion engine. No. 1,168,331; Jan. 18; Gaz. vol. 222; p. 755.

Reuter, William G., Cincinnati, Ohio. Magnetic display device. No. 1,167,020; Jan. 4; Gaz. vol. 222; p. 211.

Revere Rubber Company. (See Murrill, Paul I., assignor.)

Reynolds, Edward A. and H. V., Anderson, Ind. Electric signal system. No. 1,167,931; Jan. 11; Gaz. vol. 222; p. 583.

Reynolds, Henry V. (See Reynolds, Edward A. and H. V.)

Reynolds, John N., Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selector-switch. No. 1,168,419; Jan. 18; Gaz. vol. 222; p. 785.

Rhenstrom, Anthony, Kenosha, Wis., and H. F. Hager, Chicago, Ill., assignors to Lipert & Rhenstrom, Kenosha, Wis. Wire-link-fabric-closing machine. No. 1,166,633; Jan. 4; Gaz. vol. 222; p. 78.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Filling-replenishing loom. No. 1,167,363; Jan. 4; Gaz. vol. 222; p. 332.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Feeler device for filling-replenishing looms. No. 1,167,364; Jan. 4; Gaz. vol. 222; p. 333.

Rhoades, Lewis T., Mont Clare, Pa., assignor to New York Coil Company, Incorporated, New York, N. Y. Automatic control for ignition devices. No. 1,167,839; Jan. 11; Gaz. vol. 222; p. 549.

Rhodes, Clyde, Cooledge, Tex. Cotton-picker. No. 1,166,935; Jan. 4; Gaz. vol. 222; p. 181.

Rhodes, Jay B., Kalamazoo, Mich., assignor to Western Wheeled Scraper Company, Aurora, Ill. Dump-car. No. 1,168,420; Jan. 18; Gaz. vol. 222; p. 786.

Rice, Welby M., and J. I. Randall, Manassas, Va. Cheese cutter and cabinet. No. 1,168,964; Jan. 18; Gaz. vol. 222; p. 978.

Rice, William A., Jerseyville, Ill. Grain and seed separator and cleaner. No. 1,168,550; Jan. 18; Gaz. vol. 222; p. 832.

Rice, William D., Conneaut, Ohio. Joint for bill-boards. No. 1,167,221; Jan. 4; Gaz. vol. 222; p. 282.

Rich, Ambrose, Stamford, Conn. Metal-chain-tread tire. No. 1,167,596; Jan. 11; Gaz. vol. 222; p. 467.

Rich, George R., Oak Park, assignor to Rich Tool Company, Chicago, Ill. Piston. No. 1,168,551; Jan. 18; Gaz. vol. 222; p. 833.

Rich, Richard W., Worcester, Mass. Ice-cutting machine. No. 1,169,355; Jan. 25; Gaz. vol. 222; p. 1148.

Rich Tool Company. (See Rich, George R., assignor.)

Richards, George C., Berkeley, Cal. Lure for flies and other insects. No. 1,168,552; Jan. 18; Gaz. vol. 222; p. 833.

Richards, George H., assignor to Aurora Door Hanger and Specialty Company, Aurora, Ill. Door-hanger. No. 1,169,568; Jan. 25; Gaz. vol. 222; p. 1224.

Richards, James W., Westbourne, Manitoba, Canada. Grain-scoop. No. 1,167,782; Jan. 11; Gaz. vol. 222; p. 530.

Richards-Wilcox Manufacturing Company. (See Phillips, Ellis J. G., assignor.)

Richardson, Ernest, College Hill, Pa. Table. No. 1,167,716; Jan. 11; Gaz. vol. 222; p. 507.

Richardson, Henry C., assignor of one-half to W. C. Noland, Richmond, Va. Gripper for printing-presses. No. 1,168,675; Jan. 18; Gaz. vol. 222; p. 878.

Richardson, Samuel, assignor to Crane Company, Chicago, Ill. Trap. No. 1,167,717; Jan. 11; Gaz. vol. 222; p. 507.

Richardson, William C., Boston, Mass. Electromechanical selecting mechanism for telephones. No. 1,167,522; Jan. 11; Gaz. vol. 222; p. 440.

Richdale, Herbert W., Cannon Station, assignor of one-third to A. S. Green and one-third to H. E. Cable, Westport, Conn. Soldering appliance. No. 1,169,103; Jan. 18; Gaz. vol. 222; p. 1026.

Richert, Johan G., Stockholm, Sweden. Refrigerating device. No. 1,168,743; Jan. 18; Gaz. vol. 222; p. 901.

Richey, Charles A. (See Haddon, Virgil M., assignor.)

Richey, Tom K., *et al.* (See Gass, Charles A., assignor.)

Richmond, Norman S., and R. W. Pain, Chicago, Ill. Electric shade-holder. No. 1,168,553; Jan. 18; Gaz. vol. 222; p. 833.

Rickard, Horace D., Syracuse, N. Y. Educational appliance. No. 1,169,510; Jan. 25; Gaz. vol. 222; p. 1204.

Rickoff, Clarence M. (See Hartford and Rickoff.)

Riehm, William C., Kalamazoo, Mich. Seat-spring. No. 1,167,597; Jan. 11; Gaz. vol. 222; p. 467.

Ries, Harry W., Collingswood, N. J. Non-refillable bottle. No. 1,166,786; Jan. 4; Gaz. vol. 222; p. 131.

Rigby, Thomas, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Gathering peat. No. 1,169,679; Jan. 25; Gaz. vol. 222; p. 1264.

Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Controlling means for internal-combustion engines. No. 1,168,421; Jan. 18; Gaz. vol. 222; p. 786.

Riley, Charles O., Covington, Ky. Adjustable crocheting-fork. No. 1,168,554; Jan. 18; Gaz. vol. 222; p. 834.

Riley, Frederick, and C. A. O'Connor, Worcester, assignors to Morse Twist Drill & Machine Company, New Bedford, Mass. Reamer. No. 1,166,716; Jan. 4; Gaz. vol. 222; p. 108.

Riley, Ralph J., Livermore Falls, Me. Gate-valve. No. 1,168,332; Jan. 18; Gaz. vol. 222; p. 756.

Ripley, T. Charles. (See Crabtree and Ripley.) (Reissue.)

Riter-Conley Manufacturing Company. (See Brown, Rezeau B., assignor.)

Riter-Conley Manufacturing Company. (See Carpenter, Henry A., assignor.)

Riter-Conley Manufacturing Company. (See Carpenter and Warner, assignors.)

Riter-Conley Manufacturing Company. (See McClaskey, Robert F., assignor.)

Riter-Conley Manufacturing Company. (See Thornton, William P., assignor.)

Rites, Francis M., deceased, Ithaca and Slaterville Springs; C. H. Gallagher, executor, Ithaca, N. Y., assignor to P. C. Rites, guardian. Apparatus for producing gaseous fuel. No. 1,167,021; Jan. 4; Gaz. vol. 222; p. 211.

Rites, Perle C., guardian. (See Rites, Francis M., assignor.)

Rittenhouse, Irvin, Washington, D. C. Tobacco-users' appliance. No. 1,167,022; Jan. 4; Gaz. vol. 222; p. 212.

Ritter, Hans K., Niagara Falls, Ontario, Canada. Lamp-shade. No. 1,168,422; Jan. 18; Gaz. vol. 222; p. 787.

Ritter, Paul A. (See Regenbogen and Ritter.)

Rivière, Clery. (See Clément and Rivière.)

Robbins, Albert F., Waltham, Mass. Eyeglass-reel. No. 1,167,598; Jan. 11; Gaz. vol. 222; p. 468.

Robbins, George B. (See Laughlin, George F., assignor.)

Robert N. Bassett Company. (See Haupt, William V., assignor.)

Robert N. Bassett Company, The. (See Stuart, Henry J., assignor.)

Roberts, Aaron C. E., Rayland, Ohio. Machine for loading earth and like materials. No. 1,169,569; Jan. 25; Gaz. vol. 222; p. 1224.

Roberts, Arthur, Evanston, Ill. Coke-oven burner. No. 1,169,570; Jan. 25; Gaz. vol. 222; p. 1224.

Roberts, Gustin A., Portland, Oreg. Change making, computing, and paying machine. No. 1,166,936; Jan. 4; Gaz. vol. 222; p. 181.

Roberts, Margaret S., *et al.* (See Rolkjer, Andrew H., assignor.)

Robertson, Harold H., *et al.* (See Stewart, Perez M., assignor.)

Robertson, John A., and G. W. Adams, assignors to Eastman Kodak Company, Rochester, N. Y. Trimming-board. No. 1,167,435; Jan. 11; Gaz. vol. 222; p. 412.

Robertson, Thomas W., Kansas City, Mo. Bookkeeper's stool. No. 1,167,932; Jan. 11; Gaz. vol. 222; p. 583.

Robinson, Charles A., East Orange, N. J. Ground-surfacing apparatus. No. 1,167,112; Jan. 4; Gaz. vol. 222; p. 243.

Robinson, Harry, Sheffield, Ala., assignor of one-half to C. E. Buck, Chattanooga, Tenn. Nut-lock. No. 1,168,555; Jan. 18; Gaz. vol. 222; p. 834.

Robinson, Henry O. (See Steadman and Robinson.)

Robinson, Henry O., Brookline, Mass., and C. Steadman, Huguenot Park, N. Y. Brick-kiln. No. 1,168,556; Jan. 18; Gaz. vol. 222; p. 834.

Robinson, Henry O., Brookline, Mass., and C. Steadman, Huguenot Park, N. Y. Brick-burning. No. 1,168,557; Jan. 18; Gaz. vol. 222; p. 835.

Robinson, John G., Manchester, England. Piston-valve for locomotives. No. 1,169,286; Jan. 25; Gaz. vol. 222; p. 1125.

Rochon, Charles, Fall River, Mass. Window-screen. No. 1,168,558; Jan. 18; Gaz. vol. 222; p. 835.

Rock, Darrel D., Detroit, Mich. Lock. No. 1,166,634; Jan. 4; Gaz. vol. 222; p. 79.

Rockstroh, Max, Klein Sedlitz, near Pirna, Germany. Belt-controlling means. No. 1,169,511; Jan. 25; Gaz. vol. 222; p. 1205.

Rockstroh, Max, Klein-Sedlitz, near Pirna, Germany. Protective device for printing and embossing presses. No. 1,169,680; Jan. 25; Gaz. vol. 222; p. 1264.

Rockwell, John W., Waynesboro, Pa. Holder for box-lids, sashes, and the like. No. 1,168,112; Jan. 11; Gaz. vol. 222; p. 646.

Rodgers, Harry B., Chambersburg, Pa. Container for sanitary shaving-brushes. No. 1,168,423; Jan. 18; Gaz. vol. 222; p. 787.

Rodin, Charles, Cambridge, Minn. Stump-puller. No. 1,168,559; Jan. 18; Gaz. vol. 222; p. 835.

Roebuck, Alvah C., Woodstock, Ill. Ribbon-reverse mechanism. No. 1,166,483; Jan. 4; Gaz. vol. 222; p. 25.

Roebuck, Alvah C., and A. J. Pruszynski, Woodstock, Ill. Ribbon-vibrator. No. 1,168,333; Jan. 18; Gaz. vol. 222; p. 756.

Roesch, Alfred. (See Witham and Roesch.)

Roesti, Paul G., Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Means for regulating combustion-engines. No. 1,166,937; Jan. 4; Gaz. vol. 222; p. 182.

Roesti, Paul G., Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Regulating combustion-engines. No. 1,166,938; Jan. 4; Gaz. vol. 222; p. 182.

Rogers, George D., Lakewood, Ohio. Means for removing static electricity from materials. No. 1,169,428; Jan. 25; Gaz. vol. 222; p. 1173.

Rogers, Henry J., assignor to Morton & Andrews, Lowell, Mass. Carding-engine. No. 1,167,523; Jan. 11; Gaz. vol. 222; p. 440.

Rogers, Plumleigh A., Minneapolis, Minn. Plate-holder. No. 1,168,033; Jan. 11; Gaz. vol. 222; p. 619.

Rogers, Plumleigh A., Minneapolis, Minn. Printer's chase. No. 1,168,034; Jan. 11; Gaz. vol. 222; p. 619.

Rogers, Theodora W., Columbus, Ohio. Flesh-reducing garment. No. 1,167,713; Jan. 4; Gaz. vol. 222; p. 243.

Rohm, William, Appleton, Wis. Heating arrangement for silos. No. 1,168,424; Jan. 18; Gaz. vol. 222; p. 787.

Rolkjer, Andrew H., assignor of one-fourth to M. S. Roberts and one-fourth to M. S. Reed, Boise, Idaho. Box. No. 1,167,783; Jan. 11; Gaz. vol. 222; p. 530.

Rolfe, C. E., 2d, *et al.* (See Banes, Walter D., assignor.)

Rolland, Jean F., and P. A. P. Maulère, Paris, France. Distribution system for inflammable liquids. No. 1,168,744; Jan. 18; Gaz. vol. 222; p. 901.

Rolph, Charles M., Monticello, Wis. Car-mover. No. 1,167,660; Jan. 11; Gaz. vol. 222; p. 489.

Romer, John A., London, England, assignor to B. Macfadden, New York, N. Y. Railway system. No. 1,168,676; Jan. 18; Gaz. vol. 222; p. 879.

Rook, William H., Jr., assignor to The American Sewer Pipe Company, Akron, Ohio. Construction of tubular members. No. 1,168,909; Jan. 18; Gaz. vol. 222; p. 959.

Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Link-motion. No. 1,167,114; Jan. 4; Gaz. vol. 222; p. 244.

Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Safety device. No. 1,169,512; Jan. 25; Gaz. vol. 222; p. 1205.

Rorrison, William, assignor to The Braun Corporation, Los Angeles, Cal. Liquid-sampler. No. 1,166,717; Jan. 4; Gaz. vol. 222; p. 108.

Roschach, Joseph, Canpgaw, N. J. Embroidery-frame. No. 1,167,933; Jan. 11; Gaz. vol. 222; p. 584.

Rose, Henry, Shreveport, La. Signal for automobiles. No. 1,167,115; Jan. 4; Gaz. vol. 222; p. 244.

Rosebush, Louis, assignor of one-half to T. R. Boyle, Linwood, Mich. Car-stake. No. 1,168,560; Jan. 18; Gaz. vol. 222; p. 835.

Rosenbaum, Tillie, New York, N. Y. Child's waist. No. 1,166,484; Jan. 4; Gaz. vol. 222; p. 26.

Rosenblum, Esther, Los Angeles, Cal. Fountain toothbrush. No. 1,168,965; Jan. 18; Gaz. vol. 222; p. 979.

Rosengren, George T., assignor to Enterprise Tool & Metal Works, Chicago, Ill. Gas-heated sad-iron. No. 1,167,840; Jan. 11; Gaz. vol. 222; p. 550.

Rosengren, George T., assignor to Enterprise Tool & Metal Works, Chicago, Ill. Gas-valve. No. 1,169,195; Jan. 25; Gaz. vol. 222; p. 1094.

Rosenhagen, Victor, assignor of one-half to A. C. Hall, Newport, Ky. Internal-combustion engine. No. 1,168,425; Jan. 18; Gaz. vol. 222; p. 788.

Rosenthal, Harry, Camden, N. J. Coloring glass. No. 1,169,571; Jan. 25; Gaz. vol. 222; p. 1225.

Rosenthal, James H., London, and E. C. Carnt, East Cowes, Isle of Wight, assignors to Babcock & Wilcox, Limited, London, and J. Samuel White & Company, Limited, East Cowes, Isle of Wight, England. Steam-generator. No. 1,167,841; Jan. 11; Gaz. vol. 222; p. 550.

Rosenthal, Leon W., New York, N. Y. Calculating-machine. No. 1,168,745; Jan. 18; Gaz. vol. 222; p. 902.

Rosenwald, Lucian, Kansas City, Mo. Collapsible box. No. 1,168,561; Jan. 18; Gaz. vol. 222; p. 836.

Rosenwald, Lucian, Kansas City, Mo. Egg-case. No. 1,168,562; Jan. 18; Gaz. vol. 222; p. 836.

Rosenwald, Lucian, Kansas City, Mo. Collapsible box. No. 1,168,563; Jan. 18; Gaz. vol. 222; p. 836.

Rosenwald, Lucian, Kansas City, Mo. Folding box. No. 1,168,564; Jan. 18; Gaz. vol. 222; p. 837.

Rosenwald, Lucian, Kansas City, Mo. Collapsible fruit or berry box. No. 1,168,565; Jan. 18; Gaz. vol. 222; p. 837.

Rosenwald, Lucian, Kansas City, Mo. Folding box. No. 1,168,566; Jan. 18; Gaz. vol. 222; p. 838.

Ross Chemical Company. (See Miles, George W., assignor.)

Ross, George G., H. E., and L. D., Greensburg, Pa. Automatic train-pipe coupling. No. 1,168,677; Jan. 18; Gaz. vol. 222; p. 879.

Ross, Harold D. (See Middleton and Ross.)

Ross, Harry E. (See Ross, George G., H. E., and L. D.)

Ross, Leo D. (See Ross, George G., H. E., and L. D.)

Ross, Oscar A., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Automatic trip-valve. No. 1,167,316; Jan. 4; Gaz. vol. 222; p. 314.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Obtaining titanic oxid and the resulting product. No. 1,166,547; Jan. 4; Gaz vol. 222; p. 49.

Rossignol, Samuel K., Greenwood, S. C. Tire. No. 1,168,113; Jan. 11; Gaz. vol. 222; p. 646.

Rost, William H., Oakland, assignor to Rudolph-Myers Manufacturing Co., San Jose, Cal. Transmission mechanism. No. 1,167,718; Jan. 11; Gaz. vol. 222; p. 508.

Rostron, James D., Germantown, Pa. Sound-record cleaner. No. 1,168,910; Jan. 18; Gaz. vol. 222; p. 958.

Röth, Andor, assignor of one-half to T. Freund, New York, N. Y. Dish-carrier. No. 1,167,934; Jan. 11; Gaz. vol. 222; p. 584.

Rothschild, Aaron, Richmond, Va. Sash-lock. No. 1,169,429; Jan. 25; Gaz. vol. 222; p. 1174.

Rotter, William, and R. S. Arthur, assignors to Talking Doll & Novelty Company, Inc., New York, N. Y. Phonograph mechanism. No. 1,167,842; Jan. 11; Gaz. vol. 222; p. 551.

Rouillot, Victor B., Haddonfield, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,166,635; Jan. 4; Gaz. vol. 222; p. 79.

Rouse, Thomas S., Brazil, Ind., assignor to Hydraulic-Press Brick Company, St. Louis, Mo. Brickmaking-machine. No. 1,168,567; Jan. 18; Gaz. vol. 222; p. 838.

Rowntree, Harold, Kenilworth, Ill. Automatic ticket-punch. No. 1,168,336; Jan. 18; Gaz. vol. 222; p. 757.

Rowntree, Harold, Chicago, Ill., assignor to National Pneumatic Company. Door-operating mechanism. No. 1,168,334; Jan. 18; Gaz. vol. 222; p. 756.

Rowntree, Harold, assignor to National Pneumatic Company, Chicago, Ill. Flexible car. No. 1,168,335; Jan. 18; Gaz. vol. 222; p. 757.

Roy, John, Los Angeles, Cal. Automatic air-hose coupling. No. 1,168,426; Jan. 18; Gaz. vol. 222; p. 788.

Royal Typewriter Company. (See Hess, Edward B., assignor.)

Royal Worcester Corset Co. (See Kinder, Garrett A., assignor.)

Royer, Elmer H., Philadelphia, Pa. Fender. No. 1,168,114; Jan. 11; Gaz. vol. 222; p. 647.

Royle, John, Jr., Paterson, N. J. Shaft-locking device. No. 1,169,513; Jan. 25; Gaz. vol. 222; p. 1205.

Royle, Vernon, Paterson, N. J. Take-up or tension mechanism. No. 1,167,843; Jan. 11; Gaz. vol. 222; p. 551.

Roylance, Leon S., San Francisco, Cal. Ore-reducing. No. 1,168,678; Jan. 18; Gaz. vol. 222; p. 880.

Roystone, Walter, Fort Worth, assignor to M. P. Exline, executor, Dallas, Tex. Pass-book. No. 1,168,966; Jan. 18; Gaz. vol. 222; p. 979.

Rubber Regenerating Company. (See Price, Raymond B., assignor.)

Rud, Albin E., Claire City, S. D. Nut-lock. No. 1,167,784; Jan. 11; Gaz. vol. 222; p. 530.

Rudolf, Charles, Chicago, Ill. Window-cleaning device. No. 1,167,935; Jan. 11; Gaz. vol. 222; p. 585.

Rudolff, Barnet, Bayonne, assignor to F. Dorlson, Jersey City, N. J. Lubricating-pintle. No. 1,168,568; Jan. 18; Gaz. vol. 222; p. 839.

Rudolph-Meyers Manufacturing Co. (See Rost, William H., assignor.)

Rudolph Wurlitzer Manufacturing Company, The. (See De Kleist and Swanson, assignors.)

Rueckert, Ernest F., Providence, R. I. Fork or tongs. No. 1,168,115; Jan. 11; Gaz. vol. 222; p. 647.

Rumrill, Frank. (See Campbell, Duncan R., assignor.)

Rund, John V., Pesotum, Ill. Safety-stop for trains. No. 1,168,337; Jan. 18; Gaz. vol. 222; p. 758.

Rundle, George W., Spokane, Wash. Convertible chair. No. 1,167,524; Jan. 11; Gaz. vol. 222; p. 440.

Rundle, George W., Spokane, Wash. Sulky. No. 1,167,525; Jan. 11; Gaz. vol. 222; p. 441.

Runge, Walter, Chester, Pa., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Composition for detonating explosive charges. No. 1,168,746; Jan. 18; Gaz. vol. 222; p. 902.

Rush, Felix J., New York, N. Y. Drying-kiln. No. 1,167,844; Jan. 11; Gaz. vol. 222; p. 551.

Russell, Edwin L., Cleveland, Ohio. Valve for internal-combustion engines and driving means therefor. No. 1,166,939; Jan. 4; Gaz. vol. 222; p. 182.

Russell, Frank E., Alameda, Cal. Throttle-lever mechanism. No. 1,166,787; Jan. 4; Gaz. vol. 222; p. 132.

Russell, James B., Sinnamahoning, Pa. Shell-crimper. No. 1,166,636; Jan. 4; Gaz. vol. 222; p. 79.

Russell Mfg. Co., The. (See Frissell, Frank H., assignor.)

Russell, Nelson J., and C. A. Tyden, Chicago, Ill. Fuel-saving attachment for furnaces. No. 1,167,845; Jan. 11; Gaz. vol. 222; p. 552.

Russell, Thomas N., assignor to Chicago Cleveland Car Roofing Company, Chicago, Ill. Car-roof. No. 1,169,430; Jan. 25; Gaz. vol. 222; p. 1174.

Rutenberg, Petr, Genoa, Italy. Dam. No. 1,167,116; Jan. 4; Gaz. vol. 222; p. 245.

Rutherford, Charles H., Jerome, Ariz. Napkin-holder. No. 1,168,679; Jan. 18; Gaz. vol. 222; p. 880.

S. Haley and Son, Limited. (See Pinder, John H., assignor.)

S. F. Bowser & Company. (See Mulligan, Thomas F., assignor.)

Sabini, George, New York, N. Y. Window. No. 1,169,054; Jan. 18; Gaz. vol. 222; p. 1007.

Sacerdoti, Cesare, assignor to Società Anonima Italiana Gio. Ansaldo & C., Genoa, Italy. Device for controlling the water-ballast in submergible vessels. No. 1,169,514; Jan. 25; Gaz. vol. 222; p. 1205.

Sadler, Charles W., Windsor Locks, Conn. Ironing-machine. No. 1,166,856; Jan. 4; Gaz. vol. 222; p. 155.

Sadler, Luther, and R. C. Geckler, Oakland, Cal. Railway-crossing. No. 1,169,196; Jan. 25; Gaz. vol. 222; p. 1094.

Safety Armorite Conduit Company. (See Buch, Newton W., assignor.)

Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)

Safety Car Heating & Lighting Company, The. (See Dixon, Robert M., assignor.)

Safety Car Heating and Lighting Co., The. (See Vuilleumier, Rudolph, assignor.)

Saffold, Ray P., San Francisco, Cal. Shirt. No. 1,169,515; Jan. 25; Gaz. vol. 222; p. 1206.

Safford, Edward B., Carmona, Tex. Folding wagon-top. No. 1,166,857; Jan. 4; Gaz. vol. 222; p. 156.

Salt, William A., and T. S. Bennett, Providence, R. I. Self-adjusting finger-ring. No. 1,169,735; Jan. 25; Gaz. vol. 222; p. 1282.

Salz, Henrick, Hoboken, assignor of one-half to C. R. Gracie, Rutherford, N. J. Tool-handle. No. 1,166,485; Jan. 4; Gaz. vol. 222; p. 26.

Samlow, George H., Napoleon, Ohio. Chain coverer for drills. No. 1,166,718; Jan. 4; Gaz. vol. 222; p. 108.

Sand, Henry J. S., Nottingham, England. Manufacture and production of refractory vitreous substances. No. 1,169,681; Jan. 25; Gaz. vol. 222; p. 1264.

Sandberg, Johan H. (See Uhr and Sandberg.)

Sander, Joseph P., Spokane, Wash. Mail catching and delivery mechanism. No. 1,167,936; Jan. 11; Gaz. vol. 222; p. 585.

Sanders, Brad. (See Haskett and Sanders.)

Sanders, Charles B., Montclair, N. J., assignor to The Union Bag & Paper Company, New York, N. Y. Web-cutting mechanism for envelop-machines and similar machines. No. 1,169,197; Jan. 25; Gaz. vol. 222; p. 1094.

Sanderson, George W., Long Beach, Cal. Wave-motor. No. 1,169,356; Jan. 25; Gaz. vol. 222; p. 1149.

Sandford, William H., Armagh, Ireland. Friction-clutch. No. 1,167,117; Jan. 4; Gaz. vol. 222; p. 245.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Universal joint. No. 1,167,599; Jan. 11; Gaz. vol. 222; p. 468.

Sanitary Pulp Products Company. (See Ayerst, Harry C., assignor.)

Sanitary Sugar Dispenser Company. (See Kantor, Joseph, assignor.)

Sanker, Leonard J., Los Angeles, Cal. Machine for manufacturing concrete pipe. No. 1,166,788; Jan. 4; Gaz. vol. 222; p. 132.

Sarac, Rade, South Bend, Ind. Coin-controlled vending-machine. No. 1,167,661; Jan. 11; Gaz. vol. 222; p. 489.

Saraniecki, Carl, New Haven, Conn. Folding umbrella. No. 1,168,427; Jan. 18; Gaz. vol. 222; p. 788.

Sargent & Company. (See Brooks, Julius E., assignor.)

Sargent & Company. (See Collins, Herbert G., assignor.)

Sargent & Company. (See Page, Albert A., assignor.)

Sargent & Company. (See Shaw, John H., assignor.)

Sargent & Company. (See Shipman, Evan J., assignor.)

Sargent & Company. (See Sparks, William E., assignor.)

Sargent, Frederick G., Westford, assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Stock-agitator for drying-machines. No. 1,169,682; Jan. 25; Gaz. vol. 222; p. 1265.

Sarrasin, Paul, Dijon, France. Horizontal mechanical furnace for roasting. No. 1,167,118; Jan. 4; Gaz. vol. 222; p. 245.

Sasseen, John H., *et al.* (See Crecelius, Louis J., assignor.)

Satterthwaite, Frank W. (See Atwood and Satterthwaite.)

Sauer, Anthony M. (See Kirby, Maurice J., assignor.)

Sauer, John, Sr., Cincinnati, Ohio. Automatic water controller for water-pipes. No. 1,167,317; Jan. 4; Gaz. vol. 222; p. 314.

Saulmon, Malon F., Morganton, N. C. Package-tie. No. 1,167,719; Jan. 11; Gaz. vol. 222; p. 508.

Saum, Robert J., assignor to The Western Tool & Manufacturing Company, Springfield, Ohio. Tool-holder. No. 1,168,428; Jan. 18; Gaz. vol. 222; p. 789.

Saunders, Charles R., Lakewood, Ohio. Lever-locking device. No. 1,167,600; Jan. 11; Gaz. vol. 222; p. 468.

Savage Arms Company. (See Nelson, Charles A., assignor.)

Savart, Louis, Paris, France. Sound-producer. No. 1,168,967; Jan. 18; Gaz. vol. 222; p. 979.

Savery, Thomas H., Jr. (See Farnsworth and Savery.)

Sayen, Lillian M., Rock, Mich. Chair. No. 1,167,846; Jan. 11; Gaz. vol. 222; p. 552.

Sayer, Robert C., Redland, near Bristol, England. Collector for electric traction. No. 1,166,637; Jan. 4; Gaz. vol. 222; p. 80.

Sayre, William H., Glen Ridge, N. J., assignor to American Abrasive Metals Company, New York, N. Y. Brake-shoe. No. 1,167,937; Jan. 11; Gaz. vol. 222; p. 586.

Schacke, Gustav, Augsburg, Germany. Device for observing the flow of fluids and vapors through conduits. No. 1,169,748; Jan. 25; Gaz. vol. 222; p. 1287.

Schaefer, George A., assignor of one-half to F. W. Irving, Chicago, Ill. Electrical connector. No. 1,169,431; Jan. 25; Gaz. vol. 222; p. 1174.

Schaeffer, Alfred, St. Louis county, Mo. Planter. No. 1,169,055; Jan. 18; Gaz. vol. 222; p. 1007.

Schaeffer, J. M. (See Winter, Louis, assignor.)

Schaffer, Charles. (See Kelleher and Schaffer.)

Scharf, Paul, Berlin, Germany, and E. Kwaysser, Vienna, Austria-Hungary. Four-stroke-cycle engine. No. 1,168,116; Jan. 11; Gaz. vol. 222; p. 647.

Schechter, Benjamin, New York, N. Y. Auxiliary bed. No. 1,168,680; Jan. 18; Gaz. vol. 222; p. 880.

Scheeren, Fritz, Ford City, Pa. Window-screen. No. 1,167,526; Jan. 11; Gaz. vol. 222; p. 441.

Scheidt, Robert J., assignor of one-fourth to R. L. Kay, California, Mo. Vehicle-spring. No. 1,167,938; Jan. 11; Gaz. vol. 222; p. 586.

Schenk, John C. (See Lane and Schenk.)

Scherbius, Arthur, Baden, Switzerland, assignor to General Electric Company. Buffer-machine for alternating-current systems. No. 1,167,119; Jan. 4; Gaz. vol. 222; p. 246.

Schickel, Norbert H., Stamford, Conn. Power-transmission mechanism. No. 1,169,357; Jan. 25; Gaz. vol. 222; p. 1149.

Schiller, Joseph F., Philadelphia, Pa. Blow-off valve for steam-boilers. No. 1,166,638; Jan. 4; Gaz. vol. 222; p. 81.

Schilzonyi, Niklas, Whittier, Cal. Musical pipe instrument. No. 1,169,358; Jan. 25; Gaz. vol. 222; p. 1149.

Schlegel, Leonard, Los Angeles, Cal. Irrigating device. No. 1,166,789; Jan. 4; Gaz. vol. 222; p. 133.

Schlitt, George. (See Grobl, Mathias A., assignor.)

Schloss, Meyer W. (See Guggenheim, Edgar, assignor.)

Schmelz, Henry A., Perham, Minn. Ventilator. No. 1,167,120; Jan. 4; Gaz. vol. 222; p. 246.

Schmidt, Adolf, assignor to Columbian Three Color Co., Chicago, Ill. Ornamental flocked design. No. 1,168,747; Jan. 18; Gaz. vol. 222; p. 903.

Schmidt, Frederick C. (See Rees and Schmidt.)

Schmidt, Otto, Ludwigshafen-on-the-Rhine, T. Eichler, Mannheim, and O. Allemann, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Liquid composition for lacquering purposes. No. 1,166,790; Jan. 4; Gaz. vol. 222; p. 133.

Schmidt, Walter A., assignor to International Precipitation Company, Los Angeles, Cal. Method and means for indicating suspended matter in gases. No. 1,168,2[illegible]; Jan. 11; Gaz. vol. 222; p. 684.

Schmidt, Wilhelm, Wernigerode, Germany. Device for regulating the compression-space of internal-combustion engines. No. 1,167,023; Jan. 4; Gaz. vol. 222; p. 212.

Schmidt, Wilhelm, assignor to Schmidt'sche Heissdampf-Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Engine-governor with automatic inlet-valve. No. 1,167,527; Jan. 11; Gaz. vol. 222; p. 442.

Schmidt, Wilhelm, Wilhelmshöhe, near Cassel, assignor to Schmidt'sche Heissdampf-Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Water-tube boiler. No. 1,168,748; Jan. 18; Gaz. vol. 222; p. 903.

Schmidt'sche Heissdampf-Gesellschaft m. b. H. (See Schmidt, Wilhelm, assignor.)

Schmitt, Joseph A., South Newburg, Ohio. Locking device for the controlling-levers of motor-vehicles. No. 1,169,572; Jan. 25; Gaz. vol. 222; p. 1225.

Schmitt, Maximilian, Paterson, N. J. Boat structure. No. 1,168,828; Jan. 18; Gaz. vol. 222; p. 932.

Schnabel, Albert, Ottine, Tex. Support for cotton-pickers' sacks. No. 1,168,429; Jan. 18; Gaz. vol. 222; p. 789.

Schneider & Cie. (See Bourdelles, Emile, assignor.)

Schneider, Eugéne, Le Creuzot, France. Torpedo-launching apparatus for submarine vessels. No. 1,166,940; Jan. 4; Gaz. vol. 222; p. 183.

Schneider, Eugène, Paris, France. Ordnance. No. 1,168,681; Jan. 18; Gaz. vol. 222; p. 880.

Schneider, George W., assignor of one-third to M. Merrett, Argenta, Ark. Draft-gear. No. 1,168,569; Jan. 18; Gaz. vol. 222; p. 839.

Schneider, Peter, Oswego, N. Y. Brake-control and signal system for single-track railways. No. 1,169,516; Jan. 25; Gaz. vol. 222; p. 1206.

Schoen, Walter A. (See Skelton, Grover C., assignor.)

Schoenky, August R., Somerville, Mass. Speed-changing mechanism for power-driven machines. No. 1,167,365; Jan. 4; Gaz. vol. 222; p. 333.

Schoenle, Frank A., Buffalo, N. Y. Magnetic latch. No. 1,167,318; Jan. 4; Gaz. vol. 222; p. 315.

Schoenstein, Fritz. (See Lechner, Charle, assignor.)

Schoenwolf, Fred, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone-exchange system. No. 1,169,736; Jan. 25; Gaz. vol. 222; p. 1282.

Schoenwolf, Fred, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company. Automatic telephone system. No. 1,169,754; Jan. 25; Gaz. vol. 222; p. 1289.

Schoettle, Ferdinand, Germantown, Pa., assignor to Pioneer Suspender Company. Display-box. No. 1,167,847; Jan. 11; Gaz. vol. 222; p. 552.

Scholz, Paul J. A., Dresden, Saxony, assignor to Firm of A. Renner, Dresden, Germany. Making relievo-formes for printing. No. 1,167,939; Jan. 11; Gaz. vol. 222; p. 586.

Schrage, Herman F., Palatine, Ill. Extensible car-step. No. 1,168,749; Jan. 18; Gaz. vol. 222; p. 903.

Schroder, Anna J., Charleston, S. C. Powder-puff. No. 1,168,430; Jan. 18; Gaz. vol. 222; p. 789.

Schroeder, Frederick J., assignor to The Damascus Brake Beam Co., Cleveland, Ohio. Forging brake-fulcrums. No. 1,166,858; Jan. 4; Gaz. vol. 222; p. 156.

Schroeder, Frederick J., assignor to The Damascus Brake Beam Co., Cleveland, Ohio. Freight-car ladder. No. 1,166,859; Jan. 4; Gaz. vol. 222; p. 156.

Schulz, Carl F., New York, N. Y. Vaporizer. No. 1,169,573; Jan. 25; Gaz. vol. 222; p. 1225.

Schulz, Carl F., Corona, N. Y. Carbureter. No. 1,169,574; Jan. 25; Gaz. vol. 222; p. 1226.

Schuhmann, Richard J., assignor of one-half to G. N. Bosler, Louisville, Ky. Automaton. No. 1,168,750; Jan. 18; Gaz. vol. 222; p. 903.

Schuhmann, Richard J., assignor of one-half to G. N. Bosler, Louisville, Ky. Automaton-sign. No. 1,168,751; Jan. 18; Gaz. vol. 222; p. 904.

Schulze, Carl O., New York, N. Y. Resilient wheel. No. 1,168,117; Jan. 11; Gaz. vol. 222; p. 648.

Schumacher, Edward B. T., assignor to John J. Bagley & Company, Detroit, Mich. Combined pipe and match-holder for tobacco-jars. No. 1,169,198; Jan. 25; Gaz. vol. 222; p. 1095.

Schuman, Julius, San Francisco, Cal. Measuring instrument. No. 1,168,431; Jan. 18; Gaz. vol. 222; p. 789.

Schumann, Harry F., Los Gatos, Cal. Pump-plunger. No. 1,168,118; Jan. 11; Gaz. vol. 222; p. 648.

Schutt, Alexander, Bismarck, N. D. Dental instrument. No. 1,168,911; Jan. 18; Gaz. vol. 222; p. 959.

Schutte & Koerting Company. (See Zimmermann, Hans, assignor.)

Schwaibold, Frederick H. (See Nordstrom and Schwaibold.)

Schwartz, Ulysses G., Chicago, Ill. Ventilator or storm-shield for windows. No. 1,169,432; Jan. 25; Gaz. vol. 222; p. 1175.

Schwarze, Carl J., assignor to Schwarze Electric Company, Adrian, Mich. Electrically-operated sound-producer. No. 1,167,601; Jan. 11; Gaz. vol. 222; p. 469.

Schwarze Electric Company. (See Schwarze, Carl J., assignor.)

Schwemberger, Otto, assignor of one-third to D. Venosa, Jr., and one-third to O. Cady, Cincinnati, Ohio. Means for detaching and supporting the back of a piano. No. 1,167,436; Jan. 11; Gaz. vol. 222; p. 412.

Schweppenheiser, Oliver T., Philadelphia, Pa., and A. Freirich, Demarest, N. J. Clothes-hanger. No. 1,169,056; Jan. 18; Gaz. vol. 222; p. 1008.

Scott, Archibald D., assignor to Varley Duplex Magnet Company, Jersey City, N. J. Machine for winding coils. No. 1,167,720; Jan. 11; Gaz. vol. 222; p. 509.

Scott, Archibald D., assignor to Varley Duplex Magnet Company, Jersey City, N. J. Mandrel for winding coils. No. 1,167,721; Jan. 11; Gaz. vol. 222; p. 509.

Scott, Archibald D., assignor to Varley Duplex Magnet Company, Jersey City, N. J. Winding and the product thereof. No. 1,167,722; Jan. 11; Gaz. vol. 222; p. 510.

Scott, Archibald D., assignor to Varley Duplex Magnet Company, Jersey City, N. J. Mandrel for winding coils. No. 1,167,723; Jan. 11; Gaz. vol. 222; p. 510.

Scott, George W., Troy, Ohio. Storm-front for vehicles. No. 1,167,121; Jan. 4; Gaz. vol. 222; p. 247.

Scott, John S., Greenville, Tex. Fishing-float. No. 1,167,222; Jan. 4; Gaz. vol. 222; p. 282.

Scott Paper Company. (See Hamilton, Ernest A., assignor.)

Scott, Robert W., and A. E. Page, Boston, Mass., assignors to Scott & Williams, Incorporated, Philadelphia, Pa. Circular spring-needle knitting-machine. No. 1,167,024; Jan. 4; Gaz. vol. 222; p. 212.

Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Web-holder mechanism for knitting-machines. No. 1,169,737; Jan. 25; Gaz. vol. 222; p. 1283.

Scott & Williams. (See Morley, Joseph D., assignor.)

Scott & Williams. (See Scott, Robert W., assignor.)

Scott & Williams. (See Scott and Page, assignors.)

Scott & Williams. (See Swinglehurst, Harry, assignor.)

Scrank, Pincus. (See Lowy, Samuel, assignor.)

Scroggins, Fred, Browndel, assignor of forty-nine one-hundredths to J. E. Allison, Harris county, Tex. Door-fastener. No. 1,166,791; Jan. 4; Gaz. vol. 222; p. 133.

Seager, William, St. Louis, Mo. Attachment for washboards. No. 1,166,941; Jan. 4; Gaz. vol. 222; p. 183.

Seaman, Albert J., Boston, Mass. Therapeutic vibrator. No. 1,168,338; Jan. 18; Gaz. vol. 222; p. 758.

Searcy, George G., and W. D. Barnhart, American Falls, Idaho. Hay-fork mechanism. No. 1,167,785; Jan. 11; Gaz. vol. 222; p. 530.

Sears, Willard T., Philadelphia, Pa. Shock-absorber. No. 1,167,848; Jan. 11; Gaz. vol. 222; p. 553.

Seawright, Eugene O., Hamlin, Ky. Rotary engine. No. 1,168,968; Jan. 18; Gaz. vol. 222; p. 979.

Sebenius, John A., Bremerton, Wash. Spoon. No. 1,169,683; Jan. 25; Gaz. vol. 222; p. 1265.

Seelau, Franz, Berlin-Wilmersdorf, assignor of one-half to A. M. Newman, Berlin-Wannsee, Germany. Telegraphone. No. 1,168,432; Jan. 18; Gaz. vol. 222; p. 790.

Seelig, John G., Ripon, Wis. Washing-machine mechanism. No. 1,169,199; Jan. 25; Gaz. vol. 222; p. 1095.

Sefton Manufacturing Company, The. (See Clenny, James E., assignor.)

Seibert, Albert E., Topeka, Kans. Extension-step for railway-cars. No. 1,168,339; Jan. 18; Gaz. vol. 222; p. 758.

Seidel, William, Chicago, Ill. Resilient wheel. No. 1,168,035; Jan. 11; Gaz. vol. 222; p. 620.

Seidel, William, Chicago, Ill. Wheel-tread. No. 1,169,575; Jan. 25; Gaz. vol. 222; p. 1226.

Seidler, Hugo, Berlin-Dahlem, Germany. Manufacturing bimetallic composite objects or bodies. No. 1,168,752; Jan. 18; Gaz. vol. 222; p. 904.

Seipp, J. Harry. (See Devlin, Peter, assignor.)

Seiter, Emil, Marinette, Wis. Candle-mold. No. 1,168,433; Jan. 18; Gaz. vol. 222; p. 791.

Seitz, Edward. (See Lockwood, James E., assignor.)

Selleck, Silas E., Cold Spring, N. Y. Machine for decapping shells. No. 1,169,287; Jan. 25; Gaz. vol. 222; p. 1125.

Sels, Martinus T., Knoxville, Iowa. Hen's nest. No. 1,167,786; Jan. 11; Gaz. vol. 222; p. 531.

Semple, John B., Sewickley, Pa. Fuse. No. 1,166,942; Jan. 4; Gaz. vol. 222; p. 183.

Seng Company, The. (See Dyke, Darrell F., assignor.)

Sentinel Mfg. Co., The. (See Coes, Harold V., assignor.)

Seprec, Marek and S., and J. A. Novák, Clarence, Pa. Wrench. No. 1,168,682; Jan. 18; Gaz. vol. 222; p. 881.

Seprec, Steven. (See Seprec and Novák.)

Serrell, Edward W., Chabeuil, France. Spring connection for vehicles. No. 1,167,940; Jan. 11; Gaz. vol. 222; p. 587.

Sessions, Albert L., Bristol, Conn. Harness-loop. No. 1,167,437; Jan. 11; Gaz. vol. 222; p. 412.

Sessler, Leonhardt, Bottenweiler, near Zumhaus, Germany. Seed-feeding apparatus for cultivators with disks and elastic teeth. No. 1,167,662; Jan. 11; Gaz. vol. 222; p. 490.

Seubert, John, Sioux Falls, S. D. Corn shredding and husking machine. No. 1,169,200; Jan. 25; Gaz. vol. 222; p. 1096.

Seward, Ernest R., assignor to Gisholt Machine Company, Madison, Wis. Carriage-cross-feed stop mechanism for lathes. No. 1,168,683; Jan. 18; Gaz. vol. 222; p. 881.

Sewell, Herbert J., Highland Park, Mich. Cushion-wheel. No. 1,166,548; Jan. 4; Gaz. vol. 222; p. 49.

Sexton, Theodore H., Garden, Mich. Rotary potato-sorter. No. 1,169,288; Jan. 25; Gaz. vol. 222; p. 1125.

Seymour Manufacturing Company. (See Crow, Samuel L., assignor.)

Shab, William L. (See Wright and Shab.)

Shadbolt, William O., New York, N. Y. Truck. No. 1,167,724; Jan. 11; Gaz. vol. 222; p. 511.

Shafer, Frederick E., Idaville, Ind. Hulling-cylinder for clover and alfalfa hullers. No. 1,166,549; Jan. 4; Gaz. vol. 222; p. 49.

Shaler, Clarence A., Waupun, Wis. Vulcanizer. No. 1,169,576; Jan. 25; Gaz. vol. 222; p. 1227.

Shannon, Woodford, Louisville, Ky. Machine for cutting and forming wire clips. No. 1,167,725; Jan. 11; Gaz. vol. 222; p. 511.

Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Tandem harrow. No. 1,166,486; Jan. 4; Gaz. vol. 222; p. 27.

Sharp, Samuel J. Warwood, W. Va. Water-heater. No. 1,168,912; Jan. 18; Gaz. vol. 222; p. 959.

Sharp & Smith. (See Bennett, Charles F., assignor.)

Shattuck, Charles H., Moscow, Idaho. Treating woods. No. 1,169,289; Jan. 25; Gaz. vol. 222; p. 1126.

Shaver, Archie G. (See Bodde, Theodore, assignor.)

Shaw, Clarence R., Marine City, Mich. Heating system. No. 1,167,528; Jan. 11; Gaz. vol. 222; p. 442.

Shaw, George S., Springfield, Ohio. Grinding-machine. No. 1,166,640; Jan. 4; Gaz. vol. 222; p. 82.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,167,529; Jan. 11; Gaz. vol. 222; p. 443.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Scale-beam. No. 1,167,941; Jan. 11; Gaz. vol. 222; p. 587.

Shaw, Raymond E., assignor to B. F. Sturtevant Company, Boston, Mass. Stone-dressing machine. No. 1,166,860; Jan. 4; Gaz. vol. 222; p. 157.

Shaw, Samuel J., Chicago, Ill., assignor of one-half to I. G. Reading, Terre Haute, Ind. Piston-ring. No. 1,168,969; Jan. 18; Gaz. vol. 222; p. 980.

Shea, Bernard M., Amsterdam, N. Y. Open-mesh knitted fabric. No. 1,168,684; Jan. 18; Gaz. vol. 222; p. 882.

Sheaffer, James E. (See Radford and Sheaffer.)

Shearman, John R., Indianapolis, Ind. Safety-razor. No. 1,167,530; Jan. 11; Gaz. vol. 222; p. 443.

Shebol, Joseph, and W. F. Albrecht, Syracuse, N. Y. Fluid-pressure gage. No. 1,166,719; Jan. 4; Gaz. vol. 222; p. 109.

Sheehan, John J., *et al.* (See Woodward, Erastus, assignor.)

Sheff, Noba, New York, N. Y. Safety device for power-presses. No. 1,169,684; Jan. 25; Gaz. vol. 222; p. 1265.

Sheffield Car Company. (See Whitesell, Frederick N., assignor.)

Sheidler, Oliver E., Old Fort, Ohio. Hog-catcher. No. 1,167,223; Jan. 4; Gaz. vol. 222; p. 282.

Sheldon, Harry E., Pittsburgh, Pa., assignor of one-half to W. D. Forsyth, Youngstown, Ohio. Base-plate for railway-rails. No. 1,168,036; Jan. 11; Gaz. vol. 222; p. 620.

Sheldon, Samuel B., Duluth, Minn. Tar-drag. No. 1,168,570; Jan. 18; Gaz. vol. 222; p. 839.

Shelley, William A., assignor to J. L. Hoffman, Portland, Oreg. Oil-burner. No. 1,169,433; Jan. 25; Gaz. vol. 222; p. 1175.

Shepard, Kenneth A. (See Kendall, William G., assignor.)

Shepherd, Robert C., Los Angeles, Cal. Safety device for automobiles. No. 1,167,726; Jan. 11; Gaz. vol. 222; p. 511.

Shepherd, Thomas W., Waltham, Mass. Elk's clock. No. 1,168,571; Jan. 18; Gaz. vol. 222; p. 840.

Sheppard, John B., New York, N. Y. Mechanical toy. No. 1,168,829; Jan. 18; Gaz. vol. 222; p. 932.

Sheppard, Thomas, Agnewville, Va. Dirigible fender for street-cars. No. 1,168,970; Jan. 18; Gaz. vol. 222; p. 980.

Sherburne, Charles H. (See Graham, Benjamin J., assignor.

Sherman, Clifton W., Buffalo, N. Y., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,169,434; Jan. 25; Gaz. vol. 222; p. 1175.

Sherman, Clifton W., Buffalo, N. Y., assignor to The National Malleable Castings Company, Cleveland, Ohio. Draft-rigging for railway-cars. No. 1,169,435; Jan. 25; Gaz. vol. 222; p. 1176.

Sherman, Jacob S., Staunton, Ill. Miner's lamp. No. 1,167,942; Jan. 11; Gaz. vol. 222; p. 587.

Sherman, Max C., Ben Avon, Pa. Infant's folding bath-tub. No. 1,167,849; Jan. 11; Gaz. vol. 222; p. 553.

Sherwood, Emma, New York, N. Y. Cushioning-support for type-writing machines. No. 1,166,487; Jan. 4; Gaz. vol. 222; p. 27.

Shipman, Evan J., assignor to Sargent & Company, New Haven, Conn. Padlock. No. 1,168,340; Jan. 18; Gaz. vol. 222; p. 759.

Shirley, Cephas I., Glen Ridge, and F. W. Mueller, Newark, N. J., assignors to Tabor Sash Fixture Co. Sash hinge-fixture. No. 1,166,550; Jan. 4; Gaz. vol. 222; p. 50.

Shoemake, John C., Hiram, Mo. Check-row corn-planter and marker. No. 1,167,438; Jan. 11; Gaz. vol. 222; p. 412.

Shoninger, Sol. H. (See Joseph, Ida M., assignor.)

Short, Albert E. (See Short, Horace L., A. E., and H. O.)

Short, Frank, Schenectady, N. Y., assignor to General Electric Company. Magnetic connection. No. 1,168,037; Jan. 11; Gaz. vol. 222; p. 620.

Short, Horace L., A. E., and H. O., Battersea Park, London, England. Aeroplane. No. 1,167,943; Jan. 11; Gaz. vol. 222; p. 587.

Short, Hugh O. (See Short, Horace L., A. E., and H. O.)

Shropshire, Willets, Fort Elizabeth, N. J. Train-stop. No. 1,167,224; Jan. 4; Gaz. vol. 222; p. 282.

Shrum, David N., and J. H. Kelley, St. James, Ark. Spokegage. No. 1,169,359; Jan. 25; Gaz. vol. 222; p. 1150.

Shuman, Frank, Philadelphia, Pa. Method of and means for melting metals. No. 1,167,944; Jan. 11; Gaz. vol. 222; p. 588.

Shure Grip Horse Shoe & Manufacturing Co. (See Mault, George H., assignor.)

Sibbald, Charles A., and W. H. Caney, Troy, N. Y. Button-sewing mechanism. No. 1,169,290; Jan. 25; Gaz. vol. 222; p. 1126.

Sibley, Horace N., assignor of one-half to T. E. Collins, Shreveport, La. Jack and floor-clamp. No. 1,169,685; Jan. 25; Gaz. vol. 222; p. 1266.

Siebert, Otto W., and O. N. Turner; said Turner assignor to Bay State Metal Wheel Company, Templeton, Mass. Convertible baby-carriage. No. 1,167,439; Jan. 11; Gaz. vol. 222; p. 413.

Siemens & Halske A. G. (See Kaminski, Paul, assignor.)

Siemens & Halske A. G. (See Simpson, Otto A., assignor.)

Sill Stove Works. (See Will and Becker, assignors.)

Silliman, Benjamin F., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Rail-bond. No. 1,168,753; Jan. 18; Gaz. vol. 222; p. 904.

Sills, Harry A. and L., Montpelier, Ind. Ironing-board. No. 1,169,360; Jan. 25; Gaz. vol. 222; p. 1150.

Sills, Lafayette. (See Sills, Harry A. and L.)

Silver, Albert, Ellis, Kans. Safety-bridge. No. 1,169,517; Jan. 25; Gaz. vol. 222; p. 1207.

Silvers, Develves M., Rea, Mo. Power-transmission device. No. 1,168,119; Jan. 11; Gaz. vol. 222; p. 649.

Silvius, Ellis T., Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Credit-accounting register. No. 1,168,754; Jan. 18; Gaz. vol. 222; p. 905.

Simmon, Karl A., Edgewood Park, and A. J. Hall, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Control system. No. 1,168,038; Jan. 11; Gaz. vol. 222; p. 621.

Simmons, John J., Dunnegan, Mo. Swingletree attachment. No. 1,168,120; Jan. 11; Gaz. vol. 222; p. 649.

Simmons, Leroy W., Broad Ripple, Ind. Cultivator. No. 1,167,122; Jan. 4; Gaz. vol. 222; p. 247.

Simmons, Lucian N., Huntington, W. Va. Shoe-cleaner. No. 1,168,341; Jan. 18; Gaz. vol. 222; p. 759.

Simmons, Parker T., Attleboro Falls, Mass. Hinge. No. 1,166,551; Jan. 4; Gaz. vol. 222; p. 50.

Simmons, Ralph C., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stop mechanism. No. 1,167,531; Jan. 11; Gaz. vol. 222; p. 443.

Simmons, Ralph C., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-making machine. No. 1,169,201; Jan. 25; Gaz. vol. 222; p. 1096.

Simms Magneto Company. (See Hoyt, Francis R., assignor.)

Simonds, Justin F., Riverdale, Md. Cartridge for exploding gasolene for breaking up land. No. 1,169,686; Jan. 25; Gaz. vol. 222; p. 1266.

Simons, Eldert H., and R. Klein, assignors to Maschinenfabrik Badenia, vorm. Wm. Platz Söhne A.-G., Weinheim, Germany. Yielding coupling. No. 1,168,121; Jan. 11; Gaz. vol. 222; p. 649.

Simons, Frank W., Vallejo, Cal. Tire-armor. No. 1,166,861; Jan. 4; Gaz. vol. 222; p. 157.

Simons, Jacob W., *et al.* (See Kennedy, William D., assignor.)

Simons, William E., *et al.* (See Kennedy, William D., assignor.)

Simplex Heating Specialty Company, The. (See Wiley, Edgar C., assignor.)

Simpson, John H., Providence, R. I. Toy. No. 1,167,945; Jan. 11; Gaz. vol. 222; p. 589.

Simpson, Otto A., Charlottenburg, assignor to Siemens & Halske A. G., Berlin, Germany. Manufacturing tungsten anticathodes for Röntgen tubes. No. 1,167,532; Jan. 11; Gaz. vol. 222; p. 444.

Sinclair, George B., Georgetown, Me. Building. No. 1,166,552; Jan. 4; Gaz. vol. 222; p. 51.

Sinclair, George B., Medford, and G. I. Fiske, assignors, by mesne assignments, to Choralcelo Manufacturing Company, Boston, Mass. Pulsation device for musical instruments. No. 1,167,663; Jan. 11; Gaz. vol. 222; p. 490.

Sinclair, Neil, Boise, Idaho. Bed-frame. No. 1,167,123; Jan. 4, Gaz. vol. 222; p. 247.

Sindlinger, Daniel C., *et al.* (See Cosseboom, Robert J., assignor.)

Singer Manufacturing Company, The. (See Barron, William L., assignor.)

Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)

Singer Manufacturing Company, The. (See Hemleb, Martin, assignor.)

Sinicki, Anthony, Pittsburgh, Pa. Mail-box signal. No. 1,168,971; Jan. 18; Gaz. vol. 222; p. 980.

Sipp, Grant, Paterson, N. J. Variable-speed gearing. No. 1,167,440; Jan. 11; Gaz. vol. 222; p. 413.

Siptrott, Paul, Brooklyn, N. Y. Floating device for flying-machines. No. 1,169,361; Jan. 25; Gaz. vol. 222; p. 1150.

Sismondi, Camillo, Turin, Italy. Seal for bags, &c. No. 1,168,830; Jan. 18; Gaz. vol. 222; p. 932.

Skalla, Frank, Niles, Mich. Molding a compressed fiber composition. No. 1,168,831; Jan. 18; Gaz. vol. 222; p. 932.

Skeen, Samuel T., Sandoval, Ill. Drill. No. 1,166,943; Jan. 4; Gaz. vol. 222; p. 184.

Skelton, Grover C., assignor of one-half to W. A. Schoen, Victor, Colo. Fly-trap. No. 1,168,972; Jan. 18; Gaz. vol. 222; p. 981.

Skinner, Ernest M., Dorchester, Mass. Organ-pipe. No. 1,169,687; Jan. 25; Gaz. vol. 222; p. 1266.

Skinner, James M., and V. R. Bottone, Philadelphia, Pa. Electric storage battery. No. 1,169,362; Jan. 25; Gaz. vol. 222; p. 1151.

Slade, Basil A., London, and F. W. Thompson, Ashford, assignors of forty-five one-hundredths to said Slade, twenty-seven and one-half one-hundredths to said Thompson, and twenty-seven and one-half one-hundredths to Residential Small Holdings Company, Limited, London, England. Portable tank, cesspool, and the like. No. 1,169,688; Jan. 25; Gaz. vol. 222; p. 1267.

Slapo, Isaac, New York, N. Y. Ash-sifter for bakers' ovens. No. 1,168,913; Jan. 18; Gaz. vol. 222; p. 960.

Slaybaugh, James, assignor of one-half to E. A. Newton, Philadelphia, Pa. Envelop-sealing device. No. 1,166,553; Jan. 4; Gaz. vol. 222; p. 51.

Sledd, Taylor E., and J. T. Dixon, East Radford, Va. Lock-hinge. No. 1,169,363; Jan. 25; Gaz. vol. 222; p. 1151.

Slick, Frank F. (See Bremner and Slick.)

Slocum, Charles W., Newark, N. J. Grip for penholders. No. 1,168,342; Jan. 18; Gaz. vol. 222; p. 760.

Sloper, Thomas, Devizes, England. Wind-shield. No. 1,167,124; Jan. 4; Gaz. vol. 222; p. 248.

Sloper, Thomas, Devizes, England. Manufacturing strain-insulators. No. 1,167,125; Jan. 4; Gaz. vol. 222; p. 248.

Slough, Frank M., assignor to The Garford Manufacturing Company, Elyria, Ohio. Telephone system. No. 1,169,291; Jan. 25; Gaz. vol. 222; p. 1126.

Smernoff, Morris, New Haven, Conn. Portable display-frame. No. 1,168,832; Jan. 18; Gaz. vol. 222; p. 932.

Smiley, Ralph W., New York, N. Y. Correspondence-reminder. No. 1,169,738; Jan. 25; Gaz. vol. 222; p. 1283.

Smith, Abner B., and H. J. Goff, McCloud, Cal. Bundle-tying machine. No. 1,166,720; Jan. 4; Gaz. vol. 222; p. 109.

Smith, Albert W., Washington, D. C. Electric starter for automobile-engines. No. 1,169,518; Jan. 25; Gaz. vol. 222; p. 1207.

Smith, Alfred C., and F. E. Henry, Dobbs Ferry, N. Y. Locking-lever. No. 1,168,973; Jan. 18; Gaz. vol. 222; p. 981.

Smith, Andrew, San Mateo, Cal. Drainage-casing for culverts, drain-tiling, wells, &c. No. 1,169,689; Jan. 25; Gaz. vol. 222; p. 1267.

Smith, Arthur L., McConnelsville, Ohio. Well-cleaning device. No. 1,167,225; Jan. 4; Gaz. vol. 222; p. 282.

Smith, Benjamin, and A. Barlevy, New York, N. Y. Clothes-line support. No. 1,167,664; Jan. 11; Gaz. vol. 222; p. 490.

Smith, Benjamin F. (See Smith, John G. and B. F.)

Smith, Charles E., assignor to Underwood Typewriter Company, New York, N. Y. Page-end lock for type-writers. No. 1,169,577; Jan. 25; Gaz. vol. 222; p. 1227.

Smith, Ernest, Fort Thomas, Ky. Vehicle-curtain. No. 1,168,343; Jan. 18; Gaz. vol. 222; p. 760.

Smith, Ezra B., Chicago, Ill. Amplifying-finder for cameras. No. 1,167,319; Jan. 4; Gaz. vol. 222; p. 315.

Smith, Frank L., Winthrop, Mass., assignor to The Apple Electric Company, Dayton, Ohio. Centrifugal speed-governor. No. 1,167,850; Jan. 11; Gaz. vol. 222; p. 553.

Smith, Frank W., Portland, Me. Separator. No. 1,169,292; Jan. 25; Gaz. vol. 222; p. 1127.

Smith, Glenn R., assignor of one-half to N. R. Smith, Los Angeles, and one-half to R. F. Grenfell, San Diego, Cal. Rotary valve for internal-combustion engines. No. 1,168,572; Jan. 18; Gaz. vol. 222; p. 840.

Smith, Irving B., Philadelphia, Pa. Electrically-operated musical instrument. No. 1,168,755; Jan. 18; Gaz. vol. 222; p. 905.

Smith, James A., East Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Speed-governor for type-writing machines. No. 1,169,293; Jan. 25; Gaz. vol. 222; p. 1127.

Smith, John G. and B. F., Wahoo, Nebr. Device for connecting chains. No. 1,167,441; Jan. 11; Gaz. vol. 222; p. 414.

Smith, Keller, Aldrich, Mo. Fifth-wheel construction. No. 1,168,756; Jan. 18; Gaz. vol. 222; p. 905.

Smith, Morris F., Philadelphia, Pa. Firearm. No. 1,166,554; Jan. 4; Gaz. vol. 222; p. 51.

Smith, Nellie R., *et al.* (See Smith, Glenn R., assignor.)

Smith, Oberlin, Bridgeton, N. J. Garment-hanger. No. 1,169,202; Jan. 25; Gaz. vol. 222; p. 1097.

Smith, Orin L., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Preparing sole-blanks. No. 1,168,434; Jan. 18; Gaz. vol. 222; p. 791.

Smith, Oscar L., Grand Rapids, Mich. Rotating rack for show-cases. No. 1,169,294; Jan. 25; Gaz. vol. 222; p. 1128.

Smith, Rexford M., Washington, D. C. Aeroplane. No. 1,166,488; Jan. 4; Gaz. vol. 222; p. 27.

Smith, Ronald B., East Orange, N. J. Valve-gear. No. 1,169,690; Jan. 25; Gaz. vol. 222; p. 1267.

Smith, Shea. (See Jenkins and Smith.)

Smith, Solon, Krebs, Okla. Removable cover for receptacles. No. 1,168,122; Jan. 11; Gaz. vol. 222; p. 649.

Smith, Stephen T., Stamford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type writing machine. No. 1,169,295; Jan. 25; Gaz. vol. 222; p. 1128.

Smith, Swan, and O. W. Hammerquist, Ramsey county, assignors to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn. Printing-press. No. 1,167,665; Jan. 11; Gaz. vol. 222; p. 491.

Smith, Swan, and O. W. Hammerquist, Ramsey county, assignors to Osterlind Printing Press and Manufacturing Company, St. Paul, Minn. Printing-press. No. 1,167,666; Jan. 11; Gaz. vol. 222; p. 491.

Smith, Walter C., assignor to United States Metals Refining Company, Chrome, N. J. Treating impure bismuth metal. No. 1,166,721; Jan. 4; Gaz. vol. 222; p. 109.

Smith, Warren J., assignor to J. R. Morris, St. Louis, Mo. Lock. No. 1,168,685; Jan. 18; Gaz. vol. 222; p. 882.

Smith, William E. (See Mettler and Smith.)

Smith, William E., Milltown, assignor to Kilbourn Manufacturing Corporation, New Brunswick, N. J. Circular-knitting machine. No. 1,169,436; Jan. 25; Gaz. vol. 222; p. 1176.

Smith, William S., Cambridge, Mass. Starting and accelerating device for motors. No. 1,167,946; Jan. 11; Gaz. vol. 222; p. 589.

Smoot, Samuel B., Dimmock, assignor of one-half to W. E. Deegans, Mount Hope, W. Va. Powder-flask. No. 1,166,862; Jan. 4; Gaz. vol. 222; p. 157.

Snook, Homer C., Cynwyd, Pa. Evacuation process. No. 1,166,792; Jan. 4; Gaz. vol. 222; p. 134.

Snow, John, Cincinnati, Ohio. Evaporator. No. 1,168,573; Jan. 18; Gaz. vol. 222; p. 840.

Snyder, Daniel. (See Bibby, James J., assignor.)

Snyder, Daniel W., assignor to Snyder Metal Drying Form Company, Reading, Pa. Hosiery-drying mechanism. No. 1,167,025; Jan. 4; Gaz. vol. 222; p. 213.

Snyder, Frederick T., Oak Park, Ill. Electric furnace. No. 1,167,026; Jan. 4; Gaz. vol. 222; p. 213.

Snyder, George C. (See McInnes, Norman, assignor.)

Snyder, George H. (See Holland and Snyder.)

Snyder, Howard F., Newton, Iowa, assignor to The Maytag Company. Gearing. No. 1,167,126; Jan. 4; Gaz. vol. 222; p. 249.

Snyder Metal Drying Form Company. (See Snyder, Daniel W., assignor.)

Società Anonima Italiana Gio. Ansaldo & C. (See Sacerdoti, Cesare, assignor.)

Societe Anonyme Des Etablissements Delaunay-Belleville, The. (See Radiguer, Charles, assignor.)

Société Anonyme des Etablissements Lacour-Berthiot. (See Florian, Charles H., assignor.)

Société des Etablissements Gaumont. (See Gaumont, Léon, assignor.)

Societe du Carburateur Zenith. (See Heftler, Victor K., assignor.) (Reissue.)

Société La Stenophile Bivort. (See Dold, Victor-Charles, assignor.)

Soevyn, Thomas W. (See Welch, Elizabeth J., assignor.)

Sonnenschein, Albert. (See Barringer, Max, assignor.)

Sonora Phonograph Corporation. (See Brightson, George E., assignor.)

Sonosky, Louis, *et al.* (See Dolejska and Herzik, assignors.)

Soper, Raymond H., assignor to Superior Seating Company, Muskegon, Mich. Foot for furniture-standards. No. 1,166,641; Jan. 4; Gaz. vol. 222; p. 82.

Soule, Arthur C., San Francisco, Cal. Window-sash mounting. No. 1,168,833; Jan. 18; Gaz. vol. 222; p. 933.

Southworth, Harrison H. (See Wolf and Southworth.)

Spaeth, Joseph C., and B. Vinar, Dwyer, Wyo. Silo-material-handling mechanism. No. 1,168,123; Jan. 11; Gaz. vol. 222; p. 649.

Spann, Lewis M., Columbus, Miss. Garter. No. 1,167,226; Jan. 4; Gaz. vol. 222; p. 283.

Sparks, William E., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,167,533; Jan. 11; Gaz. vol. 222; p. 444.

Spaulding, J. C., *et al.* (See Nathan, John, assignor.)

Speare, Edward R., Newton, assignor, by mesne assignments, to Economy Food Products Company, Cambridge, Mass. Food product. No. 1,167,127; Jan. 4; Gaz. vol. 222; p. 249.

Specketer, Heinrich, and E. Marburg, Griesheim-on-the-Main, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Manufacture of reduction products of sulfurous acids and salts thereof. No. 1,169,365; Jan. 25; Gaz. vol. 222; p. 1152.

Spencer Lens Company. (See Ott, Harvey N., assignor.)

Spencer, William C., Batavia, Ill. Boiler-flue cutter. No. 1,168,344; Jan. 18; Gaz. vol. 222; p. 760.

Spiekerman, Ewald M., Lodi, Cal. Water-gate. No. 1,167,851; Jan. 11; Gaz. vol. 222; p. 554.

Spies, Edward W. (See More and Spies.)

Spillan, James R. (See Odin, Charles F., assignor.)

Spinasse, Arthur E., Mount Vernon, Ohio. Glass-working apparatus. No. 1,167,534; Jan. 11; Gaz. vol. 222; p. 444.

Spinasse, Arthur E., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Glass-working apparatus. No. 1,166,793; Jan. 4; Gaz. vol. 222; p. 134.

Spinasse, Arthur E., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Glass-working apparatus. No. 1,166,794; Jan. 4; Gaz. vol. 222; p. 134.

Spitz, Charles, and C. A. Dodson, New York, N. Y. Egg-boiler. No. 1,167,947; Jan. 11; Gaz. vol. 222; p. 590.

Spitzer, Benjamin A. (See Lawton and Spitzer.)

Spitzer, Benjamin A. (See Wilcox and Spitzer.)

Spitzfaden, Bernard. (See Marx, Charles O., assignor.)

Spivey, Thomas S., Cincinnati, and G. A. Hattersley, assignors to The Victor Safe & Lock Company, Norwood, Ohio. Safe-deposit receptacle or box for use in trunks and the like. No. 1,168,914; Jan. 18; Gaz. vol. 222; p. 960.

Spitdorf Electrical Company. (See Mason, Charles T., assignor.)

Sprague, Arthur W., La Grange, Ill. Post-anchor. No. 1,167,852; Jan. 11; Gaz. vol. 222; p. 554.

Sprague Canning Machinery Company. (See Hood, Harry H., assignor.)

Sprangers, Mathias T., Sauk Rapids, Minn. Power transmission. No. 1,166,555; Jan. 4; Gaz. vol. 222; p. 52.

Springmeyer, Pattberg & Co. (See Gentzel, Gustav H., assignor.)

Sprol, Samuel J., Baltimore, Md. Concrete construction. No. 1,166,642; Jan. 4; Gaz. vol. 222; p. 82.

Sprung, Abbe, New York, N. Y. Spark-plug. No. 1,169,203; Jan. 25; Gaz. vol. 222; p. 1097.

Spurr, Frank, St. Paul, Minn. Lip-retractor. No. 1,168,574; Jan. 18; Gaz. vol. 222; p. 841.

Squire, David W., White Plains, N. Y. Package-tie. No. 1,167,227; Jan. 4; Gaz. vol. 222; p. 283.

Squires, Frederick, McConnelsville, assignor to W. Squires, Zanesville, Ohio. Locating natural gas. No. 1,168,757; Jan. 18; Gaz. vol. 222; p. 906.

Squires, Walter. (See Squires, Frederick, assignor.)

St. Elmo, Walter M., San Juan, Porto Rico. Coupling for connecting pipes and faucets to receptacles. No. 1,169,691; Jan. 25; Gaz. vol. 222; p. 1267.

St. Onge, Amasa. (See Clark, Bert V., assignor.)

Stade, George, Schloss Hubertusberg, Germany, assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Vacuum evaporating apparatus. No. 1,168,758; Jan. 18; Gaz. vol. 222; p. 906.

Stahl, Charles E., assignor to The Connecticut Telephone & Electric Company, Meriden, Conn. Spark-controlling means for internal-combustion engines. No. 1,169,094; Jan. 18; Gaz. vol. 222; p. 1023.
Standard Computing Scale Company. (See Buckingham, Fremont H., assignor.)
Standard Knitting Mills Company. (See Janes, Ralph R., assignor.)
Standard Oil Company. (See Burton, William M., assignor.)
Standard Oil Company of New York. (See Paine, Findley R., assignor.)
Standard Plunger Elevator Company. (See Jansson, Karl E. O., assignor.)
Stanley, Arthur M., Lynn, assignor to W. K. Blodgett, Cambridge, Mass. Wheel. No. 1,168,228; Jan. 11; Gaz. vol. 222; p. 684.
Stanley, Francis E., Newton, Mass., assignor to Stanley Motor Carriage Company. Water-level indicator and automatic feed-water and fuel controlling device for steam-boilers. No. 1,168,229; Jan. 11; Gaz. vol. 222; p. 684.
Stanley, Frank C., Syracuse, N. Y. Safety attachment for shafts and mandrels. No. 1,166,722; Jan. 4; Gaz. vol. 222; p. 110.
Stanley Motor Carriage Company. (See Stanley, Francis E., assignor.)
Stanley, Richard E., assignor of one-half to C. Lutz, Pittsburgh, Pa. Means for making bowling-pins. No. 1,167,535; Jan. 11; Gaz. vol. 222; p. 445.
Stant, George H., Connersville, Ind. Transmission for player-pianos. No. 1,168,435; Jan. 18; Gaz. vol. 222; p. 791.
Star Hame Manufacturing Company, The. (See Hudson, James M., assignor.)
Starbuck, George F., Waltham, Mass. Journal-box. No. 1,168,759; Jan. 18; Gaz. vol. 222; p. 907.
Stark, Wiley, Devils Slide, Utah. Attachment for pneumatic machine-riveters. No. 1,166,723; Jan. 4; Gaz. vol. 222; p. 110.
Starley, William, Coventry, England. Wheel for vehicles. No. 1,169,364; Jan. 25; Gaz. vol. 222; p. 1152.
Starrett, Laroy S., and J. A. Adell, assignors to L. S. Starrett Company, Athol, Mass. Ratchet-wrench. No. 1,167,948; Jan. 11; Gaz. vol. 222; p. 590.
Stary, Emil P., Cedar Rapids, Iowa. Automatic flushing tank or reservoir. No. 1,166,556; Jan. 4; Gaz. vol. 222; p. 52.
Staunton, Gray, Muskegon, Mich. Recovering rubber from vulcanized-rubber waste. No. 1,168,230; Jan. 11; Gaz. vol. 222; p. 685.
Staunton, Gray, Muskegon, Mich. Devulcanizing rubber. No. 1,169,437; Jan. 25; Gaz. vol. 222; p. 1177.
Steadman, Christopher. (See Robinson and Steadman.)
Steadman, Christopher, Huguenot Park, N. Y., and H. O. Robinson, Brookline, Mass. Brick-kiln. No. 1,168,575; Jan. 18; Gaz. vol. 222; p. 841.
Stearns, Edward C., Syracuse, N. Y. Faucet. No. 1,169,519; Jan. 25; Gaz. vol. 222; p. 1207.
Stearns-Roger Manufacturing Company, The. (See Nevill, David J., assignor.)
Stebbins, Frank E., Washington, D. C. Draft and buffing gear for cars. No. 1,168,974; Jan. 18; Gaz. vol. 222; p. 981.
Steel Heddle Manufacturing Company. (See Kaufmann, Jacob, assignor.)
Steffens-Amberg Co., The. (See Fox, Thomas A., assignor.)
Steblin, Charles F., New Rochelle, N. Y. Drier. No. 1,167,853; Jan. 11; Gaz. vol. 222; p. 555.
Stein, Hugo, Vienna, Austria-Hungary. Fountain-pen. No. 1,166,863; Jan. 4; Gaz. vol. 222; p. 157.
Stein, Rudolf, Frankfort-on-the-Main, Germany. Machine for affixing and canceling stamps. No. 1,167,442; Jan. 11; Gaz. vol. 222; p. 414.
Steinbart, Alfred, Pittsburgh, Pa. Regenerative furnace. No. 1,169,296; Jan. 25; Gaz. vol. 222; p. 1128.
Steinbecker, Karl, Charlottenburg, Germany. Means for supplying fuel to internal-combustion engines. No. 1,166,864; Jan. 4; Gaz. vol. 222; p. 158.
Steiner, George A., Salt Lake City, Utah. Towel cabinet and clamp. No. 1,169,297; Jan. 25; Gaz. vol. 222; p. 1129.
Steinmetz, Joseph A., Philadelphia, Pa. Aerial aircraft-destroyer. No. 1,166,489; Jan. 4; Gaz. vol. 222; p. 28.
Stelzer, August, St. Louis, Mo. Scaffold. No. 1,168,436; Jan. 18; Gaz. vol. 222; p. 791.
Stephens, Vaden S., Marston, Mo. Windmill. No. 1,168,975; Jan. 18; Gaz. vol. 222; p. 982.
Stephenson, George E., Scio, Ohio. Drain-valve. No. 1,167,027; Jan. 4; Gaz. vol. 222; p. 214.
Stephenson, Howard, and J. L. Howard, assignors to Brantford Computing Scale Company, Limited, Brantford, Ontario, Canada. Meat-holding mechanism for slicing-machines. No. 1,167,443; Jan. 11; Gaz. vol. 222; p. 415.
Stergianopulos, Demetrios, Wilmington, Del. Small fire-arm. No. 1,166,557; Jan. 4; Gaz. vol. 222; p. 52.
Stern-Coleman Diamond Machine Company. (See Coleman, Clyde J., assignor.)
Stern & Saalberg Co. (See Hirschfeld, Leo, assignor.)
Stetson, John B. (See Marx, Richard, assignor.)
Steven, Robert. (See Aitken, James, assignor.)
Stevens, Clayton S., New Britain, Conn. Air-pump. No. 1,169,438; Jan. 25; Gaz. vol. 222; p. 1177.
Stevens, George E., Everett, assignor to C. E. Alderman, trustee, Newton, Mass. Stoker. No. 1,167,028; Jan. 4; Gaz. vol. 222; p. 214.
Stevens, Louis E., and E. J. Fairbrother, Haverhill, Mass. Automobile-headlight adjuster. No. 1,168,576; Jan. 18; Gaz. vol. 222; p. 841.
Stevens, Ralph P., Palo Alto, Cal. Printing device. No. 1,167,727; Jan. 11; Gaz. vol. 222; p. 512.
Stevens, William C., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Tire-flap-making machine. No. 1,169,204; Jan. 25; Gaz. vol. 222; p. 1098.
Stevenson, Ashton G., assignor to Chicago Lino-Tabler Company, Chicago, Ill. Rule-broach. No. 1,168,601; Jan. 18; Gaz. vol. 222; p. 850.
Stevenson, Ashton G., assignor to Chicago Lino-Tabler Company, Chicago, Ill. Ruled type-form and producing same. No. 1,168,602; Jan. 18; Gaz. vol. 222; p. 851.
Stevenson, Francis E., and H. C. Little, assignors to The Hydraulic Press Manufacturing Company, Mount Gilead, Ohio. Press. No. 1,166,558; Jan. 4; Gaz. vol. 222; p. 52.
Stevenson, Oscar, River Grove, Ill. Fire-escape. No. 1,169,439; Jan. 25; Gaz. vol. 222; p. 1178.
Stevenson, Samuel P., Chester, Pa. Hinge-guard. No. 1,167,444; Jan. 11; Gaz. vol. 222; p. 415.
Stewart, Gertrude F., *et al.* (See Stewart, Perez M., assignor.)
Stewart, Perez M., New York, N. Y., assignor of one-half to H. H. Robertson, Sewickley, Pa., and one-half to G. F. Stewart. Rigid piece of metal insulated against electrolysis and corrosion and making the same. No. 1,167,949; Jan. 11; Gaz. vol. 222; p. 590.
Stewart-Warner Speedometer Corporation. (See Cadman, Addi B., assignor.)
Stewart-Warner Speedometer Corporation. (See Larson, Edward A., assignor.)
Stickel, William. (See Bucknam and Stickel.)
Stickle, Cole, Indianapolis, Ind. Regulating apparatus for drying sheets of paper, cloth, and the like. No. 1,167,029; Jan. 4; Gaz. vol. 222; p. 214.
Stickney, Burnham C., Elizabeth, N. J., assignor to J. T. Underwood, Brooklyn, N. Y. Combined type-writing and computing machine. No. 1,167,128; Jan. 4; Gaz. vol. 222; p. 249.
Stiles, George M. (See Stiles, Solon S. and G. M.)
Stiles, Solon S. and G. M., Middletown, Conn. Feed for finishing-cards. No. 1,167,950; Jan. 11; Gaz. vol. 222; p. 591.
Stineman, Ralph P., and O. O. Taylor, San Diego, Cal. Motion-picture-projector gearing. No. 1,167,854; Jan. 11; Gaz. vol. 222; p. 555.
Stineman, William H., Baltimore, Md., assignor to E. P. Hill and L. G. Gadd. Fender for motor-vehicles. No. 1,166,724; Jan. 4; Gaz. vol. 222; p. 110.
Stipp, Charles E., Dillon, Mont. Fly-trap. No. 1,167,855; Jan. 11; Gaz. vol. 222; p. 555.
Stock, Friedrich. (See Kästner and Stock.)
Stock, Hugh E. (See Porter, Lewis E., assignor.)
Stocking, Edgar B., Washington, D. C. Mechanical starter for automobiles. No. 1,168,915; Jan. 18; Gaz. vol. 222; p. 961.
Stocking, Edgar B., Washington, D. C. Mechanical starter for automobiles. No. 1,168,916; Jan. 18; Gaz. vol. 222; p. 961.
Stodola, Joseph G., Agram, Austria-Hungary, assignor to G. J. A. Trostel, Milwaukee, Wis. Tanning. No. 1,167,951; Jan. 11; Gaz. vol. 222; p. 591.
Stoffel, Walter, Greenleaf, Kans. Cylinder-tooth. No. 1,167,667; Jan. 11; Gaz. vol. 222; p. 492.
Stone, Andrew, Kansas City, Mo. Cigarette-dispensing case. No. 1,168,437; Jan. 18; Gaz. vol. 222; p. 792.
Stone, Harry A., New York, N. Y. Folding table. No. 1,166,865; Jan. 4; Gaz. vol. 222; p. 158.
Stone, John L., Sr., Richmond, Va. Cuspidor. No. 1,168,124; Jan. 11; Gaz. vol. 222; p. 650.
Stone, Wilbur M., East Orange, N. J., assignor to Mercantile Corporation, New York, N. Y. Blank-handling mechanism. (Reissue.) No. 14,047; Jan. 11; Gaz. vol. 222; p. 702.
Storey, Milton W., Indianapolis, Ind. Egg-carrier. No. 1,168,917; Jan. 18; Gaz. vol. 222; p. 962.
Stork, Albert M., Riverton, Wyo. Farm-gate. No. 1,166,944; Jan. 4; Gaz. vol. 222; p. 184.
Stouffer, Cyrus A., Dayton, Pa. Starting device for internal-combustion engines. No. 1,169,366; Jan. 25; Gaz. vol. 222; p. 1152.
Stout, Harry H., assignor to Nichols Copper Company, New York, N. Y. Leaching-tank. No. 1,169,205; Jan. 25; Gaz. vol. 222; p. 1098.
Stowasser, Anthony, Milwaukee, Wis. Shock-absorber. No. 1,169,578; Jan. 25; Gaz. vol. 222; p. 1228.
Stowell, Edward S., assignor to Atlas Implement and Tool Company, Rexburg, Idaho. Hoof-trimmer. No. 1,168,125; Jan. 11; Gaz. vol. 222; p. 650.
Strang, Walter C., Yonkers, assignor to Otis Elevator Company, New York, N. Y. Escalator-controlling system. No. 1,167,602; Jan. 11; Gaz. vol. 222; p. 469.
Stratton, John. (See Claremont, Stratton, and Farmer.)
Strauss, Benno, Bredeney, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Vessel for boiling lye. No. 1,166,866; Jan. 4; Gaz. vol. 222; p. 159.
Strauss, Frederick M., Detroit, Mich. Glass-tube cutter. No. 1,169,579; Jan. 25; Gaz. vol. 222; p. 1228.
Strauss, Siegmund. (See Lieben, Reisz, and Strauss.)

Straw, William P., Manchester, N. H., assignor to Draper Company, Hopedale, Mass. Builder mechanism for spinning-machines. No. 1,168,331; Jan. 11; Gaz. vol. 222; p. 685.
Streib, John F., Avalon, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Center-sill construction. No. 1,168,918; Jan. 18; Gaz. vol. 222; p. 962.
Strippel, Albert E., New York, N. Y. Stencil fabric and producing the same. No. 1,169,520; Jan. 25; Gaz. vol. 222; p. 1207.
Strock, Morris S., Boulder, Colo. Drawing-pen regulator. No. 1,167,228; Jan. 4; Gaz. vol. 222; p. 283.
Strömbäck, Emma H. T., Stockholm, Sweden. Hook-and-eye fastener. No. 1,169,580; Jan. 25; Gaz. vol. 222; p. 1228.
Stromberg Motor Devices Company. (See Anderson, Raymond M., assignor.)
Strubler, Charles G., assignor to Strubler Computing Scale Company, Elkhart, Ind. Scale. No. 1,168,686; Jan. 18; Gaz. vol. 222; p. 883.
Strubler Computing Scale Company. (See Strubler, Charles G., assignor.)
Struchen, Henry C., White Bear, Minn. Window-guard. No. 1,168,577; Jan. 18; Gaz. vol. 222; p. 842.
Stuart, Henry J., assignor to The Robert N. Bassett Company, Derby, Conn. Tab end. No. 1,169,095; Jan. 18; Gaz. vol. 222; p. 1024.
Stuart, Joseph M. (See Cromarty, Samuel, assignor.)
Stull, Jacob H., Fremont, Ohio. Combined door hasp and hook. No. 1,169,298; Jan. 25; Gaz. vol. 222; p. 1129.
Sturdy-Cummings Company. (See Eklund, Alexander, assignor.)
Sturt, Alfred T. (See Mason and Sturt.)
Stüsser, Richard. (See Callsen and Stüsser.)
Submarine Signal Company. (See Fessenden, Reginald A., assignor.)
Sulkoff, Louis A., Chicago, Ill. Upholstering spring structure. No. 1,167,856; Jan. 11; Gaz. vol. 222; p. 556.
Sullivan, Charles E. (See Sullivan, Josiah and C. E.)
Sullivan, Josiah, McCook, Nebr., and C. E. Sullivan, Pueblo, Colo. Train-pipe connector. No. 1,166,559; Jan. 4; Gaz. vol. 222; p. 53.
Sullivan, Timothy, *et al.* (See Kirk and Francisco, assignors.)
Superior Seating Company. (See Soper, Raymond H., assignor.)
Suren, Nathan H., Needham, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y. Alarm-controller for sprinkler systems. No. 1,169,692; Jan. 25; Gaz. vol. 222; p. 1268.
Surface, Samuel E., Stickney, S. D., assignor to M. O. McLaughlin, York, Nebr. Ice-cream disher. No. 1,168,919; Jan. 18; Gaz. vol. 222; p. 962.
Swanson, Selvivor A. (See De Kleist and Swanson.)
Swayze, Charles W., Canandaigua, N. Y. Wagon-bed and pin-socket therefor. No. 1,166,490; Jan. 4; Gaz. vol. 222; p. 28.
Swedberg, Peter O., Marshalltown, Iowa. Barn construction. No. 1,167,129; Jan. 4; Gaz. vol. 222; p. 250.
Swedlund, Erick J., Williston, N. D. Clasp. No. 1,169,693; Jan. 25; Gaz. vol. 222; p. 1268.
Sweigard, Emanuel W., Chicago, Ill. Pneumatic printing-frame. No. 1,166,945; Jan. 4; Gaz. vol. 222; p. 184.
Sweningson, Louis, and W. H. Woodward, Cleveland, Ohio. Hydraulic motor. No. 1,166,491; Jan. 4; Gaz. val. 222; p. 28.
Swenson, Carl E., Rockford, Ill. Universal joint. No. 1,167,229; Jan. 4; Gaz. vol. 222; p. 283.
Swift, Willard E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Paper towel. No. 1,167,603; Jan. 11; Gaz. vol. 222; p. 469.
Swinglehurst, Harry, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Latch-needle for knitting-machines. No. 1,168,039; Jan. 11; Gaz. vol. 222; p. 621.
Swisher, George A., Mount Vernon, Ill. Oven-ventilator. No. 1,169,694; Jan. 25; Gaz. vol. 222; p. 1269.
Sworzyn, Morris, Washington, D. C. Display-cabinet. No. 1,168,760; Jan. 18; Gaz. vol. 222; p. 907.
Sydney, Sidney J., Philadelphia, Pa. Bearing. No. 1,169,206; Jan. 25; Gaz. vol. 222; p. 1098.
Sykes, Walter J., San Francisco, Cal. Receptacle-cover-operating mechanism. No. 1,169,207; Jan. 25; Gaz. vol. 222; p. 1099.
Sylvester & Sons, William H. (See Sylvester, William H., assignor.)
Sylvester, William H., assignor to W. H. Sylvester & Sons, Philadelphia, Pa. Safety device for printing-presses. No. 1,168,232; Jan. 11; Gaz. vol. 222; p. 685.
Symes, Harry A., Portland, Oreg. Mooring-hook. No. 1,168,126; Jan. 11; Gaz. vol. 222; p. 650.
Symington, Thomas H., Rochester, N. Y. Draft-seat. No. 1,167,130; Jan. 4; Gaz. vol. 222; p. 250.
Synthetic Patents Co. (See Callsen and Stüsser, assignors.)
Synthetic Patents Co. (See Delbrück, Konrad, assignor.)
Synthetic Patents Co. (See Delbrück and Meisenburg, assignors.)
Synthetic Patents Co. (See Engelmann and Merkel, assignors.)
Synthetic Patents Co. (See Latten, Matthias, assignor.)
Synthetic Patents Co. (See Merling, Chrzesciuski, and Pfeffer, assignors.)
Synthetic Patents Co. (See Neelmeier, Jordan, and Heusner, assigners.)
Szlemko, Katherine, Chester, Pa. Egg-beater. No. 1,168,127; Jan. 11; Gaz. vol. 222; p. 651.
Szűr, Mike, St. Catherines, Ontario, Canada. Life-raft. No. 1,169,299; Jan. 25; Gaz. vol. 222; p. 1129.
Tabor Sash Fixture Co. (See Shirley and Mueller, assignors.)
Tadakuma, Seizi, Portland, Oreg. Keyless lock. No. 1,167,787; Jan. 11; Gaz. vol. 222; p. 531.
Taggart, Thomas E. (See Lewis and Taggart.)
Takamine, Jokichi, New York, N. Y. Apparatus for separating juice from citrus fruits. No. 1,166,807; Jan. 4; Gaz. vol. 222; p. 159.
Talbert, Mark L., Macon, Ga. Valve-gear. No. 1,168,976; Jan. 18; Gaz. vol. 222; p. 982.
Talking Doll & Novelty Company. (See Rotter and Arthur, assignors.)
Tamagno, Daniel B., assignor to L. Tamagno, New York, N. Y. Handle for cans. No. 1,168,345; Jan. 18; Gaz. vol. 222; p. 761.
Tamagno, Lydie. (See Tamagno, Daniel B., assignor.)
Tambach, Rudolf, assignor to Knoll and Company, Ludwigshafen-on-the-Rhine, Germany. Medicinal extract of aperient drugs. No. 1,167,230; Jan. 4; Gaz. vol. 222; p. 284.
Tanner, Arnold J., London, England, assignor to Prepayment Car Sales Company, New York, N. Y. Passenger-vehicle. No. 1,167,445; Jan. 11; Gaz. vol. 222; p. 415.
Tarrant, Reuben W., Clapham, London, England. Electric relay. No. 1,168,438; Jan. 18; Gaz. vol. 222; p. 792.
Tatham, Victor J. (See Makley, Alexander, assignor.)
Tatum, Frederick C., *et al.* (See Gass, Charles A., assignor.)
Tausch, Joseph H., Waukegan, Ill., assignor of one-half to G. Gorton, Racine, Wis. Adjustable and convertible gate. No. 1,168,233; Jan. 11; Gaz. vol. 222; p. 686.
Tausch, Joseph H., Winthrop Harbor, Ill., assignor of one-half to G. Gorton, Racine, Wis. Gate-latch. No. 1,168,234; Jan. 11; Gaz. vol. 222; p. 686.
Tausch, Joseph H., Winthrop Harbor, Ill., assignor of one-half to G. Gorton, Racine, Wis. Gate-hinge. No. 1,168,235; Jan. 11; Gaz. vol. 222; p. 686.
Taylor, Arthur K., assignor to Taylor Nursery Baby Bed Company, Jacksonville, Fla. Bed. No. 1,169,521; Jan. 25; Gaz. vol. 222; p. 1208.
Taylor, Fred K. (See Maurer and Taylor.)
Taylor Instrument Companies. (See Maurer and Taylor, assignors.)
Taylor, Miles D. (See Wagner, Ernest G., assignor.)
Taylor Nursery Baby Bed Company. (See Taylor, Arthur K., assignor.)
Taylor, Ona O. (See Stineman and Taylor.)
Taylor, Ralph G., and C. J. W. Clasen, Davenport, assignors, by mesne assignments, to The Bettendorf Company, Bettendorf, Iowa. Draft-rigging. No. 1,167,131; Jan. 4; Gaz. vol. 222; p. 251.
Taylor, Thomas, Jr., Hubbard Woods, Ill. Croquet-mallet and the like. No. 1,166,946; Jan. 4; Gaz. vol. 222; p. 184.
Teetor Company. (See Teetor, Martin, assignor.)
Teetor, Martin, assignor to Teetor Company, Des Moines, Iowa. Attachment for calculating-machines. No. 1,167,132; Jan. 4; Gaz. vol. 222; p. 251.
Temple, Sterling. (See Frary and Temple.)
Ten Broeck, Floyd G., assignor to West Virginia Pulp & Paper Company, New York, N. Y. Bleaching apparatus. No. 1,167,728; Jan. 11; Gaz. vol. 222; p. 512.
Ten Broek, Gerrit H. (See McAneny, Michael, assignor.)
Tengdin, Charles G., Kankakee, assignor, by mesne assignments, to Paramount Hosiery Form Drying Company, Chicago, Ill. Hosiery-finishing apparatus. No. 1,166,947; Jan. 4; Gaz. vol. 222; p. 185.
Terry, Otis N. (See Crawford, John G., assignor.)
Tevander, Swan, Maywood, Ill., assignor to American Can Company, New York, N. Y. Can feeding and timing mechanism. No. 1,166,492; Jan. 4; Gaz. vol. 222; p. 29.
Texas Company, The. (See Drake, Rollin L., assignor.)
Textile Machine Works, The. (See Airhart, Lewis, assignor.)
Thaw, Alexander B., Pittsburgh, Pa. Stabilizer for aeroplanes. No. 1,169,695; Jan. 25; Gaz. vol. 222; p. 1269.
Thayer, Archie B., executor. (See Thayer, Everett E.)
Thayer, Everett E., deceased; A. B. Thayer, executor, assignor to The Thayer Manufacturing Co., Jackson, Mich. Tree-support. No. 1,167,668; Jan. 11; Gaz. vol. 222; p. 492.
Thayer, Lou V., Jamestown, Pa. Potato-digger. No. 1,169,367; Jan. 25; Gaz. vol. 222; p. 1153.
Thayer Manufacturing Co., The. (See Thayer, Everett E., assignor.)
Thomas, Carl C., Baltimore, Md. Carbureter. No. 1,167,320; Jan. 4; Gaz. vol. 222; p. 315.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric switch. No. 1,168,977; Jan. 18; Gaz. vol. 222; p. 982.
Thomas, George E., Atlantic City, N. J. Toy. No. 1,168,978; Jan. 18; Gaz. vol. 222; p. 982.
Thomas Manufacturing Company, The. (See Pelton, Charles H., assignor.)
Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. System of constant-current distribution. No. 1,168,439; Jan. 18; Gaz. vol. 222; p. 792.
Thomason, George, Ada, Okla. Flood-gate. No. 1,168,128; Jan. 11; Gaz. vol. 222; p. 651.

Thompson, Albert W., Key West, Fla. Signal-holding bracket. No. 1,168,440; Jan. 18; Gaz. vol. 222; p. 793.
Thompson, Frederick W. (See Slade and Thompson.)
Thompson, George W., assignor to J. Wolf, Indianapolis, Ind. Heater for metallic combs and curling-irons. No. 1,168,578; Jan. 18; Gaz. vol. 222; p. 842.
Thompson, Pressley C., Bristol, Tenn. Eye-shade. No. 1,166,493; Jan. 4; Gaz. vol. 222; p. 29.
Thompson, Reuben B., Cohoes, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Garment. No. 1,169,581; Jan. 25; Gaz. vol. 222; p. 1228.
Thomson Electric Welding Company. (See Peiseler, Kuno, assignor.)
Thomson Electric Welding Company. (See Thomson, Elihu, assignor.)
Thomson, Elihu, Swampscott, assignor to Thomson Electric Welding Company, Lynn, Mass. Apparatus for electric welding. No. 1,168,346; Jan. 18; Gaz. vol. 222; p. 761.
Thomson, Samuel G., Reading, Pa. Swinging-bolster hanger for trucks. No. 1,168,347; Jan. 18; Gaz. vol. 222; p. 761.
Thomson, Samuel G., Reading, Pa. Hub-liner. No. 1,169,057; Jan. 18; Gaz. vol. 222; p. 1008.
Thorberg, Eric A., Bismarck, N. D. Photographic-printing machine. No. 1,167,857; Jan. 11; Gaz. vol. 222; p. 556.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Apparatus for developing and finishing cinematograph color-films. No. 1,169,096; Jan. 18; Gaz. vol. 222; p. 1024.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Apparatus for perforating cinematographic films. No. 1,169,097; Jan. 18; Gaz. vol. 222; p. 1024.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Apparatus for producing positives for natural-color cinematography. No. 1,169,098; Jan. 18; Gaz. vol. 222; p. 1025.
Thornton, Ross S., Cozad, Nebr. Alfalfa-meal grinder. No. 1,167,858; Jan. 11; Gaz. vol. 222; p. 556.
Thornton, William F., Knoxville, assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Blast-furnace. No. 1,167,729; Jan. 11; Gaz. vol. 222; p. 512.
Thorp, Charles J., Detroit, Mich. Composite metallic plate. No. 1,168,441; Jan. 18; Gaz. vol. 222; p. 793.
Thorp, William O., Brainerd, Minn. Door. No. 1,169,696; Jan. 25; Gaz. vol. 222; p. 1270.
Thorpe, Harry S., Norfolk, Nebr. Polishing composition for furniture and pianos. No. 1,166,494; Jan. 4; Gaz. vol. 222; p. 29.
Thorsby, Karl J., assignor to California Corrugated Culvert Company, Oakland, Cal. Flood-gate. No. 1,168,579; Jan. 18; Gaz. vol. 222; p. 842.
Tice, Percival S., Detroit, Mich. Carbureter. No. 1,163,560; Jan. 4; Gaz. vol. 222; p. 53.
Tidd, John N., Carters Bridge, Va. Gate-operating attachment. (Reissue.) No. 14,055; Jan. 25; Gaz. vol. 222; p. 1293.
Tierney, Thomas F., Watertown, assignor to Economy Food Products Company, Cambridge, Mass. Making shortened food products. No. 1,167,133; Jan. 4; Gaz. vol. 222; p. 251.
Tilly, William H., Brooklyn, N. Y. Interest and time calculator. No. 1,169,300; Jan. 25; Gaz. vol. 222; p. 1130.
Timken-Detroit Axle Company, The. (See Alden and Brush, assignors.)
Timken-Detroit Axle Company, The. (See Weaver, Robert B., assignor.)
Tinsman, Edgar A. (See Wildman and Tinsman.)
Tipton, William D., Baltimore, Md. Internal-combustion engine. No. 1,166,561; Jan. 4; Gaz. vol. 222; p. 54.
Titanium Alloy Manufacturing Company, The. (See Petinot, Napoleon, assignor.)
Titanium Alloy Manufacturing Company, The. (See Rossi and Barton, assignors.)
Titus, Richard, Bowling Green, Ohio. Stuffing-box for oil-wells. No. 1,168,687; Jan. 18; Gaz. vol. 222; p. 883.
Tizley, Arthur J., New York, N. Y. Automatic releasing device. No. 1,167,231; Jan. 4; Gaz. vol. 222; p. 284.
Tizzard, Edwin B., Dayton, Ohio. Surgical instrument. No. 1,166,495; Jan. 4; Gaz. vol. 222; p. 29.
Tjaden, Fred. (See Berck and Tjaden.)
Todd, Charles H., assignor to The Champion Register Company, Cleveland, Ohio. Rubbing-strip. No. 1,167,134; Jan. 4; Gaz. vol. 222; p. 252.
Todd, Samuel J., Highland Park, assignor of three-fourths to B. C. Hughes, Detroit, Mich. Priming device for explosive-engines. No. 1,168,920; Jan. 18; Gaz. vol. 222; p. 962.
Todd, Samuel J., Highland Park, assignor of three-fourths to B. C. Hughes, Detroit, Mich. Spark-plug. No. 1,168,921; Jan. 18; Gaz. vol. 222; p. 963.
Toennesen, Peter S. (See Kallom and Toennesen.)
Tognini, Achilles B., Cayucos, Cal. Starter for automobiles. No. 1,169,208; Jan. 25; Gaz. vol. 222; p. 1099.
Tokheim, John J., Cedar Rapids, Iowa. Agitating mechanism. No. 1,167,536; Jan. 11; Gaz. vol. 222; p. 445.
Toledo Scale Company. (See Burkholder, John D., assignor.)
Tolotti, Giulio. (See Pavesi and Tolotti.)
Tompkins, John D., Valatie, N. Y. Digester and process of cooking fibrous material. No. 1,167,030; Jan. 4; Gaz. vol. 222; p. 215.
Tong, William H., Elmira Heights, N. Y. Calipers. No. 1,166,868; Jan. 4; Gaz. vol. 222; p. 159.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Driving and stopping mechanism. No. 1,167,537; Jan. 11; Gaz. vol. 222; p. 444.
Torgerson, Torvel, *et al.* (See Mansfield, William M., assignor.)
Torrey, Lewis H., Worcester, Mass. Ball-stop for indoor golf. No. 1,166,496; Jan. 4; Gaz. vol. 222; p. 30.
Torsen, Tor A. R. W., Lynn, Mass., assignor to General Electric Company. Refractory lining. No. 1,167,135; Jan. 4; Gaz. vol. 222; p. 252.
Torsion Balance Company, The. (See Michalis, Clarence G., assignor.)
Tothill, William S., Chicago, Ill. Teeter-totter device. No. 1,168,348; Jan. 18; Gaz. vol. 222; p. 762.
Townsend, David. (See Melas, William, assignor.)
Townsend, Wilber, Los Angeles, Cal. Cover-releaser. No. 1,169,697; Jan. 25; Gaz. vol. 222; p. 1270.
Trask, Sampson, San Francisco, Cal. Valveless atomizer. No. 1,169,301; Jan. 25; Gaz. vol. 222; p. 1130.
Traun Rubber Company. (See Wartemann, Oskar, assignor.)
Treat, Ellis M. (See Graham, Andrew W., assignor.)
Treeland, Lewis, Moville, Iowa, assignor to J. J. Hicks, St. Cloud, Minn. Fence-stretcher. No. 1,167,136; Jan. 4; Gaz. vol. 222; p. 252.
Trees, Samuel A., *et al.* (See Griffith, Charles W., assignor.)
Treglown, William M., and W. Noble, London, England, assignors to Ingersoll-Rand Company, Jersey City, N. J. Drilling or boring tool. No. 1,169,582; Jan. 25; Gaz. vol. 222; p. 1229.
Treiber, Theodore R., assignor to F. Huttig, Kansas City, Mo. Pool-table triangle. No. 1,167,137; Jan. 4; Gaz. vol. 222; p. 252.
Trenchard, Henry, Jr., New York, N. Y. Envelop-fastener. No. 1,167,321; Jan. 4; Gaz. vol. 222; p. 316.
Treuke, Frank, Herculaneum, Mo. Grate-cleaner. No. 1,168,443; Jan. 18; Gaz. vol. 222; p. 794.
Trezise, Arthur R., Sr., Brooklyn, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Brake. No. 1,166,725; Jan. 4; Gaz. vol. 222; p. 111.
Triggs, James M., Huntington, Ind. Wall-receptacle. No. 1,168,442; Jan. 18; Gaz. vol. 222; p. 793.
Triggs, James M., assignor to Majestic Furnace & Foundry Company, Huntington, Ind. Wall garbage-receptacle. No. 1,169,302; Jan. 25; Gaz. vol. 222; p. 1130.
Troll, Walter M., Baltimore, Md. Oil-burner tip. No. 1,168,580; Jan. 18; Gaz. vol. 222; p. 843.
Trood, Samuel, Pittsburgh, Pa., assignor to The Bryant Electric Company, Bridgeport, Conn. Attachment-plug. No. 1,167,232; Jan. 4; Gaz. vol. 222; p. 284.
Troppman, Charles J., assignor to F. A. Hardy & Company, Chicago, Ill. Goggles or eye-protector. No. 1,168,581; Jan. 18; Gaz. vol. 222; p. 843.
Trostel, Gustav J. A. (See Stodola, Joseph G., assignor.)
Trotter, Walter F., Charleston, W. Va., assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Reciprocating-tool mechanism. No. 1,168,834; Jan. 18; Gaz. vol. 222; p. 933.
Trout, John C., Oakdale, Tenn. Clothes-line. No. 1,169,522; Jan. 25; Gaz. vol. 222; p. 1208.
Troyer, Nelson, and F. C. Fox, assignors to Astoria Iron Works, Astoria, Oreg. Hinged retort-door. No. 1,167,322; Jan. 4; Gaz. vol. 222; p. 316.
Truax, Ernest A., Inglewood, Cal. Electric alarm mechanism. No. 1,168,761; Jan. 18; Gaz. vol. 222; p. 907.
True, Charles H., Hammond, Ind., assignor to Locomotive Superheater Company, New York, N. Y. Pipe-bending die. No. 1,167,538; Jan. 11; Gaz. vol. 222; p. 446.
True, Charles H., Hammond, Ind., and N. T. McKee, Dobbs Ferry, assignors to Locomotive Superheater Company, New York, N. Y. Making pipe-bends. No. 1,169,209; Jan. 25; Gaz. vol. 222; p. 1100.
Trundle, George T., Jr., Cleveland, Ohio. Automobile-lock. No. 1,167,952; Jan. 11; Gaz. vol. 222; p. 591.
Tucker, Edward M., Oakesdale, Wash. Bag-holder. No. 1,167,604; Jan. 11; Gaz. vol. 222; p. 470.
Tuffin, Reginald C., *et al.* (See Edwards, Albert, assignor.)
Tufford, John G., assignor to The I. T. S. Rubber Company, Elyria, Ohio. Resilient heel. (Reissue.) No. 14,049; Jan. 11; Gaz. vol. 222; p. 703.
Tunison, Arthur C., assignor to Atlas Concrete Pipe Machinery Company, Salt Lake City, Utah. Molding-machine. No. 1,166,562; Jan. 4; Gaz. vol. 222; p. 54.
Turk, Rufus L., Minneapolis, Kans. Block-system switchboard. No. 1,167,138; Jan. 4; Gaz. vol. 222; p. 253.
Turner, Cecil L., New York, N. Y., assignor to Improved Still Company, Still. (Reissue.) No. 14,050; Jan. 18; Gaz. vol. 222; p. 1027.
Turner, Ora N. (See Siebert and Turner.)
Turner, Richard E. (See Gregory, Charles E., assignor.)
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Quick-release valve. No. 1,169,303; Jan. 25; Gaz. vol. 222; p. 1130.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electric pump-governor. No. 1,169,304; Jan. 25; Gaz. vol. 222; p. 1131.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electric pump-governor. No. 1,169,305; Jan. 25; Gaz. vol. 222; p. 1131.
Turney, Albert, Kansas City, Mo. Side sash-lock. No. 1,169,104; Jan. 18; Gaz. vol. 222; p. 1027.
Turney, Eugene T., assignor, by mesne assignments, to American Player Action Company, New York, N. Y. Piano-player. No. 1,169,440; Jan. 25; Gaz. vol. 222; p. 1178.
Turney, Eugene T., assignor to American Player Action Company, New York, N. Y. Adjustable action for piano-players. No. 1,169,441; Jan. 25; Gaz. vol. 222; p. 1178.
Turney, Eugene T., New York, N. Y., assignor to American Player Action Company. Actuating mechanism for piano-players. No. 1,169,442; Jan. 25; Gaz. vol. 222; p. 1179.
Tuttle, Henry A., Taunton, Mass. Actuating mechanism for reversing-gearing. No. 1,168,765; Jan. 18; Gaz. vol. 222; p. 909.
Tuttle, Henry A., Taunton, Mass. Brake mechanism for reversing-gearing. No. 1,168,766; Jan. 18; Gaz. vol. 222; p. 909.
Tuttle, Henry A., assignor to Evans Stamping and Plating Company, Taunton, Mass. Clutch mechanism for reversing-gearing. No. 1,168,688; Jan. 18; Gaz. vol. 222; p. 883.
Tuttle, Henry A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Reversing-gearing. No. 1,168,762; Jan. 18; Gaz. vol. 222; p. 908.
Tuttle, Henry A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Reversing-gearing. No. 1,168,763; Jan. 18; Gaz. vol. 222; p. 908.
Tuttle, Henry A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Reversing-gearing. No. 1,168,764; Jan. 18; Gaz. vol. 222; p. 908.
20th Century Machinery Co., The. (See Harders, Hartwig M. A., assignor.)
Twomey, William K., Chicago, Ill. Burner. No. 1,167,446; Jan. 11; Gaz. vol. 222; p. 415.
Twomey, William K., Chicago, Ill. Burning gas. No. 1,167,447; Jan. 11; Gaz. vol. 222; p. 416.
Tyden, Carl A. (See Russell and Tyden.)
Tylee, Arthur K. (See McLauthlin and Tylee.)
U. S. Slicing Machine Company. (See Groot, Pieter C. de, assignor.)
U. S. Slicing Machine Company. (See Newell, Atwood M., assignor.)
U. S. Steel Furniture Company. (See Ohnstrand, Enoch, assignor.)
Ufford, Charles A., Boston, Mass. Collapsible skirt-form. No. 1,168,444; Jan. 18; Gaz. vol. 222; p. 794.
Uhlemann, William R., Chicago, Ill. Eyeglass-bridge. No. 1,167,953; Jan. 11; Gaz. vol. 222; p. 592.
Uhlinger, Roy H. (See Brownlee and Uhlinger.)
Uhr, Nils W., Gottenborg, and J. H. Sandberg, assignors to A. Andersson, Stockholm, and T. Carlander, Gottenborg, Sweden. Subfloating body, such as mine, torpedo, and the like. No. 1,169,523; Jan. 25; Gaz. vol. 222; p. 1208.
Ulrich, Simon B., Malden, assignor to The Forbes Lithograph Manufacturing Company, Boston, Mass. Display-stand. No. 1,167,031; Jan. 4; Gaz. vol. 222; p. 215.
Umlah, Richard, Turkey, Ariz. Wrench. No. 1,168,835; Jan. 18; Gaz. vol. 222; p. 934.
Underhill, Charles R., assignor to The Acme Wire Company, New Haven, Conn. Winding-machine. No. 1,166,948; Jan. 4; Gaz. vol. 222; p. 185.
Underhill, Walter A., Auburn, N. Y. Dump-box for dump-wagons. No. 1,168,689; Jan. 18; Gaz. vol. 222; p. 884.
Underwood, John T. (See Harvey, Joseph C., assignor.)
Underwood, John T. (See Stickney, Burnham C., assignor.)
Underwood Typewriter Company. (See Allard, J. Frank, assignor.)
Underwood Typewriter Company. (See Coo, Thomas J., assignor.)
Underwood Typewriter Company. (See Cooper, John J., assignor.)
Underwood Typewriter Company. (See Dennis, Adolphus S., assignor.)
Underwood Typewriter Company. (See Lindburg, Joseph, assignor.)
Underwood Typewriter Company. (See Roulliot, Victor B., assignor.)
Underwood Typewriter Company. (See Smith, Charles E., assignor.)
Underwood Typewriter Company. (See Smith, James A., assignor.)
Underwood Typewriter Company. (See Smith, Stephen T., assignor.)
Underwood Typewriter Company. (See Young, Frank A., assignor.)
Union Bag & Paper Company, The. (See Sanders, Charles B., assignor.)
Union Fibre Company. (See Lappen, James E., assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Special Machine Company. (See Kershner, Benjamin V., assignor.)
Union Special Machine Company. (See Onderdonk, Lansing, assignor.)
Union Special Machine Company. (See Thompson, Reuben B., assignor.)
Union Special Machine Company. (See Woodward, Russel G., assignor.)
Union Switch & Signal Company, The. (See Lay, Charles H., assignor.)
Union Switch & Signal Company, The. (See Lewis, Lloyd V., assignor.)
Unit Construction Company. (See Conzelman, John E., assignor.)
United Brass Manufacturing Company. (See Valmore, William S., assignor.)
United Cigarette Machine Co. (See Ewers, Alexander L., assignor.)
United Injector Company. (See Park, William R., assignor.)
United Iron and Steel Company. (See McMurray and Mullen, assignors.)
United Shoe Machinery Company. (See Alexander, Alexander M., assignor.)
United Shoe Machinery Company. (See Ashton, Orrell, assignor.)
United Shoe Machinery Company. (See Ashworth, Fred, assignor.)
United Shoe Machinery Company. (See Bates, Arthur, assignor.)
United Shoe Machinery Company. (See Bergman, Gustaf, assignor.)
United Shoe Machinery Company. (See Bond, William A., assignor.)
United Shoe Machinery Company. (See Cavanagh, James, assignor.)
United Shoe Machinery Company. (See Chaplin, Alfred T., assignor.)
United Shoe Machinery Company. (See Davenport, Herman A., assignor.)
United Shoe Machinery Company. (See Eppler, Andrew, assignor.)
United Shoe Machinery Company. (See Forsyth, William R., assignor.)
United Shoe Machinery Company. (See Haahr, Anton, assignor.)
United Shoe Machinery Company. (See Lane, Elmer E., assignor.)
United Shoe Machinery Company. (See Mayo, Benjamin F., assignor.)
United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)
United Shoe Machinery Company. (See Pickles, James, assignor.)
United Shoe Machinery Company. (See Reed, William A., assignor.)
United Shoe Machinery Company. (See Simmons, Ralph C., assignor.)
United Shoe Machinery Company. (See Smith, Orin L., assignor.)
United Shoe Machinery Company. (See Topham, Laurence E., assignor.)
United Shoe Machinery Company. (See Wylie, Emerson F., assignor.)
United States Asbestos Company. (See Hill, Chester L., assignor.)
United States Envelope Company. (See Swift, Willard E., assignor.)
United States Metals Refining Company. (See Smith, Walter C., assignor.)
United States Sales Company. (See Villinger, William E., assignor.)
United States Wind Engine & Pump Company. (See Goodhue, James E., assignor.)
Universal Caster & Foundry Company. (See Diss, Albert B., assignor.)
Universal Machine Company, The. (See Baker and Knott, assignors.)
Unruh, Christian, Glen Ullin, N. D. Leather-cutter. No. 1,168,767; Jan. 18; Gaz. vol. 222; p. 910.
Upham, George B., Boston, Mass. Manufacturing compressed asphalt blocks. No. 1,168,768; Jan. 18; Gaz. vol. 222; p. 910.
Urakawa, Kametaro, Seattle, Wash. Can-opener. No. 1,168,979; Jan. 18; Gaz. vol. 222; p. 983.
Valmore, William S., Lakewood, Ohio, assignor to United Brass Manufacturing Company. Quick-compression faucet. No. 1,169,306; Jan. 25; Gaz. vol. 222; p. 1132.
Van Alstyn, Albert T., New York, N. Y. Hook and eye. No. 1,167,859; Jan. 11; Gaz. vol. 222; p. 557.
Van Amburgh, Charles, Tacoma, Wash. Air-trap non-refillable bottle. No. 1,167,448; Jan. 11; Gaz. vol. 222; p. 416.
Van Beal, John A. (See McLean, Warren L., assignor.)
Van Brunt, Abram, Brooklyn, N. Y., assignor to Waterbury Buckle Company, Waterbury, Conn. Toothless suspender-buckle. No. 1,168,236; Jan. 11; Gaz. vol. 222; p. 687.
Van Buren, Jafew S. (See Mott and Van Buren.)
Van Dersal, Ernest D., Portland, Oreg. Motor-driven cigar cutter and inhaler. No. 1,168,445; Jan. 18; Gaz. vol. 222; p. 795.
Van Dervort, Adrian O., Troy, N. Y. Metallic packing. No. 1,169,583; Jan. 25; Gaz. vol. 222; p. 1229.

Van Dillen, John T., and G. H. F. Bergmann, St. Louis, Mo. Emergency cut-off for automatic sprinkler systems. No. 1,167,860; Jan. 11; Gaz. vol. 222; p. 557.
Van Dorn, William T., Chicago, Ill. Loose flooring and means for storing the same in railway-cars. No. 1,169,307; Jan. 25; Gaz. vol. 222; p. 1132.
Van Gundy, Charles P., Catonsville, Md. Railway signal-torpedo. No. 1,167,450; Jan. 11; Gaz. vol. 222; p. 416.
Van Horn, Vandiver J., Chicago, Ill. Sewing-machine. No. 1,169,584; Jan. 25; Gaz. vol. 222; p. 1230.
Van Ness, Marvin B., Welsh, La. Centrifugal pumping mechanism. No. 1,168,981; Jan. 18; Gaz. vol. 222; p. 983.
Van Norsdall, Calvin L., Arma, assignor of one-fourth to W. L. Weir, Weir, Kans. Automatic lubricating device. No. 1,168,129; Jan. 11; Gaz. vol. 222; p. 651.
Van Sinderen, John H., Albany, N. Y. Lubricating device. No. 1,166,795; Jan. 4; Gaz. vol. 222; p. 135.
Van Wye, C. W. (See Watkins, William F., assignor.)
Van den Plas, Antoine, Brussels-Cinquantenaire, Belgium. Mud-guard for motor-vehicles. No. 1,167,449; Jan. 11; Gaz. vol. 222; p. 416.
Vance, Andrew E., and O. C. Mortrude, Sioux City, Iowa. Copy holder and display apparatus. No. 1,166,869; Jan. 4; Gaz. vol. 222; p. 160.
Vanderlaan, Frank, Holmen, Wis. Pail-supporter. No. 1,168,980; Jan. 18; Gaz. vol. 222; p. 983.
Varley Duplex Magnet Company. (See Scott, Archibald D., assignor.)
Vass, Josef von, Charlottenburg, Germany. Manufacturing staples. No. 1,169,698; Jan. 25; Gaz. vol. 222; p. 1270.
Venard, Peter I., *et al.* (See Wilcox, Orla O., assignor.)
Veneer Machinery Company. (See Dennis, Alfred A., assignor.)
Venosa, Domenico, Jr., *et al.* (See Schwemberger, Otto, assignor.)
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Starting mechanism for internal-combustion engines. No. 1,166,949; Jan. 4; Gaz. vol. 222; p. 185.
Vette, Ernest L., Waterville, Kans. Stock. No. 1,168,836; Jan. 18; Gaz. vol. 222; p. 934.
Vickers Limited. (See Elia, Giovanni E., assignor.)
Victor Safe & Lock Company, The. (See Spivey and Hattersley, assignors.)
Victor Shoe Machinery Company. (See Erickson, Edward, assignor.)
Victor Talking Machine Company. (See Babson and Haug, assignors.)
Victor Talking Machine Company. (See Dennison, Wilburn N., assignor.)
Villinger, William E., assignor to United States Sales Company, Williamsport, Pa. Vending-machine. No. 1,168,349; Jan. 18; Gaz. vol. 222; p. 762.
Vinar, Bohumir. (See Spaeth and Vinar.)
Vincent, Jesse G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Line-spacing mechanism for adding-machines, type-writers, and the like. No. 1,167,954; Jan. 11; Gaz. vol. 222; p. 592.
Vincent, Louis N., assignor of nine-twentieths to C. A. Chambers, Prescott, Ariz. Grease-cup. No. 1,167,861; Jan. 11; Gaz. vol. 222; p. 558.
Vitali, Francesco, and G. Pizzorno, Olgiate Olona, Italy. Sliding-door lock. No. 1,167,032; Jan. 4; Gaz. vol. 222; p. 215.
Viti, Rinaldo, St. Louis, Mo. Switching mechanism. No. 1,168,922; Jan. 18; Gaz. vol. 222; p. 963.
Vlchek Tool Company, The. (See Bartenstein, John J., assignor.)
Vogel, Eugene W., Chicago, Ill., assignor to Chicago Railway Signal & Supply Co. Anticreeper for rails. No. 1,166,497; Jan. 4; Gaz. vol. 222; p. 30.
Vogel, Eugene W., Chicago, Ill., assignor to Chicago Railway Signal & Supply Co. Anticreeper for rails. No. 1,166,498; Jan. 4; Gaz. vol. 222; p. 31.
Voglesong, Clyde C., Oakland, Cal., assignor to American Coin Register Company. Change-making machine. No. 1,168,582; Jan. 18; Gaz. vol. 222; p. 843.
Vogt, Clarence W., Louisville, Ky. Appliance for artificial-ice plants. No. 1,169,368; Jan. 25; Gaz. vol. 222; p. 1153.
Vogt, John E., Chicago, Ill. Grinder for mower-knives. No. 1,167,862; Jan. 11; Gaz. vol. 222; p. 558.
Vollmer, Leonhard, New York, N. Y. Oven. No. 1,168,769; Jan. 18; Gaz. vol. 222; p. 910.
Volotone Company. (See Hornbeck, Henry S., assignor.)
Volz, William J., St. Louis, Mo. Hollow tile and tile structure. No. 1,168,583; Jan. 18; Gaz. vol. 222; p. 844.
Von Barth, Arthur, Perth Amboy, N. J. Coin or change delivery machine. No. 1,166,499; Jan. 4; Gaz. vol. 222; p. 31.
Von Hentzel, Johann, New York, N. Y. Electrical hot-water apparatus. No. 1,166,950; Jan. 4; Gaz. vol. 222; p. 186.
Von Hoffmann, George E., assignor of one-half to G. S. Noble, Chicago, Ill. Toy or game device. No. 1,168,808; Jan. 18; Gaz. vol. 222; p. 925.
Von Kramer, Hans, and G. Kapp, Edgbaston, Birmingham, England. Resonating relay. No. 1,166,951; Jan. 4; Gaz. vol. 222; p. 186.
Vosburgh, Walter S. (See Yemiker and Vosburgh.)
Vuia, Trajan, Neuilly-on-Seine, France. Hot-air engine with closed circuit. No. 1,169,308; Jan. 25; Gaz. vol. 222; p. 1132.
Vuilleumier, Rudolph, New Rochelle, assignor to The Safety Car Heating and Lighting Co., New York, N. Y. Car-axle power-transmitting mechanism. No. 1,168,446; Jan. 18; Gaz. vol. 222; p. 795.
Vulcan Soot Cleaner Co., of Pittsburg, Pa. (See Linaker, Frederick W., assignor.)
Vyvial, Ignatz H. (See Holub, Henry, assignor.)
Wagner, Charles, Grantwood, N. J., and A. Hormel, New York, N. Y. Paper-curing machine. No. 1,167,730; Jan. 11; Gaz. vol. 222; p. 513.
Wagner Electric Manufacturing Company. (See Dick, Burns, assignor.)
Wagner, Ernest G., assignor of one-half to M. D. Taylor, Lewiston, Idaho. Valve construction. No. 1,169,309; Jan. 25; Gaz. vol. 222; p. 1132.
Wagner, Raoul D., Paris, France. Expansion-socket. No. 1,168,770; Jan. 18; Gaz. vol. 222; p. 911.
Wahlenmaier, Frank C., Kansas City, Mo. Apparatus for testing muscles of the eye. No. 1,169,699; Jan. 25; Gaz. vol. 222; p. 1270.
Wahlstrom, Oscar W., Boulder, Col. Chain-link. No. 1,166,952; Jan. 4; Gaz. vol. 222; p. 187.
Waite, Charles N. (See Ayerst and Waite.)
Wakefield, Frederick W., assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio. Lighting-fixture. No. 1,168,350; Jan. 18; Gaz. vol. 222; p. 763.
Wakefield, Frederick W., assignor to The F. W. Wakefield Brass Company, Vermilion, Ohio. Battery-lamp. No. 1,168,351; Jan. 18; Gaz. vol. 222; p. 763.
Wakeland, Edwin C., assignor of one-third to J. E. Ericson and one-third to J. W. Hurley, Oakland, Cal. Nut-lock. No. 1,169,310; Jan. 25; Gaz. vol. 222; p. 1133.
Wakfer, William H., South Norwood, assignor of one-half to S. Peck, Wallington, England. Drill. No. 1,169,369; Jan. 25; Gaz. vol. 222; p. 1153.
Waldo, John R., Los Angeles, Cal. Swivel-clip. No. 1,167,731; Jan. 11; Gaz. vol. 222; p. 513.
Waldron, William H., New Brunswick, N. J. Rug-cutting machine. No. 1,168,130; Jan. 11; Gaz. vol. 222; p. 652.
Walker, Clarine M., Pensacola, Fla. Salvage-apparatus for vessels. No. 1,168,982; Jan. 18; Gaz. vol. 222; p. 984.
Walker, David L. (See Diamond, Rubin L., assignor.)
Walker, John, assignor to Massachusetts Chocolate Company, Boston, Mass. Treating cocoa. No. 1,167,956; Jan. 11; Gaz. vol. 222; p. 593.
Walker, Robin A., Kansas City, Mo. Headlight-dimmer. No. 1,167,451; Jan. 11; Gaz. vol. 222; p. 417.
Wallace Barnes Co., The. (See Linberg, Andrew, and Wright, assignors.)
Wallace Barnes Co., The. (See Wright and Andrew, assignors.)
Waller, Charles W., Chicago, Ill. Phonograph sound-box. No. 1,166,953; Jan. 4; Gaz. vol. 222; p. 187.
Wallingford, Henry, Bonaparte, Iowa. Door-bridge for railway-cars. No. 1,168,983; Jan. 18; Gaz. vol. 222; p. 984.
Walsh, James R., Jacksonville, Fla. Plaster-board. No. 1,168,131; Jan. 11; Gaz. vol. 222; p. 652.
Walsh, John L., assignor of one-half to T. J. Conley, Chicago, Ill. Wrench. No. 1,169,749; Jan. 25; Gaz. vol. 222; p. 1287.
Walsh, John L., assignor of one-half to T. J. Conley, Chicago, Ill. Wrench. No. 1,169,750; Jan. 25; Gaz. vol. 222; p. 1287.
Walsh, Martin J., New York, N. Y. Fire-extinguishing system. No. 1,169,210; Jan. 25; Gaz. vol. 222; p. 1100.
Walter, Charles F., Quenemo, Kans. Grain-car door. No. 1,167,539; Jan. 11; Gaz. vol. 222; p. 446.
Walter, Guy C., Denver, Colo. Fish-net holder. No. 1,169,311; Jan. 25; Gaz. vol. 222; p. 1133.
Walter, Maurice, New York, N. Y. Motor-vehicle. No. 1,166,726; Jan. 4; Gaz. vol. 222; p. 111.
Walters, Hiram, and N. Bumpus, Curtice, Ohio. Excavating-machine. No. 1,169,443; Jan. 25; Gaz. vol. 222; p. 1179.
Waltower, Charles S., Ensley, Ala. Adjustable step-ladder. No. 1,169,700; Jan. 25; Gaz. vol. 222; p. 1271.
Ward, Artemus, Jr., and T. P. Chase, assignors to King Motor Car Company, Detroit, Mich. Automobile. No. 1,169,058; Jan. 18; Gaz. vol. 222; p. 1009.
Ward, Bertrand G., Jersey City, N. J. Game apparatus. No. 1,167,452; Jan. 11; Gaz. vol. 222; p. 417.
Ward, Frederick A., assignor to Gear Grinding Machine Company, Detroit, Mich. Bevel-gear-grinding machine. No. 1,167,957; Jan. 11; Gaz. vol. 222; p. 593.
Ward, Robert E., Kansas City, Mo. Hose-supporter. No. 1,167,669; Jan. 11; Gaz. vol. 222; p. 492.
Wardwell, Frank W., Jr., Cleveland, Ohio. Saw-setting device. No. 1,168,352; Jan. 18; Gaz. vol. 222; p. 763.
Ware, Philip C., A. Gastonguay, C. J. Linderson, J. E. Farrell, and W. S. Woodbury, Newburyport, Mass. Clearer for drawing-rolls. No. 1,167,033; Jan. 4; Gaz. vol. 222; p. 215.
Warga, John, assignor of one-half to S. Bubenko, Ohio City, Ohio. Folding stretcher. No. 1,166,727; Jan. 4; Gaz. vol. 222; p. 111.
Warhurst, Archie. (See Collins, Peter H., assignor.)
Warner, Amy J., Middlefield, Conn. Fly-paper holder. No. 1,169,701; Jan. 25; Gaz. vol. 222; p. 1271.

Warner, Arthur W. (See Carpenter and Warner.)
Warner, Franklin B., New York, N. Y. Manufacture of barrels for shotguns and rifles. No. 1,167,233; Jan. 4; Gaz. vol. 222; p. 285.
Warren, John E. (See Fassett and Warren.)
Warren, Otis S., Los Angeles, Cal. Extra seat for automobiles. No. 1,167,453; Jan. 11; Gaz. vol. 222; p. 417.
Warren, Peter R., Boston, Mass. Paper box. No. 1,168,353; Jan. 18; Gaz. vol. 222; p. 763.
Warren Featherbone Company, The. (See Morley, Albert, assignor.)
Wartemann, Oskar, New York, assignor to Traun Rubber Company, College Point, N. Y. Stem for tobacco-pipes. No. 1,168,354; Jan. 18; Gaz. vol. 222; p. 764.
Wasden, Isaac R., Hardin, Mont. Cattle-car. No. 1,166,500; Jan. 4; Gaz. vol. 222; p. 32.
Washburn, Frank S., Nashville, Tenn., assignor, by mesne assignments, to Ammo-Phos Corporation. Making ammonium phosphate. No. 1,167,788; Jan. 11; Gaz. vol. 222; p. 531.
Washburn, Lillian E., Blue Stores, N. Y. Weather-shield. No. 1,169,702; Jan. 25; Gaz. vol. 222; p. 1271.
Washington, Wade, Huntington, W. Va. Window-scaffold. No. 1,169,370; Jan. 25; Gaz. vol. 222; p. 1154.
Waterbury Buckle Company. (See Van Brunt, Abram, assignor.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Planter. No. 1,166,502; Jan. 4; Gaz. vol. 222; p. 32.
Watkins, Charles L., Rock Hall, Md. Measuring instrument. No. 1,166,501; Jan. 4; Gaz. vol. 222; p. 32.
Watkins, Henry W. (See Kellogg and Watkins.)
Watkins, John F. (See Hyatt, Benjamin S., assignor.)
Watkins, William F., assignor to C. W. van Wye, Spokane, Wash. Amusement device. No. 1,167,958; Jan. 11; Gaz. vol. 222; p. 594.
Watson, Everett V. (See Anderson, John C. A., assignor.)
Watson, John M., Omaha, Nebr. Horseshoe-calking machine. No. 1,169,059; Jan. 18; Gaz. vol. 222; p. 1009.
Watson, Richard M., Detroit, Mich. Loose-leaf binder. No. 1,167,454; Jan. 11; Gaz. vol. 222; p. 417.
Watts, Frank E., assignor to Hupp Motor Car Company, Detroit, Mich. Universal joint. No. 1,167,455; Jan. 11; Gaz. vol. 222; p. 418.
Watts, J. R. (See Grinstead, Albert N., assignor.)
Waxbom, Carl J. E., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Electric conductor. No. 1,169,211; Jan. 25; Gaz. vol. 222; p. 1100.
Way, Sylvester B. (See Fay and Way.)
Wayne, Jacob L., 3d, Indianapolis, Ind. Lubricator. No. 1,166,643; Jan. 4; Gaz. vol. 222; p. 82.
Wear, Frank F., San Francisco, Cal., assignor to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio. Electric bone-saw. No. 1,168,355; Jan. 18; Gaz. vol. 222; p. 764.
Weatherley, Stuart, London, England. Boot and shoe fastening. No. 1,168,771; Jan. 18; Gaz. vol. 222; p. 911.
Weaver, Clayton, Phalanx, Ohio. Air-valve. No. 1,166,503; Jan. 4; Gaz. vol. 222; p. 32.
Weaver, James H., and A. D. Welker, assignors to The Ohio Match Company, Wadsworth, Ohio. Machine for impregnating matches. No. 1,167,323; Jan. 4; Gaz. vol. 222; p. 317.
Weaver, Robert B., assignor to The Timken-Detroit Axle Company, Detroit, Mich. Spiral-gear cutter. No. 1,168,356; Jan. 18; Gaz. vol. 222; p. 765.
Weber, Carl, assignor to Cement-Gun Construction Company, Chicago, Ill. Assembled concrete floor. No. 1,169,212; Jan. 25; Gaz. vol. 222; p. 1101.
Weber, Julia, New York, N. Y. Fruit-cutter. No. 1,168,838; Jan. 18; Gaz. vol. 222; p. 935.
Weber, Walter, assignor to Henkel & Cie., Dusseldorf, Germany. Cathodic production of solid peroxid compounds. No. 1,169,703; Jan. 25; Gaz. vol. 222; p. 1272.
Webster, Ada B. (See Wyatt, William, assignor.)
Webster, Allen. (See Bullard, James H. and E. W., assignors.)
Webster, Bradford, Louisville, Ky., assignor to Webster Loose-Leaf Filing Company. Book or filing device. No. 1,168,447; Jan. 18; Gaz. vol. 222; p. 795.
Webster Electric Company. (See Brown, Walter, assignor.)
Webster, Howard M., Chicago, Ill. Typographical composing-machine. No. 1,166,504; Jan. 4; Gaz. vol. 222; p. 33.
Webster Loose-Leaf Filing Company. (See Webster, Bradford, assignor.)
Wedge, Utley, Ardmore, Pa. Treating metallic sulfids, &c. No. 1,169,444; Jan. 25; Gaz. vol. 222; p. 1179.
Weeks, Harry G., assignor to F. C. Austin, Chicago, Ill. Electric heating unit. No. 1,169,213; Jan. 25; Gaz. vol. 222; p. 1101.
Weeks, Herbert W., Coopers Mills, Me. Dowel-sawing machine. No. 1,168,923; Jan. 18; Gaz. vol. 222; p. 964.
Wegener, William A., Beiseker, Alberta, Canada. Hat-pin guard. No. 1,166,728; Jan. 4; Gaz. vol. 222; p. 112.
Wehner, George A., Savannah, Ga. Lock. No. 1,168,132; Jan. 11; Gaz. vol. 222; p. 652.
Weigel, Arnold A., assignor to A. G. Welch, Chicago, Ill., trustee. Antifriction-bearing. No. 1,168,357; Jan. 18; Gaz. vol. 222; p. 765.
Weigel, Arnold A., assignor to A. G. Welch, Chicago, Ill., trustee. Antifriction-bearing. No. 1,168,358; Jan. 18; Gaz. vol. 222; p. 765.
Weir, William L. (See Van Norsdall, Calvin L., assignor.)
Weiss, Emil, Union Hill, N. J. Clothes-wringer. No. 1,166,954; Jan. 4; Gaz. vol. 222; p. 187.
Weisse, Faneuil D., New York, N. Y., assignor to Dental Manikin Head Co. Inc. Anatomical manikin-head. No. 1,166,796; Jan. 4; Gaz. vol. 222; p. 135.
Welch, Albert G., executor and trustee. (See Alfreds, Torris H.)
Welch, Albert G., trustee. (See Weigel, Arnold A., assignor.)
Welch, Albert G., executor and trustee. (See Woods, Edwin S.)
Welch, Albert G., executor and trustee. (See Woods and Alfreds.)
Welch, Elizabeth J., assignor of one-half to T. W. Soevyn, Spokane, Wash. Cap-closure for bottles. No. 1,168,690; Jan. 18; Gaz. vol. 222; p. 884.
Welch, John H., Seattle, Wash. Oil-burner. No. 1,167,805; Jan. 11; Gaz. vol. 222; p. 470.
Welch, Rosia W., assignor of one-half to J. H. Windfelder, Baltimore, Md. Rice hulling and polishing machine. No. 1,168,133; Jan. 11; Gaz. vol. 222; p. 653.
Weld, George A., Boston, Mass. Suspender-buckle. No. 1,166,955; Jan. 4; Gaz. vol. 222; p. 188.
Welin Marine Equipment Company. (See Broady, Harry W., assignor.)
Welker, Alvin D. (See Weaver and Welker.)
Welker, Alvin D. (See Young and Welker.)
Well, Hugo C., assignor of fifty one-hundredths to F. A. B. Meinhardt, New York, N. Y. Ignition system for internal-combustion engines. No. 1,167,456; Jan. 11; Gaz. vol. 222; p. 418.
Welliver, Jacob D., assignor of one-fourth to W. B. Kenworthy and one-fourth to G. R. Bull, Milford, Pa. Automobile-cranker. No. 1,168,134; Jan. 11; Gaz. vol. 222; p. 654.
Wells, Charles I., *et al.*, administrators. (See Wells, Pierson L.)
Wells, Frederic E., Greenfield, Mass. Pipe-cutter. No. 1,166,505; Jan. 4; Gaz. vol. 222; p. 33.
Wells, George W., Amesbury, Mass. Lock for doors. No. 1,168,584; Jan. 18; Gaz. vol. 222; p. 844.
Wells, Nettie J., *et al.*, administrators. (See Wells, Pierson L.)
Wells, Otto. (See Maxim, Hosea F., assignor.)
Wells, Pierson L., deceased, New York; N. J. Wells, Rockville Center, and C. I. Wells, Brooklyn, N. Y., administrators, assignors to Miller Saw-Trimmer Company of Michigan, Pittsburgh, Pa. Sheet separator and feeder. No. 1,167,367; Jan. 4; Gaz. vol. 222; p. 334.
Welt, Charles E. (See Caswell and Welt.)
Wemlinger, Julius R., Brooklyn, N. Y. Metallic sheet-piling. No. 1,166,563; Jan. 4; Gaz. vol. 222; p. 54.
Wendelburg, Alex, assignor to Pittsburgh Electric Tool Company, New York, N. Y. Switch mechanism. No. 1,167,606; Jan. 11; Gaz. vol. 222; p. 470.
Wengler, Edward A., Glasgow, Mo. Lifting-jack. No. 1,166,729; Jan. 4; Gaz. vol. 222; p. 112.
Wense, Wilhelm, Griesheim-on-the-Main, assignor to Chemische Fabrik, Griesheim-Elektron, Frankfort-on-the-Main, Germany. Drying air for metallurgical uses. No. 1,169,371; Jan. 25; Gaz. vol. 222; p. 1154.
Wescott, Charles O., Tacoma, Wash. Stud-support. No. 1,167,234; Jan. 4; Gaz. vol. 222; p. 285.
Wesner, Martin, Cleveland, Ohio. Projectile. No. 1,169,704; Jan. 25; Gaz. vol. 222; p. 1272.
West, Caroline. (See Willard, Zabdiel A., assignor.)
West Disinfecting Company. (See Marcuse, Moses M., assignor.)
West, Harvey L., Elgin, Ill. Piano-action. No. 1,167,863; Jan. 11; Gaz. vol. 222; p. 558.
West, Robert M. (See Ide and West.)
West Virginia Pulp & Paper Company. (See Ten Broeck, Floyd G., assignor.)
Westenhaver, Andrew J., North Mankato, Minn. Music-leaf turner. No. 1,168,984; Jan. 18; Gaz. vol. 222; p. 985.
Western Electric Company. (See Arnold, Harold D., assignor.)
Western Electric Company. (See Dyson, Alfred H., assignor.)
Western Electric Company. (See Hill, Ralph N., assignor.)
Western Electric Company. (See Kent, Stanley B., assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See McBerty, Frank R., assignor.)
Western Electric Company. (See Nicolson, Alexander M., assignor.)
Western Electric Company. (See Reynolds, John N., assignor.)
Western Tablet Company. (See Albrecht, William, assignor.)
Western Tool & Manufacturing Company, The. (See Enoch, John, assignor.)
Western Tool & Manufacturing Company, The. (See Saum, Robert J., assignor.)
Western Wheeled Scraper Company. (See Rhodes, Jay B., assignor.)

Westinghouse Air Brake Company, The. (See Dewson, Edward H., assignor.)
Westinghouse Air Brake Company, The. (See Hill, Ernest R., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Air Brake Company. (See Westinghouse, George, assignor.)
Westinghouse Electric and Manufacturing Company. (See Beach, Howard L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Brown, Harold W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric and Manufacturing Company. (See Haefely, Emil, assignor.)
Westinghouse Electric and Manufacturing Company. (See Mills, Chester B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Randall, Karl C., assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon and Hall, assignors.)
Westinghouse, George, assignor to Westinghouse Air Brake Company, Pittsburgh, Pa. Friction draft-gear. No. 1,168,448; Jan. 18; Gaz. vol. 222; p. 796.
Wetcarbonizing Limited. (See Higby, Thomas, assignor.)
Wetzell, Clarence A., Sterling, Ill. Stilt. No. 1,167,235; Jan 4; Gaz. vol. 222; p. 285.
Wheeler, Roy E., Kittitas, Wash. Pump-cylinder protector. No. 1,167,670; Jan. 11; Gaz. vol. 222; p. 493.
Whelan, Michael J., Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Game-table. No. 1,169,585; Jan. 25; Gaz. vol. 222; p. 1230.
Whelen, James R., Denver, Colo. Fish-trap. No. 1,167,732; Jan. 11; Gaz. vol. 222; p. 513.
Whistler, David B., assignor to The Recording and Computing Machines Company, Dayton, Ohio. Operating mechanism for fare-recorders, fare-indicators, and the like. No. 1,169,446; Jan. 25; Gaz. vol. 222; p. 1180.
Whistler, David B., assignor to The Recording and Computing Machines Company, Dayton, Ohio. Operating mechanism for fare-recorders. No. 1,169,447; Jan. 25; Gaz. vol. 222; p. 1181.
Whistler, David B., and J. E. McAllister, assignors to The Recording and Computing Machines Company, Dayton, Ohio. Indicating and operating mechanism. No. 1,169,445; Jan. 25; Gaz. vol. 222; p. 1180.
Whitall Tatum Company. (See Brumley, Howard V., assignor.)
Whitcomb, Albert E., Rochester, N. Y. Advertising-sign. No. 1,167,034; Jan. 4; Gaz. vol. 222; p. 216.
Whitcomb, Alonzo W., Worcester, Mass. Compound tool-support. No. 1,169,214; Jan. 25; Gaz. vol. 222; p. 1101.
White, Albert L., Chicago, Ill. Practice-keyboard apparatus. No. 1,169,586; Jan. 25; Gaz. vol. 222; p. 1230.
White, Ernest C., Evanston, Ill., assignor of one-half to C. Amiguet, New York, N. Y. Lighting-fixture. No. 1,168,839; Jan. 18; Gaz. vol. 222; p. 935.
White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Pneumatic player mechanism. No. 1,168,691; Jan. 18; Gaz. vol. 222; p. 884.
White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Pneumatic player mechanism. No. 1,168,924; Jan. 18; Gaz. vol. 222; p. 964.
White, George A., Pittsburgh, Pa. Finishing rolled sheets and plates. No. 1,167,864; Jan. 11; Gaz. vol. 222; p. 559.
White, George H., Haverford, Pa. Photographic-plate holder for use with X-rays. No. 1,166,797; Jan. 4; Gaz. vol. 222; p. 136.
White, George W., Hutchinson, Kans. Motor-plow. No. 1,168,135; Jan. 11; Gaz. vol. 222; p. 654.
White, Harry G., Templeton, Pa. Wrench. No. 1,167,540; Jan. 11; Gaz. vol. 222; p. 446.
White, Herbert E., Youngstown, Ohio. Machine-controlling mechanism. No. 1,167,865; Jan. 11; Gaz. vol. 222; p. 559.
White, Howard J., San Francisco, Cal. Bushing for covered wires. No. 1,169,372; Jan. 25; Gaz. vol. 222; p. 1154.
White, Lewis B., Manson, N. C. Fuel-vaporizing device for internal-combustion engines. No. 1,168,136; Jan. 11; Gaz. vol. 222; p. 654.
White, Sam B., Portsmouth, Ohio. Automatic coupling. No. 1,168,692; Jan. 18; Gaz. vol. 222; p. 885.
White Sewing Machine Company, The. (See Huffman and Lauffer, assignors.)
White, Thomas J. (See Bergo, Otto J., assignor.)
White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Train-pipe coupling. No. 1,169,373; Jan. 25; Gaz. vol. 222; p. 1154.
White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Hanger for train-pipe couplings. No. 1,169,374; Jan. 25; Gaz. vol. 222; p. 1155.
White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Hanger. No. 1,169,375; Jan. 25; Gaz. vol. 222; p. 1155.
Whitesell, Frederick N., Chicago, Ill., assignor to Sheffield Car Company, Three Rivers, Mich. Valve mechanism. No. 1,166,956; Jan. 4; Gaz. vol. 222; p. 188.
Whiting, Julius, Jr., trustee. (See Maxwell, Bert C., assignor.)
Whiting, William J., Handsworth, Birmingham, England. Barrel-fastening for automatic pistols. No. 1,168,985; Jan. 18; Gaz. vol. 222; p. 985.
Whitlock Printing Press Mfg. Co., The. (See Huson, Winfield S., assignor.)
Whitmer, Arthur K., Canton, Ohio. Roller-bearing. No. 1,166,798; Jan. 4; Gaz. vol. 222; p. 136.
Whitney, George G. (See Haas and Colestock, assignors.)
Whittemore, Audenried, St. Louis, Mo., assignor to General Roofing Manufacturing Company. Holder for shipping wall-boards. No. 1,168,986; Jan. 18; Gaz. vol. 222; p. 986.
Wick, Olaf M., Jamestown, N. D. Apparatus for raising sunken vessels. No. 1,168,040; Jan. 11; Gaz. vol. 222; p. 621.
Wickersham, Elmer E., Sunnyvale, assignor to The Yuba Construction Company, San Francisco, Cal. Carbureter. No. 1,167,457; Jan. 11; Gaz. vol. 222; p. 419.
Widdrington, William P., assignor of one-half to G. E. Fiscus, Indianapolis, Ind. Ash-dust gatherer and conveyer. No. 1,166,506; Jan. 4; Gaz. vol. 222; p. 33.
Widness, Lawrence J., New York, N. Y. Apparatus for promoting the growth of hair. No. 1,167,236; Jan. 4; Gaz. vol. 222; p. 286.
Wiechert, Frank T., Bellevue, Ohio. Fountain-faucet. No. 1,167,959; Jan. 11; Gaz. vol. 222; p. 594.
Wiese, Emil, Hamburg, Germany. Making an adhesive. No. 1,168,137; Jan. 11; Gaz. vol. 222; p. 655.
Wieser, Karl, Bredeney, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Producing springs for mechanical time-fuses. No. 1,166,870; Jan. 4; Gaz. vol. 222; p. 160.
Wiggins, Edward J., assignor to D. A. Heyman, Chicago, Ill. Electric vulcanizer. No. 1,169,215; Jan. 25; Gaz. vol. 222; p. 1101.
Wigginton, George P., Kalamazoo, Mich. Temporary binder or loose-sheet holder. No. 1,167,607; Jan. 11; Gaz. vol. 222; p. 470.
Wignot, Leonard S., assignor of one-half to L. M. Wignot, St. Charles, Mo. Device for placing and retaining insoles on lasts. No. 1,166,957; Jan. 4; Gaz. vol. 222; p. 189.
Wignot, Lucy M. (See Wignot, Leonard S., assignor.)
Wikberg, Johan and S. A., Tangle Flags, Saskatchewan, Canada. Drafting instrument. No. 1,167,237; Jan. 4; Gaz. vol. 222; p. 286.
Wikberg, Samuel A. (See Wikberg, Johan and S. A.)
Wilber, Edwin D. (See Boswell and Wilber.)
Wilcke, Otto C. F., Dayton, Ohio. Automobile-lighting apparatus. No. 1,169,216; Jan. 25; Gaz. vol. 222; p. 1102.
Wilcox, Ernest C., and B. A. Spitzer, assignors to The Connecticut Telephone & Electric Company, Inc., Meriden, Conn. Snap-switch. No. 1,169,099; Jan. 18; Gaz. vol. 222; p. 1025.
Wilcox, Frank E., Mechanicsburg, Pa. Spring. No. 1,166,564; Jan. 4; Gaz. vol. 222; p. 55.
Wilcox, Lewis T., Peekskill, N. Y. Manufacturing wick-holders. No. 1,167,960; Jan. 11; Gaz. vol. 222; p. 594.
Wilcox, Orla O., assignor of one-third to P. I. Venard and one-third to C. W. Loomis, Denver, Colo. Car-seal. No. 1,169,217; Jan. 25; Gaz. vol. 222; p. 1102.
Wilcox, Robert B., Honolulu, Hawaii. Alarm mechanism. No. 1,166,958; Jan. 4; Gaz. vol. 222; p. 189.
Wilcox & White Company, The. (See White, Frank C., assignor.)
Wilder, Neil O., Grand Rapids, Mich. Air-heater. No. 1,168,840; Jan. 18; Gaz. vol. 222; p. 935.
Wildman, Frank B., assignor to Wildman Mfg. Co., Norristown, Pa. Circular-knitting machine. No. 1,167,866; Jan. 11; Gaz. vol. 222; p. 559.
Wildman Mfg. Co. (See Ballard, George L., assignor.)
Wildman Mfg. Co. (See Wildman, Frank B., assignor.)
Wildman, William W., and E. A. Tinsman, assignors to The Portage Rubber Company, Barberton, Ohio. Rubber tire for vehicles. No. 1,169,218; Jan. 25; Gaz. vol. 222; p. 1103.
Wildt, Edward A., Scranton, Pa. Door-key-holding device. No. 1,166,565; Jan. 4; Gaz. vol. 222; p. 55.
Wiley, Edgar C., assignor to The Simplex Heating Specialty Company, Lynchburg, Va. Calibrating radiator-valve. No. 1,168,359; Jan. 18; Gaz. vol. 222; p. 766.
Wiley, Nathaniel T., Somerville, assignor to Motor Specialties Company, Waltham, Mass. Brake-rod support. No. 1,167,867; Jan. 11; Gaz. vol. 222; p. 560.
Wilhelm, Henry, and H. Olaneta, Brooklyn, N. Y. Dry battery-cell. No. 1,166,871; Jan. 4; Gaz. vol. 222; p. 161.
Wilkes, Walter G., Biloxi, Miss. Tire-pump. No. 1,169,705; Jan. 25; Gaz. vol. 222; p. 1272.
Wilkinson, Alfred, Ilkley, England. Construction of the bodies of motor-cars and other vehicles. No. 1,167,035; Jan. 4; Gaz. vol. 222; p. 216.
Wilks, Edward J. (See Drey, Wilfred J., assignor.)
Will & Baumer Company, The. (See Engman, Evald J., assignor.)
Will, Frederick, Sr., and H. Becker, assignors to Sill Stove Works, Rochester, N. Y. Combination coal and gas stove. No. 1,169,219; Jan. 25; Gaz. vol. 222; p. 1103.
Willard, Zabdiel A., assignor to C. West, Brookline, Mass. Apparatus for generating combustible vapor. No. 1,169,706; Jan. 25; Gaz. vol. 222; p. 1272.
Willcox & Gibbs Sewing Machine Co. (See Merritt, Arthur A., assignor.)

William Schollhorn Company, The. (See Bernard, William A., assignor.)
William H. Wiley & Son Company, The. (See Dillberg, Erik, assignor.)
Williams, Edwin F., deceased, Erie, Pa.; E. Williams, executrix. Piston-packing. No. 1,166,644; Jan. 4; Gaz. vol. 222; p. 83.
Williams, Evelyn, executrix. (See Williams, Edwin F.)
Williams, Frederick, assignor to Acme Register Company, Somerville, Mass. Station-box for watchmen and fire-alarm signaling. No. 1,167,961; Jan. 11; Gaz. vol. 222; p. 595.
Williams, George A. (See Lindsey and Williams.)
Williams, Gordon, assignor to The English & Mersick Co., New Haven, Conn. Lock-joint. No. 1,166,872; Jan. 4; Gaz. vol. 222; p. 161.
Williams, Harry S., assignor to Peter Smith Heater Company, Detroit, Mich. Hot-air heater. No. 1,169,448; Jan. 25; Gaz. vol. 222; p. 1181.
Williams, Henry W., Perth, Western Australia, Australia. Motion-converting device. No. 1,167,238; Jan. 4; Gaz. vol. 222; p. 286.
Williams, Horace L., Dyersburg, Tenn. Pea and bean thresher. No. 1,166,730; Jan. 4; Gaz. vol. 222; p. 112.
Williams, James, Canfield, Ohio. Engine for the propulsion of vessels. No. 1,167,139; Jan. 4; Gaz. vol. 222; p. 263.
Williams, Lacey Y., Toledo, Ohio. Dust-guard. No. 1,167,458; Jan. 11; Gaz. vol. 222; p. 419.
Williams, Louis N. D., Ogontz, Pa. Mechanism for locking together the needle-carriers of rib-knitting machines. No. 1,168,041; Jan. 11; Gaz. vol. 222; p. 622.
Williams, Phillip P. (See Hayes and Williams.)
Williams, Roy A., Desiacs, N. D. Guiding means for traction-engines. No. 1,167,459; Jan. 11; Gaz. vol. 222; p. 419.
Williams, Swayne W., East Orange, N. J. Pump. No. 1,169,707; Jan. 25; Gaz. vol. 222; p. 1272.
Williamson, Jacob, Chicago, Ill. Aquarium. No. 1,169,449; Jan. 25; Gaz. vol. 222; p. 1182.
Willis, Bernard D., assignor to Automatic Electric Company, Chicago, Ill. Lock-out party-line telephone system. No. 1,166,645; Jan. 4; Gaz. vol. 222; p. 83.
Willis, George M., assignor, by mesne assignments, to Chicago Electric Meter Company, Chicago, Ill. Rheostat. No. 1,167,868; Jan. 11; Gaz. vol. 222; p. 560.
Willis, William E., Fairview, Okla. Ice-handling apparatus. No. 1,167,140; Jan. 4; Gaz. vol. 222; p. 253.
Willson, William W., Gahanna, Ohio. Resilient wheel. No. 1,166,566; Jan. 4; Gaz. vol. 222; p. 55.
Willson, William H., Fond du Lac, Wis. Truss for hernia. No. 1,168,360; Jan. 18; Gaz. vol. 222; p. 766.
Wilson, Adam, Hanwell, London, England. Treadle operating mechanism for stamps and the like. No. 1,169,220; Jan. 25; Gaz. vol. 222; p. 1103.
Wilson, Clifton C., Eureka, Cal. Camping-stove. No. 1,166,567; Jan. 4; Gaz. vol. 222; p. 56.
Wilson, Frank L., Berkley, Cal. Apparatus for separating and recovering metalliferous compounds and gases from liquids. No. 1,167,460; Jan. 11; Gaz. vol. 222; p. 420.
Wilson, Hugh E., Grand Rapids, Mich. Table-top. No. 1,167,461; Jan. 11; Gaz. vol. 222; p. 420.
Wilson, John M. (See Bacon and Wilson.)
Wilson, John M., Montclair, N. J., and C. V. Bacon, assignors to Wilson Remover Company, New York, N. Y. Finish-remover and making same. No. 1,167,462; Jan. 11; Gaz. vol. 222; p. 420.
Wilson, Joseph D., Stockton, N. J. Incubator. No. 1,169,708; Jan. 25; Gaz. vol. 222; p. 1273.
Wilson Remover Company. (See Bacon and Wilson, assignors.)
Wilson Remover Company. (See Wilson and Bacon, assignors.
Wilson, Thomas F., Cranston, R. I. Vehicle-top-bow clamp. No. 1,166,646; Jan. 4; Gaz. vol. 222; p. 84.
Wilson, Thomas H., Memphis, Tenn. Exerciser. No. 1,168,361; Jan. 18; Gaz. vol. 222; p. 766.
Wilson, Thomas N., Spokane, Wash., assignor of one-half to A. G. Witmer, Portland, Oreg. Power-transmitting means. No. 1,169,221; Jan. 25; Gaz. vol. 222; p. 1103.
Wilson, Wilbur O., Chicago, Ill. Cable-splice. No. 1,167,962; Jan. 11; Gaz. vol. 222; p. 595.
Wilton, Ralph P., Wrightsville, Pa. Mixing-machine. No. 1,166,568; Jan. 4; Gaz. vol. 222; p. 56.
Winans, Milton E., Newark, N. J., assignor to Oxweld Acetylene Company, Chicago, Ill. Lighting device. No. 1,166,873; Jan. 4; Gaz. vol. 222; p. 161.
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Windfelder, John H. (See Welch, Rosia W., assignor.)
Windsor Machine Company. (See Cone, Frank L., assignor.)
Wingett, John N., Wilmington, Del. Making explosive powder. No. 1,166,731; Jan. 4; Gaz. vol. 222; p. 113.
Wingire, E. C. (See Geiger, David F., assignor.)
Wingquist, Sven G., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-bearing. No. 1,166,799; Jan. 4; Gaz. vol. 222; p. 136.
Wingquist, Sven G., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-bearing. No. 1,168,693; Jan. 18; Gaz. vol. 222; p. 885.
Wingquist, Sven G., Gottenborg, Sweden, and E. Junghans, Cannstatt-Stuttgart, Germany; said Wingquist assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-bearing. No. 1,166,800; Jan. 4; Gaz. vol. 222; p. 137.
Winkler, Abraham, Chicago, Ill. Portable fire-escape. No. 1,167,239; Jan. 4; Gaz. vol. 222; p. 287.
Winslow, Charlotte H., Chicago, Ill., assignor to Marshall Field & Co. Crochet-ball holder. No. 1,167,141; Jan. 4; Gaz. vol. 222; p. 254.
Winsor, Paul, Weston, and C. Corliss, Boston, Mass. Electric coupling for cars. No. 1,167,608; Jan. 11; Gaz. vol. 222; p. 471.
Winstead, Alonzo, Sharpsburg, N. C. Anti-rail-spreading device. No. 1,168,448; Jan. 18; Gaz. vol. 222; p. 796.
Winter, Louis, assignor of one-half to J. M. Schaeffer, Detroit, Mich. Automobile-radiator heater. No. 1,169,312; Jan. 25; Gaz. vol. 222; p. 1133.
Wirt, Reuben D., Philadelphia, Pa. Note-paper holder. No. 1,166,507; Jan. 4; Gaz. vol. 222; p. 34.
Witham, George S., Sr., Hudson Falls, and A. Roesch, assignors to Charles J. Tagliabue Manufacturing Co., Brooklyn, N. Y. Thermostatic regulation for heated rollers. No. 1,167,036; Jan. 4; Gaz. vol. 222; p. 216.
Witmer, Aaron G. (See Wilson, Thomas N., assignor.)
Witsaman, Clement L., Cuyahoga Falls, assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Self-adjusting tire inner-tube protector. (Reissue.) No. 14,056; Jan. 25; Gaz. vol. 222; p. 1294.
Wixom, Claudious B., Hagerman, N. Mex. Puzzle. No. 1,168,987; Jan. 18; Gaz. vol. 222; p. 986.
Wold, Olaus C., Chicago, Ill. Air-brush. No. 1,169,587; Jan. 25; Gaz. vol. 222; p. 1231.
Wolf, Fred W., Jr., and H. H. Southworth, assignors, by mesne assignments, to The Iceless Machine Company, Cleveland, Ohio. Valve-control mechanism for refrigerating apparatus. No. 1,166,874; Jan. 4; Gaz. vol. 222; p. 161.
Wolf, Joe. (See Thompson, George W., assignor.)
Wolfe, Arthur P., Buffalo, assignor to Huntley Manufacturing Company, Silver Creek, N. Y. Corn-husking machine. No. 1,166,647; Jan. 4; Gaz. vol. 222; p. 84.
Wolferman, Arthur, New York, N. Y. Handle for coffee-pots and similar utensils. No. 1,168,772; Jan. 18; Gaz. vol. 222; p. 912.
Wolff, George M., Milwaukee, Wis. Belt elevator. No. 1,167,869; Jan. 11; Gaz. vol. 222; p. 560.
Wolff, Max E. (See Mayer and Wolff.)
Wolfram-Lampen Aktien Gesellschaft. (See Kaiser, Hans, assignor.)
Wolverton, George M., Elton, La. Air, oil, and gas burner. No. 1,166,959; Jan. 4; Gaz. vol. 222; p. 190.
Wood Brothers. (See Wood, Roy L., assignor.)
Woods, Charles F., Princeton, Ind. Film-clamp for motion-picture reels. No. 1,169,222; Jan. 25; Gaz. vol. 222; p. 1103.
Wood, Herbert J., Mount Clemens, Mich. Washstand. No. 1,168,450; Jan. 18; Gaz. vol. 222; p. 796.
Wood, Orville L., Bremerton, Wash. Attachment for foot-rules. No. 1,168,362; Jan. 18; Gaz. vol. 222; p. 767.
Wood, Roy L., assignor to Wood Brothers, Russell, Kans. Attachment for steering mechanisms. No. 1,167,240; Jan. 4; Gaz. vol. 222; p. 287.
Woodbury, William S. (See Ware, Gastonguay, Linderson, Farrell, and Woodbury.)
Woodhouse, Denis K., Chicago, Ill. Dental-floss holder. No. 1,166,732; Jan. 4; Gaz. vol. 222; p. 113.
Woodroffe, Frank K., Chester, and H. C. Hodgson, Egremont, England. Centrifugal liquid-pump. No. 1,167,241; Jan. 4; Gaz. vol. 222; p. 287.
Woods, Edwin S. (See Alfreds, Torris H., assignor.)
Woods, Edwin S., deceased, Chicago, Ill.; A. G. Welch, executor and trustee. Antifriction-bearing. No. 1,168,363; Jan. 18; Gaz. vol. 222; p. 767.
Woods, Edwin S., deceased, and T. H. Alfreds, Chicago, Ill.; said Alfreds assignor to said Woods; A. G. Welch, executor and trustee. Antifriction-bearing. No. 1,168,364; Jan. 18; Gaz. vol. 222; p. 767.
Woodward, Erastus, deceased, Somerville; E. Millett, executrix, assignor, by mesne assignments, of one-half to J. J. Sheehan and one-half to W. P. Egan, Lynn, Mass. Clutch. No. 1,167,870; Jan. 11; Gaz. vol. 222; p. 561.
Woodward, Russel G., assignor to Union Special Machine Company, Chicago, Ill. Chain-stitch machine. No. 1,167,463; Jan. 11; Gaz. vol. 222; p. 421.
Woodward, William H. (See Sweningson and Woodward.)
Woolery, John W., Oxford township, Johnson county, Kans. Combined road grader and drag. No. 1,168,585; Jan. 18; Gaz. vol. 222; p. 844.
Woolley, Thomas A., and H. Fox, Hamilton, Ontario, Canada. Machine for shocking grain. No. 1,168,365; Jan. 18; Gaz. vol. 222; p. 768.
Woolwine, Ludy W., assignor of one-half to D. Boone, Hawks Nest, W. Va. Safety cranking device. No. 1,168,694; Jan. 18; Gaz. vol. 222; p. 885.
Worden, Ira L., Carmen, Okla. Header-barge attachment. No. 1,168,366; Jan. 18; Gaz. vol. 222; p. 768.
Wortman, Isaac. (See Appleton, Lewis W., assignor.)
Wright, Alcinous Y. (See Curry, Charles M., assignor.)
Wright, Arthur, New York, N. Y., assignor, to The Luna-Lite Company of America, Dover, Del. Picture-screen. No. 1,166,569; Jan. 4; Gaz. vol. 222; p. 57.

Wright, Charles M., and W. L. Shab, Altamont, Ill. Locking device for automobiles. No. 1,169,588; Jan. 25; Gaz. vol. 222; p. 1232.

Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Elevator-wrench. No. 1,168,042; Jan. 11; Gaz. vol. 222; p. 622.

Wright, Henry C. (See Linberg, Andrew, and Wright.)

Wright, Henry C., and J. E. Andrew, assignors to The Wallace Barnes Co., Bristol, Conn. Machine for cutting and grinding helical compression-springs. No. 1,166,875; Jan. 4; Gaz. vol. 222; p. 162.

Wright, John G., Tyler, Tex. Wrench. No. 1,167,242; Jan. 4; Gaz. vol. 222; p. 287.

Wright, John W., Dallas, Tex. Cotton-reginning machine. No. 1,166,801; Jan. 4; Gaz. vol. 222; p. 137.

Wright, Joseph L., Cleveland, Ohio, assignor, by mesne assignments, to E. E. Clement, Washington, D. C. Telephone-exchange system. No. 1,168,259; Jan. 11; Gaz. vol. 222; p. 696.

Wright, Richard H. (See Craggs, Ross V., assignor.)

Wright, Whitelaw R., Marion, Ind. Dinner-pail. No. 1,167,142; Jan. 4; Gaz. vol. 222; p. 254.

Wunderlich, Jacob H., Baltimore, Md., assignor to National Casket Company, New York, N. Y. Collapsible crate for caskets. No. 1,169,100; Jan. 18; Gaz. vol. 222; p. 1025.

Wundrack, Otto, Maywood, Ill. Mechanical stoker. No. 1,168,367; Jan. 18; Gaz. vol. 222; p. 768.

Wyatt, William, assignor of one-half to A. B. Webster, Salem, Va. Mail-box. No. 1,168,138; Jan. 11; Gaz. vol. 222; p. 655.

Wygodsky Engine Company. (See Wygodsky, Leon, assignor.)

Wygodsky, Leon, assignor to Wygodsky Engine Company, New York, N. Y. Valve-gear and injection-timing mechanism. No. 1,166,508; Jan. 4; Gaz. vol. 222; p. 34.

Wylie, Emerson F., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Manufacture of shoes. No. 1,169,709; Jan. 25; Gaz. vol. 222; p. 1273.

Wylie, Emerson F., Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Turn-shoe. No. 1,169,710; Jan. 25; Gaz. vol. 222; p. 1273.

Wyman, William H., Oshkosh, Wis. Machine for inserting binding material in sash. No. 1,166,960; Jan. 4; Gaz. vol. 222; p. 190.

Yale & Towne Manufacturing Company, The. (See Peterick, Joseph C., assignor.)

Yaw, Clio B., Arlington, N. J., assignor to The Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,167,963; Jan. 11; Gaz. vol. 222; p. 596.

Yeager, John B. (See Blackwell, Charles O., assignor.)

Yemiker, John, and W. S. Vosburgh, Akron, Ohio; said Vosburgh assignor to said Yemiker. Vulcanizer. No. 1,166,876; Jan. 4; Gaz. vol. 222; p. 162.

Yost, Henry B., Green Lane, Pa. Thill-coupling. No. 1,168,773; Jan. 18; Gaz. vol. 222; p. 912.

Young, Edwin J., and A. D. Welker, assignors to The Ohio Match Company, Wadsworth, Ohio. Machine for impregnating match-sticks. No. 1,167,324; Jan. 4; Gaz. vol. 222; p. 317.

Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,169,313; Jan. 25; Gaz. vol. 222; p. 1134.

Young, Harry B., Cincinnati, Ohio. Container for safety-razor blades. No. 1,167,464; Jan. 11; Gaz. vol. 222; p. 421.

Younce, Elias F., Union, Ohio. Convertible hay-rack. No. 1,166,877; Jan. 4; Gaz. vol. 222; p. 162.

Young, Harry W., Chicago, Ill. Electrical fuse. No. 1,167,964; Jan. 11; Gaz. vol. 222; p. 596.

Young, Harry W., Chicago, Ill. Electrical fuse. No. 1,167,965; Jan. 11; Gaz. vol. 222; p. 596.

Young, John M., assignor to American Can Company, San Francisco, Cal. Preserving food products and apparatus therefor. No. 1,168,695; Jan. 18; Gaz. vol. 222; p. 886.

Young, Millard S., Detroit, Mich. Flexible-drive mounting. No. 1,168,139; Jan. 11; Gaz. vol. 222; p. 655.

Youngs, Charles, Wellsville, N. Y. Automobile-truck. No. 1,167,243; Jan. 4; Gaz. vol. 222; p. 288.

Yuba Construction Company, The. (See Wickersham, Elmer E., assignor.)

Zacharia, Sylvan, New York, N. Y. Photographic camera. No. 1,168,140; Jan. 11; Gaz. vol. 222; p. 655.

Zamara, Alfred, and J. Perl, Vienna, Austria-Hungary. Mute mechanism for harps. No. 1,169,589; Jan. 25; Gaz. vol. 222; p. 1232.

Zannoth, Robert E., and V. B. Dickeson, Detroit, Mich. Terminal plug. No. 1,169,314; Jan. 25; Gaz. vol. 222; p. 1134.

Zanzig, Frank C., Milwaukee, Wis. Portable dynamometer. No. 1,168,925; Jan. 18; Gaz. vol. 222; p. 964.

Zee Socket & Mfg. Company, The. (See Keefe, Joseph, assignor.)

Zeiss, Firm of Carl. (See Cerebotani, Luigi, assignor.)

Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)

Zeiss, Firm of Carl. (See Mengel, Guido, assignor.)

Zimmerman, George W. (See Baxter, Marvin V., assignor.)

Zimmermann, Arthur, Brooklyn, N. Y. Percolator. No. 1,168,988; Jan. 18; Gaz. vol. 222; p. 986.

Zimmermann, Hans, assignor to Schutte & Koerting Company, Philadelphia, Pa. Tubular heat-exchanging apparatus. No. 1,168,368; Jan. 18; Gaz. vol. 222; p. 769.

Zimmers, Abraham M., Baltimore, Md. Water-closet-bowl cover. No. 1,169,711; Jan. 25; Gaz. vol. 222; p. 1274.

Zindler, Herman J. (See Echols and Zindler.)

Zingali, Giovanni, Montclair, N. J. Lathering device. No. 1,169,712; Jan. 25; Gaz. vol. 222; p. 1274.

Zitka, Benjamin, Detroit, Mich. Combined holder and shape-retainer for hats. No. 1,168,989; Jan. 18; Gaz. vol. 222; p. 986.

Zoerner, Hugo, Arcadia, Mich. Machine for polishing plate-glass. No. 1,167,244; Jan. 4; Gaz. vol. 222; p. 288.

Zöhe, Ludwig A., Syracuse, N. Y. Apparatus for treating gas. No. 1,168,451; Jan. 18; Gaz. vol. 222; p. 797.

Zolezzi, Adolph A. (See Corotto and Zolezzi.)

Zöllin, Adolf, Jr., Badenweiler, Germany. Apparatus for printing tickets and the like. No. 1,169,590; Jan. 25; Gaz. vol. 222; p. 1232.

Zuleg, Joseph, Hoboken, N. J., assignor to Button Machinery Company, New York, N. Y. Making buttons from ivory-nuts and the like. No. 1,166,733; Jan. 4; Gaz. vol. 222; p. 113.

Zweighaft, Jeremiah, and L. Nauman, Cresco, Pa. Feed-bag support. No. 1,168,043; Jan. 11; Gaz. vol. 222; p. 622.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Abrams, William, assignor to The Meyercord Company, Chicago, Ill. Plate or similar article of manufacture. Nos. 48,462–3; Jan. 18; Gaz. vol. 222; pp. 1028–9.

Adam, Harry C., St. Louis, Mo. Lighting-fixture. No. 48,358; Jan. 4; Gaz. vol. 222; p. 336.

American Hardware Corporation, The. (See Bosworth, William W., assignor.)

Apperson Bros. Automobile Company. (See Apperson, Elmer, assignor.)

Apperson, Elmer, assignor to Apperson Bros. Automobile Company, Kokomo, Ind. Automobile-body. No. 48,359; Jan. 4; Gaz. vol. 222; p. 336.

Bagnulo, Salvatore, East Boston, Mass. Candy cup. Nos. 48,432–4; Jan. 11; Gaz. vol. 222; p. 704.

Bargreen, Charles C., Streator, Ill. Water-cooler. No. 48,360; Jan. 4; Gaz. vol. 222; p. 336.

Beacon Falls Rubber Shoe Company, The. (See Crowley, John T., assignor.)

Blair, William A., assignor to The Meyercord Company, Chicago, Ill. Cup or similar article. No. 48,464; Jan. 18; Gaz. vol. 222; p. 1029.

Booth, Kraft, assignor to Gillinder & Sons, Inc., Philadelphia, Pa. Ceiling-light. No. 48,361; Jan. 4; Gaz. vol. 222; p. 337.

Bosworth, William W., New York, N. Y., assignor to The American Hardware Corporation, New Britain, Conn. Escutcheon-plate and knob. No. 48,362; Jan. 4; Gaz vol. 222; p. 337.

Bromley & Sons, John. (See Petzold, Adolph, assignor.)

Brooks, Frank M., assignor to Matchless Brass Mfg. Company, Brooklyn, N. Y. Hanger for lighting-bowls. No. 48,465; Jan. 18; Gaz. vol. 222; p. 1029.

Carlson, Walter C., assignor to Milwaukee Paper Box Company, Milwaukee, Wis. Box for face-powder. No. 48,363; Jan. 4; Gaz. vol. 222; p. 337.

Chase, Irwin, assignor to The Elco Company, Bayonne, N. J. Electric side light for boats. No. 48,364; Jan. 4; Gaz. vol. 222; p. 337.

Cowan, William R., Newark, N. J. Cup or similar article. No. 48,435; Jan. 11; Gaz. vol. 222; p. 704.

Cowan, William R., Newark, N. J. Plate or similar article. No. 48,436; Jan. 11; Gaz. vol. 222; p. 704.

Crescent Brass Manufacturing Company. (See Garrison, Mortimer, assignor.)

Crowley, John T., Beacon Falls, Conn., assignor, by mesne assignments, to The Beacon Falls Rubber Shoe Company. Miner's shoe. Nos. 48,437–8; Jan. 11; Gaz. vol. 222; pp. 704–5.

Curtiss, George E., assignor to Landers, Frary & Clark, New Britain, Conn. Case for vacuum-jugs. No. 48,439; Jan. 11; Gaz. vol. 222; p. 705.

Domecq, Joseph, Los Angeles, Cal. Mark-tag for laundry. No. 48,466; Jan. 18; Gaz. vol. 222; p. 1029.

Durand & Company. (See Henckel, John W. L., assignor.)

Elco Company, The. (See Chase, Irwin, assignor.)

Esch, Henry, Jr., Manitowoc, Wis. Collar-button or similar garment-fastening device. No. 48,365; Jan. 4; Gaz. vol. 222; p. 338.

Ferris, Howard J., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Tank-heater. No. 48,467; Jan. 18; Gaz. vol. 222; p. 1029.

Fondeville, August J., East Orange, N. J. Plate or similar article. No. 48,468; Jan. 18; Gaz. vol. 222; p. 1029.

Fox, Eugene O., assignor to B. F. Klein, Cleveland, Ohio. Double-ended hollow loop. No. 48,366; Jan. 4; Gaz. vol. 222; p. 338.

Frary, Ihna T., Hudson, assignor to The Hocking Glass Company, Lancaster, Ohio. Lamp-shade. No. 48,469; Jan. 18; Gaz. vol. 222; p. 1030.

Galitzki, Leo, Jr., Chicago, Ill. Hat. No. 48,440; Jan. 11; Gaz. vol. 222; p. 705.

Garrison, Mortimer, Bridgeton, N. J., assignor to Crescent Brass Manufacturing Company, Reading, Pa. Arm for lighting-fixtures. Nos. 48,367–9; Jan. 4; Gaz. vol. 222; p. 338.

Gibford-Weiffenbach Company, The. (See Weiffenbach, George U., assignor.)

Gillinder & Sons. (See Booth, Kraft, assignor.)

Goldberg, Shepard J., New York, N. Y. Bottle. Nos. 48,370–1; Jan. 4; Gaz. vol. 222; p. 338.

Graeser, Albert, Knoxville borough, Pa. Electric-lamp globe. No. 48,372; Jan. 4; Gaz. vol. 222; p. 339.

Graham, Lillian, Philadelphia, Pa. Scouring device. No 48,441; Jan. 11; Gaz. vol. 222; p. 705.

Gray, Joseph L., Fort Worth, Tex. Valve-float. No. 48,373; Jan. 4; Gaz. vol. 222; p. 339.

Greene, George W., assignor to Ten Broeck Tyre Company, Louisville, Ky. Tire. No. 48,374; Jan. 4; Gaz. vol. 222; p. 339.

Harman, Charles W., New Rochelle, assignor to Joseph Fahys & Co., New York, N. Y. Spoon, fork, or the like. No. 48,375; Jan. 4; Gaz. vol. 222; p. 339.

Harrison, Martha R., Jersey City, N. J. Doll. No. 48,442; Jan. 11; Gaz. vol. 222; p. 705.

Harter, Gustav A., Chicago, Ill. Lighting-fixture. No. 48,376; Jan. 4; Gaz. vol. 222; p. 339.

Hawken, William H., assignor to Irving Cut Glass Co., Inc., Honesdale, Pa. Glass vessel. No. 48,443; Jan. 11; Gaz. vol. 222; p. 706.

Henckel, John W. L., Yonkers, N. Y., assignor to Durand & Company, Newark, N. J. Combined pencil and cigar-cutter. No. 48,377; Jan. 4; Gaz. vol. 222; p. 339.

Hocking Glass Company, The. (See Frary, Ihna T., assignor.)

Howarth, Fred E., Utica, N. Y. Lighting-fixture. No. 48,378; Jan. 4; Gaz. vol. 222; p. 340.

Humphrey, Alfred H., New York, N. Y. Lamp-globe. No. 48,379; Jan. 4; Gaz. vol. 222; p. 340.

Humphrey, Alfred H., New York, N. Y. Lamp-shade. No. 48,380; Jan. 4; Gaz. vol. 222; p. 340.

Hunt, Albert, London, England. Board for playing a game. No. 48,470; Jan. 18; Gaz. vol. 222; p. 1030.

Hunt, Helm, Ferris & Company. (See Ferris, Howard J., assignor.)

Ilsley, Rowland S., Edmonton, Alberta, Canada. Doll or statuette. No. 48,381; Jan. 4; Gaz. vol. 222; p. 340.

International Silver Company. (See Kintz, Robert R., assignor.)

Irving Cut Glass Co. (See Hawken, William H., assignor.)

J. H. White Manufacturing Company. (See Kahns, Walter R., assignor.)

Jameson, William A., Niagara Falls, N. Y. Handle for a spoon, fork, or similar article. Nos. 48,382–5; Jan. 4; Gaz. vol. 222; pp. 340–1.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers or brackets. No. 48,386; Jan. 4; Gaz. vol. 222; p. 341.

Joseph Fahys & Co. (See Harman, Charles W., assignor.)

Kahns, Walter R., Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Hanger for light-reflecting bowls. No. 48,387; Jan. 4; Gaz. vol 222; p. 341.

Kent, William J., New York, N. Y. Horseshoe. Nos. 48,471–2; Jan. 18; Gaz. vol. 222; p. 1030.

Kintz, Robert R., assignor to International Silver Company, Meriden, Conn. Handle for spoons, forks, or similar articles. Nos. 48,388–9; Jan. 4; Gaz. vol. 222; p. 342.

Klein, Benjamin F. (See Fox, Eugene O., assignor.)

Kopp, Nicholas, assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Glass bowl for lighting purposes. No. 48,390; Jan. 4; Gaz. vol. 222; p. 342.

Landers, Frary & Clark. (See Curtiss, George E., assignor.)

Lapworth, Charles A., West Bridgewater, assignor to The Lapworth Webbing Company, Brockton, Mass. Elastic fabric. No. 48,473; Jan. 18; Gaz. vol. 222; p. 1030.

Lapworth Webbing Company, The. (See Lapworth, Charles A., assignor.)

Lehrmann, Frederick, Turtle Creek, Pa. Combination culinary tool. No. 48,474; Jan. 18; Gaz. vol. 222; p. 1030.

Loheide, Herman L., assignor to Loheide Manufacturing Company, St. Louis, Mo. Humidifier. No. 48,392; Jan. 4; Gaz. vol. 222; p. 342.

Loheide Manufacturing Company. (See Loheide, Herman L., assignor.)

Lord, Frederick K., Bayonne, N. J. Engine-casing. No. 48,391; Jan. 4; Gaz. vol. 222; p. 342.

Lyraphone Company of America. (See Samuels, Mark J., assignor.)

Matchless Brass Mfg. Company. (See Brooks, Frank M., assignor.)

Mayfair, Inc. (See Murphy, Sarah L., assignor.)

Meriden Cutlery Company. (See Spencer, Frederick M., assignor.)

Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)

Meyercord Company, The. (See Abrams, William, assignor.)

Meyercord Company, The. (See Blair, William A., assignor.)

Meyercord Company, The. (See Westerlind, Aksel, assignor.)

Milwaukee Paper Box Company. (See Carlson, Walter C., assignor.)

Murphy, Sarah L., assignor to Mayfair, Inc., New York, N. Y. Telephone appliance. No. 48,444; Jan. 11; Gaz. vol. 222; p. 706.

National Metal Spinning & Stamping Company. (See Tepfer, Albert E., assignor.)

Newton, Albert E., Pawtucket, R. I., assignor to Regina Lace Company. Lace fabric. Nos. 48,445–8; Jan. 11; Gaz. vol. 222; p. 706.

Nichols, Ellen D. C., Helena, Mont. Toy figure. No. 48,475; Jan. 18; Gaz. vol. 222; p. 1031.

Norden, Joseph. (See Norden, Mortimer, assignor.)
Norden, Mortimer, assignor to J. Norden, New York, N. Y. Electic sign. No. 48,449; Jan. 11; Gaz. vol. 222; p. 707.
Onondaga Pottery Co. (See Wigley, John T., assignor.)
Peet, Cornelus J. (See Wegkamp and Peet.)
Peters, Arnold G., Minneapolis, Minn. Lamp-case. No. 48,393; Jan. 4; Gaz. vol. 222; p. 343.
Petzold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Rug. Nos. 48,450–9; Jan. 11; Gaz. vol. 222; pp. 707–8.
Pittsburgh Lamp, Brass & Glass Company. (See Kopp, Nicholas, assignor.)
Plymouth Mills. (See Read, Harry A. S., assignor.)
Read, Harry A. S., assignor to Plymouth Mills, Lawrence, Mass. Rug. Nos. 48,394–5; Jan. 4; Gaz. vol. 222; p. 343.
Regina Lace Company. (See Newton, Albert E., assignor.)
Riedel, Otto P., assignor to West Shore Embroidery Company, West New York, N. Y. Embroidered trimming. Nos. 48,460–1; Jan. 11; Gaz. vol. 222; p. 709.
Rock Falls Manufacturing Company. (See Thomas, William H., assignor.)
Rubay, Leon, assignor to The White Company, Cleveland, Ohio. Automobile-headlight. No. 48,396; Jan. 4; Gaz. vol. 222; p. 343.
Samuels, Mark J., New York, N. Y., assignor to Lyraphone Company of America, Washington, D. C. Talking-machine case. No. 48,397; Jan. 4; Gaz. vol. 222; p. 344.
Scheuer, Jacob H., New York, N. Y. Hair-brush. Nos. 48,398–9; Jan. 4; Gaz. vol. 222; p. 344.
Schweitzer, Ernest J., and R. G. Wagner, Los Angeles, Cal. Lighting-fixture. No. 48,400; Jan. 4; Gaz. vol. 222; p. 344.
Sebring, Frank A., Sebring, Ohio. Plate. No. 48,401; Jan. 4; Gaz. vol. 222; p. 344.
Spencer, Frederick M., assignor to Meriden Cutlery Company, Meriden, Conn. Handle for knives, forks, or similar articles. No. 48,476; Jan. 18; Gaz. vol. 222; p. 1031.
Stacey, William N., Springfield, Mass. Lunch-room chair. No. 48,402; Jan. 4; Gaz. vol. 222; p. 345.
Stavropulos, Leonidas, Pocatello, Idaho. Loaf of bread. No. 48,403; Jan. 4; Gaz. vol. 222; p. 345.
Stifel, Edward W., Wheeling, W. Va. Textile fabric. Nos. 48,404–8; Jan. 4; Gaz. vol. 222; pp. 345–6.
Taylor, Homer J., East Liverpool, Ohio. Plate or similar article. Nos. 48,409–26; Jan. 4; Gaz. vol. 222; pp. 346–9.
Ten Broeck Tyre Company. (See Greene, George W., assignor.)
Tepfer, Albert E., assignor to National Metal Spinning & Stamping Company, New York, N. Y. Shell for lighting-fixtures. No. 48,427; Jan. 4; Gaz. vol. 222; p. 349.
Thomas, William H., assignor to Rock Falls Manufacturing Company, Sterling, Ill. Funeral-car. No. 48,428; Jan. 4; Gaz. vol. 222; p. 349.
Ver Bryck, Albert J., New York, N. Y. Sanitary suitcase-can. No. 48,477; Jan. 18; Gaz. vol. 222; p. 1031.
Wagner, Robert G. (See Schweitzer and Wagner.)
Wegkamp, Karel M., and C. J. Peet, Spokane, Wash. Advertising-cabinet. No. 48,429; Jan. 4; Gaz. vol. 222; p. 350.
Weiffenbach, George U., assignor to The Gibford-Weiffenbach Company, Adrian, Mich. Swivel-clamp for razor-strops or the like. No. 48,430; Jan. 4; Gaz. vol. 222; p. 350.
West Shore Embroidery Company. (See Riedel, Otto P., assignor.)
Westerlind, Aksel, assignor to The Meyercord Company, Chicago, Ill. Plate or similar article of manufacture. No. 48,478; Jan. 18; Gaz. vol. 222; p. 1031.
White Company, The. (See Rubay, Leon, assignor.)
Wigley, John T., assignor to Onondaga Pottery Co., Syracuse, N. Y. Article of manufacture. No. 48,479; Jan. 18; Gaz. vol. 222; p. 1032.
Zile, Harry M., Washington, D. C. Weighing-machine. No. 48,431; Jan. 4; Gaz. vol. 222; p. 350.
Zimmerman, Arthur, Brooklyn, N. Y. Bottle. No. 48,480; Jan. 18; Gaz. vol. 222; p. 1032.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co. Inc., New York, N. Y. Toilet powder. No. 108,245; Jan. 25; Gaz. vol. 222; p. 1309.
A. Zerega's Sons, Cons'l'd, Brooklyn, N. Y. Egg alphabets and noodles, macaroni, spaghetti, &c. Nos. 108,120–1; Jan. 18; Gaz. vol. 222; p. 1048.
A. B. Richards Medicine Co. (See Richards, Alma C., assignor.)
Abraham & Straus, New York, N. Y. Baking-powder and salt. No. 108,031; Jan. 11; Gaz. vol. 222; p. 723.
Ace Rota Strop Co., Morris Park, N. Y. Mechanical razor-stroppers. No. 107,893; Jan. 4; Gaz. vol. 222; p. 373.
Acme Mills, The, Hopkinsville, Ky. Wheat-flour. No. 108,073; Jan. 18; Gaz. vol. 222; p. 1047.
Adams, Francis W., Chicago, Ill. Bed-springs and spring fabric for bed-springs. No. 108,122; Jan. 18; Gaz. vol. 222; p. 1048.
Advance Bag Company. (See Seibert Paper Co., assignor.)
Albert Dickinson Company, The, Chicago, Ill. Mixed feeds for horse, mule, and dairy use. Nos. 108,086–7; Jan. 18; Gaz. vol. 222; p. 1047.
Alexander Brothers, Philadelphia, Pa. Leather belting. No. 107,894; Jan. 4; Gaz. vol. 222; p. 373.
Alfred Jones' Sons, Bangor, Me. Fish packed in wooden boxes and glass jars. No. 108,016; Jan. 11; Gaz. vol. 222; p. 723.
Ambrosia Chocolate Co., Milwaukee, Wis. Chocolate candy. No. 108,032; Jan. 11; Gaz. vol. 222; p. 723.
American Coffee Company of New Orleans, Ltd., New Orleans, La. Coffee. No. 108,147; Jan. 18; Gaz. vol. 222; p. 1049.
American Correspondent Film Co., Inc., The, New York, N. Y. Moving-picture or cinematograph films. No. 108,074; Jan. 18; Gaz. vol. 222; p. 1047.
American Hardware Corporation, The, New Britain, Conn. Certain named fasteners, locks, catches, and parts thereof. No. 108,033; Jan. 11; Gaz. vol. 222; p. 724.
American Life Saving Garment Company, Boston, Mass. Buoyant life-saving appliance to be worn on body. No. 107,994; Jan. 4; Gaz. vol. 222; p. 376.
American Oyster Co., Providence, R. I. Certain named foods. No. 108,188; Jan. 18; Gaz. vol. 222; p. 1050.
American Sales Book Company Limited, Toronto, Ontario, Canada, and Niagara Falls, Elmira, and Glendale, N. Y. Carbon-paper. Nos. 108,234–5; Jan. 25; Gaz. vol. 222; p. 1309.
American Woolen Company, Jersey City, N. J., and Boston, Mass. Wool and cotton piece goods. No. 108,148; Jan. 18; Gaz. vol. 222; p. 1049.
American Woolen Company, Jersey City, N. J., and Boston, Mass. Piece goods of cotton, mohair, and silk. No. 108,149; Jan. 18; Gaz. vol. 222; p. 1049.
Anable, Clarence E., Sacramento, Cal. Lock for bicycles and motor-vehicles. No. 108,236; Jan. 25; Gaz. vol. 222; p. 1309.
Andrew Jergens Co., The, Cincinnati, Ohio. Toilet soaps. No. 108,210; Jan. 18; Gaz. vol. 222; p. 1051.
Ansco Company, Binghamton, N. Y. Cameras and film. No. 108,075; Jan. 18; Gaz. vol. 222; p. 1047.
Armour and Company, Chicago, Ill. Medicinal food. No. 108,076; Jan. 18; Gaz. vol. 222; p. 1047.
Armstrong, Martha M., Morristown, N. J. Cleaning fluid for clothes and cloth fabrics. No. 107,875; Jan. 4; Gaz. vol. 222; p. 373.
Arrow-Pak Co., Inc., The, New York, N. Y. Packing and display forms for garments. No. 108,189; Jan. 18; Gaz. vol. 222; p. 1050.
Arthur S. Hoyt Company, The, New York, N. Y. Laundry starch. No. 108,293; Jan. 25; Gaz. vol. 222; p. 1310.
Asphalt Ready Roofing Co., New York, N. Y. Ready roofing in roll or shingle form. No. 107,895; Jan. 4; Gaz. vol. 222; p. 373.
Aspinwall, Franklin E., La Grange, Ky. Thermometers. No. 108,034; Jan. 11; Gaz. vol. 222; p. 724.
Atlantic Macaroni Co., The, Long Island City, N. Y. Macaroni. No. 108,077; Jan. 18; Gaz. vol. 222; p. 1047.
Automatic Chemical Closet Company, Minneapolis, Minn. Chemical-closets. No. 108,035; Jan. 11; Gaz. vol. 222; p. 724.
Baird-North Co., Providence, R. I. Traveling-bags, pocket-books, purses, &c. No. 108,281; Jan. 25; Gaz. vol. 222; p. 1310.
Barclay & Co., Wilmington, Del., and New York, N. Y. Toilet, medicinal, and shaving soaps. No. 108,190; Jan. 18; Gaz. vol. 222; p. 1050.
Barcley Corset Co., Newark, N. J. Corsets and corset-stays. No. 108,191; Jan. 18; Gaz. vol. 222; p. 1050.
Barrett Manufacturing Company, New York, N. Y. Papers, felts, and composite fabrics for roofing, &c. Nos. 107,956–7; Jan. 4; Gaz. vol. 222; p. 375.
Beattie and Co., W. E., New York, N. Y. Cigarettes. No. 108,282; Jan. 25; Gaz. vol. 222; p. 1310.
Beck, George H., Staunton, Va. Liniment, vegetable pills, and a remedy for coughs, colds, &c. No. 108,283; Jan. 25; Gaz. vol. 222; p. 1310.
Bedard, Hilaire J., New Bedford, Mass. Stove-polish. No. 108,237; Jan. 25; Gaz. vol. 222; p. 1309.
Beebe Glove Co., The, Richmond, Ind. Gloves. No. 108,186; Jan. 18; Gaz. vol. 222; p. 1050.
Berger Bros. Company, Philadelphia, Pa. Tin-plate. No. 108,238; Jan. 25; Gaz. vol. 222; p. 1309.
Bergère et Compagnie, New York, N. Y. Certain named chemical preparations. No. 108,150; Jan. 18; Gaz. vol. 222; p. 1049.
Bernardi, Philip, Newark, N. J. Blood and nerve remedy. No. 108,036; Jan. 11; Gaz. vol. 222; p. 724.
Block Brothers Clothing Company, St. Joseph, Mo. Men's and boys' suits, overcoats, and hats. No. 108,037; Jan. 11; Gaz. vol. 222; p. 724.
Bloom & Millman, New York, N. Y. Middy-blouses for women and girls. No. 107,896; Jan. 4; Gaz. vol. 222; p. 373.
Bloomingdale Bros., New York, N. Y. Non-saponaceous non-inflammable cleaning fluid. No. 108,151; Jan. 18; Gaz. vol. 222; p. 1049.
Boersig, Edward J., Detroit, Mich. Furniture and wood-work polish. No. 108,006; Jan. 11; Gaz. vol. 222; p. 723.
Bohr, John, Chicago, Ill. Combination of alkaloids in solution for treating and preventing certain diseases of the teeth. No. 108,043; Jan. 11; Gaz. vol. 222; p. 724.
Booth's Hyomei Co., Buffalo, N. Y. Treatment for affections arising from kidney and bladder disorders. No. 108,038; Jan. 11; Gaz. vol. 222; p. 724.
Bosman & Lohman Co., Norfolk, Va. Peanut-candy, roasted and salted peanuts. No. 108,078; Jan. 18; Gaz. vol. 222; p. 1047.
Botanical Manufacturing Co., Wilmington, Del., and Philadelphia, Pa. Insect-powder for exterminating insects. No. 108,079; Jan. 18; Gaz. vol. 222; p. 1047.
Boyles, Emmet, Chicago, Ill. Monthly trade journal for confectioners. No. 108,192; Jan. 18; Gaz. vol. 222; p. 1050.
Bozzola, Giovanni, Mount Airy, N. C. Liquid detergent or soap. No. 108,193; Jan. 18; Gaz. vol. 222; p. 1050.
Bradford Dyers Association, Limited, Bradford, England. Cloths and stuffs of wool, worsted, or hair. No. 107,897; Jan. 4; Gaz. vol. 222; p. 373.
Brandon, Helen A., Indianapolis, Ind. Certain named clothing for women and children. No. 108,239; Jan. 25; Gaz. vol. 222; p. 1309.
Brigham, Louise, New York, N. Y. Certain named furniture. No. 108,007; Jan. 11; Gaz. vol. 222; p. 723.
Bright Star Battery Co., New York, N. Y. Electric battery and light casings. No. 108,284; Jan. 25; Gaz. vol. 222; p. 1310.
Brill, William, New York, N. Y. Ladies' waists and skirts. No. 108,194; Jan. 18; Gaz. vol. 222; p. 1050.
Bristol Manufacturing Company, The, Bristol, Conn. Sleeping-garments. No. 107,876; Jan. 4; Gaz. vol. 222; p. 373.
Bristol-Myers Company, Brooklyn, N. Y. Laxative preparation. No. 108,154; Jan. 18; Gaz. vol. 222; p. 1049.
Brooklyn Bottle Stopper Co., Brooklyn, N. Y. Bottle, can, and jar closures. No. 107,958; Jan. 4; Gaz. vol. 222; p. 375.
Brown Shoe Company, Inc., St. Louis, Mo. Men's leather shoes. No. 107,898; Jan. 4; Gaz. vol. 222; p. 373.
Bud Cigarette Co., Inc., New York, N. Y. Cigarettes. No. 107,899; Jan. 4; Gaz. vol. 222; p. 373.
Burnee Corporation, New York, N. Y. Orange-juice. No. 107,900; Jan. 4; Gaz. vol. 222; p. 373.
Butcher, Mary E., Cambridge, Mass. Portable hangers for household and travelers' use. No. 107,959; Jan. 4; Gaz. vol. 222; p. 375.
C. Sautter & Sons, Inc., Philadelphia, Pa. Candy. No. 107,888; Jan. 4; Gaz. vol. 222; p. 373.
C. B. Shane Company, Chicago, Ill. Rain-coats. No. 108,181; Jan. 18; Gaz. vol. 222; p. 1050.
Cable Company, The, Chicago, Ill. Music-sheets. No. 108,155; Jan. 18; Gaz. vol. 222; p. 1049.
Calef, Merlin T., Philadelphia, Pa. Material used in building roads. No. 107,960; Jan. 4; Gaz. vol. 222; p. 375.
California Cotton Mills Company, Oakland, Cal. Certain named piece goods. No. 108,039; Jan. 11; Gaz. vol. 222; p. 724.
California Cotton Mills Company, Oakland, Cal. Cotton and wool batting. No. 107,901; Jan. 4; Gaz. vol. 222; p. 373.
California and Hawaiian Sugar Refining Company, San Francisco, Cal. Sugar. No. 108,123; Jan. 18; Gaz. vol. 222; p. 1048.

Camp Toiletkit Company, Inc. (See Carter, Roland R., assignor.)

Camperdown Mills, Greenville, S. C. Cotton piece goods. No. 108,195; Jan. 18; Gaz. vol. 222; p. 1050.

Capewell Horse Nail Company, The, Hartford, Conn. Horse-nails. No. 107,877; Jan. 4; Gaz. vol. 222; p. 373.

Carbona Products Company, East Orange, N. J., and New York, N. Y. Soap. No. 107,961; Jan. 4; Gaz. vol. 222; p. 375.

Carson, Pirie, Scott & Co., Chicago, Ill. Men's outside shirts. No. 108,246; Jan. 25; Gaz. vol. 222; p. 1309.

Carter, Roland R., New York, N. Y., assignor to Camp Toiletkit Company, Inc. Traveling-case. No. 108,040; Jan. 11; Gaz. vol. 222; p. 724.

Celery Tea Co., Brooklyn, N. Y. Remedy for gout, rheumatism, and nervous troubles. No. 108,068; Jan. 11; Gaz. vol. 222; p. 725.

Centadrink Filters Co. Inc., New York, N. Y. Slot-machines for vending plain or aerated water. No. 107,902; Jan. 4; Gaz. vol. 222; p. 373.

Central Electric Company, Chicago, Ill. Metallic and enameled-metal reflectors. No. 107,903; Jan. 4; Gaz. vol. 222; p. 373.

Champion Animal Food Company, St. Paul, Minn. Dog-biscuits. No. 107,878; Jan. 4; Gaz. vol. 222; p. 373.

Chapin & Company, Incorporated, Hammond, Ind. Prepared food for horses, cattle, sheep, and poultry. No. 108,080; Jan. 18; Gaz. vol. 222; p. 1047.

Charles Tiedemann Milling Co., O'Fallon, Ill. Wheat-flour. No. 107,891; Jan. 4; Gaz. vol. 222; p. 373.

Charles H. Brown Paint Co., The, New York, N. Y. Paints, varnishes, enamels, and paint-oils. No. 108,008; Jan. 11; Gaz. vol. 222; p. 723.

Chas. H. Gillespie & Sons, Jersey City, N. J. Chemical removers of all oil-containing preservatives, such as varnishes, &c. No. 108,200; Jan. 18; Gaz. vol. 222; p. 1051.

Chas. H. Gillespie & Sons, Jersey City, N. J. Certain named paints and painters' materials. No. 108,201; Jan. 18; Gaz. vol. 222; p. 1051.

Chemical Paper Manufg. Co., Holyoke, Mass. Ledger-paper. No. 108,124; Jan. 18; Gaz. vol. 222; p. 1048.

Chicago Mill and Lumber Company, Chicago, Ill. Boxes, crates, and chicken-coops. No. 107,904; Jan. 4; Gaz. vol. 222; p. 374.

Clark Manufacturing Co., The, Boston, Mass. Clasps for garments. No. 108,044; Jan. 11; Gaz. vol. 222; p. 724.

Clark Manufacturing Co., The, Boston, Mass. Elastic webbing. No. 108,045; Jan. 11; Gaz. vol. 222; p. 724.

Clark Manufacturing Co., The, Boston, Mass. Armbands, bib-holders, belts, suspenders, &c. No. 108,081; Jan. 18; Gaz. vol. 222; p. 1047.

Clark Manufacturing Co., The, Boston, Mass. Supporters for hose and half-hose. No. 108,082; Jan. 18; Gaz. vol. 222; p. 1047.

Clark Manufacturing Co., The, Boston, Mass. Closet skirt-hangers. No. 108,247; Jan. 25; Gaz. vol. 222; p. 1309.

Clen-Re-Po Manufacturing Co., Chicago, Ill. Varnish and paint remover. No. 108,009; Jan. 11; Gaz. vol. 222; p. 723.

Cleveland Brass Manufacturing Co., The., Cleveland, Ohio. Certain named hardware, plumbing, and steamfitting supplies. No. 107,879; Jan. 4; Gaz. vol. 222; p. 373.

Cleveland & Sandusky Brewing Company, The, Cleveland, Ohio. Beer. No. 108,125; Jan. 18; Gaz. vol. 222; p. 1048.

Clinchfield Portland Cement Corporation, Kingsport, Tenn. Portland cement. No. 108,156; Jan. 18; Gaz. vol. 222; p. 1049.

Cluett, Peabody & Co., Inc., Troy, N. Y. Shirts, collars, and cuffs. No. 107,962; Jan. 4; Gaz. vol. 222; p. 375.

Cobb, J. A., Jackson, Miss. Hair-tonic. No. 107,963; Jan. 4; Gaz. vol. 222; p. 375.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Soaps and soap chips. No. 107,880; Jan. 4; Gaz. vol. 222; p. 373.

Commonwealth Shoe and Leather Company, The, Portland, Me., and Boston, Mass. Leather boots and shoes. No. 108,197; Jan. 18; Gaz. vol. 222; p. 1050.

Cooper, Coats & Casey Dry Goods Co., Los Angeles, Cal., and New York, N. Y. Hosiery. No. 108,157; Jan. 18; Gaz. vol. 222; p. 1049.

Crane, Clarence A., Cleveland, Ohio. Chewing-gum and candy. No. 108,158; Jan. 18; Gaz. vol. 222; p. 1049.

Crutchfield & Woolfolk, Pittsburgh, Pa., and Jacksonville and Orlando, Fla. Citrus fruits. No. 108,159; Jan. 18; Gaz. vol. 222; p. 1049.

Crystella Company, New York, N. Y. Cleaning and polishing paste for glass and silver ware. No. 107,995; Jan. 4; Gaz. vol. 222; p. 376.

Curtis Lumber & Millwork Co., The, Clinton, Iowa. Certain named building material. No. 107,906; Jan. 4; Gaz. vol. 222; p. 374.

Curtis Publishing Company, Philadelphia, Pa. Monthly periodical. No. 108,285; Jan. 25; Gaz. vol. 222; p. 1310.

Cusimano & Co., New York, N. Y. Canned artichokes. No. 108,084; Jan. 18; Gaz. vol. 222; p. 1047.

David I. Ullman Inc., New York, N. Y. Ladies' dresses. No. 108,184; Jan. 18; Gaz. vol. 222; p. 1050.

Davies & Meacham, assignor to The Patterson Sargent Company, Cleveland, Ohio. Paints, lacs, stains, enamels, varnishes, and fillers. No. 108,085; Jan. 18; Gaz. vol. 222; p. 1047.

Davis, Roy P. M., Pittsburgh, Pa. Specially-prepared dolomite. No. 108,041; Jan. 11; Gaz. vol. 222; p. 724.

Deming, William F., Des Moines, Iowa. Compound for cleaning platens and treating them to prevent paper troubles. No. 108,042; Jan. 11; Gaz. vol. 222; p. 724.

Denmark Condensed Milk Company, The, Denmark, Wis. Condensed milk. No. 108,011; Jan. 11; Gaz. vol. 222; p. 723.

Dirnberger Pop Corn Co., Buffalo, N. Y. Popcorn, peanuts, candied popcorn, and peanuts. No. 107,964; Jan. 4; Gaz. vol. 222; p. 375.

Dorsey, Adelia G., Lockport, La. Medicinal tonic. No. 107,881; Jan. 4; Gaz. vol. 222; p. 373.

Dover Fruit Farms, The, Inc., Dover, Del. Fresh fruits and vegetables. No. 108,198; Jan. 18; Gaz. vol. 222; p. 1051.

Druggists' Co-operative Association, Inc., Jersey City, N. J., and Detroit, Mich. Perfumes, toilet waters and creams, &c. No. 108,203; Jan. 18; Gaz. vol. 222; p. 1051.

Dry Ridge Sanatorium and Hotel Co., Dry Ridge, Ky. Mineral waters. No. 108,286; Jan. 25; Gaz. vol. 222; p. 1310.

Dudley Manufacturing Company, Boston, Mass. Soap, brass, silver, and stove polishes. No. 107,882; Jan. 4; Gaz. vol. 222; p. 373.

Duer-Latta Co., Philadelphia, Pa. Constipation, liver, stomach, and headache. No. 108,046; Jan. 11; Gaz. vol. 222; p. 724.

Dwinell-Wright Co., Boston, Mass. Coffee. No. 107,909; Jan. 4; Gaz. vol. 222; p. 374.

E. and T. Fairbanks and Company, St. Johnsbury, Vt. Weighing-machines and parts thereof. No. 107,910; Jan. 4; Gaz. vol. 222; p. 374.

E. Clinton & Co., Incorporated, Philadelphia, Pa. Paint-brushes. No. 108,083; Jan. 18; Gaz. vol. 222; p. 1047.

S. Kleiner & Co., Inc., New York, N. Y. Cigars, cigarettes, and manufactured tobacco. Nos. 108,296–7; Jan. 25; Gaz. vol. 222; p. 1311.

E. Rauh & Sons Fertilizer Company, Indianapolis, Ind. Stock and poultry food. No. 108,136; Jan. 18; Gaz. vol. 222; p. 1049.

E. F. Houghton & Co., Philadelphia, Pa. Oil compound, used in cutting and shaping metals and rust-preventive. No. 108,250; Jan. 25; Gaz. vol. 222; p. 1309.

E. G. Lyons & Raas Co., The, Inc., New York, N. Y. Cocktail, rickey, fizz, punch. No. 108,214; Jan. 18; Gaz. vol. 222; p. 1051.

E. L. Patch Co., The, Boston, Mass. Antiseptic throat-tablet. No. 108,000; Jan. 4; Gaz. vol. 222; p. 376.

E. L. Patch Co., The, Boston, Mass. Cough-syrup. No. 108,173; Jan. 18; Gaz. vol. 222; p. 1050.

Early & Daniel Co., The, Cincinnati, Ohio. Balanced-ration horse feed. No. 108,126; Jan. 18; Gaz. vol. 222; p. 1048.

East Coast Preserving Company, Daytona, Fla. Fruit preserves, figs, marmalades, and jellies. No. 108,127; Jan. 18; Gaz. vol. 222; p. 1048.

Eclipse Manufacturing Company, Indianapolis, Ind., assignor to 3-X Spark Plug Co., Chicago, Ill. Spark-plugs. No. 108,248; Jan. 25; Gaz. vol. 222; p. 1309.

Effecto Co., Newark, N. J. Substance to purify gasolene and prevent formation of carbon in motor-cylinders. No. 108,249; Jan. 25; Gaz. vol. 222; p. 1309.

Elco Company, The, Bayonne, N. J. Boats. No. 108,088; Jan. 18; Gaz. vol. 222; p. 1047.

Electro-Chemical Supply & Engineering Co., Wilmington, Del., and Philadelphia, Pa. Acid-proof cement. No. 108,010; Jan. 11; Gaz. vol. 222; p. 723.

Elk Fire Brick Company, St. Marys, Pa. Fire-brick. No. 107,965; Jan. 4; Gaz. vol. 222; p. 375.

Elm-Grove Milling Co., Elm Grove, W. Va. Wheat-flour. No. 107,907; Jan. 4; Gaz. vol. 222; p. 374.

Emacitin Co., New York, N. Y. Certain named pharmaceutical preparations. No. 108,089; Jan. 18; Gaz. vol. 222; p. 1047.

Emerson Phonograph Company, Inc., New York, N. Y. Phonographic machines and sound-records. No. 108,287; Jan. 25; Gaz. vol. 222; p. 1310.

Engelke & Feiner Mfg. Co., St. Louis, Mo. Certain named foods. No. 108,128; Jan. 18; Gaz. vol. 222; p. 1048.

Essmann, August, Hamburg, Germany. Calculating, multiplying, accounting, and tabulating machines. No. 108,199; Jan. 18; Gaz. vol. 222; p. 1051.

Ewig Poultry Co., Agawam, Mass. Fresh eggs. No. 108,129; Jan. 18; Gaz. vol. 222; p. 1048.

Fierbaugh & Brown, Hanger, Va. Preparation for cancers. No. 108,160; Jan. 18; Gaz. vol. 222; p. 1049.

Finney, Olin, Columbus, Ohio. Corks. No. 107,966; Jan. 4; Gaz. vol. 222; p. 375.

Fisher Flouring Mills Company, Seattle, Wash. Poultry food. No. 107,911; Jan. 4; Gaz. vol. 222; p. 374.

Fiske & Company, Incorporated, Boston, Mass., and New York, N. Y. Brick and tile for construction purposes. No. 108,012; Jan. 11; Gaz. vol. 222; p. 723.

Franklin MacVeagh & Company, Chicago, Ill. Certain named foods. No. 107,924; Jan. 4; Gaz. vol. 222; p. 374.

Freund, Christena M., Quesnal, British Columbia, Canada. Female-tonic for use during pregnacy. No. 108,047; Jan. 11; Gaz. vol. 222; p. 724.

G. Helleman Brewing Co., La Crosse, Wis. Malt beverages. No. 108,094; Jan. 18; Gaz. vol. 222; p. 1047.

Gardner & Co., M., New York, N. Y. Linen, cotton, and linen and cotton piece goods. No. 108,204; Jan. 18; Gaz. vol. 222; p. 1051.

Geer, Geo. J., New York, N. Y. Woolen, worsted, silk, cotton, &c., piece goods. Nos. 108,091–2; Jan. 18; Gaz. vol. 222; p. 1047.

General Fire Extinguisher Company, New York, N. Y., and Providence, R. I. Coating, in the nature of paint, for automatic sprinklers. No. 108,013; Jan. 11; Gaz. vol. 222; p. 723.

Geo. Borgfeldt & Co., New York, N. Y. Aluminum hollow and flat ware. No. 108,152; Jan. 18; Gaz. vol. 222; p. 1049.

Geo. Borgfeldt & Co., New York, N. Y. Certain named paper and stationery. No. 108,153; Jan. 18; Gaz. vol. 222; p. 1049.

George C. Moon Company, Inc., New York, N. Y. Wire rope. No. 108,104; Jan. 18; Gaz. vol. 222; p. 1048.

George C. Moon Company, Inc., New York, N. Y. Rope-clamps. No. 108,303; Jan. 25; Gaz. vol. 222; p. 1311.

Gernert-Stump Company, Inc., Hoboken, N. J. Cementitious materials for floors, walls, &c. No. 108,130; Jan. 18; Gaz. vol. 222; p. 1048.

Glencoe Mills, The, Burlington, N. C. Cotton flannels, outings, dometts, &c. No. 107,967; Jan. 4; Gaz. vol. 222; p. 375.

Globe Rubber Tire Mfg. Co. Inc., Trenton, N. J. Rubber tubes and tires. No. 108,202; Jan. 18; Gaz. vol. 222; p. 1051.

Goldberg, Max, Seattle, Wash. Men's dress, negligée, work, and under shirts. No. 108,205; Jan. 18; Gaz. vol. 222; p. 1051.

Goldschmidt Detinning Company, Chrome, N. J., and New York, N. Y. Tin, tetrachlorid and bichlorid of tin, &c. No. 108,161; Jan. 18; Gaz. vol. 222; p. 1049.

Gordon, Sam, New York, N. Y. Dried and cured beef and bologna-style sausage. No. 107,968; Jan. 4; Gaz. vol. 222; p. 375.

Gramaticesco, Emilie, Paris, France. Aeroplanes and hydroaeroplanes. No. 108,048; Jan. 11; Gaz. vol. 222; p. 724.

Greif & Bro., L., Baltimore, Md. Coats, vests, and trousers. No. 108,049; Jan. 11; Gaz. vol. 222; p. 724.

Griffin, James P., Portland, Oreg. Candles. No. 108,093; Jan. 18; Gaz. vol. 222; p. 1047.

Gulf Refining Company, Port Arthur, Tex., and Pittsburgh, Pa. Kerosene. No. 107,913; Jan. 4; Gaz. vol. 222; p. 374.

Gulf Refining Company, Port Arthur, Tex., and Pittsburgh, Pa. Pure refined paraffin-wax. No. 107,914; Jan. 4; Gaz. vol. 222; p. 374.

H. Goldman and Company, Inc., New York, N. Y. Coats. No. 108,288; Jan. 25; Gaz. vol. 222; p. 1310.

H. Jantzen Shoe Co., New York, N. Y. Leather, canvas, and cloth boots and shoes. No. 108,208; Jan. 18; Gaz. vol. 222; p. 1051.

H. Jones & Co. Ltd., Hobart, Tasmania, Australia. Certain named jams, jellies, canned goods, conserves. No. 108,100; Jan. 18; Gaz. vol. 222; p. 1048.

H. G. Saal Company, Chicago, Ill. Mops, polishing mops and brushes. No. 108,109; Jan. 18; Gaz. vol. 222; p. 1048.

H. W. Johns-Manville Co., New York, N. Y. Fire-extinguishers. No. 108,099; Jan. 18; Gaz. vol. 222; p. 1047.

Haiku Fruit & Packing Co. Ltd., Haiku, Maui, Hawaii. Canned pineapple. No. 107,969; Jan. 4; Gaz. vol. 222; p. 375.

Hall, Hartwell & Co., Troy, N. Y. Dress, negligée, and work shirts. No. 108,131; Jan. 18; Gaz. vol. 222; p. 1049.

Hammond, Standish & Co., Detroit, Mich. Lard, hams, bacon, dried beef, and loins. No. 108,206; Jan. 18; Gaz. vol. 222; p. 1051.

Hammond, William P., Charlestown, Mass. Antiseptic and germicide medicinal preparations. No. 108,289; Jan. 25; Gaz. vol. 222; p. 1310.

Harley-Davidson Motor Co., Milwaukee, Wis. Motorcycles and bicycles. No. 107,970; Jan. 4; Gaz. vol. 222; p. 375.

Hawks, Incorporated, Bloomington, Ill. Certain named foods. No. 107,915; Jan. 4; Gaz. vol. 222; p. 374.

Henschel, Herman, New York, N. Y. Certain named confections and candles. No. 108,095; Jan. 18; Gaz. vol. 222; p. 1047.

Herrick, Eleanor M., San Francisco, Cal. Cold-cream. No. 108,132; Jan. 18; Gaz. vol. 222; p. 1049.

Hidden Inlet Canning Co., Ketchikan, Alaska, and Seattle, Wash. Canned salmon. No. 108,133; Jan. 18; Gaz. vol. 222; p. 1049.

Highland Milling Company, Highland, Ill. Self-rising wheat-flour. No. 108,162; Jan. 18; Gaz. vol. 222; p. 1049.

Hoopes and Townsend Company, Philadelphia, Pa. Horse-shoe-pads. No. 108,050; Jan. 11; Gaz. vol. 222; p. 724.

Hooton Cocoa Company, Newark, N. J. Cocoa, sweet and bitter chocolate. No. 108,014; Jan. 11; Gaz. vol. 222; p. 723.

Horner, Robert, Chicago, Ill. Complexion-powder. No. 108,096; Jan. 18; Gaz. vol. 222; p. 1047.

Hotel Sherman Company, Chicago, Ill. Coffee. No. 107,916; Jan. 4; Gaz. vol. 222; p. 374.

Houben, Robert, Brussels, Belgium. Disinfectants. No. 108,163; Jan. 18; Gaz. vol. 222; p. 1049.

Howard-Holt Company, Cedar Rapids, Iowa. Therapeutic iodin compounds. No. 107,998; Jan. 4; Gaz. vol. 222; p. 376.

Hunter Manufacturing & Commission Co., New York, N. Y. Cotton piece goods. No. 108,207; Jan. 18; Gaz. vol. 222; p. 1051.

Hygienic Products Company, The, Canton, Ohio. Cleaning-powder. No. 108,251; Jan. 25; Gaz. vol. 222; p. 1309.

Hygrade Wine Company, New York, N. Y. Candy. No. 108,097; Jan. 18; Gaz. vol. 222; p. 1047.

Ideal Blood Food Co., Milwaukee, Wis. Medical compound for nourishing and purifying the blood. No. 108,294; Jan. 25; Gaz. vol. 222; p. 1311.

Ingram-Richardson Manufacturing Company, Beaver Falls, Pa. Enameled metal table and cabinet tops. No. 108,166; Jan. 18; Gaz. vol. 222; p. 1050.

International Mailing Tube and Wrapper Co., New York, N. Y. Envelops. No. 108,098; Jan. 18; Gaz. vol. 222; p. 1047.

International Motor Company, New York, N. Y. Cylinders and crank-casings. No. 108,051; Jan. 11; Gaz. vol. 222; p. 724.

International Motor Company, New York, N. Y. Motor-trucks, transmission-casings, and hubs. No. 108,052; Jan. 11; Gaz. vol. 222; p. 724.

Italian Importing Company, Des Moines, Iowa. Cotton-seed salad-oil. No. 108,015; Jan. 11; Gaz. vol. 222; p. 723.

Jack's Ham Biscuit Co., Mrs., Birmingham, Ala. Biscuit and wafers. No. 107,883; Jan. 4; Gaz. vol. 222; p. 373.

Jas. H. Prince Paint Co., Boston, Mass. Preservative paint for steel. No. 108,108; Jan. 18; Gaz. vol. 222; p. 1048.

Jitney-Lax Company, The, Macon, Ga. Candy cathartic tablets. No. 108,252; Jan. 25; Gaz. vol. 222; p. 1309.

Jobes Milling Co., The, St. Johns, Oreg. Flour made from wheat and cereal food. No. 107,884; Jan. 4; Gaz. vol. 222; p. 373.

John F. Jelke Company, Chicago, Ill. Oleomargarin. No. 108,209; Jan. 18; Gaz. vol. 222; p. 1051.

John Hoberg Company, The, Green Bay, Wis. Toilet-paper. Nos. 107,996–7; Jan. 4; Gaz. vol. 222; p. 376.

John Hoberg Co., The, Green Bay, Wis. Toilet-paper, paper napkins and towels. Nos. 108,290–2; Jan. 25; Gaz. vol. 222; p. 1310.

John S. Tilley Ladders Co., Watervliet, N. Y. Ladders, ladder-brackets, mason-horses, &c. No. 108,029; Jan. 11; Gaz. vol. 222; p. 723.

Jones, Milton R. R., Jackson, Miss. Liquid female-tonic and health-builder. No. 108,053; Jan. 11; Gaz. vol. 222; p. 724.

Jones, Walter L., Cincinnati, Ohio. Combination of mint candy and chocolate. No. 108,167; Jan. 18; Gaz. vol. 222; p. 1050.

Jordan Marsh Company, Boston, Mass. Leather and canvas shoes. No. 108,101; Jan. 18; Gaz. vol. 222; p. 1048.

Jos. Middleby, Jr., Inc., Boston, Mass. Berry and fruit preserves and jelly. No. 107,928; Jan. 4; Gaz. vol. 222; p. 374.

Joseph W. Schloss Co., New York, N. Y. Collar-supporters. No. 107,941; Jan. 4; Gaz. vol. 222; p. 375.

Juliette Milling Company, Macon and Juliette, Ga. Cornmeal and cracked corn. No. 108,211; Jan. 18; Gaz. vol. 222; p. 1051.

K-C Lumber Company, The, Lucedale, Miss. Canned vegetables. Nos. 107,917–18; Jan. 4; Gaz. vol. 222; p. 374.

Kahn Brothers Company, Chicago, Ill. Certain named clothing for men, women, and children. No. 107,919; Jan. 4; Gaz. vol. 222; p. 374.

Kahn, Eugene W., New York, N. Y. Silk piece goods. No. 108,054; Jan. 11; Gaz. vol. 222; p. 724.

Kellner frères, Paris, France. Coach and carriage bodies. No. 108,055; Jan. 11; Gaz. vol. 222; p. 724.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Cereal food products. No. 107,885; Jan. 4; Gaz. vol. 222; p. 373.

Kelly & Co., Thomas, Boston, Mass. Carriage-robes, blankets, and steamer-rugs. No. 107,999; Jan. 4; Gaz. vol. 222; p. 376.

Kelsey Textile Corporation, New York, N. Y. Cotton goods in the piece and cotton sheets. No. 108,212; Jan. 18; Gaz. vol. 222; p. 1051.

Kennicott Company, The, Chicago, Ill. Metal water-stills. No. 108,295; Jan. 25; Gaz. vol. 222; p. 1311.

Kindt, John H., Chicago, Ill. Detergent cleaning preparation. No. 108,253; Jan. 25; Gaz. vol. 222; p. 1309.

Kops Bros., New York, N. Y. Corsets, corset covers and pads. No. 107,921; Jan. 4; Gaz. vol. 222; p. 374.

Koreln Co. Incorporated, The, Buffalo, N. Y. Medicine for obesity. No. 108,254; Jan. 25; Gaz. vol. 222; p. 1309.

Kotányi, Johann, Vienna, Austria-Hungary. Cayenne pepper and paprika. No. 108,102; Jan. 18; Gaz. vol. 222; p. 1048.

L. Doelman Company, Buffalo, N. Y. Coffee. No. 107,908; Jan. 4; Gaz. vol. 222; p. 374.

Landone, Mildred J., New York, N. Y. Ladies' cloaks, coats, dresses, &c. No. 108,213; Jan. 18; Gaz. vol. 222; p. 1051.

Lavedan, Lucien, New Orleans, La. Brandies and cordials. No. 108,298; Jan. 25; Gaz. vol. 222; p. 1311.

Lewis A. Crossett, Inc., North Abington, Mass. Boots and shoes of leather or skin. No. 107,905; Jan. 4; Gaz. vol. 222; p. 374.

Lilly Varnish Co., Indianapolis, Ind. Varnishes. No. 108,018; Jan. 11; Gaz. vol. 222; p. 723.
Lincoln Highway Association, The, Detroit, Mich. Weekly newspapers. No. 107,971; Jan. 4; Gaz. vol. 222; p. 376.
Lincoln Pure Butter Company, Lincoln, Nebr. Process-butter. No. 108,168; Jan. 18; Gaz. vol. 222; p. 1050.
Linotype and Machinery Limited, London, England. Printing-presses, plate-printing machines, &c. No. 107,923; Jan. 4; Gaz. vol. 222; p. 374.
M. Brodsky & Co., Inc., New York, N. Y. Cotton and silk sewing-threads and yarns. Nos. 108,240–4; Jan. 25; Gaz. vol. 222; p. 1309.
M. E. Smith & Co. Inc., Omaha, Nebr. Ladies' coats, suits, skirts, and dresses. No. 107,986; Jan. 4; Gaz. vol. 222; p. 376.
M. I. Stewart & Co. Inc., New York, N. Y. Misses' coats and suits. No. 108,115; Jan. 18; Gaz. vol. 222; p. 1048.
Madame Irene, New York, N. Y. Corsets. No. 107,925; Jan. 4; Gaz. vol. 222; p. 374.
Madame Irène, New York, N. Y. Corsets. No. 108,057; Jan. 11; Gaz. vol. 222; p. 724.
Marmont, Charles A., Iola, Kans. External application for eczema, piles, itch, &c. No. 108,216; Jan. 18; Gaz. vol. 222; p. 1051.
May, Louis, New York, N. Y. Metal-polishes. No. 108,217; Jan. 18; Gaz. vol. 222; p. 1051.
McDaniel, Quals, Rogers, Ark. Certain named chemicals, medicines, and pharmaceutical preparations. No. 108,215; Jan. 18; Gaz. vol. 222; p. 1051.
McQuade, Victor J., New York, N. Y. Whisky. No. 108,299; Jan. 25; Gaz. vol. 222; p. 1311.
Measuregraph Company, The, St. Louis, Mo. Cloth and fabric measuring machines and parts thereof. No 107,926; Jan. 4; Gaz. vol. 222; p. 374.
Melhado & Co., New York, N. Y. Ladies', misses', and children's dresses. No. 108,300; Jan. 25; Gaz. vol. 222; p. 1311.
Melowney Co., J. W., New York, N. Y. Eggs. No. 108,169; Jan. 18; Gaz. vol. 222; p. 1050.
Mende, Paul, New Rochelle and New York, N. Y. Fibrous and powdered mineral compound to be mixed with other materials for producing a concrete. No. 108,103; Jan. 18; Gaz. vol. 222; p. 1048.
Mendenhall, John C., Evansville, Ind. Blood medicine. No. 108,058; Jan. 11; Gaz. vol. 222; p. 724.
Mercian, J. Howard, New York, N. Y. Canned fish and vegetables. No. 107,927; Jan. 4; Gaz. vol. 222; p. 374.
Metal Specialties Manufacturing Co., Chicago, Ill. Certain named electrical apparatus and supplies. No. 107,972; Jan. 4; Gaz. vol. 222; p. 376.
Metalwood Manufacturing Co., Detroit, Mich. Hydraulic presses, shock-alleviators, valves, and fittings. No. 108,134; Jan. 18; Gaz. vol. 222; p. 1049.
Meyer, Firm of Arnold O., Hamburg, Germany. Padlocks, door, tumbler, flush, and seal locks. No. 107,973; Jan. 4; Gaz. vol. 222; p. 376.
Miller, Baker & Goldsmith, Baltimore, Md. Certain named clothing for ladies and children. No. 108,301; Jan. 25; Gaz. vol. 222; p. 1311.
Miller, Frank W., New York, N. Y. Babbitt, antifriction, &c., metals. No. 108,255; Jan. 25; Gaz. vol. 222; p. 1309.
Mills & Gibb, New York, N. Y. Hair-nets. No. 108,218; Jan. 18; Gaz. vol. 222; p. 1051.
Minerallac Electric Company, Chicago, Ill. Clamps for pipe, conduit, and cables. No. 108,019; Jan. 11; Gaz. vol. 222; p. 723.
Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Certain named rubber footwear. No. 108,302; Jan. 25; Gaz. vol. 222; p. 1311.
Monumental Brewing Company, Baltimore, Md. Beer. No. 108,059; Jan. 11; Gaz. vol. 222; p. 724.
Moretti-Harrah Marble Company, Sylacauga, Ala. Rough-quarried rocks, slabs, and marble. No. 108,256; Jan. 25; Gaz. vol. 222; p. 1309.
Moving Advertisement Co., New York, N. Y. Moving-picture and picture-projection machines and apparatus, &c. No. 107,929; Jan. 4; Gaz. vol. 222; p. 374.
Mu-Col Company, The, Buffalo, N. Y. Antiseptic compounds. No. 108,060; Jan. 11; Gaz. vol. 222; p. 724.
Mulholand, Eudora B., Toledo, Ohio. Stomach, liver, and blood medicine. No. 108,219; Jan. 18; Gaz. vol. 222; p. 1051.
N. Erlanger, Blumgart & Co., New York, N. Y. Wool and cotton crash piece goods. No. 108,090; Jan. 18; Gaz. vol. 222; p. 1047.
N. Z. Graves Company, Philadelphia, Pa. Dry, paste, and ready-mixed paints, japans, and varnishes. No. 107,912; Jan. 4; Gaz. vol. 222; p. 374.
Nasiacos Importing Co., Chicago, Ill. Olive-oil. No. 107,930; Jan. 4; Gaz. vol. 222; p. 374.
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Chocolate candies. No. 108,105; Jan. 18; Gaz. vol. 222; p. 1048.
National Chemical Company, Syracuse, N. Y. Washing-soda. No. 108,257; Jan. 25; Gaz. vol. 222; p. 1309.
National India Rubber Co., Bristol, R. I. Rubber and canvas boots and shoes. Nos. 107,931–2; Jan. 4; Gaz. vol. 222; p. 374.
National Poultry & Egg Co., Atchison, Kans. Dressed poultry. No. 108,220; Jan. 18; Gaz. vol. 222; p. 1051.
Newman, Simon S., New York, N. Y. Bags or receptacles of cloth, silk, &c. No. 108,106; Jan. 18; Gaz. vol. 222; p. 1048.
Newspaper Feature Service, New York, N. Y. Newspaper-section published periodically. Nos. 108,221–2; Jan. 18; Gaz. vol. 222; p. 1051.
Newspaper Feature Service, New York, N. Y. Newspaper-section. No. 108,223; Jan. 18; Gaz. vol. 222; p. 1051.
Nicholls, George F., Toronto, Ontario, Canada. Biscuits. No. 108,020; Jan. 11; Gaz. vol. 222; p. 723.
Nietmann, Fred L., New York, N. Y. Piece goods stamped with designs for embroidery. No. 108,001; Jan. 4; Gaz. vol. 222; p. 376.
North American Tuna Canning Co., Los Angeles, Cal. Canned fish. No. 107,933; Jan. 4; Gaz. vol. 222; p. 374.
North American Watch Co., Inc., Mansfield, Ohio. Watches, watchcases, and watch-movements. No. 108,258; Jan. 25; Gaz. vol. 222; p. 1309.
Nowak Milling Corporation, Buffalo, N. Y. Mixed stock feed for horses, stock, cattle, and poultry. Nos. 108,170–1; Jan. 18; Gaz. vol. 222; p. 1050.
Nutricia Dairy Farm Products Co., Thiensville, Wis. Canned peas. No. 108,259; Jan. 25; Gaz. vol. 222; p. 1309.
Odenweller Milling Co., The, Ottoville, Ohio. Wheat, &c., flours and cornmeal. No. 108,107; Jan. 18; Gaz. vol. 222; p. 1048.
Ohio Butterine Co., The, Cincinnati, Ohio. Oleomargarin. No. 107,934; Jan. 4; Gaz. vol. 222; p. 374.
Ollariu, Emil, Philadelphia, Pa. Hair-curlers. No. 108,260; Jan. 25; Gaz. vol. 222; p. 1309.
Olympia Brewing Co., Olympia, Wash. Fruit beverages. No. 108,261; Jan. 25; Gaz. vol. 222; p. 1309.
Omega Chemical Company, The, New York, N. Y. Medicated soap. No. 108,224; Jan. 18; Gaz. vol. 222; p. 1051.
Oneida Community, Limited, Oneida, N. Y. Certain named kettles, pots, pans, and bowls. No. 108,021; Jan. 11; Gaz. vol. 222; p. 723.
Oshinsky & Valentine, New York, N. Y. Men's and boys' pajamas. No. 108,225; Jan. 18; Gaz. vol. 222; p. 1051.
P. C. Knowlton Co. Inc., Memphis, Tenn. Cake. No. 107,920; Jan. 4; Gaz. vol. 222; p. 374.
Pacific Coast Canning Co., Oakland, Cal. Canned fruits. No. 107,935; Jan. 4; Gaz. vol. 222; p. 374.
Pacific Coast Canning Co., Oakland, Cal. Canned fruits and vegetables. No. 108,135; Jan. 18; Gaz. vol. 222; p. 1049.
Pacific Mills, Lawrence and Boston, Mass. Cotton piece goods and chiffons. No. 108,072; Jan. 11; Gaz. vol. 222; p. 725.
Package Confectionery Co., Boston, Mass. Candy. Nos. 107,974–80; Jan. 4; Gaz. vol. 222; p. 376.
Package Confectionery Co., Boston, Mass. Candy. No. 108,226; Jan. 18; Gaz. vol. 222; p. 1051.
Pairpoint Corporation, The, New Bedford, Mass. Silver-plated hollow ware. No. 108,262; Jan. 25; Gaz. vol. 222; p. 1310.
Parker & Co., Minneapolis, Minn. Spiced herring. No. 107,981; Jan. 4; Gaz. vol. 222; p. 376.
Parker Hosiery Mill & Dye Works, Inc., Portsmouth, Va. Hosiery. No. 108,172; Jan. 18; Gaz. vol. 222; p. 1050.
Parnitzky, Paul, New York, N. Y. Remedy for malaria, typhoid and scarlet fevers, &c. No. 108,061; Jan. 11; Gaz. vol. 222; p. 724.
Patterson-Sargent Company, The. (See Davies and Meacham, assignors.)
Peterboro Mfg. Co., Gardner, Mass. Children's woven undergarments. No. 108,304; Jan. 25; Gaz. vol. 222; p. 1311.
Philip Carey Manufacturing Company, The, Lockland, Ohio. Dry, paste, and ready-mixed paints. No. 108,196; Jan. 18; Gaz. vol. 222; p. 1050.
Phoenix Toilet and Paper Manufacturing Company, Phoenix, N. Y. Toilet-papers. No. 108,174; Jan. 18; Gaz. vol. 222; p. 1050.
Pick, Samuel, Astoria, N. Y. Liniments. No. 108,305; Jan. 25; Gaz. vol. 222; p. 1311.
Pipenhagen, Charles A., Chicago, Ill. Fly-traps. No. 108,022; Jan. 11; Gaz. vol. 222; p. 723.
Pitonzo, Antonino, Chicago, Ill. Salve for external use. No. 108,175; Jan. 18; Gaz. vol. 222; p. 1050.
Planten, Hermanus R., New York, N. Y. Remedy for treating certain named diseases. No. 108,263; Jan. 25; Gaz. vol. 222; p. 1310.
Punta Gorda Pineapple Corporation, Punta Gorda, Fla., and Chicago, Ill. Fresh and canned fruits. No. 108,024; Jan. 11; Gaz. vol. 222; p. 723.
Pure Oil Company, Minneapolis, Minn. Certain named oils and greases. No. 108,025; Jan. 11; Gaz. vol. 222; p. 723.
Purity Corporation, Richmond, Va. Cake. No. 107,982; Jan. 4; Gaz. vol. 222; p. 376.
Racine & Co., Jules, New York, N. Y. Watches and watch-movements. No. 108,187; Jan. 18; Gaz. vol. 222; p. 1050.
Racine Detachable Hinge Co., The, Racine, Wis. Hinges. No. 108,264; Jan. 25; Gaz. vol. 222; p. 1310.
Rahmann & Co., George, New York, N. Y. Leather belting. No. 108,306; Jan. 25; Gaz. vol. 222; p. 1311.
Raritan Copper Works, Perth Amboy, N. J. Certain named metals and metal castings and forgings. No. 108,307; Jan. 25; Gaz. vol. 222; p. 1311.

Reilly, Edward J., Baltimore, Md. Shoe-cleaning compounds and polishes. No. 108,265; Jan. 25; Gaz. vol. 222; p. 1310.
Remick, Eliot W., Boston, Mass. Boots, shoes, and moccasins of leather, rubber, and canvas. No. 108,266; Jan. 25; Gaz. vol. 222; p. 1310.
Republic Rubber Company, The, Youngstown, Ohio. Monthly periodical publication. No. 107,983; Jan. 4; Gaz. vol. 222; p. 376.
Republic Rubber Company, The, Youngstown, Ohio. Belting made of cotton and rubber. No. 107,984; Jan. 4; Gaz. vol. 222; p. 376.
Richard Hudnut, New York, N. Y. Cold-cream. Nos. 108,164–5; Jan. 18; Gaz. vol. 222; pp. 1049–50.
Richards, Alma C., assignor to A. B. Richards Medicine Co., Sherman, Tex. Substance to be used with soap for washing. No. 108,026; Jan. 11; Gaz. vol. 222; p. 723.
Riedel, Actiengesellschaft, J. D., Berlin-Britz, Germany. Certain named chemicals and pharmaceutical preparation. No. 108,176; Jan. 18; Gaz. vol. 222; p. 1050.
Riedel, Actiengesellschaft, J. D., Berlin-Britz, Germany. Certain named chemicals and pharmaceutical preparations. No. 108,267; Jan. 25; Gaz. vol. 222; p. 1310.
Robbins, Harry G., Minneapolis, Minn. Oily cleaning and polishing composition for automobiles, furniture, &c. No. 108,268; Jan. 25; Gaz. vol. 222; p. 1310.
Robert Reis & Co., New York, N. Y. Men's and boys' textile or knitted union suits. No. 108,063; Jan. 11; Gaz. vol. 222; p. 724.
Roessel & Co., Louis, New York, N. Y. Silks in the piece. No. 108,269; Jan. 25; Gaz. vol. 222; p. 1310.
Rosenblum, Abe, New York, N. Y. Fresh potatoes, onions, cabbage, &c. No. 108,177; Jan. 18; Gaz. vol. 222; p. 1050.
Rosenfeld & Company, E., Baltimore, Md. Night-shirts and pajamas. No. 107,887; Jan. 4; Gaz. vol. 222; p. 373.
Rosenfeld, Morris, New York, N. Y. Rye-flour. No. 107,937; Jan. 4; Gaz. vol. 222; p. 374.
Rosenwald & Weil, Chicago, Ill. Rubberized sheeting or fabric. No. 108,137; Jan. 18; Gaz. vol. 222; p. 1049.
Rubinstein, Michael M., New York, N. Y. Dress, negligée, and work shirts. No. 108,064; Jan. 11; Gaz. vol. 222; p. 724.
S. Liebmann's Sons Brewing Co., Brooklyn, N. Y. Beer. No. 108,017; Jan. 11; Gaz. vol. 222; p. 723.
S. H. Kress & Company, New York, N. Y. Hosiery. No. 107,922; Jan. 4; Gaz. vol. 222; p. 374.
S. S. Kresge Co., Detroit, Mich. Infants' hosiery. No 108,056; Jan. 11; Gaz. vol. 222; p. 724.
Samuel Sternberger Company, Philadelphia, Pa. Dress and negligée shirts. No. 107,890; Jan. 4; Gaz. vol. 222; p. 373.
Sanford Narrow Fabric Company, Inc., The, New York, N. Y. Cotton and silk braids. Nos. 108,308–9; Jan. 25; Gaz. vol. 222; p. 1311.
Sanitary Food Manufacturing Company, St. Paul, Minn. Crackers or biscuits. No. 108,178; Jan. 18; Gaz. vol. 222; p. 1050.
Sauquoit Silk Mfg. Co., Philadelphia, Pa. Broad-silk piece goods. No. 107,985; Jan. 4; Gaz. vol. 222; p. 376.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 107,938; Jan. 4; Gaz. vol. 222; p. 375.
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y. Toilet-paper. No. 108,310; Jan. 25; Gaz. vol. 222; p. 1311.
Sawyer Belting Company, Cleveland, Ohio. Dressing for machinery-belts. Nos. 107,939–40; Jan. 4; Gaz. vol. 222; p. 375.
Scoville, Albert W., Hartford, Conn. Cleansing and polishing liquid for automobiles, furniture, &c. No. 108,179; Jan. 18; Gaz. vol. 222; p. 1050.
Sears, Roebuck and Co., Chicago, Ill. Sheets and pillow-cases. No. 108,180; Jan. 18; Gaz. vol. 222; p. 1050.
Selbert Paper Co., The, Cincinnati, assignor to Advance Bag Company, Middletown, Ohio. Paper bags. No. 107,942; Jan. 4; Gaz. vol. 222; p. 375.
Selig Polyscope Company, Chicago, Ill. Motion-picture films. No. 108,027; Jan. 11; Gaz. vol. 222; p. 723.
Sery-Us Pure Food Co., Chicago, Ill. Cigars. No. 107,943; Jan. 4; Gaz. vol. 222; p. 375.
Shaft-Pierce Shoe Co., Faribault, Minn. Shoes of canvas and leather. No. 107,944; Jan. 4; Gaz. vol. 222; p. 375.
Shand, Mabel W., New York, N. Y. Toilet articles for the skin, muscles, and hair. No. 108,112; Jan. 18; Gaz. vol. 222; p. 1048.
Sharp & Dohme, Baltimore, Md. Tooth-wash. No. 108,065; Jan. 11; Gaz. vol. 222; p. 724.
Sheldon Axle and Spring Company, Wilkes-Barre, Pa. Vehicle-springs. No. 107,945; Jan. 4; Gaz. vol. 222; p. 375.
Shoemaker & Volkert, Buffalo, N. Y. Candy suckers. No. 108,113; Jan. 18; Gaz. vol. 222; p. 1048.
Silas Peirce & Co. Ltd., Boston, Mass. Olive-oil and macaroni. No. 107,936; Jan. 4; Gaz. vol. 222; p. 374.
Sloan, James O., Columbus, Ohio. Journal compound to be used with oil as a lubricant. No. 108,270; Jan. 25; Gaz. vol. 222; p. 1310.
Smalley Book Cover Co., Yonkers, N. Y. Book-covers. No. 107,946; Jan. 4; Gaz. vol. 222; p. 375.
Snellenburg Clothing Company, The, Philadelphia, Pa. Men's and boys' coats, vests, and trousers. No. 108,182; Jan. 18; Gaz. vol. 222; p. 1050.
Smith, Hogg & Co., New York, N. Y. Cotton piece goods. No. 108,311; Jan. 25; Gaz. vol. 222; p. 1311.
South Texas Grain Company, Houston, Tex. Mixed food for poultry. No. 107,889; Jan. 4; Gaz. vol. 222; p. 373.
Stadium Underwear Co., Baltimore, Md. Undershirts, drawers, and union suits. No. 108,227; Jan. 18; Gaz. vol. 222; p. 1051.
Standard Aluminum Co., Two Rivers, Wis. Certain named aluminum kitchen utensils. No. 108,028; Jan. 11; Gaz. vol. 222; p. 723.
Standard Oil Company, Richmond, Cal. Asphaltum. No. 107,947; Jan. 4; Gaz. vol. 222; p. 375.
Standard Oil Company, Richmond, Cal. Liquid petrolatum or white oil. No. 108,183; Jan. 18; Gaz. vol. 222; p. 1050.
Standard Oil Company, Richmond, Cal. Fuel and road oils. No. 108,228; Jan. 18; Gaz. vol. 222; p. 1051.
Stankiewicz, George, Chicago, Ill. Remedy for cuts, sprains, &c. No. 107,948; Jan. 4; Gaz. vol. 222; p. 375.
Star Company, New York, N. Y. Newspaper-section. No. 108,229; Jan. 18; Gaz. vol. 222; p. 1051.
Star Company, New York, N. Y. Newspaper-section. No. 108,312; Jan. 25; Gaz. vol. 222; p. 1311.
Steele-Wedeles Company, Chicago, Ill. Certain named foods. No. 108,114; Jan. 18; Gaz. vol. 222; p. 1048.
Stehli Silks Corporation, New York, N. Y. Silks in the piece. No. 108,067; Jan. 11; Gaz. vol. 222; p. 725.
Stokely Brothers & Co., Newport, Tenn. Canned vegetables. Nos. 108,271–4; Jan. 25; Gaz. vol. 222; p. 1310.
Stön Co., The, North Canaan, Conn. Stove-polish. No. 108,230; Jan. 18; Gaz. vol. 222; p. 1052.
Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Insulated cables and electric cables and cords. No. 108,275; Jan. 25; Gaz. vol. 222; p. 1310.
Suess, Carl H., Indianapolis, Ind. Mops. No. 108,069; Jan. 11; Gaz. vol. 222; p. 725.
Sunshine Panama Bleach Mfg. Co., New York, N. Y. Hat-bleach. No. 108,138; Jan. 18; Gaz. vol. 222; p. 1049.
Swan, Geo. B., Beaver Dam, Wis. Natural mineral water. No. 108,313; Jan. 25; Gaz. vol. 222; p. 1311.
T. A. Willson & Co., Inc., Reading, Pa. Ophthalmic mountings and parts thereof. No. 108,119; Jan. 18; Gaz. vol. 222; p. 1048.
Tafaco Specialty Company, Boston, Mass. Icing-powder, flavoring for cakes and pastries, a milk substitute. No. 107,949; Jan. 4; Gaz. vol. 222; p. 375.
Taormina, Vincent, New Orleans, La. Olive-oil. No. 107,950; Jan. 4; Gaz. vol. 222; p. 375.
Taubel Brothers, Philadelphia, Pa. Hosiery. No. 108,314; Jan. 25; Gaz. vol. 222; p. 1311.
Taylor-Logan Co. Papermakers, Holyoke, Mass. Ledger, record, bond, &c., papers, envelops. Nos. 108,139–40; Jan. 18; Gaz. vol. 222; p. 1049.
Texas Company, The, Houston and Port Arthur, Tex., and New York, N. Y. Kerosene-oil. No. 107,987; Jan. 4; Gaz. vol. 222; p. 376.
Texas Fig Co., Houston and La Porte, Tex. Preserved figs. No. 108,003; Jan. 4; Gaz. vol. 222; p. 376.
Thomas Potter Sons & Company, Inc., Philadelphia, Pa. Floor-cloths. No. 108,023; Jan. 11; Gaz. vol. 222; p. 723.
Thomasson, John H., Minneapolis, Minn. Furniture-polish. No. 107,988; Jan. 4; Gaz. vol. 222; p. 376.
Thompson, James L., Jr., New York, N. Y. Liniment. No. 108,116; Jan. 18; Gaz. vol. 222; p. 1048.
Thompson, Rolland E., Washington, D. C. Non-alcoholic carbonated beverages sold as soft drinks. Nos. 108,315–16; Jan. 25; Gaz. vol. 222; p. 1311.
Thompson, Roy M., Malad, Idaho. Liniment for barb-wire cuts and harness and saddle sores on live stock. No. 108,231; Jan. 18; Gaz. vol. 222; p. 1052.
3-X Spark Plug Co. (See Eclipse Manufacturing Company, assignor.)
Ticonderoga Pulp and Paper Company, Ticonderoga and New York, N. Y. Book and writing papers. No. 108,117; Jan. 18; Gaz. vol. 222; p. 1048.
Tiedtke Brothers Company, The, Toledo, Ohio. Certain named foods. No. 107,951; Jan. 4; Gaz. vol. 222; p. 375.
Toner, Wm. P. S., Springfield, Mass. Liniment. No. 108,030; Jan. 11; Gaz. vol. 222; p. 723.
Treinis Bros., New York, N. Y. Certain named knit goods. No. 108,317; Jan. 25; Gaz. vol. 222; p. 1311.
Tropical Pharmacal Co., New York, N. Y. Bronchial tablet. No. 108,141; Jan. 18; Gaz. vol. 222; p. 1049.
Tropical Pharmacal Co., New York, N. Y. Tonic pill. No. 108,142; Jan. 18; Gaz. vol. 222; p. 1049.
Turner & Seymour Manufacturing Co., The, Torrington, Conn. Egg-beaters. No. 108,118; Jan. 18; Gaz. vol. 222; p. 1048.
Turner & Seymour Manufacturing Co., Torrington, Conn. Egg-beaters. No. 108,318; Jan. 25; Gaz. vol. 222; p. 1311.
United Cigar Stores Co., Jersey City, N. J. Candy and ice-cream. No. 108,070; Jan. 11; Gaz. vol. 222; p. 725.
United States Rubber Company, New Brunswick, N. J., and New York, N. Y. Boots and shoes having fabric uppers and rubber soles. No. 107,953; Jan. 4; Gaz. vol. 222; p. 375.

United States Wire Mat Company, Decatur, Ill. Fly-killers. No. 107,989; Jan. 4; Gaz. vol. 222; p. 376.
Universal Motor Company, Oshkosh, Wis. Internal-combustion motors. No. 108,004; Jan. 4; Gaz. vol. 222; p. 377.
Vaughan, John F., Boston, Mass. Tea and coffee. No. 108,143; Jan. 18; Gaz. vol. 222; p. 1049.
Victorius Bros., New York, N. Y. Stiffening material. No. 108,071; Jan. 11; Gaz. vol. 222; p. 725.
Vita Corporation, The, Cleveland, Ohio. High-frequency apparatus. No. 108,276; Jan. 25; Gaz. vol. 222; p. 1310.
Voigt, Fritz, Newark, N. J. Hair tonic and restorer. No. 108,144; Jan. 18; Gaz. vol. 222; p. 1049.
W. Schneider Wholesale Wine & Liquor Co., St. Louis, Mo. Bottled beer. No. 108,110; Jan. 18; Gaz. vol. 222; p. 1048.
W. Schneider Wholesale Wine & Liquor Co., St. Louis, Mo. Angelica, claret, port, &c., wines. No. 108,111; Jan. 18; Gaz. vol. 222; p. 1048.
W. N. Matthews & Bro., Inc., St. Louis, Mo. Ground-anchors. No. 107,886; Jan. 4; Gaz. vol. 222; p. 373.
Walter Spencer & Co., Ld., Sheffield, England. Unwrought and partly-wrought metals used in manufacture. No. 108,066; Jan. 11; Gaz. vol. 222; p. 725.
Warren Featherbone Company, The, Three Oaks, Mich. Collar-supports. No. 107,892; Jan. 4; Gaz. vol. 222; p. 373.
Wedgefuth, Louis C., Yonkers, N. Y. Remedy for rheumatism. No. 108,277; Jan. 25; Gaz. vol. 222; p. 1310.
Welch Company, The, Chicago, Ill. Popcorn confection. No. 107,990; Jan. 4; Gaz. vol. 222; p. 376.
West Disinfecting Company, New York, N. Y. Disinfectants and insecticides. No. 108,185; Jan. 18; Gaz. vol. 222; p. 1050.
Western Clock Co., Peru, Ill. Watches and clocks. No. 108,232; Jan. 18; Gaz. vol. 222; p. 1052.
Western Conduit Co., The, Youngstown, Ohio. Iron and steel pipe and pipe fittings and couplings. No. 108,278; Jan. 25; Gaz. vol. 222; p. 1310.
Western States Envelope Co., Milwaukee, Wis. Envelops. No. 108,145; Jan. 18; Gaz. vol. 222; p. 1049.
Western Tablet Co., St. Joseph, Mo. Writing-tablets and note-book papers. No. 107,991; Jan. 4; Gaz. vol. 222; p. 376.
Wheat Meal Company, Le Mars, Iowa. Flour and breakfast cereals made from wheat. No. 108,005; Jan. 4; Gaz. vol. 222; p. 377.
White, Ralph D., Conway, Ark. Washing-powders. No. 108,279; Jan. 25; Gaz. vol. 222; p. 1310.
White River Creamery Co., Muncie, Ind., and Cincinnati, Ohio. Butter. No. 107,954; Jan. 4; Gaz. vol. 222; p. 375.
William B. Pierce Company, The, Buffalo, N. Y. Mechanical boiler-tube cleaners. No. 108,002; Jan. 4; Gaz. vol. 222; p. 376.
Wilmerding & Bisset, New York, N. Y. Cotton piece goods. No. 108,319; Jan. 25; Gaz. vol. 222; p. 1311.
Wilson Chemical Co., The, Tyrone, Pa. Clocks and watches. No. 107,993; Jan. 4; Gaz. vol. 222; p. 376.
Wilson, George J., Rochester, N. Y. Gluten-flour. No. 107,992; Jan. 4; Gaz. vol. 222; p. 376.
Wilts Veneer Company, Plymouth, N. C. Veneer. No. 108,146; Jan. 18; Gaz. vol. 222; p. 1049.
Wizard Products Co., Chicago, Ill. Stove-polish, polishing-cloths, mop-cleaning compounds, &c. No. 108,233; Jan. 18; Gaz. vol. 222; p. 1052.
Wolff, Aaron H., New York, N. Y. Gas stoves and heaters. No. 108,320; Jan. 25; Gaz. vol. 222; p. 1311.
Woolson Spice Company, The, Toledo, Ohio. Coffee. No. 107,955; Jan. 4; Gaz. vol. 222; p. 375.
Zatarain, Emile A., New Orleans, La. Sarsaparilla, root-beer, flavoring-syrups, and spearmint beverage. No. 108,280; Jan. 25; Gaz. vol. 222; p. 1310.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

American Piano Company, New York, N. Y. "Rythmodik Record Music Rolls." (For a Music-Roll Box.) No. 18,971; Jan. 11; Gaz. vol. 222; p. 726.
Ammen Co. Ltd., Chas., Alexandria, La. "Ammen's Prickly Heat Baby Powder." (For Toilet Powder.) No. 18,972; Jan. 11; Gaz. vol. 222; p. 726.
Baldwin Piano Company, The, Cincinnati, Ohio. "Manualized Player Music." (For Piano-Player Music.) No. 18,980; Jan. 18; Gaz. vol. 222; p. 1053.
Beebe-Howes Company, Inc., The, New York, N. Y. "Safe Hose." (For Hosiery.) No. 18,994; Jan. 25; Gaz. vol. 222; p. 1312.
Ben's Confection Company, Chicago, Ill. "Ben's Balsamic Mentholated Cough Drop." (For Cough-Drops.) No. 18,981; Jan. 18; Gaz. vol. 222; p. 1053.
Burgess, Thornton W., Springfield, Mass. "Quaddy-Ettes." (For Toys, Games, and Novelties.) No. 18,995; Jan. 25; Gaz. vol. 222; p. 1312.
C. S. Foulds-Briggs Company, The, Cincinnati, Ohio. "Red White & Blue." (For Macaroni.) No. 18,982; Jan. 18; Gaz. vol. 222; p. 1053.
De-Fu Manufacturing Co., Kansas City, Mo. "Parlor Horse Shoe Game." (For Games.) No. 18,996; Jan. 25; Gaz. vol. 222; p. 1312.
Delmartin Distributing Co., Ltd., The, New York, N. Y. "Tom Morris." (For Scotch Whisky.) No. 18,997; Jan. 25; Gaz. vol. 222; p. 1312.
Dock and Coal Company, Plattsburg, N. Y. "Max Best." (For Flour.) No. 18,966; Jan. 4; Gaz. vol. 222; p. 378.
Ehrmann, Hilmar, Louisville, Ky. "Big 6." (For Gin.) No. 18,998; Jan. 25; Gaz. vol. 222; p. 1312.
Eucapine Chemical Company, Atlanta, Ga. "Eucapine." (For a Salve.) No. 18,999; Jan. 25; Gaz. vol. 222; p. 1312.
Fuller Canneries Company, The, Cleveland, Ohio, and South Dayton, N. Y. "F. F. V." (For Canned Fresh Vegetables.) No. 19,000; Jan. 25; Gaz. vol. 222; p. 1312.
Geiger & Co., Geo., Milwaukee, Wis. "Red Crown." (For Canned Peas.) No. 18,983; Jan. 18; Gaz. vol. 222; p. 1053.
Gellman, Hyman, New York, N. Y. "Gellman's Kosher Scouring Powder." (For Scouring-Powders.) No. 19,001; Jan. 25; Gaz. vol. 222; p. 1312.
General Baking Company, New York, N. Y. "Gee Bee Bread." (For Bread.) No. 19,002; Jan. 25; Gaz. vol. 222; p. 1312.
Geo. C. Whitney Co., The, Worcester, Mass. "Whitney's Valentine Material." (For Valentines.) No. 18,992; Jan. 18; Gaz. vol. 222; p. 1053.
H. W. Johns-Manville Company, New York, N. Y. "J-M Gilsonite Paving Cement." (For Cement.) No. 19,003; Jan. 25; Gaz. vol. 222; p. 1312.
Hemet Canning Company, Hemet, Cal. "Hemet." (For Apricots.) No. 18,984; Jan. 18; Gaz. vol. 222; p. 1053.
Hemet Canning Company, Hemet, Cal. "Mission Inn." (For Peaches.) No. 18,985; Jan. 18; Gaz. vol. 222; p. 1053.
Iowa Macaroni Mfg. Co., Des Moines, Iowa. "Iowa Brand Macaroni." (For Macaroni.) No. 18,986; Jan. 18; Gaz. vol. 222; p. 1053.
J. P. Smith Shoe Co., Chicago, Ill. "The Chicagoan Shoe." (For Shoes.) No. 18,989; Jan. 18; Gaz. vol. 222; p. 1053.
John F. Oertel Co., Louisville, Ky. "Oertel Brew." (For Beer.) No. 18,976; Jan. 11; Gaz. vol. 222; p. 726.
Joseph, Samuel, New York, N. Y. "Joseph, The First Coatmaker, New York." (For Suits and Overcoats.) No. 18,967; Jan. 4; Gaz. vol. 222; p. 378.
Kenyon & Thomas Co., Adams, N. Y. "Dr. Hale's Household Ointment." (For Ointment.) No. 19,004; Jan. 25; Gaz. vol. 222; p. 1312.
Knight & Thomas, Inc., Boston, Mass. "Kar-Bo-Lene." (For Fire-Extinguishers.) No. 19,005; Jan. 25; Gaz. vol. 222; p. 1312.
Kurtz, David, Brooklyn, N. Y. "'America's Best' Boy's Blouse." (For Boys' Blouses.) No. 18,968; Jan. 4; Gaz. vol. 222; p. 378.
Lipshutz, Adolph, New York, N. Y. "Gold Medal." (For Shoe-Polish.) No. 18,973; Jan. 11; Gaz. vol. 222; p. 726.
McGraw, Edmund J., Baltimore, Md. "Travers Antiseptic Powder Compound." (For Travers Antiseptic Powder Compound.) No. 18,969; Jan. 4; Gaz. vol. 222; p. 378.
Mead Pulp and Paper Company, The, Dayton, Ohio. "Cosmos." (For Printing-Paper.) No. 18,974; Jan. 11; Gaz. vol. 222; p. 726.
Mead Pulp and Paper Company, The, Dayton, Ohio. "Enameline." (For Printing-Paper.) No. 18,975; Jan. 11; Gaz. vol. 222; p. 726.
North Tropic Products Enterprise, Guatemala, Guatemala, and New Orleans, La. "Supreme Brand Genuine Guatemala Coffee." (For Coffee.) No. 18,987; Jan. 18; Gaz. vol. 222; p. 1053.
North Tropic Products Enterprise, Guatemala, Guatemala, and New Orleans, La. "Very Tropical Pepper Sauce for Table." (For Sauce.) No. 18,988; Jan. 18; Gaz. vol. 222; p. 1053.
Overnite Carbon Remover Company, Chicago, Ill. "Overnite Carbon Remover." (For a Carbon-Remover.) No. 19,006; Jan. 25; Gaz. vol. 222; p. 1312.
Platt & Washburn Refining Company, New York, N. Y. "The Lubricant That Resists Heat." (For Lubricating-Oils.) No. 18,977; Jan. 11; Gaz. vol. 222; p. 726.
Salem Fruit Union, Salem, Oreg. "Forest." (For Dried Prunes.) No. 19,007; Jan. 25; Gaz. vol. 222; p. 1312.
Sturges & Burn Manufacturing Company, Chicago, Ill. "The Makers of this Can guarantee that before leaving the Factory, it was tested and found free from leaks and of correct capacity." (For Cans.) No. 18,970; Jan. 4; Gaz. vol. 222; p. 378.
Superior Trading Co., Seattle, Wash. "Superior." (For Canned Salmon.) No. 19,008; Jan. 25; Gaz. vol. 222; p. 1312.
Ten Bruin & Sons, H., Chicago, Ill. "Ten Bruins." (For Mustard.) No. 18,978; Jan. 11; Gaz. vol. 222; p. 726.
Tissera, Vincent L., Chicago, Ill. "Tissera's Tea-Fiz." (For Tea Fiz.) No. 18,990; Jan. 18; Gaz. vol. 222; p. 1053.
Toprahanian, M. G., Fresno, Cal. "Victorious." (For Cigarettes.) No. 19,009; Jan. 25; Gaz. vol. 222; p. 1312.
United States Distributing Co., The, New York, N. Y. "Better Made Cigar." (For Cigars.) No. 18,991; Jan. 18; Gaz. vol. 222; p. 1053.
Watson, Fred I., Fort Collins, Colo. "The Great Divide." (For Cigars.) No. 19,010; Jan. 25; Gaz. vol. 222; p. 1312.
Wiseheart Baking Co., Fortville, Ind. "Butter Burst Bread." (For Bread.) No. 18,979; Jan. 11; Gaz. vol. 222; p. 726.
Zarosi, Luigi, Chicago, Ill. "Trento Trieste." (For Liquor.) No. 18,993; Jan. 18; Gaz. vol. 222; p. 1053.

PRINTS.

Burdick-Simpson Co., Inc., The, New York, N. Y. "Ice Cream, The National Dessert." (For Ice-Cream.) No. 4,167; Jan. 4; Gaz. vol. 222; p. 378.

Channell Chemical Company, Chicago, Ill. "As Good as Gold is a good recommendation for gold. 'As good as O-Cedar' is O-Cedar's best recommendation." (For O-Cedar Polish.) No. 4,184; Jan. 25; Gaz. vol. 222; p. 1312.

Channell Chemical Company, Chicago, Ill. "It is a simple thing to keep your furniture as clean, bright and sparkling as new, simply use O-Cedar Polish." (For O-Cedar Polish.) No. 4,185; Jan. 25; Gaz. vol. 222; p. 1312.

Cream of Wheat Co., Minneapolis, Minn. "The Connoisseurs." (For Wheat Breakfast Food.) No. 4,186; Jan. 25; Gaz. vol. 222; p. 1312.

Double Grip Garter Company, Inc., New York, N. Y. "Del Dublegrippe Garter." (For Garters.) No. 4,175; Jan. 18; Gaz. vol. 222; p. 1053.

Elcaya Co. Inc., The, New York, N. Y. "Use Créme Elcaya And Be Complimented On Your Complexion." (For Complexion-Cream.) No. 4,176; Jan. 18; Gaz. vol. 222; p. 1053.

Erlick, Louis K., Portland, Me. "L. Karl Erlick Co., Artists & Specialists in Wigs and Toupees." (For Wigs and Toupees.) No. 4,187; Jan. 25; Gaz. vol. 222; p. 1312.

Greenberg, A. S., Norfolk, Va. "Polish- -ine." (For a Metal-Polish.) No. 4,188; Jan. 25; Gaz. vol. 222; p. 1312.

J. P. Smith Shoe Co., Chicago, Ill. "The Chicagoan Shoe." (For Shoes.) Nos. 4,178–83; Jan. 18; Gaz. vol. 222; p. 1053.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "Velvet Smokarols." (For Smoking-Tobacco and Pipe.) Nos. 4,168–71; Jan. 11; Gaz. vol. 222; p. 726.

Northwestern Knitting Company, Minneapolis, Minn. "Perfection in Munsingwear." (For Underwear.) No. 4,172; Jan. 11; Gaz. vol. 222; p. 726.

Reliance Manufacturing Company, Chicago, Ill. "Rely on Reliance." (For Shirts.) No. 4,177; Jan. 18; Gaz. vol. 222; p. 1053.

Schaffner & Ruhstadt, New York, N. Y. "Boulevard Clothes." (For Clothing.) No. 4,189; Jan. 25; Gaz. vol. 222; p. 1312.

Southern Cypress Manufacturers' Association, New Orleans, La. "Cypress 'The Wood Eternal.'" (For Cypress.) No. 4,190; Jan. 25; Gaz. vol. 222; p. 1312.

Thos. Cusack Company, Chicago, Ill. "Blue Label Ketchup." (For Catchup.) No. 4,173; Jan. 18; Gaz. vol. 222; p. 1053.

Thos. Cusack Company, Chicago, Ill. "Blue Label Chili Sauce." (For Chilli Sauce.) No. 4,174; Jan. 18; Gaz. vol. 222; p. 1053.

Wonder-Mist Co., The, Boston, Mass. "The Wonder-Mist Way." (For a Cleaning and Polishing Compound.) No. 4,191; Jan. 25; Gaz. vol. 222; p. 1312.

DISCLAIMERS.

Hoagland, Frank O., Bridgeport, Conn.; disclaimer filed by assignee, Union Metallic Cartridge Company. Rim-fire cartridge. No. 1,107,519; disclaimer filed Jan. 6, 1916; Gaz. vol. 222; p. 729.

Snook, Homer C., Philadelphia, Pa.; disclaimer filed by assignee, Snook-Roentgen Manufacturing Company. X-ray system. No. 954,056; disclaimer filed Dec. 31, 1915; Gaz. vol. 222; p. 729.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1916

[Abbreviations: "Gaz."=Official Gazette.]

Abrading device. E. G. K. Anderson. No. 1,169,061; Jan. 18; Gaz. vol. 222; p. 1010.

Abrading-machine. W. A. Reed. No. 1,167,521; Jan. 11; Gaz. vol. 222; p. 439.

Accounting mechanism, Distant. M. M. Goldberg. No. 1,166,517; Jan. 4; Gaz. vol. 222; p. 38.

Accounting, Method and means for automatic. W. J. Crumpton. No. 1,169,067; Jan. 18; Gaz. vol. 222; p. 1012.

Accounting register, Credit-. E. T. Slivius. No. 1,168,754; Jan. 18; Gaz. vol. 222; p. 905.

Accounting system. F. O. Heuser. No. 1,169,078; Jan. 18; Gaz. vol. 222; p. 1016.

Acetylene-generator, Carbid-feed. R. P. Elliott. No. 1,167,986; Jan. 11; Gaz. vol. 222; p. 603.

Acid, Making picric. G. B. Bradshaw. No. 1,168,266; Jan. 11; Gaz. vol. 222; p. 699.

Acids and salts thereof, Manufacture of reduction products of sulfurous. H. Specketer and E. Marburg. No. 1,169,365; Jan. 25; Gaz. vol. 222; p. 1152.

Adding and recording machine. H. Landsiedel. No. 1,167,415; Jan. 11; Gaz. vol. 222; p. 404.

Adding-machine. J. C. Lotterhand. No. 1,167,002; Jan. 4; Gaz. vol 222; p. 205.

Adding-machines, type-writers, and the like, Line-spacing mechanism for. J. G. Vincent. No. 1,167,954; Jan. 11; Gaz. vol. 222; p. 592.

Addressing-machine, Office. U. G. Lee. No. 1,169,080; Jan. 18; Gaz. vol. 222; p. 1017.

Adhesive, Making an. E. Wiese. No. 1,168,137; Jan. 11; Gaz. vol. 222; p. 655.

Adjustable and convertible gate. J. H. Tausch. No. 1,168,233; Jan. 11; Gaz. vol. 222; p. 686.

Adjusting device. W. Deutsch. No. 1,169,621; Jan. 25; Gaz. vol. 222; p. 1244.

Advertising device. W. F. Floessell. No. 1,166,515; Jan. 4; Gaz. vol. 222; p. 37.

Advertising medium. H. P. Gould. No. 1,166,900; Jan. 4; Gaz. vol. 222; p. 170.

Aeroplane. J. B. Gross. No. 1,167,293; Jan. 4; Gaz. vol. 222; p. 305.

Aeroplane. L. Lukás. No. 1,168,658; Jan. 18; Gaz. vol. 222; p. 873.

Aeroplane. H. L., A. E., and H. O. Short. No. 1,167,943; Jan. 11; Gaz. vol. 222; p. 587.

Aeroplane. R. M. Smith. No. 1,166,488; Jan. 4; Gaz. vol. 222; p. 27.

Aeroplane-stabilizer. A. B. Thaw. No. 1,169,695; Jan. 25; Gaz. vol. 222; p. 1269.

Agitating materials, Apparatus for. J. H. Genter. No. 1,169,026; Jan. 18; Gaz. vol. 222; p. 998.

Agitating mechanism. J. J. Tokheim. No. 1,167,536; Jan. 11; Gaz. vol. 222; p. 445.

Agricultural implement. W. O. Halford. No. 1,167,898; Jan. 11; Gaz. vol. 222; p. 571.

Air-brakes, Trip-valve for. E. H. Dewson. No. 1,168,488; Jan. 18; Gaz. vol. 222; p. 810.

Air-compressor motor. D. E. Crouse and C. G. Eldson. No. 1,168,251; Jan. 11; Gaz. vol. 222; p. 693.

Air-cushion, Automatic. G. W. MacKinnon. No. 1,169,050; Jan. 18; Gaz. vol. 222; p. 1005.

Air for metallurgical uses, Drying. W. Wense. No. 1,169,371; Jan. 25; Gaz. vol. 222; p. 1154.

Air-heater. N. O. Wilder. No. 1,168,840; Jan. 18; Gaz. vol. 222; p. 935.

Air, oil, and gas burner. G. M. Wolverton. No. 1,166,959; Jan. 4; Gaz. vol. 222; p. 190.

Air-pressure lubricator. L. G. O'Donnell. No. 1,167,593; Jan. 11; Gaz. vol. 222; p. 465.

Air under pressure, Controlling the humidity of. W. H. Carrier. No. 1,167,740; Jan. 11; Gaz. vol. 222; p. 515.

Aircraft-destroyer, Aerial. J. A. Steinmetz. No. 1,166,489; Jan. 4; Gaz. vol. 222; p. 48.

Alarm: *See*—
Burglar-alarm.
Fire-alarm.

Alarm mechanism. R. B. Wilcox. No. 1,166,958; Jan. 4; Gaz. vol. 222; p. 189.

Alarm mechanism, Electric. E. A. Truax. No. 1,168,761; Jan. 18; Gaz. vol. 222; p. 907.

Albuminous products from the residues obtained in the oil manufacture, Manufacture of. V. Grafe and K. Peche. No. 1,169,634; Jan. 25; Gaz. vol. 222; p. 1250.

Alkali-metal acetones. G. Merling, O. Chrzescluski, and O. Pfeffer. No. 1,169,341; Jan. 25; Gaz. vol. 222; p. 1143.

Alloy. E. D. Gleason. No 1,169,536; Jan. 25; Gaz. vol. 222; p. 1213.

Alloy, Copper. W. C. Pease. No. 1,168,962; Jan. 18; Gaz. vol. 222; p. 978.

Alloy, Precious-metal. R. J. Peschko. No. 1,169,753; Jan. 25; Gaz. vol. 222; p. 1288.

Alloys and manufacturing the same, Composition of copper. P. C. Frary and S. Temple. No. 1,169,392; Jan. 25; Gaz. vol. 222; p. 1161.

Alloys of high melting-point having ductile properties, Production of. H. Kaiser. No. 1,167,827; Jan. 11; Gaz. vol. 222; p. 545.

Aluminothermic mixtures, Producing. J. H. Deppeler. No. 1,168,061; Jan. 11; Gaz. vol. 222; p. 629.

Amalgamator, Ore-. J. E. Dick. No. 1,169,740; Jan. 25; Gaz. vol. 222; p. 1284.

Ammonium phosphate, Making. F. S. Washburn. No. 1,167,788; Jan. 11; Gaz. vol. 222; p. 531.

Ammunition-hoisting device. A. Kästner and F. Stock. No. 1,166,836; Jan. 4; Gaz. vol. 222; p. 149.

Ampoule. A. C. Higgins. No. 1,166,761; Jan. 4; Gaz. vol. 222; p. 122.

Amusement apparatus. J. Gunzendorfer. No. 1,167,993; Jan. 11; Gaz. vol. 222; p. 605.

Amusement device. H. Hartman. No. 1,167,170; Jan. 4; Gaz. vol. 222; p. 264.

Amusement device. C. E. Jessen. No. 1,167,077; Jan. 4; Gaz. vol. 222; p. 230.

Amusement device. W. F. Watkins. No. 1,167,958; Jan. 11; Gaz. vol. 222; p. 594.

Anatomical manikin-head. F. D. Weisse. No. 1,166,796; Jan. 4; Gaz. vol. 222; p. 135.

Anchoring device. C. E. Benson. No. 1,167,790; Jan. 11; Gaz. vol. 222; p. 532.

Anesthetic apparatus. A. C. Clark. No. 1,167,353; Jan. 4; Gaz. vol. 222; p. 329.

Animal-control device. H. Murray. No. 1,166,708; Jan. 4; Gaz. vol. 222; p. 106.

Animal-holding implement. N. L. Beck. No. 1,168,591; Jan. 18; Gaz. vol. 222; p. 847.

Animal-releasing device. D. J. Calhoon. No. 1,167,793; Jan. 11; Gaz. vol. 222; p. 533.

Animal-trap. J. A. Beverly. No. 1,166,573; Jan. 4; Gaz. vol. 222; p. 58.

Animal-trap. A. M. Grubbs. No. 1,167,493; Jan. 11; Gaz. vol. 222; p. 430.

Animal-trap. A. Korcok. No. 1,168,316; Jan. 18; Gaz. vol. 222; p. 750.

Ankle-support. J. H. King. No. 1,167,183; Jan. 4; Gaz. vol. 222; p. 269.

Annealing-furnace. H. Hillebrand. No. 1,166,684; Jan. 4; Gaz. vol. 222; p. 98.

Annealing-furnace. C. F. Kenworthy. No. 1,169,494; Jan. 25; Gaz. vol. 222; p. 1197.

Annunciator for checkers and similar games. A. Nelson. No. 1,167,423; Jan. 11; Gaz. vol. 222; p. 407.

Anti-rail-spreading device. A. Winstead. No. 1,168,449; Jan. 18; Gaz. vol. 222; p. 796.

Anticreeper. V. A. Miller. No. 1,169,051; Jan. 18; Gaz. vol. 222; p. 1006.

Antiskidding device. M. P. Bixby and F. C. Reimer. No. 1,169,525; Jan. 25; Gaz. vol. 222; p. 1209.

Aquarium. J. Williamson. No. 1,169,449; Jan. 25; Gaz. vol. 222; p. 1182.

Armature, Magneto-. H. C. Mueller. No. 1,169,179; Jan. 25; Gaz. vol. 222; p. 1089.

Article-holder. L. Merrell. No. 1,168,093; Jan. 11; Gaz. vol. 222; p. 641.

Ash resulting from the combustion of powdered fuel, Modifying the. W. P. Barba. No. 1,167,470; Jan. 11; Gaz. vol. 222; p. 423.

Ash resulting from the combustion of powdered fuel, Modifying the. W. P. Barba. No. 1,167,471; Jan. 11; Gaz. vol. 222; p. 423.

Asphalt blocks, Manufacturing compressed. G. B. Upham. No. 1,168,768; Jan. 18; Gaz. vol. 222; p. 910.

Atomizer, Liquid-fuel. C. Radiguer. No. 1,168,416; Jan. 18; Gaz. vol. 222; p. 784.

Atomizer, Valveless. S. Trask. No. 1,169,301; Jan. 25; Gaz. vol. 222; p. 1130.
Auger-braces, Drill-press attachment for. C. P. Evers. No. 1,168,939; Jan. 18; Gaz. vol. 222; p. 970.
Auto transmission. E. A. Norton. No. 1,168,103; Jan. 11; Gaz. vol. 222; p. 643.
Autographic register. E. J. Barker. No. 1,169,453; Jan. 25; Gaz. vol. 222; p. 1183.
Autographic register. U. G. Cave. No. 1,169,528; Jan. 25; Gaz. vol. 222; p. 1210.
Autographic register. H. Konerman. No. 1,166,995; Jan. 4; Gaz. vol. 222; p. 202.
Autographic register, Measured-delivery. H. Konerman. No. 1,166,996; Jan. 4; Gaz. vol. 222; p. 202.
Automatic coupling. S. B. White. No. 1,168,692; Jan. 18; Gaz. vol. 222; p. 885.
Automatic generator. J. B. Dalbey. No. 1,167,680; Jan. 11; Gaz. vol. 222; p. 496.
Automatic lock. J. Oestreich. No. 1,168,903; Jan. 18; Gaz. vol. 222; p. 957.
Automaton. R. J. Schuhmann. No. 1,168,750; Jan. 18; Gaz. vol. 222; p. 903.
Automobile. W. P. Hammond. No. 1,167,166; Jan. 4; Gaz. vol. 222; p. 263.
Automobile. A. Ward, Jr., and T. P. Chase. No. 1,169,058; Jan. 18; Gaz. vol. 222; p. 1009.
Automobile and the like heating device. G. Koch. No. 1,168,315; Jan. 18; Gaz. vol. 222; p. 749.
Automobile attachment. O. T. Botts. No. 1,166,575; Jan. 4; Gaz. vol. 222; p. 58.
Automobile-cranker. J. D. Wellliver. No. 1,168,134; Jan. 11; Gaz. vol. 222; p. 654.
Automobile extra seat. O. S. Warren. No. 1,167,453; Jan. 11; Gaz. vol. 222; p. 417.
Automobile-fender. M. Jelalian. No. 1,166,593; Jan. 4; Gaz. vol. 222; p. 64.
Automobile-fender. E. E. Johnston. No. 1,167,698; Jan. 11; Gaz. vol. 222; p. 502.
Automobile-fender. L. C. Pritchard. No. 1,169,509; Jan. 25; Gaz. vol. 222; p. 1204.
Automobile front wheels, Device for driving. E. Noel. No. 1,167,424; Jan. 11; Gaz. vol. 222; p. 408.
Automobile-hoist. J. F. Graham. No. 1,169,255; Jan. 25; Gaz. vol. 222; p. 1115.
Automobile-hood. J. F. O'Neill. No. 1,166,926; Jan. 4; Gaz. vol. 222; p. 179.
Automobile-horn. R. H. Manson. No. 1,168,322; Jan. 18; Gaz. vol. 222; p. 752.
Automobile-jack. F. O. Cooley and A. J. Milligan. No. 1,167,049; Jan. 4; Gaz. vol. 222; p. 221.
Automobile-jack. C. Davidson. No. 1,168,935; Jan. 18; Gaz. vol. 222; p. 969.
Automobile-lighting apparatus. O. C. F. Wilcke. No. 1,169,216; Jan. 25; Gaz. vol. 222; p. 1102.
Automobile-lock. G. T. Trundle, Jr. No. 1,167,952; Jan. 11; Gaz. vol. 222; p. 591.
Automobile-locking device. C. M. Wright and W. L. Shab. No. 1,169,588; Jan. 25; Gaz. vol. 222; p. 1232.
Automobile mechanical starter. E. B. Stocking. No. 1,168,915; Jan. 18; Gaz. vol. 222; p. 961.
Automobile mechanical starter. E. B. Stocking. No. 1,168,916; Jan. 18; Gaz. vol. 222; p. 961.
Automobile mud-jack. A. J. Berrien and E. I. Bowe. No. 1,167,737; Jan. 11; Gaz. vol. 222; p. 515.
Automobile-radiator. M. Gal. No. 1,167,896; Jan. 11; Gaz. vol. 222; p. 570.
Automobile-radiator heater. L. Winter. No. 1,169,312; Jan. 25; Gaz. vol. 222; p. 1133.
Automobile-radiator sections, Making. H. C. Harrison. No. 1,169,481; Jan. 25; Gaz. vol. 222; p. 1192.
Automobile-radiator shield. W. C. Karow. No. 1,167,571; Jan. 11; Gaz. vol. 222; p. 458.
Automobile-radiators, Bucket for filling. C. W. MacKenzie. No. 1,167,580; Jan. 11; Gaz. vol. 222; p. 461.
Automobile safety device. R. C. Shepherd. No. 1,167,726; Jan. 11; Gaz. vol. 222; p. 511.
Automobile-signal. H. Rose. No. 1,167,115; Jan. 4; Gaz. vol. 222; p. 244.
Automobile spring suspension. H. M. Crane. No. 1,169,531; Jan. 25; Gaz. vol. 222; p. 1211.
Automobile-starter. A. B. Tognini. No. 1,169,208; Jan. 25; Gaz. vol. 222; p. 1099.
Automobile-steering-axle head. H. W. Alden and A. P. Brush. No. 1,166,649; Jan. 4; Gaz. vol. 222; p. 85.
Automobile steering-gear. M. J. Devanney. No. 1,169,468; Jan. 25; Gaz. vol. 222; p. 1188.
Automobile steering-gear. C. L. Flora. No. 1,169,025; Jan. 18; Gaz. vol. 222; p. 998.
Automobile steering-wheel. A. G. Neville. No. 1,168,958; Jan. 18; Gaz. vol. 222; p. 976.
Automobile-wheel. P. Kelleher and C. Schaffer. No. 1,169,651; Jan. 25; Gaz. vol. 222; p. 1255.
Automobile wind-shields, Wiper for. G. W. Ousley. No. 1,169,280; Jan. 25; Gaz. vol. 222; p. 1123.
Automobiles, Mechanically-operated gear-changing mechanism for. D. C. Lewis. No. 1,169,081; Jan. 18; Gaz. vol. 222; p. 1017.
Automobiles, Water-circulating means for. J. R. Macdonald. No. 1,167,509; Jan. 11; Gaz. vol. 222; p. 435.
Axle, Rear. A. P. Brush. No. 1,168,245; Jan. 11; Gaz. vol. 222; p. 691.
Bag: *See*—
Feed-bag. Hand-bag.
Bag-holder. H. R. Conklin. No. 1,169,241; Jan. 25; Gaz. vol. 222; p. 1111.
Bag-holder. E. M. Tucker. No. 1,167,604; Jan. 11; Gaz. vol. 222; p. 470.
Bail and bail-ear for buckets. C. F. Pfalzgraf. No. 1,167,926; Jan. 11; Gaz. vol. 222; p. 581.
Baking. L. Embrey. No. 1,169,023; Jan. 18; Gaz. vol. 222; p. 997.
Baking pan, Bread-. G. A. F. Mildt. No. 1,168,819; Jan. 18; Gaz. vol. 222; p. 928.
Baking pan, Pastry-. D. M. Kefauver. No. 1,168,511; Jan. 18; Gaz. vol. 222; p. 819.
Balance means for machinery. B. Bartley. No. 1,168,460; Jan. 18; Gaz. vol. 222; p. 801.
Ball-gaging machine. E. E. Neal. No. 1,166,537; Jan. 4; Gaz. vol. 222; p. 45.
Ball-marker. R. W. Magna. No. 1,167,004; Jan. 4; Gaz. vol. 222; p. 206.
Ball-stop for indoor golf. L. H. Torrey. No. 1,166,496; Jan. 4; Gaz. vol. 222; p. 30.
Ballast-trimmer. J. Jacobsen. No. 1,167,900; Jan. 11; Gaz. vol. 222; p. 571.
Band such as a bracelet, Expansible. H. E. Hyde and J. J. Hart. No. 1,169,645; Jan. 25; Gaz. vol. 222; p. 1253.
Bar: *See*—
Commutator-bar. Musical bar.
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Barber's chair. W. S. Holzbaur. No. 1,168,071; Jan. 11; Gaz. vol. 222; p. 632.
Barium chlorid, Manufacturing. E. V. Granö. No. 1,167,061; Jan. 4; Gaz. vol. 222; p. 225.
Barn construction. P. O. Swedberg. No. 1,167,129; Jan. 4; Gaz. vol. 222; p. 250.
Barrel and the like, Metal. J. H. Nicholson. No. 1,168,545; Jan. 18; Gaz. vol. 222; p. 831.
Barrel, Collapsible. J. D. Eldridge and W. W. Gehr. No. 1,169,022; Jan. 18; Gaz. vol. 222; p. 997.
Barrel-hoop, Metallic. M. E. Lobley. No. 1,169,272; Jan. 25; Gaz. vol. 222; p. 1120.
Barrel, &c., hoop, Metallic. R. M. Parker. No. 1,169,281; Jan. 25; Gaz. vol. 222; p. 1123.
Barrel-rack. A. S. Leo. No. 1,168,946; Jan. 18; Gaz. vol. 222; p. 972.
Barrel, Veneer. C. E. Gregory. No. 1,168,391; Jan. 18; Gaz. vol. 222; p. 777.
Barrels, Air-vent for. C. N. Easter. No. 1,168,866; Jan. 18; Gaz. vol. 222; p. 944.
Basket, Berry-. F. M. Joslin. No. 1,167,409; Jan. 11; Gaz. vol. 222; p. 401.
Bath apparatus. W. Lippincott. No. 1,167,190; Jan. 4; Gaz. vol. 222; p. 271.
Bath-tub, Infant's folding. M. C. Sherman. No. 1,167,849; Jan. 11; Gaz. vol. 222; p. 553.
Bather, Back-. O. M. Farmer. No. 1,167,282; Jan. 4; Gaz. vol. 222; p. 301.
Bathing apparatus. A. Hajdu. No. 1,168,497; Jan. 18; Gaz. vol. 222; p. 813.
Batteries, Terminal seal for. E. W. Jefferson. No. 1,168,078; Jan. 11; Gaz. vol. 222; p. 635.
Battery: *See*—
Electric battery. Storage battery.
Primary battery.
Battery-cell, Dry. H. Wilhelm and H. Olaneta. No. 1,166,871; Jan. 4; Gaz. vol. 222; p. 161.
Battery jar, Storage-. B. Ford. No. 1,167,810; Jan. 11; Gaz. vol. 222; p. 540.
Bead-chain-making machine. W. W. Bradley. No. 1,169,610; Jan. 25; Gaz. vol. 222; p. 1240.
Bearing. S. J. Sydney. No. 1,169,206; Jan. 25; Gaz. vol. 222; p. 1098.
Bearing, Adjustable. E. R. Brock. No. 1,167,375; Jan. 11; Gaz. vol. 222; p. 390.
Bearing, Antifriction-. T. H. Alfreds. No. 1,168,369; Jan. 18; Gaz. vol. 222; p. 769.
Bearing, Antifriction-. A. A. Weigel. No. 1,168,357; Jan. 18; Gaz. vol. 222; p. 765.
Bearing, Antifriction-. A. A. Weigel. No. 1,168,358; Jan. 18; Gaz. vol. 222; p. 765.
Bearing, Antifriction-. E. S. Woods. No. 1,168,363; Jan. 18; Gaz. vol. 222; p. 767.
Bearing, Antifriction-. E. S. Woods and T. H. Alfreds. No. 1,168,364; Jan. 18; Gaz. vol. 222; p. 767.
Bearing, Ball-. S. G. Wingquist. No. 1,166,799; Jan. 4; Gaz. vol. 222; p. 136.
Bearing, Ball-. S. G. Wingquist. No. 1,168,693; Jan. 18; Gaz. vol. 222; p. 885.
Bearing, Ball-. S. G. Wingquist and E. Jungbans. No. 1,166,800; Jan. 4; Gaz. vol. 222; p. 137.
Bearing cage, Roller-. H. Kapper. No. 1,169,544; Jan. 25; Gaz. vol. 222; p. 1216.
Bearing-clamp. A. M. Laycock. No. 1,169,271; Jan. 25; Gaz. vol. 222; p. 1120.
Bearing element, Thrust-. A. G. M. Michell. No. 1,168,094; Jan. 11; Gaz. vol. 222; p. 641.
Bearing for electric fans, Lubricated. G. C. Marx. No. 1,167,309; Jan. 4; Gaz. vol. 222; p. 311.
Bearing for multiple-spindle metal-working machines, Spindle-. F. L. Cone. No. 1,168,249; Jan. 11; Gaz. vol. 222; p. 693.
Bearing for multiple-spindle metal-working machines, Spindle-. F. L. Cone. No. 1,168,250; Jan. 11; Gaz. vol. 222; p. 693.
Bearing, Roller-. E. D. Dunning. No. 1,169,469; Jan. 25; Gaz. vol. 222; p. 1188.

Bearing, Roller-. L. R. Heim. No. 1,169,150; Jan. 25; Gaz. vol. 222; p. 1079.
Bearing, Roller-. N. G. Kimberley. No. 1,169,652; Jan. 25; Gaz. vol. 222; p. 1255.
Bearing, Roller-. A. K. Whitmer. No. 1,166,798; Jan. 4; Gaz. vol. 222; p. 136.
Bearings, Cage for antifriction-. B. Eitner. No. 1,168,937; Jan. 18; Gaz. vol. 222; p. 969.
Bearings, Clamping device for antifriction-. H. Hess. No. 1,167,758; Jan. 11; Gaz. vol. 222; p. 521.
Beater. E. A. Clark. No. 1,167,336; Jan. 4; Gaz. vol. 222; p. 322.
Bed. A. K. Taylor. No. 1,169,521; Jan. 25; Gaz. vol. 222; p. 1208.
Bed, Auxiliary. B. Schechter. No. 1,168,680; Jan. 18; Gaz. vol. 222; p. 880.
Bed-frame. N. Sinclair. No. 1,167,123; Jan. 4; Gaz. vol. 222; p. 247.
Bed, lounge-bed, &c., Sofa-. D. F. Dyke. No. 1,169,470; Jan. 25; Gaz. vol. 222; p. 1188.
Bed-pan. D. Hogan. No. 1,169,101; Jan. 18; Gaz. vol. 222; p. 1026.
Bed-slat. G. W. Hinton. No. 1,167,692; Jan. 11; Gaz. vol. 222; p. 500.
Bedclothes-clamp. R. V. Blake. No. 1,167,040; Jan. 4; Gaz. vol. 222; p. 218.
Bell device, Transformer. C. E. Campbell. No. 1,168,378; Jan. 18; Gaz. vol. 222; p. 772.
Belt-controlling means. M. Rockstroh. No. 1,169,511; Jan. 25; Gaz. vol. 222; p. 1205.
Belt elevator. G. M. Wolff. No. 1,167,869; Jan. 11; Gaz. vol. 222; p. 560.
Belt for trousers or the like, Fabric. M. Bowman. No. 1,166,965; Jan. 4; Gaz. vol. 222; p. 191.
Belt-manufacturing machine. J. W. Blodgett. No. 1,166,574; Jan. 4; Gaz. vol. 222; p. 58.
Belt-pole. C. L. Pepper. No. 1,169,565; Jan. 25; Gaz. vol. 222; p. 1223.
Belt-shifter. S. Bremner and F. F. Slick. No. 1,169,232; Jan. 25; Gaz. vol. 222; p. 1107.
Beveling-machine. C. F. Lindeburg. No. 1,166,918; Jan. 4; Gaz. vol. 222; p. 176.
Bicycle into a tricycle, Attachment for converting a. J. C. Foley. No. 1,167,286; Jan. 4; Gaz. vol. 222; p. 803.
Bill-board joint. W. D. Rice. No. 1,167,221; Jan. 4; Gaz. vol. 222; p. 282.
Bimetallic composite objects or bodies, Manufacturing. H. Seidler. No. 1,168,752; Jan. 18; Gaz. vol. 222; p. 904.
Binder, Loose-leaf. W. Albrecht. No. 1,168,260; Jan. 11; Gaz. vol. 222; p. 697.
Binder, Loose-leaf. R. M. Watson. No. 1,167,454; Jan. 11; Gaz. vol. 222; p. 417.
Binder or loose-sheet holder, Temporary. G. P. Wigginton. No. 1,167,607; Jan. 11; Gaz. vol. 222; p. 470.
Binders, Compression device for post-. G. H. Jenkins and S. Smith. No. 1,169,405; Jan. 25; Gaz. vol. 222; p. 1165.
Bird-house. L. T. Larson. No. 1,169,409; Jan. 25; Gaz. vol. 222; p. 1166.
Biscuit, Open-shred cereal. J. L. Kellogg. No. 1,168,888; Jan. 18; Gaz. vol. 222; p. 951.
Bit: *See*—
Boring-bit. Driving or bridle bit.
Bridle-bit.
Blank-handling machine. W. M. Stone. (Reissue.) No. 14,047; Jan. 11; Gaz. vol. 222; p. 702.
Blast-furnace. W. P. Thornton. No. 1,167,729; Jan. 11; Gaz. vol. 222; p. 512.
Bleaching apparatus. F. G. Ten Broeck. No. 1,167,728; Jan. 11; Gaz. vol. 222; p. 512.
Block: *See*—
Building-block. Pulley-block.
Curbing-block.
Block-system switchboard. R. L. Turk. No. 1,167,138; Jan. 4; Gaz. vol. 222; p. 253.
Blow-out patch. E. H. Morehouse. No. 1,166,622; Jan. 4; Gaz. vol. 222; p. 74.
Blower for signaling devices. N. Nyberg. No. 1,168,105; Jan. 11; Gaz. vol. 222; p. 644.
Board: *See*—
Block-system switchboard. Plaster-board.
Insulating-board. Score-board.
Ironing-board. Trimming-board.
Metal filling-board. Washboard.
Panel-board.
Boards, Holder for shipping wall-. A. Whittemore. No. 1,168,986; Jan. 18; Gaz. vol. 222; p. 986.
Boat, Collapsible life-. F. Dolejska and L. M. Herzik. No. 1,167,340; Jan. 4; Gaz. vol. 222; p. 323.
Boat, Motor-. A. J. Bartlett. No. 1,167,876; Jan. 11; Gaz. vol. 222; p. 563.
Boat structure. M. Schmitt. No. 1,168,828; Jan. 18; Gaz. vol. 222; p. 932.
Boats, Engaging and disengaging gear for ships'. H. W. Broady. No. 1,168,377; Jan. 18; Gaz. vol. 222; p. 772.
Boiler: *See*—
Egg-boiler. Water-tube boiler.
Steam-boiler.
Boiler. M. J. Carney. No. 1,169,065; Jan. 18; Gaz. vol. 222; p. 1011.
Boiler, E. C. Meier. No. 1,166,619; Jan. 4; Gaz. vol. 222; p. 73.
Boiler and other furnace. D. Jones. No. 1,166,911; Jan. 4; Gaz. vol. 222; p. 173.
Boiler attachment. A. A. Olson. No. 1,166,539; Jan. 4; Gaz. vol. 222; p. 46.
Boiler-brick. R. J. Allen. No. 1,168,697; Jan. 18; Gaz. vol. 222; p. 887.
Boiler-cleaner. E. Rankin. No. 1,167,520; Jan. 11; Gaz. vol. 222; p. 439.
Boiler-compound holder. R. E. Durning. No. 1,168,612; Jan. 18; Gaz. vol. 222; p. 855.
Boiler-flue cutter. W. C. Spencer. No. 1,168,344; Jan. 18; Gaz. vol. 222; p. 760.
Boiler furnace, Steam-. W. A. Gilchrist. No. 1,166,670; Jan. 4; Gaz. vol. 222; p. 93.
Boilers, Forced-draft device for locomotive-. L. D. Berg. No. 1,167,374; Jan. 11; Gaz. vol. 222; p. 390.
Boilers, Soot-cleaner for. F. W. Linaker. No. 1,167,765; Jan. 11; Gaz. vol. 222; p. 524.
Boilers, Soot-cleaner for. F. W. Linaker. No. 1,167,766; Jan. 11; Gaz. vol. 222; p. 524.
Boilers, Water-level indicator and automatic feed-water and fuel controlling device for steam-. F. E. Stanley. No. 1,168,229; Jan. 11; Gaz. vol. 222; p. 684.
Boiling lye, Vessel for. B. Strauss. No. 1,166,866; Jan. 4; Gaz. vol. 222; p. 159.
Boiling, roasting, and baking apparatus, Portable. C. Lampert. No. 1,169,167; Jan. 25; Gaz. vol. 222; p. 1085.
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Draw-bolt. Stay-bolt.
Safety-bolt. Toggle-bolt.
Bolt-anchor blank. C. Joseph. No. 1,166,525; Jan. 4; Gaz. vol. 222; p. 41.
Bolts and the like, Machine for making. J. R. Blakealee. No. 1,168,855; Jan. 18; Gaz. vol. 222; p. 940.
Book-marker. H. S. Carson. No. 1,168,159; Jan. 11; Gaz. vol. 222; p. 661.
Book or filing device. B. Webster. No. 1,168,447; Jan. 18; Gaz vol. 222; p. 795.
Book or pad. B. C. Maxwell. No. 1,168,818; Jan. 18; Gaz. vol. 222; p. 928.
Book, Pass-. W. Roystone. No. 1,168,966; Jan. 18; Gaz. vol. 222; p. 979.
Book, Portable display-. R. N. Beard. No. 1,167,618; Jan. 11; Gaz. vol. 222; p. 475.
Boot and shoe fastening. S. Weatherley. No. 1,168,771; Jan. 18; Gaz. vol. 222; p. 911.
Boots and other footwear, Ventilation device for. D. E. Cook. No. 1,168,166; Jan. 11; Gaz. vol. 222; p. 663.
Boots and shoes, Making. H. A. Davenport. No. 1,169,068; Jan. 18; Gaz. vol. 222; p. 1012.
Boots and shoes, Stock manipulating and tacking apparatus for use in the manufacture of. O. Ashton. No. 1,168,458; Jan. 18; Gaz. vol. 222; p. 800.
Border-guard. F. S. Giebner. No. 1,167,689; Jan. 11; Gaz. vol. 222; p. 499.
Boring-bit. F. Konieczka. No. 1,169,406; Jan. 25; Gaz. vol. 222; p. 1165.
Boring-machine. W. J. Koenig. No. 1,166,769; Jan. 4; Gaz. vol. 222; p. 125.
Boring-machine. J. D. Puff. No. 1,168,224; Jan. 11; Gaz. vol. 222; p. 683.
Bottle, Air-trap non-refillable. C. Van Amburgh. No. 1,167,448; Jan. 11; Gaz. vol. 222; p. 416.
Bottle, Antirefillable. C. J. Giese. No. 1,168,299; Jan. 18; Gaz. vol. 222; p. 743.
Bottle cap and opener. N. Ellis. No. 1,168,182; Jan. 11; Gaz. vol. 222; p. 669.
Bottle cap and stopper. A. C. Nothstine. No. 1,168,410; Jan. 18; Gaz. vol. 222; p. 783.
Bottle-carrier. C. A. Preston. No. 1,167,430; Jan. 11; Gaz. vol. 222; p. 410.
Bottle-closure. W. E. Gaston. No. 1,168,386; Jan. 18; Gaz. vol. 222; p. 775.
Bottle-closures, Machine for the manufacture of. A. Bogdánffy. No. 1,169,608; Jan. 25; Gaz. vol. 222; p. 1239.
Bottle-filling machine. J. E. Henes. No. 1,166,520; Jan. 4; Gaz. vol. 222; p. 39.
Bottle-filling mechanism. H. M. La Porte. No. 1,166,607; Jan. 4; Gaz. vol. 222; p. 69.
Bottle holder, Milk-. N. A. Moltrum. No. 1,168,535; Jan. 18; Gaz. vol. 222; p. 827.
Bottle-making machine. H. C. Ayerst. No. 1,169,064; Jan. 18; Gaz. vol. 222; p. 1011.
Bottle-making machine. J. G. Lepper and A. Mattis. No. 1,168,517; Jan. 18; Gaz. vol. 222; p. 821.
Bottle, Non-refillable. J. H. Boothe. No. 1,167,791; Jan. 11; Gaz. vol. 222; p. 532.
Bottle, Non-refillable. O. B. Fortney. No. 1,166,755; Jan. 4; Gaz. vol. 222; p. 120.
Bottle, Non-refillable. C. N. Hayes. No. 1,167,754; Jan. 11; Gaz. vol. 222; p. 519.
Bottle, Non-refillable. A. S. Kozell. No. 1,167,412; Jan. 11; Gaz. vol. 222; p. 403.
Bottle, Non-refillable. J. D. Lacroix. No. 1,167,413; Jan. 11; Gaz. vol. 222; p. 403.
Bottle, Non-refillable. J. D. Lacroix. No. 1,169,498; Jan. 25; Gaz. vol. 222; p. 1199.
Bottle, Non-refillable. H. W. Ries. No. 1,166,786; Jan. 4; Gaz. vol. 222; p. 131.
Bottle-stopper. F. Evans and G. A. Duryee. No. 1,167,807; Jan. 11; Gaz. vol. 222; p. 538.

Bottle-stopper. C. McKeever. No. 1,167,092; Jan. 4; Gaz. vol. 222; p. 235.
Bottle-valve. C. F. Leng. No. 1,167,189; Jan. 4; Gaz. vol. 222; p. 270.
Bottles, Cap-closure for. E. J. Welch. No. 1,168,690; Jan. 18; Gaz. vol. 222; p. 884.
Bottles, Stand for crated. J. S. Hazard. No. 1,166,833; Jan. 4; Gaz. vol. 222; p. 148.
Bowling-pins, Means for making. R. E. Stanley. No. 1,167,535; Jan. 11; Gaz. vol. 222; p. 445.
Box: *See*—
Collapsible box.
Collapsible fruit or berry box.
Display-box.
Folding box.
Heater-box.
Journal-box.
Mail-box.
Match-box.
Miter-box.
Number and lamp box.
Packing and shipping box.
Panel-box.
Paper box.
Phonograph sound-box.
Sand-box.
Sound-box.
Station-box.
Switch-box.
Talking-machine box.
Box, A. H. Rolkjer. No. 1,167,783; Jan. 11; Gaz. vol. 222; p. 530.
Box-blank machine, Wire-bound-. H. G. Mead. No. 1,167,914; Jan. 11; Gaz. vol. 222; p. 577.
Box brace, Window-food-. A. F. Bernadac. No. 1,169,604; Jan. 25; Gaz. vol. 222; p. 1238.
Box-clamping machine, Packing-. C. T. Dunn. No. 1,169 244; Jan. 25; Gaz. vol. 222; p. 1112.
Box-lids, sashes, and the like, Holder for. J. W. Rockwell. No. 1,168,112; Jan. 11; Gaz. vol. 222; p. 646.
Box-making machine. G. A. Cox. No. 1,166,818; Jan. 4; Gaz. vol. 222; p. 142.
Box-opener. H. Q. Alexander. No. 1,167,143; Jan. 4; Gaz. vol. 222; p. 254.
Box-toe pieces, Apparatus for treating. W. A. Knipe and T. McKinney. No. 1,167,904; Jan. 11; Gaz. vol. 222; p. 573.
Brace: *See*—
Box-brace.
Door-brace.
Rail-brace.
Brace and bit. N. McInnes. No. 1,168,661; Jan. 18; Gaz. vol. 222; p. 874.
Bracelet. H. B. Pratt. No. 1,166,629; Jan. 4; Gaz. vol. 222; p. 77.
Bracelet-link. A. Eklund. No. 1,166,821; Jan. 4; Gaz. vol. 222; p. 144.
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Insulator-bracket.
Insulator-supporting bracket.
Shade-bracket.
Signal-holding bracket.
Brake: *See*—
Car-brake.
Engine-brake.
Railway-brake.
Tunnel-brake.
Brake, L. C. Ord. No. 1,167,209; Jan. 4; Gaz. vol. 222; p. 277.
Brake, A. R. Trezise, Sr. No. 1,166,725; Jan. 4; Gaz. vol. 222; p. 111.
Brake-actuating mechanism. C. A. Lindström. No. 1,166,771; Jan. 4; Gaz. vol. 222; p. 126.
Brake and load-binder, Combined. J. Novotny. No. 1,168,104; Jan. 11; Gaz. vol. 222; p. 644.
Brake-block holder. J. S. Nichols. No. 1,169,181; Jan. 25; Gaz. vol. 222; p. 1090.
Brake-hanger. H. A. Hoke. No. 1,166,521; Jan. 4; Gaz. vol. 222; p. 40.
Brake mechanism. F. S. Ellett. No. 1,168,614; Jan. 18; Gaz. vol. 222; p. 855.
Brake mechanism. L. A. Hoerr. No. 1,167,068; Jan. 4; Gaz. vol. 222; p. 227.
Brake-pedal attachment. C. R. Reid. No. 1,168,827; Jan. 18; Gaz. vol. 222; p. 931.
Brake-rod support. N. T. Wiley. No. 1,167,867; Jan. 11; Gaz. vol. 222; p. 560.
Brake-shoe. B. H. Divine. No. 1,166,448; Jan. 4; Gaz. vol. 222; p. 13.
Brake-shoe. H. Jones. No. 1,168,810; Jan. 18; Gaz. vol. 222; p. 926.
Brake-shoe. J. J. Kinzer. No. 1,166,993; Jan. 4; Gaz. vol. 222; p. 201.
Brake-shoe. W. H. Sayre. No. 1,167,937; Jan. 11; Gaz. vol. 222; p. 586.
Brake-shoes, Forming. H. Jones. No. 1,167,826; Jan. 11; Gaz. vol. 222; p. 545.
Brake-shoes, Forming. H. Jones. No. 1,168,509; Jan. 18; Gaz. vol. 222; p. 818.
Brassière. E. Guggenheim. No. 1,167,992; Jan. 11; Gaz. vol. 222; p. 605.
Brassière. C. Mayer. No. 1,168,732; Jan. 18; Gaz. vol. 222; p. 898.
Bread and the like, Sanitary wrapper for. E. Frisch and O. C. Miessler. No. 1,168,254; Jan. 11; Gaz. vol. 222; p. 695.
Bread from whole grain, Manufacturing. B. Leibbrandt. No. 1,167,703; Jan. 11; Gaz. vol. 222; p. 504.
Bread-pan lubricator. J. A. Dengler, Jr. No. 1,168,291; Jan. 18; Gaz. vol. 222; p. 741.
Bread-raiser. A. L. Frail. No. 1,168,718; Jan. 18; Gaz. vol. 222; p. 894.
Breast-supporter. B. F. Clarke. No. 1,167,741; Jan. 11; Gaz. vol. 222; p. 516.
Breath-deflector. T. J. King. No. 1,166,462; Jan. 4; Gaz. vol. 222; p. 17.
Brick-burning. H. O. Robinson and C. Steadman. No. 1,168,557; Jan. 18; Gaz. vol. 222; p. 835.
Brick, Furnace-. W. J. Hillis. No. 1,168,211; Jan. 11; Gaz. vol. 222; p. 678.
Brick-kiln. J. C. Boss. No. 1,167,882; Jan. 11; Gaz. vol. 222; p. 565.
Brick-kiln. H. O. Robinson and C. Steadman. No. 1,168,556; Jan. 18; Gaz. vol. 222; p. 834.
Brick-kiln. C. Steadman and H. O. Robinson. No. 1,168,575; Jan. 18; Gaz. vol. 222; p. 841.
Brickmaking-machine. T. S. Rouse. No. 1,168,567; Jan. 18; Gaz. vol. 222; p. 838.
Bridge, Safety-. A. Silver. No. 1,169,517; Jan. 25; Gaz. vol. 222; p. 1207.
Bridle-bit. J. O. Bass. No. 1,167,541; Jan. 11; Gaz. vol. 222; p. 447.
Brooder. A. Essig. No. 1,169,071; Jan. 18; Gaz. vol. 222; p. 1013.
Brooder. J. F. MacKay. No. 1,166,773; Jan. 4; Gaz. vol. 222; p. 127.
Brooder, Poultry-. L. R. Oakes. No. 1,167,013; Jan. 4; Gaz. vol. 222; p. 209.
Broom, Rotary. C. H. Butler. No. 1,168,849; Jan. 18; Gaz. vol. 222; p. 938.
Brush. E. Olson. No. 1,167,923; Jan. 11; Gaz. vol. 222; p. 580.
Brush, Air-. B. E. Holton. No. 1,166,522; Jan. 4; Gaz. vol. 222; p. 40.
Brush, Air-. O. C. Wold. No. 1,169,587; Jan. 25; Gaz. vol. 222; p. 1231.
Brush, Fountain-. C. A. Garvey. No. 1,166,896; Jan. 4; Gaz. vol. 222; p. 168.
Brush, Fountain-. H. Reiche. No. 1,166,482; Jan. 4; Gaz. vol. 222; p. 25.
Brush, Fountain tooth-. E. Rosenblum. No. 1,168,965; Jan. 18; Gaz. vol. 222; p. 979.
Brush holder, Tooth-. W. Metzroth. No. 1,167,833; Jan. 11; Gaz. vol. 222; p. 547.
Brush, Stand-up scrubbing-. J. T. Phares. No. 1,167,215; Jan. 4; Gaz. vol. 222; p. 279.
Brush, Turf-. T. D. Cummins. No. 1,168,713; Jan. 18; Gaz. vol. 222; p. 892.
Brushes, Container for sanitary shaving-. H. B. Rodgers. No. 1,168,423; Jan. 18; Gaz. vol. 222; p. 787.
Brushes, Valve structure for fountain-. J. J. Lorzing. No. 1,168,893; Jan. 18; Gaz. vol. 222; p. 953.
Bubble-making machine. E. Beeler. No. 1,167,619; Jan. 11; Gaz. vol. 222; p. 475.
Bucket, Collapsible. F. C. Hayes. No. 1,167,497; Jan. 11; Gaz. vol. 222; p. 431.
Bucket, Grab-. E. E. Brosius. No. 1,168,279; Jan. 18; Gaz. vol. 222; p. 737.
Buckle. M. B. Hammond. No. 1,167,751; Jan. 11; Gaz. vol. 222; p. 519.
Buckle. W. V. Haupt. No. 1,168,883; Jan. 18; Gaz. vol. 222; p. 950.
Buckle, Suspender-. G. A. Weld. No. 1,166,955; Jan. 4; Gaz. vol. 222; p. 188.
Buckle, Toothless suspender-. A. Van Brunt. No. 1,168,236; Jan. 11; Gaz. vol. 222; p. 687.
Buffing-machine. W. A. Bond. No. 1,168,473; Jan. 18; Gaz. vol. 222; p. 806.
Buffing-machine. E. E. Lane. No. 1,168,514; Jan. 18; Gaz. vol. 222; p. 820.
Buggy-shaft holder and antirattler. O. A. Nelson. No. 1,166,710; Jan. 4; Gaz. vol. 222; p. 106.
Builder-motion. G. S. Harris. No. 1,167,167; Jan. 4; Gaz. vol. 222; p. 263.
Building. G. B. Sinclair. No. 1,166,552; Jan. 4; Gaz. vol. 222; p. 51.
Building block and construction. J. J. Funsten. No. 1,167,746; Jan. 11; Gaz. vol. 222; p. 517.
Building construction. A. Duarte. No. 1,169,016; Jan. 18; Gaz. vol. 222; p. 995.
Building structure or silo. H. Hulen and C. F. Brown. No. 1,168,886; Jan. 18; Gaz. vol. 222; p. 951.
Bundle-tying machine. A. B. Smith and H. J. Goff. No. 1,166,720; Jan. 4; Gaz. vol. 222; p. 109.
Bung and faucet, Combination. C. E. Miller. No. 1,168,323; Jan. 18; Gaz. vol. 222; p. 752.
Burglar-alarm, Portable. H. B. Broadwell. No. 1,169,120; Jan. 25; Gaz. vol. 222; p. 1068.
Burner: *See*—
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Coke-oven burner.
Hydrocarbon-burner.
Lamp-burner.
Oil-burner.
Burner, W. K. Twomey. No. 1,167,446; Jan. 11; Gaz. vol. 222; p. 415.
Burner construction. H. A. Dreffein and M. S. Flinn. No. 1,166,451; Jan. 4; Gaz. vol. 222; p. 14.
Burner tip, Oil-. W. M. Troll. No. 1,168,580; Jan. 18; Gaz. vol. 222; p. 843.
Butter-mold. R. J. Cosseboom. No. 1,168,168; Jan. 11; Gaz. vol. 222; p. 664.
Button. R. Karger. No. 1,168,079; Jan. 11; Gaz. vol. 222; p. 635.
Button-attaching machine, Automatic. W. E. Elliott. No. 1,167,805; Jan. 11; Gaz. vol. 222; p. 538.
Button, Cuff-. J. P. Middleton and H. D. Ross. No. 1,168,095; Jan. 11; Gaz. vol. 222; p. 641.
Button-holding clamp. W. L. Barron. No. 1,167,616; Jan. 11; Gaz. vol. 222; p. 474.
Button, Snap-. B. Hausner. No. 1,167,753; Jan. 11; Gaz. vol. 222; p. 519.

Buttons from ivory-nuts and the like, Making. J. Zuleg. No. 1,166,733; Jan. 4; Gaz. vol. 222; p. 113.
Buttonhole-machine. H. C. Miller. No. 1,167,197; Jan. 4; Gaz. vol. 222; p. 273.
Cab control system. F. M. Raymond. No. 1,168,908; Jan. 18; Gaz. vol. 222; p. 958.
Cabinet and clamp, Towel. G. A. Steiner. No. 1,169,297; Jan. 25; Gaz. vol. 222; p. 1129.
Cabinet for paper towels, &c., Dispensing-. E. A. Hamilton. No. 1,169,147; Jan. 25; Gaz. vol. 222; p. 1078.
Cabinet for sound-records. J. B. Ogden. No. 1,167,206; Jan. 4; Gaz. vol. 222; p. 276.
Cable-bonding device. E. L. Brockway. No. 1,168,596; Jan. 18; Gaz. vol. 222; p. 848.
Cable-splice. W. O. Wilson. No. 1,167,962; Jan. 11; Gaz. vol. 222; p. 595.
Cable terminal, Electric-. G. L. Herz. No. 1,167,820; Jan. 11; Gaz. vol. 222; p. 543.
Calculating-machine. W. H. Brown. No. 1,167,332; Jan. 4; Gaz. vol. 222; p. 320.
Calculating-machine. C. L. Kennicott. No. 1,169,724; Jan. 25; Gaz. vol. 222; p. 1279.
Calculating-machine. R. Rein. No. 1,166,715; Jan. 4; Gaz. vol. 222; p. 108.
Calculating-machine. L. W. Rosenthal. No. 1,168,745; Jan. 18; Gaz. vol. 222; p. 902.
Calculating-machine attachment. M. Tector. No. 1,167,132; Jan. 4; Gaz. vol. 222; p. 251.
Calculator. P. F. W. C. Krippendorf. No. 1,166,528; Jan. 4; Gaz. vol. 222; p. 42.
Calculator, Interest and time. W. H. Tilly. No. 1,169,300; Jan. 25; Gaz. vol. 222; p. 1130.
Calculator-keyboard. J. C. Lotterhand. No. 1,167,086; Jan. 4; Gaz. vol. 222; p. 233.
Calculator, Parcel-post. J. Lyons. No. 1,169,413; Jan. 25; Gaz. vol. 222; p. 1167.
Calculator, Slide-rule. G. R. F. H. Cuntz. No. 1,168,059; Jan. 11; Gaz. vol. 222; p. 629.
Calculators, Key mechanism for. J. C. Lotterhand. No. 1,167,001; Jan. 4; Gaz. vol. 222; p. 204.
Calculators, Keyboard control for. W. R. De Camp. No. 1,166,973; Jan. 4; Gaz. vol. 222; p. 194.
Calendar, Perpetual. G. W. Blakely. No. 1,169,230; Jan. 25; Gaz. vol. 222; p. 1107.
Calipers. W. H. Tong. No. 1,166,868; Jan. 4; Gaz. vol. 222; p. 159.
Calipers, Self-registering. W. J. Lanouette. No. 1,168,515; Jan. 18; Gaz. vol. 222; p. 820.
Camera. J. F. Krost. No. 1,166,914; Jan. 4; Gaz. vol. 222; p. 174.
Camera-leveling device, Photographic-. F. D. Anderson. No. 1,167,967; Jan. 11; Gaz. vol. 222; p. 597.
Camera, Photographic. O. T. Gregory and N. W. Carkhuff. No. 1,167,356; Jan. 4; Gaz. vol. 222; p. 330.
Camera, Photographic. S. Zacharia. No. 1,168,140; Jan. 11; Gaz. vol. 222; p. 655.
Camera, Repeating. J. N. Johnson. No. 1,166,763; Jan. 4; Gaz. vol. 222; p. 123.
Cameras, Amplifying-finder for. E. B. Smith. No. 1,167,319; Jan. 4; Gaz. vol. 222; p. 315.
Camphor compound. J. Callsen and R. Stilsser. No. 1,169,316; Jan. 25; Gaz. vol. 222; p. 1135.
Can: *See*—
Garbage-can.
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Can-end curling, can assembling and seaming machine. C. E. Forry. No. 1,167,059; Jan. 4; Gaz. vol. 222; p. 224.
Can feeding and timing mechanism. S. Tevander. No. 1,166,492; Jan. 4; Gaz. vol. 222; p. 29.
Can-handle. D. B. Tamagno. No. 1,168,345; Jan. 18; Gaz. vol. 222; p. 761.
Can heading and shaping machine. A. Calleson. No. 1,168,477; Jan. 18; Gaz. vol. 222; p. 807.
Can-heading machine. J. Brenzinger. No. 1,167,345; Jan. 4; Gaz. vol. 222; p. 325.
Can-heading machine. J. Brenzinger. No. 1,167,346; Jan. 4; Gaz. vol. 222; p. 326.
Can-heading machine. J. Brenzinger. No. 1,167,347; Jan. 4; Gaz. vol. 222; p. 326.
Can-heading machine. J. Brenzinger. No. 1,167,348; Jan. 4; Gaz. vol. 222; p. 326.
Can-heading machine. J. Brenzinger. No. 1,167,349; Jan. 4; Gaz. vol. 222; p. 327.
Can-heading machine. J. Brenzinger. No. 1,167,351; Jan. 4; Gaz. vol. 222; p. 328.
Can-heading machines, Automatic assembling and feeding device for. J. Brenzinger. No. 1,167,352; Jan. 4; Gaz. vol. 222; p. 328.
Can-heading machines, Tool-carrier for. J. Brenzinger. No. 1,167,350; Jan. 4; Gaz. vol. 222; p. 327.
Can-opener. K. Urakawa. No. 1,168,979; Jan. 18; Gaz. vol. 222; p. 983.
Canceling machine, Check-. P. E. Rees and F. C. Schmidt. No. 1,169,352; Jan. 25; Gaz. vol. 222; p. 1147.
Candle-making machine. E. J. Engman. No. 1,168,938; Jan. 18; Gaz. vol. 222; p. 970.
Candle-mold. E. Selter. No. 1,168,433; Jan. 18; Gaz. vol. 222; p. 791.
Candy-machine. F. W. Lovelady and B. J. Kennedy. No. 1,166,610; Jan. 4; Gaz. vol. 222; p. 70.
Candy-package. L. Hirschfeld. No. 1,169,035; Jan. 18; Gaz. vol. 222; p. 1002.
Cane and like mill returner-bar, Sugar-. A. M. Lang. No. 1,169,656; Jan. 25; Gaz. vol. 222; p. 1257.
Cane-cutting machine. C. E. Bell. No. 1,168,467; Jan. 18; Gaz. vol. 222; p. 804.
Cane mill, Sugar-. A. G. Hawes. No. 1,169,149; Jan. 25; Gaz. vol. 222; p. 1079.
Canopy-frame. G. F. Lindsey and G. A. Williams. No. 1,167,767; Jan. 11; Gaz. vol. 222; p. 525.
Cape. I. Finberg. No. 1,167,058; Jan. 4; Gaz. vol. 222; p. 224.
Car-brake. W. F. Kiesel, Jr. No. 1,166,694; Jan. 4; Gaz. vol. 222; p. 101.
Car, Cattle-. I. R. Wasden. No. 1,166,500; Jan. 4; Gaz. vol. 222; p. 32.
Car-coupling. H. T. Krakau. No. 1,169,266; Jan. 25; Gaz. vol. 222; p. 1118.
Car-coupling, Electric. P. Winsor and C. Corliss. No. 1,167,668; Jan. 11; Gaz. vol. 222; p. 471.
Car-coupling-releasing device. E. W. Hartough. No. 1,167,065; Jan. 4; Gaz. vol. 222; p. 227.
Car-coupling-releasing device. E. W. Hartough. No. 1,167,066; Jan. 4; Gaz. vol. 222; p. 227.
Car-coupling-releasing device. L. A. Hoerr. No. 1,167,069; Jan. 4; Gaz. vol. 222; p. 228.
Car-diaphragm. R. M. Brown. No. 1,167,973; Jan. 11; Gaz. vol. 222; p. 598.
Car-door. W. P. Murphy. No. 1,168,539; Jan. 18; Gaz. vol. 222; p. 829.
Car-door bridge, Railway-. H. Wallingford. No. 1,168,983; Jan. 18; Gaz. vol. 222; p. 984.
Car door, Grain-. C. F. Walter. No. 1,167,539; Jan. 11; Gaz. vol. 222; p. 446.
Car-door hanger. J. F. Comee. No. 1,166,661; Jan. 4; Gaz. vol. 222; p. 90.
Car-door-operating device. W. Nicholls. No. 1,169,278; Jan. 25; Gaz. vol. 222; p. 1122.
Car draft and buffing gear. F. E. Stebbins. No. 1,168,974; Jan. 18; Gaz. vol. 222; p. 981.
Car draft-rigging, Manufacturing draft-yokes for railway-. W. H. Miner. No. 1,166,471; Jan. 4; Gaz. vol. 222; p. 21.
Car draft-rigging, Railway-. C. W. Sherman. No. 1,169,435; Jan. 25; Gaz. vol. 222; p. 1176.
Car, Dump-. J. B. Rhodes. No. 1,168,420; Jan. 18; Gaz. vol. 222; p. 786.
Car, Dumping-. A. Bodner. No. 1,168,847; Jan. 18; Gaz. vol. 222; p. 938.
Car extension-step, Railway-. A. E. Seibert. No. 1,168,339; Jan. 18; Gaz. vol. 222; p. 758.
Car, Flexible. H. Rowntree. No. 1,168,335; Jan. 18; Gaz. vol. 222; p. 757.
Car-motors, Operating circuit and switch arrangement for. J. S. McWhirter. No. 1,169,552; Jan. 25; Gaz. vol. 222; p. 1219.
Car-mover. C. M. Rolph. No. 1,167,660; Jan. 11; Gaz. vol. 222; p. 489.
Car, Poultry-. F. X. Mudd and W. P. Johnson. No. 1,168,821; Jan. 18; Gaz. vol. 222; p. 929.
Car-roof. C. Brown. No. 1,166,510; Jan. 4; Gaz. vol. 222; p. 35.
Car-roof. J. M. Coleman. No. 1,169,240; Jan. 25; Gaz. vol. 222; p. 1110.
Car-roof. T. N. Russell. No. 1,169,430; Jan. 25; Gaz. vol. 222; p. 1174.
Car-seat construction. J. E. Kilburn. No. 1,167,831; Jan. 11; Gaz. vol. 222; p. 546.
Car-seats, Aisle end for. E. C. Lang. No. 1,169,728; Jan. 25; Gaz. vol. 222; p. 1280.
Car-seats, Wall end for. E. C. Lang. No. 1,169,727; Jan. 25; Gaz. vol. 222; p. 1280.
Car signal, Motor-. A. Holtz. No. 1,167,821; Jan. 11; Gaz. vol. 222; p. 543.
Car-stake. L. Rosebush. No. 1,168,560; Jan. 18; Gaz. vol. 222; p. 835.
Car-step, Extensible. H. F. Schrage. No. 1,168,749; Jan. 18; Gaz. vol. 222; p. 903.
Car step, Railway and street. M. Beck. No. 1,168,464; Jan. 18; Gaz. vol. 222; p. 802.
Car-steps, Foldable. J. H. Fassett and J. E. Warren. No. 1,169,140; Jan. 25; Gaz. vol. 222; p. 1076.
Car, Stock and box. C. R. Haverly. No. 1,169,148; Jan. 25; Gaz. vol. 222; p. 1078.
Car street-indicator. P. Radoccio. No. 1,167,432; Jan. 11; Gaz. vol. 222; p. 411.
Car-underframe construction. B. D. Lockwood. No. 1,167,769; Jan. 11; Gaz. vol. 222; p. 525.
Cars, Adjustable exhaust or respirator for. G. F. Laughlin. No. 1,169,170; Jan. 25; Gaz. vol. 222; p. 1086.
Cars and other vehicles, Construction of the bodies of motor-. A. Wilkinson. No. 1,167,035; Jan. 4; Gaz. vol. 222; p. 216.
Cars and other vehicles, Guard for fram-. S. Cromarty. No. 1,166,744; Jan. 4; Gaz. vol. 222; p. 116.
Cars, Dirigible fender for street-. T. Sheppard. No. 1,168,970; Jan. 18; Gaz. vol. 222; p. 980.
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Cars, Ratchet mechanism for blind-end. R. H. Blackall. No. 1,167,261; Jan. 4; Gaz. vol. 222; p. 294.
Carbureter. R. M. Anderson. No. 1,166,734; Jan. 4; Gaz. vol. 222; p. 113.

Carbureter. M. Bucker. No. 1,168,782; Jan. 18; Gaz. vol. 222; p. 915.
Carbureter. M. Bucker. No. 1,168,783; Jan. 18; Gaz. vol. 222; p. 916.
Carbureter. W. C. Carter. No. 1,169,616; Jan. 25; Gaz. vol. 222; p. 1242.
Carbureter. T. S. Glover. No. 1,167,290; Jan. 4; Gaz. vol. 222; p. 304.
Carbureter. V. R. Heftler. (Reissue.) No. 14,045; Jan. 11; Gaz. vol. 222; p. 701.
Carbureter. J. V. Henley. No. 1,169,483; Jan. 25; Gaz. vol. 222; p. 1193.
Carbureter. C. F. Johnson. No. 1,166,595; Jan. 4; Gaz. vol. 222; p. 64.
Carbureter. G. Kingston. No. 1,168,513; Jan. 18; Gaz. vol. 222; p. 819.
Carbureter. D. C. Meara. No. 1,169,340; Jan. 25; Gaz. vol. 222; p. 1143.
Carbureter. W. R. Park. No. 1,167,426; Jan. 11; Gaz. vol. 222; p. 408.
Carbureter. H. M. Reichenbach. No. 1,167,217; Jan. 4; Gaz. vol. 222; p. 280.
Carbureter. C. F. Schulz. No. 1,169,574; Jan. 25; Gaz. vol. 222; p. 1226.
Carbureter. C. C. Thomas. No. 1,167,320; Jan. 4; Gaz. vol. 222; p. 315.
Carbureter. P. S. Tice. No. 1,166,560; Jan. 4; Gaz. vol. 222; p. 53.
Carbureter. E. E. Wickersham. No. 1,167,457; Jan. 11; Gaz. vol. 222; p. 419.
Carbureters and for straining such fuel, Valve for controlling the flow of fuel to. C. C. Andersen. No. 1,169,226; Jan. 25; Gaz. vol. 222; p. 1105.
Carcass scraping and polishing mechanism. J. W. Kohlhepp. No. 1,167,573; Jan. 11; Gaz. vol. 222; p. 458.
Carding-engine. H. J. Rogers. No. 1,167,523; Jan. 11; Gaz. vol. 222; p. 440.
Cards, Feed for finishing. S. S. and G. M. Stiles. No. 1,167,950; Jan. 11; Gaz. vol. 222; p. 591.
Caronsel. W. F. Mangels. No. 1,168,080; Jan. 11; Gaz. vol. 222; p. 639.
Carousel. P. F. Nachtigall. No. 1,167,650; Jan. 11; Gaz. vol. 222; p. 486.
Carpet-cleaner. F. J. Quist. No. 1,168,225; Jan. 11; Gaz. vol. 222; p. 683.
Carpet-cleaner. F. J. Quist. No. 1,169,191; Jan. 25; Gaz. vol. 222; p. 1093.
Carpet-cleaner, Vacuum. W. E. Bangs. No. 1,168,272; Jan. 18; Gaz. vol. 222; p. 734.
Carpet-sweeper. C. A. Boyer. No. 1,169,526; Jan. 25; Gaz. vol. 222; p. 1209.
Carriage, Baby-. G. Dick. No. 1,169,622; Jan. 25; Gaz. vol. 222; p. 1244.
Carriage, Baby-. A. W. McDevitt. No. 1,167,003; Jan. 4; Gaz. vol. 222; p. 205.
Carriage, Convertible baby-. O. W. Siebert and O. N. Turner. No. 1,167,439; Jan. 11; Gaz. vol. 222; p. 413.
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Coupling-carrier.
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Cart, Dump-. J. Crowley. No. 1,166,444; Jan. 4; Gaz. vol. 222; p. 12.
Carton-carrier. F. Melville, Jr. No. 1,169,730; Jan. 25; Gaz. vol. 222; p. 1281.
Carton-wrapping machine. C. A. Petterson. No. 1,166,782; Jan. 4; Gaz. vol. 222; p. 130.
Cartridge for exploding gasolene for breaking up land. J. F. Simonds. No. 1,169,686; Jan. 25; Gaz. vol. 222; p. 1266.
Cartridge-shells, Making. E. C. Bell and R. S. Case. No. 1,169,378; Jan. 25; Gaz. vol. 222; p. 1156.
Case: *See*—
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Casein and product thereof, Producing. L. H. Reuter. No. 1,167,434; Jan. 11; Gaz. vol. 222; p. 411.
Cash-carriers in despatch-tubes, Locking device for. D. MacMillan. No. 1,169,553; Jan. 25; Gaz. vol. 222; p. 1219.
Cask, Metallic. M. Brochu. No. 1,169,084; Jan. 18; Gaz. vol. 222; p. 1018.
Casket, Burial-. E. D. McDonald. No. 1,168,660; Jan. 18; Gaz. vol. 222; p. 874.
Casket-handle. J. E. Brooks. No. 1,167,044; Jan. 4; Gaz. vol. 222; p. 210.
Caster. A. Ballenberg. No. 1,169,001; Jan. 18; Gaz. vol. 222; p. 990.
Caster for tubular legs of furniture and other uses. A. B. Diss. No. 1,169,135; Jan. 25; Gaz. vol. 222; p. 1073.
Caster-slide. P. Krakauer. No. 1,169,041; Jan. 18; Gaz. vol. 222; p. 1003.
Casters, Exhibition device for articles having. E. S. French. No. 1,168,719; Jan. 18; Gaz. vol. 222; p. 894.
Casting and annealing table. C. R. Hazel. No. 1,168,303; Jan. 18; Gaz. vol. 222; p. 744.
Casting borders, slugs, leads, and the like. W. J. Mahoney. No. 1,169,554; Jan. 25; Gaz. vol. 222; p. 1219.
Casting wheels and like articles, Machine for. R. Radford and J. E. Sheaffer. No. 1,169,192; Jan. 25; Gaz. vol. 222; p. 1093.
Catalytic bodies, Manufacturing. O. D. Lucas. No. 1,168,404; Jan. 18; Gaz. vol. 222; p. 781.
Catalytic body and making the same. C. Ellis. No. 1,167,280; Jan. 4; Gaz. vol. 222; p. 301.
Catalytic material, Apparatus for making. C. B. Morey and C. R. Craine. No. 1,167,915; Jan. 11; Gaz. vol. 222; p. 577.
Cathode for electrolytic cells. F. McDonald. No. 1,167,705; Jan. 11; Gaz. vol. 222; p. 504.
Cell. W. Hoppie. No. 1,169,258; Jan. 25; Gaz. vol. 222; p. 1116.
Cellulose containing the residue of an organic acid and nitrogen and making the same, Derivatives of. L. Clément and C. Rivière. No. 1,168,164; Jan. 11; Gaz. vol. 222; p. 663.
Cement-block mold. A. D. Miller. No. 1,169,417; Jan. 25; Gaz. vol. 222; p. 1169.
Center-gage. J. E. Carter. No. 1,166,968; Jan. 4; Gaz. vol. 222; p. 193.
Center-sill construction. J. F. Streib. No. 1,168,918; Jan. 18; Gaz. vol. 222; p. 962.
Cereals to filamentous form, Roll-machine for reducing. J. E. Hutzen. No. 1,168,075; Jan. 11; Gaz. vol. 222; p. 634.
Chain-link. O. W. Wahlstrom. No. 1,166,952; Jan. 4; Gaz. vol. 222; p. 187.
Chain-links, Making. J. W. Hughes. No. 1,166,460; Jan. 4; Gaz. vol. 222; p. 17.
Chain or ring manufacture. K. Peiseler. No. 1,168,328; Jan. 18; Gaz. vol. 222; p. 754.
Chains, Device for connecting. J. G. and B. F. Smith. No. 1,167,441; Jan. 11; Gaz. vol. 222; p. 414.
Chair: *See*—
Barber's chair.
Convertible chair.
Reclining-chair.
Chair. C. H. De Frehn. No. 1,168,289; Jan. 18; Gaz. vol. 222; p. 740.
Chair. M. A. Ferguson. No. 1,167,488; Jan. 11; Gaz. vol. 222; p. 428.
Chair. L. M. Sayen. No. 1,167,846; Jan. 11; Gaz. vol. 222; p. 552.
Chalk-line marker. H. P. Carter. No. 1,168,851; Jan. 18; Gaz. vol. 222; p. 939.
Chandelier-hoist. A. T. Prescott. No. 1,166,544; Jan. 4; Gaz. vol. 222; p. 48.
Change making, computing, and paying machine. G. A. Roberts. No. 1,166,936; Jan. 4; Gaz. vol. 222; p. 181.
Change-making machine. C. C. Voglesong. No. 1,168,582; Jan. 18; Gaz. vol. 222; p. 843.
Charcoal-kiln. A. R. Bellamy. No. 1,168,845; Jan. 18; Gaz. vol. 222; p. 937.
Chart, Tailor's drafting-. G. J. Havrilla. No. 1,168,803; Jan. 18; Gaz. vol. 222; p. 923.
Chase. F. C. Leethem. No. 1,167,084; Jan. 4; Gaz. vol. 222; p. 233.
Check-holder. W. W. Kay. No. 1,169,162; Jan. 25; Gaz. vol. 222; p. 1083.
Cheese cutter and cabinet. W. M. Rice and J. I. Randall. No. 1,168,964; Jan. 18; Gaz. vol. 222; p. 978.
Cheese-follower. L. H. Pieper. (Reissue.) No. 14,048; Jan. 11; Gaz. vol. 222; p. 703.
Cheese-press. H. F. Reinhold. No. 1,168,339; Jan. 18; Gaz. vol. 222; p. 755.
Cherry-pitting machine. C. H. Marshall. No. 1,167,005; Jan. 4; Gaz. vol. 222; p. 206.
Chlorin, Purifying electrolytic. U. Ishikawa. No. 1,166,524; Jan. 4; Gaz. vol. 222; p. 41.
Chuck. J. F. Musselman. No. 1,168,540; Jan. 18; Gaz. vol. 222; p. 829.
Chuck, Positively-opening. E. J. Lees. No. 1,169,547; Jan. 25; Gaz. vol. 222; p. 1217.
Churn. W. J. McInish. No. 1,169,173; Jan. 25; Gaz. vol. 222; p. 1087.
Chute, Hog-ringing. W. D. Dolan. No. 1,166,450; Jan. 4; Gaz. vol. 222; p. 14.
Chute, Sanitary garbage-. E. P. Dargin. No. 1,169,319; Jan. 25; Gaz. vol. 222; p. 1136.
Cigar-cutter. E. L. Anderson. No. 1,166,881; Jan. 4; Gaz. vol. 222; p. 164.
Cigar cutter and inhaler, Motor-driven. E. D. Van Dersal. No. 1,168,445; Jan. 18; Gaz. vol. 222; p. 795.
Cigar-holder, Safety. C. A. Knuntila. No. 1,167,184; Jan. 4; Gaz. vol. 222; p. 269.
Cigar-lighter. A. L. Gearhart. No. 1,169,629; Jan. 25; Gaz. vol. 222; p. 1248.
Cigar-lighter. M. McAneny. No. 1,167,089; Jan. 4; Gaz. vol. 222; p. 234.
Cigarette-case. E. Poeppel. No. 1,167,110; Jan. 4; Gaz. vol. 222; p. 242.
Cigarette-dispensing case. A. Stone. No. 1,168,437; Jan. 18; Gaz. vol. 222; p. 792.
Cigarette-machines, Receiving and assorting mechanism for. A. L. Ewers. No. 1,168,795; Jan. 18; Gaz. vol. 222; p. 920.
Cigarettes and other articles, Machine for packaging. R. V. Craggs. No. 1,169,012; Jan. 18; Gaz. vol. 222; p. 993.
Cinematograph apparatus. W. H. Anderson. No. 1,168,993; Jan. 18; Gaz. vol. 222; p. 988.
Cinematograph apparatus, Lens-adjusting means for. W. H. Anderson. No. 1,168,991; Jan. 18; Gaz. vol. 222; p. 987.

Cinematograph color-films, Apparatus for developing and finishing. J. E. Thornton. No. 1,169,096; Jan. 18; Gaz. vol. 222; p. 1024.
Cinematograph-machine. W. H. Anderson. No. 1,168,992; Jan. 18; Gaz. vol. 222; p. 987.
Cinematographic display apparatus. V. L. P. A. M. Mansfeld. No. 1,166,701; Jan. 4; Gaz. vol. 222; p. 104.
Cinematographic films, Apparatus for perforating. J. E. Thornton. No. 1,169,097; Jan. 18; Gaz. vol. 222; p. 1024.
Cinematography, Apparatus for producing positives for natural-color. J. E. Thornton. No. 1,169,098; Jan. 18; Gaz. vol. 222; p. 1025.
Circle marking and cutting instrument, Suction-base. P. Crutchfield. No. 1,166,889; Jan. 4; Gaz. vol. 222; p. 166.
Circuit-breaker. S. H. Keefer. No. 1,167,411; Jan. 11; Gaz. vol. 222; p. 402.
Circuit-breaker, Automatic. C. C. Badeau. No. 1,166,650; Jan. 4; Gaz. vol. 222; p. 86.
Circuit-closer. E. Flanagan. No. 1,168,184; Jan. 11; Gaz. vol. 222; p. 670.
Circuit-closing switch. W. Grunow, Jr. No. 1,168,195; Jan. 11; Gaz. vol. 222; p. 673.
Circuit-controller. W. P. Anderson. No. 1,168,371; Jan. 18; Gaz. vol. 222; p. 770.
Circuit-controller switch and casing therefor. V. G. Apple. No. 1,167,038; Jan. 4; Gaz. vol. 222; p. 217.
Circulator. F. W. Guibert. No. 1,168,881; Jan. 18; Gaz. vol. 222; p. 949.
Clamp: *See*—
Bearing-clamp.
Bedclothes-clamp.
Button-holding clamp.
Locking-clamp.
Mitering-clamp.
Mold-clamp.
Partition-stud clamp.
Pipe-clamp.
Piston-ring clamp.
Rope-clamp.
Rubber-dam clamp.
Vehicle-top-bow clamp.
Wire-spool clamp.
Clamping device. W. Lennon. No. 1,167,418; Jan. 11; Gaz. vol. 222; p. 405.
Clamping-wrench. A. H. Bastian. No. 1,169,600; Jan. 25; Gaz. vol. 222; p. 1230.
Clasp. L. W. Litchfield. No. 1,168,521; Jan. 18; Gaz. vol. 222; p. 822.
Clasp. E. J. Swedlund. No. 1,169,693; Jan. 25; Gaz. vol. 222; p. 1268.
Cleaner: *See*—
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Carpet-cleaner.
Flue-cleaner.
Grate-cleaner.
Rake-cleaner.
Screen-plate cleaner.
Shoe-cleaner.
Sound-record cleaner.
Street-cleaner.
Tooth-cleaner.
Vacuum-cleaner.
Cleaning device. M. F. Heathcock. No. 1,166,986; Jan. 4; Gaz. vol. 222; p. 199.
Cleat, Construction-. A. M. Knauber. No. 1,168,889; Jan. 18; Gaz. vol. 222; p. 951.
Climbing device. W. J. Maley. No. 1,168,321; Jan. 18; Gaz. vol. 222; p. 752.
Clip: *See*—
Paper-clip.
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Clip. A. L. Galligan. No. 1,167,813; Jan. 11; Gaz. vol. 222; p. 540.
Clip. J. H. Gamble. No. 1,169,252; Jan. 25; Gaz. vol. 222; p. 1114.
Clock. J. Petrillo. No. 1,166,853; Jan. 4; Gaz. vol. 222; p. 154.
Clock, Automatic electric-winding. U. S. Kreider. No. 1,166,605; Jan. 4; Gaz. vol. 222; p. 68.
Clock, Elk's-. T. W. Shepherd. No. 1,168,571; Jan. 18; Gaz. vol. 222; p. 840.
Clock mechanism, Recording. C. L. Kennicott. No. 1,167,902; Jan. 11; Gaz. vol. 222; p. 572.
Closet: *See*—
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Closet-seat cover, Sanitary. H. G. A. Morén. No. 1,167,201; Jan. 4; Gaz. vol. 222; p. 274.
Closure device. E. H. Davis. No. 1,168,608; Jan. 18; Gaz. vol. 222; p. 853.
Closure device. H. C. Kestel. No. 1,169,264; Jan. 25; Gaz. vol. 222; p. 1118.
Cloth-cutting machine. D. Perlman. No. 1,168,738; Jan. 18; Gaz. vol. 222; p. 900.
Cloth, Guide mechanism for. H. C. Brehmer. No. 1,169,118; Jan. 25; Gaz. vol. 222; p. 1067.
Clothes-hanger. P. S. Meister. No. 1,168,531; Jan. 18; Gaz. vol. 222; p. 826.
Clothes-hanger. O. T. Schweppenheiser and A. Freirich. No. 1,169,056; Jan. 18; Gaz. vol. 222; p. 1008.
Clothes-line. J. Nelson. No. 1,168,102; Jan. 11; Gaz. vol. 222; p. 643.
Clothes-line. J. C. Trout. No. 1,169,522; Jan. 25; Gaz. vol. 222; p. 1208.
Clothes-line slack-adjuster. T. T. Dunn. No. 1,169,626; Jan. 25; Gaz. vol. 222; p. 1247.
Clothes-line support. B. Smith and A. Barlevy. No. 1,167,664; Jan. 11; Gaz. vol. 222; p. 490.
Clothes-wringer. E. Weiss. No. 1,166,954; Jan. 4; Gaz. vol. 222; p. 187.
Clutch. W. H. C. Higgins, Jr. No. 1,166,457; Jan. 4; Gaz. vol. 222; p. 16.
Clutch. J. H. Moss. No. 1,167,590; Jan. 11; Gaz. vol. 222; p. 464.
Clutch. B. B. Neuteboom. No. 1,167,012; Jan. 4; Gaz. vol. 222; p. 208.
Clutch. E. Woodward. No. 1,167,870; Jan. 11; Gaz. vol. 222; p. 561.
Clutch, Automatic safety-. E. H. Ramelli. No. 1,169,193; Jan. 25; Gaz. vol. 222; p. 1093.
Clutch, Band-. A. A. P. Neel. No. 1,167,010; Jan. 4; Gaz. vol. 222; p. 208.
Clutch for feed-cutters, Safety-. M. A. Paulson and C. Frederickson. No. 1,168,110; Jan. 11; Gaz. vol. 222; p. 645.
Clutch, Friction-. C. J. Gustafson. No. 1,166,832; Jan. 4; Gaz. vol. 222; p. 148.
Clutch, Friction-. W. H. Sandford. No. 1,167,117; Jan. 4; Gaz. vol. 222; p. 245.
Clutch mechanism for reversing-gearing. H. A. Tuttle. No. 1,168,688; Jan. 18; Gaz. vol. 222; p. 883.
Clutch-releasing means for motor-cars. L. A. Hays. No. 1,167,171; Jan. 4; Gaz. vol. 222; p. 265.
Coating glazing-bars and other implements with lead or other protective metal. E. A. Claremont, J. Stratton, and C. S. Farmer. No. 1,167,626; Jan. 11; Gaz. vol. 222; p. 477.
Coatings to metallic articles, Applying protective. C., Jr., and C. Mark. No. 1,168,664; Jan. 18; Gaz. vol. 222; p. 875.
Cock, Cylinder-. H. J. and C. E. Buckley. No. 1,168,933; Jan. 18; Gaz. vol. 222; p. 968.
Cock holder, Angle-. L. A. Hoerr. No. 1,167,071; Jan. 4; Gaz. vol. 222; p. 228.
Cock, Self-resetting trip-. E. H. Dewson. No. 1,168,487; Jan. 18; Gaz. vol. 222; p. 810.
Cocoa, Treating. J. Walker. No. 1,167,956; Jan. 11; Gaz. vol. 222; p. 593.
Coffee-making apparatus. A. Mintz. No. 1,167,199; Jan. 4; Gaz. vol. 222; p. 273.
Coffee-pots and similar utensils, Handle for. A. Wolferman. No. 1,168,772; Jan. 18; Gaz. vol. 222; p. 912.
Coherer. C. F. Frank. No. 1,167,163; Jan. 4; Gaz. vol. 222; p. 262.
Coin and ticket separating machine. F. B. Kennedy. No. 1,169,493; Jan. 25; Gaz. vol. 222; p. 1197.
Coin-controlled apparatus. O. W. Brenizer. No. 1,168,278; Jan. 18; Gaz. vol. 222; p. 736.
Coin-controlled lock. T. A. Delaney and E. H. Malany. No. 1,168,609; Jan. 18; Gaz. vol. 222; p. 854.
Coin or change delivery machine. A. Von Barth. No. 1,166,499; Jan. 4; Gaz. vol. 222; p. 31.
Coin separating, adding, counting, and bagging machine, Automatic. C. S. Batdorf. No. 1,168,461; Jan. 18; Gaz. vol. 222; p. 801.
Coin-slot machine. W. Cooper. No. 1,167,744; Jan. 11; Gaz. vol. 222; p. 517.
Coke, Apparatus for the manufacture of. J. Armstrong. No. 1,166,422; Jan. 4; Gaz. vol. 222; p. 4.
Coke-oven burner. A. Roberts. No. 1,169,570; Jan. 25; Gaz. vol. 222; p. 1224.
Coke-ovens, Aerator for. J. B. Keller. No. 1,167,901; Jan. 11; Gaz. vol. 222; p. 572.
Collapsible box. F. H. Houghland. No. 1,168,072; Jan. 11; Gaz. vol. 222; p. 633.
Collapsible box. F. H. Houghland. No. 1,168,073; Jan. 11; Gaz. vol. 222; p. 633.
Collapsible box. M. H. Jones. No. 1,167,570; Jan. 11; Gaz. vol. 222; p. 457.
Collapsible box. L. Rosenwald. No. 1,168,561; Jan. 18; Gaz. vol. 222; p. 836.
Collapsible box. L. Rosenwald. No. 1,168,563; Jan. 18; Gaz. vol. 222; p. 836.
Collapsible fruit or berry box. L. Rosenwald. No. 1,168,565; Jan. 18; Gaz. vol. 222; p. 837.
Collar. O. E. Fellers. No. 1,168,183; Jan. 11; Gaz. vol. 222; p. 669.
Collar-fastening device. S. W. Ford. No. 1,167,393; Jan. 11; Gaz. vol. 222; p. 396.
Collar folding and shaping machine. C. J. Prankard, Jr. No. 1,166,783; Jan. 4; Gaz. vol. 222; p. 130.
Collars, Machine for stuffing horse-. J. B. Gathright. No. 1,167,552; Jan. 11; Gaz. vol. 222; p. 450.
Comb. E. W. Grove. No. 1,169,028; Jan. 18; Gaz. vol. 222; p. 999.
Comb and curling-iron heater, Metallic-. G. W. Thompson. No. 1,168,578; Jan. 18; Gaz. vol. 222; p. 842.
Combing-machine. R. H. Lunn. No. 1,169,046; Jan. 18; Gaz. vol. 222; p. 1005.
Combing-machine, Circular. E. Greenwood. No. 1,169,478; Jan. 25; Gaz. vol. 222; p. 1191.
Combination-lock, Detachable. G. T. Oldham. No. 1,168,107; Jan. 11; Gaz. vol. 222; p. 645.
Combustion-engine. F. A. Ost. No. 1,167,313; Jan. 4; Gaz. vol. 222; p. 313.
Commode. M. M. Marcuse. No. 1,168,952; Jan. 18; Gaz. vol. 222; p. 974.
Commutator-bar. F. J. Baird. No. 1,168,261; Jan. 11; Gaz. vol. 222; p. 697.
Commutator-brush. G. S. Neeley. No. 1,166,923; Jan. 4; Gaz. vol. 222; p. 178.
Composition for use with raw linseed-oil for filling, smoothing, staining, and polishing wood. G. A. Dennis. No. 1,168,485; Jan. 18; Gaz. vol. 222; p. 809.
Composition of matter and making the same. B. B. Goldsmith. No. 1,168,626; Jan. 18; Gaz. vol. 222; p. 861.
Compression-wrench. W. H. Lutz. No. 1,166,467; Jan. 4; Gaz. vol. 222; p. 20.
Compressor L. H. Geisendorff. No. 1,168,625; Jan. 18; Gaz. vol. 222; p. 860.

Compressors, Regulating device for motor-driven. F. L. Lucker and A. O. Carpenter. No. 1,169,550; Jan. 25; Gaz. vol. 222; p. 1218.
Concentrating and amalgamating machine, Combined. W. L. McLean. No. 1,169,083; Jan. 18; Gaz. vol. 222; p. 1018.
Concentrating apparatus and constructing the same, Riffle-table for. F. B. Kollberg. No. 1,168,009; Jan. 11; Gaz. vol. 222; p. 610.
Concentrating-table. M. J. Morley. No. 1,167,779; Jan. 11; Gaz. vol. 222; p. 528.
Concrete-building apparatus. H. Reitinger. No. 1,167,595; Jan. 11; Gaz. vol. 222; p. 466.
Concrete construction. W. H. Felgenson. No. 1,166,891; Jan. 4; Gaz. vol. 222; p. 167.
Concrete construction. S. J. Sprol. No. 1,166,642; Jan. 4; Gaz. vol. 222; p. 82.
Concrete construction, Reinforced. M. E. Chamberlain. No. 1,167,624; Jan. 11; Gaz. vol. 222; p. 476.
Concrete-curb armor. C. A. Miller and C. K. Doak. No. 1,167,585; Jan. 11; Gaz. vol. 222; p. 463.
Concrete-curbing form. H. D. Cornelius. No. 1,169,464; Jan. 25; Gaz. vol. 222; p. 1187.
Concrete floor, Assembled. C. Weber. No. 1,169,212; Jan. 25; Gaz. vol. 222; p. 1101.
Concrete floor construction. M. S. Goldsmith. No. 1,168,627; Jan. 18; Gaz. vol. 222; p. 861.
Concrete-mixer. C. F. Hetherington. No. 1,167,402; Jan. 11; Gaz. vol. 222; p. 399.
Concrete-mold for constructing burial-vaults and the like. J. G. Johnson. No. 1,167,568; Jan. 11; Gaz. vol. 222; p. 457.
Concrete-pipe-manufacturing machine. L. J. Sanker. No. 1,166,788; Jan. 4; Gaz. vol. 222; p. 132.
Concrete, Reinforcing in. H. C. Barnes. No. 1,167,615; Jan. 11; Gaz. vol. 222; p. 474.
Concrete roof construction. J. E. Conzelman. No. 1,167,480; Jan. 11; Gaz. vol. 222; p. 426.
Concrete sewers, aqueducts, &c., Construction of. W. C. Flannery. No. 1,167,159; Jan. 4; Gaz. vol. 222; p. 260.
Concrete structures, Reinforcing member for. G. H. Reed. No. 1,166,545; Jan. 4; Gaz. vol. 222; p. 48.
Condult. P. N. Kenway. No. 1,168,400; Jan. 18; Gaz. vol. 222; p. 780.
Conduit coupling, Air-. M. Arnold. No. 1,168,456; Jan. 18; Gaz. vol. 222; p. 799.
Cone-coupling. A. P. Brush. No. 1,168,246; Jan. 11; Gaz. vol. 222; p. 691.
Confectionery, Machine for automatically molding. A. L. Bausman. No. 1,169,602; Jan. 25; Gaz. vol. 222; p. 1237.
Connector. E. Q. Moses. No. 1,167,780; Jan. 11; Gaz. vol. 222; p. 529.
Control system. K. A. Simmon and A. J. Hall. No. 1,168,038; Jan. 11; Gaz. vol. 222; p. 621.
Control system, Safety. J. C. A. Anderson. No. 1,168,586; Jan. 18; Gaz. vol. 222; p. 844.
Controlling device. F. H. Fairweather. No. 1,167,487; Jan. 11; Gaz. vol. 222; p. 428.
Controlling mechanism, Interchangeable. H. A. Myers. No. 1,167,100; Jan. 4; Gaz. vol. 222; p. 238.
Convertible ease or stand. J. W. Campbell. No. 1,167,046; Jan. 4; Gaz. vol. 222; p. 220.
Convertible chair. G. W. Rundle. No. 1,167,524; Jan. 11; Gaz. vol. 222; p. 440.
Conveyer cleat or flight. S. F. Quay. No. 1,169,351; Jan. 25; Gaz. vol. 222; p. 1146.
Conveyer safety device. A. E. Handy. No. 1,166,679; Jan. 4; Gaz. vol. 222; p. 96.
Conveyer, Slide-delivery. R. L. Drake. No. 1,168,865; Jan. 18; Gaz. vol. 222; p. 943.
Cooking-compartments, Heat-distributer for. H. V. Coes. No. 1,168,857; Jan. 18; Gaz. vol. 222; p. 941.
Cooking utensil. C. L. MacKenzie. No. 1,166,844; Jan. 4; Gaz. vol. 222; p. 152.
Cooking utensil cover. H. A. Paquette. No. 1,166,475; Jan. 4; Gaz. vol. 222; p. 22.
Cooking wood-pulp, Apparatus for. L. B. Decker. No. 1,167,800; Jan. 11; Gaz. vol. 222; p. 536.
Cooling system. E. P. Culver. No. 1,168,172; Jan. 11; Gaz. vol. 222; p. 666.
Cop-mounting. W. A. Houck. No. 1,169,539; Jan. 25; Gaz. vol. 222; p. 1214.
Copy holder and display apparatus. A. E. Vance and O. C. Mortrude. No. 1,166,869; Jan. 4; Gaz. vol. 222; p. 160.
Core, Collapsible. H. E. Nye. No. 1,166,625; Jan. 4; Gaz. vol. 222; p. 76.
Core-mold, Sectional. A. Miller. No. 1,167,093; Jan. 4; Gaz. vol. 222; p. 236.
Core, Vulcanizing-. W. L. Heinig and M. A. Johnston. No. 1,167,172; Jan. 4; Gaz. vol. 222; p. 265.
Corn-husking machine. A. P. Wolfe. No. 1,166,647; Jan. 4; Gaz. vol. 222; p. 84.
Corn shredding and husking machine. J. Seubert. No. 1,169,200; Jan. 25; Gaz. vol. 222; p. 1096.
Corner and furring strip, Combination plaster-gage. M. H. Carrick. No. 1,169,066; Jan. 18; Gaz. vol. 222; p. 1011.
Corner-bead. T. H. Kinsman. No. 1,166,603; Jan. 4; Gaz. vol. 222; p. 68.
Corner-joint. A. P. Derby. No. 1,167,155; Jan. 4; Gaz. vol. 222; p. 258.
Correspondence and article carrier. F. W. Kiefer. No. 1,169,039; Jan. 18; Gaz. vol. 222; p. 1003.
Correspondence-reminder. R. W. Smiley. No. 1,169,738; Jan. 25; Gaz. vol. 222; p. 1283.
Corrugating-rollers, Heating means for. G. P. Crumbaugh. No. 1,168,171; Jan. 11; Gaz. vol. 222; p. 665.
Corset-boning machine. G. A. Kinder. No. 1,167,903; Jan. 11; Gaz. vol. 222; p. 573.
Cotton-cleaning apparatus. I. Meurling. No. 1,168,897; Jan. 18; Gaz. vol. 222; p. 954.
Cotton-gin, Air-blast. C. B. Ginn. No. 1,168,493; Jan. 18; Gaz. vol. 222; p. 812.
Cotton-picker. C. Rhodes. No. 1,166,935; Jan. 4; Gaz. vol. 222; p. 181.
Cotton-pickers' sacks, Support for. A. Schnabel. No. 1,168,429; Jan. 18; Gaz. vol. 222; p. 789.
Cotton-reginning machine. J. W. Wright. No. 1,166,801; Jan. 4; Gaz. vol. 222; p. 137.
Counter, Motion-. W. R. Ayars and B. M. Anderson. No. 1,167,250; Jan. 4; Gaz. vol. 222; p. 290.
Counterfeit articles, Device for detecting. E. E. Flora. No. 1,168,895; Jan. 4; Gaz. vol. 222; p. 168.
Coupling: *See*—
Automatic coupling. Pipe-coupling.
Car-coupling. Safety-coupling.
Conduit-coupling. Shaft-coupling.
Cone-coupling. Thill-coupling.
Hose-coupling. Train-service coupling.
Hose-pipe coupling. Yielding coupling.
Coupling carrier, Antifriction-. D. P. Kellogg and H. W. Watkins. No. 1,166,600; Jan. 4; Gaz. vol. 222; p. 67.
Coupling device. M. A. Martin. No. 1,167,832; Jan. 11; Gaz. vol. 222; p. 547.
Coupling-fastener. G. Honold. No. 1,167,558; Jan. 11; Gaz. vol. 222; p. 453.
Coupon-register. M. J. Hoffman. No. 1,168,634; Jan. 18; Gaz. vol. 222; p. 864.
Cover-fastener. W. A. McVoy. No. 1,168,020; Jan. 11; Gaz. vol. 222; p. 615.
Cover-mold. W. G. Lerch. No. 1,169,410; Jan. 25; Gaz. vol. 222; p. 1166.
Cover-releaser. W. Townsend. No. 1,169,697; Jan. 25; Gaz. vol. 222; p. 1270.
Cows, Antikicking device for. A. O. Erickson. No. 1,168,867; Jan. 18; Gaz. vol. 222; p. 944.
Cranking device, Safety. L. W. Woolwine. No. 1,168,694; Jan. 18; Gaz. vol. 222; p. 885.
Crate. H. Brown. (Reissue.) No. 14,042; Jan. 11; Gaz. vol. 222; p. 699.
Crate, Collapsible. T. E. Bloyd. No. 1,167,621; Jan. 11; Gaz. vol. 222; p. 475.
Crate, Egg-. E. C. Forrest. No. 1,168,186; Jan. 11; Gaz. vol. 222; p. 670.
Crate for caskets, Collapsible. J. H. Wunderlich. No. 1,169,100; Jan. 18; Gaz. vol. 222; p. 1025.
Crate for eggs, Folding shipping-. C. C. Dalton. No. 1,168,484; Jan. 18; Gaz. vol. 222; p. 809.
Crate-making machine. M. S. Bennett. No. 1,167,253; Jan. 4; Gaz. vol. 222; p. 291.
Cream-separator, Centrifugal. C. O. Anderson. No. 1,168,452; Jan. 18; Gaz. vol. 222; p. 797.
Cream-separator, Centrifugal. C. O. Anderson. No. 1,168,454; Jan. 18; Gaz. vol. 222; p. 798.
Cream-separator, Centrifugal. C. O. Anderson. No. 1,168,455; Jan. 18; Gaz. vol. 222; p. 799.
Creep-check. L. O. Henggi. No. 1,167,299; Jan. 4; Gaz. vol. 222; p. 307.
Crimping or corrugating machine. A. M. English and H. W. Gibbs. No. 1,166,823; Jan. 4; Gaz. vol. 222; p. 145.
Crochet-ball holder. C. H. Winslow. No. 1,167,141; Jan. 4; Gaz. vol. 222; p. 254.
Crocheting-fork, Adjustable. C. O. Riley. No. 1,168,554; Jan. 18; Gaz. vol. 222; p. 834.
Croquet-mallet and the like. T. Taylor, Jr. No. 1,166,946; Jan. 4; Gaz. vol. 222; p. 181.
Cross-arm, Metallic. L. L. Crabtree and T. C. Ripley. (Reissue.) No. 14,040; Jan. 4; Gaz. vol. 222; p. 335.
Crowns, Apparatus for swaging seamless. G. M. Hiner and L. L. Hidy. No. 1,168,212; Jan. 11; Gaz. vol. 222; p. 678.
Cuff, Foldable. J. L. G. Lehman. No. 1,168,945; Jan. 18; Gaz. vol. 222; p. 972.
Cultivator. F. A. Davis, Sr. No. 1,166,446; Jan. 4; Gaz. vol. 222; p. 12.
Cultivator. E. F. Genrich. No. 1,166,516; Jan. 4; Gaz. vol. 222; p. 37.
Cultivator. A. J. Kieffer. No. 1,168,943; Jan. 18; Gaz. vol. 222; p. 971.
Cultivator. L. W. Simmons. No. 1,167,122; Jan. 4; Gaz. vol. 222; p. 247.
Cultivator, Disk. J. E. Craddock. No. 1,169,127; Jan. 25; Gaz. vol. 222; p. 1070.
Cultivator standard and shovel. E. W. Benson. No. 1,168,469; Jan. 18; Gaz. vol. 222; p. 804.
Cultivator, Wheel-. J. D. Haskett and B. Sanders. No. 1,168,201; Jan. 11; Gaz. vol. 222; p. 675.
Cultivator, Wheel-. J. D. Haskett and B. Sanders. No. 1,168,202; Jan. 11; Gaz. vol. 222; p. 675.
Cultivators with disks and elastic teeth, Seed-feeding apparatus for. L. Sessler. No. 1,167,662; Jan. 11; Gaz. vol. 222; p. 490.
Culverts, drain-tiling, wells, &c., Drainage-casing for. A. Smith. No. 1,169,689; Jan. 25; Gaz. vol. 222; p. 1267.
Cup: *See*—
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Cup holder, Aseptic drinking-. J. B. Halligan. No. 1,166,759; Jan. 4; Gaz. vol. 222; p. 122.
Curbing-block. L. Dargento. No. 1,166,664; Jan. 4; Gaz. vol. 222; p. 91.
Current distributing system, Combined alternating and direct. J. H. Gugler and G. W. Colles. No. 1,169,537; Jan. 25; Gaz. vol. 222; p. 1213.
Current distribution, System of constant-. P. H. Thomas. No. 1,168,439; Jan. 18; Gaz. vol. 222; p. 792.
Current systems, Buffer-machine for alternating-. A. Scherbius. No. 1,167,119; Jan. 4; Gaz. vol. 222; p. 246.
Currycomb. M. A. Hoffman. No. 1,169,644; Jan. 25; Gaz. vol. 222; p. 1253.
Currycomb. O. Okland. No. 1,167,781; Jan. 11; Gaz. vol. 222; p. 529.
Curtain. W. J. Goelz. No. 1,167,554; Jan. 11; Gaz. vol. 222; p. 451.
Curtain. F. H. Ilse. No. 1,169,160; Jan. 25; Gaz. vol. 222; p. 1082.
Curtain fastener, Vehicle-. F. H. Ilse. No. 1,169,542; Jan. 25; Gaz. vol. 222; p. 1215.
Curtain-hook. W. G. Kendall. No. 1,169,650; Jan. 25; Gaz. vol. 222; p. 1255.
Curtain-pole and shade hanger, Adjustable. R. R. Lynk. No. 1,168,814; Jan. 18; Gaz. vol. 222; p. 927.
Curtain-rod. P. Altschul. No. 1,168,990; Jan. 18; Gaz. vol. 222; p. 987.
Curtain, Vehicle-. E. Smith. No. 1,168,343; Jan. 18; Gaz. vol. 222; p. 760.
Curve, Adjustable. C. A. Finch. No. 1,169,245; Jan. 25; Gaz. vol. 222; p. 1112.
Curve-scriber. C. F. Odin. No. 1,168,546; Jan. 18; Gaz. vol. 222; p. 831.
Cushion: *See*—
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Cushion-wheel. H. J. Sewell. No. 1,166,548; Jan. 4; Gaz. vol. 222; p. 49.
Cuspidor. P. H. Colling. No. 1,167,273; Jan. 4; Gaz. vol. 222; p. 298.
Cuspidor. J. L. Stone, Sr. No. 1,168,124; Jan. 11; Gaz. vol. 222; p. 650.
Cut-out and switch. J. J. Buero. No. 1,168,247; Jan. 11; Gaz. vol. 222; p. 692.
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Cheese-cutter. Leather-cutter.
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Gear-cutter. Twine-cutter.
Glass-cutter. Wedge-cutter.
Glass-tube cutter. Weed-cutter.
Cutting device. J. F. Clark. No. 1,166,578; Jan. 4; Gaz. vol. 222; p. 59.
Cutting device. S. M. Heywood. No. 1,168,633; Jan. 18; Gaz. vol. 222; p. 864.
Cycle engine, Four-stroke-. P. Scharf and E. Kwaysser. No. 1,168,116; Jan. 11; Gaz. vol. 222; p. 647.
Cycle-frame. E. Journell. No. 1,167,699; Jan. 11; Gaz. vol. 222; p. 502.
Cycle, Motor-. J. J. Chapin. No. 1,167,625; Jan. 11; Gaz. vol. 222; p. 477.
Cycle saddles, Back for motor-. G. Friel. No. 1,168,253; Jan. 11; Gaz. vol. 222; p. 694.
Cycle signal, Motor-. E. A. Becker. No. 1,166,652; Jan. 4; Gaz. vol. 222; p. 87.
Cycle stand, Motor-. H. V. Etter. No. 1,168,294; Jan. 18; Gaz. vol. 222; p. 742.
Cycle support, Motor-. A. Levedahl. No. 1,169,171; Jan. 25; Gaz. vol. 222; p. 1086.
Cycle support, Motor-. R. O. Navarrete. No. 1,168,955; Jan. 18; Gaz. vol. 222; p. 975.
Cycles, Construction of motor-. F. W. Cotton. No. 1,169,381; Jan. 25; Gaz. vol. 222; p. 1157.
Cylinder-tooth. W. Stoffel. No. 1,167,667; Jan. 11; Gaz. vol. 222; p. 492.
Cylinders, Repairing scored. L. Lorentowicz. No. 1,169,658; Jan. 25; Gaz. vol. 222; p. 1258.
Dam. P. Rutenberg. No. 1,167,116; Jan. 4; Gaz. vol. 222; p. 245.
Damper for locomotive-superheaters. N. T. McKee. No. 1,167,508; Jan. 11; Gaz. vol. 222; p. 435.
Damper-regulator. J. Lemarest. No. 1,168,610; Jan. 18; Gaz. vol. 222; p. 854.
Defibrating fibrous vegetable materials, Method and apparatus for. G. J. Mahieu. No. 1,168,087; Jan. 11; Gaz. vol. 222; p. 638.
Delivery apparatus. H. O. Petersen. No. 1,167,214; Jan. 4; Gaz. vol. 222; p. 279.
Demand apparatus. W. E. Porter. No. 1,169,508; Jan. 25; Gaz. vol. 222; p. 1203.
Dental-floss holder. D. K. Woodhouse. No. 1,166,732; Jan. 4; Gaz. vol. 222; p. 113.
Dental instrument. W. W. Bolls. No. 1,168,052; Jan. 11; Gaz. vol. 222; p. 626.
Dental instrument. A. Schutt. No. 1,168,011; Jan. 18; Gaz. vol. 222; p. 959.
Dental-material-condensing apparatus. J. G. Hollingsworth. No. 1,168,635; Jan. 18; Gaz. vol. 222; p. 865.
Dental saliva-ejector. F. Groshans. No. 1,167,062; Jan. 4; Gaz. vol. 222; p. 225.
Denail, Adjustable. E. R. Packer. No. 1,167,924; Jan. 11; Gaz. vol. 222; p. 580.
Detachable-blade knife. M. Parker. (Reissue.) No. 14,054; Jan. 25; Gaz. vol. 222; p. 1292.
Detachable wheel. L. Renault. No. 1,168,673; Jan. 18; Gaz. vol. 222; p. 878.
Detonator. D. Corrie and G. A. Ashcroft. No. 1,167,981; Jan. 11; Gaz. vol. 222; p. 601.
Diamond-polishing machine. C. J. Coleman. No. 1,168,711; Jan. 18; Gaz. vol. 222; p. 891.
Die: *See*—
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Digester and cooking fibrous materials. J. D. Tompkins. No. 1,167,030; Jan. 4; Gaz. vol. 222; p. 215.
Digger: *See*—
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Dirt-working machine. J. Klopfenstein. No. 1,168,813; Jan. 18; Gaz. vol. 222; p. 927.
Discharge-tube. R. von Lieben, E. Reisz, and S. Strauss. No. 1,169,082; Jan. 18; Gaz. vol. 222; p. 1018.
Dish-carrier. A. Röth. No. 1,167,934; Jan. 11; Gaz. vol. 222; p. 584.
Dish-cloth holder. D. R. Byram. No. 1,168,708; Jan. 18; Gaz. vol. 222; p. 890.
Dish, Soap-. W. M. Myers. No. 1,167,710; Jan. 11; Gaz. vol. 222; p. 505.
Disinfectant. C. S. Miner. No. 1,167,360; Jan. 4; Gaz. vol. 222; p. 332.
Disinfecting agents. M. Engelmann and B. Merkel. No. 1,167,642; Jan. 11; Gaz. vol. 222; p. 483.
Disinfecting dumb-waiter shafts and the like, Means for. D. Fraad. No. 1,166,757; Jan. 4; Gaz. vol. 222; p. 121.
Dispensing device. J. Kantor. No. 1,167,410; Jan. 11; Gaz. vol. 222; p. 402.
Display-box. F. Schoettle. No. 1,167,847; Jan. 11; Gaz. vol. 222; p. 552.
Display-cabinet. E. Reukauf. No. 1,169,427; Jan. 25; Gaz. vol. 222; p. 1173.
Display-cabinet. M. Sworzyn. No. 1,168,760; Jan. 18; Gaz. vol. 222; p. 907.
Display device, Magnetic. W. G. Reuter. No. 1,167,020; Jan. 4; Gaz. vol. 222; p. 211.
Display-frame, Portable. M. Smernoff. No. 1,168,832; Jan. 18; Gaz. vol. 222; p. 932.
Display rack, Casket-. G. F. Honold. No. 1,169,157; Jan. 25; Gaz. vol. 222; p. 1081.
Display-shelving. M. M. Harris. No. 1,169,720; Jan. 25; Gaz. vol. 222; p. 1277.
Display-stand. S. B. Ullrich. No. 1,167,031; Jan. 4; Gaz. vol. 222; p. 215.
Distilling apparatus. J. Buchert. No. 1,169,122; Jan. 25; Gaz. vol. 222; p. 1068.
Door. M. J. Furlong. No. 1,169,143; Jan. 25; Gaz. vol. 222; p. 1077.
Door. W. O. Thorp. No. 1,169,696; Jan. 25; Gaz. vol. 222; p. 1270.
Door-brace. E. G. Abbey. No. 1,167,465; Jan. 11; Gaz. vol. 222; p. 421.
Door-check. J. Heber. No. 1,169,538; Jan. 25; Gaz. vol. 222; p. 1214.
Door check and closer. T. Mooney. No. 1,167,778; Jan. 11; Gaz. vol. 222; p. 528.
Door construction, Sheet-metal-. A. L. Lambert and A. B. Bell. No. 1,167,414; Jan. 11; Gaz. vol. 222; p. 403.
Door fan attachment. F. Evans. No. 1,167,281; Jan. 4; Gaz. vol. 222; p. 301.
Door-fastener. F. Scroggins. No. 1,166,791; Jan. 4; Gaz. vol. 222; p. 133.
Door-hanger. G. H. Richards. No. 1,169,568; Jan. 25; Gaz. vol. 222; p. 1224.
Door hasp and hook, Combined. J. H. Stull. No. 1,169,298; Jan. 25; Gaz. vol. 222; p. 1129.
Door-lock. W. A. Lurie. No. 1,168,524; Jan. 18; Gaz. vol. 222; p. 823.
Door-lock. W. A. Lurie. No. 1,168,525; Jan. 18; Gaz. vol. 222; p. 824.
Door-lock. W. J. Nelson. No. 1,167,011; Jan. 4; Gaz. vol. 222; p. 208.
Door-lock. G. W. Wells. No. 1,168,584; Jan. 18; Gaz. vol. 222; p. 844.
Door lock, Exit-. H. W. Dyer. No. 1,168,792; Jan. 18; Gaz. vol. 222; p. 919.
Door lock, Sliding-. F. Vitali and G. Pizzorno. No. 1,167,032; Jan. 4; Gaz. vol. 222; p. 215.
Door operating and locking device. J. F. Comee. No. 1,167,630; Jan. 11; Gaz. vol. 222; p. 479.
Door-operating apparatus. A. Gottschalk. No. 1,168,301; Jan. 18; Gaz. vol. 222; p. 744.
Door-operating mechanism. C. A. Remelius. No. 1,167,433; Jan. 11; Gaz. vol. 222; p. 411.
Door-operating mechanism. H. Rowntree. No. 1,168,334; Jan. 18; Gaz. vol. 222; p. 756.
Door-releasing device, Automatic. C. E. Lindig. No. 1,167,085; Jan. 4; Gaz. vol. 222; p. 233.
Door-securer. J. A. Fraser. No. 1,167,342; Jan. 4; Gaz. vol. 222; p. 224.
Door-securer. W. D. Kennedy. No. 1,166,692; Jan. 4; Gaz. vol. 222; p. 101.
Door-securing device. F. S. Gallagher. No. 1,168,878; Jan. 18; Gaz. vol. 222; p. 947.
Doors and the like, Antirattle-fastening for. E. J. Decker. No. 1,167,745; Jan. 11; Gaz. vol. 222; p. 517.
Dough-feeding machine. H. and A. H. Hayssen. No. 1,166,519; Jan. 4; Gaz. vol. 222; p. 39.
Dough-molding machine. F. N. Lauterbur. No. 1,167,187; Jan. 4; Gaz. vol. 222; p. 270.
Dough-working machine. L. Embrey. No. 1,169,472; Jan. 25; Gaz. vol. 222; p. 1189.

Draft adjustment. P. Ewald. No. 1,167,684; Jan. 11; Gaz. vol. 222; p. 498.
Draft-gear. G. W. Schneider. No. 1,168,569; Jan. 18; Gaz. vol. 222; p. 839.
Draft-gear, Friction. G. Westinghouse. No. 1,168,448; Jan. 18; Gaz. vol. 222; p. 796.
Draft-rigging. G. L. Harvey. No. 1,166,906; Jan. 4; Gaz. vol. 222; p. 172.
Draft-rigging. R. C. Taylor and C. J. W. Clasen. No. 1,167,131; Jan. 4; Gaz. vol. 222; p. 251.
Draft-rigging, Friction. C. W. Sherman. No. 1,169,434; Jan 25; Gaz. vol. 222; p. 1175.
Draft-seat. T. H. Symington. No. 1,167,130; Jan. 4; Gaz. vol. 222; p. 250.
Drafting implement. J. H. Clendenning. No. 1,167,543; Jan. 11; Gaz. vol. 222; p. 447.
Drafting instrument. J. and S. A. Wikberg. No. 1,167,237; Jan. 4; Gaz. vol. 222; p. 286.
Drag and harrow, Combined. W. C. Arbogast. No. 1,167,969; Jan. 11; Gaz. vol. 222; p. 597.
Drain-cover. D. J. Connell. No. 1,169,010; Jan. 18; Gaz. vol. 222; p. 993.
Draw-bolt. J. W. Martin. No. 1,169,664; Jan. 25; Gaz. vol. 222; p. 1259.
Drawer, Knockdown. H. M. Holtgrewe. No. 1,169,328; Jan. 25; Gaz. vol. 222; p. 1139.
Drawing apparatus. A. Cuvelier. No. 1,166,445; Jan. 4; Gaz. vol. 222; p. 12.
Drawing-rolls, Clearer for. P. C. Ware, A. Gastonguay, C. J. Linderson, J. E. Farrell, and W. S. Woodbury. No. 1,167,033; Jan. 4; Gaz. vol. 222; p. 215.
Dredge. S. A. Emmons. No. 1,168,293; Jan. 18; Gaz. vol. 222; p. 741.
Dredges, Spud lowering and hoisting means for. H. T. and D. R. Groves. No. 1,169,396; Jan. 25; Gaz. vol. 222; p. 1162.
Drier. C. F. Stehlin. No. 1,167,853; Jan. 11; Gaz. vol. 222; p. 555.
Dry-kiln. N. Greener. No. 1,168,721; Jan. 18; Gaz. vol. 222; p. 894.
Drying-frames, Web advancing mechanism for. B. H. C. H. Rathsfeld. No. 1,167,216; Jan. 4; Gaz. vol. 222; p. 280.
Drying-kiln. F. J. Rush. No. 1,167,844; Jan. 11; Gaz. vol. 222; p. 551.
Drying-machines, Stock-agitator for. F. G. Sargent. No. 1,169,682; Jan. 25; Gaz. vol. 222; p. 1265.
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Drill. G. O. Leopold. No. 1,169,657; Jan. 25; Gaz. vol. 222; p. 1257.
Drill. S. T. Skeen. No. 1,166,943; Jan. 4; Gaz. vol. 222; p. 184.
Drill. W. H. Wakfer. No. 1,169,369; Jan. 25; Gaz. vol. 222; p. 1153.
Drill attachment. H., P. E., and R. Condell. No. 1,167,545; Jan. 11; Gaz. vol. 222; p. 448.
Drill-feed mechanism. P. A. Cuenot and L. G. Fischer. No. 1,167,274; Jan. 4; Gaz. vol. 222; p. 299.
Drill-press. F. P. Clarke. No. 1,167,887; Jan. 11; Gaz. vol. 222; p. 567.
Drills, Chain coverer for. G. H. Samlow. No. 1,166,718; Jan. 4; Gaz. vol. 222; p. 108.
Drilling-machine. J. A. Eden, Jr. No. 1,166,514; Jan. 4; Gaz. vol. 222; p. 36.
Drilling or boring tool. W. M. Treglown and W. Noble. No. 1,169,582; Jan. 25; Gaz. vol. 222; p. 1229.
Drinking-fountain, Poultry. P. Enos, Jr. No. 1,167,056; Jan. 4; Gaz. vol. 222; p. 223.
Drinking vessel. M. Nirdlinger. No. 1,168,027; Jan. 11; Gaz. vol. 222; p. 617.
Drinking vessel, Poultry. F. C. Mosier. No. 1,166,534; Jan. 4; Gaz. vol. 222; p. 44.
Drip-edge. J. E. Miller. No. 1,167,198; Jan. 4; Gaz. vol. 222; p. 273.
Drip-pan. J. H. Lane and J. C. Schenk. No. 1,169,168; Jan. 25; Gaz. vol. 222; p. 1085.
Drive mounting, Flexible. M. S. Young. No. 1,168,139; Jan. 11; Gaz. vol. 222; p. 655.
Drive, Variable friction-. A. E. Hill. No. 1,168,210; Jan. 11; Gaz. vol. 222; p. 678.
Driving and reversing mechanism. D. L. Dodge and T. F. Armstrong. No. 1,167,984; Jan. 11; Gaz. vol. 222; p. 602.
Driving and stopping mechanism. L. E. Topham. No. 1,167,537; Jan. 11; Gaz. vol. 222; p. 445.
Driving apparatus, Electric. M. B. McLauthlin and A. K. Tylee. No. 1,169,174; Jan. 25; Gaz. vol. 222; p. 1087.
Driving mechanism. G. L. Ballard. No. 1,167,875; Jan. 11; Gaz. vol. 222; p. 563.
Driving mechanism. H. Kaiser. No. 1,166,764; Jan. 4; Gaz. vol. 222; p. 124.
Driving mechanism, Intermittent. H. M. Crocker. No. 1,167,337; Jan. 4; Gaz. vol. 222; p. 322.
Driving or bridle bit. J. Fields. No. 1,168,617; Jan. 18; Gaz. vol. 222; p. 857.
Duplicating-machine. D. Hyams. No. 1,168,640; Jan. 18; Gaz. vol. 222; p. 867.
Dust gatherer and conveyer, Ash-. W. P. Widdrington. No. 1,166,506; Jan. 4; Gaz. vol. 222; p. 33.
Dust-guard. L. Y. Williams. No. 1,167,458; Jan. 11; Gaz. vol. 222; p. 419.
Dye, Blue disazo. W. Neelmeier, H. Jordan, and K. Heusner. No. 1,169,344; Jan. 25; Gaz. vol. 222; p. 1144.
Dye, Blue-violet azo. M. Latten. No. 1,169,329; Jan. 25; Gaz. vol. 222; p. 1139.
Dyes, Blue-gray to green-gray vat. M. H. Isler. No. 1,169,404; Jan. 25; Gaz. vol. 222; p. 1165.
Dyeing apparatus. W. Inman. No. 1,166,989; Jan. 4; Gaz. vol. 222; p. 200.
Dyeing artificial silk. F. Kunert. No. 1,169,267; Jan. 25; Gaz. vol. 222; p. 1119.
Dynamometer, Portable. F. C. Zanzig. No. 1,168,925; Jan. 18; Gaz. vol. 222; p. 964.
Easel, Newspaper-. J. McCarty. No. 1,167,090; Jan. 4; Gaz. vol. 222; p. 235.
Educational appliance. H. D. Rickard. No. 1,169,510; Jan. 25; Gaz. vol. 222; p. 1204.
Educational appliance, Magnetic. G. McKittrick and P. B. Humphrey. No. 1,168,949; Jan. 18; Gaz. vol. 222; p. 973.
Egg-beater. K. Szlemko. No. 1,168,127; Jan. 11; Gaz. vol. 222; p. 651.
Egg-boiler. C. Spitz and C. A. Dodson. No. 1,167,947; Jan. 11; Gaz. vol. 222; p. 590.
Egg boiling or coddling utensil. F. A. Feldkamp. No. 1,167,057; Jan. 4; Gaz. vol. 222; p. 224.
Egg-carrier. I. V. Bowley. No. 1,167,263; Jan. 4; Gaz. vol. 222; p. 295.
Egg-carrier. M. W. Storey. No. 1,168,917; Jan. 18; Gaz. vol. 222; p. 962.
Egg-case. L. Rosenwald. No. 1,168,562; Jan. 18; Gaz. vol. 222; p. 836.
Egg tray and turner, Combined. B. C. Oestreich. No. 1,166,626; Jan. 4; Gaz. vol. 222; p. 76.
Electric attachment device. H. W. Denhard. No. 1,169,532; Jan. 25; Gaz. vol. 222; p. 1211.
Electric battery. F. S. B. de Mello. (Reissue.) No. 14,051; Jan. 25; Gaz. vol. 222; p. 1289.
Electric-circuit protection device. H. D. Arnold. No. 1,168,270; Jan. 18; Gaz. vol. 222; p. 734.
Electric conductor. C. J. E. Waxbom. No. 1,169,211; Jan. 25; Gaz. vol. 222; p. 1100.
Electric-conductor connector. H. F. Maxim. No. 1,168,529; Jan. 18; Gaz. vol. 222; p. 825.
Electric conductors, Ground-terminal connection for. L. B. Buchanan. No. 1,167,378; Jan. 11; Gaz. vol. 222; p. 391.
Electric conductors, Means for indicating faults and breaks in. E. Baillat. No. 1,168,587; Jan. 18; Gaz. vol. 222; p. 845.
Electric-conduit fitting and electrical appliance. C. H. Bissell and D. C. Gidley. No. 1,167,039; Jan. 4; Gaz. vol. 222; p. 217.
Electric furnace. F. T. Snyder. No. 1,167,026; Jan. 4; Gaz. vol. 222; p. 213.
Electric heater. W. D. Huff. No. 1,169,262; Jan. 25; Gaz. vol. 222; p. 1117.
Electric heater. J. B. Murray. No. 1,167,095; Jan. 4; Gaz. vol. 222; p. 237.
Electric heater for laundry-rolls. W. S. Hadaway, Jr. No. 1,167,750; Jan. 11; Gaz. vol. 222; p. 518.
Electric heater for steering-wheels. G. H. Barnes. No. 1,168,146; Jan. 11; Gaz. vol. 222; p. 657.
Electric-light bulbs to a socket, Device for fastening. C. E. Kohlmann. No. 1,169,497; Jan. 25; Gaz. vol. 222; p. 1198.
Electric light, Portable. B. Benedict. No. 1,167,878; Jan. 11; Gaz. vol. 222; p. 564.
Electric-light shifter. W. H. Eisenhart. No. 1,167,891; Jan. 11; Gaz. vol. 222; p. 568.
Electric-lighting device. J. A. Martin. No. 1,169,338; Jan. 25; Gaz. vol. 222; p. 1142.
Electric machines, Brush-holder for dynamo-. C. B. Mills. No. 1,168,021; Jan. 11; Gaz. vol. 222; p. 615.
Electric machinery, Dynamo-. R. A. Fessenden. No. 1,167,366; Jan. 4; Gaz. vol. 222; p. 334.
Electric motor. F. S. Denison. No. 1,167,890; Jan. 11; Gaz. vol. 222; p. 568.
Electric regulation. J. L. Creveling. No. 1,166,441; Jan. 4; Gaz. vol. 222; p. 10.
Electric regulation. J. L. Creveling. No. 1,166,442; Jan. 4; Gaz. vol. 222; p. 11.
Electric regulation. J. L. Creveling. No. 1,166,443; Jan. 4; Gaz. vol. 222; p. 11.
Electric regulation. J. L. Creveling. No. 1,169,465; Jan. 25; Gaz. vol. 222; p. 1187.
Electric regulation. J. L. Creveling. No. 1,169,466; Jan. 25; Gaz. vol. 222; p. 1187.
Electric-resistance material. M. A. Hunter. No. 1,168,074; Jan. 11; Gaz. vol. 222; p. 634.
Electric selective instrument. T. Bodde. No. 1,169,713; Jan. 25; Gaz. vol. 222; p. 1274.
Electric signal system. E. A. and H. V. Reynolds. No. 1,167,931; Jan. 11; Gaz. vol. 222; p. 583.
Electric switch. C. J. Klein. No. 1,168,005; Jan. 11; Gaz. vol. 222; p. 609.
Electric switch. B. L. Lawton and B. A. Spitzer. No. 1,169,089; Jan. 18; Gaz. vol. 222; p. 1021.
Electric switch. G. B. Thomas. No. 1,168,977; Jan. 18; Gaz. vol. 222; p. 982.
Electric traction, Collector for. R. C. Sayer. No. 1,166,637; Jan. 4; Gaz. vol. 222; p. 80.
Electric-traction-control system. S. D. McCaleb. No. 1,166,919; Jan. 4; Gaz. vol. 222; p. 177.
Electric vulcanizer. E. J. Wiggins. No. 1,169,215; Jan. 25; Gaz. vol. 222; p. 1101.

Electric-wire conduit. R. S. Case. No. 1,166,432; Jan. 4; Gaz. vol. 222; p. 7.
Electrical accumulator. L. W. Pullen. No. 1,169,350; Jan. 25; Gaz. vol. 222; p. 1146.
Electrical apparatus and removable locking and insulating means, Casing for. J. Keefe. No. 1,169,263; Jan. 25; Gaz. vol. 222; p. 1118.
Electrical conductors, Bridge for. L. W. Crompton and E. N. Oliver. No. 1,169,382; Jan. 25; Gaz. vol. 222; p. 1157.
Electrical conductors, Pothead or connector for. H. P. Liversidge. No. 1,168,019; Jan. 11; Gaz. vol. 222; p. 615.
Electrical connector. G. A. Schaefer. No. 1,169,431; Jan. 25; Gaz. vol. 222; p. 1174.
Electrical distribution system. F. Castiglioni. No. 1,167,382; Jan. 11; Gaz. vol. 222; p. 392.
Electrical energy in the form of alternating currents, System for distributing and regulating. W. M. Fairfax. No. 1,168,065; Jan. 11; Gaz. vol. 222; p. 630.
Electrical operating and indicating means. H. E. Cade and W. F. Cochrane. No. 1,167,045; Jan. 4; Gaz. vol. 222; p. 219.
Electrical oscillations, Producing. E. von Lepel. No. 1,168,837; Jan. 18; Gaz. vol. 222; p. 934.
Electrical protective device. H. W. Brown. No. 1,168,054; Jan. 11; Gaz. vol. 222; p. 627.
Electrical switch. H. J. L. and L. H. Frank. No. 1,169,391; Jan. 25; Gaz. vol. 222; p. 1161.
Electrical switches and similar devices, Mechanical movement for. G. H. Morse. No. 1,169,342; Jan. 25; Gaz. vol. 222; p. 1143.
Electrical testing-standard. C. B. and J. M. Beck. No. 1,166,426; Jan. 4; Gaz. vol. 222; p. 5.
Electricity from materials, Means for removing static. G. D. Rogers. No. 1,169,428; Jan. 25; Gaz. vol. 222; p. 1173.
Electricity, Means of connection between a wind-wheel and dynamo for storing. A. V. Johnson. No. 1,169,648; Jan. 25; Gaz. vol. 222; p. 1254.
Electricity-rectifier. T. J. Murphy. No. 1,168,538; Jan. 18; Gaz. vol. 222; p. 828.
Electrolytic cell. L. E. Porter. No. 1,167,594; Jan. 11; Gaz. vol. 222; p. 466.
Electromagnet. T. W. Morgan. No. 1,166,706; Jan. 4; Gaz. vol. 222; p. 105.
Electromagnetic device. R. N. Hill. No. 1,167,067; Jan. 4; Gaz. vol. 222; p. 227.
Electromagnetic frequency-meter and the like. K. R. Liljeblad. No. 1,168,519; Jan. 18; Gaz. vol. 222; p. 822.
Electromagnetic separator. C. T. Henderson. No. 1,166,682; Jan. 4; Gaz. vol. 222; p. 97.
Electromechanical exchange system. F. G. Agrell. No. 1,167,872; Jan. 11; Gaz. vol. 222; p. 561.
Electroplating apparatus. N. W. Buch. No. 1,168,281; Jan. 18; Gaz. vol. 222; p. 738.
Electroplating pipes and other articles of magnetic material, Method and apparatus for. N. W. Buch. No. 1,168,280; Jan. 18; Gaz. vol. 222; p. 738.
Electrothermostat. T. Lidberg. No. 1,169,549; Jan. 25; Gaz. vol. 222; p. 1218.
Elevator: *See*—
Belt elevator. Self-dumping elevator.
Grain-elevator.
Elevator automatic stop. K. E. O. Jansson. No. 1,169,722; Jan. 25; Gaz. vol. 222; p. 1278.
Elevator-gate. J. V. Kranebiel. No. 1,168,891; Jan. 18; Gaz. vol. 222; p. 952.
Elevator safety device. I. P. Drawbaugh. No. 1,169,015; Jan. 18; Gaz. vol. 222; p. 995.
Elevator safety device. A. Leal. No. 1,167,702; Jan. 11; Gaz. vol. 222; p. 503.
Elevator-wrench. C. S. Wright. No. 1,168,042; Jan. 11; Gaz. vol. 222; p. 622.
Elevators, Locking mechanism for cup. J. H. Gilman. No. 1,169,535; Jan. 25; Gaz. vol. 222; p. 1212.
Ellipsograph. F. Kirk and L. E. Francisco. No. 1,168,081; Jan. 11; Gaz. vol. 222; p. 636.
Embroidering-machine. J. A. Groebli. No. 1,166,676; Jan. 4; Gaz. vol. 222; p. 95.
Embroidering-machines, Device for supplying fabric to. J. A. Groebli. No. 1,167,817; Jan. 11; Gaz. vol. 222; p. 542.
Embroidery-frame. J. Roschach. No. 1,167,933; Jan. 11; Gaz. vol. 222; p. 584.
Emulsion products, Solidifying. L. Berend. No. 1,167,373; Jan. 11; Gaz. vol. 222; p. 390.
Engine: *See*—
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Combustion-engine. Rotary engine.
Cycle-engine. Rotary gas-engine.
Explosion-engine. Steam-engine.
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Gas and air engine. Two-cycle engine.
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Engine and transmission unit. D. M. Ferguson. No. 1,167,809; Jan. 11; Gaz. vol. 222; p. 539.
Engine brake and starter, Combined. A. G. Flickinger. No. 1,167,284; Jan. 4; Gaz. vol. 222; p. 302.
Engine control. L. J. Crawford. No. 1,169,620; Jan. 25; Gaz. vol. 222; p. 1244.
Engine-controlling means, Internal-combustion-. A. L. Riker. No. 1,168,421; Jan. 18; Gaz. vol. 222; p. 786.
Engine-cooling and car-heating system. H. G. Chatain. No. 1,167,151; Jan. 4; Gaz. vol. 222; p. 257.
Engine for the propulsion of vessels. J. Williams. No. 1,167,139; Jan. 4; Gaz. vol. 222; p. 253.
Engine-guiding means, Traction-. R. A. Williams. No. 1,167,459; Jan. 11; Gaz. vol. 222; p. 419.
Engine ignition system, Internal-combustion. H. C. Weil. No. 1,167,456; Jan. 11; Gaz. vol. 222; p. 418.
Engine ignition, Timer mechanism for gas-. W. E. Dow. No. 1,169,383; Jan. 25; Gaz. vol. 222; p. 1157.
Engine-starter. H. Goeddertz. No. 1,169,393; Jan. 25; Gaz. vol. 222; p. 1161.
Engine-starter. E. H. Overholt. No. 1,168,221; Jan. 11; Gaz. vol. 222; p. 682.
Engine-starting device, Internal-combustion-. C. A. Stouffer. No. 1,169,366; Jan. 25; Gaz. vol. 222; p. 1152.
Engine-starting mechanism, Internal-combustion-. W. E. Ver Planck. No. 1,166,949; Jan. 4; Gaz. vol. 222; p. 185.
Engine temperature-controlling apparatus, Internal-combustion-. F. M. Furber. No. 1,168,623; Jan. 18; Gaz. vol. 222; p. 859.
Engine wheel, Traction-. F. R. Nyberg. No. 1,167,205; Jan. 4; Gaz. vol. 222; p. 276.
Engines, Apparatus for cleaning the strakes on the driving-wheels of traction-. J. Coblet. No. 1,167,400; Jan. 11; Gaz. vol. 222; p. 399.
Engines, Battery-alternator for ignition systems of internal-combustion. F. R. Hoyt. No. 1,168,639; Jan. 18; Gaz. vol. 222; p. 866.
Engines, Device for regulating the compression-space of internal-combustion. W. Schmidt. No. 1,167,023; Jan. 4; Gaz. vol. 222; p. 212.
Engines, Electric starter for automobile-. A. W. Smith. No. 1,169,518; Jan. 25; Gaz. vol. 222; p. 1207.
Engines, Fuel-feed mechanism for internal-combustion. L. F. Burger. No. 1,166,967; Jan. 4; Gaz. vol. 222; p. 192.
Engines, Fuel-heating apparatus for internal-combustion. J. W. Pope. No. 1,168,111; Jan. 11; Gaz. vol. 222; p. 646.
Engines, Fuel-vaporizing device for internal-combustion. L. B. White. No. 1,168,136; Jan. 11; Gaz. vol. 222; p. 654.
Engines, Means for regulating combustion. P. G. Roesti. No. 1,166,937; Jan. 4; Gaz. vol. 222; p. 182.
Engines, Means for supplying fuel to internal-combustion. K. Steinbecker. No. 1,166,864; Jan. 4; Gaz. vol. 222; p. 158.
Engines, Periodic interrupter for ignition systems of internal-combustion. F. R. Hoyt. No. 1,168,638; Jan. 18; Gaz. vol. 222; p. 866.
Engines, Priming device for explosive-. S. J. Todd. No. 1,168,920; Jan. 18; Gaz. vol. 222; p. 962.
Engines, Regulating combustion-. P. G. Roesti. No. 1,166,938; Jan. 4; Gaz. vol. 222; p. 182.
Engines, Safety device against explosions in the air-pipes of internal-combustion. C. C. Regenbogen and P. A. Ritter. No. 1,166,855; Jan. 4; Gaz. vol. 222; p. 155.
Engines, Self-restoring switch for ignition systems of internal-combustion. F. R. Hoyt. No. 1,168,637; Jan. 18; Gaz. vol. 222; p. 865.
Engines, Spark-controlling means for internal-combustion. C. E. Stahl. No. 1,169,094; Jan. 18; Gaz. vol. 222; p. 1023.
Engines, Stretching device for driving-chains from magnetos or lighting-dynamos in internal-combustion. H. Gallet. No. 1,166,979; Jan. 4; Gaz. vol. 222; p. 196.
Ensilage-cutters, Feeding mechanism for. F. J. Bullock and F. F. Billings. No. 1,168,932; Jan. 18; Gaz. vol. 222; p. 967.
Ensilage-protector. W. A. Adams. No. 1,167,871; Jan. 11; Gaz. vol. 222; p. 561.
Envelop. A. M. Lockhart. No. 1,166,772; Jan. 4; Gaz. vol. 222; p. 126.
Envelop, Combined circular, coin-carrier, mailing, and return. P. G. Abrams. No. 1,167,245; Jan. 4; Gaz. vol. 222; p. 289.
Envelop-fastener. H. Trenchard, Jr. No. 1,167,321; Jan. 4; Gaz. vol. 222; p. 316.
Envelop-machines and similar machines, Web-cutting mechanism for. C. B. Sanders. No. 1,169,197; Jan. 25; Gaz. vol. 222; p. 1095.
Envelop, Mailing-. W. H. Hart, Jr. No. 1,166,805; Jan. 4; Gaz. vol. 222; p. 172.
Envelop, time-card, and receipt, Combined pay-. J. M. Cohn. No. 1,168,787; Jan. 18; Gaz. vol. 222; p. 918.
Escalator-controlling system. W. C. Strang. No. 1,167,602; Jan. 11; Gaz. vol. 222; p. 469.
Evacuation process. H. C. Snook. No. 1,166,792; Jan. 4; Gaz. vol. 222; p. 134.
Evaporating apparatus, Vacuum. G. Stade. No. 1,168,758; Jan. 18; Gaz. vol. 222; p. 906.
Evaporator. J. Naef. No. 1,167,204; Jan. 4; Gaz. vol. 222; p. 275.
Evaporator. J. Snow. No. 1,168,573; Jan. 18; Gaz. vol. 222; p. 840.
Evener or draft-equalizer. G. B. McClellan. No. 1,169,047; Jan. 18; Gaz. vol. 222; p. 1005.
Excavating earth. H. L. Doherty. No. 1,166,820; Jan. 4; Gaz. vol. 222; p. 143.
Excavating-machine. H. Walters and N. Bumpus. No. 1,169,443; Jan. 25; Gaz. vol. 222; p. 1179.

Excavator. W. G. Lawrence. No. 1,169,729; Jan. 25; Gaz. vol. 222; p. 1280.
Excavator, Drag-line-bucket. M. G. Bunnell. No. 1,167,146; Jan. 4; Gaz. vol. 222; p. 255.
Excavator, Drainage-. M. G. Bunnell. No. 1,168,784; Jan. 18; Gaz. vol. 222; p. 916.
Excavator, Drainage-. M. G. Bunnell. No. 1,169,234; Jan. 25; Gaz. vol. 222; p. 1108.
Exerciser. T. H. Wilson. No. 1,168,361; Jan. 18; Gaz. vol. 222; p. 766.
Exhibitor. T. J. Coe. No. 1,168,786; Jan. 18; Gaz. vol. 222; p. 917.
Explosion-engine, Two-stroke-cycle. J. A. Hardy. No. 1,168,199; Jan. 11; Gaz. vol. 222; p. 674.
Explosion-motor, Sliding-valve. S. A. Reeve. No. 1,169,354; Jan. 25; Gaz. vol. 222; p. 1148.
Explosive charges, Composition for detonating. W. Runge. No. 1,168,746; Jan. 18; Gaz. vol. 222; p. 902.
Explosive-engine. J. R. Harbeck. No. 1,166,902; Jan. 4; Gaz. vol. 222; p. 170.
Explosive-engine. T. J. Loftus. No. 1,166,999; Jan. 4; Gaz. vol. 222; p. 203.
Explosive-engine. M. J. Ramesh. No. 1,166,714; Jan. 4; Gaz. vol. 222; p. 107.
Explosive powder, Making. J. N. Wingett. No. 1,166,731; Jan. 4; Gaz. vol. 222; p. 113.
Explosive, Producing a liquid. O. Reuter. No. 1,166,546; Jan. 4; Gaz. vol. 222; p. 48.
Extension-pin. W. R. Ahrens. No. 1,169,591; Jan. 25; Gaz. vol. 222; p. 1232.
Extension-table. M. Kreczkowski. No. 1,167,905; Jan. 11; Gaz. vol. 222; p. 573.
Extractor: *See*—
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Eye. Apparatus for testing the muscles of the. F. C. Wahlenmaier. No. 1,169,690; Jan. 25; Gaz. vol. 222; p. 1270.
Eye-shade. P. C. Thompson. No. 1,166,493; Jan. 4; Gaz. vol. 222; p. 29.
Eyeglass-bridge. W. R. Uhlemann. No. 1,167,953; Jan. 11; Gaz. vol. 222; p. 592.
Eyeglass-reel. A. F. Robbins. No. 1,167,598; Jan. 11; Gaz. vol. 222; p. 468.
Eyeleting-machine. A. F. Engel. No. 1,169,386; Jan. 25; Gaz. vol. 222; p. 1158.
Eyeleting-machine. F. L. Harmon. No. 1,169,399; Jan. 25; Gaz. vol. 222; p. 1163.
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Fan, Centrifugal. W. H. Carrier. No. 1,166,659; Jan. 4; Gaz. vol. 222; p. 89.
Fan, Centrifugal. A. A. Criqui. No. 1,167,152; Jan. 4; Gaz. vol. 222; p. 257.
Fan, Centrifugal. J. E. Gramlich. No. 1,169,476; Jan. 25; Gaz. vol. 222; p. 1190.
Fan, Rotary. M. Nakata. No. 1,167,711; Jan. 11; Gaz. vol. 222; p. 505.
Fare-recorder-operating mechanism. D. B. Whistler. No. 1,169,447; Jan. 25; Gaz. vol. 222; p. 1181.
Fare-recorders, fare-indicators, and the like, Operating mechanism for. D. B. Whistler. No. 1,169,446; Jan. 25; Gaz. vol. 222; p. 1180.
Farm-gate. I. Barker. No. 1,168,589; Jan. 18; Gaz. vol. 222; p. 846.
Farm-gate. A. M. Stork. No. 1,166,944; Jan. 4; Gaz. vol. 222; p. 184.
Fastener, Corrugated metal. S. C. Cary. No. 1,169,124; Jan. 25; Gaz. vol. 222; p. 1069.
Fastener-setting machine. J. Pickles. No. 1,166,542; Jan. 4; Gaz. vol. 222; p. 47.
Fastening device or sash lock, Adjustable. J. Bartl. No. 1,167,617; Jan. 11; Gaz. vol. 222; p. 474.
Faucet. E. C. Stearns. No. 1,169,519; Jan. 25; Gaz. vol. 222; p. 1207.
Faucet, Fountain-. F. T. Wiechert. No. 1,167,959; Jan. 11; Gaz. vol. 222; p. 594.
Faucet, Quick-compression. W. S. Valmore. No. 1,169,306; Jan. 25; Gaz. vol. 222; p. 1132.
Feed and pressure mechanism. A. Black. No. 1,169,605; Jan. 25; Gaz. vol. 222; p. 1238.
Feed-bag. A. G. Bade. No. 1,167,614; Jan. 11; Gaz. vol. 222; p. 473.
Feed-bag support. J. Zweighaft and L. Nauman. No. 1,168,043; Jan. 11; Gaz. vol. 222; p. 622.
Feed-grinding mechanism. J. E. Goodhue. No. 1,166,899; Jan. 4; Gaz. vol. 222; p. 169.
Feed-roll carrier, Movable. C. S. Batdorf. No. 1,168,780; Jan. 18; Gaz. vol. 222; p. 914.
Feed-water regulator. M. Owen. No. 1,169,563; Jan. 25; Gaz. vol. 222; p. 1222.
Feeder and exerciser, Automatic poultry. F. Loomis. No. 1,168,656; Jan. 18; Gaz. vol. 222; p. 872.
Feeder, Poultry-. L. R. Oakes. No. 1,168,902; Jan. 18; Gaz. vol. 222; p. 956.
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Felts, Fourdrinier wires, and paper sheets, Tension-indicator for. J. W. Brassington. No. 1,168,706; Jan. 18; Gaz. vol. 222; p. 889.
Fence-post. E. A. and R. B. Morden. No. 1,166,705; Jan. 4; Gaz. vol. 222; p. 105.
Fence-post. J. H. Mosher. No. 1,169,343; Jan. 25; Gaz. vol. 222; p. 1144.
Fence-stretcher. L. Treeland. No. 1,167,136; Jan. 4; Gaz. vol. 222; p. 252.
Fence-wire stretcher. E. Morrow. No. 1,168,098; Jan. 11; Gaz. vol. 222; p. 642.
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Fender. W. Hoffmann. No. 1,168,213; Jan. 11; Gaz. vol. 222; p. 679.
Fender. W. Johnston. No. 1,167,408; Jan. 11; Gaz. vol. 222; p. 401.
Fender. W. Pearson. No. 1,169,348; Jan. 25; Gaz. vol. 222; p. 1145.
Fender. E. H. Royer. No. 1,168,114; Jan. 11; Gaz. vol. 222; p. 647.
Fertilizer and seed broadcast distributer, Hand. W. B. Parrish. No. 1,166,476; Jan. 4; Gaz. vol. 222; p. 22.
Fertilizer containing potassium, nitrogen, and phosphorous compounds from molasses refuse, Manufacturing. E. Herzka. No. 1,168,255; Jan. 11; Gaz. vol. 222; p. 695.
Fifth-wheel construction. H. G. Farr. No. 1,169,717; Jan. 25; Gaz. vol. 222; p. 1276.
Fifth-wheel construction. K. Smith. No. 1,168,756; Jan. 18; Gaz. vol. 222; p. 905.
Fifth-wheel, Vehicle. H. Hess. No. 1,169,152; Jan. 25; Gaz. vol. 222; p. 1080.
Filling appliance. S. H. Dodson. No. 1,168,611; Jan. 18; Gaz. vol. 222; p. 855.
Filling appliance. H. J. Hick. No. 1,168,805; Jan. 18; Gaz. vol. 222; p. 924.
Filling appliance. H. J. Hick. No. 1,168,806; Jan. 18; Gaz. vol. 222; p. 924.
Filling-pin and follower, Indexed. J. W. Burton. No. 1,169,614; Jan. 25; Gaz. vol. 222; p. 1242.
Filling system. G. Esmarian. No. 1,166,825; Jan. 4; Gaz. vol. 222; p. 145.
Film-driving device. L. Gaumont. No. 1,166,453; Jan. 4; Gaz. vol. 222; p. 14.
Films, Machine for exposing and developing sensitive. G. C. Beidler. No. 1,168,466; Jan. 18; Gaz. vol. 222; p. 803.
Filter. V. Müller. No. 1,167,094; Jan. 4; Gaz. vol. 222; p. 236.
Filter-cleaning device. H. N. Kilby. No. 1,169,725; Jan. 25; Gaz. vol. 222; p. 1279.
Filtering apparatus. J. P. Albert and N. R. Buller. No. 1,166,802; Jan. 4; Gaz. vol. 222; p. 137.
Finger-ring, Self-adjusting. W. A. Salt and T. S. Bennett. No. 1,169,735; Jan. 25; Gaz. vol. 222; p. 1282.
Finish-remover. C. Ellis. No. 1,167,640; Jan. 11; Gaz. vol. 222; p. 482.
Finish-remover. C. Ellis. No. 1,167,641; Jan. 11; Gaz. vol. 222; p. 483.
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Finish-remover and making same. J. M. Wilson and C. V. Bacon. No. 1,167,462; Jan. 11; Gaz. vol. 222; p. 420.
Fire-alarm, Pneumatic electric. C. J. Jenne. No. 1,168,506; Jan. 18; Gaz. vol. 222; p. 817.
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Fire-door and other closure. G. C. Avery. No. 1,169,596; Jan. 25; Gaz. vol. 222; p. 1234.
Fire-escape. W. L. Bedinger. No. 1,168,465; Jan. 18; Gaz. vol. 222; p. 803.
Fire-escape. O. M. Jensen. No. 1,167,825; Jan. 11; Gaz. vol. 222; p. 545.
Fire-escape. O. Stevenson. No. 1,169,439; Jan. 25; Gaz. vol. 222; p. 1178.
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Fire-escapes, Retarding device for. H. C. Coder. No. 1,169,239; Jan. 25; Gaz. vol. 222; p. 1110.
Fire-extinguisher. R. F. Downey. No. 1,167,635; Jan. 11; Gaz. vol. 222; p. 480.
Fire-extinguisher. W. Lawrence. No. 1,168,015; Jan. 11; Gaz. vol. 222; p. 613.
Fire-extinguisher, Dry. R. Jaretzki. No. 1,169,646; Jan. 25; Gaz. vol. 222; p. 1254.
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Firearm. E. W. Bryn. No. 1,169,121; Jan. 25; Gaz. vol. 222; p. 1068.
Firearm. C. A. Nelson. No. 1,168,024; Jan. 11; Gaz. vol. 222; p. 616.
Firearm. C. A. Nelson. No. 1,168,026; Jan. 11; Gaz. vol. 222; p. 617.
Firearm. M. F. Smith. No. 1,166,554; Jan. 4; Gaz. vol. 222; p. 51.
Firearm, Automatic. R. Frommer. No. 1,169,249; Jan. 25; Gaz. vol. 222; p. 1113.
Firearm, Automatic. K. Krnka. No. 1,166,913; Jan. 4; Gaz. vol. 222; p. 174.
Firearm-sight. C. A. Nelson. No. 1,168,025; Jan. 11; Gaz. vol. 222; p. 617.

Firearm, Small. D. Stergianopulos. No. 1,166,557; Jan. 4; Gaz. vol. 222; p. 52.
Firearms, Ejector for. R. Frommer. No. 1,169,248; Jan. 25; Gaz. vol. 222; p. 1113.
Fish-hook guard. J. H. Kruse. No. 1,166,529; Jan. 4; Gaz. vol. 222; p. 42.
Fish-net holder. G. C. Walter. No. 1,169,311; Jan. 25; Gaz. vol. 222; p. 1133.
Fish-screen, Revolving. W. L. Parsons. No. 1,166,628; Jan. 4; Gaz. vol. 222; p. 76.
Fish-trap. J. R. Whelen. No. 1,167,732; Jan. 11; Gaz. vol. 222; p. 513.
Fishing-float. J. S. Scott. No. 1,167,222; Jan. 4; Gaz. vol. 222; p. 282.
Fishing-reel. G. A. Johnson. No. 1,168,307; Jan. 18; Gaz. vol. 222; p. 746.
Flash-light. B. Benedict. No. 1,168,241; Jan. 11; Gaz. vol. 222; p. 689.
Flash-light and writing-pad, Telescopic combined portable. J. A. Petrie. No. 1,166,930; Jan. 4; Gaz. vol. 222; p. 180.
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Powder-flask.
Flexible joint. H. J. Everson. No. 1,167,355; Jan. 4; Gaz. vol. 222; p. 330.
Flies and other insects, Lure for. G. C. Richards. No. 1,168,552; Jan. 18; Gaz. vol. 222; p. 833.
Fly-killer. E. Kromer. No. 1,166,606; Jan. 4; Gaz. vol. 222; p. 69.
Fly-paper holder. G. H. Myers. No. 1,166,709; Jan. 4; Gaz. vol. 222; p. 106.
Fly-paper holder. A. J. Warner. No. 1,169,701; Jan. 25; Gaz. vol. 222; p. 1271.
Fly-trap. F. J. Anderson. No. 1,169,227; Jan. 25; Gaz. vol. 222; p. 1106.
Fly-trap. C. M. Curry. No. 1,167,339; Jan. 4; Gaz. vol. 222; p. 323.
Fly-trap. G. C. Skelton. No. 1,168,972; Jan. 18; Gaz. vol. 222; p. 981.
Fly-trap. C. E. Slipp. No. 1,167,855; Jan. 11; Gaz. vol. 222; p. 555.
Fly-wheel. E. Akins. No. 1,168,142; Jan. 11; Gaz. vol. 222; p. 656.
Flying-machine. C. V. Backus. No. 1,167,874; Jan. 11; Gaz. vol. 222; p. 563.
Flying-machines, Floating device for. P. Siptrott. No. 1,169,361; Jan. 25; Gaz. vol. 222; p. 1150.
Flood-gate. G. Thomason. No. 1,168,128; Jan. 11; Gaz. vol. 222; p. 651.
Flood-gate. E. J. Thorsby. No. 1,168,579; Jan. 18; Gaz. vol. 222; p. 842.
Floor-jack. B. E. Keller and J. W. Flatt. No. 1,166,691; Jan. 4; Gaz. vol. 222; p. 100.
Floor-stand, Tool-holding. H. B. Newhall, Jr. No. 1,167,921; Jan. 11; Gaz. vol. 222; p. 579.
Flow-controlling apparatus. G. H. Gibson. No. 1,166,758; Jan. 4; Gaz. vol. 222; p. 121.
Flow of fluids and vapors through conduits, Device for observing the. G. Schacke. No. 1,169,748; Jan. 25; Gaz. vol. 222; p. 1287.
Flue-cleaner. M. A. Grobl. No. 1,166,901; Jan. 4; Gaz. vol. 222; p. 170.
Flue-dust, Recovering. S. W. Osgood. No. 1,166,927; Jan. 4; Gaz. vol. 222; p. 179.
Fluid-containers, Valve for. W. D. Kahn. No. 1,166,690; Jan. 4; Gaz. vol. 222; p. 100.
Fluid-handling mechanism. G. H. Gibson. No. 1,168,297; Jan. 18; Gaz. vol. 222; p. 743.
Fluid-pressure gage. J. Shebol and W. F. Albrecht. No. 1,166,719; Jan. 4; Gaz. vol. 222; p. 109.
Fluids containing fat globules, casein, and sugar, Method and means for the treatment of. N. J. Nielsen. No. 1,168,823; Jan. 18; Gaz. vol. 222; p. 930.
Flushing tank or reservoir, Automatic. E. P. Stary. No. 1,166,556; Jan. 4; Gaz. vol. 222; p. 52.
Folding box. E. A. G. Bierwirth. No. 1,169,116; Jan. 25; Gaz. vol. 222; p. 1066.
Folding box. L. Rosenwald. No. 1,168,564; Jan. 18; Gaz. vol. 222; p. 837.
Folding box. L. Rosenwald. No. 1,168,566; Jan. 18; Gaz. vol. 222; p. 838.
Folding fender, Automatic. W. J. Hickey. No. 1,168,209; Jan. 11; Gaz. vol. 222; p. 678.
Folding-machine. W. J. Beattie. No. 1,167,329; Jan. 4; Gaz. vol. 222; p. 319.
Folding-machine. A. Haahr. No. 1,169,146; Jan. 25; Gaz. vol. 222; p. 1078.
Folding table. H. A. Stone. No. 1,166,865; Jan. 4; Gaz. vol. 222; p. 158.
Food, Cattle. K. Delbrück. No. 1,169,322; Jan. 25; Gaz. vol. 222; p. 1137.
Food product. E. R. Speare. No. 1,167,127; Jan. 4; Gaz. vol. 222; p. 249.
Food products, Making shortened. T. F. Tierney. No. 1,167,133; Jan. 4; Gaz. vol. 222; p. 251.
Foot support and guide. G. H. Harman. No. 1,166,518; Jan. 4; Gaz. vol. 222; p. 38.
Forging brake-fulcrums. F. J. Schroeder. No. 1,166,858; Jan. 4; Gaz. vol. 222; p. 156.
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Fork or tongs. E. F. Ruckert. No. 1,168,115; Jan. 11; Gaz. vol. 222; p. 647.
Form, Collapsible. C. D. McArthur. No. 1,168,659; Jan. 18; Gaz. vol. 222; p. 874.
Form, Convertible skirt-. C. A. Ufford. No. 1,168,444; Jan. 18; Gaz. vol. 222; p. 794.
Form, Dress-. J. F. Dinn. No. 1,167,388; Jan. 11; Gaz. vol. 222; p. 394.
Form, Dress-. J. A. Kubal. No. 1,168,653; Jan. 18; Gaz. vol. 222; p. 871.
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Frame: *See*—
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Cycle-frame. Packing-frame.
Display-frame. Printing-frame.
Embroidery-frame. Vehicle-frame.
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Frequency-converter. P. F. Pichon and A. Meissner. No. 1,169,676; Jan. 25; Gaz. vol. 222; p. 1263.
Friction transmission mechanism. W. G. Buck. No. 1,168,057; Jan. 11; Gaz. vol. 222; p. 628.
Froth fillings, Manufacture of. F. Pfleumer. No. 1,167,518; Jan. 11; Gaz. vol. 222; p. 439.
Fruit-assorting machine. F. W. Cutler. No. 1,169,467; Jan. 25; Gaz. vol. 222; p. 1187.
Fruit-assorting machine. F. W. Dustan. No. 1,169,019; Jan. 18; Gaz. vol. 222; p. 996.
Fruit-cutter. J. Weber. No. 1,168,838; Jan. 18; Gaz. vol. 222; p. 935.
Fruit-grading machine. J. R. Nunamaker. No. 1,167,512; Jan. 11; Gaz. vol. 222; p. 436.
Fruit-picker. F. E. Annis. No. 1,166,735; Jan. 4; Gaz. vol. 222; p. 114.
Fruit-picker. O. M. Garrison. No. 1,166,586; Jan. 4; Gaz. vol. 222; p. 61.
Fruit-picking sack. W. Munroe. No. 1,166,707; Jan. 4; Gaz. vol. 222; p. 106.
Fruit-snow. J. B. Ingram. No. 1,167,563; Jan. 11; Gaz. vol. 222; p. 455.
Fruit washing and blanching machine. G. E. Grier. No. 1,168,799; Jan. 18; Gaz. vol. 222; p. 922.
Fuel and heating system. J. Brewer. No. 1,169,119; Jan. 25; Gaz. vol. 222; p. 1067.
Fuel, Apparatus for producing gaseous. F. M. Rites. No. 1,167,021; Jan. 4; Gaz. vol. 222; p. 211.
Fuel-saver. J. Mandel. No. 1,168,951; Jan. 18; Gaz. vol. 222; p. 974.
Fuels and to be used for other purposes, Composition of matter to be added to internal-combustion engine. W. F. M. McCarty. No. 1,167,770; Jan. 11; Gaz. vol. 222; p. 525.
Funnel. G. G. Moore. No. 1,166,776; Jan. 4; Gaz. vol. 222; p. 128.
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Furnace. W. N. Best. No. 1,166,807; Jan. 4; Gaz. vol. 222; p. 139.
Furnace. C. F. Kenworthy. No. 1,168,313; Jan. 18; Gaz. vol. 222; p. 748.
Furnace. J. P. Ott. No. 1,167,105; Jan. 4; Gaz. vol. 222; p. 240.
Furnace-casing. J. P. Ott. No. 1,167,104; Jan. 4; Gaz. vol. 222; p. 240.
Furnace-door frame. L. L. Knox. No. 1,168,649; Jan. 18; Gaz. vol. 222; p. 870.
Furnace-feeding device, Boiler-. J. G. Crawford. No. 1,169,242; Jan. 25; Gaz. vol. 222; p. 1111.
Furnace for making hydrochloric acid and the like. W. M. Krickbaum. No. 1,167,763; Jan. 11; Gaz. vol. 222; p. 523.
Furnace regulation. G. H. Gibson. No. 1,167,343; Jan. 4; Gaz. vol. 222; p. 324.
Furnaces, Charging blast-. A. J. Boynton. No. 1,167,883; Jan. 11; Gaz. vol. 222; p. 566.
Furnaces, Controlling apparatus for metal flowing from blast-. J. S. Fraser. No. 1,169,247; Jan. 25; Gaz. vol. 222; p. 1113.
Furnaces, Draft-forming device for. J. D. Milner. No. 1,167,708; Jan. 11; Gaz. vol. 222; p. 505.
Furnaces, Fuel-saving attachment for. N. J. Russell and C. A. Tyden. No. 1,167,845; Jan. 11; Gaz. vol. 222; p. 552.
Furniture and piano polishing composition. H. S. Thorpe. No. 1,166,494; Jan. 4; Gaz. vol. 222; p. 29.
Furniture-standard foot. R. H. Soper. No. 1,166,641; Jan. 4; Gaz. vol. 222; p. 82.
Furniture-top. E. Ohnstrand. No. 1,168,106; Jan. 11; Gaz. vol. 222; p. 644.
Furrowing attachment. O. F. Orndorff. No. 1,169,183; Jan. 25; Gaz. vol. 222; p. 1090.
Fuse. J. B. Semple. No. 1,166,942; Jan. 4; Gaz. vol. 222; p. 183.
Fuse, Electrical. H. W. Young. No. 1,167,964; Jan. 11; Gaz. vol. 222; p. 596.
Fuse, Electrical. H. W. Young. No. 1,167,965; Jan. 11; Gaz. vol. 222; p. 596.
Fuse for high-explosive shells. H. K. Morén. No. 1,169,747; Jan. 25; Gaz. vol. 222; p. 1286.
Fuse-igniter. S. Frensdorf. No. 1,167,288; Jan. 4; Gaz. vol. 222; p. 304.

Fuses, Producing springs for mechanical time-. K. Wieser. No. 1,166,870; Jan. 4; Gaz. vol. 222; p. 160.

Gage: *See*—
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Gage. H. Hess. No. 1,169,327; Jan. 25; Gaz. vol. 222; p. 1138.

Game. E. W. Foster. No. 1,167,394; Jan. 11; Gaz. vol. 222; p. 396.

Game, Amusement. L. B. Heep. No. 1,169,257; Jan. 25; Gaz. vol. 222; p. 1116.

Game apparatus. J. W. Chase. No. 1,168,854; Jan. 18; Gaz. vol. 222; p. 940.

Game apparatus. L. M. Kraner. No. 1,168,082; Jan. 11; Gaz. vol. 222; p. 637.

Game apparatus. H. Passig. No. 1,167,655; Jan. 11; Gaz. vol. 222; p. 487.

Game apparatus. B. G. Ward. No. 1,167,452; Jan. 11; Gaz. vol. 222; p. 417.

Game apparatus, Base-ball-. F. J. Krebs. No. 1,168,729; Jan. 18; Gaz. vol. 222; p. 897.

Game-counter. G. H. Barker. No. 1,168,374; Jan. 18; Gaz. vol. 222; p. 771.

Game device, Educational. A. E. Johnson. No. 1,167,407; Jan. 11; Gaz. vol. 222; p. 401.

Game-table. M. J. Whelan. No. 1,169,585; Jan. 25; Gaz. vol. 222; p. 1230.

Garbage-can. J. H. Blank and C. S. Dungan. No. 1,169,606; Jan. 25; Gaz. vol. 222; p. 1239.

Garbage-can, Sanitary ventilated. E. Mayer and M. E. Wolff. No. 1,166,774; Jan. 4; Gaz. vol. 222; p. 127.

Garbage-holder. E. H. Natsch. No. 1,167,920; Jan. 11; Gaz. vol. 222; p. 579.

Garbage-receptacle, Wall. J. M. Triggs. No. 1,169,302; Jan. 25; Gaz. vol. 222; p. 1130.

Garden-tool. J. Gilson, Sr. No. 1,167,491; Jan. 11; Gaz. vol. 222; p. 429.

Garment. L. Grimm and H. H. Kant. No. 1,169,256; Jan. 25; Gaz. vol. 222; p. 1115.

Garment. M. M. Horn. No. 1,168,395; Jan. 18; Gaz. vol. 222; p. 779.

Garment. G. A. Hough. No. 1,166,689; Jan. 4; Gaz. vol. 222; p. 100.

Garment. R. B. Thompson. No. 1,169,581; Jan. 25; Gaz. vol. 222; p. 1228.

Garment, Child's. N. C. Leavitt and I. Mink. No. 1,169,500; Jan. 25; Gaz. vol. 222; p. 1200.

Garment, Flesh-reducing. T. W. Rogers. No. 1,167,113; Jan. 4; Gaz. vol. 222; p. 243.

Garment-hanger. H. M. Potter. No. 1,168,741; Jan. 18; Gaz. vol. 222; p. 901.

Garment-hanger. O. Smith. No. 1,169,202; Jan. 25; Gaz. vol. 222; p. 1097.

Garment hanger and creaser. W. H. Nuding. No. 1,169,423; Jan. 25; Gaz. vol. 222; p. 1171.

Garment, Safety-. H. P. Andrews. No. 1,168,698; Jan. 18; Gaz. vol. 222; p. 887.

Garment-securing devices, Machine for making. D. Marinsky. No. 1,168,662; Jan. 18; Gaz. vol. 222; p. 874.

Garment-simulator. S. Lippe. No. 1,168,403; Jan. 18; Gaz. vol. 222; p. 781.

Garment, Sleeping-. F. J. Blenis. No. 1,169,607; Jan. 25; Gaz. vol. 222; p. 1239.

Garment, Union. F. D. Baker and P. Hovland. No. 1,168,588; Jan. 18; Gaz. vol. 222; p. 846.

Garter. L. M. Spann. No. 1,167,226; Jan. 4; Gaz. vol. 222; p. 283.

Gas and air engine, Combined. V. H. Palm. No. 1,169,672; Jan. 25; Gaz. vol. 222; p. 1261.

Gas, Apparatus for treating coal-. H. A. Carpenter. No. 1,167,150; Jan. 4; Gaz. vol. 222; p. 256.

Gas-burners, Automatic cut-off for. P. Getson. No. 1,167,397; Jan. 11; Gaz. vol. 222; p. 397.

Gas, Burning. W. K. Twomey. No. 1,167,447; Jan. 11; Gaz. vol. 222; p. 416.

Gas-burning apparatus, Confined-combustion. L. B. Mettler. No. 1,169,177; Jan. 25; Gaz. vol. 222; p. 1089.

Gas-compressor, High-pressure. E. Freatage. No. 1,167,658; Jan. 11; Gaz. vol. 222; p. 488.

Gas cut-off, Automatic. B. Pullen. No. 1,168,415; Jan. 18; Gaz. vol. 222; p. 784.

Gas-engine. J. F. Butler and H. F. McCray. No. 1,166,577; Jan. 4; Gaz. vol. 222; p. 59.

Gas-furnace. R. A. Merrill. No. 1,166,470; Jan. 4; Gaz. vol. 222; p. 21.

Gas-generating apparatus. R. B. Brown. No. 1,168,055; Jan. 11; Gaz. vol. 222; p. 627.

Gas generator, Acetylene-. J. A. McClain. No. 1,168,895; Jan. 18; Gaz. vol. 222; p. 953.

Gas-igniter. P. P. Figueroa. No. 1,169,474; Jan. 25; Gaz. vol. 222; p. 1189.

Gas-lighter. C. F. Larsen. No. 1,169,407; Jan. 25; Gaz. vol. 222; p. 1165.

Gas, Locating natural. F. Squires. No. 1,168,757; Jan. 18; Gaz. vol. 222; p. 906.

Gas, Method of and apparatus for separating solids from. R. C. Newhouse. No. 1,168,543; Jan. 18; Gaz. vol. 222; p. 830.

Gas-treating apparatus. L. A. Zöhe. No. 1,168,451; Jan. 18; Gaz. vol. 222; p. 797.

Gas-treating apparatus, Coal-. H. A. Carpenter and A. W. Warner. No. 1,169,615; Jan. 25; Gaz. vol. 222; p. 1242.

Gas, Treating coal-. H. A. Carpenter. No. 1,167,149; Jan. 4; Gaz. vol. 222; p. 256.

Gas-washer. T. McDonald. No. 1,167,909; Jan. 11; Gaz. vol. 222; p. 575.

Gases, Device for regulating the discharge of exhaust-. A. F. Priest. No. 1,169,734; Jan. 25; Gaz. vol. 222; p. 1282.

Gases, Hydraulic device for compressing. K. Gauldie. No. 1,167,559; Jan. 11; Gaz. vol. 222; p. 453.

Gases, Method and means for indicating suspended matter in. W. A. Schmidt. No. 1,168,227; Jan. 11; Gaz. vol. 222; p. 684.

Gasolene-engine, Slide-valve. E. C. Davidson. No. 1,167,547; Jan. 11; Gaz. vol. 222; p. 448.

Gasolene-sediment trap. C. D. Adair. No. 1,167,246; Jan. 4; Gaz. vol. 222; p. 289.

Gate: *See*—
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Gate. C. O. Bond. No. 1,168,997; Jan. 18; Gaz. vol. 222; p. 989.

Gate. T. C. McPherson. No. 1,167,706; Jan. 11; Gaz. vol. 222; p. 504.

Gate-closer. A. Bujewski. No. 1,167,267; Jan. 4; Gaz. vol. 222; p. 296.

Gate-controlling device. W. S. Hickenbotham. No. 1,169,643; Jan. 25; Gaz. vol. 222; p. 1253.

Gate-operating attachment. J. N. Tidd. (Reissue.) No. 14,055; Jan. 25; Gaz. vol. 222; p. 1293.

Gate-operating mechanism. W. J. King. No. 1,166,768; Jan. 4; Gaz. vol. 222; p. 125.

Gear. F. Conrad. No. 1,167,743; Jan. 11; Gaz. vol. 222; p. 517.

Gear cutter, Spiral-. R. B. Weaver. No. 1,168,356; Jan. 18; Gaz. vol. 222; p. 765.

Gear-cutting machine. H. A. Garvey. No. 1,169,086; Jan. 18; Gaz. vol. 222; p. 1019.

Gear mechanism, Automatic selective change-. G. A. Eddy. No. 1,168,715; Jan. 18; Gaz. vol. 222; p. 892.

Gear mechanism, Reverse-. H. J. Perkins. No. 1,166,479; Jan. 4; Gaz. vol. 222; p. 23.

Gear mechanism, Reverse-. H. J. Perkins. No. 1,166,480; Jan. 4; Gaz. vol. 222; p. 24.

Gear mechanism, Reverse-. H. J. Perkins. No. 1,169,425; Jan. 25; Gaz. vol. 222; p. 1172.

Gear-shifting device. H. A. Myers. No. 1,167,097; Jan. 4; Gaz. vol. 222; p. 237.

Gear-shifting mechanism. F. Johnson. (Reissue.) No. 14,052; Jan. 25; Gaz. vol. 222; p. 1289.

Gear-shifting mechanism, Selecting. H. A. Myers. No. 1,167,096; Jan. 4; Gaz. vol. 222; p. 237.

Gear-teeth-finishing tool. E. J. Lees. No. 1,168,402; Jan. 18; Gaz. vol. 222; p. 780.

Gear-wheel. F. Conrad. No. 1,167,742; Jan. 11; Gaz. vol. 222; p. 516.

Gear-wheel, Self-lubricating. A. E. Johnson. No. 1,169,488; Jan. 25; Gaz. vol. 222; p. 1195.

Gears, Locking device for differential. G. W. King. No. 1,168,812; Jan. 18; Gaz. vol. 222; p. 926.

Gearing. V. G. Apple. No. 1,169,595; Jan. 25; Gaz. vol. 222; p. 1234.

Gearing. E. L. Demorest. No. 1,168,290; Jan. 18; Gaz. vol. 222; p. 740.

Gearing. C. F. Loring. No. 1,168,522; Jan. 18; Gaz. vol. 222; p. 822.

Gearing. J. H. Meyer. No. 1,168,533; Jan. 18; Gaz. vol. 222; p. 827.

Gearing. C. H. Pelton. No. 1,168,737; Jan. 18; Gaz. vol. 222; p. 900.

Gearing. H. F. Snyder. No. 1,167,126; Jan. 4; Gaz. vol. 222; p. 249.

Gearing, Actuating mechanism for reversing-. H. A. Tuttle. No. 1,168,765; Jan. 18; Gaz. vol. 222; p. 909.

Gearing, Adjustable screw-. C. E. and I. J. Bishop. No. 1,167,330; Jan. 4; Gaz. vol. 222; p. 319.

Gearing, Brake mechanism for reversing-. H. A. Tuttle. No. 1,168,766; Jan. 18; Gaz. vol. 222; p. 909.

Gearing, Change-speed. R. W. Compton. No. 1,169,618; Jan. 25; Gaz. vol. 222; p. 1243.

Gearing, Change-speed. A. Gotti and F. Loos. No. 1,169,633; Jan. 25; Gaz. vol. 222; p. 1249.

Gearing, Change-speed. B. B. Neuteboom. No. 1,168,890; Jan. 18; Gaz. vol. 222; p. 955.

Gearing, Friction-. G. M. Pelton. No. 1,169,282; Jan. 25; Gaz. vol. 222; p. 1123.

Gearing indicator, Change-speed-. H. A. Myers. No. 1,167,098; Jan. 4; Gaz. vol. 222; p. 238.

Gearing, Reversing-. H. A. Tuttle. No. 1,168,762; Jan. 18; Gaz. vol. 222; p. 908.

Gearing, Reversing-. H. A. Tuttle. No. 1,168,763; Jan. 18; Gaz. vol. 222; p. 908.

Gearing, Reversing-. H. A. Tuttle. No. 1,168,764; Jan. 18; Gaz. vol. 222; p. 908.

Gearing system. W. J. Kelly. No. 1,168,080; Jan. 11; Gaz. vol. 222; p. 635.

Gearing, Variable-speed. G. Sipp. No. 1,167,440; Jan. 11; Gaz. vol. 222; p. 413.

Gem-polishing. C. J. Coleman. No. 1,168,858; Jan. 18; Gaz. vol. 222; p. 941.

Gems to arbors, Apparatus for securing. C. J. Coleman. No. 1,168,710; Jan. 18; Gaz. vol. 222; p. 890.

Generator: *See*—
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Generator suspension. R. M. Dixon. No. 1,167,389; Jan. 11; Gaz. vol. 222; p. 395.

Geometrical machine. W. S. Eaton. No. 1,166,513; Jan. 4; Gaz. vol. 222; p. 36.

Glass-blanks, Machine for cracking off. E. Bell. No. 1,168,275; Jan. 18; Gaz. vol. 222; p. 735.

Glass, Coloring. H. Rosenthal. No. 1,169,571; Jan. 25; Gaz. vol. 222; p. 1225.

Glass-cutter. S. L. Braun. No. 1,169,714; Jan. 25; Gaz. vol. 222; p. 1275.

Glass-cutting machine. O. Benson. No. 1,167,254; Jan. 4; Gaz. vol. 222; p. 292.

Glass-furnace. S. B. Bowman. No. 1,166,576; Jan. 4; Gaz. vol. 222; p. 58.

Glass-holder. C. O. Kratz. No. 1,168,265; Jan. 11; Gaz. vol. 222; p. 699.

Glass machinery, Drawing-bait for window-. P. J. Paquet. No. 1,168,966; Jan. 18; Gaz. vol. 222; p. 977.

Glass-making machine, Cut-. E. H. Finnie. No. 1,168,872; Jan. 18; Gaz. vol. 222; p. 945.

Glass, Method and batch or mixture for making illuminating-. J. O. Meara. No. 1,166,922; Jan. 4; Gaz. vol. 222; p. 177.

Glass-polishing machine, Plate-. H. Zoerner. No. 1,167,244; Jan. 4; Gaz. vol. 222; p. 288.

Glass-tube cutter. F. M. Strauss. No. 1,169,579; Jan. 25; Gaz. vol. 222; p. 1228.

Glass-working apparatus. A. E. Spinasse. No. 1,166,793; Jan. 4; Gaz. vol. 222; p. 134.

Glass-working apparatus. A. E. Spinasse. No. 1,166,794; Jan. 4; Gaz. vol. 222; p. 134.

Glass-working apparatus. A. E. Spinasse. No. 1,167,534; Jan. 11; Gaz. vol. 222; p. 444.

Globe-holder. E. K. Hill. No. 1,166,908; Jan. 4; Gaz. vol. 222; p. 172.

Glove, Boxing-. S. Cline. No. 1,167,272; Jan. 4; Gaz. vol. 222; p. 298.

Glue-distributer for veneer-taping machines or machines for similar purposes. A. A. Dennis. No. 1,167,633; Jan. 11; Gaz. vol. 222; p. 480.

Goggles, Flexible. H. J. Brennecke. No. 1,167,331; Jan. 4; Gaz. vol. 222; p. 319.

Goggles or eye-protector. C. J. Troppman. No. 1,168,581; Jan. 18; Gaz. vol. 222; p. 843.

Golf-ball-addressing machine. A. E. Peck. No. 1,169,188; Jan. 25; Gaz. vol. 222; p. 1092.

Golf-balls, Making. J. R. Gammeter. No. 1,167,396; Jan. 11; Gaz. vol. 222; p. 397.

Golf-club. W. H. Meguyer. No. 1,169,667; Jan. 25; Gaz. vol. 222; p. 1260.

Golf-club. J. W. Offutt. No. 1,167,922; Jan. 11; Gaz. vol. 222; p. 580.

Golf-club. O. M. Palmer. No. 1,167,106; Jan. 4; Gaz. vol. 222; p. 240.

Golf-club and the like. P. G. E. Daniel. No. 1,167,387; Jan. 11; Gaz. vol. 222; p. 394.

Gopher-trap. A. F. Renken. No. 1,167,218; Jan. 4; Gaz. vol. 222; p. 280.

Governor with automatic inlet-valve, Engine-. W. Schmidt. No. 1,167,527; Jan. 11; Gaz. vol. 222; p. 442.

Grader and drag, Combined road. J. W. Woolery. No. 1,168,585; Jan. 18; Gaz. vol. 222; p. 844.

Grader, Road-. E. B. Harris. No. 1,168,723; Jan. 18; Gaz. vol. 222; p. 895.

Grain and seed separator and cleaner. W. A. Rice. No. 1,168,550; Jan. 18; Gaz. vol. 222; p. 832.

Grain and the like, Device for sampling. L. H. Des Isles. No. 1,168,486; Jan. 18; Gaz. vol. 222; p. 809.

Grain-binders, Butt-board for. J. Hartman. No. 1,169,031; Jan. 18; Gaz. vol. 222; p. 1000.

Grain conditioning and tempering machine. W. S. Barker. No. 1,169,599; Jan. 25; Gaz. vol. 222; p. 1235.

Grain-drill, Disk. C. L. Fowle. No. 1,167,551; Jan. 11; Gaz. vol. 222; p. 450.

Grain drying and sterilizing device. H. Monroe. No. 1,168,667; Jan. 18; Gaz. vol. 222; p. 876.

Grain-elevator, Portable. G. B. Nelson. No. 1,168,898; Jan. 18; Gaz. vol. 222; p. 955.

Grain-heading machine. A. Brooks. No. 1,167,739; Jan. 11; Gaz. vol. 222; p. 515.

Grain-separator. O. A. Burgeson. No. 1,168,282; Jan. 18; Gaz. vol. 222; p. 738.

Grain-separator attachment. J. Lunz. No. 1,166,532; Jan. 4; Gaz. vol. 222; p. 44.

Grain-shocking machine. T. A. Woolley and H. Fox. No. 1,168,365; Jan. 18; Gaz. vol. 222; p. 768.

Grains, Treating. A. Jaeger. No. 1,166,592; Jan. 4; Gaz. vol. 222; p. 63.

Grass-cutter. J. S. Doak. No. 1,167,051; Jan. 4; Gaz. vol. 222; p. 222.

Grate-bar. W. C. Armstrong. No. 1,169,107; Jan. 25; Gaz. vol. 222; p. 1062.

Grate-cleaner. F. Treuke. No. 1,168,443; Jan. 18; Gaz. vol. 222; p. 794.

Grate mechanism, Chain-. P. L. Crowe. No. 1,168,712; Jan. 18; Gaz. vol. 222; p. 891.

Grease-cup. T. W. Carter. No. 1,168,478; Jan. 18; Gaz. vol. 222; p. 807.

Grease-cup. J. S. Goldberg. No. 1,168,389; Jan. 18; Gaz. vol. 222; p. 776.

Grease-cup. R. B. Greenway. No. 1,169,477; Jan. 25; Gaz. vol. 222; p. 1191.

Grease-cup. L. N. Vincent. No. 1,167,861; Jan. 11; Gaz. vol. 222; p. 558.

Grease-cup cap for locomotive-side-rod cups. J. C. Hill. No. 1,167,177; Jan. 4; Gaz. vol. 222; p. 267.

Grinder, Alfalfa-meal. R. S. Thornton. No. 1,167,858; Jan. 11; Gaz. vol. 222; p. 556.

Grinder, Mower-knife. J. E. Vogt. No. 1,167,862; Jan. 11; Gaz. vol. 222; p. 558.

Grinding and refining mill. H. L. Johnston. No. 1,166,597; Jan. 4; Gaz. vol. 222; p. 65.

Grinding-head. J. A. Craig. No. 1,167,482; Jan. 11; Gaz. vol. 222; p. 426.

Grinding-machine. W. C. Barnhart. No. 1,169,377; Jan. 25; Gaz. vol. 222; p. 1156.

Grinding-machine. H. A. Boxill. No. 1,169,231; Jan. 25; Gaz. vol. 222; p. 1107.

Grinding-machine. O. F. Hentschel. No. 1,168,206; Jan. 11; Gaz. vol. 222; p. 676.

Grinding-machine. G. S. Shaw. No. 1,166,640; Jan. 4; Gaz. vol. 222; p. 82.

Grinding machine, Bevel-gear-. F. A. Ward. No. 1,167,957; Jan. 11; Gaz. vol. 222; p. 593.

Grinding-plate. G. G. Barker. No. 1,169,228; Jan. 25; Gaz. vol. 222; p. 1106.

Grinding the surfaces of rollers, Apparatus for. J. Kirner. No. 1,168,006; Jan. 11; Gaz. vol. 222; p. 609.

Groin. T. Davies. No. 1,166,580; Jan. 4; Gaz. vol. 222; p. 60.

Ground-surfacing apparatus. C. A. Robinson. No. 1,167,112; Jan. 4; Gaz. vol. 222; p. 243.

Gun. P. J. Kelly. No. 1,166,837; Jan. 4; Gaz. vol. 222; p. 149.

Gun-carriage, Wheeled. E. Bourdelles. No. 1,167,673; Jan. 11; Gaz. vol. 222; p. 494.

Gun-carriage, Wheeled. N. Koch. No. 1,166,839; Jan. 4; Gaz. vol. 222; p. 150.

Gun, Electrohydraulic. R. C. Hill. No. 1,167,178; Jan. 4; Gaz. vol. 222; p. 267.

Gun, Machine-. A. L. Clark. No. 1,169,237; Jan. 25; Gaz. vol. 222; p. 1109.

Gun, Machine-. A. A. K. Heinemann. No. 1,167,498; Jan. 11; Gaz. vol. 222; p. 432.

Gun-sight. A. G. Flickinger. No. 1,167,283; Jan. 4; Gaz. vol. 222; p. 302.

Gun-sight. R. B. Gilmore. No. 1,167,490; Jan. 11; Gaz. vol. 222; p. 429.

Guns, Belt-like cartridge-carrier for machine-. F. H. Frissell. No. 1,168,876; Jan. 18; Gaz. vol. 222; p. 947.

Guns, System and apparatus of automatic elevation and lateral direction of one or more. F. Andersen. No. 1,167,247; Jan. 4; Gaz. vol. 222; p. 289.

Hair. Apparatus for promoting the growth of. L. J. Widness. No. 1,167,236; Jan. 4; Gaz. vol. 222; p. 286.

Hair curler and waver. P. E. Herrmann. No. 1,168,000; Jan. 11; Gaz. vol. 222; p. 607.

Hair-dressing foundation. C. F. Porter. No. 1,166,932; Jan. 4; Gaz. vol. 222; p. 180.

Hair-dressing foundation. C. F. Porter. No. 1,166,933; Jan. 4; Gaz. vol. 222; p. 181.

Hair ornament. J. Neuhaus. No. 1,169,421; Jan. 25; Gaz. vol. 222; p. 1171.

Hame and trace connector. G. L. Forman. No. 1,167,160; Jan. 4; Gaz. vol. 222; p. 260.

Hame and trace connector. G. L. Forman. No. 1,167,161; Jan. 4; Gaz. vol. 222; p. 261.

Hame and trace connector. G. L. Forman. No. 1,167,162; Jan. 4; Gaz. vol. 222; p. 261.

Hame-draft, Adjustable. J. M. Hudson. No. 1,169,260; Jan. 25; Gaz. vol. 222; p. 1116.

Hammer, Power-. C. Campbell. No. 1,168,850; Jan. 18; Gaz. vol. 222; p. 939.

Hammering wire-drawing dies, Machine for. J. H. Pinder. No. 1,166,931; Jan. 4; Gaz. vol. 222; p. 180.

Hand-bag. G. Macaulay. No. 1,166,612; Jan. 4; Gaz. vol. 222; p. 71.

Hand-bags, Self-locking safety-catch for. G. H. Gentzel. No. 1,169,630; Jan. 25; Gaz. vol. 222; p. 1248.

Handle: *See*—
Can-handle. Stove-lid handle.
Casket-handle. Tool-handle.

Handle. A. L. Adams. No. 1,168,267; Jan. 18; Gaz. vol. 222; p. 733.

Handle connection, Instrument-. W. D. Banes. No. 1,167,252; Jan. 4; Gaz. vol. 222; p. 291.

Handle-fastening device. F. D. Craig. No. 1,168,169; Jan. 11; Gaz. vol. 222; p. 664.

Hanger: *See*—
Brake-hanger. Garment-hanger.
Car-door hanger. Pipe-hanger.
Clothes-hanger. Pipe-coupling hanger.
Door-hanger. Shaft-hanger.

Hanger. W. C. White. No. 1,169,375; Jan. 25; Gaz. vol. 222; p. 1155.

Harness. T. A. Fox. No. 1,167,811; Jan. 11; Gaz. vol. 222; p. 540.

Harness-loop. A. L. Sessions. No. 1,167,437; Jan. 11; Gaz. vol. 222; p. 412.

Harness spud hip-loop. T. A. Fox. No. 1,167,812; Jan. 11; Gaz. vol. 222; p. 540.

Harp. W. I. Kirk. No. 1,167,504; Jan. 11; Gaz. vol. 222; p. 434.

Harps, Mute mechanism for. A. Zamara and J. Perl. No. 1,169,589; Jan. 25; Gaz. vol. 222; p. 1232.

Harrow, Tandem. C. S. Sharp. No. 1,166,486; Jan. 4; Gaz. vol. 222; p. 27.

Harrow-tooth fastening. J. H. Brown. No. 1,168,930; Jan. 18; Gaz. vol. 222; p. 967.
Harvester, Beet-. A. G. Bimson. No. 1,169,229; Jan. 25; Gaz. vol. 222; p. 1106.
Harvester, Beet-. E. L. K. Peebles. No. 1,169,673; Jan. 25; Gaz. vol. 222; p. 1262.
Harvester grain-carrier. O. S. Mason. No. 1,167,911; Jan. 11; Gaz. vol. 222; p. 576.
Harvester, Self-binding. D. McIntyre. No. 1,169,048; Jan. 18; Gaz. vol. 222; p. 1005.
Harvesting machine, Beet-. G. B. and W. A. Hayes. No. 1,168,804; Jan. 18; Gaz. vol. 222; p. 924.
Harvesting machine, Beet-. H. Holub. No. 1,166,762; Jan. 4; Gaz. vol. 222; p. 123.
Harvesting the volatile constituents of wood and vegetable substances, Process and apparatus for. W. K. Freeman. No. 1,169,325; Jan. 25; Gaz. vol. 222; p. 1137.
Hat. O. Reich, Jr. No. 1,166,785; Jan. 4; Gaz. vol. 222; p. 131.
Hat conformer and retainer, Self-adjusting. L. Cohen. No. 1,169,380; Jan. 25; Gaz. vol. 222; p. 1156.
Hat-fastener. C. E. Cooke. No. 1,168,167; Jan. 11; Gaz. vol. 222; p. 663.
Hat-former. P. V. Martino. No. 1,168,665; Jan. 18; Gaz. vol. 222; p. 875.
Hat-pin guard. E. H. Mason. No. 1,168,528; Jan. 18; Gaz. vol. 222; p. 825.
Hat-pin guard. W. A. Wegener. No. 1,166,728; Jan. 4; Gaz. vol. 222; p. 112.
Hats, Combined holder and shape-retainer for. B. Zitka. No. 1,168,989; Jan. 18; Gaz. vol. 222; p. 986.
Hatchet, Shingling-. W. H. Koehler. No. 1,168,890; Jan. 18; Gaz. vol. 222; p. 951.
Hay-fork mechanism. G. G. Searcy and W. D. Barnhart. No. 1,167,785; Jan. 11; Gaz. vol. 222; p. 530.
Hay-loader. E. T. Nelson. No. 1,167,651; Jan. 11; Gaz. vol. 222; p. 486.
Hay-rack, Convertible. E. F. Younce. No. 1,166,877; Jan. 4; Gaz. vol. 222; p. 162.
Hay-rack fastener. J. Kelter. No. 1,167,659; Jan. 11; Gaz. vol. 222; p. 489.
Hay-spreader. F. Jerka. No. 1,169,647; Jan. 25; Gaz. vol. 222; p. 1254.
Hay-unloader. C. K. Johnson. No. 1,166,594; Jan. 4; Gaz. vol. 222; p. 64.
Head attachment. M. E. Burns. No. 1,169,123; Jan. 25; Gaz. vol. 222; p. 1069.
Head-rest pad. B. Albrecht. No. 1,168,842; Jan. 18; Gaz. vol. 222; p. 936.
Headed rod. A. Bayton. No. 1,166,738; Jan. 4; Gaz. vol. 222; p. 115.
Header-barge attachment. I. L. Worden. No. 1,168,366; Jan. 18; Gaz. vol. 222; p. 768.
Heading-machines, Swinging die-cap for. A. H. Gaess. No. 1,166,668; Jan. 4; Gaz. vol. 222; p. 92.
Headlight adjuster, Automobile-. L. E. Stevens and E. J. Fairbrother. No. 1,168,576; Jan. 18; Gaz. vol. 222; p. 841.
Headlight, Automobile-. M. J. Cawley. No. 1,168,058; Jan. 11; Gaz. vol. 222; p. 628.
Headlight, Automobile-. W. W. Holland and G. H. Snyder. No. 1,166,685; Jan. 4; Gaz. vol. 222; p. 98.
Headlight-dimmer. J. W. Hunt. No. 1,167,824; Jan. 11; Gaz. vol. 222; p. 544.
Headlight-dimmer. R. A. Walker. No. 1,167,451; Jan. 11; Gaz. vol. 222; p. 417.
Headlight, Dirigible. J. J. McVety and O. R. Emerson. No. 1,168,526; Jan. 18; Gaz. vol. 222; p. 825.
Headlights, Combined mask and light-concentrator for automobile-. I. L. Jones. No. 1,167,078; Jan. 4; Gaz. vol. 222; p. 231.
Headlights, Means for steering automobile-. W. C. Freeland. No. 1,167,686; Jan. 11; Gaz. vol. 222; p. 498.
Heat-exchanging apparatus, Tubular. H. Zimmermann. No. 1,168,368; Jan. 18; Gaz. vol. 222; p. 769.
Heat from hot slag, Apparatus for utilizing. W. H. Daily. No. 1,166,745; Jan. 4; Gaz. vol. 222; p. 117.
Heat regulator and distributer. G. W. Pearce. No. 1,167,516; Jan. 11; Gaz. vol. 222; p. 438.
Heater: *See*—
Air-heater.
Automobile - radiator heater.
Electric heater.
Hot-air heater.
Hot-water heater.
Link-heater.
Tank-heater.
Water-heater.
Heater-box. H. L. Pyle. No. 1,168,742; Jan. 18; Gaz. vol. 222; p. 901.
Heating apparatus. J. O. Fowler. No. 1,167,894; Jan. 11; Gaz. vol. 222; p. 569.
Heating apparatus, Electric. W. S. Hadaway, Jr. No. 1,167,749; Jan. 11; Gaz. vol. 222; p. 518.
Heating apparatus, Steam-. E. E. Gold. No. 1,167,816; Jan. 11; Gaz. vol. 222; p. 541.
Heating device, Portable. J. B. Murray. No. 1,169,560; Jan. 25; Gaz. vol. 222; p. 1221.
Heating system. F. O. Hellstrom. No. 1,168,304; Jan. 18; Gaz. vol. 222; p. 745.
Heating system. W. L. Murray. No. 1,167,008; Jan. 4; Gaz. vol. 222; p. 207.
Heating system. C. R. Shaw. No. 1,167,528; Jan. 11; Gaz. vol. 222; p. 442.
Heating system, Steam-. E. E. Gold. No. 1,168,720; Jan. 18; Gaz. vol. 222; p. 894.
Heating unit, Electric. H. G. Weeks. No. 1,169,213; Jan. 25; Gaz. vol. 222; p. 1101.
Heddle-frame. J. Kaufmann. No. 1,168,308; Jan. 18; Gaz. vol. 222; p. 746.
Heel and sole blank. E. E. Carll. No. 1,167,885; Jan. 11; Gaz. vol. 222; p. 566.
Heel-breasting machine. J. Cavanagh. No. 1,169,125; Jan. 25; Gaz. vol. 222; p. 1069.
Heel-pad for shoes. M. J. Nolan. No. 1,167,103; Jan. 4; Gaz. vol. 222; p. 239.
Heel, Resilient. J. G. Tufford. (Reissue.) No. 14,049; Jan. 11; Gaz. vol. 222; p. 703.
Hinge. S. Bohnert. No. 1,167,881; Jan. 11; Gaz. vol. 222; p. 565.
Hinge. W. G. Le Compte. No. 1,167,906; Jan. 11; Gaz. vol. 222; p. 574.
Hinge. J. S. Mardon and L. D. Fay. No. 1,166,702; Jan. 4; Gaz. vol. 222; p. 104.
Hinge. F. F. Miller. No. 1,169,274; Jan. 25; Gaz. vol. 222; p. 1121.
Hinge. R. W. Prieskorn. No. 1,169,566; Jan. 25; Gaz. vol. 222; p. 1223.
Hinge. P. T. Simmons. No. 1,166,551; Jan. 4; Gaz. vol. 222; p. 50.
Hinge and fastener, Shutter. P. Devlin. No. 1,166,748; Jan. 4; Gaz. vol. 222; p. 117.
Hinge-fixture, Sash. C. I. Shirley and F. W. Mueller. No. 1,166,550; Jan. 4; Gaz. vol. 222; p. 50.
Hinge for doors, Floor-. J. C. Peterick. No. 1,169,283; Jan. 25; Gaz. vol. 222; p. 1124.
Hinge for silo-doors. C. S. Mitchell. No. 1,169,669; Jan. 25; Gaz. vol. 222; p. 1261.
Hinge, Gate-. W. Louden. No. 1,168,523; Jan. 18; Gaz. vol. 222; p. 823.
Hinge, Gate-. J. H. Tausch. No. 1,168,235; Jan. 11; Gaz. vol. 222; p. 686.
Hinge-guard. S. P. Stevenson. No. 1,167,444; Jan. 11; Gaz. vol. 222; p. 415.
Hinge, Lock-. T. E. Sledd and J. T. Dixon. No. 1,169,363; Jan. 25; Gaz. vol. 222; p. 1151.
Hinge of flexible material. L. A. Hoerr. No. 1,167,070; Jan. 4; Gaz. vol. 222; p. 228.
Hoe, Mixing-. L. J. Birn. No. 1,167,971; Jan. 11; Gaz. vol. 222; p. 598.
Hog-catcher. O. E. Sheidler. No. 1,167,223; Jan. 4; Gaz. vol. 222; p. 282.
Hog-holder. R. E. Gibson. No. 1,167,398; Jan. 11; Gaz. vol. 222; p. 398.
Hog-trough. O. A. Grossman. No. 1,167,818; Jan. 11; Gaz. vol. 222; p. 542.
Hog-trough. J. R. Hesser. No. 1,167,557; Jan. 11; Gaz. vol. 222; p. 452.
Hoisting-drum and brake for the same. J. Farrell. No. 1,168,716; Jan. 18; Gaz. vol. 222; p. 893.
Hood. J. Buckman. No. 1,167,379; Jan. 11; Gaz. vol. 222; p. 391.
Hoof-trimmer. E. S. Stowell. No. 1,168,125; Jan. 11; Gaz. vol. 222; p. 650.
Hook: *See*—
Curtain-hook.
Mooring-hook.
Safety-hook.
Hook and eye. A. T. Van Alstyn. No. 1,167,859; Jan. 11; Gaz. vol. 222; p. 557.
Hook-and-eye fastener. E. H. T. Strömbäck. No. 1,169,580; Jan. 25; Gaz. vol. 222; p. 1228.
Hook for books and eyes. C. Andresen. No. 1,168,778; Jan. 18; Gaz. vol. 222; p. 914.
Horn. R. H. Helsel. No. 1,166,760; Jan. 4; Gaz. vol. 222; p. 122.
Horn, Mechanical. G. Marsico. No. 1,168,090; Jan. 11; Gaz. vol. 222; p. 640.
Horn, Mechanically-actuated diaphragm-. M. R. Hutchison. No. 1,169,721; Jan. 25; Gaz. vol. 222; p. 1277.
Horse-detacher. C. Graf. No. 1,168,193; Jan. 11; Gaz. vol. 222; p. 672.
Horseshoe. R. H. Eaves. No. 1,169,020; Jan. 18; Gaz. vol. 222; p. 996.
Horseshoe. G. H. Mault. No. 1,167,773; Jan. 11; Gaz. vol. 222; p. 526.
Horseshoe-calking machine. J. M. Watson. No. 1,169,059; Jan. 18; Gaz. vol. 222; p. 1009.
Horseshoe-nail-clenching tool. A. F. Deshing. No. 1,167,803; Jan. 11; Gaz. vol. 222; p. 537.
Horseshoe-pad. C. W. Dunning. No. 1,169,324; Jan. 25; Gaz. vol. 222; p. 1137.
Hose construction. J. F. Joseph. (Reissue.) No. 14,046; Jan. 11; Gaz. vol. 222; p. 701.
Hose coupling, Automatic air-. J. Roy. No. 1,168,426; Jan. 18; Gaz. vol. 222; p. 788.
Hose couplings and connections, Spanner attachment for. M. Harrison. No. 1,168,068; Jan. 11; Gaz. vol. 222; p. 632.
Hose-mending device. J. E. Peck. No. 1,168,222; Jan. 11; Gaz. vol. 222; p. 682.
Hose-pipe coupling. H. Forsman. No. 1,169,389; Jan. 25; Gaz. vol. 222; p. 1160.
Hose-reels, Swivel-joint for. S. Clay. No. 1,166,579; Jan. 4; Gaz. vol. 222; p. 59.
Hose-supporter. R. E. Ward. No. 1,167,669; Jan. 11; Gaz. vol. 222; p. 492.
Hosiery and knitting the same, Seamless. J. W. Mettler and W. E. Smith. No. 1,169,416; Jan. 25; Gaz. vol. 222; p. 1168.

Hosiery-drying mechanism. D. W. Snyder. No. 1,167,025; Jan. 4; Gaz. vol. 222; p. 213.
Hosiery-finishing apparatus. C. G. Tengdin. No. 1,166,947; Jan. 4; Gaz. vol. 222; p. 185.
Hosiery, Machine for inverting and bundling. B. A. Parkes. No. 1,169,092; Jan. 18; Gaz. vol. 222; p. 1023.
Hot-air engine with closed circuit. T. Vuia. No. 1,169,308; Jan. 25; Gaz. vol. 222; p. 1132.
Hot-air heater. H. S. Williams. No. 1,169,448; Jan. 25; Gaz. vol. 222; p. 1181.
Hot-plate. C. Franz. No. 1,168,875; Jan. 18; Gaz. vol. 222; p. 947.
Hot-water apparatus, Electrical. J. Von Hentzel. No. 1,166,950; Jan. 4; Gaz. vol. 222; p. 186.
Hot-water heater and steam-generator. L. O. Hedblom. No. 1,168,631; Jan. 18; Gaz. vol. 222; p. 863.
Hothouse-frame. C. Y. Davidson. No. 1,167,276; Jan. 4; Gaz. vol. 222; p. 300.
House: *See*—
Bird-house.
Hub. R. L. Hayton. No. 1,166,985; Jan. 4; Gaz. vol. 222; p. 199.
Hub-cap lock for vehicle-wheels. G. G. Griffin. No. 1,166,983; Jan. 4; Gaz. vol. 222; p. 198.
Hub-liner. S. G. Thomson. No. 1,169,057; Jan. 18; Gaz. vol. 222; p. 1008.
Hub, Wheel-. W. S. Hancock. No. 1,169,398; Jan. 25; Gaz. vol. 222; p. 1163.
Hullers, Hulling-cylinder for clover and alfalfa. F. E. Shafer. No. 1,166,549; Jan. 4; Gaz. vol. 222; p. 49.
Humidifier. H. L. Lobelde. No. 1,168,948; Jan. 18; Gaz. vol. 222; p. 973.
Hydraulic motor. L. Lewis and T. E. Taggart. No. 1,168,317; Jan. 18; Gaz. vol. 222; p. 750.
Hydraulic motor. L. Sweningson and W. H. Woodward. No. 1,166,491; Jan. 4; Gaz. vol. 222; p. 28.
Hydrocarbon-burner. C. J. Hutchison. No. 1,167,303; Jan. 4; Gaz. vol. 222; p. 309.
Hydrocarbon-burner. G. G. Ramsey. No. 1,167,111; Jan. 4; Gaz. vol. 222; p. 243.
Hydrogen and carbon-black, Manufacture of. R. H. Brownlee and R. H. Uhlinger. No. 1,168,931; Jan. 18; Gaz. vol. 222; p. 967.
Ice-cake-molding apparatus. W. Latham. No. 1,166,770; Jan. 4; Gaz. vol. 222; p. 126.
Ice-can. T. M. Myers. No. 1,166,623; Jan. 4; Gaz. vol. 222; p. 75.
Ice-cream disher. S. E. Surface. No. 1,168,919; Jan. 18; Gaz. vol. 222; p. 962.
Ice-cutting machine. R. W. Rich. No. 1,169,355; Jan. 25; Gaz. vol. 222; p. 1148.
Ice-handling apparatus. W. E. Willis. No. 1,167,140; Jan. 4; Gaz. vol. 222; p. 253.
Ice-making machine. W. E. Browning. No. 1,166,966; Jan. 4; Gaz. vol. 222; p. 192.
Ice-manufacturing apparatus. W. B. Kirkpatrick. No. 1,169,164; Jan. 25; Gaz. vol. 222; p. 1084.
Ice plants, Appliance for artificial-. C. W. Vogt. No. 1,169,368; Jan. 25; Gaz. vol. 222; p. 1153.
Ignition devices, Automatic control for. L. T. Rhoades. No. 1,167,839; Jan. 11; Gaz. vol. 222; p. 549.
Ignition-dynamos, Interrupter mechanism for. C. T. Mason. No. 1,167,310; Jan. 4; Gaz. vol. 222; p. 311.
Ignition system. B. Dick. No. 1,167,483; Jan. 11; Gaz. vol. 222; p. 427.
Ignition system. C. F. Kettering. No. 1,167,762; Jan. 11; Gaz. vol. 222; p. 522.
Ignition system. C. F. Kettering. No. 1,168,314; Jan. 18; Gaz. vol. 222; p. 749.
Impregnated fabrics and producing same. R. A. Marr. No. 1,166,847; Jan. 4; Gaz. vol. 222; p. 152.
Impregnating laundried articles and the like fabrics with fluid or pasty substances, Apparatus for. R. Hönigsberg and G. Edelmann. No. 1,166,687; Jan. 4; Gaz. vol. 222; p. 99.
Incubator. J. D. Wilson. No. 1,169,708; Jan. 25; Gaz. vol. 222; p. 1273.
Indicating and operating mechanism. D. B. Whistler and J. E. McAllister. No. 1,169,445; Jan. 25; Gaz. vol. 222; p. 1180.
Indicating apparatus. N. J. Nessa. No. 1,168,957; Jan. 18; Gaz. vol. 222; p. 976.
Indicating device. J. W. Fritch and D. E. Hoopes. No. 1,168,941; Jan. 18; Gaz. vol. 222; p. 970.
Indicator: *See*—
Gearing-indicator.
Lubricating-system indicator.
Maximum-indicator.
Pole-elevation indicator.
Speed-indicator.
Station-indicator.
Test-indicator.
Tire-indicator.
Wheel-position indicator.
Winding-indicator.
Indicator. W. I. Ohmer and J. E. McAllister. No. 1,169,424; Jan. 25; Gaz. vol. 222; p. 1171.
Indicater. J. V. Potter. No. 1,167,657; Jan. 11; Gaz. vol. 222; p. 488.
Indicator consisting of a stationary part and one or more movable parts. O. Junghans. No. 1,166,461; Jan. 4; Gaz. vol. 222; p. 17.
Ink-distributing roller. L. F. Nielsen. No. 1,167,652; Jan. 11; Gaz. vol. 222; p. 486.
Inseam-trimming machine. A. Eppler. No. 1,169,070; Jan. 18; Gaz. vol. 222; p. 1013.
Insect-exterminator. J. Biggs. No. 1,168,149; Jan. 11; Gaz. vol. 222; p. 658.
Insect-exterminator. W. G. Elkin. No. 1,168,181; Jan. 11; Gaz. vol. 222; p. 668.
Insect-trap. D. H. Glass. No. 1,168,798; Jan. 18; Gaz. vol. 222; p. 921.
Insect-trap. B. Gooden. No. 1,167,897; Jan. 11; Gaz. vol. 222; p. 570.
Insulated-wire-saturating machine. P. A. Nehring. No. 1,168,542; Jan. 18; Gaz. vol. 222; p. 830.
Insulating-board and producing the same. J. E. Lappen. No. 1,169,079; Jan. 18; Gaz. vol. 222; p. 1017.
Insulator. H. A. Cook. No. 1,169,011; Jan. 18; Gaz. vol. 222; p. 993.
Insulator. A. J. Folstad. No. 1,169,246; Jan. 25; Gaz. vol. 222; p. 1112.
Insulator. W. Oppelt. No. 1,167,208; Jan. 4; Gaz. vol. 222; p. 277.
Insulator-bracket. F. P. Kobert. No. 1,169,545; Jan. 25; Gaz vol. 222; p. 1216.
Insulator-support. R. C. Boozer. No. 1,167,041; Jan. 4; Gaz. vol. 222; p. 218.
Insulator-support. R. C. Boozer. No. 1,167,042; Jan. 4; Gaz. vol. 222; p. 218.
Insulator-supporting bracket. C. L. Peirce, Jr. No. 1,166,928; Jan. 4; Gaz. vol. 222; p. 179.
Insulator, Suspension-type. K. C. Randall. No. 1,168,031; Jan. 11; Gaz. vol. 222; p. 618.
Insulators, Manufacturing strain-. T. Sloper. No. 1,167,125; Jan. 4; Gaz. vol. 222; p. 248.
Internal-combustion engine. R. J. Balz. No. 1,167,970; Jan. 11; Gaz. vol. 222; p. 597.
Internal-combustion engine. J. Bouteille. No. 1,167,376; Jan. 11; Gaz. vol. 222; p. 391.
Internal-combustion engine. F. D. Butler. No. 1,169,235; Jan. 25; Gaz vol. 222; p. 1108.
Internal-combustion engine. C. A. Gass. No. 1,168,879; Jan. 18; Gaz. vol. 222; p. 948.
Internal-combustion engine. J. Keister. No. 1,167,955; Jan. 11; Gaz. vol. 222; p. 592.
Internal-combustion engine. H. L. Magill. No. 1,167,419; Jan. 11; Gaz. vol. 222; p. 405.
Internal-combustion engine. D. J. McKinnon. No. 1,169,662; Jan. 25; Gaz. vol. 222; p. 1258.
Internal-combustion engine. J. W. Mitchell. No. 1,169,556; Jan. 25; Gaz. vol. 222; p. 1220.
Internal-combustion engine. S. A. Reeve. No. 1,169,353; Jan. 25; Gaz. vol. 222; p. 1147.
Internal-combustion engine. T. Reuter. No. 1,168,331; Jan. 18; Gaz. vol. 222; p. 755.
Internal-combustion engine. V. Rosenbagen. No. 1,168,425; Jan. 18; Gaz. vol. 222; p. 788.
Internal-combustion engine. W. D. Tipton. No. 1,166,561; Jan. 4; Gaz. vol. 222; p. 54.
Internal-combustion motor, Two-stroke-cycle. W. Froehlich. No. 1,168,877; Jan. 18; Gaz. vol. 222; p. 947.
Iron: *See*—
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Iron and steel, Rust-proofing. W. H. Allen. No. 1,167,966; Jan. 11; Gaz. vol. 222; p. 597.
Iron or steel article, Metal-coated. C., Jr., and C. Mark. No. 1,168,663; Jan. 18; Gaz. vol. 222; p. 875.
Iron ores and other metallic oxids to the metallic state, Reducing. E. B. Pratt. No. 1,167,016; Jan. 4; Gaz. vol. 222; p. 210.
Iron sulfids, Producing. N. Petinot. No. 1,169,093; Jan. 18; Gaz. vol. 222; p. 1023.
Iron surfaces, Oxidation of smooth. B. Guerini. No. 1,169,397; Jan. 25; Gaz. vol. 222; p. 1163.
Iron-board. J. D. Hogan. No. 1,168,500; Jan. 18; Gaz. vol. 222; p. 815.
Ironing-board. J. McDonnall. No. 1,167,192; Jan. 4; Gaz. vol. 222; p. 272.
Ironing-board. H. A. and L. Sills. No. 1,169,360; Jan. 25; Gaz. vol. 222; p. 1150.
Ironing-machine. C. W. Sadler. No. 1,166,856; Jan. 4; Gaz. vol. 222; p. 155.
Irrigating device. L. Schlegel. No. 1,166,789; Jan. 4; Gaz. vol. 222; p. 133.
Irrigation device. W. H. Coles. No. 1,167,629; Jan. 11; Gaz. vol. 222; p. 478.
Isoprene and homologues thereof, Manufacture of. H. S. A. Holt. No. 1,168,070; Jan. 11; Gaz. vol. 222; p. 632.
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Automobile mud-jack.
Floor-jack.
Lifting-jack.
Jack. G. J. Abernathy. No. 1,168,141; Jan. 11; Gaz. vol. 222; p. 656.
Jack and floor-clamp. H. N. Sibley. No. 1,169,685; Jan. 25; Gaz. vol. 222; p. 1266.
Jar: *See*—
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Jar-wrench. I. H. Murdick and C. J. Garey. No. 1,168,669; Jan. 18; Gaz. vol. 222; p. 877.
Jelly-container. W. M. McKee. No. 1,168,731; Jan. 18; Gaz. vol. 222; p. 898.
Joint: *See*—
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Joints, Process and apparatus for making brazed. F. W. Heuser. No. 1,169,484; Jan. 25; Gaz. vol. 222; p. 1194.
Jolt ramming-machine. E. H. Mumford and E. M. Huggins. No. 1,167,511; Jan. 11; Gaz. vol. 222; p. 436.
Journal-box. G. F. Starbuck. No. 1,168,759; Jan. 18; Gaz. vol. 222; p. 907.

Juice-extractor. L. I. Reichner. No. 1,168,032; Jan. 11; Gaz. vol. 222; p. 619.
Juice from citrus fruit, Apparatus for separating. J. Takamine. No. 1,166,867; Jan. 4; Gaz. vol. 222; p. 159.
Kelp, Treating. J. W. Cheney. No. 1,168,785; Jan. 18; Gaz. vol. 222; p. 917.
Kettle, Water-. W. R. Ceperly. No. 1,169,006; Jan. 18; Gaz. vol. 222; p. 992.
Key-holding device, Door-. E. A. Wildt. No. 1,166,565; Jan. 4; Gaz. vol. 222; p. 55.
Keyboard apparatus, Practice-. A. L. White. No. 1,169,586; Jan. 25; Gaz. vol. 222; p. 1230.
Keyless lock. S. Tadakuma. No. 1,167,787; Jan. 11; Gaz. vol. 222; p. 531.
Kiln: *See*—
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Charcoal-kiln. Drying-kiln.
Kilns, Utilizing waste heat in. T. A. Edison. No. 1,167,637; Jan. 11; Gaz. vol. 222; p. 481.
Kiosk, Magical selling-. C. J. F. Ohlsson. No. 1,169,347; Jan. 25; Gaz. vol. 222; p. 1145.
Kite. M. P. Exline. No. 1,166,750; Jan. 4; Gaz. vol. 222; p. 119.
Knife: *See*—
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Knife. W. R. Brown. No. 1,169,000; Jan. 18; Gaz. vol. 222; p. 990.
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Knives, forks, and tools, Making a handle for. O. Hoch. No. 1,167,404; Jan. 11; Gaz. vol. 222; p. 400.
Knitted fabric, Open-mesh. B. M. Shea. No. 1,168,684; Jan. 18; Gaz. vol. 222; p. 882.
Knitted garment. R. R. Janes. No. 1,168,641; Jan. 18; Gaz. vol. 222; p. 867.
Knitting machine, Circular-. C. Claringburn. No. 1,166,434; Jan. 4; Gaz. vol. 222; p. 7.
Knitting machine, Circular-. W. E. Smith. No. 1,169,436; Jan. 25; Gaz. vol. 222; p. 1176.
Knitting machine, Circular-. F. B. Wildman. No. 1,167,866; Jan. 11; Gaz. vol. 222; p. 559.
Knitting-machine, Circular spring-needle. R. W. Scott and A. E. Page. No. 1,167,024; Jan. 4; Gaz. vol. 222; p. 212.
Knitting-machine latch-needle. H. Swinglehurst. No. 1,168,039; Jan. 11; Gaz vol. 222; p. 621.
Knitting-machine pattern mechanism. A. Landry. No. 1,169,655; Jan. 25; Gaz. vol. 222; p. 1256.
Knitting-machine stop-motion mechanism. I. W. Grothey. No. 1,168,194; Jan. 11; Gaz. vol. 222; p. 672.
Knitting-machine yarn-feeding mechanism. E. E. Randall. No. 1,168,549; Jan. 18; Gaz. vol. 222; p. 832.
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Labeling-machine. H. M. A. Harders. No. 1,167,496; Jan. 11; Gaz. vol. 222; p. 431.
Labeling-machine. L. C. Palmer. No. 1,166,780; Jan. 4; Gaz. vol. 222; p. 129.
Labeling machine, Can-. C. W. Blackstone. No. 1,168,476; Jan. 18; Gaz. vol. 222; p. 807.
Labeling radiographs, Means for. A. De Yoanna. No. 1,168,177; Jan. 11; Gaz. vol. 222; p. 667.
Lacquering purposes, Liquid composition for. O. Schmidt, T. Eichler, and O. Allemann. No. 1,166,790; Jan. 4; Gaz. vol. 222; p. 133.
Ladder. N. E. Beardorff. No. 1,166,747; Jan. 4; Gaz. vol. 222; p. 117.
Ladder, Adjustable step-. C. S. Waltower. No. 1,169,700; Jan. 25; Gaz. vol. 222; p. 1271.
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Ladles and the like, Multiple-pouring attachment for. F. A. King. No. 1,169,653; Jan. 25; Gaz. vol. 222; p. 1255.
Lamp and the like bracket, Electric-. T. D. Finizio. No. 1,166,753; Jan. 4; Gaz. vol. 222; p. 120.
Lamp, Automobile tail-. M. B. Danhelser. No. 1,167,546; Jan. 11; Gaz. vol. 222; p. 448.
Lamp, Battery-. N. Kribs. No. 1,168,892; Jan. 18; Gaz. vol. 222; p. 952.
Lamp, Battery-. F. W. Wakefield. No. 1,168,351; Jan. 18; Gaz. vol. 222; p. 763.
Lamp-burner. B. S. Hyatt. No. 1,166,590; Jan. 4; Gaz. vol. 222; p. 63.
Lamp-burner. S. H. Patterson. No. 1,167,212; Jan. 4; Gaz. vol. 222; p. 278.
Lamp-burner attachment. C. E. Giberson. No. 1,169,631; Jan. 25; Gaz. vol. 222; p. 1248.
Lamp-chimney attachment. D. A. Merritt. No. 1,168,733; Jan. 18; Gaz. vol. 222; p. 898.
Lamp-clamping socket. R. B. Benjamin. No. 1,167,473; Jan. 11; Gaz. vol. 222; p. 423.
Lamp, Dirigible. F. Keelin. No. 1,167,761; Jan. 11; Gaz. vol. 222; p. 522.
Lamp, Electric cluster-. T. O'Donnell. No. 1,169,346; Jan. 25; Gaz. vol. 222; p. 1145.
Lamp, Electric filament-. T. O'Donnell. No. 1,168,411; Jan. 18; Gaz. vol. 222; p. 783.
Lamp fixture, Electric-. O. E. Cook. No. 1,166,815; Jan. 4; Gaz. vol. 222; p. 141.
Lamp-holding attachment for miners' caps. L. M. Ashley, Jr. No. 1,168,700; Jan. 18; Gaz. vol. 222; p. 887.
Lamp, Miner's. J. S. Sherman. No. 1,167,942; Jan. 11; Gaz. vol. 222; p. 587.
Lamp mounting, Electric-. A. Fornander. No. 1,168,619; Jan. 18; Gaz. vol. 222; p. 857.
Lamp mounting, Electric-. A. Fornander. No. 1,168,620; Jan. 18; Gaz. vol. 222; p. 858.
Lamp, Portable electric. H. M. Greist. No. 1,169,394; Jan. 25; Gaz. vol. 222; p. 1162.
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Lamp receptacle, Electric-. G. A. Gauthier. No. 1,168,190; Jan. 11; Gaz. vol. 222; p. 671.
Lamp-shade. H. K. Ritter. No. 1,168,422; Jan. 18; Gaz. vol. 222; p. 787.
Lamp-socket. A. C. McWilliams. No. 1,167,579; Jan. 11; Gaz. vol. 222; p. 460.
Lamp-sockets and the like, Means for insulating. M. Matson. No. 1,168,258; Jan. 11; Gaz. vol. 222; p. 696.
Lamp-support, Adjustable. L. E. Nelson. No. 1,169,345; Jan. 25; Gaz. vol. 222; p. 1144.
Lamp-supports and the like, Ball-joint for. T. D. Finizio. No. 1,166,752; Jan. 4; Gaz. vol. 222; p. 119.
Lamp, Vapor-. J. E. Lockwood. No. 1,169,411; Jan. 25; Gaz. vol. 222; p. 1167.
Lamp with concentrated metallic filament, Incandescent. H. J. Jaeger. No. 1,168,077; Jan. 11; Gaz. vol. 222; p. 634.
Lamps, Maintaining the efficiency of metallic-filament. A. J. Liebmann. No. 1,166,464; Jan. 4; Gaz. vol. 222; p. 18.
Landing-mat. W. F. Bowers. No. 1,166,811; Jan. 4; Gaz. vol. 222; p. 140.
Lantern, Electric. W. P. Hartford and C. M. Rickoff. No. 1,168,724; Jan. 18; Gaz. vol. 222; p. 895.
Lantern, Electric. J. G. Peterson. No. 1,168,826; Jan. 18; Gaz. vol. 222; p. 931.
Lantern, Tubular. J. Barnes. No. 1,167,735; Jan. 11; Gaz. vol. 222; p. 514.
Lantern, Tubular. J. Barnes. No. 1,167,736; Jan. 11; Gaz. vol. 222; p. 514.
Last, Machine for working an upper on a. E. I. La Chapelle. No. 1,168,011; Jan. 11; Gaz. vol. 222; p. 611.
Last, Machine for working an upper on a. E. I. La Chapelle. No. 1,168,012; Jan. 11; Gaz. vol. 222; p. 612.
Lasts, Device for placing and retaining insoles on. L. S. Wignot. No. 1,166,957; Jan. 4; Gaz. vol. 222; p. 189.
Lasting-machine. G. Bergman. No. 1,168,470; Jan. 18; Gaz. vol. 222; p. 805.
Lasting-machine. A. Perri. No. 1,168,963; Jan. 18; Gaz. vol. 222; p. 978.
Latch. J. H. Lawrence. No. 1,166,998; Jan. 4; Gaz. vol. 222; p. 203.
Latch for elevator-doors, Safety-. C. O. Marx. No. 1,167,194; Jan. 4; Gaz. vol. 222; p. 272.
Latch, Gate-. F. H. Bogda. No. 1,167,477; Jan. 11; Gaz. vol. 222; p. 425.
Latch, Gate-. J. H. Tausch. No. 1,168,234; Jan. 11; Gaz. vol. 222; p. 686.
Latch, Magnetic. F. A. Schoenle. No. 1,167,318; Jan. 4; Gaz. vol. 222; p. 315.
Lathe. A. E. Chernack. No. 1,168,162; Jan. 11; Gaz. vol. 222; p. 662.
Lathe and drill, Combined. A. M. McGill. No. 1,167,091; Jan. 4; Gaz. vol. 222; p. 235.
Lathe taper attachment. C. Nordstrom and F. H. Schwalbold. No. 1,168,326; Jan. 18; Gaz. vol. 222; p. 754.
Lathes, Bar-holder for. G. Amborn. No. 1,166,804; Jan. 4; Gaz. vol. 222; p. 138.
Lathes, Carriage-cross-feed stop mechanism for. E. R. Seward. No. 1,168,683; Jan. 18; Gaz. vol. 222; p. 881.
Lathes, Milling attachment for. G. L. Anderson and C. D. Bacon. No. 1,167,612; Jan. 11; Gaz. vol. 222; p. 472.
Lathering device. G. Zingali. No. 1,169,712; Jan. 25; Gaz. vol. 222; p. 1274.
Lavatory appliance. G. H. Barker. No. 1,168,375; Jan. 18; Gaz. vol. 222; p. 771.
Lawn-trimmer. F. J. Butler. No. 1,169,002; Jan. 18; Gaz. vol. 222; p. 990.
Leaching-tank. H. H. Stout. No. 1,169,205; Jan. 25; Gaz. vol. 222; p. 1098.
Lead, Manufacturing arsenate of. E. O. Barstow. No. 1,169,114; Jan. 25; Gaz. vol. 222; p. 1066.
Lead, Preparing chromates of. A. S. Ramage. No. 1,168,417; Jan. 18; Gaz. vol. 222; p. 785.
Lead sulfate, Preparing-. A. S. Ramage. No. 1,168,418; Jan. 18; Gaz. vol. 222; p. 785.
Leads of nets, &c., Molding-machine for. E. Maunula. No. 1,166,703; Jan. 4; Gaz. vol. 222; p. 104.
Leaf holder, Loose-. J. Eifel. No. 1,167,639; Jan. 11; Gaz. vol. 222; p. 482.
Leaf-turner. J. B. Albert. No. 1,166,803; Jan. 4; Gaz. vol. 222; p. 138.
Leather and making it, Flexible waterproof. J. W. Barber. No. 1,167,326; Jan. 4; Gaz. vol. 222; p. 318.
Leather and making same, Impregnated. R. A. Marr. No. 1,166,846; Jan. 4; Gaz. vol. 222; p. 152.
Leather and product thereof, Treating. R. A. Marr. No. 1,166,845; Jan. 4; Gaz. vol. 222; p. 152.
Leather-blank-cutting die. M. Hagstrom. No. 1,168,800; Jan. 18; Gaz. vol. 222; p. 922.

Leather-cutter. C. Unruh. No. 1,168,767; Jan. 18; Gaz. vol. 222; p. 910.
Leather welting, Waterproof. J. W. Barber. No. 1,167,328; Jan. 4; Gaz. vol. 222; p. 318.
Lens-polishing machine. H. W. Hill. No. 1,166,639; Jan. 4; Gaz. vol. 222; p. 81.
Letter-opening machine. E. T. Hendee. No. 1,167,999; Jan. 11; Gaz. vol. 222; p. 607.
Level and plumb, Combined. G. W. Caswell and C. E. Welt. No. 1,169,005; Jan. 18; Gaz. vol. 222; p. 992.
Lever, Foldable. H. N. Faas and J. Eppley. No. 1,168,382; Jan. 18; Gaz. vol. 222; p. 774.
Lever, Locking-. A. C. Smith and F. E. Henry. No. 1,168,973; Jan. 18; Gaz. vol. 222; p. 981.
Lever-locking device. C. R. Saunders. No. 1,167,600; Jan. 11; Gaz. vol. 222; p. 468.
Lever mechanism. W. A. Paul. No. 1,168,824; Jan. 18; Gaz. vol. 222; p. 930.
Lever mechanism, Throttle-. F. E. Russell. No. 1,166,787; Jan. 4; Gaz. vol. 222; p. 132.
Lever, Starting-. J. Hutter. No. 1,167,562; Jan. 11; Gaz. vol. 222; p. 455.
Lid for boxed goods, Supplemental. E. Reukauf. No. 1,167,220; Jan. 4; Gaz. vol. 222; p. 281.
Life-raft. M. Szür. No. 1,169,299; Jan. 25; Gaz. vol. 222; p. 1129.
Life-saving appliance. A. C. Rasmussen. No. 1,167,930; Jan. 11; Gaz. vol. 222; p. 583.
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Lifting device. J. Harrigan. No. 1,167,064; Jan. 4; Gaz. vol. 222; p. 226.
Lifting-jack. S. C. Applewhite. No. 1,168,994; Jan. 18; Gaz. vol. 222; p. 988.
Lifting-jack. E. A. Wengler. No. 1,166,729; Jan. 4; Gaz. vol. 222; p. 112.
Lifts and for building heel-blanks therefrom, Machine for cutting pieced. D. Parks. No. 1,167,107; Jan. 4; Gaz. vol. 222; p. 241.
Light: *See*—
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Light-dimmer. C. K. Greenleaf. No. 1,167,748; Jan. 11; Gaz. vol. 222; p. 518.
Lighting device. M. E. Winans. No. 1,166,873; Jan. 4; Gaz. vol. 222; p. 161.
Lighting-fixture. H. C. Adam. No. 1,166,878; Jan. 4; Gaz. vol. 222; p. 163.
Lighting-fixture. F. W. Wakefield. No. 1,168,350; Jan. 18; Gaz. vol. 222; p. 763.
Lighting-fixture. E. C. White. No. 1,168,839; Jan. 18; Gaz. vol. 222; p. 935.
Lightning-arrester. A. J. Bowie, Jr. No. 1,168,595; Jan. 18; Gaz. vol. 222; p. 848.
Line, Artificial. R. S. Hoyt. No. 1,167,693; Jan. 11; Gaz. vol. 222; p. 500.
Line, Artificial. R. S. Hoyt. No. 1,167,694; Jan. 11; Gaz. vol. 222; p. 501.
Lineman's tool. S. Jones. No. 1,167,760; Jan. 11; Gaz. vol. 222; p. 522.
Link heater, Fusible-. E. T. Copeland. No. 1,167,481; Jan. 11; Gaz. vol. 222; p. 426.
Link-motion. C. F. Root. No. 1,167,114; Jan. 4; Gaz. vol. 222; p. 244.
Linotype-machine. W. E. Bertram. No. 1,168,243; Jan. 11; Gaz. vol. 222; p. 690.
Linotype-machine. W. E. Bertram. No. 1,168,244; Jan. 11; Gaz. vol. 222; p. 690.
Lip-retractor. F. Spurr. No. 1,168,574; Jan. 18; Gaz. vol. 222; p. 841.
Liquid-dispensing apparatus. D. W. Flint. No. 1,168,717; Jan. 18; Gaz. vol. 222; p. 893.
Liquid-dispensing apparatus. R. G. Marsh. No. 1,169,337; Jan. 25; Gaz. vol. 222; p. 1141.
Liquid-meter. T. F. Mulligan. No. 1,168,537; Jan. 18; Gaz. vol. 222; p. 828.
Liquid, Raising or forcing. H. A. Humphrey. No. 1,169,540; Jan. 25; Gaz. vol. 222; p. 1214.
Liquid-sampler. W. Rorrison. No. 1,166,717; Jan. 4; Gaz. vol. 222; p. 108.
Liquids, Distribution system for inflammable. J. F. Rolland and P. A. P. Mauclère. No. 1,168,744; Jan. 18; Gaz. vol. 222; p. 901.
Liquids, Pasteurizing. L. J. Crecellus. No. 1,168,789; Jan. 18; Gaz. vol. 222; p. 918.
Lister and fertilizer-distributer, Combined. J. H. Buffaloe. No. 1,168,158; Jan. 11; Gaz. vol. 222; p. 661.
Load-adjuster, Automatic. L. H. Flanders. No. 1,168,263; Jan. 11; Gaz. vol. 222; p. 698.
Load-handling apparatus. G. Kellgren. No. 1,168,811; Jan. 18; Gaz. vol. 222; p. 926.
Load-transfer apparatus. T. S. Miller. No. 1,167,586; Jan. 11; Gaz. vol. 222; p. 463.
Loading and unloading apparatus. H. M. Peightel. No. 1,168,825; Jan. 18; Gaz. vol. 222; p. 930.
Loading-coil and case therefor. S. B. Kent. No. 1,168,312; Jan. 18; Gaz. vol. 222; p. 748.
Loading earth and like materials, Machine for. A. C. E. Roberts. No. 1,169,569; Jan. 25; Gaz. vol. 222; p. 1224.
Loading-machine. D. F. Geiger. No. 1,166,897; Jan. 4; Gaz. vol. 222; p. 169.
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Lock. R. P. Bennett. No. 1,168,242; Jan. 11; Gaz. vol. 222; p. 689.
Lock. N. B. Hurd. No. 1,168,725; Jan. 18; Gaz. vol. 222; p. 896.
Lock. N. B. Hurd. No. 1,169,541. Jan. 25; Gaz. vol. 222; p. 1215.
Lock, C. N. Lowell. No. 1,169,659; Jan. 25; Gaz. vol. 222; p. 1258.
Lock. A. A. Page. No. 1,169,184; Jan. 25; Gaz. vol. 222; p. 1091.
Lock. D. D. Rock. No. 1,166,634; Jan. 4; Gaz. vol. 222; p. 79.
Lock. J. H. Shaw. No. 1,167,529; Jan. 11; Gaz. vol. 222; p. 443.
Lock. W. J. Smith. No. 1,168,685; Jan. 18; Gaz. vol. 222; p. 882.
Lock. W. E. Sparks. No. 1,167,533; Jan. 11; Gaz. vol. 222; p. 444.
Lock. G. A. Wehner. No. 1,168,132; Jan. 11; Gaz. vol. 222; p. 652.
Lock and latch. J. O. Kafader and F. Kerr. No. 1,169,649; Jan. 25; Gaz. vol. 222; p. 1255.
Lock dial, Combination-. W. T. Bonham. No. 1,166,883; Jan. 4; Gaz. vol. 222; p. 165.
Lock-joint. G. W. Fink. No. 1,166,894; Jan. 4; Gaz. vol. 222; p. 168.
Lock-joint. G. Williams. No. 1,166,872; Jan. 4; Gaz. vol. 222; p. 161.
Locking-clamp for gates and the like. I. L. Landis. No. 1,167,828; Jan. 11; Gaz. vol. 222; p. 545.
Locomotive. W. M. Fawcett. No. 1,166,751; Jan. 4; Gaz. vol. 222; p. 119.
Locomotive. W. F. Kiesel, Jr. No. 1,166,695; Jan. 4; Gaz. vol. 222; p. 102.
Locomotive. W. F. Kiesel, Jr. No. 1,166,696; Jan. 4; Gaz. vol. 222; p. 102.
Locomotive and tender. W. M. Fawcett. No. 1,169,141; Jan. 25; Gaz. vol. 222; p. 1076.
Locomotive-tank connections, Dirt trap and strainer for. W. F. Potts. No. 1,169,053; Jan. 18; Gaz. vol. 222; p. 1006.
Logging-car. B. Magor. No. 1,166,468; Jan. 4; Gaz. vol. 222; p. 20.
Loom, Filling-replenishing. A. E. Rhoades. No. 1,167,363; Jan. 4; Gaz. vol. 222; p. 332.
Loom, Harnessless. A. C. Greiner. No. 1,167,401; Jan. 11; Gaz. vol. 222; p. 399.
Loom-shuttle, Self-threading. H. W. Hakes. No. 1,168,628; Jan. 18; Gaz. vol. 222; p. 862.
Looms, Feeler device for filling-replenishing. A. E. Rhoades. No. 1,167,364; Jan. 4; Gaz. vol. 222; p. 333.
Lubricating device. J. H. Van Sinderen. No. 1,166,795; Jan. 4; Gaz. vol. 222; p. 135.
Lubricating device, Automatic. C. L. Van Norsdall. No. 1,168,129; Jan. 11; Gaz. vol. 222; p. 651.
Lubricating internal-combustion-engines, Apparatus for. C. H. Cooper. No. 1,166,816; Jan. 4; Gaz. vol. 222; p. 142.
Lubricating-pintle. B. Rudolff. No. 1,168,568; Jan. 18; Gaz. vol. 222; p. 839.
Lubricating system for steam-engines. E. J. Armstrong. No. 1,166,421; Jan. 4; Gaz. vol. 222; p. 3.
Lubricating-system indicator. G. W. Morris. No. 1,168,953; Jan. 18; Gaz. vol. 222; p. 974.
Lubricator: *See*—
Air-pressure lubricator. Shock-absorber lubricator.
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Lubricator. C. S. Barnard. No. 1,168,590; Jan. 18; Gaz. vol. 222; p. 846.
Lubricator. H. G. Haupt and C. K. Claus. No. 1,169,482; Jan. 25; Gaz. vol. 222; p. 1193.
Lubricator. E. A. and J. E. Jones. No. 1,168,508; Jan. 18; Gaz. vol. 222; p. 817.
Lubricator. G. R. Kennedy. No. 1,168,646; Jan. 18; Gaz. vol. 222; p. 869.
Lubricator. F. Le Roy. No. 1,167,829; Jan. 11; Gaz. vol. 222; p. 546.
Lubricator. J. L. Wayne, 3d. No. 1,166,643; Jan. 4; Gaz. vol. 222; p. 82.
Machine-controlling mechanism. H. E. White. No. 1,167,865; Jan. 11; Gaz. vol. 222; p. 559.
Machine-tool control. A. L. De Leeuw. No. 1,166,974; Jan. 4; Gaz. vol. 222; p. 194.
Magazine-cover. H. W. J. Gruettner. No. 1,168,392; Jan. 18; Gaz. vol. 222; p. 777.
Magazine-wrapping machine. D. S. Baird. No. 1,166,737; Jan. 4; Gaz. vol. 222; p. 114.
Magnet, Alternating-current. W. D. Lutz. No. 1,166,699; Jan. 4; Gaz. vol. 222; p. 103.
Magnetic apparatus. G. P. Finnigan. No. 1,169,475; Jan. 25; Gaz. vol. 222; p. 1190.

Magnetic connection. F. Short. No. 1,168,037; Jan. 11; Gaz. vol. 222; p. 620.
Magneto-machine. W. Brown. No. 1,169,612; Jan. 25; Gaz. vol. 222; p. 1241.
Mail-bag-delivering apparatus. F. W. Higgins. No. 1,166,587; Jan. 4; Gaz. vol. 222; p. 62.
Mail-box. M. Neidermeyer. No. 1,166,472; Jan. 4; Gaz. vol. 222; p. 21.
Mail-box. W. Wyatt. No. 1,168,138; Jan. 11; Gaz. vol. 222; p. 655.
Mail-box signal. A. Sinicki. No. 1,168,971; Jan. 18; Gaz. vol. 222; p. 980.
Mail catching and delivering mechanism. J. P. Sander. No. 1,167,936; Jan. 11; Gaz. vol. 222; p. 585.
Mailing device. M. P. Kenna. No. 1,166,767; Jan. 4; Gaz. vol. 222; p. 125.
Malt-turning machine. J. F. O'Brien. No. 1,167,362; Jan. 4; Gaz. vol. 222; p. 332.
Mandrel, Expansion-. J. Enoch. No. 1,168,794; Jan. 18; Gaz. vol. 222; p. 920.
Manger for animal-pens. W. Louden. No. 1,169,412; Jan. 25; Gaz. vol. 222; p. 1167.
Manure-spreaders, Straw-spreading attachment for. B. F. Reichenberger. No. 1,166,632; Jan. 4; Gaz. vol. 222; p. 78.
Marine motor. L. A. Dougherty. No. 1,166,749; Jan. 4; Gaz. vol. 222; p. 118.
Marking, registering, and record-printing machine. F. F. Akerly. No. 1,167,733; Jan. 11; Gaz. vol. 222; p. 513.
Marking webs of fabric, paper, and the like, Machine for. E. Kessler. No. 1,169,495; Jan. 25; Gaz. vol. 222; p. 1198.
Mash and strainer tank machine. A. R. Keller. No. 1,166,599; Jan. 4; Gaz. vol. 222; p. 66.
Mat: *See*—
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Match-box. S. Perse and R. Mausser. No. 1,168,670; Jan. 18; Gaz. vol. 222; p. 877.
Match-box holder. H. R. Houghton. No. 1,167,072; Jan. 4; Gaz. vol. 222; p. 228.
Match folder, Safety-. O. J. Friedman. No. 1,167,990; Jan. 11; Gaz. vol. 222; p. 604.
Match-impregnating machine. J. H. Weaver and A. D. Welker. No. 1,167,323; Jan. 4; Gaz. vol. 222; p. 317.
Match-machine. A. Kelley. No. 1,168,311; Jan. 18; Gaz. vol. 222; p. 748.
Match-machine block-feeding mechanism. J. C. Donnelly. No. 1,168,864; Jan. 18; Gaz. vol. 222; p. 943.
Match-machine discharging mechanism. J. C. Donnelly. No. 1,168,863; Jan. 18; Gaz. vol. 222; p. 943.
Match-making machinery. A. Kelley. No. 1,168,310; Jan. 18; Gaz. vol. 222; p. 747.
Match-packing machine. M. Paridon. No. 1,168,906; Jan. 18; Gaz. vol. 222; p. 958.
Match-packing machines, Box-tray carrier for. M. Paridon. No. 1,168,905; Jan. 18; Gaz. vol. 222; p. 957.
Match-pocket. M. R. Crossman. No. 1,167,799; Jan. 11; Gaz. vol. 222; p. 535.
Match-splint and producing the same, Treated. W. A. Fairburn. No. 1,168,869; Jan. 18; Gaz. vol. 222; p. 945.
Match-splints, Treating. J. R. Nolan. No. 1,168,901; Jan. 18; Gaz. vol. 222; p. 956.
Match-stick-impregnating machine. E. J. Young and A. D. Welker. No. 1,167,324; Jan. 4; Gaz. vol. 222; p. 317.
Matches, Book-. J. R. Nolan. No. 1,168,900; Jan. 18; Gaz. vol. 222; p. 956.
Matrix. D. Petri-Palmedo. No. 1,167,427; Jan. 11; Gaz. vol. 222; p. 409.
Mattress, Supplementary. M. P. Fleming. No. 1,167,989; Jan. 11; Gaz. vol. 222; p. 604.
Mausoleum. W. A. Clock. No. 1,167,888; Jan. 11; Gaz. vol. 222; p. 567.
Maximum-indicator. C. G. Durfee. No. 1,167,157; Jan. 4; Gaz. vol. 222; p. 259.
Measuring capacities, System for. G. A. Campbell, O. B. Blackwell, and E. H. Colpitts. No. 1,167,677; Jan. 11; Gaz. vol. 222; p. 495.
Measuring device, Fabric-. A. C. Chisholm. No. 1,166,969; Jan. 4; Gaz. vol. 222; p. 193.
Measuring device, Liquid-. H. Pein. No. 1,168,327; Jan. 18; Gaz. vol. 222; p. 754.
Measuring feet, lasts, and the like, Apparatus for. A. H. Church. No. 1,167,269; Jan. 4; Gaz. vol. 222; p. 297.
Measuring instrument. T. Chabre. No. 1,168,853; Jan. 18; Gaz. vol. 222; p. 940.
Measuring instrument. J. Schuman. No. 1,168,431; Jan. 18; Gaz. vol. 222; p. 789.
Measuring instrument. C. L. Watkins. No. 1,166,501; Jan. 4; Gaz. vol. 222; p. 32.
Measuring instrument, Amplifying. F. O. Jacques, Sr. No. 1,167,644; Jan. 11; Gaz. vol. 222; p. 483.
Measuring instrument or tool. F. M. Dannenfelser. No. 1,166,512; Jan. 4; Gaz. vol. 222; p. 36.
Measuring-machine. F. K. Fassett. No. 1,168,615; Jan. 18; Gaz. vol. 222; p. 856.
Measuring steam and other fluids, Device for. M. Gehre. No. 1,166,980; Jan. 4; Gaz. vol. 222; p. 196.
Meat fiber, Making sterilized granulated. C. Marchand. No. 1,167,193; Jan. 4; Gaz. vol. 222; p. 272.
Meat and bone cutting machine. A. M. Newell. No. 1,168,822; Jan. 18; Gaz. vol. 222; p. 929.
Meat-tenderer. E. W. Heck. No. 1,166,681; Jan. 4; Gaz. vol. 222; p. 97.
Mechanical movement. E. Erickson. No. 1,169,715; Jan. 25; Gaz. vol. 222; p. 1275.
Mechanical movement. J. E. Hires. No. 1,167,179; Jan. 4; Gaz. vol. 222; p. 267.
Mechanical movement. J. W. Maughmer. No. 1,168,091; Jan. 11; Gaz. vol. 222; p. 640.
Medicinal extract of aperient drugs. R. Tambach. No. 1,167,230; Jan. 4; Gaz. vol. 222; p. 284.
Memorial, Sepulchral. A. W. Graham. No. 1,167,291; Jan. 4; Gaz. vol. 222; p. 305.
Memorial, Sepulchral. A. W. Graham. No. 1,167,292; Jan. 4; Gaz. vol. 222; p. 305.
Mercury preparation for therapeutic purposes. H. Buchtala. No. 1,167,622; Jan. 11; Gaz. vol. 222; p. 476.
Metal and glass or the like, Structure of. A. J. Cross. No. 1,167,798; Jan. 11; Gaz. vol. 222; p. 535.
Metal articles heated by the combustion of powdered coal, Protecting. W. P. Barba. No. 1,167,472; Jan. 11; Gaz. vol. 222; p. 423.
Metal articles with fibrous material, Method and apparatus for covering rigid. J. H. Caffrey. No. 1,168,599; Jan. 18; Gaz. vol. 222; p. 849.
Metal fabric. S. C. Cary. No. 1,167,794; Jan. 11; Gaz. vol. 222; p. 534.
Metal filling-board. F. Davis. No. 1,167,548; Jan. 11; Gaz. vol. 222; p. 449.
Metal-forming machine. W. Clusattel. No. 1,166,814; Jan. 4; Gaz. vol. 222; p. 141.
Metal frame structure. E. A. Clark. No. 1,169,461; Jan. 25; Gaz. vol. 222; p. 1186.
Metal insulated against electrolysis and corrosion and making the same, Rigid piece of. P. M. Stewart. No. 1,167,949; Jan. 11; Gaz. vol. 222; p. 590.
Metal-shearing machine. C. D. McDonald. No. 1,169,332; Jan. 25; Gaz. vol. 222; p. 1140.
Metal-shearing machine. C. D. McDonald. No. 1,169,333; Jan. 25; Gaz. vol. 222; p. 1140.
Metal, Treating impure bismuth. W. C. Smith. No. 1,166,721; Jan. 4; Gaz. vol. 222; p. 109.
Metal-working. N. E. Clark. No. 1,166,888; Jan. 4; Gaz. vol. 222; p. 166.
Metals, Method of and means for melting. F. Shuman. No. 1,167,944; Jan. 11; Gaz. vol. 222; p. 588.
Metals, such as lead or zinc, in an electric furnace, Obtaining. A. Heifenstein. No. 1,167,998; Jan. 11; Gaz. vol 222; p. 607.
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Meter: *See*—
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Microscope. H. N. Ott. No. 1,167,425; Jan. 11; Gaz. vol. 222; p. 408.
Military shoulder-arm. T. C. Johnson. No. 1,166,910; Jan. 4; Gaz. vol. 222; p. 173.
Military shoulder-arm. T. C. Johnson. No. 1,169,543; Jan. 25; Gaz. vol. 222; p. 1216.
Milk-testing tube. H. Jone. No. 1,168,644; Jan. 18; Gaz. vol. 222; p. 868.
Milking-machine. J. F. Lemon and S. A. MacDonald. No. No. 1,168,016; Jan. 11; Gaz. vol. 222; p. 614.
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Mine-cage. P. W. Holstein. No. 1,168,501; Jan. 18; Gaz. vol. 222; p. 815.
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Mines at a predetermined depth independently of the bottom of the sea, Device for automatically anchoring submarine. E. G. Ellis. No. 1,167,278; Jan. 4; Gaz. vol. 222; p. 300.
Mineral substances, Treating. S. W. Osgood. No. 1,169,506; Jan. 25; Gaz. vol. 222; p. 1202.
Miter-box. W. P. Callahan. No. 1,167,478; Jan. 11; Gaz. vol. 222; p. 425.
Mitering-clamp. A. Niblen. No. 1,169,671; Jan. 25; Gaz. vol. 222; p. 1261.
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Mixing-machine. R. P. Wilton. No. 1,166,568; Jan. 4; Gaz. vol. 222; p. 56.
Moistener. C. R. Hanson. No. 1,167,819; Jan. 11; Gaz. vol. 222; p. 542.
Moistening and printing gum-tape, Apparatus for. G. L. Hogan. No. 1,167,301; Jan. 4; Gaz. vol. 222; p. 308.
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Mold-form. P. Clawson. No. 1,167,797; Jan. 11; Gaz. vol. 222; p. 535.
Molds, Making. J. C. Davis. No. 1,167,889; Jan. 11; Gaz. vol. 222; p. 568.
Molds, Making. A. S. Reeder. No. 1,166,934; Jan. 4; Gaz. vol. 222; p. 181.
Molded article. J. W. Aylsworth. No. 1,167,468; Jan. 11; Gaz. vol. 222; p. 422.

Molded articles, Machine for trimming the fin or overflow from. D. R. Campbell. No. 1,167,976; Jan. 11; Gaz. vol. 222; p. 599.
Molding a compressed-fiber composition. F. Skalla. No. 1,168,831; Jan. 18; Gaz. vol. 222; p. 932.
Molding apparatus. H. Lehmann. No. 1,166,842; Jan. 4; Gaz. vol. 222; p. 151.
Molding blade and saw. J. C. De Laney. No. 1,167,801; Jan. 11; Gaz. vol. 222; p. 536.
Molding-machine. J. C. De Laney. No. 1,167,802; Jan. 11; Gaz. vol. 222; p. 536.
Molding-machine. A. C. Tuuison. No. 1,166,562; Jan. 4; Gaz. vol 222; p. 54.
Molding-machine clamping mechanism. G. C. Batten. No. 1,167,877; Jan. 11; Gaz. vol. 222; p. 563;
Monoplane. F. J. Maronka. No. 1,167,581; Jan. 11; Gaz. vol. 222; p. 461.
Monorail system. P. English. No. 1,167,892; Jan. 11; Gaz. vol. 222; p. 569.
Mooring-hook. H. A. Symes. No. 1,168,126; Jan. 11; Gaz. vol. 222; p. 650.
Mopping device. W. C. Reding. No. 1,167,815; Jan. 4; Gaz. vol. 222; p. 314.
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Motor. E. E. Hauer. No. 1,167,995; Jan. 11; Gaz. vol. 222; p. 606.
Motor. E. E. Hauer. No. 1,167,997; Jan. 11; Gaz. vol. 222; p. 606.
Motor-control system. H. L. Beach. No. 1,168,048; Jan. 11; Gaz. vol. 222; p. 624.
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Motor controller, Door-. J. F. McElroy. No. 1,168,406; Jan. 18; Gaz. vol. 222; p. 782.
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Motor starter, Induction-. P. R. Elguth. No. 1,167,486; Jan. 11; Gaz. vol. 222; p. 427.
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Motors, Starting synchronous polyphase. C. J. Fechheimer. No. 1,168,383; Jan. 18; Gaz. vol. 222; p. 774.
Mower attachment. L. Franzmeier. No. 1,168,384; Jan. 18; Gaz. vol. 222; p. 774.
Mower, Lawn-. R. Oters. No. 1,166,474; Jan. 4; Gaz. vol. 222; p. 22.
Mowing-machine seed-harvesting attachment. R. Peck. No. 1,167,213; Jan. 4; Gaz. vol. 222; p. 278.
Muffler. G. W. Howell. No. 1,167,822; Jan. 11; Gaz. vol. 222; p. 543.
Muffler, Silencing-. L. V. Hardy. No. 1,169,030; Jan. 18; Gaz. vol. 222; p. 1000.
Music-leaf turner. A. Gasperetti and C. Dalboni. No. 1,169,144; Jan. 25; Gaz. vol. 222; p. 1077.
Music-leaf turner. A. J. Westenhaver. No. 1,168,984; Jan. 18; Gaz. vol. 222; p. 985.
Music-lyre. F. A. Bua. No. 1,167,266; Jan. 4; Gaz. vol. 222; p. 296.
Music-rack. R. W. Cathcart and J. P. Carpenter. No. 1,167,383; Jan. 11; Gaz. vol. 222; p. 393.
Music-sheets, Making perforated. P. J. Meahl. No. 1,166,618; Jan. 4; Gaz. vol. 222; p. 73.
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Musical instrument, Automatic. C. L. Davis. No. 1,169,132; Jan. 25; Gaz. vol. 222; p. 1072.
Musical-instrument coupler. E. J. Knabe, Jr. No. 1,169,654; Jan. 25; Gaz. vol. 222; p. 1256.
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Musical instrument, Percussion. J. Baker. No. 1,168,843; Jan. 18; Gaz. vol. 222; p. 936.
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Musical sounds, Wireless apparatus for producing and transmitting. G. Desilets. No. 1,166,582; Jan. 4; Gaz. vol. 222; p. 60.
Nail and spike extractor. C. Lechner. No. 1,167,574; Jan. 11; Gaz. vol. 222; p. 459.
Nail machine, Horse-. S. M. Cutter. No. 1,166,890; Jan. 4; Gaz. vol. 222; p. 166.
Napkin-holder. C. H. Rutherford. No. 1,168,679; Jan. 18; Gaz. vol. 222; p. 880.
Neckwear-holder. E. J. Kubicek. No. 1,167,083; Jan. 4; Gaz. vol. 222; p. 232.
Negatives, Producing half-tone. W. R. B. Larsen. No. 1,167,505; Jan. 11; Gaz. vol. 222; p. 434.
Nest, Bar trap-. T. Doree. No. 1,168,178; Jan. 11; Gaz. vol. 222; p. 668.
Nest, Hen's. D. C. Bute. No. 1,168,475; Jan. 18; Gaz. vol. 222; p. 806.
Nest, Hen's. M. T. Sels. No. 1,167,786; Jan. 11; Gaz. vol. 222; p. 531.
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Nipple, Nursing-. H. V. Brumley. No. 1,168,056; Jan. 11; Gaz. vol. 222; p. 627.
Nozzle. F. R. Paine. No. 1,167,712; Jan. 11; Gaz. vol. 222; p. 506.
Nozzle for syringes. R. B. Crump and J. Bernstein. No. 1,166,662; Jan. 4; Gaz. vol. 222; p. 90.
Number and lamp box. L. A. Larson. No. 1,166,608; Jan. 4; Gaz. vol. 222; p. 70.
Nut-lock. L. W. Bailey. No. 1,166,736; Jan. 4; Gaz. vol. 222; p. 114.
Nut-lock. J. A. Corratto and A. A. Zolezzi. No. 1,168,860; Jan. 18; Gaz. vol. 222; p. 942.
Nut-lock. W. R. Dillon. No. 1,168,862; Jan. 18; Gaz. vol. 222; p. 943.
Nut-lock. G. E. Eberly. No. 1,168,613; Jan. 18; Gaz. vol. 222; p. 855.
Nut-lock. C. E. Mentzer. No. 1,167,774; Jan. 11; Gaz. vol. 222; p. 526.
Nut-lock. J. N. G. Nesbit. No. 1,166,538; Jan. 4; Gaz. vol. 222; p. 46.
Nut-lock. H. Robinson. No. 1,168,555; Jan. 18; Gaz. vol. 222; p. 834.
Nut-lock. A. E. Rud. No. 1,167,784; Jan. 11; Gaz. vol. 222; p. 530.
Nut-lock. E. C. Wakeland. No. 1,169,310; Jan. 25; Gaz. vol. 222; p. 1133.
Nut-lock, Brass-screw. H. S. Griffin. No. 1,167,690; Jan. 11; Gaz. vol. 222; p. 500.
Objective. C. H. Florian. No. 1,168,873; Jan. 18; Gaz. vol. 222; p. 946.
Odometer. R. H. Manson. No. 1,169,175; Jan. 25; Gaz. vol. 222; p. 1088.
Oil-burner. A. H. W. Cleave. No. 1,168,856; Jan. 18; Gaz. vol. 222; p. 941.
Oil-burner. W. Melas. No. 1,169,091; Jan. 18; Gaz. vol. 222; p. 1021.
Oil-burner. W. A. Shelly. No. 1,169,433; Jan. 25; Gaz. vol. 222; p. 1175.
Oil-burner. J. H. Welch. No. 1,167,605; Jan. 11; Gaz. vol. 222; p. 470.
Oil-can. A. W. Bell. No. 1,166,739; Jan. 4; Gaz. vol. 222; p. 115.
Oil-gage. E. M. Benford. No. 1,168,468; Jan. 18; Gaz. vol. 222; p. 804.
Oil-hole plug. E. P. Pierce. No. 1,169,189; Jan. 25; Gaz. vol. 222; p. 1092.
Oil-press cakes, Equalizing device for. J. W. Banks. No. 1,169,112; Jan. 25; Gaz. vol. 222; p. 1065.
Oil, Refining. G. M. Holbrook. No. 1,169,154; Jan. 25; Gaz. vol. 222; p. 1080.
Oil, Refining. G. M. Holbrook. No. 1,169,155; Jan. 25; Gaz. vol. 222; p. 1081.
Oil-treating apparatus. C. J. Greenstreet. No. 1,166,982; Jan. 4; Gaz. vol. 222; p. 197.
Oiler for car-wheels, Pneumatic flange-. A. W. Olsen. No. 1,167,514; Jan. 11; Gaz. vol. 222; p. 437.
Oiling device, Hog-. L. W. Leeper. No. 1,167,188; Jan. 4; Gaz. vol. 222; p. 270.
Oiling-machine. W. J. McVicker. No. 1,169,504; Jan. 25; Gaz. vol. 222; p. 1201.
Oiling mechanism, Cream-separator-. E. L. Flowers. No. 1,168,874; Jan. 18; Gaz. vol. 222; p. 946.
Ordnance. J. S. Knowles. No. 1,169,166; Jan. 25; Gaz. vol. 222; p. 1085.
Ordnance. E. Schneider. No. 1,168,681; Jan. 18; Gaz. vol. 222; p. 880.
Ore-agglomerating machine. P. O. Harding. No. 1,166,904; Jan. 4; Gaz. vol. 222; p. 171.
Ore-concentrating apparatus. T. A. Janney. No. 1,167,076; Jan. 4; Gaz. vol. 222; p. 230.
Ore-concentrating means. T. A. Edison. No. 1,167,638; Jan. 11; Gaz. vol. 222; p. 482.
Ore-drying apparatus. J. Q. A. Houghton. No. 1,166,909; Jan. 4; Gaz. vol. 222; p. 173.
Ore-reducing. L. S. Roylance. No. 1,168,678; Jan. 18; Gaz. vol. 222; p. 880.
Ore sintering and smelting apparatus. A. S. Dwight. No. 1,169,384; Jan. 25; Gaz. vol. 222; p. 1158.

Ore treatment, Apparatus for and process of. A. S. Dwight. No. 1,169,139; Jan. 25; Gaz. vol. 222; p. 1075.

Ores, Agglomerating. P. O. Harding. No. 1,166,903; Jan. 4; Gaz. vol. 222; p. 171.

Ores, Apparatus for separating the metallic and rocky constituents of. D. H. Norris. No. 1,167,835; Jan. 11; Gaz. vol. 222; p. 548.

Ores, Apparatus for the treatment of. E. Langguth. No. 1,169,270; Jan. 25; Gaz. vol. 222; p. 1120.

Ores, Desulfurizing and smelting. A. S. Dwight. No. 1,169,069; Jan. 18; Gaz. vol. 222; p. 1012.

Ores, Volatilizing. S. I. Clawson. No. 1,169,530; Jan. 25; Gaz. vol. 222; p. 1211.

Organ, Automatic. M. C. Beman and F. A. Pilcher. No. 1,167,344; Jan. 4; Gaz. vol. 222; p. 324.

Organ-pipe. E. M. Skinner. No. 1,169,687; Jan. 25; Gaz. vol. 222; p. 1266.

Organs, Harp device for. B. G. Austin. No. 1,167,144; Jan. 4; Gaz. vol. 222; p. 254.

Ornamental flocked design. A. Schmidt. No. 1,168,747; Jan. 18; Gaz. vol. 222; p. 903.

Orthodontic appliance. H. E. Kelsey. No. 1,166,766; Jan. 4; Gaz. vol. 222; p. 124.

Oscillations, Apparatus for producing high-frequency. R. A. Fessenden. No. 1,166,892; Jan. 4; Gaz. vol. 222; p. 167.

Oscillations, Producing high-frequency. F. A. Fessenden. No. 1,166,893; Jan. 4; Gaz. vol. 222; p. 168.

Outboard motor. C. A. and O. W. Hult. No. 1,166,523; Jan. 4; Gaz. vol. 222; p. 40.

Oven. L. Vollmer. No. 1,168,769; Jan. 18; Gaz. vol. 222; p. 916.

Oven, Bake-. B. Manischewitz. No. 1,169,555; Jan. 25; Gaz. vol. 222; p. 1219.

Oven-rack. M. Harris. No. 1,168,200; Jan. 11; Gaz. vol. 222; p. 675.

Oven-shelf support. H. C. Bendall. No. 1,166,653; Jan. 4; Gaz. vol. 222; p. 87.

Oven-ventilator. G. A. Swisher. No. 1,169,694; Jan. 25; Gaz. vol. 222; p. 1269.

Ovens, Ash-sifter for bakers'. I. Slapo. No. 1,168,913; Jan. 18; Gaz. vol. 222; p. 960.

Overhead washer for garages and the like. G. A. Collison. No. 1,167,479; Jan. 11; Gaz. vol. 222; p. 425.

Overshoe. F. W. Ostrom. No. 1,169,562; Jan. 25; Gaz. vol. 222; p. 1222.

Oyster-dredges, Apparatus for dumping and throwing. H. L. Lewis. No. 1,169,548; Jan. 25; Gaz. vol. 222; p. 1217.

Package, Moisture-proof. B. A. Condax. No. 1,167,048; Jan. 4; Gaz. vol. 222; p. 221.

Package-roll, Expanded-metal. N. E. Clark. No. 1,169,462; Jan. 25; Gaz. vol. 222; p. 1186.

Package-tie. C. J. Lippold. No. 1,169,044; Jan. 18; Gaz. vol. 222; p. 1004.

Package-tie. W. M. Mansfield. No. 1,169,663; Jan. 25; Gaz. vol. 222; p. 1259.

Package-tie. M. F. Saulmon. No. 1,167,719; Jan. 11; Gaz. vol. 222; p. 508.

Package-tie. D. W. Squire. No. 1,167,227; Jan. 4; Gaz. vol. 222; p. 283.

Packaging-machine. N. M. La Porte. No. 1,169,499; Jan. 25; Gaz. vol. 222; p. 1200.

Packing and making the same. C. L. Hill. No. 1,168,807; Jan. 18; Gaz. vol. 222; p. 925.

Packing and shipping box. J. E. Clenny. No. 1,169,238; Jan. 25; Gaz. vol. 222; p. 1110.

Packing for journals. A. Hirth. No. 1,168,002; Jan. 11; Gaz. vol. 222; p. 608.

Packing-frame. G. E. Emanuel. No. 1,169,471; Jan. 25; Gaz. vol. 222; p. 1189.

Packing, Metallic. R. H. Aldrich. No. 1,168,144; Jan. 11; Gaz. vol. 222; p. 656.

Packing, Metallic. W. H. Holmes. No. 1,166,686; Jan. 4; Gaz. vol. 222; p. 99.

Packing, Metallic. A. O. Van Dervort. No. 1,169,583; Jan. 25; Gaz. vol. 222; p. 1229.

Packing, Piston-. E. F. Williams. No. 1,166,644; Jan. 4; Gaz. vol. 222; p. 83.

Packing, Rotary shaft or rod. S. Orr. No. 1,167,210; Jan. 4; Gaz. vol. 222; p. 278.

Packing structure, Cellular. C. O. Blackwell. No. 1,167,620; Jan. 11; Gaz. vol. 222; p. 475.

Pad: *See*—
Head-rest pad. Horseshoe-pad.
Heel-pad. Sanitary pad.

Padlock. L. A. Brown. No. 1,167,377; Jan. 11; Gaz. vol. 222; p. 391.

Padlock. L. Hee. No. 1,168,884; Jan. 18; Gaz. vol. 222; p. 950.

Padlock. E. J. Shipman. No. 1,168,340; Jan. 18; Gaz. vol. 222; p. 759.

Pail, Dinner-. W. R. Wright. No. 1,167,142; Jan. 4; Gaz. vol. 222; p. 254.

Pail-supporter. F. Vanderlaan. No. 1,168,980; Jan. 18; Gaz. vol. 222; p. 983.

Pails, &c., Securing device for the closures of. J. H. Berry. No. 1,168,148; Jan. 11; Gaz. vol. 222; p. 657.

Paint. S. Lowy. No. 1,168,730; Jan. 18; Gaz. vol. 222; p. 897.

Paint and the like, Spraying device for liquid. G. More and E. W. Spies. No. 1,169,558; Jan. 25; Gaz. vol. 222; p. 1220.

Paint-mixing device. G. P. Fitzsimmons. No. 1,168,618; Jan. 18; Gaz. vol. 222; p. 857.

Pan: *See*—
Baking-pan. Drip-pan.
Bed-pan.

Panel-board, Metering. F. B. Adam. No. 1,168,774; Jan. 18; Gaz. vol. 222; p. 913.

Panel-box. H. J. L. and L. H. Frank. No. 1,169,390; Jan. 25; Gaz. vol. 222; p. 1160.

Pantograph. G. Fenske. No. 1,166,827; Jan. 4; Gaz. vol. 222; p. 146.

Paper. F. H. Coyne. No. 1,168,285; Jan. 18; Gaz. vol. 222; p. 739.

Paper and making it, Opaque stencil-. C. J. Pembroke. No. 1,168,223; Jan. 11; Gaz. vol. 222; p. 682.

Paper box. P. R. Warren. No. 1,168,353; Jan. 18; Gaz. vol. 222; p. 763.

Paper-clip. J. Anderson. No. 1,167,734; Jan. 11; Gaz. vol. 222; p. 514.

Paper, cloth, and the like, Regulating apparatus for drying sheets of. C. Stickle. No. 1,167,029; Jan. 4; Gaz. vol. 222; p. 214.

Paper-curing machine. C. Wagner and A. Hormel. No. 1,167,730; Jan. 11; Gaz. vol. 222; p. 513.

Paper holder, Note-. R. D. Wirt. No. 1,166,507; Jan. 4; Gaz. vol. 222; p. 34.

Paper, Machine for making corrugated. J. E. Kieffer. No. 1,166,992; Jan. 4; Gaz. vol. 222; p. 201.

Paper-making machines, Smoothing-press for. H. R. Harrigan. No. 1,168,629; Jan. 18; Gaz. vol. 222; p. 862.

Paper or like box machinery. D. Nylander and R. Högfeldt. No. 1,166,778; Jan. 4; Gaz. vol. 222; p. 128.

Paper-pulp shredder. G. C. Howard. No. 1,168,503; Jan. 18; Gaz. vol. 222; p. 816.

Paper-pulp-straining machine. W. W. Beaumont. No. 1,166,882; Jan. 4; Gaz. vol. 222; p. 164.

Paper-pulp-treating apparatus. G. C. Howard. No. 1,168,502; Jan. 18; Gaz. vol. 222; p. 815.

Paper receptacle. C. A. Leech. No. 1,166,841; Jan. 4; Gaz. vol. 222; p. 151.

Paper-scraping machine, Wall-. W. J. Brown. No. 1,166,886; Jan. 4; Gaz. vol. 222; p. 165.

Paper towel. W. E. Swift. No. 1,167,603; Jan. 11; Gaz. vol. 222; p. 469.

Paper, Waxing. F. H. Hoberg. No. 1,167,403; Jan. 11; Gaz. vol. 222; p. 400.

Parcel-carrier. G. Bullock. No. 1,167,623; Jan. 11; Gaz. vol. 222; p. 476.

Paring-machine. B. C. Coons. No. 1,168,788; Jan. 18; Gaz. vol. 222; p. 918.

Partition-stud clamp. W. D. Henderson. No. 1,167,899; Jan. 11; Gaz. vol. 222; p. 571.

Paste, Apparatus for drying alimentary. E. Guano. No. 1,168,722; Jan. 18; Gaz. vol. 222; p. 895.

Peanut-stack support. W. C. Bryant. No. 1,167,676; Jan. 11; Gaz. vol. 222; p. 495.

Peat, Gathering. T. Rigby. No. 1,169,679; Jan. 25; Gaz. vol. 222; p. 1264.

Pedestal, Adjustable. W. B. Cogger. No. 1,166,435; Jan. 4; Gaz. vol. 222; p. 8.

Pelt stretching and drying device. J. L. Gibson. No. 1,169,145; Jan. 25; Gaz. vol. 222; p. 1077.

Pen, Duplex fountain-. A. Brochetti and J. Familet. No. 1,166,741; Jan. 4; Gaz. vol. 222; p. 116.

Pen, Fountain-. D. W. Beaumel. No. 1,169,603; Jan. 25; Gaz. vol. 222; p. 1238.

Pen, Fountain-. H. Stein. No. 1,166,863; Jan. 4; Gaz. vol. 222; p. 157.

Pen regulator, Drawing-. M. S. Strock. No. 1,167,228; Jan. 4; Gaz. vol. 222; p. 283.

Pencil attachment. L. M. Gunnerson. No. 1,169,029; Jan. 18; Gaz. vol. 222; p. 999.

Pencil-holder, Safety. C. B. Mercer. No. 1,167,196; Jan. 4; Gaz. vol. 222; p. 273.

Pencil, Magazine-. J. A. Hollenberger. No. 1,167,181; Jan. 4; Gaz. vol. 222; p. 268.

Penholder-grip. C. W. Slocum. No. 1,168,342; Jan. 18; Gaz. vol. 222; p. 760.

Percolator. L. E. Miller. No. 1,167,775; Jan. 11; Gaz. vol. 222; p. 526.

Percolator. A. Zimmermann. No. 1,168,988; Jan. 18; Gaz. vol. 222; p. 986.

Percolator-strainer. J. B. Bleichrode. No. 1,167,259; Jan. 4; Gaz. vol. 222; p. 293.

Percolators, Bracket for glass. R. S. Darling. No. 1,169,013; Jan. 18; Gaz. vol. 222; p. 994.

Perfume and the like container. L. V. Aronson. No. 1,166,806; Jan. 4; Gaz. vol. 222; p. 139.

Permutation-lock. B. V. Clark. No. 1,166,970; Jan. 4; Gaz. vol. 222; p. 193.

Peroxid compounds, Cathodic production of solid. W. Weber. No. 1,169,703; Jan. 25; Gaz. vol. 222; p. 1272.

Petroleum product. W. M. Burton. No. 1,167,884; Jan. 11; Gaz. vol. 222; p. 566.

Phonograph. N. H. Holland. No. 1,167,500; Jan. 11; Gaz. vol. 222; p. 432.

Phonograph-cabinets, Automatic lighting attachment for. F. B. Johnson. No. 1,167,304; Jan. 4; Gaz. vol. 222; p. 309.

Phonograph mechanism. W. Rotter and R. S. Arthur. No. 1,167,842; Jan. 11; Gaz. vol. 222; p. 551.

Phonograph-reproducer. A. F. Gail. No. 1,167,489; Jan. 11; Gaz. vol. 222; p. 429.

Phonograph sound-box. C. W. Waller. No. 1,166,953; Jan. 4; Gaz. vol. 222; p. 187.

Phonograph system for revolving auditoriums. L. E. Meyers. No. 1,166,852; Jan. 4; Gaz. vol. 222; p. 154.

Phonographs, Adapter-stylus for. E. S. Oliver. No. 1,168,412; Jan. 18; Gaz. vol. 222; p. 783.

Phonographic apparatus. N. H. Holland. No. 1,167,501; Jan. 11; Gaz. vol. 222; p. 433.

Phonographic-disk-record cabinet. A. H. Haag. No. 1,167,063; Jan. 4; Gaz. vol. 222; p. 226.

Phosphorus and phosphorus compounds, Blast-furnace process of producing. J. J. Gray, Jr. No. 1,168,495; Jan. 18; Gaz. vol. 222; p. 813.

Phosphorus, Apparatus and process for oxidizing. I. Hechenbleikner. No. 1,167,755; Jan. 11; Gaz. vol. 222; p. 520.

Photographic film, Treating. J. I. Crabtree. No. 1,168,286; Jan. 18; Gaz. vol. 222; p. 739.

Photographic objective, Lens for placing before a. G. Mengel. No. 1,169,731; Jan. 25; Gaz. vol. 222; p. 1281.

Photographic-plate holder for use with X-rays. G. H. White. No. 1,166,797; Jan. 4; Gaz. vol. 222; p. 136.

Photographic-printing apparatus. R. Cilley. No. 1,167,795; Jan. 11; Gaz. vol. 222; p. 534.

Photographic-printing machine. P. A. Friedell. No. 1,168,622; Jan. 18; Gaz. vol. 222; p. 859.

Photographic-printing machine. E. A. Thorberg. No. 1,167,857; Jan. 11; Gaz. vol. 222; p. 556.

Photographic shutter. A. R. McPhee. No. 1,166,921; Jan. 4; Gaz. vol. 222; p. 177.

Photographic work, Producing dot-screens for. W. R. B. Larsen. No. 1,167,506; Jan. 11; Gaz. vol. 222; p. 434.

Photographing apparatus, Automatic. G. N. Pifer. No. 1,167,314; Jan. 4; Gaz. vol. 222; p. 313.

Piano-action. H. L. West. No. 1,167,863; Jan. 11; Gaz. vol. 222; p. 558.

Piano actions, Lost-motion device for player-. A. P. Gustafson. No. 1,169,480; Jan. 25; Gaz. vol. 222; p. 1192.

Piano, Automatic grand. W. J. Keeley. No. 1,168,645; Jan. 18; Gaz. vol. 222; p. 868.

Piano, Means for detaching and supporting the back of a. O. Schwemberger. No. 1,167,436; Jan. 11; Gaz. vol. 222; p. 412.

Piano pedal connection Grand-. L. Avisus. No. 1,166,964; Jan. 4; Gaz. vol. 222; p. 191.

Piano, Player-. H. A. Clausing. No. 1,167,271; Jan. 4; Gaz. vol. 222; p. 298.

Piano, Player-. J. Leisch. No. 1,166,609; Jan. 4; Gaz. vol. 222; p. 70.

Piano-player. E. T. Turney. No. 1,169,440; Jan. 25; Gaz. vol. 222; p. 1178.

Piano-player action. C. L. Davis. No. 1,169,131; Jan. 25; Gaz. vol. 222; p. 1072.

Piano-player, Automatic. H. S. Hornbeck. No. 1,168,396; Jan. 18; Gaz. vol. 222; p. 779.

Piano-players, Actuating mechanism of. E. T. Turney. No. 1,169,442; Jan. 25; Gaz. vol. 222; p. 1179.

Piano-players, Adjustable action for. E. T. Turney. No. 1,169,441; Jan. 25; Gaz. vol. 222; p. 1178.

Piano-players, Pneumatic action for. A. N. Grimes. No. 1,166,455; Jan. 4; Gaz. vol. 222; p. 15.

Piano-players, Pneumatic action for. J. Hillstrom and A. Hawkinson. No. 1,168,001; Jan. 11; Gaz. vol. 222; p. 608.

Piano-players, Pneumatic action for interior. M. Clark. No. 1,169,126; Jan. 25; Gaz. vol. 222; p. 1070.

Pianos, Bellows-operating mechanism for player-. A. Jameson. No. 1,168,264; Jan. 11; Gaz. vol. 222; p. 698

Pianos, Electric-bell attachment for. R. A. Bessinger. No. 1,168,846; Jan. 18; Gaz. vol. 222; p. 937.

Pianos, Means for operating player-. S. R. Harcourt. No. 1,167,752; Jan. 11; Gaz. vol. 222; p. 519.

Pianos, Panel-operator for player-. E. R. Parsons. No. 1,168,109; Jan. 11; Gaz. vol. 222; p. 645.

Pianos, Transmission for player-. G. H. Stant. No. 1,168,435; Jan. 18; Gaz. vol. 222; p. 791.

Picker: *See*—
Cotton-picker. Fruit-picker.

Picture apparatus, Motion-. S. B. Austin. No. 1,169,376; Jan. 25; Gaz. vol. 222; p. 1155.

Picture apparatus, Motion-. F. E. Ives. No. 1,169,161; Jan. 25; Gaz. vol. 222; p. 1083.

Picture apparatus, Moving-. W. C. Martin. No. 1,169,176; Jan. 25; Gaz. vol. 222; p. 1088.

Picture-machine attachment, Motion-. D. D. Daniel. No. 1,168,607; Jan. 18; Gaz. vol. 222; p. 853.

Picture machines, Safety device for moving-. C. F. Mehl, H. B. Liebler, J. Nall, and E. J. Nobbe. No. 1,167,583; Jan. 11; Gaz. vol. 222; p. 462.

Picture-projecting device. M. M. Gillam. No. 1,167,399; Jan. 11; Gaz. vol. 222; p. 398.

Picture-projector gearing, Motion-. R. P. Stineman and O. O. Taylor. No. 1,167,854; Jan. 11; Gaz. vol. 222; p. 555.

Picture reels, Film-clamp for motion-. C. F. Woods. No. 1,169,222; Jan. 25; Gaz. vol. 222; p. 1103.

Picture-screen. A. Wright. No. 1,166,569; Jan. 4; Gaz. vol. 222; p. 57.

Pigment. L. Blangey. No. 1,166,808; Jan. 4; Gaz. vol. 222; p. 139.

Pigment and making the same. H. A. Gardner. No. 1,169,253; Jan. 25; Gaz. vol. 222; p. 1114.

Piling, Metallic sheet-. J. R. Wemlinger. No. 1,166,563; Jan. 4; Gaz. vol. 222; p. 54.

Pin: *See*—
Clothes-pin. Filing-pin.
Extension-pin. Safety-pin.

Pincers, Clench-. J. P. Anderson. No. 1,166,420; Jan. 4; Gaz. vol. 222; p. 3.

Pineapple, Utilization of waste from. R. A. Gould and C. S. Ash. No. 1,166,674; Jan. 4; Gaz. vol. 222; p. 94.

Pinion-securing device. E. A. Larson. No. 1,169,408; Jan. 25; Gaz. vol. 222; p. 1166.

Pipe: *See*—
Organ-pipe. Tobacco-pipe.
Smoking-pipe.

Pipe attachment, Suction-. V. M. Haddon. No. 1,169,745; Jan. 25; Gaz. vol. 222; p. 1285.

Pipe-bends, Making. C. H. True and N. T. McKee. No. 1,169,209; Jan. 25; Gaz. vol. 222; p. 1100.

Pipe-bending apparatus. R. L. Davis and G. C. Moyers. No. 1,167,983; Jan. 11; Gaz. vol. 222; p. 601.

Pipe-bending die. C. H. True. No. 1,167,538; Jan. 11; Gaz. vol. 222; p. 446.

Pipe-clamp. G. H. Naylor. No. 1,169,670; Jan. 25; Gaz. vol. 222; p. 1261.

Pipe connection and valve. J. Allan. No. 1,169,105; Jan. 25; Gaz. vol. 222; p. 1061.

Pipe connector, Train-. J. and C. E. Sullivan. No. 1,166,559; Jan. 4; Gaz. vol. 222; p. 53.

Pipe-coupling. W. A. Hall. No. 1,168,196; Jan. 11; Gaz. vol. 222; p. 673.

Pipe coupling, Automatic train-. J. W. Beacham and B. F. Powers. No. 1,167,789; Jan. 11; Gaz. vol. 222; p. 532.

Pipe coupling, Automatic train-. J. O. Cobb. No. 1,167,678; Jan. 11; Gaz. vol. 222; p. 496.

Pipe coupling, Automatic train-. G. G., H. E., and L. D. Ross. No. 1,168,677; Jan. 18; Gaz. vol. 222; p. 879.

Pipe-coupling hanger, Train-. W. C. White. No. 1,169,374; Jan. 25; Gaz. vol. 222; p. 1155.

Pipe coupling, Train-. W. C. White. No. 1,169,373; Jan. 25; Gaz. vol. 222; p. 1154.

Pipe-cutter. A. F. Anderson and E. W. Olson. No. 1,166,570; Jan. 4; Gaz. vol. 222; p. 57.

Pipe-cutter. F. E. Wells. No. 1,166,505; Jan. 4; Gaz. vol. 222; p. 33.

Pipe-cutting machine. H. J. Hamer. No. 1,166,456; Jan. 4; Gaz. vol. 222; p. 15.

Pipe-die attachment. A. F. Bacon. No. 1,168,779; Jan. 18; Gaz. vol. 222; p. 914.

Pipe-hanger. L. A. Grimes. No. 1,169,635; Jan. 25; Gaz. vol. 222; p. 1250.

Pipe-laying machine. J. Jackson. No. 1,167,565; Jan. 11; Gaz. vol. 222; p. 456.

Pipe stem, Tobacco-. O. Wartemann. No. 1,168,354; Jan. 18; Gaz. vol. 222; p. 764.

Pipe-threading tool. J. B. Phillips. No. 1,169,507; Jan. 25; Gaz. vol. 222; p. 1202.

Pipe-union. W. J. Kerr and T. Hodgson. No. 1,167,572; Jan. 11; Gaz. vol. 222; p. 458.

Pipe-wrench. L. Branham. No. 1,168,999; Jan. 18; Gaz. vol. 222; p. 989.

Pipe-wrench. P. Brown. No. 1,169,379; Jan. 25; Gaz. vol. 222; p. 1156.

Pipe-wrench. C. McCroba. No. 1,169,551; Jan. 25; Gaz. vol. 222; p. 1218.

Pipes and faucets to receptacles, Coupling for connecting. W. M. St. Elmo. No. 1,169,691; Jan. 25; Gaz. vol. 222; p. 1267.

Pipes, &c., Apparatus for facing the ends of. J. H. Deppeler. No. 1,168,060; Jan. 11; Gaz. vol. 222; p. 629.

Pipes, Automatic water-controller for water-. J. Sauer, Sr. No. 1,167,317; Jan. 4; Gaz. vol. 222; p. 314.

Pipes, Clean-out device for waste or soil. S. B. McManamin. No. 1,169,335; Jan. 25; Gaz. vol. 222; p. 1141.

Pipes, &c., Smoke-cooling attachment for tobacco-. J. O. Carpentier. No. 1,167,384; Jan. 11; Gaz. vol. 222; p. 393.

Pistol-holster. B. R. Parrish. No. 1,166,781; Jan. 4; Gaz. vol. 222; p. 130.

Pistols, Barrel-fastening for automatic. W. J. Whiting. No. 1,168,985; Jan. 18; Gaz. vol. 222; p. 985.

Piston. G. R. Rich. No. 1,168,551; Jan. 18; Gaz. vol. 222; p. 833.

Piston, Pneumatic-tool. W. Burlingham. No. 1,167,975; Jan. 11; Gaz. vol. 222; p. 599.

Piston-ring. S. J. Shaw. No. 1,168,969; Jan. 18; Gaz. vol. 222; p. 980.

Piston-ring clamp. J. L. Earl. No. 1,169,627; Jan. 25; Gaz. vol. 222; p. 1247.

Piston-ring-compressing device. B. Mergan. No. 1,167,588; Jan. 11; Gaz. vol. 222; p. 464.

Pitman. J. P. Gardner. No. 1,166,452; Jan. 4; Gaz. vol. 222; p. 14.

Plane. H. G. Collins. No. 1,166,437; Jan. 4; Gaz. vol. 222; p. 8.

Planter. R. J. Altgelt. No. 1,166,962; Jan. 4; Gaz. vol. 222; p. 190.

Planter. A. Schaeffer. No. 1,169,055; Jan. 18; Gaz. vol. 222; p. 1007.

Planter. L. E. Waterman. No. 1,166,502; Jan. 4; Gaz. vol. 222; p. 32.

Planter and marker, Check-row corn-. J. C. Shoemake. No. 1,167,438; Jan. 11; Gaz. vol. 222; p. 412.

Planter row-marker, Corn-. C. Moll. No. 1,169,275; Jan. 25; Gaz. vol. 222; p. 1122.
Planter, Seed-. J. T. Compton. No. 1,168,859; Jan. 18; Gaz. vol. 222; p. 942.
Planters, Roller attachment for corn and cotton. J. Drapela. No. 1,168,180; Jan. 11; Gaz. vol. 222; p. 668.
Planting attachment, Potato-. B. Lein. No. 1,167,907; Jan. 11; Gaz. vol. 222; p. 574.
Plaster-board. J. R. Walsh. No. 1,168,131; Jan. 11; Gaz. vol. 222; p. 652.
Plaster-board and stucco construction, Retaining and reinforcing device for. E. J. Hedden. No. 1,169,641; Jan. 25; Gaz. vol. 222; p. 1252.
Plastering-reinforcement. W. S. Pride. No. 1,167,837; Jan. 11; Gaz. vol. 222; p. 549.
Plate, Composite metallic. C. J. Thorp. No. 1,168,441; Jan. 18; Gaz. vol. 222; p. 793.
Plate-holder. P. A. Rogers. No. 1,168,033; Jan. 11; Gaz. vol. 222; p. 619.
Player mechanism, Pneumatic. F. C. White. No. 1,168,691; Jan. 18; Gaz. vol. 222; p. 884.
Player mechanism, Pneumatic. F. C. White. No. 1,168,924; Jan. 18; Gaz. vol. 222; p. 964.
Plow. P. Ewald. No. 1,167,683; Jan. 11; Gaz. vol. 222; p. 497.
Plow. J. Matouj. No. 1,167,912; Jan. 11; Gaz. vol. 222; p. 576.
Plow-adjusting mechanism, Gang-. J. A. Anderson. No. 1,169,451; Jan. 25; Gaz. vol. 222; p. 1183.
Plow and cultivator, Motor. W. S. Plummer. No. 1,167,429; Jan. 11; Gaz. vol. 222; p. 410.
Plow attachment. J. E. Hitter. No. 1,169,036; Jan. 18; Gaz. vol. 222; p. 1002.
Plow attachment. W. L. Reeves. No. 1,169,285; Jan. 25; Gaz. vol. 222; p. 1124.
Plow, Disk. F. Berendes. No. 1,168,594; Jan. 18; Gaz. vol. 222; p. 848.
Plow-frame structure. P. Ewald. No. 1,167,685; Jan. 11; Gaz. vol. 222; p. 498.
Plow, Motor-. C. Pavesi and G. Tolotti. No. 1,169,564; Jan. 25; Gaz. vol. 222; p. 1222.
Plow, Motor-. G. W. White. No. 1,168,135; Jan. 11; Gaz. vol. 222; p. 654.
Plow-point-mold-making machine. F. A. Breeze. No. 1,167,675; Jan. 11; Gaz. vol. 222; p. 495.
Plow, Wheeled. E. M. Heylman. No. 1,168,208; Jan. 11; Gaz. vol. 222; p. 677.
Plug, Attachment-. B. B. Benjamin. No. 1,167,474; Jan. 11; Gaz. vol. 222; p. 423.
Plug, Attachment-. S. Trood. No. 1,167,232; Jan. 4; Gaz. vol. 222; p. 284.
Plug receptacle, Attachment-. F. V. Burton. No. 1,169,613; Jan. 25; Gaz. vol. 222; p. 1241.
Plug-switch. F. J. Raylin and J. Lofgren. No. 1,169,426; Jan. 25; Gaz. vol. 222; p. 1172.
Plug switching device. A. S. Pearl and C. A. Jansen. No. 1,169,187; Jan. 25; Gaz. vol. 222; p. 1092.
Plug, Terminal. R. E. Zannoth and V. B. Dickeson. No. 1,169,314; Jan. 25; Gaz. vol. 222; p. 1134.
Pneumatic wheel. J. O. Raymond. No. 1,166,854; Jan. 4; Gaz. vol. 222; p. 155.
Pocket for overalls, Pencil-. E. R. Gerard. No. 1,168,387; Jan. 18; Gaz. vol. 222; p. 776.
Pole-elevation indicator. J. L. Fay and S. B. Way. No. 1,168,295; Jan. 18; Gaz. vol. 222; p. 742.
Polishing-machine. W. H. Garlock. No. 1,168,189; Jan. 11; Gaz. vol. 222; p. 671.
Pool-table triangle. T. R. Treiber. No. 1,167,137; Jan. 4; Gaz. vol. 222; p. 252.
Porous material and making the same, Flexible and waterproof. J. W. Barber. No. 1,167,327; Jan. 4; Gaz. vol. 222; p. 318.
Portable tank, cesspool, and the like. B. A. Slade and F. W. Thompson. No. 1,169,688; Jan. 25; Gaz. vol. 222; p. 1267.
Post: *See*—
Fence-post.
Post-anchor. A. W. Sprague. No. 1,168,852; Jan. 11; Gaz. vol. 222; p. 554.
Post-card, Coin-holding. S. B. Bedinger. No. 1,168,592; Jan. 18; Gaz. vol. 222; p. 847.
Post-card rack. G. Honig. No. 1,167,182; Jan. 4; Gaz. vol. 222; p. 268.
Post-hole digger. C. W. McDonald. No. 1,168,405; Jan. 18; Gaz. vol. 222; p. 781.
Potato-digger. W. A. Lippitz. No. 1,169,172; Jan. 25; Gaz. vol. 222; p. 1087.
Potato-digger. L. V. Thayer. No. 1,169,367; Jan. 25; Gaz. vol. 222; p. 1153.
Potato-mill. R. Högberg. No. 1,168,809; Jan. 18; Gaz. vol. 222; p. 925.
Potato-sorter, Rotary. T. H. Sexton. No. 1,169,288; Jan. 25; Gaz. vol. 222; p. 1125.
Poultry-duster. E. F. Hudson. No. 1,167,561; Jan. 11; Gaz. vol. 222; p. 454.
Poultry-fountain. O. A. Dietsche. No. 1,168,489; Jan. 18; Gaz. vol. 222; p. 811.
Powder-flask. S. B. Smoot. No. 1,166,862; Jan. 4; Gaz. vol. 222; p. 157.
Powder-puff. A. J. Schroder. No. 1,168,430; Jan. 18; Gaz. vol. 222; p. 789.
Power-controlling device, Intermittent. G. W. Mosher. No. 1,167,916; Jan. 11; Gaz. vol. 222; p. 578.
Power-controlling mechanism. H. A. Myers. No. 1,167,101; Jan. 4; Gaz. vol. 222; p. 239.
Power-generating method and apparatus. W. L. R. Emmet. No. 1,167,158; Jan. 4; Gaz. vol. 222; p. 259.
Power-press safety device. N. Sheff. No. 1,169,684; Jan. 25; Gaz. vol. 222; p. 1265.
Power-storage device. E. E. Gray. No. 1,167,555; Jan. 11; Gaz. vol. 222; p. 451.
Power-transferring mechanism. W. J. Bayrer. No. 1,169,115; Jan. 25; Gaz. vol. 222; p. 1066.
Power transmission. M. T. Sprangers. No. 1,166,555; Jan. 4; Gaz. vol. 222; p. 52.
Power-transmission device. G. W. Chester. No. 1,166,660; Jan. 4; Gaz. vol. 222; p. 89.
Power transmission device. T. L. Fawick. No. 1,169,072; Jan. 18; Gaz. vol. 222; p. 1014.
Power-transmission device. T. L. Fawick. No. 1,169,073; Jan. 18; Gaz. vol. 222; p. 1014.
Power-transmission device. D. M. Silvers. No. 1,168,119; Jan. 11; Gaz. vol. 222; p. 649.
Power transmission, Hydraulic. W. E. Lape. No. 1,168,216; Jan. 11; Gaz. vol. 222; p. 680.
Power-transmission mechanism. N. H. Schickel. No. 1,169,357; Jan. 25; Gaz. vol. 222; p. 1149.
Power-transmission mechanism for vehicles. W. H. Douglas. No. 1,167,052; Jan. 4; Gaz. vol. 222; p. 222.
Power-transmitting means. T. N. Wilson. No. 1,169,221; Jan. 25; Gaz. vol. 222; p. 1103.
Power-transmitting means, Variable-speed. A. Klay. No. 1,166,838; Jan. 4; Gaz. vol. 222; p. 150.
Power-transmitting mechanism. L. F. Goodspeed. No. 1,168,494; Jan. 18; Gaz. vol. 222; p. 812.
Power-transmitting mechanism, Car-axle. R. Vuilleumier. No. 1,168,446; Jan. 18; Gaz. vol. 222; p. 795.
Precious stones, Apparatus for grinding. E. Loesser. No. 1,166,843; Jan. 4; Gaz. vol. 222; p. 151.
Precious stones, Detachable setting for. V. L. Capwell. No. 1,166,431; Jan. 4; Gaz. vol. 222; p. 7.
Preserving food products and apparatus therefor. J. M. Young. No. 1,168,695; Jan. 18; Gaz. vol. 222; p. 886.
Preserving fruit. A. F. Hoffman. No. 1,166,588; Jan. 4; Gaz. vol. 222; p. 62.
Press: *See*—
Cheese-press. Printing-press.
Drill-press.
Press. E. Haefely. No. 1,168,067; Jan. 11; Gaz. vol. 222; p. 631.
Press. F. Müller. No. 1,169,559; Jan. 25; Gaz. vol. 222; p. 1221.
Press. F. E. Stevenson and H. G. Little. No. 1,166,558; Jan. 4; Gaz. vol. 222; p. 52.
Press-guard. R. F. Ide and R. M. West. No. 1,166,591; Jan. 4; Gaz. vol. 222; p. 63.
Presses, Safety device for. R. B. Benjamin. No. 1,167,475; Jan. 11; Gaz. vol. 222; p. 424.
Presses, Safety device for. R. B. Benjamin. No. 1,167,476; Jan. 11; Gaz. vol. 222; p. 424.
Pressing knitted garments, Machine for. M. J. Hirsch. No. 1,168,069; Jan. 11; Gaz. vol. 222; p. 632.
Pressure-applying device. W. S. Duwelius. No. 1,169,533; Jan. 25; Gaz. vol. 222; p. 1212.
Pressure indicating and regulating device. H. W. Maurer and F. K. Taylor. No. 1,167,421; Jan. 11; Gaz. vol. 222; p. 406.
Primary battery. W. E. Holland. No. 1,167,499; Jan. 11; Gaz. vol. 222; p. 432.
Printer's chase. S. Piwonski. No. 1,166,543; Jan. 4; Gaz. vol. 222; p. 47.
Printer's chase. P. A. Rogers. No. 1,168,034; Jan. 11; Gaz. vol. 222; p. 619.
Printing and embossing press, Card. E. E. Pollock. No. 1,168,740; Jan. 18; Gaz. vol. 222; p. 900.
Printing and embossing presses, Protective device for. M. Rockstroh. No. 1,169,680; Jan. 25; Gaz. vol. 222; p. 1264.
Printing-blocks of slight weight, Production of. S. A. C. Kristensen. No. 1,166,840; Jan. 4; Gaz. vol. 222; p. 150.
Printing device. R. P. Stevens. No. 1,167,727; Jan. 11; Gaz. vol. 222; p. 512.
Printing-frame, Pneumatic. E. W. Sweigard. No. 1,166,945; Jan. 4; Gaz. vol. 222; p. 184.
Printing-machine inking device. J. Carrelet and L. D. de Lonlay. No. 1,167,268; Jan. 4; Gaz. vol. 222; p. 297.
Printing, Making relievo-formes for. P. J. A. Scholz. No. 1,167,939; Jan. 11; Gaz. vol. 222; p. 586.
Printing means for calculating-machines, Signal-. J. C. Lotterhand. No. 1,167,000; Jan. 4; Gaz. vol. 222; p. 204.
Printing means for calculators, Signal-. W. Fuhrmann. No. 1,166,978; Jan. 4; Gaz. vol. 222; p. 196.
Printing outfit, Card-. E. E. Pollock. No. 1,168,739; Jan. 18; Gaz. vol. 222; p. 900.
Printing-press. S. Smith and O. W. Hammerquist. No. 1,167,665; Jan. 11; Gaz. vol. 222; p. 491.
Printing-press. S. Smith and O. W. Hammerquist. No. 1,167,666; Jan. 11; Gaz. vol. 222; p. 491.
Printing-press attachment. R. Kraus. No. 1,168,651; Jan. 18; Gaz. vol. 222; p. 870.
Printing-press, Convertible flat-bed. W. S. Huson. No. 1,168,887; Jan. 18; Gaz. vol. 222; p. 951.
Printing-press gripper. H. C. Richardson. No. 1,168,675; Jan. 18; Gaz. vol. 222; p. 878.
Printing-press inking attachment. J. C. Poffenbarger. No. 1,167,928; Jan. 11; Gaz. vol. 222; p. 582.

Printing-press plate-holder. C. W. Harrold. No. 1,168,498; Jan. 18; Gaz. vol. 222; p. 814.
Printing-presses, Front-feed guide for. L. F. Nielsen. No. 1,167,653; Jan. 11; Gaz. vol. 222; p. 487.
Printing-presses, Ink distribution for. J. R. Blaine. No. 1,168,277; Jan. 18; Gaz. vol. 222; p. 736.
Printing-presses, Roll-separating means for. M. A. Droitcour. No. 1,166,583; Jan. 4; Gaz. vol. 222; p. 61.
Printing-presses, Safety device for. W. H. Sylvester. No. 1,168,232; Jan. 11; Gaz. vol. 222; p. 685.
Printing, Sensitized film for process. L. A. Orans. No. 1,166,540; Jan. 4; Gaz. vol. 222; p. 46.
Printing tickets and the like, Apparatus for. A. Zöllin, Jr. No. 1,169,590; Jan. 25; Gaz. vol. 222; p. 1232.
Profiling-machine. F. K. Hendrickson. No. 1,169,151; Jan. 25; Gaz. vol. 222; p. 1079.
Projectile. M. Wesner. No. 1,169,704; Jan. 25; Gaz. vol. 222; p. 1272.
Projectile, Apparatus for modifying the trajectory of a. L. Aiard. No. 1,166,879; Jan. 4; Gaz. vol. 222; p. 163.
Projecting-machine. W. B. Featherstone. No. 1,167,643; Jan. 11; Gaz. vol. 222; p. 483.
Projection apparatus. W. L. Patterson. No. 1,169,186; Jan. 25; Gaz. vol. 222; p. 1094.
Propeller. S. Heath. No. 1,166,907; Jan. 4; Gaz. vol. 222; p. 172.
Propeller-holding device, Portable-. W. G. Gilliam. No. 1,168,192; Jan. 11; Gaz. vol. 222; p. 672.
Protector, Portable. E. Favary. No. 1,166,977; Jan. 4; Gaz. vol. 222; p. 195;
Puller: *See*—
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Pulley. A. B. Ferdinand. No. 1,168,871; Jan. 18; Gaz. vol. 222; p. 945.
Pulley. W. R. Patten. No. 1,168,907; Jan. 18; Gaz. vol. 222; p. 958.
Pulley-block. J. S. Hall. No. 1,167,295; Jan. 4; Gaz. vol. 222; p. 306.
Pulley mechanism. B. M. W. Hanson. No. 1,168,198; Jan. 11; Gaz. vol. 222; p. 674.
Pulleys, Rim-fastening for split. J. A. Bried. No. 1,169,223; Jan. 25; Gaz. vol. 222; p. 1108.
Pulling-over machine. R. F. McFeely. No. 1,169,414; Jan. 25; Gaz. vol. 222; p. 1167.
Pulling-over machines, Tack supplying and inserting mechanism for. A. Bates. No. 1,168,463; Jan. 18; Gaz. vol. 222; p. 802.
Pulp and half-cellulose from resinous kinds of wood, Manufacture of brown wood-. J. Aktschourin. No. 1,169,592; Jan. 25; Gaz. vol. 222; p. 1233.
Pulp and paper, Making. R. A. Marr. No. 1,166,848; Jan. 4; Gaz. vol. 222; p. 153.
Pulp, Preparing wood-. C. Bache-Wig. No. 1,169,597; Jan. 25; Gaz. vol. 222; p. 1235.
Pulverizer. O. Gerlach. No. 1,169,075; Jan. 18; Gaz. vol. 222; p. 1015.
Pulverizer, Land-. G. E. Karl. No. 1,167,079; Jan. 4; Gaz. vol. 222; p. 231.
Pulverizer, Rotary impact-. C. S. Lincoln. No. 1,166,698; Jan. 4; Gaz. vol. 222; p. 103.
Pulverizing apparatus. W. K. Liggett. No. 1,169,501; Jan. 25; Gaz. vol. 222; p. 1200.
Pump. M. T. Chapman. No. 1,167,047; Jan. 4; Gaz. vol. 222; p. 220.
Pump. M. T. and M. C. Chapman. No. 1,167,886; Jan. 11; Gaz. vol. 222; p. 566.
Pump. F. C. Crowe. No. 1,169,243; Jan. 25; Gaz. vol. 222; p. 1111.
Pump. S. W. Williams. No. 1,169,707; Jan. 25; Gaz. vol. 222; p. 1272.
Pump, Air-. A. R. Berck and F. Tjaden. No. 1,167,255; Jan. 4; Gaz. vol. 222; p. 292.
Pump, Air-. C. S. Stevens. No. 1,169,438; Jan. 25; Gaz. vol. 222; p. 1177.
Pump attachment. W. S. Briggs. No. 1,168,928; Jan. 18; Gaz. vol. 222; p. 966.
Pump, Centrifugal liquid-. F. K. Woodroffe and H. C. Hodgson. No. 1,167,241; Jan. 4; Gaz. vol. 222; p. 287.
Pump-cylinder protector. R. E. Wheeler. No. 1,167,670; Jan. 11; Gaz. vol. 222; p. 493.
Pump, Deep-well. F. W. Krogh. No. 1,169,266; Jan. 25; Gaz. vol. 222; p. 1119.
Pump-governor, Electric. W. V. Turner. No. 1,169,304; Jan. 25; Gaz. vol. 222; p. 1131.
Pump-governor, Electric. W. V. Turner. No. 1,169,305; Jan. 25; Gaz. vol. 222; p. 1131.
Pump-plunger. H. F. Schumann. No. 1,168,118; Jan. 11; Gaz. vol. 222; p. 648.
Pump, Power tire-. F. G. Folberth. No. 1,168,296; Jan. 18; Gaz. vol. 222; p. 742.
Pump, Tire-. W. G. Wilkes. No. 1,169,705; Jan. 25; Gaz. vol. 222; p. 1272.
Pumping mechanism, Centrifugal. M. B. Van Ness. No. 1,168,981; Jan. 18; Gaz. vol. 222; p. 983.
Pumping unit. G. D. Loud. No. 1,169,752; Jan. 25; Gaz. vol. 222; p. 1288.
Punch. W. J. Mackle. No. 1,166,613; Jan. 4; Gaz. vol. 222; p. 71.
Punch, Automatic ticket-. H. Rowntree. No. 1,168,336; Jan. 18; Gaz. vol. 222; p. 757.
Punch-press guard. F. S. Aliano. No. 1,167,611; Jan. 11; Gaz. vol. 222; p. 472.
Punch-press safety device. B. J. Graham. No. 1,166,981; Jan. 4; Gaz. vol. 222; p. 197.
Punch, Rule-. E. R. Canfield. No. 1,168,600; Jan. 18; Gaz. vol. 222; p. 850.
Punching and shearing mechanism. R. F. McCloskey. No. 1,167,771; Jan. 11; Gaz. vol. 222; p. 525.
Punching-machine spacing device. J. W. R. McLaughlin. No. 1,169,415; Jan. 25; Gaz. vol. 222; p. 1168.
Puzzle. J. L. Allen. No. 1,169,593; Jan. 25; Gaz. vol. 222; p. 1233.
Puzzle. C. B. Wixom. No. 1,168,987; Jan. 18; Gaz. vol. 222; p. 986.
Quilling-machine. E. E. Bradley. No. 1,168,929; Jan. 18; Gaz. vol. 222; p. 966.
Rack: *See*—
Barrel-rack. Oven-rack.
Display-rack. Post-card rack.
Hay-rack. Shoe-rack.
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Radial elliptical spring. C. O. Anderson. No. 1,168,453; Jan. 18; Gaz. vol. 222; p. 798.
Radiator. J. Elger. No. 1,167,391; Jan. 11; Gaz. vol. 222; p. 395.
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Radiator, Electrically-heated. P. F. Apfel. No. 1,167,613; Jan. 11; Gaz. vol. 222; p. 473.
Rail-anticreeper. P. W. Moore. No. 1,167,587; Jan. 11; Gaz. vol. 222; p. 463.
Rail-anticreeper. E. W. Vogel. No. 1,166,497; Jan. 4; Gaz. vol. 222; p. 30.
Rail-anticreeper. E. W. Vogel. No. 1,166,498; Jan. 4; Gaz. vol. 222; p. 31.
Rail-bond. J. Lindley. No. 1,167,370; Jan. 4; Gaz. vol. 222; p. 335.
Rail-bond. B. F. Silliman. No. 1,168,753; Jan. 18; Gaz vol. 222; p. 904.
Rail-brace. L. A. Mundwiller and H. A. Noedel. No 1,168,954; Jan. 18; Gaz. vol. 222; p. 975.
Rail-fastener. C. W. Dwelly. No. 1,168,292; Jan. 18; Gaz. vol. 222; p. 741.
Rail-fastener. C. B. Enloe. No. 1,166,975; Jan. 4; Gaz. vol. 222; p. 195.
Rail-joint. T. J. Bonnel. No. 1,168,152; Jan. 11; Gaz. vol. 222; p. 659.
Rail-joint. J. M. Bratten, Jr. No. 1,167,674; Jan. 11; Gaz. vol. 222; p. 494.
Rail-joint. I. Dupin. No. 1,167,390; Jan. 11; Gaz. vol. 222; p. 395.
Rail-joint. O. E. Hester. No. 1,167,174; Jan. 4; Gaz. vol. 222; p. 266.
Rail-joint. B. F. Lindley. No. 1,168,520; Jan. 18; Gaz. vol. 222; p. 822.
Rail-joint. J. C. Peppers. No. 1,167,109; Jan. 4; Gaz. vol. 222; p. 242.
Rail-joint bond. H. Etheridge. No. 1,166,826; Jan. 4; Gaz. vol. 222; p. 146.
Rail-shoe. W. Lewis. No. 1,168,083; Jan. 11; Gaz. vol. 222; p. 637.
Rail support, Third-. J. C. McGovern and M. Cohen. No. 1,167,772; Jan. 11; Gaz. vol. 222; p. 526.
Railway block-signaling system. W. Grunow, Jr. No. 1,167,294; Jan. 4; Gaz. vol. 222; p. 306.
Railway-brake. W. R. Chandler. No. 1,168,604; Jan. 18; Gaz. vol. 222; p. 852.
Railway-crossing. L. Sadler and R. C. Geckler. No. 1,169,196; Jan. 25; Gaz. vol. 222; p. 1094.
Railway-rail-anticreeping device. E. B. Powers. No. 1,168,671; Jan. 18; Gaz. vol. 222; p. 877.
Railway-rail-anticreeping device. E. B. Powers. No. 1,168,672; Jan. 18; Gaz. vol. 222; p. 878.
Railway-rail joint. I. Majcherek. No. 1,166,614; Jan. 4; Gaz. vol. 222; p. 72.
Railway-rails, Base-plate for. H. E. Sheldon. No. 1,168,036; Jan. 11; Gaz. vol. 222; p. 620.
Railway signaling. C. H. Lay. No. 1,166,915; Jan. 4; Gaz. vol. 222; p. 175.
Railway-signals, Interlocking relay for. C. E. Mason. No. 1,169,273; Jan. 25; Gaz. vol. 222; p. 1121.
Railway-spike. S. E. McMillin. No. 1,168,320; Jan. 18; Gaz. vol. 222; p. 751.
Railway system. J. A. Romer. No. 1,168,676; Jan. 18; Gaz. vol. 222; p. 879.
Railway-tie. C. A. Danz. No. 1,166,663; Jan. 4; Gaz. vol. 222; p. 91.
Railway-tie. F. A. Davis. No. 1,169,014; Jan. 18; Gaz. vol. 222; p. 994.
Railway-tie. H. G. Houghton. No. 1,169,158; Jan. 25; Gaz. vol. 222; p. 1082.
Railway-tie. H. G. Houghton. No. 1,169,159; Jan. 25; Gaz. vol. 222; p. 1082.
Railway-tie. F. Landreth. No. 1,166,997; Jan. 4; Gaz. vol. 222; p. 203.
Railway-track-laying machine or derrick. J. F. McNally and E. Raymond. No. 1,167,578; Jan. 11; Gaz. vol. 222; p. 460.
Railway-traffic-controlling apparatus. L. V. Lewis. No. 1,167,335; Jan. 4; Gaz. vol. 222; p. 321.
Railway-vehicles, Means for automatically controlling the speed of. F. T. Jones. No. 1,168,256; Jan. 11; Gaz. vol. 222; p. 695.
Railways, Brake-control and signal system for single-track. P. Schnelder. No. 1,169,516; Jan. 25; Gaz. vol. 222; p. 1206.
Rake: *See*—
Stable-rake.

Rake. E. M. Clough. No. 1,168,165; Jan. 11; Gaz. vol. 222; p. 663.
Rake attachment, Hay-. A. G. Argo. No. 1,166,963; Jan. 4; Gaz. vol. 222; p. 191.
Rake-cleaner. E. A. Neal. No. 1,168,100; Jan. 11; Gaz. vol. 222; p. 643.
Rams, Boring attachment for shaper-. H. E. Morton. No. 1,167,648; Jan. 11; Gaz. vol. 222; p. 485.
Rams, Milling attachment for shaper-. H. E. Morton. No. 1,167,647; Jan. 11; Gaz. vol. 222; p. 484.
Range. A. C. Mott, Jr., and J. S. Van Buren. No. 1,167,202; Jan. 4; Gaz. vol. 222; p. 275.
Range construction, Coal and gas. A. C. Mott, Jr. No. 1,167,203; Jan. 4; Gaz. vol. 222; p. 275.
Ranges, Grate for gas-. R. B. Caverly. No. 1,168,852; Jan. 18; Gaz. vol. 222; p. 939.
Ratchet, Back-off. R. H. Blackall. No. 1,167,262; Jan. 4; Gaz. vol. 222; p. 294.
Ratchet brake mechanism. R. H. Blackall. No. 1,167,258; Jan. 4; Gaz. vol. 222; p. 293.
Ratchet-drill. P. F. Ellmer. No. 1,166,665; Jan. 4; Gaz. vol. 222; p. 91.
Ratchet-wrench. L. C. Collier. No. 1,168,480; Jan. 18; Gaz. vol. 222; p. 808.
Ratchet-wrench. L. S. Starrett and J. A. Adell. No. 1,167,948; Jan. 11; Gaz. vol. 222; p. 590.
Razor. F. N. Davidson. No. 1,168,288; Jan. 18; Gaz. vol. 222; p. 740.
Razor. E. M. Hall. No. 1,166,678; Jan. 4; Gaz. vol. 222; p. 96.
Razor adjustment, Safety-. P. E. Gleason. No. 1,168,388; Jan. 18; Gaz. vol. 222; p. 776.
Razor attachment. E. W. Grove. No. 1,169,637; Jan. 25; Gaz. vol. 222; p. 1251.
Razor blades, Container for safety-. H. B. Young. No. 1,167,464; Jan. 11; Gaz. vol. 222; p. 421.
Razor, Safety-. P. R. Greist and E. J. Boyler. No. 1,169,395; Jan. 25; Gaz. vol. 222; p. 1162.
Razor, Safety-. R. Marx. No. 1,169,665; Jan. 25; Gaz. vol. 222; p. 1259.
Razor, Safety-. J. R. Shearman. No. 1,167,530; Jan. 11; Gaz. vol. 222; p. 443.
Reading, Apparatus for facilitating. I. Kaufmann. No. 1,169,492; Jan. 25; Gaz. vol. 222; p. 1196.
Reamer. F. Riley and C. A. O'Connor. No. 1,166,716; Jan. 4; Gaz. vol. 222; p. 108.
Reamer-head. C. G. Cashman. No. 1,168,160; Jan. 11; Gaz. vol. 222; p. 661.
Receipt and envelop, Combined. R. A. Keller. No. 1,168,004; Jan. 11; Gaz. vol. 222; p. 608.
Receptacle and closure therefor. E. M. Potter. No. 1,167,519; Jan. 11; Gaz. vol. 222; p. 439.
Receptacle-closure. C. R. Keeran. No. 1,167,306; Jan. 4; Gaz. vol. 222; p. 310.
Receptacle-cover-operating mechanism. W. J. Sykes. No. 1,169,207; Jan. 25; Gaz. vol. 222; p. 1099.
Receptacle-cover, Removable. S. Smith. No. 1,168,122; Jan. 11; Gaz. vol. 222; p. 649.
Receptacle, Wall-. J. M. Triggs. No. 1,168,442; Jan. 18; Gaz. vol. 222; p. 793.
Reclining-chair, Convertible. S. Bendzsa. No. 1,168,276; Jan. 18; Gaz. vol. 222; p. 735.
Recording-machine. H. Landsiedel. No. 1,167,416; Jan. 11; Gaz. vol. 222; p. 404.
Reed, Artificial. J. D. Miller. No. 1,169,178; Jan. 25; Gaz. vol. 222; p. 1089.
Reel: *See*—
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Fishing-reel.
Refractory lining. T. A. R. W. Torsen. No. 1,167,135; Jan. 4; Gaz. vol. 222; p. 252.
Refrigerating and ice-making apparatus. W. Pfleiderer. No. 1,169,675; Jan. 25; Gaz. vol. 222; p. 1262.
Refrigerating apparatus. G. Murray. No. 1,167,501; Jan. 11; Gaz. vol. 222; p. 465.
Refrigerating apparatus, Valve-control mechanism for. F. W. Wolf, Jr., and H. H. Southworth. No. 1,166,874; Jan. 4; Gaz. vol. 222; p. 161.
Refrigerating device. J. G. Richert. No. 1,168,743; Jan. 18; Gaz. vol. 222; p. 901.
Refrigerator, show-case, and counter, Combined. W. Amenda. No. 1,168,776; Jan. 18; Gaz. vol. 222; p. 913.
Refrigerators, Water seal for. E. J. Fulton. No. 1,167,395; Jan. 11; Gaz. vol. 222; p. 397.
Refuse and the like receptacle. A. Edwards. No. 1,167,055; Jan. 4; Gaz. vol. 222; p. 223.
Regenerative furnace. A. Steinbart. No. 1,169,296; Jan. 25; Gaz. vol. 222; p. 1128.
Register: *See*—
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Autographic register.
Register-actuating mechanism for meters and the like. T. F. Mulligan. No. 1,168,325; Jan. 18; Gaz. vol. 222; p. 753.
Register-case. F. C. Marbach. No. 1,168,408; Jan. 18; Gaz. vol. 222; p. 782.
Registering mechanism. C. F. Kettering. No. 1,166,527; Jan. 4; Gaz. vol. 222; p. 41.
Regulator: *See*—
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Feed-water regulator. Pen-regulator.
Regulator. F. J. Lallement. No. 1,168,013; Jan. 11; Gaz. vol. 222; p. 612.
Regulator. W. H. Minekime. No. 1,167,776; Jan. 11; Gaz. vol. 222; p. 527.
Relay, Electric. J. F. Gaffney. No. 1,169,251; Jan. 25; Gaz. vol. 222; p. 1114.
Relay, Electric. R. W. Tarrant. No. 1,168,438; Jan. 18; Gaz. vol. 222; p. 792.
Relay, Resonating. H. Von Kramer and G. Kapp. No. 1,166,951; Jan. 4; Gaz. vol 222; p. 186.
Releasing device, Automatic. A. J. Tizley. No. 1,167,231; Jan. 4; Gaz. vol. 222; p. 284.
Repeater, Thermionic. A. M. Nicolson. No. 1,169,422; Jan. 25; Gaz. vol. 222; p. 1171.
Resilient wheel. J. R. Ayotte. No. 1,168,238; Jan. 11; Gaz. vol. 222; p. 688.
Resilient wheel. A. Bourgeois. No. 1,168,474; Jan. 18; Gaz. vol. 222; p. 806.
Resilient wheel. R. E. Brünnow. No. 1,168,157; Jan. 11; Gaz. vol. 222; p. 660.
Resilient wheel. W. A. Bucknam and W. Stickel. No. 1,168,598; Jan. 18; Gaz. vol. 222; p. 849.
Resilient wheel. C. O. Schulze. No. 1,168,117; Jan. 11; Gaz. vol. 222; p. 648.
Resilient wheel. W. Seidel. No. 1,168,035; Jan. 11; Gaz. vol. 222; p. 620.
Resilient wheel. W. W. Willson. No. 1,166,566; Jan. 4; Gaz. vol. 222; p. 55.
Retort-door, Hinged. N. Troyer and F. C. Fox. No. 1,167,322; Jan. 4; Gaz. vol. 222; p. 316.
Retorts and treating the same, Ore charges for. C. A. H. De Saulles. No. 1,166,447; Jan. 4; Gaz. vol. 222; p. 13.
Retorts, Discharging vertical. A. M. Duckham. No. 1,169,017; Jan. 18; Gaz. vol. 222; p. 995.
Rheostat. G. M. Willis. No. 1,167,868; Jan. 11; Gaz. vol. 222; p. 560.
Ribbon mechanism. E. G. Latta. No. 1,168,654; Jan. 18; Gaz. vol. 222; p. 871.
Ribbon-reverse mechanism. A. C. Roebuck. No. 1,166,483; Jan. 4; Gaz. vol. 222; p. 25.
Rice hulling and polishing machine. R. W. Welch. No. 1,168,133; Jan. 11; Gaz. vol. 222; p. 653.
Rim breaking and locking device. M. Morey. No. 1,168,097; Jan. 11; Gaz. vol. 222; p. 641.
Ring: *See*—
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River-banks, Preventing erosion of. W. E. Pedley. No. 1,168,547; Jan. 18; Gaz. vol. 222; p. 831.
Riveters, Attachment for pneumatic machine-. W. Stark. No. 1,166,723; Jan. 4; Gaz. vol. 222; p. 110.
Riveting-machine. G. W. Osborne. No. 1,166,711; Jan. 4; Gaz. vol. 222; p. 107.
Road-machine. A. A. Conkle. No. 1,169,619; Jan. 25; Gaz. vol. 222; p. 1243.
Roasting-furnace, Horizontal mechanical. P. Sarrasin. No. 1,167,118; Jan. 4; Gaz. vol. 222; p. 245.
Roasting-furnace, Mechanical. K. J. Beskow and A. Ramén. No. 1,166,654; Jan. 4; Gaz. vol. 222; p. 87.
Robe, Automobile-. S. Ede. No. 1,169,385; Jan. 25; Gaz. vol. 222; p. 1158.
Rod: *See*—
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Rolled sheets and plates, Finishing. G. A. White. No. 1,167,864; Jan. 11; Gaz. vol. 222; p. 559.
Roller: *See*—
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Rolling machine, Sheet-metal-edge-. A. G. Kling. No. 1,166,994; Jan. 4; Gaz. vol. 222; p. 201.
Rolling-mill. J. A. Jerome. No. 1,167,567; Jan. 11; Gaz. vol. 222; p. 456.
Rolling-mill and like machine, Two-high reversing. A. Lamberton. (Reissue.) No. 14,053; Jan. 25; Gaz. vol. 222; p. 1202.
Roof. F. C. Overbury. No. 1,166,541; Jan. 4; Gaz. vol. 222; p. 47.
Roof-covering. O. Matter. No. 1,167,195; Jan. 4; Gaz. vol. 222; p. 273.
Root-washer. E. J. Matthews. No. 1,166,849; Jan. 4; Gaz. vol. 222; p. 153.
Rope-clamp. S. E. Goodfellow. No. 1,166,673; Jan. 4; Gaz. vol. 222; p. 94.
Rope-holding device. L. R. Adams. No. 1,167,610; Jan. 11; Gaz. vol. 222; p. 472.
Rope-testing machine. A. N. Faulkner. No. 1,168,870; Jan. 18; Gaz. vol. 222; p. 945.
Rosin and making the same, Stable. B. T. Brooks. No. 1,167,264; Jan. 4; Gaz. vol. 222; p. 295.
Rotary engine. E. O. Seawright. No. 1,168,968; Jan. 18; Gaz. vol. 222; p. 979.
Rotary gas-engine. N. H. Motsinger. No. 1,168,099; Jan. 11; Gaz. vol. 222; p. 642.
Rotary machines, Means for maintaining clearances in. O. Banner. No. 1,168,273; Jan. 18; Gaz. vol. 222; p. 735.
Rotary motor. P. J. Darlington. No. 1,167,154; Jan. 4; Gaz. vol. 222; p. 258.
Rotary motor. A. T. Keene. No. 1,166,598; Jan. 4; Gaz. vol. 222; p. 66.
Rotary motor for driving tools. E. E. Hauer. No. 1,167,996; Jan. 11; Gaz. vol. 222; p. 606.
Rubber-dam clamp. F. H. Newlin. No. 1,166,924; Jan. 4; Gaz. vol. 222; p. 178.

Rubber, Devulcanizing. H. J. Mayers. No. 1,167,359; Jan. 4; Gaz. vol. 222; p. 331.
Rubber, Devulcanizing. G. Staunton. No. 1,169,437; Jan. 25; Gaz. vol. 222; p. 1177.
Rubber footwear. A. Johnson. No. 1,168,306; Jan. 18; Gaz. vol. 222; p. 746.
Rubber from vulcanized-rubber waste, Recovering. G. Staunton. No. 1,168,230; Jan. 11; Gaz. vol. 222; p. 685.
Rubber, Revulcanizing. R. B. Price. No. 1,166,784; Jan. 4; Gaz. vol. 222; p. 131.
Rubber, rubber-like, or similar materials, Vulcanizing. P. I. Murrill. No. 1,166,777; Jan. 4; Gaz. vol. 222; p. 128.
Rubber-tubing-manufacturing apparatus. B. B. Goldsmith. No. 1,168,390; Jan. 18; Gaz. vol. 222; p. 777.
Rubbing-strip. C. H. Todd. No. 1,167,134; Jan. 4; Gaz. vol. 222; p. 252.
Rug-cutting machine. W. H. Waldron. No. 1,168,130; Jan. 11; Gaz. vol. 222; p. 652.
Rule-broach. A. G. Stevenson. No. 1,168,601; Jan. 18; Gaz. vol. 222; p. 850.
Rules, Attachment for foot-. O. L. Wood. No. 1,168,362; Jan. 18; Gaz. vol. 222; p. 767.
Sad-iron. J. W. Ferguson. No. 1,168,616; Jan. 18; Gaz. vol. 222; p. 856.
Sad-iron, Gas-heated. A. F. Gillet. No. 1,166,829; Jan. 4; Gaz. vol. 222; p. 146.
Sad-iron, Gas-heated. G. T. Rosengren. No. 1,167,840; Jan. 11; Gaz. vol. 222; p. 550.
Saddle-tree, Gig-. A. McKenzie. No. 1,169,334; Jan. 25; Gaz. vol. 222; p. 1141.
Safe. P. Jasinski. No. 1,168,642; Jan. 18; Gaz. vol. 222; p. 867.
Safe-deposit receptacle or box for use in trunks and the like. T. S. Spivey and G. A. Hattersley. No. 1,168,914; Jan. 18; Gaz. vol. 222; p. 960.
Safety-bolt and safety-fastener therefor. C. A. Hyde. No. 1,167,697; Jan. 11; Gaz. vol. 222; p. 502.
Safety-coupling. G. O. Flogland. No. 1,167,285; Jan. 4; Gaz. vol. 222; p. 302.
Safety device. C. P. Root. No. 1,169,512; Jan. 25; Gaz. vol. 222; p. 1205.
Safety-hook. F. E. Cottrell. No. 1,168,482; Jan. 18; Gaz. vol. 222; p. 808.
Safety-pin, Self-closing. J. J. Brell. No. 1,166,885; Jan. 4; Gaz. vol. 222; p. 165.
Safety recording device. J. C. A. Anderson. No. 1,168,370; Jan. 18; Gaz. vol. 222; p. 770.
Salt-shaker. E. A. Cochran. No. 1,166,743; Jan. 4; Gaz. vol. 222; p. 116.
Sand-box. F. W. Kallom and P. S. Toennesen. No. 1,168,398; Jan. 18; Gaz. vol. 222; p. 779.
Sandpaper-holder. A. W. Oldham. No. 1,167,207; Jan. 4; Gaz. vol. 222; p. 277.
Sanitary pad or bandage. I. M. Joseph. No. 1,169,490; Jan. 25; Gaz. vol. 222; p. 1196.
Sash-balancing mechanism. E. Georgeff. No. 1,169,719; Jan. 25; Gaz. vol. 222; p. 1277.
Sash holder and lock, Combined. H. J. Mortensen. No. 1,167,007; Jan. 4; Gaz. vol. 222; p. 207.
Sash-lock. M. Barringer. No. 1,169,113; Jan. 25; Gaz. vol. 222; p. 1065.
Sash-lock. A. Rothschild. No. 1,169,429; Jan. 25; Gaz. vol. 222; p. 1174.
Sash-lock, Side. A. Turney. No. 1,169,104; Jan. 18; Gaz. vol. 222; p. 1027.
Sash lock, Window-. A. A. Hicks. No. 1,167,175; Jan. 4; Gaz. vol. 222; p. 266.
Sash, Machine for inserting binding material in. W. H. Wyman. No. 1,166,960; Jan. 4; Gaz. vol. 222; p. 190.
Sash mounting, Window-. A. C. Soule. No. 1,168,833; Jan. 18; Gaz. vol. 222; p. 933.
Sauce-powder. M. Chila. No. 1,166,887; Jan. 4; Gaz. vol. 222; p. 166.
Saw, Electric bone-. F. F. Wear. No. 1,168,355; Jan. 18; Gaz. vol. 222; p. 764.
Saw, Electrically-operated. F. Kazlow. No. 1,166,526; Jan. 4; Gaz. vol. 222; p. 41.
Saw set and clamp, Combined. W. E. Peterson. No. 1,166,929; Jan. 4; Gaz. vol. 222; p. 179.
Saw-setting device. F. W. Wardwell, Jr. No. 1,168,352; Jan. 18; Gaz. vol. 222; p. 763.
Sawing machine, Dowel-. H. W. Weeks. No. 1,168,923; Jan. 18; Gaz. vol. 222; p. 964.
Scaffold. A. N. Faulkner. No. 1,167,988; Jan. 11; Gaz. vol. 222; p. 603.
Scaffold. A. Stelzer. No. 1,168,436; Jan. 18; Gaz. vol. 222; p. 791.
Scaffold, Adjustable. H. Ericsson. No. 1,168,868; Jan. 18; Gaz. vol. 222; p. 944.
Scaffold, Window-. W. Washington. No. 1,169,370; Jan. 25; Gaz. vol. 222; p. 1154.
Scaffolding device. F. B. Johnston. No. 1,168,397; Jan. 18; Gaz. vol. 222; p. 779.
Scale. F. H. Buckingham. No. 1,166,658; Jan. 4; Gaz. vol. 222; p. 88.
Scale. J. D. Burkholder. No. 1,167,974; Jan. 11; Gaz. vol. 222; p. 599.
Scale. C. G. Strubler. No. 1,168,686; Jan. 18; Gaz. vol. 222; p. 883.
Scale-beam. J. H. Shaw. No. 1,167,941; Jan. 11; Gaz. vol. 222; p. 587.
Scale, Railway track-. R. Grundman. No. 1,168,496; Jan. 18; Gaz. vol. 222; p. 813.
Scale, Wagon-. M. E. Anderson. No. 1,169,108; Jan. 25; Gaz. vol. 222; p. 1062.
Scale, Wagon-. M. E. Anderson. No. 1,169,109; Jan. 25; Gaz. vol. 222; p. 1062.
Scale, Weighing-. C. G. Michalis. No. 1,167,584; Jan. 11; Gaz. vol. 222; p. 462.
Scale, Weighing-. C. F. Moore and E. L. Hunter. No. 1,167,311; Jan. 4; Gaz. vol. 222; p. 312.
Scales, Scoop-balance for weighing-. C. F. Moore and H. E. Brown. No. 1,166,775; Jan. 4; Gaz. vol. 222; p. 128.
Scarecrow. H. Huffman and E. J. Peck. No. 1,167,502; Jan. 11; Gaz. vol. 222; p. 433.
Scoop, Grain-. J. W. Richards. No. 1,167,782; Jan. 11; Gaz. vol. 222; p. 530.
Score-board. J. L. Preo. No. 1,167,715; Jan. 11; Gaz. vol. 222; p. 507.
Scraper or excavation-bucket, Self filling and cleaning. H. Kendle. No. 1,166,601; Jan. 4; Gaz. vol. 222; p. 67.
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Screen-plate cleaner. H. R. Farnsworth and T. H. Savery, Jr. No. 1,167,808; Jan. 11; Gaz. vol. 222; p. 539.
Seal, Car-. O. O. Wilcox. No. 1,169,217; Jan. 25; Gaz. vol. 222; p. 1102.
Seal for bags, &c. C. Sismondi. No. 1,168,830; Jan. 18; Gaz. vol. 222; p. 932.
Seal-lock. C. Oishei. No. 1,166,779; Jan. 4; Gaz. vol. 222; p. 129.
Seal, Mercury. W. Pearson. No. 1,167,517; Jan. 11; Gaz. vol. 222; p. 438.
Seal, Self-locking car-. W. M. Brooks. No. 1,166,657; Jan. 4; Gaz. vol. 222; p. 88.
Sealing device, Coin-package-. C. S. Batdorf. No. 1,168,462; Jan. 18; Gaz. vol. 222; p. 802.
Sealing device, Envelop-. J. Slaybaugh. No. 1,166,553; Jan. 4; Gaz. vol. 222; p. 51.
Sealing or luting molds. J. H. Deppeler. No. 1,168,062; Jan. 11; Gaz. vol. 222; p. 630.
Sealing-tape, Safety. C. H. Crowell. No. 1,167,338; Jan. 4; Gaz. vol. 222; p. 322.
Search-light. V. Elsaesser. No. 1,168,064; Jan. 11; Gaz. vol. 222; p. 630.
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Draft-seat.
Seat-spring. W. C. Riehm. No. 1,167,597; Jan. 11; Gaz. vol. 222; p. 467.
Seats, Back-rest attachment for. A. Andersen. No. 1,169,225; Jan. 25; Gaz. vol. 222; p. 1105.
Seed and fertilizer distributer. W. B. Parrish. No. 1,166,477; Jan. 4; Gaz. vol. 222; p. 23.
Seed-dropping plate. A. N. Grinstead. No. 1,169,636; Jan. 25; Gaz. vol. 222; p. 1250.
Selector-switch. J. N. Reynolds. No. 1,168,419; Jan. 18; Gaz. vol. 222; p. 785.
Self-dumping elevator. C. W. Levally. No. 1,168,947; Jan. 18; Gaz. vol. 222; p. 973.
Separating substances of different specific gravities, Apparatus for. A. Gründler. No. 1,169,479; Jan. 25; Gaz. vol. 222; p. 1192.
Separator: *See*—
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Separator. J. D. Moore. No. 1,167,709; Jan. 11; Gaz. vol. 222; p. 505.
Separator. F. W. Smith. No. 1,169,292; Jan. 25; Gaz. vol. 222; p. 1127.
Serving-table, Portable. A. J. Adams. No. 1,168,775; Jan. 18; Gaz. vol. 222; p. 913.
Settling-tank. G. W. Otterson. No. 1,166,713; Jan. 4; Gaz. vol. 222; p. 107.
Sewing-machine. C. Lurz. No. 1,169,331; Jan. 25; Gaz. vol. 222; p. 1139.
Sewing-machine. V. J. Van Horn. No. 1,169,584; Jan. 25; Gaz. vol. 222; p. 1230.
Sewing machine, Broom-. L. Pelton. No. 1,167,713; Jan. 11; Gaz. vol. 222; p. 506.
Sewing-machine embroidering attachment. J. E. Berry. No. 1,168,471; Jan. 18; Gaz. vol. 222; p. 805.
Sewing-machine folder. J. R. Moffatt. No. 1,167,777; Jan. 11; Gaz. vol. 222; p. 527.
Sewing-machine for base-ball covers. A. J. Brusseau. No. 1,167,265; Jan. 4; Gaz. vol. 222; p. 295.
Sewing-machine for boot-soles and the like. G. Beer. No. 1,168,593; Jan. 18; Gaz. vol. 222; p. 847.
Sewing-machine, Intermittent feed mechanism for. A. Morley. No. 1,168,536; Jan. 18; Gaz. vol. 222; p. 827.
Sewing-machine looper mechanism. E. Erickson. No. 1,169,716; Jan. 25; Gaz. vol. 222; p. 1275.
Sewing-machine looper mechanism. L. Onderdonk. No. 1,167,515; Jan. 11; Gaz. vol. 222; p. 438.
Sewing-machine needle-bar and thread-guide, Combined. H. C. Moulton. No. 1,167,834; Jan. 11; Gaz. vol. 222; p. 547.
Sewing machine, Outsole shoe-. F. Ashworth. No. 1,169,062; Jan. 18; Gaz. vol. 222; p. 1010.
Sewing-machine take-up mechanism. A. H. De Voe. No. 1,167,634; Jan. 11; Gaz. vol. 222; p. 480.
Sewing-machine take-up mechanism. M. Hemleb. No. 1,166,834; Jan. 4; Gaz. vol. 222; p. 149.
Sewing-machine tension device. J. O. Huffman and E. J. Lauffer. No. 1,167,823; Jan. 11; Gaz. vol. 222; p. 544.

Sewing-machines, Embroidering and darning attachment for. A. Carr. No. 1,169,236; Jan. 25; Gaz. vol. 222; p. 1109.

Sewing-machines, Stay-cutting attachment for. B. V. Kershner. No. 1,169,088; Jan. 18; Gaz. vol. 222; p. 1020.

Sewing mechanism, Button-. C. A. Sibbald and W. H. Caney. No. 1,169,290; Jan. 25; Gaz. vol. 222; p. 1126.

Shackle. H. G. McComb. No. 1,169,502; Jan. 25; Gaz. vol. 222; p. 1201.

Shade bracket and lace-curtain hanger, Combined window-. G. B. Fletcher. No. 1,169,024; Jan. 18; Gaz. vol. 222; p. 998.

Shade, curtain, or awning roller. G. D. Hill. No. 1,166,683; Jan. 4; Gaz. vol. 222; p. 97.

Shade-holder, Electric. N. S. Richmond and R. W. Pain. No. 1,168,553; Jan. 18; Gaz. vol. 222; p. 833.

Shade-roller and curtain-pole support, Combined. D. Houston. No. 1,169,259; Jan. 25; Gaz. vol. 222; p. 1116.

Shade, Window-. B. Ewing. No. 1,167,987; Jan. 11; Gaz. vol. 222; p. 603.

Shaft-collar. H. T. Hallowell. No. 1,167,296; Jan. 4; Gaz. vol. 222; p. 307.

Shaft-coupling. J. J. Hogan. No. 1,166,835; Jan. 4; Gaz. vol. 222; p. 149.

Shaft, Flexible. A. B. Cadman. No. 1,167,381; Jan. 11; Gaz. vol. 222; p. 392.

Shaft for motor-vehicles, Transmission-. R. Huff. No. 1,167,695; Jan. 11; Gaz. vol. 222; p. 501.

Shaft-hanger. N. Barry. No. 1,167,672; Jan. 11; Gaz. vol. 222; p. 493.

Shaft-hanger. C. J. Jackson. No. 1,169,487; Jan. 25; Gaz. vol. 222; p. 1195.

Shaft link, Flexible-. A. B. Cadman. No. 1,167,380; Jan. 11; Gaz. vol. 222; p. 392.

Shaft-locking device. J. Royle, Jr. No. 1,169,513; Jan. 25; Gaz. vol. 222; p. 1205.

Shafts and mandrels, Safety attachment for. F. C. Stanley. No. 1,166,722; Jan. 4; Gaz. vol. 222; p. 110.

Shaper, Traveling-head. H. E. Morton. No. 1,167,649; Jan. 11; Gaz. vol. 222; p. 485.

Sharpener, Colter or cultivator-disk. F. A. Carpenter. No. 1,169,460; Jan. 25; Gaz. vol. 222; p. 1186.

Sharpener, Knife-. E. P. Johnson. No. 1,168,507; Jan. 18; Gaz. vol. 222; p. 817.

Sharpener, Razor-. W. H. Morgan. No. 1,167,589; Jan. 11; Gaz. vol. 222; p. 464.

Sharpener, Razor-blade. W. J. Bauer. No. 1,168,047; Jan. 11; Gaz. vol. 222; p. 624.

Sharpening device. M. L. Hawks. No. 1,168,302; Jan. 18; Gaz. vol. 222; p. 744.

Sharpening device for slicing-machine knives. P. C. de Groot. No. 1,168,379; Jan. 18; Gaz. vol. 222; p. 772.

Shaving-stick container. H. A. Colgate. No. 1,166,436; Jan. 4; Gaz. vol. 222; p. 8.

Shaving-stick container. G. M. Greene. No. 1,166,454; Jan. 4; Gaz. vol. 222; p. 15.

Sheet-feeding machine. F. L. Cross. No. 1,169,129; Jan. 25; Gaz. vol. 222; p. 1071.

Sheet metal, Forming. O. J. Groehn. No. 1,167,556; Jan. 11; Gaz. vol. 222; p. 452.

Sheet-metal links, Mechanism for making. H. A. House. No. 1,167,073; Jan. 4; Gaz. vol. 222; p. 229.

Sheet-metal structure, Hollow. L. L. Knox. No. 1,168,647; Jan 18; Gaz. vol. 222; p. 869.

Sheet-metal structure, Hollow. L. L. Knox. No. 1,168,648; Jan. 18; Gaz. vol. 222; p. 869.

Sheet separator and feeder. P. L. Wells. No. 1,167,367; Jan. 4; Gaz. vol. 222; p. 334.

Shell-crimper. J. B. Russell. No. 1,166,636; Jan. 4; Gaz. vol. 222; p. 79.

Shell decapping machine. S. E. Selleck. No. 1,169,287; Jan. 25; Gaz. vol. 222; p. 1125.

Sherardizing. E. F. Collins and J. A. Capp. No. 1,169,529; Jan. 25; Gaz. vol. 222; p. 1210.

Shifter. H. A. Myers. No. 1,167,099; Jan. 4; Gaz. vol. 222; p. 238.

Shingle-machines, Device for adjusting the feed mechanism of. E. Evans. No. 1,166,666; Jan. 4; Gaz. vol. 222; p. 92.

Ships, boats, submarines, and the like vessels, Apparatus for propelling, elevating, and supporting. P. U. Loubery. No. 1,167,191; Jan. 4; Gaz. vol. 222; p. 272.

Ship's construction. T. T. Jones. No. 1,167,503; Jan. 11; Gaz. vol. 222; p. 433.

Ship's table. S. Jenigar. No. 1,168,727; Jan. 18; Gaz. vol. 222; p. 896.

Shirt. H. Gerhardt. No. 1,168,191; Jan. 11; Gaz. vol. 222; p. 672.

Shirt. R. P. Saffold. No. 1,169,515; Jan. 25; Gaz. vol. 222; p. 1206.

Shock-absorber. B. J. Dryer. No. 1,169,624; Jan. 25; Gaz. vol. 222; p. 1246.

Shock-absorber. B. J. Dryer. No. 1,169,625; Jan. 25; Gaz. vol. 222; p. 1246.

Shock-absorber. L. G. Ginnett. No. 1,169,027; Jan. 18; Gaz. vol. 222; p. 998.

Shock-absorber. P. W. Kane. No. 1,167,305; Jan. 4; Gaz. vol. 222; p. 309.

Shock-absorber. A. L. McGregor. No. 1,166,920; Jan. 4; Gaz. vol. 222; p. 177.

Shock-absorber. W. T. Sears. No. 1,167,848; Jan. 11; Gaz. vol. 222; p. 553.

Shock-absorber. A. Stowasser. No. 1,169,578; Jan. 25; Gaz. vol. 222; p. 1228.

Shock-absorber for vehicles. M. J. Kirby. No. 1,166,604; Jan. 4; Gaz. vol. 222; p. 68.

Shock-absorber for water-pipes. W. M. Fulton. No. 1,169,250; Jan. 25; Gaz. vol. 222; p. 1113.

Shock-absorber lubricator. P. M. Maloney. No. 1,168,407; Jan. 18; Gaz. vol. 222; p. 782.

Shock-absorbing device for motor-cycles. J. Babis, Jr. No. 1,168,702; Jan. 18; Gaz. vol. 222; p. 888.

Shoe-assembling and heel-seat-lasting machine. B. F. Mayo. No. 1,167,913; Jan. 11; Gaz. vol. 222; p. 576.

Shoe-beating machine. A. T. Chaplin. No. 1,166,511; Jan. 4; Gaz. vol. 222; p. 35.

Shoe-cleaner. L. N. Simmons. No. 1,168,341; Jan. 18; Gaz. vol. 222; p. 759.

Shoe-forming machine. W. J. Drey. No. 1,167,277; Jan. 4; Gaz. vol. 222; p. 300.

Shoe-making machine. R. C. Simmons. No. 1,169,201; Jan. 25; Gaz. vol. 222; p. 1096.

Shoe-polish and other boxes, Holder for. P. Nelson. No. 1,167,102; Jan. 4; Gaz. vol. 222; p. 239.

Shoe-rack. W. R. Forsyth. No. 1,167,550; Jan. 11; Gaz. vol. 222; p. 450.

Shoe-shining device. W. Mitterreiter. No. 1,168,409; Jan. 18; Gaz. vol. 222; p. 783.

Shoe-shining foot-rest. B. Balser. No. 1,168,271; Jan. 18; Gaz. vol. 222; p. 734.

Shoe, Turn-. E. F. Wylie. No. 1,169,710; Jan. 25; Gaz. vol. 222; p. 1273.

Shoe-uppers, Temporary protector for lasted. C. T. Cole. No. 1,169,463; Jan. 25; Gaz. vol. 222; p. 1186.

Shoes, Antislipping device for. H. E. Clarke. No. 1,167,628; Jan. 11; Gaz. vol. 222; p. 478.

Shoes, Manufacture of. E. F. Wylie. No. 1,169,709; Jan. 25; Gaz. vol. 222; p. 1273.

Shotguns and rifles, Manufacture of barrels for. F. B. Warner. No. 1,167,233; Jan. 4; Gaz. vol. 222; p. 285.

Shovel foot-rest. M. T. Bradley. No. 1,166,427; Jan. 4; Gaz. vol. 222; p. 5.

Show-cases, Rotating rack for. O. L. Smith. No. 1,169,294; Jan. 25; Gaz. vol. 222; p. 1128.

Shuttle. M. Camagni. No. 1,166,742; Jan. 4; Gaz. vol. 222; p. 116.

Shuttle-guard. P. Joncas. No. 1,167,369; Jan. 4; Gaz. vol. 222; p. 335.

Sidewalk, vault-light, floor-light, and skylight construction. L. W. Mulford. No. 1,167,917; Jan. 11; Gaz. vol. 222; p. 578.

Sleeve. C. F. Pfalzgraf. No. 1,167,927; Jan. 11; Gaz. vol. 222; p. 581.

Sign. W. H. Bomm and J. T. Brent. No. 1,169,456; Jan. 25; Gaz. vol. 222; p. 1184.

Sign. C. Elliot. No. 1,167,279; Jan. 4; Gaz. vol. 222; p. 301.

Sign, Advertising-. A. E. Whitcomb. No. 1,167,034; Jan. 4; Gaz. vol. 222; p. 216.

Sign, Automaton-. R. J. Schuhmann. No. 1,168,751; Jan. 18; Gaz. vol. 222; p. 904.

Sign-holder. A. J. Fairbanks. No. 1,166,976; Jan. 4; Gaz. vol. 222; p. 195.

Sign, Illuminated. H. F. Löwenstein. No. 1,168,084; Jan. 11; Gaz. vol. 222; p. 637.

Sign or number-plate, Illuminating. S. Borman. No. 1,169,117; Jan. 25; Gaz. vol. 222; p. 1067.

Sign-receptacle. C. D. Platt. No. 1,169,190; Jan. 25; Gaz. vol. 222; p. 1093.

Sign structure, Electric-. A. W. Gast. No. 1,169,254; Jan. 25; Gaz. vol. 222; p. 1115.

Signal: *See*—
Automobile-signal.
Car-signal.
Cycle-signal.
Mail-box signal.
Vehicle rear-end signal.

Signal device, Safety. B. M. Downs and W. S. Cook. No. 1,169,138; Jan. 25; Gaz. vol. 222; p. 1075.

Signal-holding bracket. A. W. Thompson. No. 1,168,440; Jan. 18; Gaz. vol. 222; p. 793.

Signal system. B. B. Hatch. No. 1,168,630; Jan. 18; Gaz. vol. 222; p. 863.

Signaling device. M. J. Mandelbaum. No. 1,167,308; Jan. 4; Gaz. vol. 222; p. 311.

Signaling device, Automobile. O. J. Bemiss. No. 1,167,372; Jan. 11; Gaz. vol. 222; p. 389.

Signaling system, Vehicle. G. E. Boyden. No. 1,168,053; Jan. 11; Gaz. vol. 222; p. 626.

Silk and other thread, Holder for cones or spools of artificial. J. Haas. No. 1,168,393; Jan. 18; Gaz. vol. 222; p. 778.

Silk stripping, dyeing, and washing machine. G. A. Casson. No. 1,168,161; Jan. 11; Gaz. vol. 222; p. 662.

Silo. C. C. Crady. No. 1,167,354; Jan. 4; Gaz. vol. 222; p. 329.

Silo. C. E. Hedrick. No. 1,166,987; Jan. 4; Gaz. vol. 222; p. 199.

Silo-door. G. P. Brubaker. No. 1,168,156; Jan. 11; Gaz. vol. 222; p. 660.

Silo-door construction. A. N. Bragstad. No. 1,166,740; Jan. 4; Gaz. vol. 222; p. 115.

Silo-heating arrangement. W. Rohm. No. 1,168,424; Jan. 18; Gaz. vol. 222; p. 787.

Silo-material-handling mechanism. J. C. Spaeth and B. Vinar. No. 1,168,123; Jan. 11; Gaz. vol. 222; p. 649.

Sintering device. M. McMurray and B. J. Mullen. No. 1,169,336; Jan. 25; Gaz. vol. 222; p. 1141.

Siphon-head. C. De Lukacsevics. No. 1,168,176; Jan. 11; Gaz. vol. 222; p. 667.

Skates, Ankle-brace for. F. E. Brown. No. 1,168,848; Jan. 18; Gaz. vol. 222; p. 938.

Skein, Spring-mounted. A. Duval. No. 1,168,791; Jan. 18; Gaz. vol. 222; p. 919.

Skinning-tool. F. Jackson. No. 1,168,726; Jan. 18; Gaz. vol. 222; p. 896.

Skiving-machine. A. M. Alexander. No. 1,169,060; Jan. 18; Gaz. vol. 222; p. 1009.

Skiving-machine. B. F. Mayo. No. 1,166,533; Jan. 4; Gaz. vol. 222; p. 44.

Skylight. H. J. Giclas and S. C. Breneman. No. 1,167,553; Jan. 11; Gaz. vol. 222; p. 451.

Skylight construction. T. W. Irwin. No. 1,168,942; Jan. 18; Gaz. vol. 222; p. 971.

Slack-adjuster. E. N. Luburg. No. 1,166,465; Jan. 4; Gaz. vol. 222; p. 19.

Slicing-machines, Meat-holding mechanism for. H. Stephenson and J. L. Howard. No. 1,167,443; Jan. 11; Gaz. vol. 222; p. 415.

Sling, Hoisting and similar. N. C. Harrison. No. 1,168,802; Jan. 18; Gaz. vol. 222; p. 923.

Slotting-machine. J. Monks. No. 1,166,621; Jan. 4; Gaz. vol. 222; p. 74.

Smelting ores and apparatus therefor. F. W. Highfield. No. 1,167,176; Jan. 4; Gaz. vol. 222; p. 266.

Smoke-preventer. B. L. Ames. No. 1,166,880; Jan. 4; Gaz. vol. 222; p. 164.

Smoking-pipe. R. E. Combs. No. 1,168,481; Jan. 18; Gaz. vol. 222; p. 808.

Snap-link. C. W. Marsh. No. 1,168,817; Jan. 18; Gaz. vol. 222; p. 928.

Snap-switch. E. C. Wilcox and B. A. Spitzer. No. 1,169,099; Jan. 18; Gaz. vol. 222; p. 1025.

Soap cutting and separating machine. E. A. Houchin. No. 1,166,459; Jan. 4; Gaz. vol. 222; p. 16.

Soap dispenser, Liquid-. M. M. Marcuse. No. 1,167,420; Jan. 11; Gaz. vol. 222; p. 406.

Soap-holder. G. F. Hall. No. 1,167,994; Jan. 11; Gaz. vol. 222; p. 605.

Socket, Expansion-. R. D. Wagner. No. 1,168,770; Jan. 18; Gaz. vol. 222; p. 911.

Socket-shell. L. W. Andersen. No. 1,167,037; Jan. 4; Gaz. vol. 222; p. 217.

Socket-wrench. W. S. Bellows. No. 1,167,542; Jan. 11; Gaz. vol. 222; p. 447.

Soldering appliance. H. W. Richdale. No. 1,169,103; Jan. 18; Gaz. vol. 222; p. 1026.

Sole and heel inking machine. M. Frisch. No. 1,167,687; Jan. 11; Gaz. vol. 222; p. 499.

Sole-blanks, Preparing. O. L. Smith. No. 1,168,434; Jan. 18; Gaz. vol. 222; p. 791.

Sole for slippers. E. Dillberg. No. 1,168,790; Jan. 18; Gaz. vol. 222; p. 919.

Sole, Shoe-. B. Gilowitz. No. 1,167,747; Jan. 11; Gaz. vol. 222; p. 518.

Sound-box. A. S. Keszthelyi and F. House. No. 1,166,602; Jan. 4; Gaz. vol. 222; p. 68.

Sound-box. J. S. Ostrom. No. 1,166,627; Jan. 4; Gaz. vol. 222; p. 76.

Sound-producer. L. Savart. No. 1,168,967; Jan. 18; Gaz. vol. 222; p. 979.

Sound-producer, Electrically-operated. C. J. Schwarze. No. 1,167,601; Jan. 11; Gaz. vol. 222; p. 469.

Sound-record cleaner. J. D. Rostron. No. 1,168,910; Jan. 18; Gaz. vol. 222; p. 959.

Sound recording and reproducing apparatus. F. S. Ober. No. 1,166,925; Jan. 4; Gaz. vol. 222; p. 178.

Sound-reproducing machine. J. T. Prout. No. 1,167,838; Jan. 11; Gaz. vol. 222; p. 549.

Sower, Seed and fertilizer. G. W. Gane. No. 1,167,814; Jan. 11; Gaz. vol. 222; p. 541.

Spark-plug. A. A. Edey. No. 1,167,804; Jan. 11; Gaz. vol. 222; p. 537.

Spark-plug. A. C. Ferrier. No. 1,169,628; Jan. 25; Gaz. vol. 222; p. 1247.

Spark-plug. A. Sprung. No. 1,169,203; Jan. 25; Gaz. vol. 222; p. 1097.

Spark-plug. S. J. Todd. No. 1,168,921; Jan. 18; Gaz. vol. 222; p. 963.

Spark-plug spark-intensifier. A. F. Gillet. No. 1,169,744; Jan. 25; Gaz. vol. 222; p. 1285.

Speed-changing mechanism for power-driven machines. A. R. Schaenky. No. 1,167,365; Jan. 4; Gaz. vol. 222; p. 333.

Speed-controlling device. V. MacKay. No. 1,168,527; Jan. 18; Gaz. vol. 222; p. 825.

Speed-governor, Centrifugal. F. L. Smith. No. 1,167,850; Jan. 11; Gaz. vol. 222; p. 553.

Speed indicating and recording apparatus of the periodic-counter type. F. G. L. Johnson. No. 1,166,596; Jan. 4; Gaz. vol. 222; p. 65.

Speed indicator and recorder. C. A. Anderson. No. 1,167,671; Jan. 11; Gaz. vol. 222; p. 493.

Speed-indicators, Transmission for. J. H. and E. W. Bullard. No. 1,169,458; Jan. 25; Gaz. vol. 222; p. 1185.

Speed mechanism, Change-. A. Fay. No. 1,169,388; Jan. 25; Gaz. vol. 222; p. 1159.

Speed mechanism, Variable-. J. H. Brimson. No. 1,166,656; Jan. 4; Gaz. vol. 222; p. 88.

Speeds of shafts or the like, Apparatus for indicating at a distance the. P. Kaminski. No. 1,166,765; Jan. 4; Gaz. vol. 222; p. 124.

Spike. A. Makley. No. 1,168,088; Jan. 11; Gaz. vol. 222; p. 639.

Spindle machine, Multiple-. G. O. Gridley. No. 1,166,830; Jan. 4; Gaz. vol. 222; p. 147.

Spinning device. H. Evans. No. 1,167,681; Jan. 11; Gaz. vol. 222; p. 497.

Spinning device, Filer. J. J. Bibby. No. 1,168,927; Jan. 18; Gaz. vol. 222; p. 966.

Spinning-frame builder. G. S. Harris. No. 1,167,168; Jan. 4; Gaz. vol. 222; p. 264.

Spinning-machine. A. Avery. No. 1,168,237; Jan. 11; Gaz. vol. 222; p. 687.

Spinning-machine. C. E. Lovejoy. No. 1,167,169; Jan. 4; Gaz. vol. 222; p. 264.

Spinning-machine builder mechanism. W. P. Straw. No. 1,168,231; Jan. 11; Gaz. vol. 222; p. 685.

Spoke-gage. D. N. Shrum and J. H. Kelley. No. 1,169,359; Jan. 25; Gaz. vol. 222; p. 1150.

Spool. C. Fisher. No. 1,168,940; Jan. 18; Gaz. vol. 222; p. 970.

Spools, Spindle-holding device for. L. W. Appleton. No. 1,167,248; Jan. 4; Gaz. vol. 222; p. 289.

Spoon. J. A. Sebenius. No. 1,169,683; Jan. 25; Gaz. vol. 222; p. 1265.

Spray-rod. R. W. E. Hayes. No. 1,167,297; Jan. 4; Gaz. vol. 222; p. 307.

Sprayer. L. S. Baker. No. 1,169,524; Jan. 25; Gaz. vol. 222; p. 1208.

Spring: *See*—
Radial elliptical spring.
Seat-spring.
Vehicle-spring.

Spring. A. C. Mason and A. T. Sturt. No. 1,166,615; Jan. 4; Gaz. vol. 222; p. 72.

Spring. F. E. Wilcox. No. 1,166,564; Jan. 4; Gaz. vol. 222; p. 55.

Spring lubricator, Leaf-. A. Mustee. No. 1,167,918; Jan. 11; Gaz. vol. 222; p. 578.

Spring-making machine, Automatic. A. B. L. Linberg, J. E. Andrew, and H. C. Wright. No. 1,166,917; Jan. 4; Gaz. vol. 222; p. 176.

Spring-seat. J. P. Hurley. No. 1,167,074; Jan. 4; Gaz. vol. 222; p. 229.

Spring-separating device, Leaf-. B. Morgan. No. 1,168,735; Jan. 18; Gaz. vol. 222; p. 899.

Spring structure. W. E. Andrew. No. 1,168,372; Jan. 18; Gaz. vol. 222; p. 770.

Spring structure, Upholstering. L. A. Suekoff. No. 1,167,856; Jan. 11; Gaz. vol. 222; p. 556.

Spring suspension. A. C. Mason and A. T. Sturt. No. 1,166,616; Jan. 4; Gaz. vol. 222; p. 72.

Spring-wheel. M. Chupka. No. 1,168,283; Jan. 18; Gaz. vol. 222; p. 739.

Spring-wheel. D. H. Lapp. No. 1,169,042; Jan. 18; Gaz. vol. 222; p. 1004.

Spring-wheel. C. H. Likely. No. 1,166,697; Jan. 4; Gaz. vol. 222; p. 102.

Springs, Machine for cutting and grinding helical compression-. H. C. Wright and J. E. Andrew. No. 1,166,875; Jan. 4; Gaz. vol. 222; p. 162.

Springs, Safety-clip for leaf-. D. F. Oliver. No. 1,167,513; Jan. 11; Gaz. vol. 222; p. 437.

Sprinkler. H. H. Duley. No. 1,169,018; Jan. 18; Gaz. vol. 222; p. 996.

Sprinkler. F. B. Miller. No. 1,168,219; Jan. 11; Gaz. vol. 222; p. 681.

Sprinkler systems, Alarm-controller for. N. H. Suren. No. 1,169,692; Jan. 25; Gaz. vol. 222; p. 1268.

Sprinkler systems, Emergency cut-off for automatic. J. T. Van Dillen and G. H. F. Bergmann. No. 1,167,860; Jan. 11; Gaz. vol. 222; p. 557.

Stable-rake. J. Potter. No. 1,169,284; Jan. 25; Gaz. vol. 222; p. 1124.

Stair, Pressed-steel. G. W. Brooks. No. 1,166,428; Jan. 4; Gaz. vol. 222; p. 5.

Stairway, Compensating. P. J. Fickinger. No. 1,167,893; Jan. 11; Gaz. vol. 222; p. 569.

Stalk-cutter. H. T. Holton and W. J. Jewell. No. 1,169,156; Jan. 25; Gaz. vol. 222; p. 1081.

Stamp affixing and canceling machine. R. Stein. No. 1,167,442; Jan. 11; Gaz. vol. 222; p. 414.

Stamp, Self-inking hand-. H. S. Folger and C. L. Redfield. No. 1,166,667; Jan. 4; Gaz. vol. 222; p. 92.

Stamps and the like, Trendle operating mechanism for. A. Wilson. No. 1,169,220; Jan. 25; Gaz. vol. 222; p. 1103.

Stand: *See*—
Cycle-stand.
Display-stand.
Washstand.

Staple-puller. E. T. Allan. No. 1,166,419; Jan. 4; Gaz. vol. 222; p. 3.

Staples, Manufacturing. J. von Vass. No. 1,169,698; Jan. 25; Gaz. vol. 222; p. 1270.

Stapling-machine. A. H. Maynard. No. 1,169,339; Jan. 25; Gaz. vol. 222; p. 1142.

Stapling-tool. P. S. Keating and W. A. Overley. No. 1,167,080; Jan. 4; Gaz. vol. 222; p. 231.

Starch-machine. A. L. Bausman. No. 1,168,240; Jan. 11; Gaz. vol. 222; p. 689.

Starch of angular configuration, Producing. A. W. H. Lenders. No. 1,168,516; Jan. 18; Gaz. vol. 222; p. 821.

Station-box for watchmen and fire-alarm signaling. F. Williams. No. 1,167,961; Jan. 11; Gaz. vol. 222; p. 595.

Station-indicator. R. M. Craig. No. 1,168,170; Jan. 11; Gaz. vol. 222; p. 664.

Stave-bending machine. E. F. Beugler. No. 1,168,376; Jan. 18; Gaz. vol. 222; p. 771.
Stay-bolt, Flexible. W. A. Keith. No. 1,168,728; Jan. 18; Gaz. vol. 222; p. 897.
Steam-boiler, Water-tube. W. A. Moffat. No. 1,167,361; Jan. 4; Gaz. vol. 222; p. 332.
Steam-engine. E. J. Armstrong. No. 1,168,045; Jan. 11; Gaz. vol. 222; p. 623.
Steam-generator. J. H. Rosenthal and E. C. Carnt. No. 1,167,841; Jan. 11; Gaz. vol. 222; p. 550.
Steam-trap. W. A. Klitts, Sr. No. 1,168,215; Jan. 11; Gaz. vol. 222; p. 680.
Steering-bar lock. W. F. Holt. No. 1,169,402; Jan. 25; Gaz. vol. 222; p. 1164.
Steering device. N. P. Nelson. No. 1,168,956; Jan. 18; Gaz. vol. 222; p. 976.
Steering-gears, Locking device for. E. B. Babbitt. No. 1,168,701; Jan. 18; Gaz. vol. 222; p. 888.
Steering-mechanism attachment. R. L. Wood. No. 1,167,240; Jan. 4; Gaz. vol. 222; p. 287.
Steering-wheel for boats. G. A. and G. C. Penny. No. 1,167,108; Jan. 4; Gaz. vol. 222; p. 241.
Stencil fabric and producing the same. A. E. Strippel. No. 1,169,520; Jan. 25; Gaz. vol. 222; p. 1207.
Stenciling apparatus. H. Lehmkuhl. No. 1,168,655; Jan. 18; Gaz. vol. 222; p. 872.
Stereoscopic appliance. G. A. H. Kellner. No. 1,169,163; Jan. 25; Gaz. vol. 222; p. 1084.
Stereotype-matrix machine. A. Ott. No. 1,169,279; Jan. 25; Gaz. vol. 222; p. 1122.
Still. C. L. Turner. (Reissue.) No. 14,050; Jan. 18; Gaz. vol. 222; p. 1027.
Stilt. C. A. Wetzell. No. 1,167,235; Jan. 4; Gaz. vol. 222; p. 285.
Stirrer for meal-cookers and the like. A. W. French. No. 1,168,621; Jan. 18; Gaz. vol. 222; p. 858.
Stitch machine, Chain-. R. G. Woodward. No. 1,167,463; Jan. 11; Gaz. vol. 222; p. 421.
Stock. E. L. Vette. No. 1,168,836; Jan. 18; Gaz. vol. 222; p. 934.
Stoker. G. E. Stevens. No. 1,167,028; Jan. 4; Gaz. vol. 222; p. 214.
Stoker, Automatic. A. Cotton. No. 1,167,982; Jan. 11; Gaz. vol. 222; p. 601.
Stoker, Mechanical. F. M. Clark. No. 1,167,627; Jan. 11; Gaz. vol. 222; p. 478.
Stoker, Mechanical. O. Wundrack. No. 1,168,367; Jan. 18; Gaz. vol. 222; p. 768.
Stone-dressing machine. R. E. Shaw. No. 1,166,860; Jan. 4; Gaz. vol. 222; p. 157.
Stool, Bookkeeper's. T. W. Robertson. No. 1,167,932; Jan. 11; Gaz. vol. 222; p. 583.
Stool, Folding camp-. M. V. Baxter. No. 1,169,454; Jan. 25; Gaz. vol. 222; p. 1184.
Stool, Milking-. L. H. Chase. No. 1,169,008; Jan. 18; Gaz. vol. 222; p. 992.
Stop mechanism. R. C. Simmons. No. 1,167,531; Jan. 11; Gaz. vol. 222; p. 443.
Stop mechanism, Automatic. E. R. Kast. No. 1,169,491; Jan. 25; Gaz. vol. 222; p. 1196.
Stop-motion. G. M. Arragg. No. 1,168,457; Jan. 18; Gaz. vol. 222; p. 800.
Stopper: *See*—
Bottle-stopper.
Storage battery. T. A. Edison. No. 1,167,485; Jan. 11; Gaz. vol. 222; p. 427.
Storage battery, Electric. J. M. Skinner and V. R. Bottone. No. 1,169,362; Jan. 25; Gaz. vol. 222; p. 1151.
Stove. H. Deutsch. No. 1,168,380; Jan. 18; Gaz. vol. 222; p. 773.
Stove. P. McPeak. No. 1,168,049; Jan. 18; Gaz. vol. 222; p. 1005.
Stove and burner lighting device, Gas. L. A. Marsh. No. 1,169,505; Jan. 25; Gaz. vol. 222; p. 1202.
Stove, Camping-. C. C. Wilson. No. 1,166,567; Jan. 4; Gaz. vol. 222; p. 56.
Stove, Combination coal and gas. F. Will, Sr., and H. Becker. No. 1,169,219; Jan. 25; Gaz. vol. 222; p. 1103.
Stove, Cooking-. B. B. Kahn. No. 1,168,510; Jan. 18; Gaz. vol. 222; p. 818.
Stove, Hot-blast. K. L. Landgrebe. No. 1,168,014; Jan. 11; Gaz. vol. 222; p. 613.
Stove-lid handle or lifter. J. F. Raczkowski. No. 1,168,329; Jan. 18; Gaz. vol. 222; p. 754.
Stoves, Flue structure for hot-blast. J. Kennedy. No. 1,167,081; Jan. 4; Gaz. vol. 222; p. 232.
Stovepipe-ventilating attachment. H. F. McKeever. No. 1,169,661; Jan. 25; Gaz. vol. 222; p. 1258.
Strainer. E. C. Kelly, Jr. No. 1,168,399; Jan. 18; Gaz. vol. 222; p. 780.
Strainer, Coffee and tea. H. N. Newlin. No. 1,168,544; Jan. 18; Gaz. vol. 222; p. 830.
Strainer, Milk-. P. J. Bolen. No. 1,168,151; Jan. 11; Gaz. vol. 222; p. 658.
Strainer, Milk-. C. Meltz. No. 1,168,532; Jan. 18; Gaz. vol. 222; p. 826.
Street-cleaner, Vacuum. J. E. Deardorff. No. 1,168,175; Jan. 11; Gaz. vol. 222; p. 667.
Street-wrench, Folding. H. A. Knauff. No. 1,169,496; Jan. 25; Gaz. vol. 222; p. 1198.
Stretcher, Folding. J. Warga. No. 1,166,727; Jan. 4; Gaz. vol. 222; p. 111.
Strip-marker. O. W. Curtis. No. 1,169,130; Jan. 25; Gaz. vol. 222; p. 1071.
Strip-serving device. F. S. Anable. No. 1,168,777; Jan. 18; Gaz. vol. 222; p. 914.
Striping attachment. G. L. Ballard. No. 1,167,251; Jan. 4; Gaz. vol. 222; p. 290.
Stud-support. C. O. Wescott. No. 1,167,234; Jan. 4; Gaz. vol. 222; p. 285.
Stump-extractor. F. McCormick. No. 1,169,503; Jan. 25; Gaz. vol. 222; p. 1201.
Stump-puller. A. J. Kirstin. No. 1,168,007; Jan. 11; Gaz. vol. 222; p. 610.
Stump-puller. C. Rodin. No. 1,168,559; Jan. 18; Gaz. vol. 222; p. 835.
Stump-puller-operating mechanism. J. S. Hayden. No. 1,169,032; Jan. 18; Gaz. vol. 222; p. 1000.
Subfloating body, such as a mine, torpedo, &c. N. W. Uhr and J. H. Sandberg. No. 1,169,523; Jan. 25; Gaz. vol. 222; p. 1208.
Submarine. C. E. and H. E. Beck. No. 1,166,651; Jan. 4; Gaz. vol. 222; p. 86.
Submarine. R. Brunet. No. 1,168,707; Jan. 18; Gaz. vol. 222; p. 890.
Submarines, Hull for. M. F. Hay. No. 1,169,640; Jan. 25; Gaz. vol. 222; p. 1252.
Sugars, Fermenting. K. Delbrück and K. Meisenburg. No. 1,169,321; Jan. 25; Gaz. vol. 222; p. 1137.
Sulfids, &c., Treating metallic. U. Wedge. No. 1,169,444; Jan. 25; Gaz. vol. 222; p. 1179.
Sulfur dioxid, Recovering. L. P. Bassert. No. 1,168,046; Jan. 11; Gaz. vol. 222; p. 624.
Sulfur from sulfur gases, Recovering elemental. W. F. Lamoreaux. No. 1,169,726; Jan. 25; Gaz. vol. 222; p. 1279.
Sulky. G. W. Rundle. No. 1,167,525; Jan. 11; Gaz. vol. 222; p. 441.
Sumps and catch-basins, Apparatus for removing sediment from. G. W. Otterson. No. 1,166,712; Jan. 4; Gaz. vol. 222; p. 107.
Sun-dial, Magnetic. J. H. L. Lund. No. 1,166,611; Jan. 4; Gaz. vol. 222; p. 71.
Supporter. C. F. Bennett. No. 1,169,455; Jan. 25; Gaz. vol. 222; p. 1184.
Surgical bandage. E. Gulaeshi. No. 1,166,984; Jan. 4; Gaz. vol. 222; p. 198.
Surgical-bandage package. P. S. Bauer. No. 1,168,703; Jan. 18; Gaz. vol. 222; p. 888.
Surgical instrument. E. B. Tizzard. No. 1,166,495; Jan. 4; Gaz. vol. 222; p. 29.
Surgical ligatures and preparing the same, Sealed container of. C. T. Davis. No. 1,168,173; Jan. 11; Gaz. vol. 222; p. 666.
Surgical ligatures, Sterilizing and preserving. C. T. Davis. No. 1,168,174; Jan. 11; Gaz. vol. 222; p. 666.
Surgical sandal for the treatment of bunions. A. Reed. No. 1,167,019; Jan. 4; Gaz. vol. 222; p. 211.
Suspender attachment. E. E. Peck. No. 1,166,478; Jan. 4; Gaz. vol. 222; p. 23.
Swingletree attachment. J. J. Simmons. No. 1,168,120; Jan. 11; Gaz. vol. 222; p. 649.
Switch: *See*—
Circuit-closing switch. Plug-switch.
Electric switch. Selector-switch.
Electrical switch. Snap-switch.
Switch and crank mechanism. F. C. Anderson. No. 1,169,106; Jan. 25; Gaz. vol. 222; p. 1061.
Switch-box. J. Z. Bayliss and C. Raus. No. 1,167,879; Jan. 11; Gaz. vol. 222; p. 564.
Switch-lock. R. L. Girardot. No. 1,168,066; Jan. 11; Gaz. vol. 222; p. 631.
Switch mechanism. A. Wendelburg. No. 1,167,606; Jan. 11; Gaz. vol. 222; p. 470.
Switch mounting, Electrical-. J. A. Bennan. No. 1,167,880; Jan. 11; Gaz. vol. 222; p. 565.
Switch-throwing device. B. Bloxton. No. 1,168,472; Jan. 18; Gaz. vol. 222; p. 805.
Switching mechanism. R. Viti. No. 1,168,922; Jan. 18; Gaz. vol. 222; p. 963.
Swivel-clip. J. R. Waldo. No. 1,167,731; Jan. 11; Gaz. vol. 222; p. 513.
Tab end. H. J. Stuart. No. 1,169,095; Jan. 18; Gaz. vol. 222; p. 1024.
Table: *See*—
Casting and annealing table. Folding table.
Concentrating-table. Game-table.
Extension-table. Serving-table.
Table. O. McDaniel. No. 1,166,700; Jan. 4; Gaz. vol. 222; p. 103.
Table. E. Richardson. No. 1,167,716; Jan. 11; Gaz. vol. 222; p. 507.
Table-top. H. E. Wilson. No. 1,167,461; Jan. 11; Gaz. vol. 222; p. 420.
Tablet for a plurality of tables. J. B. Griffin. No. 1,166,675; Jan. 4; Gaz. vol. 222; p. 95.
Tag, Number license-. W. C. Lyon. No. 1,168,217; Jan. 11; Gaz. vol. 222; p. 681.
Tail-stock. F. W. Derbyshire. No. 1,168,063; Jan. 11; Gaz. vol. 222; p. 630.
Take-up or tension mechanism. V. Royle. No. 1,167,843; Jan. 11; Gaz. vol. 222; p. 551.
Talking-machine. H. B. Babson and A. Haug. No. 1,168,239; Jan. 11; Gaz. vol. 222; p. 688.
Talking-machine. F. Cirelli. No. 1,167,796; Jan. 11; Gaz. vol. 222; p. 534.
Talking-machine. W. H. Daily. No. 1,168,606; Jan. 18; Gaz. vol. 222; p. 852.

Talking-machine sound-box. W. N. Dennison. No. 1,169,134; Jan. 25; Gaz. vol. 222; p. 1073.
Talking-machine stop. R. H. Morris. No. 1,166,851; Jan. 4; Gaz. vol. 222; p. 153.
Talking-machine tone-moderator. G. E. Brightson. No. 1,167,972; Jan. 11; Gaz. vol. 222; p. 598.
Talking-machines, Record-meter for. P. Catucci. No. 1,169,317; Jan. 25; Gaz. vol. 222; p. 1135.
Tamal-machine. H. H. Hood. No. 1,168,305; Jan. 18; Gaz. vol. 222; p. 745.
Tank: *See*—
Flushing-tank. Portable tank.
Leaching-tank. Settling-tank.
Tank-heater. L. V. Feldman. No. 1,166,585; Jan. 4; Gaz. vol. 222; p. 61.
Tanning. J. G. Stodola. No. 1,167,951; Jan. 11; Gaz. vol. 222; p. 591.
Tape, Binder-. E. H. Angier. No. 1,167,466; Jan. 11; Gaz. vol. 222; p. 421.
Tape-splice. M. J. Lorraine. No. 1,168,657; Jan. 18; Gaz. vol. 222; p. 873.
Tapping-machine. H. W. Alcorn and F. R. Gravatt. No. 1,168,143; Jan. 11; Gaz. vol. 222; p. 656.
Tar-drag. S. B. Sheldon. No. 1,168,570; Jan. 18; Gaz. vol. 222; p. 839.
Teat-cup. O. Anderson. No. 1,167,968; Jan. 11; Gaz. vol. 222; p. 597.
Teeter-totter device. W. S. Tothill. No. 1,168,348; Jan. 18; Gaz. vol. 222; p. 762.
Teeth, Mechanism for upsetting heads on fastening-pins for artificial. K. Finckh and P. Almstedt. No. 1,167,341; Jan. 4; Gaz. vol. 222; p. 324.
Telegraph, Printing-. L. Cerebotani. No. 1,168,603; Jan. 18; Gaz. vol. 222; p. 851.
Telegraphic transmitting device. J. H. Abernethy. No. 1,168,696; Jan. 18; Gaz. vol. 222; p. 886.
Telegraphone. F. Seelau. No. 1,168,432; Jan. 18; Gaz. vol. 222; p. 790.
Telemeter, Horizontal. O. Eppenstein. No. 1,166,824; Jan. 4; Gaz. vol. 222; p. 145.
Telephone and watchman's-clock system, Combined central-energy. L. Airhart. No. 1,167,325; Jan. 4; Gaz. vol. 222; p. 317.
Telephone calling mechanism and system. J. H. Melvin. No. 1,166,620; Jan. 4; Gaz. vol. 222; p. 74.
Telephone connections according to the Pupin system, Self-induction coils for duplex. A. H. Olsson and H. B. M. Pleijel. No. 1,167,654; Jan. 11; Gaz. vol. 222; p. 487.
Telephone-exchange system. W. W. Dean. No. 1,169,320; Jan. 25; Gaz. vol. 222; p. 1136.
Telephone-exchange system. F. Schoenwolf. No. 1,169,736; Jan. 25; Gaz. vol. 222; p. 1282.
Telephone-exchange system. J. L. Wright. No. 1,168,259; Jan. 11; Gaz. vol. 222; p. 696.
Telephone-exchange system, Automatic. A. E. Lundell. No. 1,168,319; Jan. 18; Gaz. vol. 222; p. 751.
Telephone-exchange trunking system. F. Lubberger. No. 1,168,894; Jan. 18; Gaz. vol. 222; p. 953.
Telephone, Extension or party-line. R. Owens. No. 1,168,904; Jan. 18; Gaz. vol. 222; p. 957.
Telephone-mouthpieces, Sanitary cover for. E. E. Claussen. No. 1,168,284; Jan. 18; Gaz. vol. 222; p. 739.
Telephone-protector. O. W. Kurth. No. 1,167,185; Jan. 4; Gaz. vol. 222; p. 269.
Telephone-receiver. A. D. Jones. No. 1,169,038; Jan. 18; Gaz. vol. 222; p. 1002.
Telephone-receivers, Head-support for. C. Adams-Randall. No. 1,167,368; Jan. 4; Gaz. vol. 222; p. 334.
Telephone switching system, Machine. F. R. McBerty. No. 1,167,646; Jan. 11; Gaz. vol. 222; p. 484.
Telephone system. A. H. Dyson. No. 1,167,053; Jan. 4; Gaz. vol. 222; p. 222.
Telephone system. F. M. Slough. No. 1,169,291; Jan. 25; Gaz. vol. 222; p. 1126.
Telephone system, Automatic. A. E. Lundell. No. 1,166,466; Jan. 4; Gaz. vol. 222; p. 19.
Telephone system, Automatic. F. Schoenwolf. No. 1,169,754; Jan. 25; Gaz. vol. 222; p. 1289.
Telephone system, Lock-out party-line. B. D. Willis. No. 1,166,645; Jan. 4; Gaz. vol. 222; p. 83.
Telephone system, Measured-service. T. G. Martin. No. 1,169,102; Jan. 18; Gaz. vol. 222; p. 1026.
Telephone systems, Automatic switch for. K. E. Ericsson and G. W. Dahlström. No. 1,169,387; Jan. 25; Gaz. vol. 222; p. 1159.
Telephones, Electromechanical selecting mechanism for. W. C. Richardson. No. 1,167,522; Jan. 11; Gaz. vol. 222; p. 440.
Telephony, Apparatus for wireless. E. B. Myers. No. 1,168,541; Jan. 18; Gaz. vol. 222; p. 829.
Telescope, Binocular. F. L. G. Kallmorgen. No. 1,168,650; Jan. 18; Gaz. vol. 222; p. 870.
Telescope cross-hairs, Illuminating means for. A. Grebe. No. 1,167,991; Jan. 11; Gaz. vol. 222; p. 604.
Telescope, Variable-power. A. Grebe. No. 1,167,164; Jan. 4; Gaz. vol. 222; p. 262.
Tenpin apparatus. J. E. Lock. No. 1,169,045; Jan. 18; Gaz. vol. 222; p. 1004.
Test-indicator. K. A. Neumann and H. K. Andrews. No. 1,167,592; Jan. 11; Gaz. vol. 222; p. 465.
Textiles, Composite roll for. W. F. Gammeter. No. 1,168,188; Jan. 11; Gaz. vol. 222; p. 671.
Thermionic translating device. A. M. Nicolson. No. 1,169,182; Jan. 25; Gaz. vol. 222; p. 1090.
Thermo-electric couple. W. H. Bristol. No. 1,169,611; Jan. 25; Gaz. vol. 222; p. 1241.
Thermo-electric humidity instrument. E. W. Comfort. No. 1,169,617; Jan. 25; Gaz. vol. 222; p. 1243.
Thermometer. F. S. Dickinson. No. 1,169,623; Jan. 25; Gaz. vol. 222; p. 1245.
Thermometer-casing. C. M. Doland. No. 1,169,137; Jan. 25; Gaz. vol. 222; p. 1074.
Thermostatic regulation for heated rollers. G. S. Witham, Sr., and A. Roesch. No. 1,167,036; Jan. 4; Gaz. vol. 222; p. 216.
Thill-coupling. H. B. Yost. No. 1,168,773; Jan. 18; Gaz. vol. 222; p. 912.
Thread-tension device. J. Eastwood. No. 1,167,636; Jan. 11; Gaz. vol. 222; p. 481.
Thresher, Convertible cow-pea and small-grain. J. J. Koger. No. 1,169,040; Jan. 18; Gaz. vol. 222; p. 1003.
Thresher, Pea and bean. H. L. Williams. No. 1,166,730; Jan. 4; Gaz. vol. 222; p. 112.
Ticket-holder. E. B. Levey. No. 1,167,908; Jan. 11; Gaz. vol. 222; p. 575.
Ticket, Street-railway transfer-. C. M. Jenkins. No. 1,167,566; Jan. 11; Gaz. vol. 222; p. 456.
Tie: *See*—
Package-tie. Wire tie.
Railway-tie.
Tie and means for securing a rail thereto. W. D. Graney. No. 1,168,483; Jan. 18; Gaz. vol. 222; p. 802.
Tie-plate and anticreeper, Combination. J. Moir and H. P. McFarland. No. 1,167,200; Jan. 4; Gaz. vol. 222; p. 274.
Tile and tile structure, Hollow. W. J. Volz. No. 1,168,583; Jan. 18; Gaz. vol. 222; p. 844.
Tile, Furnace-. E. C. Meier. No. 1,167,510; Jan. 11; Gaz. vol. 222; p. 435.
Tile, Reversible wall-. H. N. Goldsmith. No. 1,166,672; Jan. 4; Gaz. vol. 222; p. 94.
Tiles, Making. J. D. Freund. No. 1,168,492; Jan. 18; Gaz. vol. 222; p. 812.
Timber and other porous material with a preservative, Impregnating. O. P. M. Goss. No. 1,167,492; Jan. 11; Gaz. vol. 222; p. 430.
Time costs, Ascertaining. J. T. Quigley. No. 1,168,548; Jan. 18; Gaz. vol. 222; p. 831.
Time-indicating device. N. Giusto. No. 1,168,797; Jan. 18; Gaz. vol. 222; p. 921.
Tire. J. E. Parrish. No. 1,168,961; Jan. 18; Gaz. vol. 222; p. 977.
Tire. G. J. Reuter. No. 1,168,674; Jan. 18; Gaz. vol. 222; p. 878.
Tire. S. K. Rossignol. No. 1,168,113; Jan. 11; Gaz. vol. 222; p. 646.
Tire antislipping attachment. H. O. Brunton. No. 1,168,597; Jan. 18; Gaz. vol. 222; p. 849.
Tire-armor. F. W. Simons. No. 1,166,861; Jan. 4; Gaz. vol. 222; p. 157.
Tire, Automobile-. W. H. Clay. No. 1,168,709; Jan. 18; Gaz. vol. 222; p. 890.
Tire, Automobile-. W. A. Heizer. No. 1,167,173; Jan. 4; Gaz. vol. 222; p. 265.
Tire-flap-making machine. W. C. Stevens. No. 1,169,204; Jan. 25; Gaz. vol. 222; p. 1098.
Tire for vehicles, Rubber. W. W. Wildman and E. A. Tinsman. No. 1,169,218; Jan. 25; Gaz. vol. 222; p. 1103.
Tire indicator, Pneumatic-. S. F. Cole. No. 1,167,980; Jan. 11; Gaz. vol. 222; p. 600.
Tire inner-tube protector, Self-adjusting. C. L. Witsaman. (Reissue.) No. 14,056; Jan. 25; Gaz. vol. 222; p. 1294.
Tire, Metal-chain-tread. A. Rich. No. 1,167,596; Jan. 11; Gaz. vol. 222; p. 467.
Tire, Resilient. M. Friedman. No. 1,168,187; Jan. 11; Gaz. vol. 222; p. 670.
Tire, Resilient. E. W. Price. No. 1,168,413; Jan. 18; Gaz. vol. 222; p. 784.
Tire, Sectional. C. F. Lighthouse. No. 1,169,746; Jan. 25; Gaz. vol. 222; p. 1286.
Tire-tightener. J. B. Land. No. 1,167,358; Jan. 4; Gaz. vol. 222; p. 331.
Tire, Vehicle-. A. A. Mohr. No. 1,168,022; Jan. 11; Gaz. vol. 222; p. 616.
Tires and other articles, Vulcanizing apparatus for repairing rubber. W. H. Miles. No. 1,168,820; Jan. 18; Gaz. vol. 222; p. 929.
Tires, Fabric for making. J. R. Gammeter. No. 1,166,669; Jan. 4; Gaz. vol. 222; p. 93.
Tires, Mileage-indicator for. A. C. Pratt. No. 1,167,836; Jan. 11; Gaz. vol. 222; p. 548.
Tires, Valve for pneumatic. J. N. Newsom. No. 1,169,277; Jan. 25; Gaz. vol. 222; p. 1122.
Titanic oxid and the resulting product, Obtaining. A. J. Rossi, and L. E. Barton. No. 1,166,547; Jan. 4; Gaz. vol. 222; p. 49.
Tobacco-can and match-holder, Combination. A. Lochner. No. 1,167,768; Jan. 11; Gaz. vol. 222; p. 525.
Tobacco-jars, Combined pipe and match holder for. E. B. T. Schumacher. No. 1,169,198; Jan. 25; Gaz. vol. 222; p. 1095.
Tobacco-pipe. M. N. Jordon and A. Gond. No. 1,169,489; Jan. 25; Gaz. vol. 222; p. 1195.
Tobacco-pouch and purse. C. J. Hathaway. No. 1,169,639; Jan. 25; Gaz. vol. 222; p. 1251.

Tobacco, Treating. J. K. Probst. No. 1,168,029; Jan. 11; Gaz. vol. 222; p. 618.
Tobacco-user's appliance. I. Rittenhouse. No. 1,167,022; Jan. 4; Gaz. vol. 222; p. 212.
Tobacco, Vulcanizer for sweating and resweating. J. K. Probst. No. 1,168,030; Jan. 11; Gaz. vol. 222; p. 618.
Toggle-bolt. J. Kennedy. No. 1,168,257; Jan. 11; Gaz. vol. 222; p. 695.
Toggle-bolt. P. H. McCain. No. 1,167,577; Jan. 11; Gaz. vol. 222; p. 459.
Toilet-seat paper and holder. E. R. Hammer. No. 1,168,801; Jan. 18; Gaz. vol. 222; p. 923.
Tongs, Pipe-. E. E. Greve. No. 1,169,077; Jan. 18; Gaz. vol. 222; p. 1016.
Tongue support, Wagon-. W. J. Cole. No. 1,167,544; Jan. 11; Gaz. vol. 222; p. 448.
Tool, Hand-. W. A. Bernard. No. 1,168,051; Jan. 11; Gaz. vol. 222; p. 625.
Tool-handle. H. Salz. No. 1,166,485; Jan. 4; Gaz. vol. 222; p. 26.
Tool handle, Combination farm and garden. W. R. Holmes. No. 1,169,486; Jan. 25; Gaz. vol. 222; p. 1194.
Tool-holder. G. Amborn. No. 1,169,594; Jan. 25; Gaz. vol. 222; p. 1233.
Tool-holder. R. J. Saum. No. 1,168,428; Jan. 18; Gaz. vol. 222; p. 789.
Tool mechanism, Reciprocating-. W. F. Trotter. No. 1,168,834; Jan. 18; Gaz. vol. 222; p. 933.
Tool-support, Compound. A. W. Whitcomb. No. 1,169,214; Jan. 25; Gaz. vol. 222; p. 1101.
Tooth-cleaner. C. K. Brandenburg. No. 1,168,998; Jan. 18; Gaz. vol. 222; p. 989.
Top, Combined flying and spinning. B. E. Lloyd. No. 1,167,507; Jan. 11; Gaz. vol. 222; p. 434.
Torpedo, Fiber-case railway-. F. Dutcher. No. 1,168,936; Jan. 18; Gaz. vol. 222; p. 969.
Torpedo-launching apparatus for submarine vessels. E. Schneider. No. 1,166,940; Jan. 4; Gaz. vol. 222; p. 183.
Torpedo, Railway signal-. C. P. Van Gundy. No. 1,167,450; Jan. 11; Gaz. vol. 222; p. 416.
Toy. D. E. Allen. No. 1,168,269; Jan. 18; Gaz. vol. 222; p. 733.
Toy. S. Ciletti. No. 1,168,605; Jan. 18; Gaz. vol. 222; p. 852.
Toy. M. A. Heinzer. No. 1,167,756; Jan. 11; Gaz. vol. 222; p. 520.
Toy. J. H. Simpson. No. 1,167,945; Jan. 11; Gaz. vol. 222; p. 589.
Toy. G. E. Thomas. No. 1,168,978; Jan. 18; Gaz. vol. 222; p. 982.
Toy balloons, Packaging. H. A. Dodge. No. 1,168,381; Jan. 18; Gaz. vol. 222; p. 773.
Toy, Educational. A. C. Baumann. No. 1,168,274; Jan. 18; Gaz. vol. 222; p. 735.
Toy gun. O. C. Madison. No. 1,168,815; Jan. 18; Gaz. vol. 222; p. 927.
Toy gun. O. W Maloney. No. 1,168,950; Jan. 18; Gaz. vol. 222; p. 974.
Toy, Jumping. A. E. Holmberg. No. 1,167,405; Jan. 11; Gaz. vol. 222; p. 400.
Toy, Mechanical. B. F. Bain. No. 1,169,598; Jan. 25; Gaz. vol. 222; p. 1235.
Toy, Mechanical. F. K. Lombardy. No. 1,167,575; Jan. 11; Gaz. vol. 222; p. 459.
Toy, Mechanical. J. B. Sheppard. No. 1,168,829; Jan. 18; Gaz. vol. 222; p. 932.
Toy or game device. G. E. Von Hoffmann. No. 1,168,808; Jan. 18; Gaz. vol. 222; p. 925.
Toy or working model. F. Hornby. No. 1,166,688; Jan. 4; Gaz. vol. 222; p. 99.
Toy pistol. L. S. Bixler. No. 1,168,150; Jan. 11; Gaz. vol. 222; p. 658.
Toy rifle. O. C. Madison. No. 1,169,816; Jan. 18; Gaz. vol. 222; p. 927.
Toy-safe lock. H. T. Kingsbury. No. 1,168,512; Jan. 18; Gaz. vol. 222; p. 819.
Toy savings-bank. C. A. Hill. No. 1,169,033; Jan. 18; Gaz. vol. 222; p. 1001.
Trace-carrier. L. H. Chase. No. 1,169,009; Jan. 18; Gaz. vol. 222; p. 993.
Trace-carrier. W. F. Halley. No. 1,168,197; Jan. 11; Gaz. vol. 222; p. 674.
Trace-fastener for hames, Adjustable. S. L. Crow. No. 1,167,632; Jan. 11; Gaz. vol. 222; p. 479.
Track, Highway-. F. J. Hardecker. No. 1,167,494; Jan. 11; Gaz. vol. 222; p. 430.
Track, Highway-. F. J. Hardecker. No. 1,167,495; Jan. 11; Gaz. vol. 222; p. 431.
Track-shifting apparatus. C. C. Jacobs. No. 1,167,075; Jan. 4; Gaz. vol 222; p. 229.
Tracking device, Magnetic. F. G. Lynde. No. 1,167,087; Jan. 4; Gaz. vol. 222; p. 234.
Traction-engine. O. C. Houghton. No. 1,167,302; Jan. 4; Gaz. vol. 222; p. 308.
Tractor. E. W. Cook. No. 1,168,934; Jan. 18; Gaz. vol. 222; p. 968.
Tractor. G. Hibacsko. No. 1,169,153; Jan. 25; Gaz. vol. 222; p. 1080.
Tractor. W. C. Knapp. No. 1,169,165; Jan. 25; Gaz. vol. 222; p. 1084.
Tractor, Farm-. F. L. Ogden. No. 1,169,732; Jan. 25; Gaz. vol. 222; p. 1281.
Train control, Automatic. J. Konsel. No. 1,168,010; Jan. 11; Gaz. vol. 222; p. 611.
Train-controlling system, Automatic. E. R. Hill. No. 1,168,499; Jan. 18; Gaz. vol. 222; p. 814.
Train-service coupling. A. J. Campbell. No. 1,169,459; Jan. 25; Gaz. vol. 222; p. 1185.
Train-stop. W. Shropshire. No. 1,167,224; Jan. 4; Gaz. vol. 222; p. 282.
Train-stopping apparatus. C. Hippman. No. 1,169,034; Jan. 18; Gaz. vol. 222; p. 1001.
Train-stopping device, Automatic. H. W. Maraton. No. 1,167,910; Jan. 11; Gaz. vol. 222; p. 576.
Trains, Safety-stop for. J. V. Rund. No. 1,168,337; Jan. 18; Gaz. vol. 222; p. 758.
Transmission-lock. J. McDonald. No. 1,169,660; Jan. 25; Gaz. vol. 222; p. 1258.
Transmission mechanism. T. M. Mueller. No. 1,169,419; Jan. 25; Gaz. vol. 222; p. 1170.
Transmission mechanism. W. H. Rost. No. 1,167,718; Jan. 11; Gaz. vol. 222; p. 508.
Transplanter. C. T. Pelton. No. 1,169,674; Jan. 25; Gaz. vol. 222; p. 1262.
Trap: *See*—
Animal-trap. Gopher-trap.
Fish-trap. Insect-trap.
Fly-trap. Steam-trap.
Gasolene-sediment trap.
Trap. M. E. Current. No. 1,168,861; Jan. 18; Gaz. vol. 222; p. 942.
Trap. C. A. Erdley. No. 1,168,252; Jan. 11; Gaz. vol. 222; p. 694.
Trap. S. Richardson. No. 1,167,717; Jan. 11; Gaz. vol. 222; p. 507.
Traverse-ring. W. H. Edsall. No. 1,169,742; Jan. 25; Gaz. vol. 222; p. 1284.
Traverse-ring. W. H. Edsall. No. 1,169,743; Jan. 25; Gaz. vol. 222; p. 1285.
Tray. M. M. Hammond. No. 1,169,638; Jan. 25; Gaz. vol. 222; p. 1251.
Tray-carrier, Gravity. W. R. Bankson. No. 1,168,459; Jan. 18; Gaz. vol. 222; p. 801.
Trend, Safety-. J. O. Fowler. No. 1,169,074; Jan. 18; Gaz. vol. 222; p. 1015.
Tread-surface. W. S. Atwood. No. 1,166,423; Jan. 4; Gaz. vol. 222; p. 4.
Treadle. A. A. Merritt. No. 1,168,218; Jan. 11; Gaz. vol. 222; p. 681.
Tree-support. E. E. Thayer. No. 1,167,668; Jan. 11; Gaz. vol. 222; p. 492.
Tricycle, Delivery-. W. A. Barnes. No. 1,168,995; Jan. 18; Gaz. vol. 222; p. 988.
Trimmer: *See*—
Ballast-trimmer. Lawn-trimmer.
Hoof-trimmer.
Trimming-board. J. A. Robertson and G. W. Adams. No. 1,167,435; Jan. 11; Gaz. vol. 222; p. 412.
Trolley-pole holder. H. E. Mattox. No. 1,166,617; Jan. 4; Gaz. vol. 222; p. 73.
Trolley-retriever. R. E. Gearhart. No. 1,168,624; Jan. 18; Gaz. vol. 222; p. 860.
Trolley-tracks, Means for supporting. E. J. G. Phillips. No. 1,167,656; Jan. 11; Gaz. vol. 222; p. 488.
Trolley-wheel. J. E. Crook. No. 1,167,631; Jan. 11; Gaz. vol. 222; p. 479.
Trolley-wire apparatus. W. H. Kempton. No. 1,166,912; Jan. 4; Gaz. vol. 222; p. 174.
Trolley-wire frog. C. E. Gierding. No. 1,166,898; Jan. 4; Gaz. vol. 222; p. 169.
Trough: *See*—
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Trowel. C. E. Johnson. No. 1,168,643; Jan. 18; Gaz. vol. 222; p. 865.
Truck. O. E. Byron. No. 1,167,792; Jan. 11; Gaz. vol. 222; p. 533.
Truck. F. V. Carman. No. 1,166,812; Jan. 4; Gaz. vol. 222; p. 140.
Truck. W. F. Irrgang. No. 1,167,406; Jan. 11; Gaz. vol. 222; p. 400.
Truck. W. O. Shadbolt. No. 1,167,724; Jan. 11; Gaz. vol. 222; p. 511.
Truck, Automobile. C. Youngs. No. 1,167,243; Jan. 4; Gaz. vol. 222; p. 288.
Truck, Can-. W. E. Kleine. No. 1,168,008; Jan. 11; Gaz. vol. 222; p. 610.
Truck, Car-. J. A. Bush. No. 1,167,148; Jan. 4; Gaz. vol. 222; p. 256.
Truck, Car-. W. F. Klesel, Jr. No. 1,166,693; Jan. 4; Gaz. vol. 222; p. 101.
Truck for cotton-pickers. T. J. King. No. 1,166,463; Jan. 4; Gaz. vol. 222; p. 18.
Truck for railway-cars and the like. K. Dingertz. No. 1,168,714; Jan. 18; Gaz. vol. 222; p. 892.
Truck, Lifting-. W. F. Irrgang. No. 1,167,564; Jan. 11; Gaz. vol. 222; p. 455.
Truck, Short-turning. C. J. Clarke. No. 1,167,270; Jan. 4; Gaz. vol. 222; p. 298.
Trucks, Attachment for cross-reach. R. W. E. Hayes and P. P. Williams. No. 1,167,298; Jan. 4; Gaz. vol. 222; p. 307.
Trucks, Brake mechanism for car-. J. A. Brooks. No. 1,169,457; Jan. 25; Gaz. vol. 222; p. 1185.
Trucks, Swinging-bolster hanger for. S. G. Thomson. No. 1,168,347; Jan. 18; Gaz. vol. 222; p. 761.

Trunk and dressing-table, Combination. D. Hinkson. No. 1,166,988; Jan. 4; Gaz. vol. 222; p. 199.
Trunks, Garment-support for wardrobe-. N. Goldsmith. No. 1,169,632; Jan. 25; Gaz. vol. 222; p. 1249.
Truss for hernia. W. H. Willson. No. 1,168,360; Jan. 18; Gaz. vol. 222; p. 766.
Tube: *See*—
Discharge-tube. Milk-testing tube.
Tube-joints, Making metallic. G. Holden. No. 1,168,885; Jan. 18; Gaz. vol. 222; p. 950.
Tube-mills and linings therefor, Construction of. D. J. Nevill. No. 1,169,276; Jan. 25; Gaz. vol. 222; p. 1122.
Tubular members, Construction of. W. H. Rook, Jr. No. 1,168,909; Jan. 18; Gaz. vol. 222; p. 959.
Tungsten anticathodes for Röntgen tubes, Manufacturing. O. A. Simpson. No. 1,167,532; Jan. 11; Gaz. vol. 222; p. 444.
Tunnel-brake. R. H. Blackall. No. 1,167,260; Jan. 4; Gaz. vol. 222; p. 274.
Turbine. R. H. Pyle. No. 1,167,018; Jan. 4; Gaz. vol. 222; p. 210.
Turbine-blading and assembling same. L. D. Lovekin. No. 1,166,530; Jan. 4; Gaz. vol. 222; p. 42.
Turbine power plant. H. A. Böhm. No. 1,166,809; Jan. 4; Gaz. vol. 222; p. 139.
Turbine power plant. H. Föttinger. No. 1,166,756; Jan. 4; Gaz. vol. 222; p. 121.
Turbines, Relief mechanism for hydraulic. A. Pfau. No. 1,167,714; Jan. 11; Gaz. vol. 222; p. 506.
Turning, shaping, and screw-cutting, Apparatus for. H. S. Land. No. 1,167,186; Jan. 4; Gaz. vol. 222; p. 269.
Twine-cutter. N. E. Nicholson. No. 1,169,052; Jan. 18; Gaz. vol. 222; p. 1006.
Twine-holder. C. J. Pasurka. No. 1,169,185; Jan. 25; Gaz. vol. 222; p. 1091.
Two-cycle engine, Variable-output. H. Lemp. No. 1,166,916; Jan. 4; Gaz. vol. 222; p. 175.
Type-case. W. Chipperfield. (Reissue.) No. 14,043; Jan. 11; Gaz. vol. 222; p. 700.
Type-form and producing same, Ruled. A. G. Stevenson. No. 1,168,602; Jan. 18; Gaz. vol. 222; p. 851.
Type-setting machine. A. G. Baker and F. W. Knott. No. 1,169,111; Jan. 25; Gaz. vol. 222; p. 1064.
Type-setting machines, Distributer for. A. G. Baker and F. W. Knott. No. 1,169,110; Jan. 25; Gaz. vol. 222; p. 1063.
Type-writer. G. W. Ramsey. No. 1,169,678; Jan. 25; Gaz. vol. 222; p. 1263.
Type-writer from a calculating-machine, Mechanism for operating a. J. F. Mays. No. 1,166,704; Jan. 4; Gaz. vol. 222; p. 104.
Type-writer paper-feeding mechanism. V. C. Dold. No. 1,167,156; Jan. 4; Gaz. vol. 222; p. 258.
Type-writers, Page-end lock for. C. E. Smith. No. 1,169,577; Jan. 25; Gaz. vol. 222; p. 1227.
Type-writing and computing machine, Combined. B. C. Stickney. No. 1,167,128; Jan. 4; Gaz. vol. 222; p. 249.
Type-writing and like machines, Packing-box for. E. B. Hess. No. 1,168,632; Jan. 18; Gaz. vol. 222; p. 863.
Type-writing machine. J. F. Allard. No. 1,169,739; Jan. 25; Gaz. vol. 222; p. 1283.
Type-writing machine. N. H. Anderson. No. 1,166,805; Jan. 4; Gaz. vol. 222; p. 138.
Type-writing machine. J. J. Chapin. No. 1,167,977; Jan. 11; Gaz. vol. 222; p. 600.
Type-writing machine. J. J. Cooper. No. 1,169,318; Jan. 25; Gaz. vol. 222; p. 1135.
Type-writing machine. A. S. Dennis. No. 1,169,323; Jan. 25; Gaz. vol. 222; p. 1137.
Type-writing machine. J. C. Harvey. No. 1,169,400; Jan. 25; Gaz. vol. 222; p. 1164.
Type-writing machine. J. Lindburg. No. 1,169,330; Jan. 25; Gaz. vol. 222; p. 1139.
Type-writing machine. C. K. Pickles. No. 1,167,428; Jan. 11; Gaz. vol. 222; p. 409.
Type-writing machine. V. B. Rouillot. No. 1,166,635; Jan. 4; Gaz. vol. 222; p. 79.
Type-writing machine. S. T. Smith. No. 1,169,295; Jan. 25; Gaz. vol. 222; p. 1128.
Type-writing machine. C. B. Yaw. No. 1,167,963; Jan. 11; Gaz. vol. 222; p. 596.
Type-writing machine. F. A. Young. No. 1,169,313; Jan. 25; Gaz. vol. 222; p. 1134.
Type-writing-machine attachment. T. J. Coo. No. 1,166,438; Jan. 4; Gaz. vol. 222; p. 9.
Type-writing-machine cushioning-support. E. Sherwood. No. 1,166,487; Jan. 4; Gaz. vol. 222; p. 27.
Type-writing-machine paper-gage. E. B. Hess. No. 1,168,207; Jan. 11; Gaz. vol. 222; p. 677.
Type-writing-machine speed-governor. J. A. Smith. No. 1,169,293; Jan. 25; Gaz. vol. 222; p. 1127.
Type-writing machines, Type-operating mechanism for. O. Bennett. No. 1,168,704; Jan. 18; Gaz. vol. 222; p. 889.
Typographical composing-machine. H. M. Webster. No. 1,166,504; Jan. 4; Gaz. vol. 222; p. 33.
Umbrella. H. J. Raabe. No. 1,167,431; Jan. 11; Gaz. vol. 222; p. 410.
Umbrella, Folding. C. H. Ely. No. 1,169,534; Jan. 25; Gaz. vol. 222; p. 1212.
Umbrella, Folding. C. Saraniecki. No. 1,168,427; Jan. 18; Gaz. vol. 222; p. 788.
Underreamer. C. L. Munsinger. No. 1,166,535; Jan. 4; Gaz. vol. 222; p. 45.
Unfermented grapes or berries, Exhausting. E. Monti. No. 1,167,006; Jan. 4; Gaz. vol. 222; p. 206.
Union suit. J. D. Morley. No. 1,168,023; Jan. 11; Gaz. vol. 222; p. 616.
Universal joint. A. J. Sanford. No. 1,167,599; Jan. 11; Gaz. vol. 222; p. 468.
Universal joint. C. E. Swenson. No. 1,167,229; Jan. 4; Gaz. vol. 222; p. 283.
Universal joint. F. E. Watts. No. 1,167,455; Jan. 11; Gaz. vol. 222; p. 418.
Utensil. V. J. Mauntel. No. 1,168,092; Jan. 11; Gaz. vol. 222; p. 640.
Vacuum-cleaner. C. A. Boyer. No. 1,169,527; Jan. 25; Gaz. vol. 222; p. 1210.
Vacuum-cleaner, Portable. D. B. Replogle. No. 1,167,219; Jan. 4; Gaz. vol. 222; p. 281.
Vaginal irrigator. M. B. Clarke. No. 1,167,979; Jan. 11; Gaz. vol. 222; p. 600.
Valve. A. A. Bowser. No. 1,168,262; Jan. 11; Gaz. vol. 222; p. 697.
Valve. J. R. Burkhardt. No. 1,169,003; Jan. 18; Gaz. vol. 222; p. 990.
Valve. W. G. Estep. No. 1,166,584; Jan. 4; Gaz. vol. 222; p. 61.
Valve. C. Fisher. No. 1,166,754; Jan. 4; Gaz. vol. 222; p. 120.
Valve. C. B. Garrett. No. 1,169,718; Jan. 25; Gaz. vol. 222; p. 1276.
Valve. F. W. Hodges. No. 1,169,485; Jan. 25; Gaz. vol. 222; p. 1194.
Valve. J. L. Hodgson. No. 1,169,401; Jan. 25; Gaz. vol. 222; p. 1164.
Valve. F. Y. Nichols. No. 1,169,561; Jan. 25; Gaz. vol. 222; p. 1221.
Valve, Air-. C. Weaver. No. 1,166,503; Jan. 4; Gaz. vol. 222; p. 32.
Valve, Automatic. E. E. Gold. No. 1,167,815; Jan. 11; Gaz. vol. 222; p. 541.
Valve, Automatic emergency return-check and stop. T. B. Ford. No. 1,167,287; Jan. 4; Gaz. vol. 222; p. 303.
Valve, Automatic trip-. O. A. Ross. No. 1,167,316; Jan. 4; Gaz. vol. 222; p. 314.
Valve, Blow-off. O. J. Bergo. No. 1,166,884; Jan. 4; Gaz. vol. 222; p. 165.
Valve, Calibrating radiator-. E. C. Wiley. No. 1,168,359; Jan. 18; Gaz. vol. 222; p. 766.
Valve, Check-. G. Hitchcock. No. 1,167,180; Jan. 4; Gaz. vol. 222; p. 268.
Valve construction. E. G. Wagner. No. 1,169,309; Jan. 25; Gaz. vol. 222; p. 1132.
Valve, Control and shut-off. H. D. Morgan. No. 1,168,668; Jan. 18; Gaz. vol. 222; p. 876.
Valve device. G. M. Bard. No. 1,166,571; Jan. 4; Gaz. vol. 222; p. 57.
Valve, Drain-. G. E. Stephenson. No. 1,167,027; Jan. 4; Gaz. vol. 222; p. 214.
Valve, Filter-. W. L. Morris. No. 1,169,418; Jan. 25; Gaz. vol. 222; p. 1169.
Valve, Flushing-. H. G. Griffin. No. 1,169,326; Jan. 25; Gaz. vol. 222; p. 1138.
Valve for internal-combustion engines and driving means therefor. E. L. Russell. No. 1,166,939; Jan. 4; Gaz. vol. 222; p. 182.
Valve for internal-combustion engines, Auxiliary. H. F. Keiffer. No. 1,168,309; Jan. 18; Gaz. vol. 222; p. 747.
Valve for internal-combustion engines, Rotary. G. R. Smith. No. 1,168,572; Jan. 18; Gaz. vol. 222; p. 840.
Valve for locomotives, Piston-. J. G. Robinson. No. 1,169,286; Jan. 25; Gaz. vol. 222; p. 1125.
Valve for steam-boilers, Blow-off. J. F. Schiller. No. 1,166,638; Jan. 4; Gaz. vol. 222; p. 81.
Valve for water-mains and the like, Air-relief. J. N. Corbin. No. 1,166,439; Jan. 4; Gaz. vol. 222; p. 9.
Valve, Gas-. J. A. Gehrung. No. 1,167,060; Jan. 4; Gaz. vol. 222; p. 225.
Valve, Gas-. G. T. Rosengren. No. 1,169,195; Jan. 25; Gaz. vol. 222; p. 1094.
Valve, Gate-. R. J. Riley. No. 1,168,332; Jan. 18; Gaz. vol. 222; p. 756.
Valve-gear. R. B. Smith. No. 1,169,690; Jan. 25; Gaz. vol. 222; p. 1267.
Valve-gear. M. L. Talbert. No. 1,168,976; Jan. 18; Gaz. vol. 222; p. 982.
Valve-gear and injection-timing mechanism. L. Wygodsky. No. 1,166,508; Jan. 4; Gaz. vol. 222; p. 34.
Valve-grinding tool. G. F. Norton. No. 1,167,312; Jan. 4; Gaz. vol. 222; p. 312.
Valve, Intake-. W. A. Doble. No. 1,169,136; Jan. 25; Gaz. vol. 222; p. 1074.
Valve-lifter. R. P. Henderson. No. 1,168,205; Jan. 11; Gaz. vol. 222; p. 676.
Valve lock, Dash-controlled carbureter-. G. Archer. No. 1,167,467; Jan. 11; Gaz. vol. 222; p. 422.
Valve mechanism. F. N. Whitesell. No. 1,166,956; Jan. 4; Gaz. vol. 222; p. 188.
Valve mechanism, Flushing-. J. W. Meaker. No. 1,168,530; Jan. 18; Gaz. vol. 222; p. 826.
Valve, Meter-orifice-disk. C. W. Duncan. No. 1,168,490; Jan. 18; Gaz. vol. 222; p. 811.
Valve, Mixing-. H. K. Mayer. No. 1,169,666; Jan. 25; Gaz. vol. 222; p. 1260.
Valve, Mixing and proportioning. C. E. Lucke. No. 1,169,090; Jan. 18; Gaz. vol. 222; p. 1021.

Valve of internal-combustion engines. F. Porsche. No. 1,169,677; Jan. 25; Gaz. vol. 222; p. 1263.
Valve-operating mechanism, Engine-. E. W. Albers. No. 1,168,841; Jan. 18; Gaz. vol. 222; p. 936.
Valve, Permutation-. A. Christensen and C. Overgaard. No. 1,168,163; Jan. 11; Gaz. vol. 222; p. 662.
Valve, Quick-release. W. V. Turner. No. 1,169,303; Jan. 25; Gaz. vol. 222; p. 1130.
Valve, Rotary. H. E. Coffin. No. 1,168,479; Jan. 18; Gaz. vol. 222; p. 808.
Valve, Rotary. W. E. Merritt. No. 1,169,668; Jan. 25; Gaz. vol. 222; p. 1260.
Valve, Safety-. J. Nathan. No. 1,167,919; Jan. 11; Gaz. vol. 222; p. 578.
Valve, Sewer-trap. J. W. McKelvey. No. 1,168,085; Jan. 11; Gaz. vol. 222; p. 638.
Valve system for carbureters, Butterfly-. F. Baverey. No. 1,167,145; Jan. 4; Gaz. vol. 222; p. 255.
Valve, Throttle-. H. L. Henszey. No. 1,167,300; Jan. 4; Gaz. vol. 222; p. 308.
Valves, Alarm device for. J. D. Nelson. No. 1,166,624; Jan. 4; Gaz. vol. 222; p. 75.
Valves, Device for facilitating the removal of. E. P. Baker. No. 1,168,145; Jan. 11; Gaz. vol. 222; p. 657.
Valves, Making bulbs for tank-. A. T. Hopkins. No. 1,167,759; Jan. 11; Gaz. vol. 222; p. 521.
Vapor, Apparatus for generating combustible. Z. A. Willard. No. 1,169,706; Jan. 25; Gaz. vol. 222; p. 1272.
Vapor, Method of and apparatus for drying and superheating a. G. H. Gibson. No. 1,168,298; Jan. 18; Gaz. vol. 222; p. 743.
Vapor producing and distributing apparatus. H. N. Atwood and F. W. Satterthwaite. No. 1,169,452; Jan. 25; Gaz. vol. 222; p. 1183.
Vaporizer. C. F. Schulz. No. 1,169,573; Jan. 25; Gaz. vol. 222; p. 1225.
Vaporizer, Starting-. A. O. M. Löfgren. No. 1,167,830; Jan. 11; Gaz. vol. 222; p. 546.
Varnishing roller-shaped bodies, Apparatus for. E. Mertens. No. 1,166,850; Jan. 4; Gaz. vol. 222; p. 153.
Vaulting-trough. P. S. Medart. No. 1,168,666; Jan. 18; Gaz. vol. 222; p. 876.
Vegetable-cutting machine. C. Heilinger and M. Lisatz. No. 1,168,203; Jan. 11; Gaz. vol. 222; p. 676.
Vehicle-brakes. Automatic air-controlling device for. E. M. Jones. No. 1,167,569; Jan. 11; Gaz. vol. 222; p. 457.
Vehicle controller-lock. G. W. Bulley. No. 1,168,248; Jan. 11; Gaz. vol. 222; p. 692.
Vehicle controlling mechanism, Electric-motor-. S. S. Amdursky. No. 1,169,450; Jan. 25; Gaz. vol. 222; p. 1182.
Vehicle-curtains, Attaching and concealing means for. F. Grundy. No. 1,166,677; Jan. 4; Gaz. vol. 222; p. 95.
Vehicle-fender. I. O. Denman. No. 1,166,581; Jan. 4; Gaz. vol. 222; p. 60.
Vehicle fender, Motor-. W. H. H. Stineman. No. 1,166,724; Jan. 4; Gaz. vol. 222; p. 110.
Vehicle-frame. D. M. Ferguson. No. 1,169,473; Jan. 25; Gaz. vol. 222; p. 1189.
Vehicle heating device, Motor-. W. H. Prettyman. No. 1,166,630; Jan. 4; Gaz. vol. 222; p. 77.
Vehicle, Light road-. F. J. McKenzie. No. 1,168,896; Jan. 18; Gaz. vol. 222; p. 954.
Vehicle-lock. W. H. Fuller. No. 1,167,688; Jan. 11; Gaz. vol. 222; p. 499.
Vehicle-locking device, Motor-. A. Moore. No. 1,169,557; Jan. 25; Gaz. vol. 222; p. 1220.
Vehicle, Motor-. E. P. Cowles. No. 1,166,440; Jan. 4; Gaz. vol. 222; p. 10.
Vehicle, Motor-. R. L. Diamond. No. 1,167,549; Jan. 11; Gaz. vol. 222; p. 449.
Vehicle, Motor-. M. Walter. No. 1,166,726; Jan. 4; Gaz. vol. 222; p. 111.
Vehicle mud-guard, Motor-. A. Van den Plas. No. 1,167,449; Jan. 11; Gaz. vol. 222; p. 416.
Vehicle, Passenger-. A. J. Tanner. No. 1,167,445; Jan. 11; Gaz. vol. 222; p. 415.
Vehicle-propelling device. A. J. Erickson. No. 1,167,806; Jan. 11; Gaz. vol. 222; p. 538.
Vehicle-propelling device. G. H. Gorman. No. 1,168,300; Jan. 18; Gaz. vol. 222; p. 743.
Vehicle rear-end signal. C. F. Marston. (Reissue.) No. 14,041; Jan. 4; Gaz. vol. 222; p. 336.
Vehicle speed-controller, Motor-. T. Douglas. No. 1,168,179; Jan. 11; Gaz. vol. 222; p. 668.
Vehicle-spring. R. J. Scheidt. No. 1,167,938; Jan. 11; Gaz. vol. 222; p. 586.
Vehicle spring connection. E. W. Serrell. No. 1,167,940; Jan. 11; Gaz. vol. 222; p. 587.
Vehicle spring suspension. W. E. Eastman. No. 1,167,054; Jan. 4; Gaz. vol. 222; p. 223.
Vehicle steering-gear, Motor-. W. H. Appleman. No. 1,167,873; Jan. 11; Gaz. vol. 222; p. 562.
Vehicle storm-front. G. W. Scott. No. 1,167,121; Jan. 4; Gaz. vol. 222; p. 247.
Vehicle-top-bow clamp. T. F. Wilson. No. 1,166,646; Jan. 4; Gaz. vol. 222; p. 84.
Vehicle-top bow-rest. R. Miller. No. 1,168,324; Jan. 18; Gaz. vol. 222; p. 753.
Vehicle-top fastener. D. T. Hastings and A. J. Neerken. No. 1,168,394; Jan. 18; Gaz. vol. 222; p. 778.
Vehicle-tops, Bow holder or clamp for. G. W. Kinnard. No. 1,167,082; Jan. 4; Gaz. vol. 222; p. 232.
Vehicle-wheel. J. Aitken. No. 1,166,961; Jan. 4; Gaz. vol. 222; p. 190.
Vehicle-wheel. G. Baehr. No. 1,168,373; Jan. 18; Gaz. vol. 222; p. 771.
Vehicle-wheel. H. Hess. No. 1,167,757; Jan. 11; Gaz. vol. 222; p. 521.
Vehicle-wheel. W. F. Holt. No. 1,169,403; Jan. 25; Gaz. vol. 222; p. 1165.
Vehicle-wheel. J. B. Hymer. No. 1,168,076; Jan. 11; Gaz. vol. 222; p. 634.
Vehicle-wheel. F. J. McCandless. No. 1,167,307; Jan. 4; Gaz. vol. 222; p. 310.
Vehicle-wheel. W. Starley. No. 1,169,364; Jan. 25; Gaz. vol. 222; p. 1152.
Vehicles, Adjustable steering-wheel for motor-. B. C. Holwick. No. 1,166,458; Jan. 4; Gaz. vol. 222; p. 16.
Vehicles, Gasolene-supply reservoir for motor-. W. J. Hotchkiss. No. 1,168,636; Jan. 18; Gaz. vol. 222; p. 865.
Vehicles, Locking device for the controlling-levers of motor-. J. A. Schmitt. No. 1,169,572; Jan. 25; Gaz. vol. 222; p. 1225.
Vehicles, System for controlling the movements of. F. E. Button. No. 1,167,333; Jan. 4; Gaz. vol. 222; p. 320.
Vending-machine. J. F. Krema. No. 1,168,652; Jan. 18; Gaz. vol. 222; p. 871.
Vending-machine. W. E. Villinger. No. 1,168,349; Jan. 18; Gaz. vol. 222; p. 762.
Vending-machine, Coin-controlled. R. Sarac. No. 1,167,661; Jan. 11; Gaz. vol. 222; p. 489.
Ventilator: *See*—
Oven-ventilator. Window-ventilator.
Ventilator. H. A. Schmelz. No. 1,167,120; Jan. 4; Gaz. vol. 222; p. 246.
Vessel, Collapsible and expansible. W. M. Fulton. No. 1,167,895; Jan. 11; Gaz. vol. 222; p. 570.
Vessels, Apparatus for raising sunken. O. M. Wick. No. 1,168,040; Jan. 11; Gaz. vol. 222; p. 621.
Vessels, Appliance for. E. F. Crane. No. 1,169,128; Jan. 25; Gaz. vol. 222; p. 1070.
Vessels, Construction of marine. E. Ambrozy. No. 1,168,926; Jan. 18; Gaz. vol. 222; p. 965.
Vessels, Device for controlling the water ballast in submergible. C. Sacerdoti. No. 1,169,514; Jan. 25; Gaz. vol. 222; p. 1205.
Vessels, Salvage apparatus for. C. M. Walker. No. 1,168,982; Jan. 18; Gaz. vol. 222; p. 984.
Veterinary surgical instrument. W. R. O'Brien. No. 1,167,014; Jan. 4; Gaz. vol. 222; p. 209.
Vibrator. C. Bergman. No. 1,167,256; Jan. 4; Gaz. vol. 222; p. 292.
Vibrator, Ribbon-. A. C. Roebuck and A. J. Pruszynski. No. 1,168,333; Jan. 18; Gaz. vol. 222; p. 756.
Vibrator, Therapeutic. A. J. Seaman. No. 1,168,338; Jan. 18; Gaz. vol. 222; p. 758.
Vise and burnisher, Scraper-. J. Allen. No. 1,167,371; Jan. 11; Gaz. vol. 222; p. 389.
Vise, Bench-. J. R. Long. No. 1,168,318; Jan. 18; Gaz. vol. 222; p. 750.
Vise holder, Pipe-. F. W. Griffin. (Reissue.) No. 14,044; Jan. 11; Gaz. vol. 222; p. 701.
Vise, Post pipe-. E. E. Beck. No. 1,168,049; Jan. 11; Gaz. vol. 222; p. 625.
Vitreous substances, Manufacture and production of refractory. H. J. S. Sand. No. 1,169,681; Jan. 25; Gaz. vol. 222; p. 1264.
Vitrified surfaces, Decorating. J. W. Hasburg. No. 1,168,882; Jan. 18; Gaz. vol. 222; p. 949.
Vulcanized articles, Apparatus for producing. R. B. Price. No. 1,169,733; Jan. 25; Gaz. vol. 222; p. 1281.
Vulcanizer. E. Nall. 1,167,009; Jan. 4; Gaz. vol. 222; p. 207.
Vulcanizer. C. A. Shaler. No. 1,169,576; Jan. 25; Gaz. vol. 222; p. 1227.
Vulcanizer. J. Yemiker and W. S. Vosburgh. No. 1,166,876; Jan. 4; Gaz. vol. 222; p. 162.
Vulcanizer, Exhaust-heated. C. W. Griffith. No. 1,167,165; Jan. 4; Gaz. vol. 222; p. 262.
Wafers, Mechanism for forming filled. E. E. Lawrence. No. 1,169,546; Jan. 25; Gaz. vol. 222; p. 1216.
Wagon-bed and pin-socket therefor. C. W. Swayze. No. 1,166,490; Jan. 4; Gaz. vol. 222; p. 28.
Wagon-top, Folding. E. B. Safford. No. 1,166,857; Jan. 4; Gaz. vol. 222; p. 156.
Wagons, Dump-box for dump-. W. A. Underhill. No. 1,168,689; Jan. 18; Gaz. vol. 222; p. 884.
Waist, Child's. T. Rosenbaum. No. 1,166,484; Jan. 4; Gaz. vol. 222; p. 26.
Wardrobe. F. N. Bardwell. No. 1,166,572; Jan. 4; Gaz. vol. 222; p. 57.
Wardrobe-fixture. B. Brager. No. 1,168,154; Jan. 11; Gaz. vol. 222; p. 660.
Warp-threads or the like, Machine for separating and selecting. E. F. Hathaway and C. Lea. No. 1,169,087; Jan. 18; Gaz. vol. 222; p. 1020.
Washboard. J. W. Holland. No. 1,169,037; Jan. 18; Gaz. vol. 222; p. 1002.
Washboard attachment. W. Seager. No. 1,166,941; Jan. 4; Gaz. vol. 222; p. 183.
Washer: *See*—
Gas-washer. Root-washer.
Overhead washer.
Washing-machine. F. G. Haas and H. B. Colestock. No. 1,167,357; Jan. 4; Gaz. vol. 222; p. 331.

Washing-machine. G. W. Moore. No. 1,168,096; Jan. 11; Gaz. vol. 222; p. 641.
Washing-machine. G. H. Myrick. No. 1,169,420; Jan. 25; Gaz. vol. 222; p. 1170.
Washing-machine. G. Portsche, Sr. No. 1,168,028; Jan. 11; Gaz. vol. 222; p. 617.
Washing-machine mechanism. J. G. Seelig. No. 1,169,199; Jan. 25; Gaz. vol. 222; p. 1095.
Washing or rinsing machine for textile material. I. E. Palmer. No. 1,168,736; Jan. 18; Gaz. vol. 222; p. 899.
Washstand. C. E. Kyte. No. 1,169,268; Jan. 25; Gaz. vol. 222; p. 1119.
Washstand. H. J. Wood. No. 1,168,450; Jan. 18; Gaz. vol. 222; p. 796.
Washstand with fire-extinguisher. R. Bosch. No. 1,166,810; Jan. 4; Gaz. vol. 222; p. 140.
Water and gas separator. W. Hemme. No. 1,167,691; Jan. 11; Gaz. vol. 222; p. 500.
Water-closet. J. J. Boyne. No. 1,167,738; Jan. 11; Gaz. vol. 222; p. 515.
Water-closet-bowl cover. A. M. Zimmers. No. 1,169,711; Jan. 25; Gaz. vol. 222; p. 1274.
Water-controlling device. V. K. Jones. No. 1,166,991; Jan. 4; Gaz. vol. 222; p. 201.
Water-elevating apparatus. S. B. Goff. No. 1,166,671; Jan. 4; Gaz. vol. 222; p. 93.
Water-flume, Metallic. W. C. Irvin and F. M. Doak. No. 1,168,505; Jan. 18; Gaz. vol. 222; p. 816.
Water-gage and thermostat. J. A. Lewis. No. 1,168,518; Jan. 18; Gaz. vol. 222; p. 821.
Water-gate. E. M. Spickerman. No. 1,167,851; Jan. 11; Gaz. vol. 222; p. 554.
Water-glass gage. J. L. Purcell. No. 1,166,631; Jan. 4; Gaz. vol. 222; p. 77.
Water-heater. F. J. Albrecht. No. 1,169,224; Jan. 25; Gaz. vol. 222; p. 1104.
Water-heater. R. D. Albright and J. E. Lukehart. No. 1,168,044; Jan. 11; Gaz. vol. 222; p. 623.
Water-heater. C. A. Backstrom. No. 1,166,424; Jan. 4; Gaz. vol. 222; p. 4.
Water-heater. H. S. Humphrey. No. 1,167,696; Jan. 11; Gaz. vol. 222; p. 501.
Water-heater. H. S. Humphrey. No. 1,168,504; Jan. 18; Gaz. vol. 222; p. 816.
Water-heater. L. D. Lovekin. No. 1,166,531; Jan. 4; Gaz. vol. 222; p. 43.
Water-heater. S. J. Sharp. No. 1,168,912; Jan. 18; Gaz. vol. 222; p. 959.
Water-heater and cooker. A. Engert. No. 1,166,822; Jan. 4; Gaz. vol. 222; p. 144.
Water-heaters, Safety appliance for gas. C. L. Best. No. 1,167,257; Jan. 4; Gaz. vol. 222; p. 293.
Water-level-actuated mechanism. A. Arlib. No. 1,168,699; Jan. 18; Gaz. vol. 222; p. 887.
Water-meters, Machine for testing. E. H. Ford. No. 1,167,392; Jan. 11; Gaz. vol. 222; p. 396.
Water-motor. T. R. Nelswander. No. 1,168,101; Jan. 11; Gaz. vol. 222; p. 643.
Water-tube boiler. F. W. Gulbert. No. 1,168,880; Jan. 18; Gaz. vol. 222; p. 949.
Water-tube boiler. C. Radiguer. No. 1,166,481; Jan. 4; Gaz. vol. 222; p. 25.
Water-tube boiler. W. Schmidt. No. 1,168,748; Jan. 18; Gaz. vol. 222; p. 903.
Wave-motor. E. Nicholson. No. 1,166,473; Jan. 4; Gaz. vol. 222; p. 21.
Wave-motor. G. W. Sanderson. No. 1,169,356; Jan. 25; Gaz. vol. 222; p. 1149.
Wax and making same, Emulsified paraffin-. G. Miles. No. 1,168,534; Jan. 18; Gaz. vol. 222; p. 827.
Weather-shield. L. E. Washburn. No. 1,169,702; Jan. 25; Gaz. vol. 222; p. 1271.
Wedge-cutter. E. B. Echols and H. J. Zindler. No. 1,168,793; Jan. 18; Gaz. vol. 222; p. 920.
Weed-cutter. H. Grotzky. No. 1,166,831; Jan. 4; Gaz. vol. 222; p. 147.
Weed-cutter and pulverizing-machine. W. Kidman, Jr. No. 1,167,645; Jan. 11; Gaz. vol. 222; p. 484.
Welding, Apparatus for electric. E. Thomson. No. 1,168,346; Jan. 18; Gaz. vol. 222; p. 761.
Welding-machine attachment, Electric-. E. Fulda. No. 1,168,385; Jan. 18; Gaz. vol. 222; p. 775.
Welding-machine, Electric. C. M. Agnew. No. 1,166,648; Jan. 4; Gaz. vol. 222; p. 85.
Welding rails or the like. W. Brewitt. No. 1,167,043; Jan. 4; Gaz. vol. 222; p. 219.
Well apparatus, Pitman connection for oil-. E. E. Greve. No. 1,169,076; Jan. 18; Gaz. vol. 222; p. 1015.
Well-cleaning device. A. L. Smith. No. 1,167,225; Jan. 4; Gaz. vol. 222; p. 282.
Well-drilling apparatus. E. Rand. No. 1,168,226; Jan. 11; Gaz. vol. 222; p. 683.
Well-plug. G. G. Gilbert. No. 1,167,289; Jan. 4; Gaz. vol. 222; p. 304.
Well-tile-placing tool. G. H. Cargin. No. 1,169,004; Jan. 18; Gaz. vol. 222; p. 991.
Well-tools, Making. C. M., C. C., and J. W. Heeter. No. 1,169,642; Jan. 25; Gaz. vol. 222; p. 1252.
Wells, Cleaning oil-. W. D. Huff. No. 1,169,261; Jan. 25; Gaz. vol. 222; p. 1117.
Wells, Stuffing-box for oil-. R. Titus. No. 1,168,687; Jan. 18; Gaz. vol. 222; p. 883.
Welt-strip. O. C. Davis. No. 1,169,085; Jan. 18; Gaz. vol. 222; p. 1019.
Wheel: *See*—
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Wheel. W. E. Binkley. No. 1,168,996; Jan. 18; Gaz. vol. 222; p. 989.
Wheel. W. E. Copithorn. No. 1,166,817; Jan. 4; Gaz. vol. 222; p. 142.
Wheel. J. E. Cumming. No. 1,168,287; Jan. 18; Gaz. vol. 222; p. 739.
Wheel. T. J. Lindsay. No. 1,168,018; Jan. 11; Gaz. vol. 222; p. 614.
Wheel. A. M. Stanley. No. 1,168,228; Jan. 11; Gaz. vol. 222; p. 684.
Wheel and axle. T. J. Lindsay. No. 1,168,017; Jan. 11; Gaz. vol. 222; p. 614.
Wheel chock, Vehicle-. C. D. Gillespie. No. 1,166,828; Jan. 4; Gaz. vol. 222; p. 146.
Wheel-position indicator. L. P. Hanson. No. 1,166,680; Jan. 4; Gaz. vol. 222; p. 97.
Wheel-rim. F. P. Johnson. No. 1,166,990; Jan. 4; Gaz. vol. 222; p. 200.
Wheel rim, Vehicle-. B. Darrow. No. 1,166,972; Jan. 4; Gaz. vol. 222; p. 194.
Wheel-tread. W. Seidel. No. 1,169,575; Jan. 25; Gaz. vol. 222; p. 1226.
Wheels to axles, Means for journaling. J. W. Price. No. 1,168,414; Jan. 18; Gaz. vol. 222; p. 784.
Whiffletree. J. L. Padgett. No. 1,167,211; Jan. 4; Gaz. vol. 222; p. 278.
Whistle. M. G. Bunnell. No. 1,167,147; Jan. 4; Gaz. vol. 222; p. 255.
Wick-holders, Manufacturing. L. T. Wilcox. No. 1,167,960; Jan. 11; Gaz. vol. 222; p. 594.
Willow-twig-peeling machine. A. O. Powell. No. 1,167,015; Jan. 4; Gaz. vol. 222; p. 209.
Wind-shield. E. L. Ackerman. No. 1,167,609; Jan. 11; Gaz. vol. 222; p. 471.
Wind-shield. M. Doujak. No. 1,167,985; Jan. 11; Gaz. vol. 222; p. 602.
Wind-shield. T. Sloper. No. 1,167,124; Jan. 4; Gaz. vol. 222; p. 248.
Wind-shields and the like, Guard for. R. B. Osterhoudt. No. 1,168,108; Jan. 11; Gaz. vol. 222; p. 645.
Winding and the product thereof. A. D. Scott. No. 1,167,722; Jan. 11; Gaz. vol. 222; p. 510.
Winding coils, Mandrel for. A. D. Scott. No. 1,167,721; Jan. 11; Gaz. vol. 222; p. 509.
Winding coils, Mandrel for. A. D. Scott. No. 1,167,723; Jan. 11; Gaz. vol. 222; p. 510.
Winding-indicator. J. Mazer. No. 1,166,469; Jan. 4; Gaz. vol. 222; p. 20.
Winding-indicator. J. Mazer. No. 1,167,582; Jan. 11; Gaz. vol. 222; p. 461.
Winding-machine. E. Morey. No. 1,168,734; Jan. 18; Gaz. vol. 222; p. 898.
Winding-machine. C. R. Underhill. No. 1,166,948; Jan. 4; Gaz. vol. 222; p. 185.
Winding machine, Coil-. A. D. Scott. No. 1,167,720; Jan. 11; Gaz. vol. 222; p. 509.
Windmill. H. C. Abern. No. 1,169,223; Jan. 25; Gaz. vol. 222; p. 1104.
Windmill. V. S. Stephens. No. 1,168,975; Jan. 18; Gaz. vol. 222; p. 982.
Window. G. Sebini. No. 1,169,054; Jan. 18; Gaz. vol. 222; p. 1007.
Window-cleaning device. C. Rudolf. No. 1,167,935; Jan. 11; Gaz. vol. 222; p. 585.
Window construction. S. P. Free. No. 1,169,142; Jan. 25; Gaz. vol. 222; p. 1076.
Window-fastener. F. B. Chapman. No. 1,166,433; Jan. 4; Gaz. vol. 222; p. 7.
Window frame and sash. J. Braff. No. 1,169,315; Jan. 25; Gaz. vol. 222; p. 1134.
Window-guard. A. Broune. No. 1,168,155; Jan. 11; Gaz. vol. 222; p. 660.
Window-guard. H. C. Struchen. No. 1,168,577; Jan. 18; Gaz. vol. 222; p. 842.
Window-screen. O. B. Critchlow. No. 1,167,153; Jan. 4; Gaz. vol. 222; p. 258.
Window-screen. J. P. Quinn. No. 1,167,929; Jan. 11; Gaz. vol. 222; p. 582.
Window-screen. C. Rochon. No. 1,168,558; Jan. 18; Gaz. vol. 222; p. 835.
Window-screen. F. Scheeren. No. 1,167,526; Jan. 11; Gaz. vol. 222; p. 441.
Window screen and sash locker. C. Ellis. No. 1,168,491; Jan. 18; Gaz. vol. 222; p. 811.
Window-ventilator. H. A. Arel. No. 1,167,249; Jan. 4; Gaz. vol. 222; p. 290.
Window-ventilator. R. M. Pancoast. No. 1,168,959; Jan. 18; Gaz. vol. 222; p. 977.
Window-ventilator or storm-shield. U. G. Schwartz. No. 1,169,432; Jan. 25; Gaz. vol. 222; p. 1175.
Windows, Screening for balanced. W. S. Kellogg. No. 1,168,214; Jan. 11; Gaz. vol. 222; p. 679.
Wire clips, Machine for cutting and forming. W. Shannon. No. 1,167,725; Jan. 11; Gaz. vol. 222; p. 511.
Wire-drawing. B. L. Benbow. No. 1,168,050; Jan. 11; Gaz. vol. 222; p. 625.

Wire holder and insulator. C. S. French. No. 1,168,796; Jan. 18; Gaz. vol. 222; p. 921.
Wire-link-fabric-closing machine. A. Rhenstrom and H. F. Hager. No. 1,166,633; Jan. 4; Gaz. vol. 222; p. 78.
Wire-reel. J. L. Lofts. No. 1,167,704; Jan. 11; Gaz. vol. 222; p. 504.
Wire-spool clamp. C. L. Munsinger. No. 1,166,536; Jan. 4; Gaz. vol. 222; p. 45.
Wire-tensioning device. W. G. Liebig. No. 1,167,764; Jan. 11; Gaz. vol. 222; p. 523.
Wire tie for twisting bags. A. M. Bates. No. 1,168,781; Jan. 18; Gaz. vol. 222; p. 915.
Wire-tightener. A. B. Cox. No. 1,167,050; Jan. 4; Gaz. vol. 222; p. 221.
Wire-twister machine. C. W. Casto. No. 1,166,813; Jan. 4; Gaz. vol. 222; p. 141.
Wires, Bushing for covered. H. J. White. No. 1,169,372; Jan. 25; Gaz. vol. 222; p. 1154.
Wood and other porous materials, Treating. A. P. Derby and J. H. Dargie. No. 1,166,819; Jan. 4; Gaz. vol. 222; p. 143.
Wood and product thereof, Treating. J. Pinal é Icaza. No. 1,169,349; Jan. 25; Gaz. vol. 222; p. 1145.
Wood, Impregnating. R. Lamb. No. 1,168,944; Jan. 18; Gaz. vol. 222; p. 972.
Wood-pulp liquor, Recovering solid by-products from. A. B. Ayerst and C. N. Waite. No. 1,166,509; Jan. 4; Gaz. vol. 222; p. 35.
Wood-treating machine. C. F. Leatherbee. No. 1,167,417; Jan. 11; Gaz. vol. 222; p. 405.
Woods, Treating. C. H. Shattuck. No. 1,169,289; Jan. 25; Gaz. vol. 222; p. 1126.
Wrench. *See*—
Clamping-wrench.
Compression-wrench.
Elevator-wrench.
Jar-wrench.
Pipe-wrench.
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Socket-wrench.
Street-wrench.
Wrench. J. J. Bartenstein. No. 1,168,844; Jan. 18; Gaz. vol. 222; p. 936.
Wrench. A. Brandetti. No. 1,166,655; Jan. 4; Gaz. vol. 222; p. 87.
Wrench. J. L. Brooks. No. 1,166,429; Jan. 4; Gaz. vol. 222; p. 6.
Wrench. W. Chadwick. No. 1,169,007; Jan. 18; Gaz. vol. 222; p. 992.
Wrench. I. Cunningham. No. 1,167,275; Jan. 4; Gaz. vol. 222; p. 299.
Wrench. T. L. Dennis, Jr. No. 1,166,449; Jan. 4; Gaz. vol. 222; p. 13.
Wrench. W. H. Everett. No. 1,167,682; Jan. 11; Gaz. vol. 222; p. 497.
Wrench. F. X. Fleck. No. 1,168,185; Jan. 11; Gaz. vol. 222; p. 670.
Wrench. J. Helstrom. No. 1,168,204; Jan. 11; Gaz. vol. 222; p. 676.
Wrench. J. P. Holmes. No. 1,166,589; Jan. 4; Gaz. vol. 222; p. 63.
Wrench. J. S. Light. No. 1,169,043; Jan. 18; Gaz. vol. 222; p. 1004.
Wrench. M. and S. Seprec and J. A. Novák. No. 1,168,682; Jan. 18; Gaz. vol. 222; p. 881.
Wrench. R. Umlah. No. 1,168,835; Jan. 18; Gaz. vol. 222; p. 934.
Wrench. J. L. Walsh. No. 1,169,749; Jan. 25; Gaz. vol. 222; p. 1287.
Wrench. J. L. Walsh. No. 1,169,750; Jan. 25; Gaz. vol. 222; p. 1287.
Wrench. H. G. White. No. 1,167,540; Jan. 11; Gaz. vol. 222; p. 446.
Wrench. J. G. Wright. No. 1,167,242; Jan. 4; Gaz. vol. 222; p. 287.
Wrenches, Locking means for clamping-. A. H. Bastian. No. 1,169,601; Jan. 25; Gaz. vol. 222; p. 1237.
Wringer: *See*—
Clothes-wringer.
Xylophone, Mechanical-action. H. R. Auld. No. 1,169,063; Jan. 18; Gaz. vol. 222; p. 1010.
Yarn-dressing machines, Tension device for. O. Charbonneau. No. 1,167,978; Jan. 11; Gaz. vol. 222; p. 600.
Yielding coupling. E. H. Simons and R. Klein. No. 1,168,121; Jan. 11; Gaz. vol. 222; p. 649.
Zinc, Apparatus for the extraction of. M. M. Pearlman. No. 1,167,925; Jan. 11; Gaz. vol. 222; p. 581.
Zinc from its ores, Extracting. F. Laist and F. F. Frick. No. 1,167,700; Jan. 11; Gaz. vol. 222; p. 503.
Zinc from its ores, Recovering. F. Laist and F. F. Frick. No. 1,167,701; Jan. 11; Gaz. vol. 222; p. 503.
Zinc ores and material containing zinc, Making briquets from. O. Kippe. No. 1,168,401; Jan. 18; Gaz. vol. 222; p. 780.

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Article of manufacture. J. T. Wigley. No. 48,479; Jan. 18; Gaz. vol. 222; p. 1032.
Automobile-body. E. Apperson. No. 48,359; Jan. 4; Gaz. vol. 222; p. 336.
Bottle. S. J. Goldberg. Nos. 48,370–1; Jan. 4; Gaz. vol. 222; p. 338.
Bottle. A. Zimmerman. No. 48,480; Jan. 18; Gaz. vol. 222; p. 1032.
Bread, Loaf of. L. Stavropulos. No. 48,403; Jan. 4; Gaz. vol. 222; p. 345.
Brush, Hair-. J. H. Scheuer. Nos. 48,398–9; Jan. 4; Gaz. vol. 222; p. 344.
Button or similar garment-fastening device, Collar-. H. Esch, Jr. No. 48,365; Jan. 4; Gaz. vol. 222; p. 338.
Cabinet, Advertising-. K. M. Wegkamp and C. J. Peet. No. 48,429; Jan. 4; Gaz. vol. 222; p. 350.
Can, Sanitary suitcase-. A. J. Ver Bryck. No. 48,477; Jan. 18; Gaz. vol. 222; p. 1031.
Candy cup. S. Bagnulo. Nos. 48,432–4; Jan. 11; Gaz. vol. 222; p. 704.
Car, Funeral-. W. H. Thomas. No. 48,428; Jan. 4; Gaz. vol. 222; p. 349.
Ceiling-light. K. Booth. No. 48,361; Jan. 4; Gaz. vol. 222; p. 337.
Chair, Lunch-room. W. N. Stacey. No. 48,402; Jan. 4; Gaz. vol. 222; p. 345.
Chandeliers or brackets, Arm for. C. E. Jones. No. 48,386; Jan. 4; Gaz. vol. 222; p. 341.
Culinary tool, Combination. F. Lehrmann. No. 48,474; Jan. 18; Gaz. vol. 222; p. 1030.
Cup or similar article. W. A. Blair. No. 48,464; Jan. 18; Gaz. vol. 222; p. 1029.
Cup or similar article. W. R. Cowan. No. 48,435; Jan. 11; Gaz. vol. 222; p. 704.
Doll. M. R. Harrison. No. 48,442; Jan. 11; Gaz. vol. 222; p. 705.
Doll or statuette. R. S. Ilsley. No. 48,381; Jan. 4; Gaz. vol. 222; p. 340.
Electric side light for boats. I. Chase. No. 48,364; Jan. 4; Gaz. vol. 222; p. 337.
Embroidered trimming. O. P. Riedel. Nos. 48,460–1; Jan. 11; Gaz. vol. 222; p. 709.
Engine-casing. F. K. Lord. No. 48,391; Jan. 4; Gaz. vol. 222; p. 342.
Escutcheon-plate and knob. W. W. Bosworth. No. 48,362; Jan. 4; Gaz. vol. 222; p. 337.
Fabric, Elastic. C. A. Lapworth. No. 48,473; Jan. 18; Gaz. vol. 222; p. 1030.
Fabric, Lace. A. E. Newton. Nos. 48,445–8; Jan. 11; Gaz. vol. 222; p. 706.
Fabric, Textile. E. W. Stifel. Nos. 48,404–8; Jan. 4; Gaz. vol. 222; p. 345.
Game-board. A. Hunt. No. 48,470; Jan. 18; Gaz. vol. 222; p. 1030.
Glass vessel. W. H. Hawken. No. 48,443; Jan. 11; Gaz. vol. 222; p. 706.
Hat. L. Galitzki, Jr. No. 48,440; Jan. 11; Gaz. vol. 222; p. 705.
Headlight, Automobile-. L. Rubay. No. 48,396; Jan. 4; Gaz. vol. 222; p. 343.
Horseshoe. W. J. Kent. Nos. 48,471–2; Jan. 18; Gaz. vol. 222; p. 1030.
Humidifier. H. L. Loheide. No. 48,392; Jan. 4; Gaz. vol. 222; p. 342.
Jugs, Case for vacuum-. G. E. Curtiss. No. 48,439; Jan. 11; Gaz. vol. 222; p. 705.
Knives, forks, or similar articles, Handle for. F. M. Spencer. No. 48,476; Jan. 18; Gaz. vol. 222; p. 1031.
Lamp-case. A. G. Peters. No. 48,393; Jan. 4; Gaz. vol. 222; p. 343.
Lamp-globe. A. H. Humphrey. No. 48,379; Jan. 4; Gaz. vol. 222; p. 340.
Lamp globe, Electric-. A. Graeser. No. 48,372; Jan. 4; Gaz. vol. 222; p. 339.
Lamp-shade. I. T. Frary. No. 48,469; Jan. 18; Gaz. vol. 222; p. 1030.
Lamp-shade. A. H. Humphrey. No. 48,380; Jan. 4; Gaz. vol. 222; p. 340.
Light-reflecting bowls, Hanger for. W. R. Kahns. No. 48,387; Jan. 4; Gaz. vol. 222; p. 341.
Lighting-bowl hanger. F. M. Brooks. No. 48,465; Jan. 18; Gaz. vol. 222; p. 1029.
Lighting-fixture. H. C. Adam. No. 48,358; Jan. 4; Gaz. vol. 222; p. 336.
Lighting-fixture. G. A. Harter. No. 48,376; Jan. 4; Gaz. vol. 222; p. 339.
Lighting-fixture. F. E. Howarth. No. 48,378; Jan. 4; Gaz. vol. 222; p. 340.
Lighting-fixture. E. J. Schweitzer and R. G. Wagner. No. 48,400; Jan. 4; Gaz. vol. 222; p. 344.
Lighting-fixture arm. M. Garrison. Nos. 48,367–9; Jan. 4; Gaz. vol. 222; p. 338.
Lighting-fixtures. Shell for. A. E. Tepfer. No. 48,427; Jan. 4; Gaz. vol. 222; p. 349.
Lighting purposes, Glass bowl for. N. Kopp. No. 48,390; Jan. 4; Gaz. vol. 222; p. 342.
Loop, Double-ended hollow. E. O. Fox. No. 48,366; Jan. 4; Gaz. vol. 222; p. 338.
Pencil and cigar-cutter, Combined. J. W. L. Henckel. No. 48,377; Jan. 4; Gaz. vol. 222; p. 339.
Plate. F. A. Sebring. No. 48,401; Jan. 4; Gaz. vol. 222; p. 344.
Plate or similar article. W. R. Cowan. No. 48,436; Jan. 11; Gaz. vol. 222; p. 704.
Plate or similar article. A. J. Fondeville. No. 48,468; Jan. 18; Gaz. vol. 222; p. 1029.
Plate or similar article. H. J. Taylor. Nos. 48,409–26; Jan. 4; Gaz. vol. 222; pp. 345–9.
Plate or similar article of manufacture. W. Abrams. Nos. 48,462–3; Jan. 18; Gaz. vol. 222; pp. 1028–9.
Plate or similar article of manufacture. A. Westerlind. No. 48,478; Jan. 18; Gaz. vol. 222; p. 1031.
Powder box, Face-. W. C. Carlson. No. 48,363; Jan. 4; Gaz. vol. 222; p. 337.
Razor-strops or the like, Swivel-clamp for. G. U. Wolffenbach. No. 48,430; Jan. 4; Gaz. vol. 222; p. 350.
Rug. A. Petzold. Nos. 48,450–9; Jan. 11; Gaz. vol. 222; pp. 707–8.
Rug. H. A. S. Read. Nos. 48,394–5; Jan. 4; Gaz. vol. 222; p. 343.
Scouring device. L. Graham. No. 48,441; Jan. 11; Gaz. vol. 222; p. 705.
Shoe, Miner's. J. T. Crowley. Nos. 48,437–8; Jan. 11; Gaz. vol. 222; pp. 704–5.
Sign, Electric. M. Norden. No. 48,449; Jan. 11; Gaz. vol. 222; p. 707.
Spoon, fork, or similar article, Handle for a. W. A. Jameson. Nos. 48,382–5; Jan. 4; Gaz. vol. 222; pp. 340–1.
Spoon, fork, or the like. C. W. Harman. No. 48,375; Jan. 4; Gaz. vol. 222; p. 339.
Spoons, forks, or similar articles, Handle for. R. R. Kintz. Nos. 48,388–9; Jan. 4; Gaz. vol. 222; p. 342.
Tag for laundry, Mark-. J. Domecq. No. 48,466; Jan. 18; Gaz. vol. 222; p. 1029.
Talking-machine case. M. J. Samuels. No. 48,397; Jan. 4; Gaz. vol. 222; p. 344.
Tank-heater. H. J. Ferris. No. 48,467; Jan. 18; Gaz. vol. 222; p. 1029.
Telephone appliance. S. L. Murphy. No. 48,444; Jan. 11; Gaz. vol. 222; p. 706.
Tire. G. W. Greene. No. 48,374; Jan. 4; Gaz. vol. 222; p. 339.
Toy figure. E. D. C. Nichols. No. 48,475; Jan. 18; Gaz. vol. 222; p. 1031.
Valve-float. J. L. Gray. No. 48,373; Jan. 4; Gaz. vol. 222; p. 339.
Water-cooler. C. C. Bargreen. No. 48,360; Jan. 4; Gaz. vol. 222; p. 336.
Weighing-machine. H. M. Zlle. No. 48,431; Jan. 4; Gaz vol. 222; p. 350.

ALPHABETICAL LIST OF TRADE-MARKS.

Acetals, acetones, acetylenes, acids, &c. J. D. Riedel, Actiengesellschaft. No. 108,267; Jan. 25; Gaz. vol. 222; p. 1310.

Aeroplanes and hydroaeroplanes. E. Gramaticesco. No. 108,048; Jan. 11; Gaz. vol. 222; p. 724.

Alkaloids in solution for treating and preventing certain diseases of the teeth. J. Bohr. No. 108,043; Jan. 11; Gaz. vol. 222; p. 724.

Aluminum hollow and flat ware. Geo. Borgfeldt & Co. No. 108,152; Jan. 18; Gaz. vol. 222; p. 1049.

Aluminum kitchen utensils. Standard Aluminum Co. No. 108,028; Jan. 11; Gaz. vol. 222; p. 723.

Anchors, Ground-. W. N. Matthews & Bro. No. 107,886; Jan. 4; Gaz. vol. 222; p. 373.

Antiseptic compounds. The Mu-Col Company. No. 108,060; Jan. 11; Gaz. vol. 222; p. 724.

Application for relief of eczema, piles, itch, &c. C. A. Marmont. No. 108,216; Jan. 18; Gaz. vol. 222; p. 1051.

Armbands, bib-holders, belts, suspenders, &c. The Clark Manufacturing Co. No. 108,081; Jan. 18; Gaz. vol. 222; p. 1047.

Asphaltum. Standard Oil Company. No. 107,947; Jan. 4; Gaz. vol. 222; p. 375.

Automobile, furniture, &c., cleaning and polishing composition. H. G. Robbins. No. 108,268; Jan. 25; Gaz. vol. 222; p. 1310.

Babbitt, antifriction, &c., metals. F. W. Miller. No. 108,255; Jan. 25; Gaz. vol. 222; p. 1309.

Bags or receptacles. S. S. Newman. No. 108,106; Jan 18; Gaz. vol. 222; p. 1048.

Bags, pocket-books, purses, &c., Traveling-. Baird-North Co. No. 108,281; Jan. 25; Gaz. vol. 222; p. 1310.

Baking-powder and salt. Abraham & Straus. No. 108,031; Jan. 11; Gaz. vol. 222; p. 723.

Battery and light casings, Electric. Bright Star Battery Co. No. 108,284; Jan. 25; Gaz. vol. 222; p. 1310.

Bed-springs and spring fabric for same. F. W. Adams. No. 108,122; Jan. 18; Gaz. vol. 222; p. 1048.

Beef and bologna-style sausage, Dried and cured. S. Gordon. No. 107,968; Jan. 4; Gaz. vol. 222; p. 375.

Beer. The Cleveland & Sandusky Brewing Company. No. 108,125; Jan. 18; Gaz. vol. 222; p. 1048.

Beer. Monumental Brewing Company. No. 108,059; Jan. 11; Gaz. vol. 222; p. 724.

Beer. S. Liebmann's Sons Brewing Co. No. 108,017; Jan. 11; Gaz. vol. 222; p. 723.

Beer, Bottled. W. Schneider Wholesale Wine & Liquor Co. No. 108,110; Jan. 18; Gaz. vol. 222; p. 1048.

Belt dressing, Machinery-. Sawyer Belting Company. Nos. 107,939–40; Jan. 4; Gaz. vol. 222; p. 375.

Belting, Cotton and rubber. The Republic Rubber Company. No. 107,984; Jan. 4; Gaz. vol. 222; p. 376.

Belting, Leather. Alexander Brothers. No. 107,894; Jan. 4; Gaz. vol. 222; p. 373.

Belting, Leather. G. Rahmann & Co. No. 108,306; Jan. 25; Gaz. vol. 222; p. 1311.

Beverages, Fruit. Olympia Brewing Co. No. 108,261; Jan. 25; Gaz. vol. 222; p. 1309.

Beverages, Malt. G. Heileman Brewing Co. No. 108,094; Jan. 18; Gaz. vol. 222; p. 1047.

Beverages, Non-alcoholic carbonated. R. E. Thompson. Nos. 108,315–16; Jan. 25; Gaz. vol. 222; p. 1311.

Bicycle and motor-vehicle lock. C. E. Anable. No. 108,236; Jan. 25; Gaz. vol. 222; p. 1309.

Biscuit and wafers. Mrs. Jack's Ham Biscuit Co. No. 107,883; Jan. 4; Gaz. vol. 222; p. 373.

Biscuits. G. F. Nicholls. No. 108,020; Jan. 11; Gaz. vol. 222; p. 723.

Blouses, Middy-. Bloom & Millman. No. 107,896; Jan. 4; Gaz. vol. 222; p. 373.

Boats. The Elco Company. No. 108,088; Jan. 18; Gaz. vol. 222; p. 1047.

Boiler-tube cleaners, Mechanical. The William B. Pierce Company. No. 108,002; Jan. 4; Gaz. vol. 222; p. 376.

Book-covers. Smalley Book Cover Co. No. 107,946; Jan. 4; Gaz. vol. 222; p. 375.

Boots and shoes. H. Jantzen Shoe Co. No. 108,208; Jan. 18; Gaz. vol. 222; p. 1051.

Boots and shoes. United States Rubber Company. No. 107,953; Jan. 4; Gaz. vol. 222; p. 375.

Boots and shoes, Leather. The Commonwealth Shoe and Leather Company. No. 108,197; Jan. 18; Gaz. vol. 222; p. 1050.

Boots and shoes of leather or skin. Lewis A. Crossett, Inc. No. 107,905; Jan. 4; Gaz. vol. 222; p. 374.

Boots and shoes, Rubber and canvas. National India Rubber Co. Nos. 107,931–2; Jan. 4; Gaz. vol. 222; p. 374.

Bottle, can, and jar closures. Brooklyn Bottle Stopper Co. No. 107,958; Jan. 4; Gaz. vol. 222; p. 375.

Boxes, crates, and chicken-coops. Chicago Mill and Lumber Company. No. 107,904; Jan. 4; Gaz. vol. 222; p. 374.

Braids, Cotton and silk. The Sanford Narrow Fabric Company. Nos. 108,308–9; Jan. 25; Gaz. vol. 222; p. 1311.

Brandies and cordials. L. Lavedan. No. 108,298; Jan. 25; Gaz. vol. 222; p. 1311.

Brick and tile. Fiske & Company. No. 108,012; Jan. 11; Gaz. vol. 222; p. 723.

Brick, Fire-. Elk Fire Brick Company. No. 107,965; Jan. 4; Gaz. vol. 222; p. 375.

Brushes, Paint-. E. Cluton & Co. No. 108,083; Jan. 18; Gaz. vol. 222; p. 1047.

Building material, Certain named. The Curtis Lumber & Millwork Co. No. 107,906; Jan. 4; Gaz. vol. 222; p. 374.

Butter. White River Creamery Co. No. 107,954; Jan. 4; Gaz. vol. 222; p. 375.

Butter, Process-. Lincoln Pure Butter Company. No. 108,168; Jan. 18; Gaz. vol. 222; p. 1050.

Cables and electric cables and cords, Insulated. Stromberg-Carlson Telephone Manufacturing Company. No. 108,275; Jan. 25; Gaz. vol. 222; p. 1310.

Cake. Purity Corporation. No. 107,982; Jan. 4; Gaz. vol. 222; p. 376.

Cake. P. C. Knowlton Co. Successors to Baldwin, Knowlton & Lake. No. 107,920; Jan. 4; Gaz. vol. 222; p. 374.

Calculating, multiplying, &c., machines. A. Essmann. No. 108,199; Jan. 18; Gaz. vol. 222; p. 1051.

Cameras and film. Ansco Company. No. 108,075; Jan. 18; Gaz. vol. 222; p. 1047.

Candies. J. P. Gridin. No. 108,093; Jan. 18; Gaz. vol. 222; p. 1047.

Candies, Chocolate. National Candy Company. No. 108,105; Jan. 18; Gaz. vol. 222; p. 1048.

Candy. Hygrade Wine Company. No. 108,097; Jan. 18; Gaz. vol. 222; p. 1047.

Candy. Package Confectionery Co. Nos. 107,974–80; Jan. 4; Gaz. vol. 222; p. 376.

Candy. Package Confectionery Co. No. 108,226; Jan. 18; Gaz. vol. 222; p. 1051.

Candy. C. Sautter & Sons. No. 107,888; Jan. 4; Gaz. vol. 222; p. 373.

Candy and chocolate, Combination mint. W. L. Jones. No. 108,167; Jan. 18; Gaz. vol. 222; p. 1050.

Candy and ice-cream. United Cigar Stores Co. No. 108,070; Jan. 11; Gaz. vol. 222; p. 725.

Candy and roasted and salted peanuts, Peanut-. Bosman & Lohman Co. No. 108,078; Jan. 18; Gaz. vol. 222; p. 1047.

Candy, Chocolate. Ambrosia Chocolate Co. No. 108,032; Jan. 11; Gaz. vol. 222; p. 723.

Candy suckers. Shoemaker & Volkert. No. 108,113; Jan. 18; Gaz. vol. 222; p. 1048.

Canned artichokes. Cusimano & Co. No. 108,084; Jan. 18; Gaz. vol. 222; p. 1047.

Canned fish. North American Tuna Canning Co. No. 107,933; Jan. 4; Gaz. vol. 222; p. 374.

Canned fish and vegetables. J. H. Mercian. No. 107,927; Jan. 4; Gaz. vol. 222; p. 374.

Canned fruits. Pacific Coast Canning Co. No. 107,935; Jan. 4; Gaz. vol. 222; p. 374.

Canned fruits and vegetables. Pacific Coast Canning Co. No. 108,135; Jan. 18; Gaz. vol. 222; p. 1049.

Canned peas. Nutricia Dairy Farm Products Co. No. 108,259; Jan. 25; Gaz. vol. 222; p. 1309.

Canned pineapples. Haiku Fruit & Packing Co. No. 107,969; Jan. 4; Gaz. vol. 222; p. 375.

Canned salmon. Hidden Inlet Canning Co. No. 108,133; Jan. 18; Gaz. vol. 222; p. 1049.

Canned vegetables. The K-C Lumber Company. Nos. 107,917–18; Jan. 4; Gaz. vol. 222; p. 374.

Canned vegetables. Stokely Brothers & Co. Nos. 108,271–4; Jan. 25; Gaz. vol. 222; p. 1310.

Carbon-paper. American Sales Book Company. Nos. 108,234–5; Jan. 25; Gaz. vol. 222; p. 1309.

Cement, Acid-proof. Electro-Chemical Supply & Engineering Co. No. 108,010; Jan. 11; Gaz. vol. 222; p. 723.

Cement, Portland. Clinchfield Portland Cement Corporation. No. 108,156; Jan. 18; Gaz. vol. 222; p. 1049.

Cementitious materials for floors, walls, &c. Gernert-Stump Company. No. 108,130; Jan. 18; Gaz. vol. 222; p. 1048.

Chemical preparations, Certain named. Begère et Compagnie. No. 108,150; Jan. 18; Gaz. vol 222; p. 1049.

Chemicals and pharmaceutical preparations, Certain named. J. D. Riedel, Actiengesellschaft. No. 108,176; Jan. 18; Gaz. vol. 222; p. 1050.

Chemicals, medicines, and pharmaceutical preparations, Certain named. Q. McDaniel. No. 108,215; Jan. 18; Gaz. vol. 222; p. 1051.

Cigarettes. W. E. Beattie and Co. No. 108,282; Jan. 25; Gaz. vol. 222; p. 1310.
Cigarettes. Bud Cigarette Co. No. 107,899; Jan. 4; Gaz. vol. 222; p. 373.
Cigars. Serv-Us Pure Food Co. No. 107,943; Jan. 4; Gaz. vol. 222; p. 375.
Cigars, cigarettes, and tobacco. E. Kleiner & Co. Nos. 108,296–7; Jan. 25; Gaz. vol. 222; p. 1311.
Clamps, Pipe, conduit, and cable. Mineralliac Electric Company. No. 108,019; Jan. 11; Gaz. vol. 222; p. 723.
Cleaning and polishing liquid for automobiles, furniture, &c. H. G. Robbins. No. 108,179; Jan. 18; Gaz. vol. 222; p. 1050.
Cleaning and polishing paste for glass and silver ware. Crystella Company. No. 107,995; Jan. 4; Gaz. vol. 222; p. 376.
Cleaning fluid for clothes and cloth fabrics. M. M. Armstrong. No. 107,875; Jan. 4; Gaz. vol. 222; p. 373.
Cleaning fluid. Non-saponaceous and non-inflammable. Bloomingdale Bros. No. 108,151; Jan. 18; Gaz. vol. 222; p. 1049.
Cleaning-powder. The Hygienic Products Company. No. 108,251; Jan. 25; Gaz. vol. 222; p. 1309.
Cleaning preparation, Detergent. J. H. Kindt. No. 108,253; Jan. 25; Gaz. vol. 222; p. 1309.
Cloaks, coats, dresses, &c., Ladies'. M. J. Landone. No. 108,213; Jan. 18; Gaz. vol. 222; p. 1051.
Clocks and watches. The Wilson Chemical Co. No. 107,993; Jan. 4; Gaz. vol. 222; p. 376.
Closets, Chemical-. Automatic Chemical Closet Company. No. 108,035; Jan. 11; Gaz. vol. 222; p. 724.
Clothing, Certain named. H. A. Brandon. No. 108,239; Jan. 25; Gaz. vol. 222; p. 1309.
Clothing, Certain named. Miller, Baker & Goldsmith. No. 108,301; Jan. 25; Gaz. vol. 222; p. 1311.
Clothing for men, women, and children, Certain named. Kahn Brothers Company. No. 107,919; Jan. 4; Gaz. vol. 222; p. 374.
Cloths and stuffs, Wool, worsted, or hair. The Bradford Dyers' Association. No. 107,897; Jan. 4; Gaz. vol. 222; p. 373.
Coach and carriage bodies. Kellner frères. No. 108,055; Jan. 11; Gaz. vol. 222; p. 724.
Coats. H. Goldman and Company. No. 108,288; Jan. 25; Gaz. vol. 222; p. 1310.
Coats and suits, Misses'. M. I. Stewart & Co. No. 108,115; Jan. 18; Gaz. vol. 222; p. 1048.
Coats, suits, skirts, and dresses, Ladies'. M. E. Smith & Co. No. 107,986; Jan. 4; Gaz. vol. 222; p. 376.
Coats, vests, and trousers, Men's and boys'. L. Greif & Bro. No. 108,049; Jan. 11; Gaz. vol. 222; p. 724.
Coats, vests, and trousers, Men's and boys'. The Snellenburg Clothing Company. No. 108,182; Jan. 18; Gaz. vol. 222; p. 1050.
Coating for automatic sprinklers, Paint. General Fire Extinguisher Company. No. 108,013; Jan. 11; Gaz. vol. 222; p. 723.
Cocktail, rickey, fizz, punch. The E. G. Lyons & Raas Co. No. 108,214; Jan. 18; Gaz. vol. 222; p. 1051.
Cocoa, sweet and bitter chocolate. Hooton Cocoa Company. No. 108,014; Jan. 11; Gaz. vol. 222; p. 723.
Coffee. American Coffee Company of New Orleans. No. 108,147; Jan. 18; Gaz. vol. 222; p. 1049.
Coffee. L. Doelman Company. No. 107,908; Jan. 4; Gaz. vol. 222; p. 374.
Coffee. Dwinell-Wright Co. No. 107,909; Jan. 4; Gaz. vol. 222; p. 374.
Coffee. Hotel Sherman Company. No. 107,916; Jan. 4; Gaz. vol. 222; p. 374.
Coffee. The Woolson Spice Company. No. 107,955; Jan. 4; Gaz. vol. 222; p. 375.
Collar-supporters. Joseph W. Schloss Co. No. 107,941; Jan. 4; Gaz. vol. 222; p. 375.
Collar-supports. The Warren Featherbone Company. No. 107,892; Jan. 4; Gaz. vol. 222; p. 373.
Compound to be used with oil as a lubricant, Journal. J. O. Sloan. No. 108,270; Jan. 25; Gaz. vol. 222; p. 1310.
Confections and candies, Certain named. H. Henschel. No. 108,095; Jan. 18; Gaz. vol. 222; p. 1047.
Constipation, liver, stomach, and headache. Duer-Latta Co. No. 108,046; Jan. 11; Gaz. vol. 222; p. 724.
Copper and other metals, Refined. Raritan Copper Works. No. 108,307; Jan. 25; Gaz. vol. 222; p. 1311.
Corks. O. Finney. No. 107,966; Jan. 4; Gaz. vol. 222; p. 375.
Cornmeal and cracked corn. Juliette Milling Company. No. 108,211; Jan. 18; Gaz. vol. 222; p. 1051.
Corsets, Madame Irène. No. 108,057; Jan. 11; Gaz. vol. 222; p. 374.
Corsets, Madame Iréne. No. 108,057; Jan. 11; Gaz. vol. 222; p. 724.
Corsets and corset-stays. Barcley Corset Co. No. 108,191; Jan. 18; Gaz. vol. 222; p. 1050.
Corsets, corset covers and pads. Kops Bros. No. 107,921; Jan. 4; Gaz. vol. 222; p. 374.
Cotton and wool batting. California Cotton Mills Company. No. 107,901; Jan. 4; Gaz. vol. 222; p. 373.
Cotton flannels, outings, dometts, &c. The Glencoe Mills. No. 107,967; Jan. 4; Gaz. vol. 222; p. 375.
Cotton goods in the piece and cotton sheets. Kelsey Textile Corporation. No. 108,212; Jan. 18; Gaz. vol. 222; p. 1051.
Cotton piece goods. Camperdown Mills. No. 108,195; Jan. 18; Gaz. vol. 222; p. 1050.
Cotton piece goods. Hunter Manufacturing & Commission Co. No. 108,207; Jan. 18; Gaz. vol. 222; p. 1051.
Cotton piece goods. Smith, Hogg & Co. No. 108,311; Jan. 25; Gaz. vol. 222; p. 1311.
Cotton piece goods. Wilmerding & Bisset. No. 108,319; Jan. 25; Gaz. vol. 222; p. 1311.
Cotton piece goods and chiffons. Pacific Mills. No. 108,072; Jan. 11; Gaz. vol. 222; p. 725.
Cough-syrup. The E. L. Patch Co. No. 108,173; Jan. 18; Gaz. vol. 222; p. 1050.
Crackers or biscuits. Sanitary Food Manufacturing Company. No. 108,178; Jan. 18; Gaz. vol. 222; p. 1050.
Cream, Cold-. E. M. Herrick. No. 108,132; Jan. 18; Gaz. vol. 222; p. 1049.
Cream, Cold-. Richard Hudnut. Nos. 108,164–5; Jan. 18; Gaz. vol. 222; pp. 1049–50.
Cylinders and crank-casings. International Motor Company. No. 108,051; Jan. 11; Gaz. vol. 222; p. 724.
Detergent or soap, Liquid. G. Bozzola. No. 108,193; Jan. 18; Gaz. vol. 222; p. 1050.
Disinfectants. R. Houben. No. 108,163; Jan. 18; Gaz. vol. 222; p. 1049.
Disinfectants and insecticides. West Disinfecting Company. No. 108,185; Jan. 18; Gaz. vol. 222; p. 1050.
Dog-biscuits. Champion Animal Food Company. No. 107,878; Jan. 4; Gaz. vol. 222; p. 373.
Dolomite, Specially-prepared. R. P. M. Davis. No. 108,041; Jan. 11; Gaz. vol. 222; p. 724.
Door, shutter, and window fasteners, locks, keys, &c. The American Hardware Corporation. No. 108,033; Jan. 11; Gaz. vol. 222; p. 724.
Dresses. Melhado & Co. No. 108,300; Jan. 25; Gaz. vol. 222; p. 1311.
Dresses, Ladies'. David I. Ullman Inc. No. 108,184; Jan. 18; Gaz. vol. 222; p. 1050.
Egg-alphabets, egg-noodles, macaroni, &c. A. Zerega's Sons. Nos. 108,120–1; Jan. 18; Gaz. vol. 222; p. 1048.
Egg-beaters. The Turner & Seymour Manufacturing Co. No. 108,118; Jan. 18; Gaz. vol. 222; p. 1048.
Egg-beaters. The Turner & Seymour Manufacturing Co. No. 108,318; Jan. 25; Gaz. vol. 222; p. 1311.
Eggs. J. W. Meloney Co. No. 108,169; Jan. 18; Gaz. vol. 222; p. 1050.
Eggs, Fresh. Ewig Poultry Co. No. 108,129; Jan. 18; Gaz. vol. 222; p. 1048.
Elastic webbing. The Clark Manufacturing Co. No. 108,045; Jan. 11; Gaz. vol. 222; p. 724.
Electrical apparatus and supplies, Certain named. Metal Specialties Manufacturing Co. No. 107,972; Jan. 4; Gaz. vol. 222; p. 376.
Embroidery, Piece goods stamped with designs for. F. L. Nietmann. No. 108,001; Jan. 4; Gaz. vol. 222; p. 376.
Envelops. International Mailing Tube and Wrapper Co. No. 108,098; Jan. 18; Gaz. vol. 222; p. 1047.
Envelops. Western States Envelope Co. No. 108,145; Jan. 18; Gaz. vol. 222; p. 1049.
Feed, Balanced-ration horse. The Early & Daniel Co. No. 108,126; Jan. 18; Gaz. vol. 222; p. 1048.
Feed, Mixed stock. Nowak Milling Corporation. Nos. 108,170–1; Jan. 18; Gaz. vol. 222; p. 1050.
Feeds for horse, mule, and dairy use, Mixed. Albert Dickinson Company. Nos. 108,086–7; Jan. 18; Gaz. vol. 222; p. 1047.
Figs, Preserved. Texas Fig Co. No. 108,003; Jan. 4; Gaz. vol. 222; p. 376.
Fire-extinguishers. H. W. Johns-Manville Co. No. 108,099; Jan. 18; Gaz. vol. 222; p. 1047.
Fish packed in wooden boxes and glass jars. Alfred Jones' Sons. No. 108,016; Jan. 11; Gaz. vol. 222; p. 723.
Floor-cloths. Thomas Potter Sons & Company. No. 108,023; Jan. 11; Gaz. vol. 222; p. 723.
Flour and breakfast cereals made from wheat. Wheat Meal Company. No. 108,005; Jan. 4; Gaz. vol. 222; p. 377.
Flour, cornmeal, bucketwheat-flour, &c., Wheat and pancake. The Odenweller Milling Co. No. 108,107; Jan. 18; Gaz. vol. 222; p. 1048.
Flour, Gluten-. G. J. Wilson. No. 107,992; Jan. 4; Gaz. vol. 222; p. 376.
Flour made from wheat and cereals. The Jobes Milling Co. No. 107,884; Jan. 4; Gaz. vol. 222; p. 373.
Flour, Rye-. M. Rosenfeld. No. 107,937; Jan. 4; Gaz. vol. 222; p. 374.
Flour, Self-rising wheat-. Highland Milling Company. No. 108,162; Jan. 18; Gaz. vol. 222; p. 1049.
Flour, Wheat-. The Acme Milling Company. No. 108,073; Jan. 18; Gaz. vol. 222; p. 1047.
Flour, Wheat-. Charles Tiedemann Milling Co. No. 107,891; Jan. 4; Gaz. vol. 222; p. 373.
Flour, Wheat-. Elm Grove Milling Co. No. 107,907; Jan. 4; Gaz. vol. 222; p. 374.
Fly-killers. United States Wire Mat Company. No. 107,989; Jan. 4; Gaz. vol. 222; p. 376.
Fly-traps. C. A. Pipenhagen. No. 108,022; Jan. 11; Gaz. vol. 222; p. 723.
Food for horses, cattle, sheep, and poultry, Prepared. Chapin & Company. No. 108,080; Jan. 18; Gaz. vol. 222; p. 1047.
Food for poultry, Mixed. South Texas Grain Company. No. 107,889; Jan. 4; Gaz. vol. 222; p. 373.

Food, Poultry. Fisher Flouring Mills Company. No. 107,911; Jan. 4; Gaz. vol. 222; p. 374.
Food products, Cereal. Kellogg Toasted Corn Flake Company. No. 107,885; Jan. 4; Gaz. vol. 222; p. 373.
Food, Stock and poultry. E. Rauh & Sons Fertilizer Company. No. 108,136; Jan. 18; Gaz. vol. 222; p. 1049.
Foods, Certain named. American Oyster Co. No. 108,188; Jan. 18; Gaz. vol. 222; p. 1050.
Foods, Certain named. Engelke & Feiner Mfg. Co. No. 108,128; Jan. 18; Gaz. vol. 222; p. 1048.
Foods, Certain named. Franklin MacVeagh & Company. No. 107,924; Jan. 4; Gaz. vol. 222; p. 374.
Foods, Certain named. Hawks Incorporated. No. 107,915; Jan. 4; Gaz. vol. 222; p. 374.
Foods, Certain named. Steele-Wedeles Company. No. 108,114; Jan. 18; Gaz. vol. 222; p. 1048.
Footwear. E. W. Remick. No. 108,266; Jan. 25; Gaz. vol. 222; p. 1310.
Fruits and vegetables, Fresh. The Dover Fruit Farms. No. 108,198; Jan. 18; Gaz. vol. 222; p. 1051.
Fruits, Citrus. Crutchfield & Woolfolk. No. 108,159; Jan. 18; Gaz. vol. 222; p. 1049.
Fruits, Fresh and canned. Punta Gorda Pineapple Corporation. No. 108,024; Jan. 11; Gaz. vol. 222; p. 723.
Furniture and woodwork polish. E. J. Boersig. No. 108,006; Jan. 11; Gaz. vol. 222; p. 723.
Furniture, Certain named. L. Brigham. No. 108,007; Jan. 11; Gaz. vol. 222; p. 723.
Furniture-polish. J. H. Thomasson. No. 107,988; Jan. 4; Gaz. vol. 222; p. 376.
Garment-clasps. The Clark Manufacturing Co. No. 108,044; Jan. 11; Gaz. vol. 222; p. 724.
Garment packing and display forms. The Arrow-Pak Co. No. 108,189; Jan. 18; Gaz. vol. 222; p. 1050.
Garments, Sleeping-. The Bristol Manufacturing Company. No. 107,876; Jan. 4; Gaz. vol. 222; p. 373.
Gasolene and prevent the formation of carbon in the cylinders of motor-vehicles, Substance to purify the. Effecto Co. No. 108,249; Jan. 25; Gaz. vol. 222; p. 1309.
Gloves. The Beebe Glove Co. No. 108,186; Jan. 18; Gaz. vol. 222; p. 1050.
Gum and candy, Chewing-. C. A. Crane. No. 108,158; Jan. 18; Gaz. vol. 222; p. 1049.
Hair-curlers. E. Ollariu. No. 108,260; Jan. 25; Gaz. vol. 222; p. 1309.
Hair-nets. Mills & Gibb. No. 108,218; Jan. 18; Gaz. vol. 222; p. 1051.
Hair-tonic. J. A. Cobb. No. 107,963; Jan. 4; Gaz. vol. 222; p. 375.
Hair tonic and restorer. F. Voigt. No. 108,144; Jan. 18; Gaz. vol. 222; p. 1049.
Hangers, Portable. M. E. Butcher. No. 107,959; Jan. 4; Gaz. vol. 222; p. 375.
Hardware, plumbing, and steam-fitting supplies, Certain named. The Cleveland Brass Manufacturing Co. No. 107,879; Jan. 4; Gaz. vol. 222; p. 373.
Hat-bleach. Sunshine Panama Bleach Mfg. Co. No. 108,138; Jan. 18; Gaz. vol. 222; p. 1049.
Herring, Spiced. Parker & Co. No. 107,981; Jan. 4; Gaz. vol. 222; p. 376.
High-frequency apparatus. The Vita Corporation. No. 108,276; Jan. 25; Gaz. vol. 222; p. 1310.
Hinges. The Racine Detachable Hinge Co. No. 108,264; Jan. 25; Gaz. vol. 222; p. 1310.
Horseshoe-pads. Hoopes and Townsend Company. No. 108,050; Jan. 11; Gaz. vol. 222; p. 724.
Hose and half-hose supporters. The Clark Manufacturing Co. No. 108,082; Jan. 18; Gaz. vol. 222; p. 1047.
Hosiery. Cooper, Coate & Casey Dry Goods Co. No. 108,157; Jan. 18; Gaz. vol. 222; p. 1049.
Hosiery. S. H. Kress & Company. No. 107,922; Jan. 4; Gaz. vol. 222; p. 374.
Hosiery. Parker Hosiery Mill & Dye Works. No. 108,172; Jan. 18; Gaz. vol. 222; p. 1050.
Hosiery. Taubel Brothers. No. 108,314; Jan. 25; Gaz. vol. 222; p. 1311.
Hosiery, Infants'. S. S. Kresge Co. No. 108,056; Jan. 11; Gaz. vol. 222; p. 724.
Hydraulic presses, shock-alleviators, valves, and fittings. Metalwood Manufacturing Co. No. 108,134; Jan. 18; Gaz. vol. 222; p. 1049.
Icing-powder, flavoring for cakes and pastries, &c. Tafaco Specialty Company. No. 107,949; Jan. 4; Gaz. vol. 222; p. 375.
Insect-powder. Botanical Manufacturing Co. No. 108,079; Jan. 18; Gaz. vol. 222; p. 1047.
Iodin compounds, Therapeutic. Howard-Holt Company. No. 107,998; Jan. 4; Gaz. vol. 222; p. 376.
Jams, jellies, canned goods, conserves. H. Jones & Co. No. 108,100; Jan. 18; Gaz. vol. 222; p. 1048.
Journal, Monthly trade. E. Boyles. No. 108,192; Jan. 18; Gaz. vol. 222; p. 1050.
Kerosene. Gulf Refining Company. No. 107,913; Jan. 4; Gaz. vol. 222; p. 374.
Kettles, pots, pans, and bowls, Metal. Oneida Community. No. 108,021; Jan. 11; Gaz. vol. 222; p. 723.
Knit goods, Certain named. Treinis Bros. No. 108,317; Jan. 25; Gaz. vol. 222; p. 1311.
Ladders, ladder-brackets, mason-horses, &c. The John S. Tilley Ladders Co. No. 108,029; Jan. 11; Gaz. vol. 222; p. 723.
Lard, hams, bacon, dried beef, and loins. Hammond, Standish & Co. No. 108,206; Jan. 18; Gaz. vol. 222; p. 1051.
Laxative preparation. Bristol-Myers Company. No. 108,154; Jan. 18; Gaz. vol. 222; p. 1049.
Life-saving appliance to be worn on the body, Buoyant. American Life Saving Garment Company. No. 107,994; Jan. 4; Gaz. vol. 222; p. 376.
Linen, cotton, and linen and cotton piece goods. M. Gardner & Co. No. 108,204; Jan 18; Gaz. vol. 222; p. 1051.
Liniment. J. L. Thompson, Jr. No. 108,116; Jan. 18; Gaz. vol. 222; p. 1048.
Liniment. W. P. S. Toner. No. 108,030; Jan. 11; Gaz. vol. 222; p. 723.
Liniment and pills for certain named diseases. G. H. Beck. No. 108,283; Jan. 25; Gaz. vol. 222; p. 1310.
Liniment for barb-wire cuts, &c., on live stock. R. M. Thompson. No. 108,231; Jan. 18; Gaz. vol. 222; p. 1052.
Liniments. S. Pick. No. 108,305; Jan. 25; Gaz. vol. 222; p. 1311.
Macaroni. The Atlantic Macaroni Co. No. 108,077; Jan. 18; Gaz. vol. 222; p. 1047.
Measuring machines and parts thereof, Cloth and fabric. The Measuregraph Company. No. 107,926; Jan. 4; Gaz. vol. 222; p. 374.
Medicinal compound for nourishing and purifying blood. Ideal Blood Food Co. No. 108,294; Jan. 25; Gaz. vol. 222; p. 1311.
Medicinal food. Armour and Company. No. 108,076; Jan. 18; Gaz. vol. 222; p. 1047.
Medicinal preparations, Antiseptic and germicide. W. P. Hammond. No. 108,289; Jan. 25; Gaz. vol. 222; p. 1310.
Medicine, Blood. J. C. Mendenhall. No. 108,058; Jan. 11; Gaz. vol. 222; p. 724.
Medicine for obesity. The Korein Co. No. 108,254; Jan. 25; Gaz. vol. 222; p. 1309.
Medicine, Stomach, liver, and blood. E. B. Mulholand. No. 108,219; Jan. 18; Gaz. vol. 222; p. 1051.
Metal-polishes. L. May. No. 108,217; Jan. 18; Gaz. vol. 222; p. 1051.
Metals used in manufacture, Unwrought and partly-wrought. Walter Spencer & Co. No. 108,066; Jan. 11; Gaz. vol. 222; p. 723.
Milk, Condensed. The Denmark Condensed Milk Company. No. 108,011; Jan. 11; Gaz. vol. 222; p. 723.
Mineral compound to be mixed with other materials for producing a concrete. P. Mende. No. 108,103; Jan. 18; Gaz. vol. 222; p. 1048.
Mops. C. H. Suess. No. 108,069; Jan. 11; Gaz. vol. 222; p. 723.
Mops, polishing mops and brushes. H. G. Saal Company. No. 108,109; Jan. 18; Gaz. vol. 222; p. 1048.
Motor-cycles and bicycles. Harley-Davidson Motor Co. No. 107,970; Jan. 4; Gaz. vol. 222; p. 375.
Motor, Internal-combustion. Universal Motor Company. No. 108,004; Jan. 4; Gaz. vol. 222; p. 377.
Music-sheets. The Cable Company. No. 108,155; Jan. 18; Gaz. vol. 222; p. 1049.
Nails, Horse-. The Capewell Horse Nail Company. No. 107,877; Jan. 4; Gaz. vol. 222; p. 373.
Newspaper-section. Newspaper Feature Service. No. 108,223; Jan. 18; Gaz. vol. 222; p. 1051.
Newspaper-section. Star Company. No. 108,229; Jan. 18; Gaz. vol. 222; p. 1051.
Newspaper-section. Star Company. No. 108,312; Jan. 25; Gaz. vol. 222; p. 1311.
Newspaper-section, Periodically-published. Newspaper Feature Service. Nos. 108,221–2; Jan. 18; Gaz. vol. 222; p. 1051.
Newspapers, Weekly. The Lincoln Highway Association. No. 107,971; Jan. 4; Gaz. vol. 222; p. 376.
Oil and macaroni, Olive-. Silas Pelrce & Co. No. 107,936; Jan. 4; Gaz. vol. 222; p. 374.
Oil compound for use in cutting and shaping metals and a rust-preventive. E. F. Houghton & Co. No. 108,250; Jan. 25; Gaz. vol. 222; p. 1309.
Oil, Cotton-seed salad-. Italian Importing Company. No. 108,015; Jan. 11; Gaz. vol. 222; p. 723.
Oil, Kerosene-. The Texas Company. No. 107,987; Jan. 4; Gaz. vol. 222; p. 376.
Oil, Olive-. Nasincos Importing Co. No. 107,930; Jan. 4; Gaz. vol. 222; p. 374.
Oil, Olive-. V. Taormina. Nos. 107,950–1; Jan. 4; Gaz. vol. 222; p. 375.
Oils and greases. Pure Oil Company. No. 108,025; Jan. 11; Gaz. vol. 222; p. 723.
Oils, Fuel and road. Standard Oil Company. No. 108,228; Jan. 18; Gaz. vol. 222; p. 1051.
Oleomargarin. John F. Jelke Company. No. 108,209; Jan. 18; Gaz. vol. 222; p. 1051.
Oleomargarin. The Ohio Butterine Co. No. 107,934; Jan. 4; Gaz. vol. 222; p. 374.
Ophthalmic mountings and parts thereof. T. A. Willson & Co. No. 108,119; Jan. 18; Gaz. vol. 222; p. 1048.
Orange-juice. Burnee Corporation. No. 107,900; Jan. 4; Gaz. vol. 222; p. 373.
Padlocks, door, tumbler, flush, and seal locks. Firm of A. O. Meyer. No. 107,973; Jan. 4; Gaz. vol. 222; p. 376.
Paint for steel, Preservative. Jas. H. Prince Paint Co. No. 108,108; Jan. 18; Gaz. vol. 222; p. 1048.
Paints. Davies & Meacham. No. 108,085; Jan. 18; Gaz. vol. 222; p. 1047.

Paints. The Philip Carey Manufacturing Company. No. 108,196; Jan. 18; Gaz. vol. 222; p. 1050.
Paints and painters' materials, Certain named. Chas. H. Gillespie & Sons. No. 108,201; Jan. 18; Gaz. vol. 222; p. 1051.
Paints, japans, and varnishes, Dry, paste, and ready-mixed. N. Z. Graves Company. No. 107,912; Jan. 4; Gaz. vol. 222; p. 374.
Paints, varnishes, enamels, and paint-oils, Ready-mixed. The Charles H. Brown Paint Co. No. 108,008; Jan. 11; Gaz. vol. 222; p. 723.
Pajamas, Men's and boys'. Oshinsky & Valentine. No. 108,225; Jan. 18; Gaz. vol. 222; p. 1051.
Paper and stationery, Certain named. Geo. Borgfeldt & Co. No. 108,153; Jan. 18; Gaz. vol. 222; p. 1049.
Paper bags. The Selbert Paper Co. No. 107,942; Jan. 4; Gaz. vol. 222; p. 375.
Paper, Ledger-. Chemical Paper Manufg. Co. No. 108,124; Jan. 18; Gaz. vol. 222; p. 1048.
Paper, paper napkins and towels, Toilet-. The John Hoberg Co. Nos. 108,290–2; Jan. 25; Gaz. vol. 222; p. 1310.
Paper, Toilet-. The John Hoberg Company. Nos. 107,996–7; Jan. 4; Gaz. vol. 222; p. 376.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 107,938; Jan. 4; Gaz. vol. 222; p. 375.
Paper, Toilet-. Sauquoit Toilet Paper Co. No. 108,310; Jan. 25; Gaz. vol. 222; p. 1311.
Papers, Book and writing. Ticonderoga Pulp and Paper Company. No. 108,117; Jan. 18; Gaz. vol. 222; p. 1048.
Papers, envelops, Ledger, record, bond, &c. Taylor-Logan Co. Papermakers. Nos. 108,139–40; Jan. 18; Gaz. vol. 222; p. 1049.
Papers, felts, and composite fabrics for roofing, &c. Barrett Manufacturing Company. Nos. 107,956–7; Jan. 4; Gaz. vol. 222; p. 375.
Papers, Toilet-. Phoenix Toilet and Paper Manufacturing Co. No. 108,174; Jan. 18; Gaz. vol. 222; p. 1050.
Pepper and paprika, Cayenne. J. Kotányi. No. 108,102; Jan. 18; Gaz. vol. 222; p. 1048.
Perfumes, toilet waters and creams, &c. Druggists' Cooperative Association. No. 108,203; Jan. 18; Gaz. vol. 222; p. 1051.
Periodical, Monthly. Curtis Publishing Company. No. 108,285; Jan. 25; Gaz. vol. 222; p. 1310.
Petrolatum or white oil, Liquid. Standard Oil Company. No. 108,183; Jan. 18; Gaz. vol. 222; p. 1050.
Pharmaceutical preparations, Certain named. Emacitin Co. No. 108,089; Jan. 18; Gaz. vol. 222; p. 1047.
Phonographic machines and sound-records. Emerson Phonograph Company. No. 108,287; Jan. 25; Gaz. vol. 222; p. 1310.
Picture and picture-projection machines and apparatus, &c., Moving-. Moving Advertisement Co. No. 107,929; Jan. 4; Gaz. vol. 222; p. 373.
Picture films, Motion-. Selig Polyscope Company. No. 108,027; Jan. 11; Gaz. vol. 222; p. 723.
Picture or cinematograph films, Moving-. The American Correspondent Film Co. No. 108,074; Jan. 18; Gaz. vol. 222; p. 1047.
Piece goods, comforters, and toweling of certain named materials, Certain named. California Cotton Mills Company. No. 108,039; Jan. 11; Gaz. vol. 222; p. 724.
Pill, Tonic. The Tropical Pharmacal Co. No. 108,142; Jan. 18; Gaz. vol. 222; p. 1049.
Pipe and pipe fittings and couplings. The Western Conduit Co. No. 108,278; Jan. 25; Gaz. vol. 222; p. 1310.
Platen cleaning and treating compound. W. F. Deming. No. 108,042; Jan. 11; Gaz. vol. 222; p. 724.
Popcorn confection. The Welch Company. No. 107,990; Jan. 4; Gaz. vol. 222; p. 376.
Popcorn, peanuts, candied popcorn and peanuts. Dirnberger Pop Corn Co. No. 107,964; Jan. 4; Gaz. vol. 222; p. 375.
Potatoes, onions, cabbage, &c., Fresh. A. Rosenblum. No. 108,177; Jan. 18; Gaz. vol. 222; p. 1050.
Poultry, Dressed. National Poultry & Egg Co. No. 108,220; Jan. 18; Gaz. vol. 222; p. 1051.
Powder, Complexion-. R. Horner. No. 108,096; Jan. 18; Gaz. vol. 222; p. 1047.
Powder, Toilet. A. Bourjois & Co. No. 108,245; Jan. 25; Gaz. vol. 222; p. 1309.
Preparation for cancers. Fierbaugh & Brown. No. 108,160; Jan. 18; Gaz. vol. 222; p. 1049.
Preserves, figs, marmalades, and jellies, Fruit. East Coast Preserving Company. No. 108,127; Jan. 18; Gaz. vol. 222; p. 1048.
Preserves, &c., Fruit and berry. Jos. Middleby, Jr., Inc. No. 107,928; Jan. 4; Gaz. vol. 222; p. 374.
Printing-presses, plate-printing machines, &c. Linotype and Machinery Limited. No. 107,923; Jan. 4; Gaz. vol. 222; p. 374.
Publication, Monthly. The Republic Rubber Company. No. 107,983; Jan. 4; Gaz. vol. 222; p. 376.
Rain-coats. C. B. Shane Company. No. 108,181; Jan. 18; Gaz. vol. 222; p. 1050.
Razor-strappers, Mechanical-. Ace Rota Strop Co. No. 107,893; Jan. 4; Gaz. vol. 222; p. 373.
Reflectors, Brass, copper, steel, and other metal. Central Electric Company. No. 107,903; Jan. 4; Gaz. vol. 222; p. 373.
Remedy, Blood and nerve. P. Bernardi. No. 108,036; Jan. 11; Gaz. vol. 222; p. 724.
Remedy for certain named diseases. H. R. Planten. No. 108,263; Jan. 25; Gaz. vol. 222; p. 1310.
Remedy for cuts, sprains, &c. G. Stankiewicz. No. 107,948; Jan. 4; Gaz. vol. 222; p. 375.
Remedy for gout, rheumatism, and nervous troubles. A. H. Stoecklein and W. Massopust, trading as Celery Tea Co. No. 108,068; Jan. 11; Gaz. vol. 222; p. 725.
Remedy for malaria, typhoid and scarlet fevers, &c. P. Parnitzky. No. 108,061; Jan. 11; Gaz. vol. 222; p. 724.
Remedy, Rheumatism. L. C. Wedgefuth. No. 108,277; Jan. 25; Gaz. vol. 222; p. 1310.
Road-building material. M. T. Calef. No. 107,960; Jan. 4; Gaz. vol. 222; p. 375.
Robes, blankets, and steamer-rugs, Carriage-. T. Kelly & Co. No. 107,999; Jan. 4; Gaz. vol. 222; p. 376.
Rocks, slabs, and marble, Rough-quarried. Moretti-Harrah Marble Company. No. 108,256; Jan. 25; Gaz. vol. 222; p. 1309.
Roofing, Ready. Asphalt Ready Roofing Co. No. 107,895; Jan. 4; Gaz. vol. 222; p. 373.
Rubber tubes and tires. Globe Rubber Tire Mfg. Co. No. 108,202; Jan. 18; Gaz. vol. 222; p. 1051.
Rope-clamps. George C. Moon Company. No. 108,303; Jan. 25; Gaz. vol. 222; p. 1311.
Rubber footwear. Mishawaka Woolen Manufacturing Company. No. 108,302; Jan. 25; Gaz. vol. 222; p. 1311.
Rubberized sheeting or fabric. Rosenwald & Weil. No. 108,137; Jan. 18; Gaz. vol. 222; p. 1049.
Salve. A. Pitonzo. No. 108,175; Jan. 18; Gaz. vol. 222; p. 1050.
Sarsaparilla, root-beer, syrups for beverages, &c. E. A. Zatarain. No. 108,280; Jan. 25; Gaz. vol. 222; p. 1310.
Sheets and pillow-cases. Sears, Roebuck and Co. No. 108,180; Jan. 18; Gaz. vol. 222; p. 1050.
Shirts. Hall, Hartwell & Co. No. 108,131; Jan. 18; Gaz. vol. 222; p. 1049.
Shirts. M. M. Rubinstein. No. 108,064; Jan. 11; Gaz. vol. 222; p. 724.
Shirts and pajamas, Night-. E. Rosenfeld & Company. No. 107,887; Jan. 4; Gaz. vol. 222; p. 373.
Shirts and undershirts, Men's. M. Goldberg. No. 108,205; Jan. 18; Gaz. vol. 222; p. 1051.
Shirts, collars, and cuffs. Cluett, Peabody & Co. No. 107,962; Jan. 4; Gaz. vol. 222; p. 375.
Shirts, Dress and negligée. Samuel Sternberger Company. No. 107,890; Jan. 4; Gaz. vol. 222; p. 373.
Shirts, Men's outside. Carson, Pirie, Scott & Co. No. 108,246; Jan. 25; Gaz. vol. 222; p. 1309.
Shoe-cleaning compounds and polishes. E. J. Reilly. No. 108,265; Jan. 25; Gaz. vol. 222; p. 1310.
Shoes, Canvas and leather. Shaft-Pierce Shoe Co. No. 107,944; Jan. 4; Gaz. vol. 222; p. 375.
Shoes, Leather and canvas. Jordan Marsh Company. No. 108,101; Jan. 18; Gaz. vol. 222; p. 1048.
Shoes, Men's leather. Brown Shoe Company. No. 107,898; Jan. 4; Gaz. vol. 222; p. 373.
Silk piece goods. E. W. Kahn. No. 108,054; Jan. 11; Gaz. vol. 222; p. 724.
Silk piece goods, Broad-. Sauquoit Silk Mfg. Co. No. 107,985; Jan. 4; Gaz. vol. 222; p. 376.
Silks in the piece. L. Roessel & Co. No. 108,269; Jan. 25; Gaz. vol. 222; p. 1310.
Silks in the piece. Stehli Silks Corporation. No. 108,067; Jan. 11; Gaz. vol. 222; p. 725.
Silver-plated hollow ware. The Fairpoint Corporation. No. 108,262; Jan. 25; Gaz. vol. 222; p. 1310.
Skirt-hangers, Closet. The Clark Manufacturing Company. No. 108,247; Jan. 25; Gaz. vol. 222; p. 1309.
Slot-machines for vending water. Centadrink Filters Co. No. 107,902; Jan. 4; Gaz. vol. 222; p. 373.
Soap. Carbona Products Company. No. 107,961; Jan. 4; Gaz. vol. 222; p. 375.
Soap, brass, silver, and stove polishes. Dudley Manufacturing Company. No. 107,882; Jan. 4; Gaz. vol. 222; p. 373.
Soap, Medicated. The Omega Chemical Company. No. 108,224; Jan. 18; Gaz. vol. 222; p. 1051.
Soaps and soap chips. Colgate & Co. No. 107,880; Jan. 4; Gaz. vol. 222; p. 373.
Soaps, Toilet. The Andrew Jergens Co. No. 108,210; Jan. 18; Gaz. vol. 222; p. 1051.
Soaps, Toilet, medicinal, and shaving. Barclay & Co. No. 108,190; Jan. 18; Gaz. vol. 222; p. 1050.
Spark-plugs. Eclipse Manufacturing Company. No. 108,248; Jan. 25; Gaz. vol. 222; p. 1309.
Springs, Vehicle-. Sheldon Axle and Spring Company. No. 107,945; Jan. 4; Gaz. vol. 222; p. 375.
Starch, Laundry. The Arthur S. Hoyt Company. No. 108,293; Jan. 25; Gaz. vol. 222; p. 1310.
Stiffening material. Victorius Bros. No. 108,071; Jan. 11; Gaz. vol. 222; p. 725.
Stills, Metal water-. The Kennicott Company. No. 108,295; Jan. 25; Gaz. vol. 222; p. 1311.
Stove-polish. H. J. Bedard. No. 108,237; Jan. 25; Gaz. vol. 222; p. 1309.
Stove-polish. The Stön Co. No. 108,230; Jan. 18; Gaz. vol. 222; p. 1052.
Stove-polish, polishing-cloths, mop-cleaning preparation, &c. Wizard Products Co. No. 108,233; Jan. 18; Gaz. vol. 222; p. 1052.
Stoves and heaters, Gas. A. H. Wolff. No. 108,329; Jan. 25; Gaz. vol. 222; p. 1311.
Sugar. California and Hawaiian Sugar Refining Company. No. 108,123; Jan. 18; Gaz. vol. 222; p. 1045.

Suits, Men's and boys' union. Robert Reis & Co. No. 108,063; Jan. 11; Gaz. vol. 222; p. 724.
Suits, overcoats, and hats, Men's and boys'. Block Brothers Clothing Company. No. 108,037; Jan. 11; Gaz. vol. 222; p. 724.
Table and cabinet tops, Enameled metal. Ingram-Richardson Manufacturing Company. No. 108,166; Jan. 18; Gaz. vol. 222; p. 1050.
Tablet, Bronchial. The Tropical Pharmacal Co. No. 108,141; Jan. 18; Gaz. vol. 222; p. 1049.
Tablets and note-book papers, Writing-. Western Tablet Co. No. 107,991; Jan. 4; Gaz. vol. 222; p. 376.
Tablets, Candy cathartic. The Jitney-Lax Company. No. 108,252; Jan. 25; Gaz. vol. 222; p. 1309.
Tea. J. H. Vaughan. No. 108,143; Jan. 18; Gaz. vol. 222; p. 1049.
Thermometers. F. E. Aspinwall. No. 108,034; Jan. 11; Gaz. vol. 222; p. 724.
Threads and yarns, Cotton and silk sewing-. M. Brodsky & Co. Nos. 108,240–4; Jan. 25; Gaz. vol. 222; p. 1309.
Throat-tablet, Antiseptic. The E. L. Patch Co. No. 108,000; Jan. 4; Gaz. vol. 222; p. 376.
Tin-plate. Berger Bros. Company. No. 108,238; Jan. 25; Gaz. vol. 222; p. 1309.
Tin, tetrachlorid and bichlorid of tin, &c. Goldschmidt Detinning Company. No. 108,161; Jan. 18; Gaz. vol. 222; p. 1049.
Toilet articles for the skin, muscles, and hair. M. W. Shand. No. 108,112; Jan. 18; Gaz. vol. 222; p. 1048.
Tonic and health-builder, Liquid female-. M. R. R. Jones. No. 108,053; Jan. 11; Gaz. vol. 222; p. 724.
Tonic for use during pregnancy, Female-. C. M. Freund. No. 108,047; Jan. 11; Gaz. vol. 222; p. 724.
Tonic, Medicinal. A. G. Dorsey. No. 107,881; Jan. 4; Gaz. vol. 222; p. 373.
Tooth-wash. Sharp & Dohme. No. 108,065; Jan. 11; Gaz. vol. 222; p. 724.
Traveling-case. R. R. Carter. No. 108,040; Jan. 11; Gaz. vol. 222; p. 724.
Treatment for affections arising from disorders of the kidneys and bladder. Booth's Hyomei Co. No. 108,038; Jan. 11; Gaz. vol. 222; p. 724.
Trucks, &c., Motor-. International Motor Co. No. 108,052; Jan. 11; Gaz. vol. 222; p. 724.
Undergarments, Children's woven. Peterboro Mfg. Co. No. 108,304; Jan. 25; Gaz. vol. 222; p. 1311.
Undershirts, drawers, and union suits. Stadium Underwear Co. No. 108,227; Jan. 18; Gaz. vol. 222; p. 1051.
Varnish and paint remover. Clen-Re-Po Manufacturing Co. No. 108,009; Jan. 11; Gaz. vol. 222; p. 723.
Varnish, &c., remover, Chemical. Chas. H. Gillespie & Sons. No. 108,200; Jan. 18; Gaz. vol. 222; p. 1051.
Varnishes. Lilly Varnish Co. No. 108,018; Jan. 11; Gaz. vol. 222; p. 723.
Veneer. Wilts Veneer Company. No. 108,146; Jan. 18; Gaz. vol. 222; p. 1049.
Waists and skirts, Ladies'. W. Brill. No. 108,194; Jan. 18; Gaz. vol. 222; p. 1050.
Washing-powders. R. D. White. No. 108,279; Jan. 25; Gaz. vol. 222; p. 1310.
Washing purposes, Substance to be used with soap for. A. C. Richards. No. 108,026; Jan. 11; Gaz. vol. 222; p. 723.
Washing-soda. National Chemical Company. No. 108,257; Jan. 25; Gaz. vol. 222; p. 1309.
Watches and clocks. Western Clock Co. No. 108,232; Jan. 18; Gaz. vol. 222; p. 1052.
Watches and watch-movements. J. Racine & Co. No. 108,187; Jan. 18; Gaz. vol. 222; p. 1050.
Watches, watchcases, and watch-movements. North American Watch Co. No. 108,258; Jan. 25; Gaz. vol. 222; p. 1309.
Water, Natural mineral. G. B. Swan. No. 108,313; Jan. 25; Gaz. vol. 222; p. 1311.
Waters, Mineral. Dry Ridge Sanatorium and Hotel Co. No. 108,286; Jan. 25; Gaz. vol. 222; p. 1310.
Wax, Refined paraffin-. Gulf Refining Company. No. 107,914; Jan. 4; Gaz. vol. 222; p. 374.
Weighing-machines and parts thereof. E. and T. Fairbanks and Company. No. 107,910; Jan. 4; Gaz. vol. 222; p. 374.
Whisky. V. J. McQuade. No. 108,299; Jan. 25; Gaz. vol. 222; p. 1311.
Wines. W. Schneider Wholesale Wine & Liquor Co. No. 108,111; Jan. 18; Gaz. vol. 222; p. 1048.
Wire rope. George C. Moon Company. No. 108,104; Jan. 18; Gaz. vol. 222; p. 1048.
Wool and cotton crash piece goods. N. Erlanger, Blumgart & Co. No. 108,090; Jan. 18; Gaz. vol. 222; p. 1047.
Wool and cotton piece goods. American Woolen Company. Nos. 108,148–9; Jan. 18; Gaz. vol. 222; p. 1049.
Woolen, worsted, silk, &c., piece goods. G. J. Geer. Nos. 108,091–2; Jan. 18; Gaz. vol. 222; p. 1047.

ALPHABETICAL LIST OF LABELS.

"'America's Best' Boy's Blouse." (For Boys' Blouses.) D. Kurtz. No. 18,968; Jan. 4; Gaz. vol. 222; p. 378.

"Ammen's Prickly Heat Baby Powder." (For Toilet Powder.) C. Ammen Co. No. 18,972; Jan. 11; Gaz. vol. 222; p. 726.

"Ben's Balsamic Mentholated Cough Drop." (For Cough-Drops.) Ben's Confection Company. No. 18,981; Jan. 18; Gaz. vol. 222; p. 1053.

"Better Made Cigar." (For Cigars.) The United States Distributing Co. No. 18,991; Jan. 18; Gaz. vol. 222; p. 1053.

"Big 6." (For Gin.) H. Ehrmann. No. 18,998; Jan. 25; Gaz. vol. 222; p. 1312.

"Butter Burst Bread." (For Bread.) Wiseheart Baking Co. No. 18,979; Jan. 11; Gaz. vol. 222; p. 726.

"Cosmos." (For Printing-Paper.) The Mead Pulp and Paper Company. No. 18,974; Jan. 11; Gaz. vol. 222; p. 726.

"Enameline." (For Printing-Paper.) The Mead Pulp and Paper Company. No. 18,975; Jan. 11; Gaz. vol. 222; p. 726.

"Eucapine." (For a Salve.) Eucapine Chemical Company. No. 18,999; Jan. 25; Gaz. vol. 222; p. 1312.

"Dr. Hale's Household Ointment." (For Ointment.) Kenyon & Thomas Co. No. 19,004; Jan. 25; Gaz. vol. 222; p. 1312.

"F. F. V." (For Canned Fresh Vegetables.) The Fuller Canneries Company. No. 19,000; Jan. 25; Gaz. vol. 222; p. 1312.

"Forest." (For Dried Prunes.) Salem Fruit Union. No. 19,007; Jan. 25; Gaz. vol. 222; p. 1312.

"Gee Bee Bread." (For Bread.) General Baking Company. No. 19,002; Jan. 25; Gaz. vol. 222; p. 1312.

"Gellman's Kosher Scouring Powder." (For Scouring-Powders.) H. Gellman. No. 19,001; Jan. 25; Gaz. vol. 222; p. 1312.

"Gold Medal." (For Shoe-Polish.) A. Lipshutz. No. 18,973; Jan. 11; Gaz. vol. 222; p. 726.

"Hemet." (For Apricots.) Hemet Canning Company. No. 18,984; Jan. 18; Gaz. vol. 222; p. 1053.

"Iowa Brand Macaroni." (For Macaroni.) Iowa Macaroni Mfg. Co. No. 18,986; Jan. 18; Gaz. vol. 222; p. 1053.

"J-M Gilsonite Paving Cement." (For Cement.) H. W. Johns-Manville Company. No. 19,003; Jan. 25; Gaz. vol. 222; p. 1312.

"Joseph, The First Coatmaker, New York." (For Suits and Overcoats.) S. Joseph. No. 18,967; Jan. 4; Gaz. vol. 222; p. 378.

"Kar-Bo-Lene." (For Fire-Extinguishers.) Knight & Thomas. No. 19,005; Jan. 25; Gaz. vol. 222; p. 1312.

"Manualized Player Music." (For Piano-Player Music.) The Baldwin Piano Company. No. 18,980; Jan. 18; Gaz. vol. 222; p. 1053.

"Max Best." (For Flour.) Dock and Coal Company. No. 18,966; Jan. 4; Gaz. vol. 222; p. 378.

"Mission Inn." (For Peaches.) Hemet Canning Company. No. 18,985; Jan. 18; Gaz. vol. 222; p. 1053.

"Oertel Brew." (For Beer.) John F. Oertel Co. No. 18,976; Jan. 11; Gaz. vol. 222; p. 726.

"Overnite Carbon Remover." (For a Carbon-Remover.) Overnite Carbon Remover Company. No. 19,006; Jan. 25; Gaz. vol. 222; p. 1312.

"Parlor Horse Shoe Game." (For Games.) De-Fu Manufacturing Company. No. 18,996; Jan. 25; Gaz. vol. 222; p. 1312.

"Quaddy-Ettes." (For Toys, Games, and Novelties.) T. W. Burgess. No. 18,995; Jan. 25; Gaz. vol. 222; p. 1312.

"Red Crown." (For Canned Peas.) G. Geiger & Co. No. 18,983; Jan. 18; Gaz. vol. 222; p. 1053.

"Red White & Blue." (For Macaroni.) The C. S. Foulds-Briggs Co. No. 18,982; Jan. 18; Gaz. vol. 222; p. 1053.

"Rythmodik Record Music Rolls." (For a Music-Roll Box.) American Piano Company. No. 18,971; Jan. 11; Gaz. vol. 222; p. 726.

"Safe Hose." (For Hosiery.) The Reebe-Howes Company. No. 18,994; Jan. 25; Gaz. vol. 222; p. 1312.

"Superior." (For Canned Salmon.) Superior Trading Co. No. 19,008; Jan. 25; Gaz. vol. 222; p. 1312.

"Supreme Brand Genuine Guatemala Coffee." (For Coffee.) North Tropic Products Enterprise. No. 18,987; Jan. 18; Gaz. vol. 222; p. 1053.

"Ten Bruins." (For Mustard.) H. Ten Bruin & Sons. No. 18,978; Jan. 11; Gaz. vol. 222; p. 726.

"The Chicagoan Shoe." (For Shoes.) J. P. Smith Shoe Co. No. 18,989; Jan. 18; Gaz. vol. 222; p. 1053.

"The Great Divide." (For Cigars.) F. L. Watson. No. 19,010; Jan. 25; Gaz. vol. 222; p. 1312.

"The Lubricant That Resists Heat." (For Lubricating-Oils.) Platt & Washburn Refining Company. No. 18,977; Jan. 11; Gaz. vol. 222; p. 726.

"The Makers of this Can guarantee that before leaving the Factory, it was tested and found free from leaks and of correct capacity." (For Cans.) Sturges & Burn Manufacturing Company. No. 18,970; Jan. 4; Gaz. vol. 222; p. 378.

"Tissera's Tea-Fiz." (For Tea Fiz.) V. L. Tissera. No. 18,990; Jan. 18; Gaz. vol. 222; p. 1053.

"Tom Morris." (For Scotch Whisky.) The Delmartin Distributing Co. No. 18,997; Jan. 25; Gaz. vol. 222; p. 1312.

"Travers Antiseptic Powder Compound." (For Travers Antiseptic Powder Compound.) E. J. McGraw. No. 18,969; Jan. 4; Gaz. vol. 222; p. 378.

"Trento Trieste." (For Liquor.) L. Zarosi. No. 18,993; Jan. 18; Gaz. vol. 222; p. 1053.

"Very Tropical Pepper Sauce for Table." (For Sauce.) North Tropic Products Enterprise. No. 18,988; Jan. 18; Gaz. vol. 222; p. 1053.

"Victorious." (For Cigarettes.) M. G. Toprahanian. No. 19,009; Jan. 25; Gaz. vol. 222; p. 1312.

"Whitney's Valentine Material." (For Valentines.) The Geo. C. Whitney Co. No. 18,992; Jan. 18; Gaz. vol. 222; p. 1053.

PRINTS.

"As Good as Gold is a good recommendation for gold. 'As good as O-Cedar' is O-Cedar's best recommendation." (For O-Cedar Polish.) Channell Chemical Company. No. 4,184; Jan. 25; Gaz. vol. 222; p. 1312.

"Blue Label Chili Sauce." (For Chilli Sauce.) Thos. Cusack Company. No. 4,174; Jan. 18; Gaz. vol. 222; p. 1053.

"Blue Label Ketchup." (For Catchup.) Thos. Cusack Company. No. 4,173; Jan. 18; Gaz. vol. 222; p. 1053.

"Boulevard Clothes." (For Clothing.) Schaffner & Ruhstadt. No. 4,189; Jan. 25; Gaz. vol. 222; p. 1312.

"Cypress 'The Wood Eternal.'" (For Cypress.) Southern Cypress Manufacturers' Association. No. 4,190; Jan. 25; Gaz. vol. 222; p. 1312.

"Del Dublegrippe Garter." (For Garters.) Double Grip Garter Company. No. 4,175; Jan. 18; Gaz. vol. 222; p. 1053.

"Ice Cream, The National Dessert." (For Ice-Cream.) The Burdick-Simpson Co. No. 4,167; Jan. 4; Gaz. vol. 222; p. 378.

"It is a simple thing to keep your furniture as clean, bright and sparkling as new, simply use O-Cedar Polish." (For O-Cedar Polish.) Channell Chemical Company. No. 4,185; Jan. 25; Gaz. vol. 222; p. 1312.

"L. Karl Erlick Co., Artists & Specialists in Wigs and Toupees." (For Wigs and Toupees.) L. K. Erlick. No. 4,187; Jan. 25; Gaz. vol. 222; p. 1312.

"Perfection in Munsingwear." (For Underwear.) Northwestern Knitting Company. No. 4,172; Jan. 11; Gaz. vol. 222; p. 726.

"Polish- -ine." (For a Metal-Polish.) A. S. Greenberg. No. 4,188; Jan. 25; Gaz. vol. 222; p. 1312.

"Rely on Reliance." (For Shirts.) Reliance Manufacturing Company. No. 4,177; Jan. 18; Gaz. vol. 222; p. 1053.

"The Chicagoan Shoe." (For Shoes.) J. P. Smith Shoe Co. Nos. 4,178–83; Jan. 18; Gaz. vol. 222; p. 1053.

"The Connoisseurs." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,186; Jan. 25; Gaz. vol. 222; p. 1312.

"The Wonder Mist Way." (For a Cleansing and Polishing Compound.) The Wonder-Mist Co. No. 4,191; Jan. 25; Gaz. vol. 222; p. 1312.

"Velvet Smokarois." (For Smoking-Tobacco and Pipe.) Liggett & Myers Tobacco Company. Nos. 4,168–71; Jan. 11; Gaz. vol. 222; p. 726.

"Use Créme Elcaya And Be Complimented On Your Complexion." (For Complexion-Cream.) The Elcaya Co. No. 4,176; Jan. 18; Gaz. vol. 222; p. 1053.

DISCLAIMERS.

Cartridge, Rim-fire. F. O. Hoagland. No. 1,107,519; date of patent Aug. 18, 1914; disclaimer filed Jan. 6, 1916; Gaz. vol. 222; p. 729.

X-ray system. H. C. Snook. No. 954,056; date of patent Apr. 5, 1910; disclaimer filed Dec. 31, 1915; Gaz. vol. 222; p. 729.

CLASSIFICATION OF PATENTS

JANUARY, 1916.

NOTE.—First number—class, second number—subclass, third number—patent number.

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ERRATA.

1,169,910, page 57, first claim, line 4, for the word "thickness" read *thicknesses.*
1,170,504, page 296, second claim, lines 4 and 6, for the words "in each instance" read *and trip.*
1,171,014, page 475, fourth claim, line 5, for the word "fluid" read *air.*
1,171,193, page 538, second claim, line 5, for the word "member" read *lever.*
1,171,492, page 685, in heading, after residence of patentee insert *assignor to R. Williamson & Co., Chicago, Ill., a Corporation of Illinois.*
1,171,872, page 819, first claim, line 3, for the word "forward" read *formed.*
1,172,422, page 1075, fourth claim, line 4, for the word "and" read *or.*
1,172,582, page 1136, first claim, line 3, strike out the word "holding"; same claim and line, before the word "means," second occurrence, insert the word *holding.*
1,172,738, page 1192, fifth claim, line 1, strike out the words "an antifriction bearing."
1,174,032, page 1687, fourth claim, line 3, after the word "metal" insert the word *resistance.*

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Total	848	

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Alabama	6	.....	**North Carolina**	3	2
Arizona	2	.....	**North Dakota**	2	.....
Arkansas	3	.....	**Ohio**	56	7
California	41	2	**Oklahoma**	3	1
Colorado	6	.....	**Oregon**	6	3
Connecticut	17	2	**Pennsylvania**	77	3
Delaware	1	.....	**Rhode Island**	12	1
Florida	.....	1	**South Carolina**	1	.....
Georgia	1	.....	**South Dakota**	2	.....
Idaho	1	.....	**Tennessee**	4	1
Illinois	83	7	**Texas**	3	1
Indiana	15	.....	**Utah**	4	.....
Iowa	11	.....	**Vermont**	1	1
Kansas	11	.....	**Virginia**	7	.....
Kentucky	2	1	**Washington**	13	1
Louisiana	1	1	**West Virginia**	5	.....
Maine	4	1	**Wisconsin**	25	2
Maryland	6	1	**Wyoming**	1	.....
Massachusetts	50	2			
Michigan	31	1	**Alaska, District of**	.....	1
Minnesota	10	3	**Canal Zone**	.....	.....
Mississippi	1	.....	**District of Columbia**	6	....
Missouri	18	.....	**Hawaii Territory**	2	.....
Montana	2	.....	**Philippine Islands**	.....	.....
Nebraska	7	.....	**Porto Rico**	.....	.....
Nevada	2	.....	**U. S. Army**	.....	.....
New Hampshire	3	.....	**U. S. Navy**	.....	.....
New Jersey	32	1			
New Mexico	.....	.....	**Total to residents of the United States**	716	68
New York	116	21			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	**Netherlands**	2	.....
Austria-Hungary	3	.....	**New South Wales**	1	.....
Belgium	.....	.....	**New Zealand**	1	.....
Brazil	.....	.....	**Nicaragua**	.....	.....
British West Indies	.....	.....	**Peru**	.....	.....
Canada	11	1	**Portugal**	.....	.....
China	1	.....	**Queensland**	.....	.....
Chile	.....	.....	**Russia**	.....	.....
Cuba	.....	.....	**Scotland**	1	.....
Denmark	2	.....	**South Australia**	.....	.....
England	12	.....	**Straits Settlements**	.....	.....
Finland	.....	.....	**Sweden**	2	.....
France	5	.....	**Switzerland**	2	.....
Germany	15	.....	**Transvaal, South Africa**	.....	.....
Guatemala	.....	.....	**Tasmania**	.....	.....
India	1	.....	**Wales**	.....	.....
Ireland	.....	.....	**Western Australia**	1	.....
Italy	.....	.....			
Japan	.....	.....	**Total to residents of foreign countries**	61	1
Luxemburg	1	.....			
Natal	.....	.....			

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In ordering manuscript copies much time will be saved if the order states specifically what is desired, viz:

Application as originally filed. (Petition, specification, oath, and drawings as received.) Application as amended. (Petition, specification, oath, and drawings with amendments entered.)

Application as allowed. (Petition, specification, oath, and drawings as passed by the Examiner for issue.)

Original application. (Facsimile petition, specification, oath, and drawings at present time.)

Specification as originally filed. (As received in Office.)

Specification as amended. (With amendments entered.)

Specification as allowed. (As passed by the Examiner for issue.)

Original specification. (Facsimile at present time.)

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Assignment. (Give the liber and page of the record as well as the name of the inventor.)

Printed publications in possession of the Office. (Give title and date of publication, also page and exact portion to be copied.)

Orders for copies of any other records not mentioned above must state specifically the exact paper to be copied.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 29, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 18	Dec. 7	327
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 2	Dec. 6	856
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Jan. 17	Jan. 18	72
242	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Oct. 13	Jan. 10	392
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 8	Nov. 27	291
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	May 29	Nov. 19	459
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Nov. 3	Oct. 15	434
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 5	Dec. 13	1106
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	June 14	Dec. 24	501
235	10. Carriages and Wagons	Sept. 4	Jan. 15	691
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 10	Jan. 15	136
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Aug. 21	Jan. 12	462
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Oct. 15	Dec. 22	445
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Sept. 2	Jan. 5	162
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Nov. 2	Jan. 12	338
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Sept. 8	Jan. 5	448
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Oct. 25	Jan. 11	158
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 1	Jan. 4	204
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Dec. 10	Jan. 3	197
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 7	Jan. 7	137

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 6	Dec. 18	292
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 23	Dec. 27	341
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 31	Dec. 13	423
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Sept. 2	Dec. 21	422
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 3	Jan. 12	124
106	26. Electricity, Generation; Motive Power.	June 11	Sept. 27	528
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 1	Dec. 9	203
65	28. Internal-Combustion Engines	Sept. 18	Dec. 14	419
147	29. Cooperage; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Wood-working-Tools.	Oct. 18	Dec. 24	337
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 10	Jan. 13	276
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 30	Dec. 8	277
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	July 7	Jan. 10	678
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 14	Dec 1.	441
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Oct. 29	Dec. 30	236
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Sept. 7	Jan. 15	564
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Oct. 8	Dec. 24	706
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	July 6	Nov. 15	599
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Nov. 2	Jan. 8	239
321	39. Water Distribution	Sept. 10	Nov. 26	341
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 7	Nov. 22	899
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 2	Jan. 3	360
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 25	Sept. 22	841
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Oct. 27	Dec. 15	229

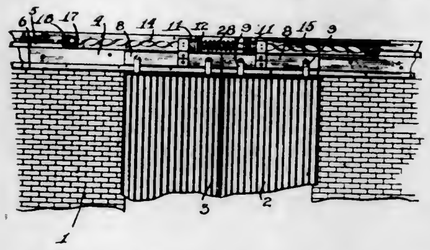
Oldest new case, May 29; oldest amended, Sept. 22.
Total number of applications awaiting action..... 17,591

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Nov. 29	Jan. 3	935
	Designs	Sept. 1	Dec. 17	491
	Labels and Prints	Jan. 14	Jan. 14	79

PATENTS

GRANTED FEBRUARY 1, 1916.

1,169,755. AUTOMATIC CLOSING DEVICE FOR SLIDING DOORS. LAWRENCE A. ABBOTT, Chicago, Ill. Filed Aug. 19, 1912. Serial No. 715,760. (Cl. 268—8.)



1. In a device of the class described a pair of oppositely disposed right and left handed thread worm shafts, an intermediate member rigidly connected to the adjacent ends of said worm shafts, bearings supporting said intermediate member and worm shafts, integral flanges on said intermediate member affording together with said bearing a ball race for a thrust bearing, and a spring wound about said intermediate member and attached thereto and to a fixed support to resist rotation of said intermediate member and worm shafts.

2. In a device of the class described a pair of right and left handed threaded worm shafts, an intermediate member rigidly connected to each, grooved flanges integrally formed on said intermediate member, grooved supporting brackets for said member and coöperating with said flanges to afford a thrust ball bearing therefor, a spring wound around said member and connected to one of said flanges and to a fixed support to resist rotation of said member, and roller ball-bearing mechanism engaging said worm shafts adapted to progress therealong with rotation of said shafts.

3. In a device of the class described a plurality of worm shafts arranged in axial alinement, a spring controlled intermediate member rigidly connected to each of said shafts to resist movement thereof in a certain direction, door supporting brackets engaging around said worm shafts, and rollers journaled in said brackets adapted to contact opposite faces of said worm shafts to cause progression of said brackets longitudinally of said worm shafts with rotation of said shafts.

4. In a device of the class described grooved brackets rigidly secured upon a wall, a shaft journaled in said brackets having an integral peripheral grooved collar near each end thereof, ball bearings, said brackets and said collars arranged to afford a race for said ball bearings, a worm shaft rigidly connected at each end of said shaft in axial alinement therewith, an integral projection on the outer end of said worm shafts, a spacing member thereon, a pair of apertured brackets rigidly secured on said wall, rollers therein adapted to receive said projections journaled therebetween, adjustable ball bearing means mounted in said apertured brackets to take the thrust of said worm shafts, roller door supporting members movably engaged with said worm shafts, and a spring wound around said first mentioned shaft having one end thereof secured in one of said grooved collars and the other end thereof rigidly fastened to the wall, said spring acting to automatically close the doors when the same have been opened.

1,169,756. ART OF MAKING PLASTIC COMPOSITIONS. RUDOLF ADLER, Amsterdam, Netherlands, assignor to Naamlooze Vennootschap "Hollandsche Proteïne Maatschappij," Amsterdam, Netherlands, a Limited Company of Netherlands. Filed Mar. 29, 1913. Serial No. 757,614. (Cl. 106—46.)

1. In the art of making plastic compositions the process which comprises mixing ammonia with an albuminous substance and oxy-cellulose.

2. In the art of making plastic composition, the process which comprises mixing an ammoniacal composition of an albuminous substance with an ammoniacal composition of oxy-cellulose.

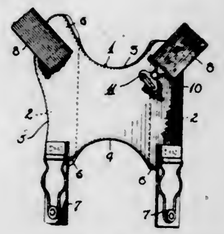
3. In the art of making plastic compositions, the process which consists in mixing an ammoniacal composition of an albuminous substance with an ammoniacal composition of oxy-cellulose, forming the desired article therefrom, and drying the said formed article, at a low temperature.

4. In the art of making plastic compositions, the process which comprises mixing an albuminous substance with ammonia and diluting the mixture with water, dissolving oxy-cellulose in ammonia and diluting the solution with water, and combining the mixture of the albuminous substance with the oxy-cellulose solution.

5. In the art of making plastic compositions, the process which consists in mixing an albuminous substance with ammonia and diluting the mixture with water, dissolving oxy-cellulose in ammonia and diluting the solution with water, and combining the mixture of the albuminous substance with the oxy-cellulose solution, subjecting the mixture to precipitation, forming the desired article from the precipitate, and drying the same.

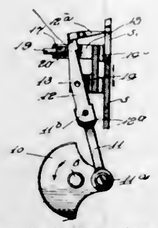
[Claims 6 to 14 not printed in the Gazette.]

1,169,757. HOSE-SUPPORTER. JOSEPH G. ALLEN, Racine, Wis. Filed Oct. 19, 1914. Serial No. 867,401. (Cl. 241—6.)



A hose supporter comprising a transversely curved rigid plate having its upper and lower edges curved inwardly to form a narrow curved central portion and ears at the four corners thereof, upright cushioning pads secured to the inner face of said plate on opposite sides of its narrow curved central portion, the outer edges of said pads conforming in shape with the contour of the ends of said plate, a fabric covering completely inclosing said plate and said pads, a leg encircling band secured to said cover adjacent the ears on the upper edge of said plate and on the outer face thereof, and hose engaging elements secured to said covering adjacent the ears on the lower edge of said plate and on the outer face thereof, substantially as and for the purpose set forth.

1,169,758. FILM-FEEDING MECHANISM. FRANK E. ARTZ, Chicago, Ill. Filed Mar. 12, 1914. Serial No. 824,079. (Cl. 88—18.4.)



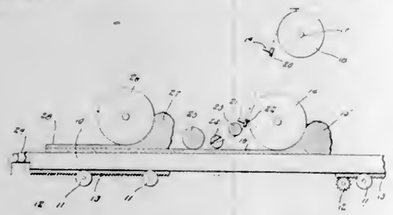
1. In a cinematograph, a film guideway through which the film is adapted to pass, a reciprocable plate movable substantially parallel to said guideway, a member pivoted to said plate, film engaging means extending laterally from said member toward said guideway, a pitman pivotally connected to said member, and means for actuating said pitman.

2. In a cinematograph, a film guideway through which the film is adapted to pass, a reciprocable plate movable substantially parallel to said guideway, a member pivoted to said plate, film engaging means extending laterally from said member toward said guideway, a pitman, a butt-joint connection between said pitman and said member, and means for actuating said pitman.

3. A film feeding mechanism for cinematographs comprising a film guideway, a drive-wheel, a pitman eccentrically connected thereto, a plate slidably mounted in the path of said pitman, a lever pivoted to said plate, a butt joint connection between said lever and said pitman, laterally extending members upon the opposite end of said lever, and means yieldingly actuating the last-mentioned end of said lever toward said film guideway.

4. In a cinematograph, a film guideway through which the film is adapted to pass, a reciprocable plate movable substantially parallel to said film, a pick pivotally mounted on said plate and adapted to enter said guideway, and means for actuating said pick, said means including a two-piece link pivotally connected by a butt-joint.

1,169,759. SINGLE-STRAND-WIRE-GLASS MACHINE. ARTHUR J. BALDWIN, New York, N. Y., assignor to Mississippi Wire Glass Company, New York, N. Y., a Corporation of New Jersey. Original application filed Dec. 21, 1908, Serial No. 468,508. Divided and this application filed June 3, 1915. Serial No. 32,000. (Cl. 49—22.)



1. In a machine for making single strand wire glass, the combination with a reciprocatory table, of a pair of glass spreading rollers spaced apart and mounted for rotation in fixed bearings above said table, bobbins constituting a source of wire supply, means for converging the single strands of wire fed from said bobbins, means for spacing apart and converging said single strands to the layer of molten glass formed by the first spreading roller, and means for embedding said single strands in said layer of glass before the latter passes beneath the second spreading roller.

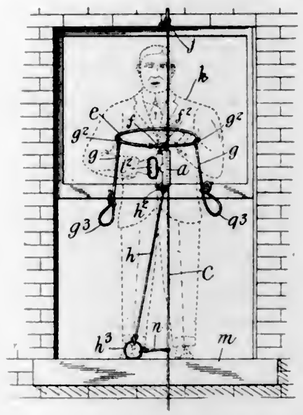
2. In a machine for making single strand wire glass, the combination with a reciprocatory table and spreading rollers, which latter are mounted for rotation in relatively fixed bearings, of an embedding roller having a smooth surface, a series of independently mounted bobbins constituting a source of wire supply, and means including a slotted guide interposed between said bobbins and the embedding roller for converging and spacing apart the strands of wire which feed from said bobbins.

3. In a machine for making single strand wire glass, the combination with a reciprocatory table and spreading rollers, which latter are mounted for rotation in relatively fixed bearings, of an embedding roller having a smooth surface, a relatively fixed slotted wire guiding member located adjacent to said embedding roller, a series of independently mounted bobbins constituting a source of wire supply, and means for spacing apart and converging the single strands of wire from the bobbins to the slotted guiding member.

4. In a machine for making single strand wire glass, the combination with a reciprocatory table and spreading rollers, which latter are mounted for rotation in relatively fixed bearings, of an embedding roller having a smooth surface, a series of independently mounted bobbins constituting a source of wire supply, and a comb for spacing apart and converging the strands of wire, which feed from the bobbins to the embedding roller.

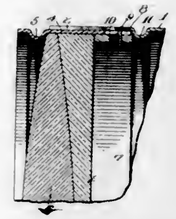
5. In a machine for making single strand wire glass, the combination with a reciprocatory table, spreading rollers, which latter are mounted for rotation in relatively fixed bearings, and an embedding roller having a smooth surface, of a series of independently mounted bobbins constituting a source of wire supply, a wire guiding member located adjacent to the embedding roller, and a plurality of elements for spacing apart and converging the strands of wire feeding from the bobbins to the wire guiding member adjacent to said wire guiding member.

1,169,760. FIRE-ESCAPE. JOHN J. BARRETT, Brooklyn, N. Y. Filed June 11, 1914. Serial No. 844,391. (Cl. 227—25.)



A fire escape device comprising a tubular casing, a rope passed loosely through said casing and adapted to have one of its ends secured to a stationary support, manually controlled means in said casing for clamping said rope, a flexible body supporting device having one of its ends connected to said casing and having its opposite end provided with a snap hook, through the loop of which said body supporting device passes, subsidiary supporting devices having certain of their ends secured to said body supporting device and having their other ends provided with slip nooses, a flexible foot supporting device having one of its ends connected to said casing and having its opposite end provided with a foot ring, and a guiding device connecting said ring and said rope.

1,169,761. LENS-SUPPORTING STRUCTURE. EDWARD BAUSCH, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 17, 1913. Serial No. 801,344. (Cl. 88—57.)



1. In a lens supporting structure, the combination with a casing, of a lens cell removably arranged in the casing, lens retaining means detachably associated with said cell, and securing devices coöperating with the casing, lens retaining means and cell, and acting to hold the cell within the casing.

2. In a lens supporting structure, the combination with a casing, of a lens carrying member removably arranged in the casing, retaining means coöperating with the lens carrying member and with the casing to hold the lens in position and to clamp the carrying member in the casing, and securing devices coöperating with the retaining means and serving to hold it in engagement with the carrying member.

3. In a lens supporting structure, the combination with a casing, of a lens carrying member adapted to fit within the casing and provided with means for limiting movement of the lens therein, a clamping ring fitted within the lens carrying member and arranged to engage the opposite face of the lens, and securing devices passing through the casing and engaging the clamping ring whereby to hold the several parts in fixed relation to each other.

4. In a lens supporting structure, the combination with a casing, of a lens carrying member movable within the casing, a stop arranged in the casing for limiting the movement of the lens carrying member, means on the carrying member for limiting the movement of the lens therein, a clamping ring movable within the lens carrying member and operating to engage the lens and to clamp the carrying member in the casing, and securing devices coöperating with the casing and clamping ring to draw the latter into clamping engagement with the carrying member.

5. In a lens supporting structure, the combination with a casing, of a lens carrying member removably arranged in the casing, lens retaining means detachably associated with the lens carrying member, and securing devices cooperating with the casing and lens carrying member and acting to hold the latter within the casing.

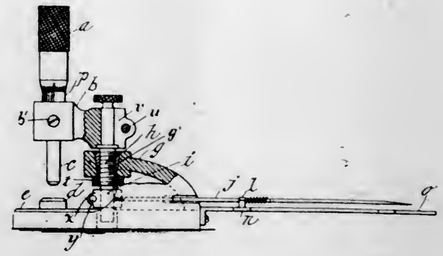
1,169,762. MICROMETER-GAGE. WARREN J. BELCHER, Hartford, Conn. Filed Feb. 19, 1912. Serial No. 678,582. (Cl. 33—147.)

1. A measuring instrument comprising, in combination, a micrometer screw, a part having threads which said screw engages, a base, an arm fixed to said screw to swing therewith and over said base, whereby said arm is raised and lowered with respect to the base, all for the purpose described.

2. A measuring instrument comprising, in combination, a micrometer screw, a part having threads which said screw engages, an arm fixed to one end of said screw, another arm fixed to the other end of said screw, both arms arranged to turn with said screw, a base arranged under the end of one arm, and a scale arranged under the second arm, said scale coöperating with said second arm to indicate the distance between the base and the arm above said base.

3. A measuring instrument comprising, in combination, a frame, a micrometer screw engaging threads in a portion of said frame, a scale adjacent the frame, two arms attached to said screw, one adapted to swing over the base of the frame and the other adapted to swing over the scale, said first mentioned arm having mounted therein a micrometer attachment with a spindle movable toward and from the base of the frame, all for the purpose described.

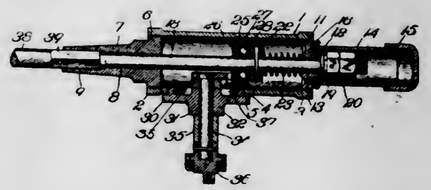
4. A measuring instrument comprising, in combination, a frame, two arms each adapted to receive a micrometer screw, one of said arms being integral with said frame, a micrometer screw for each arm, one arm being fastened to the micrometer screw of the other arm and arranged to swing therewith to raise or lower the end of the spindle of its micrometer screw relative to the base of the frame, as described.



5. A micrometer caliper measuring instrument comprising, in combination, a frame having an anvil thereon, an arm, a movable spindle, sleeve, and thimble all supported by said arm, a second arm having a micrometer screw engaged therein, a threaded support for said micrometer screw, said first arm fixed to the micrometer screw in said second mentioned arm for movement therewith, means locking the movable spindle in said first arm, when desired, to prevent movement relative thereto, said first mentioned arm being arranged to swing over the anvil so that the spindle moves toward and away from said anvil due to the micrometer screw turning in said second arm.

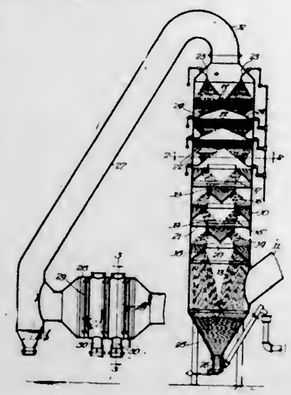
[Claim 6 not printed in the Gazette.]

1,169,763. IMPACT-TOOL HEAD. WILLIS J. BERNETT, Kansas City, Mo., assignor to William B. Thayer, Kansas City, Mo. Filed Sept. 18, 1913. Serial No. 790,431. (Cl. 255—39.)



An impact tool head comprising a hollow body having channeled heads at opposite ends, one of said heads having a tool socket communicating with its channel and the other head comprising an outwardly directed neck, a housing fixed on said neck, a shaft adapted for reciprocatory travel in the head channels and having one end projected into said socket and the other end into said housing, locking means on said shaft within the housing, a stop on said shaft within the body, a spring bearing against said stop and adjacent the head, a collar loosely mounted on said shaft and adapted for contacting the stop, a cap mounted on said body and having a channel opening into the interior thereof, a shaft revolubly mounted in said cap, a cam fixed on said shaft and adapted for intermittently forcing the collar against the tension of said spring, and means for revolving the shaft.

1,169,764. METHOD OF GAS-WASHING. HERMANN A. BRASSERT, Chicago, Ill. Filed June 28, 1915. Serial No. 36,818. (Cl. 75—30.)



1. The method of washing gas, which consists in passing the gas through falling streams of water, whereby the coarser particles of solid matter are removed, then causing the gas to impinge against angularly disposed baffles, causing water to flow over the surfaces of said baffles, the gas being caused to travel in a vertical direction, whereby a unit of washing water is repeatedly brought into contact with the gas, and then drying the gas, substantially as described.

2. The method of washing gas, which consists in passing the same vertically through a tower, said gas in its passage through the first portion of the tower being caused to follow a tortuous course and to be opposed in its passage through that section only by falling streams of water, then causing the gas to impinge against angularly disposed deflectors, the surfaces of which are sprayed with water, then drying the gas, substantially as described.

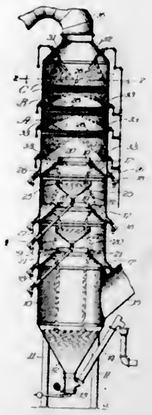
3. The method of washing and drying gas in three stages, which consists first in passing the gas through a heavy rain of water whereby the coarser particles of dust are removed, together with the sensible heat of the gas, and then subjecting the gas to a finely divided spray or mist, simultaneously impinging it against diagonally disposed baffles, the gas traveling upward in a substantially vertical direction and the water falling downwardly against the gas, whereby each unit of washing water is repeatedly brought into contact with each unit of gas then drying the gas, substantially as described.

4. The method of washing and drying gas in three stages, which consists in first passing the gas through a heavy rain; second, through a finely divided spray, simultaneously impinging it against baffles; and third, passing it through drying baffles against which the gas impinges and which are so arranged that the water deposited thereon will immediately leave the path of the gas, substantially as described.

5. The method of washing and drying gas in three stages, which consists in first passing the gas vertically through a coarse spray; second, vertically through a fine spray, simultaneously impinging it against baffles; and third, passing it horizontally through drying baffles which will catch the entrained water and conduct it out of the path of the gas, substantially as described.

1,169,765. GAS-WASHER TOWER. HERMANN A. BRASSERT and CHARLES J. BACON, Chicago, Ill. Filed July 28, 1915. Serial No. 42,361. (Cl. 75—30.)

1. In a gas washing tower, the combination of a shell, a plurality of annular troughs secured to the inner wall of the shell and disposed to provide an opening concentric of the shell and a supplementary trough disposed intermediately of said annular troughs and located substantially in line with the concentric opening provided through said troughs, said annular troughs being provided with water escape openings near the upper edge thereof whereby water is caused to flow into said supplementary trough, substantially as described.



2. In a gas washing tower, the combination of a shell, a plurality of annular troughs secured to the inner wall of the shell and disposed to provide an opening concentric of the shell and a supplementary trough disposed intermediately of said annular troughs and located substantially in line with the concentric opening provided through said troughs, both said supplementary and said annular troughs being provided with water escape apertures near the upper edges thereof, whereby water is caused to flow from an annular trough into said supplementary trough and from the latter trough into an annular trough, substantially as described.

3. In a gas washing tower, the combination of a vertically disposed shell, a plurality of annular troughs projecting inwardly from the wall thereof and disposed to provide an axial opening, an intermediate cone-shaped trough with its axis substantially coincident with the axis of the shell, each of said annular troughs being provided with a continuous opening in the body of the trough near the upper edge thereof whereby a sheet of water is caused to flow into the intermediate trough, substantially as described.

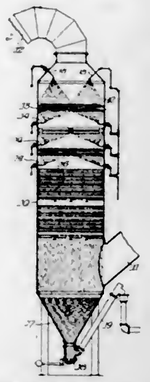
4. In a gas washing tower, the combination of a shell, a plurality of troughs so disposed as to cause the passage of gas through a sheet of water a plurality of times in its ascent in said tower, and a plurality of series of staggered baffles located in the upper portion of said tower whereby the gas having been washed of its heavier particles in its passage through the lower portion of the tower is caused to impinge against wet surfaces disposed at an angle to the flow of the gas, substantially as described.

5. In a gas washing tower, the combination of a shell, a plurality of troughs so disposed as to cause the passage of gas through a sheet of water a plurality of times in its ascent in said tower, and a plurality of series of staggered baffles located in the upper portion of said tower, one series of baffles being disposed at right angles to another series thereof and the angles of inclination of said baffles being such that the gas is caused to be subdivided and to impinge against a multitude of wetted surfaces after having been cleaned of its heavier particles of solid matter, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,766. GAS-WASHER. HERMANN A. BRASSERT, Chicago, Ill. Filed Oct. 2, 1915. Serial No. 53,779. (Cl. 75—30.)

1. In gas washing apparatus, the combination of a vertical shell, means in the lower portion of the shell for subdividing the water passing through the shell into the form of a rain, and a plurality of tiers of diagonally-disposed baffles in the upper portion of the shell, substantially as described.



2. In gas washing apparatus, the combination of a vertically-disposed shell, means for supplying water to the upper portion of the shell, means in the lower portion of the shell for inducing a rain or shower of water, the water falling at an angle to the line of motion of the gas as it enters the casing, and a plurality of series of diagonally-disposed baffles in the upper portion of the tower, substantially as described.

3. In a vertical gas washer, the combination of a lower section containing means for bringing gas in contact with a shower of water, and an upper section containing a plurality of angular baffles sprayed with water against which the gas impinges on its upward path, substantially as described.

4. In a vertical gas washer, the combination of tiers of vanes placed in the upper part of the tower and inclined to the flow of gas, and means for spraying same from above and below, means for causing the water collected on these vanes to be distributed evenly, forming a heavy rain throughout the lower section of the washer, substantially as described.

5. In a vertical gas washer, the combination of a shell, a plurality of tiers of slats arranged parallel to the flow of gas and contained in the lower portion of the washer, and a plurality of tiers of slats inclined toward the flow of the gas and contained in the upper part of the washer, substantially as described.

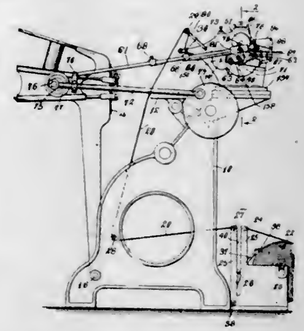
[Claim 6 not printed in the Gazette.]

1,169,767. PAPER-FEEDING ATTACHMENT FOR PRINTING-PRESSES. DE BOISE BRESNAN, East Orange, N. J. Filed Oct. 8, 1912. Serial No. 724,535. (Cl. 164—49.)

1. A paper feeding and cutting frame for printing presses, comprising releasable means for securing the attachment to a press, a frame adapted to be mounted on and supported by a press, means for feeding a web of paper past the platen of a press, a series of guiding rollers over which the web of paper is adapted to pass, one of said rollers being pivotally supported, and means for varying the position of this roller to adjust the paper with respect to the impression which is to be taken thereon, and means for cutting the web of paper into sheets.

2. A paper feeding and cutting frame for printing presses, comprising releasable means for securing the attachment to a press, a frame adapted to be mounted on and supported by a press, a pair of feed rolls, a reciprocatory rack arranged to rotate said feed rolls intermittently in one direction, a stationary cutting blade, an oscillatory cutter head having a cutting blade arranged to coöperate with said stationary cutting blade, a lever connected to said cutter head, and means operatively related to said rack for moving said lever to cause the cutting blades to sever the web of paper into sheets.

3. A paper feeding and cutting attachment for printing presses, comprising releasable means for securing the attachment to a press, a frame adapted to be mounted on and supported by a press, means for feeding a web of paper past the platen of a press, means for cutting the web on one or both edges, and means operatively connected to the feeding means for cutting the web into sheets.

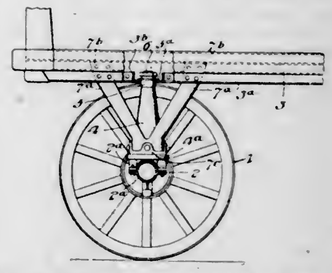


4. A paper feeding attachment for printing presses, comprising a pair of feed rolls, an oscillatory and reciprocatory bar, a rack slidably mounted in said bar and arranged to rotate said feed rolls, a fixed stop on said bar for engagement with one end of said rack, an adjustable stop on said bar for engagement with the other end of said rack, a movable cutter, and means on said bar arranged to control the operation of said cutter.

5. A paper feeding and cutting attachment for printing presses, comprising a pair of feed rolls, an oscillatory and reciprocatory bar, a rack slidably mounted in said bar and arranged to rotate said feed rolls periodically in one direction, an oscillatory cutter head provided with a cutting blade, a lever, a link connecting said lever and cutter head, and a depending arm on said bar arranged to engage said lever to move said cutter head.

[Claims 6 to 9 not printed in the Gazette.]

1,169,768. TRUCK. TRACY V. BUCKWALTER, Altoona, Pa. Filed Aug. 18, 1914. Serial No. 857,303. (Cl. 21—24.)



1. The combination with an axle and a frame having a bearing, of an upwardly tapered tubular post with its base shaped to form a shoe fixed to said axle and its top provided with a journal and hub engaging said bearing to support said frame, said axle and shoe being provided with a journal and hub engaging said bearing to support said frame, said axle and shoe being provided with flanges whereby they are connected, and means for maintaining said frame and post in normal operative relation.

2. The combination with an axle and a frame having a bearing, of a post fixed to said axle, said post having a journal at the top thereof for engaging said bearing and a circular peripheral channel thereon providing a bearing adjacent to said axle, a circular foot surrounding said post in engagement with said channel, and struts diverging from said foot and fixed to said frame.

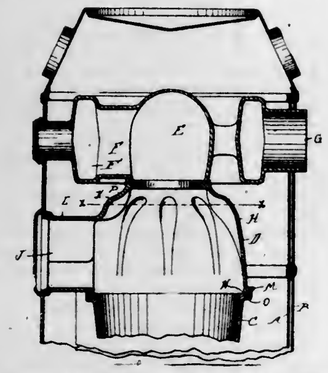
3. The combination with an axle and a frame comprising longitudinal sills, of a post fixed on said axle and journaled relatively to said frame, said post having a circular bearing thereon, a circular bearing member surrounding said post in engagement with said bearing first named, and diagonal struts connected to said sills and said bearing second named.

4. The combination of a tubular axle and a frame, with a tubular post having a bottom shoe conforming to and fixed on said axle and a peripheral bearing, a circular bearing sleeved on said post in engagement with said bearing first named, and four struts connected with and diverging from said bearing second named to connections with said frame.

5. An axle having a convex section with flanges thereon, a post having a foot conforming to said section and flanges engaging said flanges first named, and a frame to which said axle is connected in journaled relation by said post.

[Claims 6 to 8 not printed in the Gazette.]

1,169,769. HOT-AIR FURNACE. GEORGE B. CARTER, Detroit, Mich., assignor to Rudy Furnace Co., Dowagiac, Mich., a Corporation of Michigan. Filed Aug. 23, 1915. Serial No. 46,950. (Cl. 126—102.)



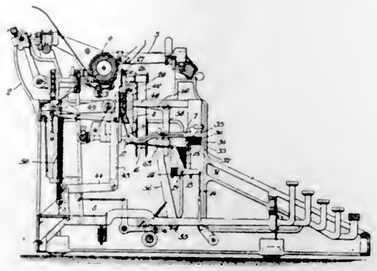
1. A combustion chamber, having a wall tapering from the bottom toward the top and having an outlet opening at the top, said wall having a plurality of outwardly-projecting corrugations spaced a comparatively wide distance apart, said corrugations being hollow on the inner sides thereof and increasing in depth toward the top of the chamber, the top of the corrugations extending inwardly for the purpose described.

2. A combustion chamber, having a wall tapering from the bottom toward the top and having an outlet opening at the top, said wall having a plurality of hollow outwardly-projecting corrugations spaced a considerable distance apart, said corrugations being comparatively deep adjacent the top and extending a considerable distance outward from the wall of the combustion chamber, and said corrugations merging into the wall of the combustion chamber adjacent the bottom of the latter.

3. A combustion chamber, having a wall tapering from the bottom toward the top and having an outlet opening at the top, said wall having a plurality of vertically-arranged outwardly-projecting corrugations spaced substantially one-eighth of the circumference of said combustion chamber, said corrugations being hollow on the inner sides thereof and being of considerable depth adjacent the top, the wall adjacent the top of the corrugations extending inwardly over the upper ends of the corrugations and said corrugations substantially merging into the wall of the combustion chamber adjacent the bottom of the latter.

4. A combustion chamber, having a wall tapering from the bottom toward the top and having an outlet opening at the top, said wall having a plurality of vertically arranged corrugations spaced substantially one-eighth of the circumference of said combustion chamber, said corrugations being hollow on the inner sides thereof and being of considerable depth adjacent the top, the wall adjacent the top of the corrugations extending inwardly over the upper ends of the corrugations, said corrugations substantially merging into the wall of the combustion chamber adjacent the bottom of the latter, and a fuel chute cast integral and projecting laterally from the wall of the casing, said fuel chute including a top wall, and there being a short corrugation immediately above said top wall.

1,169,770. TYPE-WRITING MACHINE. JOHN J. CHAPIN, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 2, 1908. Serial No. 451,361. (Cl. 197—22.)



1. In a typewriting machine, the combination with a frame and pivoted type bars, the latter having radial shoulders adjacent their pivots, of a plate secured to the frame and having spring fingers arranged to be encountered by the shoulders on the bars as they reach the point of impact.

2. In a typewriting machine, the combination with pivoted type bars, of a plate having spring fingers arranged to be encountered by the bars as they reach the point of impact, each finger coöperating with a plurality of type bars.

3. In a typewriting machine, the combination of horizontal parallel key levers, a segmental series of bell cranks in radiating planes, radiating links connecting said bell cranks with the key levers respectively, a segmental series of type bars, and links connecting the same with the bell cranks respectively.

4. In a typewriting machine, the combination of horizontal parallel key levers, a segmental series of bell cranks in radiating planes, one arm of each bell crank normally extending horizontally, radiating links connecting said bell cranks with the key levers respectively, a segmental series of type bars, and links connecting the same with the bell cranks respectively.

5. In a typewriting machine, the combination of horizontal parallel key levers, a segmental series of bell cranks in radiating planes, one arm of each bell crank normally extending horizontally and the other upwardly at an obtuse angle to the horizontally extending arm, radiating links connecting said bell cranks with the key levers respectively, a segmental series of type bars, and links connecting the same with the bell cranks respectively.

[Claims 6 to 18 not printed in the Gazette.]

1,169,771. FIGURE TOY. HARRIET JOSEPHINE CHAPMAN, Pasadena, Cal. Filed Jan. 29, 1915. Serial No. 5,047. (Cl. 46—40.)

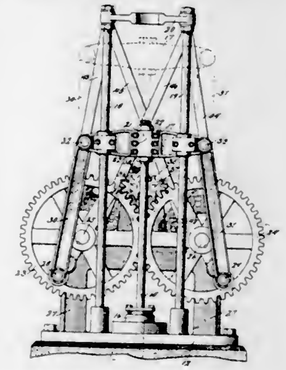
1. A jointed figure toy having one or more members thereof formed with a non-circular opening, and an operating member corresponding in size and shape to the opening adapted for removable insertion through the opening to fix said part and member together.

2. The combination with a jointed figure toy having the arms thereof formed with non-circular openings designed to be alined, and an operating rod having a sectional contour and size corresponding to that of the openings, whereby when the rod is in place in the openings said rod provides a manipulating member for the toy.



3. The combination with a jointed figure toy having the arms thereof formed with non-circular openings designed to be alined, and an operating rod having a sectional contour and size corresponding to that of the openings, whereby when the rod is in place in the openings said rod provides a manipulating member for the toy, one end of the rod being pointed.

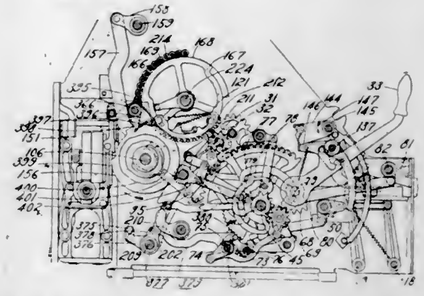
1,169,772. PUMPING MACHINERY. MATTHEW T. CHAPMAN and MARK C. CHAPMAN, Aurora, Ill., assignors to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed May 16, 1910. Serial No. 561,587. (Cl. 103—62.)



In a pumping mechanism, the combination of a standard, two shafts journaled therein a short distance apart, intermeshing gears mounted on said shafts, pitmen connected with the front faces of said gears, a cross-head pivotally connected with said pitmen, a pump rod connected with said cross-head midway between the connections of said pitmen thereto, guide rods upon which said cross-head is vertically slidable located slightly in advance of said pitmen, and segmental casings mounted on said shafts respectively adapted to be filled more or less for counterbalancing the weight of the pump rod.

1,169,773. CASH AND CREDIT REGISTER. EDMUND S. CHURCH, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (incorporated in 1906.) Filed Jan. 24, 1910. Serial No. 539,834. (Cl. 235—3.)

1. In a machine of the class described, the combination with a detachable accumulating device adapted to be manually inserted into the machine, of elements in the machine positioned to be differentially adjusted when said device is inserted, a hand lever, means, released by the insertion of said detachable device, normally locking said lever, connections from said lever for restoring said elements to normal zero positions, a substotalizer, and connections from said lever for engaging and disengaging said totalizer and said elements during a continued movement of said lever.



2. In a machine of the class described, the combination with a detachable accumulating device adapted to be manually inserted into the machine, of differential elements in the machine positioned to be differentially adjusted when said device is inserted, a hand lever, connections from said hand lever for restoring said elements to normal zero positions, a sub-totalizer, and connections from said lever for engaging and disengaging said totalizer and said elements during a continued movement of said lever.

3. In a machine of the class described, the combination with a detachable accumulating device comprising differentially adjustable slides and adapted to be manually inserted into the machine, of elements in the machine constructed to be engaged and differentially adjusted by said slides when the detachable device is inserted, a hand lever, connections from said lever for restoring said machine elements to normal zero positions, a sub-totalizer, and connections from said hand lever, including a cam, to said totalizer, said cam being shaped to engage said totalizer with said elements during their restoring movement and to disengage said totalizer at the end of such movement, by a continued movement of said lever.

4. In a machine of the class described, the combination with a plurality of amount segments and means for differentially positioning them, of a hand lever, connections, having lost motion, from said hand lever for restoring said segments to normal zero postion, a sub-totalizer, connections from said lever including a cam shaped to engage and disengage said totalizer and said segments, by a continued motion of said lever, and key controlled differential mechanism constructed further to actuate said sub-totalizer.

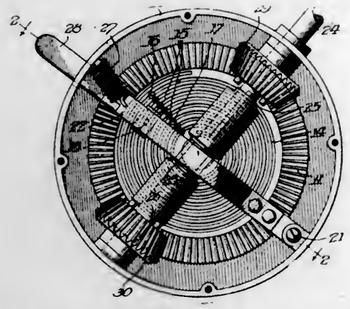
5. In a machine of the class described, the combination with a detachable accumulating device, of a pivoted carriage on which said device may be manually placed, said carriage being manually movable into the machine, elements in said machine differentially positioned by said detachable device when said carriage is so inserted, a hand lever, means, released by insertion of said carriage, normally locking said hand lever, and constructed when released to lock said carriage, connections from said lever for restoring said machine elements to normally zero position, and a sub-totalizer constructed to be actuated by the restoration of said machine elements.

[Claims 6 to 40 not printed in the Gazette.]

1,169,774. REVERSING MECHANISM. SMITH H. COCHRAN and WILLIAM E. CLOW, Chicago, Ill. Filed Mar. 26, 1915. Serial No. 17,288. (Cl. 74—50.

1. In a reversing mechanism, the combination of a rotatable disk provided with a spiral guide way on one face thereof, a clutch member fixed with relation to the rotation of said disk, said clutch member being adapted to coöperate with said guideway and to be moved across

the face thereof, oppositely rotating power transmission means and means actuated by said clutch member for alternately connecting said power transmission means to a source of power, substantially as described.



2. In a reversing mechanism, the combination of a rotatable element provided with a spiral guide-way thereon, means for adjusting the operative length of said guide-way, a shaft extending across the face of said rotatable element and provided with gears on opposite sides of the axis of rotation of said rotatable element, a clutch and means operative in the spiral guide-way for shifting said clutch and connecting said shaft to said rotatable element by means of either of said gears, substantially as described.

3. In a reversing mechanism, the combination of a gear having a spiral groove in one face thereof, a shaft extending across the face of said gear, pinions loosely mounted on said shaft and engaging said gear, a clutch member splined to said shaft and movable to alternately engage said pinions, and means for shifting said clutch, said shifting means including a pin slidable in said groove, substantially as described.

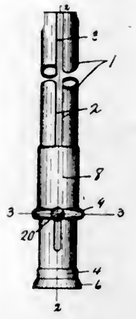
4. In a reversing mechanism, the combination of a driven member provided with a spiral groove, means for adjusting the operative length of said groove, a driving member, power transmission means between said driving and driven members, said power transmission means being located on diametrically opposite sides of said driven member, a clutch for alternately connecting one of said power transmission means to said driven member, and means operative in said groove for actuating said clutch, substantially as described.

5. In a reversing mechanism, the combination of a gear having a symmetrical spiral groove on one face thereof, stops constituting the ends of said groove, a shaft disposed across the face of said gear, pinions loosely mounted on said shaft and engaging opposite sides of said gear, a clutch member splined to said shaft and adapted to alternately engage said pinions, a lever for actuating said clutch, said lever being provided with a pin entering said groove and by contact with said stops cause the shifting of said clutch, substantially as described.

1,169,775. CAPPING DEVICE. HAROLD D. CORNWALL, Lowville, N. Y. Filed Oct. 24, 1914. Serial No. 868,449. (Cl. 226—5.)

1. In a bottle capper, an upright tubular body provided with an elongated longitudinal slot, a grip member movable longitudinally of said tubular body and having a part extending through said slot and adapted to bear upon the upper surface of a cap in said body to force the cap from said body and into engagement with a bottle upon movement of the grip.

2. In a bottle capper, an upright tubular body provided with a longitudinal slot and with means for normally supporting caps therein, a grip member externally mounted upon said body and movable longitudinally thereof and having a part extending through said slot adapted to be brought into contact with a cap in said body, a member in connection with said part and adapted to contact with the inner surface of said body, and a spring for holding said member in contact with said body.



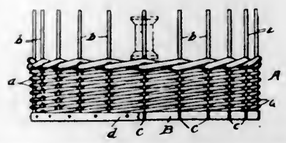
3. In a multiple bottle capper, a plurality of upright tubular members each provided with a longitudinal slot, a base common to all the members and having a plurality of openings registering with the respective tubular members, means for normally retaining caps in each tube and a grip having a part extending through the slot in each tube and bearing upon the upper surface of the caps in their respective tubes and adapted by movement of the grip to force the caps from said tubes, one by one, into engagement with respective bottles.

4. A bottle capper adapted for applying bottle caps formed of a pair of spaced connected disks of different diameters, comprising a tubular member having a discharge opening adapted to be positioned adjacent the mouth of a bottle, said member adapted to contain said caps with the disk of larger diameter uppermost, and having means for engaging the cap to hold the same within the tube, said engaging means adapted to hold the larger of said disks spaced from the top of the bottle a distance substantially equal to the distance between said spaced disks, and means for forcing said caps one at a time from said tube to cap bottles.

5. A bottle capper adapted for applying bottle caps formed of a pair of spaced connected disks of different diameters, comprising a tubular member having a discharge opening adapted to be positioned adjacent the mouth of a bottle, said member adapted to contain said caps with the disk of larger diameter uppermost, and having means for engaging the cap to hold the same within the tube, said engaging means adapted to hold the larger of said disks spaced from the top of the bottle a distance substantially equal to the distance between said spaced disks, a grip movable longitudinally of said tubular member, and means actuated by the grip and adapted to bear upon the surface of the caps in said tube for forcing said caps one at a time from said tube to cap bottles.

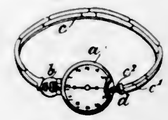
[Claims 6 to 10 not printed in the Gazette.]

1,169,776. WORK-BASKET. AMOS H. CRAWFORD, Liverpool, N. Y. Original application filed Apr. 18, 1910, Serial No. 556,209. Divided and this application filed Apr. 9, 1914. Serial No. 830,664. (Cl. 223—56.)



A work basket comprising a bottom and wicker-work sides rising therefrom and having a finished upper edge, and posts incorporated in the wicker-work and rising some distance above said finished edge for receiving and supporting spools.

1,169,777. WATCHCASE, &c. CHARLES L. DEPOLLIER, New York, N. Y. Filed Feb. 1, 1915. Serial No. 5,414. (Cl. 224—4.)



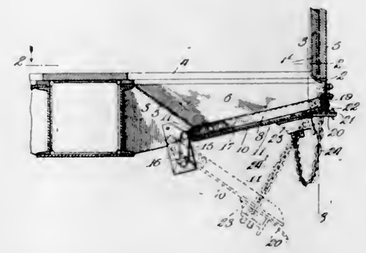
1. A watch-case having its center formed with a recess and a bar spanning such recess substantially within the periphery of the center and adapted for engagement by a hook or ring.

2. A watch-case having its center formed with a dished recess and a bar spanning the recess flush with the periphery of the center and adapted for engagement by a hook or ring.

3. A watch case having a bow adapted for connection with a hook or ring and having its center formed with a recess opposite the bow and a bar spanning such recess substantially within the periphery of the center and adapted for engagement by a hook or ring.

4. A watch case having a bow adapted for connection with a hook or ring and having its center formed with a dished recess opposite the bow and a bar spanning the recess flush with the periphery of the center and adapted for engagement by a hook or ring.

1,169,778. DOOR. GEORGE BINET DOREY, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Dec. 13, 1912. Serial No. 736,564. (Cl. 105—185.)



1. In combination, a door frame, and a hinged door projecting under the said frame on three sides and over it on the fourth side.

2. The combination with a receptacle presenting a door frame inclosing a gravity discharge opening, of a hinged door projecting under the door frame on three sides and over it and into the opening on the fourth side.

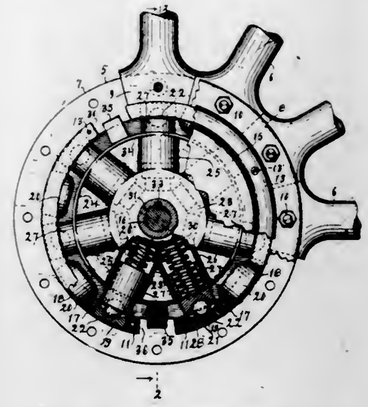
3. The combination with a receptacle presenting a door frame stationary with respect to the car and inclosing a gravity discharge opening, of a door projecting over the door frame on one side, and a swinging hinge device whereby the opposite side of the door is mounted.

4. The combination with a door frame presenting an inturned flange on one side, of a door adapted to project over such flange on its adjacent side, and means hinging the opposite side of the door in a manner to permit both of swinging movement and bodily movement laterally.

5. The combination with a door frame presenting an inturned flange on one side, of a door adapted to project over such flange on its adjacent side, and means hinging the opposite side of the door in a manner to permit both of swinging movement and bodily movement laterally, including a pair of pivoted links having the door pivotally connected to their free ends.

[Claims 6 to 14 not printed in the Gazette.]

1,169,779. RESILIENT WHEEL. JOHN B. DRAHONOVSKY, Milwaukee, Wis. Filed Nov. 13, 1914. Serial No. 871,874. (Cl. 152—45.)



1. A resilient wheel, comprising an outer hub member provided with a plurality of bearing cups having conical recesses, an inner hub member extending into the outer hub and provided with a plurality of radial bores which register with the conical recesses, plungers yieldingly reciprocally mounted in the bores and provided with conical recesses in their outer ends, and balls interposed between the plungers and the cups and entering the conical recesses.

2. A resilient wheel, comprising an outer hub member formed of a pair of annular plates positioned in spaced relation, one of said plates having annular flange portions provided with radial cup openings, bearing cups mounted in said openings and having conical recessed portions, a cap member mounted on the outer hub member, an inner hub member extending into the outer hub and having a plurality of radially extending enlargements which slidably engage the inner sides of the inner plate and the cap, said enlargements having radial bores, plungers yieldingly reciprocally mounted in said radial bores and provided with conical recesses in their outer ends which register with the recesses of the cups, and balls interposed between the plungers and the cups and entering the conical recesses.

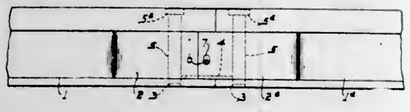
3. A resilient wheel, comprising an outer hub member formed of a pair of annular plates positioned in spaced relation, one of said plates having annular flange portions provided with radial cup openings and having conical recessed portions, a cap member mounted on the outer hub member, an inner hub member extending into the outer hub and having a plurality of radially extending enlargements which slidably engage the inner sides of the inner plate and the cap, said enlargements having radial bores, plungers yieldingly reciprocally mounted in said radial bores and provided with conical recesses in their outer ends which register with the recesses of the cups, balls interposed between the plunger and the cups and entering the conical recesses, and means for limiting the revoluble movement of the inner hub member with respect to the revoluble movement of the outer hub member.

4. A resilient wheel, comprising an outer hub member formed of a pair of annular plates positioned in spaced relation, one of said plates having annular flanged portions provided with radial cup openings, said flanged portions having a spaced portion, spokes interposed between the plates and projecting outwardly therefrom bearing cups mounted in said openings and having conical recessed portions, a cap member on the outer hub member, an inner hub member extending into the outer hub and having a plurality of radially extending enlargements which slidably engage the inner sides of the inner plate and the cap, said enlargements having radial bores

in alinement with the bearing cups, plungers reciprocally mounted in said bores and provided with conical recesses in their outer ends, balls interposed between the plungers and the cups and entering the conical recesses, coiled springs positioned within the bores and engaging the plungers, and a stop lug projecting outwardly from the inner hub and entering the spaced opening of the annular flange portions.

5. A resilient wheel, comprising an outer hub member provided with a plurality of threaded cup openings and interposed bumper recesses, bearing cups threaded into said openings, resilient bumpers mounted within the bumper recesses, an inner hub member extending into the outer hub and provided with a plurality of radial enlargements and with other portions adapted to engage the bumpers, said enlargements provided with radial bores which register with the cups, plungers reciprocally extending into the bores, said plungers having recessed inner portions and conical recesses in their outer ends, balls interposed between the plungers and the cups and extending into the conical recesses of both members, coiled springs interposed between the plungers and the inner hub and extending into the hub bores and plunger inner recesses, and means for limiting the movement of the inner hub with respect to the outer hub.

1,169,780. RAIL-JOINT. JEAN BAPTISTE DUQUETTE, Ste. Monique, Quebec, Canada. Filed June 4, 1915. Serial No. 32,059. (Cl. 239—8.)



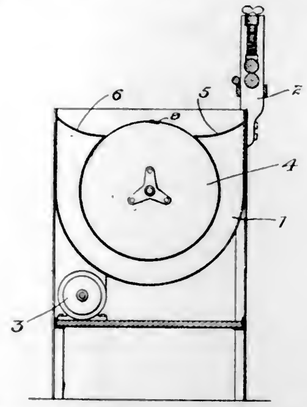
1. A rail joint compris ng the combination of adjacent overlapped rail ends each provided with a vertical bore and a slot from the top surface, and a locking member having end posts fitted into the bores and a web connecting the end posts and fitted into the slots, the bores being formed with annular shoulders and the posts being formed with heads disposed to rest on the shoulders.

2. A rail joint comprising the combination of overlapping adjacent rail ends provided with bores, and slots extending therefrom to the adjacent ends of the rails, and a locking member disposed in the bores and slots, one of the rails being provided with a slot in its web and the locking member being provided with an opening arranged so as to be adjacent the slot when the locking member is in position.

3. In a rail joint; rail sections having the web portion of their contiguous ends thickened to form integral blocks, one of said blocks being cut away at its inner end and the other of said blocks being extended so as to fit into the socket formed by cutting away the inner end of the first mentioned block, the said rail ends and blocks being provided with a deep vertical groove and vertical bores communicating with the ends of said groove, the said extended inner end of the second mentioned block being further provided with a vertical slot through one side; and a locking bolt consisting of a web portion and end posts carried thereby and adapted to fit snugly into the groove and bores of the said rail ends and blocks, the web portion of said locking block being provided with an opening normally located opposite the slot of the said extended inner end of the said second mentioned rail block to permit insertion of an instrument.

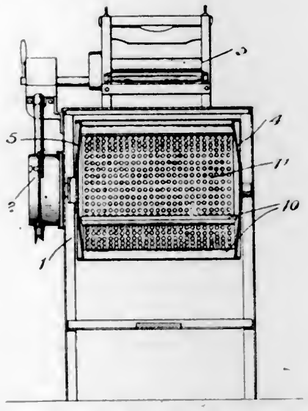
1,169,781. CLOTHES-DRUM-DOOR CONSTRUCTION. HAROLD W. EDEN, Chicago, Ill. Filed Jan. 26, 1914. Serial No. 814,413. (Cl. 68—18.)

In a device of the class described, a tub having its upper end open, a wringer mounted on one wall thereof at the open end of said tub, a clothes drum journaled within said tub, and doors hinged on said drum adapted to be swung open to bridge the space between the upper portion of the tub walls and the clothes drum with said doors resting against the tub walls, one of said doors affording a



draining support for clothes to be passed through the wringer permitting the drain water to flow back into the tub.

1,169,782. CLOTHES-DRUM CONSTRUCTION. HAROLD W. EDEN, Chicago, Ill. Filed Jan. 26, 1914. Serial No. 814,414. (Cl. 68—18.)



In a device of the class described, metallic ends having out-turned flanges thereon, ribs connecting said ends, foraminous material secured on the margin of said flanges and extending around said ribs affording a cylinder and having its edges turned over and beneath said flanges, and retaining battens on the outer surface of said foraminous material secured to the same and to said ribs and overlying said flanges.

1,169,783. FINISH-REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, a Corporation of West Virginia. Filed Feb. 3, 1912, Serial No. 675,215. Renewed Oct. 15, 1915. Serial No. 56,142. (Cl. 87—5.)

1. The relatively non-inflammable finish remover comprising approximately 30 parts of benzyl alcohol, 25 parts of benzyl acetate, 5 parts of cresylic acid, 40 parts of fractionated coal tar solvent naphtha of high boiling point, 15 points of carbon-tetrachlorid and 5 parts of hard paraffin wax.

2. The relatively non-inflammable finish remover comprising approximately 30 parts of benzyl alcohol, 25 parts of benzyl derivative finish solven material, 5 parts of phenol, 40 parts of solvent naphtha, 15 parts of chlorinated inflammability suppressing solvent material and incorporated wax.

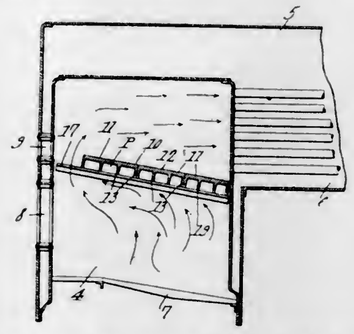
3. The finish remover containing banzyl alcohol, benzyl derivative finish solvent material and a substantially equal amount of penetrating finish solvent material, including chlorinated solvent material and incorporated waxy stiffening material.

4. The finish remover containing benzyl derivative finish solvent material, phenol and penetrating solvent material, including a chlorinated solvent.

5. The finish remover of relatively high boiling point and slight inflammability comprising considerable proportions of benzyl derivative finish solvent material, including benzyl alcohol, phenol and penetrating finish solvent material.

[Claims 6 to 8 not printed in the Gazette.]

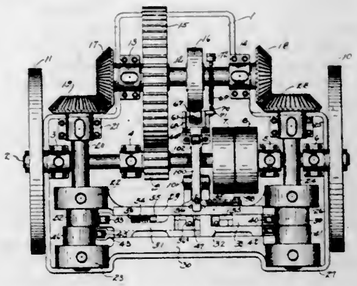
1,169,784. FURNACE BAFFLE-PLATE. WILLIAM FARBER, Long Prairie, Minn. Filed Apr. 14, 1914. Serial No. 831,823. (Cl. 110—87.)



As an article of manufacture, a furnace baffle plate comprising in a one-piece symmetrical structure, an imperforate concaved body of equal thickness from end to end and provided at its ends with attaching flanges the under faces of which lie in a common plane, the flanges being provided with attaching openings, the body being equipped upon its concaved side with parallel crescent-shaped ribs extended from one flange to the other and located along the longitudinal edges of the body and intermediate the longitudinal edges of the body, the body being supplied midway between its ends and upon its concaved side with a single transverse rib connecting all of the longitudinal ribs, the transverse rib being thicker than the longitudinal ribs and being of the same height as the longitudinal ribs.

1,169,785. HORSESHOE-CALK-MAKING MACHINE. WALLACE L. FIELD, West De Pere, Wis. Filed Feb. 9, 1915. Serial No. 7,175. (Cl. 59—66.)

1. A horse shoe calk forming machine, consisting of a frame for supporting the mechanism of the machine, a shaft arranged for revolution thereon, bevel gear wheels upon said shaft, shafts arranged at right angles with first named shaft, said second named shafts arranged parallel with one another, gear wheels mounted on the ends of said second parallel shafts meshing with said gear wheels on the first named shaft, a plurality of die parts secured in a plurality of die holding parts and arranged for reciprocating parallel with first named shaft and intermediate second named parallel shafts, means on second parallel shafts for forcing said die parts toward one another, a die part having a tapering bore arranged in position adjacent and opposite the meeting point of the first named die parts, a punching rod arranged to be reciprocated into said tapering bore, means for forcing said punching rod into said tapering bore, and means for returning said punching rod to the outward limit of its stroke, substantially as set forth.



2. In a machine of the class described, consisting of a frame for supporting the mechanism of the machine, a shaft arranged for revolution thereon, gear wheels upon said shaft, shafts arranged at right angles with the first named shaft, said second named shafts arranged parallel with one another, gear wheels mounted on the ends of said second parallel shafts meshing with said gear wheels on first named shaft, die parts arranged in die holding parts, said die holding parts and dies arranged to be reciprocated parallel with first named shaft and intermediate second named parallel shafts, cams upon the second mentioned parallel shafts arranged for forcing die holding parts and dies toward each other, a shaft arranged for sliding movement toward and from first named die, parts intermediate and parallel with second mentioned parallel shafts, a die part arranged in position adjacent to and opposite the meeting point of first named die parts having a tapering bore of the diameter of the shank of the calk to be formed, a punching rod extending from the end of said sliding shaft and arranged to be reciprocated into said tapering bore of said die part, means for sliding said sliding shaft toward the meeting point of the first named die parts immediately after the first named die parts have been advanced toward each other, means for returning the first named die parts and said sliding shaft to the outward limit of their movement, substantially as described.

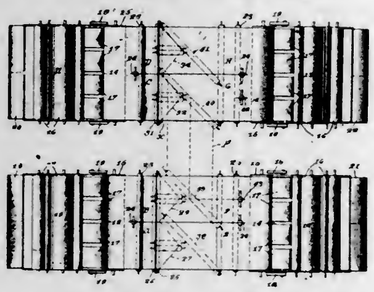
3. In a machine of the class described consisting of a supporting frame, a plurality of shafts arranged for rotation thereon, a plurality of die holding parts arranged to be reciprocated in said supporting frame, means carried by said shafts for reciprocating said die holders, a plurality of dies secured to said die holders and arranged to be reciprocated therewith, a stationary die part carried by said frame and positioned adjacent the inward positions of the said reciprocating die parts, means carried by said supporting frame adapted to be reciprocated into said stationary die part for upsetting the shank of the calk, means carried by one of said reciprocating die holders for ejecting the finished calk from the said stationary die part, substantially as described.

4. In a machine of the class described consisting of a supporting frame, a plurality of shafts arranged for rotation thereon, a plurality of die holding parts arranged to be reciprocated in said frame, a plurality of dies secured to said die holders and arranged to be reciprocated therewith, a die part having a tapering bore wherein the shank of the calk is formed, said shank forming die positioned in said supporting frame adjacent the inward position of the said reciprocating dies, means, adjacent said shank forming die adapted to receive a bar of metal from which the calk is formed, a push rod adapted to be reciprocated through said metal receiving means and into said shank forming die for the purpose of upsetting the shank of the calk, means carried by said shaft for reciprocating said push rod, and means upon said shafts for reciprocating said die holders substantially as set forth.

5. In a machine of the class described consisting of a supporting frame, a plurality of shafts arranged for rotation thereon, a plurality of die holding parts arranged

to be reciprocated in said frame, means upon said shafts for reciprocating said die holders, a plurality of dies carried by said die holders and arranged to be reciprocated therewith, said dies adapted to form the wing of the calk, a shank forming die having a tapering bore, said shank forming die positioned adjacent the inward point of travel of the said reciprocating dies, means adapted to receive a bar of metal from which the calk is formed, said means positioned in said frame adjacent the bore of the said shank forming die, means carried by said frame adapted to cut off a piece of metal from which the calk is formed, said cutting means superimposed over said metal receiving means, a push rod adapted to be reciprocated through said metal receiving means and into said tapering bore, means upon one of said shafts adapted to reciprocate said push rod, means adapted to be reciprocated with said push rod for the purpose of operating said cutting means, substantially as set forth.

1,169,786. PRINTING-PRESS. JOSEPH L. FIRM, Berwyn, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1914. Serial No. 879,653. (Cl. 101—124.)

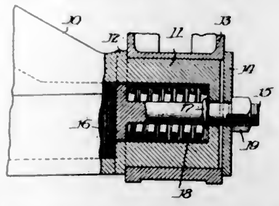


1. In a printing press, the combination of two press sections located longitudinally opposite each other, and two other press sections alongside of said first-named press sections also located longitudinally opposite each other, each of said sections comprising two form cylinders each four plates wide, separate means for folding and delivering as a separate complete product each of the four webs two plates wide printed by the plates at one end of the press in association with the corresponding one of the four webs two plates wide printed by the plates at the other end of the press, comprising longitudinal folding devices located in the straight-run paths of said webs between said sections, alternative means for superposing upon each other the webs printed by the plates of each section for folding and delivering as a single complete product, and other alternative means for superposing a web from one of said sections upon the web from one of the sections transversely opposite.

2. In a printing press, the combination of two press sections located longitudinally opposite each other, and two other press sections alongside of said first-named press sections also located longitudinally opposite each other, each of said sections comprising two form cylinders each four plates wide, separate means for folding and delivering as a separate complete product each of the four webs two plates wide printed by the plates at one end of the press in association with the corresponding one of the four webs two plates wide printed by the plates at the other end of the press, comprising longitudinal folding devices located in the straight-run paths of said webs between said sections, vertically-disposed turning means for alternatively superposing the webs printed by each press section upon each other for folding and delivery as a single complete product, and horizontally-disposed turning means adapted alternatively for superposing a web from one of said sections upon the web from one of the sections transversely opposite.

3. In a printing press, the combination of two press sections located longitudinally opposite each other, and two other press sections alongside of said first-named press sections also located longitudinally opposite each other, each of said sections comprising two form cylinders each four plates wide, vertically-disposed turning means for superposing the webs printed by each press section upon each other, means for folding and delivering such superposed webs in two complete products, and horizontally-disposed turning means adapted alternatively for turning a portion of the web printed by one of said press sections for folding and delivery with the product produced by one or more of the other press sections.

1,169,787. BRAKE-HEAD. GEORGE G. FLOYD, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 25, 1915. Serial No. 57,677. (Cl. 188—28.)



1. In a brake beam, the combination of a hollow sleeve secured to the end of a beam, a head rotatably mounted on said sleeve, a locking device located exteriorly of the sleeve and bearing against said head, a bolt axially mounted with relation to said sleeve and bearing against said locking device, and means coöperating with said bolt for securing a resilient holding action following a rigid holding action, substantially as described.

2. In a brake beam, the combination of a sleeve, a head rotatably mounted thereon, a locking device located exteriorly of said sleeve, an axial bolt engaging said locking device, a spring in the axis of said sleeve and acting upon said bolt, a stop on said bolt, the arrangement being such that said bolt acts on said locking device to rigidly hold the same until wear takes place, when said spring comes into action and resiliently acts upon said locking device, substantially as described.

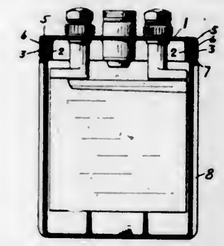
3. In a brake beam, the combination of a hollow sleeve, a brake head rotatably mounted thereon, an exterior locking plate, a bolt extending through the hollow interior of said sleeve and acting upon said locking plate, and a spring mounted in the axis of said sleeve and acting upon said bolt, whereby said locking device is resiliently held against said head, substantially as described.

4. In a brake beam, the combination of a hollow sleeve, a brake head rotatably mounted on said sleeve, an annular plate located at the end of said sleeve and bearing at its periphery on said brake head, a spring mounted in the hollow interior of said sleeve, and an axial bolt engaging said spring and said annular plate, whereby said plate is resiliently held against the brake head, substantially as described.

5. In a device of the class described, the combination of a brake beam having an integral hollow sleeve, a brake head on the sleeve, an annular plate mounted at the end of said sleeve and bearing at its periphery on said head, a bolt acting on said annular plate, said bolt being provided with a round head and with an intermediate stop, and a spring mounted in the axis of said sleeve and bearing at one end against said round head of the bolt, the arrangement being such that said plate is rigidly clamped against said head and resiliently held when said rigid holding means have become worn, substantially as described.

1,169,788. SECONDARY OR STORAGE BATTERY. BRUCE FORD, Philadelphia, Pa. Filed May 9, 1914. Serial No. 837,372. (Cl. 204—29.)

1. In a storage battery the combination of a cover provided with integral flanges projecting from one face thereof and constituting between them a groove having space for the reception of sealing compound, sealing compound in said space, a jar having the top of its wall arranged in said groove, and a plate structure holding and positioning the cover in respect to the top rim of the wall to maintain said sealing space.



2. In a storage battery the combination of a cover provided with integral flanges projecting from one face thereof and constituting between them a groove having space for the reception of sealing compound, sealing compound in said space, a jar having the top of its wall arranged in said groove, and means holding and positioning the cover in respect to the top rim of the wall to maintain said sealing space.

1,169,789. MECHANISM FOR GRINDING FLATS IN CARDING-ENGINES. JOSEPH FOSSEL, Grafton, Mass. Filed Nov. 18, 1914. Serial No. 872,740. (Cl. 51—2.)

1. In a mechanism for grinding flats in carding machines, comprising a rotatable grinding roll, and mechanism for lowering said roll comprising a weighted bell crank, a bolt carried by said bell crank having a flange adapted to rest upon the working seat of the flat, and a lip on said flange overlapping one edge of a flat, whereby said bolt is moved by the movement of the flat, and means for rocking said bolt to disengage its lip from the flat.

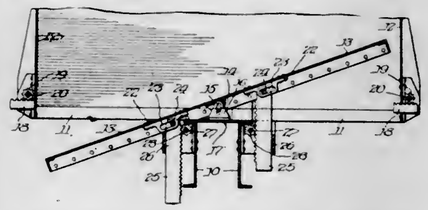
2. In a mechanism for grinding flats in carding machines, comprising a rotatable grinding roll, journal boxes supporting said roll, and mechanism for lowering said boxes, comprising a weighted bell crank, a bolt carried by said bell crank adapted to engage a flat as it moves beneath the grinding roll, a torsional spring to hold said bolt in engagement with the flat, and a stationary cam plate for rocking said bolt against the tension of said spring to release the flat.

3. In a mechanism for grinding flats of carding engines, means for lowering the grinding roll as a flat passes beneath it, comprising a bell crank, a bolt carried by said bell crank having a flange adapted to rest upon the working face of a flat, a spring applied to hold said flange against the working face of the flat, a lip on said flange overlapping one edge of the flat, and means for rocking said bolt against the tension of said spring to release said lip from the flat.

4. In a mechanism for grinding flats in carding engines, comprising a grinding roll and means for lowering said roll as a flat passes beneath it, comprising a bell crank, a slidable rocking bolt carried by said bell crank and arranged to engage a flat as it passes beneath the grinding roll, a spiral spring inclosing said bolt and adapted by its connection with said bolt to impart both a sliding and a rocking motion to said bolt, means for rocking said bolt against the tension of said spring to disengage the bolt from the flat.

5. In a mechanism for grinding flats in carding machines, a grinding roll and means for varying the position of said roll relatively to the flat as the latter is passed beneath it, comprising a bell crank, a slidable and rocking bolt carried by said bell crank and arranged to engage a flat as it passes beneath the grinding roll, a spiral spring inclosing said bolt and connected therewith to impart a rocking and a sliding movement to said bolt, means for rocking said bolt against the torsional tension of said spring, and means for holding said bolt against the longitudinal tension of said spring.

1,169,790. DUMP-CAR. WILLIAM E. FOWLER, Sr., Chicago, Ill., assignor to The Fowler Car Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 5, 1915. Serial No. 43,722. (Cl. 105—189.)



1. In a dump car, the combination of car walls and a door extending substantially entirely across the width of the car, a floating pivot for the door, said pivot being located at substantially the center of the car, and means located at each side of the center of the door a portion of which means is adapted to act as a pivot for the door upon the releasing of one edge thereof, substantially as described.

2. In a railway car, the combination of side walls and a floor, said floor being composed of a series of single doors which extend from side to side of the car, a vertically shiftable pivot for each of said doors, the pivot being located at substantially the transverse center of the door, supporting means for the edges of the doors, and vertically movable pivots located at each side of the center of each door, substantially as described.

3. In a railway car, the combination of a center sill, side walls and floor, said floor being composed of a series of single doors extending from side to side of the car and provided with a transversely-centralized pivot, said pivot being mounted in a vertically-elongated bearing, and vertically-movable stops mounted at each side of the door and adapted for vertical reciprocation in opposite directions whereby said doors may be tilted and the load discharged to either side of the car, substantially as described.

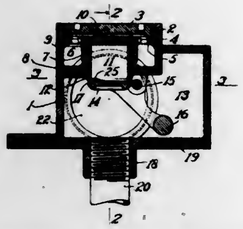
4. In a railway car, the combination of side walls and a floor, said floor being composed of a series of single doors extending from side to side of the car, means at the outer edges of the doors for normally maintaining the doors in position, a central pivot for each door, and vertical reciprocable rack bars and pinions mounted at each side of the center of each door, a shaft for actuating each rack bar, and means for actuating said shafts whereby to simultaneously move said rack bars in opposite directions, substantially as described.

5. In a railway car, the combination of side walls and a floor, said floor being composed of series of doors which extend from side to side of the car and each door being provided with a central, shifting pivot, vertically-reciprocable members located at each side of the pivot, means

for actuating said members and for releasing one or both thereof as required, the parts being arranged whereby one of said members may be released and the door be permitted to pivot on the other member through distances determined by said shiftable pivot, substantially as described.

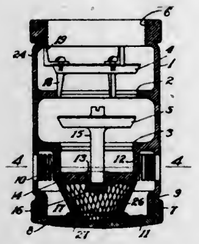
[Claims 6 and 7 not printed in the Gazette.]

1,169,791. SAFETY FILLING-TRAP. CHARLES L. FRENCH, Cambridge, Mass. Filed July 14, 1913. Serial No. 779,042. (Cl. 220—120.)



A safety filling trap comprising a box having an upper wall with an opening therethrough and a lower wall with an opening therethrough; an interior partition wall for said box and interposed between said openings, said partition wall being itself provided with an opening; removable means for closing the partition wall opening from above; a valve seat for said partition wall opening and below the same; and a valve, housed within said box and adapted to automatically engage said seat and thus cooperate with said partition wall to prevent the rise of gases or fumes through said box.

1,169,792. SUCTION FOOT-VALVE. CHARLES L. FRENCH, Cambridge, Mass. Filed July 14, 1913. Serial No. 779,043. (Cl. 103—64.)



1. A foot valve comprising a vertically disposed casing, means for operatively connecting said casing to a suitable suction device, and a lift valve operatively positioned within said casing; in combination with a plurality of movable fingers mounted on said valve and adapted to limit the lifting of said valve, said fingers being collapsibly arranged to permit the placing of said valve in operative position, and means for screening the material to be drawn through said casing.

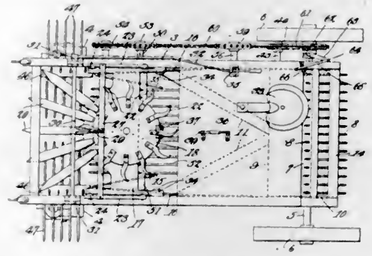
2. A suction foot valve comprising a vertically disposed casing; means for attaching said casing to a suitable suction device; a plurality of automatic valves mounted in vertical alinement within said casing; and screening means in the side walls of said casing and below said valves; in combination with a series of collapsible fingers mounted in connection with the upper of said valves.

3. A suction foot valve comprising a vertically disposed casing; screening means in the side walls of said casing; and a plurality of automatic valves mounted in vertical alinement within said casing, the upper of said valves being provided with collapsible fingers to limit its opening movement.

4. A suction foot valve comprising a vertically disposed casing with a series of narrow inlet slots in the side walls thereof and a screw-threaded opening in the top thereof; an automatic lift valve mounted within said casing; a shoulder formed in connection with said screw-threaded opening; and removable means, mounted in connection with said valve and adapted to unite with said shoulder to limit the upward movement of said valve.

5. A suction foot valve comprising a vertically disposed casing; means for operatively connecting said casing to a suitable suction device; and an automatic valve operatively positioned within said casing; in combination with a plurality of collapsible fingers mounted in connection with said valve and adapted to limit the opening movement of same.

1,169,793. MACHINE FOR TOPPING AND COMMINUTING STALKS. THOMAS M. FULBRIGHT, Rentiesville, Okla., assignor of one-third to Joseph S. Brummel and one-third to Frank Williams. Filed Apr. 29, 1915. Serial No. 24,836. (Cl. 56—131.)

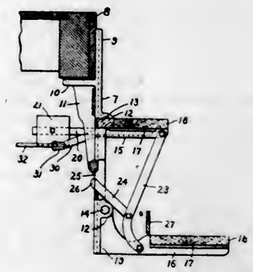


1. In a machine of the class described, the combination with a movably supported structure, a transverse cutter fixed relative thereto, spaced depending fingers thereabove, and revoluble cutters above the transverse cutter and coöperating with the fingers, of a revoluble series of cutting elements in front of and above the fixed transverse cutter and working in planes extending longitudinally of the structure, a second revoluble series of cutting elements in front of and above the fixed transverse cutter and working in substantially vertical planes extending transversely of the structure, topping mechanism supported above said cutters, and means for simultaneously actuating the topping mechanism and cutters during the forward movement of the structure.

2. A machine of the class described including a wheel supported structure, a transverse cutter fixedly mounted thereunder and movable therewith, revoluble series of cutting elements within said structure and disposed at different elevations, certain of said elements being supported above and close to the fixed cutter, side series of revoluble cutting members adjacent the front end thereof and working in substantially vertical planes extending transversely of the structure, gathering fingers, a gear adjacent thereto, topping blades revoluble with the gear and through the fingers, means for rotating the gear, the gathering fingers and topping blades being located above the side series of revoluble cutting members, means for adjusting the gathering fingers and topping blades angularly during the actuation of said gear, and means for simultaneously actuating all of the cutting members.

1,169,794. FOLDING STEP FOR VEHICLES. ANDERSON FULLER, Amsterdam, N. Y., assignor of one-half to William J. Keary, Schenectady, N. Y. Filed May 6, 1915. Serial No. 26,299. (Cl. 105—86.)

1. In combination, a vehicle, rigid hangers mounted thereon, arms directly hinged to the hangers and arranged in pairs, each arm having a heel which engages the hanger to prevent the steps carried thereby from dropping below a substantially horizontal position, steps carried by the arms, a member which connects the upper and lower arms of each pair and alternately transmits stresses from one to the other, and means on the vehicle for raising and lowering the steps.



2. In combination, a vehicle, rigid hangers mounted thereon, L-shaped arms pivotally connected to the hangers, heels on the arms which engage the face of the hangers when the arms are lowered to support them, steps carried by the arms and arranged one above the other, counterbalancing means for the steps, means connecting the steps so that movement imparted to one of them is transmitted to the other, and means carried by the vehicle for raising and lowering the steps.

3. In combination, a vehicle, hangers mounted thereon, arms arranged in pairs and pivotally supported by each hanger, steps carried by the arms, a brace attached at one end to one arm of each pair, a stop for the other end of the brace, said brace moving longitudinally with respect to the stop when the steps are raised, and means for raising and lowering the steps.

4. In combination, a vehicle, slotted hangers mounted thereon, a pair of arms hinged to each hanger, steps supported by the arms, a brace which extends through the slot in each hanger and supports one of the steps when in operative position, said brace freely sliding longitudinally in the slot as the steps are raised, and means for raising and lowering the steps.

5. In combination, a vehicle, slotted hangers mounted thereon, an arm hinged to each hanger, a step supported by the arms, braces which freely extend through the slots in the hangers, each having a head at one end preventing it from passing through the slot, the other end being attached to an arm, and means for turning the arms on their pivots to raise the step and causing the braces to slide longitudinally in said slots away from their supporting positions.

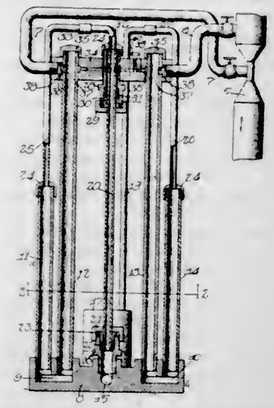
[Claims 6 to 14 not printed in the Gazette.]

1,169,795. DIFFERENTIAL-PRESSURE GAGE. GEORGE F. GEBHARDT, Chicago, Ill., assignor to Gebhardt Meter Company, Chicago, Ill., a Corporation of Illinois. Filed July 11, 1912. Serial No. 708,759. (Cl. 73—31.)

1. A differential pressure gage comprising a base member with a U-shaped passage therein, a cap member secured to the base at one end of the passage forming a seal pot, a tube connected through the said cap, a transparent tube connected to the other end of the passage, the said tubes constituting with the passage in the base member a U tube having a seal pot in one leg of the tube, and means connected to the ends of the said tubes forming a fluid seal for transmitting pressure to the said tubes.

2. The combination with a differential pressure gage comprising a base member with passages therein, tubular members secured in the ends of the passages and forming a plurality of U-shaped tubes, means to connect the ends of the U-shaped tubes together, of means forming a differential source of pressure supply and tubular connections from said source of pressure supply to the ends of the outer tubes.

3. In a differential pressure gage, the combination with a base member having passages therein of tubular members secured to the ends of the passages and forming U tubes, one of the U tubes being smaller in diameter than the others and connected in series at both ends with one of the other U tubes, and means to connect the other ends of the outer U tubes to a suitable source of supply.

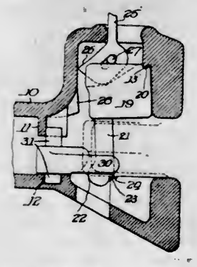


4. A differential pressure gage comprising members forming two U tubes of other members smaller in diameter forming the legs of another U tube each leg being connected to only one of the first mentioned U tubes, a seal pot in connection with one of the said smaller tubes, and means forming communication between the other smaller tube and the seal pot, the other smaller tube being composed of transparent material to show the height of fluid therein and means forming connection with the ends of the outer U tubes and a source of differential pressure.

5. In a differential pressure gage, the combination of three U tubes connected in series, the outer tubes forming a fluid seal for the inner tube, the free extremities of the said sealing tubes being provided with means to form connection between them comprising a perforated plate through which the ends of the tube are inserted, a cap to seal the protruding ends of the tubes, a recess in the plate surrounding the tubes and a laterally extending threaded opening from each of the recesses, the tubes being perforated to register with the recesses in the plate whereby communication may be had through the lateral openings with the interior of the tubes.

[Claims 6 and 7 not printed in the Gazette.]

1,169,796. CAR-COUPLING. WILLIAM J. GEDDERT, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 17, 1913. Serial No. 754,712. (Cl. 213—10.)



1. A car coupler having a coupler head and a bodily movable knuckle lock capable of being raised and lowered with respect to its locked position, the top face of the lock in rear of the front face of the lock and an interior wall of the coupler head having portions disposed to cooperate at a point in the upward movement of the lock and

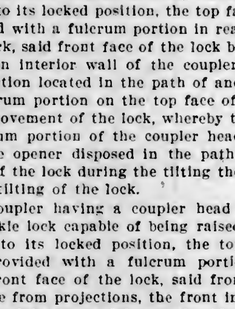
cause the lock to tilt on further upward movement thereof, and a knuckle opener disposed in the path of movement of a portion of the lock during the tilting thereof for actuation by the tilting of the lock.

2. A car coupler having a coupler head and a bodily movable knuckle lock capable of being raised and lowered with respect to its locked position, the top face of the lock being provided with a fulcrum portion in rear of the front face of the lock, said front face of the lock being free from projections, an interior wall of the coupler head having a fulcrum portion located in the path of and to coöperate with the fulcrum portion on the top face of the lock during upward movement of the lock, whereby to tilt the lock on said fulcrum portion of the coupler head as a center, and a knuckle opener disposed in the path of movement of a portion of the lock during the tilting thereof for actuation by the tilting of the lock.

3. A car coupler having a coupler head and a bodily movable knuckle lock capable of being raised and lowered with respect to its locked position, the top face of the lock being provided with a fulcrum portion located in rear of the front face of the lock, said front face of the lock being free from projections, the front interior wall of the coupler head having a fulcrum shoulder lying in the path of upward movement of the fulcrum portion on the top of the lock to coöperate therewith and cause the lock to tilt on said fulcrum shoulder as a center, said interior front wall of the coupler head being free from projections below the fulcrum shoulder thereof and constituting a guide for the lock to direct the fulcrum portion thereof to the fulcrum shoulder of the head, and a knuckle opener disposed in the path of movement of a portion of the lock during the tilting thereof for actuation by the tilting of the lock.

4. A car coupler having a coupler head and a bodily movable knuckle lock capable of being raised and lowered with respect to its locked position, said lock being provided on its top face with a transverse groove located in rear of the front face of the lock, said front face of the lock being free from projections, an interior wall of the coupler head having a fulcrum shoulder located in the path of and to coöperate with the groove of the lock during the upward movement of said lock to tilt the lock on said fulcrum shoulder of the coupler head as a center, and a knuckle opener disposed in the path of movement of a portion of the lock during the tilting thereof for actuation by the tilting of the lock.

1,169,797. LUBRICATOR. HARRY R. GEER, Johnstown, Pa. Filed Nov. 19, 1915. Serial No. 62,280. (Cl. 184—76.)

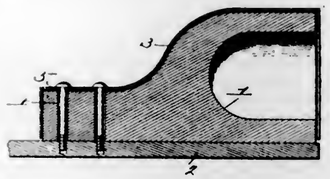


1. The combination with a fluid pressure apparatus in which the internal pressure varies recurrently, of a lubricator mounted thereon, a feed pipe extending within said lubricator and adapted to communicate with the fluid pressure apparatus aforesaid, said feed pipe also having an opening in its side wall, a reciprocable valve mounted in said feed pipe, having at the lower end a piston provided with an opening adapted to normally communicate with the opening in the side wall of the feed pipe, the upper portion of said valve being provided with an outwardly projecting portion adapted to seat upon and close the upper portion of said feed pipe.

2. The combination with a fluid pressure apparatus in which the pressure varies in cycles, of a lubricator mounted thereon, a feed pipe mounted within said lubricator and adapted to connect with the fluid pressure apparatus, said feed pipe also having an opening in its wall, a reciprocable valve adapted to open and close the upper end of said feed pipe and to also open and close the opening in the wall of said feed pipe, the opening in the wall of the feed pipe normally connecting with the fluid pressure apparatus, whereby, as the pressure increases, the opening in the wall of the feed pipe is closed and that at the upper portion of said pipe is opened, allowing the pressure to increase within the lubricator, and as the pressure in the fluid pressure apparatus decreases, the opening at the upper end of the feed pipe is automatically closed by said valve and the opening in the side wall of the feed pipe communicates with the lower opening in said valve and thence to the fluid pressure apparatus.

3. The combination with a fluid pressure apparatus in which the pressure varies in cycles, of a lubricator mounted thereon, said lubricator having an opening normally communicating with said apparatus, another opening in said lubricator adapted to communicate with the apparatus and to normally be closed, and means actuated by the varying pressure for closing the one opening while opening the other, and vice versa.

1,169,798. LUG. ROBERT ARTHUR GOELLER, New York, N. Y. Filed Sept. 9, 1914. Serial No. 860,905. (Cl. 173—353.)



1. A terminal connector comprising a lug adapted to have a cable soldered thereto, and a finished cap adapted to fit over said lug, and detachable therefrom, said cap being open at the cable attached end.

2. A lug of the kind described having openings for securing means to pass through, a cap having an exterior finish or polish and having openings for securing means, said openings alining with those of the lug.

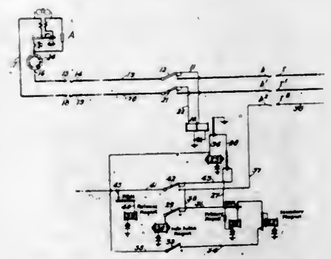
3. A two part lug, one part of said lug having cable securing means and the other part having an exterior polish or finish, and common means for securing said parts in position.

1,169,799. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 23, 1915. Serial No. 41,479. (Cl. 179—18.)

1. In a machine switching telephone exchange system, the combination with an automatic selector switch, a stepping relay associated therewith, a sender for operating the same, a slow relay controlled at a front contact of said stepping relay, a release circuit controlled at a back contact of said slow relay, a stepping magnet a circuit therefor, controlled by said stepping relay, a steering switch, a spring normally tending to advance the same, of a slow-acting control magnet for said steering switch adapted to release the same upon its deënergization and a circuit for said magnet controlled at a back contact of said stepping relay.

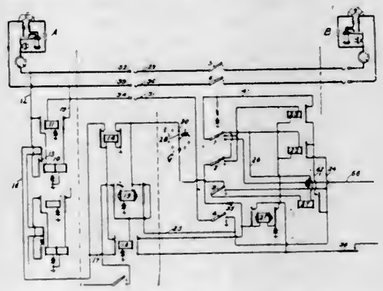
2. In a machine switching telephone exchange system, the combination with an automatic selector switch, a stepping relay associated therewith, a sender for operating

the same, a slow relay controlled at a front contact of said stepping relay, a release circuit controlled at a back contact of said slow relay, a primary stepping magnet, a circuit therefor controlled at an armature and back contact of said stepping relay, a steering switch adapted in its first position to connect said magnet to the said back



contact, of a slow-acting control magnet adapted to release said steering switch upon its deënergization, a circuit for said magnet controlled at a back contact of said stepping relay, a secondary magnet and a circuit therefor adapted to be closed by said steering switch in its succeeding position.

1,169,800. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 16, 1915. Serial No. 50,987. (Cl. 179—18.)

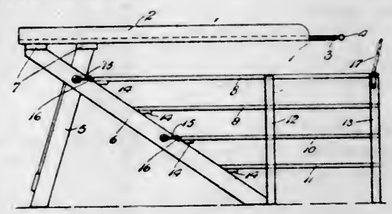


1. In a telephone exchange system, the combination with telephone lines, an automatic finder switch to which said lines are multiplied, a stepping magnet adapted to drive said finder, a circuit for said stepping magnet including its armature and back contact, and a release magnet for said finder, of a circuit including said release magnet and leading through the armature and back contact of said stepping magnet and adapted if closed for a predetermined length of time to release the finder.

2. In a telephone exchange system, the combination with telephone lines, an automatic finder switch to which said lines are multiplied, a stepping magnet for driving said line finder, and a release magnet for said finder, of a circuit for said release magnet including the armature and back contact of said stepping magnet, a resistance in said circuit, said circuit being adapted when closed for a predetermined interval to energize the release magnet.

3. In a telephone exchange system, the combination with a plurality of lines, an automatic finder switch wherein said lines terminate in groups, primary and secondary stepping magnets for said finder, a release magnet for said finder, of a circuit including said release magnet leading through the armatures and back contacts of said stepping magnets, a resistance in said circuit, said circuit being adapted when closed for a predetermined interval to cause said release magnet to attract its armatures to release the finder.

1,169,801. LAUNDRY APPLIANCE. ALBERT H. GRAY, Grand Rapids, Mich. Filed Oct. 22, 1915. Serial No. 57,270. (Cl. 93—2.)



1. In a device of the character described, a flat horizontal member, means to support said member at one end thereof leaving the opposite end free to draw bags or the like thereover, and means to support a bag adjacent said free end of the horizontal member and guide it as it is drawn over the member.

2. In a device of the character described, a flat horizontal member, means to support said member at one end thereof leaving the opposite end free and unobstructed, and a device having means to engage and hold the hook of a garment hanger secured at the free end of the horizontal member.

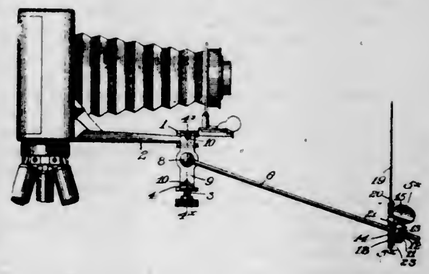
3. In a device of the character described, a flat horizontal member, means to support said member at one end thereof leaving the opposite end free and unobstructed, a device having means to engage and hold the hook on a garment hanger attached to the free end of the horizontal member, a horizontal bar located a distance from said free end of the member and in substantially the same horizontal plane, and means to support the bar in said position.

4. In a device of the character described, a flat horizontal member, a support therefor at one end, a device having means for engaging with the hook of a garment hanger secured at the opposite and free end of the member, a support below the horizontal member, and a bail secured to said support having a horizontal portion positioned a distance from the free end of the horizontal member and in substantially the same plane therewith.

5. In a device of the character described, a member, means to support said member at one end thereof leaving the opposite end free and unobstructed, and a device having means to detachably engage and hold the hook of a garment hanger secured at the free end of the member, whereby bags may be drawn over said member and garments on a garment hanger held by said device and thereafter removed from the member together with the garment and hanger.

[Claim 6 not printed in the Gazette.]

1,169,802. VIGNETTER. FRANK W. GRAY, Detroit, Mich., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 5, 1914. Serial No. 865,022. (Cl. 248—28.)



In a photographic vignetter, the combination with a clamping nut, of a supporting rod and a relatively trans-

verse mask holding rod slidably and rotatably confined by the nut, a set screw coöperating with the nut to simultaneously secure both rods in their respective adjusted positions, an attaching clamp connected to the supporting rod by a friction-spring pivot and a mask clip connected to the other rod by a friction-spring pivot whereby a complete universal movement may be given the mask by manipulating the set screw.

1,169,803. TAKE-UP DEVICE. MAURICE GREENBERG, Philadelphia, Pa. Filed Jan. 16, 1915. Serial No. 2,583. (Cl. 24—135.)



A take-up device, consisting of a base-plate having a threaded shank, a channeled-nut threaded to the shank and having an eye in the rear flanged wall and into which the end of a wire is seated, said nut arranged to take-up slack in the wire by the turning of the channel-nut on said shank and a lock-nut fitted to said shank and adapted to frictionally bear against the front wall of said channel-nut to prevent slackening of said wire.

1,169,804. TOY BALLOON. THOMAS M. GREGORY, Akron, Ohio. Filed Oct. 25, 1915. Serial No. 57,692. (Cl. 46—37.)



1. A toy balloon having an extended neck provided with a valve interiorly thereof, in combination with a carrying member having a head engaged in said neck outside of and apart from said valve.

2. A toy balloon having an open mouth and a passageway for air having a valved closure in its inner portion against the escape of air and a carrying stem having a head engaged in said mouth outside of and apart from the said valved closure.

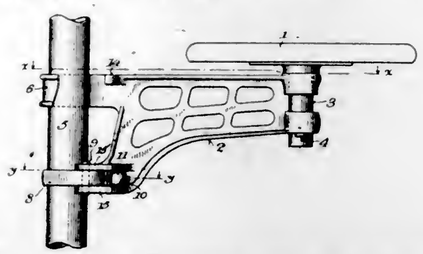
3. A toy balloon having a mouth on the outside thereof and a valve tube secured in said mouth having its inner end projected into the balloon and having flat self-sealing sides, in combination with a stem provided with a tapered head engaged in the said mouth.

4. A toy balloon having a mouth and a self-sealing rubber tube provided with flat sides secured at one end in the wall of said mouth and its outer end projecting into the said balloon apart from said mouth, said mouth having a bead about its edge, in combination with a stem having a head inserted in said mouth and engaged about its outer portion by said bead.

5. A device adapted to carry a toy balloon in an upright position comprising a stem having a head with a tapered side adapted to be inserted in the mouth of the balloon.

[Claims 6 to 9 not printed in the Gazette.]

1,169,805. PORTABLE MILK-STOOL. WILLIAM GUTENKUNST, Milwaukee, Wis. Filed Mar. 31, 1915. Serial No. 18,213. (Cl. 248—19.)



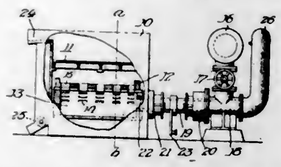
1. In a device of the described class, the combination of a seat supporting bracket, a circular member connected with the upper side of said bracket, a pair of movable clamping arms pivotally connected with the lower side of said bracket, said arms being adapted to impinge against two opposing sides of said vertical standard, and to be prevented by their frictional contact with said standard from moving downward thereon.

2. In a device of the described class, the combination of a seat supporting bracket, a circular member connected with the upper side of said bracket, two clamping arms pivotally connected with the lower side of said bracket, and adapted to impinge against two opposing sides of a vertical standard, and a spring adapted to temporarily retain said clamping arms in contact with said supporting standard.

3. The combination of a seat supporting bracket, a circular member connected with the upper side of said bracket, a pair of clamping arms pivotally connected with the lower side of said bracket, and adapted to engage two opposing sides of a vertical standard, a lug formed integral with each of said clamping arms adapted to contact with said vertical standard, whereby said clamping arms are forced into more rigid contact with said standard, and a spring coöperating with said lugs for temporarily securing said pair of arms to said vertical standard.

4. The combination of a seat supporting bracket, a circular member connected with the upper side of said bracket, a pair of arms pivotally connected with the lower side of said bracket, and adapted to engage two opposing sides of a vertical standard, and a spring adapted to temporarily retain said pair of arms in contact with said vertical standard.

1,169,806. IMPULSE COAL-WASHING MACHINE. ROBERT HAMILTON, Birmingham, Ala. Filed June 11, 1915. Serial No. 33,448. (Cl. 137—7.)

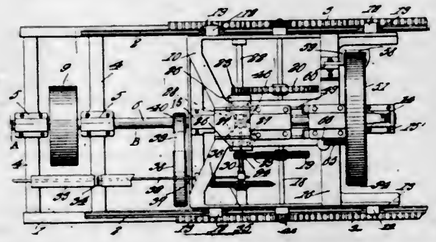


1. In a device of the class described, the combination of a semi-cylindrical valve seat provided with apertures or ports, a hollow cylindrical valve provided with ports adapted to register with ports in said seat in one posipostion, a hollow spindle rigidly connected to said valve, means for oscillating said spindle, said means adapted

to periodically oscillate said valve whereby said valve alternately opens and closes the passages through said valve seat, substantially as described.

2. In a device of the class described, the combination of means for producing a series of regular impulses of water, including a pressure equalizer, a valve in the pressure line, said valve being provided with means for periodically interrupting the flow of water through the valve seat, said valve being hollow and of cylindrical shape and provided with slotted ports in its body, a valve seat, semi-cylindrical in shape and provided with slotted ports with which the ports in said valve are adapted to register in one position of said valve, an arm on said valve adapted for oscillation whereby the passages through the ports of the valve and valve seat are alternately opened and closed, substantially as described.

1,169,807. BAND-SAW MILL. HENRY C. HANSEN, Hoquiam, Wash., assignor to East Hoquiam Shingle Company, Hoquiam, Wash. Filed June 11, 1914. Serial No. 844,530. (Cl. 143—17.)

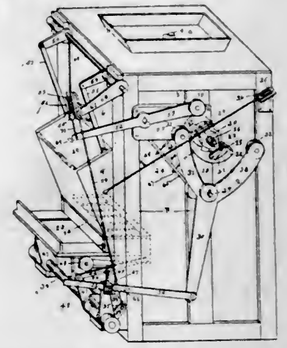


1. The combination with parallel rails and a rack adjacent and parallel with each rail, of a carriage mounted to travel along the rails, a wheel mounted on the carriage, a shaft connected to said wheel and movable with the carriage, said shaft being parallel with the rails, a drive pulley feathered on said shaft, means operated by said shaft for engaging the racks and driving the carriage in either direction along the rails, said means including reversing mechanism, and means held against movement with the carriage, for actuating the reversing mechanism.

2. The combination with parallel rails and a rack adjacent and parallel with each rail, of a carriage mounted to travel along the rails, a wheel mounted on the carriage, a shaft connected to said wheel and movable with the carriage, said shaft being parallel with the rails, a drive pulley feathered on the shaft, fixed bearings supporting the shaft and constituting means for holding the pulley against longitudinal movement with the shaft, a transverse shaft journaled on the carriage, gears revoluble therewith and engaging the racks, a pulley feathered on the drive shaft, means for transmitting motion therefrom in either direction to the gears, said means including a clutch, and means held against movement with the carriage for actuating the clutch.

3. The combination with parallel rails and a rack adjacent and parallel with each rail, of a carriage mounted to travel along the rails, a drive shaft extending from and movable with the carriage, said shaft being parallel with the rails, a wheel revoluble with the shaft and movable with the carriage, stationary bearings slidably engaged by the shaft, a drive wheel feathered on said shaft and held against movement with the shaft by the bearings, a transverse shaft journaled in the carriage, gears carried thereby and engaging the racks, a wheel driven by the drive shaft and movable with the carriage, means for transmitting motion from said wheel to the transverse shaft, reversing mechanism for shifting said means whereby the carriage can be moved in either direction, said mechanism including clutches, a revoluble rod for actuating the clutches, a bracket slidably engaged by the rod, and a lever feathered on the rod and held against movement therewith by the bracket.

1,169,808. BRICK-MACHINE. WILLIS E. HARMON, Portland, Me., assignor, by direct and mesne assignments, to Horace Purinton Co., Waterville, Me., a Corporation of Maine. Filed Feb. 24, 1915. Serial No. 10,227. (Cl. 25—47.)



1. A brick machine, a press box having discharge openings in the bottom, a press box plunger and means for operating it, a mold carriage and means for imparting an oscillating motion to said carriage including as one of its elements a link arranged to slip when the strain exceeds a certain tension.

2. In a brick machine, a press box having discharge openings in the bottom, a press box plunger and means for operating it, a mold carriage, an oscillating mold carriage operating lever having two diverging arms each provided with a cam roll, a cam adapted to engage said rolls alternately and connecting mechanism intermediate said lever and mold carriage including as one of its elements a link arranged to slip when the strain exceeds a certain tension.

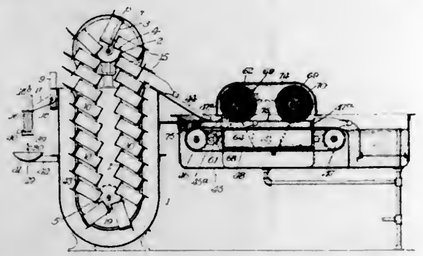
3. In a brick machine, a press box having discharge openings in the bottom, a press box plunger and means for operating it, a mold carriage, an oscillating mold carriage operating lever having two diverging arms each provided with a cam roll, a cam adapted to engage said rolls alternately and connecting mechanism intermediate said lever and mold carriage including a link having a recess, an antifriction roll normally seated in said recess and a yielding clamp arranged to hold said link yieldingly upon said roll, and to allow it to slip when the strain exceeds a certain tension.

4. In a brick machine, a press box having discharge openings in the bottom, a press box plunger and means for operating it, a mold carriage, an oscillating mold carriage operating lever having two diverging arms each provided with a cam roll, a cam adapted to engage said rolls alternately and connecting mechanism intermediate said lever and mold carriage including a link having a recess, an antifriction roll normally seated in said recess and a spring controlled clamp having an antifriction roll arranged to press with yielding tension upon the top of said link, whereby the link will slip between said rolls when the strain exceeds a certain tension.

1,169,809. BOTTLE SOAKING AND WASHING MACHINE. JOSEPH HAUK, Jr., Waukegan, Ill., assignor to Twentieth Century Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed July 13, 1909. Serial No. 507,353. (Cl. 141—7.)

1. In combination with a bottle soaking tank and its endless conveyer and bottle racks thereon, rinsing mechanism located at one side of said tank, movable means adapted to hold bottles and positioned above the rinsing mechanism for rinsing purposes, said means being arranged to move to deliver the bottles, after rinsing, to the bottle racks, and means for supplying rinsing fluid to said mechanism only when the bottle holding means is in rinsing position; substantially as described.

2. In combination with a bottle soaking tank and its endless conveyer and bottle racks thereon, rinsing mechanism including fluid jets, bottle holders located above such mechanism and a frame in which such holders are mounted and which is arranged to swing to deliver the bottles from the holders to the bottle racks, each holder having an opening through its lower end through which the bottle projects into proximity to its fluid jet of the rinsing mechanism.



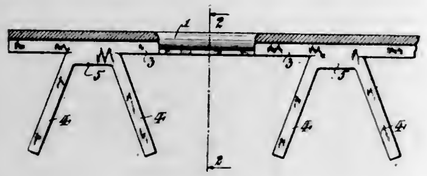
3. In combination with a bottle soaking tank and its endless conveyer and bottle racks thereon, rinsing mechanism including fluid jets, bottle holders located above such mechanism and a frame in which such holders are mounted and which is arranged to swing to deliver the bottles from the holders to the bottle racks, each holder having a projecting portion 16^b which forms a chute in said delivery of the bottles.

4. In combination with a bottle soaking tank and its endless conveyer and bottle racks thereon, rinsing mechanism including fluid jets, bottle holders located above such mechanism and a frame in which such holders are mounted and which is arranged to swing to deliver the bottles from the holders to the bottle racks, each holder comprising a substantially cylindrical shell 16 open at its top and bottom and arranged to receive and hold a bottle.

5. In combination with a bottle soaking tank and its endless conveyer and bottle racks thereon, rinsing mechanism, bottle holders for holding the bottles while being rinsed, means for swinging said holders to the position for the discharge of bottles into a rack, and means for deflecting the jet of water as to any holder not containing a bottle; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

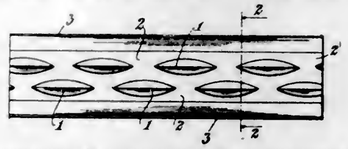
1,169,810. CORNER-BAR. JOHN F. HAVEMEYER, Ardsley-on-Hudson, N. Y. Filed Aug. 20, 1914. Serial No. 857,665. (Cl. 94—2.)



1. A corner bar, for use in concrete construction or the like, having a head and a web normal thereto and means formed integral with the web to retain the bar securely in the concrete, the said means comprising a plurality of pairs of prongs, the prongs of each pair diverging from the web and being united thereto by a base portion which projects from the web and corresponds in width substantially with the width of the prongs, and the distance between any two adjacent base portions being substantially equal to the combined length of the two adjacent prongs of the two corresponding pairs of prongs, the construction thus provided being one in which the prongs may be formed by longitudinally shearing the web and bending the prongs outwardly therefrom.

2. The combination, to form a corner bar, of the facing head 1 of any suitable shape, the longitudinally extending web 3 projecting normally from one face of the head, the bases 5 integral with the web 3, and the prongs 4 providing integral extensions at each end of the bases 5, the two prongs corresponding to each base diverging to produce a secure anchorage for the bar and the distance between any two adjacent bases being substantially equal to the combined length of the two prongs extending from the adjacent ends of said bases.

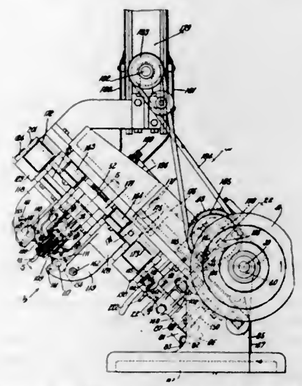
1,169,811. REINFORCING-BAR FOR CONCRETE. JOHN F. HAVEMEYER, Ardsley-on-Hudson, N. Y. Filed Oct. 9, 1914. Serial No. 865,781. (Cl. 72—111.)



1. A relatively flat reinforcing bar substantially rectangular in cross section and having a pair of straight longitudinally extending ridges and a plurality of relatively small deformations, separate from each other and from the ridges, on at least one of its broader faces, the ridges being of uniform height and extending above the tops of the deformations, whereby the bar may be passed smoothly between bending rollers and be bent without interfering with the deformations.

2. A relatively flat reinforcing bar substantially rectangular in cross section and having a pair of longitudinally extending ridges on each of its two broader faces and a plurality of relatively small separate deformations between each pair of ridges and arranged relatively to each other to preserve a uniform cross sectional area throughout the bar, the ridges being of uniform height, whereby the bar may be passed smoothly between bending rollers and be bent without interfering with the deformations.

1,169,812. LACING-HOOK DOUBLE-SET MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to American Lacing Hook Co., a Corporation of New Jersey. Filed Mar. 2, 1915. Serial No. 11,590. (Cl. 218—17.)



1. A machine for setting lacing hooks in the upper of a boot or shoe having, in combination, a pair of oppositely disposed punching dies, a pair of punches and a pair of anvils interposed between said punching dies and arranged to coact therewith and mechanism constructed and arranged to move said dies toward and away from each other, whereby when two flaps of said upper are inserted, one between each die and its respective punch, a hole will be punched in each of said flaps, and mechanism constructed and arranged to drive a lacing hook onto each of said punches and into said holes.

2. A machine for setting lacing hooks in the upper of a boot or shoe having, in combination, a pair of oppositely disposed punching dies, a pair of punches and a pair of anvils interposed between said punching dies and arranged to coact therewith, mechanism constructed and arranged to move said dies toward and away from each other, whereby when two flaps of said upper are inserted, one between each die and is respective punch, a hole will be punched in each of said flaps and said flaps will be forced onto said punches, mechanism constructed and arranged to drive a lacing hook onto each of said punches and into each of said holes, and means constructed and arranged to remove said flaps with said lacing hooks from said punches.

3. A machine for setting lacing hooks in the upper of a boot or shoe having, in combination, a pair of oppositely disposed punching dies, a pair of punches and a pair of anvils interposed between said punching dies and arranged to coact therewith, mechanism constructed and arranged to move said dies toward and away from each other, whereby when two flaps of said upper are inserted, one between each die and its respective punch, a hole will be punched in each of said flaps and said flaps will be forced onto said punches, mechanism constructed and arranged to drive a lacing hook onto each of said punches and into each of said holes, and means constructed and arranged to move said punches laterally thereof whereby said upper may be fed.

4. A machine for setting lacing hooks in the upper of a boot or shoe having, in combination, a pair of oppositely disposed punching dies, a pair of punches and a pair of anvils interposed between said punching dies and arranged to coact therewith, mechanism constructed and arranged to move said dies toward and away from each other, whereby when two flaps of said upper are inserted, one between each die and its respective punch, a hole will be punched in each of said flaps and said flaps will be forced onto said punches, mechanism constructed and arranged to drive a lacing hook onto each of said punches and into each of said holes, means constructed and arranged to move said punches laterally thereof whereby said upper may be fed, and means constructed and arranged to remove said flaps from said punches.

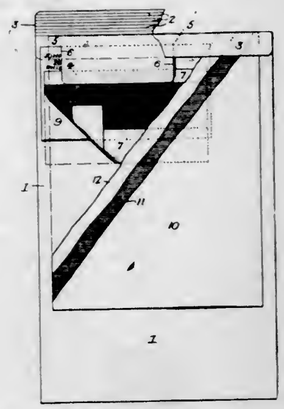
5. A machine for setting lacing hooks in the upper of a boot or shoe having, in combination, a pair of oppositely disposed punching dies, a pair of punches and a pair of anvils interposed between said punching dies and arranged to coact therewith, mechanism constructed and arranged to move said dies toward and away from each other, whereby when two flaps of said upper are inserted, one betwen each die and its respective punch, a hole will be punched in each of said flaps and said flaps will be forced onto said punches, mechanism constructed and arranged to drive a lacing hook onto each of said punches and into each of said holes, means constructed and arranged to move said punches and lacing hooks laterally thereof whereby said upper may be fed, means arranged to hold said flaps and lacing hooks on their respective punches during the feeding movement and means constructed and arranged to subsequently remove said flaps and lacing hooks from said punches.

[Claims 6 to 49 not printed in the Gazette.]

1,169,813. MANIFOLD-COPYING DEVICE. GEORGE W. HAZEL, Camden, N. J., assignor to American Addressabak Company, a Corporation of Delaware. Filed July 10, 1911. Serial No. 637,681. (Cl. 11—23.)

1. A backing element for use in manifold copying and serving to support and position a letter sheet, carbon sheet, and a copy-receiving sheet, said backing element having a flap portion forming an envelop positioning means and provided with transfer material so disposed as to transfer an impression upon an envelop positioned thereunder.

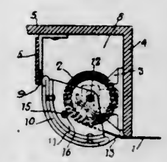
2. A backing element for use in manifold copying and serving to support and position a letter sheet carbon sheet and copy-receiving sheet, said backing element having a flap portion forming an envelop positioning means, and transfer material carried by said flap portion and disposed for the transfer of an impression upon an envelop positioned thereunder.



3. A backing element for use in manifold copying and serving to position and support a letter sheet carbon sheet and copy-receiving sheet, said backing element having a flap portion forming an envelop positioning means, and a sheet attached to the free edge of said flap portion and forming an extension thereof and having transfer material thereon so disposed as to transfer an impression upon an envelop positioned thereunder.

4. A backing element for use in manifold copying and serving to support and position a letter sheet carbon sheet and copy-receiving sheet, said backing element having a cut-out flap portion forming an envelop positioning means, and a carbon transfer sheet carried by said flap portion and positioned so that an address written upon the letter sheet may be simultaneously transferred to an envelop disposed beneath the carbon transfer sheet.

1,169,814. SHIELD FOR VESTIBULE-CURTAINS. JACOB D. HEATER, Dayton, Ohio, assignor to The Barney and Smith Car Company, Dayton, Ohio, a Corporation of West Virginia. Filed Oct. 3, 1914. Serial No. 864,725. (Cl. 156—10.)

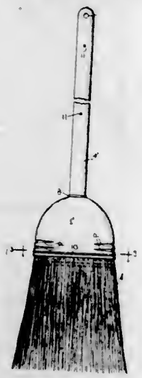


1. A shield for a curtain roller comprising a housing having walls within which said roller is mounted, the adjacent edges of two of said walls being spaced apart, said housing also having a wall mounted on an axis and adapted to be moved into and out of the space between said edges, one portion of said last-mentioned wall having a radius slightly greater than the distance between said axis and one of the said adjacent edges, and the remaining portion of said wall having a radius slightly less than that distance, whereby said first portion of said wall will engage the last-mentioned adjacent edge to limit the movement of said wall and to form a tight joint at the engaging portions.

2. A shield for a curtain roller comprising a housing having walls, the adjacent edges of two of said walls being spaced apart, said housing also having a closure comprising a plate mounted for swinging movement about an axis to enable it to be moved across the space between

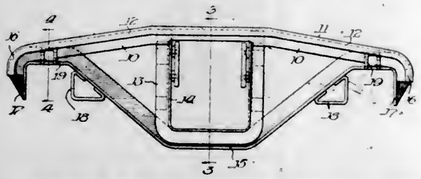
said adjacent edges, the radius of the rear edge of said plate being of greater length than the radius of the forward portion thereof and being so arranged with relation to one of said adjacent edges that when said plate is in its extended position said rear edge thereof will engage said last-mentioned adjacent edge and form a tight joint.

1,169,815. BROOM. JASPER F. HECKMAN, Henryville, Pa. Filed May 26, 1914. Serial No. 841,034. (Cl. 189—29.)



A broom of the character described comprising in combination, two equiform sheet metal shells with rounded edges which combined form a half oval holding member from each of which extends a half tubular handle forming stem, said shells being provided within opposite edges with sets of parallel extending grooves of gradually reduced depth each set of grooves being of a progressively greater distance apart, means to secure said stems, a broomhead having its upper end held between said shells which are normally held in divergent spaced relation, said grooves forming ribs upon the inner sides of said shells embedded within said head, and an annulus sprung into one of said sets of grooves clamping the same upon said broomhead, as and in the manner set forth.

1,169,816. SIDE FRAME. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed May 10, 1915. Serial No. 26,930. (Cl. 105—243.)



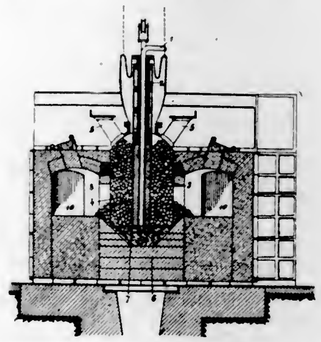
1. In a side frame, the combination of a compression member composed of two bulb angles placed back to back, a tension member of rolled or pressed form, and a strut interlocking the said compression and tension members, the parts being rigidly united to form a substantially integral structure, substantially as described.

2. In a side frame, the combination of a compression member composed of two angular shapes, a tension member of a single angular shape, one flange of said tension member being accommodated between the elements of the compression member at the ends of the frame, and a strut separating said members, said strut being composed of two angles, each of which is bent into U-shape, said members being then welded together and welded to the compression and tension members of the frame, substantially as described.

3. In a side frame, the combination of a compression member composed of a pair of bulb angles placed back to back, a tension member of T-shape, the leg of the T being accommodated between the two elements of the compression member at the ends of the frame, and a strut composed of two members, the upper ends of which are accommodated between the elements of the compression member, substantially as described.

4. In a built-up side frame, the combination of tension and compression members and a strut, and a brake hanger bracket composed of a plurality of bars, one end of each of which is welded to the said strut, the other ends of said bars being spaced apart and apertured to accommodate a hanger pin, substantially as described.

1,169,817. METHOD OF CARRYING OUT GAS REACTIONS IN AN ELECTRIC FURNACE. ALOIS HELFENSTEIN, Vienna, Austria-Hungary. Filed Nov. 18, 1911. Serial No. 660,999. (Cl. 204—31.)



1. The process of producing gas reactions at high temperatures in electric low tension furnaces consisting in blowing the gases to be brought to reaction into a molten bath, the molten bath being adapted to participate in the reaction as a contacting agent and as a component of the reaction, and leading the highly heated gases and gaseous products of the reaction through solid granular materials above said bath, substantially as described.

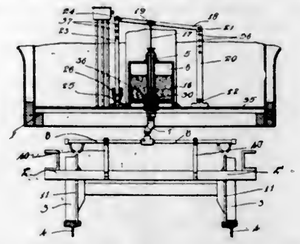
2. The process of producing gas reactions at high temperatures in electric low tension furnaces consisting in blowing the gases to be brought to reaction into a molten slag bath, floating coal on said bath as contacting material, uniting the components in an undisturbed process, and finally recovering the products, substantially as described.

3. The process of producing gas reactions at high temperatures in electric low tension furnaces, consisting in blowing the gases to be brought to reaction into a molten quartz bath, and in finally recovering the products, substantially as described.

4. The process of producing gas reactions at high temperatures in electric low tension furnaces, consisting in blowing nitrogen into a molten quartz bath blowing the gases to be brought to reaction into a bed of solid-granular materials above the molten bath serving as contacting agents and components of reaction, and effecting reactions of said granular material and finally recovering the products.

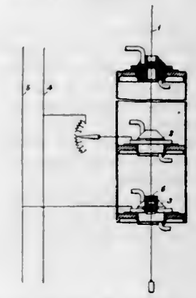
1,169,818. FLANGE-OILING DEVICE. JOHN S. HENDERSON, Los Angeles, Cal., assignor of forty-nine one-hundredths to George W. Lee, Los Angeles, Cal. Filed July 11, 1914. Serial No. 850,439. (Cl. 184—3.)

In a flange oiling device, a pipe extending above the flange to be oiled, a nozzle connected to said pipe and extending downwardly toward the flange, a flap valve closing the lower end of the nozzle and opening toward the flange, an arm secured to the nozzle and projecting across the flap valve in spaced relation thereto, a spring connected to said arm and bearing against the flap valve to hold the same closed, and means to regulate the outward



movement of the spring whereby the outward movement of the flap valve is controlled.

1,169,819. PROCESS OF PREPARING METALLIC FILAMENTS. ROBERT H. HENDERSON, East Orange, N. J., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed Dec. 5, 1910. Serial No. 595,629. (Cl. 205—21.)



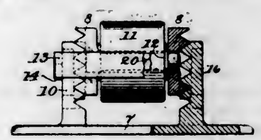
1. The process of preparing filamentary structures containing a metal having a high fusing point which consists in first producing the material in filamentary form, and then heating the same while mechanically working it.

2. The process of preparing filamentary structures consisting of a metal having a high fusing point which consists in first producing the material in filamentary form and then heating the same to a high temperature and mechanically compacting it while heated.

3. The process of treating filamentary structures containing a metal having a high fusing point which consists in heating the same to a high temperature and mechanically compacting it while heated.

4. The process of treating filamentary structures containing a metal having a high fusing point which consists in passing an electric current through it to heat it to a high temperature and mechanically compacting it while heated.

1,169,820. SIDE BEARING FOR RAILWAY-CARS. JOHN J. HENNESSEY, Milwaukee, Wis. Filed Sept. 16, 1915. Serial No. 50,930. (Cl. 64—64.)



1. In a side bearing for railway cars the combination of a base member having horizontally tongued and grooved vertical walls and a vertically adjustable bearing member having correspondingly tongued and grooved sides removably fitting the tongued and grooved walls of the base member.

2. In a side bearing for railway cars the combination of a base member having opposing horizontally tongued and grooved vertical walls and a reversible bearing member having correspondingly tongued and grooved sides removably fitting the tongued and grooved walls of the base member, the tongues and grooves of the bearing member being unequally spaced relative to its bearings.

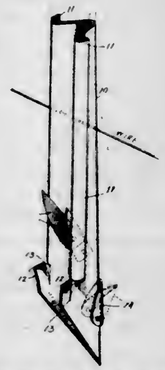
3. In a side bearing for railway cars the combination with a bolster of a base member having opposing horizontally tongued and grooved vertical walls curved concentrically with the center of the bolster, and a bearing member having correspondingly tongued and grooved and curved sides removably fitting the tongued and grooved walls of the base member and vertically adjustable relative thereto.

4. In a side bearing for railway cars the combination of a base member having opposing horizontally tongued and grooved vertical walls, a vertically adjustable bearing member having correspondingly tongued and grooved sides removably fitting the tongued and grooved walls of the base member, and means for locking the bearing member in adjusted position in the base member.

5. In a side bearing for railway cars the combination of a base member having horizontally tongued and grooved vertical walls, a bearing member having correspondingly tongued and grooved sides removably fitting the tongued and grooved walls of the base member, said members being formed in their tongued and grooved faces with vertical key grooves, and a key fitting the registering vertical grooves and adapted to lock the bearing member in place in the base member.

[Claims 6 to 9 not printed in the Gazette.]

1,169,821. FENCE-POST. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 30, 1913. Serial No. 798,269. (Cl. 15—19.)

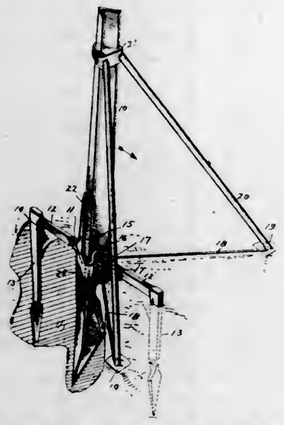


A metal post having a V-shape in cross section with the free edges bent so as to form vertical flanges that lie substantially parallel with the sides of the V, the post having at its lower end shoulders where the flanges terminate, the bottom of the flange lying in the same horizontal plane with the top of the shoulder and a slit extending from such plane downward, the flange and shoulder extending in opposite directions horizontally from said slit.

1,169,822. FENCE-POST. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Mar. 18, 1914. Serial No. 825,507. (Cl. 189—31.2.)

1. As an improvement in fences, the combination of an anchor having a V-shaped collar adapted to accommodate a post of similar shape, a horizontally extending ground-

engaging arm integral with said collar, and a downwardly and inwardly inclined arm whose inclination is in the direction in which the post tends to move under the pull of the fence, a filling block or key adapted to lie within the post and engage the sides thereof and a projection on said collar, a brace comprising a horizontal member that engages at one end an eye on the collar, and an inclined member that at its lower end engages said horizontal member and at its upper end has a bearing for the post.



2. In a device of the class described, the combination of an anchor having a horizontal ground-engaging arm and a downwardly-extending fluke, means connecting the horizontal arm and a post, a brace including a member that is adapted to engage the post and extend therefrom at an incline downward to the ground, and a vertical arm connected with the anchor and adapted to engage the post on its side opposite that where the brace engages it.

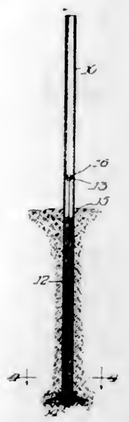
3. In a device of the class described, the combination of an anchor having a collar adapted to accommodate a post, a horizontal arm with the collar, and a downwardly and laterally inclined arm, the inclination being in the direction in which the post tends to move under the pull of the fence, a brace including a member that engages the post and extends therefrom downwardly and outwardly to the ground, and a vertical arm integral with the anchor collar that is adapted to engage and support the post on the side opposite that engaged by the brace.

1,169,823. FENCE-POST. PERCY J. HINDMARSH, Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed June 23, 1915. Serial No. 35,771. (Cl. 189—31.)

1. In a fence post, the combination of a spreader of angular cross section and provided with wings at its lower end, said spreader being provided with a transverse web near its upper end, and a tubular post adapted to be driven over said spreader, substantially as described.

2. In a device of the class described, the combination of a spreader of angular cross section and provided at its lower end with wings corresponding to the webs of the spreader, a transverse wall near the upper end of said spreader, and a tubular post adapted to be driven over said spreader, substantially as described.

3. In a device of the class described, the combination of a spreader of cruciform cross section and provided with wings at its lower end, one for each of the webs of the shank of the spreader, transverse webs uniting the vertical webs of said spreader, and a tubular post having a slitted lower end and adapted to be driven over said spreader, the wings on said spreader being adapted to cause the lower end of said post to flare and the transverse webs being adapted to cause the soil to pack between the post and the spreader, substantially as described.

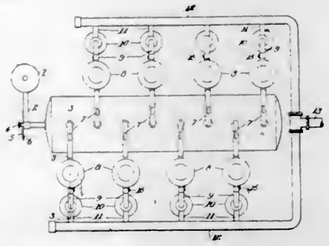


4. In a device of the class described, the combination of a spreader of cruciform cross section and provided with wings at its lower end, the number of said wings corresponding to the number of webs in the shank of said spreader, transverse webs uniting the longitudinal webs of the spreader near the upper end thereof, and a tubular post, the lower end of which is slitted and adapted to be flared upon being driven over said spreader, substantially as described.

5. In a device of the class described, the combination of a spreader of cruciform cross section, and a tubular post adapted to be driven thereover, said post being flattened on one side near its lower end to prevent relative rotary movement between the spreader and the post, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,169,824. APPARATUS FOR ELECTRICALLY TREATING AIR. WILLIAM T. HOOFNAGLE, Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y., a Corporation of New York. Filed Apr. 23, 1915. Serial No. 23,341. (Cl. 204—31.)



1. An apparatus for electrically treating air, gases, or vapors comprising a reaction chamber, means for closing the same to confine a charge of the fluid to be treated therein, means for passing an electric current through the fluid in the chamber while closed, and means controlled by chemical change in the fluid within the chamber for cutting off the current.

2. An apparatus for electrically treating air, gases, or vapors comprising a reaction chamber, means for closing the same to confine a charge of the fluid to be treated therein, means for passing an electric current through the fluid in the chamber while closed, and means responsive to an increase in pressure in the chamber due to chemical change in the fluid therein for cutting off the current.

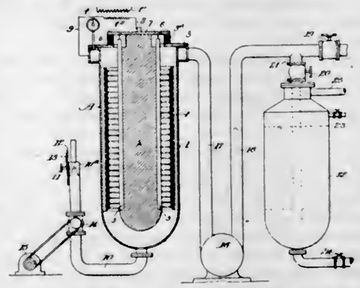
3. An apparatus for electrically treating air, gases or vapors comprising a reaction chamber, means for opening and closing the same at intervals to admit and confine successive charges of the fluid to be treated therein, means for passing an electric current through each confined charge including a switch, and means controlled by variation in pressure in the reaction chamber due to chemical change in the fluid therein for releasing said switch to stop the flow of current through said chamber.

4. An apparatus for electrically treating air, gases or vapors comprising a reaction chamber, means for opening and closing the same at intervals to admit and confine successive charges of the fluid to be treated therein, means for passing an electric current through each confined charge including a relay switch, a pressure gage connected to the reaction chamber, and a switch operated by said gage adapted to control the releasing circuit of said relay switch.

5. An apparatus for electrically treating air, gases or vapor comprising a reaction chamber, means for closing the same to confine a charge of the fluid to be treated therein, means for passing an electric current through the fluid in the chamber while closed, and means controlled by change in pressure in the chamber for cutting off the current comprising a pressure gage connected to the chamber, a contact member movable by the gage, an adjacent contact member movable back and forth with said first mentioned member, said members having contact surfaces adapted to engage in one direction of movement but not in the other, and electrical means controlled by said members for interrupting the current flow through said chamber.

[Claims 6 to 18 not printed in the Gazette.]

1,169,825. METHOD AND APPARATUS FOR MAKING OZONE. WILLIAM T. HOOFNAGLE, Glen Ridge, N. J., asignor to Electro-Chemical Products Company, New York, N. Y., a Corporation of New York. Filed Apr. 23, 1915. Serial No. 23,342. (Cl. 204—32.)



1. The method of making ozone which comprises drawing air through a reaction chamber, rapidly checking and releasing the flow to cause surging of the air while passing through the chamber, and passing an electric current through the air therein.

2. The method of making ozone which comprises passing air through a reaction chamber, causing rapid expansion and compression of the air while passing through the chamber, and passing an electric current through the air therein.

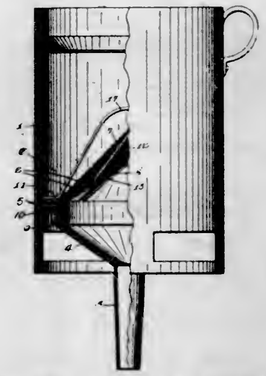
3. The method of making ozone which comprises drawing air in a rarefied state through a reaction chamber, rapidly checking and releasing the flow to cause surging of the air while passing through the chamber, and passing an electric current through the air therein.

4. In an apparatus for making ozone, a reaction chamber having inlet and outlet openings, means for passing a current of air through said chamber, means for rapidly checking and releasing the flow to cause surging of the air within the chamber and means for passing an electric current through the air in the chamber.

5. In an apparatus for making ozone, a reaction chamber having inlet and outlet pipes, means for passing a current of air through said chamber and pipes, means in one of said pipes for causing surging of the air, and means for passing an electric current through the air in the chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,169,826. GASOLENE-FILTER. THOMAS J. HORAN, Syracuse, N. Y. Filed June 2, 1913. Serial No. 771,168. (Cl. 210—16.)



1. A gasolene filter comprising a receptacle and a filter device in the receptacle above the bottom thereof, said device comprising a mesh screen inclined downwardly toward the sides of the receptacle and a fibrous screen impervious to water located beneath the mesh screen and inclined toward the sides of the receptacle, the impervious screen, being of less incline than the mesh screen and meeting the mesh screen near the lower edge thereof, substantially as and for the purpose specified.

2. A gasolene filter comprising a receptacle and a filter device in the receptacle above the bottom thereof, said device comprising of two screens arranged one above the other and inclined downwardly toward the sides of the receptacle, the screens meeting at their lower margins and the receptacles being formed with a channel at the bases of the screens for receiving the matter shed by both said screens, substantially as and for the purpose specified.

3. A filter comprising a receptacle having an inwardly extending flange, a bottom depending from the flange and having an outlet, and a filter device including a frame arranged to fit said flange above the bottom and being removable therefrom, and a screen carried by the frame and inclined downwardly toward its margin to discharge onto said flange, substantially as and for the purpose set forth.

4. A gasolene filter comprising a receptacle, a filter device arranged in the receptacle and removable therefrom and including a screen, and means for tightening the screen as the filter is moved into its final position in the receptacle, substantially as and for the purpose specified.

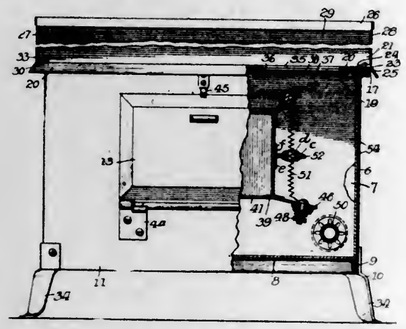
5. A gasolene filter comprising a receptacle formed with an internal flange, a filter device arranged to fit in the receptacle and being removable therefrom and including inner and outer rings arranged to fit the flange, and the screen stretching across the inner ring and having its margin held between the rings, substantially as and for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,169,827. ELECTRICAL STOVE. GEORGE A. HUGHES, Chicago, Ill., assignor to Hughes Electric Heating Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 14, 1915. Serial No. 21,204. (Cl. 219—35.)

1. In an electrical stove, the combination of a body comprising front, rear, side and bottom walls, the front wall having an opening, an oven structure secured to the front wall and extending into the body and having an in-

let in registration with said front wall opening, a door on the front wall for closing the oven structure, a plate mounted on the tops of said walls and having circular utensil sections, said sections being perforated for the passage of light and heat, and a resistance conductor within said body mounted on the oven structure and adapted for connection with a current supply circuit, the heat from said resistance conductor passing through the walls of the oven structure to the interior thereof and passing upwardly through said utensil section perforations.



2. In an electrical stove, the combination of a stove body comprising side, rear and bottom walls, a downwardly extending flange formed at the front of said bottom, a front wall having an upwardly directed tongue at its bottom for hooking around said flange for securing the bottom of said front wall to the bottom, and a top for said stove adapted to be secured to the front wall to hold the top thereof in place.

3. In an electrical stove, the combination of a rectangular body having utensil openings in its top, an oven structure within the body accessible from the exterior of the body, and uncovered heating conductors at the outside of the oven structure for heating the interior thereof, there being considerable air space between said oven structure and the stove body for circulation whereby part of the heat generated by said heating conductors will be carried through said utensil openings.

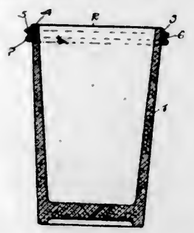
4. In an electrical stove, the combination of a rectangular sheet metal body having utensil openings in its top, a sheet metal oven structure within the body and accessible from the exterior thereof, electrical heating conductors surrounding said oven structure and spaced therefrom and from the utensil openings to apportion the generated heat between said oven and said openings.

5. In an electrical stove, the combination of a rectangular sheet metal body having utensil openings at its top and an opening in one of its sides, a rectangular sheet metal oven structure within the body having an open side communicating with said body side opening, said oven structure being considerably smaller than the body in order to leave considerable intervening air space, and uncovered resistance conductors mounted on the outside of said oven structure, said conductors being spaced from the oven walls and from said utensil openings to apportion the generated heat between them.

[Claim 6 not printed in the Gazette.]

1,169,828. CLOSURE FOR BOTTLES AND JARS AND METHOD OF AFFIXING SAME. HERBERT H. HULL, Cleveland, Ohio, assignor to The Perfection Cap & Can Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 13, 1912. Serial No. 736,576. (Cl. 215—82.)

1. As an article of manufacture, a closure for receptacles of the character described, comprising a cover provided with a downwardly extending flange adapted to surround the mouth of the receptacle, said flange being formed with a relatively shallow encircling corrugation adapted to be rendered deeper upon being compressed and having its convex face directed inwardly; and an annular gasket located within said flange in line with such corrugation and adapted normally to slip over such receptacle-mouth, such corrugation being adapted upon being thus compressed to force said gasket bodily inward into engagement with such mouth.



2. As an article of manufacture, a closure for receptacles of the character described, comprising a cover provided with a downwardly extending flange adapted to surround the mouth of the receptacle, said flange having its lower edge formed with an inturned bead, and, above such bead, with a relatively shallow encircling corrugation adapted to be rendered deeper upon being compressed in a direction at right angles to the cover and having its convex face directed inwardly; and an annular gasket located within said flange above the bead thereon and in line with such corrugation, said gasket being adapted normally to slip over such receptacle-mouth and such corrugation being adapted upon being thus compressed to force said gasket bodily into engagement with such mouth.

3. The combination with a receptacle of the character described, of a closure comprising a cover provided with a downwardly extending flange surrounding the mouth of said receptacle, such flange being formed with an encircling corrugation having its convex face directed inwardly; and an annular gasket located within said flange in line with such corrugation, the latter being compressed so as to force said gasket bodily inward into engagement with such receptacle neck.

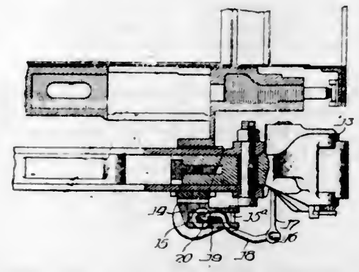
4. The combination with a receptacle of the character described, of a closure comprising a cover provided with a downwardly extending flange surrounding the neck of said receptacle, said flange having its lower edge formed with an inturned bead and, above such bead with an encircling corrugation having its convex face directed inwardly; and an annular gasket located within said flange above the bead thereon and in line with said corrugation, the latter being compressed so as to force said gasket bodily inward into engagement with such receptacle neck.

5. The method of affixing to a receptacle of the character described a closure comprising a cover provided with a downwardly extending flange adapted to surround the mouth of said receptacle, which consists in preliminarily forming such flange with a relatively shallow encircling corrugation adapted to be rendered deeper upon being compressed, such corrugation having its convex face directed inwardly; locating an annular gasket within said flange in line with such corrugation, said gasket being adapted normally to slip over the receptacle-mouth, placing said cover with said gasket in place over such receptacle-mouth, and thereupon compressing such corrugation to force said gasket bodily inward into engagement with such mouth.

[Claim 6 not printed in the Gazette.]

1,169,829. UNCOUPLING DEVICE. ROBERT E. L. JANNEY, Chicago, Ill., and EDMUND P. KINNE, Alliance, Ohio, assignors to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed July 2, 1914. Serial No. 848,540. (Cl. 213—59.)

1. In a device of the class described, the combination of a lock-operating rod extending longitudinally of the car and having an S-shaped bend in one end, a transverse rod having an eye, said first rod overlying and engaging the eye in said second rod, whereby said rods are permitted relative movement through at least 90° but are positively rotatively connected in an opposite direction, said rods being supported at their junction beneath the coupler with provision for freedom of movement relative to the support, substantially as described.



2. In a device of the class described, the combination of a coupler having a depending lock-operating rod, a longitudinal rod having a connection permitting oscillation between said lock-operating and said longitudinal rods, a transverse rod, said transverse rod being mounted for horizontal sliding movement in a longitudinal direction, and means extending to the side of the car and connected to said transverse rod for imparting movement to said rods, substantially as described.

3. In a device of the class described, the combination of a longitudinal rod having an S-shaped bend in one end thereof, a transverse rod having an eye engaging said S-bend and arranged to permit relative movement through at least 90°, said transverse rod being provided with eyes in its ends, and rods extending to the side of the car and engaging said transverse rod, the connection between said last named rods likewise permitting relative rotation through at least 90°, substantially as described.

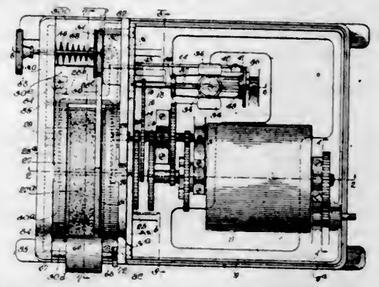
4. An uncoupling device for car couplers comprising a coupler-lock operating-rod extending longitudinally of the car, an endwise movable rock bar extending transversely of the car and connected intermediate of its ends to the coupler-lock operating-rod and provided at its ends with eyes, bearings for the rock bar, said bearings being mounted independently of the car coupler and the rock bar being capable of endwise movement through said bearings, and operating-rods extending to the respective sides of the car and provided with eyes hooked into the respective eyes of the rock bar and constituting rotative connections therewith, each of said rotative connections being positive in one direction but permitting limited rotation in the opposite direction.

5. In combination with a coupler, a lock operating rod extending longitudinally of the car, a transverse rod having an eye in each end and near its middle, said longitudinal rod being connected to said intermediate eye by means of an S-bend, and rods connected to the eyes in the ends of the transverse rod and providing a knuckle joint, said rods extending from said transverse rod to the side of the car, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,830. AUTOMATIC SELF-DRIVEN FILLET-MACHINE FOR APPLYING METALLIC LEAF. ADELBERT S. JAQUITH, Boston, Mass., assignor to Matthew H. Swift, Hartford, Conn. Filed Mar. 18, 1915. Serial No. 15,253. (Cl. 41—7.)

1. A machine of the character stated comprising a fillet-feeding member, a motor constantly engaged with said member to impart a feeding movement thereto, means yieldingly supporting the feeding member in a normal position and permitting its displacement therefrom by pressure on said member, and motor-controlling means associated with said supporting means and acting to prevent the action of the motor when the feeding member is in its normal position, and to permit the action of the motor and the feeding movement of the feeding member thereby when the feeding member is displaced from its normal position.



2. A machine of the character stated comprising a fillet-feeding member, a motor constantly engaged with said member to impart a feeding movement thereto, means yieldingly supporting the feeding member in a normal position and permitting its displacement therefrom by pressure on said member, motor-controlling means associated with said supporting means and acting to prevent the action of the motor when the feeding member is in its normal position, and to permit the action of the motor and the feeding movement of the feeding member thereby when the feeding member is displaced from its normal position, and speed-governing means associated with said motor-controlling means and acting to regulate the speed of the motor and feeding member.

3. A machine of the character stated comprising an oscillatory lever formed as a frame and fulcrumed on a fixed support, a fillet-feeding drum journaled in one arm of said lever and having a gear concentric with its axis, said drum and gear being shiftably supported by the lever, a motor including a shaft journaled in fixed bearings in alinement with the fulcrum of said lever and provided with a gear meshing constantly with the drum gear, yielding means supporting the lever and drum in a normal position and permitting the displacement of the drum from said position by pressure on the drum, and motor-controlling means associated with said yielding means and lever, and acting to prevent the action of the motor when the drum is in its normal position, said controlling means permitting the action of the motor and the rotation of the drum thereby when the drum is displaced from its normal position.

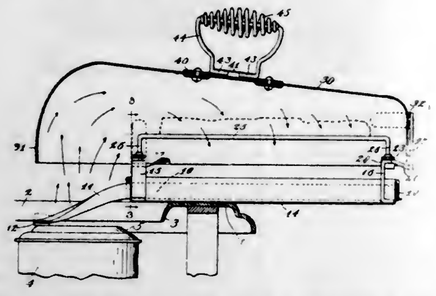
4. A machine of the character stated comprising an oscillatory lever formed as a frame and fulcrumed on a fixed support, a fillet-feeding drum journaled in one arm of said lever and having a gear concentric with its axis, said drum and gear being shiftably supported by the lever, a motor including a shaft journaled in fixed bearings in alinement with the fulcrum of said lever and provided with a gear meshing constantly with the drum gear, yielding means acting on the other arm of said lever to yieldingly support the drum in a normal position, a motor-controlling shaft geared to the motor and having a brake flange, a brake shoe coöperating with said flange, and connections between the said brake shoe and lever acting to press the shoe against the brake flange and stop the motor when the drum and lever are displaced from their normal position.

5. A machine of the character stated comprising an oscillatory lever formed as a frame and fulcrumed on a fixed support, a fillet-feeding drum journaled in one arm of said lever and having a gear concentric with its axis, said drum and gear being shiftably supported by the lever, a motor including a shaft journaled in fixed bearings in alinement with the fulcrum of said lever and provided with a gear meshing constantly with the drum gear, yielding means acting on the other arm of said lever to yieldingly support the drum in a normal position, a motor-controlling shaft geared to the motor and having a brake

flange, a brake shoe coöperating with said flange, connections between the said brake shoe and lever acting to press the shoe against the brake flange and stop the motor when the drum and lever are displaced from their normal position, said brake shoe being movable longitudinally of the said controlling shaft, and centrifugal speed-governing means associated with said shaft and flange, and adapted to press the flange against the shoe when the motor is running.

[Claims 6 to 17 not printed in the Gazette.]

1,169,831. BROILING DEVICE. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed Feb. 15, 1912. Serial No. 677,798. (Cl. 53—5.)



1. In a broiler, the combination of a substantially horizontal food supporting table or grid, a gas retaining hood having a closed top and depending sides, said sides being formed to permit the escape of heated gases and an end of said hood being extended so as to receive at one end of said food supporting table or grid the column of heated gases arising from a suitable source of heat, means carried by said table or grid for supporting said hood with its gas escape portions at a lower level than the upper surface of said table or grid, and a drip pan below such table or grid and at a lower level than said escape portions.

2. In a broiler, the combination of a substantially horizontal food support having supporting members connected to the food support and provided with seats for a hood located at a lower level than the top of the food support, a hood having a closed top and sides and a substantially horizontal lower edge adapted to rest upon the seats, an end of said hood being extended so as to receive at one side of the food support the column of heated gases arising from a suitable source of heat, and a drip pan below the food support and below the lower edge of the hood.

3. In a broiler, in combination, a metallic frame having forwardly extending downwardly inclined arms adapted to enter an aperture in a stove top, the ends of said arms being formed with hooked portions adapted to engage the sides of said aperture, a drip pan carried by said frame, a grid mounted above said frame, a hood supported above sad grid and having dependent sides inclosing the grid, the lower edges of said hood being substantially horizontal and located below said grid and the forward end of said hood being extended so as to overhang the aperture in said stove plate.

4. In a broiler, in combination, a metallic frame having forwardly extending downwardly inclined arms adapted to enter an aperture in a stove top, the ends of said arms being formed with hooked portions adapted to engage the sides of said aperture, a drip pan carried by said frame, a grid mounted above said frame, a hood supported above said grid and having dependent sides inclosing the grid, the lower edge of said hood being substantially horizontal and located below said grid, and the forward end of said hood being extended so as to overhang the aperture in said stove plate, the top of said hood being inclined and having its highest portion above said aperture.

5. In a broiler, the combination of a grid, a pair of downwardly inclined arms adapted to enter an aperture in a stove top and provided with projections adapted to engage the sides of said aperture, a drip pan beneath the grid and having its bottom above the projections of the arms so as to rest on the stove top when the projections are so engaged with the sides of the aperture, and a hood above the grid and having its lower edge below the grid and above the drip pan and having an extension adapted to overhang the aperture in the stove top to receive the heated gases discharged through such aperture.

[Claims 6 to 8 not printed in the Gazette.]

1,169,832. PIANO FELT DAMPER. ALBERT JOHNSON, New York, N. Y. Original application filed Sept. 7, 1912, Serial No. 719,188. Divided and this application filed May 7, 1913. Serial No. 766,179. (Cl. 84—100.)



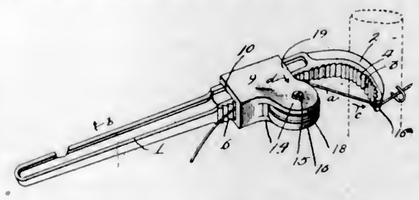
1. A damper for pianos, comprising a block severed from sheet felt along planes approximately at right angles to the original surfaces thereof, and tapered from one of said planes as a base, the block being mounted by said base on the damper lever in position to move therewith on a line substantially perpendicular to the plane of the base.

2. A damper for pianos, comprising a block severed from sheet felt along a plane approximately at a right angle to one of the original surfaces of the felt, said block being trimmed from said plane as a base, and mounted by said base on the damper lever to act upon a piano-string with its trimmed side inclined to the plane of the base.

3. A damper for pianos, comprising a block severed from sheet felt along a plane approximately at a right angle to an original surface of the felt and its sides trimmed obliquely from said plane as a base, said block being mounted on the damper lever by said base so that the plane of symmetry thereof is parallel to the line of motion of the block when moved toward the piano strings.

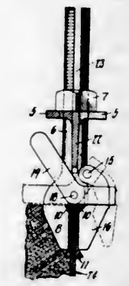
4. A damper for pianos, comprising a backing, and a block severed from sheet felt having one side cut in a plane approximately at right angles to an original surface of the felt, said side beng positioned on said backing and mounted therewith on the damper lever so that any point on the severed block moves toward the piano strings on a line at right angles to said side.

1,169,833. COMBINATION WRENCH AND WIRE-STRETCHER. LYMAN M. KANAVEL, Killbuck, Ohio. Filed Dec. 12, 1914. Serial No. 876,809. (Cl. 254—77.)



A tool comprising a stationary curved jaw the outer face of which being designed to fulcrum upon a post, one end of said jaw having a groove to receive a wire to be stretched, the other end of said jaw terminating in a shank, one face of which being provided with teeth, a boxng rectangular in cross section movably mounted upon the shank and having a portion of one of its inner faces provided with teeth to coöperate with the teeth of the shank, means for holding the teeth of the shank and the teeth of the boxing in coöperation said boxing having ears, a wheel journaled between the ears and provided with an annular groove to receive the wire to be stretched, said wire being designed to be clamped between the teeth of the boxing and the teeth of the shank, boxing adapted to be moved so that the wire may be clamped between the wheel and the inner curved face of the stationary jaw.

1,169,834. ARMOR-PLATE-SETTING DEVICE. THOMAS HENRY KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 7, 1915. Serial No. 916. (Cl. 94—6.)



1. Apparatus for constructing armor pavement joints comprising a supporting member arranged crosswise of the road-bed, clamping members depending from the supporting member at intervals and adapted to suspend and clamp a pair of joint armor-plates together, and means for adjusting some of the clamping members vertically in respect to the supporting bar, whereby they may be made to conform to the contour of the roadway.

2. Apparatus for constructing armor pavement joints comprising a supporting member arranged crosswise of the road-bed, clamping members depending from the supporting member at intervals and adapted to suspend and clamp a pair of joint armor-plates together, and means for separately adjusting some of the clamping members vertically in respect to the supporting member, whereby they may be made to conform to the crown of the roadway.

3. Apparatus for constructing armor pavement joints comprising a rigid straight beam arranged crosswise of the road-bed, clamping members depending from the beam at intervals and adapted to suspend and clamp a pair of joint armor-plates together, and means for separately adjusting some of the clamping members vertically in respect to the supporting beam, whereby they may be made to conform to the crown of the roadway.

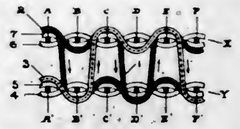
4. Apparatus for constructing armor pavement joints comprising a supporting member arranged crosswise of the road-bed, clamping members depending from the supporting member at intervals and adapted to suspend and clamp a pair of joint armor-plates together, and screw-threaded means for separately adjusting some of the clamping members vertically in respect to the supporting member, whereby they may be made to conform to the curvature of the roadway.

5. Apparatus for constructing armor pavement joints comprising a supporting member arranged crosswise of the road-bed, clamping members depending from the supporting member at intervals and adapted to suspend and clamp a par of joint armor-plates together, screw-threaded means for separately adjusting some of the clamping members vertically in respect to the supporting member, whereby they may be made to conform to the curvature of the roadway, and means for locking the clamping members in adjusted position.

[Claims 6 to 14 not printed in the Gazette.]

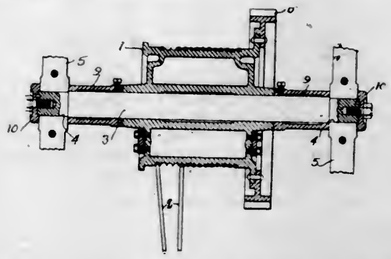
1,169,835. WOVEN PILE FABRIC. HARRY KAUFMAN and FRANK M. KAUFMAN, Philadelphia, Pa. Filed Dec. 11, 1914. Serial No. 876,615. (Cl. 139—71.)

A pile fabric, comprising top and bottom backing fabrics, a series of three pile threads connecting the backing fabrics, the alternate pile threads extending in the same direction from one backing fabric to the other, and the adjacent pile threads extending in opposite directions from one backing fabric to the other, said backing fabrics consisting of weft threads and binding warp threads, a filling shot of each backing fabric located between each



pair of pile threads, and the said shots located in parallelism one above the other, the said pile threads in both top and bottom fabrics woven with three of said shots, and between the binding warp threads, substantially as described.

1,169,836. SWINGING MECHANISM FOR BOOMS OF EXCAVATING-MACHINES. CHARLES B. KING and BENJAMIN JACOBY, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Nov. 10, 1913. Serial No. 800,074. (Cl. 254—186.)



1. In a mechanism of the character described, a fixed frame having supporting members, a shaft mounted on said supporting members, a drum mounted on said shaft, a cable wound about said drum and arranged to exert an axial thrust thereon, means carried by said shaft and in engagement with said drum and frame to prevent the axial movement of said drum, and means comprising said shaft to prevent the springing apart of said supporting members due to the resulting thrust against said frame and to divide said thrust between the two supporting members.

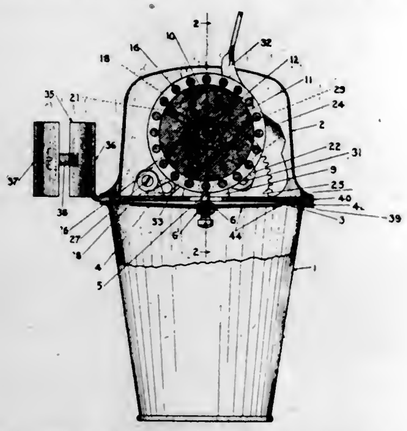
2. In a mechanism of the character described, a fixed supporting frame having bearings, a shaft mounted in said bearings, a drum mounted on said shaft, a cable wound about said drum and arranged to exert an axial thrust thereon, spacing sleeves fitting snugly between the ends of said drum and the supporting frame, and plates secured to the respective ends of said shaft and bearing against the outer sides of said frame.

3. In a mechanism of the character described, a fixed frame having supporting members, bearings in said supporting members, a shaft mounted in said bearings, a drum mounted on said shaft, a cable wound about said drum and arranged to exert an axial thrust thereon, spacing means fitting snugly between said drum and the supporting frame, and means secured to the respective ends of said shaft to prevent the springing apart of the bearings and insuring that the endwise thrust on said drum will be divided between the two frame members.

1,169,837. HORN. BERNARD F. KOCH, Chicago, Ill. Filed Feb. 25, 1914. Serial No. 820,796. (Cl. 116—1.)

In a horn of the kind described and in combination, a suitable two-part casing, provided with a transverse partition at their juncture, having an opening therethrough, a sheeet metal diaphragm arranged proximate said partition with a space therebetween and provided with a part extending therethrough at said opening, said partition

formed with a standard on the side opposite said diaphragm, a shaft carried by said standard, a pinion rotatably arranged on said shaft, a toothed wheel rotatably arranged on said shaft, and arranged to coöperate with the part on said diaphragm, means for actuating said pinion, comprising a segment in mesh with said pinion and extending around the standard and pivotally secured to the other side thereof, an actuating lever pivotally carried by said partition, a link pivotally connecting said segment extension with said lever, and means for resiliently maintaining said parts in initial position.

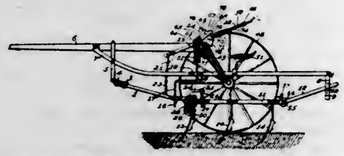


1,169,838. MILITARY WEAPON. JOHN KOLIBAS, McKeesport, Pa. Filed June 25, 1915. Serial No. 36,178. (Cl. 42—53.)



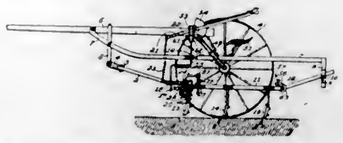
A combined sword and fire-arm comprising a sword blade provided with a longitudinal gun barrel, a cartridge cylinder revolubly mounted on the butt of said blade in alinement with said barrel, a revolver frame pivotally connected to said butt, locking means for holding said frame in its closed position, firing means carried by said frame, a hand hilt rigid with said revolver frame and when the latter is closed, extending in alinement with said sword blade, and an arched hand-guard having one end secured to the outer extremity of said hilt and its other end secured to said revolver frame at its pivot point.

1,169,839. MEANS FOR SHIFTING GANG-FRAMES OF CULTIVATORS. HENRY J. KUHLMAN, Colesburg, Iowa, assignor to Kuhlman & Holscher Manufacturing Company, Waterloo, Iowa. Filed Apr. 7, 1915. Serial No. 19,666. (Cl. 97—35.)



In a cultivator, a movable gang-frame, and shifting-means therefor, comprising a rock-body mounted to rock horizontally and having fixed bearing-studs, a hand-lever pivoted on one of said studs to rock vertically, a flexible connection between one end of said lever and said gang-frame adapted to transmit vertical movements thereto, a crank connection between said rock-body and said gang-frame adapted to rock the latter laterally when the lever is swung sidewise in either direction, and a lever slidably pivotally mounted on the other of said bearing-studs, a rack-sector fixed on said rock-body, and said levers each having a detent which are adapted to be detachably engaged with teeth on said sector, said levers each having engaging-means adapted for occasional engagement with each other, to permit both said detents to become detachably engaged with teeth on said sector, when the movable detent on the first-mentioned lever is actuated to and from said secor to become engaged or disengaged with it.

1,169,840. ADJUSTABLE GANG-FRAME FOR CULTIVATORS. HENRY J. KUHLMAN, Colesburg, Iowa, assignor to Kuhlman & Holscher Manufacturing Company, Waterloo, Iowa. Filed Apr. 7, 1915. Serial No. 19,667. (Cl. 97—35.)



1. In a cultivator, a main frame supported for transportation, a movably connected sectional gang-frame, implements mounted on the sections of said gang-frame in echelon, a connecting-rod between the forward parts of the main frame and gang-frame jointed to each for both vertical and lateral swinging movements, and a rearwardly-directed part on the rear of the gang-frame movably supported on the rear part of said main frame.

2. In a cultivator, a main frame supported on carrying-wheels, a movably connected sectional gang-frame, implements mounted on the sections of said gang-frame, the forward part of said gang-frame being jointed to said main frame to permit of both vertical and lateral swinging of that part of the gang-frame, and the rear part of the gang-frame being slidably connected to the main frame for both vertical and lateral rocking movements of the rear part of said gang-frame.

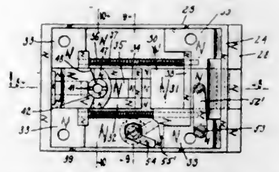
3. In a cultivator, a main-frame supported on carrying-wheels, a movably connected sectional gang-frame, implements supported on the sections of said gang-frame, the forward part of the gang-frame being jointed to the forward part of the main-frame for both vertical and lateral swinging, the rear part of the gang-frame having a bar adjustably connected thereto and the latter being slidably connected to the rear part of the main frame for both vertical and lateral rocking, and means for vertically adjusting the connection between said bar and gang-frame.

4. In a cultivator, a main frame supported on carrying-wheels, a movably connected sectional gang-frame mounted on said frame for both vertical and lateral movements relative thereto, implements connected to the sections of said gang-frame in echelon relative to the line of movement of the cultivator, and yieldable resilient connecting means between the forward and rear sections of the gang-frame adapted to exert a yielding vertical downward pressure upon the rear section of the gang-frame.

5. In a cultivator, a main frame supported on carrying-wheels, a movably connected sectional gang-frame mounted on said frame for both vertical and lateral movements relative thereto, implements supported in sections of said gang-frame, yieldable resilient connecting-means between the forward and rear sections of the gang-frame to exert a vertical yielding pressure on the latter, and a movable connection between the rear section of the gang-frame and the rear part of the main frame adapted to permit lateral and vertical swinging of that part of the gang-frame.

[Claims 6 to 11 not printed in the Gazette.]

1,169,841. DOOR-CHECK. ALFRED LESCHKA and ADOLF FIALA, New York, N. Y. Filed June 2, 1915. Serial No. 31,686. (Cl. 16—81.)



1. The combination with a door and door jamb, of a base plate fastened to one of said members, a link pivoted to said plate having a head upon its free end, a casing attached to the other one of said members having an outwardly extending projection, said projection being provided with an aperture in alinement with and forming a continuation of an aperture in the front plate of said casing, a sliding bolt within said casing made of two sections, the front section of said bolt obstructing in its projected position the aperture in the front plate of said casing, said front section being adapted to slide independently of the rear section of the bolt but the retracting of the latter withdrawing also said front section, the head of said link being adapted to pass through said apertures when the locking bolt is retracted, means upon said rear section for manually actuating said sliding bolt, means engaging said rear section adapted to be actuated by a key for retracting said bolt from outside, and a catch for holding said sliding bolt in its retracted position.

2. The combination with a door and door jamb, of a base plate fastened to one of said members, a link pivoted to said plate having a head upon its free end, a casing attached to the other one of said members having an outwardly extending projection, said projection being provided with an aperture in alinement with and forming a continuation of an aperture in the front plate of said casing, a sliding bolt within said casing made of two sections, the front section of said bolt obstructing in its projected position the aperture in the front plate of said casing, said front section being adapted to slide independently of the rear section of the bolt but the retracting of the latter withdrawing also said front section, the head of said link being adaped to pass through said apertures when the sliding bolt is retracted, and means upon said rear section for manually actuating said sliding bolt.

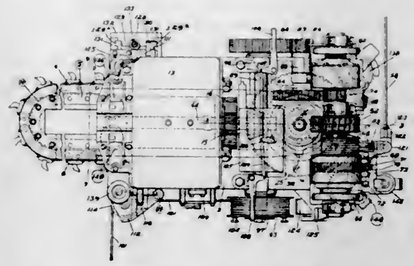
3. The combination with a door and door jamb, of a base plate fastened to one of said members, a slotted link pivoted to said plate having a head upon its free end, a casing attached to the other one of said members having an outwardly extending projection, said projection being provided with an aperture in alinement with and forming a continuation of an aperture in the front plate of said casing, a sliding bolt within said casing obstructing in its projected position the aperture in the front plate of said casing, the head of said link being adapted to pass through said apertures when the locking bolt is retracted, a lug carried by said bolt projecting through a slot in the front plate of said casing, said lug being adapted to be seated in the slot in said link and serving also as the means by which the sliding bolt can be manually retracted, and a catch for holding said sliding bolt in its retracted position.

4. The combination with a door and door jamb, of a base plate fastened to one of said members, a slotted link pivoted to said plate having a head upon its free end, a casing attached to the other one of said members having an outwardly extending projection, said projection being provided with an aperture in alinement with and forming a continuation of an aperture in the front plate of said casing, a sliding bolt within said casing obstructing in its projected position the aperture in the front plate of said casing, the head of said link being adapted to pass through said apertures when the sliding bolt is retracted, and a lug carried by said bolt projecting through a slot in the front plate of said casing, said lug being adapted to be seated in the slot in said link and serving also as the means by which the sliding bolt can be manually retracted.

5. The combination with a lock casing having an aperture, a sliding bolt within said casing made of two sections, the front section of said bolt obstructing in its projected position the aperture in said casing, said front section being adapted to slide independently of the rear section of the bolt but the retracting of the latter withdrawing also said front section, means upon said rear section for manually actuating said sliding bolt, and means engaging said rear section adapted to be actuated by a key for retracting said bolt from outside.

[Claim 6 not printed in the Gazette.]

1,169,842. MINING-MACHINE. NILS D. LEVIN, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 17, 1914. Serial No. 825,370. (Cl. 125—14.)



1. In a mining machine, the combination of a main frame, cutting apparatus having reversible cutters projecting from the inner end of said frame, a winding drum mounted at one side of the main frame with its axis disposed transversely thereof, a propelling cable having one of its ends connected to the winding drum, cable guide devices at each side of the main frame near the inner end thereof and auxiliary cable guide devices on the main frame whereby the propelling cable can be passed from the winding drum to the guide devices at either inner corner of the main frame and thence away toward the right or left to a fixed abutment so as to exert a draft either toward the right or toward the left on the inner end of the main frame, a motor on the main frame to drive the said winding drum and the cutting apparatus, means for reversing the direction in which the cutting apparatus is driven by the motor, and means adapted to exert a retarding draft on the outer end of the main frame either toward the left or toward the right.

2. In a mining machine, the combination of a main frame, cutting apparatus having reversible cutters projecting from the inner end of said frame, a winding drum mounted on the main frame, a propelling cable connected to the drum, attachment securing devices at each side of the main frame near the inner end thereof, guide attachments for the propelling cable and a vertically adjustable ground shoe attachment constructed to fit the said securing devices interchangeably whereby a cable guide attachment may be secured at either inner corner of the frame and the adjustable shoe attachment at the opposite inner corner of the frame, a motor for driving the cutting apparatus and the winding drum, means for reversing the direction in which the cutting apparatus is driven by the motor, and means adapted to exert a retarding draft on the outer end of the main frame either toward the left or toward the right.

3. In a mining machine, the combination of a main frame, cutting apparatus projecting from the inner end thereof, a propelling cable arranged to exert a forward draft on the inner end of the main frame, a winding drum on the main frame to which the said cable is connected, a retarding cable arranged to exert a rearward draft on the outer part of the main frame, a second winding drum

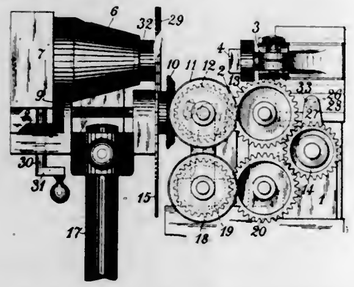
mounted on the main frame to which the last named cable is connected, a motor on the main frame and transmission gearing interposed between the motor and two winding drums comprising a manually controllable friction clutch through which the power is transmitted to the winding drum of the propelling cable, a second manually controllable friction clutch through which the power is transmitted to the retarding cable winding drum, and a safety device interposed between the said friction clutches and the motor adapted to yield when the transmission of power exceeds a certain rate.

4. In the mining machine, the combination of a main frame, an endless chain cutting apparatus projecting from the inner end thereof, propelling devices comprising a draft cable and winding drum on the main frame for advancing the machine along the face of the coal, guide devices on the main frame for exerting a retarding draft on the outer part thereof comprising a cable and winding drum, a motor mounted on the inner end of the main frame, a main vertical shaft journaled in the outer end of the main frame, a sprocket wheel engaging the cutter chain mounted on the lower end of the vertical shaft, driving connections between the motor and the vertical shaft, and driving connections between the vertical shaft and the propelling devices and guiding devices, respectively, comprising a shaft mounted transversely of the main frame on the outer end thereof, a manually controlled friction clutch on said shaft for controlling the transmission of power to the propelling devices, and a second manually controlled friction clutch on the said shaft for controlling the transmission of power to the guide devices.

5. In a mining machine, the combination of a main frame, cutting apparatus projecting from the inner end thereof, propelling devices on the main frame for exerting a forward draft on the inner end thereof, retarding devices on the main frame for exerting a rearward draft on the outer part thereof, a motor mounted on the inner end of the main frame, driving connections between the motor and the cutting apparatus, and driving connections between the motor and the propelling and retarding devices, respectively, comprising a shaft mounted transversely of the main frame on the outer end thereof, a manually controlled clutch on said shaft for controlling transmission of power to the propelling devices, and a second manually controlled friction clutch on the said shaft for controlling transmission of power to the retarding devices.

[Claims 6 to 11 not printed in the Gazette.]

1,169,843. APPARATUS FOR CINEMATOGRAPHICALLY TAKING FILM-NEGATIVES OF SUCCEEDING SECTIONS THROUGH AN OBJECT. WILHELM LÖW, Heidelberg, Germany. Filed Apr. 15, 1915. Serial No. 21,527. (Cl. 88—18.)



1. In an apparatus for cinematographically taking film negatives of succeeding sections through an object, in combination, a motion picture camera including interdependent film feeding and shutter mechanisms, a microtome, and means positively coupling said film feeding and shutter mechanisms to said microtome and operating them in timed relation.

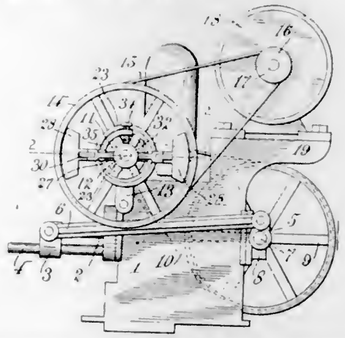
2. In an apparatus of the type set forth, in combination, a motion picture camera unit including interdependent film feeding and shutter mechanisms, a microtome unit, and motion transmission mechanism positively coupling the said two units in such manner that an exposure is made on the film, through the shutter, of an object presented by said microtome every time the microtome has operated on this object.

3. In an apparatus of the type set forth, in combination, a motion picture camera including interdependent film feeding and shutter mechanisms, a microtome, means comprising a train of wheels for operatively coupling said camera and said microtome in synchronism, and means for focusing said camera on different levels relative to said microtome.

4. In an apparatus of the type set forth, in combination, a motion picture camera including film feeding mechanism and a revolving shutter; a microtome including a reciprocating object holder; and means operatively coupling said film feeding mechanism and said shutter to said object holder in such timed relation that an exposure is made on the film through said shutter every time and only after said object holder has temporarily come to rest in the focus of said camera.

5. In an apparatus of the type set forth, in combination, a motion picture camera unit including interdependent film feeding and shutter operating mechanisms; a microtome unit including a reciprocating object holder; means for intercoupling the said two units in timed relation; means for adjusting the vertical focusing level of said camera relative to said microtome; and means in connection with said camera for illuminating or irradiating the object to be photographed.

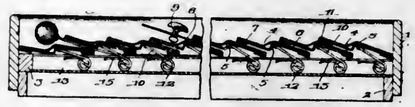
1,169,844. DRIVING CONNECTING MEANS. CHARLES O. LUCAS, Dayton, Ohio. Filed Aug. 27, 1914. Serial No. 858,891. (Cl. 74—45.)



The combination of a pulley, a drum mounted thereon, a shaft upon which said pulley is freely mounted, a friction band mounted on said shaft and adapted to engage the inner surface of said drum, a cone slidably mounted on said shaft, a spring mounted within said cone and normally maintaining it in an outward position, weights pivoted at opposite points of said drum and adapted to be actuated by said pulley when it attains a given speed, a yoke engaging said cone, links connecting said yoke to said weights, a shaft projected between the adjacent ends of said friction band, an arm upon which said shaft is supported, and means on said arm engaging said cone whereby said shaft is actuated to expand the friction band when the speed of the pulley is sufficient to control said cone, substantially as specified.

1,169,845. DISPLAY-TRAY. GEORGE R. MCALLASTER, Rochester, N. Y. Filed May 15, 1913. Serial No. 767,795. (Cl. 211—28.)

1. A display tray having a plurality of clasping strips resiliently held in overlapping relation and adjustable sidewise with relation to each other to vary the distances between their lower edges.



2. A display tray having a plurality of overlapping clasping strips, the exposed portions of said strips being off-set downwardly with relation to the overlapped portions.

3. A display tray having a plurality of overlapping clasping strips, each strip being fulcrumed at one edge on the bottom of the tray, and spring means secured to such strip and adjustably connected to the tray to permit the adjustment of the strips sidewise relatively to each other.

4. A display tray having a plurality of overlapping clasping strips, each strip being fulcrumed at one edge on the bottom of the tray, and springs secured to such strips, and adjustably and removably secured to the bottom of the tray to permit the strips to be adjusted sidewise relatively to each other and to be disconnected from the tray for the purpose of increasing the distances between the remaining strips.

5. A display tray having ways formed in the bottom thereof, overlapping clasping strips extending transversely of the ways, and springs connected to the strips and adjustable on the ways.

[Claims 6 and 7 not printed in the Gazette.]

1,169,846. STUMP-PULLER. JAMES M. MCCARGO, Keysville, Va. Filed Mar. 10, 1915. Serial No. 13,437. (Cl. 254—135.)



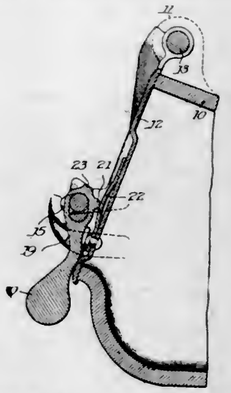
1. A cable connecting skid for stump pullers consisting of a body plate provided upon one end with an obliquely inclined horn, said body plate having longitudinal runners, and reinforcing means secured upon the other end of said plate to which a pulling cable is adapted to be attached.

2. A cable connecting skid for stump pullers consisting of a body plate provided upon one end with an integral obliquely inclined horn to which the end of a cable is adapted to be detachably connected, said body plate having longitudinally extending runners integrally formed upon opposite sides thereof, and reinforcing means sceured to the opposite sides of the body plate at its other end to which one end of a power cable is adapted to be attached.

3. A cable connecting skid for stump pullers consisting of a body plate having a central opening and an obliquely inclined tapering horn integrally formed upon one of its ends to which one end of a stump attaching cable is adapted to be detachably connected, said body plate being provided upon its opposite face and at each side of the opening therein with an integral longitudinal runner, and transversely disposed bars detachably secured to the opposite faces of the body plate at its other end to which one end of a power cable is adapted to be attached.

1,169,847. DEVICE FOR FASTENING JOURNAL-BOX LIDS. MALCOLM T. MACPHERSON, Beloit, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Nov. 28, 1914. Serial No. 874,465. (Cl. 70—3.)

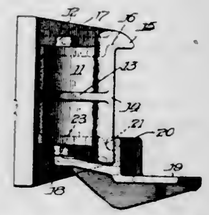
1. In combination, a journal box having ears provided with curved recesses open at the top, a lid, a shaft carried by the lid and having offset portions the ends thereof being parallel to the main portion of the shaft for entering the open top and latching into the curved recesses of said ears, and means adapted to maintain said shaft in adjusted position, substantially as described.



2. In combination, a journal box having lugs provided with curved recesses, a lid, a shaft on said lid, said shaft being offset at its ends and said ends extended in a line parallel to said shaft so that when said shaft is turned said ends are brought into engagement with said lugs, an arm for partially rotating said shaft and a spring cooperating with said arm to maintain the arm and shaft in either of two positions, substantially as described.

3. In a device of the class described, the combination of a box having recessed lugs at its sides near the lower portion of the opening thereon, a lid hinged to said box, a lid locking shaft carried by the lid, the ends of the shaft being eccentric to the body thereof parallel therewith and adapted to occupy the recesses in said lugs when said lid is in closed position, an arm on said shaft, said arm being adapted to cause rotation of said shaft and to wedge the eccentric ends of the shaft against said lugs, and means for holding said shaft in such wedged position, substantially as described.

1,169,848. COUPLING-POCKET. MALCOLM T. MACPHERSON, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Aug. 2, 1915. Serial No. 43,171. (Cl. 213—41.)



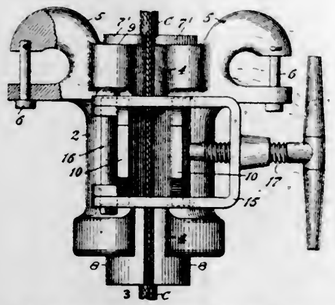
1. In a device of the class described, the combination of a pocket casting, means permitting the reversal of the casting on the end sill and thereby changing the elevation of the pocket portion, and a removable shelf adapted for interlocking engagement with either the top or bottom walls of the pocket, substantially as described.

2. In a device of the class described, the combination of a pocket member, the floor of the pocket being provided with a recess, a shelf member having a portion adapted to occupy said recess and provided with a lever extending underneath said floor, substantially as described.

3. In a device of the class described, the combination of a pocket member having a floor, a groove near the outer

edge of said floor, and a shelf, said shelf having a bead adapted to occupy said groove and provided with an arm projecting underneath the floor, substantially as described.

1,169,849. CLAMP FOR WELL-DRILLING CABLES. CLARENCE T. MAPES, Crafton, and FERDINAND C. YANDA, Pittsburgh, Pa., assignors to Oil Well Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1915. Serial No. 767. (Cl. 24—135.)



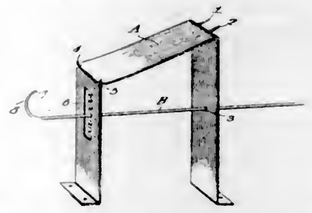
1. In cable suspending means and in combination, a clamp body having a vertical bore of fixed dimensions and a cable-entering passageway leading into said bore, opposed cable-gripping jaws extending through and rotatable within the bore, each jaw being flanged outwardly at its upper end, said flanges being adapted to rest upon the top of the clamp body to support the jaws, and jaw-adjusting means, said latter means including an element carried by and movable with each jaw, said elements coöperating in moving the jaws to cable-gripping position and maintaining them in such position, said body being recessed to permit free movement of said elements.

2. In cable suspending means and in combination, a clamp body having a vertical bore of fixed dimensions and a cable-entering passageway leading into said bore, opposed cable-gripping jaws extending through and rotatable within the bore, each jaw being flanged outwardly at its upper end, said flanges being adapted to rest upon the top of the clamp body to support the jaws, and jaw-adjusting means, said latter means including an element carried by and movable with each jaw, said elements coöperating in moving the jaws to cable-gripping position and maintaining them in such position, said body being recessed to permit free movement of said elements, said cable-entering passageway having a width to permit the passage of either of said elements when alined therewith, but insufficient to permit simultaneous passage of both elements.

3. In cable suspending means and in combination, a clamp body having a vertical bore of fixed dimensions and a cable-entering passageway leading into said bore, opposed cable-gripping jaws extending through and rotatable within the bore, each jaw being flanged outwardly at its upper end, said flanges being adapted to rest upon the top of the clamp body to support the jaws, and jaw-adjusting means, said latter means including an element carried by and movable with each jaw, said elements coöperating in moving the jaws to cable-gripping position and maintaining them in such position, said body being recessed to permit free movement of said elements, said body carrying members independent of the jaws to permit suspension of the body.

1,169,850. SHOE-STAND. EDWARD C. MARTIN and WALTER S. CHIDESTER, Columbus, Ohio. Filed June 28, 1915. Serial No. 36,758. (Cl. 15—58.)

In a shoe blacking stand, front and rear uprights, a shoe rest supported thereon having prongs at its rear extremity extending backward, and prongs at its front extremity extending upward, a rod having a curved forward extremity terminating in a hook adapted to engage the sole of a shoe, the said forward upright being provided with a vertically extending slot notched on one side, and the said rear upright with a hole slightly larger than the



cross section of said rod, said rod being mounted slidably in said slot and hole.

1,169,851. GAS LIGHTER AND EXTINGUISHER. HOWARD G. MEAD, Shrewsbury Park, Mo., assignor of one-half to James J. Hartley, St. Louis, Mo. Filed Dec. 2, 1914. Serial No. 875,182. (Cl. 175—115.)



1. A gas-lighter and extinguisher consisting of a pair of oppositely-disposed electro-magnets, each magnet having a hollow core, one end of each hollow core being attached to an adjacent end of the gas supply-pipe intermediate the source of gas supply and the burner, a hollow member supported between said magnets, said hollow member being adapted to form a gas-chamber between said magnets, each of said hollow cores being adapted to open into said chamber, a valve in said chamber, said valve being adapted normally to be seated in the opening of one of said cores in closed position with reference to the flow of gas to said burner, one end of said valve being adapted to form the armature for the magnet adjacent thereto and the other end of said valve being adapted to form an armature for the magnet adjacent thereto, guiding means borne by the inner wall of said chamber, said guiding means being adapted to support said valve slidably between said magnet, a spark-coil adapted to produce a spark at said burner, releasable means adapted for synchronously energizing one of said magnets for drawing said valve toward said magnet to open position and for energizing said spark-coil, a member within said chamber adapted to limit the movement of said valve toward said magnet and adapted, also, releasably to support said valve mechanically in open position, and releasable means for energizing the other of said magnets for drawing said valve toward said other magnet to restore said valve to normal closed position.

2. In a gas-lighter and extinguisher, the combination, with three electric circuits normally broken, of a pair of oppositely-disposed electro-magnets supported by the gas supply-pipe intermediate the burner and the source of gas supply, a hollow member supported between said magnets, said hollow member being adapted to form a gas-chamber between said magnets, each of said magnets having a hollow core adapted to connect the bore of said supply-

pipe with said chamber, a valve in said chamber adapted normally to be seated in an adjacent end of one of said cores in closed position with reference to the flow of gas from said chamber to said burner, guiding means borne by the inner wall of said chamber, said guiding means being adapted to support said valve slidably between said magnets, a spark-coil adapted to produce a spark at said burner, means for releasably closing two of said circuits synchronously for energizing one of said magnets for drawing said valve toward said magnet to open position and for energizing said spark-coil, a spring-pressed member within said chamber adapted releasably to support said valve in open position and, also, to limit the movement of said valve toward said magnet, and means for releasably closing the third circuit for energizing the other magnet for restoring said valve from open position to its normal closed position.

3. In a gas-lighter and extinguisher, the combination, with three electric circuits normally broken, of a pair of oppositely-disposed electro-magnets, each magnet having a hollow core, one end of each core being attached to an adjacent end of the gas supply-pipe intermediate said burner and the source of gas supply, a hollow member supported between said magnets, said member being adapted to form a gas-chamber between said magnets, each of said hollow cores being adapted to open into said chamber, a slidable member in said chamber, guiding means borne by the inner wall of said chamber adapted to support said member slidably between said magnets, a valve borne by one end of said member, said valve being adapted normally to be seated in the opening of one of said cores in closed position with reference to the flow of gas from said chamber to said burner, said valve being adapted, also, to form an armature for the magnet adjacent thereto, a head borne by the other end of said member, said head being adapted to form an armature for the magnet adjacent thereto, a spark-coil adapted to produce a spark at said burner, closing means common to two circuits adapted for synchronously closing same releasably for energizing one magnet for drawing said head toward said magnet to open said valve and for energizing said spark-coil, spring-pressed means within said chamber adapted releasably to engage said head to support said valve in open position and adapted, also, to limit the movement of said head toward said magnet, and means adapted for releasably closing the third circuit for energizing the other magnet for drawing said valve toward said other magnet from open position to its normal closed position.

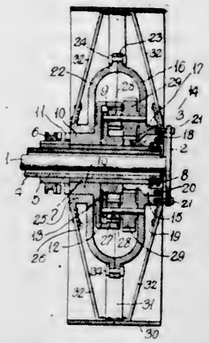
4. A device of the character described comprising in combination with a gas supply, a casing in said gas supply, oppositely disposed magnets carried interiorly of the casing, hollow cores for the magnets and communicating the casing with the gas supply, a sliding armature having one of its ends tapered for engagement with one of the hollow cores to cut off the flow of gas to the casing and having an annular groove at its opposite end, and resilient means for engagement with said annular groove to support the tapered end of the armature out of contact with the hollow core to permit the flow of gas to the casing.

5. A device of the character described comprising in combination with a gas supply, a casing in said gas supply, oppositely disposed magnets carried interiorly of the casing, hollow cores for the magnets and communicating the casing with the gas supply, a hollow member between the magnets, a guide block in the hollow member, means supported by the guide block for restricting the vertical movement of the valve, said means adapted to support the armature out of contact with one of the hollow cores.

[Claim 6 not printed in the Gazette.]

1,169,852. TWO-SPEED WHEEL. CHARLES F. MEGOW, Detroit, Mich. Filed Aug. 30, 1915. Serial No. 47,966. (Cl. 74—34.)

1. The combination of a driven axle having a drive plate at an end thereof, a wheel on said axle adapted to be connected to the drive plate thereof to rotate with said axle, and means in said wheel adapted to be connected to the drive plate of said axle to cause said wheel to rotate at a reduced speed relative to said axle.



2. In a two-speed wheel, a driven axle, a wheel hub, a planetary gear in said hub including an internal gear and a drive gear, means adapted to fix said hub for rotative continuity with said axle, and means adapted to fix said planetary gear whereby said hub is revolved by said axle at a reduced speed relative thereto.

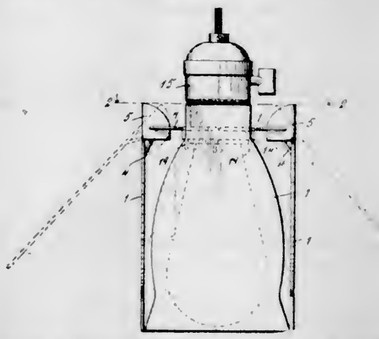
3. In a two-speed wheel, a driven axle, a wheel hub, a planetary gear in said hub including an internal gear and a drive gear, means adapted to fix said hub for rotative continuity with said axle, means adapted to fix said axle relative to the drive gear of said planetary gear, and means adapted to hold the internal gear of said planetary gear when said axle is fixed relative to said drive gear whereby said hub can be rotated by and at a reduced speed to said axle.

4. In a two-speed wheel, a driven axle, a hollow hub, means in said hub including an internal gear and a drive gear whereby said hub can be rotated by and at a reduced speed to said axle, and means independent of the first mentioned means for fixing said hub relative to said axle for rotative continuity therewith.

5. In a wheel, a driven axle, a planetary gear, a clutch member adapted to engage a portion of said gear to cause said wheel to rotate at a reduced speed relative to said axle, and means independent of said gear and clutch member adapted to fix said wheel for rotative continuity with said axle.

[Claims 6 to 9 not printed in the Gazette.]

1,169,853. ADJUSTABLE SHADE. SIEBOLD R. MENSSEN, Platte Center, Nebr. Filed May 15, 1915. Serial No. 28,362. (Cl. 240—108.)



1. In a device of the class described, the combination of a supporting ring, said ring being adapted to be carried upon an electric socket, said ring provided with a

plurality of vertical openings, spring frames carried by said ring and fitting within said openings, and wings adjustably secured to said spring frames, said wings being adapted to be swung to a desired position for forming a shade or screen for an electric light carried by said socket.

2. In a device of the class described, the combination of a supporting ring having a plurality of vertical openings, said ring being adapted to be carried by an electric socket, a plurality of spring frames engaging said ring, each of said frames provided with a loop having an enlarged lower portion, said loops being adapted to extend into said vertical openings so as to form a binding engagement for preventing the accidental displacement of said frames, and wing members pivotally and adjustably secured to said frames for constituting a shield or shade for a light carried by said socket.

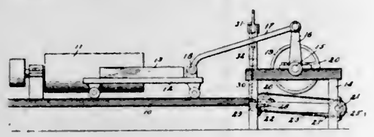
3. In a device of the class described, the combination of a supporting ring having a plurality of vertical openings, said ring being adapted to be carried by an electric socket, a plurality of spring frames mounted upon said ring, each of said frames comprising a rectangular body having free end portions, each of said bodies also provided with parallel portions terminating in an enlarged loop, said loops being adapted to extend into said vertical openings so as to form a binding action between said loops and rings, thereby preventing the accidental displacement of said frames, a plurality of wings pivotally mounted upon said ends of said spring frames, and means for retaining said wings in an adjusted set position with said spring frames whereby said wings may be swung so as to constitute a shield or a shade for an electric light carried by said socket.

4. In a device of the class described, the combination of a supporting ring, said ring being adapted to be carried by an electric socket, a plurality of spring frames detachably engaging said ring, a plurality of wings mounted upon said spring frames, each of said wings comprising a body, a casing formed upon said body, means for normally urging said casing into binding engagement with portions of one of said spring frames whereby said wings will be retained in an adjustable set position for constituting a shield or a shade for a light carried by said socket.

5. In a device of the class described, the combination of a supporting ring, said ring being adapted to be carried by an electric socket, a plurality of spring frames carried by said socket carried by said ring, a plurality of wings carried by said spring frames, each of said wings comprising a body, an extension formed upon said body and being bent to form a casing, ears formed upon the side edges of said extension, said ears being adapted to engage the side portions of said spring frames, means for holding asid wings in binding engagement with said spring frames, and said spring frames being adapted to be swung to a set position and to be retained in this position for forming either a shield or a shade for an electric light carried by said socket.

[Claim 6 not printed in the Gazette.]

1,169,854. BELT-GEARING. EDWARD T. MERRITT, Capeville, Va., assignor of one-half to Frank Parsons, Jr., Capeville, Va. Filed Feb. 12, 1915. Serial No. 7,751. (Cl. 74—21.)

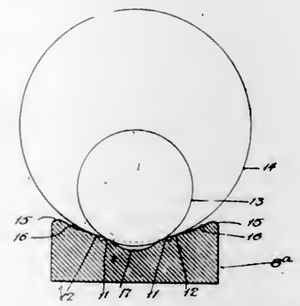


1. In a device as specified, an upright frame, a driven shaft journaled transversely in the top of the frame, a friction pulley on the driven shaft, a drive shaft mounted in one end of the frame adjacent the lower part thereof and adapted to be continuously driven, a pulley on the drive shaft, a pair of arms hinged to the drive shaft at the opposite sides of the pulley thereon and extending longitudinally within the frame, a shaft journaled between the outer ends of the arms, a pulley mounted on said last-named shaft, a belt arranged over the pulley of the drive shaft and the pulley at the outer ends of the arms, a bracket rising from the top of the frame at one end thereof, a hand lever pivoted in the bracket and extending laterally from the frame, and a connection between the inner end of the hand lever and the free ends of said arms whereby said belt may be raised against the pulley on said driven shaft and yieldingly held there by hand pressure.

2. In a device as specified, a main frame, a driven shaft in the frame, a pulley on said shaft, a frame pivoted at one end to the main frame and adapted for free vertical movement at the other end, a longitudinally extending belt mounted in said pivoted frame below said pulley, a hand-lever extending transversely over the main frame and projecting beyond the same, and a connection between the inner end of the hand-lever and the free end of the pivoted frame to raise the belt against the pulley by hand pressure, said pivoted frame and belt instantaneously and automatically moving away from said pulley when pressure upon the lever is relieved.

3. In a device as specified, a main frame, a driven shaft in the frame, a pulley on said shaft, a frame pivoted at one end to the main frame and adapted for free vertical movement at the other, a belt arranged longitudinally in the pivoted frame, a rest in the lower end of the first mentioned frame adapted to normally support the free end of the pivoted frame, and a hand-lever projecting from the upper end of the main frame and having connection with said free end of the pivoted frame whereby to raise the belt against the pulley and yieldingly hold the pulley and the belt in contact.

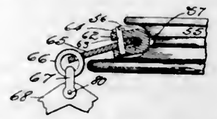
1,169,855. BALL-RETURNWAY FOR BOWLING-ALLEYS. HUGO M. MOEHLE, Los Angeles, Cal., assignor to The Brunswick-Balke-Collender Company, New York, N. Y., a Corporation of New York. Filed Dec. 16, 1912. Serial No. 736,959. (Cl. 46—66.)



1. In a ball returnway for bowling alleys, a track-structure, for balls of different diameters, having a plurality of tracks, each comprising two rails, whose respective bearing surfaces are curved convexly relative to the balls to be supported by them, the distance apart of the corresponding rails of each track, and their relative distances from the floor being a direct function of the diameter of the balls to be supported by them.

2. In a ball return-way for bowling alleys, a track structure having an outer track and an inner track therebetween, the members of each track comprising a pair of upwardly curved, short-radius, bearing faces forming the rails thereof, the outer ones being raised a trifle above the inner ones and located close thereto, whereby they support the various sizes of bowling balls at points comparatively near their greatest diameters.

1,169,856. GRADING AND FILLING MACHINE. JARED H. MOORE, Gilson, Ill. Filed Apr. 27, 1914. Serial No. 834,697. (Cl. 37—19.)



1. In combination, a horizontally arranged sheave having a peripheral channel and a peripheral groove therewithin, a second sheave, means for driving one of said sheaves, a cable traversing said sheaves and riding in said groove, a cable-clamp engaging said cable and riding in said channel, a scraper, and means intermediate said clamp and scraper for sustaining the latter.

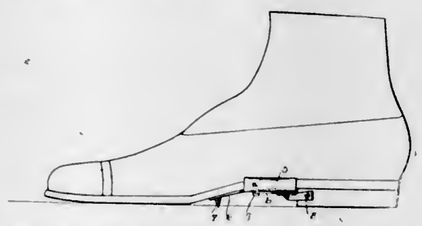
2. In combination, a sheave having peripheral flanges one of which is greater in diameter than the other, said flanges providing a channel, and said sheave having an annular peripheral groove at the median portion of said channel, a second sheave, means for driving one of said sheaves, a cable traversing said sheaves and adapted to ride in said groove, a clamp grasping said cable and adapted to ride in said channel, a scraper and means for connecting said clamp and scraper.

3. In a device of the character described, a sheave having peripheral flanges one of which is greater in circumference than the other, said flanges providing a channel, a narrow peripheral groove within said channel, a cable adapted to travel in said groove, a cable-gripping clamp arranged to travel in said channel, a link connected with said clamp, its outer end projecting over the edge of the larger flange, and a scraper connected with said link.

4. In a device of the class described, a sheave having a substantially U-shaped peripheral channel and a substantially U-shaped peripheral groove arranged interiorly thereof, means for driving said sheave, a cable, a second sheave traversed by said cable, a U-shaped clamp frictionally grasping said cable and its curved end conforming to and traversing said channel, said cable conforming to and fitting said groove, a link engaged by said clamp, and a tool suspended from said link.

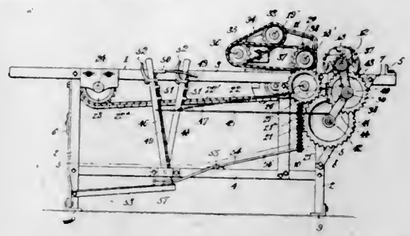
5. In a grader, a frame including posts arranged to form a rectangular quadrangle, a vertically arranged transmission shaft located centrally thereof, means for driving said shaft continuously in one direction, a sheave on said shaft and driven thereby, an endless cable traversing said sheave, a second sheave traversed by said cable, and a tool carried by said cable and passing around said sheaves and intermediate the one first recited and said quadrangularly arranged frame-posts.

1,169,857. ICE-CREEPING ATTACHMENT. RUDOLF MURN, Lakewood, Ohio. Filed Oct. 18, 1915. Serial No. 56,461. (Cl. 36—64.)



An ice creeping attachment for the instep of a shoe comprising a main plate having one edge curled downward and inward to engage on the edge of the sole and provided with opposite parallel upwardly and inwardly turned edges transversely of the shoe forming guide-ways and having a forwardly projected portion widened at its extremity and pointed spurs on said extremity adapted to come under the forward portion of the instep, an auxiliary plate slidably mounted in said guide-ways and having a curled outer edge adapted to engage the edge of the sole, and a lever pivoted on said main plate and a link engaging the lever with said auxiliary plate to clamp said plates on the shoe.

1,169,858. FEED-CUTTING MACHINE. ALBERT MUNDT, Manitowoc, Wis. Filed Apr. 20, 1915. Serial No. 22,662. (Cl. 146—29.)



1. In a feed cutter, the combination of a frame, a feed mechanism including feed devices, one adjustable automatically with relation to the other, and gearing for operating said feed devices, manually operable means for throwing said gearing into and out of action, and automatically operable means controlled by the adjustable feed device for governing the said manually operable means.

2. In a feed cutting machine, feeding and cutting mechanism including a driven shaft and a drive shaft, the said feeding mechanism also including an adjustable feed element, driving and reverse gears, adjusting devices for throwing said gears into and out of driving engagement with the feed mechanism, fastening means for locking said adjusting devices in acting position, a foot lever for retracting said locking devices to permit retraction of the adjusting device and the gear controlled thereby, and automatic means controlled by said adjustable feed element for actuating said foot lever.

1,169,859. FASTENING DEVICE. HJALMAR NORDVALL and MANUEL PETERSON, Dalton, Mich. Filed Apr. 25, 1914. Serial No. 834,534. (Cl. 24—131.)

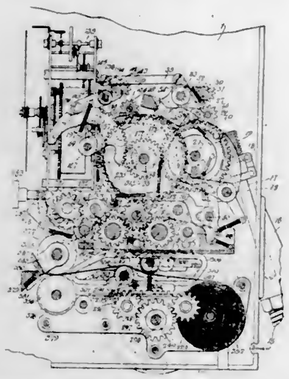


In a bag fastener, a cord and a resilient wire cord holder consisting of a body bent into the form of a thin V, one arm terminating in an eye for receiving the other end of said cord, the other arm bent back so that the end partly closes the opening of the V, but permits a cord to be forced past the retaining end and into engagement with the V notch.

1,169,860. COMPUTING AND RECORDING MACHINE. WILFRED I. OHMER and JOHN E. MCALLISTER, Dayton, Ohio, assignors to The Recording and Computing Machines Company, Dayton, Ohio, a Corporation of Ohio. Filed Sept. 16, 1910. Serial No. 582,371. (Cl. 235—30.)

1. The combination, with a wheeled vehicle, of two sets of trip registering devices, each set including devices to register a fare, separate actuating devices for each set of registering devices, single means for connecting both of said actuating devices with one of the wheels of the vehicle, and means for printing a ticket containing the items registered by one of said trip registering devices and for printing a record of the items registered by the other of said trip registering devices.

2. The combination, with a wheeled vehicle, of two sets of trip registering devices, each set including devices to register a fare, separate devices for simultaneously actuating said fare registering devices from one of the wheels of said vehicle, and mechanism for taking a record from one of said fare registering devices and issuing it as a ticket and for taking a record from the other of said registering devices and retaining said last-mentioned record within the machine.



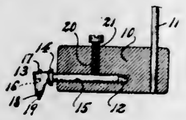
3. In a machine of the character described, the combination, with a vehicle, of two sets of trip registering devices, one set including devices to register a plurality of items relating to each trip and the second set including devices to register a part only of the items registered by the first set, means to actuate said registering devices from a moving part of said vehicle, and means to print a record from each set of said registering devices.

4. In a machine of the character described, the combination, with mechanism for registering the distance traveled, mechanism for registering the time, and mechanism for computing the fare from the distance and the time so registered and for registering said fare, of separate devices for printing and issuing a ticket showing the amount of said fare and for printing a record of the several items so registered.

5. In a machine of the character described, the combination, with mechanism for registering the distance traveled, mechanism for registering the time and mechanism for computing the fare from the distance and the time so registered and for registering said fare, of separate devices for printing and issuing a ticket showing the amount of said fare and for printing a record of the several items so registered, and a single operating mechanism to cause the operation of said separate devices.

[Claims 6 to 128 not printed in the Gazette.]

1,169,861. ADAPTER-STYLUS FOR PHONOGRAPHS. ELLIS S. OLIVER, Newark, N. J. Filed Mar. 29, 1915. Serial No. 17,600. (Cl. 181—11.)

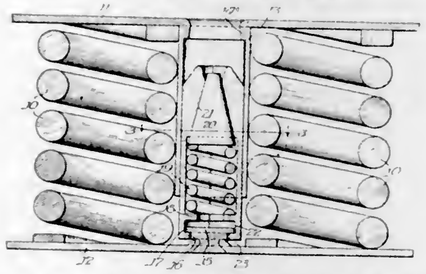


1. An adapter stylus for a phonograph sound-box having its diaphragm in a plane substantially perpendicular to the sound-record disk to be reproduced comprising a horizontal body, a vertical butt-piece extending upwardly from one end of said body, said body having a receiving-opening extending longitudinally into the same from its outer end, a stylus-point, means for supporting said stylus-point having a shank-piece slidably entering said receiving-opening, and means connected with said body and adapted to engage said shank-piece to secure said stylus-point supporting means in desired longitudinally adjusted position relatively to said body.

2. An adapted stylus for a phonograph sound-box having its diaphragm in a plane substantially perpendicular to the sound-record disk to be reproduced comprising a horizontal body, a vertical butt-piece extending upwardly from one end of said body, said body having a receiving-opening extending longitudinally into the same from its outer end, a stylus-head having a laterally extending shank-piece slidably entering said receiving opening, a downwardly projected stylus-point carried by said stylus-head, and means connected with said body and adapted to engage said shank-piece to secure said stylus-head in desired longitudinally adjusted position relatively to said body.

3. An adapted stylus for a phonograph sound-box having its diaphragm in a plane substantially perpendicular to the souud-record disk to be reproduced comprising a horizontal body, a vertical butt-piece extending upwardly from one end of said body, said body having a receiving-opening extending longitudinally into the same from its outer end, a stylus-head having a laterally extending shank-piece slidably entering said receiving opening, a downwardly projected stylus-point carried by said stylus- and means connected with said body and adapted to engage said shank-piece to secure said stylus-head in desired longitudinally adjusted position relatively to said body, comprising a lock-screw associated with said body.

1,169,862. SPRING-DAMPENER. ARMAND H. PEYCKE, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed July 30, 1915. Serial No. 42,692. (Cl. 267—3.)



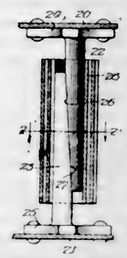
1. In a device of the class described, the combination of a spring, a plate mounted at each end of said spring, each of said plates being provided with a tubular projection at the center of the plate, and friction inducing means acting upon said tubular projections, said last named means including a spring advanced wedge, substantially as described.

2. In a device of the class described, the combination of a plurality of springs, a spring cap at each end of said springs, an incompressible tubular projection from one of said caps, a split tube secured to the other of said caps and a spring advanced wedge acting upon said split tube and tending to force the same against the inner walls of said incompressible tube, substantially as described.

3. In a device of the class described, the combination of a nest of springs, a spring cap for each end of the spring, an inexpansible tubular projection from the center of one of said caps, a split tube secured, but permitted limited relative longitudinal movement with relation to the other cap, a wedge located interiorly of said split tube, and a spring acting upon said wedge, substantially as described.

1,169,863. TRUCK-SPRING DAMPENER. ARMAND H. PEYCKE, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed July 30, 1915. Serial No. 42,693. (Cl. 267—3.)

1. In a device of the class described, the combination of a plurality of springs, upper and lower plates serving to retain said springs in operative relation, a non-contractible projection from each of said plates, and a split tube engaging said projections and acting to develop friction on the surfaces thereof independently of said springs whereby the action of such springs is dampened, substantially as described.

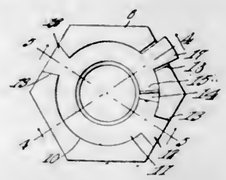


2. In a device of the class described, the combination of springs, spring caps, and a tubular non-contractible projection on each of said spring caps, a plurality of spring metal split tubes engaging each of sad projections and tending to compress said projections whereby frictional resistance is developed upon relative movement of the tube and caps, substantially as described.

3. In a device of the class described, the combination of a nest of springs, spring caps at the ends of the springs, projections from said caps, said projections being located at substantially the center of the nest of springs, the projections on the caps being in alinement, and a plurality of spring metal split tubes acting upon both of said projections and tending to develop frictional resistance to the relative movement of said caps, substantially as described.

4. In a device of the class described, the combination of a plurality of springs, spring caps at the ends of the springs, a rigid incompressible wedge-shaped projection from each cap, said projections being located substantially in the center of the nest of springs, and a plurality of spring metal bands encircling portions of said wedge-shaped projection, substantially as described.

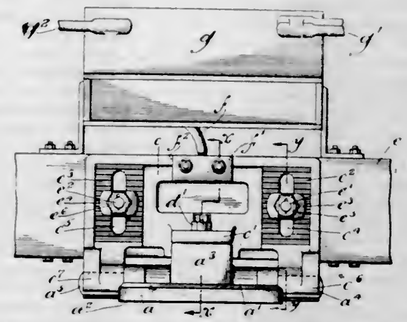
1,169,864. LOCK-NUT. ENOCH D. PIGGOTT, Parkersburg, W. Va. Filed May 4, 1915. Serial No. 25,780. (Cl. 151—11.)



1. In a device of the character described, a nut having an annular rabbet surrounding its bore, a split ring secured within said rabbet and having one end bent to form a pawl, said ring having a radially projecting finger piece adjacent said pawl, and the nut having a slot for accommodating said finger piece, the rabbet being deepened adjacent said slot and said slot being sufficiently deep whereby the finger piece may be actuated for retracting the pawl.

2. In a device of the character described, a nut having an annular rabbet surrounding its bore, and a split sheet metal ring fitting in said rabbet, the nut having diametrically opposite dove-taled recesses extending from the rabbet to opposite sides of the nut, the ring having dovetailed lugs fitting in said recesses, the ring being split adjacent one of said lugs, and that end portion of the ring remote from said lug being curved to form a spring pawl, the ring having a radially projecting finger piece adjacent the pawl, the nut having a slot accommodating said finger piece, the rabbet being deepened adjacent said slot and said slot being sufficiently deep whereby the finger piece may be actuated for retracting said pawl.

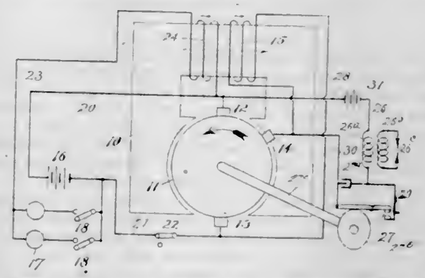
1,169,865. CONTACT-SHOE FOR THIRD-RAIL ELECTRIC CARS. CHARLES F. RAYDURE, West Philadelphia, Pa. Filed June 14, 1915. Serial No. 33,873. (Cl. 191—49.)



1. A contact shoe for a third rail, comprising a contact shoe member having a projecting housing, a spring controlled vertical bolt mounted in said housing, said member having end pintles, a supporting member with slotted ratcheted surfaces and with a central horizontal projecting plate fitting the top of said housing and through which said spring controlled bolt extends, a nut for tightenng the same thereto, said supporting member connected with the car-beam and bolted thereto and a ribbed washer to engage the ratcheted surface of said supporting member, with a nut for securing said member against movement and said supporting member having substantially semicircular end bearings to engage the pintles of said contact-shoe member, substantially as and for the purposes described.

2. A contact shoe for a third rail, comprising a contact shoe-member having integrally cast therewith a central projecting slotted housing and end pintles, a supporting member having substantially semicircular end bearings to embrace said pintles and a central perforated plate spanning the top of said housing, a bolt carrying a dish-shaped washer with a coiled spring engaging said washer and surrounding said bolt and said bolt extendng through the housing of said contact shoe member and plate of said supporting member and means detachably applied thereto for facilitating separation of said members from each other, substantially as and for the purposes described.

1,169,866. SYSTEM FOR SUPPLYING ELECTRICITY. IRVING J. REUTER, Anderson, Ind., assignor to Remy Electric Co., Anderson, Ind. Filed Oct. 19, 1912. Serial No. 726,710. (Cl. 171—312.)



1. A current generating and ignition system comprising a generator having means for regulating the current out-

put as the speed varies and having a pair of brushes between which the voltage increases as the speed increases, and an ignition circuit connected to said brushes.

2. In a system for supplyng electricity, a generator having a plurality of brushes, a load circuit connected to two of the brushes, the voltage between said two brushes being substantially constant at varying speed, an ignition circuit connected to two of the brushes, the voltage between said last named brushes increasing with the speed.

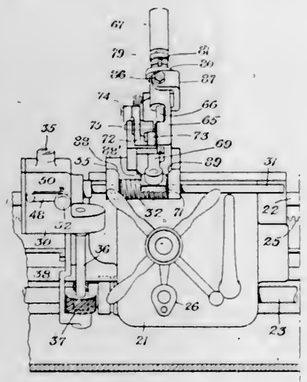
3. In a current generating and ignition system, a generator having a pair of main brushes, the voltage between which is substantially constant at varying speeds and having a third brush dsplaced from one of said load brushes, the voltage between said third brush and said last mentioned load brush increasing with the speed, and an ignition circuit connected to said last mentioned brushes.

4. In a battery charging and ignition system, a generator having a plurality of brushes including a pair of load brushes and a third brush displaced from one of said load brushes, a load circuit connected to said load brushes, a current regulating field coil connected to said auxiliary brush and one of said load brushes, and an ignition circuit connected to said third brush and the other of said load brushes.

5. In a system for supplying electricity, a generator having means for regulating the current output as the speed varies including a current regulating field winding, and provided with three brushes, the voltage between two of which decreases with the speed, and the voltage between two of which increases with the speed, said field winding being connected to said first named pair of brushes, and an ignition circuit connected to said second named pair of brushes.

[Claims 6 and 7 not printed in the Gazette.]

1,169,867. METAL-WORKING MACHINE. WILLIAM REYNOLDS, Paterson, N. J., assignor to Fitchburg Machine Works, Fitchburg, Mass., a Corporation of Massachusetts. Filed Oct. 28, 1913. Serial No. 797,753. (Cl. 82—21.)



1. A metal-working machine comprising a sliding carriage, a feed shaft therefor the axis of which is parallel to the path of said carriage, a tool slide movably mounted upon said carriage to slide thereon in a line parallel to the patch of said carriage, and transmission mechanism carried by said carriage and arranged in sliding engagement with said shaft to be driven thereby for moving said tool slide in said line relatively to said carriage.

2. A metal-working machine comprising a sliding carriage, a feed shaft therefor the axis of which is parallel to the path of said carriage, a tool slide movably mounted upon said carriage to slide thereon in a line parallel to the path of said carriage, a lead-screw or worm carried by said carriage, means for coacting with said lead-screw or worm to move said tool slide in said line relatively to said carriage, and transmission mechanism carried by said carriage and arranged in sliding engagement with said shaft to be driven thereby for rotating said lead-screw or worm.

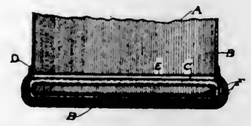
3. A metal-working machine comprising a sliding carriage, a support slidably carried by said carriage, a tool slide carried by said support, means for securing said support in various positions relatively to said carriage, a shaft carried by said carriage, a lead-screw or worm having splined connection with said shaft and movable with said support along the length of said shaft, means for coacting with said lead-screw or worm for moving said tool slide, transmission mechanism carried by said carriage for rotating said lead-screw or worm, and a driving shaft having splined connection with said transmission mechanism.

4. In a metal-working machine, two slides one mounted upon the other, for supporting a tool, one of said slides being movable relatively to the other, and two screws arranged in the ends of one of said slides and extending parallel to the direction of relative movement, said screws having heads extending laterally so as to overlap the ends of the other slide to limit relative movement of the slides, both of said slides having counter-sunk recesses for said heads, said heads being flush with the ends of the slide which carries them.

5. In a metal-working machine, a tool slide, a support therefor, a lead-screw or worm, means adapted to coact with said lead-screw or worm for moving said slide, said means being arranged to be held manually in working position, and means for moving said coacting means from coactive relation with said lead-screw or worm in consequence of movement imparted by the latter to said slide.

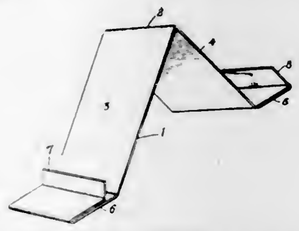
[Claims 6 to 14 not printed in the Gazette.]

1,169,868. BOOKBINDING. ERNST R. RICHARDS, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Jan. 28, 1914. Serial No. 814,849. (Cl. 11—16.)



A flat opening book comprising a set of leaves provided with coinciding openings therethrough, a flexible fibrous string passed through said holes, the end portions of said string being folded back and attached to the contiguous edges of said leaves by an adhesive, a cover sheet extending over said string and overlapping the sides of the set of leaves, said cover sheet being attached to the leaves and string by an adhesive, and a cover for the back edge and sides of the group of leaves.

1,169,869. BOOK-STAND. STEPHEN H. RICHARDS, New York, N. Y. Filed Oct. 6, 1915. Serial No. 54,298. (Cl. 120—28.)

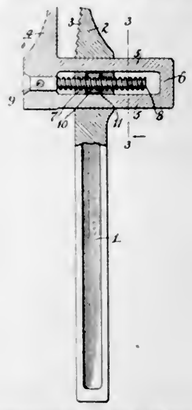


1. A book stand comprising a single strip intermediately bent to provide inclined supports and end supports, one of said ends being extended and bent back adjacent one of said inclined sides to form a clip for holding an open book.

2. A book stand comprising a single strip intermediately bent to provide a plurality of inclined book supports and end supports, each of said ends being extended and reversely bent close to the adjacent inclined supports to form clips for holding open books of respectively different character.

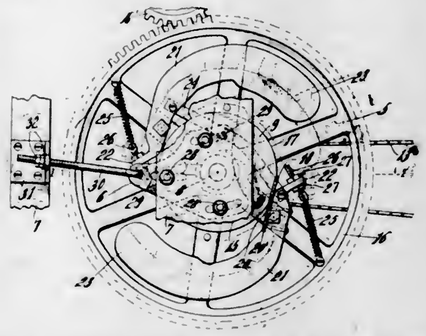
3. A book stand comprising a single strip intermediately bent to provide a plurality of inclined book supports and end supports, one of said ends being horizontally extended and then reversely and upwardly bent adjacent one of said inclined supports to form a clip for receiving and holding an open book.

1,169,870. WRENCH. GEORGE RIEXINGER, Buffalo, N. Y. Filed May 22, 1913. Serial No. 769,202. (Cl. 81—165.)



A wrench comprising a handle having a head forming a fixed jaw, said head being provided with a single transverse slot and openings arranged in the walls of said slot, a movable jaw coöperating with said head and having a shank slidably arranged in said slot, said shank consisting of a pair of separated longitudinal bars and a transverse brace-bar rigidly connecting the rear ends of said bars, said movable jaw, longitudinal bars and brace-bar being formed in one piece, a rotary nut arranged in said openings, and an adjusting screw secured to the movable jaw, arranged between said longitudinal bars and engaging said nut.

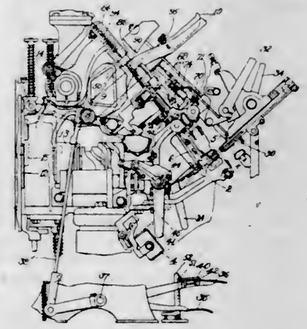
1,169,871. CENTRIFUGAL CLUTCH. AUGUST ROSENTHAL, West Allis, Wis. Filed Nov. 6, 1913. Serial No. 799,418. (Cl. 192—1.)



1. A centrifugal clutch, comprising a support provided with a projecting shaft, a driven wheel journaled on the shaft and having a peripheral recess, a hardened plate mounted in the recessed portion and projecting therefrom to form a shoulder, a drive wheel of larger diameter than the driven wheel supported by the shaft, a weighted lever pivoted near one end to the side portion of the driven wheel and having a recessed inner edge portion adjacent its short end portion, a hardened plate mounted in the edge recess and projecting therefrom to form a shoulder positioned to engage the shoulder of the driven wheel when the drive wheel is rotated at a predetermined rate of speed and to disengage said shoulder when the rate of speed of said drive wheel is reduced below said rate, and a coiled spring connected to the short end of the lever and to the drive wheel.

2. A centrifugal clutch, comprising a support provided with a projecting fixed shaft, a driven wheel journaled on the shaft and provided with an elongated hub, said wheel also having a peripheral recess, a hardened plate mounted in the recessed portion and projecting therefrom to form a shoulder, a drive wheel journaled on the elongated hub, weighted levers positioned on opposite sides of the shaft and pivoted near one of their end portions to the drive wheel, a link connecting the short end portion of one lever to the long end portion of the other lever, one of said levers at its short end provided with a recess, a hardened plate mounted in the recess and projecting therefrom to form a shoulder positioned to engage the shoulder of the driven wheel when the drive wheel is rotated at a predetermined rate of speed and to disengage said should when the rate of speed of said drive wheel is reduced below said rate, and coiled springs attached to the short ends of the levers and to the drive wheel.

1,169,872. GRIPPER MECHANISM FOR PULLING-OVER MACHINES. ARTHUR L. RUSSELL, Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 29, 1910. Serial No. 579,579. (Cl. 12—4.)



1. A pulling-over machine having, in combination, a plurality of grippers and actuating means for causing them to put an upper under tension about a last, said actuating mechanism having provision for moving different grippers through different distances, and a single manually actuated device connected operatively with two of said grippers located at opposite sides of the last and arranged to positively move each gripper the same distance from whatever position it may occupy to change equally the tension under which the upper is held by the two grippers.

2. A pulling-over machine having, in combination, grippers arranged at opposite sides of a last and actuating mechanism therefor including yielding elements coöperating with opposed grippers whereby they may be actuated through different distances in putting the upper under tension, means arranged for manual operation to move opposed side grippers together to change the tension on the upper, and an equalizer between the source of manual power and the side grippers to insure equal movement of each side gripper from whatever position it may occupy relatively to the other side gripper.

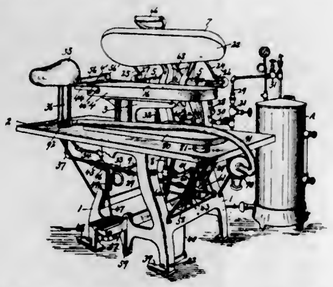
3. A machine of the class described having, in combination, a plurality of pairs of grippers and automatic mechanism for causing the grippers to pull simultaneously and hold under tension the upper at opposite sides of a last, and a single manually controlled means for effecting a movement of a plurality of pairs of grippers simultaneously in the direction to relieve the tension on the pulled upper, said machine having provision for causing said means to move equally said grippers at opposite sides of the last.

4. A pulling-over machine having, in combination, grippers for engaging the upper at opposite sides of the forepart of a shoe to pull the upper and hold it under tension, means for moving the grippers and the last relatively to straighten the toe tip seam, and a single manually operated means for completely relieving the upper of the pulling strain equally at the two sides of the last during the tip straightening operation.

5. A pulling-over machine having, in combination, side grippers, tip straightening means, and means adapted to relieve the tension on the upper during the operation of the tip straightening means, said tension relief means including an equalizer arranged to cause an equal movement of the two side grippers from whatever position they may occupy.

[Claims 6 to 123 not printed in the Gazette.]

1,169,873. CLOTHES-PRESSING MACHINE. GEORGE W. SANBORN, Utica, N. Y. Filed Apr. 1, 1913. Serial No. 758,229. (Cl. 68—9.)



1. In a clothes pressing machine, a hollow elongated buck having a horizontally disposed top provided in its underside with continuous lengthwise channels from end to end thereof, and lengthwise rows of perforations leading from the bases of said channels through the upper face of the top throughout the lengths of said channels.

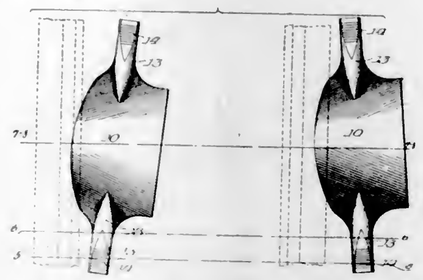
2. In a clothes pressing machine, a hollow elongated buck having a horizontally disposed top provided in its under side with continuous lengthwise channels from end to end thereof, and lengthwise rows of perforations leading from the bases of said channels through the upper face of the top throughout the lengths of said channels, and means for directing jets of steam in opposed directions across the under side of the top and transversely of the channels.

3. In a clothes pressing machine, two elongated pressing elements, one above the other, the lower element having a horizontally disposed top and an underlying steam chamber substantially coextensive therewith, said top having lengthwise parallel rows of perforations therethrough from end to end of the chamber and continuous lengthwise channels in its under side following the rows of perforations and communicating therewith.

4. In a clothes pressing machine, two elongated pressing elements, one above the other, the lower element having a horizontally disposed top and an underlying steam chamber substantially coextensive therewith, said top having lengthwise parallel rows of perforations therethrough from end to end of the chamber and continuous lengthwise channels in its under side following the rows of perforations and communicating therewith, and steam pipes running along opposite sides of and within said chamber and perforated through their inner sides for projecting jets of steam across the under side of the top transversely of said channels and rows of perforations.

5. In a clothes pressing machine, two elongated pressing elements, one above the other, the lower element having a horizontally disposed top and an underlying steam chamber substantially coextensive therewith, said top having lengthwise parallel rows of perforations therethrough from end to end of the chamber and continuous lengthwise channels in its under side following the rows of perforations and communicating therewith, the inner faces of the portions of the top between the channels being V-shaped in cross section to deflect the steam to adjacent rows of perforations.

1,169,874. RERAILER. GEORGE H. SARGENT, Chicago, Ill. Filed Mar. 22, 1915. Serial No. 16,086. (Cl. 104—163.)



1. In a rerailer, the combination of a body of metal, the upper surface of which is curved, and a narrow tread-engaging arm projecting from each side of said body portion, said arms lying in substantial alinement and being joined to said body portion at a point substantially midway between the side edges thereof, substantially as described.

2. In a device of the class described, the combination of a body of metal having a double angle of inclination, and a pair of narrow, oppositely projecting, substantially alined, tread-engaging arms integral with said body portion and joined thereto at a point between the side edges thereof, subsantially as described.

3. A rerailer composed of a convexed body of metal, and a pair of integral, narrow, oppositely extending, inclined arms, said arms being joined to the body of the rerailer at a point substantially midway between the side edges thereof, the upper surface of said arms being adapted to engage the tread of a wheel, the vertical thickness of the end of each arm being substantially equal to the height of a wheel flange, substantially as described.

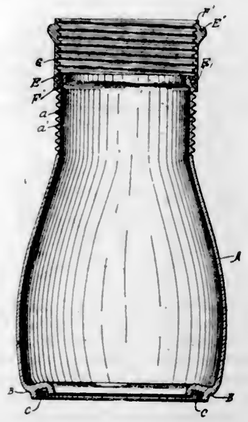
4. A rerailer composed of a convexed body of metal and a pair of oppositely projecting substantially alined arms which merge into such convexed portion, the upper surface of the ends of such projections being flattened and corrugated, substantially as described.

5. A rerailer composed of a convexed body of metal and a pair of arms projecting in substantial alinement from opposite ends of said body of metal, said arms being relatively narrow, the upper surface of the ends of the arms being flattened and corrugated and adapted to engage a wheel tread, substantially as described.

1,169,875. LANTERN-CHIMNEY. CHARLES SCHMIDT, Milwaukee, Wis. Filed Apr. 27, 1914. Serial No. 834,572. (Cl. 240—96.)

1. A lantern chimney provided with a plurality of rests of differing diameters at its lower end, and a plurality of ring receiving members of different diameters at its upper end portion.

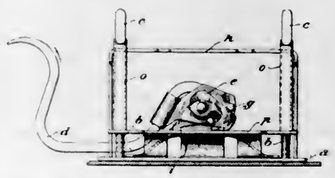
2. A lantern chimney provided with a plurality of rests of differing diameter at its lower end, and a plurality of ring receiving members of different diameters at its upper end portion, one of said ring receiving members being adjustable with reference to the other.



3. A lantern chimney member provided with a screw threaded upper portion and an extension member adjustable thereon, said chimney and also the extension member being adapted to be engaged by a chimney holder.

4. A lantern chimney having its upper end portion provided with a plurality of holder engaging members of different diameters, said members being relatively adjustable vertically.

1,169,876. FILING MECHANISM FOR LETTER-FILES. HERMANN SCHWARTZ, Neukölln, near Berlin, Germany. Filed July 8, 1915. Serial No. 38,811. (Cl. 129—7.)



1. A filing mechanism, comprising a base having stems and bridges mounted thereon, perforating sleeves mounted on the stems, said bridges being adapted to be in alinement with the stems during the perforating operation so that the sheets may be filed on the bridges, and means for actuating the sleeves for causing the sheets to be perforated.

2. A filing mechanism, comprising a base having stems and bridges mounted thereon, perforating sleeves mounted on the stems, said bridges being adapted to be in alinement with the stems during the perforating operation so that the sheets may be filed thereon, a lever for actuating the sleeves for moving them to a position for the perforating operation, and means for operating the sleeves upon the releasing of the sleeves by the lever.

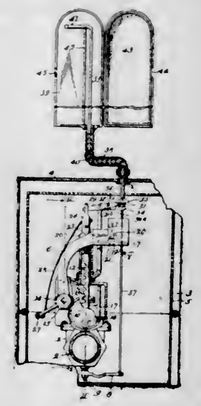
3. A filing mechanism, comprising a base having stems and bridges mounted thereon, perforating sleeves mounted on the stems, said bridges being adapted to be in alinement with the stems during the perforating operation so that the sheets may be filed thereon, and a lever for actuating the bridges, to permit the bridges to be brought into alinement with the stems, and means for operating the sleeves so that the perforating operation may be performed.

4. A filing mechanism, comprising a base having stems and bridges mounted thereon, perforating sleeves mounted on the stems, said bridges being adapted to be in alinement with the stems during the perforating operation so that the sheets may be filed thereon, a lever for actuating the bridges and sleeves, to permit the bridges to be brought into alinement with the stems, and when the stems and bridges are in alinement releasing the sleeves so that the perforating operation may be performed and means for moving the sleeves along the stems to perforate the sheets.

5. A filing mechanism, comprising a base having stems and bridges mounted thereon, perforating sleeves mounted on the stems, said bridges being adapted to be in alinement with the stems during the perforating operation so that the sheets may be filed thereon, a lever for actuating the bridges, to permit the bridges to be brought into alinement with the stems, and means for operating the sleeves so that the perforating operation may be performed and a stop mounted on the base for engaging the sheets so that the sheets will be uniformly perforated.

[Claims 6 to 14 not printed in the Gazette.]

1,169,877. FLUID-CONTROLLING APPARATUS. HENRY SIEBEN, Kansas City, Mo. Filed Dec. 29, 1911. Serial No. 668,440. (Cl. 137—92.)



1. In an apparatus of the character described, a service pipe for conducting fluid into a building, a self-closing valve to control the flow of fluid through said service pipe, means to assist in normally holding said valve open, fusible means coacting with the first-mentioned means to normally hold the valve open, and a push-rod to actuate said first-mentioned means to allow the valve to close.

2. In an apparatus of the character described, a service pipe to conduct fluid into a building, a self-closing valve to control the flow of fluid through said service pipe, means to normally hold said valve open, a rod to actuate said means to allow the valve to close, said rod having a handle, a box inclosing said handle, and a safety-member which holds the handle in position to prevent closing of the box until said handle is restored to normal position.

3. In an apparatus of the character described, a service-pipe for conducting fluid into a building, a self-closing valve to control the flow of fluid through said service pipe, a pin coacting with the casing of the valve to normally hold the valve in open position, and a rod to retract said pin and simultaneously force said valve to its seat.

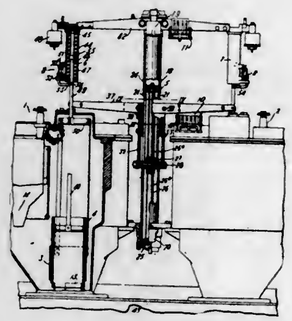
4. In an apparatus of the character described, a service-pipe for conducting fluid into a building, a self-closing valve to control the flow of fluid through said service pipe, said valve including a weighted-lever, a fusible element connected with said lever to assist in normally holding the valve open, a pin coacting with said fusible element in normally holding the valve open, and manually-operable means to actuate said pin to release the lever and allow the valve to close.

5. In an apparatus of the character described, a service-pipe for conducting fluid into a building, a self-closing

valve to control the flow of fluid through said service pipe, said valve including a weighted-lever, a fusible element connected with said lever to assist in normally holding the valve open, a pin coacting with said fusible element in normally holding the valve open, a lever to actuate said pin to release the lever and allow the valve to close, and manually-operable means to actuate said lever.

[Claims 6 to 19 not printed in the Gazette.]

1,169,878. CONTROL APPARATUS. KARL A. SIMMON and ARTHUR J. HALL, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 20, 1914. Serial No. 846,289. (Cl. 219—57.)



1. The combination with a plurality of liquid rheostats having movable discharge valves and regulating valves, of an operating device disposed intermediate said rheostats for concurrently actuating said regulating valves, supporting means carried by said device, and a plurality of operating devices attached thereto for severally actuating said discharge valves.

2. The combination with a plurality of liquid rheostats having movable discharge valves and regulating valves, of pneumatic means disposed intermediate said rheostats for actuating said regulating valves concurrently, a plurality of pneumatic means for severally actuating said discharge valves, and means for supporting said last pneumatic means upon said first pneumatic means.

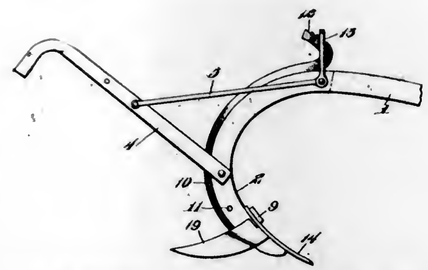
3. The combination with a pair of liquid rheostats disposed in side-by-side relation and each having a movable discharge valve and a movable regulating valve, of a power-operated device disposed between said rheostats, means associated with said device and adapted to be moved thereby for concurrently actuating said regulating valves, supporting members secured to the upper end of said device, and other power-operated devices severally attached to the respective ends of said supporting members and adapted to independently actuate said discharge valves.

4. The combination with a pair of liquid rheostats severally having movable concentric discharge valves and regulating valves, a power-operated device disposed intermediate said rheostats and having a movable member associated therewith and adapted to suspend and actuate both of said regulating valves, of oppositely projecting arms secured to the upper end of said device and other power-operated devices attached to the respective ends of said arms and severally adapted to independently suspend and actuate said discharge valves.

5. The combination with a pair of liquid rheostats having movable regulating valves, of an operating cylinder disposed intermediate said rheostats, a pair of pistons within the respective ends of said cylinder, a rod joining said pistons, and means mechanically associated with said rod below the upper ends of said rheostats for concurrently actuating said regulating valves.

[Claims 6 to 22 not printed in the Gazette.]

1,169,879. PLOW. SAMUEL OSCAR SMITH and JAMES W. CAMPBELL, Falco, Ala.; said Campbell assignor to said Smith. Filed Apr. 29, 1914. Serial No. 835,230. (Cl. 97—26.)

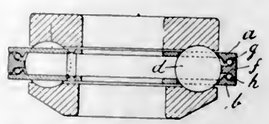


1. In an implement of the character described, the combination with a slotted standard having a transverse recess, a lever fulcrumed in the slot of the standard, a hook-shaped catch connected pivotally with the lever and extending beyond the face of the slotted standard, a plow shovel having a slot engaged by the hook-shaped catch, an obstructing member seated in the transverse recess and limiting the pivotal movement in a downward direction of the hook-shaped catch, and means for locking the lever in adjusted position.

2. In an implement of the class described, a beam having a curved slotted standard provided with a transverse recess, a lever fulcrumed in the slot of the standard and having a pivoted hook-shaped catch projecting beyond the face of the standard, an implement having a shank seated in the transverse recess in the path of the pivoted catch, and a shovel having a slot engaged by the pivoted catch, said lever having a toothed portion, and said lever possessing inherent resiliency; and a U-shaped catch pivoted on the beam to engage the toothed portion of the lever.

3. In an implement of the character described, the combination with a slotted standard having a transverse recess in its front side near its lower end, and provided with an opening in one side near said recess, of a member having a shank adapted to engage the transverse recess, said member having also a laterally projecting stud engaging the opening near the recess, and means for securing said member in position, said means including an operating lever fulcrumed on the standard, a hook-shaped catch pivoted on said lever, and means for securing the lever in adjusted position.

1,169,880. BALL-RETAINER FOR THRUST-BEARINGS. CARL AUGUST THEODOR SÖRENSEN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Aug. 14, 1914. Serial No. 856,749. (Cl. 64—49.)

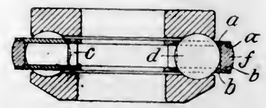


1. A ball retainer for thrust ball bearings, consisting of two parts rotatably mounted in relation to each other, and rolling members between said parts for centering them in relation to each other.

2. A ball retainer for thrust ball bearings, consisting of two parts rotatably mounted in relation to each other, one of said parts forming a separator for the bearing balls and the other forming a support for said balls in radial direction, and rolling members centering said parts in relation to each other.

3. A ball retainer for thrust ball bearings, consisting of a ring-shaped part encircling the bearing balls, a ball retaining and separating part, and balls between said parts in such position as to allow a rotative movement of said parts in relation to each other and prevent relative radial displacement thereof.

1,169,881. BALL-RETAINER FOR THRUST BALL-BEARINGS. CARL AUGUST THEODOR SÖRENSEN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Aug. 14, 1914. Serial No. 856,750. (Cl. 64—49.)

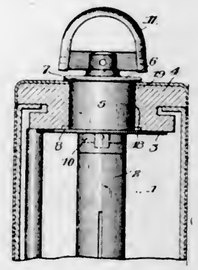


1. A ball retainer for thrust ball bearings, consisting of a ringshaped part for encircling the balls, and a ball retaining part, said parts being in such engagement with each other that they can rotate in relation to each other, while radial displacements of said parts in relation to each other are prevented, substantially as and for the purpose set forth.

2. A ball retainer for thrust ball bearings, consisting of a ring-shaped part for encircling the balls, and a ball retaining part composed of two perforated plates rigidly connected to each other, said parts being in such engagement with each other that they can rotate in relation to each other while radial displacements of said parts in relation to each other are prevented, substantially as and for the purpose set forth.

3. A ball retainer for thrust ball bearings, comprising a retaining part composed of two plates perforated for receiving the balls and spaced apart and rigidly connected, and a ring located in the space between the plates outwardly of the perforations, the ring and plates having cooperative abutting shoulders permitting relative rotation of the plates and ring and preventing relative radial movement thereof.

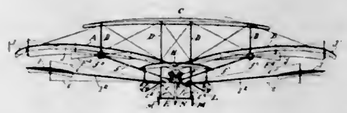
1,169,882. FILM-WINDING KEY FOR PHOTOGRAPHIC CAMERAS. CHARLES F. SPEIDEL, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Mar. 23, 1914. Serial No. 826,788. (Cl. 242—71.)



1. In a spool center, the combination with a casing containing a chamber, a cylindrical socket shell extending through a wall of the casing, and a rotary winding stem extending centrally through and journaled in the socket, said stem being provided at its respective ends with a handle on the exterior of the casing and with a spool engaging head within the chamber, of an annular clutch block within the socket shell surrounding the stem and provided with inner clutch containing recesses and with outer locking recesses, and inwardly extending projections on the socket shell occupying the last named recesses to prevent rotation of the clutch block.

2. In a spool center, the combination with a casing containing a chamber, a cylindrical socket shell extending through a wall of the casing, and a rotary winding stem extending centrally through and journaled in the socket, said stem being provided at its respective ends with a handle on the exterior of the casing and with a spool engaging head within the chamber, of an annular clutch block within the socket shell surrounding the stem and provided with inner clutch containing recesses and with outer locking recesses, a keeper plate superposed upon the clutch block to close the clutch containing recesses thereof and means for preventing rotation of the clutch block and for confining the keeper plate comprising a plurality of projections formed by striking in the material of the socket shell on opposite sides of the keeper plate, certain of said projections being arranged to occupy the outer locking recesses of the clutch block.

1,169,883. AEROPLANE. HARLOW T. STOKES, Newark, N. J. Filed Mar. 9, 1910. Serial No. 548,156. (Cl. 244—14.)



1. In an aeroplane, a plurality of main weight-supporting planes, two of which diverge outwardly, and a third plane being positioned above said diverging planes, a plurality of propellers positioned on opposite sides of the longitudinal axis of the aeroplane, a plurality of auxiliary planes positioned at the rear of said outwardly diverging weight-supporting planes, each auxiliary plane being hinged for movement on a horizontal axis, and means for turning said auxiliary planes to an inclined position with respect to said weight-carrying planes.

2. An aeroplane embodying a plurality of main weight supporting planes two of which diverge outwardly and a third plane positioned over said diverging planes, said third plane being in a predetermined fixed relation to said diverging planes. Wing tip planes hinged to the diverging planes at the outer ends thereof, said wing tip planes being positioned distant from the ends of the third plane, and means for shifting the wing tip planes in the same direction and at the same time whereby in one position of said wing tip planes the latter constitute extensions or prolongations of the main diverging planes.

3. An aeroplane embodying a plurality of three relatively fixed main planes two of which diverge outwardly and a third plane positioned over said diverging planes and spaced relatively thereto, each plane being curved lengthwise and crosswise, wing tip planes hinged to the diverging planes at points distant from the ends of said third plane, and means for controlling said wing tip planes whereby the positions of said wing tip planes relatively to the other planes may be changed at will.

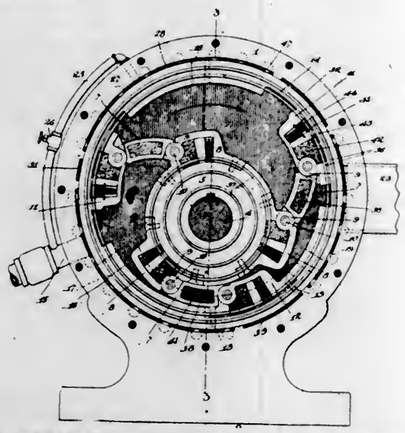
4. In an aeroplane, a plurality of weight-supporting planes each curved longitudinally, two of said planes occupying outwardly diverging relation to each other, and a third plane positioned above the diverging planes, longitudinally curved balancing planes positioned at the outer ends of the two first named planes, and means for imparting movement to the balancing planes simultaneously and in the same direction whereby the balancing planes are adapted to be moved into position wherein the longitudinal curvature thereof corresponds to the arc of the first two planes.

5. In an aeroplane, two weight-supporting planes, curved lengthwise and diverging with respect to each other, and a third plane positioned over the inner portions of said diverging planes, longitudinally curved balancing planes positioned at the outer ends of the two first named planes, and means for imparting movement to the balancing planes simultaneously and in the same direction whereby the bal-

ancing planes are adapted to be moved into position wherein the longitudinal curvature thereof corresponds to the arc of the first two planes.

[Claims 6 to 42 not printed in the Gazette.]

1,169,884. ROTARY ENGINE. HENRY C. STRACK, Owego, N. Y. Filed May 25, 1915. Serial No. 30,432. (Cl. 121—65.)



1. A rotary engine comprising a casing, a cylinder therein, means for supporting the cylinder within the casing to permit the cylinder to rotate, a hub within the cylinder and eccentric thereto, pistons connecting the hub and cylinder and dividing the interior of the cylinder into steam spaces, a steam inlet and a steam outlet to the interior of the casing, a steam chamber between the casing and steam inlet, a steam chamber between the cylinder and casing and in communication with the outlet, and a series of ports through the cylinder, each port communicating with a steam space.

2. A rotary engine comprising a casing, a cylinder therein, means for supporting the cylinder within the casing to permit the cylinder to rotate, a hub within the cylinder and eccentric thereto, pistons connecting the hub and cylinder and dividing the interior of the cylinder into steam spaces, a steam inlet and a steam outlet to the interior of the casing, a steam chamber between the casing and steam inlet, a steam chamber between the cylinder and casing and in communication with the outlet, a series of ports through the cylinder, each port communicating with a steam space, frames connecting the pistons to the cylinder, and frames connecting the pistons to the hub, one of the cylinder frames being fixed in relation to the cylinder and another cylinder frame sliding in relation to the cylinder.

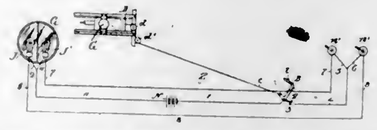
3. A rotary steam engine comprising a casing, a cylinder rotating therein, a hub eccentric to the cylinder, frames carried by the hub, frames carried by the cylinder, and pistons connecting the frames, ears carried by the frames, and pins connecting the ears and pistons so that a hinged joint is produced between each frame and piston.

4. A rotary engine comprising a casing, a cylinder therein, means for supporting the cylinder within the casing to permit the cylinder to rotate, a hub within the cylinder and eccentric thereto, pistons connecting the hub and cylinder and dividing the interior of the cylinder into steam spaces, a steam inlet and a steam outlet to the interior of the casing, a steam chamber between the casing and steam inlet, a steam chamber between the cylinder and casing and in communication with the outlet, a series of ports through the cylinder, each port communicating with a steam space, an auxiliary steam passage through the casing, and an auxiliary steam chamber between the casing and cylinder and communicating with a steam port, said auxiliary steam chamber lying between the steam inlet chamber and the steam outlet chamber.

5. A rotary engine comprising a casing, a cylinder therein, means for supporting the cylinder within the casing to permit the cylinder to rotate, a hub within the cylinder and eccentric thereto, pistons connecting the hub and cylinder, and dividing the interior of the cylinder into steam spaces, a steam inlet and a steam outlet to the interior of the casing, a steam chamber between the casing and steam inlet, a steam chamber between the cylinder and casing and in communication with the outlet, a series of ports through the cylinder, each port communicating with a steam space, an auxiliary steam passage through the casing, an auxiliary steam chamber between the casing and cylinder and communicating with a steam port, said auxiliary steam chamber lying between the steam inlet chamber and the steam outlet chamber, and means for controlling the passage of steam through the auxiliary steam passage.

[Claims 6 to 17 not printed in the Gazette.]

1,169,885. VEHICLE-SIGNAL. JOHN F. SULLIVAN, New York, N. Y. Filed June 3, 1914. Serial No. 842,555. (Cl. 177—337.)



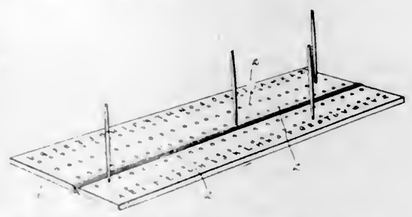
1. The combination with a body of a vehicle, of a signal lamp, a movable shutter adapted in one position to conceal said lamp and in another position to reveal it, a brake pedal, a brake, and a signal pedal operatively connected with said shutter and adapted to be actuated by said brake pedal, whereby the application of said brake moves said shutter to reveal said lamp.

2. In a vehicle signal a lamp body having a plurality of chambers within the vehicle body, a movable shutter flush with said vehicle body and means to operate said shutter to conceal or reveal said lamps, an electric lamp in each chamber, electric circuits for said lamps, and makes-and-breaks for said circuits controlled by a person in the vehicle.

3. The combination with the tonneau of a vehicle, of a lamp body having a plurality of lateral chambers, and a partition between said chambers, a lamp in each said chamber and located within the apertured wall of said tonneau, a movable shutter adapted to conceal and to reveal said lamps, and separate means operated by the driver of the vehicle to actuate said shutter and to illuminate and quench either of said lamps.

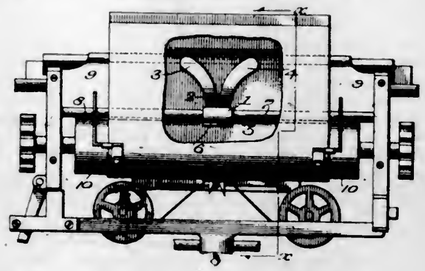
4. The combination with the body of a vehicle of a plurality of electric signal lamps, an electric generator and electric circuit for said lamps, a flash make and break in said circuit, a shutter adapted in one position to reveal and in another to conceal said lamps, a pedal operatively connected with said shutter, and adapted to make and break said circuit.

1,169,886. GAME APPARATUS. FREDERICK G. SULTZBACH, Lancaster, Pa. Filed Mar. 17, 1914. Serial No. 825,321. (Cl. 35—9.)



The herein described game apparatus comprising a board having outer and intermediate longitudinal rows of openings, said openings being also arranged in transverse rows across the board and the openings of the outer rows being respectively lettered, in alphabetical sequence, pieces arranged for insertion in said openings, and flexible members extending longitudinally over the board and arraged to receive said pieces when not in use.

1,169,887. ATTACHMENT FOR TYPE-WRITERS. FREDERICK W. SUTTERLE, Jr., Shanghai, China. Filed Jan. 30, 1915. Serial No. 5,320. (Cl. 197—127.)



1. The combination with the cross bar of a typewriter feed carriage, of an attachment comprising a thin flexible metal sheet having rearwardly directed arms and a deflected portion forming a groove whereby said attachment may be assembled with said cross bar by forcing the attachment toward the cross bar to cause the latter to become seated in said groove.

2. The combination with a typewriter feed carriage having a feed roller, a rear paper table and a cross bar, of an attachment comprising a thin, flexible, metal sheet having diverging arms at one end, and deflected upon itself near its opposite end to form a groove, and having its free end bent outwardly, said attachment being centrally mounted on said cross bar by forcing it thereagainst and causing it to be received in said groove.

1,169,888. SHIELD FOR CYCLES. JOHN SCOTT TULLOCH, Cashmere, Christchurch, New Zealand. Filed July 15, 1914. Serial No. 851,074. (Cl. 208—150.)

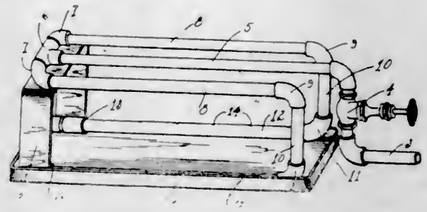


1. An apron or shied attachment for bicycles, tricycles, motor-cycles and the like, comprising a support adapted to be secured to the handle bars thereof and disposed in spaced relation above the same, said support including extensible portions adapted to project rearwardly therefrom and of said handle bars, and a cover connected to said support and adapted to extend over said rearwardly projecting portions, forwardly over the handle-bars and to depend at the side portions to protect the frame, drive mechanism of the machine and the rider.

2. A shield attachment for motor-cycles, bicycles and the like, comprising a supporting member having means to connect the same to the handle-bars of said machine and straddling said handle bars in spaced relation to and above the latter, said supporting member including foldable parts adapted to project rearwardly therefrom beyond the handle-bars and over the rider, a water-proof covering of flexible material secured to the supporting member and designed to extend forwardly and rearwardly of the same over the handle-bars, in front of the frame of the machine and over the foldable portions respectively, means to anchor the covering at the front, said covering extending downwardly at the sides, means for anchoring said downwardly extending sides and means for anchoring said foldable portions detachably to the covering.

3. An apron attachment for bicycles, motor-cycles and the like, comprising a flexible covering adapted when in operative position to envelop the handle-bars and forward portion of the machine and to depend downward on either side, and a framework detachably mounted upon the handle-bars adjacent to the grasping portions thereof, said framework comprising a supporting member having the end portions thereof curved to one side and in opposite directions toward each other, means at the extremities of said curved portions to attach the same to the handle-bars with the supporting member extending across the latter, said covering being connected thereto, arms pivoted to said supporting member and having notched end portons, a rigid member attached to the underside of the covering for disposition adjacent to the rider and having studs adapted for detachable engagement by the notched end portions of the arms whereby to support the covering in a forwardly inclined position when in use, said arms being adapted when disengaged from the studs to be moved into alinement with the supporting member attached to the handle-bars and the covering being adapted to be folded and rolled to extend along the supporting member, and means for anchoring the covering in such condition.

1,169,889. HYDROCARBON-BURNER. LEWIS C. VERMILLION, Parlier, Cal. Filed Oct. 1, 1915. Serial No. 53,548. (Cl. 158—63.)

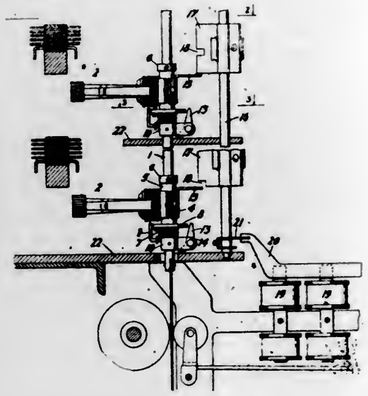


A device of the character described comprising a pan, a rectangular supporting bracket disposed at one end of said pan, a supply pipe provided with a valve, a retort pipe extending from the valve centrally above the pan and resting on the bracket, retort pipes connected with the first named pipe and paralleling the same in the same plane, vertical pipes connected at the opposite ends of said last named pipes, discharge pipes connected with said vertical pipes and extending below the second named pipes and provided with discharge outlets, said last named pipes being secured to the lower ends of the sides of said bracket, as described.

1,169,890. SELECTOR-SWITCH. LADISLAUS VON NAGY; Plainfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation or New York. Filed Aug. 25, 1915. Serial No. 47,248. (Cl. 179—27.5.)

1. In an automatic switch, a brush support, a plurality of brushes on said support, a series of stationary contacts for each brush, means normally maintaining said brushes in an operative position, a brush selecting device for rotating all undesired brushes to an inoperative position at one side of the rows of contacts, and means for maintaining the rotated brushes in their inoperative position.

2. In an automatic switch, a plurality of multiply connected brushes, a series of stationary contacts for each brush tension devices normally maintaining said brushes in an operative position, a brush controlling device, means for operating said device to rotate all undesired brushes to an inoperative position at one side of the rows of contacts, and means for maintaining the rotated brushes in their inoperative position.



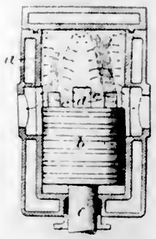
3. In an automatic switch, a plurality of multiply connected brushes, a series of stationary contacts for each brush, spring devices normally maintaining said brushes in a position to traverse their series of contacts, a brush controlling device, means for operating said device to rotate all undesired brushes to an inoperative position at one side of their rows of contacts, and pawl and ratchet devices for holding the rotated brushes in their inoperative positions.

4. In an automatic switch, a plurality of multiply connected brushes, a series of stationary contacts arranged to be traversed by each brush, tension devices normally maintaining said brushes in a position to traverse their series of contacts, a brush selecting rod, means for rotating said rod, and devices on said rod coöperating with said brushes to rotate all except a selected one of said brushes to an inoperative position.

5. In an automatic switch, a brush supporting shaft, a plurality of multiply connected brushes rotatably mounted on said shaft, a series of stationary contacts for each brush, tension devices normally maintaining said brushes in a position to traverse their series of contacts, a brush selecting rod, brush controlling members on said rod, one being adjacent to each brush set when in its normal position, an operating lever on each brush arranged to cooperate with its respective controlling member, means for rotating said rod, means for moving said shaft longitudinally, notches in said brush controlling members arranged to permit the passage therethrough of said levers, said notches being arranged at progressively increasing distances from the normal position of said brushes, so that the rotation of said rod after a predetermined longitudinal movement of said shaft will cause all except a selected one of said brushes to be rotated to an inoperative position.

1,169,891. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. ARNOLD VON SCHMIDT, Munich, Germany, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 7, 1912. Serial No. 719,065. (Cl. 123—65.)

1. A two-cycle internal combustion engine having a cylinder whose side walls are provided with a plurality of inlet ports and also with a plurality of exhaust ports arranged intermediately of the inlet ports, the inlet ports having oblique walls to direct scavenging streams entering the cylinder through said ports inwardly and also toward an end of the cylinder so as to crowd out the exhaust gases through the exhaust ports, substantially as described.



2. A double-acting two-cycle internal combustion engine having a cylinder whose side walls are provided with a plurality of inlet ports and also with a plurality of exhaust ports, arranged intermediately of the inlet ports, the inlet ports having oblique walls to direct the entering scavenging streams inwardly and also toward both ends of the cylinder so as to crowd out the exhaust gases through the exhaust ports, substantially as described.

3. A two-cycle internal combustion engine, having a cylinder provided with two inlet ports opposite to each other, each of which is divided into a number of smaller ports which are inclined both to the end of the cylinder and to each other.

4. A double-acting two-cycle internal combustion engine having a cylinder whose side walls are provided with a plurality of inlet ports and also with a plurality of exhaust ports, arranged intermediately of the inlet ports, the latter having separate discharge openings directed obliquely toward the respective ends of the cylinder so as to crowd out the exhaust gases through the exhaust ports, substantially as described.

5. A two-cycle internal combustion engine having a cylinder whose side walls are provided with a plurality of inlet ports and also with a plurality of exhaust ports arranged intermediately of the inlet ports, the inlet ports having oblique walls to direct scavenging streams entering the cylinder therethrough inwardly and also toward the ends of the cylinder so as to crowd out the exhaust gases through the exhaust ports, and each inlet port being divided into a plurality of separate discharge passages to break up the scavenging streams into a plurality of finer streams, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

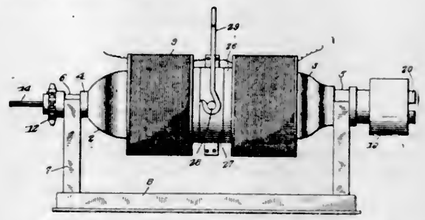
1,169,892. SAFETY-RAZOR. PETER O. UGARPH, Rockford, Ill. Filed Aug. 2, 1915. Serial No. 43,301. (Cl. 30—12.)



1. A safety razor comprising a backing having upturned ends provided with alined sockets one of said ends being also provided with a slot extending transversely of the back and communicating with the socket in said end, a blade and a guard adapted to fit said backing and be disposed between said ends, a handle provided at one end with a cross-bar constructed for attachment to said backing by inserting one end in one of said sockets and entering the other end into the other socket through said slot, and means on said cross-bar for clamping the guard and blade to the back upon swinging movement of the handle about the longitudinal axis of said cross bar.

2. A safety razor, comprising a backing provided with raised end portions, a blade and a guard mounted on the backing between said end portions, a handle provided at one end with a cross-head, one of said raised ends being formed on its inner side with a recess and the other with a recess and a cam groove leading thereto, whereby the ends of the cross-head may be entered into the said recess to effect pivotal attachment of the handle to the blade-holding means, and cam means coöperative between the handle and blade-holding means for holding the latter in any of several different angular positions with respect to the handle, the said cam groove being so arranged as to cause the said cam means to slightly clamp the guard and blade to the backing when attaching the handle, final clamping of the several parts being effected by the said cam means when the blade-holding means and handle are adjusted relatively.

1,169,893. APPARATUS FOR USE IN PRODUCING SYNTHETIC AND CHEMICAL SUBSTANCES. JOHN R. WATSON, Baltimore, Md. Filed Jan. 25, 1915. Serial No. 4,317. (Cl. 204—64.)



1. A retort of the character described comprising a rotating retort body having end journals, one of said journals being bored to form a mouth, sealing means for said mouth, means for electrically heating the retort body, said means including a controlling circuit, and means coöperating with the other end journal of the retort body and governed by the temperatures of the retort for controlling the supply of current through said circuit.

2. A retort of the character described comprising a rotating retort body having end journals, one of said journals being bored to form a mouth, sealing means for said mouth, said sealing means being rendered inoperative for sealing action when a certain pressure is exceeded in said retort, to permit the excess pressure to vent, means for electrically heating the retort body, said means including a controlling circuit, and means coöperating with the other end journal of the retort and governed by the temperature of the retort for controlling the supply of current through said circuit.

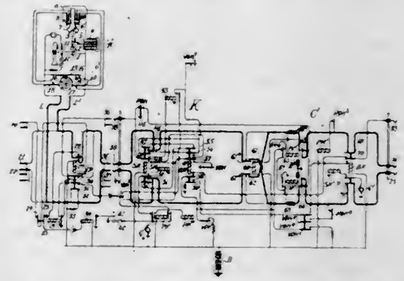
3. A retort of the character described including a seamless retort body, said body being disposed in a horizontal plane and having extensions forming end journals, one of said extensions being bored to provide a mouth, means for sealing said mouth, electrical means for heating the retort body, thermostatically controlled means associated with the retort body for governing said electrical heating means, means for rotating the retort body, and a frame having bearings receiving said retort journals and in which said journals are mounted to revolve.

4. A retort of the character described comprising a seamless retort body, said body being disposed in a horizontal plane and having extensions forming end journals, one of said journals being bored to form a mouth, a closure for said mouth, means for electrically heating the retort body, means for rotating said body, a frame in which the journals of the retort body are mounted to revolve, and means for thermostatically governing said heating means.

5. A retort of the character described including a seamless retort body, said body being disposed in a horizontal plane and having extensions forming end journals, one of said extensions being bored to provide a mouth, means for sealing said mouth, electrical heating means about the retort body, a controlling circuit associated therewith, means coöperating with the other end journal of the retort for governing said circuit to vary the supply of electric current to the heating means according to the temperature of the retort, means for rotating said retort, and a frame having bearings receiving said retort journals and in which said journals are mounted to revolve.

[Claims 6 to 10 not printed in the Gazette.]

1,169,894. AUTOMATIC TELEPHONE SYSTEM. HARRY G. WEBSTER, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Feb. 27, 1907. Serial No. 359,625. (Cl. 179—18.)



1. A telephone system including a selective switch having contact sets arranged in groups, a primary magnet for operating said switch to select a group, a secondary magnet for operating said switch to select a contact set of the selected group, means for operating said secondary magnet to effect restoration of said switch, a controlling station, and means for transmitting currents therefrom to operate and release said switch.

2. In a telephone system, the combination with an electrical switch for automatic exchanges, of a main switch shaft adapted for reciprocal action, driving means for actuating said shaft, a spring for securing return movement thereof, means for preventing said return movement until the shaft is drivin its full operative distance, mechanism for automatically temporarily relieving operative tension of said spring from said shaft effective as the shaft completes its operative distance, mechanism for thereafter automatically rendering said spring effective to cause return movement of said shaft, a controlling station, and means for transmitting currents therefrom to operate and release said switch.

3. In a telephone system, a selective switch including a rotatable main switch shaft, a spring for securing return rotary movement of said shaft against whose tension the shaft is operated, means for turning said shaft from an initial fixed rotary position to a final fixed rotary position, means for automatically removing the tension of said spring from said shaft when it assumes either of said fixed rotary positions, said spring being adapted to exert its tension upon said shaft in its other rotary positions, a controlling station, and means for transmitting currents therefrom to operate and release said switch.

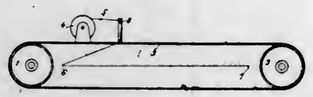
4. In a telephone system, the combination with a selective switch, of a main switch shaft, a spring-case mounted upon said shaft, a spring having one end attached thereto, an arm having an orifice at each end, one orifice fitting losely about the shaft, the other orifice fitting about a suitably disposed post, the other end of said spring being attached to said arm adjacent to said shaft, means for rotating said shaft from a particular initial rotary position to a particular final rotary position, a stop carried by said shaft normally engaging said arm to render ineffective the rotary tension of said spring upon said shaft, when in its initial rotary position, a second stop carried

by said shaft adapted to engage said arm only when the shaft reaches its final rotary position to again render ineffective said tension of said spring, a controlling station, and means for transmitting currents therefrom to operate and release said switch.

5. In a telephone system, the combination with an electrical switch, of contact sets arranged in groups, adjustable contact makers for said switch adapted to engage said contact sets, mechanism for primarily operating said switch to select a group, mechanism for secondarily operating said switch to select a contact set of the selected group, an off-normal switch shifted when said switch is initially primarily operated, a second off-normal switch operated when said switch is initially secondarily operated, means for restoring said off-normal switches effective only when said contact makers are fully restored, a controlling station, and means for transmitting currents therefrom to operate and release said switch.

[Claims 6 to 82 not printed in the Gazette.]

1,169,895. MANUFACTURE OF REINFORCED PAPER, PASTEBOARD, AND THE LIKE. ALEXANDER WENDLER, Charlottenburg, Germany. Filed July 20, 1909. Serial No. 508,615. (Cl. 154—1.)



1. The herein described method of providing paper or the like with an incorporated, non-reticular, non-interwoven reinforcement of longitudinal and cross strands, consisting in stretching continuously running, parallel, longitudinal edge strands, winding a continuous strand around said edge strands to form strengthening strands which extend at nearly a right angle to the longitudinal strands, running continuous intermediate strands between said edge strands, and incorporating the reinforcement so formed in the paper.

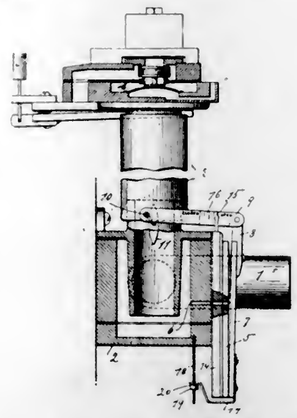
2. The herein described method of providing paper or the like with an incorporated, non-reticular, non-interwoven reinforcement of longitudinal and cross strands, consisting in stretching parallel edge and intermediate longitudinal strands spaced at short intervals from each other, winding a continuous strand around said longitudinal strands to form strengthening strands which extend at nearly a right angle to the longitudinal strands, and incorporating the reinforcement so formed in the paper.

1,169,896. VACUUM-CONTROLLING DEVICE FOR PLAYER-PIANOS. EDWIN S. WEROLIN, Brooklyn, N. Y., assignor to Sohmer & Company, New York, N. Y. Filed Apr. 7, 1915. Serial No. 19,785. (Cl. 88—168.)

1. A device of the character described, comprising a pipe adapted to be placed under variable suction, a pneumatic communicating with said pipe and adapted to be automatically expanded or contracted upon a decrease or increase of said suction, a valve controlling the pipe, means for opening the valve on a contraction of the bellows and for closing the valve on an expansion of the bellows, and a vacuum chamber of a self-player action communicating with the pipe.

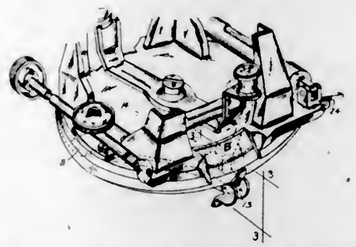
2. A device of the character described, comprising a pipe adapted to be placed under variable suction, a gate box communicating with the pipe and adapted to be placed under corresponding variable suction, a pneumatic communicating with the pipe through said gate box and adapted to be automatically expanded or contracted upon a decrease or increase of said suction, a valve controlling the pipe, means for opening the valve on a contraction of the bellows and for closing the valve on an expansion of the bellows, and a vacuum chamber of a self-player action communicating with the pipe.

3. A device of the character described, comprising a pipe adapted to be placed under variable suction, a pneumatic communicating with said pipe and adapted to be automatically expanded or contracted upon a decrease or increase of said suction, a spring secured to the movable member of the pneumatic, means for regulating the tension of said spring, a valve controlling the pipe, means for opening the valve on a contraction of the bellows and for closing the valve on an expansion of the bellows, and a vacuum chamber of a self-player action communicating with the pipe.



4. A device of the character described, comprising a pipe adapted to be placed under variable suction, a pneumatic communicating with said pipe and adapted to be automatically expanded or contracted upon a decrease or increase of said suction, a cranked spindle passing diametrically through the pipe, a valve mounted on said spindle, means for operably securing the pneumatic to the spindle, and a vacuum chamber of a self-player action communicating with the pipe.

1,169,897. AUTOMATIC ZERO AND ANGLE SETTING ATTACHMENT FOR THEODOLITES AND THE LIKE. WILLIAM GEORGE WIESENER, Sydney, New South Wales, Australia. Filed Oct. 27, 1913. Serial No. 797,621. (Cl. 33—72.)



1. An automatic zero and angle-setting attachment for theodolites and the like comprising, an index plate and a divided circle plate, a fixed stop on one of said plates and a movable stop on the other plate to be moved into or out of operation with the fixed stop, and a spring operated jaw in juxtaposition to the fixed stop whereby it will engage the movable stop and bring it into spring contact with the fixed stop.

2. An automatic zero and angle-setting attachment for theodolites and the like comprising, an index plate and a divided circle plate, two fixed stops adjustable on one of said plates and a movable stop on the other plate to be selectively moved into or out of operative relation with either one of the fixed stops, and two movable spring operated jaws one in juxtaposition to each of said fixed stops whereby it will engage the movable stop and bring it into spring contact with its respective fixed stop.

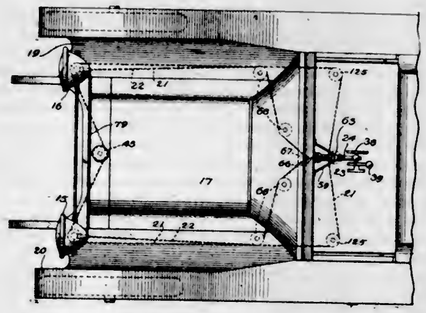
3. An automatic zero and angle-setting attachment for theodolites and the like comprising, an index plate and a divided circle plate, a fixed stop adjustable on one of said plates, a bracket hinged to the other of said plates, a movable stop pivoted to said bracket to engage said fixed stop, and means for bringing said movable stop into and out of operative relation with the fixed stop.

4. An automatic zero and angle-setting attachment for theodolites and the like comprising, an index plate and a divided circle plate, two fixed stops adjustable on one of said plates, a bracket hinged to the other of said plates, a movable stop pivoted to said bracket to engage said fixed stops, and means for bringing said movable stop into and out of operative relation with the fixed stops.

5. An automatic zero and angle-setting attachment for theodolites and the like comprising, an index plate and a divided circle plate, two fixed stops adjustable on one of said plates, a bracket hinged to the other of said plates, a movable stop pivoted to said bracket to engage said fixed stops, means for bringing said movable stop into and out of operative relation with the fixed stops, and two spring pressed jaws one in juxtaposition to each of said fixed stops whereby it will engage the movable stop and bring it into spring contact with its respective fixed stop.

[Claim 6 not printed in the Gazette.]

1,169,898. DIRIGIBLE LAMP. ROSCOE WILCOX, Lombard, Ill. Filed Mar. 18, 1915. Serial No. 15,221. (Cl. 240—61.)



1. In an automobile with dirigible headlights, an operating mechanism comprising a vertical tube mounted for rotation; an operating lever mounted for vertical rotation on one end of said tube; headlight operating means passing from the other end of said tube to said headlights; headlight operating means passing from said lever to said headlights; and resilient means tending to hold said tube in normal position.

2. The combination of an automobile, a pair of headlights, an operating mechanism, a relatively long tube passing away from said mechanism, a tube supporting each headlight, means passing through each of said tubes operatively connected with said mechanism for producing vertical rotation of each of said headlights, and means connecting all of said tubes for producing horizontal rotation of said headlights.

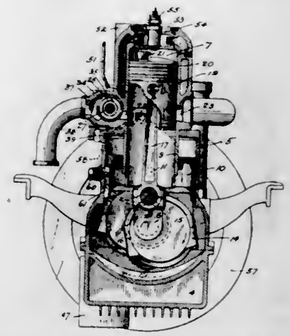
3. In an automobile with dirigible headlights, an operating mechanism for said headlights comprising an operating lever mounted for vertical rotation; pawl and ratchet means for preventing downward movement of said lever; means mounted on the free end of said lever for releasing said pawl and ratchet means; headlight operating means passing downward from said lever, and resilient means tending to pull said operating means away from said lever.

4. In an automobile, a rotatable headlight and resilient means tending to hold said headlight in normal position, said means comprising an arm non-rotatable with reference to said headlight, a spring normally opposing the movement of said arm in one direction, and means preventing movement of said spring beyond its normal position in the opposite direction.

5. In an automobile a rotatable headlight, resilient means opposing rotation of said headlight out of its normal position in one direction, other resilient means opposing rotation of said headlight out of its normal position in the opposite direction, and means preventing movement of each of said resilient means out of its normal position in its non-opposing direction.

[Claims 6 to 8 not printed in the Gazette.]

1,169,899. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. ARCHEY E. WILLIAMS, Los Angeles, Cal. Filed Mar. 9, 1914. Serial No. 823,277. (Cl. 123—65.)



1. A two-cycle internal combustion engine comprising a cylinder inclosing a combustion chamber, a piston slidably mounted therein, a casing surrounding a portion of said cylinder and forming therewith a compression chamber, a plunger mounted in said compression chamber, a crank operated valve connecting said chambers, and eccentric connection between said piston and plunger whereby a charge is delivered from said charging chamber to said combustion chamber with an accelerated action just before the end of the piston stroke.

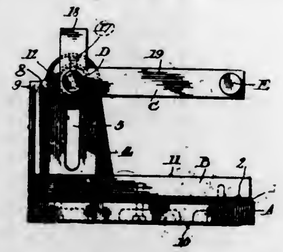
2. A two stroke internal combustion engine comprising a cylinder having a skirt provided with a plurality of surfaces, a piston slidably mounted in relation to one of said surfaces, a plunger mounted in slidable relation to the other of said surfaces, a casing surrounding said plunger and forming a sliding surface therefor, a rotary valve intermediate said piston and said plunger, and eccentric operating connections between said piston and said plunger, whereby they are reciprocated in the same and opposite direction during one stroke.

3. A two-cycle internal combustion engine comprising a cylinder having a wall provided with an internal sliding surface and an external sliding surface, with inlet and exhaust ports located above said external surface, a ported casing for the portion of said cylinder provided with the internal and external sliding surfaces, having a concentric interior surface adapted to form a sliding contact for a plunger, a piston slidably mounted in said cylinder and engaging the internal surface thereof and adapted to open and close said inlet and exhaust ports, a plunger slidably mounted in said casing and engaging the external wall of said cylinder, a rotary valve provided with a port and an open end, rotatably mounted intermediate said ported casing and said inlet port of said cylinder, a crank shaft mounted in operable relation to said piston and plunger, connections from said shaft to said piston, and eccentric operated connections from said shaft to said plunger whereby said piston and said plunger are operated in the same and opposed directions during a cycle.

4. A two-cycle internal combustion engine comprising a cylinder having a wall provided with a piston and a plunger contacting surfaces having ports passing through said wall above the plunger engaging surface, a piston re-

ciprocatingly mounted in said cylinder and arranged to open and close said ports, a plunger reciprocatingly mounted on said wall, an inclosing casing joined to said cylinder and forming a charging chamber with said plunger, a rotary valve provided with a port on one side thereof said valve being arranged to afford communication between said charging chamber and the port acting as an inlet port to said cylinder, and means to connect said piston, plunger and rotary valve in operable relation to control a gaseous mixture adapted to be ingnited within said cylinder.

1,169,900. SINE-BAR. WILLIAM WINTER, Woonsocket, R. I., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Feb. 17, 1915. Serial No. 8,950. (Cl. 33—174.)



1. In a device of the character described in combination, a supporting block having the upper surface thereof formed to constitute a surface plate, a bracket constituting a part of said supporting block, said bracket being provided with a vertical slot, a pivot boss, a pivot bolt mounted in said pivot boss, a clamping nut carried by said pivot bolt, a movable sine bar pivotally mounted upon said pivot bolt between the head of said bolt and said pivot boss, and a surface bar extending above said surface plate and having its upper edge lying in a plane parallel to said surface plate.

2. In a device of the character described in combination, a supporting block having its upper surface formed to constitute a surface plate, a vertically extending bracket at one corner of said supporting block, said bracket being provided with a slot and having sides lying in vertical parallel surfaces, a pivot boss having one end adapted to rest against one of said parallel surfaces, a pivot bolt extending through said pivot boss and said slot, means to prevent said pivot bolt from rotating in said pivot boss, a clamping nut carried on the outer end of said bolt and being adapted to bear against the other of said parallel surfaces, and a movable sine bar rotatably mounted on the opposite end of said pivot bolt.

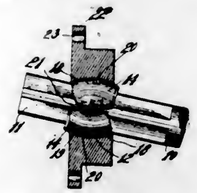
3. A device of the character described comprising in combination, a base member, a surface bar carried by said base member, a bracket supported by said base member, said bracket being provided with a vertical slot, a sine bar, and means coöperating with said bracket for adjustably mounting said sine bar over said surface bar.

4. In a device of the character described in combination, a supporting block being provided on its upper portion with a predetermined measuring surface, a measuring bar being provided with a work surface, means for pivotally mounting said measuring bar over said predetermined surface, and a pair of cylindrical buttons mounted on said measuring bar in such manner that a plane including the axes of said buttons is always parallel to the work surface of said measuring bar.

5. In a device of the class described in combination, a supporting base, means mounted upon said supporting base and being provided on its upper edge with a substantially plane surface to constityte a measuring base, a rotatable measuring arm provided with a work face, and a pair of cylindrical buttons mounted on said arm in such relation to said arm that the plane including the axes of said buttons is parallel to the work face of said arm.

[Claim 6 not printed in the Gazette.]

1,169,901. UNIVERSAL JOINT. JOHN WITTEMANN, Milwaukee, and EDWARD FLICEK, Hartford, Wis., assignors, by direct and mesne assignments, of two-thirds to said Wittemann and one-third to Frederick S. Hunt, Milwaukee, Wis. Filed Oct. 18, 1912. Serial No. 726,439. (Cl. 74—19.)



1. A universal joint, comprising a coupling member having a bore, a shaft having rectangular flattened side portions slidably extending into the bore, and oppositely positioned blocks extending into the bore and interposed between the shaft and the coupling and having a slidable connection with the shaft and a rocking movement with the coupling and engaging all of the side faces of said shaft within the coupling.

2. A universal joint, comprising a coupling member having a bore and a plurality of recesses in the portion of the coupling surrounding the bore, blocks extending into the recesses and having a rocking movement therein and forming a rectangular supplemental bore, and a shaft extending into the supplemental bore and between the blocks and having a longitudinally slidable connection therewith, said blocks engaging all of the side faces of said shaft within the coupling and locking the parts rotatively together.

3. A universal joint, comprising a coupling member having a bore and a plurality of rounded recesses in the portion of the coupling surrounding the bore, segmental blocks having rounded portions extending into the recesses and provided with inner flat faces forming a rectangular supplemental bore of less diameter than the coupling bore, and a shaft having a rectangular portion which extends slidably into the supplemental bore and is closely engaged on all of its sides by the flattened faces of the blocks.

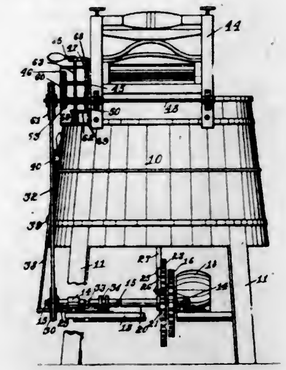
4. A universal joint, comprising a coupling member having a bore and a plurality of rounded recesses in the portion of the coupling surrounding the bore, said recesses being curved in one direction on the radius of a circle whose center is coincident with the axis of the coupling in a plane parallel to the bore thereof, segmental blocks having rounded portions positioned within and closely fitting the recessed portions of the coupling and having inner flat faces forming a rectangular supplemental bore within the coupling, and a shaft having a rectangular portion which extends slidably into the supplemental bore and is closely engaged on all of its sides by the faces of the blocks.

5. A universal joint, comprising a coupling member having a bore and a plurality of recesses in the portion of the coupling surrounding the bore, said recesses being curved in one direction on the radius of a circle whose center is coincident with the axis of the coupling in a plane parallel to the bore and being curved in a plane at right angles to the said bore on a radius approximately one half the length of the first mentioned radius, segmental blocks having rounded outer surfaces positioned within and curved to closely fit the said recesses, said blocks also having inner flat faces which form a supplemental bore within the coupling, and a shaft having a flattened portion which extends into the supplemental bore and closely engages the faces of the blocks.

[Claims 6 to 11 not printed in the Gazette.]

1,169,902. GEARING DEVICE FOR WRINGERS. OLIVER B. WOODROW, Newton, Iowa, assignor to The Automatic Electric Washer Co., Newton, Iowa, a Corporation of Iowa. Filed Oct. 1, 1909. Serial No. 520,539. (Cl. 74—59.)

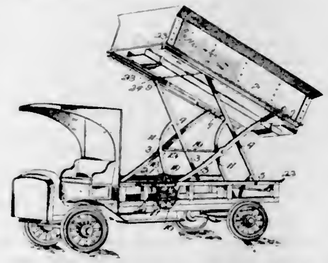
1. In apparatus of the class described, a support, a driving mechanism in said support, a shaft in the upper part of said support, connections from said driving mechanism to said shaft, a counter shaft parallel with said shaft, a chain driving mechanism and a gear driving mechanism from said shaft to said counter shaft, a clutch on said shaft and a controlling device for said clutch for throwing in either the chain driving mechanism or the gear driving mechanism to said counter shaft, a roller on said counter shaft, another roller geared to said first roller substantially as described.



2. In apparatus of the class described, a support, a driving mechanism underneath said support, a shaft located at the top of said support and adapted to be driven from said driving mechanism, a second shaft parallel to the first shaft and having a roller thereon, reversible driving connections between said first shaft and said second shaft and a second roller adjacent and geared to said first roller.

3. In apparatus of the class described, a support, a casing on the support, a shaft mounted in the support within the casing and projecting outwardly from and provided with a driving pulley at its end, a second shaft within the casing parallel to the first shaft, a chain driving mechanism and a direct gear driving mechanism from said first shaft to said second shaft, a clutch on the first shaft, manually controlling means whereby said second shaft may be driven either by the chain driving mechanism or the gear driving mechanism, a roller on the second shaft, another roller parallelly adjacent and geared to said first roller.

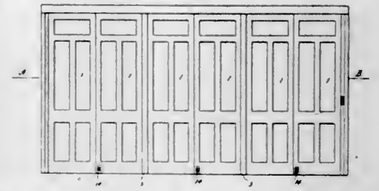
1,169,903. DUMPING-WAGON. LION L. WOODWARD, Trenton, N. J., assignor to Fitz Gibbon & Crisp, Trenton, N. J., a Corporation of New Jersey. Filed Feb. 20, 1915. Serial No. 9,739. (Cl. 21—86.)



1. A dumping-wagon comprising sills, body, levers, a cross-rod connecting two of the levers, and the other two levers having a quadrant astride the cross-rod and having means thereon to gradually engage and lift against the rod when the levers shall have moved a certain predetermined distance in one direction.

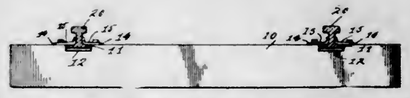
2. A dumping-wagon comprising sills, body, levers, cross-rod connecting two of the levers, and a portion of the other two extending astride and inclosing the rod and provided with a hook or notch and a cam surface adjacent thereto to engage the rod when its lever shall have moved a predetermined distance, and a single means of applying power to said lever both to tilt and raise and lower the body.

1,169,904. SLIDING AND FOLDING PARTITION AND DOOR. HERBERT WOOLARD, Stevenage, and JOHN HENRY FREDERICK LODGE, New Barnet, England. Filed Jan. 24, 1914. Serial No. 814,192. (Cl. 20—20.)



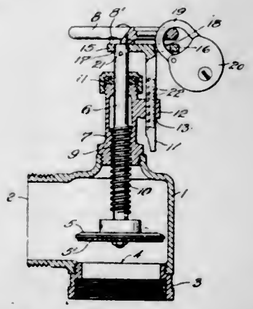
A sliding and folding partition comprising a plurality of movable uprights and a plurality of leaves adapted to fold upon each other hinged to and supported by said uprights, adjacent leaves being hinged to an intermediate part of one side face of an upright and the width of a pair of said leaves when in the folded position corresponding with the width of said uprights.

1,169,905. RAILWAY-TIE. RICHARD H. YOUNIE, Hawarden, Iowa. Filed July 13, 1915. Serial No. 39,645. (Cl. 238—5.)



A railway tie and rail fastening comprising a hollow metallic body having transverse openings adjacent the ends thereof for the reception of rail bases, a reinforcing box-like structure disposed within the ends of the body beneath the rails, said body and reinforcements being formed with registering openings and threaded openings, clamp plates having tongues disposed through the said slots, and openings registering with the threaded openings, and bolts engaged through the clamp plates and threaded into the threaded openings.

1,169,906. COMBINED MEASURING AND LOCKING DEVICE FOR VALVES. CHARLES P. ANDERSON, Seattle, Wash. Filed Mar. 10, 1914. Serial No. 823,667. (Cl. 137—4.)



1. The combination with a valve provided with a spindle and a hand wheel, of a measuring device connected with said spindle to move axially therewith and indicate the extent the valve is opened and a perforated arm provided on

said measuring device to engage a lock whereby said measuring device may be locked to said handwheel to prevent rotation thereof.

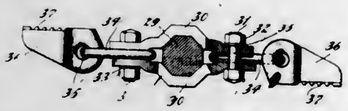
2. In apparatus of the class described, a valve-spindle, a hand-wheel therefor, a T-shaped device having a stem and two branches, one of said branches being connected with the valve-spindle and the other branch being adapted to be connected by means of a padlock to said hand-wheel to prevent the latter being rotated.

3. In apparatus of the class described having a rotary valve-spindle and a hand-wheel secured to said spindle for operating the valve, of a device connected with the spindle to travel therewith in an axial direction only, and means engageable with both the device and the hand-wheel to secure the spindle against rotation.

4. In apparatus of the class described, the combination with a body having a bonnet provided with a bracket-element, a valve, a rotary spindle therefor and a hand-wheel for rotating the spindle to actuate the valve, of a device engaging said bracket-element and connected with the valve to travel in unison therewith, and means for securing the device to the hand-wheel to prevent the rotation of the latter.

5. The combination with a valve provided with a spindle and a hand-wheel therefor, of a measuring device connected with said spindle to have movement axially therewith and provided with an apertured branch element to afford means engaging a padlock whereby said device may be coupled to said wheel to prevent the rotation of the latter, and a guide connected with the valve-body for maintaining the measuring device in upright position, said measuring device being provided with graduated marks arranged to progressively register with said guide to indicate the extent the valve is opened.

1,169,907. ROCK-BREAKER. OLIVER O. APP, New York, N. Y. Filed Apr. 3, 1911. Serial No. 618,544. (Cl. 83—11.)



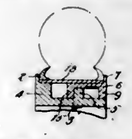
1. A rock breaker, a casing, a revolubly mounted shaft therein adapted to be driven at high speed, a member rigidly attached to said shaft, a striking block and a universal joint connection between said striking block and said member, said connection having means for resisting lateral movement when said shaft is rotating, the inner wall of said casing being arranged outside of but adjacent to the path of said striking block and a breaker bar arranged on the inner wall of said casing.

2. A striking block for a rock breaker having an enlarged outer end, one of the faces of said end being provided with teeth and an integral flattened inner end perforated to constitute a projecting eye.

3. In a rock breaker, a polygonal rotatable shaft, a striking block having an eye in the inner end thereof, a triangular-shaped link passing through said eye, said block being mounted in one of the apices of the triangular-shaped link, a clamping strap carried by said shaft, said link being connected to said strap to pivot on the side of the triangular link opposite the apex to which the striking block is connected.

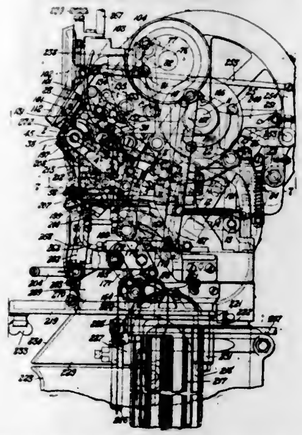
1,169,908. WHEEL-RIM. HENRY J. AREND, Quincy, Ill. Filed Sept. 22, 1914. Serial No. 862,905. (Cl. 152—21.)

A wheel rim, comprising a main section, a plurality of radial lugs on the face thereof, a tire-carrying ring adapted to telescope said main section when assembled, means for securing a tire thereon, a plurality of elongated lugs on the inner face of the ring, the inner edge of each of which is provided with a recess intermediate of its ends and which edge is beveled at one end, the lugs on the main section being adapted to pass between the lugs on the ring in assembling and separating the parts and to be



seated in said recesses to lock the tire-carrying ring on the main section and to be held therein by the expansive pressure of a tire.

1,169,909. SEWING-MACHINE. FRED ASHWORTH, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 3, 1910. Serial No. 585,116. (Cl. 112—20.)



1. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, means for moving the pin longitudinally in opposite directions, an awl driver held from longitudinal movement with the pin and having a bearing concentric with the pin on each side of the awl carrier, mechanism for oscillating the awl driver, and coöperating means on the awl driver and awl carrier for imparting the oscillating movements of the driver to the carrier while permitting the carrier to move longitudinally with the pin.

2. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, means for moving the pin longitudinally in opposite directions, an awl driver mounted concentric with the pin, and mechanism for oscillating the awl driver, the hubs of the awl driver and awl carrier being provided with coöperating surfaces to cause the carrier to be oscillated by the driver while permitting the carrier to move longitudinally with the pin independently of the driver.

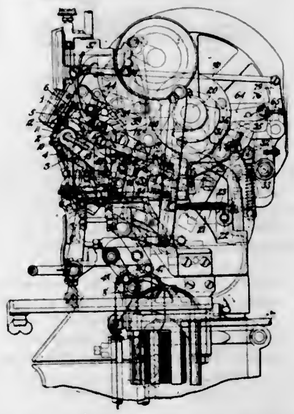
3. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, supporting brackets on each side of the awl carrier in which the pivot pin is journaled, an awl driver mounted concentric with the pivot pin and constructed to engage and oscillate the awl carrier while permitting it to move longitudinally with the pin independently of the driver, and means for oscillating the awl driver.

4. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, means for moving the pin longitudinally in opposite directions, supporting brackets on each side of the awl carrier in which the pin is journaled, an awl driver journaled on one of the brackets concentric with the pin and constructed to oscillate the awl driver while permitting it to move longitudinally with the pin independently of the driver, and means for oscillating the awl driver.

5. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a curved awl, an awl carrier, a pivot pin for the awl carrier rigid therewith, means for oscillating the awl carrier, pivotally mounted levers arranged with their ends in engagement with the opposite ends of the pin, and mechanism for actuating the levers to move the pin positively in opposite directions.

[Claims 6 to 49 not printed in the Gazette.]

1,169,910. SEWING-MACHINE. FRED ASHWORTH, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 3, 1910, Serial No. 585,116. Divided and this application filed May 23, 1912. Serial No. 699,138. (Cl. 112—20.)



1. A sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, means for yieldingly pressing the foot against the work to permit it to accommodate itself to different thickness of work, and mechanism for raising the presser foot from the work during each cycle of operations of the machine and for depressing the presser foot a predetermined uniform distance from the position it assumes under the action of said yielding means regardless of the thickness of the work and for holding it in depressed position during the tightening of the stitch.

2. A sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, mechanism for actuating the presser foot comprising a pivoted lever, means for actuating said lever during each cycle of operations of the machine to raise and lower the presser foot, a movable fulcrum for the lever, means for locking and unlocking said fulcrum during each cycle of operations of the machine, and a spring acting on the lever to move the presser foot into engagement with the work when the fulcrum is unlocked.

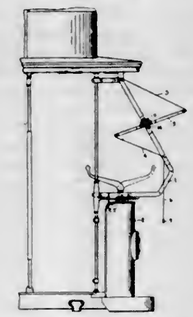
3. A sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, mechanism for actuating the presser foot comprising a pivotally mounted lever, a cam and suitable connections for oscillating the lever in opposite directions to raise and lower the presser foot, a spring acting on the lever to yieldingly force the presser foot into engagement with the work, a movable fulcrum for the lever, and means for locking and unlocking the fulcrum arranged to lock the fulcrum after the lever has completed a portion of its cam actuated movement in a direction to lower the presser foot.

4. A sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, mechanism for actuating the presser foot comprising a lever pivotally mounted intermediate its ends, a movable fulcrum for the lever, cam actuated mechanism engaging one end of the lever for oscillating the lever to raise and lower the presser foot, connections between the other end of the lever and the presser foot, a spring acting on the lever to move the lever and its fulcrum in a direction to press the presser foot yieldingly against the work, and means for locking and unlocking the fulcrum during each cycle of operations of the machine.

5. A sewing machine, having, in combination, stitch forming devices, a work support, a presser foot, mechanism for actuating the presser foot comprising a pivotally mounted lever, cam actuated mechanism and a spring connected to the lever, a movable fulcrum for the lever, and means for locking and unlocking the fulcrum during each cycle of operations of the machine to permit the cam actuated mechanism to swing the lever about its fulcrum while the fulcrum is locked to raise and lower the presser foot, and permit the spring to move the lever with its fulcrum while the fulcrum is unlocked to press the presser foot yieldingly against the work.

[Claims 6 to 21 not printed in the Gazette.]

1,169,911. WEATHER-SCREEN FOR VEHICLES. THOMAS C. AVELING, Birmingham, England. Filed Jan. 5, 1915. Serial No. 609. (Cl. 21—148.)



1. A weather screen for vehicles having in combination, two spring roller blinds mounted on a frame fixed to the vehicle, a swinging frame pivotally mounted in the said frame, said blinds being connected to the top and bottom respectively of the swinging frame, a third blind mounted on the roller of one of said blinds and automatically operable therewith to form a weather joint between the said roller and the front of the vehicle and also to form an apron, and means for adjustably fixing the position of the swinging frame.

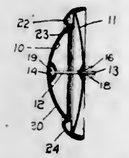
2. A weather screen for vehicles having in combination, two spring roller blinds mounted on a frame fixed to the vehicle, a swinging frame pivotally and longitudinally adjustably mounted in the said frame, said blinds being connected to the top and bottom respectively of the swinging frame, a third blind mounted on the roller of one of said blinds and automatically operable therewith to form a weather joint between the said roller and the front of the vehicle and also to form an apron, and means for adjustably flexing the angular and longitudinal position of the swinging frame.

3. A weather screen for vehicles having in combination, two spring roller blinds mounted on a frame fixed to the vehicle, a swinging frame pivotally mounted in the said frame, said blinds being connected to the top and bottom respectively of the swinging frame, a third blind mounted on the roller of one of said blinds and automatically operable therewith to form a weather joint between the said roller and the front of the vehicle and also to form an apron, and means comprising a quadrant fixed to the swing-

ing frame, a pin coöperating with said quadrant to fix the position of the swinging frame, and a fly-nut for securing the two frames in relation to each other.

4. A weather screen for vehicles having in combination, two spring roller blinds mounted on a frame fixed to the vehicle, a swinging frame pivotally and longitudinally adjustably mounted in the said frame, said blinds being connected to the top and bottom respectively of the swinging frame, a third blind mounted on the roller of one of said blinds and automatically operable therewith to form a weather joint between the said roller and the front of the vehicle and also to form an apron, means for adjustably fixing the angular position of the swinging frame, and a slotted plate mounted on the fixed frame and provided with countersunk holes, a fly-nut having a coned shank adapted to engage in said holes to permit of longitudinal adjustment of the swinging frame in relation to the fixed frame.

1,169,912. BUTTON-FORM. CHARLES S. BARBOUR, Jr., Meriden, Conn. Filed May 20, 1915. Serial No. 29,339. (Cl. 24—90.)



1. A button form comprising a front plate having a central depression and a slot crossing the depression, a shank having a head adapted to engage the depression and an eye adapted to be passed through the slot, and a clamping plate having a central depression and a slot crossing the depression, through which the eye may be passed, the parts being locked in place by giving the shank a partial turn.

2. A button form comprising a front plate having a central slot, a shank having a head adapted to engage the face of the front plate and an eye adapted to be passed through the slot, and a clamping plate having a central slot through which the eye may be passed, the parts being locked in place by giving the shank a partial turn.

3. A button form comprising a front plate having a central depression and a slot crossing the depression, a shank having a head adapted to engage the depression and an eye adapted to be passed through the slot, and a clamping plate having a central depression, a slot crossing the depression through which the eye may be passed and a groove adapted to be engaged by the inner end of the eye to lock the parts in place.

4. In combination, a front plate having a central slot, a shank having a head adapted to engage the face of the front plate and an eye adapted to be passed through the slot, a cloth cover placed over the front plate and secured at the back, and a clamping plate having a central slot through which the eye may be passed, the parts being locked in place by giving the shank a partial turn.

5. In combination, a front plate having a central slot, a shank having a head adapted to engage the face of the front plate and an eye adapted to be passed through the slot, a cloth cover placed over the front plate and secured at the back, a ring of greater diameter than the front plate through which the shank is passed, a cloth cover placed over the ring and secured at the back, and a clamping plate having a central slot through which the eye may be passed, the parts being locked in place by giving the shank a partial turn.

[Claim 6 not printed in the Gazette.]

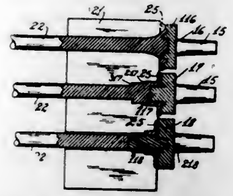
1,169,913. ARMY FIRST-AID PACKET. NOAH BARKER, Seevers, Iowa. Filed Nov. 4, 1914. Serial No. 870,301. (Cl. 206—63.2.)

1. In a first aid packet, a sterilized gauze sack, a suitable absorbent packing therein, carbid in said packing, absorbent packing around said sack, a rigid receptacle therefor, a removable cover on said receptacle, and means for sealing said cover.



2. In a first aid packet, a flexible receptacle having one end tied to form a handle, carbid therein, packing around said receptacle, and around said carbid, and a receptacle for said parts having a sealed removable cover.

1,169,914. FORGING-MACHINE. FRANKLIN P. BATES, Indianapolis, Ind. Filed Jan. 22, 1915. Serial No. 3,816. (Cl. 78—1.)



1. In a machine for making a tubular article from a solid bar, a plunger reduced at one end for forming a central bore through an article, and means for forcing said plunger through the article with the large end thereof foremost, whereby the plunger can be further advanced entirely through the article after the latter is formed for removing it.

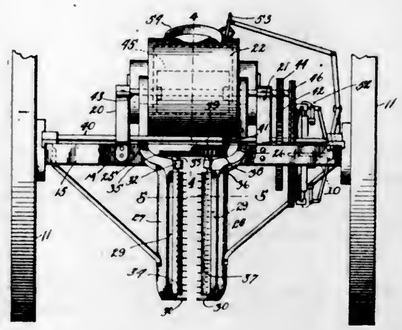
2. In a machine for making a tubular article from a solid bar, means for partially forming an article on one end of the bar, means for clamping said partially formed portion of the article which is arranged to leave the remainder of the bar free, a plunger reduced at one end with its large end having substantially the same diameter as the body portion of said bar, and means for forcing said plunger through the article with the large end thereof foremost, whereby the bore will be made through said article and the body of the bar be separated therefrom.

3. A machine for making a tubular article from a solid bar including means for partially forming the article at one end of the bar, means for clamping the partially formed article which is arranged to leave the remainder of the bar free, a die for finally forming the outer end of the article, said die having a tapering socket therein, and a tapering plunger with the small end in said socket and with the large end having a diameter substantially the same as the diameter of the body of the bar and adapted to be forced through the article by the die substantially as set forth.

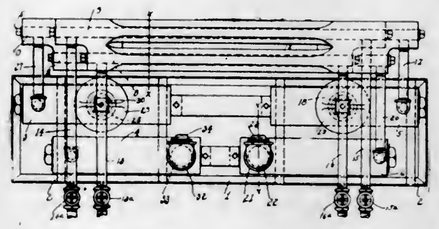
4. A macine for making a tubular article from a solid bar including means for partially forming the article on one end of the bar, means for clamping said partially formed portion of the article which is arranged to leave the remainder of the bar free, a die, a plunger removably secured thereto with its reduced end toward the die and with its large end having substantially the same diameter as the body portion of the bar, and means for forcing said plunger through the article with the large end thereof foremost, whereby the bore will be made through said article and the plunger can be advanced entirely through the article for separating it and the article.

1,169,915. COTTON-PICKING DEVICE. RUDOLPH F. BERAN, Moulton, Tex. Filed Mar. 20, 1914. Serial No. 826,065. (Cl. 56—117.)

In a cotton picking machine, the combination of a wheeled frame, a casing supported by the frame and having a discharge opening in its rear end, a suction fan mounted in the casing, traction operated means for rotating said fan, suction tubes leading from respective sides of the casing and extending forwardly, each of said tubes terminating in a depending portion provided with a lateral mouth, a rearwardly extending wing at the lower end of each depending portion disposed in a plane substantially at right angles to the vertical axis of the depending portion, a bearing formed on said wing, a bearing on the upper end of the depending portion alined with the bearing on the wing, a picker roller rotatably mounted in the alined bearings and disposed entirely to the rear of the mouth, and traction operated means for rotating said picker rollers.



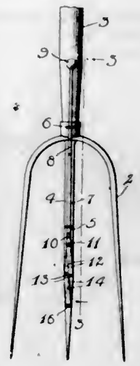
1,169,916. HYDROCARBON-BURNER. AUGUST J. BISCHOFF, Chico, Cal. Filed Feb. 23, 1915. Serial No. 9,857. (Cl. 158—53.)



A device of the character described comprising the combination of a plurality of storage receptacles, a gasifying retort disposed above and to one side of said storage receptacles, said gasifying retort being divided into a number of chambers equal to the number of said storage receptacles, an independent fuel supply pipe communicating with each chamber, a discharge pipe leading from each chamber to one of said storage receptacles, each storage receptacle having an independent discharge nozzle, a portion of said discharge nozzles extending vertically and the balance extending vertically and then at right angles to throw the discharge directly against said gasifying retort, as described.

1,169,917. HAY-FORK. JOHN K. BLACKSTONE, Crown Point, Ind. Filed Aug. 16, 1915. Serial No. 45,792. (Cl. 55—2.)

A hand fork comprising a three-tined head, a handle connected thereto, a guide on said handle, a similar guide on the central tine of said head and alined with the first-mentioned guide, an operating rod slidable in said guides, said rod being offset intermediate its ends, an operating handle on one end of said rod, a pair of toggle links pivotally connected to the opposite end, and an additional pair of toggle links pivoted to said central tine adjacent its free end, and pivoted by their free ends to the free ends of the first-mentioned pair of toggles, said toggles being adapted to normally lie substantially parallel to said tine, but movable at a right angle thereto when actuated by the operating rod.



1,169,918. TESTING-CASE FOR PNEUMATIC TUBES. BENJAMIN S. BOWERS, Laprairie, Minn., assignor to Jacob Closz, St. Ansgar, Iowa. Filed Oct. 30, 1914. Serial No. 869,440. (Cl. 73—51.)



1. A testing device including a restraining tube of separable parts whereby a tire tube may be inserted and retained therein, said restraining tube having at least a part of its wall foraminous and its wall being adapted to contact, surround and reinforce the tire tube against bursting throughout the length of the restraining tube.

2. A testing case for pneumatic tubes consisting of a body, a part of which body at least is perforated, said body being designed to surround, contain and hold an entire inner tube against bursting when inflated and expose said tube through the perforations.

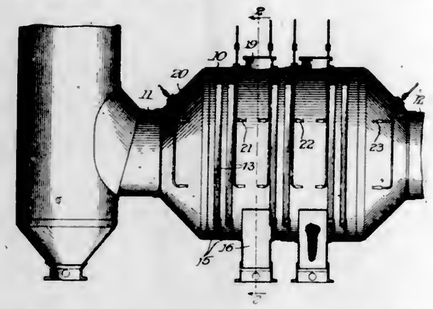
3. A testing case for pneumatic tubes consisting of a body, a part of which at least is perforated, said body being designed to surround, contain and hold an entire inner tube when inflated and expose said tube through the perforations, said perforations being of sufficiently restricted area to restrain said tube from blowing out through said perforations.

4. A tube testing device comprising a foraminous casing which is adapted to inclose the tube to be tested while the same is being inflated and which comprises two annular channel-shaped sections adapted to be connected with their concave sides facing each other.

5. A tube testing device comprising a foraminous casing which is adapted to inclose the tube to be tested while the same is being inflated and which comprises two an-

nular channel-shaped sections adapted to be connected with their concave sides facing each other, and means for detachably connecting said sections.

1,169,919. APPARATUS FOR DRYING GAS. HERMANN A. BRASSERT, Chicago, Ill. Filed Oct. 1, 1915. Serial No. 53,568. (Cl. 34—2.)



1. In a gas drier, the combination of a horiontal casing, a plurality of rows of vertically disposed baffles within said casing, the baffles of one row being disposed at an angle to the baffles of an adjacent row, and means for sequentially spraying said baffles to remove accumulations therefrom, whereby water taken up by the gas during the spraying of said baffles shall be deposited upon others of said baffles, substantially as described.

2. In a gas drier, the combination of a horiontally disposed casing, a plurality of rows of flat, vertically disposed baffles in said casing, said rows of baffles being arranged in pairs and the baffles of adjacent rows being arranged at right angles to each other and means for spraying each row of baffles, substantially as described.

3. In a gas drier, the combination of a horizontally disposed casing, a plurality of rows of flat, vertically disposed baffles in said casing, said rows of baffles being arranged in pairs and the baffles of adjacent rows being arranged at right angles to each other, and means for spraying said baffles to remove accumulated solids, substantially as described.

4. In a gas drier, the combination of a horizontally disposed casing, a plurality of rows of flat, vertically disposed baffles in said casing, said rows of baffles being arranged in pairs and the baffles of adjacent rows being arranged at right angles to each other, and means for sequentially spraying each pair of baffles, whereby water taken up by the gas during the spraying operation of one pair of baffles may be deposited on an adjacent pair of baffles, substantially as described.

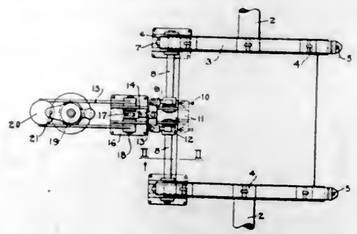
5. In a gas drier, the combination of a horizontal casing having an inlet communicating with a gas main, a plurality of rows of vertically disposed baffles within said casing, said casing having an effective diameter substantially twice that of its inlet, to the end that the passage of gas through the casing shall be at a speed less than that at which the moisture will be carried along with the gas and greater than that at which no water is deposited on said baffles, substantially as described.

[Claim 6 not printed in the Gazette.]

1,169,920. BRAKE-OPERATING MEANS. JOHN W. BROWN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 15, 1911. Serial No. 608,647. (Cl. 74—13.)

1. In a brake, a rotary shaft, a plurality of brakes for said shaft, common operating means for said brakes, an equalizing bar between said operating means and said brakes, and a stop between said operating means and each of said brakes for limiting the movement of the ends of said bar in either direction.

2. In a brake, a rotary shaft, a plurality of brakes for said shaft, a common operating means for said brakes, connecting means between said operating means and said



brakes, and a stop adjacent a movable portion of said connecting means to each of said brakes in a position slightly beyond the limiting position of said portion when said brakes are released.

1,169,921. WEEDING IMPLEMENT. LOUISE M. BURNS, Wichita, Kans. Filed July 17, 1915. Serial No. 40,510. (Cl. 55—18.)



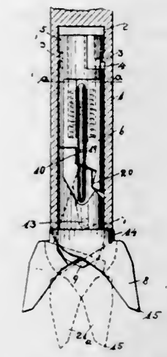
1. A weeding implement comprising a handle, and a blade carried thereby, said blade being curved in cross-section, and having opposite, parallel cutting edges terminating in convexly curved outer ends which converge and meet, the cross-sectional curvature of the blade at the parallel cutting edges being an arc of more than 180 degrees.

2. A weeding implement comprising a handle, and a blade carried thereby, said blade being curved in cross-section, and having opposite, parallel cutting edges terminating in convexly curved outer ends which converge and meet, and said cutting edges being serrated, the cross-sectional curvature of the blade at the parallel cutting edges being an arc of more than 180 degrees.

3. A weeding implement comprising a handle, and a blade carried thereby, said blade being curved in cross-section, and having opposite, parallel cutting edges terminating in convexly curved outer ends which converge and meet, the cross-sectional curvature of the blade at the parallel cutting edges being an arc of more than 180 degrees, and said blade at the parallel cutting edges having a longitudinal slot.

1,169,922. COMBINATION BIT AND ROTARY UNDER-REAMER. LAWRENCE S. CAMPBELL, Los Angeles, and JOHN GRANT, Florence, Cal. Filed Nov. 13, 1915. Serial No. 61,309. (Cl. 255—75.)

1. A device for the purpose described, consisting of a shell having a concentric bore with a projection formed near the inner termination of the bore, a center-block inserted into the bore of the shell being hollow at the upper end and flattened to the lower end and having a recess formed on the outside of the upper round end adapted to engage with the projection in the bore of the shell, cutters having shanks formed on the upper ends designed to fit in the nearly semi-circular spaces left on both sides of the center-block in the shell, a spring inserted into the hollow center-block, and operating rods with the lower ends turnably secured to the shanks of the cutters and engaging with the upper ends with the spring in the center-block adapted to hold the cutters in operating position.



2. A device for the purpose described, consisting of a hollow shell, a center-block relievably secured in the shell, cutters slidingly mounted in the space formed between the center block and the shell, and a well-casing being cut out at the lower termination to fit over the cutters designed for rotary drilling and having grooves provided along the inside of the lower thicker end in the casing adapted to allow water to pass to the cutters.

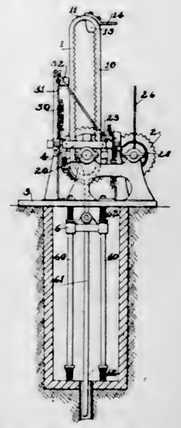
3. A device for the purpose described, consisting of a shell being hollow and terminating in a circular ring, a round center-block, removably secured in the shell being hollow at the upper end and flattened at the lower end, projections formed on the flattened part of the center-block, cutters having shanks formed on the upper ends slidingly fitting in the nearly semi-circular spaces formed on both sides of the flattened center-block in the shell and having shoulders to utilize the ring-termination of the shell for a pounding surface, the cutters having cutting edges on the lower end eccentric to the center of the device and a straight resisting shank on the upper end parallel to the center of the device opposite to the cutting edges, opposite to the straight resisting shank and on the same side with the cutting edges the shank is formed to engage with the projections on the center-block adapted to prevent the cutters from collapsing, and operating means secured to the cutters adapted to hold the cutters in operating position.

4. In a device for the purpose described, a hollow shell, a center-block removably secured in the shell being flattened at the lower end, cutters slidingly mounted in the spaces formed between the flattened center-block and the shell, said center-block having lugs formed on the termination of the flattened end, and said cutters having recesses formed on the sides toward the center-block adapted to engage with the lugs on the center-block to prevent the cutters from falling out.

5. A device for the purpose described, a hollow shell, a center-block removably secured in the shell being flattened at the lower end, cutters slidingly mounted in the spaces formed between the flattened center-block and the shell, said center-block terminating below the shell having means thereon to prevent the cutters from collapsing and also adapted to serve as a guide to bring the cutters into operating position, and operating means secured to the cutters adapted to hold the cutters in operating position, all substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,169,923. PUMP-JACK. ROBERT J. CARTMELL, Soap Lake, Wash., assignor of one-half to John W. Kahle, Seattle, Wash. Filed Aug. 14, 1915. Serial No. 45,484. (Cl. 74—27.)



1. In a device of the character described, in combination, a pinion mounted for rotation in a fixed position, two connected rack bars adapted to be alternately engaged with said pinion by lateral movement, said rack bars and the pinion having projections located outside the planes of the teeth and adapted to engage to shift the rack bars at the ends of the stroke, a guide yoke engaging the back faces of the rack bars, guide supports for said yoke permitting movement to accommodate the lateral shift of the rack bars, locking means for said yoke released by the rack bars at the ends of their stroke.

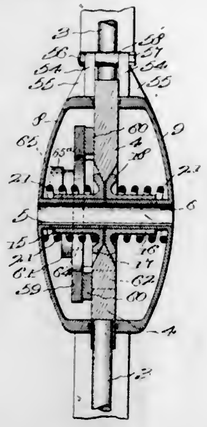
2. In a device of the character described, in combination, a pinion mounted for rotation in a fixed position, two connected rack bars adapted to be alternately engaged with said pinion by lateral movement, said rack bars and the pinion having projections located outside the planes of the teeth and adapted to engage to shift the rack bars at the ends of the stroke, a guide yoke for the rack bars mounted for reciprocation transversely with the rack bars, and provided with recesses, latches adapted to be engaged with said recesses, and means carried by the racks bars for releasing said latches.

3. In a device of the character described, in combination, a pinion mounted for rotation in a fixed position, two connected rack bars adapted to be alternately engaged with said pinion by lateral movement, said rack bars and the pinion having projections located outside the planes of the teeth and adapted to engage to shift the rack bars at the ends of the stroke, a guide for said rack bars, means for locking said guide against movement during the reciprocating movement of the rack bars, and means for releasing said locking means at the beginning of the shifting movement.

1,169,924. RESILIENT WHEEL. HARRY I. CHEW and WALTER S. SERGEANT, Washington, D. C., assignors, by direct and mesne assignments, to Hub Shock Absorber Wheel Company, Lancaster, Pa., a Corporation of Pennsylvania. Original application filed June 29, 1914, Serial No. 848,018. Divided and this application filed Aug. 4, 1914. Serial No. 854,988. (Cl. 152—45.)

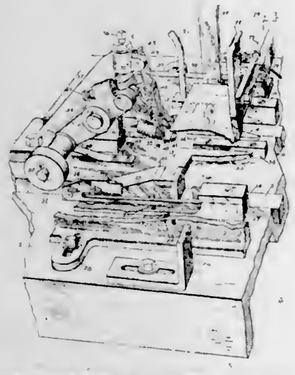
1. In a resilient wheel, the combination of a hub having rigidly connected side plates; resilient members associated with the hub; a wheel rim portion in the plane of the wheel tread, radially sustained by said resilient elements and laterally sustained by the side plates; and a flexible driving connection located between one of said side plates and said wheel rim portion; said driving connection comprising a floating ring and two pairs of diametrically opposed links curved concentric with the ring

and connecting said ring with said rim and the side plate, substantially as described.



2. In a resilient wheel, the combination of a hub member; a rim member radially movable relatively to said hub member; one of said members having a lateral extension bearing against the other of said members and thereby sustaining the rim member laterally by the hub member at points appreciably remote from the axis of the wheel; a resilient means sustaining the rim member radially, said radial sustaining means and the lateral sustaining means being located in substantially the same central plane of the wheel located between the hub member and the rim member; and a floating drive connection also located between said hub member and rim member and connected to both of said members.

1,169,925. AUTOMATIC FEEDING MECHANISM. ROBERT G. CLARK, New York, N. Y. Filed Dec. 9, 1913. Serial No. 805,515. (Cl. 113—113.)



1. Feeding mechanism for blanks, comprising, in combination, means for engaging and buckling one edge of the blank away from the adjacent blanks in the pile, said means operating transversely to the plane of the blank, means for separating the opposite edge of said blank from the pile, and means for advancing the blank.

2. Feeding mechanism for blanks, comprising, in combination, means for engaging and buckling one edge of the blank away from the adjacent blanks in the pile, said means operating transversely to the plane of the blank, means for separating the opposite edge of said blank from the pile, and means for advancing the blank, said several means operating sucessively and automatically upon each of the successive blanks in the pile.

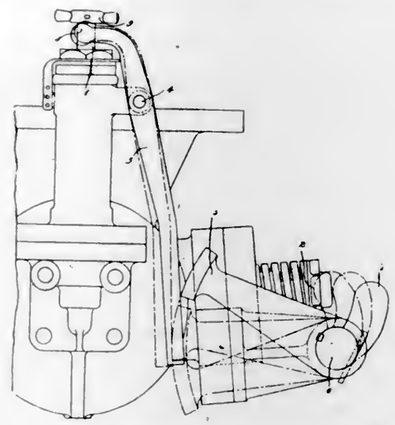
3. Feeding mechanism for blanks, comprising, in combination, means for buckling one edge of the blank away from the adjacent blanks in the pile, means for holding the edge of blank after buckling, means for separating said blank from the pile, and means for advancing the blank.

4. Feeding mechanism for blanks, comprising, in combination, means for engaging and buckling the central portion of one edge of the blank away from the adjacent blanks in the pile, said means operating transversely to the plane of the blank, means for separating the opposite edge of said blank from the pile, and means for advancing the blank.

5. Feeding mechanism for blanks, comprising, in combination, means for engaging and buckling one edge of the bottom blank away from the adjacent blanks in the pile, said means operating transversely to the plane of the blank, means for separating the opposite edge of said blank from the pile, and means for advancing the blank.

[Claims 6 to 18 not printed in the Gazette.]

1,169,926. SAFETY-VALVE. DAVID COCKBURN and DONALD MACNICOLL, Cardonald, near Glasgow, Scotland. Filed Aug. 14, 1914. Serial No. 856,823. (Cl. 137—53.)

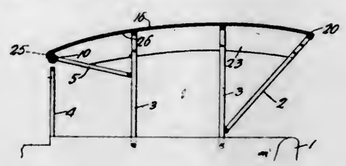


1. In a safety valve, in combination, a main valve, a separate pilot valve normally adapted when open to effect the automatic opening of said main valve, and manually operable means including a rock-shaft adapted in the first part of the rocking movement thereof to effect the positive opening of said pilot valve and thereafter on further movement of said shaft to effect the positive opening of said main valve without further displacement of said pilot valve.

2. In a safety valve, in combination, a main valve, a pilot valve adapted when open to effect the automatic opening of said main valve, and a train of connections for effecting successively the positive opening of said pilot valve and of said main valve, said train of connections including an interponent which when moved into one position acts to open the pilot valve, and when moved to a position at which the main valve is opened acts to maintain the pilot valve in open position so that any movement of the main valve effected by action of the pilot valve or by the train of connections has no effect on the pilot valve.

3. In a safety valve, a pilot valve, a main valve, means including a cam element and a coöperating lever for transmitting movement to said pilot valve, and a tappet arm adapted for direct coöperation with the main valve, said cam element and lever and said tappet arm being adapted to act successively, said tappet arm acting on the main valve after the action of the cam element and lever on the pilot valve, and only in case of failure of the main valve to open automatically.

1,169,927. SPRING AND ROLLER ATTACHMENT FOR AUTOMOBILE-CURTAINS. BENJAMIN PANNELL COLLIER, New Decatur, Ala. Filed July 26, 1915. Serial No. 42,011. (Cl. 21—62.)



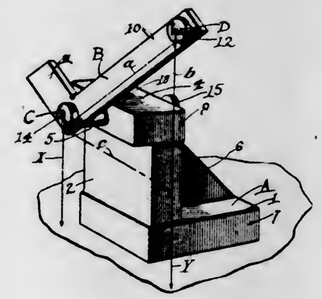
1. In a device of the class described, spaced bows; a roller journaled on one bow; a prehensile spring extended between the roller and the other bow; and a cover supported on the spring; and means for securing the spring to the roller.

2. In a device of the class described, spaced bows; a roller journaled on one bow; a prehensile spring extended between the roller and the other bow; a cover having a longitudinal pocket receiving the spring, and means for securing the spring to the roller.

3. In a device of the class described, U-shaped side pockets; a cover having its edges inserted into the pockets; cover extensions having their edges inserted into the pockets; securing means uniting the cover, the cover extensions and the pockets, the extensions being folded outwardly to house the securing means; spaced bows; a roller journaled on one bow; prehensile springs extended between the roller and the other bow, the springs being located in the pockets; and means for securing the springs to the roller.

4. In a device of the class described, a front bow comprising spaced parts having brackets; a shaft carried by the brackets; a roller supported for rotation on the shaft; a prehensile spring connected at one end to the roller; a rear bow whereunto the other end of the spring is connected; and a cover carried by the spring.

1,169,928. MOVABLE SINE-BAR. WILLIAM C. COMMONS, Woonsocket, R. I., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Feb. 17, 1915. Serial No. 8,958. (Cl. 33—174.)



1. In a device of the character described in combination, a supporting member, a measuring bar pivotally mounted upon said supporting member, a pair of cylindrical buttons coöperating with said measuring bar, one of said buttons having the same axis as the axis of rotation as said measuring bar, and means to support said measuring bar in predetermined positions.

2. In a device of the character described in combination, a supporting member, a measuring bar pivotally mounted upon said supporting member at one side thereof, a pair of cylindrical buttons coöperating with said measuring bar, certain of the edges of said measuring bar being parallel to the plane including the axes of said buttons, and means to support said measuring bar in predetermined adjusted positions.

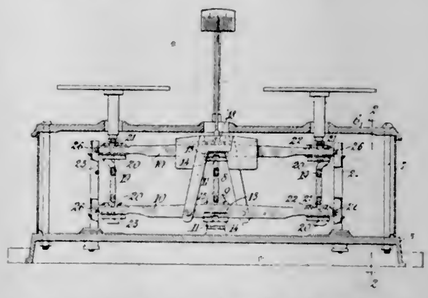
3. In a device of the character described in combination, a supporting member provided with flat supporting surfaces, a boss extending outwardly from said supporting member, a measuring bar pivotally mounted upon said boss, a supporting bolt journaled in said boss, a cylindrical head formed upon said supporting bolt to constitute a button, a cylindrical button carried by the outer end of said measuring bar, both of said buttons being of the same diameter, and a thumb nut upon said bolt and operative to support said measuring bar in predetermined angular positions.

4. In a device of the character described in combination, a supporting member, a measuring bar pivoted on a horizontal axis to swing in a vertical plane, said measuring bar being provided with two arms the axes of which are at right angles to each other, a pair of cylindrical buttons, one of said buttons having an axis coincident with the axis of rotation of said measuring bar, and the other button being mounted upon said bar adjacent the end of one of said arms, the edges of the arm carrying the last mentioned button being parallel to a plane including the axes of said buttons.

5. In a device of the character described in combination, a supporting member, a measuring bar pivotally mounted upon a horizontal axis to have a rotative movement in a vertical plane, said measuring bar being provided with a long arm and a short arm, the axes of said arms meeting the axis of rotation of said bar at a right angle, a pair of cylindrical buttons, one of which is carried by said measuring bar and means to support said measuring bar in predetermined angular positions.

[Claims 6 to 10 not printed in the Gazette.]

1,169,929. TORSION-BALANCE SCALE. GEORGE M. CONWAY, Jersey City, N. J., assignor to The Torsion Balance Company, New York, N. Y., a Corporation of New York. Filed June 9, 1915. Serial No. 33,048. (Cl. 73—152.)



1. In a balance, a pair of parallel beams, a pair of trusses each having on each of two opposite sides a tension wire, tension wire clamps carried by the ends of the beams, and means for adjusting one of the said clamps longitudinally of the beam carrying the same for adjusting the trusses into parallel relation.

2. In a balance, a pair of parallel beams, a pair of trusses each having on each of two opposite sides a tension wire, tension wire clamps carried by the ends of the beams, and means for severally adjusting the clamps longitudinally of the beams for adjusting the trusses into parallel relation.

3. In a balance, a pair of parallel beams, a fulcrum truss having on each of two opposite sides a tension wire, the beams being medially connected to said wires respec-

tively, a pair of end trusses each having on each of two opposite sides a tension wire, tension wire clamps carried by the ends of the beams, and means for adjusting one of the said clamps longitudinally of the beam carrying the same for adjusting the position of the end truss relatively to the fulcrum truss.

4. In a balance, a pair of parallel beams, a fixed fulcrum truss having on each of two opposite sides a tension wire, the beams being medially connected to said wires respectively, a pair of end trusses each having on each of two opposite sides a tension wire, tension wire clamps carried by the ends of the beams, and means for severally adjusting the clamp longitudinally of the beams for adjusting the position of the end trusses relatively to the fulcrum truss.

5. In a balance, a pair of parallel beams, a fixed fulcrum truss having on each of two opposite sides a tension wire, the beams being medially connected to said wires respectively, a pair of end trusses each having on each of two opposite sides a tension wire, tension wire clamps carried by the ends of the beams, means for severally adjusting the clamp longitudinally of the beams for adjusting the position of the end trusses relatively to the fulcrum truss, a tension wire clamp carried by each beam for engaging the fulcrum truss wires, and means for moving the said clamps vertically in the general plane of such beams.

[Claims 6 to 9 not printed in the Gazette.]

1,169,930. COMPOSITION OF MATTER FOR FINISHING WOOD. CHARLES F. COOPER, Cleveland, Ohio. Filed June 5, 1913. Serial No. 771,958. (Cl. 134—49.)

1. The herein described composition of matter for the manufacture of a wood finishing compound, comprising fifty per cent. zinc white, forty per cent. pigment (dry color), five per cent. shellac gum, and five per cent. alcohol.

2. The herein described composition of matter for the manufacture of a wood finishing compound, comprising about ninety per cent. of zinc white and any dry color in nearly equal parts, mixed with the remaining per cent. as a mixture of shellac and alcohol.

3. The herein described composition of matter comprising approximately equal parts of a body-forming ingredient and a pigment, mixed with approximately equal parts of shellac and alcohol, the proportion of the parts being substantially as specified.

1,169,931. COMPOSITION OF MATTER FOR COATING METALS. CHARLES F. COOPER, Cleveland, Ohio. Filed July 9, 1913. Serial No. 778,096. (Cl. 134—39.)

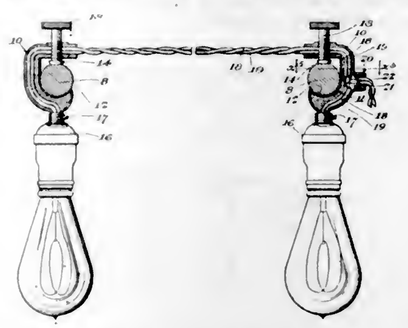
1. The herein described composition of matter for coating metals, comprising forty-two (42) to fifty (50) per cent. pigment, thirteen (13) to seventeen (17) per cent. lime, thirteen (13) to seventeen (17) per cent. varnish, twelve (12) to eighteen (18) per cent. turpentine, and two (2) per cent. common salt.

2. The herein described composition of matter for coating metals, comprising a pigment, lime, varnish, turpentine and salt in substantially the proportions given.

1,169,932. ELECTRIC-FIXTURE ATTACHMENT. STEVE E. CRESSEY, San Pedro, Cal. Filed Oct. 6, 1914. Serial No. 865,275. (Cl. 240—73.)

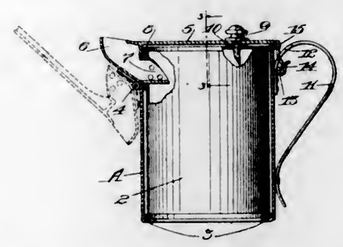
1. An electrical fixture attachment comprising a pair of brackets, each of which is hook-shaped, electric lamps secured to the shank portions of the brackets, said brackets having the free ends of their bill portions opposed, attaching screws mounted in the bill portions of the brackets, and a flexible electrical conductor permanently connected with the ends of the bill portions of the hook-shaped brackets and having connection with the lamps

2. An electrical fixture attachment comprising a hook-shaped hollow bracket having a screw-threaded shank portion, an electric light connected with the screw-threaded shank portion, electrical conducting means mounted within the hollow bracket extending out from the free end of the bill portion thereof and having connection with the light, a binder contained within and filling the hollow



bracket, and a set screw carried by the bracket near the free end of the bill portion thereof.

1,169,933. MILK-CAN CONTAINER AND SERVER. THOMAS J. DAVIS, San Francisco, Cal. Filed Feb. 13, 1915. Serial No. 7,965. (Cl. 221—23.)

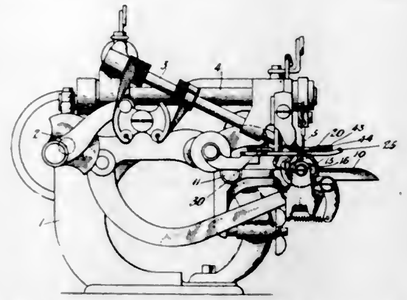


1. In combination with a container, a cover therefor having a pouring spout which has its lower end depending from the cover and pivoted at its lower extremity to the front side of the container, said container having an opening in its front side which registers with said spout, and a perforator connected to the spout and movable into and out of said opening so as to perforate the side of a can within the container below its top.

2. In combination with a container, a cover therefor having a pouring spout disposed at the front side of the cover so that the spout is disposed over the front side of the container, means to pivotally connect the spout to the front side of the container below the container top so that the entire spout is mounted to swing toward and away from said front side of the container, and a perforator carried by the spout and partaking of the swinging movements thereof so as to be movable into and out of a can within the container from a side of said can upon pivotal movement of the cover.

3. In combination with a container, a cover therefor having a pouring spout disposed at the front side of the cover so that the spout is disposed over the front side of the container, means to pivotally connect the spout to the front side of the container below the container top so that the entire spout is mounted to swing toward and away from said front side of the container, a perforator carried by the spout and partaking of the swinging movements thereof so as to be movable into and out of a can within the container from a side of said can upon pivotal movement of the cover, a handle on the container having a slot, the metal displaced by the slot formation being left in connection with the handle and bent outwardly to form a catch, and a latch borne by the cover and adapted to enter the slot and engage with said catch.

1,169,934. WORK HOLDING AND FEEDING MEANS FOR SEWING-MACHINES. CHARLES A. DEARBORN, New York, N. Y. Filed Feb. 26, 1913. Serial No. 750,786. (Cl. 112—24.)



1. In a sewing machine, the combination of stitch forming mechanism, with a work support, a ridge-forming rib carried by said work support, a slotted presser foot presented above said ridge-forming rib, and a work engaging member yieldingly mounted upon said presser foot in position to engage the ridge of work upon said rib in the slot of the presser foot and in rear of the path of the needle.

2. In a sewing machine, the combination of stitch forming mechanism, with a work support, an oscillating ridge-forming rib carried by said work support, a slotted presser foot presented above said ridge-forming rib, and a work engaging member yieldingly mounted upon said presser foot in position to engage the ridge of work upon said rib in the slot of the presser foot and in rear of the path of the needle, said work engaging member having forwardly presented cloth engaging teeth.

3. In a sewing machine, the combination of stitch forming mechanism, with a work support, a ridge-forming rib carried by said work support, a slotted presser foot presented above said ridge-forming rib, and a work engaging plate presented in the slot of said presser foot in position to engage the ridge of work upon said rib, a supporting arm connected with said work engaging plate and pivotally mounted upon said presser foot, and a spring arranged between said supporting arm and the presser foot to yieldingly hold said plate to its work.

4. In a sewing machine, the combination of stitch forming mechanism, with a work support, an oscillating toothed ridge-forming rib carried by said work support, a presser foot arranged to engage work upon said work support and a yieldingly mounted member carried by said presser foot in position to engage the ridge of work upon said rib, said yieldingly mounted member having forwardly presented cloth engaging teeth.

5. In a sewing machine, the combination of stitch forming mechanism, a work support, and a coöperating presser foot, with a ridge-forming disk mounted upon said work support and having a portion of its periphery entirely cut away in front of and below the path of the needle to afford space for the work.

[Claims 6 and 7 not printed in the Gazette.]

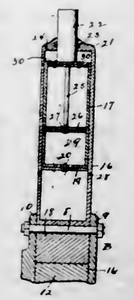
1,169,935. WATCH-FACE PROTECTOR. GILBERT DENNISON, Handsworth, Birmingham, England. Filed Mar. 1, 1915. Serial No. 11,345. (Cl. 58—105.)



1. A watch face protector, comprising in combination, a plurality of pivoted segmental members, a fixed ring for supporting one end of each of said members, a movable ring for supporting the other end of each of said members, and a flanged cover rigidly secured to said movable ring the periphery of said flange being turned so as to engage with the periphery of said fixed ring, said rings being rotatable relative to each other by means of said cover so as to cause the pivotal members to cover or expose a watch face.

2. A watch face protector, comprising in combination, a plurality of interlaced pivotal segmental members, a fixed ring for supporting one end of each of said members, a slotted movable ring for supporting the other end of each of said members, and a flanged cover rigidly secured to said movable ring the periphery of said flange being turned so as to engage with the periphery of said fixed ring, said rings being rotatable relative to each other by means of said cover so as to cause the pivotal members to cover or expose a watch case.

1,169,936. AIR-CUSHIONED WHEEL. CHARLES I. DICKERSON, Duchesne, Utah. Filed Sept. 21, 1915. Serial No. 51,780. (Cl. 152—47.)



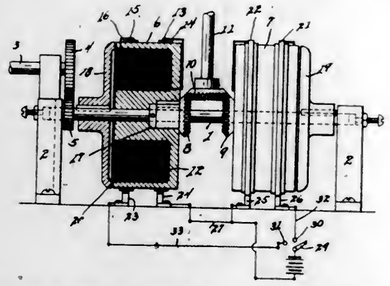
1. In a device of the character described, the combination with a hub member comprising a core having a plurality of concave recesses in its peripheral face, a plurality of spokes, each comprising a tubular section pivoted adjacent its inner end to said hub member and having a rounded inner end seated in one of said recesses, tubular sections, pistons carried by said tubular plungers and fitting in said tubular section, check valves carried by said pistons and opening inwardly, a rim member, rods passing through the outer ends of the tubular sections to which the tubular plungers are connected, said rods being pivoted at their outer ends to said rim member, pistons slidable in said tubular plungers, means for rigidly attaching said last named pistons to the tubular sections and inwardly opening check valves carried by said last named pistons.

2. In a device of the character described the combination with a hub and a rim of a plurality of spokes extending therebetween, each of said spokes comprising a tubular section pivoted at its inner end to the hub, a tubular plunger slidably disposed in said tubular section, a piston carried thereby, a member extending from said plunger to the rim, means for pivotally connecting said member to the rim, a piston mounted in said tubular plunger, means for rigidly supporting said piston with relation to the tubular section, and check valves carried by both of said pistons and opening toward the hub.

1,169,937. ELECTRICAL DEVICE FOR CHANGING THE DIRECTION OF ROTATION OF SHAFTS. MYRON J. DIKEMAN, Detroit, Mich. Filed June 30, 1913. Serial No. 776,510. (Cl. 172—239.)

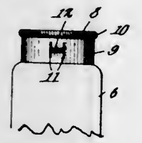
In a device of the kind described, the combination of a continuously rotatable shaft, a pair of gears loosely mounted thereon, a work shaft, a gear on said work shaft continuously in mesh with each of said pair of gears, a magnet for each of said pair of gears, said magnet being recessed to receive the gear hub to which it is keyed, a collar in the bottom of said recess secured to the shaft whereby a displacement of the magnet longitudinally of

the shaft is prevented, an armature for each magnet splined to the continuously rotatable shaft, and means for



producing a flow of electric current through one or the other of said magnets.

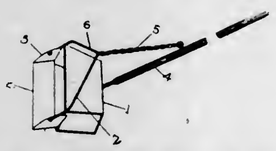
1,169,938. BOTTLE-CLOSURE. JOHN L. DUNNOCK, Baltimore, Md. Filed Nov. 24, 1915. Serial No. 63,191. (Cl. 215—9.)



1. A bottle cap comprising a top and a depending circumferential side wall, said wall having spaced parallel vertical slits terminating inward of the lower edge of said wall, and the material between the slits having an inward bend to form an internal bead.

2. A botle cap comprising a top and a depending circumferential side wall, said wall having spaced parallel vertical slits terminating inward of the lower edge of said wall, the material between the slits forming a spring tongue connected at its ends to the material of the side wall, and free of said material at its sides, and said tongue having an internal bead.

1,169,939. DUST-PAN WITH AUTOMATIC DEVICE. WILFRED DUPRÉ, Worcester, Mass. Filed Aug. 9, 1912. Serial No. 714,251. (Cl. 65—20.)

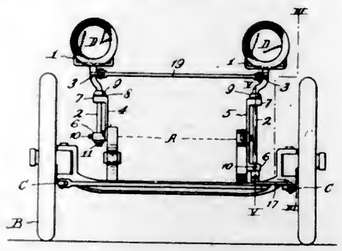


1. In a device of the class described, a pan formed with its front face open, a closure for said open face, a handle freely hinged to the rear portion of said pan, and a stay having its forward end hinged to said closure and its rear end hinged to said handle.

2. In a device of the class described, a pan formed with its front face open, a closure for said open face, a handle freely hinged to the rear portion of said pan, and a stay having its forward end hinged to said closure and its rear end hinged to said handle, the distance between the front and rear ends of the stay being greater than that between the rear end of the stay and the hinged joint between the handle and the pan.

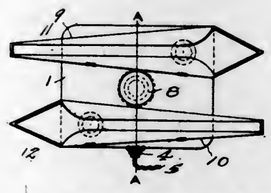
3. In a device of the class described, a pan formed with its front face open, a closure for said open face hinged at its bottom edge to said pan, a handle hinged to the rear portion of said pan, and a stay having its forward end hinged to said closure and its rear end hinged to said handle above said pan whereby when the front edge of said pan swings downwardly said pan will automatically close and when it swings upwardly, said pan will automatically open.

1,169,940. ADJUSTABLE HEADLIGHT. RALPH L. EDMONDS, Kansas City, Mo., assignor of one-fourth to F. C. McInteer, Raytown, Mo. Filed Mar. 26, 1915. Serial No. 17,149. (Cl. 240—62.)



In combination with the wheeled chassis and steering mechanism of an automobile, a pair of lamp brackets secured to opposite sides of the chassis adjacent the forward portion thereof, said brackets adapted to support said lamps above the upper plane of the wheels, each of said brackets having right angled ends forming spaced bearings, one of the brackets being relatively long, and having one of its bearings in a plane with the axis of the front wheels of the automobile, lamp supporting shafts mounted in the bearings of the brackets, the shaft supported by the long bracket, having one of its ends extending below the lower bearing thereof, said shaft having a right angled end portion, extending in the same plane with the steering arm, and a horizontal link extending at right angles to the right angled end of the shaft of the long bracket and the steering arm, for connecting the steering arm and shaft of the long bracket, and means for connecting the lamp supporting shafts.

1,169,941. SIGNAL-LAMP. JOSTEN ROBERT EDWARDS and MILTON C. LAYWELL, Columbus, Ohio. Filed Jan. 15, 1915. Serial No. 2,374. (Cl. 116—31.)



The combination in a signal lamp with a recessed housing, of a pair of separable oppositely pointed lamp boxes fitted in the housing, each lamp box having a longitudinally tapered body semi-elliptical in cross section and forming a reflecting surface, and an opaque lid to each box having a transparent portion forming an indicator.

1,169,942. ARC-LIGHT ELECTRODE. GEORG EGLY, Treptow, near Berlin, Germany, assignor to Gebrueder Siemens & Co., Lichtenberg, near Berlin, Germany. Filed Apr. 22, 1910. Serial No. 556,967. (Cl. 176—136.)

1. An arc light electrode having as illuminating ingredient calcium oxid and rare earth oxid of the cerium, lanthanum and didymium group.

2. An arc light electrode having as illuminating ingredient calcium oxid and rare earth oxid of the cerium, lanthanum and didymium group, and a fluorid.

3. An arc light electrode having an illuminating ingredient consisting substantially of three parts cerium peroxid, one part calcium oxid, and one part fluor-spar.

4. An arc light electrode having an illuminating ingredient comprising a compound of an oxid of cerium and calcium oxid.

5. An arc light electrode having an illuminating ingredient comprising a compound of cerium peroxid and calcium oxid, and a fluorid.

[Claim 6 not printed in the Gazette.]

1,169,943. COLLOIDAL-MANGANESE-DIOXID DEPOLARIZER. CARLETON ELLIS, Montclair, N. J. Filed Oct. 23, 1915. Serial No. 57,433. (Cl. 204—38.)

1. A depolarizer for batteries of the Leclanché type comprising carbonaceous material and manganese dioxid material comprising colloidal manganese dioxid.

2. A depolarizer for batteries of the Leclanché type comprising non-colloidal manganese dioxid cemented to graphite particles by colloidal manganese dioxid.

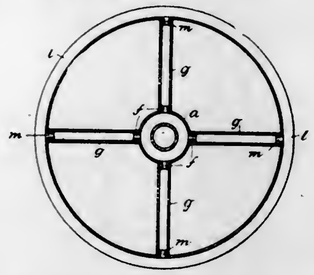
3. A depolarizer for batteries of the Leblanché type comprising non-colloidal manganese dioxid bonded by colloidal manganese dioxid material.

4. A depolarizer for batteries of the Leclanché type comprising a higher oxid of manganese cemented to carbon particles by colloidal manganese dioxid.

5. A depolarizer for batteries of the Leclanché type comprising particles of non-colloidal manganese dioxid material cemented to graphite particles by a colloidal higher oxid of manganese dioxid.

[Claim 6 not printed in the Gazette.]

1,169,944. WHEEL. FREDERICK ARTHUR ELLIS, Jr., Birmingham, England. Filed Feb. 27, 1914. Serial No. 821,417. (Cl. 21—69.)

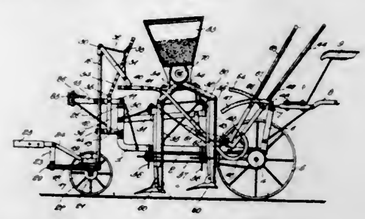


A wheel comprising a hollow hub of plate metal having tubular open-ended spigots projecting radially therefrom, tubular spokes having their inner ends fitted onto the hub spigots, a one-piece, jointless rim of plate metal encompassing the outer ends of the spokes and having tubular open-ended spigots swaged inwardly therefrom into the respective spoke ends.

1,169,945. GRAIN-DRILL. EDWIN EVERSON, Alma, Nebr. Filed Nov. 12, 1914. Serial No. 871,728. (Cl. 111—18.)

1. An implement comprising a plurality of supporting wheels, a vertically adjustable main frame supported thereon, a vertically adjustable supplemental frame mounted on the main frame, a lever for adjusting one frame, a second lever for adjusting the other frame, releasable means for locking one lever against movement, and an adjustable connection between the two levers.

2. An implement comprising a plurality of supporting wheels, a vertically adjustable main frame supported thereon, a vertically adjustable supplemental frame mounted on the main frame, a lever for adjusting one frame, a second lever for adjusting the other frame, releasable means for locking one lever against movement, a rack bar connected to one of said levers, a guide on the other lever through which the bar slides, and a pawl for locking the bar against movement in the guide.



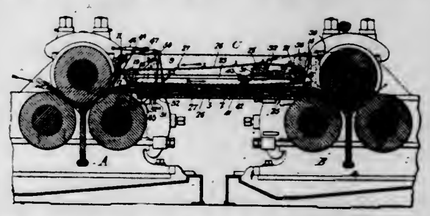
3. An implement comprising a main portable frame, mechanism for adjusting such frame vertically, an auxiliary tool-carrying frame mounted on the main frame, additional mechanism for adjusting said auxiliary frame vertically with respect to the main frame, and means for connecting the two mechanisms, whereby movement imparted to one will be imparted to the other.

4. An implement comprising a main portable frame, an auxiliary tool-carrying frame mounted on said main frame, a lever for adjusting the main frame vertically, a second lever for adjusting the supplemental frame with respect to said main frame, and means whereby the two levers may be connected to move in unison.

5. An implement comprising front and rear wheels, an upright standard supported by the front wheels, a main frame having its rear end supported by the rear wheels and having at its front end a bearing slidable vertically on the standard, a downwardly and rearwardly inclining lever pivoted to the upper end of the stndard, a link pivoted to the intermediate portion of said lever and to a part of the frame, a transverse rock shaft carried by the frame, a hand lever fulcrumed adjacent said rock shaft, a link connecting the lower end of the first named lever with the hand lever, an auxiliary tool-carrying frame mounted for vertical adjustment on the main frame, a crank arm extending from the rock shaft and connected with said auxiliary frame, an additional hand lever secured to said rock shaft and disposed adjacent the other hand lever, means for connecting the two levers for movement in unison, and releasable means for normally preventing movement of one of said levers.

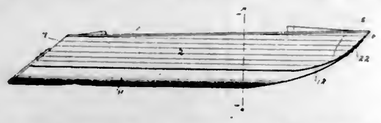
[Claim 6 not printed in the Gazette.]

1,169,946. INTERMEDIATE CONVEYER FOR SUGAR-CANE MILLS. ARTHUR FREDERICK EWART, Honolulu, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Feb. 27, 1915. Serial No. 10,951. (Cl. 193—8.)



An intermediate carrier for sugar-cane mills, comprising a trough adapted to support the bagasse, and an endless conveyer associated with said trough, one run of which is adapted to engage the top of the blanket of bagasse to force the feed toward the rearward mill, one end of said conveyer being mounted for substantially vertical raising and lowering movements and the other end thereof being mounted for movements in an arc of a circle about the first-named end as a center.

1,169,947. BOAT. JAMES M. FORSE, Pittsburgh, Pa. Filed May 19, 1915. Serial No. 29,052. (Cl. 114—66.5.)



1. A boat having a flat bottom and a plurality of air tubes on said bottom, said tubes projecting beyond the stern end of said boat, each of said tubes being divided into a plurality of air tight compartments, the bow of said boat being upwardly curved, the forward ends of said tubes being arcuate to conform to the curve of said bow, the stern end wall of said boat being inclined, the rear ends of said tubes being inclined at an angle to conform to the angle of said wall, closures for said inclined ends, said closures projecting above said tubes and being attachable to said wall, closures for the forward ends of said tubes having extending portions whereby they are secured to said bow, said last closures being formed of flat strips curved to conform to the forward ends of said tubes.

2. A boat having a flat bottom and a plurality of air tubes on said bottom, said tubes projecting beyond the stern end of said boat, each of said tubes being divided into a plurality of air tight compartments, the bow of said boat being upwardly curved, the forward ends of said tubes being arcuate to conform to the curve of said bow, the stern end wall of said boat being inclined, the rear ends of said tubes being inclined at an angle to conform to the angle of said wall, closures for said inclined ends, said closures projecting above said tubes and being attachable to said wall, closures for the forward ends of said tubes having extending portions whereby they are secured to said bow, said last closures being formed of flat strips curved to conform to the forward ends of said tubes, and the side walls of said boat being vertical.

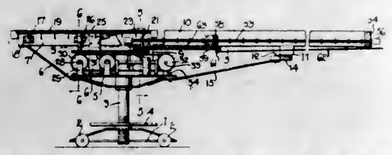
3. In combination with a boat, a plurality of air tubes formed on the bottom thereof, flat closure plates for the forward ends of said tubes, the forward ends of said tubes being longitudinally arcuate.

4. In combination with a boat, a plurality of air tubes formed on the bottom thereof, flat closure plates for the forward ends of said tubes, the forward ends of said tubes being longitudinally arcuate, and tapering and transversely rectilinear to form a flat closure.

5. In combination, a flat bottom boat having an upwardly curved bow and an inclined stern, air tubes on the bottom thereof and having the forward ends curved to conform to the contour of the boat.

[Claims 6 to 17 not printed in the Gazette.]

1,169,948. CONVEYER. FLOYD FREEMAN, Newark, Ohio. Filed June 9, 1914. Serial No. 844,094. (Cl. 193—8.)



1. A device of the character described comprising a vertically adjustable table, a stationary bed carried thereby, a swinging conveyer bed carried by the table and coacting with the stationary bed, and a supporting frame carried by the table upon which the swinging conveyer bed rests intermediate its length.

2. A device of the character described comprising a platform, a conveyer bed supported thereby and capable of swinging movement, an ejector member carried by the conveyer bed and extending to the discharge end of the bed, means carried by the bed for imparting reciprocatory movement to the ejector member, and means carried by the platform for operating said last named means.

3. A device of the character described comprising a platform capable of vertical adjustment, a conveyer bed supported thereby and capable of swinging movement, an ejector member carried by the conveyer bed and extending to the discharge end of the bed, means carried by the bed for imparting reciprocatory movement to the ejector member, and means carried by the platform for operating said last named means.

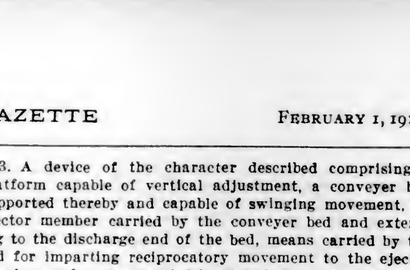
4. A device of the character described comprising a platform, a stationary bed carried thereby, a swinging conveyer bed carried by the platform and coacting with the stationary bed, a supporting frame carried by the platform upon which the swinging bed rests intermediate its length, and anti-friction members carried by the upper surface of the supporting frame and directly engageable with the swinging conveyer bed.

1,169,949. CABLE CONSTRUCTION. BERNARD W. GATES, Washington, D. C. Filed Mar. 23, 1914. Serial No. 826,682. (Cl. 173—264.)



The combination with a table embodying a plurality of insulated conductors and a sheath, of a filling composed wholly of paper having a clearly defiend cord-like structure, laid longitudinally of the insulated conductors and closely compacted longitudinally of the conductors and sheath and filling all spaces between such parts.

1,169,950. ANIMAL-TRAP. FRANK GEORGE, Orrville, Ohio. Filed Mar. 31, 1915. Serial No. 18,374. (Cl. 43—24.)



1. In an animal trap, the combination of a casing, a spring actuated shaft journaled in the casing, blades secured to the spring actuated shaft, platforms secured to the blades, said platforms inclined upward from the ends of the blades, spring actuated trip-plates located intermediate the platforms, said trip-plates provided with arms, reciprocating rods pivotally attached to the arms and a catch adapted to engage the reciprocating arms.

2. In an animal trap, the combination of a casing, a spring actuated shaft journaled in the casing, blades secured to the spring actuated shaft, inclined platforms secured to the blades, spring actuated trip plates located intermediate the platforms, said trip plates provided with arms, reciprocating rods pivoted to the arms and a catch adapted to engage the reciprocating arms, a partition provided with a one-way swinging door.

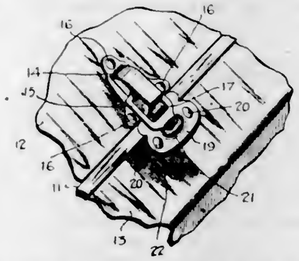
3. In an animal trap of the character described, the combination of a spring actuated shaft journaled in the casing, a series of radial blades secured to a spring actuating shaft and rotatable therewith, spring actuated trip plates spaced from the blades, reciprocating rods carried by the trip plates, a catch adapted to engage the reciprocating rod and means for elevating the trip plates after they have been tripped and a spring adapted for contact with the edges of the blades.

4. In an animal trap, the combination of a casing, a partition located in the casing, said partition provided with a one-way swinging door, a spring actuating shaft provided with blades, inclined platforms carried by the blades, the tread surface of the platforms provided with fabric, trip-plates located intermediate the inclined platforms, said trip-plates provided with fabric, and means carried by the trip plates adapted for engagement with a catch secured to the partition and a spring adapted for contact with each of the blades.

5. In an animal trap of the character described, the combination of a casing provided with fabric lining, a spring actuated shaft journaled in the casing, radial blades and platforms, said platforms inclined inward and upward and spaced from the blades, trip-plates located intermediate the platforms, said trip-plates provided with down turned flanges, means for holding the spring actuated shaft against rotation and a partition located in the casing, said partition provided with a one-way swinging door.

[Claims 6 and 7 not printed in the Gazette.]

1,169,951. FASTENER MEMBER FOR SUITCASES AND THE LIKE. JUDA GOLDWAG, New York, N. Y., assignor to American Steel Frame & Band Iron Company, Inc., a Corporation of New York. Filed Aug. 12, 1914. Serial No. 856,422. (Cl. 70—103.)

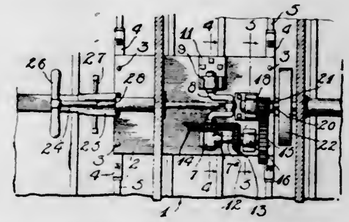


1. In a fastener member for suit-cases and the like, the combination with a plate adapted to be secured to the cover of a suit-case and provided with a toe adapted to project over the edge of said cover, said plate being also provided with an upwardly extending lug and with a centrally located downwardly extending lug; of a member adapted to be secured to an edge of a suit-case, said member being provided with a socket adapted to receive said toe, and with a pivotally mounted yoke-member adapted to straddle said upwardly extending lug and provided with a curved end adapted to engage with said downwardly extending lug.

2. In a fastener member for suit-cases and the like, the combination with a plate adapted to be secured to the cover of a suit-case and provided with a toe adapted to project over the edge of said cover, said plate being also provided with an upwardly extending lug, a centrally located downwardly extending lug, and a downward projection at its edge adapted to hold it out of immediate contact with a suit-case; of a member adapted to be secured to an edge of a suit-case, said member being provided with a socket adapted to receive said toe, and with a pivotally mounted yoke-member adapted to straddle said upwardly extending lug and provided with a curved end adapted to engage with said downwardly extending lug.

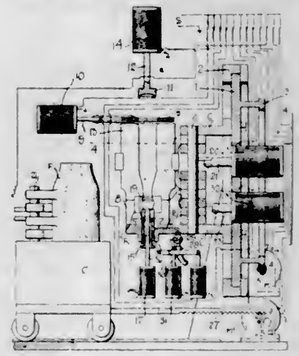
1,169,952. HAND-POWER BOAT-PROPELLING MEANS. ANTON GOTAUTAS, Brainerd, Minn. Filed July 12, 1915. Serial No. 39,372. (Cl. 115—24.)

A boat propelling mechanism comprising a horizontal rectangular bed plate, a post rising from and formed integrally with one edge portion thereof midway the ends of the latter, said post having formed integrally with its upper end a bearing formed with a transverse bore and a longitudinal bore, a second post rising from the opposite edge portion of the base plate and having an attaching foot detachably secured thereto, said second post having a bearing formed integrally with its upper end and provided with a bore alined with the aforesaid transverse bore, a third post rising from and formed integrally with the rear portion of the bed plate, said third post having formed integrally with its upper end a bearing having a bore alined with the aforesaid longitudinal bore, a fourth post rising from the base plate in laterally spaced relation to the third post, said fourth post having at its lower end an integral attaching foot detachably secured to the bed plate and having at its upper end a bearing formed with a longitudinally disposed bore, a pair of parallel upwardly and forwardly curving arms formed integrally



with and rising centrally from the front end of the bed plate, a transverse horizontal shaft rotatable in the alined bores of the bearings of the first and second posts and having a crank disposed between said bearings, a propeller shaft having its front end rotatably mounted in the bore of the bearing on the fourth standard, an intermediate longitudinal shaft rotatably mounted in the alined bores of the bearings on the first and third standards, gearing connecting the transverse shaft and the intermediate shaft, additional gearing connecting the latter and the propeller shaft, a rod leading forwardly from the crank of the transverse shaft between the aforesaid pair of arms, and an upright hand lever fulcrumed between said arms and connected with the front end of said rod.

1,169,953. GLASS-SHAPING APPARATUS. ALBERT F. GUMPP and WILLIAM J. JOHNSON, Smethport, Pa. Filed Nov. 30, 1914. Serial No. 874,887. (Cl. 49—5.)

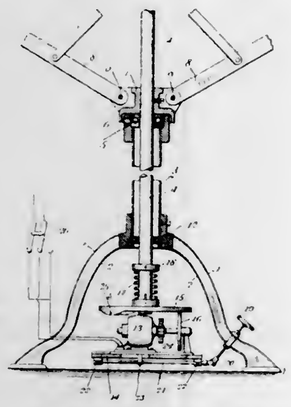


1. A machine for the manufacuture of glass ware comprising a revoluble member, electrical means for imparting rotary movement thereto, a blank mold carried by the member and comprising relatively movable sections, electrical means for imparting movement to the sections, a circuit closer interposed in each of the electrical means, and a rotatable element, said element being provided with means coacting with the circuit closers for closing the same in proper sequence.

2. A machine for the manufacture of glass ware comprising a plurality of movable elements, electrical means for each of the elements for imparting the requisite movement thereto and including a circuit-closer, said closer comprising a stationary contact and a movable contact, a rotatable element, cams carried by the rotatable element and adapted to force the movable contacts into engagement with their coacting stationary contacts in proper sequence, means for imparting movement to the rotary element, and means for automatically stopping the movement of the rotary element when such element has completed a single revolution.

3. A machine for the manufacture of glass ware comprising a plurality of movable elements, electrically controlled means of each of said elements for operating the same, a circuit closer interposed in each of the electrical means, a rotatable element, said element being provided with means coacting with the circuit closer for closing the same in proper sequence during a single revolution of the rotatable element, means for imparting movement to the rotary element, and means for automatically stopping the movement of the rotary movement when said element has completed a single revolution.

1,169,954. CLOTHES-DRYING MACHINE. MARION BORDEN HALLIDAY, Wallkill, N. Y. Filed Dec. 2, 1913. Serial No. 804,138. (Cl. 68—34.)



1. In a clothes drier, the combination of a base provided with walls inclosing the space therein, a sleeve secured to and rising vertically from said base, a vertical clothes frame carrying shaft within said sleeve, a ball race secured to the upper part of said sleeve for supporting said shaft, a ball race secured to the lower end of said sleeve adapted to take the side thrust of said shaft, a motor and driving mechanism between said motor and said shaft, said motor and driving mechanism being inclosed in said base.

2. In a clothes drier, the combination of a vertical shaft, a clothes frame secured to said shaft, means for rotating said frame and means for simultaneously moving said frame bodily in a vertical direction.

3. In a clothes drier, the combination of a vertical shaft, a clothes frame secured thereto, a motor adapted to rotate said frame through said shaft and means adapted to simultaneously and bodily raise and lower said frame as a unit.

4. In a clothes drier, the combination of a vertical shaft, a clothes frame secured thereto, a motor adapted to rotate said frame through said shaft and a cam adapted to periodically bodily raise said clothes frame as a unit.

5. In a clothes drier of the character described, the combination of a vertical clothes-frame carrying shaft and means for simultaneously rotating and longitudinally reciprocating said shaft.

1,169,955. VALVE-PICK-UP TOOL. GEORGE H. HAMMOND, Minneapolis, Minn. Filed Apr. 29, 1915. Serial No. 24,743. (Cl. 81—44.)

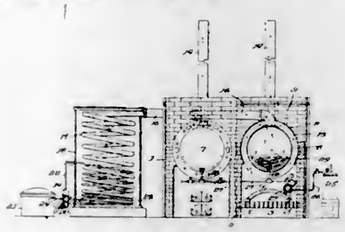


1. A tool for picking up valves having tops of different shapes, said tool comprising a pair of flat spring metal bars pivoted together near one end and bent outward to form comparatively long bowed legs, the free ends of which come normally together flatwise for a short distance, so as to spread at their extremities when the bowed legs are sprung toward each other.

2. A tool for picking up valves having tops of different shapes, said tool comprising a pair of flat spring metal bars pivoted together near one end and bent outward to form comparatively long bowed legs, the free ends of which come normally together flatwise for a short distance, so as to spread at their extremities when the bowed legs are sprung toward each other; said metal bars having also short legs in opposite direction from the said long legs and forming a pair of gripping jaws, to which the long legs serve as handles.

3. A tool for picking up valves or other articles by taking hold either inside a cavity or outside a projection of the article, said tool comprising a pair of flat spring metal bars pivoted together near one end and bent outward to form comparatively long bowed legs, the free ends of which come normally together flatwise for a short distance, so as to spread at their extremities when the bowed legs are sprung toward each other; said metal bars having also short legs in opposite direction from the long ones and forming a pair of gripping jaws; said long legs being pivoted to swing edgewise and to thus form the operating handles or levers of the short jaws, and to overlap upon each other with the first mentioned jaws when the gripping jaws are closed together.

1,169,956. PROCESS FOR RECOVERING OIL AND OTHER PRODUCTS WHICH ARE FORMED DURING THE DESTRUCTIVE DISTILLATION OF WOOD. LOUIS HANSON, Wilmington, N. C. Filed Dec. 16, 1915. Serial No. 67,223. (Cl. 203—6.)



1. The process of obtaining oil from wood which consists in quickly subjecting a confined body of wood to the action of heat at a temperature in excess of 650° F. and uniformly maintaining approximately the same temperature throughout the period of extracting the oil from the wood, and simultaneously upwardly injecting superheated steam in the retort, whereby the vapors liberated from the wood are carried upward with the steam and are caused to travel coincidently with said steam and subsequently condensing the mixture to produce oil.

2. The process of obtaining oil from wood which consists in quickly subjecting a confined body of wood to the action of heat at a temperature in excess of 650° F. and uniformly maintaining approximately the same temperature throughout the period of extracting the oil from the wood, and simultaneously injecting a superheated steam in the retort to mix with the vapors liberated from the wood and coincidently carry said vapor and steam from the retort and subsequently condensing the mixture to produce oil.

3. The process of obtaining oil from wood which consists in quickly subjecting a confined body of wood to the action of destructive heat at a temperature in excess of 650° F. and simultaneously injecting into the retort superheated steam at a temperature in excess of 650° F. to mix with the vapors liberated from the wood, and maintaining in the retort approximately a uniform temperature in excess of 650° F. and coincidently carrying said vapor and steam from the retort and subsequently condensing same.

1,169,957. CIRCUIT-CONTROLLER. WILLIAM S. HENRY, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Oct. 23, 1912. Serial No. 727,333. (Cl. 175—282.)

1. A circuit controller comprising a fixed contact spring, a movable contact arm arranged to be moved into contact with said spring, a rock lever, means for operatively connecting the rock lever and said contact arm, an operating shaft, a cam secured to said shaft and having a cam face substantially concentric with the axis of said shaft, and two rollers carried by said rock lever and arranged to coöperate with the face of said cam.

2. A circuit controller comprising a supporting panel of insulating material, a movable contact arm supported by said panel, a contact spring secured to said panel in position to be touched by said contact arm, a rock lever, means for operatively connecting said rock lever and said contact arm, an operating shaft, a cam secured to said shaft and having a cam face substantially concentric with the axis of said shaft, and two rollers carried by said rock lever and arranged to coöperate with said face of said cam, said face of said cam being slightly shorter than the distance between said rollers.

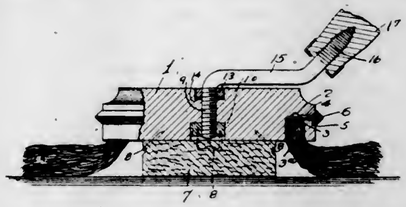
3. A circuit controller comprising a fixed contact spring, a movable contact arm arranged to be moved into and out of contact with said spring, a rock lever, means for connecting said rock lever and said contact arm, an operating shaft, a cam secured to said shaft and having a cam face substantially concentric with the axis of said shaft, said cam face being beveled at its ends, and two rollers carried by said rock lever and arranged to coöperate with said cam face, the distance between said rollers being slightly greater than the distance between the beveled ends of said cam face of said cam.

4. A circuit controller comprising a fixed contact spring, a movable contact arm arranged to contact with said spring, a rock lever, means for operatively connecting said rock lever and said contact arm, an operating shaft, a cam secured to said shaft and having two separate cam faces substantially concentric with the axis of said shaft and arranged on opposite sides thereof, and two rollers carried by said rock lever and arranged to coöperate with the face of said cam.

5. A circuit controller comprising a vertically disposed supporting panel of insulating material, a movable contact arm supported by said panel and disposed vertically, a contact spring secured to said panel in position to be touched by said contact arm, a rock lever mounted to oscillate on a horizontal axis adjacent to said panel, means for operatively connecting said rock lever and said contact arm, a cam adjustably secured to said shaft and having a cam face substantially concentric to the axis thereof, and two rollers carried by said rock lever and arranged to coöperate with said cam face.

[Claims 6 to 10 not printed in the Gazette.]

1,169,958. OIL-MOP. FREDERICK L. HURT, Chicago, Ill., assignor, by direct and mesne assignments, to Frederick Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 26, 1913. Serial No. 763,698. (Cl. 15—13.)



1. A mop comprising a frame piece, a flexible mop portion attached to said frame piece near the edge thereof and adapted to oil the surface on which the mop is used, and a polishing device connected with said frame piece and adapted to engage and polish the said surface oiled by the said flexible mop portion.

2. A mop comprising a frame piece provided with a series of openings in one face thereof, a series of looped flexible sections having their looped ends projecting into said openings, and a holding device extending around said frame piece and having portions which extend into said openings and through the loops of said sections so as to hold them in place.

3. A mop comprising a frame piece, a flexible oil spreading mop portion connected with said frame piece and extending therearound and adapted to oil the surface on which the mop is used when the mop is moved in any direction therealong, there being a free space surrounded by said flexible oil spreading portion, a polishing device connected with said frame piece and projecting into said free space, said polishing device surrounded by said flexible portion when the mop is being used, said flexible oil spreading portion and polishing device simultaneously oiling and polishing said surface as the mop is moved therealong.

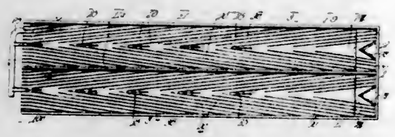
4. A mop comprising a body portion, an oil spreading device connected with said body portion and a compact polishing device also connected with said body portion and adapted to rub the oil spread by the oil spreading device, into the surface on which the mop is used so as to polish such surface.

5. A mop comprising a frame piece, a flexible yarn oil spreading device connected with said frame piece adapted to spread oil over the surface operated upon and a compact felt pad also connected with said frame piece, which engages said surface and rubs the oil into it so as to polish the surface.

1,169,959. CONCENTRATOR. JOHN F. ISBELL, Los Angeles, Cal., assignor to Orren Allen, Denver, Colo. Filed Apr. 6, 1912. Serial No. 688,855. (Cl. 83—88.)

1. In combination, a longitudinally reciprocating separator table adapted to separate materials both vertically

and horizontally and to concentrate and move the heavier materials along and below a concentration line, a relatively thin horizontal strata separator member projecting against the flow of material along the concentration line, and outlet means communicating with the space beneath said member.



2. In combination, a longitudinally reciprocating and longitudinally inclined separator table adapted to separate materials both vertically and horizontally and to concentrate and move the heavier materials along and below a concentration line and separator means arranged on said concentration line and comprising a thin flat horizontal strata separator member projecting toward the upper end of the table against the movement of material along the concentration line and spaced above the table surface, and outlet means communicating with the space below said separator member to carry off the material separated by said separator member.

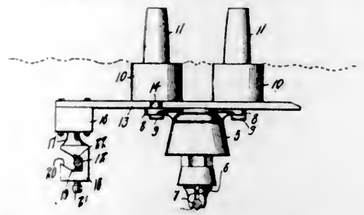
3. In combination, a longitudinally reciprocating and longitudinally inclined separator table adapted to separate materials both vertically and horizontally and to concentrate and move the heavier materials along and below a concentration line and separator means arranged on said concentration line and comprising a thin flat horizontal strata separator member projecting toward the upper end of the table against the movement of material along the concentrating line and spaced above the table surface, outlet means communicating with the space below said separator member to carry off the material separated by said separator member, and a dam arranged adjacent to said outlet means and extending above the table surface on the side of the outlet means toward the upper end of the table.

4. In combination, a longitudinally reciprocating and longitudinally inclined separator table adapted to separate materials both vertically and horizontally and to concentrate and move the heavier materials along and below a concentration line and separator means arranged on said concentration line and comprising a thin flat horizontal strata separator member projecting toward the upper end of the table against the movement of material along the concentrating line and spaced above the table surface, and outlet means communicating with the space below said separator member to carry off the material separated by said separator member, and a shelf extending over the table surface and spaced above the same adjacent to the said separator member, and means for supplying water on the top of said shelf.

5. In combination, a longitudinally reciprocating and longitudinally inclined separator table adapted to separate materials both vertically and horizontally and to concentrate and move the heavier materials along and below a concentration line and separator means arranged on said concentration line and comprising a thin flat horizontal strata separator member projecting toward the upper end of the table against the movement of material along the concentrating line and spaced above the table surface, and outlet means communicating with the space below said separator member to carry off the material separated by said separator member, and a shelf extending over the table surface and spaced above the same to the rear of the said separator member, means for supplying water on the top of said shelf, and confining walls for directing such water to the outlet means and to the apace beneath said shelf.

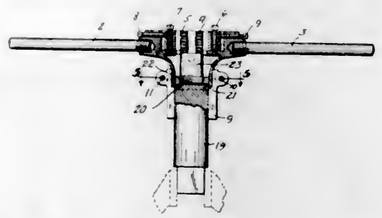
[Claims 6 to 8 not printed in the Gazette.]

1,169,960. DEVICE FOR MOUNTING ELECTRIC WIRES. GILLERT P. JACOBSON, Lanse, Pa. Filed July 3, 1915. Serial No. 37,905. (Cl. 173—251.)



A securing device of the class described, comprising a plate provided intermediately with a slot opening at one side and at one end with a longitudinal slot opening on said end whereby the plate may be secured, an insulating block carried at the other end of the block, and wire holding means carried by said block.

1,169,961. NIPPLE-MAKING DEVICE FOR DIE-STOCKS. FERDINAND A. JADIN, San Francisco, Cal. Filed May 3, 1915. Serial No. 25,651. (Cl. 10—108.)



1. A nipple making device for die stocks comprising a pair of clamps adapted to be secured to the die stock and forming therefor a guide, a mandrel to be used in conjunction with said guide, and a nipple holding socket carried by said mandrel.

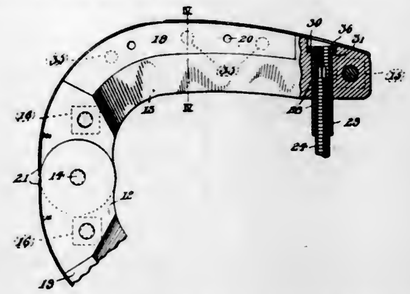
2. A nipple making device for die stocks comprising a pair of clamps adapted to be bolted together and secured on the die stock, a mandrel which fits said clamps, and a nipple holding socket threaded on said mandrel.

3. A nipple making device for die stocks comprising a pair of semi-circular shells each having a member at one end thereof to connect the same with a die stock, bolts to hold said semi-circular shells together, a mandrel having one end squared, and a nipple holding socket screwed on one end of said mandrel and with which mandrel said clamps coöperate.

1,169,962. EXPANSIBLE HORSESHOE. JOHN KALOTA, West Allis, Wis. Filed Dec. 13, 1915. Serial No. 66,538. (Cl. 168—9.)

1. A horseshoe comprising similar oppositely arranged sections pivotally connected together at the toe portions thereof, the heel portions of said sections being respectively provided with an anchoring socket and opening, and a bore having an annular bearing shoulder, a clamping bolt projecting through the said opening and having a head restrainingly seated within the said socket, an operating sleeve swiveled within the said bore and in contact with the said bolt, the outer end of the said sleeve being provided with a kerf.

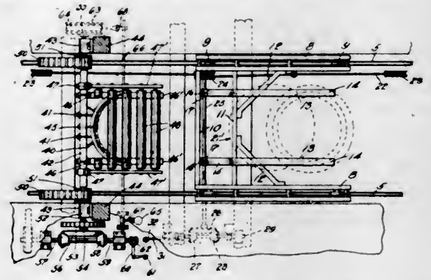
2. A horseshoe comprising similar oppositely arranged sections pivotally connected together at the toe portions thereof, the heel portions of said sections being respectively provided with an anchoring socket and opening, and a bore having an annular bearing shoulder, a clamping bolt projecting through the said opening and having a head restrainingly seated within the said socket, an operating sleeve swiveled within the said bore and in contact with the said bolt, the outer end of the said sleeve being provided with a kerf, metallic retaining bands secured to the outer edges of the said shoe sections and having inwardly projecting fingered portions overlying the hoof-engaging surfaces of the said sections, removable cushion strips carried by the outer edges of the hoof-engaging surfaces of the said sections, and a hoof cushioning pad mounted upon the said sections and cushion strips inwardly of the said bands.



3. A horseshoe provided with its receiving sockets upon the opposite outer edges of the hoof-engaging face thereof, resilient cushioning strips removably positioned within the said sockets, band members carried by the outer edges of the said shoe and positioned outwardly of the said strips, and ejecting pins for the said strips slidably projecting through the said shoe and normally underlying the said strips and having engaging free ends adjacent the ground-engaging surface of the shoe.

4. A clamp horseshoe comprising opposite pivoted sections, marginal hoof-engaging retaining bands carried by the outer edges of the said sections, the said sections having marginally-extending sockets adjacent the said bands within the hoof-engaging surfaces thereof, cushioning strips removably positioned within the said sockets, and ejecting pins for the said strips slidably positioned through the said sections underlying the said strips and accessibly extending adjacent the ground-engaging surface of the shoe.

1,169,963. PIPE-TURNER. JOHN F. KEENAN, Taylor, Wash., assignor to Denny-Renton Clay and Coal Co., Seattle, Wash., a Corporation of Washington. Filed Apr. 30, 1913. Serial No. 764,543. (Cl. 21—116.)



1. In devices of the class described, a carriage for conveying a pipe, said carriage comprising longitudinal members, and transverse members, braces secured to both the longitudinal members and one of the transverse members, and longitudinal bars supported by said transverse members and said braces.

2. In a device of the class described, a carriage having a rigid frame comprising side members and transverse members and braces disposed in angular relations with respect to said members, bars adjustably secured to one of said transverse members and being supported by the other of the transverse members and also by said braces.

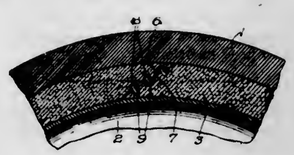
3. In a device of the class described, a carriage for conveying a pipe, said carriage comprising longitudinal frame bars, a pair of spaced transverse bars connecting the longitudinal bars, brace rods connecting one of said transverse bars with the longitudinal bars, and pipe supporting arms adjustably connected at one end to one of said transverse bars and resting on the other of said transverse bars and brace rods.

4. In a device of the class described, a carriage for conveying a pipe, said carriage comprising a substantially U-shaped frame, brace bars arranged diagonally of said frame, and pipe supporting arms adjustably connected to said frame to be partially supported by said brace bars.

5. A device of the class described including horizontal side and end bars, brace rods extending diagonally across the carriage and horizontally arranged pipe supporting means carried by the carriage and supported by said brace rods.

[Claims 6 to 8 not printed in the Gazette.]

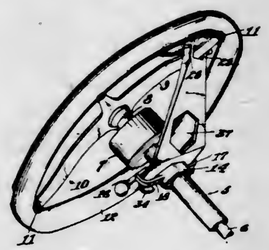
1,169,964. INNER-TUBE PROTECTOR FOR PNEUMATIC TIRES. WILLIAM N. KELLEY and JOSEPH C. PORTER, Pittsburgh, Pa. Filed July 6, 1915. Serial No. 38,189. (Cl. 152—18.)



1. A protector for the inner shoe of pneumatic tires comprising a split annulus formed of resilient material and having the ends thereof oppositely beveled, one of said ends provided with a plurality of pockets, and a plurality of connecting members each having a portion thereof embedded in the other of said ends and the remaining portion seated in said pockets for connecting the ends of the annulus together, said members extending at an inclination.

2. A protector for the inner shoe of pneumatic tires comprising a split annulus formed of resilient material and having the ends thereof oppositely beveled, one of said ends provided with a plurality of pockets, and a plurality of connecting members each having a portion thereof embedded in the other of said ends and the remaining portion seated in said pockets for connecting the ends of the annulus together, said pockets being circular in contour and said connecting members being cylindrical.

1,169,965. STEERING-WHEEL LOCK. ANDREW J. KELLOGG, Los Angeles, Cal. Filed Sept. 20, 1915. Serial No. 51,510. (Cl. 70—90.)



1. The combination with a steering wheel, a steering wheel column and a quadrant bracket mounted upon said column, of demountable means having a forked end nonrotatably engageable with the quadrant bracket and means

for locking said first-mentioned means to the steering wheel whereby said wheel is held against rotation.

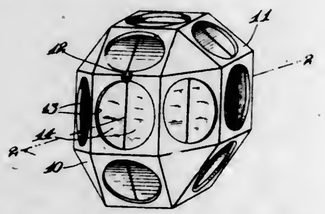
2. The combination with a steering wheel, a steering wheel column and a quadrant bracket mounted on said column, of a plate formed with a forked end engageable with the quadrant bracket and means for locking said plate to the steering wheel, whereby the latter is held against rotation.

3. The combination with a steering wheel, a steering wheel column and a quadrant bracket mounted on said column, of a plate formed with a forked end detachably engageable with the quadrant bracket, ears on the opposite end of the plates adapted to engage the wheel, and a lock on said ears for holding the plate against removal.

4. The combination with a steering wheel, a steering wheel column, a quadrant bracket on said column, and a spark controlling lever pivoted on the column, of a plate, means thereon for detachably connecting the plate to the quadrant, means for detachably connecting the plate to the steering wheel, and means on the plate for holding the spark lever in an advanced position.

5. The combination with a steering wheel, a steering wheel column, a quadrant bracket mounted on said column, and a spark controlling lever pivoted on the column, of a plate formed with a forked end, hooks on the forks for detachably engaging the quadrant bracket, a pair of perforated spaced ears on the opposite end of said plate adapted to engage the steering wheel, a lock adapted to connect the ears to hold the plate against detachment, and a projection on one of the forks for holding the spark lever in an advanced position.

1,169,966. TARGET. WACLAW KENSTOWICZ, Chicago, Ill. Filed Nov. 6, 1915. Serial No. 59,975. (Cl. 124—15.)



1. A target for aerial projectiles, comprising a receptacle having a polyhedral contour of more than six faces, and provided with entrance apertures.

2. A target for aerial projectiles, comprising a receptacle having a polyhedral contour of more than six faces, and provided with entrance apertures opening into the receptacle obliquely.

3. A target for aerial projectiles, comprising a receptacle having the contour of two quadrangular pyramids joined at their bases and rounded thereat, said receptacle having entrance apertures at its corners.

4. A target for aerial projectiles, comprising a receptacle having the contour of two quadrangular pyramids joined at their bases, said receptacle having entrance apertures at its corners.

1,169,967. CROCHET COTTON OR WOOL HOLDING DEVICE. GEORGE GARRATT KENT, London, England. Filed Apr. 19, 1913. Serial No. 762,258. (Cl. 242—136.)

1. In a device for holding crochet cotton, wool or the like in ball form, a flat base member, a spindle secured centrally thereto and projecting upwardly at right angles to the plane of said base, said spindle having a loop at its upper end and being designed to frictionally receive and hold the material thereon against rotation with respect to the spindle, an open bracelet to be fitted to the user and a hook swivel detachably connected to the loop portion of the spindle and engaged with the bracelet to permit the spindle, base and ball of material to rotate with respect to the bracelet, as one.



2. A portable and revolving holder for balls of crochet cotton and the like in wound form, comprising a solid base in the form of a plate, a spindle secured thereto centrally and extending at right angles therefrom, said spindle comprising a wire member rebent intermediate its ends and with its free ends brought together and anchored in the base, the leg portions between the rebent part and said ends being bowed outwardly to frictionally engage and hold the ball of material thereon, said base preventing displacement of said material from said spindle, and a swivel secured to the bight portion of the spindle and adapted for attachment to the bracelet of an operator.

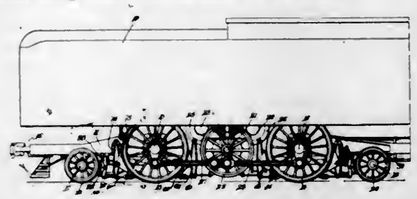
3. A portable and revolving holder for balls of crochet cotton and the like in wound form, comprising a solid base in the form of a plate, a spindle secured thereto centrally and extending at right angles therefrom, said spindle comprising a wire member rebent intermediate its ends and with its free ends brought together and anchored in the base, the leg portions between the rebent part and said ends being bowed outwardly to frictionally engage and hold the ball of material thereon, said base preventing displacement of said material from said spindle, and a swivel secured to the bight portion of the spindle, a swivel secured to the rebent upper end of the spindle to permit said spindle, base and material to revolve with respect thereto and an expansible bracelet for connection with said swivel to suspend said part.

4. A portable and revolving holder for balls of crochet cotton and the like in wound form, comprising a solid base in the form of a plate, a spindle secured thereto centrally and extending at right angles therefrom, said spindle comprising a wire member rebent intermediate its ends and with its free ends brought together and anchored in the base, the leg portions between the rebent part and said ends being bowed outwardly to frictionally engage and hold the ball of material thereon, said base preventing displacement of said material from said spindle, a swivel secured to the rebent upper end of the spindle to permit said spindle, base and material to revolve with respect thereto, an expansible bracelet and means for detachably connecting the swivel to the bracelet.

1,169,968. BRAKE-RIGGING. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Aug. 29, 1914. Serial No. 859,221. (Cl. 188—44.)

1. In a locomotive, the combination of axles, driver wheels on each of said axles, a driving motor and gearing in the space between said axles, brake devices capable of engaging said wheels on opposite sides of said axles, and a brake cylinder between said axles beneath said motor and connected with said brake devices.

2. In a locomotive, the combination of axles, driver wheels on each of said axles, driving motors in the space between said axles, means including gearing connecting said motors to the driver wheels, brake hangers on opposite sides of said wheels, brake shoes carried by said hangers and capable of engaging the wheels on opposite sides of their centers, a brake cylinder in the space between said axles and below said motors, a piston therefor, and means connecting said piston with said brake hangers, said means being located on one side of the cylinder.



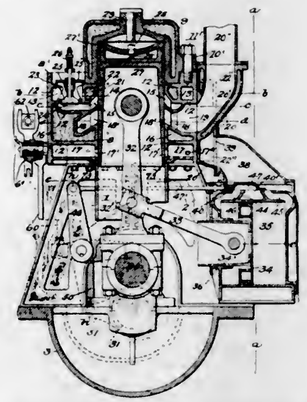
3. In a locomotive, the combination of axles, driver wheels on each of said axles, driving mechanism located between said axles, brake hangers on opposite sides of each of said wheels, brake shoes carried by said hangers and capable of engaging said wheels, a horizontal lever connected to each of said brake hangers, a cylinder located between said axles and below said driving mechanism, a piston working in said cylinder, and means connecting said piston with each of said horizontal levers.

4. In a locomotive, the combination of axles, driver wheels on each of said axles, driving mechanism located between said axles and connected to said wheels, braking means for said wheels comprising a brake cylinder located below said driving mechanism, and means below said driving mechanism for automatically adjusting the slack in the braking means.

5. In a locomotive, the combination of axles, driver wheels mounted thereon, a pair of brake hangers associated with each wheel, a brake shoe carried by each hanger and capable of engaging a driver wheel, a plurality of horizontally disposed brake levers, one for each brake hanger, a brake cylinder located between the axles, a piston working in said cylinder, a live brake lever connected to said piston and to the group of horizontal levers on one side of said cylinder, and a dead brake lever connected to said live brake lever and to the group of horizontal levers on the other side of said cylinder.

[Claims 6 to 16 not printed in the Gazette.]

1,169,969. INTERNAL-COMBUSTION ENGINE. SIMON LAKE, Milford, Conn. Filed Mar. 7, 1914. Serial No 823,172. (Cl. 123—72.)



1. In a single-acting internal combustion engine, comprising a power cylinder having scavenging-air inlet ports and exhaust ports in the wall thereof, the combination with a horizontally disposed double-acting scavenging-air compression cylinder communicating with said inlet ports, a valve controlling the communication, means for operating said valve, and a compressing piston working in said compression cylinder having its connecting rod connected to the connecting rod of the power piston in such manner that two gusts of scavenging air are introduced into the power cylinder during each exhaust period.

2. In a single-acting internal combustion engine, comprising a power cylinder having scavenging-air inlet ports and exhaust ports in the wall thereof, and a compressed-air reservoir communicating with said inlet ports, and a power piston working in the cylinder controlling said ports, the combination with a transversely arranged double-acting scavenging-air compression cylinder for supplying scavenging air to said reservoir, and a compressing piston working in said compression cylinder having its connecting rod connected to the connecting rod of the power piston so that two pulsations of scavenging air are introduced into the power cylinder during each exhaust period.

3. In a vertical single-acting internal combustion engine, comprising a power cylinder having scavenging-air inlet ports and exhaust ports in the vertical wall thereof, an air reservoir surrounding said air inlets and communicating therewith, and a power piston working in said cylinder controlling said ports, the combination with a double-acting scavenging-air compression cylinder arranged transversely of the engine having its outlet communicating with said air reservoir, a compressing piston working in said compression cylinder having its connecting rod connected to the connecting rod of the power piston so that two pulsations of scavenging air are introduced into the power cylinder during each exhaust period, and a valve operatively connected to the power shaft of the engine controlling the communication between the said compression cylinder and the said reservoir.

4. A single-acting internal combustion engine comprising a power cylinder having scavenging-air inlet ports and exhaust ports in the wall thereof, an air reservoir formed integral with and surrounding the wall of the cylinder and communicating with said air inlet ports, a power piston working in said cylinder controlling said ports, a double-acting scavenging-air compression cylinder communicating with said air reservoir, and a compressing piston working in said compression cylinder operatively connected to the connecting rod of the power piston so that a following up of the scavenging air is given during the exhaust period.

5. A single-acting internal combustion engine, comprising a power cylinder having scavenging-air inlet ports and exhaust ports arranged in the wall thereof, a power piston working in the cylinder controlling said ports, a rectangular jacket formed integral with the cylinder and having an annular scavenging-air reservior communicating with said air inlet ports and an annular exhaust passage communicating with said exhaust ports, valves controlling the communication between the reservoir and inlet ports, a double-acting air compression cylinder arranged transversely of the engine communicating with the said reservoir, and a compressing piston working in said compression cylinder having its connecting rod connected to the connecting rod of the power piston, so that two gusts of scavenging air are introduced into the power cylinder during each exhaust period.

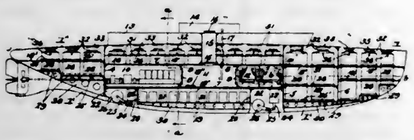
[Claims 6 to 26 not printed in the Gazette.]

1,169,970. SUBMARINE BOAT. SIMON LAKE, Milford, Conn. Filed Aug. 16, 1915. Serial No. 45,695. (Cl. 114—16.)

1. A cargo-carrying submarine or submersible boat, comprising an outer hull and an inner hull, cargo-carrying tanks arranged in the spaces formed by said outer and inner hulls, the spaces formed by said inner and outer hulls around said cargo-carrying tanks providing water-ballast compartments.

2. A cargo-carrying submarine or submersible boat, comprising an outer non-pressure-resisting hull section and an inner pressure-resisting hull section, said inner

hull section providing machinery, working and living compartments, cargo-carrying tanks arranged in the spaces formed by and between said inner and outer hull sections, said spaces also providing water-ballast compartments.



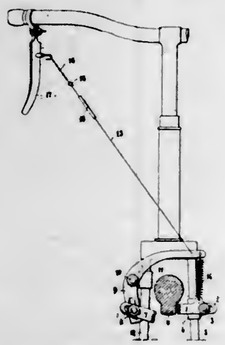
3. A cargo-carrying submarine or submersible boat, comprising an outer non-pressure-resisting hull section and an inner pressure-resisting hull section, and a plurality of pressure-resisting cargo-carrying tanks arranged in the space formed between said outer and inner hull sections, the spaces formed around said inner hull section around said tanks also providing water-ballast compartments.

4. A cargo-carrying submarine or submersible boat, comprising an outer hull section and an inner hull section, transverse and horizontal partitions arranged in the spaces formed by and between said hull sections providing a plurality of communicating compartments, and cargo-carrying tanks arranged in said spaces and extending through and connected to said horizontal partitions, the spaces formed by said partitions providing communicating water-ballast compartments.

5. A cargo-carrying submarine or submersible boat, comprising an outer non-pressure-resisting hull section and an inner pressure-resisting hull section, said inner hull section having partitions providing a plurality of compartments as specified, transverse partitions arranged in said outer hull section and forming the ends of said inner hull section, said partitions having openings providing communications between the forward and after ends of said outer hull section at the sides of said inner hull section, horizontal partitions within said outer hull having openings arranged therein, and cargo-carrying tanks extending through the openings of said horizontal partitions and braced thereto as specified, the communicating spaces formed by said transverse and horizontal partitions providing water-ballast compartments.

[Claims 6 to 8 not printed in the Gazette.]

1,169,971. BICYCLE-BRAKE. ANTOINE LARRIBE, Paris, France, assignor to René Pignois, Paris, France. Filed July 6, 1914. Serial No. 849,146. (Cl. 208—13.)

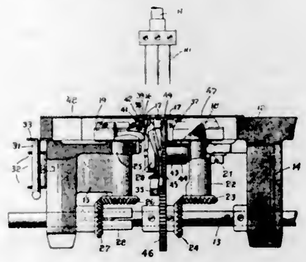


1. In a bicycle brake, the combination of a lever pivotally connected to one branch of a fork of the frame and having a slot at one terminal thereof, a shoe having a slot therein, means passing through the slots of the lever and shoe for adjustably connecting the shoe to the lever, and means for operating the lever for causing the shoe to be forced into engagement with the rim of a wheel for retarding the momentum thereof.

2. In a bicycle brake, the combination of a fixed shoe adjustably connected to one branch of a fork of the frame, and in a position to be engaged by the rim of the wheel, a lever pivotally connected to the other branch of the fork and having a slot formed in one terminal thereof, a movable shoe having a slot formed therein, means passing through the slots of the lever and movable shoe for fastening them together, and means for operating the lever for causing the movable shoe to be forced into engagement with the rim of the wheel and press the rim into contact with the fixed shoe, whereby the rotation of the wheel may be retarded.

3. In a bicycle brake, the combination with the fork of a frame, of a collar connected to one branch of the fork, a fixed shoe adapted to be positioned for engagement with the rim of a wheel straddled by said fork, and having a slot therein, means passing through the slot and connected to the collar for adjustably fastening the fixed shoe to the collar, a lever pivotally connected to the other branch of the fork, and provided with a slot at one terminal thereof, a movable shoe having a slot therein, means passing through the slots of the shoe and lever for connecting the shoe to the lever, and adjustable means connected to the other terminal of the lever for actuating the lever to cause the movable shoe to be forced into engagement with the rim of the wheel and press the rim into engagement with the fixed shoe, whereby the rotation of the wheel may be retarded.

1,169,972. TRIPLE-NEEDLE SEWING-MACHINE. AXEL R. LARSON, Bridgeport, Conn. Filed May 26, 1914. Serial No. 841,016. (Cl. 112—15.)



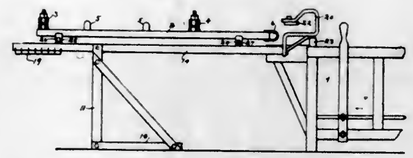
1. In a machine of the character described, the combination with three alined needles, two hooks rotating in the horizontal plane and a hook rotating in the vertical plane and lying between said first-mentioned hooks, of a sliding bearing block by which one of the horizontally rotating hooks is carried and a spring latch for locking said block in operative position.

2. In combination, a horizontally rotating hook of the character described, a vertically rotating hook contiguous thereto, a horizontally rotating hook contiguous to the vertically rotating hook and opposite to the first-mentioned horizontally rotating hook, and means for moving one of said horizontally rotating hooks out of operative position to permit access to the vertically rotating hook.

3. In a machine of the character described, the combination with two vertical and one horizontal hook carrying shafts, bevel pinions on the vertical shaft, and a gear wheel on the horizontal shaft, of a driving shaft, bevel pinions thereon engaging the pinions on the vertical shafts, a gear wheel engaging the gear wheel on the horizontal shaft and a sliding bearing block in which the driving shaft and one of the vertical shafts in journal, one of the bevel pinions on the driving shaft being keyed thereto and moving longitudinally with the bearing block.

4. In a machine of the character described, the combination with one horizontal and two vertical hook carrying shafts, a driving shaft and co-acting driving elements on said shafts, of a sliding bearing block in which the driving shaft and one of the vertical shafts is journaled, one of the driving elements on the driving shaft being keyed thereto and moving longitudinally with the bearing block, and means on the bearing block for retaining said block and the parts carried thereby in operative position.

1,169,973. LEATHER-STRETCHER DROPPING DEVICE. CHARLES B. LEONARD, Philadelphia, Pa. Filed May 21, 1914. Serial No. 839,925. (Cl. 149—21.)



1. A leather stretcher comprising a board member having a plurality of clamps, a wheel bracket adapted to be temporarily engaged with said board and to support said board, a suspended track along which said bracket may be moved, a stationary frame adjacent to and under said track and having a rotatable portion adapted to receive said board, said rotatable part having a plurality of rollers upon which said board is adjustable longitudinally.

2. A leather stretching device described comprising an overhead trolley track, having a removable section and pivoted and counterweighted stationary support for said removable section, said support being adapted to receive a stretching board and to support it during the stretching operation, as herein specified and for the purpose set forth.

3. A device of the character described comprising a leather stretching board having a traveler temporarily engaged therewith, an overhead trolley track upon which said traveler is adapted to be moved and a removable section in said track independent of said traveler, said section being adapted to be rotated out of or into alinement with said track upon the engagement of the traveler therewith and means for rotating said section out of alinement with said track and into position upon a stretching machine as herein specified and for the purpose set forth.

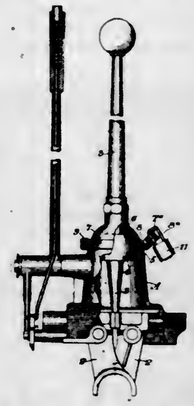
4. A leather stretcher comprising a track, a bracket having a wheel movable upon said track and a depending hook, a board adapted to be supported upon said hook, said board being provided with a plurality of clamps and a rotatable device supporting a section of said track and adapted to rotate said bracket and the end of the board engaged therewith into a position adjacent to a stretching machine.

5. A leather stretcher comprising a stretching device, a stationary frame adjacent thereto but independent thereof, a portion of said frame being rotatable, and provided with a bracket supporting a section of track, and a plurality of rollers, and a board adapted to be movably engaged upon said track section and supported upon said rollers.

1,169,974. TRANSMISSION-LOCK. ROY E. LEWIS and BERT F. GIBBS, San Francisco, Cal. Filed Oct. 25, 1915. Serial No. 57,779. (Cl. 70—90.)

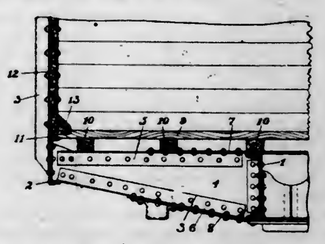
1. A lever having a globular fulcrum, and a socket within which the lever is universally turnable, a casing inclosing the socket and having an annular shoulder, a cover cap fixed to and movable with the lever, said cap forming an open annular channel between it and the casing shoulder, and a ring adapted to fit said channel and prevent movement of the lever.

2. A casing having a globular socket at the top, and an annular shoulder surrounding the socket, a lever extending into the casing and having a globular fulcrum turnable in the socket, and a cover cap fixed to the lever above the fulcrum and forming with the casing shoulder an open channel, a ring composed of two halves hinged together and capable of fitting into and closing said channel, said



ring having perforated lugs opposite the binge and adapted to receive a lock.

1,169,975. FLOOR CONSTRUCTION FOR CARS. CHARLES A. LINDSTRÖM, Pittsburgh, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 24, 1914. Serial No. 820,557. (Cl. 105—192.)



1. In a railway-car, a wooden side wall and filling strip in combination with flooring boards having rabbeted ends adapted to receive the side wall and filling strip.

2. In a railway car, a wooden side wall and filling strip in combination with flooring boards having rabbeted ends adapted to receive the side wall and filling strip, said filling strip having an inclined upper surface.

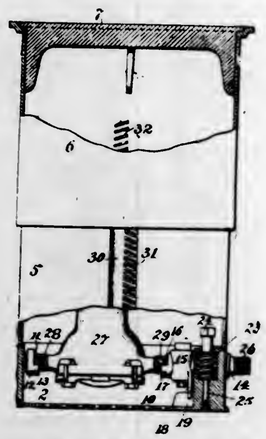
3. In a railway car, the combination of center sills, side sills, transverse members, stringers, wooden side walls, flooring boards and filling strips, said flooring boards having rabbeted ends adapted to receive the wooden side walls and filling strips.

4. In a railway car, the combination of center sills, side sills, transverse members, flooring stringers extending from end to end of the car, flooring boards having rabbeted ends secured to said stringers, and wooden sides and filling strips adapted to be secured in said rabbeted ends.

1,169,976 METER-BOX. HERBERT M. LOFTON, Chattanooga, Tenn. Filed Nov. 2, 1910. Serial No. 590,274. (Cl. 137—13.)

1. In a meter box, a base part having an upwardly extending lower tubular body part of cylindrical cross section, combined with an upper tubular body part, one of said body parts having its face formed with a vertical recess of substantially uniform depth and filled to approximately one-half of its width with a plurality of inclined teeth and intervening inclined spaces also of uniform depth, said spaces abruptly closed at one end, and

the other of said body parts having inclined teeth of approximately the width of the intervening spaces and detachably arranged therein and engaging the teeth of the recess, whereby the upper tubular body part may be adjusted upon the lower tubular body part and the weight of the former will maintain the teeth in locked engagement.



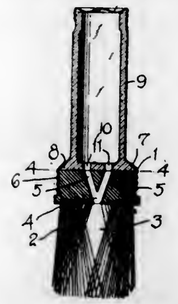
2. In a meter box, a base part having an upwardly extending lower tubular body part of cylindrical cross section, combined with an upper tubular body part also of cylindrical cross section and sliding upon the lower part, one of said parts having a narrow vertical recess facing the other part, said tubular parts forming a snugly fitting adjustable telescopic joint and respectively having inwardly and outwardly directed inclined engaging teeth, the teeth on one part being arranged in the recessed portion thereof and partly filling the width of the same and the spaces between them closed at one end by the side wall of the groove, and in which the inclined teeth of one part engaged the inclined teeth of the other part and fitting the inclined grooves and abutting against the end wall thereof.

3. In a meter box, a base part having an upwardly extending lower tubular body part of cylindrical cross section provided with a vertical grooved portion, combined with an upper tubular body part also of cylindrical cross section and fitting closely over the grooved portion, said tubular parts forming a relatively close fitting telescopic joint and having respectively inwardly and outwardly directed narrow teeth the teeth of the lower tubular part being of a width to partly fill the width of the groove and wholly shielded therein, and the teeth of the upper tubular part being of a width to slide in the toothless portion of the groove and be brought into engagement with the first mentioned teeth by rotating the upper tubular body part relatively to the lower tubular body part.

4. In a meter box, a base part having an upwardly extending lower tubular body part, combined with an upper tubular body part, said tubular parts forming a snugly fitting telescopic joint and having respectively narrow inwardly and outwardly directed teeth by which they are adjustably secured together by the inwardly directed teeth upon one of the parts engaging the outwardly directed teeth upon the other part and said lower tubular body part having a vertical grooved portion in which the teeth are arranged and for a portion only of the width.

1,169,977. FOUNTAIN-BRUSH. WILLIAM EMIL LUCHTENBERG, New York, N. Y. Filed Mar. 25, 1915. Serial No. 16,969. (Cl. 15—49.)

A device of the character described comprising a head provided with bristles, said bristles being so disposed as to afford a cavity, adjacent the head, said head having a port disposed therethrough in communication with the cavity afforded by the bristles, said port including branches to afford a plurality of entrance openings, a member in threaded engagement with the periphery of the head and provided with an inturned annular flange overlying the inner face of the head, a container provided with an outstanding annular flange adapted to underlie



the flange of the member and capable of axial rotation independently of the head, said container having its inner end closed and provided with ports adapted to be brought in register with the branches of the port in the head, the opposite end of the container being open, and a resilient cap removably arranged over the open end of the container.

1,169,978. COLLAPSIBLE WASHBASIN. FRED A. LYON, Bley, Nev. Filed Mar. 25, 1915. Serial No. 16,951. (Cl. 150—49.)



1. A basin comprising a fabric body portion, hollow ring members at the upper and lower edges of said body portion, brace rods formed in sections and hinged together, pivot heads in the ring members to which the ends of said brace rods are secured, the upper edge of said body portion being secured to the upper ring member, and means upon the lower edge of said body portion for detachably securing the same to the lower ring member.

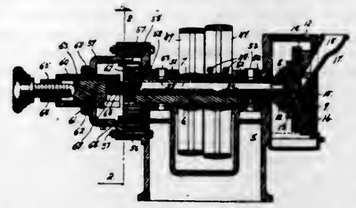
2. A basin comprising a fabric body portion, hollow ring members at the upper and lower edges of said body portion, means to secure the ends of the ring members together and hold the same in circular formation, pivot heads within said hollow ring members, said ring members having slots adjacent to the pivot heads, and a plurality of brace rods having their ends attached to said pivot heads and extending through said slots, said brace rods being formed in hinged sections.

1,169,979. GEARING. EDWARD F. MCCOOL, Victor, Colo., assignor to The McCool Mfg. & Trading Co., Victor, Colo., a Corporation of Colorado. Original application filed Sept. 13, 1911, Serial No. 649,209. Divided and this application filed Apr. 4, 1914. Serial No. 829,668. (Cl. 74—34.)

1. In a grinding mill, the combination with a hollow shaft, an operating shaft eccentrically mounted therein and means for transmitting rotary motion from one shaft to the other shaft on its own axis, comprising a crank arm fast on one shaft and carrying a gear, a surrounding interiorly cogged gear with which the first named gear meshes, and a third gear fast on the operating shaft and with which the gear carried by the crank arm also meshes.

2. The combination of a hollow shaft, an operating shaft eccentrically mounted therein and extending longitudinally thereof, the hollow shaft being mounted to

rotate and having a crank arm, a gear journaled on the crank arm, an interiorly cogged stationary gear with



which the gear carried by the crank arm meshes, and a third gear fast on the operating shaft and with which the crank arm gear also meshes.

1,169,980. EXHAUST-PUMP FOR MILKING-MACHINES. KENNETH K. MCLEOD, St. Paul, Minn. Filed Jan. 4, 1915. Serial No. 403. (Cl. 31—98.)



1. A suction pump for milking machines comprising a cylinder, a piston in said cylinder operative to compress air in one direction of movement and exhaust air in the other direction of movement within said cylinder, and means for permitting the air within the cylinder below the piston to return to atmospheric pressure at the time of change of direction of each stroke.

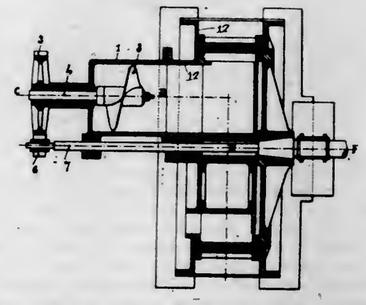
2. A suction pump for milking machines comprising a cylinder, a piston rod in said cylinder having a pair of valve seats thereon suitably spaced one from the other, and a piston on the piston rod movable between the valve seats and having an aperture adapted to be closed when said piston is in engagement with either of said valve seats, said aperture being open during the period of transit.

3. A suction pump for milking machines comprising a cylinder, a piston in said cylinder operative to compress air in one direction of movement and exhaust air in the other direction of movement within said cylinder, means for permitting the air within the cylinder below the piston to return to atmospheric pressure at the time of change of direction of each stroke so that the compression stroke and the exhaust stroke may be operative throughout the full length thereof, and means for admitting air into the cylinder during the exhaust stroke to limit the suction force thereof.

4. A suction pump for milking machines comprising a cylinder, a piston rod in said cylinder having a pair of valve seats thereon suitably spaced one from the other, said piston rod being tubular and opening through the end thereof into the cylinder, a piston on the piston rod movable between the valve seats and having an aperture adapted to be closed when said piston is in engagement with either of said valve seats, said aperture being open during the period of transit so that the compression stroke and the exhaust stroke of said piston will be operative through the full length thereof, and a valve on said piston rod for admitting air therethrough and into the cylinder below the piston during the exhaust stroke to limit the suction force of said exhaust stroke.

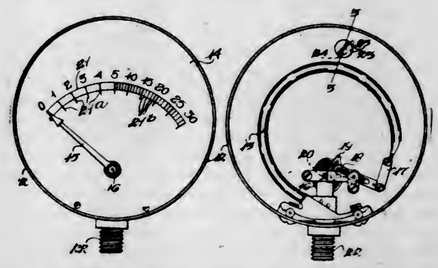
5. A suction pump for milking machines comprising a cylinder, a piston in said cylinder operative to compress air in one direction of movement and exhaust air in the other direction of movement within said cylinder, a hollow piston rod for said piston opening into the cylinder below the piston, a valve in said piston rod for admitting air into the cylinder during the exhaust stroke of the piston to limit the suction force of said stroke, a spring for controlling said valve, and means to regulate the force of the spring so as to control the degree of suction pressure at which the valve will operate.

1,169,981. FEED DEVICE FOR ROOT-CUTTERS PROVIDED WITH DRUMS. ALFRED MAGUIN, Charmes, near La Fère, France. Filed Apr. 24, 1913. Serial No. 763,421. (Cl. 146—11.)



A machine for slicing beetroots and the like consisting of a worm horizontally disposed, a shaft upon which said worm is mounted, a ratchet device by means of which the said worm is connected to the shaft so that the said worm may rotate in one direction only, a cylindrically shaped channel within which the said shaft and worm are mounted, a shaft upon which the cutters are mounted, said shaft being disposed eccentric with but parallel to the worm shaft and gear by which the movement of one shaft is transmitted to the other.

1,169,982. PRESSURE-GAGE. COLEMAN J. MANNING, Medford, Mass., assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 2, 1914. Serial No. 864,612. (Cl. 73—109.)

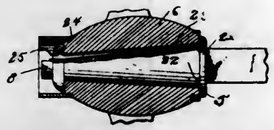


1. In a pressure gage comprising a case, a pointer, a Bourdon spring, and connections between the free end of the spring and the pointer for operating the latter, an abutment secured to the case in the path of movement of the spring and arranged to permit a limited unobstructed outward movement of the spring from its initial

position, and to thereafter arrest the outward movement of the inner portion of the spring, leaving only the outer portion free to operate the pointer.

2. A pressure gage comprising a case, a pointer, a member having one end fixed and the other end free to move under variations of pressure, the latter end being connected to the pointer to actuate it, a scale having its high-indicating graduations closer together than the low-indicating graduations, and means adjacent an intermediate portion of said member to limit the capability of movement of said member, under high pressure, to the portion beyond said limiting means.

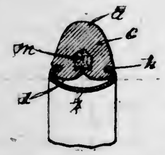
1,169,983. AXLE-LUBRICATING DEVICE. ROBERT D. MARSHALL, Sevierville, Tenn. Filed July 16, 1915. Serial No. 40,289. (Cl. 64—27.)



1. The combination with a spindle provided with a longitudinal groove, and a nut threaded on the spindle, formed with an opening to aline with said groove, of a lubricator member removably inserted through said opening to lie within the groove, said member including resilient arms normally divergent and means on one of said arms for locking engagement with the nut.

2. The combination with a spindle formed of a longitudinally extending groove and having a nut threaded on its end and provided with an opening adapted to aline with the groove, of a plunger member insertible through the opening to lie in the groove and comprising a resilient strip intermediately bent upon itself to form arms resiliently urged apart, and one of said arms being provided with a shoulder adapted to engage against the nut to prevent accidental retraction.

1,169,984. ELASTIC WHEEL-TIRE. MAX METTLER, Leipzig, Germany. Filed Feb. 12, 1915. Serial No. 7,693. (Cl. 152—1.)

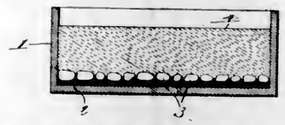


1. In combination, a circumferentially concave wheel rim provided with inwardly extending bead edges overhanging lateral body portions of the rim, and a tire having a solid thick tread and being divided by a circumferentially disposed cavity extending radially outwardly from the inner periphery of said tire toward said tread to form annular shanks, each shank having an annular bead cavity for engagement with said bead edges and said shanks being normally spread apart in spaced relation with their outer edges defining a greater dimension than the distance between said bead edges thereby causing the radially inward or lower ends of said shanks to extend radially outwardly from their normal positions and spaced relation with respect to the body of said rim when said shanks are sprung toward each other for insertion of said rim edges into said annular bead cavities, such movement of said shanks toward each other serving to arch the tread of said tire, substantially as described.

2. In combination, a wheel rim provided with inwardly extending bead edges, and a solid tire having a relatively thick tread and being centrally divided by a circumferentially disposed cavity opening to the interior periphery of said tire and dividing the latter into oppositely disposed shanks, the outer edges of said shanks having cavities for engagement with said bead edges, and said shanks being normally spaced apart from each other and defining a greater transverse dimension than the distance between said bead edges thereby causing the inner portions of said shanks to extend radially outwardly when said shanks are brought into abutting relation for insertion of said bead edges into said cavities, such compression of said shanks toward each other serving to arch said tread, substantially as described.

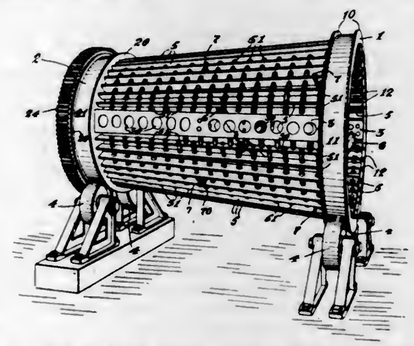
3. In combination a wheel rim provided with bead edges, a solid tire having a relatively thick tread and being divided by a cavity extending radially inwardly and circumferentially from the inner peripheries of said tire to form oppositely disposed shanks, said shanks having annular grooves for engagement with said bead edges, and a resilient filling disposed in said cavity between said shanks and normally acting to spread said shanks apart from each other to define a dimension greater than the distance between said bead edges, thereby causing compression of said filling when said shanks are brought into engagement with each other to spring the shanks into connection with said bead edges, substantially as described.

1,169,985. PROCESS OF CONSTRUCTING BUILDING-BLOCKS. ARTHUR M. MICKELSON, North Crystal Lake, Ill. Filed July 15, 1913. Serial No. 779,157. (Cl. 25—155.)



The process of manufacturing building blocks having a rough exterior face, which consists in partially embodying pieces of rock or equivalent material in a retentive adhesive and comparatively stiff base, of a material plastic when wet, tamping a concrete mixture thereupon, permitting the same to set and then washing off the said base.

1,169,986. ROTARY GRAVEL-SCREEN. HORACE MIDDAUGH, Seattle, Wash. Filed Sept. 20, 1915. Serial No. 51,536. (Cl. 83—56.)



1. A rotative gravel screen comprising a frame consisting of a ring at each end and beams fixedly connecting said rings, and screen bars of flat section having their width placed radially and their ends secured to the end rings, and pins projecting laterally from one side of each screen bar.

2. A rotative gravel screen comprising a frame consisting of end rings and longitudinal beams having their ends fixedly secured to the rings, screen bars extending between said rings and having pins projecting at one side toward the adjacent bar, one ring having sockets for the end-

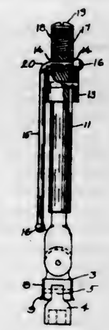
wise insertion of the bars and the other having corresponding lugs, alongside of which the ends of the screen bars may be placed, and bolts securing the end of each screen bar to its lug.

3. A rotative gravel screen comprising end rings and longitudinal bars of flat cross section connecting said rings and placed with their width radially of the screen, pins projecting laterally from one side of said bars along their central axes, and means for securing said bars to permit their being turned to reverse their edges.

4. A rotative gravel screen comprising end rings having exterior trackway surfaces, longitudinal beams fixedly connecting said rings, screen bars of flat section occupying radial planes and connecting said rings, pins projecting laterally from one side of said bars along their central axes, one end ring having sockets for the endwise reception of the screen bars, the other ring having inwardly projecting lugs, and bolts securing the bars to said lugs.

5. A rotative gravel screen comprising a frame consisting of a ring at each end and beams fixedly connecting said rings, and screen bars of flat section having their width placed radially and their ends secured to the end rings, pins projecting laterally from one side of each screen bar, and helically placed feed vanes secured within the screen bars.

1,169,987. SOCKET-WRENCH. EMILE R. MIOTTEL, Detroit, Mich., assignor of seventeen one-hundredths to Edward F. Hoffman, sixteen one-hundredths to Harry F. Hoffman, and sixteen one-hundredths to Alfred H. Hoffman. Filed Apr. 21, 1915. Serial No. 22,744. (Cl. 81—177.)



1. In a wrench, a shank, a socket support pivotally connected therewith, a socket having a pin secured thereto, the support being adapted to receive said pin providing a pivotal mounting for the socket at right angles to the pivotal mounting of the support, and spring retainers on the support adapted to engage said pin.

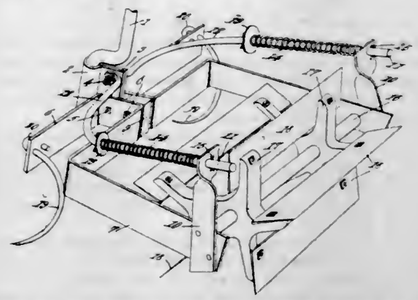
2. In a wrench, a shank having a bifurcated end, a bifurcated socket support having a tongue pivotally mounted therein, a socket having a tongue engaging between furcations of the support, a pin secured to said socket tongue, and spring retainers on the support adapted to engage the ends of the pin to detachably hold the socket in pivotal relation with the support.

3. A socket wrench comprising a shank having a bifurcated end, a bifurcated socket support pivotally mounted in the said bifurcated end, a socket having a tongue adapted to engage between furcations of the support, a pin projecting from each side of the tongue of the socket, the ends of the furcations of the support being grooved to receive said pin, and a pair of spring retainers on the support adapted to engage the pin and yieldably hold the socket in place.

4. A socket wrench comprising a shank having a bifurcated end, a bifurcated socket support pivotally mounted in the said bifurcated end, a socket having a tongue adapted to engage the furcations of the support, a pin projecting from each side of the tongue of the socket, the ends of the furcations of the support being grooved to receive the pin, and a pair of flat spring plates secured to the opposite sides of the support having apertures in alinement with the said groove adapted to engage the pin, said plates being curved at the free ends and the end of the pin being rounded whereby the socket may be readily attached or detached from the spring.

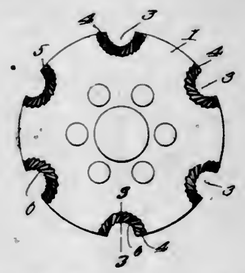
5. A socket wrench comprising a shank, a socket having a universal joint connection therewith, a tubular extension in telescopic relation with the shank, said extension being slotted upon opposite sides, a collar engaging about the extension and secured to the shank by a pin passing through said slots, and a turning handle mounted in the extension adapted to be folded parallel with the said extension.

1,169,988. STALK-CUTTER. DON A. MODRALL, Sweetwater, Tex. Filed Sept. 11, 1915. Serial No. 50,127. (Cl. 55—61.)



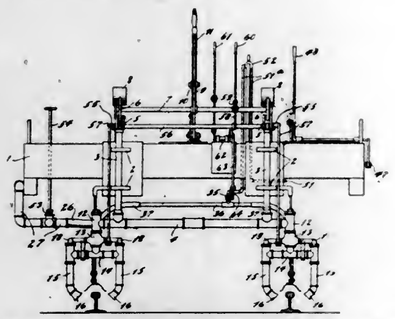
A stalk cutting attachment including a standard, a clip secured thereto and having a rearwardly extending wing, a frame pivotally connected to the wing and having rearwardly extending arms, a revoluble series of cutters carried by the frame, fingers upstanding from the arms, rods pivotally connected to the wing and above the frame and slidably mounted in the fingers, springs on the rods and bearing against the fingers to exert a constant rearward pressure thereagainst, thereby to hold the cutting elements pressed yieldingly against the surface of the ground, and stalk gathering devices connected to the front portion of the frame at the sides thereof.

1,169,989. GRIPPER-DISK FOR BINDERS. RICHARD H. MOORE, Wakita, Okla. Filed Nov. 17, 1914. Serial No. 872,604. (Cl. 56—83.)



A twine gripper for binders embodying a pair of parallel spaced disks secured together, the peripheries of the disks having coinciding curved notches, the outer sides of the disks being beveled around each notch, the bevels extending to both ends of the notches and extending from the outer sides to the inner sides of the disks, each bevel being provided from end to end with a series of grooves extending to the edges of the bevel, and said grooves being arranged obliquely.

1,169,990. TRACK-SPRAY APPARATUS. ANDREW J. NEAFIE, Mountain Lake, N. J. Filed Nov. 7, 1914. Serial No. 870,776. (Cl. 104—153.)



1. In an apparatus of the character described, the combination of a car adapted to be propelled over a railway track, a nozzle carried by the car and located to deliver its discharge against the side of a rail, and a guard protecting the tread of the rail.

2. In an apparatus of the character described, the combination of a car adapted to be propelled over a railway track, a nozzle carried by the car and located to deliver its discharge against the side of the rail, means for raising and lowering said nozzle, and a guard protecting the tread of the rail.

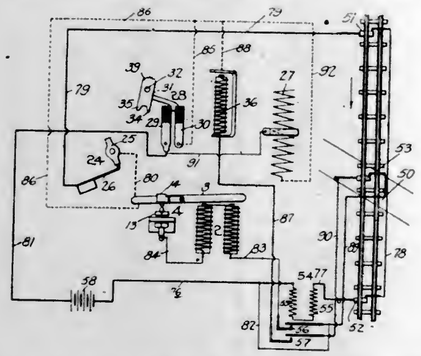
3. In an apparatus of the character described the combination of a car adapted to be propelled over a railway track, a nozzle carried by the car and located to deliver its discharge against the side of a rail, means for raising and lowering said nozzle, a guard for protecting the tread of the rail and means for raising and lowering said guard.

4. In an apparatus of the character described, the combination of a car adapted to be propelled over a railway track, a nozzle carried by the car and located to deliver its discharge against the side of a rail, means for raising and lowering said nozzle, a guard protecting the tread of the rail and means whereby the guard is raised after the nozzle is raised and is lowered in advance of the nozzle.

5. In an apparatus of the character described, the combination of a car adapted to be propelled over a railway track, a pair of nozzles carried by the car, and located to discharge on opposite sides of a rail.

[Claims 6 to 26 not printed in the Gazette.]

1,169,991. ELECTRIC SIGNALING SYSTEM. WILL C. NEAHR, Denver, Colo., assignor to The Protective Signal Manufacturing Company, a Corporation of Colorado. Filed Oct. 14, 1913. Serial No. 795,041. (Cl. 246—23.)



1. In an electric signalling system, a normally closed line circuit, a circuit breaker applied to a railroad track and adapted to open said circuit by action of a vehicle passing along said track, a normally open local circuit, an electric signaling instrument connected therein, a relay connected in said circuits so as to close the local circuit when the line circuit is opened, a normally closed switch in the line circuit, and mechanism operated by action of the signaling instrument for operating said switch to open the line circuit during a predetermined period.

2. In an electric signaling system, a line circuit, a circuit controlling instrument applied to a railroad track and adapted to reverse the normal condition of said circuit by the action of a vehicle passing along, a normally open local circuit, an electric signaling instrument connected therein, a relay adapted to close the local circuit when the normal condition of the line circuit is reversed by action of said device, a switch in the line circuit, and mechanism for operating said switch by action of said instrument to reverse the normal condition of the line circuit and thereby maintain the local circuit in closed condition during a determined period, independent of the said circuit-controlling device.

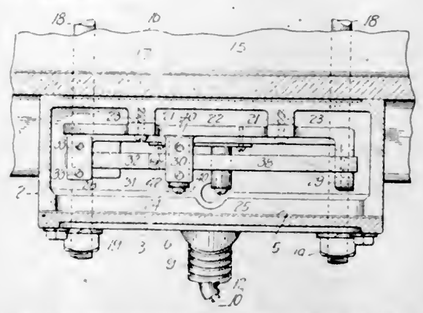
3. In an electric signaling system, a line circuit, a circuit controlling device applied to a railroad track and adapted to reverse the normal condition of said circuit by the action of a vehicle passing along said track, a normally open local circuit, an electric signaling instrument connected therein, a relay adapted to close the local circuit when the normal condition of the line circuit is reversed by action of said device, and circuit-controlling mechanism operated by action of said instrument to reverse the normal condition of the line circuit and thereby maintain the local circuit in closed condition, during a determinate period, independent of said circuit-controlling device.

4. In an electric signaling system, a line circuit, a circuit-controlling device applied to a railroad track adapted to reverse the normal condition of said circuit by action of a vehicle passing along said track, a normally open local circuit, an electric signaling instrument operatively connected therein, an auxiliary circuit, a circuit breaker applied to the railroad track and adapted to open the last mentioned circuit by the action of a vehicle passing along the said track, a relay normally opening the local and auxiliary circuits and adapted to close the same when the normal condition of the line circuit is reversed by action of the said circuit-controlling device, mechanism operated by action of said instrument to reverse the normal condition of the line circuit at another point, and thereby maintain the local and auxiliary circuits in closed condition during a determinate period, means capable of varying the signaling action of said instrument, and a circuit-controlling appliance rendering said means normally inactive by the flow of current through the auxiliary circuit and adapted to reverse the said normal condition of the said means when the said auxiliary circuit is opened by action of said circuit-breaker.

5. In an electric signaling system, a line circuit, a circuit controlling device applied to a railroad track and adapted to reverse the normal condition of said circuit by action of a vehicle passing along said track, a normally open local circuit, an electric signaling instrument operatively connected therein, an auxiliary circuit, a circuit breaker applied to a railroad track and adapted to open the last mentioned circuit by the action of a vehicle passing along said track, a relay normally opening the local and auxiliary circuits and adapted to close the same when the normal condition of the line circuit is reversed by action of the said circuit-controlling device, mechanism operated by action of said instrument to reverse the normal condition of the line circuit at another point, and thereby maintain the local and auxiliary circuits in closed condition during a determinate period, a shunt in the local circuit, a resistance in said shunt, a circuit-controlling appliance normally excluding said resistance from the path of the current, and means connected in the said auxiliary circuit for the operation of said appliance to include the resistance in the path of the current when the auxiliary circuit is opened by action of said circuit breaker.

[Claims 6 to 16 not printed in the Gazette.]

1,169,992. CIRCUIT-CONTROLLING INSTRUMENT. WILL C. NEAHR, Denver, Colo., assignor to The Protective Signal Manufacturing Company, a Corporation of Colorado. Filed May 11, 1914. Serial No. 837,870. (Cl. 246—35.)



1. In a circuit-controlling instrument, a spring fixed at one of its ends, and a poise secured at its opposite end, an insulated contact carried on said poise, and a resilient contact member supported separate from said spring to be engaged by said contact during movement of the same.

2. In a circuit-controlling instrument, a vibrative element including a conductive part, a leaf-spring mounted separate from said element to be engaged by said part during movement of the same, and a second leaf spring normally separated from the other, to be engaged thereby for conjunctive movement.

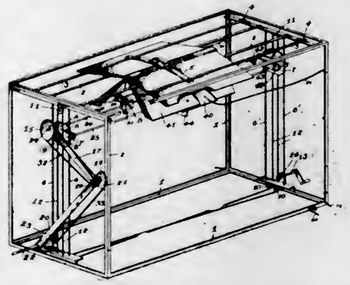
3. In a circuit controlling instrument, a vibrative element including a conductive part, a leaf spring disposed to be engaged by said part, and a second leaf spring of less resiliency, normally separated from the other, to be engaged thereby for conjunctive movement.

4. In a circuit controlling instrument, a vibrative element including a conductive part, a pair of leaf springs secured at one of their ends, and separated at their opposite ends, the said springs being disposed to engage each other for conjunction movement and so that one is engaged by said conductive part.

5. In a circuit-controlling instrument, a vibrative element including a conductive part, a pair of leaf springs of different degrees of resiliency, secured at one of their ends, and separated at their opposite ends, the said springs being disposed to engage each other for conjunctive movement and so that one is engaged by said conductive part.

[Claims 6 to 17 not printed in the Gazette.]

1,169,993. BOOK-FUMIGATOR. ROBERT OLDHAM, Salt Lake City, Utah. Filed June 2, 1915. Serial No. 31,772. (Cl. 167—3.)



1. A book fumigator comprising a closed receptacle; clamps to hold the back of a book in a plane, with the leaves depending; a pair of metal plates on which said depending leaves may rest and give the book an A-shape; friction members to engage one of the leaves resting on one of said plates and shift the free edge thereof to a vertical position; leaf levers to engage said partially turned leaf and push it beyond the other metal plate; means to rotate said friction members and said leaf levers around their respective axes; and means in said receptacle to disinfect said leaves during the turning operation.

2. A book fumigator comprising a closed receptcle filled with a disinfecting gas; means to hold a book with its back in a plane, and the leaves depending; a pair of opposed metal plates on which said leaves rest to partially open the book; rotatable friction members to engage an individual leaf resting on one of said plates and shift it to a vertical position; and means to engage said partially turned leaf and push the free edge thereof beyond the other metal plate.

3. A book fumigator comprising a closed receptacle filled with a disinfecting gas; means to hold a book with its back in a plane and the leaves depending; a pair of opposed metal plates on which said leaves rest to partially open the book; rotatable friction members to engage an individual leaf resting on one of said plates and shift it to a vertical position; and means to engage said partially turned leaf and push the free edge thereof beyond the other metal plate, said means consisting of rotatable feather springs and rotatable leaf levers.

4. A book fumigator comprising a closed receptacle within which a disinfecting gas may be generated; means to hold a book partially open in the upper part of said receptacle, said means consisting of flat bars to clamp the back of the book and a pair of opposed metal plates; means to shift the leaves, one at a time, which rest on one of said metal plates so that they will rest on the other of said plates, said means consisting of friction members and leaf levers; and power driven shafts rotatable in either direction to move said friction members and leaf levers in order that said levers may be shifted to the right or to the left.

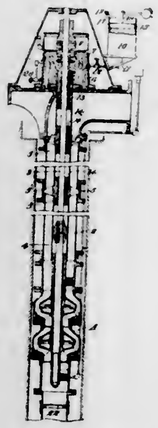
5. A book fumigator comprising a closed receptacle within which a disinfecting gas may be generated; means to hold a back partially open in the upper part of said receptacle, said means consisting of flat bars to clamp the back of the book and a pair of opposed metal plates; means to shift the leaves one at a time which rest on one of said metal plates so that they will rest on the other of said plates, said means consisting of friction members and leaf levers; and power driven shafts rotatable in either direction to move said friction members and leaf levers in order that said leaves may be shifted to the right or to the left; and means to automatically change the direction in which said shafts are rotated, said means consisting of a contact weight secured in a false back adjacent the back of said book; and electric wires leading from said contact weight and said receptacle to a source of electric energy by which an electric circuit is completed when the last leaf is shifted from between said metal plate on either side and the contact weight adjacent.

1,169,994. DEEP-WELL-PUMP-OILING SYSTEM. ALBERT C. PAULSMEIER, Alameda, Cal., assignor to Byron Jackson Iron Works, San Francisco, Cal., a Corporation of California. Filed May 12, 1914. Serial No. 838,105. (Cl. 253—199.)

1. In a centrifugal pump, the combination with the shaft, of a tube inclosing the same, an inclosed oil receptacle, shaft bearings in the tube, the uppermost of said bearings projecting into the receptacle and having an overflow duct to bring the tube and receptacle into communication, and the other bearings in the tube having ducts through which oil may pass, and means for maintaining at will an oil pressure in the receptacle and tube and throughout the length of the latter.

2. In a centrifugal pump, the combination with a shaft, of a tube inclosing same, a discharge pipe connected with the pump surrounding said tube, a check valve on the suction end of the pump to maintain a constant head of water in the discharge pipe, and means for maintaining an oil pressure in the shaft tube sufficient to exclude the entry of well water therein.

3. In combination with a centrifugal pump and its shaft, a member surrounding said shaft, a discharge pipe connected with the pump and surrounding said member, means adjacent the suction end of the pump to maintain a constant head of water in the discharge pipe, and means for maintaining an oil pressure in the member sufficient to exclude the entry of well water therein.

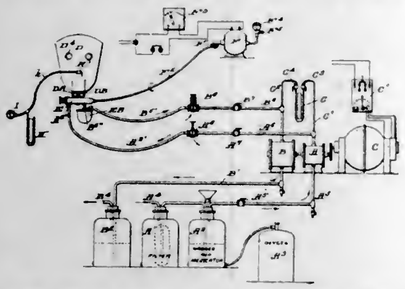


4. In combination with a centrifugal pump having an increased line shaft, a sealed oil receptacle into which the shaft extends and automatic means for maintaining the oil in said receptacle and throughout the length of the shaft casing at a predetermined constant pressure sufficient to exclude entry of well water into the shaft casing.

5. In combination with a centrifugal pump having an increased line shaft, a sealed oil receptacle into which the shaft extends, automatic means for maintaining the oil in said receptacle and throughout the length of the shaft casing at a predetermined constant pressure sufficient to exclude entry of well water into the shaft casing, and means for enabling any water which may enter the receptacle to be drained therefrom.

[Claim 6 not printed in the Gazette.]

1,169,995. METHOD OF PRODUCING ARTIFICIAL RESPIRATION. ROSCOE S. PRINDLE, New York, N. Y. Filed Feb. 10, 1909. Serial No. 477,043. (Cl. 128—13.)

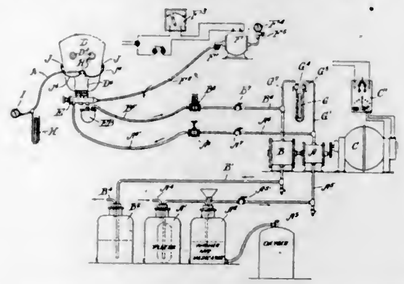


1. The method of producing artificial respiration which consists in periodically inflating the lungs of the patient with suitable aerating medium and alternately deflating the lungs, both in substantial conformity with the periodicity, cadences, volumes and pressures of the patient's normal breathing, and from time to time varying the several factors, to expedite the ejection of deleterious gases and substances.

2. The method of producing artificial respiration which consists in alternately inflating the lungs of the patient with an aerating medium under pressure and in shorter alternate periods forcibly withdrawing said medium from the lungs and thereby withdrawing fluids therefrom.

3. The method of producing artificial respiration which consists in periodically inflating the lungs of the patient with a suitable aerating medium and alternately deflating the lungs; first in substantial conformity with the periodicity, cadences, volumes and pressures of the patient's normal breathing, and gradually increasing the intensity of the several factors to expedite the ejection of deleterious gases and substances.

1,169,996. APPARATUS FOR PRODUCING ARTIFICIAL RESPIRATION. ROSCOE S. PRINDLE, New York, N. Y. Filed Feb. 13, 1909. Serial No. 477,484. (Cl. 128—13.)



1. In respiratory apparatus the combination of a mask adapted to fit tightly over the nose and mouth of a patient and provided with passages, air forcing and air withdrawing means, a longitudinally adjustable rotary valve, pipes connecting said valve, said mask and said air forcing and air withdrawing devices together, and means for constantly rotating said valve, whereby air will be forced into said mask and withdrawn therefrom at intervals, substantially as described.

2. In respiratory apparatus, the combination with a mask adapted to fit tightly over a patient's nose and mouth, means for forcing air into said mask and withdrawing it therefrom, a valve casing provided with ports, piping connecting said mask and ports, a longitudinally adjustable rotary member in said casing adapted to control said ports, and means for continuously rotating said member.

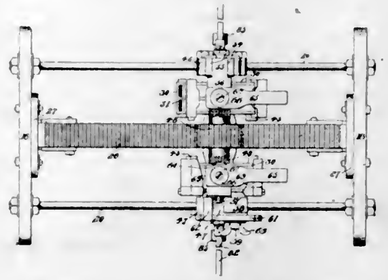
3. In respiratory apparatus, the combination with a mask adapted to fit tightly over a patient's nose and mouth, of means for forcing air into said mask and withdrawing it therefrom, a valve casing provided with ports, and pipes connecting said ports and said mask, a port in said casing communicating with the atmosphere, a valve member rotatably mounted in said valve casing, controlling the inlet and exit of air to and from the mask, means for continuously rotating said member and means for confining said member in one position to establish communication between the interior of the mask and the atmosphere.

4. In respiratory apparatus, the combination with a mask, of a valve associated with said mask comprising a valve casing, a valve member slidably and rotatably mounted in said casing, said casing being provided with a port communicating with the atmosphere, a spring normally holding said member to maintain said port closed, means for holding said member in a position to open said port and means for continuously rotating said member.

5. In respiratory apparatus, the combination with a mask adapted to fit over a patient's face, of an air compressor, a vacuum pump, piping connecting said compressor and said pump with said mask, and a continuously rotating valve for regulating the intervals of supply to and exhaust from said mask, and means for controlling the quantity of air supplied and exhausted at each rotation of the valve.

[Claims 6 to 19 not printed in the Gazette.]

1,169,997. SAW-FILING MACHINE. FRANK PYSZ, Taunton, Mass. Filed June 10, 1915. Serial No. 33,283. (Cl. 76—33.)



1. A saw filing machine including a supporting frame, a rack bar carried by the frame, independently operated pawl and ratchet devices slidably mounted on the frame at opposite sides of the rack bar, a gear wheel carried by the pawl and ratchet devices and in engagement with the rack bar, file supporting mechanism carried by the pawl and ratchet devices, and a file carried by the file supporting mechanism.

2. A saw filing machine including a frame, a rack bar carried by the frame, a cylinder including a centrally-positioned gear wheel in mesh with said rack bar, ratchet teeth formed on said cylinder laterally of the gear wheel, pawl inclosing housings and pawls inclosing the ratchet portions of the cylinder, one of said housings made operative to revolve the gear wheel in one direction, the other of said housings made operative to prevent retrograde movement of the gear wheel, and a file and supporting mechanism therefor carried by said ratchet mechanism.

3. A saw filing machine including a frame, independently operated pawl and ratchet devices mounted on the opposite sides of said frame, a file resiliently supported thereby, one of said pawl and ratchet devices adapted to move the file a predetermined distance and the other of said pawl and ratchet devices adapted to prevent retrograde movement.

4. A saw filing machine including a frame, a rack bar carried thereby, slide blocks associated with said frame, pawl inclosing housings mounted on said frame, a ratchet cylinder engaging said rack bar and extending into the housinga, pawls and supporting means therefor within said housings, said pawls adapted to engage the ratchet cylinder, means carried by one of said housings and associated with one of said sliding blocks to prevent relative movement of the housing and blocks associated therewith, the other of said housings adapted to move relative to the sliding blocks associated therewith, means for limiting the movement of the last-named housings, and a file carried by said slide blocks.

5. A saw filing machine comprising a frame having end standards, rods connecting the standards, a rack bar arranged parallel to the rods, a block slidably mounted on each rod, a cylinder including a centrally positioned gear wheel in mesh with the rack bar, and laterally positioned ratchet surfaces, housings mounted on the ratchet portions of the cylinder, spring-pressed pawls carried by the housings on opposite sides of the cylinder, means for causing selected pawls to engage the ratchet portions of the cylinder, means for holding one of said housings immovable relative to the adjacent sliding block, means to limit the movement of the other housing relative to the adjacent sliding block, and a file supported by said blocks.

[Claims 6 to 12 not printed in the Gazette.]

1,169,998. DENTIFRICE. FRANCIS JOSEPH RHODES, Malton, England. Filed Nov. 17, 1915. Serial No. 62,040. (Cl. 167—9.)

1. A dentifrice comprising a vehicle of appropriate dental composition and of neutral reaction combined with a sulfo-cyanid of an alkali metal in such proportions as to supply on use any deficiency in the amount of the sulfo-cyanid which should be present normally in the salivary fluids.

2. A dentifrice comprising a vehicle of appropriate dental composition and of neutral reaction combined with potassium sulfo-cyanid in such proportions as to supply on use any deficiency in the amount of the sulfo-cyanid which should be present normally in the salivary fluids.

1,169,999. BRACELET AND THE LIKE. DARIUS P. RICHARDS, St. Louis, Mo. Filed Apr. 17, 1915. Serial No. 22,180. (Cl. 63—3.)



1. The combination with a ribbon of suitable fabric, of a link having at one end a tongue extending through said fabric provided with a pintle which has free ends projecting in opposite directions from the end of said tongue, said link having at its opposite end a socket arranged for coöperation with a similar pintle, and a similar pintle adjustably secured to said ribbon.

2. An article of the kind described comprising a ribbon of suitable fabric, similar links detachably hinged together, each link having a tongue at one end and a pintle on said tongue, and having a socket at the other end, the pintle of one link being pivotally engaged with the socket of the next adjacent link, and the socket being formed of longitudinal extensions of the body portion and the rebent ends of said extensions being spaced from the body portion of the link a distance equal to the narrowest thickness of said tongue, and a special link having a slot for the ribbon and having also a tongue and pintle like those of the first mentioned links, said pintle of the last mentioned link engaging the socket of one endmost of said first mentioned links, and the pintle of the other endmost of said first mentioned links being passed through and engaging the fabric.

3. An article of the kind described comprising a ribbon of suitable fabric, similar links detachably hinged together and each having a pintle socket at one end and a tongue at the opposite end having a pintle adapted to coöperate with the socket of the adjacent link, one endmost link having its tongue extending through the fabric whereby its pintle serves to detachably secure the link to the ribbon, and a link adjustably secured to said ribbon and having a neck and pintle adapted for detachable engagement with the socket of said endmost standard link.

4. A link for bracelets and the like comprising a body portion having a slot for a ribbon and a T-shaped extension at one end comprising a projecting neck carrying a pintle adapted for detachable engagement with the socket of another link.

1,170,000. INSULATING-ENAMEL. FRANK A. ROBINSON, Auburn, N. Y., assignor to David W. Armistead, Aurora, N. Y. Filed Nov. 7, 1914. Serial No. 870,857. (Cl. 106—12.)

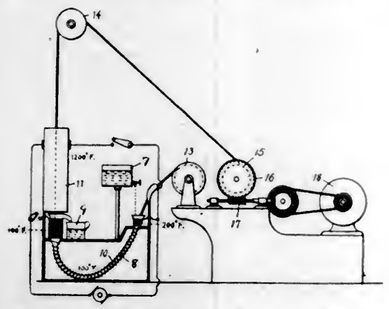
1. An elastic, flexible, insulating material consisting of a hardened preparation of the residuum of oil from a pinnipedic or cetaceous animal.

2. In connection with an electrical conductor, a tenacious, elastic, flexible, hard insulating enamel consisting of a preparation of the residuum of oil from a pinnipedic or cetaceous animal.

3. An insulating material consisting of a preparation of the residuum of oil from a pinnipedic or cetaceous animal, said preparation being fluid and capable of adhering to an electrical conductor and of being dried thereon to hard, flexible condition without carbonization at a temperature of 1200 degrees Fahrenheit.

4. An elastic, flexible, insulating material consisting

of a hardened preparation of the residuum of oil from a pinnipedic or cetaceous animal, capable of being subjected



to a heat of 1200 degrees Fahrenheit without carbonization or loss of the properties stated.

1,170,001. AUTOMATIC CENTRIFUGAL DISCHARGING-MACHINE. JOSEPH SAILER, Oxnard, Cal. Filed July 27, 1914. Serial No. 853,323. (Cl. 210—31.)



1. In a discharging device for centrifugals, a vertically disposed cylinder, a piston rod extending through the same and carrying a cutting and discharging shoe at its lower end, means for vertically moving said piston rod in either direction, means for partially rotating said piston rod during its movement, said last mentioned means including a disk through which the piston rod passes to limit its rotary movement.

2. In a discharging device for centrifugals, a centrifugal separator, having in combination therewith and attached thereto a vertically movable cutting and discharging shoe, said shoe adapted to be lowered into the centrifugal and automatically swung into operative position during its downward movement, and swung clear of the centrifugal when said shoe is moved vertically upward.

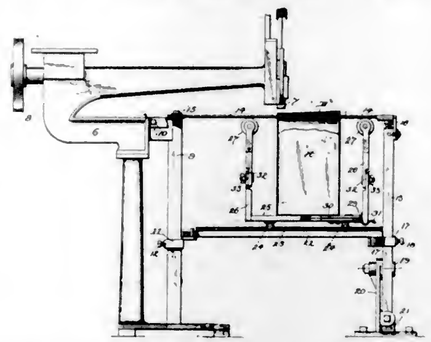
3. In a discharge device for centrifugals, a cylinder, a tubular piston rod therein projecting from the lower end of the cylinder and carrying a cutting shoe, a bar, square in cross section with a partial twist, the upper end secured to the cylinder, and a head in the piston with a square opening therein to receive the twisted bar, and by means of which the piston rod may be partially rotated during its vertical movements.

4. In a discharge device for centrifugals, a cylinder, a tubular piston rod therein, a bar, square in cross section, and partially twisted, secured at its upper end to the head of the cylinder and provided with means whereby said bar may be rotated and set at any desired point, and a squared opening in the head of the piston to receive the bar, and whereby said piston rod may be partially rotated during its vertical movement in either direction.

5. In a discharging device for centrifugals, a cylinder, a tubular piston rod therein, a disk having centrally a square aperture, a cap for securing said disk to the end of the piston rod, and a bar, square in cross section, and partially twisted with its upper end secured to the cylinder head and slidably operable through the square aperture of the disk.

[Claims 6 and 7 not printed in the Gazette.]

1,170,002. BOX-STITCHING MACHINE. ROBERT SCHLEICHER, THOMAS S. HAMILTON, and JOHN A. MOORE, Louisville, Ky., assignors to Mengel Box Company, Louisville, Ky., a Corporation of New Jersey. Filed Oct. 15, 1914. Serial No. 866,823. (Cl. 1—15.)



1. The combination with a stitching head of a bar anvil against which said head is adapted to act; means for supporting a package and guiding the same along said anvil; and an auxiliary support for said anvil movable with the supporting means for said package.

2. The combination with a stitching head, of a bar anvil hinged at one end; a fixed support for the free end of said anvil; a package supporting carriage; and a movable guide for said carriage adapted in one position to guide said carriage past said head while holding a package in proper relation to said anvil, and in another position to permit a stitched package to be withdrawn over the end of said anvil clear of said fixed support.

3. The combination with a stitching head, of a bar anvil hinged at one end; a fixed support for the free end of said anvil; a package supporting carriage; an auxiliary support for said anvil carried by said carriage; and a movable guide for said carriage adapted in one position to guide said carriage past said head while holding a package in proper relation to said anvil, and in another position to permit a stitched package to be withdrawn over the end of said anvil clear of said fixed support.

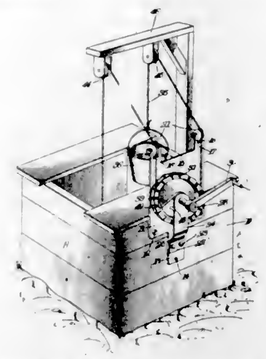
4. The combination with a stitching head of a bar anvil against which said head is adapted to act; a carriage adapted to carry a package to be stitched; supporting guides for said carriage arranged to support and guide it in the general direction of the length of said anvil; and an auxiliary support for said anvil carried by said carriage.

5. The combination with a stitching head of a bar anvil against which said head is adapted to act; a carriage adapted to carry a package to be stitched; supporting guides for said carriage arranged to support and guide it in the general direction of the length of said anvil; and a pair of auxiliary supports for said anvil mounted on said carriage at opposite ends thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,170,003. WINDLASS. WILLIAM JOHN SCHRODER and ROBERT LEWIS GILSTRAP, Walhalla, S. C. Filed June 15, 1914. Serial No. 845,260. (Cl. 254—176.)

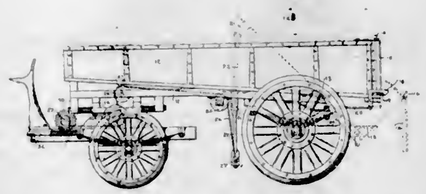
1. A portable windlass attachment adapted to be mounted on the vertical side wall of a well housing or on a similar support, said attachment comprising a substantially flat sheet metal plate having a part adapted to fit against said wall of the well housing, a bracket member having one end secured to said plate and having a portion spaced from said plate, a shaft journaled on the plate and bracket, a narrow wheel on said shaft and located in the space between the plate and bracket, said wheel having a rope receiving groove in its periphery, designed to receive only one strand of rope, and means for rotating said wheel, and a safety stop on said shaft capable of engaging said wheel.



2. A portable windlass attachment suitable for hoisting purposes comprising a plate provided with means whereby the attachment may be secured to the side wall of a well-curb or similar support, a supporting bracket secured to the outer side of said plate, a shaft journaled in said bracket and plate, a wheel carried by said shaft and disposed between a part of the bracket and said plate, means for rotating said shaft, and means pivoted on said shaft and swingable into engagement with said wheel to limit the rotation of the wheel.

3. A portable windlass attachment adapted to be mounted on the vertical side wall of a well housing or on a similar support, said attachment comprising a substantially flat sheet metal plate having a part adapted to fit against and to be secured to said wall of the well housing and a part adapted to project above the upper edge of said wall, journals in said projecting part, guiding pulleys mounted in said journals, a bracket having one end secured to said plate and having a portion disposed parallel to and spaced apart from the plate, a shaft rotatably mounted in said bracket and said plate, a wheel carried by said shaft, a device pivoted on the shaft and having a part which is adapted to engage the wheel and lock it against reversal, and means for rotating said shaft.

1,170,004. TRUCK. WILLIAM OSCAR SHADBOLT, New York, N. Y. Filed June 28, 1915. Serial No. 36,712. (Cl. 21—20.)



1. In a truck, the combination with running gear, a frame and a body pivotally secured to said frame; of means adapted to tilt said body, comprising a chain passing around a pulley on said frame, and around a pulley mounted on the front running gear, and means adapted to pull said chain.

2. In a truck, the combination with running gear, a frame, and a body pivotally secured on said frame; of means adapted to tilt said body, comprising devices extending downwardly therefrom, a chain having one end attached to said downwardly extending devices, passing around a pulley on said frame, around a pulley on the front running gear, and around a drum mounted on the front running gear.

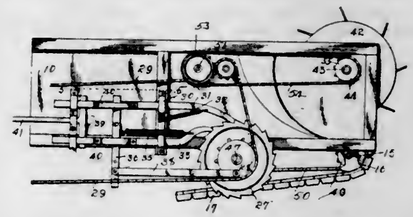
3. In a truck, the combination with running gear, a frame and a body pivotally secured on said frame; of means adapted to tilt said body, said means comprising a chain passing around a pulley on said frame, around a second pulley on said frame around a pulley mounted on the front running gear, and around a drum mounted on the front running gear.

4. In a truck, the combination with running gear, a frame and a body pivotally secured on said frame; of means adapted to tilt said body, comprising a chain passing around a pulley on said frame, around a second pulley on said frame, said second pulley being adapted to slide transversely of the wagon, around a pulley mounted on the front running gear, and around a drum mounted on the front running gear.

5. In a truck, the combination with running gear, a frame, and a body pivotally secured on said frame; of means adapted to tilt said body, said means comprising a chain passing around a pulley on said frame, around a second pulley on said frame, around a pulley mounted on the front running gear, said last named pulley being normally located partly beneath said second named pulley, said chain being then wound around a drum mounted on the front running gear.

[Claims 6 to 9 not printed in the Gazette.]

1,170,005. INTERMITTENT-GRIP DEVICE FOR MANURE-SPREADERS AND THE LIKE. ROBERT SHEDENHELM, Ladora, Iowa, assignor, by mesne assignments, of six-tenths to himself and four-tenths to H. S. Butler. Filed May 11, 1908. Serial No. 432,099. (Cl. 74—54.)



1. In a device of the class described, a shaft, a sprocket wheel loosely mounted on said shaft, a ratchet wheel fixed to said shaft, two spring actuated pawls in engagement with the ratchet wheel, a lever fulcrumed between the pawls, and having a limited sliding connection with each pawl, a pitman pivoted to the sprocket wheel and to said lever, and means for driving the sprocket wheel.

2. In a device of the class described, a shaft, a sprocket wheel loosely mounted on said shaft, a ratchet wheel fixed to said shaft, two spring actuated pawls in engagement with the ratchet wheel, a lever fulcrumed between the pawls, and having a limited sliding connection with each pawl, a pitman pivoted to the sprocket wheel and to said lever, a bar arranged to limit the movement of the spring actuated pawls away from the ratchet wheeel, and a lever for adjusting said bar.

3. In a device of the class described, a shaft, a ratchet wheel fixed to said shaft, two spring actuated pawls in engagement with the ratchet wheel, a lever fulcrumed between the pawls and having a limited sliding connection with each pawl, a pitman connected with said lever, and means for operating the pitman.

4. In a device of the class described, a shaft, a ratchet wheel fixed to said shaft, two spring actuated pawls in engagement with the ratchet wheel, a lever fulcrumed between the pawls and having a limited sliding connection with each pawl, a pitman connected with said lever, means

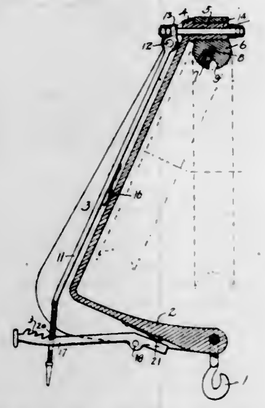
for operating the pitman and an adjustable stop device for limiting the movement of the pawl away from the ratchet wheel.

1,170,006. CABLE CONVEYING SYSTEM. EDWARD B. SHIELDS and LEWIS L. TYLER, Tacoma, Wash. Filed Apr. 7, 1914. Serial No. 830,105. (Cl. 104—133.)



In an apparatus of the class described, the combination with an endless supporting and transporting cable extending between two terminals, one of said terminals being fixed and the other being adapted to be moved; intermediate means between said terminals supporting one side only of said endless cable, said cable moving freely longitudinally over said supporting means and sagging between adjacent supports in accordance with the load thereon, the distance between the supports, and the strain in the cable; pulling means engaging and actuating said cable between the last said support and said movable terminal; means engaging the movable terminal and applying a force thereto opposed to the strain of said endless cable whereby its position is governed; and means for varying the force of said moving means whereby the force is increased as the strain in the cable is decreased and is decreased as the strain in the cable is increased.

1,170,007. CONVEYING-CABLE GRIP. EDWARD B. SHIELDS and LEWIS L. TYLER, Tacoma, Wash. Filed Sept. 23, 1914. Serial No. 863,136. (Cl. 104—87.)



1. In a device of the class described, the combination with a main jaw adapted to engage a cable, a gripping jaw movably mounted on said main jaw and adapted to grip the cable between the main and movable jaws; a load-bearing device; a horizontal transverse pivot on said load-bearing device and passing through said main jaw, whereby the load-bearing device is connected to the jaw, and the jaw is permitted vertical angular motion relative thereto; an operating lever mounted on the load-bearing device; and means passing coaxially through said pivot and connecting said operating lever with said gripping jaw whereby said jaw is actuated to clamp the cable.

2. In a device of the class described, the combination with a main jaw adapted to engage a cable; a gripping jaw pivoted to said main jaw and adapted to grip the cable between the main and movable jaws; a load-bearing device; an operating lever mounted on the load-bearing device; a horizontal transverse pivot on said load-bearing device and passing through said main jaw, whereby the load-bearing device is connected to the jaw, and the jaw is permitted vertical angular motion relative thereto; and a rod passing coaxially through said pivot and connecting said operating lever with said gripping jaw whereby said jaw is turned on its pivot to clamp the cable.

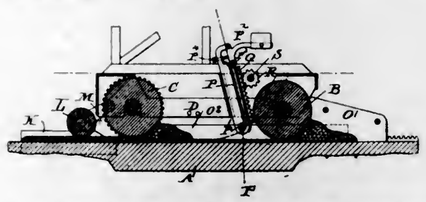
3. In a device of the class described, the combination with a pair of jaws pivoted together and adapted to engage and grip the cable between them; a load-bearing device; a horizontal transverse pivotal connection between said load-bearing device and said jaws, whereby the jaws are permitted a vertical angular motion relative thereto; and means for operating said jaws relatively to each other to grip the cable, said means also passing coaxially through said pivotal connection between the jaws and the load-bearing device whereby such vertical angular motion of the jaws together will not affect their gripping action.

4. In a device of the class described, the combination with a main jaw having an open cable groove in its under surface, said jaw having a cavity centrally positioned between its ends and traversing said cable groove; a jaw positioned within said cavity and having a gripping surface forming a movable part of the cable groove and adapted to clamp the cable between it and the main jaw; and a pivot pin lying parallel with and adjacent said cable groove and passing through both of said jaws whereby one is pivoted to the other.

5. In a device of the class described, the combination with a main jaw having an open cable groove in its under surface, said jaw having a cavity centrally positioned between its ends and traversing said cable groove; a jaw positioned within said cavity and having a gripping surface forming a movable part of the cable groove and adapted to clamp the cable between it and the main jaw; a pivot pin lying parallel with and adjacent said cable groove and passing through both of said jaws whereby the gripping jaw is pivoted to the main jaw; an upward extending lug formed on said gripping jaw above said pivot pin and passing through the cavity in the main jaw and extending above said main jaw; and means mounted on the main jaw and engaging said lug whereby said gripping jaw is actuated to clamp the cable.

[Claim 6 not printed in the Gazette.]

1,170,008. MACHINE FOR MAKING WIRE-GLASS. ARNO SHUMAN, Connellsville, Pa., assignor, by mesne assignments, to Pennsylvania Wire Glass Company, a Corporation of New Jersey. Filed Oct. 13, 1905. Serial No. 282,546. (Cl. 49—32.)



1. In a machine for rolling wire glass, the combination of the table, a carriage having forward and rear rolls, of which the rear roll travels at a higher elevation from the table than the forward roll, means near the head of the table for causing the forward roll to rise in its retraction toward its starting point in its advance and to descend to its normal position, a hopper mounted in the carriage behind the forward roll for guiding the wire webbing into the glass between the rolls, and means for adjusting the hopper on the carriage toward and from the table.

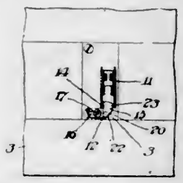
2. In a machine for rolling wire glass, the combination of the table, a carriage having forward and rear rolls, guide strips on the table for causing the rear roll to travel at a higher elevation from the table than the forward roll, means for causing the forward roll to rise as it approaches its starting point in the retraction of the carriage and to descend to its normal position in its advance, a hopper secured to the carriage at the rear of the forward roll for guiding the wire webbing to the glass between the rolls, means for adjusting the hopper on the carriage toward and from the table, and a finishing roll arranged at the rear of the carriage.

3. In a wire glass rolling machine, the combination of a table having side racks and cams, a carriage having a forward roll and a rear roll supported at different elevations from the table, gearing between the rear roll and the racks, rollers in connection with the forward roll for coöperating with the cams to lift said forward roll during a portion of its initial forward movement, and means carried by the carriage and located between the two rolls for feeding a wire mesh sheet downward between the rolls.

4. In a wire glass rolling machine, the combination of a table having side racks, a carriage having a forward and a rear roll, means for supporting these rolls adapted to cause the forward roll to travel at a less elevation from the table than the rear roll, means for feeding the wire to the glass rolled by the front roll and in advance of the rear roll, means for causing the front roll to be momentarily lifted during its initial forward movement and gearing between the rear roll and the racks whereby the carriage may be propelled when the forward roll is being tilted.

5. In a wire glass rolling machine, the combination of a table having side racks, a carriage having a forward and a rear roll, means for supporting the e rolls adapted to cause the forward roll to travel at a less elevation from the table than the rear roll, means for feeding the wire to the glass rolled by the front roll in advance of the rear roll, means for elevating the front roll when at its starting position, gearing between the rear roll and the racks, and means other than the racks for controlling the rotation of the front roll.

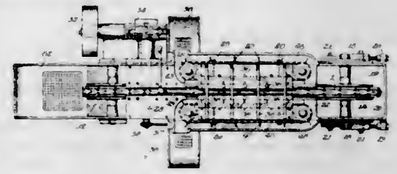
1,170,009. CLOTH-GUIDE FOR SEWING-MACHINES. CHARLES F. SMITH, Philadelphia, Pa., assignor to Hygienic Fleeced Underwear Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 10, 1914. Serial No. 866,018. (Cl. 112—9.)



In a sewing machine, a fabric supporting plate, a fabric guiding device removably mounted on the plate in advance of the needle and comprising a base plate, a vertical portion rising therefrom and forming a substantially straight edge guide adapted to direct the folded edge of the fabric toward the needle, and an overhanging portion adapted to enter between the body of the fabric and the previously turned-under edge of the hem, the free edge of the overhanging portion being inclined upwardly, and said overhanging portion being narrowed in a curved line from the rear to the front end of said guide.

1,170,010. AUTOMATIC METAL-SHAPING MACHINE. MILTON A. SMITH, Woonsocket, R. I., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed June 11, 1914. Serial No. 844,534. (Cl. 90—33.)

1. In a device of the class described in combination, a machine frame including, a bed plate provided with a longitudinal groove therein, transverse webs beneath said bed plate, guide strips arranged adjacent the upper portion of said groove, waste hoppers at each side of said machine frame, a finished work hopper at the front end of said machine frame; a work carrying chain adapted to travel in a groove in said bed plate, said work carrying chain comprising, links having beveled faces, racks on said links, work holders upon the upper faces of said links, shoulders on the sides of said links; grooved wheels adapted to carry said work carrying chain; spaced apart tracks adapted to carry the under run of said work chain, devices to adjust one of said wheels to take up slack in said work chain; a driving gear for operative engagement with the racks on the links of said chain to drive said chain; a tool holder adjacent the upper run of said chain; broaches supported by said tool holder; means to adjust said broaches toward said work chain; and scavenging devices beneath said broaches and including chains provided with flights thereon to convey waste to the said waste hoppers.



2. In a device of the class described in combination, a machine frame including a bed plate provided with a longitudinal groove therein, transverse webs beneath said bed plate, guide strips arranged adjacent the upper portion of said groove, waste hoppers at each side of said machine frame, a finished work hopper at the front end of said machine frame; a work carrying chain including links having beveled work supporting faces, racks opposite said work supporting faces, work holders on said links, shoulders on said links and adapted to coöperate with the guiding strips on the machine bed plate; grooved supporting wheels for said carrying chain, means to adjust said wheels, tracks adapted to coöperate with the shoulders on said links and supporting the lower run of said chain; a driving gear adapted to coöperate with the racks on said chain to drive said chain; a tool holder comprising a plate on each side of the upper run of said chain, arched webs connecting said plates, and adjusting screws for regulating the tool; a broach carried by said tool holder adjacent the upper run of said chain; and scavenging means to remove the waste from beneath said broach and carry same to the waste hoppers.

3. In a device of the class described in combination, a machine frame including a bed plate having a longitudinal groove therein, transverse webs beneath said bed plate, strips adjacent the upper edge of said grooves to guide a work chain, waste hoppers, a finished work hopper; a work carrying chain including links having beveled work supporting faces, work holders upon said supporting faces, shoulders on the sides of said links; flanged wheels vertically disposed for supporting said chain; adjustments for one of said wheels; tracks to support the lower run of said chain; means to drive said chain, said means including a worm wheel; a tool holder on each side of the upper run of said chain, said tool holder including arched webs crossing above said chain; adjusting screws for regulating a forming tool; forming tools carried by said tool holder and having work faces on each side of said work chain; scavenging means located beneath said tools, and means to lubricate the cutting edges of said tools.

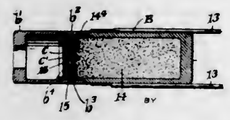
4. In a device of the class described in combination, a machine frame including a bed plate provided with a longitudinal groove therein, transverse strengthening webs beneath said bed plate, strips adjacent the upper edge of said groove for guiding a chain, a waste hopper, a finished work hopper; a work carrying chain including links having beveled faces; flanged wheels for carrying said chain; tracks for supporting the lower run of said chain; means to drive the said chain; a tool holder for supporting broaches on each side of the upper run of said chain; broaches having a plurality of cutting faces adja-

cent the upper run of said chain; means to remove the waste from beneath said broaches and deposit same in the waste hoppers, and means to lubricate the broaches.

5. In a device of the class described in combination, a machine frame including a bed plate having a longitudinal groove therein, transverse strengthening webs beneath said bed plate; a work carrying chain supported in said longitudinal groove, said chain including links having beveled work supporting faces, means to retain metallic plates upon said work supporting faces; wheels for carrying said chain; means to drive said chain; a tool holder on each side of said chain; and broaches having beveled cutting edges adjacent said chain; the cutting edges of said broaches having a double inclination, one of said inclinations being toward the work carrying chain, and the other inclination being opposed to the direction of travel of the chain to cause the action of said cutting edges to press the work against the beveled work supporting faces.

[Claims 6 to 21 not printed in the Gazette.]

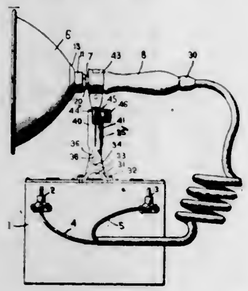
1,170,011. MEANS FOR FIRING AUTOMATICALLY SMUDGE-POTS IN ORCHARDS. ROBERT A. SMITH, Ridley Park, Pa., assignor to Precision Thermometer and Instrument Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 6, 1913. Serial No. 793,559. (Cl. 102—10.)



1. A cartridge packed with an igniting powder, the cartridge having a button of ignitible material and a gummy substance, a gasket located adjacent to the button having a pocket for holding loose powder and means spanning the gasket and in connection with contacts of said cartridge, substantially as and for the purposes described.

2. A cartridge containing an igniting material separated by a button of compressed ignitible material, a gasket having an opening forming a pocket for loose igniting material and said button of ignitible material separating the main body of ignitible material from the loose ignitible material in the pocket of said gasket, and means spanning said opening and adapted to be heated or consumed, substantially as and for the purposes described.

1,170,012. PORTABLE ELECTRIC SEARCH-LIGHT. ROLAND L. SMITH, Everett, Mass. Filed Sept. 18, 1914. Serial No. 862,406. (Cl. 240—8.5.)



1. A manually portable search light or signal light comprising an electric lamp, a reflector having a rearwardly extending stem, a handle on said reflector, a storage battery, a flexible conductor connecting said battery to said light, a supporting stand mounted upon said storage battery and means for detachably connecting said reflector to said stem.

2. The combination with a search-light comprising a reflector having a rearwardly extending stem, a handle thereon, a storage battery, a flexible conductor connecting said battery to said light through said handle, a supporting stand mounted upon said storage battery and means for detachably connecting said reflector to said stem.

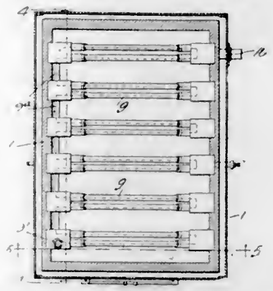
3. In combination with a search-light comprising a reflector having a rearwardly extending stem, a handle thereon, of a supporting stand, a member hinged upon said stand, a clamp having a stem rotatably mounted in said member, said clamp being adapted to engage said stem and means for detachably connecting the members of said clamp.

4. The combination with a search-light comprising a reflector having a rearwardly extending stem having a handle thereon, of a supporting stand, a member hinged thereon, means rotatably mounted in said hinged member adapted detachably to engage said stem, means for causing frictional engagement between said hinged member and said stand and means for causing frictional engagement between the hinged member and the rotatable member to prevent free movement of said members whereby the search-light may be rigidly positioned to cast its rays in any direction.

5. In combination with a search-light comprising a reflector having a rearwardly extending stem, a handle on said stem, a clamp detachably connected to said stem comprising hinged members adapted to embrace said stem and means for detachably securing the members of said clamp together whereby the search light may be detached from such clamp, a supporting stand, universal connections between said stand and said clamp, means for causing relative engagement of the members of said universal connection to maintain the search light in any desired position.

[Claims 6 and 7 not printed in the Gazette.]

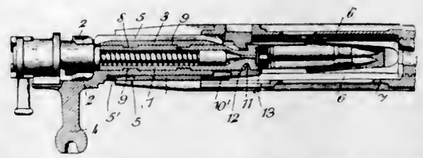
1,170,013. BOILER FOR PRODUCING SUPERHEATED STEAM. HARRY B. SPEAR, Seattle, Wash. Filed June 5, 1914. Serial No. 843,288. (Cl. 122—40.)



In a boiler, a casing, series of castings partially embedded in opposite walls of the casing to be supported thereby, a plurality of transverse pipe sections between and connected to each opposite pair of castings, other pipe sections connecting the castings and the castings having passages whereby the transverse pipe sections are connected in series, and an apertured water supply pipe extending from one of the upper castings through the pipe sections and castings.

1,170,014. CARTRIDGE-CASE EXTRACTOR FOR FIRE-ARMS. HANS STAMM, St. Gallen, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed May 27, 1915. Serial No. 30,774. (Cl. 42—25.)

1. In a straight-pull breech action for rifles, a rotatable breech-bolt provided with locking nibs at its rear end, a breech bolt actuating sleeve slidable longitudinally on the bolt, said bolt and sleeve engaging each other by corresponding helical parts, the sleeve being slipped from the front over the bolt, a cartridge case extractor mounted at the outside of a guide ledge of the sleeve and having a fixed longitudinal position relatively to the breech bolt but not rotating therewith, said extractor being guided along the bolt actuating sleeve by the sliding movement of the latter, the front end of the extractor forming a stop to prevent the sleeve from falling off when the breech action has been removed from the breech frame.



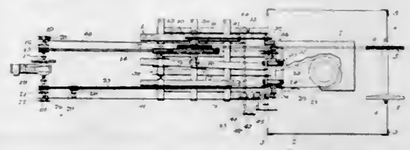
2. In a straight-pull breech action for rifles, a rotatable breech bolt provided with locking nibs, a breech bolt actuating sleeve slidable longitudinally on the said bolt and guided in the breech frame by means of lateral guide ledges, said bolt and sleeve engaging each other by corresponding helical parts, the sleeve being slipped from the front over the bolt, a cartridge case extractor slidable in a dove-tail longitudinal groove at the outside of one of the said lateral guide ledges of the sleeve and having a fixed longitudinal position relatively to the breech bolt, but not rotating therewith, said extractor being guided along the bolt actuating sleeve in said groove by the sliding movement of the sleeve.

3. In a straight-pull breech action for rifles, a rotatable breech bolt provided with locking nibs, a breech bolt actuating sleeve slidable longitudinally on said bolt and guided in the breech frame by means of lateral guide ledges, said bolt and sleeve engaging each other by means of corresponding helical parts, the sleeve being slipped from the front over the bolt, a cartridge case extractor slidable in a dove-tail longitudinal groove at the outside of one of said lateral guide ledges of the sleeve and engaging by means of a lug on its front end into an annular segmental groove in the breech bolt, said extractor having a fixed longitudinal position relatively to the breech bolt but not rotating therewith, and guided along the bolt actuating sleeve in the longitudinal groove by the sliding movement of the sleeve.

4. In a straight-pull breech action for rifles, a rotatable breech bolt provided with locking nibs, a breech bolt actuating sleeve slidable longitudinally on said bolt and guided in the breech frame by means of lateral guide ledges, said breech bolt and sleeve engaging each other by corresponding helical parts, the sleeve being slipped from the front over the bolt, a cartridge case extractor slidable in a longitudinal groove at the outside of one of said lateral guide ledges of the sleeve and engaging by means of a lug on its front end into an annular segmental groove in the breech bolt, said extractor having a fixed longitudinal position relatively to the breech bolt, but not rotating therewith, and being guided along the bolt actuating sleeve in the said longitudinal groove by the sliding movement of the sleeve, and means to limit the forward movement of the bolt actuating sleeve when the breech action has been removed from the breech frame.

5. In a straight-pull breech action of rifles, a rotatable breech bolt provided with locking nibs, a breech bolt actuating sleeve slidable longitudinally on said bolt and guided in the breech frame by means of lateral guide ledges, said bolt and sleeve engaging each other by corresponding helical parts, the sleeve being slipped from the front over the bolt, a cartridge case extractor slidable in a longitudinal groove at the outside of one of said lateral guide ledges of the sleeve and a lug on its front end engaging an annular segmental groove in the breech bolt, said extractor having a fixed longitudinal position relatively to the breech bolt, but not rotating therewith, and being guided along the bolt actuating sleeve in said longitudinal groove by the sliding movement of the sleeve, the front portion of the extractor carrying the lug serving as a stop for limiting the forward movement of the bolt actuating sleeve when the breech action has been removed from the breech frame.

1,170,015. COMBINATION DRILLING-RIG. ROSCOE W. STEPHENS, Los Angeles, Cal. Filed May 19, 1915. Serial No. 29,128. (Cl. 255—3.)



1. A combination drilling rig comprising a frame, a power shaft mounted at one end of the frame, an engine to drive said power shaft, sheaves, means on the power shaft to throw the sheaves into and out of operation, a bull wheel mounted at the opposite end of said frame, a crank shaft mounted on the frame between the bull wheel and power shaft and provided with a crank arm for connection to a walking beam to operate standard tools, two band wheels on said crank shaft, a rotary table between the bull wheel and crank shaft provided with a band wheel, a wire line rove around one of the sheaves, and one of the band wheels, a second wire line rove around the second band wheel and bull wheel, a third wire line rove around the second sheave and around the band wheel of the rotary table, draw works between the crank shaft and rotary table, and driving connections between the draw works and crank shaft.

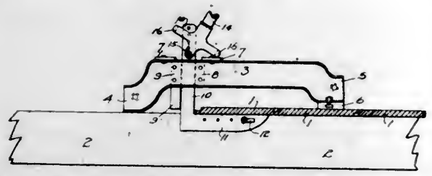
2. A combination drilling rig comprising a frame, a derrick at one end of the frame, a bull wheel mounted transversely on the frame at one side of the derrick, draw works mounted transversely on the frame at another side of the derrick diametrically opposite the bull wheel, a rotary table between the bull wheel and draw works, a power shaft mounted transversely at the other end of the frame, an engine to turn said power shaft, sheaves, means operative to throw either one of the sheaves into operative relation to the power shaft, a crank shaft mounted transversely on the frame between the draw works and power shaft, two wheels on the crank shaft, driving connections at one side of the frame between one of said wheels and the bull wheel, other driving connections at said side of the frame between the second wheel and one of the sheaves, and a wire line at the other side of the frame rove around the other sheave and the rotary table.

3. A combination drilling rig comprising a frame, a power shaft mounted at one end of the frame, an engine to drive said power shaft, sheaves, means on the power shaft to throw the sheaves into and out of operation, a bull wheel mounted at the opposite end of said frame, a crank shaft mounted on the frame between the bull wheel and power shaft and provided with a crank arm for connection to a walking beam to operate standard tools, two band wheels on said crank shaft, a rotary table between the bull wheel and crank shaft provided with a band wheel, a wire line rove around one of the sheaves and around one of the band wheels, a second wire line rove around the second band wheel and bull wheel, a third wire line rove around the second sheave and around the band wheel of the rotary table, an idler rotatively mounted near one side of the frame, one lead of said third wire line passing in a straight line from its sheave to the band wheel of the rotary table and the other lead of said third wire line passing in a straight line from its sheave to said idler and thence diagonally relative to the long axis of the frame from said idler to the band wheel of the rotary table, draw works between the crank shaft and rotary table, and driving connections between the draw works and crank shaft.

1,170,016. WRECKING-TOOL. JAMES E. STEVENSON, Puyallup, Wash. Filed Sept. 8, 1914. Serial No. 860,555. (Cl. 254—117.)

1. In a wrecking tool, the combination of a frame; of a pair of feet depending from its ends whereby it is raised above the board to be removed, one of said feet being shorter than the other; a shoe removably secured to the

shorter foot; a tool depending from the frame and engaging under the board to be removed; and an operating lever pivoted to the tool and having a fulcrum slidably engaging the frame and adapted to raise the tool.

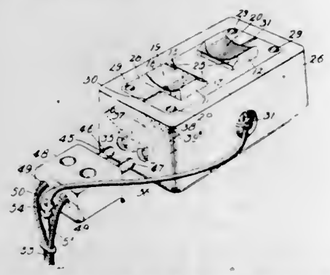


2. In a wrecking tool, the combination of a frame; of a pair of feet depending from its ends whereby it is raised above the board to be removed, one of said feet being shorter than the other; a shoe removably secured to the shorter foot; there being a guide passage formed in said frame; a tool mounted in said guide passage, and guided thereby, and depending from the frame and engaging under the board to be removed; and an operating lever pivoted to the tool and having a fulcrum slidably engaging the frame and adapted to raise the tool.

3. In a wrecking tool, the combination of a frame; a pair of feet depending from its ends whereby it is raised above the board to be removed, one of said feet being shorter than the other; a shoe removably secured to the shorter foot; a guide passage formed in said frame; a tool mounted in said guide passage, and guided thereby, and depending from the frame and engaging under the board to be removed; a stop mounted on said tool and adapted to engage the edge of the board to be removed to limit the position of said tool thereunder; and an operating lever pivoted to the tool and having a fulcrum slidably engaging the frame and adapted to raise the tool.

4. In a wrecking tool, the combination of a frame; a pair of feet depending from its ends whereby it is raised above the board to be removed, one of said feet being shorter than the other; a shoe removably secured to the shorter foot; a guide passage formed in said frame; a tool mounted in said guide passage, and guided thereby, and depending from the frame and engaging under the board to be removed; a stop mounted on said tool and adapted to engage the edge of the board to be removed to limit the position of said tool thereunder; a socket pivotally connected to said tool above said frame; a fulcrum arm extending from said socket and adapted to engage the frame; and an operating handle mounted in said socket and extending therefrom.

1,170,017. FAULT-LOCATOR FOR ELECTRIC CABLES. HUGH MONTGOMERY STOLLER, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 24, 1913. Serial No. 808,561. (Cl. 175—183.)



1. A device for exploring the field of electric cable conductors, comprising a coil, with a magnet core having in its pole face a depression transverse to and intersecting the axis of the coil and adapted to fit the surface of the cable.

2. A device for exploring the field of cable conductors, comprising a coil with a laminated magnet core having in its pole face a depression transverse to and intersecting the axis of the coil and adapted to fit the surface of the cable, the laminations of said magnet being in planes parallel to said axis and also to said depression.

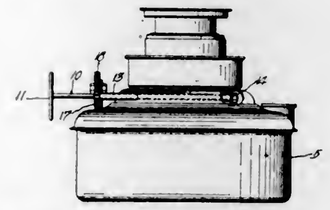
3. In a fault locator for electric cables, the combination with a current detecting instrument and a coil in circuit therewith, of a magnet core for said coil having in its pole face a depression transverse to and intersecting the axis of the coil and adapted to fit the surface of the cable.

4. In a fault locator for electric cables, the combination with a current detecting instrument and a coil in circuit therewith, of a laminated magnet core for said coil having in its pole face a depression transverse to and intersecting the axis of the coil and adapted to fit the surface of the cable, the laminations of said magnet being in planes parallel to said axis and also to said depression.

5. A device for exploring the field of cable conductors comprising a U-shaped magnet core and a winding on each leg thereof, said core having in its pole faces depressions parallel to the yoke thereof and adapted to fit the surface of the cable.

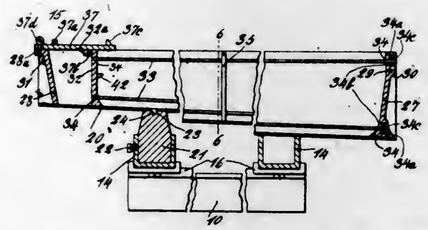
[Claims 6 to 11 not printed in the Gazette.]

1,170,018. WICK ADJUSTMENT FOR OIL-BURNERS. JACOB SWALLOW, Los Angeles, Cal. Filed Mar. 30, 1915 Serial No. 18,189. (Cl. 67—65.)



The combination with an oil stove tank formed with an upwardly extending top, and a vertically reciprocal perforated wick-tube extending through the top of said tank adapted to encircle a wick, of a pair of parallel tubular bearings projecting horizontally through the tank top, a pair of shafts in said bearings extending into the tank, pinions on each of said shafts engaging the wick-tube on diametrically opposite sides thereof, a spur pinion on each of the shafts adjacent the outer ends of the tubular bearings, a pair of intermeshing idler pinions meshing with said spur pinions, bearings for said idler pinions on the outer face of the tank top, and a hand wheel on one of said shafts.

1,170,019. POST-MOLDING MACHINE. WILLIAM THOM, Marion, Ind. Filed Apr. 3, 1915. Serial No. 18,923. (Cl. 25—121.)



1. A mold comprising a tapered form, cross beams beneath the ends of the form, the large end of the form seating on one of the cross beams, a block carried by the other one of the cross beams, on which block the small end of the form seats, said cross beam being channeled in cross sections, the block seating in the channel of the beam, means for fastening the block in the channel, and a support for the cross beams.

2. A mold comprising a tapered form, cross beams beneath the ends of the form, the large end of the form seating on one of the cross beams, a block carried by the other one of the cross beams, on which block the small end of the form seats, said end of the form having depending a bottom lug and the top of the block having an aperture in which the lug seats, and a support for the cross beams.

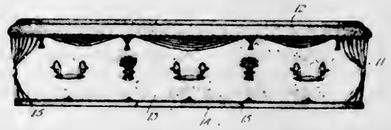
3. A mold comprising a bottom and side walls, end gates closing the ends of the mold, one of said end gates having means to support one end of a reinforcement, and a head plate in the mold adjacent to the other end gate and movable toward and from the same, said head plate having means to support the other end of the reinforcement, the supporting position of the head plate being when it is spaced from the adjacent end gate, the head plate being movable toward said end gate to release the reinforcement, and means for locking the head plate in supporting position.

4. A mold comprising a bottom and side walls, end gates closing the ends of the mold, one of said end gates having means to support one end of a reinforcement, and a head plate in the mold adjacent to the other end gate and movable toward and from the same, said head plate having means to support the other end of the reinforcement, and a removable support in the mold for the intermediate portion of the reinforcement, said support being detachable from the reinforcement and removable from the mold.

5. A mold comprising a bottom and side walls, end gates closing the ends of the mold, one of said end gates having apertures to support one end of a reinforcement, and a head plate in the mold adjacent to the other end gate and movable toward and from the same, said head plate having apertures to support the other end of the reinforcement, the aforesaid apertured end gate having recesses in its rear face into which the apertures open, and an elastic washer seating in said recesses, said washer being perforated to receive the reinforcement.

[Claim 6 not printed in the Gazette.]

1,170,020. BURIAL-CASKET. ELOISE M. THORNTON, Los Angeles, Cal. Filed July 6, 1915. Serial No. 38,354. (Cl. 27—3.)

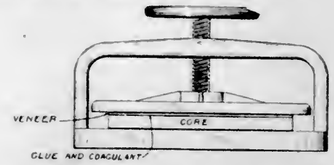


1. In a burial casket a wall member, a top secured on said wall member, a removable bottom detachably secured in the wall member, a shallow metal pan secured on said bottom in which the body may be placed, and a lining permanently secured to said pan and detachably secured to said wall member.

2. In a burial casket a wall member, a top secured on said wall member, a removable bottom detachably secured in the wall member, a shallow metal pan secured on said bottom in which the body may be placed, a lining permanenly secured to said pan and detachably secured to said wall member, a bottom fitting tightly in the wall member, a series of tubes secured in the wall member, and a series of spring actuated rods so located that they engage said tubes.

1,170,021. VENEERING PROCESS. FRANK V. TISCHER, Dayton, Ohio. Filed May 8, 1913. Serial No. 766,413. (Cl. 144—309.)

1. The process of veneering consisting of applying a coat of liquid adhesive substance to the core and permitting it to dry, after which the coated surface is covered with a solution containing a chemical adapted to coagulate said adhesive when in a liquid state; the veneer being then served with a coat of adhesive substance in liquid state, placed in contact with the core and subjected to pressure.



2. The process of veneering consisting of applying a coat of liquid adhesive substance to the core and permitting it to dry, after which the coated surface is covered with a coagulant; the veneer being then served with a coat of liquid adhesive substance, placed in contact with the core and subjected to pressure; the adhesive applied to the core being such that when it is in a sufficiently liquid state it is capable of amalgamating with the adhesive on the veneer, the adhesive applied to the veneer containing an agent capable of acting upon the dried adhesive on the core and rendering it sufficiently liquid to amalgamate with that on the veneer, the coagulant being such as is capable of coagulating the adhesive placed on the core when in a liquid state, and also that applied to the veneer.

3. The process of veneering consisting of applying a coat of glue to the core and permitting it to dry, after which said glue coated surface is given a coat of solution containing a coagulant and the veneer is given a coat of glue, the core and veneer being then united and subjected to pressure, the glue applied to the core being such that when in a liquid state it is capable of amalgamating with the glue on the veneer, the glue on the veneer containing an agent capable of restoring the dried glue to a sufficiently liquid state to permit of such amalgamation, the coagulant being capable of coagulating the resulting compound.

4. The process of water-proofing a glue joint consisting of compounding glue and a coagulant; the glue and coagulant being applied separately to the members to be joined and combined by bringing said members together, the coagulant being applied immediately before the parts are united.

5. The process of making a waterproof glue joint, consisting of applying a coating of glue in a liquid state to each member, the glue applied to one member being permitted to dry before glue is applied to the other member, the dried glue being served with a coating of coagulant before the members are placed in contact.

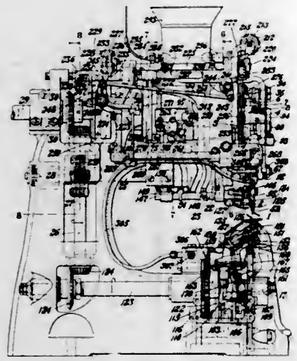
[Claim 6 not printed in the Gazette.]

1,170,022. SEWING-MACHINE. LAURENCE E. TOPHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 15, 1911. Serial No. 621,286. (Cl. 112—28.)

1. A wax thread lock stitch sewing machine, having, in combination, stitch forming devices including a hook needle, a continuously rotating loop taker, a take-up, an awl acting during each cycle of stitch forming operations to enter the work after the take-up has operated to set the stitch and leave the work as the needle enters the work, and continuously rotating cranks for actuating the needle, awl and take-up.

2. A wax thread lock stitch sewing machine, having, in combination, stitch forming devices including a hook needle, a continuously rotating loop taker, a take-up, an awl acting during each cycle of stitch forming operations to enter the work after the take-up has operated to set the stitch and leave the work as the needle enters the work, means for actuating the take-up, and continuously rotating cranks for actuating the needle and awl.

3. A wax thread lock stitch sewing machine, having, in combination, stitch forming devices including a hook needle, a continuously rotating loop taker, a take-up, an awl acting during each cycle of stitch forming operations to enter the work after the take-up has operated to set the stitch and leave the work as the needle enters the work, means for actuating the awl, and continuously rotating cranks for actuating the needle and take-up.

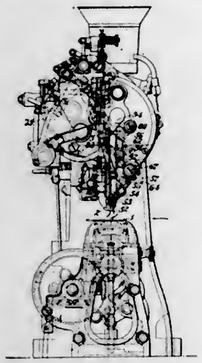


4. A wax thread lock stitch sewing machine, having, in combination, stitch forming devices including a hook needle, a continuously rotating loop taker, an awl acting during each cycle of stitch forming operations to enter the work after the take-up has operated to set the stitch and leave the work as the needle enters the work, means for actuating the needle, and continuously rotating cranks for actuating the awl and take-up.

5. A wax thread lock stitch sewing machine, having, in combination, stitch forming devices including a hook needle, a continuously rotating loop taker, a take-up, an awl acting during each cycle of stitch forming operations to enter the work after the take-up has operated to set the stitch and leave the work as the needle enters the work, means for actuating the take-up and awl, and a continuously rotating crank for actuating the needle.

[Claims 6 to 84 not printed in the Gazette.]

1,170,023. FEEDING MECHANISM FOR SEWING-MACHINES. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 15, 1911, Serial No. 621,286. Divided and this application filed May 10, 1915. Serial No. 27,078. (Cl. 112—28.)



1. A sewing machine, having in combination, stitch forming devices, a work feeding device, mechanism for imparting feed and return movements to said device comprising a longitudinally moving and oscillating bar, connections between said bar and the feeding device for directly transmitting the longitudinal and oscillating movements of the bar to the device, a supporting link hung from a fixed pivot at one end and pivotally connected at the other end to said bar to form a swinging fulcrum therefor, power driven means connected to and adapted to move said bar to turn it about its swinging fulcrum and to turn said link about its fixed pivot, and means for adjusting the position of the fixed pivot of the supporting link to vary the amount of movement imparted by said bar to the feeding device.

2. A sewing machine, having in combination, stitch forming devices, a work feeding device, mechanism for imparting feed and return movements to said device comprising a longitudinally moving and oscillating bar, connections between said bar and the feeding device for directly transmitting the longitudinal and oscillating movements of the bar to the device, a supporting link hung from a fixed pivot and pivotally connected to said bar to form a swinging fulcrum therefor, a cam connected to and adapted to turn said bar as a lever about its swinging fulcrum and to thrust said bar as a link in the direction of movement of the swinging fulcrum about the fixed pivot, and means for adjusting the position of the fixed pivot to vary the path of movement of the swinging fulcrum whereby the amount of movement imparted to the feed device may be varied.

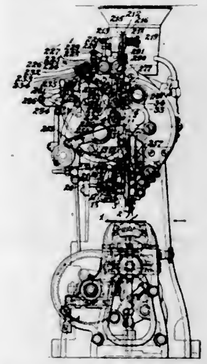
3. A sewing machine, having in combination, stitch forming devices, a work feeding device, mechanism for imparting feed and return movements to said device comprising a longitudinally moving and oscillating bar, connections between said bar and the feeding device for directly transmitting the longitudinal and oscillating movements of the bar to the device, a supporting link having one end connected to said bar to form a swinging fulcrum therefor, an arm pivotally mounted on the machine frame to which the other end of said link is connected, power driven means for moving said bar to actuate the feeding device, said means being arranged to move the swinging fulcrum of the bar into a position co-axial with the pivotal mounting of said arm at one extremity of the movement of the bar, and means for adjusting said arm in its pivotal mounting.

4. A sewing machine, having in combination, stitch forming devices, a work feeding device, mechanism for imparting feed and return movements to said feeding device comprising a longitudinally moving and oscillating bar, connections between the bar and feeding device for directly transmitting the longitudinal and oscillating movements of the bar to the device, an arm pivotally mounted on the machine frame, a link equal in length to the arm, one end of which is pivotally hung from the free end of the arm and the other end of which is connected to and forms a swinging fulcrum for the bar, power driven means for moving the bar to actuate the feeding device, said means being arranged to move the bar so that its swinging fulcrum is co-axial with the pivotal mounting of the arm at the completion of the work feeding movement, and means for adjusting said arm in its pivotal mounting whereby the arc of movement of the swinging fulcrum may be varied to vary the amount of movement imparted to the work feeding device.

5. A sewing machine, having in combination, stitch forming devices, a work feeding device, mechanism for imparting feed and return movements to said feeding device comprising a longitudinally moving and oscillating bar, connections between the bar and feeding device for directly transmitting the longitudinal and oscillating movements of the bar to the device, power driven means for moving the bar to actuate the feeding device, a supporting link, one end of which is connected to said bar and forms a swinging fulcrum therefor, a shaft journaled in the machine frame, an arm carried by said shaft from the free end of which the supporting link is hung, a second arm carried by said shaft, manually operable means carried upon the free end of the said second arm to turn the arm and lock it in adjusted position whereby the free end of the first arm from which the link is hung may be adjusted in position to vary the amount of movement of the feeding device.

[Claims 6 to 8 not printed in the Gazette.]

1,170,024. SEWING-MACHINE. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 15, 1911, Serial No. 621,286. Divided and this application filed May 10, 1915. Serial No. 27,079. (Cl. 112—20.)



1. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a thread tension device acting to put tension on the thread as the thread is drawn through said device, a thread lock, and means under the control of the operator for simultaneously releasing the tension on the thread, opening the thread lock and raising the presser foot to permit the removal and insertion of the work.

2. A sewing machine, having in combination, stitch forming devices, a thread tension device acting to put tension on the thread as the thread is drawn through said device, a thread lock, and means under the control of the operator for simultaneously releasing the tension on the thread and opening the thread lock to permit the thread to be freely drawn from the supply on the removal of the work.

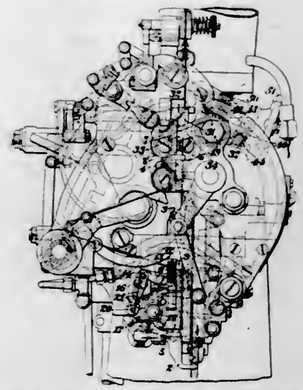
3. A sewing machine, having in combination, a needle, an awl, a take-up, a pull-off, a tension, a front thread lock between the take-up and pull-off, a rear thread lock between the pull-off and tension, the parts being so timed that the front thread lock is open, the rear thread lock is closed and the thread is held by the tension at the time when the needle and awl are out of the work, and manually operable means for opening the rear thread lock and releasing the tension so that the thread may be freely drawn from the supply when the work is removed from the machine.

4. A sewing machine, having in combination, a needle, an awl, a work support, a presser foot, a take-up, a pull-off, a tension, a front thread lock between the take-up and pull-off, a rear thread lock between the pull-off and tension, the parts being so timed that the front thread lock is open, the rear thread lock is closed and the thread is held by the tension when the needle and awl are out of the work, and manually operable means for simultaneously lifting the presser foot, opening the rear lock, and releasing the tension so that the work may be easily removed from the machine.

5. A sewing machine, having in combination, stitch forming devices, a thread tension device acting to put tension on the thread as the thread is drawn through said device, a thread lock, power driven means connected to and arranged to apply and release the tension and open and close the lock, and manually operable means connected to said power driven means and operating therethrough to independently release the tension and open the lock.

[Claims 6 to 15 not printed in the Gazette.]

1,170,025. PRESSER-FOOT MECHANISM. LAURENCE E. TOPHAM, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Apr. 15, 1911, Serial No. 621,286. Divided and this application filed May 10, 1915. Serial No. 27,080. (Cl. 112—28.)



1. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a slidably mounted presser bar, a pivotally mounted arm connected at its free end to the presser bar, a spring engaging the arm and acting to normally press the presser foot against the work, power driven means acting on the presser bar to raise the presser foot against the pressure exerted by the arm once during each cycle of stitch forming operation, and manually operable means acting on the arm to raise the presser foot to permit the removal and insertion of work.

2. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a presser foot bar, a pivotally mounted arm connected at its free end to the presser foot bar, a shaft in alinement with the pivot of the arm, a sleeve mounted on the shaft, a spring surrounding the shaft and having one end acting on the arm and the other end in engagement with the sleeve, and means for rotatably adjusting the sleeve to adjust the tension of the spring.

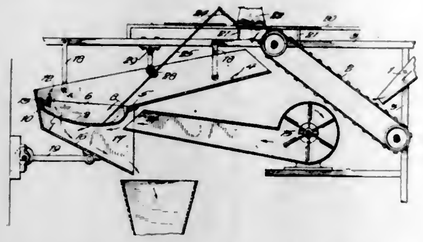
3. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a presser foot bar, a pivotally mounted arm connected at its free end to the presser bar, a spring acting on the arm to normally press the presser foot against the work, power driven means acting on the presser bar to raise the presser foot against the pressure exerted by the arm once during each cycle of stitch-forming operations, a shaft in alinement with the pivot of the arm, means for rocking the shaft to raise the presser foot to permit the removal and insertion of work, and a lost motion connection between the arm and the shaft permitting movement of the presser foot and arm without rocking the shaft.

4. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a presser foot bar, a pivotally mounted arm connected at its free end to the presser foot bar, a shaft in alinement with the pivot of the arm, a sleeve mounted on the shaft, a spring coiled about the shaft and having one end acting on the arm and the other end in engagement with the sleeve, means for rotatably adjusting the sleeve to adjust the tension of the spring, means for rocking the shaft to raise the presser foot to permit the removal and insertion of work, and a lost motion connection between the arm and the shaft permitting movement of the presser foot and arm without rocking the shaft.

5. A sewing machine, having in combination, stitch forming devices, a work support, a presser foot, a presser foot bar, a pivotally mounted arm connected at its free end to the presser foot bar, a shaft in alinement with the pivot of the arm, a connection between the arm and the shaft,

means for rocking the shaft to raise the presser foot to permit the removal and insertion of work, a sleeve mounted on the shaft, a spring coiled around the shaft and having one end acting on the arm and the other end in engagement with the sleeve, and means for rotatably adjusting the sleeve to adjust the tension of the spring.

1,170,026. MACHINE FOR CLEANING RAISINS. INMAN TUCKER, Yuba City, Cal. Filed Mar. 30, 1915. Serial No. 18,017. (Cl. 130—17.)



1. In a machine of the class described, the combination of a supply chute, a discharge chute, a cradle interposed between said chutes and having a relatively short foraminous forward wall, means for forcing an air draft against said wall, and means for agitating said chutes and said cradle.

2. In a machine of the class described, the combination of a supply chute, a discharge chute, a perforated cradle interposed between said chute and having a relatively short curved front wall and a relatively long curved bottom, means for forcing an air draft against said forward wall, and means for agitating said chutes and said perforated cradle, and reciprocatory agitating mechanism working within the cradle.

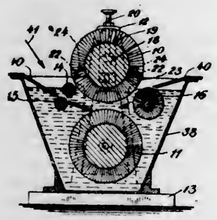
3. In a machine of the class described, the combination of a perforated cradle, means for supplying raisins to said cradle, means for forcing an air draft against said cradle, means for agitating the cradle, and combing mechanism working within the cradle.

4. In a machine of the class described, the combination of a foraminous cradle, means for supplying raisins to said cradle, means for forcing an air draft against said cradle, and combing mechanism working within the cradle.

5. In a machine of the class described, the combination with agitating means, of an inclosure having an inlet and outlet, a perforated cradle disposed in said inclosure between said inlet and outlet, and means for directing an air current through the perforations of the front wall of said cradle.

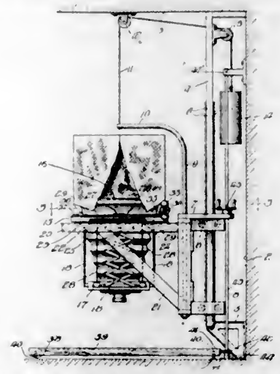
[Claims 6 to 10 not printed in the Gazette.]

1,170,027. HAT-BRUSHING MACHINE. ARTHUR B. WARING, New York, N. Y. Filed Mar. 25, 1913. Serial No. 756,648. (Cl. 26—4.)



1. A hat brushing machine comprising coöperating brush rolls tending to produce a movement of a hat body in one direction and embodying means for producing a transverse brushing action and means for holding said brush rolls against axial movement.

2. A hat brushing machine comprising coöperating brush rolls tending to move a hat body between them and embodying means for simultaneously producing a transverse movement of the hat body and means for holding said brush rolls against axial movement.



3. A hat brushing machine comprising feed rolls arranged to move a hat body at a predetermined rate of speed and a plurality of coöperating brush rolls in staggered relation, all operating at the same peripheral speed and arranged to act upon the hat body at the same time as the feed rolls and tending to produce a motion of the hat body at a different speed whereby the hat body is subjected to a brushing action.

4. A hat brushing machine comprising feed rolls arranged to move a hat body at a predetermined rate of speed and a plurality of coöperating brush rolls in staggered relation all operating at the same peripheral speed and arranged to act upon the hat body at the same time as the feed rolls and tending to produce a motion thereof at a faster speed whereby the hat body is subjected to a brushing action.

5. A hat brushing machine comprising coöperating brush rolls arranged to operate at the same peripheral speed and held against longitudinal movement and means for moving a hat body between the brush rolls at a speed which is different from the peripheral speed of the rolls, each brush roll having bands of bristles arranged to produce a transverse brushing action on the hat body.

[Claims 6 to 9 not printed in the Gazette.]

1,170,028. PHOTOGRAPHIC APPARATUS. JOHN E. WEBSTER, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,645. (Cl. 88—24.)

1. In a device of the character described, the combination of a vertically disposed camera comprising a frame, a lens board movable with respect thereto and connecting means therebetween, a shaft, resilient means between said shaft and said frame to counter-balance the weight of said lens board and connecting means, drums on said shaft, means disposed between said drums and said lens board and adapted when said shaft is rotated to draw said lens board upwardly, hand operating means secured to said shaft and means for automatically locking said shaft.

2. In a device of the character described, the combination of a vertically movable camera, an article supporting screen movably mounted beneath said camera, a slidably mounted hand wheel movable vertically with said camera and disposed to be always readily accessible by the operator when in focusing position, and connecting means between said hand wheel and said supporting screen, whereby the latter is moved horizontally relatively to the camera.

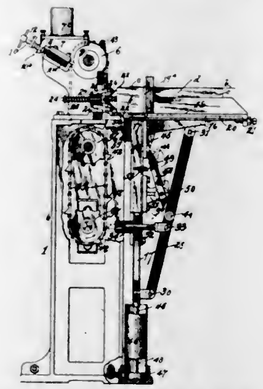
3. In a device of the character described, the combination of a vertical support, a supporting frame movably mounted thereon, a camera mounted on said frame, an article supporting screen disposed beneath the camera, and means, disposed to be always readily accessible by the operator when in focusing position, to move said camera and supporting screen horizontally in directions at right angles to each other.

4. In a device of the character described, the combination of a vertical support, a supporting frame mounted thereon and vertically movable with respect thereto, a counter-weight, flexible means connecting said supporting frame and said counter-weight, a vertically disposed camera slidably mounted to move horizontally on said supporting frame and comprising a frame, a lens board and connection means therebetween, means for moving said lens board toward said camera frame, and resilient means for counter-balancing the weight of said lens board and connecting means.

5. In a device of the character described, the combination of a vertical support, a supporting frame mounted thereon and vertically movable with respect thereto, a counter-weight, flexible means connecting said supporting frame and counter-weight, a vertically disposed camera slidably mounted to move horizontally on said supporting frame and comprising a frame, a lens board and connecting means therebetween, means for counter-balancing the weight of said lens board, means for moving said lens board toward said frame, and a hand operating device for actuating said moving means.

[Claims 6 to 16 not printed in the Gazette.]

1,170,029. GLUING-MACHINE FOR PAPER BOTTLES. FRANK N. WEIS and WILLIAM C. WEIS, Monroe, Mich., assignors to The Weis-Van Wormer Company, Monroe, Mich., a Corporation. Filed June 12, 1914. Serial No. 844,606. (Cl. 93—36.)



1. In a device of the described character, a pair of revoluble glue-rolls, means for feeding to such rolls a regulated supply of glue, a holder adapted for the reception of a paper box-blank, a support upon which said holder may be moved to and fro, devices disposed in operative relation to said glue-rolls and to said holder and controlled by the movement of said holder for deflecting the flaps of such box-blank into a common plane, and means for moving said holder into and out of operative relation to said rolls.

2. In a device of the described character, means for deflecting the projecting flaps of a box-blank into a common plane, comprising a pair of plates pivotally connected at their meeting edges, a spring and connections between the spring and plates which hold said plates normally inclined at an angle to each other, and a sliding box-blank holder adapted to move toward and away from said pivoted plates and to press them into a common plane combined with glue applying devices, and means, controlled by the movement of said blank-holder toward said pivoted plates, for moving the blank-holder into operative relation to the glue applying devices.

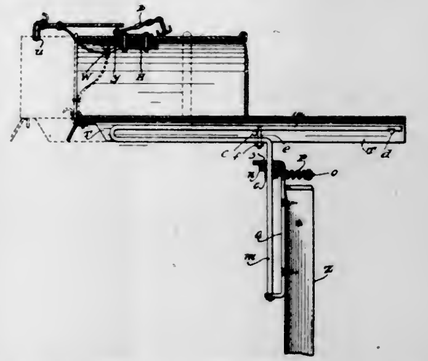
3. In a device of the described character, means for deflecting the projecting flaps of a box-blank into a common plane, comprising a pair of plates pivotally connected at their meeting edges, a spring and connections between the spring and plates which hold said plates normally inclined at an angle to each other, and a sliding box-blank holder adapted to move toward and away from said pivoted plates and to press them into a common plane; combined with glue-rolls; means for contacting such deflected flaps with the rolls; means for holding said pivoted plates in their said common plane during such contact; devices for moving the box-blank holder away from the rolls; mechanisms which permit the return of said holder to its initial position, and a trip, controlled by said latter mechanisms, for releasing said pivoted plates.

4. In a device of the described character, means for throwing the projecting flaps of a box-blank into a common plane, comprising a pair of plates pivotally connected at their meeting edges, a spring and connections which hold said plates normally inclined at an angle to each other, and a sliding box-blank holder adapted to move toward and away from said pivoted plates and to press them into a common plane, combined with a pair of glue-rolls, spaced apart, and means governed by the movement of the holder toward said pivoted plates for carrying said holder into operative relation to said glue-rolls.

5. In a device of the described character, a glue-roll, a box-blank carrier in front of and below said roll, a vertically movable support upon which the carrier moves horizontally to and fro, and means for raising said support with the carrier into operative relation to the roll, comprising a pair of sprocket-wheels, a sprocket-chain traveling upon said wheels and having a series of projecting lugs, means carried by said support for detachably engaging said lugs, and connections between said engaging means and said carrier whereby said engaging means are actuated in harmony with the horizontal movement of the carrier.

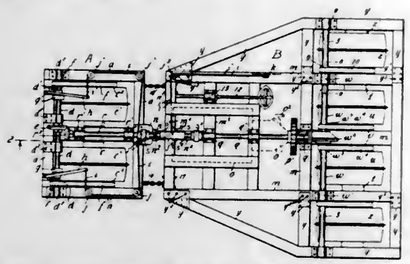
[Claims 6 to 9 not printed in the Gazette.]

1,170,030. RURAL-MAIL-BOX OUTFIT. GEORGE WILCOX, South Norwich, Ontario, Canada. Filed Oct. 14, 1912. Serial No. 725,762. (Cl. 232—40.)



In a device of the character described, a pivot bar having horizontal and vertical portions, a mail box mounted to slide upon the horizontal portion of the pivot bar, a fixed bracket, angular extensins on each end thereof, the upper extension provided with a longitudinal elongated slot the longitudinal sides of which surround and guide the vertical portion of the pivot bar, the lower extension provided with a bearing rotatably receiving and supporting the lower end of the pivot bar, an angular faced positioning block secured to the pivot bar upon the under side of the upper extension, and spring pressed means engaging the pivot bar and fixed bracket adjacent the positioning block for normally retaining one of the angular faces of the block in contact with the fixed bracket.

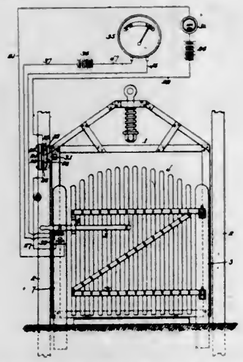
1,170,031. TRACTION-ENGINE. MARCELLUS J. WILLIAMS, Portland, Oreg. Filed Feb. 5, 1915. Serial No. 6,384. (Cl. 21—114.)



1. In a self-propelling vehicle, a frame consisting of independent units for the front and rear wheels respectively, a joint connecting such frame units, manual steering mechanism for the front frame-unit, power operated driving means connected to both the front and the rear wheels, and adapted also for driving the front wheels independently of each other, and means included in said connecting joint permiting the relative longitudinal movement of one frame-unit with respect to the other, whereby the manual steering connections of the front wheel frame unit are relatively adjusted to permit the action of the power-driven steering means.

2. In a self-propelling vehicle, a frame consisting of independent units for the front and rear wheels respectively, a joint connecting such frame-units, and a member included in said connections relatively telescopical in one of said frame-units to permit the variation of the distance said frame-units are spaced apart by said joint, manual steering mechanism for the front frame-unit, and power operated driving means connected to both the front and the rear wheels, and adapted also for driving the front wheels independently of each other.

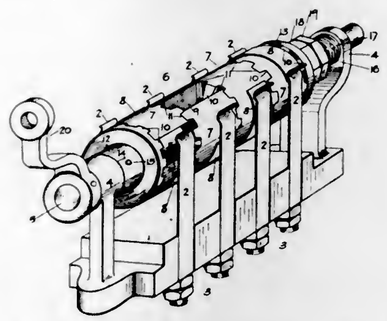
1,170,032. LOCK FOR THE GATES OF ELEVATOR-SHAFTS. WILLIAM A. WILLIAMS, Barton, Ohio. Filed Apr. 19, 1915. Serial No. 22,228. (Cl. 177—339.)



1. The combination with an elevator and a gate guarding the entrance to an elevator shaft, of a latch-bar carried by said gate, a stationary member having a pocket for receiving said latch-bar when the gate is closed, means for indicating the position of said latch-bar, the last-mentioned means comprising a normally closed electric circuit, a signal and a pair of contacts located in said circuit, a pivoted lever supporting one of said contacts, and means normally maintaining said lever in a position wherein said contacts engage, said lever having a part directed into said pocket and adapted to be depressed by the seated latch-bar for swinging said lever to a point separating said contacts.

2. The combination with an elevator and a gate guarding the entrance to an elevator shaft, of a latch-bar carried by said gate, a stationary member having a pocket for receiving said latch-bar when the gate is closed, means for locking said latch-bar in said pocket, a normally closed electric circuit, a dial indicator in said circuit, a pair of contacts in said circuit, a pivoted lever supporting one of said contacts, means normally maintaining said pivoted lever in a position wherein said contacts lie in engagement, said lever having a projection extended into said pocket and adapted to be depressed by introduction of said latch-bar into said pocket for swinging said lever to a point separating said contacts.

1,170,033. CIRCUIT-CONTROLLER. MORRIS WUERPEL, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 18, 1915. Serial No. 29,007. (Cl. 200—10.)



1. A circuit controller drum comprising a shaft, a plurality of contact carrying sections, means holding the drum sections to each other and means holding the sections to the shaft, said drum sections having an open slot permitting their lateral application to or withdrawal from the shaft when released from said holding means.

2. A circuit controller drum comprising a shaft, a plurality of mutually interlocking and circumferentially adjustable contact carrying sections applied around the shaft, a part fixed to the shaft and interlocking with the adjacent drum section whereby all the interlocking drum sections will turn in unison with the shaft, and means clamping the drum sections together endwise of the shaft; said drum sections having an open slot permitting their lateral application to or withdrawal from the shaft when unlocked from the adjacent drum sections or parts.

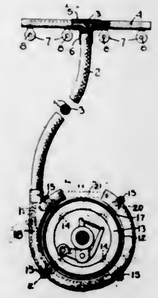
3. A circuit controller drum comprising a shaft, a plurality of mutually interlocking and circumferentially adjustable and interchangeable contact carrying sections applied around the shaft, a part fixed to the shaft and interlocking with the adjacent drum section whereby all the inter-locking drum sections will turn in unison with the shaft, and means clamping the drum sections together endwise of the shaft; said drum sections having an open slot permitting their lateral application to or withdrawal from the shaft when unlocked from the adjacent drum sections or parts.

4. A circuit controller drum comprising a shaft, a plurality of mutually interlocking and circumferentially adjustable contact carrying sections applied around the shaft, a clamp-head fixed to the shart and interlocking with the first drum section whereby all the interlocking drum sections will turn in unison with the shaft, which has a screw-threaded portion, a second clamp-head outside the last drum section, and a nut on the shaft screw-thread outside said second clamp-head securing all the interlocking drum sections together endwise of the shaft; said drum sections having an open slot permitting their lateral application to or withdrawal from the shaft when unlocked from the adjacent drum sections or parts.

5. A circuit controller drum comprising a shaft, a plurality of mutually interlocking and circumferentially adjustable and interchangeable contact carrying sections applied around the shaft, a clamp-head fixed to the shaft and having the same interlocking connection with the first drum section as the sections have with each other, and a second clamping means outside the last drum section securing all the interlocking drum sections together endwise of the shaft; said drum sections having an open slot permitting their lateral application to or withdrawal from the shaft when unlocked from the adjacent drum sections or parts.

[Claim 6 not printed in the Gazette.]

1,170,034. ELECTRICAL CONNECTOR. WILLIAM H. ADAMS, Kenyon, R. I. Filed May 1, 1915. Serial No. 25,301. (Cl. 123—198.)



1. An electrical connector comprising a flexible cable, members rigidly affixed to opposite ends of said cable and each having a plurality of relatively insulated terminals, a plurality of relatively insulated conductors carried by said cable, each oppositely disposed pair of said relatively insulated terminals being connected by one of said conductors, whereby relative movement of said members is compensated for by said cable and said members and strains upon said terminals and conductors are avoided.

2. An electrical connector comprising a flexible cable, inflexible members rigidly affixed to opposite ends of said cable, and forming therewith a subtsantially integral continuous structure, each of said inflexible members having a plurality of relatively insulated terminals, a plurality of relatively insulated conductors carried by said cable, each oppositely disposed pair of relatively insulated terminals being connected by one of said conductors, whereby relative movement of said members is compensated for by said cable and said members and strains upon said terminals and conductors are avoided.

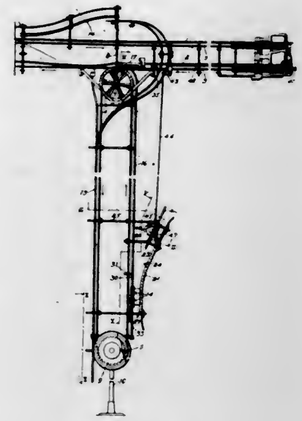
3. In an electrical connector, a flexible insulating medium, a plurality of relatively insulated conductors carried by said medium, members rigidly affixed to opposite ends of said medium, each member having a plurality of relatively insulated terminals, a head substantially annular formed by one of said members and bearing therein the relatively insulated conductors of progressively increased length.

4. In an electrical connector, a flexible insulating medium, a series of relatively insulated conductors carried within said medium, means for connecting said conductors to electrical receiving and distributing elements including an inflexible head rigidly secured to said insulating medium said relatively insulated conductors extending into said head and each having a terminal, and a metallic reinforcing means surrounding said head.

5. In an electrical connection, a flexible insulating medium, a substantially annular head inflexibly attached to said medium, a series of relatively insulated conductors inclosed in said medium, and extending into said head in circumferential pairs of different lengths, a relatively insulated terminal for each of said conductors.

[Claims 6 to 11 not printed in the Gazette.]

1,170,035. CHUTE-TYPE STATION FOR CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, and CHARLES P. HIDDEN, Brookline, Mass., assignors to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 22, 1914. Serial No. 833,632. (Cl. 186—15.)



1. In drop-station apparatus for cable carrier systems, the combination of a main receiving track having a station therealong, an auxiliary track leading up from said station to said track, a chute, leading down toward said auxiliary track, down which a carrier may descend by gravity, said auxiliary track having provisions to admit said carier into operative engagement therewith, a cable to propel carriers up said auxiliary track to said main track and means to automatically engage a carrier which has descended said chute, with said cable.

2. Cable carrier apparatus comprising a track, a cable, a carrier having means to engage said cable and adapted to be propelled thereby along said track with one particular end of said carrier foremost, a chute leading toward said track down which said carrier may drop by gravity, said chute having provisions to prevent the insertion of said carrier thereinto wrong end to, and means to automatically engage said carrier with said cable after the carrier has moved down said chute substantially into engagement with said track.

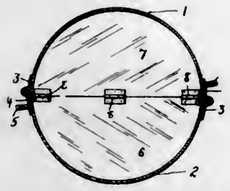
3. Cable carrier apparatus comprising a track, a cable, a carrier having means to engage said cable and adapted to be propelled thereby along said track, a chute leading toward said track down which said carrier may drop by gravity in an inverted position for a part at least of the length of said chute, and means to automatically engage said carrier with said cable after the carrier has moved down said chute substantially into engagement with said track.

4. Cable carrier apparatus comprising a track, a cable, a carrier having means to engage said cable and adapted to be propelled thereby along said track with determined parts of said carrier in engagement with said track, guiding means leading toward said track down which said carrier may drop by gravity, said means engaging parts of said carrier different from those aforesaid, and means to automatically engage said carrier with said cable after the carrier has moved down said guiding means substantially into engagement with said track.

5. Cable carrier apparatus comprising a substantially vertical track, a cable, a station relatively adjacent to said track having means to automatically emplace a carrier upon said track, said means including substantially fixed guides down which said carrier may drop by gravity into engagement with said track, means to engage said carrier with said cable, and means to automatically deliver carriers to said station.

[Claims 6 to 23 not printed in the Gazette.]

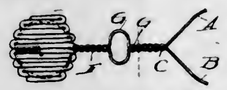
1,170,036. METALLIC BARREL. WILLIAM G. AVERY, Painesville, Ohio. Filed Feb. 27, 1913. Serial No. 751,092. (Cl. 220—4.)



1. A metallic cask of the type set forth comprising a series of sections, one edge of each section provided with a slotted tubular member and the opposite edge of each section provided with a headed strip, said slotted tubular member and said headed strip adapted to interlock with the headed strip and slotted tubular member of the adjoining section, said slotted tubular member and said headed strip so located as to present a smooth interior surface to said metallic container.

2. A metallic cask of the type set forth comprising a series of sections, each of said sections comprising bottom and side portions of equal proporations, one edge of each side portion provided with a slotted tubular member and the opposite edge of each of said side portions provided with a headed strip adapted to be engaged by the slotted tubular member of the adjoining side portion, said slotted tubular member and said headed strip so located as to present a smooth interior surface to said metallic cask.

1,170,037. PROCESS OF WIRE-TYING AND PACKAGING BAGS. ADELMER M. BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Sept. 8, 1913. Serial No. 788,516. (Cl. 140—93.)



1. A method of wire-tying bags, which consists of twisting together the ends of two strands of wire, bending the twisted ends inwardly toward the loop formed by encircling the gathered end of the bag between the wires, with the twisted end in the midst of the fold, twisting the two strands about the bag so as tightly to tie it, and severing the two strands from the tie.

2. A method of wire-tying bags, which consists of twisting together the ends of two strands of wire, bending the twisted ends inwardly toward the loop formed by encircling the gathered end of the bag between the wires with the twisted end in the midst of the fold, twisting the two strands about the bag so as tightly to tie it, and severing the two strands from the tie in the midst of the twisted portion.

3. A method of wire-tying bags, which consists of twisting together the ends of two strands of wire, bending the twisted ends inwardly toward the loop formed by encircling the gathered end of the bag between the wires, with the twisted end in the midst of the fold, twisting the two strands about the bag so as to tightly tie it, and severing the two strands from the tie, the two strands twisted so as to form a key loop with a twisted section on each side of the loop.

4. A method of wire-tying bags, which consists of twisting together the ends of two strands of wire, bending the twisted ends inwardly toward the loop formed by encircling the gathered end of the bag between the wires, with the twisted end in the midst of the fold, twisting the two strands about the bag so as to tightly tie it, and severing the two strands from the tie, the two strands twisted so as to form a key loop with a twisted section on each side of the loop, and severing the two strands in the midst of the outer twist.

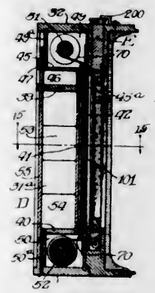
5. A method of wire-tying bags, which consists of twisting together the ends of two strands of wire, encircling the gathered end of the bag between the wires, twisting the two strands about the bag so as tightly to tie it, and severing the two strands from the tie, bending the twisted end of the wires between the folds, with the twisted end in the midst of the fold, the two strands twisted so as to form a key loop with a twisted section on each side of the loop and severing the two strands in the midst of the outer twist, and bending the projecting portion of the tie into parallelism with and among the folds of the gathered end of the bag.

[Claims 6 to 13 not printed in the Gazette.]

1,170,038. PLASTIC COMPOSITION. WILLIAM W. BEEBE and EDWIN E. DAVIS, Los Angeles, Cal. Filed Apr. 9, 1915. Serial No. 20,276. (Cl. 106—24.)

A plastic composition consisting of crushed pumice, one and one half parts, gypsum one and one half parts, and Portland cement one part, the same forming a dry mixture, combined with a wet mixture of salammoniac one pound and water one hundred pounds, ten gallons of the wet mixture being used with each cubic foot of the dry mixture.

1,170,039. FILM-BACK FOR CAMERAS. ALBERT P. D. BELANGER and JOHN D. BELANGER, Chicago, Ill. Filed June 4, 1915. Serial No. 32,095. (Cl. 95—34.)



1. A camera including a casing, a frame provided with an opening and slidably mounted in the rear of said casing, a second frame provided with a ground glass and movable in said opening, a film carrier in connection with said casing, and adapted to be light tightly engaged therewith, means on said carrier adapted to move said second frame from its normal position, and devices mounted in said casing and adapted to move both frames beyond the line of vision within said camera.

2. A camera including a casing, a frame having an opening therethrough and arranged for transverse movement with respect to said casing and located in the rear of said casing, a ground glass, and a frame therefor, in said opening and movable therein, a film carrier in connection with said casing, and means on said carrier to move said frame and ground glass in a direction away from said carrier.

3. A camera including a casing, a frame having an opening therethrough and arranged for transverse movement with respect to said casing and located in the rear of said casing, a ground glass and guiding means therefor, in said opening and movable therein and spring maintained in said opening in a predetermined position, a film carrier in connection with said casing, and means on said film carrier to move said guiding means and ground glass from said predetermined position.

4. A camera including a casing and a frame in connection therewith at the rear thereof, said frame being movable transversely with respect to said casing and having an opening therethrough, a ground glass and guiding means therefor, in said opening and movable therein, a film carrier in connection with said casing at the rear of said frame, and containing a sensitized film, there being means on said carrier to move said guiding means and ground glass away from said carrier, so that said film may occupy the space theretofore occupied by said ground glass, and guiding means.

5. A camera including a casing, a frame provided with an opening and slidably mounted in the rear of said casing, a second frame provided with a ground glass and movable in said opening, a film carrier in connection with said casing, and adapted to be light tightly engaged therewith, and means on said carrier adapted to move said second frame in a direction away from said carrier.

[Claims 6 to 30 not printed in the Gazette.]

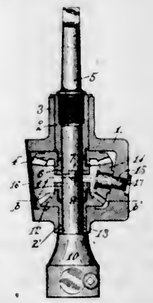
1,170,040. BROOM. EMIL C. BOECKH, Toronto, Ontario, Canada. Filed Sept. 4, 1915. Serial No. 49,111. (Cl. 15—20.)



1. A broom having a broom head provided with shoulders; a handle extending within the broom head and below the shoulders of the broom head and provided with a slot in its inner end; and a short narrow cross bar secured in the slot, the material comprising the broom being lashed to the handle above the cross bar.

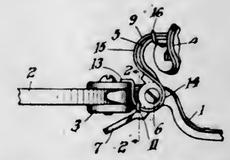
2. A broom comprising a handle; a broom head consisting of straight broom material secured to the handle; other broom material bent on itself and secured to the handle, the ends of the bent over portions forming shoulders below which the handle projects; a layer of broom material forming the outer portions of the broom head secured to the handle; and a short cross bar secured in a slot in the end of the handle immediately adjacent the shoulders aforesaid.

1,170,041. DRILLING AND TAPPING ATTACHMENT. WILLIAM J. BRENNAN, Dayton, Ohio. Filed Apr. 26, 1915. Serial No. 23,790. (Cl. 10—137.)



In an attachment for tapping machines, the combination with a frame comprising two parallel walls united by a vertical wall, said parallel walls having alined tubular extensions, of a bushing in one of said extensions having an exteriorly screw-threaded end within said frame, a driving spindle connected with said bushing, a driving pinion connected with the screw-threaded end of said bushing and having an axial extension, a clutch member having a screw-threaded connection with said axial extension, a driven pinion having a sleeve extended into the other tubular extension of said frame, said driven pinion having an axial extension, a clutch member screwed into the axial extension of said driven pinion, an intermediate pinion connecting said driving and driven pinions, a tool spindle extending through said pinions and the clutch members carried thereby, and a clutch member carried by said tool spindle and adapted to engage one or the other of the clutch members carried by said pinion, substantially as specified.

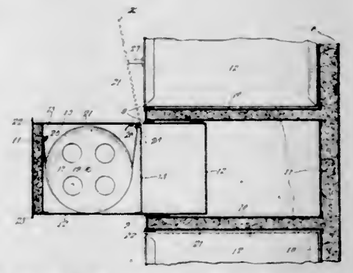
1,170,042. SPRING FOR FINGER-PIECE EYEGLASS-MOUNTINGS. DANIEL V. BROWN, Philadelphia, Pa. Filed Oct. 14, 1910. Serial No. 586,997. (Cl. 88—50.)



1. In a pair of eyeglasses, the combination of the lenses, a bridge or equivalent member for connecting the lenses together, nose gripping members having pivotal connection with the opposite ends of the said bridge, posts secured to the opposite ends of the said bridge at points beyond the points of pivotal connection of the said nose gripping members to said bridge, which posts have hooks at their upper ends, and springs for actuating the said nose gripping members to cause them to grip the nose, the said springs extending underneath the said hooks and being held detachably in position thereby and one end of each of the said springs having operative connection with a nose gripping member and the other end thereof extending beyond a post and being in contact with a fixed part of the mounting.

2. In a pair of eyeglasses the combination of a bridge or equivalent member, nose gripping members having pivotal connection with the opposite ends of said bridge, posts secured to the opposite ends of the said bridge at points beyond the points of pivotal connection of the said nose gripping members to said bridge, which posts have hooks at their upper ends and springs for actuating the said nose gripping members to cause them to grip the nose, the said springs extending underneath the said hooks and being held detachably in position thereby.

1,170,043. FILM-STORAGE SAFE. GEORGE F. BROWN, Chicago, Ill. Filed Jan. 18, 1915. Serial No. 2,815. (Cl. 109—2.)

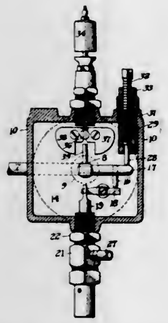


1. A safe of the character described consisting of a casing having its interior, with the exception of its front

wall, lined with non-combustible and non-heat conducting material, a receptacle extended into the lined casing and having its front end open, a drawer having vertically disposed compartments and slidably located in said receptacle and having at and within its front end a lining of non-combustible and non-heat conducting material to coincide with the opening of said receptacle, said drawer having at its front end a perimetric flange to rest against the outer surface of the front wall of the casing when the drawer is closed, and a gravity actuated lid hinged at its rear end to the upper portion of the drawer and having at its front end an upwardly extended flange.

2. A safe of the character described consisting of a casing having its interior, with the exception of its front wall, lined with non-combustible and non-heat conducting material, a series of receptacles extended into the lined casing and spaced from each other, non-combustible and non-heat conducting material interposed between said receptacles, each of said receptacles having its front end open, a drawer having vertically disposed compartments and slidably mounted in each of said receptacles and provided at its front end with lining of non-combustible and non-heat conducting material, each of said drawers having at its front end a perimetric flange to rest against the front surface of the casing when the drawer is closed, and a lid hinged at its rear end to the upper portion of each drawer and having at its front end an upwardly extended flange.

1,170,044. FEED-WATER REGULATOR. JOHN J. BUCKLEY, Chester, Pa., assignor to Fuel Economy Engineering Company, Lansdowne, Pa., a Corporation of Delaware. Filed May 1, 1915. Serial No. 25,127. (Cl. 137—101.)



1. In a feed water regulator, the combination of a casing having communication with a boiler or tank above and below the water line, a float member in said casing, an auxiliary casing connected to said first casing, valve means in said auxiliary casing and connected to and under the control of said float for governing the supply of steam to a control mechanism for a feed water supply, said casings having means forming a communication between the two for the passage of steam, and means extending exterior of one of said casings for opening and closing said communicating means at will whereby one casing may be shut off from another for repair purposes.

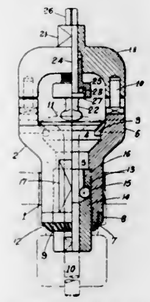
2. In a feed water regulator, the combination of a main casing having communication with a boiler or tank above and below the water line, an auxiliary casing secured to said main casing and provided with means to establish communication with said main casing, a removable cover for said auxiliary casing, a spindle journaled in one of said castings and projecting into both castings, a float in said main casing directly connected to said spindle, valve means in said auxiliary casing for governing the supply of pressure fluid to a control mechanism for a feed water supply, said valve means being independent of said cover and operatively connected to said spindle and means operable from the exterior of one of said casings for closing communication between said casings at will, whereby access may be had to said valve means without reducing the pressure in the boiler or tank.

3. In a feed water regulator, the combination of a main casing having communication with a boiler or tank above and below the water line, an auxiliary casing provided with means to establish communication with said main casing, a removable cover for said auxiliary casing, a spindle journaled in one of said castings and projecting into both castings, a float in said main casing directly connected to said spindle, a fitting adjustably connected to said auxiliary casing and provided with a plurality of valve seats, valves for respectively engaging said seat, means common to said valves and connected to said spindle for actuating said valves and a manually operated means for controlling communication between said castings, whereby access may be had to said valve means without reducing the pressure in the boiler.

4. In a feed water regulator, the combination of a main casing, having communication with a boiler or tank above and below the water line, an auxiliary casing secured to said main casing and provided with means to establish communication with said main casing, a removable cover for said auxiliary casing, a spindle journaled in one of said castings and projecting into both castings, a float in said main casing directly connected to said spindle, a fitting provided with valve seats secured to said auxiliary casing, said fitting having a bore between said valve seats arranged at substantially right angles to said spindle, valves for respectively engaging said seats, means common to said valves and connected to said spindle for actuating said valves and a manually operated means for controlling communication between said castings at will, whereby said cover may be removed without reducing the pressure in the boiler or tank.

5. In a feed water regulator the combination of a main casing having communication with a boiler or tank above and below the water line, a float member in said main casing, an auxiliary casing carried by said main casing, a rock spindle controlled by said float, an arm extending laterally from said spindle and terminating within said auxiliary casing, a valve for governing the supply of steam to a control mechanism for a feed water supply, means controlled by the movement of said arm for controlling the operation of said valve and adjustable spring controlled means mounted within said auxiliary casing for normally maintaining said float in balanced condition, whereby a substantially continuous supply of feed water is delivered to said boiler or tank.

1,170,045. TOOL FOR TRUING, CLEANSING, AND GRINDING VALVES AND VALVE-SEATS. ARTHUR ALBERT BULL, Detroit, Mich. Filed Apr. 3, 1915. Serial No. 19,082. (Cl. 82—1.)



1. A cutting device comprising a tubular body adapted to surround a valve and to be positioned between the valve and its seat, a cutter concentric with and inside the body for engaging the valve face, a conical cutter placed upon and concentric with the body at the outer end to engage the valve seat.

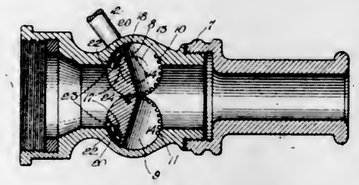
2. A device of the character described comprising a tubular body adapted to surround a valve, and to be positioned between the valve and its seat, cutting means upon the said body for simultaneously engaging the valve and its seat, a central perforation in the body permitting the end of the valve to extend and project outward from the end of the body and enter the valve guide as a pilot for the body, insuring the correct correlation of the valve, body and seat.

3. A device of the character described comprising a tubular body adapted to surround a valve, cutters upon the body for respectively operating upon the valve and its seat, means for centralizing the valve, and body relative to the seat, and means for rotating the valve, stem and body for truing the valve seat.

4. A device of the character described comprising a tubular body adapted to surround a valve, cutting devices detachably attached to the said body for respectively acting upon the valve and its seat, means for centralizing the device, an operating device connected with the body for operating on the valve and its seat simultaneously, and means carried by said operating device for engaging the valve.

5. A device of the character described comprising a tubular body adapted to surround a valve, cutting means upon the said body, means for centralizing the valve, body and seat, an operating device detachably engaging the body, and means carried by said operating device for engaging the valve whereby the body may be rotated independently of, or with the valve.

1,170,046. VALVE FOR FLUID-CONDUITS. GUY CARLETON, Rockport, Me. Filed July 12, 1915. Serial No. 39,356. (Cl. 137—7.)



1. In a rotary valve for fluid conduits, a rotary plug having a longitudinal groove therein, and a leather packing strip of substantial width one portion of which is secured within said groove and the free portion of which is folded back over said groove against the direction of the flow of the fluid and is in close contact with the adjacent wall of the conduit, thereby preventing the passage of the fluid between said wall and said rotary plug.

2. In a rotary valve for fluid conduits, a rotary plug having a groove extending in the same direction as its axis of rotation, a leather packing strip of substantial width one edge of which is secured within said groove, the free portion of which is folded back against the direction of the flow of the fluid, mechanical means for holding open to the ingress of said fluid the edge of said free portion of said strip, thereby utilizing the pressure of the fluid to force the free portion of the packing strip against the wall of the conduit and to prevent the passage of the fluid between said plug and the adjacent wall of said conduit.

3. In a rotary valve for fluid conduits, a rotary plug having a longitudinal groove therein, a leather packing strip one edge of which is secured in said groove leaving a free portion of substantial width folded back upon said groove against the direction of the fluid, and mechanical means for holding open the free portion of said leaf and forcing the same into close contact with the adjacent wall of the conduit, thereby preventing the passage of the fluid between said wall and said rotary plug.

4. In a rotary valve for fluid conduits, a rotary plug having a longitudinal groove therein segmental in cross section and convex at the bottom, a leather packing strip of substantial width, a plate shaped to conform with said convex bottom and securing one edge of said packing strip within said groove, the said packing having a free portion folded back over said groove against the flow of said fluid, and mechanical means for holding open to the ingress of the fluid the free edge of said packing strip, thereby utilizing the pressure of the fluid to force the free portion of the packing strip against the wall of the conduit, and preventing the pasage of the fluid between the said wall and said rotary plug.

1,170,047. HOOK. NANNIE D. CONWAY, Portland, Oreg. Filed Feb. 12, 1914. Serial No. 818,383. (Cl. 24—160.)

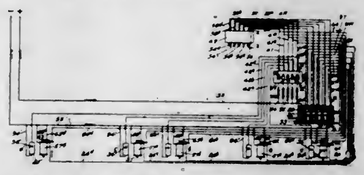


1. A securing device comprising a plate, tongues struck from said plate and providing leaf springs, said plate being provided with pockets positioned upon opposite sides of slots formed in said plate by said leaf springs, attaching pins passing through said slots and provided with pivot pins having their ends positioned in the pockets formed in said plate, and heels extending from the pivotally mounted ends of said pins and engaged by said leaf springs.

2. A securing device comprising a plate having an opening formed therein and being provided with pockets positioned upon opposite sides of the opening, an attaching pin positioned in the opening and provided with a pivot pin mounted in said pocket, and resilient means engaging said attaching pin to yieldably hold the same in a set position.

3. A securing device comprising a plate having an opening formed therein and provided with notches forming pockets upon opposite sides of said opening, an attaching pin extending through the opening and provided with pivot pins positioned in said pockets, and a leaf spring engaging said attaching pin to yieldably hold the same in a set position.

1,170,048. DISTRIBUTING SYSTEM. JAMES T. COWLEY, North Scituate, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Mar. 19, 1914. Serial No. 825,735. (Cl. 186—15.)



1. A delivery system for parcels, messages and like articles, which comprises a way having therealong a plurality of stations and automatic mechanism for conveying an article from one of said stations to and unloading said article at any other desired one of said stations, said mechanism including a plurality of timing elements, one for each of said other stations, each of said elements being adapted to time differently from the others of said elements to determine by the lapse of different periods of time the station at which said article is to be unloaded, said mechanism also including time element controlled means for unloading said article at said desired station after the lapse of the particular period of time allotted by the timing element corresponding to said last mentioned station.

2. A delivery system for parcels, messages and like articles, which comprises a way having therealong a plurality of stations, automatic mechanism for conveying an article from one of said stations to and unloading said article at any other desired one of said stations, said mechanism including a plurality of timing elements, one for

each of said other stations, each of said elements being adapted to time differently from the others of said elements to determine by the lapse of different periods of time the station at which said article is to be unloaded, said mechanism also including time element controlled means for unloading said article at said desired station after the lapse of the particular period of time allotted by the timing element corresponding to said desired station, and means, controlling parts of which are located at the station from which said article is despatched, for determining which of said timing elements is to become operative.

3. A delivery system for parcels, messages and like articles, which comprises a way having therealong a plurality of stations, automatic mechanism for conveying an article from one of said stations to and unloading said article at any other desired one of said stations, said mechanism including a plurality of timing elements, one for each of said other stations, each of said elements being adapted to time differently from the others of said elements to determine by the lapse of different periods of time the station at which said article is to be unloaded, said mechanism also including time element controlled means for unloading said article at said desired station after the lapse of the particular period of time allotted by the timing element corresponding to said desired station, and means for determining which of said timing elements is to become operative, whereby to predetermine the station at which said article will be discharged.

4. A delivery system for parcels, messages and like articles, which comprises a way having therealong a plurality of stations, automatic means for starting an article at one of said stations and conveying said article along said way past at least a second of said stations to another and predetermined station, and means including a timing mechanism, separate from the means for conveying said article for automatically unloading said article only at said predetermined station.

5. A delivery system for parcels, messages and like articles which comprises a way having therealong a plurality of stations, automatic means for conveying an article from one of said stations at which said article is despatched, past a second of said stations to another and predetermined station, means including variably acting timing mechanism for automatically unloading said article only at said predetermined station, said timing mechanism being separate and distinct from said conveying means, and means for setting said timing mechanism to time a determined period allotted for the transmission of an article from said despatching station substantially to said predetermined station.

[Claims 6 to 57 not printed in the Gazette.]

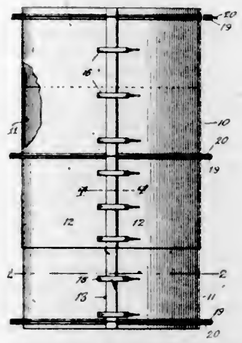
1,170,049. FORM FOR CONCRETE STRUCTURES. WILLIAM P. CUNNINGHAM, Waukegan, Ill., assignor to American Metal Form Company, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1915. Serial No. 25,419. (Cl. 25—127.)

1. A form for concrete structures, comprising a tubular wall having a joint along its side comprising outwardly bent edge portions, having radial abutting portions terminating in an outward bearing surface and an inward bearing surface, the one interlocking with the other, and clamping means disposed along the radial portions of said joint.

2. A form for concrete structures comprising a tubular wall having a joint along its side and comprising outwardly and radially bent portions terminating in V-shaped, marginal portions, the one nesting into the other, and clamp members disposed along said radial portions for clamping together said members of the joint.

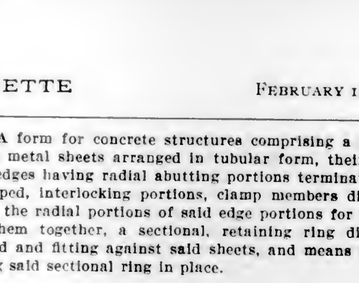
3. A form for concrete structures comprising a plurality of arcuate metal sheets arranged in tubular form, the adjacent edge portions of which are bent outward in radial directions, and terminate in V-shaped, marginal edge portions, the V-shaped parts of one sheet nesting into those of the adjacent sheets, and clamp screws disposed along said radial portions and clamped thereon.

4. A form for concrete structures comprising a plurality of metal sheets arranged in tubular form, their adjacent edges having radial abutting portions terminating in V-shaped, interlocking portions, clamp members disposed along the radial portions of said edge portions for clamping them together, a sectional, retaining ring disposed around and fitting against said sheets, and means for securing said sectional ring in place.



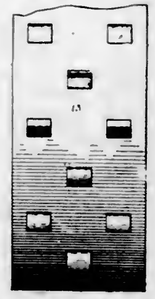
5. A form for concrete structures comprising a plurality of telescoping sections, each formed of metal, arcuate sheets arranged in tubular form, the adjacent edge portions of said sheets having abutting radial portions which are V-shaped in cross section, and nested together, and clamp members disposed along the radial portions of said edge portions, and clamped thereon.

1,170,050. REGULATING-VALVE. HERBERT F. DANIELS, Seattle, Wash. Filed Nov. 19, 1914. Serial No. 873,013. (Cl. 137—26.)



The combination with a casing having an inlet port and an outlet opening, said casing being provided with a screw-threaded opening opposite the inlet port, valve seats at opposite ends of the inlet port, a screw-threaded plug fitted in the screw-threaded opening and provided on its outer end with a head adapted to be gripped by an operator, said plug having a reduced stem extending into the casing, the stem and body of the plug being provided with a bore terminating in spaced relation to the outer surface of the head, a stem slidably-mounted within said bore and having a threaded end projecting through the inlet opening, a sleeve mounted on said threaded end, valves on said threaded end bearing against the ends of the sleeve and adapted to close the inner and outer valve seats respectively, nuts on said threaded end holding said valves in position against the sleeve, and a spring surrounding the stem closely and resting against the shoulder formed between the reduced stem and the plug at one end and against one of said valves at the other end.

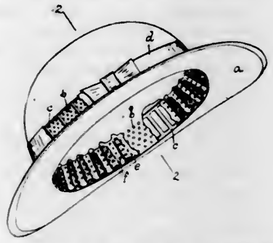
1,170,051. TRACTION-WHEEL. DAVID P. DAVIES, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Oct. 5, 1915. Serial No. 54,269. (Cl. 21—215.)



1. A grouter for traction wheels including side walls, a base connecting said walls having a longitudinal slot therein, a bolt extending through the slotted portion of said base for securing said grouter to the wheel rim, and a lug on said base adapted to be inserted in the wheel rim to prevent displacement of said grouter.

2. A substantially triangular grouter for traction wheels including a slotted base having a guideway, a bolt extending through said slotted base and held in said guideway from turning, and a lug on said base adapted to be inserted in the wheel rim to prevent said grouter from turning.

1,170,052. VENTILATED HAT. MAGDALENA DIENER and CHARLES FREDOLIN URBAN, Milwaukee, Wis. Filed Apr. 8, 1912. Serial No. 689,427. (Cl. 2—114.)



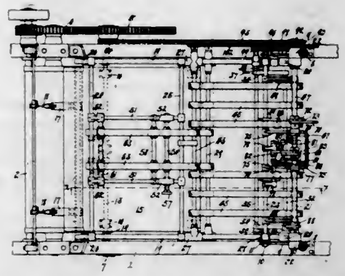
1. The combination in a hat of a crown having a wide section of coarse perforations extending all around the circumference and adjacent the brim, an interior sweat band made of pliable perforated material formed with vertically disposed flutes spaced apart and extending all around the sides of the crown, a skeleton spacer band fixed exterior of the perforations of the crown, and a hat band of coarse mesh concealing said skeleton spacer band.

2. The combination in a hat of a crown having a wide section of coarse perforations extending all around the circumference and adjacent the brim, an interior sweat band made of pliable perforated material formed with vertically disposed flutes spaced apart and extending all around the sides of the crown, and of greater cross section at the bottom than at the top, a skeleton spacer band affixed exterior of the perforations of the crown, and a hat band of coarse mesh concealing said skeleton spacer band.

1,170,053. SHEET-ADVANCING MECHANISM. MICHAEL A. DROITCOUR, Delphos, Ohio. Filed Dec. 8, 1914. Serial No. 876,037. (Cl. 101—36.)

1. In combination, a plurality of sets of coöperating sheet advancing means, separate frames carrying different sets of said advancing means and pivotally mounted to have independent raising and lowering movements to place them in upright or reclining positions.

2. In combination, a plurality of sets of coöperating sheet advancing means, separate frames carrying different sets of said advancing means and pivotally mounted to have independent raising and lowering movements, and means operable to drive said sets in any position of movement of said frames.



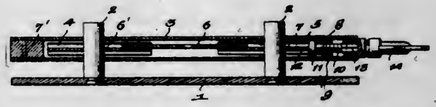
3. In combination, a plurality of sets of coöperating sheet advancing means, separate frames carrying different sets of said advancing means and being independently movable into and out of operative position, a drive member, and separate means connecting said drive member and the advancing means of the different frames to communicate advancing movements to said advancing means from said member, said connecting means remaining in driving connection with said member during a movement of the frames to and from operative position.

4. In a printing press, a feed board, and mechanical sheet feeding means having upper and lower sets of sheet advancing tapes which deliver sheets in successive order to cylinder picking-up position on the feed board and then release them.

5. In a printing press, a feed board, and mechanical means for successively feeding sheets to cylinder picking-up position on the feed board, said means embodying upper and lower runs of feeding tapes with the upper sheet advancing portion of the lower tapes in substantially flush parallel relation with the top surface of the feed board.

[Claims 6 and 7 not printed in the Gazette.]

1,170,054. LOOSE-LEAF BINDER. EDWARD H. ELDER, Chicopee Falls, Mass., assignor to National Blank Book Company, Holyoke, Mass., a Voluntary Trust Association of Copartnership having as trustees J. W. Towne, F. B. Towne, E. S. Towne, J. M. Towne, and F. W. Wilson. Filed Feb. 8, 1915. Serial No. 6,756. (Cl. 129—4.)



1. In combination with the posts of a binder, a top bar having a pair of movable spring connected locking members for engagement with the respective posts, and means for moving said members to effect the impingement of one locking member against one post and to thereby compress the spring to accentuate such impingement and to subsequently effect the impingement of the other locking member against the other post.

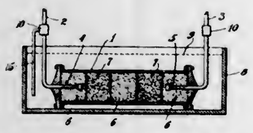
2. In combination with the posts of a binder, a locking member comprising two plates each perforated to accommodate the respective posts said plates being connected intermediate said perforated portions by a spring element, and means for moving said locking member whereby one of said plates will be impinged against one post while the continued movement of the locking member will effect the impingement of the other plate against the remaining post, the action of the spring element be-

ing such that it will accentuate the contact between one plate and post and will resist the contact between the other plate and post.

3. In combination with the posts of a binder, a top bar having a pair of locking members for the posts, means to operate the members and a compressible spring plate rigidly connected to each member whereby when the operating means is moved to actuate the members one of the latter will be impinged against its post by compression of the spring and subsequently the other member will be impinged against the other post.

4. In combination with the posts of a binder, a locking member composed of two plates apertured to receive said posts and of rigid formation throughout their extent, a spring element connecting the inner ends of said plates, and means for operating said plates thus connected, whereby the latter will be impinged successively against said posts.

1,170,055. EXPLOSION-ARRESTER. CARLETON ELLIS, Montclair, N. J. Filed Sept. 22, 1913. Serial No. 791,203. (Cl. 48—192.)



1. An explosion arrester comprising a receptacle packed wtih alternate layers of granular refractory material and metallic heat-conducting material, said last mentioned material being in heat-conducting relation with cooling means.

2. An explosion arrester comprising a receptacle packed with alternate layers of granular refractory material and granular metallic heat-conducting material; said receptacle being water-cooled at a point surrounding said granular heat-conducting material, said receptacle having inlet and outlet pipes on opposite sides of the receptacle projecting into the receptacle a short distance from the side walls thereof and having perforations in that portion projecting through said side walls.

3. An explosion arrester comprising a liquid cooled receptacle having inlet and outlet pipes; said receptacle, having positioned between the inlet and outlet thereof, a quantity of porous heat-conducting material and heat non-conducting material.

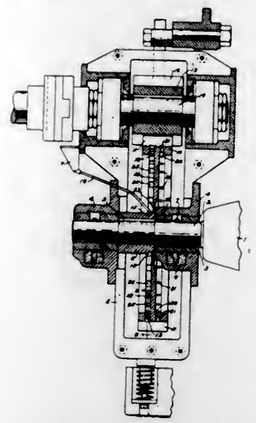
4. An explosion arrester comprising a liquid cooled cylindrical receptacle closed at either end and having at one end an inlet pipe and at the opposite end an outlet pipe, and having throughout its length layers alternately of heat-conducting and heat-insulating porous beds, each comprising finely-divided material maintained at a temperature below the temperature of explosion propagation.

5. An explosion arrester comprising (1) a casing, (2) gas inlet and outlet connections thereto, (3) a separate liquid-introducing connection, (4) a plurality of spaced layers of refractory granular material therein, (5) a layer of metallic heat-conducting material interspaced between said spaced layers, and (6) cooling means disposed in heat-conducting relation to said heat-conducting means, substantially as described.

1,170,056. THERAPEUTIC PREPARATION. MAX ENGELMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 30, 1913. Serial No. 745,175. (Cl. 167—9.)

The new product comprising clay containing silver phosphate precipitated thereon and throughout its mass whereby said silver phosphate is deposited on and distributed over the surface of numerous small particles of clay and the active surface of the silver phosphate thereby greatly extended, said product retaining the bland, protective and drying-up properties of the clay and possessing a strong disinfecting action, substantially as described.

1,170,057. CENTRIFUGAL-LUBRICATING GEAR. WILLIAM C. FARNUM, Winchendon, Mass., assignor of one-half to William M. Whitney, Winchendon, Mass. Filed Apr. 16, 1915. Serial No. 21,914. (Cl. 74—41.)

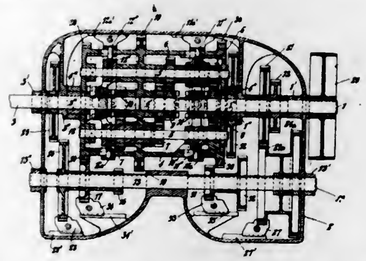


1. A gear wheel having a hub provided with a lubricant reservoir, and a flange portion having peripheral teeth, and a web connecting the hub and flange portion, said flange portion having a lubricant receiving groove formed on its inner surface to receive a lubricant thrown from the hub reservoir by centrifugal force as the gear rotates, and communicating with the spaces between the teeth of the gear.

2. A gear wheel having a hub provided with a groove to hold a lubricant, a web extending from the hub and over which the lubricant may be thrown radially by centrifugal force as the gear rotates, a flange mounted on said web and having a series of teeth on one side and a lubricant receiving groove on the opposite side in communication with the spaces between the teeth to deliver lubricant thereto by centrifugal action as the gear is rotated.

3. A gear wheel having a hub, means for delivering a lubricant to said hub, a web extending from said hub and over the surface of which the lubricant delivered to the hub may be moved by centrifugal action as the gear is rotated, a flange having gear teeth on its outer portion and a circumferential groove on its inner portion intersecting the spaces between the gear teeth to direct lubricant thrown radially of the hub to the gear teeth as the gear is rotated.

1,170,058. VARIABLE-SPEED MECHANISM. ALPHEUS FAY, Louisville, Ky. Filed Feb. 24, 1911. Serial No. 610,658. (Cl. 74—34.)



1. In variable speed mechanism, a driving shaft, a driven shaft, a movable reactive member, a change speed operative connection between the driving shaft and the driven shaft carried by said reactive member and means for eliminating said operative connection and connecting said reactive member directly to the driven shaft, and an operative connection between the reactive member and the driving shaft.

2. In variable speed mechanism, a driving shaft, a driven shaft coaxial with the driving shaft, a reactive member rotatable concentric with said shafts, a change-speed operative connection between said shafts carried by said reactive member, means for eliminating said operative connection and connecting said reactive member directly to said driven shaft, and an operative connection between the reactive member and the driving shaft.

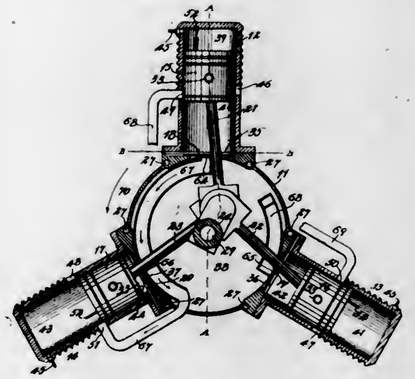
3. In variable speed mechanism, shafts, a reactive member, the shafts being coaxial and the reactive member being concentric with them, a change-speed operative connection between the shafts carried by the reactive member, means for eliminating said operative connection and connecting the reactive member directly with one of said shafts, and an operative connection between the reactive member and the other of said shafts.

4. In a variable speed mechanism, a driving shaft, a driven shaft coaxial with the driving shaft, a reactive member rotatable concentric with said shafts, a change-speed operative connection between said shafts carried by said reactive member, means for varying the speed of the reactive member, means for changing the ratio of change of speed of said operative connection, means for eliminating said operative connection and connecting it directly with said reactive member and an operative connection between the reactive member and the driving shaft.

5. In a variable speed mechanism, a driving shaft, a driven shaft coaxial with the driving shaft, a reactive member rotatable concentric with said shafts, change-speed operative connection between said shafts carried by said reactive member, an intermediate shaft parallel with said shafts, a gear on the reactive member, a gear on the intermediate shaft in mesh therewith, another gear on the reactive member alternatively intermeshing with the aforementioned gears on the reactive member and the intermediate shaft respectively, means for controlling the speed of rotation of the intermediate shaft, whereby the speed of rotation of the reactive member may be varied, means for changing the ratio of change of speed of said operative connection carried by said reactive member, and means for eliminating said operative connection carried by the reactive member and connecting said reactive member directly with said driven shaft, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,170,059. INTERNAL-COMBUSTION ENGINE. PER OLOF FREDLUND, Pasadena, Cal. Filed Nov. 2, 1914. Serial No. 869,914. (Cl. 123—44.)



1. In an internal combustion engine, a plurality of cylinders each with a single bore of uniform diameter, a piston sliding freely in each of said bores dividing the interior of the cylinder into an upper and a lower space, a crank case forming a mixture space below said lower space in the cylinders, a crank shaft in said crank case, a connecting rod connecting each of said pistons to said crank shaft, valve means actuated by said connecting rod and so arranged that an open connection is provided between said mixture space and said lower space during the up stroke of the piston, and open connection being closed during the down stroke of the piston, and conduit means connecting said lower space in each cylinder with a port located in the walls of another cylinder in such a position that it is uncovered and communicates with the space above said piston when said piston is in its lowest position.

2. An internal combustion engine comprising three cylinders set with their axes intersecting and 120 degrees apart, a piston in each cylinder, a crank shaft set at the intersection of the axes of the cylinders, a crank formed on said crank shaft, means for connecting said crank with each of said pistons, means for admitting an explosive mixture to the space below each of said pistons on the up stroke of said piston, and means whereby said mixture is conducted from the space below each of said pistons into the space above the piston in an adjacent cylinder during the time the piston in the adjacent cylinder is at or near its lower position.

3. An internal combustion engine comprising a plurality of cylinders, a piston in each cylinder dividing that cylinder into an upper and a lower space, valve means for admitting an explosive mixture into each lower space during the up stroke of the piston of said space, a crank shaft, means for connecting said pistons to said crank shaft in such a manner that one piston is moving downwardly while another is at its lower stationary position, and means for connecting the space below the downwardly moving piston with the space above the lower stationary piston while the latter piston is at or near said lower stationary position.

4. An internal combustion engine comprising a plurality of cylinders, a piston in each cylinder dividing that cylinder into an upper and a lower space, valve means for admitting an explosive mixture into each lower space during the up stroke of the piston of said space, a crank shaft, means for connecting said pistons to said crank shaft in such a manner that one piston is moving downwardly while another is at its lower stationary position, and means for connecting an inlet port located in the cylinder walls of said last named piston just above the upper edge of said piston when in the extreme lower position of that piston with the lower space of said first named piston.

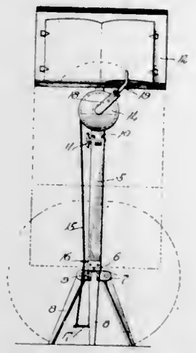
5. An internal combustion engine comprising three cylinders set with their axes intersecting and 120 degrees apart, a piston in each cylinder, a crank shaft, means for connecting said crank shaft with each of said pistons, means for admitting an explosive mixture to the space below each of said pistons on the up stroke of said piston, and means whereby said mixture is conducted from the space below each of said pistons into the space above the piston in an adjacent cylinder during the time the piston in the adjacent cylinder is at or near its lower position.

1,170,060. MUSIC-LEAF TURNER. JOHN O. GREEN, Lost Lake, Alberta, Canada. Filed Feb. 15, 1915. Serial No. 8,423. (Cl. 84—17.)

1. Leaf turning mechanism including the combination with a support, a disk movably mounted on said support, a spring having connection with said disk and said support for normally retaining said disk in a normal position, means including a flexible element for moving said disk, an arm fixed to said disk, and a leaf engaging member having swivel connection with said arm for the purpose specified.

2. Leaf turning mechanism including the combination with a support, a disk movably mounted on said support, a spring having connection with said disk and said support for normally retaining said disk in a normal position, an arm fixed to said disk, a leaf engaging member having

swivel connection with said arm, means including a flexible member trained about said disk for moving the same, and means to actuate said flexible means for the purpose specified.

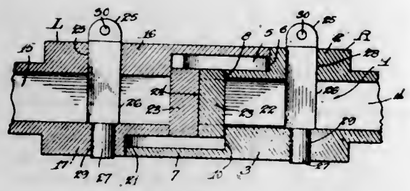


3. Leaf turning mechanism including the combination with a vertical support, a disk movably mounted on said support, said disk being movable in a plane in parallelism with the vertical plane of said support, an arm fixed to said disk and projecting radially beyond the periphery thereof, a leaf engaging member having swivel connection with said arm, a flexible member trained about said disk for operating the same, and means including a coil spring having connection with said disk and said support to return said disk to its normal position for the purpose specified.

4. Leaf turning mechanism including the combination with a vertical support, a disk revolubly mounted on said support, an arm fixed to said disk and projecting beyond the periphery thereof, a leaf engaging member having swivel connection with said arm, means including a flexible element trained about said disk for operating the same, means including a coil spring having a connection with said disk and said support to return said disk to its normal position, and an oscillatory member for actuating said flexible means, substantially as described.

5. Leaf turning mechanism including the combination with a vertical support, a disk revolubly mounted on said support, an arm fixed to said disk and projecting beyond the periphery thereof, a leaf engaging member having swivel connection with said arm, the upper end of said leaf engaging member being bifurcated to engage the sheet of music, means including a flexible element trained about said disk for operating the same, a coil spring having connection with said disk and said support to return said disk to its normal position, and a pivoted member for actuating said flexible means, substantially as described.

1,170,061. CAR-COUPLING. JESSE C. GRIFFITH, Madison, N. C. Filed Dec. 10, 1914. Serial No. 876,523. (Cl. 213—65.)



1. A car coupling including a pair of drawheads, retaining arms disposed at the top of one and bottom of the other of said drawheads and extending into recesses provided in the adjacent edges of said draw-head, and means for securing said retaining arms in said recesses.

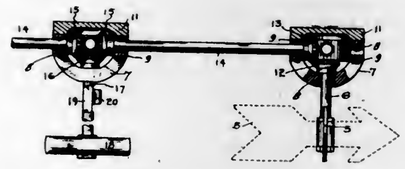
2. A car coupling including a pair of drawheads, retaining arms disposed at the top of one and bottom of the other of said drawheads and extending into recesses provided in the adjacent edges of the draw-heads, a pair of drawhooks mounted for horizontal swinging movement in said drawheads, and means for locking said drawhooks in engagement.

3. A car coupling including a pair of draw-heads, an uper retaining arm provided at the top of one of said draw-heads, a recess provided at the top of the other of said draw-heads for receiving said upper retaining arms, a lower retaining arm provided on the other of said drawheads, a recess provided in the bottom of said last mentioned draw-head for receiving said lower retaining arm, and a pair of draw-hooks provided with curved engaging faces for coupling said pair of draw-heads together.

4. A car coupling including a pair of drawheads, the top wall of one of said draw-heads and the bottom of the other draw-head having extensions thereon, said extensions terminating in an enlarged and curved head, arcuate recesses formed in the adjacent top and bottom walls of the drawheads adapted to receive the extensions, draw-hooks pivotally mounted in the drawheads, and means for securing the drawhooks in engagement with each other.

5. A car coupling comprising a pair of drawheads provided with central chambers, extensions and recesses formed on and in the top and bottom walls respectively, the meeting edges of the top and bottom walls being arcuated, drawhooks pivotally mounted in said chambers, the outer edges of the bills of said hooks being curved and adapted to be engaged with the said arcuate wall edges, and means for holding the drawhooks in engagement.

1,170,062. DIRECTION-INDICATOR HANGER FOR VEHICLES. CHARLES B. HAINES, Indianapolis, Ind. Filed July 16, 1914. Serial No. 851,393. (Cl. 64—14.)



In a hanger for vehicle direction indicator shafts, an annular body secured to the vehicle having shaft-journal openings in a plurality of directions, and a semi-annular depending member having a shaft-journal opening extending substantially at right angles to the plane of the journal openings in the annular body.

1,170,063. CIRCUIT-CLOSER. HENRY J. HEENEY, Roxbury, Mass., assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Filed Nov. 17, 1910. Serial No. 592,765. (Cl. 175—283.)



1. A push-button circuit-closer comprising in combination a contact-maker, a plurality of spring-fingers each provided with means for holding said contact-maker in

circuit-closing position, means normally holding said contact-maker out of contact with said spring-fingers and means movable with respect to said contact-maker for releasing the latter from said spring-fingers.

2. A push-button circuit-closer comprising in combination a contact-maker, a plurality of spring-fingers each provided with means for holding said contact-maker in circuit-closing position, means normally holding said contact-maker out of contact with said spring-fingers, a push-button attached to said contact-maker, and a collar surrounding said push-button and movable relatively thereto for spreading said spring-fingers apart and releasing the said contact-maker therefrom.

3. A push-button circuit-closer comprising in combination a contact-maker, a plurality of spring-fingers each provided with means for holding said contact-maker in circuit-closing position, means normally holding said contact-maker out of contact with said spring-fingers, a circuit-closing element terminating below the ends of said spring-fingers and means movable with respect to said contact-maker for releasing the latter from said spring-fingers.

4. A push-button circuit-closer comprising in combination a tubular casing, a longitudinally-bored stem secured within said casing, spring fingers carried thereby, a pin having its lower portion arranged within the bore of said stem, a contact-maker carried by said pin, a spiral spring surrounding the lower portion of said pin and interposed between said contact-maker and stem, and a push-button secured to the upper portion of said pin and extending beyond said casing.

5. A push-button circuit-closer comprising in combination a contact-maker, a plurality of spring-fingers each provided with a catch for holding said contact-maker in circuit-closing position, means normally holding said contact-maker out of contact with said spring-fingers and means movable with respect to said contact-maker for releasing the latter from said spring-fingers.

[Claims 6 to 14 not printed in the Gazette.]

1,170,064. METHOD OF FORMING CUFF-BUTTONS. JOSEPH L. HERZOG, New York, N. Y. Filed Apr. 30, 1913. Serial No. 764,547. (Cl. 79—3.)

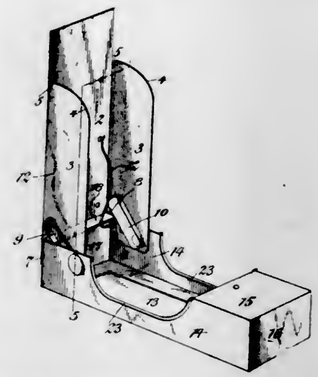


1. The method hereinbefore described of forming one-piece cuff buttons, comprising the partial formation from a ribbed blank of filled stock, of the two disks of metal from the thin portions of said blank, and a connecting bar or post from the rib of said blank, the metal between said disks being removed adjacent the post and the resulting edge of said metal forced against the sides of said post, then curling the edges of said disks over to conceal the extreme edges of the same, and finally bending said disks at an angle to each other.

2. The method hereinbefore described of forming cuff buttons from a single, continuous piece of metal, consisting in first cutting from a ribbed blank of filled stock the partially formed button, the thinner portions of said blank forming the disks, and the rib of said blank forming the connecting bar between said disks; secondly, completing the formation of the thickened connecting bar between said disks by removing the metal adjacent the same and turning the resulting edge against said bar, then cupping and curling the outer edge of said disks to conceal the extreme edges thereof from view, and finally bending the disks at an angle to each other to form the completed button.

3. The method hereinbefore described of forming cuff buttons, comprising the partial formation of the disks from a single, continuous piece of filled ribbed stock, the disks being formed of the thinner portions of said stock, and the connecting bar from the rib of said stock, reducing the thickness of the metal between said disks and adjacent said bar to less than that of the disks, removing this thin metal and pressing the resulting edge against the sides of said bar, curling the outer edges of said disks to conceal the extreme edges thereof from view, and finally bending the disks at an angle to each other to form the completed button.

1,170,065. SHOE-POLISHING CABINET. WILLIAM F. HIRSCHMAN, Buffalo, N. Y. Filed Oct. 19, 1914. Serial No. 867,325. (Cl. 15—58.)



1. A device of the character described comprising a bracket adapted to be mounted on a support, and an arm mounted on said bracket to swing vertically and having a front wall, two side walls projecting rearwardly from the front wall, a top connecting the upper ends of the front and side walls, a bottom connecting the lower ends of the front and side walls, and an upwardly projecting flange arranged on the rear edge of said bottom.

2. A device of the character described comprising a bracket adapted to be mounted on a support and having an upright rear wall and two upright side walls projecting forwardly from said rear wall and each provided in its lower part with a slot which is inclined from its upper rear end toward its lower front end, and a vertically swinging arm having pins arranged in said slots, respectively.

3. A device of the character described comprising a bracket adapted to be mounted on a support and having an upright rear wall and two upright side walls projecting forwardly from said rear wall and each provided in its lower part with a slot which is inclined from its upper rear end toward its lower front end and guards arranged on the inner sides of the side walls opposite said slots, and an arm having a front wall, two side walls which lap the outer sides of the bracket side walls, and pins projecting from the lower parts of the arm side walls inwardly into said slots of the bracket side walls.

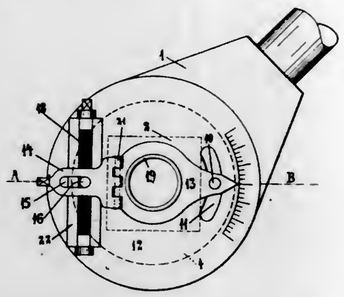
4. A device of the character described comprising a bracket having a rear wall adapted to be mounted on a support and two side walls projecting forwardly from said rear wall and provided at their upper ends with upwardly opening notches and in their lower parts with inclined slots, and a vertically swinging arm having a front wall, two side walls projecting rearwardly from the front wall and provided with pins engaging the slots of the bracket side walls, and a shelf connecting the upper parts of the arm side walls and adapted to engage its lower edge with the notches in the upper ends of the bracket side walls.

5. A device of the character described comprising a bracket having a rear wall adapted to be mounted on a support, and two side walls projecting forwardly from the rear wall and each provided with an inclined slot, and a vertically swinging arm movably connected with said bracket and provided with a front wall, two side

walls which lap the outer sides of the bracket side walls and are provided with pins engaging with said slots, and a bottom connecting the lower ends of the front and side walls of the arm and adapted to engage its rear edge with the lower ends of the bracket side walls.

[Claims 6 to 8 not printed in the Gazette.]

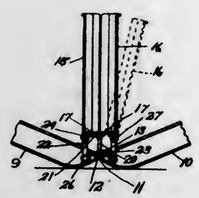
1,170,066. DIE-STOCK. JOHANN FRIEDRICH HOLZSCHEITER, Zurich, Switzerland. Filed Apr. 8, 1914, Serial No. 830,522. Renewed Oct. 27, 1915. Serial No. 58,302. (Cl. 10—116.)



1. The combination with a die-stock of a ring rotatably mounted in said stock, dies also mounted in said stock and arranged in contact with each other and formed with co-acting surfaces so inclined that lateral pressure applied to one of the dies produces a corresponding movement of the other dies toward or away from the center of said ring rotatably mounted in said stock engaging said dies, a lever connected with said ring, a nut and spindle arrangement adapted to rotate said lever, and means to disengage said lever from said nut.

2. A thread cutting device comprising in combination a stock, a plurality of dies mounted therein, a ring arranged to adjust said dies, a lever pivotally connected to said ring provided with a longitudinal slot therein, a straight threaded bolt or spindle rotatably mounted on said stock, and a nut mounted on said spindle having a projection for engaging said slot to move said lever positively or to lock the same.

1,170,067. CIGARETTE-CASE. HERBERT D. HOUGH, Cranston, R. I., assignor to Wightman & Hough Company, Providence, R. I., a Corporation of Rhode Island. Filed Dec. 14, 1914. Serial No. 877,040. (Cl. 206—41.)



1. A case of the character described comprising a pair of hinged lids, a standard mounted on a hinge between said lids, a holder attached to said standard, and springs interposed between the lids and the holder to open the lids and bearing on the holder to centralize the same.

2. A case of the character described comprising a pair of hinged lids, a standard mounted on the lid hinge, a holder attached to said standard, and springs interposed between the lids and the holder to open the lids and bearing on the holder to centralize the same.

3. A case of the character described comprising a pair of hinged lids, a standard mounted on a hinge between said lids, a holder attached to said standard, flexible wires disposed lengthwise of the hinge and located on opposite sides of the holder, and interposed between the lids and the holder to open the lids and bearing on the holder to centralize the same.

4. An article of the character described comprising a pair of hinged lids, a holder formed of two pivoted side members mounted between said lids and flexible means interposed between each side member and its adjacent lid and acting to retain said side members in closed position.

5. A case of the character described comprising two lids hinged together, a holder constructed of two side members hinged together between the lids, and a spring interposed between each side member and each lid to open the lids close said side members and centralize the holder.

[Claims 6 to 9 not printed in the Gazette.]

1,170,068. ROLLER FOR WINDOW-SHADES, SASH-BALANCES, AND THE LIKE. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed June 11, 1913. Serial No. 772,930. (Cl. 156—29.)

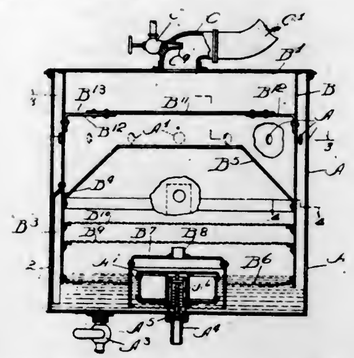
1. An extensible roller of the character described consisting of two sections formed of metallic shells, said shells being of substantially equal outside diameter, and each having a groove extending lengthwise thereof, a hollow cylindrical member secured within the end of one shell and freely slidable in both directions within the end of the other shell, and an open coiled spring located within said other shell and said hollow cylindrical member and adapted automatically to exert its force to extend the shells of the roller.

2. An extensible roller of the character described consisting of two cylindrical shells of sheet metal of practically the same outside diameter, a connecting member for the two shells consisting of a hollow plug secured within one of the shells and freely slidable within the other shell, a thrust member secured within one of the cylindrical shells beyond where the connecting member reaches, and another thrust member secured within the connecting member, a spring within the roller, one end bearing on the thrust member in the roller shell, and the other end bearing on the thrust member within the connecting member tending to force the two roller shells from each other, and means on the thrust members to maintain the ends of the spring central within the roller.

3. An extensible roller of the character described consisting of two cylindrical shells of sheet metal of substantially equal outside diameter, a connecting hollow member for the two sections consisting of a hollow shell secured to one section and freely slidable in both directions in the other section, a thrust member secured in one section and another thrust member secured within said hollow member, said thrust members each having a central flat face surrounded by an inclined wall converging toward said face, and a coil spring within the roller and having its ends abutting said thrust members and adapted to exert its force expansibly to extend the roller, the inclined walls on the thrust members serving to center the said spring within the roller sections.

4. An extensible roller of the character described consisting of two cylindrical metallic shells of substantially equal outside diameter, a connecting member carried by one section and freely slidable in both directions within the other section, a thrust member in each section, a spring between the thrust members and adapted to exert its force expansibly to extend the roller sections, said thrust members being formed with cup-shaped seats having converging walls adapted to engage the ends of the spring to center the same within the roller.

1,170,069. MEANS FOR SUPPLYING AIR AND WATER TO CARBURETERS. ORLAND L. IHRIG, Sunnyvale, Cal., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed July 16, 1914. Serial No. 851,307. (Cl. 98—47.)

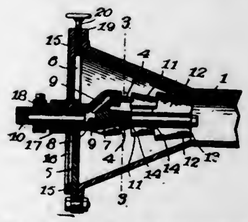


1. An air washer comprising a receptacle adapted to contain a quantity of liquid, an air inlet passage opening below the surface of said liquid, an air outlet passage arranged at the top of said receptacle, an inverted funnel contacting at its lower end with the sides of the receptacle, and a baffle plate of less diameter than the receptacle arranged above said inverted funnel, and a conduit extending from the annular space between the funnel and the receptacle to a point below the surface of the said liquid.

2. An air washer comprising a cylindrical housing closed at the bottom, a casing closed at the top and open at the bottom suspended within said housing its bottom being lifted above the bottom of the housing and upwardly, an extended truncated flange mounted within the casing and open at the top, a baffle plate above the open top of the cone located within the housing and extending outwardly beyond the open mouth of the cone, a discharge pipe leading from the casing above the baffle plate.

3. An air washer comprising a cylindrical housing closed at the bottom, a casing closed at the top and open at the bottom suspended within said housing its bottom being lifted above the bottom of the housing and upwardly, an extended truncated flange mounted within the casing and open at the top, a baffle plate above the open top of the cone located within the housing and extending outwardly beyond the open mouth of the cone, a discharge pipe leading from the casing above the baffle plate, the wall of the casing being apertured above the cone, a discharge pipe located upon the outside wall of the housing communicating with said aperture and discharging downwardly beneath the lower edge of the housing.

1,170,070. STEAM-BLOWER FOR GAS-PRODUCERS. EBENEZER A. W. JEFFERIES, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 8, 1913. Serial No. 788,538. (Cl. 230—13.)



1. In a steam blower for gas producers, a main combining tube, a plurality of steam nozzles within the main combining tube, a separate combining tube in front of each steam nozzle and within the main combining tube, and means arranged axially within the main combining tube for supporting the nozzles and the combining tubes in front of the nozzles, said supporting means being itself supported at the rear of the nozzles.

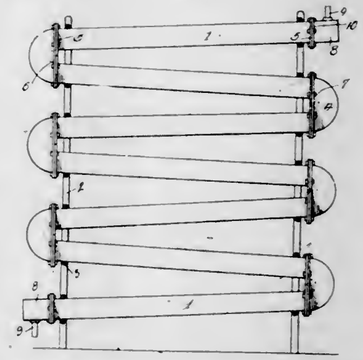
2. In a steam blower for gas producers, a main combining tube, a cover for the outer end of the combining tube, a plurality of steam nozzles within the main combining tube, a separate combining tube in front of each steam nozzle and within the main combining tube, and means arranged axially within the main combining tube and supported by the central portion of said cover for supporting the nozzles and the combining tubes in front of the nozzles.

3. In a steam blower for gas producers, a main combining tube, a plurality of steam nozzles within the main combining tube, a support for the nozzles, a separate combining tube in front of each steam nozzle and within the main combining tube, the combining tubes in front of the nozzles being carried by a common hub, and means for securing the hub to the nozzle support.

4. In a steam blower for gas producers, a main combining tube, a cover for the main combining tube, said cover having air admission openings, a steam nozzle within the main combining tube, and a second combining tube in front of the steam nozzle and within the main combining tube, the steam nozzle and the second combining tube being supported by the cover of the main combining tube.

5. In a steam blower for gas producers, a main combining tube, a cover for the main combining tube, a steam nozzle within the main combining tube, a second combining tube in front of the steam nozzle and within the main combining tube, a pipe at the center of said cover to conduct steam to the steam nozzle, a plate pivoted upon the pipe and lying against the cover, the plate and cover having openings movable into and out of register by rotation of the plate, and means for pressing the plate yieldingly against the cover.

1,170,071. CONDENSER-COIL. JACOB KEAGY, Coshocton, Ohio. Filed Aug. 12, 1912. Serial No. 714,727. (Cl. 257—234.)



A device of the character described comprising end bars, transversely extending rods connecting said end bars, pipe sections extending between said transversely extending rods, elbows connecting said pipe sections outside said rods, and manifolds connected with the upper and lower pipe sections.

1,170,072. BALL-RETAINER. HENRY BRINSER KEIPER, Lancaster, Pa. Filed Feb. 3, 1913. Serial No. 745,988. (Cl. 64—59.)

1. A ball retainer and separator comprising a substantially flat ring-shaped base having its marginal portions

or edges upturned and formed with a series of opposed approximately semi-circular recesses to provide seats for a series of balls, the upturned portion of the outer margin being extended in the form of spaced projections enlarging toward their upper ends so as to provide openings therebetween which are circular in form but slightly less than a complete circle, said projections having their free ends turned inwardly over said flat base and said free ends of adjacent projections having their opposed sides curved to conform to the curvature of an interposed ball, the device being adapted to confine a series of balls between said base and upturned marginal portions and the free ends of said projections with the balls resting on the base and projecting therefrom in three directions.



2. A ball-retaining and separating device comprising an annular base portion having an upturned inner edge with a series of substantially semi-circular recesses therein of less height than the diameter of the ball to be retained and a circular series of projections extending from the outer edge thereof and separated by openings of circular form of less than a complete circle and of less width than the balls to be retained but adapted to embrace more than one-half the diameter of a ball, the free ends of said projections extending inwardly over the base-ring and having their opposed sides curved to conform to the curvature of the balls and overlapping the balls on both sides of a line extending through the center of the ball.

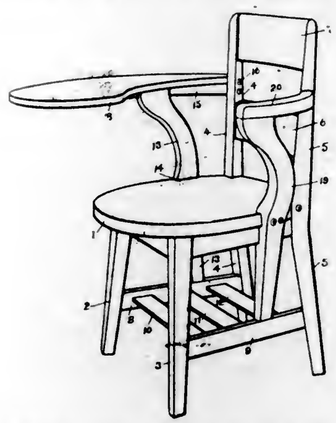
3. A ball-retaining and separating device comprising a flat annular base portion having an upturned inner edge extending substantially at right angles thereto with a series of substantially semi-circular recesses therein of less height than the diameter of the ball to be retained and a circular series of projections extending from the outer edge thereof and substantially at right angles thereto and separated by openings of circular form but less than a complete circle and of less width than the balls to be retained but adapted to embrace more than one-half the diameter of a ball, the free ends of said projections extending inwardly over the base-ring and having their opposed sides curved to conform to the curvature of the balls and overlapping the balls on both sides of a line extending through the center of the ball.

1,170,073. RESTAURANT-CHAIR. JOHN T. KENEALY and WALTER A. NAYLON, Rochester, N. Y. Filed Dec. 19, 1913. Serial No. 807,764. (Cl. 155—3.)

1. A chair comprising a seat, legs supporting said seat, a support rising from one side of said seat and back of the center line thereof, said support being curved forward at the top, a table supported from said support, and curved around over the edge of said seat to approximately the middle of the front of said seat, the space in front of the support being unobstructed.

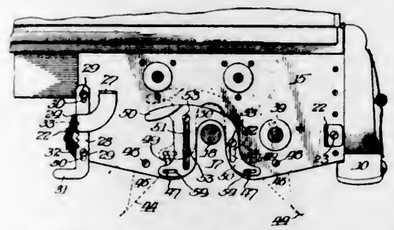
2. A chair comprising a seat, legs supporting said seat, a support rising from one side of said seat and back of the center line thereof, said support being curved forward at the top, a table supported from said support, and curved around over the edge of said seat, to approximately the middle of the front of said seat, the space in front of the support being unobstructed, and an arm at the other side of the seat serving as a back rest when the seat is occupied by a person sitting diagonally thereon with his limbs extending over the side of the corner of the chair.

3. A chair comprising a seat, legs supporting said seat, said legs being short at the front and long at the rear, the rear legs extending above the seat and forming a back for said chair, a support rising from one side of said seat near the rear thereof and curved forward at the top, a table supported at its rear end from one of said legs and at an intermediate point from said support, said table extending around over a portion of the front edge of said seat, and a similar support on the opposite side of said



chair and an arm connected at one end to a rear leg and at the other end to said support.

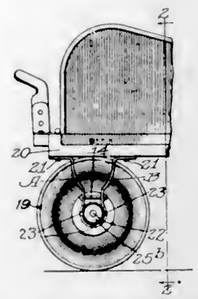
1,170,074. CLEANING DEVICE. EDWARD KRANTZ, Chicago, Ill. Filed May 4, 1914. Serial No. 836,142. (Cl. 15—60.)



1. In a cleaner of the character described having side walls and a bottom closure pivotally mounted therein, the combination therewith of means for moving said closure pivotally, said means comprising a finger piece slidably mounted on said side wall, said finger piece having a slotted opening, a projection on said closure spaced from the pivot thereof, one of said side walls having a clearance opening in which said projection travels with an arcuate movement when the closure is moved on its pivot, said projection being also in the slotted opening of said finger piece, said slotted opening being adapted to permit arcuate movement of said projection when the closure is moved on its axis.

2. In a cleaner of the character described, the combination of a casing having side walls, and a pair of bottom closures spaced apart and pivotally mounted in said side walls, one of said side walls having two clearance openings therein, each of said closures having an operating projection adapted to travel with an arcuate movement in said openings respectively when the closures are pivotally moved, a finger piece mounted on said side wall having said openings, said finger piece being operatively connected to each of said projections, said finger piece having a finger engaging portion thereof lower than the top of said cleaner when in operative position, the arrangement being such that when said cleaner is lifted horizontally off the floor with the thumb of the operator on the top thereof said finger piece may be engaged by the operator's finger and caused to move said closures from a closed to an open position, and spring means adapted to retract said closures into a closed position when the operator's finger is removed from said finger piece.

1,170,075. WHEEL-MOUNTING. EDWARD KRANTZ, Chicago, Ill. Filed Apr. 22, 1915. Serial No. 23,026. (Cl. 64—14.)

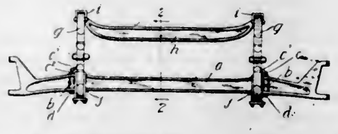


1. A wheel mounting comprising in combination a metallic strap bent substantially U-shaped intermediate its ends and the end portions of the two legs thus formed bent to form supports, the legs of said U-shaped portion being formed at the crotch thereof to accommodate a bearing within the crotch, said legs being spaced apart more widely than the width of said bearing at a place intermediate the crotch and the ends of the legs, said legs being spaced apart less widely than the width of the bearing intermediate the crotch and said more widely spaced apart portion whereby said bearing may be placed between said legs at said more widely spaced apart portion and forced into the crotch against the spring pressure resistance of said legs, said legs being apertured to receive a bolt, and a bolt in said apertures adapted to draw said legs toward each other whereby a bearing in said crotch may be clamped tightly therein, and a bearing so clamped in said crotch.

2. A wheel mounting comprising in combination a metallic strap bent substantially U-shaped intermediate its ends, means for securing said strap in a relatively fixed position, a bearing element in the crotch of said U-shaped portion, edge portion of said strap being turned over to hold said bearing against lateral displacement in said crotch, the legs of said U-shaped portion being spaced apart a greater distance than the width of said bearing at a place between the ends of said strap and the crotch thereof whereby a bearing may be there positioned between said legs and passed into the crotch and into engagement with said inwardly turned portions, and means for drawing said legs toward each other whereby said bearing is clamped in said crotch.

3. A wheel mounting comprising a metallic strap bent substantially U-shaped intermediate its ends and the end portions of the two legs thus formed bent to form supports, each of said supports having an opening for a screw or the like, one of said openings being elongated to provide adjustment of a shaft carried by said mounting, a bearing in the crotch of said U-shaped element, and means intermediate said bearing and the ends of the strap for clamping said legs upon said bearing to hold the same securely.

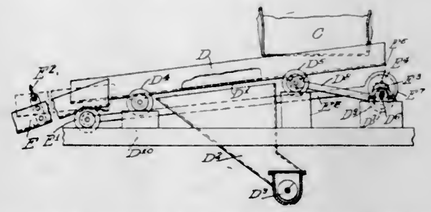
1,170,076. MEANS FOR ATTACHING SPRINGS TO THE AXLES OF VEHICLES. FRANK J. LAHER, Portland, Oreg. Filed Apr. 16, 1915. Serial No. 21,882. (Cl. 267—31.)



1. In a vehicle running-gear, in combination with an axle having a perforation, an elliptic spring, means for fastening said spring transversely on the axle, such means consisting of U-bolts encircling one member of the spring, a plate to which the extremities of such U-bolts are fastened, a tie-plate, a bolt inserted through said spring-member and said tie-plate, and a bolt inserted through said perforation of the axle and said tie-plate.

2. In a vehicle running-gear, in combination with an axle having a perforation at each end, a pair of elliptic springs, means for fastening each of said springs transversely on the axle, such means consisting of U-bolts encircling one member of the spring, a plate to which the extremities of such U-bolts are fastened, a tie-plate, a bolt inserted through said spring-member and said tie-plate, a bolt inserted through said perforation of the axle and said tie-plate and a transverse bar connecting the other members of said pair of elliptic springs.

1,170,077. CAR-LOADING APPARATUS. RAYMOND G. LAWRY, Chicago, Ill., assignor to Roberts & Schaefer Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 5, 1915. Serial No. 6,217. (Cl. 193—11.)



1. Means for discharging materials and the like comprising a chute having one end pivoted and held against vertical displacement, means for reciprocating the chute in a horizontal plane and means for raising and lowering the free end of it during operation independent of such reciprocation to vary its angle of inclination.

2. Means for conveying and discharging fragmentary materials and the like comprising an inclined feed chute and means for reciprocating it in a generally horizontal direction, a discharge chute having its axis in the same vertical plane as, and pivoted at one end, immediately below the discharge end of the feed chute, separate means for reciprocating it in a horizontal plane, means for controlling such reciprocation and means for raising and lowering the free end of the chute to vary its angle of inclination without longitudinally displacing it.

3. Means for conveying and discharging fragmentary materials and the like comprising an inclined feed chute and means for reciprocating it in a generally horizontal direction, a discharge chute having its axis in the same vertical plane as, and pivoted at one end immediately below the discharge end of the feed chute and separate means for reciprocating it in a horizontal plane.

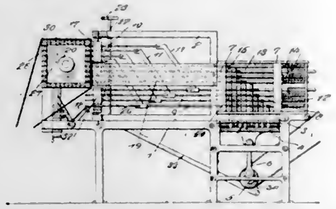
4. Means for conveying and discharging fragmentary materials and the like comprising an inclined feed chute and means for reciprocating it in a generally horizontal direction, a discharge chute having its axis in the same vertical plane as, and pivoted at one end immediately below the discharge end of the feed chute, separate means for reciprocating it in a horizontal plane and means for raising and lowering the free end of the chute to vary its angle of inclination without longitudinally displacing it.

5. Means for conveying and discharging fragmentary materials and the like comprising an inclined feed chute and means for reciprocating it in a generally horizontal direction, a discharge chute having its axis in the same vertical plane as, and pivoted at one end immediately below the discharge end of the feed chute, separate means for reciprocating it in a horizontal plane and means for controlling such reciprocation.

1,170,078. PATTERN DUPLICATING AND REVERSING MACHINE. HARRY LEA, Thompsonville, Conn. Filed Oct. 22, 1915. Serial No. 57,361. (Cl. 164—114.)

1. A device of the class described, including a base, a pattern cylinder, a supporting frame, needles carried

thereby, a plurality of punches controllable by said needles, and means for altering the relative positions of said pattern cylinder and needles for duplicating or reversing a design formed by the latter.



2. A device of the class described, including a base, a frame mounted on said base, a pattern cylinder pivotally and slidably movable on said base, a plurality of needles, a plurality of punches controllable by said needles and mounted on said base, means for raising or lowering certain of said needles, and means for raising and lowering said cylinder, said cylinder and needles adapted to coact, whereby to control the disposition of said punches.

3. A pattern duplicating and reversing card punching device including a base, a frame on said base, said frame comprising a U-shaped body, a plurality of needles carried by said frame and slidably mounted therein, adjusting blocks for certain of said needles, a plurality of punches, certain of said punches being controllable by needles whereby to duplicate a design on the pattern cylinder.

4. In a device of the class described, the combination with a pattern roller and a plurality of punches, of a plurality of sets of laterally adjustable needles co-acting with a design carried on said pattern roller to control certain of the punches, a non-adjustable set of needles, and means to move the pattern roller into and out of engagement with certain of the adjustable sets of needles and the non-adjustable set to reverse a design.

5. A pattern duplicating and reversing mechanism, including, in combination with a base, a frame on said base, having a plurality of punching elements thereon, a pattern roller vertically and horizontally movable on said frame, a plurality of needles coacting therewith to reproduce a design carried on said cylinder, and adjusting blocks through which said needles are disposed for reversing the design, as and for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,170,079. HORSESHOE. LORENTZ LEHOTZKÝ, Bridgeport, Ohio, assignor of one-third to Albert Holdermann and one-third to Oscar Holdermann, Benwood, W. Va. Filed Aug. 11, 1915. Serial No. 44,913. (Cl. 168—4.)

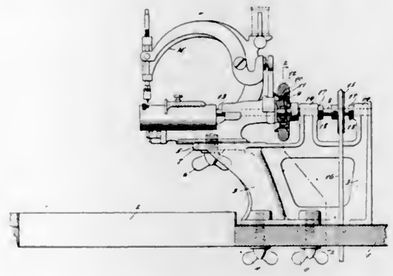


1. A horseshoe comprising a shoe body having a downwardly projecting tenon formed on each heel portion thereof, a heel-calk having a mortise for receiving said tenon and provided with a longitudinally extending bore at the rear of said mortise and with a curved groove in front of said mortise, said tenon having a bore therethrough which registers at one end with the calk bore and at the other end with said groove, and a pin directed through said registering passages.

2. A horseshoe comprising a shoe body having a downwardly projecting tenon formed on each heel portion thereof, a heel-calk of substantially inverted L-shape embracing said tenon, said calk having a tenon-receiving mortise therein, and a removable pin rigidly connecting said calk to said tenon, said calk and tenon having registering longitudinally extending passages therein in which said pin is received, the foremost of said passages being slightly curved for deflecting the point of said pin out of line with its axis.

3. A horseshoe comprising a shoe body having a downwardly projecting tenon formed on each heel portion thereof, a heel-calk adapted for seating against the under side of said heel portion in embracing relation to said tenon, said calk having a mortise therein for receiving said tenon, said calk having a mortise therein for receiving said tenon, said calk having a forward shoe-underlying extension of less thickness than said tenon, and a removable pin connecting said calk to said tenon, the rear portion of said calk and said tenon having registering pin-receiving bores therein and the forward extension of said calk having a curved groove therein which registers with the bore in the tenon, said groove being designed to receive the point of said pin and to deflect the latter from a straight course.

1,170,080. SEWING-MACHINE SUPPORTING AND DRIVING DEVICE. CHARLES LURZ, New York, N. Y. Filed June 7, 1915. Serial No. 32,650. (Cl. 74—21.)



1. A sewing machine supporting and driving device comprising a standard having at its upper side a laterally projected machine-supporting bed overhanging its base, a drive shaft supported in a bearing on said standard, and a clutch member on the shaft for engagement with the machine on said bed.

2. A sewing machine supporting and driving device comprising a standard having at its upper side a laterally projected machine-supporting bed overhanging its base, a drive shaft supported in a longitudinally adjustable position in a bearing on said standard, and a clutch member on the shaft for engagement with a machine on said bed.

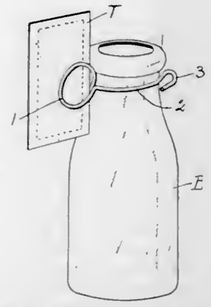
3. A sewing machine supporting and driving device comprising a standard having at its upper side a laterally projected machine-supporting bed overhanging its base, said bed being provided with an elongated slot to adjustably receive a machine fastening device, a drive shaft supported in a bearing on said standard in the direction of length of said slot in the bed, and a clutch member on the shaft for engagement with a machine on said bed.

4. A sewing machine supporting and driving device comprising a standard having at its upper side and at one end thereof a laterally projected machine-supporting bed overhanging its base and adjacent its opposite end having an arm provided with a bearing, a drive shaft supported in said bearing, and a clutch member on the shaft at that end thereof adjacent the bed for engagement with a machine on said bed.

5. In combination, a work-table, a machine supporting and driving device comprising a standard detachably connected with said table at one edge thereof and having at its upper side a laterally projected machine-supporting bed overhanging said edge of the table, a machine detachably supported on said bed, a drive shaft mounted in said machine, a pulley attached to said shaft, a drive shaft supported in a bearing on said standard, and a clutch member on the latter drive shaft in operative engagement with said machine pulley.

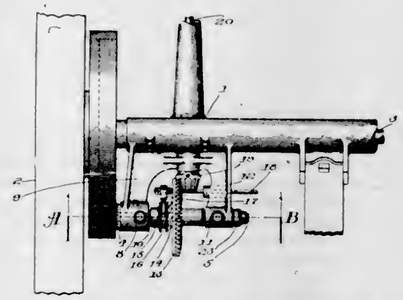
[Claim 6 not printed in the Gazette.]

1,170,081. TICKET-HOLDER. WILLIAM R. MCCAY, New Castle, Pa. Filed Feb. 18, 1915. Serial No. 9,198. (Cl. 40—11.)



A device of the character described comprising a single length of wire bent intermediate its length to afford a plurality of substantially concentric coils, the free end portions of the wire being reversely curved and radiating from the axial center of the coils and disposed in substantial alinement, said free end portions occupying a plane parallel to the axial center of the coil, the extremity of one free end portion being formed into an eye and the similar extremity of the second free end portion being formed into a hook, said hook and eye occupying perpendicularly related planes, the hook being disposed in a plane substantially parallel to the coils.

1,170,082. POWER-TRANSMISSION MECHANISM. RICHARD E. MCINTIRE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 9, 1913. Serial No. 778,015. (Cl. 74—7.)



1. A power transmitting device comprising a pinion having integral therewith a cylindrical chambered bearing member terminating in an angular extension.

2. A power transmitting mechanism including, in combination, a pinion having integral therewith a cylindrical chambered bearing member terminating in an angular extension, and a bearing box surrounding said bearing member.

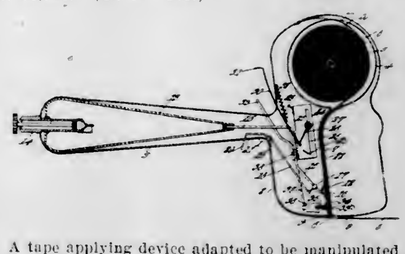
3. A power transmitting mechanism including, in combination, a pinion having integral therewith a cylindrical bearing member terminating in an angular extension, and a clutch member slidably mounted upon said angular extension.

4. A power transmitting mechanism including, in combination, a pinion having integral therewith a cylindrical chambered bearing member terminating in an angular extension, and a shaft extending longitudinally through said extension and bearing member.

5. A power transmitting mechanism including, in combination, a shaft, a pinion secured to said shaft, said pinion having integral therewith a cylindrical bearing member terminating in an angular extension, a gear member journaled upon said shaft and provided with clutch teeth, and a clutch member slidably mounted upon said angular extension and adapted to engage with said clutch teeth.

[Claim 6 not printed in the Gazette.]

1,170,083. TAPE-APPLYING DEVICE. PORT RICO MARSHALL, Horton, Kans. Filed July 9, 1915. Serial No. 38,948. (Cl. 91—145.)



1. A tape applying device adapted to be manipulated by the hand and comprising a frame having a head and handle, tape holding means carried by said frame, said head having an outlet slot for the tape, means for guiding the tape from said tape holding means to said slot, a water reservoir carried by the frame, a tube connected to said reservoir to conduct water for spraying the tape and having a controlling valve, a cutter carried by the frame for cutting the tape adjacent the slot, feeding means carried by the frame for advancing the tape, and independent actuating means for said valve, blade and feeding means and adapted to be operated by the thumb and fingers of a hand grasping said handle.

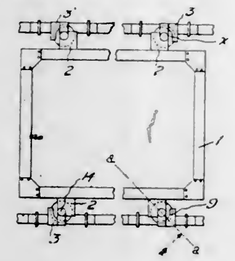
2. A tape applying device comprising a casing having a hollow head and handle, tape holding means within one end portion of said head, a tape delivery tube extending from said means to the opposite end of the head, the last mentioned end of the head having a slot registering with said tube, a water reservoir within the handle, a spray nozzle associated with said tube for moistening the tape, a water tube connecting said reservoir and nozzle and having a controlling valve, a cutter associated with the first mentioned tube for severing the tape, a dog operatively mounted within said head and coöperable with the first mentioned tube to feed the tape therethrough, and actuating devices for said valve, cutter blade and dog and adapted to be operated by the thumb and fingers of a hand grasping said handle.

1,170,084. SUSPENSION DEVICE. GEORGE S. MATTHEWS, Kansas City, Mo., assignor of one-half to Augustine Duehler, Kansas City, Mo. Filed Jan. 16, 1914. Serial No. 812,448. (Cl. 21—50.)

1. In a suspension device for vehicles, a plurality of complemental socket members, each having a concave face, one of said members being carried by the frame of the vehicle, the other of said members being mounted slightly below the horizontal plane and substantially out of alinement with said first named member, and a spherical resilient device housed between said concave faces to sepa-

rate said socket members and permit of free rotative movement of the resilient device between said socket members.

2. In a suspension device for road vehicles, a plurality of upper and lower socket members, a substantially spherical resilient device adapted to be interposed between said socket members to maintain said members out of contact with each other, and means carried by the lower member to engage the upper member to permit limited universal movement of the upper socket member with relation to the lower socket member.



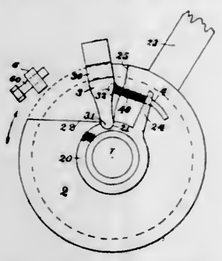
3. In a device of the class described, complemental socket members each having a concave face at substantially the side thereof, said members being arranged to house a substantially resilient spherical device which operates to maintain said socket members in their separated positions, the socket members being so positioned with relation to each other that the spherical device may be rotated within the socket.

4. In a device of the class described, a plurality of complemental socket members, some of which are adapted to be mounted upon the running gear of the vehicle, while other socket members are adapted to be mounted upon the vehicle frame, the frame socket members being positioned out of vertical alinement with the running gear socket members, and a substantially spherical resilient device interposed between each pair of the socket members to maintain them out of contact with each other, whereby the movement of the socket members is opposed by the resilient members in substantially all directions.

5. A suspension device comprising a plurality of complemental socket members each having a concave face and one side substantially cut away, a resilient spherical member separating the socket members, said socket members when in operative position with relation to each other leaving an irregular space between them and completely around the spherical member.

[Claims 6 to 11 not printed in the Gazette.]

1,170,085. CLUTCH FEEDING MECHANISM. THORSTEN H. MAURSETH, Seattle, Wash., assignor of one-half to Louis Beirl, Seattle, Wash. Filed Dec. 17, 1914. Serial No. 877,804. (Cl. 74—53.)



1. An intermittent feed device comprising a driven member having an axially projecting flange which is concentric with its rotative axis, a driving member pivoted concentric with and comprising a disk adapted to largely close the space inclosed by the said flange, said driving member having a hub concentric with the flange and provided with an axially extending peripheral groove, a feed dog having a transverse slot spanning the flange and its inner end entering the groove in said hub, the disk having a segment cut away to permit insertion and removal of the dog without disturbing the other parts, and a securing member adapted to be secured to the driven member and engaging outwardly facing surfaces of the driving member and the dog to retain the whole in place.

2. An intermittent feed device comprising a wheel-like driven member having peripheral, axially-projecting flanges and a central hub, a driving member comprising a disk having a hub pivoted upon the hub of the driven member and a sector cut away and extending from its hub outward, said hub of the driving member having an axially extending peripheral groove extending to the outer face of the disk within said cut away sector, a feed dog having a transverse slot spanning the flange of the driven member and its inner end entering the groove in the hub of the driving member, a spring connecting said dog and the driving member and acting to throw the dog toward one side of said cut away sector, a disk and means for securing it to the driven member and engaging the driving member and feed dog to prevent their separation from the driven member.

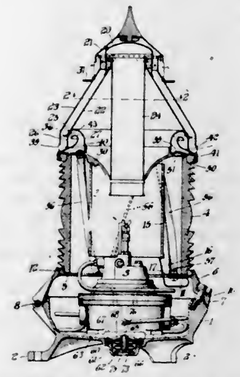
3. An intermittent feed device comprising a wheel-like driven member having peripheral axially-projecting flanges and a central hub, a driving member comprising a disk having a hub pivoted upon the hub of the driven member and a sector cut away and extending from its hub outward, said hub of the driving member having an axially-extending peripheral groove extending to the outer face of the disk within said cut away sector, a feed dog having a transverse slot spanning the flange of the driven member and its inner end entering the groove in the hub of the driving member, a spring connecting said dog and the driving member and acting to throw the dog toward one side of said cut away sector, and means for locking said parts together to prevent separation.

4. An intermittent feed device comprising a wheel-like driven member having peripheral axially-projecting flanges and a central hub, a driving member comprising a disk having a hub pivoted upon the hub of the driven member and a sector cut away and extending from its hub outward, said hub of the driving member having an axially-extending peripheral groove extending to the outer face of the disk within said cut away sector, a feed dog having a transverse slot spanning the flange of the driven member and its inner end entering the groove in the hub of the driving member, the driving member having a lug projecting toward the driven member adjacent the cut away sector and having a hole therethrough alined with the feed dog, the feed dog having a recess alined with said hole, a headed bolt having its stem passed through the hole in the lug and its head entering the recess in the dog, and a coiled spring surrounding said bolt between lug and dog and acting under compression to hold the dog over toward one side of the cut away sector of the driving member.

5. An intermittent feed device comprising a wheel-like driven member having peripheral axially-projecting flanges and a central hub, a driving member comprising a disk having a hub pivoted upon the hub of the driven member and a sector cut away and extending from its hub outward, said hub of the driving member having an axially-extend ing peripheral groove extending to the outer face of the disk within said cut away sector, a feed dog having a transverse slot spanning the flange of the driven member and its inner end entering the groove in the hub of the driving member, the driving member having a lug projecting toward the driven member adjacent one edge of the cut away sector, a spring connecting said lug and the dog to hold the dog yieldingly toward one side of said cut away sector, and a locking disk and means for securing it to the driven member and overlapping the driving member and the inner end of the dog to prevent the separation of said parts.

[Claim 6 not printed in the Gazette.]

1,170,086. MARINE LANTERN. ELOF H. MEDÉN, Philadelphia, Pa., assignor to American Gasaccumulator Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 3, 1915. Serial No. 37,880. (Cl. 240—21.)



1. In a lantern, the combination of a conduit for conveying from the lantern the bases of combustion and heated air, a casing extending around said conduit and forming a substantially air-tight insulating space surrounding the same, and a casing extending around the upper portion of the first-named casing and being spaced therefrom to form a chamber surrounding the said upper portion of the said first-named casing, said chamber communicating at its upper and lower ends with the air.

2. A lantern comprising a conduit for conveying the gases of combustion and heated air from the lantern, a hood surrounding the said conduit said hood having double walls the inner wall being spaced from the said conduit intermediate its upper and lower ends and having substantially air-tight connection with the said conduit adjacent to its upper and lower ends to form a substantially air-tight chamber surrounding said conduit and the outer wall of said hood being spaced from the inner wall thereof to form a space surrounding the said inner wall such space having communication at its upper and lower ends with the air, and means for supporting the said hood together with the said conduit.

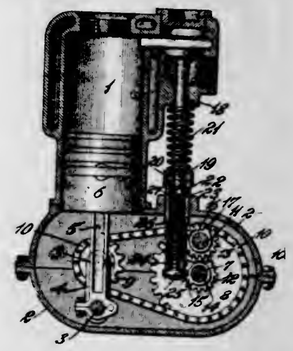
3. In a lantern, the combination of a conduit for conveying from the interior of the lantern gases of combustion and other gases, a hood surrounding the said conduit and contacting therewith adjacent to its upper and lower ends and being spaced therefrom between the said points of contact, said hood comprising a portion having double walls spaced from each other, the space between the said walls being open at the top and at the bottom and said hood being provided with means whereby cool air may be admitted to the interior of the said lantern without contacting with said conduit and means for supporting the said hood together with the said conduit.

4. A lantern comprising a conduit for conveying combustion and other gases from its interior, a truncated cone-shaped member having connection with the said conduit at its upper end, said member flaring downwardly and away from the said conduit and surrounding the same, an inverted truncated cone-shaped member extended around and contacting with the said conduit adjacent to its lower end, and an intermediate annular member having connection at its lower end with the upper end of the said inverted truncated cone-shaped member and flaring upwardly and outwardly and being bent and extended downwardly, and the said outwardly and downwardly extended portion having connection with the lower end of the said truncated cone-shaped member.

5. A lantern comprising a conduit for conveying combustion and other gases from the interior thereof, a truncated cone-shaped member having connection with the said conduit adjacent its upper end, means surrounding and contacting with the said conduit adjacent to its lower end said means flaring upwardly and outwardly and having connection with the lower end portion of the said truncated cone-shaped member to form therewith an annular space surrounding the said conduit, a truncated cone-shaped member surrounding and being spaced from the first-named truncated cone-shaped member, the space between the said members being open at top and bottom, the outside member having openings to permit the entry of cool air into the interior of said lantern, means for preventing the passage of water through said openings into the interior of the said lantern, and means for supporting the several parts of the structure hereinbefore enumerated.

[Claims 6 to 9 not printed in the Gazette.]

1,170,087. VALVE-OPERATING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ONESIME E. MICHAUD, St. Louis, Mo. Filed Jan. 9, 1915. Serial No. 1,275. (Cl. 123—91.)



1. A valve operating mechanism for internal combustion engines comprising a valve, a rod for operating said valve, said rod having members constituting shoulders, and tappets mounted adjacent to said rod and rotating in opposite directions, said tappets being arranged to engage said members of said rod alternately to open and close said valve.

2. A valve operating mechanism for internal combustion engines comprising a valve, a rod for operating said valve, said rod having members constituting shoulders, two shafts arranged one above the other at one side of said rod, and a sleeve secured to each shaft and having a projection capable of engaging one of said members of said rod, said shafts being rotated in opposite directions.

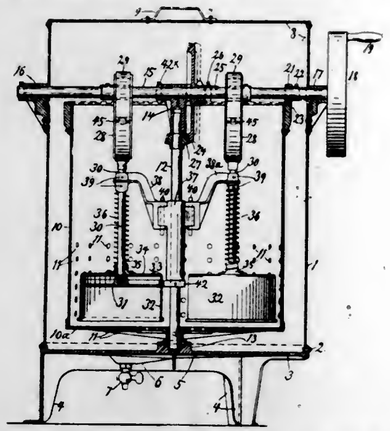
3. A valve operating mechanism for internal combustion engines comprising a valve, a rod for operating said valve, said rod having spaced members connected thereto which constitute shoulders, two shafts mounted adjacent to said rod and geared together to rotate in opposite directions, and a cam secured to each shaft and intermittently engaging one of the shoulders of said rod.

4. A valve operating mechanism for internal combustion engines comprising a valve, a rod for operating said valve, said rod having a collar fixed thereto, a member movably mounted on said rod, the movement of said member being limited in one direction, and tappets mounted adjacent to said rod and operated in opposite directions, said tappets engaging said collar and said member alternately to open and close said valve.

5. A valve operating mechanism for internal combustion engines comprising a valve, a rod for operating said valve, said rod having a collar integral therewith, a plunger slidably mounted in said rod and having a head larger than said rod, said head of said plunger normally engaging the end of said rod, a spring holding said plunger in its normal position, and tappets mounted adjacent to said rod and operated in opposite directions, said tappets engaging said collar and said head alternately to open and close said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,170,088. DRY-CLEANING MACHINE. ANDREW B. MILLER, Baldwin, Wis., assignor of one-fourth to Rasmus Johnson, one-fourth to Horace C. Nelson, and one-fourth to Edward Christensen, Baldwin, Wis. Filed Apr. 29, 1915. Serial No. 24,786. (Cl. 68—19.)



1. In a machine of the class described, the combination with a cylindrical tub having in its lower part an outlet valve and on its top a cover, a vertical shaft journaled centrally upon the bottom of the tub, a member having a vertical journal box for the upper end of said vertical shaft and also integral therewith a box for a horizontal shaft, two other journal boxes secured to the top of the tub at diametrically opposite points thereof, a horizontal operating shaft mounted in said two bearings and in the first mentioned horizontal bearing, and means at one end of said horizontal shaft for applying rotary power to it; a bevel gear and a bevel pinion slidably keyed on the horizontal shaft and provided with means for holding each of them in two different positions on the shaft, a pinion fixed on the vertical shaft in a position to be engaged by the bevel gear, a perforated cylinder open at the top and having a bottom fixed on the lower end of the vertical shaft and at its upper end an annular bevel gear in a position to be engaged by the bevel pinion on the horizontal shaft; a cross-head slidable on the vertical shaft and having two oppositely directed radial members, two pounders arranged one below each radial member and connected thereto, means on the horizontal shaft for imparting vertical reciprocating movement to the cross-head, and operative connection between said means on the shaft and the cross-head.

2. In a machine of the class described, the combination with a cylindrical tub having a cover and in its lower portion an outlet valve, a vertical shaft journaled centrally upon the bottom of the tub, a member having a bearing for the upper end of said vertical shaft and also integral therewith a horizontal bearing, a horizontal operating shaft journaled in the latter bearing and having also two other bearings secured to the top of the tub one near each end of the shaft, means on said horizontal shaft for imparting rotary movement to it, a bevel gear and a bevel pinion slidably keyed on the horizontal shaft and provided with means for holding each of them in two different positions on the shaft, a pinion fixed on the vertical shaft in a position to be engaged by the bevel gear on the horizontal shaft, a perforated cylinder open at its top and having its bottom fixed on the lower end of the vertical shaft, and its upper end provided with a circular rack in a position to be engaged by the bevel pinion on the horizontal shaft; a cross head slidable on the vertical shaft and having two oppositely directed horizontal radial arms, two dashers having rods fixed in said radial arms, means on the horizontal shaft adapted to impart vertical reciprocating movement of the cross-head and pounders, and operative connection between said means on the shaft and the cross-head; said operative connection and said radial arms of the cross-head being easily detachable from the horizontal shaft and from the cross-head.

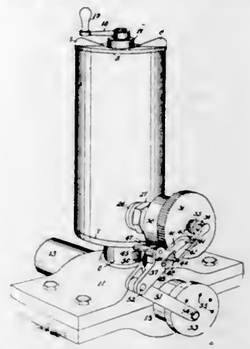
3. In a machine of the class described, the combination with an outer tub designed to stand still, of a drive shaft journaled across the top thereof and having slidably held thereon a small and a large bevel gear, a block forming a horizontal bearing for said shaft near the large gear and forming also a vertical bearing, a vertical shaft journaled in said vertical bearing and centrally upon the bottom of the tub; a small bevel gear fixed on the vertical shaft in position to be driven by the large bevel gear on the drive shaft; a perforated inner tub having its bottom centrally secured on the vertical shaft and its upper edge provided with an annular bevel gear arranged to be engaged by the small bevel gear on the drive shaft when so desired; pounders arranged within the inner tub and having pounder rods with yokes at the upper ends, eccentrics fixed on the horizontal shaft and operating in the yokes to reciprocate the pounders; said yokes being easily detachable from the eccentrics; a cross-head slidable on the vertical shaft and having horizontal arms detachably secured to the cross-head and fixed to the pounder rods; rollers mounted in the upper end of the outer tub for guiding the upper end of the inner tub, and means for rotating the drive shaft.

4. In a machine of the class described, the combination with an outer tub designed to stand still, of a drive shaft journaled across the top thereof and having slidably held thereon a small and a large bevel gear, a block forming a horizontal bearing for said shaft near the large gear and forming also a vertical bearing, a vertical shaft journaled in said vertical bearing and centrally upon the bottom of the tub, a small bevel gear fixed on the vertical shaft in position to be driven by the large bevel gear on the drive shaft; a perforated inner tub having its bottom centrally secured on the vertical shaft and its upper edge provided with an annular bevel gear arranged to be engaged by the small bevel gear on the drive shaft when so desired; pounders arranged within the inner tub and having pounder rods with yokes at the upper ends, eccentrics fixed on the horizontal shaft and operating in the yokes to reciprocate the pounders; said yokes being easily detachable from the eccentrics; a cross-head slidable on the vertical shaft and having horizontal arms detachably secured to it and fixed to the pounder rods; rollers mounted in the upper end of the outer tub for guiding the upper end of the inner tub, and means for rotating the drive shaft; said pounders being each composed of a pounder rod, a piston fixed at the lower end thereof and a downwardly open suction chamber fitting about the piston and having a perforated top with a central hub slidable on the rod, and a compressible coil spring encircling the rod between the arm of the cross-head and said hub of the top of the suction chamber.

1,170,089. AUTOMATIC FORCE-FEED LUBRICATOR. RUSSELL A. MILNE, Detroit, Mich., assignor to Snyder Manufacturing Company, a Copartnership comprising Russell A. Milne, Charles M. Snyder, and Charles Westfall, Detroit, Mich. Filed May 26, 1915. Serial No. 30,481. (Cl. 184—37.)

1. In a lubricator, a cylinder for containing the lubricant having a delivery outlet, a plunger movable longitudinally in said cylinder for exerting pressure on said lubricant to eject it through said outlet, power transmitting means having detachable driving connection with said plunger for imparting movement thereto, and means associated with said cylinder and with said power transmitting mans and actuable by the pressure of the lubricant for disengaging said driving connection.

2. In a lubricator, a cylinder for containing the lubricant having a delivery outlet, a rotatable plunger having screw-threaded engagement within said cylinder and movable therein for exerting pressure on the lubricant to eject it through said outlet, power transmitting means having detachable driving connection with said plunger for imparting rotary motion thereto, and means operatively engaging said driving connection and communicating with said cylinder actuable by the pressure of the lubricant therein for disengaging said driving connection.



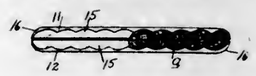
3. In a lubricator, a cylinder for containing the lubricant having a delivery outlet adapted for connection with a journal bearing, a plunger movable longitudinally in said cylinder for exerting pressure on the lubricant to eject it through said outlet, power transmitting means having detachable driving connection with said plunger, means operatively engaging said driving connection and associated with said cylinder actuable by the pressure of the lubricant therein for disengaging said driving connection, and means for limiting the longitudinal travel of said plunger.

4. In a lubricator, a cylinder for containing the lubricant having a delivery outlet adapted for connection with the journal bearing, a rotatable plunger having screw-threaded engagement with said cylinder and movable longitudinally therein for exerting pressure on the lubricant to eject it through said outlet, power transmitting means having detachable driving connection with said plunger for imparting rotary movement thereto to move said plunger longitudinally of said cylinder, means operatively engaging said driving connection and communicating with said cylinder actuable by the pressure of the lubricant therein for disengaging said driving connection, and adjustable means for regulating the pressure on the lubricant and for restoring said driving connection.

5. In a lubricator, a cylinder for containing the lubricant having a delivery outlet, a plunger movable longitudinally in said cylinder for exerting pressure on the lubricant to eject it through said outlet, power transmitting means having detachable driving connection with said plunger, and spring pressed means associated with said cylinder and with said power transmitting means actuable by the pressure of the lubricant for disengaging said driving connection and actuable with the decreasing pressure on the lubricant for restoring said driving connection.

[Claims 6 to 9 not printed in the Gazette.]

1,170,090. CIGARETTE-HOLDER. HENRY D. MIX, Providence, R. I., assignor to Wightman & Hough Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 22, 1915. Serial No. 3,685. (Cl. 206—41.)



1. A cigarette case comprising a holder having a series of pockets oblong in cross-section for receiving and positioning a plurality of cigarettes, the transverse major axes of these pockets being parallel with each other and oblique with respect to the longitudinal medial line through the holder, whereby the bodies of the cigarettes are caused to overlap each other.

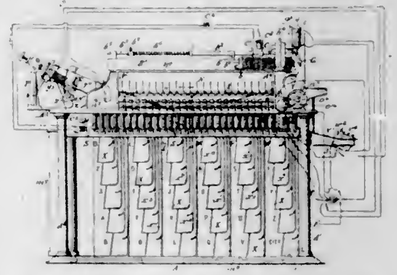
2. A cigarette holder comprising a pair of holder members, a series of alternate grooves and ribs in one of said members for receiving and positioning the cigarettes and causing them to lie with their major axes parallel to each other and obliquely with respect to the medial line between said members whereby the bodies of the cigarettes lie side by side and overlap each other.

3. A cigarette holder comprising a pair of coöperating holder members, one of said members being provided with a series of grooves whose radii are greater than the shortest radius of the oblong cigarette whereby the cigarettes are caused to lie with their major transverse axes parallel to each other and obliquely with respect to the medial line between said members and their bodies to lie side by side and overlap each other.

4. In a cigarette holder, a pair of oppositely fluted holder members, the flutes in said opposite members being set staggering to cause the transverse major axes of the cigarettes held therein to lie parallel with each other and obliquely to the medial line between the holder members.

5. In a cigarette holder, a pair of oppositely disposed spring pressed fluted holder members hinged together, the flutes in said opposite members being staggered relative to each other to cause the transverse major axis of each to lie obliquely to the medial line between the holder members whereby their bodies are caused to over-lap each other.

1,170,091. MAIL-DISTRIBUTING MACHINE. BARTON S. MOLYNEUX, Buffalo, N. Y., assignor, by mesne assignments, to Christopher H. Bierbaum, Buffalo, N. Y. Filed Apr. 2, 1898, Serial No. 676,177. Renewed Sept. 25, 1911. Serial No. 651,295. (Cl. 101—80.)



1. The combination with a series of receptacles, of a movable carrier for letters or other mail matter provided with holders which receive such matter successively, and selecting mechanism controlled by the operator whereby each holder is set to automatically release the matter which it contains at the entrance of the proper receptacle, substantially as set forth.

2. The combination with a series of receptacles, of a movable carrier for letters or other mail matter provided with holders which receive such matter successively, selecting mechanism arranged on said carrier for causing each holder to release automatically the matter which it contains at the entrance of the proper receptacle, and keys whereby each selecting mechanism can be set by the operator, substantially as set forth.

3. The combination with a series of receptacles, of a movable carrier for letters or other mail matter provided with holders which receive such matter successively, selecting mechanism arranged on said carrier for causing each holder to release automatically the matter which it contains at the entrance of the proper receptacle, releasing mechanism actuated by said selecting mechanism, and keys whereby each selecting mechanism can be set by the operator, substantially as set forth.

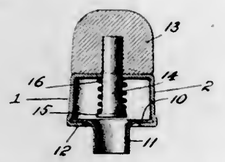
4. The combination with a series of receptacles, of an endless carrier arranged over said receptacles and provided with holders for mail matter, a feeding device whereby such matter is fed successively to the holders on said carrier, selecting mechanism arranged on said carrier for causing each holder to release the matter automatically, releasing mechanism actuated by said selecting

mechanisms as the holders move over the receptacles, and keys whereby each selecting mechanism can be set by the operator, substantially as set forth.

5. The combination with a carrier provided with letter holding devices, of releasing mechanism whereby the holding devices are operated for releasing the letters, and keys whereby the operation of the releasing mechanism is controlled, substantially as set forth.

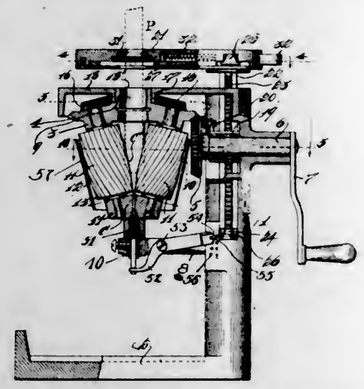
[Claims 6 to 100 not printed in the Gazette.]

1,170,092. CURTAIN-FASTENER. GEORGE W. J. MURPHY, Merrimac, Mass., assignor to G. W. J. Murphy Company, Merrimac, Mass., a Corporation of Massachusetts. Filed July 16, 1914. Serial No. 851,246. (Cl. 24—96.)



A curtain fastener comprising a sheet metal base formed with a substantially elliptical body part, a circular base flange at its lower end, said flange being perpendicular to the longitudinal line of the fastener and substantially equal in diameter to the longer diameter of the elliptical body part and forming shoulders at opposite sides of the shorter diameter of the elliptical body part, a fastening device formed with a thin flat head fitting against the under side of the shoulders formed by the flange of the base, said shoulders holding the fastening device against inward movement, and a retaining flange formed around the margin of the circular base and extending inwardly over the flat head of the fastening device, said flange holding said head against the aforesaid shoulders and preventing its rotation.

1,170,093. PENCIL-SHARPENING MACHINE. LOUIS MYERS, Brooklyn, N. Y., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 22, 1913. Serial No. 808,147. (Cl. 120—96.)



1. In a pencil sharpening machine, a main frame, a pencil guiding means, a milling device comprising a revolving carrier, a milling cutter revolubly mounted in said carrier, said milling cutter having a tapering surface whose smaller end is in proximity to the point of the pencil when sharpened, and having a milling surface at an angle thereto and removed from the point of the pencil, said tapering surface continuously approaching the axis of revolution of said carrier as said smaller end is approached, and means for giving said milling cutter a relative planetary movement about said pencil.

2. In a pencil sharpening machine, a main frame, a pencil guiding means, a milling device comprising a revolving carrier, a plurality of milling cutters mounted in said carrier, said milling cutters having tapering surfaces whose smaller ends are in proximity to the point of the pencil and other milling surfaces at an angle thereto and removed from the point of the pencil, said tapering surfaces continuously approaching the axis of revolution of said carrier as said smaller ends are approached, and means for giving said milling cutters a relative planetary movement about said pencil, comprising a gear fixed on said frame, coacting gears fixed to said milling cutters, and means for revolving said carrier relatively to said frame.

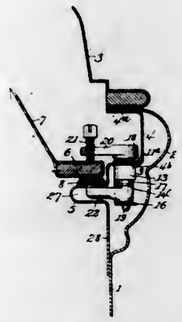
3. In a pencil sharpening machine, a main frame, a pencil guiding means, a milling device comprising a revolving carrier, a plurality of milling cutters mounted in said carrier, said milling cutters having tapering surfaces whose smaller ends are in proximity to the point of the pencil, and cylindrical milling surfaces removed from the point of the pencil, and means for giving said milling cutters a relative planetary movement about said pencil, said tapering surfaces continuously approaching the axis of revolution of said carrier as said smaller ends are approached, comprising a gear fixed on said frame, coacting gears fixed to said milling cutters, and means for revolving said carrier relatively to said frame.

4. In a pencil sharpener, the combination of a support, a planetary cutter having a rotating cutting member and a frame for carrying the same, of a bearing carried by said support for the remote end of the carrier, an adjustable pin having its axis parallel to the axis of rotation of said frame and passing through said bearing for controlling the longitudinal movement of the pencil, said frame being rotatable relatively to said pin.

5. In a pencil sharpener, the combination of a support, a planetary cutter having a rotating cutting member and a frame for carrying the same, of a bearing carried by said support for the remote end of the carrier, an adjustable pin having its axis parallel to the axis of rotation of said frame and passing through said bearing for controlling the longitudinal movement of the pencil, and an adjusting member carried by said support and engaging said pin.

[Claim 6 not printed in the Gazette.]

1,170,094. CLAMP FOR CASKET-COVERS. HARRY A. NEFF, Bellaire, Ohio, assignor to Belmont Casket Manufacturing Company, Shadyside, Ohio, a Corporation of Ohio. Filed Dec. 1, 1915. Serial No. 64,394. (Cl. 27—12.)



1. Means for securing a cover on a casket body, comprising a panel rigidly mounted interiorly of said body adjacent to the upper edge thereof, said panel having an inwardly directed open fold formed therein, the upper member of said fold constituting a ledge for the reception of the rim of said cover, a pivoted element mounted rearwardly of said ledge and having a tongue adapted in one position of said element to project into the channel between the members of said fold, an arm carried by the upper end of said element parallel to said tongue for overlying the cover rim, and adjustable means carried by said arm for depressing said rim with respect to said ledge.

2. Means for securing a cover on a casket body, comprising a panel rigidly mounted interiorly of said body adjacent to the upper edge thereof, said panel having an inwardly directed open fold formed therein, the upper member of said fold constituting a ledge for the reception of the rim of said cover, a bearing member mounted on said panel at the rear of said ledge, a vertical spindle pivoted in said bearing member and having an arm adapted in one position of the spindle to overlie the rim of the cover, a tongue carried by said spindle parallel to said arm and adapted to enter the channel of said fold to underlie said ledge, and adjustable means carried by said arm for forcing said rim downward with respect to said tongue.

3. Means for securing a cover on a casket body, comprising a panel mounted interiorly of said body adjacent to the upper edge of the latter, said panel being shaped to form an inwardly directed open fold and a ledge above and at the rear of said fold, a gasket seated upon the upper face of said fold, a bearing member mounted upon said ledge, a spindle pivoted in said bearing member, said spindle having a tongue adapted to enter the channel between the members of said fold in closely underlying relation to the upper member of the latter, an arm carried by the upper end of said spindle parallel to said tongue, said arm being adapted to overlie the rim of a casket cover seated on said gasket, and adjustable means for forcing said rim downward to compress said gasket.

4. Means for securing a cover on a casket body, comprising a panel mounted interiorly of said body adjacent to the upper edge of the latter, said panel being shaped to form an inwardly directed open fold and a ledge above and at the rear of said fold, a gasket seated upon the upper face of said fold, a bearing member mounted in said ledge and extending downward therefrom, a member pivoted in said bearing member and having portions adapted to assume positions on opposite sides of the upper member of said fold, and means carried by the upper of said portions for depressing a cover rim into compressing relation to said gasket.

5. The combination with a casket body, of a panel mounted interiorly of said body adjacent to the upper edge of the latter, said panel being shaped to form two horizontal ledges one of which is located below and inward with respect to the other, a bearing member supported by the upper ledge and extending below the latter, a vertically disposed rotary spindle mounted in said bearing member, horizontal members disposed in parallel alinement carried by said spindle above and below said upper ledge, and a vertically disposed set-screw carried by the uppermost of said members, said spindle being adapted for movement to a position wherein the lower member underlies the lowermost ledge and the upper member overlies the rim of a cover seated on the latter.

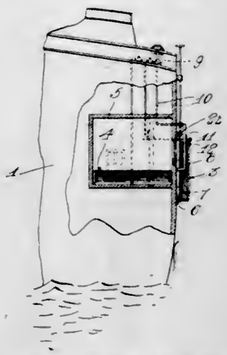
[Claim 6 not printed in the Gazette.]

1,170,095. INSUBMERGIBLE SHIP. JAKOB S. NEUMANN, Great Falls, Mont. Filed Apr. 9, 1915. Serial No. 20,239. (Cl. 114—68.)

1. In an insubmergible ship, an exteriorly located inflatable container, a stop rod affording a support for the container when inflated, and means engaging the rod prior to inflation of the container to lock it against movement and the container against extension.

2. In an insubmergible ship, a plurality of exteriorly located inflatable containers, a taut cable affording a support for the several containers, a rod mounted to penetrate the sides of the ship and to engage the containers to afford a support therefor when inflated, and means on the rod to limit the distention of the container.

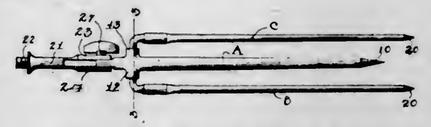
3. In an insubmergible ship, a plurality of inflatable air containers, a support for the several containers, an auxiliary support for each container when inflated, the last mentioned supports being arranged to penetrate the sides of the ship, a stop means on the inclosed end of each auxiliary support to limit the distention of the containers, means normally engaging the inclosed end of each support to lock it against movement, and means to simultaneously release the lock means and inflate the containers.



4. In an insubmergible ship, an exteriorly located inflatable container, a stop rod affording a support for the container when inflated, means engaging the rod prior to displacement of the container to lock it against movement and the container against distention, and pneumatic means to release said rod.

5. In an insubmergible ship, a plurality of exteriorly located inflatable containers, a means affording a support for the several containers, a rod support for the several containers when extended, means on the rod to limit distention of the containers, means engaging the rods to lock the containers against distention, and pneumatic means to release the rods.

1,170,096. TRIPOD. JAMES M. NICHOLSON, Chicago, Ill. Filed May 26, 1915. Serial No. 30,623. (Cl. 248—43.)



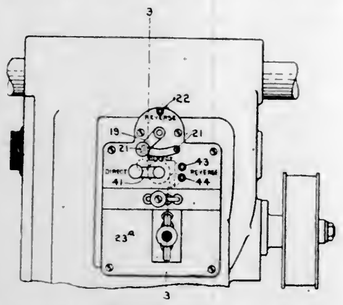
1. A tripod comprising a central arm having one end screw threaded, alined lateral extensions on said arm adjacent the other end thereof, said extensions being provided in their outer ends with sockets, terminal arms on each side of the central arm and having angular extensions on corresponding ends thereof provided with balls operatively engaged in said sockets respectively, and an arm adjustably pivoted on the end of the central arm adjacent said extension and having means for connecting same to a camera.

2. A tripod comprising a central arm having one end screw threaded, terminal arms disposed respectively on opposite sides of the central arm and having a ball and socket connection with the latter at one end, the end of the central arm adjacent the ball and socket member being provided with an opening, an arm having one end bifurcated and embracing the central arm and having openings in the furcation alining with the opening in the central arm, a thumb screw engaged through said alined openings and threaded in the opening in one of said furcations whereby said arm may be secured in a desired angular relation with respect to the central arm, and means on the other end of said arm for securing the camera.

3. A tripod comprising a central arm having means at one end for engaging a supporting part, opposite integral

alined lateral extensions on said arm adjacent the other end thereof, terminal arms on each side of the central arm having a pivotal connection with one of said extensions, and an arm adjustably pivoted on the end of the central arm adjacent said extensions and having means for connecting same to a camera.

1,170,097. SPEED CHANGING AND REVERSING MECHANISM. JOHN PARKER, Providence, R. I., assignor to Brown & Sharpe Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed July 31, 1912. Serial No. 712,392. (Cl. 74—58.)



1. A speed-changing and reversing mechanism comprising a driving member and a driven member adapted to be engaged one with the other to rotate said driven member in one direction, and two intermediate gears adapted to be alternately moved into engagement with said driving and driven members to rotate said driven member in the reverse direction at one or the other of two different speeds.

2. A speed-changing and reversing mechanism comprising a cone-gear driving member and a quill-gear driven member adapted to be engaged one with the other to rotate said quill-gear in one direction, and two intermediate gears adapted to be alternately moved into engagement with said cone-gear and said quill-gear to rotate said quill-gear in the reverse direction at one or the other of two different speeds.

3. A speed-changing and reversing mechanism comprising a cone-gear driving member and a quill-gear driven member, means for moving said quill-gear into engagement with said cone-gear to enable said quill-gear to be rotated by said cone-gear, two intermediate gears, and means for moving either one of said intermediate gears into engagement with said cone-gear and said quill-gear to rotate said quill-gear in the reverse direction at one or the other of two different speeds.

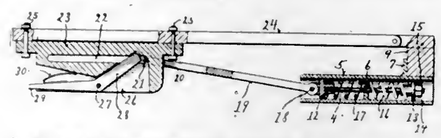
4. A speed-changing and reversing mechanism comprising a driving gear, a cone-gear, a tumbler-gear adapted to engage said driving gear and said cone-gear, a quill-gear adapted to engage said cone-gear, and an intermediate gear adapted to engage said cone-gear and said quill-gear to rotate said quill-gear in the reverse direction.

5. A speed-changing and reversing mechanism comprising a driving gear, a cone-gear, a tumbler-gear adapted to engage said driving gear and said cone-gear, a quill-gear adapted to engage said cone-gear, and two intermediate gears adapted to engage alternately said cone-gear and said quill-gear to rotate said quill-gear in the reverse direction at one or the other of two different speeds.

[Claims 6 to 20 not printed in the Gazette.]

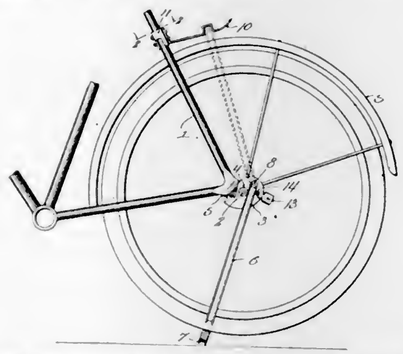
1,170,098. WAGON-TONGUE SUPPORT. PEARL E. PARKER, Winchester, Kans. Filed May 20, 1915. Serial No. 29,282. (Cl. 21—63.)

1. A wagon-tongue support comprising the combination of a casing formed for attachment to a wagon-axle, a rod and heads mounted in the casing and having movement lengthwise of the wagon, oppositely disposed springs bearing against said heads and casing, a block adapted to be secured to a wagon-tongue and formed with a slot extending lengthwise of the wagon-tongue, a rod connected at one end with said heads and first-named rod and extending at the other end through said slot, and a latch mounted in said block for retaining said last-named rod in the rearward end of the slot and adapted to free it therefrom at will in order to relieve the wagon-tongue from the effect of said springs.



2. A wagon-tongue support comprising the combination of a casing formed for attachment to a wagon-axle, a rod and heads mounted in the casing and having movement lengthwise of the wagon, opposed springs bearing against said casing and said respective heads, a block adapted to be secured to the wagon-tongue and formed with a transverse slot extending lengthwise of the wagon tongue, a bolt extending transversely through said slot, a rod connected at one end with the first-named rod and at the other end with said bolt, and a latch pivotally mounted in said block above said bolt and formed with a lug adapted to hold said bolt in the rearward end of said slot and being also formed with a handle for lifting it and freeing it from said bolt.

1,170,099. BICYCLE-STAND. EWALD F. PAWSAT, Sheboygan, Wis., assignor to Wald Manufacturing Company, Sheboygan, Wis. Filed July 6, 1915. Serial No. 38,209. (Cl. 208—75.)



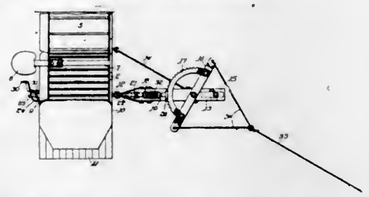
In a stand for bicycles and motor-cycles, the combination with the rear axle and the axle nuts, of stand heads held on the axle by the nuts, a stand having side legs pivoted to the heads at points above and to the rear of the nuts, the stand being retained in a supporting position by contact of the legs with the nuts.

1,170,100. TANDEM DRAFT CONNECTION FOR HARVESTERS. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 8, 1913. Serial No. 783,807. (Cl. 21—114.)

1. In combination, a trailing unit, a draft connection thereon, means for adjusting said draft connection laterally, and means for disconnecting said adjusting means whereby said draft connection may move freely.

2. In combination, a plurality of operatively connected units normally tending to assume an offset relation, means for adjusting one of the same laterally with respect to the line of draft, and means for disconnecting said means whereby said unit is automatically adjustable laterally as it is moved forward.

3. In a tandem draft connection, a plurality of trailing units, mechanism for adjusting the units laterally relative to the line of draft, and means for rendering said adjusting mechanism inoperative whereby the units are free to move in an opposite direction.

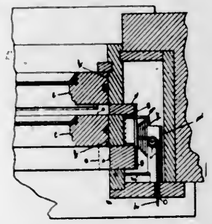


4. In a tandem draft connection, a plurality of trailing units adapted to travel in offset relation relative to each other, mechanism under the control of the operator to varying the line of travel of one unit, and means under the control of the operator for rendering said adjusting mechanism inoperative whereby the unit is free to move in either direction.

5. In a tandem draft connection, a plurality of trailing units, operative draft connections between the same normally tending to swing said units into offset relation, adjusting mechanism for moving a unit in any desired offset relation independent of other units, and means for releasing said adjusting mechanism in any position thereof whereby as the unit moves forward its draft connections may be automatically adjusted.

[Claims 6 to 14 not printed in the Gazette.]

1,170,101. WINDOW-FRAME. GEORGE PULLETS, New York, N. Y., assignor of one-half to Paul Raia, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,468. Serial No. 20,558. (Cl. 18—48.)



A window frame having a pair of depressible beads, strips secured to the rear of the beads, a spring arranged to engage said strips to hold said beads normally projected and a flexible member secured to said strips and arranged so that when it is pulled it will cause said beads to be compressed.

1,170,102. ELASTIC ARTIFICIAL CORK AND PROCESS OF PRODUCING SAME. FRITZ RASCHIG, Ludwigshafen-on-the-Rhine, Germany. Filed Apr. 10, 1915. 1915. Serial No. 20,558. (Cl. 18—48.)

1. As a new article of manufacture an artificial cork comprising cork particles and a heat-hardened binder and characterized by the properties of a product hardened by heating under pressure and under a high vacuum, said product being elastic and of low specific weight.

2. As a new article of manufacture an artificial cork comprising cork particles bound together into a homogeneous body by a heat-hardened protein binder, and the particles of said cork being substantially free from occluded air.

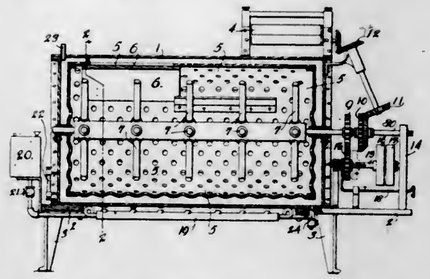
3. As a new article of manufacture an artificial cork comprising cork particles bound together by a heat-hardened protein binder hardened under a high vacuum.

4. As a new article of manufacture an artificial cork comprising cork particles bound together by a heat-hardened protein binder hardened under a vacuum at a temperature not exceeding about 70 to 80° C., said product being of a light color and low specific gravity.

5. As a new article of manufacture an artificial cork comprising cork particles bound together by a heat-hardened protein binder and having a specific gravity of about .220.

[Claims 6 to 12 not printed in the Gazette.]

1,170,103. WASHING-MACHINE. IRELAND G. REGNIER, Humphrey, Ark. Filed July 12, 1915. Serial No. 39,307. (Cl. 68—15.)



1. In a washing machine, an outer fixedly held cylindrical casing that constitutes a boiler, a casing or drum fixedly held within the outer casing and spaced from the sides and ends of the outer casing, the said inner casing or drum being perforated and having a doorway for the reception of the clothes, an agitator or stirrer rotatable within the said inner casing or drum and means for operating the said stirrer.

2. In a washing machine, a suitable supporting base, a fixedly held cylindrical casing, said casing being formed of upper and lower sections and mounted on the said supporting base, the upper section of the casing having a vent opening and the lower section having a valved discharge, a corrugated and perforated drum fixedly held within the casing with its ends and sides spaced from the casing ends and sides and a rotatable shaft that extends through the ends of the casing and through the drum, radial beater arms within the drum mounted on the shaft to turn therewith, and journal boxes on the shaft that seat in the adjacent drum and casing ends and form the means for fixedly supporting the drum within the cylinder.

3. In a washing machine, a suitable base, a casing formed of upper and lower sections mounted on the base, a perforated drum fixedly held in the casing with its sides and ends spaced from the sides and ends of the boiler, an axial bearing box in each end of the casing that includes a squared hub that extends inside of the casing and the adjacent drum end, a shaft journaled in the said axial bearings, stirrer arms projected from the said shaft, said arms being located within the aforesaid inner drum, and means for imparting motion to the stirrer shaft.

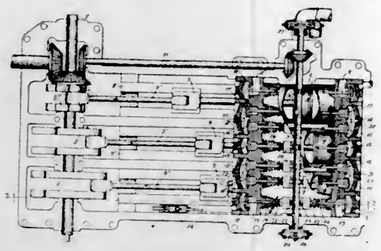
1,170,104. INTERNAL-COMBUSTION ENGINE. CHARLES E. RICE, Round Mountain, Nev. Filed June 18, 1913. Serial No. 774,333. (Cl. 123—59.)

1. An internal combustion engine comprising a power cylinder and a piston, means for compressing an explosive fuel charge, a compression chamber connected therewith for receiving said compressed charge, manually adjustable means for varying the capacity of said chamber, means for admitting said compressed charge from said compression chamber directly to said cylinder and means in said compression chamber for igniting said charge.

2. An internal combustion engine comprising a power cylinder and piston, a compression cylinder and piston, said compression piston being driven by said power piston, a compression chamber, manually adjustable means for varying the capacity of said chamber, valved passages directly connecting said chamber with said cylinders, means for suitably operating said valves and ignition means in said compression chamber, operable when the chamber is in communication with said power cylinder.

3. An internal combustion engine comprising a power cylinder and piston, a compression cylinder and piston,

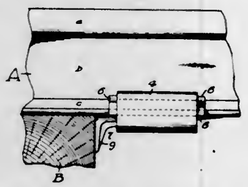
said compression piston being driven by said power piston, a forward compression chamber, valved passages directly connecting said chamber with the forward ends of said cylinders, a rearward compression chamber, valved passages directly connecting said rearward chamber with the rearward ends of said cylinders, manually adjustable means for varying the capacity of each of said chambers, valved exhaust ports connecting each end of said power cylinder with the atmosphere, means for suitably operating said valves, and ignition means in said compression chambers, operable when the chambers are in communication with the respective ends of said power cylinder.



4. An internal combustion engine comprising a power cylinder and piston, valved exhaust ports connecting each end of said power cylinder with the atmosphere, compression chambers each in direct communication with one end of said cylinder through valved passages, manually adjustable means for varying the capacity of each of said chambers, means for compressing fuel charges alternately in said chambers, means for suitably operating said valves and means for igniting said charges alternately in the chambers at opposite ends of said cylinder when in communication with the latter.

5. An internal combustion engine comprising a plurality of power cylinders each provided with valved exhaust ports at the ends thereof, a compression cylinder provided with valved fuel admission ports at the ends thereof, pistons in said cylinders, the compression piston being driven by a power piston, a plurality of forward compression chambers, valved passages connecting each of said chambers with the forward end of said compression cylinder and with the forward end of one of said power cylinders, a plurality of rearward compression chambers, valved passages connecting each of said rearward chambers with the rearward end of said compression cylinders and with the rearward end of one of said power cylinders, means for suitably operating said valves, and ignition means in said compression chambers.

1,170,105. ANTICREEPER FOR RAILS. LOUIS J. RIEGLER, Ben Avon, Pa. Filed Nov. 13, 1915. Serial No. 61,240. (Cl. 238—4.)



1. An anti-creeper for rails, comprising a yoke arranged substantially transversely of the rail beneath its base, said yoke having a jaw at each end of the same for fitting around the rail flanges and a body portion provided with a thin central portion thereon adapted to bend freely, and a wedge adapted to be forced between the bottom of the rail base and said central portion to bend said portion and cause the gripping of the rail flanges by said jaws.

2. An anti-creeper for rails, comprising a clamping device arranged substantially beneath the rail base, said device having a body portion, a jaw at each end of the same for fitting around the rail flanges, one of said jaws being enlarged and said body portion provided with a thin central portion, adapted to bend freely, a filler block fitting between the rail flange and the enlarged jaw, and a wedge adapted to be forced between the bottom of the rail base and said central portion to bend said portion and cause the gripping of said rail flange and said filler block, respectively by said jaws.

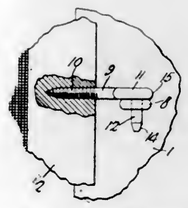
3. An anti-creeper for rails, comprising a one piece yoke having a body portion fitting under the rail base and a jaw at each end of the same for fitting around the flanges on said base, said body portion having a thin flexible portion intermediate of said jaws, and a wedge adapted to be forced between the bottom of the rail base and said flexible portion to bend said portion and cause the gripping of the rail flange by said jaws.

4. An anti-creeper for rails, comprising a one piece yoke having a body portion fitting under the rail base and a jaw at each end of the same for fitting around the rail flanges, one of said jaws being enlarged, said body portion having a thin flexible portion intermediate of said jaws, a filler block fitting between the rail flange and the enlarged jaw and a wedge adapted to be forced between the bottom of the rail base and said flexible portion to bend said portion and cause the gripping of said rail flange and said filler block, respectively by said jaws.

5. In a rail anchor, the combination with a one piece yoke having jaws adapted to embrace the edges of the rail base, of means for distorting said yoke between said jaws, thereby to create tension therein and cause said jaws to grip said rail base.

[Claim 6 not printed in the Gazette.]

1,170,106. DOOR-HINGE. BYRD C. ROCKWELL, Camden, Ark. Filed May 12, 1915. Serial No. 27,622. (Cl. 16—106.)



1. As an article of manufacture for use in door suspension, a screw hook embodying a shank which is bent upon itself to form a hinge pintle and to form a body which projects beyond the pintle in a direction opposite to the shank.

2. As an article of manufacture for use in door suspension, a screw hook embodying a shank which is bent upon itself to form a hinge pintle and to form a body which projects beyond the pintle in a direction opposite to the shank; and a screw eye through which the pintle passes, the eye bearing upon the body upon opposite side of the pintle from the shank.

1,170,107. WRENCH. EDWARD D. ROCKWELL, Bristol, Conn. Filed Feb. 12, 1914. Serial No. 818,269. (Cl. 81—185.)

1. A wrench embodying a shank having at the end a socket with rigid jaws, said shank having a chamber therein and a channel intermediate the chamber and socket, a jaw face mounted in the channel with its inner end in the chamber and movable into and out of the socket parallel with and in proximity to the inner face of one of the rigid jaws, a spring in the chamber for advancing the jaw face, and means for limiting such movement.

2. A wrench embodying a shank having at the end a socket with rigid jaws, said shank having a chamber therein and a channel intermediate the chamber and socket, a plurality of parallel flat jaw faces mounted one in front of the other in the channel with their inner ends in the chamber and movable into and out of the socket parallel with and in proximity to the inner face of one of the rigid jaws, springs in the chamber for independently resisting the inward movement of the jaw faces, and means for limiting the outward movement of said faces.



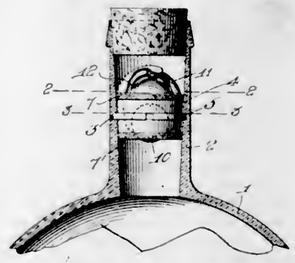
3. A wrench embodying a shank having at the end a socket with rigid jaws, one of which projects a greater distance than the other to form a positioning guide, said shank having a chamber therein and a channel intermediate the chamber and socket, a jaw face mounted in the channel and movable into and out of the socket parallel with and in proximity to the shorter rigid jaw, a spring in the chamber for holding the jaw face advanced, and means for limiting the advance of the jaw face.

4. A wrench embodying a shank having at the end a socket with rigid jaws, one of which projects a greater distance than the other to form a positioning guide, said shank having a chamber therein and a channel intermediate the chamber and socket, a plurality of parallel jaw faces mounted one in front of the other in the channel and movable into and out of the socket parallel with and in proximity to the shorter rigid jaw, means for arresting the outward movement of the jaw faces to project a less distance than the longer rigid jaw, and means for yieldingly and independently holding the jaw faces projected into the socket.

5. A wrench embodying a shank having oppositely facing sockets at opposite ends of different width and each having rigid jaws with parallel proximate faces, said shank having a longitudinally extending chamber therein and channels intermediate the ends of the chamber and respective sockets, a jaw face mounted in each channel with its inner end in the chamber and movable into and out of the socket parallel with and in proximity to one of the rigid jaws, a spring in the chamber interposed between the proximate ends of the jaw faces for yieldingly holding both jaw faces projected, and means for limiting the outward movement of the jaw faces.

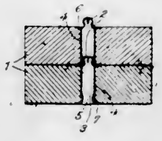
[Claims 6 and 7 not printed in the Gazette.]

1,170,108. NON-REFILLABLE BOTTLE. GEORGE S. ROGERS, Pana, Ill. Filed Feb. 10, 1915. Serial No. 7,305. (Cl. 215—65.)



In combination with a bottle having an annular groove formed in the neck thereof, of a stopper having an annular groove formed therein, a split ring engageable with said grooves to retain said stopper in position within said neck, a plurality of gaskets carried by said stopper and engageable with the inner surface of said neck to prevent the contents of the bottle from coming into contact with said ring, said stopper being cut out to form a valve seat, a valve in said cut-out normally resting on said seat, a plurality of guard members having their one end fixed to said stopper, said guard members being formed of a non-resilient material and arranged so that they extend upwardly at an angle to meet and overlap at their upper ends, and said guard members being so spaced apart to permit the free flow of fluid therebetween substantially as described.

1,170,109. CHECKER. JOHN F. ROGERS, Atlantic City, N. J. Filed Oct. 2, 1915. Serial No. 53,788. (Cl. 46—65.)



1. A checker having an opening extending therethrough, and a tubular element in said opening, said tubular element being provided with a projecting snap device at one end and being also provided with a socket to receive a corresponding snap device of another checker.

2. A checker having a tubular element extending therethrough, said tubular element being provided with clip flanges which engage opposite sides of the checker and secure said element thereto, and being also provided with a projecting snap device at one end and with a socket to receive a corresponding snap device of another checker.

1,170,110. PROCESS FOR THE MANUFACTURE OF YEAST FROM MOLASSES. GUSTAV ROTH, Olmütz, Austria-Hungary. Filed Mar. 28, 1914. Serial No. 827,816. (Cl. 195—20.)

1. In the process of producing yeast from molasses, the improvement in the preparation of a clear wort which comprises diluting the molasses in the usual manner, acidulating the same, boiling the diluted and acidulated molasses, and drawing off the clear liquid, further diluting and acidulating the liquid to a sufficient extent to cause the separation of finely divided suspended matter, and thereafter separating the clear liquid from the said suspended matter.

2. In the process of producing yeast from molasses, the improvement in the preparation of a clear wort which comprises diluting the molasses in the usual manner, acidulating the same, boiling the diluted and acidulated molasses, and drawing off the clear liquid, further diluting and acidulating the liquid to a sufficient extent to cause the separation of finely divided suspended matter, and thereafter separating the clear liquid from the said suspended matter, by filtration at atmospheric pressure, over a large filtering surface.

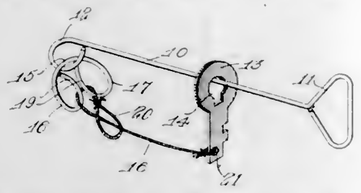
3. In the process of producing yeast from molasses, the improvement in the preparation of a clear wort which comprises diluting the molasses in the usual manner, acidulating the same, boiling the diluted and acidulated molasses, and drawing off the clear liquid, further diluting and acidulating the liquid to a sufficient extent to cause the separation of finely divided suspended matter, stirring or aerating the liquid and thereafter separating the clear liquid from the said suspended matter, then adding a clear nitrogeneous extract and fermenting.

4. In the process of producing yeast from molasses, the improvement in the preparation of a clear wort which comprises diluting the molasses in the usual manner, acidulating the same, boiling the diluted and acidulated molasses, and drawing off the clear liquid, further diluting and acidulating the liquid to a sufficient extent to cause

the separation of finely divided suspended matter, then stirring or aerating the liquid and thereafter separating the clear liquid from the said suspended matter, then mixing the liquid with a clear nitrogenous extract, then adding lactic acid bacteria in the form of clear wort, leaving the solution to acidify, and then fermenting.

5. A process of producing yeast from molasses which comprises the successive steps of (1) diluting, (2) acidifying, (3) boiling, (4) drawing off the clear liquor (5) further diluting, (6) further acidifying sufficiently to cause a precipitation of fine divided matter (7) stirring or aerating, (8) removal of the finely divided precipitated matter, and thereafter (9) fermenting.

1,170,111. PUZZLE. LEE ROTHE, Linneus, Mo. Filed Oct. 15, 1915. Serial No. 56,068. (Cl. 46—41.)



1. A puzzle comprising a relatively large key formed from a strip of wire having one end portion bent to form a handle and having the opposite end portion bent to form an eye, a relatively small key provided with an opening through which said large key passes, the opening being of sufficient size to permit the eye of the large key to pass through the same, a line having one end portion connected with said small key, and a wire link provided with eyes, the eye of said large key engaging said link intermediate the eyes thereof and said line having its free end portion passed through the eyes of said link and provided with a loop engaging the line intermediate the link and small key.

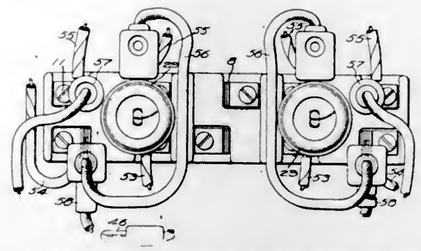
2. A puzzle comprising a relatively large key, a relatively small key slidably mounted upon said relatively large key and removable therefrom, a link removably connected with said relatively large key, and a line connected with said relatively small key and passing through said link and having its free end portion provided with a loop engaging the line between said relatively small key and said link.

3. A puzzle comprising a main member, an auxiliary member slidably and removably mounted upon said main member, a flexible element connected with said auxiliary member and having its free end portion provided with a loop, and a link removably connected with one end portion of said main member, the looped end of said flexible element being passed through said link and having its loop engaging the flexible element intermediate the auxiliary member and link.

4. A puzzle comprising a relatively large key having an eye at one end and a handle at the other, a relatively small key mounted upon said large key between the eye and handle thereof, the opening of the small key through which said large key passes being of sufficient size to permit the eye of the large key to pass through the same, a link carried by the eye of the large key, said link being formed from a strand of wire bent to provide eyes positioned in spaced relation, the eye of the large key engaging the link between the eyes thereof, and one of the eyes of the link being of sufficient size to pass through the eye of the large key, and a line connected with the relatively small key and having its free end portion passing through the eyes of said link and provided with a loop engaging the line intermediate the link and small key, the loop being of sufficient size to permit the link and the handle of the large key to pass through the same.

5. A puzzle comprising a main member having an eye at one end and a handle at the other, an auxiliary member slidably mounted upon said main member between the eye and handle thereof, a link carried by the eye of said main member and provided with eyes positioned upon opposite sides of the eye of the main member, and a line connected with said auxiliary member and having its free end portions passing through the eyes of said link and provided with a loop engaging the line intermediate the link and auxiliary member.

1,170,112. SERVICE AND METER TESTING AND CONNECTION BLOCK. JOSEPH SACHS, Hartford, Conn. Filed Dec. 14, 1914. Serial No. 877,113. (Cl. 175—183.)



1. A base, a pair of contacts on said base, and means for electrically connecting the contacts or breaking the electrical connection therebetween, said connecting means being provided with means for the electrical connection therewith of testing means, the connecting means when the testing means is connected therewith being movable to eletcrically free for testing purposes at least one of said contacts.

2. A base, a pair of contacts on said base, and a connector coöperative with said contacts to make and break connection therebetween, said connector being provided with means for the electrical connection therewith of testing means irrespective of the position of said connector.

3. A base, a pair of contacts thereon, a connector to make and break the electrical connection between said contacts, one of said contacts being electrically freed for testing purposes when the connector has been moved to the breaking position, and means for making electrical connection with that part of the freed contact which is engaged by said connector when in the circuit making position thereof, the connector having means for the connection therewith of testing means in any of the positions thereof.

4. A base, a pair of contacts thereon, and a connector directly coöperative with said contacts and movable to open and close the connection between the contacts and when in the open position freeing one of said contacts for testing purposes, said connector being provided with means for the connection thereto of testing means irrespective of the position of said connector.

5. A base, at least four contacts arranged in two pairs thereon, means for electrically connecting or disconnecting the contacts of each pair independently, means for electrically bridging across from one of the contacts of one pair to one of the contacts of the other pair and for maintaining said bridging connection when the other contact of each pair has been freed by opening the connecting means between each pair, the connecting and disconnecting means of at least one pair of contacts being included in the bridging circuit.

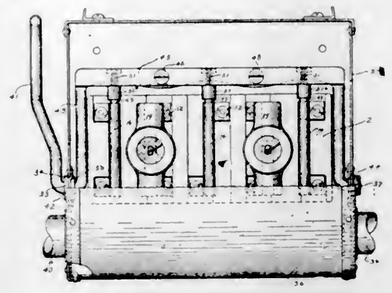
[Claims 6 to 52 not printed in the Gazette.]

1,170,113. ELECTRIC-METER-TESTING SWITCH. JOSEPH SACHS, Hartford, Conn. Filed Mar. 12, 1915. Serial No. 13,895. (Cl. 175—183.)

1. An electric meter testing switch comprising contacts disposed in pairs, connectors coöperative with the respective pairs of contacts, operating means, and means for at will connecting to or disconnecting from said operating means at least one of said connectors, the switch being provided with means to adapt it for meter testing.

2. An electric meter testing switch comprising a pair of contacts, a connector coöperative with the contacts and

movable to make and break positions, a movably mounted member supported independently of the connector, and means for at will connecting said connector to or disconnecting it from said movable member, each connector when disconnected from said movable member being individually movable and said switch having means to adapt it for meter testing.



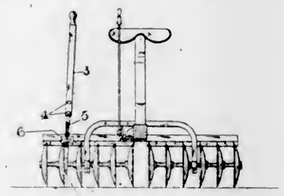
3. An electric meter testing switch comprising contacts disposed in pairs, independently movable connectors coöperative with the respective pairs of contacts and individually movable into making and breaking positions respectively, a movably mounted member independent of the connectors, and means for at will connecting any one or more of said connectors to or disconnecting the same from said movably mounted member, said switch being provided with means to adapt it for meter testing.

4. An electric meter testing switch comprising contacts disposed in pairs, connectors coöperative with the respective pairs of contacts and independently movable into making and breaking positions, and means whereby the connectors may be operated together or independently of each other, the switch being provided with means to adapt at least one of said connectors for meter testing.

5. An electric meter testing switch comprising contacts disposed in pairs, connectors coöperative with the respective pairs of contacts and independently movable to making and breaking positions, a movable member, and means for at will connecting any one or more of said connectors to or disconnecting the same from said movable member, the switch being provided with means to adapt at least one of said connectors for meter testing.

[Claims 6 to 37 not printed in the Gazette.]

1,170,114. SHARPENING DEVICE FOR DISKS OF DISK HARROWS. ALBERT LAWRENCE SAUNDERS and ALBERT HENGESBACH, Weyburn, Saskatchewan, Canada. Filed Sept. 7, 1915. Serial No. 49,409. (Cl. 97—77.)



1. A disk sharpening device comprising a lever arm having a fork integrally formed at one end in alinement with the lever; and a sharpener blade secured to the lever transversely thereof and adapted to be engaged with the edge of the disk.

2. A disk sharpening device comprising a lever arm provided with means of engagement with an axle; and a transverse sharpener blade secured to said arm transversely thereof, the edge of said blade nearest the fork and at each side of the lever being serrated, substantially as shown and described.

3. A disk sharpening device comprising a lever arm having a fork formed at one end and a longitudinal slot formed therein between the ends; and a transverse sharpener blade secured to said arm by means of a clamping bolt passing through the blade and through said slot, the edge of said blade nearest the fork being serrated substantially as shown and described.

4. A disk sharpening device comprising a lever arm having a fork integrally formed at one end in alinement with the lever; a sharpener blade secured to the lever transversely thereof and adapted to be engaged with the edge of the disk; a latch pivoted on one arm of the fork; and means for releasably securing the latch to the other arm of the fork.

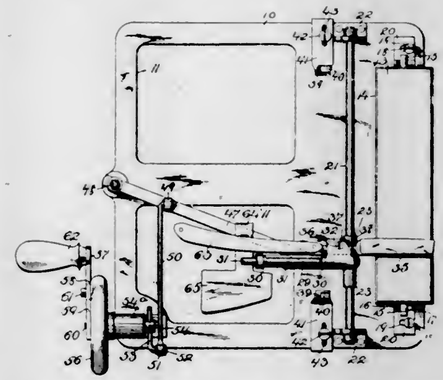
1,170,115. LOOSE-LEAF BINDER. JOHN SCHADE, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass., a Copartnership. Filed Mar. 4, 1915. Serial No. 11,948. (Cl. 129—24.)



1. In a device of the character described, a pair of prong carrying members pivoted together at their inner edges and having integral therewith spring portions, and rigid clasps loosely secured within perforations in said portions and extending across said members.

2. In a device of the character described, a pair of prong carrying members formed to provide opposite spring portions at a plurality of locations, the action of which portions is in the direction of the width of said members, and rigid clasps whose ends are secured loosely through perforations in opposing spring portions whereby said members are held in pivoted relation at their inner edges while the rigid clasps passively coöperate with said spring portions to effect the opening and closing of said prongs with a spring action.

1,170,116. MACHINE FOR SHARPENING AND SIMILAR OPERATIONS. NICHOLAUS SCHNUR, Elizabeth, N. J. Filed Nov. 20, 1915. Serial No. 62,452. (Cl. 51—16.)



1. A sharpening machine comprising a hone mounted so that it can tilt, an arm slidably supported adjacent to the hone, a carriage sliding on the arm, a spring arm swinging on one end and having its other end pivotally attached to the carriage, means for oscillating the spring arm, and means on the carriage for holding a blade.

2. A sharpening machine comprising a hone mounted so that it can tilt, an arm slidably supported adjacent to

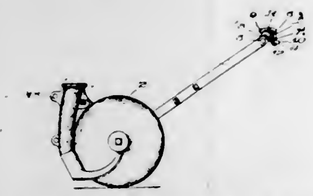
the hone, a carriage sliding on the arm, a spring arm swinging on one end and having its other end pivotally attached to the carriage, means for oscillating the spring arm, means on the carriage for holding a blade, and abutments against which the blade holding means are pressed at the end of each stroke of the arm to turn the blade holder.

3. A sharpening machine comprising a hone, an arm sliding adjacent to the hone, a carriage on the arm, a spring arm adapted to swing at one end and having its other end pivotally connected to the carriage, a pivoted blade holder on the carriage, means on the blade holder for securing a blade in position thereon, abutments against which the blade holder is forced at the ends of the strokes to turn the blade holder, and means for adjustably securing said abutments toward and from each other.

4. A sharpening machine comprising a hone, an arm sliding adjacent to the hone, a carriage on the arm, a spring arm adapted to swing at one end and having its other end pivotally connected to the carriage, a pivoted blade holder on the carriage, means on the blade holder for securing a blade in position thereon, abutments against which the blade holder is forced at the ends of the strokes to turn the blade holder, means for adjustably securing said abutments toward and from each other, and a wing on the blade holder to provide resistance against the turning of the blade holder.

5. A sharpening machine comprising a hone, means for supporting the hone so that it can tilt, a rod adjacent to the hone, a sleeve having an arm thereon, the sleeve being rotatable and slidable on the rod, a carriage slidable in the hone in a direction transverse to the sliding movement of the arm, a blade holder on the carriage, means on the blade holder for holding a blade, a wing on the blade holder having a projecting loop thereon, the blade holder having rounded edges, abutments in the path of said rounded edges to turn the blade holder at the ends of the strokes, means for adjustably securing the abutments so that they can be moved toward and from each other, a spring arm pivoted at one end so that it can swing and having its free end pivoted to the carriage, the arm having a tendency to force the carriage to cause a blade held in the holder to engage the hone, and means for swinging the spring arm.

1,170,117. DRAG-BAR ATTACHMENT. DUNY A. SCHUTT, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 27, 1913. Serial No. 786,955. (Cl. 97—7.)



1. In a drag bar attachment, a support of substantially right angled cross section, a drag bar attachment member seated between the flanges thereon having extensions protruding beyond the edges of said flanges, and a clamping member extending around the opposite side of said support from said attachment member and attached to said extensions.

2. In a drag bar attachment, a support of substantially right angled cross section, a drag bar attachment member having its body portion seated between the flanges on said support and oppositely disposed laterally projecting extensions extending beyond the edges of said flanges, and a substantially L-shaped clamping member extending around the opposite side of said support from said attachment member and attached to said extensions.

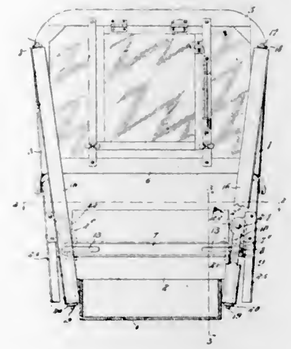
3. In a drag bar attachment, a support, an attachment member having portions thereof engaging one side of said support and positioning said member with respect to said support, said attachment member having a lip protruding from one side thereof beyond one edge of said support, and a U-bolt having the bight thereof fitted over said lip and its ends attached to said attachment member on the opposite side of said support from said lip, and having its body portion extending around the opposite side of said support from said attachment member.

4. In a drag bar attachment, a support, an attachment member having portions thereof positioning the same with respect to said support and a lip protruding from one end thereof, a U-bolt having the bight thereof fitted over said lip and its ends fixed to said attachment member and clamping the latter to said support, and a drag bar connected to said attachment member.

5. A drag bar attachment member comprising a body portion having a longitudinally extending shoulder thereon and substantially parallel rearwardly disposed drag bar attachment lugs formed on its ends, said attachment member being provided at points on opposite sides of its body portion with substantially oppositely disposed extensions disposed in different planes, one of said extensions being in the form of a hook while the others are provided with upstanding lugs.

[Claims 6 and 7 not printed in the Gazette.]

1,170,118. STORM-FRONT FOR VEHICLES. GEORGE W. SCOTT, Troy, Ohio. Filed Apr. 24, 1912. Serial No. 692,813. (Cl. 21—81.)



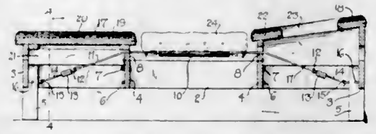
1. In a storm front for vehicles, the combination, with a vehicle body and its dash, of a rigid frame together with means for securing same in position at the front of said body, a straight arm pivotally connected to the side of said frame near the lower end thereof and depending downwardly, the pivotal connection being such as to permit said arm to swing laterally relatively to said frame to a point within said frame, means at the pivotal point of said arm for holding said arm in different positions of adjustment relatively to said frame, and a vertically arranged curtain supported at its upper end by said frame and at its lower end by the lower end of said arm.

2. In a storm front for vehicles, the combination, with a vehicle body and its dash, of a rigid frame together with means for securing the same in position at the front of said body, a serrated portion on said frame near the lower end thereof, a straight arm having its upper end provided with serrations, means for adjustably securing the upper serrated end of said arm to said serrated frame portion such as to permit said arm to be swung laterally relatively to said frame, and a vertically arranged curtain supported at its upper end by said frame and at its lower end by the lower part of said arm.

3. In a storm front for vehicles, the combination, with a vehicle body having a dash provided with a bead at its outer edge, of a frame, a clamping device on each side of said frame, each of said clamping devices comprising a hook-shaped portion adapted to engage the bead of said dash and clamp the dash to said frame, said clamping devices being independent of each other.

4. In a storm front for vehicles, the combination, with a vehicle body having a dash, a frame, a removable cross-bar carried by said frame, a clamping device near each end of said cross-bar, each of said clamping devices having means for engaging and clamping the dash to said cross-bar, and means for adjusting said clamping devices on said cross-bar.

1,170,119. CHIROPRACTIC ADJUSTING-TABLE. FREDERICK W. SEFTON, Davenport, Iowa. Filed Oct. 26, 1914. Serial No. 868,728. (Cl. 126—16.)



1. A chiropractic table comprising a supporting frame, main body supporting members mounted on the frame and in spaced relation, a plurality of supporting members disposed lower than said body supporting members and extending across the space between them and operatively connected at their ends to said frame, said second-named supporting members including a plurality of stretched helical springs, and spaced independently operable means disposed intermediate of the ends of said second-named supporting members for raising or lowering the second-named supporting members whereby to increase or decrease the tension of said springs or vertically adjust the second-named supporting members or incline them in either direction.

2. A chiropractic table including a supporting frame, body supporting members disposed in spaced relation, a plurality of stretched helical springs disposed lower than the body supporting members and between them and operatively connected at their ends to said frame, and hinged members mounted upon the frame at opposite ends of the springs and movable independently into a vertical position whereby to bodily raise or lower the springs, incline them in one or the other direction, or tension said springs.

3. A chiropractic table comprising a supporting frame, body supporting members spaced from each other and mounted on the frame, resilient cushion supporting means disposed lower than and between said members, and means for raising or lowering both ends of said cushion supporting means or inclining the cushion supporting means in either direction.

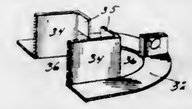
4. A chiropractic table comprising a supporting frame, body supporting members spaced from each other and mounted on the frame, a plurality of helical springs disposed between and lower than the body supporting members, flexible connections extending from the ends of the springs toward the ends of the frame, means for operatively connecting the wires to the frame, said means providing for the tensioning of the springs, and means for bodily raising or lowering both ends of the springs.

5. A chiropractic table comprising a supporting frame, body supporting members mounted on the frame in spaced relation, longitudinally extending springs mounted on the frame lower than the body supporting members and extending between them, and means for raising or lowering both ends of said springs independently of the body supporting members.

[Claims 6 to 10 not printed in the Gazette.]

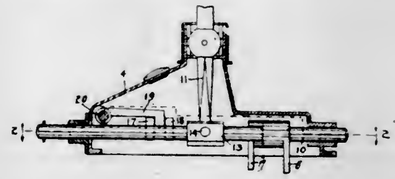
1,170,120. PORTABLE CHAIN MORTISING-MACHINE. FRANK D. SLONAKER, Pennsburg, Pa. Filed Oct. 21, 1914. Serial No. 867,844. (Cl. 144—72.)

A guide for chain mortising machines comprising a pair of arcuate plates having their ends connected, upstanding extensions carried by the confronting edges of the plates for slidably engaging the sides of the chain bar of the machine, said extensions having inwardly directed flanges, the inner edges being spaced to provide a passage



for the chain of the machine when the chain bar is engaged by the extensions and flanges.

1,170,121. TRANSMISSION-CLUTCH LOCKOUT. CHASE D. SMELSER, Rushville, Ind. Filed Mar. 13, 1915. Serial No. 14,150. (Cl. 74—58.)



1. In a transmission clutch lockout, the combination of a gear transmission, gear-shifting yoke-shafts having formations to engage a lock-plate hinged at one end and hooked at the other, a lock-plate to engage the formations on the yoke shaft and hold said yoke-shafts, a clutch between the transmission and its source of power, and means connecting the clutch with the lock-plate to move the latter into position to hold the shafts when the clutch is closed and to release them when it is open.

2. In a transmission clutch lockout, the combination of a gear transmission, gear-shifting yoke-shafts having lateral lugs, a swinging lock-means having an end hook to hold the yoke-shafts by engagement with their lugs, the lugs of each shaft being separated from each other approximately the thickness of the hooks and the dimensions of the lugs and hooks axially of the yoke shafts being substantially the same, a clutch between the transmission and its source of power, a shaft to operate the clutch and means to operate the lock-means by the movement of the clutch shaft.

1,170,122. WEEDING-TOOL. WILLIAM F. STUART, Cleveland, Ohio. Filed Aug. 3, 1915. Serial No. 43,416. (Cl. 55—65.)



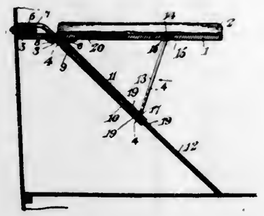
1. A weeder comprising a handle and shank, and a fork at the front end of the shank, an arm projecting from the shank and provided with a ball, and a flat fulcrum plate having a retaining socket for the ball.

2. A weeding tool comprising a handle and shank provided with a fork at one end and a hooked claw at the opposite end, an arm projecting from the shank, a fulcrum plate, and a ball and socket joint between said arm and the plate.

1,170,123. FOLDING AUTOMOBILE-SEAT. THOMAS A. TATE, Lowell, Ariz. Filed Sept. 17, 1914. Serial No. 862,224. (Cl. 155—22.)

A folding seat comprising a seat, a leg pivotally connected to the seat consisting of telescopic sections, one of the sections having a notch therein and the other section having openings in the wall thereof, and a brace com-

prising spaced sides provided with inwardly extending projections, said projections being received in the openings of one of the sections of the leg and adapted to be



sprung into and out of engagement with the notched section of the leg, said brace being adapted to be swung into engagement with the seat for forming a support therefor.

1,170,124. METHOD OF MAKING FINGER-RINGS. ALBERT F. VAUGHAN, Warwick, R. I., assignor to The R. L. Griffith & Son Company, Providence, R. I. Filed Aug. 4, 1914. Serial No. 855,041. (Cl. 29—8.)



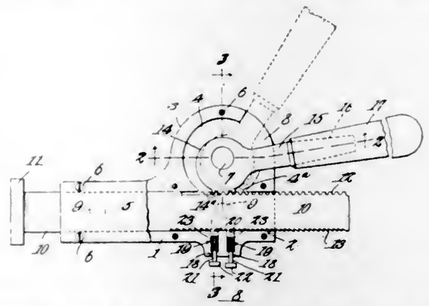
1. The herein described method of making finger rings which consists in covering a core of white metal with a finishing metal, then in forming the blank with a central enlargement by rolling or swaging same so as to bunch the white metal in said enlargement, then in forming the fingers of the setting in part about a central pillar, burring or drilling the pillar out to complete the formation of fingers and to simultaneously expose the white metal so that the latter provides a coating for the interior of the setting, and finally in securing the ends of the blank together to form the completed ring.

2. The hereindescribed method of making finger rings which consists in bunching the white metal of a blank having a white metal core to form a central enlargement, then in swaging the blank to form same with partially formed fingers for the setting, and then in drilling out the center of the enlargement so as to expose the white metal and in assembling or connecting the ends of the blank.

3. The hereindescribed method of making finger rings which consists in bunching the white metal of a blank having a white metal core at approximately the center of the blank, then in forming said bunched part with partially formed fingers for the setting, and then in removing the material from the center of the bunched part to expose the white metal and finally in connecting the ends of the blank.

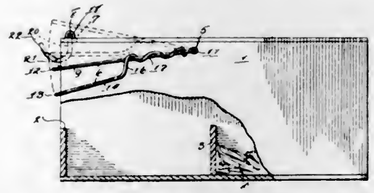
1,170,125. BENCH DOG OR CLAMP. WALTER J. VILLARD, Bloomington, Ill. Filed Mar. 30, 1915. Serial No. 18,158. (Cl. 144—307.)

In a device of the character described, a base having a channel, a recess at one side of the channel, an opening between the recess and channel, an upstanding lug within said recess, a slot at one side of the recess and a pocket at that side of the channel opposite the recess, a bar slidable in said channel, that edge of the bar adjacent the recess having rack teeth, the opposite edge of the bar having ratchet teeth, a spring pressed pawl disposed in said pocket and coöperating with the ratchet teeth to prevent the retrograde movement of the bar, an eccentric journaled upon the said lug within the recess and having teeth at that portion farthest away from said lug to swing into and out of engagement with said rack teeth, the eccentric having a shank projecting through



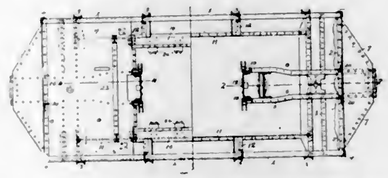
said slot, and a cover secured upon the base over said channel and recess to hold the bar and eccentric therein.

1,170,126. TRAP-NEST. JOHN A. WACHENDORF, Mukwonago, Wis. Filed May 9, 1914. Serial No. 837,482. (Cl. 119—49.)



A trap nest comprising a compartment open at one end, a guarding member pivotally mounted in the sides of said compartment, said guarding member being substantially U-shaped and having the vertex thereof disposed in front of said opening, a hook member pivotally mounted on the outer part of said compartment disposed adjacent said opening for receiving the vertex of the guarding member, the outer end of said hook member bent outwardly for preventing the upward movement of the guarding member after the same has been released.

1,170,127. DUMPING-CAR. ROBERT R. WEAVER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed May 13, 1915. Serial No. 27,898. (Cl. 105—185.)



1. In a dumping car, the combination with side and end sills, bolsters between the side sills, a hopper body, and dumping doors therefor, of longitudinal sub-sills near the side sills and secured at their ends to the bolsters, and hinge brackets for said dumping doors, said brackets disposed between said sub-sills and the sides of the hopper body and rigidly secured to both.

2. In a dumping car, the combination with an underframe comprising side and end sills and bolsters, and a hopper body, of longitudinal sub-sills near the side sills and secured to the bolsters, brackets secured to the side and sub-sills and engaging the inclined side sheets of the hopper body, and plates extending from the inclined side hopper sheets to the sub-sills and secured to both.

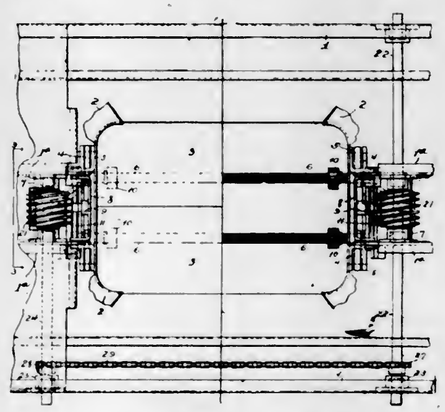
3. In a dumping car, the combination with an underframe comprising side and end sills and bolsters, a hopper body, and side stakes secured to the side sills, of longitudinal sub-sills near the side sills and secured to the bolsters, brackets disposed between the inclined side hopper sheets and said stakes, and angle bars secured to the lower portions of said brackets and to the side sills and the longitudinal sub-sills.

4. In a dumping car, the combination with an underframe, of a hopper body having inclined end floors each comprising three sections secured together, the intermediate section of each end floor having outwardly projecting flanges at its longitudinal edges, and means securing intermediate portions and the lower end portions of said flanges to the underframe.

5. In a dumping car, the combination with an underframe, and draft sills, of a hopper body having inclined end floors each comprising three sections secured together, the central section having outwardly projecting flanges at its longitudinal edges, said flanges depending between the draft sills and secured to the draft sills.

[Claims 6 and 7 not printed in the Gazette.]

1,170,128. DROP-DOOR-OPERATING MECHANISM. ROBERT R. WEAVER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed May 20, 1915. Serial No. 29,384. (Cl. 105—185.)

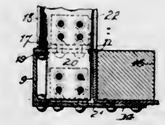


1. The combination with a car underframe, a hopper body having a single opening in its bottom and draft sills terminating at the hopper body, of two doors closing said single opening, a shaft parallel with the longitudinal axis of the underframe, bearing brackets for said shaft supported by the draft sills, pivoted link mechanism connecting said shaft with the two doors, a worm gear on said shaft, a transverse worm mounted between the draft sill and meshing with said worm gear, and means for manually operating said worm.

2. The combination with a car underframe, a hopper body having a single unobstructed bottom opening, and drop doors coöperating to close said bottom opening, of a shaft supported by the under-frame parallel with the longitudinal axis thereof and outside of the hopper body, pivoted link mechanism connecting said shaft with the drop doors, a worm gear loose on said shaft, lost-motion clutch devices between said worm gear and shaft, a worm mounted transversely over the longitudinal center of the underframe and meshing with said worm gear, and means for operating said worm from the sides of the car.

3. The combination with a car underframe, a hopper body having a single unobstructed bottom opening, two drop doors coöperating to close said bottom opening, and pivoted link mechanism located near respective ends of the hopper body and coöperative with said drop doors, of draft sills terminating at the hopper body, brackets depending from said center sills beyond respective ends of the hopper body, shafts mounted in said brackets, centrally located worm gears mounted on said shafts, means connecting the respective worm gears with the respective link mechanisms, two centrally located transverse worms supported by said draft sills and meshing with the worm gears, manually operable transverse shafts for operating said worms, and sprocket gearing connecting said shafts.

1,170,129. CAR-UNDERFRAME. ROBERT R. WEAVER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed June 15, 1915. Serial No. 34,174. (Cl. 105—76.)



1. The combination with the side sills of a car underframe, of an end sill structure comprising a member disposed forwardly of the ends of the side sills and projecting above the horizontal plane thereof and having rearwardly extending end portions secured to the side sills, and a plate member comprising an upper horizontal portion secured to the upper edge of the first mentioned end sill member, a lower horizontal portion connected with the side sills and a vertical portion connecting said upper and lower horizontal portions.

2. The combination with the side sills of a car underframe, of an end sill structure comprising an end sill channel projecting beyond the ends of the side sills and having its ends connected with the latter, a plate member having an upper horizontal part secured to the top of the end sill channel, a lower horizontal part disposed between the side sills and secured thereto, and a vertical part connecting said upper and lower horizontal parts, and plates secured to the bottom of the end sill channel and to the lower horizontal part of the plate member of the end sill structure.

3. The combination with the side sills and center girder of a car underframe, of an end sill channel having rearwardly turned end portions, a plate secured at its outer edge to the upper edge of said end sill channel and comprising a horizontal member, a vertical member and a lower horizontal member, the latter mounted on the center girder and extending from one side sill to the other, and means securing the ends of said plate and the ends of the end sill channel to the side sills.

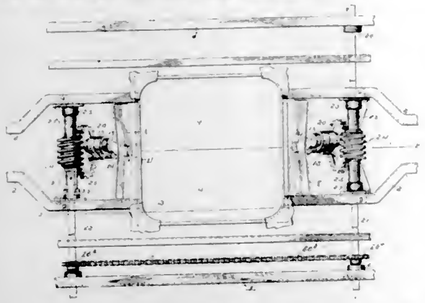
4. The combination with the side sills of a car underframe, of an end sill structure extending from one side sill to the other, said end sill structure comprising an end sill channel, and a plate comprising a top horizontal member secured to the top of the end sill channel, a vertical member and a bottom horizontal member, said top member having slots to receive end posts, anchor angles secured upon the top member of said plate, transverse plates secured under the end sill channel and the lower horizontal member of said plate, and post anchors secured to said transverse plates and located within the end sill structure.

1,170,130. DROP-DOOR-OPERATING MECHANISM FOR CARS. ROBERT R. WEAVER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Aug. 6, 1915. Serial No. 44,018. (Cl. 105—185.)

1. The combination with a car and two drop doors therefor, of an inclined crank shaft disposed approximately in line with the axis of the car, pitman connections between said crank shaft and each of said drop doors, and means for operating said crank shaft.

2. The combination with a car body and two drop doors therefor, of an inclined shaft disposed approximately in line with the axis of the car, two crank arms rigid with

said shaft, a wrist pin connecting said crank arms, pitman connections between said wrist pin and both of said doors, and means for operating said shaft.



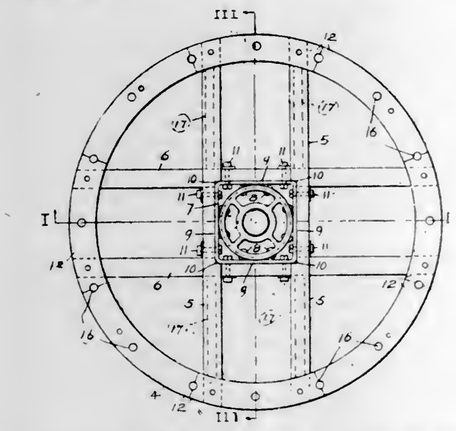
3. The combination with a car body and two drop doors therefor, of a centrally located inclined crank shaft, pitman connections between said crank shaft and both of said drop doors, a worm wheel loose on said shaft, lost-motion clutch devices between said worm wheel and said crank shaft, a transverse manually operable shaft, and a worm carried by the transverse shaft and meshing with said worm wheel.

4. The combination with a car body and two drop doors therefor, of a centrally located shaft, crank arms rigid therewith, a wrist pin connecting said crank arms, pitman connections between said wrist pin and the respective drop doors, a worm wheel loose on said shaft, said worm wheel and one of the crank arms carrying coöperating lost-motion clutch devices, a transverse shaft, and a worm carried by said transverse shaft and meshing with said worm wheel.

5. The combination with the framework, a car body and drop doors for the latter, of an inclined crank shaft supported by the frame-work approximately in line with the axis of the car, pitman connections between said crank shaft and the respective drop doors, said crank shaft having an offset portion to receive said pitman connections and effect a lock for the drop doors, and manually operable means for operating said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,170,131. BULL-WHEEL FOR DRILLING APPARATUS. CLYDE S. WRIGHT, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed May 21, 1915. Serial No. 29,532. (Cl. 242—117.)

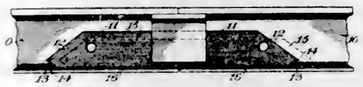


1. In a bull-wheel or the like, a shaft, a polygonal metal box secured to the shaft, there being spaces bounded by the shaft and the angles of the box, arms lying on the sides of the box, and bolts securing the arms to the box, each bolt having one of its ends in one of the said spaces.

2. In a bull-wheel or the like, a cylindrical shaft, a polygonal box comprising a continuous flat strip of metal which has its sides tangent to the shaft and secured thereto, whereby spaces are provided between the shaft and the angles of the box, arms lying on the sides of the box, and bolts securing the arms to the box, and having retaining means in the said spaces.

3. In a bull-wheel or the like, a tubular shaft, a polygonal box surrounding the shaft and secured to the same, a rim, and arms each having both ends connected to the rim and its central portion, provided with a recess to receive a side of the box, and means for securing the said central portion of the arms to the box.

1,170,132. WELDED RAIL-BOND AND FISH-PLATE. JESSE M. YOUNT, San Francisco, Cal., assignor of one-half to Thomas Finigan, San Francisco, Cal. Filed Nov. 15, 1915. Serial No. 61,488. (Cl. 239—9.)



1. A rail joint comprising abutting rail ends, and opposed fish plates therefor adapted to be welded to the rails at their perimeters, said opposed plates being arranged with their top and end seams out of alinement.

2. A rail joint comprising abutting rail ends, and opposed fish plates therefor adapted to be welded at their perimeters, one of said plates being of greater height than the other and the two being overlapped at their ends.

3. A rail joint comprising abutting rail ends and opposed fish plates therefor adapted to be welded thereto at their perimeters, said plates having acute angular ends with their apices cut away to prevent coincidence of the adjacent side and end seams.

4. A welded rail joint comprising abutting rails and opposed fish plates, the plate on one side arranged with respect to its companion so that the welding edges of the two plates are out of register.

1,170,133. PAPER-PUNCH. CLINTON B. ALEXANDER, Washington, D. C. Filed July 27, 1912. Serial No. 711,840. (Cl. 164—119.)



1. A paper punch embodying a substantially flat sheet metal base plate having projections on its upper side inclined to the plane of the base, parallel substantially straight transversely extending spring members permanently secured at one end to the projections, a finger plate mounted on the ends of the spring members, and coöperating punches and dies on the base and finger plate adapted to be brought together by the depression of the finger plate to form apertures in an interposed sheet.

2. A paper punch embodying a sheet metal base plate, parallel flat springs secured at one end permanently to the base plate, a finger plate extending longitudinally of the base plate and mounted on and connecting the flat spring members, coöperating punches and dies carried respectively on the base and finger plates and adapted to be brought together by the depression of the finger plate, and paper gages on the base plate shaped from the metal of said plate.

3. A paper punch embodying a sheet metal base plate having spaced inclined projections on its upper side, two spring members permanently secured at one end to each

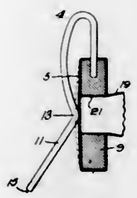
projection, extending therefrom in the general direction of inclination of said projections and having punch apertures formed therein, a finger plate mounted on and connecting the upper spring members and punches permanently mounted in position to coöperate with said apertures, one of each pair of said spring members forming clearers for discharging the perforated paper from the punches.

4. A paper punch embodying a sheet metal base plate having oppositely arranged projections on its upper side and located respectively near the front and rear edges of the plate, pairs of spring members permanently secured to the projections at the rear edge of the plate and one member of each pair having its forward end loosely confined beneath the projection at the front edge of the plate, a finger plate permanently mounted on the free ends of the other members of the pair, and punches mounted on the base plate in position to enter apertures in the spring members and finger plates respectively.

5. A paper punch embodying a sheet metal base plate, having upwardly extending projections near its opposite ends, parallel pairs of spring members permanently secured at their rear ends to the inner faces of the rear edge projections on the base plate, the lower members of said pairs being bowed upwardly and having their forward ends confined loosely beneath the front edge projections of the base plate, a finger plate permanently mounted on and connecting the upper members of the pairs of spring members, there being alined apertures in the spring members and finger plate, and punches permanently mounted on the base plate in position to enter said apertures to perforate a sheet interposed between the members of said pairs of spring members.

[Claims 6 to 12 not printed in the Gazette.]

1,170,134. PHONOGRAPH. DEXTER W. ALLIS, Whitman, and JOSIAH B. MILLET, Boston, Mass., assignors to Boston Talking Machine Company, Boston, Mass., a Corporation of Maine. Filed Apr. 17, 1912. Serial No. 691,307. (Cl. 181—11.)



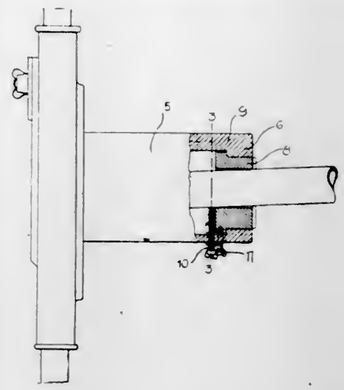
1. In a phonograph, the combination of a cup shaped sound box formed to present a bulged resilient diaphragm integral therewith, a disk in said box, and an integral stylus bar fast to said box and formed to present a bight for light engaging contact with said diaphragm.

2. In a phonograph, the combination of a sound box having a bulged side forming a diaphragm and a resilient stylus bar having one end fast to said box and a stylus at its opposite end, said bar being bent intermediate its ends to present a bight for engagement with said diaphragm.

3. In a phonograph, the combination of an integral cup shaped metal sound box formed to present a diaphragm, and a stylus bar comprising a rod having an end secured to said box, an end for connection with a stylus, and a part formed to present a portion separate from but engaging said diaphragm.

4. In a phonograph, the combination of a cup shaped sound box formed to present a resilient diaphragm, an apertured disk in said box substantially filling the same, and a stylus bar having an end fast to said disk and an end rigidly connected with a stylus, a portion of said bar being adapted to engage said diaphragm, the resilience of said diaphragm serving to urge the same toward said bar.

1,170,135. DEVICE FOR CUTTING CROOKED SCREW-THREADS. RICHARD ANDREWS, Charles Town, W. Va., assignor of one-fourth to Oscar M. Darlington, one-fourth to Daniel S. Hughes, one-fourth to George E. Diehl, and one-fourth to Fontain B. Hooff, Charles Town, W. Va. Filed Mar. 26, 1913. Serial No. 757,005. Renewed June 25, 1915. Serial No. 36,383. (Cl. 10—123.)



1. The combination with a die stock, of a collar provided with a pipe receiving opening, said collar being eccentrically mounted within the die stock, for rotative movement and engaging the wall thereof, said collar having a plurality of spaced cylindrical sockets, and a screw threaded in the stock body adapted for engagement in said sockets to secure the collar in an adjusted position within the body and maintain the pipe to be threaded at a desired inclination with relation to the longitudinal axis of the stock.

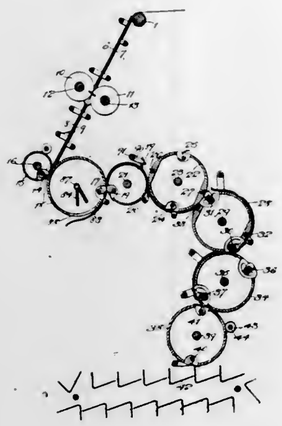
2. The combination with a die stock having an opening in one end of its body eccentrically related to the periphery thereof, a collar loosely arranged in said opening for rotative movement, said collar being also provided with an eccentric opening for the reception of the pipe to be threaded, and means for securing the collar in an adjusted position in the stock body.

3. The combination with a die stock having an opening in one end of its body eccentrically related to the periphery thereof, and means adjustably mounted in said opening and engaging the pipe or rod extending through the die stock to maintain the die stock at an inclination relative to the longitudinal axis of said pipe or rod.

4. The combination with a die stock provided in the rear end of its body with an eccentric opening, of a collar loosely mounted in said opening for rotative movement, said collar being also provided with an eccentric opening for the reception of the pipe to be threaded, means mounted in the stock body to prevent longitudinal movement of the collar therein, and additional means mounted in the stock body to secure said collar in an adjusted position within the eccentric opening of the body and maintain the die stock at an inclination relative to the longitudinal axis of the pipe.

5. The combination with a die stock provided in its rear end with an eccentric opening, of a collar loosely mounted in said opening for rotative movement and having an annular flange on one end, said collar also having an eccentric opening for the reception of the pipe to be threaded, a plurality of screws threaded in the body of the stock to prevent longitudinal movement of the collar into the stock body, the flange on said collar being provided in its periphery with a plurality of spaced sockets, and an additional screw threaded in the stock body for engagement in said sockets to secure the collar in its adjusted position and maintain the die stock at an inclination with relation to the longitudinal axis of the pipe.

1,170,136. SHEET CUTTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed June 4, 1915. Serial No. 32,171. (Cl. 101—120.)



1. A sheet carrying mechanism traveling at a certain constant speed, a sheet folding mechanism traveling at a lesser constant speed, an interposed sheet transfer mechanism traveling at a variable speed, and means for forcing the sheets away from the carrying mechanism while the sheets are being retarded by the transfer mechanism.

2. A sheet carrying mechanism traveling at a certain constant speed, a sheet folding mechanism traveling at a lesser constant speed, an interposed sheet transfer mechanism traveling at a variable speed, and means for holding the sheets away from the transfer mechanism while the transfer mechanism is being accelerated.

3. A sheet carrying mechanism traveling at a certain constant speed, a sheet folding mechanism traveling at a lesser constant speed, an interposed sheet transfer mechanism traveling at a variable speed, means for forcing the sheets away from the carrying mechanism while the sheets are being retarded by the transfer mechanism and means for holding the sheets away from the transfer mechanism while the transfer mechanism is being accelerated.

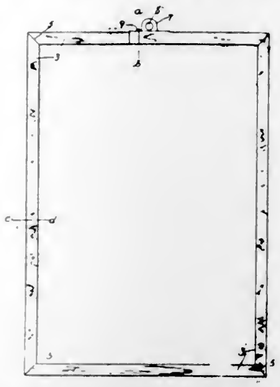
4. A sheet collecting mechanism traveling at a certain constant speed, a sheet folding mechanism traveling at a lesser constant speed, an interposed sheet transfer mechanism traveling at a variable speed, and means for forcing the groups of sheets away from the collecting mechanism while the sheets are being retarded.

5. A sheet collecting mechanism traveling at a certain constant speed, a sheet folding mechanism traveling at a lesser constant speed, an interposed sheet transfer mechanism traveling at a variable speed, and means for holding the groups of sheets away from the sheet transfer mechanism while the same is being accelerated.

[Claims 6 to 18 not printed in the Gazette.]

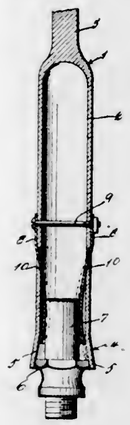
1,170,137. PICTURE-FRAME. LEWIS D. BENTON, Hamden, and CHARLES E. WIRTH, Waterbury, Conn. Filed Nov. 11, 1914. Serial No. 871,502. (Cl. 40—155.)

A picture frame formed from a strip of metal bent to U-shape, said strip comprising a central part with integral front and rear flanges, said flanges notched at intervals, and bent to the desired shape one end of the central part formed with a perforated finger and with a lug at one side of the finger and the other end of the central part formed with a single longitudinal slot through which the finger and the lug project, the lug being turned down on



the surface of the overlapping ends, whereby the ends are interlocked and a suspension eye provided for the frame.

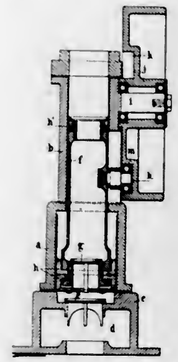
1,170,138. HYDRANT-WRENCH. GUY F. BOHNE and CHARLES RENBURG, Mount Pleasant, Utah. Filed May 8, 1915. Serial No. 26,889. (Cl. 81—90.)



1. In a wrench of the class described, the combination of a hollow cylindrical body having a handle formed upon one end thereof, a flared end formed upon the lower end of said body, said flared end comprising a plurality of outwardly diverging integral sides, said flared end being adapted to be positioned over a hydrant stem or nut, whereby upon the rotating of said body the hydrant stem or nut may be rotated, said flared end having its sides diverging so as to fit over and accommodate various sized stems or nuts.

2. In a wrench of the class described the combination of a hollow cylindrical body having a handle formed upon one end thereof, a flared lower end formed upon said body and comprising a plurality of diverging integral sides, said body provided with enlarged openings at a spaced distance from its outer end, said body also provided with reduced openings in alinement with said enlarged openings, flat springs having their outer ends fitting snugly upon said body, a bolt passing through said outer ends and through said reduced openings for retaining said springs in position, said springs extending through said enlarged openings and extending for a considerable distance within said hollow body, said bolt and enlarged openings holding said springs in parallel alinement with each other, whereby a hydrant stem or nut may be engaged by said flared end so as to be moved when said body is rotated, said springs being adapted to retain a stem or nut within said flared end when desired, said springs being protected from injury by having their major portions fitting within said body and having their outer ends fitting snugly upon said body.

1,170,139. COMBINED SUCTION AND FORCE PUMP. GABRIEL PIERRE BRIAU, Tours, France, assignor to La Société dite G. Briau et A. Soudée, Tours, France. Filed Jan. 23, 1915. Serial No. 3,961. (Cl. 103—57.)



1. A double-acting suction and force pump, consisting of a case or body comprising two parts having different diameters, the part of reduced diameter being provided with a vertical slot; a differential, tubular piston movable in said case; a spindle secured laterally to the reduced part of said piston and projecting through said slot; a roller mounted on the projecting portion of said spindle; and a driving pulley having a track for said roller.

2. A pump consisting of a case or body provided with a vertical slot; a piston movable in said case; a spindle secured laterally to said piston and projecting through said slot; a roller mounted on the projecting portion of said spindle; and a driving pulley having a track for said roller.

1,170,140. SNAP-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed Nov. 19, 1915. Serial No. 62,318. (Cl. 70—99.)



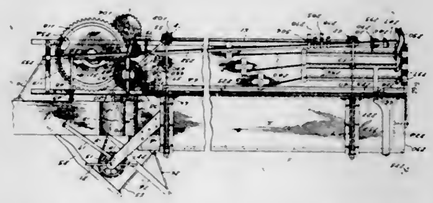
1. A snap seal having in combination a bulb shaped containing member closed except for a small shackle admitting aperture in one end, a flexible shackle with longitudinally folded ends adapted to fit snugly the one within the other, means for securing the outermost shackle end permanently within the containing member, means on the shackle ends for guarding the entrance aperture of the containing member, coincident locking apertures in each of the shackle ends, indentations on either side of the outermost shackle end above the locking apertures adapted to receive the sprung ends of a locking ring, and a locking ring of spring wire doubled upon itself so that one free end abuts the folded end and the other passes it.

2. A snap seal having in combination a bulb shaped containing member having a shackle entrance aperture at one end, a flexible shackle the ends of which are longitudinally folded and adapted to fit snugly the one within the other having means for securing the outermost end in the containing member, coincident locking apertures in each end adapted to receive a locking ring, coincident transverse enlargements adapted to guard the shackle entrance aperture and secure the outer shackle end in the containing member, indentations in the outer sides of the outer end above the locking apertures adapted to receive the sprung ends of a locking ring, a ring engaging notch in the extremity of each shackle end and a locking ring of spring wire doubled upon itself so that one free end abuts the folded end and the other passes it.

3. The combination in a snap seal of a two part containing member adapted to be circumferentially joined having a small shackle admitting aperture in one end with inwardly projecting lips, a flexible shackle the ends of which are folded longitudinally and adapted to fit the one within the other through endwise engagement, the outermost end having weakening notches, outwardly projecting horns adapted to engage the lips of the receiving aperture and indentations adapted to receive the sprung ends of a locking ring, both ends having transverse enlargements adapted to coincide and guard the outer side of the entrance aperture, locking apertures adapted to coincide and receive a locking ring and ring engaging notches in their extremities, and a locking ring of spring wire doubled upon itself so that one free end abuts the folded end and the other passes it.

4. A snap seal having in combination a containing member constructed with a shackle admitting aperture having inwardly projecting lips, a flexible shackle formed from a rectangular strip folded longitudinally at each end and provided with transverse enlargement adapted to engage and guard the outer side of the entrance aperture and outwardly projecting horns adapted to engage the inwardly projecting lips of said aperture and preliminarily secure one end of the shackle within the containing member and a locking ring of spring wire doubled upon itself so that one free end abuts the folded end and the other passes it, adapted to interlock with the shackle ends in the sealing operation; said preliminarily fastened end being a sheath end and the other longitudinally folded end being adapted to be inserted endwise into said sheath end and the two shackle ends having respectively duplicate holes and slots to admit the ends of the locking ring and ring engaging notches on their extremities, all as hereinbefore specified.

1,170,141. AUTOMATIC BALING-MACHINE. ROY A. COLLINS, Gerster, Mo. Filed May 15, 1915. Serial No. 28,350. (Cl. 100—20.)



1. In a baling machine, a feeder comprising packers, links pivotally connected to one end portion of said packers and serving as an anchoring means therefor, the

other end portion of each of said packers being free to engage the material to be fed, and an operating crank shaft engaged with the packers intermediate their ends.

2. In a baling machine, a feeder comprising packers, means for operating said packers, shiftable anchoring means for the packers independent of said operating means, whereby their movement or throw by the operating means is controlled, said anchoring means being shiftable to different positions to dispose the packers in operative or inoperative position.

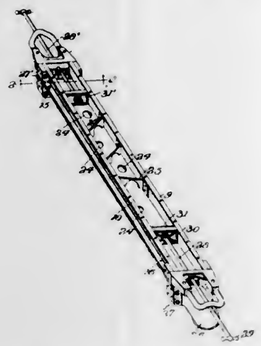
3. In a baling machine, a feeder comprising packers, means for operating the packers, links engaged with the packers and adapted to control their movement, and a shiftable anchorage for said links, whereby the packers may be disposed in operative or inoperative position.

4. In a baling machine, the combination with a chamber, of a movable compressor adapted to act upon the material in said chamber, a settable feeder adapted to deliver the material to the chamber, operating means for said feeder, and means independent of said operating means connecting the feeder to the compressor, whereby the movement of said compressor sets the feeder in feeding or non-feeding condition.

5. In a baling machine, the combination with a chamber, of a movable compressor operating therein, a feeder comprising packers and operating means therefor, said feeder being adapted to deliver material to said chamber, and links connecting the packers to the compressor, whereby the movement of the compressor disposes the operative portions of the packers in non-feeding position.

[Claims 6 to 24 not printed in the Gazette.]

1,170,142. SUCTION-BOX FOR PAPER-MAKING MACHINES. BENJAMIN DENVER COPPAGE, Wilmington, Del. Filed Sept. 27, 1915. Serial No. 52,841. (Cl. 92—51.)



1. In a suction box for a paper-making machine, the combination of a body part having upright side walls and a bottom formed in two parts with upright flanges on the adjacent edges, and a longitudinal upright reinforcing member positioned between and secured to the said flanges.

2. In a suction box for a paper-making machine, the combination of a body part having upright side walls, a central horizontal partition and a bottom, and a longitudinal upright reinforcing member secured to the bottom and engaging the partition.

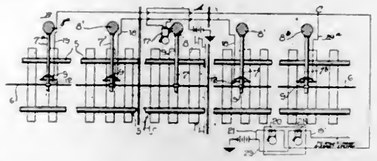
3. In a suction box for a paper-making machine, the combination of a body part having upright side walls, a central horizontal partition and a bottom formed in two parts with upright flanges on the adjacent edges, and a longitudinal upright reinforcing member positioned between and secured to the said flanges and engaging the said partition.

4. In a suction box for a paper-making machine, the combination of a body part having upright side walls, a central horizontal partition and a bottom, and a longitudinal upright reinforcing member secured to the bottom and engaging the partition, the said central horizontal partition having apertures therein, some on one side of the upright reinforcing member and some on the other side.

5. In a suction box for a paper-making machine, the combination of a body part having upright side walls, a central unitary partition and a bottom, and a longitudinal upright reinforcing member secured to the bottom and having its upper edge abutting the bottom of the said central unitary partition.

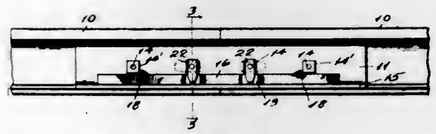
[Claims 6 to 8 not printed in the Gazette.]

1,170,143. RAILWAY SIGNALING SYSTEM. ALFRED DULAC, Gardiner, Me. Filed May 7, 1913. Serial No. 766,163. (Cl. 234—27.5.)



In a signaling system for railways, the combination with the home station and distant signaling stations at opposite sides of the home station along the line of the track, of an indicating clock arranged at the home station and including a stationary dial and an annular rotatable dial and disposed in the same plane therewith surrounding the stationary dial, said latter dial having inner and outer graduated surface portions, an hour hand movable over the face of the stationary dial and carrying the rotatable dial, a minute hand movable over the face of the stationary dial, bells arranged upon diametrically opposite sides of the clock, means carried by the bell hammers to indicate upon the inner and outer graduated portions of the rotatable dial respectively, lapses of time, operating circuits for said bells, and means for closing the respective circuits upon the arrival of a car at the distant stations to ring the respective bells and indicate the time of arrival upon the inner or outer graduated portion of the rotatable dial and also close the circuit of one of the dials upon the arrival of the car at the home station to indicate upon the rotatable dial the time of arrival.

1,170,144. NUT-LOCK. JAMES F. EVINS, Joplin, Mo., assignor of one-half to Charles L. Smyer, Springdale, Ark. Filed Aug. 9, 1915. Serial No. 44,542. (Cl. 151—54.)

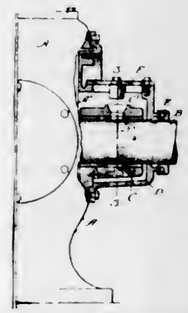


1. The combination with a fish-plate and nut carrying bolts passing therethrough, of a substantially straight flexible bar provided near its ends with lateral extensions to contact with the fish-plate and adapted to be arranged beneath and adjacent the nuts to prevent their rotation, means to prevent the longitudinal movement of the bar with respect to the fish-plate, elements having screw-threaded engagement with the bolts, and co-acting elements carried by the bar to have detachable locking engagement with the first named elements to hold the bar against lateral movement.

2. Apparatus adapted for use in connection with a fish-plate and nut carrying bolts passing therethrough, comprising a substantially straight resilient bar provided with means adapted to contact with the fish-plate and normally hold the bar spaced therefrom, elements carried by the bar to contact with certain of the nuts for holding the bar against longitudinal movement with relation thereto, key-nuts having screw-threaded engagement with the bolts, and elements carried by the bar and adapted to have detachable locking engagement with the key-nuts.

3. Apparatus adapted for use in connection with a fish-plate and nut carrying bolts passing therethrough, comprising a resilient bar provided with spacing elements and adapted to be arranged near the fish-plate upon one side of the nuts to prevent rotation thereof, outwardly projecting members formed upon the bar and provided with exterior notches, key-nuts having screw-threaded engagement with the bolts and provided with teeth adapted to enter the notches in the outwardly projecting members, and means to prevent the longitudinal movement of the bar with relation to the fish-plate.

1,170,145. BEARING. WILLIAM F. FREIDAG, Freeport, Ill., assignor to Stover Engine Works, Freeport, Ill., a Corporation of Illinois. Filed Nov. 15, 1912. Serial No. 731,525. (Cl. 64—24.)



1. The combination with a crank casing having on opposite sides of its body portion extensions forming supplemental external chambers closed below and primarily open above to admit the hands of the operator, of separable shaft bearings projecting from said body into said chambers, respectively, a crank shaft mounted in said bearings, and removable covers adapted to tightly close said chambers above; whereby escape of oil is prevented at all times and the protected bearings are readily accessible for adjustment or repair.

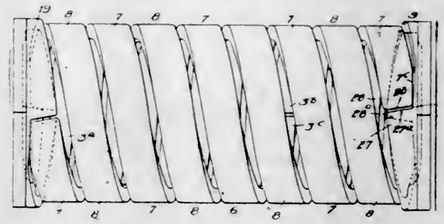
2. The combination with a crank casing provided with a lateral external auxiliary chamber closed below and primarily open upwardly to admit adjustment and removal of bearing parts, of a separable shaft bearing within said chamber, a crank shaft extending from the crank case through said chamber and supported in said bearing, oil arresting devices surrounding the crank shaft at the outer wall of the chamber, and a removable cover tightly closing the chamber above, substantially as and for the purpose set forth.

3. The combination with a crank-shaft casing having integral outwardly projecting shaft bearings and having its walls cut away alongside said bearings to form an open passage from the interior of the casing, of a supplemental, outwardly closed cup-like casing covering said bearings and passages, respectively, hermetically joined to the crank-shaft casing, and provided above the shaft bearings with an openable, hermetically closing cover, permitting ready access to and adjustment of the bearing regardless of liquid which may be within the casings.

1,170,146. FRICTION-SPRING. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed June 19, 1915. Serial No. 35,149. (Cl. 267—46.)

1. In a friction spring, the combination of friction spring elements subject to radial expansion under axial stress, and a casing surrounding said friction spring elements comprising a plurality of intercalated coil springs.

2. In a friction spring, the combination of a friction element having a cylindrical outer face and said friction element subject to radial expansion under axial stress, and a radially expansible and inherently axially resilient casing having a cylindrical inner face for coöperation with the cylindrical outer face of the friction element, and said casing surrounding said friction element.



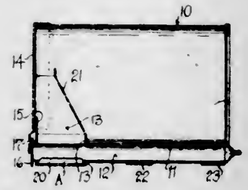
3. In a friction spring, the combination of a friction coil having a cylindrical outer face and said coil subject to radial expansion under axial stress, and a radially expansible and inherently axially resilient spring casing having a cylindrical inner face for coöperation with the cylindrical outer face of the friction coil and said spring casing surrounding the friction coil.

4. In a friction spring, the combination of a friction coil subject to radial expansion under axial stress, and a radially and axially, expansible and contractible casing surrounding said friction coil, said casing composed of a plurality of intercalated coil springs.

5. The combination of a plurality of resilient helices nested one within the other in position to create friction between the convolutions under axial pressure, the outer helix having a cylindrical outer face, and a casing having a cylindrical inner face for coöperation with the outer cylindrical face of the outer helix to resist radial stress in said helix and also expand and contract axially with said nested helices.

[Claims 6 to 16 not printed in the Gazette.]

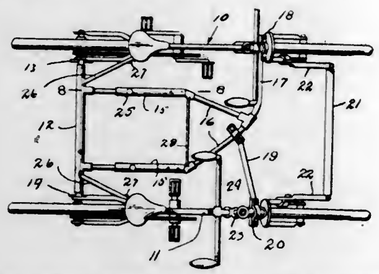
1,170,147. TOBACCO-TIN. GEORGE TATE GREER, Roanoke, Va. Filed June 7, 1915. Serial No. 32,686. (Cl. 131—5.)



The combination of a tobacco container having a longitudinal channel at one side, a forming tube rotatably mounted within the channel, means coacting with the forming tube for curling a cigarette paper into tubular form, a partition wall arranged within the container, said wall being inclined with respect to the forming tube, whereby tobacco placed within the chamber, which is defined by the partition wall and the side walls of the container, will slide by gravity when the container is upright, toward the tube, a pair of partition walls disposed within said chamber and defining an outlet passage therefor, there being a slot in the forming tube, said tube being rotatable for disposing the slot in registration with the outlet opening, whereby tobacco will pass from said chamber into the forming tube, a partition disposed across the channel of the container at the inner end thereof, said tube being rotatably supported by said partition and the adjacent end of the container and extending beyond said end, said extended end being closed, the slot of the tube being positioned between the last named partition and the end of

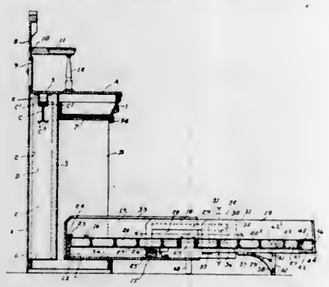
the container, and a plate carried by said end of the container and overlying the closed end of the tube for holding said tube against longitudinal movement in one direction, said extended portion of the tube being provided with a head for limiting movement of the tube in the opposite direction.

1,170,148. BICYCLE ATTACHMENT. DAVID H. GROGAN, Gadsden, Ala. Filed Oct. 18, 1913. Serial No. 795,937. (Cl. 208—27.)



In combination with a pair of bicycles, of a frame comprising an axle having its ends removably engaged with the rear axle spindles of the bicycle, adjustable parallel bars extending forwardly between the bicycles and having upwardly extending converging end bars, one of which extends laterally from the point of merging of said bars, and has its end detachably engaged with the steering head of one of the bicycles, a bar connecting one of the converging bars to the steering head of the other bicycle, and a horizontal bar having its ends pivotally connected to the front forks of both bicycles by links, said links having their inner ends detachably connected to the front fork of the bicycles.

1,170,149. COMBINATION TELESCOPING AND FOLDING BUFFET-BED. CARL GUSTAFSON, Chicago, Ill. Filed Nov. 6, 1911. Serial No. 658,797. (Cl. 5—34.)



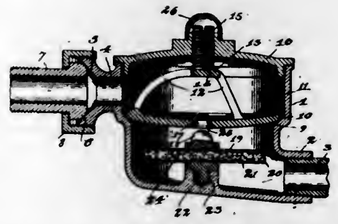
1. In a combination telescoping and folding buffet bed, a bed casing, a folding compound telescoping bed frame comprising, a section pivotally hung to and within the sides of the bed casing, a plurality of sections telescopingly connected and each acting as a guide and support for the other, and telescopically connected to said pivotally hung section, a telescoping preventing means adapted to act as, both a lock and an extension between and against the bed spring frame and the outermost extended telescoping bed frame section, a spring actuated bed frame support, a gravity actuated pivotally hung bed frame support, a bed spring frame section adapted to be folded together with the mattress, within the telescoped and folded, or closed bed frame within the sides of the bed casing, a second bed spring frame hinged to the first bed spring frame section and detachably secured to said pivotally hung bed frame section, and against longitudinal movement with said telescoping sections.

2. In a combination telescoping and folding bed, a bed casing, a folding compound telescoping bed frame comprising, a section, pivotally hung to and within the sides of the bed casing, sections telescopingly connected to one another and to and within said pivotally hung section, one of said sections adapted to slide within and be supported by said pivotal section, and, to act as a sliding connection and support for another telescoping section therewithin, substantially as described, a combination telescoping preventing means, and lock and extension member, adapted to act as a lock between the outermost extended telescoping section and the bed spring frame, and as an extension for shortened telescoping folding bed frames, a bed spring frame section adapted to be folded together with the mattress, within the telescoped folded or closed bed frame within the sides of the bed casing, a second bed spring frame section hinged to the first bed spring frame section and detachably secured to said pivotally hung bed frame section, and against longitudinal movement with said telescoping sections.

3. The combination in a combination folding and compound telescoping bed frame of, a bed casing, a bed frame section pivotally connected with the bed casing, telescoping sections interlockingly connected one within the other, one of said sections supported by said pivotal section, and adapted to act as a sliding guide and support for the other telescoping section, and adapted to be telescoped and folded, together with a folding bed spring frame section and a mattress, within the sides of the bed casing, bed spring frame sections detachably secured to said pivotally hung section, and against longitudinal movement with said telescoping sections, a combination telescoping preventing means, and lock and extension member, adapted to act as a lock between the outermost extended telescoping section and the folding bed spring frame section, and, as an extension for shortened telescoping folding bed frames, a spring actuated frame support and a gravity actuated pivotally hung section support.

4. The combination in a combination folding telescoping bed, of, a bed casing inclosing a telescoping folding bed frame consisting of a pivotally mounted section, an intermediate telescoping section slidably connected to and within and supported by the pivotal section, a second telescoping section interlockingly connected to and within and supporting the intermediate telescoping section, a compound folding bed spring frame having one section detachably secured to and supported within and upon said pivotal section, said compound bed spring frame adapted to support a mattress and to be folded together with the mattress and to envelop the same within the sides of said bed casing, and means for locking said telescoping folding bed frame in its open or extended position against the end of the folding bed spring frame, a spring actuated bed support adapted to support the bed in its open, or, extended position and a gravity actuated pivotal section support carried by said pivotal section.

1,170,150. STEAM-TRAP. LYNEWOOD M. HASTINGS and RICHARD W. LEUTWILER, Chicago, Ill. Filed Jan. 12, 1915. Serial No. 1,729. (Cl. 236—10.)



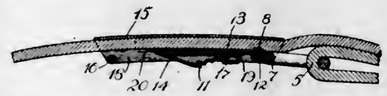
1. A steam trap comprising a casing having an inlet and an outlet, said casing having a seat formed on its inner face between said inlet and outlet, a diaphragm having an opening therein disposed against the seat to divide the casing into compartments, a thermostatically actuated valve for coöperation with the opening in the diaphragm to control communication between the compartments, and adjustable means carried by the casing to hold the diaphragm tightly engaged against the seat.

2. The combination with a casing having a seat formed centrally therein, said casing being open at its upper end, a diaphragm engaged against the seat to divide the casing into an upper compartment and a lower compartment, said casing having an inlet communicating with the upper compartment and an outlet communicating with the lower compartment, the diaphragm being formed with a central opening to establish communication between said compartments, a cover to close the upper end of said casing, means carried by the cover to hold the diaphragm tightly engaged against the seat, a valve disposed in the lower compartment to control communication between the compartments of the casing, and an expansible member for automatically actuating said valve upon predetermined change in temperature within the casing.

3. The combination with a casing having an open upper end and a central seat formed therein, a diaphragm having a central opening therein arranged against valve seat to divide the casing into an upper compartment and a lower compartment, a valve arranged within the lower compartment and adapted to coact with the opening in the diaphragm to control communication between the compartments of the casing, an expansible member for automatically actuating said valve upon predetermined change in temperature, a cover adapted to detachably close the open end of the casing, and adjustable means carried by the cover to tightly hold the diaphragm in engagement against the seat.

4. The combination with a casing having an open end and a central seat formed therein, a diaphragm arranged within said casing and having a central opening therein, said diaphragm dividing the casing into two compartments, a valve arranged in one of said compartments to coact with the opening in said diaphragm for controlling communication between the compartments, an expansible member for automatically actuating said valve upon predetermined change in temperature, a spider formed on said diaphragm and extending into the other compartment, a cover for closing the open end of the casing, said cover having a centrally threaded opening therein, and a screw mounted in the threaded opening for engagement against the spider whereby to maintain the dipahragm in engagement against the seat.

1,170,151. BELT-BUCKLE. THOMAS F. HATHAWAY, Elgin, Ill., assignor to Elgin American Manufacturing Co., Elgin, Ill., a Corporation of Illinois. Filed May 29, 1915. Serial No. 31,201. (Cl. 24—191.)



1. In a buckle, the combination of a body portion embodying a face place, a clamping member movable longitudinally with respect to the body portion, a V-shaped member attached to the clamping member, and a member affixed to the body of the buckle and arranged to effect a wedging of said V-shaped member to maintain the clamping member in a desired spaced relation with respect to the face plate of the buckle, substantially as described.

2. A buckle comprising a body portion embodying a face plate, a bar extending crosswise of the body portion and on the under side thereof, a clamping member movable with respect to the body portion, and a V-shaped plate attached to the clamping member and provided with a serrated surface, said serrated surface engaging with said crosswise extending bar to maintain the clamping member in a desired spaced relation with respect to the face plate, substantially as described.

3. In a buckle, the combination of a body portion embodying a plate, a bar spaced rearwardly of the plate to provide a straight line passage for a strap, a V-shaped clamping member having one end thereof disposed between the bar and the plate with the extremities of the member arranged to engage upon the strap, said clamping member being longitudinally movable with respect to the bar, whereby the extremities of the clamping member may be brought nearer to or farther from the strap as desired, and means for locking the V-shaped clamping member in desired position longitudinally of the bar, substantially as described.

4. In a buckle, the combination of a body portion embodying a substantially flat plate, a bar spaced rearwardly from the plate, whereby a strap may be threaded between the plate and bar in a straight line, and a clamping member arranged to act upon the strap to press the same against the plate, comprising an angularly disposed longitudinally movable element arranged to be wedged between the bar and strap with a desired degree of pressure, and means for locking the said element in desired position longitudinally of the bar, substantially as described.

1,170,152. CLOSURE-CAP AND THE LIKE. WILLIAM E. HEATH, Minneapolis, Minn., assignor to Heath Self-Opening Stopper Company, Baltimore, Md., a Corporation of Delaware. Filed May 10, 1912. Serial No. 696,511. (Cl. 215—10.)



1. A stiff metal closure ring or cap composed of a vertical flange, a horizontal flange, and a finger piece partially severed from the horizontal flange by a circumferential cut, the horizontal flange having radial slits therein one of which is extended through the vertical flange, said last mentioned slit being separated from the circumferential cut forming the finger piece by a narrow strip of metal on one side and by a wide strip on the other side, whereby the twisting of the finger piece breaks the continuity of the horizontal flange and allows the cap to expand without separating the finger piece from the cap.

2. A stiff metal closure ring or cap composed of a finger piece partially severed therefrom, and integrally connected thereto by a wide strip of metal on one side and by a narrow strip of metal on the other side, a vertical flange, and a horizontal flange, said horizontal flange having cuts therein to enable the cap to expand, said flanges having a cut extending completely therethrough except for said narrow strip of metal which maintains the continuity of the cap, whereby the bending of the finger piece severs said narrow strip of metal and breaks the continuity of the cap and allows the cap to expand without separating the finger piece from the cap.

3. A stiff metal closure ring or cap composed of a vertical flange, a horizontal flange, and a finger piece partially severed from the cap, said finger piece being integrally connected to the cap by a narrow strip of metal on one side of the finger piece and by a wide strip of metal on the other side, the horizontal flange having cuts therein one of which is extended through the vertical flange and is bridged by said narrow strip of metal to maintain the continuity of the cap, whereby the bending up and twisting of the finger piece severs said narrow strip and breaks the continuity of the cap and allows the cap to expand without separating the finger piece from the cap.

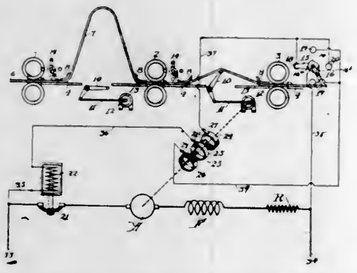
4. A stiff metal closure ring or cap composed of a vertical flange, a horizontal flange, and a finger piece partially severed from said cap and having a free end arranged in the horizontal plane of said horizontal flange, said finger piece being integrally connected to the cap by a narrow strip of metal on one side and a wide strip on

the other side, the horizontal flange having cuts therein to render the same capable of expanding, one of said cuts extending through the vertical flange and being closed by said narrow strip of metal, whereby said narrow strip of metal is severed by bending up the finger piece to break the continuity of the cap and allow the same to expand without separating the finger piece from the cap.

5. A stiff metal closure ring or cap composed of a vertical flange, a horizontal flange, and a finger piece partially severed from the cap and integrally connected to the horizontal flange by a narrow strip of metal on one side of said piece and by a wide strip on the other side, said horizontal flange having radial cuts therein one of which is extended through said veritcal flange, said last mentioned cut being arranged between said strips, whereby the bending up of the finger piece breaks the continuity of the horizontal flange and allows the cap to expand without separating the finger piece from the cap.

[Claim 6 not printed in the Gazette.]

1,170,153. METAL-ROLLING MACHINERY. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 31, 1910. Serial No. 579,850. (Cl. 80—35.)



1. The combination with a plurality of sets of metal rolls, one set feeding the material issuing therefrom to a second set faster than it enters the latter, of a device operable to bow the material between said two sets of rolls, and means for automatically operating said device after the material enters said second set of rolls.

2. The combination with a plurality of sets of metal rolls, one set feeding the metal issuing therefrom to a second set faster than it enters the latter, of a device operable to bow the material passing between said two sets of rolls, and means operating automatically after the material enters said second set of rolls to operate said device and immediately restore the same to initial position.

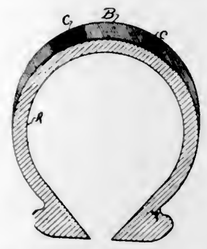
3. The combination with a plurality of sets of metal rolls, one set feeding the material issuing therefrom to a second set faster than it enters the latter, of a device adapted to be projected against the material passing between said sets of rolls, a member operated by the material issuing from said second set of rolls, and automatic means operating upon said movement of said member to operate said device and thereafter return the same to initial position independently of the passage of the material rolled.

4. The combination with a plurality of sets of metal rolls, one set feeding the material issuing therefrom to a second set, of a device operable to bear against the material passing between said two sets of rolls, a member operable by the material issuing from said second set of rolls, and automatic means operating upon said movement of said member to operate said device and restore the same to initial position, said means being unaffected by the return movement of said member.

5. The combination with a plurality of sets of metal rolls, one set feeding the material issuing to another set faster than it enters the latter, of a device operable to bear against and bow the material passing between said two sets of rolls, an electric motor for operating said device and restoring the same to initial position, and automatic controlling means for said motor including a switch operated by the material issuing from said second mentioned set of rolls and an automatic switch.

[Claims 6 to 10 not printed in the Gazette.]

1,170,154. PROCESS OF MAKING TIRE-CASINGS. HUGO HENNIG, Akron, Ohio, assignor of one-half to Adelbert Hauschild, East Palestine, Ohio. Filed Apr. 8, 1915. Serial No. 19,930. (Cl. 154—14.)



1. The method of making tire casings having inlays, consisting of punching openings in a rubber tread strip and inserting in these openings rubber inlays of a composition different from the tread strip, the outer faces of such inlays being flush with the tread surface, securing the tread in place on a tire carcass, and vulcanizing the casing thus produced.

2. The method of making tire casings consisting of punching through the tread strip a series of holes, punching holes of the same size through rubber stock of other composition, inserting the punched out portions of the last mentioned stock in the openings provided in the strip, mounting the tread on a carcass, and vulcanizing the casing thus produced.

3. The process of making tire casings consisting of making openings in a tread strip and inserting in these openings rubber pieces softer than the tread strip and having their outer faces flush with that of the tread, and securing such compound tread in place on a tire carcass.

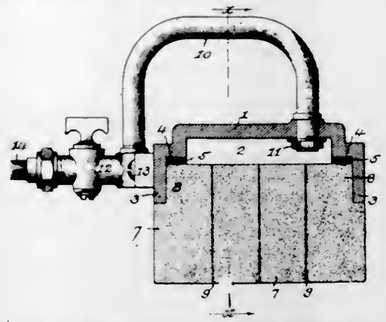
4. The process of making tire casings consisting of making openings in a member to constitute a tread strip, making inlay members of a different composition of rubber and of a size corresponding to the openings, softening the edge walls of one of these members by a rubber solvent, inserting the inlay members into the strip member, and mounting the tread on a tire carcass.

5. The process of making tire casings consisting of making a stencil for a tread strip, making inlays of a different composition from the tread strip, said inlays being adapted to fit the openings in the stencil, immersing the inlays in rubber solvent, thereafter inserting them in the stencil openings, and thereafter vulcanizing the inlaid strip in place on a tire carcass.

1,170,155. FOUNTAIN RUBBING-BLOCK. HENRY JAMES HEWITT, Chicago, Ill. Filed Aug. 23, 1915. Serial No. 46,796. (Cl. 51—1.)

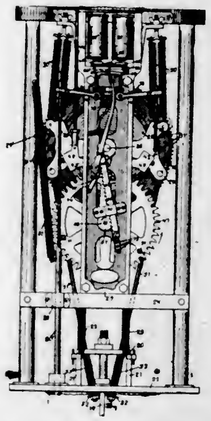
1. In a fountain rubbing block, the combination of a holding head formed with a fluid containing chamber, a depending annular skirt, a tubular handle for said holding head having communication at one end with the chamber aforesaid, a valve connected to the other end of said handle and adapted for connection with a flexible supply hose, a rubbing block fitting within the aforesaid depending skirt, and means associated with said skirt for fastening the rubbing block in place, substantially as set forth.

2. In a fountain rubbing block, the combination of a holding head formed with a fluid containing chamber, a depending annular skirt, a tubular handle for said holding head having communication at one end with the chamber aforesaid, a valve connected to the other end of said handle and adapted for connection with a flexible supply hose, a rubbing block fitting within the aforesaid depending skirt, and a plurality of set screws passing through said skirt to engage said rubbing block, substantially as set forth.



3. In a fountain rubbing block, the combination of a holding head formed with a fluid containing chamber, a depending annular skirt, a tubular handle for said holding head having communication at one end with the chamber aforesaid, a valve connected to the other end of said handle and adapted for connection with a flexible supply hose, a rubbing block having a shank portion fitting within the aforesaid depending skirt, and means associated with said skirt for fastening the rubbing block in place, substantially as set forth.

1,170,156. RAILWAY SIGNAL MECHANISM. HENRY A. HOESCHEN, Omaha, Nebr., assignor to Hoeschen Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Filed Dec. 13, 1911. Serial No. 665,575. (Cl. 246—48.)



1. In a railway signaling mechanism, a spring motor, train-actuated means for winding the motor spring, a signal actuating wheel driven by the motor, a stop for said wheel, said stop being normally at a position to prevent movement of the wheel but being movable to a release position, means for holding the stop at normal position, means for moving said holding means to release the stop therefrom, means for retaining the stop in release position, and means controlled by the winding means for moving said retaining means to free the stop therefrom.

2. In a mechanism of the class described, a motor-driven wheel, signal mechanism actuated by said wheel, a stop normally positioned so as to prevent movement of the wheel but movable to a release position, means for holding the stop at normal position, train-controlled means for moving said holding means to release the stop therefrom, means for retaining the stop at release position, and means for moving said retaining means to free the stop therefrom.

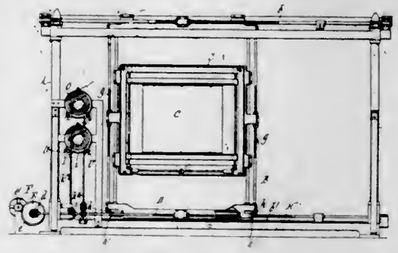
3. In a mechanism of the class described, a motor-driven wheel, a stop normally positioned to prevent movement of the wheel but movable to a release position by pressure of the wheel thereon, means for holding the stop at normal position, train-controlled means for moving said holding means to release the stop therefrom, means for retaining the stop at release position, and means for disengaging said retaining means from the stop.

4. In a mechanism of the class described, a motor-driven signal-actuating wheel, a movable stop-device engageable with the wheel, means for holding the stop-device in position to prevent movement of the wheel, the stop-device normally tending to move toward such position but being movable to a release position by pressure of the wheel thereon, train-controlled means for moving the stop-holding means to release the stop therefrom, means for retaining the stop-device in release position, and motor-actuated means for disengaging said retaining means from the stop.

5. In a mechanism of the class described, a motor-driven signal-actuating wheel, a movable stop, means for holding the stop in a normal position to prevent movement of the wheel, the stop having a bias toward such position but being movable to a release position by pressure of the wheel thereagainst, means for moving the stop-holding means to release the stop therefrom, means for retaining the stop in release position, and train-controlled means for disengaging said retaining means from the stop.

[Claims 6 to 21 not printed in the Gazette.]

1,170,157. ADJUSTMENT INDICATOR AND CONTROLLER. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Filed Apr. 7, 1911. Serial No. 619,560. (Cl. 74—46.)



1. The combination with an adjustable machine part and its adjusting mechanism, of an adjustment controller comprising adjustable unit and fraction members which are set to correspond to the desired adjustment of the adjustable machine part and are stationary during the adjusting movement of said part, and driven unit and fraction members which move differentially and in unison with said adjustable part during the adjusting movement thereof and which indicate by comparison with the stationary members the position of the adjustable machine part, substantially as set forth.

2. The combination with an adjustable machine part and its adjusting mechanism, of an adjustment controller comprising adjustable unit and fraction members which are set to correspond to the desired adjustment of the adjustable machine part and are stationary during the adjusting movement of said part, and driven unit and fraction members which move differentially and in unison with said adjustable part during the adjusting movements thereof, and automatic mechanism which operates to stop the adjusting movement when the driven unit and fraction members arrive at positions which correspond to the positions of the adjustable unit and fraction members, substantially as set forth.

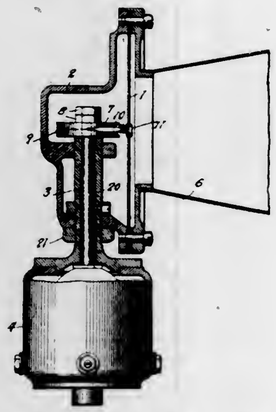
3. The combination with an adjustable machine part and its adjusting mechanism, of an adjustment controller comprising unit and fraction members capable of rotary adjustment, which members are set to correspond to the desired adjustment and remain stationary during the adjusting movement of said part, and rotary unit and fraction members which move differentially and in unison with said adjustable part during the adjusting movement thereof, substantially as set forth.

4. An adjustment controller for stopping the movement of an adjustable part comprising unit and fraction members capable of rotary adjustment, which members are set to correspond to the desired adjustment and remain stationary during the adjusting movement of said part, and rotary unit and fraction members which move differentially and in unison with said adjustable part during the adjusting movement thereof, and automatic mechanism which operates to stop the adjusting movement when the driven unit and fraction members arrive at positions which correspond to the positions of the adjustable unit and fraction members, substantially as set forth.

5. The combination with an adjustable machine part, its adjusting mechanism, and an electrical clutch for driving the same, of an adjustment controller comprising adjustable unit and fraction members which are set to correspond to the desired adjustment and driven unit and fraction members which move differentially in unison with said adjustable part, electrical contacts which are automatically connected when said driven unit and fraction members arrive in positions corresponding to the adjusted positions of said adjustable members, and electrical mechanism connected with said contacts and operating said clutch to stop the movement of said adjusting mechanism when said contacts are connected, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,170,158. MECHANICALLY-ACTUATED HORN OR ALARM. MILLER REESE HUTCHISON, New York, N. Y., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed June 7, 1910. Serial No. 565,564. (Cl. 116—1.)



1. In an alarm or signal, a friction driver having its operating surface traveling in one direction, means for driving the same, a friction grip member, yieldingly restrained against movement in the direction of travel constantly tending to contact with said driver, the friction surfaces of said driver and grip member being of a nature to grip with exceeding intimacy of contact and great friction and to suffer great diminution of friction upon severance of the union, whereby alternate grips and slips of the grip member are produced, and a diaphragm agitated by the chattering of the grip member for the production of loud sound.

2. In an alarm or signal, a friction driver having its operating surface traveling in one direction, means for driving the same, a friction grip member yieldingly restrained against movement in the direction of travel constantly tending to contact with said driver, the friction surfaces being of a nature to grip with exceeding intimacy of contact and great friction and to suffer great diminution of friction upon the occurrence of relative slip, whereby alternate grips and retrograde slips of the grip member are produced, and a diaphragm having mechanical connection with said grip member so as to be agitated thereby.

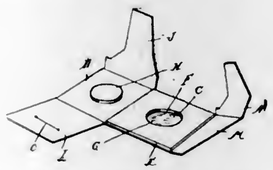
3. In an alarm or signal, a friction rotor having its operating surface traveling in one direction, a friction grip member yieldingly restrained in the direction of travel constantly tending to contact with said rotor, the friction surfaces of said rotor and grip member being of a nature to grip with extreme intimacy of contact and great friction and to suffer great diminution of friction upon severance of the union, whereby alternate grips and retrograde slips of the grip member are produced, and a diaphragm arranged to be agitated by the chattering of the grip member for the production of loud sound.

4. In an alarm or signal, coöperating friction members constantly tending to contact with each other having surfaces of a high coefficient of friction, means for driving one of said members in one direction in contact with the other, one of said members being yieldingly restrained in the direction of travel and having a chattering action due to alternate gripping and slipping on the other of said members, and a diaphragm mechanically associated with one of said members so as to be agitated by said chattering action.

5. In an alarm or signal, coöperating friction members constantly tending to contact with each other of a nature alternately to grip and slip, means for driving one of said members in one direction, one of said members being resiliently yieldingly restrained in the direction of travel, and a diaphragm associated mechanically with the yieldable member so as to be agitated by the grip and slip action.

[Claims 6 to 12 not printed in the Gazette.]

1,170,159. PACKET. FREDERICK F. INGRAM, Detroit, Mich., assignor to Frederick F. Ingram Company, Detroit, Mich., a Corporation of Michigan. Filed June 12, 1915. Serial No. 33,813. (Cl. 229—72.)



1. A packet comprising two sides folded into parallelism, a chamber on one of the sides, and a projection on the inner face of the other side for closing the chamber.

2. A packet comprising a blank foldable upon itself to form sides, a member secured to the inner face of one of the sides and having a cut-away portion forming a chamber, and a projection secured to the inner face of the other side and adapted to fit within said chamber.

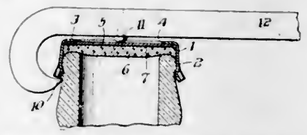
3. A packet comprising a blank foldable upon itself to form sides, a member secured to the inner face of one of the sides and having a cut-away portion forming a chamber, a projection secured to the inner face of the other side and adapted to fit within said chamber, said blank having a flap attached to one of the sides and overlapping the other side.

4. A packet comprising a blank foldable upon itself to form sides, a member secured to the inner face of one of the sides and having a cut-away portion forming a chamber, a projection secured to the inner face of the other side and adapted to fit within said chamber, said blank having flaps for closing all the open side edges of the packet.

5. A packet comprising a blank foldable upon itself to form sides, a member secured to the inner face of one of the sides and having a cut-away portion forming a chamber, said blank having a flap at the end of one of the sides, and flaps on the opposite side edges of one of said sides, said flaps serving to close the sides and the end of the packet.

[Claims 6 and 7 not printed in the Gazette.]

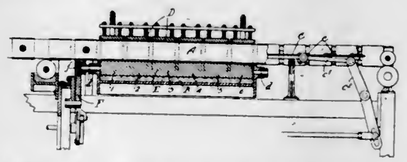
1,170,160. COMBINED BOTTLE-CLOSURE AND COUPON-DISK. JAMES E. INGRAM, Baltimore, Md., ALBERT K. KELLER, Philadelphia, Pa., and HENRY L. ARTHUR, Aberdeen, Md., assignors, by mesne assignments, to William H. G. Gould, Philadelphia, Pa. Filed Mar. 5, 1915. Serial No. 12,321. (Cl. 215—83.)



1. In a combined receptacle closure and coupon disk, the combination of an integral annular member including an integral fluted skirt whereby it is adapted to be attached to the mouth of such receptacle and also including an inwardly extending integral flange portion which terminates above and in alinement with the edge of the mouth of the said receptacle, a disk situated within the said annular member and having its edges seated against the underside of the inwardly extending flange portion, and a sealing disk situated within the said skirt below the said first-named disk and being adapted to contact with the edge of the mouth of said receptacle for closing the same, substantially as described.

2. In a combined bottle closure and coupon disk, the combination of an integral annular member including an annular skirt whereby said annular member is adapted to be attached to the mouth of such bottle and also including an inwardly extending integral flange portion which terminates directly above the edge of the mouth of said bottle, a metallic disk situated within the said annular member and having its edge seated against the said inwardly extending flange, a sealing disk of suitable material situated within the said skirt below the first-named disk and being adapted to contact with the edge of the mouth of said bottle, and adhesive means for securing the said disks together substantially as described.

1,170,161. CAN-BODY-SOLDERING MACHINE. OLIVER J. JOHNSON, Wheeling, W. Va. Filed Aug. 12, 1915. Serial No. 45,123. (Cl. 113—63.)



1. Means for soldering the side seams of can bodies comprising a soldering device having a surface portion which is curved lengthwise of the can body to conform to the warped shape of the seam when the latter is heated.

2. Means for soldering the side seams of can bodies comprising a soldering device having surface portions with which the can body is adapted to contact in succession, one at least of which surface portions is curved lengthwise of the can body to conform to the warped shape of the seam when the latter is heated.

3. Means for soldering the side seams of can bodies comprising a soldering device having a succession of concave surface portions with which the can body is adapted to contact in succession and which are curved lengthwise of the can body to conform to the warped shape of the seam when the latter is heated.

4. Means for soldering the side seams of can bodies comprising a soldering device having a succession of concave surface portions with which the can body is adapted to contact in succession and which are curved lengthwise of the can body to conform to the warped shape of the seam when the latter is heated, said surface portions being of successively increased concavity.

5. Means for soldering the side seams of can bodies comprising a soldering device having a surface portion which is curved lengthwise of the can body to conform to the warped shape of the seam when the latter is heated, and means for moving said surface portion transversely across the seam to apply solder thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,170,162. MANUFACTURE OF SHREDDED CEREAL FOOD. JOHN LEONARD KELLOGG, Battle Creek, Mich. Filed May 17, 1915. Serial No. 28,586. (Cl. 99—10.)



1. A process of preparing a shredded cereal food during the performance of which the cereal grain is pulverized and mixed with flavoring material and water to form a dough, the dough cooked, dried and broken into small particles, and the particles shredded and baked or toasted.

2. A process of preparing a shredded cereal food, during the performance of which the cereal grain is pulverized and mixed with water to form a dough, the dough molded into cakes or slabs, the slabs cooked, dried, and broken into small particles, the particles shredded and the shreds baked or toasted.

3. A process of preparing a shredded cereal food during the performance of which the cereal grain is pulverized and mixed with water to form a dough, the dough cooked, dried and broken into small particles, the particles shredded into elongated ribbon-like shreds, and the ribbon-like shreds baked or toasted.

4. A process of preparing a shredded cereal food during the performance of which the grain is pulverized by a crushing action, and made into a dough, the dough cooked, dried and broken into small particles, the particles shredded and baked or toasted.

5. A process of preparing a shredded cereal food during the performance of which the grain is pulverized and mixed with water to form a dough, the dough cooked, dried and broken into small particles, the particles air dried and shredded, and the shreds baked or toasted.

[Claims 6 to 10 not printed in the Gazette.]

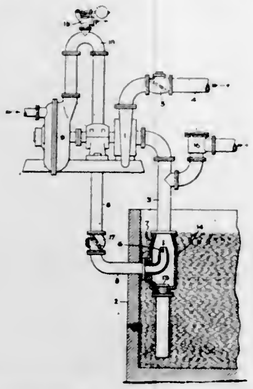
1,170,163. AUTOMATIC STARTING DEVICE FOR BOILER FEED-PUMPS. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 19, 1914. Serial No. 846,146. (Cl. 103—54.)

1. The combination with a boiler feed pump, of an automatic starting device comprising a suction pipe for said pump, a tank into which said pipe dips, and a steam ejector arranged in said pipe below the level of the water in said tank.

2. The combination with a boiler feed pump, of an engine for driving the same, and an automatic starting device for said pump comprising a suction pipe, a tank into which said pipe dips, and an ejector arranged in said pipe below the level of the water in said tank and connected with the exhaust pipe of said engine.

3. The combination with a boiler feed pump driven by an engine, of a suction pipe from said pump, and an ejector connected with the exhaust pipe of said engine and arranged at the lower end of said suction pipe.

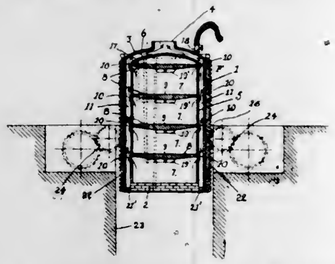
4. The combination with a boiler feed pump driven by an engine and having suction and delivery pipes, of a tank into which the suction pipe dips, an ejector in said suction pipe located below the level of the water in the tank and connected with the exhaust of said engine, and check valves in said suction and delivery pipes.



5. The combination with a boiler feed pump driven by an engine and having suction and delivery pipes, of an ejector in the suction pipe connected with the exhaust pipe of said engine, a check valve in the suction pipe, and means for relieving any excess of pressure in said suction pipe.

[Claims 6 to 9 not printed in the Gazette.]

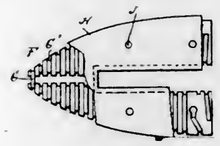
1,170,164. COMBINED ANNEALING AND MUFFLE FURNACE. ALEXANDER KINNEAR, Toledo, Ohio. Filed Mar. 11, 1915. Serial No. 13,578. (Cl. 148—17.)



1. In a combined annealing and muffle furnace, the combination of a movable furnace body comprising an outer casing having a bottom end closure and a top closure provided with a central flue, an inner casing within the outer casing and supported on its bottom end and forming with the outer casing a chamber around the inner casing between the casings, said inner casing being provided with a plurality of divisional floors dividing the inner casing into a plurality of heating chambers, and said inner and outer casings being each provided with door openings opposite each chamber, doors hinged to the outer casing and having inner offset portions adapted when the doors are closed in the door openings of the outer casing to close the door openings of the inner casing, a gas suply pipe mounted on the top of the outer casing and having a branch adapted to be flexibly connected with a gas supply, a plurality of burners one connected to the under side of each floor partition of the inner casing, branch pipes connecting each burner with the supply pipe, a muffle pit below and adapted to telescopically receive the furnace body, means to raise and lower the furnace body from and into the pit and a cover adapted to close the top of the pit with the furnace therein.

2. In a combined annealing and muffle furnace, the combination of a movable furnace body comprising an outer casing having a bottom end closure and a top closure provided with a central flue, an inner casing within the outer casing and supported on its bottom end and forming with the outer casing a chamber around the inner casing between the casings, said inner casing being provided with a plurality of divisional floors dividing the inner casing into a plurality of heating chambers, and with vent ports from each chamber into the chamber between the casings, and said inner and outer casings being each provided with door openings opposite each chamber, doors hinged to the outer casing and having inner offset portions adapted when the doors are closed in the door openings of the outer casing to close the door openings of the inner casing, a gas supply pipe mounted on the top of the outer casing and having a branch adapted to be flexibly connected with a gas supply, a plurality of burners one connected to the under side of each floor partition of the inner casing, branch pipes connecting each burner with the supply pipe, a muffle pit below and adapted to telescopically receive the furnace body, means to raise and lower the furnace body from and into the pit and a cover adapted to close the top of the pit with the furnace therein.

1,170,165. ELECTRICAL HEATING UNIT. FRANK KUHN, Detroit, Mich., assignor to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 6, 1911. Serial No. 612,641. (Cl. 219—25.)



1. An electrical heating unit comprising superposed sheet metal plates seamed together at the margin and centrally thereof, a resistance element extending on opposite sides of the central seam, separate terminal contact plates upon opposite sides of said seam, and insulating layers all arranged to form a series intermediate said superposed plates and clamped by the seaming thereof.

2. A resistance element for sad-irons comprising a sheathing corresponding in contour to the work body of the iron and having marginal seams and a central longitudinal seam, insulator core sections upon opposite sides of said central seam, a continuous resistance conductor wound upon said insulator core sections, separate terminal connecting plates corresponding substantially with the contour of said insulator core sections and arranged thereabove, terminals extending outward from said terminal connecting plates, and insulating layers, said layers, terminal connecting plates and resistance element being clamped by the marginal and central seams of said sheathing.

3. An electrical heating unit comprising an outer sheath, a conducting element and insulating layers arranged on opposite sides of said element and projecting beyond the edges thereof, the outer sheath being seamed to clamp the projecting edges of the insulating layers a less distance apart than the thickness of the element.

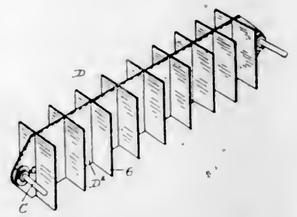
4. An electrical heating unit comprising a conducting element, insulating layers of greater width than the conducting element, and an outer sheath seamed at the margin to clamp said element and insulating layers with the edges of the latter a less distance apart than the thickness of the element.

5. An electrical heating unit, comprising an outer sheath, a conducting element and insulating layers arranged in series, the outer sheath and insulating layers being of greater width than the element, the central and marginal portions of said outer sheathing being seamed.

said marginal portion clamping the projecting edges of the insulating layers a less distance apart than the thickness of the heating element.

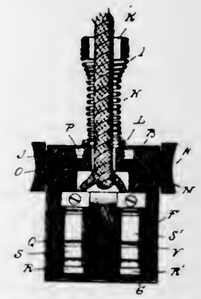
[Claims 6 to 8 not printed in the Gazette.]

1,170,166. ELECTRICAL HEATING UNIT. FRANK KUHN, Detroit, Mich. Filed June 28, 1913. Serial No. 776,255. (Cl. 219—67.)



An electrical heating unit, comprising a comparatively flat insulated resistor extending longitudinally in a plane and a comparatively flat, longitudinally extending armor, incasing said resistor, said armor having portions lying in planes parallel to the resistor and in heat conducting contact with the flat face thereof and being also provided with integrally formed outward extensions positioned crosswise to the plane of the resistor and extending at substantially right angles thereto, said outward extensions being distributed along the length of said resistor to form heat distributing surfaces.

1,170,167. TERMINAL CONTACT-PLUG. FRANK KUHN, Detroit, Mich. Filed Sept. 8, 1913. Serial No. 788,713. (Cl. 173—328.)



1. An electrical terminal plug, comprising an outer armor, an insulator inclosed thereby, an electrical conductor passing through the end of said armor into said insulator, and a resilient guard surrounding said conductor, formed of a coil having an enlarged inner end, said enlarged end being clamped between said armor and insulator.

2. An electrical terminal plug, comprising an outer armor struck up from sheet metal and having an apertured end portion and side portions, an insulator clamped by said armor between the side portions thereof, an electrical conductor passing through the aperture in the end of said armor into said insulator, and a resilient guard surrounding said conductor, engaging the aperture in the end of said armor and having an enlarged inner end engaging the aperture in said insulator.

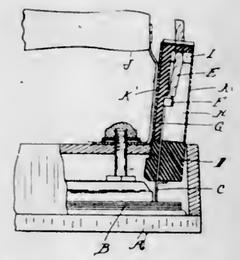
3. An electrical terminal plug, comprising an outer armor struck up from sheet metal, an insulator inclosed within said armor, said insulator having an aperture, an electrical conductor, a resilient guard for the electrical conductor formed of a coil of wire having enlarged outer and inner ends, the inner end engaging the aperture in said insulator and preventing the outward detachment of the guard, and an insulating bushing within the enlarged outer end of said guard.

4. An electrical terminal plug, comprising an outer armor, an insulator inclosed by said armor, said armor being provided with an aperture and said insulator being provided with a projection extending through an aperture in said armor and forming a finger grip.

5. An electrical terminal plug, comprising an outer armor provided with apertures, and an insulator therein formed of complementary sections, one of said sections being provided with outwardly-projecting portions passing through the apertures in said armor and forming finger grips.

[Claim 6 not printed in the Gazette.]

1,170,168. CONNECTOR FOR ELECTRICALLY-HEATED INSTRUMENTS. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed July 9, 1914. Serial No. 849,938. (Cl. 219—25.)



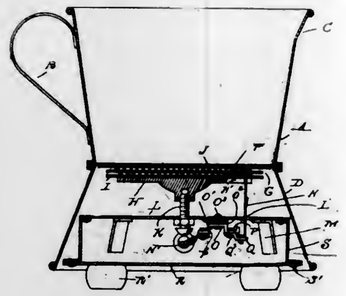
1. In an electrically heated instrument, the combination with a heating unit having a terminal projecting therefrom, of a casing for inclosing said unit apertured for the passage of said terminal, a handle for said casing, a flexible conductor having a clamping engagement with said terminal, an insulator block for embracing said terminal and adjacent portion of said flexible conductor, a metallic housing having a section thereof secured to said handle and embracing said insulator block, and a complementary portion of said housing having a snap engagement with said attached section.

2. In an electrically heated instrument, the combination with an electrical heating unit, of a terminal projecting therefrom, a casing for inclosing said unit apertured for the passage of said terminal, a handle for said casing, a flexible conductor having a clamping engagement with said terminal, an insulator block channeled for the reception of said terminal and having an extension angular channel for the passage of said flexible conductor, a metallic housing section secured to said handle and embracing said insulator block, a guard for said flexible conductor mounted upon said housing section, and a complementary section for said metallic housing having a snap engagement with said fixed section and completely inclosing said insulator block.

1,170,169. ELECTRICAL FOOD-WARMER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 19, 1915. Serial No. 22,407. (Cl. 219—43.)

1. A food warmer, comprising a cup-shaped receptacle having a skirting at the lower end thereof forming a chamber beneath the bottom, a flat electrical heating unit lying adjacent to the bottom of said receptacle, a partition extending between the sides of said skirting beneath said heater, means mounted on said partition for clamping said heater against the bottom, a bottom plate secured to and spaced from said partition, and electrical terminal connections in the space between said partition and bottom plate and surrounded by said skirting.

2. The combination with a cup-shaped receptacle having a depending skirting, of an electrical heater adjacent to the bottom of said receptacle, a partition parallel to said bottom and beneath the same, lugs upon said skirting with which said partition is detachably slidably engaged, clamping means mounted on said partition for holding said heater in contact with said bottom, terminals from said heater passing through apertures in said partition, and terminal connections mounted on said partition and connected to said terminals.



3. The combination with a cup-shaped receptacle having a depending skirting, of an electrical heater adjacent to the bottom of said receptacle, a parallel partition, lugs upon said skirting with which said partition is detachably engaged, means on said partition for clamping said heater to said bottom, a lower partition or false bottom, electrical terminal connections inclosed in the space between said partitions, and terminals on said heater passing through apertures in said first-mentioned partition detachably engaging said terminal connections.

4. The combination with a cup-shaped receptacle having a depending skirting, of a plate extending across between the sides of said skirting parallel to said bottom, lugs projecting inward from said skirting with which said plate is detachably engageable, an electrical heater adjacent to the bottom of said receptacle, means mounted on said plate for clamping said heater against said receptacle, terminals on said heater passing through apertures in said plate, insulated terminal plates mounted on said plate beneath the same, detachable connections between said terminals and said terminal plates, a flexible connector attached to said terminal plates and passing outward through said skirting, and a false bottom for said skirting inclosing said terminals.

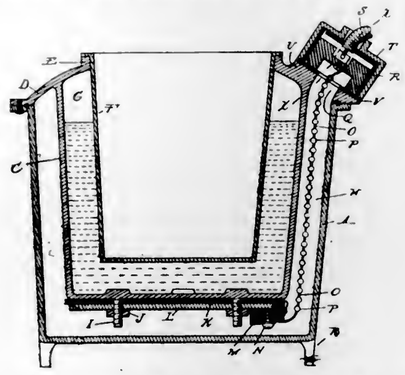
5. The combination with a receptacle having a depending skirting, of an electrical heating unit, a clamping plate to which said unit is attached, a plate detachably secured by a substantially lateral movement to said skirting extending beneath said heater, clamping means on said plate for holding said heater against the bottom of said receptacle, and terminal connections mounted on said plate and detachably engaging said heater.

[Claim 6 not printed in the Gazette.]

1,170,170. ELECTRICALLY-HEATED GLUE-POT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 12, 1915. Serial No. 20,894. (Cl. 219—44.)

1. The combination with a vessel for holding liquid to be heated, of an outwardly-extending flange integral with said vessel, an outer casing surrounding said vessel and secured to said flange, an electric heater secured to the bottom of said vessel in the space between the same and the bottom of the outer casing, terminal connections for said heater passing outward through an aperture in said flange, said flange being provided with a boss and a housing for said terminal connections secured to said boss and above said flange forming a liquid-tight seal with said boss.

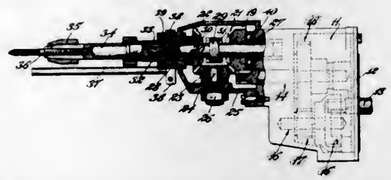
2. The combination with a vessel for containing liquid to be heated, of an outwardly-extending flange integral with said vessel at the upper end thereof, an outer casing surrounding said vessel and spaced therefrom, secured to the under face of said outwardly-extending flange, an electric heater clamped to the bottom of said vessel and housed in the space between the same and the bottom of the outer casing, terminal connectors passing from said heater upward through the space between the same and the outer case and outward through an aperture in said flange, an insulator block mounted on said flange through which said terminal connectors pass, and a housing of inverted cup-shaped form inclosing said insulator block and secured to said flange with a liquid-tight seal.



3. The combination with a vessel having integral with its upper end an outwardly and inwardly extending annular flange, a casing surrounding said vessel and spaced therefrom, secured at its upper end to said outwardly-extending flange, an inner vessel supported upon said inwardly-extending flange and depending within said first-mentioned vessel, studs depending from the bottom of said first-mentioned vessel, an electric heater clamped to the bottom of said vessel by said studs, terminal connections from said heater passing upward through the space between said vessel and outer casing and outward through an aperture in said outwardly-extending flange, a terminal block above said flange, and a housing for inclosing said terminal block mounted upon said flange, forming a sealing joint therewith.

4. The combination with a vessel having integral with its upper end an outwardly and inwardly extending annular flange, a casing surrounding said vessel and spaced therefrom, secured at its upper end to said outwardly-extending flange, an inner vessel supported upon said inwardly-extending flange and depending within said first-mentioned vessel, an electric heater secured to the bottom of said first-mentioned vessel, and terminal connections from said heater passing upward through the space between said vessel and outer casing and outward through an aperture in said outwardly-extending flange.

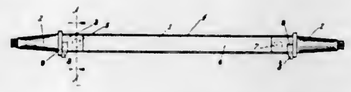
1,170,171. PORTABLE DRILLING AND TAPPING MACHINE. ALFRED M. LANE, St. Louis, Mo. Filed May 20, 1915. Serial No. 29,291. (Cl. 10—137.)



1. A portable drilling and tapping tool comprising a gear box adapted to be secured to the casing of a portable motor, said gear box containing speed reducing gearing adapted to be driven from the armature shaft of said motor, a nose-piece secured to said gear box on the side away from said motor casing, a rotary spindle rotatably and slidably mounted in bearings in said gear box and nose-piece, a bevel gear loosely mounted on said spindle near its inner end and driven from said reducing gearing, a second bevel gear arranged on said spindle facing said first bevel gear and driven therefrom by means of a bevel gear meshing with said gears and arranged on a stud mounted in said nose-piece at right angles to said spindle, an antifriction thrust bearing arranged on the inner end of said spindle between said inner bevel gear and said gear box bearing, and a clutch member fixed on said spindle between said bevel gears and adapted to bear against said inner bevel gear to transmit endwise pressure on said spindle through said gear and thrust bearing to said gear box.

2. A portable drilling and tapping tool comprising a gear box adapted to be secured to the casing of a portable motor, said gear box surrounding the end of the armature shaft of said motor, a nose-piece secured to said gear box and forming an extension of one side thereof, a rotary spindle rotatably and slidably mounted in bearings in said gear box and nose-piece, a bevel gear loosely mounted on said spindle near its inner end and having straight teeth on its outer edge meshing with a spur gear mounted on an axis parallel to said spindle and driven from said armature shaft, a second bevel gear arranged on said spindle facing said first bevel gear and driven therefrom by means of a bevel gear meshing with said gears and arranged on a stud mounted in said nose-piece at right angles to said spindle, an antifriction thrust bearing arranged on the inner end of said spindle between said inner bevel gear and said gear box bearing, and a clutch member fixed on said spindle between said bevel gears and adapted to bear against said inner bevel gear to transmit endwise pressure on said spindle through said gear and thrust bearing to said gear box, whereby the proper mesh of said straight toothed gear and spur gear is not disarranged by wear or distortion of said thrust bearing.

1,170,172. COMPOSITE METAL AXLE. EDGAR C. LITCHFIELD, Waterloo, Iowa. Filed Oct. 19, 1912. Serial No. 726,653. (Cl. 21—5.)



1. In combination, a supporting member of steel having a web provided with flanges, said web having an opening therethrough, and a bearing member having two separated blocks cast on opposite sides of the web and united by a part extending through said opening, at least one of said blocks engaging with said flanges.

2. In combination, a supporting member having a recess in the side thereof and an opening extending therethrough from the recess, and a bearing member having integral blocks one of which lies in the recess and the other of which engages the opposite side of the supporting member cast in place and united by an integral portion extending through said opening.

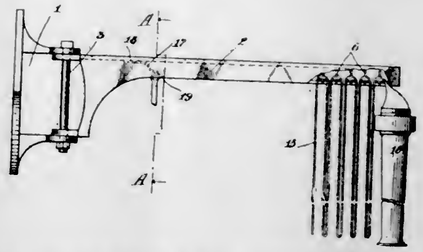
3. In combination, a supporting member having recesses in its sides and an opening extending through the same and connecting the recesses together, and a bearing member cast upon the supporting member and having portions lying within said recesses and connected together by an integral piece extending through said opening.

4. In combination, an I-beam having an opening through its web, and a bearing member cast upon the I-beam and having parts fitting between the flanges thereof and united by an integral part extending through said opening.

5. An axle comprising a body member having an opening therethrough near the end thereof, a journal member abutting against said end of the body member and having an integral attaching device consisting of separated blocks cast on opposite sides of the body member and united by an integral part extending through said opening

[Claims 6 to 9 not printed in the Gazette.]

1,170,173. HOSE-RACK. CARL O. LUND, Brooklyn, N. Y., assignor, by direct and mesne assignments, of one-half to Carlund Manufacturing Company, New York, N. Y., a Corporation of New York, and one-half to W. D. Allen Mfg. Company, Chicago, Ill., a Corporation. Filed Mar. 18, 1912. Serial No. 684,583. (Cl. 137—31.)



1. A hose-rack having a pair of supporting members, a plurality of pins supported thereby, each of said pins having two parts adapted to maintain each other in horizontal position within the vertical plane of their axes and to release each other when moved out of such plane.

2. A hose rack comprising an arm, a plurality of pairs of hooks on said arm, a pin for supporting loops of hose linked to the hooks of each pair, each pin consisting of two parts and of means for securing together said parts when supporting the hose.

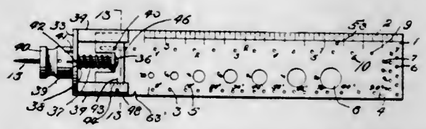
3. In a hose rack the combination with an arm, of a plurality of pins thereon for supporting loops of hose, each pin consisting of two parts and having means for securing together said parts when supporting the hose, said parts being adapted to separate and release the hose when laterally displaced.

4. A hose rack comprising an arm and a plurality of pins thereon for supporting loops of hose, each pin consisting of two parts, the inner ends of said parts abutting in a vertical plane oblique to the axis of said pin, each pin having means for securing together said parts when supporting the hose.

5. A hose rack comprising an arm and a plurality of pins thereon for supporting loops of hose, each pin consisting of two parts, a stud at the inner end of one part, and a recess at the abutting end of the second part to receive said stud for securing together said parts when supporting the hose.

[Claims 6 to 9 not printed in the Gazette.]

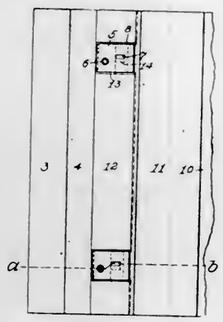
1,170,174. DRAWING INSTRUMENT. JEPTHA L. MATSON, Dunbarton, Wis. Filed Oct. 12, 1911. Serial No. 654,363. (Cl. 33—27.)



A drafting instrument comprising an elongated base plate having guide ears struck up from one end, said base plate having a series of equally spaced and a series of unequally spaced apertures, a plate slidable between the said ears and provided with an aperture, a bolt connected to the slidable plate, an upstanding apertured lug at one end of the base plate, the bolt extending through the aperture of the said lug, the outer extremity of the bolt being threaded and having a longitudinal socket formed

in the end for the reception of a pin, and a coil spring embracing the bolt and disposed between the slidable plate and the upturned perforated lug for normally forcing the slidable plate to the inner limit of its movement.

1,170,175. STUB FOR BINDING LOOSE LEAVES. FREDERICK A. MERRIMAN, Los Angeles, Cal. Filed Jan. 8, 1915. Serial No. 1,152. (Cl. 129—19.)



1. Fastening means for loose leaves, consisting of a pair of elastic clamping arms adapted to detachably hold margins of a pile of leaves between them, and both arms having orifices out of line with each other for the reception of a lever end.

2. Fastening means for loose leaves, consisting of a strip of relatively stiff elastic material doubled upon itself to provide spaced parallel plates, one of the plates having an orifice spaced from its free extremity, and means for securing said members upon an inclosed supporting body, with the extremities of the members including said orifice extending beyond the supporting body.

3. Fastening means for loose leaves, consisting of a supporting rigid strip, a plate of elastic material bent over said strip to provide a pair of opposed clips extending therebeyond and adapted to yieldingly clasp a number of loose sheets between them, and means for securing both clips to said strip.

4. Fastening means for loose leaves, comprising a strip of relatively rigid material, a pair of elastic members secured to opposite sides of the strip to project therebeyond, and a rivet securing said members to said strip.

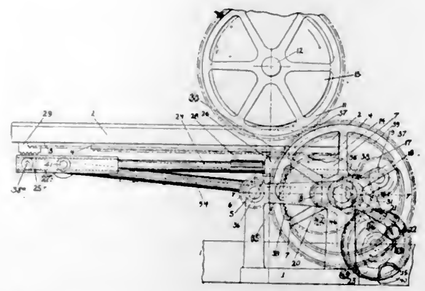
5. Fastening means for loose leaves, comprising a strip of relatively rigid material having a recessed edge, a plate of elastic material doubled to provide a pair of spaced opposed clips embracing said strip, covering the recess therein and adapted to grasp yieldingly marginal tabs of a pile of loose sheets between them, and means for securing said clips to said strip.

[Claims 6 to 11 not printed in the Gazette.]

1,170,176. MECHANICAL MOVEMENT. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Oct. 20, 1911. Serial No. 655,820. (Cl. 74—89.)

1. The combination with a reciprocating member or bed and means for reciprocating the same, of a reversing mechanism adapted to reverse the movements of said member or bed, including a reciprocating bar having means at one end thereof adapted to be periodically interlocked with said member or bed at each end thereof, and at each end of its stroke, a frame on which said bar slides, means for swinging said frame to bring said bar into and out of engagement with the member or bed, and means for reciprocating the bar in said frame.

2. The combination with a reciprocating member or bed and means for reciprocating the same, a reversing mechanism adapted to reverse the movements of said member or bed, including a reciprocating bar having means at one end thereof adapted to be periodically interlocked with said member or bed at each end thereof, and at each end of its stroke, a frame on which said bar slides, means for pivotally supporting said frame at a point remote from the engaging end of the sliding bar, means for swinging said frame about its pivot, and means for reciprocating said bar.



3. The combination with a reciprocating member or bed, and means for reciprocating the same, of a reversing mechanism adapted to reverse the movements of said member or bed including a reciprocating bar having means at one end thereof adapted to periodically interlock with said member or bed at each end thereof, and at each end of its stroke, a frame on which said bar slides, means for pivotally supporting said frame at a point remote from the engaging end of the bar, said frame at a point adjacent said engaging end of the bar having an arm projecting therefrom, means engaging said arm for swinging said frame, and means for reciprocating said bar on said frame.

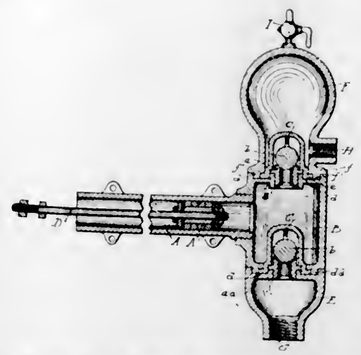
4. The combination with a reciprocating member or bed, and means for reciprocating the same, of a reversing mechanism adapted to reverse the movements of said member or bed, including a reciprocating bar having an engaging means at one end thereof, adapted to be periodically interlocked with said member or bed at each end thereof, a pivoted frame on which said bar slides, said frame having guide-ways formed therein adjacent its pivot, said bar having blocks sliding in said guide-ways connected to the opposite end thereof from the engaging means, means carried by said frame for guiding the engaging end of said reciprocating bar, means for swinging said frame, and means for reciprocating said bar.

5. The combination with a reciprocating member or bed, of racks secured to the under side of said bed, and having downwardly projecting teeth, a bed motion rocker frame, driving pinions carried thereby and adapted to alternately engage said racks, means for rotating said pinions in opposite directions, means for moving the pinions into engagement with the racks, and disengaging the same therefrom, and a reversing mechanism adapted to reverse the movement of the member or bed including a reciprocating bar, having means at one end thereof, adapted to be periodically interlocked with said member or bed at each end thereof, and at each end of the stroke of the bed, means for reciprocating said bar, and means for moving the same into and out of engagement with said member or bed.

[Claims 6 to 15 not printed in the Gazette.]

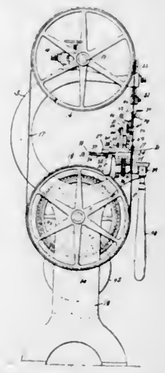
1,170,177. FORCE-PUMP. JESSE NEISWANGER, Clarksburg, W. Va. Filed Sept. 2, 1914. Serial No. 859,744. (Cl. 103—75.)

1. In a pump of the character described, the combination with a chamber constructed with an end wall having a central opening and a channel in its outer surface surrounding said opening, of a valve seat fitting said opening and having a flange which rests against the outer edge thereof, a valve cage over said valve seat having a flange which rests in said channel and a shoulder which engages the flange on the valve seat, and a chamber in communication with said first named chamber through said valve seat and having a rib which rests in said channel and a shoulder which engages the flange on the valve cage and means for clamping said chambers together as shown and described.



2. In a pump of the character described the combination with a pulsation chamber of a discharge chamber secured to the outlet end of the pulsation chamber, a suction chamber attached to the inlet end of the pulsation chamber, and the engaging end of the suction chamber being constructed with a wall provided with a central opening and a channel in its outer surface surrounding said opening, a valve seat fitting said opening and having a flange which rests against the outer edge thereof, a valve cage over each valve seat having a flange which rests in said channel and a shoulder which engages the flange on the valve seat, the engaging end of the discharge chamber and the inlet end of the pulsation chamber having each a rib which rests in said channel and a shoulder which engages the flange on the valve cage, and clamping devices connecting the said discharge chamber and suction chamber substantially as shown and for the purposes specified.

1,170,178. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Aug. 23, 1915. Serial No. 46,975. (Cl. 12—42.)



1. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a table transversely movable on the platform, a pivot on the table, a plate mounted on the pivot and adjustable horizontally on said pivot to dispose it at the desired angle to the cutter, and means carried by the plate for clamping the heel of a shoe.

2. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a table transversely movable on the platform, a pivot on the table, a plate mounted on the pivot and adjustable horizontally on said pivot to dispose it at the desired angle to the cutter, and means carried by the plate for clamping the heel of a shoe.

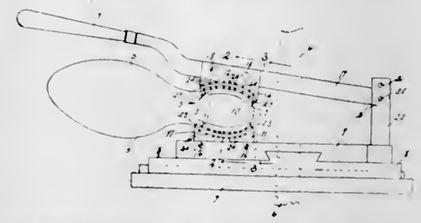
3. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a table transversely movable on the platform, a pivot on the table, a plate mounted on the pivot and adjustable horizontally on said pivot to dispose it at the desired angle to the cutter, means carried by the plate for clamping the heel of a shoe, and means for locking the plate in adjusted position.

4. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a table transversely movable on the platform, a pivot on the table, a plate mounted on the pivot, a lever having teeth thereon and pivotally mounted on the plate, coacting parts on the lever and the plate for clamping the heel of a shoe, a pawl carried by the plate to engage said teeth to lock the lever in clamping position, and means for disengaging the pawl from said teeth.

5. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a table transversely movable on the platform, a pivot on the table, a plate mounted on the pivot, means including a lever pivotally mounted on the plate for clamping the heel of a shoe, an angular bar pivotally mounted on the lever and having a part thereon adapted to engage the forward part of the heel, an arm carried by the lever and provided with teeth, and a pivotally mounted dog on the angular bar to engage the teeth to lock the angular bar when the latter is moved to engage the heel.

[Claims 6 and 7 not printed in the Gazette.]

1,170,179. HEEL-CLAMPING MEANS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Sept. 27, 1915. Serial No. 52,957. (Cl. 12—42.)

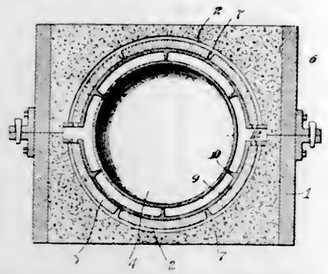


The herein-described heel clamping means consisting of upper and lower plates disposed in substantially the same vertical plane and having the edge portions thereof curved and adapted to fit in the crease between the heel seat and the heel of a shoe, the lower of said plates being stationary relatively to the upper of said plates, a pivotally mounted lever on which the upper of said plates is mounted, said plates being provided with lateral projections adjacent to and substantially parallel to the edge of the curved edge portions of the plates, and teeth arranged longitudinally on said projections and adapted to engage the heel to prevent forward movement of the heel when the latter is moved against a cutter, said teeth provided with pointed ends which terminate short of the edge of the curved edge portions of the plates.

1,170,180. METHOD OF CASTING. HENRY W. O'DOWD, Peekskill, N. Y., assignor to William M. Crane Company, New York, N. Y., a Corporation of New York. Filed May 18, 1909. Serial No. 496,751. (Cl. 22—203.)

1. The method of casting a hollow metal receptacle inclosing another article, which method consists in forming a core about said article, making cavities in said core, forming a mold for the receptacle, placing said article inclosed within said core in said mold, and filling the space between said core and said mold with molten metal,

the said cavities in said core being so disposed that the projections on the hollow cast receptacle formed by the molten metal flowing therein will keep said article and said receptacle spaced apart.



2. The method of casting a hollow metal receptacle inclosing another article, which method consists in forming a core about said article, making cavities in said core, forming a mold for the receptacle, placing said article inclosed within said core in said mold, and filling the space between said core and said mold with molten metal, the said cavities in said core being so disposed that the projections on the hollow cast receptacle formed by the molten metal flowing therein will keep said article and said receptacle spaced apart, and said dry core being so formed that the outer sphere will be cast with an aperture therethrough.

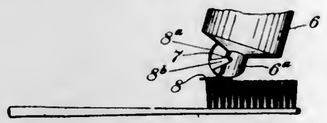
3. The method of casting a hollow metal receptacle inclosing another article, which method consists in forming a core about said article, forming a mold for the receptacle, placing said article inclosed within said core in said mold, providing casting cavities between said article and said mold whereby members are provided for keeping said article and said receptacle permanently spaced apart, and filling said space between said core and said mold with molten metal.

4. The method of casting a hollow metal receptacle inclosing another article, which method consists in providing means for forming bosses on said receptacle so that the same will be kept spaced apart from the article, forming a mold for the receptacle, placing said article inclosed within a core in said mold, and filling the space between said core and said mold with molten metal.

5. The method of casting a plurality of hollow metal receptacles each inclosing another article, which method consists in forming a core about an article, making cavities in said core, forming a mold for the receptacle, placing said article inclosed within said core in said mold, and filling the space between said core and said mold with molten metal, the said cavities in said core being so disposed that the projections on the hollow cast receptacle formed by the molten metal flowing therein will keep said article and said receptacle spaced apart, and said core being so formed that the outer receptacle will be cast with an aperture therethrough, and then repeating the above process using the said completed hollow receptacle in the further steps as the article inclosed in the core.

[Claim 6 not printed in the Gazette.]

1,170,181. PASTE-SPREADING DEVICE. WALTER C. O'KANE, Durham, N. H. Filed Jan. 22, 1914. Serial No. 813,785. (Cl. 91—67.4.)



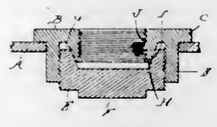
1. The combination with a paste container having a beveled discharge end, of a spreader loosely hinged to the container to form substantially a continuation of the beveled end.

2. The combination with a paste container having a discharge end, of a spreader loosely hinged to the container to lie, in use, beyond the discharge end, and a closure for the discharge moved with the spreader.

3. The combination with a paste container having a discharge end, of a spreader and a closure for the discharge end hinged thereto on an axis located at one side of the axis of said discharge end, the discharge end being beveled at its extremity on an arc concentric with the axis of the hinge, and the closure being curved to substantially coincide with the beveled discharge end.

4. The combination with a paste container having a shoulder and a discharge end, of a spreader and a closure for the discharge end hinged thereto ou an axis located at one side of the axis of said discharge end, the discharge end at its extremity being formed on an arc concentric with the hinging axis, and the closure being curved to substantially coincide with the beveled discharge end, the closure being extended to form a stop to engage said shoulder to hold the spreader in spreading position.

1,170,182. BUNG FOR METALLIC BARRELS. CHARLES F. PAPE, Vandergrift, Pa., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed July 30, 1914. Serial No. 853,999. (Cl. 217—107.)



1. A barrel bushing comprising an outwardly extending internally threaded portion and an internally threaded portion of lesser diameter, and a bung externally threaded to engage said outwardly-extending portion, and adapted to exteriorly engage said internally threaded portion.

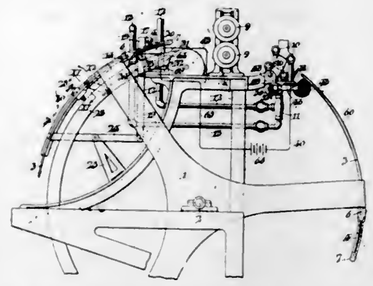
2. A barrel bushing, comprising an outwardly extending internally threaded portion, an inner portion having an internally threaded aperture of lesser diameter, an outwardly-extending conical seat surrounding said threaded aperture of lesser diameter, and a bung threaded for engagement with said outwardly-extending portion and recessed to form a conical bearing complementary to the conical seat upon said bushing member.

3. A barrel bushing, comprising a cylindrical member having an internally threaded portion at its outer end and a flange or head at its inner end having a concentric, internally threaded aperture of lesser diameter, a conical bearing formed upon said flange and projecting outward within the larger internolly threaded portion, and a bung threaded for engagement with said larger internally threaded portion and having a recess with a conical wall for seating on said conical bearing.

4. A barrel bushing, comprising a cylindrical member having a head at one end projecting beyond the periphery of the cylinder to form a shoulder for seating against the barrel wall and extending inward, and increased in thickness with an internally threaded aperture in the thickened portion concentric with said cylindrical portion, and a bung threaded for engagement with the larger internally threaded portion and bearing against said portion of increased thickness, the contacting faces being correspondingly coned to form a liquid tight seal.

5. A barrel bushing, comprising two integral outwardly-extending annular portions, one within the other, the outer portion having an annular flange for internally engaging the barrel, and a bung having threaded engagement with one of said portions and forming a lap joint with the other.

1,170,183. SINGEING-MACHINE. BERTRAND A. PARKES, Philadelphia, Pa., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1915. Serial No. 18,522. (Cl. 26—14.)



1. In a machine of the class described, the combination of holders capable of carrying singeable articles: singeing burners; means for carrying the holders successively into operative relation to the burners; means for increasing the supply of gas to the burners when a holder carrying an article approaches the region of the burners, and for decreasing the same when the holder leaves said region; and means whereby the approach of a holder carrying no article to be singed occasions no increase in the gas supply.

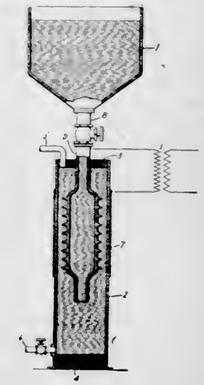
2. In a machine of the class described, the combination of holders capable of carrying singeable articles; singeing burners; means for carrying the holders successively into operative relation to the burners; means whereby the approach to the burners of a holder carrying an article occasions a temporary increase of the flame of the burners, and means whereby a holder not carrying such an article is prevented from thus affecting the flame, said means comprising an electric circuit, with an electromagnet, whereby the flame increasing means are rendered inoperative by the closing of the circuit, which is completed by contact of a fixed element with a passing holder, unless said holder carries an article which effects insulation of the holder from the fixed element.

3. In a machine of the class described in which the approach of a holder to the singeing burners automatically occasions a temporary increase of the singeing flame; means for preventing the holder from effecting this, including an electric circuit, which is completed by contact of a traveling holder with a fixed contact point, and also includes an electromagnet which when energized by the circuit, renders the flame increasing means inoperative, and means whereby the presence of an article to be singed upon the holder prevents the closing of the circuit between the fixed contact point and the holder.

4. In a machine of the class described, the combination of a rotating frame with a succession of holders mounted thereon; singeing burners in proximity to which the rotation of the frame successively carries the holders; a valve for determining the supply of gas to the burners; a projection in fixed relation of said rotating frame; a cam which is normally in position to be struck by said projection as it rotates with the frame; connections whereby said cam when thus struck actuates the valve to increase the supply of gas to the burner; and means whereby a holder carrying no article to be singed moves said cam out of the plane of the rotating projection at the time when it would otherwise be struck thereby, substantially as described.

5. In a machine of the class described, in which the supply of gas to the singeing burners is temporarily increased during the passage of an article to be singed between said burners; an electric circuit including electromagnets which by their action upon closing of the circuit prevent such increase of the flame, said circuit including the metal shod surface of the holder and the metal shod segment of a roller, mounted in fixed relation to the machine, with which the surface of the holder comes in contact and completes the circuit, unless its metal shod surface is insulated by the presence thereon of a singeable article, said roller including also a flattened non-conducting segment which prevents further rotation of the roller, and, therefore, possible closing of the circuit until the holder has passed away from the region of the roller.

1,170,184. SEPARATION OF LIQUID SUSPENSIONS. FRANK W. PEEK, Jr., Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 18, 1913. Serial No. 749,117. (Cl. 204—24.)



1. The combination in an apparatus for separating and collecting particles of one liquid suspended in another, of a pair of electrodes connected to a high potential source of electricity, one of said electrodes having its surface provided with projecting conductive points, and means for passing the liquid mixture between said electrodes.

2. The combination in an apparatus for separating particles of one liquid suspended in another differing therefrom in conductivity, of a pair of electrodes, means for passing the liquid mixture between said electrodes, means for establishing an electrostatic field in the liquid between said electrodes which will be of high intensity at certain points and of much lower intensity at other points and a wall of dielectric material for preventing the formation of an arc between said electrodes.

3. In an apparatus for removing suspended water from oil, a glass vessel, an electrode coating upon the outside of said vessel, a metallic tube constituting another electrode in said vessel, said tube having its surface provided with projecting conductive points, means for passing the oil containing water through said tube into said vessel, and means for applying an alternating current of high potential to said electrodes.

4. The combination in an apparatus for separating particles of one liquid from a less conductive liquid in which they are suspended, of a vessel having a wall of dielectric material, an electrode having a plain surface upon the outside of said wall, an electrode upon the inside of said wall and spaced therefrom having a plurality of projecting conductive points and means for passing the liquids to be separated between said electrodes.

5. The combination in an apparatus for removing suspended water from oil, of a vessel having a wall of dielectric material, an electrode coating on the outside of said wall, a hollow metallic electrode within said vessel spaced from said wall and provided with a plurality of projecting conductive points on its outer surface, means for passing the oil containing water into said vessel through the lower end of said electrode, means for withdrawing the oil from the top of said vessel, means for withdrawing the separated water from the bottom of said vessel and means for applying a high electrical potential to said electrodes.

[Claim 6 not printed in the Gazette.]

1,170,185. BUTTON. VINCENT PRICE, New York, and JOSEPH H. SANDERSON, Babylon, N. Y., assignors to Christina J. Higley, New York, N. Y. Filed July 19, 1915. Serial No. 40,545. (Cl. 24—245.)



1. A button for use for hose supporters and the like, comprising a base, an internal shaper element supported thereon, a strip of relatively yielding material placed over said shaper element, the ends of said strip flaring outwardly and clamping means for securing said strip ends and said shaper piece rigidly on said base.

2. A button for use for hose supporters and the like, comprising a base, an internal shaper element supported thereon, a strip of relatively yielding material placed over said shaper element, the ends of said strip flaring outwardly and clamping means for securing said strip ends and said shaper piece rigidly on said base, said clamping means being integral with said base.

3. A button for use for hose supporters and the like, comprising a base, a shaper element supported thereon, a strip of relatively yielding material placed over said shaper element, the ends of said strip flaring outwardly and clamping means for securing said strip ends and said shaper piece rigidly on said base, said yielding material entirely covering said shaper and projecting beyond the edges thereof.

4. A button for use for hose supporters and the like, comprising a base, a shaper element supported thereon, a strip of relatively yielding material placed over said shaper element, the ends of said strip flaring outwardly and clamping means for securing said strip ends and said shaper piece rigidly on said base, said yielding material entirely covering said shaper and projecting beyond the edges thereof, the edges of the intermediate part of the shaper piece being cut back.

5. A button for hose supporters and the like comprising a base having parallel sides, a shaper piece having substantially parallel sides supported thereon, a strip of relatively yielding material folded over said shaper element to cover the top and sides, the ends of said strip flaring outwardly and clamping means at opposite edges of said base for securing the said strip ends and shaper piece rigidly to said base.

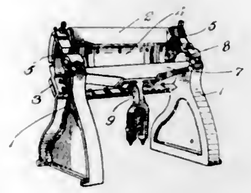
1,170,186. SAFETY-PIN. VINCENT PRICE, New York, N. Y., assignor to Christina J. Higley, New York, N. Y. Filed Nov. 10, 1915. Serial No. 60,663. (Cl. 24—161.)



In a safety pin, a back, a shield at one end thereof, a yielding pin portion supported at the other end thereof, the point of the pin portion being arranged to be engaged by the shield, the intermediate part of the pin portion being bent toward the back to form opposite spaced resisting shoulders relatively near to the ends of the pin portion to prevent the gathering of a fabric through which the pin is passed at the middle of the pin.

1,170,187. CHAMFER, CROZE, AND EQUALIZING KNIFE FOR STAVE-MACHINES. WILLIAM W. PUTNEY, Kent City, Mich., assignor of one-fourth to Michael A. Muma and one-fourth to Edward M. Holland, Grand Rapids, Mich. Filed Mar. 4, 1915. Serial No. 12,071. (Cl. 144—67.)

1. In a stave cutting machine, the combination with a table on which a stave bolt is placed of a central knife for cutting the central portion of the stave and an auxiliary chamfering, crozing and equalizing knife in alinement with and at each end of the central knife to cut, chamfer and croze a stave at a single operation, said auxiliary knives having extensions beyond the chamfer and crozing portions thereof in alinement with the central knife for cutting the ends of the stave bolt beyond the length of the stave cut therefrom in the same plane with the central portion of the stave bolt.



2. A chamfering, crozing and equalizing knife for stave machines comprising a plate having a sharpened edge a pair of adjoining grooves in said knife one of which is comparatively narrow and the other of comparatively greater width, and a rib having a sharpened edge on the back of said knife opposite the lowermost point of the wider groove, the edge of the knife at either side of the grooves being in alinement, substantially as described.

3. In combination, a chamfering, crozing and equalizing knife for use in stave machines, a shimming knife including a portion adapted to be secured to a stave machine and a forward curved extension terminating in a downwardly extending sharpened edge located directly back of the cutting edge of the chamfering, crozing and equalizing knife whereby the cutting edges of said knives engage a stave bolt at substantially the same time, and means on the shimming knife to direct the material severed thereby away from the knives.

4. In combination, in a stave cutting machine, a chamfering, crozing and equalizing knife having a rib on its rear side, a shimming knife adjustably mounted with one side adjacent said rib and having its cutting edge substantially directly back of the edge of the cutting knife whereby said cutting edges of the knives engage the work at substantially the same time, said shimming knife being adjustable in a direction substantially normal to the edge of the chambering, crozing and equalizing knife that the thickness of staves at the ends thereof, cut by said knives may be varied, substantially as described.

5. In combination, in a stave cutting machine, a knife having a crozing groove and a chamfering groove, a rib having a sharpened lower edge on the knife back of the chamfering groove, a shimming knife mounted to move back and forth in a direction substantially normal to the edge of said knife, said shimming knife adapted to pass on the inner side of the rib and having a curved forward end terminating in a cutting edge directly back of the cutting edge of said knife, and means on the shimming knife to direct the material cut thereby laterally away from the knives, substantially as described.

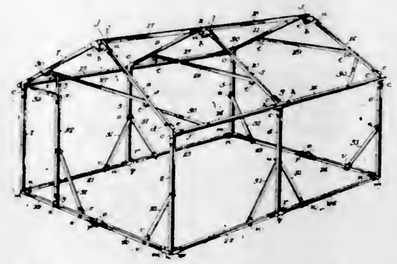
[Claim 6 not printed in the Gazette.]

1,170,188. FOLDING FRAME FOR PORTABLE BUILDINGS. MARTIN RASMUSSEN and NEWTON N. BROWN, Racine, Wis., assignors to Gold Medal Camp Furniture Manufacturing Co., Racine, Wis., a Corporation of Wisconsin. Filed Apr. 26, 1915. Serial No. 23,959. (Cl. 135—4.)

1. In a folding frame for portable buildings the combination of rafters connected in pairs at their upper ends by offset hinges, posts hinged at their upper ends to the rafters adjacent to their lower ends and adapted to fold between and parallel with them, and plate members hinged to the lower ends of the rafters and adapted to fold alongside the rafters and posts, the posts being shorter than the rafters, which are shorter than the plate members.

2. In a folding frame for portable buildings the combination of rafters hinged together in pairs at their upper ends and adapted to fold parallel with each other, posts

hinged at their upper ends to the rafters adjacent to their lower ends and adapted to fold between them, plate members hinged to the lower ends of the rafters and adapted to fold alongside thereof, and a ridge pole hinged at one end to one pair of rafters and detachably connectible at the other end with another pair at their upper ends so as to fold alongside thereof and between opposite plate members.



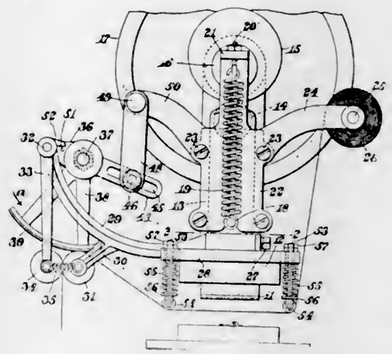
3. In a folding frame for portable buildings the combination of rafters hinged together at their upper ends in pairs, posts hinged at their upper ends to the rafters adjacent to their lower ends and adapted to fold between them, plate members hinged to the lower ends of the rafters and adapted to fold alongside thereof, and a folding sill frame composed of sections connected at the ends by hinges which form therewith sockets for the lower ends of the posts.

4. In a folding frame for portable buildings the combination of rafters connected in pairs at their upper ends by downwardly offset hinges, posts connected at their upper ends by offset hinges to the rafters adjacent to their lower ends and adapted to fold between them, and plate members connected by offset hinges with the lower ends of the rafters and adapted to fold alongside thereof.

5. In a folding frame for portable buildings the combination of end and intermediate rafters hinged together at their upper ends in pairs, posts hinged at their upper ends to the rafters adjacent to their lower ends and adapted to fold between them, plate members hinged to the lower ends of the rafters and adapted to fold alongside thereof, and ridge pole sections hinged to the upper ends of the end rafters and connectible at the other end with each other and with the upper ends of the intermediate rafters.

[Claims 6 to 15 not printed in the Gazette.]

1,170,189. FEEDING ATTACHMENT FOR METALLIC-LEAF-STAMPING MACHINES. FRED W. RAUSKOLB, Medford, Mass. Filed Apr. 12, 1915. Serial No. 20,962. (Cl. 41—7.)



1. In a device of the character described, the combination of a support secured to a stationary part of a stamping press provided with a reciprocating die holder; a roll revolubly mounted on said support at one side of said die holder and adapted to carry a ribbon or strip of metallic leaf; a member secured to and movable with the die holder; feeding rolls thereon oppositely disposed to said strip supporting roll; and means interposed between one of said feeding rolls and said support for rotating said roll a predetermined distance during each reciprocation of said die holder.

2. In a device of the character described, the combination of a support secured to a stationary part of a stamping press having a vertically reciprocating die holder; a roll revolubly mounted on said support and adapted to carry a ribbon or strip of metallic leaf; a member secured to and movable with the die holder of the press; feeding rolls thereon; and means interposed between one of said rolls and said support for rotating said roll a predetermined distance during each upward movement of said die holder.

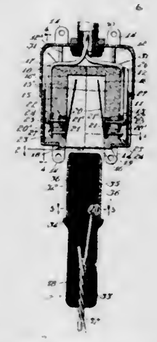
3. In a device of the character described, the combination of a support secured to a fixed part of a stamping press having a reciprocating die holder; a revoluble roll on said support adapted to carry a ribbon or strip of metallic leaf; a member adapted to be secured to and movable with the die holder of said press; feed rolls carried thereby; an oscillating member carried by said member and engaging one of said feed rolls; and a connection between said oscillating member and said support whereby said feed roll is rotated during each reciprocation of said die.

4. In a device of the character described, the combination of a support secured to a fixed part of a stamping press having a reciprocating die holder; a revoluble roll on said support adapted to carry a ribbon or strip of metallic leaf; a member adapted to be secured to and movable with the die holder; feed rolls carried thereby; an oscillating member carried by said member and engaging one of said feed rolls; and a connection between said oscillating member and said support whereby said feed roll is rotated during each upward movement of said die.

5. In a device of the character described, the combination of a support secured to a fixed part of a stamping press having a reciprocating die holder; a revoluble roll on said support adapted to carry a ribbon or strip of metallic leaf; a member adapted to be secured to and movable with the die holder; feed rolls carried thereby; an oscillating member carried by said member and engaging one of said feed rolls, said member having a lateral arm; and a link interposed between said arm and support.

[Claims 6 to 12 not printed in the Gazette.]

1,170,190. ELECTRIC SWITCH. FREDERICK J. RAVLIN, Chicago, Ill. Filed Apr. 3, 1911. Serial No. 618,666. (Cl. 173—338.)



1. In a plug-switch receptacle-member, the combination of upper and lower metallic casing sections, slip-fitting telescopically, jointly forming a casing closed circumferentially and having top and bottom walls, there being a wiring orifice in one section and a plug orifice in the bot-

tom wall; means on each said casing section for attachment thereof to a suitable support; an insulating base slip-fitted in the casing and otherwise free therefrom, said base receiving bearing in all directions from the casing and thereby positioned against movement in the casing, said base having therein an end-opening socket adapted to receive a push plug and registering with the plug orifice in the bottom wall of the casing; and contacts within the socket carried by said insulating base.

2. As an article of manufacture a weather proof plug-switch receptacle-member, comprising, in combination, a plurality of insulating-base sections, meeting at their longitudinal edges and there suitably recessed to provide an end-opening socket; contacts carried by said sections respectively mounted on the back walls of the socket; and a casing comprising upper and lower sections each provided with exterior apertured ears for attachment to a suitable support, said casing sections telescopically interfitting and jointly encompassing the base sections to give them bearing in all directions and to position them by inclosure, the lower casing member having a plug receiving orifice registering with the end opening socket of the base, and the upper casing section having a wiring orifice and being otherwise closed throughout.

3. In a plug-switch receptacle-member the combination of upper and lower metallic casing sections, slip-fitting telescopically, jointly forming a casing closed circumferentially and having top and bottom walls, there being a wiring orifice in one section and a plug orifice in the bottom wall; an insulating base, slip-fitted in the lower casing section to receive lateral and end bearing therefrom, and having end engagement with the upper casing section to position the latter vertically with respect to the lower casing section, said base having therein an end opening socket adapted to receive a push plug and registering with the plug orifice in the bottom wall; and contacts within said sockets carried by the base.

4. In a plug-switch receptacle-member the combination of upper and lower metallic casing sections, slip-fitting telescopically, jointly forming a casing closed circumferentially and having top and bottom walls, there being a wiring orifice in one section and a plug orifice in the bottom wall; an insulating base, slip-fitted in the lower casing section to receive lateral and end bearing therefrom, and having end engagement with the upper casing section to position the latter vertically with respect to the lower casing section, said base having therein an end opening socket adapted to receive a push plug and registering with the plug orifice in the bottom wall; contacts within said sockets carried by the base and means for uniting said casing sections.

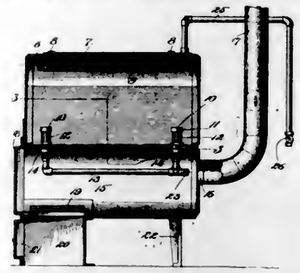
5. In a plug-switch receptacle-member, the combination of a plurality of insulating base sections, meeting at their longitudinal edges and there providing jointly an end opening socket, contacts carried by said respective sections mounted on the back walls of the socket, and a separable part casing, surrounding said base, receiving its sections in slipped-in relation and affording them bearing in all directions to position them only by inclosure, said casing having a plug receiving orifice registering with the end opening of the base socket.

[Claims 6 to 19 not printed in the Gazette.]

1,170,191. MACHINE FOR PREDIGESTING AND STERILIZING STOCK FOODS. EDGAR ROBERTS, St. Louis, Mo., assignor, by direct and mesne assignments, to Landro Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 24, 1915. Serial No. 35,989. (Cl. 99—2.)

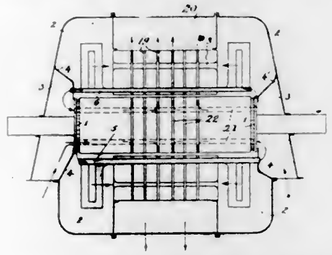
1. A machine for predigesting and sterilizing foods, comprising a suitable closed chamber, fixed, vertical nozzles having a series of slots arranged to discharge laterally in said chamber near the bottom thereof, and suitable means for supplying steam under pressure to said nozzles.

2. A machine for predigesting and sterilizing foods, comprising a suitable closed chamber, nozzles having oblique slots arranged to discharge laterally in said chamber near the bottom thereof, and means for supplying to said nozzles steam under pressure.



3. A machine for predigesting and sterilizing foods, comprising a digesting chamber having a suitable supply and discharge opening, a door for closing said opening, a series of rosette nozzles located in said chamber and provided with oblique slots, a series of water tubes below said chamber and connected to said nozzles, a fire box inclosing said water tubes, a steam pipe connected with the upper part of said chamber to discharge steam therefrom, and a valved pipe connected to said water tubes for drawing off the liquid from said chamber.

1,170,192. COOLING DYNAMOS. REINHOLD RÜDENBERG, Charlottenburg, and ALBERT ZEHRUNG, Berlin-Wilmersdorf, Germany, assignors to Siemens Schuckert Werke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 13, 1915. Serial No. 39,680. (Cl. 171—252.)



1. In a dynamo electric machine, the combination with a stator provided with hollow conductors extending continuously from one side to the other of said stator, of means for sending cooling air through some of said conductors in one direction, and means for sending cooling air through others of said conductors in the opposite direction.

2. In a dynamo electric machine the combination of a stator with hollow conductors therein, means for supplying cooling air to both sides of said stator, communicating spaces connecting said hollow conductors in groups for passing the cooling air through either one of said groups in one direction and in opposite directions in different groups.

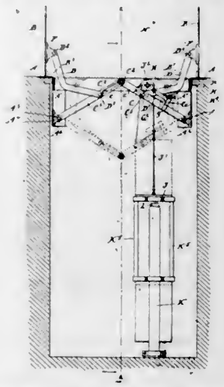
3. In a dynamo electric machine the combination of a stator with hollow conductors, means for supplying cooling air to both sides of said stator, pressure and discharge chambers on either side of said stator, said chambers communicating with each other on different sides of said stator by means of said hollow conductors, and an insulating separating wall between pressure and air discharging chambers on either side of said stator.

4. In a dynamo electric machine the combination of a stator with hollow conductors therein, means for supplying cooling air to both sides of said stator, pressure and discharge chambers on either side of said stator, said chambers on different sides of said stator communicating through said hollow conductors, tubes connecting the ends of some of said conductors to said air discharge chamber on one side of said stator, other tubes connecting others of said conductors to said air discharge chamber on the other side of said stator, and an insulating wall between the pressure and air discharge chambers on each side of the stator.

5. In a dynamo electric machine the combination of a stator with hollow conductors therein, means for supplying cooling air to both sides of said stator, pressure and discharge chambers on either side of said stator, said chambers on different sides of said stator communicating through said hollow conductors, and tubes adapted to the ends of said conductors, said tubes connecting said hollow conductors with the air discharging space through said pressure chambers, said tubes being fixed upon the separating wall between said pressure and said air discharge chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,170,193. MECHANISM FOR OPERATING HOISTWAY-DOORS. WILLIAM RUTAN, New York, N. Y., assignor to Gillis & Geoghegan, New York, N. Y., a Firm. Filed Apr. 28, 1915. Serial No. 24,424. (Cl. 268—3.)



1. In a device of the character set forth, a hoistway, hoisting apparatus therein having a vertically movable standard, means for elevating said standard, vertically swinging doors covering such hoistway, means depending within the hoistway and means pivotally supported thereon and pivotally connected with each other and with said doors and coöperating with said standard for automatically operating the doors.

2. In a device of the character set forth, a hoistway, hoisting apparatus therein having a vertically movable standard, means for elevating said standard, vertically swinging doors covering such hoistway, means depending within the hoistway and means pivotally supported thereon and pivotally connected with each other and with said doors and coöperating with said standard for automatically operating the doors, a member rising and falling with said doors, and a coöperating member on a connection between said doors and the depending member.

3. In a device of the character set forth, a hoistway, vertically swinging doors covering such hoistway, levers pivoted at opposite points in such hoistway and loosely connected at their ends to rise and sink together, a link for each lever, each link pivoted at one end to the latter and at the other to one of said doors, a member in said hoistway arranged to rise and sink therein, and means on one of said levers adapted to be engaged by and coact with said member and open and close said doors.

4. In a device of the character set forth, a hoistway, vertically swinging doors covering such hoistway, levers pivoted at opposite points in such hoistway and loosely connected at their ends to rise and sink together, a link for each lever, each link pivoted at one end to the latter and at the other to one of said doors, a member in said hoistway arranged to rise and sink therein, means on one of said levers adapted to be engaged by and coact with said member and open and close said doors, and a weight connected to one of said levers for counterbalancing said levers, links, and doors.

5. In a device of the character set forth, a hoistway, vertically swinging doors covering such hoistway, levers pivoted at opposite points in such hoistway and loosely connected at their ends to rise and sink together, a link for each lever, each link pivoted to the latter at one end and at the other to one of said doors, an arm on one of said levers forming a notch, and a member in such hoistway arranged to rise and sink therein and adapted to engage in such notch and to coact with said arm and its lever to open and close said doors.

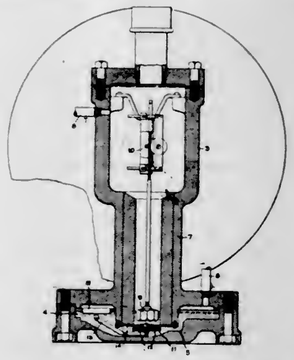
[Claims 6 to 9 not printed in the Gazette.]

1,170,194. FENCE-POST. HOWARD D. SALINS, Chicago, Ill. Filed Aug. 5, 1915. Serial No. 43,709. (Cl. 256—48.)



A post provided with a facing member having openings extended therethrough, said openings being arranged in pairs, each pair located in a diagonal line with respect to the post and one opening of each of said pairs being located on one side of a vertical line drawn through the middle portion of said facing member, and a body portion connected to the rear surface of said facing member between the vertical rows of said openings and having its sides divergently and rearwardly extended from said facing member, the rear portion of said body portion being of substantially the same width as the facing member.

1,170,195. FLOW-METER. LUCIAN A. SHELDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 3, 1914. Serial No. 842,633. (Cl. 73—167.)



1. In a flow meter, the combination of a pressure difference creating device adapted to create a pressure difference which bears a definite relation to the rate of flow of the fluid to be metered, a U-tube manometer, pipes connecting the device and manometer, valve means for cutting off communication between the leading and trailing sides of the pressure difference creating device in case of excess pressure on one leg of the manometer, and a float which rides on the indicating fluid and controls said valve means.

2. In a flow meter, the combination of a pressure difference creating device adapted to create a pressure difference which bears a definite relation to the rate of flow of the fluid to be metered, a U-tube manometer, pipes connecting the device and manometer, valve means for cutting

off communication between the leading and trailing sides of the pressure difference creating device in case of excess pressure on either leg of the manometer, a float which rides on the indicating fluid, and means connecting the float to said valve means.

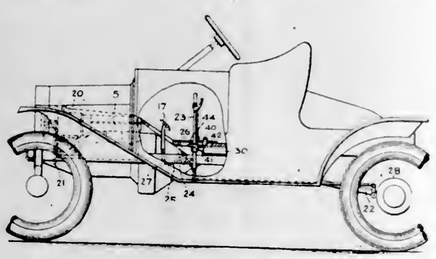
3. In a flow meter, the combination of a pressure difference creating device adapted to create a pressure difference which bears a definite relation to the rate of flow of the fluid to be metered, a U-tube manometer, pipes connecting the device and manometer, and valve means arranged between the two legs of the manometer and controlled by the lever of the indicating fluid for cutting off communication between the leading and trailing sides of the pressure difference creating device in case of excess pressure on one leg of the manometer.

4. In a flow meter, the combination of a base member forming a reservoir, a tube rising therefrom, said reservoir and tube forming together the respective legs of a U-tube manometer, a valve controlling communication between the reservoir and the tube, and means controlled by excess pressure on the leading side of the flow meter for closing said valve.

5. In a flow meter, the combination of a base member forming a reservoir, a tube rising therefrom, said reservoir and tube forming together the respective legs of a U-tube manometer, a valve controlling communication between the reservoir and the tube, and means controlled by excess pressure on either side of the flow meter for closing said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,170,196. CONTROLLING MECHANISM FOR AUTOMOBILE STARTING-MOTORS AND LIGHTING-GENERATORS. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 11, 1915. Serial No. 1,539. Cl. 171—315.)



1. A vehicle having an internal combustion engine for driving it, power transmitting means between the engine and the vehicle wheels, and a controlling device for said means, in combination with a dynamo electric machine whose rotor is connected to the engine shaft to drive it or be driven thereby, a switch controlling the circuit of said machine, an actuator for the switch, and an interlocking means between the controlling device and the actuator which prevents certain movements of the device until the actuator has been moved to a predetermined position.

2. A vehicle having an internal combustion engine for driving it, power transmitting means between the engine and the vehicle wheels, and a controlling device for said means, in combination with a dynamo electric machine whose rotor is connected to the engine shaft to drive it or be driven thereby, a switch controlling the circuit of said machine, an actuator for the switch, and an interlocking means between the controlling device and the actuator which prevents the controlling device from connecting the engine to the driving wheels through the power transmitting means until the actuator has first moved said switch.

3. A vehicle having an internal combustion engine for driving it, power transmitting means between the engine and the vehicle wheels, and a controlling device for said means, in combination with a dynamo electric machine whose rotor is connected to the engine shaft to drive it or be driven thereby, a switch that controls the main circuit between said machine and its source of current supply, an actuator for the switch, and a stop moving with the switch that is normally interposed in the path of the controlling device and limits its movement to a restricted zone until said switch is closed.

4. A vehicle having an internal combustion engine for driving it, power transmitting means between the engine and the vehicle wheels, and a lever which controls the power transmitting means, in combination with a dynamo electric machine whose rotor is connected to the engine shaft to drive it or be driven thereby, a switch for controlling the circuit of said machine which is held closed by the lever so long as it is in its high speed position, a stop that prevents the lever from moving out of a restricted zone until the machine starts into operation as a motor, and means for closing the switch and moving the stop out of the path of the lever.

5. A vehicle having an internal combustion engine for driving it, power transmitting means between the engine and the vehicle wheels, and a lever which controls the power transmitting means, in combination with a dynamo electric machine whose rotor is connected to the engine shaft to drive it or be driven thereby, a switch in the main circuit of the machine that is biased to open position and is held closed by the lever when it is in one of its positions, an actuator for closing the switch independently of the lever, and a means for preventing the lever from acting on the switch until it has first been closed by the actuator.

[Claims 6 to 9 not printed in the Gazette.]

1,170,197. CEMENT MOLD. HARRY H. STYLL and HAROLD K. PARSONS, Southbridge, Mass., assignors to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed Mar. 27, 1915. Serial No. 17,397. (Cl. 88—47.)



1. In an ophthalmic mounting, the combination with a strap member in the form of a laterally open box, of a heat actuable adhesive formed on and adhering to the inner face of the strap, whereby heating of the strap will soften the adhesive to cause it to firmly engage and secure a lens as pressed into the strap.

2. As an article of manufacture, an eyeglass strap comprising a box portion adapted to embrace the lens, and a heat actuable adhesive lining carried by the inner face of the strap, whereby the strap may at any time be attached to or detached from a lens by simply heating thereof.

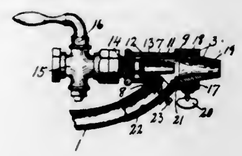
3. As an article of manufacture, a mount for an ophthalmic lens, comprising a strap having edge engaging and side engaging portions for coöperating with the lens, and a hardened adhesive adhering to and lining the strap, whereby heating thereof will soften the same to a condition to satisfactorily adhere to and secure a lens within the strap, substantially as and for the purpose described.

4. As an article of manufacture, a mold including means to secure the same to a strap and a lens, the strap and lens engaging portions of the mold being formed from different adhesive material.

5. As an article of manufacture, a mold including means to secure the same to a strap and a lens, the strap and lens engaging portions of the mold being formed from different adhesive material and separated by a non-conductive material.

1,170,198. SAND-BLAST DEVICE. JOHN E. SWEET, ANTHONY WINTER, and FRANK G. CHAMBERS, Syracuse, N. Y., assignors to Straight Line Engine Company, a Corporation of New York. Filed Oct. 17, 1913. Serial No. 795,739. (Cl. 51—12.)

1. A sand blast device comprising a threaded air pipe nipple, a tubular head having one end threaded internally and screwed upon the nipple and its opposite end provided with a socket, the inner end of which is co-axial with the nipple and the outer end eccentric to said axis, a tapering delivery nozzle having its larger end seated in the base of the socket and its smaller end extending outwardly through the eccentric end of the socket, a set screw for holding the nozzle in the socket co-axial with said axis, said head having an inner annular shoulder intermediate its ends and a branch sand inlet opening therein between the annular flange and the inner end of the nozzle, and an air nozzle fitted within the annular shoulder and having one end extending partially across the branch inlet and its opposite end enlarged and clamped between the annular flange and adjacent end of the nipple.



2. In a sand blast device, the combination of a tubular head having a branch sand inlet intermediate its ends at an angle to the axis thereof, said head having an air inlet in one end and its opposite end provided with a socket, the inner end of which is co-axial with the axis of the head and its outer end eccentric to said axis, a tapering delivery nozzle for sand and air having its larger end of substantially the same diameter as the inner end of the socket and fitted therein, and movable means for holding said nozzle in the socket co-axial with the head.

3. In a sand blast device, the combination of a tubular head having an air inlet in one end and a cylindrical socket in its opposite end disposed at an angle to the produced axis of the inlet, said head having a branch sand inlet intermediate its ends at an acute angle with the axis of the air inlet, a tapering delivery nozzle for sand and air having its larger end of substantially the same diameter as the socket and seated in the base thereof co-axial with the air inlet, and movable means in one side of the socket for clamping the nozzle against the opposite side of said socket.

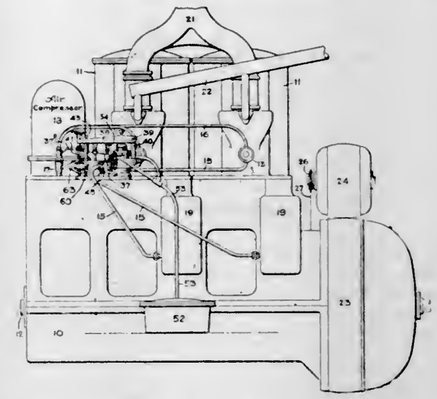
4. In a sand blast device, the combination of a tubular head having an air inlet in one end and a cylindrical socket in its opposite end disposed at an angle to the produced axis of the inlet, said head having a branch sand inlet intermediate its ends at an acute angle with the axis of the air inlet, a tapering delivery nozzle for sand and air having its larger end of substantially the same diameter as the socket and seated in the base thereof co-axial with the air inlet, movable means in one side of the socket for clamping the nozzle against the opposite side of said socket, and a valve having one end of its case provided with a threaded nipple screwing into the air inlet end of the head.

5. In a sand blast device; the combination of a tubular head having a branch sand inlet in one side intermediate its ends, an air pipe nipple in one end of the head, a transverse partition within the head between the branch sand passage and inlet nipple and provided with a central opening co-axial with the air inlet nipple, and a tapering air nozzle fitted in the opening in the partition and having its larger end clamped between said partition and nipple.

1,170,199. GOVERNING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Feb. 12, 1913. Serial No. 747,954. (Cl. 123—123.)

1. The combination of an engine, a compressor, a fuel pump, an injector for the engine that receives fluid from the compressor and fuel from the pump, and a governor responsive to the pressure of the fluid delivered by the compressor for preventing fuel from entering the injector until said pressure exceeds a predetermined value.

2. The combination of an engine, a compressor driven thereby, a fuel pump, an injector for the engine that receives fluid from the compressor and fuel from the pump, a by-pass for the fuel supply located between the pump and injector, and a governor sensitive to a condition of the fluid passing through the compressor which holds the by-pass open until the pressure of the fluid delivered by the compressor exceeds a predetermined value.



3. The combination of an engine, an elastic fluid compressor, a fuel pump, an injector for the engine that receives fluid from the compressor and fuel from the pump, and a governor for controlling the admission of fuel to the injector which comprises a member sensitive to the pressure of said fluid, a means acting in opposition to the member, and a valve controlling the passage of fuel through the injector.

4. The combination of an engine, an elastic fluid compressor, a fuel pump, an injector for the engine that receives fluid from the compressor and fuel from the pump, a main governor responsive to the pressure of the fluid delivered by the compressor for preventing fuel from entering the injector until the fluid pressure exceeds a predetermined value, and an emergency speed governor driven by the engine for by-passing fuel from the injector.

5. The combination of an engine, an elastic fluid compressor, a fuel pump, an injector for the engine that receives fluid from the compressor and fuel from the pump, a main governor responsive to the pressure of the fluid delivered by the compressor for preventing fuel from entering the injector until the fluid pressure exceeds a predetermined value, an emergency governor responsive to an operating condition of the engine, and a valve controlled thereby which relieves the fluid pressure on the governor and prevents fuel from entering the injector.

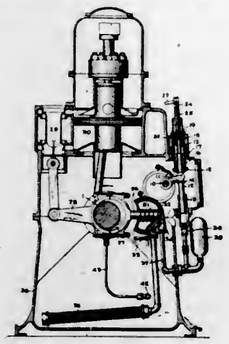
[Claims 6 to 18 not printed in the Gazette.]

1,170,200. CONTROLLING MECHANISM FOR HIGH-COMPRESSION INTERNAL-COMBUSTION ENGINES. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed July 29, 1914. Serial No. 853,866. (Cl. 123—140.)

1. The combination with a high compression internal combustion engine, of fuel pumps for feeding fuel to the cylinders thereof, adjustable fulcra for said pumps, a pressure-responsive device for shifting said fulcra, a lubricating system for the engine forcing oil through said pressure-responsive device, and a speed governor controlling the flow of oil through said device.

2. The combination with a high compression internal combustion engine, of fuel pumps for feeding fuel to the cylinders thereof, adjustable fulcra for said pumps, a pressure-responsive device for shifting said fulcra, a lubricating system for the engine forcing oil through said pressure-responsive device, a speed governor controlling the

flow of oil through said device, and means for by-passing the oil around said pressure-responsive device.



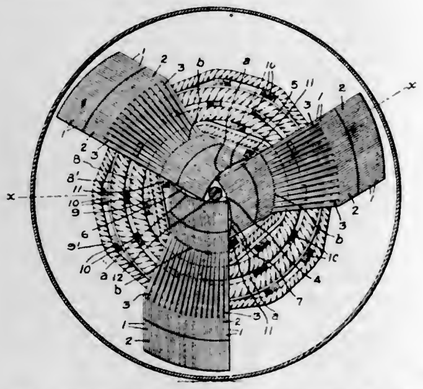
3. The combination with a high compression internal combustion engine, of fuel pumps for feeding fuel to the cylinders thereof, a rock-shaft, eccentrics thereon, levers mounted on said eccentrics and adapted to drive said pumps, a pressure-responsive device operatively connected with said rock-shaft, means for forcing fluid through said pressure-responsive device, and a speed governor controlling the flow of such fluid.

4. The combination with a high compression internal combustion engine, of a pump for supplying fuel thereto, and a regulating means for the pump, said regulating means embodying a pressure-responsive device comprising a cylinder, a tubular plunger therein, closed at its upper end and containing ports at that end, a ported sleeve valve working on the upper portion of said plunger, means for forcing fluid up through said plunger, a helical spring opposing the pressure of said fluid, and a speed governor controlling said sleeve valve.

5. The combination with an internal combustion engine, of a fuel pump therefor which is regulated by fluid pressure, a lubricating system for the engine, and a single pump for supplying fluid for regulating the fuel pump and lubricant to the lubricating system.

[Claims 6 to 8 not printed in the Gazette.]

1,170,201. TRANSFORMER. JAMES M. WEED, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,845. (Cl. 175—361.)



1. A transformer core section composed of laminations of substantially the same size, offset relatively longitudinally, to produce surfaces on the legs each departing from a single plane, and additional laminations inserted in one leg between the other laminations, the laminations on one side of the core section being unchanged in shape and the remaining laminations being gradually bent or fanned away from this side to make room for the additional laminations.

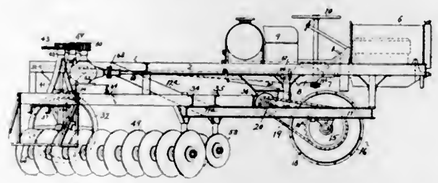
2. The combination of a plurality of core sections forming a transformer core, each including a center leg the outer surface of which departs from a single plane, the sections being symmetrically grouped with the center legs together, one edge of the outer surface of the center leg of each section being located nearer the center of the core than the other and being displaced from the corresponding edges of the other sections, along the outer surface of another center leg.

3. A transformer core comprising three sections, each section including a center leg and being composed of laminations initially of uniform width offset relatively longitudinally and fanned away from one side of the section, the sections being assembled with the center legs of the sections at the center of the core and with one edge of the outer surface of the center leg of each section nearer the center of the core than the other and displaced from the corresponding edges of the other sections.

4. The combination of a transformer having a laminated core providing a complete magnetic circuit, a rod extending through the transformer core at approximately its center, core clamping plates carried by said rod engaging and supporting the core at its opposite ends and clamping its parts together, and a tank for the transformer provided with means for supporting the rod by engaging its ends.

5. The combination of a transformer having a laminated core providing a complete magnetic circuit, a rod extending through the transformer at approximately its center, core clamping plates carried by said rod and engaging and supporting the core at its opposite ends and clamping its parts together, and a tank for the transformer provided with means for supporting the rod by engaging its ends, the walls of the tank engaging one of the clamping plates.

1,170,202. AGRICULTURAL MACHINE. ROLLIN H. WHITE, Cleveland Heights Village, Ohio, and CLARENCE G. WHITE, Haiku, Hawaii. Filed Mar. 31, 1913. Serial No. 757,765. (Cl. 97—71.)



1. In a machine of the character described, the combination with a chassis, a power producing device carried thereby, an annular traction member supporting the chassis, operative connections between the traction member and the power device, a diagonally extending frame supported by the chassis, said frame carrying devices adapted to engage the soil, and a roller supporting one end of the diagonally extending frame, a steering wheel, and operative connections between said steering wheel and roller.

2. In a machine of the character described, the combination with the chassis having a rearwardly extended side member of a power producing device carried by the chassis, a traction roller upon which the chassis is mounted, a frame in which said traction roller is mounted, said frame being secured to the chassis, a side member of said frame being rearwardly extended parallel to said rearwardly extending side member of the chassis, members joining the side members mentioned, a roller mounted between the side members mentioned and supporting the rear portion of the machine, a steering wheel, operative connections between the steering wheel and the roller, and a frame carrying devices adapted to engage the soil, said frame being connected to the traction frame and to the side members of the chassis.

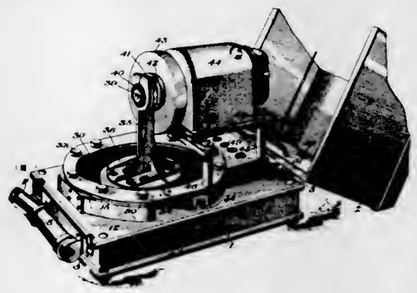
3. In a machine of the character described, the combination with a chassis, of a power producing device carried thereby, an annular traction member supporting the chassis, a frame in which said traction member is mounted, one side of said frame being extended toward the rear and bent upwardly to the plane of the chassis, the side of the chassis adjacent the side of the frame just mentioned being extended to the rear, the side members mentioned being joined at their rear portions, a roller supported between the side members mentioned, a steering wheel carried by the chassis, operative connections between the steering wheel and the roller, and a frame carrying devices adapted to operate upon the soil, said frame being connected to the traction frame and to the side members of the chassis.

4. In a machine of the character described, the combination with a chassis, of a power producing device carried thereby, an annular traction member supporting the chassis, an auxiliary frame supported by the traction member, an implement frame, one end of which is supported by the auxiliary frame, the other end being supported by the chassis, and devices carried by the said implement frame which are adapted to engage the soil.

5. In a machine of the character described, the combination with a chassis, of a power producing device carried thereby, an annular traction member supporting the chassis, an auxiliary frame carried by the chassis and beneath the same, a traction roller supported in said frame, operative connections between the traction roller and the power producing device, an implement frame supported at one end by the auxiliary frame, and at the opposite end from the chassis, disks carried by said implement frame, mechanism for rotating said disks, a flexible driving connection between the said mechanism and the power producing device, and means for raising and lowering the disks.

[Claims 6 to 10 not printed in the Gazette.]

1,170,203. AIR-PUMP FOR VACUUM-CLEANERS. THEODORE WIEDEMANN and JOSEPH H. TEMPLIN, Philadelphia, Pa., assignors, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed June 12, 1909. Serial No. 501,701. (Cl. 230—5.)



1. In a vacuum pump, a vacuum chamber into which the fluid is initially conducted, a pulsation chamber having an inlet thereto from said vacuum chamber, pumping mechanism coöperating with said pulsation chamber and comprising a flexible diaphragm having its outer periphery suitably supported, means for retaining said outer periphery in position, a connecting rod having one end non-pivotally secured to said diaphragm whereby the latter receives a combined oscillatory and reciprocatory movement within a portion only of said pumping chamber, whereby a relatively large clearance space is provided, a pressure chamber, into which the purified air is discharged, an electric motor in said pressure chamber, a crank operated by said motor, and a direct connection from said crank to said connecting rod for actuating the latter.

2. In a vacuum pump, a vacuum chamber into which the fluid is initially conducted, a pulsation chamber having a valved inlet thereto from said vacuum chamber, pumping mechanism coöperating with said pulsation chamber, and comprising a flexible diaphragm having its outer periphery suitably supported, means for retaining said outer periphery in position, a connecting rod, having one end non-pivotally secured to said diaphragm, whereby the latter receives a combined oscillatory and reciprocatory movement within a portion only of said pumping chamber, whereby a relatively large clearance space is provided, a pressure chamber having a valved outlet theerto from said pulsation chamber, said pressure chamber having a restricted outlet therefrom, whereby a requisite body of compressed fluid is retained in said pressure chamber during the reciprocations of said motor, an electric motor, and connections from said motor to said connecting rod for actuating the latter.

3. In a pumping apparatus, a vacuum reservoir provided with a restricted inlet port whereby the apparatus may be used as a suction device, a pressure reservoir provided with a restricted outlet port whereby the apparatus may be used as a blower, a pulsation chamber intermediate said reservoirs and ports, pumping mechanism coöperating with said pulsation chamber and comprising a flexible diaphragm having its outer periphery suitably supported, means for maintaining said outer periphery in position, an electric motor in one of said reservoirs, a connecting rod having one end secured to said diaphragm, whereby the latter receives a combined oscillatory and reciprocatory movement within a portion only of said pumping chamber, whereby a relatively large clearance space is provided, a crank operated by said motor, and a connection from said crank to said connecting rod for actuating the latter.

4. In a pumping apparatus, a vacuum reservoir, having a restricted inlet port, a pressure reservoir having a restricted outlet port whereby the apparatus can be used as a blower, a pulsation chamber intermediate said reservoirs, pumping mechanism coöperating with said pulsation chamber and comprising a flexible diaphragm having its outer periphery suitably supported, means for maintaining said outer periphery in position, a connecting rod having one end non-pivotally secured to said diaphragm, whereby the latter receives a combined oscillatory and reciprocatory movement within a portion only of said pumping chamber, whereby a relatively large clearance space is provided, an electric motor located within one of said reservoirs, and a direct connection from said motor to said connecting rod for actuating the same.

1,170,204. INDICATING AND RECORDING FLOW-METER. JAMES WILKINSON, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 9, 1912. Serial No. 724,735. (Cl. 73—167.)

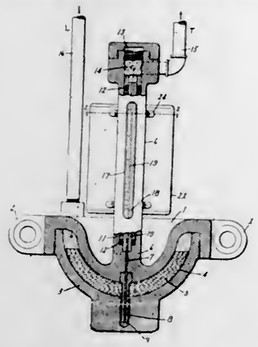
1. A steam flow meter, comprising a casing having a hemispherical chamber for mercury, a stem rising centrally therefrom and having a central passage, a glass tube in said stem communicating with said passage, and means for connecting the mercury chamber and said glass tube respectively with the higher and lower pressure regions of a pressure-difference device.

2. A steam flow meter, comprising a casing having a dished top and a bowl-shaped bottom forming a hemispherical chamber for mercury, a stem rising centrally from said top and having a central counterbored passage, a glass tube in said counterbore, and means for connecting the top of the chamber and the upper end of the glass tube respectively with the higher and lower pressure regions of a pressure difference device.

3. A steam flow meter, comprising a hemispherical chamber, a mass of mercury therein, a stem rising centrally from said chamber and having a central passage, a well in the bottom of said casing, a tube connecting with said passage and depending into said well, a glass tube

in said stem, a quantity of opaque liquid in said glass tube, and a slot in said stem for exposing said liquid.

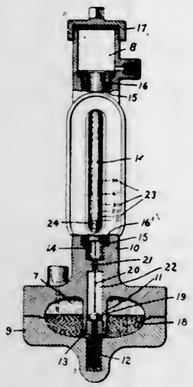
4. A steam flow meter, comprising a hemispherical chamber for mercury, a slotted stem, a glass tube therein communicating with said chamber and containing opaque liquid, means for connecting the higher and lower pressure regions of a pressure difference device with said chamber and tube respectively, and means with which said opaque column of liquid coöperates to show the flow.



5. A steam flow meter, comprising a hemispherical chamber for mercury, a slotted stem containing a glass tube communicating with said chamber, means for connecting the higher and lower pressure regions of a pressure-difference device with said chamber and tube respectively, and means with which the liquid in the tube coöperates to show the flow.

[Claims 6 to 13 not printed in the Gazette.]

1,170,205. FLOW-METER FOR MARINE PURPOSES. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 14, 1913. Serial No. 773,602. (Cl. 73—167.)



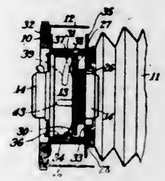
1. A fluid flow meter having a fluid containing tube provided with leading and trailing legs, a portion of the leading leg being of such a configuration as to decrease automatically the area of the exposed surface of the mercury in said leg with every departure of said portion from a horizontal position.

2. A fluid flow meter having a fluid containing tube which has a mercury chamber for the leading pressure whose shape is that of an oblate ellipsoid.

3. A steam flow meter having a base containing a chamber, a body of fluid in said chamber, a tubular stem rising from the base and having an extension projecting down into said fluid, a glazed longitudinal slot in said stem, a flat surface on said stem adjacent to said slot and provided with graduation marks, a float in said stem having a rod, an index on the upper end of said rod observable through said slot, and means for connecting said chamber and the upper end of said stem respectively with the high and low pressure regions of a pressure difference device.

4. The combination with a conduit for fluids, of a pressure-difference device thereon, a base containing a chamber connected with the high-pressure region of said device, a longitudinally-slotted tubular stem rising from said base and having an extension depending into said chamber, a chamber at the top of said stem connected with the low pressure region of said pressure difference device, a glass tube in said stem connecting the two chambers, and a float in the stem having a rod whose upper end is observable through said slot.

1,170,206. FOCUSING DEVICE. ANDREW WOLLENSAK, Rochester, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,886. (Cl. 95—45.)



1. In a camera, the combination, with the camera-front, of a tubular housing secured thereto; a shutter-casing; a lens mounted on the shutter-casing; the shutter-casing being supported, and axially movable, within the housing; and means for so moving the shutter-casing to focus the camera.

2. In a camera, the combination, with the camera-front, of a tubular housing secured thereto; a shutter-casing; a lens mounted on the shutter-casing; the shutter-casing being supported, and axially movable, within the housing; and means for so moving the shutter-casing to focus the camera, said means including a manually-operable annular member rotatable upon the outer surface of the housing.

3. In a camera, the combination with the camera-front and the bellows, of a housing interposed between them; a lens-carrier axially movable in the housing; and means for so moving the lens-carrier to focus the camera without movement of the front.

4. In a camera, the combination, with the camera-front and the bellows, of a housing interposed between them; a lens-carrier axially movable in the housing; and means for so moving the lens-carrier to focus the camera without movement of the front, said means comprising a manually-operable member rotatably mounted upon the housing.

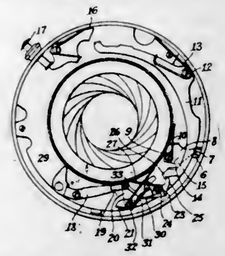
5. In a camera, the combination, with the camera-front and the bellows, of a housing interposed between them; a lens-carrier axially movable in the housing; and means for so moving the lens-carrier to focus the camera without movement of the front, said means comprising a sleeve surrounding the housing and rotatable thereon, and a flange at he rear end of the sleeve.

[Claims 6 to 12 not printed in the Gazette.]

1,170,207. PHOTOGRAPHIC SHUTTER. ANDREW WOLLENSAK, Rochester, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 27, 1915. Serial No. 24,367. (Cl. 95—63.)

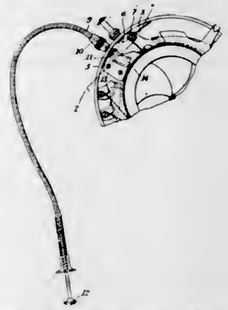
1. A photographic shutter having, in combination, a retarder; actuating-mechanism; and connections between said mechanism and the retarder, for actuating the latter, constructed and arranged to give the actuating-mechanism a mechanical advantage over the retarder which increases substantially toward the last part of the operative movement.

2. A photographic shutter having, in combination, a retarder; actuating-mechanism; and connections between said mechanism and the retarder, for actuating the latter, comprising levers having effective arms which vary in such sense as to give the actuating-mechanism a mechanical advantage over the retarder which increases substantially toward the last part of the operative movement.



3. A photographic shutter having, in combination, a retarder; a controller to vary the length of the operative movement of the retarder; a master-lever; a retarder-lever connected with the retarder; and an intermediate lever coöperating with the retarder-lever and the master-lever; the retarder-lever and the intermediate lever coöperating with effective lever-arms which vary in such sense as to give the intermediate lever a mechanical advantage over the retarder-lever which increases substantially toward the last part of the operative movement.

1,170,208. PHOTOGRAPHIC SHUTTER. ANDREW WOLLENSAK, Rochester, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a Corporation of New York. Original application filed Aug. 3, 1914, Serial No. 854,887. Divided and this application filed May 4, 1915. Serial No. 25,848. (Cl. 95—53.)

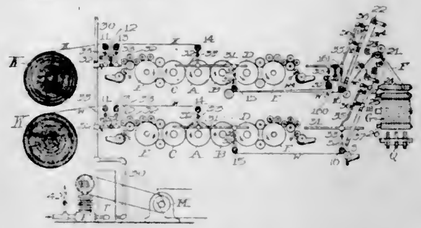


1. In a shutter, the combination, with an actuating-lever and a release-wire having an extremity normally engaging the actuating-lever, of a guideway, in which said extremity moves, extending in the path of movement of the lever so as to restrict said extremity to said path and insure coöperation between the release-wire and the actuating-lever.

2. In a shutter, the combination, with an actuating-lever and a release-wire having an extremity normally engaging an arm of the actuating-lever, of a guideway in which said extremity moves, slotted at one side to receive said arm of the actuating-lever, and curved longitudinally substantially concentrically with the pivotal point of the lever.

1,170,209. PAPER-LUBRICATING DEVICE FOR PRINTING-PRESSES. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Apr. 3, 1909. Serial No. 487,629. (Cl. 101—112.)

1. The combination in a web printing press, of a hollow rotary roller over and part-way around which the web passes substantially in contact therewith, said roller having perforations in the periphery thereof, means for constantly forcing air into the interior of the roller and out through said perforations, and a solid shield engaging the perforated surface of the roller where the same is not engaged by the web.



2. The combination of a hollow longitudinal former or folder having a broad flat surface for engaging the web, said flat surface having perforations throughout its area, and means for forcing air into the space in the former and out through said perforations.

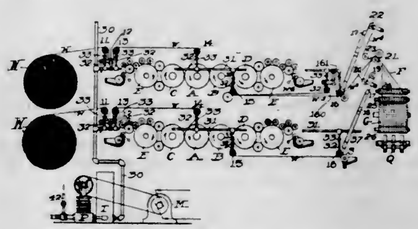
3. The combination of a cutting cylinder having means thereon for severing a web into sheets, and means for introducing a current of air between the surface of the cylinder and the web directly against the web on both sides of the cutting line during the cutting operation.

4. The combination of a collecting cylinder, and means for introducing a film of air between the surface of the same and the web to hold the web from intimate contact with the collecting cylinder.

5. The combination of a web printing press, means for introducing a supply of air under pressure between the web and a surface or surfaces over which the same passes, and means for injecting steam or water vapor into the air before the air is introduced between the web and said surface.

[Claim 6 not printed in the Gazette.]

1,170,210. METHOD OF FEEDING PAPER. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed Apr. 3, 1909, Serial No. 487,629. Divided and this application filed May 23, 1914. Serial No. 840,488. (Cl. 101—112.)

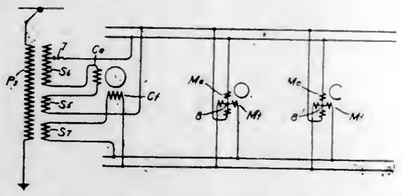


The method of assisting the travel of paper, which consists in forcing a lubricating fluid such as air between the paper and a surface or surfaces over which the same passes, and introducing water vapor into the air.

1,170,211. SPLIT-PHASE SYSTEM. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1914, Serial No. 815,279. Renewed July 20, 1915. Serial No. 41,014. (Cl. 172—238.)

1. In combination, a phase converter, a motor, and a plurality of secondary transformer windings, a phase of said converter and a phase of said motor being connected between two of the secondary transformer windings so

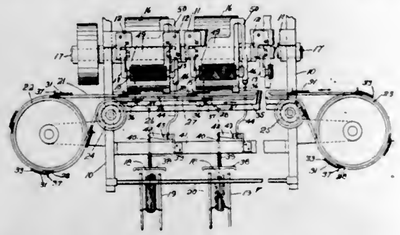
that said secondary windings are disposed between the terminals of the machine windings, another phase of said converter being connected to another phase of said motor and to a secondary transformer winding.



2. In combination, a phase converter, a quarter-phase motor, and a plurality of secondary transformer windings, one phase of said converter being connected in series with two of said secondary transformer windings and with one phase of said motor so that said secondary windings alternate with said machine windings, another phase of said converter being connected in series with another phase of said motor and with a secondary transformer winding having an induced voltage different from the maximum voltage impressed on said first-mentioned phases.

3. In combination, a single phase source of supply, a phase converter, a quarter-phase motor, and a transformer with its primary connected to said supply and its secondary divided into sections, one phase of said converter being connected to one terminal of each of two of the sections of the secondary, one phase of said motor being connected to the free terminals of said sections, another phase of said converter being connected in series with another phase of said motor, and means for interpolating a voltage different from that of said source in the latter circuit.

1,170,212. WINDING-MACHINE. GEORGE BION ALLEN and VALORUS STUKELY WESTCOTT, Pawtucket, R. I. Filed Aug. 4, 1914. Serial No. 855,054. (Cl. 242—36.)



1. In a cop winder, cop supporting means, means for rotating the cop, yarn guiding members movable rectilineally in opposite directions past the cop to alternately engage the yarn and lead it back and forth across the face of the cop while being wound thereon.

2. In a cop winder, a holder for the cop, means for rotating the cop, a member having portions traveling in opposite directions along the face of the cop and means carried by the said oppositely traveling portions adapted to alternately engage the yarn and lead it back and forth across the face of the cop while being wound thereon.

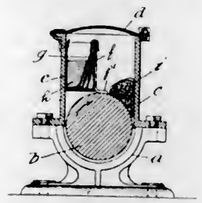
3. In a cop winder, a holder for the cop, means engaging the face of the cop to rotate the same by friction, a belt having oppositely traveling portions moving lengthwise of the cop, and means carried by the said oppositely traveling portions adapted to alternately engage the yarn and lead it back and forth across the face of the cop while being wound thereon.

4. In a cop winder, means for yieldably supporting the cop, means for rotating the cop, a belt having portions traveling in opposite directions across the face of said cop, and yieldable fingers carried by the said oppositely traveling portions adapted to alternately engage the yarn and lead it back and forth across the face of the cop while being wound thereon.

5. In a cop winder, cop supporting means, means for rotating the cop, yarn guiding members movable rectilineally in opposite directions past the cop to alternately engage the yarn and lead it back and forth across the face of the cop while being wound thereon and means for automatically stopping the cop from winding when a stickage occurs in the yarn.

[Claims 6 to 9 not printed in the Gazette.]

1,170,213. METHOD AND MEANS FOR LUBRICATING BEARINGS. THOMAS E. ALLEN, Andover, Mass. Filed Oct. 16, 1915. Serial No. 56,320. (Cl. 64—24.)

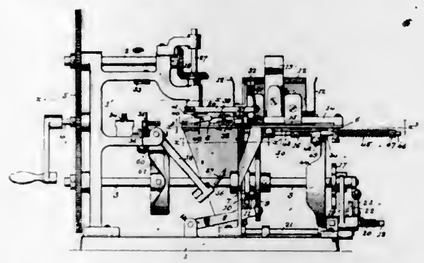


1. The method of lubricating shafts which consists in supporting a mass of fibrous material, saturated with hard-grease, on a portion of the surface of the shaft, to be lubricated, above the level of its axis, and providing a constant supply of lubricating oil to an adjacent portion of said surface above said level, so that the oil is carried directly beneath said material, by the shaft, as it rotates.

2. A self-lubricating bearing comprising a journal box having a shaft resting therein, a casing inclosing the portion of the shaft above the bearing, a fibrous, grease-saturated material, resting on the shaft, between the shaft and the side of the casing toward which the shaft turns, and means in the opposite side of the casing to supply lubricating oil to the surface of the shaft, above its axis, as it moves toward the packing.

3. A self-lubricating bearing comprising a journal box having a shaft resting therein, a casing inclosing the portion of the shaft above the bearing, a fibrous, grease-saturated material resting on the shaft, between the shaft and the side of the casing toward which the shaft turns, an oil reservoir located in the opposite side of the casing from said material, and a wick leading from said reservoir and resting on the shaft in proximity to said material in such a position, with relation to the direction of rotation of the shaft, that the oil will be carried beneath said material before passing to the journal box.

1,170,214. MACHINE FOR STRINGING TAGS. JOHN AXELSTROM, Chicago, Ill. Filed Oct. 5, 1914. Serial No. 864,996. (Cl. 93—91.)



1. In a tag stringing and tying mechanism, the combination of a table, a looper stem adapted to draw a loop of string through the eye of a tag resting on said table, means for imparting reciprocation to said stem, string carrying jaws having movement in a path around the looper stem aforesaid and adapted in their movement to place a loop of string around said looper stem, a pair of jaws adapted to carry the looped end of the string to a point beneath the end portions of the string and spread said loop portion laterally, means for imparting reciprocation to said pair of jaws, a tying needle adapted to move through said looped end of the string into engagement with the aforesaid end portions of the string and draw the same through said looped end, and means for imparting reciprocation to said tying needle, substantially as set forth.

2. In a tag stringing and tying mechanism, the combination of a table, a looper stem adapted to draw a loop of string through the eye of a tag resting on said table, means for imparting reciprocation to said stem, string carrying jaws having movement in a circular path which includes the aforesaid looper stem and adapted to place a loop of string around said looper stem, a pair of jaws adapted to carry the looped end of the string to a point beneath the end portions of the string and spread said loop portion laterally, means for imparting reciprocation to said pair of jaws, a tying needle adapted to move through said looped end of the string into engagement with the aforesaid end portions of the string and draw the same through said looped end, and means for imparting reciprocation to said tying needle, substantially as set forth.

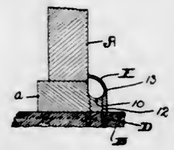
3. In a tag stringing and tying mechanism, the combination of a table, a looper stem having a side hook adapted to draw a loop of string through the eye of a tag on said table, means for imparting reciprocation to said stem, string carrying jaws adapted in their movement to place a loop of string around said looper stem, a pair of jaws adapted to carry the looped end of the string to a point beneath the end portions of the string and spread said loop portion laterally, means for imparting reciprocation to said pair of jaws, a tying needle adapted to move through said looped end of the string into engagement with the aforesaid end portions of the string and draw the same through said looped end and means for imparting reciprocation to said tying needle, substantially as set forth.

4. In a tag stringing and tying mechanism, the combination of a table, a looper stem having a side hook adapted to draw a loop of string through the eye of a tag on said table means for imparting reciprocation to said stem, string carrying jaws having movement in a circular path and adapted to place a loop of string around said looper stem, a pair of jaws adapted to carry the looped end of the string to a point beneath the end portions of the string and spread said loop portion laterally, means for imparting reciprocation to said pair of jaws, a tying needle adapted to move through said looped end of the string into engagement with the aforesaid end portions of the string and draw the same through said looped end, and means for imparting reciprocation to said tying needle, substantially as set forth.

5. In a tag stringing and tying mechanism, the combination of a table, a looper stem adapted to draw a loop of string through the eye of a tag resting on said table, means for imparting reciprocation to said stem, string carrying jaws having movement in a path around the looper stem aforesaid and adapted in their movement to place a loop of string around said looper stem, one of said jaws being movable and held closed by a string, a stationary cam plate adapted to open said movable jaw, a pair of jaws adapted to carry the looped end of the string to a point beneath the end portions of the string and spread said loop portion laterally, means for imparting reciprocation to said pair of jaws, a tying needle adapted to move through said looped end of the string into engagement with the aforesaid end portions of the string and draw the same through said looped end, and means for imparting reciprocation to said tying needle, substantially as set forth.

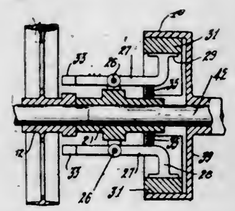
[Claims 6 to 24 not printed in the Gazette.]

1,170,215. WALL CONSTRUCTION FOR BUILDINGS. JOSEF BLAHA, Cleveland, Ohio. Filed Apr. 19, 1915. Serial No. 22,316. (Cl. 72—39.)



In an outer wall of a building, a footing provided at the outer side of the wall with a water-conducting passageway which is formed in and extends longitudinally of the upper portion of the footing, said footing being provided at the outer side of said passageway with a seat extending longitudinally of the passageway, and a cover for said passageway, which cover is formed of slabs which are seated on the aforesaid seat and curved outwardly in cross-section and lean against the wall at a point above the footing, the outer side of said wall and the inner side wall of the aforesaid passageway being flush where the first-mentioned wall extends upwardly from the footing.

1,170,216. BRAKE MECHANISM. CHARLES C. BLANCH, Providence, R. I. Filed Aug. 13, 1914. Serial No. 856,682. (Cl. 74—13.)



1. In a brake mechanism, the combination of a shaft, and radially movable pivoted means upon the shaft extending in the direction of the length of said shaft independent of said shaft, shoes carried by said pivoted means, means engageable between the free ends of said radially movable pivoted means, and a member with which said shoes coöperate to check the rotation of the shaft.

2. In a brake mechanism, the combination of a shaft, a fixed housing, means pivotally mounted and extending parallel with the shaft and having lateral means for cooperation with said housing, a cam engageable between the free ends of said pivotally mounted means, coöperating interengaging means between said cam and the shaft, and springs acting on said pivoted means for forcing said lateral means outward.

3. In a brake mechanism, the combination with the frame, of a shaft in the frame, lugs loosely registering with each other and capable of limited axial movement independently of each other, a housing fixed to the frame adjacent the shaft, a cam on the shaft, and yielding means upon the shaft normally in contact with the cam for frictionally engaging the housing when said contact is broken.

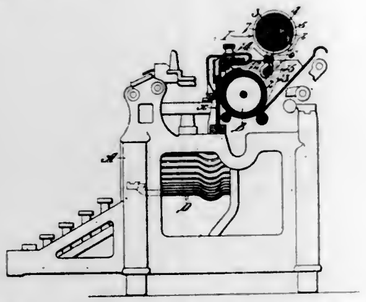
4. In a brake mechanism, the combination with the frame, of a shaft in the frame, a cam on the shaft, lugs on the cam, lugs on the shaft in the path of the first mentioned lugs, a housing on the frame, pivotally-mounted yielding arms carried by the shaft in contact with the cam, and shoes on the arms within the housing.

5. In a brake mechanism, the combination with the frame, of a shaft in the frame, a cam on the shaft, lugs on the cam, a housing on the frame, a sleeve fast on the shaft, lugs on the sleeve in the path of the first mentioned lugs, ears on the sleeve, arms pivotally mounted intermediate their length in the ears provided with end por-

tions in the path of the cam, springs on the sleeve in contact with the arms, and shoes on the arms within the housing.

[Claims 6 to 14 not printed in the Gazette.]

1,170,217. TYPE-WRITING MACHINE. FRANK W. BUFFUM and MERRITT A. CULLING, Louisiana, Mo., assignors to Buffum Tool Company, Louisiana, Mo., a Corporation of Missouri. Original application filed Sept. 21, 1914, Serial No. 862,800. Divided and this application filed June 12, 1915. Serial No. 33,752. (Cl. 197—133.)



1. In a typewriting machine, a carriage, and a shaft for rotatably supporting a spool that is adapted to contain a roll of carbon paper, said shaft having a single right-angular extension that is detachably connected to said carriage, said extension being integral with said shaft.

2. In a typewriting machine, a carriage, and a horizontally-disposed shaft for rotatably supporting a spool that is adapted to contain a roll of carbon paper, said shaft having a single integral, downwardly-projecting extension at one end thereof that is detachably connected to said carriage.

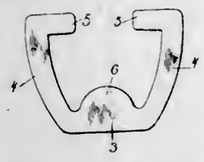
3. In a typewriting machine, a carriage provided with a cross bar having a longitudinal groove therein, and a support for a roll of carbon paper, said support having a hook-shaped portion that coöperates with said grooved cross bar, and means for holding said hook-shaped portion in engagement with said cross bar.

4. In a typewriter, a carriage provided with a cross bar, and a substantially L-shaped member having one of its legs detachably connected to said bar and its other leg lying parallel to said cross bar and adapted to support a rotatable spool.

5. In a typewriter, a carriage, a horizontally-disposed stationary shaft detachably connected to said carriage, a spool loosely mounted on said shaft, a shoulder on said shaft that limits the movement of said spool in one direction longitudinally of said shaft, and coöperating means on said spool and said shaft for preventing longitudinal movement of said spool in the opposite direction.

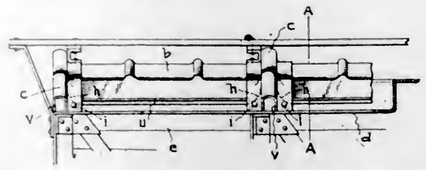
[Claims 6 and 7 not printed in the Gazette.]

1,170,218. SPRING-HEEL FOR HORSESHOES. GORDON H. BURKE, Plymouth, N. H. Filed Apr. 23, 1915. Serial No. 23,292. (Cl. 168—15.)



As an article of manufacture, a spring heel device for attachment to the under face of a horseshoe consisting of a substantially U-shaped spring metal plate having its rear portion including the portion joining the legs of the U relatively thick and the forward ends of the legs of the U relatively thin, the forward portions of the legs of the U being each provided on their upper faces with a bearing surface adapted to contact with the under face of the shoe and being each provided at its forward end with an inwardly extending portion adapted to be bent about and secured to the shoe.

1,170,219. ROOF. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Mar. 25, 1912. Serial No. 686,105. (Cl. 108—54.)



1. In a car roof, the combination with carlines of inverted U-form, of roof-sheets having overlapping upwardly offset side edges enveloped by the carlines.

2. In a car roof, the combination with carlines of inverted U-form, of roof-sheets having overlapping upwardly offset side edges enveloped by the carlines and means fastening the said edges of the sheets within the carlines.

3. In a car roof, the combination with carlines of inverted U-form, of roof-sheets having overlapping upwardly offset side edges enveloped by the carlines, bridging straps riveted at their ends to the interior of the legs of the carline, clamping bars beneath the overlapping edges and bolts extending downwardly through the straps, sheet edges and bars, and clamping devices carried by the protruding ends of the bolts.

4. In a car roof, the combination with carlines of inverted U-form, of roof-sheets having overlapping upwardly offset correspondingly curved side edges enveloped by the carlines.

5. In a car roof, the combination with carlines of inverted U-form, of roof-sheets having overlapping upwardly offset correspondingly curved side edges enveloped by the carlines, bridging straps riveted at their ends to the interior of the legs of the carline, clamping bars beneath the overlapping edges and bolts extending downwardly through the straps, sheet edges and bars, and clamping devices carried by the protruding ends of the bolts.

[Claims 6 to 17 not printed in the Gazette.]

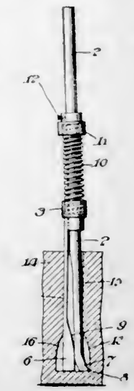
1,170,220. RUBBER FOR REMOVING MARKS FROM PAPER. JOSEPH A. COYLE, Baltimore, Md. Filed Oct. 14, 1915. Serial No. 55,774. (Cl. 120—36.)



1. The combination of a block of erasing material provided with a hole, and a spring clip of sheet material having two arms one of which has passed through said hole and also having a tongue that locks the two arms and block together.

2. The combination with an elastic body having a slot in its center, of a pair of jaws comprising a strip of sheet-material bent and folded at its center—the center part fitted into the said slot and one jaw being at one side of the body and the other jaw at the opposite side and the free ends of the jaws being parallel with each other and both jaws extending laterally from the said body and forming a spring clip.

1,170,221. EXPANDING DRILL. AARON SANFORD CRAVEN, Philadelphia, Pa. Filed Nov. 12, 1914. Serial No. 871,648. (Cl. 255—75.)



1. An expanding drill comprising a bar, a collar surrounding said bar, a leg extending downwardly from said collar, and a cam on the lower portion of said leg and having a downwardly and outwardly extending face adapted to be acted upon by the lower portion of said bar, the lower end of said bar having an outwardly extending part provided with a cutting edge and an upper face extending upwardly from said edge and inwardly therefrom toward the axis of the bar, whereby said part may enter an undercut cavity formed by said cutting edge when said part is actuated against said cam.

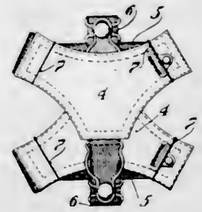
2. An expanding drill comprising a bar, a collar secured to said bar, a collar slidable on said bar below the first named collar, a spring encircling said bar between said collars, and a leg extending downwardly from the slidable collar, a cam on the lower portion of said leg and having a downwardly and outwardly extending face adapted to be acted upon by the lower portion of said bar, the lower end of said bar having an outwardly extending part provided with a cutting edge and an upper face extending upwardly from said edge and inwardly therefrom toward the axis of the bar, whereby said part may enter an undercut cavity formed by said cutting edge when said part is actuated against said cam.

3. An expanding drill comprising a bar, a collar secured to said bar, a collar slidable on said bar below the first named collar, a spring encircling said bar between said collars and having its upper end secured to the first named collar and its lower end secured to the second named collar, a leg extending downwardly from the slidable collar, a cam on the lower portion of said leg and adapted to be acted upon by the lower portion of said bar, and a cutter carried by the lower portion of said bar.

4. An expanding drill comprising a bar, a collar secured to said bar, a collar slidable on said bar below the first named collar, a spring encircling said bar between said collars and having its upper end secured to the first named collar and its lower end secured to the second named collar, a leg extending downwardly from one side of the slidable collar, the lower portion of said bar being free to move laterally toward and from said leg, a cam on the lower portion of said leg and adapted to be acted upon by the lower portion of said bar, and a cutter rigid on the lower portion of said bar and extending laterally therefrom.

1,170,222. PACKAGING GARTERS. JOHN P. CROASDALE, Berwyn, Pa., assignor to Pioneer Suspender Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1911. Serial No. 612,106. (Cl. 206—46.)

1. A package comprising a pair of pad garters having non-elastic pads with clasps and elastic leg bands connected thereto, the pads placed directly one upon the other, the entire area of that part of one pad which superimposes the other being in direct contact therewith, the leg bands folded beneath the pads and suitable means for maintaining said garters in said relationship.



2. A package comprising a pair of pad garters having clasps and elastic leg bands connected to non-elastic pads, the pads placed one directly upon the other with the lower end of one pad superimposing the lower end of the other pad and its clasp, the clasps projecting in opposite directions and lying directly against a pad and the leg band of each garter folded beneath the pads and clasps, and means for maintaining the garters in such relationship.

1,170,223. TIMEPIECE ATTACHMENT FOR AUTOMOBILES. FRANK M. DALE, Sullivan, Ind., assignor to Motoring Clock Manufacturing Company, Sullivan, Ind., a Corporation of Indiana. Filed Aug. 5, 1915. Serial No. 43,834. (Cl. 224—4.)

1. In combination with a steering wheel of an automobile and the shaft and hub of said wheel, said shaft having an integral threaded portion extending above said hub, a wheel clamping nut on said threaded portion, a time piece separate from the nut and movable relatively thereto, and time-piece supporting means intermediate the nut and time piece and having means for the retention thereof by the nut.

2. In combination with a steering wheel of an automobile and its hub and the shaft, said shaft having a threaded portion extending above the hub, a hub and shaft clamping nut on said extended portion, a time-piece, and a member intermediate said nut and time-piece and separable therefrom and having means at its upper part to detachably receive and retain the time-piece and having a circumferential horizontal portion at its lower part adapted to detachably engage and be retained by said nut.

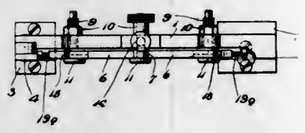
3. In combination with the steering wheel of an automobile, the hub and shaft of said wheel, and the threaded stem of said shaft extending above the hub, a nut for clamping the hub and shaft together, a time-piece, a supporting member for the time-piece separable therefrom and having means for detachable engagement with said nut.

4. In combination with a steering wheel of an automobile, and the hub and shaft of said wheel, said shaft having a stem projecting above the hub, a clamping member mounted on said stem, a time-piece supporting member having means adapted to be clamped in position by said clamping member.

5. In combination with a steering wheel of an automobile and its hub and shaft, a clamping nut for said hub and shaft, a time piece, supporting means for the time piece, said means having a horizontal portion adapted to extend between the nut and hub and be clamped by the former.

[Claims 6 to 9 not printed in the Gazette.]

1,170,224. FLOATING CUTTER AND HOLDER. FRANK DIEBOLD, Muskegon, Mich. Filed June 30, 1915. Serial No. 37,365. (Cl. 82—36.)



1. In combination, a support comprised of a substantially semi-circular member adapted to be attached to a lathe carriage, members projecting laterally from the support and a cutter member loosely received between said members, said cutter member comprised of a substantially semi-circular section and having diametrically opposed cutters mounted thereon with their cutting ends extended toward each other.

2. In combination, a support comprised of a substantially semi-circular member adapted to be attached to a lathe carriage, studs passing through the support and having eccentrically connected plugs projecting thereon projecting to one side of the support, a cutter member having cutters projecting inwardly therefrom loosely mounted between the plugs and means to retain the cutter member on the support.

3. In combination, a support of substantially semi-circular outline, studs passing through the support and secured thereto, eccentric plugs on the studs projecting to one side of the support, sleeves having heads of larger diameter mounted on the studs, a semi-circular cutter member loosely positioned between said sleeves and retained by the heads, and means to adjust the studs to varying positions, substantially as described.

4. In combination, a support of semi-circular outline, base members at the feet thereof, said support being pivotally connected to the rear base member and detachably connected to the front base member, a pair of studs in horizontal alinement extending through and secured to the support, a similar stud similarly secured at the upper part of the support, threaded plugs eccentrically connected to the studs and projecting to one side of the support, sleeves having heads of larger diameter threaded on to the studs, a semi-circular cutter member supported on the lower sleeves and lightly bearing against the upper sleeve and loosely positioned between the support and the heads of the sleeves, cutters mounted on the cutter member and pins projecting laterally from the support at each edge of the cutter member.

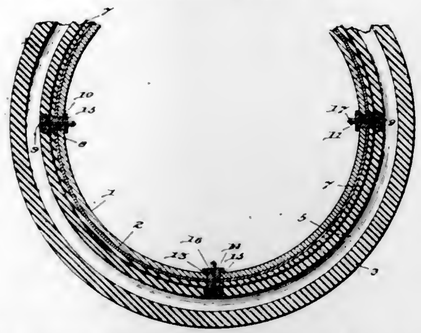
5. In combination, a support, a plurality of eccentrically mounted cylindrical plugs projecting from one side of the support, sleeves having enlarged heads threaded on to the plugs, means to lock the sleeves in position on the plugs, and a cutter member having a plurality of radially extending cutters loosely positioned on and between the sleeves, substantially as described.

1,170,225. RESILIENT TIRE. RICHARD C. DILLMORE, Philadelphia, Pa. Filed Dec. 2, 1913. Serial No. 804,237. (Cl. 152—20.)

1. A vehicle tire of resilient material provided with a plurality of longitudinal reinforcing wires embedded in the tire, having their ends overlapping from opposite directions, and fastening means coöperating with the ends of said wires to lock the tire on a rim, said wires forming substantially a single circle consisting of a plurality of wire arcs, the ends of adjacent arcs overlapping each other.

2. A vehicle tire of resilient material provided with a plurality of sets of longitudinal reinforcing wires embedded in the tire, and fastening means coöperating with said wires to lock the tire on a rim, each of said sets consisting of a plurality of longitudinal wires having their ends overlapping from opposite directions, forming substantially a single circle having a plurality of wire arcs, the ends of adjacent arcs overlapping each other.

3. A vehicle tire of resilient material having an open side, a plurality of longitudinal reinforcing wires embedded in the tire on either side of the opening and having the ends of the wires on either side overlap from opposite directions, and fastening means coöperating with the ends of said wires to lock the tire on a rim, said wires forming substantially a single circle on each side of said opening consisting of a plurality of wire arcs, the ends of adjacent arcs overlapping each other.

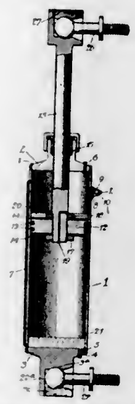


4. A vehicle tire of resilient material provided with a plurality of sets of reinforcing wires embedded in the tire, and fastening means coöperating with the ends of said wires to lock the tire on a rim, each of said sets consisting of a plurality of longitudinal wires formed with recurved ends and having their ends overlapping from opposite directions.

5. A vehicle tire of resilient material provided with a plurality of longitudinal reinforcing wires embedded in the tire, and fastening means coöperating with the ends of said wires to lock the tire on a rim, said ends of the wires being recurved and overlapping each other from opposite directions.

[Claims 6 to 11 not printed in the Gazette.]

1,170,226. SHOCK-ABSORBER. JOHN A. DOXEY, Chicago, Ill. Filed Apr. 27, 1914. Serial No. 834,737. (Cl. 21—105.)



1. A shock absorber comprising a closed cylinder having a by-pass between its upper and lower ends, a piston in the cylinder having a minute open leak-pass between its opposite sides, and a charge of oil incompletely filling the lower end of the cylinder.

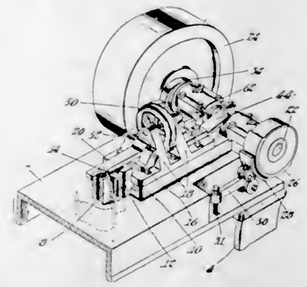
2. A shock absorber comprising a cylinder having a by-pass between its upper and lower ends, and a piston therein having an always open by-pass between its opposite sides whose upper end communicates with the cylinder at a point slightly above the top of the piston to thereby permit oil to collect in a pool on top of the piston and to overflow through said by-pass.

3. A shock absorber comprising a closed cylinder having a by-pass between its upper and lower ends, and a piston in the cylinder provided with a rod having an always open by-pass between opposite sides of the piston, said latter by-pass communicating at its upper end with the cylinder at a point slightly above the top of the piston.

4. A shock absorber comprising a cylinder having a by-pass leading from the extreme lower end thereof to a point near the top of the same, a piston in said cylinder having restricted communication between its opposite sides permitting leakage, and a charge of oil normally standing in the bottom of the cylinder a short distance above the level of the lower end of the by-pass, a relatively large space above the oil and below the piston constituting an air chamber.

5. A shock absorber comprising a cylinder having a by-pass leading from the extreme lower end thereof to a point near the top of the same, a piston in said cylinder provided with packing arranged around its periphery and having a minute open leak-pass between its opposite sides whose upper end communicates with the space above the piston at a point slightly above the top of such piston to permit oil to collect in a pool on top of the piston and an overflow to drain through such leak-pass, and a charge of oil normally standing in the bottom of the cylinder a short distance above the level of the lower end of the by-pass, a relatively large space above the oil and below the piston constituting an air chamber.

1,170,227. METAL-BENDING MACHINE. HARRISON H. EATON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 1, 1910. Serial No. 595,044. (Cl. 153—21.)



1. In a machine of the class described, the combination with a table having a surface to support the stock, a power driven female die arranged for reciprocation in a path above the supporting table, a stationary male die having its lower end extending for support below the surface of the table, and a hinged retaining bar constructed and arranged to detachably engage and support the upper end of said male die leaving the rear side of the die free of obstruction to the movement of the bent stock about it.

2. A machine of the class described having, in combination, coöperating dies, means for reciprocating one of said dies toward and from the other die, a screw operatively disposed with respect to one of said dies and arranged for shifting said die to adjust the point of nearest approach of the two dies, said screw being freely rotatable during the reverse stroke of the reciprocatory die and having means associated therewith for holding it against turning during the working stroke thereof.

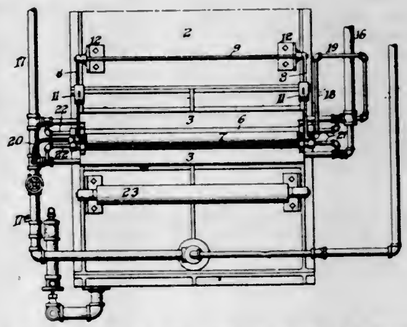
3. A machine of the class described having, in combination, coöperating dies, means for reciprocating one of said dies toward and from the other die, a screw operatively disposed with respect to one of said dies for shifting the die to adjust the point of nearest approach of the two dies, and means operating automatically for preventing turning of said screw during the working stroke of the reciprocating die.

4. A machine of the class described having, in combination, coöperating dies, means for reciprocating one of said dies toward the otner die, rotatable means including a hand wheel for adjusting the relative positions of the two dies and a controlling arm arranged to turn with the hand wheel for limiting the movement of said rotatable means.

5. A machine of the class described having, in combination, a stationary die, a reciprocatory die, a mannally operated device for moving said reciprocatory die independently of its reciprocation, and controlling means movable with said device for limiting the extent of such independent movement.

[Claims 6 to 15 not printed in the Gazette.]

1,170,228. CLOTH-FEEDING DEVICE FOR TEXTILE MACHINERY. CHARLES H. ELLIOTT, Philadelphia, Pa., assignor to H. W. Butterworth & Sons Company, a Corporation of Pennsylvania. Filed Sept. 21, 1915. Serial No. 51,748. (Cl. 26—7.)



1. In apparatus of the character stated, a chamber through which a web is passed having an entrance passage for the web, combined with feeding and guiding means for said passage comprising a fixed tubular guide over which the web is guided, a movable tubular guide movable to and from the fixed guide, means for normally pressing the movable guide toward the fixed guide and upon the web passing thereover with a yielding pressure, and means for supplying a heating fluid to the tubular guides.

2. In apparatus of the character stated, a chamber through which a web is passed having an entrance passage for the web, combined with feeding and guiding means for said passage comprising a fixed tubular guide over which the web is guided, a movable tubular guide movable to and from the fixed guide, means for normally pressing the movable guide toward the fixed guide and upon the web passing thereover with a yielding pressure, said guides adjustable circumferentially to enable different portions of their surfaces to be brought into opposed positions to compensate for wear, and means for supplying a heating fluid to the tubular guides.

3. In apparatus of the character stated, a chamber through which a web is passed having an entrance passage for the web, combined with feeding and guiding means for said passage comprising a fixed tubular guide over which the web is guided, a movable tubular guide movable to and from the fixed guide, means for normally pressing the movable guide toward the fixed guide and upon the web passing thereover with a yielding pressure consisting of swinging pivoted arms carrying the tubular guide at their free ends and having counterweighted means for swinging them toward the fixed guide, and adjustable means for supplying a heating fluid to the tubular guides for all positions of their relative adjustment.

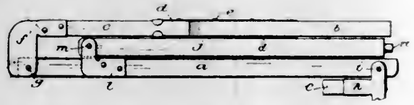
4. In apparatus of the character stated, a chamber through which a web is passed having an entrance pas-

sage for the web, combined with feeding and guiding means for said passage comprising a fixed tubular guide over which the web is guided, a movable tubular guide movable to and from the fixed guide, means for normally pressing the movable guide toward the fixed guide and upon the web passing thereover with a yielding pressure consisting of swinging pivoted arms carrying the tubular guide at their free ends and having counterweighted means for swinging them toward the fixed guide and adjustable brackets to which the swinging arms are pivoted and by which the movable guide may be adjusted parallel to the fixed guide, and adjustable means for supplying a heating fluid to the tubular guides for all positions of their relative adjustment.

5. In apparatus of the character stated, a chamber through which a web is passed having an entrance passage for the web, combined with feeding and guiding means for said passage comprising two fixed guides closely fitting the walls of the entrance passage and separated a short distance apart to provide a passage for the web over one guide in entering and over the other guide in leaving the chamber, a movable guide in alinement with the passage between the fixed guides and adapted to make a close fit with both guides, and means for moving the movable guide toward the fixed guides and between the web portions guided thereby with a yielding pressure.

[Claims 6 to 14 not printed in the Gazette.]

1,170,229. FOLDING COT. ARTHUR M. FERGUSON, Burlington, Kans., assignor to Gold Medal Camp Furniture Manufacturing Co., Racine, Wis., a Corporation of Wisconsin. Filed Dec. 23, 1912. Serial No. 738,187. (Cl. 5—5.)



1. A folding bed or cot comprising side rails and folding end legs hinged to the side rails and adapted to fold over the tops of said rails parallel therewith and at a distance therefrom, folding extension bars hinged at one end to the upper sides of said rails at a distance from their outer ends and adapted to be folded between and parallel with said rails and legs and to be unfolded upon and parallel with said rails beyond which they extend when unfolded.

2. A folding bed or cot comprising side rails and folding legs, folding extension bars hinged at their inner ends to the upper sides of said rails at a distance from their ends, and offset hinge plates connecting the legs with said rails and projecting, when the legs are unfolded, above the rails to embrace and stay the unfolded extension bars, the folded legs being adapted to be folded over the tops of said rails parallel therewith and at a distance therefrom, and the extension bars being adapted to fold between and parallel with said rails and legs and to unfold upon, parallel with and beyond said rails.

1,170,230. METALLIC FENCE-POST. QUINCY L. FLARIDA, Dayton, Ohio. Filed Mar. 6, 1915. Serial No. 12,480. (Cl. 256—58.)

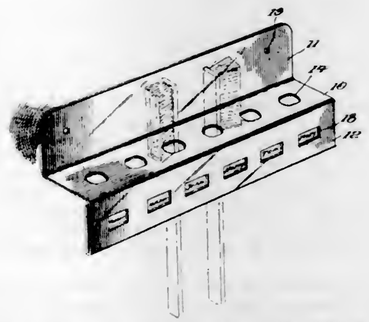
1. A fence post formed of sheet metal and provided with a vertically arranged series of wire-supporting devices, said devices being spaced apart and each comprising an upwardly extending projection struck from the metal of said post and having its upper end bent outward away from the face of the post, and a downwardly extending projection also struck from the metal of the post alongside of and close to the upwardly extending projection and having its lower end bent outward away from the face of said post, said downwardly extending projection terminating above the lower end of the upwardly extending projection and being arranged to be engaged by a wire placed back of the upwardly extending projection and to yield to permit said wire to pass the lower end thereof.



2. A fence post formed of sheet metal having a longitudinal slot therein and having a downwardly extending projection struck from the metal at one edge of the post and having an upwardly extending projection struck from the metal beyond and in close proximity to the first-mentioned projection, said projections overlapping and the first-mentioned projection having its lower end arranged close to the adjacent portion of the last-mentioned portion at a point between the ends of said last-mentioned projection and being yieldable to permit a wire to be forced past the end thereof and confined within the space between said projections and the body of the post.

3. A triangular fence post formed of a sheet of metal having its edges arranged close together near the center of one face thereof and having a series of wire-supporting devices struck from said face thereof along one edge of the sheet from which the post is formed, each of said devices comprising overlapping projections arranged side by side and in close proximity one to the other, one of said projections being yieldable to permit a wire to pass between the same and the other projection.

1,170,231. TOOTH-BRUSH HOLDER. BRADFORD B. FLINT, Saranac Lake, N. Y. Filed Apr. 19, 1915. Serial No. 22,413. (Cl. 40—11.)



1. A device of the character described including a body portion formed to receive a tooth brush, an attaching plate carried by the body portion, a face plate mounted on the body portion and provided with a sight opening, and a flange arranged to coact with the face plate, the said flange defining a pocket adapted to receive a card bearing indicia visible through said sight opening.

2. A device of the character described including a body portion formed to removably receive a tooth brush, an attaching plate carried by the body portion, a face plate formed on the body portion and having a sight opening formed therein, and a yieldable flange formed on the face plate and adapted to normally engage the face plate to coact therewith, the said flange defining in connection with the face plate a pocket adapted to receive a card bearing indicia visible through the said opening with the flange yieldably engaging the said card.

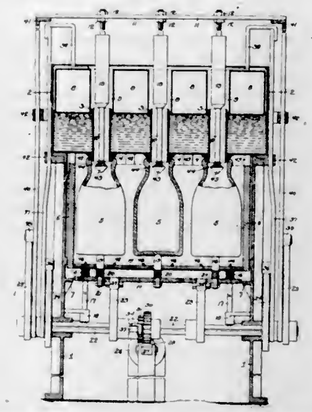
3. A device of the character described including a body portion adapted to detachably receive a tooth brush, an attaching plate formed on the body portion, a face plate formed on the body portion and provided with sight openings, the face plate being bent at its free edge to define an overlapping yieldable flange arranged to coact with the face plate and defining in connection therewith, a pocket adapted to receive a card bearing indicia visible through said opening with the flange yieldably engaging the card.

4. A tooth brush holder, including the combination with a body portion formed to receive a tooth brush and provided with an attaching member, a face plate carried by the body portion and provided with an opening, and a flange carried by the face plate and adapted to support a card disposed between the flange and said face plate whereby indicia upon the card may be observed through said opening.

5. As a new article of manufacture, a tooth brush holder formed from a single piece of material bent intermediate its ends to provide a body portion having an attaching plate extending from one margin thereof, and a face plate extending from the opposite margin thereof, the face plate being bent to provide an overlapping flange, there being an opening formed in the body portion adapted to receive a tooth brush and an opening formed in the face plate, the flange being adapted to support a card disposed between the said flange and the face plate whereby indicia upon the card may be observed through said opening in the face plate.

[Claims 6 and 7 not printed in the Gazette.]

1,170,232. BOTTLE-FILLING MACHINE. AMOS L. FOREMAN, Baltimore, Md. Filed Jan. 4, 1913. Serial No. 740,115. (Cl. 226—9.)



1. The combination, in a bottle filling machine, of a tank having tubes through which the bottles are filled, a displacement structure whereby the liquid in the tank is caused to overflow into the bottles through said tubes, a vent tube coöperating with each filling tube, and vertically movable bodies of larger diameter than the vent tubes and adapted to enter the filling tubes and displace the milk therefrom without first withdrawing said vent tubes, substantially as specified.

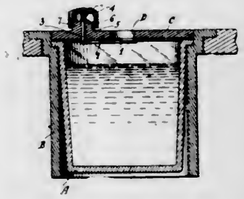
2. The combination, in a bottle filling machine, of a tank having tubes through which the bottles are filled, a displacement structure whereby the liquid in the tank is caused to overflow into the bottles through said tubes, vertically movable vent tubes in said filling tubes, and bodies carried by and of larger diameter than said vent tubes and movable into and out of the filling tubes as the vent tubes are lowered into and withdrawn from the bottles.

3. The combination, in a bottle filling machine, of a tank having tubes through which the bottles are filled, a displacement structure whereby the liquid in the tank is caused to overflow into the bottles through said tubes, vertically movable vent tubes in said filling tubes, and bodies carried by and of larger diameter than said vent tubes and movable with the same, said bodies being located above the lower ends of the vent tubes at a distance equal to the height of the filling tubes.

4. The combination of the filling tube of a bottle filling machine with a spirally grooved deflector located below the delivery end of said tube so as to cause the incoming flow of liquid to be thrown in the form of tangentially directed streams against the inner wall of the bottle, whereby the frictional retarding effect upon the descent of the streams is increased, and the forcible plunge of said streams into the body of milk in the bottle is prevented.

5. The combination, in a bottle filling machine, of bottle filling devices, a main lifting platform, means for raising the same, a supplementary crate lifting platform yieldingly mounted on said platform, and bottle lifting devices independent of the crate lifting platform and also yieldingly mounted upon said main platform.

1,170,233. INK-WELL. JAMES H. FOSTER, Tuscaloosa, Ala. Filed Feb. 4, 1915. Serial No. 6,149. (Cl. 120—58.)



1. In combination, a liquid container having a top plate provided with an opening through which access may be had to the liquid, a closure for said opening arranged below said top plate, an operating element for said closure arranged above said top plate and having movements in angular paths, said element in its movement in one path moving said closure into or out of alinement with said opening, and means for preventing a movement of said element in a direction to aline or stagger said closure and said opening except after a movement of said element in a direction at an angle to said first-named direction.

2. In combination, a liquid container having a top plate provided with an opening through which access may be had to the liquid, a closure for said opening arranged below said top plate, an operating element for said closure arranged above said top plate and having movements in angular paths, said element in its movement in one path moving said closure into or out of alinement with said opening, means for preventing a movement of said element in a direction to aline or stagger said closure and said opening except after movement of said element in a direction at an angle to said first-named direction, and a spring for holding said operating element in a normal position.

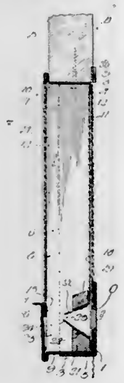
3. In combination, a liquid container having a top plate provided with an opening through which access may be had to the liquid, a closure plate below said top plate to normally close said opening, an operating element above said top plate having vertical and horizontal components of movement, means for preventing a horizontal movement of said operating element except after a determined vertical movement thereof and connections between said operating element and said closure plate whereby the latter is actuated by a horizontal movement of said element.

4. In combination, a liquid container having a top plate provided with an opening through which access may be had to the liquid, a closure plate below said top plate to normally close said opening, an operating element above said top plate having vertical and horizontal components of movement, means for preventing a horizontal movement of said operating element except after a determined vertical movement thereof, connections between said operating element and said closure plate whereby the latter is actuated by horizontal movement of said element, and a spring resisting horizontal and vertical movements of said element in certain directions.

5. In combination, a liquid container having a top plate provided with an opening through which access may be had to the liquid, a closure plate below said top plate to normally close said opening, an operating element above said top plate having vertical and horizontal pivotal components of movement, means for preventing a horizontal movement of said operating element except after a determined vertical movement thereof, connections between said element and said closure plate whereby the latter is actuated by a horizontal movement of said element, and a spring for restoring said operating element to normal position after a horizontal movement thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,170,234. FLY-TRAP FOR SCREEN-DOORS. JAMES A. FOUST, Humboldt, Kans. Filed June 3, 1915. Serial No. 31,889. (Cl. 43—22.)

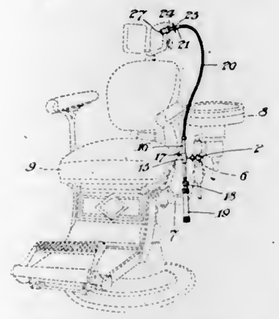


1. The combination with a slotted screen; of a fly trap comprising a plate slotted to correspond with the slot in said screen, a frame, said plate and frame being fastened together on opposite faces of said screen, a cage shaped to fit in said frame and including side and end walls having inturned flanges at their edges, screen wire members secured to said flanges and terminating at one end at points spaced from the adjacent end wall of the cage, cross bars connecting the side walls of the cage to which the free ends of said screen members are attached, one of said members extending under its cross bar and projecting into said cage, and a coöperating plate inclined upwardly and inwardly and terminating adjacent to and spaced from said inturned screen member to provide an inlet for the trap.

2. The combination with a slotted screen; of a fly trap comprising a plate slotted to correspond with the slot in said screen, a U-shaped frame on the opposite side of said screen and secured to said plate, a rectangular cage shaped to fit in said frame and including side and end walls having inturned guides at one of their edges and inwardly extending flanges on the other, screen members secured to said flanges and inturned guides and terminating at one end at points spaced from the adjacent end wall of the cage, a plate slidable in said guides between the end of the cage and the free end of one of said screen members to form a removable closure, cross bars connecting the side walls of said cage to which the free ends of said screen members are attached, one of said members extending under its cross bar and projecting into said cage, and a coöperating plate inclined upwardly and inwardly and terminating adjacent to and spaced from said inturned screen member to provide an inlet into said trap.

3. The combination with a slotted screen; of a fly trap comprising a plate slotted to correspond with the slot in said screen and having apertures therein to receive fastening elements, a U-shaped frame on the opposite side of said screen and formed from a one-piece metal strip, lugs extending laterally from the arms thereof adjacent the cross bar and having apertures therein to aline with the apertures in said plate, fastening elements connecting said plate and the lugs, the upper free ends of the arms of said frame being bent laterally at right angles thereto to form attaching lugs to be secured to the screen frame, a cage shaped to fit said frame and having an entrance slot corresponding with the slots in said screen and plate, and means for holding said cage in the frame.

1,170,235. ADJUSTABLE LAMP-SUPPORT. FRANK A. FOX, Philadelphia, Pa. Filed Nov. 28, 1914. Serial No. 874,491. (Cl. 240—52.)



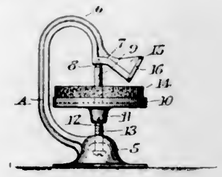
1. In a lamp support, the combination of a bracket, an arm adjustably connected to said bracket, a sleeve having one side thereof attached to said arm, a tube extending through said sleeve and being longitudinally adjustable therein and having its end portions extending outwardly beyond the respective end portions of said sleeve, a part connected to one end of said tube and having a lamp-receiving socket therein, a part connected to the other end of said tube and having a socket therein adapted to receive an electrical connecting plug, and electrical conducting wires extending through said tube and connecting said parts.

2. In a lamp support, the combination of a bracket having a socket therein, an arm having a ball on one end thereof adjustably fitted to said socket and a sleeve on the other end thereof extending substantially at right angles thereto, means to clamp said ball within said socket, a tube extending through said sleeve and being longitudinally adjustable therein and having its end portions extending outwardly beyond the respective end portions of said sleeve, a part connected to one end of said tube and having a lamp-receiving socket therein, a part connected to the other end of said tube and having a socket therein adapted to receive an electrical connecting plug, and electrical conducting wires extending through said tube and connecting said parts.

3. In a lamp support, the combination of a bracket, an arm adjustably connected to said bracket, a sleeve having one side thereof attached to said arm, a non-flexible tube extending through said sleeve and being longitudinally adjustable therein and having its end portions extending outwardly beyond the respective end portions of said sleeve, a part connected to one end of the non-flexible tube and having a socket therein adapted to receive an electrical connecting plug, a flexible tube having one end secured to the other end of the non-flexible tube, a part secured to the other end of the flexible tube and having a lamp-receiving socket therein, and electrical conducting wires extending through said tubes and connecting said parts.

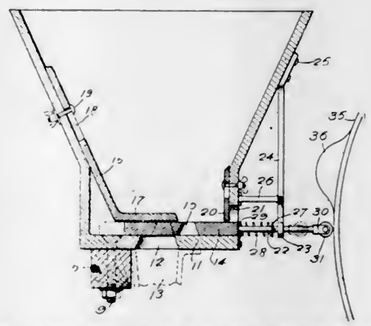
4. In a lamp support, the combination of a bracket carrying a sleeve having free open end portions, a tube extending through said sleeve and being longitudinally adjustable therein and having its end portions extending outwardly beyond the respective end portions of said sleeve, a part connected to one end of said tube and having a lamp-receiving socket therein, a part connected to the other end of said tube and having a socket therein adapted to receive an electrical connecting plug, and electrical conducting wires extending through said tube and connecting said parts.

1,170,236. SCISSORS-GRINDER. WELLINGTON H. FOX, Philadelphia, Pa. Filed Apr. 28, 1915. Serial No. 24,555. (Cl. 51—7.)



A grinder of the class described comprising a base having a central hollow swell rising therefrom and also provided with a goose-neck serving as a frame, a bearing shoulder formed on the frame in vertical alinement with the swell and having a socket therein, a pointed screw adjustably threaded centrally in the swell, a turn-table formed with a central depending boss having a socket receiving the pointed end of the screw, a pintle rising centrally from the said turn-table and having a pointed end engaged in the socket in the bearing shoulder, a sharpening stone seated in the turn-table and disposed concentrically about the spindle, and an angularly disposed guide on the said goose-neck.

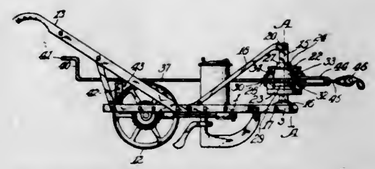
1,170,237. UNIVERSAL PLANTER. OTTO LEO FREISINN, Santa Rosa, Cal. Filed Feb. 19, 1914. Serial No. 819,714. (Cl. 111—6.)



1. A planter comprising a frame, hoppers secured to said frame and provided with discharge openings in the bottoms thereof, slides positioned on the bottoms of the hoppers and provided with seed pockets, stems secured to said slides, guide plates secured to the hoppers through which said stems extend, collars secured on said stems between said guide plates and hoppers, bearing plates secured to said hoppers, through which said stems extend, springs interposed on said stems between said collars and bearing plates, wheels carried by said stems, a shaft carried by said frame, ground wheels carried by said shaft, and rounded lugs disposed at spaced intervals on the periphery of said wheels, said lugs adapted to engage the wheels carried by said stems whereby said wheels may be actuated to discharge seeds through said discharge openings at intervals.

2. A planter comprising a frame, a plurality of hoppers positioned thereon, seed discharge means carried thereby, a shaft carried by said frame, ground wheels carried by and adjustable longitudinally of said shaft, coöperating means between said ground wheel and seed discharge means whereby said seed discharge means will be operated at intervals for discharging seed from said hoppers, said coöperating means including elements positioned at spaced intervals circumferentially of said ground wheels, and in alinement with each other transversely of the frame, covering means in the wake of the ground wheels, and means whereby the covering means may be adjusted longitudinally of the shaft.

1,170,238. GRADUAL-SHIFTING DRAFT-HITCH. SCOTT F. FUCHS, Union township, Shelby county, Ind. Filed Aug. 7, 1914. Serial No. 855,542. (Cl. 97—4.)



1. A shiftable draft hitch including a supporting frame and a journal integral thereon, a wheel rotatably mounted on the journal and having gear teeth on its periphery and also a pivotal draft pin adjacent to the periphery, a clevis embracing the peripheral portion of the wheel and connected to the draft pin, and a worm rotatably mounted on the frame in mesh with the teeth of the wheel.

2. A shiftable draft hitch including a standard that is squared in cross-section, a frame having a journal thereon, the journal having a squared aperture extending therethrough and through the frame corresponding to and receiving the squared standard, a draft device rotatably mounted on the journal and having gear teeth, a clevis pivotally connected to the draft device, and a worm rotatably mounted on the frame in connection with the teeth of the draft device.

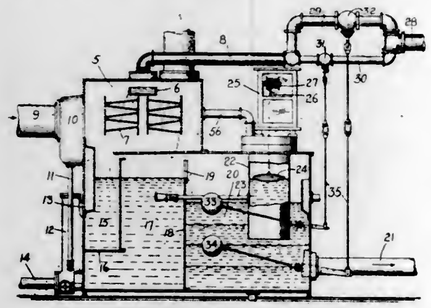
3. A shiftable draft hitch including a standard having a supporting foot on its lower end and two braces secured to its upper end portion, the braces extending divergently each from the other and downwardly to the plane of the foot of the standard, a frame non-rotatably mounted on the standard and having a hollow journal thereon through which the standard extends, a draft device rotatably mounted on the journal and having gear teeth, a clevis pivotally connected to the draft device, and a worm rotatably mounted on the frame in connection with the teeth of the draft device.

4. A shiftable draft hitch including a standard having pin holes, a frame adjustably mounted on the standard and provided with a journal having a pin hole, a supporting pin in the pin hole of the journal and extending in one of the pin holes of the standard, a draft device rotatably mounted on the journal and having gear teeth, a clevis pivotally connected to the draft device, and a worm rotatably mounted on the frame in connection with the teeth of the draft device and provided with an operating device.

5. The combination with a movable implement frame, of a standard vertically secured to the forward portion of the implement frame, a base plate having a vertical journal thereon and adjustably mounted on the standard to be raised or lowered, said plate having two journal boxes thereon, a wheel rotatably mounted on the vertical jour-

nal and having gear teeth on its periphery, said wheel having a pivotal draft pin in proximity to the periphery thereof, a clevis embracing the peripheral portion of said wheel and connected to said draft pin, a controlling shaft rotatably mounted in said boxes and extending toward the rear portion of the implement frame, said shaft having a crank arm on its rear end, a guide mounted on the rear portion of the implement frame and adjustably supporting the shaft in proximity to the crank arm, and a worm mounted on and rotated by the controlling shaft in mesh with the teeth of said wheel.

1,170,239. MEASURING APPARATUS FOR LIQUIDS. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership of Pennsylvania. Filed Oct. 28, 1913. Serial No. 797,737. (Cl. 261—4.)



1. A combined water heating and measuring apparatus comprising a heater, a water inlet connected thereto, a chamber into which water flows from the heater, a second chamber into which water flows from the first chamber over a weir, and means for increasing the flow of water through said water inlet as the level of the water in said second chamber falls and for varying the rate of such increase when said level reaches a predetermined point, substantially as set forth.

2. The combination of a chamber, a water inlet connected thereto, a second chamber into which water flows from the first chamber over a weir, and means for admitting water to the first chamber through said inlet, for maintaining the rate of admission of such water substantially constant when the level of the water in said second chamber is above a predetermined point and for increasing the rate of admission of such water when the level of the water in said second chamber falls below said point, substantially as set forth.

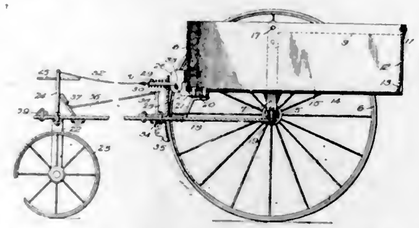
3. The combination of a chamber, a water inlet connected thereto, a second chamber into which water flows from the first chamber over a weir, and means for admitting water to the first chamber through said inlet, increasing the rate of flow of such water as the level of the water in said second chamber falls, holding the rate of flow of such water substantially constant when said level falls beyond a predetermined point and increasing the rate of flow of such water when said level falls beyond a second predetermined point, substantially as set forth.

4. The combination of two water chambers having a weir between them over which water flows from the first chamber into the second, means for admitting water to the first chamber and means for changing the rate of admission of such water a plurality of times as the level of the water in the second chamber falls to different points, substantially as set forth.

5. The combination of two water chambers having a weir between them over which water flows from the first chamber into the second, and means for admitting water to the first chamber, for increasing the rate of admission of such water as the level of the water in the second chamber falls between predetermined limits and for maintaining the rate of admission of such water substantially constant when the level of the water in the second chamber is between certain limits which are intermediate said first-named limits, substantially as set forth.

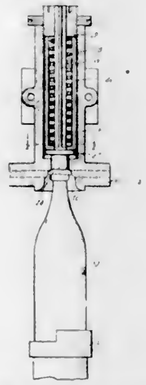
[Claims 6 to 11 not printed in the Gazette.]

1,170,240. DUMPING-MACHINE. EMERSON L. GARY, Anamoose, N. D. Filed Sept. 3, 1914. Serial No. 859,984. (Cl. 21—20.)



A dumping machine comprising a truck, a dumping body carried by the truck and having a floor fixed with relation to the body, a reach connected with the truck and having a reversible draft mechanism pivotally mounted thereon, said draft mechanism being fixed with respect to movements toward and away from the body, and means whereby the body may be dumped irrespective of whether the machine as a whole is moving or is at a standstill.

1,170,241. BOTTLE-CAPPING MACHINE. JOHN J. GAYNOR and PETER CARL LIEBER, Indianapolis, Ind., assignors to Progress Machine Company, Indianapolis, Ind., a Corporation. Filed Feb. 25, 1915. Serial No. 10,490. (Cl. 113—2.)

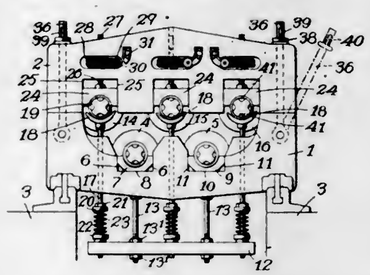


1. A bottle capping machine including a relatively movable capping plate and bottle support, said capping plate being provided with a tapering throat, a plunger for discharging the bottle and cap with its lower end projecting through the capping plate into the throat thereof, adjustable means for positively limiting the upward movement of the plunger at the instant that the throat of the capping plate limits the upward movement of the cap and mouth of the bottle, said adjustable means including a sleeve inclosing a portion of the plunger, a spring encompassed by said sleeve to normally hold the lower projecting end of said plunger within the said tapered throat of said capping plate.

2. A bottle capping machine including a relatively movable capping plate and bottle support, said capping plate being provided with a tapering throat to receive the cap and mouth of a bottle to positively limit the inward movement thereof, a casing extending upwardly from said plate, a plunger within said casing, means arranged in connection with the plunger for positively limiting the upward movement of the plunger at the instant that the throat of the capping plate limits the inward movement of the cap and mouth of the bottle, and a spring acting on said plunger to resiliently hold the same in effective engagement with a bottle cap until the instant that the inward movement of the cap and the upward movement of the plunger is positively limited.

3. A bottle capping machine including a relatively movable capping plate and bottle support, said capping plate being provided with a rigid throat to receive the cap and mouth of a bottle to positively limit the inward movement thereof, a casing extending from said plate, a plunger in said casing, means for positively limiting the upward movement of the plunger at the instant that the rigid throat of the capping plate limits the inward movement of the cap and mouth of a bottle and a spring acting on said plunger to resiliently hold the same in effective engagement with a bottle cap until the instant that the inward movement of the cap and the upward movement of the plunger is positively limited.

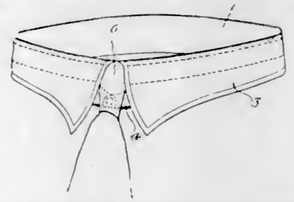
1,170,242. ROD-STRAIGHTENING MACHINE. JEROME R. GEORGE and VICTOR E. EDWARDS, Worcester, Mass., assignors to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 17, 1913. Serial No. 748,806. (Cl. 153—54.)



1. In a rod straightening machine, a base portion, a set of rollers carried by said base portion, a detachable cap portion, a set of rollers disposed within said cap portion, a yielding support for each of said last mentioned rollers, and adjustable means, carried by said base portion, for sustaining said yielding supports.

2. A rod straightening machine including a frame having a base portion and a detachable cap portion, a set of rod straightening rollers carried within said cap portion, a support for each of the rollers, springs for said supports to rest upon, an adjustable support for said springs, whereby the forces of the springs may be simultaneously adjusted, said support being carried by said base portion and a set of coöperating rod straightening rollers carried within said base portion.

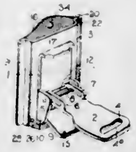
1,170,243. COLLAR. SAMUEL GLAXON, New York, N. Y. Filed Mar. 27, 1915. Serial No. 17,444. (Cl. 2—69.)



A collar comprising a neckband and an outer fold, the neckband being provided with button-holes located in the vicinity of its ends, tabs attached to the end portions of the fold and projecting beyond the ends thereof at points between the upper and lower edges of the fold, said tabs having button-holes adapted to register with the button-holes in the neckband.

1,170,244. [WITHDRAWN.]

1,170,245. CLASP. HANS E. GRABAU, New York, N. Y., assignor to Gabriel Abraham, New York, N. Y. Filed Feb. 26, 1915. Serial No. 10,655. (Cl. 24—268.)

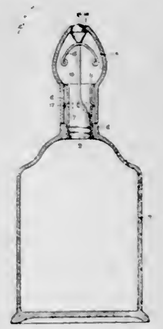


1. The combination of a base having parallel guideways, a slide having its edges engaged in the guideways, a spring concealed between the base and slide and having opposite ends connected with the slide and base, means for limiting the relative movement of the slide and base to prevent the spring from being subjected to a destructive tension, and a clasp carried by the slide.

2. The combination of a clasp, a slide to which the clasp is fastened, a base having opposite edges provided with guideways and in which the opposite edges of the slide move, a spring confined between the base and slide and having its free extremities bent in opposite directions, said slide and base having apertures for receiving the extremities of the spring, the base having a longitudinal slot, and a lug on the slide engaging in the slot for limiting the movement of the slide in both directions.

3. The combination of a base having parallel guideways, a slide retained on the base and guided in its movement by the edges of the slide engaging in the guideways, a spring element concealed between the base and slide and having one end engaged with one end of the base and the other end engaged with the opposite end of the slide, and a fastener carried by the slide.

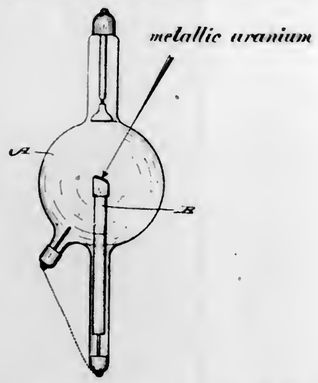
1,170,246. DISPENSING SUGAR-BOWL. MAHLON DUFF GREEN, Portland, Oreg. Filed Mar. 11, 1915. Serial No. 13,677. (Cl. 221—62.)



1. A bowl as characterized, comprising a body portion; an open-ended cap having a contracted pouring opening; means mounted on said body portion, extending within said cap, for closing the pouring opening therein; a spout removably mounted in the delivery end of said body portion, said spout having guiding projections extending from the sides thereof to slidably engage and at all times maintain the alinement of said cap; and a contractible arm supported from said spout and extending within said cap to limit the movement thereof.

2. A bowl as characterized, comprising a body portion having a screw-threaded pouring opening; a screw-threaded spout mounted therein; a cap slidably mounted in surrounding relation to said spout, said cap being provided with a pouring opening; a valve disposed within said cap for closing the pouring opening thereof; a stem mounted in said spout for supporting said valve; and a contractible arm mounted in said cap for limiting the movement thereof when inverted to remove the pouring opening thereof from said valve.

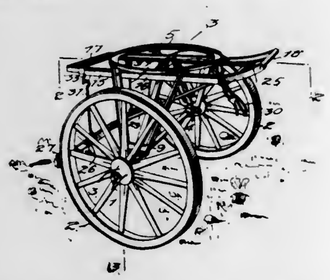
1,170,247. ANTICATHODE FOR RÖNTGEN-RAY TUBES. MAX GUNDELACH, Gehlberg, Germany. Filed Apr. 21, 1915. Serial No. 22,952. (Cl. 250—35.)



1. In a Röntgen-ray tube, an anticathode consisting partly of metallic uranium, substantially as set forth.

2. In a Röntgen-ray tube, an anticathode consisting entirely of metallic uranium, substantially as set forth and for the purpose specified.

1,170,248. TRUCK. HANS CHRISTIAN GUSTAFSON, Arlington, Iowa. Filed Oct. 12, 1915. Serial No. 55,519. (Cl. 21—39.)



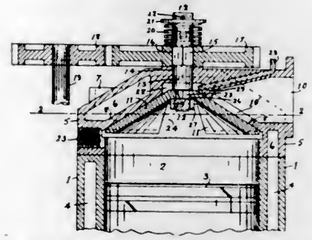
1. A truck, comprising a wheel supported axle, a fifth wheel comprising inner and outer sections, the outer section being of angle material and the inner section being of channel material, and having its channel facing inwardly, said inner section resting in the outer section and being rotatable therein, V-shaped brackets, each comprising a body arranged transversely of the axle and arms extending upwardly and connected to the inner section, bearing sleeves on the axles for the bodies of the brackets, a V-shaped bracket comprising a body for pivotal connection with the body of the vehicle at the axis of the fifth wheel, and arms connected with the bearing sleeves, guide bars extending transversely of the first named brackets and parallel with each other, said guide bars being of angle material, and a sliding handle frame mounted in the guide bars and movable transversely of the axle, said frame being substantially rectangular and having a roller journaled at the front end thereof, releasable latch mechanism for holding the handle frame in its forward position, and stops for limiting the rearward movement of the frame.

2. A truck comprising a wheel supported axle, a lower fifth wheel section supported above the axle, guide bars extending transversely of the axle and rigid with the fifth wheel support, and a substantially rectangular handle frame mounted to slide on the guide bars transversely of the axle, and having means for limiting its rearward movement, and releasable latch mechanism for holding the frame in forward position, said handle frame having a roller at its front end, and the latch mechanism comprising plates mounted on the side members of the frame and having depending lugs for engaging the guide bars to limit the rearward movement of the frame, and springs normally pressing the latch plates downward.

3. A truck comprising a wheel supported axle, a lower fifth wheel section supported above the axle, guide bars extending transversely of the axle and rigid with the fifth wheel support, and a substantially rectangular handle frame mounted to slide on the guide bars transversely of the axle, and having means for limiting its rearward movement, and releasable latch mechanism for holding the frame in forward position.

4. A truck comprising a wheel supported axle, a fifth wheel above the axle, supports rigid with the fifth wheel and journaled on the axle near the ends thereof, guide bars secured to the supports transversely of the axle and parallel with each other, a substantially rectangular handle frame mounted to slide on the guide bars and having means for limiting the rearward movement of the said frame, releasable latch mechanism for holding the frame in forward position, brake mechanism supported by the guide bars and the fifth wheel supports, and means at the front of the vehicle for operating the brake mechanism.

1,170,249. ENGINE VALVE MECHANISM. RALPH T. GUYER, Elkhart, Ind. Filed May 10, 1915. Serial No. 26,987. (Cl. 123—80.)



1. In an internal combustion engine, the combination of an engine cylinder provided with a head, said head being provided with a valve seat having a centrally formed lubricant recess therein; means for supplying lubricant to said recess; and a valve rotatively mounted upon said valve seat, covering said lubricant recess and forming the lower wall thereof.

2. In an internal combustion engine, the combination of an engine cylinder provided with a head, said head being provided with a conical valve seat having a centrally formed lubricant recess therein; means for supplying lubricant to said recess; and a conical faced valve rotatively mounted upon said valve seat, covering said lubricant recess and forming the lower wall thereof.

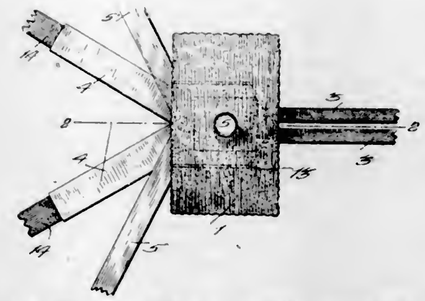
3. The combination of an engine cylinder provided with a cylinder head, said head being provided with a valve seat and grooves formed in said valve seat; and a valve rotatively mounted upon said valve seat, said grooves extending radially to a point in the valve seat which is beyond the valve circumference and adapted to reduce frictional resistance between the valve and its seat.

4. The combination of an engine cylinder provided with a cylinder head, said head being provided with a conical valve seat and grooves formed in said valve seat; and a conical valve rotatively mounted upon said valve seat, said grooves extending radially to a point in the valve seat which is beyond the valve circumference and adapted to reduce frictional resistance between the valve and its seat.

5. In an explosion engine, the combination of an engine cylinder provided with a cylinder head, said head being provided with a valve seat upon the surface of which a plurality of grooves are formed, said grooves being in communication with the cylinder interior and adapted to receive the compression of the explosion in the cylinder; a valve rotatively mounted upon said valve seat; ignition means; and means for rotating said valve.

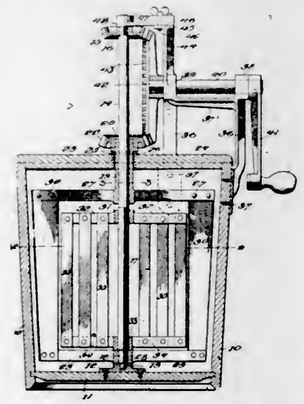
[Claims 6 and 7 not printed in the Gazette.]

1,170,250. UTERINE SUPPORT. CLAES G. HALL, Washington, D. C. Filed Oct. 12, 1915. Serial No. 55,422. (Cl. 128—21.)



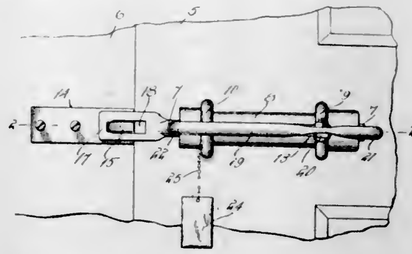
A support of the character specified, comprising a pad consisting of a sheet of chamois-skin or the like, having superposed on the under face and at the center thereof a sheet of fibrous material, supporting tabs having their ends received between the sheets and securing means passing through the sheets and the tabs, a sleeve held at the center of the pad and extending through the same, a rod of silver slidable in the sleeve, a receiving cup of silver having a ball and socket joint connection with the upper end of the rod, a set screw threaded through the sheet for holding the rod in adjusted position, the end of the flexible pad depending on each side of the rod to prevent chafing of the lower end of the rod.

1,170,251. ROTARY CHURN. OLIVER E. HARRIS, Abingdon, Ill. Filed Mar. 30, 1915. Serial No. 18,120. (Cl. 31—43.)



In a churn, an inner dasher comprising a plurality of radial arms each carrying vertically spaced beaters, and an outer dasher comprising a plurality of radial arms directed obliquely to the longitudinal planes of the arms where they project beyond the arms of the inner dasher, and vertical blades secured to said obliquely directed portions, the sides of said blades extending in parallel relation, and means for reversibly rotating said dashers in opposite directions, whereby material is moved toward the center of the dasher when the same are rotated in one direction and moved away from the center when the dashers move in the other direction.

1,170,252. LATCH. HERMAN HARRISON, Harrisburg, Ill. Filed June 25, 1913. Serial No. 775,775. Renewed Dec. 1, 1915. Serial No. 64,583. (Cl. 70—42.)

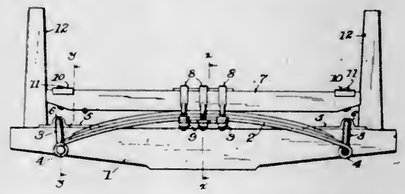


1. A latch of the class described, comprising the combination with a door and a frame, of a casing secured to the door, a bolt disposed within the casing and having its ends extended therebeyond, a slotted head formed on the forward end of the bolt, a keeper having a beveled top edge and a shouldered side edge, a spring normally forcing the bolt to retracted position and a lever pivoted to move toward and away from the door having one end disposed adjacent the rear end of the bolt whereby pivotal movement of the lever will move the bolt forwardly.

2. A latch of the class described, comprising the combination with a door and a frame, of a casing, U-clips securing the casing to the door, a bolt disposed within the casing and having its ends extending therebeyond, a slotted head formed on the forward end of the bolt, a keeper on the frame having a beveled top edge and a shouldered side edge, a spring normally forcing the bolt to retracted position, a lug extending from the bight of the rearmost U-clip, a lever pivoted to said lug, an inward extension on said lever engaging the rear end of the bolt.

3. A latch of the class described, comprising the combination with a door and frame, of a slidably mounted bolt, a spring for forcing said bolt to retracted position, a slotted head formed on the forward end of the bolt, a keeper on the frame and having a beveled top edge and a shouldered side edge and a cap adapted to be disposed over the head to cover the slot thereof.

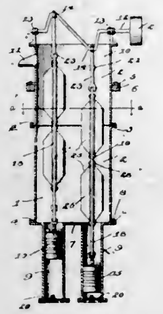
1,170,253. BOLSTER-SPRING. EDWARD J. HARVEY, Racine, Wis. Filed June 13, 1914. Serial No. 844,857. (Cl. 267—29.)



The combination with a bar having a flat surface, of a leaf spring secured to said flat surface of the bar, said spring projecting outwardly from the point of connection longitudinally of the bar and diverging therefrom in a continuous curve from the portion in contact with the bar

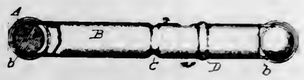
substantially to the outer end of the spring, the form and resilience of said spring being such that the area of continuous contact with the bar will progressively increase in direct proportion to the load and throughout the entire length of said flat surface opposed to the spring, whereby the spring may be progressively reinforced by the bar from the point of connection to the end of the area of contact in accordance with the load to be carried, substantially as described.

1,170,254. PUMP. MARTIN HENDRICKSON, Globe, Ariz. Filed Aug. 8, 1914. Serial No. 855,808. (Cl. 103—62.)



The herein described pump comprising a casing a pump cylinder at the lower end of the casing, a head at the upper end of the casing, a plunger arranged to operate in the cylinder, a plunger rod connected to the plunger and extending up through the casing, float members arranged on two opposite sides of the plunger rod, guides in the casing for the plunger rod and engaging the latter at the sides intermediate the float members and operating means for the plunger rod, arranged in the head.

1,170,255. GAGE. HENRY HESS, Philadelphia, Pa. Filed Oct. 19, 1912. Serial No. 726,637. (Cl. 33—174.)



1. In a fixed-dimension gage the combination of a spherical contact piece, and a support therefor, said support having a body part and gripping portions all constituted of a single integral piece of bent metal, and said gripping portions being bent permanently into place around the sphere so as to grip it rigidly by contact outside of its equator.

2. In a fixed-dimension gage the combination of a spherical contact piece, and a support therefor, said support having a body part and a plurality of gripping fingers each constituted of a single piece of bent metal, integral with said body portion and said fingers being bent permanently into place around the sphere so as to grip it rigidly outside of its equator.

3. In a fixed-dimension gage the combination of a spherical contact piece having finger receiving grooves, and a support therefor, said support having a body part and a plurality of gripping fingers all constituted of a single piece of bent metal, integral with said body portion and said fingers being bent permanently into place around the sphere so as to grip it rigidly outside of its equator in said grooves; the parts constructed and arranged to afford contact exposure of the sphere at the end and also at the sides of the gage.

4. In a fixed-dimension gage the combination of a spherical contact piece, and a support therefor, said support having a body part and a plurality of extensions, said extensions being bent permanently into place around the sphere so as to grip it rigidly outside of its equator, and the parts so constructed and arranged as to afford contact exposure of the sphere at the end of the gage and also at the sides thereof.

5. In a fixed dimension end or length gage the combination of a contact piece and a tubular support having gripping extensions bent around said contact piece for permanently and immovably holding it, and means for standardizing the length of said gage by deformation of the support.

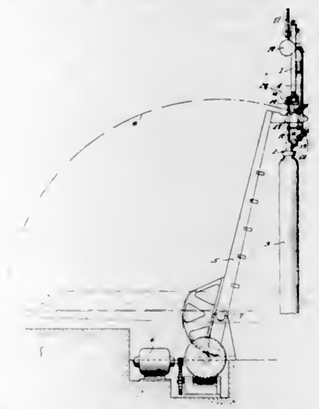
[Claims 6 to 9 not printed in the Gazette.]

1,170,256. FORE GRIP FOR GUNS. GREAR HILLPOT, Philadelphia, Pa. Filed May 7, 1915. Serial No. 26,603. (Cl. 42—71.)



In a gun having a stock provided with an extension, an enlargement on said extension at the free end thereof and having an air chamber in its upper side and also having air passages opening through the under side at diagonally opposite points near the ends of said chambers for communication therewith to permit the circulation of air therethrough, and ribs formed on the upper side of the enlargement at opposite sides of the chamber to provide guard cheeks for the barrel of the gun, the said enlargement on its outer surface being serrated.

1,170,257. APPARATUS FOR DRAWING AND HANDLING GLASS CYLINDERS. HALBERT K. HITCHCOCK, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 1, 1914. Serial No. 864,412. (Cl. 49—17.1.)



1. In combination, a drawing carriage, a bait having a laterally extending air supply passage, a handle for the bait supported on the carriage and removable therefrom by a lateral movement in a direction opposite to the direction in which the said air passage extends, an air supply pipe carried by the carriage and having a detachable connection with the air supply passage and disengageable by the lateral movement of the bait, and a takedown apparatus adapted to engage the handle of the bait and remove it laterally from the carriage.

2. In combination, a carriage, a bait having an air passage extending laterally through its wall, an air supply member mounted for lateral movement on the carriage and having its end in yielding engagement with the surface of the bait surrounding the end of said air passage, and a handle extending upwardly from the bait and releasably engaging the carriage.

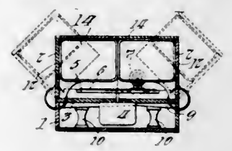
3. In combination, a carriage, a bait having in its upper wall an oblique air supply passage, an air supply pipe mounted for oblique movement with respect to the carriage and having releasable connection with the air supply passage of the bait, and a handle extending upwardly from the top wall of the bait, and releasably engaging the carriage.

4. In combination, a carriage, a bait provided with a handle having a projection engaged and supported by the carriage, but removable therefrom by a movement laterally and without any substantial upward movement with respect to the carriage, and a catch between the carriage and the handle and just above said projection yieldingly restraining it against movement in a lateral direction.

5. In combination, a carriage provided with a support, a bait provided with a handle engaged by said support, but removable therefrom by a movement laterally, a catch independent of the support between the carriage and the handle and just above said support yieldingly restraining the handle against movement in a lateral direction, and a takedown apparatus adapted to engage the handle of the bait and move it laterally from the support overcoming the restraint of the said catch.

[Claims 6 to 10 not printed in the Gazette.]

1,170,258. PHONOGRAPH OR TALKING-MACHINE. DELOS HOLDEN, East Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed July 14, 1913. Serial No. 778,824. (Cl. 181—3.)



1. In a phonograph or talking machine, the combination of sound reproducing apparatus, a pivoted cover therefor, and a sound amplifier movable with said cover and connected with said sound reproducing apparatus, the pivotal axis of said cover passing through the axis of the smaller end of said amplifier and extending lengthwise of the exit portion of said amplifier, substantially as described.

2. In a phonograph or talking machine, the combination of a record support, a reproducer in operative relation thereto, a plurality of covers for said reproducer and record support movable about different axes, each of said covers having a sound amplifier movable therewith, and sound conveying means connecting all of said amplifiers with said reproducer, substantially as described.

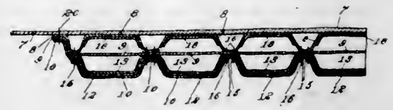
3. In a phonograph or talking machine, the combination of sound reproducing apparatus, a pivoted cover therefor, a sound amplifier movable with said cover, and a fixed tubular member communicating with said sound reproducing apparatus and said amplifier, the pivotal axis of said cover and amplifier being coincident with the axis of the exit portion of said fixed member and extending lengthwise of the exit portion of said amplifier, substantially as described.

4. In a phonograph or talking machine, the combination of a rotatable record support, a reproducer in operative relation thereto, a movable cover for said record support and reproducer, a movable sound conveying arm connected with said reproducer, a sound amplifier movable with said cover about an axis extending lengthwise of the exit portion of the amplifier, and a stationary sound conveying connection between said arm and said amplifier, said amplifier and sound conveying connection being of fixed length and in direct and uninterrupted communication during the opening and closing of said cover, substantially as described.

5. In a phonograph or talking machine, the combination of a horizontal record support, a reproducer in operative relation thereto, a plurality of sound amplifiers movable about substantially horizontal axes which are out of alinement with the axes of the exit portions of said amplifiers, and sound conveying means connecting all of said amplifiers with said reproducer, said sound amplifiers being in direct and uninterrupted communication with said sound conveying means during the movement of said amplifiers about said axes, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,170,259. POCKET FOR CARTRIDGE-BELTS. JAMES P. HOOPER, Baltimore, Md. Filed Mar. 30, 1915. Serial No. 18,022. (Cl. 224—23.)



1. The combination with a belt, of a plurality of longitudinal web strips at one side of the belt the inner of said web strips being secured to the belt at spaced apart intervals and the longitudinal web-strips being secured together at spaced apart intervals whereby to form a series of pockets, and means for closing the bottom side of the pockets.

2. The combination with a belt of a plurality of longitudinal web strips at one side of the belt; means at spaced apart intervals for securing the longitudinal web strips together and leaving the intervening portions of said strips unsecured with respect to each other, means for securing the inner of said longitudinal strips to the belt to form a series of pockets, and means for closing the bottom side of the pockets.

3. The combination with a belt, of a plurality of longitudinal web strips at one side of the belt,—the inner and outer of the longitudinal web strips having a fullness at spaced apart intervals with respect to the interposed strips whereby to form pockets; means for securing the longitudinal strips together between adjacent fullnesses, means for securing the inner strip to the belt at each fullness and means for closing the bottom side of the pockets.

4. The combination with a belt, of a plurality of longitudinal web strips at one side of the belt,—the inner and outer web strips having a tapering fullness in a vertical direction and at spaced apart intervals with respect to the interposed strips; means for securing the longitudinal strips together at the side of each vertical tapered fullness whereby to form a series of pockets means for securing the inner longitudinal strip to the belt and means for closing the bottom side of the pockets.

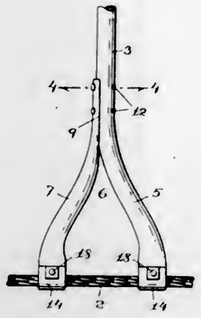
5. The combination with a belt of a plurality of longitudinal web strips at one side of the belt; means for securing the inner strip to the belt at spaced apart intervals; means for securing the strips together independently of the belt, and a strip having one end secured at the inner side of the outer longitudinal strip and extending down and under all of said longitudinal strips.

[Claims 6 and 7 not printed in the Gazette.]

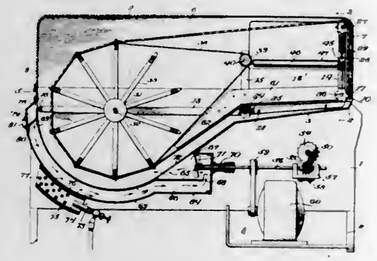
1,170,260. LIGHTNING-ROD. AMASA G. HOOVENS, Goshen, Ind. Filed Apr. 1, 1915. Serial No. 18,624. (Cl. 173—31.)

In a lightning rod, a vertical point tube having a lower inclined integral brace portion provided with a lower integral vertical reversely curved flattened upturned hook-form end, said brace portion and said hook-form end having alined perforations, and an inclined tubular brace divergent from said integral brace portion and having a similar integral lower vertical reversely-curved flattened upturned hook-form end and a vertical concave upper end engaging the point tube above the brace portion thereof, said brace portion and the hook-form end thereof being

provided with alined perforations, and the upper end of said brace and the point tube having also alined perforations, and horizontal securing bolts engaging said alined perforations.



1,170,261. DISH-WASHING APPARATUS. AARON HORTON and SALYER HORTON, Coleman, Mich. Filed Dec. 17, 1914. Serial No. 877,743. (Cl. 141—9.)



1. In washing apparatus, a tank, conveyer aprons traveling in said tank, the stretches of the aprons traveling in contact throughout a portion of their lengths and for the remainder of their lengths traveling in spaced relation, the first-mentioned length of one of the aprons being yieldably supported.

2. In washing apparatus, a tank, a rotary member mounted within the tank and having a yieldable peripheral surface, a conveyer apron traveling about the said member and in contact with the said surface, and a second conveyer apron traveling in contact with the first mentioned apron.

3. In washing apparatus, a rotary member having radially yieldable elements comprising its peripheral surface, a conveyer apron traveling in contact with said surface, a second conveyer apron traveling in contact with the first mentioned apron, and means for supplying water to the said aprons and to the said surface.

4. In washing apparatus, a rotary member having a peripheral series of radially yieldable elements, a conveyer apron supported by and traveling upon the said elements, a conveyer apron having a portion of its length traveling in contact with the first-mentioned apron, and means for supplying water to the said aprons.

5. In washing apparatus, a rotary member having transversely extending peripherally located elements adapted to be radially sagged, means yieldably resisting sagging of the said elements, a conveyer apron traveling about and supported by the said elements, a second conveyer apron traveling in contact with the first mentioned apron, and means for supplying water to the said apron.

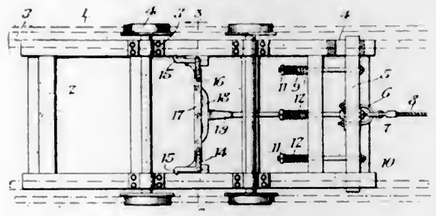
[Claims 6 to 10 not printed in the Gazette.]

1,170,262. SCREEN-HINGE. HENRY HOUGHAM, Manhattan, Kans. Filed Sept. 25, 1915. Serial No. 52,722. (Cl. 16—48.)



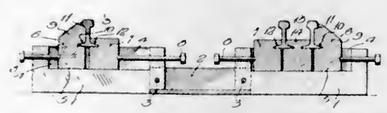
A hinge, comprising an upper member having a body, an upwardly and forwardly curved tongue struck from the middle of the lower portion of the body, and lugs extending rearwardly on the lower portion of the body, at opposite sides of the tongue; and a lower member constructed and arranged to be accurately positioned relative to the upper edge of a screen or the like and having an upwardly reaching apertured portion to receive said tongue.

1,170,263. SAFETY APPARATUS FOR MINE-CARS AND THE LIKE. HOWARD HOUSEKNECHT, Freeland, Pa. Filed June 25, 1915. Serial No. 36,405. (Cl. 187—13.)



In safety apparatus for mine cars, safety rails disposed between the lines of rails of the mine car trackway, hangers depending from the side sills of the mine car, bell crank levers pivoted upon the lower ends of said hangers respectively and each having one limb thereof formed with a dog adapted to engage the adjacent safety rail, a transverse bar, pin and slot connections between said bar and the remaining limbs of said bell crank levers, a cross bar mounted in the side sills of the mine car and capable of movement therein longitudinally of the car, a connection between the first-mentioned cross bar and the last-mentioned bar, a connection between the last-mentioned bar and the hauling rope, and springs connected to the last-named bar and acting against the hauling rope to force the dogs into engagement with said safety rails in the event of the breaking of the hauling rope.

1,170,264. RAILWAY-TIE. MILAN HANICH, Conemaugh, Pa. Filed Oct. 18, 1915. Serial No. 56,490. (Cl. 238—5.)

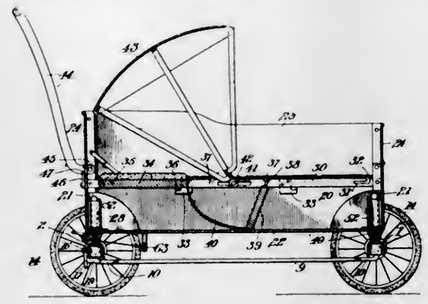


1. In combination with the meeting ends of a pair of track rails, the bases thereof being notched on opposite sides adjacent the ends, of a pair of rail supporting blocks underlying said rails, extensions formed on the inner sides of said blocks, a rail plate underlying said rail ends and connected to said extensions, and rail clamping members coacting with said plate and rails.

2. In combination with the meeting ends of a pair of track rails, the bases thereof being notched on opposite sides adjacent the ends, of a pair of rail supporting blocks underlying said rails, extensions formed on the inner sides of said blocks, a rail plate underlying said rail ends and connected to said extensions, said plate having upright flanges on its longitudinal edges adapted to receive the bases of the rails therebetween, said plate also being provided with notches in its edges corresponding to the notches in said rails, and rail clamping members coacting with said plate and the rails and disposed in said notches.

3. In combination with the meeting ends of a pair of track rails, the bases thereof being notched on opposite sides adjacent the ends, of a pair of rail supporting blocks underlying said rails, extensions formed on the inner sides of said blocks, a rail plate underlying said rail ends and connected to said extensions, said plate having upright flanges on its longitudinal edges adapted to receive the bases of the rails therebetween, said plate also being provided with notches in its edges corresponding to the notches in said rail, rail clamping members comprising upright blocks whose lower ends are adapted to rest on the road bed, and having notches in their upper ends to coact with the notches in said plate and rails, and fastening elements connecting the intermediate portions of said members.

1,170,265. GO-CART. JOHN HUDRY, Hazleton, Pa. Filed Dec. 30, 1914. Serial No. 879,671. (Cl. 21—83.)



1. In a go-cart, the combination with the body, of a running gear, comprising front and rear axles of inverted box-like or channel shape in cross-section, stub-axles fitted in the ends of said axles, and wheels mounted on said stub-axles, said stub-axles adapted to be turned downwardly and slid inwardly toward the center of said axles to bring the wheels under the body, means for locking the stub-axles in operative position, and means for connecting said body and axles.

2. In a go-cart, the combination with the body, of a running gear, comprising front and rear axles of inverted box-like or channel shape in cross-section, stub-axles having block-shaped inner ends fitted to turn and slide in the ends of said axles, wheels mounted upon said stub-axles, means for locking the stub-axles in operative position, and means for connecting the body with said axles, said stub-axles adapted to be turned downward and slid inward toward the center of said axles to bring the wheels under the body.

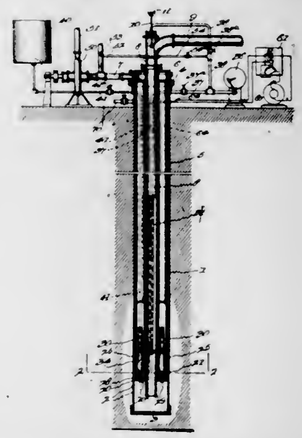
3. In a go-cart, the combination with the body, of a running gear, comprising front and rear axles of inverted box-like or channel shape in cross-section having slots in their sides at opposite ends, stub-axles having block-shaped inner ends fitted in the ends of said axles, bolts passing through said slots and the block-shaped ends of the stub-axles and pivotally and slidably securing said stub-axles in place, means for locking the stub-axles in operative position, and means for connecting the body and axles, said stub-axles adapted to be released and turned downwardly and moved inwardly toward the center of the axles to bring the wheels to a horizontal position under the body.

4. In a go-cart, the combination with the body, of a running gear, comprising front and rear axles of inverted box-like or channel shape in cross-section having slots in their sides at opposite ends extending from near the ends of the axles to about the centers thereof, stub-axles having block-shaped inner ends fitted in said axles, bolts passing through said slots and the block-shaped ends of the stub-axles and pivotally and slidably securing said stub-axles in place, means for locking the stub-axles in operative position, and means for connecting the body with the front and rear axles, said stub-axles adapted to be released and turn downwardly and moved inwardly toward the centers of the axles to bring the wheels to a horizontal position under the body and beyond the sides of the body and overlapping each other at their inner sides.

5. In a go-cart, the combination with the body, of a running gear, comprising front and rear axles of inverted box-like or channel shape in cross-section having slots in their sides at opposite ends, stub-axles having block-shaped inner ends fitted in said axles, bolts passing through said slots and the block-shaped ends of said stub-axles and pivotally and slidably securing the stub-axles in place, wheels mounted on said stub-axles, longitudinal side rods operatively connecting the stub-axles of the front and rear axles, means for locking the stub-axles in operative position, and means for connecting the body with the front and rear axles, said stub-axles upon opposite sides of the body adapted to be released and simultaneously turned downwardly and moved inwardly toward the centers of the axles to bring the wheels to a horizontal position under the body.

[Claims 6 to 19 not printed in the Gazette.]

1,170,266. APPARATUS FOR OPERATING SULFUR-WELLS. WILLIAM DANIEL HUFF, La Fayette, La., assignor of three-fourths to Louise Guidry Moss, New Iberia, La. Filed Apr. 21, 1915, Serial No. 22,874. Renewed Dec. 27, 1915. Serial No. 68,922. (Cl. 83—78.)



1. An apparatus for operating sulfur mines, comprising a well casing provided with perforations near its bottom, hydrocarbon burners contained in said casing near the bottom thereof for heating the water in the well, and causing the same to melt the sulfur, a central pipe to carry off the fused products projecting down in said casing between the burners, an air tube mounted in said pipe and provided with an air jet at its lower end, and means for supplying air under pressure to said tube, substantially as described.

2. An apparatus for operating sulfur mines, comprising a well casing provided with perforations near its bottom, hydrocarbon burners mounted in said casing near the bottom thereof for heating the water in the well, and causing the same to melt the sulfur, a central pipe and means for elevating the fused material from the well, substantially as described.

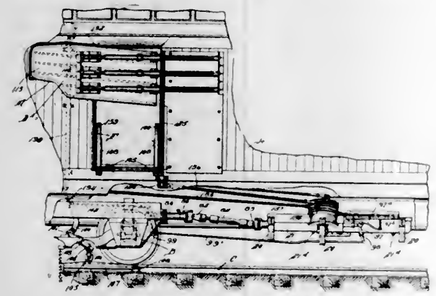
3. An apparatus for operating sulfur mines, comprising a well casing provided with perforations near its bottom, hydrocarbon burners mounted in said casing near the bottom thereof for heating the water in the well, and causing the same to melt the sulfur, with means for supplying oil and air to the base of said burners and for carrying off the products of combustion therefrom, a central pipe and means for elevating the fused material from the well, substantially as described.

4. An apparatus for operating sulfur mines, comprising a well casing provided with perforations near its bottom, hydrocarbon burners mounted in said casing near the bottom thereof for heating the water in the well, and causing the same to melt the sulfur, electric heaters and igniters for warming up said burners and for igniting same, a central pipe and means for elevating the fused material from the well, substantially as described.

5. An apparatus for operating sulfur mines, comprising a well casing provided with perforations near its bottom, hydrocarbon burners mounted in said casing near the bottom thereof for heating the water in the well, and causing the same to melt the sulfur, with means for supplying oil and air to the base of said burners and for carrying off the products of combustion therefrom, electric heaters and igniters for warming up said burners and for igniting same, a central pipe and means for elevating the fused material from the well, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,170,267. AUTOMATIC MAIL-EXCHANGE SYSTEM. ALBERT HUPP, Washington, D. C. Filed May 31, 1913. Serial No. 771,041. (Cl. 258—6.)



1. In combination with a car having a door, means for opening the door and for automatically handling mail through the door, reversible gearing driven by an axle of the car, and means, adapted to be actuated by a trip, for operatively connecting said gearing and said first-mentioned means.

2. In combination with a car having a door, means for opening the door and for automatically handling mail through the door, gearing driven by an axle of the car, means, adapted to be actuated by a trip, for operatively connecting said gearing and said first-mentioned means, and means within the car for stopping and reversing said gearing.

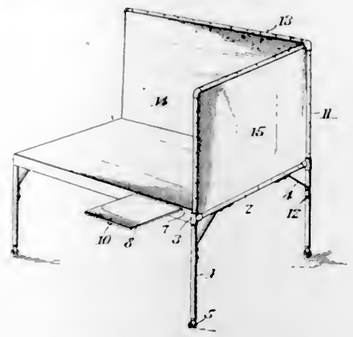
3. In combination with a car having a plurality of doors, separate means for opening each of said doors, automatic mail handling means associated with said doors, gearing driven by an axle of the car, and trip actuated means for automatically operating one or more of said door opening means and the mail handling means associated therewith, from said gearing.

4. In combination with a car having a plurality of doors, separate means for opening each of said doors, automatic mail handling means associated with said doors, reversible gearing driven by an axle of the car, and trip actuated means for automatically operating one or more of said door opening means and the mail handling means associated therewith, from said gearing.

5. In combination with a car having doors on opposite sides thereof, means associated with each door for automatically handling mail therethrough, gearing driven by an axle of the car, cams for operating each of said means, and separately operable trip actuated means for automatically operating said cams from said gearing.

[Claims 6 to 23 not printed in the Gazette.]

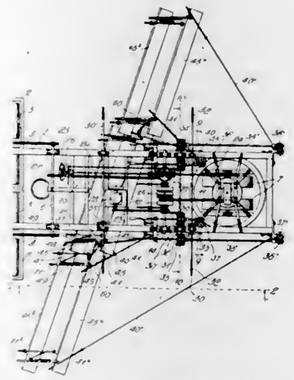
1,170,268. BOOKBINDER'S TRUCK AND TABLE. JOSEPH A. HURLEY, New York, N. Y. Filed Aug. 31, 1915. Serial No. 48,277. (Cl. 101—34.)



1. A table comprising a wheel mounted frame, a bottom panel mounted thereon and having an upper surface disposed at an angle with relation to a horizontal, a shelf adjustably mounted upon the bottom panel, means for securing the shelf at an adjusted position with relation to the bottom panel, a back panel mounted upon the frame having a forward surface inclined at an angle with relation to a perpendicular erected from a horizontal, the forward surface of the back panel being approximately at a right angle to the upper surface of the bottom panel.

2. A table comprising a wheel mounted frame including vertically disposed hollow standards, a superimposed frame including rods which fit in these said standards, means for securing the rods in the standards, a bottom panel mounted upon the frame and having an upper surface inclined at an angle with relation to a horizontal, a back panel mounted upon the said rods and the said frame and having the forward surface inclined at an angle with relation to a perpendicular erected from a horizontal.

1,170,269. ROAD-GRADING MACHINE. ELMER A. HYDE, Villisca, Iowa. Filed Feb. 11, 1915. Serial No. 7,519. (Cl. 37—7.)



1. A grading machine comprising a portable frame, combined with a plurality of substantially alined grading blades extending transversely of the frame, means hingedly connecting the adjacent ends of the several blades, draft connections between the latter and the frame, means to swing the various blades forwardly and rearwardly around their hinges, and additional means to vary the upright positions of said blades.

2. A grading machine comprising a portable frame, combined with a plurality of substantially alined grading blades extending transversely of the frame, means hingedly connecting the adjacent ends of the several blades, draft connections between the blades and the frame, means to swing the various blades forwardly and rearwardly around their hinges, and additional means to independently vary the upright positions of the independent blades.

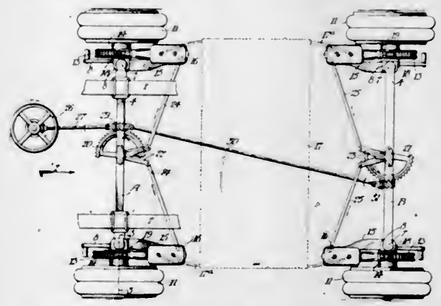
3. A grading machine comprising a front and a rear grading blade, a draft beam hinged by a two-way hinge to the front blade, an additional draft beam leading rearwardly from the first named beam, and hinged by a two-way hinge to the rear grading blade, and means to vary the upright positions of the two blades.

4. A grading machine comprising a front and a rear grading blade, a draft beam hinged by a two-way hinge to the front blade, an additional draft beam leading rearwardly from the first named beam and hinged by a two-way hinge to the rear grading blade, means to vary the upright positions of the two blades, and additional means to move one of the draft beams forwardly and rearwardly.

5. A grading machine comprising a front and a rear grading blade, a draft beam hinged to the front blade by a two-way hinge, an additional draft beam leading rearwardly from the first named beam and hingedly connected to the rear blade by a two-way hinge, a link connecting the two blades, and a lever operating in conjunction with the link and with one of the beams for adjusting the former forwardly and rearwardly to rock the blades around their hinges.

[Claims 6 and 7 not printed in the Gazette.]

1,170,270. MOTOR-TRUCK. JOHN JOHNSTON, New York, N. Y. Filed Oct. 30, 1914. Serial No. 869,413. (Cl. 21—90.)



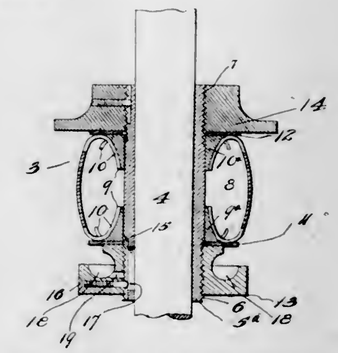
1. In combination, a vehicle, a driven traction wheel for the vehicle, a turning knuckle pivoted in said vehicle, means projecting from the knuckle and providing an axle for the wheel, oppositely extending extensions formed on said knuckle, motors mounted on said extensions and having a single driving connection with said wheel, and a steering gear for the vehicle having an operative connection with said knuckle.

2. In combination, a vehicle, a driven traction wheel for the vehicle, a turning knuckle pivoted to said vehicle, means projecting from said knuckle providing an axle for said wheel, oppositely extending extensions formed on said knuckle, a motor mounted on one of the extensions and having a direct driving connection with said wheel, a second motor mounted on the other of said extensions and being removably connected with said driving connection of said first-mentioned motor, and a steering gear connected with said knuckle.

3. In combination, a vehicle, a driven traction wheel, for the vehicle, a turning knuckle pivoted to the vehicle, means projecting from said knuckle providing an axle for said wheel, oppositely extending extensions formed on the knuckle, each extension being of considerable width so as to support a motor on each side of the wheel, a motor mounted on each extension and on opposite sides of the wheel, a single driving connection between the wheel and each pair of motors on opposite sides of the wheel, and steering means connected with said knuckle.

4. In combination, a vehicle, a driven traction wheel for the vehicle, a turning knuckle pivoted to the vehicle, means projecting from the knuckle providing an axle for the vehicle, an extension formed on the vehicle and of considerable width to support a motor on opposite sides of the wheel, motors mounted on said extension on opposite sides of the wheel, driving connections between each motor and said wheel, and a steering wheel connected with said knuckle.

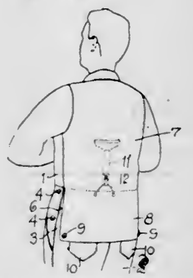
1,170,271. JOURNAL-BEARING. DANIEL A. JONES, Durand, Mich. Filed Sept. 9, 1915. Serial No. 49,721. (Cl. 64—48.)



1. The combination with a spindle and its slotted bearing sleeve having threaded ends, of a resilient member, and lock nuts on the sleeve adapted to adjust the resiliency of said member and one of which is slotted and provided with an oil chamber communicating with the slotted bearing sleeve.

2. The combination with a spindle and its bearing sleeve, of a hollow metal collar formed with inwardly bent resilient oppositely disposed tongues, a pair of wedge rings between said tongues and the bearing sleeve, and means above and below the collar for compressing said resilient tongues.

1,170,272. UNION GARMENT. WILLIAM KETCHUM JONES, Wichita, Kans. Filed June 11, 1915. Serial No. 33,572. (Cl. 2—144.)



A union garment comprising a body portion and a nether portion, said nether portion being provided with a seat opening, and a seat flap provided with a pocket and the jacket portion provided at its back with a depending skirt adapted to overlie the seat flap and the mouth of the

pocket, said skirt being of a width less than the width of the seat opening and having its sides terminating inwardly of and in spaced relation relatively to the side slits of the nether portion as afforded by the seat opening, fastening means for the seat flap, and co-acting fastening means carried by the seat flap adjacent its inner end and between the pocket and the sides thereof, at points below the top of the pocket and by the skirt adjacent its free corners, whereby said skirt may be secured to the flap in overlying relation, said co-acting fastening means being independent of the fastening means for the seat flap.

1,170,273. METHOD FOR TAKING FINGER IMPRESSIONS. HAKON JORGENSEN, Copenhagen, Denmark. Filed Oct. 8, 1914. Serial No. 865,719. (Cl. 41—41.)

1. The herein described method of taking finger impressions, which consists in treating an impression-receiving surface with a substance capable of being rendered adhesive and of becoming discolored, applying to the fingers a substance adapted to chemically react with said first named substance to discolor and render the same adhesive, when coming in contact with it, and finally effecting contact between the fingers and said impression-receiving surface.

2. The herein described method of taking finger impressions, which consists in treating a yielding impression-receiving surface with a substance capable of being rendered adhesive and of becoming discolored, applying to the fingers a substance adapted to chemically react with said first named substance to discolor and render the same adhesive when coming in contact with it, and finally conforming said impression-receiving surface to and in contact with the fingers.

3. The herein described method of taking finger impressions, which consists in treating one surface of a paper blank with a substance capable of being rendered adhesive and of becoming discolored and coating the other surface of said paper blank with a substance capable of being rendered adhesive, applying to the fingers a substance adapted to chemically react with said first named substance to discolor and render the same adhesive when coming in contact with it, and finally effecting contact between the fingers and the surface of the paper blank treated with said first named substance.

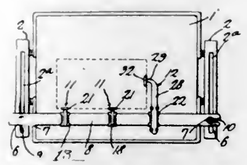
4. The herein described method of taking finger impressions which consists in treating an impression-receiving surface with a solution comprising French gelatin, Russian gelatin, glycerin, yellow prussiate of potash and water substantially in the proportions specified, applying to the fingers a substance adapted to chemically react with the said solution to discolor and render the same adhesive, when coming in contact with it, and finally effecting contact between the fingers and said impression-receiving surface.

5. The herein described method of taking finger impressions which consists in treating an impression-receiving surface with a substance capable of being rendered adhesive and of becoming discolored, applying to the fingers a solution adapted to chemically react with said substance when coming in contact with it, and comprising chlorid of iron, chlorid of lime and concentrated hydrochloric acid substantially in the proportions specified, and finally effecting contact between the fingers and said impression-receiving surface.

[Claim 6 not printed in the Gazette.]

1,170,274. TYMPAN-GAGE. ERNEST KARL, Litchfield, Conn. Filed May 19, 1915. Serial No. 29,142. (Cl. 101—227.)

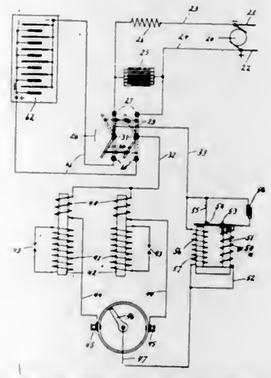
1. In a device of the character described, a pair of angle iron guides applicable to the side edges of a platen, the guides having depending flanges provided with T-shaped slots for the reception of securing elements carried by the side edges of the platen, the other flanges of the guides having longitudinal slots, elements slidable in the last mentioned slots, a strip engageable with said elements to extend across the platen, and gage elements slidable upon the strip.



2. In a device of the character described, a pair of guides applicable to the side edges of a printing press platen, a pair of adjustable clamping elements carried by the guides, a strip adapted to extend across the platen and having a longitudinal open slot at one end for the reception of one clamping element, and a transverse slot adjacent its other end for the reception of the other clamping element, and gage elements slidably mounted upon the strip.

3. In a device of the character described, a strip adapted to extend across a printing press platen and having lower longitudinal rabbets along its edges, a slide embodying a body resting upon the strip and having a pair of lips at each end bent back under the respective edge of the strip and received by the corresponding rabbet, said body having portions projecting from between the lips, and said portions having lips bent back upwardly from its side edges, and a side gage strip slidable upon the slide and said portions thereof under the last mentioned lips, the last mentioned strip having means at one end to bear upon the platen for the engagement of a sheet therewith.

1,170,275. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Nov. 8, 1910. Serial No. 591,242. (Cl. 123—148.)



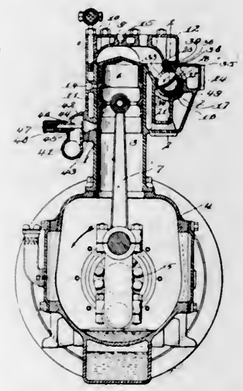
1. In an ignition system, the combination with a main source of current of relatively high voltage and amperage, of a condenser circuit having a condenser shunted across the main current source; an ignition circuit unsuitable for a continued flow of high voltage and high amperage from said source of current connected with the opposite terminals of said condenser, said ignition circuit embracing an induction coil and an interrupter device, and a timer; the voltage of the main source of current being greater than that suitable for the conditions of the ignition circuit, and a resistance located in said condenser circuit between the condenser and the main source of current, said resistance being proportioned to the circuit conditions in the ignition circuit to effect the proper charging of the condenser between the successive discharges by the timer.

2. In an ignition system, the combination with a main source of current of a relatively high voltage and amperage, of a condenser circuit having a condenser shunted across the main current source; an ignition circuit unsuitable for a continued flow of high voltage and high amperage from said source of current connected with the opposite terminals of said condenser, said ignition circuit embracing an induction coil, a timer, and an interrupter device, said interrupter comprising a high resistance locking coil in series in the ignition circuit and a low resistance breaking coil shunted around the high resistance coil through the armature contact breaker; and a resistance located in said condenser circuit between the condenser and the main source of current, said resistance being proportioned to the circuit conditions in the ignition circuit to effect the proper charging of the condenser between the successive discharges by the timer.

3. The combination with a direct current source of a relatively high voltage and amperage, and a suitable work circuit connected therewith; of an ignition system including a circuit unsuitable for a continued flow of high voltage and high amperage current, said ignition circuit having a making and breaking device for intermittently closing and opening said circuit; a condenser bridged across the said work circuit and connected with the ignition system; and a resistance in series with said work circuit, so proportioned that it will reduce the amperage of the flow of current to the condenser, to meet the conditions of the condenser and the elements of the ignition system.

4. In an ignition system, the combination with a plurality of sources of current, one of said sources of current being of low voltage and comparatively low amperage, the other source of said current being of comparatively high voltage and high amperage; circuit connections adapted to be connected to each of said sources of current; an induction coil; a timing device; and means for connecting the induction coil and timer with either of the said sources of current; and a proportioned resistance operable to be cut into said circuit connections, in series with the high voltage and high amperage source of current, when said source is connected to the induction coil and timer.

1,170,276. INTERNAL-COMBUSTION ENGINE. HARMON J. KLINE, Alpena, Mich. Filed July 29, 1911. Serial No. 641,320. (Cl. 123—59.)



1. In an internal combustion engine, the combination of a cylinder casing formed with adjacently located intake and exhaust manifolds, a separate head connected thereto, and a single valve mounted in the cylinder casing below the parting line between the latter and its head and above the intake manifold and operative to control communication between the intake and exhaust manifolds and the cylinder.

2. In an internal combustion engine, the combination of a cylinder casing formed with a lateral offset containing adjacently located intake and exhaust passages, a head detachably mounted on the cylinder casing, and a rotary valve mounted in the cylinder casing below the parting line between the latter and its head and above the intake manifold and operative to control communication between the intake and exhaust passages and the cylinder.

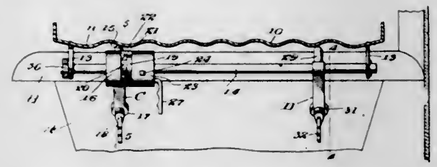
3. In an internal combustion engine, the combination of a multiple cylinder casing having a lateral offset formed with adjacently located intake and exhaust manifolds extending longitudinally of the casing, a separate head detachably secured to the casing and formed with an explosion chamber for each cylinder, and a rotary valve mounted in the offset of the cylinder casing below the parting line between the cylinder and said head and arranged longitudinally above the intake manifold, the valve being operative to control communication between the intake and exhaust manifolds with respect to the explosion chamber of the head.

4. In an internal combustion engine, the combination of a multiple cylinder casing provided with intake and exhaust manifolds extending longitudinally thereof and having a valve chamber extending longitudinally above the intake manifold, a bushing inserted within said valve chamber and formed with circumferentially spaced and alined ports which communicate respectively with the intake and exhaust manifolds and the cylinder, and a rotary valve mounted in said bushing and having a port operative to control the ports in the bushing.

5. In an internal combustion engine, the combination of a jacketed cylinder casing having a removable head and also having a lateral offset provided wth a valve chamber arranged below said head, an intake manifold located below the valve chamber and inclosed by a portion of the jacketing of the cylinder casing, an exterior exposed exhaust manifold at the outer side of the valve chamber and a passage connecting the valve chamber and cylinder, and a valve mounted in the valve chamber and operative to control communication between the intake and exhaust manifolds and the cylinder.

[Claims 6 to 20 not printed in the Gazette.]

1,170,277. ADJUSTABLE DRAINBOARD FOR SINKS. MAX KLUGE, Billings, Mont. Filed Jan. 5, 1915. Serial No. 648. (Cl. 141—11.)



1. The combination with a drain board, of hangers fixed to its under side, a shaft mounted in the hangers, a curved jaw formed with a clutch sleeve receiving the shaft and also having a clamp screw bearing, a clamp screw threaded in the bearing and coöperative with the jaw, a companion clutch sleeve adjustably fixed on the shaft, the said first-named sleeve having a peripheral arcuate shaped slot, a hook-like lug on the last-named clutch sleeve and engageable in the slot to limit the relative movement of the clutch sleeve, and means in one clutch sleeve and engageable in the other clutch sleeve to lock the same in adjusted position.

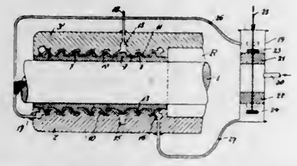
2. The combination with a drain board, of hangers fixed to its under side, a shaft mounted in the hangers, a curved jaw formed with a clutch sleeve receiving the shaft and also having a clamp screw bearing, a clamp screw threaded in the bearing and coöperative with the jaw, a companion clutch sleeve adjustably fixed on the shaft, the said first-named sleeve having a peripheral arcuate shaped slot, a hook-like lug on the last-named clutch sleeve and engageable in the slot to limit the relative movement of the clutch sleeve, and a spring-held bolt in one clutch sleeve and engageable with the other clutch sleeve to lock the same together and having a handle.

1,170,278. NEEDLE-THREADER. MARY GASKELL KNECHTEL, Hanover, Ontario, Canada. Filed Nov. 28, 1914. Serial No. 874,444. (Cl. 223—36.)



In a needle threader, a sheath having at its lower end an aperture and a notched lug adjacent to said aperture, in combination with a threading blade having a notch forming a thread-engaging hook, and a handle with which said blade is pivotally connected and whereby it may be projected through the aperture in the sheath.

1,170,279. PACKING FOR ROTARY SHAFTS. FRANZ KNOUREK, Bohemia, Austria-Hungary. Filed Apr. 22, 1914. Serial No. 833,779. (Cl. 127—117.)



1. A labyrinth packing comprising a sleeve having internal annular grooves therein, said grooves having a rounded and a flat surface, a rotary shaft passing through said sleeve, collars on said shaft and rotating with free clearance in said annular grooves, means for supplying a circulating fluid to the end of said sleeve adjacent the rounded portion of the groove, and centrifugal blades on the side of said collars facing the supply of circulating fluid.

2. A labyrinth packing comprising a sleeve having internal annular grooves therein, said grooves having a rounded and a flat surface, a rotary shaft passing through said sleeve, collars on said shaft and rotating with free clearance in said annular grooves, means for supplying a circulating fluid to one end of said sleeve and centrifugal blades on the side of said collars facing the supply of circulating fluid, said blades being inclined relatively to both the radius and axis of said shaft and having rounded edges adjacent the rounded edges of the grooves.

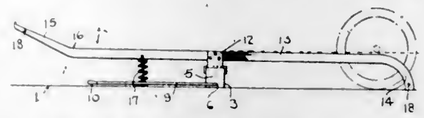
3. A labyrinth packing comprising a sleeve having internal annular grooves therein, said grooves having a rounded portion, a rotary shaft passing through said sleeve, collars on said shaft and rotating with free clearance in said annular grooves, means for supplying a circulating fluid to the ends of said sleeve, centrifugal blades on the side of said collars facing the supply of circulating fluid, said blades having a cut-away portion adjacent the rounded portion of the grooves, a central receiving chamber for the circulating fluid and located at the junction of the series of collars with oppositely arranged blade members thereon.

4. A labyrinth packing comprising a sleeve having internal annular grooves therein, said grooves having a rounded and a flat portion, a rotary shaft passing through said sleeve, collars on said shaft and rotating with free clearance in said annular grooves, means for supplying a circulating fluid to one end of said sleeve, adjacent the rounded portion of the grooves, and centrifugal blades on the side of said collars facing the supply of circulating fluid, and adjacent the rounded portion of the grooves, a receiving chamber for the circulating fluid, and a collar on the shaft opposite said receiving chamber, said collar having blade members on both sides thereof.

5. A labyrinth packing comprising a sleeve having internal annular grooves therein, a rotary shaft passing through said sleeve, collars on said shaft and rotating with free clearance in said annular grooves, means for supplying a circulating fluid to the ends of said sleeve and centrifugal blades on the side of said collars facing the supply of circulating fluid, a central receiving chamber for the circulating fluid and located at the junction of the series of collars with oppositely arranged blade members thereon, and automatic means for directing the supply of circulating fluid to either end of said sleeve, according to the increase and decrease in pressure therewithin.

[Claims 6 to 9 not printed in the Gazette.]

1,170,280. DEVICE FOR RAISING AND SUPPORTING AUTOMOBILES. JOSEPH KOENIG, Springfield, Mo. Filed May 14, 1915. Serial No. 28,130. (Cl. 254—91.)



1. A device of the character described comprising a rectangular frame, a U-shaped member depending from said rectangular frame and adapted to form the pivot point thereof, means for resiliently supporting the front end of the rectangular frame, a plurality of cams engaging said U-shaped member and means for operating the cams to elevate the rectangular frame.

2. A device of the character described comprising a vertically movable rectangular frame pivotally mounted and having its forward end inclined upwardly and its rearward end inclined downwardly, resilient means for supporting the frame in front of its pivotal point, and a plurality of cams for vertically raising said rectangular frame.

3. A device of the character described comprising a rectangular frame, a U-shaped member depending from said rectangular frame and adapted to form the pivot point thereof, said frame and U-shaped member being vertically movable, means for resiliently supporting the front end of said frame, a plurality of cams engaging said U-shaped member for causing said vertical movement and means for operating said cams.

4. A device of the character described comprising a pair of side bars spaced apart, said bars having their forward ends bent upwardly and their rear ends bent downwardly, a pair of braces joining said side bars, and a U-shaped member secured to said side bars, said U-shaped member being pivotally mounted on cams within a hollow base member.

5. A device for raising automobiles from garage floors comprising a hollow rectangular member rigidly secured to said floor, rectangular slots adjacent the ends of said member and recesses in line with said slots, a shaft mounted in said rectangular member, cams mounted on said shaft, a U-shaped member mounted within said rectangular member on said cams, having its standards extending upwardly, side bars secured to said standards, said side bars being spaced apart by braces at their ends, springs under said side bars forward of their center, and an operating lever on said shaft.

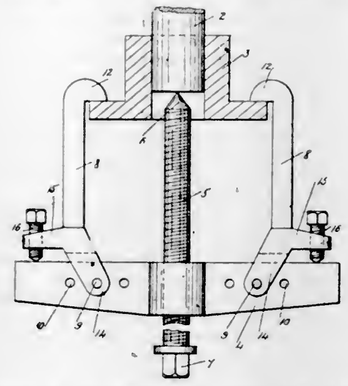
[Claims 6 and 7 not printed in the Gazette.]

1,170,281. WHEEL-PULLER. CHARLES H. KOHLER, Oakdale, N. Y. Filed Oct. 12, 1915. Serial No. 55,531. (Cl. 29—85.)

1. In a wheel or hub puller, a crossbar, a main screw engaging with the crossbar and adapted to bear against the shaft, arms provided at one end with hooks for engaging with the hub, and having at the other end double-eyes the forked portions of which straddle the crossbar and are pivoted to it, said double-eyes and hooks projecting laterally on one side of the arms, and said double-eyes having lugs which project laterally from them between their forked portions and the arms and upon the other side of the arms from the hooks, and setting-screws engaging with the said lugs and bearing on the crossbar.

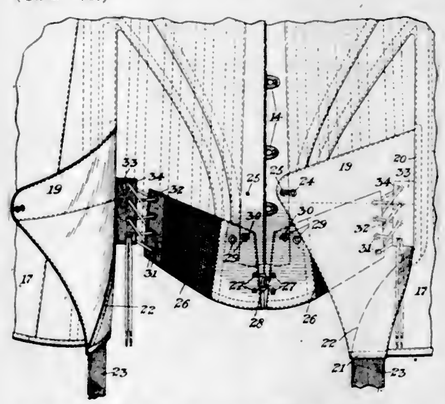
2. In a wheel or hub puller, a crossbar, a main screw engaging with the crossbar and adapted to bear against

the shaft, extension arms having heads at their free ends, said extension arms having at their other ends inwardly inclined portions which are pivoted to the crossbar and having also outwardly projecting lugs provided with setting screws which bear against the crossbar, and hooked



arms for engaging with the hub on the shaft, said hooked arms being provided at one end with inwardly inclined portions which are pivoted to the heads of the extension arms, and having also outwardly projecting lugs provided with setting screws which bear against the said heads.

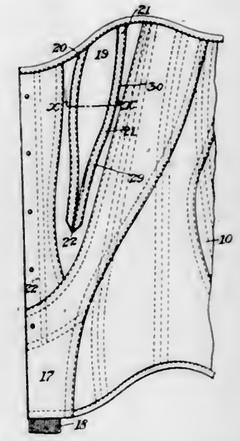
1,170,282. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed July 2, 1915. Serial No. 37,646. (Cl. 2—73.)



In an apparel corset and in each corset body half, a self reducing strap permanently secured to the corset body half only on a line distant from the front steel so as to be detachably and adjustably connected to the corset body half at the front portion thereof with the upper and lower edges of said self-reducing strap free from the corset body, means for adjustably connecting said self-reducing strap to the front of the corset body half, and an uplifting tension strap located under the self-reducing strap and secured at one end to the lower front portion of the corset body half extending rearwardly and adjustably connected to the corset body half adjacent the line of attachment thereto of the said self-reducing strap so as to be simultaneously adjusted to position both upwardly and inwardly.

1,170,283. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Nov. 6, 1915. Serial No. 59,915. (Cl. 2—73.)

1. In an apparel corset and in combination with each corset body half, a bust gore or section, stays secured in the bust gore or section and diverging upwardly from a point in the lower portion of the bust gore or section appreciably below the waist line, and a strap depending from the lower portion of said bust gore or section to exert a downward tension causing said bust gore or section to act as a lever with the fulcrum at the lower portion thereof thereby applying pressure against the underlying part of the body of the wearer and forcing outwardly the upper portion of the bust gore or section.

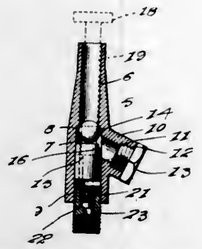


2. In an apparel corset and in combination with each corset body half, a bust gore or section, stays secured in the bust gore or section and diverging upwardly from a point in the lower portion of the bust gore or section appreciably below the waist line and running in correspondingly curved lines to the upper portion of the bust gore or section, and a strap attached at the lower portion of the bust gore or section and extending downwardly therefrom to exert a downward and rearward tension causing said bust gore or section to act as a lever with the fulcrum at the lower portion of said bust gore or section whereby pressure is exerted against the underlying part of the body of the wearer to force outwardly the upper portion of the bust gore or section.

3. In an apparel corset and in combination with each corset body half, a bust gore or section, stays secured in the bust gore or section, diverging upwardly from a point in the lower portion thereof appreciably below the waist line, a hose supporter strap secured to the lower portion of the bust gore or section and extending downwardly therefrom, a second hose supporter strap also secured to the lower portion of the bust gore or section and extending downwardly therefrom, hose supporters secured to the lower ends of the hose supporter straps, a yielding tension strap secured at one edge to the first aforesaid hose supporter strap, and means for connecting the opposite or forward edge of the said yielding tension strap in position for use in the garment.

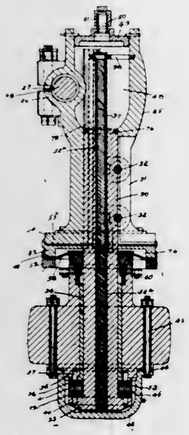
4. In an apparel corset and in combination with each corset body half, and a depending skirt therefrom, a bust gore or section, stays secured in the bust gore or section and diverging upwardly from a point in the lower portion thereof appreciably below the waist line, a side hose supporter strap, a front hose supporter strap, the said hose supporter straps being secured to the lower portion of the bust gore or section adjacent the lower ends of the stays, hose supporters connected to the lower ends of the hose supporter straps, a yielding tension strap secured at one edge to said side hose supporter strap, and means independent of the skirt for connecting the opposite or forward edge of the yielding tension strap to the front hose supporter strap and by which means the yielding tension straps of the garment are secured together in use.

1,170,284. DEVICE FOR FACILITATING THE REMOVAL AND REPLACING OF TIRE-VALVES. EDWARD P. LA BOUNTY, Hoopeston, Ill. Filed May 26, 1915. Serial No. 30,636. (Cl. 152—12.)



A device for facilitating the removal and replacing of tire valves including a body having a longitudinal bore enlarged adjacent one end to define an annular shoulder constituting a valve seat, internal screwthreads formed in the enlarged portion of the bore of said body adapted to fit the external screwthreads of a pneumatic tire valve stem, a ball valve adapted to engage said seat, a lateral extension on said body having a bore of adequate size to receive said ball valve and communicating with the bore of said body at a point intermediate the screwthreaded end of the bore and said annular shoulder, a removable closure for the outer extremity of said extension, and an annular retaining element for said valve having a cutaway portion permitting said valve to move from said seat into said extension.

1,170,285. BEARING FOR ROLLERS. ROBERT A. LACHMANN, Chicago, Ill., assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill., a Corporation of Illinois. Filed May 10, 1915. Serial No. 27,104. (Cl. 64—56.)



1. The combination with a roller, of a shaft sustained in substantially vertical position providing a bearing for said roller and formed with a longitudinally extending lubricant duct arranged to supply lubricant to the bearing surfaces of the roller and shaft, sealing means surrounding the shaft above the roller to prevent the escape of lubricant comprising a flexible diaphragm, and seal rings bearing against each other one stationary and one secured to and rotating with the roller.

2. The combination with a roller, of a shaft sustained in substantially vertical position providing a bearing for said roller and formed with a longitudinally extending lubricant duct arranged to supply lubricant to the bearing surfaces of the roller and shaft, sealing means surrounding the shaft above the roller to prevent the escape of lubricant comprising a non-rotating flexible diaphragm, and sealing rings bearing against each other, one fixed to the diaphragm and the other secured to and rotating with the roller.

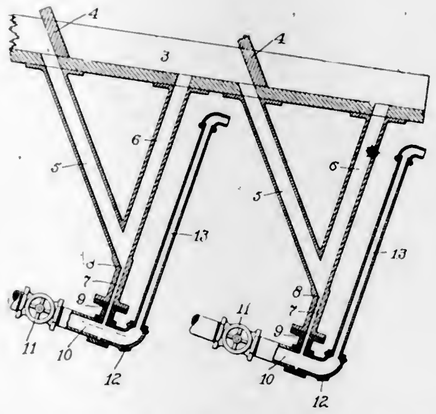
3. The combination with a roller, of a shaft sustained in substantially vertical position providing a bearing for said roller and formed with a longitudinally extending lubricant duct arranged to supply lubricant to the bearing surfaces of the roller and shaft, sealing means surrounding the shaft above the roller to prevent the escape of lubricant comprising a non-rotating flexible diaphragm, sealing rings bearing against each other, one fixed to the diaphragm and the other secured to and rotating with the roller, and sprigns which bear on the diaphragm so as to keep said rings in contact.

4. The combination with a roller, of a shaft sustained in substantially vertical position providing a bearing for said roller and formed with a longitudinally extending lubricant duct arranged to supply lubricant to the bearing surfaces of the roller and shaft, sealing means surrounding the shaft above the roller to prevent the escape of lubricant comprising a non-rotating flexible diaphragm, sealing rings bearing against each other, one fixed to the diaphragm and the other secured to and rotating with the roller, and guide studs for the diaphragm parallel with the axis of said shaft.

5. The combination with a roller, of a shaft sustained in substantially vertical position providing a bearing for said roller and formed with a longitudinally extending lubricant duct arranged to supply lubricant to the bearing surfaces of the roller and shaft, sealing means surrounding the shaft above the roller to prevent the escape of lubricant comprising a non-rotating flexible diaphragm, sealing rings bearing against each other, one fixed to the diaphragm and the other secured to and rotating with the roller, guide studs for the diaphragm parallel with the axis of said shaft, and springs which keep said rings in contact.

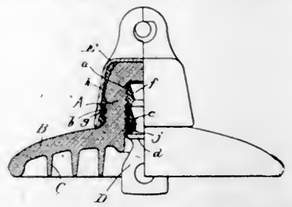
[Claims 6 to 31 not printed in the Gazette.]

1,170,286. LAUNDER-CLASSIFIER. GORDON LAND, Seattle, Wash., assignor to Leighton Howard Smith, Seattle, Wash. Filed Jan. 24, 1914. Serial No. 814,202. (Cl. 83—82.)



In combination in an ore classifier, an assorting channel inclined at an angle to the vertical, a discharge channel in alinement therewith and opening into said assorting channel at its lower end, the lower walls of the two channels lying in a common plane, said assorting channel having its side walls converging inwardly to form a contraction below the junction of the two channels, a water supply pipe connected with said contraction for producing an upward flow of water through said assorting channel into said discharge channel, and a downwardly inclined feed channel for delivering material to the assorting channel at its junction with the discharge channel.

1,170,287. METHOD OF MAKING INSULATORS. JOHN S. LAPP, Victor, N. Y., assignor to Locke Insulator Mfg. Co., Victor, N. Y., a Corporation of New York. Filed Jan. 2, 1914. Serial No. 810,069. (Cl. 173—318.)



1. The method of uniting the parts of insulators consisting in placing hydraulic cement between the parts and maintaining the parts at a relatively high temperature until the cement has set.

2. The method of uniting the parts of insulators consisting in placing liquid hydraulic cement between the parts and subjecting them and the cement to moisture and a relatively high temperature until the cement has set.

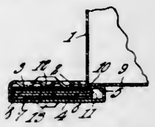
3. The method of uniting the parts of insulators composed of metallic and vitreous sections with cement between them, consisting in expanding and holding the parts expanded by the application of heat while the cement connecting them is setting.

4. The method of uniting the parts of insulators composed of metallic and vitreous sections consisting in placing cement between the parts and maintaining them at a relatively high temperature while the cement is setting.

5. The method of uniting the parts of insulators composed of metallic and vitreous sections, consisting in placing liquid hydraulic cement between the parts and subjecting them and the cement to heat and moisture until the cement has set.

[Claims 6 to 11 not printed in the Gazette.]

1,170,288. SEAM FOR METAL RECEPTACLES. JOHN F. LESLIE, Madison, Wis. Filed Feb. 11, 1915. Serial No. 7,626. (Cl. 220—81.)

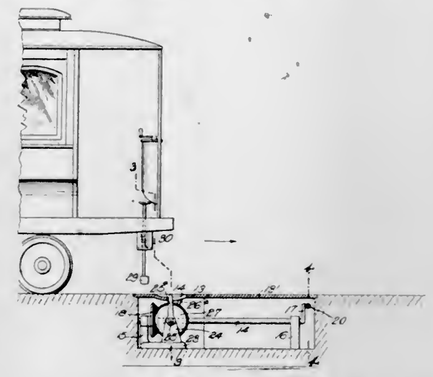


1. A seam for metal receptacles, including a base ring having an annular upstanding bead, an annular flange extending from the bead and having radial corrugations bearing on the base ring, a plate bearing upon the bead and having a depressed marginal portion bearing upon the corrugated flange, a flange integral with the outer edge of the base ring and having an annular corrugation, said last named flange overhanging the depressed marginal portion of the plate, a gasket interposed between said depressed marginal portion and the last named corrugated flange, and means extending through the flanges, gasket, depressed marginal portion and base ring for binding the parts together.

2. A seam for metal receptacles, including a base ring having an upstanding bead at its inner edge, a flange extending outwardly from the bead and having radial corrugations constituting a yieldable support for engaging the base ring, a plate having a marginal depressed portion bearing upon the said corrugated flange, a corrugated flange integral with the outer edge portion of the base ring, the said corrugations being extended annularly and overhanging the depressed marginal portion of the plate, and a gasket interposed between and clamped by said depressed marginal portion and the last named corrugated flange.

3. A seam for metal receptacles including upper and lower yieldable members, a plate extending therebetween and resting upon one of the members, a gasket supported by the plate and contacted by the other yieldable member, means extending through the plate, members and gasket for binding them together, each of said yieldable members being corrugated, the corrugations of one of the members being disposed substantially at right angles to the corrugations of the other member.

1,170,289. RAILWAY-SWITCH THROWER. SAMUEL LEVY, Paterson, N. J. Filed Sept. 1, 1915. Serial No. 48,434. (Cl. 104—24.)



1. The combination with the main rails of a railway track, a side track, and a movable switch point associated therewith, of a bed plate extending transversely between the rails and below the surface of the road bed, said bed plate having a pair of slots adjacent its ends extending parallel to the rails and forming concave portions of the plate, a pair of arms coöperating with the bed plate and extending upwardly in alternation through said slots, connections between said arms and the switch point and means carried by a car adapted to engage one of said arms moving it forwardly causing the switch point thereby to be thrown and bringing the other arm into an upright position through its slot.

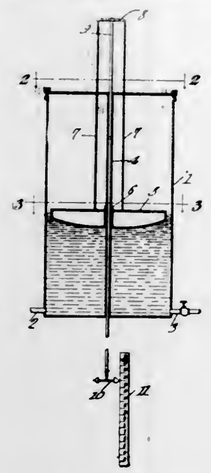
2. The combination with a pair of rails, a siding and a switch point between the main rails and the siding, of a rock shaft parallel to and below the surface of the rails, a crank at one end of the rock shaft, a rod connecting said crank to the switch point, a pair of shafts journaled on opposite sides of the rock shaft and at right angles thereto, gearing between the rock shaft and said pair of shafts, an arm carried by the outer end of each shaft of the pair, the two arms being arranged normally at an angle to each other, and means carried by a car to engage one of the arms carrying it forwardly and downwardly causing the switch point to be thrown and the other arm to be moved in an opposite direction.

1,170,290. MEASURING DEVICE FOR TANKS. WILLIAM C. LINDSAY, Newport, Vt. Filed June 11, 1915. Serial No. 33,569. (Cl. 73—82.)

1. In an appliance of the character described, a tank, a tubular member projecting upwardly from the bottom thereof, a float slidable upon said tubular member within the tank, and a member extending through and movable vertically within said tubular member for operating an indicating device from its lower end and having at its upper portion means operatively connecting with the float.

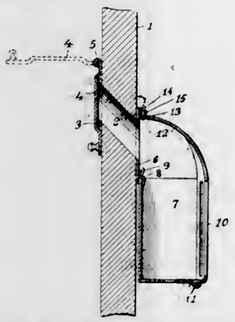
2. In an appliance of the character described, a tank, a tubular member projecting upwardly from the bottom

thereof, a float slidable upon said tubular member within the tank, a rod slidable through said tubular member for



operating an indicating device from its lower end, and a bar attached to the float and to the upper end of said rod.

1,170,291. MAIL-RECEPTACLE. WILLIAM H. LINK, Salisbury, N. C. Filed Feb. 25, 1914. Serial No. 821,056. (Cl. 232—19.)

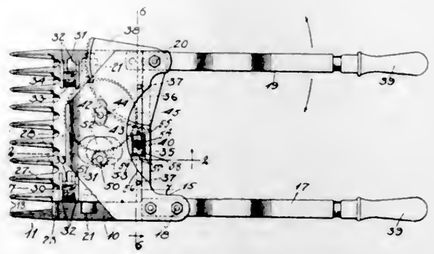


1. A plate to be secured at and around the inner end of a small chute and provided with hooks at its lower side and with a securing device at its upper side, in combination with a mail receptacle having an inner wall provided with eyes for engagement with said hooks, said mail receptacle being open at its outer side and at its upper end, and an outer wall for the mail receptacle hinged to the bottom of the latter at its lower side and formed at its upper end with a guard to pass over the receptacle and above the inner end of the chute and having detachable engagement with the securing device of the plate.

2. In combination with a member having a mail chute, a plate to be secured to and around the inner end of the chute, a mail receptacle having an inner wall detachably connected to the lower side of the plate, said receptacle also having a pivotally mounted guard at its outer side arranged, when in closed position, to extend over the inner end of the chute, and detachably connected to the plate, at the upper side thereof.

1,170,292. GRASS-TRIMMER. CORNELIUS CASSIDY LIPPEN, Philadelphia, Pa. Filed Sept. 22, 1914. Serial No. 862,889. (Cl. 56—19.)

1. A grass trimmer comprising a stationary bottom plate having blades projecting forwardly therefrom, said blades being beveled on the top and bottom faces of their forward extremities and tapered, ribs coincident with said blades and projecting downwardly and rearwardly from the latter and downwardly from the plate thereof, a second plate movably mounted on the first mentioned plate and having forwardly projecting blades tapered at their forward edges to correspond with the bevel of the forward edges of the first-mentioned blades at their top portions, an upwardly offset handle fixed to the stationary plate in alinement with one edge thereof and an upwardly offset movable handle also carried by said plate and operatively connected to the movable plate to shift the latter with respect to the stationary plate to cause a co-action of the blades set forth.



2. A grass trimmer comprising a stationary bottom plate having blades projecting forwardly therefrom, said blades being beveled on the top and bottom faces of their forward extremities and tapered, ribs coincident with said blades and projecting downwardly from the latter and the plate thereof, a second plate movably mounted on the first mentioned plate and having forwardly projecting blades tapered at their forward edges to correspond with the bevel of the forward edge of the first-mentioned blades at their top portions, means to reciprocate the movable plate and blades whereby the opposite edges of the latter will coöperate with adjacent edges of the stationary blades, said means including a handle fixed to the stationary plate and a handle pivoted thereto and having drive connections with the movable plate, said ribs forming bottom engaging portions and a pair of bearing rollers journaled beneath the bottom plate midway of the length thereof, said stationary plate being directed upwardly at its rear end and the rollers being adapted to rotatably support the trimmer in close proximity to the ground when trimming grass and permitting the blades to be inclined upwardly or downwardly to regulate the height at which the cutting action takes effect.

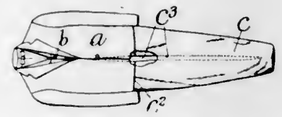
3. A grass trimmer comprising a stationary plate and a movable plate mounted thereon, said plates having cooperating blades and the bottom plate having a transverse guideway on which the movable plate is slidably mounted, a handle fixed to the stationary plate and projecting rearwardly therefrom adjacent one edge, said plates being disposed in spaced relation, a cover plate connected to the stationary plate and positioned in spaced relation to the movable plate, means for resiliently holding the plates together with their blades in contact, a pair of shafts vertically journaled in the stationary and cover plates, said movable plate being provided with a longitudinal slot, an eccentric disk fixed to one shaft and operating in said slot, drive connections between the shafts and a handle pivoted to the stationary plate and operatively connected to the other shaft for rotating the shafts and reciprocating the movable plate.

4. A grass trimmer comprising a stationary plate and a movable plate mounted thereon, said plates having cooperating blades and the bottom plate having a transverse guideway on which the movable plate is slidably mounted, a handle fixed to the stationary plate and projecting rearwardly therefrom adjacent one edge, said plates being disposed in spaced relation, a cover plate connected to the stationary plate and positioned in spaced relation to the movable plate, means for resiliently holding the plates together with their blades in contact, a pair of shafts vertically journaled in the stationary and cover plates, said movable plate being provided with a longitudinal slot, an

eccentric disk fixed to one shaft and operating in said slot, drive connections between the shafts and a handle pivoted to the stationary plate and operatively connected to the other shaft for rotating the shafts to impart opposite rotation to the movable plate and blades when the handle is swung in one direction and adapted to permit opposite movement of the handle while said drive means and movable plate remain stationary.

5. A grass trimmer comprising a stationary plate and a movable plate mounted thereon, said plates having cooperating blades and the bottom plate having a transverse guideway on which the movable plate is slidably mounted, a handle fixed to the stationary plate and projecting rearwardly therefrom adjacent one edge, said plates being disposed in spaced relation, a cover plate connected to the stationary plate and positioned in spaced relation to the movable plate, adjustable means for resiliently holding the plates together with their blades in contact, a pair of shafts vertically journaled in the stationary and cover plates, said movable plate being provided with a longitudinal slot, a cam fixed to one of said shafts and operating in said slot, a pinion also fixed to said shaft and positioned between the stationary and movable plates, a spur gear loose on the other shaft and disposed in mesh with the pinion, ratchet means between the spur gear and the second mentioned shaft whereby rotation may be imparted to the spur gear in one direction only, a pair of handles mounted on the stationary plate, one of said handles being pivoted and geared to the second-mentioned shaft to rotate the latter in opposite directions when the handle is swung in opposite directions in an arc on opposite sides of its pivot, movement of the handle in one direction imparting a double reciprocating motion to the movable plate and blades by rotation on the cam in the slot.

1,170,293. BURIAL-GARMENT. HARRY T. LOOMIS, Brooklyn, N. Y., assignor to Frank and Lambert, Inc., New York, N. Y., a Corporation of New York. Filed May 13, 1915. Serial No. 27,762. (Cl. 2—80.)

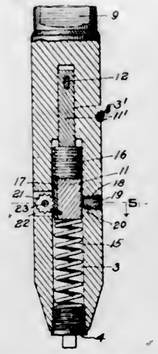


In a burial garment, a coat and a foot pocket connected with the bottom edge portion of the coat and forming an extension thereof and adapted to receive the feet and legs, said coat and foot pocket being open centrally of the back and approximately the full length thereof.

1,170,294. CASING-SPEAR. WILLIAM J. LOUDEN, Kittanning, Pa. Filed July 27, 1915. Serial No. 42,174. (Cl. 57—9.)

1. In a casing spear, the combination of a hollow tool body having downwardly diverging slipways, slips movable on said ways, a stem movable in the body cavity longitudinally of the slipways and operatively connected to the slips for raising and lowering them, a spring for opposing downward movement of the stem and slips, means mounted in the tool body and operatively connected to the stem for lowering it and the slips in opposition to said spring, and automatically releasable means for maintaining the slips in depressed position.

2. The combination of a hollow tool body having downwardly diverging slipways, opposed slips movable on said ways, a stem movable vertically in the body and operatively connected to the slips for holding them elevated, a spring for opposing downward movement of the stem, the stem provided with a vertical series of notches, a latch device carried by the body and adapted to engage one or another of the notches for holding the stem depressed, a spring for opposing movement of the latch device in direction to engage the stem and adapted to disengage the latch device therefrom upon counteracting the upward pressure of the stem-holding spring, the stem provided with a vertical rack, and a pinion mounted on the body and meshing with said rack for lowering the stem in opposition to its holding spring.



3. The combination of a hollow tool body having downwardly diverging slipways, opposed slips movable on the ways, a stem movable vertically in the body and operatively connected to the slips, the stem formed at one side with a vertical rack and with a vertical series of horizontal tooth-like serrations extending around a portion of the stem not occupied by the rack, the body formed with an externally-open latchway, a latch device movable in said way with its inner extremity shaped to engage one or another of said stem serrations for holding the stem depressed, a spring for opposing stem-engaging movement of the latch device and for disengaging said device from the stem, a spring for opposing downward movement of the stem and for raising the same when the latch device is released, and stem depressing means adapted to coöperate with said vertical rack.

4. The combination of a hollow tool body having downwardly diverging slipways, opposed slips movable on said ways, a stem movable vertically in the body and operatively connected to the slips, a spring for opposing downward movement of the stem, the stem provided with a vertical rack, a pinion rotatably mounted in the body and meshing with the rack for lowering the stem in opposition to said spring, and an automatically releasable latch device for holding the stem in depressed position.

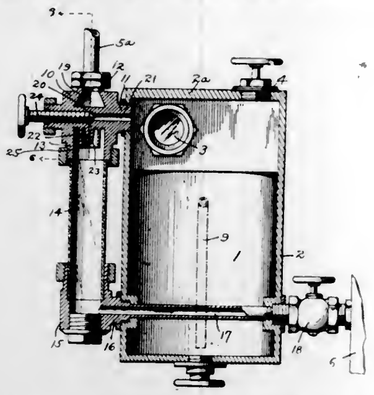
5. In a casing spear, the combination of a tool body having opposite downwardly diverging slipways, slips movable on said ways, the body formed with a cavity and a device movable in the cavity and connected to the slips for raising and lowering them, a spring for opposing downward movement of said device and for holding it and the slips normally elevated, means mounted in the body for depressing the slip-holding device in opposition to said spring, and automatically releasable means for maintaining the slips in depressed position.

1,170,295. DROP-FEED LUBRICATOR. FRANK LOWRY, Loudonville, Ohio, assignor to The Ohio Grease Company, Loudonville, Ohio, a Corporation of Ohio. Filed July 27, 1915. Serial No. 42,112. (Cl. 184—50.)

1. In a lubricator, a feed fitting having a chamber therein, connections for passing live steam through the chamber, a heating tube with a pendent nipple in the same chamber, the tube being directly impinged and surrounded by the live steam and there being a grease port in the tube and a feed port in the nipple wherein the lubricant is liquefied for the formation of drops at the mouth of the nipple.

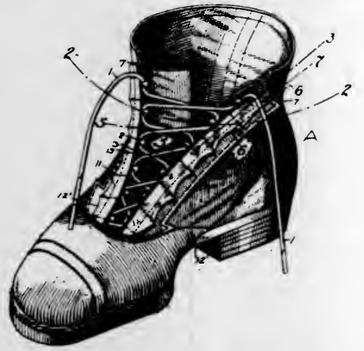
2. In a lubricator, a feed fitting having a chamber therein, connections for passing live steam through the chamber, a heating tube with a pendent nipple in the chamber, the tube being directly impinged and surrounded

by the live steam and there being a grease port in the tube and a feed port in the nipple wherein the lubricant is



liquefied for the formation of drops at the mouth of the nipple, and a shield within the chamber around the nipple.

1,170,296. SHOE-LACING. EDWARD WALTER LUCAS and CHARLES JAMES SAUNDERS, Garden City, N. Y. Filed Mar. 26, 1915. Serial No. 17,126. (Cl. 24—140.)

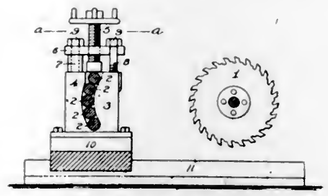


1. In a lacing device an under member and an outer member, the outer member being doubled longitudinally, spaced posts riveted to the under member and to the under portion of the outer member, and the outer member being fastened to the under member at points midway between the posts and outwardly from the outermost posts, whereby twice the number of apertures as there are posts will be formed between the members for the passage of a lacing.

2. In a lacing device, an under member, an outer member in the form of a strip doubled longitudinally on itself, spaced posts fastened to the under member and outer member, and means for fastening the edges of the doubled member to the under member at points intermediate the posts and outwardly from the outermost posts, whereby openings are provided between the members for permitting a lacing to be engaged with the posts.

1,170,297. METAL-SAWING MACHINE. WILLIAM H. LUCAS, Philadelphia, Pa., assignor to Fred F. Espen, Jacob Espen, Jr., and William H. Lucas, Philadelphia, Pa., trading under the firm-name of Espen-Lucas Machine Works, a Copartnership. Filed May 13, 1915. Serial No. 27,816. (Cl. 29—69.)

1. The combination, in a work holder for metal cutting saws, of a pair of jaws between which the bars to be cut are piled, one of said jaws having its bar engaging face of convex contour and the opposite jaw having its bar engaging face of concave contour, the saw, and means for effecting relative movement between the saw and pile in a direction transversely of the pile.



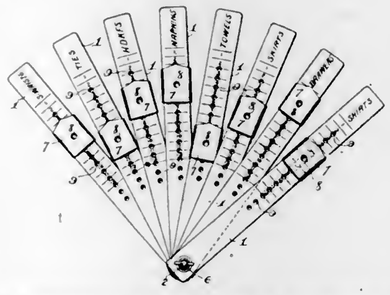
2. The combination, in a work holder for metal cutting saws, of a pair of jaws between which the bars to be cut are piled, one of said jaws having its bar-engaging face of convex contour and the opposite jaw having its bar-engaging face of concave contour, and means for imparting downward pressure to the top bar so as to maintain the pile of bars in place between the jaws.

3. The combination, in a metal cutting machine, of the cutting saw, and a pair of bar holding jaws disposed one on each side of said saw, the bars extending from one of said pairs of jaws to the other across the path of the cutting saw, and means for causing the pile of bars to assume a curved contour conforming to that of the periphery of the saw.

4. The combination, in a metal cutting machine, of the cutting saw, and a pair of bar holding jaws disposed one on each side of said saw, the bars extending from one of said pairs of jaws to the other across the path of the cutting saw, means for causing the pile of bars to assume a curved contour conforming to that of the periphery of the saw, and a slidably mounted base structure carrying said jaws.

5. The combination, in a metal cutting machine, of the cutting saw, a work holding jaw having a curved face conforming substantially to the periphery of the saw, and means for maintaining a pile of bars with one face of each bar in contact with said curved face of the jaw.

1,170,298. LAUNDRY-REGISTERING DEVICE. JOSEPH GILLIS LUNDY, Evergreen, Ala. Filed Apr. 3, 1915. Serial No. 18,979. (Cl. 116—31.)

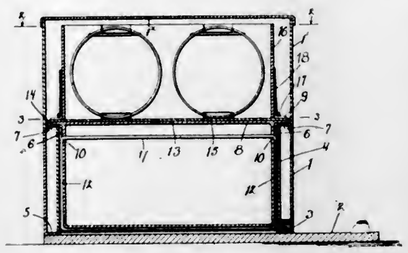


1. A registering device comprising a plurality of pivotally connected blades having numerical graduations and each blade having a different article designation thereon, spacers between the pivoted ends of said blades for spacing the latter apart, indicators movable on said blades and adapted to occupy the spaces between the blades, and clamping means for temporarily holding the blades against relative movement.

2. A collapsible registering device comprising a plurality of blades each having numerical graduations and each blade having a different article designation thereon, spacers separating the blades, a pivot bolt passing through the end portions of the blades and through said spacers, a thumb nut on said bolt for clamping said blades against relative movement, and an indicator slide movable on each blade and adapted to occupy spaces between the blades.

3. A registering device, comprising pivotally connected blades, each having numbered graduations and article designations, each blade also having depressions in its face, and an indicator movable on each blade having a projection to enter any one of said depressions and hold said indicator in the position to which it may be adjusted.

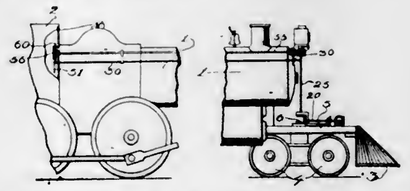
1,170,299. BEEHIVE. BERNARD H. LUPKE, Dolores, Colo. Filed June 26, 1915. Serial No. 36,515. (Cl. 6—2.)



1. A bee hive comprising a shell with a bee opening in the lower portion thereof, a hive having grooves formed in the opposite ends thereof, frames, wire passing through the ends of the latter and spaced apart from the top thereof and upon which a starter is adapted to be supported, said wire extending outside the ends of the frame and adapted to engage said grooves, the ends of the frames having projections resting upon the hive, a perforated plate with openings therein and adapted to rest upon said frames, a super and means for fastening the same to said plate, a series of cylindrical, open-ended frames, recesses formed in the edge thereof and which cylindrical frames are adapted to register with openings in said plate, a closure to said super, and a lid to said casing.

2. A bee hive comprising a shell with a bee opening in the lower portion thereof, a hive having grooves formed in the opposite ends thereof, frames, wire passing through the ends of the latter and spaced apart from the top thereof and upon which a starter is adapted to be supported, said wire extending outside the ends of the frame and adapted to engage said grooves, the ends of the frames having projections resting upon the hive, a perforated plate with openings therein adapted to rest upon said frames, a super and means for fastening the same to said plate, a series of cylindrical, open-ended frames, recesses formed in the edge thereof and which cylindrical frames are adapted to register with openings in said plate, vertically disposed partitions intermediate the cylindrical casings and resting upon said perforated plate, and partitions intermediate said frames in the hive.

1,170,300. LOCOMOTIVE-HEADLIGHT. JAMES J. MCCARTHY, Nashville, Tenn. Filed May 21, 1915. Serial No. 29,565. (Cl. 240—61.)



1. In combination with a locomotive, a headlight carried by the locomotive, means connected to the pony truck of the locomotive to turn the headlight upon the turning of the pony truck and means to adjust the headlight laterally of the locomotive.

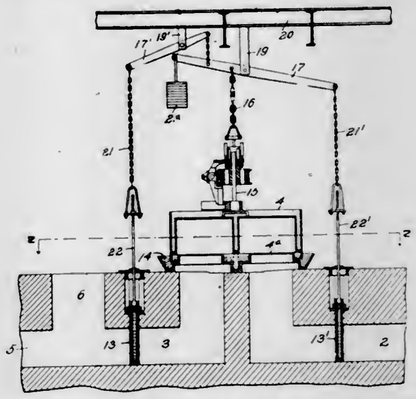
2. In combination with a locomotive, a headlight mounted at the forward end thereof, means to adjust the headlight laterally, means connected to the pony truck of the locomotive to cause the headlight to turn upon the turning of the pony truck, and means to disconnect the headlight turning means from the pony truck.

3. In combination with a locomotive, a headlight carried at the forward end of the locomotive and arranged to be adjusted laterally, a revolving means carried by the headlight, means connected to the revolving means and to the pony truck to cause the light to turn with the turning of the pony truck and a clutch to disengage the turning means of the headlight from the means carried by the pony truck.

4. In combination with a locomotive, a supporting frame at the forward end of the locomotive, a laterally sliding carriage on the supporting frame, a turn table mounted on the carriage supporting the headlight, means to revolve the turn table simultaneously with the movement of the pony truck of the locomotive, means to disengage the revolving means from the pony truck and means to manually control the revolution of the turn table and the sliding of the carriage.

5. In combination with a vehicle, a headlight carried by the vehicle, means connected to the running gear to turn the headlight upon the turning of said running gear, and means to adjust the headlight laterally of the vehicle.

1,170,301. VALVE MECHANISM FOR REGENERATIVE FURNACES. LOUIS N. MCDONALD, Youngstown, Ohio. Filed July 12, 1915. Serial No. 39,295. (Cl. 75—124.



In a regenerative furnace, valve mechanism comprising a reversing valve adapted to operatively connect the stack and gas flues with the regenerator flues, a valve for the gas flue, a valve for the stack flue, and means operatively connecting all of said valves and constructed and arranged to close the gas flue valve and the stack flue valve while the reversing valve is being operated to reverse the direction of flow of gases.

1,170,302. EYEGLASSES AND SPECTACLES. WILLIAM E. MCDONELL, Rochester, N. Y., assignor to Rochester Spectacle Co., Rochester, N. Y., a Corporation of New York. Filed June 13, 1914. Serial No. 844,875. (Cl. 88—50.)

1. In combination with a suitable bearing, a guard or pad for eyeglasses and spectacles formed from a single blank of sheet material and embodying two relatively adjustable nose bearing portions and a split supporting sleeve formed by bends in the stock between the nose bearing portions and passed about the bearing.

2. A guard or pad for eyeglasses and spectacles formed from a single blank of sheet material and embodying two relatively adjustable nose bearing portions and a supporting sleeve formed by bends in the stock between the nose bearing portions, the stock having weakened portions between the sleeve and the nose bearing portions.

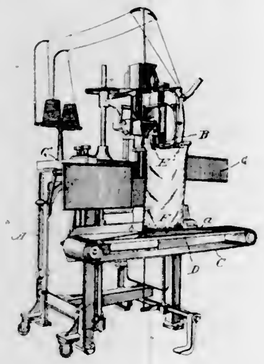


3. In eyeglasses or spectacles, the combination with a bearing and a laterally extending portion at one end of the bearing, of a guard pad having a sleeve fitting around the bearing, said sleeve having a lateral opening which receives the laterally extending portion at the end of the bearing.

4. In eyeglasses and spectacles, the combination with a bearing and a laterally extending portion at one end of the bearing of a guard pad having a sleeve fitting the bearing, said sleeve having a lateral opening which receives the laterally extending portion at the end of the bearing, said opening being larger than the laterally-extending portion to permit the guard pad to rock on the bearing.

5. In eyeglasses and spectacles, the combination with a bearing and a laterally-extending portion at one end of the bearing, of a guard formed from a single blank of sheet material and embodying two nose bearing portions, and a supporting sleeve formed by bends in the stock between the nose bearing portions, said sleeve fitting around said bearing and having a lateral opening through which the laterally-extending portion projects.

1,170,303. FILLED-BAG-SEWING APPARATUS. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 6, 1910. Serial No. 536,669. (Cl. 112—24.)



1. A filled bag sewing apparatus including in combination stitch forming mechanism, carrying means for supporting and feeding a filled bag to the stitch forming mechanism, means located in rear of the stitch forming mechanism for severing the chain of stitches between the filled closed bag and the stitch forming mechanism, and means for rendering taut the chain of stitches for the action of the severing means.

2. A filled bag sewing apparatus including in combination stitch forming mechanism, a conveyer located beneath the stitch-forming mechanism and operating to present a filled bag to the stitch forming mechanism, means located in rear of the stitch forming mechanism for severing the chain of stitches between the closed bag and the stitching mechanism, and means for shifting the point of contact of the chain of stitches with the filled bag relative to the stitching mechanism for rendering said chain of stitches taut for the action of the severing means.

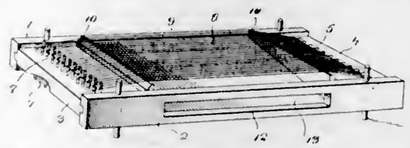
3. A filled bag sewing apparatus including in combination stitch forming mechanism, a conveyer located beneath the stitch-forming mechanism and operating to present a filled bag to the stitch forming mechanism, means for severing the chain of stitches between the closed bag and the stitching mechanism, and means for shifting the position of the bag for rendering taut the chain of stitches between the closed bag and the stitching mechanism for the operation of the severing means.

4. A filled bag sewing apparatus including in combination stitching mechanism, a conveyer for presenting a filled bag to the stitching mechanism, means for severing the chain of stitches between the closed bag and the stitching mechanism, and means for tilting the bag relative to the stitching mechanism after the filled bag is closed for rendering the chain of stitches taut between the bag and the stitching mechanism for the operation of the severing means.

5. A filled bag sewing apparatus including in combination stitching mechanism, a conveyer for presenting a filled bag to the stitching mechanism, means for severing the chain of stitches between the closed bag and the stitching mechanism, means for tilting the bag relative to the stitching mechanism after the filled bag is closed for rendering the chain of stitches taut between the bag and the stitching mechanism for the operation of the severing means, and means located at one side of the bag for preventing the same from toppling over.

[Claims 6 to 14 not printed in the Gazette.]

1,170,304. MACARONI-MAKER. VICTOR MANCINI, Granville, N. Y. Filed May 24, 1915. Serial No. 30,100. (Cl. 107—20.)

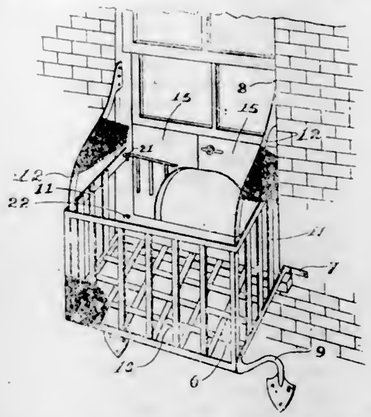


1. A device of the character described comprising an oblong rectangular frame bounding a correspondingly shaped opening, one of the side bars of said frame being provided with a longitudinally extending discharge slot, cutting wires extending over and longitudinally of said opening, and an inclined partition plate within the opening forming a collection tray and an inclined plane sloping toward said discharge slot.

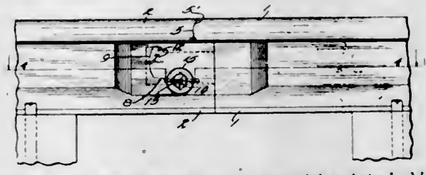
2. A device of the character described comprising an oblong rectangular frame bounding a correspondingly shaped opening, the side bars of said frame being provided with longitudinally extending discharge slots, cutting wires extending over and longitudinally of the opening at the opposite sides of the frame, and a partition disposed within said opening in an inclined position so as to provide opposite collection chambers and surfaces sloping toward the respective slots.

1,170,305. WINDOW-BALCONY. MARIA MINOR MARSHALL, Front Royal, Va. Filed Oct. 5, 1914. Serial No. 865,137. (Cl. 20—1.11.)

In combination, the wall of a building having a window therein, a balcony secured to said wall adjacent said window including a floor, two end walls and a side wall, the side of said balcony adjacent said window being open, a removable side wall for the open side of said balcony, means for supporting said removable wall in operative position, and an interiorly padded receptacle removably supported upon said balcony including a hinged side wall adapted to be supported in vertical position by the removable side wall of said balcony and adapted, when moved to a horizontal position, to overlie the sill of said window.



1,170,306. RAIL-JOINT. MATT E. MATTSON, Rossburg, Minn. Filed Dec. 9, 1914. Serial No. 876,318. (Cl. 239—8.)



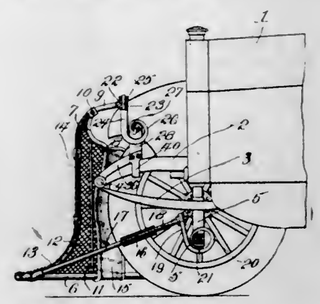
The herein described rail joint comprising interlocking rail ends each formed with a beveled tread termination, the web of one rail being formed with a shoulder to receive one termination of the opposite rail web, a tongue carried by one rail end and formed with a shoulder upon one edge with a notch diagonally opposite the same upon the opposite edge, the opposite rail end being formed with a central opening and an interior notch, said opening being adapted to receive said tongue, a shoulder formed in said central opening for engagement with the shoulder of said tongue and a connecting bolt adapted to be projected through the web of one rail for frictional engagement with the notched portion thereof and with the notched portion of said tongue whereby said rail and tongue are locked in fixed relation.

1,170,307. FENDER FOR AUTOMOBILES, &c. ARTHUR EDWARD MAYZES, Calgary, Alberta, Canada. Filed Aug. 4, 1915. Serial No. 43,668. (Cl. 105—33.)

1. A fender for automobiles including a hanger for pivotal connection with the vehicle at opposite sides of the center thereof, a fender proper carried by said hanger, and means for adjustably connecting the fender proper with the vehicle at a point below and on a line between the points of attachment of the hanger.

2. A fender for automobiles comprising a fender proper, a horizontal transverse fender bar, means yieldingly connecting the fender proper with said hanger bar, means for pivotally connecting the ends of the hanger bar with the machine frame at opposite sides of the latter, and an adjustable connection between the fender proper and the frame at a point below and between the points of connection of the hanger bar therewith, said adjustable connection being adapted to permit of the pivotal adjustment of the fender proper with relation to the surface of the ground.

3. In a fender for automobiles, the combination with the front axle and side bars of the chassis of such vehicle, of a horizontal transverse hanger bar, means connecting said hanger bar with said side bars, a fender yieldingly supported from said hanger bar, and a yielding supporting connection between the fender proper and the front axle.



4. In a fender for automobiles, the combination with the front axle and side frame bars of the vehicle, of a horizontal cross bar detachably and pivotally connected with said frame bars, a fender proper, spring supporting connections between the hanger bar and fender proper, and a spring supporting connection between the fender proper and the front axle, and said connection being adjustable to adjust the fender proper upon the said pivotal connections.

5. In a fender for automobiles, the combination with a vehicle having side frame bars and a front axle, of a horizontal transverse hanger bar, pivotal supporting connections between the same and said frame bars, a fender proper provided with a pair of spaced suspension bars, spring supporting connections between the same and said hanger bar, a bracket connected with the fender proper below and on a line between said suspension bars, a spring support connected with the front axle, and an adjustable connection between the same and said bracket.

[Claims 6 and 7 not printed in the Gazette.]

1,170,308. AIR-CIRCULATING SYSTEM. VICTOR E. MERTZ, New York, N. Y. Filed Mar. 3, 1915. Serial No. 11,804. (Cl. 98—40.)



1. A humefier comprising a pipe adapted to direct a draft of air, means for injecting moisture into the same, a drum connected with the pipe, a drain for the drum, deflector plates mounted in the drum and an air outlet pipe connected with the drum.

2. A humefier comprising a pipe adapted to direct a draft of air, means for injecting moisture into the same, a drum connected with the pipe, a drain for the drum, deflector plates arranged in cruciform relation and pivotally mounted in the drum and an air outlet pipe for the drum.

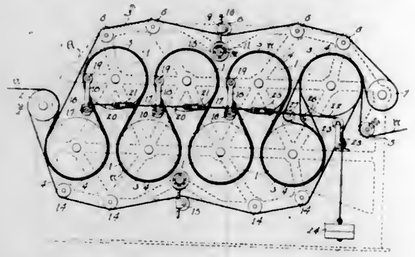
3. A humefier comprising a pipe adapted to direct a draft of air, means for injecting moisture into the same, a conical drum connected with the pipe, a drain for the drum, deflector plates mounted in the drum and an air outlet pipe connected with the drum.

4. A humefier comprising a pipe adapted to direct a draft of air, means for injecting moisture into the same, a conical drum connected with the pipe, a drain for the drum, deflector plates mounted in the drum and arranged in cruciform relation, and an air outlet pipe connected with the drum.

5. A humefier comprising a pipe adapted to direct a draft of air, means for injecting moisture into the same, a drum connected with the pipe, an outlet pipe connected with the drum and a sieve adjustably mounted in the outlet pipe and adapted to be projected into the drum.

[Claims 6 to 8 not printed in the Gazette.]

1,170,309. DRIER SHEET-STEEL FOR PAPER-MACHINES. MICHAEL H. MEYERS, Wausau, Wis. Filed June 4, 1915. Serial No. 32,030. (Cl. 34—48.)



1. A paper drying machine including drier rolls, endless imperforate sheet metal drier belts threaded around the drier rolls so as to receive the sheet of paper between the same and carry it around the drier rolls, and means for compensating automatically for the expansion and contraction of the sheet metal drier belts caused by changes of temperature.

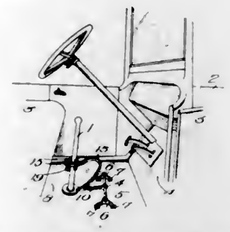
2. A paper drying machine including drier rolls, an endless sheet metal drier belt for carrying the paper around the drier rolls, a tensioning roll for the sheet metal drier belt, a compensating roll also engaging the sheet metal drier belt, and means for causing the compensating roll to bear against the drier belt with a uniform pressure so as to compensate for expansion and contraction due to changes of temperature.

3. A paper drying machine including drier rolls, an endless sheet metal drier belt for carrying the paper around the drier rolls, a tensioning roll for the sheet metal drier belt, a series of swinging arms, compensating rolls carried by the swinging arms and engaging the sheet metal drier belt, connecting means between the several swinging arms, and means acting upon one of the swinging arms for causing the compensating rolls to bear against the sheet metal drier belt with a uniform pressure so as to compensate for expansion and contraction due to changes of temperature.

4. A paper drying machine including drier rolls, an endless sheet metal drier belt for carrying the paper around the drier rolls, tensioning means for the sheet metal drier belt, a series of corresponding swinging arms mounted on each side of the sheet metal drier belt, compensating rolls journaled between the corresponding pairs of swinging arms and engaging the sheet metal drier belt, adjustable link connections between the swinging arms of each series, guide members, a weight, and a cable connected to the weight and end swinging arms and passing around the guide means, said weight acting upon the arms to swing the compensating rolls against the sheet metal drier belt with a uniform pressure so as to compensate for expansion and contraction due to changes of temperature.

1,170,310. AUTOMOBILE-LOCK. WILLIAM J. MILES, Denver, Colo. Filed June 16, 1915. Serial No. 34,406. (Cl. 70—90.)

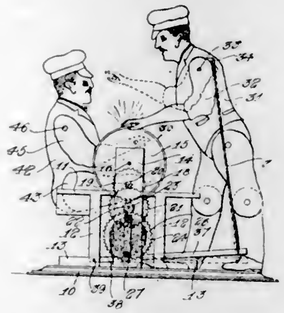
1. A locking device for the gear shift lever of a motor vehicle, for locking said lever in neutral position, comprising a shaft having a radial arm, said shaft being of relatively great length and supported at points relatively far apart, the arm having an extension curving toward the shaft and then away from the shaft, and provided with a shoe at its free end for engaging the lever, and means in connection with the shoe for locking the lever in the shoe.



2. A locking device for the gear shift lever of a motor vehicle, for locking said lever in neutral position, comprising a shaft having a radial arm, said shaft being of relatively great length and supported at points relatively far apart, the arm having a shoe at its free end for receiving the lever, and a shoe having locking means in connection therewith for locking the lever in the shoe.

3. A locking device with a gear shift lever of a motor vehicle, for locking said lever in neutral position, comprising a shaft having a rigid radially extending arm intermediate its ends, said arm having a locking shoe at the end remote from the shaft and the length of the shaft being greater than the distance between the shaft and the shoe, and means at the ends of the shaft for journaling the shaft on the vehicle.

1,170,311. TOY. CALVIN C. MILLER, Summit Hill, Pa. Filed Aug. 25, 1915. Serial No. 47,317. (Cl. 46—40.)



1. A toy comprising a support, a table carried by said support, a motor positioned upon said support adjacent said table and including a driving shaft extending beneath the table and a driven shaft extending above the table, a figure placed in a seated position adjacent said table and provided with a pivotally mounted body portion and with pivotally mounted arms extending in front of the body portion, a grind stone carried by said driven shaft and provided with a handle connected with the hands of the seated figure to impart motion to the figure as the grind stone rotates, a second figure placed in a standing position adjacent said table and having its arms pivotally mounted and extending to hold an article above said grind stone, a lever pivotally mounted beneath said table and having its free end portion extending toward said standing figure to one side thereof, a draw rod connecting the free end portion of said lever with the arms of said standing figure, and an arm carried by said driving shaft and provided with fingers extending to engage said lever as said driving shaft rotates to oscillate the lever and cause the arms of the standing figure to be moved toward and away from said grind stone.

2. A toy of the character described including a support, a table carried by said support, a motor carried by said support and including a driving shaft and a driven shaft, a grind stone carried by said driven shaft, a figure carried by said support adjacent said table and provided with pivotally mounted arms extending toward said grind stone, an ear extending from one of said arms adjacent the shoulder portion thereof, a lever extending beneath the table and pivotally connected therewith, a rod connecting the outer end portion of said lever with the ear of said arm, and an arm carried by said driving shaft and provided with fingers for engaging said lever to oscillate the lever as the driving shaft rotates and rock the arms of the figures toward and away from said grind stone.

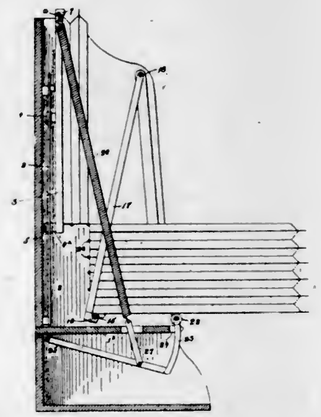
3. A toy comprising a support, a table carried by said support, a motor provided with a driving shaft and with a driven shaft, a grind stone carried by said driven shaft, a figure mounted upon said support adjacent said table and provided with pivotally mounted arms extending toward the grind stone carried by said driven shaft, a lever connected with the arms of said figure, and means carried by said driving shaft for engaging said lever to rock the lever and move the arms of the figure toward and away from said grind stone.

4. A toy comprising a support, a motor carried by said support and including a driven shaft and a driving shaft, a grind stone carried by said driven shaft, a figure carried by said support and provided with pivotally mounted arms extending toward said grind stone, a lever, a rod connecting said lever with the arms of said figure, the weight of the arms normally holding the lever in an elevated position, and means carried by the driving shaft of said motor for engaging said lever to move the same downwardly and swing the arms of the figure upwardly.

5. A toy comprising a support, a motor carried by said support and including a driving shaft and a driven shaft, a grind stone carried by said driven shaft, a figure positioned adjacent the grind stone and provided with pivotally mounted arms, and means actuated from said driving shaft to move the arms of said figure toward and away from the grind stone.

[Claim 6 not printed in the Gazette.]

1,170,312. FILING APPLIANCE. EMERSON B. MOSELEY, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (Incorporated in 1914.) Alliance, Ohio, a Corporation of Ohio. Filed June 20, 1911. Serial No. 634,268. (Cl. 45—2.)



1. An appliance having pendent bearings in its forward portion, a series of vertically movable normally upright frames having their lower ends jointed together and an upright slide guide engaging the rearmost frame, there being connections between the lower end of the foremost frame and the pendent bearings, whereby a rotation of the several frames moves the rotated frames to and fro and the upright frames upward and downward.

2. An appliance having pendent bearings in its forward portion, a series of vertically movable normally upright frames having their lower ends jointed together, and an upright slide guide engaging the rearmost frame, there being pivots on the lower end of the foremost frame engaged in the pendent bearings, whereby a rotation of the several frames moves the rotated frames to and fro and the upright frames upward and downward.

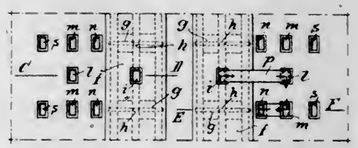
3. An appliance having pendent bearings in its forward portion, a series of vertically movable normally upright frames having their lower ends jointed together, and an upright slide guide engaging the rearmost frame, there being connections between the lower end of the foremost frame and the pendent bearings, whereby a forward rotation of the several frames moves the rotated frames rearward and the upright frames upward, and vice versa.

4. An appliance having pendent bearings in its forward portion, a series of vertically movable normally upright frames having their lower ends jointed together, and an upright slide guide engaging the rearmost frame, there being pivots on the lower end of the foremost frame engaged in the pendent bearings, whereby a forward rotation of the several frames moved the rotated frames rearward and the upright frames upward, and vice versa.

5. An appliance having oscillating bearings in its forward portion, a series of vertically movable normally upright frames having their lower ends jointed together, and an upright slide guide engaging the rearmost frame, there being connections between the lower end of the foremost frame and the oscillating bearings, whereby a rotation of the several frames swings the rotated frames to and fro and the upright frames upward and downward.

[Claims 6 to 33 not printed in the Gazette.]

1,170,313. PROCESS OF BURNING CARBON ELECTRODES. FRANZ NAGELSCHMITZ, Munich, Germany, assignor to the Firm of Georg Mendheim, Munich, Germany. Filed Feb. 15, 1915. Serial No. 8,138. (Cl. 204—54.)



1. The herein described method of producing carbon electrodes, which consists in first gradually heating and then heating to a high temperature formed bodies comprising a mixture of electrode material and tar binder to drive out the volatile constituents of the tar, recovering said constituents, and igniting the same.

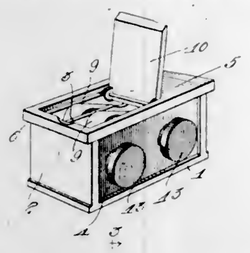
2. The herein described method of producing carbon electrodes, which consists in packing formed bodies comprising a mixture of electrode material and tar binder with disintegrated raw electrode material, first gradually heating and then heating the entire mass to a high temperature to drive out the gases from the electrode material and the volatile constituents from the tar, recovering said gases and volatile constituents and igniting the same.

1,170,314. PEN-WIPER. WILLIAM L. NIEMANN, Mount Olive, Ill. Filed Nov. 6, 1914. Serial No. 870,643. (Cl. 120—108.)

1. In a pen wiper, the combination of a casing, a pair of studs mounted in said casing, a ribbon wound about said studs, a cushion member arranged between said studs over which said ribbon is trained, the upper face of said cushion member being curved, substantially as described.

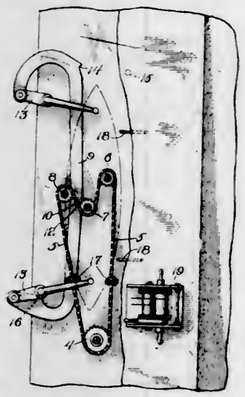
2. In a pen wiper, the combination of a casing, studs mounted in said casing, a ribbon wound about said studs, a cushion member arranged between said studs over which said ribbon is trained, means arranged exteriorly

of the casing to rotate said studs and move said ribbon over said cushion member, a spring for tensioning said



ribbon, the upper face of said cushion member being curved, substantially as described.

1,170,315. DAVIT FOR LIFE-BOATS. OLOF NILSEN, Hoboken, N. J. Filed Sept. 19, 1914. Serial No. 862,471. (Cl. 9—22.)



1. In a life boat apparatus, a pair of davits, a single lever connecting said davits, a conveyer attached to said lever, and means for moving said conveyer to shift said lever and swing said davits to the outboard or inboard positions.

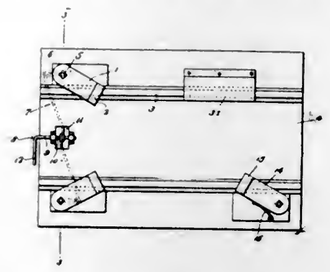
2. In a life boat apparatus, a pair of davits, a lever connecting said davits, a sprocket chain secured to said lever, and means for operating said sprocket chain to shift said lever and swing said davits to the outboard or inboard positions.

3. In a life boat apparatus, a pair of davits, a single lever connecting said davits, means for shifting said lever, and a guide for causing said lever to follow a predetermined path in its shifting movement to swing said davits successively to the outboard or inboard positions.

4. In a life boat apparatus, the combination with a pair of davits, of a shaft having an operating device located adjacent said davits, a sprocket wheel on said shaft, a series of idler sprockets, a chain passed over all of said sprockets, and a lever connecting said davits and secured to a link of said chain.

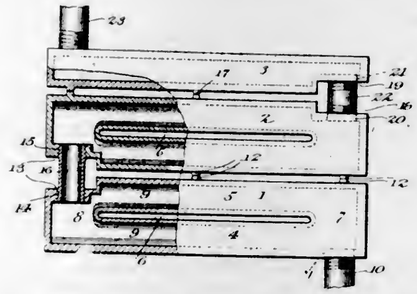
1,170,316. AUTOMATIC CAR-CAGER. JAMES A. NOLAN, Bowerston, Ohio. Filed June 26, 1914. Serial No. 847,502. (Cl. 187—97.)

A car cage having track rails thereon, stop blocks pivotally mounted on the cage and swinging in a horizontal plane, each stop block having a terminal abutment to overlie the rails when the stop blocks are in operative positions, pivot rods on which the stop blocks are secured and having crank ends, a main operating crank pivotally mounted in the cage, one terminal of said latter crank extending in advance of one end of the cage, and levers connecting the stop block pivot rod cranks with the main crank to simul-



taneously and oppositely actuate the stop blocks in a single movement of the main crank.

1,170,317. WATER-GRATE. JAMES M. NYE, Kansas City, Kans. Filed June 23, 1914. Serial No. 846,894. (Cl. 122—374.)



1. A grate comprising hollow members each formed with a water chamber and having spacers on their opposing sides and also having recesses in their opposing sides at one end, and right and left hand threaded nipples screwed in correspondingly threaded openings in the recessed portions of said members and detachably connecting them together.

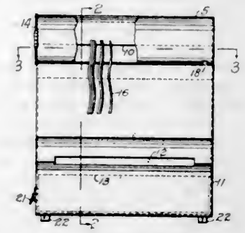
2. A grate comprising hollow members each formed with a water chamber and having spacers on their opposing sides and also having recesses in their opposing sides at one end, and right and left hand threaded nipples screwed in correspondingly threaded openings in the recessed portions of said members and detachably connecting them together, the said connecting nipples being successively arranged at opposite ends of the grate and so that water is caused to pass in opposite directions through each connected pair of members throughout the grate.

1,170,318. FORK OR KNIFE RECEPTACLE. BENJAMIN OHRBACH, Brooklyn, and CHARLES H. ZWERLING, New York, N. Y., assignors to Morris Bernard Kassel, New York, N. Y. Filed July 24, 1914. Serial No. 852,822. (Cl. 65—65.)

1. A receptacle comprising, a casing having a longitudinal slot at its bottom for receiving forks or the like, a guide fixed within the said casing above the said longitudinal slot, the said guide being composed of an integral member having one side parallel to the said slot and another side being connected to the said casing.

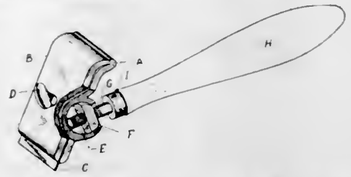
2. A receptacle comprising, a casing having two longitudinal slots at its bottom for receiving forks or the like, two guides fixed within the said casing above the said longitudinal slots and parallel to them, adapted to hold the prongs of inserted forks, the said guides being composed of an integral member.

3. A receptacle comprising, a casing having two longitudinal slots at its bottom for receiving forks or the like, two guides fixed within the said casing above the said longitudinal slots and parallel to them, adapted to hold the



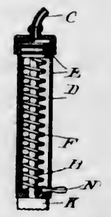
prongs of inserted forks, the said guides being composed of an integral member having two sides parallel and the third side being connected to the casing and a supporting base for the said casing.

1,170,319. FLOOR-SCRAPER. WALTER A. PAPWORTH, Syracuse, N. Y., assignor to E. C. Stearns & Company, Syracuse, N. Y. Filed Apr. 8, 1912. Serial No. 689,298. (Cl. 145—47.)



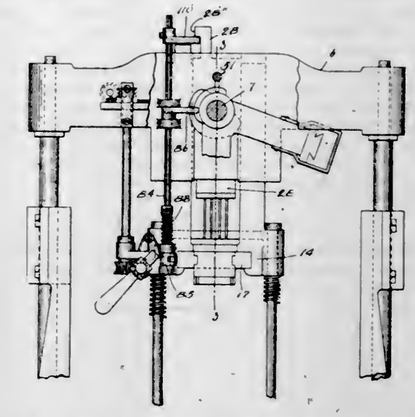
A tool comprising a member provided with a socket having an opening communicating therewith through an integral wall and of lesser diameter than the socket interior, a clamping nut of a form to permit of its entering the socket through said opening and to assume a position within the socket to span said opening, said nut having an aperture registering with said opening when the nut is turned into said spanning position, a handle element and a screw shank on the handle element fitted to the nut aperture and adapted to exert a force on the nut to effect a clamping engagement of the nut and socket, to secure the parts in their relatively adjusted positions.

1,170,320. AUTOMOBILE-JACK. WILLIAM D. PATTERSON, Jr., Marysville, Kans. Filed Aug. 28, 1914. Serial No. 859,110. (Cl. 138—9.)



A lifting jack for automobiles comprising, in combination with a cylinder adapted to be attached to a vehicle frame, a piston mounted within the cylinder, a stem secured to the under surface of the piston and extending through an aperture in the bottom thereof, a foot upon the lower end of the piston stem, a cap fitted over the upper end of the cylinder and having an inlet pipe communicating with an aperture therein, a pawl passing through the lower portion of the cylinder and adapted to engage said stem, a spring upon the stem and interposed between said piston and pawl.

1,170,321. HEELING-MACHINE. GEORGE M. PETTENGILL, Haverhill, Mass., assignor, by mesne assignments, to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed June 11, 1914. Serial No. 844,546. (Cl. 1—35.)



1. In a heeling machine of the character described, a vertically movable head, a nail plate, movable beneath said head between driving and pricking positions, a vertically movable awl carrier disposed adjacent said head, means to connect and disconnect said head and said carrier, a locking device supported independently of said head and movable between positions to lock said awl carrier in raised position and to unlock it to permit it to move downwardly with the head, means, actuated on movement of the nail plate to driving position, to move said locking device into locking position, and means to return said locking device to unlocking position when the nail plate is moved into pricking position.

2. In a heeling machine of the character described, a vertically movable head, a nail plate, movable beneath said head between driving and pricking positions, a vertically movable awl carrier disposed adjacent said head, means to connect and disconnect said head and said carrier, a locking device supported independently of said head and movable between positions to lock said awl carrier in raised position and to unlock it to permit it to move downwardly with the head, an actuator for said locking device arranged to be engaged by the nail-plate, as it is moved from pricking to driving position, to move said locking device to locking position, and means to return said locking device to unlocking position when the nail-plate is moved to pricking position.

3. In a heeling machine of the character described, a vertically movable head, a nail-plate movable beneath said head between pricking and driveng positions; a turret mounted on the head movable to driving and top-lift spanking positions, a vertical movable awl-carrier disposed adjacent said head, means to connect and disconnect said head and said carrier, a locking device, constructed and arranged simultaneously to lock said turret in spanking position and said carrier in raised position and movable between positions to lock and unlock the same, means, actuated on movement of the nail-plate to driving position, to move said locking device to locking position and means to return said device to unlocked position when said nail-plate is moved to pricking position.

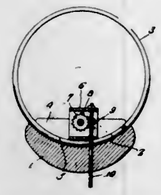
4. In a heeling machine of the character described, a vertically movable head, a nail-plate movable beneath said head between driving and pricking positions, a vertically movable awl-carrier disposed adjacent said head, means to connect and disconnect said head and said carrier, a locking device supported independently of the head, inter-engaging projections on said locking device and carrier arranged to support said carrier in raised position when the head is lowered for the driving operation, and means to

move one of said projections into engagement with the other when the nail-plate is moved from pricking to driving position, and to move it out of engagement therewith when the nail plate is returned to pricking position.

5. In a heeling machine of the character described, a head vertically movable to perform the heel-pricking and nail-driving operations, successively, a vertically movable awl carrier disposed adjacent said head, means to connect and disconnect said head and said carrier, a locking device supported independently of said head and movable to support said carrier in its raised position independently of the head and to release it to permit it to be lowered with the head, and actuating means to move said locking device alternately between its supporting and releasing positions to correspond to the successive nail-driving and heel-pricking movements, respectively, of said head.

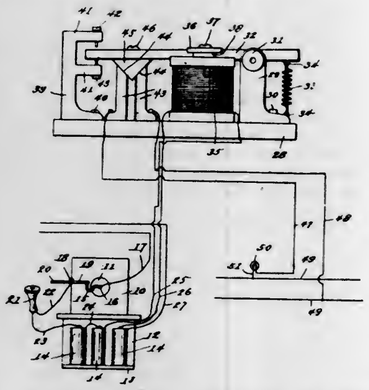
[Claim 6 not printed in the Gazette.]

1,170,322. SPRING-TIRE. WILLIAM T. PEYTON, Weiser, Idaho. Filed Feb. 9, 1915. Serial No. 7,049. (Cl. 152—8.)



A spring tire comprising in combination with a grooved rim, a tire member formed of a coil spring having a portion seated in the groove, an annular band engaging the inner surface of that portion of the tire which seats in said groove, a yoke having one extremity fixed to one end of said band and its remaining extremity adjustable with respect to the remaining end of said band, a nut adjustably mounted on one end of said band and engaging the adjustable end of said yoke, and a worm shaft passing radially through said rim and having a squared portion arranged exteriorly thereof and further projecting through said yoke and coöperating with said nut whereby the latter may be adjusted upon the end of said band, said yoke frictionally engaging said nut at all times and forming a support for said shaft.

1,170,323. TELEPHONE-SIGNAL-OPERATING DEVICE. FRANK E. PHILLIPS, Wells, Me. Filed Nov. 12, 1912. Serial No. 730,835. (Cl. 179—81.)



1. In a signal system for telephones, the combination with a telephone apparatus including means for completing the receiver and transmitter circuit only when the apparatus is brought into use for audibly communicating, of an electric light, a light circuit, switch points connected in said light circuit and separated one from the other to form a gap in said circuit, and means connected in the receiver and transmitter circuit to become operative upon closing said receiver and transmitter circuit to bridge the switch points and thus complete the lamp circuit.

2. In a signal system for telephones, the combination of a telephone apparatus including means for completing the receiver and transmitter circuit only when the apparatus is brought into use for audibly communicating, an electromagnet disposed in the said receiver and transmitter circuit of said telephone apparatus, an armature for said electromagnet, a light circuit having a gap therein, switch points connected in said circuit at the gap and separated one from the other, a bridge piece connected with said armature adjacent the location of said switch points, and all of said parts so arranged that as the receiver and transmitter circuit is closed this current is passed through the electromagnet and the bridge piece is brought to a relation to contact across said switch points and complete the connection through the lamp circuit.

1,170,324. DILATING-FORCEPS. MYRON B. POMERENE, Berlin, Ohio. Filed Feb. 2, 1912. Serial No. 674,984. (Cl. 128—28.)

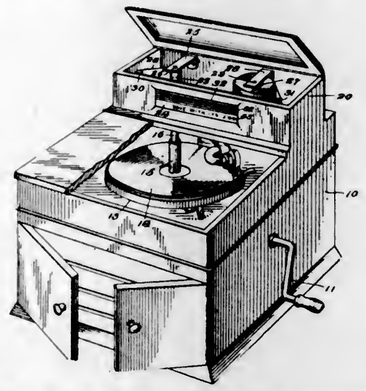


1. Dilating forceps having substantially straight arms with smooth-edged flanges forming finger rests on one side only of the ends thereof.

2. Dilating forceps having substantially straight arms with smooth-edged concaved flanges forming finger rests on one side only of the ends thereof.

3. Dilating forceps including two substantially straight arms jointed together and having smooth-edged finger rests on one side only of the ends thereof, and a third arm detachably hinged on the joint of the two arms and having a horn-shaped blade on its free end.

1,170,325. ATTACHMENT FOR MUSICAL INSTRUMENTS. ARCHIE B. POPOSKEY, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,150. (Cl. 40—28.)



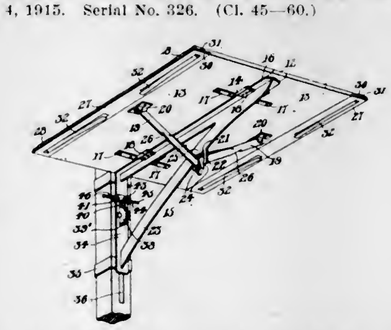
1. In a device of the class described, in combination with a phonograph having a driving spindle, a turn-table, a phonetic record carried by said turn-table, a moving tape, indications on said tape corresponding with the phonetic sounds from said record and positive connection between said phonetic record and said tape for actuating said moving tape in synchronism with said record.

2. In a device of the character described comprising in combination a phonograph having a driving spindle, a turn-table thereon, a phonetic record on said turntable, a moving tape bearing indications similar to the phonetic sounds from said record, a housing having a restricted visual opening for exposing a restricted portion of said moving tape, a detachable shaft having positive engagement with said musical record, said moving tape being detachably supported by said shaft and the indications on said tape being exposed through said visual opening in synchronism with the phonetic sounds of said musical record.

3. In a device of the character described, a driving shaft, a turntable carried thereby, a musical record detachably carried by said turntable, said musical record having a socket formed therein, a detachable shaft for engagement with said driving shaft and an offset carried by said detachable shaft for engagement in the socket formed by said musical record.

4. In a device of the class described, in combination, a driving shaft, a turntable carried thereby, a musical record carried by said turntable, said musical record having frictional contact with said turntable, a supplemental shaft in alinement with said driving shaft, said supplemental shaft having an irregular head carried thereby, a spool detachably carried by said irregular head and means for driving said supplemental shaft by positive engagement of a portion thereof with said musical record.

1,170,326. ADJUSTABLE BOOK RACK AND STAND. ANDREW A. POSIVAK, South Bethlehem, Pa. Filed Jan. 4, 1915. Serial No. 326. (Cl. 45—60.)

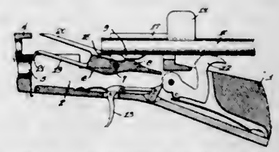


A device of the class described comprising the combination with a post having a longitudinal side slot therein, a toothed rack secured within said slot, a bracket vertically slidable upon the said post and having its inner side provided with a slot adjacent the said post slot, a gear journaled in the said bracket slot and positioned in constant engagement with the said rack, a yoke secured to the inner side of the said bracket and having a longitudinal slot in the front side thereof terminating at substantially the center of such side, a locking block for the said gear, a bolt carried by the said block and extending through the said yoke slot, oppositely-arranged operating rods secured to the said block, and a normal positioning spring carried by one of the said rods whereby the said block is normally positioned in engagement with the said gear and with the bolt seated at the inner end of the said yoke slot.

1,170,327. COMBINED BREECH-LOADING SHOTGUN AND RIFLE. WILLIAM H. POTTER, Cleghorn, Iowa. Filed June 22, 1915. Serial No. 35,642. (Cl. 42—17.)

1. In a breech-loading mechanism for firearms, a pivoted carrier, arms arranged in pairs to form a part of said carrier, one pair of the mentioned arms affording a support for the cartridges applied to said breech-loading mechanism and the other pair of arms affording a support for the cartridges extracted from the barrel, and means to oscillate the carrier during operation.

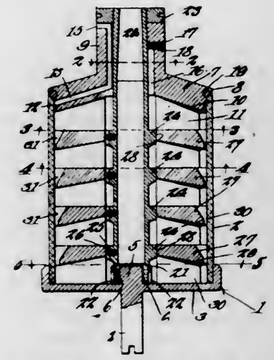
2. In a firearm; the combination with a barrel, stock and receiver; of a breech-loading mechanism comprising a pivoted carrier, arms arranged in pairs and in parallelism to form a part of said carrier, one pair of the mentioned arms affording a support for the cartridges applied to said breech-loading mechanism and the other pair of arms affording a support for the cartridges extracted from the barrel, and correlated cam devices associated with said carrier to control operation thereof, substantially as described.



3. In a firearm, the combination with a barrel, stock and receiver, of a breech-loading mechanism comprising a pivoted carrier, arms arranged in pairs and in parallelism to form a part of said carrier, one pair of the mentioned arms affording a support for the cartridges supplied to said breech-loading mechanism and the other pair of arms affording a support for the cartridges extracted from the barrel, a cam surface formed upon the carrier, a sliding bolt, and a correlated cam surface formed upon the bolt to engage with the first mentioned cam surface that the carrier may be actuated, and means directly limiting movement of the bolt.

4. In a firearm, the combination with a stock, receiver and barrel, of a breech-loading mechanism including a magazine, a carrier pivoted within the receiver to transfer the cartridges from said magazine to the barrel, arms arranged in pairs and in parallelism to form a part of the carrier, one pair of the mentioned arms affording a support for the cartridges supplied thereto from the magazine and the other pair of arms affording a support for the cartridges extracted from the barrel, a cam surface formed upon the carrier, a sliding bolt, an extension integral with the bolt and normally fitting a recess therefor in the receiver to lock the bolt against longitudinal movement, means to limit the sliding movement of the bolt, and a cam surface formed upon the bolt to engage with the cam surface of the carrier upon sliding movement of the bolt to actuate the carrier, substantially as described.

1,170,328. CREAM-SEPARATOR. HARRY E. POWELL, Kokomo, Ind. Filed July 3, 1915. Serial No. 37,995. (Cl. 233—35.)



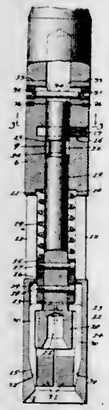
1. In a separator, a rotary bowl, superposed disks therein of smaller diameter than the internal diameter of the bowl, the disks having depending radial wings fitting snugly within the bowl, the wings of the lowermost disk seating upon the bottom of the bowl, and the other wings seating upon the disks below them, the disks having central openings, the lower surfaces of the disks being inclined from the margins of the disks toward their centers, and the peripheries of the disks having upper bevels.

2. In a separator, a bowl having a stud upstanding centrally from its bottom and provided with a flattened side, a cover for the bowl, an upright tubular member having its lower end threaded upon the stud and provided with an outlet opening coöperating said flattened side of the stud, the tubular member projecting upwardly through the cover, a member engaged upon the tubular member and seating upon the cover for holding it in place, and superposed annular separating members within the bowl having means for separating them from one another and from the bowl bottom and cover.

3. In a separator, a bowl, an axial upstanding tubular member within the bowl having a lower opening, and having vertically spaced collars provided with vertical channels, annular separating members within the bowl around said collars, and means for regulating the flow of liquid through said channels.

4. In a separator, a bowl, an axial upstanding tubular member within the bowl having a lower opening, and having vertically spaced collars provided with vertical channels, annular separating members within the bowl around said collars, and adjusting screws threadedly engaging the collars and projecting into said channels.

1,170,329. TOOL-FISHING SOCKET. CHESTER A. RASMUSSEN and ROBERT M. CLARK, Yenangyaung, Upper Burmah, India. Filed Oct. 28, 1914. Serial No. 869,124. (Cl. 57—9.)

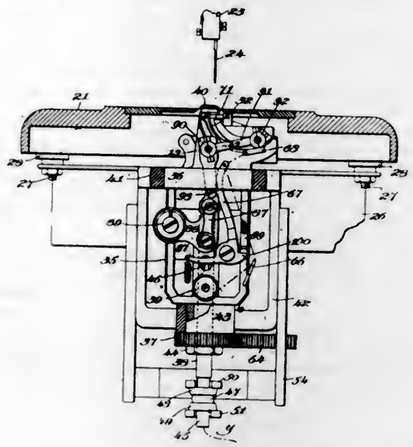


1. A device of the class described, comprising a casing, a plunger therein, a clutch carried by said plunger, means for actuating said clutch in the upward movement of said casing, means for preventing the operation of said clutch in the upward movement of said casing, and a frangible element for normally preventing the operation of said clutch prevention means.

2. A device of the class described, comprising a casing, a plunger therein provided with an annular groove, a clutch on said plunger, means on said casing for actuating said clutch, in the upward movement of said casing, a latch on said casing, and a frangible element preventing the entry of said latch into said groove, while unbroken, and means for breaking said frangible element.

3. A device of the class described, comprising a casing, a plunger therein provided with an annular groove, a spring for moving said plunger downwardly in said casing, a plurality of flexible jaws on said plunger forming a tool clutch, the interior of said casing being tapered to actuate said clutch jaws inwardly, a latch on said casing, a frangible pin in said casing, above said plunger and normally maintaining said latch and groove at an inoperative distance from each other, and a detachable plug for permitting access to said pin to replace the same, and means for breaking said pin.

1,170,330. BUTTONHOLE-STITCHING MACHINE. FRED A. READ, Lynn, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Aug. 9, 1913. Serial No. 783,893. (Cl. 112—4.)



1. In a buttonhole stitching machine the combination of an upper needle having means for reciprocating it, and an under sewing mechanism comprising a shiftable stock, a movable actuator shiftable with the stock, and the following carried by the stock: an under needle carrier, a swinging lever pivoted near its lower end and swung by the actuator, a link between the lever's upper end and the carrier, and a device for effecting up-and-down adjustment of the connection between said link and lever to vary the needle travel.

2. In a buttonhole stitching machine the combination of an upper needle having means for reciprocating it, and an under sewing mechanism comprising a shiftable stock, a movable actuator shiftable with the stock, and the following carried by the stock: an under needle carrier, a swinging lever pivoted near its lower end and swung by the actuator, a link between the lever's upper end and the carrier, and a device for adjusting the effective length of the upwardly extending portion of said lever to vary the needle travel.

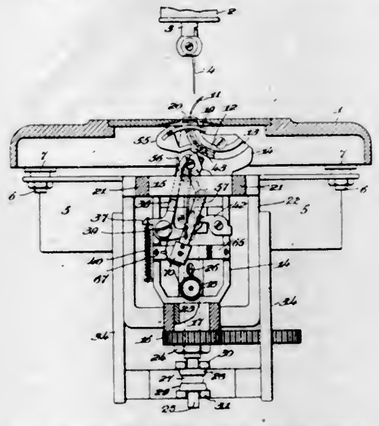
3. In a buttonhole stitching machine the combination of an upper needle having means for reciprocating it, and an under sewing mechanism comprising a shiftable stock, a movable actuator shiftable with the stock, and the following carried by the stock: an under needle carrier, a swinging lever pivoted near its lower end and swung by the actuator, a link between the lever's upper end and the carrier, the lever shaped with a recessed portion adjacent the actuator, a stud located loosely in such recess affording a pivot for a link, and said last named link, the same connecting the actuator and lever.

4. In a buttonhole stitching machine the combination of an upper needle having means for reciprocating it, and an under sewing mechanism comprising a shiftable stock, a movable actuator, and the following carried by the stock: an under needle carrier, connections from the actuator for reciprocating said needle carrier, a looper and carrier, a carriage for said looper carrier for guiding it toward and from the needle path, a lever arm pivoted on the stock, an up-and-down moving link directly from said actuator to said lever arm and a side moving link directly between said lever arm and said carriage.

5. In a buttonhole stitching machine the combination of an upper needle having means for reciprocating it, and an under sewing mechanism comprising a shiftable stock, a movable actuator, and the following carried by the stock: an under needle carrier, connections from the actuator for reciprocating said needle carrier, a looper and carrier, a longitudinally sliding guide-carriage, means mounting said looper carrier on said guide-carriage to have lateral movement relatively thereto, connections from the actuator for sliding the carriage to advance and retract the looper carrier, and a device for causing displacement of the looper carrier laterally with respect to and during carriage movement.

[Claim 6 not printed in the Gazette.]

1,170,331. BUTTONHOLE-STITCHING MACHINE. FRED A. READ, Lynn, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Sept. 18, 1913. Serial No. 790,387. (Cl. 112—4.)



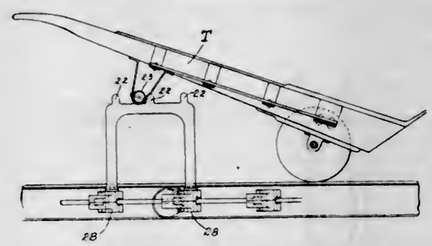
1. In a buttonhole stitching machine, stitching mechanism including in combination, a work support, a reciprocable upper needle, a shiftable stock below the work support, and the following elements carried by the stock, an actuator operable independently of the stock's shifting but in harmony with the upper needle, a reciprocable under needle actuated from said actuator, a looper adapted to coöperate with said under needle by a compound movement, a downwardly extending rigid looper-carrying lever, a universal pivot between the stock and lever located a substantial distance beneath said looper, a connection whereby the actuator bodily swings the lever to and fro about said universal pivot, and an automatic device located substantially below said universal pivot and coöperating with said lever for causing said lever to slightly vibrate about said universal pivot laterally to its to and fro movements.

2. In a buttonhole stitching machine, stitching mechanism including in combination, a work support, a reciprocable upper needle, a shiftable stock below the work support, and the following elements carried by the stock, an actuator operable independently of the stock's shifting but in harmony with the upper needle, a reciprocable under needle actuated from said actuator, a looper adapted to coöperate with said under needle by a compound movement, a downwardly extending rigid looper-carrying lever, a universal pivot between the stock and lever located a substantial distance beneath said looper, a connection whereby the actuator bodily swings the lever to and fro about said universal pivot, and an automatic device for causing said lever to slightly vibrate about said universal pivot laterally to its to and fro movements, said device comprising a cam and follower mounted one upon the lever and the other upon the stock substantially below said universal pivot and adapted to determine the looper's compound movement.

3. In a buttonhole stitching machine, stitching mechanism including in combination, a work support, a reciprocable upper needle, a shiftable stock below the work support, and the following elements carried by the stock, an actuator operable independently of the stock's shifting but in harmony with the upper needle, a reciprocable under needle actuated from said actuator, a looper adapted to coöperate with said under needle by a compound movement, a horizontal stud fixed on the stock a substantial distance beneath the looper, a sleeve movable about said stud, a recessed lever surrounding said sleeve, gimbal pivots between said lever and sleeve, said lever extending upwardly and rigidly carrying the looper at its upper end, a connection whereby the actuator bodily swings the lever to and fro, and an automatic device for causing said lever to slightly vibrate laterally to its to and fro movements.

4. In a buttonhole stitching machine, stitching mechanism including in combination, a work support, a reciprocable upper needle, a shiftable stock below the work support, and the following elements carried by the stock, an actuator operable independently of the stock's shifting but in harmony with the upper needle, a reciprocable under needle actuated from said actuator, a looper adapted to coöperate with said under needle by a compound movement, a downwardly extending rigid looper-carrying lever, a universal pivot between the stock and lever located a substantial distance beneath said looper, a connection whereby the actuator bodily swings the lever to and fro about said universal pivot, an adjustable follower mounted on said lever a substantial distance below said pivot, and a suitably-shaped cam fixed to said stock adapted to be engaged by the follower during the lever's to and fro movements for determining its compound movements.

1,170,332. TRUCK-CONVEYER. JESSE W. RENO, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 14, 1914. Serial No. 824,619. (Cl. 104—18.)



1. In a truck conveyer, the combination with a conveyer chain, of a carrier movable with said chain and adapted to engage and support one end of a truck.

2. In a truck conveyer, the combination with a conveyer chain, of a carrier movable with said chain and adapted to engage and support the forward end of a truck.

3. In a truck conveyer, the combination with a conveyer chain, of a detachable carrier movable with said chain and adapted to engage a truck.

4. In a truck conveyer, the combination with a conveyer chain, of a detachable carrier movable with said chain and adapted both to support one end of a truck and to haul said truck.

5. In a truck conveyer, the combination with a floor having a channel or groove formed therein, of plates secured to the floor above said channel and separated by a space forming a relatively narrow slot, a conveyer chain movable in said channel, and a detachable carrier extending through said slot and engaging said chain.

[Claims 6 to 12 not printed in the Gazette.]

1,170,333. MOUTH-EXTENDER. EDWARD REYER, Scranton, Pa. Filed Aug. 5, 1914. Serial No. 855,291. (Cl. 128—24.)

1. In a mouth expander, a plate having a depression in the side thereof, the walls of the depression forming shoulders extending laterally from the plate and spaced from the edges thereof, and lip supporting means projecting from the edges of the plate.

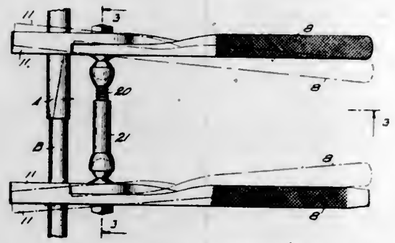
2. In a mouth expander, a plate having a depression in the side thereof, the body of the plate being bent into U-form, and portions of the walls of the depression forming shoulders extending laterally into the opening of the U, for supporting the lips, and other lip supporting means projecting from the plate.



3. In a mouth expander, a plate having a depression deeper at the central portion than elsewhere, the body of the plate being bent into U-form, and portions of the walls of the depression forming shoulders extending laterally into the opening of the U, for supporting the lips, and other lip supporting means projecting from the plate, and comprising flanges adjacent to the bent portion.

4. In a mouth expander, an elongated plate member adapted to enter the mouth and extend between the teeth and cheek, lip supporting means formed on opposite edges of said plate and adapted to hold the lips in expanded position, said plate being formed with longitudinally extending depression intermediate said lip supporting means to permit access to the labial side of the teeth when the expander is in operative position, and additional lip supporting flanges formed by the walls of said depression intermediate said first mentioned lip supporting means.

1,170,334. PLIERS. FRANK HENRY RIGGS, Rochester, N. Y. Filed Oct. 23, 1915. Serial No. 57,477. (Cl. 81—48.)



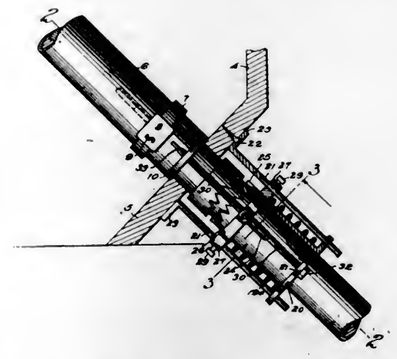
1. A tool as characterized comprising a plurality of hand-gripped pliers; and means holding said pliers in spaced relation, said means embodying telescopic members, each forming with one of said pliers a ball-and-socket joint.

2. A tool as characterized comprising a plurality of hand-gripped pliers; means holding said pliers in spaced relation, said means embodying telescopic members, each forming with one of said pliers a ball-and-socket joint; and means for expanding and contracting the length of said members, said means embodying a screw and a threaded sleeve.

3. A tool as characterized comprising a plurality of hand-gripped pliers having pivotally connected members; pivots for said members having each a ball formed at one end thereof and laterally extended from said pliers; and a spreading member having sockets at the ends thereof for engaging said balls for forming a flexible joint therewith.

4. A tool as characterized comprising a plurality of hand-gripped pliers having pivotally connected members; pivots for said members having each a ball formed at one end thereof and laterally extended from said pliers; said spreading member consisting on the one side of a feed screw and on the other side of an internally threaded sleeve for engaging said screw.

1,170,335. AUTOMOBILE-LOCK. GRANT RISDON, Jersey City, N. J. Filed June 17, 1915. Serial No. 34,619. (Cl. 70—90.)



1. In an automobile lock, the combination with a foot board having a steering column secured thereto, and a revoluble steering post extending through said steering column and said foot board, of a clutch member mounted rigidly upon the steering post, a sleeve provided with another clutch member and loosely encircling said steering post, guide members engaging the sleeve, for preventing rotation of the latter, means connected with the sleeve for sliding said sleeve upon said steering post in the general direction of the length thereof, and a locking mechanism including a member connected with the sleeve, and a lock mounted upon a fixed part and adapted to be engaged by said member to hold said sleeve in fixed position while said clutch members are in engagement.

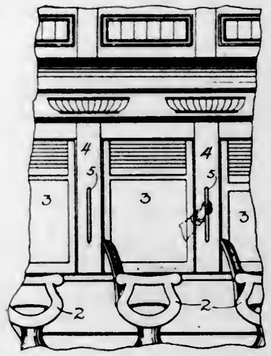
2. The combination of a fixed steering column, a revoluble steering post extending through said steering column, a clutch member mounted rigidly upon said steering post and revoluble therewith, a sleeve loosely encircling said steering post, a second clutch member carried by said sleeve and adapted to engage and disengage said first mentioned clutch member when said sleeve is moved back and forth in the direction of the length of said steering post, fixed guide rods on which the sleeve is mounted for preventing said sleeve from turning with said steering post while permitting said sleeve to slide in the direction of the length of said steering post, a rod carried by said sleeve, and a lock mounted upon the steering column and provided with means for holding and releasing said rod.

3. A device of the character described, comprising a revoluble steering post, a ring mounted fixedly thereupon and provided with a surface for enabling said ring to serve as a clutch member, a sleeve loosely encircling said steering post and provided with a surface for enabling said sleeve to serve as a clutch member mating said first mentioned clutch member and adapted to engage and disengage the same, a flange carried by said sleeve, a spiral spring encircling said sleeve and engaging said flange, means for engaging said spiral spring in order to enable the same to be compressed by movement of said sleeve and said flange, means for shifting said sleeve bodily in the general direction of the length of said steering post, a locking mechanism controllable at the will of the operator for securing said sleeve in a position at one of the limits of its travel.

4. A device of the character described, comprising a footboard, a steering column mounted rigidly thereupon, a steering post extending through said steering column and said footboard and revoluble relatively to the same, a clutch member mounted rigidly upon said steering post, a second clutch member loosely encircling said steering post and adapted for engagement with and disengagement from said first mentioned clutch member, a flange carried by said second mentioned clutch member and provided with eyes, guide rods mounted rigidly upon said footboard and extending through some of said eyes of said flange in order to prevent rotation of said second mentioned clutch member, means for sliding said second mentioned clutch member in the general direction of the length of said steering post, a locking mechanism for holding said second mentioned clutch member in engagement with said first-mentioned clutch member in order to prevent rotation of said steering post.

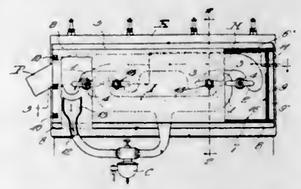
5. In an automobile lock, the combination with a fixed steering column, and a revoluble steering post extending through said steering column, of a clutch member mounted rigidly upon the steering post, a sleeve provided with another clutch member and loosely encircling said steering post, the said sleeve being provided with a pair of oppositely disposed slots, and having a flange at its lower end provided with openings, a ring encircling said sleeve and provided with eyes, fixed guide members extending through openings in the flange, and through corresponding eyes in said ring, the said ring being provided with lugs extending into the slots in said sleeve, means connected with said sleeve for sliding the same upon said steering post to engage and disengage the said clutch members, and locking mechanism for holding said sleeve in fixed position while said clutch members are in engagement.

1,170,336. SAFETY-HANDHOLD. JAMES N. ROBERSON, Wadley, Ga. Filed Dec. 23, 1913. Serial No. 808,450. (Cl. 105—19.)



The combination with a closed car having spaced transverse seats therein, of vertically disposed grab handles rigidly secured to the side wall of the car at approximately the center of the spaces between the seats so as to extend forwardly of the seats when the same are turned in either direction, said handles being mounted independently of the seats and being arranged within easy reach of the occupants thereof to steady them while the occupants are entering and leaving the seats.

1,170,337. AIR-HEATER FOR CARBURETERS. FREDERICK L. ROBINSON and WALTER BELL, Cheyenne, Wyo. Filed Sept. 2, 1915. Serial No. 48,735. (Cl. 123—122.)



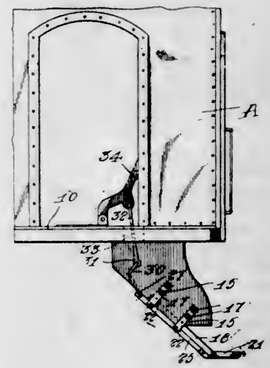
1. The combination with an internal combustion engine having the intake and exhaust manifolds on one of its sides; of a casing surrounding said manifolds and having an open side abutting the side of the engine, a carbureter connected to the intake manifold, an air intake for said carbureter disposed within said casing, said casing also having an air inlet and means for attaching said casing to the engine.

2. The combination with an internal combustion engine having intake and exhaust manifolds on one of its sides; of a casing surrounding said manifolds and having an open side abutting the side of the engine, a carbureter connected to the intake manifold, an air intake for said carbureter extending within said casing, said air intake having a flared open end disposed adjacent the exhaust pipe at one end of the casing, the opposite end of said casing having an air inlet adjacent its top, and means for attaching said casing to the engine.

3. The combination with an internal combustion engine having intake and exhaust manifolds on one of its sides; of stud bolts extending from the side of said engine between the inlet and outlet ends of the manifolds, clamping yokes on said stud bolts for attaching manifolds to the engine; nuts on the threaded end of said bolts for maintaining the manifolds in operative position, a casing surrounding said manifolds and having an open side abutting the side of the engine, said casing having a plurality of openings therein adapted to receive the outer ends of said stud bolts, nuts on the ends of said bolts for holding the casing in operative position, a carbureter connected to said intake manifold, an air intake for said carbureter opening within the casing, said casing having an air inlet in its opposite end.

4. The combination with an internal combustion engine having intake and exhaust manifolds on one of its sides; of a casing surrounding said manifolds and comprising a box whose top and bottom and one side are formed of a single piece of sheet metal substantially rectangular in shape, the longitudinal edge portions of which are bent laterally to provide said top and bottom, laterally extending flanges formed on the longitudinal free edges of the top and bottom and adapted to bear against the side of the engine, ends formed of single pieces of sheet metal, the edges of which have laterally extending flanges adapted to bear against the inner surfaces of the first-mentioned part of the box, and to be secured thereto, one of said ends having an air inlet formed therethrough, a carbureter connected to the intake manifold, an air intake for the carbureter opening into said box, the opening being disposed at the opposite end of the casing from the air inlet, and means for attaching said casing to the engine.

1,170,338. EXTENSION CAR-STEP. JOHN P. RODENBUR, Duluth, Minn. Filed June 3, 1915. Serial No. 31,917. (Cl. 105—87.)

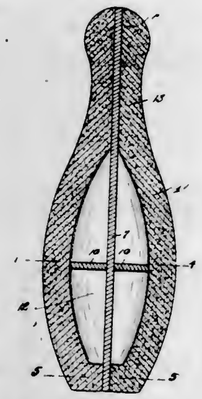


1. In an extension car step, the combination with fixed steps including side shield members, strap members secured to the outer faces of said side shield members and having their lower ends bent under the inclined rear edges of said side shield members and directed upwardly parallel

with the latter, spaced bearing rollers mounted in the upwardly directed ends of said strap members and the parallel portions of said side shield members, an extension step, guide strips secured to the under face of said extension step and having their main portions twisted and slidably engaged in said upwardly extended ends of said strap members between said rollers, the upper ends of said guide strips being bent at right angles for engagement with the uppermost strap member to limit downward movement of said extension step, a lever, and operative connections between said lever and said extension car step to move the latter upwardly and downwardly upon operation of said lever.

2. In an extension car step, the combination with fixed steps including side shield members, strap members secured to the outer faces of said side shield members and having their lower ends bent under the inclined rear edges of said side shield members and directed upwardly parallel with the latter, spaced bearing rollers mounted in the upwardly directed ends of said strap members and the parallel portions of said side shield members, an extension step, guide strips secured to the under face of said extension step and having their main portions twisted and slidably engaged in said upwardly extended ends of said strap members between said rollers, the upper ends of said guide strips being bent at right angles for engagement with the uppermost strap member to limit downward movement of said extension step, a lever, a rock shaft mounted in said side shield members, connection between said rock shaft and said extension car step, and connections between said rock shaft and said lever to cause movement of said extension car step toward and away from said fixed steps upon operation of said lever.

1,170,339. BOWLING-PIN. HERMANN ROMÜNDER, Mishawaka, Ind. Filed Feb. 25, 1915. Serial No. 10,410. (Cl. 46—66.)



1. A bowling pin having a hollow body portion, and a reinforcing frame within the body comprising radially extending longitudinal members and a transverse brace member.

2. A bowling pin comprising a hollow body portion formed of longitudinal sections, and a reinforcing frame within the body having counterbraced radial members extending between the adjacent edges of the sections.

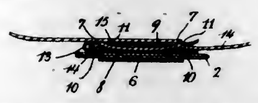
3. A bowling pin comprising a hollow body formed of longitudinal sections, and reinforcing means within the body extending longitudinally thereof and between the adjacent edges of said sections.

4. A bowling pin comprising a hollow body formed of longitudinal sections, and reinforcing members within the body extending the full length thereof and between the adjacent edges of said sections, the outer edges of the reinforcing members forming a part of the exterior body surface.

5. A bowling pin comprising a hollow body portion formed of longitudinal sections, and a reinforcing frame within the body extending longitudinally thereof and having radially disposed wing portions, the body sections being edgewise secured to the marginal side surfaces of the wing portions.

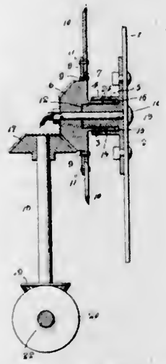
[Claim 6 not printed in the Gazette.]

1,170,340. GARMENT-FASTENER. ISAAC ROSEN, New York, N. Y. Filed Mar. 2, 1915. Serial No. 11,544. (Cl. 24—259.)



As an article of manufacture, a neck-tie clasp, comprising an inner clasp member consisting of a relatively rigid body member provided with a plurality of apertures and a yielding jaw integral therewith and bent upon said body member to form a clasp, an outer imperforate ornamental clasp member, prongs bent up from the latter and adapted to pass through said apertures in said rigid body member to secure the said tie clasp to a neck-tie, said yielding jaw member being further provided with apertures opposite the said prongs on the outer clasp member as an additional means for securing the clasp to the edge of the shirt.

1,170,341. ANTIFRICTION-BEARING FOR CUTTING APPARATUS. HENRY G. ROTEN and WILLIAM W. EMBRY, Ballinger, Tex. Filed Nov. 29, 1912. Serial No. 734,187. (Cl. 64—49.)



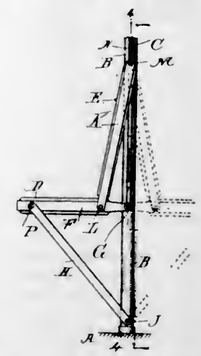
A base plate having an upwardly extending boss and a sleeve surrounding the same, spaced therefrom and concentric therewith, a revoluble member consisting of a bevel gear having a socket engaging the upper end of the boss and a sleeve extending into the space between the boss and the surrounding sleeve and spaced from said boss and sleeve to form a lubricant receptacle, antifriction balls fitted in the space between the boss, the surrounding sleeve and the sleeve associated with the bevel gear, and an assembling bolt extending axially through the base plate, the boss and the bevel gear.

1,170,342. PROCESS FOR THE RECOVERY OF METALS FROM WASTE OILS. MATHEW E. ROTHBERG, Crafton, Pa., assignor to Falk Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 16, 1915. Serial No. 61,855. (Cl. 75—18.)

1. A process for the recovery of metals and compounds thereof present in the waste oils and fats occurring as a by-product in the process of plating metals with tin, lead, zinc, and the like, said process consisting in treating said waste oils and fats with a mineral acid or acids of a strength that will form no emulsions of the resulting metallic salt solution with the oils.

2. A process for the recovery of metals and compounds thereof present in the waste oils and fats occurring as a by-product in the plating of metals with tin, lead, zinc, and the like, said process consisting in treating said waste oils and fats with a mineral acid or acids in quantity slightly in excess of the amount necessary to combine with the metals or organic salts of metals present and of a strength that will form no emulsions of the resulting metallic salt solution with the oils, at the same time agitating the mixture, separating the salt solution from the oils, and separating the metals from the salt solution.

1,170,343. DISAPPEARING AND REVERSIBLE SEAT FOR CARS. HAROLD ROWNTREE, Kenilworth, Ill., assignor to National Pneumatic Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 27, 1912. Serial No. 738,791. (Cl. 155—2.)



1. A combined reversible and disappearing seat comprising side standards longitudinally slotted, a seat having side members provided at their rear ends with pintles engaging in the longitudinal slots of the side standards, a seat back having side members provided with pintles also engaging in said slots, said back side members being pivotally connected to said seat and links pivotally connecting the seat side members and said standards, whereby the seat is reversible into horizontal position from one side to the other of said standards, said back extending down to the plane of the seat when the latter is in horizontal position.

2. A combined disappearing and reversible seat comprising side standards arranged in pairs and longitudinally slotted upon their opposed surfaces, a seat having pintles at its rear edge, said pintles loosely engaging in said slots, a seat back having pintles also loosely engaging in said slots, means for pivotally connecting said back to said seat, whereby when said back is raised vertically the rear edge of said seat is also raised, thereby moving said seat into vertical alinement with the back, the rear edge of the seat being reversible beyond the vertical position of alinement thereof with the back and links to support the seat in horizontal position for use.

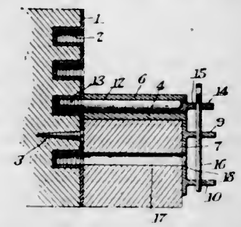
3. A combined disappearing and reversible seat comprising side standards, a seat back loosely engaging said standards at the upper part of its ends, a seat also loosely engaging said standards at the rear part of the ends, and means pivotally connecting said back to the ends of said seat whereby when said back is raised vertically, the rear edge of said seat will be raised vertically therewith to draw said seat into vertical alinement therewith, the rear edge of the seat being reversible beyond the vertical position of alinement thereof with the back and links pivotally connecting the standards and seat ends to support the seat in position for use.

4. A combined disappearing and reversible seat structure comprising side standards arranged in pairs and longitudinally slotted upon their opposed surfaces, a seat having its back and rear edge disposed between said standards and engaged in said slots and means for counterbalancing the weight of the parts.

5. A combined disappearing and reversible seat structure comprising side standards arranged in pairs and longitudinally slotted upon their opposed surfaces, a seat, a back therefor, side pieces secured to the back and connected at one end to the sides of the seat, the other ends of the said side pieces, and the rear edge of the seat having pintles disposed and engaging in the slots of said standards and a spring engaging the pintles to the seat back side pieces to exert a tension to counterbalance the weight of the back.

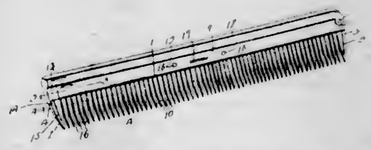
[Claims 6 and 7 not printed in the Gazette.]

1,170,344. SASH-LOCK. MARTIN J. RYAN, New York, N. Y. Filed May 1, 1915. Serial No. 25,251. (Cl. 16—144.)



A sash lock comprising a plate having at one side pockets which are embedded in one sash, another plate having a barrel resting on the top of the other sash and provided with a depending flange which extends along the side of the sash and disposed at a right angle to said barrel, securing devices passing through the flange and entering the sash at the side thereof, a bolt extending through the barrel and having a threaded end adapted to engage the thread of one of the pockets, said bolt having an enlarged head adapted to engage the flange whereby the sashes may be drawn together, there being provided upon the said flange an outstanding lug, said lug and the bolt having openings and a key insertible through the openings of the bolt and the lug to hold the bolt in locked position.

1,170,345. CLEANER FOR TOOTHED IMPLEMENTS. INGEMAR RYSTEDT, Dayton, Ohio. Filed Jan. 15, 1915. Serial No. 2,457. (Cl. 132—17.)



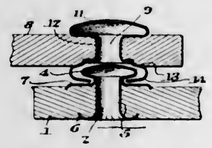
1. In combination, a toothed member having tapered teeth, the two end teeth thereof each being enlarged and provided with a curved slot, each slot being curved similar to the curve of the side of the several teeth of the comb located away from said slot, and a cleaner member movable longitudinally of the comb teeth comprising two cleaning elements, a pivot member for each of the cleaning members arranged one in the curved slot of each of the end teeth and the said cleaner members adapted to be moved longitudinally of said comb teeth by virtue of said pivot engagement with the slots of the end teeth, whereby the cleaning elements may be guided along and to contact closely the whole length of the comb teeth.

2. The combination with a toothed member having tapering teeth, the two end teeth thereof each being enlarged and provided with a curved slot, each slot being curved similar to the curve of the sides of the several teeth of the

comb located away from said slot, and a cleaner member movable longitudinally of the comb teeth comprising each two spaced plates arranged upon the opposite faces of the comb, the plates of one of the members disposed in contact with the outer sides of the plates of the other member, pivots compressing the side members of the cleaners passing through the curved slots in the end teeth, cleaners including elements arranged between the teeth of the comb and in contact therewith and adapted by virtue of the pivots arranged in the slots of the end teeth to be guided along and to contact closely the whole length of the tapered teeth.

3. In combination with a toothed member having tapering teeth, the end teeth being widened and provided with slots which are curved similar to the curve of the side of the several teeth of the comb located away from said slot, a cleaner member comprising two longitudinally movable elements arranged upon the opposite sides of the comb, a binding element for the sides of the cleaner members comprising a guide pin arranged in the curved slots of the end teeth, whereby the cleaner members by virtue of the said engagement contact with the teeth throughout the entire length of said teeth, transverse elements carried by the said cleaner members engaging with the opposite edges of the teeth of the comb, one of the widened end teeth having a notch, a cap connected with one of the elements of the cleaner member, a spring tooth for the cap, and said tooth adapted to engage in the notch of the mentioned end tooth to lock the cleaner on the comb.

1,170,346. GARMENT-FASTENER. RYUJI SATO and TANEHISA TANAKA, New York, N. Y. Filed Nov. 10, 1914. Serial No. 871,363. (Cl. 24—207.)



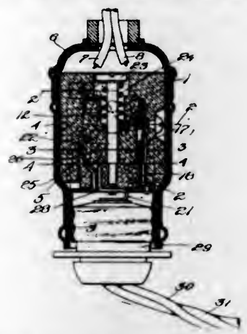
1. A fastener comprising a member having spaced guide flanges, a stud having a head of greater diameter than the space between the flanges and a shank less in diameter than the space between the flanges, said stud adapted to be received between the flanges, and a flange plate standing out from the shank and spaced from the head of the stud and bearing against the head and shank at their point of juncture.

2. A fastener comprising a member having spaced guide flanges, a stud having a head of greater diameter than the space between the flanges and a shank less in diameter than the space between the flanges said stud being adapted to be received between the flanges and a flange plate having an opening which snugly receives the shank, the edge of which bears against the head, said flange plate being spaced from the head of the stud.

1,170,347. MEANS FOR OPERATING SWITCH MECHANISMS. RALPH ABRAHAM SCHOENBERG, New York, N. Y., assignor to Ida S. Rosenheim, New York, N. Y. Original application filed Feb. 9, 1914, Serial No. 817,472. Patented Aug. 10, 1915, No. 1,149,789. Divided and this application filed May 21, 1915. Serial No. 29,539. (Cl. 173—346.)

1. A device of the character described comprising switch mechanism including an immovable contact and a contact movable into and out of engagement with said immovable contact; a support normally occupying its inner position but movable outwardly in preparation for operative movement and movable inwardly to change the condition of the circuit through said switch mechanism; and an electrical appliance carried by the support and having a terminal in circuit with said switch mechanism.

2. A device of the character described comprising switch mechanism including an immovable contact and a contact movable into and out of engagement with said immovable contact; a support normally occupying its inner position but movable outwardly in preparation for operative movement and movable inwardly both to make and break the circuit through said switch mechanism; and an electrical appliance carried by the support and having a terminal in circuit with said switch mechanism.



3. A device of the character described comprising switch mechanism including a fixed contact and a rotatable contact to engage said fixed contact; a support normally occupying its inner position but movable outwardly in preparation for operative movement and movable inwardly to change the condition of the circuit through said switch mechanism; and an electrical appliance carried by the support and having a terminal in circuit with said switch mechanism.

4. A device of the character described comprising a body comprising two blocks of insulating material connected together with provision for limited relative movement toward and from each other, a pair of terminals on one of said blocks for connection with the lead wires of a circuit; a spring yieldingly tending to move said blocks toward each other; a screw shell and center contact mounted on the other block; means electrically connecting said shell and center contact with said terminals, said means including a switch comprising a rotatable member and means through which relative movement of said blocks toward each other shifts said rotatable member one step to reverse the condition of the circuit.

5. A device of the character described comprising two blocks of insulating material connected together with provisions for limited relative movement toward and from each other; a spring for urging said blocks toward each other; a screw shell, a center contact and a switch actuating pawl carried by one of said blocks; and a circuit-controlling switch carried by the other block, comprising a rotatable switch member that is actuated by said pawl when the blocks are moved relatively toward and from each other.

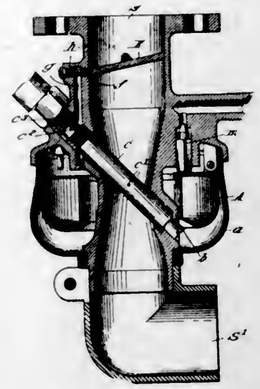
[Claims 6 to 9 not printed in the Gazette.]

1,170,348. STARTING AND IDLE-RUNNING DEVICE FOR JET-CARBURETERS. PAUL SCHÜTTLER, Charlottenburg, Germany, assignor to Pallas Vergaser G. M. B. H., Berlin-Charlottenburg, Germany. Filed Jan. 16, 1914. Serial No. 812,495. (Cl. 48—150.3.)

1. In combination, in a carbureter, a continuous atomizer extending across the air channel and provided with main discharge openings arranged to discharge into the air channel and also with auxiliary discharge openings, and, in the wall of the fuel container, a conduit, discharging into the air channel, the auxiliary discharge openings of the atomizer being in communication with such channel.

2. In combination, in a carbureter, a throttle valve therefor, a continuous atomizer extending across the air-channel and provided with main openings arranged to discharge into the air channel of the carbureter, and provided also with auxiliary discharge openings, and, in the wall of the fuel container, a channel arranged in communication with the auxiliary discharge openings discharging into

the air channel of the carbureter at or near the edge of the throttle valve in its closed position, there being provided a small passageway between the edge of the throttle valve and the wall of the air channel.



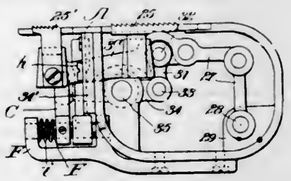
3. In a carbureter, and in combination therewith a continuous atomizer extending across the air-channel and provided with main jet orifices discharging into the air intake channel, and also provided with auxiliary openings discharging into an auxiliary channel, said auxiliary channel discharging into the intake channel, and an open-ended air pipe center-wise of the atomizer, arranged to supply air to said atomizer and thereby control and regulate fuel supply in response to variations of engine load.

4. In a carbureter, a throttle valve therefor, an atomizer arranged obliquely across the air intake channel, and having openings discharging directly into said channel, the lower end of said atomizer having direct connection with the fuel supply chamber, and an open-ended pipe arranged centerwise of said atomizer, and communicating freely with said atomizer, said atomizer being provided with an auxiliary discharge opening, communicating with the air intake channel, on the engine side of the throttle valve, whereby when the throttle is closed suction may come through said auxiliary openings and air be drawn downward through the air pipe and upward through the channel discharge openings.

5. In a carbureter, an atomizer provided at its upper part with two screw threads and a channel between said screw threads, and also provided with discharge openings, said atomizer arranged to extent obliquely across the air intake channel and supported by said screw threads in the wall of the carbureter so that its lower end communicates with the fuel chamber, the walls of said carbureter being provided with a channel leading from the atomizer channel to the air intake channel through said openings.

[Claims 6 to 7 not printed in the Gazette.]

1,170,349. CHAIN-SEVERING MECHANISM FOR SEWING-MACHINES. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 6, 1910. Serial No. 536,766. (Cl. 112—33.)



1. A sewing machine including in combination, a throat plate, a feeding device, means for raising and lowering the feeding device including a rock shaft and for reciprocating the same, a chain-severing device including a cutting member movable in a plane at right angles to the plane of the throat plate, and connections between said cutting member, and the rock shaft, whereby said cutting member is operated in unison with the raising and lowering of the feeding device.

2. In a sewing machine, in combination with a feeding device, a rock shaft for raising and lowering the feeding device, an arm extending from said rock shaft, a pivoted cutting member, and a connection between the rock shaft and the pivoted cutting member for swinging the latter on its pivot in a plane crossing the line of feed.

3. A chain-severing device, comprising a cutting member arranged to operate in a plane crossing the line of feed, a pivoted frame to which the same is secured, a head having a free joint connection with the frame, and a rock shaft having an arm secured to it, said arm having a free joint connection with the head.

4. A sewing machine having a feeding device, with means for raising and lowering it, in combination with a chain severing device including a cutting member, a pivoted frame to which the same is secured, a head having a free joint connection with the frame, and a rock shaft having an arm secured to it, said arm having a free joint connection with the head, said rock shaft having also connections to the feeding device of a sewing machine, for raising and lowering said feeding device.

5. In a sewing machine, a rock shaft, an arm secured thereto having connections to the feeding device for raising and lowering the latter, said arm having an extension, a head freely pivoted thereto, a frame also freely pivoted to said head, and pivoted also to a stationary part of the machine frame, and a cutting member secured to the frame.

[Claims 6 to 15 not printed in the Gazette.]

1,170,350. COMBINATION-UNDERWEAR. CHARLES A. SHEDAKER, Philadelphia, Pa. Filed Aug. 29, 1913. Serial No. 787,252. (Cl. 2—144.)



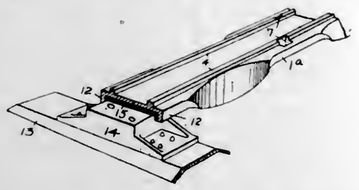
1. A garment having an opening extending downwardly from the waist, a flap at the upper end of the opening permitting greater separation of the sides of the opening at this point and a single waist band secured to the body of the garment on each side of the line of attachment of the flap and extending continuously between these portions, following the contour of the outside and inside faces of the flap.

2. A union suit or garment, having one leg provided with a longitudinal opening and a rear flap to normally cover the opening when in the closed position, an approximately horizontal strip attached to the garment near the waist and to the upper end of the upper end of the rear flap and connecting the flap with the garment at a point spaced rearwardly for a substantial distance from the normal longitudinal opening, with the strip folded upon itself when the flap is in the closed position whereby the upper end of the flap and the portion of the strip secured thereto may be swung rearwardly to increase the size of the upper end of the opening, and means for detachably

securing the flap to the leg for retaining it in the closed position.

3. A union suit comprising a waist band extending across the back and terminating at the sides and folded intermediate its ends, and a rear piece for one leg having a portion in the form of a flap inclosed in the fold of the waistband.

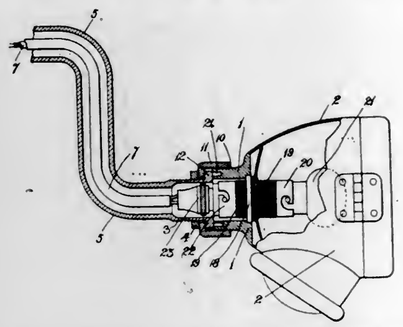
1,170,351. BASE-PLATE. HARRY E. SHELDON, Pittsburgh, Pa., assignor of one-half to William D. Forsyth, Youngstown, Ohio. Filed Oct. 22, 1914. Serial No. 867,994. (Cl. 239—2.)



1. In a rail-way, cross-ties, chairs secured thereto and having opposing side-faces extending lengthwise of the rail-way, continuous steel base-plates supported by the chairs and supporting the rails along their entire length and provided with longitudinal down-turned flanges overlapping the said opposing faces of the chairs, whereby the rails are prevented from spreading.

2. In a rail-way, continuous steel base-plates supporting the rails, chairs for supporting the base-plates, and means integral with the base-plates and coöperating with the chairs to prevent the base-plates from spreading.

1,170,352. ELECTRIC LAMP AND ITS FITTINGS. HUBERT EDWARD SHEWARD, Winchmore Hill, England. Filed Mar. 18, 1914. Serial No. 825,687. (Cl. 240—52.)



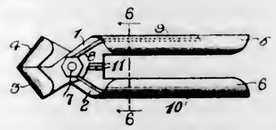
1. The combination with a lamp casing, a hollow lamp iron and a system of loose wiring inclosed in said lamp iron, of a contact plug normally and loosely inclosed in the end of said lamp iron and carried wholly by said system of wiring, a socket forming a part of the lamp casing, a detachable connection between said socket and said lamp iron, and a contact socket carried by said casing and arranged within said first-named socket, said contact plug with a portion of the wiring connected thereto being adapted for removal from the lamp iron to facilitate its engagement with said contact socket preliminary to the connection of said lamp casing and said lamp iron.

2. The combination with a lamp casing, a hollow lamp iron and a system of loose wiring inclosed in said lamp iron, of a contact plug normally and loosely inclosed in the end of said lamp iron and carried wholly by said system of wiring, a socket forming a part of the lamp casing, a detachable connection between said socket and said lamp iron, and a member having its opposite ends formed to provide contact sockets, the said member being carried by the lamp casing and having one of its contact sockets located within said first-named socket and adapted for connection to said plug and its other socket located within the body of said lamp casing and adapted to carry the lamp, said contact plug with a portion of the wiring connected thereto being adapted for removal from the lamp iron to facilitate its engagement with said contact socket arranged within said first-named socket preliminary to the connection of said lamp casing and said lamp iron.

3. The combination with a lamp casing, a hollow lamp iron and a system of loose wiring inclosed in said lamp iron, of a contact plug normally and loosely inclosed in the end of said lamp iron and carried wholly by said system of wiring, a socket forming a part of the lamp casing and having external threads, the lamp iron also having external threads, a flanged screw nut engaged with the threads of the socket and having its flange engaging the lamp iron to hold the latter against the socket, a lock nut engaged with the threads of the lamp iron and bearing against the flange of the screw nut, and a contact socket carried by said casing and arranged within said first-named socket, said contact plug with a portion of the wiring connected thereto being adapted for removal from the lamp iron to facilitate its engagement with said contact socket preliminary to the connection of said lamp casing and said lamp iron.

4. The combination with a lamp casing, a hollow lamp iron and a system of loose wiring inclosed in said lamp iron, of a contact plug normally and loosely inclosed in the end of said lamp iron and carried wholly by said system of wiring, a socket forming a part of the lamp casing, a detachable connection between said socket and said lamp iron, a contact socket carried by said casing and arranged within said first-named socket, said contact plug with a portion of the wiring connected thereto being adapted for removal from the lamp iron to facilitate its engagement with said contact socket preliminary to the connection of said lamp casing and said lamp iron, and set pins projecting from the lamp iron, the lamp socket having its end face provided with recesses for said pins.

1,170,353. FRUIT-CLIPPER. THOMAS E. SILVEAR, Aptos, Cal. Filed June 24, 1915. Serial No. 36,080. (Cl. 146—6.)



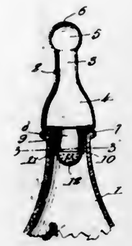
1. A clipper of the class described comprising two pivoted members which are rolled at one end toward the pivot thereof to form jaws, the connecting or meeting edges of which are obliquely disposed to form a curved pointed nose when the jaws are closed.

2. A clipper composed of two pivotally connected cooperating members, each of which is formed of a strip of sheet metal having one end rolled toward its pivot point to form a hollow connecting jaw, the meeting edges of said jaws being obliquely disposed and sharpened to form cutting blades, said members having laterally extending flanges arranged at the rear of their pivotal connection to form stops for limiting the closing movement of the jaws to prevent distortion thereof.

1,170,354. NIPPLE FOR NURSING-BOTTLES. JACOB SKYDEL, New York, N. Y. Filed Oct. 18, 1913. Serial No. 795,994. (Cl. 128—18.)

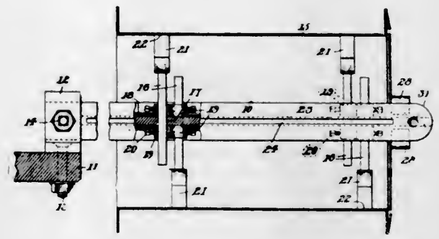
1. A nipple for nursing bottles including a body portion, a base portion, a detachable semi-spherical filter carried by the said base portion, the said filter and the said base both fitting within the neck of the bottle, and means carried by the said base adapted to engage the bottle neck to provide a fastening means for the nipple.

2. A nipple for nursing bottles including a body portion, a constricted base depending from and formed integrally with the said body, the said base forming an annular shoulder at the base of the said body, a semi-spherical filter detachably carried by the said base, the



said base and the said filter both fitting within the neck of the bottle, and a band arranged to embrace the said base above the said filter, said band and said shoulder being adapted to engage the neck of the bottle to provide for the fastening of the nipple to the bottle as well as a closure therefor.

1,170,355. STACK-SEAMING MANDREL. ARTHUR W. SMITH, Ithaca, N. Y. Filed Apr. 19, 1915. Serial No. 22,353. (Cl. 113—33.)



1. A stack forming device comprising an adjustably mounted mandrel of I-beam form having central longitudinal seam forming grooves upon the outer faces of the base flanges thereof, and adjustably mounted anvils carried by the mandrel web.

2. A stack forming device comprising an adjustably mounted mandrel of I-beam form having central longitudinal seam forming grooves upon the outer faces of the base flanges thereof, longitudinally shiftable parallel arms transversely carried by the web of the said mandrel, flat faced forming anvils upon the opposite outer ends of the said arms.

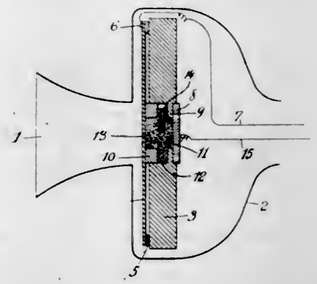
3. A stack forming device comprising an adjustably mounted mandrel of I-beam form having central longitudinal seam forming grooves upon the outer faces of the base flanges thereof, longitudinally shiftable parallel arms transversely carried by the web of the said mandrel, flat faced forming anvils upon the opposite outer ends of the said arms, the outer end of the said mandrel being rounded and a sheet metal clamp slidably mounted upon one of the base flanges of the mandrel.

4. A stack forming device comprising a rigidly mounted collar bracket, a mandrel bar I-shaped in cross section slidably mounted within the said bracket, adjusting screws for said mandrel carried by the bracket, the said mandrel having the free end thereof rounded and its opposite base flanges provided with central longitudinal seam forming grooves.

5. A stack forming device comprising a rigidly mounted collar bracket, a mandrel bar I-shaped in cross section slidably mounted within the said bracket, adjusting screws for said mandrel carried by the bracket, the said mandrel having the free end thereof rounded and its opposite base flanges provided with central longitudinal seam forming grooves, and the web of said mandrel having rectangular perforations therethrough, arms arranged in pairs within the said perforations and being formed rectangular in cross section, positioning collars adjustably mounted upon said arms at opposite sides of the mandrel web, forming anvils upon the outer ends of the said arms having outer flat engaging faces.

[Claim 6 not printed in the Gazette.]

1,170,356. TELEPHONIC APPARATUS. HARALD SMITH, Copenhagen, Denmark, assignor to George Klorboe, Copenhagen, Denmark. Filed Nov. 14, 1914. Serial No. 872,087. (Cl. 179—122.)



1. In apparatus of the character described, the combination with a vibratable diaphragm and mounting means therefor, of a contact, means forming a main chamber extending from said contact to said diaphragm, means including a movable wall of insulating material on the side toward said diaphragm forming a reserve chamber communicating with said main chamber at points distant from said contact and said diaphragm and carbon granules completely filling said main chamber and at least partially filling said reserve chamber when said diaphragm is in normal position.

2. In apparatus of the character described, the combination with a vibratable diaphragm and mounting means therefor, of a fixed contact, means forming a main chamber extending from said diaphragm to said fixed contact, means including a movable wall of insulating material on the side toward said diaphragm forming a reserve chamber communicating with said main chamber at points remote from said diaphragm and said fixed contact and carbon granules completely filling said main chamber and at least partially filling said reserve chamber.

3. In apparatus of the character described, the combination with a vibratable diaphragm and mounting means therefor, of a fixed contact, means forming a main chamber of substantially equal breadth and height extending from said diaphragm to said fixed contact, means including a movable wall of insulating material on the side toward said diaphragm forming a reserve chamber communicating with said main chamber at points distant from said diaphragm and said fixed contact, a portion of said reserve chamber being disposed above said main chamber and carbon granules completely filling said main chamber and at least partially filling said upper portion of said reserve chamber.

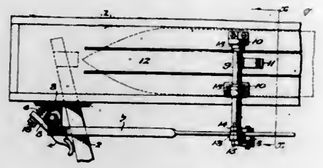
4. In apparatus of the character described, the combination with a diaphragm and mounting means therefor, of a contact, means forming a main chamber extending from said diaphragm to said contact, means forming a reserve chamber communicating with said main chamber at points

distant from said diaphragm and said contact, carbon granules completely filling said main chamber and at least partially filling said reserve chamber, and resilient means for normally tending to cause carbon granules to move out of said reserve chamber and into said main chamber.

5. In apparatus of the character described, the combination with a diaphragm and mounting means therefor, of a fixed contact, means forming a main chamber extending from said diaphragm to said fixed contact, means forming a reserve chamber communicating with said main chamber at points distant from said diaphragm and said fixed contact, carbon granules completely filling said main chamber and at least partially filling said reserve chamber and a spring disposed in said reserve chamber normally tending to cause said carbon granules to move out of said reserve chamber and into said main chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,170,357. SHUTTLE-CHECK. STOGDELL S. STAPLES, White Haven, Pa. Filed Feb. 13, 1915. Serial No. 7,918. (Cl. 139—29.)



1. In a check for loom shuttles, a shuttle box, a picker stick, a bracket secured to a part of said box, an arm pivotally mounted on said bracket, a spring bearing against one limb of said arm, and a bar connected with the other limb of said arm and extended for connection with brake mechanism of said check.

2. In a check for loom shuttles, a shuttle box, a picker stick, a bracket secured to a part of said box, an arm pivotally mounted on said bracket, a spring bearing against one limb of said arm, a bar connected with the other limb of said arm and extended for connection with brake mechanism of said check, said spring being compressible when the said arm is engaged by the picker stick.

3. In a check for loom shuttles, a shuttle box, a pivoted arm, a resilient device bearing on a limb of said arm, a bar pivotally connected with said arm, a rock-shaft pivotally connected with said bar, a brake member, and means on said rock-shaft adapted to engage the brake member when said rock-shaft is operated.

4. In a check for loom shuttles, a shuttle box, a pivoted arm having a depending member directly in the path of the picker stick, a spring bearing upon a limb of said arm, a bar pivotally connected with the other limb of said arm, a rock-shaft, means pivotally connecting said rock-shaft and bar, a brake member, and a tongue on said rock-shaft adapted to engage said brake member when said rock-shaft is operated, said bar being adjustably connected with said rock shaft.

5. In a check for loom shuttles, a shuttle box, a pivoted arm on said box having a depending member directly in the path of the picker stick, a bar pivotally connected to said arm between its ends, a rock-shaft, a crank arm pivotally connected with said bar, a brake member, and a tongue on said arm adapted to engage said brake member when the rock-shaft is operated.

[Claims 6 to 9 not printed in the Gazette.]

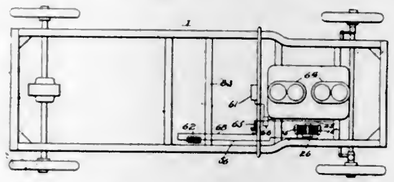
1,170,358. COMBINED KITCHEN UTENSIL. HARRY W. SWEETING, Rochester, N. Y. Filed Feb. 26, 1915. Serial No. 10,825. (Cl. 107—53.)

The herein described potato masher comprising a vacuum cup opened at its lower end and closed at its upper end, a handle attached to the cup, and a coiled beating spring secured around and extending below the cup, said



beating spring having a base ring at its lower end and spaced bars extending across said base ring.

1,170,359. ELECTRICALLY-OPERATED PUMP. MARQUIS E. SWORTZEL, Waynesboro, Va. Filed June 18, 1913. Serial No. 774,453. (Cl. 123—179.)



1. In an electric pump, the combination of a pump cylinder and piston, motor solenoids for actuating said piston, an electric circuit, motor circuits for said solenoids connected in multiple to said electric circuit, a rotary distributer-valve for controlling the discharge from said pump cylinder, a switch arm for controlling said motor circuits, means on said switch arm for actuating said distributer-valve, auxiliary solenoids for operating said switch arm, branch circuits for said auxiliary solenoids connected in multiple to said electric circuit, and means controlled by said pump piston for automatically opening and closing said branch circuits.

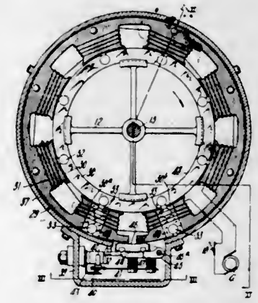
2. In an electric pump, the combination of a pump cylinder and piston, motor solenoids for actuating said piston, an electric circuit, motor circuits for said solenoids connected in multiple to said electric circuit, a rotary distributer-valve for controlling the discharge from said pump cylinder, a spindle secured to said rotary valve, a switch arm rotatably mounted on said spindle for controlling said motor circuits, means on said switch arm for rotating said valve spindle, auxiliary solenoids for oscillating said switch arm, branch circuits for said auxiliary solenoids connected in multiple to said electric circuit, and means controlled by said pump piston for automatically opening and closing said branch circuits.

3. In an electric pump, the combination of a pump cylinder and piston, a pair of motor solenoids for actuating said piston, an electric circuit, a pair of spaced contacts connected to one terminal of the respective motor solenoids, connections between the other terminals of said motor solenoids and one lead of said electric circuit, a rotary distributer-valve for controlling the discharge from said pump cylinder, a spindle secured to said valve, a switch arm rotatably mounted on said spindle for connecting said spaced contacts to the other lead of said

electric circuit, means on said switch arm for rotating said valve spindle, spring pressed contacts connected to one terminal of the respective auxiliary solenoids and extending in the path of said pump piston, an electric connection between said pump piston and one lead of said electric circuit, and connections between the other lead of said electric circuit and the other terminals of said auxiliary solenoids.

4. In an electric pump, the combination of a pump cylinder and piston, a pair of motor solenoids for actuating said piston, an electric circuit, a pair of spaced contacts connected to one terminal of the respective motor solenoids, connections between the other terminals of said motor solenoids and one lead of said electric circuit, a rotary distributer-valve for controlling the discharge from said pump cylinder, a spindle secured to said valve, a ratchet wheel secured to said spindle, a switch arm rotatably mounted on said spindle for connecting said spaced contacts to the other lead of said electric circuits, a pawl on said switch arm in engagement with said ratchet wheel, auxiliary solenoids for oscillating said switch arm, spring pressed contacts connected to one terminal of the respective auxiliary solenoids and extending in the path of said pump piston, an electric connection between said pump piston and one lead of said electric circuit, and connections between the other lead of said electric circuit and the other terminals of said auxiliary solenoids.

1,170,360. HOLDING DEVICE. JOHN D. TAYLOR, deceased, Wilkinsburg, Pa., by Mary E. Taylor, executrix, Chillicothe, Ohio; said John D. Taylor assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Original application filed Aug. 28, 1912, Serial No. 717,436. Divided and this application filed Apr. 11, 1914. Serial No. 831,263. (Cl. 172—284.)



1. A holding device comprising a stator, a single phase winding for said stator, and a squirrel-cage rotor having the same number of rods as the stator has poles.

2. A holding device comprising a stator, a single phase winding for said stator, and a rotor having the same number of closed electric circuits as the stator has poles.

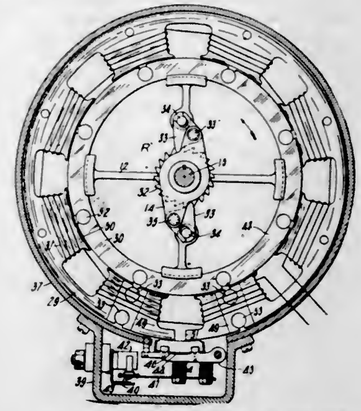
3. A holding device comprising a stator, a single phase winding for said stator, and a rotor with a short-circuited winding having the same number of poles as the stator.

4. A holding device comprising a stator having an energizing winding, a rotor, a gap in the stator, an armature adapted to bridge said gap, and means for causing part of the magnetic flux in the stator to pass through said armature.

5. In combination, a substantially ring-shaped member of magnetizable material having pole-pieces and having a gap between two of said pole-pieces, windings on said pole-pieces, an armature adapted to bridge said gap, and means associated with said ring-shaped member for causing part of the flux from the pole-pieces adjacent said gap which would otherwise return through the unbroken portion of the member to flow through the armature.

[Claims 6 and 7 not printed in the Gazette.]

1,170,361. RAILWAY-SIGNAL. JOHN D. TAYLOR, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 28, 1912, Serial No. 717,436. Renewed Nov. 12, 1915. Serial No. 61,158. (Cl. 246—34.)



1. In combination, a signal biased to one position of indication, means for moving it to another position, and a transformer device for holding the signal in the last-mentioned position, said device comprising a primary member and a secondary member one of which is fixed and the other of which is movable.

2. In combination, a signal biased to one position of indication, means for moving it to another position, and a holding device for holding the signal in the last-named position said device comprising a stator provded with an energizing winding and a rotor provided with closed electric circuits.

3. In combination, a signal biased to one position of indication, means for moving it to another position, and an inductive device holding the signal in the last-named position; said device comprising a stator, a squirrel-cage rotor having the same number of bars as the stator has poles and a single phase winding for the stator.

4. In combination, a signal biased to one position of indication, means for moving it to another position, a holding device for holding the signal in the last-named position, said device comprising a stator having an energizing winding and a rotor having closed electric circuits, and means for operatively connecting said holding device with the signal only when the latter is moving or tending to move toward its biased position.

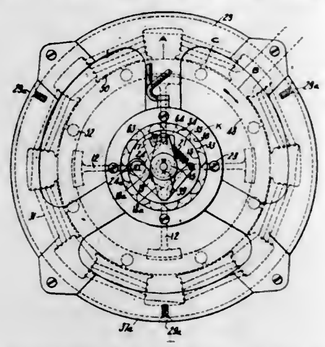
5. In combination, a signal biased to one position of indication, means for moving it to another position, and a transformer device for holding the signal in the last-mentioned position, said device comprising a fixed primary member and a movable secondary member operatively connected with the signal.

[Claims 6 to 14 not printed in the Gazette.]

1,170,362. RAILWAY-SIGNAL. JOHN D. TAYLOR, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 2, 1913. Serial No. 758,354. (Cl. 246—29.)

1. In combination, a signal biased to one position of indication, mean for moving it to another position; and a holding device for holding the signal in the latter position comprising a stator having an energizing winding, a squirrel-cage rotor operatively connected with the signal, and having the same number of bars as the stator has poles; means for energizing the stator winding, and means operatively connected with the rotor for de-energizing the stator winding while the rotor is passing from such position that its bars are midway between the stator poles to such position that the bars are opposite the middle points of the stator poles.

2. In combination, a signal biased to one position of indication, means for moving it to another position; and a holding device for holding the signal in the latter position comprising a stator having an energizing winding, a squirrel-cage rotor operatively connected with the signal and having the same number of bars as the stator has poles; means for energizing the said stator winding, and means operatively connected with the rotor for de-energizing the stator winding while the rotor is passing in either direction from such position that its bars are midway between the stator poles to such position that the bars are opposite the middle points of the stator poles.



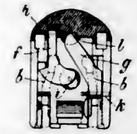
3. In combination, a signal biased to one position of indication, means for moving it to another position; and a holding device for holding the signal in the latter position comprising a stator having an energizing winding, a squirrel-cage rotor operatively connected with the signal and having the same number of bars as the stator has poles; a circuit for said winding including a source of alternating current, and a circuit controller included in said circuit and operatively connected with the rotor for opening the circuit while the rotor is passing from such position that its bars are midway between the stator poles to such position that the bars are opposite the middle points of the stator poles, and for closing the circuit while the rotor is passing from the last-mentioned position to the first-mentioned position.

4. In combination, a signal biased to one position of indication, means for moving it to another position; and a holding device for holding the signal in the latter position comprising a stator having an energizing winding, a squirrel-cage rotor operatively connected with the signal and having the same number of bars as the stator has poles; a circuit for said winding including a source of alternating current, a circuit controller included in said circuit, and means operatively connected with the rotor for opening said circuit controller while the rotor is passing from such position that its bars are midway between the stator poles to such position that the rotor bars are opposite the middle points of the stator poles, and for closing the circuit controller while the rotor is passing from the second-mentioned position to the first-mentioned position.

5. In combination, a signal biased to one position of indication, means for moving it to another position; and a holding device for holding the signal in the latter position comprising a stator having an energizing winding, a squirrel-cage rotor operatively connected with the signal and having the same number of bars as the stator has poles; a circuit for said stator winding including a source of current; and a circuit controller included in said circuit and comprising a plurality of circularly arranged and eletrically connected stationary contact surfaces the number thereof being equal to the number of stator poles, and the angular length of each surface and of the space between surfaces being equal to half the angle between the middle points of adjacent poles, and a contact member operatively connected with the rotor and adapted to make contact with said contact surfaces.

[Claims 6 to 10 not printed in the Gazette.]

1,170,363. DROP-DOWN BREECH-LOADING SMALL-ARM. LESLIE B. TAYLOR, Birmingham, England. Filed Apr. 7, 1915. Serial No. 19,787. (Cl. 42—69.)



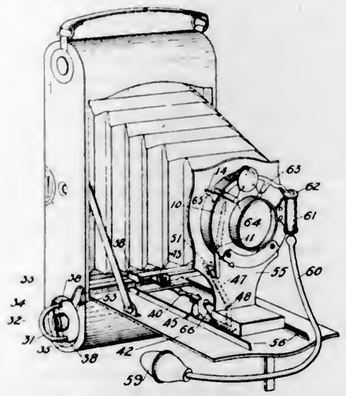
1. In an "over and under barrel" small arm, the combination with the frame of a gun having a cartridge chamber, of pivoted supplementary hammers arranged in the gun, one for each of said barrels, a striking nose carried by and projecting from each hammer and adapted to be extended into said cartridge chamber in the plane of the axis of said barrels, a pair of detachable lock plates, and primary hammers carried by said plates for engaging with and actuating said supplementary hammers and arranged out of the plane of the axes of said barrels, whereby said primary hammers strike the supplementary hammers to one side of said striking nose, said supplementary hammers having a free pivotal movement.

2. In small arms, the combination with the frame of a gun having a cartridge chamber, a supplementary hammer having one end pivoted to said frame, a striking nose carried by said hammer and adapted to be extended into said cartridge chamber, a primary hammer arranged out of alinement with said striking nose and adapted to engage with said supplementary hammer when released from cock position and thereby effect the discharge of the cartridge in said cartridge chamber.

3. In small arms, the combination with the frame of a gun having a cartridge chamber, of a supplementary hammer having one end pivoted to said frame, a striking nose projecting from said hammer at a point intermediate its ends and adapted to be extended into said cartridge chamber, a primary hammer carried by said frame and arranged to engage with said supplementary hammer at a point between said striking nose and the free extremity thereof when released from cocked position, whereby the discharge in said cartridge chamber is effected.

4. In a double barreled small arm, the combination with the frame of the gun having cartridge chambers, of pivoted supplemental hammers arranged in said frame, one for each of said barrels, a pair of detachable lock plates, and primary hammers carried by said lock plates for actuating said supplemental hammers and arranged out of the plane of the barrels with which the respective supplemental hammers are in connection.

1,170,364. CAMERA. CHARLES THOMA, Jr., and WALTER THOMA, Carlstadt, N. J. Filed Dec. 4, 1912. Serial No. 734,807. (Cl. 95—32.)



1. In a camera, the combination with a shutter and a film-winding spool, of a controller arranged upon operation

of the shutter to automatically engage with the shutter mechanism to prevent a second operation of the shutter, a handle for the film-winding spool, normally lying in an inactive position, a movable member disposed to be engaged and shifted by the spool handle when the same is moved to an active position, and connections from the movable member adapted when said member is shifted by the spool handle, to shift the controller to an ineffective position.

2. In a folding camera, the combination of a foldable support connected with the body of the camera, shutter mechanism adapted at times to be supported by the support, a controller located adjacent to the shutter mechanism and arranged upon actuation of the shutter to interlock with the shutter mechanism to prevent further operation of the shutter, means in the body of the camera for positioning the sensitized material with respect to the shutter, and a train of operating levers between the positioning means and the controller and supported on said foldable support adapted upon operation of the positioning means to operate to disconnect the controller from engagement with the shutter mechanism.

3. In a camera, the combination of a film-winding spool, a handle for turning the same, arranged normally to lie in an inactive position and movable into an active position, a pivoted lever arranged to be depressed by the handle when the same is moved to an active position, a shutter and mechanism for operating the same, a pivoted latch arranged upon actuation of the shutter to interlock with a member of the shutter mechanism to prevent further operation of the shutter, and connections from the pivoted lever to the latch, whereby upon shifting of the lever by the handle the pivoted latch will be shifted from engagement with the member of the shutter mechanism.

4. In a camera, a spindle for connection with the spool which carries the film, a handle pivoted to the spindle so that it may be turned from an inactive position lying flat against the camera into an active outstanding position, a pivoted lever disposed beneath the handle and arranged in the turning of the handle to an active position to be shifted thereby, a shutter and mechanism for operating the same, a pivoted latch arranged upon actuation of the shutter by the shutter mechanism to interlock with a member of the shutter mechanism to prevent further operation of the shutter, a member adapted to be shifted longitudinally by the pivoted lever, and lever connections from the said member to the pivoted latch.

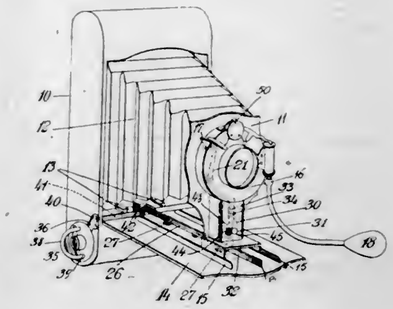
5. In a folding camera, the combination with means for positioning the sensitized material, of a folding shutter support, shutter mechanism adapted at times to be supported by said support, a controller arranged upon operation of the shutter to engage with the shutter mechanism to prevent operation of the shutter thereafter, and pivoted levers carried on said folding support within the camera for providing connections between the positioning means and the controller in both the extended and the folded position of the camera whereby upon operation of the positioning means the controller will be rendered ineffective.

[Claims 6 to 9 not printed in the Gazette.]

1,170,365. CAMERA. CHARLES THOMA, Jr., and WALTER THOMA, Carlstadt, N. J. Filed May 7, 1913. Serial No. 766,050. (Cl. 95—32.)

1. In a camera, a shutter, a shutter operating member having a bias toward its inoperative position and so arranged when operated the first time to open the shutter and when operated the second time to close the shutter, a latch held out of engagement with the shutter operating member when the latter is in its inoperative position, means for automatically causing said latch to engage said shutter operating member, upon the same being actuated, to prevent it from returning to its original position but permitting a second movement thereof, and means for releasing the latch from engagement with the shutter operating member to permit the latter to return to its initial position.

2. In a camera, a shutter, a pivotally supported shutter operating member having a bias toward its inoperative position, a latch held out of engagement with the shutter operating member when the latter is in its inoperative position, means for automatically causing said latch to engage said shutter operating member, upon the same being actuated, to hold it in an intermediate position and to prevent it from returning to its original position, and means for releasing the latch from engagement with the shutter operating member to permit the latter to return to its initial position.



3. A camera comprising a casing, a head having extensible connection with the casing, a shutter, shutter operating means, and controlling means adapted to engage the shutter operating means to prevent a repeated operation of the same, all mounted on the extensible head, releasing means for causing the controlling means to disengage the shutter operating means, pivoted to have a movement substantially at right angles to the axis of the extensible head, operative means on the casing, and connecting means therefrom to the releasing means for actuating the latter.

4. A camera comprising a cassing, a head having extensible connection with the casing, a shutter, shutter operating means, and controlling means adapted to engage the shutter operating means, all mounted on the extensible head, releasing means for causing the controlling means to disengage the shutter operating means mounted to swing in a vertical plane on an axis substantially parallel to the axis of the extensible head, and means on the casing for actuating the releasing means.

5. A camera comprising a casing, a foldable support connected with the casing, a head normally housed within the casing and having extensible connection with the casing so that it may be extended upon said support when in use, a shutter, shutter operating means, and controlling means adapted to engage the shutter operating means, all mounted on the extensible head, and a releasing lever device secured on said support for providing connection between the actuating means and the controlling means in both the extended and folded position of the head.

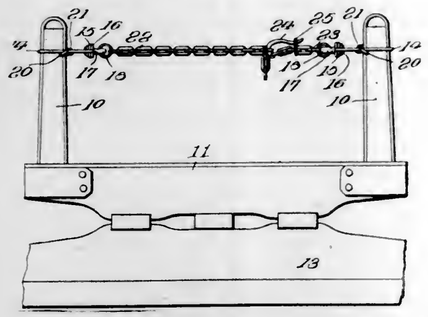
[Claims 6 to 19 not printed in the Gazette.]

1,170,366. VEHICLE-STAKE HOLDER. CARL O. TORGERSON, Houston, Minn. Filed Sept. 22, 1915. Serial No. 51,913. (Cl. 214—5.)

1. A device of the class described comprising coacting loops adapted to bear respectively around vehicle stakes, a yieldable member connected to each of said loops and adapted to engage said stakes, a flexible element connecting said loops, and means for applying strain to said flexible element to draw said loops toward each other.

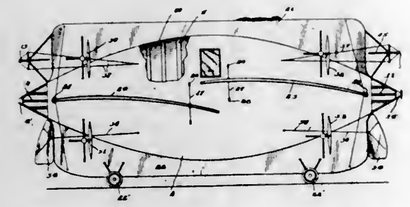
2. A device of the class described comprising coacting loops each formed of a rod having overlapping eyes at the ends and eyes intermediate the ends, said loops being adapted to engage respectively around vehicle stakes, a yieldable device connected to the intermediate eyes of said loops and adapted to engage the adjacent stake, swivel de-

vices engaging said overlapping eyes, a flexible element connecting to each of said swivels, and means for apply-



ing strain to said flexible element to draw said loops toward each other.

1,170,367. AIRSHIP. LAFAYETTE C. VAN DUZER, National Soldiers Home, Hampton, Va. Filed Apr. 27, 1915. Serial No. 24,286. (Cl. 244—10.)



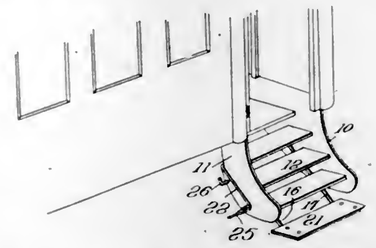
1. An airship including a substantially cigar-shaped hollow body, a rigid wind tunnel extending axially through the body, suction fans at the front and rear of the tunnel, cabins within the body, balloonets filling the spaces between the wind tunnel and body remaining unoccupied by the cabins, counterpart rudders at opposite ends of the body, sustaining wings at the sides of the body, propellers at the front and rear of the body, and means for driving the fans and propellers.

2. An airship including a substantially cigar-shaped hollow body, a wind tunnel extending axially through the body, suction fans at the front and rear of the tunnel, a vane depending from and extending longitudinally of the bottom of the body, sustaining wings at opposite sides of the body, propellers at the front and rear of the body on opposite sides thereof, said propellers being arranged in upper and lower front and rear working pairs, and means for driving the suction fans and operating the said propellers.

3. An airship including a substantially cigar-shaped body, a tunnel extending axially through the body, suction fans at the front and rear of the tunnel, sustaining wings arranged at opposite sides of the body, propellers at the front and rear of the body on opposite sides thereof, said propellers being arranged in upper and lower front and rear working pairs, and means for driving the suction fans and operating the said propellers.

4. An airship including a substantially cigar shaped hollow body, a wind tunnel extending axially through the body, suction fans at the front and rear of the tunnel, a vane depending from and extending longitudinally of the bottom of the body, sustaining wings arranged in pairs in following order at opposite sides of the body, means for adjusting said wings to different working angles, propellers at the front and rear of the body on opposite sides thereof, said propellers being arranged in upper and lower front and rear working pairs, and means for driving the suction fans and operating the said propellers.

1,170,368. EXTENSIBLE CAR-STEP. WILLIAM H. VINSON, Jonesboro, Ark. Filed Sept. 13, 1915. Serial No. 50,428. (Cl. 105—87.)



1. The combination with spaced members, of a step mounted to shift thereon to project below the said members, a stop carried by one of said members, and a locking member shiftable with the step and swingingly movable to engage said stop for supporting the step in elevated position.

2. The combination with spaced members, of a step mounted to gravitate thereon to a position projecting below the said members, a pivotally mounted stop carried by one of said members, and a swingingly mounted locking member shiftable with the step and movable into the path of said stop to engage therewith for supporting the step in elevated position.

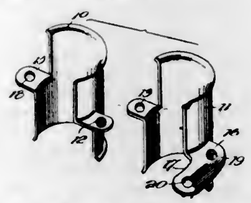
3. The combination with spaced members, of a step shiftable thereon to project below the members and provided with a supporting rod having an arm embracing one of the members, a stop carried by the said member, and a locking member carried by said arm and shiftable to engage the stop for supporting the step in elevated position.

4. A device of the character described including spaced rods, a step secured thereto, one of said rods being bent to provide a substantially U-shaped terminal, a locking member carried by the said terminal, and a stop for the locking member, the rods being adapted for attachment to spaced members to shift longitudinally thereon with the step projecting below the members and with the said U-shaped terminal embracing the rear edge of one of the members, the stop being supported by the said member and engageable by said locking member for supporting the step in elevated position upon the members.

5. The combination with spaced members, of brackets carried thereby, rods carried by said brackets, a step carried by the rods and shiftable therewith upon the brackets to project below the lower ends of said members, stops carried by the rods and adapted to engage the brackets for limiting the step in its downward shifting movement, a stop carried by one of said members, an arm carried by one of said rods and supported upon the outer side of said member, and a locking member shiftable upon said arm to engage said last mentioned stop for supporting the step in elevated position upon the members.

[Claims 6 to 8 not printed in the Gazette.]

1,170,369. TAIL-CLIP FOR ANIMALS. CHARLES B. WAGNER, Jr., Burlington, Wis. Filed Apr. 24, 1915. Serial No. 23,656. (Cl. 248—31.)

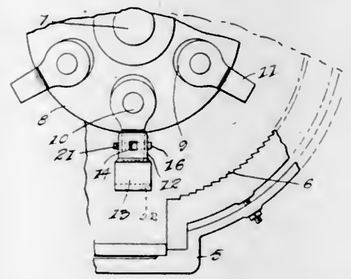


1. A device of the class described comprising coacting semicylindrical clamping members having lateral bearings

intermediate their ends and apertured to receive fastening devices, the material between the bearings and the ends of the clamping members being cut away at opposite sides and toward their opposite ends, whereby when the clamping members are disposed edge to edge, the bearings will be superimposed and the longitudinal division lines between the members broken at opposite sides of the bearings and the gripping force thereby increased.

2. A device of the class described comprising coacting semicylindrical clamping members having lateral bearings intermediate their ends and apertured to receive fastening devices, one of the bearings being extended concentrically of the periphery of the clamping members and the material between the bearings and the ends of the clamping members cut away at opposite sides and toward their opposite ends, whereby the bearings are adapted to be superimposed and the clamping members movable toward and away from each other at one side and the longitudinal division lines between the members broken at opposite sides of the bearings.

1,170,370. CRUSHER. FRANK A. WALD, East Berlin, Conn. Filed Oct. 9, 1914. Serial No. 865,928. (Cl. 83—11.)



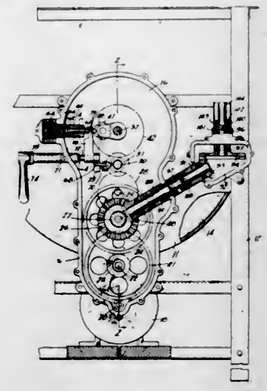
1. In a rotary crusher, a hammer arm having an aperture in its outer end, a hammer having a recess in one end removably receiving the apertured end of said arm, the walls of said recess having a plurality of apertures therein adapted to register with the aperture in said arm, a wedge removably positioned through several of the apertures in said hammer and through the aperture in said arm, and a locking member engaged with said hammer and said wedge to prevent accidental removal of the latter.

2. In a rotary crusher, a hammer arm having a transverse opening therethrough, a hammer having one end recessed and a cutting edge at the outer end of each of its sides, said hammer having apertures formed in each of the side walls of said recess adapted to be moved into registration with the transverse opening in said hammer arm, and means movably positioned through the openings in said hammer arm and said hammer for securing the latter in position to present any one of the four cutting edges for use.

1,170,371. REVERSING MECHANISM. FRED W. WAPPAT, Pittsburgh, Pa., assignor to Pittsburgh Gage and Supply Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1915. Serial No. 6,331. (Cl. 74—50.)

1. In a machine of the class described, the combination of driving and driven members, gear connections therebetween adapted to turn the driven member in either direction, a star wheel arranged to shift said gear connections, and means for actuating said star wheel at each revolution of the driven member.

2. In a machine of the class described, the combination of driving and driven members, gear connections therebetween for rotating the driven member in opposite directions, a movable member arranged when actuated a predetermined number of times to shift said gear connections, and means for actuating said member at each revolution of the driven member.



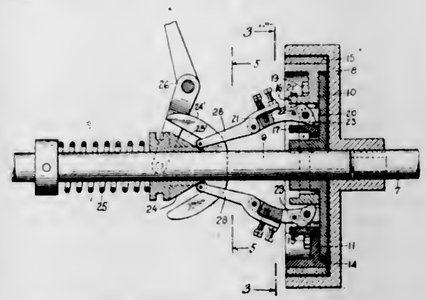
3. In a machine of the class described, the combination of driving and driven members, gear connections therebetween for rotating the driven member in opposite directions, a movable member adapted to be actuated once at each revolution of the driven shaft, a stationary member for actuating the same, and means whereby said movable member after a predetermined number of revolutions of said driven member shifts said gear connections.

4. In a machine of the class described, the combination of driving and driven members, gear connections therebetween for rotating the driven member in opposite directions, a device having a step by step movement to shift said gear connections after a plurality of steps, said device rotating with the driven member and adapted to be actuated one step at each revolution thereof, and a stationary member for actuating said device.

5. In a machine of the class described, the combination of driving and driven members, gear connections therebetween for rotating the driven member in opposite directions, a device to shift said gear connections rotating with the driven member and adapted to be actuated once at each revolution thereof, a stationary operating member for actuating said device, and means whereby said device after a predetermined number of revolutions of said driven member shifts said gear connections.

[Claims 6 to 29 not printed in the Gazette.]

1,170,372. CLUTCH. AUGUST W. WARSEN, New York, N. Y. Filed Dec. 9, 1914. Serial No. 876,269. (Cl. 192—11.)



1. In a clutch, a friction member, a disk therein, a pair of diametrically opposite jaws mounted to move radially on said disk, means carried by said jaws adapted to engage the friction member, resilient means for moving the

jaws, toward the axis, spreading fingers bearing on the disk, each of said jaws having means for engaging each finger, and means for moving said fingers on their bearing, whereby said jaws are moved radially away from the axis of the disk and caused to engage the first friction member.

2. In a friction clutch, spreader fingers comprising two hinged portions, one of said portions having an extension, an adjusting screw in said extension engaging the other portion of the finger, a screw in said other portion projecting through the extension, and a resilient member on said screw forcing said extension toward said other portion.

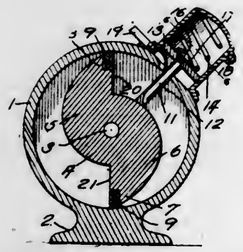
3. In a clutch, a friction member, a disk therein, friction jaws mounted to slide radially on said disk, said jaws having flanged portions on opposite sides of the disk's axis, spreading fingers bearing on said disk and each having cam portions in engagement with said flange portions of the jaws on the same side of the disk's axis, and means for moving said spreading fingers on their bearings, whereby said jaws are actuated substantially as and for the purpose set forth.

4. In a clutch, a friction member, a disk therein, a pair of diametrically opposite jaws mounted to move radially on said disk, friction material carried by said jaws and adapted to engage the friction member flanges on each jaw on opposite sides of the disk's axis, a pair of spreading fingers bearing on said disk, each having cam portions adjacent its bearing in engagement with a flange on each jaw located on the same side of the disk's axis, means for moving said spreading fingers on their bearings whereby said jaws are simultaneously operated by each finger, and resilient means connecting said jaws and normally tending to move them radially away from the friction member.

5. In a clutch, a friction member, a disk therein, friction jaws mounted to slide radially on said disks, said jaws having flanged portions, spreading fingers bearing on said disk and having cam portions in engagement with said flange portions of the jaws, a yoke connecting each finger with the flanged portion of the jaw, and means for moving said spreading fingers on their bearings, substantially as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,170,373. ROTARY ENGINE. ANTHONY V. WEBER, St. Libory, Ill. Filed Feb. 19, 1915. Serial No. 9,369. (Cl. 121—71.)

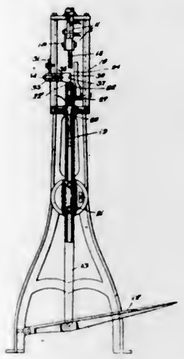


1. In a rotary engine, a casing, a rotor mounted therein having gradually increasing spaces to the opposite sides thereof between itself and the casing, means for conveying steam to one of said spaces, a plate slidably mounted within the casing and bearing against the face of the rotor, the said plate having a hole extending outwardly therethrough whereby the steam in the other of said spaces will be forced through said hole upon the rotation of the rotor, a cylinder for receiving said steam and means for forcing the steam from the cylinder.

2. In a rotary engine, a cylindrical casing, a rotor mounted therein on a shaft concentric with the casing, the rotor including oppositely extending substantially semi-cylindrical sections fixedly mounted on the shaft, the outer edges of said sections bearing against the inner face of the casing and being so constructed that gradually increasing spaces are provided to each side of the rotor, a plate, having a hole therethrough, slidably mounted in the casing and bearing against the face of the rotor, a piston secured to the outer end of said plate, a cylinder inclosing said piston, a valve mounted on said piston for closing the hole in the plate and resilient means for maintaining the plate in contact with the face of the rotor.

3. In a rotary engine, the combination with a casing having an eccentric rotor therein, of means for conveying steam into the casing to one side of the rotor, a plate extending within the casing and engaging the rotor, a steam receiving member mounted on and in communication with said casing, means operable by the steam to allow the same to escape into the receiving member, and means operable by the rotor to force the steam from said receiving member.

1,170,374. HEEL-BREASTING MACHINE. EDWIN A. WEBSTER, Haverhill, Mass., assignor, by mesne assignments, to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed May 16, 1914. Serial No. 839,147. (Cl. 12—47.)

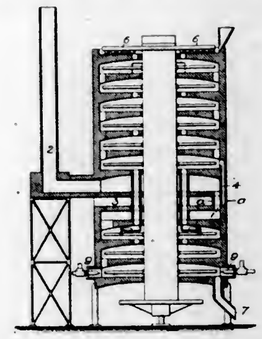


1. A heel-breasting machine having a vertically reciprocating knife-holder, a breasting knife depending therefrom and a heel-support having a vertical side face conforming to the back of said knife and disposed in close proximity to the path thereof to form a shearing edge, the top surface of said support being inclined downwardly from said edge to permit the heel to be tilted into different positions thereon, and a top-lift rest vertically disposed at the top-lift engaging end of said edge, substantially as described.

2. A heel-breasting machine having a vertically reciprocating knife-holder, a breasting-knife depending therefrom and a heel-support having a vertical side face conforming to the back of said knife and disposed in close proximity to the path thereof to form a shearing edge, the top surface of said support being inclined downwardly from said edge to permit the heel to be tilted into different positions thereon, and a vertically extending shank-rest arranged adjacent the heel-base-engaging end of said edge, substantially as described.

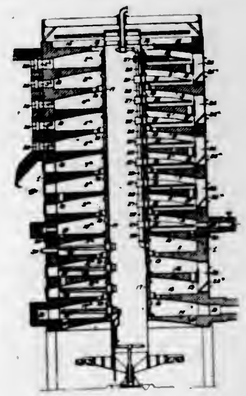
1,170,375. TREATING ORES. UTLEY WEDGE, Ardmore, Pa. Filed Oct. 7, 1911, Serial No. 653,421. Renewed July 1, 1915. Serial No. 37,583. (Cl. 75—17.)

The mode herein described of treating ores, which consists in subjecting the same to a two-stage treatment, feeding the ore over one or more hearths in each stage of the treatment, conveying the ore from the primary to the secondary stage of the treatment without permitting passage of products of combustion from the secondary to the primary stage, supplying heated air to the ore during the primary stage of treatment in order to effect ignition of the combustible constituents of the ore, supplying to the ore during the secondary stage of the treatment products of combustion derived from fuel independent of that constituting the furnace charge, and utilizing the escaping products of combustion from the secondary stage of the



treatment to heat the air employed for effecting combustion of the charge in the primary stage.

1,170,376. METALLURGICAL FURNACE. UTLEY WEDGE, Ardmore, Pa. Filed Jan. 15, 1913, Serial No. 742,151. Renewed July 1, 1915. Serial No. 37,586. (Cl. 75—143.)



1. A metallurgical furnace having primary and secondary members, means for introducing into said secondary member products of combustion derived from fuel independent of the furnace charge, means for causing said products of combustion to flow through the secondary member in one direction, and means for causing air to flow through the primary member in the opposite direction.

2. A metallurgical furnace having primary and secondary members, each with a series of treating chambers therein, means for supplying to the secondary member of the furnace products of combustion derived from fuel independent of the furnace charge, means for causing said products of combustion to flow through the chambers of the secondary member of the furnace in one direction, and means for causing air to flow through the chambers of the primary member of the furnace in the opposite direction.

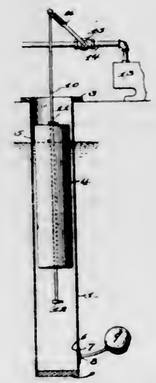
3. A metallurgical furnace having primary and secondary members, means for causing the material to be treated to flow in the same direction through both members, means for conveying to the secondary member products of combustion derived from fuel independent of the furnace charge, means for causing said products of combustion to flow through the secondary member of the furnace in one direction, and means for causing air to flow through the primary member of the furnace in the opposite direction.

4. A metallurgical furnace having primary and secondary members, means for causing the material to be treated to flow in one and the same direction through both members, means for supplying to the secondary member of the furnace products of combustion derived from fuel independent of the furnace charge, means for causing said products of combustion to flow through the secondary member of the furnace in the same direction as that of the flow of material therethrough, and means for causing air to flow through the primary member of the furnace in a direction the reverse of that of the flow of the material therethrough.

5. A metallurgical furnace having primary and secondary members, means for causing the material to be treated to flow through the same, means for conveying to the secondary member of the furnace products of combustion derived from fuel independent of the furnace charge, and means disposed between the primary and secondary members of the furnace and serving to prevent passage of said products of combustion from the secondary member to the primary member.

[Claim 6 not printed in the Gazette.]

1,170,377. DEVICE FOR STARTING AND STOPPING PUMPS AND THE LIKE. CLYDE E. WEED, Victoria, Mich. Filed Dec. 8, 1914. Serial No. 876,103. (Cl. 103—86.)



1. In a device of the character described, the combination with a pump-controlling member, of a chamber having means for admitting and discharging liquid relatively thereto, means governed according to the height of liquid exteriorly of the chamber for controlling the discharge of liquid from the chamber, and means within the chamber and controlled according to the level of liquid therein for actuating said pump-controlling member.

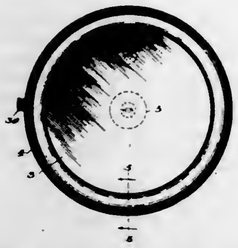
2. In a device of the character described, the combination of a chamber adapted to be immersed in liquid and having an upper liquid inlet and a lower liquid outlet, means for closing said outlet during rising of the level of liquid exteriorly of the chamber and for maintaining said outlet closed until the liquid exteriorly of the chamber has fallen below a given level, and pump-controlling means within the chamber governed according to the level of liquid within said chamber.

3. In a device of the character described, the combination of a chamber adapted to be immersed in liquid and having an upper liquid inlet and a lower liquid outlet, a valve for opening and closing said outlet and having a float influenced by the liquid exteriorly of the chamber, and a pump-controlling float contained within said chamber.

4. In a device of the character described, the combination of a chamber adapted to be immersed in liquid and having an upper liquid inlet and a lower liquid outlet, the inlet providing constant communication between the interior and the exterior of the chamber, a valve governed by the level of liquid exteriorly of the chamber for opening

and closing said outlet, a pump-controlling member having upper and lower stops thereon, and a float operative between said stops and governed by the level of liquid within said chamber.

1,170,378. LAMP. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed Apr. 30, 1914. Serial No. 835,356. (Cl. 240—41.)



1. In a lamp, the combination of a substantially bowl-shaped casing, a parabolic reflector nested within said casing, said reflector and casing being provided with an annular member connecting them rigidly together, a door provided with a glazing closing the front end of the lamp body, a gasket interposed between said door and said annular connection, and means for forcing said door toward said annular connection.

2. In a lamp, the combination of an outer shell provided with an inwardly projecting flange, an inner reflector shell provided with an outwardly projecting flange lapping the flange on the outer shell, an annular gasket supported in contact with the outer face of one of said flanges, an annular glazing door having a glazing for closing the front end of the reflector and provided with an annular surface adapted to engage the outer annular surface of said gasket, and resilient means for clamping said door to the lamp.

3. In a lamp, the combination of an outer shell provided with an inwardly projecting flange, an inner reflector shell provided with an outwardly projecting flange overlapping the flange on the outer shell, an annular gasket interposed between said flanges and extending beyond said inner flange, an annular glazing door having a glazing for closing the front end of the reflector and provided with a flange adapted to engage the projecting surface of said gasket, and resilient means for clamping said door to the lamp.

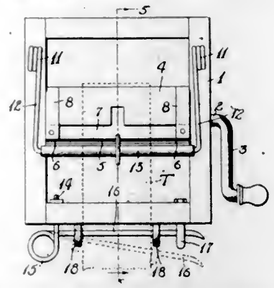
4. In a lamp, the combination of an outer shell provided with an inwardly projecting flange, an inner reflector shell provided with an outwardly projecting flange overlapping the flange on the outer shell, an annular gasket interposed between said flanges and projecting from between said flanges, an annular door having a glazing for closing the front end of the reflector and provided with an annular seat adapted to engage the projecting surface of said gasket, and means for pressing the door against said gasket.

5. In a lamp, the combination of an outer shell, a parabolic reflector nested within said outer shell and provided with an outwardly extending flange connecting it to said outer shell, said flange being provided with a circumferentially extending slot, a spring on the inside of said flange, and a hook carried by the door adapted to enter said slot and engage said spring and provided with a circumferentially sloping cam surface adapted to compress said spring by a rotary movement of said door.

[Claim 6 not printed in the Gazette.]

1,170,379. NECKTIE AND RIBBON PRESSING DEVICE. ALBERT W. WILLIAMS, St. Louis, Mo. Filed Dec. 24, 1914. Serial No. 878,946. (Cl. 242—60.)

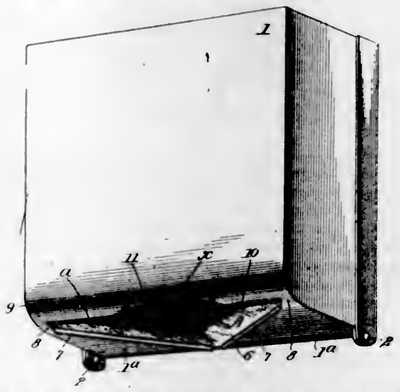
1. A device of the class described comprising a cylindrical reel having a longitudinal groove in its periphery, a clamping bar in said groove, a pair of curved spring arms secured to the periphery of said reel and to the ends of said bar, a transverse pin sliding diametrically through the reel and abutting the under side of said clamping bar, whereby it may be forced outwardly, and a pressing device adjacent said reel.



2. The combination with a reel upon which an article to be pressed is to be wound, and a pressing device adjacent said reel, of a fixed and a movable guide bar lying parallel to each other and between which the article to be pressed is adapted to be passed, the movable bar being pivotally connected to the fixed bar, means to normally retain the two bars in fixed relation, and a pair of stops on the movable bar, one of said stops being adjustable longitudinally on said movable bar.

3. A device of the class described comprising a retangular frame, a winding roller rotatably mounted therein and having an actuating crank and means for the attachment of the object to be wound, and a guide bar lying parallel to one side of the frame and to the axis of the roller, said bar having one end anchored to the aforesaid side of the frame and being coiled adjacent said end whereby to impart resiliency thereto, to allow the bar to yield toward and away from the frame.

1,170,380. PAPER-DISPENSING CABINET. COURTNEY P. WINTER, Washington, D. C. Filed June 2, 1914. Serial No. 842,403. (Cl. 211—29.)



1. A cabinet for dispensing paper sheets, each sheet being folded to form portions of unequal width, and the sheets being arranged in a stack, with the narrower portions undermost, said cabinet having an opening in its bottom through which the free edge of the narrower portion of the sheets may project, the forward side of the opening being formed by a ledge adapted to support the free edge of the wider portion of such sheets, said ledge being disposed in a different plane from the bottom, and being located sufficiently above the bottom to permit of the free edge of the narrower portion of a sheet lying upon and substantially in the plane of the bottom being grasped by the fingers of the user.

2. A cabinet for dispensing paper sheets, each sheet being folded to form portions of unequal width, and the sheets being superposed, with the narrower portions undermost, said cabinet having a substantially triangular opening in its bottom through which the free edge of the narrower portion of the sheets may depend, the base of the triangle being formed by the lower margin of the front wall of the cabinet, such lower margin being bent rearwardly so as to constitute a ledge upon which the free edge of the wider portion of the sheets is supported.

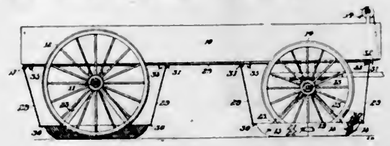
3. A cabinet for dispensing paper sheets, each sheet being folded to form portions of unequal width, and the sheets being superposed, with the narrower portions undermost, said cabinet having a substantially triangular opening in its bottom through which the free edge of the narrower portion of the sheets may project, the base of the triangle being of less length than said sheet, whereby the ends of said sheets rest upon the bottom at each side of the base and sag downwardly through such triangular opening.

4. A cabinet for dispensing paper sheets, each sheet being folded to form portions of unequal width, and the sheets being superposed with the narrower portions undermost, said cabinet having an opening in its bottom through which the free edge of the narrower portion may extend, the length of said opening being less than the corresponding dimension of the sheets, whereby the ends of said sheets are supported at each side of said opening, and the middle of the narrow portion thereof sags downwardly through the opening.

5. A cabinet for dispensing paper sheets, each sheet being folded to form portions of unequal width, and the sheets being superposed, with the narrower portions undermost, said cabinet having a relatively long opening in its bottom through which the free edge of the narrower portion may extend, and means at each end of said opening for supporting the extreme ends of the narrower portions of the sheets, whereby the middle thereof sags downwardly through the opening.

[Claims 6 to 9 not printed in the Gazette.]

1,170,381. RUNNER ATTACHMENT FOR VEHICLES. STANISLAW WISNIEWSKI, Erie, Pa., assignor of one-fourth to Kazimierz Lukaszenski, Erie, Pa. Filed June 3, 1915. Serial No. 31,867. (Cl. 21—96.)

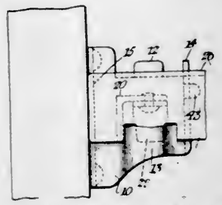


1. A wheel runner composed of two identical oppositely-arranged sections having alining wheel-receiving sockets therein, pivoting supporting arms pivoted to each of the said sections, and adjustable locking latches connecting the said sections.

2. A device of the class described comprising in combination with wheels of a vehicle, two similar socketed runner sections positioned end-to-end beneath each wheel thereof, supporting arms swingingly mounted in pairs upon the vehicle pivotally connected to the inner faces of the said sections, and latch connections between the said sections.

3. A device of the class described, comprising in combination with wheels of a vehicle, two similar socketed runner sections positioned end-to-end beneath each wheel thereof, supporting arms swingingly mounted in pairs upon the vehicle pivotally connected to the inner faces of the said sections, latch connections between the said sections, hooks carried by the said vehicle above the said sections, rings upon the ends of the sections adapted for engaging the said hooks, pulleys and a windlass carried by the vehicle, and cords operatively secured to the windlass and passing over the said pulleys and having their free ends attached to the said section rings.

1,170,382. CORNER-POST FASTENER. AARON WOLF, New York, N. Y. Filed July 1, 1915. Serial No. 37,420. (Cl. 5—55.)



1. A corner post fastening including a member formed of a single piece of sheet metal, said member having a base portion adapted for attachment to a corner post, and two separate plate portions in vertical planes at right-angles to each other and each provided with an upwardly extending projection in its own plane and adapted to enter a corresponding aperture in a side rail member.

2. A corner post fastening including a member formed of a single piece of sheet metal and having a base adapted for attachment to the corner post, a plate portion extending outwardly from one edge of said base in a vertical plane and a second plate portion substantially parallel to said base and carried by said first mentioned plate portion at its outer end, said plate portions having separate lugs for attachment to a side rail.

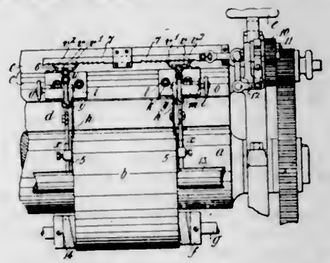
3. A corner post fastening member having means for attaching it to a corner post, means for attaching it to a cross rail and said fastening member having means adapted to directly engage with a corresponding corner post member to prevent lateral or vertical sliding when in registering engagement.

4. A corner post fastening member having means for attaching it to a corner post, means for attaching it to a cross rail and means adapted to engage with a corresponding corner post member to prevent lateral or vertical sliding when in registering engagement, and a joining member, said fastening member having integral means for engagement with said joining member to prevent separation of said fastening members when said joining member is in position.

5. In combination, two corner post fastening members each having means for interlocking engagement with a side rail, one of said members having a projection and the other having an aperture, said projection being adapted to enter said aperture and a short side rail for connecting said members together.

[Claims 6 to 8 not printed in the Gazette.]

1,170,383. SPREADING-MACHINE FOR COATING FABRIC WITH RUBBER OR OTHER LIKE PLASTIC MATERIALS. ALFRED WOOD, Uxbridge, England. Filed Apr. 24, 1914. Serial No. 834,177. (Cl. 91—53.)



1. In a spreading machine for coating fabric with rubber or other like plastic materials, the combination with side plates for retaining the plastic material, of means for feeding fabric past said side plates, and means for automatically controlling or adjusting the side plates in

accordance with variations in the lateral feed of the fabric.

2. In a spreading machine of the kind described for coating fabric or other like plastic materials, the combination with a plurality of side plates for retaining the plastic material, a slidable support for each of said side plates, said supports being automatically and positively operated in accordance with variations in the feed of the fabric.

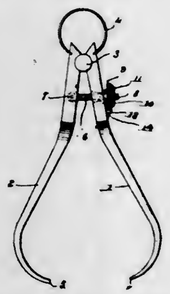
3. In a machine of the kind described, the combination with a plurality of side plates, of a support for each of said side plates, said supports being independently movable with relation to a variation of the fabric feed.

4. In a spreading machine of the kind described, a plurality of side plates adapted to retain the plastic material, a slidable support for each of said plates, a rack bar adapted to operate each of said slidable members, and means controlled by variation in the feed of the fabric adapted to operate said racks.

5. In a spreading machine of the character set forth, the combination with a plurality of side plates, of a slidable mounting for each of said plates, a rack bar adapted to operate each of said slidable members, a pivotally mounted arm on each slidable member, a plate on said arm adapted to engage the edge of the fabric being fed to the machine, springs adapted to hold said plates in position, and means carried by each of said arms adapted to engage said rack bars, whereby the variation in the width of the fabric feed will free the position of said slidable members.

[Claims 6 and 7 not printed in the Gazette.]

1,170,384. CALIPERS. OTTO C. ZERCK, Los Angeles, Cal. Filed Mar. 20, 1914. Serial No. 826,068. (Cl. 33—148.)



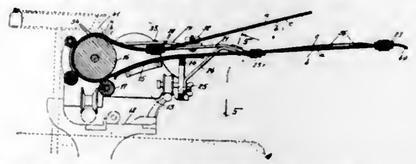
A device of the character described, consisting of a pair of caliper arms, a spring connected to the ends thereof, one of said arms being formed with a slot, a threaded bolt projecting through said slot, and being pivotally mounted upon the other arm, an adjusting nut engaging said bolt and bearing against one of said arms, said nut being cylindrical and having a beveled edge, said beveled edge having a series of graduated notches upon the same, and a fixed lug formed on one of said arms and having sides inclined substantially to the same pitch as said beveled edge, said inclined side of said lug having a single notch coöperating with said first named notches.

1,170,385. ATTACHMENT FOR TYPE-WRITING MACHINES. RICHARD D. ANANSON, Stirling, N. J. Filed May 17, 1915. Serial No. 28,523. (Cl. 197—133.)

1. An attachment adapted to be removably secured to the carriage of a typewriting machine, comprising a frame, means for guiding a longitudinally folded strip of fabric, and cutters for severing the strip at the folds.

2. An attachment adapted to be removably secured to the carriage of a typewriting machine, comprising a frame, means for guiding a longitudinally folded strip of fabric, and cutters adjacent to the guide means for severing the strip at the folds.

3. An attachment adapted to be removably secured to the carriage of a typewriting machine, comprising a frame having pairs of transverse strips constituting guides for a longitudinally folded strip of fabric, and cutters extending inwardly from opposite sides of the frame for severing the strip at the folds.



4. An attachment, for typewriting machines, comprising means for guiding a longitudinally folded strip to the platen of the machine, cutters for dividing the strip along the lines of the fold, and means for supporting superposed strips of printing ribbon in position to produce manifold copies on the several copy strips.

5. An attachment adapted to be removably secured to the carriage of a typewriting machine, comprising a frame, means for guiding a longitudinally folded strip of fabric, side cutters for severing the strip at the folds, and a transverse cutting member.

[Claims 6 to 16 not printed in the Gazette.]

1,170,386. CAN-OPENER. JOHN ANDERSON, Philadelphia, Pa. Filed June 24, 1915. Serial No. 36,019. (Cl. 30—3.)



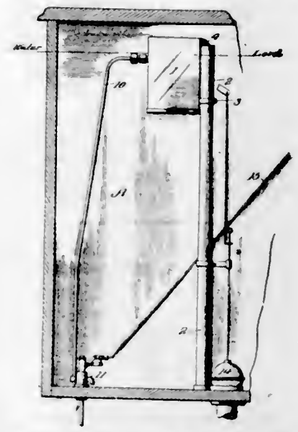
A can opener composed of a blade, a handled head, and a cleat, said members being firmly connected, and a handle rising from and fixed to said head, said head being on the inner side of the upper end of the front of said blade, and said cleat being on the upper end of the back of said blade, said cleat being adapted to set-out said guide from said blade and to form a positive stop for the descent of said blade and said head by engagement with the top edge of the can.

1,170,387. RETAINER FOR DISINFECTANTS. WILLIAM V. ANDREWS, Nashville, Tenn., assignor of one-half to William S. Harris, Nashville, Tenn. Filed June 2, 1915. Serial No. 31,745. (Cl. 4—30.)

1. A detachable retainer for disinfectant divided into two compartments, each of which has an independent outlet into the overflow tube of the flush-tank.

2. The combination with a flushing-tank and overflow tube, of a retainer divided horizontally into two compartments, and restricted means of communication between the two, each having an overflow in the form of a hook, which hooks over the upper end of the overflow tube whereby the retainer is removably supported thereon.

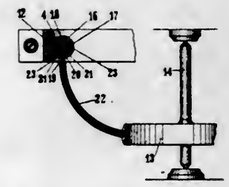
3. The combination with a flushing-tank and overflow tube, of a retainer divided horizontally into two compartments, and restricted means of communication between the two, each having an overflow in the form of a hook, which hooks over the upper end of the overflow tube whereby the retainer is removably supported thereon, a refill pipe discharging into the retainer, and a clamp which assists in holding the retainer on the overflow tube.



4. A retainer for flushing-tanks divided horizontally into two compartments, each having an outlet, a threaded opening in the partition between the two compartments, and a screw-cap having a hole formed therein whereby communication is formed between the two compartments of the retainer, said screw-cap removably secured in the threaded opening in the partition between the two compartments.

5. A retainer for flushing-tanks divided horizontally into two compartments, each having an outlet, a threaded opening in the partition between the two compartments, a screw-cap having a hole formed therein whereby communication is formed between the two compartments of the retainer, and a cross-bar on the screw-cap to retard the flow of liquid through the opening in the screw-cap.

1,170,388. ELECTRICAL CONTACT. HERMANN ANSCHÜTZ-KAEMPFE, Neumühlen, near Kiel, Germany. Filed Sept. 7, 1911. Serial No. 648,248. (Cl. 173—324.)



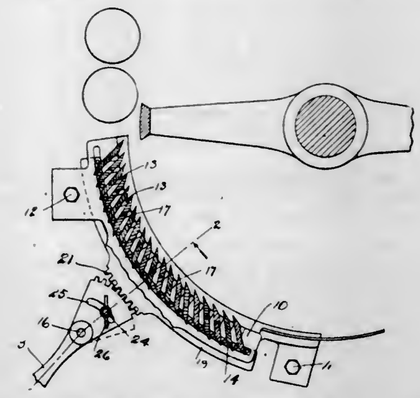
1. An electrical contact comprising a relatively rotatable contact pin and bearing as two elements each of which is adapted to constitute terminal points of an electrical circuit, the pin and bearing being spaced apart over part of their length so as to hold mercury between them and there being a capillary space between pin and bearing where the former enters the latter so that the mercury may not escape.

2. In a mercury electrical contact, the combination of a spherical cup to hold the mercury and a pin, entering said cup and surrounded by but spaced from the inner wall thereof, on which the cup is carried rotatably, the space between cup and pin being of capillary dimensions where the pin enters said cup.

3. An electrical contact comprising a fixed contact pin, a bearing for said pin adatpted to rotate thereupon and having inner surfaces separated from the pin so as to form a space for mercury said space being so small where the pin enters the bearing that the mercury will be maintained by cohesion, and a member upon which said bearing is adapted to roll.

4. An electrical contact comprising a pivoted arm carrying a fixed pin, a spherical cup rotatably mounted upon said pin said cup being adapted to contain mercury and the pin projecting into the cup but spaced from the inner wall thereof, the pin as it enters the cup being separated therefrom by a capillary space, and a track upon which said cup is adapted to roll as the arm moves upon its pivot.

1,170,389. COTTON-PICKER. LINUS D. ARMSTRONG, Providence, R. I. Filed Oct. 27, 1915. Serial No. 58,280. (Cl. 19—21.)



1. A reversible grid bar comprising a flat bar having both of its opposite edges beveled to a thin working edge.

2. A reversible grid bar comprising a flat bar having both of its opposite edges beveled on planes substantially parallel to each other and each having a thin working edge, said bar being adapted to be reversed edge for edge.

3. A reversible grid bar comprising a flat bar having both of it sopposite edges beveled on planes substantially parallel to each other each having a thin working edge, said bar being adapted to be reversed edge for edge, and means whereby said bar may be rocked to adjust its working angle.

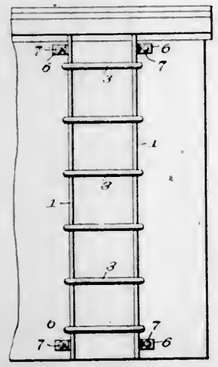
4. A reversible grid bar comprising a flat bar having its opposite edges beveled to a thin working edge, said bar being adapted to be reversed edge for edge, and a trunnion on the end of each bar whereby the same may be rotatably mounted.

1,170,390. SAFETY CAR-LADDER. WILLIAM F. ARMSTRONG and FREDERICK S. FORD, Chicago, Ill. Filed Sept. 4, 1915. Serial No. 49,062. (Cl. 228—1.)

1. In a ladder for railway cars, the combination with the side wall of the car having depressions formed therein and spaced apart longitudinally of such wall, of a ladder comprising side rails spaced apart, brackets at the opposite ends of the respective rails securing the ladder to the side wall of the car, bolts holding said brackets to the side wall of the car, said side rails being formed with alining openings disposed adjacent to the depressions in said side wall, a rung formed of a bar having the end portions thereof inturned and passed through said openings and the inner ends of the inturned end portions bent outwardly and disposed within said depressions and coöperating with said brackets to support the side rails, and rungs disposed upon opposite sides of the first-mentioned rung and secured to the side rails and spaced apart equal distances from each other and from the first-mentioned rung.

2. In a ladder for railway cars, the combination with the side wall of the car, of a ladder comprising side rails spaced apart, brackets at the opposite ends of the respective rails securing the same to the side wall of the car, said side rails being formed with alining openings, rungs

each formed of a bar having the end portions thereof inturned and passed through the corresponding openings



and then bent outwardly and having the outwardly bent portions bearing against the inner surfaces of the respective rails to hold the latter properly spaced apart.

1,170,391. PROCESS OF FORMING SOUND-RECORDS AND OTHER OBJECTS. JONAS W. AYLSWORTH, East Orange, and EDWARD L. AIKEN, Orange, N. J., assignors to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Aug. 6, 1910. Serial No. 575,981. (Cl. 18—48.4.)

1. The process of forming molded objects which consists in dissolving a permanently fusible phenolic condensation product in a liquid solvent therefor, mixing therewith an inert filling material, freeing the mass of the solvent, reducing the same to uniform powder, heating the same and molding the same to shape, substantially as described.

2. The process of forming molded objects which consists in dissolving a permanently fusible phenolic condensation product in a liquid solvent therefor, mixing therewith an inert filling material, freeing the mass of the solvent, heating the same and molding the same to shape, substantially as described.

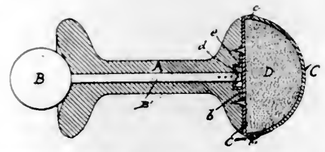
3. The process of forming sound record blanks, which consists in dissolving a permanently fusible phenolic condensation product in a liquid solvent therefor, dissolving therein a sufficient quantity of a methylene containing substance to harden the mass upon subsequent bringing of the same to the reaction temperature, mixing therewith an inert filling material, freeing the mass of the solvent, reducing the same to a uniform powder, heating the same, and molding the same to shape, substantially as described.

4. The process of forming molded objects, which consists in making a blank comprising a phenolic condensation product, forming a surface layer comprising a mixture of a permanently fusible phenolic condensation product, and a methylene containing substance in sufficient quantity to harden the mass to an infusible product upon heat treatment, then applying the same to the surface of the blank, and then applying the object thus made to a suitable mold and molding the same with application of heat, substantially as described.

5. The process of forming molded objects, which consists in making a blank comprising an inert filling body and a binding agent, forming a surface layer comprising a mixture of a permanently fusible phenolic condensation product and a methylene containing substance in sufficient quantity to harden the mass to an infusible product upon heat treatment, then applying the same to the surface of the blank, and then applying the object thus made to a suitable mold and molding the same with application of heat, substantially as described.

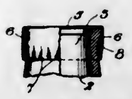
[Claims 6 to 25 not printed in the Gazette.]

1,170,392. CHALK-LINE SPOOL. EDWIN E. BAILEY, Rochester, N. Y. Filed July 21, 1913. Serial No. 780,414. (Cl. 33—87.)



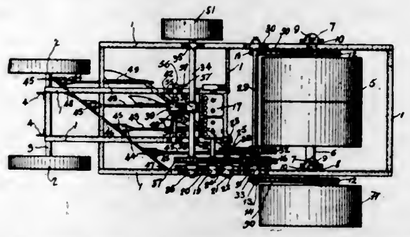
The improved chalk-line holder comprising a flanged spool having a chalk-holder proper secured to one end, a central shaft on which the spool is mounted and secured rotatably, said shaft having one end constructed as an enlarged disk, as and for the purpose specified.

1,170,393. BOTTLE-CLOSURE. JAMES T. BAKER, Bustleton, Pa. Filed Apr. 3, 1914. Serial No. 829,322. (Cl. 215—9.)



A device of the class described, a closure for bottles comprising single piece of paper formed to provide a smooth flat disklike top, and a smooth depending annular rim, with the top adapted to fit tightly against the entire top edge of the bottom and the rim snugly encircling the adjacent neck portion thereof and frictionally engaging the neck, and a series of relatively spaced corrugations formed on the smooth depending annular rim at the lower edge thereof by gripping the same, with the rim depending inwardly at substantially its medial portion and at the points of formation of the corrugation whereby said corrugation will bear tightly against the outer face of the neck.

1,170,394. POWER PLOWING-MACHINE. IMER EMERSON BEAMISH, North Vancouver, British Columbia, Canada, assignor of one-half to Byron C. Beamish, North Vancouver, British Columbia, Canada. Filed Mar. 24, 1914. Serial No. 826,838. (Cl. 97—30.)



1. A plowing machine comprising, a main frame, plowshares carried thereby, a pair of wheels supporting the front end of said frame, a rear axle one end of which extends outwardly from the frame, a pair of cylindrical rollers mounted end to end on said axle and positioned so that their peripheries roll on the ridges of the furrows formed by said plowshares, a land tranction wheel mounted on the outwardly extending portion of the rear axle, a motor mounted on the frame, a driving shaft supported on the frame, a driving connection between the driving shaft and the rear axle, a pinion on the motor shaft, a differential gear for the driving shaft, and a gear connection between said pinion and said differential gear, said gear connection being adapted to reverse the direction of rotation of the said differential gear and said driving shaft irrespective of the direction of rotation of the said pinion.

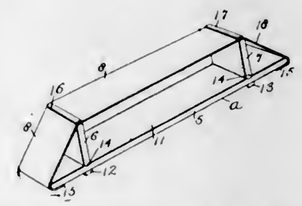
2. A plowing machine comprising, a main frame, plowshares carried thereby, a pair of wheels supporting the front end of said frame, a rear axle one end of which extends outwardly from the frame, a cylindrical roller mounted on said axle within the frame and positioned so that its periphery rolls on the ridges of the furrows formed by the said plowshares, a land traction wheel mounted on the outwardly extending portion of the rear axle, a motor mounted on the frame, a driving shaft supported on the frame, a driving connection between the said driving shaft and the rear axle, a differential gear on the driving shaft, an intermediate shaft in gear connection with the said differential gear, a pair of intermediate shafts gear connected with each other and with the motor shaft, a loose gear on each of the last mentioned intermediate shafts, each said loose gear being in engagement with a gear on the first mentioned intermediate shaft, and manually operated clutch means for each loose gear adapted to engage alternately therewith whereby each loose gear becomes alternately a fixed gear.

1,170,395. EXTENSION-LADDER. WILLIAM GEORGE BEATTY, Fergus, Ontario, Canada. Filed Oct. 9, 1912, Serial No. 724,775. Renewed Dec. 23, 1915. Serial No. 68,460. (Cl. 228—25.)



In an extension ladder, a locking element so pivoted to an extension ladder section as to tend to swing toward an adjoining ladder section and having at its lower end a substantially U-shaped rung-gripping member, one side of which is elongated and is provided with an angular extension having a downward inclination from the entrance to the rung-gripping member to engage the ladder rungs and move the locking element to the proper side thereof for the unimpeded descent of the extension section, and a latch pivoted to said angular extension to close the entrance to the rung-gripping member.

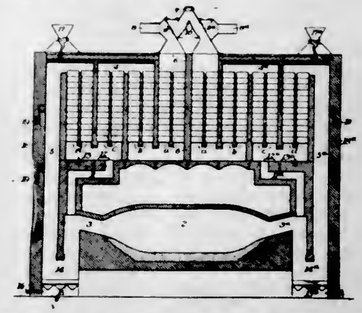
1,170,396. KNEE-REST. PETER A. BECH, Brooklyn, N. Y. Filed May 16, 1913. Serial No. 768,148. (Cl. 155—22.)



1. A kneeling rest comprising a base, a pliable strap, connected at its ends with the ends of the base and being longer than the base, and relatively rigid uprights attached to the strap at points between the ends thereof and adapted to be interposed on edge between the base and the strap to hold the intermediate portion of the strap spaced from the intermediate portion of the base.

2. A kneeling rest comprising a base provided at one side with grooves, a pliable strap connected at its ends wih the ends of the base and being longer than the base, transversely disposed strips located at the other side of the base and opposite the grooves, and relatively rigid uprights attached to the strap at points between the ends thereof and adapted to be interposed on edge in said grooves and between the base and the strap to hold the intermediate portion of the strap spaced from the intermediate portion of the base.

1,170,397. REGENERATIVE FURNACE. JOHN E. BELL, New York, N. Y. Filed June 2, 1913. Serial No. 771,189. (Cl. 75—94.)



1. The herein described method of operating regenerative furnaces, which consists in preheating air in a regenerator, then feeding powdered coal to and burning it in the preheated air between the regenerator and the furnace chamber under conditions which cause a producer reaction to form a combustible gas, and then passing this gas into the furnace for further combustion, substantially as described.

2. The method of operating regenerative furnaces, consisting in heating air in a regenerator, dividing said heated air, feeding pulverized fuel into one portion of the air and burning the same under conditions which cause a producer reaction between the regenerator and the furnace chamber to form a combustible gas, and then supplying the other portion of air to said gases before they enter the furnace, substantially as described.

3. The herein described method of operating regenerative furnaces, which consists in heating air in a regenerator, feeding pulverized solid fuel into said heated air, and burning the same in suspension in the air under conditions which cause a producer reaction to form a combustible gas, and then feeding this gas into a furnace, and limiting the rise in temperature in the combustion chamber, substantially as described.

4. The method of operating regenerative furnaces, which consists in heating the air in a regenerator, feeding pulverized solid fuel into a portion of said air, burning the fuel in suspension in said air between the regenerator and the furnace chamber to form a combustible gas, and then supplying another portion of heated air to said gas, and limiting the rise in temperature in the combustion chamber, substantially as described.

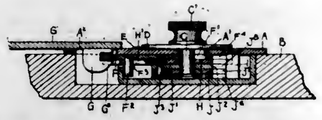
5. The method of operating regenerative furnaces, which consists in heating air in a regenerator, supplying a pulverized solid fuel to the heated air and burning the same to form a combustible gas in a combustion chamber separate from the furnace chamber, and then passing said gas into the furnace chamber for further combustion, and changing the direction of flow of the gas between the combustion chamber and the furnace chamber for the purpose of causing the gas to deposit ash, substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

1,170,398. PERMUTATION-LOCK. STEPHAN BLAZEK, New York, N. Y., assignor of one-third to Samuel Sherman, New York, N. Y. Filed Mar. 23, 1915. Serial No. 16,332. (Cl. 70—55.)

1. A permutation lock provided with a spring-pressed bolt normally held by its spring in locking position, mechanism for moving the bolt into unlocking position, the said

mechanism having a slide on one side of the bolt and connected therewith to permit the bolt to have limited movement thereon, a spindle secured to the slide for operating it, and means for guiding the bolt, slide and spindle on movement of the parts in the direction of the length of the bolt.

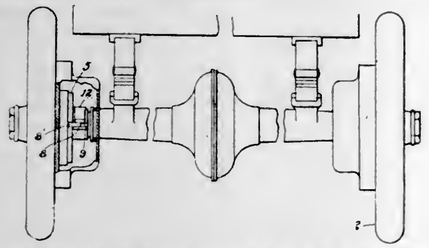


2. A permutation lock, comprising a sliding and spring pressed bolt, a slide, means connecting the bolt and slide to permit the bolt to have limited movement on the slide, a spindle secured to the slide, tumblers mounted on the spindle and connected with each other to be operated by the spindle, the tumblers having notches in their peripheries, and a post adjacent the tumblers and with which the notches of the tumblers are adapted to register.

3. A permutation lock, comprising a spindle having a knob, a tumbler attached to the spindle, tumblers loose on the spindle and controlled by the said fixed tumbler, the tumblers having peripheral notches adapted to register with each other, a bolt having an elongated slot through which extends the said spindle, a pin on the said bolt, a spring pressing the said pin, a slide moving with the said spindle and having a slot engaged by the said pin, and a fixed guide post for the said bolt and slide to slide on the post forming an abutment for the said tumbler notches and the latter when in register being also in register with the said post to allow bodily movement of the bolt, slide and tumblers on moving the spindle in the direction of the length of the bolt.

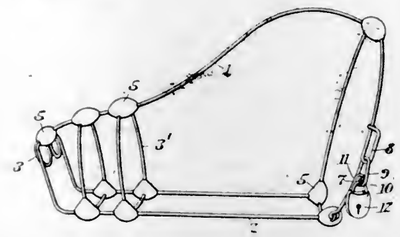
4. A permutation lock provided with a sliding and spring pressed bolt, a slide upon which the bolt has limited sliding movement, a spindle secured to the slide, a tumbler fixed on the spindle and provided with a pin, tumblers mounted loosely on the said spindle and provided with segmental slots engaged by the said pin, the said fixed and loose tumblers having notches at their peripheral faces, and a fixed post extending across the peripheral faces of the tumblers and adapted to register with the said notches at the time the latter are in register with each other.

1,170,399. MOTOR-VEHICLE DRIVING-GEAR. CHARLES F. BLODGETT, Buchanan, Mich. Filed Jan. 13, 1915. Serial No. 2,037. (Cl. 21—90.)



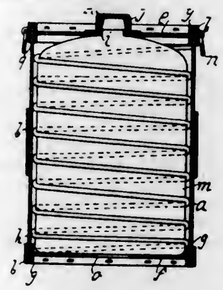
The combination with a driving axle of a motor vehicle and wheels loosely mounted upon the respective ends of said axle and each having an annular row of depressions formed in the inner face of the hub concentrically of the axle, disks fixed to said axle concentrically thereof and face to face with the inner faces of the respective hubs, pawls carried by the respective disks and engaging the depressions in the adjacent hubs to rotate the latter from the axle in one direction and adapted to disengage the depressions to permit differential movement of the wheels, means holding said pawls normally in the depressions, a second set of pawls carried by the respective disks and adapted to engage the depressions in the adjacent hubs to rotate the latter from the axle in the reverse direction and adapted to disengage the depressions to permit differential movement of the wheels, and means for disengaging the first-mentioned pawls from the depressions and engaging the last-mentioned pawls with the depressions.

1,170,400. ANIMAL-MUZZLE. FRANK BOEHME, New York, N. Y. Filed Oct. 15, 1915. Serial No. 56,098. (Cl. 119—133.)



A muzzle comprising a wire structure having at its rear ends loop wire sections one of which is provided with a slot and the other provided with a hook, said hook having at its free end an eye, the section carrying the hook having an eye adapted to register with the eye upon the hook whereby the said eyes may receive the bail of a lock.

1,170,401. BOTTLE-PROTECTOR. BENJAMIN BOLEY, Brooklyn, N. Y. Filed Dec. 22, 1914. Serial No. 878,539. (Cl. 217—52.)



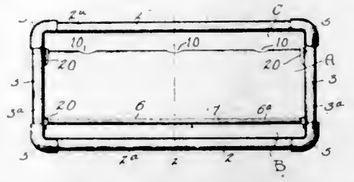
1. A bottle protector comprising a cylindrical wooden case having a sunken bottom, and a top provided with an aperture, a bottle supported on the bottom with an upper shoulder in contact with the inner portion of the cover and a neck projecting from the aperture, a threaded sleeve extending from the aperture adapted to fit closely about the circumference and to cover the neck to the mouth of the bottle, and a cap inserted on the sleeve to cover the apex of the bottle.

2. A bottle protector comprising a cylindrical wooden case having a sunken bottom, and a top provided with an aperture, a bottle supported on the bottom with an upper shoulder in contact with the inner portion of the cover and a neck projecting from the aperture, a threaded sleeve extending from the aperture to cover the neck of the bottle, a cap inserted on the sleeve to contact with the apex of the bottle, and cushioning devices spirally embracing the body of the bottle from the bottom to the shoulder to coact with the inner portion of the case.

1,170,402. FLOWER-BOX. THOMAS P. BOLGER, Gloucester, Mass. Filed Mar. 31, 1915. Serial No. 18,356. (Cl. 47—41.)

1. A flower box including an elongated substantially rectangular flower box having an open top and formed with water-tight sides and bottom, a longitudinally extending upright partition having a slightly spaced and

substantially parallel relation to one of the sides of the box and terminating short of the bottom thereof, said partition providing a comparatively narrow air space and watering channel extending the full length of the box and leading from the top to the bottom thereof, and a false bottom extending the full length of the box and spaced from the bottom thereof to provide an air space and drainage compartment extending under the full length of the soil compartment, the edges of the false bottom being secured to the lower edge of the upright partition so that the watering channel and drainage compartment communicate with each other throughout the entire length of the box.



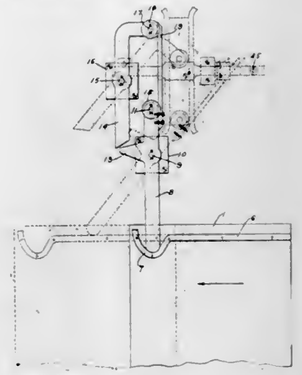
2. A flower box including an elongated substantially rectangular box having an open top and formed with water tight sides and bottom, an upright partition extending the full length of the box and having a slightly spaced and parallel relation to one of the sides so as to provide a large soil compartment and a comparatively narrow watering channel extending the full length of the box and leading from the top to the bottom thereof, a false bottom extending the full length of the box and spaced from the bottom thereof so as to provide a drainage compartment extending under the full length of the soil compartment and communicating with the upright watering channel, one edge of the false bottom being secured to the upper edge of the upright partition, while the opposite edge thereof terminates at a point spaced from the opposite side of the box, and a downwardly extending flange projecting from the said opposite edge of the false bottom, a longitudinally disposed drainage depression being provided at the bottom of the soil compartment between the flange and the box.

3. A flower box including a box having water-tight bottom and sides, an upright partition slightly spaced from one side of the box and providing a watering channel leading from the top to the bottom of the box, a false bottom spaced from the bottom of the box to provide a drainage compartment, said false bottom extending from the lower edge of the upright partition to a point spaced from the opposite side of the box, and a downwardly extending flange projecting from the edge of the false bottom to the bottom of the box and having drain openings therein, said flange having the lower edge thereof returned upwardly to provide a combined reinforcing rib and baffle member extending across the drain openings.

4. A flower box including an elongated water tight box having a bottom and opposed upright sides, an upright partition having a slightly spaced and substantially parallel relation to one of the sides so as to provide a comparatively large soil compartment and a narrow watering channel extending the full length of the box and leading from the top to the bottom thereof, a false bottom spaced from the main bottom of the box so as to provide a drainage compartment which extends under the soil compartment and communicates with the watering channel, said false bottom leading from the lower edge of the upright partition to a point spaced from the opposite side of the box, and a downwardly extending flange projecting from the edge of the false bottom and engaging the main bottom so as to provide a longitudinally extending drainage depression between the flange and the side of the box, the said flange being provided with a series of drain openings.

5. A flower box including an elongated water-tight box formed with a bottom and opposed upright sides, an upright partition having a slightly spaced and substantially parallel relation to one of the sides so as to provide a large soil compartment and a comparatively narrow watering channel extending the full length of the box and leading from the top to the bottom thereof, a false bottom spaced from the bottom of the box so as to provide a drainage compartment extending under the soil compartment, said false bottom leading from the lower edge of the upright partition to a point spaced from the opposite side of the box, and a downwardly extending flange projecting from the edge of the false bottom and engaging the main bottom, said flange being provided with a series of drain openings and having the lower edge thereof extended upwardly to provide a combined reinforcing rib and baffle member for the drain openings, a longitudinally disposed drainage depression being provided at the bottom of the soil compartment between the flange and the side of the box.

1,170,403. ELEVATOR. JOHN E. BOYCE, Peekskill, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 12, 1914. Serial No. 844,629. (Cl. 187—31.)



1. The combination with an elevator car, a floor landing, a door at the landing, a lever pivoted above the door, means on the door for rocking said lever about its pivot, a member normally locking said lever against movement, and means on the car coacting with said lever and locking member and adapted to move said locking member out of locking position upon a movement of the door toward open position.

2. The combination with an elevator car, a floor landing, a door at the landing, a lever pivoted above the door, means on the door for rocking said lever about its pivot, a member normally locking said lever against movement, and a cam on the car adapted to register with said lever and member when the car is adjacent the floor landing, whereby a movement of the door toward open position carries said locking member out of locking position.

3. The combination of an elevator car, a floor landing, a door at the landing, a lever pivoted above the door, means on the door for rocking said lever about its pivot, a member normally locking said lever against movement, rollers carried upon said lever and member, and a cam on the car adapted to engage said rollers when the car is adjacent the floor landing, whereby a movement of the door toward open position effects a movement of said cam to remove said locking member from locking position.

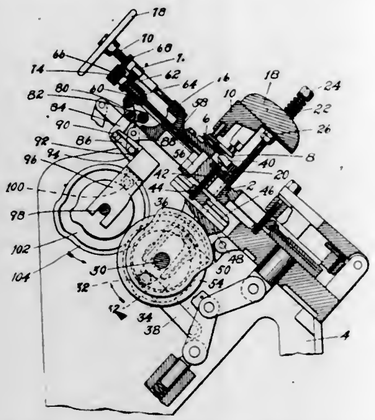
4. The combination of an elevator car, a floor landing, a door at the landing, a lever pivoted above the door, means on the door for rocking said lever about its pivot, a pivoted abutment in the path of movement of said lever, rollers carried upon said lever and abutment, and a cam on the car adapted to register with both of said rollers when the car is adjacent the floor landing, whereby a movement of the door toward open position effects the withdrawal of said abutment from the path of movement of the lever and thereby permits the opening of the door.

5. The combination of an elevator car, a floor landing, a door at the landing, a lever pivoted above the door, a piv-

oted member normally locking the lever against movement, rollers carried by said lever and member arranged in vertical alinement, a cam on the car adapted to register with both rollers when the car is adjacent the floor landing, means on the door for positively rocking said lever upon its pivot and thereby effecting a movement of said cam to remove said member from locking position to permit the opening of the door, and means carried by the lever for restoring said member to locking position independently of the said cam.

[Claims 6 to 11 not printed in the Gazette.]

1,170,404. METHOD OF FORMING UPPERS OF BOOTS AND SHOES. MATTHIAS BROCK, Boston, and LOUIS M. BROWN, Beverly, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Feb. 9, 1914, Serial No. 817,544. Divided and this application filed Nov. 1, 1915. Serial No. 59,042. (Cl. 12—142.)



1. The method of forming shoe uppers which consists in positioning an upper blank with the margin in outstanding relation to the body portion, relatively moving different portions of the material at the margin of the blank lengthwise of the margin to adjust the material, retaining the different portions of the material at the margin in said adjusted relation, and while said portions are thus retained applying forming pressure to an unconfined portion of the blank.

2. The method of forming shoe uppers which consists in gathering the material along the margin of an upper blank, and then confining the marginal portion of the blank in out-turned relation to the body portion and applying forming pressure to an unconfined portion of the blank.

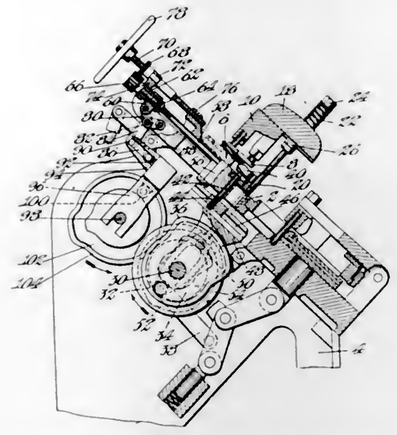
3. The method of forming shoe uppers which consists in gathering the material along the margin of an upper blank to provide a fullness at the front portion of the blank, flattening the margin of the blank and confining it with its different portions in gathered relation, and while the margin is thus confined applying forming pressure to an unconfined portion of the blank.

4. The method of forming shoe uppers which consists in positioning an upper blank with the margin in outstanding relation to the body portion, moving different portions of the material at the margin of the blank relatively to gather the material, confining the margin of the blank to retain the different portions in gathered relation, and while said portions are thus retained applying pressure to form a toe from an unconfined portion of the blank.

5. The method of shaping a toe blank which consists in positioning a blank with its margin in outstanding relation to its body portion, relatively moving different portions of the material at the margin of the blank in the direction of the toe end of the blank to provide a fullness of the material preparatory to the forming of the toe, retaining the different portions of the material at the margin in said adjusted relation, and while said portions are thus retained applying pressure to the blank to form the toe.

[Claims 6 to 8 not printed in the Gazette.]

1,170,405. MACHINE FOR FORMING UPPERS OF BOOTS AND SHOES. MATTHIAS BROCK, Roxbury, and LOUIS M. BROWN, Beverly, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 9, 1914. Serial No. 817,544. (Cl. 12—97.)



1. In apparatus of the class described, the combination with means for forming a toe from a toe blank, of means for effecting a relative movement of adjustment of different portions of the margin of the blank previous to the operation of the toe forming means.

2. In apparatus of the class described, the combination with means for forming a toe from a toe blank, of means for effecting a shaping and compensating relative movement of different portions of the margin of the blank before the blank is acted upon by the toe forming means.

3. In apparatus of the class described, the combination with means for forming a toe from a toe blank, of means for gathering in the marginal portion of the blank in the regions of the abruptly curved portions of the toe before the end of the toe is formed by said toe forming means.

4. In apparatus of the class described, the combination with means for forming a toe from a toe blank, of means for relatively moving different portions of the blank at its edge substantially in the plane of the margin before the blank is acted upon by the toe forming means.

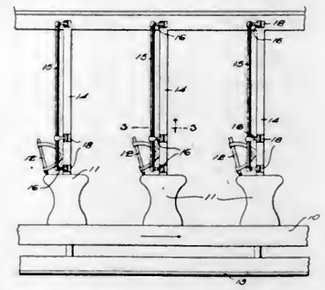
5. In apparatus of the class described, the combination with means for forming a toe from a toe blank, of means for forming an out-turned sole attaching flange upon said blank, and means for gathering in the material along the line of said flange previous to the operation of said flange forming means.

[Claims 6 to 45 not printed in the Gazette.]

1,170,406. HAND-RAIL SUPPORT FOR TROLLEY-CARS. FRANK L. BROOKS, New York, N. Y. Filed May 29, 1915. Serial No. 31,158. (Cl. 105—31.)

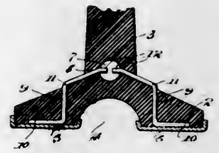
In trolley car construction, the combination with a series of seats, a series of vertical posts at the ends of the seats, and a back for each seat movable to a position adjacent either edge of its corresponding seat, of a series of vertically extending hand rails, one adjacent to each end of each seat, and means for rigidly and permanently securing each of said hand rails to a corresponding post,

each of the hand rails on one side of the car being spaced outwardly and rearwardly from its respective post and each



of the hand rails on the other side of the car being spaced outwardly and forwardly from its corresponding post.

1,170,407. TESTING DEVICE FOR SPARK-PLUGS. WILLIS BROWN, Oglesby, Ill. Filed Nov. 17, 1914. Serial No. 872,597. (Cl. 175—183.)



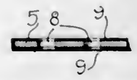
1. A testing device for spark plugs comprising a substantially T-shaped body having an opening formed therein, contact plates on the head of said body and spaced apart, and conducting wires connected with said plates respectively and extending into said sight opening and spaced apart therein to form a spark gap.

2. A testing device for spark plugs comprising a substantially T-shaped body having a recess formed in the outer edge of the head thereof approximately centrally of such edge, contact plates secured to said edge of the head at opposite sides of the recess therein, said body being formed with a sight opening, and conducting wires connected with the respective plates and extending into said sight opening therein to form a spark gap.

3. A testing device for spark plugs comprising a substantially T-shaped body having a sight opening formed therein at the junction of the stem and head and having a groove formed in the outer edge of the head thereof centrally of said head, contact plates secured to the outer edge of said head at opposite sides of the groove therein, and conducting wires connected with the respective plates and extending into said opening and spaced apart therein to form a spark gap.

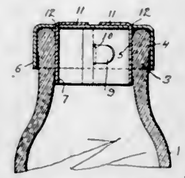
4. A testing device for spark plugs comprising a body formed with a head, and a stem and having a sight opening formed therein at the junction of the head and stem, contact plates on the head and spaced apart and conducting wires connected with said plates respectively and extending into said sight opening and spaced apart therein to form a spark gap.

1,170,408. FLY-KILLING DEVICE. HENRY L. BRUEN, New York, N. Y. Filed Nov. 18, 1914. Serial No. 872,825. (Cl. 43—1.)



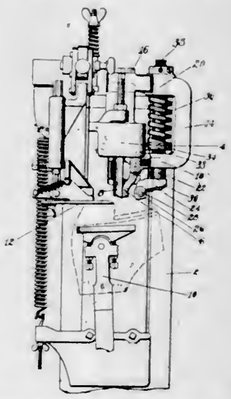
A device for killing insects consisting of a flexible, foraminated metal plate of uniform thickness throughout its area, a coating of soft, elastic, vulcanizable material entirely covering all exposed surfaces and the edges of said plate but leaving the passages through the openings in the plate unobstructed, said coating also being of uniform thickness throughout its area, and a suitable handle connected to one end of said plate.

1,170,409. MILK-BOTTLE CAP. MAE S. GELLMAN BURR, Commack, N. Y. Filed June 11, 1915. Serial No. 33,582. (Cl. 215—9.)



A bottle cap of the class described having an outer flange wall to fit around the exterior of the bottle mouth and having a pair of spaced slits in the top thereof, and also having an inner wall or collar having a pair of ears formed on its longitudinal edges at spaced distances apart, said ears adapted to fit up into the slots in the cap for securely holding the inner flange integral to the cap and at spaced distance away from the outer flange wall of the cap, said inner flange or collar being adapted to engage the inner face of the bottle mouth and provided on one of its vertical ends with a locking tongue intermediate of its longitudinal edges and having a vertical slot formed adjacent its opposite end intermediate the longitudinal edges thereof, said tongue adapted to fit in said slot for securely holding the inner flange against the interior of the bottle mouth.

1,170,410. MACHINE FOR OPERATING UPON THE BOTTOMS OF BOOTS AND SHOES. CHARLES T. CAMILL, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 18, 1912. Serial No. 732,043. (Cl. 12—47.)



1. In a machine of the class described, the combination of a shoe support, a reciprocating slide, means for breasting the heel of a shoe, means for stamping the shank of the shoe, both said means being actuated respectively unyieldingly and yieldingly by said slide, and means operating upon contact with the shoe shank for releasing the breasting means and the stamping means from actuation by the reciprocating slide.

2. A machine of the class described having, in combination, a work support for sustaining a shoe, a knife for breasting the shoe heel, operating means therefor, a die, connections between the die and the knife operating mechanism for effecting a die impression upon the outer face of the shoe bottom during the operating cycle of the breast-

ing knife, and means for automatically effecting release of the knife and die simultaneously when the end of their operative stroke is reached.

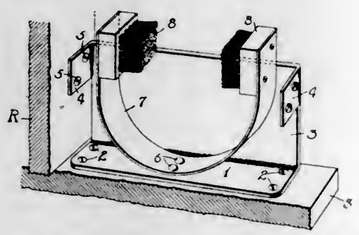
3. A shoe machine comprising positively actuated heel breasting mechanism and resiliently actuated stamping means arranged to operate respectively on the heel and on the shank portion of a shoe, and a supporting jack for the shoe, said parts being so arranged that the heel may be breasted and the shank stamped while the shoe remains in the same position upon said support.

4. In a machine for operating upon shoes the combination of a shoe support, a slide mounted for reciprocation toward and from a shoe on said support, a bracket secured to the slide, a rod having bearings in said bracket, a die carried by the rod, a spring for resiliently holding the die carrying rod depressed in the bracket, means for actuating the slide to force the die upon the shoe, a breasting knife operated by said slide simultaneously with said die, and means for automatically releasing the slide from the actuating means when the said spring has yielded a predetermined amount.

5. A machine of the class described, having, in combination, a shoe support, a power actuated slide, a breasting knife mounted on said slide, a stamp resiliently carried upon said slide and arranged to contact with the shoe bottom when the slide is reciprocated, and means for releasing the stamp from power actuation when the slide has made a predetermined stroke relatively to the shoe bottom.

[Claims 6 to 9 not printed in the Gazette.]

1,170,411. SHOE-CLEANING DEVICE. WARD G. CALLENDER, Mansfield, Ohio. Filed Dec. 10, 1914. Serial No. 876,525. (Cl. 15—2.)

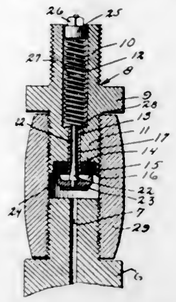


1. A shoe cleaning device comprising a flat horizontal base plate to be secured to a step, an upright scraping plate formed integrally with one edge of said base plate and rising therefrom, and a flange formed integrally with and projecting laterally from one end of said scraping plate, said flange being adapted for attachment to a step riser.

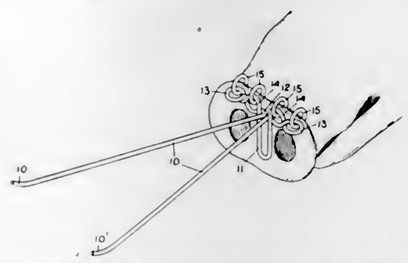
2. A shoe cleaning device comprising a flat horizontal base plate to be secured to a step, an upright scraping plate formed integrally with one edge of said base plate and rising therefrom, and a flange formed integrally with and projecting laterally from one end of said scraping plate, said flange being adapted for attachment to a step riser, combined with a pair of resilient arms rising from the base plate, and inwardly facing brushes secured to the upper ends of said arms.

1,170,412. VALVE FOR TIRES. WILLIAM A. CAMPBELL, Maricopa, Cal. Filed Nov. 16, 1914. Serial No. 872,446. (Cl. 152—12.)

In combination with the threaded nipple of a fire, a valve comprising a body portion having its ends formed reduced and externally threaded, said body portion being provided with a comparatively large bore extending through its major portion and a smaller bore communicating therewith, a rubber disk recessed into the end of the inner reduced portion, a sleeve extending through said smaller bore and having an outwardly flared end, a valve rod extending through said large bore and said sleeve, a guide collar threaded upon one end of said rod, a cupped disk secured upon the other end of said rod and normally seating against said rubber disk, the portion of said rod adjacent said cupped disk being tapered to conform to the flared end of said sleeve, a coil spring surrounding said rod and abutting against the end of said larger bore and said guide collar, and a coupling ring threaded upon the inner reduced extension and said nipple.

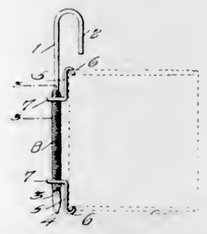


1,170,413. HOG-RING. WILLIAM LOREN CHAMBERS, Brookville, Ind. Filed Aug. 5, 1915. Serial No. 43,790. (Cl. 119—136.)



In a device of the character set forth, the combination of a pair of forwardly projecting prongs having free ends spaced from each other, the inner ends of the prongs being adjacent each other, an intermediate U-shaped downwardly projecting tongue embracing the inner ends of the prongs, those portions of the device connecting the prongs and the tongue being bent into pairs of loops arranged in planes perpendicular to each other, providing means for supporting the same for movement around an axis transverse to the vertical axis of the tongue.

1,170,414. RECEPTACLE-HOLDER. GEORGE H. CHRISTENSEN, Chicago, Ill. Filed Mar. 24, 1915. Serial No. 16,647. (Cl. 248—23.)

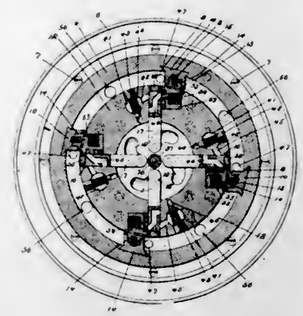


1. A receptacle holder comprising a rod having a support at one end thereof, a coil spring loosely mounted on said rod, and clamping elements each including a laterally extending lug having an opening therein for the reception of said spring, said opening being of a less diameter than the coils of the spring whereby the clamping element may be adjusted back and forth to regulate the tension thereof on the receptacle, said clamping elements being provided with inturned ends for engaging said receptacle.

2. A receptacle holder comprising a rod, a coil spring carried thereby, and clamping elements supported between the coils of said spring.

3. A receptacle holder comprising a rod, a coiled spring carried thereby, and clamping elements rotatably mounted on said coiled spring whereby to adjust the same relative thereto.

1,170,415. ROTARY INTERNAL-COMBUSTION ENGINE. JOHN L. CLARK, Lockport, Ill., assignor of one-fifth to Edwin F. Mandell, Chicago, Ill. Filed Sept. 8, 1915. Serial No. 49,577. (Cl. 123—14.)



1. In a rotary internal combustion engine, a hollow cylindrical rotor, a non-rotary cylindrical member arranged concentrically within and in peripherally spaced relation to the rotor to form a combustion chamber, abutments carried by the rotor and bearing a fixed relation to the same, a circular series of non-rotary abutments each slidable in relation to said non-rotary member and in a substantially radial direction toward and away from the inside periphery of the rotor, an oscillatory cam operating with a positive action on all of said slidable abutments to thrust the same outwardly and draw the same inwardly, an oscillatory cam shaft concentric with the rotor and means for introducing an explosive mixture in the combustion chamber between the non-rotary and rotor carried abutments.

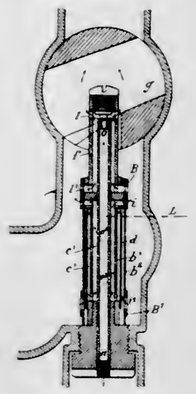
2. In a rotary internal combustion engine, a hollow cylindrical rotor, a non-rotary cylindrical member arranged concentrically within and in peripherally spaced relation to the rotor to form an annular combustion chamber, abutments carried by the rotor and bearing a fixed relation to the same, non-rotary abutments slidable in relation to said non-rotary member and in a substantially radial direction toward and away from the inside periphery of the rotor, means operating with a positive action to thrust said slidable abutments outwardly and draw the same inwardly, and means for introducing an explosive mixture in the combustion chamber between the non-rotary and motor carried abutments, said means comprising a compressing cylinder and piston arranged within said non-rotary cylindrical member, and valved passages leading from said cylinder outwardly to said annular combustion chamber.

3. In a rotary internal combustion engine, a hollow cylindrical rotor, a non-rotary cylindrical member arranged concentrically within and in peripherally spaced relation to the rotor to form a combustion chamber, abutments carried by the rotor and bearing a fixed relation to the same, non-rotary abutments slidable in relation to said non-rotary member and in a substantially radial direction toward and away from the inside periphery of the rotor, an oscillatory cam operating with a positive action to thrust said slidable abutments outwardly and draw the same inwardly, and means for introducing an explosive mixture in the combustion chamber between the non-rotary and rotor carried abutments, said means comprising a compressing cylinder and piston arranged within said non-rotary cylindrical member and compression trap chambers between and in communication with said cylinder and the combustion chamber.

4. In a rotary internal combustion engine, a hollow cylindrical rotor, a non-rotary cylindrical member arranged concentrically within and in peripherally spaced relation to the rotor to form a combustion chamber, abutments carried by the rotor and bearing a fixed relation to the same, non-rotary abutments slidable in relation to said non-rotary member and in a substantially radial direction toward and away from the inside periphery of the rotor, an oscillatory cam operating with a positive action to thrust said slidable abutments outwardly and draw the same inwardly, means for introducing an explosive mixture in the combustion chamber between the non-rotary and rotor carried abutments, said slidable abutments acting as valves to control the admission of mixture to the combustion chamber, and presser blocks carrying antifriction rollers bearing against said slidable abutments to press said blocks against the ported faces of the non-rotary member.

5. In a rotary internal combustion engine, a hollow cylindrical rotor, a non-rotary cylindrical member arranged concentrically within and in peripherally spaced relation to the rotor to form a combustion chamber, abutments carried by the rotor and bearing a fixed relation to the same, non-rotary abutments slidable in relation to said non-rotary member and in a substantially radial direction toward and away from the inside periphery of the rotor, an oscillatory cam operating with a positive action to thrust said slidable abutments outwardly and draw the same inwardly, means for introducing an explosive mixture in the combustion chamber between the non-rotary and rotor carried abutments, said means comprising a compressing cylinder and piston arranged within said non-rotary cylindrical member, valved passages leading from said cylinder to the combustion chamber, a rotary cam shaft actuated by the rotor, an arm on said oscillatory cam, and a cam on said rotary cam shaft operating to rock said arm.

1,170,416. CARBURETER. CHARLES HENRI CLAUDEL, Levallois-Perret, France. Filed Feb. 6, 1912. Serial No. 675,738. (Cl. 48—150.3.)



1. A carbureter comprising a nozzle discharging into the suction space, means for admitting liquid fuel to said nozzle, a chamber associated with the nozzle and provided at a point of greater suction with an orifice through which mixed air and fuel are discharged independently of said nozzle and at a point of less suction with an inlet orifice for the admission of air, and means for supplying the

chamber with liquid fuel through an orifice distinct from the air inlet orifice.

2. A carbureter comprising a nozzle discharging into the suction space above the constant supply level, means for admitting liquid fuel to said nozzle, and a chamber associated with the nozzle and provided with a discharge orifice which is independent of said nozzle and is located at a point of greater suction, with an air inlet orifice at a point of less suction, and with a distinct orifice for admitting liquid fuel to the chamber below the constant supply level.

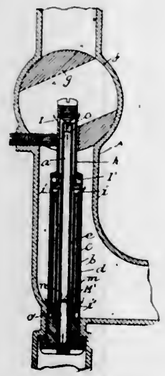
3. A carbureter comprising a nozzle discharging into the suction space above the constant supply level, means for supplying said nozzle with liquid fuel, and a concentric tube associated with the nozzle to form a chamber, said chamber being provided with an orifice through which mixed air and fuel are discharged independently of said nozzle, with an air inlet orifice located at a point of less suction, and with an orifice distinct from the air inlet orifice for admitting liquid fuel below the constant supply level.

4. A carbureter comprising a nozzle discharging into the suction space, means for supplying the nozzle with liquid fuel, and a concentric tube associated with said nozzle to form an annular chamber having an orifice through which mixed air and fuel are discharged independently of said nozzle and also having an air inlet orifice, the nozzle being provided with a passage leading into said chamber independently of said air inlet orifice and at a point below the constant supply level.

5. A carbureter comprising a nozzle discharging into the suction space, means for supplying the nozzle with liquid fuel, and a concentric tube associated with said nozzle to form an annular chamber having a discharge orifice leading therefrom and distinct orifices for the admission of air thereto, the lateral walls of the nozzle being provided with a plurality of openings located at different heights below the constant supply level for admitting liquid fuel to said chamber.

[Claims 6 to 19 not printed in the Gazette.]

1,170,417. CARBURETER. CHARLES HENRI CLAUDEL, Levallois-Perret, France. Original application filed Feb. 6, 1912, Serial No. 675,738. Divided and this application filed May 5, 1914. Serial No. 836,572. (Cl. 48—150.3.)



1. A carbureter comprising a nozzle discharging at its upper portion into the suction space, a diaphragm located below the constant supply level and dividing the interior of the nozzle into two parts, means for admitting liquid fuel to said nozzle below the diaphragm, and a chamber associated with the nozzle and provided at a point of less suction with an orifice for the admission of air and at a point of greater suction with a discharge orifice for the mixed air and fuel, said nozzle being provided with an opening located below the diaphragm and with another opening located above said diaphragm and affording communication between said chamber and the interior of the nozzle.

2. A carbureter comprising a nozzle discharging at its upper portion into the suction space, a perforated diaphragm dividing said nozzle into two parts and located below the constant supply level, means for admitting liquid fuel to the lower portion of the nozzle, and a concentric tube associated with the nozzle and forming a chamber having an air inlet and a discharge outlet located respectively in regions of less and greater suction, said nozzle being provided with an opening located below the diaphragm for supplying liquid fuel to said chamber.

3. A carbureter comprising a nozzle discharging at its upper portion into the suction space, a diaphragm provided with a perforation and dividing the interior of the nozzle into two parts below the constant supply level, means for admitting fuel to said nozzle below the diaphragm, and a chamber associated with the nozzle and provided at a point of less suction with an orifice for the admission of air and at a point of greater suction with a discharge orifice for the mixed air and fuel, said nozzle being provided with openings located above and below the diaphragm, respectively, and below the constant supply level, whereby the interior of the nozzle is placed in communication with said chamber.

4. A carbureter comprising a nozzle discharging at its upper portion into the suction space, a diaphragm located below the constant supply level and dividing the interior of the nozzle into two parts, means for admitting fuel to said nozzle below the diaphragm, a chamber associated with the nozzle and provided at a point of less suction with an orifice for the admission of air and at a point of greater suction with a discharge orifice for the mixed air and fuel, said nozzle being provided with openings located above and below the diaphragm, respectively, and below the constant feed level, whereby the interior of the nozzle is placed in communication with said chamber, and an air-circulating cage surrounding the discharge outlet from the nozzle.

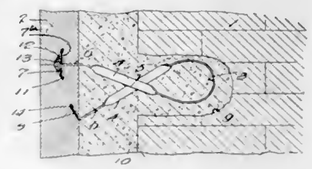
5. A carbureter comprising a nozzle discharging at its upper portion into the suction space, a diaphragm located below the constant supply level and dividing the interior of the nozzle into two parts, means for admitting liquid fuel to said nozzle below the diaphragm, a chamber associated with the nozzle and provided at a point of less suction with an orifice for the admission of air and at a point of greater suction with a discharge orifice for the mixed air and fuel, said nozzle being provided with openings located above and below the diaphragm, respectively, and below the constant supply level, whereby the interior of the nozzle is placed in communication with said chamber, an air-circulating cage surrounding the upper portion of the nozzle, and a rotary cock plug having a passage in which the discharge opening of the cage is located, the inlet opening of said cage and the discharge orifice of said chamber being located behind the cock plug.

1,170,418. PROCESS OF PRODUCING SOLUBLE SALTS OF ALUMINUM. MELVILLE F. COOLBAUGH and ELWYN H. QUINNEY, Rapid City, S. D. Filed June 2, 1913. Serial No. 771,244. (Cl. 23—13.)

1. The herein described process of producing soluble salts of aluminum from potash-free argillaceous and siliceous rocks, earths or minerals containing insoluble compounds of aluminum, which consists in reducing the rocks, earths or minerals to a powdered form, mixing therewith limestone in approximate proportions of one and seven-tenths parts of limestone, by weight, to each one part of silica, by weight, contained in the rocks, earths, or minerals, heating the mixture to incipient fusion, cooling quickly, leaching the product with dilute sulfuric acid, and separating the aluminum sulfate from the resulting solution, by crystallization.

2. The herein described process of producing soluble salts of aluminum from potash-free argillaceous and siliceous rocks, earths, or minerals containing insoluble compounds of aluminum, which consists in reducing the rocks, earths, or minerals to a powdered form, mixing therewith limestone in approximate proportions of one and seven-tenths parts of limestone by weight to each one part of silica by weight contained in the rocks, earths, or minerals, heating the mixture to incipient fusion, cooling quickly, leaching the product with dilute sulfuric acid in the approximate proportions of three parts of sulfuric acid by weight to each one part of aluminum by weight, and separating the aluminum sulfate from the resulting solution by crystallization.

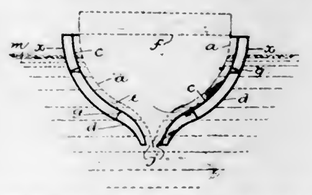
1,170,419. BUILDING CONSTRUCTION. ARTHUR B. COON, Little Rock, Ark., and ALFRED VAN DE SANDT, Portland, Oreg. Filed Dec. 29, 1913. Serial No. 809,370. (Cl. 72—101.)



1. The combination with the wall and the facing composed of separate elements, of means for holding the facing to the wall, said means comprising an anchor and tie consisting of a strip of metal doubled upon itself to form an arch intermediate the ends thereof, the ends of the strip being crossed upon each other and the material of the strip being given a quarter turn at the crossing to permit the ends to lie flat upon each other, each extremity of the strip being bent a quarter turn in the reverse direction and having a locking lug arranged at an angle to the body of the strip, the locking lugs extending toward each other, the facing having grooves or recesses for receiving the locking lugs, the wall having a cavity for receiving the arch and a filling of plastic material capable of hardening arranged between the wall and the facing and filling the recesses and grooves.

2. The combination with the wall and the facing composed of separate elements, of means for holding the facing to the wall, said means comprising an anchor and tie consisting of a strip of metal doubled upon itself to form an arch intermediate the ends thereof, the ends of the strip being crossed upon each other and the material of the strip being given a quarter turn at the crossing to permit the ends to lie flat upon each other, each extremity of the strip being bent a quarter turn in the reverse direction and having a locking lug arranged at an angle to the body of the strip, the locking lugs extending toward each other, the facing having recesses for engagement by the lugs, and the wall having a recess for receiving the body.

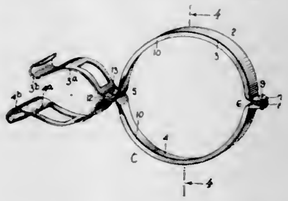
1,170,420. PNEUMATIC NON-SINKABLE SHIELD FOR BOATS. CHARLES CROWLEY, Perth, Australia. Filed Jan. 3, 1914. Serial No. 810,192. (Cl. 114—68.)



1. The combination with a conventional boat hull of an inclosing, structurally independent, continuous, hollow, air-filled wall comprising as an entirety a pair of spaced shells connected and braced to one another, the said shells extending throughout the longitudinal and vertical depth of said hull and each conforming to the longitudinal and vertical outline thereof, and vertical plates arranged at suitable intervals and fixedly connecting the hull and the wall and also definitely spacing the latter throughout its extent from the former, the wall being open at its lower end adjoining the keel of the boat to provide open communication between the space intermediate the boat and the wall and the water in which the boat is borne.

2. The combination with a conventional boat hull of an inclosing, structurally independent, continuous, hollow, air-filled wall comprising as an entirety a pair of spaced shells, and means connecting said shells and bracing them to one another and dividing the space between said shells into compartments or cells, the said shells extending throughout the longitudinal and vertical depth of said hull and each conforming to the longitudinal and vertical outline thereof, and vertical plates arranged at suitable intervals and fixedly connecting the hull and the wall and also definitely spacing the latter throughout its extent from the former, the wall being open at its lower end adjoining the keel of the boat to provide open communication between the space intermediate the boat and the wall and the water in which the boat is borne.

1,170,421. RECEIVER-HOLDING ATTACHMENT FOR TELEPHONES. WILLIAM ADAMS DELANO, New York, and ELEANOR ROBSON BELMONT, Hempsted, N. Y. Filed Feb. 11, 1915. Serial No. 7,563. (Cl. 248—20.)



1. A telephone attachment comprising a clamping ring for application to a transmitter body, said ring being provided with an internal flange for engaging the front of the body to determine the proper positioning of the ring and also for stiffening the said ring, and a pair of jaws integrally connected with the ring and extending laterally therefrom to hold a receiver during the use of the telephone to which the attachment is applied.

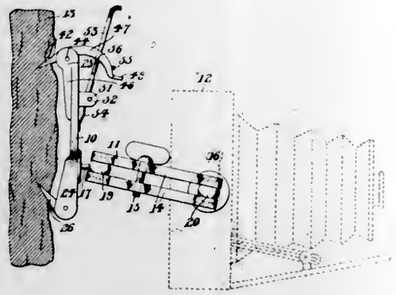
2. A receiver attachment for telephones, comprising a clamping ring expansible and contractible, said ring having at its front edge an internal flange adapted to engage the front face of a telephone transmitter, and laterally projecting spring jaws for holding a receiver, the free ends of the jaws being spread apart, and the lower jaw projecting beyond the upper jaw, said flange insuring the placing of the attachment on the transmitter in a position with the longer jaw lowermost when the jaws project from the left of the transmitter.

3. A receiver holding attachment for telephones, consisting of two sections, each section being made of a single strip of metal and bent into a semi-circular part, and a bowed jaw, the jaw being united with one extremity of the semi-circular part by a flat portion, and the opposite extremity of the semi-circular part being formed into an apertured lug, a fastener for permanently securing the flat parts of the sections together, and a tightening device passing through the apertured lugs, said semi-circular parts being formed with internal flanges for insuring the proper positioning of the attachment on the body of a transmitter and the jaws having oppositely curved lips, and the lower lip extending outwardly beyond the other.

1,170,422. CAMERA AND INSTRUMENT SUPPORT. RALPH H. DENMAN, Ithaca, N. Y. Filed Mar. 31, 1915. Serial No. 18,337. (Cl. 248—43.)

1. A support comprising a base, an adjustable clamp mounted thereon, claws pivoted to the said base, a locking claw carried by the said base, and a locking lever for

the said claw, the said base being provided with claw-receiving recesses.



2. A support comprising a base provided with socketed feet at the corners thereof, foldable engaging claws pivoted to the said feet, an operating extension carried by one of the said claws, and a claw-locking lever pivoted to the said base and adapted for operative engagement with the said extension.

3. A support comprising a triangular-shaped base, a mounting clamp upon one side thereof, a locking lever pivoted to the said side of said base and provided with a longitudinal slot therethrough, foldable claws pivoted to the said base at the corners thereof and positioned upon the opposite side of the said base from the said clamp, a curved extension carried by one of said claws and extending through the said lever slot, the said extension and lever having coöperating ratchet teeth.

4. A support comprising a triangular-shaped base, a mounting clamp upon one side thereof, a locking lever pivoted to the said side of said base and provided with a longitudinal slot therethrough, foldable claws pivoted to the said base at the corners thereof and positioned upon the opposite side of the said base from the said clamp, a lever extension carried by one of said claws and extending through the said lever slot, the said extension and lever having coöperating ratchet teeth, a terminal cross-head at the free end of the said extension, a stop pin upon the outer face of the said extension spaced from the said cross-head, the said base having claw receiving sockets and the said locking lever being positioned between the said cross head and pin when its claw is in its closed position.

5. A support comprising a base, engaging claws carried by the said base, a movable locking claw carried by the said base and a locking lever for the said locking claw.

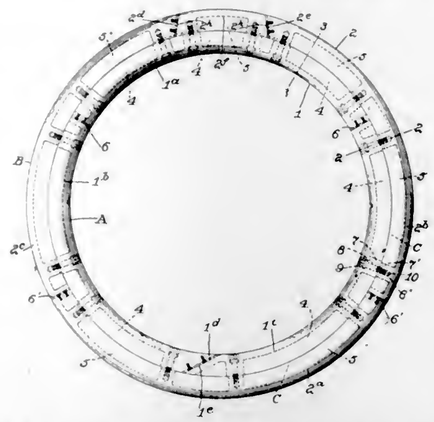
[Claims 6 to 10 not printed in the Gazette.]

1,170,423. COLLAPSIBLE CORE. WALTER R. DENMAN, Akron, Ohio, assignor to Miller Rubber Company, a Corporation of Ohio. Filed July 29, 1915. Serial No. 42,618. (Cl. 18—45.)

1. A collapsible core comprising inner and outer sections detachable along a circumferential line extending around the core, each of said sections being of semi-circular cross section and composed of a plurality of hollow segments having interlocking end to end connections.

2. A collapsible core comprising inner and outer sections separably connected along a circumferential line extending around the core, each of said sections comprising a plurality of hollow segments of semi-circular cross section provided with interlocking end to end joints, the segments of one section adapted, when assembled to overlap the end joints of the segments of the other section.

3. A collapsible ring core comprising inner and outer sections detachable along a circumferential line extending around the core, each of said sections being of semi-circular cross-section and composed of a plurality of hollow segments having interlocking end to end connections, and means normally contained within the circular body of the core for detachably securing the segments of the inner section to the segments of the outer section, said means being accessible, for the purpose of disassembling the core parts, from the inner circumference of the ring core.

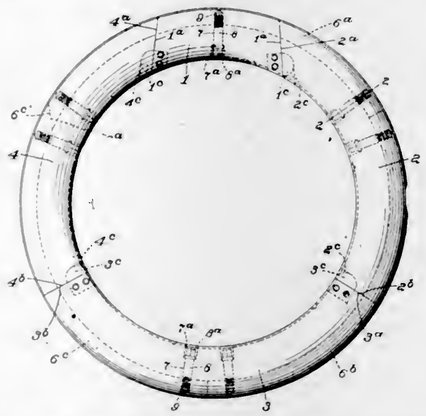


4. A collapsible core comprising inner and outer sections, each of said sections being of semi-circular cross section and comprising a plurality of hollow segments each of which is semi-circular in cross section and means for detachably securing the several parts together.

5. A collapsible core comprising an inner core section composed of a plurality of hollow segments adapted to be placed end to end, and an outer core section similarly composed of a plurality of hollow core sections adapted to be placed end to end, and means for detachably securing the segments of the outer core section to the segments of the inner core section to form an assembled hollow ring core of circular cross section.

[Claims 6 and 7 not printed in the Gazette.]

1,170,424. COLLAPSIBLE CORE. WALTER R. DENMAN, Akron, Ohio, assignor to Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Sept. 14, 1915. Serial No. 50,643. (Cl. 18—45.)



1. A collapsible core comprising a plurality of separable segments and retaining means extending on the periphery circumferentially thereof.

2. A collapsible core comprising a plurality of separable segments having interlocking end connections, and circumferential retaining means extending around the outer periphery of said core.

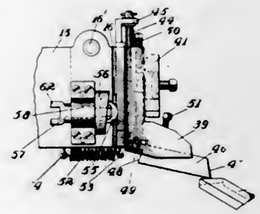
3. A collapsible core comprising a plurality of separable segments and a segmental retaining band extending circumferentially around the outer periphery of said core.

4. A collapsible core comprising a plurality of separable segments, said segments each provided with an annular groove, and a retaining band extending on the periphery circumferentially of said core and fitting said annular grooves.

5. A collapsible core comprising a plurality of separable segments formed with an annular groove at their outer circumference, a retaining band encircling said core segments and fitting said annular groove.

[Claims 6 to 8 not printed in the Gazette.]

1,170,425. GEAR-CUTTING MACHINE. CHARLES E. DEER, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Feb. 11, 1913, Serial No. 747,677. Divided and this application filed May 28, 1914. Serial No. 841,608. (Cl. 90—9.)



1. In a gear cutting machine, the combination of a frame, a ram slidably mounted thereon, a tool carriage movably mounted on said ram, and means comprising a telescopic operating shaft connected to said carriage.

2. In a gear cutting machine, the combination of a frame, a ram slidably mounted thereon, a tool carriage slidably mounted on the ram, a tool holding apron pivoted to the carriage, and means comprising a flexible operating shaft connected to said carriage for swinging said apron on its pivot.

3. In a gear cutting machine, the combination of a frame, a ram slidably mounted thereon, a tool carriage slidably mounted on the ram, a tool holding apron pivoted to the carriage, a rotary cam for swinging said apron on its pivot, an operating shaft for said cam mounted on said frame, and a flexible telescopic connection between said operating shaft and said cam for rotating the latter.

4. In a gear cutting machine, the combination of a ram, a tool carriage slidably mounted on the ram, a tool-holding apron pivoted to the carriage, a rotatable cam on said carriage adapted to swing said apron on its pivot, and means for rotating said cam.

5. In a gear cutting machine, the combination of a frame, a ram slidably mounted thereon, a tool carriage slidably mounted on the ram, a tool holding apron pivoted to the carriage, a rotary cam for swinging said apron on its pivot, an operating shaft for said cam mounted on said frame, and a flexible shaft connecting said operating shaft and said cam for rotating the latter.

[Claim 6 not printed in the Gazette.]

1,170,426. PREPARING HIDES AND SKINS FOR TANNING PROCESSES. EMILE D'HUART, Luxemburg. Filed June 18, 1914. Serial No. 845,747. (Cl. 149—3.)

1. A process for bating unhaired skins, which consists in subjecting the skin to the action of free glycerophosphoric acid.

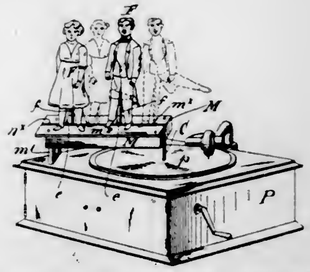
2. A process for bating unhaired skins, which consists in subjecting the skin to the action of free glycerophosphoric acid, and afterward to the action of an alkali glycerophosphate salt.

3. A process for bating unhaired skins, which consists in subjecting the skin to the action of glycerophosphoric acid to which an alkali salt has been added.

4. A process for bating unhaired skins, which consists in subjecting the skin to the action of glycerophosphoric acid to which an alkali salt has been added, and afterward to the action of an alkali glycerophosphate salt.

5. A tanning process which consists in unhairing the skin with the aid of a concentrated solution of an alkaline earth such as barium hydrate and subsequently bating the skin by the action of free glycerophosphoric acid.

1,170,427. FIGURE-TOY ATTACHMENT FOR DISK PHONOGRAPHS. GEORGE A. D'OENCH, New York, N. Y. Filed Aug. 9, 1915. Serial No. 44,415. (Cl. 46—40.)



1. An attachment for phonographs of the character designated, comprising a slide, means for reciprocating the same by motion derived from the spindle of the rotatable record table of the phonograph, a marionette supporting rod pivotally mounted on said slide and formed with a slotted lateral extension straddling a fixed stud, and said fixed stud, whereby the marionette as carried back and forth by the slide is made to partially turn alternately in opposite directions, substantially as and for the purpose set forth.

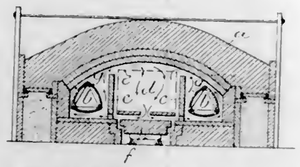
2. An attachment for phonographs of the character designated, comprising a slide, means for reciprocating the same by motion derived from the spindle of the rotatable record table of the phonograph, a marionette supporting rod pivotally mounted on said slide, a marionette mounted on said rod and formed with pivotally attached limbs, flexible connections, one attached to each of said pivoted limbs and to the said slide, and stationary contacts arranged to engage said flexible connections during the reciprocation of the slide, whereby the limbs are actuated, substantially in the manner and for the purpose herein set forth.

3. An attachment for phonographs of the character designated, comprising a slide, means for reciprocating the same by motion derived from the spindle of the rotatable record table of the phonograph, a marionette supporting rod pivotally mounted on said slide and formed with a slotted lateral extension straddling a fixed stud, said fixed stud, a marionette mounted upon said supporting rod and formed with pivotally attached limbs, flexible connections, one attached to each of said pivoted limbs and to the slide, and stationary contacts arranged to engage said flexible connections during the reciprocation of the slide, whereby the marionette as it is moved back and forth is made to partially turn alternately in opposite directions and whereby its limbs are actuated substantially in the manner and for the purpose set forth.

4. An attachment for phonographs of the character designated, comprising a slide upon which is mounted a marionette, and means for reciprocating said slide by motion derived from the spindle of the rotatable record table of the phonograph, consisting of a coupling sleeve fitting upon said record table spindle and formed for engagement with the interlocking end of a pinion stud, a cog gear meshing with said pinion, and a pitman rod pivotally connected with said cog gear and with said slide, whereby the reciprocation of the slide with relation to the music may be prescribed by the relative difference in the diameters of the said pin and cog wheels, substantially as set forth.

5. An attachment for phonographs of the character designated, comprising a slide upon which is mounted a marionette, and means for reciprocating said slide by motion derived from the spindle of the rotatable record table of the phonograph, consisting of a coupling sleeve lifting upon said record table spindle and formed for engagement with the interlocking end of a gear stud, and a pitman rod pivotally connected to the said slide and actuated by the rotation of said gear, for the purpose described.

1,170,428. OVEN SUITABLE FOR USE IN THE MANUFACTURE OF TILES, BRICKS, POTTERY, AND ANALOGOUS WARE, FOR ANNEALING, AND FOR OTHER PURPOSES. CONRAD DRESSLER, Chelsea, London, England. Filed Aug. 6, 1914. Serial No. 855,468. (Cl. 25—142.)



1. In an oven, a wall arranged longitudinally therein at one side of the space designed to contain the goods to be treated and so as to allow of the fluid medium within the said space flowing under and over its lower and upper ends and a chamber or conduit arranged longitudinally between said wall and the adjacent side wall of the oven and through which fluid at a different temperature to that in the oven can be caused to flow for changing the temperature of the fluid flowing in contact with said chamber or conduit.

2. In an oven, a combustion chamber arranged longitudinally therein at one side of the space designed to contain the goods to be treated and a longitudinally arranged wall of refractory material adapted to form with the chamber a separate air heating compartment, passage or zone and prevent or retard the passage of radiant heat from said combustion chamber to said space and to constrain the air heated by the combustion chamber to flow upward through the heating compartment, passage or zone and downward through the said space for goods.

3. In an oven, a combustion chamber arranged longitudinally therein at one side of the space designed to contain the goods to be treated and provided with external ribs or extensions for the purpose set forth.

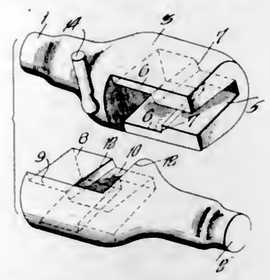
4. In an oven, a combustion chamber arranged longitudinally therein at one side of the space designed to contain the goods to be treated and provided with external ribs or extensions and a longitudinally arranged wall of refractory material adapted to form with the chamber a separate air heating compartment or zone and prevent or retard the passage of radiant heat from said combustion chamber to said space and to constrain the air heated by the combustion chamber to flow upward through the heating compartment or zone and downward through the said space for goods.

5. In an oven, a wall of refractory material arranged longitudinally therein at one side of the space designed to contain the goods to be treated and so as to allow of air flowing under and over its lower and upper ends and a longitudinally arranged combustion chamber disposed between said wall and the adjacent side wall of the oven for the purposes set forth.

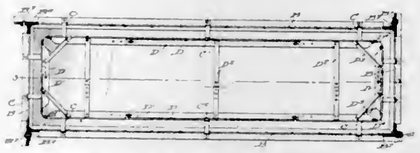
[Claims 6 to 16 not printed in the Gazette.]

1,170,429. SLIP-JOINT FOR SUCKER AND PULL RODS. JOSEPH B. DUNLAP, Tulsa, Okla. Filed Nov. 23, 1914. Serial No. 873,509. (Cl. 255—30.)

A slip joint for sucker rods, comprising in combination with the rods each having a head at its inner end, the head of one rod having a socket opening at one side edge and at the outer end thereof, the side walls of the socket diverging from within outward, and the said side walls being recessed at the inner end of the socket to form at each side of the socket a shoulder transverse to the head and facing inwardly and extending to the side opening of the socket, the other head having its opposite faces rabbeted from the end and side of the head, and each rabbet being deepened at the inner end thereof from the sides to form at each side of the rabbeted portion a shoulder transverse to the head and facing inwardly, said rabbeted portion fitting within the socket and the transverse shoulders of the rabbeted portion engaging behind the transverse shoulders of the socket, the last-named head having between the inner side of each rabbeted portion and the body of the head a shoulder extending longitudinally of the head and adapted to fit against the adjacent side edge of the other head, and a latch for preventing lateral movement of the heads in a direction to release the rabbeted portion from the socket.



1,170,430. CONCRETE-BURIAL-VAULT FORM. LEON PATRICK DUNN, Terre Haute, Ind., assignor of one-half to John M. Martin, Terre Haute, Ind. Filed Feb. 12, 1913. Serial No. 747,874. (Cl. 25—130.)



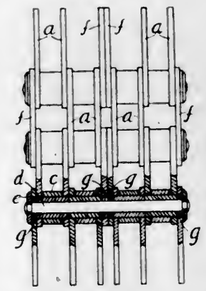
1. The combination of an inner form or mold and an adjustable outer mold comprising four sides, each of said sides having at one end means whereby to adjustably connect the same to an adjacent side and each of said sides comprising an upper and a lower section, one of which sections embodies a plurality of independent plates which may be removed and added to, and adjustable connections between the said sections and each of the independent plates of the latter section.

2. The combination of a base mold embodying an adjustable frame, an adjustable outer mold connected to and supported by said base mold and comprising sides having a plurality of longitudinal plates and adjustable connections between the said plates, each of the plates having an angle bar at one end and a series of apertures adjacent its opposite end and locking pins carried by the said angle bars and adapted for engagement through selected apertures.

3. The combination of a base mold embodying an adjustable frame, an adjustable outer mold connected to and supported by said base mold and comprising sides each having horizontal plates forming upper and lower sections of which the lower sections are provided with adjustable connections between their plates whereby the latter may be removed or added to, adjustable connections between the sections of each side, the said longitudinal plates being each provided with an angle bar at one end and series of apertures at their opposite ends, and locking pins carried by the angle bars and adapted for engagement through selected apertures.

4. The combination of a base mold comprising angle bars having adjustable connections at their ends whereby to form a frame, an adjustable outer mold having angle bars secured along the lower edges of its sides and adapted for connection with the angle bars of the base mold, angle bars also extending along the upper edges of the sides of the outer mold, an inner mold or form disposed within the outer mold and spacing arms having connection with the upper angle bars of the outer mold sides and extending into contact with the sides of the inner mold, certain of which arms are provided with clips whereby to engage over the upper edges of the sides of the inner mold for the purpose described.

1,170,431. MULTIPLE-STRAND BUSH-ROLLER CHAIN. CHRISTOPHER GABRIEL EDEN and ADRIAN ETHELBERT CARTER, Manchester, England, assignors to Hans Renold Limited, Manchester, England. Filed Mar. 3, 1915. Serial No. 11,908. (Cl. 74—32.)



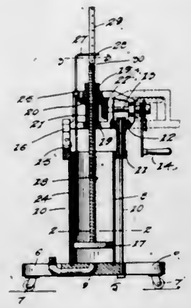
1. A multiple-strand bush-roller chain, comprising inner chain combinations in every section of the chain, studs connecting together the inner chain combinations of adjacent sections, and means for securing the studs against slipping out while permitting independent rotation of the said studs, each inner chain combination consisting of a pair of link plates, bushes connecting together the pair of link plates at each end, and rollers surrounding the two bushes.

2. A multiple-strand bush-roller chain, comprising in each section of the chain a plurality of inner chain combinations, each of which chain combinations is similar in structure and consists of a pair of link plates, bushes connecting together the pair of link plates at each end, and rollers surrounding the bushes, studs connecting together the respective sections of the chain, and washers affixed on the ends of the studs.

3. A multiple-strand bush-roller chain, comprising inner chain combinations in every section of the chain, each inner chain combination consisting of a pair of link plates, bushes connecting together said link plates at each end, and rollers surrounding the two bushes, studs connecting together the inner chain combinations of adjacent sections, means for securing the studs against slipping out while permitting independent rotation of the said studs, additional link plates connecting the studs at the ends in alternate sections between the inner combinations, and at intermediate positions not less than the width of two inner combinations apart across the chain.

4. A multiple-strand bush-roller chain, comprising in alternate sections of the chain, inner chain combinations in the outermost positions, and additional link plates in the middle line of the chain, and in the intermediate sections inner chain combinations in the positions adjacent the middle line, and additional link plates at the outer ends of the sections, each inner chain combination consisting of a pair of link plates, bushes connecting together said link plates at each end, and rollers surrounding the two bushes, studs connecting the chain combinations and additional link plates of the respective sections, and means for preventing said studs from slipping out while permitting independent rotation thereof.

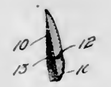
1,170,432. PORTABLE GARAGE GREASE-GUN. HELMER O. EKERN and WILLIAM L. EKERN, Flandreau, N. D. Filed Dec. 10, 1914. Serial No. 876,524. (Cl. 221—79.)



1. In combination, a grease gun including a casing, a piston slidable longitudinally therein, a screw-feed piston rod carried by said piston, a longitudinally slidable rod disposed parallel with said piston rod, means for securing the second-mentioned rod in adjusted position, and means secured to and extending axially from the upper end of said piston rod adapted to coöperate with the second-mentioned rod to indicate the movement of said piston relative to said second-mentioned rod.

2. In combination, a cylindrical casing, a rod movable longitudinally within said casing and disposed parallel with the longitudinal axis thereof, a piston slidably mounted in said casing constituting a stop for the lower extremity of said rod, a screw-threaded piston rod connected with said piston, means for rotating said rod to feed the latter into said cylindrical casing, and means for retaining the first-mentioned rod in adjusted position with relation to said cylindrical casing, said first-mentioned rod having an angularly directed upper end formed with a rectangular aperture, and a graduated block rotatably secured to and extending axially from the upper extremity of the piston rod and non-rotatably received within the angularly directed extremity of the first-mentioned rod and adapted to coöperate with the first mentioned rod to indicate the movement of the piston relative to said rod.

1,170,433. RAZOR. LOUIS ELLEBRECHT, Cincinnati, Ohio. Filed Sept. 9, 1915. Serial No. 49,716. (Cl. 30—12.)

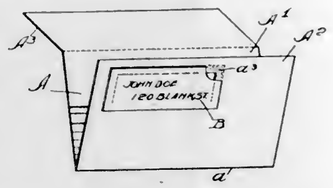


In a razor, a split handle, a pair of absorbent strips removably fitted within the split of the handle against opposed inner faces, said handle having apertures in the sides thereof, and resilient clips anchored in the strips, and having hook ends detachably engaged in the apertures for removably holding the strips interiorly of the handle.

1,170,434. ADDRESSING AND INDEXING DEVICE. ALBERT W. ENGEL, Chicago, Ill. Filed Oct. 17, 1914. Serial No. 867,095. (Cl. 101—134.)

1. A combined addressing and indexing device consisting of a card folded to form two facing flaps and having its inner surface treated to prevent any tracing by ink, one of the flaps having a stencil aperture and the other flap being adapted to receive an address or index mark produced by and through a stencil for which said aperture is provided at the area of its outer side which is lapped by said aperture when the flaps are reversely folded.

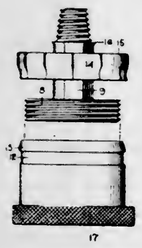
2. A combined addressing and index device consisting of a card folded to form two facing flaps, one of the flaps having a stencil aperture marginally gummed on the inner side of the flap, the other flap being arranged to receive an address or index mark produced by and through a stencil for which said aperture is provided at the area of its outer side which is lapped by said aperture when the flaps are reversely folded.



3. A combined addressing and index device consisting of a card folded to form two facing flaps, one of the flaps having a stencil aperture, and a stencil secured to the flap covering said aperture, the other flap being arranged to receive an address or index mark produced by and through said stencil for which said aperture is provided at the area of its outer side which is lapped by the stencil when the flaps are reversely folded.

4. A combined addressing and index device consisting of a card folded to form two facing flaps, one of the flaps having an aperture, and a stencil secured to the card for covering said aperture, the other flap being arranged to receive an address or index mark produced by and through said stencil for which said aperture is provided at the area of the outer side of said other flap which is lapped by the stencil when the flaps are reversely folded, one of said two flaps having at the side opposite the fold a guard flap of suitable width and adapted to be folded to cover the stencil at the outer side of the flap containing the same when the two first mentioned flaps are folded together.

1,170,435. GREASE-CUP. EDMUND M. ERB, Jersey City, N. J. Filed Apr. 14, 1915. Serial No. 21,249. (Cl. 184—48.)



1. A grease cup comprising a plunger having a stem, a cup threaded on to the plunger, a cap on the stem of the plunger mounted to slide but prevented from rotation thereon, said cap having a depending resilient skirt adapted to frictionally engage the exterior open end of the cup, said skirt having protuberances and said cup having recesses adapted to be engaged by said protuberances when said cap is in engagement with the cup, said cap adapted to participate in the axial displacement of the cup when the same is moved on the plunger, said plunger adapted to engage the cap when said cup is removed from the plunger, whereby the cap disengages the cup.

2. A grease cup comprising a plunger having a stem, a cup threaded on to the plunger, a cap on the stem of the plunger mounted to slide but prevented from rotation thereon, said cap having means for frictionally engaging said cup, said stem having means for engaging the cap when the cup is to be unscrewed from the plunger after it has been totally screwed thereon, whereby the cap may be stripped from the cup before the cup is totally unscrewed from the plunger.

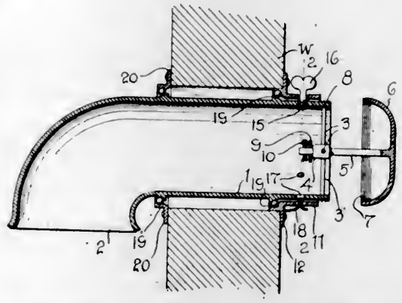
3. A grease cup comprising a plunger having a stem, a cup threaded on to the plunger, a cap on the stem of the plunger mounted to slide but prevented from rotation thereon, said cap having means for frictionally engaging said cup, said stem having tapering grooves adapted to engage and retain the cap when the cup is unscrewed after the same has been totally screwed on to the plunger, thereby stripping the cap from the cup at the beginning of the unscrewing movement.

4. A grease cup comprising a plunger having a stem, a cup threaded on to the plunger, a cap on the stem of the plunger mounted to slide but prevented from rotation thereon, said cap having a depending, resilient skirt for frictionally engaging the open end of the cup, said cup having means at the open end engageable by the skirt, whereby the skirt grips yieldingly the cup.

5. A grease cup comprising a plunger having a stem, a cup threaded on to the plunger, and a cap on the stem of the plunger mounted to slide but prevented from rotation thereon, said cap having a depending, resilient skirt, said cup having an annular groove at the open end adapted to be engaged by the resilient skirt of the cap whereby said skirt grips yieldingly said cup.

[Claims 6 and 7 not printed in the Gazette.]

1,170,436. VENTILATOR. CHRISTIAN ERICKSON, York, N. D. Filed Mar. 3, 1915. Serial No. 11,780. (Cl. 98—27.)



The combination of a ventilating tube having a spider arranged in one end thereof provided with a central sleeve in axial alinement with the tube, a cap member of concavo-convex disk-like form provided at its edge with internal screw threads, said ventilating tube having complementary external screw threads, a stem projecting axially from the inner face of the cap and slidably engaged in said sleeve whereby the cap is supported in spaced relation to the end of the ventilating tube when said tube is open, and means on the end of said stem for preventing the complete disconnection of the same from said sleeve, said stem sliding freely through the sleeve and also rotating therein whereby the threads on the cap may be engaged with the threaded end of the ventilating tube and said cap turned thereon to close the tube.

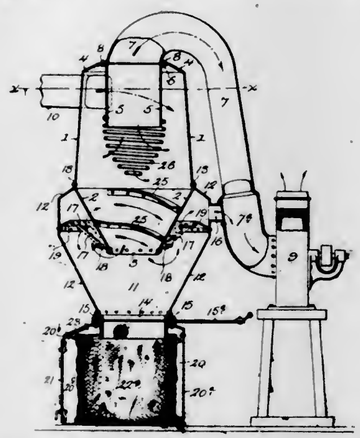
1,170,437. SCARF OR NECKTIE. DAVID ESSEX, Kearney, N. J., assignor of one-half to John Ammann, Jersey City, N. J. Filed Sept. 26, 1914. Serial No. 863,661. (Cl. 2—83.)

In a scarf or neck tie a flat frame of ornamental shape having a central top opening, a reduced inner portion and a slightly curved outer surface, a similarly shaped ornamental piece of textile fabric thereon, curved neck-band strips, a wire spring secured thereto forming an inner downward hook adapted to be inserted in the opening of the flat frame, and an ornamental spring member with a continuous side flange conforming to the shape of the edge



of the flat frame and adapted to be gently pressed thereon for securing the fabric.

1,170,438. APPARATUS FOR SEPARATING DUST AND FOREIGN MATTER FROM AIR. CALLO D. FAHANEY, Milwaukee, Wis. Filed Nov. 27, 1911. Serial No. 662,728. (Cl. 83—48.)

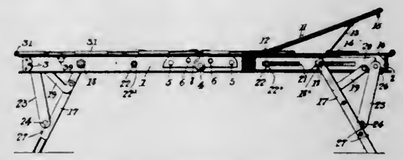


1. A separator and dust collector comprising a vertically disposed cylindrical chamber with tangential inlet; outlet openings in the top and bottom thereof with a flange projecting downwardly from the rim of the top opening and a spirally constructed hood disposed over the mouth of the said flanged top opening to permit the escape of the whirling air without resistance and at the same time screening it.

2. A separator and dust collector comprising a vertically disposed cylindrical chamber having a tangential inlet with outlet openings in the top and bottom thereof; a cylindrical chamber disposed underneath the aforesaid chamber and partly enveloping its lower portion to receive a portion of the air from the said above chamber in whirl and to purify that portion by centrifugal action; an outlet opening for the air in the said lower chamber in the upper portion of its casing and a refuse chamber disposed underneath the said secondary chamber and connected therewith by a gate-controlled passage.

3. A separator and dust collector comprising a vertically disposed cylindrical chamber having a tangential inlet with outlet openings in the top and bottom thereof; a secondary cylindrical separating chamber disposed underneath the first mentioned chamber and enveloping its lower portion to receive a portion of the air in whirl from same; air outlet means in the upper portion of the casing of the said lower chamber; a refuse chamber with gate-controlled opening disposed under the said secondary chamber and suction means in communication with the top outlet opening of the upper chamber and also with the said air outlet of the secondary separating chamber.

1,170,439. CONVERTIBLE COOLING-BOARD AND AMBULANCE-BASKET. JOSEPH E. FAUBER, Lynchburg, Va. Filed Sept. 16, 1913. Serial No. 790,024. (Cl. 45—50.)

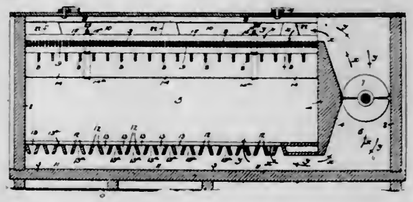


1. A knock-down convertible cooling board and ambulance basket of the character described, having a body-supporting member, legs pivotally mounted upon said member, slides carried by said member, links connecting the slides and legs, and handles slidably mounted in said member and connected with the slides and serving as means for operating the legs to set them up or fold them and for moving the apparatus from place to place as desired.

2. The combination with the side and end bars and a bottom thereon, of legs pivotally mounted upon the inner sides of the side bars and foldable therein, slides carried by the side bars, links connecting the slides and legs, and handles slidably mounted in the end bars and connected with the slides and serving as means for operating the legs to set them up or fold them and for moving the apparatus from place to place as desired.

3. The combination with the side and end bars and a bottom, of legs pivoted to the side bars, longitudinally slotted slides applied to the side bars, links connecting the slides and legs, and upwardly curved handles applied to the slides and engaging the end bars and serving as means to operate the legs and for moving the apparatus from place to place.

1,170,440. YARN-DYEING APPARATUS. JAMES J. FEARON, Philadelphia, Pa., assignor of one-half to Charles J. Fox, Philadelphia, Pa. Filed June 4, 1915. Serial No. 32,058. (Cl. 8—18.)



1. The combination of a dye tub having therein a dyeing chamber and a circulating passage below the same, with an interposed grid presenting passages whose sides alternately diverge from top to bottom and from bottom to top.

2. The combination of a dye tub having therein a dyeing chamber and a circulating passage below the same, with an interposed grid composed of separated strips inclined alternately to right and left.

3. The combination of a dye tub having therein a dyeing chamber and a circulating passage below the same, with an interposed grid having baffle plates at each side adjacent to the sides of the tub.

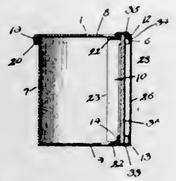
4. The combination of a dye tub having therein a dyeing chamber, yarn supporting strips, and a cage movable

into and out of said dyeing chamber and comprising separable upper and lower members, the lower member having in its upper edges recesses for the reception of the ends of the yarn supporting strips and the upper member resting upon said lower member and serving to retain said strips in said recesses, and means for detachably connecting said upper and lower members of the cage.

5. The combination of a dye tub having a dyeing chamber therein, yarn supporting strips, a cage having separable members, the lower member carrying said yarn supporting strips, and clips for retaining said upper and lower members of the cage in proper relation to one another or releasing the upper member from the lower member.

[Claim 6 not printed in the Gazette.]

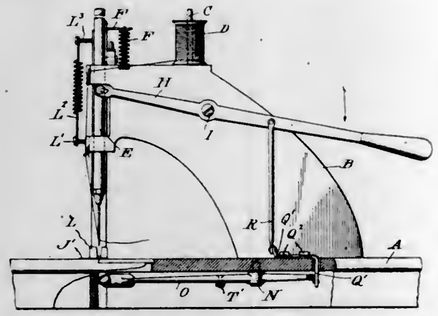
1,170,441. SIGN. PETER LEE FERGUSON and JOSEPH W. WHEELWRIGHT, Ogden, Utah. Filed July 8, 1913. Serial No. 777,909. (Cl. 40—132.)



1. A sign casing formed from a single piece of material and comprising substantially rectangular front and rear walls, a top and bottom of trapezoidal formation, and end walls, said front wall having a series of openings therein, said top adjacent its juncture with the front wall having a slot corresponding to each front opening with its longer dimension parallel to the plane of the front opening and approximately equal to the width of the front opening, and bendable tongues struck up from the top and disposed at one side of the slots in close proximity thereto.

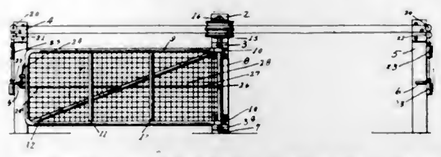
2. A sign casing formed from a single piece of material and comprising substantially rectangular front and rear walls, a top and bottom of trapezoidal formation, the adjacent edges of said top and rear wall being provided with bendable interlocking flanges, end walls, said front wall having a series of openings therein, said top adjacent its juncture with the front wall having a slot corresponding to each front opening with its longer dimension parallel to the plane of the front opening and approximately equal to the width of the front opening, said bottom wall being bent to provide a vertical longitudinally disposed flange in alinement with the rear edges of said slots, and bendable tongues struck up from the top and disposed at one side of said slots in close proximity thereto.

1,170,442. LOCK-STITCH SEWING-MACHINE. ANDREW FINSETH, Oslo, Minn. Filed Feb. 23, 1915. Serial No. 10,011. (Cl. 112—22.)



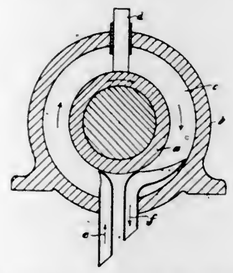
A lock stitch sewing machine comprising a table with a goose neck, a reciprocating needle bar mounted therein, a pivotal shuttle bar pivoted to the under side of the table, a lever pivotally mounted upon the goose neck and having pivotal connection with the needle bar, a crank rock shaft journaled upon the table, a rod pivotally connected to one end of the crank shaft and said lever and its other end passing through the table and pivotally connected to one end of the shuttle bar, a reciprocating feed bar mounted upon the table, a rock shaft journaled in bearings underneath the table and having a crank end engaging a slot in said work member, and an arm with pivotal rod connections with the shuttle bar.

1,170,443. GATE. LEWIS C. FOUTS, Peoria, Ill. Filed Apr. 14, 1915. Serial No. 21,276. (Cl. 39—34.)



In combination, a gate adapted to open from either side the rear stile of which is formed of a tubular or sleeve member extending above the top rail and having a limiting through slot on each side between its ends, a shaft extending through the sleeve member and rotatable therein, its ends projecting beyond the ends of said member, an upper hinge bracket through which the extended portion of the sleeve member passes and in which it turns, a lower hinge bracket upon which the tubular member is supported and in which the shaft turns, a spring latch on the front of the gate, a connecting rod extending rearwardly from said latch, two arms fixed on said shaft and projecting horizontally in opposite directions through slots in the sleeve, a flexible connection from each of said arms to the rear end of the connecting rod, a pair of sheaves fixed on the upper end of the shaft, a flexible pull connection attached to each of said sheaves and passed around the same in opposite directions, their ends extending to suitable distant points at opposite sides of the gate, pulleys at said points over which the connections pass, and weighted handles attached to the terminal of each connection which when pulled, first turns the shaft and arms thereon to release the latch after which said arms having reached the limits of the slots in the tubular rear stile positively swing the gate into open or closed position.

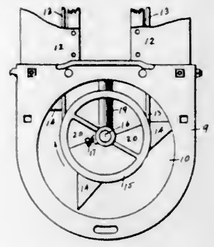
1,170,444. COOLING DEVICE FOR DYNAMOS. WILHELM GSCHEIDLEN, Berlin - Schmargendorf, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Dec. 5, 1914. Serial No. 875,716. (Cl. 64—28.)



1. A cooling device for sliding electrical contacts in dynamo electric machines comprising a rotary contact member having a sliding surface, a casing concentrically surrounding the same and forming a space between said surface and said casing, an intake nozzle, and an exhaust nozzle, said nozzles projecting into said space and being shaped to facilitate the passage of a cooling medium around said sliding surface.

2. A cooling device for sliding electrical contacts in dynamo electric machines comprising a rotary contact member having a sliding surface, a casing concentrically surrounding the same and forming a space between said surface and said casing, an intake nozzle, and an exhaust nozzle, said nozzles projecting into the said space and being bent in opposite directions and about tangentially to said sliding surface, substantially as described.

1,170,445. ELEVATOR. ARTHUR J. HARTLEY, Peoria, Ill., assignor to Hart Grain Weigher Co., Peoria, Ill. Filed Sept. 4, 1915. Serial No. 48,944. (Cl. 193—5.)



1. In a device of the class described, in combination, an elevator housing including a boot member, the latter provided with an opening thereinto, grain carrying members in said housing including belt members, wheel members in the elevator boot coöperating with the belt members, and one of said wheel members disposed within the area of the opening leading into said boot, said wheel member being provided with deflector members correspondingly disposed at an angle with the axis of said wheel member and extending across the inner face of said wheel substantially its entire width.

2. In a device of the class described, in combination, an elevator housing, including a boot, the latter provided with inlet openings, conveyer members including belt members driven from a suitable source, wheel members cooperating with the belt members disposed in the boot in spaced relation, and in proximity to the inlet openings, said wheel members being provided each with deflector members intermediate their axial centers and circumference, said deflector members of each wheel being correspondingly inclined at an angle from the axis of said wheel and extending approximately the width of said wheels, the deflector members of the respective wheels being oppositely inclined, a chute or lead communicating optionally with one or the other inlet opening, and a closure member for the opening not in use as an inlet.

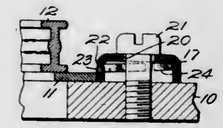
3. In a device of the class described, in combination with an elevator housing, an inlet opening into the boot portion thereof, a trough member communicating with said opening into the elevator, a conveyer therein, elevating mechanism within the elevator housing including belt members driven from a suitable source of power, wheels coöperating with and driven by said belt members and disposed in spaced relation and each respectively in partial register or alinement with the inlet opening, the wheel member adjacent the inlet opening being provided with deflector members interposed between its axial center and circumference, and inclined at an angle from the axis of said wheel and extending substantially the width of the wheel.

4. In a device of the class described, in combination with an elevator housing, an inlet opening into the boot portion thereof, a trough member communicating with said opening into the elevator, a conveyer therein, elevating mechanism within the elevator housing including belt members driven from a suitable source of power, wheels coöperating with and driven by said belt members and disposed in spaced relation and each respectively in partial register or alinement with the inlet opening, said wheel members being provided each respectively with deflector members interposed between their axial centers and circumference, and inclined from said axis and extending substantially the width of said wheels.

5. In a device of the class described, in combination, an elevator housing provided with an inlet into the boot portion thereof, a conveyer, elevating mechanism within the elevator housing, including plural belt members driven from a suitable source of power, wheels in said boot member coöperating with the belt members, one of which is disposed in partial register with the inlet opening, said wheel being provided with deflector members intermediate its axial center and circumference and inclined from the axis of said wheel and in a direction opposite from the direction of movement thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,170,446. FASTENING DEVICE FOR RING-HOLDERS. LEWIS T. HOUGHTON, Worcester, Mass. Filed May 5, 1915. Serial No. 26,149. (Cl. 118—59.)



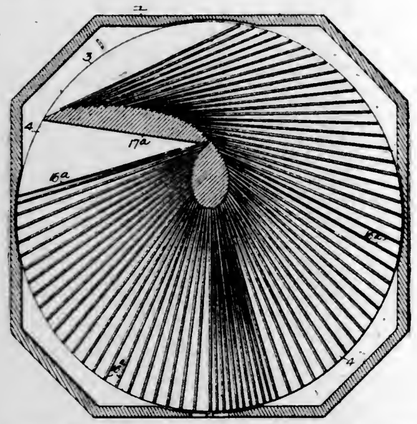
1. In a ring frame, in combination, a ring, a holder for said ring having notches in its flat outer edge portion, a ring rail, and means to detachably secure said holder to said rail, said means comprising a pair of clips adjustably fixed to said rail and engaging the notches in said holder to position the holder upon the rail, one of said clips containing a separate resilient member adapted to yield relatively to its clip to a substantial extent as the holder is placed in position between the clips and said resilient member thereafter engaging said holder and cooperating with said clips to retain said holder in position.

2. In a ring frame, in combination, a ring, a holder for said ring having notches in its flat outer edge portion, a ring rail, and means to detachably secure said holder to said rail, said means comprising a pair of clips adjustably fixed to said rail and engaging the notches in said holder to position the holder upon the rail, one of said clips containing a separate resilient member effective to engage the upper outer edge of said holder and to force the holder laterally against the opposite clip and also downwardly against the ring rail.

3. In a ring frame, in combination, a ring, a holder for said ring, a ring rail, and means to detachably secure said holder to said rail, said means comprising a pair of clips adjustably fixed to said rail and engaging notches in said holder to position the holder upon the rail, one of said clips having an opening in one side thereof and containing a resilient member having a portion normally projecting outwardly through said opening, said member being adapted to yield to permit the movement of a ring holder upwardly or downwardly adjacent said clip and past said opening.

4. In a ring frame, in combination, a ring, a holder for said ring, a ring rail, and means to detachably secure said holder to said rail, said means comprising an inverted cup-shaped clip having a downwardly and inwardly converging flange, said clip being adjustably fixed to said rail and engaging a notch in said holder, a second cup-shaped clip having a downwardly extending substantially cylindrical flange with an opening in one side thereof, said second clip being adjustably fixed to said rail and engaging a second notch in said holder, and a substantially circular spring fitting within said cylindrical flange, said spring having an opening between the ends thereof within the clip and having a narrowed portion projecting outwardly through the opening in said flange in position to yieldingly engage the upper outer edge of said holder.

1,170,447. RECORD-HOLDER. JAMES W. HUGHES, Narberth, Pa. Filed Jan. 18, 1915. Serial No. 2,960. (Cl. 211—20.)



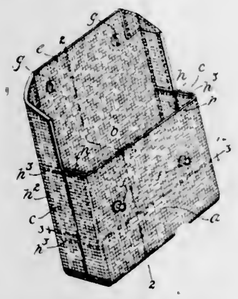
1. The combination in means for holding disk records, consisting of a holder having a series of partitions forming compartments arranged to receive the records, the partitions radiating from a spiral line.

2. A holder for disk records consisting of a casing; a cylindrical holder mounted on a vertical pivot and located within the casing, said holder having a series of partitions spaced apart to form compartments, the partitions radiating from a spiral line at one side of the center of rotation of the holder, the casing having an opening at the side through which any of the disks located in the compartments can be removed.

3. Means for holding disk records consisting of a cylindrical holder having a series of partitions forming compartments arranged to receive records, the partitions radiating from a line located at one side of the center of rotation of the cylindrical holder.

4. A record holder having vertical pivots on which it is turned, said holder having two sets of receptacles for the records, one mounted above the other; a horizontal partition; and vertical partitions extending from each side above and below the horizontal partition, said vertical partitions radiating from a spiral line at one side of the center of rotation of the holder, the vertical partitions of one set being of a greater length than those of the other set.

1,170,448. WOVEN RECEPTACLE AND METHOD OF PRODUCING THE SAME. VICTOR H. JENNINGS, Worcester, Mass., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed June 6, 1912. Serial No. 702,034. (Cl. 224—23.)



1. A woven receptacle having integral end-reinforcing means which fix the depth of the receptacle and the transverse internal diameter thereof at the ends.

2. A woven receptacle having integral bottom-reinforcing means whereby the length of the receptacle and the transverse diameter thereof at the bottom are fixed.

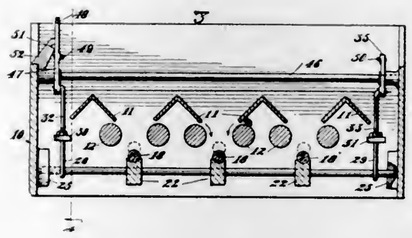
3. A woven receptacle having integral end- and bottom-reinforcing means which shape said receptacle at its ends and bottom, and fix the length and transverse diameter thereof.

4. A woven receptacle having integrally woven therewith a reinforcing ply extended transversely across an end thereof, whereby the said end is shaped and stiffened and the transverse diameter of the receptacle is fixed.

5. A woven receptacle having integral plies extended beyond the length of the receptacle proper, fastened to the end-walls of the receptacle, and stiffening and shaping the said end-walls.

[Claims 6 to 17 not printed in the Gazette.]

1,170,449. ADJUSTING MECHANISM FOR FRUIT AND NUT SIZERS. JOHN C. KEEBLER, Bloomington, and ROY I. SIBLEY, Gardena, Cal., assignors to Curtis Olive Corporation, Bloomington, Cal., a Corporation of California. Filed Feb. 24, 1915. Serial No. 10,174. (Cl. 130—32.)



1. In a fruit and nut sizer, the combination with a runway having an open bottom, of a conveying belt mounted to travel longitudinally beneath the open bottom of the runway, rolls disposed with their axes parallel to said belt and spaced therefrom so as to permit the passage of fruit or nuts therethrough, a vertically adjustable bar mounted to support the upper leaf of said belt, a hand lever, and means operable on said lever for adjusting the spaced relation of said bar and rolls.

2. In a fruit and nut sizer, the combination with a runway having an open bottom, of a conveying belt mounted to travel longitudinally beneath the open bottom of the runway, rolls disposed with their axes parallel to said belt and spaced therefrom so as to permit the passage of fruit or nuts therethrough, a vertically adjustable bar mounted to support the upper leaf of said belt, a hand lever, means operable on said lever for adjusting the spaced relation of said bar and rolls, and means for locking said bar is various adjusted positions.

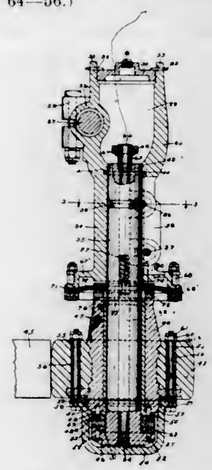
3. In a fruit and nut sizer, the combination with a runway having an open bottom, of a conveying belt mounted to travel longitudinally beneath the open bottom of the runway, rolls disposed with their axes parallel to said belt and spaced therefrom so as to permit the passage of fruit or nuts therethrough, a vertically adjustable bar mounted to support the uppel leaf of said belt, a hand lever, means operable by said lever for adjusting the spaced relation of said bar and rolls, and means operable on said hand-lever for locking same against movement to hold the supporting bar and belt in various adjusted positions.

4. In a fruit sizer and grader, the combination with an open bottomed runway, of a belt positioned to travel longitudinally beneath said runway, rolls disposed with their axes parallel to said belt and spaced therefrom so as to permit the passage of fruit or nuts therethrough, vertically adjustable means for supporting the upper leaf of said belt, a mounting therefor, and a rockable member operating on said mounting for adjusting the spaced relation of the supporting means and the said rolls.

5. In a fruit sizer and grader, the combination with an open bottomed runway, of a belt positioned to travel longitudinally beneath said runway, rolls disposed with their axes parallel to said belt and spaced therefrom so as to permit the passage of fruit or nuts therethrough, vertically adjustable means for supporting the upper leaf of said belt, a mounting therefor, a rockable member operating on said mounting for adjusting the spaced relation of the supporting means and the said rolls, and means for retaining the supporting means in various adjusted positions.

[Claims 6 to 13 not printed in the Gazette.]

1,170,450. ROLLER AND BEARING FOR SAME. ROBERT A. LACHMANN, Chicago, Ill., assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill., a Corporation of Illinois. Filed May 10, 1915. Serial No. 27,105. (Cl. 64—56.)



1. In apparatus of the character described, the combination with a revoluble element and a non-revoluble element, of a lubricant seal comprising a flexible diaphragm secured to one of said elements, and a sealing member carried by the diaphragm which bears against said other element.

2. In apparatus of the character described, the combination with a revoluble element and a non-revoluble element, of a lubricant seal comprising a flexible diaphragm secured to one of said elements, a sealing member carried by the diaphragm which bears against said other element, and elastic means which presses the sealing member against the element upon which it bears.

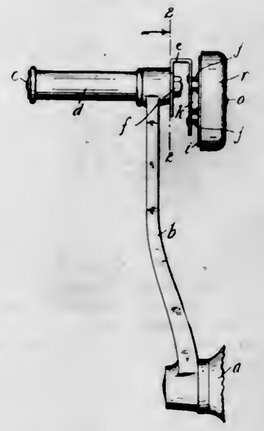
3. In apparatus of the character described, the combination with a revoluble element and a non-revoluble element, of a lubricant seal comprising a flexible diaphragm secured to one of said elements, a sealing member carried by the diaphragm which bears against said other element, and means for engaging said sealing member with said first specified element so as to prevent torsion of the diaphragm while permitting movement as between said member and element in the direction of the axis of revolution of the revoluble element.

4. In apparatus of the character described, the combination with a revoluble element and a non-revoluble element, of a lubricant seal comprising a flexible diaphragm secured to one of said elements, a sealing member carried by the diaphragm which bears against said other element, means for engaging said sealing member with said first specified element so as to prevent torsion of the diaphragm while permitting movement as between said member and element in the direction of the axis of revolution of the revoluble element, and elastic means for pressing said sealing member against the element upon which it bears.

5. In apparatus of the character described, the combination with a revoluble element and a non-revoluble element, of a lubricating seal comprising a flexible diaphragm secured to one of said elements, a sealing ring carried by said diaphragm and adapted to bear against the other element, and studs on said ring, said first specified element being formed with recesses in which said studs have a sliding fit.

[Claims 6 to 60 not printed in the Gazette.]

1,170,451. AUDIBLE SPEED-INDICATOR FOR ROTATING MECHANISM. HARRY H. LEWIS, Portland, Oreg. Filed June 18, 1914. Serial No. 845,986. (Cl. 116—65.)



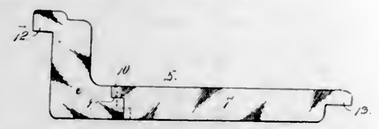
1. In a device including a rotating member, the combination with the latter of an audible speed-indicator comprising two sound emitters distinguishable one from the other, and a striker adapted to be actuated by gravity and centrifugal force, and operating to strike one of said sound emitters during each revolution of said rotating member while rotating under a predetermined maximum speed, and said striker being restrained by the developed centrifugal force when such maximum speed of said member is exceeded.

2. The combination with a device having a rotating member of an audible speed-indicator consisting of a striker adapted to be actuated by gravity and centrifugal force, means for restraining the movement of the latter to a path radial to the axis of rotation of said member, and a sound emitter located at each end of said path whereby the striker will be caused to strike both sound emitters during each revolution of the member, while rotated under a predetermined speed, to strike one sound emitter while said member is rotated under a predetermined maximum speed, and said indicator will become silent, when said maximum speed is exceeded.

3. As an attachment for mechanism having a member rotating in a vertical plane, a bracket adapted for being attached to the rotating member, a guide element on the bracket and provided with a stop at its outer end, a loose hammer restrained by such guide element to move radially to the axis of rotation of said rotating member; and a bell supported by the bracket in position to be struck by the hammer, said stop also emitting a sound when struck.

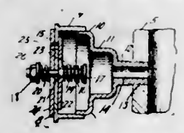
4. As an attachment for mechanism having a member rotating in a vertical plane, a bracket adapted for being attached to the rotating member, a barrel on the bracket having a stop at one end, a loose ball hammer in such barrel and restrained thereby to move radially to the axis of rotation of said rotating member; and a bell supported by the bracket in position to be struck by the hammer, said stop also emitting a sound when struck.

1,170,452. TEMPLET FOR CONCRETE GUTTERS. JOSEPH F. LIPP, Denver, Colo. Filed May 31, 1912. Serial No. 700,881. (Cl. 25—118.)



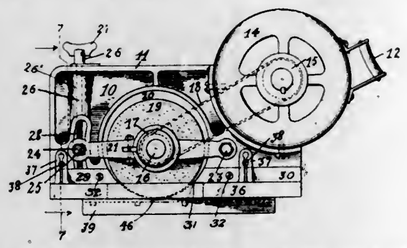
A templet composed of a plurality of abutting sections, whose inner ends are provided with spaced horizontal overlapping portions and with spaced vertically disposed beveled portions, the ends of said sections being rounded as and for the purposes set forth.

1,170,453. VALVE. NICHOLS P. MADER, Beaumont, Cal. Filed May 16, 1914. Serial No. 839,026. (Cl. 137—26.)



In an air inlet valve for manifolds, a valve casing communicating with the interior of the manifold and having an apertured face plate, a pin of differential diameter mounted in said face plate and its small diameter extending therethrough, a disk reciprocally mounted on the large diameter of said pin interiorly of the valve casing, a disk pivotally mounted on the small diameter of said pin exteriorly of the casing, said last named disk having perforations adapted to register with the apertures in the casing normally held out of communication therewith, a pair of springs wound on said stem bearing against the opposite faces of said disks to maintain the latter in close contact with the face plate on opposite sides thereof, and means for adjusting the tension of the outermost spring independent of the tension of the interiorly positioned spring.

1,170,454. PORTABLE METAL PLANING AND FINISHING MACHINE. CHARLES MAGERKURTH, Los Angeles, Cal., assignor of one-half to Emeline Magerkurth, Los Angeles, Cal. Filed May 17, 1915. Serial No. 28,602. (Cl. 51—12.)



1. In a portable planing and grinding machine, a frame, a pair of arms, each arm being pivoted at one end to said frame and provided with an eye at the free end, a horizontal shaft journaled in the center of said arms, means for rotating said shaft, a tool removably mounted on said shaft, a pin threaded at the ends passing through the eyes of said arms and provided with a centrally threaded bore, a rotatable threaded rod swiveled to said frame, said rod passing through the bore of said pin and being provided with a thumb nut at its upper end, nuts on the ends of said pin for locking said arms in adjusted position to the frame, a pair of horizontally adjustable box-shaped gage members open at their ends and slidably mounted at the bottom of said frame, said members being spaced from each other, whereby a slot is provided through which the operative part of said tool extends, means for locking said members in adjusted position, a pair of lateral gage plates mounted on opposite sides of said gage members, said plates being adjustable vertically, and a detachable longitudinal guide plate extending at right angles from the bottom of said gage members.

2. In a portable planing and grinding machine, a frame, a pair of arms, each arm being pivoted at one end to said frame and provided with an eye at the free end, a horizontal shaft journaled in said arms, means for rotating said shaft, a tool removably mounted on said shaft, a pin threaded at the ends passing through the eyes of said arms, means for vertically moving said pin, means for locking the free ends of said arms to said frame, a pair of horizontally adjustable gage members open at their ends slidably mounted at the bottom of said frame and spaced from each other, whereby a slot is provided through which the operative part of said tool extends, means for locking said members in adjusted position, a pair of lateral gage plates mounted on opposite sides of said gage members, and means for vertically adjusting said plates.

3. In a portable planing and grinding machine, a frame, a pair of arms, each arm being pivoted at one end to said frame, a horizontal shaft journaled in said arms, means for rotating said shaft, a tool mounted on said shaft, means for vertically adjusting the free ends of said arms, a pair of horizontally adjustable box-shaped gage members open at their ends and slidably mounted at the bottom of said frame, said members being spaced from each other, whereby a slot is provided through which the operative part of said tool extends, a lateral gage plate mounted on one side of said gage members, and means for vertically adjusting said plate.

4. In a portable planing and grinding machine, a frame, a pair of arms, each arm being pivoted at one end to said frame, a horizontal shaft journaled in said arms, means for rotating said shaft, a tool mounted on said shaft, means for vertically adjusting said arms, a pair of horizontally adjustable gage members movably mounted at the bottom of said frame, said members being spaced from each other, whereby a slot is provided through which the operative part of said tool extends, means for locking said members in adjusted position, and a lateral gage plate adjustably mounted on one side of said gage members.

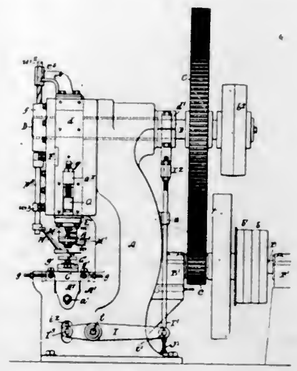
5. In a portable planing and grinding machine, a frame, a pair of arms, each arm being pivoted at one end to said frame, a shaft journaled in said arms, means for rotating said shaft, a tool mounted on said shaft, means for simultaneously adjusting said arms in vertical position, a pair of horizontally adjustable gage members spaced from the bottom of said frame and from each other, whereby a slot is provided through which the operative part of said tool extends, and a lateral gage plate adjustably mounted on one side of said gage members.

[Claims 6 to 8 not printed in the Gazette.]

1,170,455. PUNCHING-MACHINE. JOSEPH M. MASON, Philadelphia, Pa., assignor of one-half to John H. Hills, Philadelphia, Pa. Filed Apr. 6, 1914. Serial No. 829,971. (Cl. 164—13.)

1. The combination, in a washer punching machine, of a frame, upper and lower dies carried by said frame; the latter being apertured below the lower die, a shaft, a cam on the shaft, rods moved by the cam, levers connected to the rods, a block carried by the levers and internally disposed with respect to the frame, said block having sockets, and stripper rods mounted in said sockets and disposed in the aperture of the frame, said stripper rods being guided at their upper ends and carrying a stripper plate.

2. The combination, in a punching machine, of a frame, upper and lower dies, a carrier for the lower dies, lever mechanism, a block pivotally mounted on said lever mechanism and having sockets, stripper rods adapted to bearings in the lower die carrier and having their lower ends mounted in the sockets, a stripper plate carried by the upper ends of the rods and encircling the lower die, so that on raising the stripper rods they can be lifted out of their sockets in the block and on turning the block the rods can be withdrawn on the downward movement.



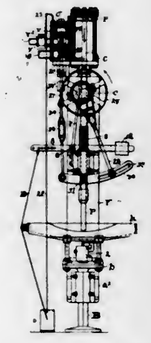
3. The combination of a frame, a lower die holder having a socket, a die having an enlarged base adapted to the socket, a clamp extending over the base, means for securing the clamp to the die holder, an upper die, and means for reciprocating the said upper die.

4. The combination, in a washer punching machine, of a frame, upper and lower dies, a shaft, a cam on the shaft, cam rods, two levers one on each side of the frame, a stripper connected to the levers, a cross bar connecting the levers at the rear, and an adjustable set screw at the back of the frame for limiting the movement of the levers.

5. The combination of a frame, a lower die holder having an opening, said opening being enlarged at the upper end and forming a socket, a lower die having an enlarged base flange fitting said socket, a flanged clamping ring extending over the base flange of the lower die and secured to the carrier therefor, an upper die, and means for reciprocating the upper die with respect to the lower die.

[Claims 6 to 18 not printed in the Gazette.]

1,170,456. MACHINE FOR FILLING DRY BATTERIES. PHILIP P. NUNGESSER, Cleveland, Ohio. Filed Aug. 5, 1914. Serial No. 855,315. (Cl. 100—57.)



1. A dry battery filling machine having a vertically disposed tamper and a pneumatic engine to actuate the same, in combination with a treadle, a valve controlling the flow of pneumatic energy and a stop adapted to engage said tamper operatively connected with the said treadle.

2. A machine as described comprising a pneumatic engine, and a tamper actuated thereby, a power driven shaft and a valve mechanism controlling the flow of energy to said engine, and means connecting said shaft and said means adapted to reciprocate the valves, in combination with a treadle, a cut-off valve for the pneumatic energy and a stop for said tamper and flexible connections between said treadle and said stop and the said cut-off valve respectively.

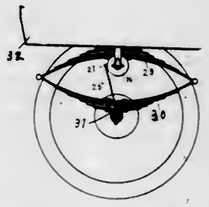
3. A battery filling machine comprising a tamper for the battery, a pneumatic engine having a piston operatively connected with the said tamper and valves adapted to control the flow of air to said engine to reciprocate said piston and tamper, in combination with a treadle, a cut-off valve for the air and means connecting said cut-off valve and treadle.

4. In a dry battery filling machine, a tamper and a pneumatic engine having a piston in actuating relations therewith, valves controlling the pneumatic energy and power driven means adapted to reciprocate said valves and thereby control the said energy to the engine, in combination with a treadle and means operatively connected therewith comprising a pivoted lever and a pawl thereon adapted to engage said tamper and limit the descent thereof.

5. A machine as described having a tamper having a collar thereon and a pneumatic engine to actuate the tamper, in combination with a power driven shaft, valves controlling the flow of pneumatic energy to said engine and means between the said valves and the said power driven shaft adapted to reciprocate the valves from the said shaft, in combination with a cut-off valve to stop the flow of energy to said engine, a pawl to engage the collar on the damper and a treadle and means therewith to close said cut-off valve and actuate said pawl simultaneously.

[Claim 6 not printed in the Gazette.]

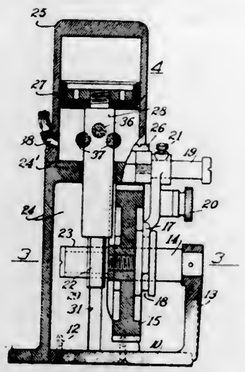
1,170,457. SHOCK-ABSORBER. KNIGHT K. PARKER, Seattle, Wash. Filed Nov. 28, 1911, Serial No. 662,945. Renewed Oct. 3, 1914. Serial No. 864,944. (Cl. 267—2.)



1. In a shock absorber of the class described, the combination with resilient means interposed between the axle and the body of a vehicle, of a spring-box associated with an arm, whose outer end is adapted to connect with a chain and whose inner end terminates at a point near the axis of said spring-box, and suitably mounted to rotate on fixed studs, a coiled ribbon spring disposed within said spring-box, one end of which spring is connected by a suitable catch with the circular wall of said spring-box while its other end is connected to one of said fixed studs, a yoke adapted to be attached to the body of a vehicle and further adapted to support said fixed studs, a chain adapted to connect with and extend between the outer end of said arm and the axle of said vehicle and means for winding said ribbon spring to a desired tension and securing such spring in a position normally to maintain such tension.

2. In a shock absorber, in combination, a rotative shaft carried by one member of the body-axle combination, and an arm mounted to turn with said shaft, a flexible conductor connected with the outer end of said arm and with the other member of said body-axle combination, and adapted to wrap about the pivotal end of the arm, and a spring having rotative connection with said shaft, so there will be manifest a gradual diminution of the strain of the flexible conductor as the body and axle recede one from the other.

1,170,458. AIR-PUMP FOR AUTOMOBILES AND THE LIKE. VICTOR H. PETERSON, Cambridge, Mass. Filed Nov. 4, 1914. Serial No. 870,279. (Cl. 230—27.)



1. An air pump comprising a standard combined integrally with a base part and adapted to guide a cross head and to support a cylinder; said cylinder; a piston in it; a piston rod and cross-head guided in said standard; another standard, integral with another base part; and means supported thereon to engage and drive said piston rod; said two parts of the base being separately joined together with their bottoms in the same plane and with said driving means between their parts that extend thence upward for said supporting purposes.

2. An air pump comprising a standard, with guide grooves for opposite edges of a cross-head, extending to the bottom of the standard, a bearing for a sliding piston rod, and means to support a cylinder; said cylinder; said piston rod, with cross-head; a piston thereon in the cylinder; means under the cylinder for engaging and driving said cross-head; the said standard having upright portions on the two sides where the guide grooves are, and a horizontal portion adapted for attachment to a support on the third side; and a standard for said driving means having an upright on the fourth side with a horizontal part extending under and fastened to the said upright parts of the first mentioned standard.

3. An air pump comprising a standard with guide grooves for opposite edges of a cross-head, a bearing for a sliding piston rod, and means to support a cylinder; said cylinder; said piston rod with cross-head having a slot extending transversely; and driving means movable toward and from the path of the cross-head and having a driving part always in mesh in said slot of the cross-head.

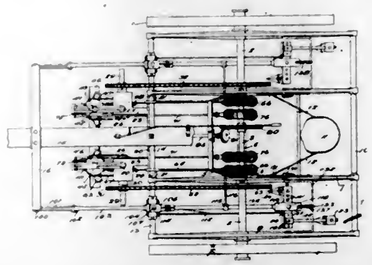
4. An air pump comprising a standard with guide grooves for opposite edges of a cross-head, a bearing for a sliding piston rod, and means to support a cylinder; said cylinder; said piston rod with cross-head having a slot extending transversely; a stud and means to support it; a gear movable on the stud toward and from the path of the cross-head; and a driving pin on the gear, having a rolling casing engaging in said slot.

5. An air pump comprising a standard with guide grooves for opposite edges of a cross-head, a bearing for a sliding piston rod, and means to support a cylinder; a piston, having a cup-bearing in the cylinder; said piston rod with cross-head guided in a rectilinear path by said grooves and bearing; and a driving member engaging the cross-head and rolling thereon transversely of its path while driving it longitudinally of said path.

[Claims 6 and 7 not printed in the Gazette.]

1,170,459. COTTON-CULTIVATOR. CLARENCE E. PIERCE, Starkville, Miss. Filed Feb. 25, 1915. Serial No. 10,588. (Cl. 97—47.)

1. A cultivator of the class described, comprising a frame mounted upon a two-part axle, spaced castings carried by the frame, a swinging knuckle pivoted to each casting, an upright shaft journaled in the knuckle, driving connections leading from the shaft through the casting to one part of the axle, a rotary cultivating element at the lower end of the shaft, said shaft being telescopic within its length, a collar fixed to its lower section, an arcuate loop embracing said section below the collar, manually operated means for swinging the knuckle around said shaft, and means for raising and lowering said loop irrespective of the position of the knuckle, for the purpose set forth.



2. A cultivator of the class described comprising a frame mounted upon a two-part axle, spaced castings carried by the frame, a swinging knuckle pivoted to each casting, an upright shaft journaled in the knuckle, driving connections leading from the shaft through the casting to one part of the axle, a rotary cultivating element at the lower end of the shaft, and means for permitting the lifting of each element from the ground; combined with two sets of pedals mounted on the frame, connections between each pedal of one set and one of said knuckles for swinging the latter outward and inward, and connections between each pedal of the other set and said lifting means.

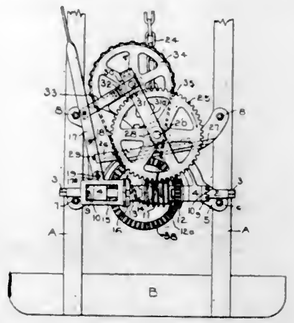
3. A cultivator of the class described comprising a frame mounted on a two-part wheeled axle, two swinging knuckles carried by the frame, upright telescopic shafts journaled in said knuckles, a rotary cultivating element and a collar carried by the lower section of each shaft, and driving connections between the upper part of each section and one of the axles; combined with pedals pivoted within the frame, arcuate loops inclosing the lower shaft-sections beneath their collars, connections between the pedals and said loops, and means for swinging the knuckles outwardly and inwardly, for the purpose set forth.

4. A cultivator of the class described comprising a frame mounted on a two-part wheeled axle, two swinging knuckles carried by the frame, upright telescopic shafts journaled in said knuckles, a rotary cultivating element and a collar carried by the lower section of each shaft, and driving connections between the upper part of each section and one of the axles; combined with two pairs of pedals pivoted within the frame, rods connecting those of one pair with said knuckles for swinging the latter outwardly and inwardly, arcuate loops inclosing the lower shaft-sections beneath their collars, and connections between the remaining pedals and said loops, for the purpose set forth.

5. A cultivator of the class described comprising a frame mounted on a two-part wheeled axle, two swinging knuckles carried by the frame, upright telescopic shafts journaled in said knuckles, a rotary cultivating element and a collar carried by the lower section of each shaft, and driving connections between the upper part of each section and one of the axles; combined with two pairs of pedals pivoted within the frame, rods connecting those of one pair with said knuckles for swinging the latter outwardly and inwardly, arcuate loops inclosing the lower shaft sections beneath their collars, levers pivotally supported at one end by the frame and attached at their other end to said loops, chains leading from the other pair of pedals to said levers respectively, and a spring normally depressing the lower section of each shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,170,460. GEARING. GEORGE B. READ, Bloomington, Ill. Filed July 22, 1912. Serial No. 710,798. (Cl. 74—36.)



1. In a gearing for wagon dumps, a frame structure, a driven shaft, a drive shaft, a worm on the drive shaft, a worm wheel driven therefrom connected with the driven shaft and normally in engagement with the worm, means for shifting the worm and including means for turning the same in clearance of the worm wheel to permit the driven shaft to turn freely in reverse direction.

2. In a gearing for wagon dumps, a frame structure, a driven shaft supported therein, a drive shaft, a worm thereon, a worm wheel on the driven shaft adapted to be driven from the worm and means for shifting the worm out of engagement with the worm wheel and including means for turning the worm in clearance of the worm wheel to permit the reverse rotation of the driven shaft.

3. In a gearing for wagon dumps, in combination, a frame structure, a reversible driven shaft supported in connection therewith, a drive shaft, a worm thereon, a worm wheel upon the driven shaft normally in engagement with the worm and adapted to be driven to rotate the driven shaft in one direction, means connected with the worm wheel for shifting the worm including means actuated by the reverse rotation of the driven shaft to turn the worm in clearance of the worm wheel.

4. In a gearing for wagon dumps, in combination, a frame structure, a reversible driven shaft, a drive shaft, a worm thereon, a worm wheel upon the driven shaft normally in engagement with the worm, means for shifting the worm relative to the worm wheel to relieve the normal braking force therebetween and connecting means between the driven and the drive shaft independent of the worm, operable by the reverse rotation of the driven shaft to turn the worm in substantial clearance of the worm wheel.

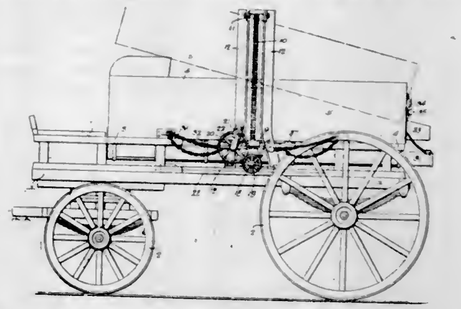
5. In a gearing for wagon dumps, in combination, a frame structure, a reversible driven shaft, a drive shaft, a worm thereon, a worm wheel connected with the driven shaft and normally engageable by the worm to turn the driven shaft, related shiftable members engageable with the worm to turn it initially substantially in clearance of the worm wheel and operable through the reverse movement of the driven shaft to maintain such clearance.

[Claims 6 to 25 not printed in the Gazette.]

1,170,461. VEHICLE. GIACINTO ROSSI, Philadelphia, Pa. Filed Jan. 27, 1915. Serial No. 4,720. (Cl. 21—86.)

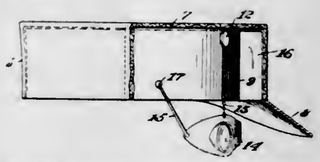
1. An improved dumping wagon comprising a supporting frame; a body portion; a turn-table between the body portion and frame; screws carried by the turn-table; a sleeve mounted across said body portion; transverse axially alined rods independently mounted for combined sliding and rotary movement in said sleeve; nuts on the outer ends of said rods respectively engaging the screws; and means for turning said screws to raise said nuts with the body portion.

2. The combination of a supporting frame; vertically extending screws mounted thereon; means for turning said screws; nuts on the screws each having a projecting rod, said rods being unconnected with each other and axially alined and independently rotatable; a wagon body; with



a sleeve extending transversely thereof and providing a pivotal bearing for the rods connected to the nuts.

1,170,462. CAP CONSTRUCTION. WILLIAM J. H. SCHROEDER, San Pedro, Cal. Filed May 10, 1915. Serial No. 26,942. (Cl. 2—106.)



1. In a head covering construction, the combination of a crown including a wall encircling the head, a second wall secured to said first mentioned wall and forming therewith a chamber open at the bottom, goggles, and an adjustable flexible supporting means secured to said crown disposed wholly in said chamber for supporting said goggles.

2. In a head covering construction, the combination with a crown including a wall encircling the head, a second wall removably secured to the first mentioned wall to form a chamber at the front part thereof, goggles, and an automatic winding reel secured to said crown and disposed in said chamber for supporting the goggles.

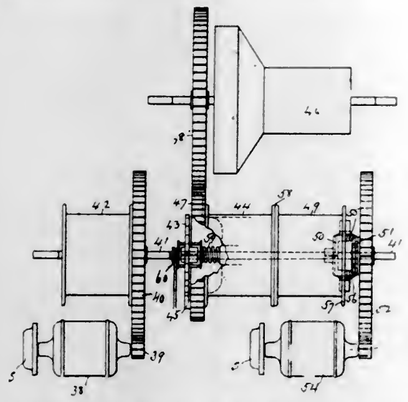
1,170,463. HOISTING MACHINERY FOR OPERATING GRAB-BUCKETS. AUGUSTUS SMITH, North Plainfield, N. J., assignor to Bergen Point Iron Works, Bayonne, N. J., a Corporation of New Jersey. Filed May 4, 1912. Serial No. 695,079. (Cl. 254—185.)

1. A hoisting mechanism comprising separate holding and closing drums, separately controlled reversible motors for driving the same, and an equalizer gearing connecting the closing drum with both motors whereby said drum may be driven at half speed with full torque by either motor running and the other standing, substantially as described.

2. A hoisting mechanism comprising separate holding and closing drums, separately controlled reversible motors for driving the same, and an equalizer gearing connecting the closing drum with both motors whereby said drum may be driven at half speed with full torque by either motor running and the other standing, together with a counterweight operatively connected to the holding drum.

3. A hoisting mechanism comprising separate holding and closing drums, separately controlled reversible motors for driving the same, and an equalizer gearing connecting the closing drum with both motors whereby said drum may be driven at half speed with full torque by either motor running and the other standing, together with a clutch for locking one drum system to the other.

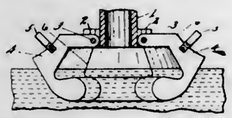
4. A hoisting mechanism comprising separate holding and closing drums, separately controlled reversible motors for driving the same, and an equalizer gearing connecting the closing drum with both motors whereby said drum may be driven at half speed with full torque by either motor running and the other standing, together with a clutch for locking one drum system to the other, and a counterweight operatively connected to the holding drum.



5. A hoisting mechanism comprising separate drums, a frictional drag device between the same, independently-controlled reversible motor means respectively geared to said drums, and comprising for one of said drums a one-way driving mechanism between said drum and its motor, whereby said drum may rotate in advance of its motor under the influence of the drag of the other drum.

[Claims 6 to 11 not printed in the Gazette.]

1,170,464. BAIT FOR GLASS-DRAWING MACHINES. ARTHUR E. SPINASSE, Mount Vernon, Ohio. Filed Feb. 10, 1913. Serial No. 747,581. (Cl. 49—17.1.)



1. A bait for drawing glass comprising a continuous element constructed to vary its form in avoidance of relatively rupturing pressures, said element being so constructed that the novel may be supported without fusion and may be so formed in relation to said element that it will not interfere with the said variation of form.

2. A bait for drawing glass comprising a continuous element having yieldable sections, said element being so constructed that the novel may be supported without fusion and may be so formed in relation thereto that it will not interfere with the yielding of said sections.

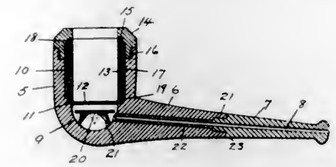
3. A bait for drawing glass comprising a continuous novel-supporting element having sections yieldable at the point of departure of the novel from the bait, said element being so constructed that the novel may be supported without fusion and may be so formed in relation to said element that it will not interfere with the yielding of said sections.

4. A bait for drawing glass comprising a continuous novel-supporting element having sections capable of a substantially horizontal yielding action, said element being so constructed that the novel may be supported without fusion and may be so formed in relation thereto that it will not interfere with the yielding of said sections.

5. A bait for drawing glass comprising sections assembled to produce a pocket adapted to support a novel without fusion, said sections being continuous and being yieldable to render the walls of the said pocket automatically adjustable.

[Claims 6 to 14 not printed in the Gazette.]

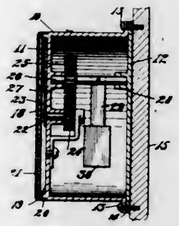
1,170,465. TOBACCO-PIPE. ARCHIE H. STRONG, West Brighton, N. Y. Filed Nov. 19, 1914. Serial No. 872,997. (Cl. 131—12.)



1. A tobacco pipe having a bowl portion, a removable carbon tube section forming a lining therefor, and a retaining cap overlying said tube section and engaging said pipe bowl to hold said lining in position therein, said tube section being spaced from the surrounding walls of the bowl throughout at least the major portion of its depth.

2. A tobacco pipe having a wooden bowl portion shouldered adjacent the bottom of the bowl well, a screen supported on said shoulder, a tubular carbon lining resting freely at its lower end on said screen, and a wooden retaining ring shouldered on its inner face to engage the upper end of said tubular lining and having a threaded engagement with the body of the bowl, the inner diameter of said ring being substantially the same as that of said lining and registering therewith in the assembled condition of the parts.

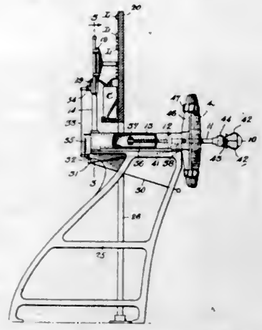
1,170,466. GRADE-INDICATOR. ANDREW SWITZER, Los Angeles, Cal. Filed Feb. 8, 1915. Serial No. 6,727. (Cl. 33—215.)



A grade indicator for vehicles, comprising a casing of cylindrical form, a detachable base provided with a boss having an aperture for a shaft, a cover integral with said casing, a boss upon said cover provided with an aperture for a shaft registering with said first mentioned aperture, a rotatable shaft mounted in the apertures of said boss, a pendent weight fixedly secured to said shaft, said cover provided with a second boss having an aperture for a shaft, a bracket provided with a bearing for a shaft mounted on said cover, a shaft mounted in the aperture of said last mentioned boss and said bracket bearing, a pinion on said last mentioned shaft meshing with said first mentioned pinion, a pointer on said last mentioned shaft disposed exterior of the cover for indicating grade.

1,170,467. EXERCISING APPARATUS. LYMAN B. TAYLOR, Lynnfield, Mass., assignor to Health Games Company. Filed Apr. 17, 1912. Serial No. 691,317. (Cl. 73—15.)

1. An exercising apparatus comprising a plurality of indicating devices, controlling means for causing an indication by any one of said devices, pneumatic means for operating said controlling means, air compressing means adapted to be operated by a blow for compressing a charge to operate said pneumatic means, and means for preventing retrograde movement of said compressing means when a charge is compressed.



2. An exercising apparatus comprising a plurality of indicating devices, controlling means for causing an indication by any one of said devices, pneumatic means for operating said controlling means, air compressing means adapted to be operated by a blow for compressing a charge to operate said pneumatic means, and means for preventing retrograde movement of said pneumatic means, whereby said controlling means is held in position to keep a circuit closed through the determined indicating device.

3. An exercising apparatus comprising a plurality of indicating devices, controlling means for causing an indication by any one of said devices, pneumatic means for operating said controlling means, said pneumatic means being adapted to return automatically to initial position when unrestrained, retaining means for preventing return movement of said pneumatic means, air compressing means adapted to be operated by a blow for compressing a charge to operate said pneumatic means, retaining means for preventing return movement of said compressing means, a manually operative releasing member, and connections between said releasing member and both of said retaining means whereby the latter may be operated by one movement of said releasing member.

4. An exercising apparatus comprising a plurality of electrically operating indicating devices, a support therefor, air compressing means adapted to be operated by a blow, an independent support for said means, pneumatic means operative by the compressed air from said compressing means, electric switch mechanism operative by said pneumatic means, said switch mechanism including a plurality of terminals connected with the several indicating devices whereby any one of said devices may be included in an operating circuit, and a source of current connected with the switch terminals and indicating devices for operating the latter.

5. In an apparatus of the character described, a plunger, indicating means, means adapted to be operated when said plunger is moved, for causing an operation by said indicating means, a ball, and means mounted on one end of said plunger for holding said ball so as to present a portion of the ball surface to a plunger operating element, said holding means being adapted to grip the ball and release the same whereby the ball may be turned to various positions.

[Claim 6 not printed in the Gazette.]

1,170,468. SULFO-FATTY-AROMATIC ACID SALT. ERNST TWITCHELL, Wyoming, Ohio. Filed Jan. 29, 1913. Serial No. 744,820. (Cl. 23—24.)

A sulfonic material for the manufacture of glycerin and fatty acids from fats and oils, consisting of a dry, stable solid, insoluble in water, consisting of a neutral body having the property when treated with a mineral acid of yielding an active, concentrated sulfonic saponifier, of an oily nature, which will not decompose at the temperature of boiling water, and a residue of innocuous character adapted to be removed as a precipitate.

1,170,469. APPARATUS FOR DRYING AND STERILIZING AIR. REINDER PIETERS VAN CALCAR, Oegstgeest, and JAN ELLERMAN and HENDRIKUS JOHANNES MARTIJN, The Hague, Netherlands. Filed Jan. 6, 1914. Serial No. 810,637. (Cl. 34—1.)



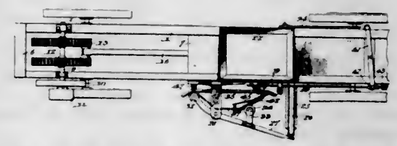
1. An apparatus for drying and sterilizing air consisting of a casing having inlet means at the bottom and outlet means at the top, pans held in said casing and provided with foraminated bottoms, said pans being adapted to contain a drying and sterilizing chemical, and pins projecting from the bottoms of said pans and arranged to afford contact surfaces for the air flowing through the apparatus.

2. An apparatus for drying and sterilizing air consisting of a casing having inlet means at the bottom and outlet means at the top, pans held in said casing and provided with foraminated bottoms, said pans being adapted to contain a drying and sterilizing chemical, and pins projecting from the bottoms of said pans and arranged to afford contact surfaces for the air flowing through the apparatus, said pins being provided each with an absorbent envelop.

3. An apparatus for drying and sterilizing air comprising a casing having inlet and outlet openings, pans having foraminated bottoms held in said casing in superposed staggered relation, and baffle pins projecting downward from the bottoms of said pans.

4. An apparatus for drying and sterilizing air comprising a casing having inlet and outlet openings, pans having foraminated bottoms held in said casing in superposed staggered relation, and baffle pins projecting downward from the bottoms of said pans, each of said pins being provided with an absorbent coating and each of said pans being adapted to contain a suitable soluble absorbent material.

1,170,470. HAY-BALER. ISAAC E. WARD, Andale, Kans. Filed Feb. 17, 1914. Serial No. 819,254. (Cl. 100—20.)



1. In a baling press, a baling chamber, a packer working in said chamber, means at one side of the chamber for supporting a division block, a folder mounted for movement into the chamber in advance of the block, and means actuated by the movement of the packer for moving the folder and block into the chamber.

2. In a baling press, a baling chamber, a packer working in said chamber, means at one side of the chamber for supporting a division block, a folder plate mounted for movement into the chamber to lie transversely thereof and in such movement arranged to fold up the material of the bale at the end of the bale, the said folder plate constituting also a guide for said block as the block is moved into the chamber, and means arranged to move the folder into the chamber and to immediately subsequently move the block into the chamber.

3. In a baling press, a baling chamber, a packer working in said chamber, means for supporting a division block to be placed in said chamber, an arm mounted for rocking movement and arranged when rocked in one direction to move the division block into the baling chamber, a slidably mounted cam member arranged when slid in one direction to so rock the said arm, the packer having a notch provided with an inclined wall terminating in a shoulder, and means carried by the cam member and arranged to be brought into operative relation to the packer and to be guided by said inclined wall into engagement with said shoulder, whereby to connect the cam member for movement with the packer.

4. In a baling press, a baling chamber, a packer working in said chamber, means for supporting a division block to be placed in said chamber, an arm mounted for rocking movement and arranged when rocked in one direction to move the division block into the baling chamber, a slidably mounted cam member having spaced oppositely inclined surfaces, spaced elements upon said arm coöperating each with one of said surfaces, whereby when the cam member is slid in one direction, the said arm will be rocked to move the division block into the chamber and when the cam member is slid in the other direction, the arm will be returned to normal position, and means for moving the cam member.

5. In a baling press, a baling chamber, a packer working in said chamber, means for supporting a division block to be placed in said chamber, an arm mounted for rocking movement and arranged when rocked in one direction to move the division block into the baling chamber, a slidably mounted cam member having spaced oppositely inclined surfaces, spaced elements upon said arm coöperating each with one of said surfaces whereby when the cam member is slid in one direction, the said arm will be rocked to move the division block into the chamber and when the cam member is slid in the other direction the arm will be returned to normal position, the packer having a notch provided with an inclined wall terminating in a shoulder, and means carried by the cam member and arranged to be brought into operative relation to the packer and to be guided by said inclined wall into engagement with the said shoulder whereby to connect the cam member for movement with the packer.

[Claims 6 to 15 not printed in the Gazette.]

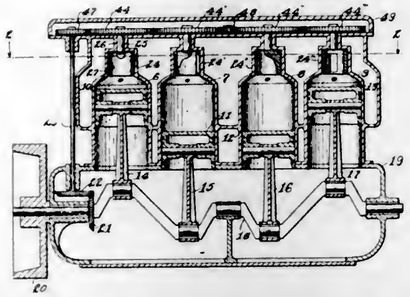
1,170,471. VALVE FOR ENGINES. SHERMAN T. ALLEN, Los Angeles, Cal., assignor of one-half to John C. Hasbrouck, Jr., North Grafton, Mass. Filed Aug. 11, 1915. Serial No. 45,032. (Cl. 123—80.)

1. In an engine, a rotary valve comprising a valve casing provided with inlet, exhaust and cylinder ports, a tubular rotatable valve member split longitudinally having a port in the wall thereof; and retaining rings mounted on said valve member for limiting expansion of the same.

2. In an engine, a rotary valve comprising a valve casing provided with inlet, exhaust and cylinder ports, a tubular rotatable valve member open at the upper end, split longitudinally having a port in the wall thereof; and retaining rings mounted on said valve member for limiting expansion of the same.

3. In an engine, a rotary valve comprising a valve casing provided with inlet, exhaust and cylinder ports, a tubular rotatable valve member split longitudinally having a port in the wall thereof; and endless retaining rings of an external diameter to rotatably fit the said casing and prevent leakage mounted on said valve.

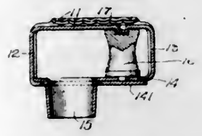
4. In an engine, a rotary valve comprising a valve casing provided with inlet, exhaust and cylinder ports, a tubular rotatable valve member open at the upper end, split longitudinally having a port in the wall thereof; and endless retaining rings of an external diameter to rotatably fit the casing and prevent leakage mounted on said valve.



5. In an engine, a rotary valve comprising a valve casing of hollow cylindrical form closed at its upper end, open at its lower end to an engine cylinder, and provided in its cylinder wall with inlet and exhaust ports; a tubular rotary valve member open at its lower end having a port in the wall thereof disposed to register with said inlet and exhaust ports; and retaining rings mounted on said valve member for limiting expansion of the same.

[Claims 6 and 7 not printed in the Gazette.]

1,170,472. FASTENER FOR SHOES, &c. JOHN WESLEY BARBER, Newton, Mass. Filed Aug. 27, 1909. Serial No. 514,913. (Cl. 24—149.)



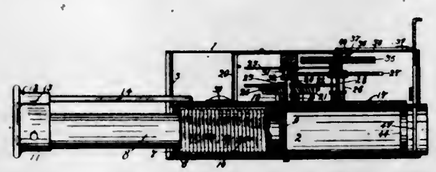
1. A lacing device comprising a housing formed of a single strip of material having a top portion, end portions and a double-thick base, the upper layer of the base having an opening, a roller having a trunnion in said opening and having its upper end rotatively engaged with the top of the housing, the under layer of the base extending under the said roller trunnion and preventing contact of said trunnion with the material to which the device is attached.

2. A lacing device formed of a single strip of metal having integral attaching means near one end and an opening near the other end, said strip being bent to form an elongated housing and having said attaching means passing through said opening whereby the ends of the strip are interlocked, and a roller mounted in said housing out of alinement with the attaching means, the space in the housing above the attaching means providing room for the insertion of a lacing, the end of the strip which has the opening extending under practically the entire length of the base portion of the housing and forming a double-thick base to stiffen said base and to provide a smooth under surface to bear on the material to which the device is to be secured.

3. A lacing device comprising a strip of metal bent to form an elongated housing, and a roller mounted therein, the bearing for the upper end of the roller comprising a socket or depression in the roller and a hollow stud projecting into said socket or depression from the housing whereby the bearing for the upper end of the roller becomes at the same time a trunnion and a retaining holder for a suitable coating, the strip forming the housing having attaching means located at one side of the axis of the roller.

4. A lacing device comprising an elongated box-shaped housing, the top section having its edge portions turned over and inwardly above and substantially parallel with the main portion of the top section, whereby the edges of said top section are of double thickness.

1,170,473. AUTOMATIC SHUTTER-RELEASE FOR CAMERAS. MORRISSON J. BARNETT, San Francisco, Cal., assignor, by mesne assignments, to Alonzo Grimes, trustee, Mill Valley, Cal. Filed May 19, 1915. Serial No. 29,103. (Cl. 161—26.)



1. The combination of an open-ended cylinder, a plunger within the cylinder, a spring for pressing said plunger toward said open end, a train of gearing one end of which is operatively connected to said plunger, an escapement operatively connected to said train, and means for securing in the open end of the cylinder an end of a releasing device.

2. The combination of an open-ended cylinder, a plunger within the cylinder, a spring for pressing said plunger toward said open end, a train of gearing one end of which is operatively connected to said plunger, an escapement operatively connected to said train, means for securing in the open end of the cylinder an end of a releasing device, and means for rendering said train operative or inoperative as desired.

3. The combination of a casing having a hole in one end, a cylinder within said casing, having an open end projecting through said hole, a plunger within the cylinder, a spring for pressing said plunger toward said open end, a rack moving with the plunger, a pinion engaging said rack, a train of gearing one end of which is operatively connected to said pinion, an escapement operatively connected to the other end of said train, and means for securing in the open end of the cylinder an end of a releasing device.

4. The combination of a casing having a hole in one end, a cylinder within said casing, having an open end projecting through said hole, a plunger within the cylinder, a spring for pressing said plunger toward said open end, a rack moving with the plunger, a pinion engaging said rack, a train of gearing one end of which is operatively connected to said pinion, an escapement operatively connected to the other end of said train, and means for securing in the open end of the cylinder an end of a releasing device, comprising a fixed ring in the cylinder against which said end is adapted to abut, and a transversely movable device adapted to be moved on opposite sides of said releasing device, said cylinder having opposite slots in which said transversely movable device can slide.

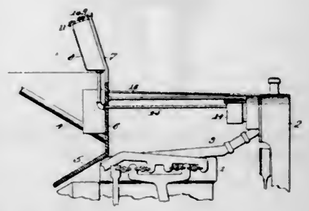
5. The combination of a casing having a hole in one end, an open-ended cylinder within said casing and projecting through said hole, a coiled spring within the cylinder, means in the cylinder against which one end of said coiled spring abuts, a plunger extending through said means, a head therefor within the cylinder against which the other end of the spring abuts, a head for the other end of the plunger, a bar secured to said head and formed with a rack, a guide for said rack, a pinion engaging said rack, a train of gearing one end of which is operatively connected to said pinion and comprising a ratchet wheel, and a spring dog engaging said ratchet wheel and preventing relative movement thereof in one direction, while permitting it in the other direction, an escapement operatively connected to the other end of said train, and means for securing in the cylinder an end of a releasing device.

[Claim 6 not printed in the Gazette.]

1,170,474. COMPOSITION FOR USE IN BREAD-MAKING. DAVID BEATTY, Berkeley, Cal., assignor to himself as trustee. Filed Apr. 21, 1914. Serial No. 833,337. (Cl. 99—10.)

As an article of manufacture for admixture with soda to make biscuits and the like, pure lactic acid mixed with a sufficient amount of starch to render it substantially dry.

1,170,475. WATER REGULATION FOR AUTOMOBILE-RADIATORS. CHARLES L. BESLER, Winfield, Kans. Filed Jan. 5, 1915. Serial No. 694. (Cl. 123—170.)



1. The combination with an internal combustion engine and its water-cooling system, of a water-supply, a connection thereof with said cooling system, a valve in said connection, and means adapted to automatically open and close said valve to maintain a practically uniform volume of water in said cooling system.

2. In a device of the class specified, a radiator, a separate water supply therefor, a chamber interposed between said radiator and water supply, connecting pipes to carry water from the water supply to said chamber and from the chamber to the radiator, and a float and valve actuated thereby mounted in said chamber.

3. In a device of the class described, a water-holding tank set at a higher level than the radiator to be fed thereby, a gasolene engine radiator, a float-chamber interposed between the radiator and said tank, with water communication between it and both the tank and the radiator, a valve connected with the inlet to said float-chamber, a float adapted to open said valve when depressed, and means adapted to close the valve when the float is elevated.

4. The combination with a gasolene engine radiator, of a supply tank set at a higher level than the radiator, a regulating chamber interposed between said tank and the radiator, and communicating with both, a valve adapted to open and close the inlet to said chamber, a float adapted to open the valve when depressed, and means independent of the float for closing the valve when the float is elevated.

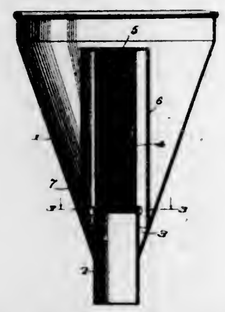
5. In combination with the radiator of a gasolene engine, a supply tank set at a higher level than the radiator, a regulating device to control the flow of water from said tank to the radiator, and a settling chamber interposed between the tank and the regulator, and adapted to strain the water passing thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,170,476. FUNNEL. ARLEIGH L. BULL, Westfield, Pa. Filed Apr. 7, 1914. Serial No. 830,218. (Cl. 210—16.)

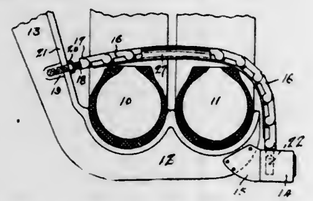
A device of the class described, a cone shaped body, a discharge spout projecting upwardly into the lower ends of the body for a portion of its length, defining between the spout and the lower end of the body, a concentric water and sediment pocket, a cylindrical shield secured at its lower end and the inner wall of the cone shaped body adjacent its lower end and disposed in spaced relation with the projecting portion of the discharge spout, said shield being disposed and located centrally within and vertically of said body for the greater portion of its length, and a cylindrical screen member disposed within and in spaced relation to the shield and connected at one

end to the discharge spout and at its opposite end to the top of the shield, said shield having apertures below the



upper edge of the pocket and arranged in embracing relation with the mouth of the discharge spout.

1,170,477. TIRE-GUARD. ABEL E. CHERNACK, Providence, R. I. Filed Mar. 5, 1915. Serial No. 12,358. (Cl. 224—29.)



1. A chain for a tire guard or the like, comprising a series of interengaged links recessed on one face to form a continuous open channel, in combination with a cushioning element lying in said channel and extending beyond said face of the chain to form a bearing surface.

2. A chain for a tire guard or the like, comprising a series of readily-detachable interengaged links recessed on one face to form a continuous open channel, in combination with a cushioning element lying in said channel and extending beyond said face of the chain to form a bearing surface.

3. A chain for tire guards or the like, comprising a series of interengaged links of like shape, recessed to form a channel uninterruptedly open to one face of the chain, in combination with a cushioning element lying in said channel and extending beyond said face of the chain to form a bearing surface, substantially as described.

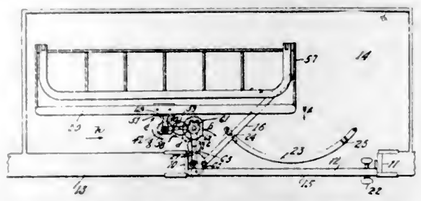
4. A chain for a tire guard or the like, comprising a series of interengaged links, the joints between the links being of such construction that the chain can be bent in only one direction, said links being recessed on the inner face of the chain to form a continuous open channel, in combination with a cushion element lying in said channel and extending beyond said face to form a bearing surface.

5. A chain for tire guards or the like, comprising a series of interengaged links of like shape, a terminal link at one end having a screw extension and a terminal link at the opposite end having a locking bar extension, in combination with a lock having a threaded connection with said screw on the one hand and a locking bolt adapted to engage the inserted chain bar, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,170,478. DOOR-BED. EDGAR COCKS, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 830,036. (Cl. 5—18.)

1. In a folding bed mounting, the combination of a pair of parallel spaced arm members, a link pivoted to each of said arms, a second link pivoted to the first-named link a folding bed frame carried by the second-named link, and a planetary gear mechanism adapted to operate on the arms and links, whereby the bed may be swung from one side of a wall to the other on a definite line of travel and be disposed parallel with the wall on either side thereof.



2. A folding bed mounting, comprising a pair of parallel spaced arm members, a link pivoted to each of said arms, a second link pivoted to the first-named link a bed frame carried by the second-named links, a stationary circular rack, a pinion on one of the arms engaging said rack, a toothed wheel carried by the last-named arm engaging said pinion and rigidly connected to the link carried by said arm, a rack rigidly mounted on said arm, a pinion on one of said links engaging said last-named rack, and a rack carried by the link connected to the pinion carrying link engaging the pinion thereon, said racks and pinions adapted to operate to direct the movements of the links and arms on a definite path of travel.

3. The combination with a bed frame, of a pair of links to which said bed frame is rigidly mounted, a pair of pivoted arms, link connections between said arms and the before-mentioned links, and a planetary gear mechanism adapted to operate on said arms and links, whereby swinging of any one of the arms or links will effect a swinging movement of the other arms and links in a definite path of travel.

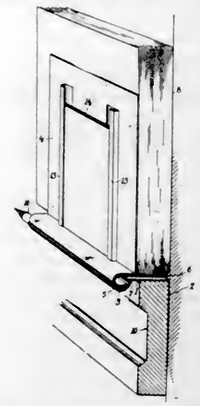
4. A mounting for folding beds, comprising a pair of connected arms, pivotal supports for said arms, connected links pivotally mounted on the outer ends of said arms, bed supporting links pivotally connected to the before-mentioned links, a rack carried by one of said last-named links, a rack carried by one of said arms, an idler pinion carried on one of the first-named links meshing with both of said racks, a toothed wheel connected to a pinion carrying link, a stationary rack, and a pinion carried by one of said arms connecting said toothed wheel and stationary rack.

5. A folding bed mounting, comprising the combination with a door casing, of a pair of connected arms pivoted to the casing, a pair of connected links pivoted to said arms, a bed frame pivotally connected to said links, and gear means acting on the arms and links whereby rocking of said arms will effect a movement of the bed frame in a definite path of travel by which the bed frame may be moved from one side of the door casing through a door opening to the opposite side thereof.

[Claims 6 to 10 not printed in the Gazette.]

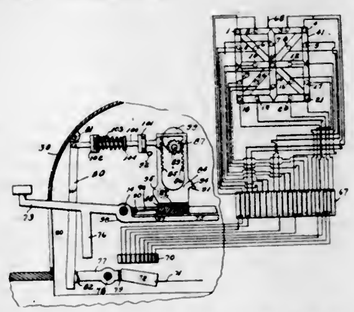
1,170,479. TELEPHONE-BOOK REST. CHARLES W. COREY, Malden, Mass., assignor of one-half to Isaac S. Hall, West Medford, Mass. Filed Mar. 25, 1915. Serial No. 16,917. (Cl. 45—58.)

1. A book holder comprising a length of sheet metal having an incompletely cylindrical bend along one edge, and a length of sheet metal having a terminal section disposed at right angles to the body thereof, and an intermediate section bent over sharply on itself and curved into an incompletely cylindrical form, one of the cylindrical bends fitting snugly within the other to constitute a hinge, the edge of one of the cylindrical bends being disposed to meet and be stopped by a portion of the other bend and to thereby support the body of the second-named length of sheet metal at an acute angle with respect to the wall from which the first-named length of sheet metal is designed to project in a horizontal direction.



2. A book holder comprising a sheet metal supporting member having its outer edge formed into a semi-cylindrical socket having a stop shoulder, a metal plate having a section thereof bent into a knuckle loosely received by said socket to permit said plate to swing through a limited arc, said knuckle being disposed by engagement with said shoulder to limit the inclination of said plate to a few degrees from the vertical, said plate having a shelf projecting at right angles therefrom.

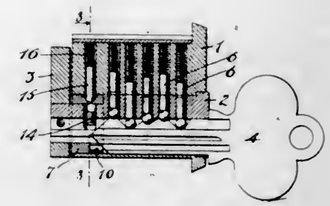
1,170,480. CASH-REGISTER. JOHN J. DUFFIE, San Francisco, Cal. Filed Nov. 22, 1910. Serial No. 593,714. (Cl. 235—23.)



1. In a register, a casing, register mechanism therein, devices to operate said mechanism, a plurality of electric lamps, electric circuits to operate any series of lamps to produce given characters, a shaft, a plurality of circuit closers pivotally mounted on said shaft, a plurality of releasing catches rigidly connected with the shaft, one for each circuit closer, means whereby a given circuit closer may be operated to close its circuit and means connected with each operating device for opening all of the circuits near the beginning of movement of the operating device, substantially as described.

2. In a register, a casing, register mechanism therein, means to operate said mechanism, a plurality of electric lamps, a series of electric circuits to illuminate any series of lamps to produce a given character, a shaft, a plurality of circuit closers pivotally mounted on said shaft, a latch for each circuit closer, means whereby upon the operation of the register a given circuit closer will be operated to close its circuits and means whereby upon the operation of the register all of the circuit closers will be operated to open all of the circuits near the beginning of movement of the register operating device, substantially as described.

1,170,481. LOCK. WILLIAM CONEY, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed May 24, 1915. Serial No. 29,976. (Cl. 70—93.)



1. In a lock, a main body portion, a rotatable element carried thereby and having a key passage, means for locking said parts against relative rotation, said means being movable by a key to release said parts, whereby the rotatable element may be turned in said body portion, with rotatable auxiliary locking means operating between said body portion and rotatable element for locking said element against movement by said key, said auxiliary means being operable by a different key, both keys being operable through the same key passage.

2. In a lock, a main body portion, a rotatable element carried thereby, a row of pin tumblers for locking said parts against relative rotation, said tumblers being movable by a key to release said parts whereby said rotatable element may be turned in said body portion, with rotatable auxiliary means for locking said parts against relative movement by said key, said first mentioned locking means and said auxilfary locking means being respectively operated by different keys, and a single key-way in said rotatable element for both keys.

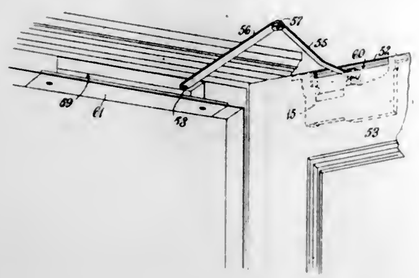
3. In a lock, a main body portion, a rotatable element carried thereby, means for locking said parts against relative rotation, said means being movable by a key to release said parts whereby the rotatable element may be turned, with auxiliary means for locking said parts against operation by said key, said auxiliary means being operable by a different key, the auxiliary locking means comprising a movable bolt pin carried by the main body portion and arranged to project into the rotatable element, with means for holding said bolt pin out of engagement with said rotatable means at certain times.

4. In a lock, a main body portion, a rotatable element carried thereby, means for locking said parts against relative rotation, said means being movable by a key to release said parts whereby the rotatable element may be turned, with auxiliary means for locking said parts against operation by said key, said auxiliary means being operable by a different key, the auxiliary locking means comprising a movable bolt pin carried by the main body portion and arranged to project into the rotatable element, with means for holding said bolt pin out of engagement with said rotatable means at certain times, said last mentioned means comprising a ring mounted to rotate on the rotatable element and arranged between the bolt pin and the rotatable element.

5. In a lock, a main body portion, a rotatable element carried thereby, means for locking said parts against relative rotation, said means being movable by a key to release said parts whereby the rotatable element may be turned, with auxiliary means for locking said parts against operation by said key, said auxiliary means being operable by a different key, the auxiliary locking means comprising a movable bolt pin carried by the main body portion and arranged to project into the rotatable element, with means for holding said bolt pin out of engagement with said rotatable means at certain times, said last mentioned means comprising a ring mounted to rotate on the rotatable element and arranged between the bolt pin and the rotatable element, with means for limiting the rotary movement of the ring.

[Claims 6 to 10 not printed in the Gazette.]

1,170,482. DOOR CHECK AND CLOSER. JOHN GÉRARD, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 5, 1915. Serial No. 59,726. (Cl. 16—88.)



1. In a construction of the character described, the combination with a hinged door and its casing, of a door check and closer concealed in the upper edge of the door adjacent its hinge, and a jointed connection between said check and closer and the stationary door casing, connected at one side of the upper edge of the door, said door casing being provided with a pocket and the upper edge of the door being provided with a slot to permit the jointed connection to be entirely concealed when the door is closed.

2. In a construction of the character described, the combination of a hinged door and door casing having opposed faces meeting in the closed position of the door, the meeting faces of said door and door casing having recesses therein and one of said members being recessed to receive a door check and closer, a door check and closer seated in said recessed portion, an arm connected to said door check and closer and extending out through the recess in said member, and a second arm pivoted to said first arm and pivotally connected in the recess in the other member, whereby when the door is closed, said jointed arms will be receive and concealed in the recesses in the meeting faces of the door and casing.

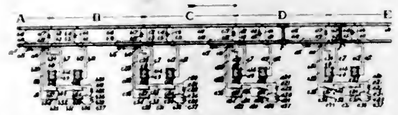
3. In a construction of the character described, the combination with a door and its casing, of a relatively thin door check and closer, said door having a recess in the upper portion thereof receiving said door check and closer and a slot in the side of the door which faces the casing and said casing having a pocket therein in the side which faces the door, an arm connected to the door check and closer and extending out through the slot in the side of the door, and a second arm pivoted at one end to the free end of the first arm and pivotally connected at its opposite end in the pocket in the door casing.

4. In a construction of the character described, the combination with a hinged door and its casing, said door and casing having opposed faces substantially meeting in the closed position of the door, a door check and closer mounted in the door, jointed arms connected between the door check and closer and the door casing, the meeting faces of said door and door casing having recesses therein, receiving said jointed arms in the closed position of the door.

5. In a construction of the character described, a transmitting member of general rectangular cross section having a vertical passage-way therethrough, gear teeth at the opposite sides of said passage-way and longitudinal ribs at the upper and lower edges of said passage-way connecting said gear teeth, and a spindle engaged in said passage-way and having gear teeth for meshing with the gear teeth at the sides of the passage-way, one of the ribs aforesaid having an entering notch therein permitting entrance of the toothed portion of the spindle into the passage-way in the transmitting member.

[Claims 6 to 21 not printed in the Gazette.]

1,170,483. TRACK SYSTEM FOR CONTROLLING TRAINS. ANATOL GOLLOS, Chicago, Ill., assignor to Gollos Railway Signal Company of America, a Corporation of Maine. Filed Jan. 22, 1914. Serial No. 813,661. (Cl. 246—27.)



1. A track system for controlling trains comprising a track divided into blocks, and each block having a section at the end thereof insulated from the balance of the block, pairs of contact rails arranged adjacent to the exit end of each section, means for energizing said rails, means including a source of electricity and the rails of the insulated section for deënergizing the contact rails at certain times, and means including a source of electricity, and the track rails of the succeeding block for deënergizing one of said rails and reducing the voltage to the other rail at other times.

2. A system of the character set forth, comprising a railway track divided into blocks with each block divided into relatively long and short sections, the short sections being at the entrance ends of the blocks, with pairs of contact rails arranged adjacent to the track, but at some distance from each other, at the exit ends of the long sections, means for supplying electric current to said contact rails, a source of electricity, a relay and circuit including the rails of the short sections of each block for opening the circuits to said contact rails of the adjacent section, and a relay, a battery and a circuit including the track rails of each succeeding block section for opening the circuit to one of said contact rails, and for opening the circuit to the other rail and closing a circuit thereto and a resistance in said last-named circuit.

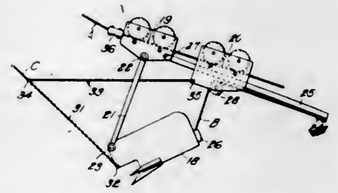
3. A system of the character set forth, comprising a track divided into blocks and each block being divided into relatively long and short sections, the short sections being at the entrance ends thereof, a contact rail adjacent to the exit end of the long section of each block, a second contact rail at a predetermined distance from the exit end of each block, a source of electricity for these two contact rails of each block, a resistance to be inserted at times in the circuit from said source of electricity to the last named contact rail, a battery for each short section having its terminal connected with the track rails of such section, a relay for each short section having its terminals connected with the track rails of such section and receiving current from said battery, the armatures of said relay being included in the circuits from said source of electricity to the contact rails, a second relay having its terminals connected with the track rails at the entrance of the nearest succeeding block, a battery having its terminals connected with the rails of said succeeding block and supplying current to said second named relay, the armatures of said second named relay also being included in the circuit from said source of electricity to the contact rails, and one of said armatures being also arranged to close a circuit at times, from the source of electricity through the resistance to the second named contact rail.

4. A system of the character set forth, comprising a track divided into blocks B and C, each block having a section of predetermined length at the entrance end thereof, which is insulated from the remainder of the block, contact rails b^{15} and b^{16} located a predetermined distance apart adjacent to the exit end of the second section of the block B, a source of electricity c^{21} having one terminal connected with the rails of the second section of the block B, a source of electricity c^{6} having its terminals connected with the rails of the entrance section of the block C, a relay c^{9} having its terminals connected with the rails of the entrance section of the block C, said relay having two armatures, circuits from said source of electricity c^{21} through said armatures to the rails b^{15} and b^{16}, a source of electricity c^{10} having its terminals connected with the rails of the second section of the block C, a relay c^{14} having its terminals connected with said rails, the armatures of said last named relay being included in the circuits from the source of electricity c^{21} to the contact rails, a resistance c^{30} and a circuit from the battery c^{21} to the contact rail b^{15} which is closed through said resistance when the armatures of the relay c^{14} drop.

5. A track system for automatic railway control, comprising a track divided into blocks by having each of the rails insulated at the ends of the blocks and having the blocks divided into relatively short entrance sections and long exit sections, sources of electricity having their terminals connected with the opposite rails adjacent to the exit ends of the blocks, two contact rails arranged adjacent to the exit ends of each of the blocks, relays having their terminals connected with the rails at the entrance ends of the long sections, sources of electricity having their terminals connected with the opposite rails adjacent to the exit ends of the short sections, relays having their terminals connected with the rails at the entrance ends of the blocks, sources of electricity for energizing the contact rails, circuits from said last named sources of electricity to the contact rails, and the track rails, each of said circuits being controlled by two relays.

[Claims 6 to 19 not printed in the Gazette.]

1,170,484. CABLE EXCAVATOR. ALVAH D. HADSEL, Philadelphia, Pa., assignor to Cable Excavator Company, Philadelphia, Pa., a Corporation of Delaware. Filed Sept. 10, 1915. Serial No. 49,934. (Cl. 37—19.)



1. In a cable excavator, the combination with an overhead trackway, a bucket, and trolley means operating over the trackway, of suspending devices between the trolley means and the bucket, said suspending devices including a rigid member connected at its ends through fixed pivots to the trolley devices and to the front end of the bucket and a flexible member connected to the other end of the bucket, and means to traverse the bucket and trolley means along the trackway.

2. In a cable excavator, the combination with a trackway, trolley devices operating along the trackway, and a bucket, of suspending devices connecting the bucket to the trolley devices, said suspending devices including a rigid member pivoted to the upper front portion of the bucket and to the front portion of the trolley devices and also including a flexible connecting member leading from the rear end of the bucket over the rear portion of the trolley devices, and draft connections including main and auxiliary parts connected respectively to the bucket and trolley devices.

3. In a cable excavator, the combination with a trackway, trolley devices thereon, and a bucket below the trolley devices, of suspending devices for the bucket comprising a rigid member pivoted at one end to the front end of the bucket and extending thence to and pivoted at its other end upon the front portion of the trolley devices and also including a flexible member connected to the rear end of the bucket and extending thence upwardly and along the rear portion of the trolley devices, and means to shorten the effective length of the last mentioned connection to tilt the bucket for dumping its contents.

4. In a cable excavator, the combination with an overhead trackway, a bucket, and a plurality of trolley devices operating along said trackway and movable toward or from each other, of suspending devices between the trolley devices and the bucket, said suspending devices including independent members connected to the respective ends of the bucket, one of said members being connected directly to one of said trolley devices, the other of said members being flexible and operating over a pulley on the other trolley device, and a rigid strut connected at one end to the first mentioned trolley device and extending thence along the other trolley device and having said flexible suspending member connected to the opposite end thereof.

5. In a cable excavator, the combination with an overhead trackway, a bucket, and a plurality of trolley devices operating over the trackway, of suspending devices between the trolley devices and the bucket, said suspending devices including a rigid link pivoted through fixed pivots at its ends to the front trolley device and the front end of the bucket, a flexible connection attached to the rear end of the bucket and extending thence over the rear trolley device, and a rigid strut connected permanently at one end to the front trolley device, extending thence along the rear trolley device and having said flexible member connected to its rear end, and draft members connected to the front end of the bucket and the rear trolley device.

[Claim 6 not printed in the Gazette.]

1,170,485. CHILD'S CARRIAGE. WILLIAM P. LAYTON, Chicago, Ill. Filed May 16, 1914. Serial No. 839,130. (Cl. 21—12.)

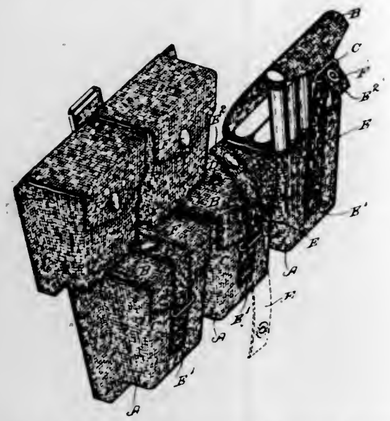


1. In a baby carriage, the combination of a carriage body in which the child may be placed with its head in either end of the carriage body, a non-foldable hood, means for pivotally connecting the hood to the body, the axis of said connecting means being located midway of the length of the carriage body and near the upper edge of the sides of the body, the hood being large enough to swing down beside either end of the carriage body, and stops to limit such downward swing.

2. The combination of a hood-supporting arm having a cupped lower end, said lower end having a peripheral tapered friction locking surface, a bracket having attaching ears, fastening devices extending through said ears, the central portion of the bracket cupped to receive the cupped lower end of said arm, the cupped portion of said bracket having a tapered peripheral frictional locking surface adapted to coact with the similar surface of the arm, a pivot bolt extending rotatably through said bracket and non-rotatably through said arm, axially of said cupped portions, the head of said bolt lying at the side of the bracket, a clamping nut on said bolt, a washer between said nut and the cupped portion of said arm, and a stop on said arm arranged to impinge against both of said fastening devices to limit pivotal movement of the arm in either direction.

3. The combination of a hood-supporting arm, an attaching bracket to which the arm is pivotally connected, stops on said bracket at opposite sides of the pivotal axis of the arm, and a single stop on said arm arranged to coact with both of the other stops to limit pivotal movement of said arm in either direction.

1,170,486. CARTRIDGE-CARRIER. ALBERT ALEXANDER LETHERN, London, England, assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 4, 1915. Serial No. 354. (Cl. 224—23.)



1. In a cartridge carrier adapted to contain groups of cartridges in clips or packets and provided with a flap cover, a fastening device for the cover comprising a metal or other loop or the like and a strip or strap which passes through the loop and carries toward its free end one member of a snap fastener or like device, the loop and strap being secured one to the cover and the other to the pocket, the other member of said fastener being attached in position to coöperate with the member first named, as and for the purpose set forth.

2. In a cartridge carrier adapted to contain groups of cartridges in clips or packets and provided with a flap cover, a fastening device for the cover comprising a metal or other loop or the like and a strip or strap which passes through the loop and carries toward its free end one member of a snap fastener or like device, the loop and strap being secured one to the edge of the cover and the other to the front wall of the pocket, the other member of said fastener being attached in position to coöperate with the member first named, as and for the purpose set forth.

3. In a cartridge carrier adapted to contain groups of cartridges in clips or packets, the combination with a cover flap having a snap-fastener member mounted on it and a metal or other loop secured to its edge, of a strap which passes through the loop on the cover flap and has one end secured to the front wall of the pocket while toward the free end is mounted a snap-fastener member which will limit the movement of the loop on the strap and engage the snap-fastener member on the cover flap, as and for the purpose described.

4. In a cartridge-carrier having a pocket provided with a flap cover, the combination with said pocket and cover, of a fastening device for the cover comprising a loop or the like, a strip or strap which passes through the loop, one thereof secured to the cover and the other to the pocket, and means whereby the free end of the strip or strap may be made fast temporarily in position to hold the cover closed and fastened.

5. In a cartridge-carrier having a pocket provided with a flap cover, the combination with said pocket and cover, of a fastening device for the cover comprising a loop or the like, a strip or strap which passes through the loop, one thereof secured to the cover and the other to the pocket, and means whereby the free end of the strip or strap may be made fast temporarily in position to hold the cover closed and fastened, said parts constructed to limit the extent of withdrawal of the strip or strap through the loop or the like and thereby limit the extent to which the cover can be opened.

1,170,487. METHOD OF TREATING BAGASSE AND PRODUCT THEREOF. MARK W. MARSDEN, Philadelphia, Pa., assignor to Sugar Cane By-Products Co., Philadelphia, Pa., a Corporation of Delaware. Filed Mar. 10, 1914. Serial No. 823,699. (Cl. 92—3.)

1. That improvement in the treatment of bagasse for the recovery of its industrial values, which consists in subjecting it to dry distillation before digesting.

2. That improvement in the treatment of bagasse for the recovery of its industrial values, which consists in removing the natural moisture content by evaporating it to dryness.

3. That improvement in the treatment of bagasse for the recovery of its industrial values, which consists in subjecting it to the action of dry heat at a regulated temperature to evaporate its natural moisture content.

4. The herein-described method of treating bagasse, which consists in dehydrating it, dissolving and removing the extractive, and reducing the stock to useful fiber.

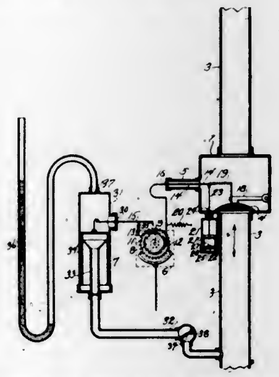
5. The herein-described method of treating bagasse, which consists in thoroughly drying it to prevent fermentation and decay, dissolving and recovering the extractive, and reducing the stock to useful fiber.

[Claims 6 to 9 not printed in the Gazette.]

1,170,488. PACKING OR OBTURATING MATERIAL. MARK W. MARSDEN, Philadelphia, Pa., assignor to Sugar Cane By-Products Co., Philadelphia, Pa., a Corporation of Delaware. Filed Mar. 17, 1914. Serial No. 825,373. (Cl. 91—68.)

The herein-described durable and non-rotting packing or obturating material consisting of bagasse primarily deprived of its residual sugar and other fermentable bodies and separated from its fiber bearing shell or bark and combined with a chemical designed to render it non-inflammable.

1,170,489. FLOW-INDICATING MEANS FOR DISTRIBUTION SYSTEMS. JAMES D. NELSON, Cincinnati, Ohio, assignor to The Ohio Messenger and Telegraph Company, a Corporation of Ohio. Filed Jan. 9, 1913. Serial No. 740,950. (Cl. 169—23.)



1. In combination with a distribution system, an alarm device, flow responsive means for controlling the operation of said device, a retarding device for retarding the operation of said means, pressure responsive means coöperating with said flow responsive means in controlling said retarding device and a retarding device for retarding the operation of said pressure responsive means.

2. In combination with a water distribution system, an indicating mechanism, a device for controlling the operation of said mechanism and operative in response to flow through said system, means for retarding the operation of said device, pressure responsive means for locking said mechanism during momentary increases in pressure within said system and means for retarding the operation of said pressure responsive means in releasing said device in response to decreasing pressure within said system.

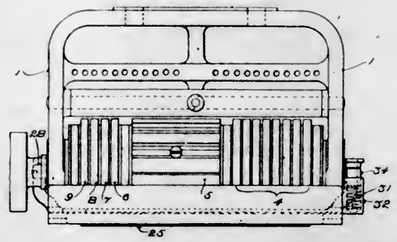
3. In combination with a distribution system, an alarm device, flow controlled means for releasing said alarm device during periods of flow through the system, a device for retarding the releasing movement of said means, a pressure responsive means for locking said alarm device during periods of excess pressure within said system, and for releasing said alarm device during periods of normal pressure, and a retarding device for controlling the operation of said last mentioned means.

4. In combination with a distribution system, an alarm device, flow controlled means for releasing said alarm device during periods of flow through said system, a device for retarding the releasing movement of said means, pressure responsive means for locking said alarm device during periods of momentary pressure within said system and for releasing the alarm device during periods of normal pressure within said system and a retarding device for retarding the releasing motion of said pressure responsive means.

5. In combination with a distribution system, an alarm device, a release finger for controlling the operation of said device, a flow controlled valve for controlling the operation of said finger, a retarding device for retarding the releasing operation of said finger, and pressure responsive means coöperating with said finger in controlling the operation of said alarm device.

[Claims 6 to 18 not printed in the Gazette.]

1,170,490. STAMPING, MARKING, OR NUMBERING MACHINE. EDWARD B. PARKHURST, Woburn, Mass., assignor to Power Numbering Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed July 23, 1908. Serial No. 444,728. (Cl. 101—169.)

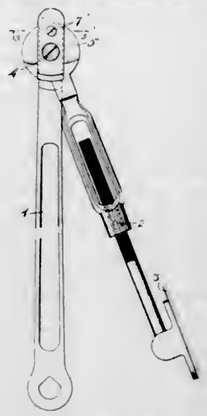


1. In stamping, marking, or numbering machines, the combination with a reciprocating printing-head carrying settable printing-wheels, and a name-plate co-acting with the said printing-wheels in producing the required imprint, of opposite jaws clasping between them the edges of the said name-plate and thereby supporting it upon said printing-head, said jaws relatively-movable to open and close, and a spring to occasion the closing of the jaws upon the said edges.

2. In stamping, marking, or numbering machines, the combination with a reciprocating printing-head carrying settable printing-wheels, of a name-plate co-acting with the said printing-wheels in producing the required imprint, a fixed jaw carried by the said reciprocating printing-head at one side of the said printing-wheels grooved to receive and sustain one edge of the name-plate, and a movable spring-actuated jaw upon said printing-head at the opposite side of the said wheels, similarly grooved to receive and sustain the opposite edge of the name-plate.

1,170,491. HOLD-OPEN DEVICE FOR DOORS. JOHN PETERSON, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 23, 1915. Serial No. 57,412. (Cl. 16—46.)

1. In a hold open device for a door, two arms, a pivot for connecting the ends of said arms, a friction shoe carried by one arm at one side of said pivot, and a friction member carried by the other arm having a cam face arranged to coöperate with said shoe when said arms are moved apart to a certain predetermined extent.



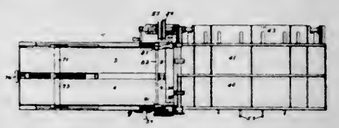
2. In a hold open device for a door, two arms, a pivot for connecting the ends of said arms, a friction shoe carried by one arm at one side of said pivot, and a friction member carried by the other arm having a cam face arranged to coöperate with said shoe when said arms are moved apart to a certain predetermined extent, and means for effecting a relative adjustment between said shoe and cam for the purpose described.

3. In a hold back device for a door, two arms, a pivot for connecting the ends of said arms, a friction shoe carried by one arm at one side of said pivot, a friction member carried by the other arm having a cam face arranged to coöperate with said shoe when said arms are moved apart to a predetermined extent, said shoe having a limited degree of movement on its support, whereby it may adapt itself to the pitch of the cam.

4. In a hold open device for a door, two arms, a pivot for connecting the ends of said arms, said pivot being carried by one of the arms, a friction head at the end of the other arm through which said pivot freely passes, said head having a cam surface, a friction shoe carried by the arm carrying the pivot and at one side of the latter and arranged to coöperate with the cam surface on the end of the other arm.

5. In a hold open device for a door, two arms, a pivot for connecting the ends of said arms, a friction head carried at the end of one of the arms and adjacent to the pivotal connection, said friction head having a cam face, a friction shoe carried by the other arm at one side of said pivot and arranged to coöperate with said cam face when said arms are swung apart to a predetermined degree to frictionally hold said arms in said position.

1,170,492. AUTOMATIC FEEDING-MACHINE. EDWARD B. ROBY, Troy, N. Y., assignor to Margaret L. Heald, Colonie, N. Y. Filed Oct. 4, 1913. Serial No. 793,354. (Cl. 223—55.)



1. In a machine of the class described a frame, a series of rolls mounted upon shafts having bearings attached to said frame, two of said rolls being feed rolls and adapted to carry endless conveyers, endless conveyers mounted upon said rolls and adapted to receive goods deposited on the surface thereof, receiving plates attached to said

frame, a clutch located between said feed rolls, a rocking arm pivoted upon said frame, a clutch fork mounted upon said rocking arm, and adapted to move said clutch into engagement with said feed rolls one at a time whereby goods deposited upon the surface of said conveyers will be alternately fed on said receiving plates.

2. In a machine of the class described a frame, roller bearings in said frame, a series of rolls mounted upon shafts adapted to turn in the bearings, endless conveyers mounted upon said rolls, said conveyers driven by feed rolls, said feed rolls mounted loosely upon the same shaft, a rocking arm mounted upon said frame, a clutch fork mounted upon said rocking arm, a clutch slidably mounted upon the same shaft with said feed rolls and adapted to drive said feed rolls, said clutch fork adapted to slide said clutch into engagement with each of said rolls one at a time, magnets mounted upon said frame under the ends of said rocking arm, means for magnetizing said magnets alternately whereby said rocking arm will rock alternately tilting said clutch fork so as to move said clutch into engagement with said feed rolls, substantially as described.

3. In a machine of the class described a frame, roller bearings in said frame, a series of rolls mounted upon shafts adapted to turn in the bearings, endless conveyers mounted upon said rolls, said conveyers driven by feed rolls, said feed rolls mounted loosely upon the same shaft, a rocking arm pivoted upon said frame, a clutch fork mounted upon said rocking arm, a clutch slidably mounted on the same shaft with said feed rolls and adapted to drive said feed rolls, said clutch fork adapted to slide said clutch into engagement with each of said rolls one at a time, magnets mounted upon said frame under the ends of said rocking arm, means for conducting electricity through a pair of said rolls to said magnets alternately whereby said magnets will be alternately magnetized rocking said rocking arm and thereby causing said clutch to alternately engage said feed rolls.

4. In a machine of the class described a frame, a series of rolls mounted upon bearings in said frame, endless conveyers mounted upon said rolls, two of said rolls being feed rolls, means for alternately revolving said rolls, a pair of additional rolls adapted to take the goods which have been deposited on the surface of the endless conveyers, a shaft mounted in said frame, one of said additional rolls mounted on the shaft fixedly mounted in said frame and the other of said rolls fixedly mounted on the shaft turning in bearings mounted upon swinging arms which arms are mounted upon a parallel shaft which is pivoted between screw points at the opposite ends of said shaft, a shaft pivoted between screw points at the ends thereof and a parallel shaft turning in bearings mounted upon swinging arms.

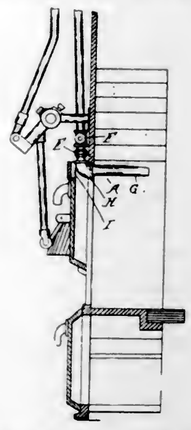
5. In a machine of the class described a frame, a series of rolls mounted in bearings in said frame, endless conveyers mounted upon said rolls, a rocking arm pivoted upon said frame, a clutch fork mounted upon said rocking arm adapted to move said clutch from one feed roll to the other, electromagnets located under each end of said rocking arm, switch mechanism for controlling said magnets, a ratchet wheel mounted upon said frame, an arm attached to the shaft of said ratchet wheel and adapted to turn the same, said arm being adapted to be moved by one of the magnets under said rocking arm, pawls attached to said arm and adapted to move said ratchet wheel, intermediate connections between said ratchet wheel and the switch mechanism whereby the movement of said ratchet wheel will close the circuit and energize said magnets alternately.

[Claims 6 to 16 not printed in the Gazette.]

1,170,493. STEAM-JET FOR DRAFT-REGULATORS. GREGORY H. SCHARF, Ypsilanti, Mich. Filed Feb. 11, 1914. Serial No. 817,991. (Cl. 110—80.)

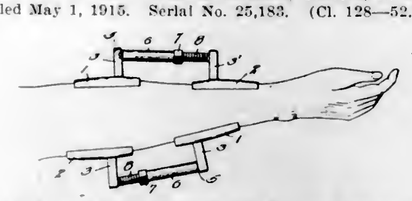
1. In a draft regulator for furnaces, the combination of a door, a steam-supply pipe, a steam jet independent of said door, extending within the door opening adjacent the top thereof, said jet being adapted to be turned outward through the door opening.

2. In a draft regulator for furnaces, the combination of a door, a steam-supply pipe, and a swinging steam jet therefor extending within the opening closed by the door,



the latter having a recessed portion for receiving the jet when the door is closed, said jet being of a size to permit the turning outward thereof through the opening when said door is opened.

1,170,494. SURGICAL DEVICE FOR USE IN SETTING BROKEN BONES. FRED A. SPRAGUE, Concord, N. H. Filed May 1, 1915. Serial No. 25,183. (Cl. 128—52.)



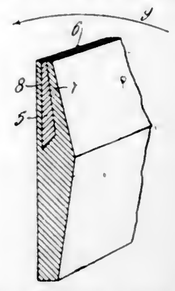
1. A device of the character described, comprising splint pads conforming to the contour of the parts of the body to which the device is adapted to be applied each of the pads having an integral upstanding arm, a removable member adapted to engage in non-rotatable relation in the arm of one pad, a coöperating removable member adapted to engage in rotatable relation in the opposing arm of the other pad, and means for rotating the latter member to adjustably press the upstanding arms farther apart, for the purposes set forth in the foregoing specification.

2. A device of the character described, comprising concave splint pads each having an upstanding arm recessed at the upper inner end portion, one of the aforesaid recessed portions being round and the other of approximately key shape, a threaded shaft having a key at one end retained in non-rotating position by the arm having the key-shaped recess, and an interiorly threaded tube in adjustable engagement with the threaded shaft and having a smaller cylindrical end portion in rotatable engagement in the arm having a round recessed portion and having means for turning the tube member, whereby to adjustably stretch the splint pads apart for the purposes described.

1,170,495. ROLL-BAR FOR PAPER-PULP ENGINES. CHARLES IRVING WARE, Holyoke, Mass., assignor of one-half to Fred E. Maxfield, Holyoke, Mass. Filed Mar. 6, 1915. Serial No. 12,510. (Cl. 92—22.)

1. A roll bar for paper pulp engines, comprising, a one-piece member formed with a groove therein, and a plate located in the groove and integrally secured to said member.

2. A roll bar for paper pulp engines, comprising, a wrought iron one-piece member formed with a groove therein, the upper outlet end of the groove having side-portions of substantially equal thickness, a hardened plate located in the groove and having its outer edge flush with the outer edge of the side-portions and substantially of the same thickness as one of said side portions.

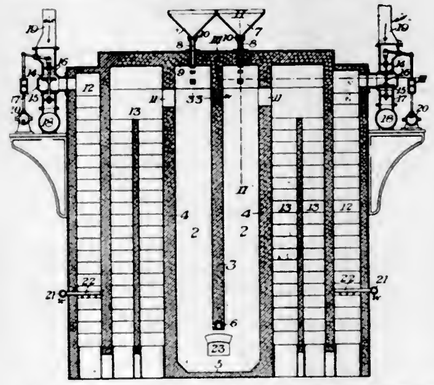


3. A roll bar for paper pulp engines, consisting of two members, one having a longitudinal groove therein and the other a steel plate of corresponding shape contained in the groove, the lower and upper ends of the groove and the inserted plate being of unequal thickness and one of the side portions of the grooved member which engages one of the sides of the inserted plate being of the same thickness as the inserted plate, as described.

4. A roll bar, for paper pulp engines, comprising, a grooved one-piece member, the groove having its inner end formed with an inclined surface, a steel plate inserted in the groove and integrally secured to the wrought iron member, one of the portions of the wrought iron member adjacent to the inserted plate being of equal thickness, as said plate as described.

5. A roll bar for paper pulp engines, comprising, a one-piece member and a tapered plate located therein.

1,170,496. GAS-PRODUCER. JOHN E. BELL, New York, N. Y. Filed Mar. 8, 1912. Serial No. 681,880. Renewed July 20, 1915. Serial No. 41,013. (Cl. 48—74.)



1. A reversing gas producer for the continuous manufacture of gas, having a single combustion chamber, in which the combination of the oxygen and carbon progresses continuously, a regenerator at least partially surrounding the chamber, means for feeding granulated or pulverized fuel to said chamber, and means for reversing the movement of the air and gas through the producer; substantially as described.

2. A reversing gas producer for the continuous manufacture of gas, having a single combustion chamber, in which the combination of the oxygen and carbon progresses continuously, a regenerator at each side of the combustion chamber, means for feeding fuel to the combustion chamber, and means for reversing the movement of air or gas through the producer; substantially as described.

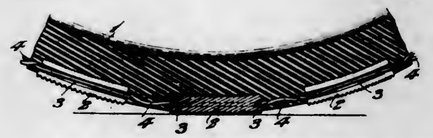
3. A reversing gas producer for the continuous manufacture of gas, having a single combustion chamber, in which the combination of the oxygen and carbon progresses continuously, a regenerator connected to opposite sides of the combustion chamber, means for continuously feeding fuel to the combustion chamber, means for feeding heated air to the combustion chamber at the point of entrance of the fuel, means for reversing the movement of the air and gas through the producer, and means for injecting steam into the combustion chamber; substantially as described.

4. A reversing gas producer, having a combustion chamber, a regenerator at each side of the combustion chamber, means for continuously causing granulated or pulverized fuel to pass through the combustion chamber, means for mixing steam and air with the fuel, and means for reversing the passage of air and gas through the producer; substantially as described.

5. A reversing gas producer for the continuous manufacture of gas, having a single combustion chamber, in which the combination of the oxygen and carbon progresses continuously, a regenerator connected to each side of the combustion chamber, said regenerator chambers having a plurality of divisions formed of refractory material, means to feed air to the combustion chamber, means for feeding granulated or pulverized fuel to said chamber, the air passing through one of the regenerators, while the gas passes out of the other regenerator, and means for reversing the movement of the air and gas through the producer; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,170,497. TIRE. WALTER T. BOGAN, Philadelphia, Pa., assignor of one-half to William W. Porter, Philadelphia, Pa. Filed May 11, 1915. Serial No. 27,297. (Cl. 152—14.)



1. In a tire, a tread portion formed of resilient material and blocks of rigid material partly embedded in said portion and partly appearing outside of the same at intervals, and stringers disposed in grooves in said blocks and tightly affixed thereto, said stringers being united between the blocks and spacing the latter and preventing their creeping toward or from each other.

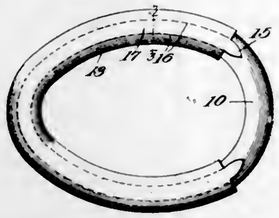
2. In a tire, a tread portion formed of resilient material and blocks of rigid material partly embedded in said portion and partly appearing outside of the same at intervals, and stringers encircling said blocks and tightly affixed thereto, said stringers being united between the blocks and spacing the latter and preventing their creeping toward or from each other.

1,170,498. SANITARY CLOSET-SEAT. ANDREW L. KLEIN, San Francisco, Cal. Filed May 4, 1915. Serial No. 25,791. (Cl. 4—18.)

1. A plurality pad for toilet seats including a substantially U-shaped base adapted to rest upon the front and side portions of a toilet seat, and a plurality of superimposed layers of oiled paper correspondingly shaped secured by their edges to each other and to the base, said sheets at their free ends being formed with extending tongues.

2. A sanitary pad for toilet seats including a substantially U-shaped base adapted to rest upon the front and side portions of a toilet seat, and a plurality of superimposed layers of oiled paper correspondingly shaped secured by their edges to each other and to the base, said sheets at

their free ends being formed with extending tongues, and each sheet being formed with spaced series of perforations extending from the tongue at one end to that at the other.



3. A sanitary pad for toilet seats including a base adapted to rest upon a toilet seat, and a plurality of superimposed layers of paper secured by their edges to each other and to the base, each of the sheets being formed with a tongue and with lines of perforations extending longitudinally of the sheet from the sides of the tongue.

4. A sanitary pad for toilet seats including a base adapted to rest upon a toilet seat, and a plurality of U-shaped sheets of paper secured to the base and each terminating at its ends in rearwardly extending tongues.

5. A sanitary pad for toilet seats including a substantially U-shaped base adapted to rest upon the front and side portions of a toilet seat, and a plurality of superimposed layers of paper correspondingly shaped secured by their edges to each other and to the base, said sheets being formed with spaced series of perforations extending from end to end of the sheets.

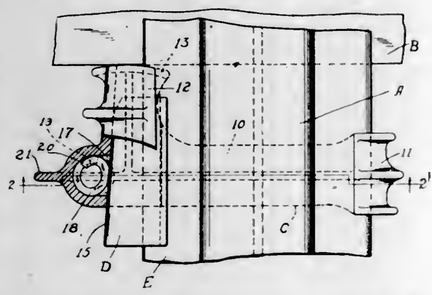
[Claim 6 not printed in the Gazette.]

1,170,499. COMPOSITION OF MATTER FOR ARTIFICIAL STONE. PAUL KUHN, New York, N. Y. Filed Dec. 28, 1914. Serial No. 879,332. (Cl. 106—34.)

1. A composition of matter for artificial stone prepared of the following ingredients and volumetric proportions: 6 parts of plaster of Paris, 6 parts of Portland cement, 1 part of magnesium carbonate, 4 parts of ashes, and 12 parts of wood shavings in a dry mixture.

2. A composition of matter for artificial stone prepared of the following ingredients and volumetric proportions: 6 parts of plaster of Paris, 6 parts of Portland cement, 1 part of magnesium carbonate, 4 parts of ashes, 12 parts of wood shavings, and 16 parts of water.

1,170,500. RAIL-ANCHOR. EDWARD LAAS, Chicago, Ill., assignor to Otto R. Barnett, Chicago, Ill. Filed May 17, 1915. Serial No. 28,662. (Cl. 238—4.)



1. In a rail anchor, the combination of a member adapted to extend under a rail and provided at one end with means for engaging said rail and at the other with a jaw formed with a recess; a member interposed between said jaw and the rail, and an arcuate spring arranged in said recess so as to be compressed to less than its normal radius when said members are in operative position on the rail.

2. In a rail anchor, the combination of a member adapted to extend under a rail and provided at one end with means for engaging said rail and at the other with a jaw formed with a recess; a member interposed between said jaw and the rail; and a curved spring with its ends overlapping each other which is arranged in said recess so as to bear against and be compressed by said last named member.

3. In a rail anchor, the combination of a member adapted to extend under a rail and provided at one end with means for engaging said rail and at the other with a jaw formed with a recess; a wedge member interposed between said jaw and the rail, and an arcuate spring arranged in said recess so as to be compressed to less than its normal radius when said members are in operative position on the rail.

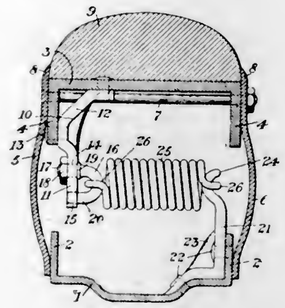
4. In a rail anchor, the combination of a member adapted to extend under a rail and provided at one end with means for engaging said rail and at the other with a jaw formed with a recess; a wedge member interposed between said jaw and the rail; and a curved spring with its ends overlapping each other which is arranged in said recess so as to bear against and be compressed by said last named member.

5. A rail anchor comprising two members engageable one with the other to provide rail clamping means, and an arcuate spring interposed between said members which is compressed to less than its normal radius when the members are in operative position on the rail.

[Claims 6 to 16 not printed in the Gazette.]

REISSUES.

14,057. QUICK-DETACHABLE ELASTIC TIRE. PIERRE ANTONIO PAINCHAUD, Plessisville, Quebec, Canada, assignor, by direct and mesne assignments, to Octave Gingras, Quebec, Canada. Filed Sept. 16, 1915. Serial No. 51,109. Original No. 1,149,780, dated Aug. 10, 1915, Serial No. 875,728. (Cl. 152—37.)



1. In a device of the class described, an inner rim adapted to be attached to a wheel and having outwardly extending continuous opposite side flanges, an outer rim surrounding and of larger diameter than the inner rim and having continuous inwardly extending opposite side flanges, an inwardly extending angle bracket with one side engaging the web of said outer rim, rivets for fastening said bracket to said web, an outwardly extending bracket rigidly secured to the inner rim and cushioning means for holding said rims in operative relation, said means including a transversely disposed coil spring stretched between said brackets.

2. In a device of the class described, an inner rim adapted to be attached to a wheel and having outwardly extending continuous opposite side flanges, an outer rim surrounding and of larger diameter than the inner rim and having continuous inwardly extending opposite side flanges, an inwardly extending bracket rigidly secured to said outer rim in the angle formed by its flanges, an outwardly extending bracket rigidly secured to the inner rim in the angle formed by its flanges and oppositely disposed transversely of the tire from said first named brackets, and cushioning means for holding said rims in operative relationship, said means including a transversely disposed coiled spring stretched between said brackets.

3. In a device of the class described, an inner rim adapted to be attached to a wheel and an outer rim surrounding and of larger diameter than the inner rim, an inwardly extending bracket having a broad base portion rigidly secured to said outer rim, an outwardly extending bracket having a broad base portion rigidly secured to the inner rim and cushioning means for holding said rims resiliently relative to each other, said means including a transversely disposed coil spring stretched between said brackets.

4. A tire comprising a pair of rims concentrically arranged, the inner rim designed to fit the felly of a wheel, means for demountably securing the inner rim to the felly, a plurality of angle brackets secured in pairs to the inner and outer rims respectively with the angle of the brackets facing inward and springs stretched between the brackets of each pair and positioned to extend in a direction parallel with the axis of the wheel.

5. A tire comprising a pair of rims concentrically arranged, side plates to inclose the space between the rims, cushioning means for holding the rims in operative relationship, said means including a bracket secured to the outer rim and a bracket secured to the inner rim, a hook carried by one of the brackets, and a plurality of springs connecting the rims, one of said springs being stretched between the brackets with one end of the spring engaging said hook so that the spring may be easily attached or detached.

6. A tire comprising a pair of channel shaped rims concentrically disposed with the channels facing each other, brackets positioned in the angles formed by the flanges of the rims thereby to strengthen the rims, with one of the brackets affixed to the outer rim and another affixed to the inner rim, and means for connecting the rims, said means including a transversely disposed spring with opposite ends attached respectively to the bracket fixed to the outer rim and to the bracket fixed to the inner rim.

7. A tire comprising a pair of concentrically disposed rims, a bracket affixed to the inner rim and another bracket affixed to the outer rim, means for connecting the rims, said means including a transversely disposed spring stretched between the brackets and means accessible through the side opening between the inner and outer rims for adjusting the tension of said spring.

8. A tire comprising a pair of concentrically disposed rims, a bracket affixed to the inner rim and another bracket affixed to the outer rim, means for connecting the rims, said means including a transversely disposed spring stretched between the brackets, means accessible through the side opening between the inner and outer rims for adjusting the tension of said spring and side plates for inclosing said springs, brackets and adjusting means.

9. A device of the class described, comprising a pair of concentrically disposed spaced apart channel bars, side plates on opposite sides of said bars coacting therewith to form a hollow rim, brackets extending from the web portions of each bar and spaced from the side plates, and means for connecting the rims, said means including a transversely disposed spring having opposite ends attached to said brackets and acting thereon to transmit strain on one of the bars directly to the other bar without passing through said side plates.

10. A device of the class described, comprising a pair of concentrically disposed rims, one of said rims being U shaped with the channel facing the other rim, said U shaped rim being of heavier stock than the other rim, a bracket positioned in one of the angles formed by the flanges of said U shaped rim to strengthen the same and transversely disposed means connecting said rims.

11. A device of the class described, comprising a pair of concentrically disposed channel shaped rims with the channels facing each other, brackets attached to the web portions of each rim and extending toward the other rim, said brackets being offset transversely from each other and overlapping, a transversely disposed spring stretched between each pair of the brackets and side plates fixed to one of the rims and in sliding engagement with the other rim for inclosing the spring and brackets.

12. In a quick detachable elastic tire, an inner rim having outwardly extending continuous opposite side flanges, an outer rim surrounding and of larger diameter than the inner rim and having continuous inwardly extending opposite side flanges, a pair of side plates adapted to close the space between said outer and inner rims and having sliding abutment with the flanges of said inner rim, inwardly extending brackets rigidly secured to said outer rim in the angles formed by its flanges, said brackets being on both sides of the rim and in alternate arrangement and each having a base extending diagonally across the angle and terminating in a tongue portion with a pair of holes therein, a hook having a threaded shank and engaging one of said holes and having a head portion bent over to engage the other hole, a nut on said shank for clamping the hook to the tongue, outwardly extending brackets rigidly secured to the inner rim in the angles formed by its flanges, and arranged on both sides of the inner rim in alternate arrangement and each terminating in a tongue bent to form an integral hook, and a coil spring stretched between each inner and outer rim bracket and having looped ends engaging the hooks of said brackets.

13. In a device of the class described, an inner wheel band designed to be attached to the wheel, an outer tread band encircling the inner band, an angle bracket affixed to one of said bands with a member thereof extending toward the other band and extending transversely of the band toward the medial plane through the tire thereby to transmit strains toward the center of the tire and means for holding the bands relative to each other, said means including a transversely disposed coiled spring having one end pivoted to the bracket and the other end pivoted to said other band.

14. In a device of the class described, an inner wheel band designed to be attached to the wheel, an outer tread band encircling the inner band, an angle bracket having a broad flat base flange, a plurality of spaced apart fastening means for affixing said base to one of said bands thereby to resist twisting of the same, said bracket including a post projecting from said base flange toward the other band and means for connecting the bands resiliently, said means including a transversely disposed spring having one end pivoted to said post and the other end pivoted to the other band.

15. In a device of the class described, an inner wheel band channel shaped in cross-section, means for attaching the web of said band centrally to the felly of a wheel, an angle bracket having a base portion extending transversely of a portion of the web of the band on the side opposite the portion engaged by the wheel felly whereby strains on said bracket are transferred directly to the portion of the band reinforced by the felly and means connecting the bands, said means including a transversely extending spring placing a strain on said bracket.

16. A tire for vehicle wheels including an inner wheel band and an outer tread band, circumferentially spaced apart pairs of brackets, each pair being transversely disposed and having one bracket thereof fixed to the outer band and the other bracket fixed to the inner band, a spring extending between the members of each pair of brackets, the brackets attached to each band being staggered from side to side, whereby adjacent springs will be inclined in opposite directions to hold the bands in one plane when the bands are moved from their normal position relative to each other.

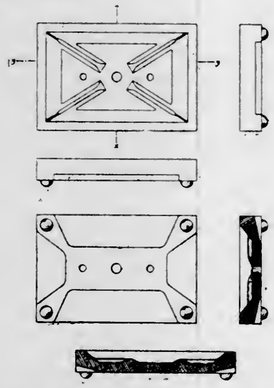
DESIGNS.

48,481. LIGHTING-FIXTURE PART. PERCY I. ANSORGE, Brooklyn, N. Y. Filed Mar. 27, 1915. Serial No. 17,558. Term of patent 3½ years.



The ornamental design for a lighting fixture part, as shown.

48,482. SOAP-DISH. STEPHEN D. BAKER, New York, N. Y. Filed Oct. 28, 1915. Serial No. 58,503. Term of patent 7 years.



The ornamental design for a soap dish, substantially as herein shown.

48,483. RING. ARTHUR J. BEACOM, Omaha, Nebr. Filed Nov. 8, 1915. Serial No. 60,450. Term of patent 7 years.



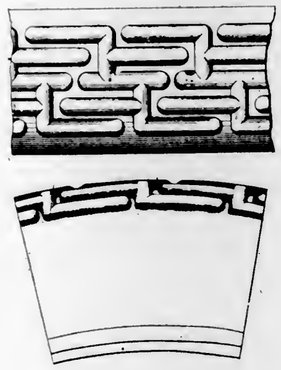
The ornamental design for a ring as shown.

48,484. LAMP-SHADE. KRAFT BOOTH, Philadelphia, Pa., assignor to Gillinder & Sons, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 18, 1915. Serial No. 56,616. Term of patent 7 years.



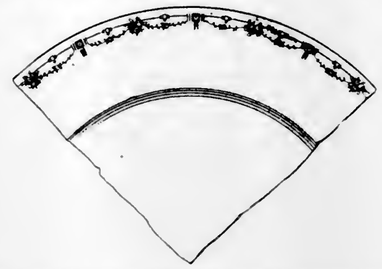
The ornamental design for a lamp shade as shown.

48,485. VEHICLE-TIRE. JAMES CHRISTY, Cleveland, Ohio, assignor to The Portage Rubber Company, Barberton, Ohio, a Corporation. Filed Oct. 18, 1915. Serial No. 56,613. Term of patent 14 years.



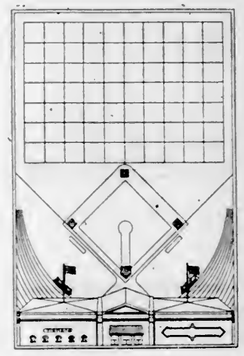
The ornamental design for a vehicle tire, as shown.

48,486. ARTICLE OF MANUFACTURE. JOSEPH CROMPTON, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed Nov. 1, 1915. Serial No. 59,156. Term of patent 3½ years.



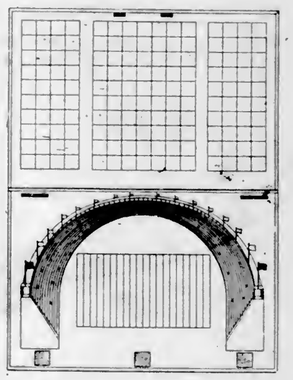
The ornamental design for an article of manufacture as shown.

48,487. GAME-BOARD. FREDERICK E. DORR, Everett, Mass. Filed Oct. 30, 1914. Serial No. 869,489. Term of patent 14 years.



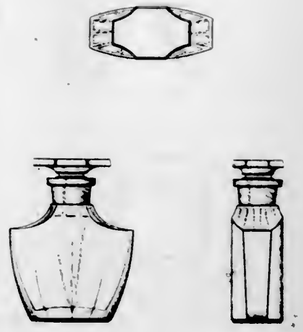
The ornamental design for a game-board, substantially as shown and described.

48,488. GAME-BOARD. FREDERICK E. DORR, Everett, Mass. Filed Oct. 30, 1914. Serial No. 869,490. Term of patent 14 years.



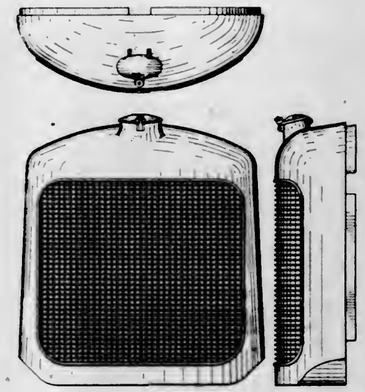
The ornamental design for a game-board, substantially as shown and described.

48,489. BOTTLE. RUDOLPH EBERHARDT, New York, N. Y., assignor to Remilier Co. Inc., a Corporation of New York. Filed Nov. 12, 1915. Serial No. 61,165. Term of patent 7 years.



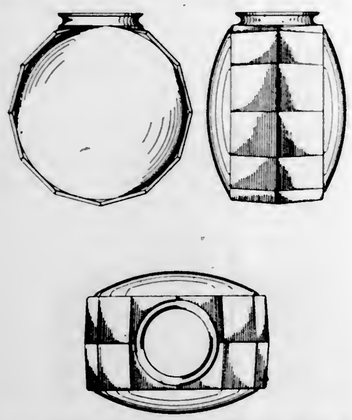
The ornamental design for a bottle, substantially as shown.

48,490. RADIATOR FOR AUTOMOBILES. CHARLES A. ELIGH, Detroit, Mich., assignor to Long Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 28, 1915. Serial No. 47,874. Term of patent 7 years.



The ornamental design for a radiator for automobiles substantially as shown.

48,491. ELECTRIC-LAMP GLOBE. ALBERT GRAESER, Knoxville borough, Pa. Filed Oct. 28, 1915. Serial No. 58,504. Term of patent 7 years.



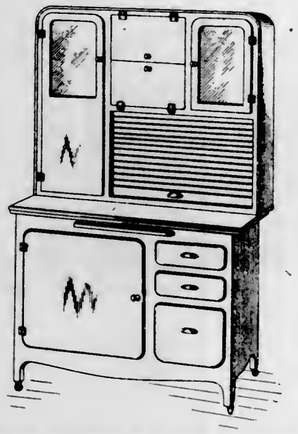
The ornamental design for an electric lamp globe, as shown.

48,492. LIGHTING-FIXTURE. MAX HERSKOVITZ, Chicago, Ill. Filed Apr. 1, 1915. Serial No. 18,620. Term of patent 3½ years.



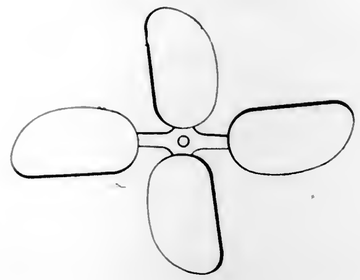
The ornamental design for a lighting fixture, as shown.

48,493. KITCHEN-CABINET. WILLIAM C. HUSS, Cincinnati, Ohio. Filed Aug. 11, 1915. Serial No. 45,049. Term of patent 7 years.



The ornamental design for a kitchen cabinet, as shown.

48,494. FAN. JAMES A. IRVING, New York, N. Y. Filed Jan. 9, 1915. Serial No. 1,471. Term of patent 14 years.



The ornamental design for a fan as shown and described.

48,495. MANICURE INSTRUMENT. MAX KLAAS, Montclair, N. J. Filed Mar. 29, 1913. Serial No. 757,714. Term of patent 14 years.



The ornamental design for a manicure instrument, as shown.

48,496. KNIFE. GEORGE KOVÁC, Detroit, Mich. Filed Oct. 13, 1915. Serial No. 55,739. Term of patent 7 years.



The ornamental design for a knife, as shown.

48,497. HAND-BAG. DOROTHY M. LANDER, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,125. Term of patent 3½ years.



The ornamental design for a hand bag, as shown.

48,498. PRECIOUS OR SEMIPRECIOUS OR SYNTHETIC STONE OR AN IMITATION THEREOF. MEYER L. ROBBINS, New York, N. Y. Filed Nov. 8, 1915. Serial No. 60,436. Term of patent 7 years.



The ornamental design for a precious or semi-precious or synthetic stone or an imitation thereof, as shown.

48,499. PRECIOUS OR SEMIPRECIOUS OR SYNTHETIC STONE OR AN IMITATION THEREOF. MEYER L. ROBBINS, New York, N. Y. Filed Nov. 8, 1915. Serial No. 60,437. Term of patent 7 years.



The ornamental design for a precious or semi-precious or synthetic stone or an imitation thereof, as shown.

48,500. RUG. MOSES ROSENTHAL, Chicago, Ill. Filed Nov. 8, 1915. Serial No. 60,442. Term of patent 3½ years.



The ornamental design for a rug, as shown.

48,501. RUG. MOSES ROSENTHAL, Chicago, Ill. Filed Nov. 8, 1915. Serial No. 60,443. Term of patent 3½ years.



The ornamental design for a rug, as shown.

48,502. BADGE, MEDAL, OR SIMILAR ARTICLE. WILLIAM F. RYAN, Chicago, Ill. Filed Oct. 28, 1915. Serial No. 58,496. Term of patent 14 years.



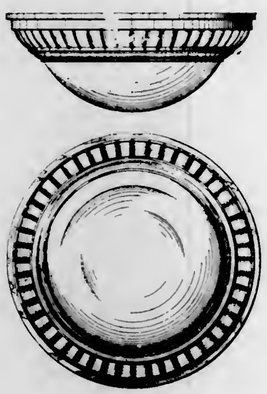
The ornamental design for a badge, medal or similar article as shown.

48,503. GRAVE-MARKER. WILLIAM P. SAMPLES and PARKER SELVEY, Grafton, W. Va. Filed Nov. 17, 1915. Serial No. 62,064. Term of patent 14 years.



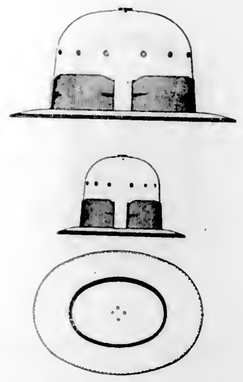
The ornamental design for a grave marker, as shown.

48,504. LAMP-SHADE. LINDSLEY SCHEPMOES, Hasbrouck Heights, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 3, 1915. Serial No. 48,883. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

48,505. HAT. FRANK SCHOBLE, Philadelphia, Pa. Filed July 16, 1915. Serial No. 40,338. Term of patent 14 years.



The ornamental design for a hat, as shown.

48,506. FOLDING PICTURE-CARD. BAYARD P. SILVER, St. Louis, Mo., assignor to F. B. Chamberlain Company, a Corporation of Illinois. Filed Nov. 15, 1915. Serial No. 61,694. Term of patent 7 years.



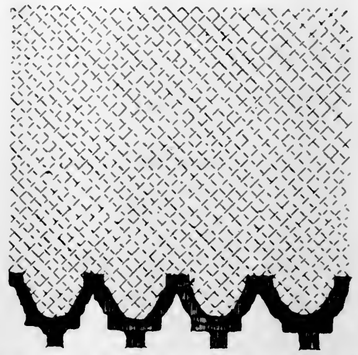
The ornamental design for a folding picture card, as shown.

48,507. RADIATOR-SHIELD. CHRISTIAN W. G. SODEMANN, St. Louis, Mo. Filed Sept. 13, 1915. Serial No. 50,519. Term of patent 3½ years.



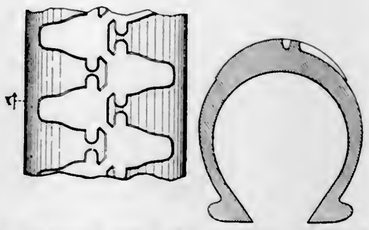
The ornamental design for a radiator shield, substantially as shown.

48,508. BORDER FOR NET VEILINGS. ZEALIE VAN RAALTE, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,976. Term of patent 3½ years.



The ornamental design for a border for net veilings, as shown.

48,509. ELASTIC VEHICLE-TIRE. PAUL E. WERNER, Kansas City, Mo. Filed Nov. 8, 1915. Serial No. 60,446. Term of patent 3½ years.



The ornamental design for an elastic vehicle tire, as shown.

48,510. WEAPON. PETER WILLIAMS, Ingallston, Mich. Filed Nov. 6, 1915. Serial No. 60,146. Term of patent 7 years.



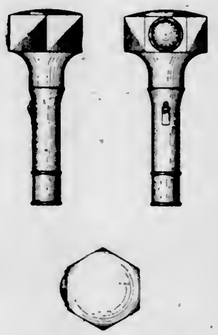
The ornamental design for a weapon, as shown.

48,511. VEST OR SIMILAR ARTICLE. VICTOR E. BLOM, New York, N. Y. Filed Mar. 3, 1915. Serial No. 11,869. Term of patent 3½ years.



The ornamental design for a vest or similar article substantially as shown and described.

48,512. CANE OR UMBRELLA HANDLE OR SIMILAR ARTICLE. JOHN B. GLOWACKI, Chicago, Ill. Filed Oct. 3, 1914. Serial No. 864,950. Term of patent 3½ years.



The ornamental design for a cane or umbrella handle or similar article, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 1, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 74,564. (CLASS 7. CORDAGE.) DURABLE WIRE ROPE CO., Boston, Mass. Filed Dec. 13, 1913.





Which consists of a blue fibrous core of the wire rope.

Particular description of goods.—Fiber-Covered Wire Rope.

Claims use since the year 1902.

Ser. No. 74,594. (CLASS 7. CORDAGE.) JOHN A. ROEBLINGS SONS CO., Trenton, N. J. Filed Dec. 13, 1913.





Which consists of a blue fibrous core of the wire rope.

Particular description of goods.—Wire Rope or Cable, (Except Fiber-Covered Wire Rope.)

Claims use since the month of May, 1910.

Ser. No. 80,492. (CLASS 39. CLOTHING.) DONALD J. CAMERON, Syracuse, N. Y. Filed Aug. 12, 1914.



I do not herein claim the term "Welt."

Particular description of goods.—Boots and Shoes of Leather or of Leather and Canvas.

Claims use since about 1899.

Ser. No. 82,570. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JOHN E. NORWOOD, Baltimore, Md. Filed Nov. 13, 1914.

NOLEAKO

Particular description of goods.—Oil-Packing Piston-Rings.

Claims use since December, 1913.

Ser. No. 82,904. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORIDA WOOD PRODUCTS CO., Jacksonville, Fla. Filed Nov. 25, 1914.

Sunny South

Comprising the words "Sunny South."

Particular description of goods.—Pine-Oil, (Crude and Refined,) Pine-Tar Oils, (Crude and Refined,) Pine-Tar, (Heavy and Light Body,) Oils Used in Disinfectants, Wood-Acids, and Pine-Creosote.

Claims use since June, 1914.

Ser. No. 83,210. (CLASS 39. CLOTHING.) SINSHEIMER BRO. & CO., Chicago, Ill. Filed Dec. 10, 1914.

Helthy-Fut

Particular description of goods.—Children's and Infants' Shoes of Leather and Combination of Leather and Fabrics.
Claims use since February, 1899.

Ser. No. 83,923. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARROW FORGING AND TOOL WORKS, Chicago, Ill. Filed Jan. 18, 1915.

TOOLS

Applicant disclaims the right to the exclusive use of either the word "Tools" or the representation of the arrow except in the combination shown in the accompanying drawing.
Particular description of goods.—Lathe, Planer, Shaper, and Hand-Turning Tools; Cutters for Tool-Holders, High-Speed Flat Tools, Chisels, Drills, Gouges, Chisel-Blanks, Cold-Cutters, Punches, Drift-Pins, Key-Drifts, Hammers; Packing, Yarning, and Ceiling Irons; Stone-Points, Pinch-Bars; Beading, Grooving, and Calking Tools.
Claims use since Feb. 1, 1910.

Ser. No. 84,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALLEN & LEWIS, Portland, Oreg. Filed Feb. 26, 1915.

PREFERRED STOCK

Particular description of goods.—Coffee, Dried Fruits, Cider Vinegar, Mustard, Table Sauces, and Rolled Oats.
Claims use since Feb. 1, 1915.

Ser. No. 85,602. (CLASS 39. CLOTHING.) CHIPMAN KNITTING MILLS, Easton, Pa. Filed Apr. 1, 1915.

THE NATIONAL GUARD SOX



No claim being made to the exclusive use of the words "The National Guard Sox."
Particular description of goods.—Hosiery.
Claims use since Dec. 1, 1914.

Ser. No. 86,362. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ALBERT BISHOP CHANCE, Centralia, Mo. Filed May 4, 1915.

SPARKLETS

Particular description of goods.—Spark-Gaps.
Claims use since Jan. 15, 1911.

Ser. No. 86,452. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEO HERRMANN, Detroit, Mich. Filed May 7, 1915.

MAZOL TRADE MARK REGISTERED

No claim being made for the use of the words "Trade Mark Registered."
Particular description of goods.—A Foot-Wash, a Liquid Preparation to be Used Externally.
Claims use since May 1, 1915.

Ser. No. 86,958. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JAMES J. GARLAND, St. Louis, Mo. Filed May 28, 1915.



No claim being made to the words "Kar-Kleen Polish" apart from the mark shown in the drawing.
Particular description of goods.—A Polish for Furniture or Woodwork Generally and for Cleansing, Polishing, Preserving, and Finishing of Varnished or Painted Surfaces, Such as the Surfaces of Pianos, Furniture, Automobiles, and All Polished Woodwork.
Claims use since Sept. 15, 1914.

Ser. No. 87,777. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ANDREW JERGENS CO., Cincinnati, Ohio. Filed July 6, 1915.



Particular description of goods.—Soap.
Claims use since 1892.

Ser. No. 87,890. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DALLAS H. GRAY COMPANY, Armona, Cal. Filed July 12, 1915.

NATURE'S CANDY

The trade-mark is "Nature's Candy."
Particular description of goods.—Dried Fruits, Particularly Raisins, and Nut-Meats.
Claims use since Oct. 1, 1914.

Ser. No. 87,931. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY J. MILLER, Fort Wayne, Ind. Filed July 14, 1915.

O-ZEL-O

Particular description of goods.—An Antiseptic Remedy Used in Connection with an Inhaler.
Claims use since about Mar. 1, 1914.

Ser. No. 88,278. (CLASS 37. PAPER AND STATIONERY.) KANSAS CITY PAPER HOUSE, Kansas City, Mo. Filed July 29, 1915.

STATIONARY KC

No claim being made to the word "Stationary" except in association with the mark as shown.
Particular description of goods.—Printing and Writing Paper.
Claims use since July 15, 1915.

Ser. No. 88,289. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SEISMO-THERM CO., Chicago, Ill. Filed July 29, 1915.

SEISMO THERM

Particular description of goods.—A Chemical Compound, Being a Mixture of Chemicals Which When Placed in a Container will, with the Application of Air and Shaking, Congeal and Give Out Heat, Making of the Container a Hot Bottle.
Claims use since the 1st day of November, 1914.

Ser. No. 88,329. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COMFORT'S, INCORPORATED, New York, N. Y. Filed July 31, 1915.

Comfort's INC.

Particular description of goods.—Bonbons, Chocolates, and Candies.
Claims use since May 19, 1915.

Ser. No. 88,335. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN H. MYERS, Norfolk, Va. Filed July 31, 1915.



The portrait being that of applicant.
Particular description of goods.—A Pile-Ointment.
Claims use since June 1, 1915.

Ser. No. 88,687. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KNICKERBOCKER CHOCOLATE COMPANY (INC.), New York, N. Y. Filed Aug. 19, 1915.

Sportsman's "Chocolate Bracer"

No claim being made to the exclusive use of the words "Sportsman's" and "Chocolate" except in conjunction with the word "Bracer."
Particular description of goods.—Chocolate Candy.
Claims use since May 1, 1915.

Ser. No. 88,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARTHUR L. LAKE, Danbury, Conn. Filed Aug. 28, 1915.

OWL BRAND



No claim being made to the exclusive use of the word "Brand" apart from the trade-mark shown in the drawing.
Particular description of goods.—Peanut-Butter and Salted Peanuts.
Claims use since Oct. 1, 1914.

Ser. No. 88,872. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CABLE COMPANY, Chicago, Ill. Filed Aug. 30, 1915.

SOLO CAROLA INNER-PLAYER

No claim being made to the words "Solo" and "Inner-Player" apart from the mark shown in the drawing.
Particular description of goods.—Player-Pianos and Piano-Player Mechanism.
Claims use since Aug. 14, 1915.

Ser. No. 88,873. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CABLE COMPANY, Chicago, Ill. Filed Aug. 30, 1915.

CAROLA INNER-PLAYER

No claim being made to the compound word "Inner-Player" apart from the mark shown in the drawing.

Particular description of goods.—Player-Pianos and Player-Piano Mechanism.

Claims use since Oct. 8, 1913.

Ser. No. 88,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD T. RUSSELL & Co., Boston, Mass. Filed Aug. 31, 1915.

Gold Label

No claim being made to the exclusive use of a gold-colored label.

Particular description of goods.—Canned Fish, Canned Sardines, Canned Clams, Canned Shrimp, Canned Lobster, Canned Salmon, Canned Mackerel, Canned Herring, Salt Codfish, Canned Fruits, and Canned Vegetables.

Claims use since 1896.

Ser. No. 88,942. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & Co., INC., New York, N. Y. Filed Sept. 1, 1915.



Colored as shown, having purple-centered flowers and leaves of brown and tan hues and a golden border on a white and brown background.

Particular description of goods.—Toilet Powder.

Claims use since Nov. 28, 1913.

Ser. No. 89,161. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ALLISON BROTHERS, INC., Middletown, Conn. Filed Sept. 13, 1915.

BORANAP

Particular description of goods.—Soap.

Claims use since August, 1915.

Ser. No. 89,180. (CLASS 37. PAPER AND STATIONERY.) EAST HARTFORD MANUFACTURING COMPANY, East Hartford, Conn. Filed Sept. 14, 1915. Under ten-year proviso.

DAMASK



Linene

Particular description of goods.—Writing-Paper.

Claims use since about the 1st of June, 1885.

Ser. No. 89,252. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) PATHÉ FRÈRES, Jersey City, N. J. Filed Sept. 16, 1915.



Consists of the representation of a cock crowing, associated with the words "Pathé Color." Exclusive right to the use of the compound word "Pathécolor" is disclaimed apart from the mark shown in the drawing.

Particular description of goods.—Cinematograph-Films,

Claims use since on or about the 14th day of July, 1915.

Ser. No. 89,270. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SHERIDAN GALLAGHER, Jr., Chicago, Ill. Filed Sept. 17, 1915.



The drawing being lined for blue.

Particular description of goods.—Dental Cement, Dental Alloys, Dental Plaster, Dental Gold, Gold Solder, Dental Electric Motors and Equipment, Dental Electric Equipment and Sterilizers, Artificial Teeth Crowns and Facings, Dental Casting-Machines and Attachments, Paper Disks and Strips for Use as Dental Abradant or Polishing Elements, Dental Burs and Broaches, Dental Operating-Cabinets, Dental Work-Benches, Dental Chairs, Dental Cuspidors, Dental Drills and Reamers, Dental Suctions, Disks Made of Carborundum for Separating the Teeth, Carborundum Engine-Wheels for Grinding the Teeth, Carborundum Trimmers for Trimming Dental Work, Carborundum Lathe-Wheels, and Dental Abradant or Polishing Elements Containing Carborundum, Dental Polishing Wheels or Cones Made of Felt Used on a Dental Lathe for Polishing Dental Work, Brushes Used in Dental Engines for Cleaning and Polishing Dental Work; Waxed Silk, Floss, Tape, and Appliances for Cleaning and Polishing the Teeth; Gutta-Percha Dental Appliances and Steel Dental Operative Instruments—Namely, Scalers, Cutting Instruments, Files and Knives, Excavators, Chisels, Canal-Pluggers, Cleavers, Amalgam Instruments, Pyorrhea Instruments, Plastic Instruments, Spatulas, Pliers, Cotton and Foil Carriers, Gold-Working Instruments, Silver-Alloy-Working Instruments, Vulcanite-Working Instruments, Impression-Taking Appliances, Articulating Appliances, Scissors, Shears, Rubber-Dam Instruments and Clamps, Forceps, Root-Elevators, Syringes, Mirrors, Hypodermic Needles, Waxes, and Impression Materials.

Claims use since Aug. 1, 1915.

Ser. No. 89,334. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVERETT C. TARR, Boston, Mass. Filed Sept. 20, 1915.



The words "Kandies" and "Trade-Mark" being disclaimed.

Particular description of goods.—Candies.

Claims use since Sept. 13, 1915.

Ser. No. 89,335. (CLASS 37. PAPER AND STATIONERY.) THE UNION PAPER AND TWINE COMPANY, Cleveland, Ohio. Filed Sept. 20, 1915.

IDEAL WHITE

No claim being made for the word "White" apart from the word as shown.

Particular description of goods.—Toilet-Paper and Sanitary Paper Towels.

Claims use since Jan. 1, 1915.

Ser. No. 89,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIE DACKERMANN, New York, N. Y. Filed Sept. 23, 1915.



Comprising the words "Blue Bird" and the representation of a bluebird carrying a streamer in its beak.

Particular description of goods.—Toilet Preparations—viz., Toilet Waters, Astringent Waters, Antiseptic Deodorant, Toilet Creams, Cold-Cream, Cucumber and Almond Cream, Salve, Face-Powder, Hair-Tonic, and Skin-Bleach.

Claims use since Sept. 4, 1915.

Ser. No. 89,468. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE MOTOR PRODUCTS, INCORPORATED, Stamford, Conn. Filed Sept. 25, 1915.

STEER-LITE

Particular description of goods.—Automobile-Brackets.

Claims use since July 1, 1915.

Ser. No. 89,505. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COPPEDGE SPECIALTY CO., Winston-Salem, N. C. Filed Sept. 28, 1915.

DAD-GUM



We hereby disclaim the word "Gum" as a part of our trade-mark, no claim being made to the word "Gum" except in connection with the other features of the mark.

Particular description of goods.—Chewing-Gum.

Claims use since Aug. 15, 1915.

Ser. No. 89,527. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) TRIPURE WATER SYSTEMS COMPANY, Washington, D. C. Filed Sept. 28, 1915.

Tripure

Particular description of goods.—Water and Soft Drinks.

Claims use since July 6, 1915.

Ser. No. 89,660. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WALTER F. CAHIR, Boston, Mass. Filed Oct. 5, 1915.

PROPHYLACTIC RIHAC SPRAY

Disclaiming, however, for purposes of registration the words "Prophylactic" and "Spray" now appearing in it.

Particular description of goods.—A Floor-Sweeping and Dust-Laying Compound.

Claims use since Mar. 1, 1910.

Ser. No. 89,704. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & COMPANY, Jacksonville, Fla. Filed Oct. 7, 1915.

SUNNILAND

Particular description of goods.—Citrus Fruits and Fresh Fruits and Vegetables.

Claims use since Sept. 3, 1915.

Ser. No. 89,860. (CLASS 32. FURNITURE AND UPHOLSTERY.) JULIUS GARST, Worcester, Mass. Filed Oct. 15, 1915.

CLIPWOOD PORCH SHADE WORCESTER MASS

No claim being made to the words "Porch Shade" and "Worcester, Mass." apart from the mark shown in the drawing.

Particular description of goods.—Porch Shades and Blinds.

Claims use since September, 1913.

Ser. No. 89,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEINHAUER BROTHERS CANDY CO., New York, N. Y. Filed Oct. 16, 1915.

Particular description of goods.—Candy.

Claims use for ten years last past.

Ser. No. 89,874. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN RANDOLPH BRAY, New York, N. Y. Filed Oct. 16, 1915.

COLONEL HEEZA LIAR

Particular description of goods.—Moving-Picture Films Showing Animated Cartoons.

Claims use since December, 1913.

Ser. No. 89,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATURAL DRY MILK COMPANY, Chicago, Ill. Filed Oct. 16, 1915.

HANDY BRAND MILK YOUR OWN COW

No claim is made to an exclusive right in the word "Brand."

Particular description of goods.—Dry Milk.

Claims use since Sept. 22, 1915.

Ser. No. 89,907. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN J. BURNS, Chicago, Ill. Filed Oct. 18, 1915. Under ten-year proviso.

J.M. PACE CLIMAX SALVE

Particular description of goods.—Ointments.

Claims use since November, 1873.

Ser. No. 89,965. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARTHUR LEE LIGON, Cincinnati, Ohio. Filed Oct. 20, 1915.

Ligon TOOLS TRADE MARK.

The words "Trade-Mark" and "Tools" are herewith disclaimed.

Particular description of goods.—Tools for Use by Jewelers, Stone-Masons, Upholsterers, Carpenters, Machinists, Blacksmiths, Lathers, Car-Builders, Joiners, Slate-Workers, Cabinet-Makers, Ship-Builders, Structural-Metal Workers, Miners, Coppersmiths, Automobile-Boiler Makers, Artificial-Stone Workers—Namely, Hammers, Axes, Hatchets, Sledges, Adzes, Mallets, Wrecking-Bars, Wrenches, Rivet-Sets, Swages and Anvil-Tools, Mauls, Ratchet-Drills and Heads, Screw-Drivers, Wrenches, Mattocks, Picks, Shovels, Spades and Scoops, Hoes, Pitch, Ground, Hay, and Fertilizer Fork.

Claims use since Sept. 1, 1915.

Ser. No. 89,982. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CHAS. JACQUIN ET CIE., INC., New York, N. Y. Filed Oct. 21, 1915.

BLACKBERRIA

Particular description of goods.—Cordial.

Claims use since Sept. 25, 1915.

Ser. No. 90,046. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. S. BROWN MER. CO., Denver, Colo. Filed Oct. 23, 1915.

MOUNT CROSS

Particular description of goods.—Canned Vegetables, Candy, Apple-Butter, Sardines, Jelly-Powder, Canned Sprats, Wheat Food, Macaroni, Vermicelli, Spaghetti, Popcorn, Coffee, Jelly, Prepared Mustard, Vinegar, Dried Codfish, Fruit Preserves, Sorghum, Chilli, and Canned Salmon, Apricots.

Claims use since 1906.

Ser. No. 90,103. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) UNITED BATTERY CORPORATION, Brooklyn, N. Y. Filed Oct. 25, 1915.

MASTER

Particular description of goods.—Batteries, Flash-Lights, Coils, and Electric Lanterns.

Claims use since about Oct. 1, 1915.

Ser. No. 90,109. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Oct. 26, 1915.

PRIDE OF THE COLUMBIA

Particular description of goods.—Canned Salmon.

Claims use since 1895.

Ser. No. 90,113. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Oct. 26, 1915.

RELIANCE

Particular description of goods.—Canned Salmon.

Claims use since 1885.

Ser. No. 90,114. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Oct. 26, 1915.

ARGONAUT

Particular description of goods.—Canned Salmon.

Claims use since 1885.

Ser. No. 90,192. (CLASS 38. PRINTS AND PUBLICATIONS.) ROSS-GOULD LIST & LETTER CO., St. Louis, Mo. Filed Oct. 28, 1915.

Particular description of goods.—Mailing-Lists, Facsimile Letters, and Advertising-Copy.

Claims use since Aug. 1, 1915.

Ser. No. 90,230. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GIRTEN-BOWMAN SUPPLY CO., Houston, Tex. Filed Oct. 30, 1915.

RED REX

Particular description of goods.—Wire-Wound Drilling-Hose for Oil-Field Use.
Claims use since Oct. 1, 1911.

Ser. No. 90,231. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KANSAS CITY WHOLESALE GROCERY CO., Kansas City, Mo. Filed Oct. 30, 1915.

HEIRLOOM

Particular description of goods.—Coffee.
Claims use since May 1, 1915.

Ser. No. 90,266. (CLASS 10. FERTILIZERS.) HIRSH-STEIN & CO., Chicago, Ill. Filed Nov. 1, 1915.

CALUMET



Particular description of goods.—Fertilizers.
Claims use for eight years.

Ser. No. 90,331. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HARRIS & BERNTZ COMPANY, Philadelphia, Pa. Filed Nov. 2, 1915.

JUSTRITE

Particular description of goods.—Tooth-Brushes.
Claims use since January, 1909.

Ser. No. 90,354. (CLASS 37. PAPER AND STATIONERY.) NEENAH PAPER COMPANY, Neenah, Wis. Filed Nov. 2, 1915.



Particular description of goods.—Bond-Papers, Ledger-Papers, Book-Papers, and Linen Writing-Papers.
Claims use since July 1, 1915.

Ser. No. 90,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. ROMEO & CO., INC., New York, N. Y. Filed Nov. 3, 1915.

G^re GARIBALDI



The portrait being that of Giuseppe Garibaldi, a deceased patriot of Italy.
Particular description of goods.—Macaroni.
Claims use since about Jan. 1, 1910.

Ser. No. 90,402. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRODHEAD CHEESE & COLD STORAGE CO., Brodhead, Wis., and New York, N. Y. Filed Nov. 4, 1915.

FORWARD BRAND

The word "Brand" being disclaimed.
Particular description of goods.—Cheese.
Claims use since November, 1914.

Ser. No. 90,407. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE FIRESTONE TIRE & RUBBER CO., Akron, Ohio. Filed Nov. 4, 1915.



The trade-mark comprises a circumferential band of black intermediate two circumferential bands of red, the exclusive independent use of the representation of an automobile-tire not being claimed.
Particular description of goods.—Rubber Tires and Casings.
Claims use since Oct. 14, 1915.

Ser. No. 90,411. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Nov. 4, 1915.

NAUGAHYDE

Particular description of goods.—Razor-Strops.
Claims use since Sept. 29, 1915.

Ser. No. 90,479. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. O. MITCHELL & BRO., Perryman, Md. Filed Nov. 6, 1915.

CHESTNUT HILL

Particular description of goods.—Canned Corn.
Claims use since 1902.

Ser. No. 90,480. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. O. MITCHELL & BRO., Perryman, Md. Filed Nov. 6, 1915.

"As You Like It"

Particular description of goods.—Canned Corn.
Claims use since 1904.

Ser. No. 90,489. (CLASS 39. CLOTHING.) ROBERT REIS & CO., New York, N. Y. Filed Nov. 6, 1915.

Lavender Line

No claim being made to the exclusive use of the word "Line" apart from the mark shown in the drawing.
Particular description of goods. — Underwear — viz., Men's and Boys' Union Suits Made of Textile or Knitted Materials.
Claims use since Feb. 1, 1915.

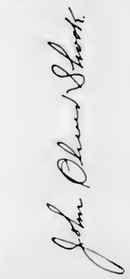
Ser. No. 90,521. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETERS-EASTMAN CO., Indianapolis, Ind. Filed Nov. 8, 1915.

P-I-C-A-B-B-S

Particular description of goods.—Machines for Molding Concrete Building-Blocks.
Claims use since Oct. 25, 1915.

Ser. No. 90,545. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN OLIVER SHOOK, Long Beach, Cal. Filed Nov. 9, 1915.

OLIVER'S



The signature shown being that of the applicant.
Particular description of goods.—Preparation for the Treatment of the Following Diseases: Asthma and Heart, Kidney and Bladder, Indigestion, Tetter and Eczema, Corns, Liver and General System, Headache and Neuralgia, Rheumatism, Gonorrhea, Teething Babies, Piles, Old Sores, Sore Throat, Catarrh, Female.
Claims use since Jan. 1, 1888.

Ser. No. 90,550. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Nov. 10, 1915.



Particular description of goods.—Axes, Hatchets, Hunting and Skinning and Bowie and Pocket Knives.
Claims use since January, 1900.

Ser. No. 90,563. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MOTOR SUPPLIES MANUFACTURING CO., Minneapolis, Minn. Filed Nov. 10, 1915.

PERMA TITE TIRE PATCH

The words "Tire Patch" are not herein claimed as a part of the trade-mark.
Particular description of goods.—Tire-Patches.
Claims use since on or about Mar. 1, 1915.

Ser. No. 90,568. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) OTTMAR GEO. STARK, St. Louis, Mo. Filed Nov. 10, 1915.

TRADE ★K MARK
KANT-LEEK

No claim is made to the exclusive use of the representation of the packing-ring or to the word "Kant-Leek" except in association with the other features illustrated. No claim is made to the exclusive use of the word "Trade-Mark" shown in the drawing.
Particular description of goods.—Metallic Packing-Rings.
Claims use since on or about Oct. 12, 1915.

Ser. No. 90,575. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE CROW MOTOR CAR CO., Elkhart, Ind. Filed Nov. 11, 1915.



Particular description of goods.—Automobiles.
Claims use since Dec. 30, 1910.

Ser. No. 90,588. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SUNDERMAN SAFETY CARBURETOR CORPORATION, New York and Newburgh, N. Y. Filed Nov. 11, 1915.

MOUSE TRAP

Particular description of goods.—Internal-Combustion Engines.
Claims use since the 27th day of September, 1915.

Ser. No. 90,598. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IDAHO CANDY COMPANY, Boise, Idaho. Filed Nov. 12, 1915.

Owyhee

Particular description of goods.—Candies.
Claims use since about July 1, 1910.

Ser. No. 90,618. (CLASS 39. CLOTHING.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Nov. 12, 1915.



COLONIAL

Particular description of goods.—Dust-Caps Made of Light Flimsy Materials, Baby-Pants, Brassières, Camisoles; and Bathing-Caps Made of Rubber Alone or Rubber and Mercerized Cotton and Silk.
Claims use since the year 1897.

Ser. No. 90,640. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE WEISS INSTRUMENT COMPANY, Denver, Colo. Filed Nov. 13, 1915.

ALPINE STEREO

No claim being made to the word "Stereo" apart from the mark shown in the drawings.
Particular description of goods.—Binoculars.
Claims use since June 19, 1915.

Ser. No. 90,652. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACKSONVILLE CRACKER WORKS, Jacksonville, Fla. Filed Nov. 15, 1915.

SUM-JAX-PIE

Particular description of goods.—Cakes, Biscuits, and Crackers.
Claims use since Feb. 14, 1913.

Ser. No. 90,653. (CLASS 37. PAPER AND STATIONERY.) W. G. LLOYD COMPANY, Chicago, Ill. Filed Nov. 15, 1915.

WILLOY

Particular description of goods.—Ledger-Binders, Sectional-Post Binders, Solid-Post Binders, Prong-Files, Periodical-Binders, Loose-Sheet Holders, Price-Books, Manifold-Books, Blank Books, and Loose Leaves or Sheets and Fasteners for Loose Leaves or Sheets.
Claims use since on or about Mar. 1, 1901.

Ser. No. 90,654. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MACIE L. LIGGINS, St. Louis, Mo. Filed Nov. 15, 1915.



Particular description of goods.—A Preparation to Induce the Growth of Hair Upon the Scalp and for the Treatment of Tetter and Scalp Diseases.
Claims use since about Jan. 1, 1907.

Ser. No. 90,669. (CLASS 12. CONSTRUCTION MATERIALS.) ACME BRICK COMPANY, Cayuga, Ind. Filed Nov. 16, 1915.

RYLTYLE

Particular description of goods.—Tile for Paving, Building, and Roofing.
Claims use since Aug. 1, 1914.

Ser. No. 90,700. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GRADY MFG. CO., Long Island City, N. Y. Filed Nov. 17, 1915.

ARMY & NAVY

Particular description of goods.—Metal-Polishes.
Claims use since prior to the year 1897.

Ser. No. 90,703. (CLASS 12. CONSTRUCTION MATERIALS.) HYDROLITHIC WATERPROOFING CO. INC., New York, N. Y. Filed Nov. 17, 1915.

HYDRO-CRETE

Particular description of goods.—Compositions Used in Making Concrete Structures.
Claims use since about the end of October, 1915.

Ser. No. 90,708. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OLIVIA CANNING, PRSVG. & MFG. CO., Olivia, Minn. Filed Nov. 17, 1915.

BOW AND ARROW



Particular description of goods.—Canned Corn, Sauer-Kraut, Rhubarb, Baked Beans, Red Kidney-Beans, Peas, and Tomatoes.
Claims use since June 1, 1905.

Ser. No. 90,715½. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CALVIN & CO., Guttenberg, N. J. Filed Nov. 17, 1915.

CALVIN'S-SALVA-PEL

No claim for the word "Calvin's" except as associated with the other features of the mark.
Particular description of goods.—An Ointment.
Claims use since Jan. 1, 1915.

Ser. No. 90,723. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo. Filed Nov. 18, 1915.

MIDWAY

Particular description of goods.—Roasted Coffee.
Claims use since 1897.

Ser. No. 90,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo. Filed Nov. 18, 1915.

ADVANCE

Particular description of goods.—Roasted Coffee.
Claims use since May 26, 1915.

Ser. No. 90,733. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OLIVER-FINNIE CO., Memphis, Tenn. Filed Nov. 18, 1915.

OLIVER TWIST

Particular description of goods.—Candy and Vinegar.
Claims use since August, 1904.

Ser. No. 90,741. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TILLMANN & BENDEL, San Francisco, Cal. Filed Nov. 18, 1915.

RAJAH

Particular description of goods.—Roasted Coffee.
Claims use since January, 1911.

Ser. No. 90,748. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE G. H. WESTING COMPANY, Indianapolis, Ind. Filed Nov. 18, 1915.



Particular description of goods.—Bicycles
Claims use since Jan. 1, 1915.

Ser. No. 90,753. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. WELLER CO., Oak Harbor, Ohio. Filed Nov. 18, 1915.

HOFFMAN HOUSE

Particular description of goods.—Catsup, Tomato Purée, Pickles, Canned Sauer-Kraut, Canned Vegetables.
Claims use since Jan. 1, 1903.

Ser. No. 90,763. (CLASS 37. PAPER AND STATIONERY.) FREDERICK C. HARRIMAN, Irvington, N. Y. Filed Nov. 19, 1915.

TIBLER

Particular description of goods.—Loose-Leaf and Document Binders for Loose Leaves, Circulars, Papers, Books, Pamphlets, Bonds, Stocks, Insurance-Policies, and other Documents, Legal Papers, and Securities.
Claims use since on or about the 10th day of November, 1915.

Ser. No. 90,774. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHAS. A. SCHIEREN COMPANY, New York, N. Y. Filed Nov. 19, 1915.

ELECTRIC

Particular description of goods.—Oil-Dressed and Waterproofed Flat Leather Belting.
Claims use since November, 1884.

Ser. No. 90,816. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHASE & CO., Jacksonville, Fla. Filed Nov. 22, 1915.



Particular description of goods.—Citrus Fruits and Fresh Vegetables.
Claims use since Oct. 7, 1915.

Ser. No. 90,822. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CORBY COMMISSION CO., New York, N. Y. Filed Nov. 22, 1915.



Particular description of goods.—Sardines.
Claims use since Sept. 30, 1915.

Ser. No. 90,827. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRICK AND KAUPKE, Cedar Rapids, Iowa. Filed Nov. 22, 1915.

DELF

Particular description of goods.—Coffee.
Claims use since August, 1915.

Ser. No. 90,830. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULF CITY COFFEE CO., Pensacola, Fla. Filed Nov. 22, 1915.

16 to 1

Particular description of goods.—Coffee.
Claims use since Jan. 1, 1902.

Ser. No. 90,851. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STARR COLLINSON PACKING CO., Portland, Oreg. Filed Nov. 22, 1915.

ECHO

Particular description of goods.—Canned Salmon.
Claims use since August, 1914.

Ser. No. 90,855. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED DRUG COMPANY, Boston, Mass. Filed Nov. 22, 1915.



Fenway Chocolates

The words "Chocolates Made in Boston U. S. A." are disclaimed.
Particular description of goods.—Candy.
Claims use since prior to May 1, 1904.

Ser. No. 90,863. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE H. WAKEFIELD, Seattle, Wash. Filed Nov. 22, 1915.

RED-E-LUNCH

Particular description of goods.—Canned Salmon.
Claims use since Oct. 27, 1915.

Ser. No. 90,864. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRIET HUBBARD AYER, New York, N. Y. Filed Nov. 23, 1915.



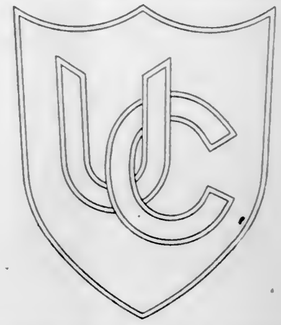
The picture shown being fanciful.
Particular description of goods.—Almond-Meal, Aromatic Ozonizer, Astringent for Relaxed Tissues, Bandoline, Bath Essence, Bath-Powder, Bath-Salts, Bay-Rum, Benzoin, Brilliantine, Camphor-Ice, Cocoa-Butter, Stick-Cosmetics, Adeps Lanæ Cream, Face-Cream, Cold-Cream, Cuticle-Cream, Finishing-Cream, Foot-Cream, Freckle-Cream, Massage-Cream, Non-Greasy Cream, Perspiration-Cream, Strawberry Cream, Treatrical Cream, Toilet Cream, Vanishing Cream, Cologne Water, Complexion-Balm, Cuticle-Acid, Cuticle-Ice, Cuticle-Powder, Cuticle-Softener, Depilatories, Disinfectant, Face-Bleach, Face-Powder, Foot-Ice, Foot-Powder, Frost-Bite Lotion, Frost-Bite Salve, Toilet Glycerin, Hair-Bleach, Hair-Color, Hair-Dye, Hair Essence, Hair-Oil, Hair-Powder, Hair-Tonic, Hair-Waver, (Chemical,) Hair-Whitener, Hand-Lotion, Hand-Salve, Hand-Whitener, Headache-Cologne, Incense, Lip-Pencil, Lip-Pomade, Almond, Honey, and Cucumber Lotion, Lotions for Use After Shaving, Eye-Lotion, Face-Lotion, Foot-Lotion, Freckle-Lotion, Head-Lotion, Honey Lotion, Mouth-Lotion, Moth and Freckle Lotion, Skin-Lotion, Strawberry Lotion, Toilet Lotion, Mouth-Tablets, Mouth-Wash, Milk of Cucumber, Mutton-Tallow, (Refined and Perfumed,) Nail-Acid, Nail-Bleach, Nail-Enamel, Nail-Polish, Nail-Pomade, Nail-Tint, Nail-Rouge, Grease Paint, Eyebrow-Pencil, Body-Perfume, Handkerchief-Perfumes, Non-Alcoholic Perfumes, Room-Perfumes, Perfume-Pencils, Synthetic Perfumes, Perfume-Tablets, Pomades, Menthol-Pencils, Aikenna Powders, Glove Perfume-Powders, Nail-Powders, Oatmeal-Powders, Powder-Papers, Perspiration-Powders, Rice-Powders, Theatrical Powders, Perspiration Liquid, Rouge, Lip-Rouge, Rouge-Leaves, Theatrical Rouge, Cheek-Rouge, Tooth-Powder, Sachet-Powder, Shampoo, Skin-Whitener, Skin and Tissue Builder, Smelling-Salts, Talcum, Toilet Borax, Toilet Paste, Toilet Powder, Toilet Cerate, Toilet Water, Tooth-Cream, Tooth-Paste, Tooth-Wash, Troches for the Breath, Aromatic Vinegar, Bath-Vinegar, Strawberry Vinegar, Theatrical-Make-Up Toilet Vinegar, Antiseptic Washing-Water, Water-Softener, Wrinkle-Eradicator, Hair-Pomade, Nail-Polish, (Cake,) Non-Greasy Shaving-Cream for Use After Shaving.
Claims use since the 1st day of January, 1904.

Ser. No. 90,876. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCIS H. LEGGETT & CO., New York, N. Y. Filed Nov. 23, 1915.

UNICORN

Particular description of goods.—Coffee.
Claims use since Nov. 10, 1908.

Ser. No. 90,881. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PETTIT AND GIVENS, Stratford, N. J. Filed Nov. 23, 1915.



Particular description of goods.—A Deodorant for Perspiration.
Claims use since about Oct. 1, 1915.

Ser. No. 90,887. (CLASS 39. CLOTHING.) LENA H. TAYLOR, Springfield, Mass. Filed Nov. 23, 1915.



The word "Hose" shown in the drawing being disclaimed.
Particular description of goods.—Infants' Hosiery..
Claims use since Dec. 10, 1914.

Ser. No. 90,898. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. C. CAMPBELL, Boston, Mass. Filed Nov. 24, 1915.



Particular description of goods.—Cream-of-Tartar Substitutes and Baking-Powder.
Claims use since 1911.

Ser. No. 90,900. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROGERS COMPANY, Tacoma, Wash. Filed Nov. 24, 1915.

SCHOOLBOY

Particular description of goods.—Peanut-Butter.
Claims use since May, 1914.

Ser. No. 90,935. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HUDSON MOTOR CAR CO., Detroit, Mich. Filed Nov. 26, 1915.

SUPER-SIX

Particular description of goods.—Automobiles.
Claims use since Oct. 2, 1915.

Ser. No. 90,936. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HUGHES ELECTRIC HEATING COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

JUNIOR

"Junior."
Particular description of goods.—Electrical Stoves.
Claims use since May 1, 1915.

Ser. No. 90,937. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLCOMB & HOKE MFG. CO., Indianapolis, Ind. Filed Nov. 26, 1915.

TOP NOTCH

Particular description of goods.—Popcorn.
Claims use since Sept. 15, 1915.

Ser. No. 90,938. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLCOMB & HOKE MFG. CO., Indianapolis, Ind. Filed Nov. 26, 1915.

GOLD MINE

Particular description of goods.—Popcorn.
Claims use since Sept. 15, 1915.

Ser. No. 90,948. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE NATIONAL BREWERS' ACADEMY AND CONSULTING BUREAU, New York, N. Y. Filed Nov. 26, 1915.

BEER-OLA

Particular description of goods.—A Non-Alcoholic Beverage Having the Properties of a Carbonated or Effervescent Soft Drink Possessing Nourishing, Refreshing, and Tonic Properties.
Claims use since October, 1915.

Ser. No. 90,957. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PFISTER & VOGEL LEATHER CO., Milwaukee, Wis. Filed Nov. 26, 1915.

NEON

Particular description of goods.—Black and Colored Leather, Calf, Sides, and Kips.
Claims use since Oct. 7, 1915.

Ser. No. 90,968. (CLASS 38. PRINTS AND PUBLICATIONS.) FRANK E. BECHMANN, Battle Creek, Mich. Filed Nov. 27, 1915.

DOGDOM

Particular description of goods.—A Monthly Publication.
Claims use since March, 1900.

Ser. No. 91,035. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM KENNY, New York, N. Y. Filed Nov. 30, 1915.

Patrine

Particular description of goods.—A Healing Salve or Ointment to be Used for Treating Boils, Bruises, and other Abrasions or Eruptions of the Skin.
Claims use since January, 1915.

Ser. No. 91,043. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE STONE STRAW COMPANY, Washington, D. C. Filed Nov. 30, 1915.

CAPITOL

Particular description of goods.—Paper Drinking-Straws.
Claims use since July, 1908.

Ser. No. 91,044. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE STONE STRAW COMPANY, Washington, D. C. Filed Nov. 30, 1915.



Particular description of goods.—Paper Drinking-Straws.
Claims use since July, 1908.

Ser. No. 91,080. (CLASS 46. FOODS AND INGREDIENTS OF FOOD.) PRATT-LOW PRESERVING CO., Santa Clara, Cal. Filed Dec. 1, 1915.

DEL REY

Particular description of goods.—Canned Olives.
Claims use since Nov. 3, 1915.

Ser. No. 91,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAULINA JABLONOWSKI, St. Louis, Mo. Filed Dec. 2, 1915.

LUNG-TONE

No claim being made to the words "Lung" and "Tone" apart from the mark shown in the drawing.
Particular description of goods.—A Preparation for the Treatment of Lung Ailments and Disorders.
Claims use since Dec. 15, 1912.

Ser. No. 91,178. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTON DESPOL, San Francisco, Cal. Filed Dec. 4, 1915.



Particular description of goods.—Herb Hair-Grower and Dandruff-Remover; Herb Shampoo; Rose-Blush Invisible Powder and Astringent, (a Liquid Preparation;) Almond Boric and Benzoin Lotion; Lilac Vegetal; Violet Water; Antiseptic Peppermint Tooth-Paste; Almond Massage-Cream; Violet Borated Talcum Perfumes.
Claims use since Nov. 1, 1913.

Ser. No. 91,207. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915.

"A.B.S."

Particular description of goods.—Silk Piece Goods and Mixed Cotton and Silk Piece Goods.
Claims use since January, 1915.

Ser. No. 91,212. (CLASS 43. THREAD AND YARN.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

INDIA ROYAL

Particular description of goods.—Textile Threads.
Claims use since January, 1889.

Ser. No. 91,214. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915.



The picture being fanciful, no claim being made to the exclusive right to the use of the word "Yardwide" apart from the mark shown in the drawing.
Particular description of goods.—Silk Piece Goods and Mixed Silk and Cotton Piece Goods.
Claims use since January, 1904.

Ser. No. 91,254. (CLASS 17. TOBACCO PRODUCTS.) ARNOLD B. WERTHEIMER, New York, N. Y. Filed Dec. 6, 1915.

NOLDAR
EGYPTIAN CIGARETTES

I disclaim the right to the registration of the words "Egyptian Cigarettes" as set forth in the drawing herewith presented, reserving, however, all claims to procuring the name "Noldar" to be registered as a trade-mark.
Particular description of goods.—Cigarettes.
Claims use since Nov. 1, 1915

Ser. No. 91,286. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. BOLGIANO & SON, Baltimore, Md. Filed Dec. 8, 1915.



Particular description of goods.—Tonic Preparation for Game-Birds and Poultry, Head-Lice and Scaly-Leg Ointment, Lice-Powder, Sulfur Candle, Cholera Remedy, Roup Remedy, Mange Remedy, Disinfectant and Deodorizer, Liquid Lice and Mite Killer, Dog Remedies—viz., Distemper-Pills, Tonic Pills, Condition-Pills, Sulfur Tablets, Digestive Tablets, Eye-Lotion, Vermifuge-Capsules, Diarrhea-Tablets, and Rheumatic Tablets.
Claims use since Jan. 1, 1914.

Ser. No. 91,318. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MUENZEN SPECIALTY CO., INC., New York, N. Y. Filed Dec. 8, 1915.

IMPERIAL

Particular description of goods.—Electric Vacuum-Cleaners.
Claims use since May 1, 1915.

Ser. No. 91,336. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE STRONG-CARLISLE & HAMMOND COMPANY, Cleveland, Ohio. Filed Dec. 8, 1915.

CARBONEW

Particular description of goods.—Case-Hardening Material.
Claims use since October, 1914.

Ser. No. 91,378. (CLASS 39. CLOTHING.) FRANCES BENJAMIN LACKLAND, New York, N. Y. Filed Dec. 10, 1915.

"La Jeunesse"

Particular description of goods.—Hats, Caps, Outer Suits, Skating-Suits, House-Dresses, Street-Dresses, Evening-Gowns, Cloaks, Capes, Evening-Wraps, Blouses, Negligées, Tea-Gowns, and Skirts.
Claims use since Nov. 1, 1915.

Ser. No. 91,388. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERTINA W. WALBERG, Springfield, Mass. Filed Dec. 10, 1915.



Particular description of goods.—Liniment.
Claims use since on or about Dec. 1, 1915.

Ser. No. 91,397. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILTON E. HISEY, Painesville, Ohio. Filed Dec. 11, 1915.

NERVODYNE

Particular description of goods.—Devitalizing Preparations.
Claims use since October, 1913.

Ser. No. 91,398. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FERD. T. HOPKINS & SON, New York, N. Y. Filed Dec. 11, 1915. Under ten-year proviso.

Gouraud

Particular description of goods.—Face Creams and Lotions, Toilet Powders, Hair-Eradicators, "Lily White,"—viz., Face-Powders, Medicated Soaps, and Powder-Leaves.
Claims use since about 1848.

Ser. No. 91,415. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 13, 1915.

SYLTEX

Particular description of goods.—Artificial Silk.
Claims use since March, 1912.

Ser. No. 91,423. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FERDINAND GUTMANN & CO., New York, N. Y. Filed Dec. 13, 1915.

SNAP

Particular description of goods.—Closures for Bottles and the Like.
Claims use since Nov. 27, 1915.

Ser. No. 91,424. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FOOSE CHEMICAL CO., Dayton, Ohio. Filed Dec. 13, 1915.

ZONITE

Particular description of goods.—An Antiseptic, Disinfectant, Deodorizer, and Bleach.
Claims use since Nov. 8, 1915.

Ser. No. 91,425. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL GELLER, New York, N. Y. Filed Dec. 13, 1915.

HUNARIT

Particular description of goods.—Liniment for Rheumatism.
Claims use since Dec. 1, 1915.

Ser. No. 91,434. (CLASS 39. CLOTHING.) LOUIS MEYERS & SON, New York, N. Y. Filed Dec. 13, 1915. Under ten-year proviso.

PERFECT FITTING

Particular description of goods.—Gloves.
Claims use since before 1891.

Ser. No. 91,491. (CLASS 39. CLOTHING.) MATTEAWAN MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 15, 1915.

COFA

Particular description of goods.—Hats for Men, Women, and Children.
Claims use since about Jan. 1, 1915.

Ser. No. 91,590. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BENJAMIN C. NEAT, Louisville, Ky. Filed Dec. 20, 1915.

Petro-Menta

Particular description of goods.—Ointment.
Claims use since Oct. 24, 1915.

Ser. No. 91,609. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. GREENBERG & CO., Kansas City, Kans. Filed Dec. 20, 1915.

SULQU

Particular description of goods.—A Remedy for Rheumatism, Catarrh, Asthma, Hay-Fever, Stomach Trouble, and All Diseases of the Blood.
Claims use since Nov. 1, 1915.

Ser. No. 91,628. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TWITCHELL PROCESS COMPANY, Cincinnati, Ohio. Filed Dec. 20, 1915.

TWITCHELL PROCESS COMPANY (KONTAK)

No claim is made to the exclusive right of the words "Twitchell" "Process" "Company," as a trade-mark apart from the mark shown in the drawing.
Particular description of goods.—Saponifier.
Claims use since Nov. 15, 1915.

Ser. No. 91,646. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LACNO CO., Oakland, Cal. Filed Dec. 21, 1915.

LACNO

Particular description of goods.—A Mouth-Wash and Antiseptic.
Claims use since May 25, 1915.

Ser. No. 91,669. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed Dec. 21, 1915.

COLLAPSO SUPREME

Particular description of goods.—Dress-Forms.
Claims use since Sept. 4, 1915.

Ser. No. 91,677. (CLASS 39. CLOTHING.) BERNHARD SCHAFRAN, New York, N. Y. Filed Dec. 22, 1915.

The English "Piccadilly" Brand
Modes of Quality

No claim being made to the exclusive use of "The English Brand" and "Modes of Quality" apart from the mark shown in the drawing.
Particular description of goods.—Suits and Cloaks.
Claims use since Nov. 25, 1915.

Ser. No. 91,684. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed Dec. 22, 1915.

VINAROUGE

Particular description of goods.—Rouge.
Claims use since Dec. 10, 1915.

Ser. No. 91,702. (CLASS 7. CORDAGE.) AMERICAN CORE-TWINE COMPANY, Boston, Mass. Filed Dec. 23, 1915.

Amcore

Particular description of goods.—Twine.
Claims use since Dec. 16, 1915.

Ser. No. 91,770. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KAR-RU CHEMICAL CO., Tacoma, Wash. Filed Dec. 27, 1915.

KAR-NITUM

Particular description of goods.—Medicinal Preparation for the Treatment of Tubercular Diseases in Cattle.
Claims use since May, 1915.

Ser. No. 91,796. (CLASS 39. CLOTHING.) THE CAPANHAT CO., INC., New York, N. Y. Filed Dec. 28, 1915.



No claim being made to the exclusive right to the representation of the cap apart from the mark shown in the drawing.
Particular description of goods.—Ladies', Men's, and Children's Caps and Hats.
Claims use since Dec. 8, 1915.

Ser. No. 91,846. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ASAM BROTHERS, INCORPORATED, Philadelphia, Pa. Filed Dec. 31, 1915.



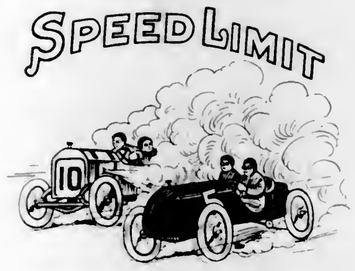
Comprises a green disk bearing the letters "A B" in white, which said disk is surmounted by an annular band of black, bearing the words "Asam Brothers Incorporated" in white. The colors herein described are essential features of the applicant's mark.
Particular description of goods.—Dry, Paste, and Ready-Mixed Paints.
Claims use since Dec. 1, 1915.

Ser. No. 91,889. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MINUSA CINE PRODUCTS COMPANY, St. Louis, Mo. Filed Jan. 3, 1916.

MINUSA

Particular description of goods.—Projection-Screens.
Claims use since Feb. 20, 1915.

Ser. No. 91,980. (CLASS 40. DISTILLED ALCOHOLIC LIQUORS.) JOSEPH E. SOUCEY, Salmon Falls, N. H. Filed Jan. 6, 1916.



Particular description of goods.—Whisky.
Claims use since May 1, 1914.

Ser. No. 91,986. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD S. BURNHAM, Charleston, S. C. Filed Jan. 7, 1916.

Kotone

Particular description of goods.—A Soft Drink.
Claims use since Sept. 1, 1915.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 1, 1916.

108,321. MEN'S COATS AND OVERCOATS. L. ADLER, BROS. & CO., Rochester, N. Y.
Filed September 21, 1915. Serial No. 89,344. PUBLISHED NOVEMBER 23, 1915.

108,322. NECKTIES, SUSPENDERS, GARTERS, BELTS FOR PERSONAL WEAR, PINS FOR PERSONAL USE, BUTTONS, AND GARMENT-FASTENERS. ASSOCIATED 5 AND 10 CENT STORES, INC., New York, N. Y.
Filed June 26, 1912. Serial No. 64,434. PUBLISHED NOVEMBER 23, 1915.

108,323. PRINTING-PRESSES. THE BABCOCK PRINTING PRESS MANUFACTURING COMPANY, New London, Conn.
Filed July 14, 1915. Serial No. 87,922. PUBLISHED NOVEMBER 2, 1915.

108,324. LEAD-PENCILS. RICHARD BEST, New York, N. Y.
Filed May 13, 1913. Serial No. 70,398. PUBLISHED APRIL 28, 1914.

108,325. TABLEWARE MADE OF PRECIOUS METAL OR PLATED WITH PRECIOUS METAL. F. L. BOSWORTH CO., Minneapolis, Minn.
Filed August 9, 1915. Serial No. 88,491. PUBLISHED NOVEMBER 9, 1915.

108,326. ATTACHMENT-PLUGS, RECEPTACLES, AND CONNECTORS. THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn.
Filed October 18, 1915. Serial No. 89,909. PUBLISHED NOVEMBER 16, 1915.

108,327. BOOTS AND SHOES MADE OF LEATHER OR OF LEATHER AND CANVAS. DONALD J. CAMERON, Syracuse, N. Y.
Filed August 12, 1914. Serial No. 80,490. PUBLISHED NOVEMBER 23, 1915.

108,328. BOOTS AND SHOES MADE OF LEATHER OR OF LEATHER AND CANVAS. DONALD J. CAMERON, Syracuse, N. Y.
Filed August 12, 1914. Serial No. 80,491. PUBLISHED NOVEMBER 23, 1915.

108,329. TOOTH-PASTE. LOUIS F. CHRISTMAN, Jackson, Tenn.
Filed August 28, 1915. Serial No. 88,851. PUBLISHED NOVEMBER 16, 1915.

108,330. FIRELESS COOKERS. FRANK WINTHROP DAVENPORT, Providence, R. I.
Filed June 19, 1915. Serial No. 87,412. PUBLISHED NOVEMBER 9, 1915.

108,331. WASHING-MACHINES. THE EAGLE WOODENWARE MANUFACTURING COMPANY, Hamilton, Ohio.
Filed September 17, 1915. Serial No. 89,268. PUBLISHED NOVEMBER 16, 1915.

108,332. STERILIZERS, DISINFECTANTS, AND PURIFIERS. GENERAL PURIFICATION CO., Phoenix, Ariz., and Madison, Wis.
Filed July 31, 1915. Serial No. 88,330. PUBLISHED AUGUST 31, 1915.

108,333. MECHANICAL RAILWAY SIGNALING APPARATUS. GENERAL RAILWAY SIGNAL COMPANY, Gates, N. Y.
Filed May 21, 1915. Serial No. 86,803. PUBLISHED NOVEMBER 16, 1915.

108,334. WATCHES. GOODMAN BROTHERS, Columbus, Ohio.
Filed February 23, 1915. Serial No. 84,687. PUBLISHED JUNE 1, 1915.

108,335. HOT-BLAST HEATERS. WILLIAM M. KINGSBURY, Cleveland, Ohio.
Filed September 14, 1915. Serial No. 89,186. PUBLISHED NOVEMBER 23, 1915.

108,336. RIBBONS. ULRIK R. T. LUND, North Catasauqua, Pa.
Filed September 28, 1915. Serial No. 89,513. PUBLISHED NOVEMBER 16, 1915.

108,337. RIBBONS. ULRIK R. T. LUND, North Catasauqua, Pa.
Filed September 28, 1915. Serial No. 89,514. PUBLISHED NOVEMBER 16, 1915.

108,338. PREPARATION FOR THE TREATMENT OF DANDRUFF. CHARLES MANDRACCHIA, Corona, N. Y.
Filed September 22, 1915. Serial No. 89,383. PUBLISHED NOVEMBER 16, 1915.

108,339. SALT. MICHIGAN SALT WORKS, Marine City, Mich.
Filed October 8, 1915. Serial No. 89,737. PUBLISHED NOVEMBER 9, 1915.

108,340. DOG-SOAP. G. DAN MORGAN KENNELS, Denton, N. C.
Filed September 11, 1915. Serial No. 89,146. PUBLISHED NOVEMBER 16, 1915.

108,341. DIAPHRAGM-VALVES. NATIONAL REGULATOR COMPANY, Chicago, Ill.
Filed January 2, 1915. Serial No. 83,625. PUBLISHED NOVEMBER 23, 1915.

108,342. PACKING-CASES. NELSON & HALL COMPANY, Montgomery and Montgomery Center, Vt.
Filed February 17, 1915. Serial No. 84,583. PUBLISHED AUGUST 3, 1915.

108,343. ELECTRIC BATTERIES AND CASINGS THEREFOR. NOVO MANUFACTURING CO. INC., New York, N. Y.
Filed April 8, 1915. Serial No. 85,781. PUBLISHED JUNE 1, 1915.

108,344. GARBAGE-RECEPTACLES. O'NEILL BROTHERS, Brighton, Mass.
Filed October 8, 1915. Serial No. 89,739. PUBLISHED NOVEMBER 16, 1915.

108,345. RUBBER HEELS FOR BOOTS AND SHOES. O'SULLIVAN RUBBER CO., Portland, Me., and New York, N. Y.
Filed October 9, 1915. Serial No. 89,769. PUBLISHED NOVEMBER 23, 1915.

108,346. LEATHER AND RUBBER SHOES FOR MEN AND WOMEN. JOHN H. PRICE, Columbus, Ohio.
Filed September 28, 1915. Serial No. 89,522. PUBLISHED NOVEMBER 23, 1915.

108,347. WHITE FLOATING SOAP. PRODUCTS MANUFACTURING COMPANY, Oklahoma, Okla.
Filed November 16, 1914. Serial No. 82,623. PUBLISHED NOVEMBER 16, 1915.

108,348. MATTRESSES. ROBERTI BROS., Los Angeles, Cal.
Filed August 18, 1915. Serial No. 88,679. PUBLISHED NOVEMBER 2, 1915.

108,349. POLISH AND POLISHING-OILS FOR FURNITURE AND WOOD. H. G. SAAL COMPANY, Chicago, Ill.
Filed October 2, 1915. Serial No. 89,613. PUBLISHED NOVEMBER 16, 1915.

108,350. NUTRITIOUS TONIC FOOD BEVERAGE. CARL SCHILDER, Fort Worth, Tex.
Filed July 17, 1915. Serial No. 87,995. PUBLISHED NOVEMBER 9, 1915.

108,351. CERTAIN NAMED MEN'S UNDERWEAR. SPHINX UNDERWEAR CO., Philadelphia, Pa.
Filed July 16, 1915. Serial No. 87,977. PUBLISHED NOVEMBER 16, 1915.

108,352. CERTAIN NAMED FOODS. THE VIONANA COMPANY, Dayton, Ohio.
Filed August 4, 1914. Serial No. 80,310. PUBLISHED NOVEMBER 2, 1915.

108,353. LIQUID AND OTHER ANTISEPTIC, VACCIN, AND GERMICIDE PREPARATIONS. RALPH B. WAITE, Springville, N. Y.
Filed September 22, 1915. Serial No. 89,391. PUBLISHED NOVEMBER 9, 1915.

108,354. LIP-ROUGE. JULES WARNESSON, Chicago, Ill.
Filed October 12, 1915. Serial No. 89,829. PUBLISHED NOVEMBER 9, 1915.

108,355. CANNED SALMON. ALASKA SANITARY PACKING CO., Seattle, Wash.
Filed September 7, 1915. Serial No. 89,049. PUBLISHED NOVEMBER 16, 1915.

108,356. ROOFING AND PAVING MATERIALS MADE OF OR INCLUDING TAR AND PITCH. AMERICAN TAR PRODUCTS COMPANY, Chicago, Ill.
Filed May 27, 1915. Serial No. 86,924. PUBLISHED OCTOBER 5, 1915.

108,357. INSECTICIDES. ANSBACHER INSECTICIDE CO., INC., New York, N. Y.
Filed October 28, 1915. Serial No. 90,164. PUBLISHED NOVEMBER 23, 1915.

108,358. COFFEE. BAKER IMPORTING CO., Minneapolis, Minn., and New York, N. Y.
Filed October 4, 1915. Serial No. 89,622. PUBLISHED NOVEMBER 16, 1915.

108,359. SALVE FOR CROUP, PNEUMONIA, &c. BRAME DRUG COMPANY, Northwilkesboro, N. C.
Filed October 22, 1915. Serial No. 90,019. PUBLISHED NOVEMBER 23, 1915.

108,360. OLIVE-OIL. CRISI & CERCHIONE, New York, N. Y.
Filed September 22, 1915. Serial No. 89,369. PUBLISHED NOVEMBER 23, 1915.

108,361. CERTAIN NAMED FOODS. JAMES P. GALLIGAN CO., Taunton, Mass.
Filed May 1, 1914. Serial No. 77,920. PUBLISHED FEBRUARY 16, 1915.

108,362. CANNED SALMON. GEORGE INLET PACKING CO., INC., Ketchikan, Territory of Alaska, and Portland, Oreg.
Filed September 16, 1915. Serial No. 89,235. PUBLISHED NOVEMBER 16, 1915.

108,363. CANNED SALMON. GEORGE INLET PACKING CO., INC., Portland, Oreg.
Filed September 16, 1915. Serial No. 89,236. PUBLISHED NOVEMBER 16, 1915.

108,364. CERTAIN NAMED FOODS. GOWAN-LENNING-BROWN CO., Duluth, Minn.
Filed August 28, 1914. Serial No. 80,856. PUBLISHED MAY 18, 1915.

108,365. BLOOD-PURIFIER. LOUIS MARINKÁS, South Akron, Ohio.
Filed November 1, 1915. Serial No. 90,280. PUBLISHED NOVEMBER 23, 1915.

108,366. CERTAIN NAMED FOODS. MCCLELLAND-WARD CO., Decatur, Ill.
Filed September 12, 1914. Serial No. 81,228. PUBLISHED NOVEMBER 23, 1915.

108,367. CHEESE. MCLEOD & ORMSBEE, Utica, N. Y., assignors to Boonville Creamery & Cold Storage Co., Boonville, N. Y., a Corporation of New York.
Filed February 24, 1915. Serial No. 84,741. PUBLISHED MAY 18, 1915.

108,368. COFFEE AND CHICORY COMPOUND. MERCHANTS COFFEE CO. OF NEW ORLEANS LTD., New Orleans, La.
Filed September 20, 1915. Serial No. 89,320. PUBLISHED NOVEMBER 23, 1915.

108,369. LOTION FOR EXTERMINATING INSECTS AND CURING THEIR STINGS, AND FOR RELIEF OF PAIN. THOMAS T. POUNTNEY, New York, N. Y.
Filed October 22, 1915. Serial No. 90,036. PUBLISHED NOVEMBER 23, 1915.

108,370. FARINA, ROLLED OATS, AND OATMEAL. ROBIN HOOD MILLS, LIMITED, Calgary, Alberta, and Moose Jaw, Saskatchewan, Canada.
Filed November 19, 1913. Serial No. 74,079. PUBLISHED AUGUST 17, 1915.

108,371. CERTAIN NAMED SURGICAL DRESSINGS. SEABURY & JOHNSON, East Orange, N. J., and New York, N. Y.
Filed July 31, 1915. Serial No. 88,343. PUBLISHED NOVEMBER 23, 1915.

108,372. CERTAIN NAMED SURGICAL DRESSINGS. SEABURY & JOHNSON, East Orange, N. J., and New York, N. Y.
Filed July 31, 1915. Serial No. 88,344. PUBLISHED NOVEMBER 23, 1915.

108,373. MEN'S AND BOYS' CLOTHING—VIZ., COATS, VESTS, AND TROUSERS. ARCHIE M. SIMON, Chicago, Ill.
Filed October 31, 1914. Serial No. 82,314. PUBLISHED NOVEMBER 23, 1915.

108,374. CITRUS FRUITS. TERRA CEIA CITRUS GROWERS ASSN., Terra Ceia, Fla.
Filed September 25, 1915. Serial No. 89,472. PUBLISHED NOVEMBER 23, 1915.

108,375. MEDICINAL COMPOUND OR DECOCTION OF HERBS TO BE USED AS A TONIC. AUGUSTUS W. WEISMANN, New York, N. Y.
Filed May 17, 1915. Serial No. 86,689. PUBLISHED NOVEMBER 23, 1915.

TRADE-MARK REGISTRATIONS CANCELED.

21,444. BREAD. JOHN D. HENNESSY, New York, N. Y. Registered July 12, 1892. Canceled January 11, 1916.

79,882. FRESH BLUE-POINT OYSTERS. N. S. ACKERLY & SON COMPANY, Northport and Sayville, N. Y. Registered October 18, 1910. Canceled January 10, 1916.

102,515. RUBBER GARDEN-HOSE. THE FAIR, Chicago, Ill.
Registered February 9, 1915. Canceled January 6, 1916.

LABELS

REGISTERED FEBRUARY 1, 1916.

19,011.—*Title:* "RICHMOND." (For Undergarments.) THE ATLAS UNDERWEAR CO., Piqua, Ohio. Filed November 23, 1915.

19,012.—*Title:* "BUSCH MEDICAL WATER." (For Mineral Water.) JOHN T. BUSCH, Potter Valley, Cal. Filed October 2, 1915.

19,013.—*Title:* "THE EMBOSSING CO'S STABUILT BLOCKS." (For Stabuilt Blocks.) THE EMBOSSING COMPANY, Albany, N. Y. Filed November 11, 1915.

19,014.—*Title:* "THE EMBOSSING CO'S BURNT WOOD SPELLING BLOCKS." (For Spelling-Blocks.) THE EMBOSSING COMPANY, Albany, N. Y. Filed November 23, 1915.

19,015.—*Title:* "PRINCE EITEL." (For Kümmel.) FIALLA & EPPLER, INC., New York, N. Y. Filed December 7, 1915.

19,016.—*Title:* "RENO." (For a Hair Dressing or Tonic.) JOHNSON AND WINN MANUFACTURING CO., Covington, Ky. Filed October 19, 1915.

19,017.—*Title:* "NORTH STAR BRAND MACARONI." (For Macaroni.) FORTUNATO LABATE, Brooklyn, N. Y. Filed December 15, 1915.

19,018.—*Title:* "SPRING MAID." (For Canned Corn.) PRAIRIE STATE CANNING CO., El Paso, Ill. Filed December 6, 1915.

19,019.—*Title:* "GOLDEN NECTAR." (For a Beverage.) HENRY WEINHARD ESTATE, by Louise Weinhard and Anna Wessinger, executrices, and Paul Wessinger and Henry Wagner, executors, Portland, Oreg. Filed November 20, 1915.

19,020.—*Title:* "AMBER NECTAR." (For a Beverage.) HENRY WEINHARD ESTATE, by Louise Weinhard and Anna Wessinger, executrices, and Paul Wessinger and Henry Wagner, executors, Portland, Oreg. Filed November 20, 1915.

PRINTS

REGISTERED FEBRUARY 1, 1916.

4,192.—*Title:* "FRANK'S MEAT-TREATS." (For Meat Treats.) L. FRANK & SON CO., Milwaukee, Wis. Filed December 18, 1915.

4,193.—*Title:* "DUROC." (For Pork Sausage.) MARGERUM PROVISION CO., Trenton, N. J. Filed December 17, 1915.

4,194.—*Title:* "IT'S ALWAYS GOOD." (For Flour.) MOSELEY & MOTLEY MILLING CO., Rochester, N. Y. Filed January 5, 1916.

4,195.—*Title:* "FISH AND OYSTER FANCIFUL DESIGN." (For Fish and Oysters.) U. S. STEWART & BRO., Baltimore, Md. Filed November 13, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE GASAU.

Decided December 15, 1914.

PATENTABILITY.

The appealed claims compared with the references and *Held* to differ from applicant's prior patent only in an obvious change that might be classed as needing no suggestion by other known devices.

APPEAL from Examiners-in-Chief.

MATTRESS-FRAME.

The structure of the appealed claims is shown in Figures 3 and 4 of Patent No. 1,149,360, which are as follows:

Fig. 3.

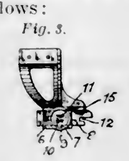
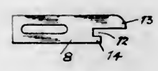


Fig. 4.



The structure of applicant's former patent, No. 1,035,751, is as follows:

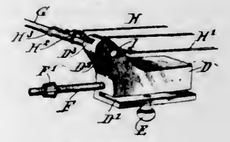
Fig. 2.



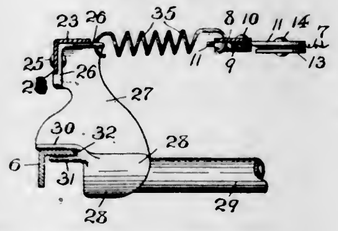
The other references show:

Mardis.

Fig. 2.



Schwartzman.



Mr. C. A. Weed for the applicant.

NEWTON, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in his final rejection of claims 1 to 4, inclusive, 10, 11, 12, 14, and 15, of which claim 3 is a fair example:

3. A mattress frame having at each corner a riser bracket each provided with a slotted adjustable slidable locking bar having means for interlocking it with a side-bar of a bedstead without the removal of said bar, said means comprising overlapping and underlapping portions forming a recess for the reception of a side-bar between such portions, thereby to prevent premature separation of the mattress from or the rocking thereof relatively to the side-bars.

The references relied upon are: Mardis, 790,799, May 23, 1905; Schwartzman, 877,004, January 21, 1908; Gasau, 1,035,571, August 13, 1912; Walker *et al.*, British, 20,846, November 3, 1893.

Applicant's invention involves the feature of a riser-bracket for supporting a mattress-frame. The novel feature over applicant's own patent is the "underlapping portion" marked 14 in Fig. 4 of his drawing.

The ground of rejection has been that there would be no invention in adding this so-called "underlapping portion" to the locking-bar of applicant's patented device, shown best in his Fig. 2 and numbered 24, in view of the "underlapping portion" of such patents as Mardis, Fig. 2, or Schwartzman, Fig. 12, etc.

Applicant vigorously contends, in effect, that inasmuch as the so-called "underlapping portions" in the references are for a different purpose, subserving functions suitable to the construction shown in those patents, but which functions are inappropriate to and not needed in applicant's construction, these features of the references do not suggest application to applicant's patented structure. For example, in Mardis the "underlapping portion" has a set-screw E therein to clamp the frame and prevent longitudinal motion thereof, whereas the "underlapping portion" of applicant's device has no such function.

While the function of the "underlapping portion" is somewhat different in the references from what it is in applicant's device, the change is such an obvious change that it might be classed as one of those changes that really needed no suggestion. It is too frivolous to support a claim, much less the nine claims that applicant has drawn to this feature, and the decision of the Examiners-in-Chief is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

THE ROYAL MILLING COMPANY *v.* THE J. F. IMBS MILLING COMPANY.

Decided November 29, 1915.

TRADE-MARK—OPPOSITION—CHANGE IN GOODS.

The prior right of the opposer to the use of the trade-mark for flour *Held* not vitiated by a change in the goods from soft-wheat flour to hard-wheat flour during the course of its use.

Mr. F. A. Whiteley and *Mr. Bruce S. Elliott* for the appellant.

Mr. Paul Bakewell for the appellee.

SHEPARD, *C. J.:*

The Royal Milling Company filed an application October 18, 1911, for the registration of the word "Rex" as a trade-mark for flour. The mark consisted of a diamond-shaped figure upon which appears in large script type the word "Rex." Below the diamond-shaped figure is a scroll upon which are the words "Rex is King." The word "Rex" is the dominant feature of the mark and is all that is applied for.

The applicant claims a certificate of registration granted to the Royal Milling Company October 3, 1893.

The opposer, The J. F. Imbs Milling Company, claims that it and its predecessors have used the word "Rex" as a trade-mark for flour continuously since 1873. The mark was adopted originally by J. F. Imbs, who is the senior member of the firm opposing registration.

The proof shows that the mark was adopted and used by J. F. Imbs in 1873 as a trade-mark for flour and has been continuously used since that time by successive firms of which J. F. Imbs was the senior member. He is the senior member of the J. F. Imbs Milling Company. The proof establishes satisfactorily the use of the mark upon the flour packed in barrels since said date.

The Examiner of Interferences and the Commissioner, on appeal, rendered decisions sustaining the opposition, from which there has been an appeal to this court.

The applicant contends that the word "Rex" was fraudulently used by the opponent, basing its contention on the fact that "Rex" was originally used on flour made from soft wheat, but is now used on flour made from hard wheat.

As stated by the Commissioner, it is a well-known fact that twenty-five or thirty years ago hard wheat began to be raised in this country. Since that time it has gone into extensive use, and while the flour made from hard wheat may be different from that made from soft wheat, Imbs's record shows that "Rex" was always used upon good flour, and always on the same grade of flour and he held that the trade-mark is not to be vitiated by a change in the species of wheat used, any more than it would be vitiated by an important change of process in the making of flour.

It appears that the "Rex" flour is of the same grade, of the best flour, and there has been no misrepresentation in its use.

We agree with the Commissioner that no fraud has been shown, and his decision is affirmed.

This decision will be certified by the clerk to the Commissioner of Patents.

Affirmed.

Court of Appeals of the District of Columbia.

ROHLFING *v.* MURPHY.

Decided December 6, 1915.

1. INTERFERENCE—RIGHT TO MAKE THE CLAIMS—CONSTRUCTION OF CLAIMS.

Where the counts of the issue called for a car end of sheet metal having a V-shaped stiffening-rib, *Held* that an X-shaped rib, though in a sense composed of two V-shaped ribs, would not satisfy the issue in view of the described function and effect of the V-shaped rib.

2. SAME—SAME.

The right of a party to make the claims goes to the foundation of the interference and will be considered on appeal on priority, (citing *Podlesak* v. *McInnerney*, etc.)

Mr. F. R. Cornwall, Mr. L. S. Bacon, and *Mr. J. H. Milans* for the appellant.

Mr. Otto R. Barnett, Mr. Percival H. Truman, and *Mr. John M. Coit* for the appellee.

ROBB, *J.:*

Appeal from a decision of the Patent Office in an interference proceeding awarding priority of invention to the appellee.

The issue is expressed in the following counts:

1. A car end composed of sheet metal and having formed therein a substantially V-shaped stiffening rib or corrugation.

2. A car end composed of sheet metal and having formed therein a pair of substantially V-shaped stiffening ribs or corrugations.

3. A car end constructed of sheet metal and having formed therein a substantially V-shaped reinforcing rib or corrugation, and a horizontally disposed rib or corrugation.

Upon the declaration of the interference Rohlfing moved that it be dissolved on the ground that Murphy has no right to make the claims of the issue. This motion was referred to the Primary Examiner, who sustained it. Upon appeal to the Examiners-in-Chief the decision of the Examiner was reversed. Judgment of priority on the record then was rendered in due course by the various tribunals in favor of Murphy, Rohlfing all the while insisting that his motion for dissolution should have been granted.

As the question of the right of Murphy to make the claim goes to the foundation of the interference, we will consider it here. (*Podlesak* v. *McInnerney*, 26 App. D. C., 399; *United States, ex rel. Newcomb Motor Co.*, v. *Moore*, 30 App. D. C., 464; *Gold* v. *Gold*, 34 App. D. C., 229.) The claims originated with Rohlfing and therefore should be construed in the light of his disclosure. In his specification Rohlfing directs attention to the fact that the ends of freight-cars are subjected to severe stresses and strains and that he proposes to construct a car end from a single piece of material, such as sheet metal. He states that the novel features of his construction and arrangement of parts consist in vertically-disposed stiffening ribs or corrugations—

which extend from the bottom of the plate to points near the top thereof.

In short, reading his specification in connection with his drawings, it is perfectly clear that in his construction these V-shaped ribs extend across the car end and that they would not perform their purpose and function unless so made. In his decision dissolving the interference, the Primary Examiner said:

Each of the counts relates to a sheet metal car end having a V-shaped rib or corrugation therein. The V-shaped rib of the Rohlfing patent appears as an erect V with an enlargement at the bottom; however, it may be fairly termed V-shaped. The Murphy application shows X-shaped corrugations in the car end and Murphy can only show the V-shaped corrugations by dissecting an X-shaped corrugation.

This, the Examiner ruled, Murphy had no right to do. The Examiners-in-Chief ruled that—

appellant should be sustained in his contention that in his X-shaped construction there are two V-shaped formations.

The Assistant Commissioner in his decision said:

The claims specify that the rib or corrugation is "V-shaped," but they do not specify the location of the rib, that is, whether the point of the V is in the middle of the car end or at the top, bottom or side thereof.

He therefore held that Murphy could make the claims.

In construing these claims we should have in mind the purpose of the construction, as set forth in Rohlfing's specification. He there says that—

by providing the corrugations in the plate and reinforcing the same with the plates arranged over said corrugations, an exceptionally strong and rigid car end is provided which is effective in resisting externally applied crushing strains such as may be received in collisions, or internally applied stresses resulting from shifting loads;

that by this construction—

the impact and stresses produced by blows received by the end plate in service are transmitted directly to the strongest parts of the car body, viz: the corners thereof.

In other words, that the purpose and function of the V-shaped corrugations to which Rohlfing refers is to concentrate the stresses at any particular point on the margin of the plate, according to the location of the corrugation. With Rohlfing's specification in mind the claims, in our view, cannot be given the interpretation placed upon them in the Patent Office. Indeed, by a car end having formed therein a V-shaped stiffening-rib or a pair of such ribs, a mechanic naturally would understand that such ribs extended across the end. Certainly, if told to construct such a V-shaped stiffening-rib in a car end, he would not position the point of the V in the middle of the end. In other words, he would consider the whole and not a half of the end of the car. Giving these claims the interpretation which we think they should reasonably bear, we rule that Murphy's X is not equivalent to Rohlfing's V, and therefore reverse the decision of the Patent Office.

Reversed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Osburn patent, No. 652,806, for flexible electric conduit, *Held* not anticipated and valid. *National Metal Molding Co.* v. *Tubular Woven Fabric Co.*, 227 Fed. Rep., 884.

(U. S. C. C. A.) The Wiedrich patent, No. 721,987, for a hame and trace connector, *Held* void for lack of invention. *Star Hame Mfg. Co.* v. *United States Hame Co.*, 227 Fed. Rep., 876.

(U. S. D. C.) The De Mayo patent, No. 797,364, for an apparatus for coaling ships, *Held* not anticipated and valid. *De Mayo Coaling Co.* v. *Michener Stowage Co.*, 227 Fed. Rep., 895.

(U. S. C. C. A.) The Woodward patent, No. 890,582, for a sewing-machine, *Held* valid. *Union Special Mach. Co.* v. *Singer Mfg. Co.*, 227 Fed. Rep., 858.

(U. S. D. C.) The MacDonnell patent, No. 981,208, for pneumatic tire, *Held* not anticipated and valid. *MacDonnell* v. *Voorhees Rubber Mfg. Co.*, 227 Fed. Rep., 898.

(U. S. C. C. A.) The McLean patents, Nos. 817,438 and 826,349, for an apparatus and method for regulating furnaces, *Held* not anticipated and valid. *Engineer Co.* v. *Hotel Astor*, 226 Fed. Rep., 949.

(U. S. D. C.) The Gale patent, No. 831,337, for apparatus for washing out and refilling locomotive-boilers, *Held* valid. *Horace L. Winslow Co.* v. *National Boiler Washing Co.*, 226 Fed. Rep., 951.

(U. S. C. C. A.) The De Laski and Thropp patent, No. 1,011,450, for a tire-wrapping machine, *Held* not anticipated and valid. *William R. Thropp & Sons Co.* v. *De Laski & Thropp Circular Woven Tire Co.*, 226 Fed. Rep., 941.

(U. S. C. C. A.) The Adt patents, Reissue No. 13,466, and Nos. 1,019,116, 1,019,117, 1,019,214, and 1,040,096, all for eyeglass-mountings, *Held* void for lack of patentable invention, novelty, or utility in view of the prior art. *Adt* v. *Bay State Optical Co.*, 226 Fed. Rep., 925.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1916.

Adler Bros. & Co., their assigns or legal representatives, take notice.

An interference having been declared by this Office between the application of the Los Angeles Soap Company, of 633 East First street, Los Angeles, Cal., for registration of a trade-mark and trade-mark registered June 15, 1886, No. 13,403, to Adler Bros. & Co., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Adler Bros. & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Adler Bros. & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 7, 1916.

Anna H. McDonnald, her assigns or legal representatives, take notice:

A cancelation proceeding having been instituted by this Office upon the application of Richard Hudnut, of 115 East Twenty-ninth street, New York, N. Y., to effect the cancelation of the trade-mark registration of Anna H. McDonnald, of 351 State street, Albany, N. Y., No. 18,410, dated September 9, 1890, and the notice of such proceeding sent by registered mail to the said Anna H. McDonnald at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anna H. McDonnald, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

[Vol. 223. No. 1.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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ISSUE OF FEBRUARY 8, 1916.

Patents	904—	No. 1,170,501 to No.	1,171,404, inclusive.
Designs	29—	No. 48,513 to No.	48,541, inclusive.
Trade-Marks	126—	No. 108,376 to No.	108,501, inclusive.
Labels	23—	No. 19,021 to No.	19,043, inclusive.
Prints	17—	No. 4,196 to No.	4,212, inclusive.
Reissues	3—	No. 14,058 to No.	14,060, inclusive.
Total	1102		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	North Carolina	7	.....
Arizona	2	.....	North Dakota	3	2
Arkansas	2	.....	Ohio	69	8
California	46	3	Oklahoma	5	.....
Colorado	5	.....	Oregon	12	2
Connecticut	23	2	Pennsylvania	72	10
Delaware	4	1	Rhode Island	8	.....
Florida	2	1	South Carolina	.....	.....
Georgia	4	1	South Dakota	4	.....
Idaho	1	.....	Tennessee	4	2
Illinois	116	23	Texas	11	2
Indiana	11	3	Utah	4	.....
Iowa	12	3	Vermont	1	.....
Kansas	6	.....	Virginia	6	2
Kentucky	7	1	Washington	15	1
Louisiana	2	2	West Virginia	3	1
Maine	3	1	Wisconsin	21	3
Maryland	9	5	Wyoming	1	.....
Massachusetts	60	6			
Michigan	30	11	Alaska, District of	1	.....
Minnesota	15	3	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	3	.....
Missouri	34	2	Hawaii Territory	1	.....
Montana	3	.....	Philippine Islands	.....	.....
Nebraska	9	1	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	1	.....
New Hampshire	3	.....	U. S. Navy	.....	.....
New Jersey	47	13			
New Mexico	2	.....	Total to residents of the United States	866	159
New York	149	43			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	11	.....	Peru	1	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
England	28	5	Spain	.....	.....
Finland	.....	.....	Sweden	.....	1
France	7	.....	Switzerland	2	.....
Germany	9	1	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Isle of Jersey	.....	.....	Total to residents of foreign countries	64	7
Italy	2	.....			
Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT NO. 1,032,347.

On February 13, 1915, a decision was rendered that Charles C. Taylor was not the first inventor of the subject-matter covered by claim 1 of his Patent No. 1,032,347, subject, "Type-writing and computing machine," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,077,601.

On January 4, 1916, a decision was rendered that John F. Fox was not the first inventor of the subject-matter covered by claims 1, 2, and 8 of his Patent No. 1,077,601, subject, "Running-gear and draw-bar attachments for mine-cars," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,140,012.

On January 7, 1916, a decision was rendered that Milton Tibbetts was not the first inventor of the subject-matter of claims 14, 19, and 20 of his Patent No. 1,140,012, subject, "Gear-cutting machines," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,152,649.

On January 7, 1916, a decision was rendered that Lawrence W. Luellen was not the first inventor of the subject-matter covered by claims 1, 2, 3, 4, 5, 6, 7, 8, and 11 of his Patent No. 1,152,649, subject, "Golf-Tees," and no appeal having been taken within the time allowed such decision has become final.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 5, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 1	Dec. 15	316
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 2	Dec. 6	848
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Jan. 17	Jan. 28	79
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Oct. 14	Jan. 8	377
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 25	Jan. 5	288
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	June 2	Dec. 1	470
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Oct. 15	Dec. 15	428
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 15	Dec. 20	1090
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	July 10	Dec. 28	504
235	10. Carriages and Wagons	Sept. 7	Jan. 21	691
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 13	Jan. 24	132
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 12	Jan. 19	447
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 4	Dec. 31	422
307	14. Compound Tools: Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Sept. 2	Jan. 6	170
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Nov. 12	Jan. 26	330
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Sept. 8	Dec. 31	445
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Nov. 2	Jan. 14	167
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 16	Jan. 8	202
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Dec. 11	Jan. 5	194
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 15	Jan. 11	142

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 6	Dec. 23	288
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 23	Dec. 30	93
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 31	Dec. 16	419
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Sept. 4	Jan. 6	418
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 10	Jan. 22	51
106	26. Electricity, Generation; Motive Power.	June 17	Oct. 14	527
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 7	Dec. 29	215
65	28. Internal-Combustion Engines	Sept 27	Dec. 13	428
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 3	Nov. 23	327
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 20	Jan. 17	292
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Sept. 30	Dec 11	274
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	July 7	Jan. 12	686
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Sept. 14	Dec 21	428
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Oct. 30	Jan. 10	215
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Sept. 14	Jan. 19	547
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Oct. 13	Jan. 14	685
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	July 15	Dec. 10	594
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Dec. 2	Jan. 10	229
321	39. Water Distribution	Sept. 10	Dec. 18	339
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	June 15	Dec. 1	867
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 16	Jan. 5	357
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	July 3	Oct. 6	836
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 20	Dec. 15	208

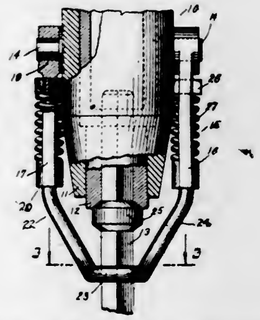
Oldest new case, June 2; oldest amended, Oct. 6.
Total number of applications awaiting action..... 17,381

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 8	Jan. 12	863
	Designs	Sept. 1	Dec. 21	141
	Labels and Prints	Jan. 18	Jan. 14	66

PATENTS

GRANTED FEBRUARY 8, 1916.

1,170,501. SPRING-MUZZLE FOR ROCK-DRILLING ENGINES. WILLIAM T. AYER, Dover, N. J., assignor to McKiernan-Terry Drill Company, Dover, N. J., a Corporation of New Jersey. Filed May 22, 1915. Serial No. 29,938. (Cl. 78—44.5.)



1. A spring muzzle for drilling engines comprising a resilient yoke, a pair of side members adapted to be pivotally mounted on the engine and a yielding connection between the yoke and the side members.

2. A spring muzzle for drilling engines comprising a resilient yoke, a pair of clevises into which the ends of the yoke extend, and means for yieldingly holding the ends of the yoke in the clevises, said clevises being adapted to be pivotally mounted on the engine.

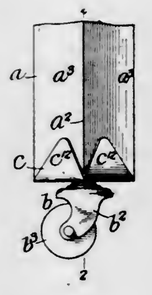
3. A spring muzzle for drilling engines comprising a resilient yoke having a loop in a lateral plane and a pair of substantially parallel spaced end members with heads, clevises into which the end members extend, helical springs interposed between the heads of the end members and the opposite ends of the clevises, said clevises being adapted to be pivotally mounted on oppositely extending lugs on the engine.

4. In combination with a drilling engine having a cylindrical member provided with oppositely extending lugs and a socket adapted to receive a drill steel, of a spring muzzle comprising a resilient yoke pivotally mounted at its ends on the lugs and having a loop adapted to engage the drill steel, said lugs being offset from the central plane of the drill socket whereby the yoke is adapted to be sprung past the center of the cylindrical member and resiliently hold the loop against the drill steel.

5. In combination with a drilling engine having a cylindrical member provided with a socket adapted to receive a drill steel and oppositely extending lugs in a plane offset relative to the central plane of the socket, of a spring muzzle comprising a resilient yoke having a loop in a lateral plane and a pair of substantially parallel spaced end members with heads, clevises into which the end members extend, helical springs interposed between the heads of the end members and the opposite ends of the clevises, said clevises being adapted to be pivotally mounted on the oppositely extending lugs of the engine and said muzzle being adapted to be sprung past the center of the cylindrical member to resiliently hold the loop against a drill steel.

[Claim 6 not printed in the Gazette.]

1,170,502. CASTER. ADOLPH BALLENBERG, New York, N. Y. Filed Sept. 16, 1915. Serial No. 50,937. (Cl. 16—4.)



1. The herein described attaching device for connecting casters with a furniture leg composed of angle iron, consisting of a back plate, a top plate which extends backwardly into the angle of the leg, a bottom plate in which the leg rests and upwardly directed clamping members connected with the bottom plate and which overlap the sides of the leg.

2. An attaching device for use in connection with an angular support, said attaching device being formed from sheet metal and consisting of a bottom plate on which the support rests, a back plate and a top plate, said bottom plate being provided with upwardly directed clamping members and said top plate with downwardly directed clamping members.

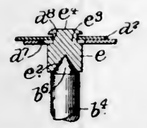
3. An attaching device for securing a caster to an angular leg, said caster being provided with a pintle on which the attaching device is mounted and said attaching device consisting of a bottom plate on which the leg rests, a top plate connected with the bottom plate and which fits in the angle of the leg, and means for detachably securing said device in and to the leg, consisting of upwardly directed spring clamp devices connected with the bottom plate and which overlap the sides of the leg.

4. An attaching device for securing a caster to an angular leg, said caster being provided with a pintle on which the attaching device is mounted and said attaching device consisting of a bottom plate on which the leg rests, a top plate connected with the bottom plate and which fits in the angle of the leg, and means for detachably securing said device in and to the leg, consisting of upwardly directed spring clamp devices connected with the bottom plate and which overlap the sides of the leg, and other clamp devices connected with the top plate and operating inside of the leg.

5. An attaching device for the support of an article of furniture or other article, said attaching device consisting of a bottom plate on which the support rests, a top plate formed integral with the bottom plate, spring clamp devices integral with the bottom plate and which overlap the sides of the support and other clamping members for detachably securing said device in and to the support.

[Claim 6 not printed in the Gazette.]

1,170,503. CASTER. ADOLPH BALLENBERG, New York, N. Y. Filed Oct. 5, 1915. Serial No. 54,172. (Cl. 16—4.)



1. A caster provided with a pintle, spring clamp devices mounted on said pintle and having overlapping ends, and a pivot block mounted in connection with said ends and bearing on the top of the pintle.

2. A caster provided with a pintle, spring clamp devices loosely mounted on said pintle and having overlapping top ends, and a pivot block loosely mounted in connection with said ends and bearing on the top of the pintle.

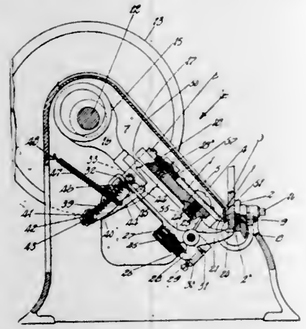
3. A caster provided with a pintle, spring clamp devices loosely mounted on said pintle, and having overlapping top ends, and a pivot block loosely and rotatably mounted in connection with said ends.

4. A caster provided with a pintle, an attaching means loosely mounted thereon and extending above the top of the pintle, and a pivot block rotatably mounted in said means and vertically movable therein and bearing on the top of the pintle.

5. A caster provided with a pintle, clamp devices mounted on said pintle and having overlapping top end members, and a pivot block supported by one of said end members and bearing on the pintle.

[Claim 6 not printed in the Gazette.]

1,170,504. MACHINE FOR TREATING LEATHER AND SIMILAR MATERIALS. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 7, 1910. Serial No. 570,769. (Cl. 12—17.)



1. A machine for beveling material for the soles of shoes; comprising a knife; actuating mechanism therefor, having a given cycle of operation; and means operable by the work to cause the actuation of said knife by said mechanism at a predetermined point in said cycle.

2. A machine for beveling material for the soles of shoes; comprising a reciprocating operating device; actuating mechanism therefor and normally unconnected therewith; and a work-gage in each instance displaceable by the work to connect said device and mechanism operatively, said work-gage in each instance including a yielding connective member.

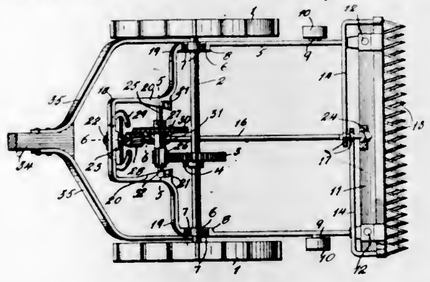
3. A machine of the class described; comprising an operating device; actuating mechanism therefor; a controlling device operable by the work to control the actuation of said operating device by said actuating mechanism; and means to clear said controlling device automatically from the path of said work.

4. A machine of the class described; comprising an operating device; actuating mechanism therefor; a member displaceable yieldingly by the work to start the actuation of said device by said mechanism; means to retard said displacement so as to constitute said member a work-gage; and means acting subsequently to move said member clear of the work.

5. A machine of the class described; comprising a knife; actuating mechanism therefor; a gage to be engaged with the work to position the same for treatment by said knife, and movable by said work to initiate the operation of said knife by said actuating mechanism; means to clear said gage from the path of the material cut from said work; and means to reset said gage automatically after the cutting operation.

[Claims 6 to 16 not printed in the Gazette.]

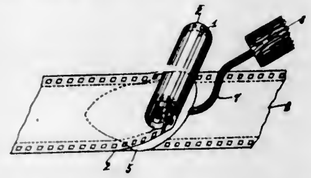
1,170,505. LAWN-MOWER. CHARLES T. BISHOP, Fayetteville, Tenn. Filed Mar. 29, 1915. Serial No. 17,807. (Cl. 56—19.)



1. In a lawn mower of the class described the combination of a frame, said frame having reciprocating cutter blades at its forward portions an axle carried by said frame and provided with supporting wheels, a U-shaped yoke formed integral upon said frame, a drive shaft extending through and being secured to said yoke and also to the forward portions of said frame, means connected to said drive shaft and said cutter blades for reciprocating said cutter blades as said drive shaft is actuated, a drive gear keyed to said axle, a stub shaft carried by said yoke and extending at right angles to said drive shaft, a plurality of gears keyed upon said stub shaft, a spiral gear keyed upon said drive shaft and engaging one of the gears of said stub shaft, said drive gear of said axle engaging the remaining gear of said stub shaft whereby when said axle is rotated, rotary motion may be imparted to said drive shaft for actuating said cutter blades, a hanger journal carried upon said stub shaft, said hanger journal comprising a sleeve fitting upon said stub shaft, a second sleeve formed upon said first-mentioned sleeve and being secured to said drive shaft, said sleeves extending at right angles to each other, a bridge formed integral upon said first-mentioned sleeve and terminating in a depending hollow collar, said bridge being adapted to fit over one of the gears of said stub shaft so as to allow said collar to embrace said stub shaft whereby the gears upon said stub shaft will be held in their correct relations and the drive shaft will be supported so as to positively retain the gear thereof in engagement with one of the gears of said stub shaft.

2. In a lawn mower of the class described, the combination of a frame, said frame provided with reciprocal cutter blades at its forward portion, a yoke formed integral upon said frame, said yoke provided with integral blocks, each of said blocks provided with a bayonet slot, an axle carried by said frame and provided with supporting wheels, a stub axle carried by said yoke so as to allow the ends thereof to fit within said bayonet slots, said stub axle provided with a plurality of gears, a drive gear keyed upon said first-mentioned axle and engaging one of the gears of said stub axle, whereby said stub axle will be positively retained within said bayonet slots, a drive shaft carried by said frame and said yoke, means connecting said drive shaft and said cutter blades for reciprocating the same, a gear carried by said drive shaft, and engaging one of the gears of said stub axle, whereby, upon the rotation of said first-mentioned axle, rotary motion will be imparted to said drive shaft for actuating said cutter blades.

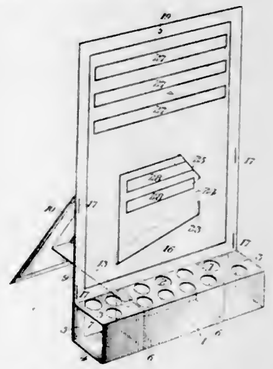
1,170,506. PROCESS FOR PRODUCING FILMS OR PELLICLES DETACHABLY SECURED TO A PAPER BACKING OR THE LIKE. JULES BLONDEL and ALEXIS CHOPIN, Rueil, France. Filed June 29, 1914. Serial No. 848,066. (Cl. 154—2.)



1. Method of making cinematographic films having perforated edges consisting in coating the support for the gelatin film with a non-adhesive material, then treating near the edges thereof with a neutralizing agent for the non-adhesive material between support and film in such a manner that not more than a mere weak adherence of the film to the support is produced at its edges, sufficiently weak to admit of its being easily stripped from the support.

2. Method of making cinematographic machines having perforated edges, consisting in coating the support for the gelatin film with a non-adhesive material, then treating near its perforated edges with acetic acid adapted to deteriorate the non-adhesive emulsion between support and film to such a degree that no more than a mere weak adherence of the film to the support at its edges is produced sufficiently weak to admit of its being easily stripped from the support.

1,170,507. ADVERTISING DISPLAY-RACK. CHARLES BLUM, Philadelphia, Pa. Filed June 29, 1910. Serial No. 569,453. (Cl. 211—24.)



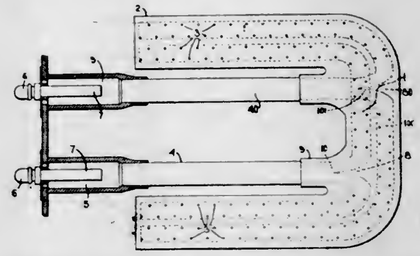
In a display rack, a single piece of flexible sheet material having means, including openings therethrough, to respectively receive an article to be displayed, and a leaflet; the portion of said piece having the article opening being collapsibly movable with respect to the portion of said piece having the leaflet opening; and, leaf portions of said piece, collapsibly movable with respect to said leaflet holding portion and within said article holding portion arranged to support them in coöperative relation; said leaves also serving as lateral supports for the leaflet extending through the leaflet opening, and, the bottom wall of said article holder also serving as a support for said leaflet.

1,170,508. SAFETY-PIN. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed May 5, 1915. Serial No. 25,907. (Cl. 24—161.)



A safety-pin, comprising a wire having a coil terminating in partial convolutions which extend a substantial distance back from the inner edge of the coil, reversely curved portions carried by said partial convolutions and forming therewith similar concavities adapted to accommodate fabric therein and thus prevent the fabric from entering the coil, arms extending from said reversely curved portions, one of said arms having a pointed extremity, and a keeper at the extremity of the other arm adapted to receive said pointed extremity.

1,170,509. GAS-BURNER. ARTHUR M. BURNHAM, Gardiner, Me. Filed Sept. 19, 1914. Serial No. 862,513. (Cl. 158—114.)

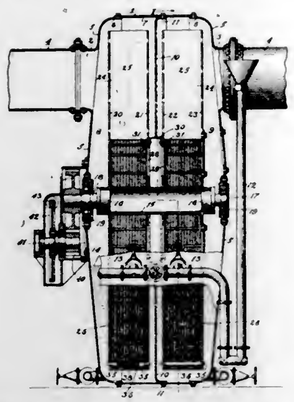


1. A gas burner having a continuous U-shaped burner passage provided with burner openings, a gas inlet port leading into said passage between the ends thereof, and a deflector extending from said passage into the inlet port to bisect the stream of gas as it passes through said port and to deflect the two portions of said stream toward opposite ends of the burner passage, said burner openings being situated only in the portions of the passage beyond the deflector.

2. A burner element having a general U-shape and provided with two separate U-shaped burner passages, each having burner openings and a gas inlet port leading thereto between its ends, and means in each passage adjacent the port leading thereto to divide the stream of gas passing through the port into two parts which are deflected toward opposite ends of the burner passage.

3. A burner comprising a casting having a pair of U-shaped gas passages extending side by side and having burner openings to deliver substantially in one direction and a pair of gas inlets communicating each with one of said passages at a point intermediate the ends thereof, one of said inlets having a port extending below one of said passages.

1,170,510. GAS-SCRUBBER. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 12, 1913. Serial No. 747,910. (Cl. 48—134.)



1. In a gas scrubber, a casing having supply and discharge openings, an annular division plate secured to the casing, a rotatable member mounted in the casing and carrying pairs of annular plates, said pairs being located on opposite sides of the division plate, the inner plate of each pair having a series of openings, an annular member connecting the inner plates of said pairs and located between said plate openings and the inner edge of said division plate, means for forming pack-receiving compartments between the plates of each pair, and pack plates supported in the several compartments and individually insertible therein.

2. In a gas scrubber, a pack carrier having pack-receiving compartments, individual pack plates, and means for securing the plates in pack relation within the compartments, said means permitting positioning and withdrawal of the plates individually.

3. In a gas scrubber, an annular pack carrier having fixedly positioned pack-receiving compartments, individual pack plates, and means for securing the plates in pack relation within the compartments, said means permitting positioning and withdrawal of the plates individually.

4. In a gas scrubber, a pack carrier having pack-receiving compartments, individual pack plates, and means for securing the plates in pack relation within the compartments, said means being positionable independently of the pack plates and permitting positioning and withdrawal of the plates individually.

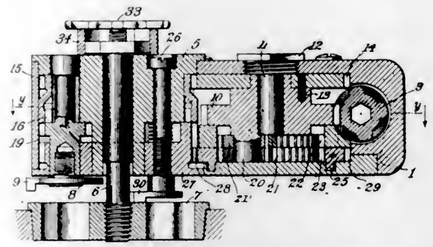
5. In a gas scrubber, a pack carrier having pack-receiving compartments, individual pack plates, and means for securing the plates in pack relation within the compartments, said means comprising a device for each pack cooperating with the compartment walls and positionable independently of the pack plates, said means permitting positioning and withdrawal of the plates individually.

[Claims 6 and 7 not printed in the Gazette.]

1,170,511. DEVICE FOR REFACING VALVE-SEATS. HERMAN CASLER, Canastota, N. Y., assignor to The General Pump Appliance Company, a Corporation of New York. Filed Oct. 30, 1911. Serial No. 657,626. (Cl. 90—12.5.)

1. In a tool for dressing or refacing valve seats and which is adapted to be placed over a post or stem secured centrally to the valve seat, the combination with a cutter head carrying a cutting point, of means for rotating the head about its own axis and means for simultaneously revolving the head around the axis of the said post or stem, as set forth.

2. In a tool for dressing or refacing valve seats and which is adapted to be supported on or by a post or stem secured centrally to the valve seat, the combination with a rotary cutter head having a cutting point and mounted eccentrically to the said post or stem, of a power shaft, and gearing for imparting revolutionary movement to the cutter head about its own axis and revolutionary movement of the head about the axis of said post or stem, as set forth.



3. The combination with a stem or post adapted to be centrally secured to a valve seat, of a tool fitting over said stem, said tool comprising a cutter head having a cutting point, a driving shaft, gearing intermediate to the same and the cutter head for imparting a relatively rapid rotation thereto about its own axis, and other gearing intermediate to the power shaft and cutter head for imparting thereto a relatively slow movement of revolution around the axis of the stem, as set forth.

4. The combination with a post or stem adapted for attachment to a valve seat, of a refacing device fitting over said stem, a pressure foot for supporting the refacing device upon the valve seat, a spring intermediate to the presser foot and said device, and means adapted to adjust the device toward the valve seat against the pressure of said spring and to retract the same therefrom, as set forth.

5. The combination with a post or stem adapted for attachment to a valve seat, of a refacing device fitting over said stem and comprising a rotary cutter head mounted in a spindle head adapted to rotate around said stem, a spindle head, a presser foot mounted in the spindle head, a spring intermediate to said foot and the spindle head and means for adjusting the position of the refacing device vertically on the stem, as set forth.

1,170,512. PUMP. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed May 4, 1911. Serial No. 625,014. (Cl. 253—182.)



1. The combination of a well tube through which the liquid pumped is discharged, a rotary pump shaft in said well tube, a casing in said well tube about said shaft, a runner carried by said shaft, a cylinder about said runner below said casing having its walls spaced away from the walls of the well tube, and a packing between the upper end of said cylinder and said well tube, the annular space between said cylinder and said well tube being at its upper end in communication with the interior of said casing and at its lower end in communication with the interior of the cylinder below the runner.

2. The combination of a well-tube, a casing, a rotary pump-shaft therein, a runner carried by said shaft, a cylinder in which said runner rotates, said cylinder being supported by said casing, a chamber between the cylinder and the well-tube, and packing between the upper portion of the cylinder and the well-tube.

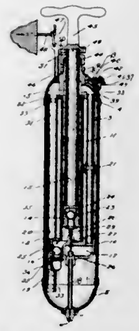
3. The combination with a well-tube, of a rotary pump comprising a rotary shaft having pumping runners mounted thereon and rotating therewith, a casing for said shaft, pump cylinders in which said runners rotate, and packing between the uppermost pump cylinder and the well-tube.

4. The combination with a well-tube, of a rotary pump comprising a rotary shaft having pumping runners mounted thereon and rotating therewith, a casing for said shaft, pump cylinders in which said runners rotate, said pump cylinders being supported by said casing, and packing between the uppermost pump cylinder and the well-tube.

5. The combination with a well-tube, of a rotary pump comprising a rotary shaft having pumping runners mounted thereon and rotating therewith, a casing for said shaft, pump cylinders in which said runners rotate, said pump cylinders being supported by said casing, packing between the uppermost pump cylinder and the well-tube, and a foundation below the pumping mechanism.

[Claims 6 to 31 not printed in the Gazette.]

1,170,513. FIRE-EXTINGUISHER. WALTER T. CHARLES, Chicago, Ill. Filed Feb. 24, 1914. Serial No. 820,612. (Cl. 169—17.)



1. A device of the class described, comprising a container, a discharge nozzle in one end of said container and adapted to be used for directing the discharge of the contents from said container, a cylinder mounted within said container and having an inlet in the end thereof which is adjacent to the said one end of said container and having an outlet at the opposite end, a piston slidably mounted in said cylinder, a valve located in said inlet and adapted to permit fluid to flow from said container into said cylinder, a valve carried by said piston and adapted to permit the flow of fluid past said piston into the side of said cylinder which communicates with said outlet, and a tube located outside of said cylinder and extending alongside thereof and connecting said cylinder outlet with said nozzle.

2. A device of the class described, comprising a container, a discharge nozzle in one end of said container, a cylinder mounted in said container and having an inlet in one end and an outlet in the opposite end, a fitting attached to the end of said cylinder and having passages formed therein, one of which communicates with said cylinder inlet and the other with said cylinder outlet and said nozzle, a tube supporting said fitting and providing communication between said other passage and said nozzle, a second tube located on the outside of said cylinder and connecting said outlet with said other passage, a piston slidably mounted in said cylinder, and valve mechanism adapted to control the admission of fluid from said container into said cylinder and the discharge thereof from said cylinder through said nozzle when said piston is reciprocated in said cylinder.

3. A device of the class described, comprising a container, a discharge nozzle located in one end of said container, a cylinder mounted within said container and having an inlet at one end and an outlet at the opposite end, a piston slidably mounted in said cylinder, a tube located outside of said cylinder and connecting said cylinder outlet with said nozzle, valve mechanism adapted to control the admission of fluid from said container into said cylinder and the discharge thereof from said cylinder through said nozzle, a valve arranged to shut off communication through said nozzle, a stem on said valve extending into said cylinder in position to be engaged by said piston when said piston is in its lowermost position, means normally urging said valve toward its open position, and other means adapted to hold said piston in its depressed position for closing said valve.

4. A device of the class described, comprising a container, a discharge nozzle in one end of said container, a cylinder mounted in said container and having an inlet in one end and an outlet in the opposite end, a fitting attached to the end of said cylinder and having passages formed therein, one of which communicates with said cylinder inlet and the other with said cylinder outlet and said nozzle, a tube supporting said fitting and providing communication between said other passage and said nozzle, a second tube located on the outside of said cylinder and connecting said outlet with said other passage, a piston slidably mounted in said cylinder, valve mechanism adapted to control the admission of fluid from said container into said cylinder and the discharge thereof from said cylinder through said nozzle when said piston is reciprocated in said cylinder, a valve arranged to shut off communication through the tube connecting said other passage in said fitting and said nozzle, a stem on said valve slidably supported in said fitting and extending into said cylinder, and means normally urging said valve toward its open position, said valve being adapted to be held in its closed position when said piston is depressed.

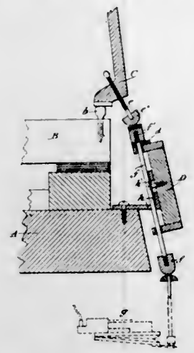
5. A device of the class described, comprising a container, a discharge nozzle in one end of said container, pumping mechanism located in said container and having an outlet connected to said nozzle, a suction pipe connected to said pumping mechanism and terminating adjacent to the ends of said container, said pipe having ports in each of the ends thereof, and sleeves slidably mounted on the ends of said pipe and having ports therein adapted to be moved into and out of registration with the ports in said pipe, said sleeves being adapted to be normally urged by gravity to open the ports at one end of said pipe and close the ports at the opposite end so as to allow a suction of fluid from the lowest part of said container.

[Claims 6 to 8 not printed in the Gazette.]

1,170,514. PIANO-ACTION-OPERATING MECHANISM FOR MECHANICAL MUSICAL INSTRUMENTS. WILLIAM F. COOPER, Norwalk, Ohio. Filed Aug. 23, 1909. Serial No. 514,320. (Cl. 84—226.)

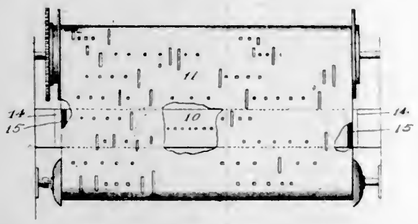
1. In a musical instrument, a key, a key bed, a piano action abstract in position to be actuated by said key, said abstract having a foot at its lower end, player action operating mechanism, a regulating screw carried by the foot of said abstract having a contact button, and a pitman rod vertically adjustable with respect to and supported from the key-bed, means to hold the rod in adjusted relation with respect to the key-bed, said rod extending below the key-bed and forming a connection between the player action operating mechanism and the regulating screw carried by the abstract.

2. In a musical instrument, a key, a key-bed, a piano action abstract in position to be actuated by said key, player action operating mechanism, a bracket carried by the key bed, a pitman rail adjustable on said bracket, means for securing the rail in adjustment, a regulating



screw carried by the lower end of the abstract having a button on its lower end, and a pitman rod slidably mounted in the pitman rail having buttons on its ends contacting respectively with the regulating screw button and the player action operating mechanism.

1,170,515. SHEET-WINDING INDICATOR. WILLIAM F. COOPER, Norwalk, Ohio. Filed Nov. 7, 1912. Serial No. 730,057. (Cl. 84—165.)



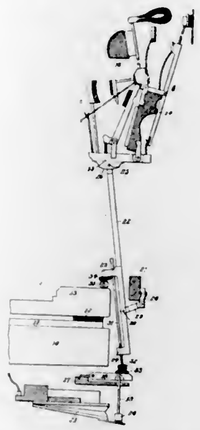
1. In a tracker-box for pneumatically-operated instruments, a tracker over which a note-sheet passes, said tracker bearing upon its face adjacent to each end thereof, an indicator of a color strongly contrasting with the color of the sheet and so located with relation to the ends of the tracker as to be entirely concealed when the sheet is tracking correctly, but visible at one end of the tracker when the sheet shifts laterally.

2. In combination, a tracker, a sheet adapted to be moved across said tracker, and means on the tracker and normally underlying the sheet for visually indicating lateral variations in the travel of the sheet, said means including a face contrasting in color with the color of the sheet.

3. In combination, a tracker, a sheet adapted to be moved across said tracker, and means on the tracker and normally underlying the sheet for visually indicating lateral variations in the travel of the sheet, said means providing a visual color contrast with the sheet upon lateral shifting of the sheet, the contrast exposure being at that edge of the sheet which has moved inward.

4. In combination, a tracker, a sheet adapted to be moved across said tracker, means on the tracker and normally underlying the sheet for visually indicating lateral variations in the travel of the sheet, said means providing a visual color contrast with the sheet upon lateral shifting of the sheet, the contrast exposure being at that edge of the sheet which has moved inward, and elements having a color contrasting with that of and positioned outside said means and adapted to be normally exposed relatively to the sheet, the shifting of the latter carrying one sheet edge over the line formed by the contrasting colors.

1,170,516. UPRIGHT-PIANO ACTION. WILLIAM F. COOPER, Norwalk, Ohio. Filed July 1, 1915. Serial No. 37,574. (Cl. 84—226.)



1. In a player piano, the combination with a piano action, of abstracts for the same, piano keys, a piano key-bed, player piano operating mechanisms placed below said keys and key-bed, and adjusting screws extending through said abstracts from above the keys and in front of the abstracts to the player piano operating mechanisms.

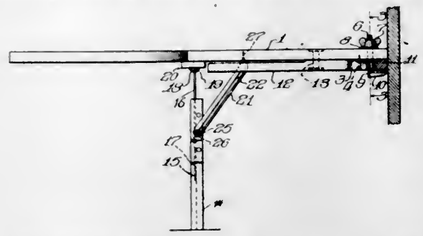
2. In a piano, the combination with an action including a wippen, a key bed, a key mounted on said bed, of a player piano operating mechanism located beneath the key bed, an abstract provided with spaced forwardly extending projections, one of which extends over the key and the other of which extends from the lower end of the abstract means connecting the first projection and the key, and an adjusting screw extending through the projections and provided with a button at its lower end arranged to engage the player mechanism.

3. In a piano, the combination with an action including a wippen, a key bed, a key mounted on said bed, of a player piano operating mechanism located beneath the key bed, an abstract pivoted to the wippen and having a portion extending below the key bed and a second portion extending over the key, a regulating screw carried by the key and a felt on the second projection engaged by the regulating screw, a lower action rail located behind the key and a pivotal connection between the lower action rail and abstract.

4. In a piano, the combination with an action including a wippen, a key bed, a key mounted on said bed, of a player piano operating mechanism located beneath the key bed, an abstract provided with spaced forwardly extending projections, one of which extends over the key and the other of which extends from the lower end of the abstract, a regulating screw carried by the key and a felt carried by the projection extending over the key and engageable by the regulating screw, an adjusting screw extending through the projections and provided with a button at its lower end arranged to engage the player mechanism, a lower action rail located behind the key and a pivotal connection between the lower action rail and abstract.

1,170,517. IRONING-BOARD. FELIX E. DAUDELIN, Chicago, Ill. Filed June 30, 1915. Serial No. 37,260. (Cl. 68—10.)

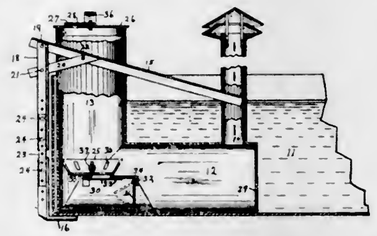
1. An ironing board having a main board provided with vertical openings near its head end, a cleat screwed to the under side of the board and having a surface adjacent to said openings, clamps having screw stems occupying said openings and extending above and below the main board, thumb-nuts turned onto the upwardly extending portions of the stems, jaws carried by the lower ends of the stems, adapted to engage the under side of a support, and flanges adjacent to said jaws and adapted to engage the cleat for preventing the screw stems on the clamps from turning.



2. An ironing board having in combination a main board, clamps carried by the head of the board and adapted to engage a suitable support for supporting the head of the board at the desired height and an extensible leg hinge-jointed to the under side of the main board, said leg comprising a channeled wooden section and a leg extension having a straight portion occupying the channel aforesaid and having a longitudinal slot or opening, the underside of said straight portion being toothed or serrated, screws passing through a longitudinal slot with which said straight portion is provided, and means for hinge joining said leg extension to the under side of the main board.

3. An ironing board having a main board, clamps at the head thereof adapted to clamp a suitable support for supporting the head of the board at the desired height, and a leg hinge-jointed to the under side of the board, said leg comprising a channeled wooden section and a leg extension made of a heavy piece of wire bent to form a straight portion occupying the channel aforesaid and having a longitudinal slot, screws passing through said slot and engaging the wooden section of the leg at the bottom of the channel, said wire having its upper branches spread apart and terminated in eyes, and staples engaging said eyes and engaging the under side of the main board.

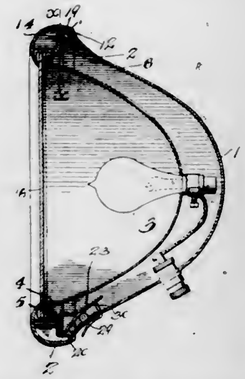
1,170,518. TANK-HEATER. ALBERT N. EATON, Omaha, Nebr. Filed Dec. 1, 1915. Serial No. 64,439. (Cl. 126—367.)



1. A heater for watering tanks comprising a tubular receptacle having a horizontal and a vertical portion, a scoop adapted to rest within the horizontal portion, a grate adapted to be supported upon said scoop, a door hingedly mounted within one end of said scoop, and means for securing said tubular receptacle to the wall of the tank while disposed therein.

2. A device for the purpose described, comprising, in combination with a tank for containing water, a receptacle having an imperforate horizontal part provided with a flue and a vertical part provided with a cover, a scoop within said horizontal part, a grate detachably mounted on the scoop, and an L-shaped bracket adapted to have a connection at one of its ends with the vertical part of the receptacle with its opposite end in engagement with the bottom of the tank for maintaining the imperforate horizontal part of the receptacle against the force of buoyancy while disposed in the water of said tank.

1,170,519. LAMP. DAVID HENRY ELKINS, Amesbury, Mass., assignor to Gray & Davis, Inc., Boston, Mass., a Corporation of Massachusetts. Filed May 25, 1915. Serial No. 30,303. (Cl. 240—41.)



1. The combination in a lamp, of a body or shell having a cylindrical rim with a plurality of sets of yielding lugs disposed about the inner surface of said rim the lugs of each set being located in substantially parallel planes; a reflector having a flange with notches whereby the said flange can be placed between the lugs lying in different parallel planes and rotated about its axis to a locked position, a packing or cord of yielding material being located in a plane parallel with the flange and in front of the same; a removable door or cover provided with an inner edge, a glass or lens in frictional contact with said edge, and an outer edge lapping over the cylindrical rim of the body; and means for detachably locking the door or cover to the rim of the body; the said glass or lens engaging the packing or cord and pressing the flange of the reflector against the lugs at the inner surface of the rim of the body, whereby the glass is cushioned and the reflector held against clattering vibration.

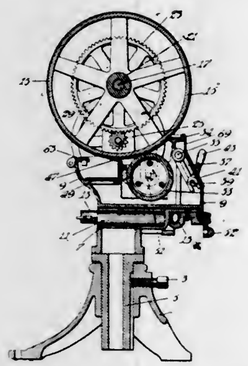
2. The combination in a lamp, of a body or shell having a cylindrical rim with a plurality of sets of yielding lugs disposed about the inner surface of said rim, the lugs of each set being located in two substantially parallel planes; a reflector having a flange with notches whereby the said flange can be placed between the lugs lying in parallel planes and rotated about its axis to a locked position, a packing or cord of yielding material being located in a plane parallel with the flange and in front of the same; a removable door or cover comprising a molding substantially concavo-convex in cross section having an inner edge with a glass or lens in contact therewith and a ring of angular shape in cross section secured to the rear surface of said molding and provided with a part, as 14, with a surface adapted to frictionally engage the disk flange of the reflector when the cord has been compressed by the glass, the outer flange of the molding overlapping the rim of the body; and means for detachably locking the door or cover to the rim of the body.

3. The combination in a lamp, of a body having a rim, a reflector having a flange, means for supporting the flange of the reflector upon the rim of the body, a packing located upon the reflector and in front of the flange, a door or cover having a glass which engages the said packing and an edge which overlaps the rim of the body, and means for detachably securing the door or cover to the body consisting of a lug upon one of said members seated within a slot in the other member, and a pivoted lever located upon

and secured to the interior surface of the body at the opposite side of the body and cover and having an end seated within registering slots in the rim of the body and the cover, means being provided for locking and unlocking said lever.

4. The combination with a lamp body, of a detachable door or cover and means for securing the door or cover to the body consisting of a lug on one of the members seated within a slot in the other member, a pivoted lever at the opposite edge of the body and cover, said lever secured to the inner surface of the body and the end thereof seated within a slot in the door or cover, and a locking lever pivoted within a slot in the body, one arm being adapted to engage the pivoted lever and hold it from turning upon its pivot when in one position and releasing the lever when in another position, the other end of the locking lever being located outside the body and serving as a handle.

1,170,520. CEMENTING-MACHINE. EDWARD ERICKSON, Beverly, and JOHN W. COSGROVE, Medford, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 13, 1913. Serial No. 748,267. (Cl. 91—50.)



1. A machine of the class described having, in combination, a cement applying roll, a self contained receptacle for cement, a supplying roll adapted to transfer cement from said receptacle to said applying roll, a doctor for regulating the thickness of the coating of cement on said applying roll, a scraper for cleaning said roll, and a strainer to which is directed the material removed from said roll by said scraper, said supplying roll, doctor, scraper and strainer being carried by said cement receptacle and being removable from the machine therewith.

2. A machine of the class described having, in combination, a cement applying roll, a readily removable receptacle for cement, open-sided bearings carried by the walls of said receptacle, a cement supplying roll having trunnions adapted to be received in said bearings, a doctor pivotally mounted on a wall of said receptacle and arranged to regulate the thickness of the coating of cement on said applying roll, a raised compartment in said receptacle having a perforated bottom, and a scraper mounted on a wall of said compartment.

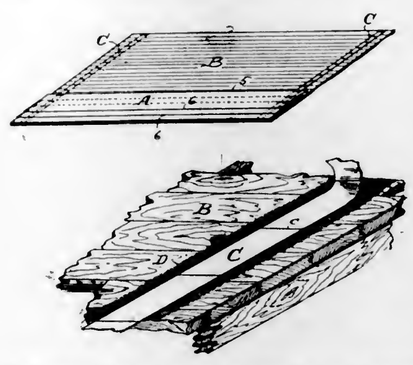
3. A machine of the class described having, in combination, a cement applying roll, a receptacle for cement, open-sided bearings mounted upon the walls of said receptacle, and a cement supplying roll having raised portions at its ends and provided with trunnions adapted to be received in said bearings.

4. A machine of the class described having, in combination, a cement applying roll, a readily removable receptacle for cement, open-sided bearings movably mounted upon the walls of said receptacle, springs carried by said receptacle and arranged to support said open-sided bearings, and a cement supplying roll having trunnions adapted to be received in said bearings.

5. A machine of the class described having, in combination, a cement applying roll, a readily removable receptacle for cement, open-sided bearings movably mounted upon the walls of said receptacle, springs carried by said receptacle and arranged to support said open-sided bearings, a cement supplying roll having trunnions adapted to be received in said bearings, and means for adjusting said supplying roll toward and from said applying roll.

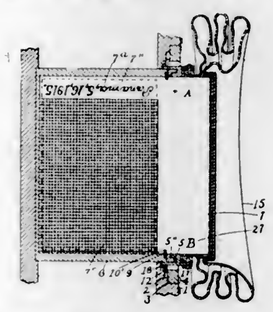
[Claims 6 to 9 not printed in the Gazette.]

1,170,521. METHOD OF LAYING ROOFING MATERIAL. SHERWOOD B. FAISON, Cincinnati, Ohio. Filed Aug. 5, 1911. Serial No. 642,482. (Cl. 33—188.)



The method of laying roofing material which, in form of strips like tar-paper or felt, is applied to the roof surface, parallel to the eave of the roof and so that the strips at their longitudinal edges partly overlap each other, the extent of lap being governed by the particular ply in which the roof is to be laid and which is determined by the positioning of the upper edge of the strip to be laid with reference to the corresponding edge of the strip laid before, said method consisting of providing a tape of suitable thin material with un-numbered positioning marks so spaced that when used for positioning the strips, a roof of a certain predetermined ply results, of affixing strips of said tape to the roof surface so as to extend parallel to each other at right angles from the eave of the roof and suitably spaced, of laying the roofing material on top of these tapes so as to extend from one tape to another one, and of positioning the upper edge of each strip by means of the marks on said tapes to which it is alined.

1,170,522. MASKING DEVICE FOR CAMERAS. ISAAC FELTENSTEIN, St. Joseph, Mo. Filed May 15, 1915. Serial No. 28,366. (Cl. 95—1.1.)



1. In masking devices for cameras, the combination with a camera adapted to hold a sensitive film therein, of

a series of masks formed of transparent material and adapted to be interchangeably inserted one at a time into said camera in front of said film; an opaque coating adhesively secured on a certain portion of one of said series of masks the remaining portion of said mask forming a transparent inscription space adapted to have an opaque inscription applied thereon; another one of said series of masks having an exposure opening formed therethrough in such position that said opening correlates with said opaque coating; another opaque coating on such portion of the last mentioned mask as correlates with said inscription space; admitting means for admitting said masks into said camera in front of said film, one mask at a time; mask guiding means in said camera; and light excluding means for preventing admission of light through said mask admitting means into said camera.

2. The combination with a camera, adapted to hold a sensitive film therein; of a series of masks whereby said film is so masked from light during a series of separate exposures that a series of different objects is photographed on said film; mask admitting means for admitting said series of masks one mask at a time in front of said film; a flexible light proof bag covering said mask admitting means wherefrom said masks are ejected through said mask admitting means into said camera; position designations on said bag; and corresponding mask position designations on each one of said series of masks for determining the position in which said masks shall be placed in said bag.

3. In masking devices for cameras, a body for said camera having a countersink formed in its outer surface and a mask receiving slot therethrough; a shutter slidably mounted in said countersink for covering said slot; a spring whereby said shutter is actuated to cover said slot; securing means actuated by said spring for detachably securing said shutter in position when it is over said slot; releasing means whereby said securing means is manually moved from said shutter for releasing the latter; shutter moving means whereby said shutter is manually moved from over said opening; a lid for said countersink said lid having openings therethrough for affording access to said releasing means and to said shutter moving means; and light excluding means for preventing passage of light through said slot when said shutter is from over the latter.

4. The combination with a camera adapted to hold a sensitive film therein; of a camera body having a countersink formed in its outer surface and a slot formed therethrough opening into said countersink; a shutter slidably mounted in said countersink for closing said slot; shutter guides for laterally guiding said shutter; the latter having securing notches formed in its upper and lower edges; holding projections formed on the rear edge of said shutter; an L shaped lever for each of said notched edges said levers being pivotally mounted in said countersink; a cover projection on each one of said levers; a spring the central portion of which engages the ends of said levers for actuating the same and thereby moving their projections into said securing notches while the ends of said spring press against the front edge of said shutter for actuating the latter to close said slot; and a mask adapted to be inserted in said slot said mask having holding notches formed in the edges thereof for engagement with said holding projections.

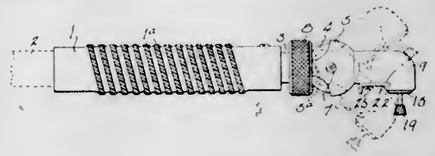
5. The combination with a camera body having a countersink formed in its outer surface and a slot therethrough opening into said countersink; of a cover for said countersink; an escutcheon secured in said lid, said escutcheon having a countersink formed in its outer surface and a slot therethrough in register with the first mentioned slot; a bag for covering the said countersunk slot; a bag connector having its outer portion connected with the inner edges of said bag and its inner portion in the escutcheon countersink, said inner portion having a slot therethrough in register with the previously mentioned slots; a hook on each end of said connector engaged with the rear ends of said L shaped levers; and a mask in said slots extending into said camera body said mask having holder notches in its upper and lower edges for engagement with said holder projections.

1,170,523. RIGHT-ANGLE NERVE-EXTRACTOR. ADELBERT FERNALD, Boston, Mass. Filed July 9, 1915. Serial No. 38,994. (Cl. 32—10.)



A dental drill of the character described, including a tubular stock, a flat looped handle projecting longitudinally from one end of the tubular stock, a head upon the opposite end of the tubular stock, a main shaft extending longitudinally through the tubular stock and journaled therein, one end of the main shaft projecting into the interior of the looped handle, a finger operated sleeve rigidly applied to the said end of the main shaft and arranged within the confines of the flat looped handle so as to be readily engaged by the fingers of the hand grasping the handle, and a chuck mounted within the head and geared to the opposite end of the main shaft.

1,170,524. DENTAL HANDPIECE. ADELBERT FERNALD, Boston, Mass. Filed July 23, 1915. Serial No. 41,441. (Cl. 32—11.)



1. A dental hand piece including a stock terminating in a hollow ball, a drive shaft extending through the stock and journaled therein, a socket pivotally mounted upon the ball and provided with rearwardly extending ears, a locking collar mounted upon the stock for coöperation with the said ears to hold the socket in different angular positions, a head projecting longitudinally from the socket and provided at the end thereof with a lateral opening, a chuck journaled within the head and facing the lateral opening, means for locking a drill within the chuck, a shaft extending longitudinally through the head, gearing between the shaft and the chuck, and a universal joint arranged within the hollow ball and connecting the shaft to the drive shaft.

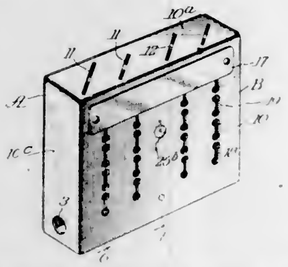
2. A dental hand piece including a stock terminating in a hollow ball, a drive shaft extending through the stock and journaled therein, a socket adjustably mounted upon the ball, means for locking the socket in different angular positions upon the ball, a head projecting longitudinally from the socket and provided at the end thereof with a lateral opening, an apertured plug fitted within the lateral opening, a tubular chuck journaled within the head with the bore thereof in registry with the aperture of the plug, said chuck being held in position within the head by the plug, means for locking a drill within the chuck, a shaft extending longitudinally through the head, a sleeve slipped upon the shaft and having an interlocking connection therewith, gearing between the sleeve and the chuck, and a universal joint arranged within the ball and connecting the shaft to the drive shaft.

3. A dental hand piece including a stock terminating in a hollow ball, a drive shaft extending through the stock and journaled therein, a socket adjustably mounted upon the ball and formed with a longitudinally extending sleeve, means for locking the socket in different angular positions, a tubular head fitted removably upon the sleeve and having a lateral opening in the end thereof, an apertured plug fitted within the lateral opening, a tubular chuck journaled within the head and arranged with the bore thereof in registry with the aperture of the plug, a drill insertible into the tubular chuck through the aperture of the plug and having an annular groove in the side thereof, a locking slide mounted upon the head for engagement with the annular groove to retain the drill in position, a shaft ex-

tending longitudinally through the head, a sleeve slipped upon the shaft and journaled within the neck of the socket, said sleeve having an interlocking connection with the shaft, bevel gearing between the sleeve and the tubular chuck, and a universal joint arranged within the hollow ball and connecting the shaft to the drive shaft.

4. A dental hand piece including a stock terminating in a hollow ball, a drive shaft extending through the stock and journaled therein, a socket pivotally mounted upon the ball and formed with a longitudinally extending neck, ears projecting rearwardly from the socket, a collar threaded upon the stock for coöperation with the ears to lock the socket in different angular positions, a tubular head fitted upon the neck of the socket and provided at the end thereof with a lateral opening, an upright plug fitted within the lateral opening, a tubular chuck journaled within the head with the bore thereof in registry with the aperture of the plug, a drill insertible through the apertured plug into the chuck and having an annular groove therein, a locking slide mounted upon the head for engagement with the annular groove of the drill to retain the drill in position, a shaft extending longitudinally through the head, a sleeve slipped upon the shaft and journaled within the neck of the socket, said sleeve having an interlocking connection with the shaft, bevel gearing between the sleeve and the tubular chuck, and a ball and socket joint arranged within the hollow ball and connecting the shaft to the hollow drive shaft.

1,170,525. SAVINGS-BANK. CHARLES FISHER, Milwaukee, Wis., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1914. Serial No. 821,281. (Cl. 133—7.)



1. A savings-bank comprising a series of coin-compartments adapted to maintain the coins in assorted, stacked relation, and a closure releasably locked in closed position, said savings-bank having coin-admission slots corresponding with the coin-compartments and having said coin-partments so formed arranged and alined as to permit the several stacks of coins to be spread out in rows by manipulating the savings-bank.

2. In a savings-bank, the combination of a section having a series of coin-compartments, so formed, arranged and alined as to permit the several stacks of coins to be spread out in rows by manipulating the savings-bank, a complemental casing-section, means associated with said first-named section whereby the coins will be stacked with the individual coins inclined, and coin-admission ports corresponding with the several coin-compartments.

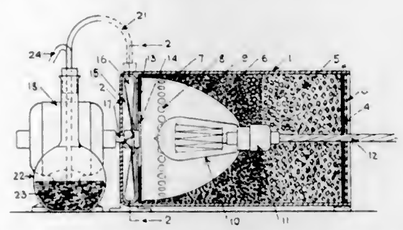
3. In a savings-bank, the combination of a section having a series of coin-compartments disposed substantially in a common plane, a complemental casing-section, a releasable locking-device securing said sections together, and coin-admission ports corresponding with the several coin-compartments, said first-named section having its coin-compartments of such form, construction and arrangement as to adapt the device to be manipulated to discharge the coins in rows on a table.

4. A savings-bank comprising a series of coin-compartments having means for stacking the coins with the coins inclined with relation to the axes of the stacks, said compartments being so formed, arranged and alined as to permit the several stacks of coins to be spread out in rows by manipulating the savings-bank, and a closure releasably locked in closed position, said savings-bank having coin-admission slots corresponding with the coin-compartments and equipped with slot-guards.

5. A savings-bank comprising a series of coin-compartments for coins of different denominations, said compartments having sloping walls at their bottoms, and a closure releasably locked in closed position, said savings-bank having coin-admission slots corresponding with the coin-compartments.

[Claims 6 to 33 not printed in the Gazette.]

1,170,526. APPARATUS FOR PURIFYING AIR. WALLACE H. GAITHER, Pittsburgh, Pa. Filed Mar. 6, 1915. Serial No. 12,561. (Cl. 167—3.)



1. Apparatus for purifying air, comprising a casing provided at one end with a cyclonic chamber and open at its opposite end, a filtering screen at the open end of said casing, means within said casing for absorbing carbon dioxid and moisture, and a high speed centrifugal separator in said cyclonic chamber for removing the finer dust particles.

2. Apparatus for purifying air, comprising a casing provided at one end with a cyclonic chamber and open at its opposite end, a filtering screen at the open end of said casing, means within said casing for absorbing carbon dioxid and moisture, a high speed centrifugal separator in said cyclonic chamber for removing the finer dust particles, and a trap or well at one side of said cyclonic chamber for collecting the finer dust particles.

3. Apparatus for purifying air, comprising a hollow casing closed at one end and open at the other, a reflector within said casing, an electric lamp within said reflector, and a centrifugal separator at the open end of said reflector.

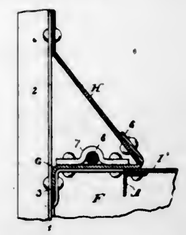
4. Apparatus for purifying air, comprising a hollow casing closed at one end and open at the other, a reflector within said casing, an electric lamp within said reflector, a centrifugal separator at the open end of said reflector, and a transparent diaphragm between said lamp and separator and provided with a central opening therein.

5. Apparatus for purifying air, comprising a hollow casing closed at one end and open at the other, a reflector within said casing, an electric lamp within said reflector, a centrifugal separator at the open end of said reflector, and a transparent diaphragm between said chamber and separator and provided with a central opening therein, said casing containing means for absorbing carbon dioxid and moisture and also provided with mechanical filtering means.

[Claim 6 not printed in the Gazette.]

1,170,527. CAR CONSTRUCTION. FREDERICK H. GIBBS, New York, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 12, 1912. Serial No. 731,031. (Cl. 105—14.)

1. In a dumping car the combination comprising a plurality of transverse underframe members; a Z-shaped side sill of relatively thick metal connecting said members, said sill having an oblique flange, posts connected with some of said transverse members, and a sheet metal side wall terminating above said transverse members and of less thickness than said sill and said side wall lapping said oblique flange and being connected respectively with said posts and oblique flange.



2. In a car construction, transverse members, a vertical side wall provided with inwardly bent lower portion terminating above said transverse members, side posts, and a relatively Z-shaped member with a horizontal web portion between said wall and transverse members, connecting a plurality of said transverse members and having an inclined flange connected to the lower portion of the side wall.

3. In a car construction, a plurality of transverse members, a side wall, a part of which is in relative vertical alinement with the ends of some of said members and which is provided with an oblique lower end portion terminating above said transverse members, a side sill having a horizontal web and oblique flange resting on the transverse members and connecting a plurality of the transverse members and connected directly to said oblique lower end of the side wall.

4. In a car constructed with sheet metal side walls having a vertical portion and an inwardly inclined lower portion terminating above the cross-bearers, cross-bearers, a flanged plate of metal thicker than the metal of the side walls and having a horizontal web portion secured to and connecting a plurality of said cross-bearers having an oblique flange lapping and being connected to said inwardly inclined wall portion whereby the load shedding portion of the wall is reinforced and connected with said cross-bearers.

5. In a car constructed with sheet metal side walls having an inwardly inclined load shedding portion, an underframe comprising a plurality of transverse members, a relatively Z-shaped member with horizontal web and inclined flange extending parallel with the inclined portion of said wall and connected thereto, the horizontal web of said Z member being connected with the top and ends of a plurality of said transverse members.

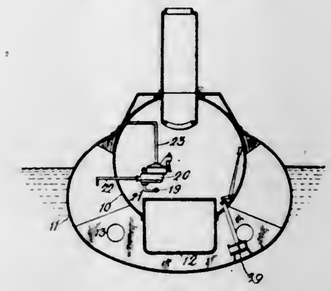
[Claims 6 to 10 not printed in the Gazette.]

1,170,528. TRACE-CARRIER. JOHN GREIFENHAGEN, Randolph, S. D. Filed Aug. 22, 1912. Serial No. 716,504. (Cl. 54—56.)



A trace carrier comprising an integral structure formed of bendable metal, a triangular body portion, a resilient split ring formed at the vertex of said body portion and arranged in a plane at right angles to the plane of the body portion so that portions thereof extend equal distances beyond the plane of the body portion, said ring constituting a suitable support, a hook integral with the vertex and arranged in the same plane as the ring, said hook including an inclined arm projecting beyond the sides of said body portion and a horizontal arm projecting through said body portion, and the extreme free end of said horizontal arm being curved at the terminal thereof and arranged in a plane substantially flush with the plane of the outer edge of said ring and constitutes a support coöperating with the supporting portion of the ring for supporting the body portion and facilitating the maintenance of a trace loop in engagement therewith.

1,170,529. SUBMARINE BOAT. HUGO E. GRIESHABER, New London, Conn., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed June 2, 1915. Serial No. 31,652. (Cl. 114—16.)



1. A submarine boat having a strong inner hull, a relatively weak outer hull, means for admitting water to the space between the hulls, means for admitting air to the space between the hulls to expel the water therefrom, and means for automatically regulating the pressure of the air admitted to the space between the hulls with reference to the pressure of the water surrounding the boat; substantially as described.

2. A submarine boat having a section thereof of double hull conatruction providing a space for a ballast tank between the inner and outer hulls, means for admitting water to the ballast tank, means for admitting air to the ballast tank to expel the water therefrom, and automatic regulating devices in the air supply line for precluding the admission of air to the ballast tank at a pressure exceeding the pressure of the water surrounding the boat by more than a predetermined amount; substantially as described.

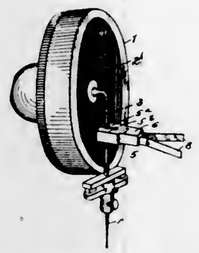
3. A submarine boat having a section thereof of double hull construction including a strong inner hull and a relatively weak outer hull providing space for a ballast tank between the two hulls, a source of supply of compressed air within the boat, a connection therefrom to the ballast tank, an automatic regulator in said connection, and a connection from the regulator to the exterior of the boat whereby the operation of the regulator will be dependent upon the pressure of the water surrounding the boat; substantially as described.

4. A submarine boat having a section thereof of double hull construction including a strong inner hull and a relatively weak outer hull providing space for a ballast tank between them, a source of supply of compressed air within the boat, a connection from said source to the ballast tank, a preasure regulator in said connection, a pipe extending from the pressure regulator to the exterior of the boat, and controlling devices within the regulator controlling the flow of air to the ballast tank and responsive to the pressure of the air flowing through the regulator and to the pressure of the water admitted to the regulator by said pipe; substantially as described.

5. A submarine boat having a tank with a relatively weak outer skin, means for admitting fluid to said tank, means for admitting air to said tank to expel the fluid therefrom, and means for automatically limiting the air pressure within said tank with reference to the pressure of the water surrounding the boat; substantially as described.

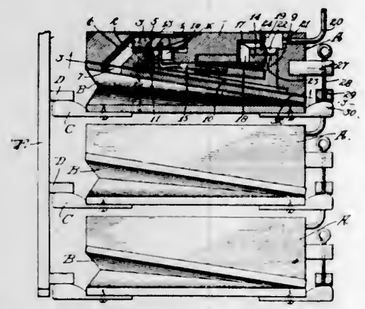
[Claims 6 to 8 not printed in the Gazette.]

1,170,530. METHOD OF REGULATING SOUND-BOX REPRODUCTION. EMIL GRUENFELDT, Cleveland, Ohio. Filed Jan. 8, 1915. Serial No. 1,239. (Cl. 181—11.)



The method of regulating the reproduction of sound from a sound box, which consists in engaging resiliently a regulating mass with the needle arm of said sound box between its point of connection with the diaphragm and its point of connection with the sound box frame, and moving said regulating mass to and fro along said needle arm between its said points of connection to effect the reproduction desired.

1,170,531. PNEUMATIC ACTION. ADOLPH PETER GUSTAFSON, Chicago, Ill., assignor to M. Schulz Co., Chicago, Ill. Filed June 8, 1914. Serial No. 843,747. (Cl. 84—178.)



1. A pneumatic action comprising a board or chest member having chambers formed in its upper portion, a windway formed in its lower portion, a pneumatic closing said windway, a valve controlling pneumatic, and a passage leading from each pneumatic to the windway.

2. A pneumatic action comprising a board or chest member having valve chambers formed in its upper portion, and having a windway formed in its lower portion and a pneumatic closing said windway.

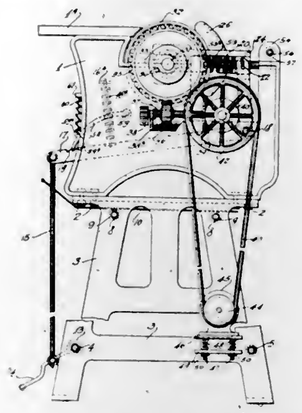
3. A pneumatic action comprising a board or chest member having valve chambers formed in its upper portion, and having a windway formed in its lower portion, and also having ducts or passages from said valve chambers to the under surface of said board or member, a pneumatic closing said windway and connections between said pneumatic and said duct or passage.

4. A pneumatic action comprising a board or chest member having chambers formed in its upper portion, a windway formed in its lower portion, a pneumatic closing said windway, a valve provided in one of said chambers, a passage leading from said pneumatic to the valve chamber and thence to the windway, a passage leading from said windway to the other chamber, a port leading from said chamber to a valve controlling pneumatic, and connections from said pneumatic to the valve provided in said first mentioned chamber.

5. A pneumatic action chest having a member provided with a valve chamber in its upper portion, and a windway in its lower portion, and also having a port communicating with said valve chamber and windway, in combination with a valve controlling pneumatic secured within said windway and having a rod extending up through said port and a valve controlling said port and resting upon the upper end of said rod.

[Claims 6 to 10 not printed in the Gazette.]

1,170,532. IRONING-MACHINE. AXEL R. GUSTAFSON, Chicago, Ill. Filed July 3, 1915. Serial No. 37,925. (Cl. 68—9.)

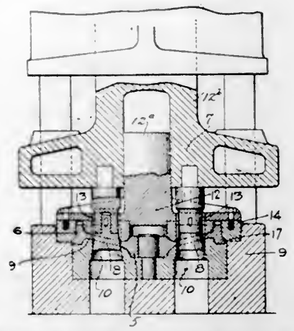


1. In a motor driven ironing machine comprising a frame and a shafted padded roll and a clutch on the shaft of said roll whereby the same may be operatively connected to said motor, horizontally disposed bearings arranged upon the roll shaft at each end of said rolls, rods connecting said bearings and the said frame, angular arms slidable over said rods, one of the said arms being extended for operative engagement with said clutch; springs interposed between said arms and bearings upon said rods, a shoe carried by said angular arms, pivotally supported levers operatively engaging said angular arms and a foot lever connected to said levers whereby the same may be actuated to move said shoe into engagement with said padded roll.

2. In a motor driven ironing machine comprising a frame and a shafted padded roll and a clutch on the shaft of said roll whereby the same may be operatively connected to said motor, horizontally disposed bearings arranged upon the roll shaft at each end of said roll, rods connecting said bearings and the said frame, angular arms slidable over said rods, one of said arms being extended and terminally beveled and bifurcated for operative engagement with said clutch; springs interposed between said arms and bearings upon said rods, a shoe carried by said angular arms, toothed levers operatively engaging said angular arms, a foot lever connected to said levers whereby the same may be depressed to move said shoe into engagement with said padded roll, pivotally supported arms carried by said frame for engagement with the toothed portions of said levers whereby they may be releasably retained in depressed relation and return springs for said last named arms.

3. In an ironing machine, a normally stationary power driven padded roll, an horizontally movable shoe capable of engagement with said padded roll, means yieldingly connecting said members whereby they are spaced away from each other, angular arms supporting said shoe, one of said arms being extended to coöperate with the shaft of said padded roll and foot-controlled means operatively connected to said angular arms whereby they may be actuated and caused to actuate said shoe and to coöperate with said roll shaft to connect the same with the source of power.

1,170,533. MANUFACTURE OF CAR-WHEELS. JOHN M. HANSEN, Pittsburgh, Pa., assignor to Forged Steel Wheel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 4, 1910. Serial No. 565,025. (Cl. 29—168.)



1. The herein described method of forming forged steel wheels, consisting in forging a finished wheel body with an integral hub portion, a flat web portion of the same thickness at equal distances from the wheel axis and a rim portion, and simultaneously shearing through said web portion at different points along lines parallel to the axis of the wheel to produce spoked portions connecting the hub and rim.

2. The herein described method of forming forged steel wheels, consisting in forging a finished wheel body with an integral hub portion, a flat web portion of the same thickness at equal distances from the wheel axis and a rim portion, and while the wheel is still in heated condition shearing through said web portion simultaneously at different points along lines parallel to the axis of the wheel to produce spoked portions connecting the hub and rim.

3. The herein described method of forming forged steel wheels, consisting in forging a finished wheel body with an integral hub portion, web portion and rim portion, the web portion being dished and of the same thickness at equal distances from the wheel axis, and shearing through said web portion simultaneously at different points progressively from adjacent the rim toward the hub along lines parallel to the axis of the wheel to produce spoke portions connecting the hub and rim.

4. The herein described method of forming forged steel wheels, consisting in forging a finished wheel body with hub portion, rim portion and continuous connecting web portion, clamping said wheel between suitable dies, and while so held shearing through said web portion progressively on radial lines parallel to the axis of the wheel to produce spoke portions connecting the hub and rim.

5. The herein described method of forming forged steel wheels, consisting in forging a finished wheel body with hub and rim, and a continuous connecting web portion, confining the rim portion of said wheel and while so confined shearing through said web portion progressively on radial lines to produce spoke portions connecting the hub and rim.

[Claims 6 and 7 not printed in the Gazette.]

1,170,534. AIR-HOSE COUPLING FOR RAILWAY-CARS. WILLIAM H. HIDLEBAUGH, Gould, Okla. Filed Sept. 8, 1914. Serial No. 860,665. (Cl. 188—13.)



In an air hose coupling, the combination of a pair of yieldingly supported coöperating heads, said heads having their adjacent ends provided with outwardly tapering fingers adapted to move into interlocking relation when the heads are moved toward each other, an air pipe line mounted in each head and provided at one end with means for connection to a train pipe and having their other ends positioned to be disposed in registration when the heads are interlocked, a valve in each of said pipe lines, a handle on each valve having a cam edge, spring means secured to each handle and constantly tending to move the associated valve to closed position and the handle in bridging relation with respect to the space between the fingers of the related head, and a roller journaled on the outer end of one of the fingers of each head and adapted to engage the cam edge of the handle on the other head during the coupling movement of said heads to operate the valves to open position.

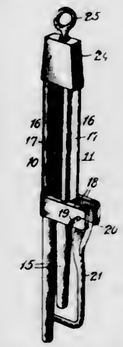
1,170,535. GARTER. FRED T. HILL, Chicago, Ill. Filed Dec. 23, 1914. Serial No. 878,647. (Cl. 241—6.)



1. A spacing member for garters and the like comprising a member having a garter engaging side and a side opposite said garter engaging side convex in shape providing means whereby greatest strains on said convex side will be sustained at the central portion thereof.

2. A spacing member for garters and the like comprising a yielding material having its garter engaging sides substantially flat, its side opposite said flat side convex and its edges thin, providing means whereby greatest stress on the convex side will be sustained at the central portion thereof.

1,170,536. STERILIZING DEVICE. CORNELIUS 'T HOEN, Maywood, Ill. Filed Aug. 3, 1914. Serial No. 854,656. (Cl. 128—27.)



1. A sterilizing device comprising members provided with coöperating surfaces adapted to apply pressure externally to the scrotum of an animal, stop-means between the members whereby they will be spaced apart and in position to cause the members to crush a cord in the scrotum, without cutting it, and means for holding the members in operative position to keep the cord under pressure.

2. A sterilizing device comprising members provided with coöperating round surfaces to apply pressure externally to the scrotum of an animal, stop-means between the members whereby they will be spaced apart and in po-

sition to crush a cord in the scrotum, without cutting it, and means for holding the members in operative position to keep the cord under pressure.

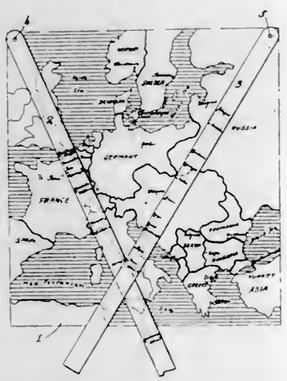
3. A sterilizing device comprising members provided with coöperating surfaces adapted to apply pressure externally to the scrotum of an animal, a covering of soft material on said surfaces to prevent them from cutting the scrotum, stop-means between the members, whereby they will be spaced apart and in position to crush a cord in the scrotum, without cutting it, and means for holding the members in operative position to keep the cord under pressure.

4. A sterilizing device, comprising members provided with coöperating surfaces adapted to apply pressure externally to the scrotum of an animal to crush a cord in the scrotum, means for forcing the members together in operative position, and locking them to keep the cord under pressure, and stops between said members for holding them spaced apart sufficiently to prevent cutting of the scrotum.

5. A sterilizing device comprising members formed to apply pressure externally to the scrotum of an animal to crush a cord in the scrotum without cutting the scrotum, a link connection between said members, means for locking the link in substantially parallel relation to one of the members when the latter are in operative position, and means for forcing the members together.

[Claims 6 and 7 not printed in the Gazette.]

1,170,537. EDUCATIONAL DEVICE. WALTER W. HOLMES, Waterbury, Conn. Filed Oct. 10, 1914. Serial No. 865,992. (Cl. 35—6.)



1. In an educational device, the combination of a surface bearing a map, a strip movably connected at a certain point on said surface and having indications of desired points thereon and a second strip movably connected at another certain point on said surface and bearing corresponding indications of said points.

2. In an educational device, the combination with a surface bearing a map, of a strip pivotally connected thereto at a certain point, indications of desired points arranged on said strip in the order of their respective straight line distances from said certain point, a second strip pivotally connected at another certain point to said surface and indications on said second strip of said desired points arranged in the order of their respective straight line distances from said another certain point.

3. In an educational device, the combination with a surface bearing a map, of a strip extending in a surface corresponding to said map surface, said strip being pivotally connected thereto at a certain point, indications of desired points arranged on said strip, a second strip extending in a surface corresponding to said map surface, said second strip being pivotally connected to said map surface, and indications on said second strip corresponding to said desired points.

4. In an educational device, the combination with a surface bearing a map, of strips extending in a surface corresponding to said map surface, means for pivotally connecting said strips at predetermined points on said map surface and names of points arranged on said strips at certain spaced distances corresponding to points desired to be located on said map.

5. In an educational device, the combination with a map surface, of a strip extending in a surface corresponding to said map surface, means for pivotally connecting said strip to said map surface at a predetermined point, a second strip extending in a surface corresponding to said map surface, means for pivotally connecting said second strip to said map surface at a second predetermined point, indications on said first strip of desired points arranged relatively to one another in accordance with the respective distances of said desired points from said predetermined point and indications on said second strip of said desired points arranged relatively to one another in accordance with the respective distances of said desired points from said second predetermined point.

1,170,538. PHOTOGRAPHIC CAMERA. HARRY L. IDE, Springfield, Ill. Filed Apr. 5, 1915. Serial No. 19,113. (Cl. 95—10.)



1. A photographic camera including a plurality of negative elements; and sensitized testing portions, each individual to and coupled with a negative element, for testing actinic light value.

2. A photographic camera including a plurality of negative elements; sensitized testing portions, each individual to and coupled with a negative element, for testing actinic light value; and means for arranging the negative elements and the sensitized testing portions individual thereto for exposure.

3. A photographic camera including a plurality of negative elements; sensitized testing portions, each individual to a negative element, for testing actinic light value; and means for simultaneously moving the negative elements and the sensitized testing portions individual thereto to exposure positions.

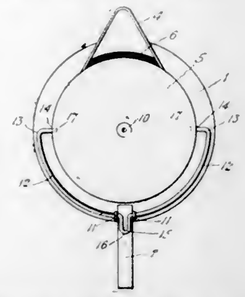
4. A photographic camera including a plurality of negative elements; light shields for the negative elements individual thereto and movable therewith; and an actinic light value testing portion provided upon each light shield.

5. A photographic camera including a plurality of negative elements; sensitized testing portions, each individual to and coupled with a negative element, for testing actinic light value, there being an exposure opening in the camera casing, distinct from the lens opening, to which the testing portions are brought; and a shutter for normally excluding actinic light from said opening.

[Claims 6 to 17 not printed in the Gazette.]

1,170,539. COFFEE-POT. HARRY STEVENS ISHAM, Belmar, N. J. Filed Oct. 24, 1912. Serial No. 727,631. (Cl. 53—3.)

1. In a device of the class described, the combination with a receptacle and a removable cover therefor, said cover being provided with a straining element attached thereto, of resilient means the ends of which are adapted to engage oppositely positioned sockets on said cover, said resilient means being pivoted to the forward part of the handle of said receptacle and adapted to lock said cover on the receptacle by engagement with said handle at a point in arrears of said pivotal engagement.



2. In a device of the class described, the combination with a receptacle and a removable cover therefor provided with retaining sockets, a plurality of lugs mounted on the receptacle, resilient means fulcrumed to said lugs and adapted to be seated in the sockets of said cover to lock said cover on the receptacle, said resilient means comprising a U-shaped portion and a plurality of arms extending from the U-shaped portion outwardly and forwardly and into engagement with said cover, said U-shaped portion being adapted to engage a part of the receptacle to limit the pivotal movement of the resilient member in one direction.

3. In a device of the class described, the combination with a receptacle having a plurality of upstanding lugs, of a removable cover provided with oppositely positioned sockets, and means to lock said cover in its closed position on the receptacle, said locking means comprising substantially arcuate resilient arms adapted to engage said socket, said arms being provided with a substantially U-shaped member adapted to be positioned between said lugs and to bear against a portion of the receptacle to lock the cover in its closed position.

1,170,540. COLOR PHOTOGRAPH OR FILM AND METHOD OF PRODUCING SAME. FREDERIC E. IVES, Woodcliffe-on-Hudson, N. J. Filed July 1, 1914. Serial No. 848,356. (Cl. 95—2.)



1. Method of producing a color photograph or color motion picture film from suitable color-selection negatives consisting in first forming one color image within the body of a given layer of material, and thereafter sensitizing, exposing and by a different process introducing another color image of different color into the body of the same layer of material in registry with the first image.

2. Method of producing a color photograph or color motion picture film from suitable color-selection negatives consisting in first photographically forming an insoluble blue-to-green image within the body of a given layer of material, and thereafter sensitizing said layer, exposing, and by absorption introducing a red image into the body of said layer in registry with the blue-to-green image.

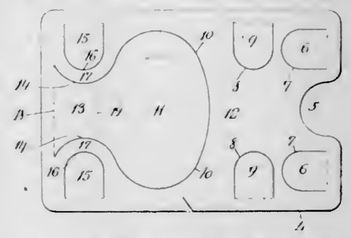
3. Method of producing a color photograph or color motion picture film from suitable color selection negatives consisting in first photographically forming an insoluble color image within the body of a given layer of material, and thereafter photographically exposing and by absorption introducing a dye image of different color into the body of the same layer of material in registry with the first image.

4. Method of producing a color photograph or color motion picture film from suitable color-selection negatives consisting in first photographically forming an insoluble color image within the body of a given layer of material, and thereafter photographically exposing under a diapositive, washing and by absorption introducing a dye image of different color into the body of the same layer of material in registry with the first image.

5. Method of producing a color photograph or color motion picture film from suitable color-selection negatives consisting in first photographically forming a silver image within the body of a given layer of colloid material, converting the silver into an insoluble color, and thereafter sensitizing, exposing, washing and by selective absorption introducing a dye image of different color into the body of the same layer of material in registry with the first image.

[Claims 6 to 14 not printed in the Gazette.]

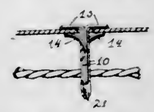
1,170,541. MEMORANDUM-HOLDER. NELSON L. JACOBUS, West Orange, N. J., assignor to Electro-Chemical Engraving Co., a Corporation of New York. Filed Jan. 10, 1914. Serial No. 811,501. (Cl. 40—120.)



1. A pad holder made from a blank of sheet material comprising: a base member, a member cut from the base and bent to form a relatively large concaved top member substantially parallel to the base and connected thereto by a relatively narrow resilient neck portion at right angles to said base, the relatively narrow neck portion leaving comparatively large areas in said base between said neck portion and the lateral edges of said base to provide material from which lateral pad retaining holders are formed, and supporting strips in said base portion between said lugs and neck portion.

2. A pad holder made from a blank of sheet material comprising: a base portion, a member cut from the base and bent to form a relatively large concaved top member substantially parallel to the base at one end thereof and connected thereto by a relatively narrow resilient neck portion at right angles to the base, the relatively narrow neck portion leaving comparatively large areas in said base between said neck portion and the lateral edges of said base to provide material from which lateral retaining lugs are formed, supporting strips in said base portion between said lugs and neck portion, and retaining lugs arranged to engage the side edges and end of the pad at the outer end of said base and formed of the material in said base.

1,170,542. FASTENER. CARL JOSEPH, Bayonne, N. J. Filed Apr. 23, 1915. Serial No. 23,277. (Cl. 248—31.)



1. A fastener comprising two members each having a flat body and two arms projecting therefrom, one a short

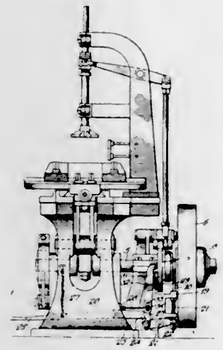
arm curved away from the body in one direction and the other a long arm bent at an angle from the body in an opposite direction leaving an appreciable space between the planes passing through the ends of both arms and at right angles to the plane of the flat body.

2. A fastener comprising two complementary flat bodies each provided with a projecting angular stop arm and a shorter arm turned from the body in the opposite direction to that of the stop arm and lying in a parallel plane thereto, and means for preventing their accidental displacement along their plane of contact including a notch or indentation on one body and a coöperating projection or lug on the other body.

3. A fastener comprising two contactable members each having a body and two arms projecting therefrom in opposite directions said arms arranged to form gripping arms when the bodies are in contact with each other.

4. A fastener comprising two contactable members each having a body and two elastic arms projecting therefrom in opposite directions said arms arranged to form gripping arms when the bodies are in contact with each other.

1,170,543. AUTOMATIC CLUTCH-RELEASE. EDWARD KATZINGER, Chicago, Ill., assignor to Edward Katzinger Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 27, 1914, Serial No. 847,612. Divided and this application filed Feb. 20, 1915. Serial No. 9,509. (Cl. 74—46.)

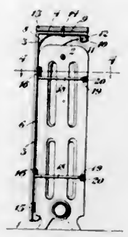


1. The combination with the main shaft and driving wheel of a press, of a clutch on said shaft and adapted to engage said wheel; a cam engaging said clutch; a spring normally holding the cam in engagement with the clutch; a lever connected at one end with said cam; a link pivoted to the other end of said lever and having a notch therein; a trip lever having one end engaging said notch; and means operated by said shaft and connected to said link adapted to disconnect said link from said trip lever.

2. The combination with the main shaft and driving wheel of a press, of a clutch on said shaft and adapted to engage said wheel; a cam engaging said clutch; a spring normally holding the cam in engagement with the clutch; a lever connected at one end with said cam; a link pivoted to the other end of said lever and having a notch therein; a trip lever having one end engaging said notch; a cam on said shaft; a lever engaging said last-mentioned cam and connected with said link, adapted to swing the latter laterally and disconnect the link from said trip lever.

3. The combination with the main shaft and drive wheel of a press, of a clutch on said shaft adapted to engage said wheel; a cam engaging said clutch; a spring normally holding the cam in engagement with the clutch; a lever connected at one end with said cam; a link pivoted to the other end of the lever and having a notch in its side; a trip lever having a portion engaging said notch; a lever in substantial alinement with the link, a slot and pin connection between the link and said last mentioned lever; and a cam on the main shaft adapted to move the last mentioned lever and link to disengage the latter from said trip lever.

1,170,544. RADIATOR-SHIELD. SAMUEL KAUFFMAN, St. Louis, Mo. Filed May 3, 1915. Serial No. 25,536. (Cl. 237—79.)



1. A radiator shield comprising two end brackets, a forward extension at the upper end of each of said brackets, an inwardly extending vertical flange at the rear edge of each of said brackets, an inwardly extending horizontal flange at the upper end of each of said brackets and said forward extensions, a sheet metal shield having a vertical portion secured to said vertical flanges and a horizontal portion secured to said horizontal flanges and a curved portion intermediate of said vertical and said horizontal portions, a trough at the forward edge of the horizontal portion of said shield provided with an imperforate outer wall, a passage into said trough underneath said horizontal portion of said shield, a horizontal lithic top member resting upon said horizontal flanges of said brackets, and elements holding said top member in position on said flanges.

2. A radiator shield comprising two imperforate brackets adapted to be supported at opposite ends of a radiator, a sheet metal shield secured to said brackets and comprising a vertical portion extending from near the bottom to a point above the top of the radiator and having a horizontal portion extending over the top of the radiator, a horizontal lithic top member wholly supported by said end brackets, and spacing elements in connection with said brackets holding said top member rigidly in position with respect to said brackets and said shield.

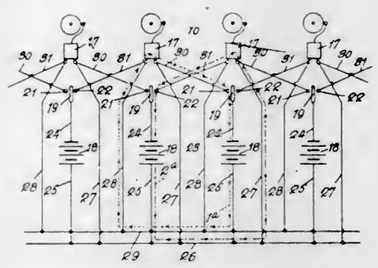
3. A radiator shield comprising two imperforate end brackets which gradually widen from their lower ends toward their upper ends, a forward extension at the upper end of each of said brackets, a dust trough between said forward extensions of said brackets, a shield arranged to deflect rising particles into said dust trough, a horizontal lithic top member seated upon the upper ends of said brackets and on said extensions, an air passage between said top and said shield and being open both at the front and rear sides, and releasable devices holding said top member in rigid position with respect to said brackets and said shield.

4. A radiator shield comprising two imperforate end brackets positioned at opposite ends of the radiator, forward extensions on the upper ends of said brackets, a trough extending between said forward extensions above the radiator and adjacent to the front side thereof, an imperforate sheet metal shield attached to said brackets and comprising a vertical portion at the rear side of the radiator and a horizontal portion above the radiator and above said trough and a curved portion connecting said vertical portion with said horizontal portion, flanges on said brackets above the horizontal portion of said shield, a horizontal lithic top member seated on and wholly supported by said flanges and separated from the horizontal portion of said shield by an intervening space open at the front and rear sides, elements in connection with said flanges holding said top member in position, and elements in connection with said shield intermediate of said brackets coöperating with said first-named elements to hold said top member in position.

5. An improved radiator shield, comprising a sheet metal shield having a vertical portion at the rear of the radiator and a horizontal portion above the radiator, a trough at the forward edge of and below said horizontal portion, an imperforate bracket at each end of the radiator in connection with and extending above said shield, a horizontal lithic top member seated upon and wholly supported by the upward extensions of said brackets, an air space between said shield and said top open at the front and rear sides, and devices for securing said top member in position.

[Claims 6 to 8 not printed in the Gazette.]

1,170,545. SIGNALING DEVICE FOR APPARATUS FOR STOPPING VEHICLES. JOHN J. KEENAN, New York, N. Y., assignor to Margaret A. Keenan, New York, N. Y. Filed May 14, 1915. Serial No. 28,119. (Cl. 177—333.)



1. A signaling system for regulating traffic with apparatus for stopping vehicles, comprising a plurality of stations, an alarm in each station, a normally open circuit leading to all of the alarms, and means in each station for closing the circuit whereby the alarm in either the next preceding or the next following station may be sounded in emergency so that the apparatus of the station may be operated, for the purpose specified.

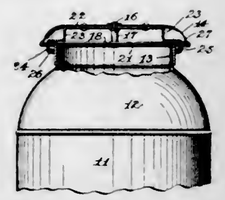
2. A signaling system for regulating traffic with apparatus for stopping vehicles, comprising a plurality of stations, an alarm in each station, a normally open circuit leading to all of the alarms, and a switch in each station for closing the circuit whereby the alarm in either the next preceding or the next following station may be sounded in emergency so that the apparatus of the station may be operated, for the purpose specified.

3. A signaling system for regulating traffic with apparatus for stopping vehicles, comprising a plurality of stations, an alarm in each station, a battery in each station including the alarm, a normally open circuit leading from each battery to all of the alarms, and means in each station for closing the circuit whereby the alarm in either the next preceding or the next following station may be sounded in emergency so that the apparatus of the station may be operated, for the purpose specified.

4. A signaling system for regulating traffic with apparatus for stopping vehicles comprising a plurality of stations, an alarm in each station, a battery in each station, including the alarm, a normally open circuit leading from each battery to all of the alarms, and a switch in each station for closing the circuit whereby the alarm in either the next preceding or the next following station may be sounded in emergency so that the apparatus of the station may be operated, for the purpose specified.

1,170,546. CLOSURE FOR CONTAINERS. HENRY A. KEINER and EMILE PLANÇON, New York, N. Y.; said Plançon assignor to said Keiner. Filed Nov. 10, 1913. Serial No. 800,029. (Cl. 31—78.)

1. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member, means for securing said cap or cover to said container by rotating said main or body member relative to said second or sealing member and to said container and packing interposed between said second or sealing member and said container.



2. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member rotatably connected therewith, and means for securing said cap or cover to said container by rotating said main or body member relative to said second or sealing member and to said container.

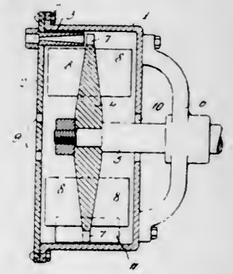
3. The combination with a container of a cap or cover comprising a main or body member, a second or sealing member rotatably connected therewith, means for securing said cap or cover to said container by rotating said main or body member relative to said container and packing interposed between said second or sealing member and said container.

4. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means for joining together said main or body member, said reinforcing means and said second or sealing member, and means for securing said cap or cover to said container.

5. The combination with a container of a cap or cover comprising a main or body member, means for strengthening or reinforcing said main or body member, a second or sealing member, means for joining together said main or body member, said reinforcing means and said second or sealing member, means for securing said cap or cover to said container and packing interposed between said second or sealing member and said container.

[Claims 6 to 9 not printed in the Gazette.]

1,170,547. ELASTIC-FLUID TURBINE. FRANK W. KENNEDY, Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 7, 1913. Serial No. 799,743. (Cl. 121—118.)



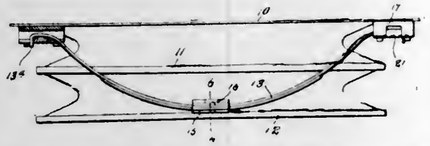
1. In a fluid pressure turbine, the combination, with a rotor disk, of a fixed fan blade mounted thereon to rotate therewith, and of a size, and so disposed, as to interpose effective progressively increasing resistance to motion of such rotor as the speed thereof rises.

2. In an elastic fluid turbine, the combination, with a rotor disk, of fixed fan blades secured to and projecting therefrom and arranged to travel in an air space surrounding such rotor, and of such size, and so disposed, as by their fan action to offer a progressively increasing effective resistance to motion of the rotor as the velocity of such rotor increases.

3. A turbine rotor disk provided with turbine buckets and also provided with fixed fan blades projecting from it and of such size and so arranged as to offer effective progressively increasing resistance to motion of such rotor as the velocity of such rotor increases.

4. A turbine rotor disk formed of cast metal and provided with buckets and also with cast-in fan blades, such fan blades arranged to offer progressively increasing resistance to motion of such rotor as the velocity of such rotor increases.

1,170,548. UPPER BUFFING DEVICE FOR VESTIBULE FACE-PLATES. JAMES G. LAWLER, St. Charles, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 16, 1915. Serial No. 14,854. (Cl. 105—61.)



1. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring retaining members fixed to the other element, each of which retaining members comprises a base plate and a keeper hinged thereto.

2. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring retaining members fixed to the other element, each of which retaining members comprises a base plate and a keeper hinged thereto, and means for securing the free end of the keeper to the base plate.

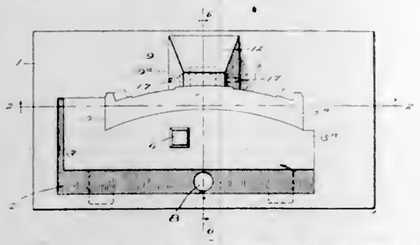
3. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and retaining members for the end portions of said spring, each of which members comprises a pair of plates hinged to each other, one of said plates being rigidly fixed to the other one of the first mentioned elements.

4. A diaphragm face plate spring retaining device comprising a bearing plate, and a keeper hinged thereto, said parts being spaced apart to form a spring pocket.

5. A diaphragm face plate spring retaining device comprising a bearing plate, a keeper hinged thereto, said parts being spaced apart to form a spring pocket, and readily releasable means for securing the free end of the keeper to the bearing plate.

[Claims 6 to 11 not printed in the Gazette.]

1,170,549. MOLD FOR BRAKE-SHOES. JOHN A. MCDOUGALL, Wilmington, N. C. Filed Jan. 13, 1915. Serial No. 1,943. (Cl. 22—126.)

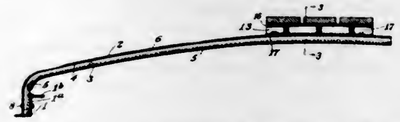


1. A mold for brake shoes comprising two separable metal parts coöperating to form the walls for the face, back, ends, and one side of the brake shoe, the mold cavity being uncovered upon the opposite side, the wall of one part corresponding with the back of the shoe having a recess to provide the walls which shape the attaching lug, and a porous fragile plug or insert extending across said recess to displace the casting metal and form the locking-key slot, said wall being provided with niches upon either side of said recess to receive the supporting ends of said plug.

2. A two-part metal mold for brake shoes having a main body portion provided with an open cavity or chamber conforming to the back and one end of a brake shoe, a face plate or block seated in said cavity and movable therein and conforming to the shape of the face and the other end of the shoe, said body portion and said face plate having contiguous walls shaped to provide a mold cavity conforming to the shape of a brake-shoe, the top of said mold cavity being open and uncovered, said open top corresponding to one side of the shoe, whereby the molten casting metal may be poured into the open mold cavity.

3. A two-part metal mold for brake shoes, comprising a main body portion having a chamber or cavity open at the top and having the configuration of one wall shaped to conform to the back of the brake shoe and one end thereof, said wall being provided with a recess conforming to the shape of the attaching lug and having lateral extensions, a porous core piece having its ends supported in said extensions and extending across said recess to displace the casting metal and form the locking key slot, and a face block seated in said chamber and which may be moved therein toward and from said shaped wall, the contiguous side of said block conforming to the shape of the face of the brake shoe and the other end thereof, so that when the parts are brought together they will form a mold cavity conforming to the shape of the shoe, the mold cavity being open and exposed on top, whereby the molten casting metal may be poured directly into the mold cavity.

1,170,550. CAR-ROOF. JOHN F. MCKNIGHT, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 3, 1915. Serial No. 37,920. (Cl. 108—54.)



1. In a car roof, a plurality of self-sustaining metallic roof plates comprising main body portions and lapping edge portions, said edge portions of adjoining plates flexibly interlocking and being shaped to form roof sustaining members in combination with a side plate of Z-shape with which said plates are connected, but over which said roof plates extend without support from the upper portion thereof.

2. In a car roof, side plates each having a vertical portion and a roof plate support at its bottom portion, a plurality of self-sustaining metallic roof plates adapted to extend across a car and to said roof plate supports and being secured to said side plates, said roof plates clearing the tops of said side plates and each having a main body portion and a plurality of edge portions lapping others of said roof plates, said edge portions of adjoining roof plates interlocking and being shaped to form carline-like members extending to the roof plate supports of said side plates.

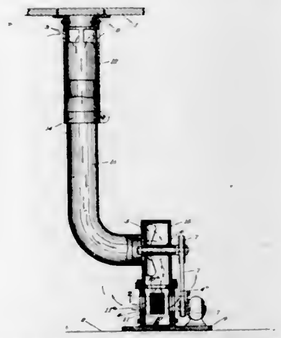
3. In combination in a car roof, successively arranged self-sustaining metallic roof plates, each plate having a relatively smooth body portion and lapping edge portions, the latter having channeled depressions, the channeled depressions of adjoining roof plates fitting into each other without attachment and flanges within the lapping portions projecting from fitted channeled depression portions over said body portions of adjacent roof plates.

4. In combination in a car roof, successively arranged self-sustaining metallic roof plates having body portions and depressed channeled portions, the channeled portions of adjacent plates fitting into each other without attachment to each other and flanges projecting from fitted channeled portions lapping said body portions of adjoining roof plates.

5. In combination in a car roof, metallic roof plates adapted to span the sides of a car and having flexibly interconnected depressed channel portions lapping and conforming to the adjacent contour of adjoining roof plates, and means adapted for the attachment thereto of a running board saddle extending from said lapping and conforming portions of said roof plates.

[Claims 6 to 13 not printed in the Gazette.]

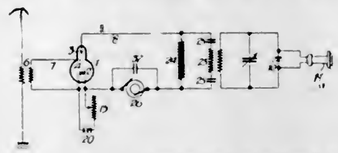
1,170,551. VENTILATING APPARATUS. JOHN M. MARTY, Cleveland, Ohio. Filed Nov. 5, 1914. Serial No. 870,392. (Cl. 98—27.)



1. In a ventilating apparatus, the combination with a ceiling and a floor, and a vertically arranged air conduit pipe having air inlet ports near said ceiling; of a fan and fan housing mounted on said floor connected to the lower end of said air conduit pipe, said fan housing being provided with air eduction ports, and means for opening and closing said air eduction ports whereby to regulate the suction exerted by said fan.

2. In a ventilating apparatus, the combination with a ceiling and a floor, and a vertically arranged air conduit having air inlet ports near said ceiling and air eduction ports near said floor; of a suction device within said air conduit above said air eduction ports, and means for regulating or opening and closing said air eduction ports whereby to regulate the suction exerted by said suction device.

1,170,552. MEANS FOR PRODUCING ALTERNATING CURRENT BY CATHODE-RAY TUBES. ALEXANDER MEISSNER, Berlin, Germany, assignor to Gesellschaft Fuer Drahtlose Telegraphie M. B. H., Berlin, Germany. Filed June 2, 1915. Serial No. 31,736. (Cl. 250—8.)



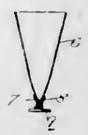
1. In a receiving arrangement for sustained high frequency electric oscillations, the combination with a circuit for receiving said oscillations and an aperiodic gaseous relay having an incandescent cathode, an anode and auxiliary electrodes therebetween, an indicator, local source of energy for rendering said relay operative, and circuit connections between the relay and the receiving circuit and the indicator, of auxiliary means for affecting said relay and said high frequency oscillations passing therethrough by periodical low frequency current impulses, and means for preventing said impulses from affecting the indicator, except in combination with said high frequency oscillations.

2. In a receiving arrangement for sustained high frequency electric oscillations, the combination with a circuit for receiving said oscillations and an aperiodic gaseous relay having an incandescent cathode, an anode and auxiliary electrodes therebetween, an indicator, local source of energy for rendering said relay operative, and circuit connections between the relay and the receiving circuit and the indicator, of auxiliary means for affecting said relay and said high frequency oscillations passing therethrough by periodical low frequency current impulses, and means located between the relay and the indicator, having two current paths, of which one constitutes a low resistance for the low frequency current impulses, but a high resistance for high frequency oscillations, and the other path constitutes a low resistance for the high frequency oscillations affected by said low frequency impulses, but a high resistance for the low frequency impulses alone, said indicator being suitably connected with the latter path.

3. In a receiving arrangement for sustained high frequency electric oscillations, the combination with a circuit for receiving said oscillations and an aperiodic gaseous relay having an incandescent cathode, an anode and auxiliary electrodes therebetween, an indicator, local source of energy for rendering said relay operative, and circuit connections between the relay and the receiving circuit and the indicator, of auxiliary means for affecting said relay and said high frequency oscillations passing therethrough by periodical low frequency current impulses, and means located between the relay and the indicator, having two current paths, of which one constitutes a low resistance for the low frequency current impulses, but a high resistance for high frequency oscillations, and the other path constitutes a low resistance for the high frequency oscillations affected by said low frequency impulses, but a high resistance for the low frequency impulses alone, said indicator being suitably connected with the latter path, said low frequency impulses corresponding with the frequency of audible tones.

4. In a receiving arrangement for sustained high frequency electric oscillations, the combination with a circuit for receiving said oscillations and an aperiodic gaseous relay having an incandescent cathode, an anode and auxiliary electrodes therebetween, an indicator, local source of energy for rendering said relay operative, and circuit connections between the relay and the receiving circuit and the indicator, of auxiliary means for affecting said relay and said high frequency oscillations passing therethrough by periodic low frequency current impulses and a tuned high frequency oscillation circuit interposed between the relay and said indicator for preventing said low frequency impulses from affecting the indicator, except in combination with said high frequency oscillations.

1,170,553. COLLAPSIBLE DRINKING-CUP. CASPAR METTLER, New Haven, Conn., assignor to Nashua Card, Gummed & Coated Paper Company, Nashua, N. H., a Corporation of Massachusetts. Filed Jan. 20, 1912. Serial No. 672,419. (Cl. 229—1.)

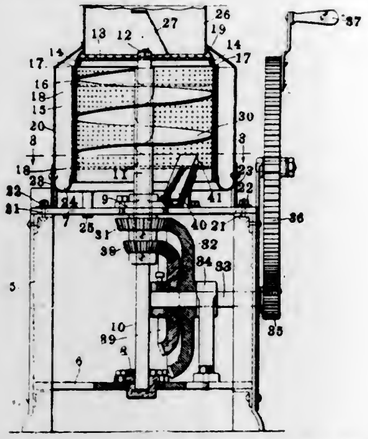


A drinking cup comprising a flattened tube of material which is water-resistant, and removable means for closing the lower end of the tube, the upper portion of the tube being exposed to be inclosed by the hand of the user.

1,170,554. CENTRIFUGAL SEPARATOR. OSCAR MORATH, St. Louis county, Mo. Filed Feb. 11, 1915. Serial No. 7,480. (Cl. 210—30.)

1. In a centrifugal machine for separating liquids from solids, the combination with a rotary cylindrical foraminous container, of a rotary grater forming one end of said

cylindrical container for comminuting the material, and means for collecting the liquid passing through the walls of said container.



2. In a cider mill, the combination with a rotary container for the pulp, of a conveyer for moving the pulp through the said container, a discharge chute for the pulp, and a pair of scraping edges, one arranged to receive the material from said container and the other from the said conveyer.

3. In a cider mill, the combination with a rotary container for the pulp, the said container consisting of an inner perforate cylinder, an outer perforate cylinder removably surrounding the said first named cylinder, and a ledge on one of said cylinders and engaging with the other to limit the relative longitudinal movement of the cylinders.

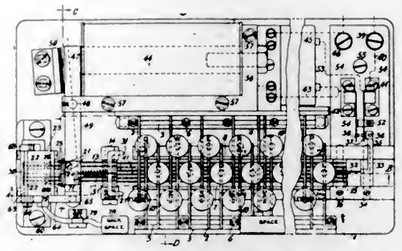
1,170,555. ARTIFICIAL TOOTH AND BACKING. JOSEPH P. MORRISON, Mount Carmel, Pa. Filed Aug. 6, 1915. Serial No. 43,968. (Cl. 32—9.)



An artificial tooth facing comprising a body having its lingual surface provided with a substantially medial horizontal transverse shoulder, an abutment surface leading from the inner edge of said shoulder toward the gingival surface of the tooth, an abutment surface leading at an angle from the outer edge of the shoulder to the occlusal surface of the tooth, said body being provided with pin-receiving recesses opening through said shoulder, and a backing provided with a corresponding shoulder and abutment surfaces to engage the shoulder and abutment surfaces of the body and having pins projecting from its shoulder to engage said pin-receiving recesses.

1,170,556. KEYBOARD APPARATUS. DONALD MURRAY, London, England, assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 30, 1914. Serial No. 874,609. (Cl. 164—112.)

1. A keyboard apparatus comprising a plurality of rows of keys and pivoted key levers for such keys, certain of said key levers pivoted immediately in rear of the rows of keys and extending forwardly to their respective keys, others of said key levers pivoted immediately in front of the rows of keys and extending rearwardly to their respective keys.



2. A keyboard apparatus comprising a plurality of rows of keys and pivoted key levers for such keys, certain of said key levers pivoted immediately in rear of the rows of keys and extending forwardly to their respective keys, others of said key levers pivoted immediately in front of the rows of keys and extending rearwardly to their respective keys, the forwardly extending key levers alternating with the rearwardly extending key levers.

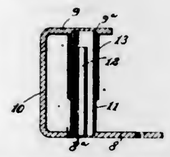
3. Keyboard apparatus comprising three rows of keys and pivoted key levers therefor, the key levers for the front row of keys pivoted in rear of that row and extending forwardly to their respective keys, the key levers for the rear row pivoted in front of that row and extending rearwardly to their respective keys.

4. Keyboard apparatus comprising three rows of keys and pivoted key levers therefor, the key levers for the front row of keys pivoted in rear of that row and extending forwardly to their respective keys, the key levers for the rear row pivoted in front of that row and extending rearwardly to their respective keys, the forwardly extending key levers and the rearwardly extending key levers being alternated.

5. Keyboard apparatus comprising three rows of keys and pivoted key levers therefor, the key levers for the front row of keys pivoted in rear of that row and extending forwardly to their respective keys, the key levers for the rear row pivoted in front of that row and extending rearwardly to their respective keys, the key levers for the intermediate row being pivoted at points beyond the keys of another of said rows.

[Claims 6 to 28 not printed in the Gazette.]

1,170,557. TOY TELEGRAPH-SOUNDER. JOSEPH S. NEWMAN, Cleveland, Ohio. Filed Feb. 6, 1915. Serial No. 6,476. (Cl. 178—98.)



1. In a sounder of the character described, the combination of a base, a sounding device comprising a substantially U-shaped metallic frame having one branch thereof secured to the base, a tube inserted between the branches of said frame, a solenoid core in said tube, and a winding extending about the upper portion of said tube.

2. In a sounder of the character described, the combination of a base, a sounding device comprising a pair of vertically spaced sounding members, a tube inserted between said members, a solenoid core in said tube, and a winding extending about said tube.

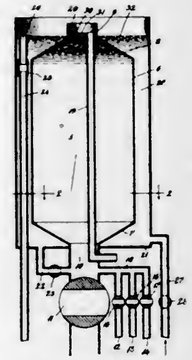
3. In a sounder of the character described, the combination of a base, a substantially U-shaped frame having one of its parallel branches secured to said base, a tube secured between the branches of said frame, a core in said tube, a winding about said core, and an electric circuit including the winding and that is adapted to be opened and closed.

the parts being arranged so that, when the circuit is closed, the upper end of the core will engage the branch of the frame thereabove and, when the circuit is opened, the lower end of the core will drop upon the branch therebeneath by gravity.

4. In a sounder of the character described, the combination of a base, a metallic frame supported thereon and comprising upper and lower substantially parallel branches, the lower branch having a recess in the upper face thereof and the upper branch having a recess in the lower face thereof, a tube interposed between said branches and seated in said recesses, a core in said tube, and a winding surrounding the tube.

5. In a sounder of the character described, the combination of a base, a metallic frame supported thereon and comprising upper and lower substantially parallel branches, a tube clamped between said branches, a core in said tube, and a winding surrounding the tube.

1,170,558. PROCESS FOR THE SEPARATION OF LIQUIDS. OTTO HEINRICH NONNENBRUCH, New Rochelle, N. Y., assignor to De La Vergne Machine Co., a Corporation of New York. Original application filed July 8, 1915. Serial No. 38,754. Divided and this application filed Aug. 24, 1915. Serial No. 47,046. (Cl. 210—5.)



1. The process of separating liquids of different specific gravities which comprises allowing the mixture of liquids to separate into layers, causing the removal of the desired liquids by means of an introduced liquid until the desired removal has been effected, and automatically interrupting the removal of the desired liquids without the interruption of the flow of the introduced liquid.

2. The process of separating liquids of different specific gravities which comprises allowing the mixture of liquids to separate into layers and then removing the layers from the mixture by means of the pressure of a liquid of greater specific gravity than that of the mixture, the removal being automatically interrupted when the pressure of the remaining mixture is equal to the pressure of the removing liquid, the flow of the removing liquid being uninterrupted.

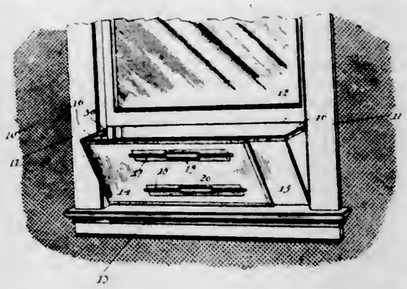
3. The process of removing liquids which have separated into layers due to their different specific gravities which comprises forcing the layers upwardly by means of an introduced liquid of greater specific gravity than the liquids to be removed, and automatically interrupting the removal of the liquids when the pressure of the unremoved liquids is equal to the pressure of the removing liquid, the flow of the removing liquid being uninterrupted.

4. The process of removing oil from water which comprises allowing the oil to rise above the water, introducing a flow of water beneath the oil causing the removal of the oil through an overflow, and automatically interrupting the removal while allowing the flow of the water to continue.

5. The process of separating oil from a mixture of oil and water which comprises allowing the oil to rise above the water, introducing a flow of water beneath the oil causing the removal of some of the oil from the mixture, and automatically interrupting the removal when the pressure of the introduced water is equal to the pressure of the remaining oil and water, the flow of the introduced water being uninterrupted.

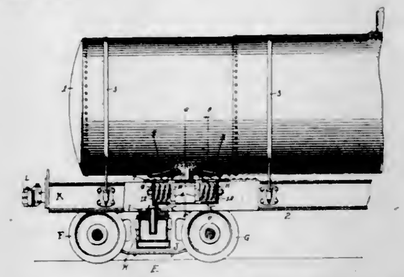
[Claims 6 and 7 not printed in the Gazette.]

1,170,559. WINDOW-VENTILATOR. MYRON B. NUTE, Chicago, Ill. Filed Nov. 11, 1912. Serial No. 730,610. Renewed Dec. 20, 1915. Serial No. 67,948. (Cl. 98—31.)



A window ventilator comprising two lapped longitudinally movable boards, end members secured to each of said movable boards, one of the movable members having near its center, long narrow slots, elongated cleats of a width greater than that of the slots overlying the outer edges of the slotted boards and extending through the slots, and clips fastened near the outer ends of the said cleats and joining them with the imperforate member, thereby providing sliding connections between the two members.

1,170,560. TANK-CAR. JOHN T. H. PAUL, Chicago, Ill. assignor, by mesne assignments, to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 24, 1908. Serial No. 428,898. (Cl. 105—264.)



1. The combination with a car body, of a tank, a post projecting downwardly from the tank and carried thereby, a bearing plate mounted upon the car body, bearing wings carried by the tank and slidably supported upon said bearing plate, said bearing plate having an aperture through which the post projects downwardly, a pair of abutments in association with said post movable longitudinally of the car body and between which said post downwardly projects, and springs carried by the car body and pressing said abutments against said post.

2. The combination with a car body, of a tank, a post projecting downwardly from the tank and carried thereby, a bearing plate mounted upon the car body, bearing wings carried by the tank and slidably supported upon said bearing plate, a pair of abutments in association with said post movable longitudinally of the car body and between which said post downwardly projects, and springs carried by the car body and pressing said abutments against said post.

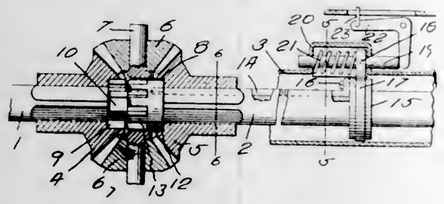
3. The combination with a car body, of a tank, a post projecting downwardly from the tank and carried thereby, bearing wings carried by the tank and slidably supported upon the car body, a pair of abutments in association with said post movable longitudinally of the car body and between which said post downwardly projects, and springs carried by the car body and pressing said abutments against said post.

4. The combination with a car body, of a tank slidably supported thereupon, a post projecting downwardly from the tank and carried thereby, a pair of abutments in association with said post movable longitudinally of the car body and between which said post downwardly projects, and springs carried by the car body and pressing said abutments against said post.

5. The combination with a car body, of a tank slidably supported thereupon, a post projecting downwardly from the tank and carried thereby, and a pair of spring-pressed abutments carried by the car body in association with said post movable longitudinally of the car body and between which said post downwardly projects.

[Claims 6 to 23 not printed in the Gazette.]

1,170,561. DIFFERENTIAL-GEAR LOCK. LE ROY E. PETERS and RAYMOND C. PETERS, Chicago, Ill. Filed Feb. 8, 1915. Serial No. 6,906. (Cl. 74—34.)

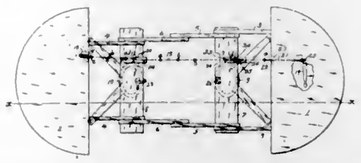


1. The combination with a two part driven axle having its ends terminating in spaced relation, of a differential gear secured to the end of each portion of the axle, one of said gears having a chamber therein provided with a plurality of teeth around the face thereof, a clutch member slidably mounted on the end of the opposing portion of the axle and rotatable therewith, said clutch member having a plurality of teeth thereon arranged to engage the teeth of the clutch member, a rod secured to the clutch member and extending through a channel in the adjacent gear and portion of the axle, a collar secured to the said axle portion and to the said rod, and means for moving the collar to shift the clutch member into engagement with the teeth in the said chamber.

2. The combination with a two part axle having the ends thereof in spaced relation, of gears secured to the said ends, gears extending between and meshing wtih the first mentioned gears on opposite sides thereof, one of said gears having a clutch chamber therein, a clutch member slidably mounted on the end of the opposing portion of the axle, a collar secured to the said axle portion, a rod connecting the collar and the clutch member, a shipper member straddling the said collar, a casing, a rod slidably mounted in said casing, means for securing the shipper member to the said rod and resilient means for moving the shipper member to disengage the clutch member from the aforementioned clutch chamber.

1,170,562. EXTENSION-TABLE. WILLIAM L. PFEFFERKORN, ALBERT P. SCHLOERB, and AUGUST H. HAMMETTER, Milwaukee, Wis. Filed Mar. 8, 1912. Serial No. 682,508. (Cl. 45—9.)

1. An extension table, comprising the combination of a supporting bridging board, slides, fixed and removable top boards, of a chain connected at one side of its middle portion with the bridging board and provided with suitably spaced catch engaging links of different character from the other links of the chain, catches on the fixed top boards adapted to engage said links, and a lever for adjusting one of the catches to tighten said chain.

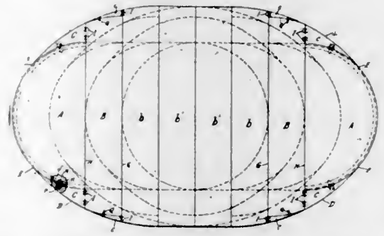


2. An extension table comprising the combination with a support, slides, and permanent top boards, of a flexible connecting member secured to one of the top boards and provided with means at spaced intervals along its length, for detachably engaging the other top board.

3. An extension table comprising the combination with a support, slides and permanent top boards, of a flexible connecting member secured to one of the top boards and provided with means at spaced intervals along its length, for detachably engaging the other top board, said flexible connecting member being also secured at one point to the support.

4. An extension table comprising the combination with separable supports, slides, permanent and removable top boards, of a flexible connection secured to one of the supports and provided with means for detachably engaging the other support, at spaced intervals corresponding substantially to the width of the top boards, and means for allowing an additional separation of the permanent top boards independently of the supports and applying an indrawing tension thereto.

1,170,563. BANQUET-TOP FOR EXTENSION-TABLES. WILLIAM L. PFEFFERKORN, ALBERT P. SCHLOERB, and AUGUST H. HAMMETTER, Milwaukee, Wis. Filed May 19, 1913. Serial No. 768,400. (Cl. 45—9.)

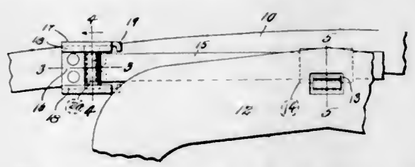


1. The combination with a lineally extensible table frame having permanent top boards at its respective ends, of a set of filler boards adapted to fill the space between the top boards when the table is extended, some of said filler boards being longer than the others whereby said table at a given degree of lineal extension may have a standard width when the short boards only are used, substantially equal to that of the permanent top boards and an abnormal width in its central portion when the longer filler boards are used, and a set of table top members adapted to fill the angles formed by the projecting ends of the longer filler boards with the other portions of the table top, said angle filling members having their outer margins contoured to form symmetrical extensions of the remaining exposed margins of the filler boards and top members, substantially as described.

2. The combination with a lineally extensible table frame having permanent top boards at its respective ends, of a set of filler boards adapted to fill the space between the top boards when the table is extended, some of said filler boards being longer than the others whereby said table at a given degree of lineal extension may have a standard width when the short boards only are used, substantially equal to that of the permanent top boards and an abnormal width in its central portion when the longer filler boards are used, and a set of table top members adapted to fill the angles formed by the projecting ends of the longer filler boards with the other portions of the table top, said angle filling members having their outer margins contoured to form symmetrical extensions of the remaining exposed margins of the filler boards and top members, each of said angle filling members being connected with one of the longer filler boards and adapted to fold upon the under side of the same when such filler boards are not in use, substantially as described.

3. The combination with a lineally extensible table frame having permanent top boards at its respective ends, of a set of filler boards adapted to fill the space between the top boards when the table is extended, some of said filler boards being longer than the others whereby said table at a given degree of lineal extensions may have a standard width when the short boards only are used, substantially equal to that of the permanent top boards and an abnormal width in its central portion when the longer filler boards are used, and a set of table top members adapted to fill the angles formed by the projecting ends of the longer filler boards with the other portions of the table top, said angle filling member having their outer margins contoured to form symmetrical extensions of the remaining exposed margins of the filler boards and top members, each of said angle filling members being provided with supporting connections engaging the longer filler boards and the margins of the shorter filler boards or table top members against which they abut when in angle filling position.

1,170,564. UPPER BUFFING DEVICE FOR VESTIBULE FACE-PLATES. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 16, 1915. Serial No. 14,783. (Cl. 105—61.)



1. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured at the middle to one of said elements, keepers fixed to the other element, and bearing members loosely mounted in said keepers to which bearing members the ends of the spring are connected.

2. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured at the middle to one of said elements, keepers fixed to the other element, and spools carried by the ends of said spring, which spools are loosely mounted in the keepers.

3. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, spools carried by the ends of said spring, and keepers applied to the other element in which keepers the spools are loosely mounted.

4. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, rolling anti-friction members carried by the ends of said spring, and bearings on the other element in which said rolling anti-friction members are loosely mounted.

5. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, spools carried by the ends of said spring, and keepers fixed to the other element, which keepers receive the spools and the ends of the spring and are provided with retaining flanges against which the ends of the spools engage.

[Claims 6 to 16 not printed in the Gazette.]

1,170,565. SPRING-SEPARATOR. PHILIP H. SENIOR, New York, N. Y. Filed May 1, 1914. Serial No. 835,601. (Cl. 81—3.)



1. A device of the class described, comprising a relatively long handle lever, and a pair of operating members fixed and stationary upon said lever, said operating members having wedge portions facing inwardly toward one another and adapted to enter between the leaves of a spring when said lever is moved angularly with relation to the spring in a plane substantially parallel to the contacting surfaces of the leaves to be separated.

2. A device of the character described, comprising a relatively long handle lever, and a pair of hook shaped operating members fixed and stationary upon said lever, said operating members having their hooked ends terminating in wedge portions facing inwardly toward one another and adapted to enter between the leaves of a spring when said lever is moved angularly with relation to the spring in a plane substantially parallel to the contacting surfaces of the leaves.

3. A device of the class described, comprising a relatively long handle lever, a pair of operating members fixed and stationary upon said lever, said operating members having wedge portions facing inwardly toward one another and adapted to enter between the leaves of a spring when said lever is moved angularly with relation to the spring in a plane parallel to the contacting surfaces of the leaves to be separated, and means whereby said operating members may be adjusted upon said lever to vary the distance between the said wedge shaped portions.

4. A device of the class described, comprising a relatively long handle lever having a shoulder formed at one end, a pair of operating members mounted thereupon and having portions adapted to enter between the leaves of a spring to separate said leaves, said operating members engaging said shoulder to prevent turning movement of the operating members with respect to the said lever, and means securing said operating members upon said lever.

5. A device of the class described, comprising a relatively long handle lever, a pair of operating members fixed and stationary upon said lever, said operating members having wedge portions facing inwardly toward one another and adapted to enter between the leaves of a spring to separate said leaves, and means whereby said operating members may be secured in different angular positions upon said lever.

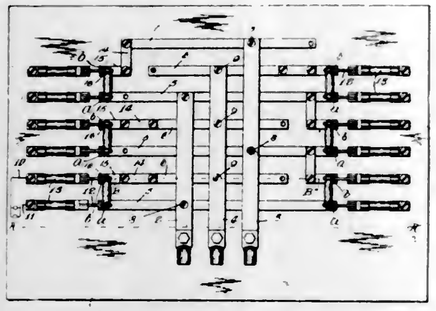
[Claim 6 not printed in the Gazette.]

1,170,566. PANEL-BOARD. FREDERICK F. SKEEL, Chicago, Ill., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 22, 1911. Serial No. 650,682. (Cl. 247—13.)

1. In a panel-board, a base, three bus-bars supported thereon, and connected respectively, to the outside and neutral wires of a three-wire system, a load circuit, a pair of load circuit terminals, a conductor in permanent electrical connection with one of said outside bus-bars, and one terminal of said pair of terminals, a conductor leading from each of the other bus-bars, and means for establishing electrical connection between the other of said pair of terminals, and either of the last two conductors, substantially as and for the purpose described.

2. In a panel-board, a base, three bus-bars supported thereon and connected respectively to the outside and neutral wires of a three-wire system, a plurality of pairs of load circuit terminals, a conductor in permanent electrical connection with one member of each pair of terminals and with one or the other of the outside bus-bars, a conductor for each load circuit leading from the neutral bus-bar, and means for establishing electrical connection between each of the remaining load circuit terminals and the conductor of its load circuit leading from the neutral

bus-bar, or the conductor permanently connected to the terminal of the adjacent load circuit, substantially as and for the purpose specified.



3. A panel board comprising a base, three bus bars supported on the base and designed to be connected respectively with the outside mains and the neutral main of a three wire system, three conducting bars mounted on the base and extending crosswise of the bus bars substantially parallel to each other, the conducting bars being connected respectively to the bus bars, load circuit terminals on the base and arranged for normal connection with two of such conducting bars, and means on the panel board for disconnecting one terminal from the conducting bar to which said terminal is connected and connecting such terminal to another conducting bar, said means comprising a bar section normally alined with one of such conducting bars and movable from its normal position about one of its ends as an axis into connection with another conducting bar, substantially as and for the purpose set forth.

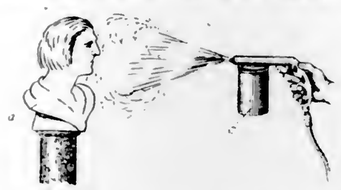
4. In a panel-board, a base, three bus-bars supported thereon and connected, respectively, to the outside and neutral wires of a three-wire system, two load circuits, a pair of terminals associated with each circuit and supported on the base, a permanent conductor extending between one outside bus-bar and one terminal of one pair, a second permanent conductor extending between the other outside bus-bar and one of the terminals of the other pair, a conductor for each load circuit leading from the neutral bar, and means associated with the other terminal of the first-named pair for establishing electrical connection between the same and either the conductor associated therewith and leading from the neutral bus-bar, or said second permanent conductor, substantially as and for the purpose described.

5. In a panel board, a base, a plurality of pairs of load circuit terminals at opposite sides thereof, three bus bars extending lengthwise of the base and located between said sets of terminals at opposite sides of the base, said bars being the outside mains and neutral members of the three-wire system, a plurality of pairs of conductor bars extending crosswise of the bus bars, one of the conductor bars of each pair being connected to one outside bus bar and at each end to one terminal of a pair of terminals, alternate conductor bars which are connected at their ends to terminals on opposite sides of the bars being connected to different outside bus bars, and the other conductor of each pair being connected to the neutral bar, and means for connecting each end of each of the latter conductor bars to each of the other terminals of said pairs of terminals or for connecting the last-mentioned terminals to one of the conductor bars of each pair connected to one of the outside bus bars, substantially as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

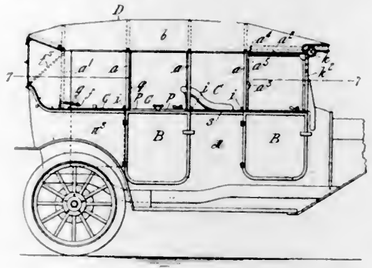
1,170,567. METHOD OF PRODUCING ORNAMENTAL SURFACES. WALTER J. SMART, New York, N. Y. Filed Feb. 28, 1911. Serial No. 611,504. (Cl. 41—38.)

1. The method of producing ornamental surfaces simulating metal on objects of a plastic material having an intaglio and relief design, which consists in spraying on the surface of the object, a base coat of lacquer of a color simulating a metal, then spraying over the body coating a second or film coat of lacquer in a manner whereby partial volatilization of the second coat will occur in transit and the lacquer will be deposited upon the object in a semi-dry state to represent a state of corrosion of the metal simulated by said body coating, then removing said second coating from portions of the object by the application of a cutting material thereto, and then subjecting the entire surface of the object to a polishing process.



2. The method of producing ornamental surfaces on objects to simulate a metal, which consists in spraying on the surface of the object, a base coat of lacquer to represent the metal, then applying to the base coating a film coat of lacquer by spraying the lacquer upon the object from a distance, whereby partial volatilization of the lacquer solvent will be effected in transit and the lacquer deposited upon the surface of the object in a semi-dry state, said second coating representing a state of corrosion of the metal simulated by the base coat, then removing said film coating from portions of the object by applying turpentine thereto and creating friction by rubbing and then subjecting the entire surface of the object to a polishing process.

1,170,568. CONVERTIBLE AUTOMOBILE-BODY. HINSDALE SMITH, Springfield, Mass., assignor to The Springfield Body Company, Springfield, Mass., a Corporation of Massachusetts. Filed Feb. 20, 1911. Serial No. 609,564. (Cl. 21—62.)



1. The combination with an automobile body having oppositely located brackets at its rear portion, of a foldable top comprising a plurality of bows adapted to have suitably widely separated relations, the rear one of which is secured to said brackets, and the bows forward of the rear one adapted while in such separated relations to be detachably supported in parallelism on the sides of the body, and to be also in their folded relations detachably connected to, and supported by said brackets, members having fore and aft sliding movements at opposite rear portions of the body, to which the said brackets are hinge-connected, and means for confining said members in their forwardly or rearwardly located positions.

2. The combination with an automobile body having horizontally arranged runner bars oppositely located at the rear portion thereof, of slide blocks movably mounted on the runner bars, brackets hinge-connected to the slide blocks, a foldable top comprising a rear bow the depending members of which are fixed to said hinged brackets, and another bow forward of such rear bow, and means comprised in said bracket for the detachable connection with the latter of said forwardly located bow.

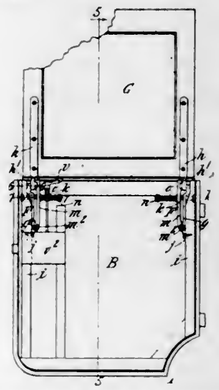
3. The combination with an automobile body having horizontally arranged runner bars oppositely located at the rear portion thereof, of slide blocks movably mounted on the runner bars, and means for confining them in their forwardly and rearwardly located positions, brackets hinge-connected to the slide blocks, a foldable top comprising a rear bow the depending members of which are fixed to said hinged brackets, and another bow forward of such rear bow and means comprised in said bracket for the detachable connection with the latter of said forwardly located bow.

4. The combination with an automobile body having horizontally arranged runner bars oppositely located at the rear portion thereof, of slide blocks movably mounted on the runner bars, normally upright brackets hinge-connected to the slide blocks, and having horizontal forwardly projecting extensions provided with upwardly opening sockets, a foldable top comprising a rear bow the depending members of which are fixed to said upright hinged brackets, and other bows forward thereof adapted while in their folded regulations to have temporarily supporting engagements in said bracket sockets, and means for detachably supporting the forwardly located bows in their separation on the sides of the body.

5. The combination with an automobile body having horizontally arranged runner bars oppositely located at the rear portion thereof, of constrictive blocks embracing and slidable on the runner bars, and having means for binding them in their forward or rearwardly located relations on said bars, normally upright brackets hinge-connected to the slide blocks, and having horizontal forward extension provided with upwardly opening sockets, a foldable top comprising a rear bow the depending members of which are fixed to said upright hinged brackets, and other bows forward thereof adapted while in their folded relations to have temporary-supporting engagements in said bracket sockets, and means for detachably supporting the forwardly located bows, in separation, on the sides of the body.

[Claims 6 to 11 not printed in the Gazette.]

1,170,569. HINGE FOR CONVERTIBLE AUTOMOBILE-BODIES. HINSDALE SMITH, Springfield, Mass., assignor to The Springfield Body Company, Springfield, Mass., a Corporation of Massachusetts. Filed May 12, 1911. Serial No. 626,737. (Cl. 21—125.)



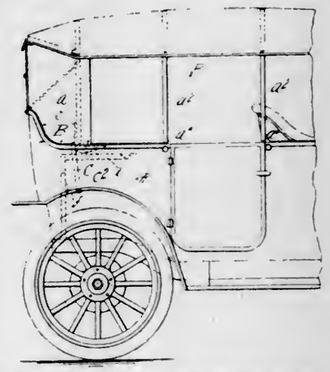
1. A hinge consisting of an attachment member, and a second attachment member pivoted thereto, a bar pivoted to the first attachment member, near the lower end of the latter, arranged in separation and approximate parallelism therewith, and such bar together with the portion of the second attachment member adjacent its pivot having, the one a channel with inwardly convergent walls, and the other a locking portion having tapering sides for an engagement in the channel, and a spring operative for imparting a yielding pressure to the pivoted bar in a direction toward the first attachment member.

2. A hinge consisting of an attachment member and a second attachment member pivoted thereto, a bar having the lower portion thereof pivoted to, and arranged offset from and substantially parallel with the first attachment member for a swinging movement toward and away from such member, and at right angles to the plane of swinging movement of the second attachment member, and such bar, together with the portion of the second attachment member adjacent its pivot having, the one a channel with inwardly convergent walls, and the other a locking portion having tapering sides for an engagement in the channel, a rod rigidly supported by the first attachment member and extending loosely through and beyond the pivoted bar, having a shoulder at its outer end and a spring encircling said rod and in compression between said shoulder and the bar.

3. A locking hinge consisting of two attachment members, one of said members provided with a socket at its upper end, a dowel arranged on one side of the lower end of the associate member of said hinge adapted to swing in said socket, a beveled portion arranged on said last mentioned member at the opposite side of the dowel, a bar pivoted to the first mentioned member, said bar having its free end yieldingly engaged with said bevel portion.

4. A hinge consisting of an attachment member and a second attachment member pivoted thereo, a bar pivoted to the first attachment member, said second attachment member arranged between the bar and the first mentioned member, interlocking portions arranged on the bar and said second attachment member, and means arranged below the points of contact of the interlocking engaging portions whereby the second mentioned member may be frictionally held in its adjusted position.

1,170,570. FOLDING TOP FOR AUTOMOBILES. HINSDALE SMITH, Springfield, Mass., assignor to The Springfield Body Company, Springfield, Mass., a Corporation of Massachusetts. Filed Aug. 5, 1912. Serial No. 713,439. (Cl. 21—62.)



1. The combination with an automobile body, of oppositely located brackets at its rear portion, a foldable top comprising a plurality of bows adapted to have suitably widely separated relations, the rear one of which has its depending member secured to said brackets and the bows forward of the rear one adapted, while in such separated relations, to be detachably supported on the sides of the body and to be also in their folded relations detachably connected to, and supported by, said brackets, approximately vertical links, at opposite sides of the body, having their lower ends pivoted to the later and to the upper ends of which said brackets are pivoted, and means for detachably locking said brackets to the sides of the automobile body.

2. The combination with an automobile body, of oppositely located brackets at the rear portion, a foldable top,

the bows of which are supported by and foldable and distensible relatively to said brackets, said bows provided with an aperture on their free ends, screws positioned in spaced relation on the brackets for engagement with said apertures when the top is folded, and links having one end pivotally connected to the rear end of said brackets, the other end of said links pivotally secured on said body for supporting and shifting the top of said body in its folded position, guides for the links and a recess provided in said body for receiving locking means carried by the brackets thereby locking the brackets with reference to the body.

3. The combination with an automobile body, a foldable top having a plurality of bows, of oppositely located bodily movable L shaped brackets at its rear portion having their lower members provided with outwardly extending flanges, which flanges form flush continuations of the upper edges of the side walls of the body, means whereby said movement may be effected and means provided for temporarily locking each bracket when flush with the edges of said walls to the side of the body so that when the top is up the rear bow connected to the duplicated brackets cannot move relatively to the body.

4. The combination with an automobile body, of oppositely located brackets at its rear portion, a section of said bracket flush with the upper edge of said body, a foldable top comprising a plurality of bows adapted to have suitably widely separated relations, the rear one of which has its depending member secured to said brackets and the bows forward of the rear one adapted while in such separated relation to be detachably supported on the sides of the body and to be also in their folded relations detachably connected to and supported by said brackets, approximately vertical links at opposite sides of the body, having their lower ends pivoted to the latter and to the upper ends of which said brackets are pivoted, and means for detachably locking said brackets to the sides of the automobile body.

5. The combination with an automobile body, of oppositely located brackets at its rear portion, means for detachably locking said brackets to the sides of the automobile body, a foldable top comprising a plurality of bows adapted to have suitably widely separated relations, the rear one of which has its depending member secured to said brackets and the bows forward of the rear one adapted while in such esparated relation to be detachably supported on the sides of the body and to be also in their folded relations detachably connected to and supported by said brackets, approximately vertical links at opposite sides of the body having thir lower ends pivoted to the latter and to the upper ends of which said brackets are pivoted.

1,170,571. CONVERTIBLE VEHICLE-BODY. HINSDALE SMITH, Springfield, Mass., assignor to The Springfield Body Company, Springfield, Mass., a Corporation of Massachusetts. Filed Jan. 13, 1913. Serial No. 741,732. (Cl. 21—125.)



1. The combination with a vehicle body having a top provided with a window stop above the body proper, and having a door opening, a door therefor, hinged to the body, of a window jointed on a horizontal pivot-axis to an upper portion of the door at a point without the plane of the door, and spring means for yieldingly supporting the window in a slightly upwardly and inwardly inclined position relatively to the vertical plane of the door, the arrangement being such that just previous to the complete closing of the door the upper portion of the inwardly inclined window will acquire contact against said window stop.

2. The combination with an automobile body having a door opening and a door therefor, hinged to the body, and a window stop above the door opening, of a window hinge-connected on a horizontal pivot-axis to an upper portion of the door at a point without the plane of the door, whereby the window while in its upwardly swung position and on being bodily moved with the closing door will contact at its upper portion against the stop causing a swinging motion of the window relatively to the door and a movement of the lower edge of the window toward and for tightly closing against the top of the door, the said device comprising a resilient member, whereby the parts on being brought to their coöperative relations may yield for the accommodation of one to another thereof.

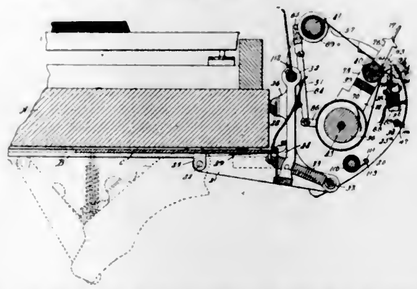
3. The combination with an automobile body having a door opening and a door therefor hinged to the body, a window stop above the door opening, said door having a hinged upper portion in advance of the lower portion and yieldingly held in such position until the door is forced against the stop thereby forcing the upper section of the door into alinement with the lower section.

4. The combination with an automobile body having a door opening and a sectional door therefor hinged to the body, a window stop adjacent the door opening, said door having one section thereof in advance of the remaining section and yieldingly held in such position until the door is closed when the first mentioned section is forced into alinement with the said remaining section.

5. The combination with an automobile body having a door opening and a door therefor hinged to the body, a window stop adjacent the door opening, said door being divided into an upper and lower section, means associated with the meeting edges of the sections for excluding dust, the door having the upper section in advance of the lower section and yieldingly held in such position until the door is closed against said stop thereby forcing the upper section into alinement with the lower section.

[Claims 6 and 7 not printed in the Gazette.]

1,170,572. MUSIC-HOLDER FOR SELF-PLAYING MUSICAL INSTRUMENTS. IRVING B. SMITH and CHARLES W. DORRICOTT, Philadelphia, Pa., assignors to Electrelle Company, Summerdale, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1912. Serial No. 707,525. (Cl. 84—161.)



1. In a device of the character described, a slidable member adapted to be mounted below the key bed of a musical instrument, a roll holder connected to said slidable member and arranged to swing up in front of the key bed to playing position, and means on said roll holder to bear against the front face of the key bed to position the roll holder.

2. In a device of the character described, a slidable member adapted to be mounted below the key bed of a musical instrument for movement back and forth thereunder, a roll holder pivotally connected on the slidable member to swing up in front of the key bed into playing position, a latch to lock said roll holder in playing position, and angle pieces fixed on said roll holder having portions arranged to contact respectively with the bottom and front face of the key bed to position the roll holder when raised.

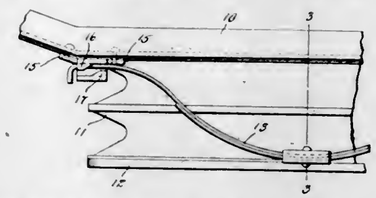
3. In a device of the character described, a slidable member adapted to be mounted below the key bed of a musical instrument for movement back and forth thereunder, a roll holder pivotally connected on the slidable member to swing up in front of said key bed above the plane of the slidable member into playing position, a latch to lock the roll holder when raised, and resilient means between the roll holder and the sliding member for preventing the roll holder falling when the latch is disconnected.

4. In a device of the character described, a slidable member adapted to be mounted below the key bed of a musical instrument for movement back and forth thereunder, a roll holder pivotally connected on the slidable member to swing up in front of said key bed above the plane of the slidable member into playing position, means for retaining said roll holder in playing position, and a spring connected to the roll holder and to the slidable member serving the double purpose of preventing the roll holder from falling when the latch is disconnected, and retaining said roll holder against the underside of the key bed when moved thereunder.

5. In a device of the character described, a slidable member adapted to be mounted below the key bed of a musical instrument, a roll holder pivotally connected to said slidable member and arranged to swing up in front of said key bed above the plane of the slidable member into playing position, angle pieces on said roll holder each adapted to bear at one point only against the front and underside of the key bed and hold the roll holder rigidly in playing position, a latch on the roll holder for locking it in playing position, and a spring to assist in raising said roll holder to playing position and prevent the same from dropping suddenly while being lowered.

[Claims 6 to 9 not printed in the Gazette.]

1,170,573. UPPER BUFFING DEVICE FOR VESTIBULE FACE-PLATES. LEVI C. SPARKS, Maplewood, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 16, 1915. Serial No. 14,843. (Cl. 105—61.)



1. The combination with a railway car vestibule and vestibule diaphragm face plate, of a horizontally disposed semi-elliptic spring secured to the upper portion of one of said elements, and brackets fixed to the other element and serving as bearings for the ends of the springs, said brackets being provided at their upper ends with openings whereby the ends of the spring are applied to or removed from said brackets by a vertical movement of said spring relative to said brackets.

2. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a substantially U-shaped bracket having an opening at its upper end, portions of which opening are offset with respect to each other.

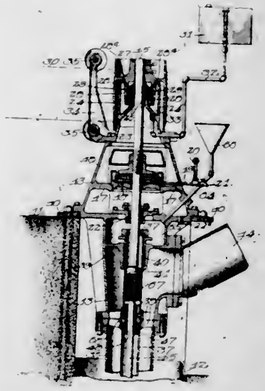
3. The combination with a railway car vestibule and vestibule diaphragm face plate, of a horizontally disposed semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a substantially U-shaped bracket arranged with its opening at the top to permit the spring to be positioned in or removed from said bracket by a relative vertical movement and a lug projecting from the upper portion of one of the legs of said brackets toward the other leg.

4. The combination with a railway car vestibule and vestibule diaphragm face plate, of a horizontally disposed semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a substantially U-shaped bracket arranged with the opening at the top to permit the spring to be positioned in or removed from said bracket by a relative vertical movement, the upper portions of the legs of which are provided with lugs which project into the opening between said legs.

5. The combination with a railway car vestibule and vestibule diaphragm face plate, of a horizontally disposed semi-elliptic spring secured to one of said elements, spring bearings fixed to the other element, each of which bearings comprises a substantially U-shaped bracket arranged with its openings at the top whereby the end of the spring is positioned in or removed from said bracket by a relative vertical movement, and means on the upper portion of one of the legs of the bracket for preventing the accidental withdrawal of the spring from the bracket in an upward direction.

[Claims 6 to 15 not printed in the Gazette.]

1,170,574. PUMPING APPARATUS. JOHN B. SPERRY, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Jan. 27, 1913. Serial No. 744,430. (Cl. 253—199.)



1. In a pumping apparatus, the combination of a water discharge casing, a pump shaft extending therethrough, a pulley fixed upon said shaft and having a bearing on said water discharge casing, a bearing for said shaft separated from said water discharge passage, and a screen covering a port between said shaft and said water discharge passage adapted to filter water permitted to pass to said bearing for lubricating purposes.

2. In a pumping apparatus, the combination of a water discharge casing, a pump shaft extending therethrough, a pulley fixed upon said shaft and having a bearing on said water discharge casing, a shaft casing located in said water discharge casing separating said shaft therefrom, bearings for said shaft in said shaft casing, and a screen covering a port in the wall of said shaft casing below the level of the water about said shaft casing during the pumping operation, said screen being adapted to filter water permitted to pass into said shaft casing for the

purpose of lubricating said bearing, each of said bearings being provided with a duct therethrough whereby the screened water is permitted to pass downward along the shaft inside of the shaft casing for lubricating the bearings.

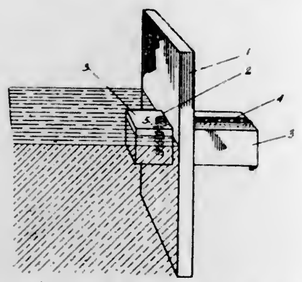
3. In a pumping apparatus, the combination of a stationary frame, a bearing sleeve fixed thereon, a vertical shaft extending loosely through said bearing sleeve, driving means journaled upon said bearing sleeve and connected with said shaft for rotating the shaft serving to hold the shaft out of contact with the bearing sleeve, and pumping means connected with said shaft.

4. In a pumping apparatus, the combination of a water discharge casing, a shaft extending therethrough, a shaft casing located in said water discharge casing separating said shaft therefrom, means for rotating said shaft, means operatively connected with said shaft for forcing water upward through said water discharge casing, bearings for said shaft in said shaft casing, another bearing for said shaft below said water-raising elements, means for supplying a lubricating fluid to said shaft casing whereby it is directed to the bearings in said casing, each of said last-named bearings being provided with a duct therethrough whereby the lubricating fluid is permitted to pass downward along said shaft casing, and means connecting the lower end of said shaft casing with said lower bearing whereby the lubricating fluid is permitted to pass thereto.

5. In a pumping apparatus having a water discharge passage, the combination of a shaft rotatable in said passage, a plurality of bearings for said shaft separated from said water discharge passage, and a screen covering a port between said shaft and said water discharge passage above said bearings adapted to filter water permitted to pass downward to said several bearings for lubricating purposes.

[Claims 6 to 20 not printed in the Gazette.]

1,170,575. VITREOUS FURNACE. HERMAN STAPELMANN and JULIUS JUCH, Newark, Ohio. Filed July 22, 1914. Serial No. 852,499. (Cl. 49—55.)

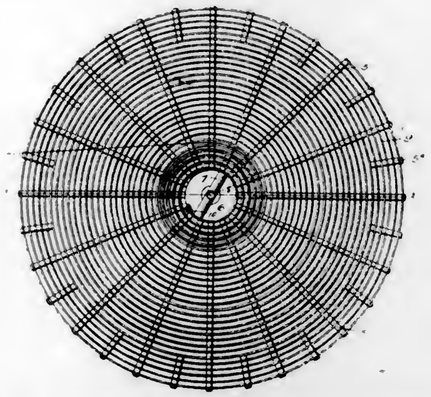


In combination with a furnace having a rectangular opening, a rectangular prismatic spout block insertible in and filling the opening, said spout having a longitudinally grooved open duct in its upper surface portion and extending from the outer end of the block to a point away from the inner end of the block, said duct having its lower portion or depth arranged below the normal level of the material melted in the furnace, and its upper and open portion above and accessible to inspection, a duct through the block extending from the inner end portion of the groove duct to a point below the scum line of the material in the furnace, said ducts being disposed in the block whereby the flow of molten material through the same may be controlled by moving the block horizontally in the opening.

1,170,576. MOVING-PICTURE-FILM HOLDER. RALPH P. STINEMAN and THOMAS STAMPS DARBY, San Diego, Cal. Filed Aug. 20, 1915. Serial No. 46,512. (Cl. 242—104.)

1. The combination with a support of a spirally wound, film holding web rigidly affixed thereto.

2. A film holding means comprising a spirally wound web and means for maintaining said web fixedly in spiral formation.



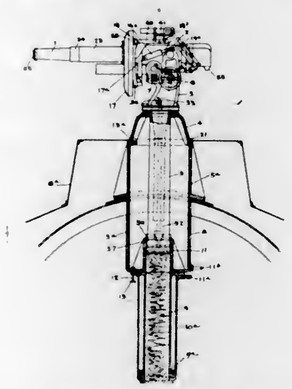
3. The combination with a supporting frame comprising a plurality of radially disposed arms of a spirally disposed film holding web secured to said arms.

4. A film holder comprising in combination a centrally disposed hub, of a plurality of radially disposed arms carried thereby, said hub having an opening formed therein to mount the structure for rotation, a spirally wound film holding web secured at one end to said hub and at the edges of its convolutions to said arms.

5. A film holder comprising in combination a centrally disposed hub, a plurality of radially disposed arms carried thereby, said hub having an opening formed therein to mount the structure for rotation, a spirally wound film holding web secured at one end to said hub, and at the edges of its convolutions to said arms and means disposed at the inner end of said spiral for engaging a film.

[Claim 6 not printed in the Gazette.]

1,170,577. HOUSING FOR GUNS. JOSEPH STRAUSS and ARTHUR S. HALSEY, Washington, D. C., assignors to the Government of the United States. Filed Sept. 4, 1914. Serial No. 860,299. (Cl. 89—38.)



1. In a watertight compartment for sheltering and housing a gun and mount, a combination of an up and down adjustable gun and mount, a shield rigidly secured to the mount and made a part thereof, said shield being provided with a permanently watertight joint through which the gun recoils and through which it projects when housed, the whole combination serving to close the compartment and make it watertight when the gun and mount are housed.

2. In connection with a housing compartment, a combination of a gun, a housable mount, a shield rigidly secured to the mount and made a part thereof, said shield provided with a permanently watertight joint through which the gun recoils and through which it projects when the mount is housed, the whole combination being adapted to close the compartment and make it watertight when the mount is housed, and means for securing the combination in the housed position.

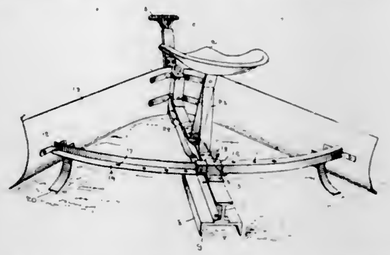
3. In connection with a housing compartment, a combination of a gun, a housable mount, a shield rigidly secured to the mount and made a part thereof, said shield provided with a permanently watertight joint through which the gun recoils and through which it projects when the mount is housed, the whole combination being adapted to close the compartment and make it watertight when the mount is housed, and means for securing the combination in the battery postiion.

4. A combination of a housable sight mounted on a shield, said shield being rigidly attached to a gun mount and made a part thereof and fitted with a permanently watertight joint through which the gun recoils; said sight in its normal or sighting position projecting beyond the limits of the shield but so adapted as to permit it being closed to a housed position within the limits of the shield.

5. In a watertight compartment for sheltering a gun and mount, a combination of an up and down adjustable gun and mount, a shield rigidly attached to the mount and made a part thereof, said shield being provided with a permanently watertight joint through which the gun recoils and through which it projects when sheltered, the whole combination serving to close the compartment and make it watertight when the gun and mount are sheltered, and a detachable watertight cover for protecting the bore of the gun.

[Claims 6 to 10 not printed in the Gazette.]

1,170,578. PLOW. HUGH T. TOY, Sidney, Ohio. Filed Mar. 19, 1915. Serial No. 15,406. (Cl. 37—5.)

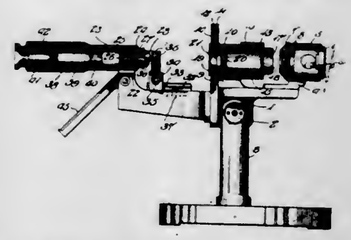


1. A snow plow, comprising a beam of substantially I-beam formation having an upwardly extending forward end and an elevated rear end, a shoe attached to the forward portion of said beam, a channel-shaped guide member attached to said elevated rear end, a pair of moldboards having curved surfaces hingedly secured at their forward ends to the forward portion of said I-beam, and means at the rear ends of said moldboards to adjust the angle of the moldboards.

2. A snow plow, comprising a beam having an upwardly extending forward end and an elevated rear end, a shoe secured to the upwardly extending forward end mold boards pivoted to said beam, means to regulate the width of said mold boards, and a channel shaped guide member attached to the elevated rear portion of the beam, the depending portions of said guide member having sharp edges whereby the rear end of the plow will be held against lateral skidding movement.

3. A snow plow, comprising a beam of substantially I-beam formation, a shoe adjacent to the forward end of said beam, a pair of mold boards pivoted at their forward ends to the forward portion of the beam, a pair of angle bars substantially L-shaped in cross section pivotally attached to the inner faces of the mold boards, said bars being inverted one with the other and having their inner ends overlapped, means to hold said bars in adjusted position, and means to hold the rear end of said beam against lateral skidding movement.

1,170,579. LENS-TESTING INSTRUMENT. CHARLES J. TROPPMAN, Chicago, Ill., assignor to F. A. Hardy & Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1914. Serial No. 870,237. (Cl. 88—56.)



1. A lens testing instrument comprising a target; a lens positioned to parallel rays proceeding from said target, a standard lens disposed in the path of said parallel rays, means for locating a lens to be tested between said lenses and in known relation to the plane of the equivalent focus of said standard lens, a movable screen, and scales for disclosing the amount of movement of said screen from the conjugate equivalent focus of said standard lens.

2. A lens testing instrument comprising a target, a lens positioned to parallel rays proceeding from said target, a standard lens disposed in the path of said parallel rays, means for locating a lens to be tested between the lenses and in known relation to the plane of the equivalent focus of said standard lens, a movable screen, and scales for disclosing the amount of movement of said screen from the conjugate equivalent focus of said standard lens in terms of the change of refraction equivalent to such movement.

3. A lens testing instrument comprising a target, a lens positioned to parallel rays proceeding from said target, a standard lens disposed in the path of said parallel rays, adjustable means for locating a lens to be tested between said lenses and in known relation to the plane of the equivalent focus of said standard lens; a movable screen, and scales for disclosing the movement of said screen from the conjugate equivalent focus of said standard lens.

4. A lens testing instrument comprising a target, a lens positioned to parallel rays proceeding from said target, a standard lens disposed in the path of said parallel rays, means for locating a lens to be tested between said lenses and at a known relation to the plane of the equivalent focus of said standard lens, and means for viewing the image focalized by said standard lens.

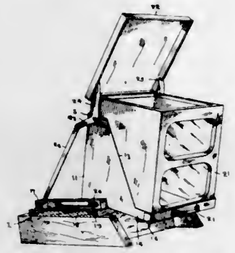
5. A lens testing instrument comprising a target, a lens positioned to parallel rays proceeding from said target, a standard lens disposed in the path of said parallel rays, means for locating a lens to be tested between said lenses and at a known relation to the plane of equivalent focus of said standard lens, means for viewing the image focalized by said standard lens, and means for measuring the relation of location of the image focalized by the standard lens and the plane of equivalent focus thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,170,580. SUPPORTING-RACK. WILLIAM WALDEMARSON, Erie, Pa. Filed Feb. 23, 1915. Serial No. 10,057. (Cl. 211—6.)

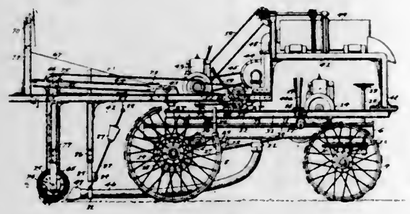
The combination with a base, of a rack formed of a single sheet of metal mounted on said base and surrounding the lower portion of and supporting a receptacle thereon, longitudinally disposed slotted guide blocks fixed to the ends of said base, stems carried by said rack and having bearing rollers mounted thereon and engaging the slots in the guide blocks, a pair of bell crank levers pivoted to the

rear upper edges of the side walls of said rack, one arm of each bell crank lever being grooved and adapted for engagement with the flange of the cover of the receptacle, links having their lower ends pivoted to the rear ends of the guide blocks and their upper ends to the opposite arms



of the bell crank levers, whereby when the rack and receptacle are moved outwardly or inwardly, the bell crank levers will be rocked and the cover of the receptacle raised or lowered, the movement in both directions being limited by the said bearing rollers in engagement with the ends of the slots of the said guide blocks.

1,170,581. SWEEPING-DREDGE. HENRY R. WALKER, Nome, Alaska. Filed Nov. 17, 1914. Serial No. 872,673. (Cl. 37—9.)



1. A device of the class described, comprising a platform, a frame movable thereon, a supplemental frame movable on said first named frame, a brush vertically adjustable in said supplemental frame, means for actuating said brush, a suction pipe, and a pump in connection therewith.

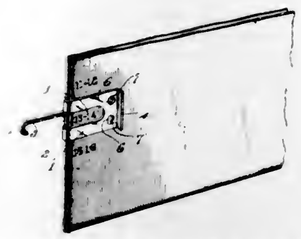
2. A device of the class described, comprising a platform, a frame movable thereon, a supplemental frame movable on said first named frame, a brush carried by said supplemental frame, a suction pipe, a pump, means for actuating said brush and pump simultaneously, traction means for said platform, and means for actuating said wheels and for actuating said frames at will.

3. A device of the class described, comprising a platform, a brush adjustable thereon, a suction pipe adjustable thereon, means for actuating said brush, and means for bringing said pipe into contact with said brush.

1,170,582. FILING DEVICE. HARRY A. WARDY, Kalamazoo, Mich. Continuation in part of application Serial No. 650,936, filed Sept. 23, 1914. This application filed Mar. 18, 1914. Serial No. 825,635. (Cl. 24—84.)

1. A clip adapted to engage a flat sheet, comprising a body portion composed of two clamping leaves, a hook portion stamped from one of said leaves projecting from said body portion, said leaves being adapted to receive and hold between their inner surface the sheet, a portion of said sheet being visible through the opening from which said hook portion is cut, substantially as specified.

2. A device adapted to constitute a clasp for a folder, comprising a body portion composed of two clamping leaves, a projecting portion stamped from one of said leaves, said leaves being adapted to receive and hold between their inner surface the folder, a portion of said folder being visible through the opening from which said projection is cut, substantially as specified.



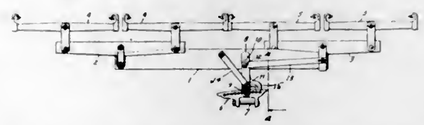
3. A clip for indexing or withdrawing cards and folders, comprising a rear clamping leaf, a front clamping leaf integral with said rear clamping leaf and having its free end pressing toward said rear clamping leaf and having a sight opening, and an engageable hook extending from said leaves, substantially as described.

4. A device adapted to be applied to a folder, sheet or card, comprising a sheet bent to form two clamping leaves, and a projecting portion stamped from one of said leaves, said leaves being adapted to receive and hold between their inner surface the object to which it is applied, a portion of said object being visible through said opening from which said projection is cut, substantially as specified.

5. A device adapted to constitute a clip for a folder, comprising a body portion composed of two clamping leaves, a projection stamped from one of said leaves, and a lip formed at the free end of one of said leaves for manual engagement whereby said leaves may be separated in applying and removing said clip, substantially as specified.

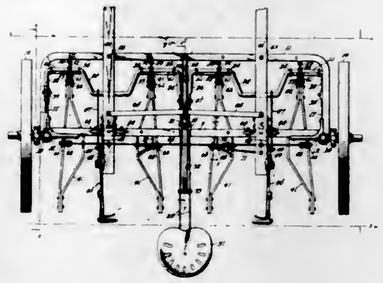
[Claims 6 to 8 not printed in the Gazette.]

1,170,583. DRAFT-EQUALIZER. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 11, 1911. Serial No. 620,419. (Cl. 21—76.)



In a draft equalizer, the combination of an evener clevis pivotally mounted so as to swing laterally with respect to an implement or vehicle to which it may be attached and shaped at its forward end to form a yoke, the arms of which are vertically spaced, an evener-bar interposed between said arms so as to be slidingly movable therebetween, links pivotally mounted on the evener clevis, extending laterally therefrom in opposite directions and being so pivotally connected to the evener bar as to maintain the same offset laterally to one side of the evener clevis and permit the evener bar to swing laterally on its evener clevis pivots, guided at all times between the yoke arms of the clevis, and an abutment member rigid with the evener clevis and arranged to so abut against a part fixed with respect thereto as to prevent swinging of the evener clevis to the side of the medial line of the load opposite from that to which the evener bar is offset, whereby a relatively close hitch is obtained and the links are relieved of the weight of the evener bar and its draft attachments by reason of the association of the evener bar with the yoked evener clevis, and whereby also the evener bar may be swung to its offset side on both the pivots of its links and the evener clevis pivot so as to make possible a short, quick turn at an abrupt angle.

1,170,584. TWO-ROW CULTIVATOR. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 17, 1914. Serial No. 832,567. (Cl. 97—35.)



1. In a cultivator, the combination of a frame, wheels pivoted on said frame to shift about vertical axes, an arch connected to and movable with said wheels, cultivator beams attached to said arch, and means for moving said arch to raise and lower said beams.

2. In a cultivator, the combination of a frame, a pair of supporting wheels shiftable about vertical axes, means including an arch connected with said wheels to maintain the same in parallel relation, cultivator beams carried by said arch, means for moving said arch laterally of the frame to shift said beams and simultaneously angle the wheels, and means for moving said arch vertically to raise and lower said beams.

3. In a cultivator, the combination of a frame, a pair of wheels mounted thereon to shift about vertical axes, an arm projecting forwardly from the vertical axis of each wheel and rigidly connected with the wheel axles, means connecting the forward ends of said arms, said means being shaped to provide an arch, cultivator beams carried by said arch, means for shifting said arch laterally to shift the position of the cultivator beams and simultaneously angle the wheels, and means operating on said arch to raise and lower said beams.

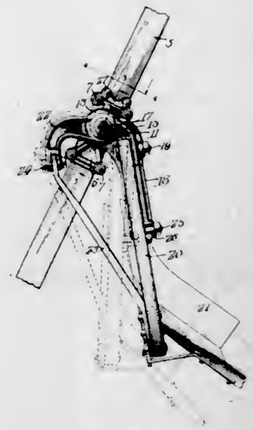
4. In a cultivator, the combination of a frame, standards pivotally mounted to swing about vertical axes at each side of said frame, supporting wheels mounted on said standards, an arm projecting forwardly from each standard, means including an arch pivotally attached to the forward end of each arm for connecting said arms, cultivator beams carried by said arch, and means for swinging said arch about its pivotal connections with said arms to raise and lower said beams.

5. In a cultivator, the combination of a frame, standards pivoted to each side of said frame, supporting wheels mounted on said standards, an arm fixedly secured to and projecting forwardly from each standard, means for connecting said arms, pivotally attached to the front end of each arm, to move vertically with respect to said arms, cultivator beams carried by said means, mechanism for moving said means laterally with respect to the frame to shift said beams and simultaneously angle the supporting wheels, and mechanism for swinging said means about its pivots to raise and lower said beams.

[Claims 6 to 28 not printed in the Gazette.]

1,170,585. PLOW. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 17, 1914. Serial No. 832,570. (Cl. 97—69.)

1. In combination, a draft frame, an upright bearing-post bracket mounted fixedly above and upon the rear portion of the draft frame, a sleeve rotatably mounted upon the bearing-post, means coöperative between the base portion of the sleeve and the bearing-post bracket for normally holding the sleeve from rotating, means for resiliently opposing rotation of the sleeve, the sleeve having formed integrally therewith an arm extending rearwardly and downwardly therefrom beyond the draft frame, a plow beam connected at its forward end to the lower end of said arm, and a plow attached to the rear end of the plow beam.



2. In combination, a draft frame, an upright bearing-post bracket mounted fixedly above and upon the rear portion of the draft frame, a sleeve rotatably mounted upon the bearing post, means coöperative between the base portion of the sleeve and the bearing-post bracket for normally holding the sleeve from rotating, means for resiliently opposing rotation of the sleeve, the sleeve having formed integrally therewith an arm extending rearwardly and downwardly therefrom beyond the draft frame, and then rearwardly from its lowermost point, a plow beam pivotally connected on a horizontal axis at its forward end to said arm at the forward end of its lower portion, means at the rear end portion of said arm for permitting the plow beam to swing upwardly on its pivot but limiting the downward swinging movement thereof, and a plow attached to the rear end of the plow beam.

3. In combination, a draft frame, an upright bearing-post mounted above and upon the rear portion of said frame, a bracket having a sleeve rotatably mounted upon said bearing-post, means coöperative between the base portion of the sleeve and the bearing-post bracket for normally holding the sleeve from rotating, means for resiliently opposing rotation of the sleeve, the sleeve having an arm portion located at the rear of said sleeve in a general horizontal plane below the same and extending in the line of draft, a plow beam pivotally connected at its forward end on a horizontal axis to the forward end portion of said arm, means at the rear of said end portion of the arm for limiting the downward pivotal movement of the same and a plow attached to the rear end of the plow beam.

4. In combination, a draft frame, a bracket mounted thereon having an upstanding bearing-post, a sleeve-shaped bracket revolubly mounted on said bearing-post and having two arms extending rearwardly from the sleeve portion unequal distances, a plow beam pivotally connected at its forward end on a horizontal axis to one of the arms adjacent to the sleeve, a brace-bar pivotally connected to the other arm coaxial with the beam pivot and being connected to the plow beam bracing the latter, means operative between the end portion of the longer arm and the plow beam for limiting downward pivotal movement of the beam, and a plow attached to the plow beam.

5. In combination, a draft frame, a bracket mounted thereon having an upstanding bearing-post and inclined faces adjacent to the base thereof, a sleeve-shaped bracket revolubly mounted on said bearing-post and formed with inclined faces adapted to coöperate with those on the first named bracket, resilient means normally holding the

sleeve bracket from rotating but permitting it to move rotatably by movement of the sleeve faces upon the stationary bracket faces, the sleeve bracket having formed integrally therewith a rearwardly extending portion, a plow beam pivotally connected thereto on a horizontal axis, means operative between said bracket extension and the plow beam for limiting downward pivotal movement thereof, and a plow attached to the plow beam.

[Claims 6 and 7 not printed in the Gazette.]

1,170,586. TATTING-SHUTTLE-WINDING DEVICE. CHRIS WEBER, Havana, N. D. Filed Feb. 12, 1915. Serial No. 7,839. (Cl. 242—52.)



1. In a device for winding a tatting shuttle, the combination of a U-shape frame having handle forming prongs, and a crank journaled on said frame for rotating said shuttle therein, said crank adapted to be interlocked with said shuttle by the closing movement of said prongs and to be released therefrom by the opening movement thereof.

2. In a device for winding a tatting shuttle, the combination of a U-shape frame having normally spring opened handle forming prongs, and a crank journaled on said frame for rotating said shuttle therein, said crank adapted to be interlocked with said shuttle by the closing movement of said prongs and to be released therefrom by the opening movement thereof.

3. In a device for winding a tatting shuttle, the combination of a U-shape frame having normally spring opened handle forming prongs, means for detachably journaling said shuttle to one of said prongs, and a crank journaled in the other of said prongs and having a clutch adapted to be interlocked with said shuttle by the closing movement of said prongs and to be released therefrom by the opening movement thereof.

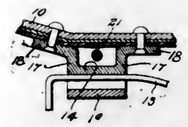
4. In a device for winding a tatting shuttle, the combination of a U-shape frame, a trunnion on one of the prongs of said frame, said shuttle being removably journaled on said trunnion, a crank journaled on the other prong of said frame and having a clutch separately connected to said shuttle, said shuttle adapted to be removed from said trunnion and clutch by the separation of the prongs of said frame, and a thread tension device on said frame.

5. In a device for winding a tatting shuttle, the combination of a U-shape frame, a trunnion on one of the prongs of said frame, said shuttle being removably journaled on said trunnion, a crank journaled on the other prong of said frame and having a clutch separably connected to said shuttle, said shuttle adapted to be removed from said trunnion and clutch by the separation of the prongs of said frame, a thread tension device on said frame, and a thread guide at the transverse portion of said frame.

[Claims 6 to 8 not printed in the Gazette.]

1,170,587. UPPER BUFFING DEVICE FOR VESTIBULE FACE-PLATES. JACOB H. WEISBROD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 16, 1915. Serial No. 14,781. (Cl. 105—61.)

1. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and bearings for the free ends of said springs, each of which bearings comprises a fixed block upon which the free end of the spring bears, and a clevis-shaped keeper applied to said block and inclosing the end of the spring.



2. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a bearing member against the face of which the free end of the spring engages and a clevis-shaped keeper detachably applied to said bearing member and inclosing the free end of said spring.

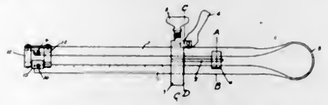
3. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a member having a bearing plate against the face of which the free end of the spring engages and a substantially channel-shaped keeper detachably applied to said bearing plate, with the legs of said keeper applied to the top and bottom of said plate.

4. The combination with a railway car vestibule and vestibule diaphragm face plate, of a semi-elliptic spring secured to one of said elements, and spring bearings fixed to the other element, each of which bearings comprises a member provided with a bearing plate against the face of which the free end of the spring engages, a substantially clevis-shaped keeper the legs of which engage the top and bottom of said bearing plate and readily removable attaching means seated in the keeper and bearing plate.

5. A diaphragm face plate spring retaining device comprising a bearing plate against which the free end of the spring is adapted to engage, a keeper applied thereto, said parts being spaced apart to form a spring pocket in which the free end of the spring is loosely mounted and a detachable member for securing said keeper to the bearing plate.

[Claims 6 and 7 not printed in the Gazette.]

1,170,588. GLASS-TUBE CUTTER. HARRY J. WELLS, Portland, Oreg. Filed Aug. 31, 1915. Serial No. 48,200. (Cl. 49—52.)



1. A glass tube cutter comprising two parallel rods, with spring part made integral therewith and forming the closed end, a sliding guide block with pressure lever, a sliding fulcrum block attached to said guide block and located between the rods, a cutting wheel mounted at the end of each rod, so that their axes are longitudinal with the rods and their cutting edges are opposite each other and in the same plane, and an end guide attached to top arm or rod and supporting two roller wheels, one on each side of arm, their faces respectively being at right angles to the cutting edge of each cutter and located centrally over same.

2. In a glass tube cutter of the class described, the combination with a parallel armed holder with guide block and pressure lever, of a sliding fulcrum block between the arms, on the side of the guide block nearest to the closed end of the cutter

3. In a glass tube cutter of the class described, the combination with a parallel armed holder, with guide block and pressure lever, of an end guide comprised of two spring supported roller wheels, one on each side of the top arm and attached thereto, their faces at right angles to the edges of the cutters and located centrally over same.

4. In a glass tube cutter of the class described, in combination with a parallel armed holder, with guide block and pressure lever, of a sliding fulcrum block between the arms and an end guide comprised of two spring supported roller wheels, one on each side of the top arm and attached thereto, their faces being at substantially right angles to the plane of incision.

5. In a glass tube cutter of the class described, the combination with a parallel armed holder with guide block and pressure lever, of a sliding fulcrum block between the arms and a cutter wheel placed at the free end of each arm, the axis of each wheel being longitudinal with the arm on which it is mounted and the cutting edges of the wheels being opposite each other and in the same plane.

[Claim 6 not printed in the Gazette.]

1,170,589. PAPER-ROLL. SETH WHEELER, Castleton, N. Y. Filed Aug. 12, 1914. Serial No. 856,337. (Cl. 206—58.)



1. A paper roll having a central incision adapted to receive a support, and a pair of inclined incisions one on each side of the central incision extending forwardly from the central incision arranged and adapted to permit the paper to be readily torn off sheet by sheet.

2. A paper roll comprising a plurality of convolutions having a relatively large mandrel opening, flattened into a narrow elliptical form, said flattened roll having a central incision extending through the top of the roll adapted to receive a support, and inclined incisions coöperating with the central incision extending forwardly from the central incision to weaken the roll and to permit the paper to be readily torn off sheet by sheet.

3. A paper roll comprising a plurality of convolutions having a relatively large mandrel opening, flattened into a narrow elliptical form, said flattened roll having a central incision extending through the top of the roll in front of the central plane of the roll, and incisions on each side of the central incision and oppositely inclined to the central plane of the roll, coöperating with the central incision to weaken the roll and to permit the paper to be readily torn off sheet by sheet.

4. A paper roll having a curved central incision adapted to receive a support of like form, and a pair of straight inclined incisions one on each side of the central incisions extending forwardly from the central incision arranged and adapted to permit the paper to be readily torn off sheet by sheet.

5. A paper roll comprising a plurality of convolutions having a relatively large mandrel opening, flattened into a narrow elliptical form, said flattened roll having a central curved incision extending through the top of the roll, and a pair of incisions one on each side of the central incision, extending forwardly from said curved incision to the edges of the paper and coöperating with the central incision to weaken the roll and to permit the paper to be readily torn off sheet by sheet.

1,170,590. PAPER-ROLL. SETH WHEELER, Castleton, N. Y. Filed Jan. 14, 1915. Serial No. 2,203. (Cl. 206—57.)

1. A roll of paper or other fabric having its convolutions of substantially equal length, the excess in its inner convolutions being assembled at a single point of the periphery of the roll.

2. A roll of paper or other fabric with its convolutions of substantially equal length, the excess material in its inner convolutions being assembled at a single point of the periphery of the roll, and said roll being provided with a line of perforations in the same plane extending transversely across and through the convolutions from the interior of the exterior of the roll.



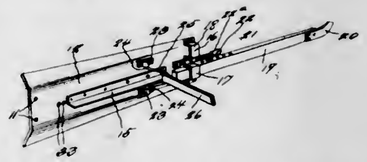
3. A paper roll comprising a plurality of turns wound in the form of a flattened spiral, each of said turns being folded inwardly at one edge of the flattened spiral, and radial cuts or incisions through the roll at the opposite edge of the spiral, said folds being of gradually decreasing depth from the innermost turn outward to compensate for the thickness of the paper, whereby the turns are of uniform size and may be removed from the roll sheet by sheet.

1,170,591. COMBINATION-TOOL. ELLIOTT L. WHITE, Suffolk, Va. Filed July 11, 1914. Serial No. 850,457. (Cl. 33—89.)



In a device of the class described, a support formed with a straight edge, a slot in its outer end, and an enlarged aperture adjacent its inner end, said slot and the center of said aperture being equi-distant from the straight edge of said support, said slot adapted to receive one end of a plumb line, a plumb bob carried by the other end of the plumb line, adapted to register with said aperture when the straight edge is engaged with a vertical surface and said surface brought to a true vertical position and an upstanding scale bar upon said support disposed at a right angle to the straight edge thereof, said scale bar being positioned adjacent said aperture and extending beyond each side thereof and coöperating with the plumb bob for indicating the degree of declination of surfaces against which the straight edge is positioned.

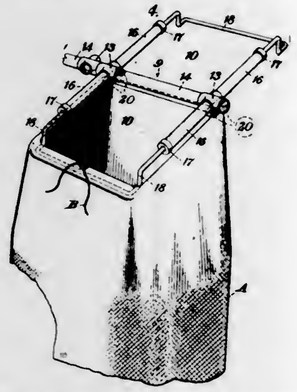
1,170,592. ROAD-GRADING MACHINE AND DITCHER. WILLIAM R. WILLIAMS, Owensboro, Ky. Filed Jan. 25, 1915. Serial No. 4,207. (Cl. 37—5.)



In a road grading machine, a land side body member, a scraper blade connected at its forward end to the forward portion of the body member and extending laterally and rearwardly at an angle to the body member, connections between the rear lateral end of the blade and the

body member, the rear lateral end of the blade having upon its rear face a strap, bent to form two rectangular arches, a handle member fixed between the arches, an extension leveler blade to be received adjustably in either one of the arches, said leveler blade having vertical apertures, and a T-shaped hook pivoted to the handle member and having its T-shaped portion to engage any one of the apertures to hold the leveler blade in adjusted position in either one of the arches.

1,170,593. MAIL-POUCH RACK WITH EXPANSIBLE GRIP. VICTOR WILLOUGHBY, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 2, 1914. Serial No. 859,886. (Cl. 211—36.)



1. In a device of the class described, a supporting frame, and a multiple rack secured thereto and comprising a series of connected unit racks, each of the latter being provided with expansible pouch-gripping means adapted to hold the pouch with its opening distended.

2. In a device of the class described, a supporting frame, a multiple rack carried thereby and comprising a series of unit racks, said multiple rack having a central supporting member attached to said frame and forming one side of each unit rack, and expansible pouch-gripping means in each of the latter adapted to hold the pouch with its opening distended.

3. In a device of the class described, a supporting frame, a multiple rack carried thereby and comprising a central supporting member and a series of connected rack sections each containing oppositely extending unit racks, said central supporting member forming part of each of said unit racks, and expansible pouch-gripping means in each of the latter adapted to hold a pouch with its opening distended.

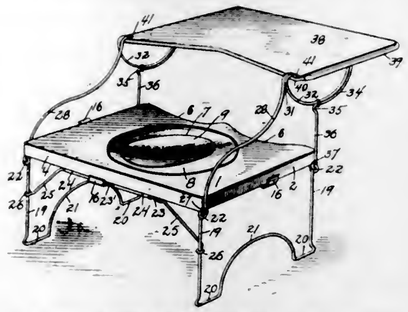
4. In a device of the class described, a supporting frame, an inclined multiple rack carried thereby and comprising a central supporting member and a series of connected twin sections of unit racks symmetrically disposed each side of said central member, and expansible pouch-gripping means in each unit rack adapted to hold the pouch with its opening distended.

5. In a device of the class described, a supporting frame, a multiple rack carried thereby and comprising a common supporting member and a series of unit racks mounted thereon, and expansible pouch-gripping means for each unit rack comprising fixed holding members and a movable member forming part of said unit rack.

[Claims 6 to 10 not printed in the Gazette.]

1,170,594. COMBINATION CHILD'S PLAY-CHAIR AND COMMODE. WILLIAM H. YOUNG, Thomson, Ga. Filed June 26, 1914. Serial No. 847,428. (Cl. 155—8.)

1. In a combination child's play-chair and commode, an apertured seat, curved rods pivoted at their lower extremities and forming side-arms for the chair, and foldable beneath said seat without obstructing said aperture, and a tray removably engaging said rods and holding them in operative, upright position, against collapse.



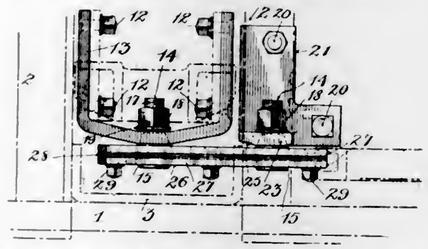
2. In a combination child's play-chair and commode, a seat having depending edge-flanges, legs pivoted to the inner surface of two of said flanges, side-arms pivoted to said legs, and a tray removably engaging said side-arms and locking them in operative upright position, said side-arms, in turn, holding said legs against said two flanges and thus locking said legs against pivotal movement.

3. In a combination child's play-chair and commode, a seat carrying spring clips, legs pivoted to said seat and foldable therebeneath, side-arms for the chair pivoted to said legs and also foldable beneath said seat, and a tray engageable with said clips in the collapsed position of the device.

4. In a combination child's play-chair and commode, a seat, and side-arms for the chair pivoted at their lower extremities and foldable beneath said seat and provided with portions projecting beyond said seat when said arms are folded therebeneath, said portions forming handles, by which the chair may be carried when in collapsed condition.

5. In a child's play-chair, a seat, side-arms, a tray removably engaged by said arms, and spring-clips carried by said seat, whereby, when said tray is removed from said arms, it may be placed on said seat and snapped over and yieldingly held by said spring clips.

1,170,595. BOLSTER-GUIDE. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 18, 1915. Serial No. 34,844. (Cl. 105—105.)



1. In a car truck, a frame, a bolster movable in said frame, a bearing comprising a spherical projection on said bolster, a bearing comprising a spherical projection on said frame, and a link variable in thickness with relation to said bearings extending between said bearings and mounted thereon.

2. In a car truck, a frame, a bolster movably mounted within said frame, a bearing on said bolster comprising a pin having a spherical head, a like bearing mounted on the truck frame and a link variable in thickness with relation to said bearings extending between said bearings and movably mounted thereon.

3. In a car truck, a frame, a bolster movably mounted within said frame, a bearing on the bolster comprising a pin secured thereto having a spherical head, a like bearing secured to the truck frame, and a link variable in thickness with relation to said bearings extending between said bearings and having perforations fitting over said spherical heads and allowing a movement of the link thereon.

4. In a car truck, a truck frame, a bolster movably mounted within said frame, a bracket on the bolster, a pin having a spherical head mounted on said bracket, a bracket on the truck frame, a pin having a spherical head mounted on said bracket and a link comprising two outer parts with a series of plates between them having perforations adapted to fit over said spherical heads extending between said pins.

5. In a car truck, a truck frame, a bolster movably mounted within said frame, a bracket secured on the bolster, a pin secured in said bracket having a spherical head; a bracket secured to the truck frame, a pin secured in said bracket having a spherical head and a link comprising two outer parts and a series of plates between said outer parts, said link extending between the spherical heads and having perforations fitting over said heads and allowing movement of said link.

[Claim 6 not printed in the Gazette.]

1,170,596. REFLECTOR CONNECTION. LAURITZ W. ANDERSEN, Waterbury, Conn., assignor to Plume and Atwood Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Aug. 25, 1915. Serial No. 47,214. (Cl. 240—105.)



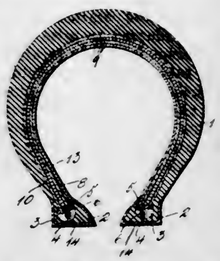
1. A reflector having an opening therein, a sleeve fitted in said opening, a socket holder fitting in said sleeve and turnable therein, the lower end of said socket holder being threaded and a flanged threaded ring adapted to engage the threaded end of the socket holder and maintain the socket therein.

2. A reflector having an opening therein, a sleeve fitted in said opening, said sleeve having an interior annular shoulder, a socket holder fitted into said sleeve and having a flange at the inner end engaging said interior annular shoulder, the outer end of said socket holder being threaded and having an interior annular shoulder adjacent said threaded end, said holder having an exterior bead adapted to engage the outer end of sleeve, and a flanged threaded ring adapted to engage the threaded end of holder and maintain a socket therein.

1,170,597. PNEUMATIC TIRE. CHARLES L. ARCHER, Council Bluffs, Iowa. Filed May 10, 1915. Serial No. 27,172. (Cl. 152—13.)

1. A device of the class described, comprising a plurality of reinforcing layers, said layers being formed of a single strand of rubberized cord, the outer and inner layers extending in the opposite directions to the central layer, said layers being adapted to be positioned within the tire casing for reinforcing the same.

2. A device of the class described comprising inner and outer layers, a central layer interposed between said inner and outer layers, said central layer extending at right angles to said inner and outer layers, said layers being formed of a single strand of material, said layers being adapted to be positioned within a tire casing for reinforcing the same.



3. In a device of the class described, the combination of a tire casing having heel portions, longitudinal bores formed within said heel portions, a single strand of rubberized cord extending transversely back and forth around the inner portions of said casing and then passing longitudinally so as to form independent layers, said longitudinal portion terminating in an outer transversely extending portion forming an outer layer, said outer layer extending at right angles to the longitudinal layer, and means carried within said bores for engaging said layers and positively retaining the same in their correct positions.

4. In a device of the class described, the combination of a plurality of supporting cables, hooks carried upon said cables, a single strand of rubberized cord passing transversely backward and forward and being secured to said hooks, thereby forming an inner layer, said cord then extending to form longitudinal portions, thereby forming an intermediate longitudinal layer, said longitudinal portions then terminating in transversely extending portions forming an outer transverse layer, said outer transverse layer being secured to said hooks, whereby three independentent layers will be formed in which the outer and inner transverse layers will be formed so as to extend at right angles to the longitudinally extending layers, said layers, hooks, and cable being adapted to be positioned within a tire casing for reinforcing the same.

5. In a device of the class described, the combination of a plurality of cables, hooks carried upon said cables, said hooks having hooked ends extending in opposite directions, a rubberized cord passing around said hooks and extending to form reinforcing layers, and means fitting between said hooks for holding the same in their correct extended positions whereby the hooks will be prevented from accidentally swinging to closed positions causing the displacement of the cords, said cables, hooks, and layers being adapted to be positioned within the inner portions of a tire casing, for reinforcing the same.

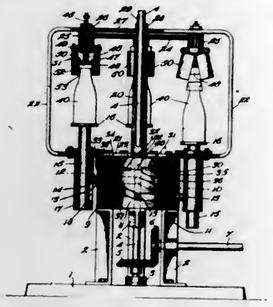
[Claim 6 not printed in the Gazette.]

1,170,598. MACHINE FOR CRIMPING PAPER BOTTLE-CAPS. GEORGE W. BEADLE, New York, N. Y. Filed Apr. 8, 1915. Serial No. 20,089. (Cl. 113—4.)

1. In a machine for crimping paper bottle caps around bottle heads, the combination of a support for the bottle; a stationary cam guide; a connection between said support and said stationary guide adapted to raise and lower said support; a revolving cam adapted to revolve with said support around a fixed center; a pressure disk adapted to be revolved with said support and to hold a paper cap in place on a bottle head; a pivoted crimping means adapted to be raised and lowered by said revolving cam, moving with said support, and adapted to be controlled by said disk; and means for rotating said crimping means around the axis of said support while the support is in motion, substantially as described.

2. In a machine for crimping paper bottle caps around bottle heads the combination of a shaft; means for rotating said shaft; a spider having a sliding engagement with said shaft and rotating therewith; a rotating cam member fixed to said spider for moving said spider up and

down; a stationary cam member with which said rotating cam member contacts; a bottle support carried by said spider and revolving around said shaft as a center; connections between said stationary cam member and said bottle support adapted to raise and lower said support, at a rate different from said rotating cam member; a pinion carried by said spider; a crimping member carried by said pinion; means to rotate said pinion and crimping member on the axis of said bottle support while said spider is revolving; and means to cause said crimping member to automatically move toward said axis prior to the crimping operation, substantially as described.



3. In a crimping apparatus the combination of a pinion; means to revolve said pinion around an axis; means comprising a stationary gear to rotate said pinion around another axis while it is revolving; a pivoted crimping member carried by said pinion adapted to engage the lower edge of a paper cap; a bottle support revolving with said pinion for holding a bottle carrying a paper cap in position to be engaged by said crimping means; a pressure disk adapted to engage said crimping means and cause the same against the action of centrifugal force to engage said paper cap, means for raising and lowering said pinion while in motion; and means for raising and lowering said bottle support while in motion, substantially as described.

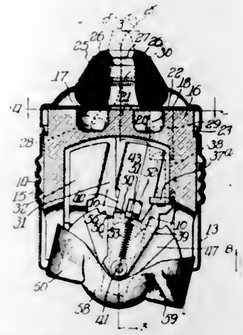
4. In an apparatus for crimping paper caps onto bottles, the combination of a pinion; a sleeve on which said pinion is mounted; a rod carrying a pressure disk passing through said sleeve; a vertical flange carried by said disk; a pivoted crimping member having a lug adapted to be engaged by said disk and carried by said pinion; and a vertical lug carried by said crimping member adapted to engage said flange, substantially as described.

5. In an apparatus for crimping paper caps onto bottles the combination of a pinion; a sleeve on which said pinion is mounted; a rod carrying a pressure disk passing through said sleeve; a spring surrounding said rod; a pivoted crimping member having a lug adapted to be engaged by said disk carried by said pinion; a stationary gear around which said pinion is adapted to revolve; and means for raising and lowering said pinion while in engagement with said gear, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,170,599. PENDANT-SWITCH. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 18, 1910. Serial No. 592,989. (Cl. 175—293.)

1. In a snap switch, the combination of a supporting base having a suitable channel therein, a pair of stationary contact members arranged within said channel along the sides thereof, a pair of hangers mounted within said channel, a pivot secured between the free ends of said hangers, a switch blade having a pair of legs pivotally mounted on said pivot, a stop mounted on one of said hangers and arranged beside such switch blade, a latch extending between the two legs of said switch blade and adapted to engage upon either side of said stop, a spring coiled about said pivot between the legs of the blade and having its free ends engaging on opposite sides of said latch, and a rocking lever pivoted on said pivot substantially U-shaped and arranged between the legs of said snap switch, one of the legs of said rocking lever having an in-turned lug mounted between the free ends of said spring and the other leg having a cam portion arranged to engage said latch and lift the same out of engagement with said stop when the lever is rocked.



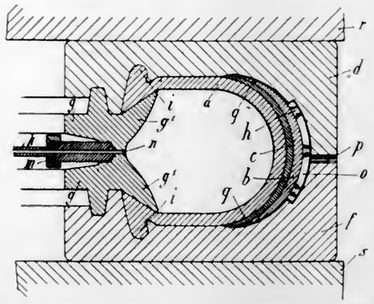
2. A pendant switch comprising an insulating base, a contact carried thereby, a movable contact for engaging said contact, substantially cylindrical casing means at the lower end of said switch and operating means for said movable contact comprising an operating member pivoted near the lower end of said switch, said operating member comprising wing portions extending in opposite directions from the pivotal point and movable from a position substantially within said casing to a position extending outside of said casing, and comprising also a central projection between said wing portions extending farther downward than said wing portions.

3. A snap switch comprising a contact, a fixed member having a stop thereon, a pivoted blade adapted to be moved into and out of connection with said contact and having a pair of legs, one of said legs having an opening therethrough, a latch extending between said legs and carried by said blade one end of said latch extending through said opening and adapted to engage upon either side of the stop of said fixed member, a spring for effecting the movement of said blade in both directions, a spring secured at one end to said latch for holding it in latching position; and means for moving said latch out of engagement with the stop of said fixed member when the first said spring has been set.

4. A switch comprising an insulating base, a contact carried thereby, a movable contact for engaging said contact, casing means for said base and contacts and operating means for said movable contact comprising a rocking member pivoted near a wall of said casing, said rocking member having wing portions extending in opposite directions from the pivotal point and movable from a position substantially within said casing to a position extending outside of said casing and comprising also a central projection between said wing portions extending farther outward than said wing portions.

1,170,600. APPARATUS FOR THE VULCANIZATION OF PNEUMATIC TIRES WITH NON-SKID LEATHER TREADS. MATHIEU BERGOUGNAN, Paris, France, assignor to Societe Generale des Etablissements Bergougnan, Clermont-Ferrand, France. Filed Dec. 16, 1911. Serial No. 666,247. (Cl. 18—34.)

1. In an apparatus for vulcanizing pneumatic tires having non-skid bands of leather or similar material, a mold adapted to fit a tire of the class described, said mold having a recess adapted to surround the non-skid band of the tire, and a foraminous member positioned within the said recess in interposed relation to the said tire band and the mold walls, the mold being provided with air ducts leading outwardly from the recess at a number of places to afford a circulation of air within the interstices of the foraminous member.



2. In an apparatus for vulcanizing pneumatic tires having non-skid bands of leather or similar material, a mold adapted to fit a tire of the class described, said mold having a recess adapted to surround the non-skid band of the tire, and a fabric sheet positioned within the said recess in interposed relation to the said tire band and the mold walls, the mold being provided with air ducts leading outwardly from the recess at a number of places to afford a circulation of air within the interstices of the fabric sheet.

3. In an apparatus for vulcanizing pneumatic tires having non-skid bands of leather or similar material, an annular mold adapted to fit a tire of the class described, said mold having a circumferential recess adapted to surround the non-skid band of the tire, and a foraminous member positioned within the said recess in interposed relation to the said tire band and the mold walls, the mold being provided with circumferentially spaced air ducts leading outwardly to the atmosphere from the recess to afford a circulation of air within the interstices of the foraminous member.

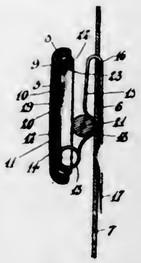
4. In an apparatus for vulcanizing pneumatic tires having studded non-skid bands of leather or similar material, an annular mold adapted to fit a tire of the class described, said mold having a circumferential recess adapted to surround the non-skid band of the tire, said recess being provided with an enlarged central portion for the accommodation of the studs of the band, and a foraminous member positioned within the said recess in interposed relation to the said tire band and the mold walls, the mold being provided with circumferentially spaced air ducts leading outwardly from the enlarged portion of the recess to the atmosphere to afford a circulation of air within the recess and the interstices of the foraminous member.

5. In an apparatus for vulcanizing pneumatic tires having non-skid bands of leather or similar material, a mold adapted to fit a tire of the class described, said mold having a recess adapted to surround the non-skid band of the tire, a foraminous member positioned within the said recess in interposed relation to the said tire band and the mold walls, the mold being provided with air ducts leading outwardly from the recess at a number of places to afford a circulation of air within the interstices of the foraminous member, and means for supplying air under pressure to the tire positioned within the mold.

[Claims 6 to 8 not printed in the Gazette.]

1,170,601. BADGE AND PENCIL HOLDER. JOHN C. BLIEMEISTER, Buffalo, N. Y. Filed July 22, 1914. Serial No. 852,381. (Cl. 24—12.)

1. A combined badge and pencil holder comprising a badge or display member, and a combined pencil retainer and fastening member formed of wire fashioned into a coil and having the wire extended in two stretches from said coil, one of said stretches being secured to said badge or display member and the other being directed substantially parallel with said first stretch and recurved upon itself, the extremity of said recurved portion being pointed to permit of attaching the device to a garment, said second-mentioned stretch being spaced from said badge or display member to permit of placing a pencil between the two.



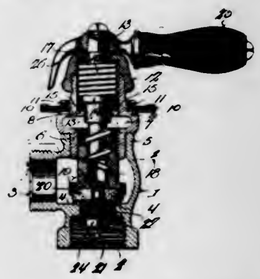
2. A combined badge and pencil holder comprising a badge or display member and a combined pencil retainer and fastening member, said pencil retainer and fastening member being formed of wire fashioned into a coil near one end and having a short and a comparatively long stretch of wire extending from said coil, said short stretch of wire being fastened to said badge or display member and said long stretch being recurved upon itself and having its extremity pointed, said long stretch being further provided with a crooked or curved portion between its recurved portion and said coil and said crooked or curved portion lying in contact with said recurved portion.

3. A device of the kind described, comprising a badge or display member having a foundation or body portion and a back plate, said back plate being provided with a slit, and a fastening member formed of wire having one extremity flattened and adapted to be thrust through said slit and be entered and clamped between said foundation or body portion and said back plate.

4. A device of the kind described, comprising a badge or display member having a back plate provided with a plurality of slits arranged in different radial planes, and a fastening member formed of wire adapted to have one end thereof thrust behind said back plate through any one of said slits.

5. A device of the kind described, comprising a badge or display member having a back plate provided with slits arranged in different radial planes, and a fastening member formed of wire fashioned into a coil near one end to provide a long and a short stretch of wire extending therefrom, said short stretch of wire being flattened at its extremity and thrust behind said back plate through any one of said slits.

1,170,602. VALVE. JOHN S. BRENNAN, Milwaukee, Wis. Filed July 6, 1915. Serial No. 38,160. (Cl. 137—4.)

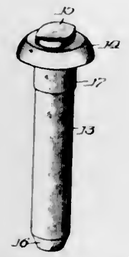


1. A valve comprising a casing provided with a valve seat, and including a stem bore, an annular flange provided in said bore, a valve head having one end slidable in the bore, a unitary stem passed through the bore and threadedly engaged with the head, an annular flange on the stem outwardly of the flange of the bore, a resilient gasket disposed between the flanges, and a spring sur-

rounding the stem between its flange and the outer end of the stem bore and bearing against said flange and against the casing at said end of the bore.

2. In a valve, the combination with a casing provided with an inlet and a valve seat surrounding the inlet of a valve head adapted to engage on the seat, a bolt extending from the head into the inlet, a plurality of washers on the bolt, certain of said washers being provided each with an annular recess in one face, annular projections on the other washers adapted to engage in the recesses or to engage the washer to form abutments and means for securing the washers on the bolt.

1,170,603. TRACK-SPIKE. JOHN BRUNNER, Evanston, Ill. Filed May 13, 1915. Serial No. 27,797. (Cl. 85—10.)

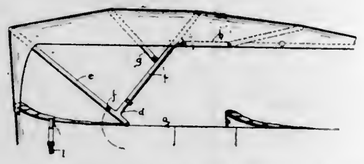


1. A track spike, consisting of a head and a solid shank, said shank being finished to provide cylindrical surfaces of two different diameters in the length thereof, the portion of the larger diameter being near the head of the spike, the head of the spike being in the form of a round flange, the under surface of which is inclined to substantially the inclination of the rail base, substantially as described.

2. A track spike, consisting of a solid cylindrical shank having an annular flange near one end of the shank, the under surface of which flange is inclined, the lower end of the cylindrical shank being symmetrically reduced in diameter to form a blunt, rounded point, substantially as described.

3. A track spike, consisting of a solid cylindrical shank and a head in the form of an annular flange, the lower edge of which is beveled, said cylindrical shank being of two different diameters, the larger diameter being located near the said annular flange, and the lower end of the shank being pointed to form a blunt hole-engaging end, substantially as described.

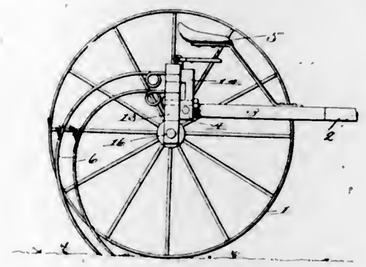
1,170,604. VEHICLE-TOP. MAX ALVINUS BUCH, Birmingham, England, assignor to Henry E. Edwards, Jackson, Mich. Filed Feb. 19, 1915. Serial No. 9,241. (Cl. 21—62.)



1. In combination with a vehicle body, a vehicle top having a bow structure in which the central supporting bow has a T terminal, the forward end of the head of the T being pivoted to the body of the vehicle and the rear bow being pivoted to the other end of the head of the T, whereby the bow structure is both drawn in toward the body and occupies a lower position relative to the body when the bows are collapsed.

2. The combination wtih a vehicle body, of a collapsible top structure provided with a deck and a plurality of folding bows including a master bow pivoted to the vehicle body near the top of the vehicle and arranged to swing down to a substantially horizontal position, the said master bow being provided with an L-shaped terminal, the base of the L extending forwardly of the vehicle when the top is in raised position and the forward end of the base constituting the said pivotal point of the master bow with respect to the top, whereby when the bows are collapsed and assume a substantially horizontal position with respect to the body, the whole bow structure is lowered so that practically the entire bow structure lies below a horizontal line passing through the pivoting of the bow structure to the top.

1,170,605. FOLDING HAY-RAKE. JESSE ALFRED BURKS, Ezra, Ky., assignor of one-fifth to A. D. Britt, Freedom, Ky., and one-fifth to W. S. Fisher, one-fifth to H. M. Jones, and one-fifth to J. P. Jones, Ezra, Ky. Filed Nov. 25, 1914. Serial No. 873,988. (Cl. 56—67.)



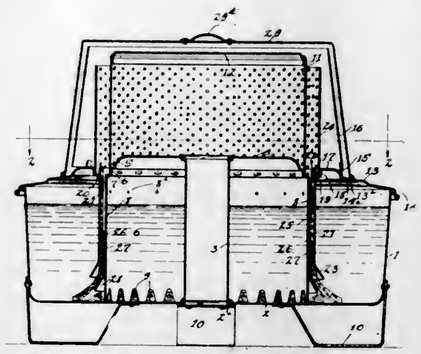
1. A folding hay rake comprising a central axle portion, said portion having a central downward extension, the ends of the extension and the ends of the axle portion being both provided with tongue receiving sockets, boxes, spindles carried by said boxes, and tongues arranged within the boxes and adapted to engage either the sockets or the central axle portion or of the extension, the said axle portion sliding into the boxes when the tongues enter the extension sockets.

2. A folding hay rake formed in central and end sections, the central section comprising a plate, rake teeth carried by the plate, an axle section spaced from and below said plate, and a centrally arranged and a downwardly extending extension carried by the axle portion, said axle portion and said extension both having tongue receiving sockets in their ends, boxes having spindles at their outer ends and having interior tongues adjacent their open inner ends, and rake teeth carried by the upper portions of both of said boxes, the said tongues being adapted to enter the sockets of either the central axle portion or the extension, the upper portions of said boxes sliding in the spaces between the axle and the rake carrying plate when the tongues engage the sockets of the extension.

1,170,606. OIL-STOVE. LEE S. CHADWICK, East Cleveland, Ohio, assignor to The Cleveland Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 6, 1914. Serial No. 855,426. (Cl. 158—88.)

1. In a stove of the character described, the combination of a reservoir having a vertical tube therethrough, a vertical wick tube interposed between the outer wall and the first mentioned tube, a removable cover section for one of the annular spaces provided by the outer wall of the reservoir and said tubes, a wick tube depending from said cover section and movable therewith, the wick tubes being spaced apart circumferentially and a wick between said wick tubes and movable with the last mentioned wick tube.

2. In a stove of the character described, the combination of a reservoir having a vertical tube therethrough, a stationary wick tube interposed between the outer wall and the vertical tube, a removable cover section for one of the annular spaces provided by the outer wall of the reservoir and said tubes, a wick tube depending from said cover section and movable therewith, the wick tubes being spaced apart circumferentially and a wick between said wick tubes and movable with the last mentioned wick tube.



3. In a stove of the character described, the combination of a reservoir having a tube extending therethrough, a wick tube interposed between the outer wall of the reservoir and the first mentioned tube, a cover section connected with said wick tube and the reservoir, a commingling tube supported by said section, a removable cover section for the other portion of the reservoir, a wick tube connected to and depending from said removable cover section, a commingling tube supported by said removable cover section and projecting above the last mentioned wick tube, a wick adapted to be interposed in the space between the wick tubes, and means adjustably supporting the wick from the movable wick tube.

4. In a stove of the character described, the combination of a reservoir having a tube extending therethrough, a wick tube interposed between the outer wall of the reservoir and the first mentioned tube, a cover section connected with said wick tube, a commingling tube extending above said wick tube, a removable cover section for the other portion of the reservoir, a wick tube connected to and depending from said removable cover section, a commingling tube projecting upwardly above the last mentioned wick tube, a wick adapted to be interposed in the space between the wick tubes, and means supporting the wick from the movable wick tube.

5. In an oil stove, the combination of a reservoir, an inner wick tube therein, a cover for the space within said tube, an inner perforated commingling tube extending above the inner wick tube, an outer wick tube, and a perforated commingling tube extending upwardly from the outer wick tube, the upper portion of the inner wick tube being perforated to admit vapors into the wick space.

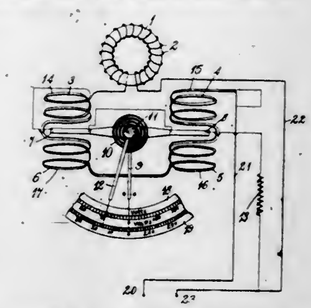
[Claims 6 to 15 not printed in the Gazette.]

1,170,607. ELECTRIC MEASURING INSTRUMENT FOR IRON-LOSS TESTING. LEWIS W. CHUBB, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 24, 1909. Serial No. 497,972. (Cl. 175—183.)

1. A measuring instrument comprising relatively movable mutually reacting coils, a magnetizable core member having a winding connected in series with one of the said coils, and means for causing the indications of the instrument to include the losses in all of its circuits.

2. A measuring instrument comprising relatively movable mutually reacting coils, a magnetizable core member having a winding connected in series with one of the said coils, and auxiliary coils for causing the indications of the instrument to include the losses in all of its circuits.

3. A measuring instrument comprising relatively movable mutually reacting coils, a magnetizable core member having a winding connected in series with one of the said coils, and an auxiliary coil supplementing the latter coil and connected in series with the other coil.

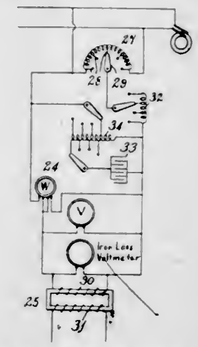


4. A measuring instrument comprising relatively movable mutually reacting coils, a magnetizable core member having a winding connected in series with one of the said coils, and an auxiliary coil supplementing the latter coil and connected in series with the other coil, the mutually reacting coils and the devices in series therewith being connected in parallel relation.

5. A measuring instrument comprising relatively movably mutually reacting coils, a magnetizable core member having a winding connected in series with one of the said coils, a plurality of scales, a pointer movable relatively thereto, and means for causing the pointer to indicate upon the scales both the main quantity measured by the instrument and the energy losses in all of the circuits of the instrument.

[Claims 6 to 18 not printed in the Gazette.]

1,170,608. METHOD OF AND MEANS FOR TESTING ELECTRICAL APPARATUS. LEWIS W. CHUBB, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed May 24, 1909, Serial No. 497,972. Divided and this application filed Sept. 12, 1910. Serial No. 581,734. (Cl. 175—183.)



1. The method of testing inductive apparatus which consists in so adjusting the form factor of the supply circuit that the power consumed in a calibrated inductive device at the standard voltage of the inductive apparatus corresponds to the iron or core loss in said device when connected to a supply circuit of the same voltage having a sine wave characteristic, connecting the inductive apparatus to said supply circuit, and determining the iron or core losses in the inductive apparatus.

2. The method of testing inductive apparatus which consists in so adjusting the form factor of the supply circuit that the power consumed in a calibrated inductive device at the standard voltage of the inductive apparatus corresponds to the iron or core loss in said device when connected to a supply circuit of the same voltage having a sine wave characteristic, connecting the induc-

tive apparatus to said supply circuit, determining the total loss in the inductive apparatus and the inductive device, and substracting therefrom the indicated losses in the calibrated inductive device.

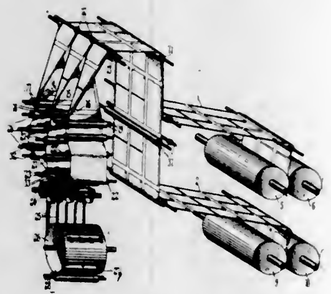
3. The method of testing electrical apparatus which consists in applying to it an electromotive force of other than sine wave form but having substantially the same form factor as a sine wave, and making the desired measurements.

4. The method of testing electrical apparatus which consists in applying to it an electromotive force having an unknown wave form differing from that of a sine wave but having substantially the same form factor as a sine wave, and making the desired measurements.

5. The method of testing electrical apparatus which consists in deriving from a circuit having an unknown electromotive force wave of unknown form factor an electromotive force having an unknown wave form of substantially the same form factor as a sine wave, and applying the latter electromotive force to the device under test.

[Claim 6 not printed in the Gazette.]

1,170,609. METHOD OF PRODUCING PRINTED PRODUCTS. EDGAR H. COTTRELL, Westerly, R. I. Filed Apr. 27, 1914. Serial No. 834,661. (Cl. 101—124.)



1. The herein described method of producing a newspaper consisting in printing a web so that one page of the newspaper will appear on one sheet, another page on another sheet, and the remaining pages will each appear partly on one sheet and partly on another sheet, slitting the web into narrow webs, associating the narrow webs and cutting the so associated narrow webs transversely into sheets.

2. The herein described method of producing a newspaper consisting in printing a web so that one page of the newspaper will appear on one sheet, another page on another sheet, and the remaining pages will each appear partly on one sheet and partly on another sheet, slitting the web into narrow webs, associating the narrow webs, cutting the so associated narrow webs transversely into sheets and folding the sheets transversely across the middle of their printed pages.

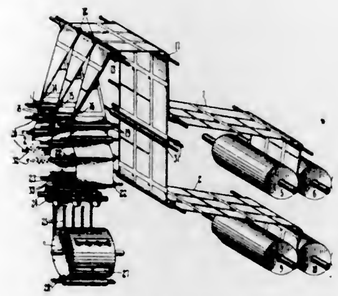
3. The herein described method of producing a newspaper consisting in printing a web so that one page of the printed product will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, slitting the web into narrow webs, securing the webs together transversely across the middle of the printed pages, associating the webs and cutting the so associated webs transversely into sheets.

4. The herein described method of producing a newspaper consisting in printing a web so that one page of the printed product will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, slitting the web into narrow webs, securing the webs together transversely across the middle of the printed pages, associating the webs, cutting the so associated webs transversely into sheets, and folding the sheets transversely across the middle of their printed pages.

5. The herein described method of producing a newspaper, consisting in printing a web so that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter on the front sides of all of the sheets reading in one direction and the printed matter on the back sides of all of the sheets reading in the reverse direction, whereby the newspaper may be read from beginning to end by turning the leaves over successively in the same direction, slitting the web into narrow webs, associating the narrow webs and cutting the so associated narrow webs transversely into sheets.

[Claims 6 to 18 not printed in the Gazette.]

1,170,610. MACHINE FOR PRODUCING PRINTED PRODUCTS. EDGAR H. COTTRELL, Westerly, R. I. Filed Apr. 27, 1914. Serial No. 834,662. (Cl. 101—124.)



1. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for associating the narrow webs and a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that one page of the newspaper will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet.

2. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for associating the narrow webs and a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that one page of the newspaper will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, and means for folding the sheets transversely across the middle of their printed pages.

3. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for securing the webs together, transversely across the middle of the printed pages, a mechanism for associating the webs and a mechanism for cutting the so associated and secured webs transversely into sheets, the said printing and associating mechanisms being so arranged to print the pages on the web and to so associate the narrow webs that one page of the newspaper will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet.

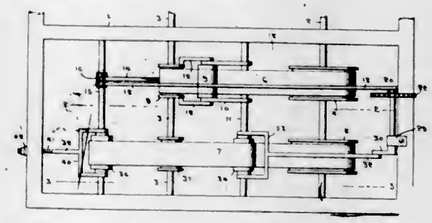
4. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for securing the webs together transversely across the middle of the printed pages, a mechanism for

associating the webs and a mechanism for cutting the so associated and secured webs transversely into sheets, the said printing and associating mechanisms being so arranged to print the pages on the web and to so associate the narrow webs that one page of the newspaper will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, and means for folding the sheets together transversely across the middle of their printed pages.

5. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for associating the narrow webs and a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being so arranged to print the pages on the web and to so associate the narrow webs that one page of the newspaper will appear on one sheet, another page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter on the front sides of all of the sheets reading in one direction and the printed matter on the back sides of all of the sheets reading in the reverse direction, whereby the newspaper may be read from beginning to end by turning the leaves over successively in the same direction.

[Claims 6 to 18 not printed in the Gazette.]

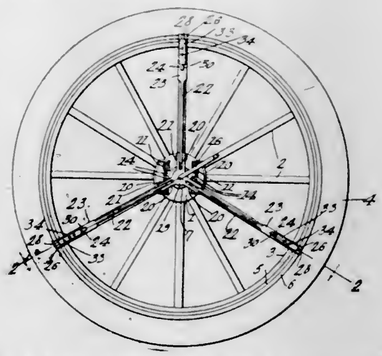
1,170,611. FEEDING DEVICE FOR SAWMILLS. ISAAC W. COULBOURN, Coldwater, Va. Filed May 15, 1915. Serial No. 28,386. (Cl. 74—21.)



1. A feeding attachment for saw mill carriages comprising, a frame, a driving shaft mounted in said frame, an operating shaft mounted in said frame, a rack mounted in said frame, an oscillating shaft mounted in said rack, a lever at one end thereof adapted to be manually operated, a driving belt loosely mounted between said driving shaft and said operating shaft, a cross bar mounted in said frame, a bracket mounted upon said cross bar, an idle pulley supported by said bracket, a second cross bar, a bell-crank lever loosely mounted upon said second mentioned cross bar, a yoke member pivotally and adjustably connected to one arm of said lever at one end and connected to said idle pulley at the opposite end, and a reach rod pivotally connected between the upper end of said bell-crank lever and said manually operated lever adapted upon the operation of said lever to depress said idle pulley through the medium of said yoke member and said bell-crank lever against said driving belt to drive said operating shaft in the same direction with said driving shaft.

2. An attachment for saw mills, comprising a frame, a driving shaft, an operating shaft, a rack mounted on said frame, a shaft rotatable in said rack having an angular offset portion at one end, a pulley fixed to said operating shaft, a driving pulley on the driving shaft, a belt extending loosely around said pulleys, a cross bar, a bracket carried by said cross bar, an idle pulley carried by the bracket, a yoke attached to said idle pulley, a second cross bar, a bell crank lever pivoted to said second cross bar, one arm of said bell crank lever being pivotally and adjustably attached to said yoke, a second pulley on said operating shaft, a second driving pulley on the driving shaft, a second bracket carried by the first cross bar, an idle pulley carried by said bracket, a bracket carried by the second cross bar, an idle pulley supported by said bracket, an adjustable bolt collected to the bracket of said last idle pulley and frame, a link connecting the second idle pulley bracket to said angular offset end, a belt engaging said second pulleys and idle pulleys, a lever connected to the shaft having the offset end and a reach rod connecting the lever to the bell crank lever, said lever moving said idle pulleys into or out of engagement with said belts.

1,170,612. TIRE REMOVER AND REPLACER. HARRY A. COVEY, Akron, Ohio, assignor of one-half to Frank C. Eberly, Akron, Ohio. Filed Dec. 3, 1914. Serial No. 875,313. (Cl. 157—6.)



1. In a device of the class described, a wheel-engaging thrust member; a screw journaled therein; a nut adapted to traverse the screw; a plurality of levers radiating from the nut and pivoted thereto at their inner ends; wheel-engaging fulcrums with which the levers are movably connected intermediate their ends; and compression members at the outer ends of the levers.

2. In a device of the class described, a wheel-engaging thrust member; resilient wheel-gripping means carried by the thrust member; a screw journaled in the thrust member; a nut adapted to traverse the screw; a plurality of levers radiating from the nut and pivoted thereto at their inner ends; wheel-engaging fulcrums with which the levers are movably connected intermediate their ends; and compression members at the outer ends of the levers.

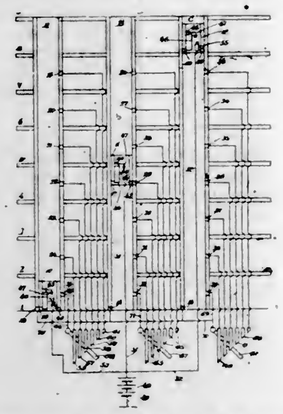
3. In a device of the class described, a lever; a wheel-engaging fulcrum extended transversely of the lever; interengaging elements on the lever and the fulcrum; spring means coacting with the fulcrum to maintain said elements interengaged; a compression member at the outer end of the lever; and wheel-engaging means operatively connected with the inner end of the lever for tilting the lever.

4. In a device of the class described, a lever; a wheel-engaging fulcrum with which the lever is movably connected intermediate its ends; a compression member pivoted to the outer end of the lever; spring means on the lever and engaged with the compression member for holding the latter in adjusted positions; and wheel-engaging means operatively connected with the inner end of the lever for actuating the lever.

5. In a device of the class described, a lever; a wheel-engaging fulcrum disposed transversely of the lever; interengaging elements on the fulcrum and on the lever; a compression member pivoted to the outer end of the lever; and a spring secured intermediate its ends to the lever, one end of the spring bearing against the fulcrum to hold the said elements interengaged, and the other end of the spring bearing upon the compression member to hold the same in adjusted positions; and wheel-engaging means operatively connected with the inner end of the lever for actuating the lever.

[Claim 6 not printed in the Gazette.]

1,170,613. SIGNALING SYSTEM. GORHAM CROSBY, New York, N. Y. Filed July 12, 1910. Serial No. 571,551. (Cl. 197—336.)



1. The combination of a plurality of traveling cars, each having a starting position, starting signaling means for said cars, means operated by the movement of a car on its return toward its starting position but not by the movement of the car away from the starting position for causing the operation of the signaling means for any car at its starting position, and means for adjusting the point at which the returning car causes the operation of said signaling means.

2. The combination of a plurality of traveling cars, each having a starting position, starting signaling means for said cars, means controlled by the movement of a car on its return toward its starting position for causing the starting of the operation of the signaling means for another car, and means for adjusting the point at which the returning car starts the operation of said signaling means on another car.

3. The combination of a plurality of traveling cars each having a starting position, starting signaling means for said cars, and means controlled by a car at successive points on its return toward its starting position, for causing the operation of the signaling means for another car, and causing the intermittent repeating of the signal as the returning car continues toward its starting position, the signaling means for a car being inoperative when the car is away from its starting position.

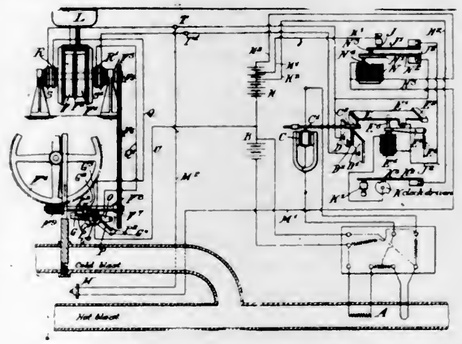
4. The combination of a plurality of traveling cars each having a starting position, starting signaling means for said cars, and means controlled by the movement of any car toward its starting position but not by the movement of the car away from the starting position for causing the operation of the signaling means for any car at its starting position, the signaling means being inoperative for any car when it is not at its starting position.

5. The combination of a plurality of traveling cars each having a starting position, starting signaling means for said cars, means controlled by a car at successive points on its return toward its starting position but not on its movement away from its starting position for causing the operation of the signaling means for another car, and causing the intermittent repeating of the signal as the returning car continues toward its starting position.

[Claims 6 to 45 not printed in the Gazette.]

1,170,614. APPARATUS FOR REGULATING THE TEMPERATURE OF FLUIDS. HORACE DARWIN and CECIL CHARLES MASON, Cambridge, England, assignors to Taylor Instrument Companies, Rochester, N. Y. Filed Aug. 14, 1911. Serial No. 643,823. (Cl. 236—4.)

1. In apparatus for producing a fluid of approximately constant temperature by the admixture of a plurality of fluids of different temperatures, the combination of, a source of supply of each of the fluids of different temperatures, a valve controlling one source of supply, a heat-sensitive device A, a moving contact C_2 controlled by the heat-sensitive device, contacts D D', an electromagnetic relay E E^5, an intermittently operating contact K K^2 K^3 in electrical connection with the relay, an electric circuit including contacts D C^2 J' J and clutch F, an electric circuit including contacts D' C^2 J' J and clutch F' an electromagnet N, a main controlling circuit M M' M^2 including the electromagnet N, another circuit including the electromagnet N and its armature N' and spring N^2 a source of electric energy and connections between it and the several electric circuits a motor L operating through clutches F F' and connections F^5 F^6 F^7 F^8 F^9 F^4 to operate the valve.



2. In apparatus for producing a fluid of approximately constant temperature by the admixture of a plurality of fluids of different temperatures, the combination of, a source of supply of each of the fluids of different temperatures, a valve controlling one source of supply, a heat-sensitive device A, a moving contact C_2 controlled by the heat-sensitive device, contacts D D', an electromagnetic relay E E^5, an intermittently operating contact K K^2 K^3 in electrical connection with the relay, an electric circuit including contacts D C^2 J' J and clutch F, an electric circuit including contacts D' C^2 J' J and clutch F' an electromagnet N, a main controlling circuit M M' M^2 including the electromagnet N, another circuit including the electromagnet N and its armature N' and spring N^2 a source of electric energy and connections between it and the several electric circuits a motor L operating through clutches F F', connections F^5 F^6 F^7 F^8 F^9 F^4 to operate the valve, and a limiting device O O' P P^2 to terminate the duration of the main control.

3. In a fluid governing apparatus, the combination with a fluid supply, of a controlling means coöperating with the fluid supply, a movable contact subjected to the fluid supply and controlled thereby, a plurality of circuits with which said movable contact may coöperate, said controlling means being actuated by the last mentioned circuits, an actuator coöperating with the contact to move it into engagement with said circuits, a relay controlling the actuator, means for energizing and deënergizing the relay, and a source of electric energy for the circuits.

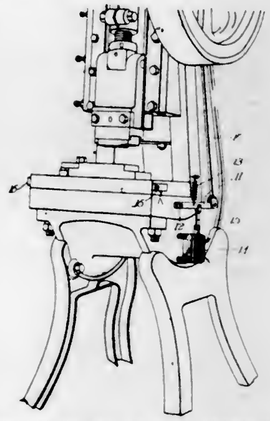
4. In a fluid governing apparatus, the combination with a fluid supply, of a controlling means coöperating with the fluid supply, a movable contact subjected to the fluid supply and controlled thereby, a plurality of circuits with which said movable contact may coöperate, said controlling means being actuated by the last mentioned circuits, an actuator coöperating with said contact to move it into engagement with the circuits, a relay controlling the actuator, means acting intermittently to energize and deënergize said relay, and a source of electric energy for the circuits.

5. In a fluid governing apparatus, the combination with a fluid supply, of a controlling means coöperating with the fluid supply, a movable contact controlled by the fluid, a plurality of circuits with which said movable contact may coöperate, said controlling means being actuated by the last mentioned circuits, an actuator coöperating with the

contact to move it into engagement with said circuits, a relay controlling the actuator, means for energizing and deënergizing the relay, a main control for operating the controlling means independently of the movable contact, and a source of electric energy for the circuits.

[Claims 6 and 7 not printed in the Gazette.]

1,170,615. SAFETY MANIPULATING DEVICE FOR MACHINERY. WILLIAM W. DEAN, Chicago, Ill., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 15, 1913. Serial No. 754,510. (Cl. 164—107.)



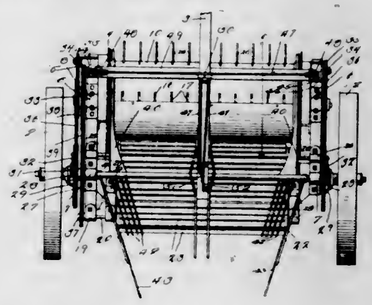
1. The combination with a press having a clutch trip, of safety actuating means for said trip, said actuating means including a pair of separated switches, an electromagnetic device for directly actuating said trip, said device being arranged to be energized only when said switches are operated simultaneously, whereby the actuation of said clutch trip is solely effected upon the operation of said switches, and means, operated automatically when said clutch is actuated, for reducing the current flowing through said device, for the purposes set forth.

2. The combination with a press having a clutch trip, of safety actuating means for said trip, said actuating means comprising a solenoid for directly actuating said trip, said solenoid having a high resistance winding and a low resistance winding, a pair of separated switches connected in series with said solenoid and with each other, and switching mechanism adapted to be operated when said clutch trip is actuated, to connect said high resistance winding in circuit, for the purposes set forth.

1,170,616. BEAN AND PEA LIFTER AND CLEANER. ABEL DINTAMAN, Alto, Mich. Filed Aug. 25, 1914. Serial No. 858,556. (Cl. 56—1.)

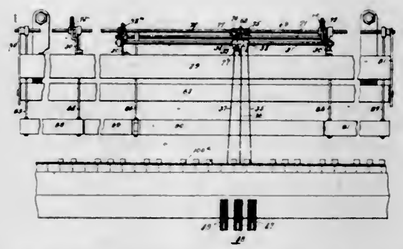
1. In a machine of the class described, a revolubly mounted drum, means for supporting the same, the said drum having radially extending arcuate slots in the end thereof, and spaced slots on the periphery thereof, longitudinally extending shafts within the said drum having the ends thereof extending through the arcuate slots, fingers on the said shafts adapted to extend through the peripheral slots, arms pivotally mounted on the said ends adjacent the arcuate slots and connected to the adjacent ends of the aforementioned shafts, resilient means for maintaining the free ends of the arms adjacent the periphery of the drum, and means adapted to move the said ends of the arms inwardly against the tension of the resilient means.

2. In a vine lifting machine, an axle, supporting wheels revolubly mounted thereon, supporting strips pivotally mounted on said axle and extending forwardly and rearwardly therefrom, a transversely extending shaft revolubly mounted on the forward portions of said supporting strips and extending between the same, a cylindrical drum fixedly mounted on said shaft, the ends of the said drum having radially extending arcuate slots therein, and the body of the said drum having peripheral slots in spaced relation, arms pivotally mounted on the ends of the drum, the said shaft being fixedly connected to the ends of said arms and movable in the arcuate slots, fingers on the said shafts adapted to extend through the peripheral slots, rollers on the ends of said shafts, cam tracks secured to said supporting strips and adapted to engage the rollers, and resilient means for maintaining the said rollers in engagement with the said cam tracks.



3. In a vine lifting machine, a drum, means for supporting the same, means for rotating the same, the said drum being cylindrical in formation and having spaced slots in the body portion thereof, fingers mounted within the drum and adapted to extend through said slots, resilient means for normally maintaining the fingers in their extended positions, and means for withdrawing the fingers through the said slots.

1,170,617. CONTROLLING MECHANISM FOR PHRASING-BARS. CHARLES W. DOBRICOTT, Philadelphia, Pa., assignor to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 3, 1912. Serial No. 707,524. (Cl. 84—61.)



1. In expression mechanism for musical instruments, a hammer-supporting phrasing-bar, separate manually operable levers each having an operative connection with a part of said bar, a laterally yieldable finger-piece section having a pivotal connection with the forward end of each lever, said pivotal connection permitting lateral deflection of the free end of the said section when the parts are in alinement, and interlocking means between each lever and its finger-piece section to hold the parts in rigid relation, said means requiring lateral deflection of the finger-piece section to bring the parts into and out of interlocking engagement.

2. The combination with a musical instrument embodying a key-board, hammers and strings, of expression mechanism for varying the stroke of the hammers, embodying a hammer rest-rail made in sections, manually operable expression levers having operative connections with said

rest-rail sections, and clamping means engaging opposite faces of said levers for holding the same in different adjusted positions.

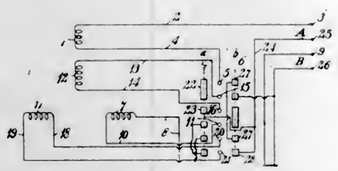
3. The combination of a musical instrument provided with a casing and with hammers, mechanism for varying the stroke of said hammers, expression levers connected with said mechanism for actuating the same, said levers being provided with foldable portions having cam-like extensions for engaging said casing and thus holding said levers individually in predetermined positions.

4. The combination with a musical instrument having a key-bed and hammers, of a hammer-supporting phrasing bar, manually operable levers having operative connections with said bar to alter the position of the hammers, said levers being pivotally supported beneath the key-bed, a swinging section pivotally connected to the forward end of each lever and adapted to be swung back under the key-bed, means for holding each lever and its section in rigid relation, and means carried by each section adjacent its pivoted end for engaging the underside of the key-bed and thereby depressing its lever when the section is swung back under the key-bed.

5. The combination with a musical instrument having a key-bed and hammers, of a hammer supporting phrasing bar, and manually operable levers having operative connections with said bar for moving the latter to alter the position of the hammers, said levers being pivotally supported beneath the key-bed, and each lever having a swinging section pivotally connected to the forward end thereof, each section being adapted to be swung back parallel with its lever and having a portion adjacent its pivoted end arranged to contact with the underside of the key-bed when the section is swung back to hold the parts in adjusted positions.

[Claims 6 to 8 not printed in the Gazette.]

1,170,618. INDUCTION-MOTOR. ADOLPHUS M. DUDLEY, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 8, 1911. Serial No. 659,150. (Cl. 172—280.)



1. A winding for polyphase multi-speed alternating current motors consisting of conductors so arranged that the current always flows in the same relative direction, and means for connecting said conductors to form a plurality of groups according as they belong to a single branch for all speeds, or are changing from one branch to another.

2. A winding for polyphase multi-speed alternating current motors consisting of coils so arranged that the current always flows in the same relative direction, and means for connecting said coils to form a plurality of groups which, respectively, contain coils which remain in one phase for all speeds and those which change phase in passing from one speed to the other.

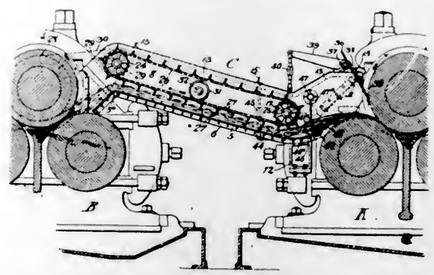
3. A winding for polyphase multi-speed alternating current motors consisting of coils in all of which the current continuously flows in the same relative direction to produce a plurality of consequent poles, said coils being permanently connected in groups according as they belong to one phase for all speeds, or change from one phase to another when the motor speed is changed.

4. In a two-speed consequent-pole induction motor, the combination with a winding composed of coils arranged in groups and having said groups arranged in relatively displaced phases, of means for interchanging certain of said groups between said phases and for maintaining the relative direction of current flow in said coils.

5. A multi-speed winding for alternating current motors, arranged in T connection and comprising a plurality of uniformly distributed coils in two branches of two groups each, and means for changing the connections of said groups without changing the relative direction of current in said groups.

[Claims 6 to 13 not printed in the Gazette.]

1,170,619. INTERMEDIATE CONVEYER FOR SUGAR-CANE MILLS. ARTHUR FREDERICK EWART, Honolulu, Hawaii, assignor to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed Oct. 21, 1914. Serial No. 867,890. Renewed Jan. 3, 1916. Serial No. 70,075. (Cl. 100—47.)



1. An intermediate conveyer for sugar-cane mills comprising, a detachable water tight trough, means within the trough for engaging the blanket of bagasse to aid its movement through the trough, means for adjusting the distance between the said means and the bottom of the trough, and scrapers for one of the mills supported by the trough, substantially as described.

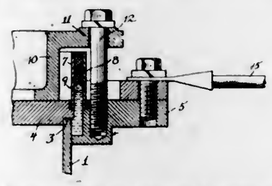
2. An intermediate conveyer for sugar-cane mills comprising, a removable trough, means for engaging the blanket of bagasse within the trough to aid its movement rearward in the trough, upper and lower scrapers for the rolls of one mill with adjusting means for same supported by the trough, and a maceration pipe located between the bottom of the trough and the rear end of the lower scraper, substantially as described.

3. An intermediate conveyer for sugar-cane mills comprising, a removable trough, means for engaging the blanket of bagasse to aid its movement rearward in the trough, upper and lower roll scrapers with adjusting means supported by the trough, and a maceration pipe between the bottom of the trough and the lower scraper, the rear end of the lower scraper being bent or curved upward, substantially as and for the purpose described.

4. In an intermediate conveyer for sugar-cane mills, a removable trough, and maceration pipes supported by and removable with said trough.

5. In an intermediate conveyer for sugar-cane mills, a removable trough, roll scrapers, and means for adjusting said scrapers removable with said trough.

1,170,620. VAPOR-RECTIFIER. SIDNEY W. FARNSWORTH, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 30, 1914. Serial No. 828,196. (Cl. 175—354.)



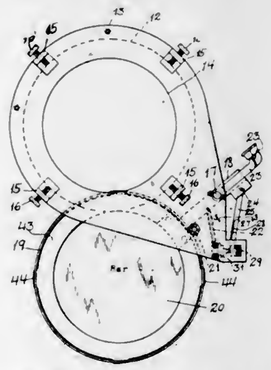
1. A container for vapor electric apparatus comprising a bowl-shaped receptacle provided with a peripheral flange a short distance from the rim, a cover for the receptacle, clamping means engaging said flange and securing the cover in place, and retaining rings carried by the cover and the flange, respectively, and serving to maintain a pool of sealing liquid over the joint between the receptacle and the cover.

2. A container for vapor electric apparatus comprising a bowl-shaped receptacle provided with a peripheral flange a short distance from the rim, a cover for the receptacle, clamping means engaging said flange and securing the cover in place, and retaining rings carried by the cover and the flange, respectively, and serving to maintain a sealing pool of liquid over the joint between the receptacle and the cover, said clamping means bridging over the sealing means.

3. A container for vapor electric apparatus comprising a bowl-shaped receptacle provided with a peripheral flange a short distance from the rim, a cover for the receptacle, sealing means for the joint between the receptacle and the cover, a ring shaped member resting upon the outer surface of the cover and extending out over the sealing means, said means tending to draw said flange and said ring shaped member together.

4. A container for vapor electric apparatus comprising a bowl-shaped receptacle provided with a peripheral flange a short distance from the rim, a cover for the receptacle, sealing means for the joint between the receptacle and the cover, a ring shaped member resting upon the outer surface of the cover and extending out over the sealing means, and threaded members engaging said flange and said ring member and tending to draw them together.

1,170,621. COLOR-CHANGING ATTACHMENT FOR LIGHT-PROJECTORS. POWYS A. L. FOULDS and EDWARD FOULDS, Boston, Mass. Filed Sept. 30, 1915. Serial No. 53,327. (Cl. 240—45.1.)



1. A color changing device comprising a supporting frame, a series of oscillatory levers fulcrumed thereon, color frames carried by said levers, each lever and its color frame being normally held in a retracted inoperative position, and being manually movable with its frame to a projected operative position, and mechanism for locking the levers in their projected position, said mechanism having means operated by the movement of any lever to its projected position to automatically unlock any other lever or levers previously projected and permit the same to return to a retracted position.

2. A color changing device comprising a supporting frame, a series of oscillatory levers fulcrumed thereon, color frames carried by said levers, each lever and its color frame being normally held in a retracted inoperative position, and being manually movable with its frame to a projected operative position, and mechanism for locking the levers in their projected positions, said mechanism having manually operated means for releasing any projected lever or levers and permitting the same to return to a retracted position.

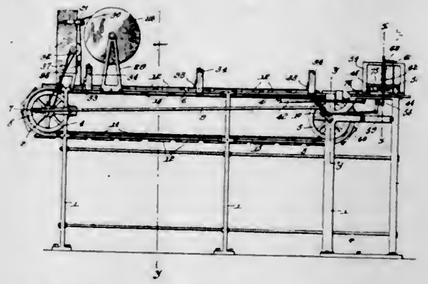
3. A color changing device comprising a supporting frame, a series of oscillatory levers fulcrumed thereon, color frames carried by said levers, each lever and its color frame being normally held in a retracted inoperative position, and being manually movable with its frame to a projected operative position, oscillatory latch bars pivoted to said levers and provided with detents having inclined faces, said bars being movable longitudinally by the levers, a fixed guide maintaining the latch bar detents in predetermined paths, and a spring-pressed keeper having a plurality of shoulders normally held yieldingly in the paths of said detents, the keeper being displaceable by a detent on either latch bar to release the latch bar of any previously projected lever or levers.

4. A color changing device comprising a supporting frame, a series of oscillatory levers fulcrumed thereon, color frames carried by said levers, each lever and its color frame being normally held in a retracted inoperative position, and being manually movable with its frame to a projected operative position, oscillatory latch bars pivoted to said levers and provided with detents having inclined faces, said bars being movable longitudinally by the levers, a fixed guide maintaining the latch bar detents in predetermined paths, a spring-pressed keeper having a plurality of shoulders normally held yieldingly in the paths of said detents, the keeper being displaceable by a detent on either latch bar to release the latch bar of any previously projected lever or levers, and a manually movable push-piece whereby the keeper may be displaced to release the bar of any projected lever or levers.

5. A color changing device comprising a frame composed of rigidly connected spaced-apart members apertured for the passage of light rays, one of said members having means for attaching the frame to a light projector, a series of levers fulcrumed between the frame members and each having a color frame which is movable by and with the lever to a projected operative position between the apertures of the members, means being provided for normally holding each lever and frame in a retracted inoperative position with the frame out of register with said apertures, and mechanism for locking the levers in their projected positions, said mechanism having means, operated by the movement of any lever to its projected position, to automatically unlock any other lever or levers previously projected.

[Claims 6 to 8 not printed in the Gazette.]

1,170,622. ARTIFICIAL-LEAF STEMMING AND FINISHING MACHINE. ISAAC FRIEDRICH, Philadelphia, Pa. Filed June 5, 1914. Serial No. 843,307. Renewed Mar. 30, 1915. Serial No. 18,160. (Cl. 41—3.)



1. In a machine for applying stems to artificial leaves and finishing the latter, the same comprising a plurality of tables for receiving and supporting the leaves, a reel containing a stem forming element wound thereon, means for applying an adhesive to the said stem forming element, means for pressing and holding the stem forming element upon the leaves placed upon the tables, a cutting mechanism for severing the stem forming element into predetermined lengths, means for effecting a release of the leaves from the tables, a second table for receiving

the leaves from the stemming tables, operating means for said second table, a plunger for finishing the leaves, and operating means for actuating the said plunger.

2. In a machine for stemming and finishing artificial leaves, the combination of a plurality of leaf supporting tables connected in a series, means for supplying a stem forming element in continuous length, means for supplying an adhesive to such stem forming element, presser members at intervals in the path of said tables for holding and pressing the stem forming element upon the leaves, and a cutting mechanism for severing the stem forming element into predetermined lengths.

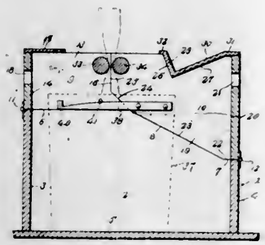
3. In a machine for stemming and finishing artificial leaves, the combination of an endless belt, supporting means for such belt, leaf supporting tables attached to the belt, a track for supporting and giving proper direction to the leaf supporting tables, means for applying a stem to the leaves placed upon the tables, a second table arranged to receive the leaves when stemmed from the first mentioned tables, means for imparting a reciprocatory movement to the second table, and a finishing mechanism for operating upon the leaves when properly positioned by the said second table.

4. In a machine of the character specified, the combination of spaced pulleys, an endless belt supported by means of such pulleys, a track arranged between the pulleys, a plurality of leaf supporting tables attached to the said belt and arranged to travel upon the track, means for supplying a stem forming element in continuous length, means for affixing such stem forming element to the leaves, a cutting mechanism for severing the stem forming element into given lengths, and a finishing mechanism arranged to receive the leaves when stemmed.

5. In a machine for applying stems to artificial leaves, the combination of a connected series of leaf supporting tables, a clamp and cutter mounted upon each of such tables, means for supplying a stem forming element in continuous length, and actuating means for operating the clamp and cutter of each of the tables at different times whereby the stem forming element is cut in advance of the operation of the clamp to effect the release of the stem.

[Claims 6 to 10 not printed in the Gazette.]

1,170,623. MOP-WRINGER. WILLIAM FROHNE, Cincinnati, Ohio. Filed Apr. 18, 1914. Serial No. 832,797. (Cl. 15—12.)



1. In a device of the class described, a receptacle having rectangular ends and adapted to receive a pail, a cover section including an end hinged to one end of the receptacle and sides resting upon the upper side edges thereof, the sides of said cover section having angular tongues at the lower inner corners thereof, a second cover section also including an end hinged to the remaining end of the receptacle and sides resting upon the upper sides of the receptacle, said sides being recessed to receive the tongues on the sides of the first mentioned cover section and having their ends abutting with the ends of the sides of the first mentioned cover section, a roller carried by each of the cover sections, said rollers being adjacent and disposed in parallel relation, hooks secured to the inner faces of the sides of one of the cover sections and extending along the sides of the other cover section, and pins extending laterally from the inner faces of the sides of the second mentioned cover section and bearing upon the extending portions of the rods.

2. A substantially rectangular receptacle having an opened top, a cover section having sides and an end resting upon the upper edges of the receptacle at one end thereof, the sides of said cover section having at their inner edges portions which are inclined upwardly from the lower ends thereof to provide the same with tongues, a roller trunnioned between the sides of the cover section, pins disposed below the roller projecting laterally from the sides, a top plate arranged adjacent the roller, a hinge connection between the end of the cover section and the end of the receptacle, a second cover section comprising sides and an end, a hinge connection between the end and the second end of the receptacle, said sides at their inner ends being inclined to provide recesses for the reception of the tongues of the first mentioned cover section, a roller trunnioned between the sides of the second mentioned cover section and parallel with the roller of the first mentioned cover section, longitudinally extending rods secured to the sides of the second mentioned cover section and provided with extending ends terminating in hooks, said rods contacting with the laterally extending pins on the first mentioned cover section, and a plate disposed upon the top of the second mentioned cover section adjacent its roller.

1,170,624. COMPOSITION OF MATTER FOR THE PRODUCTION OF FORMALDEHYDE SOLUTIONS. GEORGE PRESCOTT FULLER, Niagara Falls, N. Y., assignor to The National Electrolytic Company, a Corporation of New York. Original application filed June 1, 1914, Serial No. 842,025. Divided and this application filed Dec. 7, 1914. Serial No. 875,781. (Cl. 23—13.)

1. A composition of matter comprising a solid polymerization product of formaldehyde and a solubleizing material.

2. A composition of matter comprising a solid polymerization product of formaldehyde and an ingredient capable of giving a basic reaction on solution in water.

3. A composition of matter comprising a solid polymerization product of formaldehyde and a salt of basic reaction.

4. A composition of matter comprising a solid polymerization product of formaldehyde, and an alkali metal salt of basic reaction.

5. A composition of matter comprising a solid polymerization product of formaldehyde and a salt which on solution in water hydrolyzes to give a base.

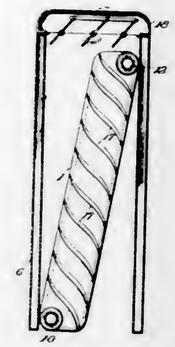
[Claims 6 to 8 not printed in the Gazette.]

1,170,625. RADIATOR. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Mar. 2, 1914. Serial No. 821,991. (Cl. 257—136.)

1. In combination, a vertical radiator casing through which air to be heated passes, a sectional radiator in said casing constituting a partition between the inlet and outlet ends of said casing, opposing ribs on adjacent sections constituting top and bottom walls of passages through which air to be heated passes, said walls having double cycloidal outline for facilitating flow of heated air through said passages.

2. In combination, a radiator casing through which air to be heated passes, a radiator in said casing extending diagonally between its vertical walls and located between the inlet and outlet ends of said casing and having passages through which air to be heated passes on its way through the casing, said passages having top and bottom walls approximately cycloidal in outline.

3. In combination, a vertical radiator casing through which air to be heated passes, a radiator in said casing adapted to extend diagonally between the vertical walls of said casing and forming with the casing on its delivery side a chamber progressively increasing in size toward the outlet end of the casing, said radiator being provided with passages through which air to be heated passes, said passages having top and bottom walls cycloidal in outline for facilitating the flow of said heated air.



4. In a radiator having sections normally inclined from the vertical, an end section adapted to be associated therewith comprising a casting for supporting the associated sections in their inclined position and having a chamber open to said sections, and a vertical passage within said end section for supplying heating fluid to the top of said chamber.

5. In a radiator having sections normally inclined from the vertical, an end section adapted to be associated therewith comprising a casting for supporting the associated sections in their inclined position and having a chamber open to said sections and a vertical passage within said end section open at the top to said chamber for supplying heating fluid thereto, and a drain passage between said chamber and supply passage and means for opening and closing the same.

[Claims 6 to 11 not printed in the Gazette.]

1,170,626. PENHOLDER. ERNEST C. GARBER, Waterloo, Iowa. Filed Dec. 17, 1913. Serial No. 807,293. (Cl. 120—101.)



A pen holder comprising a handle having one end reduced to provide a shoulder and a longitudinal groove therein, a sleeve mounted on the reduced end and extending therebeyond, said sleeve consisting of a single piece of metal bent into a cylindrical formation, clamping arms formed by bending the ends of the metal inwardly upon themselves, said clamping arms being arranged in spaced relation with each other constituting a resilient pen seat, said sleeve being provided with a longitudinal slot in alinement with the sides of the edges of the arms and with the sides of the groove, a rod slidably mounted in the groove and retained by the sleeve, an upstanding pen receiving head formed by thickening the outer end of the rod, said head being arranged in the slot in the sleeve and between the sides of the arms and provided with a transverse groove for receiving and facilitating the removal of the pen point from the seat when the rod is moved, an operating handle formed on the inner end of the rod, and a finger grip disposed about the reduced end for concealing these parts and bearing against the shoulder to constitute a stop for the operating handle for limiting outward movement of the rod.

1,170,627. WIND MUSICAL INSTRUMENT. MANIOUS GARL, Akron, Ohio. Filed Apr. 3, 1912. Serial No. 688,250. (Cl. 84—81.)



1. A base for a wind instrument comprising a body portion provided with a longitudinally extending channel, arms extending from said body portion and provided with pockets leading from said channel and with passages leading from the outer ends of said arms and communicating with said pockets, the outer end portions of said arms being provided with vertical passages leading from the first mentioned passages to the upper faces of said arms, a cover plate covering said channel and provided with openings communicating with said pockets and vertical passages, valves carried by said plate and having their stems passing into said pockets for normally closing the upper ends of said first mentioned passages, and plugs threaded into the outer end portions of said first mentioned passages and extending across the inner ends of said vertical passages when in their innermost position for cutting off the flow of air through said vertical passages.

2. A musical instrument of the class described comprising a body provided with an air channel, a plurality of sound producing elements carried by said body, said body provided with a series of passages communicating with said air channel, said body provided with a second series of passages communicating with said first mentioned passages, said sound producing elements communicating with said second series of passages, means for supplying air to said passages, and means for controlling the flow of air through said first mentioned passages.

1,170,628. PERIODICAL-HOLDER. FLOYD A. GARRISON, Chicago, Ill. Filed Dec. 12, 1912. Serial No. 736,371. (Cl. 211—17.)

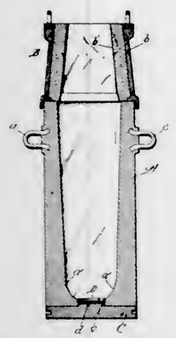
A periodical holder comprising a longitudinally extensible bracket composed of two independent sections arranged for sliding movement one upon the other to define a space, each of the said sections being substantially U-shaped and arranged with their connecting portions remote, tongues formed integrally with and upon each of the said sections to form a means of suspension for the holder, an enlargement formed upon one arm of one of the said sections, an enlargement formed upon the extremity of one of the arms of the other of the said sections, the enlarged portion of the said last mentioned arm being curved laterally to overlap the arm first mentioned, said overlapping portion being adapted to embrace said first mentioned arm to form a guide therefor, the said overlapping portion being further adapted to engage the said enlargement of the first mentioned arm to limit sliding movement of the holder section, and parallel guide flanges formed upon the other of the arms of the said last

mentioned section to engage the other arm of the said first mentioned section to maintain the said sections in parallel relation, the connecting portion of the respective sec-



tions serving as abutments limiting movement of the periodical engaging means hung to suspend from the bracket.

1,170,629. INGOT-MOLD. EMIL GATHMANN, Baltimore, Md. Filed Nov. 24, 1915. Serial No. 63,166. (Cl. 22—139.)



1. A metallic mold open at top and bottom, in combination with a stool for supporting the mold and which is provided with refractory plastic sealing material below the bottom opening of the mold cavity, and a relatively thin metallic plate resting on said sealing material for protecting it.

2. A metallic mold open at top and bottom, in combination with a supporting stool having a projection extending into the bottom opening of the mold, a layer of refractory, plastic sealing material spread on top of said projection, and a relatively thin metallic plate resting on the sealing material to protect the latter while the mold is being poured.

3. A metallic mold open at top and bottom, in combination with a supporting stool, refractory sealing material closing the joints between the stool and the mold and covering that portion of the stool immediately below the mold cavity, and a relatively thin cup-shaped metallic plate resting on said sealing material.

4. A metallic mold open at top and bottom in combination with a stool for supporting the mold and which is provided with a layer of refractory plastic sealing material below the bottom opening of the mold cavity, and a relatively thin metallic plate resting on and removable from said sealing material and which is adapted to be welded to the ingot and to be withdrawn therewith from the mold.

5. A metallic mold open at top and bottom, in combination with a stool for supporting the mold having a projection extending upwardly into the bottom opening of the mold, a thin layer of stationary hard refractory sealing material spread on the top of said projection and a relatively thin metallic plate resting on the sealing material to protect the latter while the mold is being poured and to prevent the sealing material from adhering to the ingot.

1,170,630. ARTIFICIAL TOOTH. THOMAS F. GLENN, Ardmore, Pa., assignor to The S. S. White Dental Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 17, 1915. Serial No. 14,886. (Cl. 32—9.)



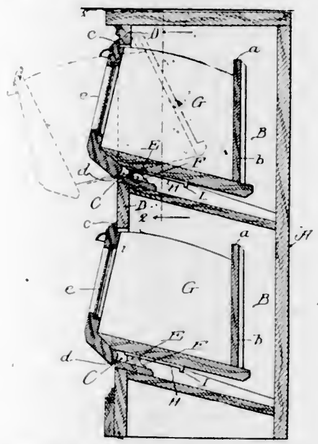
1. A tooth adapted for vulcanite work, having in its lingual face a recess forming a pocket which deepens toward the incisive end, and whose lingual wall forms incisively and laterally disposed undercut shoulders.

2. A tooth adapted for vulcanite work, having incisively and laterally disposed perimetric shoulders forming a recess providing surfaces which are extended labially beyond the labial wall of said recess to form a groove at the intersection of said surfaces with said labial wall.

3. A tooth adapted for vulcanite work, having incisively and laterally disposed perimetric shoulders, forming a recess providing undercut surfaces which are extended labially beyond the labial wall of said recess to form a counter recess in said labial wall at the intersection of said undercut surfaces with said labial wall, and having a transverse aperture cutting into said groove.

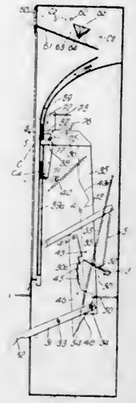
4. A tooth adapted for vulcanite work, having a projection extending from its lingual face embraced upon three sides laterally and incisely by undercut shoulders.

1,170,631. BIN. CHARLES A. GLOEKLER and CHARLES ZIEFEL, Pittsburgh, Pa. Filed Sept. 27, 1910. Serial No. 584,126. (Cl. 211—6.)



The combination of a case having a bin compartment that is open at its front and is provided with a stop above said opening and is also provided with a bottom wall; a horizontal anti-friction roller disposed transversely of the compartment and supported sufficiently in rear of the lower portion of the front opening of the compartment as to be near the vertical line passing through the center of gravity of the bin; a deep but short vertically-swinging and sliding bin having a stop below the top of the friction roller resting against the front of the case so that when the top of the bin is tilted outwardly it will move around the stop as a pivot and the bin will be bodily moved outwardly until the center of gravity is approximately above the roller, the bin having a bottom which when the bin is closed extends from the front to the rear of the bin in a downwardly inclined position in the bin compartment, and also having means for bringing up against the front and rear sides, respectively, of the stop above the opening of the compartment, and a stop to bring up against the anti-friction roller when the bin is in its outermost position.

1,170,632. VENDING-MACHINE. MCDOWELL GRAVES, Los Angeles, Cal., assignor to General Utilities Company, Los Angeles, Cal., a Corporation of California. Filed June 15, 1915. Serial No. 34,242. (Cl. 194—91.)



1. In a vending machine, a shaft adapted for rotary movement, a pawl on said shaft projecting substantially horizontally therefrom so that vertical movement of the outer end of the pawl will rotate the shaft, a vertical slotted coin chute, a vertically movable bar having a finger at its upper end projecting into the slot in the coin chute and adapted to press against a coin therein, and having a coin supporting projection immediately below the finger so that the finger will engage substantially the center of the coin resting on said support, so that the upper end of the bar is guided substantially in a vertical movement by the coin moving in the coin chute, and a member on said bar adapted to engage the end of the pawl when the bar is moved guided by the coin in said chute.

2. In a vending machine, a shaft adapted for rotary movement, a pawl on said shaft projecting substantially horizontally therefrom so that vertical movement of the outer end of the pawl will rotate the shaft, a vertical slotted coin chute, a vertically movable bar having a finger at its upper end projecting into the slot in the coin chute and adapted to press against a coin therein, so that the upper end of the bar is guided substantially in a vertical movement by the coin moving in said coin chute, a member on said bar adapted to engage the end of the pawl when the bar is moved guided by a coin in said chute, and means releasable by upward movement of said member to hold the pawl in its lowermost position to which it is moved by said member.

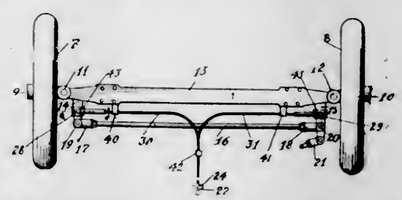
3. In a vending machine, a shaft adapted for rotary movement, a pawl on said shaft projecting substantially horizontally therefrom so that vertical movement of the outer end of the pawl will rotate the shaft, a vertical slotted coin chute, a vertically movable bar having a finger at its upper end projecting into the slot in the coin chute and adapted to press against the coin therein, and having a coin supporting projection immediately below the finger so that the finger will engage substantially the center of the coin resting on said support, so that the upper end of the bar is guided substantially in a vertical movement by the coin moving in the coin chute, a member on said bar adapted to engage the end of the pawl when the bar is moved guided by the coin in said chute, and means releasable by upward movement of said member to hold the pawl in its lowermost position to which it is moved by said member.

4. Coin controlled apparatus, embodying a vertical slotted chute down which a coin may drop, a coin engaging member having a coin supporting foot normally extending into the chute and having a coin engaging finger above the foot normally without the chute, means to cause downward movement of the coin engaging member and means to cause movement of said member toward the chute when first moved downwardly, and means to cause movement of said coin engaging member away from the chute during the last part of its downward movement so as to withdraw the supporting foot from under the coin.

5. Coin controlled apparatus, embodying a vertical slotted chute down which a coin may drop, a coin engaging member pivoted at one end and having at its other end a coin supporting foot normally extending into the chute and having a coin engaging finger above the foot normally without the chute, means to move the pivoted end of the coin engaging member downwardly, and means to cause first a movement of the coin engaging end of the member toward the chute and afterward away from the chute by virtue of said downward movement.

[Claim 6 not printed in the Gazette.]

1,170,633. DEFECT-INDICATOR FOR STEERING MECHANISMS. GUSTAVIUS B. GUINAND, Los Angeles, Cal. Filed Aug. 24, 1914. Serial No. 858,400. (Cl. 116—31.)



1. A defect indicator, comprising the combination with the steering wheels of a vehicle running gear, of a pivoted pointer, a rock shaft on which said pointer is mounted, and a pair of wires connecting with the opposite sides of said rock shaft and leading to and connecting with the wheel mountings, whereby wabbling movement of the wheels will cause a vibration of the pointer.

2. A defect indicator, comprising the combination with the steering wheels of a vehicle running gear and the connected steering arms thereof, of a pointer, a rock shaft on which the pointer is mounted, a pair of wires connecting with the steering arms, and resilient connections between said wires and the rock shaft, whereby movement of one of the arms in relation to the other will effect a corresponding movement of the pointer.

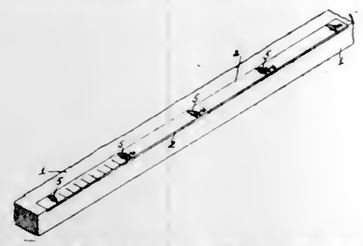
1,170,634. LINEAR COUNTER-SCALE. HENRY E. HARRIS, South Shaftsbury, Vt., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt., a Corporation of Vermont. Filed Apr. 27, 1912. Serial No. 693,532. (Cl. 33—111.)

1. The combination with a table; of an apertured scale-plate mounted thereupon; and fastening-devices inserted through said apertures in the scale-plate into said table, said fastening-devices having projecting heads forming markers for certain graduations on the scale-plate.

2. The combination with a table; of an apertured scale-plate mounted upon the table; and fastening-devices severally having a shank inserted through an aperture in the scale-plate into said table, and an elongated head extending transversely of the scale-plate forming a marker for a graduation thereof.

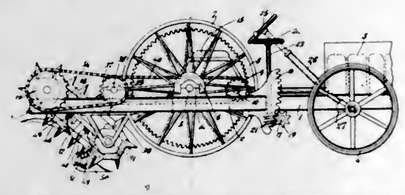
3. The combination with a table; of a scale-plate provided with angular apertures; and fastening-devices in-

serted through the respective apertures in the scale-plate into said table, said fastening-devices severally having an angular shank fitting and held from rotation in the



respective apertures, and an elongated head extending transversely of the scale-plate and forming a marker for a graduation thereof.

1,170,635. MOTOR-PLOW. CHRISTIAN F. HEINSS, Huntington, Ind. Filed Mar. 16, 1914. Serial No. 824,845. (Cl. 97—66.)



1. In a motor cultivator, a pair of drums, a series of pairs of chains upon said drums, spading means located on said chains, means for revolving the drums and means for swinging the chains and their spading means into and out of contact with the soil and plow plates located in the interchain spaces.

2. In a motor cultivator, a pair of drums, a series of pairs of chains upon said drums, spading means located on said chains, a frame, means for rigidly journaling said drums upon said frame, and means for swinging the frame to bring the chains and their spading means into and out of contact with the soil and plow plates located in the interchain spaces of each pair of chains.

3. In a motor cultivator, a pair of drums, a plurality of circumferential series of teeth on said drums, a series of pairs of chains upon said drums and engaged by said teeth, a spading means located on said chains, means for revolving the drums, and means for swinging the chains and their spading means into and out of contact with the soil and plow plates located in the interchain spaces of each pair of chains.

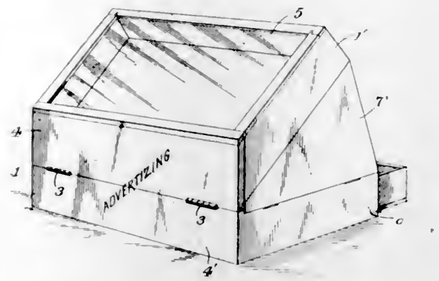
4. In a motor cultivator, a pair of drums, a plurality of circumferential series of teeth on said drums, a series of pairs of chains upon said drums and engaged by said teeth, spading means located on said chains, a frame, means for rigidly journaling said drums upon said frame, and means for swinging the frame to bring the chains and their spading means into and out of contact with the soil and plow plates located in the interchain spaces of each pair of chains.

5. In a motor cultivator, a pair of drums, a series of chains upon said drums, spading means located on said chains, a frame upon which the drums are mounted and means located in the inter-chain spaces of the series to strike off sods or clods from said inter-chain spaces.

[Claims 6 to 12 not printed in the Gazette.]

1,170,636. DISPLAY-BOX. ERNEST H. HEPPE, Montclair, N. J. Filed Mar. 8, 1915. Serial No. 13,010. (Cl. 217—58.)

1. A sectional display case provided with storage means comprising a base-section, provided with a closed bottom, having a front face vertical to said bottom, a top-section, provided with a closed bottom hinged to said base-section and normally superposed thereon, said top-section having a uni-lateral front face which forms an acute angle with the bottom of said top-section, and means for locking the top-section in an elevated position with respect to said base-section with its front face in substantial alinement with the vertical front face of said base-section.



2. A display case comprising two sections movably secured together, said sections being provided with slidable drawers, one of said sections being provided with a slidable cover of transparent material, means for maintaining one of the said sections elevated, and a compartment formed intermediate said drawers adapted to receive said transparent cover.

3. In a display case, the combination comprising two sections hinged together and provided with drawers, the front face of one section being inclined and the front face of the other section being vertical when the said sections are closed upon each other, lateral spacing wings hinged to one of said sections and adapted to be folded against one face of the latter, said wings each being of a length not substantially exceeding one-half of the length of the sections of said box and said wings being of sufficient height to maintain the front faces of the sections of the box in the same plane when said wings are interposed between the respective inner faces of said sections.

1,170,637. ORE CONCENTRATION. ARTHUR HOWARD HIGGINS, London, England, assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Filed Aug. 31, 1915. Serial No. 48,177. (Cl. 83—85.)

1. A process of concentrating ores which consista in mixing the finely crushed ore with water, adding a minute quantity of a sulfuric acid derivative of an organic body, agitating and aerating the mixture to form a froth, and separating the froth.

2. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a sulfuric acid derivative of an organic body and a small quantity of acid, agitating and aerating the mixture to form a froth, and separating the froth.

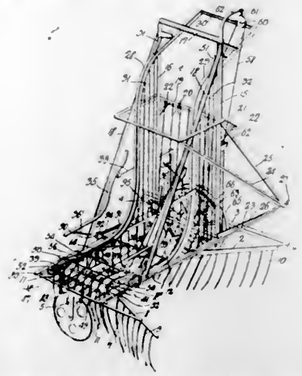
3. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a sulfuric acid derivative of a non-mineral oil, agitating and aerating the mixture to form a froth, and separating the froth.

4. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a sulfuric acid derivative of a non-mineral oil and a small quantity of acid, agitating and aterating the mixture to form a froth, and separating the froth.

5. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of "soluble oil", agitating and aerating the mixture to form a froth, and separating the froth.

[Claims 6 to 8 not printed in the Gazette.]

1,170,638. LOADING APPARATUS. HENRY P. HOFSTRAND, St. Louis Park, Minn. Filed Jan. 27, 1915. Serial No. 4,754. (Cl. 214—12.)



1. In a loading apparatus, an elevator embodying a frame and a fork hinged thereto and having downwardly projecting prongs, a pair of guides for guiding said frame movement up and down, the elevator frame and fork having coöperable means whereby the fork is frictionally held in lowered position, cam means carried by the guides adjacent their upper ends, the fork being raised by said cam means when the elevator is raised, means for actuating the elevator, and cam means coöperable with the fork when the elevator is lowered, to raise the fork until the elevator returns to normal lowered position.

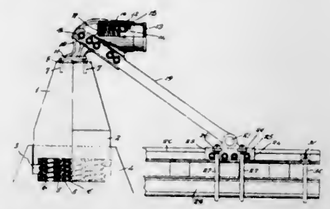
2. In a loading apparatus, an elevator embodying a frame and a fork hinged thereto and having downwardly projecting prongs, means for guiding said elevator frame for movement up and down, a cable attached to said fork to pull the elevator upwardly, and means carried by the elevator frame for normally engaging said cable when the elevator is lowered and to release the cable when the elevator is raised whereby the pull of the cable is applied to the fork for raising it.

3. In a loading apparatus, an elevator embodying a frame and a fork hinged thereto and having downwardly projecting prongs, means for guiding the elevator frame upwardly and downwardly, a pulley adjacent the upper end of said means at one side thereof, a cable passed over said pulley and attached to said fork for pulling the elevator upwardly, and a hook carried by the elevator frame and engageable with the said cable when the elevator is lowered, and disengageable from said cable when the elevator is raised.

4. In a loading apparatus, an elevator embodying a frame and a fork hinged thereto and having downwardly projecting prongs, means for guiding the elevator frame for movement upwardly and downwardly, spring means connecting the elevator frame and fork for normally swinging the fork downwardly, the elevator frame and fork having coöperable means for normally holding the fork in lowered position, cam means for raising the fork when the elevator is moved to its upper position, means for raising the fork during the downward movement of the elevator, a cable connected to the fork for pulling the elevator upwardly, and means carried by the elevator frame engageable with said cable when the elevator is lowered and arranged to release said cable when the elevator is pulled to its upper position.

5. In a loading apparatus, an elevator, a drum, a cable connecting said drum and elevator for raising the latter, a rotatable ratchet wheel, a dog carried by the drum and engageable with the ratchet wheel, means carried by the drum for normally holding the dog released, means carried by the drum tending to move the dog into engagement with the ratchet wheel, means adjacent the drum for releasing the first mentioned means, and means for resetting the dog after the drum has made one revolution to move the elevator to raised position.

1,170,639. BUMPING-POST FOR RAILROADS. EDWARD C. HOLMES, Norwood, Ohio. Filed June 17, 1914. Serial No. 845,526. (Cl. 104—224.)



1. In a device of the character specified, a concrete standard, a receiving head slidingly mounted thereon, rocker arms secured to the receiving head, with pivotal connections for the arms with the track structure whereby the force of a horizontal striking blow may be converted into a blow at right angles thereto upon the concrete standard.

2. In a device of the character specified, a concrete standard, with a yielding vertical support therefor, a receiving head slidingly mounted thereon, rocker arms secured to the receiving head, with pivotal connections for the rocker arms with the track structure whereby the force of a horizontal striking blow may be converted into a blow at right angles thereto upon the concrete standard.

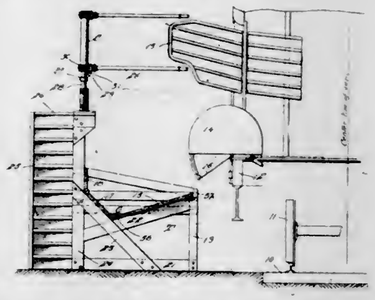
3. In a device of the character specified, a concrete standard, with a yielding vertical support therefor, a receiving head slidingly mounted thereon, rocker arms secured to the receiving head, with pivotal connections for the rocker arms with the track structure, the receiving head provided with a horizontal socket and a striking plate mounted in the socket in the receiving head, with springs to serve as a yielding cushion.

4. In a device of the character specified, a vertical standard, with a bearing plate on top thereof, the plate provided with side flanges, a receiving head mounted to slide and to rock between said flanges, and rocker arms secured to the receiving head and pivotal connections with the track structure.

5. In a device of the character specified, a vertical standard, with yielding cushion for the standard, and a bearing plate on top of the standard, the plate provided with side flanges, a receiving head mounted to slide and to rock between said flanges, and rocker arms secured to the receiving head and pivotal connections with the track structure.

[Claims 6 and 7 not printed in the Gazette.]

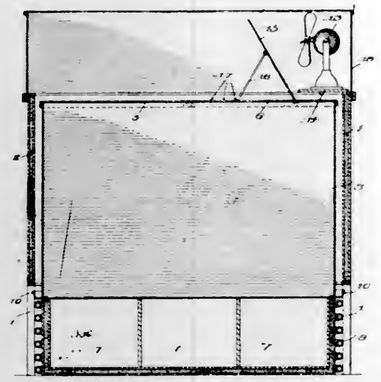
1,170,640. RAILWAY MAIL-EXCHANGE SYSTEM. ALBERT HUPP, Washington, D. C. Filed May 31, 1913. Serial No. 771,042. (Cl. 258—20.)



In a mail exchange system, a mail receiving trough arranged parallel with the railway track and provided with a flat bottom inclined downwardly away from the track, and formed with a longitudinal opening extending substantially throughout its full length, an upwardly ex-

tending back forming with the bottom a groove or angle in which the mail sacks slide parallel with the track, and a guard rail along the edge of the bottom adjacent the track.

1,170,641. COOLING DEVICE. JOHN IHRIG, Rochester, N. Y. Filed May 1, 1913. Serial No. 764,798. (Cl. 62—54.)



1. A cooling apparatus comprising a casing open at the bottom, a closed ice chamber arranged within the casing in spaced relation to the walls thereof, a refrigerating compartment arranged beneath the ice chamber, a cooling coil surrounding the refrigerating compartment and communicating with the ice chamber, and air circulating means disposed above the ice chamber and acting to direct currents of air downwardly between the walls of the chamber and casing and discharge it at the bottom of the casing.

2. A cooling apparatus comprising a casing open at the bottom, a closed ice chamber arranged within the casing in spaced relation to the walls thereof, a refrigerating compartment disposed beneath the ice chamber, an overflow gutter surrounding the bottom of the ice chamber, and a cooling coil surrounding the refrigerating compartment and communicating with said overflow gutter.

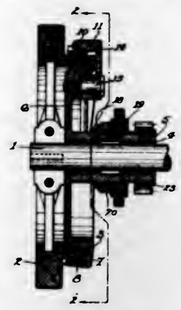
1,170,642. DAMPER. WILLIAM W. JACKSON, New York, N. Y. Filed Apr. 15, 1915. Serial No. 21,502. (Cl. 126—288.)



1. The combination of an open-ended member, a damper pivotally mounted therein, and a segmental member extending transversely to the axis of said damper and having its one end rigidly secured to said element, said member having a friction surface arranged to be engaged throughout its length by an edge of said damper whereby the latter is maintained in an adjusted position.

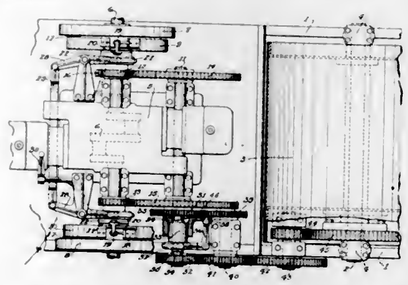
2. The combination of an open-ended element, a damper pivotally mounted therein, a segmental member having its one end rigidly secured to said element and having a friction surface arranged to be engaged throughout its length by an edge of said damper whereby the latter is maintained in an adjusted position and a stop on said member whereby a movement of said damper in one direction is arrested.

1,170,643. CLUTCH. HENRY D. JONES, Springfield, Ohio, assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio, a Corporation of Ohio. Filed July 16, 1915. Serial No. 40,228. (Cl. 192—14.)



In a clutch, two revoluble members, each of said members having a laterally extending rim, one inclosing the other, the outer rim having an opening therein, a band connected with the outer rim adjacent said opening and lying between the respective rims, a link connected to the free end of said band, a pivoted operating lever, means for adjustably connecting said link and lever, and a spring connected to the outer rim and also to said link.

1,170,644. DRIVING MECHANISM. HENRY D. JONES, Springfield, Ohio, assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio, a Corporation of Ohio. Filed July 16, 1915. Serial No. 40,229. (Cl. 74—59.)



1. In a road roller, the combination of a gas engine crank shaft, a driven shaft, means for driving said driven shaft in either direction from said crank shaft, two spur gears of different size located loosely on said driven shaft, a shiftable clutch between said gears splined to said driven shaft, a third shaft, spur gears thereon in mesh with said driven shaft gears, an axle, and gearing for transmitting the motion of said third shaft to the said axle.

2. In a road roller, the combination of a gas engine crank shaft, a driven shaft, means for driving said driven shaft in either direction from said crank shaft, a stationary bearing, a slidable clutch sleeve splined to said driven shaft and journaled in said bearing, a spur gear on each side of said clutch sleeve loose on said driven shaft, said gears being of different size, an axle, and gearing for transmitting the motion of either one of said loose gears to said axle.

1,170,645. OVERHEAD LOGGING SYSTEM. CHARLES A. JOY, Bordeaux, Wash. Filed May 21, 1915. Serial No. 29,614. (Cl. 212—91.)

1. In a logging system, the combination of supporting uprights located at a distance from each other, an elevated sky line extending from one upright to the other, a wheeled carriage supported by and movable along said sky line, a main draft line connected at two points with said carriage, a tag line having a pulley block through which said main draft line passes between said two points, a slack line connecting said pulley block with the carriage, and a haul back line having a pulley block through which said slack line passes.

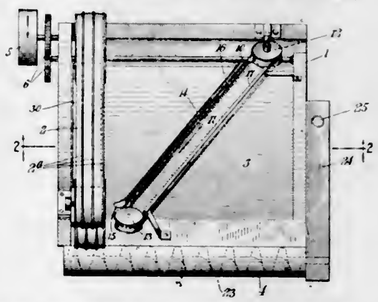


2. In a logging system, the combination of supporting uprights located at a distance from each other, an elevated sky line extending from one upright to the other, a wheeled carriage supported by and movable along said sky line, a main draft line connected at two points with said carriage, a tag line having a pulley block through which said main draft line passes between said two points, a slack line extending from said pulley block to the wheeled carriage, an engine having a winding drum for the sky line, a haul back line having a pulley through which said slack line passes, a drum for the main draft line, and a drum for the haul back line.

3. In a logging system, the combination of supporting uprights located at a distance from each other, an elevated sky line extending from one upright to the other, a wheeled carriage supported by and movable along said sky line, a main draft line connected at two points with said carriage, a tag line having a pulley block through which said main draft line passes between said two points, a slack line, a haul back line and a wheel brake mechanism on said carriage controlled by the haul back and slack lines.

4. In a logging system, the combination of supporting uprights located at a distance from each other, an elevated sky line extending from one upright to the other, a wheeled carriage supported by and movable along said sky line, a guard wheel on the carriage engaging the bottom of the sky line, a main draft line connected at two points with said carriage, and a tag line having a pulley block through which said main draft line passes between said two points.

1,170,646. APPARATUS FOR REMOVING SEED, &c., FROM FLAX-PLANTS AND THE LIKE. THEODORE KREIPE, Floral Park, N. Y., assignor to Victor E. Freeman and Louis P. Whitaker, New York, N. Y. Filed May 27, 1915. Serial No. 30,732. (Cl. 130—13.)



1. In an apparatus for removing seed and seed pods from grain stalks, the combination with means for gripping the stalks adjacent to the butt ends thereof, and holding them in substantially parallel relation, of cleaning blade provided with teeth having angularly disposed continuous faces, and means for moving said blade longitudinally in a direction at an angle to the stalks and away from the gripping and holding means.

2. In an apparatus for removing seed and seed pods from grain stalks, the combination with means for gripping the stalks adjacent to their butt ends and conveying them sidewise, of a cleaning device provided with teeth having angularly disposed contiguous faces, and means for moving said cleaning device longitudinally in a direction inclined to and away from the line of travel of said gripping and conveying means.

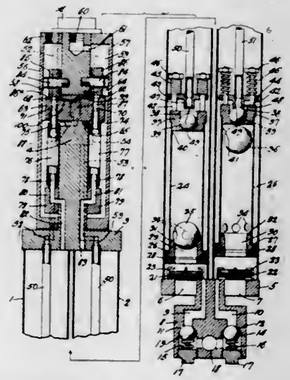
3. In an apparatus for removing seed and seed pods from grain stalks, the combination with means for gripping the stalks adjacent to their butt ends and conveying them sidewise, of a cleaning device provided with teeth having angularly disposed contiguous faces, retaining means for engaging said stalks adjacent to said cleaning device and holding the engaged portions of the stalks between the teeth of said cleaning device, and means for moving said blade longitudinally in a direction inclined to and away from the line of travel of said gripping and conveying means.

4. In an apparatus for removing seed and seed pods from grain stalks, the combination with means for gripping the stalks adjacent to their butt ends and conveying them sidewise, of a cleaning device provided with teeth having angularly disposed contiguous faces, a retaining guard having portions overlapping the outer extremities of said teeth, for retaining portions of said stalks within the recesses between said teeth, and means for moving said cleaning device longitudinally in a direction inclined to and away from the path of movement of said gripping and conveying means

5. In an apparatus for removing seed and seed pods from grain stalks, the combination with means for gripping the stalks adjacent to their butt ends and conveying them sidewise, of a cleaning device provided with teeth having angularly disposed contiguous faces, a stationary retaining guard having portions parallel to said cleaning device and overlapping the outer extremities of said teeth for retaining the portions of said stalks within the recesses between the teeth, and means for moving said cleaning device longitudinally in a direction inclined to and away from the path of movement of said gripping and conveying means.

[Claims 6 to 15 not printed in the Gazette.]

1,170,647. PUMP. JOHN L. LATTA, Hickory, N. C. Filed Mar. 24, 1915. Serial No. 16,708. (Cl. 103—8.)



1. The combination in a pneumatic pump, a cylinder, an air outlet passage, a piston working within the cylinder and having an opening, a guide carried by the piston, a buoyant valve guided by said guide and seatable over the opening of the piston, a valve carried by the guide for closing the air outlet passage, and means for yieldingly moving the guide to seat the last mentioned valve.

2. The combination in a pneumatic pump, a cylinder having an air outlet passage, a piston movable within the cylinder and having an opening, a buoyant valve seatable over said opening, a second valve connected to the piston to be moved therewith and operable for closing said passage, and means for yieldably moving the piston to cause the last mentioned valve to normally close said passage.

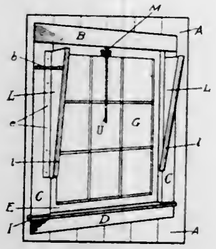
3. The combination in a pneumatic pump, a cylinder, a depending nipple therein providing an air outlet for the cylinder, a spring pressed member movable within the cylinder and having a valve at one end seatable against the nipple to normally close the passage therethrough, a piston attached to said member and movable snugly within the cylinder, the piston having an opening, and a buoyant valve guided by said member and seatable over the opening of the piston.

4. The combination in a pneumatic pump, a vertical cylinder, a depending air outlet pipe therein, a plate attached to the lower end of said pipe and having a depending nipple in communication with said pipe and provided with a valve seat, a vertically movable member within the cylinder having portions slidable through said plate, springs between said portions and plate for normally raising said member, said member having a valve at its upper end to seat against said nipple, a piston attached to said member and working snugly within the cylinder, the piston having an opening, and buoyant valve guided by said member and seatable over the opening of the piston.

5. The combination in a pneumatic pump, a vertical cylinder, having an air outlet passage, a sleeve movable vertically within the cylinder and having openings for the passage of water therethrough, a piston secured to the lower end of the sleeve and working snugly within the cylinder, the piston having an opening, a buoyant valve mounted within the sleeve and seatable over said opening of the piston, a valve carried by the upper end of the sleeve and arranged to close said passage, and means for yieldingly raising the sleeve.

[Claims 6 to 12 not printed in the Gazette.]

1,170,648. WINDOW-VENTILATOR. WILLIAM LOUDEN, Fairfield, Iowa. Filed Aug. 13, 1913. Serial No. 784,540. (Cl. 20—53.)

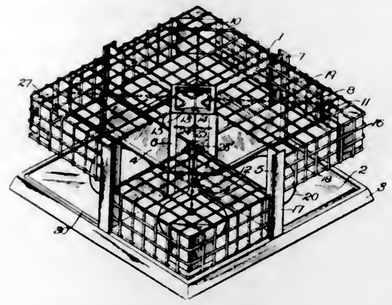


1. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges, the incline of the flanges corresponding approximately with the incline of the sash when tilted in, and the sash being adapted to be slid up the flanges, and a pair of dogs pivoted at their outer ends to the sides of the window frame and their inner ends adapted to come in contact with the side rails of the sash and prevent it from tilting out as well as to hold it in raised position when slid up the flanges.

2. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges to receive and hold the sash when tilted in, dogs pivoted to the sides of the window frame to hold the sash in this position, said dogs being adapted to stand in an approximately vertical position when the sash is tilted into closed position, and means to prevent the dogs from tilting over away from the sash.

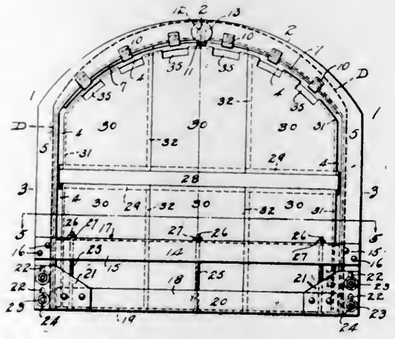
3. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges to receive and hold the sash when tilted in, and a stool on the bottom of the window frame adjoining the inner face of the lower sash rail, beveled on its adjacent edge to fit the incline of the sash rail when tilted in, and thus insure a close fit between the edge of the sash rail and the stool whether the sash is tilted in or tilted out.

1,170,649. ANIMAL-TRAP. HARVEY C. LOWRANCE, Kansas City, Mo. Filed Apr. 13, 1914. Serial No. 831,628. (Cl. 43—19.)



In an animal trapping device, the combination of a base having a groove around the outer edge of its surface, a group of standards rising from the central portion of said base, each standard being one member of two pairs of standards, a frame imposed on the standard and having bar members for each pair, a notch in the center of each bar, with a plurality of end standards erected along the outer edge of the base, mirrors mounted between the central and end standards, a wire frame mounted on the end standards and having guide sockets, trip plates in the base, trip bars adapted to be actuated by said plates, wires on the central pairs of standards having guide loops for the trip bars, cages slidably mounted in the end and central standards, chains connected with the tops of said cages, and balls on the free ends of said chains, said balls being adapted for disengageable seating in the notches in said central standard bars.

1,170,650. COKE-OVEN DOOR. JAMES A. MCCREARY, Connellsville, Pa. Filed Dec. 11, 1914. Serial No. 876,701. (Cl. 202—6.)



1. A coke oven door including a metal frame construction having a top arch provided with air ports therein.

2. A coke oven door including a metal frame construction having a top arch provided with air ports therein, and a tile filling for the frame also having a top arch with air openings beneath and communicating with those in the frame arch.

3. A coke oven door including an arched frame member of Z-shaped cross section presenting a flat web and inner and outer flanges, said frame member having air admission ports in the flat web of the arch thereof.

4. A door of the class described including an open frame member having fixed tile engaging means, and other tile locking means adjustable in a plane parallel to the vertical axis of the door.

5. A door of the class described including a substantially inverted U-shaped main frame member having fixed tile engaging means, a horizontal key bar, and other tile locking means adjustable parallel to said horizontal key bar.

[Claims 6 to 19 not printed in the Gazette.]

1,170,651. TROUSERS STRETCHER AND CREASER. CHARLES A. MATHENY, Kingston, Tenn. Filed Sept. 6, 1912. Serial No. 718,984. (Cl. 223—19.)



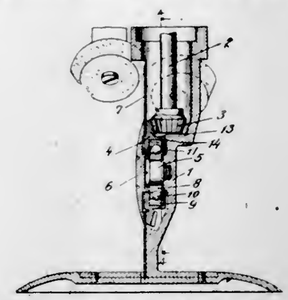
A trousers stretching and creasing device comprising a pair of creasing members, each consisting of clamping bars, a plurality of clips comprising bodies, said bodies having fingers which are pivotally connected to one of the bars, a lug carried by one end of each bar, spacing bars having one of their ends pivotally connected to one bar of the creasing members, and their other ends provided with teeth for selectively engaging an adjacent lug, certain of the clips being adapted to have their fingers engage the spacing bars when the backs of the clip bodies are engaged with the edges of the bars of the creasing members, thereby holding the teeth of the spacing bars in engagement with the associated lugs.

1,170,652. CLOTH-CUTTING MACHINE. HYMAN MAIMIN, New York, N. Y. Filed June 18, 1914. Serial No. 845,822. (Cl. 164—76.)

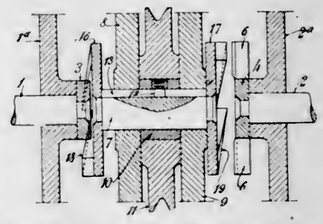
1. In a cloth cutting machine, a standard, a stud projecting therefrom, a knife, a knife-driving gear on the stud and a knife-clamping cap inclosing the end of the stud and coöperating with the gear to clamp the knife between them so that the knife, gear and cap rotate as a unit.

2. In a cloth cutting machine, a standard, a stud projecting therefrom, a knife-driving gear on the stud, and having an internally threaded hub, a circular knife having a central aperture, and a clamping cap having a screw-threaded hub passing through the central aperture of the knife into engagement with the screw threads of the gear so as to clamp the knife between the cap and gear for rotation as a unit.

3. In a cloth cutting machine, an upstanding recessed standard, a vertically disposed knife-driving shaft carrying a bevel gear in the recess of the standard, a stud projecting laterally from the standard, a coöperative bevel gear mounted for rotation on the stud and having an internally threaded hub, a circular cutting knife having a central aperture, and a clamping cap having a screw threaded hub extending through the aperture of the knife into engagement with the screw threads of the coöperative bevel gear to clamp the knife between the cap and gear for rotation as a unit, the standard, the cap and the knife forming a closed housing for the gearing.



1,170,653. REVERSING CLUTCH. JACQUES MARETTE, Vincennes, France, assignor to Compagnie Generale Des Etablissements Pathe Freres, Phonographe Et Cinematographe, Paris, France. Filed June 22, 1914. Serial No. 846,458. (Cl. 192—9.)

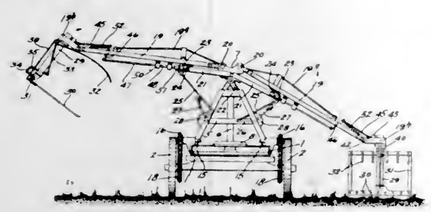


1. In a device for the purpose specified, two spindles arranged on a line and spaced from each other, a sliding shaft between the spindles and in alinement with the same, clutch arms on the spindles, ratchet plates on the ends of the shaft for engagement with the clutch arms, the teeth on one of said plates having opposite directions to the teeth on the other plate and a pulley adapted to rotate with the shaft, substantially as described and for the purpose set forth.

2. In a device for the purpose specified, two spindles arranged on a line and spaced from each other, a sliding shaft between the spindles and in alinement with the same, clutch arms on the spindles, ratchet plates on the ends of the shaft for engagement with the clutch arms, the teeth on one of said plates having opposite directions to the teeth on the other plate, a pulley mounted on the shaft, means for preventing the pulley from moving axially and a pin on said pulley, said pin being adapted to slide in a longitudinal groove in the shaft, substantially as described and for the purpose set forth.

3. In a device for the purpose specified, two spindles arranged on a line and spaced from each other, a sliding shaft between the spindles and in alinement with the same, clutch arms on the spindles, ratchet plates on the ends of the shaft for engagement with the clutch arms, the teeth on one of said plates having opposite directions to the teeth on the other plate, a pulley mounted on the shaft, means for preventing the pulley from moving axially, and a pin on said pulley, said pin being adapted to slide in a longitudinal groove in the shaft, the walls of the groove having two recesses into which the pin is adapted to engage, substantially as described and for the purpose set forth.

1,170,654. SHOCK-LOADER. THOMAS MARTIN, Minneapolis, Minn. Filed Oct. 15, 1914. Serial No. 866,790. (Cl. 214—2.)



1. In a shock loader, the combination with a support, of an upriglit power-driven shaft journaled thereon, an arm connected to said shaft for rotation therewith and for raising and lowering movements, of a fork pivotally connected to the free end of said arm for approximately horizontal swinging movements.

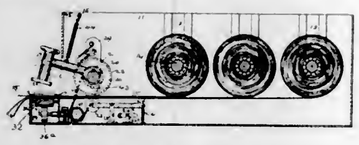
2. In a shock loader, the combination with a truck, of an upright power-driven shaft journaled thereon, an arm connected to said shaft for rotation therewith and for raising and lowering movements, an endless track controlling the raising and lowering movements of said arm, and a fork pivoted to the free end of said arm, for approximately horizontal swinging movements.

3. In a shock loader, the combination with a support, of an upright power-driven shaft journaled thereon, an arm connected to said shaft for rotation therewith and for raising and lowering movements, and main and supplemental forks pivoted to the free end of said arm for common approximately horizontal swinging movements, one of the said forks having movement toward and from the other.

4. In a shock loader, the combination with a truck, of an upright power-driven shaft journaled thereon, an arm pivoted to said shaft but connected for rotation therewith, means for controlling the vertical movements of said arm when it is rotated with said shaft, coöperating main and supplemental forks pivotally mounted on the free end of said arm for common approximately horizontal swinging movements, and means for moving said supplemental fork toward and from said main fork.

5. In a shock loader, the combination with an upright power-driven shaft journaled thereon, an arm connected to said shaft for rotation therewith and for raising and lowering movements, a fork pivoted to the free end of said arm for approximately horizontal swinging movements, a lock normally holding said fork against rotation, and means for releasing said lock.

1,170,655. DEVICE FOR TREATING STRIPS OF CARD OR PAPER. WILLIAM C. MARTINEAU and CLARENCE R. MARTINEAU, Albany, N. Y. Filed Aug. 13, 1914. Serial No. 856,647. (Cl. 101—15.)



1. A device for treating strips of paper or card, including duplicate means each constructed and fitted to independently support a plurality of strips so that they may be passed in superposition over a support; means for moving a carbon strip transversely of the paper strips; a hammer for acting upon a portion of the upper paper strip; means for automatically moving each of such pluralities of strips forward; and means for moving said hammer and said strip moving means transversely of the strips.

2. In a device for treating strips of paper or card, a casing; means within said casing for supporting a plurality of strips; means for guiding such strips in superposition out of said casing; a hammer for impressing such strips; a friction roll in contact with one face of such plurality of strips and directly connected for operation by the return movement of said hammer; a second roll coöperative with said friction roll and normally bearing the opposite face of such plurality of strips; a spring actuated lever on which said second roll is mounted; and a pivoted button adapted to be forced against said lever for continuously holding said second roll out of operative position.

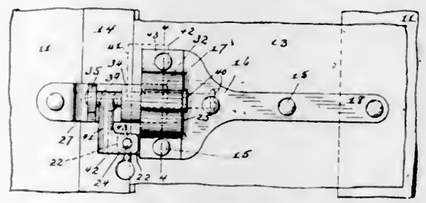
3. In a device for treating strips of paper or card, a casing; duplicate means side-by-side within said casing for supporting a plurality of strips; duplicate means for guiding such strips in superposition out of said casing; a shaft forward of said strip supporting means; a hammer and strip feeding means mounted on said shaft for movement longitudinally thereof whereby they may be placed in operative relation with either of said strip supporting means.

4. A device for treating strips of paper or the like, including a casing; duplicate, side-by-side means in said casing, each of which means is adapted to independently support a plurality of independent, separately removable, strip carrying rolls, each of said rolls being adapted to carry a strip of paper so that such strips may be passed in superposition over a support; and a single hammer adapted to be moved in a plane parallel to those of said rolls, and thereby adapted to operate on paper strips supported on either of said pluralities of rolls.

5. A device for treating strips of paper or the like, including a casing; duplicate, side-by-side means in said casing, each of which means is adapted to independently support a plurality of independent, separately removable, strip carrying rolls, each of said rolls being adapted to carry a strip of paper so that such strips may be passed in superposition over a support; means for automatically moving a unitary carbon strip transversely of such paper strips carried on either of said pluralities of rolls; and a single hammer adapted to be moved in a plane parallel to those of said rolls, and thereby adapted to operate on paper strips supported on either of said pluralities of rolls.

[Claims 6 and 7 not printed in the Gazette.]

1,170,656. CAR-DOOR DEVICE. WILLIAM C. MARTINEAU and CLARENCE R. MARTINEAU, Albany, N. Y. Filed Apr. 3, 1915. Serial No. 19,021. (Cl. 70—102.)



1. A car door fixture for securing a sliding door to a stile or the like, comprising a bolt carrying portion secured to one of said car parts and formed with a laterally projecting lug having an aperture; a bolt having limited longitudinal and rotary movement in said carrying portion and formed with an L-shaped engaging and locking member comprising a laterally projecting stem and a lug having an aperture and extending transversely from said stem; a socket portion on the other of said car parts adapted to receive said bolt and to permit the passage of said L-shaped member when said bolt has been rotated to bring said member into one position and to prevent withdrawal of said bolt when it has been rotated to bring said member into another position; the construction of the parts being such that when said bolt has been rotated to its last-named position said lugs will be brought into substantial contact and the apertures therein into registration, whereby the shackle of a seal or lock may be passed through both said apertures.

2. A car door fixture for securing a sliding door to a stile or the like, comprising a bolt carrying portion secured to one of said car parts and formed with a laterally projecting lug having an aperture; a bolt having limited longitudinal and rotary movement in said carrying portion and formed with a laterally projecting member spaced away from its free end; a socket portion on the other of said car parts formed with a U-shaped member adapted to receive said bolt and to permit the passage of said lateral member when said bolt has been rotated to bring said member into one position and to prevent withdrawal of said bolt when it has been rotated to bring said member into another position, and with a second socket apertured to receive the free end of said bolt; said projecting member on said bolt being formed with an aperture adapted to register with the aperture in said lug when said bolt has been rotated to its last-named position, whereby the shackle of a seal or lock may be passed through both said apertures.

3. A car door fixture for securing a sliding door to a stile or the like, comprising a bolt carrying portion secured to one of said car parts and having an arch-shaped head spaced away from said car part; a horizontally disposed bolt having limited longitudinal and rotary motion in said head and formed with a laterally projecting member; a combined guide and socket portion on the other of said car parts having a member adapted to engage over the edge of the other car part beneath said arched head and a bolt receiving socket adapted to permit the passage of said bolt when it has been rotated to bring said projecting member into one position and to engage with said member after said bolt has been rotated to bring said member into engaging position.

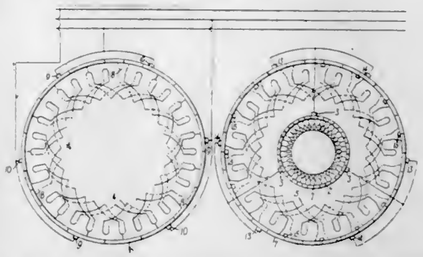
4. A car door fixture for securing a sliding door to a stile or the like, comprising a bolt carrying portion secured to one of said car parts and provided with a lug formed with an aperture therein and spaced away from said car part; a bolt having limited longitudinal and rotary movement in said carrying portion and formed with a laterally projecting member at the free end of which is a flange formed with an aperture therein; a combined striker, guide and socket portion on the other of said car parts having a member adapted to engage over the edge of said first named car part beneath said lug and adapted to permit the passage of said bolt and of said projecting member when said bolt has been rotated to bring said projecting member into one position and to engage with said member to prevent withdrawal of said bolt therefrom when it has been rotated to bring said apertures closely adjacent, whereby a shackle may be passed through both said apertures to prevent rotation of said bolt.

5. A car door fixture for securing a sliding door to a stile or the like, comprising a bolt carrying portion secured to one of said car parts and including an arch-shaped head spaced away from said car part and an independent, bolt-retaining strap member superposed on and bolted to said head; a bolt having limited longitudinal and rotary movement in said head and formed with a laterally projecting member; a combined guide and socket portion on the other of said car parts having a flange member adapted to engage over the edge of said first named car part beneath said arched head, and a bolt receiving socket adapted to permit the passage of said bolt when it has been rotated to bring said projecting member into one position and to engage with said member after said bolt has been rotated to bring said member into engaging position.

1,170,657. ALTERNATING-CURRENT COMMUTATOR-MOTOR. FRIEDRICH W. MEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 11, 1913. Serial No. 741,460. (Cl. 172—280.)

1. An alternating current commutator motor comprising a plurality of inductively related lap and wave stator windings, an armature having a commutator cylinder, brushes bearing on the commutator cylinder and adjustably connected to one of said field windings.

2. An alternating current commutator motor comprising a plurality of inductively related lap and wave stator windings, an armature having a commutator cylinder, brushes bearing on the commutator cylinder, and means for adjustably connecting the said brushes to alternate coils of one of said stator windings.



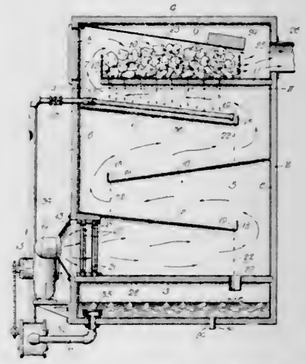
3. An alternating current commutator motor comprising a plurality of inductively related lap and wave stator windings, each comprising a plurality of phase divisions, an armature that is adjustably connected to one of said windings, and means for adjusting the relative positions of the corresponding phase divisions of the said stator windings.

4. An alternating current commutator motor comprising a plurality of inductively related lap and wave stator windings, each comprising a plurality of phase divisions, an armature that is connected to one of the said stator windings, and means for adjusting the numbers of active convolutions in, and the relative positions of, the corresponding phase divisions of the said windings.

5. The combination with an alternating current supply circuit, of a motor comprising electrically unconnected but inductively related primary and secondary stator windings, the primary winding of which is connected to the supply circuit, an armature that is connected to the secondary stator winding, and means for adjusting the relative positions of the active portions of the several phase divisions of the said windings.

[Claims 6 to 8 not printed in the Gazette.]

1,170,658. AIR COOLING AND PURIFYING APPARATUS. JOSEPH B. MITCHELL, Detroit, Mich. Filed July 13, 1914. Serial No. 850,553. (Cl. 62—133.)



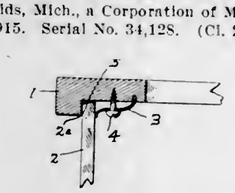
1. An air cooling and purifying apparatus comprising a housing having air inlet and outlet openings, means in the upper part of said housing in a horizontal plane with the air outlet opening of said housing adapted to support an aqueous cooling agent, an inclined tray within said housing below said cooling agent adapted to receive drippings from the cooling agent and provide a plurality of aqueous curtains, pipes above said tray adapted to discharge water against the bottom of the cooling agent and coöperate with drippings from the cooling agent in providing double aqueous curtains, and means in the upper part of said housing inclined toward said air outlet open-

ing and normally engaging the cooling agent for deflecting air into contact therewith.

2. An air cooling and purifying apparatus comprising a housing having air inlet opening in the bottom thereof and outlet opening in the side thereof at the top of said housing, said housing having a chamber in the upper end thereof adapted to contain an aqueous cooling agent, said chamber having the bottom thereof perforated, an air deflector arranged in the chamber of said housing inclined toward said air outlet opening and adapted to normally engage a cooling agent therein, an inclined superimposed tray within said housing and adapted to receive drippings from the cooling agent and provide a plurality of aqueous curtains, pipes above said tray adapted to discharge water against the bottom of said chamber between the perforations thereof to rebound and coöperate with drippings from said cooling agent in forming double aqueous curtains, and a blower adapted to force air into said housing and through the aqueous curtains.

3. An air cooling and purifying apparatus comprising a housing having air inlet and outlet openings, a perforated platform in the upper part of said housing and adapted to support a cooling agent, inclined trays within said housing and providing a sinuous passage, a blower adapted to force air into said housing, perforated pipes within said housing above the uppermost tray and adapted to discharge water against the bottom of said platform and to supply water to said trays and provide aqueous curtains at the ends of said trays and between said platform and the uppermost tray, and means for conveying water from the bottom of said housing to said perforated pipes.

1,170,659. METHOD FOR REMOVABLY SETTING GLASS PLATES. EDMUND MORRIS, Grand Rapids, Mich., assignor to Wilmarth Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed June 14, 1915. Serial No. 34,128. (Cl. 20—56.4.)



A method for detachably and tightly securing a plate or panel of glass in a frame, comprising; beveling two or more of the several edges of the glass plate, providing the angles of the recesses of the frame which are adapted to receive the beveled edges of said glass plate with a plastic material which will harden, embedding the said beveled edges of said glass plate into said plastic material, leaving said plate in said position until said plastic material has hardened, and providing detachable means for holding the said glass plate in constructional position in its frame.

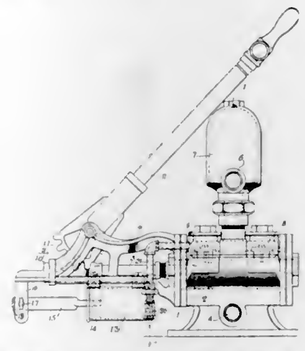
1,170,660. DETACHABLE DUST-GUARD. EDMUND MORRIS, Grand Rapids, Mich., assignor to Wilmarth Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed June 14, 1915. Serial No. 34,129. (Cl. 211—25.)



1. As an article of manufacture, a detachable dust guard for the sliding doors or closures of show cases comprising; spring clamps adapted to be detachably secured to the edge of one of such glass doors or closures, a resilient or flexible member secured to said spring clamps and having one free edge adapted to yieldingly engage the adjacent surface of the other door or closure.

2. As an article of manufacture, a detachable dust guard for the sliding glass doors or closures of show cases comprising; spring clamps adapted to be detachably secured to the edge of one of such glass doors or closures, a strip of felt having one edge free said free edge adapted to yieldingly engage the surface of an adjacent sliding door or closure, bars, between which one edge of said strip of felt and the bases of said spring clamps are securely fixed, and means for fixedly attaching said bars, said strips of felt and said spring clamps together.

1,170,661. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, a Copartnership composed of Francis E. Myers and Philip A. Myers, Ashland, Ohio. Filed Jan. 5, 1914. Serial No. 810,317. (Cl. 103—79.)

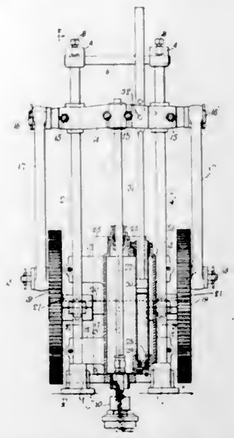


1. In a pump, the combination, with a horizontal water pumping cylinder having a cylinder head, a piston mounted in said cylinder, a piston rod for said piston extending beyond said cylinder head, a bracket rigidly secured to said cylinder head and extending longitudinally of said piston rod, and an operating member mounted on said bracket and operatively connected with said piston rod, of an air pumping cylinder rigidly secured to said bracket, a piston in said air pumping cylinder, a piston rod therefor, and an operative connection between the last-mentioned piston rod and said operating member.

2. In a pump, the combination, with a horizontal water pumping cylinder having a cylinder head, a piston mounted in said cylinder, a piston rod for said piston extending beyond said cylinder head, a bracket rigidly secured to said cylinder head and extending longitudinally of said piston rod, and an operating member mounted on said bracket and operatively connected with said piston rod, of an air pumping cylinder rigidly secured to said bracket and arranged beneath the same and beyond said cylinder head, a piston in said air cylinder, a piston rod therefor extending substantially parallel with the first-mentioned piston rod, and means for connecting said last-mentioned piston rod with and disconnecting the same from said operating member, whereby either one or both of said pistons may be operated by the manipulation of said handle.

3. In a pump, the combination, with a horizontal water pumping cylinder having a cylinder head, a piston mounted in said cylinder head, a piston rod for said piston extending through and beyond said cylinder head and having at its outer end a toothed rack, a bracket rigidly secured to said cylinder head and extending lengthwise of said piston rod and having a portion forming a guide for said rack, and a handle pivotally mounted on said bracket and having a toothed portion meshing with said toothed rack, an air pumping cylinder rigidly secured to said bracket and supported beneath the same near said rack, a piston in said air pumping cylinder, a piston rod therefor, a lug depending from said rack, and a pin to connect said lug with and disconnect the same from the rod of the piston in said air pumping cylinder.

1,170,662. WORKING HEAD FOR PUMPS. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, a Copartnership consisting of Francis E. Myers and Philip A. Myers, Ashland, Ohio. Filed July 22, 1914. Serial No. 852,508. (Cl. 103—62.)



1. A supporting frame for a pump comprising a plurality of separate units arranged side by side and spaced apart to receive pumping mechanism between them, and connecting devices to rigidly connect said units one to the other and to maintain the same in their spaced relation, said connecting devices being detachably secured to said units to permit said units to be separated and their relative positions altered.

2. A supporting frame for a pump comprising a plurality of separate units arranged side by side and spaced apart to receive pumping mechanism between them, each of said units comprising a base, a guide rod and a brace rod rigidly secured at their lower ends to said base, and a head block rigidly secured to and connecting together the upper ends of said guide rod and said brace rod, and connecting devices extending between and detachably secured to the bases and the head blocks, respectively, of said units to rigidly connect said units to form a unitary structure.

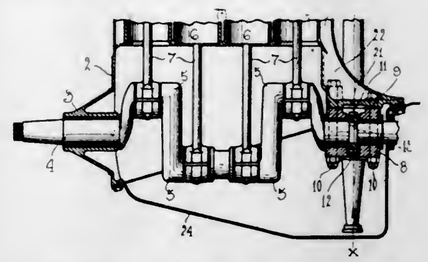
3. A supporting frame for a pump comprising a plurality of separate units arranged side by side and spaced apart to receive pumping mechanism between them, said units being interchangeable, and connecting devices to rigidly connect said units one to the other and maintain them in their proper relative positions, said connecting devices being adapted to be secured to either side of any one of said units, whereby said units may be connected one to the other in different relative positions.

4. A supporting frame for a pump comprising a plurality of separate units arranged side by side and spaced apart to receive pumping mechanism between them, said units being interchangeable and each comprising a base, a guide rod and a brace rod rigidly secured at their lower ends to said base, and a head block, rigidly secured to the upper ends of said rods, the base and head block of each unit having sockets opening on either side thereof, tie rods adapted to enter the sockets on either side of any one of said units, and means for detachably securing said tie rods in the sockets.

5. A supporting frame for a pump comprising a plurality of separate units arranged side by side and spaced apart to receive pumping mechanism between them, each of said units comprising a base and a guide rod rigidly secured to said base, connecting devices to rigidly connect said units one to the other and maintain them in their proper relative positions, said connecting devices being detachable to permit said units to be separated and their relative positions altered, and a pumping device detachably secured to the guide rods of the respective units.

[Claims 6 to 9 not printed in the Gazette.]

1,170,663. CRANK-CASE AND BEARING FOR ENGINES. EMIL A. NELSON, Ronville, Mich. Filed Dec. 17, 1914. Serial No. 877,655. (Cl. 64—10.)



1. In an engine, a crank case comprising an upper portion and a lower detachable portion, said upper portion being formed with an integral crank shaft bearing, and a detachable crank shaft bearing in alinement with said integral bearing, the line of division between said upper and lower portions being extended below the horizontal plane of the longitudinal axes of said bearings at one end and above said plane at the opposite end.

2. In an engine, a crank case having an integral bearing at one end for a crank shaft and a detachable bearing for said shaft at its opposite end, said case being divided below the horizontal plane of the axes of said bearings adjacent to one bearing and above said plane adjacent to the other bearing to form a lower detachable portion for the crank case.

3. In an engine, a crank case divided into an upper portion and a lower detachable portion, said upper portion being formed at one end with an integral bearing for a crank shaft, and a detachable crank shaft bearing secured to the opposite end of said upper portion, the line of division between said upper and lower portions being adjacent to the plane of the lower side of the integral bearing at one end of the case and adjacent to the plane of the upper side of the detachable bearing at its opposite end.

4. In an engine, a crank case having an upper portion provided with an integral bearing at one end, a detachable bearing at the opposite end of said portion, and a detachable lower portion for the crank case removable independently of said bearings, the plane of the line of division between said upper and lower portions being at an incline to the horizontal plane of the axes of said bearings.

5. In an engine, a crank case divided into an upper portion and a lower detachable portion, said upper portion being formed at one end with an integral bearing for a crank shaft and at its opposite end with a seat for a detachable bearing for the crank shaft, the plane of the line of division between said upper and lower portions being inclined from a point below the horizontal plane of the integral bearing, upwardly to substantially the plane of the seat for the detachable bearing.

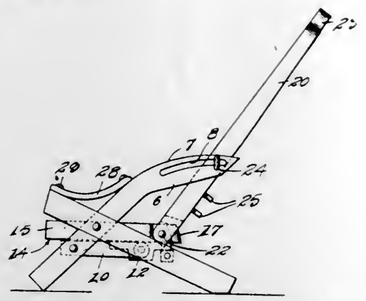
[Claims 6 to 12 not printed in the Gazette.]

1,170,664. COMBINED CHAIR AND IRONING-TABLE. OSCAR C. NELSON, Westbrook, Minn. Filed Feb. 26, 1915. Serial No. 10,775. (Cl. 155—6.)

1. A combination ironing board and chair including a supporting structure comprising cross pieces, rods connecting the cross pieces, and arms pivoted to the rods, a seat pivoted to the ends of the arms, a back pivoted to the seat, extensions on one set of cross pieces, screw eyes extending through the extensions and into the back, and means to lock the seat and back in parallel relation.

2. A combination ironing board and chair including a supporting structure comprising cross pieces, rods connecting the cross pieces, extensions on one set of the cross pieces, said extensions being provided with arcuate slots, pivoted arms secured to one of the rods, a seat, said arms being pivotally secured to the seat, a back pivoted to the seat, pivotal connections extending through

the slots and into the back, and means to hold the back and seat in parallel relation, the seat being designed to rest upon one of the connecting rods when in position for use as a chair.



3. A combination ironing board and chair including a supporting structure comprising cross pieces, a rod connecting the cross pieces, a second rod connecting opposite arms of the cross pieces, angular extensions formed on one set of arms of the cross pieces, said angular extensions being provided with arcuate slots, arms pivoted to the last mentioned connecting rods, a seat pivoted to the ends of the arms, a back pivoted to the seat, and pins extending through the slots and into the back to pivotally and slidably hold the back in place.

1,170,665. CONCENTRATION OF ORE. EDWARD HOIT NUTTER, San Francisco, Cal., assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Filed Aug. 31, 1915. Serial No. 48,169. (Cl. 83—85.)

1. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a product obtained by treating a hydrocarbon (composed exclusively of hydrogen and carbon) with sulfuric acid, agitating and aerating the mixture to form a froth, and separating the froth.

2. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a product obtained by treating a mixture of hydrocarbons (composed exclusively of hydrogen and carbon) with sulfuric acid, agitating and aerating the mixture to form a froth, and separating the froth.

3. A process of concentrating ores which consists in mixing the finely crushed ore witlf water, adding a minute quantity of a product obtained by treating a hydrocarbon (composed exclusively of hydrogen and carbon) with sulfuric acid, and a small quantity of acid, agitating and aerating the mixture to form a froth, and separating the froth.

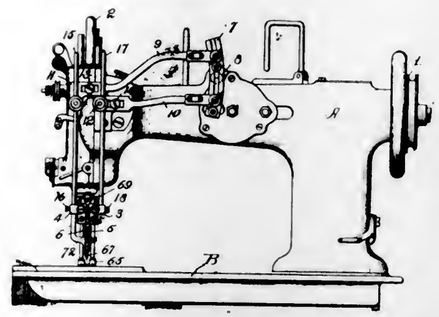
4. A process of concentrating ores which consists in mixing the finely crushed ore with water, adding a minute quantity of a product obtained by treating a mixture of hydrocarbons (composed exclusively of hydrogen and carbon) with sulfuric acid, and a small quantity of acid, agitating and aerating the mixture to form a froth, and separating the froth.

5. A process of concentrating ores which consists in mixing a finely crushed ore with water, adding a minute quantity of a product obtained by treating a hydrocarbon (composed exclusively of hydrogen and carbon) with sulfuric acid and allowing it to stand for some time, agitating and aerating the mixture to form a froth, and separating the froth.

[Claims 6 to 19 not printed in the Gazette.]

1,170,666. COMBINATION THREAD-DRAWING AND HEMSTITCH SEWING-MACHINE. WILLIAM N. PARKS, Brooklyn, N. Y. Filed Apr. 19, 1909. Serial No. 490,825. (Cl. 112—7.)

1. In combination in a sewing machine, a stitch forming mechanism comprising a needle, means for producing a relative lateral movement between said needle and the work, a fabric thread extracting mechanism the extracting device of which is located to extract threads from the fabric in advance of the stitching and in the direction of the feed of the work, and means for operating said fabric thread extracting mechanism.



2. In combination in a sewing machine, a fabric thread extracting device by means of which ends of one or more threads of the fabric running in the direction of the feed of the work are extracted, a cutter device for cutting off the ends of said fabric threads, and a stitching device adapted to bind or stitch the fabric along the edge of the path from which said fabric threads have been extracted.

3. The combination in a thread drawing and hemstitch sewing machine, of a vertically reciprocating fabric thread extractor, a horizontal reciprocating cutter for shearing off the threads extracted, and a stitch forming mechanism comprising a vertically reciprocating and laterally vibrating needle for making hemstitches or binding stitches along the edge of the path from which the fabric threads have been extracted.

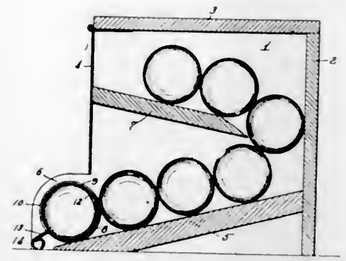
4. In combination in a hemstitch sewing machine, a stitch forming mechanism comprising one or more vertical reciprocating and laterally vibrating needles, a feeding mechanism by means of which the work is advanced once to each third reciprocation of said needle or needles, a fabric thread extracting device, a cutter device, and means for operating said cutter device so that it acts to shear off the ends of the extracted fabric thread each time the needle is reciprocated.

5. In combination in a hemstitch sewing machine having a needle plate or its equivalent, a vertically reciprocating and laterally vibrating needle, an aperture through said needle plate for the passage of the needle, a reciprocating fabric thread extractor located to operate adjacent to the needle and in front of the same, an aperture formed through said needle plate for the passage of the fabric thread extractor, a cutter located below said needle plate to coöperate with said thread extractor, and means for reciprocating said cutter.

[Claims 6 to 18 not printed in the Gazette.]

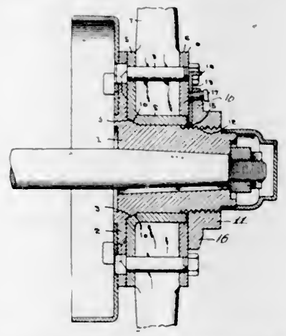
1,170,667. VENDING APPARATUS. JONATHAN PETERSON, Brooklyn, N. Y., assignor to Weyman Bruton Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 17, 1912. Serial No. 715,600. (Cl. 211—8.)

The combination with a casing having a front wall and side walls provided with forward extensions projecting beyond the front wall, and an inclined bottom adapted to support a plurality of rows of cylindrical articles and down which bottom the articles may roll by gravity, of a substantially semicylindrical trough having its end flush with the side walls of the casing and journaled in the forward extensions of the side walls and adapted to rotate on its longitudinal axis so that when the trough is in its closed position the advanced row of articles will lie therein and at a point forward of the front wall, but between the extensions of the side walls, and a member carried by the trough and extending at an abrupt angle to one of the longitudinal edges of the trough, said member limiting the opening movement of the trough whereby the articles therein will be exposed to view while held in



the trough, said trough in its closed position acting to hold back the remaining articles on the inclined bottom.

1,170,668. DEMOUNTABLE WHEEL. ASA P. PRATHER, Georgetown, Ky. Filed Nov. 23, 1914. Serial No. 873,584. (Cl. 21—31.)



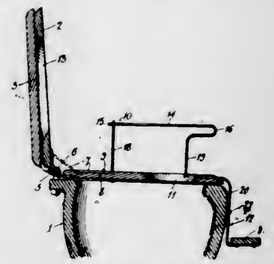
1. In a demountable wheel, the combination with a hub having exterior threads thereon, and a flange at one end of the hub, the face of the hub adjacent the flange being beveled, of an auxiliary hub comprising two sections, one of said sections being substantially L-shaped in cross section and forming a base, a portion of said last section having a bevel to coöperate with the bevel of the hub, means to lock said sections together and clamp spoke members therein, a locking nut coöperating with the threads of the hub, the inner face of said nut having a seat, and a locking key entering said seat and coöperating with said locking means for said sections to limit the rotation of the nut when applied to use.

2. In a demountable wheel, the combination with a hub having threads on the exterior thereof, and a flange at one end, of an auxiliary hub comprising two sidesections, and a base portion, said side sections and base portion forming a receptacle for the ends of spokes, bolts to secure the sections together and clamp the spokes therebetween, a nut engaging the threads on the hub and adapted to lock the auxiliary hub in firm engagement with the main hub, said nut having a seat in its inner face, and a locking key coöperating with said seat and the section securing bolts to limit the rotating movement of said nut.

3. In a demountable wheel, the combination with a hub having threads adjacent one end and a flange at the opposite end, of an auxiliary hub, comprising two side sections, one of said sections having a base portion integral therewith, bolts to secure the sections together and clamp the ends of spoke members therebetween, said base member being of less length than the extreme width of the sections when applied to use, a nut coöperating with the threads of the hub to lock the auziliary hub in position thereon, said nut having a vertically extending seat in the face thereof, a locking key adapted to enter said seat and having its outer end projecting in the path of said bolts to limit the rotating movement of said nut, and a binding screw extending through the nut and key to hold the key against longitudinal movement.

4. In a demountable wheel, the combination with a hub having threads thereon, and an auxiliary hub formed of sections and bolts extending transversely through the sections to clamp spoke ends therebetween, of a nut coöperating with the threads of the hub, said nut having a seat therein, a key adapted to fit said seat, and a binding screw extending through said nut and key and against the face of one of the spoke receiving sections.

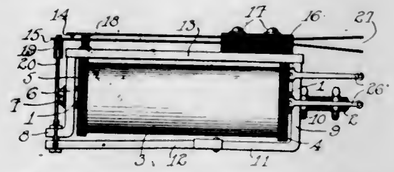
1,170,669. ATTACHMENT FOR WATER-CLOSETS. JOHN RIDGLEY, New Orleans, La. Filed June 8, 1914. Serial No. 843,818. (Cl. 155—22.)



1. As a new article of manufacture, an auxiliary seat for water closet bowls comprising an apertured seat, means projecting from the rear of the seat for engaging the hinge portion of the main seat and to secure the same to the bowl of the closet, and a hinged brace arm secured to the seat and adapted to be moved to engage the main seat of the closet, when the latter is raised, to hold the same against falling.

2. As a new article of manufacture, an auxiliary seat for watercloset bowls comprising an apertured seat formed with a recess in its top face, means on the seat for securing the same to the closet bowl, a brace arm normally lying in said recess flush with the surface of the seat, said brace arm being pivotally secured at its rear end to the seat and adapted to be moved to have its free end engage the main seat of the closet, when the latter is raised, to hold the same in its raised position.

1,170,670. ELECTROMAGNETIC RELAY. EUGENE A. REINKE, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 10, 1915. Serial No. 27,192. (Cl. 175—325.)



1. In a device of the class described, a magnetic core having pole pieces, one of said pole pieces extending parallel to said core and having its end formed into one-half of an overlapping rocking joint, an armature of shorter length than the length of the core, said armature having its one end formed into a coöperating half of an overlapping rocking joint and having its other end held adjacent said other pole piece and a winding upon said core.

2. In a device of the class described, a magnetic core having pole pieces, one of said pole pieces extending parallel to said core and having its end formed into one-

half of an overlapping rocking joint, an armature of shorter length than the length of the core, said armature having its one end formed into a coöperating half of an overlapping rocking joint and having its other end held adjacent said other pole piece and a clip for holding said halves of said overlapping joint in coöperating relation.

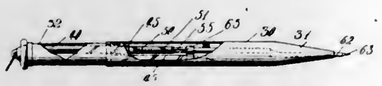
3. In combination, a magnetic core, an L-shaped pole piece having one arm secured to one end of said core, the other arm of said pole piece extending substantially parallel with said core and having on its end one part of a rocking joint, an armature having a corresponding part of a rocking joint engaging the part on said pole piece, said rocking parts overlapping to form a joint of low magnetic reluctance, a clip for holding said halves in coöperating relation, and a pole piece secured to the opposite end of said core, said pole piece having a flattened extremity adjacent the free end of said armature.

4. In combination, a magnetic core, an L-shaped pole piece having one arm secured to one end of said core, the other end of said pole piece extending substantially parallel with said core and having one part of an overlapping rocking joint upon the end thereof, an armature having a corresponding part of an overlapping rocking joint engaging the part on said pole piece, a clip for holding said halves in coöperating relation, said clip being secured to said pole piece, a pole piece secured to the opposite end of said core and having a flattened extremity adjacent the free end of said armature, and means for determining the air-gap between said armature and pole pieces.

5. In combination, a magnetic core having L-shaped pole pieces, one of said pole pieces having an arm secured to one end of said core, the other end of said pole piece extending substantially parallel with said core and having one part of an overlapping rocking joint thereupon, an armature having a corresponding part of said joint engaging the part on said pole piece, a clip for holding said halves in coöperating relation, said clip being secured to said pole piece, the other end of said armature extending adjacent the end of the other pole piece, a bridge of nonmagnetic material secured to said pole pieces, contact mechanism mounted on said bridge, said contact mechanism being adapted to be operated by said armature and a light rectangular frame pivoted on said armature and connected to said contact mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,170,671. POLYPOINTED PENCIL-CASE. GEORGE RESSLER, New York, N. Y. Filed July 25, 1914. Serial No. 853,150. (Cl. 120—14.)



1. A pencil case comprising a magazine, a sleeve movable therein, a cap rotatably engaging said sleeve, a plurality of marking point carriers operable in said sleeve, a propelling sleeve for each marking point carrier, and means combined with said cap engaging with any one of said propelling sleeves whereby any selected marking point carrier may be propelled outwardly upon the sliding movement of the propelling sleeve.

2. A pencil case comprising a magazine, a sleeve telescopically contained in said magazine, a revoluble cap engaging said sleeve, a plurality of marking point carriers each having an offset portion operable in said sleeve, means combined with said cap for propelling any of said point carriers, and means whereby said point carriers are caused to partially rotate during their longitudinal movement, thereby bringing the offset portion into a central position with respect to said magazine while being propelled therethrough.

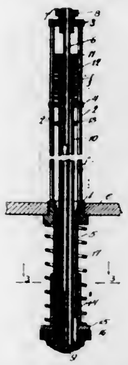
3. A pencil case comprising a magazine, a plurality of marking point carriers therein, a sleeve telescopically engaged in said magazine, a rotatable cap engaging said sleeve, means combined with said cap for ejecting and retracting any point carrier selected by rotation of the cap upon movement of the sleeve within the magazine, and means for causing the pencil points to be operatively exposed axially of said magazine.

4. In a pencil case, the combination with a magazine and a plurality of marking point carriers therein, each having a cylindrical portion and an offset portion formed with the cylindrical portion, means for selectively rotating any one of said carriers to move the offset portion to a position centrally of the magazine and to propel said carrier outwardly of the casing.

5. In a pencil case, the combination with a plurality of marking point carriers, each having a cylindrical portion and an offset portion formed therewith, of a pin set in the cylindrical portion, a sheath enveloping said cylindrical portion, said sheath having an open slot curved a portion of its length and straight the remainder, receptive of said pin, whereby said off-set portion is moved into and out of a central position relative to said sheath, means for ejecting and retracting any of said point carriers.

[Claims 6 to 8 not printed in the Gazette.]

1,170,672. BOTTLE-FILLING VALVE. ALBERT J. RICE and CHARLES S. ADAMS, Buffalo, N. Y. Filed Apr. 4, 1908. Serial No. 425,144. (Cl. 226—12.)



1. A valve for bottle-filling tanks comprising an unobstructed filling tube depending from the bottom of the tank, an open frame rising in the tank above the tube, a stem extending axially through the filling-tube and supported in a fixed position by the frame, a vent-tube movably supported in said frame and surrounding the stem, a lifting spring for said vent-tube, an enlargement on the lower end of the stem constituting a closure for the vent-tube, a closing sleeve, entirely outside of and telescoping on the filling-tube and spring-pressed downwardly to seat on the lower end of the vent-tube and to carry down the vent-tube into engagement with its closure, against the action of the lifting spring, and a stopper surrounding said sleeve and adapted to fit within the mouth of the bottle to be filled; substantially as described.

2. A valve for bottle-filling tanks comprising a filling-tube depending from the tank, an open frame rising in the tank above said tube, a stem containing an auxiliary vent passage extending axially through said filling tube and supported in a fixed position by said frame, a main vent-tube movably supported in said frame and surrounding the stem, an enlargement on the lower end of the stem constituting a closure for the main vent-tube, a closing sleeve telescoping on the filling tube and spring-pressed downwardly to seat on the lower end of the main vent-tube and to carry down said main vent-tube into engagement with its closure, and a stopper surrounding said sleeve and adapted to fit within the mouth of the bottle to be filled; substantially as described.

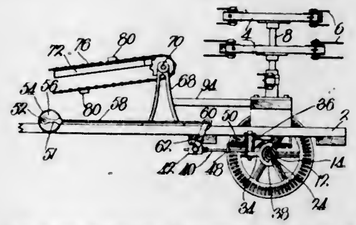
3. A valve for bottle-filling tanks comprising a filling-tube depending from the bottom of said tank, an open frame rising in the tank above said tube, a stem extending axially through said filling tube and supported in a fixed position by said frame, a vent-tube supported in said frame by a spring which tends to lift the vent-tube, a stop limiting the upward movement of the vent-tube, an enlargement on the lower end of the stem constituting a closure for the vent-tube, a closing sleeve telescoping on the filling-tube and spring-pressed downwardly to seat on the lower end of the vent-tube and to carry down said vent-tube into engagement with its closure against the action of the lifting spring, and a stopper surrounding said sleeve and adapted to fit within the mouth of the bottle to be filled; substantially as described.

4. A valve for bottle-filling tanks comprising a plug 1 screwed into the bottom of said tank, a filling-tube 5 depending from said plug, rods 2 rising from said plug and supporting a head 3, a stem 6 extending axially through the filling-tube and adjustably supported in fixed position in the head 3, a guide-frame 4, a vent-tube 10 supported from the guide-frame 4 by spring 12 which tends to lift the vent-tube, an enlargement 9 on the lower end of the stem 6 constituting a closure for the vent-tube, a closing sleeve 14 telescoping on the filling-tube 5 and spring-pressed downwardly to seat on the lower end of the vent-tube and to carry down said vent-tube into engagement with its closure, and a stopper 16 surrounding said sleeve and adapted to fit within the mouth of the bottle to be filled; substantially as described.

5. A valve for bottle-filling tanks comprising a filling-tube depending from the bottom of said tank, a vent-tube centered in the filling-tube, a lifting spring for said vent-tube, a closure at the lower end of the vent-tube, a closing sleeve telescoping on the filling-tube and spring-pressed downwardly to seat on the lower end of the vent-tube and to carry down said vent-tube into engagement with its closure against the action of the lifting spring, and a stopper surrounding said sleeve and adapted to fit within the mouth of the bottle to be filled, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

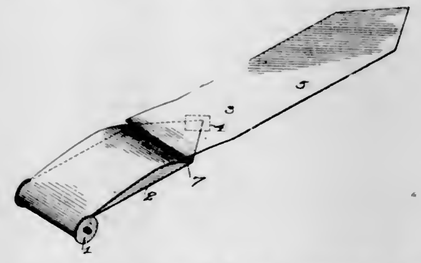
1,170,673. STRAW-SPREADER. LEWIS D. RICE, Kansas City, Mo. Filed Jan. 13, 1914. Serial No. 811,802. (Cl. 111—40.)



1. In a straw spreader, the combination of a vehicle, a frame carried thereby, a rotary shaft suitably journaled on and extending transversely of said frame, vertical spreader-fork-carrying shafts suitably journaled and geared to said transverse shaft, driven sprocket wheels journaled on the transverse shaft, clutch mechanisms for locking said sprocket wheels upon the shaft or releasing them from the latter, reversed bell cranks connected for effecting engagement or disengagement between said clutch mechanism, a rock lever pivoted to the said frame, rods pivotally connected to the bell-cranks and extending slidingly through opposite ends of said rock lever, abutments mounted upon said rods at opposite edges of the lever so that movement thereof in one direction shall rock the bell-cranks and disengage the clutch mechanisms, and in the reverse direction shall not affect either bell crank, and springs connecting said rods with the frame and tending to hold the clutch mechanisms in engagement with the adjacent sprocket wheels.

2. In a straw spreader, the combination of a vehicle, a frame carried thereby, a rotary shaft suitably journaled on and extending transversely of said frame, vertical spreader-fork-carrying shafts suitably journaled and geared to said transverse shaft, driven sprocket wheels journaled on the transverse shaft, clutch mechanisms for locking said sprocket wheels upon the shaft or releasing them from the latter, reversed bell cranks connected for effecting engagement or disengagement between said clutch mechanism, a rock lever pivoted to the said frame, rods pivotally connected to the bell-cranks and extending slidingly through opposite ends of said bell-cranks, abutments mounted upon said rods at opposite edges of the lever so that movement thereof in one direction shall rock the bell-cranks and disengage the clutch mechanisms, and in the reverse direction shall not affect either bell-crank, and springs connecting said rods with the frame and tending to hold the clutch mechanisms in engagement with the adjacent sprocket wheels, a lever operatively connected to said rock lever, a shaft suitably journaled, an eccentric thereon, and an eccentric strap and rod connecting the eccentric with the second lever.

1,170,674. FILM-CARTRIDGE. JOHN A. ROBERTSON, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 25, 1912. Serial No. 722,165. (Cl. 95—9.)



1. As an article of manufacture, an unexposed photographic film cartridge embodying a backing strip, and a film strip having one end attached thereto, the backing strip being provided, intermediate the ends of the film strip, with a relatively easily longitudinally expansible section.

2. As an article of manufacture, a photographic film cartridge embodying a backing strip and a film strip having one end attached thereto, the backing strip being provided with an extensible portion at a point intermediate the ends of the film strip formed by a doubled crease or fold made transversely of the backing strip.

3. As an article of manufacture, an unexposed photographic film cartridge embodying a backing strip and a film strip wound together to form a roll with the backing strip outside, the outer end of the film strip being attached to the backing strip and the latter being provided, intermediate the ends of the film strip and adjacent the outer attached end of the film strip, with a relatively easily longitudinally expansible section.

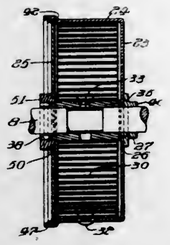
1,170,675. SPRING-BARREL FOR TALKING-MACHINE MOTORS. BELFORD G. ROYAL, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 16, 1914. Serial No. 824,918. (Cl. 185—45.)

1. A spring barrel for a talking machine motor or the like comprising a cup-shaped body portion, a circular head and a split ring, said ring being operative to maintain said head within said body portion.

2. A spring barrel for a talking machine motor or the like comprising a cup-shaped body portion having a shoulder formed upon its interior, a circular head adapted to rest against said shoulder, and a split ring operative to engage the interior of said body portion adjacent said head.

3. A spring barrel for a talking machine motor or the like comprising a cup-shaped body portion having a groove

formed upon its interior, a circular head adapted to fit within said body portion and a split ring operative to engage within said groove.

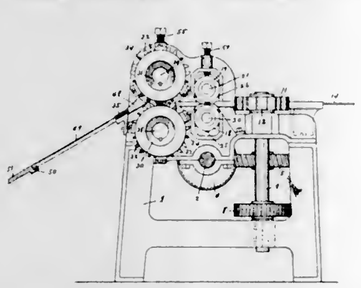


4. A spring barrel for a talking machine motor or the like comprising a cup-shaped body portion having an offset adjacent its open end, a shoulder upon the interior of said body, a circular head adapted to rest against said shoulder, and a split ring operative to engage within said body portion adjacent said head.

5. In a motor barrel for a talking machine motor or the like the combination with a cup-shaped body portion having a peripheral groove upon its interior adjacent its open end, and a shoulder formed upon the interior of said body portion, of a circular head adapted to rest against said shoulder and a spring ring adapted to engage said groove and operative to maintain said head against said shoulder.

[Claims 6 to 9 not printed in the Gazette.]

1,170,676. MACHINE FOR MAKING WIRE STAPLES. CLARENCE E. SAFFORD, Detroit, Mich. Filed Oct. 30, 1911. Serial No. 657,483. (Cl. 140—82.)



1. A staple machine comprising means for continuously feeding a strand, means traveling with said strand for forming lateral bends therein from which the staples are made, means for cutting said strand between said lateral bends, and means moving with the strand for forming the bent portions of the strand between said points of cutting into staples having angular legs.

2. A staple machine comprising means for feeding a strand into the machine, means for severing said strand into portions of predetermined lengths, and rotatable staple forming disks having coöperating jaws and shaping members adapted to form the severed portions of the strand into loops as said disks revolve.

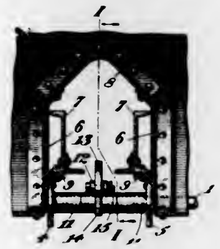
3. A staple machine comprising means for feeding a strand into the machine, means for severing said strand into portions of predetermined lengths, rotatable staple forming disks having coöperating jaws and shaping members adapted to form the severed portions of the strand into loops as said disks revolve, and means carried by said disks for discharging the formed staples from the staple forming members.

4. A staple machine comprising means for continuously feeding a strand, means moving with the strand for forming therein opposed lateral bends connected by transversely disposed portions and longitudinally extending portions, means traveling with the strand for cutting the transversely disposed portions of said strand between said bends, and means for engaging the straight longitudinal portions of the strand and forming them into staples the legs of which have angular terminals.

5. A staple machine comprising means for bending a strand laterally to form transversely disposed portions connected by straight longitudinal portions, rotatable cutting disks between which the bent strand passes, dies in said disks for partially severing said strand through the transverse portions thereof, staple forming disks having jaw members, and coöperating shaping members, said shaping members engaging the straight portions of the strand between said lateral bends and forcing them between the jaw members to form them into loops as said disks revolve.

[Claims 6 to 17 not printed in the Gazette.]

1,170,677. CAR-DOOR-OPERATING MECHANISM. RALPH V. SAGE, Westmont borough, Pa. Filed June 7, 1913. Serial No. 772,231. (Cl. 105—185.)



1. A bearing plate member for a car door operating shaft, comprising a perforated flat rolled plate with a flange bent at right angles along one of its edges, said bearing plate member being riveted to the hopper sheet of the car with its flange attached to a sill of the car and forming a rigid connection between the center sill and the hopper sheet.

2. A center bearing for a car door operating shaft, comprising a perforated flat rolled plate riveted to the outside of the inner hopper sheet, a flange bent at right angles along the upper edge thereof riveted to the bottom flange of the center sill and forming a rigid connection between the center sill and the hopper sheet.

3. A center bearing for a car door operating shaft, comprising a flat rolled plate riveted to the inside hopper sheet of the car, the downwardly extending portion of same being perforated to receive the operating shaft, and provided with a flange bent at right angles to the perforated portion and riveted to the center sill of the car and forming a rigid connection between the center sill and the hopper sheet.

4. A center bearing for a car door operating shaft comprising a flat rolled plate riveted to the inside hopper sheet of the car and extending downwardly therefrom beyond the edges of the hopper, a perforation in said downwardly extending portion adapted to receive the operating shaft, and a flange bent at right angles to the said downwardly extending portion and riveted to the center sill of the car, thereby rigidly connecting the hopper sheet with the center sill.

5. In a railway car, a plurality of rolled plate attached to the inside hopper sheets and extending downwardly therefrom on either side of the center sills, perforations therein forming center bearings for the car door operating shaft, each of said plates having a flange bent at right angles to the downwardly extending portion and attached thereby to the lower flanges of the center sills and forming a rigid connection between the inside hopper sheets and the center sills.

[Claim 6 not printed in the Gazette.]

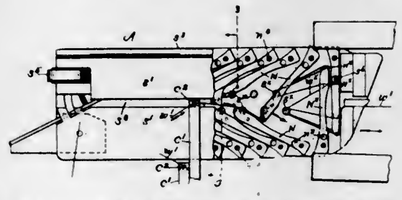
1,170,678. CAR-DOOR RIGGING. RALPH V. SAGE, Westmont borough, Pa. Filed June 7, 1913. Serial No. 772,232. (Cl. 105—185.)



1. In a railway car, a car door operating shaft, a crank arm mounted thereon, a longitudinal center sill composed of a pair of members each having a vertical web with outstanding flanges, a flanged reinforcing member secured to each of said webs near the bottom edge thereof, a short rolled angle section, one leg of which abuts and is secured to the lower portion of each flanged reinforcing member aforesaid, the other legs of said angles extending below the center sill, and each provided with a cylindrical opening therein, adapted to receive the crank arm, and thereby form a journal bearing for the car door operating shaft.

2. In a railway car, a door operating crank-arm, a longitudinal center sill composed of a pair of members spaced apart, each member having a web with outstanding flanges, a flanged reinforcing member secured to the inner side of each web near the bottom edge thereof and projecting inwardly toward the center of the center sill, short pieces of rolled angles abutting and attached to each of the bottom portions of said reinforcing members, with the downwardly extending portions of said rolled angles near each other, each of said rolled angles being provided with a cylindrical opening therein adapted to receive the crank-arm aforesaid and to form a journal bearing therefor.

1,170,679. TEXTILE-LOOM SHUTTLE OF THE NON-RECIPROCATING TYPE. LEVI E. SALISBURY, Providence, R. I. Original application filed Oct. 16, 1913, Serial No. 795,492. Divided and this application filed Apr. 30, 1915. Serial No. 24,912. (Cl. 139—27.)

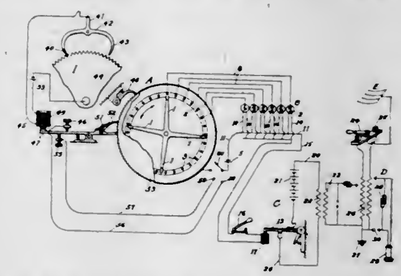


1. In a shuttle of the general character described, a flat, hollow frame or body having spaced apart connected upper and lower parallel plate members, a longitudinal row of uniformly spaced inner stud members arranged between the plates in a staggered or zigzag manner relatively to the median line of the shuttle, said stud members being rigidly secured to the lower plate and extending upwardly therefrom at right angles to it, and a series of swinging thin pin-carrying finger members inclosed in the shuttle and pivoted respectively in front and back edge rows of the frame, the fingers of one row alternating with the fingers of the other row, and having the outer or free end portions of the fingers adapted to swing freely across the upper ends of the corresponding studs, substantially as described.

2. In a shuttle of the type described, having a hollow frame or body provided interiorly with a row of fixed studs arranged in a staggered or zigzag manner with relation to the longitudinal center line of the shuttle, a row of yarn-infolding fingers N pivoted in one edge of the shuttle, a row of similar fingers pivoted in the opposite edge, the fingers of one row alternating with those of the other row, and having the arm portion of each of said fingers provided with one or more downwardly extending pins *n* arranged with respect to the said studs, for the purpose set forth.

3. In a shuttle of the character described, the combination of a hollow body or frame, a plurality of fingers adapted to infold a length of yarn, said fingers being pivoted longitudinally within the frame in laterally separated outer parallel rows, the fingers alternating with one another and provided respectively with a pair of depending pins movable therewith for looping the yarn, and relatively stationary upwardly extending studs having their centers arranged in a longitudinal direction in a zigzag manner with respect to the median line of the shuttle, whereby in charging the shuttle with yarn, the pins *n* of a finger are adapted to coöperate with certain of the fixed studs and infold a length of yarn exceeding the net length of the finger member a plural or multiple-fold.

1,170,680. SELECTIVE WIRELESS-TELEGRAPH APPARATUS. FREDERICK G. SARGENT, Westford, Mass. Filed Oct. 3, 1914. Serial No. 864,716. (Cl. 250—8.)



1. In an apparatus for selective signaling, the combination of two members, means for moving one of said members relatively to the other, a series of contacts adapted to be closed and opened in order during such motion, means independent of said members for announciating the relative position of said members as each contact is made and means for automatically sending a uniform radio signal at each announciation.

2. In an apparatus for selective signaling, the combination of two members, one having a series of spaces thereon with which the other member is adapted to register, means for moving one of said members relatively to the other, a series of contacts corresponding to said spaces adapted to be closed and opened in order during such motion, electrical means independent of said members for announciating the relative positions of said members and the space which is registered as each contact is made and means in series with all of said electrical means for sending a uniform signal by radio signaling means upon the making of each of said contacts.

3. In an apparatus for selective signaling, the combination with a dial and indicator rotatable relatively to each other and having a series of contacts adapted to be connected up in order during the rotation of the dial or indicator, a series of electric lamps, one connected with each of said contacts a character adjacent to each of said lamps and adapted to be illuminated thereby, and means in series with all of said lamps whereby a radio signal will be sent whenever any one of said contacts is closed and the lamp illuminated.

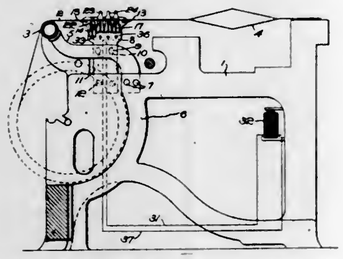
4. In an apparatus for selective signaling, the combination with two members rotatable relatively to each other and having a series of contacts adapted to be connected up in order during the rotation of the rotatable member, a branch circuit connected with each of said contacts, a source of electric power connected with all of said contacts, a series of electric lamps, one connected with each

of said branch circuits, means whereby said electric lamps can be illuminated as said branch circuits are closed by the rotation of the rotatable member, a character adjacent to each of said lamps and adapted to be illuminated thereby, and means operated by said source of power whereby a radio signal will be sent whenever any one of said branch circuits is closed and the lamp illuminated.

5. In an apparatus for selective signaling, the combination with two members relatively rotatable, a series of contacts associated therewith and adapted to be closed in order during the rotation thereof, a branch circuit connected with each of said contacts, each branch circuit being normally open at another point, a push-button for each of said branch circuits having an electric lamp thereon electrically connected with its branch circuit, and means onnected with each push-button for closing one of the branch circuits at said other point when the push-button is depressed.

[Claims 6 to 13 not printed in the Gazette.]

1,170,681. WARP STOP-MOTION FOR LOOMS. ALBERT H. SAWTELL, Winthrop, Mass. Filed Mar. 29, 1915. Serial No. 17,631. (Cl. 139—91.)



1. A warp stop motion for looms comprising in combination, means to support a set of warp ends, a set of forked drop devices supported thereon, a stop member whereon said set of drop devices is mounted, and a co-acting stop member consisting of a rod substantially circular in cross section and mounted below said drop devices, and spaced and distinct from said stop member, the lower ends of the drop devices being concaved to fit upon said co-acting stop rod when in indicating position.

2. A warp stop motion for looms comprising in combination, means to support a set of warp ends, a set of forked drop devices supported thereon, each drop device having a lateral shoulder or shoulders, stop devices above said lateral shoulders but below the warp ends, a stop member whereon said drop devices are mounted, and a co-acting stop member mounted below said drop devices and spaced and distinct from said stop member, the lower ends of the drop devices being recessed to fit upon said co-acting stop member when in indicating position.

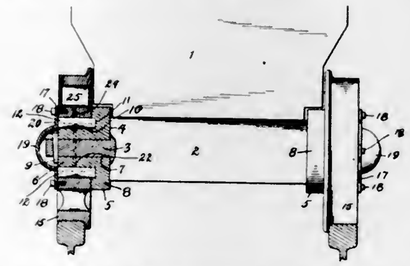
3. In a broad loom having a cross brace connected to the loom frame beneath and in proximity to stop devices, means to support a set of warp ends in non-leased condition, sets of short drop devices supported on said non-leased portions of said warp ends with their upper ends in substantially the same plane, a series of stop members whereon said drop devices are mounted in sets, and a series of co-acting stop members mounted below said drop devices but above said cross brace, and spaced and distinct from said series of stop members, the lower ends of said drop devices being shaped to fit upon said respective co-acting stop members when in indicating position, said parts being so relatively located that a drop in indicating position and in contact with the co-acting stop member is out of contact with said cross brace.

4. In a broad loom having a cross brace connected to the loom frame beneath and in proximity to stop devices, means to support a set of warp ends in non-leased condition, sets of short drop devices supported on said non-leased portions of said warp ends with their upper ends in substantially the same plane, a series of stop members whereon said drop devices are mounted in sets, and a series of co-acting stop rods mounted below said drop devices but above said cross brace, and spaced and distinct from said series of stop members, the lower ends of said drop devices being recessed to embrace said rods when in indicating position, said parts being so relatively located that a drop in indicating position and in contact with the respective rod is out of contact with said cross brace.

5. In a broad loom having a cross brace connected to the loom frame beneath and in proximity to stop devices, means to support a set of warp ends in non-leased condition, sets of short drop devices supported on said non-leased portions of said warp ends with their upper ends in substantially the same place, a series of electrical contact rods upon which said drop devices are supported, and a co-acting series of electrical contact rods mounted below said drop devices but above said cross brace, the lower ends of said drop devices being shaped to embrace said lower rods when in indicating position, said parts being so relatively located that a drop in indicating position and in contact with its said rod is out of contact with said cross brace.

[Claims 6 to 8 not printed in the Gazette.]

1,170,682. COAL-CAR WHEEL AND AXLE. JOSEPH SCHANMAN, Pittsburgh, Pa. Filed June 30, 1914. Serial No. 848,166. (Cl. 105—67.)

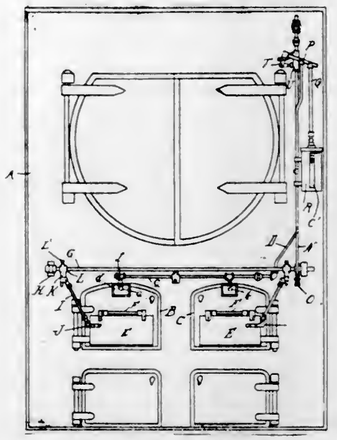


1. In a device of the character described, a car axle provided with a shoulder, a spindle portion on said axle, a collar on said spindle portion and abutting said shoulder, said collar being provided with grooves, rolling bearings in said grooves and projecting beyond the surface of the collar, a wheel journaled on said rollers, and a cap on said wheel retaining said rolling bearings in their respective grooves.

2. In a device of the character described, a car axle provided with a shoulder, a spindle portion on said axle, a collar on said spindle portion and abutting said shoulder, said collar having a disk-like extension, said collar being provided with bearing receiving grooves and said disk-like extension having recesses coincident with said grooves, cylindrical bearings in said grooves and recesses, said bearings extending beyond the outer face of the collar, a wheel journaled on said bearings, and a cap on said wheel engaging the outer ends of the bearings.

3. In a device of the character described, a car axle provided with a shoulder and a spindle, a tubular cylindrical member on said spindle and abutting said shoulder, a key between the said member and spindle, a disk-like extension on one end of said member, said member having longitudinal semi-circular grooves in its outer surface, said disk-like extension having holes of circular formation in one of its faces, said grooves and recesses being coincident, cylindrical bearings in said grooves and recesses and projecting beyond the outer surface of said member, a wheel journaled on said rollers, a cap on said wheel and engaging the outer ends of the rollers, a pin passed through the spindle and securing the cap in place, and a second cap carried by the wheel and inclosing the end of the spindle and preventing displacement of the sid pin, said member having an oil distributing groove and the wheel having an oil chamber and oil distributing port.

1,170,683. DRAFT-REGULATOR FOR FURNACES. GREGORY H. SCHARF, Ypsilanti, Mich., assignor to The Scharf Smoke Preventer Company, Ypsilanti, Mich. Filed Dec. 30, 1911. Serial No. 668,596. (Cl. 110—55.)



1. In a draft regulator for furnaces, the combination with a damper of a fuel door, a steam-supply pipe, a jet leading from the pipe within the furnace, a valve controlling the admission of steam to the jet, a rock shaft, a rock arm fixed to the shaft, a rigid rod having the opposite ends thereof pivotally connected respectively to the arm and the damper, whereby upon the opening of the fuel door the rod will be actuated by the chamber to rock said shaft, a second rock arm secured to the shaft, a rod having one end pivoted to the latter arm, a connection between the other end of the rod and the valve, and a timed retarding device for controlling the closing of the damper and the valve upon the closing of the fuel door.

2. In a furnace, the combination with a valve or damper of means for operating the same in one direction and a retarding device for controlling movement thereof in the opposite direction, comprising a cylinder, a piston therein, a passage communicating with the cylinder at the bottom thereof, a restricted port leading from the passage to the interior of the cylinder adjacent the top thereof, an opening above said port also forming a communication between the passage and the interior of the cylinder, and a normally closed valve controlling said port.

3. In a draft regulator for furnaces, the combination of a damper of a fuel door, a steam supply pipe, a jet leading from the pipe within the furnace, a valve controlling the admission of steam to the jet, positively connected levers of fixed length connecting the damper and the valve including a rockable member, a rigid rod of fixed length secured to said member and said damper, whereby upon the opening of the damper said member will be rocked, a rod attached to said rockable member and operatively secured to said valve, and a timed retarding device for controlling the closing of the damper and valve.

4. In a draft regulator for furnaces, the combination of a valve or damper, of means for operating the same in one direction and a retarding device for controlling movement thereof in the opposite direction, comprising a cylinder, a piston therein having an opening in its bottom, a valve controlling said opening, a spring normally closing said valve arranged within the piston, a spider carried by the piston for limiting the opening movement of the valve, and a restricted passage permitting the flow of fluid from the chamber on one side of the piston to the chamber on the opposite side when the piston is moved in one direction.

5. In a draft regulator, the combination with a valve or damper, of means for operating the same in one direction and a retarding device for controlling movement thereof in the opposite direction, comprising a cylinder, a piston therein, a restricted passage permitting the flow of fluid from the chamber on one side of the piston to the chamber on the opposite side when the piston is moved in one direction, an unrestricted port permitting passage of the fluid from one of said chambers to the other when the piston is moved in the opposite direction, and means for forming a substantially unrestricted conduit out of said restricted passage.

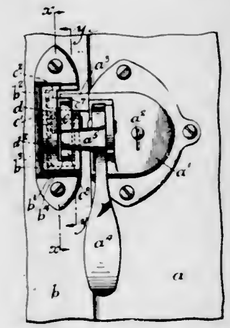
[Claims 6 and 7 not printed in the Gazette.]

1,170,684. VIOLIN-SUPPORTING ATTACHMENT FOR MUSIC-STANDS. CHARLES C. SCHLIECKERT, Chicago, Ill., assignor of one-half to Arthur Hirsch, Chicago, Ill. Filed Jan. 19, 1911. Serial No. 603,462. (Cl. 45—62.)



A violin supporting attachment for music stands comprising a body part having a passageway for receiving the stem of a music stand and having a set screw for entering said passageway and clamping said stem, a threaded stud extended laterally from said body, and a fork member comprising a shank part and prongs parallel therewith, said shank part being threaded to loosely receive said threaded stud whereby when the violin is applied to the prongs said shank part may freely rotate axially to allow the violin to readily swing by gravity to vertical position to thereafter readily swing when bumped or moved to thus prevent injury thereto.

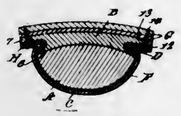
1,170,685. SAFETY LOCK-LATCH FOR REFRIGERATOR-DOORS. THOMAS O. SCHRADER, Allentown, Pa., assignor to The Dent Hardware Company, Fullerton, Pa., a Corporation of Pennsylvania. Filed July 1, 1915. Serial No. 37,412. (Cl. 70—49.)



1. In a device of the character described, a lock-casing having a tongue, an operating lever having a finger, a casing and a spring controlled device mounted in said casing and having a cam-surface for said tongue to engage, to hold the door latched and an opposite contact-surface adapted to permit of the turning of said device in one position of movement of said finger and to prevent movement of said device in the other position of movement of said finger.

2. In a device of the character described, a lock-casing having a tongue, an operating lever having a finger, a casing having an oblong opening in the top and a spring controlled device mounted in said casing and having a cam-surface for said tongue to engage to hold the door latched and an opposite divided contact surface adapted to permit of the turning of said device in one position of movement of said finger and to prevent movement of said device in the other position of movement of said finger.

1,170,686. METHOD OF MAKING STITCH-DOWN SHOES. WILLIS S. SHAFT, Faribault, Minn. Filed Apr. 21, 1914. Serial No. 833,507. (Cl. 12—142.)



1. That improvement in the manufacture of stitch-down shoes which comprises first channeling the sole at its marginal portion to provide an upper and a lower flap; then separating said flaps to open up said channel; then securing that portion of the lining, adjacent its lower marginal edge, within the said channel; then placing a toe cap about said lining; then turning that portion of the upper, adjacent its lower marginal edge, outwardly; and, then securing said outturned portion of said upper and said toe cap to said sole.

2. That improvement in the manufacture of stitch-down shoes which comprises first channeling the sole at its marginal portion to provide an upper and a lower flap; then slitting said lower flap from its marginal edge inwardly to form segments; then turning and securing said segments of said lower flap to open up said channel; then securing that portion of the lining, adjacent its lower marginal edge, within the said channel and releasing said segments; then turning that portion of the upper, adjacent its lower marginal edge, outwardly; and then securing said outturned portion of said upper to said sole.

3. That improvement in the manufacture of stitch-down shoes which comprises first channeling the sole at its marginal portion to provide an upper and a lower flap; then slitting said lower flap from its marginal edge inwardly to form segments; then turning and securing the said segments of said lower flap to open up said channel; then securing that portion of the lining, adjacent its lower marginal edge, within the said channel and releasing said segments; then placing a toe cap about the lining; then turning that portion of the upper, adjacent its lower marginal edge, outwardly; and, then securing said outturned portion of said upper and said toe cap to said sole.

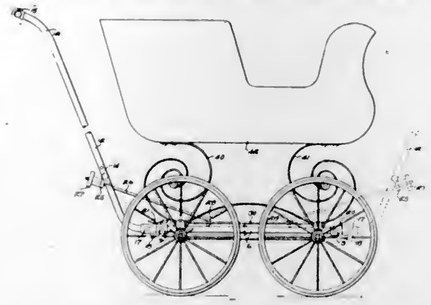
4. That improvement in the manufacture of stitch-down shoes which comprises first channeling the sole at its marginal portion to provide an upper and a lower flap; then slitting said lower flap from its marginal edge inwardly to form segments; then placing said sole upon a last with the said upper flap next adjacent thereto; then bending the segments of said lower flap upwardly and securing the same to open up said channel; then securing that portion of the lining, adjacent its lower marginal edge, within the said channel; then turning that portion of the upper, adjacent its lower marginal edge, outwardly; and, then securing said outturned portion of said upper to the said sole.

5. That improvement in the manufacture of stitch-down shoes which comprises first channeling the sole at its marginal portion to provide an upper and a lower flap; then separating said flaps to open up said channel; then placing the lining with its portion adjacent its lower marginal edge turned upon itself, within said channel; then drawing and securing a cord about the channel formed by said turning of the lining upon itself; then turning that portion of the upper, adjacent its lower marginal edge, outwardly; and, then securing said outturned portion of said upper to said sole.

[Claims 6 to 8 not printed in the Gazette.]

1,170,687. CHILD'S CARRIAGE. FRANK J. SHAW, Leominster, Mass., assignor to F. A. Whitney Carriage Co., Leominster, Mass., a Corporation of Massachusetts. Filed Sept. 14, 1911. Serial No. 649,331. (Cl. 21—12.)

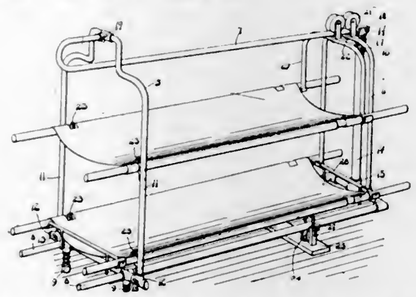
1. In a vehicle of the class described, the combination of a rectangular running gear frame comprising longitudinal side members; a casting having a substantially vertical bearing surface and a depending eye, secured to each end of each longitudinal side bar of the running gear frame; handle means comprising longitudinal bars; a casting at the lower end of each longitudinal handle bar, having a depending hook and a substantially vertical bearing surface, said hook and said bearing surface being arranged to engage respectively the eye and the bearing surface of one of the said castings upon a longitudinal side bar of the running gear frame; upwardly projecting coöperating toes upon the two mating castings of the handle bars and the longitudinal side bars; a cross bar connecting the longitudinal handle bars; a lug upon said cross bar; a tie rod passing through said lug and having a hooked end; a nut upon said tie rod and engaging said lug; and a centrally and longitudinally disposed strip upon the running gear frame having two seats to receive the hooked end of the tie rod according as the handles are positioned at one or the other end of the vehicle.



2. In a vehicle of the class described, the combination with a running gear frame of handle means therefor; separable elements 9 and 17 fast on said frame and handle means respectively, having interlocking elements and abutting faces, a tension member 26 for connection with said frame and handle means, and means 25 and 27 coöperating with said member for tensioning the latter and pressing said interlocking elements into secure non-rattling engagement.

3. In a vehicle of the class described, the combination of a running gear frame; handle attaching means at both ends of the running gear frame comprising hook receiving eyes and vertical bearing surfaces; handle means; hooks on the handle means to engage said eyes; bearing surfaces on said handle means for abutting engagement with the bearing surfaces of said handle attaching means; a tie rod connecting the handle means and running gear frame; and a thumb nut on said tie rod for holding the bearing surfaces of said handle attaching means and handle means in tight abutting engagement under tension.

1,170,688. AMBULANCE STRETCHER-SUPPORT. JESSE T. SHEETS, Covington, Ky. Filed Oct. 23, 1912. Serial No. 727,278. (Cl. 21—80.)



1. In combination with an ambulance, a stretcher support comprising, a frame located in the ambulance and movable from a horizontal to an inclined position, and a stretcher-engaging member mounted on and movable longitudinally along said frame.

2. In combination with an ambulance, a stretcher support comprising, a frame movably mounted within the ambulance, a way mounted on the frame and projecting at one end beyond its supporting members, a stretcher-engaging member mounted on the way and movable therealong to a position beyond the end members of the frame, means provided on the frame for supporting one end on the floor of the ambulance and means mounted on the floor of the ambulance for supporting the other end of the frame.

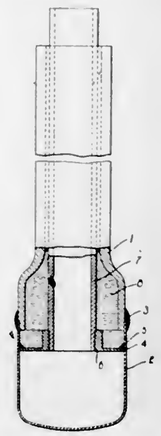
3. In combination with an ambulance, a stretcher support comprising, a frame mounted in the ambulance and movable, relatively thereto, to a horizontal or inclined position, a way mounted on the frame and projecting at one end beyond the end members of the frame, a stretcher-engaging member mounted on and movable along the way, rollers mounted on the floor of the ambulance for supporting one end of the frame and means formed on the other end of the frame for coöperating with said rollers to support the frame in a horizontal position.

4. In combination with an ambulance, a stretcher support comprising, a frame movably mounted within the ambulance, a way mounted on the frame and projecting beyond its support members at one end of the frame, a stretcher support member mounted on, movable along and capable of being turned to angular positions relatively to said way, means mounted on the floor of the ambulance for supporting one end of the frame and means secured to the frame for supporting the other end of the frame.

5. A stretcher support comprising, a frame, a way mounted on the frame and projecting at one end beyond the end members of the frame, a movable stretcher-engaging member mounted on and movable longitudinally along the way and means mounted on the frame for coöperating with said member in supporting a stretcher on the frame.

[Claims 6 to 12 not printed in the Gazette.]

1,170,689. RECTIFIER-ANODE. EDMUND F. SIPHER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 844,107. (Cl. 175—354.)



1. A hollow electrode for vacuum electric apparatus comprising a hollow stem having comparatively thick walls and a head attached thereto having comparatively thin walls.

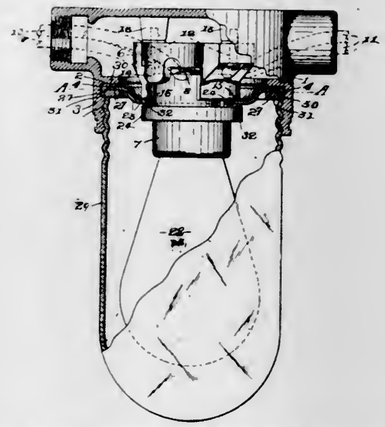
2. A hollow electrode for vacuum electric apparatus comprising a hollow stem having thick walls and a head having thin walls welded thereto.

3. A hollow electrode for vacuum electric apparatus comprising a hollow stem, a head united thereto, and a liquid seal covering the line of union.

4. A hollow electrode for vacuum electric apparatus comprising a hollow stem, a head united thereto, and a liquid seal within the anode and covering the line of union.

5. An anode for vacuum electric apparatus comprising a hollow stem, a hollow head united thereto, an internal flange on the head, a tube attached thereto and projecting outwardly through the stem, and a pool of sealing fluid in the annular space between said tube and the stem.

1,170,690. ELECTRIC-CONDUIT FITTING. FREDERICK F. SKEEL, Chicago, Ill., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 9, 1914. Serial No. 817,510. (Cl. 240—11.)



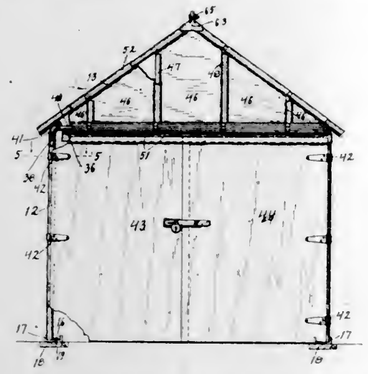
1. An electric conduit fitting comprising a box having an opening in one side, an internal annular seat concentric with said opening, an electrical appliance including a base and a cap, the base being mounted in the box and the cap extending beyond the annular seat and including a lamp socket, means for clamping the cap to the base, a cover plate for the opening, the plate having a central opening for the appliance and having its inner margin clamped between the base and cap of said appliance, and its outer margin opposed to said seat, and a globe secured to the box and having its edge opposed to the outer margin of the plate and serving to press the same toward said seat, substantially as and for the purpose described.

2. An electric conduit fitting comprising a box having an opening in one side, an internal annular seat concentric with said opening, an electrical appliance including a base and a cap, the base being mounted in the box and the cap extending beyond the annular seat and including a lamp socket, means for clamping the cap to the base, a cover plate for the opening, the plate having a central opening for the appliance and having its inner margin clamped between the base and cap of said appliance, and its outer margin opposed to said seat, a globe secured to the box and having its edge opposed to the outer margin of the plate and serving to press the same toward said seat, and resilient rings interposed between the outer margin of the plate and the seat and the edge of the globe, substantially as and for the purpose specified.

3. An electric conduit fitting comprising a box having an opening in one side thereof, an internally threaded cylindrical flange projecting from the open side and an internal annular seat at the base of the flange, an electrical appliance including a base and a cap, the base being fixed in the box and the cap being mounted on the base and extending into said flange, the base and cap being spaced from the inner edge of the seat and from the threaded flange, and the cap having a lamp socket, means for clamping the cap to the base, a cover plate for the open side of the box, the plate having a central opening for the appliance and having its inner margin clamped between the

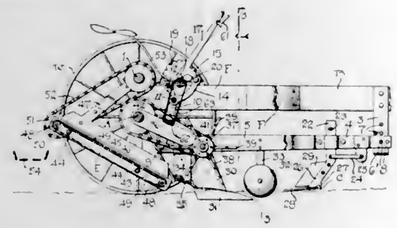
base and the cap of said appliance, and its outer margin opposed to said seat, and a globe threading in the flange toward the outer margin of the cover plate and serving to clamp the plate toward the seat, substantially as and for the purpose set forth.

1,170,691. PORTABLE BUILDING CONSTRUCTION. WALTER SKIPWORTH, Racine, Wis., assignor of one-half to Charles R. Wells, Racine, Wis. Filed May 4, 1914. Serial No. 836,095. (Cl. 189—2.)



In a portable building having a rear wall and side walls, downwardly inclined frame members mounted on the upper edges of said walls and across the front side of the building, a plurality of vertical interlocked plates at the front and rear sides of the building forming gables, each of said plates having at its lower edge a downwardly inclined extension provided with an underturned flange at its extreme edge forming a groove for the reception of the free edge of its downwardly inclined frame member and adapted for fixed engagement with said member, and a locking means along its top edge, a plurality of interlocked roofing plates secured to said frame members on the side walls of the building and also being provided with underturned flanges at their extreme edges forming grooves for the free edges of their supporting frames, the end roofing plates being interlocked with the locking means on the top edge of said gable plates, and means for securing the top edges of said roofing plates together.

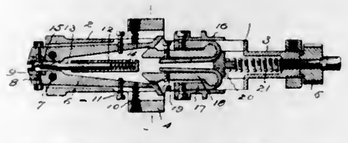
1,170,692. HARVESTER. ASA SMITH and CHARLES F. CARR, Antwerp, Ohio. Filed Mar. 8, 1915. Serial No. 12,882. (Cl. 55—9.)



1. A device of the character described comprising a main frame, a supplemental frame pivotally supported thereby and movable in a vertical plane, a crank shaft rotatably supported by the main frame and disposed above the supplemental frame, a link connection between the supplemental frame and the crank shaft, means for axially rotating the crank shaft whereby the supplemental frame may be vertically adjustable, lifting means carried by the supplemental frame, a second suplemental frame terminating above the lifting means, a rotatable member carried by the last named frame, means for rotating said member, and a flexible connection between said last named supplemental frame and the main frame for limiting the downward movement of the last named supplemental frame.

2. A device of the character described comprising a main frame, a supplemental frame pivotally supported thereby and movable in a vertical plane, a crank shaft rotatably supported by the main frame and disposed above the supplemental frame, a link connection between the supplemental frame and the crank shaft, means for axially rotating the crank shaft, whereby the supplemental frame may be vertically adjustable, lifting means carried by the supplemental frame, a second supplemental frame terminating above the lifting means, a rotatable member carried by the last named frame, means for rotating said member, and a flexible connection between said last named supplemental frame and the main frame for limiting the downward movement of the last named supplemental frame, said flexible connection being so positioned as to be engaged by the crank shaft upon upward movement of the crank shaft whereby both of said supplemental frames may be moved upwardly in unison.

1,170,693. BLANK-HOLDING SPINDLE FOR WOOD-SCREW MACHINES. HENRY L. SMITH, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 17, 1915. Serial No. 51,173. (Cl. 29—129.)



1. A rotatory spindle having levers with blank holding jaws, a sleeve movable back and forth on the spindle, socketed springs attached to the sleeve, and wedges seated in said socketed springs and adapted to engage the levers for opening and closing the jaws.

2. A rotatory spindle having levers with blank holding jaws, independent wedges adapted to engage the levers and close the jaws, spring arms supporting and carrying the wedges, means carried by the wedges for adjusting the tension of the springs upon the wedges, and means for reciprocating the springs and wedges.

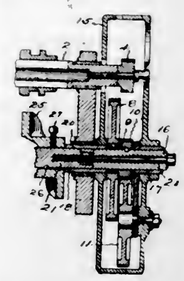
3. A rotatory spindle having levers with blank holding jaws, wedges adapted to engage the levers and close the jaws, springs supporting and carrying the wedges, and means for reciprocating the springs and carrying the wedges into and out of engagement with said levers.

4. A rotatory spindle having levers with blank holding jaws, a reciprocating sleeve, springs attached to and movable with the sleeve, and wedges mounted on and carried back and forth by said springs out of and into engagement with said levers.

5. A rotatory spindle having levers with blank holding jaws, springs thrusting against the levers for opening the jaws, independent wedges adapted to engage the levers and close the jaws, springs supporting and carrying the wedges, a reciprocatory sleeve carrying the springs, means carried by the wedges for adjusting the tension of the springs upon the wedges, and means for thrusting the springs and wedges and sleeve forward.

1,170,694. LEAD MECHANISM FOR WOOD-SCREW MACHINES. HENRY L. SMITH, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Sept. 17, 1915. Serial No. 51,174. (Cl. 10—101.)

1. In a wood-screw machine the combination of a sectional lead cam shaft, one section of said shaft being movable longitudinally with relation to the other section, means detachably connecting the shaft sections, a lead cam removably mounted on the longitudinally movable section of the shaft, and a driving gear mounted on the other section of the shaft.



2. In a wood-screw machine the combination, of a sectional lead cam shaft, one section being permanently mounted in the machine, and the other section being removably mounted in the machine, a driving gear mounted on the former section and a lead cam mounted on the latter section.

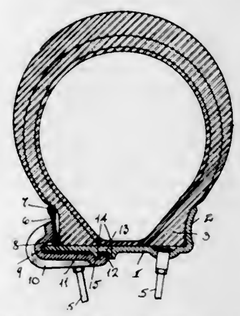
3. The combination in a wood-screw machine, of a sectional shaft, one section being movable longitudinally with relation to the other section, means detachably interlocking the adjacent ends of the shaft sections, means for normally holding the adjacent ends of the sections of the shaft interlocked, a driving gear mounted on one section of the shaft, and a lead cam removably mounted on the other section of the shaft.

4. The combination in a wood-screw machine, of a train of intermeshing operating gears, a longitudinally separable shaft with one section permanently connected with and rotated by said gears, and a lead cam removably mounted on and rotating with the other section of said shaft.

5. The combination in a wood-screw machine, of a sectional shaft, one section being permanently mounted in the machine and the other section being removably mounted in the machine, an interlocking tongue and mortise on the adjacent ends of the shaft sections, a screw for holding the tongue and mortise in engagement, a driving gear mounted on one shaft section and a lead cam mounted on the other shaft section.

[Claim 6 not printed in the Gazette.]

1,170,695. LOCKING MECHANISM FOR VEHICLE-TIRES. HAROLD A. SOULIS, New York, N. Y., assignor of one-half to Wilbur T. Soulis, New York, N. Y. Filed Nov. 13, 1914. Serial No. 871,870. (Cl. 152—21.)



1. In a vehicle wheel, the combination with a tire retaining felly-band and a retaining flange on one side thereof, of a continuous, relatively flexible ring adapted to be positioned upon the other side of said felly-band and constituting the other retaining flange thereon, and coöperative locking means mounted on said band and said ring and adapted, in one position of the latter, to interlock, thereby maintaining a tire upon said felly-band.

2. In a vehicle wheel, the combination with a tire retaining felly-band and a retaining flange on one side thereof, of a continuous, relatively flexible ring adapted to be positioned upon the other side of said felly-band and constituting the other retaining flange thereon, and coöperative locking means permanently mounted, partly on said ring and partly on said flange and adapted, in one position of said ring, to interlock, thereby maintaining a tire upon said felly-band.

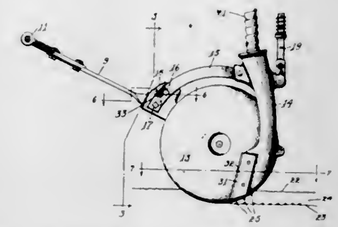
3. In a vehicle wheel, the combination with a tire receiving felly band and a retaining flange on one side thereof, of a continuous relatively flexible ring adapted to be positioned upon the other side of said felly band, a rib formed on the under side of said relatively flexible ring adapted to be positioned upon the other side of said felly band, said band having recesses formed on its under side, and lugs attached to said ring and adapted, in one position of the same, to engage in such recesses in said felly band.

4. In a vehicle wheel, the combination with a tire receiving felly band and a retaining flange on one side thereof, of a continuous annular, relatively flat, and resilient ring normally having its longest transverse dimension at an angle to the plane of the edge of said ring, said ring being adapted to be positioned on the other side of said felly band, said band having recesses formed in its under side, and lugs attached to said ring and adapted, in the tire engaging position of said ring, to enter such recesses.

5. In a vehicle wheel, the combination with a tire receiving felly band and a retaining flange on one side thereof, of a continuous annular, relatively flat, and resilient ring normally having its longest transverse dimension at an angle to the plane of the edge of said ring, said ring being adapted to be positioned on the other side of said felly band, said band having recesses formed in its under side, and a plurality of lugs integrally attached to the outside of said ring and having fingers extending under said felly band and adapted to enter such recesses when said ring is in its tire engaging position.

[Claims 6 to 13 not printed in the Gazette.]

1,170,696. DISK DRILL. WALTER C. SQUIER, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Mar. 22, 1915. Serial No. 16,145. (Cl. 111—11.)



1. In a disk drill, the combination of a drag bar, a concavo-convex furrow opening disk rotatably mounted on said bar, so as to be disposed at an angle to the line of draft of the machine, an arm projecting rearwardly from said drag bar above the disk, a downwardly tapered boot rigidly mounted on the rear end of said arm, said boot being curved to conform to the convexity of said disk and curved forwardly at its lower end so as to be disposed in front of the rear edge of said disk and entirely within the furrow produced by the disk, a scraper rigidly attached to the toe of said boot and projecting upwardly and rearwardly in front of the boot, and means for adjusting said arm laterally about its point of connection with said drag bar as a center to thereby adjust the boot and the scraper carried thereby bodily relatively to the disk to bring the scraper into proper scraping relation with the disk.

2. In a disk drill, the combination of a drag bar, a concavo-convex furrow opening disk carried thereby, an arm mounted on said drag bar and projecting rearwardly

therefrom, a downwardly tapered boot curved forwardly at its lower end and also laterally to conform to the convex face of the disk rigidly mounted on said arm, a rigid scraper rigidly mounted on the toe of said boot and having a sharpened scraping edge extending upwardly and rearwardly from the lower end thereof at the front of the boot, and means forming the connection between said drag bar and said arm for adjusting the position of the scraper with respect to the disk by bodily adjusting the arm and the boot carried thereby.

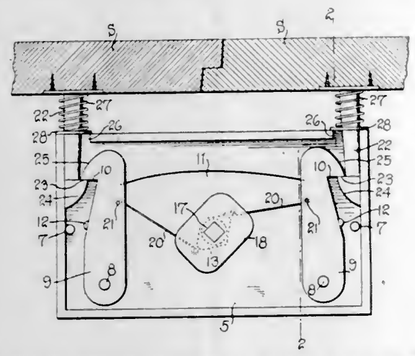
3. In a disk drill, the combination of a concavo-convex furrow opening disk disposed at an angle to the line of draft of the machine, a boot positioned adjacent to the convex face of the disk forwardly of the rear edge of said disk, a scraper rigidly mounted on the toe of said boot, with its scraping edge extending upwardly and rearwardly from the lower end thereof in front of the boot and means for adjusting said boot laterally above a point located forwardly of the center of the disk to adjust said scraper toward and from the disk.

4. In a disk drill, the combination of a concavo-convex furrow opening disk disposed at an angle to the line of draft of the machine, a boot extending downwardly adjacent to and following the curvature of said disk on the convex side thereof, the lower portion of the boot from a point above the horizontal center of the disk being disposed entirely within the periphery of the disk, the bore of said boot adjacent its lower end being provided with a deflector extending inwardly from the rear wall to deflect the falling seeds forwardly, a rigid scraper rigidly mounted on the toe of said boot and so constructed that the scraping edge extends upwardly and rearwardly in front of the boot, and means for adjusting the boot to vary the position of the scraper.

5. In a disk drill, the combination of a drag bar, a furrow opening disk rotatably mounted on said bar so as to be disposed at an angle to the line of draft of the machine, an arm projecting rearwardly from said drag bar above the disk, a downwardly tapered boot rigidly mounted on the rear end of said arm, a scraper rigidly attached to the toe of said boot, and means in front of the center of the disk for adjusting said arm laterally about its point of attachment to said drag bar to thereby adjust the boot and the scraper carried thereby, bodily relatively to the disk to bring the scraper into proper scraping relation with the disk.

[Claim 6 not printed in the Gazette.]

1,170,697. SHUTTER-FASTENER. WILFORD E. STALLINGS, Beaver Creek, Md. Filed July 21, 1915. Serial No. 41,159. (Cl. 16—127.)



A shutter fastener including a lock case, a pair of pivotally mounted locking pawls mounted in said case, dogs fixed to the shutters adapted to extend into said case when the shutters are closed, a spring arranged between the pawls and acting to project the same into locking engagement with the dogs, a rotatable spindle mounted in the lock case, link connections between said spindle and the pawls to move the same out of engagement with the dogs and close the shutters, and springs arranged upon said dogs and placed under compression when the respective shutters are moved to closed position and acting by their expansive force, when the shutters are released, to forcibly move the shutters to their open positions.

1,170,698. AGRICULTURAL IMPLEMENT. CHARLES S. STEIN, Hillsboro, Iowa. Filed Oct. 12, 1915. Serial No. 55,460. (Cl. 97—41.)



An agricultural implement comprising a body portion having a plurality of transverse openings, a handle carried by the body portion and a plurality of pairs of tines extending downwardly through one row of openings and upwardly through the other row of openings and having their end portions extended beyond the body and bent to form curved fingers.

1,170,699. PROCESS FOR APPLYING A LAYER OF ADHESIVE MATERIAL TO FABRICS. FERNAND STOFFEL, Paris, France, assignor to Wesley IJ. Edwards, Case Edwards, and James E. Rierdan, New York, N. Y. Filed Jan. 21, 1914. Serial No. 813,455. (Cl. 91—68.)

1. A process of treating fabric with adhesive material, comprising projecting particles of the adhesive onto the fabric by means of a jet of compressed gas, the adhesive being introduced into the jet of compressed gas at or near the point of issuance of the jet, the particles of adhesive taking part in the expansion of the gas, and being so coagulated by the cold due to the expansion of the gas, and dried to such an extent, and the adhesive being in such a previous pasty condition, that the particles adhere to the fabric without perceptibly moistening the latter.

2. A process of treating fabric with adhesive material, comprising projecting particles of the adhesive onto the fabric by means of a jet of compressed air, the adhesive being introduced into the jet of compressed air at or near the point of issuance of the jet, the particles of adhesive taking part in the expansion of the air, and being so coagulated by the cold due to the expansion of the air, and dried to such an extent, and the adhesive being in such a previous pasty condition, that the particles adhere to the fabric without perceptibly moistening the latter.

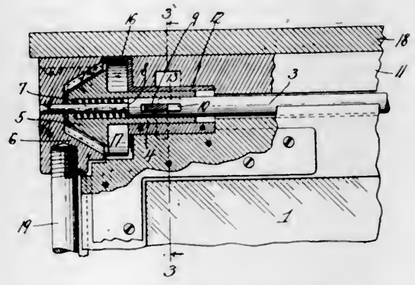
3. A process of treating fabric with adhesive material, comprising projecting particles of the adhesive onto the fabric by means of a jet of compressed gas, the adhesive being introduced into a part of the jet in which the gas is under a substantial degree of compression, the particles of adhesive taking part in the expansion of the gas, and being so coagulated by the cold due to the expansion of the gas, and dried to such an extent, and the adhesive being in such a previous pasty condition, that the particles adhere to the fabric without perceptibly moistening the latter.

4. A process of treating fabric for the purpose of applying upon one face, the back, thereof, a discontinuous and granular layer of adhesive material, comprising projecting an adhesive upon the fabric by a jet of compressed air, the adhesive taking part in the expansion of the air, and the degree of expansion and the viscosity of the adhesive being such that the drying, and coagulation, due to the cold produced by the expansion of the air, of the particles of the adhesive causes the particles to adhere to the fabric without perceptibly moistening or stiffening the latter.

5. The method of applying adhesives to fabric comprising projecting the adhesive onto the fabric in the form of fine particles.

[Claim 6 not printed in the Gazette.]

1,170,700. WIND-SHIELD. PORTER EDWARDS STONE, Chicago, Ill. Filed Dec. 16, 1910. Serial No. 597,629. (Cl. 21—148.)



1. An article of manufacture comprising a frame, a rod connected with said frame, a sleeve slidably mounted upon said rod, a toothed wheel at the end of said sleeve and larger in diameter than the sleeve, a fixed toothed part in proximity to said toothed wheel and adapted to engage said wheel and prevent its rotation, and a controlling device for moving said toothed wheel so as to permit the frame to be moved to various positions.

2. An article of manufacture comprising a frame, a rod connected with said frame, a support with which said rod is connected, a tooth part on said support, a tooth wheel slidably mounted on said rod and engaging said tooth part, a projecting sleeve connected with said wheel and smaller in diameter than the wheel, a hollow inclosing piece connected with said frame and into which said wheel is received when moved to its disengaging position, a projecting bracket connected with said hollow inclosing piece and in which said sleeve is slidably mounted, and means for moving said sleeve in said bracket and longitudinally along said rod.

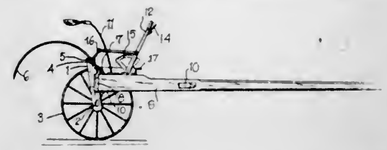
3. An article of manufacture comprising a frame movably mounted in position, a toothed wheel connected with said frame so as to be free to move in the direction of its axis, a rod extending through said wheel, a sleeve connected with said wheel, a bracket through which said rod passes, said sleeve projecting into said bracket, a fixed toothed part adapted to engage said toothed wheel, said bracket sleeve and rod provided with longitudinal openings extending therethrough, said openings registering, and a controlling device extending through said openings for moving said toothed wheel in the direction of its axis to disengage it from the fixed part.

4. An article of manufacture comprising a frame mounted so that it can be moved to various positions, a rod connected with said frame, a sleeve slidably mounted on said rod, a toothed wheel connected with said sleeve, a fixed part having teeth which engage the teeth of said toothed wheel to hold the frame in any desired position, a controlling part for said toothed wheel extending through said sleeve and said rod, and a bracket surrounding said sleeve and fixed to said frame.

5. An article of manufacture comprising a frame for vehicles movably mounted in position and provided with a toothed wheel, a rod extending through said toothed wheel, a fixed part having teeth engaging the teeth of the toothed wheel to hold the shield in position, said toothed wheel mounted upon said rod so that it may be moved in the direction of its axis to disengage its teeth from those of the fixed part, a bracket connected with said frame and provided with an inclosing part into which said toothed wheel is moved when moved to its unlocked position, said rod projecting from both sides of said bracket.

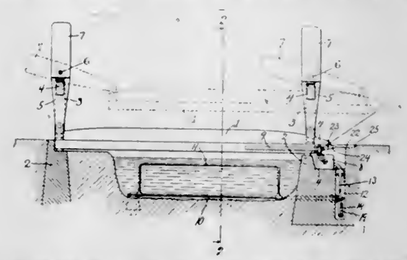
[Claim 6 not printed in the Gazette.]

1,170,701. RAKE. JOHN H. STOUT, North Yakima, Wash. Filed Sept. 14, 1914. Serial No. 861,680. (Cl. 56—67.)



A device of the character described comprising two substantially vertically disposed beams, a tie beam connecting the same, a rake frame pivotally supported between the vertical beams and provided with prongs, a yoke depending from the tie beam, a draft pole having one extremity disposed through the yoke, a substantially U-shape member secured to the tie beam at opposite sides of the draft pole and overlying said draft pole and in contact therewith, brace beams connecting the draft pole and the vertical beams, a seat structure carried by the draft pole in advance of the yoke, a lever pivotally supported by the draft pole, coacting locking means for the lever carried by the lever and the draft pole, a rock arm carried by the rake frame, and an operative connection between the rock arm and the lever.

1,170,702. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,690. (Cl. 14—42.)



1. A swinging lift bridge comprising a bridge span, a supporting device therefor at each side of the channel, a connection between the supporting device and the bridge span pivoted both to the supports and the bridge span.

2. A swinging lift bridge comprising a bridge span pivotally supported on opposite sides of the channel upon swinging arms at the ends thereof, and means for rotating said arms about a fixed point so as to lift the span.

3. A swinging lift bridge comprising a bridge span, stationary supporting devices at each end thereof, arms connected by pins with said supporting devices and pivotally connected with said span, and counterweight material applied to said arms, the pivots being located above the span between the counterweight material and the span.

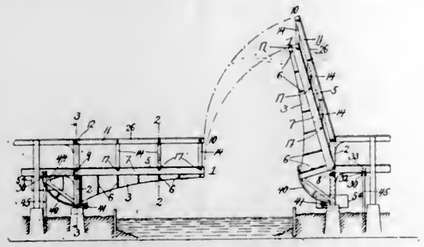
4. A swinging lift bridge comprising a bridge span, supports at each side of the channel therefor, connections from the bridge to said supports, said connections pivotally connected with the supports and the bridge span, and means for moving the bridge span with relation to said pivotal connections.

5. A bridge, comprising a longitudinally and vertically movable span adapted to be opened and closed by simul-

taneous longitudinal and vertical movement, operating mechanism for said span located beyond the boundaries of the water-way for vessels, and connected with said span so as to move it longitudinally and vertically, and means located in the water-way for automatically actuating said operating mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,170,703. DOUBLE-DECK BASCULE-BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Mar. 18, 1908. Serial No. 421,930. (Cl. 14—38.)



1. A bascule bridge comprising a main leaf and a secondary leaf in different horizontal planes, a support for said leaves to which they are pivotally connected at different points so as to rotate about different centers, whereby said leaves move relatively when the bridge is opened.

2. A bascule bridge comprising a main leaf and a secondary leaf, both pivoted to a stationary support, and pivoted posts connecting the two leaves together near the outer ends said posts pivoted to both leaves.

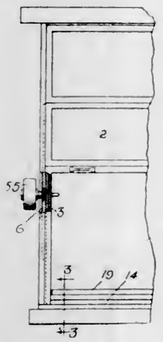
3. A bascule bridge comprising a main leaf and a secondary leaf both pivoted to a single support, the pivots thereof being in the same vertical plane and means for moving the two leaves simultaneously.

4. A bascule bridge comprising a main leaf and a secondary leaf in different horizontal planes, and pivotally connected to a fixed support, movable connections between the leaves and a counterweight applied to the lower leaf back of the pivotal point thereof to balance the weight of both leaves as they are moved about their pivotal points.

5. A bascule bridge comprising a main leaf and a secondary leaf mounted upon pivots and connected together, and a counterweight connected with one leaf back of the pivotal point thereof arranged to counterbalance the weight of both leaves as they are moved about their pivotal points.

[Claims 6 to 14 not printed in the Gazette.]

1,170,704. WINDOW. JOSEPH B. STRAUSS, Chicago, Ill. Filed Feb. 23, 1909. Serial No. 479,615. (Cl. 189—72.)

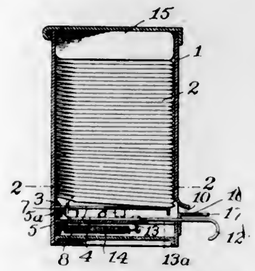


1. A window comprising two elements adapted to be moved to open and close the window, a unitary combined rack and frame for each of said elements, a rack piece parallel to said frame piece, an intermediate piece at an angle to the frame piece and rack piece and integral with both of said pieces and a pinion adapted to engage said rack piece.

2. A window sash comprising a metal sash frame, a projecting part at right angles thereto and integral therewith, a lateral projecting rack part connected with said projecting part and provided with rack teeth, said lateral projecting rack part being in a plane different from the sash frame but parallel thereto.

3. A window comprising a metal sash frame made up of a thin sheet of metal bent so as to form three sections, one section acting as the glass support, another section parallel thereto acting as a rack and an intermediate section connecting the other two sections.

1,170,705. DISPENSING-CABINET FOR COLLAPSIBLE DRINKING-CUPS OR THE LIKE. WILLARD E. SWIFT, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Nov. 9, 1912. Serial No. 730,487. (Cl. 211—8.)

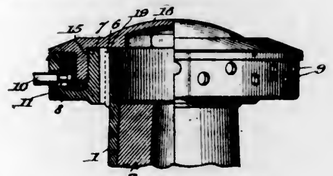


1. In a dispensing cabinet for drinking cups, an ejecting mechanism for moving each cup in the plane of its flat or extended position, comprising a slide, movable in the direction of the median line of the cup, and cup engaging means, pivoted to said slide about an axis parallel to said median line, and having projections on each side of said median line adapted to contact with said cup.

2. In a dispensing cabinet for drinking cups, an ejecting mechanism for moving each cup in the plane of its flat or extended position, comprising a member adapted to be reciprocated in a direction corresponding to the median line of a cup, said member being pivoted about an axis parallel to said median line, and having cup engaging means disposed on each side of said median line.

3. In a dispensing cabinet for drinking cups, a slide, and a T-shaped member pivoted to rock transversely to the direction of movement of said slide, the horizontal arms of said T-shaped member having prongs to engage an edge of the cup at each side of its center, to project the cup from the cabinet.

1,170,706. CONSTRUCTION OF WHEELS. CHARLES G TATE, Chicago, Ill., assignor, by mesne assignments, to Edwin A. Benson, Chicago, Ill. Filed Aug. 4, 1913. Serial No. 782,846. (Cl. 21—69.)



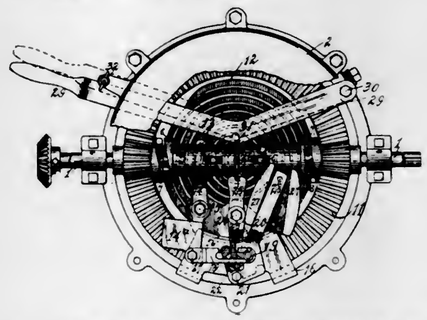
1. In a wheel, a rim, a hub comprising a tubular member having an apertured flange, a tubular member supported on one end of the hub, the second mentioned tubular member having apertures, spokes, each of said spokes having one of its ends secured to the rim, the opposite ends of the spokes extending through the respective apertures of the tubular members, and having circumferential grooves providing shoulders, slotted rings engaging the shoulders of the spokes, and means for holding the slotted rings in position.

2. In a wheel, a rim, a hub, a tubular member supported on the hub and having an apertured flange, spokes, each of said spokes having a shoulder adjacent one end thereof, said spokes extending through the apertures of the flange of the tubular member, a slotted ring adapted to engage the shoulders of the spokes, a nut positioned on one end of the hub, said nut adapted to engage the ring for securing the spokes to the hub.

3. In a wheel, a rim, a hub, a tubular member having an apertured flange supported on one end of the hub, spokes of a less diameter than the area of the apertures, said spokes extending through the apertures, each of said spokes having a head, slotted means coöperating with the heads of the spokes for holding the spokes in position, and a nut for holding said slotted means in position.

4. In a wheel, a rim, a hub, a tubular member having an apertured flange, spokes extending through the apertures, means engaging one end of each of the spokes for holding the spokes in position, a nut operating on the tubular member, said nut adapted to move the tubular member longitudinally of the hub, whereby the spokes are tensioned.

1,170,707. GEAR. JAMES H. TAYLOR, Sr., and JULIUS B. TAYLOR, Toledo, Ohio. Filed Oct. 6, 1915. Serial No. 54,325. (Cl. 74—50.)



1. A gear of the described character, comprising a driving shaft, a sleeve revoluble with and longitudinally movable upon the shaft, a pinion at each end of the sleeve and loose upon the shaft, clutch-members for engaging the sleeve with the pinions, a gear-wheel engaged at opposite sides with the pinions and having a spirally grooved side, a weighted lever, connections between the lever and said spiral groove and connections intermediate the lever and the sleeve.

2. A gear of the described character comprising a driving shaft, a sleeve revoluble with and slidable upon the shaft, pinions loose upon the shaft, a gear-wheel in mesh at its opposite sides with the pinions and having a spiral groove, and means controlled by the spiral groove for reciprocating the sleeve upon the shaft to engage the sleeve with either of said pinions.

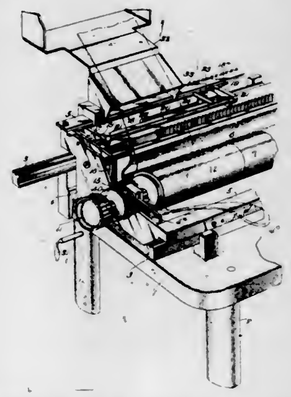
3. In a gear of the described character, a gear-wheel having in its side a spiral groove, a shaft having rotation constant in one direction, pinions loose upon the shaft and in mesh with the gear-wheel at its opposite sides, clutches adapted to operatively engage either of said pinions with said shaft, and means controlled by the spiral groove for alternately actuating said clutches.

4. In a gear of the described character, a shaft, a sleeve revoluble with and slidable upon the shaft, a pinion loose upon the shaft near each end of the sleeve, clutches for engaging the sleeve with either of said pinions, a gear-wheel engaged with both said pinions and having in its side a spiral groove, a lever having one end engaged with the groove, another lever having one end engaged with said sleeve, and operable connections intermediate said two levers.

5. In a gear of the described character, a shaft, a sleeve revoluble with and slidable upon the shaft, a pinion loose upon the shaft near each end of the sleeve, clutches for engaging the sleeve with either of said pinions, a gear-wheel engaged with both said pinions and having in its side a spiral groove, a lever having one end engaged with the groove, another lever having one end engaged with said sleeve, a third lever fulcrumed at its lower end and having a weight at its upper end, the second and third levers mentioned being operatively connected near their lower ends, and a link which connects the lever first mentioned with the third mentioned lever.

[Claims 6 to 8 not printed in the Gazette.]

1,170,708. PLATEN FOR WRITING-MACHINES. OTTO THIEME, St. Louis, Mo., assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 28, 1911. Serial No. 668,255. (Cl. 197—129.)



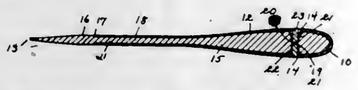
1. In a machine of the character described, the combination of a laterally-movable carriage, a manually operable platen, a second platen on said carriage and operble independently of the first mentioned platen, line-spacing mechanism for said second platen, said line spacing mechanism including a bar extending parallel to said platen, said bar being provided with a pointed advancing end, and means capable of operating the line-spacing mechanism for said second platen when said laterally-movable carriage is within a predetermined zone of its travel.

2. In a machine of the character described in combination, a machine frame, a laterally-movable carriage, a manually operable platen, a second platen mounted within said carriage, mechanical means for rotating said second platen, said mechanical means being mounted upon the movable carriage, said mechanical means comprising a substantially rectangular frame mounted upon said movable carriage and having one member comprising a bar whose advancing end is tapered, and the driving member mounted upon the machine frame and capable of operating said mechanical means when the laterally-movable carriage is within a predetermined zone of its travel.

3. In a machine of the class described in combination, a rotatable platen being wholly under manual control to rotate same, a secondary platen, manual means for turning said secondary platen, a transversely movable carriage for supporting said platens, a rod extending parallel to the movement of said carriage, an oscillating frame carrying said rod, a line-space device for said secondary platen operatively connected with said rod, and driving means

capable of coöperation with said rod when the carriage is in a predetermined zone of its travel to operate said rod thereby actuating said line-space devices.

1,170,709. SCREW-DRIVER AND SIMILAR TOOL. WILLIAM S. THOMSON, Plantsville, Conn., assignor to The H. D. Smith & Company, Plantsville, Conn., a Corporation. Filed Mar. 24, 1915. Serial No. 16,747. (Cl. 145—61.)



A screw-driver comprising a metal element consisting of a handle portion, a shank portion, a shank extension, and a bit portion, a layer of insulating material extending continuously over the said handle portion and shank portion and secured thereto by vulcanizing, the said shank portion being reduced relatively to the said shank extension, and the periphery of the said insulating layer on the shank portion being flush with the periphery of the said shank extension.

1,170,710. BROOM. BERNARD C. TORELLE, Indianapolis, Ind. Filed Sept. 7, 1915. Serial No. 49,241. (Cl. 15—20.)



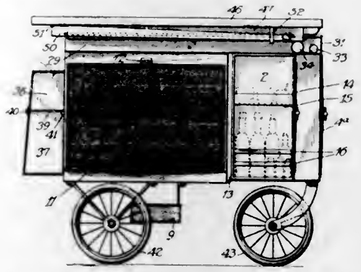
1. A broom comprising a pair of clamping members each embodying a smooth tapered socket member, a mass of wisps held between said members, hollow rivets extending through said members and wisps for securely binding the same, a tapered ferrule surrounding said socket members, and a tapered sharp pointed handle secured in said socket members.

2. A broom comprising a pair of clamping members each embodying a smooth tapered socket member, the ends of each of said clamping members being cut at an angle and extending beyond each other in clamping position, a mass of stitched wisps held between said members, hollow rivets extending through said members and wisps for securely binding the same, a tapered ferrule surrounding said socket members, a pointed handle secured in said socket members, and a binding and protecting guard supported by said socket members and covering the stitched portion of said wisps.

1,170,711. SERVING-WAGON. AUGUST C. TROMBLEY, Chicago, Ill. Filed Oct. 16, 1914. Serial No. 866,923. (Cl. 21—65.)

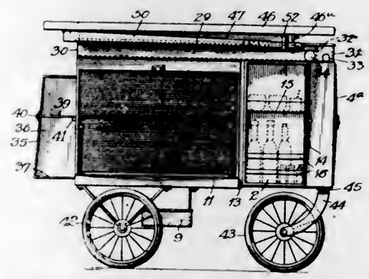
1. A serving wagon comprising a casing which is mounted on wheels and divided into storage compartments for the transportation of food and table accessories and which has a relatively shallow open compartment at its top for dishes and articles requisite for the serving of a meal, said storage compartments opening at the side of the wagon, and a combined closure for the top compartment and table slidably mounted on said casing and adapted to be extended beyond the end of the casing.

2. A serving wagon comprising a casing mounted on wheels and divided into storage compartments for the transportation of food and table accessories and having an open compartment at its top, and a combined structure forming a closure for the latter compartment and a table, said structure being in two sections, the lower one of which has sliding engagement with the casing and the upper one of which slides on the lower one to form an extension table.



3. A serving wagon comprising a casing mounted on wheels and divided into storage compartments for the transportation of food and table accessories and having an open compartment at its top, and a combined structure forming a closure for the latter compartment and a table, said structure being in two sections, the lower one of which has sliding engagement with the casing and the upper one of which slides on the lower one to form an extension table, and said sections having separate legs at their meeting ends.

1,170,712. SERVING-WAGON. AUGUST C. TROMBLEY, Chicago, Ill. Filed Jan. 22, 1915. Serial No. 3,754. (Cl. 21—65.)



1. A serving wagon comprising a casing having an open compartment at its top and mounted on wheels, and a combined top and table forming a closure for said compartment and slidably mounted on said casing and having a leg to support one end of the table and to act as a brake for the wagon.

2. A serving wagon comprising a casing having an open compartment at its top and mounted on wheels, and a combined top and table forming a closure for said compartment and slidably mounted on said casing and having a leg to support one end thereof when in position as a table, said leg being foldable thereon when in position as a top.

3. A serving wagon comprising a casing having an open compartment at its top and mounted on wheels, and a combined top and table forming a closure for said compartment and slidably mounted on said casing and having at its outer corners foldable legs to support such end of the table and to act as a brake for the wagon.

4. A serving wagon comprising a casing having an open compartment at its top and mounted on wheels, and a combined top and table forming a closure for said compartment and slidably mounted on said casing and having at its outer corners legs pivotally mounted on the underside thereof and foldable to a position along opposite sides of the casing.

5. A serving wagon comprising a casing mounted on wheels and a combined top and table mounted to slide on the casing, a corner of the table at one end thereof being pivotally mounted upon the casing and adapted to swing at an angle thereto, and legs hinged to the other end of the table to support it when extended and arranged to be folded when the table is not in use along opposite sides of the casing.

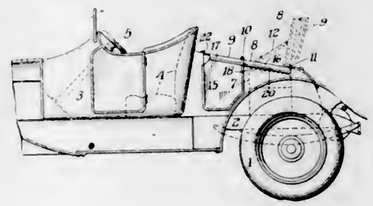
[Claims 6 and 7 not printed in the Gazette.]

1,170,713. HAME. WALTER A. WAGNER, Sheboygan, Wis. Filed Apr. 8, 1914. Serial No. 830,436. (Cl. 54—29.)



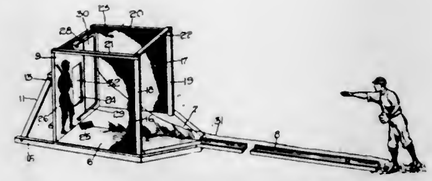
An attachment for hames comprising a plate having its end portions reduced to provide upper and lower extensions, each of the extensions being provided with a fastener receiving opening, the body portion of the plate between the extensions being provided with diagonally extending slots having their end portions positioned in overlapping relation.

1,170,714. CONVERTIBLE VEHICLE-BODY. WILLIAM B. WEST, Philadelphia, Pa. Filed Jan. 22, 1915. Serial No. 3,681. (Cl. 21—43.)



A vehicle body having an opening in the top of its rear portion, a seat situated in the rear part of said opening, openings in the sides of the said body in front of said seat, horizontally swinging doors for closing said openings, flexibly connected parts for opening and closing the opening in the top of the automobile body, one of the said parts having hinged connection with the rear edge of the opening in the top of said body, and constituting the back of the seat when in open position, means for holding the said part in open position, and the opposite ends of the part constituting the back when in raised position contacting with the opposite side edges of the opening in the top of the body when in closed position and the opposite ends of the other member when in closed position engaging the upper edges of the doors for closing the side opening.

1,170,715. AUTOMATIC UMPIRE. HARVEY E. WESTGATE, Los Angeles, Cal. Filed Mar. 9, 1915. Serial No. 13,285. (Cl. 46—59.)



1. In an automatic umpire, the combination of a platform, a home-plate on said platform and located near the middle of its farther end, means for returning a ball to the pitcher, said means comprising lateral walls on said platform, a floor converging to the median line on said platform, and a run-way leading to the pitcher, a vertical wall extending from the rear edge of said platform, said wall having an opening above and behind said home-plate, and of a size corresponding to the "batting zone," a pair of figures representing batters on opposite sides of said opening, a panel pivotally mounted on said wall and adapted to cover one of said figures, means operable by the pitcher for operating said panel, and means covering said opening and pivoted to the outer face of said vertical wall, indicating a "strike" when the plate is struck by a ball, substantially as described.

2. In an automatic umpire, the combination of a platform, a home-plate on said platform near the middle of its farther end, means for returning a ball to the pitcher, a vertical wall extending from the rear edge of said platform, said wall having an opening above and behind said home-plate and of a size corresponding to the "batting zone," a pair of figures representing batters on opposite sides of said opening, a panel pivotally mounted on said wall and adapted to cover one of said figures, means operable by the pitcher for operating said panel, and a plate covering said opening, said plate being pivoted on the rear face of said wall, and adapted to indicate a "strike," when the plate is struck by a ball, substantially as described.

3. In an automatic umpire, the combination of a platform, a home-plate on said platform and located near its farther end, means for returning a ball to the pitcher, a vertical wall extending from the rear edge of said platform, said wall having an opening above and behind said home-plate and of a size corresponding to the "batting zone," a pair of figures representing batters on opposite sides of said opening, a panel pivotally mounted on said wall and adapted to cover one of said figures, panel operating means capable of being operated by the pitcher, and means indicating a "strike" when a ball is delivered in said "batting zone," substantially as described.

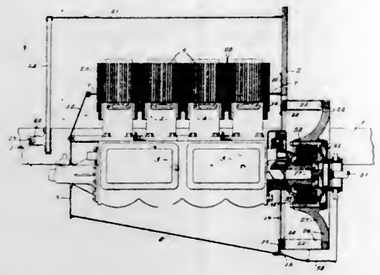
4. In an automatic umpire, the combination of a platform, a home-plate on said platform and located near its farther end, means for returning a ball to the pitcher, a substantially vertical wall extending from the rear edge of said platform, said wall having an opening above and behind said home-plate and of a size corresponding to the "batting zone," a pair of figures representing batters on opposite sides of said opening, a movable panel adapted to cover one of said figures, means for moving said panel operable by the pitcher, and means covering said opening and indicating a "strike" when a ball is delivered through the "batting zone," substantially as described.

5. In an automatic umpire, the combination of a platform, a home-plate on said platform and located near its farther end, means for returning a ball to the pitcher, a substantially vertical wall extending from the rear edge of said platform, said wall having an opening above and behind said home-plate and of a size corresponding to the "batting zone," a means for rendering the area of the opening indistinguishable from the pitching point, a figure

representing a batter on one side of said opening, and means for indicating a "strike" when a ball is delivered in said "batting zone," substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,170,716. AIR-COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. JOHN WILKINSON, Syracuse, N. Y., assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 27, 1910. Serial No. 599,245. (Cl. 123—171.)



1. The combination with an engine having a plurality of upright cylinders arranged tandem, and provided with heat radiating ribs, an inclosing casing comprising a shoe surrounding the lower portion of the engine, and having a closed front end, and an exit opening in its rear end, a hood having a closed rear end and an opening in its front end, and a partition dividing the casing into upper and lower compartments and having vertical passage-ways therein individual to the cylinders through which the cylinders extend, and an exhaust fan arranged adjacent the opening in said shoe.

2. The combination with an engine having a plurality of air cooled cylinders arranged tandem, of an inclosing casing for the engine having inlet and exhaust openings therein, a transversely arranged partition wall dividing the casing into upper and lower compartments, said inlet opening communicating directly with one of the compartments, and the exhaust opening with the other compartment, a shell individual to each cylinder supported by the partition and extending on opposite sides thereof and providing a passage way between the said compartments, each shell being arranged concentric with the cylinder with which it is associated, and an exhaust fan arranged adjacent the exit opening in the casing.

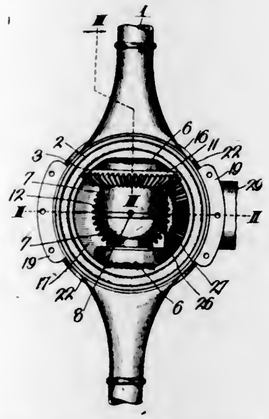
3. The combination with an engine provided with a plurality of cylinders each equipped with peripheral ribs, or fins, of a casing, a transversely disposed partition dividing the casing into upper and lower compartments, said casing having an inlet opening communicating directly with the upper compartment, and an exhaust opening communicating directly with the lower compartment, a shell associated with each cylinder, said shells being supported by the partition and opening at their upper ends into the upper compartment of the casing and at the lower ends within the lower compartment thereof, and an exhaust fan arranged in close juxtaposition to said exit opening.

4. The combination with an engine provided with a plurality of cylinders each equipped with peripheral ribs, or fins, of a casing, a transversely disposed partition dividing the casing into upper and lower compartments, said casing having an inlet opening communicating directly with the upper compartment and an exhaust opening communicating directly with the lower compartment, a shell associated with each cylinder, said shells being supported by the partition and opening at their upper ends into the upper compartment of the casing and at the lower ends within the lower compartment thereof, and an exhaust fan having an axial intake and a peripheral discharge, said fan being located with its intake arranged concentric with said exit opening and in close juxtaposition thereto.

5. The combination with the side sills of an automobile chassis, and an engine having its base supported by the said sills and having a plurality of upright cylinders arranged tandem and equipped with heat conducting ribs, of a casing inclosing the cylinders comprising, a boot having a front wall, a rearwardly flaring body portion with its side edges attached to the sills, and a rear wall provided with an opening, a partition having side portions resting on the sills, a front wall attached to the front wall of the boot, and a depending rear wall provided with an opening coöperating with the opening in the rear wall of the boot for providing an exit opening for the casing, and a hood pivôtally supported at its front end from the sills, and having its side edge supported by the sills, said hood having an inlet opening therein, a shell disposed concentrically of each cylinder, said shells being carried by and extending through said partition, and having their opposite ends open, and an exhaust fan arranged in close juxtaposition to said exit opening.

[Claims 6 to 8 not printed in the Gazette.]

1,170,717. COMBINED FIFTH-WHEEL AND AXLE DRIVE. NEZZA N. WILLIAMS, Kansas City, Mo. Filed Nov. 14, 1914. Serial No. 872,102. (Cl. 21—90.)

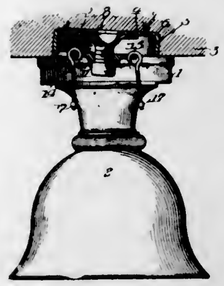


1. A combined fifth wheel and axle drive, comprising a stationary vertical tubular housing provided with horizontal slots in its lateral faces, an axle comprising a horizontal ring journaled in the housing and provided at diametrically-opposite points with inwardly-projecting tubular alined portions, and tubular portions extending outwardly through the opposite slots of the housing, a sectional shaft extending through the axle and journaled within the housing in said inwardly-projecting portions of the ring, a differential gearing connection for the shaft sections, including a pair of differential housing members between said inwardly-projecting portions of the ring, and means for rotating the differential housing.

2. A combined fifth wheel and axle drive, comprising a stationary vertical tubular housing, consisting of a vertical tubular member having a bearing, an upwardly-facing internal ball race, an internal downwardly-facing ball race, and horizontal slots in its lateral faces, in combination with an axle, comprising a horizontal ring fitting snugly in the housing and provided with oppositely-facing ball races, inwardly-projecting tubular portions and tubular portions projecting outwardly through the said slots, two series of balls in the ball races of the ring and housing to facilitate turning of the former, a sectional shaft extending through the axle and journaled within the housing, in said inwardly-projecting portions of the ring, a differential gearing connection for the shaft sections, including a pair of differential housing members between said inwardly-projecting portions of the ring, a gear wheel on one of said differential housing members, a vertical shaft journaled in said bearing, a gear wheel on the upper end of said shaft, meshing with the first-named gear wheel, a gear wheel on the lower end of said shaft, a drive shaft extending into and journaled on the stationary housing, and a gear wheel on said shaft, meshing with the gear wheel on the lower end of the said vertical shaft.

3. In a combined fifth wheel and axle drive, a stationary vertical tubular housing, consisting of a tubular member having a bottom, a central bearing above the bottom, and an upwardly-facing internal ball race above the bearing, and a cap member secured upon the upper end of the first-named member and provided with an internal downwardly-facing ball race above the first-named ball race, the meeting edges of the said members having registering notches conjointly forming horizontal slots in the lateral faces of the housing.

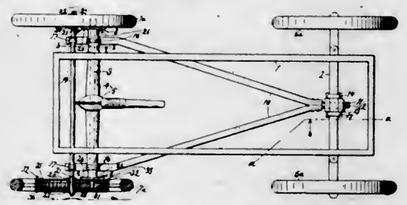
1,170,718. CEILING-LIGHT HANGER. JAMES WILLIAMSON, Chicago, Ill., assignor to R. Williamson & Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1915. Serial No. 45,231. (Cl. 240—85.)



1. The combination with a junction box and a lighting fixture, of rods hooked at their upper ends and having said ends detachably engaged with the junction box, and having their lower ends threaded and extended through the wall of said fixture, and nut devices on the projected threaded ends of said rods.

2. The combination with a junction box and a lighting fixture, said junction box having its floor provided with a downwardly extending threaded stud, a washer detachably mounted upon said stud and provided with side apertures, rods having their upper ends hooked and engaged in said apertures, and having their lower ends extended downwardly through the walls of said fixture, and threaded beads on the exposed threaded ends of said rods.

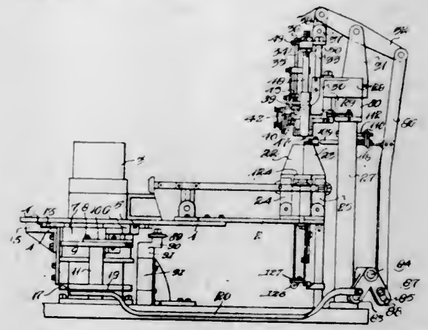
1,170,719. AUTOMOBILE ATTACHMENT. CAESAR L. WILSON, Dassel, Minn. Filed Nov. 20, 1914. Serial No. 873,149. (Cl. 21—114.)



1. In an autovehicle, the combination with the ordinary frame, axles, and ground wheels, of larger ground wheels adapted to be substituted for the regular ground wheels, a secondary rear axle for the larger hind wheels, means holding said axle detachably to the main frame work, a gear in the hub of said larger hind wheel, a pinion meshing with said gear, and means for securing it on the end of the regular rear axle.

2. In an auto-vehicle the combination with the ordinary frame, axles, and ground wheels and wheel hub brakes, of larger ground wheels adapted to be substituted for the regular ground wheels, a secondary rear axle for the larger hind wheels, means holding said rear axle detachably to the main frame work, a gear in the hub of said larger hind wheel and a pinion meshing with said gear, and means for securing it on the end of the regular rear axle, a brake band in the hub of the larger hind wheel and arranged to be expanded into frictional contact with the hub by the same means which operated a brake band in the hubs of the small wheels.

1,170,720. CHARGING AND DELIVERING MECHANISM FOR CONE-BAKING MACHINES. SAMUEL E. WINDER, Chicago, Ill., assignor to Appleton P. Williams, West Upton, Mass. Filed Oct. 27, 1914. Serial No. 868,849. (Cl. 107—58.)



1. A charging apparatus comprising a carrier, a plunger fixed to said carrier, an operating actuator connected to the said carrier and operable to move the same and the plunger back and forth, a pump casing having a chamber into which said plunger extends, and having an outlet directed in the same direction as the movement of the carrier, connecting means between said casing and carrier having a lost motion by which the casing is moved positively by the carrier in one direction and the plunger is thereafter enabled to move relatively to the casing, and a fixed abutment for limiting the movement of the pump casing in the opposite direction at a point short of the limit to which the carrier and plunger are moved by said actuating means.

2. A charging device comprising a pump casing, a plunger working in said casing, a carrier to which said plunger is attached, actuating means connected to said carrier for applying force thereto and thereby moving the plunger and the pump casing, a fixed stop for arresting the pump casing during the movement of the plunger in one direction, and lost motion connecting means between the carrier and casing for moving the casing in the opposite direction.

3. A charging device comprising in combination, a guide, a guideway for constraining said guide to move in a definite path, a pump plunger rigidly connected to said guide, a pump casing into which said plunger extends, said casing being movable with the plunger, actuating mechanism connected with the plunger for applying force thereto, whereby said plunger is moved back and forth, a fixed stop, and abutments carried by the pump casing for confining the movement thereof within limits less than the limits of movement of the plunger, whereby the plunger in its movement in one direction is caused first to advance the pump casing, and is then moved relatively to the casing to discharge material therefrom.

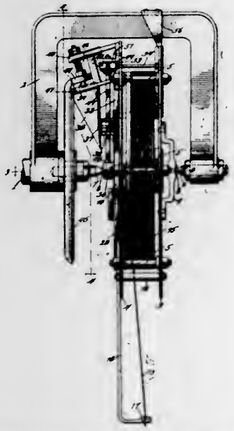
4. The combination with a mold having an inlet, of an apparatus for charging such mold, comprising a pump casing having an outlet in line with the inlet to the mold and being movable toward and away from the latter, a plunger operating in said pump casing in the line of movement thereof, means for applying force to said plunger to reciprocate the same, the pump casing being movable with the plunger toward the mold inlet, and

means for arresting the pump casing when its outlet is substantially in registry with such inlet, the plunger being adapted to continue in motion after the arrest of the casing, whereby to expel material from the casing into the mold.

5. The combination with a mold having an inlet, of a charging device comprising a chamber having an outlet movably mounted to bring such outlet into substantial registry with the mold inlet, and away from the same, a plunger operating in said chamber in the line of movement thereof, actuating means for applying force to said plunger to reciprocate the same, said chamber being adapted to move with said plunger, and a stop for arresting the chamber when the outlet thereof is contiguous to the mold inlet, the plunger being adapted to continue in motion whereby to discharge the contents of the chamber into the mold.

[Claims 6 to 26 not printed in the Gazette.]

1,170,721. AREA-METER. JOHN AIREY, Ann Arbor, Mich. Filed Feb. 26, 1915. Serial No. 10,685. (Cl. 33—121.)



1. An area measuring instrument having a register, an angularly movable element, an element movable radially with reference to said angularly movable element and means whereby said elements coöperate to operate said register, said radially movable element being also angularly movable and by its change in direction changing the angular position of said angularly movable element.

2. An area measuring instrument having a pivotally supported element, a radially movable element movable approximately toward and from the same, and a register operated jointly by said pivotally supported and radially movable elements, said radially movable element being also angularly movable and in its angular movement moving said pivotally supported element about its pivot.

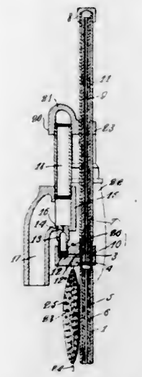
3. In an area meter, a stationary support, a radially movable member movable toward and from the same, an angularly movable member upon said support, and a register operated jointly by said radially movable and angularly movable members, said radially movable member being also angularly movable and engaging said angularly movable member to move it angularly, when said radially movable element moves angularly.

4. In a device for measuring areas, a register, a flexible longitudinally movable element and an angularly movable element, all connected together for operating said register, said longitudinally movable element being also angularly movable and engaging said angularly movable element to move it angularly when said longitudinally movable element is moved angularly.

5. An instrument for measuring areas having a register, a longitudinally movable element movable longitudinally toward and from the register and also movable angularly, and a rotatable element rotated by the angular movement of said longitudinally movable element, said rotatable and longitudinally movable element coöperating with each other and with the register.

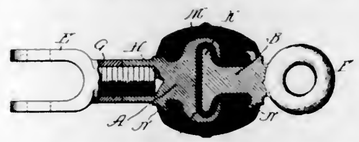
[Claims 6 to 35 not printed in the Gazette.]

1,170,722. HYDROCARBON-LAMP. HENRY C. ALBRECHT, Terre Haute, Ind. Filed Aug. 12, 1915. Serial No. 45,190. (Cl. 67—50.)



A hydrocarbon lamp comprising a horizontal coupling having an upstanding nozzle, a lower pipe attached to said coupling, an upstanding tube attached to said pipe, a second upstanding pipe attached to the coupling, the tube extending into the second pipe, said coupling having a duct establishing communication between the respective end of the second pipe and the nozzle, an air chamber engaged to said nozzle, an upstanding mixing tube attached to said chamber to receive the jet from the nozzle, and a burner head attached to said mixing tube and engaged to said second pipe, said head being adapted to support a mantle at one side of said second pipe.

1,170,723. STRAIN-INSULATOR. CLETUS N. ALLERDING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Mar. 2, 1914. Serial No. 821,872. (Cl. 173—366.)

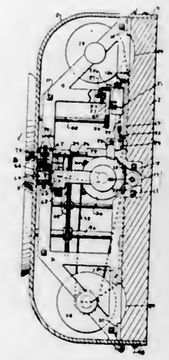


1. A strain insulator comprising conducting members one formed with a projecting head, a shank and a flange at a distance from the head, and the other having sides bendable only over the head, and sheet insulating material interposed between the members and pressed into the cup when the bendable edges are bent over the head, the insulating material extending beyond the bent edges along the shank adjacent the said flange.

2. A strain insulator comprising a headed member with an extending shank and a flange bendable toward the head at a distance therefrom, a cup-shaped member having edges bendable over the head only, and sheet insulating material interposed between the two members before the edges are bent over the head and extending along the shank to a point below the inwardly bent flange.

3. A strain insulator comprising a member with an enlarged head, an extending shank and inwardly extending flange at a distance from the head, a cup member with edges bendable over the head and an inwardly bendable flange at a distance from the cup, sheet insulating material insertible between the members and extending from the bent edges of the cup member along the shank of the other member adjacent the bendable flange, and other insulating material molded over the joint and over the sheet insulating material and additionally held to the members by means of an inwardly bent flange at a distance from the joint between the said members.

1,170,724. SPEED-RECORDING INSTRUMENT. ALBERT A. AUSTIN, Dallas, Tex., assignor of one-fourth to M. W. Hulsey and one-fourth to W. O. Hulsey, Dallas, Tex. Filed Feb. 14, 1914. Serial No. 818,724. (Cl. 234—29.)



1. In a speed recording instrument, the combination with a record sheet, of means for actuating the same, a marking device bearing upon the record sheet, and a mechanism simultaneously shifting the marking device out of contact with the record sheet and for discontinuing the communication of travel to said sheet.

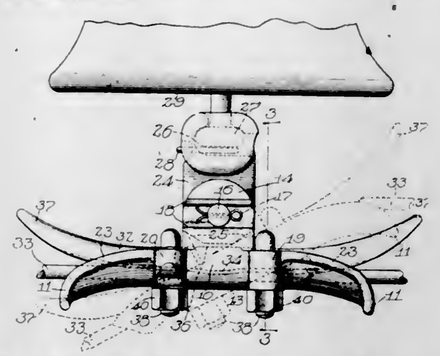
2. In a speed recording instrument, the combination with a record sheet, of means for actuating the same, a marking device bearing upon the record sheet and actuated in arcuate travel transverse of said sheet, two alined shafts perpendicular to the record sheet and having end portions threaded one within the other, a mechanism for manually subjecting one of said shafts to rotation, means for restricting the other shaft against rotation, but permitting sliding motion of the same, and means carried by the last mentioned shaft engaging the marking device, for shifting said device from contact with the record sheet.

3. In a speed recording instrument, the combination with a record sheet, of means for actuating the same, a marking device actuated in an arcuate travel transverse of the record sheet, a frame pivoted to swing about an axis parallel and transverse with the record sheet, said frame having a cam shaped aperture in its free end, a shaft perpendicular to the record sheet projecting into said recess, a cam within said recess serving to subject the pivoted frame to an angular displacement when subjected to rotation, a mechanism actuated by said shaft serving to withdraw the marking device from contact with the record sheet, the angular displacement of said frame serving to cut off communication of travel to the record sheet.

1,170,725. WIRE-CLAMP. ARTHUR O. AUSTIN, Barberton, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of Ohio. Filed May 20, 1912. Serial No. 698,419. (Cl. 173—251.)

1. A suspension wire clamp, comprising a body member formed with a wire groove, and a suspension lug extending above the groove with an opening disposed at one side of the groove adjacent the lug, and a hook bolt disposed in said opening with the hook so arranged that in tightening the bolt to grip a wire in the groove the hook portion thereof will be turned against the lug to prevent the hook from being moved out of engaging position with respect to the wire.

2. In a suspension wire clamp, the combination with a body member formed with an upwardly opening groove, and a suspension lug extending above the groove with bolt openings adjacent each side of the lug on opposite sides of the groove, of hook bolts positioned in the openings each having a hook portion adapted to extend over the groove and to engage the lug for preventing the bolt from being turned out of the groove in tightening it, and a single clamping bar adapted to be positioned in the groove and to be engaged and pressed down when the bolts are tightened.



3. In a suspension wire clamp, the combination with a body member formed with an upwardly opening groove, and suspension lugs extending above it with a bolt opening on opposite sides of the groove adjacent the lugs, of hook bolts each positioned in an opening with the hook portion extending over the groove, and a single clamping member positioned in the groove between the lugs and adapted to be engaged and pressed down by the hooks of the said bolts at a distance from the ends of the clamping member, the said bolts being tightened from the under side of the body member and the hooks being disposed so that when the bolts are tightened against the clamping bar the hooks will engage the said lugs to prevent them from turning out of the groove.

4. In a suspension wire clamp, the combination with a body member provided with upwardly extending sides to form a wire groove, and suspension lugs with an outwardly rounding recess adjacent the lugs on opposite sides of the groove and with a bolt hole across the groove from each recess, a clamping bar disposed in the groove, and hook bolts positioned in said holes, the hook of each bolt extending across the groove and adapted to engage in its recess across the groove when the hook is turned against the lug to prevent the hook from turning out of the groove, the recess holding the end of the hook from turning.

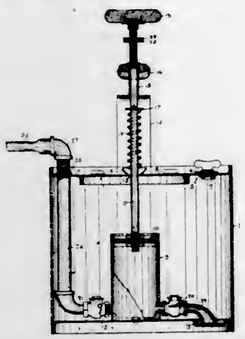
5. In a suspension wire clamp, the combination with a freely mounted suspension member having a wire receiving groove therein, of a clamping bar adapted to be positioned over a wire disposed in said groove, and hooked clamping bolts the hooks of which extend in opposite directions over the said bar to clamp the bar in the groove.

[Claims 6 to 24 not printed in the Gazette.]

1,170,726. LUBRICATING DEVICE. NATHANIEL M. AYCOCK, Houston, Tex. Filed July 9, 1914. Serial No. 849,903. (Cl. 221—103.)

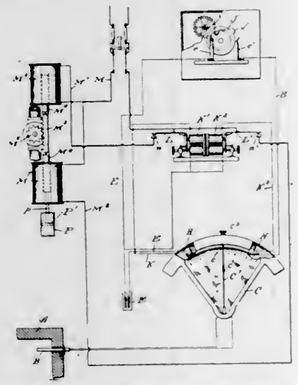
A device of the character described including a container, a removable top therefor having a central orifice, a funnel shaped flange fixed to the top and surrounding said orifice, a bail fixed to the container and having an orifice in alinement with the central orifice of the top, a cylinder within the container and fixed to the bottom thereof, a piston in said cylinder, a piston rod to the inner end of which the piston is fixed and which extends out through said orifices, a knob fixed to the upper end of the rod, a resilient member surrounding said rod, one

end of which is attached to the rod and the other end of which rests against said top, a collar surrounding the rod one end of which is fixed to said bail, a grip fixed to the other end of said collar, a discharge spout leading



from said cylinder, an inlet spout leading into said cylinder and having its outer end flared and curved downwardly and means for controlling said discharge and inlet spout.

1,170,727. APPARATUS FOR REGULATING THE TEMPERATURE OF FURNACES AND THE LIKE. ROBERT E. BAKER, Cleveland, Ohio, assignor to Arthur G. McKee. Filed Nov. 25, 1912. Serial No. 733,459. (Cl. 236—4.)



1. In apparatus for regulating the temperature of furnaces or the like, the combination of means for varying the temperature of said furnace or the like; electrical means for controlling the operation of said temperature-varying means; electrical means for controlling the first-named controlling means; and separate electrical means for recurrently completing a circuit in said last-named controlling means, at predetermined periods of time.

2. In apparatus for regulating the temperature of furnaces or the like, the combination of means for varying the temperature of said furnace or the like; electrical means for controlling the operation of said temperature-varying means; electrical means for controlling the first-named controlling means; and separate electrical means for recurrently completing a circuit in said last-named controlling-means and independently of temperature.

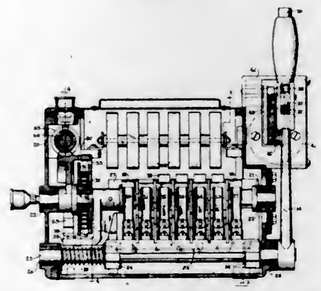
3. In apparatus for regulating the temperature of furnaces or the like, the combination of a temperature-indicator; means for varying the temperature of said furnace or the like and including a source of motive-power; and means for controlling said source of power and including an electrical circuit controlling a magnetic field and means for interrupting such circuit periodically, and a second electrical circuit directly controlling said controlling means and including a circuit-closing member carried by the indicating member of said indicator and located in said magnetic field.

4. In apparatus for regulating the temperature of furnaces or the like, the combination of a temperature-indicator; means for varying the temperature of said furnace or the like and including a source of motive-power; and means for controlling said source of power and including an electrical circuit controlling a magnetic field and means for interrupting such circuit periodically; and a second electrical circuit directly controlling said controlling means and including a circuit-closing member controlled by the indicating member of said indicator and located in said magnetic field.

5. In apparatus for regulating the temperature of furnaces or the like, the combination of a thermo-couple; a galvanometer electrically connected with and operated by said thermo-couple; means for regularly and periodically completing an electric circuit through the needle of said galvanometer; a magnetically operated switch controlled through said electric circuit; a valve; and means for controlling the movements of said valve, through said magnetically operated switch.

[Claims 6 to 9 not printed in the Gazette.]

1,170,728. CIRCUIT-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 11, 1914. Serial No. 837,833. (Cl. 172—240.)



1. In a circuit controller, in combination, a plurality of relatively stationary contacts and an automatically operated contact member to coöperate therewith, said contacts being movable out of operative relation with respect to said member to break circuit in any position of the latter and having manual and automatic controlling means.

2. In a circuit controller, in combination, a plurality of stationary contacts, an automatically operated contact member to coöperate therewith, said contacts being movable out of operative relation with respect to said member to break circuit in any position of the latter, and means insuring against arrest of said automatically operated member except in a position whereby circuit may be reclosed by return of said contacts to operative relation therewith.

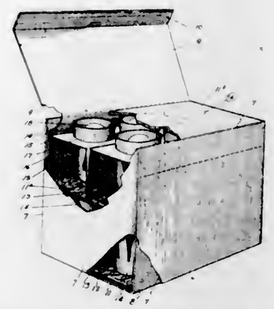
3. In a circuit controller, the combination with a movable contact device, of relatively stationary contacts to be engaged thereby, said device having automatic operating means controlled thereby and said relatively stationary contacts being movable out of operative relation with said device to interrupt the controlled circuit and thereby effect arrest of said device.

4. In a circuit controller, the combination with a movable contact device, of relatively stationary contacts to be engaged thereby, said device having automatic operating means controlled thereby and said relatively stationary contacts being movable out of operative relation with said device to interrupt the controlled circuit and thereby effect arrest of said device and means insuring against the arrest of said device except in a position whereby the controlled circuit may be reclosed by return of said contacts to operative relation with said device.

5. In a circuit controller, in combination, a plurality of relatively stationary contacts, a movable contact device to coöperate therewith, said stationary contacts being biased to a position out of operative relation with respect to said device and means for setting said contacts in operative relation with respect to said device and releasably retaining the same in the latter relation.

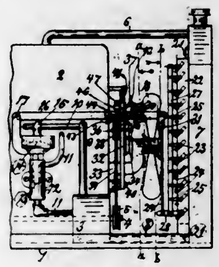
[Claims 6 to 17 not printed in the Gazette.]

1,170,729. EGG BOX OR CARRIER. NELS H. BECKSTROM, Chicago, Ill. Filed June 6, 1914. Serial No. 843,390. (Cl. 229—15.)



As an improved article of manufacture, an egg holder consisting of a support made of a single piece of material provided with a plane surface having a plurality of openings therein and formed with integrally depending legs, and a tubular and downwardly tapered holder located in each of said openings, each of said holders having vertically elongated cut-out portions between its ends and engaging at the upper portion of the cut-out parts the said support.
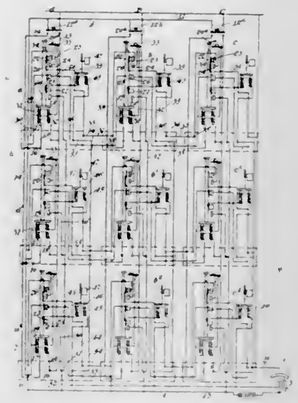
1,170,730. AUTOMATIC TEMPERATURE-REGULATOR FOR EXPLOSION-ENGINES. ISAAC N. BENJAMIN and CHARLES LYNCH, St. Paul, Minn. Filed Dec. 18, 1914. Serial No. 877,889. (Cl. 123—170.)



1. The combination with an explosion engine and a water cooling system including a radiator, of piping and jackets about the cylinders of the engine, a fan having wings arranged to rotate about axes radiating from the hub of the fan and to cause a cooling air current through the radiator when the fan rotates, a thermostat inserted in the water system, a driven shaft having operative connection with the engine, means for transmitting power from the driven shaft to the fan, and means operated by the thermostat for automatically rendering the fan more or less effective and ineffective by tilting its wings about their axes more or less edgewise in the direction of their movement about the axis of the fan.

2. The combination with an explosion engine having a water-cooling system comprising a water-cooling radiator, a fan arranged to induce a cooling current of air through the radiator, a thermostat in the water system, a shaft having operative connection with the engine by which said shaft is driven; means for transmitting power from the driven shaft to the fan, means operated by the thermostat for automatically rendering said fan effective and ineffective; means for regulating or even shutting off the air current through the radiator, and operative connection between the thermostat and the means for regulating the air current, whereby said current regulating means is automatically operated.

1,170,731. VOTING-MACHINE. WILLIAM J. BOHAN, St. Paul, Minn., and WAYBURN E. JOHNSTON, Sacramento, Cal. Filed Aug. 14, 1914. Serial No. 856,715. (Cl. 235—51.)



1. The combination with a series of vote registering devices, of electromagnetic means for actuating the same, a series of movable members, one for each vote registering device, said members being combined with means whereby by their movement they control the circuits for said electromagnetic means, said movable members being manually operable, and electro-magnetic means for actuating said movable members.

2. The combination with a series of vote registering devices, of electromagnetic means for actuating the same, a series of movable members, one for each vote registering device, said members being combined with means whereby by their movement they control the circuits for said electromagnetic means, said movable members being manually operable, electro-magnetic means for actuating said movable members, and circuit connections and a switch whereby all of said electro-magnetic means for actuating said movable members may be operated.

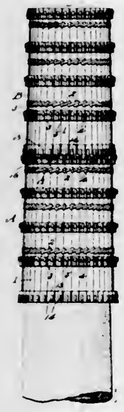
3. The combination with the vote registers, and the electromagnets therefor, of push rods, one for each register, contacts on said push rods and coöperating stationarily mounted contacts, circuit connections whereby the movement of said push rods establishes circuits for said electro-magnets, said push rods being adapted to be manually operated, and electromagnets arranged to operate said push rods.

4. The combination with the vote registers, and the electromagnets therefor, of push rods, one for each register, contacts on said push rods and coöperating stationarily mounted contacts, circuit connections whereby the movement of said push rods establishes circuits for said electro-magnets, said push rods being adapted to be manually operated, electro-magnets arranged to operate said push rods, circuit connections with said last mentioned electro-magnets and a switch for closing said circuit connections and causing the operation of all of said magnets to operate all of said push rods.

5. The combination with the vote registers, and the electro-magnets therefor, of push rods, one for each register, contacts on said push rods and coöperating stationarily mounted contacts, circuit connections whereby the movement of said push rods establishes circuits for said electro-magnets, said push rods being adapted to be manually operated, electro-magnets arranged to operate said push rods, circuit connections with said last mentioned electro-magnets and a switch for closing said circuit connections and causing the operation of all of said magnets to operate all of said push rods, said push rods operating magnets being provided with local circuit coils whereby they are locked in holding position when operated.

[Claims 6 to 12 not printed in the Gazette.]

1,170,732. MOLD. JOHN V. BOLAND, St. Louis, Mo. Filed July 6, 1914. Serial No. 849,092. (Cl. 25—124.)

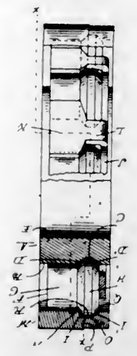


1. A mold made up of a series of uniform and tapering units, adapted for assembling to provide through such tapering formation a mold of tapering form, the upper or lower end of any one unit forming an equal length in the circumferential length of the mold as the similar end of any other unit, the length ratio of the respective ends of any one unit being such that in the absence of such unit from a particular mold, the maximum sectional dimension of such latter mold will equal the minimum sectional dimension of the mold including such unit.

2. A mold made up of a series of uniform and tapering units, adapted for assembling to provide through such tapering formation a mold of tapering form, the upper or lower end of any one unit forming an equal length in the circumferential length of the mold as the similar end of any other unit, the length ratio of the respective ends of any one unit being such that in the absence of such unit from a particular mold, the maximum sectional dimension of such mold will equal the minimum sectional dimension of the mold including such unit, and means for securing the unit in mold forming relation.

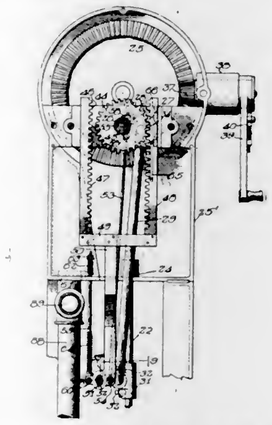
3. A mold made up of a series of uniform and tapering units, adapted for assembling to provide through such tapering formation a mold of tapering form, the upper or lower end of any one unit forming an equal length in the circumferential length of the mold as the similar end of any other unit, the length ratio of the respective ends of any one unit being such that in the absence of such unit from a particular mold, the maximum sectional dimension of such latter mold will equal the minimum sectional dimension of the mold including such unit, a strip carried by each unit and projected beyond the side edges thereof, the strip of one unit overlying and underlying the strips of the immediately adjacent oppositely disposed units.

1,170,733. ROLLER-BEARING. ROBERT F. BOWER, Detroit, Mich., assignor to Bower Roller Bearing Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 11, 1915. Serial No. 44,932. (Cl. 64—62.)



In a roller bearing, the combination with a single end thrust assembly, comprising a series of rolls each having a cylindrical portion and an enlarged head at one end with opposed end thrust faces, an inner annular race member having a cylindrical face with which the cylindrical portions of said rolls engage and a groove having oppositely-beveled faces, an outer race member having a cylindrical portion for engaging the cylindrical portions of said rolls and a beveled end for engaging the inner beveled faces of said rolls, of an additional race member abutting against the end of said outer race member and forming a groove for the heads of the rolls, with an oppositely-beveled face, said additional race member converting said single end thrust assembly into a double end thrust bearing, and being of slightly lesser diameter than the outer race member of said single end thrust bearing to find an independent seat.

1,170,734. PUMP-OPERATING MECHANISM. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Jan. 17, 1912. Serial No. 671,551. (Cl. 74—27.)



1. The combination of a frame having oppositely disposed racks with teeth on the inside, a rotatable toothed member between them adapted to engage one or the other, a reciprocable rod to which the frame is connected for movement, and resilient means having only one connection with the frame for moving the frame laterally at each end of its stroke.

2. The combination with a rotary toothed gear, of racks on each side of the gear connected together so that the gear engages only one of the racks, a reciprocable member with which the racks are movable, an arm connected to the racks, a rod connected to the arm having springs at the ends, and means to engage the springs whereby the racks are moved laterally at the ends of the strokes of the reciprocable member to move one of the racks into and the other rack out of engagement with the toothed member.

3. The combination with a driving gear, of a pump rod reciprocated thereby, a frame reciprocated by the rod having opposite inside racks, a pinion to engage one of the racks but not both at the same time, a rod having springs thereon at each end connected to said frame, and a guide through which the rod passes adapted to engage one of the springs at each end of the stroke of the frame and to compress the spring whereby the frame will be shifted laterally to engage the pinion alternately with the racks depending upon the direction of movement of the frame.

4. The combination with a rotary driving member, of a member reciprocated thereby, a frame with opposite inside racks connected to move with the member, a pinion to engage one but not both of the racks at the same time, and a double spring mechanism in connection with the frame to shift the frame laterally only at the ends of the strokes thereof to change the engagement of the racks with the pinion.

5. The combination with a rotary driving member, of a rod reciprocated thereby, a frame with opposite inside racks adjustably connected to the rod, a pinion to engage one but not both of the racks at the same time, and means in connection with the frame to shift the frame laterally in opposite directions at the opposite end of its stroke.

[Claims 6 to 11 not printed in the Gazette.]

1,170,735. HOLDER AND SPREADER FOR MUCILAGINOUS MATERIAL. GEORGE P. BRENNER, Milwaukee, Wis. Filed Nov. 20, 1914. Serial No. 873,121. (Cl. 91—67.5.)



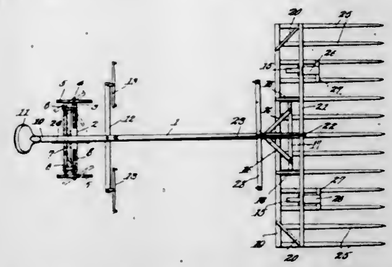
1. A mucilaginous material holder and spreader comprising a shell having a stoppered filling aperture and a beveled angular discharge end provided with a spreader seat, a wall in said end of the shell provided with a discharge orifice, and a flexible spreading strip normally sealing said orifice, the upper portion of the otherwise free strip being held to said shell against said wall of the same.

2. An adhesive material holder and spreader comprising a flexible shell having a discharge end that is beveled, the material of the shell at the beveled discharge end being folded to provide a doubled outer wall that is parallel and spaced from the beveled surface to form a spreader socket, the outer wall being shorter than the inner wall of the socket, and said inner wall being provided with a discharge opening adjacent the open end of the socket, and a flexible spreader mounted in the socket and normally sealing the discharge opening, the free portion of the spreader projecting beyond the socket.

3. A mucilaginous material holder and spreader comprising a flexible shell having a stoppered filling aperture and an angular end all sides of which are beveled, one side of said end being folded to form a socket and an inner wall having a discharge orifice therein below the open end of the socket, and a flexible sealing-strip for said orifice, the upper portion of the otherwise free strip being in engagement with said socket.

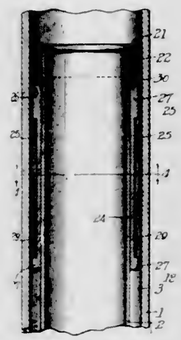
4. A holder and spreader for adhesive material comprising a receptacle having a flat discharge portion provided with an outlet, the discharge portion above said outlet being provided with a socket, and a spreader formed of a strip of flexible material that is curved on an arc of a circle and has one portion thereof seated in the socket and normally held by its engagement with the socket so that the spreader will be held flat and in position to lie firmly on the flat discharge end of the receptacle to seal the discharge opening therein.

1,170,736. HAY-SWEEP. HUGH C. BROWN, Fremont, Nebr. Filed Sept. 16, 1912. Serial No. 720,614. (Cl. 56—66.)



In a sweep of the class described, the combination with a beam, supporting wheels adjacent one end of the beam, and means upon the beam for supporting a driver back of the axis of the wheels, of an axle extending under and laterally beyond the other end of the beam, a frame fixedly connected to and revoluble with the axle, a bar pivotally mounted at its ends within the frame at points back of the axle and fixedly connected to the beam near the front end of the beam, said bar and axle being parallel, a standard fixedly connected to the frame and axle and movable therewith, said standard being adapted, when swung rearwardly, to abut against the front end of the beam and limit the upward movement of the front ends of the tines, and means extending to the standard from a point adjacent the rear end of the beam for controlling the lowering of the front ends of the tines under the action of the weight of the driver when upon the driver supporting means.

1,170,737. PUMP-CYLINDER. EDWIN W. CLARK, Chicago, Ill. Filed Oct. 21, 1914. Serial No. 867,712. (Cl. 103—65.)



1. In combination, a tubular pump cylinder externally threaded near the top, an external flange at the top of said cylinder, a spring dog screwing on the outside of said cylinder, and a resilient ring interposed between the upper end of the spring dog and the flange on the pump cylinder.

2. In a pump cylinder, the combination, with the cylinder proper, having an external flange at its upper end, of a spring dog screwing on the outside of said cylinder, and resilient packing material interposed between the upper

end of said dog and the flange on the upper end of the cylinder, said flange flaring upwardly and outwardly, substantially as described.

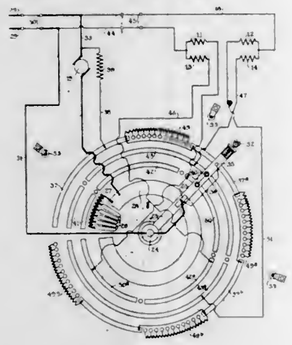
3. In a device of the class described, the combination of a pump cylinder having an external flange at its upper end, a resilient packing ring encircling said cylinder adjacent to said flange, a spring dog screwing on the upper end of said cylinder beneath said packing ring, a seating tool, and means on said cylinder constructed to be engaged and disengaged by said seating tool for rotating said cylinder.

4. In a device of the class described, the combination of a pump cylinder having at its upper end an upwardly and outwardly flaring flange, a resilient packing ring encircling said cylinder beneath and adjacent to said flange, a tubular sleeve screwing on the outside of said cylinder adjacent to and beneath said ring, outwardly bulging springs on said sleeve, said springs extending approximately longitudinally and collars formed on said sleeve above and below said springs for protecting them, substantially as described.

5. In a device of the class described, the combination of a tubular well casing, a pump cylinder having an external flange at its upper end, the perimeter of said flange being slightly less than the internal diameter of the well casing, a resilient packing ring surrounding said cylinder beneath and adjacent to the flange thereon, a spring dog screwing on said cylinder beneath and adjacent to said resilient ring, a foot on said cylinder, and a seating tool adapted to engage and disengage said foot for rotating said cylinder and raising and lowering the same.

[Claim 6 not printed in the Gazette.]

1,170,738. CIRCUIT-CONTROLLER. HENRY H. CUTLER and FREDERIC S. WILHOIT, Milwaukee, Wis. Original application filed Nov. 30, 1908, Serial No. 465,165. Divided and this application filed Aug. 22, 1914. Serial No. 858,075. (Cl. 172—239.)



1. The combination with a variable speed gearing, of a plurality of magnetic clutches each having a driving member and two driven members, one of said driven members being engageable with either said driving member or the other driven member, the corresponding members of said clutches being connected and means to gradually accelerate the speed of said driven members when connected to the driving member.

2. The combination with a plurality of magnetic clutches, of a controller therefor having an element movable to effect energization and deënergization of said clutches separately and means insuring against stoppage of said element at an intermediate point to deënergize all of said clutches.

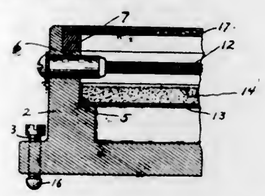
3. The combination with a plurality of magnetic clutches, of a controller therefor having an element movable over a series of contacts and means to prevent said element from stopping at a point between said contacts.

4. The combination with a motor, of a plurality of magnetic clutches, a rheostat having a movable element adapted to be moved over a series of contacts for controlling said motor and said clutches and means insuring against the stoppage of said element at an intermediate point between said contacts.

5. The combination with a supply circuit, of a motor arranged in said circuit, an armature resistance and a field resistance for said motor, a plurality of magnetic clutches arranged in said circuit, and means for controlling said motor and said clutches, said means having a movable element operable to remove said armature resistance from circuit before said clutches are energized and to insert said field resistance in circuit only after one of said clutches is energized.

[Claims 6 to 11 not printed in the Gazette.]

1,170,739. MICROSCOPIC-SLIDE DRIER. ACHILLES DE KHOTINSKY, Chicago, Ill. Filed Mar. 17, 1915. Serial No. 14,928. (Cl. 34—39.)



1. A drier for microscopic slides including a receptacle, a support for slides carried thereby, a heating element mounted in the receptacle below said support, and means disposed within the receptacle below the heating element for concentrating the heat of the latter upon the slides.

2. A drier for microscopic slides including a heating element, a support for the same, and a removable carrier for the slides comprising a grid supporting opposite edge portions of the slides and exposing substantially the entire under surface of the latter, said carrier being normally mounted on said support and adapted to hold the slides at a predetermined distance from the heating element.

3. A drier for microscopic slides including a support for the slides, a heating element, and moisture absorbent heat-reflecting means carried by the support and disposed below the heating element.

4. A drier for microscopic slides including a receptacle having an opening at the top, means for supporting the slides across an opening, an absorbent medium disposed within the receptacle, and a heating element mounted in the chamber bounded by the sides of the receptacle and having the slides and the absorbent medium respectively as its top and bottom.

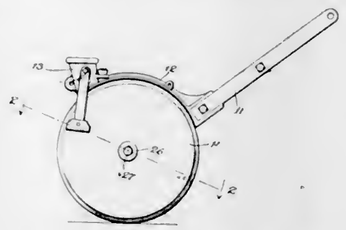
5. A drier for microscopic slides including a receptacle having an opening at the top, a grid for supporting the slides across the said opening, a tray removably disposed within the receptacle, and a heating element mounted in the chamber bounded by the sides of the receptacle and having the slides and the absorbent medium respectively as its top and bottom.

[Claims 6 to 8 not printed in the Gazette.]

1,170,740. DISK FURROW-OPENER. CLINTON W. DICKINSON, La Crosse, Wis. Filed Feb. 19, 1909. Serial No. 478,957. (Cl. 111—11.)

1. In a double disk furrow opener, the combination of a support provided with a bearing, a pair of disks disposed at the opposite sides of said support, said disks being angled toward each other and having their edges in contact at one point to cause them to open a single furrow by moving the soil laterally and outwardly away from the outer side of both disks and a pair of spindles for the disks respectively, journaled in the bearing in angular relation to each other and having thrust surfaces which receive lateral thrust from each other independently of the bearing.

2. In a double disk furrow opener, the combination of a support provided with a bearing, a pair of disks disposed at the opposite sides of said support, said disks being angled toward each other and having their edges in contact at one point to cause them to open a single furrow by moving the soil laterally and outwardly away from the outer side of both disks, and a pair of spindles for the disks respectively, journaled in the bearing and having conoidal bearing surfaces at their inner ends receiving lateral thrust from each other independently of the bearing.



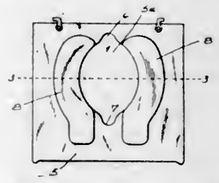
3. In a double disk furrow opener, the combination of a support provided with a bearing, a pair of disks disposed at opposite sides of said support, said disks being angled toward each other and having their edges in contact at one point to cause them to open a single furrow by moving the soil laterally and outwardly away from the outer side of both disks, and a pair of spindles for the disks respectively, journaled in the bearing in angular relation to each other and having conoidal surfaces at their inner ends engaging and receiving lateral thrust from each other independently of the bearing.

4. In a double disk furrow opener, the combination of a support provided with a bearing, a pair of disks disposed at opposite sides of said support, said disks being angled toward each other and having their edges in contact at one point to cause them to open a single furrow by moving the soil laterally and outwardly away from the outer side of both disks, and a pair of spindles for the disks respectively, journaled in the bearing in angular relation to each other and having conoidal bearing surfaces at their inner ends in rolling contact with each other and receiving lateral thrust from each other independently of the bearing.

5. In a double disk furrow-opener, the combination of a support provided with a bearing, a pair of disks at the sides of the bearing respectively, and angled toward each so that their lower portions will coöperate to cut a furrow, a pair of spindles for the disks respectively, journaled in the bearing in angular relation to each other and having their inner ends provided with surfaces for receiving lateral thrust from each other, and an abutment between said inner ends.

[Claims 6 to 11 not printed in the Gazette.]

1,170,741. SEAT STRUCTURE FOR LATRINES. DAVID A. EBINGER, Columbus, Ohio. Filed Nov. 11, 1912. Serial No. 730,572. (Cl. 4—18.)

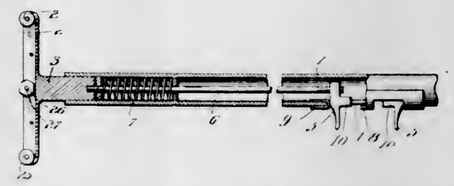


1. A liftable latrine seat structure comprising a metal base, having an opening therein, and a wooden seat rigidly mounted on said base and conforming substantially to the contour of said opening, said seat being of greatly reduced area in comparison with said base.

2. A liftable latrine seat structure comprising a substantially rectangular non-absorbent base member having an opening therein, and a plurality of seat boards, said seat boards being rigidly mounted upon either side of said opening and having their adjacent ends spaced from each other and being of greatly reduced area with comparison with said base member.

3. A latrine seat comprising a unitary metallic base member having an opening therein, said opening having a supplemental cut-out portion at both its front and rear, and a plurality of seat boards rigidly mounted upon either side of said opening and having their adjacent ends spaced from each other and on opposite edges of said cut-out portion, said seat boards being of greatly reduced area in comparison with said base member.

1,170,742. FIXTURE FOR WINDOW-SHADES. PLATO G. EMERY, Chicago, Ill. Filed July 25, 1913. Serial No. 781,068. (Cl. 156—26.)



1. In combination, a shade stick, a head mounted at the end of the stick so as to be movable lengthwise of the stick, a rod extending from the head into the stick, an actuating device on the rod, and a device in the path of the actuating device and adapted to limit its movement in the direction of the length of the stick, one of said devices being normally yieldingly held in alinement with the other device and being movable in a direction to bring it out of alinement with the other and afford the actuating device an increased range of movement.

2. In combination, a shade stick, a head mounted at the end of the stick so as to be movable lengthwise of the stick, a rod extending from the head into the stick, an actuating device on the rod, and a stop device normally adapted to engage with the actuating device at a predetermined point in the movement of the latter in the direction of the length of the stick, one of said devices being normally yieldingly held in alinement with the other device and being movable transversely of the stick to permit the actuating device to pass beyond said predetermined point.

3. In combination, a hollow shade stick having an opening through the side, a head mounted at one end of the stick so as to be movable lengthwise of the stick, a rod extending from the head into the stick, a finger piece on the rod extending through said opening, and a stop device adapted in normal operation to engage with a shoulder on the finger piece to arrest the movement of the finger piece in the direction of the length of the stick, the parts being so proportioned that the finger piece may be moved transversely of the stick to bring said shoulder out of alinement with the stop to afford the finger piece an increased range of movement.

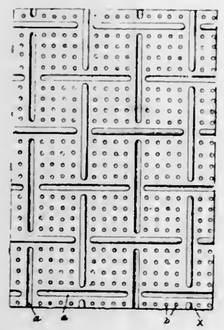
4. In combination, a tubular shade stick having an opening through the side, a head mounted at the end of the stick so as to be movable lengthwise of the stick, a small rod extending from the head into the stick, a finger piece extending from said rod through said opening, said finger piece having a projection extending laterally toward the end of said opening farthest from said head so as to engage with the edge of said opening in the normal operation of the finger piece and limit its movement, and the parts being so proportioned as to permit the inner end of the rod to be sprung laterally far enough to let said projection clear the aforesaid edge of the opening.

5. In combination, a shade stick, a head mounted at the end of the stick so as to be movable lengthwise thereof, a

rod extending from the head into the stick, an actuating device on the rod, and a device in the path of the actuating device and adapted to limit its movement in the direction of the length of the stick, the parts being so constructed and arranged that one of said devices is normally held yieldingly in alinement with the other device and is movable relatively thereto in a direction to bring them out of alinement with each other and afford the actuating device an increased range of movement.

[Claim 6 not printed in the Gazette.]

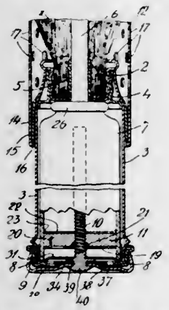
1,170,743. BUILDING CONSTRUCTION. WILLIAM H. EVERS, Lakewood, Ohio, assignor to The Concrete Flooring Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 27, 1915. Serial No. 30,719. (Cl. 72—116.)



1. A metal plate for building construction, having a plurality of intersecting rows of ribs projecting on opposite sides thereof and also provided with numerous perforations between the ribs, with rims around the perforations projecting on opposite sides of the plate at different perforations respectively.

2. A metal plate for building construction, having a plurality of relatively short ribs projecting on opposite sides thereof and disposed in intersecting lines with the ends of each rib adjacent intermediate portions of other ribs and at an angle thereto, and perforations in the spaces between the ribs and projecting rims around the perforations, the rims around some of the perforations projecting on one side of the plate, and those around other perforations projecting on the opposite side of the plate.

1,170,744. FOUNTAIN-BRUSH. JOEL BARLOW FESLER, New York, N. Y., assignor to Fesler Sales Company, New York, N. Y., a Corporation of New York. Filed Aug. 8, 1914. Serial No. 855,744. (Cl. 15—50.)



1. The combination with an end cap of a fountain brush, of a hand piece rotatably mounted on the outside of said end cap and having a feed screw extending therethrough, and means arranged within said cap for permitting relative rotation of said cap and hand piece in one direction only.

2. The combination with an end cap of a fountain brush, of a hand piece rotatably mounted on the outside of said end cap and having a feed screw extending therethrough, and means carried by said hand piece and screw arranged within said cap to engage the same to prevent relative rotation of said cap and hand piece in one direction and to permit relative rotation in the opposite direction.

3. The combination with a hollow member, of an end cap thereon, a hand piece rotatably mounted on the outside of said end cap and having a feed screw extending therethrough into said hollow member, and means arranged within said cap and carried by said hand piece and screw for audibly engaging said cap at intervals during the rotation of said hand piece, whereby the number of rotations given said hand piece can be audibly observed.

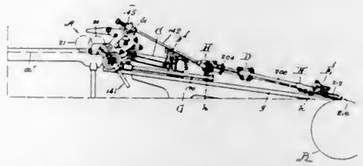
4. The combination with a hollow member, of a cap mounted on the end thereof and provided with one or more recesses, a rotary member mounted upon the outside of such end cap, and one or more spring pawls carried by said rotary member and arranged within said cap to engage such recesses as such member rotates with respect to the end cap.

5. The combination with a hollow handle, of an end cap mounted thereon and having one or more recesses, a hand piece mounted on such end cap, and provided with a central screw projecting into such hollow handles, and one or more spring pawls connected to said screw and located within said end cap and adapted to rotate with the screw and to engage the said recess or recesses.

[Claims 6 to 8 not printed in the Gazette.]

1,170,745. [WITHDRAWN.]

1,170,746. PAPER-FEEDING MACHINE. VERNON GARNER, Boston, Mass., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Nov. 16, 1912. Serial No. 731,862. (Cl. 101—39.)



1. In a sheet-feeder, combing devices arranged in tandem relation, oscillatory carriers therefor, the radial distance of one combing device from the axis of its carrier being greater than that of the other, a spring-actuated member having two cam surfaces for acting on said carriers respectively to lift the combing devices, said cam surfaces being different to compensate for the radial difference of said combing devices, whereby said devices will be lifted to the same level, and sheet-controlled means for restraining said spring-actuated member.

2. In a sheet-feeder, two carriers disposed to oscillate about the same axis, combing devices mounted on said carriers at different distances from said axis, a spring-actuated member having two cam surfaces for acting respectively on said carriers to lift the combing devices, said cam surfaces being different to lift said combing devices to the same level, and sheet-controlled means for restraining said spring-actuated member.

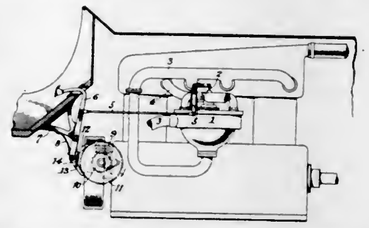
3. In a sheet-feeder, primary combing means, auxiliary combing means, spring-actuated means for lifting both combing means, an auxiliary spring for said lifting means, sheet-controlled means for restraining said lifting means, and means controlled by said auxiliary combing means for causing said auxiliary spring to act when said auxiliary combing means is in operation, and for restraining said auxiliary spring when the auxiliary combing means is supported above operative position.

4. In a sheet-feeder, primary combing means, auxiliary combing means, spring-actuated means for lifting both combing means, an auxiliary lifting spring for said lifting means, sheet-controlled means for restraining said lifting means, sheet-controlled means for supporting said auxiliary combing means above operative position, and means controlled by said auxiliary combing means for restraining said auxiliary spring when said auxiliary combing means is supported by said sheet-controlled supporting means, and for permitting said auxiliary spring to act when both combing means are in operation.

5. In a sheet-feeder, primary combing means, auxiliary combing means, spring-actuated means for lifting both combing means, an auxiliary lifting spring for acting upon said lifting means, means for supporting said auxiliary combing means above operative position while said primary combing means is in operative position, and means for restraining said auxiliary spring while said supporting means is acting.

[Claims 6 to 15 not printed in the Gazette.]

1,170,747. CONTROL MECHANISM. JOHN GOOD, Brooklyn, N. Y. Filed June 2, 1914. Serial No. 842,514. (Cl. 136—11.)



1. A controlling device comprising in combination with a machine controlled, a part moved by or proportionately to the velocity of such machine, a regulating member and means connecting the same with said moving part whereby the latter limits the rapidity of operation of said member.

2. A controlling device comprising in combination with the throttle of an internal combustion engine, a throttle-controlling member and an engine driven part limiting the rapidity of operation of such member in proportion to its own velocity.

3. The combination in an internal combustion engine having a throttle and a throttle-controlling member manipulated by the operator, of means whereby the speed of the engine limits the rapidity with which said member may be moved.

4. A controlling device comprising in combination with a machine controlled, a part geared to such machine, a controlling member and a clutch device between the same and said part.

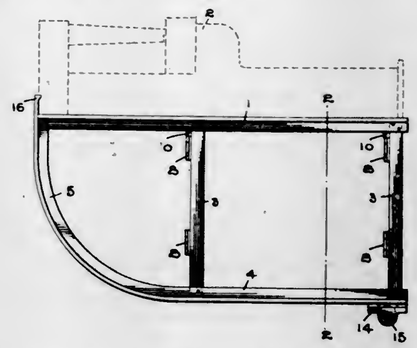
5. A controlling device comprising in combination with the machine controlled, a part geared to rotate with or by said machine, a clutch device coöperating with said rotary part, a control member and a yielding connection between the same and the clutch device.

[Claims 6 to 8 not printed in the Gazette.]

1,170,748. TRUCK. ROBERT A. GUARNIERY, Philadelphia, Pa., assignor to Cunningham Piano Company, Philadelphia, Pa. Filed Feb. 10, 1915. Serial No. 7,311. (Cl. 21—65.)

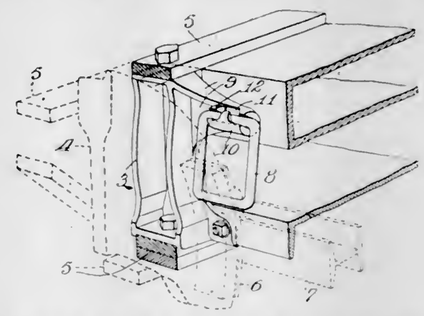
1. As a new article of manufacture, a truck comprising side frames, wheels below the side frames, transverse frames connecting the side frames, and said transverse frames consisting each of two sections hinged to the side frames and together, said sections of the transverse frames having tongues thereon, and locking bars pivotally connected to the sections and adapted when positioned in engagement with the tongues to hold the sections of the transverse frames in alinement and maintain the side frames spaced apart, substantially as described.

2. A truck, comprising side frames consisting of upper and lower bars with uprights connecting them, the lower bars curved at one end and secured to the upper bars, with the ends of the curved bars projecting beyond the upper bars, hinged transverse frames connecting the uprights of the side frames, and means for holding the hinged transverse frames against independent movement, substantially as described.



3. A truck comprising a pair of side frames each consisting of an upper and a lower bar and a pair of uprights rigidly connecting said bars, one of said uprights being arranged adjacent one end of the bars and the other intermediate the ends thereof, the lower bar at the other end from said uprights being curved upwardly and secured to the corresponding end of the upper bar, a pair of hinged frames connecting said uprights and each comprising outer vertical bars hingedly attached to said uprights, inner vertical bars hingedly connected to each other, horizontal top bars connecting the outer and inner vertical bars, and upwardly and inwardly inclined lower bars connecting the lower ends of the upright bars and means for locking said frames rigidly in alinement to each other, substantially as described.

1,170,749. BRAKE-BEAM HANGER. HUGH C. HARRAGIN, Montreal, Quebec, Canada. Filed July 6, 1915. Serial No. 38,296. (Cl. 188—70.)



1. In a car, a truck, a brake beam, a brake beam hanger and a bracket presenting an opening for the reception of the hanger, such opening have a distorted slot leading thereto through which the hanger is inserted.

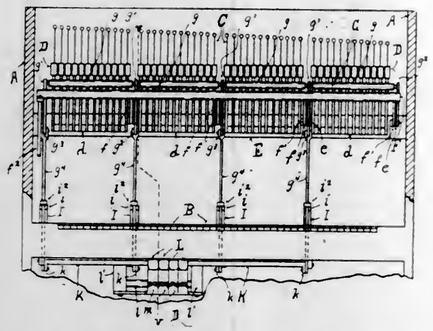
2. In a car, a truck, a brake beam, a brake beam hanger, a bracket presenting an opening for the reception of the hanger, such opening having a slot leading thereto and spaced lugs upon the lips of the slot.

3. In a car, a truck, a brake beam, a brake beam hanger, a bracket presenting an opening for the reception of the hanger, such opening having a slot leading thereto and spaced, interdigitating lugs upon the lips of the slot.

4. In a car, a truck including a column casting, a brake beam, a brake beam hanger and a bracket arm upon the casting and presenting an opening for the reception of the hanger, such opening having a distorted slot leading thereto through which the hanger is inserted.

5. In a car, a truck including a column casting, a brake beam, a brake beam hanger, a bracket arm formed with and extending inwardly from the casting, a hub formed at the end of the arm, such hub having an opening formed therethrough for the reception of the brake beam hanger and presenting a slot leading to such opening and spaced and interdigitating lugs upon the lips of said slot forming a distorted mouth through which the hanger is inserted.

1,170,750. MUSICAL INSTRUMENT. DAVID J. HAUSS, Aurora, Ind. Filed Aug. 30, 1909. Serial No. 515,263. (Cl. 84—160.)



1. In a mechanism of the character described, the combination with a series of hammers, and strings on which they act, of a sectional bar for engaging said hammers for controlling the movement thereof, means engaging intermediate of the sections of said bar for moving the same to and from said hammers, actuating levers to adjust said hammer bar sections, electrically actuated mechanism to operate said actuating lever included in electric circuits to be automatically controlled by a music sheet, and manually operable levers adjustable into and out of engagement with said actuating levers to enable said actuating levers to be manually actuated when required, and without normally interfering with the operation of said electrically operated mechanism.

2. In a mechanism of the character described, the combination with a series of hammers of a musical instrument, strings upon which the hammers act, of a bar for engaging said hammers to control their position relatively to the strings, comprising a series of sections pivotally united actuating levers engaging the sections of the bar for actuating the same, and manually operable levers engaging said actuating levers and adjustable to normally hold said hammers at rest in position to make a minimum stroke or any desired intermediate stroke, said manually operable levers being independently temporarily operable without disturbing their respective adjustments for normal positions of rest for the hammers.

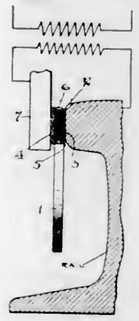
3. In a mechanism of the character described, the combination with a series of hammers of a musical instrument, and strings upon which the hammers act, of a sectional bar for engaging said hammers to control their position relatively to the strings, the sections of the bar being pivotally united, bar actuating means engaging at one end with the ends of each of the bar sections and provided at the opposite ends with inclined faces, manually operable levers provided with inclined faces to yieldingly engage the inclined faces of said actuating means, and adjustable to bring said inclined faces in pairs progressively into engagement to predetermine the minimum stroke of said hammers.

4. In a mechanism of the character described, the combination with a series of hammers of a musical instrument and strings upon which the hammers act, of a bar for engaging said hammers to control their position relative to the strings, comprising a series of sections pivotally united, a series of actuating devices connected to respective sections, for independently operating a portion of the bar, means for manually controlling the movement of said actuating mechanism, and electrically actuated mechanism having electric circuits controlled by a music sheet to automatically operate said bar independently of said manually control.

5. In expression mechanism for musical instruments, the combination with a series of hammers, of means for shifting the position of rest thereof whereby the length of stroke of the successive hammers varies from end to end of said series, and mechanism adjustable to predetermine the minimum stroke of said hammers and operable independently of its adjustment to temporarily increase the stroke of said hammers.

[Claim 6 not printed in the Gazette.]

1,170,751. RAIL-BOND. ALBERT B. HERRICK, New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Nov. 29, 1912, Serial No. 733,974. Divided and this application filed Apr. 29, 1915. Serial No. 24,708. (Cl. 173—262.)



1. As an article of manufacture, the combination with an article to be welded, of an electrode comprising a body of high resistance material provided with a recess substantially conforming in shape with said article but shallower, whereby such article will project beyond the face of the electrode.

2. As an article of manufacture, the combination with an article to be welded, of an electrode comprising a body of high resistance material provided with a recess substantially conforming in shape with said article but shallower, whereby such article will project beyond the face of the electrode, said electrode body having an opening extending from the upper side to such recess.

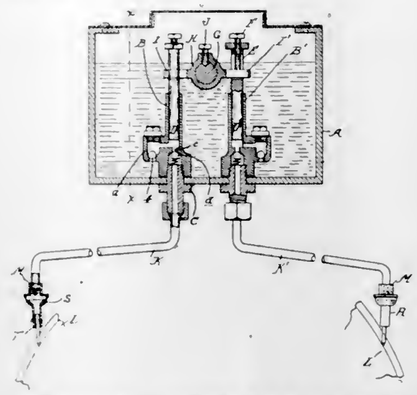
3. As an article of manufacture, the combination with a rail bond, of an electrode comprising a body of high resistance material provided with a recess substantially conforming in shape with the terminal of said bond but shallower, whereby such bond terminal will project beyond the face of the electrode.

4. As an article of manufacture, the combination with a rail bond, of a body of high resistance material applied to the terminal of said bond, such body inclosing the outer face of the bond terminal and the edges thereof save for the portion of such edges adjacent the inner face of the terminal.

5. As an article of manufacture, the combination with a rail bond, of an electrode comprising a body of high resistance material provided with a recess substantially conforming in shape with the terminal of said bond but shallower, whereby such bond terminal will project beyond the face of the electrode, said electrode body having an opening extending from the upper side to such recess.

[Claims 6 to 10 not printed in the Gazette.]

1,170,752. DEVICE FOR LUBRICATING CAR OR LOCOMOTIVE WHEELS. FREDERICK W. HODGES, Detroit, Mich., assignor to Detroit Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed June 24, 1914. Serial No. 846,912. (Cl. 184—3.)



1. In a device for lubricating car or locomotive wheels, the combination of a lubricant pump carried on the vehicle and means for actuating the pump by the vibration of the vehicle operative at all the normal angles at which the vehicle travels.

2. In a device for lubricating car or locomotive wheels, the combination of an oil tank, a pump for taking the oil therefrom and delivering it to the wheel, and a device actuated by the vibration of the vehicle for operating the pump operative at all the normal angles at which the vehicle travels.

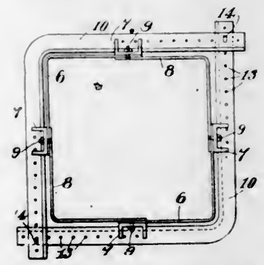
3. In a device for lubricating car or locomotive wheels, the combination of an oil tank, a pump for taking oil therefrom and delivering it to the wheel and a pendulum connected to the pump and oscillated by the vibration of the vehicle and operating the pump substantially without lost motion.

4. In a device for lubricating car or locomotive wheels, the combination of an oil supply vessel, a pipe leading therefrom to the wheel and a pendulum device normally inoperative and operated by the vibration of the vehicle in motion for controlling the flow of oil to the wheel at all normal angles at which the vehicle travels.

5. In a device for lubricating car or locomotive wheels, a force feed device for delivering the oil upon the wheel, normally inoperative, and means for operating it by and upon the oscillation of the vehicle in motion operative at all the normal angles at which the vehicle travels.

[Claims 6 to 15 not printed in the Gazette.]

1,170,753. ADJUSTABLE COLUMN-FORM. JESSE E. HODGES, Cincinnati, Ohio. Filed Feb. 1, 1915. Serial No. 5,361. (Cl. 25—131.)



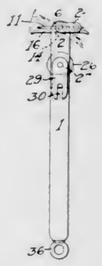
1. In a form for concrete columns, the combination of a series of angle plates adapted to form the corners of a mold body and adjustably secured together at their edges to form the sides of a mold body, a series of longitudinally extending notched braces located at intermediate points of the sides of the mold, and a series of transversely extending adjustable clamps located in the notches of the longitudinally extending braces and surrounding the mold.

2. In combination in a form for concrete columns, a series of angle plates having a series of apertures formed in their edges and adapted to be adjustably secured together by bolts located in registering apertures of adjacent plates, a series of longitudinally extending notched braces located at intermediate points of the sides of the mold, and a series of transversely extending clamps located in the notches of the longitudinally extending braces, embracing the joined plates and having a series of apertures formed therein, said transversely extending clamps being adapted to be secured together, and bolts located in registering apertures of coöperating clamps.

3. A form for concrete columns, comprising a series of angle plates adjustably secured together at their edges to form a mold, a series of longitudinally extending notched braces located at intermediate points of the sides of the mold, and a series of transversely extending adjustable clamps located in the notches of the longitudinally extending braces and surrounding the mold, each of said clamps comprising a rigid member adapted to embrace one half of the circumference of the mold, and a second rigid member adapted to coöperate with the first mentioned rigid member to adjustably engage the other half of the circumference of the mold.

4. In a form for concrete columns the combination of a series of angle plates having a series of transversely and longitudinally ailned apertures in their edges, adapted to be adjustably secured together by bolts located in registering apertures of adjacent plates, a series of longitudinally extending notched braces located at intermediate points of the sides of the mold, a series of transversely extending clamps located in the notches of the longitudinally extending braces, each of said clamps embracing the joined plates and comprising a rigid member adapted to embrace one half of the circumference of the mold, and a coöperating rigid member adapted to embrace the other half of the circumference of the mold, each of said members having a series of apertures formed in their ends, and bolts located in registering apertures of cooperating members.

1,170,754. COMBINED SAFETY-RAZOR AND RAZOR-BLADE SHARPENER. JOHN HOLTZMAN and MORRIS KOVER, New York, N. Y. Filed Mar. 29, 1915. Serial No. 17,718. (Cl. 30—12.)



1. A safety razor having the combination with a handle, of a fixed and rigid frame thereon, of a double-edged razor blade pivoted between its edges in said frame, a guard for said blade adaptable to be removed, mechanism for sharpening said blade when in pivoted state, and means to adjust said blade and maintain it locked at any angular shaving position.

2. A safety razór having the combination with a handle, and a frame thereon, of a razor blade pivoted in said frame, a removable guard for said blade, mechanism for sharpening said blade when in pivoted state, and

means to adjust said blade and maintain it locked at any angular shaving position.

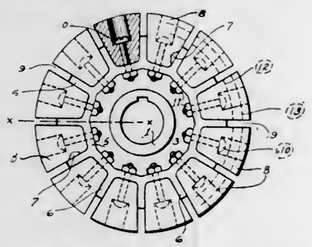
3. A safety razor having the combination with a handle, of a fixed and rigid frame thereon, of a razor blade pivoted in said frame, a removable guard for said blade, mechanism for sharpening said blade when in pivoted state, and means to adjust said blade and guard at any angular shaving position.

4. A safety razor having the combination with a handle, of a fixed and rigid frame thereon, of a razor blade pivoted to rotate in said frame at its shaving position, a guard for said blade, mechanism for sharpening said blade when in rotatable state, means to adjust said blade and guard in shaving position, and means for removably connecting said guard with and disconnecting it from said blade.

5. A safety razor having the combination with a handle, of a fixed and rigid frame thereon, of a shaft pivoted in said frame, a double-edged razor blade secured between its edges to said shaft, a guard adaptable to be removably connected to and disconnected from said blade and shaft, mechanism for sharpening said blade when in pivoted state, and means to adjust said blade and guard in shaving position.

[Claims 6 to 18 not printed in the Gazette.]

1,170,755. PULLEY. WILLIAM HUDDLE, Mansfield, Ohio, assignor to The Aultman & Taylor Machinery Company, Mansfield, Ohio, a Corporation of Ohio. Filed June 24, 1915. Serial No. 36,063. (Cl. 64—17.)



1. The combination in a pulley, of a hub having its ends cup-shaped and also having a series of radial plane surface longitudinal flanges extending from the periphery of the hub to form V shaped open pockets, and a series of plane surface longitudinal bars spaced apart by said flanges and clamped in the pockets thereby forming the periphery of the pulley.

2. In a pulley, a metal hub having its ends undercut, said hub also having a series of radial longitudinal flanges extending from the periphery of the hub to form a series of plane surface and tapered radial open pockets, a series of plane surface longitudinal wooden peripheral bars fitted to said pockets in spaced relation with respect to each other, and fastening means provided on each end of the bars to retain said bars in said pockets.

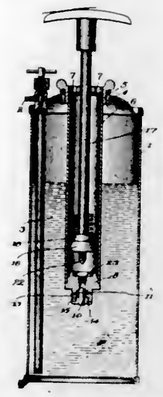
3. In a pulley, a hub having its ends cup-shaped and also having a series of radial plane surface flanges provided on the hub forming open pockets, a series of plane surface longitudinal wooden bars fitted to said pockets and held in spaced relation from each other by said flanges, and means to secure said bars in said pockets.

4. In a pulley a cup-shaped metal hub provided with a series of radial plane surface and open pockets, and a series of plane surface longitudinal wooden bars which are inserted in said pockets in spaced relation from each other to form the periphery of the pulley wth interstices between the wooden bars.

5. The herein described pulley, comprising a cup-shaped metal hub provided with a series of plane surface radial pockets, a series of plane surface longitudinal wooden bars which are inserted in said pockets to form the periphery of the pulley with interstices between the bars thereby forming a pulley of metal and wood, and a clamping means which affords facilities for interchanging said wooden bars by lifting them from their respective pockets and replacing them with others to vary the diameter and the face of the pulley without removing the pulley from the shaft upon which it is mounted.

[Claim 6 not printed in the Gazette.]

1,170,756. PUMP. JOHN M. KELLEY, Rochester, N. Y. Filed Mar. 16, 1914. Serial No. 825,080. (Cl. 169—12.)



1. A pump comprising a cylinder having an outlet, a piston, and a valve controlling said outlet, the piston carrying a projection rigid therewith and movable into engagement with the valve to open the communication.

2. A pump comprising a cylinder having an outlet, a piston and a valve controlling said outlet, the piston carrying a portion arranged to open the valve and to close the outlet when the piston is moved to open the valve.

3. A pump comprising a cylinder having an outlet, a piston and a valve controlling said outlet, the piston carrying a portion arranged to open the valve and to close the outlet, said portion being in the form of a projection arranged to enter and close said outlet prior to the opening of the valve.

4. A pump comprising a cylinder having an outlet, a piston, and a valve controlling said outlet, the piston carrying a portion arranged to open the valve and to close the outlet, said portion being in the form of a projection arranged to enter and close said outlet prior to the opening of the valve, and the walls of the outlet having interlocking screw threads so that the projection is advanced toward or removed from the valve as said projection is rotated.

5. A pump comprising a cylinder having a head formed with a discharge passage, a spring pressed valve arranged to close said passage, a cup-shaped leather piston operating in said cylinder, a piston rod carrying said piston and projecting beyond the latter to enter the discharge passage to close the latter and then to open the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,170,757. LIFTING AND MOVING DEVICE. HOWARD KENYON, Houston, Tex. Filed Feb. 20, 1915. Serial No. 9,522. (Cl. 21—114.)

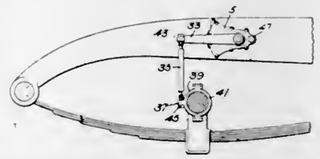


1. A device of the character described including a frame-work consisting of side-members and cross beams arranged in pairs and secured to said side-members, a pair of runners, upstanding braces arranged in pairs and fixed to the runners, the ends of the respective pairs of cross-beams being arranged between the members of the corresponding pairs of braces, bridges connecting said pair of beams at their respective ends, bearing members having internally threaded sockets fixed to said runners underneath the respective bridges, vertical shafts threaded into said sockets and whose upper ends support the respective bridges and by the manipulation of which said bridges and the frame-work supported thereby may be raised and lowered.

2. A device of the character described including a frame-work mounted upon carrier wheels and consisting of side members and cross beams arranged in pairs and secured to said side members, a pair of runners, upstanding braces arranged in pairs and fixed to the runners, the ends of the respective pairs of cross-beams being arranged between the members of the corresponding pairs of braces, bridges secured to said pairs of beams at their respective ends, bearing members having internally threaded sockets fixed to said runners underneath the respective bridges, vertical shafts threaded into said sockets and whose upper ends support the respective bridges and by the manipulation of which said bridges and the frame-work supported thereby may be raised and lowered, relative to said runners.

3. A device of the character described including a frame-work mounted upon carrier-wheels and consisting of side-members and cross-beams secured thereto, a pair of runners, upstanding braces arranged in pairs and fixed to the runners, the ends of the cross-beams being arranged between the members of the corresponding pairs of braces, bridges secured to said beams at their respective ends, bearing members having internal threaded sockets fixed to the said runners underneath the respective bridges, vertical shafts threaded into said sockets and whose upper ends have swivel-connections with the respective bridges and by the manipulation of which the frame-work and runners may be elevated and lowered relative to each other.

1,170,758. SHOCK-ABSORBER. DWIGHT F. KILGOUR, Lexington, Mass., assignor to Knojah Shock Absorber Company, Lexington, Mass., a Corporation of Massachusetts. Filed June 2, 1911. Serial No. 630,747. (Cl. 21—105.)



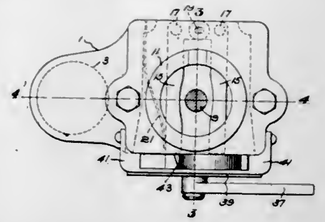
1. A shock absorber comprising, in combination, a sector-shaped fluid containing casing; and an arc-like partition therein having a multiplicity of comparatively small openings distributed laterally and graded longitudinally of said partition to present distributed fluid controlling friction surfaces; and a plunger fulcrumed in said casing and movable against the resistance offered to the passage of said fluid by said openings.

2. A shock absorber comprising in combination, a sector shaped fluid-containing casing having a curved wall; a curved partition spaced from said wall and dividing said casing into chambers, said partition having a multiplicity of graded and distributed fluid-controlling holes therethrough; and an oscillatory blade in one of said chambers for forcing the fluid from the fulcrum end of said blade along the latter through the holes in said partition to the opposite side of said blade.

3. A shock absorber comprising in combination, a sector shaped fluid-containing casing; a partition removably mounted in said casing and having a multiplicity of graded and distributed fluid-controlling holes extending therethrough; and an oscillatory plunger fulcrumed in said casing for forcing the fluid through the holes in said partition.

4. A shock absorber comprising in combination, a sector shaped fluid-containing casing 1; a partition 9 therein having a multiplicity of graded and distributed fluid-controlling holes extending therethrough; a cover plate 5; means to secure said plate to said casing; an oscillatory plunger 13 in said casing; and a shaft 15 for said plunger projecting out of said casing.

1,170,759. ELEVATOR-LOCK. DWIGHT F. KILGOUR, Lexington, Mass. Filed Sept. 29, 1914. Serial No. 864,178. (Cl. 187—33.)



1. An elevator lock comprising in combination, a block having a hole permitting the passage of a controlling cable therethrough, opposed bell crank jaws fulcrumed on said block and having pivotally connected arms, spring means tending to close the jaws, and means for opening the jaws comprising a cam pivoted on said block in front of said hole for engagement with one of said jaws and having a stop thereon for limiting the turning of the cam, a protecting plate connected to said block in front of said cam and, a handle for operating said cam, said plate having an index for indicating the positions of the handle for opening and closing the jaws.

2. An elevator lock comprising in combination, a block having opposed jaws fulcrumed thereon, and a hole permitting the passage of a controlling cable, means pivotally connecting said jaws, spring means tending to close said jaws, and means for opening said jaws including a cam pivoted on said block at the front of the block in advance of said hole for engagement with one only of said jaws, said cam having a stop for limiting the turning thereof and a handle for operating said cam.

3. An elevator lock comprising in combination, a member having jaws mounted thereon, spring means tending to close said jaws, and means for opening said jaws including a pivoted cam having a curved jaw engaging portion, and a straight terminal jaw engaging portion for preventing inadvertent turning of the cam, said cam being mounted for movement in opposite directions, and means to prevent overthrow in each direction.

4. An elevator lock comprising in combination, a member having opposed jaws mounted thereon, means for transmitting movement from one of said jaws to the other, spring means tending to close said jaws, and a cam pivoted on said member for engagement with one of said jaws and having stop shoulders for contact with opposite faces of said jaw to limit turning movements of said cam.

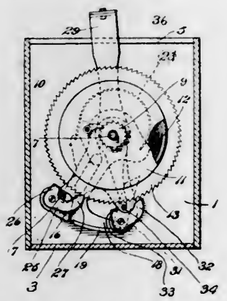
5. An elevator lock comprising in combination, a member having a hole for the passage of the controller cable and having jaws mounted upon said member, means for transmitting movement from one of said jaws to the other, spring means tending to close said jaws, a pin secured to said member in front of said hole, a disk-like cam also in front of said hole and fulcrumed on said pin for engagement with one of said jaws to open said jaws, a handle fast to said cam, and a protecting plate interposed between said cam and handle and secured to said member.

[Claims 6 to 8 not printed in the Gazette.]

1,170,760. SPRING-MOTOR. FRANK KOPERSKI, Bay City, Mich., assignor of one-half to Kasimar E. Niedzielski, Bay City, Mich. Filed Aug. 4, 1915. Serial No. 43,627. (Cl. 185—46.)

1. In combination, a shaft, an arm pivotally mounted between its ends on the shaft and having said ends ex-

tending upwardly and downwardly from the shaft, a disk provided with a continuous series of teeth at its periphery rotatably mounted on the shaft, a spring connected to the shaft and disk tending to rotate the disk, a relatively stationary member, a dog mounted thereon adjacent the disk, an irregularly shaped member loosely carried by the shaft, an arm on said member adjacent the dog, a spring interposed between the stationary and irregularly shaped members operating said last member against the dog to bring it into engagement with the disk, a dog pivotally mounted at the lower end of the arm, an arm on the irregularly shaped member interposed in the path of movement of the dog as the first arm oscillates, bringing the dog carried thereby momentarily into engagement with the disk and freeing the dog on the stationary member from the disk.



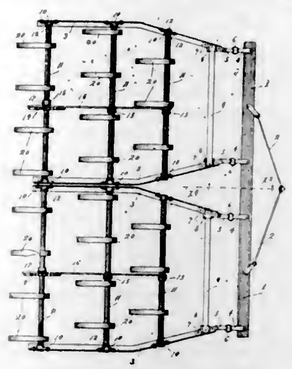
2. In combination, a shaft, an arm pivotally mounted between its ends on the shaft having one end extending downwardly and the other upwardly from the shaft, a disk provided with a continuous series of teeth at its periphery rotatably mounted on the shaft, a spring connected to the shaft and disk tending to rotate the disk, a relatively stationary member back of the disk and extending in a downward direction and having a part bent back upon the body of the member, a dog pivotally mounted on said part having an extension bent inwardly over said part, an irregularly shaped member loosely carried on the shaft between its stationary member, and the pivotally mounted arm, an arm to said member adapted to engage against the extension to the dog, a spring interposed between the irregularly shaped and stationary members operating upon the former to bring said arm thereof against said extension to the dog, a dog on the lower end of the pivotally mounted arm located adjacent the disk, and a second arm on said irregularly shaped member interposed in the path of movement of the dog as said pivotally mounted arm oscillates, and acting to momentarily bring said dog into engagement with the disk simultaneously with the freeing of the dog on the stationary member from the said disk.

1,170,761. SPRING-TOOTHED HARROW. JOSEPH J. KOVAR, Dodge Center, Minn. Filed Jan. 23, 1914. Serial No. 813,872. (Cl. 55—104.)

1. In a harrow, the combination with a common equalizing beam, of a harrow comprising laterally spaced drag-bars flexibly connected, at their front ends, to said equalizing beam, transverse rock shafts flexibly connected, at their ends, to said drag bars, harrow teeth applied to said rock shafts, and a front cross bar flexibly connected, at its ends, to the front ends of said drag bars.

2. In a harrow, the combination with a common equalizing beam, of a harrow made up of several units, each unit comprising laterally spaced drag bars flexibly connected, at their front ends, to said equalizing beam, rock shafts, flexible joints, loosely connecting said rock shafts, at their ends, to said drag bars for movement in a horizontal plane, harrow teeth applied to said rock shafts, means for oscillating the respective rock shafts to adjust the harrow teeth of each unit, and a front cross bar flexibly connected, at its ends, to the front ends of the respective drag bars.

3. A harrow comprising a pair of laterally spaced drag-bars having upwardly bent forwardly converging front ends, transverse rock-shafts, flexible joints, loosely connecting the rock-shafts at their ends to the drag-bars for

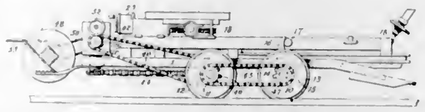


movement in a horizontal plane, harrow-teeth applied to the rock-shafts, and a cross-bar connecting the forward ends of the drag-bars and limiting their lateral swinging movement.

1,170,762. PROCESS OF CANNING SARDINES. EDWARD M. LAWRENCE, Lubec, Me. Filed July 30, 1915. Serial No. 42,775. (Cl. 99—8.)

The herein described process of canning sardines which consists in packing the raw fish in open cans, covering the open cans with a screen, inverting the open cans, subjecting the fish in the inverted open cans to heat to sterilize and cook them and then frying them in oil.

1,170,763. MINING-MACHINE AND TRUCK. NILS D. LEVIN, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Apr. 25, 1910, Serial No. 557,432. Renewed June 18, 1914, Serial No. 845,975. (Cl. 105—32.)



1. The combination of a wheeled truck, a mining machine having a clutch element arranged with its axis perpendicular to the longitudinal lines of the machine, a mating clutch element on the truck arranged with its axis perpendicular to the longitudinal lines of the track and mounted so as to be movable through a limited area in a plane perpendicular to its axis, and power transmitting gearing connecting the movable clutch element with the truck wheels.

2. The combination of a truck body, flanged track wheels, and a clutch element adapted to mate with another clutch element on a mining machine on the truck, said clutch element being arranged with its axis vertical, a power transmitting shaft on the truck, a shaft coupling between the shaft and clutch element permitting the latter to rotate in engagement with the mining machine clutch element at any position within a limited area in a plane perpendicular to its axis, and power transmitting gearing between the shaft and truck wheels.

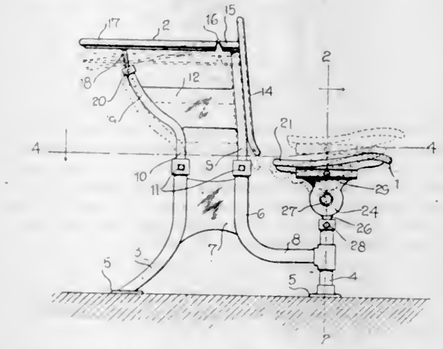
3. The combination of a truck frame adapted to receive and carry a mining machine thereon, wheels supporting said frame and a train of gearing on the truck frame connected to the truck wheels and comprising coupling devices adapted to connect with power devices on said mining machine when it is in position upon the truck frame and a manually operable reversing mechanism, whereby the truck can be propelled in either direction by the power devices on the mining machine.

4. The combination of a truck frame, wheels on the truck, a train of power transmitting gearing on the truck adapted to be connected at one end with power mechanism on the body carried by the truck and connected at the other end to the truck wheels, manually controllable reversing mechanism in the said train, a reel mounted on the truck, a flexible conductor wound on the reel, and power transmitting gearing connecting the reel to an element in the said train located operably between the reversing mechanism and the wheels.

5. The combination of a truck frame, a pair of axles mounted thereon, a pair of supporting wheels mounted on the rear axle, a pair of crank arms on the ends of the front axle, supporting wheels rotatably mounted on the outer ends of the crank arms, and levers rigidly secured to the crank arms and arranged to be engaged by the body carried by the truck as it is moved onto the truck.

[Claims 6 to 10 not printed in the Gazette.]

1,170,764. SCHOOL FURNITURE. ARTHUR JOHN LEWIS and LLEWELLYN HENRY JOHNSTON, Sovereign, Saskatchewan, Canada. Filed Nov. 17, 1913. Serial No. 801,476. (Cl. 155—34.)

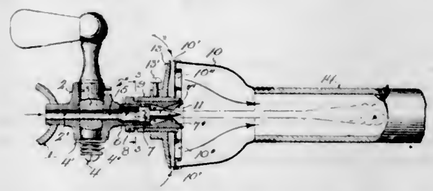


A combined seat and desk comprising side sections, each section including lower vertically disposed tubular members integrally connected adjacent their upper extremities by an intervening web, upper members telescopically engaged with the lower members and integrally connected by an intervening web, means carried by the lower members coacting with the upper members for holding the members against relative movement, the forward upper members of each of the sections being disposed on a forward and upward curve and having their upper extremities terminating below the upper extremities of the rear members, a cross member supported by the upper extremities of the rear upper members, a desk top hingedly engaged with said cross member, depending arcuate arms depending from the free portion of the desk top and adapted to telescopically engage the upper extremities of the forward upper members, and clamping screws adjustable through the outer extremities of the forward upper members adapted to engage the depending arms of the desk top to maintain the desk top in its adjusted position.

1,170,765. MIXER FOR FLUID-FUEL BURNERS. WALTER C. LINDEMANN and KEY D. CAMP, Milwaukee, Wis., assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Oct. 21, 1914. Serial No. 867,851. (Cl. 158—118.)

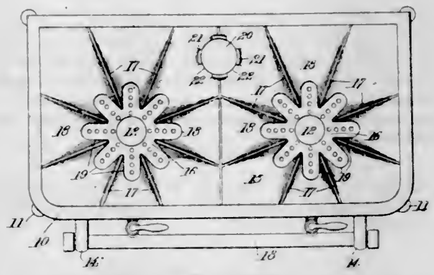
1. In a structure of the class described the combination with a valve including a discharge nipple of a sleeve threaded on the discharge nipple and extending outwardly thereof with its outer bore portion reduced, a plug in the sleeve for coaction with said reduced portion and a flattened head on the plug threaded in the discharge nipple.

2. In a structure of the class described the combination of a sleeve member having its bore taperingly reduced at one end, a plug in the sleeve having one end taperingly reduced at a pitch corresponding with the pitch of the said reduced bore, and said reduced end of the bore being enlarged adjacent the end of the sleeve to form a cupped portion at said end of the sleeve into which the end of the plug projects and a mixing tube disposed axially with respect to the sleeve, the only opening in said cupper portion being the said bore.



3. In a structure of the class described the combination with the discharge nipple of a valve, of a sleeve threaded on the nipple and having one end projected there past and reduced, a plug carried by the nipple in the sleeve to coact with said reduced end, a second sleeve loose on the first sleeve, a mixing tube disposed axially with respect to the sleeves, an apertured end plate carried by the mixing tube and secured to the loose sleeve and an air adjusting disk adjustably carried on the loose sleeve.

1,170,766. TOP FOR GAS-RANGES. MARTIN W. LONGFELLOW, Baltimore, Md., assignor to The Baltimore Gas Appliance and Manufacturing Company, Baltimore, Md., a Corporation of Maryland. Filed Jan. 12, 1914. Serial No. 811,574. (Cl. 126—214.)



1. A top for gas ranges and the like comprising a plate formed of a single piece of metal having openings adapted to register with gas burners, said plate having an undulating top surface between and around all of said openings, the depressed portions of said surface forming draining channels for the areas between said openings, and adapted to coöperate with a vessel upon said plate to form flues leading from the burners.

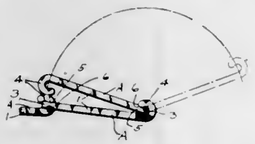
2. A top for gas ranges and the like comprising a plate provided with openings adapted to register with gas burners, the top surface of said plate having undulations radiating from and surrounding the respective openings, the depressed portions of said surfaces forming draining channels for the areas between said openings and adapted to coöperate with a vessel upon said plate to form flues leading from the burners.

3. A top for gas ranges and the like comprising a plate formed of a single piece of metal provided with spaced apart openings adapted to register with the gas burners, and having alternating ridges and depressions between and around the respective openings, the depressions forming draining channels for the areas between said openings, and adapted to coöperate with a vessel upon said plate to form flues leading from the burners.

4. A top for gas ranges and the like comprising a plate formed of a single piece of metal having openings adapted to register with gas burners, said top plate having an undulating surface between and around the respective openings, the depressed portions of said surface forming draining channels for the areas between said openings, and adapted to coöperate with a vessel upon said plate to form flues leading from the burners, the depressed portions being provided with radiating recesses arranged around said openings.

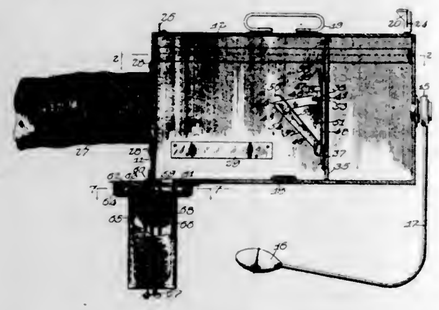
5. A top for gas ranges and the like comprising a plate formed of a single piece of metal provided with spaced apart openings adapted to register with the gas burners and having alternating ridges and depressions between and around the respective openings, the depressions forming draining channels for the areas between said openings, and adapted to coöperate with a vessel upon said plate to form flues leading from the burners, in combination with ring grates located in said openings and provided with raised ribs in prolongation of said ridges.

1,170,767. BRACELET. ANDREW H. LOTT, St. Louis, Mo. Filed May 24, 1915. Serial No. 30,021. (Cl. 59—80.)



As a new article of jewelry, a bracelet-link having a body-portion provided at one end only with a hinge-slot and at its other end with a longitudinally-projecting attaching-hook of reduced width to fit the hinge-slot of and thereby engage with a second link, the distance between the bill and shank of said hook being less than the thickness of the end of said body-portion having said hinge-slot, said body-portion being transversely provided on one face with a groove in alinement with said slot to slidably accommodate, as described, the sidewise detachable pivot-engagement with said end-bar of the attaching-hook of a third link.

1,170,768. CAMERA. MANDEL MANDEL and LOUIS MANDEL, Chicago, Ill. Filed Apr. 12, 1912. Serial No. 690,260. (Cl. 95—13.)



1. A camera having separate compartments, a light-tight entry to the interior of one compartment, and a closable device to provide communication between the compartments.

2. A camera having a partition forming two separate compartments, a lens in the walls of one compartment, means impervious to light to form an entry to the interior of the other compartment, and means to open the last named compartment to the first named compartment.

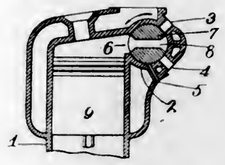
3. A camera having an apertured partition forming compartments, a lens in the end of one compartment, means impervious to light in the end of the other compartment to form an entry thereto, and an exposure device operable from the last named compartment.

4. A camera having an apertured partition forming compartments, a lens in the end of one compartment, means impervious to light in the end of the other compartment to form an entry thereto, and an exposure device secured to the partition and operable from the last named compartment.

5. A camera having an apertured partition forming compartments, a lens in the end of one compartment, means impervious to light in the end of the other compartment to form an entry thereto, and an exposure device secured to the partition and operable from the last named compartment to open and close the aperture.

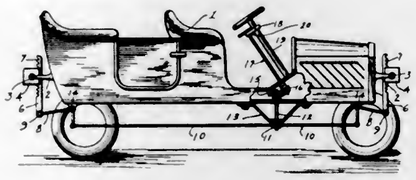
[Claims 6 to 58 not printed in the Gazette.]

1,170,769. INTERNAL-COMBUSTION ENGINE. CHAMPION MAYFIELD, Kansas City, Mo. Filed June 7, 1915. Serial No. 32,560. (Cl. 123—190.)



In an internal combustion engine, the combination with a cylinder of a communicating valve casing having intake, exhaust and auxiliary ports, of a rotary valve journaled in the casing and provided with a single port for establishing communication successively between the intake port and the cylinder, the intake port and the auxiliary port and the cylinder and the exhaust port.

1,170,770. DIRECTION-INDICATOR. HOWARD G. MILLER, Mansfield, Ohio. Filed May 28, 1915. Serial No. 31,076. (Cl. 40—77.)

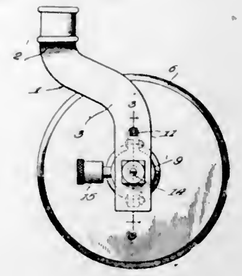


An automobile direction indicator including an arm connected to the automobile and adapted for movement about its center, a signal mounted at each end of the automobile, and operating means between the respective ends of the arm and the respective signals, each of said operating means including a link, a movably supported bell crank lever, a rack bar and a pinion, the said link, bell crank, rack bar and a pinion operating in substantially the same vertical plane.

1,170,771. LUBRICATING MEANS FOR DISK COLTERS. STANLEY P. MILLER, Minto, N. D. Filed May 24, 1915. Serial No. 30,083. (Cl. 64—66.)

1. In combination, a pair of spaced arms for attachment to a plow or the like, a shaft spanning the space between said arms, a hub rotatably mounted on said shaft and having its ends spaced from the arms, and a pair of dust caps having inner sides of two diameters, the smaller diameters being disposed around the shaft between the hub and the arms, and the larger diameters receiving therein the opposite ends of the hub.

2. In combination, a pair of spaced arms, for attachment to a plow or the like, a shaft spanning the space between the two arms, a hub member rotatably mounted on said shaft and having its ends spaced from the arms, and a pair of dust caps secured to the arms and having bores of two diameters, the smaller diameters being disposed around the shaft between the arms and the hub and the larger diameters receiving therein the opposite ends of the hub.



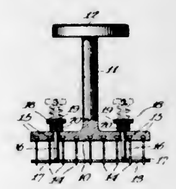
3. In combination, a pair of spaced arms, for attachment to a plow or the like, a shaft spanning the space between the two arms, a hub rotatably mounted on said shaft and having its ends spaced from the arms, and cap members surrounding said ends of the hub and the portions of the shaft between the same and the arms.

4. In combination, a pair of spaced arms for attachment to a plow or the like, a shaft spanning the space between the two arms, a hub rotatably mounted on said shaft and having its ends spaced from the arms, cap members secured to the arms and surrounding said ends of the hub and the portions of the shaft between the same and the arms.

5. In combination, a pair of spaced arms for attachment to a plow or the like, a shaft spanning the space between said arms, a hub rotatably mounted on said shaft and having its ends spaced from the arms, annular flanges surrounding said ends of the hub, and a pair of cap members disposed on the shaft between the flanges and the arms and having internal grooves receiving the former.

[Claim 6 not printed in the Gazette.]

1,170,772. MEAT-TENDERER. MYRON J. MITCHEL, Philadelphia, Pa. Filed Feb. 26, 1915. Serial No. 10,725. (Cl. 17—27.)



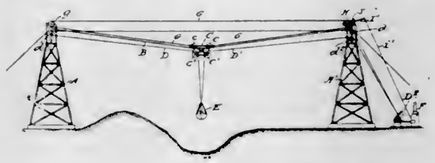
A meat tenderer including a base plate provided with an operating member at substantially the axial center thereof and having two radially alined apertures, disposed at opposite sides of the axial center of the plate tines projecting from the plate in a direction opposite to the operating member, a stripping plate provided with apertures through which the tines of the base plate are freely directed, bolts detachably engaged with the stripping plate and freely directed through the apertures of the base plate, finger plates detachably engaged with the outer extremities of the bolts, and an expansible member surrounding each of the bolts and interposed between the base plate and the finger plate.

1,170,773. POULTRY-FEEDER. GEORGE H. MOORE, New Castle, Pa. Filed Mar. 15, 1915. Serial No. 14,379. (Cl. 119—70.)



A poultry feeder comprising a grain receptacle having a centrally arranged discharge opening in its bottom wall, an inner receptacle arranged concentrically of the grain receptacle and having its lower edge spaced from the bottom of the grain receptacle by means of integral legs which pass through the bottom wall of the grain receptacle, means adjustable with relation to the bottom edge of the inner concentric receptacle to adjust the space between the lower edge thereof and the bottom of the grain receptacle, a bait rod movable within the discharge opening of the grain receptacle, and secured in place by its engagement with the upper wall of the inner concentric receptacle, and an agitator carried by the bait rod and spaced from the bottom of the grain receptacle, the legs of the inner concentric receptacle adapted to limit the rotating movement of the agitator.

1,170,774. HOISTING AND CONVEYING MECHANISM. CHARLES A. MORRIS, Montclair, N. J., assignor to The Hayward Company, a Corporation of New York. Filed Dec. 22, 1909. Serial No. 534,530. (Cl. 212—88.)

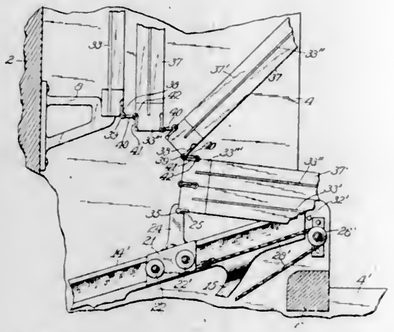


1. In a system for hoisting and conveying, the combination with an aerial track, a load-supporting carriage movable thereon, and power cables for imparting traversing movement to said carriage and for handling the load, of a friction drum supported in a raised position relative to the track, brake mechanism coöperating with the friction drum, said brake mechanism being controllable from a distant point, an idle second drum positioned adjacent to the friction drum and to said track, an endless controlling cable connected to the carriage and looped or wrapped alternately around the friction drum and the second drum, said controlling cable being independent of the power cables and receiving motion from the traversing movement of the carriage so as to rotate the friction and second drums, retaining means contacting with the runs or loops of the cable and positioned between the friction drum and the second drum for directing the runs of the controlling cable in predetermined paths with respect to said drums, and a third drum free from frictional contact with the looped portions of the controlling cable, said third drum being positioned between, and in engagement with, said friction drum and second drum.

2. In a system for hoisting and conveying, the combination with a traveling carriage, and a controlling cable therefor, of a plurality of grooved drums around which

said cable is alternately wrapped or looped, and directing means separate from, and positioned between, said drums for frictional engagement with the runs or looped portions of the cable, whereby the looped portions of the cable are precluded from frictional contact with each other.

1,170,775. FILING APPLIANCE. EMERSON B. MOSELEY, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Original application filed Nov. 30, 1910, Serial No. 594,817. Divided and this application filed Mar. 23, 1912. Serial No. 685,898. (Cl. 129—34.)



1. A filing appliance including a plurality of recessed filing leaves, and folding devices extending into the recesses and connecting the leaves together hingedly and also with a movement of separation each with respect to the adjacent one.

2. A filing appliance including a plurality of recessed filing leaves, and foldable hinges connecting the leaves together and folding into the recesses, each hinge having two hinge-pins and a link connected thereto.

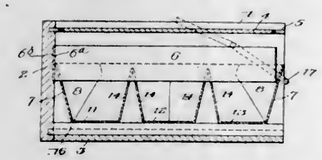
3. A filing appliance including a plurality of leaves, devices on the leaves for holding papers thereon, and hinging devices comprising interfolding plates between the leaves connecting each two adjacent leaves together and pivoted thereto at different distances from the ends thereof.

4. A filing appliance including a plurality of recessed leaves, bill-holding devices on the leaves, and a plurality of hinges comprising each a link and two hinge-plates pivotally connected thereto, one of the hinge-plates being secured to one and the other to an adjacent one of the leaves in the recess thereof.

5. A filing appliance including a plurality of assembled upright filing leaves having each a hinge-pin on the lower forward portion thereof, the leaves having also a hinge-pin on the rear or opposite side above the lower end thereof, and a link connected pivotally to the two hinge-pins of adjacent leaves.

[Claims 6 to 14 not printed in the Gazette.]

1,170,776. EGG CARRYING AND DELIVERING DEVICE. JOHN P. NAGLE, Rochester, N. Y. Filed Apr. 11, 1914. Serial No. 831,133. (Cl. 217—18.)



1. An egg carrier comprising a casing having an intake opening at its top and a discharge opening in one of its vertical sides, a receptacle arranged in the bottom of the casing to support the lower ends of eggs within the casing and removable through the discharge opening, and dividers arranged in the casing above the receptacle and formed to permit the eggs to move laterally between such dividers toward and through the discharge opening as the receptacle is withdrawn.

2. An egg carrier comprising a casing having an intake opening at its top and a discharge opening in one of its vertical sides, a receptacle arranged in the bottom of the casing to support the lower ends of eggs within the casing and removable through the discharge opening, and a plurality of substantially parallel dividers, separated between their ends and extending toward the discharge opening so that the eggs may move laterally between such dividers toward and through the discharge openings as the receptacle is withdrawn.

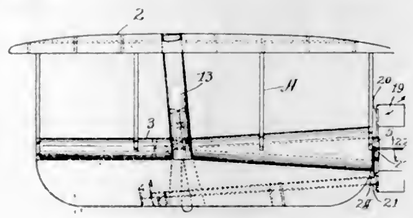
3. An egg carrier comprising a casing having an intake opening in its top and a discharge opening in one of its vertical sides, a receptacle arranged in the bottom of the casing to support the lower ends of eggs within the casing and removable through the discharge opening, and a plurality of substantially parallel dividers secured to the vertical wall opposite the discharge opening and projecting toward the discharge opening, the dividers being separated between their ends so that the eggs may move laterally between such dividers toward and through the discharge openings as the receptacle is withdrawn.

4. An egg carrier comprising a casing having an intake opening at its top and a discharge opening in one of its vertical sides, a receptacle arranged in the bottom of the casing to support the lower ends of eggs within the casing and removable through the discharge opening, and a plurality of substantially parallel dividers formed from a single strip of sheet material bent between its ends to provide the dividers and having the other portions secured to the vertical side opposite the discharge opening.

5. An egg carrier comprising a casing having an intake opening in its top wall and a discharge opening in one of its vertical sides, a receptacle arranged in the bottom of the casing to support the lower ends of eggs within the casing and removable through the discharge opening, separating means carried by the casing to hold the eggs separated within the receptacle, and a bail movably arranged on the casing to bridge the discharge opening in order to prevent the removal of the the receptacle.

[Claims 6 to 11 not printed in the Gazette.]

1,170,777. AEROPLANE. ROLLAND H. NEAL, Lake City, Minn. Filed Sept. 18, 1915. Serial No. 51,492. (Cl. 244—18.)



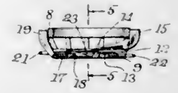
1. An aeroplane of the class described comprising a framework and a rigidly supported plane, a propulsion tube extending longitudinally of said aeroplane and having an enlarged rear end, a tapered cone centrally positioned in the enlarged end of said tube, and means for drawing the air into the smaller end of said tube and forcing it out of the flared end around said cone.

2. An aeroplane of the class described comprising a framework and a rigidly supported plane, a propulsion tube extending longitudinally of said aeroplane and having an enlarged rear end, a tapered cone centrally positioned in the enlarged end of said tube, means for drawing the air into the smaller end of said tube and forcing it out of the flared end around said cone comprising a fan positioned toward the inlet end of the tube, and a discharge fan at the rear of said indrawing fan, and means for actuating said fans.

3. An aeroplane of the class described comprising a framework and a rigidly supported plane, a propulsion tube extending longitudinally of said aeroplane and having an enlarged rear end, a tapered cone centrally positioned in the enlarged end of said tube, means for drawing the air into the smaller end of said tube and forcing it out of the flared end around said cone, and a plurality of similar suction tubes extending vertically of said aeroplane with the smaller ends opening into the top of the plane and the flaring ends at the bottom thereof.

4. An aeroplane of the class described comprising a framework and a rigidly supported plane, a propulsion tube extending longitudinally of said aeroplane and having an enlarged rear end, a tapered cone centrally positioned in the enlarged end of said tube, means for drawing the air into the smaller end of said tube and forcing it out of the flared end around said cone, and vertical and horizontal guiding rudders for said machine.

1,170,778. SAFETY-FASTENING FOR JEWELRY. IVER NIELSEN, New Rochelle, N. Y. Filed Apr. 14, 1915. Serial No. 21,201. (Cl. 24—230.)



1. In a safety fastening for jewelry, the combination of a frame, a click formed of a slide and a spring engaging said frame, a pusher for depressing said spring, a detent spring mounted on said frame and having a projection engaging said click, and a pusher for depressing the detent spring in the same direction as the click spring.

2. In a safety fastening for jewelry, the combination of a frame having a base and guides, a click formed of a slide and spring, and adapted to engage said guides, and a detent spring mounted on said base beneath the click and having a projection for locking the same.

3. In a safety fastening for jewelry, the combination of a setting formed of a frame for holding a jewel and having a base and guides, a click comprising a spring and slide adapted to engage said guides beneath the jewel, and a detent spring mounted on said base and having a projection engaging said click.

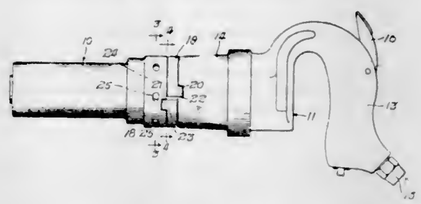
4. In a safety fastening, the combination of a setting formed of a frame for holding a jewel, a click detachably connected to said frame beneath the jewel, and a detent spring mounted on the frame below the click and having a projection for locking the same.

5. In a safety fastening, the combination of a setting formed of a frame for holding a jewel, a click having a spring for detachably engaging said frame, a pusher at one side of the frame for depressing said spring, a detent spring mounted on the frame for engaging said click, and a pusher for said detent spring located at the other side of the frame.

[Claim 6 not printed in the Gazette.]

1,170,779. HANDLE-LOCKING DEVICE FOR PNEUMATIC TOOLS. REINHOLD A. NORLING, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Delaware. Filed May 24, 1915. Serial No. 29,999. (Cl. 151—2.)

1. A pneumatic tool, comprising a handle member and a body member adapted to be connected together at adjacent ends by the relative rotation of said members in one direction, and means for locking said members from rotation in the opposite direction, comprising a circumferentially adjustable member mounted on one of said members intermediate its ends and adapted to be locked thereto in one of several adjusted positions, and a resilient tension member interposed between and connected with said adjustable member and with the end of the other of said members, said adjustable member being adapted to vary the tension of said resilient member.



2. A pneumatic tool, comprising a handle member and a body member having screw-threaded end portions adapted to be screwed tightly together, and means for locking said members together, comprising a resilient member adapted to be connected at one of its ends to the end of one of said members, and a circumferentially adjustable member mounted on the other of said members intermediate of its ends and connected with the opposite end of said resilient member.

3. A pneumatic tool, comprising a handle member a barrel member adapted to have threaded engagement with said handle member, one of said members being provided with a threaded socket adapted to receive a threaded end of the other member, a circumferentially adjustable member mounted on one of said members intermediate its ends and adjacent to the socket of the other of said members, and a resilient member interposed between and connected with said adjustable member and the margin of said socket.

4. A pneumatic tool, comprising a handle provided with a socket, a barrel having screw-threaded connection with said socket, a peripherally resilient member surrounding said barrel adjacent to the said socket and connected at one of its ends to said handle member, and a rotative collar mounted on said barrel and connected with the opposite end of said resilient member, said collar being adapted to be rotated to vary the tension of said resilient member and to be locked to said barrel in one of several adjusted positions.

5. A pneumatic tool, comprising a barrel, a handle provided with a socket adapted to have screw-threaded engagement with one end of said barrel, a split tension ring surrounding said barrel and connected at one end to said handle, a tension adjusting member connected to the other end of said ring and interposed between said ring and said barrel, and means for locking said adjustable member to said barrel.

[Claims 6 to 10 not printed in the Gazette.]

1,170,780. CHAIN CONSTRUCTION. FRED B. PARKS, Grand Rapids, Mich. Filed Feb. 16, 1911. Serial No. 609,070. (Cl. 59—78.)



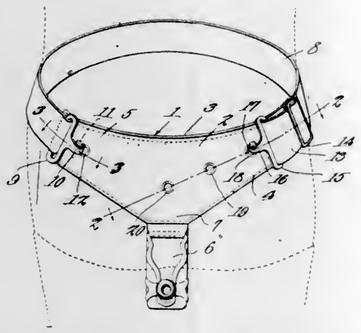
1. A chain composed of links each made of a single bar having a half globe at each end, one of said half globes having a hole concentrically located through it, a pin integral with and projecting from the surface of the other half globe in position so that the pin on each link may be passed through the hole in the half globe on the adjacent link to interlock the links.

2. A chain composed of a series of links each made of a single bar, a half globe formed on each end of each bar, one of said halves having a hole centrally located through it with the meeting surface of the half-globe projecting outward in conical form, the other of said half globes being made concave on the meeting surface, a pin integral and concentric with said half globe and projecting out-

ward therefrom in position to pass through the hole in the adjacent half globe in the chain and be riveted therein to form flexible chain construction.

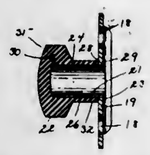
3. A chain composed of links each having a half globe on one end with a depression in the meeting surface and a pin concentric therewith and projecting outward therefrom, a half globe at he other end having a protrusion from the meeting surface and a hole concentric therewith through the half globe, said half globes, pins and holes made to register to form a flexible joint between links.

1,170,781. GARTER. HOLMES ERWIN PENN, Madison, N. C., assignor to Penn Bros. Suspender Company, Inc., Madison, N. C. Filed Sept. 16, 1914. Serial No. 862,095. (Cl. 241—6.)



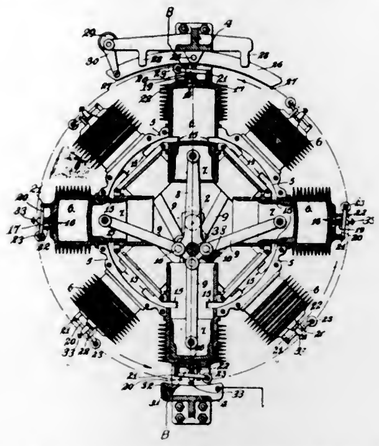
A garter of the type described embodying an approximately triangular pad having a clasp depending from its lower apical portion, and having a series of eyelets between the center of the pad and one end thereof, and an elastic having one end attached to the other end of the pad and having a hook at its other end engageable through said eyelets, said series of eyelets being arranged in the line of strain between the pad and that end of the elastic having the hook, so that there is no tendency to destroy the equilibrium of the pad when the hook is engaged through any of said eyelets.

1,170,782. HOSE-SUPPORTER STUD AND LOOP. GEORGE E. PRENTICE, New Britain, Conn., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn., a Corporation. Filed Feb. 5, 1915. Serial No. 6,346. (Cl. 24—245.)



In a stud and loop combination, a stud member comprising a body plate having a hole and a unitary structure mounted thereon comprising a core member and a cushion member supported thereby, the said core member comprising a tubular barrel portion of uniform cross-section having an open outer end and fitting and extending through the said hole and having the inner end headed over suitably to engage with the rear face of the body plate, the said cushion member comprising a head portion closing the outer end portion of the said core member and a shank portion extending from the said head portion along the said barrel portion, and the said shank portion having the inner end engaged with the opposed face of the said body plate.

1,170,783. INTERNAL-COMBUSTION ENGINE. LEONARD BROOKES STEDMAN, Victoria, British Columbia, Canada. Filed June 26, 1914. Serial No. 847,450. (Cl. 123—44.)



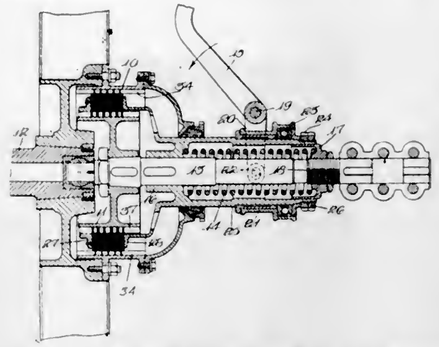
1. In a two cycle internal combustion engine of the rotary cylinder type, the combination with the rotating cylinders and pistons, the stationary crank shaft, the connecting rods between the pistons and the crank shaft, the exhaust valves and their operating devices and the piston controlled by-pass ducts between the working chambers of the cylinders and the crank case, of means for supplying gaseous fuel to within the casing under pressure, scoops for scooping air into the crank case during rotation of the engine to act with the gaseous fuel and form the working charge, check valves for controlling the passage of air through said scoops.

2. In an internal combustion engine of the rotary cylinder two cycle type, the combination with a fixed crank shaft, the rotatable closed crank case, the cylinders, pistons, connecting rods, exhaust valves, and by-pass ducts between the crank case and the working chambers of the respective cylinders; of scoops having check valves, the opening of which is governed by the rotation of the crank case for forcing air into the crank case, and means for admitting fuel into the crank case to unite with the air and form the working charge.

3. In an internal combustion engine of the rotary cylinder two cycle type, the combination of rotating cylinders and pistons, a stationary crank shaft, connecting rods between the pistons and the crank shaft, said cylinders having piston controlled charge inlet ports in communication with the crank case, exhaust valves in the heads of said cylinders, means for opening said exhaust valves at intervals, means for passing gasolene into said crank case, air scoops on said crank case and designed to take air when said crank case is rotated in either direction, check valves for said air scoops, and means for igniting the charge in the cylinders at intervals.

1,170,784. CLUTCH. OTTO F. SUNDEN, Brockton, Mass., assignor of one-half to Eldon B. Keith, Brockton, Mass. Filed Apr. 30, 1915. Serial No. 24,914. (Cl. 192—10.)

1. In a multiple disk friction clutch, a rotary driving member, a rotary driven member, a series of groups of disks including two groups coacting with one of said rotary members and a third group arranged between said two groups and coacting with the other one of said rotary members, each of said two groups comprising a metal disk and a disk of heat-insulating friction material fastened thereto, each said metal disk having splined engagement with said one of said rotary members and each said disk of heat-insulating material being arranged to coact with said third group, said third group comprising a plurality of contiguous disks of thin flexible metal having splined engagement with said other one of said rotary members, and means arranged to press said disks against each other to apply the clutch.



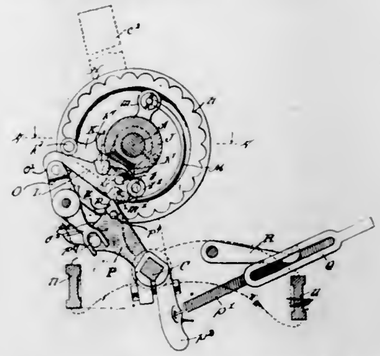
2. In a multiple disk friction clutch, a rotary driving member, a rotary driven member, a series of groups of disks including two groups coacting with one of said rotary members and a third group arranged between said two groups and coacting with the other one of said rotary members, each of said two groups comprising a plurality of contiguous disks of thin flexible metal, said third group comprising three disks, to wit, two disks of heat-insulating friction material and a metal disk between and fastened to said two disks, said metal disk having splined engagement with said other one of said rotary members, the two inner disks of said two groups having splined engagement with said one of said rotary members, and means arranged to press said disks against each other to apply the clutch.

3. A multiple disk friction clutch comprising a rotary driving member, a rotary driven member, a series of disks carried by said driving member, a series of disks carried by said driven member, one of said series comprising a plurality of sub-groups each of which has three disks, to wit, two heat-insulating friction disks and a metal disk interposed between and fastened to said two disks, the several said metal disks having splined engagement with one of said members, the other one of said series comprising a plurality of sub-groups arranged to alternate with the first said sub-groups, each sub-group of said other series comprising a plurality of relatively thin flexible metal disks, the latter disks having splined engagement with the other one of said members, and means arranged to press said disks against each other.

1,170,785. CORN-PLANTER CLUTCH MECHANISM. JOHN TEDELL, Moline, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed May 5, 1910. Serial No. 559,466. (Cl. 192—6.)

1. In a planter, a rotary shaft, a clutch member which is loose on said shaft, a connection for driving said clutch member, said clutch member being provided internally with an endless series of notches, a rotary element connected to the shaft, a pivoted dog on said rotary element, adapted to engage said notches, a spring adapted to hold said dog either in or out of said notches, a pivoted element associated with said dog, a rock shaft provided with means for engaging said pivoted element to cause the dog to engage one of said notches, means for engaging said pivoted element to disengage the dog from said notches, and means for preventing disengagement of the dog from the notches until the shaft reaches a predetermined point in its rotation.

2. In a planting machine, a rotary shaft, a clutch member which is loose on said shaft, a connection for driving said member, a hub on said shaft, a pivoted dog on said hub, said dog adapted to engage the interior of said clutch member to enable the latter to rotate the hub, a pivoted element associated with said dog, said pivoted element being provided with a hook-shaped portion at one end and a roll at the other end thereof, a lever provided with means for engaging said hook-shaped portion to throw the dog out of engagement with the clutch member, a rock shaft provided with means for engaging said roll to throw the dog into engagement with the clutch member, a spring adapted to hold the dog either in or out of engagement with the clutch member, and means for moving said lever out of the path of the hook-shaped portion when the rock shaft is actuated.



3. In a planting machine, a rotary shaft, a clutch member which is loose on said shaft, a connection for driving said member, a hub on said shaft, a pivoted dog on said hub, said dog adapted to engage the interior of said clutch member to enable the latter to rotate the hub, a pivoted element associated with said dog, said pivoted element being provided with a hook-shaped portion at one end and a roll at the other end thereof, a lever provided with means for engaging said hook-shaped portion to throw the dog out of engagement with the clutch member, a rock shaft provided with means for engaging said roll to throw the dog into engagement with the clutch member, a spring adapted to hold the dog either in or out of engagement with the clutch member, means for moving said lever out of the path of the hook-shaped portion when the rock shaft is actuated, and means for locking the rock shaft in its actuated position, whereby the dog will remain in engagement with the clutch member.

4. In a corn planter clutch mechanism, a clutch wheel, a dog for engaging said wheel, a spring operative to hold the dog either out or in, and means for initially operating said dog upon each rotation of the clutch wheel.

5. In a corn planter clutch mechanism, a clutch wheel provided with a flange having teeth on the inner circumference thereof, a dog for engaging said teeth, a spring inclosed in said wheel and operative to hold the dog either out or in, and means for initially operating said dog upon each rotation of the clutch wheel.

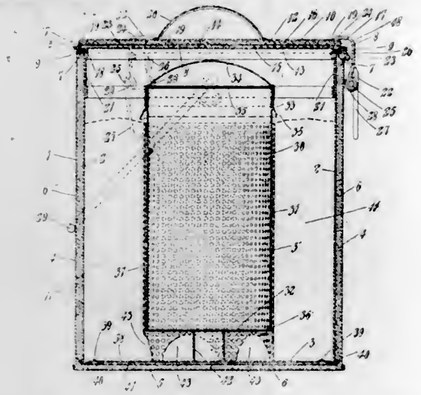
[Claims 6 to 17 not printed in the Gazette.]

1,170,786. FREEZER. CHARLES P. THOMAS, Ludlow, Ky. Filed May 4, 1914. Serial No. 836,061. (Cl. 220—48.)

1. In a device of the character described, a vessel, a ledge around inside the rim thereof, a cover for the vessel, a gasket to lie on the ledge between it and the cover, an inner supporting flange for the gasket, detachable from the vessel, cover and gasket, adapted to be removably slid into the top of the vessel with a substantial bearing down along its inner surface, to facilitate the application of the gasket and cover to the vessel, and means to clamp the cover on the vessel.

2. In a device of the character described, in combination with a heat-insulating vessel, a heat insulated lid for said vessel comprising an outer plate having a gutter around in it closely inside of the periphery thereof, an inner plate having a downwardly extended bead around

near the periphery thereof and secured to the outer plate at the periphery, and an intermediate plate having a downwardly turned peripheral flange resting inside the downwardly extended bead of the inner plate, held down therein by the lower inside of the gutter part of the outer plate, whereby distinct insulating spaces are formed inside said cover, and means for securing said cover on the vessel by engagement in the outside of the gutter of the outer plate.

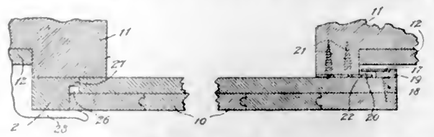


3. In a device of the character described, in combination with a heat-insulating vessel, a heat insulated lid for said vessel comprising an outer plate having a gutter around in it closely inside of the periphery thereof, an inner plate having a downwardly extended bead around near the periphery thereof and secured to the outer plate at the periphery, and an intermediate plate having a downwardly turned peripheral flange resting inside the downwardly extended bead of the inner plate, held down therein by the lower inside of the gutter part of the outer plate, whereby distinct insulating spaces are formed inside said cover, means for securing said cover on the vessel by engagement in the outside of the gutter of the outer plate, said vessel having an annular ledge around inside its rim, an annular gasket resting on said ledge, and said cover having its downwardly projected bead of its inner plate resting on said gasket.

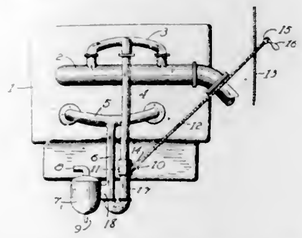
4. In a device of the character described, in combination with a heat-insulated vessel, a heat insulated lid for said vessel comprising an outer plate having a gutter around in it closely inside of the periphery thereof, an inner plate having a downwardly extended bead around near the periphery thereof and secured to the outer plate at the periphery, and an intermediate plate having a downwardly turned peripheral flange resting inside the downwardly extended bead of the inner plate, held down therein by the lower inside of the gutter part of the outer plate, whereby distinct insulating spaces are formed inside said cover, means for securing said cover on the vessel by engagement in the outside of the gutter of the outer plate, said vessel having an annular ledge around inside its rim, an annular gasket resting on said ledge, said cover having its downwardly projecting bead of its inner plate resting on said gasket, and a short cylindrical flange or collar removably fitting into the upper part of the vessel and engaging said lid around inside its downwardly extended bead to facilitate the application of said gasket and cover to the vessel.

1,170,787. CAR-DOOR. ARTHUR M. WAITT, Sharon, Conn., and WEYMER H. WAITT, New York, N. Y., assignors to Camel Company, Chicago, Ill., a Corporation. Original application filed Dec. 4, 1912, Serial No. 734,911. Divided and this application filed Aug. 12, 1913. Serial No. 784,325. (Cl. 20—26.)

In combination, a car body having a door opening, door posts at the sides of said opening, a sliding door arranged to overlap said door posts in its closed position, a door stop fixed to the forward door post against which the forward edge of said door abuts, when in closed position, the inner portion of the front edge of said door being reduced in thickness to form a vertical channel open at its bottom, substantially as described.



1,170,788. MIXING DEVICE. WILLIAM WALCH, Rockwell, Iowa. Filed Nov. 23, 1914. Serial No. 873,520. (Cl. 48—180.)



1. In a system of the class described, an intake pipe, an exhaust pipe, a connecting pipe between said pipes whereby a portion of the exhaust gases may be conducted into the intake pipe, means for adding air to the gases while in this connecting pipe, and a carbureter on said intake pipe adapted to deliver its carbureted charge into said exhaust gases in the intake pipe.

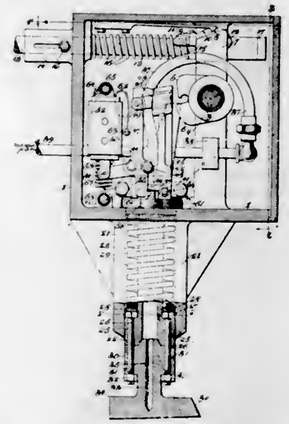
2. In an automobile, the system of additional fuel mixing for the engine comprising an intake pipe, an exhaust pipe, a connection between said pipes whereby a portion of the exhaust gases may be conducted into the intake pipe, a cutoff in said connection, an air-supplying pipe in said connection, a carbureter on said intake pipe adapted to deliver its carbureted charge into said exhaust gases therein, and combined means on the dashboard of the automobile for controlling said cutoff and said air-supplying pipe.

1,170,789. TRAIN-STOPPING APPARATUS. JEAN F. WEBB, Sr., and JEAN F. WEBB, Jr., New York, N. Y., assignors to The International Signal Co., Incorporated, New York, N. Y. Filed Oct. 12, 1914. Serial No. 866,356. (Cl. 246—58.)

1. In train stopping apparatus, an air brake valve, a member for holding the same closed, a plunger for moving said holding member to release said valve; a ramp for moving said plunger to effect the opening of said valve to initiate the action of the brakes; and mechanism coöperating with the plunger to effect an immediate restoration of said holding member to reclose said valve and thereby suppress the action of the brakes.

2. In train stopping apparatus, an air brake valve, a member for holding the same closed, a plunger for moving said holding member to release said valve; a ramp for moving said plunger to effect the releasing act and thereby initiate the action of the brakes, an electro operative mechanism coöperating with the plunger to effect an immediate restoration of said holding member to reclose said valve and thereby suppress the action of the brakes.

3. In combination with means on a vehicle for initiating a danger indication, said means including an operating member; of means on the vehicle coöperating with said operating member when the same is moved in a direction opposite to the initiating movement for counteracting said indication; and means for effecting the coöperative connection between said counteracting means and said operating member; and mechanism located along the roadway for operating said operating member and controlling the action of said coöperatively connecting means, said roadway mechanism including a ramp for engaging said operating member.

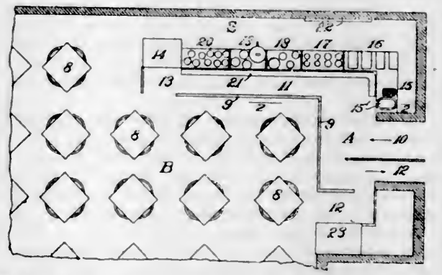


4. The combination with a device on a vehicle that is adapted to be operated upon for a predetermined purpose; mechanism on the vehicle for initiating the operation of said device, mechanism on the vehicle for counter-acting said initiation, said mechanisms including a common plunger; and means along the roadway for effecting the operation of the vehicle mechanisms, said roadway means including a single obstacle to engage the plunger and effect the operative connection between said vehicle mechanisms and said roadway means.

5. The combination with a device on a vehicle that is adapted to be operated upon for a predetermined purpose; mechanism on the vehicle for initiating the operation of said device, mechanism on the vehicle for counter-acting said initiation, said mechanisms including a common plunger normally disconnected from said first mentioned device; means along the roadway for effecting the operation of the vehicle mechanisms, said roadway means including a single obstacle to engage the plunger and effect the operative connection between said vehicle mechanisms and said roadway means.

[Claims 6 to 35 not printed in the Gazette.]

1,170,790. SERVING DEVICE FOR EATING-HOUSES. ALBERT M. WESTON, Boston, Mass., assignor to Everett E. Kent, Newton, Mass. Filed June 3, 1909. Serial No. 499,985. (Cl. 211—11.)



1. A serving device comprising a track having an unobstructed upper surface, combined with a multiplicity of removable carrier trays adapted to fit thereon and to move thereon along the track, the top of the track cooperating with the under sides of the trays to hold the trays horizontal in the transverse direction; a multiplicity of depots arranged in sequence alongside the track, the depots being severally adapted for holding and for service of different classes of foods; and a way alongside the track, on the other side thereof from said sequence of depots, for persons to walk alongside while propelling trays along the track.

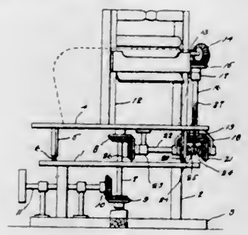
2. A serving device comprising a stationary flat-topped track, combined with a multiplicity of food service stations arranged in sequence along and below the track on one side thereof; a way for persons to walk along the track on its other side; and a multiplicity of removable carrier trays with flat bottoms wider than the track and adapted to project out laterally therefrom over parts of the service stations while resting on the track, the track being adapted to maintain said trays horizontal when so projecting.

3. A serving device comprising a track having an unobstructed upper surface combined with a multiplicity of food service stations arranged in sequence alongside the track, on one side thereof, and a way for persons to walk alongside the track on the other side thereof, the said track being adapted to stabilize in substantial horizontally flat bottomed trays resting movably thereon while receiving food from said stations and transporting it along the track under propulsion of persons walking in said way.

1,170,791. METHOD OF MAKING CONCRETE BLOCKS. FRANK ZAGELMEYER, Bay City, Mich. Filed Aug. 26, 1914. Serial No. 858,607. (Cl. 25—155.)

The herein described method of making a concrete block having a facing, said method comprising, first, coating the pallet of a mold with adhesive adapted to become softened by moisture, second, applying to the layer of adhesive a layer of particles of facing material and allowing the adhesive to harden, third, covering the layer of said particles with liquid neat cement, fourth, placing the prepared pallet within the walls of a mold to temporarily form the bottom of the mold, and filling the mold with dry tamped concrete, fifth, removing the sides of the mold from the block and pallet and allowing the block to remain on the pallet until after the liquid cement has set.

1,170,792. DRIVING MECHANISM. ALPHEUS W. ALTORFER, Roanoke, Ill., assignor to Power Washing Machine Co., Peoria, Ill., a Corporation of Illinois. Filed Feb. 24, 1913. Serial No. 750,296. (Cl. 74—7.)



1. In a device of the character described, in combination, a support, a table revolubly mounted on said support, a wringer mechanism mounted on said table off center, gearing for operating said wringer mechanism, said gearing mounted to be revolved with said table, driving means for said gearing, and a clutch for controlling the connection of said gearing with said driving means.

2. In a device of the character described, in combination, a support, a vertical shaft disposed centrally of said support, a table revolubly mounted on said support, the pivot of said table being coincident with the axis of said shaft, a wringer mechanism mounted on said table off center, and clutch controlled means for operating said wringer mechanism, said clutch controlled means being movable with said table to operate said wringer mechanism in various positions.

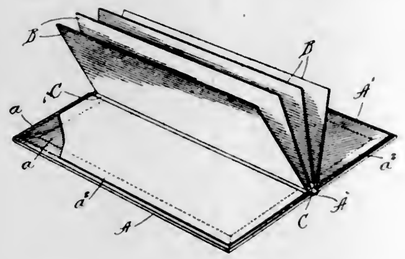
3. In a device of the character described, in combination, a support, a vertical shaft disposed centrally of said support, a table revolubly mounted on said support, the pivot of said table being coincident with the axis of said shaft, means for transmitting power to said shaft, a wringer mechanism mounted on said table off center, gearing for operating said wringer mechanism, said gearing being movable with said table and said mechanism, for operating the latter in adjusted positions, and means for actuating said gearing from said vertical shaft.

4. In a device of the character described, in combination, a support including a bed-plate, a shaft extending upwardly from said bed-plate, a table revoluble mounted at the upper end of said shaft, rollers connected with said table and presenting bearing means for the table on the bed-plate, a wringer mechanism mounted on said table off center, and means movable with the table for operating said wringer mechanism.

5. In a device of the character described, in combination, a support including a bed-plate, a shaft, a table revolubly mounted on the upper end of said shaft, said table having rollers movable on the upper surface of said bed-plate, a wringer mechanism mounted on said table off center and movable therewith, means for transmitting power to said shaft, a cross-shaft and means for operating said cross-shaft from said first mentioned shaft, and clutch controlled gearing between said cross-shaft and said wringer mechanism.

[Claims 6 to 15 not printed in the Gazette.]

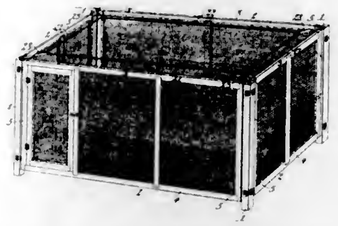
1,170,793. TEMPORARY HOLDER FOR CAR-REPORT BLANKS AND THE LIKE. NOTEN D. BALLENTINE, Chicago, Ill. Filed Aug. 16, 1911. Serial No. 644,442. (Cl. 129—20.)



A temporary holder for report blanks and the like comprising front and back covers formed of separate, outer, rigid boards, a common cloth covering extending over and secured to the outer faces of said outer boards and forming a flexible hinge between the same, the edges of said covering being folded over and secured to the inner faces of said outer boards, inner boards of heavy card board secured to the inner surfaces of said outer boards and extending over the folded edges of the cloth covering, a leaf of the same size as said inner boards comprising two thicknesses of heavy card board secured together, and a flexible fabric strip having its ends extending between and secured to the inner and outer boards of said cover and having a fold extending between and secured to the boards of said leaf, said inner boards and said leaf having smooth, uninterrupted rigid surfaces for supporting the blanks, substantially as described.

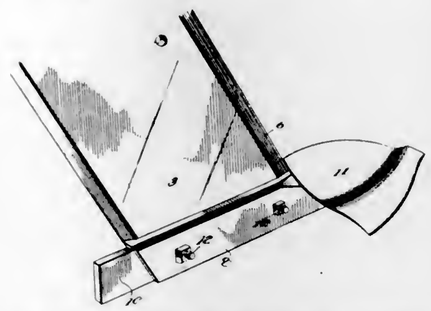
1,170,794. POULTRY-RUN. WALTER H. BARNES, Buffalo, N. Y. Original application filed June 9, 1914, Serial No. 843,996. Divided and this application filed Apr. 21, 1915. Serial No. 22,807. (Cl. 119—20.)

A poultry run comprising a plurality of posts, a plurality of walls connected with said posts so as to be arranged at an angle relatively to each other, a plurality of supporting arms each secured at its outer end to the upper end of one of said posts and each projecting inwardly therefrom at an angle to both walls on opposite sides of



the respective post, and guard lines mounted on the inner ends of said arms.

1,170,795. GROUND ROOT-CUTTER. HUSS M. BEUTELL, Norcross, Ga. Filed Apr. 1, 1915. Serial No. 18,584. (Cl. 97—32.)



In an implement of the class set forth, the combination with a plow beam, of a downwardly and forwardly inclined upright secured to the beam, the forward edge of said upright being provided with a cutting face, the lower portion of said upright being offset to form a recess in line with the body of the upright, a member fitting said recess and lying flush with the body of said upright, a plurality of bolts passing through said member and the aforesaid portion formed by said recess, and an outwardly and upwardly inclined cutting blade formed integral with said member and located substantially in line with the cutting edge of said upright, the lower portion of said cutting blade lying in the same plane as the lower edge of said upright.

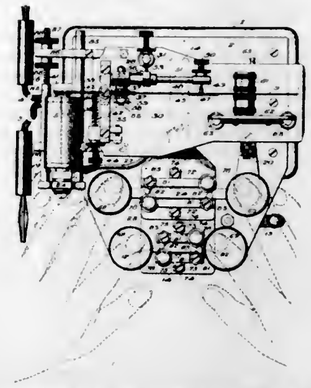
1,170,796. ELECTROMAGNETIC TELEGRAPH-KEY. ROYAL L. BOULTER, Los Angeles, Cal. Filed Nov. 13, 1914. Serial No. 871,938. (Cl. 178—82.)

1. In an electro-magnetic telegraph key, the combination of a pivoted and bodily movable inherently vibratile reed, a spring for normally retracting said reed, electrical contacts controlled by the reed, an electromagnet for actuating the reed, and a key controlling the electro-magnet.

2. In an electro-magnetic telegraph key, the combination of a pivoted and bodily movable inherently vibratile reed, a spring for normally retracting said reed, normally open electrical contacts which are closed and opened when the reed is actuated, an electro-magnet for actuating the reed, and a key controlling the electro-magnet.

3. In an electro-magnetic telegraph key, a vibratory reed, electrical contacts controlled thereby, an electro-magnet for actuating the reed, a normally open key, and a local circuit including the magnet and the key, whereby said magnet is normally deënergized, said reed being pivoted, and a spring coöperating with the reed adapted to retract it so that it is normally conditioned for actuation by the electro-magnet.

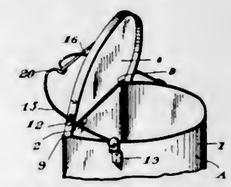
4. In a telegraph key, the combination with a vibrator, of a pivoted, rocking back stop coöperating with the vibrator, and means for regulating at will the resistance afforded by said back stop.



5. In a telegraph key, the combination with a vibrator, of a pivoted, rocking back stop coöperating with the vibrator, and means for regulating the resistance afforded by said back stop consisting of a laterally extending arm and a bob or weight adjustably mounted on said arm and adapted to be held at different positions thereon.

[Claims 6 to 14 not printed in the Gazette.]

1,170,797. GARBAGE-CAN. SYLVESTER HARRY BURROUGHS, Calgary, Alberta, Canada. Filed Apr. 9, 1914. Serial No. 830,774. (Cl. 220—22.)

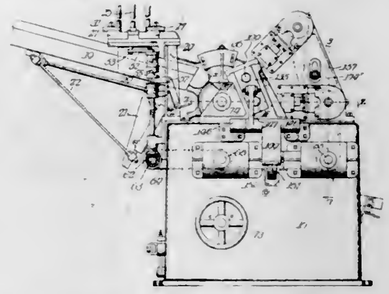


The combination with a pail of a gravity closed lid hinged thereon, a bail pivotally mounted to the pail, provided intermediate of its ends with a U-shaped projection, a link operatively connecting the lid and bail and designed to retain the latter in a normally vertical position, and angle brackets rigidly mounted on diametrically opposite sides of the lid designed to limit the rotation of the bail to less than a right angle.

1,170,798. MACHINE FOR DOUBLE-SEAMING CANS. WILLIAM CAMERON, Chicago, Ill. Filed Jan. 2, 1914. Serial No. 809,889. (Cl. 113—14.)

1. In a machine of the character described, the combination of a horizontally disposed turret shaft, a can body and cap-carrying turret disposed thereon, means for simultaneously feeding can bodies and caps to said turret, means for intermittently rotating said turret, a plurality of pairs of oppositely disposed chuck spindles, arranged in the path of movement of said can bodies and caps, means for moving the spindles at one end of said turret longitudinally with respect to said turret shaft, chuck heads fixedly secured to the longitudinally movable chuck spindles, the chuck spindles at the opposite ends of said turret being held from longitudinal movement with respect to said turret shaft and provided with yieldingly supported chuck heads, means for rotatingly each of said chuck spindles, and seaming means intermittently movable into coöperative relation with said can bodies and caps.

2. In a machine of the character described, the combination of a horizontally disposed turret shaft, a can body and cap-carrying turret disposed thereon, means for simultaneously feeding can bodies and caps to said turret, means for intermittently rotating said turret, a plurality of pairs of oppositely disposed chuck spindles, arranged in the path of movement of said can bodies and caps, means for moving the spindles at one end of said turret longitudinally with respect to said turret shaft, chuck heads fixedly secured to the longitudinally movable chuck spindles, the chuck spindles at the opposite ends of said turret being held from longitudinal movement with respect to said turret shaft and provided with yieldingly supported chuck heads, means for rotating each of said chuck spindles, seaming means intermittently movable into coöperative relation with said can bodies and caps, and means for positively discharging the cans from said turret after the seaming operation.



3. In a machine of the character described, the combination of a horizontally disposed turret shaft, a can body and cap-carrying turret disposed therein, means for simultaneously feeding can bodies and caps to said turret, means for intermittently rotating said turret, a plurality of pairs of oppositely disposed chuck spindles arranged in the path of movement of said can bodies and caps, means for moving the spindles at one end of said turret longitudinally with respect to said turret shaft, chuck heads fixedly secured to the longitudinally movable chuck spindles, means for preventing longitudinal movement of the chuck spindles at the opposite end of said turret, chuck heads loosely mounted in said last-mentioned chuck spindles, yielding means normally forcing said loosely mounted chuck heads inwardly to can engaging position, means for rotating each of said chuck spindles, and seaming means intermittently movable into coöperative relation with said can bodies and caps.

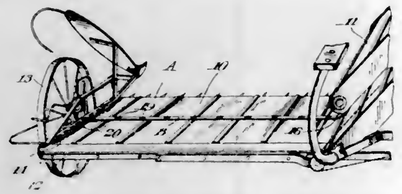
4. In a machine of the character described, the combination of a horizontally disposed turret shaft, a can body and cap-carrying turret disposed thereon, means for simultaneously feeding can bodies and caps to said turret, means for intermittently rotating said turret, a plurality of pairs of oppositely disposed chuck spindles arranged in the path of movement of said can bodies and caps, means for moving the spindles at one end of said turret longitudinally with respect to said turret shaft, chuck heads fixedly secured to the longitudinally movable chuck spindles, means for preventing longitudinal movement of the chuck spindles at the opposite end of said turret, chuck heads loosely mounted in said last-mentioned chuck spindles, yielding means normally forcing said loosely mounted chuck heads inwardly to can-engaging position, means for rotating each of said chuck spindles, adjustable members to receive the end thrust of each of said chuck spindles, and seaming means intermittently movable into coöperative relation with said can bodies and caps.

5. In a machine of the character described, the combination of a horizontally disposed turret shaft, a can body and cap-carrying turret disposed thereon, means for simultaneously feeding can bodies and caps to said turret, means for intermittently rotating said turret, a plurality of pairs of oppositely disposed chuck spindles arranged in the path of movement of said can bodies and caps remote from said feeding means, a reciprocating block adapted to support the spindles at one end of said turret, means

for reciprocating said block, whereby said spindles are moved longitudinally of said turret shaft, chuck heads fixedly secured to the longitudinally movable spindles, means for preventing longitudinal movement of the chuck spindles at the opposite end of said turret, chuck heads loosely mounted in said last-mentioned chuck spindles, yielding means normally forcing said loosely mounted chuck heads inwardly to can-engaging position, means for continuously rotating each of said chuck spindles, and seaming means intermittently movable into coöperative relation with said can bodies and caps.

[Claims 6 to 12 not printed in the Gazette.]

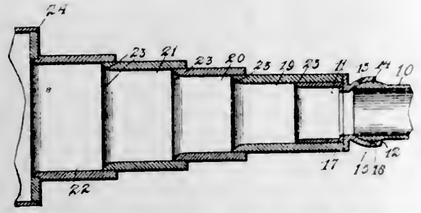
1,170,799. BINDER. WILLIAM CHAPPEL, Barrie, Ontario, Canada. Filed Oct. 7, 1915. Serial No. 54,683. (Cl. 56—89.)



1. In a binder and in combination, a flexible strap extending longitudinally above the platform conveyer and intermediate of the breadth thereof, a plurality of upwardly extending fingers integral with the said strap, and resilient means for preventing upward motion of the strap comprising a grooved boss on one end thereof and an extending spring in said groove.

2. In a binder and in combination, a resilient strap extending longitudinally of the platform conveyer and intermediate of the breadth thereof and provided with an offset upturned end, a plurality of fingers formed integral with the strap, and a spring to limit the upward motion of the strap.

1,170,800. SOUND RESONATOR AND AMPLIFIER. FOREST CHENEY, Jamestown, N. Y., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 11, 1912, Serial No. 682,989. Renewed Nov. 26, 1915. Serial No. 63,678. (Cl. 181—27.)



1. An amplifying device for sounds consisting of a plurality of sections each composed of a plurality of flat vibrating walls parallel to the common axis, the walls of each section being spaced farther apart than those of the preceding section.

2. An amplifying device for sounds consisting of a plurality of sections each composed of a plurality of flat rectangular vibrating walls, each parallel to its opposed wall and to the common axis, the walls of each section being spaced farther apart than those of the preceding section.

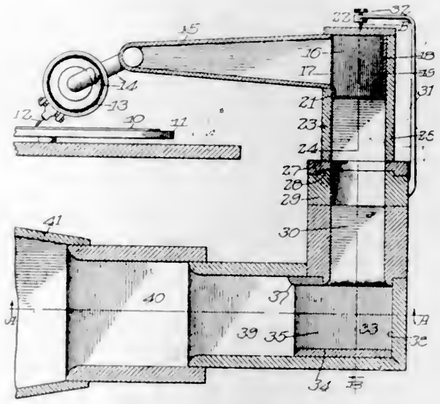
3. An amplifying device for sounds consisting of a plurality of sections each composed of a plurality of flat vibrating walls parallel to the common axis, the walls of each section being spaced farther apart than those of the preceding section, and having their forward edges rounded off, as shown.

4. An amplifying device for sounds consisting of a plurality of sections each composed of a plurality of flat rectangular vibrating walls, each parallel to its opposed wall and to the common axis, the walls of each section being spaced farther apart than those of the preceding section, and having their forward edges rounded off, as shown.

5. An amplifying device for sounds consisting of a plurality of sections, each composed of four equal-sized flat vibrating walls, the adjacent walls being at right angles to each other, and the walls of all sections being parallel to a common axis, the walls of each section being spaced farther apart than those of the preceding section, and having their forward edges rounded off, as shown.

[Claims 6 to 12 not printed in the Gazette.]

1,170,801. SOUND-REPRODUCING MACHINE. FOREST CHENEY, Chicago, Ill., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1912. Serial No. 729,956. (Cl. 181—27.)



1. A mechanical throat for sound-reproducing machines, consisting of a box-like structure having flat internal sides, two of said sides forming a pair of opposed imperforate parallel vibrating walls, a third side having an opening to receive the sound waves, said opening being of substantially the area of the side in which it exists, and having the form of a regular polygon, a fourth side forming a vibrating wall opposite the sound-receiving opening, a fifth open side being adjacent the other open side to permit the exit of the sound waves, and a sixth side forming a vibrating wall opposing the last-mentioned open side, the entrance opening being offset from the wall opposite the exit so that a shallow air cushion is formed adjacent said wall.

2. A mechanical throat for sound-reproducing machines, consisting of a box-like structure provided with a pair of opposed parallel vibrating sides and open at one side to receive the sound waves, and having a vibrating wall at the opposite side, and open at a side adjacent the other open side to permit the exit of the sound waves, and having a vibrating wall opposing the second open side, and having a palate bar between the entrance and the exit apertures.

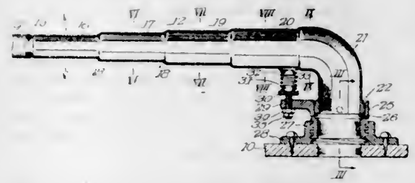
3. A mechanical throat for sound-reproducing machines, consisting of a generally cubical box-like structure open at two adjacent sides for an entrance and exit for the sound waves, and having the other four sides consisting of solid vibrating surfaces, and having a palate bar between the entrance and exit apertures.

4. A mechanical throat for sound-reproducing machines, consisting of a box-like structure provided with a pair of opposed parallel vibrating sides and open at one side to receive the sound waves and having a vibrating wall at the opposite side, and open at a side adjacent the other open side to permit the exit of the sound waves, and having a vibrating wall opposing the second open side, the edges of the entrance and exit apertures being rounded off as shown, and having a palate bar between the entrance and exit apertures.

5. A mechanical throat for sound-reproducing machines, consisting of a generally cubical box-like structure open at two adjacent sides for an entrance and exit for the sound waves, and having the other four sides consisting of solid vibrating surfaces, the edges surrounding the entrance and exit apertures being rounded off as shown, and having a palate bar between the entrance and exit apertures.

[Claims 6 to 9 not printed in the Gazette.]

1,170,802. SOUND-REPRODUCING MACHINE. FOREST CHENEY, Chicago, Ill., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 21, 1913. Serial No. 768,905. (Cl. 181—3.)



1. In a sound-reproducing machine, a tone arm made up of a plurality of sections, each section composed of a plurality of flat vibrating walls, each parallel to its opposed wall and to the common axis, the opposed walls of each section being spaced farther apart than those of the preceding section.

2. In a sound-reproducing machine, a tone arm made up of a plurality of sections, each section composed of eight equal sized flat vibrating walls, each wall being parallel to its opposed wall and to the common axis so that the cross section of the arm is a regular octagon, the opposed walls of each section being spaced farther apart than those of the preceding section.

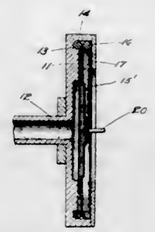
3. In a sound-reproducing machine, a tone arm comprising horizontal and vertical portions connected by an intermediate curved portion, the horizontal portion of said arm being made up of a plurality of sections, each section composed of a plurality of flat vibrating walls, each parallel to its opposed wall and to the common axis, the opposed walls of each section being spaced farther apart than those of the preceding sections.

4. In a sound-reproducing machine, a tone arm comprising horizontal and vertical portions connected by an intermediate curved portion, said tone arm throughout being made up of a plurality of sections, each section composed of a plurality of flat vibrating walls each parallel to its opposed wall and to the common axis, the opposed walls of each section being spaced farther apart than those of the preceding section.

5. In a sound reproducing machine, the combination with an interiorly-threaded collar secured to and projecting above the upper horizontal surface of a support, of a ring screwed into said collar and adapted to turn therein, said ring having an upper portion of larger interior diameter than the lower portion thereof, a tone arm having its larger end pivoted in the upper portion of said ring so as to swing in a vertaical plane, the inner surface of the larger end of said tone arm being in register with the inner surface of the lower portion of said ring and with an opening through said support, a lug projecting laterally from the upper portion of said ring beneath said tone arm, and a spring interposed between said lug and the tone arm.

[Claim 6 not printed in the Gazette.]

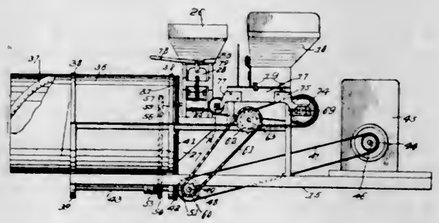
1,170,803. SOUND-REPRODUCING APPARATUS. FOREST CHENEY, Chicago, Ill., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 22, 1913. Serial No. 791,237. (Cl. 181—10.)



1. In a sound-reproducing device, an integral diaphragm of uniform thickness and imperforate from its center to the periphery and comprising a series of smooth concentric annular sections lying in progressively stepped parallel planes.

2. In a sound box for sound-reproducing machines, an integral diaphragm of uniform thickness having a central hole for the attachment of a stylus lever and imperforate from its center to its periphery and comprising a series of smooth concentric annular sections lying in progressively stepped parallel planes.

1,170,804. FEED-REGULATOR FOR CONCRETE-MIXING MACHINES. WILLIAM J. DUNHAM, Johnstown, N. Y. Filed May 20, 1914. Serial No. 839,865. (Cl. 83—73.)



1. In a feed regulator for concrete mixing machines, the combination of a hopper, a conveyer bed having side flanges and an intermediate partition, conveyer belts running between the side flanges and the intermediate partition, means for driving the conveyer belt, and guards secured to the side flanges and the intermediate partition for preventing material gaining access to the edges of the conveyer belts.

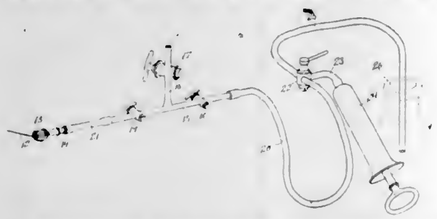
2. In a feed regulator for concrete mixing machines, the combination of a hopper, a conveyer bed having side flanges and an intermediate partition, a conveyer belt between one of the side flanges and the intermediate partition, a conveyer belt between the opposite side flange and the intermediate partition, means for driving the said belts, guards secured to the side flanges and intermediate partition, said guards having their edges terminating above the conveyer belts to prevent material gaining access thereto.

3. In a feed regulator for concrete mixing machines, the combination of a hopper, a conveyer bed, and to one side of the longitudinal center of the hopper, side flanges and an intermediate partition extending longitudinally of the said bed, conveyer belts on the bed, means for driving the said conveyer belts, guards adapted to lie parallel with the side flanges and intermediate partition, said guard having flanges at the upper edges overlying the side flanges and intermediate partition, apertured bosses on the said guards, and means for securing the guards to the said flanges and intermediate partition.

4. In a feed regulator for concrete mixing machines, the combination of a hopper for pulverulent material having discharge openings at one end, a partition for separating the hopper into two compartments having discharge openings of unequal area, a bed for the conveyer belts which is common to both compartments of the hopper, means for associating a conveyer bed with the hopper, and means within the hopper maintained to overlie the longitudinal edges of the conveyer belts.

5. In a feed regulator for concrete mixing machines, a hopper having a partition, the lower end of which is separated longitudinally, a rib maintained to extend between the separated end of the partition, traveling conveyer belts, the side edges of which are overlaid by the ends of the partition, depending means for overlying the other edges of the belt, and a rigid bed associated with the hopper and upon which the conveyer travels.

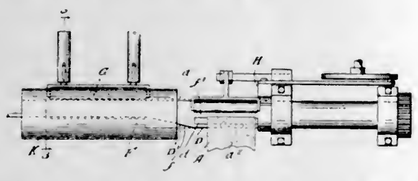
1,170,805. APPARATUS FOR INTRODUCING LIQUID INTO VEINS. GEORGE WARREN EASTMAN, Lynn, Mass. Filed Dec. 22, 1913. Serial No. 808,105. (Cl. 128—28.)



1. An apparatus for introducing liquid into the veins, comprising a hypodermic needle, a conduit communicating with the lumen of said needle and provided with a laterally extended branch forming an air chamber to trap any air that may be occluded within the liquid, said branch being open at its outer end and provided with means for permitting escape of the trapped air when desired, and means on both sides of said branch to interrupt the flow of said fluid when the trapped air is permitted to escape.

2. An apparatus for introducing liquid into the veins comprising a hypodermic needle, a conduit communicating with the lumen of said needle and provided with a transparent portion having a laterally extended branch forming an air chamber to trap any air that may be occluded within the liquid, said branch being open at its outer end, a cock for controlling the open end of said branch for permitting escape of the trapped air when desired, and cocks located at the opposite ends of said transparent portion to interrupt the flow of fluid when the trapped air is permitted to escape.

1,170,806. PROCESS OF MAKING NON-CIRCULAR PAPER BOX-BODIES. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 11, 1910. Serial No. 543,213. (Cl. 93—81.)



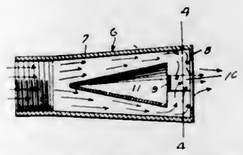
1. The process of making laminated paper bodies for vessels having an irregular or noncircular cross section and with a flat face consisting in first winding a web of paper in successive coils into a tubular form, and pasting or gluing the several coils or laminæ thereof together, then, while the paste or glue uniting the several coils is still moist or undried, shaping the tubular body into the desired irregular or noncircular shape in cross section by applying pressure upon the inside and outside of said body, and then drying the same while maintained in such irregular or non-circular shape and while under internal and external pressure and thereby giving it a permanent set of the desired form, substantially as specified.

2. The process of making laminated tubular paper bodies of irregular or noncircular cross section, consisting in first forming a tubular coiled paper body, then while the paste or glue uniting its several coils is still moist and undried, shaping it into the required irregular or noncircular form in cross section by subjecting it to internal and external pressure and then imparting a permanent set to the re-shaped body by heating and drying it while maintained in such form, substantially as specified.

3. The process of making laminated tubular paper bodies of irregular or noncircular cross section, consisting in first forming a tubular coiled paper body, then while the paste or glue uniting its several coils is still moist and undried, shaping it into the required irregular or noncircular form in cross section by subjecting it to internal and external pressure, and then drying it while maintained in such form, said paper body being subjected to the action of a shaping device on both the inside and outside, during both the shaping and the drying steps, substantially as specified.

4. The process of making paper bodies of irregular or noncircular cross section, consisting in first forming a tubular paper body, and then shaping it into the required irregular or noncircular cross section by passing it longitudinally in contact with a tapering shaping device, and simultaneously subjecting it to a heating and drying action, substantially as specified.

1,170,807. COMPRESSED-AIR-EXHAUST MUFFLER. EUGENE EGAN, Kingston, N. Y. Filed June 16, 1914. Serial No. 845,453. (Cl. 121—116.)

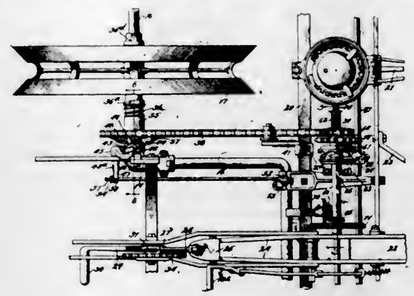


A muffler for compressed fluid exhausts comprising a casing having one end taperingly enlarged and provided at said end with an inwardly extending annular flange which bounds a discharge opening of a size not less than the inlet at the other end of the casing, and a deflecting member substantially conical in shape disposed in said tapered end of the casing and having its base of substantially the size of the discharge opening.

1,170,808. GEARING. ALBERT B. FRENIER, Rock Island, Ill., assignor to Rock Island Plow Company, Rock Island, Ill., a Corporation of Illinois. Filed Dec. 11, 1908. Serial No. 467,023. (Cl. 74—58.)

1. In apparatus of the class described, the combination of a shaft, a rock shaft, multiple gears supported on said shaft, a clutch for connecting the shaft with and disconnecting it from said gears, a cam mounted on said rock shaft, adapted when the rock shaft is rocked to actuate said clutch, and means whereby said shaft may be caused to pass through a desired part of a revolution with each revolution of said clutch mechanism, said means comprising a countershaft, a pinion mounted thereon and adapted to mesh with said multiple gears, and means for locking any desired gear in operative engagement with said pinion, said pinion provided with an elongated tooth and each of said multiple gears having a corresponding depression.

2. In apparatus of the class described, the combination of a shaft, a rock shaft, multiple gears supported on said shaft, a clutch for connecting the shaft with and disconnecting it from said gears, a cam mounted on said rock shaft, adapted when the rock shaft is rocked to actuate said clutch, and means whereby said shaft may be caused to pass through a desired part of a revolution with each revolution of said clutch mechanism, said means comprising a countershaft, a shifting pinion mounted thereon adapted to mesh with said multiple gears whereby said pinion may be shifted on said countershaft to lock said pinion in operative engagement with any of said gears, said pinion provided with an elongated tooth and each of said multiple gears having a corresponding depression.



3. In an apparatus of the class described, the combination with an axle, a shaft, multiple gears mounted on said shaft, a sleeve surrounding said shaft, means for rotating said sleeve from said axle, a pinion mounted on said sleeve and adapted to rotate therewith, a countershaft, a pinion mounted thereon engaging said first-mentioned pinion and a second pinion adapted to mesh with said multiple gears, said last-mentioned pinion having an elongated tooth, and each of said multiple gears having corresponding depressions.

4. In an apparatus of the class described, the combination with an axle, a shaft, multiple gears mounted on said shaft, a pinion driven from said axle meshing with said multiple gears, said pinion being provided with an elongated tooth and there being a corresponding depression in each of said multiple gears, a sleeve surrounding said shaft, means for rotating said sleeve from said axle, a pinion mounted on said sleeve and adapted to rotate therewith, a countershaft, a pinion mounted thereon engaging said first-mentioned pinion and a second pinion adapted to mesh with said multiple gears, said last-mentioned pinion having an elongated tooth, and each of said multiple gears having corresponding depressions.

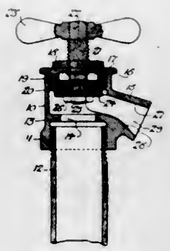
5. In an apparatus of the class described, the combination with an axle, a shaft, multiple gears mounted on said shaft, a sleeve surrounding said shaft, means for rotating said sleeve from said axle, a pinion mounted on said sleeve and adapted to rotate therewith, and a countershaft, a pinion mounted thereon engaging said first-mentioned pinion and a second pinion adapted to mesh with said multiple gears.

[Claim 6 not printed in the Gazette.]

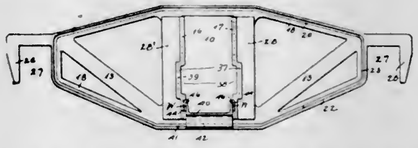
1,170,809. VALVED NOZZLE. HENRY GIBBS, Chicago, Ill., assignor to W. D. Allen Manufacturing Company, Chicago, Ill., a Corporation. Filed May 10, 1912. Serial No. 696,329. (Cl. 137—13.)

1. A valved nozzle comprising an upright casing having a coupling at its lower end, a removable cap at its upper end and a laterally projecting, down-turned discharge spout, a valve in said casing having a stem threaded through said cap, said valve being vertically movable across the inner end of the discharge passage through said spout for opening and closing the same, the passage through said down-turned discharge spout being elongated transversely and contracted vertically at its inner end and having top and bottom walls which diverge and side walls which converge from its inner to its outer end, whereby a fan-shaped spray is projected downwardly from said spout in a vertical plane extending through the axis of said upright casing, substantially as described.

2. A valved nozzle comprising an upright casing adapted to be mounted upon the upper end of a vertical supply pipe and having a laterally projecting, down-turned discharge spout and an internal shoulder forming a valve seat below the inner end of the said spout, a valve in said casing vertically movable across the inner end of the discharge passage through said spout for opening and closing the same, the passage through said down-turned discharge spout being elongated transversely and contracted vertically at its inner end and having top and bottom walls which diverge and side walls which converge from its inner to its outer end, whereby a fan-shaped spray is projected downwardly from said spout in a vertical plane, substantially as described.



1,170,810. TRUCK FOR RAILWAY-CARS. ALONZO L. HASTINGS, Chicago, Ill. Filed Nov. 11, 1911. Serial No. 659,691. (Cl. 105—243.)



1. In a railway truck, the combination with side frames each having a central opening and a spring plank whose ends extend through said openings, of wedge mechanism parallel with said spring plank and inserted between said spring plank and the vertical walls adjacent said openings to engage with the sides and the top of said spring plank to lock said spring plank securely to the side frames.

2. In a truck, the combination of side frames and a spring plank, each side frame having a central opening surrounded by horizontal and vertical walls, the ends of the spring plank extending through the lower ends of said openings, said vertical walls of each side frame adjacent the sides of the spring plank having grooves running in the direction of the spring plank, and a wedge driven into each groove, said wedges securely clamping the spring plank to the side frames to prevent relative movement thereof with reference to the side frames.

3. In a truck, the combination of side frames and a spring plank, each side frame having a central opening surrounded by horizontal and vertical walls, the ends of the spring plank extending through the lower ends of said openings, said vertical walls of each side frame adjacent the sides of the spring plank having grooves running in the direction of the spring plank, and a wedge driven into each groove and adapted when so driven to exert both horizontal and vertical compression against said spring plank whereby the spring plank is rigidly secured to the side frames and relative movement thereof with reference to the side frames prevented.

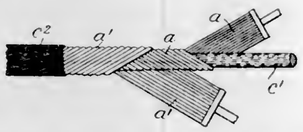
4. In a railway truck, the combination of side frames and a spring plank, each side frame having a central substantially rectangular opening and the spring plank ends extending through the lower parts of said openings and resting on the side frames, means for preventing longitudinal movement of said spring plank with reference to

the side frames when thus engaging in the lower parts of said openings, and wedge mechanism associated with each end of the spring plank and with the side walls adjacent the opening of the side frame through which said end extends, said wedge mechanism having wedging engagement with the tops and sides of the spring plank whereby to lock the spring plank ends against vertical displacement and to maintain said spring plank at right angles with the side frames.

5. In a car truck, the combination of side frames and a spring plank, each side frame having a substantially rectangular central opening and the side walls adjacent said opening being provided at their lower ends each with a transverse slot, the ends of said spring plank extending through said openings in the opposite side frames, and the sides of the spring plate being adjacent said slots, and wedge mechanism driven into said slots to lock said spring plank against vertical and horizontal displacement with reference to the side frames.

[Claims 6 to 20 not printed in the Gazette.]

1,170,811. ELECTRICAL RESISTANCE. CHARLES E. HAY, Ilford, and HERBERT W. SULLIVAN, London, England. Filed Mar. 14, 1914. Serial No. 824,695. (Cl. 219—63.)



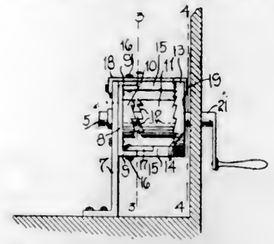
1. An electrical resistance comprising two conductors each formed of a plurality of insulated wires placed side by side and wound upon a core of insulating material in two layers, the wires of each conductor being in parallel, one layer forming the outgoing conductor and the other layer forming the return conductor, the distance between adjacent wires in each conductor being proportioned to the distance separating the conductors, whereby reaction due to self inductance is balanced by the counter reaction due to capacity.

2. An electrical resistance comprising two conductors each formed of a plurality of insulated wires placed side by side, and wound obliquely upon a core of insulating material in superposed layers, the wires of each conductor being joined in parallel, one layer forming the outgoing conductor and the other layer forming the return conductor, the distance between adjacent wires in each conductor being proportioned to the distance separating the conductors, whereby reaction due to self inductance is balanced by the counter reaction due to capacity.

3. An electrical resistance comprising two conductors each formed of a plurality of insulated wires placed side by side, and wound obliquely upon a core of insulating material in superposed layers, the wires of each conductor being joined in parallel, one layer forming the outgoing conductor and the other layer forming the return conductor, whereby reaction due to self inductance is balanced by the counter reaction due to capacity, the layers being insulated from each other the distance between adjacent wires in each conductor being proportioned to the distance separating the conductors.

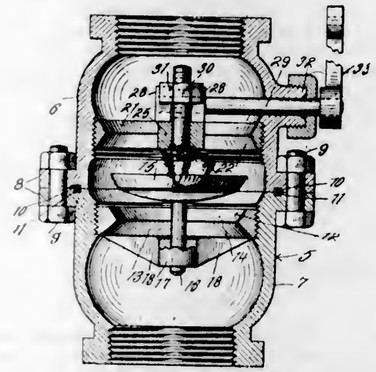
4. An electrical resistance comprising a multiple conductor formed of woven material, having a warp of conducting material, the strands of which are connected in parallel, a weft of fibrous insulating, material covering the conductors and spacing them apart, said multiple conductor being wound upon a core, a second multiple conductor formed of a woven material having a warp composed of conducting material the strands of which are connected in parallel, a weft of fibrous, insulating material covering the conductors and spacing them apart, said second multiple conductor being wound upon the first mentioned multiple conductor and connected in series therewith.

1,170,812. STARTING DEVICE FOR MOTOR-VEHICLE ENGINES. CHARLES O. HEMBREE, Asher, Okla. Filed July 6, 1915. Serial No. 38,283. (Cl. 123—185.)



The combination with an engine shaft, of an upright in which said shaft is journaled, a clutch disk fixed upon said shaft, a sleeve loosely mounted upon the engine shaft having teeth on one end to engage the teeth of the clutch disk, said sleeve being provided with an annular flange on its other end having ratchet teeth on one face, a crank adapted to be connected to said sleeve to move the same into locking engagement with the clutch disk and rotate the engine shaft and sleeve in one direction, spring pressed pawls mounted upon the upright at one of their ends on opposite sides of said clutch disk and having their free ends engaged with the ratchet teeth on said flange, said pawls acting against the flange to force the sleeve out of locking engagement with the clutch disk upon the reverse turning movement of the engine shaft, and a bar fixed at one of its ends to the upright and extending longitudinally of said sleeve, the other end of said bar being formed with an angularly disposed stop for engagement by the flange on said sleeve to limit the movement of the sleeve to its inoperative position.

1,170,813. CHECK-VALVE STRUCTURE. PATRICK W. HENNESSY, Joplin, Mo. Filed Dec. 28, 1914. Serial No. 879,360. (Cl. 137—32.)



1. In a valve structure, a pair of casing sections arranged in end to end relation and suitably connected, a valve seat having its opposite sides beveled and having screw-threaded engagement with one casing section, a spider connected with and depending from the valve seat, a reciprocatory valve stem slidably engaging the spider to be guided thereby, a gravity operated valve connected with the valve stem and disposed above the valve seat to engage therewith, a support ring having screw-threaded engagement with the other casing section above the valve seat and having oppositely arranged bevel faces, an apertured guide arm carried by the support ring and receiving the upper end of the valve stem in the aperture and having spaced upstanding ears projecting above it for a substantial distance, a member carried by the upper end of the valve stem, a lift dog arranged between the ears and beneath the member to engage therewith, and means to swing the lift dog.

2. In a valve structure, a lower casing section, an annular valve seat arranged within and having screw-threaded engagement with the upper portion of the valve casing section and provided with upper and lower beveled faces, an apertured spider carried by the valve seat and depending therefrom, a substantially vertical valve stem having its lower end operating within the aperture of the spider, a gravity operated check-valve rigidly secured to the valve stem above the valve seat to engage and disengage the upper beveled face thereof, an upper casing section having its lower end engaging the upper end of the lower casing section, a support ring disposed within and having screw-threaded engagement with the lower end of the upper casing section and having upper and lower beveled faces, a substantially horizontal guide arm carried by and extending diametrically of the support ring and provided with a central aperture to receive the valve stem and spaced ears arranged upon one side of the aperture, a substantially horizontal rock-shaft extending through one side of the upper casing section and journaled through the spaced ears, a lift dog rigidly secured to the end of the rock-shaft and arranged between the spaced ears, and a nut having screw-threaded engagement with the upper end of the valve stem and disposed above the lift dog.

1,170,814. REDUCTION OF ORGANIC COMPOUNDS. ERIC BERKELEY HIGGINS, Wallasey, England. Filed May 15, 1913. Serial No. 767,814. (Cl. 87—12.)

1. A process for the hydrogenation of unsaturated organic compounds by catalysis, consisting in treating the said compounds by admixture with a formate and with a catalyst, and by heating the mixture, substantially as described.

2. A process for the hydrogenation of unsaturated organic compounds by catalysis, consisting in treating the said compounds by admixture with a formate and with a catalyst, and by heating the mixture in a vessel from which air has been exhausted, substantially as described.

3. A process for the hydrogenation of unsaturated organic compounds by catalysis, consisting in treating the said compounds by admixture with a formate and with a catalyst and by heating the mixture in a vessel in the presence of a non-oxidizing gas that has no chemical action on the catalyst or body to be reduced; substantially as described.

4. A process for the hydrogenation of unsaturated fatty compounds containing as the essential constituent an unsaturated fatty acid radical, consisting in treating the said compounds by admixture with a formate and with a catalyst, and by heating the mixture, substantially as described.

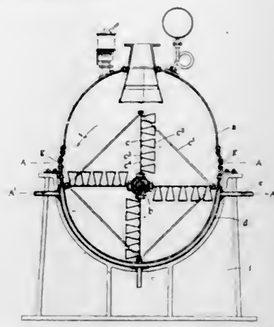
5. A process for the hydrogenation of unsaturated fatty compounds containing as the essential constituent an unsaturated fatty acid radical, by catalysis, consisting in treating the said compounds by admixture with a formate and with a catalyst, and by heating the mixure in a vessel from which air has been exhausted, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,170,815. MIXING-MACHINE. ERIC BERKELEY HIGGINS, Wallasey, England. Filed Feb. 14, 1914. Serial No. 818,693. (Cl. 87—12.)

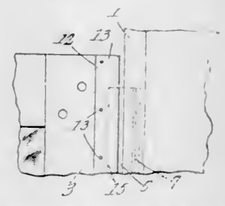
1. A mixing machine, comprising a casing, beaters or vanes adapted to rotate within said casing, open cups of conical form mounted on said beaters or vanes, having their mouths at their smaller ends, the mouths of the said cups being disposed in the plane of the said beaters or vanes, substantially as described.

2. A mixing machine, comprising a casing, beaters or vanes adapted to rotate within the said casing so that their edges closely fit the inner walls of the said casing, open cups of conical form mounted on said beaters or vanes, having their mouths at their smaller ends, the mouths of the said cups being disposed in the plane of the said beaters or vanes, said beaters or vanes being provided with series of holes intermediate of said cups, substantially as described.



3. A mixing machine, comprising a casing, a rotating shaft within said casing, beaters or vanes mounted upon said shaft at right angles thereto and so as in their rotation to fit the inner walls of the casing, open cups of conical form mounted on said beaters or vanes with their mouths disposed in line with the said beaters or vanes, said beaters or vanes being provided with series of holes intermediate of said cups, substantially as described.

1,170,816. WINDOW CONSTRUCTION. SAMUEL W. HORST, Lemoyne, Pa., assignor of one-half to Walter Mertz, Lebanon, Pa. Filed Jan. 23, 1914. Serial No. 813,940. (Cl. 20—69.)



In a device of the class described, a stile and a sill; an I-shaped member comprising sash guiding flanges, and holding flanges inserted into the stile; a sash slidable between the guiding flanges and provided in its lower edge with an open sided recess; a strip on the sill and embodying an upstanding flange, the strip being adjustable transversely of the sill to permit the flange thereof to enter the recess and to abut against the sash when the latter is closed, one of the holding flanges being cut away to receive one end of the upstanding flange and to permit an adjustment of said flange toward and away from the sash when the latter is closed; means for securing the strip to the sill; a detachable angle plate; and means for securing the angle plate to the sash, the angle plate constituting a closure for the recess and a guide coöperating with the notched flange.

1,170,817. POULTRY-NEST. MARTIN R. JACOBUS, Ridgefield, N. J. Filed May 18, 1915. Serial No. 28,810. (Cl. 119—45.)



1. A poultry nest, comprising: a receptacle, a partition dividing said receptacle into a lower liquid compartment

and an upper nest compartment, and a liquid absorbent element held by said partition and dipping into the liquid of the liquid compartment.

2. A poultry nest, comprising: a receptacle, a partition consisting of a plurality of concentric disks and dividing said receptacle into a lower liquid compartment and an upper nest compartment, and a liquid absorbent element held by said partition and dipping into the liquid of the liquid compartment.

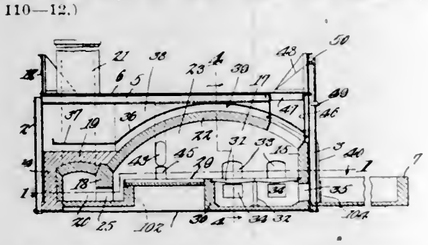
3. A poultry nest, comprising: a receptacle, a partition consisting of an outer annular member and an inner disk supported thereby and an absorbent element over said inner disk, held between the same and the annular member and having portions dipping into the liquid of said liquid compartment.

4. A poultry nest, comprising: a receptacle, a partition consisting of an outer annular member and an inner disk supported thereby, an absorbent element over said inner disk held between the same and the annular member and having portions dipping into the liquid of said liquid compartment, and an absorbent element over said annular member and dipping into the liquid of said liquid compartment.

5. A poultry nest, comprising: a receptacle, a partition dividing said receptacle into a lower liquid compartment and an upper nest compartment, a liquid absorbent element held by said partition and dipping into the liquid of the liquid compartment, and a disk resting upon said partition.

[Claims 6 and 7 not printed in the Gazette.]

1,170,818. CREMATORY. EDWARD M. JONES, Macon, Ga. Filed Sept. 28, 1914. Serial No. 863,938. (Cl. 110—12.)



1. A crematory embodying an incinerating chamber; a grate disposed at one side of the incinerating chamber; an offal support disposed in approximate alinement with the grate; a platform above the incinerating chamber; a hood interposed between the top of the incinerating chamber and the platform and defining an upper draft space and a lower draft space which communicate with each other adjacent one end of the hood; means for admitting air into the upper draft space at a point remote from said end of the hood; a flue communicating with the lower draft space adjacent the other end of the hood and opening into the incinerating chamber below the grate; an upright wall constituting at once a support for the grate and a means for deflecting the air from the flue upwardly through the grate; and an outlet for the products of combustion, the outlet communicating with the incinerating chamber below the level of the offal support thereby to draw the air which passes through the grate across the offal support.

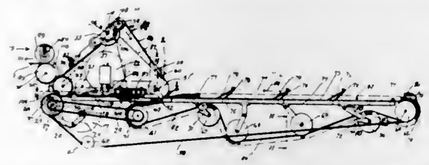
2. A crematory comprising an incinerating chamber; a transverse combustion chamber at one side of the incinerating chamber; a cross wall defining one side of the combustion chamber and one side of the incinerating chamber; a stack at one extreme end of the combustion chamber; a platform above the incinerating chamber; a hood between the top of the incinerating chamber and the platform, the platform terminating in an extension lying above the combustion chamber and extended unbrokenly entirely across the crematory from one end thereof to the flue; a grate in the incinerating chamber and extended entirely thereacross; means for admitting air to the space above the hood; and means for conducting air from the space below the hood to the space below the grate; the cross wall having a plurality of openings placed closely together, whereby the products of combustion entering the combustion chamber will heat the chamber throughout its length and cause the chamber to heat the air passing around the extension through the entire length of the extension, one of said openings in the cross wall communicating directly with the stack thereby to prevent a deadening of the draft from the grate.

1,170,819. GALVANIC CELL. MORDUCH L. KAPLAN, Brooklyn, N. Y., assignor to Beacon Miniature Electric Co., Inc., New York, N. Y., a Corporation of New York. Filed May 1, 1915. Serial No. 25,165. (Cl. 204—38.)

1. As a new article of manufacture, a depolarizing material comprising discrete particles of graphite coated with higher oxid of manganese.

2. As a new article of manufacture, a shaped depolarizing material comprising discrete particles of graphite bonded by attached dense but slightly porous manganese depolarizing material.

1,170,820. APPARATUS FOR MAKING FEATHER BOAS AND THE LIKE. CHARLES L. KAUFMAN, Englewood, N. J., assignor to Alexander Arbib, New York, N. Y. Filed Jan. 5, 1914. Serial No. 810,391. (Cl. 112—24.)



1. In apparatus of the class described, in combination, a sewing means, conveying means for transporting a line of feathers past said sewing means; a translatable carrier movable toward said conveying means and including a plurality of substantially parallel series of spikes longitudinally arranged on the carrier, and a rod-like member lying over the median longitudinal portion of said carrier and between said series of spikes, said spikes projecting above the upper surface of said member.

2. In apparatus of the class described, in combination, a sewing means, conveying means for transporting a line of feathers past said sewing means; a translatable carrier movable toward said conveying means and including a plurality of substantially parallel series of spikes longitudinally arranged on the carrier, and a rod-like member lying over the median longitudinal portion of said carrier and between said series of spikes, said spikes projecting above the upper surface of said member; and a resilient member which extends downwardly toward said rod-like member.

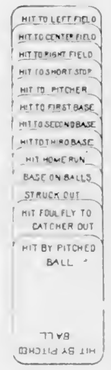
3. In apparatus of the class described, in combination, a sewing means, conveying means for transporting a line of feathers past said sewing means; a translatable carrier movable toward said conveying means and including a plurality of substantially parallel series of spikes longitudinally arranged on the carrier, and a rod-like member lying over the median longitudinal portion of said carrier and between said series of spikes, said spikes projecting above the upper surface of said member; said rod-like member being fixed relatively of said translatable carrier and serving to support the quills of feathers the flues of which are engaged by said spikes.

4. In apparatus of the class described, in combination, a sewing means, conveying means for transporting a line of feathers past said sewing means; a translatable carrier movable toward said conveying means and including a plurality of substantially parallel series of spikes longitudinally arranged on the carrier, and a rod-like member lying over the median longitudinal portion of said carrier and between said series of spikes, said spikes projecting above the upper surface of said member; said member terminating adjacent said conveying means in a trough-like portion.

5. In apparatus of the class described, in combination, a sewing means, conveying means for transporting a line of feathers past said sewing means; a translatable carrier movable toward said conveying means and including a plurality of substantially parallel series of spikes longitudinally arranged on the carrier, and a rod-like member lying over the median longitudinal portion of said carrier and between said series of spikes, said spikes projecting above the upper surface of said member; said carrier advancing to a predetermined point adjacent said conveying means and thereupon advancing to become removed from said predetermined point and said members carrying adjacent said conveying means a plurality of slots through which said spikes may pass when said carrier advances as aforesaid to become removed from said predetermined point.

[Claims 6 to 8 not printed in the Gazette.]

1,170,821. GAME. ORLANDO R. KELLER, Portsmouth, Ohio. Filed Nov. 27, 1914. Serial No. 874,267. (Cl. 46—25.)

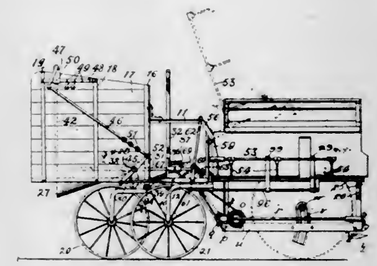


A game including separate suits of cards for the respective infield and outfield positions on a baseball field, the cards of each suit having designated on one face the position in the field to which the cards belong, and on the opposite faces of the respective cards of each suit the various fielding chances and misplays that are possible at said position, another suit of cards representing a batter, the cards of said suit being marked on one side to indicate the suit to which they belong and, on the opposite sides of the respective cards of said suit being provided with designations of all possible plays and misplays of a batter, and another suit of cards designated to represent a player stealing and provided, on one face with designations as to whether the player stealing is safe or out.

1,170,822. GRAIN-SHOCKER FOR HARVESTING-MACHINES. EDWIN M. KELLOGG, Moline, Ill. Filed Feb. 7, 1908. Serial No. 414,740. (Cl. 56—121.)

1. In a machine of the class described, the combination of a harvesting machine provided with a traction wheel, a rearwardly tilting shock receptacle, a transverse pivot for the shock receptacle, a pivoted, reciprocating, bundle-lifting member located forward of said transverse pivot and of the shock receptacle and having a bundle-engaging and supporting portion movable upward and rearward in a plane at right angles to the transverse axis of the shock receptacle and toward the shock receptacle, means for reciprocating the bundle-lifting cradle, and operating mechanism connected with said shock receptacle and operatively connected with the traction wheel for automatically operating the shock receptacle.

2. In a machine of the class described, the combination of a harvesting machine having a main traction wheel and having a grain binder provided with bundle-discharging mechanism, a rearwardly tilting shock receptacle, a transverse pivot for the shock receptacle, a pivoted reciprocating bundle-lifting member located on the stubbleward side of the path of movement of the main traction wheel and adjacent to the bundle-discharging arms of the grain binder and forward of said transverse pivot of the shock receptacle, and having a bundle-engaging and supporting portion movable upward and rearward toward the shock receptacle in a plane substantially at right angles to the transverse axis of the shock receptacle, a rock shaft in supporting engagement with the reciprocating bundle-lifting member, actuating mechanism connected with said rock shaft, and actuating mechanism connected with the tilting shock receptacle and operatively connected with the main traction wheel, for automatically operating said shock receptacle.



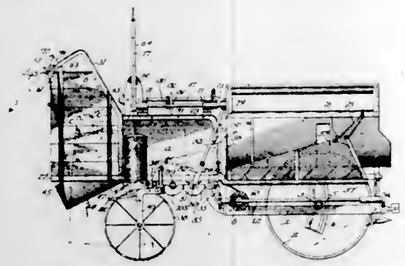
3. In a machine of the class described, the combination of a main frame, supporting wheels upon which the frame is mounted, a rearwardly tilting shock receptacle mounted in the frame, a pivoted reciprocating cradle mounted in the frame forward of the rearwardly tilting shock receptacle, and adapted to receive bundles of grain from a binder, mechanism operatively connected with the reciprocating cradle and with the rearwardly tilting shock receptacle and forming a connection between said cradle and shock receptacle, for automatically operating the shock receptacle, and means for operating the reciprocating cradle.

4. In a machine of the class described, the combination of a shocker frame, a rearwardly tilting shock receptacle pivotally mounted in the frame, dumping mechanism operatively connected with the shock receptacle for tilting it, a reciprocating bundle-lifting cradle pivotally mounted forward of the shock receptacle and having its free end normally located forward with respect to its axis and adapted to swing upward and rearward above the level of its axis, in the direction of the shock receptacle and in supporting engagement with the bundle, cradle-operating mechanism operatively connected with the reciprocating bundle-lifting cradle, and automatically actuated trip and dog mechanism operatively connected with the dumping mechanism of the shock receptacle.

5. In a machine of the class described, the combination of a harvesting machine provided with binder mechanism having bundle-discharging arms, a shocker frame connected with the harvesting machine, a rearwardly tilting shock-engaging member mounted in the shocker frame, actuating mechanism connected with said tilting member, a pivoted reciprocating bundle-lifting arm movable upward and rearward toward said tilting shock-engaging member and adapted to receive a bundle from said discharging arms of the harvesting machine, actuating mechanism operatively connected with the pivoted bundle-lifting receptacle, and releasing mechanism operatively connected with the actuating mechanism of the reciprocating bundle-lifting arm and adapted to be engaged and operated by a discharge bundle of the binder.

[Claims 6 to 33 not printed in the Gazette.]

1,170,823. GRAIN-SHOCKER. EDWIN M. KELLOGG, Moline, Ill. Filed Jan. 31, 1910. Serial No. 541,004. (Cl. 56—122.)



1. In a shocking machine, a dumping sheaf receiving cradle, a pivotally supported sheaf delivering member located forward thereof and having a sheaf engaging portion adapted to swing upward and rearwardly toward said cradle to deposit sheaves therein, binding mechanism for binding sheaves contained in said cradle and mechanism operatively connected with the sheaf delivering member and with said binding mechanism respectively for operating the same in a predetermined order.

2. In a shocking machine, a frame, a rearwardly dumping sheaf receiving cradle supported thereby, a pivoted sheaf delivering member located forward of said cradle and adapted to swing upward and rearwardly toward said cradle in depositing the sheaves therein, binding mechanism for binding sheaves contained in said cradle, mechanism for operating the binder mechanism and the sheaf delivering mechanism respectively, means for connecting the binder mechanism and the sheaf delivering mechanism, and means for dumping the sheaf receiving cradle.

3. In a shocking machine, a rearwardly dumping sheaf receiving member, an upwardly and downwardly swinging binder arm located on one side of said cradle and provided with a needle, knotter mechanism located on the opposite side of said cradle from said binder arm, and a pivoted upwardly and rearwardly movable sheaf delivering member located forward of said cradle and adapted to deposit bundles of grain in said cradle.

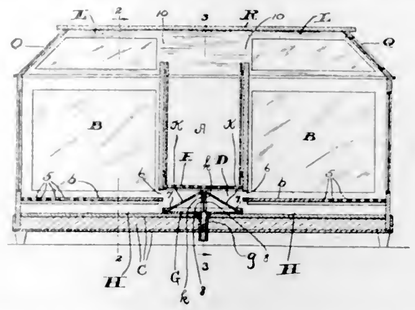
4. In a shocking machine, a shocker frame, a binder arm mounted on one side of the center thereof, knotter mechanism mounted on the opposite side of said frame from said binder arm, a rearwardly dumping sheaf receiving member located between said binder arm and said knotter mechanism, and a sheaf delivering member mounted forward of the rearwardly dumping cradle and adapted to swing rearwardly between said binder arm and said knotter mechanism.

5. In a shocking machine, a shocker frame, a sheaf receiving cradle carried thereon, a binder arm located on one side of said cradle, knotter mechanism located on the opposite side thereof from said binder arm, a sheaf delivering member mounted forward of said binder arm and knotter mechanism and adapted to swing rearward between the same, and means for operating said sheaf delivering member.

[Claims 6 to 30 not printed in the Gazette.]

1,170,824. REFRIGERATOR. ADOLPH S. KLEIN, Cleveland, Ohio. Filed Oct. 25, 1911. Serial No. 656,701. (Cl. 62—37.)

In a refrigerator having a substantially horizontally arranged bottom, two provision-chambers arranged over opposite end-portions respectively of said bottom and having their bottoms spaced from the first-mentioned bottom so as to form air-conducting passageways under the provision-chambers, apertures in the outer end-portions of the bottoms of the provision-chambers a cold-air-chamber arranged between the lower portions of the provision-chambers, and an ice-chamber arranged over said cold-air-chamber, each provision-chamber being provided at the inner side and lower end with a lateral air-inlet which communicates with and forms an outlet of said cold-air-chamber, the aforesaid passageways communicating at their inner ends with said cold-air-chamber and having their outer end-portions in communication with the provision-



chambers in proximity to the outer side walls of the provision-chambers, and the bottom of each provision-chamber being substantially imperforate between said cold-air-chamber and a point central between said cold-air-chamber and the outer side wall of said provision-chamber.

1,170,825. FOUNTAIN-PEN. JOSEPH A. KRAKER, Kansas City, Mo., assignor to Kraker Pen Co., Kansas City, Mo., a Corporation of Missouri. Filed Nov. 30, 1914. Serial No. 874,706. (Cl. 120—46.)

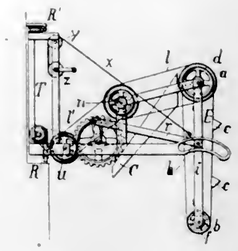


1. In a fountain pen, the combination with a barrel having a slot in one side thereof, of a compressible ink sack and a follower for said sack both housed by the barrel, the follower facing said slot; and a lever of the first class pivoted to said barrel and normally having at least its longer end housed by said slot; the shorter end of said lever engaging said follower when the lever is moved about its pivot, thereby actuating the follower to compress the sack; said lever having a portion wider than the part of the slot housing the longer end of the lever, said wider portion so disposed as to engage the barrel adjacent to the last named part of the slot, when the lever is moved to actuate the follower, thereby limiting the said follower-actuating movement of the lever.

2. In a fountain pen, the combination with a barrel having a slot in one side thereof, of a compressible ink sack and a follower for said sack both housed by the barrel, the follower facing said slot; and a lever of the first class pivoted to said barrel and having at least its longer end normally housed by said slot; the shorter end of said lever engaging said follower when the lever is moved about its pivot, thereby actuating the follower to compress said sack; said lever having a portion wider than the part of the slot housing the longer end of the lever, said wider portion so disposed as to engage the barrel adjacent to and at both sides of the last named part of the slot, when the lever is moved to actuate the follower thereby limiting the said follower-actuating movement of the lever.

3. In a self-filling fountain pen equipped with a sack collapsing element, an actuating lever for said element pivotally secured between its ends in a longitudinal slot in the barrel of said pen and housed by said slot when in closed position, said lever equipped with a lateral projection adapted to engage a peripheral surface of the wall of the barrel to limit the pivotal movement of said lever in one direction.

1,170,826. UNLOADING-MACHINE. LEO KAESSER, Passaic, N. J. Filed Oct. 27, 1914. Serial No. 868,794. (Cl. 193—3.)



1. In an unloading machine a movable frame and a bucket-elevator mounted therein in combination with a supporting structure which is provided with means for guiding the frame in two places lengthwise remote from one another for movement in two distinct directions, attachments to the frame to engage with the guiding means of the structure and means for oscillating the frame and driving the elevator.

2. In an unloading machine a movable frame and a bucket-elevator mounted therein in combination with a supporting structure which is provided with means for guiding the frame in two places lengthwise remote from one another for movement in two distinct directions, attachments to the frame to engage with the guiding means of the structure, pushrods attached to said frame, a crank mechanism acting upon the pushrods and driving machinery for the crank mechanism and the elevator.

3. In an unloading machine a pivoted structure provided with curved tracks serving as a support in combination with a movable frame and a bucket elevator mounted therein, links connecting the headshaft of the elevator with the structure, rollers attached to the frame and running on the curved tracks of the structure, pushrods connected with and acting upon the frame of the elevator, cranks, a crankshaft and driving machinery actuating the pushrods and driving the elevator, means for hoisting the free end of the structure.

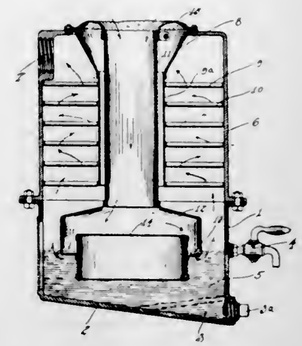
4. In an unloading machine a pivoted structure provided with curved tracks serving as a support in combination with a movable frame and a bucket elevator mounted therein, links connecting the headshaft of the elevator with the structure, rollers attached to the frame and running on the curved tracks of the structure, pushrods connected with and acting upon the frame of the elevator, cranks, a crankshaft and driving machinery actuating the pushrods and driving the elevator, a trolley to carry the structure and means for hoisting the free end of the structure, tracks to carry the trolley and means of propulsion of the trolley.

1,170,827. AIR-HUMIDIFIER FOR EXPLOSIVE-MOTORS. JOHN M. KROYER, Stockton, Cal. Filed Nov. 10, 1914. Serial No. 871,284. (Cl. 98—45.)

1. A device of the character described comprising a receptacle provided with an outlet, a tube projecting into said receptacle, an open pipe slidably projecting through said tube and arranged to admit air into said receptacle, and a flexible closure arranged over the space between said pipe and said tube, as described.

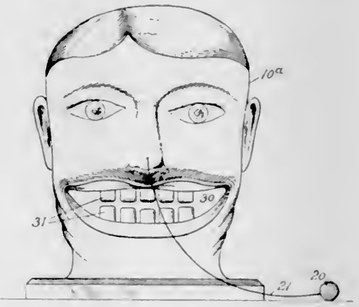
2. A device of the character described comprising a receptacle carrying water and provided with an outlet, a tube projecting into said receptacle, an open pipe slidably disposed through said tube, a flaring discharge outlet on the lower end of said tube, a perforated cover on the underside of said flaring outlet, a float interposed centrally in said cover and projecting above and below the same, the perforations of said cover being arranged around the float, as described.

3. A device of the character described comprising a receptacle carrying water, said receptacle being provided with an inlet and outlet, a plurality of perforated baffle plates in said receptacle, each provided with a central orifice, a tube projecting through said orifices and connected



with said inlet, an open pipe projecting into said inlet and through said tube and into said water, a float on said pipe, the sides of said inlet and said tube being spaced from said pipe, as described.

1,170,828. GAME APPARATUS. SIDNEY R. LAMB, New York, N. Y. Filed Feb. 8, 1912. Serial No. 676,324. (Cl. 46—59.)



1. A game apparatus comprising a target made to represent a face with an open mouth and having teeth which normally show in the mouth, and a striking ball tethered by a stretchable elastic string, the teeth being formed by a plurality of independently movable parts mounted to disappear from sight when hit by the ball.

2. A game apparatus comprising a target made to represent a face with an open mouth, and having teeth normally showing in the mouth, the teeth being formed each of an independently movable part mounted to disappear from sight when hit from the front.

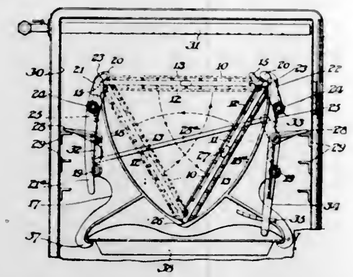
3. A game apparatus comprising a target made to represent a face with an open mouth, and having teeth normally showing in the mouth, the teeth being mounted to disappear from sight when hit from the front.

4. A game apparatus comprising a target made to represent a face with an open mouth, and having teeth normally showing in the mouth, and means for holding said teeth in normal position and for causing them to disappear when struck.

5. A game apparatus comprising a target made to represent a face with an open mouth, and having a plurality of teeth normally showing in the mouth, and means for holding each of said teeth in normal position independently of the others and for causing it to disappear when struck.

[Claims 6 and 7 not printed in the Gazette.]

1,170,829. REVERSIBLE BROILER. HENRIETTA WILMER LAWRENCE, Baltimore, and HARRY J. LEBHERZ, Frederick, Md. Filed Oct. 23, 1915. Serial No. 57,394. (Cl. 53—5.)



1. A reversible broiler comprising a gridiron and a supporting structure therefor having two upper bearing elements in spaced relation to each other horizontally, or substantially so, and a lower bearing element in a vertical plane between the upper bearing elements.

2. A reversible broiler comprising a gridiron and a supporting structure therefor having two upper bearing elements in spaced relation to each other horizontally, or substantially so, a lower bearing element in a vertical plane between the upper bearing elements, and guide means for the gridiron in its travel between the lower and the upper bearing elements.

3. A reversible broiler comprising a gridiron and a supporting structure therefor having two upper bearing elements in spaced relation to each other horizontally, or substantially so, a lower bearing element in a vertical plane intermediate the upper bearing elements, and cam surfaces diverging from the lower bearing element toward the respective upper bearing elements.

4. A reversible broiler comprising a gridiron, a supporting structure therefor having upwardly diverging cam portions and movable bearing elements for supporting the gridiron substantially horizontal at the upper part of the said cam portions, the crotch of said portions affording a bearing element for the gridiron when either movable element is removed therefrom.

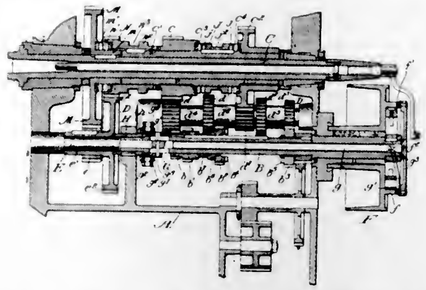
5. A reversible broiler comprising a gridiron, a supporting structure therefor, spring-pressed bearing pawls normally positioned on said stucture to support the gridiron substantially horizontal, a bearing element for the gridiron located below and in a vertical plane between the said pawls, and guide means for the gridiron in its travel between the lower bearing element and the upper bearing pawls.

[Claims 6 to 12 not printed in the Gazette.]

1,170,830. VARIABLE-SPEED MECHANISM. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 12, 1913. Serial No. 760,671. (Cl. 74—59.)

1. The combination, with a spindle, of a sleeve loose thereon, means to turn the sleeve, a gear splined on the sleeve and having a clutch member, a gear fast on the spindle and having a supplemental clutch member, a back gear meshing with the gear on the sleeve, another back gear mounted to turn with the first back gear and meshing with the gear on the spindle, and means for first moving the second back gear out of mesh with the gear on the spindle and then sliding the gear on the sleeve to bring its clutch member into operative engagement with the clutch member on the spindle, and vice versa.

2. The combination with a spindle, of a sleeve loose thereon, means to turn the sleeve, direct and indirect drives from the sleeve to the spindle, means for shifting each of said drives into and out of operative position, interrupted segments carried by said shifting means, interrupted gears meshing with said segments, and means for turning said gears, whereby one drive is thrown out and the other thrown in.



3. The combination with a spindle, of a sleeve loose thereon, means to turn the sleeve, direct and indirect drives from the sleeve to the spindle, means for shifting each of said drives into and out of operative position, interrupted segments carried by said shifting means, interrupted gears meshing with said segments, a stud carrying said gears, and means for turning said stud, whereby one drive is thrown out and the other in by turning said stud in one direction or the other.

4. The combination with a spindle, of a sleeve loose thereon, means to turn the sleeve, direct and indirect drives from the sleeve to the spindle, shifting devices for each of said drives, interrupted segments carried by said shifting devices, each segment having a series of teeth and a groove, interrupted gears meshing with said segments, each gear having a series of teeth and a smooth portion, the latter adapted to engage the groove in its segment to allow for lost motion during a part of the turning of each gear, and means to turn said gears together, whereby the lost motion on each segment occurs during the movement of the other segment for first throwing out one drive and then throwing in the other.

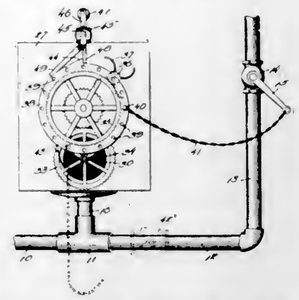
5. The combination, with a spindle, of a sleeve loose thereon, means to turn the sleeve, direct and indirect drives from the sleeve to the spindle, shifting devices for each of said drives, interrupted segments carried by said shifting devices, each segment having a series of teeth and a groove, interrupted gears meshing with said segments, each gear having a series of teeth and a smooth portion, the latter adapted to engage the groove in its segment to allow for lost motion during a part of the turning of each gear, a stud carrying said gears, and means for turning said stud, the gears being fixed to the stud with their smooth portions arranged in relative positions which cause the lost motion on each segment to occur during the movement of the other segment, whereby one drive is thrown out before the other is thrown in.

[Claims 6 to 11 not printed in the Gazette.]

1,170,831. AUTOMATIC GAS CUT-OFF. ELSWORTH LEWIS, Shreve, Ohio. Filed Aug. 13, 1913. Serial No. 784,533. (Cl. 67—115.)

1. A gas cut-off operating device comprising a chamber element, a support therefor, a plate carried by the chamber movable for concentric rotative adjustment thereon, means movable under fluctuation of pressure in the chamber including a member projecting therefrom, valve operating means carried by the plate tending to operate the valve, a detent carried by the plate engaged with the last named means having a portion disposed in the path of said member projecting from the chamber for engagement thereby and operation of the detent, and extensible valve connections engaged with said operating means.

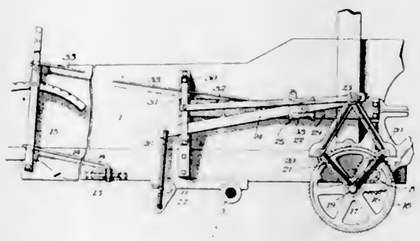
2. A gas cut-off comprising a pressure operated reciprocating device, a rotatable wheel having a tooth thereon, a detent having a long and a short bill spaced on different radii on the wheel and adapted to lie respectively in the path of the tooth at opposite limits of movement of the detent, a valve, and lost motion connections between the wheel and valve for closing of the valve.



3. A safety gas cut-off comprising a valve having a manually operable operating member movable in one direction to close the valve, a wheel disposed in the direction of closing movement of the said member, and rotatable in a plane therewith, a flexible member eccentrically connected to the wheel and connected to the operating member for movement of the operating member from open to closed position, constructed and arranged to flex under rotation of the wheel when the valve is closed, means for rotating the wheel, a detent engaged in the wheel and pressure operated means for releasing the detent, and means to limit rotation of the wheel to reset position after release.

4. In a mechanism of the class described, a rotating wheel, means for rotating the wheel and means to control its rotation, a member movable in the plane of a wheel, away from and toward the wheel, said wheel having a concentric cyclically spaced series of lateral openings therein, a wrist member removably engageable in the openings and connections between the wrist and said movable member.

1,170,832. INTERMITTENTLY-OPERATING DRIVING MECHANISM. ALEXUS C. LINDGREN and GUNDER G. MANDT, Moline, Ill., assignors to Moline Plow Company, a Corporation of Illinois. Original application filed Dec. 20, 1909, Serial No. 533,992. Divided and this application filed Nov. 17, 1913. Serial No. 801,520. (Cl. 74—54.)



1. A transmission mechanism including a driving member; a driven member; and intermediate mechanism comprising a ratchet wheel operatively connected with said driven member; means for actuating said ratchet wheel; a support; a fulcrum member shiftably mounted on said support; a rocker arm mounted, intermediate its ends, on said fulcrum element, and pivotally connected at one end with said ratchet wheel actuating means; means for connecting the opposite end of said arm and said driving member; and a member having a fixed pivot at one end on said support; the other end being connected with said rocker arm and ratchet wheel actuating means.

2. A transmission mechanism including a driving member; a driven member; and intermediate mechanism comprising a ratchet wheel operatively connected with said driven member; means for actuating said ratchet wheel; a support; a fulcrum member shiftably mounted on said support; a rocker arm mounted, intermediate its ends, on said fulcrum element, and pivotally connected at one end with said ratchet wheel actuating means; means for connecting the opposite end of said arm and said driving member; means, connected with said rocker arm and ratchet wheel actuating means, for maintaining them in predetermined axial relation; and means for shifting said fulcrum on said support whereby the speed of said driven member is varied.

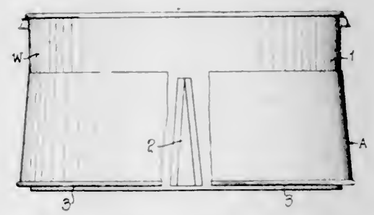
3. A transmission mechanism including a driving member; a driven member; and intermediate mechanism comprising a ratchet wheel operatively connected with said driven member; means for actuating said ratchet wheel; a support; a fulcrum member shiftably mounted on said support; a rocker arm mounted, intermediate its ends, on said fulcrum element, and pivotally connected at one end with said ratchet wheel actuating means; means for connecting the opposite end of said arm and said driving member; a member having a fixed pivot at one end on said support; the other end being connected with said rocker arm and ratchet wheel actuating means; and a controlling means connecting with said driving member and said fulcrum element to actuate one of said members and then the other.

4. A transmission mechanism including a driving member; a driven member; and intermediate mechanism comprising a ratchet wheel operatively connected with said driven member; means for actuating said ratchet wheel; a support; a fulcrum member shiftably mounted on said support; a rocker arm mounted, intermediate its ends, on said fulcrum element, and pivotally connected at one end with said ratchet wheel actuating means; means for connecting the opposite end of said arm and said driving member; a member having a fixed pivot at one end on said support; the other end being connected with said rocker arm and ratchet wheel actuating means; and a controlling means connecting with said driving member and said fulcrum element to actuate one of said members and then the other.

5. A structure of the class described including a driving member; a driven member; driving mechanism for actuating said driving member; mechanism for transmitting motion between said driving and driven members comprising a rocking member, a shiftable fulcrum-element upon which said rocking member is supported, a ratchet-wheel, pawl-carrying arms supported on said rocking member and also on the axis of said ratchet-wheel, a crank-arm connecting with the opposite end of the rocking-member and with said driving member, connections between said ratchet-wheel and said driven-member; and a controlling member connecting with said driving and motion-transmitting mechanisms and shiftable to actuate one of said mechanisms and, then, the other.

[Claims 6 and 7 not printed in the Gazette.]

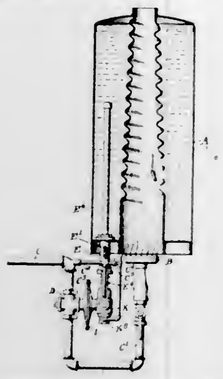
1,170,833. HOUSEHOLD UTENSIL. GEORGE W. LONG, Mannington, W. Va. Filed Sept. 15, 1915. Serial No. 50,880. (Cl. 68—30.)



As a new article of manufacture, a wash boiler and an apron disposed entirely around said boiler, the upper marginal portion of the apron being permanently secured to the outer face of the side wall of the boiler at a point intermediate the height thereof, said apron being flared outwardly and terminating at a point above the bottom of the boiler, and reinforcing members substantially U

shape in cross section and in the form of an inverted V in plan interposed between the apron and the boiler and disposed transversely of the apron.

1,170,834. THERMOSTATIC VALVE MECHANISM. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed June 1, 1911. Serial No. 630,611. (Cl. 126—351.)



1. A thermostatic valve mechanism comprising in combination a main valve casing, a pilot valve casing and a pressure chamber open at one side to the interior of the main valve casing and at the other side to the interior of the pilot valve casing and formed of two casing parts detachably secured together and one rigidly but detachably secured to the pilot valve casing.

2. A thermostatic valve mechanism comprising in combination a main valve casing formed with a port, a valve controlling said port, a pilot valve casing, a pressure chamber open at one side to the interior of the main valve casing and at the other side to the interior of the pilot valve casing and formed of two parts detachably secured together and each detachably connected to the corresponding valve casing, and a flexible diaphragm dividing said chamber and secured at its margin between said chamber ports and operatively connected to said valve.

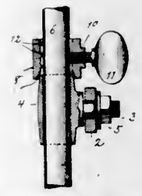
3. The combination of a main valve and fluid pressure operating means therefor including a compartment and thermostatically actuated mechanism controlling the admission to, and exhaust from said compartment of a pressure fluid for operating said valve in opposite directions, said mechanism including a valve casing formed with a chamber communicating with said compartment and having an inlet port opening to said chamber and a spring chamber opening away from said chamber and an outlet channel exterior to said spring chamber, a valve operating member having an extension projecting into said spring chamber, a spring located in said chamber and acting on said operating member and valve parts actuated by said member to open and close said port and passage.

4. The combination of a main valve and fluid pressure operating means therefor including a compartment and thermostatically actuated mechanism for controlling the admission to an exhaust from said compartment of a pressure fluid for operating said valve in opposite direction, said mechanism including a valve casing formed with a chamber communicating with said compartment, and with an inlet port opening to said chamber and a passage leading away from said chamber, a casing part removably secured in said passage and formed with a central spring chamber and an outlet channel exterior to said spring chamber, a valve operating member having a projection extending into said spring chamber, a spring located in said chamber and acting on said operating member, and ports actuated by said member to open and close said port and passage.

5. The combination of a main valve and fluid pressure operating means therefor including a compartment and thermostatically actuated mechanism for controlling the admission to and exhaust from said compartment of a pressure fluid for operating said valve in opposite directions, said mechanism including a valve casing formed with a chamber communicating with said compartment, and with an inlet port opening to said chamber and a threaded passage leading away from said chamber, a threaded casing part adjustably screwed into said pasage and formed with a central spring chamber and an outlet channel exterior to said spring chamber, a pair of valves, one controlling said port and the other said channel, a valve operating member on which said valve members are slidingly mounted, said operating member having an extension projecting into said spring chamber and a spring located in said chamber and acting on said operating member.

[Claim 6 not printed in the Gazette.]

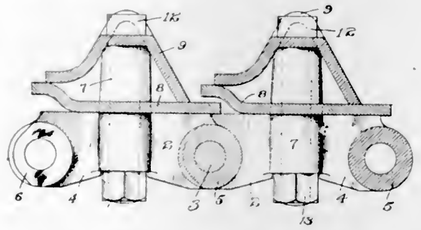
1,170,835. AWNING ATTACHMENT. MICHAEL LOY, Brooklyn, N. Y. Filed July 23, 1915. Serial No. 41,513. (Cl. 156—42.)



1. An awning comprising a covering, a runner operatively connected thereto, and a rod encompassed by the runner, combined with a tubular slide mounted on the rod above the runner, said slide having a lower belled and serrated mouth adapted to receive the upper end of the runner, and a clamp screw tapped into the slide and adapted to engage the rod.

2. An awning comprising a covering, a runner operatively connected thereto and a rod encompassed by the runner, combined with a tubular slide mounted on the rod above the runner, said slide having a lower belled and serrated mouth adapted to receive the upper end of the runner, a plurality of inner ridges, and a clamp screw tapped into the slide and adapted to draw said ridges against the rod.

1,170,836. TRACTOR-CHAIN. WALTER B. MACAULAY, Marysville, Cal., assignor to The Yuba Construction Company, a Corporation of California. Filed Aug. 10, 1914. Serial No. 856,069. (Cl. 21—150.)

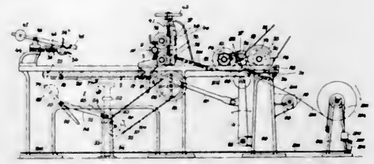


1. In a tractor tread chain, a link, a hollow boss thereon projecting above the surface of the link, a curved tread plate and a bolt extending through said boss and tread plate.

2. In a tractor tread chain, a link having two legs and an integral hollow upstanding boss on each leg projecting above the surface of the link, said boss being arranged midway between the ends of the link.

3. In a tractor tread chain, a link having two legs, a hollow boss on each leg projecting above the surface of the link, a curved tread plate resting against said bosses, and bolts extending through said plate and bosses.

1,170,837. TUBE-MAKING MACHINE. PAUL MENZEL, Vienna, Austria-Hungary. Filed Nov. 26, 1913. Serial No. 803,103. (Cl. 93—81.)



1. A tube making machine comprising a frame, a bearing slidable thereon, a drum mounted in the bearing and adapted to be encompassed by a tube-forming band, a transfer roller for conveying a plastic substance to the band, a guide roller arranged in proximity to the transfer roller, and means actuated by the bearing for projecting the guide roller against the band.

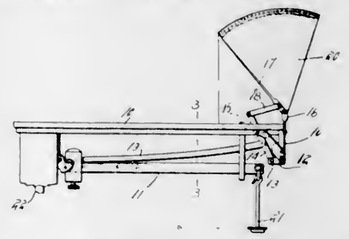
2. A tube making machine comprising a frame, a bearing slidable thereon, a catch on the bearing, a bar also slidable in the frame, a pair of adjustable stops on the bar that are adapted to be engaged by the catch, a transfer roller for conveying a plastic substance to the band, a guide roller arranged in proximity to the transfer roller and adapted to engage the band, and means for operatively connecting the bar to the guide roller.

3. A tube making machine comprising a frame, a drum mounted thereon and adapted to be encompassed by a tube-forming band, means for applying a plastic substance to said band, a vertically reciprocable table, a cutter mounted on said table adapted to sever the band, and a plurality of spring-controlled rollers also carried by the table and adapted to press the end of the severed band against the drum.

4. A tube making machine comprising a frame, a bearing slidable thereon, a drum hung on the bearing and adapted to be encompassed by a tube-forming band, means for applying a plastic substance to the band, means actuated by the bearing for controlling the supply of said substance, means for severing the band, means for pressing the end of the severed band against the drum, and heating rollers arranged in the path of the drum and adapted to engage the band.

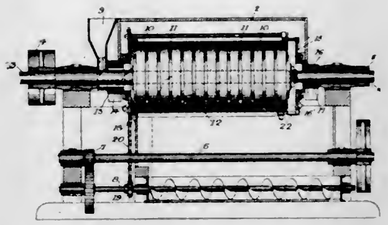
5. A tube making machine comprising a frame, a bearing slidable thereon, a drum hung in the bearing and adapted to be encompassed by the tube-forming band, a transfer roller for applying a plastic substance to the band, a guide roller adapted to engage the band and operable by the bearing, a vertically reciprocable table, a cutter on said table adapted to sever the band, a plurality of spring-controlled rollers also carried by the table and adapted to press the end of the severed band against the drum, and heating rollers arranged in the path of the drum and adapted to engage the band.

1,170,838. SELF-WEIGHING BALANCE-SCALE. FREDRICK C. METZ, Succasunna, N. J. Filed Apr. 30, 1915. Serial No. 24,959. (Cl. 73—29.)



The combination with the frame and beam of a platform scales, of a vertical arm pivotally supported on the frame of the scales, a scale dial mounted on the frame, an indicating pointer pivotally mounted on the frame in position to traverse the scale dial, a link pivotally connecting the said arm with the pointer, and an arcuate weighted bar secured to the said arm and bearing with its convex edge on the upper edge of the scale beam.

1,170,839. BARLEY OR RICE HULLER. JOHN J. MOLLOY, Stockton, Cal. Filed Apr. 10, 1915. Serial No. 20,442. (Cl. 83—30.)



1. An attrition device for rice or barley hullers, comprising a set of rotatively mounted axially alined and parallel spaced attrition disks, an incasing cylindrical screen for the grinders, means for regularly and continuously feeding stock to the grinding and screening elements, and variable automatic gravity operated gates for permitting the constant discharge of the hulled kernel.

2. A rotary barley and rice huller comprising a continuously operative attrition means, and variable discharge gates automatically opened through an arc above the axis of the huller.

3. A rotary barley and rice huller comprising a continuously operative attrition means, and means for automatically discharging material by centrifugal force through a predetermined arc above the axis of the huller, and means for regulating the period of discharge.

4. A barley and rice huller comprising a rotative cylindrical screen with a feeder at one end and rotating centrifugal discharge means at the other operative through an arc above the axis of the huller, and a coaxial attrition device in said screen for abrading the stock in transit therein.

5. A continuously operative grain huller comprising coactive attrition and screening means, and means for mainmaintaining a predetermined quantity of stock in transit therein to produce the desired pressure of the grain upon the attrition means, said latter means including an adjustable band structure for varying and fixing the rate of discharge, and for regulating the period of discharge.

[Claims 6 to 9 not printed in the Gazette.]

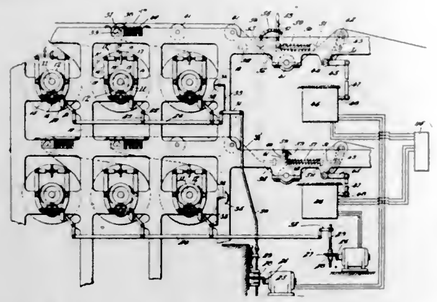
1,170,840. TENSION-REGULATING MECHANISM FOR PRINTING-PRESSES AND THE LIKE. WILLIS S. MORSE, Philadelphia, Pa. Filed Jan. 12, 1914. Serial No. 811,695. (Cl. 242—75.)

1. In a printing press or the like, the combination of a series of shafts adapted to support rolls of material which successively supply a web to the same devices operating thereon, mechanism for retarding or permitting the acceleration of rotation of each of said shafts, and means responsive to the variations in the tension of said web for causing the operation of said mechanism.

2. In a printing press, the combination of a series of shafts adapted to support rolls of paper which successively and continuously supply a web to the same set of printing couples, mechanism for retarding or permitting the acceleration of rotation of each of said shafts, and means interposed between the said mechanism and the web and operating in response to variations in the tension of said web to cause the operation of said mechanism and the retardation or acceleration of said shafts.

3. In a web tension regulating mechanism for printing presses or the like, the combination of a series of shafts adapted to carry rolls of material which successively and

continuously supply a web to the same devices, mechanism for retarding or permitting the acceleration of each of said shafts when the roll of material supported thereby is feeding, and means common to said series of shafts and interposed between the said mechanism and the web for causing the operation of said mechanism to retard or permit acceleration of the shaft carrying the feeding roll as the tension of the web supply therefrom rises above or falls below normal.



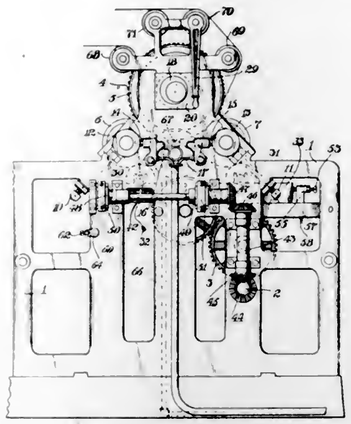
4. In a web tension regulating mechanism for printing presses and the like, the combination of a series of shafts adapted to support rolls of paper which successively supply a web to the same set of printing couples or like devices, of breaking means operative on said shafts for retarding or permitting the acceleration of rotation of each of the web supply roll shafts, a driving mechanism associated with the braking means, and means responsive to the variations in the tension of the web for causing the operation of the braking means by the driving mechanism when the tension of the web falls below or rises above normal.

5. In a web tension regulating mechanism for a printing press or the like, the combination of a series of shafts adapted to support rolls of paper, a braking device associated with each of said shaft and adapted to retard or permit the acceleration of rotation of the same, driving means associated with each of said braking devices, a member movable in response to variations in the tension of said web, and a device rendered operable by said movable member when the tension of the web is above or below normal, said device when operative causing the actuation of the braking devices by the driving means to retard or permit the increase of the acceleration of the supply roll shaft.

[Claims 6 to 34 not printed in the Gazette.]

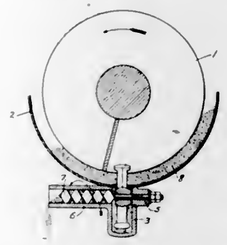
1,170,841. ROTARY MULTICOLOR-PRINTING MACHINE. ERNEST J. W. MULLER, New York, N. Y., assignor to American Bank Note Company, a Corporation of New York. Filed June 7, 1913. Serial No. 772,227. (Cl. 101—104.)

1. A rotary multi-color printing machine embodying therein a main frame, an impression cylinder mounted therein, a plurality of form cylinders mounted in said frame below the impression cylinder, a laterally reciprocatory doctor bar mounted in said frame adjacent and bearing upon the plates on each of said form cylinders, a removable ink-font slidable upon said frame toward and into engagement with the plates on one of said form cylinders, means securing said font in position relative to said cylinder, an ink roller carried by said font, an ink-font associated with the other form cylinder, supports therefor intermediate said doctor bars, an ink roller carried by said font, adjustable means whereby one end of said font will be supported and may be raised or lowered to develop the requisite pressure between the said inking roller and the plates on said cylinder and said font and said inking roller may be dropped below said form cylinder and the doctor bar associated therewith to permit the withdrawal and removal of said font and its roller, and means for projecting a setting medium toward said impression cylinder intermediate said form cylinders.



2. A rotary multi-color printing machine embodying therein a sequence of form or plate cylinders, an ink font for each of said form or plate cylinders, an inking roller for each said font adapted to apply ink therefrom directly to the plate or cylinder upon its plate or form cylinder, a doctor bar or scraper for each said font adapted to remove ink from the top or non-printing surface of said plate or cylinder and return it to said font, whereby a plurality of impressions in different colors may be consecutively made upon a single run of the paper through the machine, one of said fonts being arranged between said doctor bars or scrapers, one end of said font being supported by the frame of the machine and the other end thereof being supported by a plurality of oscillatory levers, one arm of which respectively engages the bottom of said font, and the other arm of which is adapted to be engaged by an adjustable stop, and supports for said stops whereby said levers may be oscillated to permit the end of said font to be dropped beneath one of said doctor bars or scrapers, and the inking roller carried by said font may be moved toward or from its plate or form cylinder, an impression surface for each of said cylinders, and means intermediate succeeding cylinders whereby the ink upon the paper will be dried or set while passing from one cylinder to the succeeding cylinder.

1,170,842. SAMPLING DEVICE. RAY C. NEWHOUSE, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Aug. 1, 1914. Serial No. 854,889. (Cl. 73—21.)



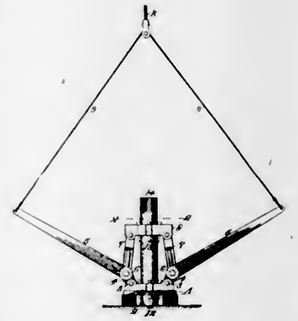
1. In combination, a main casing forming a conduit, a main screw conveyer movable to transport material through said conduit, a sampler casing communicating with said main casing conduit, and an auxiliary screw conveyer operable by said main conveyer to intermittently deliver samples of material from said sampler casing.

2. In combination, a main casing forming a conduit, a screw conveyer having a blade movable to transport material through said conduit, a sampler casing forming a conduit communicating with said main casing conduit, and means operable directly by the moving blade of said conveyer to intermittently deliver samples of material from said sampler casing conduit.

3. In combination, a main casing forming a conduit and having an opening through the bottom thereof, a screw conveyer movable to transport material through said conduit and over said opening, a sampler casing forming a conduit communicating with said main casing conduit at said opening, and means directly operable by a portion of said conveyer adjacent said opening for intermittently removing samples of material from said sampler casing conduit.

4. In combination, a trough, a screw conveyer having a rotatable blade adapted to transport material through said trough, a star wheel having arms engageable with the blade of said conveyer, said star wheel being rotatable by the rotation of said conveyer blade, and a secondary conveyer rotatable by the movement of said star wheel to remove from said trough samples of the material being transported.

1,170,843. CASING-JACK. HARRY G. PEAKE, San Francisco, Cal. Filed June 7, 1915. Serial No. 32,611. (Cl. 254—31.)



1. In a jack, a base and a top member spaced above the base and each apertured to receive a pipe, a pair of toggle links comprising short parts pivoted to the base at their lower ends and angular lever extending out from said short parts, and vertical links pivoted at the lower ends to the upper ends of the short parts and to the top member and normally diverging at their lower ends whereby upon upward movement of the levers the vertical links will be moved inwardly at their lower ends to thus move the top member upwardly.

2. In a pipe jack, an upper movable member and a lower stationary member, a pair of means to raise the upper member located on opposite sides of the members and connected thereto, actuating means for each of the raising means operable by upward movement thereof, and means connected to said actuating means to move same upwardly in unison while the lower member remains stationary.

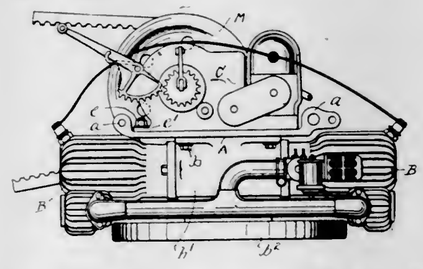
1,170,844. MATTRESS-HANDLE. MARY L. PETTES, Lakota, N. D. Filed Jan. 22, 1914. Serial No. 813,732. (Cl. 224—45.)

A detachable handle for a mattress comprising a pair of elongated closed frames, one of the longer sides of one of the frames being intertwisted with one of the longer sides of the other frame, and fastening devices movably carried by the other longer sides of the frames for detachably movable attachment to the binding edges of a mattress, said twisting portion serving the double function of a hand grip and as a hinge for the frames whereby



the device can be attached to mattresses of different thicknesses.

1,170,845. MOTOR-CYCLE, TRICAR, CYCLE-CAR, AND LIKE MOTOR-VEHICLE. GEORGE F. RAYNER, Acton, England. Filed Jan. 16, 1914. Serial No. 812,510. (Cl. 123—195.)



1. In a motorcycle, tricar, cyclecar or like motor vehicle, an engine and gear box secured on opposite sides of a horizontal frame plate adapted to form part of the vehicle frame, so that the engine shaft rotates about a vertical axis and projects through the frame plate into the gear box, a horizontal countershaft in the gear box, driven from the continuation of the vertical crank shaft and means for transmitting the power from the countershaft to the driving wheel or wheels.

2. In a motor cycle, tricar, cycle car or like motor vehicle, a horizontal frame plate adapted to be detachably secured in the vehicle frame, a horizontal engine having a vertically disposed crank shaft, on one side of the frame plate and a gear box on the other side thereof and means for transmitting the power from the gear box to the driving wheel or wheels.

3. In a motorcycle, tricar, cycle car or like motor vehicle, a horizontal detachable frame plate, a horizontally disposed engine secured to the underside thereof and a gear box secured to the upper side thereof, a continuation of the vertical engine shaft projecting into the gear box, a horizontal countershaft journaled in the gear box, gearing on the engine shaft and the countershaft to transmit the power to the latter, a change speed gear mounted on one end of the countershaft, and a friction clutch on the other end adapted to engage the countershaft with the means for transmitting the power to the driving wheel or wheels.

4. In a motor cycle, tricar, cycle car or like motor vehicle, a horizontal detachable frame plate, a double opposed twin-cylinder internal combustion engine secured to the underside thereof and a gear box secured to the upper side thereof, a continuation of the vertical engine shaft projecting into the gear-box, a horizontal countershaft journaled in the gear box and driven from the engine shaft by gearing, a two speed gear, comprising a pair of gear wheels mounted on the countershaft, one being loose and the other fixed to the driven member of the gearing between the engine shaft and countershaft, two interconnected wheels on the countershaft and a sliding dog clutch to engage one of the wheels to the countershaft and a multiple plate clutch to frictionally engage with the

countershaft the driven member of the means for transmitting the drive to the vehicle wheel or wheels.

5. In a motor-cycle, tricar, cycle car or like motor vehicle, a horizontal detachable frame plate, a double opposed twin cylinder internal combustion engine on the under side and a gear box on the upper side thereof, a continuation of the vertical engine shaft projecting into the gear box, a worm on the engine shaft, a horizontal countershaft journaled in the gear box and a worm wheel on the countershaft and driven by the worm on the engine shaft, a gear wheel on the countershaft fixed to the worm wheel and another loose upon the countershaft, two interconnected gear wheels on a lay-shaft gearing respectively with the two wheels on the countershaft, a sliding clutch adapted to lock either of the loose wheels on the countershaft thereto, and a friction clutch on the countershaft adapted to engage the driving member of the means for transmitting the final drive to the vehicle wheel or wheels, therewith.

[Claim 6 not printed in the Gazette.]

1,170,846. BREAST-STRAP SNAP-HOOK AND THE LIKE. JOHN REICHERT, Racine, Wis. Original application filed May 22, 1911, Serial No. 628,798. Divided and this application filed Jan. 16, 1915. Serial No. 2,611. (Cl. 54—59.)



1. A combined breast strap snap and slide consisting of a vertically-disposed yoke provided with a depending hook comprising a shank and a spring guard, a freely and vertically swingable martingale loop, and a removable coupling pivotally and removably joining said loop to the yoke approximately at a lower corner thereof and spaced a distance from the upper end of the shank and guard of the hook, the said loop being arranged to extend beside said yoke to exert upward pull on and approximately longitudinally of said hook, as and for the purposes substantially as described.

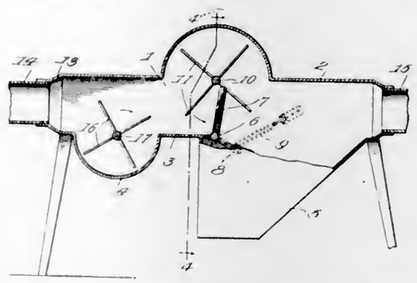
2. A breast strap snap and slide consisting of a yoke and a depending snap hook, the yoke being laterally enlarged with respect to the hook and having a transverse opening located approximately at a lower corner of the yoke, a vertically swingable loop coupled to the yoke at said opening, and a removable pin forming the axis on which said loop swings and removably coupling the loop to the yoke, substantially as described.

3. A combined breast strap snap and slide consisting of a yoke provided with a snap hook depending centrally from the lower cross bar of the yoke, said yoke approximately at a lower corner thereof having a transverse perforation, a split martingale loop having rearwardly extending ears straddling the yoke at said perforation, and a removable pivot passing through said ears and said perforation and pivotally coupling the loop to the yoke, so that said loop can swing up beside said yoke to exert upward pull approximately longitudinally of said hook, substantially as described.

4. A combined breast strap snap and slide consisting of a yoke and a snap hook depending from the central portion of the lower cross bar of the yoke, said yoke formed with a transverse perforation approximately at a lower corner thereof, and a vertically swingable martingale loop having rearwardly extending ears straddling said yoke at said corner and pivotally joined thereto, a pivot being provided passing through said perforation.

5. A combined breast strap snap and slide consisting of a yoke having a hook depending from the central portion of its lower cross bar, said yoke having transverse perforations at its lower corners, a removable vertically swingable loop having a pair of ears adapted to removably straddle either corner of the yoke, and a removable pivot adapted to pass through said ears and either perforation.

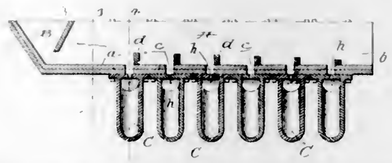
1,170,847. MACHINE FOR CRUSHING COTTON-BOLLS. RICHARD J. REYNOLDS, Taylor, Tex., assignor of one-half to Carlos Easley, Taylor, Tex. Filed Mar. 25, 1915. Serial No. 16,997. (Cl. 13—19.)



1. A boll crushing machine comprising a longitudinal passageway, a hopper in the rear end of the bottom thereof, a beater rotatably mounted in the top of said passage over the forward end of said hopper, its arms extending into said passageway, and a yieldably mounted comb disposed at the forward edge of said hopper, its teeth extending across said passageway in a substantially vertical plane and receiving the beater arms therebetween to crush the cotton bolls, said comb moving laterally when a non-crushable substance is brought into contact therewith to deposit said substance in the hopper.

2. A boll crushing machine comprising a casing having a longitudinal passageway therethrough, a hopper in the bottom thereof at the rear end, a beater in the lower part of said casing at the forward end, the arms thereof extending into said passageway, an additional beater disposed above said passage over the forward end of said hopper, its arms extending into said passageway, and a yieldably mounted comb disposed in the vertical plane of the shaft of said last mentioned beater at the forward edge of said hopper, its teeth normally extending across said passageway and coöperating with the arms of said last mentioned beater to crush the cotton bolls, said comb moving laterally when a non-crushable substance is brought into contact therewith to deposit said substance in the hopper.

1,170,848. APPARATUS FOR AND PROCESS OF CLASSIFYING MINERALS. ROBERT H. RICHARDS, Boston, Mass. Filed July 25, 1907. Serial No. 385,503. (Cl. 83—82.)



1. A classifier having a pocket of substantially constant area in horizontal cross-section throughout its entire depth, and having a chamber below said pocket in communication therewith by a thoroughfare both concentrated and constricted with reference to at least one dimension of said pocket measured in a horizontal plane, whereby quicksand conditions may be maintained in said pocket and a high velocity of flow in said thoroughfare, a water inlet to said chamber, and a discharge from said chamber for heavier grains or particles previously passed through said thoroughfare.

2. A classifier having a pocket of substantially constant area in horizontal cross-section through its entire depth, and having a chamber below said pocket in communication therewith by a thoroughfare both concentrated and constricted with reference to one dimension only of said pocket measured in a horizontal plane, whereby quicksand conditions may be maintained in said pocket and a high velocity of flow in said thoroughfare, a water inlet to said chamber, and a discharge from said chamber for heavier grains or particles previously passed through said thoroughfare.

3. A classifier having a pocket of substantially constant area in horizontal cross-section throughout its entire depth, and having a chamber below said pocket, a plane perforated plate forming the botton of said pocket and the top of said chamber, the perforation of said plate forming a thoroughfare both concentrated and constricted with reference to at least one dimension of said pocket measured in a horizontal plane, whereby quicksand conditions may be maintained in said pocket and a high velocity of flow in said thoroughfare, a water inlet to said chamber, and a discharge from said chamber for heavier grains or particles previously passed through said thoroughfare.

4. A classifier having a pocket of substantially constant area in horizontal cross-section throughout its entire depth, and having a chamber below said pocket, a plane perforated plate forming the bottom of said pocket and the top of said chamber, the perforation of said plate forming a thoroughfare both concentrated and constricted with reference to one dimension only of said pocket measured in a horizontal plane, whereby quicksand conditions may be maintained in said pocket and a high velocity of flow in said thoroughfare, a water inlet to said chamber, and a discharge from said chamber for heavier grains or particles previously passed through said thoroughfare.

5. A flume, a series of pockets in the bottom of said flume and opening directly therein, said pockets being of substantially constant area in horizontal cross section throughout their entire depth, a series of chambers in communication with said pockets by orifices passing fluid upwardly therethrough and concentrates downwardly therethrough, said pockets adjacent said orifices being free from obstruction, and means for delivering concentrates from said chambers, the walls of said pockets on their delivery sides forming dams and being of decreasing height in regular order from first to last proceeding in the direction of flow in said flume.

[Claims 6 to 11 not printed in the Gazette.]

1,170,849. UTILIZATION OF PEAT. THOMAS RIGBY, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Filed July 11, 1914. Serial No. 850,484. (Cl. 44—3.)

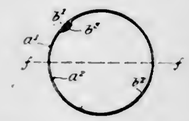
1. A method of gathering and preparing the peat of water logged deposits for fuel consisting in excavating the peat from a particular point, subjecting the excavated peat to heat treatment adapted to render the water more freely expressible, pressing the treated peat to dewater it, changing the region of excavation while the first cutting is still relatively small, effecting a separate and relatively small excavation at another part of the deposit, continuing working out of the deposit in a series of like small and independent excavations and returning to the excavation being worked, water expressed from the heat treated peat; as and for the purposes set forth.

2. A method of gathering and preparing peat to be converted into fuel by heat treatment, consisting in excavating the peat at a particular point, thereupon changing the region of excavation while the cutting is still relatively small, excavating in an adjacent but entirely separate portion of the deposit, so as to result in entirely separate excavations, and adding to the liquid in the working excavation warm effluent expressed from peat which has been subjected to the heat treatment.

3. A method of gathering and preparing peat to be converted into fuel by heat treatment consisting in excavating the peat at a particular point of the peat deposit thereupon changing the region of excavation while the cutting is still relatively small, excavating in an adjacent but entirely separate portion of the deposit so as to result in a plurality of separate excavations, adding to the liquid in the working excavation effluent expressed from peat which has been subjected to heat treatment and utilizing one of the excavations as a water store to make up shortage as required in the working excavation.

1,170,850. METALLIC BEDSTEAD. ERNEST L. ROSENBURGH, Rome, N. Y., assignor to Rome Metallic Bedstead Company, Rome, N. Y., a Corporation of New York. Filed July 12, 1913. Serial No. 778,789. (Cl. 5—4.)

1. A bedstead-frame member formed of a continuous length of bent compound seamed tubing.



2. A bedstead-frame member formed of a continuous length of bent compound seamed tubing each bent portion having a tangential portion adjacent thereto on each side.

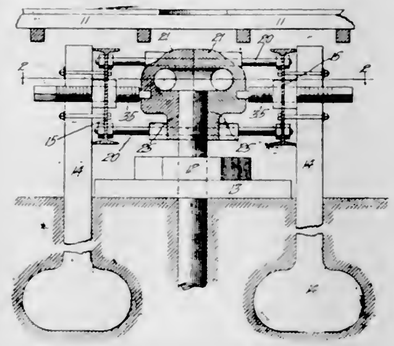
3. A bedstead-frame member formed of a continuous length of bent compound seamed tubing, the seam of the external tube being outside of the longitudinal diameter thereof.

4. A bedstead-frame member formed of a continuous length of bent compound seamed tubing, the seam of the internal member being out of the longitudinal diameter thereof.

5. A bedstead-frame member formed of a continuous length of bent compound seamed tubing, the seam of the external tube being outside of and the seam of the internal tube being inside of the longitudinal diameter of the tubing.

[Claim 6 not printed in the Gazette.]

1,170,851. WELL SHUT-OFF. GEORGE MARVIN SAVAGE, Los Angeles, Cal. Filed Dec. 14, 1914. Serial No. 877,085. (Cl. 166—15.)



1. In a well shut-off, the combination with a well casing of an anchored foundation, horizontal ways thereon, a casing cap divided into halves slidable on the horizontal ways on opposite sides of the casing and having outlets, and means to force said halves together over the casing.

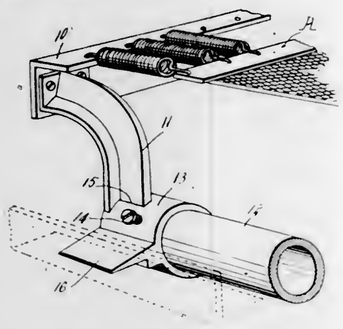
2. In a well shut-off, the combination with a well casing of an anchored foundation, horizontal ways thereon, a casing cap divided into halves slidable on the horizontal ways on opposite sides of the casing, and means to force

said halves together over the casing, said cap halves having fluid passages therein with a plurality of outlets, and valves controlling said outlets.

3. In a well shut-off, the combination with a well casing of anchor piers arranged on opposite sides of the casing, horizontal beams secured to the upper ends of the anchor piers, transverse horizontal rods secured between the beams, a cap divided into two halves slidable on the transverse rods on opposite sides of the casing, and means for forcing the cap halves toward each other to a position over the casing.

4. In a well shut-off, the combination with a well casing of anchor piers arranged on opposite sides of the casing, horizontal beams secured to the upper ends of the anchor piers, transverse horizontal rods secured between the beams, a cap divided into two halves slidable on the transverse rods on opposite sides of the casing, and means for forcing the cap halves toward each other to a position over the casing, each cap half having a fluid passage with a plurality of outlets, and an individual valve controlling each outlet, substantially as and for the purpose described.

1,170,852. ATTACHMENT FOR BED-SPRINGS. DANIEL G. SCHUCKER, Selinsgrove, Pa. Filed Mar. 11, 1915. Serial No. 13,627. (Cl. 5—63.)



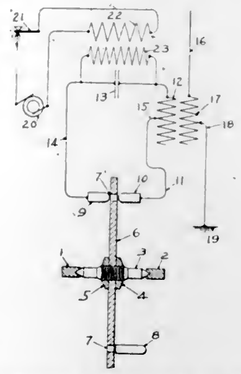
An attachment for bed springs comprising a sleeve adapted to be slidably and rotatably mounted on the side rail of a bed spring and having diametrically opposite corresponding recesses in one end one of which is adapted to receive the corner arm of a bed spring when the sleeve is moved to its limit in one direction on the side rail of the bed spring, and a lateral wing carried by said sleeve for engaging the side rail of a bed when said sleeve is rotated to dispose the wing outwardly with respect to the spring.

1,170,853. SIGNALING APPARATUS. HARRY SHOEMAKER, Jersey City, N. J., assignor to Marconi Wireless Telegraph Company of America, a Corporation of New Jersey. Filed Sept. 29, 1911. Serial No. 651,908. (Cl. 250—37.)

1. In a wireless telegraph transmitter, the combination of a high frequency oscillatory circuit having discharge terminals separated by a spark gap, and means for presenting alternately a solid dielectric and a fluid dielectric between said terminals for the purpose of regulating the sparking and intermittently clearing the gap of heated gases.

2. In a transmitter of electromagnetic waves, the combination of a high frequency oscillatory circuit having discharge terminals separated by a spark gap, and means for intermittently presenting a solid dielectric between the terminals of said spark gap, for the purpose of regulating the sparking and intermittently clearing the gap of heated gases.

3. In a producer of electro-magnetic waves, the combination of a plurality of sets of terminals separated by spark gaps, means for causing high frequency disruptive discharges across said gaps, and means for alternately presenting a solid dielectric and a fluid dielectric between the terminals of said spark gaps, for the purpose of regulating the sparking and intermittently clearing the gaps of heated gases.

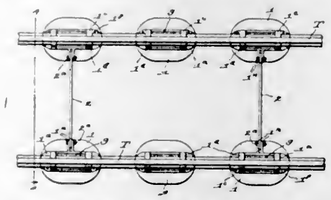


4. In a transmitter of electromagnetic waves, the combination of a plurality of sets of terminals separated by spark gaps, means for causing high frequency disruptive discharges across said gaps, and means for successively presenting a solid dielectric between the terminals of said spark gaps to intermittently clear the gaps of heated gases.

5. In a producer of electro-magnetic waves, the combination of a high frequency oscillatory circuit having terminals separated by a spark gap, a rotary disk of non-conducting material, said disk being so constructed as to present intermittently a solid dielectric between the terminals of the spark gap, and means for rotating said disk, for the purpose of intermittently clearing the gap of heated gases.

[Claim 6 not printed in the Gazette.]

1,170,854. RAILROAD-TIE. JOSEPH A. SILVER, Salt Lake City, Utah. Filed June 13, 1914. Serial No. 844,943. (Cl. 238—6.)



1. A pot-sleeper for railway rails, comprising a metal body having rail supporting portions on its top, integral flange engaging lugs at opposite sides of said portions, one set of said lugs being malleable and capable of being bent over to engage the base of the rail, and socket-members depending from said portions for the engagement of ordinary spikes, substantially as described.

2. A pot-sleeper for railway rails, comprising a metal body having rail supporting portions on its top, integral flange engaging lugs capable of being bent over to engage the base of the rail, stops projecting above the said portions to prevent lateral displacement of the rails; and malleable socket-members below said openings adapted to be engaged by ordinary spikes.

3. A pot-sleeper for railway rails, comprising a metal body having rail supporting portions on its top, integral flange engaging lugs at opposite sides of said portions, one set of said lugs being malleable and capable of being bent over to engage the base of the rail, stops adjacent the malleable lugs projecting above the bearing surfaces

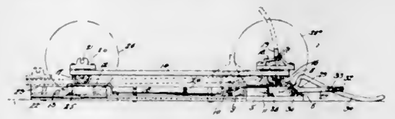
to prevent lateral displacement of the rails, openings through said stops, and malleable socket-members below said openings adapted to be engaged by ordinary spikes.

4. A pot-sleeper for railway rails, comprising a hollow metal body larger at bottom than at top and having openings in its top and bottom and provided at each end of its top with a rail supporting portion, integral flange engaging lugs at opposite sides of said portions, one set of said lugs being capable of being bent over to engage the base of the rail; and socket-members depending from said portions for the engagement of ordinary spikes, substantially as described.

5. A pot-sleeper for railway rails, comprising a hollow metal body larger at bottom than at top and having openings in its top and bottom and provided at each end of its top with a rail supporting portion, integral flange engaging lugs at opposite sides of said portions, stops adjacent the lugs projecting above the bearing surfaces to prevent lateral displacement of the rails; and socket-members adapted to be engaged by ordinary spikes.

[Claims 6 to 8 not printed in the Gazette.]

1,170,855. LIFTING DEVICE. BERNARD E. SMITH, Pond Creek, Okla. Filed Mar. 20, 1915. Serial No. 15,860. (Cl. 254—88.)

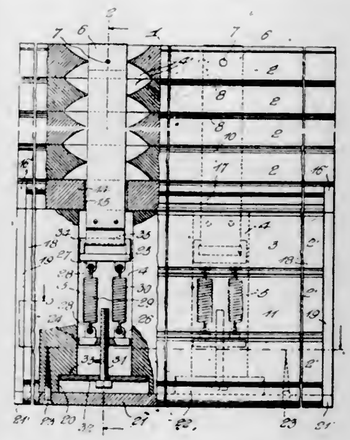


1. A lifting device comprising a support having front and rear elevated rails provided with inclines, the bottom of the inclines of the front rails being on a higher level than the bottom of the inclines of the rear rails, a lifting frame above the support, front and hind wheels supporting said frame, said wheels being located to travel respectively on the front and rear rails and the inclines thereof, lifting inclines for the hind wheels of the vehicle located alongside the inclines of the rear rails, on the outside thereof, off which lifting inclines said hind wheels pass when the hind wheels of the lifting frame reach the top of the inclines of the rear rails, a pivoted latch lever carried by the forward end of the lifting frame, a keeper on the support for said lever, a lever pivoted to the support, and a connection between said lever and the latch lever for releasing the latter from its keeper and thereafter starting the lifting frame rearward toward the inclines of the rails.

2. A lifting device comprising a support having front and rear elevated rails provided with inclines, the bottom of the inclines of the front rails being on a higher lever than the bottom of the inclines of the rear rails, a lifting frame above the support, front and hind wheels supporting said frame, said wheels being located to travel respectively on the front and rear rails and the inclines thereof, lifting inclines for the hind wheels of the vehicle located alongside the inclines of the rear rails, on the outside thereof, off which lifting inclines said hind wheels pass when the hind wheels of the lifting frame reach the top of the inclines of the rear rails, a pivoted latch lever carried by the forward end of the lifting frame and having a hook, a bolt carried by the support and engageable by the hook, a lever pivoted on the bolt, and a connection between said lever and the latch lever for releasing the latter from its keeper and thereafter starting the lifting frame rearward toward the inclines of the rails.

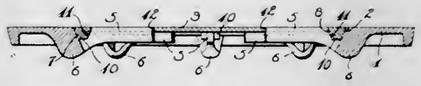
1,170,856. ROLLING FLEXIBLE PARTITION OR CURTAIN. GEORGE B. THORNTON, Belleville, N. J. Filed July 6, 1915. Serial No. 38,383. (Cl. 156—16.)

In a flexible partition, the combination of a plurality of slats, flexible elements connecting said slats, a hollow rail disposed at the lower end of said partition and having a detachable closure at its lower end and openings in its upper end for the passage of the flexible slat connecting elements, longitudinally spaced fillers arranged in said rail to provide chambers between them in which said flexible elements extend, the opposed end of said fillers being recessed at their lower edges to form seats, an apertured bar spanning each chamber and engaged at its ends with said seats, spaced heads mounted in each chamber and each having longitudinally spaced ears on its inner face, coiled springs having loops at their opposite ends engaged with



said ears for yieldingly connecting said heads, the upper head having an upwardly projecting substantially U-shaped loop with which the inner end of one of said flexible slat connecting elements is engaged, the other head having a threaded aperture extending transversely therethrough between its ears, and a bolt inserted upwardly through the aperture in said chamber spanning bar and having threaded engagement with the apertured head whereby said head may be adjusted to vary the tension of said springs.

1,170,857. STOVE-TOP. JAPEW S. VAN BUREN, Albany, N. Y. Filed Apr. 22, 1915. Serial No. 23,251. (Cl. 126—214.)



1. The combination with a stove top having a grating, of a cover plate covering said grating and having slots receiving portions thereof.

2. The combination with a stove top having a grating, of a cover plate covering said grating and having slots receiving portions thereof, the upper side of the plate being disposed in the plane in which the top of the stove is disposed.

3. The combination with a stove top having a grating whose upper side lies in the plane in which the upper side of the top lies, of a cover plate having slots receiving portions of said grating, the upper side of said plate being disposed in the aforesaid plane.

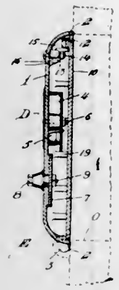
4. The combination with a stove top having therein an opening, and a grating substantially spanning said opening and including a plurality of radially disposed fingers provided with notches in their upper sides, of a cover plate having depending feet received by said notches.

5. The combination with a stove top having therein an opening, and a grating substantially spanning said opening and including a plurality of radially disposed fingers having notches in their upper sides and having said upper

sides disposed in the plane in which the upper side of the top is disposed; of a cover plate covering said grating and having a plurality of radial slots receiving the radial fingers, and feet depending from the cover plate into the aforesaid notches and supporting said plate at a level in which its upper side is located in the same plane in which the upper side of the top lies.

[Claims 6 and 7 not printed in the Gazette.]

1,170,858. OVEN-DOOR. JAFEW S. VAN BUREN, Albany, N. Y. Filed July 8, 1915. Serial No. 38,705. (Cl. 126—198.)



1. In combination, an oven door having hinge means on its lower edge, and a lining plate hinged to the rear side of said door at the upper edge thereof.

2. An oven door comprising a front plate having a rearwardly extending surrounding flange, a flat lining plate surrounded by the rear edge portion of said flange and disposed flush with the rear edge thereof and means hingedly connecting the flange and the lining plate.

3. An oven door comprising a front plate having a continuous flange extending rearwardly from its edge, a plurality of projections extending inwardly from said flange and spaced forwardly from the rear edge thereof, and a hinged lining plate surrounded by the rear edge portion of said flange, disposed flush with the edge thereof, and bearing on said projections.

4. An oven door comprising an upright front plate having a continuous flange extending rearwardly from its edge, a plurality of transverse ribs formed integrally with the inner side of said flange and terminating at points spaced forwardly from the rear edge thereof, and a hinged lining plate surrounded by the rear edge portion of said flange, disposed flush with the edge thereof, and bearing against the rear ends of said ribs.

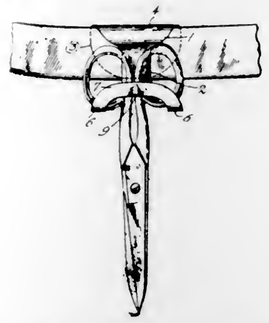
5. An oven door comprising a front plate having a continuous flange extending rearwardly from its edge, a lining plate surrounded by the rear edge portion of said flange and including a hinge bar disposed adjacent a portion of said flange, and L-shaped hinge members receiving in the angles thereof the hinge bar, and having attaching feet secured to the front plate.

[Claim 6 not printed in the Gazette.]

1,170,859. SCISSORS-HANGER. WILLIAM R. WALKER, Arlington, Tex. Filed May 11, 1915. Serial No. 27,404. (Cl. 24—3.)

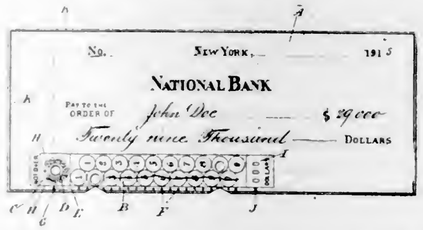
1. A scissors hanger comprising a spring metal plate body bent upon itself and provided with a depending attaching lip, there being a roll between the body proper and the lip, a shank below the roll, the body being arched at the bottom of the shank, oppositely directed hooks extending from the shank at the arch and connected by an integral guard strip, and offsets in the guard and the arch of the shank transversely opposed, the guard strip being spaced from the shank sufficiently to permit the insertion of a pair of scissors therebetween.

2. A scissors hanger comprising a plate metal body having means for attaching it to the clothing of the wearer and including a shank, and a scissors supporting element



depending from the shank and arched longitudinally and provided with a central transverse enlargement.

1,170,860. BANK-CHECK. JUDSON G. WALL, New York, N. Y. Filed Sept. 2, 1914. Serial No. 859,733. (Cl. 11—13.)



1. A check, draft or other similar evidence of value having imprinted upon it a series of figures in two parallel adjacent columns said figures running consecutively from one to nine with a cipher in each column, one column of said figures indicating thousands and the other tens of thousands, these figures being adapted to be canceled to indicate that the number of thousands or tens of thousands in the face value of the check do not exceed the sum indicated by the canceled numerals, a symbol at the bottom of said columns and common to both which when canceled destroys the indicative value of the two columns of figures, another series of figures at the top of the columns running from one to nine inclusive any one of which when canceled indicates that the hundreds of dollars in the face value of the check do not exceed the sum indicated by the canceled numeral, and a symbol associated with said last series of figures which when canceled destroys the indicative value of said series of figures.

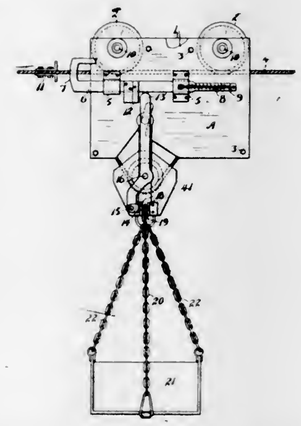
2. A check, draft or other similar evidence of value having imprinted upon it a series of figures in two parallel adjacent columns arranged near to and parallel with one edge of the check said figures running consecutively from one to nine with a cipher in each column, one column of said figures indicating thousands and the other tens of thousands, these figures being adapted to be canceled to indicate that the number of thousands or tens of thousands in the face value of the check do not exceed the sum indicated by the canceled numerals, a symbol at the bottom of said columns and common to both which when canceled destroys the indicative value of the two columns of figures, another series of figures at the top of the columns running from one to nine inclusive any one of which when canceled indicates that the hundreds of dollars in the face value of the check do not exceed the sum indicated by the canceled numeral, and a symbol associated with said last series of figures which when canceled destroys the indicative value of said series of figures, and a series of guide symbols arranged between said columns and the adjoining edge of the check and arranged respectively in line with the figures in the column, said symbols and the edge of the check being adapted to be punched out to correspond with the canceled numerals.

3. A bank check provided with a "not over" safety device, consisting of a pair of adjacent columns of figures running from one to nine and including a cipher, one of these columns representing thousands and the other tens of thousands, and a series of figures running from one to nine representing hundreds, this series of figures being arranged at one end of said column in a circular series, thereby inclosing a space which when punched or otherwise canceled will destroy the indicative value of all this latter series of figures.

4. A bank check provided with a "not over" safety device, consisting of a pair of adjacent columns of figures running from one to nine and including a cipher, one of these columns representing thousands and the other tens of thousands, and a series of figures running from one to nine representing hundreds, this series of figures being arranged at one end of said column in a circular series, thereby inclosing a space which when punched or otherwise canceled will destroy the indicative value of all this latter series of figures, said columns being arranged parallel to each other and near to and parallel with one edge of the check, the figures in one column being staggered with reference to the figures in the other column, whereby the margin of the check may be notched opposite each one of the twenty figures.

5. A bank check provided with a "not over" safety device, consisting of a group of figures from one to nine, which when canceled indicate hundreds, a pair of parallel columns of figures running from one to nine including a cipher, the figures in one column being staggered with reference to the figures in the other column and both columns being located near one edge of the check, whereby any one of the figures in said columns may be canceled by notching the margin of the check and the aforesaid group of figures in its entirety may be canceled in a similar manner.

1,170,861. DUMPING DEVICE FOR ROPEWAYS. PHILIP B. WALLACE, San Francisco, Cal., assignor to Chadwick & Sykes, Inc., San Francisco, Cal., a Corporation of California. Filed Apr. 28, 1915. Serial No. 24,560. (Cl. 214—14.)

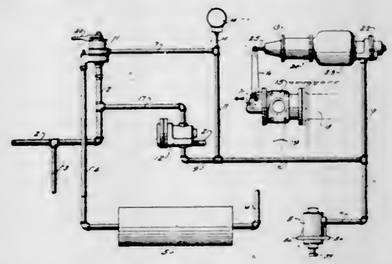


1. In a dumping device for ropeways a carrier having two plates spaced apart movably mounted on a cable, a bumper adjustably secured to said cable, a bar having a downwardly extending branch and slidably secured to one side of said carrier and having one end engageable with said bumper and its other end resiliently connected to said carrier, a block suspended from said carrier, a lever pivotally connected to said block having one end engageable with said branch and its other end provided with a laterally extending pin, angle plates secured to the lower end of said block and having openings penetrable by said laterally extending pin, and a container suspended from said block and having means disengageably connected to said pin between said angle plates for supporting part of said container.

2. In a dumping device for ropeways in combination with a bumper adjustably secured to a cable, a carrier having two plates spaced apart movably mounted on said cable, a bar having a downwardly extending branch and slidably secured to one side of said carrier and having one end provided with a bent portion engageable with said bumper, and its other end resiliently connected to said carrier, a block suspended from said carrier, a lever pivotally connected to said block having one end engageable with said branch and its other end provided with a laterally extending pin, angle plates secured to the lower end of said block and having openings penetrable by said laterally extending pin, and a container suspended from said block and having means disengageably connected to said pin between said angle plates for supporting part of said container.

3. In a dumping device for ropeways a carrier having two plates spaced apart movably mounted on a cable, a bumper adjustably secured to said cable, a bar resiliently connected to said carrier having a laterally extending branch and slidably secured to said carrier and having one end engageable with said bumper, a block suspended from said carrier, a lever pivotally connected to said block having one end engageable with said branch and its other end provided with a support, and a container suspended from said block and having means disengageably connected to said support for supporting part of said container.

1,170,862. TRAIN-STOP. WILLIAM E. WINE, Wilmington, N. C. Filed May 24, 1913. Serial No. 769,654. (Cl. 246—59.)



1. In an automatic train stop, the combination with an air brake system, provided with an engineer's valve, of means for operating said brake system, comprising a trip valve and a control valve, an operative connection between said trip valve and said control valve and a direct operative connection between said engineer's valve and said control valve, whereby an operation of the trip valve controls the actuation of the control valve to one position and an operation of the engineer's valve controls the actuation of the control valve to another position.

2 In an automatic train stop, the combination with an air brake system provided with an engineer's valve, of means for operating said brake system, comprising a trip valve communicating with a port in said engineer's valve, and a control valve having opposite chambers therein, one of said chambers communicating with a chamber in said engineer's valve and the trip valve, the other of said chambers communicating with said brake system.

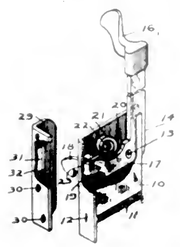
3. In an automatic train stop, the combination with an air brake system provided with an engineer's valve, of means for operating said brake system, comprising a trip valve provided with a chamber therein communicating with a chamber in said engineer's valve, and a control valve provided with a reciprocating member operating within a chamber therein, the chamber in the trip valve having communication with the chamber in the control valve, said chamber in the control valve having a port communicating with the train line of said brake system.

4. In an automatic train stop, the combination of an air brake system, provided with an engineer's valve and a source of power having a regulating means, of means for operating said brake system comprising a trip valve communicating with a port in said engineer's valve, and a control valve having chambers therein communicating with said engineer's valve and the trip valve, and means operated by said trip valve for controlling said power.

5. In an automatic train stop, the combination with an air brake system provided with an engineer's valve, of means for operating said brake system, comprising a trip valve communicating with a port in said engineer's valve, and a control valve having opposite chambers therein, one of said chambers communicating with a chamber in said engineer's valve and the trip valve, the other of said chambers communicating with said brake system and means located along the roadway for operating said trip valve.

[Claims 6 to 14 not printed in the Gazette.]

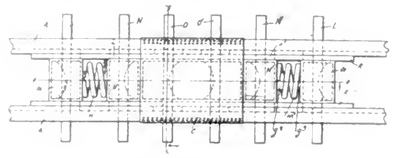
1,170,863. AUTOMOBILE-DOOR LATCH. EDWARD L. ACKERMAN, Detroit, Mich., assignor to Jos. N. Smith & Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 23, 1914. Serial No. 873,539. (Cl. 70—45.)



1. In an automobile door latch, the combination of a right angular latch lever located within the door and having an upwardly extending arm extending without and above the upper edge of the door, plates located on each side of the latch lever for pivotally supporting the latch lever, the latch lever having an engaging nose extending upwardly and through one of the plates and at right angles to the plane of the lever, the latch lever having a depressed portion and a coiled spring located above the latch lever and between the plates and within the area of the depressed portion of the latch lever, an angular striker plate, one side of which overlaps the lever supporting plates and having a recess for engaging the nose of the latch lever.

2. In an automobile door latch, the combination of a right angular latch lever, the latch lever having an upwardly extending arm for operating the lever, a pair of plates for pivotally supporting the lever, a coiled spring for operating the latch lever, the latch lever having an engaging nose extending upwardly and at right angles to the plane of the lever, one of the plates having an opening through which the engaging nose is located, a buffer thimble located below and in proximity to the nose of the latch lever and extending through one of the plates and in the direction in which the engaging nose extends, a striker plate having a recess for receiving and engaging the engaging nose of the latch lever, and receiving the thrust of the buffer thimble.

1,170,864. TANK-CAR. LOUIS E. ALLYN, Pekin, Ill., assignor to American Car and Foundry Co., New York, N. Y., a Corporation of New Jersey. Filed Apr. 6, 1910. Serial No. 553,782. (Cl. 105—264.)



1. In a tank car, a pair of sills, a tank provided with a portion depending between the sills, a pair of movable stop blocks on each side of the depending portion, resilient members interposed between each pair of stop blocks, and means for connecting the depending portion and the stop blocks in a relation that a longitudinal movement of the tank in either direction will cause a corresponding compression of both the resilient members.

2. In a tank car, a pair of sills, provided with a plurality of longitudinal slots therein, a tank provided with a portion depending between the sills, a pair of stop blocks on each side of the depending portion, springs interposed between each pair of stop blocks, follower boards interposed between the sills and the depending portion and stop blocks, bars connecting the depending portion, the follower boards and the sills in a relation that the longitudinal movement of the depending portion will carry with it the follower boards, and bars connecting the stop blocks, the follower boards and the sills in a relatively movable relation, whereby when the tank is shifted in either direction through the follower boards, the stop blocks rearwardly of the direction of movement will be carried forwardly with the depending portion, causing a corresponding compression of both of the springs.

3. A car structure including a tank; a supporting structure therefor upon which the tank may move longitudinally with respect to the supporting structure; a connection taking part in holding the tank down and which is attached to the tank and is moved by the tank upon and longitudinally of the supporting structure; and means for preventing vertical movement between said connection and the tank supporting structure without preventing longitudinal movement of said tank and connection.

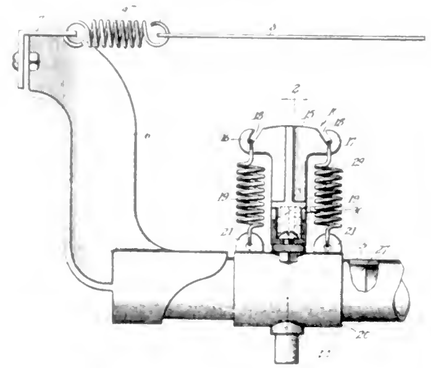
4. A car structure including a tank; a supporting structure therefor upon which the tank may move longitudinally with respect to the supporting structure; a connection taking part in holding the tank down and which is attached to the tank and caused to slide by the tank upon the supporting structure; and means for preventing vertical movement between said connection and the tank supporting structure without preventing said longitudinal movement of the tank and said connection.

5. A car structure including a tank; a supporting structure therefor upon which the tank may move longitudinally with respect to the supporting structure; a connection taking part in holding the tank down and which is attached to the tank and is caused to slide by the tank upon and longitudinally of the supporting structure; and means for preventing vertical movement between said connection and the tank supporting structure without preventing said longitudinal movement of the tank and connection.

[Claims 6 to 10 not printed in the Gazette.]

1,170,865. MOUNTING FOR BED-BOTTOMS. WILLIAM B. ANDERSON, Chicago, Ill., assignor to Haggard and Marcusson Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 22, 1914. Serial No. 878,519. (Cl. 5—63.)

1. A device of the character described, for use with a bed frame and a bed bottom comprising a relatively, stationary bracket member, having a laterally extending member for support on a bed frame and a vertically extending cruciform member, a pair of helical springs, each spring having one of its ends connected to one of the arms of the vertical member and the other end to the bed bottom and a guide member secured to said bracket member to prevent lateral displacement of said bed bottom.

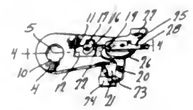


2. In combination with a bed frame and a bed bottom comprising side rails, of a device for yieldingly suspending the bed bottom from said frame comprising a laterally extending member for support on said bed frame, a vertically extending cruciform member, and a guiding member, the latter adapted to pass through a perforation in a side rail of the bed bottom and a pair of helical springs, each connected to an arm of the vertical member and to the said side rail.

3. In combination with a bed frame and a bed bottom comprising side rails, of a device for yieldingly suspending the bed bottom from said frame comprising, a laterally extending member for support on said bed frame, a vertically extending cruciform member and a guiding member, the latter adapted to pass through a perforation in the side rail of the bed bottom, a relatively soft bushing for said guide member to prevent noise when the guide member is moved and a pair of helical springs, each connected to an arm of the vertical member and to said side rail.

4. A device of the character described, comprising a sleeve adapted for connection to a side rail of a bed bottom and perforated for a guide rod, a wood bushing within said sleeve within which said rod is guided; a bracket member connected to the upper end of said guide rod having a laterally extending member for support on a bed frame; a vertically extending member having two side arms and two helical springs, one of each connected to one said side arm and to said sleeve for suspending a bed bottom within a bed frame.

1,170,866. NUT-LOCK. BERNARD V. APFELD, Spokane, Wash. Filed Apr. 12, 1915. Serial No. 20,836. (Cl. 151—30.)



1. In a nut lock, a base having a bore therein for projection therethrough of the threaded end of a bolt and provided with spurs projecting into said bore, said base having a guideway extending longitudinally thereof, a slide movable in said guideway and having a longitudinally tapered finger provided with a thread engaging knife edge acting in opposition to said spurs, said slide having a shank projecting from said base and terminating in an enlarged head provided with a retaining shoulder, a nut holder having a flange at one end for engaging the top of a nut and provided with a slot having a laterally disposed entrance for passage about said shank to admit the latter to said slot, means pivoting said holder on said base, and a locking member mounted on said pivot means and having a cam for engagement with said shank to advance said slide into a locking position to retain said holder and said locking member being provided with a resilient locking element adapted to spring over the head of said shank and seat against said retaining shoulder, substantially as described.

2. In a nut lock, a base having a bore therein for projection therethrough of the threaded end of a bolt and provided with a split resilient washer having spurs projecting into said bore and provided with a serrated end portion for engagement with the stock to be held, a slide longitudinally movably mounted on said base and having a longitudinally tapered finger for engagement with the threads of the bolt in opposition to said spurs, said slide having a shank terminating in a retaining shoulder, a nut holder pivoted on said base and provided with a slot having a lateral entrance for admission of said shank to said slot, and a locking member pivoted to said base and having a cam for engagement with said shank to advance said slide into a locking position and also provided with a resilient locking element adapted to be sprung into engagement with said retaining shoulder, to lock the several parts, substantially as described.

3. In a nut lock, a base having a bore therein for projection therethrough of the threaded end of a bolt, a slide longitudinally movably mounted on said base and having a bolt thread engaging portion, said slide having a shank terminating in a retaining shoulder, a nut holder pivoted on said base and provided with a slot having a lateral entrance for admission of said shank to said slot, and a locking member pivoted to said base and having a cam for engagement with said shank to advance said slide into the locking position and also provided with a resilient locking element adapted to be sprung into engagement with said retaining shoulder, substantially as described.

4. In a nut lock, a base, a bolt engaging member slidable on said base, a nut holding member movable on said base and coacting with said slidable member to be held thereby in a nut holding position, and a locking member movable on said base for advancing said bolt engaging member into a locked position and coacting therewith to thereby hold itself and also said bolt engaging and nut engaging members in locked position, substantially as described.

5. In a nut lock, a base, a bolt engaging member slidable on said base, a nut holding member movable on said base and coacting with said slidable member to be held thereby in a nut holding position, and a locking member movable on said base for co-action with said bolt engaging member to thereby hold itself and also said bolt engaging and nut engaging members in locked positions, substantially as described.

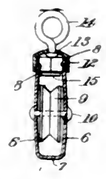
[Claims 6 and 7 not printed in the Gazette.]

1,170,867. PULLEY. ERNEST H. ARNOLD, Cleveland, Ohio, assignor to The Osborn-Crew Manufacturing Company, Cleveland, Ohio. Filed Jan. 28, 1915. Serial No. 4,849. (Cl. 254—192.)

1. A pulley comprising a body having opposite sides and parts joined at the top to form a neck, a cap extending around said neck and holding said parts together, an eye connected to said cap, and a wheel between the sides.

2. A pulley comprising a body having opposite sides connected at their lower ends and joined at their upper ends to form a neck, a cap fitting on said neck, a hanging device connected to the cap, and a wheel between the sides.

3. A pulley comprising a body made of a sheet metal blank bent to form opposite sides, and an integral connecting part at the lower end thereof, and neck parts at the upper end thereof, a cap fitting on said neck, an eye swiveled to the cap, and a wheel between the sides.



4. A pulley comprising a body having two sides each having a threaded neck part at the top, a cap screwed on said neck, a swivel eye connected to the cap, and a wheel journaled between the sides.

5. A pulley comprising a body having two sides each having a neck part at the top, a cap fitting around said neck and having lugs engaging between the sides and under said neck parts, and a wheel journaled between the sides.

[Claim 6 not printed in the Gazette.]

1,170,868. PROCESS OF PURIFYING LIQUIDS. FREDERICK RICHARD BACHLER, Los Angeles, Cal., assignor to Kieselguhr Company of America, Los Angeles, Cal., a Corporation of California. Filed Mar. 1, 1915. Serial No. 11,150. (Cl. 252.)

1. The process of purifying a liquid which consists in mixing therewith a colloidal metallic compound, precipitating such compound, together with impurities in the liquid, by the action of a coagulating agent, and incorporating with the solution, during the process, a porous carrier to produce an open precipitate.

2. The process of purifying liquids, with consists in mixing with such liquid, a mineral colloid together with a porous carrier material, adding a coagulating agent to the liquid to precipitate the mineral colloid together with impurities in the liquid and with the porous carrier material, and then removing the precipitate from the liquid.

3. The process of purifying liquids, which consists in mixing with the liquids, a mineral colloid together with a porous carrier material, heating the liquid and adding a coagulating agent to precipitate the colloidal metallic compound together with impurities in the liquid and with the porous carrier material, and then filtering the liquid.

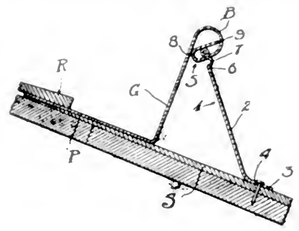
4. The process of purifying sugar solutions which consists in mixing a colloidal material containing hydrous aluminum silicate with such solution, precipitating such colloidal material, together with impurities in the solution, by the action of a coagulating agent in the presence of heat, incorporating kieselguhr with the solution during the process to produce an open precipitate, and filtering such precipitate from the solution.

5. The process of purifying liquids, which consists in mixing with the liquid, colloidal clay together with kieselguhr, heating the liquid and adding a coagulating agent to precipitate the colloidal clay together with the impurities in the liquid and with the kieselguhr, and then removing the precipitate from the liquid.

[Claim 6 not printed in the Gazette.]

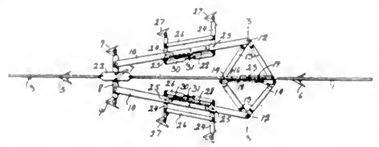
1,170,869. ROOF-GUTTER BRACKET. HUGO BOLDT, Durant, Iowa. Filed Apr. 29, 1915. Serial No. 24,746. (Cl. 108—29.)

A roof gutter bracket comprising a substantially rectangular strip, one end being bent laterally to provide an attaching foot, its opposite end being bent into the form of an S, one loop of which is larger than the other, the smaller loop being disposed to one side of the plane of the body portion of the strip with its free end joined to the end of said body portion, the larger loop being disposed to the opposite side of said plane with its free end extended, the last named loop being adapted to receive the



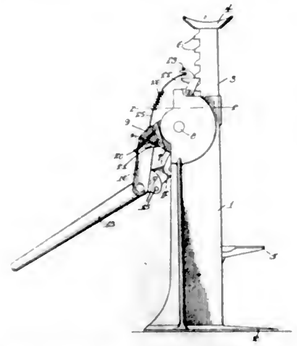
free edge of the gutter bead, while its curved portion abuts the adjacent surface of the straight portion of the gutter, the extended end being disposed within the gutter bead.

1,170,870. AGRICULTURAL MACHINE. ANTAL BORBÉLY, Dubois, Pa. Filed July 31, 1914. Serial No. 854,323. (Cl. 97—10.)



In a machine of the character described, the combination of a beam, a transversely disposed bar fixed to said beam, longitudinally extending side bars pivotally mounted upon said transverse bar at their forward ends and arranged upon opposite sides of the beam, toggle link connections between the rear ends of said bars extending under the beam, manually operable means mounted upon the beam and connected to the toggle links to move the same and force said bars toward or from the central beam, and a plurality of ground working implements mounted upon each of said side bars and means for independently adjusting the implements on each of said side bars to angularly position the same with respect to the line of movement of the machine.

1,170,871. MECHANICAL MOVEMENT. JOHN H. BREWER and JOHN CHARLES, Hagerstown, Md. Filed Sept. 15, 1914. Serial No. 861,854. (Cl. 74—16.)



1. In a mechanical movement the combination with a guide and a toothed bar operating therein, of a plate

mounted in the guide, a link connected to said plate, an operating lever supported by said link, a pawl pivotally connected to said plate and lever adapted to engage the toothed bar.

2. In a mechanical movement the combination with a guide and toothed bar operating therein, of a plate secured to the guide, a link connected to said plate, an operating lever supported by said link, a pawl connected to the plate and lever and engaging with the toothed bar, a rotatable shaft secured to said plate and link, a second pawl adapted to engage the toothed bar, and means connecting the second pawl and rotatable shaft.

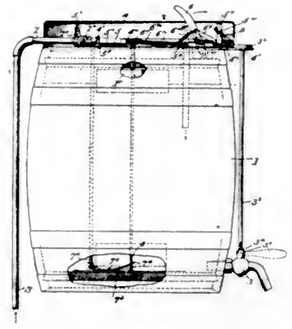
3. In a mechanical movement, the combination with a guide and a toothed bar operating therein, a plate mounted in said guide, a link secured to the plate, an operating lever supported by said link, a pawl pivotally connected to the plate and lever engaging with the toothed bar, a second pawl adapted to engage with the toothed bar, a rotatable shaft secured to the plate and link, means for adjusting the rotatable shaft, and means connecting the second pawl and rotatable shaft.

4. In a mechanical movement the combination with a guide and a toothed bar operating therein, of a plate secured to the guide, a link secured to the plate, an operating lever supported by said link, a pawl pivotally connected to the plate and lever and engaging the toothed bar, a second pawl engaging the toothed bar, a rotatable shaft connected to the plate and link, means for adjusting the said shaft, and a flexible connection between the rotatable shaft and second pawl.

5. In a mechanical movement the combination with a guide and a toothed bar operating in the guide, of a plate mounted in the guide, a pawl pivotally connected to the plate, a lever pivotally connected to the pawl, a link connecting the plate and lever, a second pawl pivotally connected to the guide and adapted to engage the toothed bar, and means connecting the lever and second mentioned pawl, said means consisting of the said link and a flexible member.

[Claims 6 to 11 not printed in the Gazette.]

1,170,872. LIQUID DISPENSING AND MEASURING APPARATUS. CHARLES F. BROWN, New York, N. Y., assignor, by mesne assignments, of one-half to Arthur D. Dickerson, Freehold, N. J. Filed Jan. 11, 1913. Serial No. 741,476. (Cl. 221—112.)



1. In combination, a measuring vessel having an outlet valve, a valve stem therefor, a notched member on the valve stem, a reciprocating member adapted to engage the notched member and lock the valve in closed position, means for locking said reciprocating member in projected and retracted positions, a float in the vessel, and devices operated by said float for releasing said locking means.

2. In combination, a measuring vessel having an outlet valve, a valve stem, a notched member on said stem, a reciprocating member adapted to engage said notched member to lock the valve in closed position, and means for locking said reciprocating member in projected and retracted positions; with a float in the vessel, and devices operated by said float for releasing said locking means.

3. In combination, a vessel having an inlet valve and an outlet valve, devices for manually operating the outlet valve, a reciprocating member adapted to operate the inlet valve and to lock and unlock the outlet valve operating devices, means for locking said reciprocating member in projected position, and means for locking said reciprocating member in retracted position, substantially as described.

4. In combination, a vessel having an inlet valve and an outlet valve, devices for manually operating the outlet valve, a reciprocating member adapted to operate the inlet valve and to lock and unlock the outlet valve operating devices, means for locking said reciprocating member in projected position, and means for locking said reciprocating member in retracted position; a float in the vessel, and devices operated by said float for disengaging said locking means from said reciprocating member.

5. In combination, a vessel, inlet and outlet valves therefor, devices for manually operating the outlet valve, a reciprocating member adapted to open the inlet valve and lock the outlet valve, operating devices, and means for reciprocating said member; with means for locking said member in one position, means for locking the member in its other position, and a float in the vessel adapted to alternately release said member locking means.

[Claims 6 to 20 not printed in the Gazette.]

1,170,873. PUMP. CHARLES F. BROWN, New York, N. Y., assignor to Universal Liquid Register Company, New York, N. Y., a Corporation of New York. Filed Dec. 30, 1913. Serial No. 809,549. (Cl. 103—62.)

1. In a pump the combination with a cylinder, a bracket attached to one head thereof and adapted to guide the piston rod, a piston in said cylinder, a piston rod extending through said head and guide-bracket, a frame attached to the piston head beside said bracket and extending above the same, a crank gear, a yoke connected with the piston rod and crank gear, and means for operating said crank gear.

2. In a pump the combination of a cylinder provided with inlet and outlet ports, a piston in the cylinder, a piston rod attached to said piston and extending through one of the heads, a piston rod guide bracket attached to said head, a frame detachably attached to said head beside said guide bracket, a crank gear journaled in said frame, a yoke pivotally connected to said rod and crank gear, and means for rotating said gear.

3. In a pump, the combination of a cylinder provided with heads, and valved inlet and outlet ports; a piston in the cylinder, a piston rod attached to said piston and ex-

tending through one of the heads; a piston rod guide bracket attached to said head, a frame detachably attached to said head at right angles to said guide bracket, a crank gear journaled in said frame, a yoke pivotally connected to said rod and said crank gear, a pinion journaled in the frame and meshing with said gear, and a crank for rotating said pinion.

1,170,874. WINDOW. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Original application filed Nov. 13, 1908, Serial No. 462,366. Divided and this application filed Apr. 11, 1912. Serial No. 690,106. (Cl. 189—78.)



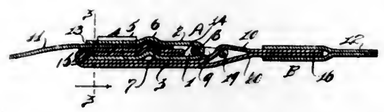
1. In a window, a metallic frame having an inwardly extending flange, a pane of glass positioned by said flange, fastening strips for holding the pane in position, screws for securing said strips to the frame and nuts secured in openings in the frame underlying said strips and provided with threaded openings to receive the ends of said screws, said strips having side walls and nuts having flattened heads interposed between and in contact with the side walls of said strips to brace the strips against side strains independently of the screws, substantially as set forth.

2. In a window a metallic sash frame having a forwardly extending flange and a portion at right angles thereto, a fastening strip of U-shaped sheet-metal in inverted position upon said frame portion, a pane of glass having one edge positioned against said frame portion between said flange and strip and held thereby, screws for holding said strip to the frame, extending through the same and said frame portion, nuts screwed into threaded openings in said frame portion and each provided with a threaded opening to receive the end of one of said screws, said nuts having heads having flattend sides filling the space between and in contact with the side walls of the said strip, to brace the latter against side strains independently of the screws, substantially as set forth.

3. In a window a metallic sash frame having a forwardly-extending flange and a portion at right angles thereto, a fastening strip of U-shaped sheet-metal in inverted position upon said frame portion, said strip having raised screw-seats thereon, a pane of glass positioned with one edge between said flange and strip, screws extending through said strip, and nuts secured to said frame portion and having threaded openings therein to receive the ends of said screws, said nuts having plane surfaces positioned between and in contact with the side walls of said strip, to brace the latter against side strains, substantially as set forth.

1,170,875. HOSE-SUPPORTER. SAMUEL BUYER, New York, N. Y. Filed Feb. 27, 1915. Serial No. 10,913. (Cl. 24—265.)

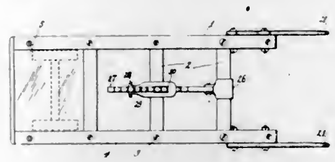
1. A fastener for hose-supporters, consisting of a plate bent over upon itself to form a jaw, coöperating fastening means carried by the jaw-members of said fastener, and located intermediate the ends thereof, arranged to cooperate one with the other, clips carried by one jaw-member arranged to engage the other jaw-member, said clips being located between the fastening means and the free ends of said jaw-members, a link engaged at one end thereof by said fastener, and a protector, consisting of a strip of fabric doubled upon itself, one member of said protector passing through said link and over the free end thereof, the other protector member passing under said link, both protector members passing under said fastener, the doubled over end of said protector being engaged by said fastener.



2. In combination with a hose-supporter fastener, a link secured, at one end thereof, to said fastener, and a protector consisting of a strip of fabric doubled upon itself, one member of said protector passing through said link and over the free end thereof, the other protector member passing under said link, both protector members passing under said fastener, the doubled over end of said protector being engaged by said fastener.

3. In combination with a hose-supporter having an elastic webbing and a pad, a protector consisting of a strip of fabric doubled upon itself, the free ends being secured to said pad, a fastener consisting of a strip of metal turned over upon itself to form a jaw, the doubled over end and one end of said webbing being located within the jaw of the fastener, one member of said jaw being provided with a recess, a projection carried by the other jaw-member alining with said recess to force said webbing and protector together, and clips carried by one jaw-member arranged to engage the other jaw-member and bind said members together.

1,170,876. HAND-TRUCK. CURTIS S. CALHOUN, Decatur, Ill. Filed Feb. 27, 1915. Serial No. 10,935. (Cl. 21—65.)

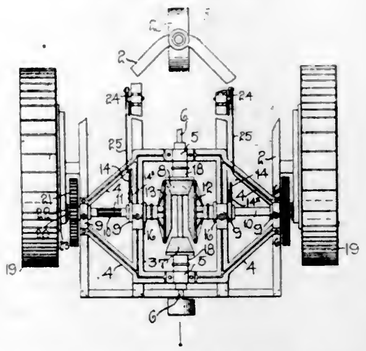


The combination in a hand truck with its frame of a pair of spaced quadrant shaped members each having a flat horizontal heel at the end of its curved portion, of a spindle connecting said members and rollers on the spindle journaled between said members forward of the flat heel, and a pair of supplemental rollers located at the upper end of the curved portion of said members.

1,170,877. STEERING AND TRANSMISSION MECHANISM FOR TRACTION-VEHICLES. ALVAH J. COLWELL and ALBERT T. KENNEY, Norfolk, Nebr. Filed June 24, 1915. Serial No. 36,111. (Cl. 21—114.)

1. In a motor vehicle, steering and power transmission mechanism, including a power shaft, independently movable traction wheels, a shaft operatively connected to each traction wheel, oppositely disposed driving wheels mounted on the power shaft, oppositely disposed driven wheels mounted one on each traction wheel shaft and disposed between said driving wheels, and means for operatively engaging both of the driven wheels with either of the driving wheels.

2. In a motor vehicle, steering and power transmission mechanism, including a power shaft, traction wheels, independently rotatable shafts to which the traction wheels are operatively connected, oppositely disposed driving wheels mounted on the power shaft, oppositely disposed driven wheels mounted one on each traction wheel shaft, said driven wheels being mounted between the driving wheels, and means for operatively engaging one of the driven wheels with one of the driving wheels, and the other driven wheel with the other driving wheel.



3. In a motor vehicle, steering and power transmission mechanism, including a power shaft, traction wheels, independently movable shafts to which the traction wheels are operatively connected, oppositely disposed driving wheels mounted on the power shaft, oppositely disposed driven wheels mounted one on each traction wheel shaft and located between the driving wheels, and means for operatively disconnecting either one of the driven wheels from both driving wheels, and connecting the other one of the driven wheels to either one of the driving wheels.

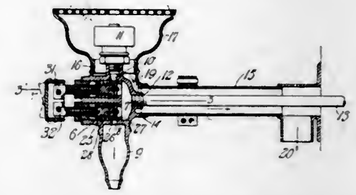
4. In a motor vehicle, steering and power transmission mechanism, including a power shaft, traction wheels, independently rotatable driven shafts, gear wheel connection between one of said shafts and one traction wheel, sprocket wheel and chain connection between the other driven shaft and the other traction wheel, oppositely disposed driving wheels mounted on the power shaft, oppositely disposed driven wheels mounted one on each traction wheel shaft, and means for operatively engaging both of the driven wheels with either of the driving wheels or one of the driven wheels to one of the driving wheels, and the other driven wheel to the other driving wheel, or disconnecting one of the driven wheels from both driving wheels and connecting either one of the driven wheels to either one of the driving wheels.

5. In a motor vehicle, steering and power transmission mechanism, including a power shaft, independently rotatable driven shafts, traction wheels operatively connected to the respective shafts, oppositely disposed driving wheels mounted on the power shaft, oppositely disposed driven wheels mounted one on each traction wheel shaft, bearings in which the traction wheel shafts are eccentrically mounted, and independent means for rotating said bearings in the same or opposite directions, as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

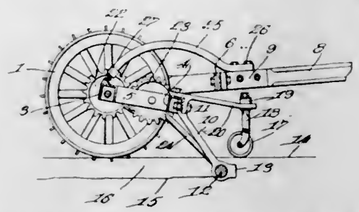
1,170,878. SANITARY DRINKING-FOUNTAIN. LESLIE A. COOPER, deceased, Springfield, Mass., by Wayland V. James, administrator, Springfield, Mass., assignor of one-half to George W. Kimball, Springfield, Mass. Filed Dec. 12, 1913. Serial No. 806,193. (Cl. 137—26.)

1. In a device of the character described, a valve casing having therein parallel cylindrical chambers provided with outer closing heads, a chamber therein in common to both said cylindrical chambers, and having connection therewith through valve seat openings, two spring closed valves in said chambers for said valve seat openings, having stems outwardly extending through the said end closing heads, and said chambers having each an outlet port, one extending upwardly and the other extending downwardly, and a single lever pivotally connected with both of said valve stems and operable when swung in one direction to open one of the valves and when swung in the other direction to open the other valve to permit an outflow of water through the outlets of either of the aforesaid parallel chambers from the common chamber.



2. In a device of the character described, a valve casing having therein parallel cylindrical chambers provided with outer closing heads, a chamber therein in common to both said cylindrical chambers, and having connection therewith through valve seat openings, two spring closed valves in said chambers for said valve seat openings, having stems outwardly extending through the said end closing heads, and said chambers having each an outlet port, one extending upwardly and terminating in a drinking fountain or bubbler, and the other extending downwardly and terminating in a water delivery nozzle, and a single lever pivotally connected with both of said valve stems and operable when swung in one direction to open one of the valves and when swung in the other direction to open the other valve to permit an outflow of water through either the bubbler or through the delivery nozzle.

1,170,879. COMBINED CULTIVATOR AND WEEDER. CARL H. CRAWFORD, Spokane, Wash. Filed Oct. 12, 1915. Serial No. 55,427. (Cl. 97—25.)



1. As a means for weeding and cultivating soil, a bearing structure including bearing wheels, a weeding and cultivating rod carried by said structure, and means causing said rod to be depressed beneath the soil surface on forward movement of said structure, substantially as described.

2. As a means for weeding and cultivating soil, a bearing structure including bearing wheels, a weeding and cultivating rod carried by said structure, means causing said rod to be maintained beneath the soil surface on forward movement of said structure, and means for limiting the depth of depression of said rod, substantially as described.

3. As a means for weeding and cultivating soil, a bearing structure including bearing wheels, a weeding and cultivating rod journaled on said structure, and mechanism transmitting rotary drive to said rod to depress the latter into and rotate the same beneath the soil surface, substantially as described.

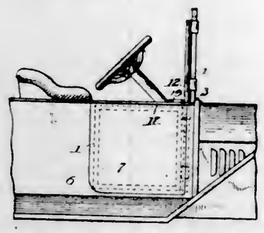
4. As a means for weeding and cultivating soil, a bearing structure including bearing wheels, a weeding and cultivating rod journaled on said structure, mechanism transmitting rotary drive to said rod to depress the rod

below the surface soil and rotate the rod, and means causing said rod to be maintained beneath the surface soil on forward movement of said structure, substantially as described.

5. As a means for weeding and cultivating soil, bearing wheels, a frame rotatably mounted on said wheels to tilt downwardly forwardly of the axes of said wheels, a rod journaled in said frame forwardly of the axes of said wheels, and means applying draft rearwardly of said rod to depress the latter into the soil, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,170,880. WIND-SHIELD. ALBERT W. CROUCH, Milwaukee, Wis., assignor to Milwaukee Yacht & Boat Company, Milwaukee, Wis. Filed Oct. 16, 1914. Serial No 866,950. (Cl. 21—148.)



1. Apparatus of the character described comprising a pivotally mounted door having a pocket, a wind shield having a pivotal mounting substantially concentric with the pivotal mounting of said door and slidable into and out of the pocket in said door, said wind shield when in operative position by virtue of its pivotal mounting being substantially at right angles to said door.

2. Apparatus of the character described comprising a pivotally mounted door having a pocket, a wind shield, means whereby said wind shield may be slid into and out of said pocket, and means for pivotally carrying said wind shield so that said wind shield may be swung at an angle to said door when said wind shield is to occupy its operative position.

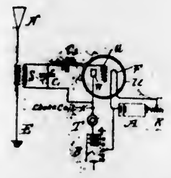
3. Apparatus of the character described comprising a pivotally mounted door having a pocket, a wind shield having a pivotal mounting substantially concentric with the pivotal mounting of said door, means whereby said wind shield may be slid into and out of the pocket in said door, said wind shield when in its operative position outside of said pocket being adapted to be swung about its pivotal mounting at an angle to said door.

4. Apparatus of the character described comprising a door having a pocket, a wind shield, means for concentrically pivotally mounting said door and wind shield, and means whereby said wind shield may be slid into and out of said pocket, said wind shield when in operative position by virtue of its pivotal mounting being adapted to be swung at an angle to said door.

5. Apparatus of the character described comprising a door having a pocket, a wind shield, means for concentrically pivotally mounting said door and wind shield, and means whereby said wind shield may be slid into and out of said pocket, said wind shield when in operative position by virtue of its pivotal mounting being adapted to be swung at an angle to said door, and to maintain said position without interfering with the swinging of said door.

1,170,881. WIRELESS RECEIVING SYSTEM. LEE DE FOREST and CHARLES LOGWOOD, New York, N. Y., assignors to Radio Telephone & Telegraph Company, a Corporation of Delaware. Filed Mar. 12, 1914. Serial No. 824,171. (Cl. 250—8.)

1. In a wireless apparatus, an audion having a grid element and a wing or plate element, and a series oscillating circuit having one terminal associated with the grid element and the other terminal associated with the wing or plate element.



2. The combination with an audion having a grid and a wing element, of a series oscillating circuit having its terminals respectively connected to said grid and wing elements.

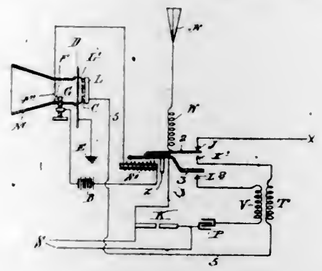
3. In a wireless receiving system, a sensitive detector including cold electrodes and a hot electrode, and a plurality of inductively related circuits associated therewith, one of said circuits being a series circuit and connected at its terminals with said respective cold electrodes.

4. In a wireless receiving system, a detector including cold electrodes and a hot electrode, and a series oscillating circuit connected at its terminals to said cold electrodes respectively.

5. In a wireless receiving system, a detector including cold electrodes and a hot electrode, and a plurality of inductively related circuits associated therewith, one of said circuits being a series oscillating circuit and having its terminals respectively connected to the cold electrodes.

[Claims 6 to 23 not printed in the Gazette.]

1,170,882. AUTOMATIC SWITCHING DEVICE FOR TELEPHONE SYSTEMS. LEE DE FOREST, New York, N. Y. Filed July 7, 1915. Serial No. 38,399. (Cl. 250—6.)



1. In a radio telephone system, an antenna, receiving and transmitting circuits, said antenna being normally connected to said receiving circuit and means controlled by the voice for automatically connecting said transmitting circuit to said antenna when said system is used for transmission.

2. In a radio telephone system, an antenna, receiving and transmitting circuits, and means controlled by the voice for automatically connecting said transmitting circuit to said antenna only when said antenna is used for transmission.

3. In a radio telephone system, an antenna, receiving and transmitting circuits, voice controlled means for automatically connecting said transmitting circuit to said antenna and means for maintaining said connection only as log as transmissions are made.

4. In a radio telephone system, an antenna, receiving and transmitting circuits, voice controlled means for automatically connecting said transmitting circuit to said antenna and means for automatically breaking said connection when transmission ends.

5. In a radio telephone system, an antenna, receiving and transmitting circuits, and voice controlled means to connect said antenna to said transmitting circuit.

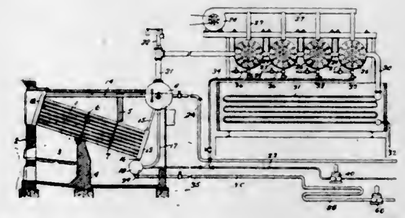
[Claims 6 to 18 not printed in the Gazette.]

1,170,883. PAINT COMPOSITION. JOHN W. DUNFORD, Atlanta, Ga. Filed May 1, 1915. Serial No. 25,326. (Cl. 134—52.)

1. The herein described paint composition, consisting of a body composed of coal tar and oil tar, said body being mixed with graphite, linseed oil, yellow ocher, oxid of iron, spirits of turpentine, ground slate and pine tar.

2. The herein described paint composition, consisting of the following ingredients in substantially the specified proportions, namely, a body composed of coal tar twenty-five gallons and oil of tar twenty-five gallons, mixed with graphite twenty-five pounds, linseed oil five gallons, yellow ocher fifteen pounds, oxid of iron twenty pounds, spirits of turpentine five gallons, slate ground in lineseed oil, twenty pounds, and pine tar ten gallons.

1,170,884. OIL-DISTILLING APPARATUS. SAMUEL H. EDWARDS, Bayonne, N. J., assignor of one-fourth to Tide Water Oil Company, Bayonne, N. J., a Corporation of New Jersey. Filed May 8, 1915. Serial No. 26,699. (Cl. 196—14.)



1. A continuous tubular oil still comprising a plurality of connected sections comprising groups of heating tubes and therewith connected drum compartments, and means for supplying and discharging oil to and from different sections whereby the oil being heated in circulation progresses from one section to another successively.

2. A continuous tubular oil still comprising a furnace and setting, in combination with a plurality of transversely connected still sections comprising drum compartments and heating tubes connected therewith and exposed to the heat of the furnace, and means for supplying and discharging oil to and from different sections whereby the oil being heated in circulation progresses from one section to another transversely of the still.

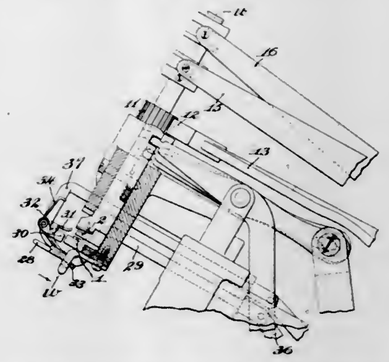
3. A continuous tubular oil still comprising a nest of inclined heating tubes, a fire-box under the upper portion thereof, a plurality of drum compartments above and connected with the tubes, the compartments and therewith connected tubes constituting sections through which the oil circulates successively, a supply line connected with the first section, and an overflow line connected with the last section.

4. A continuous tubular oil still comprising a fire-box, a nest of tubes arranged in the path of the gases flowing from the fire-box, a plurality of upper drum compartments connected in circuit with the tubes, a plurality of lower drum compartments, the drum compartments and therewith connected tubes constituting sections through which the oil circulates successively, and oil inlet and outlet lines connected with different sections.

5. A continuous tubular oil still comprising a furnace, a nest of tubes therein, a plurality of drum compartments, each compartment being connected with the opposite ends of a set of the tubes, whereby the oil may circulate repeatedly in each section comprising a drum compartment and its connected tubes, connections between the compartments whereby the oil may pass from one section to another, and an inlet and an outlet for oil connected with different sections.

[Claims 6 to 27 not printed in the Gazette.]

1,170,885. KNOT-TYING MECHANISM. HERBERT E. ENSLIN, Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Jan. 30, 1908, Serial No. 413,343. Patented June 25, 1912, No. 1,030,573. Divided and this application filed Apr. 15, 1911. Serial No. 621,329. (Cl. 112—24.)



1. A knot tying mechanism, having, in combination, a cord gripper arranged to grip the free end of a cord on one side of a knot, a second cord gripper arranged to grip the same free end of the cord on the opposite side of the knot with the remainder of the cord extending beyond the gripper and means to cause a relative movement between the grippers to draw the portion of the cord between them taut and thereby tighten the knot, substantially as described.

2. A knot tying mechanism, having, in combination, mechanism to form a loop in the free end of a cord, and to draw a bight of the cord through the loop, and a cord gripper arranged to grip the same free end of the cord on the side of the loop opposite said mechanism with the remainder of the cord extending beyond the gripper and acting to grip the cord during the tightening of the knot, substantially as described.

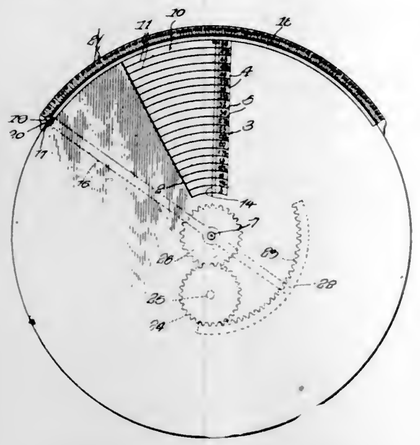
3. A knot tying mechanism having, in combination, mechanism for forming a knot in the free end of a cord, a gripper arranged to grip the free end of the cord on the side of the knot opposite the knot forming mechanism with the remainder of the cord extending beyond the gripper, and means to cause a relative movement between the knot forming mechanism and the gripper to draw the portion of the cord between them taut and thereby tighten the knot, substantially as described.

4. A knot-tying mechanism having, in combination, means to hold the end of a cord, mechanism for forming a loop in the cord and for drawing a bight of the cord adjacent to the loop through the loop, arranged in inoperative position, and means to move the said mechanism bodily as a whole into and out of position to act on the cord, substantially as described.

5. A knot tying mechanism having, in combination, a rotary looping post to form a loop in the cord, cord gripping jaws to draw a bight of the cord through the loop, a gripper arranged to grip the cord on the opposite side of the loop, and means to cause a relative movement between the gripping jaws and the gripper to tighten the knot, substantially as described.

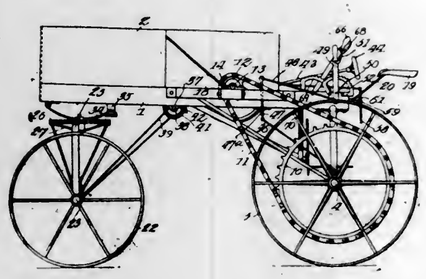
[Claims 6 to 17 not printed in the Gazette.]

1,170,886. WAGE-COMPUTER. JEAN C. FLAMAND, Celina, Ohio. Filed July 15, 1915. Serial No. 40,026. (Cl. 235—88.)



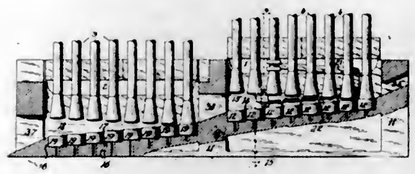
In combination, a circular face plate having near its edge an arcuate slot concentric to said edge, and having an eccentrically positioned opening adjacent said slot, a rotatable shaft extending rearwardly from the center of the face plate, a computing disk secured to said shaft and disposed immediately in rear of the face plate, a pointing arm immediately in rear of the disk and having between its ends an opening through which the shaft passes loosely, one end of said arm being bent forwardly through the arcuate slot in the face plate and being then bent radially outward to form a pointer, an operating knob secured to the forwardly bent end of the arm, an arcuate rack bar carried by the other end of said arm and disposed concentric to the shaft, and a gear driven by said rack bar and secured to the shaft; in combination with a scale adjacent one edge of the opening in the face plate, a second scale adjacent the slot for coaction with the pointer, and computing characters on the computing disk for coöperation with the first named scale.

1,170,887. MOTOR-VEHICLE. EDDIE L. FOLSE and STANISLAUS E. ROBICHAUX, Raceland, La. Filed June 7, 1912. Serial No. 702,260. (Cl. 21—114.)



A motor vehicle for farm work, comprising a body for supporting the motor, front and rear axles below the body, wheels journaled on the axles, each of the said axles having an arch intermediate its ends extending upwardly to approximately the tops of the wheels to permit the wheels to move astride a row of growing plants without interference from the vehicle, a fifth wheel in connection with the arch of the front axle, springs between the fifth wheel and the body, the arch of the rear axle being connected with the body, a seat in rear of the rear axle and above the arch, and controlling mechanism for the motor arranged adjacent to the seat, said body having means for engagement by cultivating implements adjacent to the rear axle.

1,170,888. METAL-REDUCING MACHINE. MAXIMILIAN J. FUCHS, Stamford, Conn. Filed Oct. 29, 1914. Serial No. 869,341. (Cl. 83—57.)



1. A device of the character described having an inclined runway with anvils, beaters for said anvils, and movable means located adjacent and within the side walls of said runway for confining the material treated to the anvils.

2. A machine of the character described comprising a base provided with a plurality of compartments, the compartments being disposed in different horizontal planes and equipped with beaters, means for operating the beaters, an inclined runway forming the floor of each compartment, a series of stepped-off anvils in each compartment, an inclined passage connecting the compartments, a delivery passage in the last compartment, and means for feeding material to the first compartment.

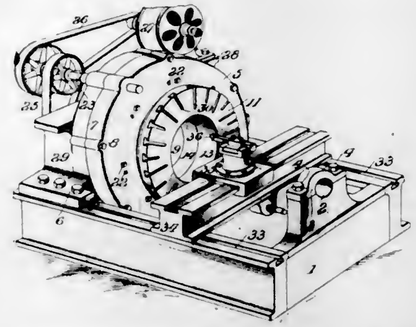
3. A metal reducing machine comprising a plurality of longitudinally alined separate compartments, the compartments having inclined floors, the first compartment provided with an inclined inlet and the last compartment being provided with an inclined outlet, means for feeding material to the inlet, each compartment having its floor provided with anvil seats, anvils seated in said seats, the seats and anvils being disposed so that continuous anvil surfaces extending the entire longitudinal length of the compartments are provided, adjoining compartments being connected by an inclined passageway, said passageway extending from the top surfaces of the last anvils in the preceding compartment to the top surfaces of the first anvils in the next compartment, beaters coöperating with the anvils of each compartment, and means adjacent the side walls of the first compartment for confining the material being treated to the anvils.

1,170,889. [WITHDRAWN.]

1,170,890. METAL-WORKING LATHE AND THE LIKE. GEORGE GORTON, Racine, Wis. Filed Apr. 13, 1914. Serial No. 831,468. (Cl. 82—2.)

1. In lathes and the like, a base, a narrow headstock carried thereby, a narrow rotary annulus mounted therein, driving means applied to the rim of the annulus, and a work holder carried and driven by the annulus and arranged exteriorly of the head stock and annulus and beside the headstock, the extreme diameter of the annulus approximating the extreme diameter of the work holder.

2. In lathes and the like, in combination, a bed, an annular fixed headstock trough-like in cross section, a hub arranged longitudinally in the center opening of said headstock and being longitudinally open and provided with an enlarged exterior gear arranged in said headstock, driving means carried by the headstock for actuating said gear and its hub, and a face plate removably secured to one end of said hub and arranged exteriorly thereof and beyond one side of the head stock.



3. A lathe comprising a base provided with a fixed annular headstock, and a hub rotating in the open center of the headstock and provided with an exterior gear arranged within the headstock and having a face plate applied to one end thereof and arranged exteriorly of the headstock, the end faces of the headstock and of said gear providing the main bearings of said hub and supporting the same against radial and longitudinal thrust.

4. A lathe comprising an annular open-center headstock, and an annular open-center gear arranged in said headstock and provided with and driving a face plate arranged beside and exteriorly of the headstock, the end walls of the headstock and the side faces of the gear providing main bearings for said gear sustaining the longitudinal and radial thrust thereof, and driving means for said gear applied to the periphery thereof and carried by said headstock.

5. A lathe comprising a horizontally disposed base, an annular open-center headstock arranged vertically and transversely with respect to the base, a hollow hub arranged longitudinally within the open center of the headstock and provided with an exterior supporting and driving gear arranged in the headstock, a driving shaft in the headstock having a pinion meshing with said gear, and a face plate removably secured to an end of said hub and arranged exteriorly of and beyond one side of the headstock.

[Claims 6 to 19 not printed in the Gazette.]

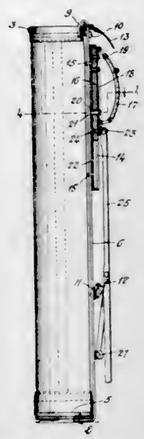
1,170,891. GOLF-BAG SUPPORT. HENRY T. GRAF, Briarcliff Manor, N. Y. Filed Nov. 6, 1915. Serial No. 59,893. (Cl. 224—45.)

1. In a golf bag support the combination with a bar secured to the bag, a slide mounted thereon, a pair of tripod legs pivoted to said slide, means for locking said slide against movement and manually operated means for releasing said slide.

2. A golf bag tripod comprising a bar secured to the bag, a pair of legs, brace links connecting the legs to said bar, a slide block mounted on said bar and adapted to spread the legs and means for locking said slide block to hold the legs either collapsed or spread.

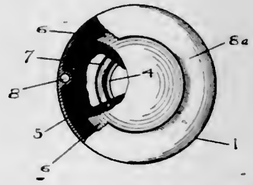
3. A golf bag tripod comprising a bar removably secured to the bag, a slide block mounted to slide longitudinally of the bar, a pair of legs pivotally carried by said slide block, links connecting the legs to said bar so as to spread the legs by sliding said block and means for locking the block.

4. In a golf bag support the combination of a bar, means for removably securing the bar to a golf bag, a slide block mounted for reciprocation longitudinally of said bar, a pair of tripod legs pivotally secured to said block and adapted to be spread by sliding said block, a handle on the block and a bolt carried by said block for locking the same against movement said handle being



adapted to operate said bolt to unlock the block and slide it to spread or close the tripod legs.

1,170,892. FILTER-FUNNEL. OTIS G. GRAHAM, Portland, Oreg. Filed Mar. 2, 1915. Serial No. 11,504. (Cl. 210—16.)



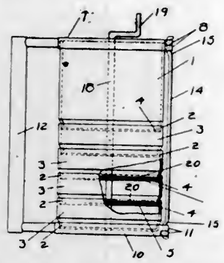
1. A funnel comprising a receiving chamber, a discharge member, a separating chamber adjacent said receiving chamber and intermediate said receiving chamber and said discharge member, a straining diaphragm within said receiving chamber, said diaphragm extending across the upper end of said discharging member and being intermediate said receiving chamber and said separating chamber, a deflector within said receiving chamber, and a tube for draining said separating chamber.

2. In a funnel having a cylindrical portion and a truncated conical portion, a screen diaphragm within said cylindrical portion and attached to the walls thereof, a discharge tube within said conical portion, said tube being attached to said diaphragm and extending outside of said conical portion, an inverted dish shaped disk mounted upon said diaphragm within the cylindrical portion of said funnel, the periphery of said disk being intermediate the periphery of the cylindrical portion of said funnel and the periphery of said discharge tube.

1,170,893. FLOUR-SIFTER. OTIS G. GRAHAM, Portland, Oreg. Filed Apr. 7, 1915. Serial No. 19,697. (Cl. 83—60.)

1. In a flour sifter having a plurality of interlocking members, each member forming a compartment wherein is mounted a screen, a plurality of agitators, each agitator being rotatably mounted upon one of said screens and having a central orifice therein adapted for the free passage of a shaft longitudinally therethrough, a shaft

adapted to pass freely through the central orifices of said agitators, and means whereby the rotation of said shaft shall cause the simultaneous rotation of the agitators.



2. In a flour sifter, a plurality of screens adapted for the successive passage of flour therethrough, an agitator adjacent each of said screens, means to rotate said agitators comprising an eyelet rigidly attached to said agitator and rotatably attached to the adjacent screen, said eyelet having a polygonal orifice adapted to receive a polygonal shaft.

3. In a flour sifter having a plurality of interlocking members, each member forming a compartment wherein is mounted a screen, a handle comprising an upper pair of pivotally connected bands, a lower pair of pivotally connected bands, the corresponding bands of each pair being rigidly connected by a handle portion, said pairs of bands being adapted to infold the upper and lower of said interlocking members and clamp upon same when said handles are grasped.

4. A flour sifter comprising a plurality of interlocking members, each member forming a compartment, a plurality of screens, one of said screens being mounted in each of said compartments and said screens being adapted for the successive passage of flour therethrough, an agitator rotatably mounted upon each of said screens, a crank shaft adapted to engage each of said agitators and to rotate same when manually operated, and a handle adapted to simultaneously clamp the upper and lower of said interlocking members when said handle is grasped.

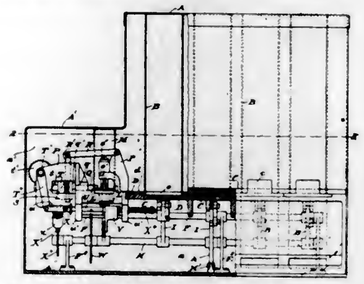
1,170,894. LADY'S HAT-FASTENER. HAROLD GRAVILL, Hull, England. Filed Sept. 25, 1914. Serial No. 863,570. (Cl. 132—25.)



A device for fastening a hat in position comprising a prong constituted by a narrow loop of wire, bowed out portions in the said loop, a button attached to the hat and having a neck around which the narrow loop of wire forming the prong passes, so that the device is retained, guided and held in position by the button and so that the bowed out portions of the said loop are adapted to spring around the neck of the button when the device is pushed in, with means for enabling the device to be engaged with the hair substantially as described.

1,170,895. VENDING-MACHINE. CHARLES M. GREY, East Orange, N. J. Filed Jan. 4, 1911. Serial No. 600,763. (Cl. 194—91.)

1. In a vending machine, coin-actuated mechanism embodying a plurality of coin-engaging members having means whereby said members are rendered movable relative to each other, the extent of such relative movement being dependent upon the thickness and diameter of a coin, a transmitting member, and means operated by the movement of one of the coin-engaging members for actuating the transmitting member, combined with article-delivery mechanism, and mechanism coöperating with the transmitting member for controlling the operation of the article-delivery mechanism.



2. In a vending machine, coin-actuated mechanism embodying a plurality of movable coin-engaging members, means whereby the movement of one member is dependent upon one dimension of a coin, means whereby the movement of another of said movable members is dependent upon another dimension of a coin, a transmitting member, and means actuated by the respective movable members for imparting movement to the transmitting member, combined with article-delivery mechanism, and mechanism coöperating with said transmitting member for controlling the operation of the article-delivery mechanism.

3. In a vending machine, coin-actuated mechanism embodying a plurality of coin face-engaging members, one of which is adapted for movement relative to the other, means operated by a coin for actuating the movable member, a plurality of coin edge-engaging members, one of which is adapted for movement relative to the other, means operable by a coin for actuating said movable edge-engaging member, a transmitting member, and means actuated by the respective movable members for imparting movement to said transmitting member, combined with article-delivery mechanism, and means coöperating with the transmitting member for controlling the operation of the article-delivery mechanism.

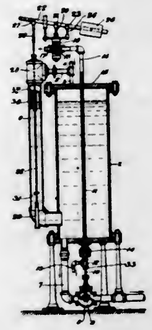
4. In a vending machine, coin-engaging members, having varying movements and dependent for such movements upon the dimensions of a coin, means operable by a coin for effecting said movements, a transmitting member, and means operated by said coin-engaging members whereby the conjoint movement thereof is applied to actuate the transmitting member, combined with article-delivery mechanism, and mechanism coöperating with the transmitting member for controlling the article-delivery mechanism.

5. In a vending machine, a plurality of coin face-engaging members, one of which is movable relative to the other, means operable by a coin for actuating said movable member, a plurality of coin edge-engaging members, one of which is movable relative to the other, means operable by a coin for actuating the movable edge-engaging member, a transmitting member, and means operated by the conjoint movement of said movable members for operating the transmitting member, combined with article delivery mechanism, and means operated by said transmitting member for controlling the article delivery member.

[Claims 6 to 19 not printed in the Gazette.]

1,170,896. STEAM-TRAP. CHARLES GULLAND, Pittsburgh, Pa., assignor of one-half to John F. Courson, Pitcairn, Pa. Filed Jan. 23, 1915. Serial No. 3,920. (Cl. 236—5.)

1. A trap of the class described consisting of a closed reservoir having a steam inlet and a condensation water outlet conduit, a valve controlling the outlet, and a hollow expansible and contractible stem extending through the reservoir connected with said valve adapted to be traversed by fluid, a valve controlling fluid circulation therethrough, means for actuating said valve dependent on the contents of the reservoir, said hollow stem being provided with a branch outlet connection between the outlet valve and the reservoir.



2. A trap of the class described consisting of a closed reservoir having an inlet and an outlet conduit, a valve controlling the outlet, a hollow circulating stem extending through the reservoir connected with said valve beyond the reservoir at one end thereof and with a source of fluid beyond the reservoir at the other end thereof, and valve mechanism controlling circulation through said circulating stem having lever mechanism and a float device operable by the rise and fall of the contents of the reservoir.

3. A trap of the class described consisting of a reservoir having an inlet and an outlet conduit, a valve controlling the outlet, a hollow circulating stem connected with said valve, a valve controlling fluid circulation through said stem, and means for actuating said valve dependent on the contents of the reservoir.

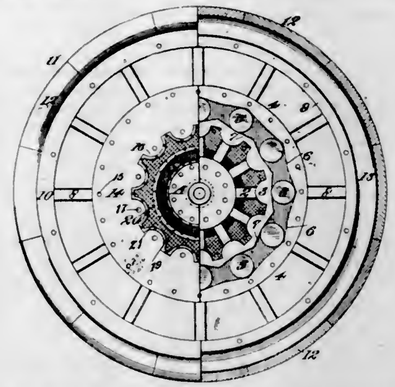
4. In combination, a reservoir having an inlet and an outlet conduit, a valve controlling the outlet conduit having a hollow actuating stem extending through the reservoir and connected with a fluid supply pipe, a valve in said pipe, lever mechanism therefor, and a float device operable with the rise and fall of the contents of the reservoir to actuate said mechanism.

5. In combination, a reservoir having an inlet and an outlet conduit, a valve controlling the outlet conduit having a hollow actuating stem extending through the reservoir and connected with a fluid supply pipe, a valve controlling circulation through said pipe, lever mechanism therefor, a by-pass conduit communicating with the reservoir, a float therein, and a rod connected with said lever mechanism, extending into said conduit, and having abutments adapted to be engaged by the float.

1,170,897. RESILIENT WHEEL. JOHN J. HALLORAN, Daly City, Cal. Filed May 10, 1915. Serial No. 27,067. (Cl. 152—43.)

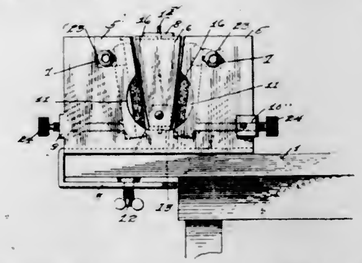
1. In a wheel, a hub, an inner rim section encircling the hub, spokes supporting the rim section from the hub, an outer rim section encircling the inner rim section, yieldable means spacing the outer rim section from the inner rim section, side plates fixed to the outer section and extending inwardly over the inner section to prevent relative lateral movement between the rim sections, and a composite guard for preventing admission of dust between the inner rim section and side plates comprising fabric elements secured to the inner edges of the side plates and connections of resilient material between the fabric pieces and the hub.

2. In a device of the character described inner and outer concentrically positioned rim members, angularly disposed straight faces formed on the inner side of the outer rim member, oppositely disposed angular straight faces formed on the outer side of the inner rim member, and a plurality of resilient members interposed between the angular faces of the rim members, each resilient member normally seating at the junction of a pair of faces of each rim member.



3. A device of the character described comprising a hub having a rim section secured concentric therewith, and exterior thereof, said rim section having a plurality of V shaped recesses formed in its face, a second rim section concentric with and exterior of the first-named rim, said exterior rim having a plurality of V shaped recesses formed on its inner face in alinement with the opposite recesses, a plurality of resilient members interposed between the rim sections, one for each set of alined V shaped recesses, and a tire secured to the exterior rim section.

1,170,898. KNIFE-SHARPENER. JAMES B. HANCOCK, Cedaredge, Colo. Filed Jan. 5, 1915. Serial No. 649. (Cl. 51—7.)



1. A knife sharpener comprising a frame, abrading plates secured to the frame, and a frusto-conical roller having bulged sides mounted between said plates.

2. A knife sharpener comprising a frame, abrading plates adjustably secured to the frame, and a roller mounted between the plates, said roller diminishing in diameter from the top toward the bottom.

3. A knife sharpener comprising a frame, plates pivotally connected to said frame, abrading plates secured to said pivoted plates, and a frusto-conical roller having bulged sides mounted between said abrading plates.

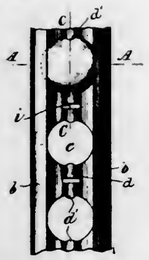
4. A knife sharpener comprising a frame, plates pivotally connected to the frame, said plates provided with bottom flanges and sides having right angle extensions, abrading plates received on the bottom flanges and provided with grooves adapted to receive the right angle extensions of the sides, and a roller mounted between the abrading plates.

5. A knife sharpener comprising a frame, plates pivotally connected to the frame, said plates provided with bottom flanges and sides having right angle extensions, abrading plates received on said bottom flanges and provided

with grooves adapted to receive the right angle extensions of the sides, threaded shafts extending through the frame and rotatably connected to the pivoted plates, and a frusto-conical roller having bulged sides mounted between the abrading plates.

[Claims 6 to 17 not printed in the Gazette.]

1,170,899. CAGE FOR ANTIFRICTION-BEARINGS. EWALD HANUS, Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany, a Corporation of Germany. Filed Mar. 17, 1914. Serial No. 825,220. (Cl. 64—59.)



1. A cage for antifriction bearings, comprising an annular resilient body or ring provided with an open circumferential fold having holes therein at intervals to form ball seats, the parts of said fold being adapted to be sprung apart to enlarge the holes to receive the balls; whereby the parts in automatically resuming their former condition will retain the balls in place.

2. A cage for antifriction bearings, comprising an annular body or ring provided with a radially extending circumferential fold having holes at intervals to form ball seats, said holes being adapted to be enlarged temporarily to admit the balls, by spreading the folds.

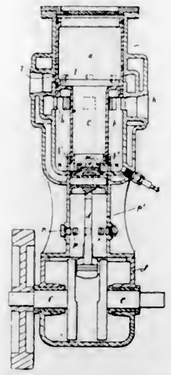
3. A cage for antifriction bearings, comprising an annular body or ring provided with a radially extending circumferential fold having holes therein at intervals to form ball seats, the intact portions of the fold between the ball seats being slit.

4. A cage for antifriction bearings, comprising an annular body or ring bent between its edges into a circumferential fold, said fold being provided at intervals with holes forming ball seats, and the edges of the annular body being extended inwardly toward each other to confine the balls.

5. A cage for antifriction bearings, comprising an annular body or ring provided with a radially extending circumferential fold provided at intervals with holes to constitute ball seats, and leaving intact portions of the fold between the seats, the distance between the ends of the adjacent intact portions of the fold being less than the diameter of the balls.

1,170,900. INTERNAL-COMBUSTION ENGINE OF THE TWO-CYCLE TYPE. SHERREN BRUCE DOUGLAS HARDING, London, England. Filed Feb. 6, 1914. Serial No. 816,982. (Cl. 123—74.)

1. A single acting internal combustion engine of the two-cycle type comprising a cylinder, a piston working in said cylinder and having its back or upper end open, a tubular truck on the front end of the piston—said trunk being open to the piston but closed at or near its forward or lower end, ports at the forward or lower end of the trunk of the piston, inlet ports in the cylinder adapted to be opened to the back or upper end of the cylinder as the piston reaches the end of its downward or non-working stroke, exhaust ports in the cylinder adapted to be opened by the piston as it reaches the end of its upward or working stroke, an internal sleeve in the bottom or forward end of the cylinder through which the trunk of the piston works, ports in said internal sleeve with which the ports in the trunk of the piston register when the piston approaches the end of its upward or working stroke, a crank chamber supporting a crank shaft, a couple between said crank shaft and the tubular extension of the piston, a sleeve extension of the cylinder which forms both a guide for the trunk of the piston and a distance piece between the cylinder and the crank chamber, and ports in said sleeve extension adapted when the piston is at the end of its downward or non-working stroke to coincide with the ports in the trunk of the piston, as set forth.



2. A single acting internal combustion engine of the two-cycle type comprising a cylinder, an annular piston working in said cylinder, a trunk carried by said piston and closed at its free end, ports in the free end of said trunk, ports in the cylinder adapted to be opened to the back end of the cylinder as the piston reaches the end of its non-working stroke, exhaust ports in the cylinder adapted to be opened by the piston as it reaches the end of its working stroke, a crank chamber, a crank shaft mounted in said chamber, a connecting rod coupling said crank shaft with the trunk of the piston, a sleeve extension of the cylinder extending upward into said cylinder and downward to be fixed to the crank-chamber, ports in said sleeve within the cylinder adapted to be uncovered by the trunk of the piston as the piston approaches the end of its working stroke, and ports in the sleeve extension of the cylinder adapted when the piston is at the end of its non-working stroke to coincide with the ports in the trunk of the piston, as set forth.

1,170,901. WHEEL-FLANGE OILER. ANNA G. HARRIS, Spokane, Wash. Filed Dec. 17, 1914. Serial No. 877,702. (Cl. 184—3.)



1. In a wheel flange oiler, driven means for advancing a supply of oil, a flange oil applying device communicating with said means, treadle mechanism for initiating operation of said driven means and moving said oil applying device into an oil applying position with respect to the wheel flange, and means normally acting to move said applying device out of an applying position and restoring said treadle means to a starting position, substantially as described.

2. In a wheel flange oiler, a conveying shank provided with a rounded terminal, and a hollow head adjustable on said terminal and provided with an oil applying slit shaped to engage the wheel flange in flat abutting relation, substantially as described.

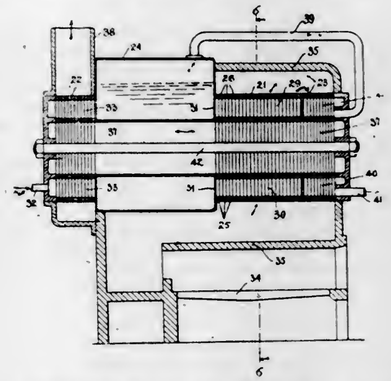
3. In a wheel flange oiler, a pump for advancing a supply of oil, a flange applying device communicating with said pump, an electric motor for driving said pump, and mechanism for shifting said applying device into an oil applying position and including an electric switch for closng circuit to start said motor, substantially as described.

4. In a wheel flange oiler, an oil applying device including a supplying shank provided with a rounded terminal, and an oil applying head comprising slit members bolted adjustably about said terminal to be supported thereby, said head having a cavity for receiving the oil and a slit for delivering the oil to the wheel flange, substantially as described.

5. In a wheel flange oiler, rotary pump mechanism for forcibly advancing a supply of oil, pipes leading from said pump mechanism, and oil applying devices having valved pivoted connection with said pipe arranged to open communication between said devices and their pipes when said oil applying devices are in an applying position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,170,902. APPARATUS FOR THE TRANSMISSION OR EXCHANGE OF HEAT BETWEEN FLUIDS. ALBERT DEN HARRISON, Wolverhampton, England. Filed Feb. 12, 1915. Serial No. 7,709. (Cl. 257—245.)



1. In an apparatus for the transmission or exchange of heat between fluids, a plurality of plates constructed and arranged so that the heating fluid or the fluid to be cooled is caused to pass through radially disposed spaces of gradually decreasing area.

2. In an apparatus for the transmission or exchange of heat between fluids, means located therein comprising passages of gradually decreasing area radiating from the center of the apparatus through which the heating fluid or fluid to be cooled is caused to pass.

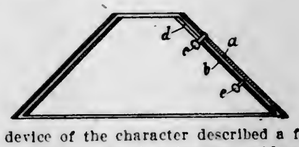
3. In an apparatus for the transmission or exchange of heat between fluids, means located therein comprising passages of gradually decreasing area radiating from the center of the apparatus through which the heating fluid or fluid to be cooled is caused to pass, and passages through which the fluid to be heated or the cooling fluid is caused to pass, part of such second named passages being disposed at right angles to the radially disposed passages, the other part being arranged alternately with such radially disposed passages.

4. In an apparatus for the transmission or exchange of heat between fluids, two series of plates eccentrically disposed openings provided in both series, radially disposed passages of gradually decreasing width toward the center of and formed on each plate of one series, one series being placed alternately with the plates of the other series, the eccentrically disposed openings in one series coinciding with the eccentrically disposed openings of the other series, thereby forming passages through the combined plates, means for securing said plates in assembled relation, a chamber exterior to and in which said plates are arranged, and a passage formed by the interior edges of said plates.

5. In an apparatus for the transmission or exchange of heat between fluids, a series of plates, a central opening formed in each of such plates, eccentrically disposed openings provided in each plate, concentric flanges formed around the central opening and around the peripheral edge of each plate, flanges formed around said eccentrically disposed openings, radially disposed passages of varying width formed on said plates, said last named flanges and radially disposed passages being formed on the opposite side of said plates to said concentric flanges, a second series of plates, a central opening formed in each of such plates eccentrically disposed openings provided in each plate, the two series of plates being assembled so that the plates of one series alternate with the plates of the other series, the eccentrically disposed openings in one series coinciding with the eccentrically disposed openings in the other series thereby forming passages through the combined plates, and means for securing such plates in assembled relation.

[Claims 6 to 11 not printed in the Gazette.]

1,170,903. REFLECTOR. JACOB HAUSCHILDT, Cologne, Germany. Filed July 23, 1914. Serial No. 852,754. (Cl. 240—103.)



1. In a device of the character described a frusto-conical reflector, a frusto-conical casing over said reflector and means to removably secure the reflector and casing in uniformly spaced relation to each other.

2. In a device of the chaacter described a frusto-conical reflector, a frusto-conical casing over said reflector and a pin secured to said outer casing and adapted to enter a slot in said reflector, said pin having means for spacing the reflector from the casing.

1,170,904. COLLAR-RETAINER. EDWIN HECKMAN, Vallejo, Cal. Filed Sept. 8, 1915. Serial No. 49,448. (Cl. 24—101.)



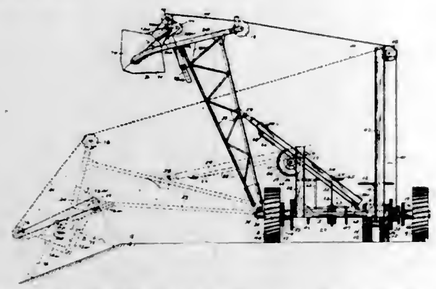
A collar retainer formed of a single piece of spring sheet material comprising two halves folded against one another along a mediate line, each half comprising an inner cross piece, a vertical member and a terminal member projecting laterally on each side beyond the adjacent edge of the vertical member, the two halves normally diverging from their line of juncture.

1,170,905. EXCAVATING-MACHINE. OLAF HETLESAETER, Chicago, Ill. Filed Feb. 11, 1914. Serial No. 817,988. (Cl. 212—9.)

1. In an excavator, the combination of a vehicle body having an axle and two propulsion wheels thereon, a bucket supporting boom extending from said axle, a source of power on said body, driving connections between said source and said propulsion wheels, and means for locking one of said wheels against propulsion and for allowing propulsion only of the other wheel to effect rotation of the vehicle body about the locked wheel as a center.

2. In an excavator, the combination of a vehicle body, an axle, propulsion wheels on said axle, a boom mounted on said axle, a driving shaft section connected with the respective wheels and connected by differential drive

mechanism, a source of power on said vehicle body having connection with said differential driving mechanism, and means for locking one of said wheels against propulsion and for allowing propulsion of the other wheel whereby to effect rotation of said vehicle body about the locked wheel as a center.



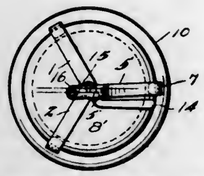
3. In an excavator, the combination of a supporting body, an axle, two supporting wheels on said axle, a source of power on said supporting body, a driving train for connecting said source with one of said wheels and means for locking the other wheel against rotation whereby said body may be rotated about the locked wheel as a center, and excavating mechanism supported on the axle adjacent one of said wheels.

4. In an excavator, the combination of a supporting body, an axle, supporting wheels on said axle, a driving source on said body, means for connecting either of said wheels in driving relation with said source and for preventing drive of the other wheel, and hoisting mechanism supported on one end of said axle.

5. In an excavator, the combination of an axle and a wheel pivoted at either end thereof, a vehicle body supported on said axle, a boom supported on said axle, a hoisting drum rotatable on said axle, a source of power on said body, means for connecting said source in driving relation with either of said wheels, and means for connecting said source in driving relation with said drum.

[Claims 6 to 15 not printed in the Gazette.]

1,170,906. JAR-CLOSURE. EDGAR C. HILL, Columbus, Ohio. Filed June 29, 1915. Serial No. 37,011. (Cl. 215—88.)

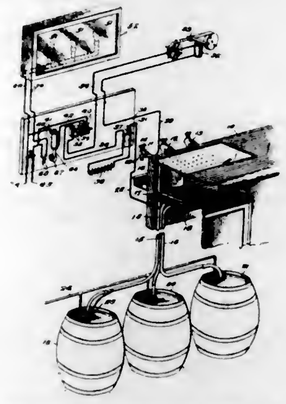


1. A locking device comprising a bridge piece with angular arms formed each with a hook and a beveled end, combined with a lever pivoted on the bridge piece having a long arm and a short arm, and a third arm formed with a hook and beveled end and pivoted on the short arm of said lever.

2. A locking device comprising a single angular piece formed with end hooks and beveled ends, an operating lever having a long arm and a short arm pivoted centrally of said piece, and an arm pivoted on the short arm of said lever having an end hook and beveled end and formed with a shoulder to provide a stop for said lever.

1,170,907. PROTECTIVE LIQUID-DISPENSING SYSTEM. HENRY HILLEBRAND, Brooklyn, N. Y. Filed Nov. 16, 1914. Serial No. 872,414. (Cl. 234—34.)

1. In a system for dispensing liquids, in combination with a valve controlled outlet from a container, an electric switch actuated by the stem of said valve, a source of electrical supply for said electrical switch, a high voltage relay in circuit with said switch and source of electrical supply, and a time controlled illumination display actuated by said relay.



2. In a system for dispensing liquids, in combination with a valve controlled outlet from a container, an electric switch actuated by the stem of said valve, a source of electrical supply for said switch, an electrical recording mechanism and a high voltage relay in circuit with said source of electrical supply and said electric switch and an illuminated display actuated by said relay.

3. In a system for dispensing liquids, in combination with a valve controlled outlet from a container, a metallic tube between said valve and said container, an insulated conductor formed in said tube, a circuit closer carried by said container, a switch actuated by the stem of said valve, an electrically controlled recording mechanism, a source of electrical supply and said switch actuated by said valve stem closing the circuit through the recording mechanism source of supply and including the tube and insulated conductor in said tube.

4. In a system for dispensing liquids, a valve controlled outlet from a container, having the container at a remote point from said valve, an electric switch actuated by said valve stem, an electrically actuated recording mechanism in a circuit with said switch, a source of electrical supply in said circuit, said tube being in said circuit, an insulated conductor formed in said tube, and a circuit closing attachment carried by said container to complete the circuit through the source of supply, recording mechanism tube and insulated conductor formed in said tube.

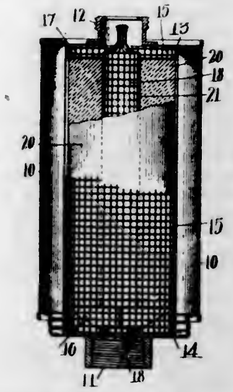
5. In a system for dispensing liquids, in combination with a container, and a valve controlled outlet at a remote point, a connecting tube comprising a metallic tube having a passage formed therein for fluid and an insulated electrical conductor embedded therein.

[Claim 6 not printed in the Gazette.]

1,170,908. DEVICE FOR USE FOR SPRAYING PURPOSES. FREDERIC D. HOUGHTON, Worcester, Mass. Filed Oct. 20, 1913. Serial No. 796,241. (Cl. 137—14.)

1. In a device of the character described, the combination of a casing for receiving a stream of liquid solvent and for holding a soluble substance, and means for causing the stream of solvent to come in contact with two surfaces of the soluble substance one of which increases in area and the other decreases as the surfaces are worn away as long as any material part of said substance remains undissolved.

2. In a device of the character described, the combination with a casing and means for directing a stream of liquid solvent through the casing, of means for holding a soluble substance in position in the casing, and means for directing the stream of solvent over a plurality of surfaces of the soluble substance some of which diminish in area and the remainder increase as they are worn away, so as to keep them of substantially constant combined area as long as any of the soluble substance remains undissolved.



3. In a device of the character described, the combination with a casing for receiving and discharging a stream of liquid solvent, and means for holding a soluble substance in fixed position in said casing and for permitting access of the solvent to a plurality of surfaces of said substance, the surfaces to which the solvent has access being so located and arranged as to remain substantially of constant combined area during the dissolution of said substance.

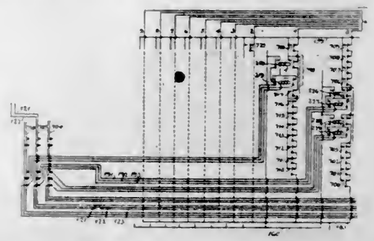
4. In a device of the character described, the combination with a casing for receiving a stream of liquid solvent and discharging it therefrom, of a foraminous cage within the casing extending from one end to the other, a foraminous cylinder within the cage extending throughout the length of the cage, said cage and cylinder constituting means for holding a soluble substance in hollow form in fixed position in the casing and permitting access of the solvent to the inner surface of said substance, and means within the cage for assisting in directing the solvent from the inlet of said casing into contact with the outer surface of the soluble substance and out of contact with the end thereof, whereby the surfaces to which the solvent has access will remain substantially of constant combined area during the dissolution of said substance by the liquid solvent.

5. The combination, of a container for a solid or viscous but soluble substance, having an inlet and an outlet for water, and stationary means therein for directing water from the inlet both around and through the interior of a body of said solid or viscous substance to the outlet and in contact with the interior thereof as long as any of the substance remains undissolved, and for keeping the stream of water from striking the end of said body.

[Claims 6 to 14 not printed in the Gazette.]

1,170,909. AUTOMATIC TELEPHONE SYSTEM. DAVID S. HULFISH, Toronto, Ontario, Canada, assignor to Canadian Independent Telephone Company, Limited, Toronto, Canada, a Corporation of Canada. Filed Oct. 16, 1911. Serial No. 654,872. Renewed June 28, 1915. Serial No. 36,915. (Cl. 179—18.)

1. In an automatic telephone system, a selecting switch of two movements of selection; two sets of indicator conductors, each set indicating stop positions in one movement of selection; a line having eligible points in said switch; a relay pertaining to said line and controlling circuits of two wires one in each of said sets, said two wires thus controlled determining the position of the said switch for the selection of the said points of said line, a series of circuits for moving said switch in its first movement of selection, and a relay in series with all of said circuits of said series and controlling said switch to move in its second movement of selection.



2. In an automatic telephone system, a selecting switch of two movements of selection; two sets of indicator conductors each set indicating stop positions in one movement of selection; a plurality of relays each controlling a conductor in each set; a circuit for moving the switch in its first movement and for stopping it in that movement in the stop position indicated by the conductor of a charged one of said relays, and a slow acting relay in said circuit and in series with the switch-driving means of the circuit and acting after said switch-driving means has ceased operating, said slow relay controlling the starting of the said switch in its second direction of movement.

3. In an automatic telephone system, a selecting switch of two movements of selection; two sets of indicator conductors each set indicating stop positions in one movement of selection; means for changing the electrical status of one conductor of each set; and means for moving the switch in its two movements and for stopping it in each movement in the stop position indicated by the changed conductor, a plurality of circuits used successively in propelling said switch in its first movement of selection, and a relay in series with all of said circuits and acting to start the switch in its second movement of selection only after its first movement of selection has been accomplished.

4. In an automatic telephone system, a selecting switch having two movements of selection; means for indicating within the switch a stop position in each movement of selection; means for accomplishing the first movement to the indicated stop position; means subsequently operable for accomplishing the second movement, said means for accomplishing the second movement comprising in part, a slow acting relay which is included in series with said means for accomplishing the first movement.

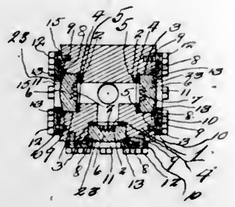
5. In an automatic telephone switch, a selecting brush; contact points for said brush; a driving means for said brush; a circuit including the brush and its contacts and when closed, controlling said driving means to move the brush; normally closed paths from said points except the normal point; means for closing the path through the normal point and for opening the path of another point, and a slow relay in series with all of said closed paths, said relay operating to close its controlled circuit only when no current flows through any of said paths.

[Claims 6 to 8 not printed in the Gazette.]

1,170,910. SECTIONAL WATER-GAGE GLASS. JAMES E. KEAN, Woburn, Mass. Filed June 30, 1915. Serial No. 37,211. (Cl. 73—54.)

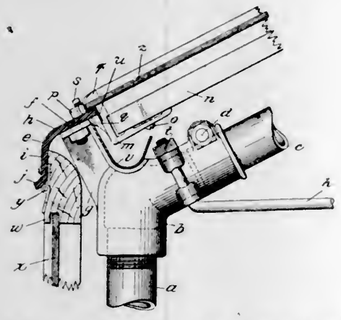
1. In combination, a skeleton casting rectangular in cross section and having three of its faces slotted, the slots of two of the opposite faces joining each other and joining the slot of the other face, the walls of each slot being rabbeted and having a composition asbestos packing, a glass plate in the rabbets of each slot against the packing, the outer face of each glass plate in cross section being oval, the outer face of each glass plate at its ends being oval, an asbestos gasket engaging the oval portions adja-

cent the corner edges of the glass plates, and slotted metal plates bolted to the slotted faces of the casting to hold the last mentioned gaskets in place, and means for holding the slotted plates in position.



2. In combination, a skeleton casting rectangular in cross section and having three of its faces slotted, the slots of two of the opposite faces joining each other and joining the slot of the other face, the walls of each slot being rabbetted and having a composition asbestos packing, a glass plate in the rabbets of each slot against the packing, the outer face of each glass plate in cross section being oval, the outer face of each glass plate at its ends oval, an asbestos gasket engaging the oval portions adjacent the corner edges of the glass plate, the three faces which are slotted having bevels adjoining the rabbeted portions of the walls of the slots, which bevels are engaged by the last mentioned gaskets, slotted metal plates having ribs adjacent their slots to bear against the last mentioned gaskets to hold them firmly in contact with the bevels and the oval portions, a composition asbestos packing between the slotted plates and the three faces of said casting, and means for holding the slotted plates in position.

1,170,911. CONSTRUCTION OF HORTICULTURAL BUILDINGS. ROBERT O. KING, North Tonawanda, N. Y. Filed Oct. 9, 1913. Serial No. 794,212. (Cl. 108—16.)



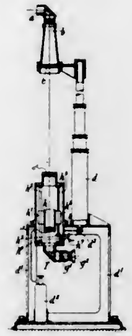
1. In a building of the character described, a sheet metal eave longitudinally bent with one flange angularly arranged in substantially the plane of the roof and the other flange substantially vertical, and the lower edge of said vertical flange outwardly flared, roof sashes secured to the upper flange, side sashes secured to the inner side of the vertical flange, and interior frame supports to which the eave is directly connected by its angularly arranged flange.

2. In a building of the character described, a sheet metal eave longitudinally bent with one flange angularly arranged and substantially in the plane of the roof and the other flange substantially vertical, and the lower edge of said vertical flange outwardly flared, roof sashes secured to the upper flange, side sashes secured to the inner side of the vertical flange, and interior frame supports to which the eave is directly connected by its angularly arranged flange, glazing strips extending around the lower edges of the glass of the roof sashes, between the glass and the eave and around the upper edge of the eave, through the medium of which the glass is upheld by the eave.

3. In a building of the character described, a sheet metal eave longitudinally bent with one flange angularly arranged and substantially in the plane of the roof and the other flange substantially vertical, and the lower edge of said vertical flange outwardly flared, roof sashes secured to the upper flange, side sashes provided at their upper end s with hinges, said hinges being secured to the inner side of the vertical flange, and interior frame supports to which the eave is directly connected by its angularly arranged flange.

4. In a building of the character described, a sheet metal eave longitudinally bent with one flange angularly arranged and substantially in the plane of the roof and the other flange substantially vertical, roof sash bars, angular brackets each fastened by one of its limbs to a sash bar, and having on the other limb two lugs adapted to receive between them the upper edge of the eave and set-screws passing through one of the lugs and adapted to clamp the eave firmly against the other lug.

1,170,912. LOOKOUT-TELESCOPE. ALBERT KÖNIG, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Mar. 26, 1915. Serial No. 17,300. (Cl. 88—32.)



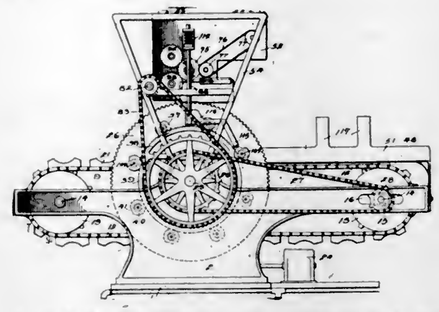
In a look-out telescope two tubes, an upper one and a lower one, each having its axis broken, disposed one above the other, the axis of emergence of the upper tube and the axis of entrance of the lower tube being substantially vertical, the upper tube being fitted displaceably in the direction of its axis of emergence and containing an objective and a collective lens and the lower tube being rigidly fixed and containing a lens-system of revision and an ocular, which lens-system of revision consists of two members, a front member and a rear member, the front member being positive and having a greater (absolute) focal length than the rear member, of which two members at least the rear member being disposed displaceably in the direction of the optical axis.

1,170,913. LABELING-MACHINE. FRANK KRAEMER, Buffalo, N. Y., assignor, by mesne assignments, of one-half to The United States Labeling Machine Company. Filed Apr. 13, 1914. Serial No. 831,459. (Cl. 216—59.)

1. In a labeling machine, the combination of a label-feeder, a rotary carrier coöperating therewith, a circular row of rotary bottle-holders mounted on said carrier, means for turning said bottle-holders relatively to said carrier, and bottle-centering rollers journaled on the carrier at opposite sides of each of said holders.

2. In a labeling machine, the combination of a label-feeder, opposing rotary carriers coöperating therewith, a circular row of rotary bottle-holders journaled in one of said carriers, an opposing row of spring-pressed plungers

mounted in the other carrier, and centering seats for the bottle-necks mounted on the inner side of the last-named carrier.



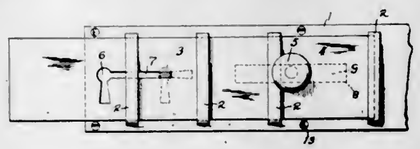
3. In a labeling machine, the combination of a label-feeder, spaced rotary carriers coöperating therewith, a circular row of rotary bottle-holders mounted on one of said carriers, an opposing row of corresponding bottle-holders mounted on the other carrier, means for automatically turning said rotary holders relatively to their carrier, and a conveyer running between said carriers and having bottle-seats.

4. In a labeling machine, the combination of a label-feeder, spaced rotary carriers coöperating therewith, a circular row of rotary bottle-holders mounted on one of said carriers, an opposing row of corresponding bottle-holders mounted on the other carrier, automatic means for turning said rotary holders relatively to their carrier bottle-centering seats mounted on said carriers adjacent to said bottle-holders, and a conveyer arranged between said carriers and having bottle-seats.

5. In a labeling machine, the combination of a label-feeder, mechanism for intermittently actuating the feeder, a carrier having bottle-holders, and trip means mounted on said carrier and coöperating with said actuating mechanism to operate the label-feeder when a bottle arrives opposite the same.

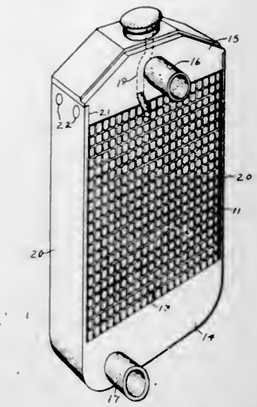
[Claims 6 to 19 not printed in the Gazette.]

1,170,914. KEY-BOLT. JOHN H. A. KRAUSS, Boston, Mass. Filed Oct. 27, 1913. Serial No. 797,491. (Cl. 70—7.)



In combination with a lock having a key hole and a key associated therewith, a base plate mounted adjacent said lock and provided with a key hole, a plurality of transversely extending yokes upon said base plate, a relatively flat locking plate slidably supported by said yokes, said locking plate being provided with a key hole for registration with the key hole of the base plate and lock, said locking plate being further provided with a longitudinally extending slot terminating upon the upper end of said key hole and adapted to receive said key, a transverse abutment upon said locking plate, a knob upon said locking plate for facilitating the operation thereof, said base plate provided with a longitudinally extending recess, and a bow spring mounted in said recess and bearing against said locking plate for yieldingly and releasably holding said locking plate in various adjusted positions for maintaining said abutment in engagement with one of said yokes for preventing relative sliding movement of the plates and consequently maintaining said key in said lock.

1,170,915. METHOD OF MAKING RADIATORS. WILLIAM H. LEGATE, Hartford, Conn. Filed May 27, 1915. Serial No. 30,756. (Cl. 204—8.)



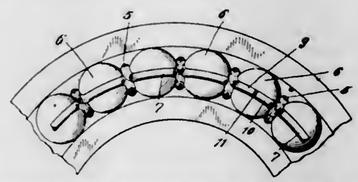
1. A method of making radiator bodies comprising the formation of two grid-like cores, each having longitudinally and transversely extending bars, then connecting the two cores with a space therebetween, then depositing a metal on both the cores, and then removing the cores from the exterior structure.

2. A method of making radiator bodies comprising the formation of two grid-like cores having projecting means, then uniting the projecting means to form two connected cores, then depositing a metal on the cores, and then removing the cores from the exterior structure.

3. A method of making radiator bodies comprising the formation of two grid-like cores, each having longitudinally and transversely extending bars and each also having projections extending inward from the barred portion thereof, then uniting the projections, then depositing a metal on the two cores and on the connected projections, and then removing the cores and said projections from the exterior structure.

4. A method of making radiator bodies comprising the formation of fusible grid-like cores each having longitudinally and transversely extending bars and also having projections extending inwardly from the barred portion thereof, uniting said projections, then electrolytically completely enveloping said longitudinally and transversely extending bars with a metal between the ends thereof and also enveloping said projections, and then removing the core by heat from the exterior structure.

1,170,916. SEPARATOR-CAGE FOR BALL-BEARINGS. EMIL M. LOWY, New York, N. Y. Filed Dec. 16, 1911. Serial No. 666,087. (Cl. 64—59.)



1. The combination with a series of balls, of a separator-cage therefor, said separator-cage being formed of a single length of wire bent and formed into retaining loops or rings being disposed at equi-distant points along its length the eye of each ring adapted to form a seat for two adjacent balls.

2. The combination with a series of balls, of a one piece separating member therefor comprising a plurality of eyes

or loops, each eye or loop providing a seat for two adjacent balls, each ball contacting with an annular peripheral portion of an eye or loop.

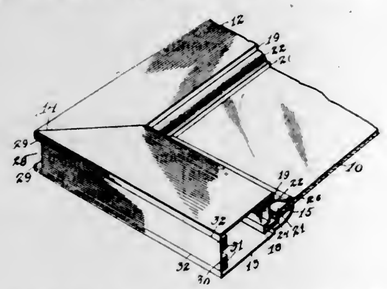
3. The combination with a series of balls, of a one piece separator-cage comprising a series of elastic wire loops, said loops being respectively disposed between the balls and each loop contacting with two adjacent balls and providing seats therefor.

4. A one piece annular separator cage for balls formed with integral connected rings of circular cross-section, each ring constituting a separating and seat member for adjacent balls.

5. The annular separator-cage for balls formed of flexible wire and having integral rings adapted to be interposed between two adjacent balls to form a separating and seat member therefor, each ring being so positioned with relation to the balls that an outer peripheral portion of two balls will be centered and seated within the eye of each ring but separated from each other.

[Claims 6 to 8 not printed in the Gazette.]

1,170,917. METALLIC WINDOW OR SCREEN FRAME. EBBERT J. LUND, Jamestown, N. Y., assignor of one-half to Henry M. Lund, Jamestown, N. Y. Filed Jan. 23, 1911. Serial No. 604,116. (Cl. 189—78.)

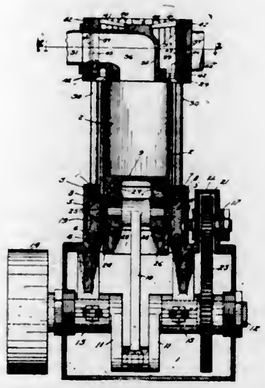


1. In a window or screen frame, a hollow frame having spaced sides formed of sheet metal one of the sides having a wall against which one side of the screen fabric or glass filler abuts and also having a pocket of U-shape off set from the wall and located in spaced relation to the side walls of the frame, a strip having a wall which is located opposite to the first named wall and an angular wall against which the filler engages and having a part which projects into the pocket, a second strip between the free side of the first strip and the adjacent frame side, and interlocking connections between said second strip, said adjacent frame side and the first named strip.

2. In a window or screen frame, a sheet metal frame having tubular sides, the sheet metal bent to form a molding along the inner edge of said frame sides, said molding having a flat inner face for holding one side of the screen fabric or glass, the sheet metal of said flat face turned at an angle and continued in an inner recess, a sheet metal binding strip bent at a similar angle to said angle in the flat inner face of said molding and holding within said recess, said binding strip facing the opposite side of the screen fabric or glass from said flat inner face of said molding, said binding strip having a return bend flange on its edge, a second binding strip, holding means on the edge of said tubular frame for one edge of said second binding strip and the other edge of said second binding strip sprung beneath said return bend flange on the first binding strip to hold the glass or screen fabric.

3. In a window or screen frame, sides formed of sheet metal having a wall against which one side of the screen fabric or glass abuts and further having a pair of spaced walls located beyond the inner side of the first named wall, one of the frame sides having an inwardly extending flange located on one side of the pair of spaced walls, a strip of metal having an off-set side which operates with the inner wall of said pair of walls to hold the fabric or glass in position and having a wall which extends opposite and in spaced relation to the first named wall, said strip having an out-turned flange at its opposite side, and a second strip having one side engaged with said out-turned flange of the first named strip and having its opposite side engaged beneath the inwardly extending flange of the frame side.

1,170,918. VALVE STRUCTURE. CHARLES LUNDY, Reno, Nev. Filed June 3, 1914. Serial No. 842,622. (Cl. 123—43.)

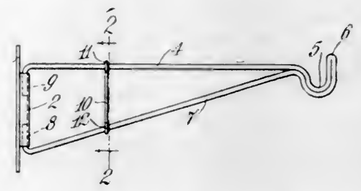


1. In a valve structure for gas engines, the combination with a cylinder of a hollow rotatably mounted valve associated therewith and formed with a channel adapted for communication with the interior of the cylinder, a series of cooling vanes arranged within the hollow interior of the valve, a valve casing surrounding said valve and provided with a plurality of ports, means for operating said valve to present the port therein successively to the ports in said casing to provide a communication between the interior of the said cylinder and the ports, a packing ring carried by the rotating valve and interposed between the valve and the valve casing and rotatable with the valve, the packing ring being rigidly attached to the valve and provided with an opening therethrough intermediate its edges for registering with the channel in the valve.

2. In a valve structure for gas engines, the combination with a rotary cylinder formed with a port in its head, with a hollow rotary valve carried by the cylinder and having a substantially L-shaped channel therein communicating at its lower end with the port in said cylinder, a series of spaced outstanding cooling vanes arranged within the hollow interior portion of the valve, a valve casing surrounding said valve and provided with a plurality of ports, means for rotating the cylinder to successively present the upper end of said channel to the said ports in the valve casing, a packing ring of substantially greater width than the valve interposed between the valve and valve casing and secured thereto by means of a fastening lug, said packing ring being provided with a port intermediate its edges registering with the channel in the valve; and a relatively narrow packing ring seated within the valve on each side of the said ported packing ring.

1,170,919. BIRD-CAGE HOOK. LEWIS M. MCCALLUM, Worcester, Mass., assignor to Parker Wire Goods Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 9, 1915. Serial No. 38,967. (Cl. 248—18.)

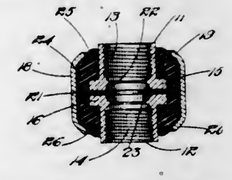
1. A hook for bird cages and the like, comprising in combination, a wall plate adapted to be secured to a wall, a struck up socket portion thereon, a horizontal arm, another arm inclined to said horizontal arm, bent portions on each of said arms adapted to engage in said socket, the outer portions of said arms being bent to form a hook, said arms, hook and bent portions being integral parts of a single wire, and a strut member connecting said arms and movable thereon to serve to retain the bent portions in the sockets of the wall-plate.



2. A hook for bird cages and the like, comprising in combination, a wall plate, having a single integrally formed socket portion thereon, a hook member, detachably supported in said socket portion, said member comprising a horizontal outwardly extending arm, an arm inclined thereto, a hook portion, and vertically disposed bent portions on each of said arms arranged to engage in said socket portion, said arms, hook and bent portions being integral portions of a single wire, and a member connecting said horizontal and inclined arms and slidable thereon, said member adapted when moved in one direction to hold said bent portions in said socket and when moved in the other direction to remove said portions therefrom.

3. A bird cage hook and support therefor, comprising in combination, a wall-plate formed with a centrally arranged struck-up portion to provide an opening therethrough, a hook proper formed from a single piece of wire, one end having a cage-engaging portion and its opposite end bent into angular portions to engage the top and bottom part of the struck-up portion, and means comprising a slidable bar to retain the angular portions in place in the struck-up portion of the wall-plate and to furnish means to brace the members of the hook, as described.

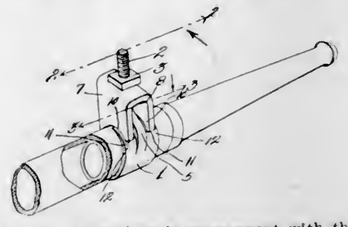
1,170,920. INSULATING-JOINT. LOUIS MCCARTHY, Boston, Mass. Filed June 1, 1914. Serial No. 842,007. (Cl. 173—365.)



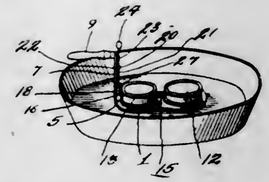
The improved insulator comprising flanged end members, masses of a fireproof insulating material molded about said end members, an insulating washer separating the proximate faces of said end members and masses of insulating material, a tube of mica surrounding said block of insulating material, and a steel shell having inturned flanges curved over the shoulders of said masses of insulating material and securing the whole together.

1,170,921. HOSE-CLAMP. ADAMS MURPHEY MCDONALD, Davis, W. Va. Filed Nov. 10, 1914. Serial No. 871,300. (Cl. 137—28.)

A hose clamp comprising a ring clamping member having a laterally extending screw, the lower half of the ring clamping member opposite the screw being semi-circular, the other half adjacent the screw being partially elongated or semi-elliptical, a U-shaped clamping member having an aperture in the arch thereof to receive the screw, said U-shaped clamping member arching the semi-elliptical portion of the ring, the semi-circular portion of the ring having oppositely arranged spring arms, said U-shaped clamp having its side portions provided with segmental curved edges to engage the oppositely arranged spring arms to press them in engagement with the hose, which passes through the ring clamp.



1,170,922. EGG-POACHER. PETER J. MAGUIRE, Hutchinson, Kans. Filed Apr. 30, 1915. Serial No. 24,999. (Cl. 53—7.)



1. An egg poacher, comprising a base having a set of apertures, a supporting handle having a lower angled end secured to the base, whereby the handle rises vertically from the base, a rim hinged adjacent one side of the base and resting upon the upper surface of the base, said rim at right angles to its hinged connection having an upwardly extending arm provided with a slot in its upper portion, a lever pivoted to the supporting handle and being alined with said arm when the entire lower edge of the rim engages the base, the upper end of said lever having a thumb piece, and provided at its lower end with a headed pin engaging through said slot of the arm, so that when the lever at its lower end is tilted toward the hinge of the rim, the rim is tilted upwardly to permit the removal of the eggs.

2. An egg poacher, comprising a base having two sets of apertures and provided with a supporting handle, a pair of rims pivoted to the base and respectively encircling each set of apertures, said rims being connected so as to move as one body, an upwardly extending arm carried by one rim and provided with a slot in its upper portion, a lever pivoted to the supporting handle and having a thumb piece at its upper end, and a headed pin at its lower end engaging said slot, so that as the lever is tilted to one side the rims may be tilted upwardly synchronously to permit the removal of the eggs.

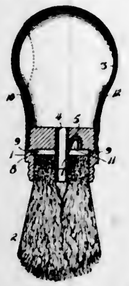
1,170,923. FOUNTAIN SHAVING-BRUSH. CHARLES MALKIN, San Francisco, Cal. Filed Sept. 21, 1915. Serial No. 51,773. (Cl. 15—50.)

1. A fountain shaving brush comprising a longitudinally apertured body for holding the bristles at one end, and a rubber bulbous reservoir having a neck which can fit closely around either end of the body.

2. A fountain shaving brush comprising a longitudinally apertured body for holding the bristles at one end, a tube secured in said aperture and extending between said bristles, an air tube communicating at one end with said tube and at the other end with the atmosphere, and a rubber bulbous reservoir having a neck which can fit closely around either end of the body.

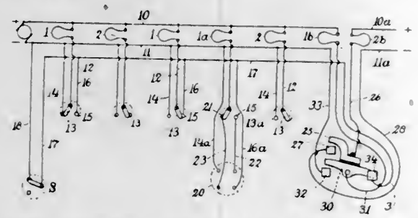
3. A fountain shaving brush comprising a longitudinally apertured body for holding the bristles at one end, a tube secured in said aperture and extending between

said bristles, an air tube communicating at one end with said tube and at the other end with the space within the body between the body and bristles, said body having an



air pasaage therethrough leading from said space to the atmosphere, and a rubber bulbous reservoir having a neck which can fit closely around either end of the body.

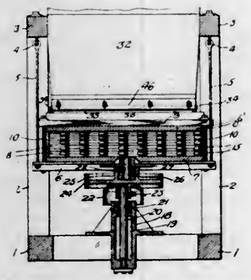
1,170,924. MASTER-CONTROLLED SYSTEM OF ELECTRIC-LIGHT WIRING. IRVING L. MATSON, Marshfield, Mass., assignor to Katherine M. Gair, Boston, Mass. Filed Sept. 19, 1913. Serial No. 790,592. (Cl. 171—07.)



1. The combination of electric lamps located in groups, means including circuits for delivering current to said lamps, switches individual to each of said groups controlling the circuits of said lamps, a master-switch, and wiring connecting the latter with said current delivering means and with a part of the lamps in each group for delivering current thereto independently of said individual switches.

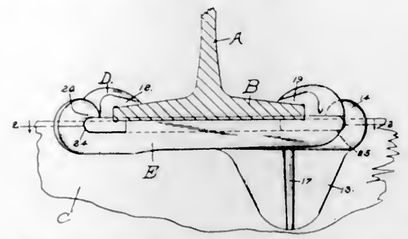
2. The combination of a group of electric lamps, means including circuits for delivering current thereto, a combined two-pole and three-point switch mechanically united to move simultaneously, the two-pole switch controlling the circuit to part of said lamps, the three-point switch controlling the remainder of the lamps, and a master-switch wired to said three-point switch.

1,170,925. CONCENTRATOR. WILLIAM H. MILLER and GUY E. KRATZER, Chico, Cal. Filed Feb. 3, 1915. Serial No. 5,817. (Cl. 83—54.)



A concentrating tray formed with an open top, a solid bottom and up-turned side and end walls, the end walls terminating short of the upper edge of the side walls to provide feed and discharge openings at the opposite ends thereof, a plurality of spaced walls extending transversely of each tray and dividing the same into compartments, the upper edge of said transverse walls terminating short of the upper edge of the side walls, a plurality of agitator fingers extending from one side wall toward the center of the trays, and said fingers being spaced from the bottom of the respective trays, and means for gyrating the tray in a horizontal plane.

1,170,926. ANTICREEPER. PHILIP W. MOORE, Evanston, Ill., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1914. Serial No. 879,712. (Cl. 238—4.)



1. An anti-creeper comprising two co-engaging members, one provided with a tie abutting part, and each provided with a rail base engaging jaw formed below the plane of the bottom of the rail base with a laterally outstanding wedge-shaped rib adapted to be engaged by the other element.

2. An anti-creeper comprising two co-engaging members, one provided with a tie abutting part, and each provided with a rail base engaging jaw, formed below the plane of the bottom of the rail base with a laterally outstanding wedge-shaped rib, and with a hook adapted to extend around the rib on the other member.

3. An anti-creeper comprising two co-engaging members, one provided with a tie abutting part, and each formed with a rail base engaging jaw, with a wedging rib projecting outwardly from said jaw, and with a hook adapted to extend around the rib of the other member without embracing the jaw thereof.

4. An anti-creeper comprising two co-engaging members, one provided with a tie abutting part, and each formed with a rail base engaging jaw, with a wedging rib projecting outwardly from said jaw, and on the end opposite the jaw with a hook adapted to extend around the rib of the other member without embracing the jaw thereof.

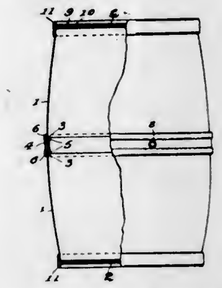
5. An anti-creeper comprising two members having a wedging engagement with each other at opposite ends of the device, each member being provided with a jaw extending around an edge of the rail base, and one of them with a tie abutting part; one of said wedging engagements being provided by a wedge formed rib projecting laterally from the jaw of one of said members and a hook on the other which engages said rib without embracing the jaw on which the rib is formed.

[Claims 6 to 11 not printed in the Gazette.]

1,170,927. ART OF MAKING BARRELS. THOMAS F. MOORE, New York, N. Y. Filed June 4, 1915. Serial No. 32,162. (Cl. 113—116.)

1. In the art of constructing metallic barrels, forming end sections of sheet metal, forming a substantially axially extending return flange about the edge of the inner end of each section, forming a connecting ring for the sections with edge grooves open respectively toward the ends of the barrel and proportioned to receive the respective rounded edges and return flanges of the inner ends of the sections, and folding the material forming the outer wall of each groove over and across the edge of the respective return flange and axially between said flange and the body of the section.

2. In the art of constructing metallic barrels, forming end sections of sheet metal, forming a substantially axially extending return flange about the edge of the inner end of each section, forming a connecting ring for the sections with edge grooves open respectively toward the ends of the barrel and proportioned to receive the respective rounded edges and return flanges of the inner ends of the sections, folding the material forming the outer wall of each groove over and across the edge of the respective return flange and between said flange and the body of the section, and flattening the joints thus formed against the respective sections.



3. In the art of constructing metallic barrels, forming end sections each with a substantially axially extending return edge flange at its inner end, forming a connecting ring for said sections with axially open grooves for bodily receiving the rounded inner edges and return flanges of the sections, assembling said sections with their inner end edges in the respective grooves of the connecting ring, and interlocking each return flange with the material of the outer wall of the respective groove.

4. In the art of constructing metallic barrels, forming end sections each with a return edge flange at its inner end, forming a flat plate with outstanding flanges spaced from its edges, and bending said outstanding flanges to form grooves along the edges of the plate, forming the plate into a ring with the grooves opening axially, the grooves being proportioned to receive the rounded edges and return flanges of the end sections, assembling said sections with their inner end edges in the respective grooves of the ring, and folding the bent flange at each edge of the ring across the edge of and about the return flange of the respective section for forming a lock joint.

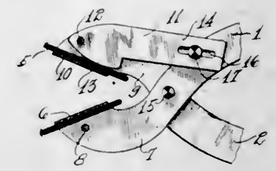
5. In the art of constructing metallic barrels, forming end sections each with a return edge flange at its inner end, forming a flat plate with outstanding flanges spaced from its edges, the flanges being spaced apart a distance sufficient to enable the presence of a bung hole in the plate between the flanges, and bending said outstanding flanges to form grooves along the edges of the plate, forming the plate into a ring with the grooves opening axially, the grooves being proportioned to receive the rounded edges and return flanges of the end sections, assembling said sections with their inner end edges in the respective grooves of the ring, folding the bent flanges at each edge of the ring across the edge of and about the return flange of the respective section for forming a lock joint, and forming a bung hole in the plate between the bent flanges.

[Claim 6 not printed in the Gazette.]

1,170,928. JAR-WRENCH. JOHN NELSON, Bay City, Mich. Filed Sept. 4, 1914. Serial No. 860,269. (Cl. 65—26.)

1. A jar wrench comprising handles pivoted together, a flexible band secured to one of said handles at the one end thereof, means provided on said second handle through which the free end of said flexible band passes, and a movable member between and connecting said first handle and said means in such a relation that as the handles are manipulated in an operative relation the band is gripped and held by said means and member.

2. A wrench comprising handles pivoted together, jaws provided on said handles, a flexible band connected with one of said jaws and having an adjustable connection with the second of said jaws, and means connected with one of said jaws and with the handle of the other of said jaws to be brought into operation by the gripping of the handles to engage with and maintain the flexible band in its adjusted relation.



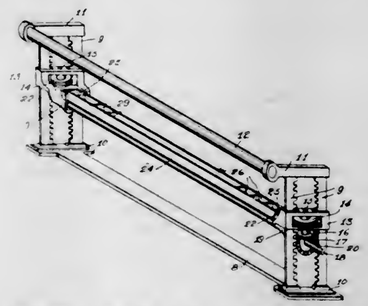
3. A wrench comprising handles pivoted together, jaws provided on said handles beyond the point of pivot, a flexible band secured to one of said jaws and adapted to be slidably adjustable through a rolled portion provided on the second of said jaws, and a gripping member connected with said second jaw adjacent the rolled portion and with the handle of said first jaw to be brought into operation upon the gripping of the handles to hold the flexible band against movement from the adjusted position.

4. A wrench comprising handles pivoted together, jaws provided on each of said handles, a flexible band secured at its end to one of said jaws and looped around to pass through a rolled portion provided on the second of said jaws and to have sliding adjustment therethrough, a gripping jaw mounted on said second jaw adjacent the point of disposition of the flexible band therein and provided with an elongated slot, and a pin passed through said slot and secured with said first handle to impart a rocking motion to said gripping jaw upon operative movement of said handles to thus secure the flexible band to be of a fixed length.

5. A wrench comprising handles pivoted together, jaws provided on each of said handles, a flexible band rigidly connected with one of said jaws, a rolled portion provided on the second of said jaws through which the flexible band is passed to be capable of endwise sliding adjustment, a gripping jaw pivoted adjacent the sliding connection of said flexible band with said second jaw, a gripping face provided on said gripping jaw eccentrically with respect to the point of pivot, and a connection between said gripping jaw and the handle on which said first jaw is formed so provided that as the handles are brought together the eccentric gripping face is brought into engagement with the flexible band and this band is held against displacement from its adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

1,170,929. BED-LIFTER. JOSEPH L. NYLANDER, Seattle, Wash. Filed Mar. 29, 1915. Serial No. 17,921. (Cl. 254—89.)



1. A bed lifter of the class described, comprising a frame having vertically movable blocks associated there-

with, a bed supporting bar pivotally connected with said blocks to permit a slight oscillation of said bar and means for adapting said bar to be engaged with beds of different width.

2. A bed lifter of the class described comprising a frame having two pairs of vertical spaced bars disposed at opposite ends thereof, blocks slidably mounted on each of said pairs of bars, means for raising and lowering said blocks, and a bed supporting bar connected with said blocks to support one end of a bed in an elevated position.

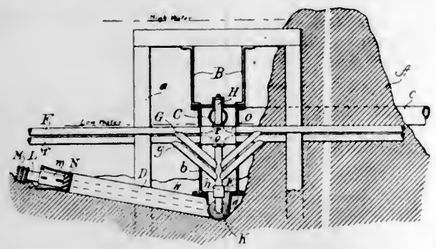
3. A bed lifter of the class described, comprising a base plate, a pair of vertically disposed toothed rack bars secured in spaced relation at each end of said base plate, blocks slidably mounted on each pair of said rack bars, vertical shafts associated with said blocks, worm wheels provided on said vertical shafts and adapted to engage with teeth on said rack bars, a horizontal shaft extending lengthwise of said base plate and journaled in said blocks, bevel gears connecting said vertical shafts and said horizontal shaft whereby said worm wheels may be rotated to move said blocks simultaneously, and a bed supporting bar connected with said blocks.

4. A bed lifter of the class described comprising a frame, vertical standards provided at the ends of said frame, a bed supporting member having one end connected with each of said vertical standards and means for simultaneously moving the two ends of said bed supporting member vertically on said standards at the same rate of speed.

5. A bed lifter, comprising a base plate, pairs of parallel vertical toothed rack bars secured in spaced relation at each end of said base plate, blocks slidably associated with each of said pairs of rack bars, vertical shafts journaled in said blocks, worm wheels secured on said vertical shafts, said worm wheels being adapted to engage with the teeth on said rack bars, bevel gears connecting said vertical shafts with a horizontal shaft whereby said blocks may be moved simultaneously in a vertical direction on said rack bars, a bed supporting bar extending between said blocks to support the end of a bed, said bed supporting bar being pivotally connected with said blocks to permit a slight oscillation of said bar, and means for adapting said bar to engage with beds of various width.

[Claim 6 not printed in the Gazette.]

1,170,930. HYDRAULIC-RAM DREDGE. EDWIN K. O'BRIEN, Alexandria, Va. Filed Nov. 4, 1914. Serial No. 870,219. (Cl. 37—9.)



1. In a hydraulic ram dredge, the combination with a ram having a clear water intake, a valve, and a soil and water intake, of a discharge pipe from the said ram, and a suction pipe leading from the said soil and water intake and opening into the said discharge pipe beyond the said valve.

2. In a hydraulic ram dredge, the combination with a ram having a clear water intake, a valve, a soil and water intake, a discharge pipe for clear water, a discharge pipe for soil and water, the said valve being arranged to control the said discharge pipes, and a suction pipe leading from the said soil and water intake and opening into the said discharge pipe for soil and water beyond the said valve.

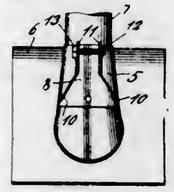
3. In a hydraulic ram dredge, the combination with a ram having a movable clear water intake, a valve, a movable soil and water intake, a discharge pipe for clear water, a discharge pipe for soil and water, the said valve being arranged to control the said discharge pipes, and a suction pipe connected with the said soil and water intake and opening into the said soil and water discharge pipe beyond the said valve.

4. In a hydraulic ram dredge, the combination with a ram having a movable clear water intake, a valve, a movable soil and water intake arranged lengthwise within the said clear water intake, a discharge pipe from the ram, and a suction pipe leading from the said soil and water intake and opening into the said discharge pipe beyond the said valve.

5. In a hydraulic ram dredge, the combination with a ram having a clear water intake, a valve, a soil and water intake arranged lengthwise within the said clear water intake, a discharge pipe for clear water, a discharge pipe for soil and water, the said valve being arranged to control the said discharge pipes, and a suction pipe connected with the said soil and water intake and opening into the said soil and water discharge pipe beyond the said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,170,931. ROOF-JOINT. CHARLES AUGUSTUS OVERTON, Coeur d'Alene, Idaho. Filed June 7, 1915. Serial No. 32,615. (Cl. 108—26.)



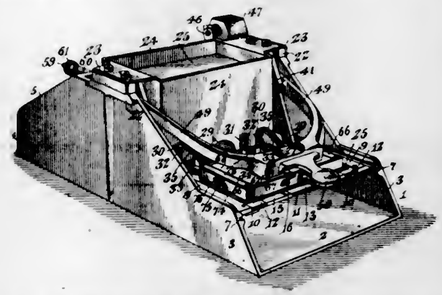
1. A roof joint comprising a flexible sleeve having a side recess and a tongue extending upward from the bottom of the recess, a flexible tongue secured to the sleeve to cover the recess, said tongue lapping the inner surface of the sleeve at opposite sides of the recess and also lapping the said first-mentioned tongue, and means for contracting the sleeve to clamp the aforesaid lapping parts together.

2. A roof joint comprising a flexible sleeve having a side recess and a tongue extending upward from the bottom of the recess, a flexible tongue secured to the sleeve to cover the recess, said tongue lapping the inner surface of the sleeve at opposite sides of the recess and also lapping the first mentioned tongue, the side edges of the flexible tongue having notches at its lower end in which the edges of the recessed portion of the sleeve seat, and means for contracting the sleeve to clamp the aforesaid lapping parts together.

1,170,932. TAG-ADDRESSING MACHINE. GEORGE THOMAS PRITCHARD, Norfolk, Va. Filed Jan. 26, 1914. Serial No. 814,437. (Cl. 101—132.)

1. In a tag printing machine, a reservoir or receptacle for tags, reciprocable tag holding means movable with relation to the receptacle to carry one tag at a time therefrom into printing position, a printing device, means for moving the printing device into and out of engagement with the projected tag, and connections from the means for moving the printing device to the tag holding means movable out of propelling engagement therewith on the attainment of the tag holding means to printing position, whereby the printing mechanism has a range of movement to effect the printing during a period of rest of the tag holding means.

2. In a tag printing machine, a reservoir or receptacle for tags, a reciprocatory bed plate movable across the bottom of the reservoir and constructed to project one tag at a time from the reservoir into position to be printed, a rockable operating member for the bed plate, a printing device, and rockable operating means for the printing device connected to the first-named rockable means for actuating the same and said first-named operating means having a connection with the bed plate for movement out of propelling relation thereto after the bed plate has come to rest and before the second-named operating means has reached the limit of its movement.



3. In a tag printing machine, a reservoir or receptacle for tags, a reciprocatory bed plate movable across the bottom of the reservoir and provided with means for engaging and projecting one tag at a time from the reservoir, means for limiting the movement of the bed plate in a direction to project the tag, a rockable operating member, a printing device carried by the operating member and movable thereby toward and from the bed plate when the latter is in the projected position, and rockable connections between the rockable operating member and the bed plate having connections with the latter movable out of operative engagement therewith when the bed plate reaches the limit of its movement and before the printing device reaches the projected tag to print the latter.

4. In a tag addressing machine, a receptacle or reservoir, a bed plate movable transversely of the lower end of the reservoir and provided with a tag engaging portion, tag holding and arresting members carried by the reservoir in the path of tags within the reservoir and in the path of return movement of a projected tag, an operating member, an imprinting device carried by the operating member, and connections between the operating member and the bed plate for causing reciprocations of the latter.

5. In a tag addressing machine, a reservoir or receptacle, a reciprocatory bed plate movable beneath the reservoir and forming a support for tags lodged within the reservoir, said bed plate having means for engaging and projecting the tag resting upon the bed plate when the latter is in the retracted position, an operating member, a printing device carried by the operating member and movable therewith into and out of engagement with a projected tag, and lost motion operating connections between the operating member and the bed plate comprising rock arms projecting through the bed plate and connected to the operating member, each rock arm having an extension of less width in the direction of travel than the arm and the bed plate being provided with passages for the rock arms each of a length to receive the wider portion of the arm.

[Claims 6 to 22 not printed in the Gazette.]

1,170,933. LADDER. OLIVER K. PUTNAM, Orange, Cal. Filed Dec. 10, 1914. Serial No. 876,546. (Cl. 228—23.)

1. A device for use in picking fruit from the upper portions of trees having branches which lie close to the ground, and comprising an arm having an inner, ground-engaging end; a ladder pivotally engaged intermediate its ends with the arm intermediate the ends of the arm and overhanging the inner end of the arm, the space between the inner end of the arm and the ladder being unencumbered; and an upwardly prolonged tension connection uniting the outer end of the arm and the ladder.

2. A device for use in picking fruit from the upper portions of trees having branches which lie close to the ground, and comprising an arm having an inner, ground-engaging end; a ladder overhanging the inner end of the arm, the space between the inner end of the arm and the ladder being unencumbered; an upwardly prolonged tension connection uniting the outer end of the arm with the ladder; and an adjustable, step-by-step connection between the intermediate portion of the arm and the intermediate portion of the ladder.



1,170,934. SHUTTLE-BOX. ERNST RIEDEL, Paterson, N. J. Filed Mar. 8, 1915. Serial No. 12,746. (Cl. 139—29.)



1. In combination, with the fixed structure and the movable swell of a shuttle-box and a shuttle in the box having beveled ends, a resilient lever fulcrumed in said structure and having one arm engaged by the swell and the other simultaneously engaged by the bevel of the shuttle adjoining the inner end of the box.

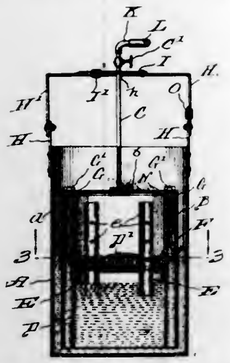
2. In combination, with the fixed structure and the movable swell of a shuttle-box and a shuttle in the box having beveled ends, a resilient lever fulcrumed in said structure and having one arm engaged by the swell and the other simultaneously engaged by the bevel of the shuttle adjoining the inner end of the box, said lever consisting of a wire spring having a coil forming its bearing portion and its ends forming the arms of the lever.

3. In combination, with the fixed structure and the movable swell of a shuttle-box, a resilient lever fulcrumed in said structure and having one arm adapted to be engaged by and including a yoke receiving the swell and the other arm simultaneously engaged by the shuttle on the latter entering the box, said yoke affording limited movement of the lever relatively to the swell.

1,170,935. PORTABLE ACETYLENE-LIGHTING APPARATUS. WILFRED E. ROYCE, Lead, S. D. Filed Apr. 19, 1915. Serial No. 22,492. (Cl. 48—41.)

1. An apparatus of the character described, comprising a receptacle adapted to contain water, a gas bell projecting down into said receptacle, a carbid container carried in the said bell and provided with a diaphragm extending transversely across the same and adapted to support the carbid, tubes projecting downwardly through said diaphragm and extending both above and below same, said tubes having perforations above said diaphragm and closed cylindrical side walls below said diaphragm, a gas pipe leading from the top of the bell, and a burner carried by said gas pipe, substantially as described.

2. An apparatus of the character described, comprising a receptacle adapted to contain water, a gas bell projecting down into said receptacle, a carbid container carried in the said bell and provided with a diaphragm extending transversely across the same and adapted to support the carbid, tubes projecting downwardly through said diaphragm and extending both above and below same, said tubes having perforations above said diaphragm and closed cylindrical side walls below said diaphragm, a gas pipe leading from the top of the bell, and a burner and a reflector carried by said gas pipe, substantially as described.



3. An apparatus of the character described, comprising a receptacle adapted to contain water, a gas bell projecting down into said receptacle, a carbid container carried in the said bell and provided with a diaphragm extending transversely across the same and adapted to support the carbid, tubes projecting downwardly through said diaphragm and extending both above and below same, said tubes having perforations above said diaphragm and closed cylindrical side walls below said diaphragm, a gas pipe leading from the top of the bell, and a burner detachably connected to said gas pipe, substantially as described.

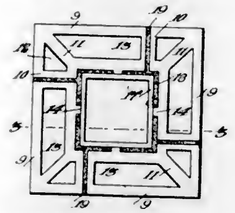
4. An apparatus of the character described, comprising a receptacle adapted to contain water, a gas bell projecting down into said receptacle, a carbid container carried in the said bell and provided with a diaphragm extending transversely across the same and adapted to support the carbid, tubes projecting downwardly through said diaphragm and extending both above and below same, said tubes having perforations above said diaphragm and closed cylindrical side walls below said diaphragm, a gas pipe leading from the top of the bell, and a burner with a reflector carried thereby both detachably connected to said gas pipe, substantially as described.

5. An apparatus of the character described, comprising a receptacle adapted to contain water, a gas bell projecting down into said receptacle, a carbid container carried in the said bell and provided with a diaphragm extending transversely across the same and adapted to support the carbid, tubes projecting downwardly through said diaphragm and extending both above and below same, said tubes having perforations above said diaphragm and closed cylindrical side walls below said diaphragm, a gas pipe leading from the top of the bell, and means for clamping said gas pipe in the desired position for maintaining the apparatus out of operation when desired, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

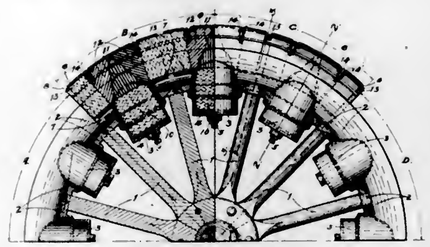
1,170,936. FLUE STRUCTURE. GROVER CLEVELAND ROYSE, Tacoma, Wash. Filed Dec. 22, 1913. Serial No. 808,172. (Cl. 72—94.)

A block comprising a body portion extending longitudinally and an extending portion integral with said longitudinal portion and extending laterally therefrom, said block being further provided with a lug integral with it and extending from it in the same direction as said extending portion, said block being further provided with compartments and with a partition extending obliquely



across said longitudinal portion and located between said compartments.

1,170,937. AUTOMOBILE-WHEEL. EDWARD H. RUNDLE, Longmont, Colo. Filed Sept. 16, 1913. Serial No. 790,004. (Cl. 152—9.)



1. A wheel tire consisting of a series of tubular segments joined into a substantially continuous tire by elastic connecting blocks extending into adjacent open ends of said segments, each of said segments having an opening in its base with an elastic expanding block adapted to rest upon a wheel rim and extend into said tubular segment through said opening, with a non-elastic wedge inside said tubular segment adapted to spread said elastic connecting blocks when pressed by said elastic expanding block, substantially as described.

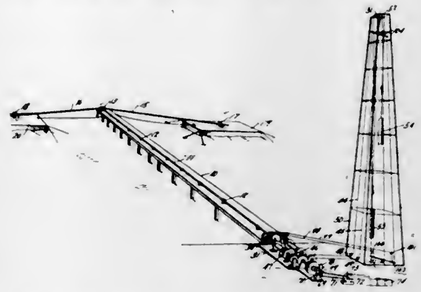
2. In a wheel the combination of a grooved rim, a tire consisting of alternating elastic and non-elastic blocks, said non-elastic blocks being wedge shaped and adapted to wedge between said elastic blocks and spread said elastic blocks when pressed outward from said wheel rim, with elastic blocks between said wedges and said wheel rim, and means to hold said tire in assembled position, substantially as described.

3. The combination in a wheel of a grooved rim having cups extending inward radially between the spokes of the wheel with a tire consisting of a series of T shaped tubular members, said T shaped members having their bases extending into said cups, elastic blocks extending into the bases of said T shaped members and resting on the bottoms of said cups, elastic blocks extending into the ends of said T shaped members and a flexible chain extending around the outer periphery of said tire.

4. In a wheel the combination of a tire consisting of a series of T shaped tubular segments, each of said segments having in its base and extending out therefrom an elastic block adapted to rest upon the rim of the wheel, an expanding wedge member above said block with two compressing wedge members resting against said expanding wedge member inside said tubular segment, elastic blocks resting against the outer ends of said expanding wedge members and extending out of the ends of said tubular T segment and into the adjoining T segments of the tire, with a flexible chain binding said segments together, substantially as described.

5. In a wheel the combination of a grooved rim with cups extending inwardly from said rim between the spokes of the wheel, with a tire consisting of T shaped tubular segments, the base of each segment adapted to extend into a cup in said rim, elastic expanding blocks adapted to fit into said cups and extend outward into the base of said T shaped segments, movable bottoms in said cups adapted to be adjusted by set screws in said cups, expanding wedge members in said T segments resting upon said elastic expanding blocks, compressing wedge members in said T segments at each side of said expanding wedge members, elastic connecting blocks resting against the outer ends of said compressing wedge members and extending out the ends of said T member segments and into the adjoining segments, with a flexible chain binding said segments in the groove of said wheel rim, substantially as described.

1,170,938. TIDE AND WAVE POWER MECHANISM. HENRY SCHASER, Sierra Madre, Cal. Filed June 15, 1914. Serial No. 845,080. (Cl. 253—11.)



1. In a tide and wave motor, the combination with a shaft, float operated means for rotating said shaft in one direction, a power shaft, and means interposed between said shafts, whereby the variable rotation of the first-named shaft will be transmitted into uniform rotation of the last-named shaft, including a plurality of weights, means for elevating said weights independent of each other controlled by the first named shaft, and means, whereby the weights will operate independent of each other on gravitating downward to rotate the last named shaft.

2. In a tide and wave motor, the combination with a shaft, a float means actuated by the rise and fall of the float for rotating the shaft in one direction, a pair of drums, cables wound on said drums, weights supported by said cables, means for rotating the drums alternately from the shaft controlled by the weights to cause one weight to be elevated while the other is descending, a second shaft, and means controlled by the downwardly moving weight for rotating said shaft continuously.

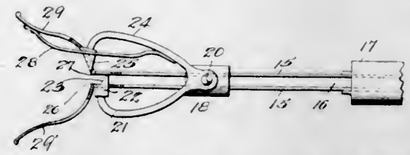
3. In a tide and wave motor, a pair of drums, cables on said drums, weights suspended on said cables, a drive shaft, a float, means for rotating said drive shaft by the float in one direction, means for alternately rotating the drums from said drive shaft to alternately elevate the weights, a power shaft, and means controlled through the drums, whereby the weights moving downward will rotate the power shaft continuously.

4. In a tide and wave motor, a pair of drums, cables on said drums, weights suspended on said cables, a drive shaft, a float, means for rotating said drive shaft by the float in one direction, means for alternately rotating the drums from said drive shaft to alternately elevate the weights, a power shaft, and means controlled through the drums, whereby the weights moving downward will rotate the power shaft continuously, and means for regulating the speed of rotation of the power shaft.

5. In a tide and wave motor, a pair of drums, cables wound on said drums, weights attached to said cables, a power shaft, means whereby the rotation of either of the drums on the unwinding of the cable therefrom will rotate the power shaft continuously in one direction, a second shaft, float means for rotating said shaft in one direction, means for rotating the drums separately from said last-named shaft, and means controlled by the weights for throwing the drums alternately in and out of operative connection with said shaft.

[Claim 6 not printed in the Gazette.]

1,170,939. NAIL HOLDING AND DELIVERING DEVICE. MARTIN L. SNYDER, Torrington, Wyo. Filed June 8, 1915. Serial No. 32,889. (Cl. 1—6.)

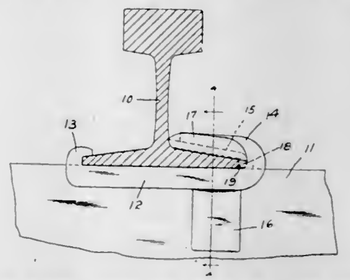


1. The combination with a nail holding and feeding device having a trough and a nozzle on the trough with a cam edge, of a magazine adapted to receive nails from said trough and provided with a spring detent co-acting with the cam edge, and a chute having a spring pressed detent for ejecting a single nail.

2. In a nail holding and feeding device the combination with a slotted magazine tube having a spring detent overhaving its open end and formed with a finger, of an open bottom gravity feeding nozzle having an upper cam edge for co-action with said finger of the detent as described.

3. The combination with two rigidly spaced slotted plates forming a chute and having outspreading end guide wings, of a spring pressed detent pivoted over the top of said plates and having opposed cam heads adapted to move through the slots in the respective plates, one of said heads being a retaining head and the other an ejecting head, whereby one nail at a time may be ejected from the chute.

1,170,940. RAIL-ANCHOR. HIRAM H. SPONENBURG, Gurnee, Ill., assignor to Otto R. Barnett, Chicago, Ill. Filed May 2, 1914. Serial No. 835,900. (Cl. 238—4.)



1. A rail anchor comprising two rail gripping elements, one of which is formed with means for giving the device a fixed position in the road-bed as against the tendency of the rail to creep, and one of which comprises a spring element which bears upon the upper side of the base flange of the rail, and is put under tension by the other element.

2. A rail anchor comprising two rail gripping elements, one of which is formed with means for giving the device a fixed position in the road-bed as against the tendency of the rail to creep, and one of which comprises a spring element which bears upon the upper side of the base flange of the rail and against the upstanding web thereof and is put under tension by the other element.

3. A rail anchor comprising two rail gripping elements, one of which is formed with a tie abutting flange, one of which comprises an element which is wedged between the other element and the upstanding web of the rail.

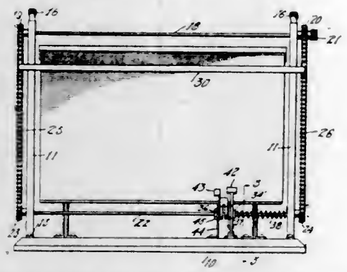
4. A rail anchor comprising two rail gripping elements, one of which is formed with means for giving the device a fixed position in the road-bed as against the tendency

of the rail to creep, one of which comprises a spring member which bears upon the top of the base flange of the rail, and the other a yoke which embraces said spring member and the rail base.

5. A rail anchor comprising two rail gripping elements, one of which is formed with means for giving the device a fixed position in the road-bed as against the tendency of the rail to creep, one of which consists of a yoke which extends around the base of the rail, and the other comprises a spring member which is wedged between said yoke and the upstanding web of the rail.

[Claims 6 to 25 not printed in the Gazette.]

1,170,941. COPY-HOLDER. AARON W. STRAUSE, Berkeley, Cal. Original application filed Feb. 24, 1913, Serial No. 750,180. Divided and this application filed May 2, 1914. Serial No. 835,869. (Cl. 120—34.)

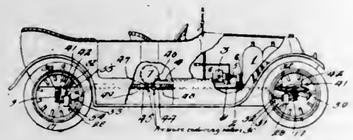


1. A line indicating device, for copyholders, comprising a pair of spaced sprocket chains, a reading bar detachably mounted thereon, means for advancing the sprocket chains in a step by step movement, and means for disengaging the bar from the chains as the bar is moved to its lowermost position.

2. In a line indicating device for copy holders, the combination of a shaft, a pair of sprocket wheels on said shaft, chains on said sprocket wheels having links formed with transverse bars, a reading bar, hooks on the ends of said reading bar engaging the transverse bars on the chain links, means for intermittently rotating the shaft to advance the chains and the bar thereon in step by step fashion, and means for disengaging the bar from the chains as the bar is moved to its lowermost position.

3. A line-indicating device for copy holders comprising, a pair of spaced sprocket chains, a reading bar detachably mounted thereon, means for advancing the sprocket chains in a step-by-step movement, and an arm extending in the path of travel of the bar to engage the bar to automatically disengage it from the chains.

1,170,942. PNEUMATIC-CUSHION SUPPORT FOR AUTOMOBILE-BODIES. JOSEPH M. SULLIVAN, Dallas, Tex. Filed Mar. 4, 1915. Serial No. 12,162. (Cl. 267—51.)

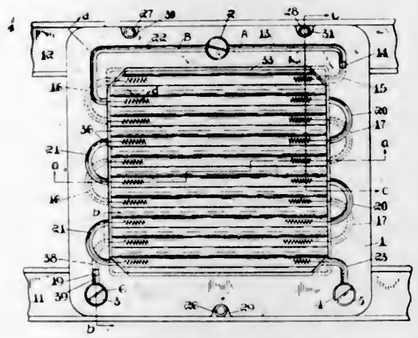


1. In combination with a vehicle body and running gear therefor, a plurality of pneumatic cylinders having universal connections with the running gear, each universal connection between each cylinder and the running gear comprising a pair of bracket plates having upwardly and downwardly extending ears, means for clamping the upwardly extending ears together, a bolt having a cylindrical bearing head midway the ends of said bolt, said bolt beyond one side of the cylindrical head extending through the downwardly extending ears and provided with means to clamp the ears together, a U-shaped plate, the arch of which having an opening to receive the cylindrical head to swivel the U-shaped plate in position, means for holding the U-shaped plate swiveled on the head, said U-shaped plate in turn having pivotal connections to the side of the cylinder, one upon each end of each axle, said cylinders including pistons having their upper portions provided with universal connections to the vehicle body, an air reservoir having connections with the cylinders including reducing valves, and means having connections with and operated by the engine of the vehicle restoring air in the reservoir.

2. In combination with a vehicle body and a running gear therefor, a plurality of pneumatic pressure cylinders having universal connections with the running gear, one universally connected at each end of each axle, said cylinders including pistons operable therein, the upper ends of which have universal connections with the body, and means of connection between the engine of the vehicle and the cylinders for maintaining air pressure therein, each of the universal connections between the cylinders and the axle comprising bracket plates clamped to the axle, a U-shaped plate swivelly connected to the bracket plates and having a pivotal connection to the cylinder.

3. In improvements in a structure as set forth, a vehicle body, a running gear therefor and pneumatic pressure cushioning means to support the body on the running gear, said pneumatic pressure cushioning means including pneumatic pressure cylinders, said cylinders having universal connections with each end of each axle of the running gear, said universal connection comprising a pair of bracket plates having upper and lower ears, means for clamping the upper ears together, a bolt having a cylindrical bearing head midway the ends of said bolt, said bolt beyond one side of the cylindrical head extending through the lower ears and provided with means to clamp the lower ears together, a U-shaped plate, the arch of which having an opening to receive the cylindrical head to swivel the U-shaped plate in position, means for holding the U-shaped plate swiveled on the head, said U-shaped plate in turn having pivotal connections to the side of the cylinder.

1,170,943. ELECTRIC HEATING ELEMENT. HANS OTTO SWOBODA, Edgewood borough, Pa., assignor to The Moffat Stove Company of Weston, Limited, Weston, Ontario, Canada. Filed Aug. 16, 1915. Serial No. 45,776. (Cl. 219—37.)



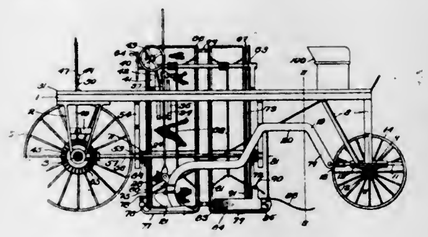
1. An electric heating element comprising an open-center frame of insulating material; a continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections, grooves being formed in one face of said frame to receive the portions of said resistance connecting said sections; and a second continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections alternating with and in the same plane as the sections of the other resistance, grooves being formed in the other face of said frame to receive the connecting portions of said second resistance.

2. An electric heating element comprising an open-center frame of insulating material; a continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections, grooves being formed in one face of said frame to receive the portions of said resistance connecting said sections; a second continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections alternating with and in the same plane as the sections of the other resistance, grooves being formed in the other face of said frame to receive the connecting portions of said second resistance; a plurality of terminals connected to said frame; and leads from the terminals to the resistances, grooves being formed in one face of said frame to receive said leads and holes in the frame through which leads may pass to the resistance having its connecting portions lying in grooves at the other side of the plate.

3. An electric heating element comprising an open-center frame of insulating material; a continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections, grooves being formed in one face of said frame to receive the portions of said resistance connecting said sections; a second continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections alternating with the sections of the other resistance, grooves being formed in the other face of said frame to receive the connecting portions of said second resistance; and a removable deflector of heat insulating material fitted into the open center of the frame beneath the resistance.

4. An electric heating element comprising an open-center frame of insulating material; a continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections, grooves being formed in one face of said frame to receive the portions of said resistance connecting said sections; a second continuous electric resistance strung back and forth across said frame to form a plurality of resistance sections alternating with the sections of the other resistance, grooves being formed in the other face of said frame to receive the connecting portions of said second resistance; a plurality of terminals connected to said frame; and leads from the terminals to the resistances, grooves being formed in one face of said frame to receive said leads and holes in the frame through which leads may pass to the resistance having its connecting portions lying in grooves at the other side of the plate; and a removable deflector of heat insulating material fitted into the open center of the frame beneath the resistance.

1,170,944. BEET-HARVESTER. JOHN H. TIETGE, Kansas City, Mo. Filed June 27, 1914. Serial No. 847,647. (Cl. 55—9.)



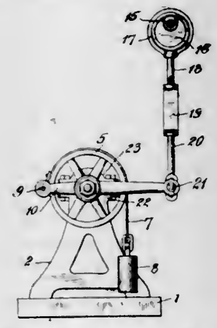
1. A beet harvester comprising a frame, a plow, a lever having notches therein, means on the frame for engagement by the notched lever to support the plow, and means for lifting the plow.

2. A beet harvester comprising a frame, a plow, a lever pivotally mounted on said plow and having a plurality of edge notches, a pin supported by the frame and adapted for engagement by any one of the lever notches, and a windlass for lifting or lowering said plow.

3. A beet harvester comprising a frame, a plow, a lever pivotally mounted on said plow and having a plurality of edge notches, brackets on said frame, a pin extending between said brackets and adapted for engagement by any one of said notches, and a windlass for lifting said plow.

4. A beet harvester comprising a frame, a plow, a lever pivotally mounted on said plow and having a plurality of edge notches, a pin supported on said frame and adapted for taking into any one of said notches to pivotally support the lever, a platform on said frame having a slotted aperture for receiving said lever, a notched quadrant on said platform adjacent said aperture, and an elongated pawl on said lever adapted for projection into said notched quadrant at various points in the pivotal movement of said lever.

1,170,945. POWER-TRANSMITTING DEVICE. FRANCIS D. WEEKS, Salida, Colo., assignor to The Ohio & Colorado Smelting & Refining Co., Denver, Colo., a Corporation of Colorado. Filed Mar. 2, 1911. Serial No. 611,795. (Cl. 74—55.)



1. In a device for the conversion of motion, the combination of a primary driving mechanism rotating continuously and a secondary mechanism movable with intermittent rotary motion, coacting driving and driven friction members interposed between and connected respectively to the said continuously moving primary mechanism and the said intermittently moving secondary mechanism, the connection from the primary driving mechanism to the driving friction member including mechanism for converting the movement of said primary driving mechanism into an oscillation of the driving friction member, weighted means independent of the primary driving mechanism for imparting a limited pressure of engagement to the driving friction member during the advance movement, and mechanism for continuously holding the driven friction member against movement in the reverse direction, substantially as and for the purpose described.

2. In a device for converting continuous rotary motion of a primary driving mechanism into an intermittent rotary movement of a secondary mechanism, co-acting driving and driven friction members interposed between and connected respectively to the said primary and secondary mechanisms, the connection from the primary driving mechanism to the driving friction member including adjustable mechanism for converting the movement of said primary mechanism into an oscillation of variable and predetermined extent of the driving friction member, means independent of the primary driving mechanism for maintaining a substantially constant frictional engagement of the driving friction member on the driven friction member during the advance movement, and mechanism for holding the driven friction member against movement in the reverse direction, substantially as and for the purpose described.

3. In a device for converting continuous rotary motion of a primary driving mechanism into an intermittent movement of a secondary mechanism, a pulley connected to the secondary mechanism, a flexible strap engaging a part only of the circumference of said pulley, means for imparting a limited and constant pull on said strap, connections from the primary driving mechanism to the strap

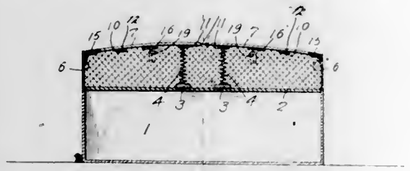
including mechanism for converting the rotary movement of said primary driving mechanism into an oscillation of the strap, and means for holding the pulley against movement by the strap in one direction, substantially as and for the purpose described.

4. In a device for converting continuous rotary motion of a primary driving mechanism into an intermittent rotary movement of a secondary mechanism, a pulley connected to the secondary mechanism, a strap in frictional engagement with said pulley, means for imparting a limited tension to said strap, connections from the primary driving mechanism to the strap including mechanism for converting the rotary movement of said primary driving mechanism into an oscillation of the strap and means for regulating the extent of that oscillation, a second pulley connected to the secondary mechanism, and a stationary strap in frictional engagement with said second pulley, said last named strap having a tensioning device at one end and being fastened at the other end to a fixed support, substantially as and for the purpose described.

5. In a transmitting device of the character described, a rotatable shaft, a pulley on said shaft, a flat flexible strap making a partial turn about said pulley, and a frictional engagement therewith, a weight for imparting a limited tension to said strap and limiting the grip of the strap on the pulley, a rock lever pivoted to said shaft to impart an oscillatory motion to said strap, and a second weighted strap for frictionally preventing movement of the pulley on the return swing of said rock lever, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

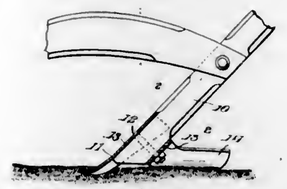
1,170,946. ELECTRIC RAT AND ANIMAL TRAP. OTTO WEISS, Salt Lake City, Utah, assignor of one-half to William Sunday, Salt Lake City, Utah. Filed Apr. 14, 1914. Serial No. 831,874. (Cl. 43—34.)



1. In an electric trap, a casing, a plurality of platforms hinged at one end to said casing, each of said platforms being composed of a series of conducting sections suitably insulated from one another, means for electrically connecting the alternate sections together, spring means for normally holding the platforms in an upper position, the weight of an animal on the platform causing the latter to descend, a primary source of current, a switch operated by the descending movement of either of said platforms for completing the circuit through the primary source of current, a secondary source of current associated with the primary, connections between one terminal of said secondary source of current and certain of said conducting bars, and connections at the opposite end of said secondary source of current with the remaining bars.

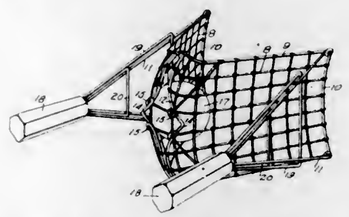
2. In an electric trap, a casing, a plurality of platforms hinged at one end to said casing, each of said platforms being curved toward its outer edges and being composed of a series of conducting sections suitably insulated from one another, means for electrically connecting the alternate sections together, spring means for normally holding the platform in an upper position, the weight of the animal on the platform causing the latter to descend, a primary source of current, a switch operated by the descending movement of either of the said platforms for completing the circuit through the primary source of current, a secondary source of current associated with the primary, connections between one terminal of said secondary source of current at certain of said conducting bars and connections at the opposite end of said secondary source of current with the remaining bars.

1,170,947. COTTON-SWEEP. JACOB CLEMMONS YOUNG, Longview, Tex. Filed Sept. 10, 1914. Serial No. 861,020. (Cl. 97—9.)



A sweep comprising a central forwardly inclined portion having an opening therein for the reception of an attaching device and provided with integral diverging wings of uniform width and length and disposed at an angle of approximately seventy-eight degrees, the upper longitudinal edges of said wings being rounded and the forward faces thereof concave and gradually increasing in depth from the central portion to the outer ends of the wings, the rear faces of the wings at the lower edges thereof being curved downwardly and forwardly and gradually merged into the concave faces of said wings to form cutting edges.

1,170,948. GAME DEVICE. HALVOR ACHERSHAUG, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,037. (Cl. 46—59.)



1. A device as characterized, comprising a plurality of resilient handles, each embodying a plurality of resilient, reinforcing members, said members being spaced from each other; and a flexible structure connecting said handles at the extremities thereof.

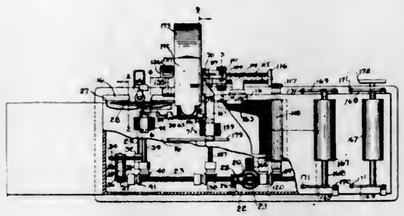
2. A device as characterized, comprising a plurality of resilient handles, each embodying a plurality of resilient, reinforcing members, said members being spaced from each other; a flexible structure connecting said handles at the extremities thereof; and a cradle-like member incorporated in said connecting structure for receiving therefrom a projectile.

3. A device as characterized, comprising a plurality of resilient handles, each embodying a plurality of resilient, reinforcing members, said members being spaced from each other; a flexible structure connecting said handles at the extremities thereof; a cradle-like member incorporated in said connecting structure for receiving therefrom a projectile; a plurality of whip-cords operatively connecting said handles and the outer ends of said cradle; and a plurality of connecting cords operatively connecting said whip-cords and the center of said cradle for imparting to the center of said cradle a full force of the strain on said whip-cords at the moment of delivery of a projectile from said cradle.

4. A device as characterized, comprising a plurality of resilient handles; a skeleton cradle constructed from resilient material and having lateral extensions bowed in the direction of operation of said device; and a plurality of flexible, non-resilient sections operatively connecting said cradle and said handles for catching in flight a projectile and delivering the same to said cradle.

5. A device as characterized, comprising a plurality of resilient handles; a skeleton cradle constructed from resilient material and having lateral extensions bowed in the direction of operation of said device; and a plurality of netting sections operatively connecting each of said handles and one side of said cradle, said netting sections being adapted for catching a projectile in flight, and arranged to deliver the same when caught, to said cradle.

1,170,949. STAMP-APPLYING AND ENVELOP-SEALING MACHINE. FRED R. ALLEN, Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, Boston, Mass., a Corporation of Massachusetts, (organized in 1912.) Filed Mar. 13, 1911. Serial No. 614,096. (Cl. 216—3.)



1. A machine of the character described comprising a table, means for affixing a stamp to an envelop on said table, a stop for determining the position of the envelop during the application of a stamp, a continuous rotatable friction feed member for moving an envelop to position against said stop and then carrying the same onward after the stop has been withdrawn, and means for holding an envelop in contact with said friction feed member.

2. A machine of the character described comprising a table, means for affixing a stamp to an envelop on said table, a stop for determining the position of the envelop during the application of a stamp, a continuous rotatable friction feed member for moving an envelop to position against said stop and then carrying the same onward after the stop has been withdrawn, and a gravity roll for holding an envelop in contact with said friction feed member.

3. A machine of the character described comprising a table, an arm pivotally supported at one end over said table, a moistening member carried by the free end of said arm and adapted to bear upon the envelop, means for feeding the envelops, a lever independent of said arm and provided with a trip arm to be moved by each envelop in its travel, and means operated by said lever for periodically raising said arm.

4. A machine of the character described comprising a table, a set of rolls for feeding an envelop along said table, a gravity moistener underneath which the envelop passes, a set of levers actuated by the passage of the envelop for lifting the moistener from the envelop at a predetermined point, and means for affixing a stamp to said moistened portion.

5. A machine of the character described comprising a table, rolls for feeding an envelop along said table, a pivoted arm having a brush adapted to bear upon an envelop passing beneath it, a set of levers for lifting said brush above the envelop at a predetermined point of the passage of the envelop, and means for affixing a stamp to said moistened portion.

[Claims 6 to 22 not printed in the Gazette.]

1,170,950. FILE OR RASP. JOHN AMBICKY, Perth Amboy, N. J. Filed Sept. 23, 1915. Serial No. 52,252. (Cl. 168—48.)

1. A file or rasp having oppositely curved ends provided with abrading surfaces, and a removable handle adapted to be fitted over the abrading surface of either end.

2. A file or rasp having oppositely curved ends substantially S-shaped in general contour and having abrading surfaces on the opposite convex faces of said ends.

3. A file or rasp having oppositely curved ends substantially S-shaped in general contour and having abrading surfaces on the opposite convex faces of said ends, and a removable handle applied to either curved end over the abrading surface formed thereon.

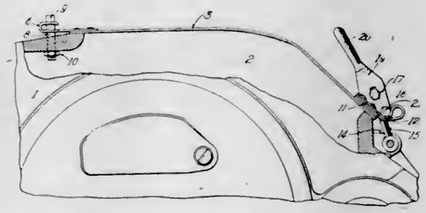


4. A file or rasp having its ends formed smooth on one side and with an abrading surface on the other side, the abrading surfaces being on opposite sides of the file or rasp, and a removable handle applied to either end of the file or rasp over the abrading surface and means for holding the handle in place.

5. A file or rasp having its ends provided with opposite abrading surfaces, a handle applied to either end, and resilient means for securing said handle to said file or rasp.

[Claims 6 to 11 not printed in the Gazette.]

1,170,951. COVER-LOCKING DEVICE. JOHN ANDERSON, Mount Vernon, Me., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Original application filed June 2, 1905, Serial No. 263,493. Divided and this application filed Jan. 18, 1915. Serial No. 2,940. (Cl. 70—82.)



1. The combination with a casing having an opening and a cover therefor, of a resilient extension projecting beyond said cover, and a locking toggle for coöperating with said extension and comprising an operating lever and means associated with said lever intermediate its ends for associating said lever with said casing.

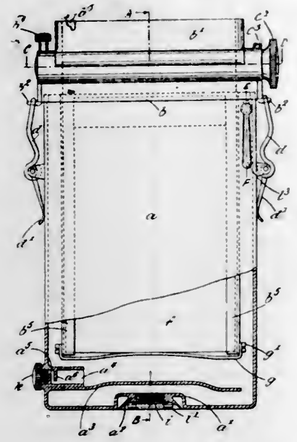
2. The combination with a casing provided with an opening and a removable cover therefor, of a resilient slotted member associated with said cover and having a recess therein, and a locking toggle comprising a bifurcated operating lever having lateral end projections adapted to be seated in said recess, a pin disposed between the arms of said bifurcated lever intermediate their ends and a member connecting said pin with said casing and adapted to be moved into and out of the slot in said resilient member.

3. The combination with a casing and a removable cover therefor, of locking means for fastening said cover to said casing and comprising an operating lever, means associated with said lever intermediate its ends for connecting said lever to said casing, and means associated with and constituting a part of said locking means for introducing an element of resilience therein.

1,170,952. PHOTOGRAPHIC DAYLIGHT DEVELOPING APPARATUS. HAROLD CECIL ANDREWS, London, England. Filed May 19, 1914. Serial No. 839,583. (Cl. 95—90.)

1. In a photographic developing apparatus comprising an approximately rectangular tank for containing the

developing liquid, the combination of a tank intended to be filled with developing liquid, with a removable cap fitting on the open top of the tank with a hermetic joint, the said cap having a funnel fitting the projecting mouth of a dark slide, a transverse shutter, a plate-holding frame dipping into the tank, and a fastener adapted to secure the cap to the tank, when the cap is mounted on the same, substantially as described.



2. In a photographic developing apparatus comprising an approximately rectangular tank for containing the developing liquid, the combination of a tank intended to be filled with developing liquid, with a removable cap fitting on the open top of the tank with a hermetic joint, the said cap having a funnel fitting the projecting mouth of a dark slide, a transverse shutter, a flat plate-holding frame consisting of a pair of longitudinal guide bars and a transverse piece dipping into the tank, and a fastener adapted to secure the cap to the tank, when the cap is mounted on the same, substantially as described.

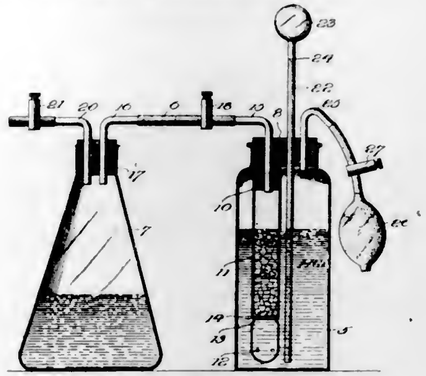
3. In a photographic developing apparatus comprising an approximately rectangular tank for containing the developing liquid, and having at one end an opening controlled by a transverse shutter, a removable cap mounted on the open end of the tank, the said cap having a funnel for introducing the photographic plates, and an open rectangular guide- and supporting frame provided with an elastic supporting bar hinged to the sides of the said frame, substantially as described.

4. In a photographic developing apparatus comprising an approximately rectangular tank for containing the developing liquid and having at one end an opening controlled by a transverse shutter, the developing tank having in its base a fill- and discharge-opening closed by a screw-plug and in the side near the lower end a vent closed by a screw-plug, substantially as described.

1,170,953. HYDROGEN-SULFID GENERATOR. REGINALD M. BANKS, New York, N. Y. Filed Jan. 5, 1915. Serial No. 619. (Cl. 23—10.)

1. In a self-contained automatically operating gas generator, in combination, a generating flash, a stopper therefor, a container tube supported therefrom, a valved outlet from said container tube, a source of gaseous fluid pressure connected with said generator flask, said container tube being open at its lower end whereby the acid may alternately be forced up therein through the lower end by said gaseous fluid pressure in the generator flask and forced downwardly therein by the reactive pressure of the gas generated and contained in said container tube.

2. In a self-contained automatically operating gas generator, in combination, a generating flask, a stopper therefor, a container tube supported therefrom, a valved outlet from container tube, a source of gaseous fluid pressure connected with said generator flask, said container tube being open at its lower end whereby the acid may alternately be forced up therein through the lower end by said gaseous fluid pressure in the generator flask and forced downwardly therein by the reactive pressure of the gas generated and contained in said tube, and a valve between the source of gaseous fluid pressure and generator flask whereby the pressure may be maintained substantially constant in the generator flask and the gases automatically and regularly generated therein.



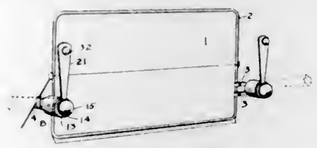
3. In a self-contained gas generator, in combination, a generator flask, a tube open at its lower end within said generator flask adapted to contain gas evolving material and having a valved outlet at its upper end, and means for increasing the pressure in said generator flask.

4. In a self-contained gas generator, in combination, a generator flask, a tube open at its lower end within said generator flask adapted to contain gas evolving material and having a valved outlet at its upper end, and means for supplying a gaseous fluid under pressure to said generator flask to force the acid therein up through the lower end of said tube.

5. In a self-contained gas generator, in combination, a generator flask, a stopper therefor having a body portion and an integral depending lug to which a tube may be attached and having an opening through the stopper body and lug.

[Claims 6 to 10 not printed in the Gazette.]

1,170,954. DIRECTION-INDICATOR FOR VEHICLES. HERMAN H. BROYER, GEORGE CAMBEILH, and JOSEPH PAPALE, San Francisco, Cal. Filed May 13, 1915. Serial No. 27,845. (Cl. 177—330.)



1. In a direction indicating device for vehicles, the combination of an arm pivoted to swing about a horizontal longitudinal axis, a lamp located at the pivotal point of said arm, an electric lamp carried by the end of said arm, means for turning said arm from a vertical to a horizontal position, and means whereby the circuit through the latter lamp is automatically closed when the arm assumes a horizontal position and is automatically opened when it assumes a vertical position.

2. In a direction indicating device for vehicles, the combination of an arm pivoted to swing about a horizontal longitudinal axis, a lamp located at the pivotal point of said arm, an electric lamp carried by the end of said arm, said lamp being unobstructed both at the front and at the rear, means for turning said arm from a vertical to a horizontal position, and means whereby the circuit through the latter lamp is automatically closed when the arm assumes a horizontal position and is automatically opened when it assumes a vertical position.

1,170,955. FOUNTAIN-PEN BLOTTER. KENNETH D. BRYSON, Madison, N. H. Filed Jan. 9, 1915. Serial No. 1,347. (Cl. 120—26.)



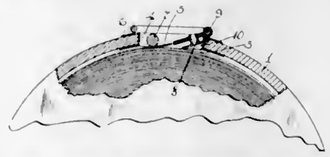
1. The combination with a fountain pen cap of a blotting device comprising a shield slidable within the cap, a cylindrical shell disposed within said shield and covered with absorbent material, and a spring normally forcing said cylindrical shell outwardly through an opening in said shield when said shield is pulled partially out of said cap.

2. The combination with a fountain pen cap of a blotting device comprising a shield slidable longitudinally within the cap and provided in its periphery with an opening, a spring connected with the outer end of said shield and carrying a guide upon its other end, and a cylindrical shell revoluble upon said guide and covered with absorbent material, said spring forcing said shell outwardly through said opening when said shield is pulled out of said cap, said shell being then disposed with its axis at an angle to the axis of said cap.

3. The combination with a fountain pen cap of a blotting device comprising a cylindrical shield slidable longitudinally within said cap and provided in its periphery with an opening, a tine on said shield disposed within a groove on the inner periphery of said cap for preventing excessive longitudinally movement of said shield, a rib formed on the inner periphery of said shield adjacent said opening, a leaf spring connected with the outer end of said shield, a guide carried by said spring, and a cylindrical shell revoluble upon said guide and covered with absorbent material, said spring forcing said shell outwardly through said opening when said shield is pulled partly out of said cap, the edge of said cap preventing longitudinal displacement of said shell when in its outer position, and said rib preventing longitudinal displacement of said shell when in its inner position within said shield.

4. The combination with a fountain pen cap having both ends open, of a blotting device comprising a cylindrical shield slidable longitudinally within said cap, a pin threaded through the outer end of said shield, a spring having one end engaging the inner periphery of said shield adjacent said opening and its other end apertured for engagement with said pin, guide bands formed on said spring, and a cylindrical shell revoluble upon said guide bands and covered with absorbent material, said spring forcing said cylindrical shell outwardly through said opening when said shield is pulled partly out of said cap.

1,170,956. TAPE MEASURE. FRED BUCK, Saginaw, Mich., assignor to The Lufkin Rule Company, Saginaw, Mich., a Corporation of Michigan. Filed Dec. 19, 1914. Serial No. 878,051. (Cl. 33—138.)

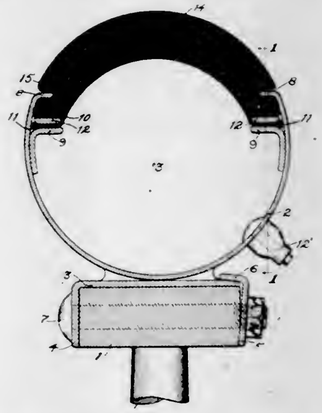


1. In a tape measure, the combination with a casing having a winding element therein and having also a peripheral slot for the passage of the tape, of a resilient tape attached at one end to said winding element and having its other end extending through such slot, a guide normally maintaining said tape against one end of such slot, and means mounted adjacent to such end of such slot and on said tape and adapted to inter-engage when said tape is wound in and to thereby prevent accidental unwinding of the same through such slot.

2. In a tape measure, the combination with a casing having a winding element therein and having also a peripheral slot for the passage of the tape, of a resilient tape attached at one end to said winding element and having its other end extending through such slot, a guide normally maintaining said tape against one end of such slot, and coöperative means mounted on the free end of said tape and on said casing adjacent to such end of such slot, said means being adapted to prevent the free end of said tape from accidental movement through and beyond such slot after said tape has been wound in.

3. In a tape measure, the combination with a casing having a winding element therein and having also a peripheral slot for the passage of the tape, and a tape attached at one end to said winding element and having its other end extending through such slot, of a frame set into said casing about the edges of such slot, and having a recess in one edge adjacent to the path of movement of said tape, and a button mounted upon the under side of the free end of said tape and adapted to be automatically engaged in such recess upon the winding in of said tape and thereby preventing accidental outward movement of said tape through and beyond such slot.

1,170,957. TIRE. ANDREW B. BURT, San Francisco, Cal. Filed Nov. 10, 1914. Serial No. 871,275. (Cl. 152—13.)



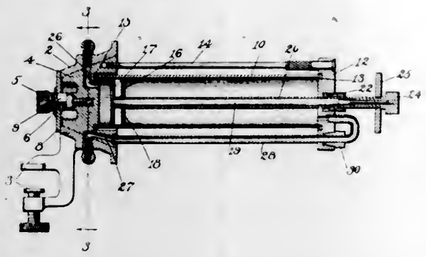
1. The combination of a hollow metallic rim semi-circular in cross section and formed on its peripheral edges with inwardly disposed integral flanges and provided on its inner surface intermediate said peripheral edges with oppositely disposed inturned annular flanges lying in a plane parallel to said first mentioned flanges, an annular strip of flexible material for resting at its opposite side edges on the outer surface of said last mentioned flanges to form with said rim an air chamber, clamping rings for encircling the outer surfaces of the opposite edges of the strip to clamp the same tightly against the outer surface of said last mentioned flanges, and a flexible tread member formed on its outer surface adjacent to its opposite side edges with annular grooves and adapted for receiving said first mentioned flanges when said tread is positioned on said rim.

2. The combination of a hollow rim semi-circular in cross section and formed on its inner surface intermediate of its peripheral edges with oppositely disposed inturned annular flanges and on each peripheral edge with an annular flange, an elastic band adapted to rest at its opposite

side edges on said flanges to form with the rim an air chamber, a ring for encircling each flange to clamp the opposite edges of said band thereto, a flexible annularly grooved protecting surface detachably engaging said peripheral flanges, and a valve controlled connection in said rim for admitting air into said air chamber.

3. The combination with a hollow rim semi-circular in cross section terminating on each peripheral edge in an integral inwardly disposed flange, a strip of flexible material detachably secured to the opposite inner side edges of said rim to form with the rim an air chamber, and a flexible tread member formed with annular grooves for receiving said flanges when said tread is positioned on said rim.

1,170,958. TRANSFUSION APPARATUS. FERGUS A. BUTLER, Danvers, Mass. Filed July 6, 1915. Serial No. 38,196. (Cl. 128—28.)



1. In an apparatus of the character described, the combination with a distributing valve having a plurality of ports, of a double acting syringe connected to said valve, said valve being constructed and arranged to control the communication between said ports and said syringe.

2. In an apparatus of the character described, the combination of a double acting syringe, a valve controlling the flow of liquid to and from said syringe, and a series of tubes leading from said valve, said valve being constructed to place different pairs of said tubes in communication with opposite ends of the syringe to enable the syringe to draw liquid through one tube and simultaneously discharge liquid through another tube.

3. In a transfusion apparatus, the combination of a double acting syringe, a valve controlling the flow of liquid to and from said syringe, and two tubes arranged to lead, respectively, to the recipient and donor from said valve, said valve being constructed to control the communication between said tubes and the syringe.

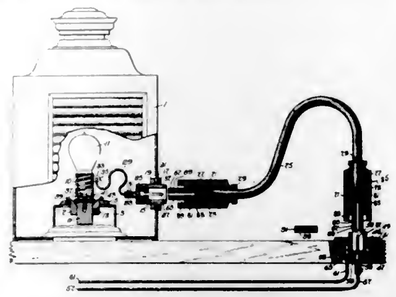
4. In an apparatus of the character described, the combination of a valve casing having a series of ports, a double acting syringe, and a valve plug movable in said casing and in communication with the opposite ends of said syringe, said plug being constructed to control the communication between said syringe and said ports.

5. In an apparatus of the character described, the combination of a stationary valve casing, a rotatable valve plug mounted in said casing, and a double acting syringe mounted on said plug, said casing having a plurality of ports and said plug being constructed to control the communication between said syringe and said ports.

[Claims 6 to 11 not printed in the Gazette.]

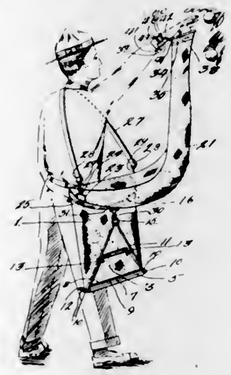
1,170,959. MARINE LAMP AND ELECTRIC CONNECTION. ALPHONSO S. CAMPBELL, Medford, Mass. Filed June 14, 1910. Serial No. 566,754. (Cl. 173—338.)

1. A device of the class described comprising in combination, a socket having an outer surface and an inner contact wall, a contact pin in said socket and spaced from said wall, a plug provided with an annular member having outer and inner contact surfaces for engagement with said inner wall and contact pin respectively, a housing shell for said annular member having a rim portion spaced from said member, and an outer flange on said socket for engagement with the end of said rim portion, said rim portion and member being formed for water tight fit with outer and inner surfaces of said socket.



2. A device of the class described comprising in combination a socket having a flange projecting above the level of a floor or wall and presenting an outer surface and an inner contact wall, a contact pin in said socket spaced from said contact wall, a plug provided with an annular member having outer and inner contact surfaces for engagement with the inner wall and contact pin of said socket, insulation material between the outer and inner contact surfaces of said annular member and a housing shell for said annular member having a rim portion spaced from said annular member and terminating a substantial distance from the end of said member, the end of said rim portion being arranged for engagement with said socket flange and the inner wall of said rim and the outer contact surface of said annular member having provision for water tight engagement respectively with the outer surface and inner contact wall of said socket.

1,170,960. FRUIT-GATHERING SLEEVE AND RECEPTACLE THEREFOR. ELLISON ROBBINS CANTERBURY, Redlands, Cal. Filed July 26, 1915. Serial No. 42,000. (Cl. 56—99.)



A fruit gathering sleeve having a mouth end at its upper portion, means for connecting the mouth end to the wrist of an operator, the lower end of the sleeve terminating in a receptacle with its lower end opened, the opposite sides of the receptacle slightly above the lower open end of the receptacle having stiffening rods, each having eyes at both ends, a rope folded upon itself to form a loop and having its end portions passing through the eyes of one rod and through the eyes of the other rod, and being knotted at the extremities of said ends upon the outer portions of the eyes of one of the rods, to hold the two rods adjacent each other when the lower portion of the receptacle is bolted upon itself adjacent said rods, the loop of the rope having detachable connections with the upper part of the receptacle, to hold the receptacle folded adjacent said rods, the extreme lower edge portion of the receptacle having connections with the opposite side of the rope to hold the receptacle securely folded.

1,170,961. CUE-TIP. BUFORD S. CAPSTICK, Pine Lawn, Mo. Filed Jan. 6, 1915. Serial No. 828. (Cl. 46—9.)



1. In a cue tip, in combination with a cue having a reduced end and further provided with a central recess in the free edge thereof, a ferrule removably associated with the reduced end and having the free edge depressed, tip anchoring means removably associated with the ferrule, said tip anchoring means including a bolt having a head and a nut, a tip associated with the head of the bolt, a washer associated with the shank of the bolt, bearing against the head of the bolt and the depressed edge to consequently provide an air cushion, and the inner end of the bolt being disposed within said recess to facilitate the efficient assembling of the parts, the nut being arranged in abutting relation to the bore in the ferrule and with the edge of the cue.

2. In combination with a billiard cue having a reduced end provided with a central recess on the free edge thereof, of a ferrule having a large central bore to permit of the ferrule engaging the reduced end, the large bore being slightly longer than the reduced end to provide a space therebetween, said ferrule being further provided with a small central bore in communication with the large bore and with a depressed outer end, a tip, a bolt having the head thereof associated with the tip and the shank extending through the small bore and terminating within the recess in the reduced end, a nut engaging the bolt and abutting the inner end of the large bore and the free edge of the cue, and a resilient washer arranged on the shank between the head and the free depressed edge of the ferrule to consequently provide an air cushion.

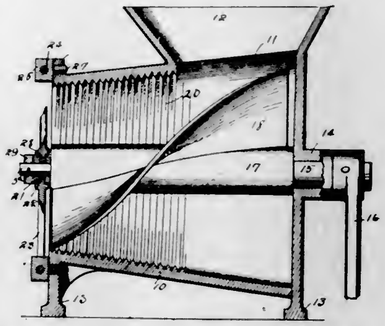
1,170,962. PROCESS FOR THE CONCENTRATION OF WOOL-SCOURING AND LIKE LIQUORS AND THE RECOVERY OF GREASE AND ALKALINE SUBSTANCES THEREFROM. EDGAR VINCENT CHAMBERS, THOMAS CHARLES HAMMOND, and GEOFFREY G. JARMAIN, Huddersfield, England. Filed May 10, 1915. Serial No. 27,077. (Cl. 87—6.)

1. A process for the treatment of foul scouring liquor, which consists in heating the foul liquor so as to liquefy the grease in it, and then subjecting the hot liquor to centrifugal action to separate the grease from the liquor leaving the liquor freed from surplus grease and in suitable condition for reuse as a scouring agent.

2. A process for the treatment of foul scouring liquor, which consists in first permitting the sand and heavy particles to settle by gravity, decanting the liquor and screening it to remove fibers, then heating the foul liquor so as to liquefy the grease in it, and then subjecting the hot liquor to centrifugal action to separate the grease from the liquor leaving the liquor freed from surplus grease and in suitable condition for re-use as a scouring agent.

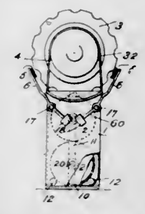
3. A process for the treatment of foul scouring liquor, which consists in heating the foul liquor to liquefy the grease in it, then subjecting the hot liquor to centrifugal action to separate the grease from it without removing the soap and alkali, and finally removing any deleterious excess of alkali from the liquor by subjecting it to the action of a suitable reagent to effect carbonation.

1,170,963. KRAUT-CUTTER. HENRY F. CONLIE, Centralia, Ill. Filed Aug. 3, 1915. Serial No. 43,488. (Cl. 146—11.)



In a device of the class described, a hollow tapered casing open at one end, a hopper above and communicating with the larger end thereof, a shaft extended longitudinally through the casing, a spirally arranged cutting knife on said shaft, a bearing on the end of said shaft at the open end of the casing having sockets, a plurality of curved knives having their outer ends detachably mounted on the open end of the casing and their inner ends mounted in said sockets for supporting said shaft.

1,170,964. AUTOMATIC GREASER FOR LIVE STOCK. RALPH ROBER CROCKER, Lincoln, Nebr. Filed Sept. 13, 1915. Serial No. 50,362. (Cl. 119—157.)



1. In an appliance of the character described, a tank, a plurality of perforated grease drums sustained successively one upon the other, means on the inside of the tank for sustaining the lowermost one of the grease drums above the bottom of the tank, a rubbing roller mounted on the uppermost one of the grease drums, and means for sustaining the said rubbing roller on the said uppermost drum, the said rubbing roller being of greater diameter than the said grease drums and the tank.

2. In an appliance of the character described, a tank, a grease drum rotatably mounted in the tank, a rotating longitudinally corrugated roller mounted over the tank, and in contact with the grease drum and gravity held pivotally mounted yokes on the tank and brushes on the yokes for brushing over the under side of the roller, substantially as shown and described.

3. In an appliance of the character described, a tank, a grease drum rotatable within the tank, a rubbing roller mounted on the tank and comprising a body portion in contact with the grease drum and conical ends that ex-

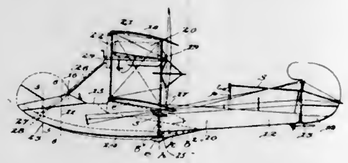
tend beyond the ends of the tank, the said tank having trough like portions that extend under the conical ends of the rubbing roller, and means engaging the said trough like portions and the conical ends of the roller for holding the roller in frictional engagement with the grease drum, substantially as described.

4. In an appliance of the character described, a tank, a grease drum rotatable within the tank, a rubbing roller mounted on the tank, and comprising a body portion in contact with the grease drum, and conical ends that extend beyond the ends of the tank, the said tank having trough like portions that extend under the conical ends of the rubbing roller, and means engaging the said trough like portions and the conical ends of the roller for holding the roller in frictional engagement with the grease drum, the said means comprising endless bands and seats on the conical ends of the roller and the trough like portions for receiving the said bands, substantially as described.

5. An appliance of the character described comprising the following elements in combination: a tank having a trough-like extension at each of the upper ends, internal bearing lugs and an internal centrally disposed vertical guide groove in each end, at least one perforated grease drum having smooth end bearings for engaging the aforesaid bearing lugs, and end journals slidable in the vertical guide grooves, a rubbing roller having conical ends, said roller being mounted on the top grease drum, said roller having conical ends that extend over the trough-like extensions of the tank, and means for holding the roller in frictional contact with the said top grease drum.

[Claims 6 and 7 not printed in the Gazette.]

1,170,965. HYDROAEROPLANE. GLENN H. CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed Sept. 16, 1913. Serial No. 790,050. (Cl. 244—2.)



1. A hydroaeroplane comprising a boat structure having a horizontally disposed, broad, upwardly inclined landing prow, an aerial supporting surface arranged transversely of said boat structure near the prow thereof, a base adapted to support a body of relatively large mass in elevated position above the body of said boat structure and in the rear of the prow thereof, a brace interconnecting directly the front end of said base and the said prow of the boat structure, and a cockpit provided with a seat for an operator located in said boat structure below said brace.

2. A hydroaeroplane comprising a boat structure having a broad, laterally extended, upwardly inclined landing prow including transversely extending bottom beams, an aerial supporting surface arranged transversely of said boat structure near the prow thereof, a base adapted to support a body of relatively large mass in elevated position above the body of said boat structure, and in the rear of the prow thereof, and a post brace extending directly between said elevated base and the transverse beams of said upwardly inclined prow at a point aft of the frontal portion thereof.

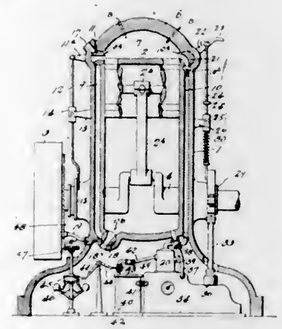
3. A hydroaeroplane comprising an aerial supporting surface, a boat structure arranged longitudinally beneath said surface and provided with a prow inclined sharply upwardly, a cockpit in said boat structure provided with seats for two passengers arranged side by side one on each side of the longitudinal vertical plane of the craft, a motor of relatively heavy mass mounted in an elevated position above the body of the boat but in the said plane, and a post brace also lying in said plane and extending directly between said elevated motor and the said inclined prow, whereby the vision ahead of neither passenger is obstructed.

4. A hydroaeroplane comprising a boat structure, aerial supporting surfaces arranged transversely of said boat structure, and astern of the prow thereof, a cockpit in the bow of said boat having a seat for the operator therein, a water deflecting dash covering the forward portion of said cockpit and hinged at its forward end to be folded back over the prow of the boat, whereby the operator may enter and leave the boat over the prow.

5. A hydroaeroplane comprising a boat structure, aerial supporting surfaces arranged transversely of said boat structure, and astern of the prow thereof, a cockpit on the bow of said boat having a seat for an operator therein, a water deflecting dash covering the forward portion of said cockpit and hinged at its forward end to be folded back over the prow of the boat, whereby the operator may enter and leave the boat over the prow, together with reinforcing means on the under side of said folding dash, whereby the same may be stepped upon without damage.

[Claims 6 to 22 not printed in the Gazette.]

1,170,966. ENGINE. GEORGE W. DONNING, Stamford, Conn. Filed June 18, 1909. Serial No. 502,860. (Cl. 123—36.)



1. In an engine, a cylinder and a single piston working therein, a power-producing chamber within the cylinder and arranged at one side of the piston, a secondary chamber within the cylinder and arranged at the opposite side of the piston, a channel for directing a motive fluid directly from one chamber to the other whereby said fluid operates upon and actuates said piston at every cycle thereof, said channel extending directly between said chambers and substantially parallel with the cylinder and piston, valve mechanism timed to operate during the return-stroke of the piston to normal position to release unused gases from the power-producing chamber and, thus, reduce pressure thereof on the piston, and means for operating said valve-mechanism in relation to the position of the piston.

2. In an engine, a cylinder, a single piston working therein, firing and piston-returning chambers within the cylinder and located at oposite sides of the piston, a connection between said chambers formed within the engine-frame and housed thereby and extending throughout its length longitudinally of the cylinder and substantially parallel with the direction of movement of the piston, valve-mechanism timed to operate during the return stroke of the piston to normal position to exhaust the unused gases from the firing-chamber, means for actuating said valve-mechanism, and means for supplying a firing-mixture to the firing-chamber.

3. In an engine, a cylinder, a piston working therein, a firing-chamber within the cylinder and disposed at one side of said piston, a piston-retaurning chamber within the cylinder and at the opposite side of said piston, a stationary abutment-surface located in said piston returning chamber, a connection formed within and housed by the engine-frame and extending directly between said chambers and longitudinally of the cylinder and substantially parallel with the direction of movement of the piston whereby, when the piston moves away from the firing-chamber, the motive fluid generated therein is switched directly to the piston-returning chamber and between the lower face of the piston and said abutment-surface for effecting the return of the piston to normal position, mean for supplying a firing-mixture to said firing-chamber, and means for controlling the passage of the mixture into said piston-returning chamber before said piston completes a return-stroke in its cycle of movement, and means for exhausting the unused gas from the firing-chamber during said return-stroke of the piston to eliminate pressure thereof on the piston.

4. In an engine, a cylinder, a single piston working therein, a firing-chamber within the cylinder and disposed at one side of said piston, a piston-returning chamber within the cylinder and at the opposite side of said piston, a connection formed within and housed by the engine frame and extending directly between said chambers and longitudinally of the cylinder and substantially parallel with the direction of movement of the piston whereby, when the piston moves away from the firing-chamber, the motive fluid generated therein is switched directly to the piston-returning chamber for effecting the return of the piston to normal position, means for supplying a firing-mixture to said firing-chamber, means for controlling the passage of the mixture into said piston-returning chamber before said piston completes a return-stroke in its cycle of movement, and means for exhausting the unused gas from the firing-chamber during said return-stroke of the piston to eliminate pressure thereof on the piston, a balance-wheel adapted to cause momentum by the operation of the engine, and means for relieving head-pressure in the firing-chamber.

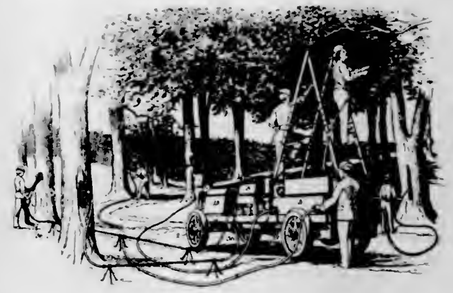
5. In an engine, a cylinder, a single piston working therein, a firing-chamber within the cylinder and disposed at one side of said piston, a piston-returning chamber within the cylinder and at the opposite side of said piston, a connection formed within and housed by the engine-frame and extending directly between said chambers and longitudinally of the cylinder and substantially parallel with the direction of movement of the piston whereby, when the piston moves away from the firing chamber, the motive fluid generated therein is switched directly to the piston-returning chamber for effecting the return of the piston to normal position, means for supplying a firing-mixture to said firing-chamber, means for controlling the passage of the mixture into said piston-returning chamber before said piston completes a return-stroke in its cycle of movement, and means for exhausting the unused gas from the firing-chamber during said return-stroke of the piston to eliminate pressure thereof on the piston, a balance-wheel adapted to cause momentum by the operation of the engine, and a crank-shaft upon which said balance-wheel is mounted and which is connected to the piston.

[Claims 6 to 34 not printed in the Gazette.]

1,170,967. MACHINE FOR TREATING TREES. GEORGE W. DONNING, Stamford, Conn. Filed Apr. 13, 1910. Serial No. 555,193. (Cl. 21—90.)

1. The combination, in tool-operating apparatus for treating trees, of tool-driving mechanism including a motor, a main drive-shaft connected therewith, vehicle-wheels operatively connected with said shaft, a counter-shaft arranged in juxtaposition to and in a relatively different horizontal plane from the drive-shaft and deriving motion therefrom, means for connecting the vehicle-wheels to the drive-shaft and disconnecting the same therefrom and for connecting and disconnecting the counter-shaft therewith and therefrom, respectively, tool-driving shafting driven by gsaid counter-shaft and normally disconnected therefrom when the vehicle-wheels are connected with the shaft, and means for operatively connecting said shafting and said counter-shaft.

2. The combination, in tool-operating apparatus for treating trees, of tool-driving mechanism including a motor, a main drive-shaft connected therewith, vehicle-wheels operatively connected with said shaft, a counter-shaft arranged in juxtaposition to the drive-shaft and deriving motion therefrom, means for connecting the vehicle-wheels to the drive-shaft and disconnecting the same therefrom and for connecting and disconnecting the counter-shaft therewith and therefrom, respectively, tool-driving shafting driven by said counter-shaft, means for bodily swinging said shafting operatively to connect said shafting and said counter-shaft, and means for actuating said shafting axially in relation to the counter-shaft to vary the speed of said shafting.



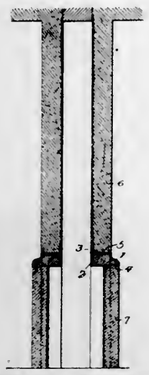
3. The combination in tool-operating apparatus for treating trees, of tool-driving mechanism including a motor, a main drive-shaft connected therewith, vehicle-wheels operatively connected with said shaft, a counter-shaft arranged in juxtaposition to the drive-shaft and deriving motion therefrom, means for connecting the vehicle-wheels to the drive-shaft and disconnecting the same therefrom and for connecting and disconnecting the counter-shaft therewith and therefrom, respectively, tool-driving shafting driven by said counter-shaft, means for operatively connecting said shafting and said counter-shaft, speed-change mechanism connecting with said drive-shaft, and means independent of said speed-change mechanism for shifting said shafting axially in relation to said counter-shaft progressively to vary the speed of said shafting.

4. The combination, in tool-operating apparatus for treating trees, of tool-driving mechanism including a motor, a main drive-shaft connected therewith, vehicle-wheels operatively connected with said shaft, a counter-shaft arranged in juxtaposition to the drive-shaft and deriving motion therefrom, means for connecting the vehicle-wheels to the drive-shaft and disconnecting the same therefrom and for connecting and disconnecting the counter-shaft therewith and therefrom, respectively, tool-driving shafting driven by said counter-shaft, means for operatively connecting said shafting and said counter-shaft, speed-change mechanism connecting with said drive-shaft, means independent of said speed-change mechanism for shifting said shafting axially in relation to said counter-shaft progressively to vary the speed of said shafting, and means for locking in any of a plurality of operating positions the means for varying the speed of said shafting.

5. The combination, in tool-operating apparatus for treating trees, of tool-driving mechanism including a motor, a main drive-shaft connected therewith, vehicle-wheels operatively connected with said shaft, a counter-shaft arranged in juxtaposition to the drive-shaft and deriving motion therefrom, means for connecting the vehicle-wheels to the drive-shaft and disconnecting the same therefrom and for connecting and disconnecting the counter-shaft therewith and therefrom, respectively, tool-driving shafting driven by said counter-shaft, means for operatively connecting said shafting and said counter-shaft, and a swinging support at all times under the control of the operator for swingingly sustaining said tool-driving shafting.

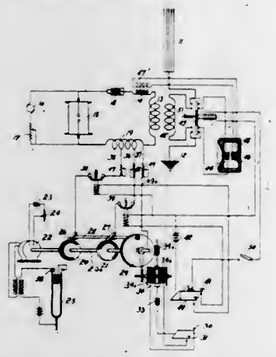
[Claims 6 to 15 not printed in the Gazette.]

1,170,968. METAL DOOR AND WINDOW CASING AND BASE-CAP. WILLIAM H. ELGIN, Excelsior Springs, Mo. Filed May 11, 1915. Serial No. 27,388. (Cl. 189—46.)



A molding for the finishing of buildings, the same comprising a skelp or strip of material formed between its longitudinal edges to provide a base of single thickness and a marginal portion of double thickness, both being in the same plane and having one of its edge portions bent outward from the plane of the base to provide an ornamental hollow body and having the free edge of the hollow body bent inwardly to form a return lip.

1,170,969. MEANS OF TRANSMITTING INTELLIGENCE. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Dec. 23, 1907. Serial No. 407,750. (Cl. 250—8.)



1. In electric signaling apparatus, the combination of a current controlling device in uniform motion at the sending station and a current controlling device in uniform motion at the receiving station, means to adjust the motion of the latter device independently of the former, but synchronously therewith, and means to cause impulses emitted from the sending station by means of the said controlling device to produce different effects at he receiving station according to the relative positions of the said two synchronous current controlling devices at the time of sending.

2. Electric signaling apparatus comprising a generator and a receiver, two synchronous frequency controlling devices respectively at the sending and receiving stations, means causing impulses due to said frequency controlling devices to normally annul each other's effects, and means to produce an indication by altering the relative phases of the synchronous devices, the indication depending upon the relation of phases, substantially as described.

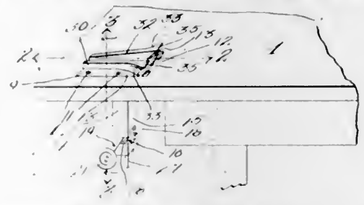
3. Electric signaling apparatus comprising means for continuously sending a series of cycles of impulses, means to maintain independently at other stations a series of similar cycles, and means to produce a signal by altering the character of the individual impulses in the transmitted cycle.

4. Electrical signaling apparatus comprising means to locally maintain a stream of cycles of impulses, means to annul their effects by independent but synchronous cycles of impulses sent from another station, and means to sensibly indicate changes in the character of the individual impulses in the cycles sent.

5. Electrical signaling apparatus comprising sending and receiving circuits having independent means to maintain synchronous streams of orderly cycles of impulses in each circuit, means to normally annul their effects on each other, means to variously alter the character of the impulses in a cycle in one circuit, and means in the other by which said alterations produce sounds of predetermined character, for signaling.

[Claims 6 to 18 not printed in the Gazette.]

1,170,970. WORK ABUTMENT OR STOP FOR WORK-BENCHES. OSWALD S. GOOCH, Cedarville, Cal. Filed Apr. 8, 1915. Serial No. 19,963. (Cl. 144—306.)

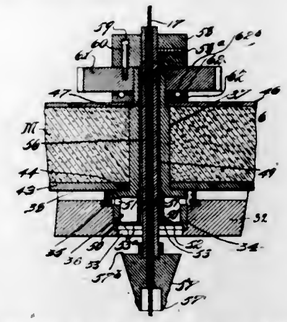


In combination with a work bench having an opening, a casing trough-shaped in cross section secured in said opening and provided with a downwardly protruding extension casing, a trough-shaped stop or abutment mounted in said first casing and having one side disposed at an angle to the opposite side, said second trough-shaped casing having a rack bar extending through the extension casing, the lower portion of the extension casing having recesses in its opposite side forming bearings, the rear wall of the extension casing having an opening adjoining said recesses, a shaft pin mounted in said bearings and provided with a pinion meshing with the rack bar to impart a vertical movement thereto when the shaft pin is rotated, the opening in the extension casing constituting means through which the pinion may be passed so that the shaft may be inserted through the pinion, a lug on the inner face of one of the sides of the extension casing to be engaged by the pinion to prevent its rotation, and a spring on the shaft pin and against the action of which the shaft pin may be shifted to disengage the pinion from the lug, whereby the rack and its second trough-shaped casing may be adjusted vertically.

1,170,971. CAP-SOLDERING MACHINE. BERNARD HAUSHEER, Norwich, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed June 7, 1912. Serial No. 702,154. (Cl. 113—87.)

1. In a machine of the class described, a vertically movable thimble containing a vertically extending bore; a soldering tool having an annular operative edge and comprising a shank upwardly extending therefrom through, and normally without contacting, said bore; means to prevent said thimble from moving horizontally relatively to said shank; a gear concentric with, and horizontally rotatable independently of, said thimble; an upwardly-projecting pin carried by said gear; and, carried by said shank, a part projecting radially beyond said bore and comprising a socket containing said pin and so dimensioned as to enable said part, shank, and tool, to move

universally-horizontally an equal distance relatively to said pin, gear, and thimble.



2. In a machine of the class described, having a pathway for a can, a rotatable, vertically, and universally-horizontally, movable soldering-tool comprising a therefrom upwardly extending shank carrying a part containing a downwardly presented socket; movable vertically relatively to said tool a member carrying a thimble disposed around said spaced-apart from said shank sufficiently to permit horizontal movements of the shank relatively thereto; means to prevent said member and thereby carried thimble from moving horizontally; vertically-movably supported intermediate said thimble-carrying member and said part of said shank a horizontally rotatable gear concentric with said thimble and carrying an upwardly projecting pin of smaller dimensions than, and extending within, said socket; means to lower said tool and thimble-carrying member until further descent of the tool is resisted by a can in said pathway, and to further lower said member relatively to said tool; and means to rotate said gear.

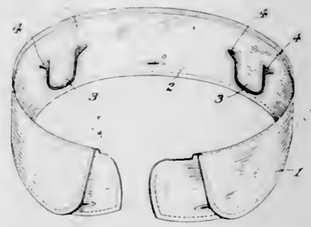
3. In a cap-soldering machine, an uprightly disposed, vertically, horizontally and rotatively movable soldering tool having a therethrough-extending, therewith-concentric, vertical bore and comprising a downwardly-presented operative edge and an upwardly extending shank; extending through said bore a thereto relatively vertically movable cap-holding rod dimensioned to admit horizontal movements of said tool relatively thereto; encircling said shank a thimble vertically movable relatively to said tool and rod and interiorly dimensioned to admit horizontal movements of said shank therein; means to vertically-movably suspend said thimble; means to, by aid of said thimble, vertically-movably suspend said tool; means to vertically-movably suspend said rod; means to, by aid of gravity, lower in unison said thimble, tool and rod until further descent of the rod is resisted by a can, to further lower in unison said thimble and tool until further descent of the tool is resisted by said can, and to thereafter further lower said thimble; and means to rotate said tool.

4. In a cap-soldering machine, a plurality of uprightly disposed, vertically, horizontally and rotatively movable soldering tools each having a therethrough-extending therewith-concentric, vertical bore and comprising a downwardly-presented operative edge and an upwardly extending shank; extending through each said bore a thereto relatively vertically movable cap-holding rod dimensioned to admit horizontal movements of the tool relatively thereto; encircling each said shank a thimble vertically movable relatively to the tool and rod and interiorly dimensioned to admit horizontal movements of the shank therein; means to vertically-movably suspend in unison said thimbles; means to, by aid of said last mentioned means, vertically-movably suspend in unoson said tools, means to vertically-movably suspend in unison said rods; means to, by aid of gravity, lower in unison said thimbles, tools and rods until further descent of each rod is resisted by a can, to further lower in unison said thimbles and tools until further descent of each tool is resisted by a can, and to thereafter further lower in unison said thimbles; and means to rotate said tools.

5. In a cap-soldering machine, a vertically, horizontally, and rotatively movable, suspended soldering tool having an annular operative edge and comprising a vertically extended shank carrying a radial projection containing a downwardly-opening socket; encircling said shank a thereto relatively vertically movable thimble interiorly dimensioned to admit universal horizontal movements of said shank therein; means to prevent said thimble from moving horizontally; horizontally rotatable, independently of said thimble, a gear; carried by said gear an upwardly presented projection dimensioned to engage so loosely within said socket as to permit universal horizontal movements of said radial projection and said gear relatively to each other; means to rotate said gear; means to, by aid of gravity, lower in unison said tool and gear until further descent of the tool is resisted by a can and thereafter to further lower and to raise said gear independently of said tool.

[Claims 6 to 16 not printed in the Gazette.]

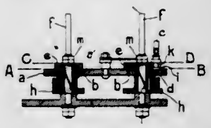
1,170,972. COLLAR. OSCAR KAFKA, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,897. (Cl. 2—71.)



1. A turn down collar provided with an inner and outer fold having center and end button-holes in the inner fold, in combination with downwardly projecting tongues formed in the inner band adjacent the center button-hole at the back of the collar adapted to be normally positioned between the cravat and the outer fold, the edges of said tongues and the edges of the inner band adjacent thereto defining openings through which a portion of the cravat is adapted to pass, whereby free and easy slip of said cravat between said folds is effected.

2. A turn down collar provided with an inner and outer fold having center and end button-holes in the inner fold, in combination with downwardly projecting tongues formed in the inner band adjacent the center button hole at the back of the collar adapted to be normally positioned between the cravat and the outer fold, the said inner band having openings therein at the upper ends of the tongues to receive the edge of the cravat as it is drawn through the collar.

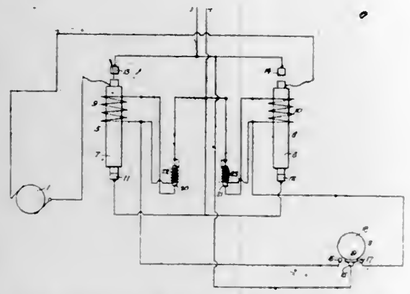
1,170,973. BRAIDING-MACHINE. JEAN KAPPELER, Mellingen, Switzerland. Filed Oct. 21, 1913. Serial No. 796,471. (Cl. 28—4.)



A braiding machine, having a guide plate, movable bobbins guided by the guide plate, lower guide shoes and guide collars on the bobbins, a toothed gearing arranged below the guide plate, driving disks for the bobbins connected with said gearing and arranged above the guide plate to engage over said guide collars and to hold them down, a groove in the guide plate for receiving the guide shoes of the bobbins, said groove being slightly narrowed downward to insure a good fitting of the guide shoes therein, and a recess in the upper face of the guide plate

to serve as guide-way for the guide collars of the bobbins and as oil receptacle, substantially as hereinbefore described.

1,170,974. SYSTEM OF MOTOR CONTROL. SAMUEL H. KEEFER, Plainfield, N. J., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 29, 1911. Serial No. 630,031. (Cl. 172—288.)



1. In an electrical system, in combination, a motor, reversing means therefor comprising a winding and a pilot-switch, and means comprising a substance the electrical resistance of which is influenced by temperature connected to prevent the passage of an operative current through said winding during an interval of time after the actuation of said pilot-switch.

2. In an electrical system, in combination, a motor, reversing means therefor comprising an electro-magnetic device and a pilot- switch, means comprising a substance the electrical conductivity of which is influenced by temperature for retarding the operation of said reversing means, and an electrical circuit under control of said pilot-switch for causing temperature changes in said substance.

3. In an electrical system, in combination, a motor, reversing means therefor, and electrical means independent of the motor adapted to retard the operation of said first means.

4. In an electrical system, in combination, a motor, reversing switches therefor, solenoids adapted to actuate said switches, a pilot switch, and electrical means independent of the motor adapted to prevent the passage of an operative current through either of said solenoids during an interval of time after the operation of the pilot switch.

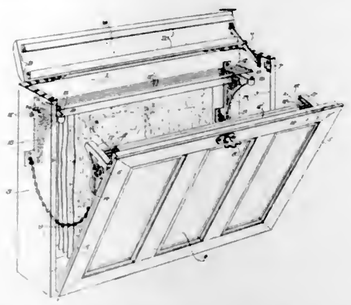
5. In an electrical system, in combination, a motor, reversing means therefor comprising two windings, a pilot switch adapted to close a circuit including one or the other of said windings at will, each of said windings having in circuit with it a body of material substantially an insulator at normal temperatures and a conductor at elevated temperatures, and a heating coil for each of said bodies of material connected in shunt to the same.

[Claim 6 not printed in the Gazette.]

1,170,975. VERTICAL-FILING CABINET. AMANDUS KLITSCHE, Chicago, Ill., assignor to Frederick Post Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1912. Serial No. 729,354. (Cl. 45—2.)

1. A vertical filing cabinet provided with a swinging front, said cabinet and said front having coöperating ledges in horizontal alinement for supporting filing rods, and said swinging front having a flange arranged to extend over the filing rods to maintain said rods in horizontal alinement.

2. The combination with a filing cabinet, of a swinging front hinged thereto at its lower edge, said cabinet and said front being provided at their upper end portions with pairs of coöperating curved ledges for supporting filing rods, said ledges being arranged side by side in horizontal alinement when said front is closed and said front having flanges arranged to extend over the ends of the filing rods to maintain said rods in horizontal alinement.



3. The combination with a filing cabinet, of a swinging front hinged thereto at its lower edge, said cabinet and said front being provided at their upper end portions with pairs of coöperating curved ledges for supporting filing rods, said ledges being arranged side by side in horizontal alinement when said front is closed and said front having flanges arranged to extend over the ends of the filing rods to maintain said rods in horizontal alinement, and depressible spring held stop pins at the forward ends of the ledges of said cabinet.

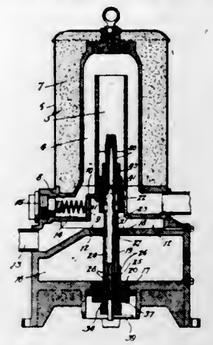
4. A vertical filing cabinet provided with a front hinged thereto at its lower edge, forwardly projecting supporting brackets fixed to the upper portion of the rear wall of said cabinet adjacent the ends thereof and coöperating rearwardly projecting brackets secured to said front and arranged to pass between said rear brackets and the end walls of said cabinet, said brackets having similarly curved supporting ledges for filing rods arranged in horizontal alinement when said front is closed, said front brackets having flanges above the supporting ledges thereof and arranged to extend over the ends of the filing rods, and depressible spring held stop pins at the forward ends of the supporting ledges of said rear brackets.

5. A vertical filing cabinet provided with a swinging front, forwardly projecting curved supports for filing rods fixed to the upper portion of the rear wall of the cabinet adjacent its ends, and similarly curved rearwardly projecting supports for the filing rods fixed to said front and arranged to pass between said rear supports and the end walls of said cabinet, said latter supports having slots in their sides for engaging the ends of the filing rods.

1,170,976. HEATER FOR MOTOR FLUIDS. OTTO A. KREUTZBERG, Lake Bluff, Ill., assignor to Kreutzberg Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 7, 1914., Serial No. 823,102. Renewed June 23, 1915. Serial No. 35,939. (Cl. 60—36.)

1. In a heater for the purpose set forth, the combination of a source of compressed air, a conduit for conveying the compressed air to the point of use, a burner exposed to the air in said conduit and formed of a gasifying head, a supply of fuel-oil, and means for supplying a mixture of air under a pressure exceeding that of the air in said conduit when air is flowing therefrom to the point of use, and oil from said oil supply, into said burner-head.

2. In a heater for the purpose set forth, the combination of a source of compressed air, a conduit for conveying the compressed air to the point of use, a burner exposed to the air in said conduit and formed of a burner head provided with a main passage and branch passages opening into said main passage, and means for supplying a mixture of air under a pressure exceeding that of the air in said conduit when air is flowing therefrom to the point of use, and oil, to said main passage, the length of said branch passages relative to their diameters being such as to cause the jets of flame issuing therefrom to be smothered therein when the velocity of the gas through said burner passages is less than the velocity of combustion against the flow of gas through said branch passages.



3. In a heater for the purpose set forth, the combination of a source of compressed air, a conduit for conveying the compressed air to the point of use, a burner exposed to the air in said conduit and formed of a burner-head provided with a main feed-passage and branch passages opening into said main passage, and means for supplying a mixture of air under a pressure exceeding that of the air in said conduit when air is flowing therefrom to the point of use, and oil, to said main passage, said main and branch passages being so proportioned that the combined cross-sectional areas of the streams of fuel passing through said branch passages, at their smallest cross-sections, shall not be greater than the cross-sectional area of the stream of fuel in said main passage adjacent to the lowermost branch passages.

4. In a heater for the purpose set forth, the combination of a source of compressed air, a conduit for conveying the compressed air to the point of use, a burner exposed to the air in said conduit and formed of a burner-head provided with a main passage and branch passages opening into said main passage, and means for supplying a mixture of air under a pressure exceeding that of the air in said conduit when air is flowing therefrom to the point of use, and oil, to said main passage, said main and branch passages being so proportioned that the combined cross-sectional areas of the streams of fuel, passing through said branch passages, at their smallest cross-sections, shall not be greater than the cross-sectional area of the stream of fuel in said main passage adjacent to the lowermost branch passages, the length of said branch passages relative to their diameters being such as to cause the jets of flame issuing therefrom to be smothered therein when the velocity of the gas through said branch passages is less than the velocity of combustion against the flow of gas through said branch passages.

5. In a heater for the purpose set forth, the combination of a source of compressed air, a conduit for conveying the compressed air to the point of use, a burner exposed to the air in said conduit and formed of a burner-head provided with a main passage and branch passages opening into said main passage, and upwardly-inclined branch passages opening into said main passage, and means for supplying a mixture of air under a pressure exceeding that of the air in said conduit when air is flowing therefrom to the point of use, and oil, to said main passage, said main and branch passages being so proportioned that the combined cross-sectional areas of the streams of fuel, passing through said branch-passages, at their smallest cross-sections, shall not be greater than the cross-sectional area of the lowermost branch passages.

[Claims 6 to 11 not printed in the Gazette.]

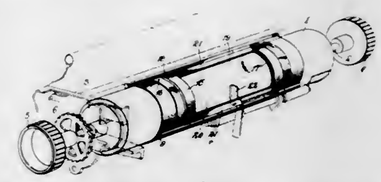
1,170,977. COLLAPSIBLE TABLE. JOHN KÖNIG, Cleveland, Ohio. Filed Dec. 3, 1913. Serial No. 804,489. (Cl. 45—116.)

1. In a collapsible table, the combination of a top: a truss comprising tension and compression members and having the outer ends of its tension members and the upper ends of its compression members hinged to the under side of said top, the axes of oscillation of all of said members lying in the same straight line parallel with said top; and an oscillatory member carried by one of said compression members adapted to be swung into position at right angles with said truss and to engage the under surface of the top, whereby said truss may be held in its supporting position.



2. In a collapsible table, the combination of a two-part hinged top; a truss comprising two tension and two compression members; one tension and one compression member being hinged to the under side of each part of said top, the axes of oscillation of all of said members lying in the same straight line parallel with said top when in its extended position; and a member having an axis of oscillation perpendicular to the plane of the top of the table when extended, said member being mounted upon one of said compression members and including an arm adapted to engage the under surface of the adjacent top member, whereby said truss may be held in its supporting position.

1,170,978. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 5, 1913. Serial No. 765,719. (Cl. 197—136.)



1. An attachment for the platen of a typewriting machine comprising a pair of hinged members adapted to surround the platen, means to secure said members on the platen, and guides to receive and hold a card or work-sheet.

2. A card holder forming an attachment for the platen of a typewriting machine and comprising hinged members adapted to surround the platen, and means for clamping the holder to the platen.

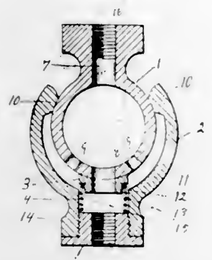
3. A holder forming an attachment for the platen of a typewriting machine, said holder comprising members connected by a hinge extending longitudinally of the platen, and a clamping device connecting the free ends of said members and causing the holder to grip the platen.

4. A card holder forming an attachment for a platen and adapted to surround the platen, said holder having free edges adapted to be separated to permit the holder to be placed upon or removed from the platen, and a clamping device to connect said free edges and draw the holder into clamping engagement with the platen.

5. A card holder attachment for a typewriter platen adapted to surround the platen and having free edges extending longitudinally of the platen, a clamping device comprising a locking bar having a sliding connection with one of said edges, and locking pins on said bar, the other of said edges being formed with cam slots to engage said pins.

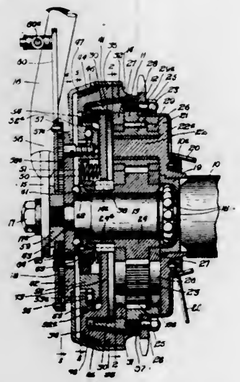
[Claims 6 to 33 not printed in the Gazette.]

1,170,979. FLEXIBLE PIPE-JOINT. JOHN S. LEAKE, Louisville, Ky. Filed Aug. 1, 1913. Serial No. 782,477. (Cl. 137—88.)



A flexible pipe-joint, comprising a hollow spherical male member having an inlet and an outlet, a female member formed integrally around a major portion of the male member, with a bearing ring in contact therewith beyond the center thereof, a stem on the female member having a bore which opens into the interior thereof, a shoe adapted to be introduced through said bore and bearing on the male member, a stem on the shoe, said shoe and stem provided with a perforation extending therethrough, said stem depending within said bore, a bushing within said bore and a spring interposed between said bushing and the shoe.

1,170,980. TRANSMISSION-GEAR AND CLUTCH. AXEL LEVEDAHL, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 2, 1914. Serial No. 875,065. (Cl. 74—34.)



1. In a device of the character described, the combination of a driving member, a driven member, planetary gearing, comprising a gear wheel connected with one of said driving and driven members, a pinion meshing with said gear wheel and journaled upon the other of said driving and driven members, and a rotative spur gear wheel meshing with said pinion, and a clutch member mounted on said spur gear wheel and adapted to be shifted relatively to the same to connect and disconnect said first mentioned gear wheel and said spur gear wheel.

2. In a device of the character described, the combination of a driving member, a driven member, planetary gearing, comprising a gear wheel fixed to one of said driving and driven members, a pinion meshing with said gear wheel and journaled upon the other of said driving and driven members, and a spur gear wheel meshing with said pinion, a clutch member mounted on said spur gear wheel and adapted to be shifted to connect and disconnect said first mentioned gear wheel and said spur gear wheel, and a friction producing member acting on said clutch member, when disconnected from said first mentioned gear wheel, to prevent the rotative movement of said spur gear wheel.

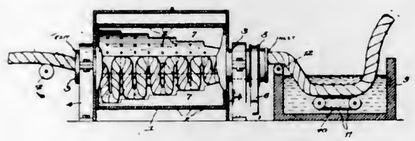
3. In a device of the character described, the combination of a bearing member, a driving member provided with gear teeth, a driven member, a gear wheel rotatively mounted on said bearing member, a pinion journaled on said driven member and meshing with said gear wheel and gear teeth of the driving member, and a clutch member operatively connected with said gear wheel and adapted to be shifted relatively to said gear wheel to lock the same to said driving member or in fixed position upon said bearing member.

4. In a device of the character described, the combination of a bearing member, a driving member, a driven member, planetary gearing interposed between said driving and driven members, one of the gear wheels of said planetary gearing being adapted to normally rotate on said bearing member, a clutch member mounted on said gear wheel of the planetary gearing and adapted to be shifted relatively to the same to alternately connect and disconnect said driving member and planetary gear wheel, and means engaging said clutch mechanism for restraining said gear wheel from rotation when disconnected from said driving member.

5. In a device of the character described, the combination of a driven member, a driving member provided with an annular friction surface, planetary gearing, comprising a spur gear wheel, an internal gear wheel fixed to said driving member, and a pinion meshing with said spur and internal gear wheels and journaled on said driven member, and a clutch member mounted on said spur gear wheel and adapted to be shifted to engage and disengage said friction surface of said driving member.

[Claims 6 to 27 not printed in the Gazette.]

1,170,981. METHOD OF CRAPING FABRICS. PATRICK J. MCCARTHY, Providence, R. I. Filed Nov. 19, 1914. Serial No. 873,019. (Cl. 26—2.)

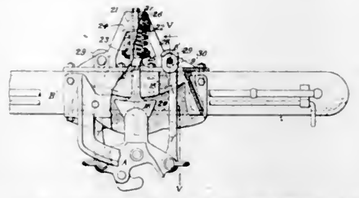


1. The hereindescribed method of craping fabrics, which consists in first wetting the fabric, then in continuously operating upon an extended length of the fabric by intermittently removing portions from the wetting medium, bunching said portions in a mass in an inclosed space, then in beating up said portions while being formed into and while in a mass by rotating same first in one direction and then in another direction, and finally in removing said portions from said inclosed space.

2. The hereindescribed method of craping fabrics, which consists in first wetting the fabric, then in continuously operating upon an extended length of the fabric by intermittently removing portions from the wetting medium, bunching said portions in a mass in an inclosed space, then in beating up said portions while being formed into and while in mass for a predetermined period and in simultaneously removing said portions from said space and straightening out the fabric as same has been successively beaten up at the termination of said period.

3. The hereindescribed method of craping fabrics, which consists in first wetting the fabric, and then in continuously operating upon an extended length of the fabric by intermittently removing portions from the wetting medium, and bunching and beating up said portions in an inclosed space.

1,170,982. ENGINE-COUPLING. GEORGE V. MARTIN, Cleveland, Ohio, assignor to The National Malleable Castings Company. Filed June 28, 1913. Serial No. 776,356. (Cl. 213—42.)



1. A coupler mounted for lateral movement, a buffer segment mounted on the car structure, a shoe interposed between the coupler shank and the segment, and adapted to travel laterally along said segment during lateral movement of the coupler, and links forming the pivotal connection between the coupler and the car structure.

2. In a coupler mounted for lateral movement, a buffer segment on the car structure adapted to permit the coupler to slide bodily in a lateral direction and to take up the buffing stresses from the coupler, and a plurality of links through which the coupler swings radially about a point to the rear of the rearmost portion of its shank, the said links being adapted to take up the pulling strains and comprising the sole pivotal connection between the coupler and the car structure.

3. In a coupler mounted for lateral movement, a buffing shoe interposed between the coupler and the car structure and adapted for travel laterally with the coupler, and a plurality of links forming the sole pivotal connection between the coupler and the car structure and upon which the coupler swings radially about a point to the rear of the rearmost portion of its shank, the said links being under strain during pulling and being relieved of strain during buffing.

4. A coupler mounted for lateral movement, having a head, and a shank, a buffing segment mounted on the car structure, a shoe adapted to engage said shank and to slide laterally along said segment, and a plurality of links connecting said coupler head with the car structure, said links forming the pivotal mounting of said coupler.

5. In a coupler mounted for lateral movement, a buffer stop on the car structure adapted to restrict rearward movement of the coupler and to take up the buffing strains, and links forming the pivotal connection between the coupler and the car structure, adapted to restrict the forward movement of the coupler and to take up pulling strains, the said stop being inoperative in pulling and the said links in buffing.

[Claims 6 to 12 not printed in the Gazette.]

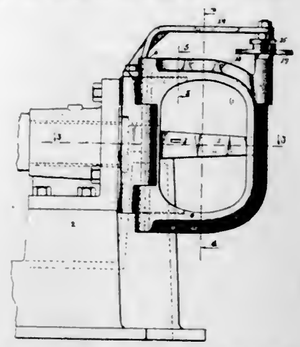
1,170,983. SCRAP-BUNDLING MACHINE. DAVID B. MARWICK, New Britain, Conn., assignor to Ethelbert A. Moore, New Britain, Conn. Filed Mar. 24, 1914. Serial No. 826,863. (Cl. 100—1.)

1. In a scrap bundling machine, a frame, a mandrel thereon, means for rotating the mandrel and a bundle former surrounding the mandrel and hinged to the frame, said former comprising a plurality of sections each of which is adapted to completely encircle the bundle whereby a bundle may be removed from the mandrel by a direct longitudinal pull when the former is open.

2. In a scrap bundling machine, a frame, a mandrel thereon, means for rotating the mandrel, a bundle former surrounding the mandrel, said former comprising a plurality of sections movable with respect to the mandrel, and means whereby a bundle will be moved longitudinally of the mandrel on opening the former sections.

3. In a scrap bundling machine, a frame, a mandrel thereon, means for rotating the mandrel, a bundle former surrounding the mandrel, said former consisting of a plurality of sections hinged at one side to the frame and means engaging the other sides of the former for locking said sections together and for forcing them apart.

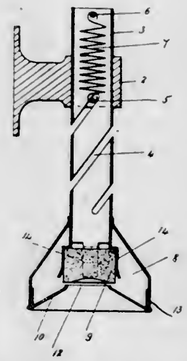
4. In a scrap bundling machine a frame, a mandrel thereon, means for rotating the mandrel, a former surrounding the mandrel comprising two sections hinged to the frame at one side, means engaging the other side of each section for locking them together and for forcing them apart, and projections on the inner faces of each section, adjacent to the hinges for longitudinally moving a bundle on the mandrel on opening the former.



5. In a scrap bundling machine, a frame, a mandrel thereon, means for rotating the mandrel, a bundle former surrounding the mandrel, said former comprising a plurality of sections hinged to the frame at one side and engaging the free end of the mandrel at the other side to support the same during the formation of a bundle.

[Claim 6 not printed in the Gazette.]

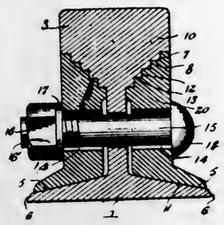
1,170,984. BILLIARD-CUE CHALKER. JOHN H. MILES, Grays River, Wash., assignor of one-half to Charles C. Schmand, Grays River, Wash. Filed June 16, 1915. Serial No. 34,462. (Cl. 46—8.)



1. In a billiard cue chalker, a stationary cylindrical guide, a tube slidable longitudinally in the guide and provided with two spiral slots, a pin secured to the guide and passing transversely through the two slots, a tension spring arranged between the said pin and the upper portion of the tube, and a chalk holder secured to the lower end of the said tube.

2. In a billiard cue chalker, a stationary cylindrical guide, a tube slidable longitudinally in the guide and provided with two spiral slots, a pin secured to the guide and passing transversely through the two slots, a tension spring arranged between the said pin and the upper portion of the tube, a chalk cup secured to the lower end of the said tube, means for positioning the chalk in the chalk cup and a conical guide for the cue tip secured to the chalk cup and having a central opening, the said chalk cup and conical guide being slidable vertically with the said tube.

1,170,985. RAILWAY-JOINT. FRANK A. MOFFITT, Chicago, Ill. Filed Mar. 11, 1915. Serial No. 13,641. (Cl. 239—9.)



1. A rail, a plurality of connected vertical and horizontal faces formed on the under side of the head thereof, fish plates having a plurality of vertical and horizontal faces adapted to engage the connected vertical and horizontal faces on the under side of the rail head, and means for securing the fish plates in engagement with the rail.

2. A rail, a plurality of integral shoulders on the under face thereof, fish plates, a plurality of integral shoulders formed on the upper edge thereof and adapted for interengagement with the integral shoulders on the under face of the rail head and means for securing said rail and fish plates in such interengagement.

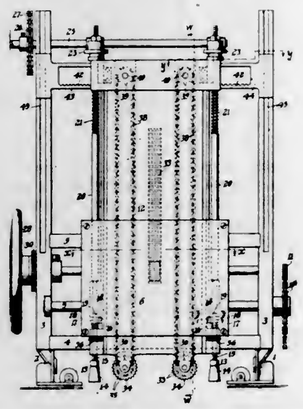
3. A rail, a plurality of connected vertical and horizontal faces on the under face of the head of said rail, and means for engagement with said faces to secure two of said rails together.

4. A rail, having an integral head the under faces of which are rounded and terminate in a plurality of right angular faces, at each end of the rail, and means for securing two of said rails together, said means having a plurality of right angular faces adapted to engage the right angular faces on the under faces of the rail head.

5. In combination with a rail having a plurality of vertical and horizontal faces on the under side of the head thereof, a plurality of fish plates having a plurality of horizontal and vertical faces, and means for forcing the vertical and horizontal faces of the fish plates into engagement with the vertical and horizontal faces on the underside of the rail head.

[Claims 6 to 8 not printed in the Gazette.]

1,170,986. FEED FOR STONE-CHANNELING MACHINES. THOMAS D. MOWLDS, Bala, Pa. Filed Apr. 4, 1912. Serial No. 688,362. (Cl. 125—2.)



1. In a device of the character stated, a channeling tool frame, a rotatable channeling-frame-support, adapted to engage the bottom of the channel, a channeling tool, and means for rotating the support, put in action by movement of the channeling tool frame along the length of the channel.

2. In a device of the character stated, a channeling frame adapted to enter the channel, a rotatable frame support, engaging the bottom of the channel, and automatic means, set in operation by the moving of the frame along the length of the channel, for rotating the support.

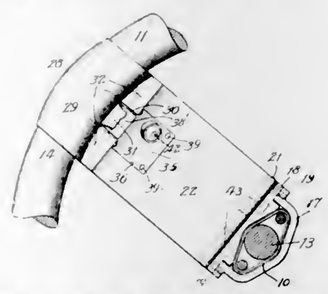
3. In a device of the character stated, a channeling frame, a tool carried by the frame, a rotary feed wheel entering the channel and engaging a wall of the channel, and means outside of the channel for rotating the wheel.

4. In a device of the character stated, a channeling frame, a channeling tool carried thereby, a combined frame support and feeding wheel entering the channel, and means for turning the wheel to feed the tool carrying frame.

5. In a device of the character stated, a channeling frame, a rotatable member extended down into the channel, tool feeding means within the channel turned thereby and adapted to engage with a channel wall, a member parallel with the length of the channel in operative relation to the frame and connections between the parallel member and rotatable member for causing rotation of the rotatable member by the movement of the rotatable member along the length of the channel.

[Claims 6 to 12 not printed in the Gazette.]

1,170,987. LOCK FOR AUTOMOBILES. RAYMOND F. MUDD, Chicago, Ill., assignor of one-half to Joseph A. Mudd, Chicago, Ill. Filed Sept. 19, 1914. Serial No. 862,486. (Cl. 70—90.)



1. In a device of the class described, a clamp adapted to be secured to a steering-column, an arm hinged to the clamp at one end, a two-piece clamp adapted to embrace the rim of a steering-wheel and to straddle a spider arm of the same, and means for locking the free end of said hinged arm to said steering-wheel clamp.

2. In a device of the class described, a clamp adapted to be secured to a steering-column, an arm hinged to the clamp at one end, a locking-bolt mounted in the free end of the arm, means for advancing and retracting the bolt, and a two-piece clamp adapted to embrace the rim of a steering-wheel and to straddle a spider arm thereof, said clamp having a recess to receive the locking-bolt.

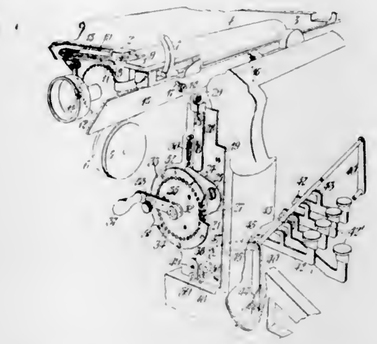
3. In a device of the class described, a clamp adapted to embrace a steering-column, detachable fastening means to secure said clamp in a fixed position on the column, an arm hinged at one end to the clamp, a two-piece clamp adapted to embrace the rim of a steering wheel, detachable fastening means for securing said clamp to said rim, and means for locking the free end of said arm to said steering wheel, said arm masking both of said fastening means when in the locked position.

4. In a device of the class described, a clamp-section adapted to embrace one side of a steering-column, a conjugate clamp-section adapted to embrace the opposite side of the column, securing-screws seating in the outer face of said second clamp-section and engaging said first clamp-section, an arm hinged to the lower edge of said second clamp-section and adapted to swing upwardly to lie over the face thereof and mask the said screws, and means for locking the free end of said arm to a steering-wheel.

5. In a device of the class described, a clamp-section adapted to embrace one side of a steering-column, a conjugate clamp-section adapted to embrace the opposite side of the column, securing-screws seating in the outer face of said second clamp-section and engaging said first clamp-section, an angular arm hinged to the lower edge of said second clamp-section and adapted to swing upwardly to lie over the face thereof and mask the said screws, a clamp-section adapted to embrace one side of the rim of a steering-wheel, a conjugate clamp-section adapted to embrace the opposite side of the rim, securing-screws seated in the outer face of said second clamp-section and engaging said first clamp-section, a locking-bolt mounted in the free end of said arm and adapted to engage a recess formed in said rim clamp-section, and a lip formed on the free end of said arm and adapted to overlie and mask the securing-screws of said rim clamp-sections when the parts are in the locked position.

[Claims 6 to 8 not printed in the Gazette.]

1,170,988. TYPE-WRITING MACHINE. ALEXANDRE VALERE NIHOUREL, Paris, France, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 24, 1913. Serial No. 775,466. (Cl. 197—141.)



1. In a typewriting machine, the combination of an escapement wheel, an operating motor therefor, an escapement device to permit a step-by-step movement of the wheel, line-space mechanism controlling said escapement device, and indicating means carried by the wheel.

2. In a typewriting machine, the combination of an escapement wheel, a spring to rotate the wheel, an escapement pawl controlling the rotation of the wheel, a line-space lever, operating connections between said lever and the escapement pawl, type keys, and locking means therefor actuated by said wheel.

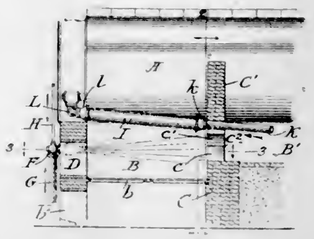
3. In a typewriting machine, the combination of an escapement wheel, a coöperating pawl, a line-space lever, a cam device operated thereby to actuate the pawl, and an indicator carried by the escapement wheel.

4. In a typewriting machine, the combination of a platen frame, a rotary platen, a bar extending longitudinally of said frame and movable up and down relatively to the frame, a line-space lever, means operated thereby to depress the bar, an escapement wheel, a coöperating pawl, means operated by the depression of said bar to actuate said pawl, and a page-end indicator carried by said wheel.

5. In a typewriting machine, the combination of a platen frame, a rotary platen, a bar extending longitudinally of said frame and movable up and down relatively to the frame, a line-space lever, means operated thereby to depress the bar, an escapement wheel, a coöperating pawl, means operated by the depression of said bar to actuate said pawl, type keys, a universal bar to lock said keys, and operating connections between said wheel and said universal bar.

[Claims 6 to 50 not printed in the Gazette.]

1,170,989. SMOKE-CONSUMING FURNACE. ORLAND D. ORVIS, New York, N. Y., assignor, by mesne assignments, to United Furnace Corporation, New York, N. Y., a Corporation of Delaware. Filed Sept. 16, 1913. Serial No. 790,141. (Cl. 110—60.)



1. In a furnace, the combination with a fire chamber, of a nozzle, and means for supplying steam and air to the nozzle, said nozzle being provided with a plurality of outlets, certain of said outlets being in the form of slots positioned for feeding sheets of steam and air in different planes and in different directions and other of said outlets being in the form of apertures for feeding steam and air on lines which cross with the sheets supplied through said slots.

2. In a furnace, the combination with a fire chamber, of a nozzle provided with a plurality of outlets, certain of said outlets being in the form of slots which operate to diffuse the steam and air in different horizontal planes and in thin sheets, and other outlets being in the form of openings the cross sectional shape of which differs from the first named slots so as to spread the steam and air on lines which intersect with the sheets supplied through the slots, whereby thin sheets of steam and air and streams of steam and air are blown in different planes directly into the smoke and gases for effecting disintegration of the cloud of smoke and gases and the intimate admixture therewith of the inflowing steam and air.

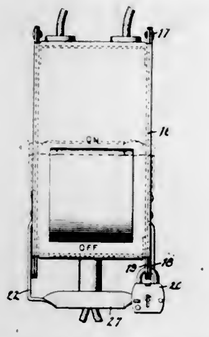
3. In a furnace, the combination with a fire chamber, and a pipe for supplying steam and air, of a distributing nozzle, the delivery face of which is arcuate, said nozzle being provided with a plurality of radially positioned exits the aggregate area of which is equal substantially to the cross sectional area of the pipe, certain of said exits being in the form of slots positioned for directing the steam and air in thin sheets and in different horizontal planes, and certain other exits being in the form of apertures operating to direct streams of steam and air in directions which cross the sheets of steam and air supplied through the slots.

4. In a furnace, the combination with a fire chamber, and a pipe for supplying steam and air, of a distributing nozzle provided with a series of slots and with apertures the aggregate area of which is equal substantially to the cross sectional area of said pipe, said slots being in different horizontal planes for directing sheets of steam and air directly into the smoke and gases and said apertures being of a different cross sectional form from the slots, said apertures being positioned relatively to the slots for directing streams of steam and air on lines which cross with the sheets supplied through the slots.

1,170,990. INCLOSED SWITCH CONSTRUCTION. CLARENCE D. PLATT, Bridgeport, Conn. Filed July 15, 1915. Serial No. 39,966. (Cl. 175—282.)

1. In combination, a switch having a pivoted switch blade, a casing inclosing said switch and having openings in the opposite walls thereof in line with the pivot of the pivoted switch blade, relatively flat disks rotatably engaged in said openings, a U-shaped member inside the casing having side arms connected by a cross bar, the ends of said side arms being secured in engagement with the inner relatively flat sides of the rotatable disks and

thereby preventing outward displacement of said disks in the openings in which they are seated, a connection between the cross bar and the pivoted switch blade, an operating U-shaped member outside the casing having sides connected by a cross bar, the ends of said sides being secured to the outer relatively flat surfaces of the rotatable disks, and thereby preventing inward displacement of said disks in the openings in which they are seated, and said cross bar extending across the front face of the switch casing and serving as a handle for operating the switch.



2. The combination of a switch, an inclosure therefor having a pivoted cover, an external operating handle for said switch, said inclosure and cover having holes adapted to be brought into alinement by the closing of the switch inclosure, a locking device insertible into said alined holes to lock the switch inclosure closed, and the said switch operating handle adapted to be thrown into a position beneath the alined holes, whereby upon the engagement of the locking device in said holes, said switch operating handle will be locked in position beneath said locking device.

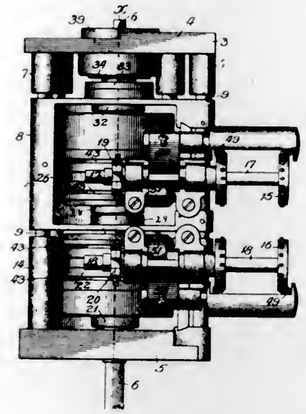
3. The combination of a switch, an inclosure for said switch having a hinged cover, an external handle for operating said switch, said inclosure and cover having lugs adapted to be brought into alinement by the closing of the switch inclosure, and a locking device engageable with said alined lugs, and with the operating handle to lock the inclosure closed and the switch in the position to which it has been thrown by the operating handle.

4. The combination of a switch, a casing inclosing said switch having a bearing opening in one wall thereof, a relatively flat disk rotatably engaged in said bearing opening, a switch operating member inside the casing secured in flat engagement with the inner relatively flat face of the disk and extending beyond the rim of said disk to thereby prevent outward displacement of said disk in the opening in which it is seated, and a switch operating handle outside the casing secured in flat engagement with the relatively flat outer face of the disk and extending beyond the rim of said disk to thereby prevent inward displacement of said disk in the opening in which it is seated.

5. The combination of a switch, an inclosure therefor having a pivoted cover, an external operating handle for said switch, said box, said cover and said handle having holes adapted to be brought into alinement for locking the box closed and the switch in open circuit position.

1,170,991. FILM-FEEDING MECHANISM. JOHN PROKSA, Chicago, Ill. Filed Feb. 13, 1914. Serial No. 818,586. Renewed July 6, 1915. Serial No. 38,259. (Cl. 88—18.)

1. In an intermittent film feeding mechanism, the combination of a pair of carrying frames disposed in separated relation and movable to and from each other, individual film feeding sprocket drums mounted on said carrying frames, means for imparting positive and simultaneous rotation to the sprocket drums, and means associated with said frames and exerting a constant yielding stress upon one of the frames in a direction away from its companion frame, substantially as set forth.



2. In an intermittent film feeding mechanism, the combination of a pair of carrying frames disposed in separated relation and movable to and from each other, individual film feeding sprocket drums mounted on said carrying frames, means for imparting positive and simultaneous rotation to the sprocket drums, and resilient means exerting a constant stress upon one of the frames in a direction away from the companion frame, substantially as set forth.

3. In an intermittent film feeding mechanism, the combination of a pair of carrying frames disposed in separated relation, one of said frames being slidingly mounted, individual film feeding sprocket drums mounted on said carrying frames, means for imparting positive and simultaneous rotation to the sprocket drums, and resilient means for effecting a movement of the slidingly mounted carrying frame, substantially as set forth.

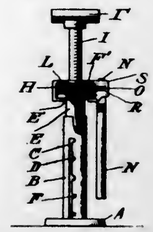
4. In an intermittent film feeding mechanism, the combination of a pair of sprocket drums disposed in separated relation and having carrying shafts, star wheels on said shafts, a pair of carrying frames having bearings for the aforesaid carrying shafts, a pair of cam disks individual to said carrying frames and having operative engagement with said star wheels, one of said carrying frames with its cam disk and accessories being movable in relation to the companion carrying frame, and means for imparting simultaneous rotation to said cam disks, substantially as set forth.

5. In an intermittent film feeding mechanism, the combination of a pair of sprocket drums disposed in separated relation and having carrying shafts, star wheels on said shafts, a pair of carrying frames having bearings for the aforesaid carrying shafts, a pair of cam disks associated with said carrying frames and each provided with a pair of holding grooves disposed in separated relation and with an operating spiral groove connecting said holding grooves, said grooves having operative engagement with the prongs of a star wheel, and means for imparting simultaneous rotation to cam disks, one of said carrying frames with its cam disk and accessories being movable in relation to a companion carrying frame, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

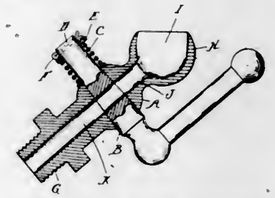
1,170,992. LIFTING-JACK. MARTIN K. PURDY, Easton, Pa., assignor of one-half to John H. Spence, Easton, Pa. Filed June 30, 1915. Serial No. 37,266. (Cl. 254—98.)

A lifting jack comprising a hollow supporting base, a shell telescoping therein and designed to be held at different elevations and terminating in a flange at its upper end with a raceway at its upper surface, a screw movable within said shell, a ratchet whee. with a threaded opening engaging the threads of the screw, ball bearings interposed between the wheel and flange, a yoke having a downwardly projecting portion with a slot with walls tapering outward from its central portion, the lower end of said projection having an angled part extending under-



neath the flange, an oppositely disposed projection of the yoke being bent at right angles and extending also underneath said flange, a handle having a forked end, a pin engaging the arms of the forked end and having a rocking movement in said slots, the end of the arms designed to engage the teeth of the ratchet wheel.

1,170,993. PRIMING-CUP FOR V-TYPE ENGINES. WILLIAM H. ROBERTS, Detroit, Mich., assignor to The Roberts Brass Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 19, 1915. Serial No. 22,450. (Cl. 137—7.)



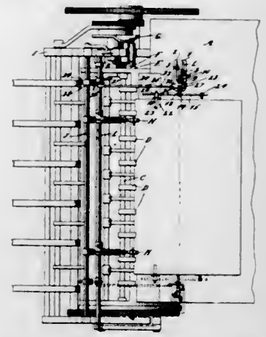
A priming cup comprising a plug valve body portion, a nipple portion on one end of said body portion and an extension on the opposite end of the body portion of substantially spherical form, said body portion and nipple portion having an axial passage therethrough, and the center of said substantially spherical extension being in alinement with the longitudinal axes of said body portion and nipple portion, said extension being cut away in a plane at an angle to the axes of the body portion and nipple portion, and recessed to form a cup communicating with the axial passage.

1,170,994. SHEET-GAGE FOR PRINTING-PRESSES. LEWIS L. ROGERS, Orange, Mass. Filed Jan. 28, 1915. Serial No. 4,834. (Cl. 101—38.)

1. In a printing press, the combination with a feed table from either end of which a sheet may be fed toward an end gage, of a base plate removably supported by the feed table at one end thereof, a movable end gage associated with said base-plate, and actuating means for the gage partly carried by the base-plate, said base-plate and end gage being transferable to the other end of the feed table and certain parts of the actuating means on the base-plate being capable of being repositioned thereon to render the end gage operable in its new position.

2. In a printing press, the combination with the feed table, of a sheet gage removably supported by the feed table and comprising a base-plate, a movable gage associated with said base-plate, a bell-crank lever for actuating said movable gage, and means to actuate the bell-crank lever, said bell-crank lever being transferable to a new position on the base-plate, for the purpose described.

3. The combination with the feed table of printing presses and similar machines, of a sheet gage comprising a base-plate removably secured to said feed table, a movable gage proper associated with said base-plate, and actuating means for said movable gage comprising a movable element mounted on said base-plate, and means whereby said element may be transferred to a new position on said base-plate to permit the gage to be used at either side of the feed table.

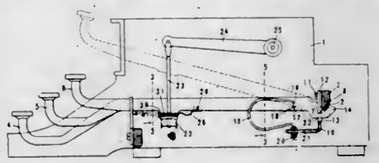


4. The combination with the feed table of a printing press or similar machine, of a base-plate mounted on said feed table, a movable gage proper supported from said base-plate, a rod slidably mounted on said base-plate and to which the gage is secured, and a bell-crank lever pivotally mounted on the base-plate adapted to be actuated from a movable part of the machine, said base-plate with the gage, rod and bell-crank lever supported thereby being removable as a unit from the feed table, for the purpose described.

5. The combination with the feed table of a printing press or similar machine, of a base-plate removably mounted on the feed table, a movable gage proper associated with the base-plate, means for mounting the movable gage on the base-plate comprising a rod movable longitudinally with respect to the base-plate, an actuating rod movable transversely with respect to the base-plate, connecting means between said rods, and means whereby said connecting means may be pivoted to the base-plate at either one of two places in each of which the connecting means operatively connects said rods whereby the operative relation between the parts may be maintained when the base-plate is mounted at either side of the feed table.

[Claims 6 to 12 not printed in the Gazette.]

1,170,995. TYPE-WRITING MACHINE. JOSEPH ALBERT RONCHETTI, Woonsocket, R. I., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed June 5, 1908. Serial No. 436,744. (Cl. 197—33.)



1. In a typewriting machine, the combination with a key lever, of a fulcrum for the same, means for returning the key lever to normal position after depression comprising a curved spring extended through an eye provided in the key lever and having a portion thereof engaging the side of the key lever, whereby said spring is maintained in position adjacent the key lever, and an adjustable support for said spring suspended from said fulcrum.

2. In a typewriting machine, the combination with the key-levers having holes therein, of a fulcrum for said key-levers, and means for maintaining the key-levers in engagement with said fulcrum and for returning them to normal position after depression, comprising curved springs, one end of each of which is supported from said fulcrum and the opposite end is passed through the hole in said key-lever and bent in a direction to lie in a plane parallel with the plane of the body of said spring against the opposite side of said key-lever, so as to hold the key-lever and said spring in operative relation.

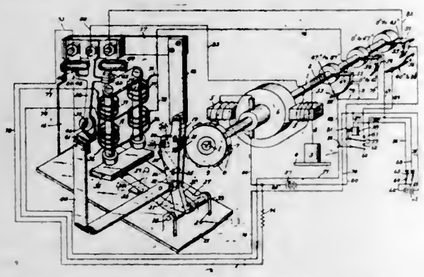
3. In a typewriting machine, the combination with the key levers and a fulcrum therefor, of a curved spring arranged in parallel relation with each of said key levers, each of said key levers being provided with an eye through which one end of the spring extends, an adjusting screw for supporting the other end of said spring and a support suspended from said fulcrum in which the adjusting screw is mounted.

4. In a typewriting machine, the combination with the key-levers, of a fulcrum therefor, curved springs the body portion of each of which lies in a plane in parallel relation with each of said key-levers, each of said key-levers being provided with a hole through which one end of the spring extends, an adjustable screw for supporting the other end of said spring, and a support suspended from said fulcrum in which the adjusting screw is mounted.

5. In a typewriting machine, the combination with the key levers, of a fulcrum therefor, springs for holding the key levers in engagement with their fulcrum, and means mounted on said fulcrum for holding the key levers against removal when in their normal positions but which permits their removal when they are moved upward from their normal positions.

[Claims 6 to 25 not printed in the Gazette.]

1,170,996. RETAINING MECHANISM. OSCAR A. ROSS and HERBERT B. TAYLOR, Rochester, N. Y., assignors to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 3, 1915. Serial No. 25,595. (Cl. 172—239.)



1. The combination of a rotatable shaft biased to rotate in one direction, of an electric motor for rotating said shaft in the opposite direction, a toothed wheel loosely mounted on said shaft, a detent movable into and out of engagement with the teeth of said wheel, a clutch between said shaft and said wheel which permits said shaft to be rotated by said motor relatively to said wheel but which prevents said relative rotation of said shaft in the opposite direction, an operating circuit for said motor, and means for closing said motor operating circuit and for simultaneously moving said detent into engagement with said toothed wheel.

2. A combination with a rotatable shaft biased to rotate in one direction, of an electric motor for rotating said shaft in the opposite direction, a toothed wheel mounted on said shaft, a clutch between said wheel and said shaft which permits said shaft to be rotated by said motor relatively to said wheel but which prevents said relative rotation of said shaft in the opposite direction, a detent movable into engagement with said wheel, and electromagnetic means for operating said detent.

3. In a retaining mechanism, in combination: a rotatable shaft biased to rotate in one direction; a motor for rotating said shaft in the opposite direction; a toothed wheel loosely mounted on said shaft; a clutch mechanism interposed between said shaft and said wheel and permitting said shaft to be rotated by said motor relatively to said wheel, but preventing such relative rotation in the opposite direction; a detent movable into and out of engagement with the teeth of said wheel; an operating circuit for said motor; a circuit controller included in said circuit and connected to said detent and operated simultaneously therewith; means for operating said detent and said circuit controller; and yielding means for permitting said circuit controller to be operated by said means independently of said detent.

4. A combination with a rotatable shaft biased to rotate in one direction, of an electric motor for rotating said shaft in the opposite direction, a detent for holding said shaft against movement in the direction of biased rotation, an electromagnetic device for operating said detent, an operating circuit for said motor, a snubbing circuit including resistance and connected to said motor, and a switch for closing said operating circuit and said snubbing circuit alternately, said switch being operatively connected to said detent to close said operating circuit when said detent is moved into position to hold said shaft.

5. A combination with a rotatable shaft biased to rotate in one direction, of means for rotating said shaft in the opposite direction from a normal or initial position to a second position and for holding said shaft in said second position against rotation in the direction in which it is biased, said means comprising an electric motor for rotating said shaft in said opposite direction, a local source of electric current, a local switch, a circuit including said local source, said motor and said local switch, a circuit controller included in said circuit and operated by said shaft to close said circuit during the rotation of said shaft from said first position to said second position and to open said circuit when said shaft attains said second position, a toothed wheel mounted loosely on said shaft, clutch mechanism interposed between said shaft and said wheel which permits said shaft to be rotated by said motor relatively to said wheel but which prevents such relative rotation in the opposite direction, a detent movable into and out of engagement with the teeth of said wheel for holding said shaft against rotation in the direction in which it is biased, an electromagnetic device for operating said local switch and said detent, said electromagnet when energized closing said local switch and actuating said detent to hold said shaft, and means controlled from a distance for energizing said electromagnet.

[Claims 6 to 13 not printed in the Gazette.]

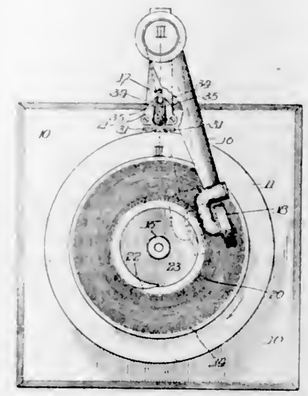
1,170,997. STOP MECHANISM FOR GRAPHOPHONES. OSCAR L. SCALBOM, Glenview, Ill. Filed Feb. 15, 1913. Serial No. 748,605. (Cl. 74—46.)

1. A brake device comprising, in combination, a pair of oppositely disposed spring applied brake shoes, spring held detent means for normally holding said shoes in a predetermined position, and means for releasing said detent means whereby said brake shoes are released and may thereupon be actuated by said spring.

2. A brake device, comprising, in combination, a pair of oppositely disposed members pivoted intermediate their ends, each carrying at one end a brake shoe and the opposite end being provided with spring actuating means for causing the first mentioned ends to approach, spring held detent means for normally holding said shoes in separated position, and means for releasing said detent means whereby said shoes are released and may thereupon be actuated by said actuating means.

3. A brake device comprising, in combination, a spring applied brake shoe, spring held detent means for normally holding said shoe in a predetermined position, and a cam for moving said detent and thereby releasing said brake shoe, whereby it may be actuated by said actuating means.

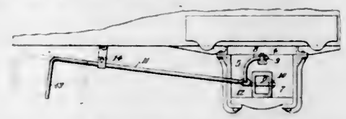
4. A brake device comprising, in combination, a spring applied brake shoe, pivoted detent means for normally holding said shoe in a predetermined position, and a cam for moving said detent and thereby releasing said brake shoe, whereby it may be actuated by said spring actuating means.



5. A brake device comprising, in combination, a spring applied brake shoe, a detent for normally holding said shoe in a predetermined position, a cam adapted to move said detent, and a trigger for moving said cam and thereby said detent, whereby said brake shoe is released and may thereupon be actuated by said spring brake applying means.

[Claims 6 to 13 not printed in the Gazette.]

1,170,998. UNCOUPLING MECHANISM FOR CAR-COUPLINGS. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation. Filed Dec. 2, 1913. Serial No. 804,150. (Cl. 213—59.)

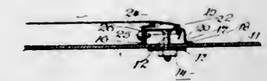


1. In uncoupling mechanism for cars, the combination with a coupler of the top-operated type having a lock-lifting link, of an actuating member having a plurality of parallel arms, one of said arms being pivoted to the coupler shank adjacent its juncture with the coupler-head and forward of the carry iron, and the other of said arms engaging said lock-lifting link, the said actuating member having a connection between said arms extending, when the member is at rest, upwardly and forwardly, and an uncoupling rod engaging said connection and being adapted to rotate it a greater distance rearwardly than it is upwardly to effect uncoupling.

2. In uncoupling mechanism for cars, the combination with a coupler of the top-operated type having a lock-lifting link, of an actuating member of substantially U-shape having one arm extending forwardly and upwardly and engaging the lock-lifting link, every portion of the arm being at all times below the top of the link, and another arm journaled in the coupler shank forward of the carry iron at a point below the point of attachment of the first-mentioned arm to the lifting link, and an uncoupling rod engaging said actuating member and being adapted to rotate the first-mentioned arm upwardly and rearwardly to effect uncoupling.

1,170,999. BRIDGE FOR STRINGED INSTRUMENTS. WILLIAM J. F. SCHULTZ, Chicago, Ill. Filed Apr. 10, 1914. Serial No. 830,854. (Cl. 84—132.)

1. An improved metallic bridge for stringed instruments comprising side walls and a top wall connecting the side walls, said walls being integral and forming a hollow box-like base, means whereby the base may be secured to an instrument, means on the base for holding the ends of the strings, and a bridge-strip adjustably and detachably secured to said base.



2. An improved metallic bridge for stringed instruments comprising side walls and a top wall connecting the side walls, said walls being integral and forming a hollow box-like base, means whereby the base may be secured to an instrument, a flange at the bottom of and integral with one of said side walls, means on the base for holding the ends of the strings and a bridge strip detachably and adjustably secured to said base.

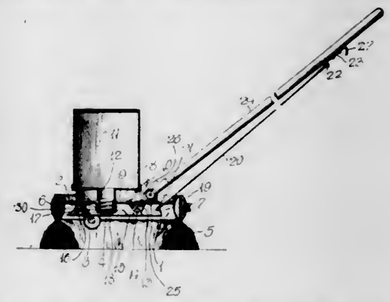
3. An improved bridge for stringed instruments comprising side walls and a top wall connecting said side walls forming a hollow base, means on the base for holding the ends of the strings, and a bridge strip having slots therein, and screws extending through said slots for securing said strip to one of the side walls of the base.

4. An improved bridge for stringed instruments comprising side walls and a top wall connecting said side walls forming a hollow base, means on the base for holding the ends of the strings, and a bridge strip having slots therein, and screws extending through said slots and adjustably securing said strip to one of the side walls of the base, said strip having its upper edge extended to overlie the top wall of the base.

5. An improved metallic bridge for stringed instruments, comprising side walls and a top wall connecting the side walls, said walls being integral and forming a hollow box-like base, means whereby the base may be secured to an instrument, a rib on and integral with said top wall, means on the base for holding the ends of the strings, and a bridge-strip adjustably secured to the base.

[Claims 6 and 7 not printed in the Gazette.]

1,171,000. MOP. EARL A. R. SKILLMAN, Detroit, Mich. Filed May 6, 1915. Serial No. 26,408. (Cl. 15—13.)



1. A mop comprising a main frame, a mop body connected thereto, a top plate carried by said mop frame, a socket forming part of said top plate, a reservoir above said top plate and in communication with said socket, said socket having a discharge opening therein, and a tiltable distributer below said top plate normally closing the discharge opening of said socket and adapted to distribute the contents of said reservoir at the front portion of said frame.

2. A mop comprising a main frame, provided with a mop body, a top plate carried thereby, a socket carried by said top plate and provided with a discharge opening, a reservoir holder upon said top plate, a reservoir seated upon said holder and having a neck detachably mounted in said socket, a handle connected to said reservoir holder, a tiltable distributer below said top plate normally closing the discharge opening of said socket and adapted to dis-

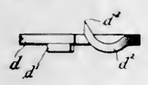
tribute the contents of said reservoir at the front portion of said frame, and means longitudinally of said handle and extending through said top plate adapted to tilt said distributer.

3. A fountain dust mop comprising a frame provided with a mop body, a top plate carried by said frame, a depending socket forming part of said top plate and provided with a discharge opening, a cylindrical reservoir holder secured to said top plate, a reservoir seated upon said holder and having a neck detachably mounted in said socket, a tiltable distributer supported beneath said top plate, a closure carried thereby and adapted to close the discharge opening of said socket, a handle connected to said top plate, and means longitudinally of said handle and extending through said top plate adapted to tilt said distributer whereby the contents of said reservoir can flow thereon and be distributed at the front portion of said mop.

4. A fountain dust mop comprising a triangular frame provided with a mop body, a top plate carried by said frame, a reservoir detachably mounted upon said top plate and adapted to discharge the contents thereof below said top plate, and a tiltable triangular distributer below said top plate and adapted to distribute the contents of said reservoir at the front portion of said triangular frame.

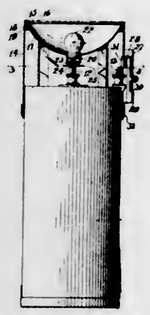
5. A fountain mop comprising a frame, a mop body carried thereby, a top plate on said frame, casters carried by said top plate and adapted to support said mop, a reservoir on said top plate adapted to supply liquid to said mop, and a tiltable distributer below said top plate adapted to distribute the liquid at the front portion of said mop.

1,171,001. LOCKING MEANS FOR NUTS AND BOLTS. ROBERT SMITH, West Stanley, England. Filed Apr. 28, 1915. Serial No. 24,412. (Cl. 151—39.)



A nut lock comprising a split spring washer provided on its under surface with a dovetailed projection, a dipped portion near one end of the washer from which the said end rises to form an upstanding part, a nut having radial cuts formed on its under side with which said upstanding parts of the washer are adapted to engage, and a member against which the split washer contacts, said member being provided with a dovetailed recess to receive the dovetailed projection on the under surface of the split washer and further having a second recess to receive the dipped portion of the washer and to permit the upstanding part to be moved out of engagement with the radial cuts of the nut.

1,171,002. ELECTRIC HAND-LAMP. GEORGE A. SOEHNLEIN, Brooklyn, N. Y. Filed May 20, 1914. Serial No. 839,853. (Cl. 240—8.5.)



1. A battery cell having its pole pieces projecting from the top thereof and one of said pole pieces projecting beyond the periphery of said top, an insulation on the exterior of said cell, a case arranged to fit over the top of said cell and around said insulation, said case being provided with an opening to accommodate said projecting pole, an insulation on said case adjacent said opening, arranged to prevent electrical contact between said case and said pole, a lamp in said case, and means to form an electric circuit through said lamp and cell when said case is in position.

2. A battery cell having its pole pieces projecting from the top thereof and one of said pole pieces projecting beyond the periphery of said top, an insulation on the exterior of said cell, a case arranged to fit over the top of said cell and around said insulation, said case being provided with an opening to accommodate said projecting pole, an insulation on said case adjacent said opening, arranged to prevent electrical contact between said case and said pole, a switch on said case adjacent said pole, adapted to connect said projecting pole and said case electrically, a lamp in said case, and means, including said case and said switch, to form an electric circuit through said lamp and cell.

3. A cylindrical battery cell having its pole pieces projecting from the top thereof and one of said poles projecting beyond the periphery of said top, an insulation on the exterior of said cell, a cylindrical, metallic case arranged to fit over the top of said cell and to engage said insulation frictionally, a lamp in said case, said case being provided with a slot in its side to permit the passage of said projecting pole when said case is moved endwise into position on said cell and to locate said case in proper relation to said cell, a switch on said case, adapted to connect said projecting pole and said case electrically, insulation on said case, adjacent said opening, to prevent electrical contact between said pole and said case, and means, including said case and switch, to form an electric circuit through said lamp and cell.

4. A battery cell having its pole pieces projecting beyond the top thereof, a case adapted to fit over the top of said cell, and around the exterior thereof, insulation between said case and the exterior of said cell, a lamp in said case, means for forming an electric circuit through said cell and said case when said case is in position on said cell, and a handle removably attached to said cell and adapted to clamp said case to said cell.

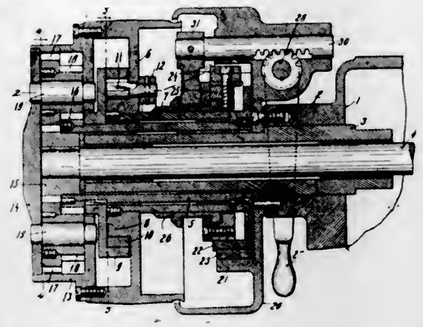
5. An electric light mounting, comprising a metallic case, a lamp socket in said case, a switch on said case, said case being open at one end to permit the entrance of the top of a battery into said case, and having a slot in one side extending from said open end, said switch being located opposite said slot, and insulation along the edges of said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,171,003. REVERSING MECHANISM FOR MACHINE-TOOLS. AUGUSTUS M. SOSA, Cincinnati, Ohio, assignor to The American Tool Works Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 8, 1914. Serial No. 849,659. (Cl. 74—34.)

1. A device of the nature disclosed combining a tubular non-rotative supporting member, a shaft passing freely through said member, a pulley supported upon said member, a system of planetary gears unitarily rotative with said pulley and operatively connected with said shaft, and a gear member available as lock member for unitarily uniting the rotative members and adapted to be non-rotatively retained for rotating said planetary gears upon their axis to rotate said shaft reversely.

2. A device of the nature disclosed combining a non-rotative supporting member, a shaft passing concentrically freely through said member, a tubular member concentrically supported upon said supporting member, a pulley concentrically supported upon said tubular member, a pair of planetary gears unitarily revoluble with said pulley and in transmitting train with said shaft and tubular member, and means for operatively connecting said tubular member with said pulley and conversely for non-rotatively locking the same, whereby said shaft may be selectively driven by said pulley in forward and reverse directions.



3. A device of the nature disclosed combining a non-rotative supporting member, a pulley thereon, a driven shaft adapted to receive motion from said pulley, compound planetary gear supported upon said pulley in transmission train with said shaft, an intermediate gear in train with said planetary gears clutching devices for operatively connecting said intermediate gear to said pulley for uniting said pulley, gears and shafts as a revoluble unit, and conversely for non-rotatively locking said intermediate gear for independently functioning said gear for rotating said shaft in a direction reversably from that of said pulley.

4. A device of the nature disclosed combining a casing having a rigid tubular bearing element projected therefrom, a driven shaft passing freely through said casing bearing element, a pulley journaled on said bearing element and providing a closure for said casing, a compound planetary gear journaled within one side of said pulley, a gear fixed to said shaft in train with said compound planetary gear, a gear member coaxial with said pulley in train with said compound planetary gear, a clutch device within said casing and pulley closure for connecting said gear member to said pulley, a second clutch device within said casing and pulley closure for uniting said gear member and casing non-rotatively locking said gear member, and a single lever controlled clutch actuator mechanism for said clutching devices adapted to alternatively function the same, for unitarily revolubly uniting said rotative members, and secondly for independently rotating said member for rotating said pulley and shaft in relatively opposing directions.

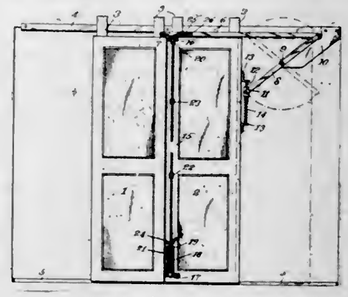
5. A device of the nature disclosed combining a rigid support, a pulley journaled thereon, a shaft, a gear fixed on the shaft, a gear member coaxial relatively and concentrically mounted on said support, unitarily united different diameter planetary gears unitarily revoluble with said pulley and in respective gear train engagement with said shaft gear and gear member, and means for locking said gear member to said pulley, non-rotatingly uniting said gears for a corresponding rotation of the pulley and shaft, and alternately conversely for non-rotatively locking said gear member to the support for rotating said planetary gears upon their own axis, for driving said shaft in a direction reversely from that of said pulley and at a relatively higher rate of speed.

[Claims 6 and 7 not printed in the Gazette.]

1,171,004. OPERATING DEVICE FOR SLIDING DOORS. WILLIAM J. STILLING, Elmhurst, N. Y., assignor to Hecla Iron Works, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 2, 1915. Serial No. 64,645. (Cl. 70—102.)

1. In a device for operating a pair of sliding doors in opposite directions, the combination of a link pivoted at one end to one of the doors and having its other end pivotally connected to the other door, a latch on said link and a bolt movable vertically and adapted to engage said latch to lock the doors together.

2. In a device for simultaneously operating double parting sliding doors, the combination of a link secured to one of the doors, a lever connected to said link and the other of said doors and means engaging said lever for assisting in both the opening and closing movement of the doors.



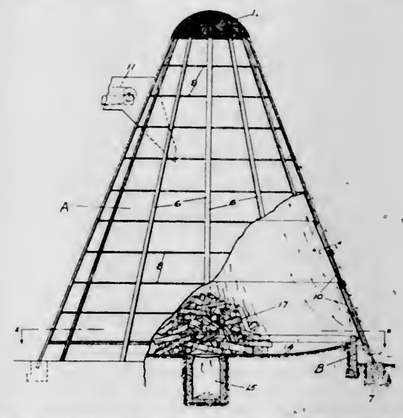
3. In a device for simultaneously operating a pair of sliding doors, the combination of a link pivoted to one of the doors, a lever connected to said link and to the other door and a spring carried by one of the doors and exerting an upward vertical pressure against said lever for assisting in both the opening and closing movement of the doors after they have reached a predetermined position in their travel.

4. In a device for simultaneously operating double parting sliding doors, the combination of a link pivotally connected to one of the doors, a lever fulcrumed to a suitable support and pivotally connected at one end to said link and at the other end to the other of said doors, means engaging said link when the doors are in closed position in order to lock the same and means for assisting in both the opening and closing movement of the doors.

5. In a device for simultaneously operating a pair of sliding doors, the combination of a link pivotally connected to one of the doors, a lever fulcrumed to a suitable support and pivotally connected to said link and the other of said doors, a vertical latch-bolt adapted to engage the link to automatically lock the doors when they slide into closed position and means for assisting in both the opening and closing movement of the doors after they have reached a predetermined position in their travel.

[Claims 6 to 9 not printed in the Gazette.]

1,171,005. WOOD-REFUSE INCINERATOR. JAMES T. STODDARD, Portland, Oreg. Filed May 24, 1915. Serial No. 30,064. (Cl. 110—8.)

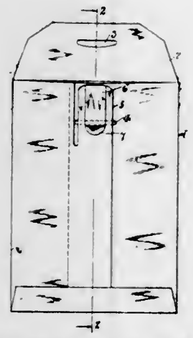


1. An incinerator of the character described, comprising a thin metal upright conical body shell A with openings at each of its ends and open throughout its length,

means to support said body at a suitable height, a circular fire-pit within the body, having a vertical pit wall the upper end of which is arranged at a suitable distance laterally from the body shell and also at a suitable height above its lower end, substantially as described.

2. An incinerator of the character described, comprising an upright body with openings at each of its ends and open throughout its length, said body being composed of a frame and a thin metal wall on the inside of the frame, means to support the body at a suitable height, a fire-pit within the body, having a vertical pit wall the upper end of which is arranged at a suitable distance laterally from the body wall and also at a suitable height above its lower end, substantially as described.

1,171,006. ENVELOP. HENRY TRENCHARD, Jr., New York, N. Y. Filed Sept. 24, 1915. Serial No. 52,329. (Cl. 229—84.)



1. An envelop comprising a body, a flap, and a flap locking member having a flexible portion and a relatively rigid portion, the said body and flap each being provided with a perforation adapted to receive the relatively rigid part of the locking member.

2. An envelop comprising a body, a flap and a hinged flap locking member flexible at the hinged end and relatively rigid toward the free end, said body and flap each being provided with a perforation adapted to engage the locking member to hold the flap in closed position.

3. An envelop comprising a body, a flap and a flap locking tongue fixed to said body and adapted to coöperate therewith and with said flap to close the envelop, said tongue being formed of the material of the body and having a reinforced free end.

4. An envelop provided with a flap and a fastening tongue secured to the back of the envelop, said back and flap having registering openings through which the tongue may be inserted, and a reinforcing piece secured to the tongue in such relation as to leave the attaching end of the tongue flexible and to lie in both openings when the tongue is in fastening position.

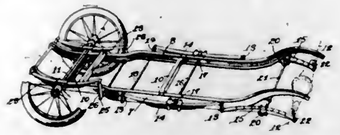
5. An envelop provided with a flap and fastening tongue secured to the back of the envelop, said back and flap having registering openings through which the tongue may be inserted, and a reinforcing piece secured to the tongue to stiffen it, the attaching portion of the tongue being left without reinforcement so as to remain flexible for the purpose described.

[Claim 6 not printed in the Gazette.]

1,171,007. SPRING SUSPENSION FOR VEHICLES. WILLARD IRVING TWOMBLY, New York, N. Y. Filed Dec. 14, 1914. Serial No. 877,096. (Cl. 267—27.)

1. In a vehicle the combination with the frame and the wheel axles, of a pair of springs having a link connection at one end and a fulcrum connection with the frame, and the free ends of the springs pivotally connected, one to the frame and the other to an axle.

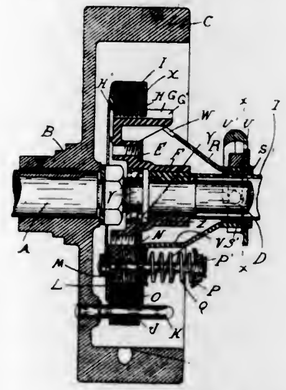
2. In a vehicle the combination with the frame and the wheel axles, of two pairs of springs, the springs of each pair having a link connection at one end and both springs of each pair fulcrumed to the frame, the free end of one spring of each pair having a link connection with the frame and the free ends of the other springs having a link connection with the axle.



3. In a vehicle the combination with the frame and the wheel axles, of two pairs of springs, the springs of each pair having a link connection at one end and both fulcrumed to the frame, the fulcrum of the rear spring of each pair being to the rear of a point midway the ends of the said spring, and the fulcrum of the other spring being substantially midway between its ends; and the free ends of one spring of each pair pivotally connected to the frame and the free end of the other springs pivotally connected to an axle.

4. In a vehicle the combination with the frame and the wheel axes, of two pairs of springs one pair at each side of the frame, the springs of each pair having a link connection at one end and fulcrumed to the frame, the fulcrum of the rear springs of each pair being in the rear of a point midway between the ends of said spring, and the free end of one spring of each pair pivotally connected to the frame and the free end of the other springs pivotally connected to an axle.

1,171,008. FRICTION-CLUTCH. JOHN G. UTZ, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 12, 1908. Serial No. 467,231. (Cl. 192—10.)



1. In a clutch, the combination with a series of annular friction disks, of a head within said disks engaging alternate members of the series, a member to which the other members of the series are connected, clamping plates at the ends of the series, said head and one of the clamping plates being provided with alined apertures, a pin secured to the other of said clamping plates and passing through said apertures, and a spring upon said pin for yieldingly drawing said plates together.

2. In a clutch, the combination with a series of annular friction disks, of a head within said disks engaging the alternate members of the series, a member to which the other members of the series are connected, an annular clamping plate for one end of the series, said head having an aperture therein, a pin on said clamping plate passing through said aperture, a movable clamping plate for the opposite end of the series, and a spring on said pin for yieldingly drawing said plates toward each other.

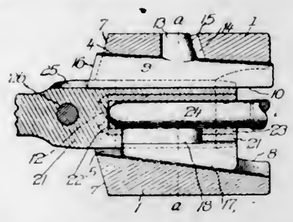
3. In a clutch, the combination with a series of annular friction disks, of a head within said disks engaging the alternate members of the series, a member to which the other members of the series are connected, clamping plates for the ends of the series, said head and one of the clamping plates being provided with alined apertures, a pin secured to the other of said clamping plates and passing through said apertures, a spring on said pin for yieldingly pressing said plates against the disks, and peripheral bearings on the disks which are free from said head for engaging said member.

4. In a clutch, the combination with a series of annular friction disks, of a head within said disks engaging the alternate members of the series, a member to which the other members of the series are connected, an annular clamping plate at one end of the series detachably engaging said head, a member having an annular flange forming the opposite clamping plate, said head and one of said clamping plates being provided with alined apertures, a pin secured to the other of said clamping plates and passing through said apertures, a spring upon said pin for yieldingly drawing said plates together, and an actuating flange on said member.

5. In a clutch, the combination with a series of annular friction disks, of a head within said disks engaging alternate members of the series, a member to which the other members of the series are connected, a shaft on which said head is mounted, a conical member having its small end slidably engaging said shaft and provided with an annular flange at its large end forming a clamping plate for said disk and an annular flange at its small end forming an actuating member, an annular clamping plate at the opposite end of the series, said head and the clamping plate on said conical member being provided with alined apertures, a pin projecting from the other clamping plate and passing through said apertures, and a spring on said pin for yieldingly drawing said plates against the disks.

[Claim 6 not printed in the Gazette.]

1,171,009. CHUCK FOR ROCK-DRILLS. JAMES C. H. VAUGHT, Detroit, Mich. Filed Mar. 3, 1914. Serial No. 822,245. (Cl. 255—57.)



1. In a drill chuck, the combination with a body having a shank socket, and a gib slot leading thereto, of a gib having an inclined outer face, a releasing key having an oppositely inclined outer face, a sliding sleeve provided with grooves to engage the gib and key and force the gib inward, and a projection on the front end of the sleeve for the purpose specified.

2. In a drill chuck, the combination with a body having a shank socket, and a gib slot leading thereto, of a gib having an inclined outer face, a retaining and releasing key having an oppositely inclined outer face, a projection on the key, the same being removed from the ends of the key, a sliding sleeve provided with grooves to engage the gib and key and force the gib inward, a recess in the sleeve to accommodate the projection on the key, and a projection on the front end of the sleeve for the purpose specified.

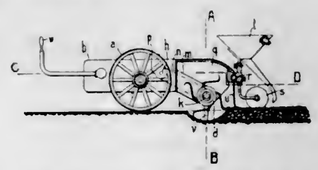
3. In a drill chuck, the combination with a body having a shank socket, and a gib slot leading thereto, of a gib adapted to the slot, a retaining and releasing key provided with a shoulder removed from its opposite ends, a sliding sleeve provided with interior longitudinal grooves to correspond with the gib and key, an inner recess in the sleeve to correspond with the shoulder on the key, and a projection on the front end of the sleeve for the purpose specified.

4. In a chuck for rock drills, the combination with a body and a socket therein to receive the shank of a drill steel, a slot leading to said socket, a gib in the slot, and a movable sleeve surrounding the body and gib, the sleeve being provided with a projection on its front end as and for the purpose specified.

5. In a chuck for rock drills having a body and a socket therein to receive the shank of a drill steel, a slot leading to said socket, a gib in the slot, and a sliding sleeve surrounding the body and gib, said sleeve being provided with projections on its front end, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

1,171,010. TILLING-MACHINE. KONRAD VICTOR VON MEYENBURG, Basel, Switzerland, assignor to the Firm of Motoculture Limited, Basel, Switzerland. Filed Mar. 12, 1913. Serial No. 753,789. (Cl. 97—72.)



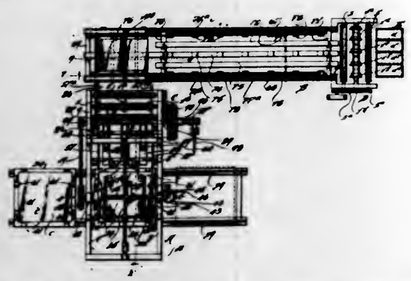
1. In tilling machines, the combination of running wheels, a rotary tool carrier with a shaft arranged behind said running wheels, a driving motor, a gear mechanism between said motor and the shaft of said rotary tool carrier, a further gear mechanism between said motor and said running wheels, a rigid structure constituting at the same time the carriage frame and a holding and inclosing box for the driving motor and said gear mechanisms and comprising a rear central hollow bracket piece for supporting the rotary tool carrier shaft in its middle part and inclosing part of the first named gear mechanism.

2. In tilling machines, the combination of running wheels, a rotary tool carrier with a shaft arranged behind said running wheels, a driving motor, a gear mechanism between said motor and the shaft of said rotary tool carrier, a further gear mechanism between said motor and the running wheels, a carriage frame box for the motor and said gear mechanisms, having a rear part formed by a bracket piece for supporting the rotary tool carrier shaft in its middle part so as to leave sidewardly free both its halves, with the tools, said bracket piece being hollow and inclosing part of the first-named gear mechanism, and a transverse beam centrally supported on said bracket piece to the rear of said rotary tool carrier and adapted to carry auxiliary implements on its laterally extending portions.

1,171,011. SHEET FEEDING AND CUTTING MACHINE. JOHN H. YOUNG, Randolph, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 10, 1913. Serial No. 805,711. (Cl. 164—62.)

1. In a sheet-feeding, and cutting, machine, the combination of a stationary supported cutter disposed to sever an initial sheet into smaller sheets, means to removably support and horizontally feed, in a given direction, said initial sheet to said cutter, means to advance said smaller sheets, in the same plane, simultaneously side by side, in said direction beyond said cutter; means to simultaneously receive, and movably support, said smaller sheets, side by side, in the same horizontal plane; another stationarily supported cutter disposed to cut each of said smaller sheets, in turn, into a plurality of still smaller sheets; and means to horizontally feed said first mentioned smaller sheets, sequentially, in procession, and out of contact with each other, to said last mentioned cutter in a direction angular to said first mentioned direction.

2. In a sheet-feeding, and cutting, machine, the combination of a stationarily supported cutter disposed to sever an initial sheet into smaller sheets; means to lift and drop, in the same vertical path, in advance of said cutter, said initial sheet horizontally disposed; movable means, normally projecting into said path, to guide said sheet while so lifted, and to movably support it thereon when so dropped; percussive means to impel said sheet toward said cutter; means to horizontally advance said smaller sheets in the same plane, simultaneously, side by side, in said direction beyond said cutter; means to simultaneously receive and movably support said smaller sheets, side by side, in the same horizontal plane; another stationarily supported cutter disposed to cut each of said smaller sheets, in turn, into a plurality of still smaller sheets; and means to horizontally feed said first mentioned smaller sheets, sequentially, in procession, and out of contact with each other, toward said last mentioned cutter in a direction angular to said first mentioned direction.



3. In a sheet-feeding, and cutting, machine, the combination of a stationarily supported cutter disposed to sever an initial sheet into smaller sheets; pneumatic means to lift and drop, in the same vertical path, in advance of said cutter, said initial sheet horizontally disposed; movable means normally projecting into said path, to guide said sheet while so lifted, and to movably horizontally support it thereon when so dropped; percussive means to impel said sheet toward said cutter; means to horizontally advance said smaller sheets, in the same plane, simultaneously, side-by-side, in said direction beyond said cutter, means to simultaneously receive, and movably support, said smaller sheets, side-by-side, in the same horizontal plane; another stationarily supported cutter disposed to cut each of said smaller sheets, in turn, into a plurality of still smaller sheets; and means to horizontally feed said first mentioned smaller sheets, sequentially, in procession, and out of contact with each other, toward said last mentioned direction.

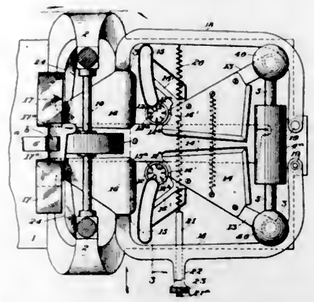
4. In a sheet-feeding machine, the combination of means to lift and drop a sheet horizontally disposed, and, normally projecting into the pathway of said sheet while so lifting, a plurality of thereby movable guide-rests, or T's, supported and disposed to resume normal position after clearance thereof by said sheet and to horizontally movably support it thereon when so dropped.

5. In a sheet-feeding machine, a rest disposed to, movably-against-gravity, normally uphold a sheet without contacting a portion thereof comprising a part of the edge of the sheet; a member advanceable without contacting said rest in a path in alinement with, and extending beyond, such normal location of said part of the edge; means to movably support said member out of contact with said rest; and means to impel said member in said path against said edge and beyond its said normal location.

[Claims 6 to 22 not printed in the Gazette.]

1,171,012. EDGE-IRONING MACHINE. WILLIAM A. ZEIDLER, New York, N. Y. Filed Jan. 17, 1911. Serial No. 603,109. (Cl. 68—9.)

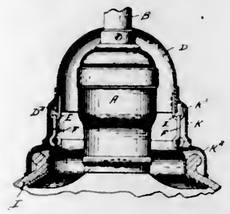
1. In an edge ironing machine, the combination of an iron, an arm, means for feeding the article, the iron having a vertically grooved contact face and being supported on the arm which is pivoted to swing in a horizontal plane, the pivot of said arm being relatively far distant from the iron and being located in the general direction of the plane of the contact face of the iron, and a guide ahead of the iron having ribs converging to the grooves in the iron, the feed means feeding the article edgewise through the groove in the iron, substantially as and for the purpose set forth.



2. In an edge ironing machine, the combination of an iron, an arm, means for feeding the article, the iron having a vertically grooved contact face and being supported on the arm which is pivoted to swing in a horizontal plane, the pivot of said arm being relatively far distant from the iron and being located about one-half the average throw of the iron outside a position of true alinement with the contact face of the iron, and guides ahead of the iron having ribs converging to the grooves in the iron, the feed means feeding the article edgewise through the groove in the iron and said iron pressing yieldingly against the edge of the iron, substantially as and for the purpose set forth.

3. In an edge ironing machine, the combination of irons having grooved contact faces, means for feeding the articles to the irons, and guides ahead of the irons having contact ribs converging to the grooves in the irons, said ribs being grooved to provide converging side walls which support the sides of the article adjacent its edge.

1,171,013. SCREWLESS ELECTRIC-SHADE HOLDER. LAURITZ W. ANDERSEN, Waterbury, Conn. Filed Nov. 8, 1915. Serial No. 60,426. (Cl. 240—115.)



1. A shade holder comprising a socket-receiving member, a continuous supporting member having outwardly extending portions adapted to engage the interior of a shade, and means for detachably connecting said socket-receiving and shape-supporting members.

2. A shade holder comprising a socket-receiving member, a continuous supporting member having outwardly extending portions adapted to engage the interior of a shade, and means for detachably connecting, the socket-receiving and shade-supporting members, and a third member enveloping and concealing said means.

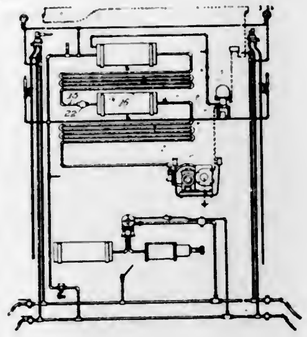
3. A shade holder comprising a socket-receiving member having hooks, a shade supporting member, and loops connected to said shade-supporting member and adapted to engage said hooks.

4. A shade holder comprising an upper shell adapted to receive a socket, and a continuous band suspended from said shell and having outwardly projecting portions adapted to engage the interior of a shade.

5. A shade holder comprising an upper shell adapted to receive a socket, a continuous band suspended from said shell and having outwardly projecting portions adapted to engage the interior of a shade, and a second shell telescoping on the first and adapted to envelop the lower end of the first shell and suspending means.

[Claims 6 to 9 not printed in the Gazette.]

1,171,014. SAFETY MEANS FOR PREVENTING AND REMOVING ICE AND OTHER OBSTRUCTIONS IN FLUID-PRESSURE SYSTEMS. EDWARD W. ANGER and HARRY H. HORNSBY, Chicago, Ill. Filed Jan. 23, 1915. Serial No. 3,893. (Cl. 137—70.)



1. The herein described method of preventing or removing a formation of frost or ice in the pipes, tanks, valves and the like, of a system in which there is a flow of air, which consists in causing to be injected into the air an agent which forms with moisture or water a mixture tending to prevent the existence of ice or frost.

2. The herein described method of preventing or removing a formation of frost or ice in the pipes, tanks, valves and the like of an intermittently operated air system, which consists in causing to be injected into the flowing air each time the system is operated to cause a flow of the air, an agent which forms with moisture or water a mixture tending to prevent the existence of ice or frost.

3. The herein described method of preventing or removing an accumulation of oil or grease in the pipes, tanks, valves and the like of a system in which there is a flow of air, which consists in causing to be injected into the system an agent capable of cutting the grease or oil.

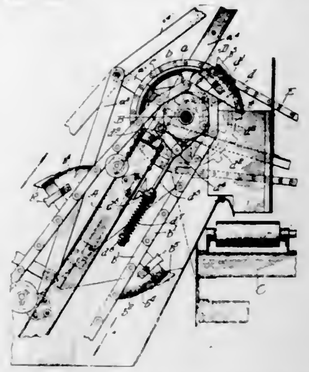
4. The herein described method of preventing or removing an accumulation of frost, ice, oil or grease in the pipes, tanks, valves and the like, of a system in which there is a flow of air, which consists in causing to be injected into the fluid an agent which forms with moisture or water a mixture tending to prevent the existence of ice or frost, and capable of cutting the oil or grease.

5. The combination with a system in which there is a flow of air, of means for causing an agent which forms with moisture or water a mixture tending to prevent the existence of ice or frost to be injected into said air.

[Claims 6 to 23 not printed in the Gazette.]

1,171,015. EXCAVATOR-BUCKET CLEANER. FREDERIC E. BAGER, Winthrop Harbor, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 16, 1914. Serial No. 812,515. (Cl. 37—24.)

1. An excavator comprising a traveling bucket, a support, a bucket cleaner pivoted on said support, a sliding element, a link connecting said element with the cleaner, said link having one end pivoted on the cleaner and the other end pivoted on said element, a spring for yieldingly holding said cleaner in the path of the bucket, applied to said element, and a connection between said element and support, serving to counteract side thrust on said element by said link.



2. An excavator comprising a traveling bucket, a support, a bucket cleaner pivoted on said support, a sliding element, a link connecting said element with the cleaner, a spring for yieldingly holding said cleaner in the path of the bucket, applied to said element, and a connection between said element and support, serving to counteract side thrust on said element by said link, said connection having a link pivoted at one end on said support, and pivotally connected at its other end with said element.

3. An excavator comprising a traveling bucket, a support, a bucket cleaner pivoted on said support, a sliding element, a link connecting said element with the cleaner, a spring for yieldingly holding said cleaner in the path of the bucket, applied to said element, and a connection between said element and support, serving to counteract side thrust on said element by said link, sprockets at each side of said cleaner, chains on said sprockets, and means for rigidly connecting said bucket with a link of each chain.

4. An excavator comprising a traveling bucket, a pivoted cleaner disposed in position to pass through the bucket, a rod mounted to slide endwise, a link connecting the rod with said cleaner, and a spring for yieldingly holding said cleaner in normal position, applied to said rod.

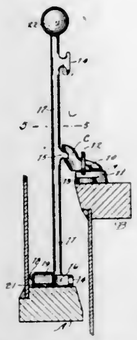
5. An excavator comprising a traveling bucket, a pivoted cleaner disposed in position to pass through the bucket, a rod mounted to slide endwise, a link connecting the rod with said cleaner, and a spring for yieldingly holding said cleaner in normal position, applied to said rod, a support, and a link connection between said support and rod.

[Claims 6 to 8 not printed in the Gazette.]

1,171,016. SASH-LOCK. WILLIAM F. BARGER, Norwood, Ohio. Filed Mar. 18, 1915. Serial No. 15,330. (Cl. 16—30.)

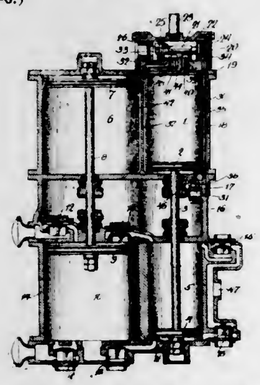
In a lock of the type explained, to positively lock the complementary sashes of a window to each other, the combination of an eccentric locking member mounted upon the meeting rails of one of the sashes and comprising a handle and an upright, crescent-shaped locking cam which has a horizontally extending slot open at one end and narrowing toward its other end, a keeper bar formed to integrally contain a short and a long member arranged at right angles to each other and provided with a series of shanks projecting toward the locking cam and adapted to occupy the narrow end of the slot therein, said shanks having elongated locking buttons which project from each side thereof parallel to the keeper bar, a journal projecting from this bar at the apex of the angle where its members diverge, and a bearing for this journal whereby the bar is adjustably mounted upon the meeting rail of the

other sash and so that either of its members may occupy a position in which it extends over the meeting rail and in contact therewith and which position places the other member of said keeper bar in a position which permits the locking cam on the other sash to enter positive locking engagement with the keeper bar by receiving the shank



of one of the locking buttons thereof in the narrow end of its slot so that said locking button occupies the concave side of the cam with one part of the button hooking over the lower edge of this slot in said cam and with the other part of the button hooking over the upper edge thereof.

1,171,017. FLUID-COMPRESSOR. JOHN S. BARNER, Albany, N. Y. Filed Mar. 2, 1909. Serial No. 480,927. (Cl. 121—6.)

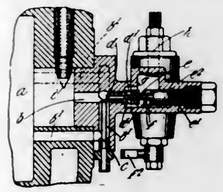


1. In a compound fluid compressor, a high pressure motor cylinder, conduits for the motive fluid communicating with both ends of said cylinders, a low pressure motor cylinder, conduits for the motive fluid communicating with both ends of the low pressure cylinder, a main supply pipe for the motive fluid, and an exhaust pipe, and a single fluid-actuated control valve controlling all of said conduits and so arranged that in one position it connects the main supply pipe with the lower end of the high pressure cylinder, the upper end of the high pressure cylinder with the upper end of the low pressure cylinder, and the lower end of the low pressure cylinder with the exhaust, and in the other position it connects the main supply pipe with the upper end of the high pressure cylinder, the lower end of the high pressure cylinder with the lower end of the low pressure cylinder, and the upper end of the low pressure cylinder with the exhaust, conduits for supplying fluid to shift said control valve, and a tappet valve at each end of the high pressure cylinder in position to be actuated by the piston in its extreme positions, said tappet valves controlling the last named fluid conduits, in combination with a piston in each of said cylinders.

2. In a fluid-compressor, a motor cylinder with admission and exhaust ports and passages, a piston in said cylinder, a fluid actuated control-valve controlling said passages and having in communication withe each side thereof a conduit for admitting fluid thereto and a conduit for discharging fluid therefrom directly to atmospheric pressure, and two tappet valves located at opposite ends of the cylinder in position to be actuated by the piston in its extreme positions and each controlling the admission and discharge conduits of one side of the control-valve.

3. In a fluid compressor, a motor cylinder with admission and exhaust ports and passages, a piston in said cylinder, a valve chest having a seat in which the said passages lead, a valve on said seat comprising a stem-carrying end actuating pistons and intermediate separating pistons coacting with said seat to change the relative connections of the passages when the valve is shifted, said valve having in communication with its chamber outside of each of the end pistons a conduit for admitting fluid thereto and a conduit for discharging fluid therefrom, and two tappet valves located at opposite ends of the cylinder in position to be actuated by the piston in its extreme positions and each controlling the admission and discharge conduits of one end of the control valve.

1,171,018. APPARATUS FOR MIXING ATOMIZED FUEL WITH THE AIR IN INTERNAL-COMBUSTION ENGINES. EDWARD C. BLACKSTONE, FRANK CARTER, and EVERSHED CARTER, Stamford, England. Filed Mar. 16, 1915. Serial No. 14,766. (Cl. 123—33.)



1. In an internal combustion engine, the combination with the combustion chamber, of a compressed air reservoir having a passage communicating with the chamber, a nozzle in said passage, a valve controlling said nozzle, means for delivering fuel to the passage whereby a mixture of air and fuel is delivered to the combustion chamber, and means for circulating the mixture delivered to the combustion chamber back in the direction of the reservoir and then redelivering same to the passage in advance of the nozzle.

2. In an internal combustion engine, the combination with the combustion chamber including a compressed air reservoir in its wall and having a passage in its wall connecting the chamber with the reservoir, the wall of said chamber further having a circulated passage communicating at one end with the chamber and at its other end with the first named passage, a nozzle in the first named passage, a nozzle in the first named passage outwardly of its connection with the second named passage, a valve controlling said nozzle, and means for delivering fuel to the first named passage.

1,171,019. ADVERTISING APPARATUS. ROBERT S. BLAIR, South Orange, N. J. Filed July 9, 1909. Serial No. 506,643. (Cl. 40—62.)



1. In apparatus of the nature described, in combination, a frame, a plurality of fixed unitary signs mounted in said frame in inclined positions, a plurality of movable unitary signs, a plurality of pairs of upper and lower guides mounted in said frame, each guide extending in an inclined

position from the front of one of said fixed signs to the rear of the neighboring sign and having mounted therein said movable signs, a member connected to each of said movable signs, and means adapted to reciprocate said member.

2. In apparatus of the nature described, in combination, a pair of fixed signs, a pair of guides extending forwardly of one of said signs and to the rear of the other thereof, a sign mounted within said guides and adapted to move from a position back of one of said fixed signs to a position forward of the other of said fixed signs, and means adapted to move said movable sign, each of said guides comprising a channel shaped portion forwardly of one fixed sign and an angle portion at the rear of the other fixed sign.

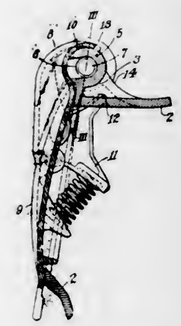
3. In apparatus of the nature described, in combination, a frame, a plurality of fixed signs mounted in said frame, a plurality of movable unitary signs mounted in said frame in an inclined position, means adapted to guide said movable signs between said fixed signs into positions respectively in front of said fixed signs, and means adapted simultaneously to move said movable signs into and out of said positions, said guides being adapted to engage said movable signs at their upper and lower edges.

4. In apparatus of the nature described, in combination, a frame, a plurality of fixed card holders mounted within said frame in inclined positions, guides mounted upon the upper and lower members of said frame and extending from positions at the rear of said fixed card holders to positions forwardly thereof, a plurality of movable card holders positioned in said guides, a member connected with said several movable card holders and provided with a pair of projecting portions, an endless chain mounted to travel in an upright plane and provided with a projecting member adapted alternately to engage said portions and reciprocate said movable signs throughout a distance substantially equal to their length, and means adapted to drive said chain.

5. In apparatus of the nature described, in combination, a horizontal support, a plurality of stationary sign holders disposed in different planes on said support, a plurality of sign holders disposed in different planes and movable on said support, guides extending in front and rear of the stationary sign holders, and means adapted to automatically move the movable sign holders in the guides into and out of position opposite the stationary sign holders.

[Claim 6 not printed in the Gazette.]

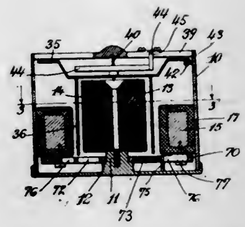
1,171,020. JOURNAL-BOX. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 6, 1915. Serial No. 6,470. (Cl. 64—23.)



1. In a journal box, a hinge lug on said box having rounded bosses and cam surfaces thereon, the bosses on the hinge-lug having sockets open at their forward sides, a lid having an upward extension with arc-shaped bearings adapted to turn on said bosses, the lid having trunnions mounted on its inner face adapted to fit into said socket openings, a spring seated on the inside of the lid, a lever pivoted to the lid, one arm engaging said spring, and the other arm the cam surfaces on the hinge lug, and being adapted in all positions to draw said socket bearings tightly against the bosses, to keep said trunnions in said sockets and to coöperate with said trunnions, lug, bearing bosses and sockets in limiting the upward movement of the lid.

2. A journal box having a hinge lug, said hinge-lug having arc-shaped bosses and cam surfaces thereon, a lid having an arc-shaped extension engaging and bearing upon said bosses, a lever pivoted on the inside of the lid, one arm of the lever acting as a wedge between the pivot of the lever and said cam surfaces, said hinge-lug having also sockets in said bosses, open at the forward side, and said lid having trunnions also thereon, adapted to enter said sockets and to coöperate with said lever and cam surfaces in holding the said bearings of the lid against said bosses in all positions of the lid.

1,171,021. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed May 25, 1914. Serial No. 840,752. (Cl. 175—183.)



1. A speedometer comprising an electromagnetic member wound to provide a rotating magnetic field, an indicator member in inductive relation thereto, an armature, thermostatic means for varying the magnetic flux through said indicator member and comprising movable pole pieces for providing a path for the magnetic flux around said indicator member and means for operating the said movable pole pieces.

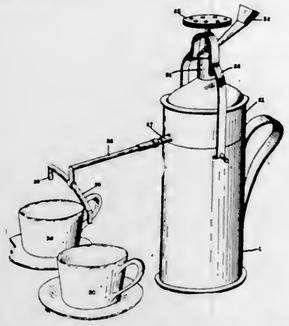
2. A speedometer comprising an electro-magnetic member wound to provide a rotating magnetic field, an indicator member in inductive relation thereto, an armature, movable pole pieces supported on said electro-magnetic member and thermostatic means for operating said pole pieces whereby to provide a path for the magnetic flux around said indicator member to compensate for temperature changes of resistance in the circuit of said electro-magnetic member and means for supplying electric current to said electro-magnetic member.

3. A speedometer comprising an electro-magnetic wound to provide a rotating magnetic field, an indicator in inductive relation thereto, an armature, movable pole pieces supported on said electro-magnet, means for operating said pole pieces, a thermostat for actuating the said means and means for supplying electric current to the said electro-magnet.

1,171,022. PERCOLATOR. STANISLAO CILETTI, Newark, N. J. Filed Nov. 19, 1914. Serial No. 872,965. (Cl. 53—3.)

1. In a percolator, the combination of a fluid container, a receptacle having an enlarged upper end adapted to receive grounds and a depending stem adapted to supply water to the grounds from the container, said receptacle having a circumferential rim at its top adapted to seat on the top of the container, whereby said receptacle depends entirely within said container and seals the top thereof, a hollow top overlying said receptacle and retain-

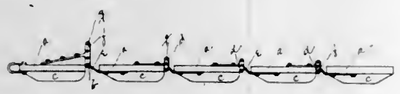
ing the same seated upon the top of the container, said top adapted to seat imperviously in peripheral engagement with the top of the container and having a trap in its bottom through which the beverage may pass from the receptacle into said top, and means for discharging the beverage from said top.



2. In a percolator, the combination of a fluid container, a receptacle having an enlarged upper end adapted to receive grounds and a depending stem adapted to supply water to the grounds from the container, said receptacle having a circumferential rim at its top adapted to seat on the top of the container, whereby said receptacle depends entirely within said container and seals the top thereof, a hollow top overlying said receptacle and retaining the same seated upon the top of the container, said top adapted to seat in peripheral engagement with the top of the container and having a trap in its bottom through which the beverage may pass from the receptacle into said top, and a spout for discharging the beverage from said top having diverging branches whereby the beverage may be distributed into a plurality of receptacles.

3. In a percolator, the combination of a fluid container, a receptacle having an enlarged upper end adapted to receive grounds and a depending stem adapted to supply water to the grounds from the container, said receptacle having a circumferential rim at its top adapted to seat on the top of the container, whereby said receptacle depends entirely within said container and seals the top thereof, a hollow top overlying said receptacle and retaining the same seated upon the top of the container, said top adapted to seat imperviously in peripheral engagement with the top of the container and having a trap in its bottom through which the beverage may pass from the receptacle into said top, means for discharging the beverage from said top, and a signal from the hollow top adapted to be operated by steam escaping from said trap after discharge of the beverage therethrough.

1,171,023. AGRICULTURAL IMPLEMENT. CYRUS C. CLARK, Marshall, Wis. Filed Oct. 1, 1915. Serial No. 53,636. (Cl. 55—22.)



1. In an agricultural implement, a plurality of transverse sections flexibly connected one behind the other, each of said sections carrying a series of agitating blades, the blades on some of the sections being arranged transversely thereto and on others in reverse and varying angle relation thereto, and draft attachments.

2. In an agricultural implement, a plurality of transverse sections flexibly and adjustably connected one behind the other, each of said sections carrying a series of agitating blades, the blades on some of the sections being arranged transversely thereto and on others in reverse and varying angle relation thereto, and draft attachments.

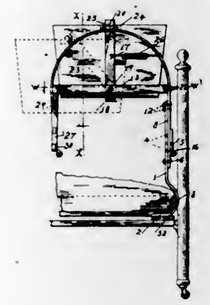
3. In an agricultural implement, a plurality of transverse sections flexibly connected one behind the other, each of said sections carrying a series of agitating blades having concave working faces, the blades on some of the sections being arranged transversely thereto and on the others in reverse and varying angle relation thereto, and draft attachments.

4. In an agricultural implement, a plurality of transverse sections flexibly and adjustably connected one behind the other, each of said sections carrying a series of agitating blades having concave working faces, the blades on some of the sections being arranged transversely thereto and on others at reverse and varying angle relation and draft attachments.

5. In an agricultural implement, a plurality of transverse sections, each section except the rear one being provided at its rear edge with T-shaped connecting members, and also each section except the front one being provided at its front edge with connecting members for engagement with the said T-shaped connecting members; agitating blades attached to the under surface of said sections and arranged in transverse and varying angle relation thereto, and draft attachments.

[Claim 6 not printed in the Gazette.]

1,171,024. CRIB. STUART J. CLARK, Auburn, Ill., assignor of one-fourth to Earl Faust, Auburn, Ill., and one-fourth to John Dodot, McCook, Nebr. Filed Apr. 12, 1915. Serial No. 20,778. (Cl. 5—59.)



1. In a crib, a crib-frame comprising permanent legs, arches, cross-pieces, oscillative arms and detachable legs; in combination wth standards attachable to a bed and adapted to support the crib-frame above the foot of the bed.

2. In a crib, the combination of a crib-frame, standards attachable to a bed and adapted to support the crib-frame above the foot of the bed, depressible arms connected with the crib-frame, and a latch adapted to hold said arms in their depressed position.

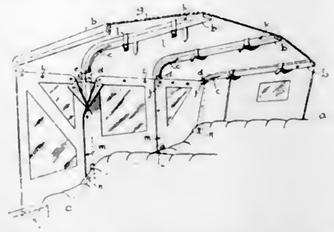
3. In a crib, the combination of a crib-frame, standards attachable to a bed and adapted to support the crib-frame above the foot of the bed, depressible arms connected with the crib-frame and a latch adapted to hold said arms in variable depressed positions.

4. In a crib, the combination of a crib-frame, standards attachable to a bed and adapted to support the crib-frame above the foot of the bed, depressible arms normally upright on the crib-frame, a cradle oscillative on said arms, means for holding said arms in their depressed position, and means for returning said arms to their normal position.

5. In a crib, the combination of arches, permanent legs integral with the arches, side-rails connecting said permanent legs, cross pieces transverse to said arches, and provided with sockets, detachable legs having tenons fitting in the sockets of said cross pieces, and side rails connecting said detachable legs.

[Claims 6 and 7 not printed in the Gazette.]

1,171,025. VEHICLE SIDE CURTAIN. JEFFREY N. COLLINS, Jackson, Mich. Filed May 24, 1913. Serial No. 769,571. (Cl. 21—62.)



1. The combination with a vehicle top provided with bows and a weather-excluding fabric stretched only part way down over the sides of the bows to form the quarter, of a bracket on one of the bows at the curvature thereof, a tab slidably secured to the bracket to travel along the bow upon the bracket, a flexible curtain at one corner detachably secured to the free end of the tab, and means on the under side of the top for holding the curtain when it has been made into a package for stowage, the said curtain being brought into position for such stowage by the movements allowed by the tab and bracket.

2. In combination with a foldable vehicle top, a side curtain, means on the top near one of its sides for detachably connecting the outer corner of the curtain to the top, and permitting said curtain to be shifted to occupy an operative position longitudinally of the top or an inoperative position transversely of the top, means on the top for supporting the curtain in stored relation thereto, and means for movably supporting the detachable connecting means on the top so that the same may shift to various positions to prevent its obstructing the folding of the top, said last mentioned means comprising an elongated supporting bracket and the connecting means comprising a tab sleeved thereon and carrying a fastening device to engage the curtain.

1,171,026. TYPE-WRITING MACHINE. CORNELIUS B. CORCORAN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 9, 1913. Serial No. 777,983. (Cl. 197—139.)



1. In a typewriting machine, the combination of a platen mounted in a platen frame, a rail supported in parallelism with said platen, a carrier mounted on said rail, a guide finger attached to the carrier, a roll mounted on said guide finger, a shiftable member splined to the rail, and a carrier locking pin on said member lying behind the front edge of the carrier when the feed roll bears normally against the platen.

2. In a typewriting machine, the combination of a platen mounted in a platen frame, a rail supported in parallelism with said platen, a carrier slidable and rotatable upon said rail, a guide finger attached to said carrier, a feed roll mounted in said guide finger, locking means for said carrier to prevent said guide finger and feed roll from rising from the surface of the platen, said locking means held frictionally in an operative position, and means acting to render said locking means inoperative upon depressing the guide finger.

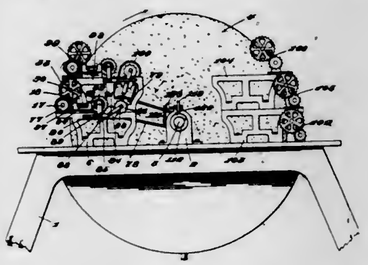
3. In a typewriting machine, the combination of a platen mounted in a platen frame, a rail supported parallel to said platen, a carrier mounted to slide upon said rail, a groove in said rail, means on said carrier adapted to engage said groove to yieldingly hold the carrier against rotation, a guide finger attached to the carrier, a roll mounted on said guide finger, engaging means on said rail, and means on said carrier adapted to coöperate with said engaging means, whereby the carrier and the finger held thereby may be held rigidly against rotation.

4. In a typewriting machine, the combination of a platen mounted in a platen frame, a rail supported in said frame parallel with said platen, said rail having a groove therein, a carrier slidable along said rail and having means for yieldably engaging said groove, a guide finger on said carrier, and means on the rail engaging said groove for positively locking said carrier against rotation.

5. In a typewriting machine, the combination of a platen frame, a platen mounted therein, a round rail supported in said frame parallel with the platen, a groove in said rail extending lengthwise thereof, carriers mounted on said rail, spring-held members mounted on said carriers and adapted for engagement with the groove of said rail, paper-holding fingers mounted on the ends of said carriers and adapted to press the paper toward the platen when the spring-held member is in engagement with the groove of the rail, and means on said rail engaging said groove for positively locking said carrier against rotation.

[Claims 6 to 10 not printed in the Gazette.]

1,171,027. MACHINE FOR GRINDING THE EDGES OF LENSES AND THE LIKE. JOSEPH H. COSSMAN, Irvington, N. J., assignor, by mesne assignments, to Cossman Manufacturing Company, a Corporation of New Jersey. Filed Aug. 17, 1912. Serial No. 715,552. (Cl. 51—3.)



1. In a machine of the character described, the combination with a grinding stone, of lens supporting means having parts adapted to rotate and present lenses to said grinding stone, a second lens supporting means mounted upon the first-mentioned lens supporting means and having parts adapted to rotate and present lenses to a different portion of the periphery of said grinding stone, driving connections between the rotatable parts of the first-mentioned lens supporting means and the grinding stone, and other driving connections between the rotatable parts of said second lens supporting means and said first-mentioned driving connections.

2. In a machine of the character described, the combination with a grinding stone, of lens supporting means having parts adapted to rotate and present lenses to said grinding stone, a second lens supporting means mounted upon the first-mentioned lens supporting means and having parts adapted to rotate and present lenses to a different portion of the periphery of said grinding stone, driving connections between the rotatable parts of the first-mentinoned lens supporting means and the grinding stone, other driving connections between the rotatable parts of said second lens supporting means and said first-mentioned driving connections, and a clutch in one of said driving connections at a point farther away from the grinding stone than the union of the two driving connections.

3. In a machine of the character described, the combination with a substantially horizontal elongated frame and

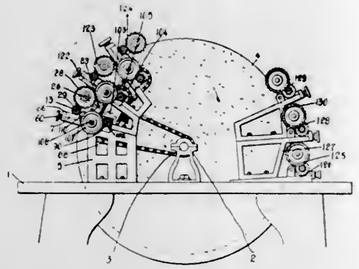
a grinding stone mounted therein, of a lens supporting means mounted transversely of said frame adjacent said grinding stone and having parts adapted to rotate and present lenses to the periphery thereof, a second lens supporting means above said first-mentioned lens supporting means also arranged transversely of the frame adjacent to the grinding stone and having parts adapted to rotate and present lenses to the periphery of said stone, and driving connections for transmitting motion to either of said rotatable parts of the lens supporting means while the other remains idle.

4. In a machine of the character described, the combination of a substantially horizontal frame, a grinding stone mounted therein with substantially one-half of it projecting above said frame, a plurality of lens supporting means extending upward from said frame adjacent the periphery of the grinding stone and having parts adapted each to rotate and present lenses to said grinding stone, and driving means for imparting motion to any one of said rotatable parts of the lens supporting means while the others remain idle.

5. In a machine of the character described, a lens supporting means comprising a base providing trunnions, a shaft extending through said trunnions, a carriage having a tubular portion pivotally receiving at its ends the said trunnions and inclosing the shaft between said trunnions, a lens carrier journaled in said carriage, and a helical spring in said tubular portion of the carriage for swinging the carrier.

[Claims 6 to 14 not printed in the Gazette.]

1,171,028. MACHINE FOR GRINDING THE EDGES OF LENSES. JOSEPH H. COSSMAN, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,715. (Cl. 51—3.)



1. In a machine of the character described, the combination with a grinding stone, of lens supporting means adapted to present lenses to said grinding stone, a second lens supporting means mounted upon the first-mentioned lens supporting means and adapted to present lenses to a different portion of the periphery of said grinding stone at substantially the same angle thereto as said first-mentioned lens supporting means presents its lenses, driving connections for operating the first-mentioned lens supporting means from the grinding stone, and other driving connections for operating the said second lens supporting means from said first-mentioned driving connections.

2. In a machine of the character described, the combination with a grinding stone, of lens supporting means adapted to present lenses to said grinding stone, a second lens supporting means mounted upon the first-mentioned lens supporting means and adapted to present lenses to a different portion of the periphery of said grinding stone at substantially the same angle, driving connections for operating the first-mentioned lens supporting means from the grinding stone, other driving connections for operating the said second lens supporting means from said first-mentioned driving connections, and a clutch in one of said driving connections at a point farther away from the grinding stone than the union of the two driving connections.

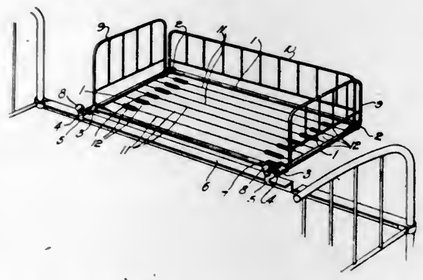
3. In a machine of the character described, the combination with a substantially horizontal elongated frame and a grinding stone mounted therein, side pieces mounted at one end of said frame on opposite sides of said grinding stones in planes substantially parallel therewith, the top and bottom edges of each of said side pieces being inclined to each other, a second pair of side pieces upon said first mentioned side pieces having their top and bottom edges inclined to each other, and lens supporting means between corresponding pairs of side pieces adapted to present lenses to the periphery of said grinding stone.

4. In a machine of the character described, the combination with a frame and a grinding stone having an axle mounted in said frame, of side pieces mounted on said frame on opposite sides of said grinding stone, a shaft carried by said side pieces substantially parallel to said axle, a carriage mounted to swing on said shaft providing a rotary lens carrier adapted to be rotated by said shaft and present lenses to the grinding stone, a counter shaft mounted on one of said side pieces substantially parallel to said axle and carriage shaft between the two, means for driving said carriage shaft from the counter shaft, a sprocket rotatably loose on said counter shaft, means for driving the sprocket from the axle, and clutch means for connecting said sprocket and counter shaft as desired.

5. In a machine of the character described, the combination with a frame and a grinding stone having an axle for mounting said grinding stone in said frame, of a lens supporting means, a sprocket wheel therefor, a sprocket wheel on said axle, a chain connecting said sprockets, and a guiding trough for said chain for preventing dislodgment of said chain from its sprockets.

[Claims 6 to 15 not printed in the Gazette.]

1,171,029. FOLDING COT FOR CHILDREN. FELIX DUTOUR, Elie, Manitoba, Canada. Filed May 24, 1915. Serial No. 30,025. (Cl. 5—59.)



1. A cot comprising the combination of a frame, a side and end members hingedly connected with the frame, and an attaching member removably connected to the frame and arranged to selectively engage the horizontal and vertical flanges of the side bar of a common form of bed frame.

2. A cot comprising the combination of a frame, a side and end members on the frame, T-members on the frame provided with internal screw threads and L-shaped members each provided at one end with a hook arranged to engage the flange of the side bar of a bed when either end is engaged in the T-members, to engage respectively the vertical and horizontal flanges of the side bar of a common form of bed frame.

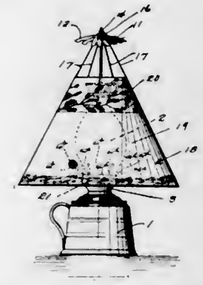
3. In a cot of the character described; a rectangular base frame; mattress supporting means carried thereby; end frames having the lower ends of their side rods bent in L shape and journaled in the side rods of the said base frame, each L portion being provided with a sharp inward bend near the outer end of its stem; a side frame at one side of the cot having the lower ends of its end rods bent in L shape and journaled in the end rods of the said base frame; a T member secured at each corner of the other side of the base frame and internally screw threaded; an L member provided, at one end of its stem, with integral hooks adapted to engage the side bar of a bed, and adapted to have either one end of its stem portion or one end of its short branch threaded into the said T member, selectively; and a thumb screw threaded through the stem of the said L member.

1,171,030. FINGER-RING. JOSEPH FINBERG, Attleboro, Mass., assignor to Finberg Manufacturing Company, Attleboro, Mass. Filed Aug. 27, 1915. Serial No. 47,678. (Cl. 63—16.)



A rigid finger ring composed of but two pieces, an integral band and a head, said band having its ends spaced and said head bridging the space between the band ends and having a pair of spaced slots which receive the ends of the band, said band being formed of bendable metal and the ends thereof being firmly engaged on top of the head ends and with the end edges of the head and seating on the band periphery radially thereof so as to be rigidly connected to the head.

1,171,031. LAMP-SHADE. JAMES FISHER, Watertown, Mass. Filed Apr. 28, 1914. Serial No. 835,004. (Cl. 240—49.)

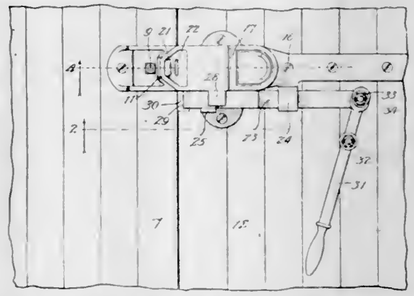


1. The combination with an ordinary kerosene lamp having a chimney, of a strand of wire having its lower end coiled to form resilient convolutions for engaging the outer surface of the chimney a short distance below the crown of the same, said wire bent inwardly from said convolutions and upwardly, extending upwardly from the chimney substantially in alinement with the longitudinal axis of the same, a propeller rotatably mounted upon the upper end of said wire, a translucent decorated shade connected to said propeller for rotation thereby, and a plurality of yieldably supported decorating members carried by said chimney interiorly of said shade.

2. The combination with an ordinary kerosene lamp having a chimney, of a strand of wire having its lower end coiled to form resilient convolutions for engaging the outer surface of the chimney a short distance below the crown of the same, said wire bent inwardly from said convolutions and upwardly, and extending upwardly from the chimney substantially in alinement with the central axis of the same, a propeller rotatably mounted upon the upper end of said wire, a translucent decorated shade connected to said propeller for rotation thereby, a collar mounted about said chimney below said resilient convolutions, a plurality of resilient strands of wire connected to said collar, and decorative articles carried by said strands of wire and yieldably supported thereby interiorly of said shade.

3. The combination with an ordinary kerosene lamp having a chimney, of a translucent shade positioned about the chimney, means for rotating the shade, a collar mounted about said chimney, a plurality of resilient strands of wire connected to said collar, and decorative articles carried by said strands of wire and yieldably supported thereby interiorly of said shade.

1,171,032. MEANS FOR OPENING DOORS. MATTHEW J. FLANNERY, Matteson, Ill. Filed July 26, 1915. Serial No. 41,891. (Cl. 268—6.)



1. The combination with members relatively movable toward and away from each other, of means for forcing said members apart comprising a shiftable device supported on the outer face of one of said members to move toward and away from the other of said members and carrying a rearwardly-extending lug movable therewith, one of said members containing a recess in its edge-portion opposing the other of said members, and opening through the outer face of the member and extending rearwardly of the outer face of the other member and into which recess said lug projects, said shiftable device being adapted to engage at its lug the edge portion of one of said members other than the one carrying it and force said members apart when actuated.

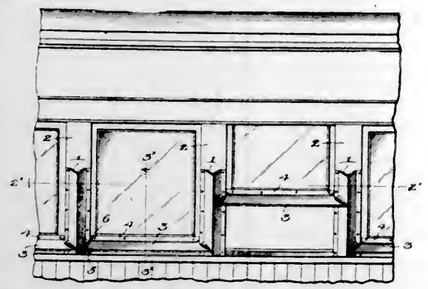
2. The combination with members relatively movable toward and away from each other, of means for forcing said members apart comprising a shiftable device supported on the outer face of one of said members to move toward and away from the other of said members and carrying a rearwardly-extending lug movable therewith, one of said members containing a recess in its edge-portion opposing the other of said members, and opening through the outer face of the member and extending rearwardly of the outer face of the other member and into which recess said lug projects, said shiftable device being adapted to engage at its lug the edge-portion of one of said members other than the one carrying it and force said members apart when actuated, and a lever pivoted on the member carrying said shiftable member and connected with the latter for operating it.

1,171,033. CINDER-GUARD. DAVID FUNSTEN, Washington, D. C. Filed Oct. 9, 1915. Serial No. 55,090. (Cl. 98—21.)

1. The combination with a car having a window provided with a vertically movable sash, of a cinder guard comprising a lateral shield extending across the window and outward therefrom and movable up and down by the window sash, and a substantially vertical shield extending outward from the side of the car in close proximity to an end of said lateral shield.

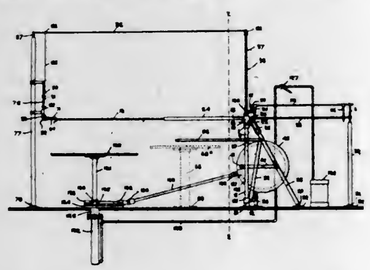
2. The combination with a car having windows provided with vertically movable sashes, of a cinder guard comprising a substantially vertical stationary shield located adjacent the side of a window and extending outward from the side of the car, and a lateral shield secured to the sash of said window near its bottom, extending outwardly therefrom and adapted to be moved up and down by said

sash in a path substantially parallel to said side shield and adjacent thereto.



3. The combination with a car having windows provided with vertically movable sashes, of a cinder guard comprising substantially vertical stationary shields located between adjacent windows and extending outward from the side of the car, and a lateral shield secured to the window sash near its bottom, lying in a plane intersecting that of said vertical shields and movable up and down therebetween by the raising and lowering of said sash.

1,171,034. BAG-TURNING MACHINE. PETER J. GAGNON, Jr., South Lowell, Mass., assignor of one-half to Ralph A. Wilson, Lowell, Mass. Filed Feb. 23, 1915. Serial No. 9,772. (Cl. 139—47.)



1. A bag turning machine comprising a plurality of bag turning members, means to reciprocate the same to cause them to engage, enter and while advancing reverse a positioned bag, means for gripping and holding the bottom end of the turned bag during the withdrawal of the bag turning members and means to release the bag gripping means from engagement with the bag when the bag turning members leave the mouth of the bag thereby to drop the bag horizontally.

2. A bag turning machine comprising a plurality of bag turning members, means to reciprocate the same to cause them to engage, enter and reverse a positioned bag, gripping means comprising members adapted to penetrate the bag and coöperating supporting members adapted to hold the bag in horizontal position during the withdrawal of the bag turning members and means simultaneously to release the bag gripping means from the bag when the bag turning members leave the mouth of the bag.

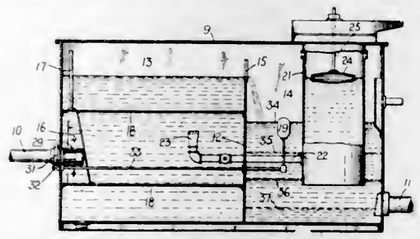
3. A bag turning machine comprising a plurality of bag turning members, means to reciprocate the same to cause them to engage, enter and reverse a positioned bag, stripping means comprising a slide having a pair of pronged arms adapted to penetrate the bag and coöperating supporting members and means for simultaneously actuating said slide and said supporting members to grasp and hold the bag during the withdrawal of the bag turning means, and means for separating the prongs and supporting members as the bag turning members emerge from the mouth of the bag, whereby the bag may be dropped horizontally.

4. A bag turning machine comprising a plurality of bag turning members, a cross head connected to said members, means to reciprocate said cross head to cause said members to engage, enter and reverse a positioned bag, stripping means adapted to engage the bag when fully turned and to hold the bag during the withdrawal of the bag turning means and means actuated by said cross head adapted to release the stripping means as the bag turning members leave the mouth of the bag.

5. A bag turning machine comprising a plurality of bag turning members, a cross head connected to said members, means to reciprocate said cross head to cause said bag turning members to engage, enter and reverse a positioned bag, stripping means comprising a pair of separable members adapted to engage the bag when fully turned, means for actuating said members including a rock shaft connected to one of said members, a bell crank having one arm connected to said rock shaft, a sliding rod connected to the other arm of said bell crank and means carried by said sliding rod adapted to be engaged by said cross head as the same approaches the end of its movement in each direction, whereby said stripping means will be actuated to engage the bag at the conclusion of the turning movement of said members and will be actuated to release the bag when the turning members leave the mouth thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,171,035. WATER-MEASURING APPARATUS. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership. Filed Nov. 22, 1913. Serial No. 802,384. (Cl. 73—167.)



1. In water measuring apparatus, the combination of a receptacle having an approach and an outboard chamber and a wall between them constituting a weir over which water flows from the approach to the outboard chamber, an inlet pipe connected to the approach chamber, a horizontally disposed screen in the lower part of the approach chamber, means for directing water from said pipe to the space in said approach chamber below said screen, a connection to the outboard chamber for drawing water therefrom, and means for measuring the flow of water over said weir responsive to changes of water level in the approach chamber, substantially as set forth.

2. In water measuring apparatus, the combination of a receptacle having an approach and an outboard chamber and a wall between them constituting a weir over which water flows from the approach to the outboard chamber, an inlet pipe connected to the approach chamber, a hood within the approach chamber mounted over said inlet to direct water admitted through the inlet pipe to the bottom of the chamber, means for preventing accumulation of air under the hood, means in said approach chamber to suppress swirling of the water as it rises in said chamber, and a pipe for withdrawing air from the outboard chamber, substantially as set forth.

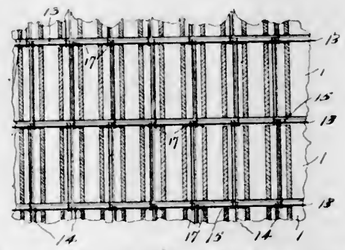
3. The combination of a receptacle, a vertical wall in the receptacle dividing the same into approach and outboard chambers, said wall being notched at its upper edge to form a weir, an inlet pipe connected to the approach chamber, a hood within the approach chamber mounted over said inlet to direct water admitted through the inlet pipe to the bottom of the chamber, a horizontally disposed screen in the approach chamber, water measuring apparatus responsive to changes of water level within the approach chamber, a valve in the inlet pipe, means for controlling said valve responsive to changes of water level in the outboard chamber and a pipe for withdrawing water from the outboard chamber, substantially as set forth.

4. The combination of a receptacle, a wall therein dividing the receptacle into two chambers and forming a weir over which water flows from the first chamber to the second, an inlet pipe connected to the first chamber, a valve therein having a rotatable valve-member, and a coöperating stationary valve-member, a float in the second chamber, connections from the float to the rotatable valve-member for rotating said member as the float is moved, said rotatable and stationary valve-members being provided, one with two ports spaced apart and the other with an opening therethrough of a circumferential length at least equal to the sum of the lengths of the said two ports and the space therebetween, and a measuring apparatus responsive to changes of water level within the first chamber, substantially as set forth.

5. In water measuring apparatus, the combination of a receptacle, a wall therein dividing the receptacle into two chambers and forming a weir over which water flows from the first chamber to the second, an inlet pipe connected to the first chamber, a valve therein comprising a rotary sleeve and a coacting stationary member, one of the same having ports so arranged with respect to a port in the other that as said sleeve is rotated in one direction, water is admitted through said valve at an increasing rate, then for a period at a constant rate, and then at a further increased rate, a float in the second chamber and connections from the float to said sleeve for rotating the latter as the float is moved in response to changes in the level of water in said chamber, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,171,036. HOLLOW-TILE SILO. ROBERT L. GAMEWELL, Birmingham, Ala. Filed May 5, 1915. Serial No. 25,947. (Cl. 72—6.)

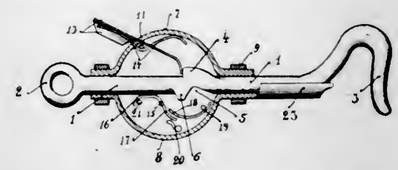


A wall composed of hollow blocks laid in courses and formed with longitudinal grooves having a horizontally extending bar in the grooves of each course below the top thereof, said blocks each fashioned with curved end walls forming vertical spaces between adjoining blocks and an intermediate space in each block, vertically arranged rods passing through said spaces and hooked ends on said rods engaging said horizontal bars in pairs, and concrete cores incasing said rods and embedded in the spaces of the blocks.

1,171,037. HASP-LOCK. JOSEPH GARAND, Woburn, Quebec, Canada. Filed Apr. 5, 1915. Serial No. 19,129. (Cl. 70—5.)

1. In a combined hook and lock for doors the combination of a shaft with an eye at one end and a hook on its other end; a shell slidably mounted on the shaft with a tongue-like projection extending on the shell along the shaft and adapted to engage the point of the hook; means arranged on the shaft and on the inner side of the shell adapted to lock the shaft and shell together, when the tongue of the shell is in engagement with the point of the hook.

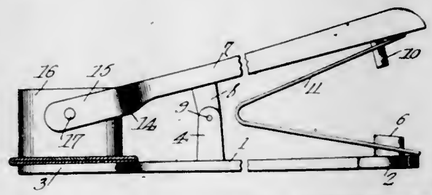
2. In a combined hook and lock for doors the combination of a shaft with an eye at one end and a hook on its other end and a notch and a projection at the side of same in its middle part; a shell slidably mounted on the middle part of the shaft; a tongue-like projection on the shell extending along the shaft and adapted to engage the point of the hook; a spring pressed catch arranged within the shell and adapted to engage the notch at the side of the projection in the middle part of the shaft, when the shell is shifted to that position in which its tongue-like projection engages the point of the hook.



3. In a combined hook and lock for doors the combination of a shaft with an eye at one end and a hook on its other end; a shell slidably mounted on the shaft; a tongue-like projection on the shell extending along the shaft, and adapted to engage the point of the hook; means on the shaft and on the inner side of the shell, adapted to lock the shaft and shell together, when the shell is at the one end of the shaft where its tongue is in engagement with the point of the hook; and other means on the shaft and on the inner side of the shell, adapted to lock the shaft and shell together, when the shell is at the opposite end of the shaft to that position in which the tongue engages the point of the hook.

4. In a combined hook and lock for doors the combination of a shaft with an eye at the end and a hook at its other end; a shell slidably mounted on the shaft and provided with a tonguelike lateral projection adapted to engage with the point of the hook; a notch at the side of a projection on the middle part of the shaft within the shell; a two-armed member hinged within the shell, the one catch-shaped arm of which is adapted to engage into the notch on the shaft, when the tongue on the shell engages with the point of the hook; a flat spring fixed within the shell and pressing on the other arm of the two-armed member; a wedge-shaped projection on the shaft opposite to the aforementioned notch and projection; a two-armed lever hinged within the shell, with a catch-shaped arm, which is adapted to engage behind the aforementioned wedge-shaped projection of the shaft, and a latch-shaped arm which projects to outside of the shell; and a spring fixed within the shell, adapted to press the last mentioned catch-shaped arm down on the shaft; substantially as described and illustrated.

1,171,038. GASOLENE-VULCANIZER. TRUMAN DEAN GARD, Kokomo, Ind. Filed July 15, 1915. Serial No. 40,082. (Cl. 18—18.)



1. In a device of the class described, pivotally connected members, one member being provided with a compression element; a combined compression element and fuel holder pivoted to the other member; and spring means engaged with the members to cause the compression elements to coact.

2. In a device of the class described, a pair of levers pivotally connected intermediate their ends, one lever being provided at one end with a compression element, and the other lever being provided at the corresponding end with

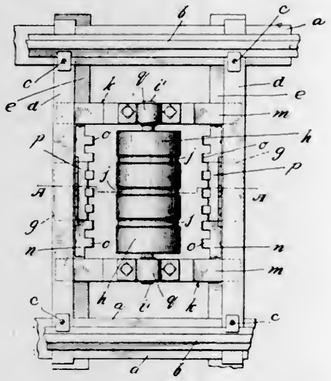
a pivotally mounted fuel holder coöperating with the compression element; and a spring connecting the levers to cause the fuel holder and the compression element to coact.

3. In a device of the class described, a primary lever provided at one end with a compression element; a secondary lever provided at the corresponding end with spaced arms; a fuel holder pivoted in the arms and coöperating with the compression element; ears projecting from the levers intermediate their ends; a pivot element connecting the ears; and a compression spring interposed between the levers upon the opposite side of the cars from the compression element and the fuel holder.

4. A vulcanizer comprising a pair of pivotally connected members one of which is provided with a compression element; and a combined compression element and fuel receptacle pivoted to the other member.

5. A vulcanizer comprising a pair of levers connected intermediate their ends, one of the levers at one end being provided with a compression element, and there being a combined compression element and fuel receptacle pivoted to the corresponding end of the other lever, the opposite ends of the levers constituting handles to effect a separation of the compression elements.

1,171,039. MINE-SHAFT ROLLER. JOHN GEMMELL, Calumet, Mich. Filed Nov. 13, 1914. Serial No. 871,872. (Cl. 104—18.)

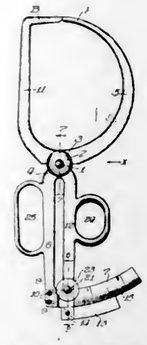


1. In a structure of the class described, the combination of a cable-railway; a cable for propelling the cars therealong; a cable roller over which said cable runs; a carriage upon which is mounted said roller and which is movable transversely of said cable-railway to vary the point of contact of said cable with said roller; and means for retaining said carriage in its adjusted position.

2. In a structure of the class described, the combination of a cable-railway; a cable for propelling the cars therealong; a cable roller over which said cable runs; a rack; a carriage upon which are mounted said roller and rack and which is movable transversely of said cable-railway to vary the point of contact of said cable with said roller; and means mounted on said cable-railway for engaging said rack to retain said carriage in its adjusted position.

1,171,040. CALIPERS AND SIMILAR TOOL. WILLIAM B. GEORGE, Chicago, Ill. Filed Feb. 16, 1915. Serial No. 8,441. (Cl. 33—148.)

1. An article of the class described including a pair of members pivoted together intermediate their length and possessed of opposite ends, measuring legs comprising one of the ends of said members, the opposite end of one of said members being bifurcated, an arcuate registering blade having one end fixed in said bifurcation, there being slotted means in said blade permitting lateral adjustment thereof, and a coacting blade, fixed to the opposite end of the other of said members.



2. An article of the class described including a pair of members pivoted together intermediate their length and possessed of opposite ends, measuring legs comprising one of the ends of said members being bifurcated, an arcuate registering blade having one end fixed in said bifurcation, and a coacting arcuate blade, the inner periphery of which contacts the outer periphery of said first named blade and fixed to the opposite end of the other of said members.

3. An article of the class described including a pair of members pivoted together intermediate their length and possessed of opposite ends, measuring legs comprising one of the ends of said members, the opposite end of one of said members having an arcuate blade extending laterally beyond said member, and the other of said members being possessed of a coacting arcuate blade, the inner periphery of which contacts with the outer periphery of said first named blade, both of said blades being located in the same plane.

4. A tool of the class described comprising two members pivotally connected at an intermediate point, and having measuring legs on one side of said pivoting point, hand grasping parts on the opposite side of said pivoting point, one of said hand grasping parts having a slotted extremity, a segmental registering arm adjustably secured in said slotted extremity, another segmental registering arm secured to the other hand grasping part and concentric to the adjustable segmental arm.

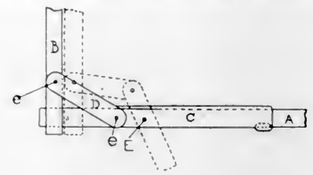
5. An article of the class described including a pair of members pivoted together intermediate their length and possessed of opposite ends, measuring legs comprising one of the ends of said members, the opposite end of one of said members having an arcuate blade extending laterally beyond said members, and the other of said members being possessed of a coacting arcuate blade, the inner periphery of which contacts with the outer periphery of said first named blade, but is shorter than said first named blade, both of said blades being located in the same plane.

[Claim 6 not printed in the Gazette.]

1,171,041. ADJUSTABLE TIGHTENING AND LOCKING DEVICE FOR BED-SPRINGS AND OTHER SUCHLIKE ARTICLES. THOMAS F. GRANT, Guelph, Ontario, Canada. Filed Aug. 31, 1914. Serial No. 859,536. (Cl. 5—67.)

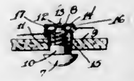
An adjustable, tightening and locking device for bed-springs and other suchlike articles, comprising side bars and front cross bars, slidably mounted on the ends of the side bars: a spring bottom fabric attached to said cross-bars, hand levers fulcrumed on the side bars carrying on their shorter ends connecting links attached to the front cross bars, the shorter ends of the hand levers containing a plurality of holes into one or other of which a

downwardly projecting pivot, at the end of the connecting links is inserted, for the purpose of adjusting the



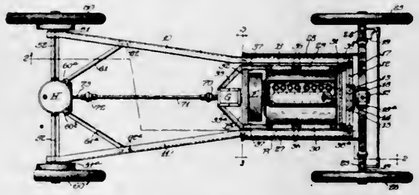
amount of tension to be applied to the spring bottom fabric, substantially as hereinbefore described.

1,171,042. ALARM. JOHN J. GREYTAK, Great Falls, Mont. Filed Mar. 10, 1914. Serial No. 823,815. (Cl. 200—35.)



A circuit closing device for use in connection with movable objects comprising an open tubular casing secured to said object, a flange partially closing one end of said casing, a movable support for said object fitting said casing and projecting beyond the ends thereof, an enlargement formed on one end of said support for contact with said object to limit movement of said support, a spring embracing said support and abutting said enlargement and said partially closed end of the casing to move said enlargement out of engagement with said support upon movement of said object, diametrically opposed fixed contacts disposed exteriorly of said casing, and a contact secured to said support and movable therewith into engagement with said fixed contacts through action of said spring to close the electrical circuit, substantially as described.

1,171,043. AUTOTRUCK. JOHN H. AUFDER HAAR, Chicago, Ill. Filed Apr. 29, 1915. Serial No. 24,770. (Cl. 21—90.)



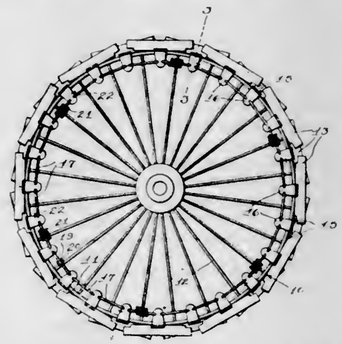
1. A truck frame including longitudinal side members, transverse members connecting the rear end of said side members, there being interposed between said transverse members a differential gear box, wholly supported by said transverse members, diagonal braces connecting said gear box and side members, and rear drive shafts located below said transverse members, journaled under said side members, and within said gear box, said drive shafts having rear drive wheels at the free ends thereof.

2. In a truck, a frame including longitudinal side members, a transverse rear member connecting the rear ends of the side members and also forming the rear axle, and a differential gear box arranged at the center of the transverse member, and diagonally extending brace bars connected at their rear extremities to the gear box and at their front ends to the side members.

3. An auto truck comprising a main frame having longitudinal side members, a transverse front member connecting said side members at the front end thereof, transverse members rigidly connecting the rear ends of said side members, there being interposed between said transverse members a differential gear box, wholly supported by said transverse members, drive shafts located below said transverse members, journaled under said side members, and within said gear box, and driving wheels at the free ends of said shafts; a motor sub-frame located between said side members, near the front ends thereof, and, yieldingly supported from beneath said side members, a motor on said sub-frame, power transmission means connecting said motor and said differential gear box, and a front axle and wheels in connection with said transverse front member.

4. An auto truck comprising a main frame having longitudinal side members, a transverse front member connecting said side members at the front end thereof, transverse members rigidly connecting the rear ends of said side members, there being interposed between said transverse members a differential gear box, wholly supported by said transverse members, drive shafts located below said transverse members, journaled under said side members, and within said gear box, and driving wheels at the free ends of said shafts; a motor sub-frame located between said side members, near the front ends thereof, and, free for universal vibration between said side members, and yieldingly supported from beneath said side members, a motor on said sub-frame, power transmission means connecting said motor and said differential gear box, and a front axle and wheels in connection with said transverse front member.

1,171,044. TRACTOR-TREAD FOR WHEELS. LESLIE S. HACKNEY and FERDINAND G. HAAS, St. Paul, Minn.: said Haas assignor to said Hackney. Filed June 12, 1913. Serial No. 773,255. (Cl. 21—214.)



1. A tread, adapted to be placed upon a flat rimmed wheel, comprising a succession of staggered tread plates, a strap secured to each plate and resting transversely on said rim and connecting members uniting the ends of said straps to join the same in an independent detachable series about the rim of the wheel.

2. The combination with the rim of a wheel, of a succession of tread plates notched at their ends and arranged in staggered relation around the periphery of the wheel, a strap secured to each plate and forming a mounting therefor and attaching elements connecting the straps, the notched ends of said plates being adapted to overlap and conform to the adjacent straps.

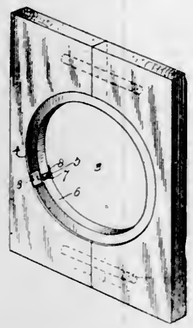
3. The combination with a wheel, of a series of tread plates arranged in staggered relation around the periphery of the rim of said wheel, a strap forming a mounting for each plate and formed with lugs overlapping the edge of said rim, a series of links on each side of the wheel connecting said lugs in succession and means, such as chains, extending between a plurality of said lugs and across said wheel for engaging the spokes thereof.

4. In a tractor tread for wheels, a plurality of tread plates arranged in staggered relation, straps secured to and forming a mounting for said plates, lugs on said

straps and links connecting said lugs, a plurality of said links including springs adapted to form a yielding attaching medium for said straps.

5. A tread, adapted to be placed upon the rim of an ordinary wheel, comprising a succession of staggered tread plates, a mounting for each plate resting transversely on said rim, means for yieldingly uniting the ends of said mountings to join the same in an endless series and means to prevent the slipping of the tread upon said rim.

1,171,045. DUST-GUARD. FRANK B. HARRISON, Toledo, Ohio. Filed May 21, 1915. Serial No. 29,469. (Cl. 64—22.)



1. A dust-guard comprising a two part frame having centrally therethrough a circular opening bounded by an inwardly projecting circumferential tongue, an open circumferentially channeled spring ring the channel of which takes and frictionally engages said tongue, the bottom of one end of said channel being cut away, the sides of the ring forming flaps which overlap and frictionally engage the sides of the opposed end of the ring.

2. In a device of the described character, an open spring ring, U-shaped in cross-section, one end of said spring having forwardly projecting flaps which overlap and frictionally engage the sides of the opposite end of the ring the bottom of the channel between said flaps being removed.

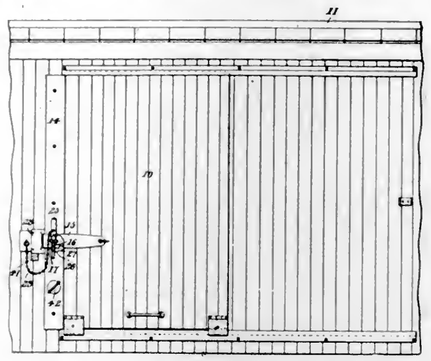
1,171,046. PURIFICATION OF WATER. JOSEPH C. HECKMAN, Avalon borough, Pa. Filed Mar. 9, 1915. Serial No. 13,145. (Cl. 210—1.)

The process of purifying water containing acids which consists in passing the same through a mass of "granulated" blast furnace slag containing a substantial quantity of its original oxid of lime content.

1,171,047. CAR-DOOR FASTENER. JOHN HORNAGY, Cleveland, Ohio. Filed Nov. 10, 1915. Serial No. 60,784. (Cl. 70—102.)

1. A lock comprising a rotatable keeper, a swinging hasp provided with a receiving slot for the said keeper, a pivoted locking plate having a slot in normal engagement with the said keeper, a positioning spring for the said plate, and a resilient depressible wall in engagement with the said spring.

2. A lock comprising in combination with a door and a stationary door jamb therefor, a swinging hasp upon the said door having a transverse slot therein, a cover plate upon the said jamb, an elongated keeper for the said hasp journaled through the said plate and jamb and removably attached to the said plate, a rotation-preventing locking plate for the said keeper pivoted to the inner side of the said beam, the said beam having a socket adjacent the opposite side thereof providing a thin resilient outer exposed wall, an operating pin carried by the said plate and projecting within the said socket, and a spring positioned within the said socket and resiliently engaging the said wall and pin.



3. A lock comprising in combination with a door and a stationary door jamb therefor, a swinging hasp upon the said door having a transverse slot therein, a cover plate upon the said beam, an elongated keeper for the said hasp journaled through the said plate and jamb and removably attached to the said plate, a rotation-preventing locking plate for the said keeper pivoted to the inner side of the said jamb, the said beam having a socket adjacent the opposite side thereof providing a thin resilient outer exposed wall, an operating pin carried by the said plate and projecting within the said socket, a spring positioned within the said socket and resiliently engaging the said wall and pin, for retaining the plate in its locked position, a stationary fulcrum member positioned adjacent the said resilient wall, and a depressing operating lever for the said wall.

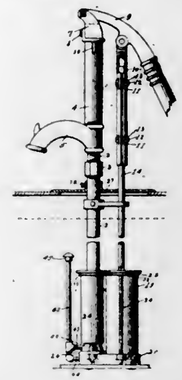
4. A lock comprising in combination with a door and a stationary door jamb therefor, a swinging hasp upon the said door having a transverse slot therein, a cover plate upon the said jamb, an elongated keeper for the said hasp journaled through the said plate and jamb and removably attached to the said plate, a rotation-preventing locking plate for the said keeper pivoted to the inner side of the said jamb, the said jamb having a socket adjacent the opposite side thereof providing a thin resilient outer exposed wall, an operating pin carried by the said plate and projecting within the said socket, a spring positioned within the said socket and resiliently engaging the said wall and pin for retaining the plate in its locked position, a stationary fulcrum member positioned adjacent the said resilient wall, and a combined keeper and cotter and operating lever for the said depressible wall carried by the adjacent side of the car.

5. A lock including a rotatable keeper having a shank angular in cross-section for a portion of its length, and spring-pressed means engageable with said angular portion to prevent rotation of the keeper.

1,171,048. PUMP. OLIVER N. HOWERTON, Peoria, Ill. Filed Jan. 4, 1915. Serial No. 497. (Cl. 103—53.)

1. In a pump, in combination, a pump cylinder, a piston therein, a pump stock cylinder communicating with the pump cylinder, a tubular pump stock section having its lower end telescopically mounted in the pump stock cylinder and having an outlet in its upper end, a cap supported upon the upper end of said pump stock section in a turnable relation thereto, and a pump handle pivotally secured to the cap and having connection with the pump piston.

2. In a pump, in combination, an initial tubular pump stock section, threaded at its lower end and having an offset at its upper end, and provided with exterior grooved ways, a spout connected with the pump section, a cap supported upon the upper end of said pump section in a turnable relation, provided with outlet openings, communicating with the grooved ways in said section, said pump section being turnable with relation to said cap section, and a set screw for fixing said pump section in relation to said cap section in any desired position of turning, a pipe section joined to the initial section in a manner to permit the latter to be turned into different positions, a pump cylinder and a base connecting the same with the pipe section of the pump to establish communication therebetween, the valve for controlling such communication, a piston valve within the pump cylinder, a handle pivoted to the initial pump section, and a rod connecting the pump handle with the piston valve.



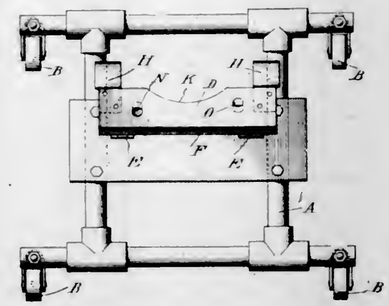
3. In a pump, in combination, an initial tubular pump stock section, threaded at its lower end and having an offset at its upper end and provided with exterior grooved ways, a spout connected with the pump section, a cap supported upon the upper end of said pump section in a turnable relation, provided with outlet openings, communicating with the grooved ways in said section, said pump section being turnable with relation to said cap section, and a set screw for fixing said pump section in relation to said cap section in any desired position of turning, a pipe section joined to the initial section in a manner to permit the latter to be turned into different positions, a pump cylinder and a base connecting the same with the pipe section of the pump to establish communication therebetween, the valve for controlling such communication, a piston valve within the pump cylinder, a handle pivoted to the initial pump section, a rod connecting the pump handle with the piston valve, comprising plural sections telescopically related to facilitate extension or contraction of said connection, and means for securing said sections together.

1,171,049. TRUCK FOR RAISING AUTOMOBILES. JOHN A. JEFFERY, Canton, N. Y., assignor of one-half to Rollin E. Cleaveland, Canton, N. Y. Filed Apr. 9, 1915. Serial No. 20,236. (Cl. 254—8.)

1. An apparatus for raising and holding vehicles suspended, consisting of a truck with wheels upon which the same is mounted, a beam hinged upon the truck, and having its lower hinged end beveled and adapted to contact with the floor of the car when in an operative position, and means upon the beam for receiving and supporting the axle of a vehicle.

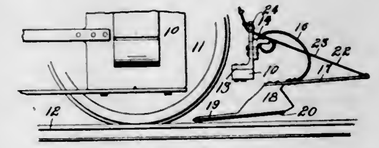
2. An aparatus for raising and holding vehicles suspended, consisting of a truck with wheels upon which the same is mounted, a beam hinged upon the truck and having its lower hinged end beveled and adapted to contact with the floor of the car when in an operative position, and concaved axle holders fastened to the free swinging edge of said beam.

3. An apparatus for raising and holding vehicles suspended, consisting of a truck with wheels upon which the same is mounted, a beam hinged upon the truck and having its lower hinged end beveled and adapted to contact with the floor of the car when in an operative position, concaved axle holders fastened to the free swinging edge of



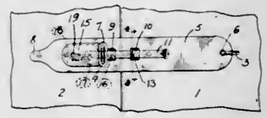
said beam, said beam having diagonally disposed openings with holes through the same for the reception of a pry bar.

1,171,050. CAR-BRAKE. JOHN S. JOHNSON and HENRY A. JOHNSON, Chicago, Ill. Filed June 22, 1914. Serial No. 846,702. (Cl. 188—65.)



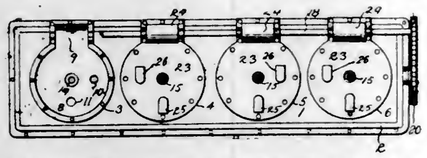
In a brake structure, a bracket adapted to be secured to the truck of a car, said bracket having an arm provided with an opening opening, a bowed leaf spring having one end engaged through said opening and then returned inwardly and secured to the arm, a bar secured to the other end of said spring, a brake shoe carried by said bar and adapted to be engaged between the wheel and rail in advance of the former, and a flexible element secured to the end of the bar remote from the brake shoe adapted when pulled in one direction to move the bar longitudinally against the influence of said leaf spring to engage the brake shoe between the wheel and rail.

1,171,051. HASP-LOCK. PETER JOHNSON, San Francisco, Cal., assignor, by direct and mesne assignments, of one-third to Otto Sari, one-third to George Newman, and one-third to Ervin J. Casper, San Francisco, Cal. Filed July 6, 1915. Serial No. 38,368. (Cl. 70—5.)



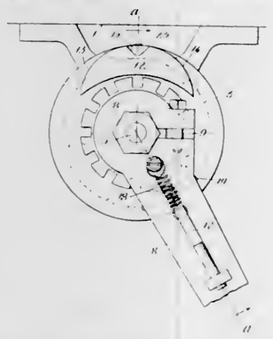
A hasp lock comprising a slotted plate having an opening at one end, a bolt slidable on the plate over the slot and carried by guides thereon, means to prevent the bolt from being removed from the plate, a notch on the bolt for holding said bolt partially extended, means on one of the bolt guides for coöperating with said notch when the bolt is in said partially extended position to allow the bolt to be removed from the staple passing through the slot in the plate without the use of the lock, and a lock casing into which said bolt passes after passing over the slot for preventing the withdrawal of the bolt without the use of a key.

1,171,052. INTERNAL-COMBUSTION ENGINE. EDWIN B. JONES, Hornell, N. Y., assignor of one-third to E. B. Kreason, Hornell, N. Y. Filed Jan. 9, 1913. Serial No. 741,081. (Cl. 123—80.)



In an engine, a cylinder including a head having an external recess and a central internally screwthreaded opening, a disk valve rotatably mounted in said recess having a central opening registering with the threaded opening, a cover plate overlying said valve secured to the cylinder head and having an opening registering with the opening in the valve and cylinder head, a sleeve having external screwthreads at its inner end fitted in the threaded opening and having a plane external surface at its outer end received within the openings in the valve and cover plate, said sleeve terminating flush with the outer surface of the cover plate and having internal screwthreads at its outer end, and a spark plug removably fitted in the internally screwthreaded portion of said sleeve.

1,171,053. DOOR-CHECK AND OPEN-DOOR-LOCKING DEVICE. WILLIAM J. KELLY, Jamaica, N. Y., assignor to Thomas Mooney, Douglaston, N. Y. Filed Aug. 14, 1914. Serial No. 856,729. (Cl. 16—88.)

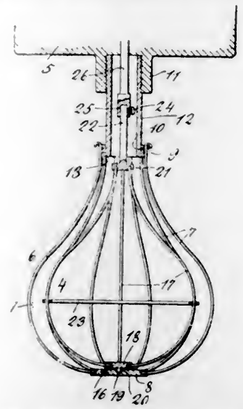


1. The combination with a door check casing of a spring-actuating arm mounted to turn about the axis of the casing, a notched cam having cam surfaces of less radius than the casing and having its inner ends located over the top of the casing and within the periphery thereof, and a pawl carried by the arm engaging the cam and moved radially outward thereby and adapted to engage the notch of the cam.

2. In a door check the combination with a spring barrel, a shaft extending into the barrel, a sleeve surrounding said shaft and carrying a ratchet wheel, a spring attached to the barrel and to the sleeve, a cap for the barrel having a notched cam thereon arranged in the same plane with the ratchet wheel, and partially surrounding it, a spring-actuating arm mounted to turn relatively to said sleeve, a pawl carried by the arm and engaging the ratchet wheel, and another pawl mounted on the arm and moving radially toward and from the ratchet wheel but held at all times out of engagement therewith, and which is adapted to ride on said notched cam and engage the notch thereof.

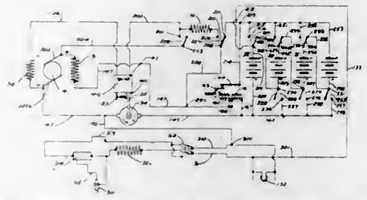
1,171,054. MIXING APPARATUS. ADOLPH KEPPELER, Butte, Mont. Filed Mar. 23, 1914. Serial No. 826,581. (Cl. 107—38.)

An agitator comprising a tubular support having an outstanding flange at its extremity, a ring clamped around said support behind the flange, an open cage carried by the ring and having a base portion formed of sections which are hinged together, a shaft passing through the tubular



support, a beater carried by the shaft, said beater being located in the cage, and a bearing on one of the aforesaid base sections of the cage, said bearing supporting the beater shaft.

1,171,055. ENGINE STARTING, LIGHTING, AND IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Apr. 17, 1911. Serial No. 621,512. (Cl. 171—315.)



1. In a device of the character described, the combination with an engine, a motor-generator, and connections between the engine and motor-generator for starting the former by the latter and running the latter by the former; of an accumulator comprising a plurality of electric cells connected with said motor-generator; and an operating member having a normal position for arranging the cells in multiple series with the motor-generator for charging, and movable to another position for arranging said cells in series for operating the motor-generator as a motor for starting; and means for resisting the movement of said operating member out of its normal position, and adapted to automatically return said member to its normal position when released.

2. In a device of the character described, the combination with an engine, a motor-generator, and connections between the engine and motor-generator for starting the former by the latter and running the latter by the former; of an accumulator comprising a plurality of electric cells connected with said motor-generator; and an operating member having a normal position, but movable to a different position to arrange the cells in series for operating the motor-generator as a motor for starting purposes; and means for automatically re-arranging said cells in multiple series for charging purposes, when the controlling means is moved from its displaced position.

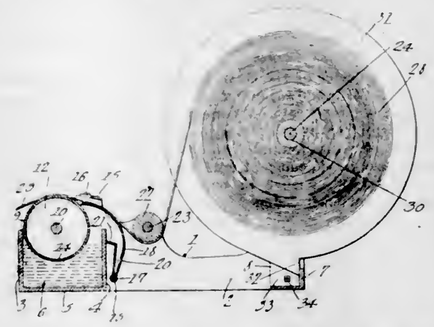
3. In a device of the character described, the combination with an engine, a motor-generator, and connections between the engine and motor-generator for starting the former by the latter and running the latter by the former; of an accumulator comprising a plurality of electric cells connected with said motor-generator, said cells having a normal position of arrangement and being adapted for arrangement in series for operating the motor-generator as a motor for starting, and in multiple series for charging by the motor-generator; and means for controlling the arrangement of said accumulator cells and automatically restoring said cells to their normal arrangement.

4. In a device of the character described, the combination with an engine, a motor-generator, and a mechanical connection between the engine and motor-generator for starting the former by the latter and running the latter by the former; of an accumulator comprising a plurality of electric cells connected with said motor-generator; a switch controlling the arrangement of said cells in series for operating the motor-generator as an engine cranking motor and in multiple series for charging by the motor-generator; means automatically tending to maintain said switch in a determined position; and a manually operable controlling member adapted to throw said switch from said position.

5. In a device of the character described, the combination with an engine, a motor-generator, and connections between the engine and motor-generator for starting the former by the latter and running the latter by the former; of an accumulator having a plurality of circuit connections with said motor generator, certain of said circuit connections being adapted to transmit high wattage from the accumulator to the motor-generator for starting purposes, and other of said circuit connections being adapted to transmit low wattage from the motor-generator to the accumulator for charging purposes; and a controlling member having a normal position, for selecting the low wattage circuit connection for charging purposes, but movable to a different position to select the high wattage circuit connection for starting purposes; with provisions for automatically restoring said controlling member to normal position.

[Claims 6 to 28 not printed in the Gazette.]

1,171,056. TAPE-MOISTENING DEVICE. ERNEST S. KNEELAND, Malden, Mass. Filed Jan. 20, 1915. Serial No. 3,297. (Cl. 91—14.5.)



1. In a tape moistener, a moistening means; tape delivery mechanism; a relatively fixed cutter located between the moistening means and the tape delivery mechanism; and a resilient means operating beneath the cutter to bind the tape against the cutter and to lift the end of the tape with respect to the moistening means after the tape has been severed by the cutter, the cutter coacting with the resilient means to limit the lifting movement thereof.

2. In a tape moistener, a tank; a moistening roller cooperating with the tank; a tape delivery mechanism; a cutter located adjacent the moistening roller; and a yieldably acting member located adjacent the cutter and constituting means for lifting the end of the tape after the tape has been severed by the cutter, the yieldably acting member being tape actuated to bear on the roller while the tape is being advanced.

3. In a tape moistener, a tank; a moistening roller cooperating with the tank; a tape delivery mechanism; a cutter located adjacent the moistening roller; and a yieldably acting member located adjacent the cutter and constituting means for lifting the end of the tape after the tape has been severed by the cutter, the yieldably acting member being tape actuated to bear on the roller while the tape is being advanced, and constituting a tape support while the tape is being advanced.

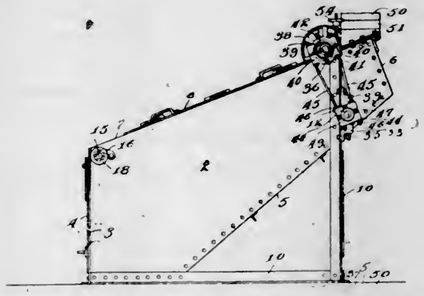
4. In a tape moistener, a tank; a moistening roller cooperating with the tank; a tape delivery mechanism; a cutter located adjacent the moistening roller; and a yieldably acting member located adjacent the cutter and constituting means for lifting the end of the tape after the tape has been severed by the cutter, the yieldably acting member being tape actuated to bear on the roller while the tape is being advanced; and means for exerting a brake-pressure on the delivery mechanism thereby to tighten the tape and to render the tape efficient as a means for actuating the yieldable member with respect to the roller.

5. In a tape moistener, a supporting structure including a stop; a tape receiving shaft carried by the supporting structure; tape engaging disks journaled on the shaft and having shoulders coacting with the stop; yieldable brake elements carried by the supporting structure and bearing on the outer faces of the disks; a moistening device; a cutter located adjacent the moistening device; and a tape engaging means located adjacent the cutter, the tape engaging means being yieldable to permit the tape to engage the moistening device while the tape is retarded by the action of the disks and the brake elements and being movable to elevate the end of the tape with respect to the moistening device after the tape has been severed by the cutter.

[Claim 6 not printed in the Gazette.]

1,171,057. [WITHDRAWN.]

1,171,058. VIBRATING SCREEN. WILLIAM K. LIGGETT, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed May 8, 1912. Serial No. 695,853. Renewed July 2, 1915. Serial No. 37,783. (Cl. 83—56.)



1. In a screening apparatus, the combination with the frame, of the inclined screen, the flexible support for the lower end of the screen, and means for vibrating the upper end of the screen in a vertical plane by blows delivered alternately in an upward and downward direction.

2. In a screening apparatus, the combination with the frame, of the inclined screen, the vertically adjustable support for the lower end of the screen, and the means for vibrating the upper end of the screen in a vertical plane by hammer blows alternating in an upward and downward direction.

3. In a screening apparatus, the combination with the frame, of the inclined screen, the flexible support for the lower end of the screen, the floating support for the upper

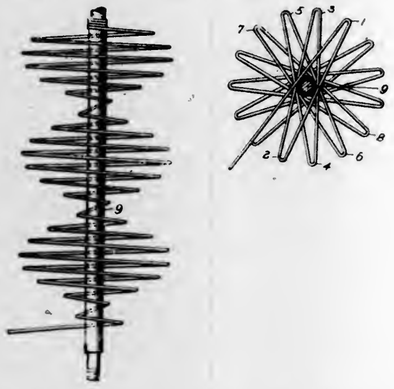
end of the screen, and means for vibrating the upper end of the screen by means of hammer blows delivered alternately in opposite directions.

4. In a screening apparatus, the combination with the frame, of the inclined screen, the vertically adjustable support for the lower end of the screen, the vertically floating support for the upper end of the screen, and the means for delivering hammer blows alternately in opposite directions to the upper end of the screen.

5. In a screening apparatus, the combination with the inclined screen, of the support for the lower end of the screen, the floating support for the upper end of the screen, and the means for delivering hammer blows to the upper end of the screen in alternate directions.

[Claims 6 to 20 not printed in the Gazette.]

1,171,059. RESISTANCE UNIT FOR ELECTRICAL APPARATUS. ALEXANDER J. LOGUIN, Petrograd, Russia. Filed Apr. 3, 1915. Serial No. 18,937. (Cl. 219—63.)

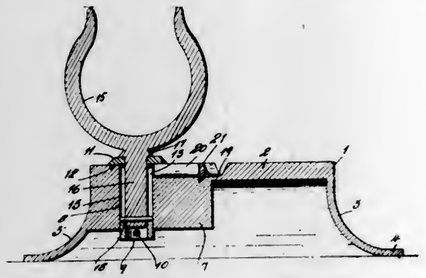


1. A helically wound conductor for electric current, each turn of the helix being elongate in plan and the succeeding turns being non-parallel to one another.

2. A helically wound conductor for electric current the successive turns of the helix being alike in plan, asymmetrical with respect to the axis of the helix, and the homologous portions of the turns following one another in helical succession.

3. An electric conductor formed into a coil, each turn of said coil being elongate in plan, and the turns succeeding one another in stepped arrangement.

1,171,060. FOLDING OAR-LOCK. FREDERICK C. MILLER, Hillsboro, Oreg. Filed May 18, 1915. Serial No. 28,922. (Cl. 9—26.)



1. In a device of the class described the combination of a body, a sleeve rotatably carried by said body, a lock member slidably mounted upon said sleeve, said lock member being adapted to receive an oar so as to retain the same in its correct position when in operation, whereby when the oar is actuated it will impart a pivotal movement to said sleeve by means of said lock member, said lock member being capable of being lifted and then swung so as to rest upon the upper portions of said body when not in use.

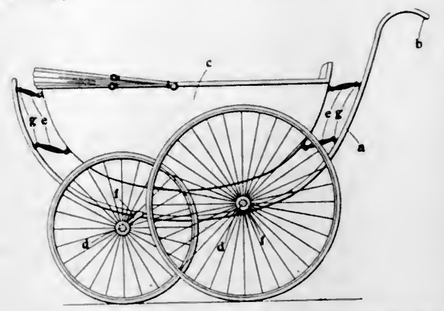
2. In a device of the class described the combination of a body, said body provided with a vertical opening, said body being adapted to be supported upon the side portions of a boat, a sleeve rotatably mounted within said vertical opening, said sleeve provided with an enlarged shoulder formed upon its upper end so as to engage the outer portions of said body, a pin passing through the lower end of said sleeve so as to engage the inner portions of said body thereby retaining said sleeve against accidental displacement, said sleeve provided with a pair of alined slots, a lock member carried upon said sleeve and provided with a shank positioned therein, a second pin extending through the lower end of said shank and extending through said slots, said lock member being adapted to carry an oar, whereby upon the actuating of the oar said lock member will impart reciprocal rotary movement to said sleeve, said lock member being adapted to be lifted until the upward movement thereof is limited by said second pin engaging the upper ends of said slots at which time said lock member may be swung downwardly so as to rest upon the upper portions of said body and be positioned in a compact manner when not in use.

3. In a device of the class described the combination of a body having a vertical opening, said body being adapted to be carried upon the side portions of a boat, a sleeve rotatably mounted within said opening, means for preventing the accidental displacement of said sleeve, said sleeve provided with a notch formed in its upper side portion, a lock member carried by said sleeve and provided with a shank extending thereinto, means carried by said shank and engaging said sleeve for preventing the displacement of said lock member, said lock member being adapted to be actuated by an oar extending therethrough whereby reciprocal rotary movement will be imparted to said sleeve, by said lock member when the same is operated, said lock member being capable of being lifted, means for limiting the upward movement of said lock member, said lock member being adapted to be swung downwardly through the notch formed in said sleeve so as to rest upon the upper portion of said body when not in use.

4. In a device of the class described, the combination of a body, said body having a vertical opening formed therein, a sleeve rotatably mounted within said opening, a lock member positioned upon said sleeve and provided with a shank extending thereinto, means for retaining said sleeve in engagement with said body, means for holding said lock member in engagement with said sleeve, said lock member being capable of swinging said sleeve when said lock member is actuated by an oar, said lock member being adapted to be lifted when not in operation and to be swung downwardly upon the upper portions of said body, and means for retaining said lock member in a central compact position upon said body when not in use.

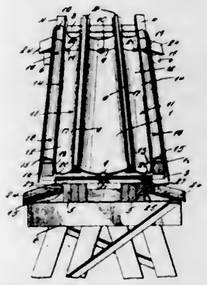
5. In a device of the class described the combination of a body, said body provided with a vertical opening, a sleeve rotatably carried within said opening, said sleeve provided with a notched portion, means for retaining said sleeve in engagement with said body, a lock member carried upon said sleeve, said lock member provided with a shank extending thereinto, means for retaining said lock member in engagement with said sleeve, said lock member being capable of sliding upon said sleeve whereby said lock member may be lifted when not in use and then swung downwardly through the notch formed in said sleeve so as to rest upon the upper portion of said body, said body provided with a socket formed upon its upper portion, said socket conforming in contour to the shape of said lock member whereby when said lock member rests upon the upper portion of said body it will fit snugly within said socket and will be retained in its correct central position upon the upper portions of said body.

1,171,061. PERAMBULATOR, MAIL-CART, AND THE LIKE. EDWARD THOMPSON MORRISS, South Hampstead, England. Filed Mar. 21, 1912. Serial No. 685,175. (Cl. 21—12.)



A perambulator consisting of a frame of tubing bent to a closed figure in plan and having a curved bow shape in elevation and forming a light and resistant spring rising upwardly at each end, a body having a curvature corresponding to that of the frame and means for suspending the said body within the said frame at the upper ends thereof consisting of spiral springs, substantially as described.

1,171,062. COVERING FOR RAILWAY BRIDGES AND TRESTLES. GEORGE B. MOSELEY, Camden, Ark. Filed June 28, 1915. Serial No. 36,875. (Cl. 104—4.)



1. In a covering of the class described, the combination of a central sheet and side sheets, said central sheet being adapted to fit between two rails, said side sheets being adapted to engage the outer portions of the rails and fit over the side portions of a trestle or bridge, whereby the sheets will protect a trestle or bridge from being rotted by water or burned by the dropping of hot coals thereon as a train passes thereover.

2. In a covering of the class described, the combination of a central sheet, said central sheet being adapted to be carried between two rails, a plurality of side sheets engaging the outer portions of the rails, said sheets being adapted to be carried upon a trestle or bridge so as to allow the side sheets to overhang the side portions of the trestle or bridge for retaining said sheets in position, said sheets being provided with water guide portions whereby the water collected by the sheets may be directed to a desired position to be discharged, and said sheets being adapted to prolong the life of a trestle or bridge by preventing the water from rotting the trestle or bridge and preventing the trestle or bridge from being consumed by fire.

3. In a covering of the class described, the combination of a central sheet, said central sheet being elongated and being bowed longitudinally so as to allow the central portion to be in a plane below the side edges thereof, said side edges being adapted to be sprung beneath the tread of two rails whereby the sheet will be retained in position, and side sheets being carried adjacent said central sheet so as to engage the outer portions of the rails which hold said central sheet, said sheets being adapted to be carried upon a trestle or bridge whereby the sheets will protect the trestle or bridge from water or from fire.

4. In a covering of the class described, the combination of a central sheet, said central sheet comprising an elongated body being bowed so as to have its side edges positioned in a plane above the central portion thereof, said side edges provided with elongated notched portions, said side edges being adapted to be sprung beneath the treads of a plurality of rails whereby the central sheet will be held in its correct position, said notched portions providing sufficient space to accommodate the fish plates of a plurality of rails, said central plate provided with notches in its end portions whereby the water caught by the plate will be directed to its lower central portion so as to pass therealong to be discharged through said notched portions, and side protector plates carried adjacent said central plate so as to engage the rails holding said central plate whereby said plates will fit upon the upper portions of a trestle or bridge for protecting the same from the weather or preventing the burning thereof by the dropping of hot coals thereon.

5. In a covering of the class described, the combination of a central sheet, said central sheet being adapted to be carried between a plurality of rails, side sheets carried adjacent the central sheet, each of said side sheets comprising an elongated body having an edge fitting under the tread of a rail, a substantially U-shaped inverted portion formed upon the outer portions of the body of the side sheets, said U-shaped inverted portion being adapted to fit over the side guard of a trestle or bridge, said side sheets provided with a gutter adjacent the junction of said body and U-shaped inverted portion whereby the water caught by said side sheets will pass along said gutter so as to be discharged from the end portions thereof.

[Claim 6 not printed in the Gazette.]

1,171,063. MULTIPLE-SOCKET WRENCH. WLADYSLAW NIGBOROWICZ, Gallitzin, Pa. Filed Sept. 22, 1915. Serial No. 52,056. (Cl. 81—185.)



1. A ratchet wrench comprising a hub having an engaging opening extending therethrough, a plurality of double-ended nut-receiving sleeves telescopingly adjustably positioned within the said opening, coöperating rotation preventing means carried by the sleeves, and means for locking the sleeves in extended and retracted adjusted positions.

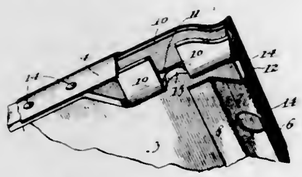
2. A ratchet wrench comprising a collar, a cylindrical hub journaled therein and having an angular nut-receiving opening therethrough, a plurality of telescoping wrench-sleeves of similar configuration slidably positioned within the said opening, coöperating tongues and grooves formed on the opposed faces of the sleeves, and means for locking the sleeves in extended and retracted adjusted positions.

3. A ratchet wrench comprising a cylindrical hub, having a nut-receiving hexagonal opening axially extending therethrough and having spaced longitudinal grooves upon its outer surface, a sleeve encircling the said hub and removably positioned thereon, a spring-pressed releasing and

ratcheting pawl attached to the said sleeve and in operative engagement with the said grooves, a plurality of telescoping wrench-sleeves slidably positioned within the said hub opening and being each formed hexagonal in cross-section, guide tongues and grooves carried by the opposed faces of each sleeve, and means for locking the sleeves in extended and retracted adjusted positions.

4. A ratchet wrench comprising a cylindrical hub, having a nut-receiving hexagonal opening axially extending therethrough and having spaced longitudinal grooves upon its outer surface, a sleeve encircling the said hub and removably positioned thereon, a spring-pressed releasing and ratcheting pawl attached to the said sleeve and in operative engagement with the said grooves, a plurality of telescoping wrench-sleeves slidably positioned within the said hub opening and being each formed hexagonal in cross-section, longitudinal lug and groove connections between the said sleeves and hub, adjustable locking means between the said hub and sleeves, and adjustable locking means between the sleeves whereby the hub and sleeves may be locked in any adjusted position.

1,171,064. SHELVING. JOHN B. O'CONNOR, Aurora, Ill., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Aug. 11, 1915. Serial No. 45,007. (Cl. 211—27.)



1. In shelving, the combination of an upright, a shelf, and a corner clip fastened to said shelf, said clip having legs adapted to contact the inner surface of the upright at two different elevations, and means for holding said clip in close contact with the upright.

2. In shelving, the combination of an upright, a shelf having a depending flange at the end, and a depending flange along the front, the end flange being cut away to clear the upright, and a corner clip having extensions fastened to the flanges of the shelf, and having legs abutting the inner surface of the upright at two points vertically remote from each other, and means for holding said legs in close contact with said upright.

3. In shelving, the combination of an upright, a metallic shelf having an integral depending flange at the end, a channel-shaped corner clip arranged horizontally with the ends of its flanges in contact with the side of the upright, and an extension integral with said clip at the base of the channel thereof, said extension dropping to the plane of the end flange and fastened thereto, and means passing through the upright and through the channeled portion of the clip for removably holding the clip in position against the upright.

4. In shelving, the combination of an upright, a sheet metal shelf having an integral depending flange at the end and an integral depending flange along the front, a horizontal channel-shaped corner clip having its flanges in contact with the vertical surface of the upright at points vertically remote from each other, an extension integral with the back of the clip rigidly fastened to the end flange of the shelf, and another extension, integral with the back of the clip, rigidly fastened to the front flange of the shelf, and means passing through the upright and through the channeled portion of the clip for removably holding the clip in position against the upright.

5. In shelving, the combination of an upright, a sheet metal shelf having an integral depending flange at the end and an integral depending flange along the front, a horizontal channel-shaped corner clip having its flanges in contact with the vertical surface of the upright at points vertically remote from each other, an extension integral with the back of the clip rigidly fastened to the end flange of the shelf, and another extension, integral with the back of the clip, rigidly fastened to the front flange of the shelf, the channeled portion of the clip having a notch therein and a bolt passing through the upright and through the notched portion of the clip for removably holding the clip in place, said notch being open at the bottom whereby, when the bolt is loosened, the shelf may be lifted off.

[Claims 6 to 8 not printed in the Gazette.]

1,171,065. MANUFACTURE OF VINEGAR. JAMES BENTON PAGE, El Paso, Tex. Filed Dec. 8, 1913. Serial No. 805,278. (Cl. 23—27.)

1. In the manufacture of table vinegar, the process which comprises fermenting and acetifying melon juice and aging to produce table vinegar.

2. The process of producing a vinegar which comprises concentrating, fermenting and acetifying melon juice.

3. The process of producing a vinegar which comprises concentrating melon juice until a desired color develops, and then fermenting and acetifying the concentrated juice.

4. The process of producing a vinegar which comprises clarifying melon juice, heating the clarified juice till a brown color develops, and then fermenting and acetifying such juice.

5. The process of producing a vinegar which comprises clarifying melon juice, subjecting the juice to a heating operation comprising an evaporation at a low temperature and a subsequent short heating to a higher temperature, and then fermenting and acetifying the treated juice.

[Claim 6 not printed in the Gazette.]

1,171,066. PROCESS OF UNITING COPPER TO FERROUS METALS. WILLIAM MARSHALL PAGE, Chester, Pa. Filed June 17, 1913. Serial No. 774,162. (Cl. 22—203.)

1. The process of uniting copper to steel which comprises preparing a bath of a molten alloy or mixture of copper and iron of approximately predetermined composition, contacting therewith a body of steel until said body acquires an adhering coating or film, removing said body of steel from contact with said bath, and uniting a body of substantially pure copper to the filmed steel body.

2. The process of uniting copper to steel which comprises preparing a bath of a molten alloy or mixture of copper and iron of approximately predetermined composition, the proportion of iron being relatively small, contacting therewith a body of steel until said body acquires an adhering coating or film, removing said body of steel from contact with said bath, and uniting a body of substantially pure copper to the filmed steel body.

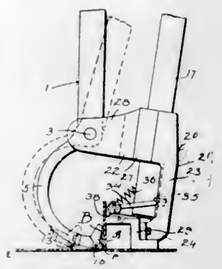
3. The process of uniting copper to steel which comprises treating molten copper with iron under non-oxidizing conditions to obtain an alloy or mixture of copper and iron, contacting said alloy or mixture in molten condition with a solid body of steel and maintaining such contact until said steel body is coated or filmed with the alloy or mixture, terminating the contact of the steel body with the molten mixture, and thereafter uniting a body of substantially pure copper to the filmed steel body.

4. The process of uniting copper to steel which comprises treating molten copper with iron and a deoxidant to obtain a molten bath of a mixture or alloy of copper and iron, said mixture being low in iron, dipping a steel billet into said bath to produce an adherent coating of copper iron alloy on said billet, removing the billet from the bath, and casting substantially pure copper against the filmed billet.

5. The process of uniting copper to steel which comprises treating molten copper with iron and phosphorus to obtain a molten bath of a mixture or alloy of copper and iron, said mixture being low in iron, dipping a steel billet into said bath to produce an adherent coating of copper iron alloy on said billet, removing the billet from the bath and casting substantially pure copper against the filmed billet.

[Claims 6 to 9 not printed in the Gazette.]

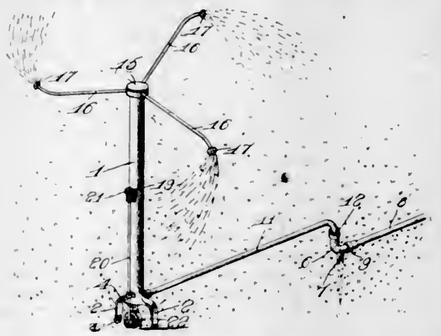
1,171,067. ROOFING-TOOL. WILLIAM F. ROTH, Nevada, Ohio. Filed Nov. 7, 1914. Serial No. 870,898. (Cl. 113—56.)



1. A roofing tool comprising a pair of tongs, jaws carried by the tongs, one of the handles of one of the jaws being rotatable with relation thereto, bending elements carried by the jaw in which the rotatable handle is mounted means connecting the bending elements with the rotatable handle to cause the elements to bend when the handle is rotated, and a mandrel carried by the coöperating jaw and arranged to form a coöperating bending element.

2. A roofing tool comprising a pair of tongs, jaws carried by the tongs, bending elements carried by one jaw, a rotatable handle in the jaw on which the bending element is mounted, means connecting the bending elements with the rotatable handle, whereby when the handle is rotated the elements are actuated, and a jointed mandrel carried by the other jaw and arranged to form a coöperating bending element over which the material which is being bent is forced by the bending elements.

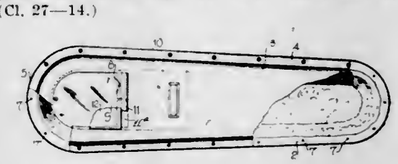
1,171,068. LAWN-SPRINKLER. MAX A. SCHIENKE, Bay Shore, N. Y. Filed Aug. 14, 1914. Serial No. 856,840. (Cl. 137—63.)



1. A lawn sprinkler comprising a supporting standard provided at its lower end with supporting feet, a supporting wheel mounted on each of said feet to carry the supporting standard, a fluid supply pipe connected with said supporting standard and provided with a swivel connection with the source of fluid supply so formed that the supporting standard may have movement upon the supporting wheels in a circular path, a hollow stem revolubly mounted in said standard, a revolving spray structure carried by said stem above the upper end of said standard, an operating wheel carried by said supporting standard to engage the ground, gear teeth formed on said operating wheel, gear teeth formed on said stem, substantially midway its vertical extent, said standard being cut away at a point intermediate its upper and lower ends adjacent the gear teeth on said stem, bearings mounted on said standard, a shaft journaled through said bearings, one end of said shaft carrying a gear wheel in mesh with the gear teeth on said operating wheel, and the other end of said shaft carrying a gear wheel in mesh with the teeth on said stem, whereby the rotation of said stem by said spray structure will cause a similar movement of said supporting wheel, substantially as described.

2. In a movable lawn sprinkler, a hollow supporting standard, an operating means carried by said standard to engage the ground, a hollow stem mounted in said standard, a spray structure carried by said stem, gear teeth formed on said stem, said standard provided with a cut-out intermediate its ends adjacent the gear teeth, gear teeth formed on said operating wheel, bearings, a shaft journaled through said bearings, a gear wheel carried on said shaft meshing with the gear teeth on said operating wheel, a gear wheel carried on said shaft projecting through the cut-out in said standard and meshing with the gear teeth on said stem, whereby rotation of said stem will cause a similar movement of said operating wheel, substantially as described.

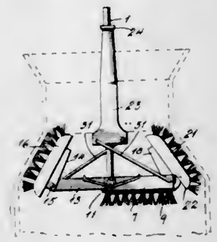
1,171,069. BURIAL-CASKET. IDA SCHMIDT, Los Angeles, Cal. Filed Sept. 22, 1915. Serial No. 52,031. (Cl. 27—14.)



1. A casket cover composed of a plurality of metallic sheets, the cover being cut away at one end to provide an opening and formed with a recess extending from one end of the opening, the cover being also formed with a transverse recess extending from the upper surface of the cover adjacent the end of the opening and a slide mounted within the recess and movable into a position across the opening, and a facing strip removably disposed in the transverse recess and adapted to hold the slide either in place across the opening or in place within the recess.

2. A casket cover composed of a plurality of metallic sheets, all of the sheets being cut away at one end of the cover to provide an opening, the intermediate sheets being cut away to a greater extent than the outer and inner sheets to provide lateral slide supporting grooves and a slide receiving recess forming a continuation of the opening, the cover being formed with a transverse recess extending downward from the upper surface of the cover and intersecting said first named recess, a slide disposed in the first named recess slidable in said grooves from an open to a closed position, and a facing strip removably disposed in the transverse recess to thereby hold the slide either in place across the opening or within said first named recess.

1,171,070. MILK-CAN WASHER. HENRY E. SCHOEPHOERSTER and FREDERICK RODER, Sumner, Iowa. Filed Mar. 3, 1915. Serial No. 11,755. (Cl. 141—7.)

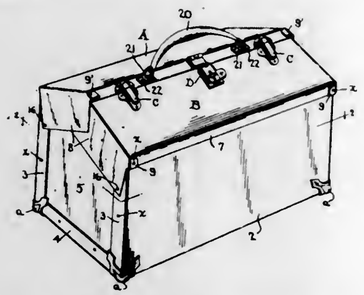


1. A can washer of the class described comprising a crank handle, a channel plate, a bottom brush carried by said channel plate, said channel plate provided with a laterally extending flange for fitting snugly over said bot-

tom brush, an attaching link pivotally secured to said crank handle and to said channel plate, said link being adapted to be swung upwardly, a brush supporting plate pivotally secured to said link, said brush supporting plate provided with a pair of parallel sides, a coiled spring carried by said link and engaging said brush supporting plate for normally holding said brush supporting plate in line with said link, a second brush carrying plate secured to the outer end of said channel plate, means for normally urging said second brush carrying plate to extend in alinement with said channel plate, a slide mounted upon said crank handle, links connecting said channel plate and said first-mentioned link to the lower end of said slide, and means for holding said slide against upward movement.

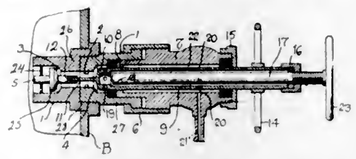
2. A can washer of the class described comprising a crank handle, a channel plate, a bottom brush carried by said channel plate, said channel plate provided with a laterally extending flange for fitting snugly over said bottom brush, an attaching link pivotally secured to said crank handle and to said bottom brush, said link being adapted to be swung upwardly, a brush supporting plate pivotally secured to said link, said brush supporting plate provided with a pair of parallel sides, a coiled spring carried by said link and engaging said brush supporting plate for normally holding said brush supporting plate in line with said link, a second brush carrying plate secured to the outer end of said channel plate, means for normally urging said second brush carrying plate to extend in alinement with said channel plate, a slide mounted upon said crank handle, links connecting said channel plate and said first-mentioned link to the lower end of said slide, and means for holding said slide against upward movement, a finger grip carried by said slide for facilitating the reciprocation of said slide upon said crank handle for swinging said brushes with respect to said crank handle, whereby said brushes may be yieldably held in engagement with each other by the inner face of a can adapted to be cleaned, said slide provided with a plurality of inwardly bent ears, said crank handle provided with a notch formed therein, and said ears adapted to engage said notched portion for limiting the upward sliding movement of said slide upon said crank handle.

1,171,071. GRIP. HENRY S. SCHUMACHER, Bloomington, Ill. Filed Apr. 21, 1914. Serial No. 833,476. (Cl. 190—48.)



A grip of the class described, comprising a rectangular sheet metal receptacle including a bottom and two integral sides and two end flanges, two metal end plates secured to said flanges and said sides, two similar sheet metal lids each comprising a flat top portion having an outer stop flange held at a right angle to said flat portion arranged to contact with one of said sides, said lids being provided with overlapping upper edges each lid further provided with two flat securing end flaps extending at a right angle from said top portion each flap having an ear, means to secure each ear to one of said stop flanges, the inner ends of said flaps arranged to overlap at times, and pivot studs passing through said flaps to secure the same to said end plates, as and in the manner set forth.

1,171,072. GAGE-COCK. JOHN B. SEAGO, Pee Dee, N. C. Filed Mar. 17, 1915. Serial No. 14,989. (Cl. 137—138.)



1. A device of the character described comprising a casing adapted to be projected within a boiler and provided with an internal valve seat, a barrel engaged with the outer extremity of the casing, an elongated tubular valve member disposed through the barrel and capable of longitudinal movement, the inner end of said valve member being closed and adapted to coact with the valve seat within the casing, said tubular valve member being provided with perforations communicating with the bore thereof, said valve member being also provided with an internal valve seat in close proximity to its inner end and inwardly of certain of the perforations, and a stem projecting within the tubular valve member and capable of longitudinal movement adapted to coact with the internal valve seat of the valve member, the diameter of the stem being less than the diameter of the bore of the valve member and the diameter of the valve member being less than the diameter of the bore of the barrel, said barrel being provided with a discharge opening.

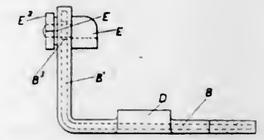
2. A device of the character described comprising a casing adapted to be projected within a boiler and provided with an internal valve seat, a barrel engaged with the outer extremity of the casing, an elongated tubular valve member disposed through the barrel and capable of longitudinal movement, the inner end of said valve member being closed and adapted to coact with the valve seat within the casing, said tubular valve member being provided with perforations communicating with the bore thereof, said valve member being also provided with an internal valve seat in close proximity to its inner end and inwardly of certain of the perforations, a stem projecting within the tubular valve member and capable of longitudinal movement adapted to coact with the internal valve seat of the valve member, the diameter of the stem being less than the diameter of the bore of the valve member and the diameter of the valve member being less than the diameter of the bore of the barrel, said barrel being provided with a discharge opening, and means for imparting longitudinal movement to the valve member.

3. A device of the character described comprising a casing adapted to be projected within a boiler and provided with an internal valve seat, a barrel engaged with the outer extremity of the casing, an elongated tubular valve member disposed through the barrel and capable of longitudinal movement, the inner end of said valve member being closed and adapted to coact with the valve seat within the casing, said tubular valve member being provided with perforations communicating with the bore thereof, said valve member being also provided with an internal valve seat in close proximity to its inner end and inwardly of certain of the perforations, a stem projecting within the tubular valve member and capable of longitudinal movement adapted to coact with the internal valve seat of the valve member, the diameter of the stem being less than the diameter of the bore of the valve member and the diameter of the valve member being less than the diameter of the bore of the barrel, said barrel being provided with a discharge opening, said casing being provided with a second internal valve seat, a safety valve within the casing adapted to coact with the second valve seat, and means carried by the inner extremity of the valve member for maintaining said safety valve in open adjustment.

4. A device of the character described comprising a casing adapted to be projected within a boiler and provided with an internal valve seat, a barrel engaged with the outer extremity of the casing, an elongated tubular valve member disposed through the barrel and capable of

longitudinal movement, the inner end of said valve member being closed and adapted to coact with the valve seat within the casing, said tubular valve member being provided with perforations communicating with the bore thereof, said valve member being also provided with an internal valve seat in close proximity to its inner end and inwardly of certain of the perforations, a stem projecting within the tubular valve member and capable of longitudinal movement adapted to coact with the internal valve seat of the valve member, the diameter of the stem being less than the diameter of the bore of the valve member and the diameter of the valve member being less than the diameter of the bore of the barrel, said barrel being provided with a discharge opening, said casing being provided with a second internal valve seat, a safety valve within the casing adapted to coact with the second valve seat, means carried by the inner extremity of the valve member for maintaining said safety valve in open adjustment, and means within the casing coacting with the safety valve for maintaining the same against displacement.

1,171,073. GLAZING-BAR. JOHN STRATTON and ERNEST ALEXANDER CLAREMONT, county of Chester, England. Filed May 19, 1915. Serial No. 29,092. (Cl. 108—16.)



1. The combination with a lead coated glazing bar of lead coated clips or shoes adapted to support the upper and lower ends of said bar, each of said clips comprising a base or main member on which said bar rests, and an angularly disposed member against which an end of the bar abuts, a detachable bolt on one of said clips having a hood shaped end, and an integral hood shaped member on the other of said clips, the bolt and hood shaped member being adapted to embrace the upper part of the glazing bar.

2. A clip or shoe for use with glazing bars comprising a base member, an end member disposed angularly thereto and a bolt having a hood shaped end in detachable relation to said end member.

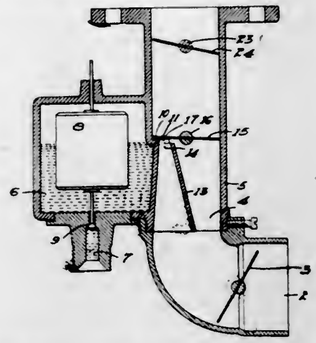
3. A clip or shoe for use with glazing bars comprising a base member, an end member disposed in angular relation thereto, a bolt in detachable relation to said end member and having a hood shaped end extending over said base member, and upwardly extending lateral flanges on said base member.

4. The combination with a lead-coated glazing bar, of a clip or chute adapted to support an end of said bar, said clip or chute consisting of a base or main member comprising two wings between which said bar rests, the lower face of one of said wings being beveled laterally, an angularly disposed member against which the end of the bar abuts, and means on said angularly disposed member for embracing the upper part of the bar.

5. A clip or chute for use with glazing bars comprising a base member interrupted to provide two wings between which the bar is received, the lower surface of one of said wings being beveled laterally, an end member disposed in angular relation to said base member, and a hood formed integral with said end member and disposed angularly thereto.

1,171,074. CARBURETER. CHARLES M. STROUD, Minneapolis, Minn., assignor of one-half to William J. Bowman, Minneapolis, Minn. Filed Mar. 8, 1915. Serial No. 12,774. (Cl. 48—150.3.)

1. A carbureter comprising a casing having an air intake passage and a shoulder provided with ports for delivering liquid fuel to said passage, a valve mounted to swing in said passage and having an edge to seat on said shoulder over said ports and provided with means for allowing a predetermined flow of liquid fuel when the valve is in its closed position, said valve also regulating the flow of air through said passage and the movement of said valve toward its open position, allowing a proportionate increase in the flow of liquid fuel and air.



2. A carbureter comprising a casing having an air intake passage and a shoulder formed in the wall of said passage and provided with ports for delivering liquid fuel to said passage, a valve mounted to swing in said passage and having an edge to seat on said shoulder over said ports and provided with an opening therein to register with one of said ports for allowing the passage of a predetermined flow of liquid fuel when the valve is in its closed position, the movement of said valve from its seat opening the other ports and increasing the flow of liquid fuel and simultaneously increasing the flow of air through said passage past said shoulder and ports.

3. A carbureter comprising a casing having an air intake passage and a wall provided with a port for delivering liquid fuel to said passage, a valve mounted to swing in said passage and having an edge to seat over said port and check the flow of liquid fuel and simultaneously reduce the flow of air past said port, a wall provided in said passage adjacent to said valve and extending to a point near said port, there being a narrow throat formed between said wall and said port, said throat being closed when said valve is in its closed position, the opening of said valve proportionately increasing the flow of air through said passage and fuel from said port.

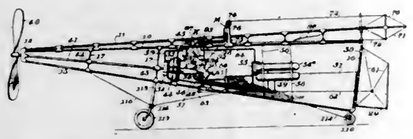
4. A carbureter comprising a casing having an air intake passage and a wall provided with a port for delivering liquid fuel to said passage, a valve mounted to swing in said passage and having a part to seat over said port and check the flow of liquid fuel and simultaneously cut off the passage of air past said port, said valve having an opening therein for allowing a predetermined supply of fuel and a predetermined volume of air to pass therethrough when said valve is in its closed position, the opening of said valve allowing a proportionate increase in the flow of liquid fuel and air past said valve.

5. A carbureter comprising a casing having an air intake passage and a wall provided with a port for delivering liquid fuel to said passage, a valve mounted to swing in said passage, said valve having means for allowing the flow of a predetermined supply of fuel and a predetermined volume of air through said passage when said valve is in its closed position, and means mounted in said passage for directing the air toward said port and forming a comparatively narrow throat adjacent to said port through which air is directed past said port and valve.

1,171,075. FLYING-MACHINE. EDWIN TAYLOR, Farmingdale, N. Y., assignor to David M. Neuberger, New York, N. Y. Filed Aug. 22, 1910. Serial No. 578,324. (Cl. 244—29.)

1. In a flying machine, in combination, a plane, a propeller at the front end thereof, said propeller mounted to

rotate in a plane at an angle to the horizontal when said machine is at rest; a pair of ailerons at the rear end thereof, a rudder below the said ailerons and automatically controlled means for simultaneously adjusting said ailerons in opposite directions and to defferent angular relations with respect to each other and to the plane.



2. In a flying machine, in combination, a plane converging from the rear to the front, a propeller at the front end of the plane exerting both a forward driving and a lifting effort, an engine and shaft for said propeller, a plurality of independently and relatively movable ailerons at the rear end of the plane, operating means for said ailerons and means on said engine shaft supplying means to operate said aileron operating means.

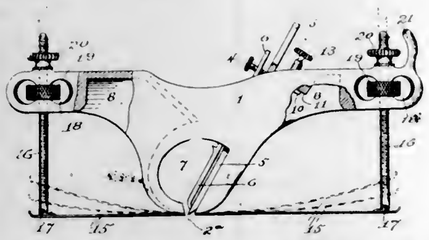
3. In a flying machine, in combination, a plane converging from the rear to the front, a propeller at the front end of the plane exerting both a forward driving and lifting effort, a plurality of independently and relatively movable ailerons at the rear end of the plane, and an engine connected to the propeller and means connected to said engine for operating the ailerons, said means comprising an air pump, air tanks, air motor and connections.

4. In a flying machine, the combination of a supporting means therefor, a frame mounted on the supporting means and comprising a substantially horizontally arranged central bar, side bars secured to the central bar at its forward end and extending rearwardly and at an angle thereto, a centrally arranged downwardly and rearwardly extending bar connected to the central bar at its forward end and to the side bars and forming with the latter a frame triangular in contour, and a shaft journaled within the frame and projecting therefrom at the front end, a propeller mounted on the projecting end of said shaft, and a motor mounted on the other end of the shaft.

5. In a flying machine, the combination of a frame triangular in cross section and comprising bars converging at their forward ends and connected at their rear ends to form a structure triangular in marginal outline, a shaft projecting from the front end of the aeroplane, a propeller mounted on the projecting end of the shaft, the other end of the shaft terminating within the frame, a fluid compressor supported on said shaft, a motor also supported on the shaft and arranged to operate the propeller and fluid compressor, balancing means at the rear end of the frame, means including fluid-operating mechanism for actuating said balancing means and connections between said fluid-operated mechanism and the fluid compressor.

[Claims 6 to 10 not printed in the Gazette.]

1,171,076. HAND-PLANE. JOHN F. THUNELL, Salt Lake City, Utah. Filed Nov. 17, 1914. Serial No. 872,608. (Cl. 145—14.)



In a bit plane, a plane throat the under wall of which has a slot lengthwise thereof, a plate of larger area than the slot and slidable on the under face of said wall opposite the slot, a lug on the upper face of the plate and projecting through the slot into engagement with the bit, a lug on the lower face of the plate, and a screw spaced apart from said wall equal to the thickness of the plate and engaging the plate and the lower lug to keep the upper lug in engagement with the bit for longitudinal adjustment by the screw.

1,171,077. CUSHIONING VEHICLE-BODY FRAMES. THOMAS HENRY WHELESS, New York, N. Y. Filed Nov. 22, 1911. Serial No. 661,711. (Cl. 267—51.)

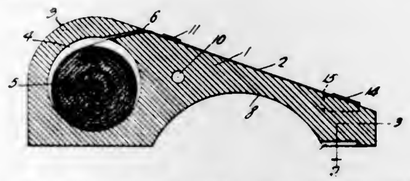


1. In a vehicle the combination with side bars for the body frame provided with a cylindrical recess, forming a housing, contained therein, of an axle projecting through said housing, and a resilient cushion mounted in said housing and inclosing said axle, substantially as described.

2. In a vehicle the combination with a body frame and axle, of a resilient cushion in said body frame and surrounding the axle, with end plates and sleeves loosely mounted on said axle, said end plates bearing against said resilient cushion, fixed bearings on said axle, and springs mounted in said sleeves and engaging said end plates and said fixed bearings, substantially as described.

3. In a vehicle the combination with a body frame and axle, of a resilient cushion in said body frame and surrounding the axle, with a sleeve interposed between said resilient cushion and said axle, with end plates and sleeves loosely mounted on said axle, said end plates bearing against said resilient cushion, fixed bearings on said axle, and springs mounted in said sleeves and engaging said end plates and said fixed bearings substantially as described.

1,171,078. NOTE-PAPER HOLDER. REUBEN D. WIRT, Philadelphia, Pa. Filed Sept. 10, 1915. Serial No. 49,972. (Cl. 11—22.)



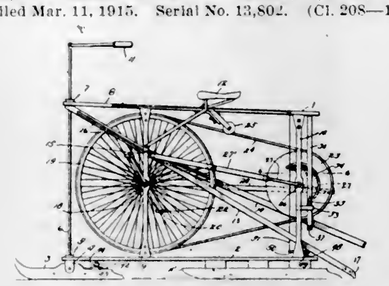
1. A paper holder embodying a block having opposite surfaces arranged at an acute angle with one another, thereby causing the block to have a thick end and a thin end, one of them being a writing surface, the said block having a transverse bore of large diameter in its thick end and a slot extending from said bore to said writing surface, said bore being adapted to hold a roll of paper so that the paper can extend through said slot onto the writing surface.

2. A paper holder embodying a block having opposite surfaces arranged at an acute angle with one another, thereby causing the block to have a thick end and a thin end, one of them being a writing surface, the said block having a transverse bore of large diameter in its thick end and a slot extending from said bore to said writing surface, said bore being adapted to hold a roll of paper so that the paper can extend through said slot onto the writing surface, means for guiding and holding said paper on said writing surface, a closure resting against one side of the block to close the end of the bore, and holding

elements for supporting said closure in place engaging within the block around said bore.

3. A paper holder embodying a block having opposite surfaces arranged at an acute angle with one another, thereby causing the block to have a thick end and a thin end, one of them being a writing surface, the said block having a transverse bore of large diameter in its thick end and a slot extending from said bore to said writing surface, said bore being adapted to hold a roll of paper so that the paper can extend through said slot onto the writing surface, the block having a cut out portion between said bore and thin end, and a dovetailed slot extending from said cut out portion toward the thin end for receiving the head of a supporting element.

1,171,079. SLED. OSCAR W. AHLBOM, Garfield, Utah. Filed Mar. 11, 1915. Serial No. 13,802. (Cl. 208—159.)



1. In a sled, the combination with runners, of a frame mounted thereon, propelling rods slidably and pivotally mounted on said frame and having spurs on the ends thereof for penetrating the ground, means for alternately moving the rods forwardly and rearwardly, means alternately engageable with the rods on their forward movement to lift the same and automatically operated means for effecting said engagement.

2. In a sled, the combination with runners, of a frame mounted thereon, propelling rods slidably and pivotally mounted on said frame, means for alternately sliding said rods on said frame, and means for alternately engaging said rods to lift the same about their pivots.

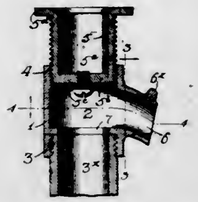
3. In a sled, the combination with front and rear runners, of a frame including a base, upwardly extending spaced standards mounted on the base adjacent the forward end thereof, similar spaced standards mounted on the base adjacent the rear end thereof, a drive wheel rotatably mounted between the first mentioned standards, a second wheel rotatably mounted between the second mentioned standards, a belt passing over said wheels, bolts on the first mentioned standards extending inwardly therefrom, propelling rods slidably and pivotally mounted on said bolts, pitmen connected to the second mentioned wheel at diametrically opposite points thereon and pivotally secured to the said rods, means for rotating the wheels whereby the rods will be alternately moved forwardly and rearwardly and means for alternately engaging the rods to lift the same about their pivots.

4. In a sled, the combination with a frame, of runners for supporting the same, said frame consisting of a base, standards extending upwardly therefrom, and a beam secured to the upper ends of the standards, a drive wheel rotatably mounted between two adjacent standards, a second wheel rotatably mounted between another two of said standards, propeller rods slidably and pivotally mounted on the frame, means connecting the rods and second mentioned wheel to alternately move the rods forwardly and rearwardly, downwardly extending converging arms hingedly secured to the said beam and having rollers on the outer faces thereof, a cam on the said last mentioned wheel, a roller on one of said arms constructed and arranged to be engaged by said cam whereby the roller on one of the arms will be moved beneath the adjacent rod, and a spring for moving the roller on the other arm beneath the other rod upon the disengagement of the cam from the roller on the opposite arm.

5. In a sled, the combination with a frame, of a runner pivotally secured to the front thereof and a pair of runners rigidly secured to the rear thereof, a supplemental runner pivotally secured to the front runner and normally lying above the plane of the lower edge thereof, and means for automatically projecting the said supplemental runner outwardly upon the pivotal movement of the front runner.

[Claim 6 not printed in the Gazette.]

1,171,080. VALVE. CHARLES P. ANDERSON, Seattle, Wash. Filed Oct. 13, 1914. Serial No. 866,458. (Cl. 137—4.)



1. A valve for controlling flow through a pipe, said valve comprising a substantially cylindrical shell having a pipe opening at one end, a valve chamber in its intermediate portion and a valve plug opening at its other end; said pipe opening, valve plug opening and valve chamber being coaxially alined; a discharge spout communicating laterally with the valve chamber and a valve plug threaded in the valve plug opening and axially disposed therein; said valve plug comprising a cylindrical shell having a central socket and a surrounding gripping flange, the threaded portion of the valve plug opening terminating at the free end of said shell permitting removal, without hindrance of the plug.

2. A valve for controlling flow through a pipe; said valve comprising a substantially cylindrical shell having a pipe opening at one end, a smooth bored valve chamber in its intermediate portion and a valve plug opening at its other end; said pipe opening, valve plug opening, and valve chamber being coaxially alined and their respective diameters of increasing magnitude in the order here enumerated; a discharge spout communicating laterally with the valve chamber and level with said pipe opening; and a valve plug threaded in the valve plug opening and axially adjustable therein; said valve plug comprising a cylindrical shell having a central socket and a surrounding gripping flange, the threaded portion of the valve plug opening terminating at the free end of said shell permitting removal without hindrance to the plug.

3. A valve for controlling flow through a pipe; said valve comprising a shell having a pipe opening, a suitably vented smooth bored valve chamber and a valve plug opening of smaller diameter than said chamber; in combination with a valve plug threaded in the valve plug opening and constructed with a central socket and a surrounding gripping flange, and a removable operating handle for said valve plug comprising a central shank adapted to enter the valve plug socket and centering in the plug, and circumferentially disposed gripping lugs adapted to engage the gripping flange of said plug, whereby the plug may be detached from the shell by simply unscrewing it.

1,171,081. WEATHER-BOARDING. WILLIAM E. AYCOCK, Aycock, Fla., assignor of one-half to Thomas J. Aycock, Aycock, Fla. Filed July 2, 1915. Serial No. 37,753. (Cl. 20—5.)

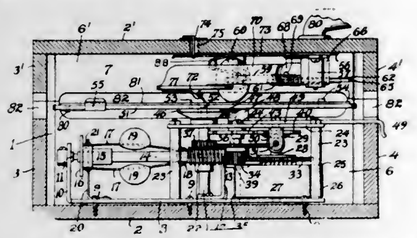
1. A weather-board having two longitudinally extending rabbets of approximately the same depth formed in one edge portion, a longitudinally extending rabbet formed in the other edge portion, and a series of transverse grooves

extending across the face of the board, the bottoms of said grooves being in the same plane as the face of one of the two first-named rabbets.



2. A weather-boarding having two longitudinally extending rabbets formed in one edge portion, each of said rabbets being in depth approximately one-third the thickness of the board, a longitudinally extending rabbet formed in the other edge portion the depth of said rabbet being approximately one-third less the thickness of the board, and a series of transverse grooves extending across the face of the board, the width of said grooves corresponding to that of one of the first-named rabbets and the bottoms of said grooves being in the same plane as the face of that one of the two first-named rabbets nearest the front face of the board.

1,171,082. SOUND RECORDING AND REPRODUCING MACHINE. BERTHOLD A. BAER, Philadelphia, Pa. Filed Mar. 30, 1909. Serial No. 486,776. (Cl. 181—5.)



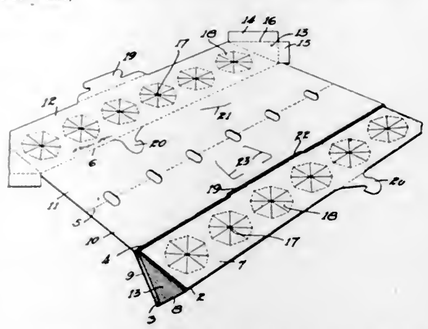
1. The combination, in a sound recording and reproducing machine, of a box, a card carrier rotatably mounted in said box, a cover for the box, said card carrier being wholly independent of the cover, a friction disk carried by the cover and revolubly supported thereby, and a sound-box carried by said cover in operative connection with and adapted to be fed by said disk, said disk being arranged to be rotated by the carrier when the cover is down on the box.

2. A sound recording and reproducing machine comprising a box, a carrier rotatably mounted therein adapted to carry a card, a cover for the box, a bracket mounted on the inside of the cover, a friction disk revolubly supported thereby and adapted to be rotated by the card when the cover is down on the box, a sound box pivotally supported by said bracket, a gear sector adapted to move the sound box relatively to the carrier, a shaft carrying the friction disk provided with a worm, and a gear in mesh with said sector and worm.

3. A sound recording and reproducing machine, comprising a box provided with a revolubly mounted carrier, a cover therefor provided with a friction disk adapted to be revolved by the carrier, a sound box suspended from the cover and adapted to be moved by the disk relatively to the carrier, a needle point suspended from the sound box, a gear, a shaft carrying the friction disk and provided with a worm in mesh with said gear, and a sector in mesh with said gear adapted to cause said needle to move over the surface of the carrier.

4. A sound recording and reproducing machine, comprising a box provided with a revoluble carrier, a cover therefor provided with a disk adapted to be rotated by the carrier, a sound box above the carrier adapted to be moved by the disk relatively to the carrier, a needle point suspended from the sound box over the carrier, and means above the cover adapted to indicate the position of the needle point relatively to the carrier.

1,17_,083. EGG-BOX. BENJAMIN F. BAILEY, Minneapolis, Minn., assignor of one-half to Lizzie A. Cree, Chicago, Ill. Filed June 9, 1915. Serial No. 33,055. (Cl. 229—29.)



1. An egg box comprising a blank of flexible material divided by parallel score lines into a series of panels, the outer panels at the ends of the blank having a plurality of openings therein and being folded initially along their score lines over the adjacent panels to form egg pockets triangular, substantially, in cross section, said pockets being folded finally upon one another when the eggs have been inserted therein, and said blank having tongues and slots for locking said pockets in opposing relation to one another.

2. An egg box comprising a blank divided by parallel score lines into a plurality of panels, the outer panels having openings therein and triangular tongues at the ends of said outer panels having flaps formed on the edges thereof, said outer panels being folded on their score lines over the adjacent panels to form egg pockets, triangular in cross section, the tongues and flaps at the ends of said outer panels being inserted into said pockets for closing and bracing the open ends thereof.

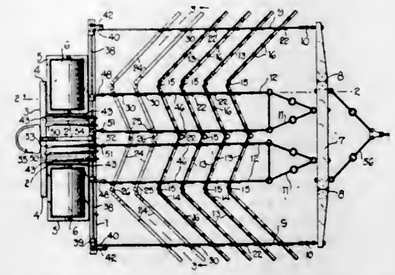
3. An egg box comprising a blank divided by parallel score lines into a plurality of panels, the outer panels having openings therein and tongues formed on their outer longitudinal edges, said blank having a slot at the center thereof along the middle score line, said outer panels being folded initially along their score lines over upon the adjacent panels to form egg pockets triangular, substantially, in cross section, the tongues of said outer panels being inserted through the slot in said blank and interlocked with slits provided in the panels on opposite sides of said slot.

4. An egg box comprising a blank divided by transverse score lines into a plurality of panels, the outer panels having openings therein, the next adjacent panels having tongues and slits formed therein in staggered relation, said outer panels being folded initially over upon the adjacent panels to form egg pockets and also folded finally against one another with their openings in opposing relation, and said tongues being positioned after the final folding operation to enter the opposite slit for locking said egg pockets together.

5. An egg box comprising a blank scored to form a series of panels, the outer panels being folded along their score lines to form egg pockets, triangular in cross section, said pockets having opposing openings therein to receive the eggs, the openings in each pocket being opposite one another with the egg interposed between them, for the purpose specified.

1,171,084. ROAD-GRADER. EDWARD E. BARRETT, Spokane, Wash. Filed Aug. 12, 1914. Serial No. 856,447. (Cl. 37—5.)

1. A road drag including a main frame, draft rods extending forwardly from the frame in parallel spaced relation to each other, a transverse draft bar connected to the forward ends of the rods, a plurality of bars supported by the rods, ground treating implements carried by the bars, and means mounted upon the main frame for independently adjusting the several draft rods, whereby the elevation of the ground treating implements may be varied.



2. A road drag including a main frame, draft rods extending forwardly from the frame in parallel spaced relation to each other, movable crank arms connecting the rear ends of the draft rods to the main frame, a transverse draft bar connecting the forward ends of the draft rods, a plurality of bars carried by the draft rods, ground treating implements carried by the bars, and means mounted upon the main frame and connected to the crank arms for adjusting the draft rods, whereby the elevation of the ground treating implements may be controlled.

3. A road drag including a main frame, a plurality of draft rods extending forwardly from the main frame in parallel spaced relation to each other, movable crank arms connecting the rear ends of the draft rods to the main frame, adjustable means controlling the position of the crank arms, for retracting the draft rods or projecting them, and a plurality of ground treating implements carried by the draft rods, the elevation of the ground treating implements, with respect to each other being controlled by the said adjustable means.

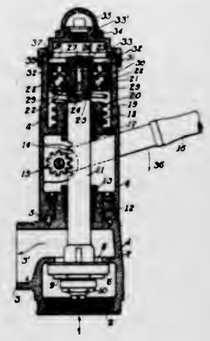
4. A road drag including a main frame, draft means therefor, a plurality of ground treating implements, and a plurality of bars supporting the implements, said bars being disposed in advance of the main frame, each of said bars consisting of a plurality of freely connected angularly related sections arranged to define two forwardly opening V's, which lie on opposite sides of the center of the drag and are adapted to cause the ground treating implements to direct the dirt on the road, outside of the ruts therein, inwardly toward the ruts and the dirt in the center of the road between the ruts, outwardly toward the ruts.

5. A road drag including a main frame, a plurality of ground treating implements, and a plurality of bars carrying the implements, said bars being disposed in advance of the main frame, each of said bars consisting of four freely connected sections, said sections being arranged to define two transversely spaced, forwardly opening V's, the apexes of which are adapted to move along the road over the ruts therein, whereby a diagonally disposed section is located on each side of each rut, for scraping the dirt from the sides of the road and from the center portion thereof and directing it into the ruts.

[Claim 6 not printed in the Gazette.]

1,171,085. FLUSHOMETER. JOHN L. BECK, Springfield, Mass. Filed Nov. 12, 1914. Serial No. 871,681. (Cl. 137—93.)

1. In a flushometer, the combination with the casing thereof provided with means for attaching the same to the service supply and bowl, respectively, of a main valve for opening and closing the source of supply, a valve-stem, a piston secured to the upper end thereof, the casing having a chamber above and below the piston to receive a liquid, and the piston having passageways therethrough, balls to permit the liquid from one side of the piston to flow freely through the passageways when the main valve is opened and to cut-off the flow of liquid to the other side of the piston through the passageways when the direction of movement of the piston is changed, the valve-stem having a passageway extending from one side of the piston to the other, a needle-valve for varying the size of the passageway for controlling the flow of the liquid to the lower side of the piston during the return movement of the main valve to its seat, means for adjusting the position of the needle-valve, means for manually moving the main valve from its seat, and a compression spring located on one side of the piston to assist the water pressure in closing the main valve, said spring being located within an annular chamber and directly engaging the lower side of the piston.



2. In a device of the class described, the combination with the casing thereof, means for directly attaching the casing to the water supply and the bowl, respectively, a main valve, a valve-stem, a rack and pinion to move the main valve from its seat, the casing having a closed liquid-receiving chamber, a piston therein and attached to the upper end of the valve-stem, the lower end of the chamber having an annular portion, a compression spring located in the annular portion and engaging the under side of the piston to normally retain the valve on its seat, said piston being formed with a chambered passageway therethrough, a ball-valve located in the chambered portion of the passageway and normally seated to close the passageway when the main valve is closed and the piston elevated but permitting the ball-valve to freely rise from its seat by the force of the liquid below the ball when the piston is lowered to open the main valve, the stem having a passageway formed therein, and two transverse passageways that connect with the ends of the axial passageway, the piston having a passageway that extends from the upper side of the piston to one of the transverse passages, a needle-valve to vary the size of the axial passageway for regulating the flow of the liquid from the upper to the lower side of the piston during the time of the return movement of the main valve.

3. In a flushometer, a casing having chambered portions, a main valve in one of the chambered portions, a valve-stem, a piston on the upper end of the valve-stem and located in another chambered portion, a rack and pinion construction to move the main valve and piston in unison, the piston-receiving portion being sealed to receive a liquid, a spring engaging the lower side of the piston to assist in maintaining the main valve closed, means to permit the liquid to freely flow through the piston during the opening movements of the main valve, means to retard the return movements of the main valve, said means comprising communicating oil passages in the piston and valve-stem and which extend to the opposite sides of the piston and valves movable automatically in the piston passages, a needle-valve in the valve-stem to vary the size of the passageway therein.

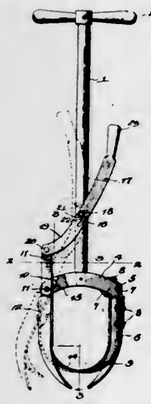
4. In a flushometer, the combination with the casing, a main valve, a valve-stem, a rack and pinion to operate the valve, a closed chambered portion in the casing, a piston attached to the valve-stem and located within the closed chambered portion, the upper end of the valve-stem being enlarged and having recesses formed therein, ball-valves

in the recesses, springs to force the ball-valves to their seats, there being passageways through the enlarged upper end of the valve-stem which are controlled by the ball-valves, a recessed cap secured to the upper end of the valve-stem the rim of which is apertured to communicate with passageways in the piston and said stem to permit oil to flow from the upper to the lower part of the chamber during the closing of the main valve, and, when the ball-valves are in a closed position, said ball-valves being designed to permit the oil to freely flow from the lower to the upper side of the piston when the main-valve is opened and to close when the main valve is moved to its closed position, and means to vary the size of one of the passageways in the stem to vary the rate of closing of the main valve.

5. In a flushometer, a valved casing provided with a fluid containing chamber, a piston in the fluid containing chamber, a stem connecting the piston and the valve in the valved casing, means to shift the stem to open the valve and slide the piston, and means including communicating passages formed in the valve stem and the piston and also means movable automatically in the piston to retard flow of liquid through the piston passages upon return movement of the valve and thereby retard return movement of the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,171,086. POST-HOLE AUGER. LAWRENCE E. BIRKLAND, Graettinger, Iowa. Filed July 26, 1915. Serial No. 42,002. (Cl. 255—65.)



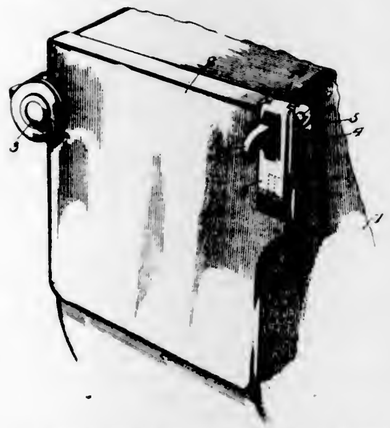
1. In a post hole auger, the combination of a handle, a relatively fixed blade carried by the lower end of said handle and having a laterally curved auger bit thereon, a relatively movable blade having a shank fulcrumed on said handle and a laterally curved bit adapted for coaction with the auger on the fixed blade, a lever fulcrumed to the shank of said movable blade, and said lever pivotally and slidably movable on the handle.

2. In a post hole auger, the combination of a handle having a cross head at its lower end, a blade fixedly secured at its upper end to one end of said cross head and having a laterally curved bit on its lower end, an additional blade having an upwardly projecting shank at its upper end fulcrumed to the opposite end of said cross head, a laterally curved bit on the lower end of said blade, a lever having a curved lower end fulcrumed to the upper extremity of said shank, said lever having a longitudinally extending arcuate slot therein intermediate its ends, and a laterally projecting pin on the said handle projecting through said slot and slidable therein.

3. In a post hole auger, the combination of a handle, a relatively fixed blade carried by the lower end of said handle and having a laterally curved auger bit thereon, a relatively movable blade having a shank fulcrumed on said handle and a laterally curved bit adapted for coaction with the auger on the fixed blade, a lever pivotally and slidably movable on the handle fulcrumed to the shank of said movable blade, and coacting means at said connection between the lever and handle to lock the movable blade when in operative position.

4. In a post hole auger, the combination with a handle having a cross head at its lower end, a blade fixedly secured at its upper end to one end of said cross head and having a laterally curved bit on its lower end, an additional blade having an upwardly projecting shank at its upper end fulcrumed to the opposite end of said cross head, a laterally curved bit on the lower end of said blade, a laterally projecting pin in said handle, a lever having a curved lower end fulcrumed at the upper extremity of the said shank, and said lever having therein a longitudinally extending arcuate slot adapted to engage said pin, the upper end portion of said slot in which the pin is disposed when the movable blade is in operative position being straight to prevent any longitudinal movement of the lever when the pin is in said position and to lock the movable blade thereby.

1,171,087. JOURNAL-BOX. PERRY BROWN, Coraopolis, Pa. Filed Oct. 28, 1914. Serial No. 869,133. (Cl. 64—23.)



1. In a journal box, a box proper, and a lid closing the feed opening of the same, said lid having a latch pivotally supported thereon normally dropping by gravity substantially parallel with the lid, the latch swinging at right angles to the lid under a part of the box as the lid closes, whereby the latch locks the lid to the box, substantially as described.

2. In a journal box, a box proper, and a lid closing the feed opening of the same, said lid having a latch pivotally supported thereon normally dropping by gravity substantially parallel with the lid, the latch swinging at right angles to the lid under a part of the box as the lid closes, thereby locking the lid to the box, and a handle projecting from said latch whereby when said handle is moved the latch moves on its pivot to release the lid, substantially as described.

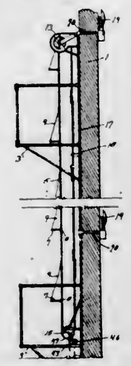
3. In a journal box, a box proper, a lid closing the feed opening of the same, a plate pivotally supported on said lid and having a latch normally hanging substantially parallel with the lid and swinging at right angles to the lid, under a part of the box as the lid closes, and a handle projecting from said plate whereby when said handle is moved, the plate is moved on its pivot to release the latch from the box, substantially as described.

4. In a journal box, a box proper having a lug thereon, a lid closing the feed opening of said box, and a plate pivotally supported by said lid and having a latch normally hanging substantially parallel with the lid and movable at right angles to the lid, said latch striking the upper part of said lug just before the lid closes and swinging under said lug as the lid reaches its closed position, substantially as described.

5. In a journal box, a box proper having a lug thereon, a lid closing the feed opening of said box, a plate pivotally supported by said lid and having a latch normally hanging substantially parallel with the lid and movable at right angles to the lid, said latch striking the upper part of said lug just before the lid closes and swinging under said lug as the lid reaches its closed position, and a handle projecting from said plate whereby when said handle is moved the plate moves on its pivot to release the latch from said lug, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,171,088. ALARM SYSTEM FOR FIRE-ESCAPES. DANIEL S. BURKHART, Spokane, Wash. Filed Mar. 5, 1915. Serial No. 12,287. (Cl. 177—311.)



1. In an alarm and lighting system for fire escapes, a fire escape mechanism comprising endless user supporting means, a circuit disposed along said mechanism, alarm and lighting devices in said circuit distributed along said mechanism, a circuit closing switch means for closing said circuit, and a device rotated by said endless means for actuating said switch means to close said circuit, substantially as described.

2. In an alarm or protecting system for fire escapes, a fire escape mechanism movable under the weight of a user, an electric circuit, warning or protecting devices in said circuit and disposed along the building area protected by said mechanism, a switch for closing said circuit including a gravity movable weighted arm, and means rotatable upon movement of said mechanism for shifting said arm into a gravity acting position, substantially as described.

3. In an alarm and lighting system for fire escapes, a fire escape mechanism movable under the weight of a user and extending vertically along and outside of a building to be protected, a conduit extending along said mechanism, a circuit comprising conductors disposed in said conduit, electric lamps mounted on said conduit and connected with said circuit, bells connected with said circuit, and means operated by said mechanism for closing said circuit, substantially as described.

1,171,089. VALVE-LIFTER. ERNEST L. CASE, Minneapolis, Minn. Filed June 14, 1915. Serial No. 34,052. (Cl. 81—3.)

1. A valve lifting tool having handles pivotally connected to one another and provided with jaws, wedge-shaped in cross section and adapted to lap by one another and having ends for entering a slot in the valve disk, for the purpose specified.

2. A valve lifting tool having jaws provided with ends for entering a slot in the valve disk, said jaws lapping by one another and formed to exert when squeezed together an outward pressure on the walls of the slot, substantially as described.

3. A valve lifting tool comprising handles having jaws for gripping opposing walls provided in the upper surface of a valve disk.



4. A valve lifting tool having jaws adapted to enter a slot in a valve disk, said jaws being formed to exert when closed an outward pressure on the walls of the slot to lock the tool therein.

1,171,090. STUFFING-BOX PACKING. GEORGE HENRY COOK, Poplar, London, England. Filed Oct. 23, 1914. Serial No. 868,272. (Cl. 154—45.5.)

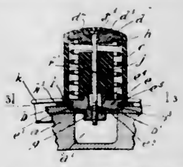


1. Packing for stuffing boxes made from cloth or fabric, consisting of a number of separate parts of folded cloth or fabric forming lengths, a soft metal covering for each of said parts and means for holding the said parts together to form a composite packing.

2. Packing for stuffing boxes made from cloth or fabric woven from asbestos, cotton, flax or other fiber, consisting of a number of separate flat section strips or lengths, a soft metal covering formed upon the said strips or lengths and means for holding the said parts together to form a composite packing.

3. Packing for stuffing boxes made from cloth or fabric woven from asbestos, cotton, flax or other fiber, and consisting of a number of separate flat section strips or lengths, a soft metal covering wound upon each of said strips or lengths and an outer covering for the strips or lengths used to form the packing.

1,171,091. VEHICLE-TIRE. WILLIAM E. COOK, St. George, and JAMES W. MUSGROVE, Stapleton, N. Y. Filed Feb. 23, 1912. Serial No. 679,250. (Cl. 152—8.)



1. A vehicle tire embodying therein a felly, a plurality of closely juxtaposed independent units extending circumferentially about said felly, said units being spaced apart and respectively embodying therein a plate adapted to seat upon said felly, a tie rod slidably mounted in said plate, a wear plate carried by and movable with said rod, a metallic spring seated between said first named plate and said wear plate, means carried by said rod acting upon said first named plate whereby said spring may be ten-

sioned and held in tension and said plates and said spring will be permanently assembled, and a flexible sheathing inclosing said spring and conforming to and engaging said wear plate, and a ring coöperating with the first named plate and the sheathing of all units upon a felly to maintain said units in position thereon.

2. A vehicle tire embodying therein a felly, a plurality of closely juxtaposed independent units extending circumferentially about said felly, said units being spaced apart and respectively embodying therein a plate adapted to seat upon said felly, a tie rod slidably mounted in said plate, a wear plate carried by and movable with said rod, a metallic spring seated between said first named plate and said wear plate, said rod having screw threads thereon, a nut adjustably mounted upon said screw thread and coöperating with said first named plate whereby said spring may be tensioned and held in tension and said plates and said spring will be permanently assembled, and a flexible sheathing inclosing said spring and conforming to and engaging said wear plate and a ring coöperating with the first named plate and the sheathing of all units upon a felly to maintain said units in position thereon.

3. A vehicle tire embodying therein a felly, a plurality of closely juxtaposed independent units extending circumferentially about and spaced apart upon said felly, each of said units embodying therein a metallic spring, a plate adapted to seat upon said felly, a tie rod slidably mounted in said plate, a wear plate carried by and movable with said rod, means carried by said rod whereby said spring may be tensioned and held in tension, and coöperating with said first named plate, a cup-like flexible casing adapted to inclose said spring and to bear upon and engage said wear plate, said sheathing having laterally extending flanges bearing upon said first named plate and a reinforcing metallic plate extending about said sheathing and embedded in said flange, and a ring adapted to engage the top of said reinforced flange, and clamp said flange and said first named plate in position upon said felly.

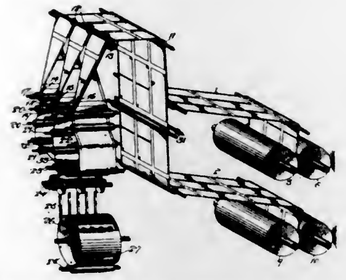
4. A vehicle tire embodying therein a felly having a series of recesses upon the outer face thereof, a plurality of closely juxtaposed independent units each embodying therein a plate adapted to enter one of the recesses upon said felly and be held thereby against circumferential movement about the felly, a tie rod slidably mounted in said plate, a wear plate carried by said tie rod, a coiled metallic spring seated between said first named plate and said wear plate and a take-up nut carried by said tie rod and operatively engaging said first named plate, whereby the tension of said spring may be regulated and the parts of each unit are united and means whereby the units composing the tire may be detachably mounted upon the felly.

5. A vehicle tire, embodying therein a plurality of closely juxtaposed units, each unit embodying therein a coiled spring, a wear plate upon one end thereof, an oppositely disposed plate adapted to occupy a fixed position upon a felly said plate having laterally projecting wings or projections whereby said last named plate may be clamped thereon, a tie rod carried by said wear plate and slidably mounted in said oppositely disposed plate, a take-up nut whereby the tension of said spring may be controlled, and a cup-like flexible sheathing adapted to inclose said spring, and means adapted to engage said wings or projections whereby each unit may be detachably mounted upon a felly.

[Claims 6 to 8 not printed in the Gazette.]

1,171,092. MACHINE FOR PRODUCING PRINTED PRODUCTS. EDGAR H. COTTRELL, Westerly, R. I. Filed Oct. 9, 1914. Serial No. 865,947. (Cl. 101—124.)

1. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for associating the narrow webs, and a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page.



2. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for associating the narrow webs, a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page and means for folding the sheets together transversely across the middle of their printed pages.

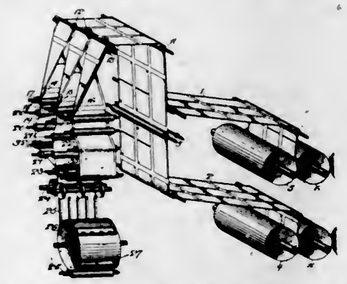
3. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for securing the webs together transversely across the middle of the printed pages, a mechanism for associating the narrow webs, and a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page.

4. Means for producing a newspaper comprising a web feeding mechanism, a web printing mechanism, a mechanism for slitting the web into a plurality of narrow webs, a mechanism for securing the webs together transversely across the middle of the printed pages, a mechanism for associating the narrow webs, a mechanism for cutting the so associated narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the web and to so associate the narrow webs that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, and means for folding the sheets together transversely across the middle of their printed pages.

5. Means for producing a newspaper comprising two web printing mechanisms, means for feeding webs thereto, a mechanism for associating the two webs, a mechanism for slitting the two webs into a plurality of pairs of narrow webs and a mechanism for cutting the associated pairs of narrow webs transversely into sheets, the said printing and associating mechanisms being arranged to so print the pages on the two original webs and to so associate the said original and narrow webs that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages will each appear partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions, and the back page reading in the same direction as the front page.

[Claims 6 to 8 not printed in the Gazette.]

1,171,093. METHOD OF PRODUCING PRINTED PRODUCTS. EDGAR H. COTTRELL, Westerly, R. I. Filed Oct. 9, 1914. Serial No. 865,948. (Cl. 101—124.)



1. The herein described method of producing a newspaper consisting in printing a web so that the front page of a newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, slitting the web into narrow webs, associating the narrow webs and cutting the so associated narrow webs transversely into sheets.

2. The herein described method of producing a newspaper consisting in printing a web so that the front page of a newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, slitting the web into narrow webs, associating the narrow webs, cutting the so associated narrow webs transversely into sheets and folding the sheets transversely across the middle of their printed pages.

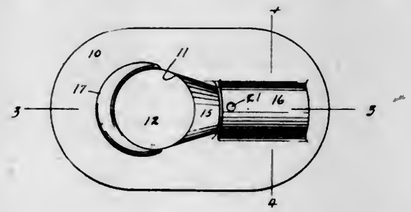
3. The herein described method of producing a newspaper consisting in printing a web so that the front page of a newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, slitting the web into narrow webs, securing the webs together transversely across the middle of their printed pages, associating the webs and cutting the so associated webs transversely into sheets.

4. The herein described method of producing a newspaper consisting in printing a web so that the front page of a newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, slitting the web into narrow webs, securing the webs together transversely across the middle of their printed pages, associating the webs, cutting the so associated webs transversely into sheets and folding the sheets transversely across the middle of their printed pages.

5. The herein described method of producing a newspaper consisting in feeding two webs to two printing mechanisms where the printing is so arranged that the front page of the newspaper will appear on one sheet, the back page on another sheet and the remaining pages each partly on one sheet and partly on another sheet, the printed matter of two different pages on the same side of any one sheet reading in opposite directions and the back page reading in the same direction as the front page, associating the two webs, slitting the two webs into a plurality of pairs of narrow webs and cutting the associated pairs of narrow webs transversely into sheets.

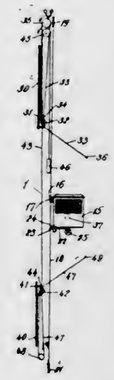
[Claims 6 to 8 not printed in the Gazette.]

1,171,094. BED-PAN. CLARENCE V. COURTRIGHT, Miami, Fla. Filed June 17, 1915. Serial No. 34,734. (Cl. 4—19.)



A bed pan comprising a receptacle having an upwardly and outwardly extending flange surrounding the upper side thereof, said flange being slightly elongated, one end portion of the flange having a channel extending from the receptacle to the end of the flange, an upwardly extending arched wall disposed over the said channel and provided with an opening in its inner end portion, and a removable cover for the receptacle provided with a hook member for engagement in said opening.

1,171,095. ULTIMATE-LIMIT STOP FOR ELEVATORS. ANDREW M. COYLE, New York, N. Y., assignor to Gurney Electric Elevator Company, Honesdale, Pa., a Corporation of Pennsylvania. Filed Apr. 26, 1912. Serial No. 693,326. (Cl. 187—35.)



1. In an elevator, a car, a stop device therefor adapted to be actuated as the car approaches the limit of its travel, and means for changing the rate of action of the stop device when the speed of the car varies beyond a predetermined limit.

2. In an elevator, a car, a stop device therefor adapted to be actuated as the car approaches the limit of its travel at a rate substantially proportional to the speed of the

car, and means for increasing the rate of action of the stop device in relation to the speed of the car, when the speed of the car exceeds a predetermined rate.

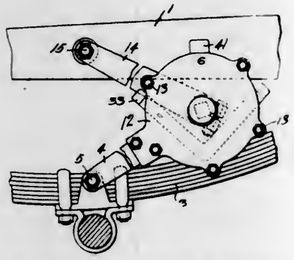
3. In an elevator, a car, a stop device therefor, means for causing the car as it approaches the limit of its travel to actuate the stop device at a rate substantially proportional to the speed of the car, and mechanism for changing the proportional rate of action of the stop device.

4. In an elevator, a car, a stop device therefor, means for causing the car as it approaches the limit of its travel to actuate the stop device at a rate substantially proportional to the speed of the car, and mechanism for increasing the proportional rate of action of the stop device when the speed of the car exceeds a predetermined rate.

5. In an elevator, a car, a stop device therefor comprising a plurality of devices for gradually bringing the car to a stop, means for actuating the stop device as the car approaches the limit of its travel to successively actuate said devices at different points of the travel of the car, and means dependent upon the speed of the car for automatically changing the points of travel of the car at which said devices are actuated.

[Claims 6 to 65 not printed in the Gazette.]

1,171,096. SHOCK-ABSORBER. PAUL J. CUBBISON and ROBERT G. MCFARLAND, New Castle, Pa. Original application filed Aug. 15, 1911, Serial No. 644,150. Divided and this application filed May 16, 1913. Serial No. 768,077. (Cl. 21—105.)



1. A shock absorber comprising a member connected with a vehicle body, a second member connected with the axle and movable relatively to the first, a resistance medium adapted to oppose such relative movement, means coöperating with said medium constructed and arranged to offer slight resistance to all compression or expansion movements of the spring under impact and to offer increased resistance proportionate to the force of a heavy impact at the latter part of the compression or expansion movements of the spring under such heavy impact.

2. A shock absorber comprising a member connected with a vehicle body, a second member connected with the axle and movable relatively to the first, a resistance medium adapted to oppose such relative movements, means coöperating with said medium constructed and arranged to cause said medium to offer slight resistance to slight compression or expansion movements of the spring under light impacts and to offer slight initial resistance to compression or expansion movements of the spring under heavy impacts and to offer increased resistance proportionate to the force of heavy impulses at the latter part of such compression or expansion movements of the spring under such heavy impulse.

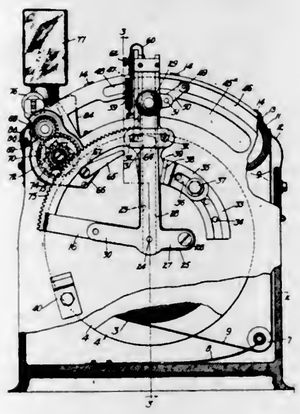
3. A shock absorber comprising means including members connected respectively to the vehicle body and to the axle of the vehicle constructed and arranged to offer slight proportionate resistance to light impacts on the vehicle spring and means constructed to offer decreased proportionate resistance to heavy impacts during the initial period of movement of the vehicle springs under said heavy impacts and to offer increased resistance to further movement of the spring under such heavy impacts.

4. A shock absorber comprising means including members connected respectively to the vehicle body and to the axle of the vehicle constructed and arranged to offer slight proportionate resistance to light impacts on the vehicle spring and means constructed to offer a decreased proportionate resistance to heavy impacts during the initial period of compression or expansion movements of the vehicle spring under said heavy impacts and means to offer the full resistance of the device during the latter part of the compression or expansion movements of the spring under heavy impact.

5. A shock absorber comprising a member connected with the vehicle body, a second member connected with the axle and movable relatively to the first, a resistance medium adapted to oppose such relative movement, means coöperating with said medium for allowing said movement independent of movement of the resistance medium from one to the opposite side of the piston.

[Claims 6 to 9 not printed in the Gazette.]

1,171,097. STRIP-SERVING APPARATUS. HENRY H. CUMMINGS, Newton, Mass., assignor to National Binding Machine Co., Boston, Mass., a Corporation of Maine. Filed Feb. 13, 1909. Serial No. 477,646. (Cl. 11—14.5.)



1. A strip serving apparatus comprising in combination a strip support, a strip moistener, and strip feeding means comprising a movable carrier having a plurality of strip gripping means, and strip severing means mounted upon the carrier and operated by the movement thereof.

2. A strip serving apparatus comprising in combination a strip support, strip moistening means, strip gripping means comprising a plurality of members having relative movement toward and from each other to engage and release the strip, means to feed the strip to the moistening means, and strip severing means traveling along substantially the service path of the strip.

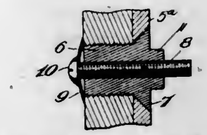
3. A strip serving apparatus comprising in combination a strip support, a moistener, and a strip severing device comprising blades upon opposite faces of the strip, means to move said blades longitudinally of the strip, and means to move said blades toward each other to sever the strip.

4. A strip serving apparatus comprising in combination a strip support, a moistener, a movable severing blade and yielding means to hold the blade substantially flatwise against its support and strip feeding means movable with said severing blades.

5. A strip serving apparatus comprising in combination a strip support, a moistener, a severing blade, a support therefor, means to hold said blade against its support with varying pressure and strip feeding means carrying said severing blade.

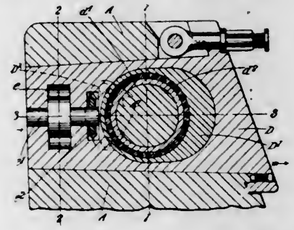
[Claims 6 to 55 not printed in the Gazette.]

1,171,098. PATCH-BOLT. THOMAS F. DALTON, Chicago, Ill., assignor of one-half to William J. Sheehy, Chicago, Ill. Filed Mar. 21, 1914. Serial No. 826,383. (Cl. 137—99.)



A patch bolt having a head to hold a patch, and threaded externally to screw into that part to which the patch is applied, and said bolt having a threaded axial bore extending throughout its entire length, a screw threaded through said bore and of a length to project from both ends of the bolt, and an expansible washer on the screw between its head and the inner end of the bolt, the diameter of the screw head and the diameter of the washer before the latter is expanded not exceeding the diameter of the bolt, and said washer when expanded having a greater diameter than that of the bolt.

1,171,099. TRUNNION-BLOCKS OF GUN-MOUNTINGS. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Aug. 17, 1912. Serial No. 715,583. (Cl. 89—37.)



1. In a gun mounting, the combination of the carriage side cheeks, trunnion blocks slidably disposed in longitudinal recesses therein, locking members carried by the trunnion blocks and situated in front of the trunnions which pass through the trunnion blocks, means for moving said members into and out of engagement with slots formed in the side walls of the longitudinal recesses, and sight supporting extensions on the trunnions, said extensions passing through slots in the outer side walls of said recesses for the passage of said extensions when the gun is being housed and replaced in position.

2. In a gun mounting, the combination of the carriage side cheeks, trunnion blocks slidably disposed in longitudinal recesses therein, the said recesses being so formed that the forward ends of the trunnion blocks are, surrounded by the walls of the recesses, locking members carried by the trunnion blocks and situated in front of the trunnions which pass through the trunnion blocks, means for moving said members into and out of engagement with slots formed in the side walls of the longitudinal recesses, and sight supporting extensions on the trunnions, said extensions passing through slots in the outer side walls of said recesses for the passage of said extensions when the gun is being housed and replaced in position.

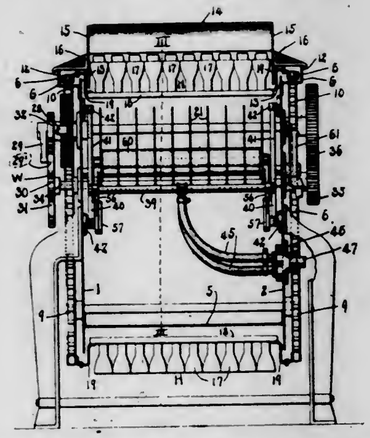
3. In a gun mounting, the combination of the carriage side cheeks, trunnion blocks slidably disposed in longitudinal recesses therein, rotary locking members carried by the trunnion blocks and situated in front of the trunnions which pass through the trunnion blocks, means for moving said members into and out of engagement with slots formed in the side walls of the longitudinal recesses, and sight supporting extensions on the trunnions, said extensions passing through slots in the outer side walls of said recesses for the passage of said extensions when the gun is being housed and replaced in position.

4. In a gun mounting, the combination of the carriage side cheeks, trunnion blocks slidably disposed in longitudinal recesses therein, locking members carried by the trunnion blocks and situated in front of the trunnions which pass through the trunnion blocks, sight supporting extensions on the trunnions, said extensions passing through slots in the outer side walls of said recesses for the passage of said extensions when the gun is being housed and replaced in position, and means carried by the trunnion blocks and situated in front of said extensions for moving said members into and out of engagement with slots formed in the side wall of the longitudinal recesses.

5. In a gun mounting, the combination of the carriage side cheeks, trunnion blocks slidably disposed in longitudinal recesses therein, the said recesses being so formed that the forward ends of the trunnion blocks are surrounded by the walls of the recesses, locking members carried by the trunnion blocks and situated in front of the trunnions which pass through the trunnion blocks, sight supporting extensions on the trunnions, said extensions passing through slots in the outer side walls of said recesses for the passage of said extensions when the gun is being housed and replaced in position, and means carried by the trunnion blocks and situated in front of said extensions for moving said members into and out of engagement with slots formed in the side wall of the longitudinal recesses.

[Claims 6 to 11 not printed in the Gazette.]

1,171,100. BOTTLE-WASHING MACHINE. JOSEPH W. DAWSON, St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company, a Corporation of Missouri. Filed Apr. 23, 1915. Serial No. 23,309. (Cl. 141—7.)



1. A machine having a tank provided with a washing device, a carrier for moving articles past said washing device, said carrier including chains and a holder for the articles to be carried, and means for protecting said chains from the water thrown by said washing device, said means including pairs of shields forming passageways for the end portions of said holder and adapted to prevent the water from splashing onto said chains.

2. A machine having a washing device, a carrier for moving articles past said washing device, said carrier including a chain, a holder for the articles to be carried and an angular arm connecting said holder to said chain; and means for protecting said chain from the water thrown by said washing device, said means including a shield for preventing the water from splashing onto said chain, and the said shield being spaced from said chain sufficiently to permit the passage of said angular arm.

3. A machine having a washing device, a carrier for moving articles to said washing device, said carrier including a pair of sprocket chains, a holder for the articles

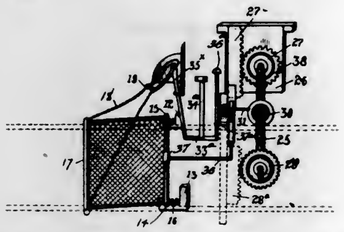
to be carried, and angular arms connecting said holder to said chains; and means for protecting said chains from the water thrown by said washing device, said means including a pair of shields arranged between said chains to prevent the water from splashing onto the chains, the shields being located between said angular arms and at points near said chains and spaced from said chains sufficiently to permit the passage of said angular arms.

4. A machine comprising a bottle washing device, a carrier for moving bottles to said bottle washing device, said carrier including a pair of chains, and a bottle holder secured to said chains; and means for protecting said chains from the water thrown by said bottle washing device, said means including a pair of shields arranged between the chains and between the end portions of said bottle holder so as to prevent the water from splashing onto the chains.

5. A machine comprising a bottle washing device, a carrier for moving bottles to said bottle washing device, said carrier including a pair of sprocket chains, and a bottle holder having angular end portions which are secured to said sprocket chains; and means for protecting said sprocket chains from the water thrown by said bottle washing device, said means including two pairs of shields, the shields of each pair being separated from each other to permit the pasage of the angular end portions of the bottle holder.

[Claims 6 to 9 not printed in the Gazette.]

1,171,101. SAFETY-FENDER FOR TRACTION-CARS. ELZEAR A. DE COTEAU and HENRY F. CASEY, Milford, Mass. Filed Oct. 24, 1914. Serial No. 868,494. (Cl. 105—130.)



1. The combination with a traction car, of a guard beam, racks connected therewith, pinions engageable with said racks, a fender, a rock shaft and means carried thereby, and means movable with said pinions coöperating with said rocking means to control the descent of the fender and guard.

2. The combination with a traction car, of a guard beam, racks connected therewith, pinions with which said racks are engageable, a fender, a rock shaft connected with the fender, a notched disk on the shaft of said pinions, and means movable with the rock shaft for engaging the notch of the disk.

3. The combination with a traction car, of a guard beam, racks connected therewith, pinions with which said racks are engageable, a fender, a rock shaft connected with the fender, a notched disk on the shaft of said pinions, means movable with the rock shaft for engaging the notch of the disk, a support for the forward end of the fender, and means movable with said rock shaft for disconnecting said means to allow the front of the fender to drop.

1,171,102. ROLLER-BEARING. JOSEPH F. DEMARCHI, East Orange, N. J. Filed May 12, 1915. Serial No. 27,601. (Cl. 64—62.)

1. A bearing comprising inclosing members each provided with a recess having a cylindrical face with retaining walls on either side thereof, said members having complementary annular recesses on the sides thereof, a plurality of rollers positioned therein adapted to roll on said flat faces, guide rings positioned in said last mentioned recesses and engaging said rollers, and means for holding said guide rings and rollers in position.



2. A bearing comprising inclosing members each provided with a recess having a cylindrical face with angular retaining walls on either side thereof, said members having complementary annular recesses on the sides thereof, a plurality of rollers positioned therein adapted to roll on said flat faces, guide rings positioned in said last mentioned recesses and engaging said rollers, and means for holding said guide rings and rollers in position.

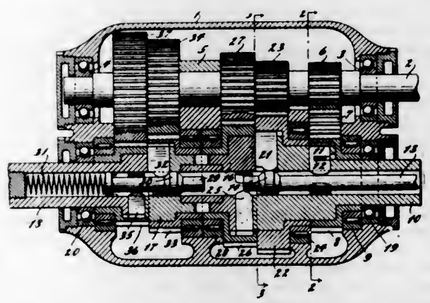
3. A bearing comprising inclosing members each provided with a recess having a cylindrical face with angular retaining walls on either side thereof, said members having complementary annular recesses on the sides thereof, a plurality of rollers positioned therein adapted to roll on said flat faces, said rollers having angular ends corresponding to said angular retaining walls, guide rings positioned in said last mentioned recesses and engaging said rollers, and means for holding said guide rings and rollers in position.

4. A bearing comprising inclosing members each provided with a recess having a cylindrical face with retaining walls on either side thereof provided with an opening through which rollers may be inserted in said recess, guide rings positioned in said bearing members and closing said opening and engaging said rollers, and means for holding said guide rings and rollers in position.

5. A bearing comprising inclosing members each provided with a recess having a cylindrical face with retaining walls on either side thereof, a plurality of rollers positioned therein adapted to roll on said flat faces, said rollers having projecting stems on either end, guide rings having openings loosely receiving said projecting stems on said rollers, and means for holding said guide rings and rollers in position.

[Claims 6 to 8 not printed in the Gazette.]

1,171,103. TRANSMISSION-GEARING. JOSEPH F. DEMARCHI, East Orange, N. J. Filed Jan. 20, 1915. Serial No. 3,271. (Cl. 74—59.)



1. In a transmission gearing, in combination, a number of sets of gears adapted to operatively connect the motor shaft and the driving member, the gears of each set being always in mesh, a mechanism for each of said sets of gears adapted when operated to positively connect one of said sets of gears with the driving member, an operating member adapted to operate any one of said mechanisms, said operating member being formed in two parts having lost motion therebetween whereby one of the parts may be moved independently of the other part to operate certain of said mechanisms.

2. In a transmission gearing, in combination, a number of sets of gears adapted to operatively connect the motor shaft and the driving member, the gears of each set being always in mesh, a mechanism for each of said sets of gears adapted when operated to positively connect one of said sets of gears with the driving member, an operating member adapted to operate any one of said mechanisms, said operating member being formed in two parts having lost motion therebetween whereby one of the parts may be moved independently of the other part to operate certain of said mechanisms, the first mentioned part being adapted to move the second mentioned part in one direction, and a spring adapted to move the second mentioned part in the opposite direction.

3. In a transmission gearing, in combination, a motor shaft, a driving member having a central longitudinal opening and radial slots therein, a number of sets of gears adapted to operatively connect the motor shaft and driving member, the gears of each set being always in mesh, a set of pawls slidably mounted in such radial slots in the driving members adapted to move radially with respect to the driving member to engage ratchet teeth in one of the gears, and an operating member within the said central longitudinal opening adapted to engage and operate each of the said pawls.

4. In a transmission gearing, in combination, a casing, a motor shaft journaled therein, a hollow driving member divided longitudinally into a plurality of sections also journaled in the casing, a series of gears fixed upon the motor shaft, a corresponding series of gears loosely mounted upon the driving member and permanently in mesh with the gears on the motor shaft, anti-friction bearings mounted upon the housing and surrounding the said driving member in which said second mentioned series of gears are journaled, an operating member within the hollow driving member, and means operated by such member and extending outwardly through the driving member for effecting operative engagement between said driving member and second mentioned series of gears.

5. In a transmission gearing, in combination, a casing, a motor shaft journaled therein, a series of gears fixed upon the motor shaft, a driving member also journaled in the casing, said driving member being longitudinally divided into a number of interlocking sections, a second series of gears loosely mounted upon such driving member and meshing with the gears upon the motor shaft, and means for effecting driving connection between such driving member and the gears thereon.

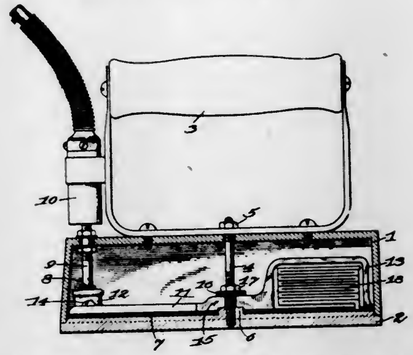
1,171,104. ELECTRIC HEATER. HARRY W. DENHARD, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 30, 1911. Serial No. 605,345. (Cl. 219—25.)

1. In combination, an electrical heater having heat storing means associated therewith and having a specially heated portion of increased storing capacity adjacent the portion of said heater dissipating the maximum amount of heat.

2. In an electrical heater, a heat transmitting member, a heat storing member associated therewith having a portion of increased storing capacity adjacent the portion of said transmitting member subjected to the greatest heat dissipating demand and electrical means for supplying heat to both of said members and an augmented quantity to said portion of increased storing capacity.

3. A heater having an electric heating element for heating the working face thereof to a substantially uniform temperature and heat storing means heated by said element and having a specially heated portion of increased storing capacity contiguous to the portion of the heater dissipating the maximum amount of heat.

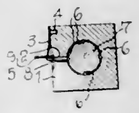
4. In an electrically heated device, in combination, an electrical heating element for heating the working face of the device to a substantially uniform temperature, and heat-storing means heated by said element and having an increased storing capacity contiguous to the portion of the heated device dissipating the most heat, said element having a portion for specially heating said heat-storing means at the point of its increased storing capacity.



5. In an electrically heated iron, in combination, a heat storing member within the iron having a portion of increased storing capacity adjacent to the point of the iron and a heating element having a portion disposed between the working face of the iron and the portion of said member having an increased storing capacity.

[Claims 6 to 13 not printed in the Gazette.]

1,171,105. LOCK-NUT. JOHN C. DEUCHLER, Tiffin, Ohio. Filed Sept. 8, 1915. Serial No. 49,474. (Cl. 151—11.)



A lock nut provided in one side with an aperture, a plate spring secured at one end to the apertured side of the nut and having its other end disposed angularly and inward through the aperture to form a locking tongue, the spring being formed with a longitudinal slot, and a disengaging member formed intermediate of its ends with a neck movably mounted in said slot and formed at one side of the neck with a finger piece, as and for the purpose set forth.

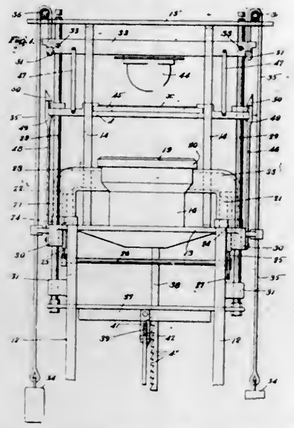
1,171,106. HAT-MACHINE. ISAAC DINGEE, Charlestown, and EDWARD T. SMITH, Boston, Mass. Filed Aug. 11, 1915. Serial No. 44,920. (Cl. 223—31.)

1. A hat machine comprising a receptacle for fluid, a yielding cover or diaphragm therefor, means for forcing a block and hat material against said cover to depress the latter, means for permitting the fluid to be displaced, and means for causing back pressure on the displaced fluid.

2. A hat machine comprising a receptacle for fluid, a yielding cover or diaphragm therefor, means for forcing a block and hat material against said cover to depress the latter, means for permitting the fluid to be displaced, and means for causing back pressure on the displaced fluid, means being provided for heating the fluid.

3. A hat machine comprising a receptacle for fluid having means for heating the fluid, an elastic cover for the receptacle, means for holding the fluid under pressure while permitting it to be displaced, means for causing a block and hat material to flex the said cover and displace the fluid, and means for variably determining the pressing action of said cover caused by said fluid.

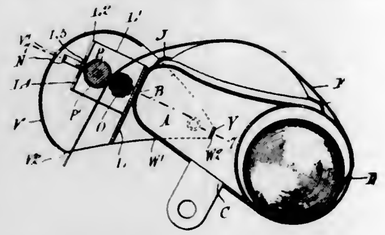
4. A hat machine comprising a receptacle for fluid having means for heating the fluid, an elastic cover for the receptacle, means for holding the fluid under pressure while permitting it to be displaced, a carrier for hat material movable toward and from the receptacle, and means for moving a block to said carrier and then with the carrier to the receptacle.



5. A hat machine comprising a fluid container having a flexible cover, means for forcing a hat block with applied hat material below the plane of the top of the container, means for permitting the fluid in the container to be displaced, and means for applying variably determined resistance to displacement of the fluid.

[Claims 6 to 15 not printed in the Gazette.]

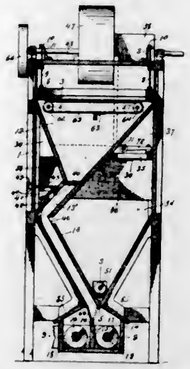
1,171,107. ATTACHMENT FOR BARBERS' CHAIRS. WILLIAM H. J. DOWNEY, Delaware City, Del. Filed June 25, 1914. Serial No. 847,287. (Cl. 155—10.)



A head rest for barber chairs, comprising a casing having a chambered portion adapted for the reception of a reel of paper, the ends of the casing having slots formed therein, a shell fastened to one end of the casing and having open ends in which paper feeding rolls are mounted, a housing, upper and lower portions of the latter being open, the marginal edge of the opening in the lower portion forming a cutting edge whereby the paper from the reel may be severed, the side walls of the housing being contracted and tapering with shouldered portions adjacent to their forward ends, the latter being bent at right angles and engaging said slots, and screws engaging and holding the portions of the side walls intermediate the angled ends and shoulders flat against the walls of the casing.

1,171,108. APPARATUS FOR PURIFYING MIDDLINGS. CRAVEN R. DUNCAN, Kansas City, Kans. Filed Feb. 2, 1914. Serial No. 815,902. (Cl. 83—40.)

1. In a middlings purifier, a downwardly extending conductor, adapted to carry downwardly a stream of middlings, and having an air inlet and an air outlet located lower than said inlet, and means for drawing air from said conductor through said outlet and for forcing the withdrawn air through said inlet.



2. In a middlings purifier, a downwardly extending conductor, adapted to carry downwardly a stream of middlings, and having an air inlet and an air outlet located lower than said inlet and in one side of said conductor, and means for drawing air from said conductor through said outlet and for then passing the air upwardly and into said conductor through said inlet.

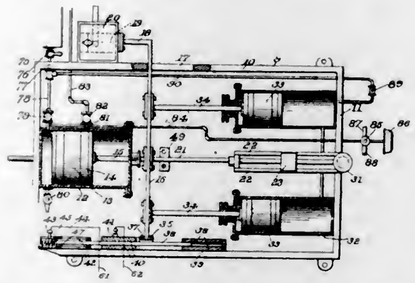
3. In a middlings purifier, a downwardly extending conductor, adapted to carry downwardly a stream of middlings, and having an air inlet and an air outlet located lower than said inlet, and means for drawing air from said conductor through said outlet and for then expanding the withdrawn air and passing it upwardly and then into said conductor through said inlet.

4. In a middlings purifier, a downwardly extending conductor, adapted to carry downwardly a stream of middlings, and having an air inlet and an air outlet located lower than said inlet, means for adjustably regulating the flow of air into said conductor through said inlet, and means for forcing air into said conductor through said inlet and for drawing air from said conductor through said outlet.

5. In a middlings purifier, a downwardly extending conductor, adapted to carry downwardly a stream of middlings, and having an air inlet and an air outlet located lower than said inlet, a valve controlling said inlet, and means for forcing air into said conductor through said inlet and for drawing air from said conductor through said outlet.

[Claims 6 to 32 not printed in the Gazette.]

1,171,109. CAR-CONTROLLING APPARATUS. WILLIAM C. DUST, St. Louis, Mo. Filed June 19, 1915. Serial No. 35,113. (Cl. 105—250.)



1. The combination with an electric motor car, of a frame secured beneath the car, cylinders in the frame, one of said cylinders being in constant communication with an air reservoir, a bar slidable in the frame, a piston within the cylinder, said piston being connected to the bar and arranged to slide the same longitudinally of the frame, a rod extending forwardly of the bar, a slide limiting the movement of the rod and holding the same against the air pressure in the cylinder, said slide being arranged to be manipulated to permit the rod to slide forwardly, means carried by the bar to control a flow of current through the electric motor of the car, and means connecting the opposite cylinders with the bar and with the air supply, and a valve arranged to relieve the main cylinder of its air pressure and permit the auxiliary cylinder to force the bar to its normal position.

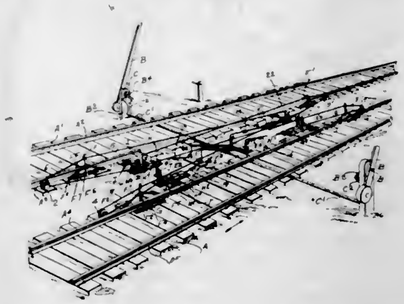
2. The combination with an electric motor car, of a frame supported beneath the car, a main cylinder mounted within the frame, a pair of auxiliary cylinders mounted in the frame, a bar slidable longitudinally in the frame, said bar being connected to the cylinder and arranged to be operated thereby, a rod extending forwardly of the bar, said rod being in direct alinement with the main cylinder, means connecting the main cylinder with the air reservoir to maintain a pressure therein, means to relieve the pressure within the main cylinder, electrical contacts carried by the car and arranged to break the circuit through the motor, a foot pedal controlling the operation of the forwardly extending bar to permit the same to slide forward under the influence of the air pressure in the main cylinder, and valves controlling the flow of air through the auxiliary cylinders to return the bar to its normal position.

3. The combination with an electric motor car, of a frame mounted within the car, a main cylinder within the frame, a piston slidable in the cylinder, a pair of auxiliary cylinders in the frame, pistons in the auxiliary cylinders, a bar slidable longitudinally of the frame, means connecting the bars with the pistons of the cylinders, the main cylinder working in a direction opposite to the auxiliary cylinders, a pipe connecting the main cylinder with the air reservoir of the air brake system to normally maintain a pressure within the cylinder, a forwardly extending rod connected to the bar in direct alinement with the main cylinder, means limiting the forward movement of the forwardly extending bar and arranged to permit the bar to slide forward when so desired, a valve to relieve the air pressure within the cylinder, and valves controlling the admission of air to the auxiliary cylinders to force the bar rearwardly to expel the air from the main cylinder.

4. The combination with an electric motor car having an air brake system, a motor, a trip fender, and a sanding device, of a frame secured to the car, a main cylinder mounted within the frame, said main cylinder having an inlet port at one end and an outlet port substantially centrally thereof, the inlet port being connected to the air reservoir of the air brake system, the outlet port being connected to the brake cylinder, a bar slidable longitudinally of the frame, means carried by the bar to control the operation of the sanding device, means carried by the bar to control the supply of electric current to the motor, oppositely acting cylinders mounted in the frame, a rod extending forwardly of the bar, means controlling the movement of the forwardly extending rod, a constant air pressure maintained within the main cylinder to normally force the rod and bar forwardly, and means to relieve the pressure therein and allow the air to enter the opposite cylinder to return the bar to its normal position, and means connected with the forwardly extending rod to control the operation of the trip fender.

1,171,110. RAILROAD-CROSSING GATE. LAUNCELOT GEORGE EGGLESTON and EDWARD OLIVANT, London, Ontario, Canada. Filed Jan. 21, 1914. Serial No. 813,448. (Cl. 269—5.)

1. In a railroad crossing gate, the combination with the swingable gate arms, of a rocking rod extending crosswise of the track and beneath the same, a counter balanced lever supported on the rod intermediately of its length, a counter weight carried on one end of the lever, means connected to the opposite end of the lever operated by an approaching train for raising and locking the arm in the raised position against the counter weight, and means for releasing the lever operated by the receding train, as and for the purpose specified.



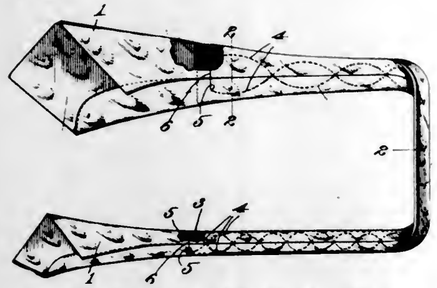
2. In a railroad crossing gate for a double track, the combination with the swingable gate arms adapted to be placed on opposite sides of the track, of a rocking rod extending crosswise of the track and beneath the same, a turnable member supported in the gate arm support, a right angular bar carried thereby and designed to normally extend beneath the gate arm in its raised position, means operated by an approaching train for rocking the rod in one direction, connecting mechanism between the rocking rod and turnable member designed to rotate such turnable member and lower the right angular bar to free the gate arm, and means controlled by the receding train for rocking the rod in the opposite direction to raise the right angular bar and the gate arm supported thereby, as and for the purpose specified.

3. In a railroad crossing gate for a double track, the combination with the swingable gate arms adapted to be placed on opposite sides of the double track, a weight and mechanism operated by the weight for holding each gate arm in a raised position, of individual means actuated by each individual train approaching the crossing for raising the weight to allow the arms to swing downward, means located at each end of the crossing and at the side of each track for locking the weight in the raised position, means for individually actuating said locking means actuated by a train approaching the crossing, and means for individually releasing said locking means by means actuated by each train receding from the crossing whereby the weight is released by the locking means last released.

4. In a railroad crossing gate, the combination with the swingable gate arms, of a rocking rod located beneath the tracks, a swingable arm located at each side of the crossing in proximity to the track rail, a counter-balanced lever mounted upon the rocking rod, a longitudinally movable notched locking bar, a suitably journaled pulley, a cable adapted to extend from one end of the notched locking bar around said pulley to the train operated lever at one side of the railroad crossing, a cable connecting the opposite end of the locking bar with the counter-balanced lever, a swingable slotted bar co-acting with the locking-bar, and a cable connecting the slotted bar with the swingable lever located at the opposite side of the railroad crossing, as and for the purpose specified.

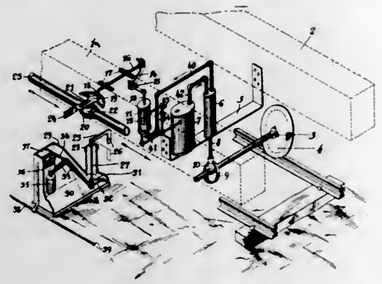
5. In a railroad crossing gate, the combination with the swingable gate arms, of a rocking rod extending crosswise of the track and beneath the same, a stud extending from the gate arm support, a pinion mounted on the stud, a right angular bar secured to the pinion and supporting the gate arm, a quadrant carried by the rocking rod and engaging the pinion, means operated by an approaching train for rocking the rod in one direction to release the gate arm and means controlled by the receding train to rock the rod in the opposite direction to raise the gate, as and for the purpose specified.

1,171,111. NECKWEAR. SIMON M. FRANK, St. Louis, Mo. Filed June 4, 1915. Serial No. 32,035. (Cl. 2—11.)



A necktie having neck band and tying end portions comprising a front portion and rearwardly-folded back portions, the edge of each back portion being turned under to reinforce said edge, and a lining between the front and back portions, lines of stitches tacking said lining to said back portions and the turned-under edges thereof at a plurality of points transversely of the tie as well as along the length of the lining, said stitches following the course of a pair of relatively oppositely-curved wavelike lines undulated progressively from one side of the tie to the other, throughout the major portion of the tying end portions, each line crossing the other at intervals along the length of the tie, each corresponding pair of ends of said lines of stitching being spaced apart at opposite sides of an end of the tie and a transverse line of stitches traversing the distance between each pair of ends to cross-connect the same adjacent to the ends of the lining, said turned-under edges constituting a chord extending longitudinally between the connecting wavelike lines at their points of intersection whereby tension on the necktie is neutralized through the area of the main part of the tie.

1,171,112. AUTOMATIC STOP AND SPEED CONTROL FOR RAILWAY-TRAINS AND THE LIKE. ADOLPH FREES, Thornwood, and ALFRED COX, Hawthorne, N. Y. Filed Mar. 24, 1915. Serial No. 16,568. (Cl. 246—58.)



1. In an automatic stop and speed control for railway trains and the like, means for actuating the air brake valve comprising a slotted plate adapted to reciprocate across the valve stem without actuating the valve, a contact device carried by said plate, a rod adapted to engage said plate, a closed circuit liquid operated means adapted to actuate said rod and controlled in the extent of its action by the speed of the train, a second contact device mounted adjacent the track and in the line of travel of said first contact device and means for moving said second contact device into and out of the path of said first contact device, the valve being operated by the angular displacement of the slotted plate relative to the valve.

2. In an automatic stop and speed control for railway trains and the like, means for actuating the air brake valve comprising a slotted plate adapted to reciprocate across the valve stem without actuating the valve, a contact device carried by said plate, a rod adapted to engage said plate, a lever adapted to actuate said rod, a plunger on one arm of said lever, liquid in a closed circuit controlling the action of said plunger, means controlled by the speed of the train for varying the pressure of said liquid, a second contact device mounted adjacent the track and in the line of travel of said first contact device and means for moving said second contact device into and out of the path of said first contact device, the valve being operated by the angular displacement of the slotted plate relative to the valve.

3. In an automatic stop and speed control for railway rtains and the like, an air brake valve, a contact device mounted on the valve stem, a closed circuit liquid pressure controlled means for sliding the contact device relative to the valve stem without actuating the valve, means for varying the liquid pressure controlled by the speed of the train and a second contact device mounted adjacent the track and in the line of travel of said first contact device, the valve being operated by the angular displacement of the first contact device relative to the valve.

4. In an automatic stop and speed control for railway trains and the like, an air brake valve, a contact device mounted on the valve stem, a closed circuit liquid pressure controlled means for sliding the contact device relative to the valve stem without actuating the valve, means for varying the liquid pressure controlled by the speed of the train, a second contact device mounted adjacent the track and in the line of travel of said first contact device and a switch controlling the movement of said second contact device into and out of said line of travel of said first contact device, the valve being operated by the angular displacement of the first contact device relative to the valve.

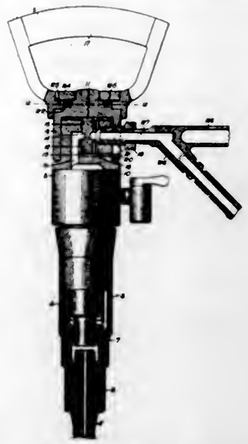
5. In an automatic stop and speed control for railway trains and the like, means for actuating the air brake valve comprising an arm provided with a slot for receiving the valve stem of the valve, a contact plate carried by said arm, a rod for reciprocating said arm across said valve stem, means for actuating said rod comprising a cylinder, a fluid-operated weighted piston therein, a connection between said piston and rod, a fluid tank in open connection with the cylinder, a pump in connection with the tank for forcing fluid into the cylinder, means for driving the pump from one of the axles of the car and means permitting the slotted arm to be moved angularly relative to the valve when the arm is in extended position, to actuate said valve.

1,171,113. PRESSURE-FLUID-ACTUATED TOOL. GEORGE H. GILMAN, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 26, 1912. Serial No. 693,336. (Cl. 121—20.)

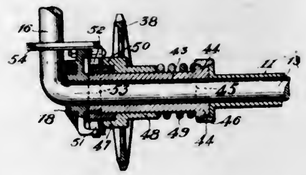
1. In a pressure-fluid actuated tool, the combination with the cylinder and piston, of a grasping handle mounted to slide longitudinally and swivel with respect to said cylinder, a longitudinally slidable throttle valve under the control of said handle, a laterally extending grasping handle for turning said cylinder with respect to the first-mentioned grasping handle, the second mentioned handle being provided with a pressure-fluid supply passage.

2. In a pressure-fluid actuated tool, the combination with the cylinder and piston, of a head mounted to slide longitudinally with respect to said cylinder, a grasping handle swiveled upon said head, a longitudinally slidable throttle valve under the control of said sliding head, laterally extending means to conduct pressure-fluid toward said throttle valve, and a laterally extending grasping handle for turning said cylinder with respect to first-mentioned grasping handle, the second mentioned grasping handle being provided with a pressure-fluid supply passage leading toward said throttle valve.

3. In a pressure-fluid actuated tool, the combination with the cylinder and piston of a head mounted on said cylinder and provided with a reduced portion, a grasping handle swiveled on said head, means for holding said grasping handle in place on said head comprising a member secured to said reduced portion, said handle being provided with an inwardly projecting portion interposed between said member and said head, and retaining means for said member interposed between said reduced portion and said inwardly projecting portion and between said member and said head.



1,171,114. CLUTCH MECHANISM. WILLIAM S. GRAHAM, Canton, Ill., assignor to Parlin & Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed May 25, 1914. Serial No. 840,812. (Cl. 192—9.)



1. The combination of an axle, a carrying wheel mounted thereon having its hub closed at the outer end, a sleeve flanged at its outer end mounted on said axle and having an operative engagement with said hub for rotation thereby, a two-part clutch mounted on said sleeve and adapted to be driven thereby, a spring mounted between said clutch and the flange on said sleeve tending to hold said clutch members in engagement, and a sand band about the juncture between the sleeve and the hub.

2. The combination of an axle, a wheel revolubly mounted thereon, a sleeve mounted on said axle and adapted to revolve with said wheel, a clutch member fixed upon said sleeve, a coöperating clutch member slidably mounted on said sleeve, a spring tending to hold said clutch members in engagement, a rock-shaft revolubly mounted adjacent to the inner end of said sleeve having arms extending into engagement with the inner end of the slidably mounted clutch member, said clutch member comprising a bearing collar having a smooth inner edge for engagement by said arms, and means for rocking said rock-shaft for throwing said slidably mounted clutch member out of engagement with the first-named clutch member.

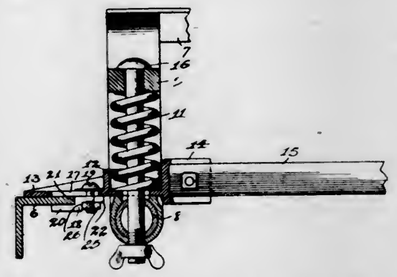
3. The combination of a shaft, a wheel revolubly mounted on said shaft, a sleeve revolubly mounted on said shaft and adapted to revolve with said wheel, a clutch member adapted to be rotated by said sleeve, a second clutch member adapted to be moved into and out of operative engagement with said first-mentioned clutch member, yielding means tending to hold said clutch members yieldingly in operative engagement, and means for holding the yielding means against pressure upon said hub.

4. The combination of a shaft, a wheel revolubly mounted on said shaft, a sleeve revolubly mounted on said shaft and adapted to revolve with said wheel, a clutch member adapted to be rotated by said sleeve, a second clutch member adapted to be moved into and out of operative engagement with said first-mentioned clutch member, yielding means tending to hold said clutch members in operative engagement with each other, and means serving while said clutch members are in operative engagement to hold said yielding means against pressure upon said wheel relative to said shaft.

5. The combination of a shaft, a wheel revolubly mounted on said shaft, a sleeve revolubly mounted on said shaft and adapted to revolve with said wheel, a clutch member adapted to be rotated by said sleeve, a second clutch member slidably mounted on said sleeve and adapted to be moved into and out of operative engagement with said first-named clutch member, and a coiled spring mounted on said sleeve bearing at one end against said second clutch member and having a bearing at its other end upon said sleeve whereby the spring tends to hold said clutch members yieldingly in operative engagement.

[Claim 6 not printed in the Gazette.]

1,171,115. BED CONSTRUCTION. WILLIAM J. GROTENHUIS, Chicago, Ill., assignor, by mesne assignments, to Kinney-Rome Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 14, 1912. Serial No. 714,978. (Cl. 5—63.)



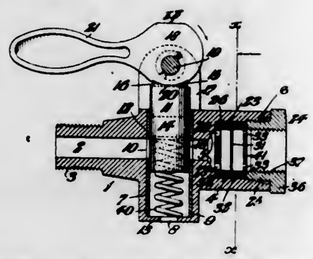
1. In combination, a pair of bedstead side rails, a bed bottom having corner members and side bars disposed between said rails, and devices for securing the bed bottom in place on said rails, each device comprising a bed bottom supporting projection extending upon the adjacent rail, an element for engaging both the under side and the inner edge of said rail, and means for removably securing said element to the under side of said projection, said device having provisions for the adjustment of said element toward and away from the adjacent side of the bed bottom, including a slot in said projection, and said means including a bolt in said slot, said bolt having a nut on the lower end thereof, said element having a shoulder for preventing rotation of said nut, and said bolt having its upper end provided with means for the rotation thereof to tighten or loosen said element.

2. In combination, a pair of bedstead side rails, a bed bottom having corner members and side bars disposed between said rails, and devices for securing the bed bottom in place on said rails, each device comprising a bed bottom supporting projection extending upon the adjacent rail, an element for engaging both the under side and the inner edge of said rail, and means for removably securing said element to the under side of said projection, said device, having provisions for the adjustment of said element and means toward and away from the adjacent side of the bed bottom, said element having upper and lower shoulders which face in opposite directions to respectively engage said rail and means, one said shoulder thereby holding said means to permit operation thereof.

3. In combination, a pair of bedstead side rails, a bed bottom having corner members and side bars disposed between said rails, and devices for securing the bed bottom in place on said rails, each device comprising a bed bottom supporting projection extending upon the adjacent rail, an element for engaging both the under side and the inner edge of said rail, and means for removably securing said element to the under side of said projection, said device having provisions for the adjustment of said element toward and away from the adjacent side of the bed bottom, said means including a nut, and said element having means for holding said nut against rotation.

4. In combination, a pair of bedstead side rails, a bed bottom having corner members and side bars disposed between said rails, and devices for securing the bed bottom in place on said rails, each device comprising a bed bottom supporting projection extending upon the adjacent rail, an element for engaging both the under side and the inner edge of said rail, and means for removably securing said element to the under side of said projection, said device having provisions for the adjustment of said element toward and away from the adjacent side of the bed bottom, said element having upper and lower portions which overlap, the outer edge of the upper portion engaging the edge of said rail, and said means including a bolt provided with a nut which engages the inner edge of said lower portion, thereby preventing both said element and nut from turning about said bolt.

1,171,116. SELF-CLOSING VALVE. CHARLES H. HAESELER, Philadelphia, Pa. Filed July 10, 1915. Serial No. 39,060. (Cl. 137—69.)



1. A fitting for pneumatic devices comprising a casing having a longitudinal bore therethrough, a valve seat extending transversely of said bore, a valve plug in said seat provided with a passage extending transversely therethrough, tension devices bearing on the opposite inner end of said valve, ears projecting from said casing, and a disk eccentrically mounted in said ears and having its edge engaging the top of said plug, said disk having its edge farthest from its fulcrum flattened to enable said valve plug to be locked in open position.

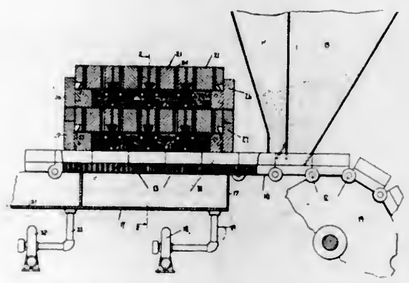
2. In a valve, a casing having a longitudinal bore therethrough, a valve seat extending transversely of said bore, a valve plug in said seat provided with a groove in its outer end, tension devices bearing on the opposite inner end of said valve, ears projecting from said casing, and a disk eccentrically mounted in said ears and having its edge engaging the groove in said plug, said disk having its edge farthest from its fulcrum flattened to enable said valve plug to be locked in open position.

3. In a valve, a casing having a longitudinal bore therethrough, a valve seat extending transversely of said bore, a valve plug in said seat provided with a groove in its outer end, tension devices bearing on the opposite inner end of said valve, ears projecting from said casing, a disk eccentrically mounted in said ears and having its edge engaging the groove in said plug, said disk having its edge farthest from its fulcrum flattened to enable said valve plug to be locked in open position, and a handle on said disk for operating the latter, said handle in both its extreme positions extending in alinement with the longitudinal axis of said casing.

4. In a valve, a casing having a longitudinal bore therethrough, the inlet end of said bore being formed with a screen chamber, a screening device in said chamber, a valve seat extending transversely of said bore, a valve plug in said seat provided with a groove in its outer end, tension devices for the opposite inner end of said valve, ears projecting from said casing, and a disk eccentrically mounted in said ears and having its edge farthest from its fulcrum flattened to enable said valve lug to be locked in open position.

5. In a valve, a casing having a longitudinal bore therethrough, the inlet end of said bore being formed with a screen chamber, a screening device in said chamber, means engaging the walls of said chamber for retaining said screening device in position, a valve seat extending transversely of said bore, a valve plug in said seat provided with a groove in its outer end, tension devices for the opposite inner end of said valve, ears projecting from said casing, a disk eccentrically mounted in said ears and having its edge engaging the groove in said plug, said disk having its edge farthest from its fulcrum flattened to enable said plug to be locked in open position, and a handle on said disk for operating the latter, said handle and disk in both their extreme positions extending in alinement with the longitudinal axis of said casing.

1,171,117. PROCESS AND APPARATUS FOR THE ELECTRIC FIRING OF MATERIALS AND ORES. WILLIAM H. HAMPTON, New York, N. Y., assignor to The Conley Electric Furnace Company, Incorporated, Wilmington, Del., a Corporation of Delaware. Filed May 3, 1913. Serial No. 765,380. (Cl. 75—134.)



1. An apparatus for the treatment of ore, comprising a movable carrier for the ore, means for causing a blast to pass into the ore charge at a point in its travel, and electrical means for heating the blast.

2. An apparatus for the treatment of ore, comprising means for creating and controlling a continuous blast, electric resistance heating means for heating the fluid forming said blast, and means for transporting successive or continuous portions of the ore charge across such heated blast.

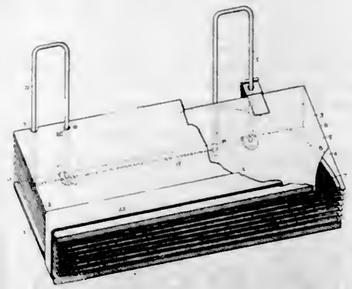
3. In an apparatus of the character described, the combination of a carrier for the ore, electric heating means at one side of the path of the ore transported by said carrier, and means for causing air to flow over said electric heating means into the body of ore.

4. In an apparatus of the character described, the combination of an endless perforated ore conveyer, electric heating means comprising resistance conductors located over a portion of the path of travel of the ore, and means for producing a draft downward over said resistance conductors and through said conveyer and the ore thereon.

5. In an apparatus of the character described, the combination of a perforated traveling ore support, suction producing means at one side of the path of travel thereof, and an electric heater opposed thereto in such manner as to heat the draft created through the ore support and ore.

[Claims 6 to 18 not printed in the Gazette.]

1,171,118. HOLDER FOR RECORDS AND THE LIKE. FRANK W. HARRIS, Brooklyn, N. Y., assignor of one-half to John Pfleging, Brooklyn, N. Y. Filed Apr. 21, 1915. Serial No. 22,728. (Cl. 129—1.)



1. In a device of the class described, in combination, a plurality of record-holding pockets, each complete in itself, a guide, and a plurality of devices each of which is secured to one of said pockets and is provided with means removably interlocking with said guide.

2. In a device of the class described, in combination, a pair of substantially flat members, a guide connecting said members and permitting them to swing apart, a plurality of complete pockets between said flat members, and a plurality of securing devices each of which is adhesively secured to a closed edge of one of said pockets and each of which is provided with means removably interlocking with said guide.

3. In a device of the class described, in combination a pair of substantially flat members, a pair of guides connecting said members and permitting them to swing apart, and a plurality of securing devices respectively connected upon said guides in pairs in removable interlocking relation therewith and each provided with a pair of narrow flexible tapes adapted to receive and make adhesive connection with a record-receiving pocket and further provided with a locking member adapted to hold it in said interlocking relation.

4. In a device of the class described, in combination, means comprising a pair of superposed tapes having adhesive matter upon their adjacent surfaces and forming a recess for removably connecting with a rod, and means adapted removably to close the open end of said recess.

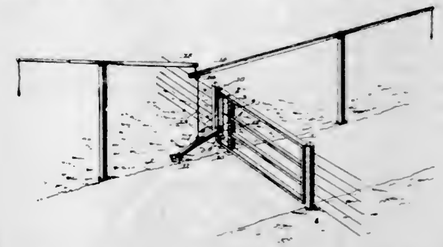
5. In a device of the class described, in combination, a plurality of substantially flat members, a pair of guides secured to one of said members and having the other member movably mounted thereon to swing away from the first member, said guides being mounted to swing toward or away from the edges of said flat members when the latter are in superimposed position, means connecting the swinging portions of said guides one with another to cause them to swing in substantially parallel planes, and means adapted to support records on said guides between said members.

[Claims 6 to 15 not printed in the Gazette.]

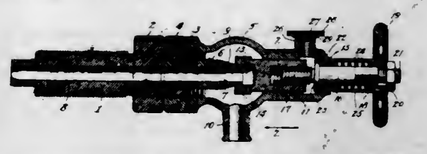
1,171,119. GATE-OPERATOR. SAMUEL F. HARRIS, Smyrna, Tenn. Filed Apr. 8, 1915. Serial No. 20,099. (Cl. 39—51.)

1. The combination of a gate pivoted adjacent to one end on a vertical pivot and having bars extending rearwardly beyond its pivot, a guide hinged in said extended bars, said guide including a pair of parallel bars, a lever pivoted at one end at one side of the gate and provided at the opposite end with a grooved roller fitted to move between the parallel bars and means connected to the lever for rocking it on its pivot whereby the roller is moved along the parallel bars to swing the gate.

2. The combination of a gate pivoted adjacent to one end and having rearwardly extending bars, a guide pivoted in said bars, a lever pivoted at one end at one side of the gate and provided at the other end with a roller fitted to move in said guide when the lever is rocked, and operating levers pivoted at both sides of the gate and connected to the said lever to rock the same whereby the gate is swung on its pivot.



1,171,120. VALVE. GEORGE J. HATZ, Omaha, Nebr., assignor of one-half to Charles E. Fuller, Omaha, Nebr. Filed Apr. 10, 1914. Serial No. 830,840. (Cl. 137—4.)



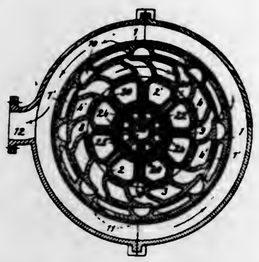
1. The combination with a plug exteriorly threaded at its inner and outer ends and provided at its outer end with a projecting valve seat, of a valve casing formed of a single piece threaded at its inner end to engage the outer end of said plug, the outer end portion of said casing being formed with a non-circular chamber to receive a valve and having between said non-circular chamber and its inner end an expanded chamber around the end of the valve seat, said expanded chamber being provided with a discharge nipple, said casing being provided at its outer end, beyond said non-circular chamber, with a contracted opening and with an interior recess adjacent said contracted opening to receive a washer, a washer within said interior recess, a valve slidably and non-rotatably mounted within said non-circular chamber of the casing and provided at its outer end with an interiorly threaded part, a valve stem having a threaded inner end to engage said valve and having a collar adjacent its threaded inner end to engage said washer, and means connected to the outer end of said valve stem whereby it may be rotated to effect the sliding movement of the valve; said valve being removably held within the valve casing until said casing is bodily detached from said plug.

2. The combination with a valve casing having a contracted opening for the passage of the valve stem, said casing having its interior provided with an annular recess adjacent said contracted opening, said casing having its interior formed with a non-circular chamber to receive the shank of the valve and with a chamber for oil between the outer end of said non-circular chamber and said annular recess, a valve mounted to slide within said non-circular chamber of the casing, a valve stem having its inner end threaded to engage a correspondingly threaded outer portion of said valve and having a collar arranged within said annular recess, a washer arranged around the valve stem within said recess and adjacent said collar and means mounted upon the outer end of said valve stem for turning the same, the outer portion of said casing being provided with a passage leading to said oil chamber and a cap for closing said passage.

1,171,121. DIRECT-ACTING EXPLOSION-TURBINE. JEAN JACQUES HEILMANN, Paris, France. Filed Mar. 21, 1911. Serial No. 615,877. (Cl. 123—9.)

1. In an explosive turbine, a rotor having chambers formed therein at spaced intervals therearound, means for

introducing a combustible mixture under pressure into said chambers in a direction to strike the side walls of the chamber at an angle thereto while said rotor is rotating, means for closing said chambers, means for igniting the explosive charge within said chambers, and means for exhausting the exploded gases from said chamber in a direction to cause the explosive gases to re-act against the side walls of said chamber in said rotor to add a further impetus to the rotation of the rotor.



2. In an internal combustion turbine, two spaced concentrically arranged stators and an intermediate rotor, said rotor having a series of spaced explosion chambers therein, inlet passages in one of said stators and outlet passages in the other of said stators periodically and momentarily communicating with said chambers during the normal operation of the turbine.

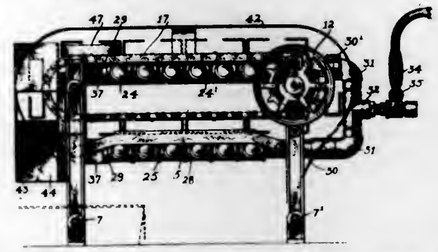
3. In an explosion turbine, a rotor comprising a rotary annular member having a plurality of chambers formed therein with their side walls angularly disposed to the radii passing therethrough, means for periodically introducing explosive charges under pressure into each of said chambers in a substantially radial direction, while said rotor is rotating to cause the charge in entering said chambers to act directly against the side walls of the chambers and thereby rotate the rotor, means for exploding the charges while within said chambers and means for exhausting the charges in a substantially radial direction to cause the reaction of the exploded gases in escaping from said chambers to add a further impetus to the rotation of the rotor.

4. In a direct action and reaction explosive turbine, two concentrically arranged stators and an intermediate rotor, said rotor having a plurality of chambers therein leading from stator to stator and disposed at spaced intervals therearound, each of said stators having recesses in the surfaces thereof which are immediately adjacent said rotor, said chambers in said rotor co-acting momentarily and periodically with the recesses in one of said stators during the rotation of the rotor to form explosion chambers, means for introducing an explosive charge into each of said chambers, means for igniting said mixture in each of said chambers, said chambers in said rotor also momentarily and periodically co-acting with said recesses in the other of said stators during the rotation of said rotor and after the explosion of the combustible mixture within said explosive chamber has taken place, and means for connecting said last-named recesses to exhaust.

5. In a direct action and reaction explosive turbine comprising two concentrically arranged stators and an intermediate rotor, said rotor having a plurality of chambers therein leading from stator to stator at spaced intervals therearound, each of said stators having in its surface which is immediately adjacent said rotor, a plurality of recesses adapted to be brought into communication with said chambers in said rotor, said chambers in said rotor co-acting momentarily and periodically with the recesses in one of said stators during the rotation of the rotor to form explosion chambers, means for introducing an explosive mixture under pressure into said chambers in a generally radial direction, means for igniting said mixture when in said chambers, said chambers in said rotor also momentarily and periodically co-acting with the recesses in the other of said stators during the rotation of the rotor after the explosion of the mixture within the explosion chambers has taken place, said exploded gases entering said chambers in a generally radial direction, means for connecting each of said last named recesses to exhaust, said rotor having a side wall of each of the chambers angularly disposed with respect to the general radial direction in which the mixture enters and exhausts therefrom whereby the entrance and exhaust of said combustible mixture from said chamber will cause a rotation of the rotor.

[Claims 6 to 14 not printed in the Gazette.]

1,171,122. BREAD-TOASTER. ARTHUR A. HILL, New York, N. Y. Filed July 17, 1915. Serial No. 40,530. (Cl. 126—41.)



1. In a bread toaster, an endless skeleton carrier, a plurality of gas burners arranged below the upper and lower runs of the carrier, respectively, said burners having their jets arranged to direct flames issuing therefrom upwardly, a plurality of skeleton holders each adapted to receive a slice of bread to be toasted mounted on said carrier, and screens interposed between the gas burners and the upper and lower runs of the carrier, respectively.

2. In a bread toaster, an endless skeleton carrier, a plurality of gas burners arranged below the upper and lower runs of the carrier, respectively, said burners having their jets arranged to direct flames issuing therefrom upwardly, a plurality of skeleton holders each adapted to receive a slice of bread to be toasted mounted on said carrier, screens interposed between the gas burners and the upper and lower runs of the carrier, respectively, and a deflector arranged between the two sets of gas burners.

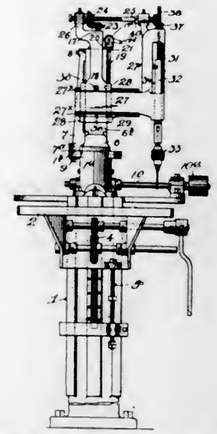
3. In a bread toaster, an endless skelton carrier, a row of gas burners arranged below the upper and lower runs of the carrier, respectively, said burners having their jets arranged to direct the flames issuing therefrom upwardly, a plurality of skelton holders mounted on said carrier, each of said holders comprising a substantially rectangular skeleton cage having the opposite end faces thereof parallel to the endless carrier open whereby the emplacing of a slice of bread to be toasted in the holder will eject the piece which has been toasted, and screens interposed between the rows of gas burners and the upper and lower runs of the carrier, respectively.

4. In a bread toaster, an endless skeleton carrier, a row of gas burners arranged below the upper and lower runs of the carrier, respectively, said burners having their jets arranged to direct flames issuing therefrom upwardly, a plurality of skeleton holders mounted on said carrier, each of said holders comprising a substantially rectangular skeleton cage having the opposite end faces thereof parallel to the endless carrier open whereby the emplacing of a slice of bread to be toasted in the holder will eject the piece which has been toasted, a chute arranged at one end of said endless carrier arranged to receive the toasted pieces when ejected from the holders, and screens interposed between the rows of gas burners and the upper and lower runs of the carrier, respectively.

5. In a bread toaster, an endless skeleton carrier comprising two endless belts, a plurality of skeleton holders mounted upon said belts in spaced relation to each other, pulleys, one at one end of each of said belts, a semi-circular guide for the other end of each of said belts, a row of gas burners arranged below the upper and lower ends of said carrier, respectively, said burners having their jets arranged to cause the flames issuing therefrom to be directed upwardly, and screens arranged between the rows of burners and the upper and lower runs of said carrier, respectively.

[Claims 6 and 7 not printed in the Gazette.]

1,171,123. DRILL-PRESS. MAX HIMOFF, New York, N. Y. Filed Oct. 3, 1913. Serial No. 793,106. (Cl. 77—27.)



1. A drill press comprising a base, a column thereon, a head supported by said column, a drill spindle and guide mounted upon said head, a pulley and spring carried by said head, a second pulley connected with said spring, and a flexible connection passing over said pulleys and connected at its ends respectively with said head and guide.

2. A drill press comprising a base, a head carried thereon, a drill spindle and guide therefor carried by said head, said head having a stop adjacent to said guide, a projection upon the guide to engage said stop, and means for adjusting the stop and projection with relation one to another and holding the same in set position to regulate the descent of the guide.

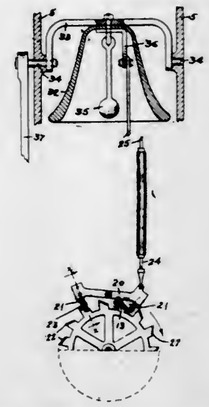
3. A drill press comprising a base, a head carried thereon, a drill spindle and guide therefor carried by said head, said head having a slot, a stop, means to adjustably support said stop in said slot, and a projection upon said guide to coact with said stop to regulate the descent of the guide.

4. A drill press comprising a base, a head carried thereon, a drill spindle and guide therefor carried by said head, said head having a slot provided with a guide, a stop in line with said slot and adjacent to said guide, a washer having a pointer and adapted to coact with said guide, a screw connecting said washer and stop to hold them adjustably on said guide, and a projection upon said first named guide to coact with said stop.

1,171,124. RAILWAY-SIGNAL. HENRY A. HOESCHEN, Omaha, Nebr., assignor to Hoeschen Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Filed Mar. 7, 1913. Serial No. 752,762. (Cl. 246—45.)

1. In a railway signal mechanism, an escape-wheel, a motor for driving the same, a stop for the wheel, means for releasing the stop, a verge-beam actuated by the escape-wheel, and a pivotally supported swinging bell yieldably connected with the verge-beam and adapted to act as a pendulum to regulate the movement of the verge-beam.

2. In a railway signal mechanism, a pendent visual signal member, a motor, oscillating escapement mechanism actuated by the motor, and yieldable connecting means between the escapement mechanism and signal member, whereby the latter is swung as a pendulum and regulates the movement of the escapement mechanism.



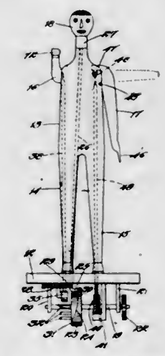
3. In a railway signal mechanism, a spring motor, an escape-wheel driven thereby, a verge-beam and pallets adapted to be oscillated by the escape-wheel, and pivotally mounted swinging signals including a bell yieldably connected with the verge-beam and adapted to act as a pendulum to regulate the movement of the verge-beam.

4. In a railway signal mechanism, swinging signal members, a motor, a toothed escape-wheel actuated thereby, a verge-beam, pallets carried thereby adapted to be engaged by the escape-wheel to oscillate the beam, means connecting the verge-beam and the signal members, means for stopping the escape-wheel at definite positions, and means carried by the verge-beam and wheel and engageable with each other to prevent movement of the verge-beam when the wheel is stopped.

5. In a railway signal mechanism, swinging signal members, a motor, a wheel actuated thereby, an oscillating part actuated by the wheel, means for stopping the wheel at definite positions, interengaging means on the wheel and oscillating part to prevent movement of the latter when the wheel is stopped, means including yieldable members connecting the oscillating part and signal members, and means for holding the yieldable members constantly under a stress as great as the force normally transmitted by the connecting means in actuating the signals.

[Claims 6 and 7 not printed in the Gazette.]

1,171,125. ADVERTISING DEVICE. ALBERT JONES, Somerville, Mass., assignor to Alexander F. Lee, Somerville, Mass. Filed Aug. 30, 1915. Serial No. 47,942. (Cl. 46—40.)



1. In a device of the character described, an automaton having a pair of pivoted arms mounted thereon, automatic

means for giving one of said arms a knocking movement and automatic mechanism for giving the other of said arms a pointing movement.

2. In a device of the character described, an automaton having a pair of movably mounted arms and a movable head, means for giving one of said arms a knocking movement, and mechanism for turning said head and for giving to the other of said arms a pointing movement.

3. In a device of the character described, an automaton having a pair of pivoted members, a rod pivoted at one end to one of said members, means for successively moving said rod to give to the said member a knocking movement, a rod pivotally secured to the other of said members, and means operatively connected with the said rod for giving the said arm a pointing movement.

4. In a device of the character described, an automaton having a pair of pivoted arms, a base upon which said automaton is supported, a rod loosely mounted in said automaton connected at one end with one of said arms, and projecting through the base, a revolving drum mounted beneath said base having a plurality of projecting pins secured thereto, a pivoted lever in engagement at one end with said rod and adapted to be successively engaged by said pins to cause the said arm to have a knocking movement, a second rod loosely mounted in said automaton connected at one end to the other of said arms and projecting through said base, a pivoted lever to which said second rod is secured, and a revolving cam adapted to engage said lever to give the said arm a swinging movement.

5. In a device of the character described, an automaton having a movable head and a pair of pivoted arms, a base upon which said automaton is supported, a rod loosely mounted in said automaton connected at one end with one of said arms, and projecting through the base, a revolving drum mounted beneath said base having a plurality of projecting pins secured thereto, a pivoted lever in engagement at one end with said rod and adapted to be successively engaged by said pins to cause the said arm to have a knocking movement, a second rod loosely mounted in said automaton connected at one end to the other of said arms and projecting through said base, a pivoted member to which said second rod is secured, a revolving cam adapted to engage said lever to give the said arm a swinging movement, and a third rod rotatably mounted in said automaton which is secured to said head at one end and projects through the base at the other end, an arm secured to said third rod and a revolving cam adapted to engage the said arm and give the said head a turning motion.

1,171,126. INSULATOR-PIN. JOHN G. S. LINDHOLM and ANDERS P. LINDHOLM, Chicago, Ill.; said John G. S. Lindholm assignor to said Anders P. Lindholm. Filed Nov. 2, 1914. Serial No. 869,827. (Cl. 173—321.)



1. The combination, in a structure of the character described, of two vertical sections each providing a threaded insulator-engaging portion, and each having a horizontal base portion, and means for securing said base portions together and to a support.

2. In an insulator, the combination of two hollow-shell sections jointly providing an exteriorly threaded stem divided on a vertical plane and a seating base, and means to connect the base portions of the pin together and to a support, the edges of the threaded portion of the pin being separated for lateral resiliency.

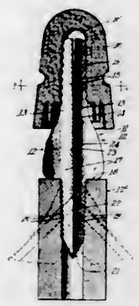
3. A sheet metal insulator pin comprising two approximately similar sections, forming a vertically divided hollow shell exteriorly providing insulator-engaging threads and providing horizontal base portions adapted and arranged for mutual engagement and connection to a support, the confronting edges of said shell sections being separated throughout the upper portions for lateral resiliency, and said sections having adjacent the base meeting abutment portions forming a fulcrum.

4. The combination of a sectional, metallic insulator pin comprising two vertical sections jointly forming a hollow shell having external insulator-engaging means, said sections having overlapped base portions, one said base portion having an aperture and the other having parts to interlock with said apertures.

5. In a device of the character described the combination of two sections each providing a peripheral threaded portion, and a horizontal base portion, said base portions overlapping and having registering apertures; and a bolt taking through said apertures to secure said base structures together and to a support.

[Claims 6 to 13 not printed in the Gazette.]

1,171,127. METALLIC CROSS-ARM PIN. JOHN G. S. LINDHOLM, Chicago, Ill., assignor to Anders P. Lindholm, Chicago, Ill. Filed Nov. 19, 1914. Serial No. 872,939. (Cl. 173—321.)



1. An insulator-pin comprising a plurality of channeled sections, each providing a body portion and a stem portion, said sections meeting back to back below the stem portions and separated at the tops of the stem sections.

2. An insulator-pin comprising a plurality of channeled sections, each providing a body portion and a stem portion, said sections joined back to back below the stem portions and separated at the tops of the stem sections; and means for securing said body portions fixedly to a support, whereby the point of jointure acts as a fulcrum for resilient movement of the stem ends.

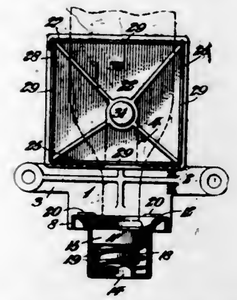
3. An insulator pin composed of sheet metal formed into similar vertical sections of channeled cross section, each providing a stem portion threaded on its web-edges, a broadened back portion at the lower end of the stem portion, for mutual bearing of the sections back to back, and an enlarged base portion affording a horizontal seating surface.

4. An insulator pin composed of sheet metal formed into similar vertical sections of channeled cross section, each providing a stem portion threaded on its web-edges, a broadened back portion at the lower end of the stem portion, for mutual bearing of the sections back to back, an enlarged base portion affording a horizontal seating surface and integral means for connection of the back portions of said sections.

5. An insulator pin comprising a plurality of channeled sections, each providing a body portion and a stem portion threaded on its web-edges, said sections being positioned back to back, and means for connecting the channel backs together.

[Claims 6 and 7 not printed in the Gazette.]

1,171,128. CARRIER AND CONVEYER FOR BOTTLES. BENJAMIN E. LINFOOT, Philadelphia, Pa. Filed May 22, 1915. Serial No. 29,753. (Cl. 193—2.)



1. A carrier for conveying bottles through a machine, comprising in combination, a mouth-piece, a drum rotatably mounted above said mouth-piece and having a plurality of supporting members to be located in operative position as desired, and means for locking the drum in its different positions.

2. A carrier for conveying bottles through a machine, comprising in combination, a mouth-piece, a drum eccentrically and rotatably mounted above the mouth-piece and having a plurality of supporting members to be located in operative position as desired and at different heights above the mouth-piece, and means for locking the drum in its different positions.

3. A bottle carrier, comprising in combination, link members, bottle mouth-pieces carried thereby, a drum having a plurality of series of openings therein, each series of different diameter, means for rotatably supporting the drum above said mouth-pieces to locate the desired series in operative position with the mouth-pieces and at varying heights therefrom, and means for locking the drum in its different positions.

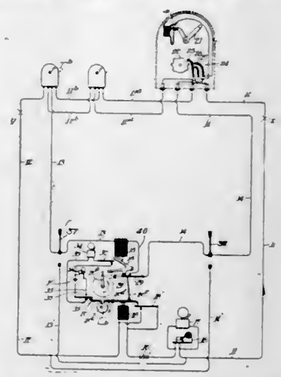
4. A bottle carrier comprising in combination, links, bottle mouth-pieces carried by said links, a drum eccentrically mounted on said links to be rotatable above the mouth-pieces, said drum having a plurality of series of openings, each series being of different diameters to be located centrally and at different vertical distances above the mouth-pieces, and means for locking the drum in its different positions.

5. A bottle carrier comprising in combination, links having ears extending upwardly therefrom, bottle mouth-pieces carried by the links, a drum eccentrically mounted on said ears to be rotatable above the mouth-pieces, said drum having a plurality of series of openings, each series being of different diameters to be located centrally and at different vertical distances above the mouth-pieces, and means for locking the drum in its different positions.

[Claims 6 to 9 not printed in the Gazette.]

1,171,129. FIRE-ALARM SIGNAL SYSTEM. JUDSON MCFELL, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,070. (Cl. 177—367.)

1. In a fire alarm signal system, the combination of a central station source of energy, signal responsive means, a plurality of transmitters located at transmitting stations, test circuit connections extending from the central station to the successive boxes and beyond said boxes extending back to the central station and connected to each other through and including a high resistance test magnet, each said transmitter embodying a signal wheel, a switch associated therewith comprising three elements, one said element connected with one said wire and the other two elements connected respectively with the portions of the opposite wire leading in opposite directions from the box, said elements arranged for interconnection of all thereof in response to operation of the signal wheel.



2. In a fire alarm signal system, the combination of a central battery, two line wires extending from said battery to suitable transmitting stations and thence returning to the central station, signal-responsive means connected therewith, a high resistance magnet connecting said return wires at the central station, means controlled by the magnet armature controlling the magnet circuit and at each transmitting station a transmitter comprising a signal wheel, and a signal switch associated therewith providing a plurality of members, one connected with one said line wire and two others connected with portions of the other line wire which lead in opposite directions with respect to the box, said elements arranged to be brought into joint electrical connection by the operation of the signal wheel.

3. In a fire alarm signal system, the combination of a central battery, two line wires extending from said battery to suitable transmitting stations and thence returning to the central station, signal-responsive means connected therewith, a high resistance magnet connecting said return wires at the central station, and at each transmitting station a transmitter comprising a signal wheel, and a signal switch associated therewith providing a plurality of members, one connected with one said line wire and two others connected with portions of the other line wire which lead in opposite directions with respect to the box, said elements arranged to be brought into joint electrical connection by the operation of the signal wheel and means at the central station for connecting the return ends of each wire to the outgoing end of the same wire.

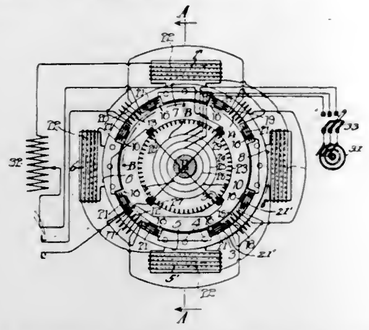
4. In a fire alarm signal system the combination of a central station battery, a signal responsive means, line wires extending from opposite terminals of the battery to the respective signal stations and returning to, and normally connected through, a high resistance test magnet at the central station, means at the central station for connecting the return end of either line wire to its outgoing end, and at each signaling station a transmitter involving a signaling wheel, a normally open signal switch therefor providing a plurality of elements, one normally connected with one line wire and two others normally connected with portions of the opposite line wire running in opposite directions from the box, said switch elements being all interconnectible by the operation of the signal wheel, and a line switch, normally connecting the two said signal switch elements which are connected to a single wire, and means for opening said line switch during the signaling cycle of the box.

5. In a signal system of the character described, the combination of a plurality of open circuit boxes having

normally separated signaling pens and signal wheels therefor, a test circuit including a central station battery, a test magnet and line wires, each said line wire including in series therein an individual one of the signaling pens of each transmitter, whereby the switch parts of said normally open transmitters are maintained under normal test.

[Claims 6 to 10 not printed in the Gazette.]

1,171,130. SYNCHRONOUS CONVERTER. SAMUEL H. MARTIN, Chicago, Ill. Filed Aug. 22, 1912. Serial No. 716,407. (Cl. 171—228.)



1. A synchronous converter, comprising an armature, windings therefor, a field magnet comprising an annular series of poles spaced apart circumferentially, a magnetic screen mounted between said field poles and said armature and having squirrel cage conductors thereon, windings mounted on said screen and arranged in sets interposed between adjacent poles, each set comprising form windings spaced apart, and ring windings located between them for the purpose specified.

2. In a device of the class described, an annular magnetic screen member, formed and adapted to house and support the essential elements of a squirrel cage winding and having thereon an annular series of slots spaced apart circumferentially, squirrel cage windings arranged on said screen to serve either as a damper or as induction armature circuits, a series of form windings mounted on said screen, said form windings being connected in series and disposed one adjacent to and lying partially within each side of said slots, and a series of ring windings mounted on said screen one being interposed between each pair of said form windings for the purpose specified.

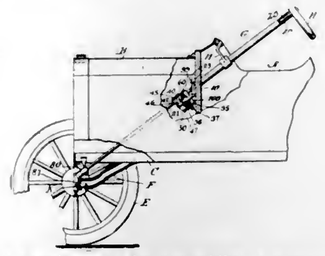
3. A magnetic screen for synchronous electric current converting machines, comprising an annular ring embodying squirrel cage construction, said ring having an annular series of spaced slots and having an annular series of relatively narrow slots adjacent said first named slots, ring windings in said first named slots and form windings in said narrow slots, series connections for said ring windings with respect to the direct current line, and shunt connections for the form windings and adapted to control the position and amount of magnetism in said damper under varying conditions and load.

4. In a synchronous dynamo electric machine having a main field magnet system, an armature and brushes for the armature, a magnetic screen disposed between the said armature and field magnet system and comprising an annular ring having squirrel cage members structurally embodied therein; said ring also having a series of slots symmetrically disposed therein, a system of windings mounted in said slots comprising ring windings and form windings arranged with the axes of adjacent ring and form windings substantially transverse to each other, respectively, and each kind being connected in a series by itself, connections for bringing one series of windings across the brushes for control by potential of the machine and other means for connecting the second set of windings in series with the line for control by the load current of said machine, for the purpose specified.

5. In a device of the class described, a rigidly fixed annular magnetic screen, in combination with a damper of squirrel cage construction supported and housed thereby and a series of ring windings mounted on said screen for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

1,171,131. STEERING-GEAR. ARTHUR C. MASON and ALFRED T. STURT, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 14, 1914. Serial No. 877,007. (Cl. 74—79.)



1. In a steering gear for autombiles, a support, a cage or frame fixedly mounted on said support, at one side thereof and inclined with reference thereto, an upper shaft mounted in said cage or frame, a second frame removably mounted on said first frame, a lower shaft mounted in the second frame, each of said shafts having a gear secured thereto, an idler shaft mounted in said frames, gears fixed to said idler shaft, said gears operatively engaging with the gears on the upper and lower shafts.

2. In a steering gear for automobiles, a support, a cage or frame fixedly mounted on said support, at one side thereof and inclined with reference thereto said frame being provided with rigid projections, an upper shaft mounted in said cage or frame, a second frame removably secured to the free ends of the projections aforesaid, a lower shaft mounted in the second frame, each of said shafts having a gear secured thereto, an idler shaft mounted in said frames, gears fixed to said idler shaft, said gears operatively engaging with the gears on the upper and lower shafts, a steering wheel secured to the upper shaft as and for the purpose described.

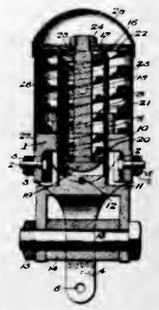
3. In a steering gear for automobiles, the combination with the dash board, of a support secured to the front side thereof, a frame carried by said support and arranged at an angle thereof, a shaft mounted on said frame and extending through the dash board, the said shaft being provided with an operating handle at one of its ends and a gear at the other end, a second shaft arranged in line with said first mentioned shaft and having a gear secured thereto at its upper end and an operating lever arm secured to its lower end, the lower and upper ends of each of the two shafts being held together in the said supporting frame, idler gears fixed to a common shaft mounted in said supporting frame and arranged to engage respectively with the gears mounted upon the steering shaft.

4. In a steering gear for automobiles, a two part cage or frame, a support therefor arranged in an inclined position with reference to said frame and whereby said frame may be secured to the dash board, means for removably securing the parts of the cage or frame together, a power or driving shaft mounted in the fixed part of said cage or frame, a gear secured to said shaft, a driven shaft mounted in the other part of said cage or frame in juxtaposition to the driving shaft, a gear secured to said driven shaft, an idler shaft, the ends of which are supported respectively in the parts of said cage or frame, and idler gears secured to said idler shaft, the said idler gears engaging respectively with the gear of the driving shaft and the gear of the driven shaft.

5. In a steering gear for automobiles, a frame, a plurality of shafts mounted in said frame, gears mounted on each of said shafts for operative engagement one with the other, means for drawing together the separate portions of the frame in which the parallel shafts are mounted to adjust engagement of the gears.

[Claims 6 and 7 not printed in the Gazette.]

1,171,132. SHOCK-ABSORBER. WILLIAM S. MILLER, Philadelphia, Pa., assignor to Utility Shock Absorber Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 21, 1914. Serial No. 852,206. (Cl. 267—19.)



1. A shock absorber, comprising a base portion, a spring abutment, a spring interposed between said spring abutment and said base portion, a bolt carried by said spring abutment, a washer slidably mounted on said bolt, a sleeve engaging said washer, a second spring interposed between said washer and the head of said bolt, and relatively movable members, one of which is connected with said base portion, and the other of which is connected with said sleeve.

2. A shock absorber, comprising a base portion pivotally supported, an abutment, a cushion intermediate said abutment and said base portion, a member movable with respect to said base portion, a connection extending from said abutment, a cushion interposed between the outer end of said connection and the end portion of said movable member, said second cushion being contained within said first cushion, and a device to be cushioned operatively connected with said movable member.

3. A shock absorber, comprising a base portion, an inner shell slidable with respect thereto and guided thereby, a washer slidable within said shell, a bolt guiding said washer and having a head within said shell, an abutment fixed to said bolt and spaced from said head, a spring between said base portion and said abutment, a spring between said washer and the head of said bolt, and means of attachment connected to said shell.

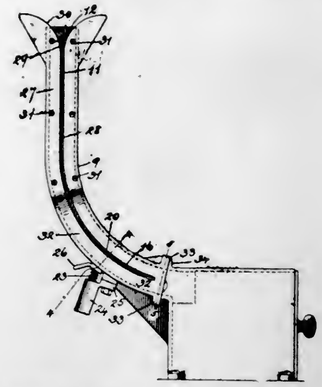
4. A shock absorber, comprising the hangers, two concentric compression springs of different capacities, a spring abutment between which and said first hanger one of said springs is interposed, a bolt having a head at one end and its opposite end fixed to said spring abutment, a member movable longitudinally with respect to said bolt and between which and the head of said bolt the other of said springs is interposed, and means to connect said member with the other of said hangers.

5. A shock absorber, comprising the hangers, two concentric compression springs of different capacities, a spring abutment between which and said first hanger one of said springs is interposed, a bolt having a head at one end and its opposite end fixed to said spring abutment, a member movable longitudinally with respect to said bolt and between which and the head of said bolt the other of said springs is interposed, an inner shell connecting said member with the second hanger, and an outer shell carried by said first hanger.

[Claims 6 and 7 not printed in the Gazette.]

1,171,133. MACHINE FOR REMOVING BUTTONS FROM SHOES. SOLOMON J. MYERBURG, Baltimore, Md. Filed Nov. 11, 1915. Serial No. 60,814. (Cl. 218—27.)

1. In a machine for removing sewed buttons from shoes the combination with a guide having a curved button-slot, said slot being open at one end to permit the buttons on a shoe to freely pass therein, of means extending along the slot to yieldingly press a shoe away from the slot to place the securing threads under tension; a blade having a cutting edge that extends along and in proximity to the slot, and means for yieldingly holding the blade.



2. In a machine for removing sewed buttons from shoes the combination with a guide having a curved button-slot, said slot being open at one end to permit the buttons on a shoe to freely pass therein, of means extending along the slot to yieldingly press a shoe away from the slot to place the securing threads under tension; a stationary cutting blade extending along the button slot, and a movable cutter blade also extending along said slot,—said stationary and movable blades being interposed between the slotted guide and the yielding pressing means.

3. In a machine for removing sewed buttons from shoes the combination with a guide having a curved button-slot, said slot being open at one end to permit the buttons on a shoe to freely pass therein; of a cutter blade secured to the guide at one side of the curved slot; a cutter blade yieldingly secured to the guide and extending along the opposite side of said slot, said cutter blades being lapped in front of the slot, and means extending along the outer side of the cutter blades for yieldingly pressing a shoe away from the slot to place the securing threads under tension.

4. In a machine for removing sewed buttons from shoes the combination with a guide tube having a curved slot to receive the shanks of the buttons, of a plate extending along one side of the tube and having a slot coincident with the tube slot, said plate having a lower end thereof detached from the tube and sprung away from the tube, and a yielding cutter blade between the sprung end of the plate and the tube, said cutter blade extending along the curved slot.

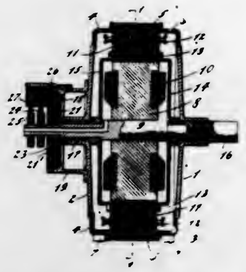
5. In a machine for removing sewed buttons from shoes the combination with a button receptacle, of a guide tube extending from the receptacle and having a curved button slot therein, said tube communicating with the receptacle; a plate extending along one side of the tube and having a slot coincident with the slot in the guide tube, said plate having means for pressing a shoe away from the guide tube, and a cutter blade interposed between the pressing means and the slotted side of the tube.

[Claims 6 to 11 not printed in the Gazette.]

1,171,134. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, Bergenfield, N. J. Filed Mar. 4, 1914. Serial No. 822,254. (Cl. 171—252.)

1. A dynamo-electric machine comprising a rotatable magnet, a stationary member having a plurality of spaced magnetic conductors circularly disposed around the magnet and extending parallel to the axis thereof, and a rotatable member having a plurality of spaced magnetic conductors arranged concentric with and adjacent to those of the stationary member and adapted to successively

radially aline with those of the stationary member as the rotatable member rotates, whereby rotation of one rotatable part will cause the rotation of the other rotatable part.



2. A dynamo-electric machine comprising a rotative magnet, a stationary member having a plurality of spaced magnetic conductors circularly disposed around the magnet and extending parallel to the axis thereof, and a driven member having a plurality of spaced magnetic conductors arranged concentric with and adjacent to those of the stationary member and adapted to successively radially aline with those of the stationary member and provide closed paths for the magnetic flux as the magnet rotates and thereby impart rotation to the driven member.

3. A dynamo-electric machine comprising a rotative magnet, a stationary member having a plurality of spaced magnetic conductors circularly disposed around the magnet and extending parallel to the axis thereof, and a driven member having a plurality of spaced magnetic conductors arranged between the magnet and stationary member and concentric with and adjacent to the magnetic conductors of the stationary member and adapted to successively radially aline with those of the stationary member and provide closed paths for the magnetic flux as the magnet rotates and thereby impart rotation to the driven member.

4. A dynamo-electric machine comprising a rotative field member and a winding therefor, a stator axially surrounding the field member and having a plurality of longitudinally-extending spaced magnetic conductors, and a driven member having a plurality of spaced longitudinally-extending magnetic conductors adapted to successively radially aline with those of the stator and provide closed paths for the magnetic flux as the field member rotates and thereby impart rotation to the driven member.

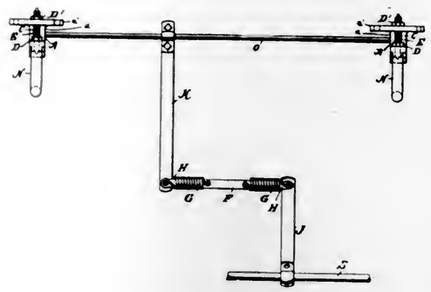
5. A dynamo-electric machine comprising a rotative field member and a winding therefor, a stator axially surrounding the field member and having a plurality of longitudinally-extending spaced magnetic conductors, and a driven member having a different number of spaced longitudinally-extending magnetic conductors disposed between the stator and field member and adapted to successively radially aline with those of the stator and provide closed paths for the magnetic flux as the field member rotates and thereby impart rotation to the driven member.

[Claims 6 to 21 not printed in the Gazette.]

1,171,135. AUTOMOBILE-HEADLIGHT. WILLIAM B. OLD, Denison, Tex. Filed Jan. 26, 1914. Serial No. 814,547. (Cl. 240—62.)

1. An improved support for a headlight comprising an element in the form of a yoke, means for engaging the ends of the arms of said yoke to enable said element to be pivotally mounted, a cross-bar carried at the end of one of said arms for mounting the headlight thereon, and means for operating the shank of the yoke to turn the headlight.

2. An improved support for a headlight comprising a bracket adapted to be mounted upon a vehicle, said bracket carrying a double-pointed screw extending through its outer end, and an element adapted to bear the headlight pivotally engaging the said screw, said element having a socket member adjustably secured thereto, whereby both ends of said screw and said element can be retained in operative relation.



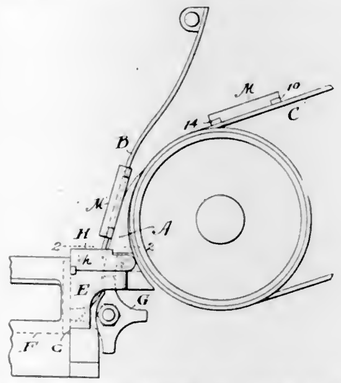
3. An improved operating device for a headlight comprising a rod, an arm, a plurality of link members for securing an end of the rod to an end of the arm, and a spiral spring fastened to said rod and said arm and encircling said members.

4. Improvements in headlights comprising a pair of pivoted supports, an operating rod connecting the same, a rigid arm carried by the rod, a steering rod, a rigid arm on the steering rod, a third rod, a plurality of link members uniting the ends of the third rod to the outer ends of said arms, and spiral springs encircling the link members and secured to said third rod and said arms.

5. An improved support for a headlight comprising a bearing, a bracket mounted therein, said bracket carrying a double-pointed screw extending through its outer end, a yoke having a socket member mounted on one arm thereof, said screw engaging the socket member and the other arm of said yoke, whereby the yoke is pivoted on said bracket, a cross bar at the end of the first-named arm for carrying the headlight, and means for operating the shank of the yoke to turn the headlight.

[Claims 6 and 7 not printed in the Gazette.]

1,171,136. TYPOGRAPHIC MACHINE. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed May 15, 1915. Serial No. 28,258. (Cl. 199—7.)



1. In a typographic machine, the combination of matrices which are of different thicknesses but have between their front and rear edges webs of the same thickness on all matrices produced by vertical channels of different depths on matrices of different thickness, each of said matrices having its said channel extended from top to bottom, and formed in said side of the matrix which is the leading side as the matrix is going through the composing mechanism, with an assembler throat having relatively fixed upper and lower members of which the

width of the upper member is slightly less in width than the vertical channels in said matrices.

2. In a typographic machine, the combination of matrices which are of different thicknesses but have between their front and rear edges webs of the same thickness on all matrices produced by vertical channels of different depths in matrices of different thickness,—each of said matrices having its said channel extended from top to bottom, and formed in said side of the matrix which is the leading side as the matrix is going through the composing mechanism, with an assembler throat having relatively fixed upper and lower members of which the width of the upper member is slightly less in width than the vertical channels in said matrices, and means for delivering the matrices into said throat with their grooved sides uppermost.

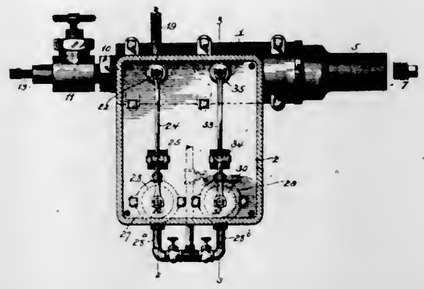
3. In a typographic machine, the combination of matrices which are of different thicknesses but have between their front and rear edges webs of the same thickness on all matrices produced by vertical channels of different depths in matrices of different thickness,—each of said matrices having its said channel extended from top to bottom, and formed in that side of the matrix which is the leading side as the matrix is going through the composing mechanism, with an assembling throat having relatively fixed upper and lower members of which the width of the upper member is slightly less in width than the vertical channels in said matrices, a rotating star wheel packer located beneath said throat, and assembling rails adjacent to said packer onto which the packer will push the matrices discharged from said throat.

4. In a typographic machine, the combination of matrices which are of different thicknesses but have between their front and rear edges webs of the same thickness on all matrices produced by vertical channels of different depths in matrices of different thickness,—each of said matrices having its said channel extended from top to bottom, and formed in said side of the matrix which is the leading side as the matrix is going through the composing mechanism, with an assembling throat having relatively fixed upper and lower members of which the width of the upper member is slightly less in width than the vertical channels in said matrices, a rotatable star wheel packer located beneath said throat, two inclined extension rails lying respectively in front of and behind said star wheel packer, and assembling rails alined with said extension rails.

5. In a typographic machine, the combination of matrices which are of different thicknesses but have between their front and rear edges webs of the same thickness on all matrices, produced by vertical channels of different depths on matrices of different thickness, each of said matrices having its said channel extended from top to bottom, and formed in said side of the matrix which is the leading side as the matrix is going through the composing machanism, with an assembling throat having relatively fixed upper and lower members of which the width of the upper member is slightly less in width than the vertical channels in said matrices, a rotatable star wheel packer located beneath said throat, two inclined extension rails lying respectively in front of and behind said star wheel packer, and assembling rails alined with said extension rails, the delivery ends of said extension rails being in a plane slightly higher than the receiving ends of said assembling rails, and two spring-actuated retaining pawls above the delivery ends of said extension rails and past which the packer will push said matrices.

1,171,137. BURNER. LEWIS PIRDUN, Tulsa, Okla. Filed Apr. 16, 1915. Serial No. 21,716. (Cl. 236—6.)

1. In a burner, the combination with an elongated shell having a nozzle outlet at one end, of an inner nozzle passing through said shell and terminating at its forward end near the nozzle outlet of the shell, said inner nozzle and shell forming two annular chambers, means isolating said chambers from each other, an oil inlet communicating with one of said annular chambers, an automatically actuated valve for controlling the passage of oil from said last-mentioned chamber into the inner nozzle, a steam inlet communicating with the forward annular chamber, automatically actuated valve for controlling the passage of steam through said steam inlet, and an air inlet communicating with the inner nozzle in rear of the oil inlet.



2. In a burner, the combination with an elongated shell, and a nozzle at the forward end thereof, of an inner nozzle passing through said shell and terminating near the first-mentioned nozzle, automatically controlled means for admitting steam between the shell and the inner nozzle, separate automatically controlled means for admitting oil into the rear portion of the inner nozzle, and a gas inlet communicating with the inner nozzle in rear of the oil inlet.

3. In a burner, the combination with a nozzle, and a shell inclosing the same, said shell being divided into rear and forward annular chambers, of means for supplying oil to the rear annular chamber, means for controlling the passage of oil from said rear chamber into the nozzle, means for supplying steam to the forward annular chamber, and a forward nozzle communicating with said first-mentioned nozzle and with the annular steam chamber.

4. In a burner, the combination with an elongated shell having an internal annular flange, and a forward nozzle secured to said shell, of an inner nozzle inclosed within said shell and communicating with the forward nozzle, said inner nozzle having an annular shoulder coöperating with the annular shoulder in the shell, to form two annular chambers within the shell, the forward of said chambers communicating with the forward nozzle, means for controlling a supply of steam to the forward annular chamber, means supplying oil to the rear annular chamber, and means for controlling flow of oil from said rear annular chamber into the inner nozzle.

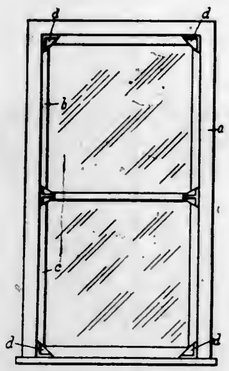
5. The combination with an elongated burner nozzle and a forward nozzle communicating therewith, of means forming two annular chambers around said elongated nozzle, the forward of said chambers communicating with the forward nozzle, mean for controlling the supply of steam to said forward chamber, means for supplying oil to the rear annular chamber, a valve for controlling the passage of oil from said chamber into the elongated nozzle, a pivoted lever having one arm connected with the stem of said valve, and a steam actuated diaphragm connected with the other arm of said lever.

1,171,138. WINDOW-SCREEN. VITO A. QUAGLIANO, East Boston, Mass. Filed July 31, 1914. Serial No. 854,385. (Cl. 156—14.)

1. In combination with a window frame, of angular metal plates having ribs for attachment in the corners of the frame, and a screen frame having magnetized plates fixed to its corners adapted to cohere with the plates carried by the window frame.

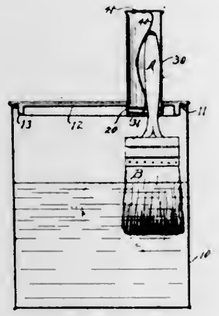
2. In combination with a window frame, of angular metal plates having angularly arranged ribs for attachment in each corner of the frame, intermediate plates vertically spaced from the corner plates and fixed to the

frame and having horizontal ribs, screen frames having magnetized plates carried by their upper and lower cor-



ners and adapted to cohere with the respective corner plates and intermediate plates.

1,171,139. CAN FOR PAINTS, VARNISHES, OR SIMILAR SUBSTANCES. DANIEL W. ROBERTS, Cleveland, Ohio, assignor to The Billings-Chapin Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 31, 1913. Serial No. 745,336. (Cl. 91—66.)

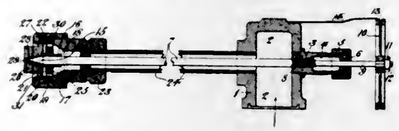


1. The combination of a can, a removable cover therefor having a filling opening adapted to be closed for shipment, a sleeve permanently carried by the cover and extending inwardly from said opening, a tubular extension having a closed top and an open bottom formed at the bottom to fit snugly within said sleeve, and means within said tubular extension adapted to clamp the handle of a brush, the body of which is within the can.

2. The combination of a can, a cover therefor having an opening in it with a surrounding sleeve, a tubular extension having an open bottom and adapted to occupy said sleeve and be held therein against accidental displacement, said extension having a closed top, and a leaf spring within the extension secured to such top and depending to engage the side of the brush handle.

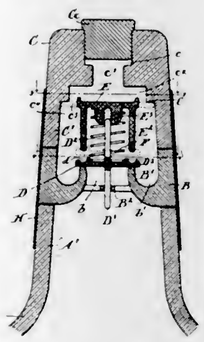
3. The combination of a can, a removable cover therefor having a filling opening adapted to be closed for shipment, a sleeve mounted in said opening, a tubular extension having a closed top and an open bottom formed to fit said opening, and projections formed on the lower end of said tubular extension engaging said sleeve, and a spring secured to the top of said tubular extension and depending within the same and adapted to clamp the handle of the brush, the body of which is within the can.

1,171,140. HYDROCARBON-BURNER. JOHN PATON ROBERTSON, San Francisco, Cal. Filed Mar. 5, 1912. Serial No. 681,680. (Cl. 137—86.)



A liquid hydrocarbon burner, comprising a tubular casing formed with an outwardly flaring chamber, a disk bearing upon the forward end of said casing and having a rearward extension extending substantially through the flaring portion of said chamber, said disk having a central bore, a central annular recess in its outer face surrounding said bore, an annular groove near its periphery and ports through its bottom opening into said groove, a burner tip having an exterior flange at its inner end and seated with its inner face against said disk to cover said annular and tangential grooves and central recess, and provided with a conical central valve seat terminating in a diverging discharge port, a coupling adjustably connected with said casing and having an inwardly projecting flange engaging the flange of said tip, the discharge port of said tip being located outwardly of said coupling, and a conical valve slidable through said bore and coöperating with said conical central valve seat.

1,171,141. NON-REFILLABLE BOTTLE. JOHN J. ROBINSON, New York, N. Y. Filed Feb. 2, 1915. Serial No. 5,681. (Cl. 215—61.)

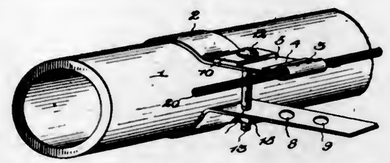


The improved non-refillable bottle herein described, comprising a shell having an opening with a surrounding lip forming a valve seat and an annular channel exterior to and below said lip, a cap above said shell and having an annular skirt resting upon said shell, said cap having a pouring orifice with a contracted passage and an annular recess forming an annular shoulder, a baffle disk having arms engaging said shoulder, said baffle disk having a depending inverted cup terminating above said valve seat, a valve movable between the valve seat and the lower end of said cup and having upwardly and downwardly extended guiding stems, a guide within said shell for the lower stem and a guide within said cup for the upper stem, and a spring interposed between the cup and valve, said valve being adapted to be seated against said seat when in one position and to seat against the adjacent end of the cup when the resistance of the spring is overcome by the force of the liquid when the bottle is tilted.

1,171,142. GROUND CONNECTION FOR ELECTRICAL CONDUCTORS. DAVID ROSEN, Philadelphia, Pa. Filed Feb. 10, 1915. Serial No. 7,318. (Cl. 173—273.)

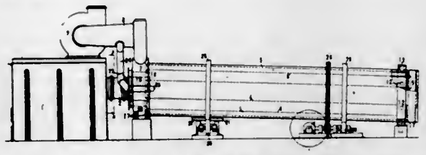
As a new article of manufacture, a ground connection for electric conductors, composed of a flexible strip bent to

have its end portions lie in superposed relation, one of the horizontal end portions being slightly deflected downwardly and then rolled over to form a substantially circular conductor receiving eye, the free terminal of said end portion being extended parallel with the latter to form a free flat liftable wing squarely seating on the strip, said liftable wing providing a means by which the eye may be opened by inserting an instrument beneath said free flat wing, a relatively narrow strip-like block of a length ap-



proximately equal to the width of the strip rigidly secured to said end portion of the latter at a point inwardly from the free side of the wing, and a bolt passed through said block and the end portions of the strip and having a nut thereon, said block providing an edge which when the bolt is tightened causes the strip to be bent at said edge into engagement with the pipe, said block also serving as a reinforcement for said specified end portion of the strip carrying said wing.

1,171,143. DRIER. WILLIAM B. RUGGLES, Bayonne, N. J. Filed June 11, 1909. Serial No. 501,453. (Cl. 34—6.)



1. In an apparatus of the class described, in combination, a source of combustible heating medium, a drum, a flue therein, rotatable therewith, open at the front end and communicating with said source of heat, and a second flue connected with said first mentioned flue at the rear end thereof adapted to convey the heating medium back to the front end of said drum whereby the material to be dried may pass through said drum out of contact with the heating medium.

2. In an apparatus of the class described, in combination, a source of combustible heating medium, a drum, a flue therein open at the front end and communicating with said source of heat, a header at the opposite end into which said flue passes, and a second flue parallel with said first flue extending from said header to the front end of said drum whereby material may be dried within said drum without coming in contact with the heating medium.

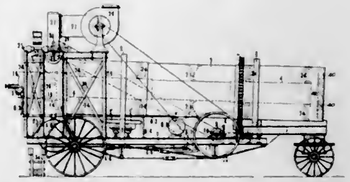
3. In an apparatus of the class described, in combination, a source of heat, a rotating drum, a central longitudinal flue in said drum through which the products of combustion pass connected with said source of heat at one end, a header in said drum at the opposite end thereof, and a plurality of return flues located about said central flue for conveying the products of combustion back to the front end of said apparatus.

4. In a device of the class described, in combination, a source of heat, a rotatable drum, a central longitudinal flue connecting with said source of heat extending through said drum, a header at the opposite end of said drum into which the products of combustion are discharged, a plurality of return flues located about said central flue connected with said header and with the front end of said apparatus, and supports for said flues connected to the inner periphery of said drum.

5. In an apparatus of the class described, in combination, a source of heat, a rotatable drum, a central longitudinal flue connected with said source of heat for conducting a heating medium through said drum, a plurality of return flues located about said central flue and connected therewith adapted to convey the heating medium back to the front end of said drum, and a tube plate for holding said flues in proper relative position and forming a closure for said drum.

[Claims 6 to 69 not printed in the Gazette.]

1,171,144. PORTABLE DRIER. WILLIAM B. RUGGLES, Bayonne, N. J. Filed Dec. 16, 1910. Serial No. 597,610. (Cl. 34—6.)



1. In an apparatus of the character described, in combination, a movable support, a rotatable drier thereon, a rotatable flue, a combustion chamber embraced by said flue, and a fluid fuel burner projecting into said combustion chamber.

2. In an apparatus of the character described, in combination, a movable support, a rotatable drier thereon, a rotatable flue therein adapted to convey heat to said drier, a combustion chamber relatively fixed with respect to the rotative motion of said flue and embraced thereby, said chamber being adapted to deliver products of combustion to said flue, and a fluid fuel burner projecting into said chamber.

3. In an apparatus of the character described, in combination, a movable support, a rotatable drier thereon, a hood about one end of said drier and forming an exit for gases emerging therefrom, a flue held in said drier and having a portion projecting therefrom and through said hood, a combustion chamber embraced by said flue and projecting thereinto to a point adjacent said end of the drier, and a fluid fuel burner projecting into said chamber.

4. In an apparatus of the character described, in combination, a movable support, a rotatable drier drum thereon, a flue held in said drum and rotatable therewith, a hood surrounding one end of said drum, said flue projecting through said hood, a combustion chamber positioned within the projection of said flue and spaced therefrom, and a fluid fuel burner projecting into said combustion chamber.

5. In an apparatus of the character described, in combination, a movable support, a rotatable drier drum thereon, a flue held in said drum and rotatable therewith, a hood surrounding the end of said drum adapted to receive products of combustion emerging therefrom, said flue projecting through said hood to a point exterior thereof, a combustion chamber adjustably held within the end of said flue, and a fluid fuel burner projecting into said combustion chamber.

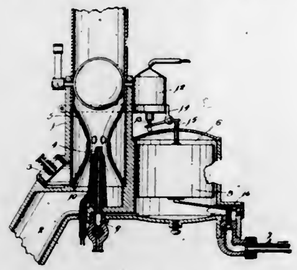
[Claims 6 to 17 not printed in the Gazette.]

1,171,145. CARBURETER. JOSEPH SACHS, Hartford, Conn. Filed May 23, 1911. Serial No. 628,982. (Cl. 123—119.)

1. In a primer for explosive engines, a vaporizing chamber, an electric heating device in the chamber, means for admitting volatile fuel to the chamber comprising a valve mechanism, a solenoid controlling the valve, an electric circuit containing both solenoid and heating devices, and means to close the circuit to operate both solenoid and heating devices.

2. In a primer for explosive engines, in combination, hydro-carbon supply means, a valve adapted to control the passage of the hydro-carbon to a motor, means for heating the hydro-carbon, and controlling means common to said valve and heating means for governing the operation of the same.

3. In a primer for explosive engines, in combination, hydro-carbon supply means, a heater for the hydro-carbon, a casing having a passage connecting the hydro-carbon supply means with said heater, a valve normally closing the passage, and means common to the heater and the valve for starting said heater and operating said valve.



4. A carbureter including a vaporizing nozzle, a valve to control the supply of fuel to said nozzle, and a single means actuated by thermal and magnetic manifestations of an electric current for controlling the action of said valve and the vaporization at the nozzle, and a source of supply of electric current.

5. A carbureter comprising a vaporizing nozzle and a main air supply, a valve to control the supply of fuel thereto, an auxiliary air supply and a valve therefor, a conductor of electric current, means actuated by thermal manifestations of the current to control the vaporizing effect, and by the magnetic manifestations of the current to control the action of said valves, and a source of supply of electric current.

[Claim 6 not printed in the Gazette.]

1,171,146. BURNISHING-TOOL. IRVIN A. SCRIBNER, San Diego, Cal. Filed Jan. 9, 1914. Serial No. 811,261. (Cl. 120—8.)



A device of the character described comprising a tubular body portion, a ball mounted in the lower end thereof with a portion of its periphery projecting from said body portion, said tube being partially spun over said ball to retain said ball, a plate comprising a section of a hollow sphere seated in said tubular body portion and backing up said ball, a cap closing the upper end of said tubular body portion and a body of filling material of such a nature that it is plastic when placed in position and afterward hardens, said filling material completely filling the space between said plate and said cap to thereby hold said cap in engagement with said ball.

1,171,147. TIRE-VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J. Filed Feb. 8, 1913. Serial No. 747,062. (Cl. 152—12.)

1. A valve for tires or the like, comprising a casing, a seat member in said casing, a seat on the interior of said casing, a packing engaging said seat member and said seat, a valve chamber in said casing below said seat member, and a plunger working in said valve casing, said valve chamber being of larger diameter than the bottom of said seat.

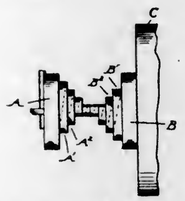


2. In a valve for tires or the like, the combination of a casing having a screw-threaded bore at its end, a tapered seat below said screw-threaded bore, and a valve chamber below said seat, said chamber being of larger diameter than the bottom of said seat, and a valve mechanism fitting wholly within said valve casing, said valve mechanism comprising a plug, a seat member swiveled to said plug, a packing carried by said member and engaging said seat, a plunger below said seat member, a spring below said plunger, and a pin passing through said spring, plunger, seat member and plug and connecting said parts.

3. A valve for tires or the like comprising a casing, a seat member in said casing having an effective opening for the passage of air, a valve chamber below said seat member, and a plunger working in said valve chamber and coacting with said seat member, said valve chamber being enlarged so that the effective passage for air between said plunger and the walls of said valve chamber considerably exceeds the effective passage through said seat member.

4. In a valve for tires or the like, the combination of a casing having a screw-threaded bore at its end, a tapered seat below said screw-threaded bore, and a valve chamber below asid seat, said chamber being of larger diameter than the bottom of said seat, and a valve mechanism fitting wholly within said valve casing, said valve mechanism comprising a plug, a seat member swiveled to said plug, a packing carried by said member and engaging said seat, a plunger below said seat member, a spring below said plunger, a spring holder for said spring, a pin passing through said spring, plunger, seat member, plug and spring holder and connecting said parts, and said valve chamber being restricted at its lower end to receive a portion of said spring holder.

1,171,148. METHOD OF FORMING ARMATURE-COILS. JOHAN CHARLES SIMONSEN, Detroit, Mich., assignor to Chalmers Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 1, 1913. Serial No. 798,646. (Cl. 153—64.)

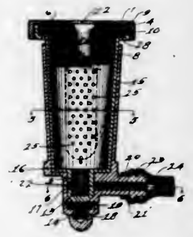


1. The method of forming armature coils, comprising the winding of an open spiral having progressively decreasing convolutions followed by progressively increasing convolutions, and in subsequently telescoping said convolutions to form a closed coil with both terminals leading from the outer convolutions thereof.

2. The method of forming armature coils, consisting in the winding of an open armature coil having spaced spiral convolutions and the subsequent telescoping of the spiral convolutions to form a closed coil with both terminals leading from the outer convolutions thereof.

3. The method of forming armature coils, comprising the winding of an open coil having reversely spaced spirals of progressively decreasing and progressively increasing convolutions, and in the subsequent telescoping of the spaced decreasing and increasing spiral convolutions to form a closed coil having parallel pairs of convolutions with terminals leading from the outer convolutions thereof.

1,171,149. CONVERTIBLE BATH-SPRAY. CHARLES EDGAR SMITH, Redondo Beach, Cal. Filed Aug. 5, 1915. Serial No. 44,846. (Cl. 4—26.)



1. In a device of the character described, the combination with the water faucet, of a cylinder detachably and frictionally held on the faucet provided with means for spraying the water from the sides thereof and an outlet disposed at right angles to the cylinder through which the water may be discharged in a jet, and means for converting the discharge of the water from the cylinder in the form of a spray and jet, at will.

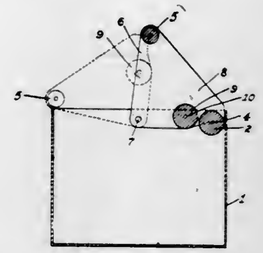
2. In a device of the character described, the combination with the water faucet, of a cylinder detachably and frictionally held thereon and provided with spraying outlets on the side thereof and a single and substantially larger outlet communicating with and extending outwardly from the cylinder at right angles for discharging the water from the cylinder in the form of a jet, and common means for selectively regulating the discharge of the water from either of said outlets in the form of a spray and a jet.

3. In a device of the character described, the combination of the water cylinder provided with a removable cap and friction element seated therein and peripheral water spraying means, a removably held water outlet extending at right angles from the cylinder having a bore communicating with said cylinder, and means for converting the discharge of water from said cylinder from a spray to a jet, and vice versa, at will.

4. In a device of the character described, the combination of the vertically disposed water cylinder provided with a plurality of peripheral apertures, a detachably held cap on the top of the cylinder, a friction element seated in said cap, a neck extending from said cylinder provided with a horizontally disposed outlet communicating with said cylinder, and means removably held on said neck and adapted to register at will with said horizontal outlet for discharging the water therefrom in a jet, the cylinder being arranged to prevent the discharge of the water from said cylinder simultaneously from said peripheral apertures and said horizontal outlet.

5. In a device of the character described, the combination of the vertically held water cylinder provided with a group of peripheral outlets and water receiving means at the top thereof, a contracted neck below the receiving end of the cylinder having an outlet passage in communication with said cylinder, and a detachably held horizontally disposed member on said neck having a passage adapted to register with the outlet in said neck for permitting the discharge of the water from said cylinder therethrough and for converting the discharge of the water to the form of a jet and capable of movement on said neck for closing the outlet in the neck and converting the discharge of the water from the cylinder to the form of a spray, at will.

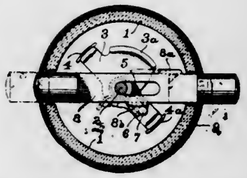
1,171,150. MOP-WRINGER. PHILESTER SMITH, Rochester, N. Y. Filed Jan. 3, 1916. Serial No. 69,828. (Cl. 15—12.)



1. In a mop wringer, a receptacle, a roller at one side of the receptacle, a ball pivoted to said receptacle, a roller arranged on the ball to coöperate with the first named roller and guards on opposite sides of said ball arranged to operate within the receptacle, from the pivot of the ball to the first named roller and to bridge the joint between the two rollers when they are in coöperative relation.

2. In a mop wringer, a receptacle, a roller mounted at one side of the receptacle, a ball pivoted to said receptacle so that its arms are within the side walls of said receptacle, and the pivot point is in a slightly higher plane than the axis of turning of the roller, said ball being provided with lateral guard extensions on opposite sides to enter the receptacle between the pivot of the ball and the roller, and a roller carried by said guard extensions to coöperate with the first named roller, the position of the second named roller on the guards being such that, when the ball is thrown to one side, the said roller will be positioned substantially over the pivot of the ball to be used as a handle.

1,171,151. QUICK-BREAK SWITCH. PETER SORENSEN, New York, N. Y. Filed June 26, 1914. Serial No. 847,422. (Cl. 175—287.)



An electrical switch comprising, in combination, a pair of fixed contacts, an insulating base, a stud mounted on said base, an oscillatory contact having an angular flange by means of which the movement thereof is controlled, a spring, a slide bar provided with a projecting portion adapted to engage said flange on said oscillatory contact during the first period of its movement and also provided with a second projection adapted to engage and set said spring in its operative position and to hold said oscillatory contact during said operation and on further movement to release said contact, permitting said spring to operate the same, and a part upon said oscillatory contact adapted to engage said second projection to limit the movement of said oscillatory contact.

1,171,152. CAPTURING OR DESTROYING AIRCRAFT. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed May 7, 1914. Serial No. 836,892. (Cl. 244—1.)

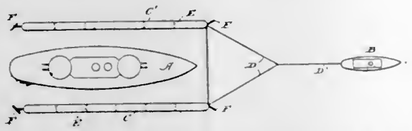


1. The method of attacking hostile aircraft which consists in suspending a grapple, in a plane below such aircraft, by means of a wire or the like from another aircraft in a higher plane, securing to the wire at the higher aircraft a weight heavier than the grapple, bringing the vertical lines through the grapple and weight upon opposite sides of the lower craft, and throwing the weight free from the higher craft.

2. The method of attacking aircraft in flight which consists in providing a long wire, or the like, having at one end a contact bomb and at the opposite end a weight materially heavier than the bomb, and by suitable means causing the intermediate portion of the wire to rest upon an attacked aircraft lying between the otherwise unsupported weight and bomb; whereby the weight descending by gravity draws the lighter bomb into contact with the attacked aircraft and thus causes an explosion.

3. The combination with a suitable aircraft, of a wire depending therefrom and having at its lower end a bomb adapted to explode when drawn upwardly against a resisting body, and having at its upper end a weight materially heavier than the bomb; whereby the bomb and weight being brought to opposite sides of any attached aircraft in a lower plane, the discharge of the weight may cause the bomb to be drawn to the attacked aircraft.

1,171,153. MINE AND TORPEDO GUARD. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed May 13, 1915. Serial No. 27,826. (Cl. 114—241.)



1. The combination with two approximately parallel and vertical sheets sustained and held apart wholly by the water in which they move and adapted in size and character to explode a contact torpedo moving toward the side of a vessel located between the sheets, and means for towing the sheets in proper position for protecting a moving vessel so located.

2. The combination with two approximately vertical floating metal sheets adapted to be placed on opposite sides, respectively, of a vessel and to protect the vital parts thereof, of means for towing the sheets at such distance from an interposed vessel as to avoid injury to the latter by the explosion of a torpedo in contact with either sheet; said sheets being supported and spaced wholly independently of vessel borne arms.

3. In apparatus of the class described, the combination with an approximately vertical float-supported protecting sheet forming a floating unit, of a second like unit alongside the first and at a distance therefrom materially greater than the width of a vessel to be protected, flexible connections joining the forward portions of said units near their upper limits and lower limits, and means for towing said units and maintaining them in approximately constant position with respect to a vessel placed centrally between them; said units being supported and urged apart solely by the water in which they move.

4. The combination with two float devices adapted to be arranged at a distance from and on opposite sides of a vessel to be protected and supported and urged apart wholly by the water in which they advance, of a flexible connection joining the upper and forward portions of the two floats, a series of heavy bars depending at short intervals from said connection, and means for towing the float devices in approximately constant position with respect to a vessel centrally located between them.

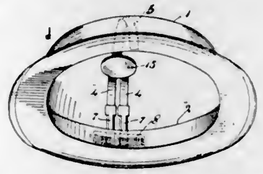
5. The combination with a vessel to be protected, of a vertical metal sheet floating freely independently of and alongside the vessel and adapted in size to protect the vital parts of the latter, a like sheet similarly located on the opposite side of the vessel, and lines extending from the vessel to the sheets, respectively, and arranged to tow them in practically constant relative position.

1,171,154. TRANSFER-MOUNT FOR EMBROIDERY. ARNOLD STERN, Hollis, N. Y. Filed June 18, 1915. Serial No. 34,824. (Cl. 2—147.)



A new article of manufacture, comprising an acid and heat treated temporary mount of textile material having a design embroidered thereon, said mount being of such consistency that while it is readily disintegrable, it will serve as a form retaining vehicle for the embroidered design until the latter is secured upon a permanent mount, said temporary mount then being readily separated from the embroidered design and permanent mount.

1,171,155. TOILET DEVICE. ROBERT TANNENBAUM and PETER REICHARDT, Cincinnati, Ohio. Filed Oct. 28, 1913. Serial No. 797,879. (Cl. 2—113.)

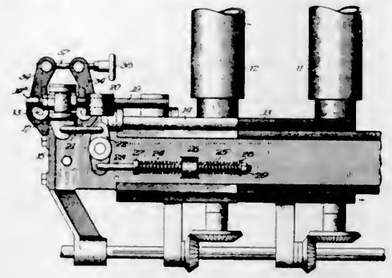


1. A toilet device comprising a mirror, arms for securing said mirror inside the crown of a hat, a comb, and means for slidably mounting said comb on said arms whereby said comb may be moved into position for use without removing the same from said arms.

2. A toilet device comprising a mirror adapted to be applied to the inside of the crown of a hat, pins mounted on the back of said mirror to secure the same to said hat, one of said pins being adapted to be placed under tension and to engage said hat by the turning of said mirror, and the other pin being fixed, the point thereof being opposed to the point of said first pin, so that said second pin may be caused to engage said hat by the turning of said mirror actuated by the tension of said first pin.

3. A toilet device comprising parallel arms, one end of each of said arms being adapted to be secured to the inside of a hat in such position that the free ends of said arms will be secured under the sweat band of said hat, bars slidably mounted on said arms, a comb secured to the free ends of said bars, and means whereby the movement of said bars toward the free end of said arms is limited by the sweat band of said hat.

1,171,156. SELF-CENTERING AND GAGE-SAWING DEVICE. IRA M. THURLOW, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed June 14, 1915. Serial No. 34,065. (Cl. 143—5.)

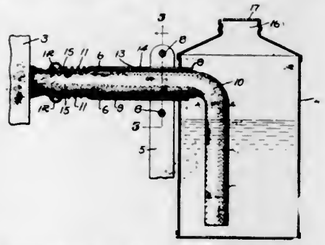


1. In a resaw, the combination with two sets of feed rolls arranged one on each side of the saw, of two arms extending in a common plane, a connection between each of the arms and one of the sets of feed rolls, one of the arms free to move and the other yieldingly supported, a pair of clamping levers suitably fulcrumed and embracing one of the arms at one side of their fulcrum and embracing a portion of the machine frame at the other side of the fulcrum, and adjustable means connecting the clamping levers whereby to alternatively anchor one of the arms leaving the other free and to couple the two arms together to move in unison in opposite directions.

2. In a resaw, the combination with two sets of feed rolls arranged one on each side of the saw, of two arms extending in a common plane, a connection between each of the arms and one of the sets of feed rolls, one of the arms free to move and the other yieldingly supported, a pair of clamping levers fulcrumed to one of the arms and embracing the other arm at one side of their fulcrum and embracing a portion of the machine frame at the other side of the fulcrum, and adjustable means connecting the clamping levers whereby to alternatively anchor one of the arms leaving the other free and to couple the two arms together to move in unison in opposite directions.

3. In a resaw, the combination with two sets of feed rolls arranged one on each side of the saw, of two arms oppositely extending from a common pivot, a connection between each of the arms and one of the sets of feed rolls, one of the arms free to move and the other yieldingly supported, a pair of clamping levers fulcrumed to one of the arms and embracing the other arm at one side of their fulcrum and embracing a portion of the machine frame at the other side of the fulcrum, a screw spindle connecting the clamping levers, whereby to alternatively anchor one of the arms leaving the other free and to couple the two arms together to move in unison in opposite directions.

1,171,157. LUBRICATOR FOR ELEVATOR GUIDE-RAILS. CHARLES V. WARREN, Cambridge, Mass., assignor to Frederick L. Emery, Lexington, Mass. Filed Jan. 4, 1912. Serial No. 669,431. (Cl. 184—22.)



1. The combination of an oil can having a nose, a cylinder adapted to reciprocate within said nose, said cylinder having an enlarged end, a spiral spring arranged between the end of the nose and the enlarged end of the cylinder.

2. In a lubricator for elevators, in combination, a nose, on one side thereof, a member slidable within said nose and having a boss on the end thereof, and resilient means contacting the nose and the boss and tending to hold the member outwardly.

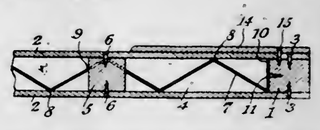
3. In a lubricator for elevator guides, a nose having a slot therein, a member extending beyond said nose and having a projection thereon slidable within said slot, a boss upon said member, and a spring mounted upon said member between the end of the nose and the boss tending to keep the projection in one end of the slot.

4. In a lubricator for elevator guides, a nose projecting through one side of the lubricator and having a slot therein, a cylindrical member within said nose extending beyond the same and having a projection engaging said slot and also having a boss upon the outer end thereof, a spiral spring mounted upon said cylindrical member and located between the nose of the lubricator and the boss of the said member, and a wick adjustably secured in said member.

5. In a lubricator for elevator guides, a lubricant cup adapted to be secured to the elevator, an extensible member secured to the cup and having a wick therein one end of which extends into the cup and means for causing the other end of the wick to engage the elevator guide rail regardless of the distance between the lubricant cup and the said rail.

[Claims 6 to 18 not printed in the Gazette.]

1,171,158. FIREPROOF DOOR. JAMES A. WHEELER, Somerset county, N. J., assignor to William T. Elkinton, Philadelphia, Pa. Filed May 31, 1913. Serial No. 770,809. (Cl. 72—97.)

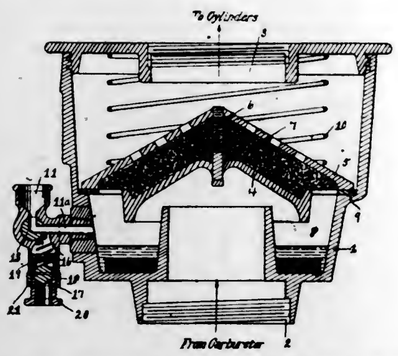


An improved fireproof door of the class described, comprising a main frame consisting of the bars 1 forming the edge portion of the door and surrounding the interior area or space 4, said bars being constituted by a solid substantially rectangular strip formed of a rigid non-metallic composition of low heat conductivity and undeformable by heat, the side portions consisting of the solid sheets or plates 2 extending over the surface area of the door and secured to said edge bars and formed of a corresponding non-metallic fireproof composition, said side sheets and edge strips constituting a complete inclosure of the interior space 4 which extends across the area of the door, the internal bracing members arranged in parallel series extending vertically from top to bottom of the door between said side sheets and secured thereto, said bracing members being constituted by a solid body formed of a corresponding non-metallic fireproof composition, and the internal corrugated metallic sheet 7 extending in the interior space 4 and bracing the area of the non-metallic composition side sheets 2 between the series of internal non-metallic composition bracing members.

1,171,159. PRIMER FOR GAS-ENGINES. HERMAN E. WHITING, Palmyra, N. Y. Filed Feb. 6, 1911. Serial No. 606,939. (Cl. 123—187.5.)

1. The combination with a gas engine having a plurality of cylinders, and a carbureter, of a connection between the carbureter and the cylinders extending in an upward direction from the carbureter, one wall of said connection being provided with a threaded opening, and an automatic air valve having a threaded nipple fitted in said threaded opening, said valve being adjusted to remain closed at slow speeds of the motor and opening automatically on high speeds to act on the mixture after the latter is discharged by the carbureter, and a priming chamber connected with

the air valve to discharge the fuel by way of the threaded nipple of the air valve.

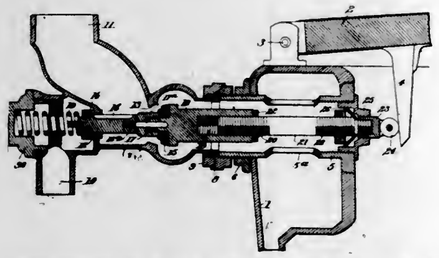


2. A combined primer and air supply for gas engines comprising a casing having an externally-threaded nipple and a fuel cup formed integrally therewith, the fuel cup projecting upwardly and the nipple projecting horizontally, a turning plug arranged in horizontal alinement with the nipple and in vertical alinement with the cup and having a port adapted to connect the cup and the nipple when in one position, said casing also having a valve chamber communicating with said nipple independently of the cup and having a normally closed check valve therein.

3. A combined primer and air supply for gas engines comprising a casing having an externally threaded nipple and a fuel cup formed integrally therewith, the fuel cup projecting upwardly and the nipple projecting horizontally, a turning plug arranged in said casing in horizontal alinement with the nipple and in vertical alinement with the fuel cup, said casing also having an integral portion depending below the nipple and communicating with the nipple, a valve seat adjustable on said depending portion, a ball valve arranged in said depending portion and cooperating with said seat, and a spring operating on the ball valve and housed by said depending portion.

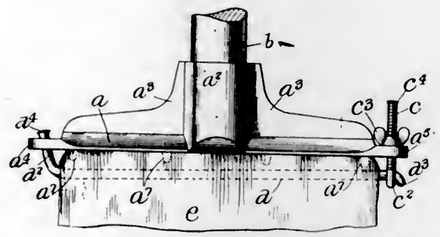
4. A combined primer and air supply for gas engines comprising an externally threaded nipple, a fuel cup, the fuel cup projecting upwardly and the nipple projecting horizontally, a turning plug arranged to connect or disconnect the fuel cup with the nipple, a chamber also having connection with the nipple, a valve seat adjustable in said chamber from the exterior thereof, a ball valve cooperating with the seat, and a helical spring arranged within said chamber and bearing against the ball valve.

1,171,160. FLUSHING-VALVE. RAY E. WINCHESTER, Vinita, Okla. Filed Mar. 22, 1915. Serial No. 16,211. (Cl. 4—28.)



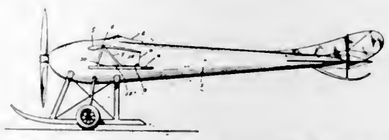
The combination with a closet having a seat, of an arm carried by said seat and projecting downwardly therefrom, a casing having inlet and outlet openings, a pair of opposing valve seats formed in said casing, a pair of valves coöperating with said seats to control the flow of water through said openings, and a valve stem carrying said valves, said valve stem comprising two sections, screw-threaded together within said casing, said valve stem lying wholly within said casing with the exception of one end thereof, which end projects a relatively short distance beyond said casing and lies directly in the path of said downwardly extending arm, whereby movement of said arm in one direction forces one of said valves toward its seat, and the other away from its seat, the above described arrangement being such that the length of said valve stem and the relation between said valves and arm may be adjusted inside of said casing as required to cause the proper seating of said valves.

1,171,161. MOP-HOLDER. GEORGE WINGENDER, New York, N. Y. Filed June 1, 1915. Serial No. 31,336. (Cl. 15—56.)



A mop holder, comprising a cross head member, the opposite ends of which are provided with apertures and a clamp, rod or bar having an end member at an angle thereto and adapted to be passed through one of said apertures, and a screw passed through the other of said apertures and provided at one end with a hook adapted to engage the free end of the clamp, rod or bar and at the other end with a nut.

1,171,162. FLYING-MACHINE. ADOLPH L. ALDAY, Cleveland, Ohio. Filed Apr. 30, 1915. Serial No. 25,044. (Cl. 244—29.)



1. A flying machine including a body, fixed wings upon the body, curved wings pivotally mounted on the body above said fixed wings to tilt vertically on horizontal transverse axes, means connected with the rear portions of said curved wings for manually tilting the wings downwardly or permitting them to tilt upwardly under air pressure, and elastic elements in such connections for permitting the wings to have automatic adjustment.

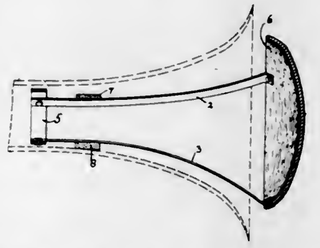
2. A flying machine including a body, fixed wings upon the body, a controlling device within the body, curved wings mounted on the body above said fixed wings to tilt vertically on horizontal transverse axes, cables connecting the controlling device with the rear portions of the wings, and springs or like elastic connections in the lengths of said cables.

3. A flying machine including a body, a controlling device therein, curved wings mounted to tilt on horizontal transverse axes, guide pulleys upon the body beneath the front and rear portions of said wings, cables connected at their front and rear ends to the controlling device and rear edges of the wings and passing intermediately over said guide pulleys, and springs in the lengths of said cables on lines between the sets of guide pulleys.

4. A flying machine including a body, stationary flat wings upon the body, curved wings upon the body above said fixed wings, said curved wings being mounted to tilt vertically on horizontal transverse axes, and connections for adjusting said tiltable wings with relation to said fixed wings, said connections including elastic means in the length thereof for permitting the curved wings to have automatic adjustment.

5. A flying machine including a body, fixed flat wings upon the sides of the body, curved supporting wings above said flat wings, said curved wings being mounted to tilt vertically on horizontal transverse axes, a control device within the body, front and rear guide pulleys beneath the curved wings, controlling cables connected at their opposite ends to the control device and rear edges of the curved wings, said cables passing centrally over said pulleys, and contractile springs in the lengths of the cables between the sets of pulleys.

1,171,163. CORNET-MUTE. LEROY W. ALLEN, Berkeley, Cal. Filed Feb. 23, 1915. Serial No. 9,855. (Cl. 84—125.)



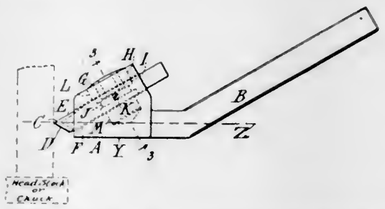
1. A muffler for horns comprising a flat bell, a plurality of springs carried thereby, and friction pads carried by the springs to secure the muffler in any desired position within the bell of a horn.

2. A muffler for horns comprising a flat bell, a plurality of springs carried thereby, friction pads carried by said springs, and a ring connecting the ends of the springs.

3. A muffler for horns comprising a flat bell, a plurality of springs carried thereby, friction pads carried by the springs to hold the bell in any given adjustment within the mouth of a horn, and a muffler pad lining the bell.

4. A muffler for horns comprising a flat bell, a felt lining therefor, a plurality of springs projecting from the bell and adapted to be projected into the mouth of a horn, a plurality of friction pads for securing the muffler in any given adjustment in the horn, and a ring connecting the ends of the springs to assist in holding the muffler in position.

1,171,164. THREADING AND OTHER TOOL. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Mar. 20, 1912. Serial No. 684,980. (Cl. 29—99.)



1. A thread-cutting tool comprising a bar-shaped cutter and a tool holder, said cutter having a straight edge lengthwise thereof adapted to form a continuous straight cutting edge, and a second cutting edge at an angle to said lengthwise edge, said lengthwise edge being adapted to have successive portions thereof brought into use by successive grindings of said second angularly-disposed edge, said tool holder being adapted to hold said cutter at such an angle to the work that a perpendicular to the work bisects the angle formed by the two aforesaid cutting edges of the cutter, whereby an equilateral groove may be cut.

2. A thread-cutting tool comprising a bar-shaped cutter and a tool-holder, said cutter having a straight edge lengthwise thereof adapted to form a continuous straight cutting edge, and a second cutting edge at an angle to said lengthwise edge, said lengthwise edge being adapted to have successive portions thereof brought into use by successive grindings of said second angularly-disposed edge, said tool-holder being adapted to hold said cutter at such an angle that the longitudinal axis Z of the holder bisects the angle formed by the two aforesaid cutting edges of the cutter, said tool-holder having a shank on the cutter side thereof at an angle to said longitudinal axis.

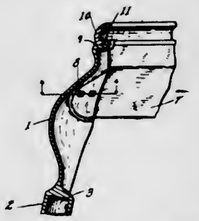
3. A thread-cutting tool comprising a bar-shaped cutter and a tool holder, said cutter having a straight edge lengthwise thereof adapted to form a continuous straight cutting edge and a second cutting edge at an angle to said lengthwise edge, said lengthwise edge being adapted to have successive portions thereof brought into use by successive grindings of said second angularly-disposed edge, said tool-holder being adapted to hold said cutter at such an angle that the longitudinal axis Z of the holder bisects the angle formed by the two aforesaid cutting edges of the cutter, said tool-holder having a shank on the cutter side thereof substantially parallel to said lengthwise edge of the cutter.

4. A tool holder for thread-cutters, comprising a shank and a fixed head having a tool recess therein, said tool recess being angularly disposed with relation to the longitudinal axis Z of the holder, said shank being disposed substantially parallel to said tool recess on the side opposite the cutter side of the tool.

5. A tool holder for thread cutters comprising a shank and a fixed head having a tool recess therein, said tool recess being angularly disposed with relation to the longitudinal axis Z of the holder, said shank being disposed substantially parallel to said tool recess, said tool holder also having a face Y at an angle to said tool recess and adapted to present a flat face to an implement used in setting the tool holder with relation to the work.

[Claims 6 to 8 not printed in the Gazette.]

1,171,165. STOVE-LEG. ARTHUR K. BECKWITH, Dowagiac, Mich., assignor to Estate of P. D. Beckwith, Incorporated, Dowagiac, Mich. Filed Feb. 21, 1913. Serial No. 749,927. (Cl. 126—305.)

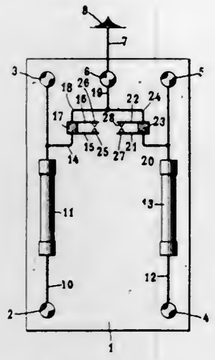


A stove leg consisting of a shell-like body portion having a hollow annular foot portion open at the bottom integral therewith, the lower edges of the walls of the foot portion being in the same plane and making continuous contact with the floor.

1,171,166. LIGHTNING-ARRESTER. LEON S. BRACH, New York, N. Y. Filed Apr. 3, 1911. Serial No. 618,569. (Cl. 175—30.)

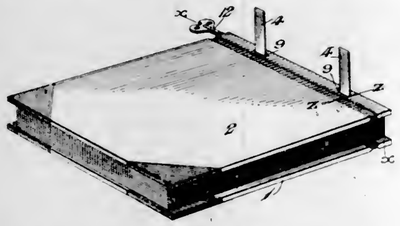
1. In a lightning arrester, the combination with a line and ground connection therefor, of a member of relatively low conductivity interposed between said line and ground, and spaced conductors providing an air gap in multiple with said low conducting member, said spaced conductors comprising a pair of members at least one of which is bendable whereby to adjust the degree of the resistance

offered by the air gap and consequently for varying the maximum load to be placed upon the interposed low conducting member.



2. In a lightning arrester, the combination with a line and a ground connection therefor, of a block of material of relatively low conductivity interposed between said line and ground having oppositely disposed substantially parallel faces, a pair of plates of conducting material, one engaging each of said faces and having parts extending substantially straight therefrom so that their outer ends are spaced apart to provide an air gap in multiple with said interposed block of material, and at least one of said plates being bendable whereby the outer ends of said plates may be moved toward or away from each other for varying the resistance offered by the air gap and consequently for varying the maximum load to be placed upon the interposed block of material.

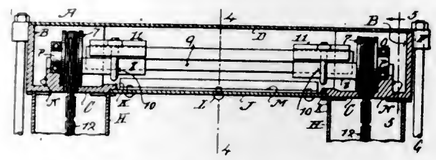
1,171,167. LOOSE-SHEET BINDER. WILLIAM H. BROOKS, Philadelphia, Pa., assignor to William F. Murphy's Sons Co., a Corporation of Pennsylvania. Filed Aug. 20, 1914. Serial No. 857,686. (Cl. 129—12.)



A loose sheet binder composed of separate leaves having hinge portions thereon, a stationary plate of rigid material on the hinged portion of one leaf, a transversely extending tube on the hinge portion of the other leaf, a bar slidable in said tube and having slots of elongated approximately quadrilateral form, said tube having therein opposite registering slots of elongated form, impaling forks secured to said plate and entering said tube and bar in the slots therein and flat and approximately quadrilateral in cross section corresponding with said slots, and means for moving said bar endwise to impinge the end walls of the slots of the tube against the narrow edges of the forks and lock the hinge portions of said leaves one with the other.

1,171,168. SASH-SUSPENSION DEVICE. HARRY E. CAMPBELL, New York, N. Y. Filed Dec. 16, 1915. Serial No. 67,295. (Cl. 16—116.)

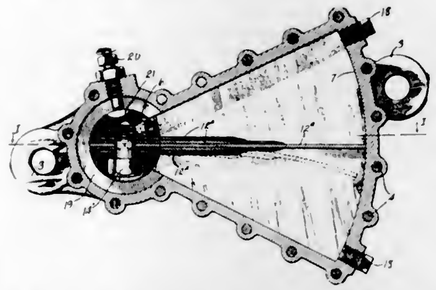
1. A sash suspension device, comprising a polygonal shaft, two chain wheels, bearings for said wheels, sash chains engaging said wheels, polygonal seats for said shaft extending from opposing faces of said wheels, and means for securing said shaft in said seats.



2. A sash suspension device, comprising a polygonal shaft, two chain wheels, bearings for said wheels, sash chains engaging said wheels, polygonal seats for said shaft extending from opposing faces of said wheels, a stirrup receiving said seat, and a cover fitting upon said shaft and engaging the legs of said stirrup.

3. A sash suspension device, comprising a polygonal shaft, a hollow lintel having an opening in its bottom wall, two parallel chain wheels having journals projecting from their outer faces, fixed bearings in said lintel receiving said journals, sash chains engaging said wheels, polygonal seats for said shaft extending from the opposing faces of said wheels, and means for securing said shaft in said seats.

1,171,169. SHOCK-ABSORBER. RUSSELL STEENBACK CARTER, Hewlett, N. Y. Filed June 4, 1913. Serial No. 771,614. (Cl. 21—105.)



1. In a shock absorber, the combination of a chamber adapted to contain a liquid, a shock-resisting spring-blade partition normally dividing the liquid in two portions and means for imparting the shock pressure to one of such portions whereby the partition yields and the liquid flows from one side to the other thereof.

2. In a shock absorber, the combination of a chamber adapted to contain a resistance medium, a shock-resisting yielding partition dividing the medium in two portions and adapted to vary the sectional area of a passage from one portion to the other, according to the degree of its yielding, and connections for imparting the shock pressure to one of such portions whereby the partition yields and the medium flows through the passage.

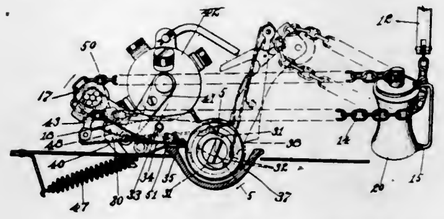
3. In a shock absorber, the combination of a chamber adapted to contain a liquid resistance medium, a shock-resisting yielding partition dividing the liquid in two portions and providing a variable passage from one portion to the other, connections for imparting the shock pressure to one of the portions, and a by-pass independent of the variable passage.

4. In a shock absorber, a chamber confining a liquid, an elastic shock-resisting partition relatively movable in the liquid under the shock pressure and adapted to provide a passage from one side to the other thereof varying in size according to the degree of flexure of the partition, in combination with a constantly open by-pass passage and means for adjustably restricting the flow through the by-pass.

5. In a shock absorber, a chamber containing a liquid, a spring blade forming a partition therein and adapted to provide a varying passage from one side to the other thereof by its flexure in either direction under the shock pressure, in combination with a by-pass for the liquid and means whereby a minimum resistance is offered to mid-vibrations not exceeding a predetermined amplitude.

[Claims 6 to 23 not printed in the Gazette.]

1,171,170. STARTING DEVICE FOR INTERNAL-COMBUSTION MOTORS. LOUIS A. CASGRAIN, Beverly, Mass. Filed Dec. 8, 1913. Serial No. 805,298. (Cl. 123—185.)



1. A starting device for internal combustion motors, having in combination, a starting handle, a one direction clutch adapted to be connected with the crank shaft of the motor, an operating arm supported upon the crank shaft and connected with the clutch, and a flexible connection passing over the end of the operating arm and fixedly secured at one end and connected to the starting handle at its opposite end and arranged to apply double the pull upon the end of the arm that is exerted upon the starting handle.

2. A starting device for internal combustion motors, having, in combination, a starting handle, a one-direction clutch adapted to be connected to the crank shaft of the motor, an operating arm supported upon the crank shaft and connected with the clutch, and a flexible connection fixed at one end and arranged to apply substantially double the pull upon the end of the arm that is exerted upon the starting handle, and passing over the end of the operating arm and arranged to rock the arm in a direction to impart an increasing torque to the crank shaft.

3. A starting device for internal combustion motors, comprising a starting handle, a rod connected with the handle, connections between the rod and crank shaft, including a one direction clutch, and a bearing located in the dash provided with a tapered bore in which the rod is slidingly supported to permit an angular movement of the rod with relation to the bearing when the starting handle is actuated by the operator.

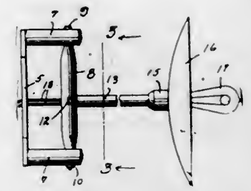
4. A starting device for internal combustion motors, having in combination, a starting handle, a ratchet secured to the crank shaft of the motor, an operating arm, a pawl carried by the arm and normally retained in engagement with the ratchet, a chain connected with the free end of the arm, and a dog supported by the pawl and arranged to be actuated by the chain and disengage the pawl from the ratchet upon a reverse movement of the chain.

5. A starting device for internal combustion motors, comprising a starting handle, an operating arm, a one direction clutch adapted to connect the arm with the motor crank shaft, a bracket, an idler roll carried in the bracket, and a flexible connection operatively engaging with the end of the arm and connected at its opposite ends to the bracket and the starting handle.

[Claims 6 to 9 not printed in the Gazette.]

1,171,171. ADJUSTABLE ELECTRIC LAMP. RALPH D. CHANDLER, Spiceland, Ind. Filed Sept. 21, 1914. Serial No. 862,804. (Cl. 240—73.)

An electric lamp comprising a supporting plate, a pair of forwardly extending arms thereon disposed one above the other, a member pivoted between said arms and adapted to be rotated, said member provided with a longitudinal slot and transverse openings communicating with said slot, a bolt arranged in the said transverse openings, a forwardly extending arm pivoted on said bolt within



said slot and adapted to swing vertically, a reflector on the end of said arm, a socket carried by the end of said arm and extending through said reflector, and an incandescent lamp in said socket.

1,171,172. BALANCED ROLL FOR PAPER-MAKING MACHINES. BENJAMIN D. COPPAGE, Wilmington, Del. Filed June 17, 1914. Serial No. 845,698. (Cl. 74—6.)



1. A rotatable machine element adapted to be balanced, having near each end a series of regularly spaced predetermined weight-receiving apertures, and a plurality of preformed definitely sized weights of which one or more are placed in any one or more apertures at either or both ends to secure a running balance.

2. A rotatable machine element adapted to be balanced, having near each end a series of regularly spaced predetermined longitudinal weight-receiving apertures, and a plurality of preformed definitely sized weights each entirely inserted into an aperture, the said machine element being provided with means for definitely positioning the weights in the apertures.

3. The combination with a rotatable machine element adapted to be balanced having in each end thereof a plurality of outwardly opening similarly shaped cavities or chambers disposed about the axis of rotation and having their inner end closed, of preformed weight-adding means shaped to fit said cavities and positioned in one or more thereof at one or both ends of the element to put the same in running balance.

4. The combination with a rotatable machine element adapted to be balanced having in each end thereof a plurality of outwardly opening similarly shaped cavities disposed about and extending parallel to the axis of rotation, the inner ends of the cavities being closed, of preformed weight-adding means shaped to fit said cavities and positioned in one or more thereof in one or both ends of the element to put the same in running balance.

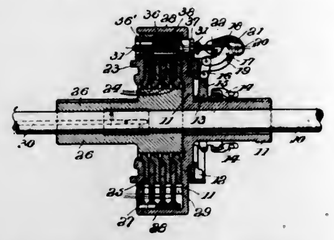
5. The combination with a rotatable machine element adapted to be balanced, having in each end thereof a plurality of outwardly opening cylindrical cavities disposed about and extending parallel to the axis of rotation, the inner ends of the said cavities being closed, of preformed weight-adding means shaped to fit said cavities and positioned in one or more thereof in one or both ends of the element to put the same in running balance.

[Claims 6 to 16 not printed in the Gazette.]

1,171,173. FRICTION-CLUTCH. BENJAMIN DENVER COPPAGE, Wilmington, Del. Filed July 1, 1914. Serial No. 848,440. (Cl. 192—10.)

1. In a clutch mechanism the combination of a plurality of disks, means for moving the same into clutching engagement including a lever mechanism, a spring as-

sociated with said lever mechanism through which power applied to said lever mechanism is transmitted to said disks, and means for adjusting said spring independent of changes in the path of travel of said lever mechanism.



2. In a clutch mechanism the combination of a plurality of disks, means for moving the same into clutching engagement including a plurality of lever mechanisms, a spring associated with each lever mechanism through which power applied to said lever mechanisms is transmitted to said disks, means for adjusting said springs, and stop members associated with said springs for permitting adjustments of said springs independent of changes in the paths of travel of said lever mechanisms.

3. In a clutch mechanism the combination of a plurality of disks, means for moving the same into clutching engagement including a plurality of lever mechanisms, adjustable springs associated with each lever mechanism through which power applied to said lever mechanisms is transmitted to said disks, stop members associated with the springs of each lever mechanism to prevent changes in the paths of travel of said lever mechanisms when said springs are adjusted, and locking means for said stop members.

4. In a clutch mechanism, the combination of a plurality of disks, means for moving the same into clutching engagement including a plurality of lever mechanisms, and springs associated with each lever mechanism for transmitting powe rto said disks, said springs being adjustable without changing the paths of travel of said lever mechanisms.

5. In a clutch mechanism, the combination of a plurality of disks, a follower plate, means moving said follower plate to force said disks into clutching engagement, said means including a plurality of lever mechanisms and a spring associated with each lever mechanism through which springs the power applied to said lever mechanisms is transmitted to said follower plate.

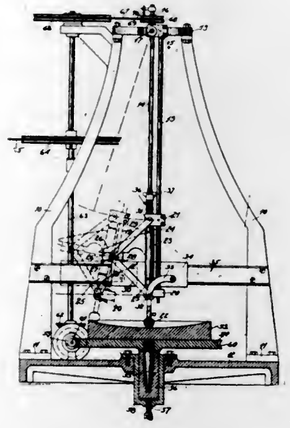
[Claims 6 to 13 not printed in the Gazette.]

1,171,174. PARABOLIC-MIRROR-GRINDING MACHINE. THOMAS AVÉRY CORRY, Arequipa, Peru. Filed Oct. 16, 1914. Serial No. 866,952. (Cl. 51—3.)

1. In a machine of the character set forth, the combination of a support, a suspension member mounted upon a horizontal pivot in said support and adapted to oscillate around its pivot, a rotary shaft arranged in said suspension member and adapted to oscillate therewith, means to rotate the shaft, a tool carried by the free end of the shaft, and means coöperating with the suspension member and the rotary shaft serving to cause the active point of the tool to describe a parabolic curve while the suspension member oscillates in the arc of a circle.

2. In a device of the character set forth, the combination of a rotary shaft, means to support the shaft for oscillation around a fixed axis but allowing the shaft to slide transversely of said axis, means to rotate the shaft in its support, a tool carried by the free end of the shaft, and means coöperating with the shaft and its supporting means serving to cause the point of the tool to describe a parabolic curve whose focal center coincides with the axis of oscillation of the shaft.

3. In a machine of the character set forth, the combination of a main supporting frame including a horizontal annulus adjacent its top, a rotary shaft extending centrally of said annulus, means pivotally supporting the shaft on a fixed axis in said annulus and permitting the oscillation of the shaft around said axis, said shaft supporting means including a rigid member adapted to swing with the shaft in an arc of a circle, a tool secured to the free end of the shaft, a rigid stationary member adjacent the plane of oscillation of the shaft, a slide movable to and fro on said stationary member along a path different from an arc of a circle, and means connected to said slide and coöperating with the shaft and its supporting means serving to cause the tool to describe a path having a form differing from both the path of the slide and an arc of a circle.



4. In a machine of the character set forth, the combination of a supporting frame including a horizontal annulus, a rotary shaft journaled within the frame and having its axis extending through the annulus, a rigid supporting member for the shaft including bearing arms journaled in a horizontal axis in the annulus and including bearings in which the shaft rotates, every point of the rigid supporting member being adapted to oscillate in an arc of a circle around the pivotal axis of the shaft, a tool carried by the free end of the shaft and movable with the shaft longitudinally in its bearings, a rigid stationary member arranged transverse to the normal mid-position of the shaft, a slide fitted to the stationary member and movable to and fro thereon and describing a path differing from an arc of a circle, a pair of members pivoted together and having their opposite ends pivoted respectively to the rigid shaft supporting the said slide, and means coöperating with said pair of members and the shaft serving to cause the tool to describe a path differing both from that of the slide and an arc of a circle, substantially as set forth.

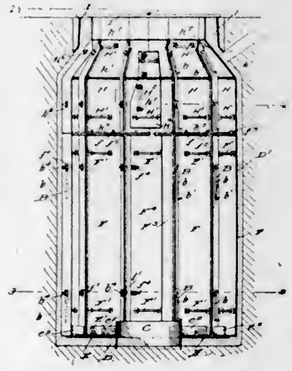
5. In a machine of the class set forth, the combination of a main support, a rotary shaft, means to support the shaft in the main support for oscillation around a horizonal axis, said shaft support including bearing members in which the shaft is journaled and adapted to slide longitudinally, a tool carried by the free end of the shaft, a rigid stationary member adjacent the path of movement of the shaft, a slide movable to and fro along the stationary member in a straight line, a pair of links pivoted together and having their opposite ends pivoted respectively to the rotary shaft support and said slide, an arm associated with the rotary shaft, means to prevent relative longitudinal movement between the arm and shaft, and a member associated with the point of connection between the links and coöperating with said arm whereby the tool will be caused to describe a parabolic curve simultaneously with the operation of the shaft and support.

1,171,175. SAFETY-RAZOR. HOOPER COYNE, Baltimore, Md. Filed June 16, 1915. Serial No. 34,504. (Cl. 30—12.)



In a safety razor, the combination with a bolder having its head adapted to form a support for the razor blade, said head being provided with a central rectangular lug stamped out of the center thereof, with studs having flanged heads projecting from the same side of said support as said lugs, and spaced apart therefrom and parallel therewith, of a blade perforated to slip over said studs and to engage said lug, thus preventing lateral or longitudinal movement, and a sliding resilient locking piece, arch-shaped in cross section and having the edges turned inward and slightly upward toward the arch, said member being adapted to engage the flanged heads of said studs and to press down the razor blade and lock it in position, substantially as described.

1,171,176. COLLAPSIBLE FORM FOR CISTERNS. CLYDE L. CRAIG, Washington Court-House, Ohio. Filed Aug. 28, 1914. Serial No. 859,071. (Cl. 25—124.)



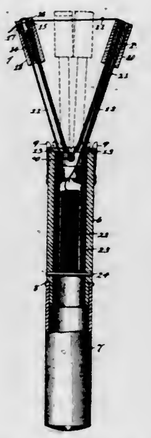
1. In a collapsible cistern mold, upper and lower detachably connected wall sections, means for detachably connecting said wall sections, a centrally located cylindrical ring adapted to be partially embedded in the ground in the base of the cistern, and horizontal radially extending base sections located around said ring and positioned thereby, having means adjacent their outer edges adapted to receive and support the lower ends of the lower wall sections, certain of said wall sections and certain of said base sections embodying adjustably connected portions for the purpose described.

2. In a collapsible cistern mold, a plurality of detachably connected wall sections, means for connecting said sections, a centrally located cylindrical ring adapted to be partially embedded in the ground in the base of the cistern, and horizontally radially extending base sections located around said ring and positioned thereby, having upwardly projecting portions adjacent their outer ends adapted to receive and support the lower ends of the corresponding wall sections.

3. In a collapsible cistern mold, upper and lower detachably connected wall sections each having apertured inwardly projecting flanges around its sides, means for connecting the sections through said apertures, a centrally located cylindrical ring adapted to be partially embedded in the ground in the base of the cistern, and horizontal radially extending base sections located around said ring and positioned thereby, having upwardly extending curved angle pieces adjacent their outer edges adapted to receive the base flanges of the corresponding wall sections.

4. In a collapsible cistern mold, a plurality of detachably connected wall sections, means for detachably connecting the said wall sections, a centrally located cylindrical ring adapted to be partially embedded in the ground in the base of the cistern, and horizontal radially extending base sections located around said ring and positioned thereby, having means adjacent their outer ends adapted to receive and support the lower ends of the corresponding wall sections.

1,171,177. DENTAL-FLOSS HOLDER. JOHN PEALE DE L'EAU, Betteravia, Cal. Filed Mar. 31, 1915. Serial No. 18,294. (Cl. 132—12.)



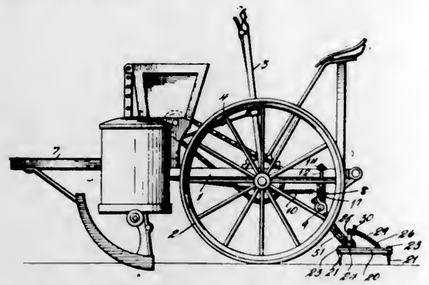
1. A device of the class described, comprising a container for a supply of dental thread, a cap adapted to be reversed thereon, means for holding said cap in place, two arms in pivotal connection with said container, a plate on each arm engaged by the respective cap holding means when said cap is removed therefrom, one of said arms being tubular to permit the passage of said thread therethrough, and means for holding a length of said thread between said arms under tension in position for use.

2. A device of the class described, comprising a tube, a removable cap therefor, a vial in said tube, adapted to contain a supply of dental thread, two arms in pivotal connection with said tube through one of which said thread is passed, means for holding said arms in spread positions, and means for detachably holding the end of said thread on the other of said arms.

3. A device of the class described, comprising a tube, a removable cap therefor, a vial in said tube, adapted to contain a supply of dental thread, two arms in pivotal connection with said tube and through one of which said thread is passed, means for holding said arms in spread positions, means for clamping said thread in the arm through which it is passed, and means for detachably holding the end of said thread on the other of said arms.

4. A device of the class described, comprising a container for a supply of dental thread, a cap adapted to be reversed thereon, means for holding said cap in place, two arms in pivotal connection with said container, a plate on each arm engaged by the respective cap holding means and jointly forming a cover for said container when said cap is reversed, one of said arms being tubular to permit the passage of said thread, and means for tensionally holding a portion of said thread between the outer ends of said arms.

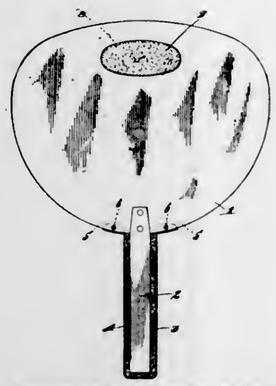
1,171,178. CORN-PLANTER HARROW ATTACHMENT. JOSEPH DEMMER, Dyersville, Iowa. Filed May 15, 1915. Serial No. 28,368. (Cl. 97—44.)



1. In a device of the class described, the combination with a planting frame, of a harrow supporting bar carried by said frame, yieldable means connected to said bar and facilitating the rotation thereof, suspending brackets connected to said bar, harrow frames connected to said suspending brackets, stub shafts carried by said harrow frames and engaging said suspending brackets, an upwardly extending arm connected to one of said stub shafts, yieldable means engaging said upwardly extending arm and engaging said harrow for yieldably holding said harrow in engagement with the ground over which the same is passing.

2. In a device of the class described, the combination with a frame, a plurality of harrows suspended therefrom and adapted to normally lie in engagement with the ground over which said frame is passing, each harrow frame provided with a substantially U-shaped body, harrow teeth carried by each body, a stub shaft carried by each harrow frame, an upwardly extending arm carried by each stub shaft, a bar connected to said upwardly extending arm and to said harrow frame, a spring carried upon said arm, means for regulating the tension of said spring, and said spring adapted to yieldably hold said harrow frame in firm engagement with the ground over which said harrow frame is passing.

1,171,179. FAN. JAMES L. DEMOVILLE, San Francisco, Cal. Filed Apr. 30, 1915. Serial No. 25,005. (Cl. 230—33.)

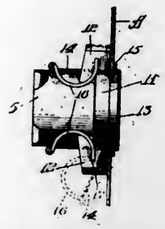


1. A fan comprising a flat body having an opening therein extending therethrough; and a thin flat element of absorbent material secured to said body and traversing said opening, substantially as described.

2. A fan comprising a flat body having an opening therein adjacent its upper edge; and a covering of blotting paper secured to said body over said opening, substantially as described.

3. A fan comprising a flat body; a handle secured to said body; a layer of absorbent material surrounding said handle; a shield inclosing said layer of absorbent material, said shield having openings therein for the escape of perfumes emanating from said absorbent material, said body having an opening adjacent its upper edge; and a covering of absorbent material secured to said body over said opening, substantially as described.

1,171,180. ELECTRIC-LAMP SOCKET. VICTOR REGINALD DESPARD, Chicago, Ill. Filed May 27, 1914. Serial No. 841,203. (Cl. 173—339.)



1. The combination, with a signboard having an opening therethrough, of a lamp socket having a lip adapted to project forwardly into said opening and having a part to abut against the rear face of the board, a member adapted to engage the front face of the board, and spring means acting on said member to clamp the board between said member and said part.

2. The combination, with a signboard having an opening therethrough, of a lamp socket having an anular rib adjacent to its open end, a lip adapted to project forwardly through said opening, said rib being adapted to abut against the rear face of the signboard, a pair of fingers adapted to project forwardly through said opening and engage the front face of the signboard adjacent to the edge of the opening, and spring means acting on said fingers to clamp the signboard between said fingers and said rib.

3. The combination, with a mounting-board, of a lamp socket abutting against one face of said board, a member having a hooked portion to engage the opposite face of the board, and spring means mounted on the socket and acting on said member to cause the hooked portion to grip the board and secure the socket thereto.

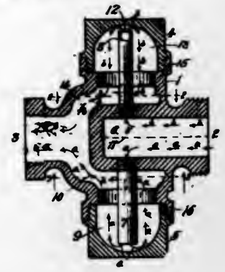
4. The combination, with a signboard having an opening therethrough, of a lamp socket having a portion adjacent to its open end which is insertible through said opening from the rear side of the board, said socket having a shoulder arranged to abut against the rear side of the board, and spring-actuated means to pass forwardly through said opening and engage the front side of the board for securing the socket in place.

5. The combination, with a board having an opening therethrough of an electrical receptacle having a portion lying in said opening, and a rib to abut against the face of the board adjacent to said opening, clamping means mounted on said receptacle at the side of the board adjacent to said rib, said clamping means having a portion passing through the opening in the board and engaging the opposite face thereof and spring means connected to the receptacle at the same side of the board as that at which the rib is located, for actuating said clamping means.

[Claims 6 to 24 not printed in the Gazette.]

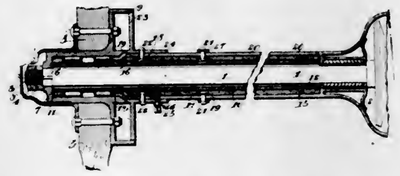
1,171,181. AUTOMATIC RELIEF DEVICE FOR STEAM-RADIATORS. THOMAS F. DEXTER, New Preston, Conn. Filed Dec. 14, 1914. Serial No. 877,162. (Cl. 182—15.)

1. An automatic relief device comprising a casing having an inlet chamber projecting in the casing and an outlet, chambered plugs attached to the casing, a water outlet tube communicating with the inlet chamber and the chamber of one of said chambered plugs, an air tube communicating with the inlet chamber and the chamber of the other of said chambered plugs, said casing having passages communicating with the outlet and the chamber of said chambered plugs.



2. An automatic relief device comprising a casing having an inlet chamber projecting in the casing and an outlet in alinement with each other, chambered plugs attached to the casing on each side of the inlet chamber, a water outlet tube secured to the wall of the inlet chamber and communicating with said chamber and the chamber of one of the chambered plugs, an air tube secured to the wall of said inlet chamber and communicating with said chamber and the chamber of the other of said chambered plugs, said casing having passages communicating with the chambers of said chambered plugs and with the outlet.

1,171,182. AXLE-HOUSING. FRANK C. DIBBLE, Harney county, Oreg. Filed Sept. 30, 1915. Serial No. 53,351. (Cl. 21—5.)



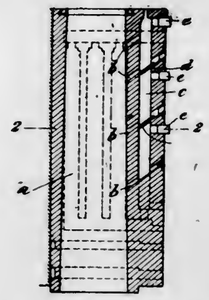
1. In combination with the rear axle and the housing therefor, of a sleeve held within the housing and riveted thereto, said sleeve being internally threaded at its inner end, a hollow spindle externally threaded at its ends, one of the threaded portions engaging the internally threaded portion of the sleeve, and a set screw having a lock nut threaded through the sleeve into engagement with the spindle, said sleeve having internal annular grooves, and rivets connecting the sleeve to the housing, the heads of the rivets engaging the grooves, said spindle having an annular rib at the outer end of the sleeve against which the sleeve abuts.

2. In combination with the rear axle and the housing therefor, of a sleeve held within the housing and riveted thereto, said sleeve being internally threaded at its inner end, a hollow spindle externally threaded at its ends, one of the threaded portions engaging the internally threaded portion of the sleeve, and a set screw having a lock nut threaded through the sleeve into engagement with the spindle, said sleeve having internal annular grooves, and rivets connecting the sleeve to the housing, the heads of the rivets engaging the grooves.

3. In combination with the rear axle and the housing therefor, of a sleeve held within the housing and riveted thereto, said sleeve being internally threaded at its inner end, a hollow spindle externally threaded at its ends, one of the threaded portions engaging the internally threaded portion of the sleeve, and a set screw having a lock nut threaded through the sleeve into engagement with the spindle.

4. In combination with the rear axle and the housing therefor, of a sleeve rigidly connected with the housing and internally threaded at its inner end, a hollow spindle inclosing the axle, and having a threaded engagement with the sleeve at the inner ends of the sleeve and spindle, and means for detachably connecting the outer end of the sleeve to the spindle.

1,171,183. VERTICAL RETORT. ARTHUR MCDOUGALL DUCKHAM, Ashstead, England. Filed May 19, 1915. Serial No. 29,146. (Cl. 48—123.)



1. A vertical retort for carbonizing coal or the like comprising heating flues, a number of ports for the escape of products at different levels in the wall of the retort, a collecting flue situated in a position removed from the said heating flues, means for subdividing the said collecting flue into compartments, means providing passage for products from the said ports to the said compartments respectively and an off-take for products in each compartment.

2. A vertical retort for carbonizing coal or the like comprising heating flues, a number of ports for the escape of products at different levels in the wall of the retort, a collecting flue situated in a position removed from the said heating flues and such that the said ports open into it, dampers subdividing the said collecting flue into compartments such that each of the said ports opens into a separate compartment, and an off-take for products in each compartment.

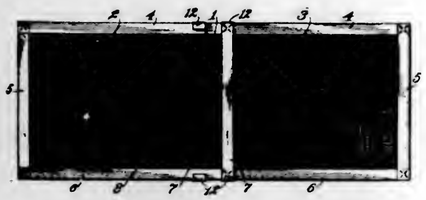
3. A vertical retort for carbonizing coal or the like comprising heating flues, a number of ports for the escape of products at different levels in the wall of the retort, a collecting flue into which the said ports open and flues close to but entirely independent of the said collecting flue and adapted to receive a medium for varying the temperature of the collecting flue.

4. A vertical retort for carbonizing coal or the like comprising heating flues, a number of ports for the escape of products at different levels in the wall of the retort, a collecting flue situated in a position removed from the said heating flues, means for subdividing the said collecting flue into compartments, means providing passage for products from the said ports to the said compartments respectively, an off-take for products in each compartment, and flues close to the said collecting flue adapted to receive a medium for varying the temperature of the collecting flue.

5. A vertical retort for carbonizing coal or the like comprising heating flues, a number of ports for the escape of products at different levels in the wall of the retort, a collecting flue situated in a position removed from the said heating flues and such that the said ports open into it, dampers subdividing the said collecting flue into compartments such that each of the said ports opens into a separate compartment, an off-take for products in each compartment, and flues close to the said collecting flue adapted to receive a medium for varying the temperature of the collecting flue.

[Claim 6 not printed in the Gazette.]

1,171,184. METAL FRAME FOR WINDOW-SCREENS. JOHN ANTON FEIERABEND, Swissvale, Pa. Filed Oct. 6, 1915. Serial No. 54,395. (Cl. 156—38.)



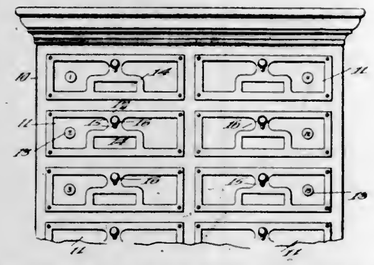
1. A window screen comprising sections slidably secured together, each of said sections comprising a four piece frame and wire screen secured in said frame, the bottom and top pieces of said frame having portions cut to form spring guides adjacent their ends, and means for securing the corners of said frames together.

2. A window screen comprising sections slidably secured together, each of said sections comprising a four piece frame and wire screen secured in said frame, the bottom and top pieces of said frame having portions cut to form spring guides adjacent their ends, the extreme ends of the free ends of said guides contacting with the top and bottom strips of the adjoining section.

3. In a window screen comprising sections, a metallic frame for said sections, said frame comprising four pieces bent upon themselves to form clamping faces for holding the wire screen, the top and bottom pieces of said frame having one of their said clamping faces cut at one end to form a lug the width of the side piece leaving a single thickness of metal, said single thickness of metal being inserted between the clamping faces of the adjacent side piece forming three sides of said frame, the opposite clamping face of said top and bottom pieces being clamped between the clamping faces of the fourth side of said frame, and each of the corner joints of said frame having a portion pressed outward to securely hold said joints from separation.

4. In a window screen comprising two sections, a frame for each of said sections comprising four strips of metal bent upon themselves to form clamping strips to hold the screen wire, each of the strips used for the top and bottom of said frame have one clamping face cut away adjacent one end and formed into a lug, said lug being bent at right angles to the strip and then upwardly and inwardly forming a guide member, all of said clamping strips being so joined at the corners that one clamping face is disposed between the two clamping faces of the adjacent strip and thus held in position, and portions of the joints pressed outwardly to lock said joints.

1,171,185. COIN-TRAY AND LOCK MECHANISM. EDWARD FOX and ROY S. FOX, York, Pa. Filed Mar. 12, 1913. Serial No. 753,736. (Cl. 133—11.)

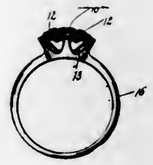


1. A device of the character described comprising a case, a plurality of coin trays slidably fitted into said case, a book mounted upon each coin tray at the inner end thereof, a door connected with said case and adapted to be swung open, a panel which slides in the case and carried by said door and movable bodily in relation thereof, latches mounted upon said panel, for the purpose of preventing the withdrawal of said coin trays when said hooks are engaged by said latches, and means controllable at the will of the operator for shifting said panel vertically in relation to the said door, in order to release the coin trays, as described.

2. A coin tray comprising a plate, a grid mounted thereon and provided with an opening of suitable size to hold paper, currency, and checks, a gripping plate adapted to close into said opening and provided with compartments for receiving and holding coins for weighting the gripping plate, and links pivotally connecting the ends of the gripping plate with the adjacent frame, whereby said plate is adapted to be swung upward out of the opening in the grid so as to maintain it in horizontal position and thus avoid dislodgment of the coins, as described.

3. A coin tray comprising a grid provided with an opening for holding paper money and the like, said grid being further provided with lugs disposed adjacent to said opening, rods provided with bent portions extending into said lugs, a gripping plate journaled upon said rods and adapted to be shifted as said rods are swung upon said lugs as centers, said gripping plate being provided with coin compartments each of a size to hold coins of a number and denomination related to a dollar, said gripping plate being so arranged that when said coins carried by it are in position said coins assist in weighting said gripping plate.

1,171,186. SETTING FOR PRECIOUS STONES. JOSEPH FRACKMAN, New York, N. Y. Filed Aug. 18, 1915. Serial No. 46,129. (Cl. 63—28.)



1. A setting for a cluster of small stones, comprising a disk provided with a plurality of apertures into which the stones are fitted, and a frame-work attached to said disk, said frame-work being made in the form of a star-like structure having the points of its radiating arms secured to the periphery of said disk, said arms being out of alinement with said apertures and extending in inclined positions downward toward the axis of said disk, but stopping short of said axis.

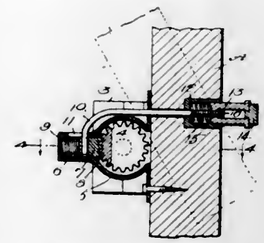
2. A setting for a cluster of small stones, comprising a disk provided with a plurality of apertures into which the stones are fitted, and a frame-work attached to said disk, said frame-work being made of a single piece of wire in the form of a star-like structure having the points of its radiating arms secured to the periphery of said disk, said arms being out of alinement with said apertures and extending in inclined positions downward toward the axis of said disk, but stopping short of said axis.

1,171,187. PROCESS FOR PREPARING A RUBBER SUBSTITUTE. ALFRED ADELBERT GLIDDEN, Watertown, Mass., assignor to Hood Rubber Co., a Corporation of Massachusetts. Filed Oct. 11, 1913, Serial No. 794,663. Renewed July 8, 1915. Serial No. 38,780. (Cl. 106—23.)

1. The process of preparing elastic substances or rubber substitutes which consists in heating vulcanized rubber wastes with a small amount of a higher fatty acid and any of the unsaturated hydrocarbons of the homologous series of which butadiene 1,3 is the lowest member.

2. The process of preparing elastic substances or rubber substitutes which consists in heating vulcanized rubber wastes with any of the unsaturated hydrocarbons of the homologous series of which butadiene 1,3 is the lowest member, and stearic acid in proportion of one per cent. of the weight of hydrocarbon used, in sealed vessels to a temperature of 100° to 120° C. for periods from one to three weeks.

1,171,188. MIRROR-LOCK. SAMUEL F. GOSS, Mosier, Oreg. Filed Oct. 6, 1915. Serial No. 54,449. (Cl. 16—142.)



1. A lock for a frame pivotally mounted between stationary supports comprising a bearing pin secured to the frame, a bearing bracket for the said pin secured to the stationary support, a toothed wheel upon the end of the bearing pin, a casing surrounding the same and having a protuberance at its rear forming a slideway, a block mounted in the slideway and having teeth adapted to engage the toothed wheel, a spring interposed between the block and the rear of the slideway, a rod secured to the block and extending through the stationary support, a counter sunk sleeve in the face of the stationary support surrounding the said rod, a hollow push pin adjustably secured to the said rod, and a spring interposed between the push pin and the rear of the counter sunk sleeve.

2. A lock for a frame pivotally mounted between stationary supports comprising a bearing pin secured to the frame, a toothed wheel on the end of the said pin, a sliding toothed block carried by the stationary support and normally engaging the said wheel to lock it against rotation, and means for disengaging the wheel and the said block.

3. A lock for a pivotally mounted frame comprising a bearing pin secured to the frame, a toothed wheel upon the end of the bearing pin, a casing surrounding the same and having a protuberance at its rear forming a slideway, a block mounted in the slideway and having teeth adapted to engage the toothed wheel, a spring interposed between the block and the rear of the slideway, and means for disengaging the wheel and the block.

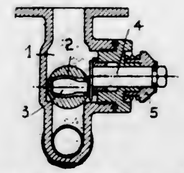
4. A lock for a pivotally mounted frame comprising a bearing pin secured to the frame, a toothed wheel on the end of the said pin, a sliding toothed block secured to the stationary support and normally engaging the said wheel to lock it against rotation, and an adjustable push rod secured to the said block and passing through the stationary support to disengage the block from the wheel.

5. A lock for a pivotally mounted frame comprising a bearing pin secured to the frame, a sliding locking block adapted to lock the said bearing pin against rotation, a rod secured to the said block and passing through the stationary support, a counter sunk sleeve in the face of the supporting frame surrounding the said rod, a hollow push pin adjustably secured to the said rod, and a spring interposed between the push pin and the rear of the counter sunk sleeve.

[Claim 6 not printed in the Gazette.]

1,171,189. COCK. ALFREDO GRANDI, Bologna, Italy. Filed Apr. 8, 1915. Serial No. 19,923. (Cl. 137—4.)

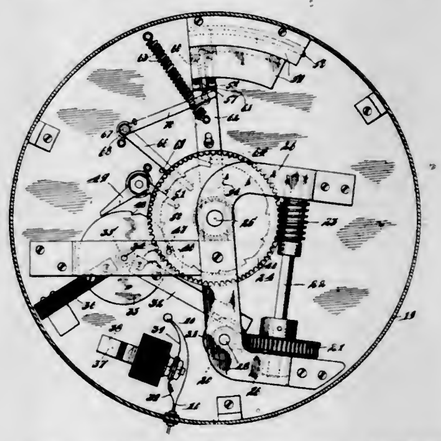
1. In a cock, the combination, with a casing having a valve seat therein, of a ball valve disposed within said casing and provided with a diametrically-arranged recess; a supporting member for said valve projecting into said recess and having play therein, said member forming an axis about which said valve is adapted to roll automatically; and means for shifting said member, to raise or lower said valve.



2. In a cock, the combination, with a casing having a valve seat therein; of a ball valve disposed within said casing and provided with a diametrically-arranged recess; a supporting member for said valve projecting into said recess and having play therein, said member forming an axis about which said valve is adapted to roll automatically; a rotatable member journaled in said casing and to which said supporting member is eccentrically secured; and a handle secured to said rotatable member for rotating the same, to raise or lower said valve.

3. In a cock, the combination, with a casing having a vertically-arranged valve seat therein; of a ball valve within said casing and provided with a diametrically-arranged recess; a supporting member for said valve projecting into said recess and having play therein, said member forming an axis about which said valve is adapted to roll automatically; and means for shifting said member, to move said valve to a position slightly removed from said seat whereby it is adapted to be moved by fluid pressure into tight engagement with said seat.

1,171,190. FAN. GEORGE H. GRAVES, Chicago, Ill., assignor of one-half to Harmon M. Campbell, Chicago, Ill. Filed Apr. 9, 1914. Serial No. 830,696. (Cl. 194—72.)



1. The combination of an electric motor; apparatus driven thereby; a hollow supporting base for said motor; an electric circuit for said motor; a pivoted switch in said base controlling said circuit; a spring normally holding said switch open; trigger mechanism arranged to lock said switch automatically in closed position; a rotatable member arranged to release said trigger mechanism at the terminus of its movement in one direction; mechanism for rotating said member in the other direction to close said switch; means in said base for rotating said member to release said trigger mechanism; an operative connection between said motor and said means to release said trigger mechanism; a clutch between said means and said connection; means operated by said rotatable member for throwing said clutch in and out simultaneously with the closing and opening of said switch; and an operative connection

between said motor and said means, substantially as described.

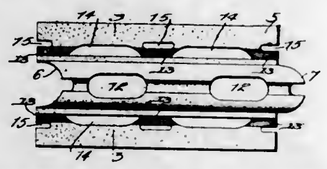
2. The combination of an electric motor; apparatus driven thereby; a hollow supporting base for said motor; an electric circuit for said motor; a pivoted switch in said base controlling said circuit; a spring normally holding said switch open; trigger mechanism arranged to lock said switch automatically in closed position; a rotatable member arranged to release said trigger mechanism at the terminus of its movement in one direction; mechanism for rotating said member in the other direction to close said switch; means in said base for rotating said member to release said trigger mechanism; a yieldable operative connection between said motor and said means to release said trigger mechanism; a clutch between said means and said connection; means operated by said rotatable member for throwing said clutch in and out simultaneously with the closing and opening of said switch; and an operative connection between said motor and said means, substantially as described.

3. The combination of an electric motor; apparatus driven thereby; coin controlled mechanism for closing the motor circuit; and means operable by the motor to release said mechanism and permit said mechanism to break the circuit and disconnect the said motor, substantially as described.

4. The combination of an electric motor; apparatus driven thereby; an electric circuit for operating said motor; a switch in said circuit; coin controlled mechanism for closing said switch; and means operable by the motor to release said mechanism and permit said mechanism to break the circuit and disconnect said motor from said means, substantially as described.

5. The combination of an electric motor; apparatus driven thereby; an electric circuit for operating said motor; a switch in said circuit; a spring normally holding said switch open; coin controlled mechanism for closing said switch; means operable by said motor for releasing said trigger mechanism; and means connected with said switch for disconnecting said motor from said means, substantially as described.

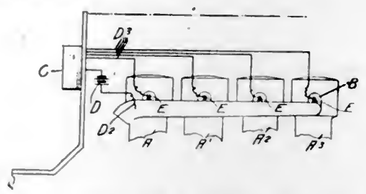
1,171,191. BUILDING-BLOCK. WILLIAM J. GRONERT and WILLIAM C. REID, Elkhart, Ind. Filed Aug. 21, 1915. Serial No. 46,697. (Cl. 72—38.)



A building block comprising a body portion provided with alined tongues and grooves in the ends, top and bottom thereof and smaller communicating grooves which extend around the entire body portion, the latter being also provided with communicating vertical openings and longitudinal channels arranged on each side of said tongues and grooves and forming air spaces.

1,171,192. EXPLOSION-INDICATOR FOR INTERNAL-COMBUSTION ENGINES. CHARLES T. HAAS, Tucumcari, N. Mex. Filed Sept. 16, 1915. Serial No. 50,997. (Cl. 177—339.)

1. The combination with an internal combustion engine, including a plurality of cylinders each having an exhaust pipe provided with a capped opening, of a plug threaded into said opening, an operating member in the form of a rod journaled through the plug and having an angular outer end and an offset inner end, the latter within the exhaust pipe and subject to the action of the exhaust gases, an upright carried by, and having an insulated connection with, the outer end of the plug, a spring engaging the outer angular end of the said operating member whereby to normally hold the same spaced from said contact upright, a source of current, and an indicator in circuit with said source of current and with the contact upright, for the purpose described.



2. The combination with an internal combustion engine including a plurality of cylinders each having an exhaust pipe provided with a capped opening, of a plug threaded into said opening, an operating member in the form of a rod journaled through the plug and having an angular outer end and an offset inner end, the latter extending within the exhaust pipe and subject to the action of the exhaust gases, an upright carried by, and having an insulated connection with the outer end of the plug, a spring secured to the plug and engaging the outer end of said operating member whereby to normally hold the same spaced from said contact upright, a source of current, and an indicator having a plurality of indicating members corresponding in number to the cylinders of the engine, and each of which indicating members is in circuit with said source of current and with the contact upright of one of the cylinder plugs.

3. The combination with an internal combustion engine, including a plurality of cylinders, each having an exhaust pipe, of an electrical indicator having an indicating member for each cylinder, a source of current in circuit with said indicator and with the several exhaust pipes, spaced contact members adjacent each of the exhaust pipes, one of which is in circuit with its respective indicating member, and the other of which is movable into engagement with the first contact member and has a portion extended into the exhaust pipe and into the path of movement of the exhaust gases.

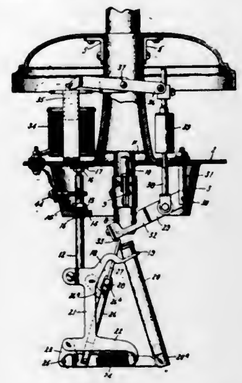
4. The combination with an internal combustion engine including a plurality of cylinders each having an exhaust pipe, of an indicator including an indicating member for each cylinder, and means controlled by the volume of exhaust in each exhaust pipe for actuating the respective indicating member.

5. The combination with an internal combustion engine including a plurality of cylinders each having an exhaust pipe, of an indicator including an indicating member for each cylinder, and means controlled by the volume of exhaust in each exhaust pipe for actuating the reapective indicating member, said means including an operating member for each cylinder, one end of which is extended into the exhaust pipe thereof and directly acted upon by the exhaust gases.

1,171,193. ARC-LAMP. CROMWELL A. B. HALVORSON, Jr., Saugus, and JOHN T. BEECHLYN, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Apr. 3, 1912. Serial No. 688,180. (Cl. 176—64.)

1. In an arc lamp, a pivoted lever, an electrode, means for pivotally connecting said electrode to said lever, an auxiliary electrode and a support for the same pivoted to said lever intermediate the pivot of the lever and the pivotal connection of the electrode, means for moving said lever, and means including the pivotal connections of the electrode and of the auxiliary electrode support to said lever for guiding said electrode and said auxiliary electrode into abutting engagement throughout their consumption.

2. In an arc lamp, a pivoted lever, an electrode, means for pivotally connecting said electrode to said lever, a member pivoted to the lever intermediate the pivot of the lever and the pivotal connection of said electrode, an auxiliary electrode carried by said member and having a different rate of consumption in the arc from the electrode, means for moving said lever, and means including the pivotal connections of the electrode and of the auxiliary electrode support to said member for guiding said electrode and said auxiliary electrode into abutting engagement throughout their consumption.



3. In an arc lamp, a member pivoted at one end, an electrode, means for pivotally connecting said electrode to said member, a metallic pin, means for pivotally connecting said pin to said member intermediate its pivoted end and the pivotal connection of the electrode, means for moving said pivoted member, and means including the pivotal connections of the electrode and of the auxiliary electrode support to said member for guiding said electrode and said pin into abutting engagement throughout their consumption.

4. In an arc lamp, a pivoted member, an electrode, means for pivotally connecting said electrode to said member, a pin, means for connecting said pin to said member intermediate its pivoted end and the pivotal connection of said electrode, means including the pivotal connections of the electrode and of the auxiliary electrode support to said member for guiding said electrode and said pin into abutting engagement throughout their consumption, and a spring for moving said pivoted member.

5. In an arc lamp, a member pivoted at one end, an electrode, means for pivotally connecting said electrode to said member, a pin, means for pivotally connecting said pinto said member intermediate the pivoted end of the member and the pivotal connection of the electrode, a guide for maintaining said pin and said electrode in abutting engagement, and means for moving said pivoted member about its pivot, said pin and electrode consuming in the same ratio as their respective rates of movement whereby said electrode and said pin are moved in accordance with their consumption and maintained in abutting engagement.

[Claim 6 not printed in the Gazette.]

1,171,194. THREAD-HOLDER. CLARENCE A. HAMMOND-KNOWLTON, New York, N. Y. Filed May 12, 1915. Serial No. 27,597. (Cl. 206—64.)

1. In a skein holder, a thread supporting body, covering sections arranged adjacent said body and adapted to be folded thereover, an end flap arranged on each of the covering sections adapted to fold over the end of said body so as to cover the thread carried thereby, a cap extending from one of the covering sections, said cap being formed with a plurality of folds or creases and then wound around the upper end of said body, and means for holding said cap against unwinding.

2. A skein holder formed from a single blank provided with a thread holding body, a pair of covering sections formed with a flap at one end of each section and a side flap on one of the sections, and means extending from one of the sections defining a cap, said means comprising a plurality of blocks adapted to be folded over and around one end of said body.



3. In a skein holder of the character described, a thread holding body formed with a notch at the upper end, a slot and a tab at the lower end, said tab adapted to have one end thrust through the slot so as to form a closed loop, a thread backing member or abutment fitting into said loop, a pair of covering sections arranged on one side of said body and adapted to be folded over the body, each of said sections being formed with an end flap adapted to be folded over the end of said body when the sections are folded over the body, a side flap for the outer of said covering sections, and a cap structure connected with said outer covering section, said cap structure being formed with a block extending from said last mentioned section to the upper end of said body so as to cover one side of the end of said body, a second block adapted to be folded over and cover the opposite side of said body, an extension on said second block adapted to be folded around the upper end of said body, said extension being formed with a removable perforated section, and means for holding said cap in its folded position.

4. In a thread holder of the character described, a body for receiving thread, a pair of sections adapted to be wrapped around said body for covering the same with the exception of one end, and a cap connected with one of said sections adapted to be folded over and wrapped around the exposed end of said body, whereby the thread is completely inclosed.

5. In a thread holder of the character described, a body, a reinforcing member arranged adjacent one end of said body, a foldable locking tab for holding said reinforcing member in position, means for inclosing said body and said reinforcing member together with thread mounted on the body, and a cap extending from said means, said cap being formed with a foldable section and a projection extending therefrom adapted to be wound around the end of said body so as to produce an inclosing cap therefor.

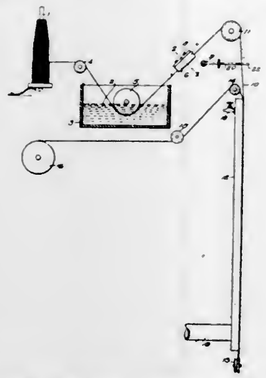
[Claims 6 to 9 not printed in the Gazette.]

1,171,195. METHOD OF WAXING SILK THREAD. CLARENCE A. HAMMOND-KNOWLTON, New York, N. Y. Filed July 24, 1915. Serial No. 41,730. (Cl. 91—70.)

1. The method of waxing thread, comprising subjecting the thread to a wax solution and then ironing the thread by rotating the same while in contact with a heated member.

2. In a device for waxing silk thread, a thread supplying member, a container supplied with wax, means for guiding thread from said supplying means through the wax in said container, a heated ironing member, and means for guiding said thread a plurality of times over said ironing member.

3. The method of waxing thread, comprising subjecting the thread to a wax solution, passing the waxed thread over a heated member while under tension, and causing the thread to rotate as the same passes over said heated member.

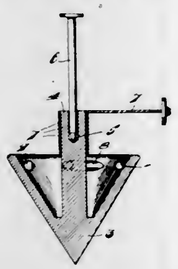


4. The method of waxing continually a silk thread, comprising the passing of the same through a bath of wax solution, passing said thread over and in contact with a heated member, rotating the thread as the same passes over said heated member, and then returning the thread over said heated member and causing the same to press against the heated member.

5. The method of waxing silk thread, comprising the passing of said thread through a wax bath while under tension, wiping the excess wax from the thread, passing the thread a plurality of times over and in rubbing contact with a heated member, and rotating the thread while passing over said heated member.

[Claim 6 not printed in the Gazette.]

1,171,196. TOP. LOUIS H. HANDELL, Aurora, Ill. Filed May 29, 1915. Serial No. 31,286. (Cl. 46—32.)

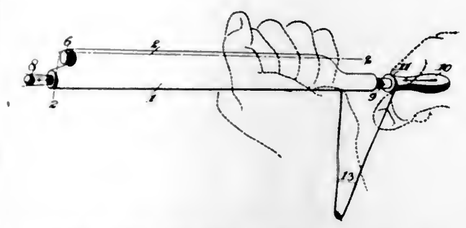


1. A top in the form of a hollow cone spinning upon the point thereof, said cone being provided with a central stem extending above it and having a spinning socket in its top; and sound producing agencies on the periphery thereof, substantially as described.

2. A top in the form of a hollow cone of substantially sixty-five degrees spinning upon the point thereof, said cone being provided with a central stem extending above it and having a spinning socket in its top; and sound producing agencies on the periphery thereof, substantially as described.

3. A top in the form of a hollow cone spinning upon the point thereof, said cone being provided with a central stem extending above it and having a spinning socket in its top; and tubes extending through the walls of said cone substantially tangentially thereto, said tubes being open at their outer ends and provided with reeds at their inner ends, substantially as described.

1,171,197. TOY GUN. NOLAN BAILEY HARMON, Jr., Gulfport, Miss. Filed Sept. 1, 1915. Serial No. 48,404. (Cl. 124—8.)



1. A gun of the character specified, comprising a body consisting of a barrel, and a magazine, the barrel and the magazine opening at one end of the body, and the barrel opening at the other end and communicating with the magazine by a passage, said magazine being above the barrel, a plunger or rammer mounted to slide in the barrel and having a handle, and having a shoulder between the handle and the plunger or rammer for limiting the inward movement of the plunger or rammer, said barrel having a recess at the communicating passage, and the inner end of the plunger being recessed to fit a projectile, said recess being adapted to receive a projectile, means for limiting the outward movement of the plunger to a position with the inner end thereof on the opposite side of the communicating passage from the muzzle, and a closure for the open end of the magazine.

2. A gun of the character specified, comprising a barrel open at both ends, and a magazine extending parallel with the barrel, and communicating by a passage with the barrel at the end adjacent to the breech, said barrel being contracted or choked at the passage and between the same and the muzzle of the barrel, a plunger or rammer mounted to slide in the barrel, means for limiting the withdrawal of the plunger or rammer to a point where the inner end is at the side of the passage remote from the muzzle, and a closure for the magazine.

3. A gun of the character specified, comprising a barrel, a plunger mounted to reciprocate in the barrel, and a magazine above the barrel and communicating with the bore of the barrel, at the end adjacent to the breech, for permitting a projectile to drop into the barrel in front of the plunger or rammer, said barrel having a recess at the passage for receiving a projectile and holding it in front of the plunger or rammer, the barrel being choked at the recess and between the same and the muzzle.

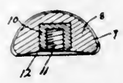
4. A gun of the character specified, comprising a barrel, a plunger mounted to reciprocate in the barrel, and a magazine above the barrel and communicating with the bore of the barrel at the end adjacent to the breech, for permitting a projectile to drop into the barrel in front of the plunger or rammer, the barrel being choked at the recess and between the same and the muzzle.

5. A gun of the character specified, comprising a barrel, a plunger mounted to reciprocate in the barrel, and a magazine above the barrel and communicating with the bore of the barrel, at the end adjacent to the breech, for permitting a projectile to drop into the barrel in front of the plunger or rammer, said barrel having a forward pointing, conically shaped recess under the passage for receiving, holding and with plunger compressing and shaping projectile as described.

[Claims 6 to 8 not printed in the Gazette.]

1,171,198. SANITARY HOOK. HENRY HELLBERG, San Francisco, Cal. Filed Aug. 20, 1914. Serial No. 857,689. (Cl. 248—22.)

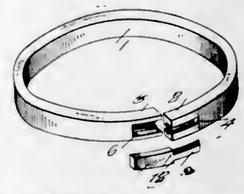
1. A sanitary hook comprising a member adapted to be secured to a fixed structure and having an outwardly extending portion and an upwardly extending portion, and a groove porcelain knob carried by the upwardly extending portion of the hook, said knob having its under surface reëntrant to prevent the accumulation of liquid thereupon.



2. A sanitary hook comprising a slotted member to be secured to a fixed structure, another portion integral to the slotted portion, extending outwardly and downwardly therefrom, an upwardly extending portion and a grooved porcelain knob on the upper end of the hook, said porcelain knob having its under surface reëntrant toward its top to prevent the accumulation of liquid thereon.

3. A sanitary hook comprising a slotted portion adapted to be secured to a fixed structure, and outwardly and downwardly inclined portion connected with the slotted portion, an upwardly extending portion and a grooved knob formed of a body resistant to corrosion, threaded on the upper end of said hook, said grooved knob having the central portion of its grooved under side higher than the outer edges thereof, whereby the liquid will drip off the knob and not run down the support therefor.

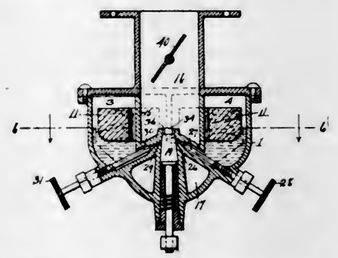
1,171,199. PISTON-RING. IRL ROBERT HICKS, Hallsville, Mo. Filed Mar. 17, 1915. Serial No. 14,930. (Cl. 121—108.)



1. A piston ring, having its ends abutting, and each end being recessed, and a connector for the ends of the ring, and shaped to fit the recesses of the ends, said recesses opening on the outer face of the ring and one of the recesses having parallel side walls and the other having undercut side walls, each recess having an extension to the inner face of the ring and of lesser width than the recess, and the connector having a rib fitting the said extensions, the extensions being in alinement.

2. A piston ring having its ends recessed longitudinally, and a connector for connecting the said ends, and shaped to fit the recesses, the recesses opening at the peripheral face of the ring, one recess having undercut side walls to prevent disengagement of the said end of the connector outwardly, and each recess having an extension opening at the inner face of the ring, the connector having a rib fitting the extensions of the recesses.

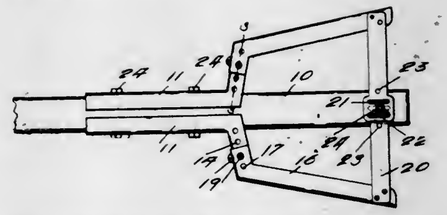
1,171,200. CARBURETER. GEORGE MELVIN HOLLEY, Detroit, Mich. Filed June 14, 1909. Serial No. 502,023. (Cl. 48—150.1.)



1. In a carbureter, the combination of a casing having a plurality of independent reservoirs, a mixing chamber within the casing, a nozzle extending within the mixing chamber, a plurality of independent conduits leading respectively from said reservoirs to adjacent the upper end of said nozzle, and a valve within the nozzle having a ported portion controlling said conduits and provided with an annular discharge opening.

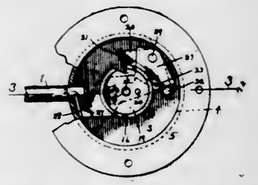
2. In a carbureter, the combination of a casing having a plurality of independent reservoirs, a mixing chamber within the casing, a nozzle extending within the mixing chamber, a plurality of independent conduits leading respectively from said reservoir to adjacent the upper end of said nozzle, a valve within said nozzle provided with a ported portion controlling said conduits, a vertical passage communicating with the ported portion and having a transverse passage communicating with said vertical passage, there being an annular discharge opening with which said transverse passage communicates.

1,171,201. ADJUSTABLE WAGON-HOUND. NELS P. HOLMQUIST, Fairmont, Minn. Filed Jan. 25, 1915. Serial No. 4,280. (Cl. 21—36.)



In a hound for vehicles, a pair of angle members mounted for longitudinal adjustment on a draft pole, a pair of angle members adjustably connected to the first named members and extending divergently from the ends thereof, upper and lower inwardly directed members carried by the second named members, the upper members having their inner ends arranged in overlapping relation on the upper surface of the draft pole, said lower members having their inner ends similarly arranged beneath said pole, said last named members being adjustable longitudinally and transversely of the pole, and means passable through the pole and common to the inner ends of said members to hold the inner ends in their adjusted positions.

1,171,202. COMBINATION-LOCK. JOHN W. HOLZ, Detroit, Mich. Filed Apr. 19, 1915. Serial No. 22,255. (Cl. 70—55.)



1. In a combination lock, a lock body, a shaft revoluble therein, a tumbler loosely mounted on the shaft and having a notch in its periphery and a segmental slot, a tumbler secured to the shaft and having a notch in its periphery, a pin extending from said second tumbler through the slot in the first, a latch plate pivotally mounted on the shaft, a pawl mounted on the plate and having a lip in engagement with said tumblers and adapted to enter said notches, a hasp to be engaged by the latch and a spring engaging the pawl to hold it against the tumblers and to hold the latch in engagement with the hasp.

2. In a combination lock, a lock body, a shaft revoluble therein, a tumbler loosely mounted on the shaft and having a notch in its periphery and a segmental slot, a tumbler secured to the shaft and having a notch in its periph-

ery, a pin extending from said second tumbler through the slot in the first, a latch plate pivotally mounted on the shaft, a pawl mounted on the plate and having a lip in engagement with said tumblers and adapted to enter said notches, a hasp to be engaged by the latch, and a lug secured to the lock body to swing the pawl out of the notches when the latch is swung a sufficient distance.

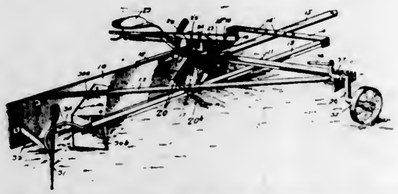
3. In a combination lock, a lock body, a shaft revoluble therein, a knob for turning the shaft, a plurality of tumblers loosely mounted on the shaft and each having a notch in its periphery and a segmental slot, a tumbler secured to the shaft and having a notch in its periphery and a pin extending into the slots in the other tumblers, a latch plate pivotally mounted on the shaft, a pawl pivoted to said plate, a spring to hold the pawl against the peripheries of the tumblers, and a hasp adapted to be engaged by said latch plate under tension of said spring.

4. In a combination lock, a body, a shaft revolubly mounted therein, a plurality of tumblers on the shaft and each having a notch in its periphery, a latch plate pivotally mounted on the shaft, a hasp adapted to be engaged by the latch, a pawl mounted on the latch plate and adapted to enter said notches, a spring to hold the latch plate in hasp-engaging position and the pawl in engagement with the tumblers, and stationary means engaged by the pawl whereby it may be forced out of the notches in the tumblers when the latch plate is moved out of hasp-engaging position.

5. In a combination lock, a lock body, a shaft revoluble therein, a tumbler loosely mounted on the shaft and having a notch in its periphery and a segmental slot, a tumbler secured to the shaft and having a notch in its periphery, a latch plate pivotally mounted on the shaft, a pawl mounted on the plate and having a lip in engagement with said tumblers and adapted to enter said notches, a hasp to be engaged by the latch, and a stationary lug on the lock body with which the pawl engages and whereby its lip is forced out of said notches.

[Claim 6 not printed in the Gazette.]

1,171,203. DITCHING-MACHINE. CHARLES HUNGERFORD, Soldier, Kans. Filed Mar. 31, 1915. Serial No. 18,264. (Cl. 97—12.)



1. In a machine of the character set forth, the combination of a main longitudinal frame member constituting a runner, a cutter head pivoted to and movable vertically adjacent the front end of the runner, means to lock the cutter head in definite cutting position with respect to the end of the runner, devices connected to the rear portion of the runner and extending laterally therefrom at an angle to act upon the soil loosened by the cutter head, and draft connections for the machine.

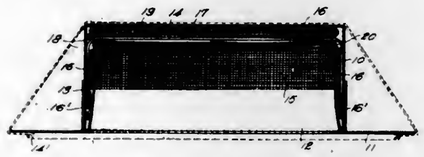
2. In a machine of the class set forth, the combination of a main longitudinal frame member constituting a runner, means extending laterally from the runner to determine its relation to a vertical longitudinal plane of action, a cutter head pivotally connected to the front end of the runner and movable in a vertical plane with respect thereto, and means to limit the upward movement of the cutter head and thereby positively fix the depth of its cutting action, said cutter head having cutting blades extending laterally from both sides of the runner.

3. In a machine of the character set forth, the combination of a longitudinal frame member constituting a runner, a bell crank axle journaled in the outer end of the frame devices, a wheel mounted upon said axle, a cutter head connected to the front end of the runner, means to regulate the depth of cut thereof, and rigid cutting devices secured to one side of the runner and acting laterally therefrom on the same side as said wheel, the effective inclination of the latter mentioned cutting devices being determined by the vertical adjustment of said frame through said wheel and axle.

4. In a machine of the character set forth, the combination of a longitudinal frame member constituting a runner, supporting devices extending laterally from one side of the runner to determine the position thereof with respect to the longitudinal vertical plane, a cutter head comprising a rib pivoted to the runner, said cutter head also including a pair of cutting blades secured rigidly to the rib on opposite sides thereof and also upon opposite sides of the runner, said blades having cutting edges substantially perpendicular to the plane of the runner and the main portions of the cutting blades lying in the same plane and extending upwardly and rearwardly from said edges, and means to determine the cutting depth of the cutting head.

5. In a machine of the character set forth, the combination of a runner constituting a main frame member lying in a longitudinal and substantially vertical plane, a bar connected to the runner and extending forwardly therefrom, a cutter head comprising a colter pivoted to the front end of the bar and extending thence downwardly and rearwardly in substantially the plane of the frame member, a cutting blade secured to one side of the colter and extending rearwardly along the front end of the frame member, said cutting blade having a cutting edge substantially perpendicular to the plane of the frame member, the blade extending thence upwardly from said edge at an inclination, and means to positively regulate the cutting depth of the cutter head, said last mentioned means comprising a lever, a wedge pivoted at one end to the lever and having its other end movable downwardly between the colter and the front end of the frame member, and a link connected to the lever and having loose pin and slot connection with the cutter head.

1,171,204. RETAINER FOR HAT-PROTECTORS. JOHN WILLIAM JACOBS, New York, N. Y., assignor of one-third to Hilda Hoffmann, Far Rockaway, N. Y. Filed Sept. 9, 1915. Serial No. 49,724. (Cl. 2—108.)

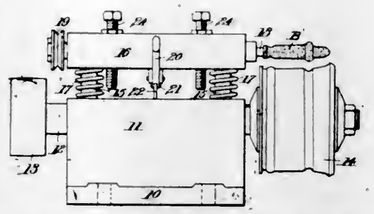


The herein described retainer for hat protectors, the same comprising a plurality of spring arms connected to one another and terminating in prongs adapted to engage directly against the inner surface of the hat crown, a crown lining connected to the spring members, and a wire hoop carried by the lining in a plane closely parallel to the general plane of the spring members, substantially as and for the purposes set forth.

1,171,205. PROCESS OF MANUFACTURING PORCELAIN ARTICLES. JOSEPH ARTHUR JEFFERY and BENJAMIN ALFRED JEFFERY, Newark, N. J. Filed Aug. 18, 1909, Serial No. 513,512. Renewed July 12, 1915. Serial No. 39,519. (Cl. 25—156.)

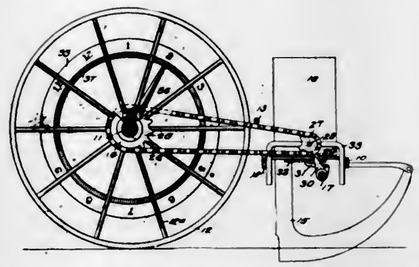
1. An improvement in the art of manufacturing porcelain articles comprising producing blanks of green clay, allowing said blanks to become dry and hard, imparting the desired shape to said blanks while in the dry and hard condition by grinding off portions of the surface thereof and then firing.

2. An improvement in the art of manufacturing porcelain articles comprising producing blanks of plastic clay, allowing said blanks to stand until they are bone dry and brittle, grinding off the surfaces of the blanks throughout the length thereof to impart the desired shape to said blanks while in the dry and brittle condition and then firing.



3. An improvement in the art of manufacturing porcelain articles comprising producing approximately cylindrical blanks of plastic green clay, allowing the same to stand until bone dry, grinding the surfaces of the blanks to impart an irregular contour of circular cross section to said blanks while in the bone dry condition and then firing.

1,171,206. CHECK-ROW ATTACHMENT FOR PLANTERS. WILLEM JELSEMA, Worthing, S. D. Filed June 1, 1915. Serial No. 31,407. (Cl. 111—5.)



1. A check row attachment for planters, comprising a drive element adapted to be mounted on a planter to be turned with the turning of a running wheel of the planter, a coupling member on the drive member and movable thereon to establish driven engagement with the running wheel of the planter or effect engagement therefrom, indicating means including a rotary and a relatively fixed member, the rotary member being adapted to be actuated by the movable member of the drive element, and being manually movable over the fixed indicating member to optionally alter their relative positions, and dropper actuating means driven from said drive element, the said drive element being manually turnable to adjust the relation of the dropper actuating means to a given adjustment of the indicating members.

2. A check row attachment for corn planters, comprising a drive element having means to mount the same in position on a planter to be turned by the turning of a running wheel of the planter, dropper actuating means driven from said drive element, and means to indicate the relation of the dropper actuating means to the running wheel of the planter, the said drive element and the said indicating means being manually adjustable to optionally vary the relation between the dropper actuating means and the indicating means.

3. A check row attachment for planters, comprising a drive element adapted to be loosely mounted on the axle of a planter, a dropper actuating element driven from said drive element, and a coupling bar swingingly mounted on the drive element, whereby to effect engagement or disengagement of the drive element and the adjacent running wheel of a planter.

4. A check row attachment for planters, comprising a rotary driven element, a dropper actuating element driven from the drive element, an indicating means including a rotary indicating member, and means to establish or disestablish driving connection between the drive element and the rotary indicating member and between the drive element and a revolving part of a planter.

5. In a check row attachment for planters, a dropper element, a drive element in constant driving engagement with the said dropper element, indicating means including a movable indicating member, movable means to optionally actuate the drive element from a rotary part of a planter, and means to variously establish driving engagement between the said drive element and the movable indicating member.

[Claim 6 not printed in the Gazette.]

1,171,207. INTERCOMMUNICATING PICK-UP SYSTEM. CHESTER S. JENNINGS, Boston, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 24, 1914. Serial No. 834,103. (Cl. 186—16.)



1. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong, with movable jaw pick-up carriers to travel on said track, means to propel said carriers, and actuating means, co-acting with said carriers and propelling means to automatically pick up an article at any given station and unload said article at a predetermined other one of said stations by actuating the movable jaw of such carrier, each of said stations, from which loads may be despatched to said predetermined unloading station, having a load supporting part which, if an article be emplaced thereat, will co-act with at least one of said carriers and said pick-up actuating means to the end that said article will be loaded upon said carrier and conveyed thereby to said predetermined unloading station to be there unloaded by a part of said actuating means, said pick-up actuating means having elements thereof disposed at each of said despatching stations and normally adapted to load any article to be despatched, upon said carrier from the supporting part at each of said stations which corresponds to said predetermined unloading stations but unadapted to co-act with already loaded carriers *en route* therepast to said unloading station, each carrier having means to render ineffective the action of the said loading elements at stations which it passes while *en route* to said predetermined unloading station, said last mentioned means for any given carrier being operatively disposed when said carrier is loaded.

2. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong with carriers to travel on said track, means to propel said carriers, and actuating means co-acting with said carriers and propelling means, to automatically pick-up an article at any given station and unload said article at a predetermined one of a plurality of the stations at which carriers are to be unloaded, each of said stations, from which loads may be despatched to any one of said unloading stations, having load supporting parts which, if an article be emplaced thereat in any one of a plurality of determined positions each of which positions corresponds respectively to one of said unloading stations, will co-act with at least one of said carriers and said pick-up actuating means to the end that said article will be loaded upon said carrier and conveyed thereby to the corresponding unloading station to be there unloaded by a part of said actuating means, said pick-up actuating means having elements thereof disposed at each of said despatching stations and normally adapted to load upon a passing carrier any article which may be in place in one of the said determined positions but unadapted to

co-act with said passing carrier if the latter be already loaded, each of said carriers having means to render ineffective the action of said loading elements at stations which it passes while *en route* to a station beyond, said last mentioned means for any given carrier being operatively disposed when said carrier is loaded.

3. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong with carriers to travel on said track, means to propel said carriers, and actuating means, co-acting with said carriers and propelling means, to automatically pick-up an article at any given station and selectively unload said article at a predetermined one of a plurality of stations at which said carriers are to be selectively unloaded, each loading station which is adapted to despatch articles to said plurality of unloading stations having thereat a plurality of loading points and means to support an article to be despatched at any one of said points, each of said loading points corresponding to one of said unloading stations, said pick-up actuating means comprising elements adjacent each of said loading points for loading carriers while the latter are passing said points and said carriers having means to prevent said elements from disturbing loads already in place thereon when such loaded carriers are passing said elements.

4. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong with carriers to travel on said track, means to propel said carriers, and actuating means co-acting with said carriers and propelling means, to automatically pick-up an article at any given station and unload said article at a predetermined other one of said stations, each of said stations, from which loads may be despatched to said predetermined unloading station, having a relatively fixed load supporting part which, if an article be emplaced thereat, will co-act with at least one of said carriers and said pick-up actuating means to the end that said article will be loaded upon said carrier and conveyed thereby to said predetermined unloading station to be there unloaded by a part of said actuating means, said pick-up actuating means having elements thereof disposed at each of said despatching stations and normally adapted to load any article to be despatched, upon said carrier from the supporting part at each of said stations which corresponds to said predetermined unloading station but unadapted to co-act with already loaded carriers *en route* therepast to said unloading station, each carrier having means to render ineffective the action of the said loading elements at stations which it passes while *en route* to said predetermined unloading station, said last mentioned means for any given carrier being operatively disposed when said carrier is loaded.

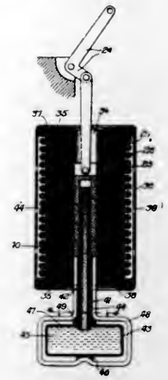
5. In a pick-up and delivery system for messages, parcels and the like, the combination of a track having a plurality of stations therealong with carriers to travel on said track, each of said carriers having a pick-up element movably mounted thereon, means to propel said carriers, and actuating means to control said pick-up elements and only adapted to co-act therewith to automatically load an empty carrier, as the latter passes any given station and to thereafter unload said carrier at a determined point along said track, said system having provisions to positively prevent the emplacement of a load upon an already loaded carrier.

[Claims 6 to 20 not printed in the Gazette.]

1,171,208. VOLTAGE REGULATION. LEE B. JONES, Kansas City, Mo. Filed Nov. 4, 1913. Serial No. 799,095. (Cl. 175—21.)

1. In an electromagnetic regulator the combination of a coil, a two-section hollow plunger armature, a body of expansible material operatively joining said sections together, and a portion of said body projecting upward into the hollow armature to be there subjected immediately to changes of temperature.

2. In an electromagnetic regulator the combination of a coil, a two-section plunger armature working within said coil, an expansible member connecting said sections together, and a portion of said expansible member projecting upward into the body of the armature to be there subjected immediately to changes of temperature.



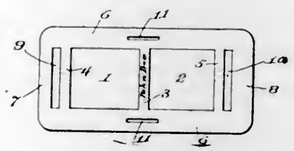
3. In an electromagnetic regulator the combination of a coil, a two-section plunger armature working within said coil, and an expansible member connecting the sections of the armature together and under the influence of changes of temperature of the coil.

4. In an electromagnetic regulator the combination of a coil, a two-section armature, an expansible member, a connection from the expansible member to the armature to control the distance between the two sections of the armature, and means for causing the expansible member to expand and contract according to changes of temperature of the coil.

5. In an electromagnetic regulator the combination with a coil, of a two part plunger armature working within the same, an abutment connected to one part of said armature, a closed receptacle supported by said abutment, said receptacle having a movable face, an operative connection between said movable face and the other section of the armature, and an expansible fluid contained within the receptacle.

[Claims 6 to 9 not printed in the Gazette.]

1,171,209. CARD-HOLDER BINDING DEVICE. JASON W. JORDAN, Jr., Lexington, Miss. Filed June 10, 1915. Serial No. 33,371. (Cl. 40—10.)



A device for binding and labeling bundles and packages, comprising a plate composed of flexible material having slotted side members, and bars connecting the side members, a cross bar adjacent to each end bar and forming a slot between the cross bars and the end bars, a central bar connecting the side members, an identification card fitting between the side members and extending under the central bar and and over the cross bars and terminating under the end bars, a tape passing through the end slots and through one end of the card, and a tape passing through the said side slots.

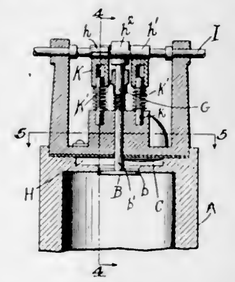
1,171,210. HOLDER FOR MEDICINE-BOTTLES AND ABSORBENT ROLLS. CLARENCE C. KEEFER, Union City, Ind. Filed Apr. 1, 1915. Serial No. 18,591. (Cl. 248—41.)

A cross-form sheet metal bottle holder, comprising a central horizontal base having four long broad horizontal bracing arms extending from its sides in the plane of said base and at right angles to each other, and four clasping



arms projecting upward from said base, each clasping arm being located between two bracing arms and the clasping arms being spaced apart from each other.

1,171,211. INTERNAL-COMBUSTION ENGINE. HENRY B. KEIPER, Lancaster, Pa. Filed Sept. 7, 1915. Serial No. 49,196. (Cl. 123—79.)



1. In an internal combustion engine, a cylinder having at one end an explosion chamber and a single valve controlling both the inlet and exhaust to said chamber, intake and exhaust ports in close proximity to said valve but slightly separated therefrom by a narrow space, auxiliary normally closed valves each controlling one of said ports and each adapted to open into said space, and means whereby each of said valves in opening is positively actuated.

2. The combination, in an internal combustion engine, of a cylinder having a reciprocating piston therein, a single valve at one end adapted to control the intake and exhaust from said cylinder, and intake and exhaust ports in close proximity to but separated from said single valve by a narrow space, together with auxiliary valves controlling said ports, each adapted to open into said space and movable in the same direction as said single valve, together with positively actuated mechanism for opening said valves.

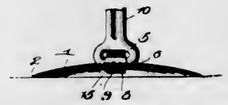
3. An internal combustion engine comprising a cylinder, a reciprocating piston, a single normally closed valve controlling the inlet and exhaust from said cylinder, a valve case mounted on the cylinder-head so as to leave a narrow space above said valve of substantially uniform depth from side to side of the cylinder-head; said case having inlet and exhaust ports therein, one in communication with a source of explosive fluid supply and the other in communication with the exhaust conduit, and auxiliary normally closed valves each controlling one of said ports; the first mentioned valve being adapted to open downwardly into the explosion chamber and the auxiliary valves aranged to open downwardly into said narrow space, all movable in the same direction, and means for positively actuating said valves to open them.

4. In an internal combustion engine, an inwardly opening normally closed puppet valve controlling the inlet and exhaust from the engine cylinder, inlet and exhaust ports located in close proximity to said valve but separated therefrom by a narrow space over the cylinder-head, and puppet valves controlling said ports each opening into said space and movable in opening in the same direction as said first mentioned valve, together with means whereby each of said valves in opening is positively actuated.

5. In an explosive engine, a cylinder having a single valve controlling the inlet and exhaust thereto, auxiliary valves controlling the inlet and exhaust through said single valve; the latter valve being separated from said intake and exhaust valves by a narrow space, and said intake and exhaust valves opening into said space; all of said valves being movable in the same direction; said intake valve being arranged at one side of said main valve, and said exhaust valve arranged at the opposite side thereof and a shaft having a series of cams thereon whereby the several valves are positively actuated in opening by the same shaft each in the proper interval of time to control the admission and exhaust to said cylinder through said narrow space.

[Claims 6 to 10 not printed in the Gazette.]

1,171,212. PAN-SCRAPING DEVICE. INA D. KINNE, Portland, Oreg. Filed May 13, 1915. Serial No. 27,860. (Cl. 65—12.)



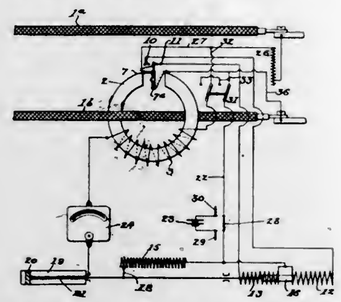
A scraping device comprising a convexo concave disk having a central opening with a strap extending thereacross and having an outwardly bowed lop therein to form one member of a handle bearing, a strap arranged on the inner face of said disk below said first mentioned strap in alinement therewith and secured at its opposite ends to the inner face of the disk and having an inwardly bowed loop registering with the loop in the first-mentioned strap to complete the handle bearing, a handle composed of a metal rod bent intermediately of its ends to form a hand gripping loop and with the side members thereof converging toward each other and contacting from a point near the mid-length thereof toward their free ends and united throughout their contacting portions, the free ends of said rod being bent to form an elongated transversely extending loop, a sleeve connecting the terminals of said bent ends, and fixedly connected thereto forming a combined reinforce and wear plate, the outer side member of said transversely arranged loop being engaged with the bearing formed by said straps with the connecting wearing sleeve arranged in said bearing, the inner wall or side member of said transverse lop being spaced a sufficient distance only from the outer side member to permit the free turning of the outer side member in the bearing, whereby said inner member is adapted to engage the outer face of the disk on the lowering of the handle and thereby hold said handle at an angle in relation to the disk.

1,171,213. ELECTRICAL INSTRUMENT. OTTO A. KNOPP, Oakland, Cal. Filed July 2, 1914. Serial No. 848,636. (Cl. 171—95.)

1. The combination in an electrical instrument of a core; a winding thereon; a movable member actuated by magnetic flux in said core; a contact engaged by said member when it is deflected from a normal position; a current indicating device; a body of resistance; a source of current in circuit with said resistance, the winding and said device; an electromagnet having a movable part and in circuit with the movable member and its contact; and a contact arm connected to the movable part of the electromagnet for varying the amount of resistance in circuit when the movable member engages its contact.

2. The combination of a core adapted to be subjected to the influence of a magnetic field; a winding thereon; a source of current; a body of resistance and a current indicating device in circuit with said winding; a member

movable under the action of the magnetic flux in said core; a contact engaged by said member when it is deflected; and means in circuit with said member and contact for automatically adjusting the amount of said resistance, when the contact and member are engaged, until the flux in the core is neutralized.



3. The combination of a core adapted to be subjected to the influence of a magnetic field; a winding thereon; a current indicating device and a source of current in the circuit with said winding; a member movable under the action of magnetic flux in the core; a contact engaged by said member when it is deflected; and means in circuit with said contact and member for automatically varying the current flow in the winding, when the member engages the contact, until the flux in the core is neutralized.

4. The combination of a core adapted to be subjected to the influence of a magnetic field; a winding thereon; a current indicating device and a source of current in circuit with said winding; a member movable under the action of magnetic flux in the core; a contact engaged by said member when it is deflected; and means in circuit with said contact and member for automatically varying the current flow in the winding to bring the flux in the core to a predetermined value.

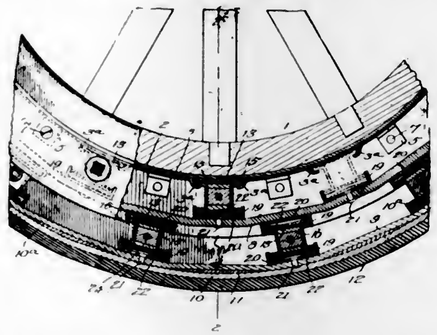
5. A current measuring instrument consisting of an annular core having ends spaced apart to permit of the introduction of a current carrying conductor; a device for indicating the presence of flux in said core; a winding for the core; means in circuit with the winding for causing a current flow therein; means for indicating the amount of said current; and means for automatically adjusting the flow of current to an amount necessary to bring the flux in the core to a predetermined density.

[Claims 6 to 11 not printed in the Gazette.]

1,171,214. SPRING-TIRE. HENRY MILLER LAMBERT, Portland, Oreg., assignor to Lambert Multiplus Company, Portland, Oreg., a Corporation of Arizona. Filed May 20, 1912, Serial No. 698,494. Renewed July 15, 1915. Serial No. 40,124. (Cl. 152—8.)

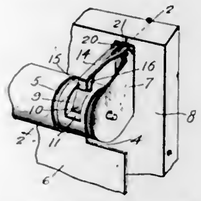
1. A wheel comprising a rigid rim, a rim band on the rim, a plurality of endless flexible bands arranged concentric with the rim band and in spaced relation, a casing outside the outermost band, said casing having a lateral inwardly extending flange at each side edge and a rubber thread on the peripheral face thereof, and series of tensioning devices between the adjacent bands and between the rim band and the adjacent band, the members of each series being staggered with respect to the members of the adjacent series, each of the said tensioning devices comprising a sectional casing, a bolt journaled longitudinally of each casing and having its ends oppositely threaded, a wedge-shaped nut on each end of the bolt and having a threaded engagement with the bolt, for moving the said nuts in opposite direction when the bolt is turned, the bands and the rim band having guideways for the sections of the casing, and a transversely arched plate spring in each guideway of the flexible bands between the guideway and the adjacent casing section.

2. In a wheel having a rigid rim, a tire comprising endless flexible bands concentric with the rim, and means between the rim and the adjacent band and between the bands for varying the resiliency of the said bands, a series of the said means being arranged between the rim and the adjacent band, and a series of the said means being arranged between the bands, the members of one series being staggered with reapect to the members of the other series, and each of the said means comprising a sectional casing, a bolt journaled longitudinally of each casing and having its ends oppositely threaded, a wedge-shaped nut threaded on to each end of the bolt, a fixed guideway for each section of each casing, a cushion between each guideway of the flexible bands and the adjacent casing section, each of the said casing sections being of greatest height intermediate its ends, and gradually decreasing in height toward its ends, said sections being arranged transverse to the plane of the wheel.



3. In a wheel having a rigid rim, a tire consisting of a flexible band arranged coaxially with the rim, and a series of adjusting devices between the rim and the band for varying the resiliency of the band, each of the said devices comprising a sectional casing arranged transversely to the plane of the wheel, each section of the casing being of greatest height intermediate its ends and decreasing gradually in height toward its ends, a wedge-shaped nut arranged between the sections at each end of each casing, means for simultaneously moving the nuts in opposite direction, a fixed guideway for each section of the casing, and a spring between each guideway of the flexible bands and the adjacent casing sections.

1,171,215. SHADE-ROLLER. DAVID ADDISON LANE, Austin, Tex. Filed Feb. 4, 1915. Serial No. 6,047. (Cl. 156—35.)



1. In a device of the class described, the combination of a roller having a transverse recess provided therein and adapted to form a shoulder at one end of the recess, a metallic sleeve disposed upon said roller and provided with a stamped portion engaging in said recess against the floor and shoulder thereof, a flexible shade secured to and adapted to be wound upon the roller and in position to overhang the recess, said shade being provided adjacent the roller with a cut-away portion whereby the recess may be uncovered as the shade is drawn from the roller, a bracket in which said roller is pivoted, and a pawl pivotally connected to the bracket and in such position as to drop into the recess when the latter becomes uncovered whereby to limit the movement of the shade, substantially as described.

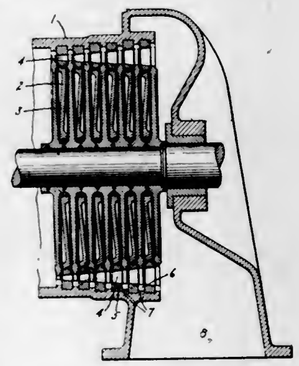
2. In a device of the class described, the combination of a roller having a recess provided transversely near one end thereof for forming a shoulder, a bracket upon which said roller is journaled, a shade secured to and adapted to be wound upon the roller and having a cut-away portion adjacent the roller whereby the shade may be unwound for uncovering the recess, and a pawl pivotally connected to the bracket and adapted to engage within the recess upon uncovering of the latter whereby to stop the unwinding movement of the shade.

3. A device of the class described comprising a roller having a recess disposed transversely near one end thereof and providing an inclined floor and a shoulder at one end of the floor, a shade carried on the roller and adapted to be wound thereon whereby to cover said recess, said shade adjacent the roller being provided with a cut-away portion whereby the recess may be uncovered, a bracket in which said shade is journaled and a pawl carried by the bracket and adapted to engage within said recess against the shoulder for limiting the movement of the shade in one direction, said shade adapted when moved in the opposite direction to wind upon the roller and engage beneath said pawl for lifting the latter out of engagement with the recess.

4. A device of the class described comprising a roller having a transversely disposed recess formed near one end thereof, a shade secured to and adapted to be wound upon the roller and adapted to cover the recess when the shade is in wound up position, said shade being provided with a cut-away portion adjacent the roller whereby the recess may be uncovered as the shade is unwound from the roller, and means engaging on the shade above the roller and adapted to drop within the recess when the latter is uncovered whereby to limit the unwinding movement of the shade.

5. In a device of the class described, the combination with a roller having a recess formed therein, and a shade secured to and adapted to be wound on the roller in such position as to cover the recess and provided with a cut-away portion whereby the recess may be revealed as the shade nears the downward terminal of its unwinding movement, of a pawl bearing upon the roller and adapted to engage within the recess for limiting the unwinding movement of the shade.

1,171,216. STEAM-TURBINE. OSKAR LASCHE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,801. (Cl. 253—76.)



1. The combination with an elastic fluid turbine provided with bucket wheels and nozzles for directing the elastic fluid against them, of means forming a passage in the nozzles which is beyond the periphery of the next succeeding bucket wheel so that fluid of condensation may escape past the periphery of such buckets.

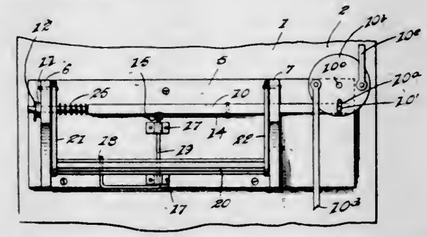
2. An elastic fluid turbine having stage nozzles provided with means for directing water of condensation past the periphery of the succeeding bucket wheel.

3. An elastic fluid turbine having its low pressure stage nozzles cut away at their outer sides to permit water of condensation to escape past the periphery of the succeeding bucket wheel.

4. An elastic fluid turbine having its low pressure stage nozzles cut away at their outer sides to permit water of condensation to escape past the periphery of the succeeding bucket wheel, and drain passages opening from the spaces between the diaphragms.

5. An elastic fluid turbine divided into stages, each stage having a fluid discharging device and a rotor means acted upon by the fluid from said device, the outer surface of the said device being at a greater distance from the rotor axis than the ends of the rotor buckets cooperating therewith to permit condensation to be discharged beyond the path of said buckets.

1,171,217. DOOR-BOLT-OPERATING MECHANISM. ELLSWORTH M. LETTS, Waverly, N. Y. Filed Sept. 4, 1914. Serial No. 860,272. (Cl. 70—120.)



1. In a door bolt operating mechanism, the combination, of an attaching plate, a spring controlled bar slidably carried by said attaching plate, a link pivotally connected to said bar, a rockable crank shaft supported by said attaching plate, one end of said crank shaft being connected to said link, the opposite end of said crank shaft being bent upwardly and angled, a hand bar pivotally connected to said attaching plate, the angled end of said crank shaft being positioned in the path of said hand bar for rocking said crank shaft and moving said slidable spring controlled far upon movement of said hand bar toward said attaching plate, a disk rotatatbly carried by said attaching plate, said slidable bar being eccentrically connected to said disk for rotating the disk upon slidable movement of the bar, and means operatively connecting said disk to a door bolt.

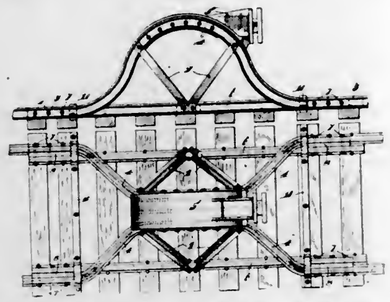
2. In a door bolt operating mechanism, the combination, of an attaching plate, a bar slidably carried by said attaching plate, a disk rotatably carried by said attaching plate, said bar being eccentrically connected to said disk, a link pivotally connected to said bar, a crank shaft rockably supported by said attaching plate, one end of said crank shaft being connected to said link, a hand bar pivotally connected to said attaching plate, the end of said crank shaft remote from said link being bent upwardly and angled and positioned in the path of said hand bar for rocking the crank shaft upon movement of the hand bar toward said attaching plate, a spiral spring connected to said slidable bar for automatically returning said bar to its normal position and rocking said crank for moving said pivoted hand bar outwardly after release of pressure therefrom, and means eccentrically connected to said disk for operating a door bolt upon rotation of the disk.

1,171,218. CAR-BUMPER. JOSEPH MCMAHON, Chicago, Ill., assignor of one-half to Ellen E. McMahon, Chicago, Ill. Filed Aug. 14, 1915. Serial No. 45,454. (Cl. 104—224.)

1. The combination of track end rails arched centrally, upwardly and inwardly, both ends of the arches being

identical so as to be interchangeable; and a bumper supported on said arches, substantially as described.

2. The combination of track end rails arched centrally, upwardly and inwardly, both ends of the arches being identical so as to be interchangeable; straight rails laid within the ends of said arched rails and secured thereto; and a bumper supported on said arches, substantially as described.

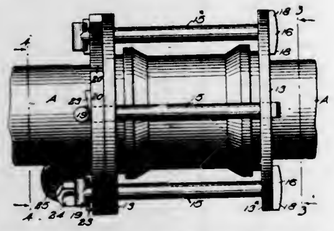


3. The combination of track end rails arched centrally, upwardly and inwardly, both ends of the arches being identical so as to be interchangeable; two braces secured at their lower ends adjacent each other, diverging thence upwardly and inwardly and secured at their upper ends to the corresponding arch; and a bumper supported on said arches, substantially as described.

4. The combination of track end rails arched centrally, upwardly and inwardly, both ends of the arches being identical so as to be interchangeable; straight rails laid within the ends of said arched rails and secured thereto; two braces secured at their lower ends adjacent each other to each straight rail, diverging thence upwardly and inwardly and secured at their upper ends to the corresponding arch; and a bumper supported on said arches, substantially as described.

5. The combination of track end rails arched centrally, upwardly and inwardly, both ends of the arches being identical so as to be interchangeable; straight rails laid within the ends of said arched rails and secured thereto; two braces secured at their lower ends adjacent each other to each straight rail, diverging thence upwardly and inwardly and secured at their upper ends to the corresponding arch; clamping bars extending between said track end rails at each side of said arches and clamping said end and straight rails together; and a bumper supported on said arches, substantially as described.

1,171,219. PIPE-COUPLING. EDWARD J. MAIRE, Lima, Ohio. Filed Aug. 4, 1915. Serial No. 43,557. (Cl. 137—28.)



1. A pipe coupling including a coupling sleeve adapted to receive pipe sections, the said sleeve being formed with enlarged ends presenting annular seats adapted to receive gaskets, followers fitting the sleeve ends to press the gaskets therein, bolts extending longitudinally outside the sleeve, the said bolts engaging at one end with one follower and at the opposite ends passing through the other follower and formed with heads, a gland formed of separate segments presenting slots receiving the said bolts, there being inclines on the gland segments at said slots, on which inclines the adjacent heads of the bolt are adapted to seat, and means to draw the segments together and give transverse movement to the inclines beneath the bolt heads.

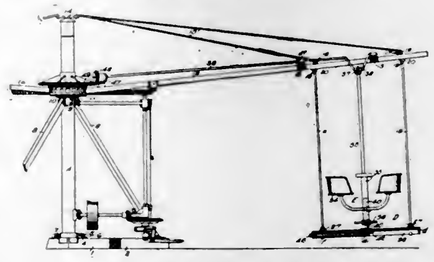
2. A pipe coupling including a coupling sleeve to receive the ends of pipe sections and presenting seats adapted to receive gaskets, sliding followers adjacent to said seats, a gland adjacent to one of the said followers, the said gland being formed of segments, and means to draw the followers toward the gasket seats by the movement of the segments of the gland toward each other.

3. A pipe coupling comprising a sleeve adapted to receive the ends of pipe sections, said sleeve having flaring ends presenting tapering gasket seats, gaskets conforming approximately to the said seats, ring followers at the ends of the sleeve adapted to exert pressure against the gaskets, the said followers having slots therein, bolts outside the sleeve and formed with T-heads, the bolts extending through the slots of the followers, the T-head at one end of each bolt engaging in the slots of the adjacent follower, the T-head at the opposite end being adapted to pass through the follower and be positioned beyond same, a gland formed of separate segments and provided with inclines on which the adjacent bolt heads are adapted to seat, and means to draw the said segments together.

4. A pipe coupling including a coupling sleeve having seats at its ends adapted to receive gaskets, followers adjacent to the ends of the sleeve and adapted to exert pressure on the gaskets, bolts ranging lengthwise outside of the sleeve, the said bolts engaging at one end with the adjacent follower and a gland adjacent to the other follower and means to give transverse movement to the gland relatively to the bolts, there being co-acting members on the bolts and gland to cause the bolts to force the followers toward each other by the said relative transverse movement of the gland.

5. A pipe coupling including a sleeve adapted to receive the ends of pipe sections, the said sleeve presenting gasket seats at its ends, followers adjacent to the ends of the sleeve adapted to be moved toward the gasket seats, the followers being formed with slots, bolts extending through the slots of the followers and provided with T-heads, the heads of the bolts at one end of the latter engaging the adjacent slotted follower, the opposite ends of the bolts extending beyond the follower adjacent thereto, the heads on said opposite ends being positioned beyond the follower, a gland formed of segmental sections, the sections being slotted, presenting inclines on which the adjacent bolt heads are adapted to seat, said gland sections furthermore having lugs thereon near opposite ends thereof, the lugs presenting slots opening at the edges of the lugs and a bolt passing through said lugs and received in said slots.

1,171,220. CAROUSEL. WILLIAM F. MANGELS, New York, N. Y. Original application filed July 17, 1914, Serial No. 851,512. Divided and this application filed June 18, 1915. Serial No. 34,818. (Cl. 46—27.)



1. In a carousel, the combination of a rotary structure including a suspension passenger platform, crank shafts on the said structure, a rod detachably connected with and suspended from each crank shaft to be reciprocated and oscillated thereby, a member telescopically connected with each rod, sockets on the platform for receiving the lower ends of the members, and removable pivots disposed under the platform for connecting the members with the sockets.

2. In a carousel, the combination of a rotary structure including a suspension passenger platform, crank shafts on the said structure, a rod detachably connected with and suspended from each crank shaft to be reciprocated and oscillated thereby, members telescopically connected with each rod, sockets in the platform in which the lower ends of the members are disposed, and pivot rods detachably and hingedly connecting the members with their respective sockets, said rods extending to the edge of the platform so as to be accessible.

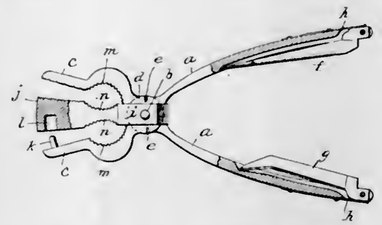
3. In a carousel, the combination of a rotary structure including a suspension passenger platform, crank shafts on the said structure, a rod detachably connected with and spspended from each crank shaft to be reciprocated and oscillated thereby, members telescopically connected with each rod, sockets in the platform receiving the lower ends of the members, pintle pins extending through the sockets and members for hingedly and detachably connecting the latter to the sockets, and keepers for holding the pintle pins removably in position.

4. In a carousel, the combination of a rotary structure including suspension devices, and a platform composed of sections each supported by a plurality of suspension devices, each section having cleats fastened to its under side at the ends thereof, and the devices extending under and interlocking with the cleats for holding the sections in alinement.

5. In a carousel, the combination of a rotary structure including suspension rods, double hook members fastened to and carried by the lower ends of the rods, and a platform made in sections engaged with and supported by the said members, the ends of said sections meeting in planes coincident with the rods and having recesses to engage the said members, whereby outward radial displacement of the platform sections is prevented.

[Claims 6 to 16 not printed in the Gazette.]

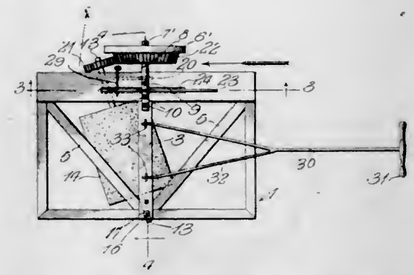
1,171,221. COMBINATION-TOOL. CHARLES EPHRIAM MARION, Franklin, N. H. Filed Dec. 13, 1915. Serial No. 66,534. (Cl. 7—3.)



A tool of the pliers type consisting of crossed handles pivoted together and each provided with a jaw, and an anvil between said jaws freely swung on the pivot connecting the handles, one of said jaws being provided with a punch.

1,171,222. PAVEMENT-SWEEPER. JOHN B. MARTIN, Cincinnati, Ohio. Filed Dec. 3, 1914. Serial No. 875,288. (Cl. 15—17.)

1. In a sweeper of the class described, a frame, a tractor wheel mounted thereon intermediate of its ends, a shaft rotatably mounted on the frame and extending transversely of the latter, a bearing for one end of said shaft, a pivoted link having a bearing for the other end of said shaft, a brush carried on said shaft, an intermeshing pinion, a gear on the pivotally mounted end of the shaft and the tractor wheel, and means for swinging the last mentioned end of the shaft and link in the arc of a circle to adjust the end of the brush to opposite sides of the tractor wheel.



2. In a sweeper of the class described, a frame, a tractor wheel carrying a gear mounted at one side of the frame, a rotatable shaft extending transversely of the frame, one end of said shaft mounted to rotate and swing in a bearing, a link pivotally mounted at one end on the frame adjacent the traction wheel and having a bearing at its opposite end for the opposite end of said shaft, a pinion on the last mentioned end of the shaft engaging the gear on the tractor wheel, and means for swinging said pinion and link in the arc of a circle to adjust the end of the brush to opposite sides of the tractor wheel.

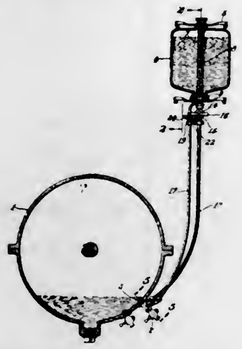
3. In a sweeper of the class described, a frame, a tractor wheel carrying a gear mounted thereon at one side intermediate of its ends, a rotatable shaft extending transversely of the frame, a shaft positioned vertically through one end of the frame and having an apertured bearing plate depending therefrom in which one end of the shaft is adapted to rotate and swing, a link pivotally mounted at one end on the frame adjacent the traction wheel and having a bearing at its opposite end for the opposite end of the shaft, connecting means between the last mentioned end of the shaft and the tractor wheel, a brush on said shaft to rotate therewith, and a lever for swinging said last mentioned end of the shaft and link in the arc of a circle on the frame to adjust one end of the brush to opposite sides of the axis of the tractor wheel.

4. In a sweeper of the class described, a frame, a tractor wheel mounted thereon intermediate of its ends, a rotatable shaft extending transversely of the frame, a bearing for one end of said shaft, a link pivotally mounted at one end on the frame and having a bearing at its opposite end for the opposite end of said shaft, connecting means between the last mentioned end of the shaft and the tractor wheel, a brush on said shaft to rotate therewith, and a lever fulcrumed intermediate of its ends on said frame and having connection with the last mentioned end of said shaft to swing the latter in the arc of a circle and dispose the same to opposite sides of the axis of said tractor wheel.

5. In a sweeper of the class described, a frame, a tractor wheel mounted thereon intermediate of its end, a rotatable shaft extending transversely of the frame, a bearing for one end of said shaft, a link pivotally mounted at one end on the frame and having a bearing at its opposite end for the opposite end of said shaft, connecting means between the last mentioned end of the shaft and the tractor wheel, a brush on said shaft to rotate therewith, a lever fulcrumed intermediate of its ends on the frame and movable thereon to permit the lower end of the same to contact with the surface of the ground, said lever having a loose engagement with said shaft to adjust the latter in the arc of a circle and dispose the same on opposite sides of the axis of said tractor wheel, and means for retaining said lever in various adjusted positions on the frame.

[Claims 6 to 8 not printed in the Gazette.]

1,171,223. AUTOMOBILE-OILER. RUDOLPH MARTINI, St. Louis, Mo. Filed May 3, 1915. Serial No. 25,469. (Cl. 184—103.)



1. In a lubricating device and in combination with an engine crank casing, a supply reservoir, lubricant and air ducts directly connecting the reservoir and casing and terminating at the determined oil level in said casing, and a valve adapted to close one of said ducts relatively to said reservoir after a determined supply of lubricant has been delivered to the casing and while the engine is in operation.

2. In a lubricating device and in combination with a casing, a supply reservoir, a lubricant duct connecting the reservoir and casing, an air duct also connecting said parts, and means for closing said ducts at will relatively to the reservoir.

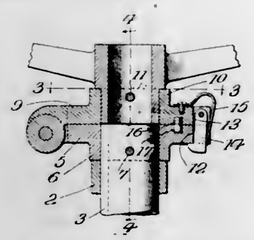
3. In a lubricating device and in combination with a casing, a supply reservoir, lubricant and air ducts connecting the reservoir and casing, and a valve for opening and closing said air duct relatively to said reservoir.

4. In a lubricating device and in combination with a casing, a supply reservoir, a lubricant duct, an air duct, said ducts leading from the reservoir and communicating with the casing at the determined oil level, and means for closing said ducts at will relatively to the reservoir.

5. In a lubricating device and in combination with a casing, a supply reservoir, a lubricant duct, an air duct, said ducts connecting the reservoir and casing and communicating with the latter at the determined oil level, and means for simultaneously closing said ducts at will relatively to the reservoir.

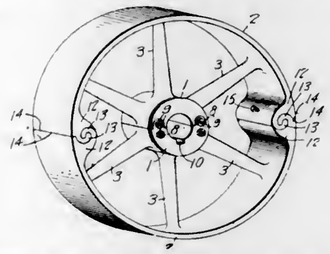
[Claims 6 to 19 not printed in the Gazette.]

1,171,224. STEERING-WHEEL OF MOTOR-VEHICLES. JOHN F. MEANS, Oil City, Pa. Filed Apr. 13, 1914. Serial No. 831,537. (Cl. 74—33.)



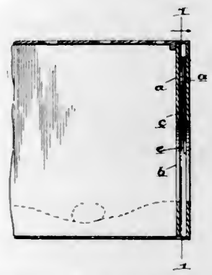
In a steering device, the combination with a steering post composed of a hollow shaft, of a rotatable shaft therein and projecting therefrom at its upper end, a plate member having therein a central opening surrounded by a depending collar and a pair of spaced apart knuckles formed on one end, said collar receiving the upper end of the rotatable shaft, a pin extending transversely through said collar and said shaft, whereby the plate member is reliably secured in position, an additional plate member having therein a central opening of the same size as and adapted to aline with the opening in said first mentioned plate, said plate being provided with a collar on its upper face surrounding said openings and a knuckle formed on one end adapted to be disposed between said pair of knuckles to provide a hinged connection between said plates, one of said plate members having a socket therein and the other having a stud positioned to enter said socket, said socket and stud being disposed diametrically opposite the hinged connection of the plate, a wheel provided with a collar on its under face of the same diameter as the projecting end of said rotatable shaft, said collar being adapted to be received in the last mentioned collar, a pin extending transversely through said collars, whereby the additional plate member is reliably secured in position, said plates having registering notches therein at points opposite the hinged connection thereof, a locking dog pivotally mounted in the notch of the upper plate with its locking end extending through the notch in the other plate in position to engage the lower face of said last mentioned plate, and a resilient member positioned to normally force said dog in a locking position.

1,171,225. WHEEL. SAMUEL MICHAUD, Saltese, Mont. Filed May 11, 1915. Serial No. 27,377. (Cl. 64—18.)



A sectional wheel having a hub and a rim connected therewith, the rim at each end of each section having an enlargement or head on the inner surface of the rim, each enlargement having a hook extending beyond the end of the section, and each enlargement being recessed to receive the adjacent hook of the other section and to form an abutment against which the hook may bear, the hooks fitting and filling each other and the recesses, and extending circumferentially of the rim, and being of substantially uniform cross sectional area throughout their extent.

1,171,226. TRAP-NEST. FREDERIC CHARLES MILLER, U. S. Army. Filed Mar. 20, 1915. Serial No. 15,722. (Cl. 119—49.)



1. The combination with a nest box whose front wall is constructed of two wall members spaced apart and provided with a door-opening, of a door gravitatingly pivoted in the space between the wall members at a point above the door-opening and being bodily movable backward and forward between said wall members, and a supporting projection extending inwardly from the front member of the wall and so located that when the door rests thereon a part of the door will extend into the door-opening, both of said wall members being arranged to inclose the edge of the door when the door is in closed position, for the purpose set forth.

2. The combination with a nest box whose front wall is provided with a combined entrance and exit opening, of a door gravitatingly pivoted at a point above said opening on the front wall, and a projection mounted on the front wall extending inwardly into the path of the swinging door at one side of the opening, so that when the door is raised it will impinge against the under side of said projection, one of the impinging faces being beveled so that in raising the door it will pass by the projection and rest upon the upper edge of the projection, the parts being so proportioned that when the door thus rests upon the projection a part of the door near the pivoted end will project into the opening at the upper side thereof.

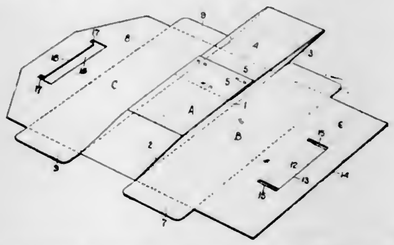
1,171,227. BILLIARD-CUE TIP AND HOLDER. KELSEY L. MILLS, Denver, Colo. Filed Sept. 12, 1914. Serial No. 861,335. (Cl. 46—9.)



1. The combination with a cue stick, of a tip having its base circumferentially grooved, a sleeve whose upper extremity is interiorly grooved and surrounds the grooved part of the base, a spring ring for connecting the engaging parts of the sleeve and tip, and means for securing the sleeve to the cue stick.

2. The combination with a cue stick, of a tip and a two-part coöperating sleeve for securing the tip in place upon the stick, both of the coöperating members having a groove, and a ring adapted to engage both grooves, for the purpose set forth.

1,171,228. FOLDING PACKING-BOX. ABRAHAM MISROCH and ADOLPH KAHN, New York, N. Y. Filed Feb. 1, 1915. Serial No. 5,452. (Cl. 229—52.)



A collapsible packing box comprising a body formed of a bottom, top, and end walls integrally connected with the top and bottom; side walls connected with the bottom; end flaps on the side walls folded into the body and engaging the inner faces of the end walls; flaps connected with the top edges of the side walls and overlapping the top of the said body; and a handle in the form of a strip having enlarged ends, one of the last mentioned flaps having recesses out of which the portion of the handle between the enlarged ends projects, the enlarged ends lying between the top of the body and the said recessed flaps, and the other flap which overlies the top of the body being provided with a longitudinal slot through which the handle projects, and one edge of the slot being recessed for permitting the handle to be laterally moved into and out of the recesses to lock and unlock the flaps.

1,171,229. NURSERY-RATTLE. AMELIA MORSE, New York, N. Y. Filed Nov. 27, 1915. Serial No. 63,739. (Cl. 46—46.)



1. The herein described nursery rattle comprising a holder, a hollow sounding body secured rigidly thereto, means within the body to cause a rattling sound, one or more illustrations arranged upon the surface of said body, another hollow body surrounding the first mentioned body, and means connected to the outer body to prevent endwise movement thereof with respect to the holder and inner body but permitting relative rotation of the inner and outer bodies with respect to each other, said illustrations being visible in succession through the wall of the outer body.

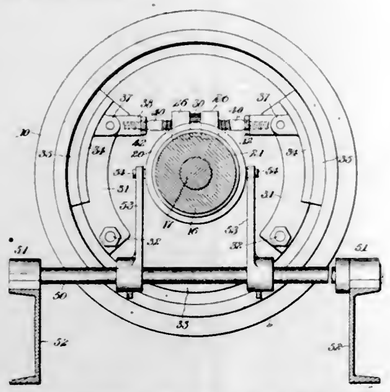
2. In a nursery rattle, the combination of a holder, a hollow sounding ball secured to and around said holder, means within the ball to cause a rattling noise, the holder constituting a polar axis for the ball, a series of illustrations of common objects arranged around the equatorial circumference of the ball and all indicated as progressing in the same direction, a hollow body surrounding said ball and spaced therefrom and rotatable around said polar axis, and means to prevent endwise movement of the hollow body with respect to the ball, said illustrations being visible in succession through the wall of the outer body.

3. In a nursery rattle, the combination of a holder comprising an axial stem and an enlargement at each end thereof, a hollow sounding body secured rigidly to the stem adjacent but spaced from one of the enlargements, means within the body to cause a rattling sound, a series of illustrations of common objects arranged around the hollow body in a plane perpendicular to the stem, a hollow body surrounding and spaced freely from the sounding body and journaled for rotation around said axial stem, the latter body being provided with an opening in its wall in the plane of said illustrations whereby the illustrations may be viewed in succession through the opening, and a sleeve secured at one end to the latter mentioned body and adapted to bear at its other end against the other enlargement, substantially as set forth.

1,171,230. CLUTCH. RUDOLPH B. MORTON, Cleveland, Ohio. Filed May 1, 1912. Serial No. 694,378. (Cl. 192—3.)

1. An improvement in clutches comprising a driving member provided with a flange, a driven member, clutch shoes pivotally supported by said driven member oppo-

site said flange, connecting sleeves pivotally connected with said shoes, rods adjustably connected with said connecting sleeves, a rotatable turnbuckle member adjustably engaging the other end of each rod, and means for rotating said turnbuckle member.



2. An improvement in clutches comprising a driving member, a driven member, clutch shoes pivotally supported by said driven member, spaced apart bearing blocks carried by said driven member, a turnbuckle member rotatably mounted between said bearing blocks, turnbuckle rods adjustably engaging said rotatable turnbuckle member, connecting sleeves pivotally connecting with said clutch shoes and adjustably engaging said turnbuckle rods, means for preventing relative movement of said sleeves and said rods, and means for rotating said turnbuckle member.

3. An improvement in clutches comprising a driving member provided with a flange, a driven member, clutch shoes pivotally supported by said driven member and provided with flanges extending parallel with the flange of the driving member, sleeves pivoted to the free ends of said shoes, rods adjustably connected with said sleeves, means for preventing relative movement of said rods and sleeves, a rotatable turnbuckle member adjustably engaging the other end of each rod, and means for rotating said turnbuckle member.

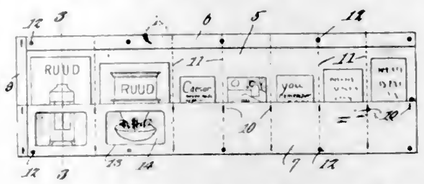
4. An improvement in clutches comprising a driving member provided with an overhanging flange, a driven member including a hub provided with a radial flange, clutch shoes pivotally supported by said radial flange and provided with flanges extending parallel with said overhanging flange, sleeves pivotally connected with the free ends of said shoes, rods adjustably connected with said sleeves, means for preventing relative movement of said rods and sleeves, a rotatable turnbuckle member adjustably engaging said rods, and means for rotating said turnbuckle member.

5. An improvement in clutches comprising a shaft, a driving member secured thereto and having an overhanging flange, a driven member including a hub rotatably mounted on said shaft and provided with a radial flange, and a longitudinal groove, said hub having a flattened portion, clutch shoes pivotally supported by said radial flange and arranged to engage said overhanging flange, spaced apart blocks secured to the flattened portion of said hub, a rotatable turnbuckle member supported by said blocks, turnbuckle rods positively connected to said shoes and adjustably connected to said rotatable member, and a slidable rack in said groove for rotating said rotatable member.

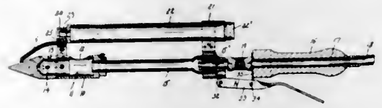
[Claims 6 to 8 not printed in the Gazette.]

1,171,231. MAILING AND DISPLAY PACKAGE. MICHAEL W. MULLEN, Baltimore, Md. Filed June 18, 1915. Serial No. 34,795. (Cl. 229—87.)

The combination in a mailing and display package comprising an elongated sheet of pliant material having transverse creases dividing the sheet into a plurality of foldable sections, with two adjacent end sections at one end of the sheet of a greater width than the remaining sections, the latter sections being foldable between said broader end sections, of a fold in the sheet approximately one half its width, at one of its longitudinal edges having a plurality of openings provided therein, fasteners passing through the fold and the body of said sheet to form the folds into a series of pockets, the openings in the fold forming sight openings in said pockets, and means for securing said foldable sections in folded position.



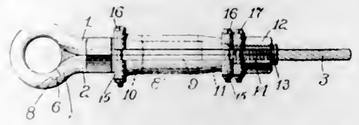
1,171,232. SOLDERING-IRON. GÉZA MÜLLER, New York, N. Y. Filed Oct. 20, 1915. Serial No. 56,885. (Cl. 158—25.)



1. In a soldering iron, the combination with the bit, stock and handle of the tool, of a solder magazine oscillatably carried thereby, said magazine having an outlet, a conduit leading to said bit having an inlet adapted to register with said outlet, heating means for said bit and magazine, and manually controllable means for oscillating said magazine, whereby its outlet is brought in registering position with the inlet to said conduit.

2. In a soldering iron, the combination with the bit, stock and handle of the tool, of a solder magazine oscillatably carried thereby, said magazine having an outlet, a conduit leading to said bit having an inlet adapted to register with said outlet, heating means for said bit and magazine, manually controllable means for oscillating said magazine, whereby its outlet is brought in registering position with the inlet to said conduit, and means for returning said magazine to its normal closing position.

1,171,233. DETACHABLE MOVABLE CABLE-FASTENING. WILLIS GRANT MURRAY, San Francisco, Cal. Filed Apr. 1, 1914. Serial No. 828,793. (Cl. 24—124.)



1. A cable socket comprising two clamping members having exterior inclines and threaded ends, and having their meeting faces provided with parallel grooves from end to end, making a throughway for the cable, said grooves being corrugated to fit and grip the corrugations of the cable, a one-part slotted sleeve having an inclined portion to engage the inclines on the clamping members, a slotted nut for pressing said sleeve longitudinally along the clamping members, and an attaching device on one of the clamping members, substantially as described.

2. In combination clamping members grooved longitudinally to receive a cable and corrugated spirally to conform substantially to the cable corrugations, said corrugations of the clamping members having transversely disposed high parts to bite into the cable, and a clamping sleeve and nut to press the clamping members together, substantially as described.

3. In combination in a cable socket, a pair of clamping members to engage a cable and having means for the attachment of another cable, said clamping members having inclines disposed at different points along the same, a jump on sleeve in one piece slotted longitudinally to receive the cable and having inclines at its ends to engage the inclines on the clamping members, and a nut slotted to receive the cable and threaded upon the ends of the clamping members and bearing on the clamping sleeve to force the same into place, substantially as described.

4. In combination in a cable socket, a pair of clamping members having inclines, a sleeve slotted longitudinally and having inclines to engage the inclines of the clamping members, a slotted clamping nut engaging screw threaded ends of the clamping members, and a removable connection extending from one edge of the slotted clamp to the other and a connection extending from one edge of the nut to the other, substantially as described.

5. In combination two clamping members, a sleeve slotted to receive a cable, said clamping members and said sleeve having each a pair of inclines, a slotted nut for holding the sleeve in place, and a removable reinforcing connection extending from one edge of the sleeve to the other at the inclines, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,171,234. BILL-FOLDER. EDWARD P. O'HARA, New York, N. Y. Filed July 1, 1915. Serial No. 37,466. (Cl. 150—38.)

1. A bill folder having a bill pocket one side of which has a longitudinal opening and the other side, a cut-out at one end thereof; and a flap for closing the cut-out.

2. A bill folder having a bill pocket extending substantially through the entire length of the folder and having at one side of the pocket a longitudinal opening and at the other side a cut-out, said cut-out being slightly less than a fold of the bill folder; and a flap for closing the cut-out adapted to overlap it.

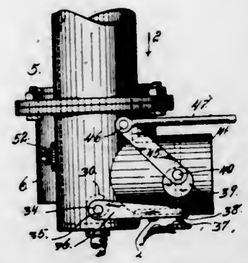
3. A bill folder having a bill pocket extending through the entire length of the folder, said folder having a longitudinal opening on the outer side thereof and a cut-out at one end thereof on the inner side of the pocket, said cut-out being less than a fold of the folder; and a flap secured to the edge on the inner side of the folder adapted to close the cut-out.

4. A bill folder comprising a pair of blanks the adjacent longitudinal edges of which form an opening; and a blank secured at the edges with the pair of blanks and forming therewith a bill pocket, said blank having a cut-out at one end thereof, the width of which is greater than the width of a bill, and a flap for closing the cut-out.

5. A bill folder having a pair of similar outer blanks the adjacent longitudinal edges of which form an opening; an inner blank secured at the edges of the other blank, said inner blank having a cut-out adjacent one end thereof, said cut-out being less than the fold of the bill folder; a flap for closing the cut-out secured to the edge of the folder; and means for locking the flap to the inner blank.

[Claims 6 and 7 not printed in the Gazette.]

1,171,235. CARBURETER. CHARLES D. OLSEN, Denver, Colo. Filed Jan. 25, 1915. Serial No. 4,148. (Cl. 48—155.1.)



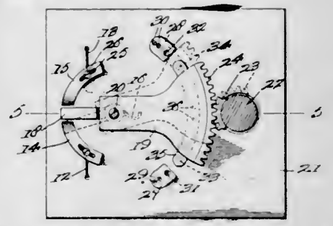
A carbureter having a throttle valve and a needle valve, the needle valve being located between the throttle valve and the engine, the needle valve comprising a stem and a casing in which the stem is located, the said casing having an opening normally closed by the valve piece of the stem, the said stem projecting beyond the casing and having a stop at its exposed extremity, a spring surrounding the stem between the needle-valve casing and said stop, a rock spindle located below the stem of the needle valve and carrying an eccentric cam, against which the exposed extremity of the needle valve is pressed by the said spring, an arm secured to the rock spindle and carrying a screw threaded into one extremity thereof, the stem of the throttle valve carrying an eccentric cam whose periphery is engaged by the said screw, means acting on the said arm for pressing the screw against said cam, a crank arm secured to the stem of the throttle valve, and an operating rod connected with said crank arm, whereby as the throttle valve is actuated, a corresponding predetermined movement is imparted to the needle valve.

1,171,236. ROAD-MAKING COMPOSITION. EDWARD A. PATERSON, North Tonawanda, N. Y. Filed June 20, 1914. Serial No. 846,402. (Cl. 106—30.)

1. A road covering, comprising essentially a road metal, powdered calcium carbonate and a soluble alkali metal silicate containing a large percentage of silica and a relatively small percentage of combined water.

2. A road covering, comprising essentially a road metal, powdered calcium carbonate, asphaltum and a soluble alkali metal silicate containing a large percentage of silica and a relatively small percentage of combined water.

1,171,237. AUTOMOBILE-HEADLIGHT. GEORGE PELHAM, Lead, S. D., assignor of one-half to Chambers Kellar, Lead, S. D. Filed Oct. 29, 1915. Serial No. 58,617. (Cl. 240—7.)



1. The combination with electric lamps, of circuits for said lamps including a pair of contacts, means for adjusting said contacts, a switch normally resting between said contacts and pivoted to swing to engage either one thereof, disengageable gear connections for actuating said switch, and means for maintaining said switch in shifted position during the disengagement of said gear connections, substantially as described.

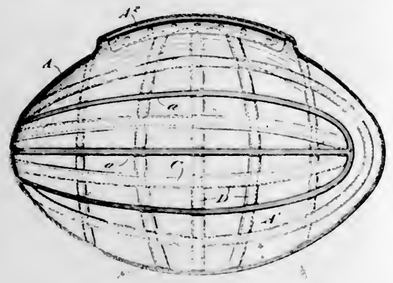
2. A device as described including circuits, adjustable contacts in said circuits, a pivoted switch for swinging to engage said contacts, disengageable gear connections for actuating said switch, socket plates to either side of said switch, and spring-pressed heads on said switch for engaging said socket plates to temporarily maintain the switch in shifted position during the disengagement of said gear connections, substantially as described.

3. In a device of the character described, the combination of circuits, contacts included in said circuits, a switch normally at rest between said contacts and movable to engage either one thereof, a gear element associated with said switch, a second gear element normally in mesh with the switch gear element but disengageable therefrom, socket plates to either side of said switch element, a spring secured to said switch element, and heads on the ends of said spring for engaging said socket plates when the gear elements are disengaged to maintain the switch on the respective contact, substantially as described.

4. In a device of the character described, the combination of a rotatable post, a gear element on said post, a pivoted gear element meshing with said first-named gear element, a switch arm connected to move with said last-named gear element, contacts to either side of said switch arm, circuits including said contacts and switch arm, socket plates to either side of said pivoted gear element, and spring-pressed heads on said pivoted gear element for engaging the socket plates to maintain the switch arm on the respective contact when the first-named gear element disengages the pivoted element, substantially as described.

5. In a device of the character described, the combination of a pair of circuits, contacts included in said circuits, means for adjusting said contacts, a pivoted switch arm normally resting between said contacts and movable to engage either one thereof, a pivoted gear segment connected to move with said switch arm, a rotatable post, a fragmentary pinion on said post normally in mesh with the gear segment and disengageable therefrom, a flat spring secured centrally to said gear segment, heads on the ends of said flat spring, and socket plates to either side of said gear segment for receiving the heads of said flat spring to hold the segment and switch in shifted position when the gear connections are disengaged, substantially as described.

1,171,238. ATHLETIC BALL. GEORGE L. PIERCE, Brooklyn, N. Y., assignor to A. G. Spalding & Bros. Mfg. Co., Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 23, 1914. Serial No. 878,771. (Cl. 46—4.)



1. An inflatable athletic ball having an outer cover or shell comprising a plurality of panels, each of which has individual thereto a series of attached strips running crosswise thereof and with their ends connected with adjacent panels.

2. An inflatable athletic ball having an outer cover or shell comprising a plurality of panels each of which has individual thereto a series of strips of suitable material running longitudinally and crosswise thereof and attached to adjacent panels.

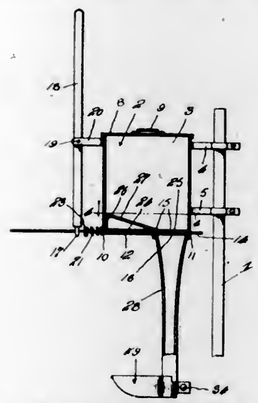
3. An inflatable athletic ball having an outer cover or shell comprising a plurality of panels each provided with its own strips of suitable inextensible material running longitudinally and crosswise thereof, and projecting into the seams and included in the stitching at said seams which unites the panels of said outer cover or shell.

4. An athletic ball having an outer cover or shell comprising a plurality of panels having a lining of suitable material with reinforcing strips sewn along their body portions to said lining and running longitudinally and crosswise of the panels of said ball and projecting into the seams and included in the stitching at said seams which unites the panels of said outer cover or shell.

5. An inflatable athletic ball having an outer cover or shell comprising a plurality of panels each having individual thereto a lining of suitable material with reinforcing strips of cotton webbing individual to each lining sewn thereto, running longitudinally and crosswise thereof projecting into the seams and included in the stitching at said seams which unites the panels of said outer cover or shell.

[Claims 6 to 8 not printed in the Gazette.]

1,171,239. PLANTER ATTACHMENT FOR CULTIVATORS. ROLDON E. PIERCE, Brimfield, Ill. Filed Oct. 13, 1915. Serial No. 55,677. (Cl. 111—6.)

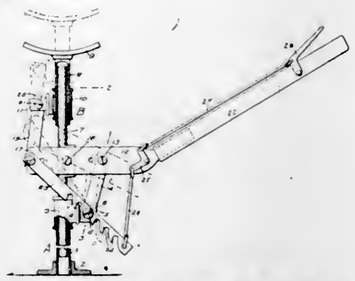


In a planter attachment for cultivators, the combination, of a hopper, means carried by said hopper for detachably connecting the hopper to an ordinary cultivating shovel carrying standard, a delivery spout carrier by said hopper, the sides of said hopper being positioned with a pair of alining openings positioned a short distance above the bottom of the hopper, a seed dropping plate slidably extending through said openings, a lever pivotally supported by said hopper and operatively connected to said seed dropping plate for moving the seed dropping plate for permitting of the passage of seeds out of said hopper through said delivery spout, means attached to said seed dropping plate for automatically returning it to a non-seed dropping position, a plate positioned within said hopper and above the upper surface of said seed dropping plate, said last named plate being bent upwardly and inwardly and downwardly at an incline, providing an inclined surface for guiding the grain toward the outlet opening formed in said seed dropping plate.

1,171,240. LIFTING-JACK. GEORGE ARTHER PIPER, Omaha, Nebr. Filed Apr. 2, 1915. Serial No. 18,715. (Cl. 254—114.)

1. A jack comprising a stationary base section, a movable upper section composed of two parts movable simultaneously in the same direction and at different rates, and an operating lever fulcrumed on the base section and operatively connected with the said movable parts on the upper section.

2. A jack comprising a stationary base section, a movable upper section composed of two parts movable simultaneously in the same direction and at different rates, an operating lever fulcrumed on the base section and operatively connected with the said movable parts on the upper section, and a prop pivotally connected with the lever and having means automatically engaging the base section to prop the lever raised.



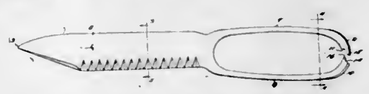
3. A jack comprising a stationary base section, a movable upper section composed of differentially movable parts, an operating lever fulcrumed on the base section and operatively connected with the said movable parts on the upper section, a prop pivotally connected with the lever and having means automatically engaging the base section to prop the lever raised, and means carried by the lever for releasing the prop.

4. A jack comprising a base section embodying a hollow column, a rod slidable vertically on the column, a load-carrying element slidable on the upper end of the rod, an operating lever, means for fulcruming the lever on the column, a pivotal connection between the lever and rod, and means for operatively connecting the load-carrying element with the lever at a point more remote from the fulcrum of the lever than the pivotal connection between the lever and the rod.

5. A jack comprising a base section embodying a hollow column, a rod slidable vertically on the column, a load-carrying element slidable on the upper end of the rod, an operating lever, means for fulcruming the lever on the column, a pivotal connection between the lever and rod, means for operatively connecting the load-carrying element with the lever at a point more remote from the fulcrum of the lever than the pivotal connection between the lever and the rod, and an automatic prop device for holding the rod and load-carrying element propped up when sustaining a load.

[Claim 6 not printed in the Gazette.]

1,171,241. TOOL FOR DRESSING FISH, &c. DUANE L. POTTER, Scranton, Pa. Filed May 5, 1915. Serial No. 26,052. (Cl. 17—10.)



1. A tool for skinning eels, etc., comprising two jaws, one jaw being recessed on its inner side and its outer side extended into a lip and the other jaw being recessed on its outer side to receive said lip and having its inner projecting side toothed to enter the recess of the first-named jaw, and means for supporting the jaws and moving them relatively to each other.

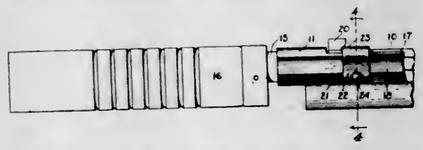
2. A tool for skinning eels, etc., comprising two arms having their ends turned inward into jaws, the upper jaw being recessed on its inner side and having its outer side extended into a lip provided with a sharp cutting edge, and the lower jaw being recessed on its outer side to receive said lip and having its inner side notched longitudinally of the tool to produce upstanding teeth adapted to enter said recess in the other jaw.

3. A tool for skinning eels, etc., comprising a loop-shaped handle consisting of two arms connected at one end and having their other ends disconnected and turned inward into jaws, one jaw being recessed on its inner side and its outer side extended into a lip provided with a sharp edge and the other jaw being recessed on its outer side to receive said lip when the jaws are pressed together.

4. A tool for skinning eels, etc., comprising a loop-shaped handle consisting of two arms connected at one end having their other ends disconnected and turned inward into jaws, one jaw being recessed on its inner side and its outer side extended into a lip and the other jaw being recessed on its outer side to receive said lip and having its inner projecting side toothed to enter the recess of the first-named jaw.

5. A tool for skinning eels, etc., comprising a loop-shaped handle consisting of two arms integrally connected at one end and having their other ends disconnected and turned inward into jaws, the upper jaw being recessed on its inner side and having its outer side extended into a lip provided with a sharp cutting edge, and the lower jaw being recessed on its outer side to receive said lip and having its inner side notched longitudinally of the tool to produce upstanding teeth adapted to enter said recess in the other jaw when the handle is compressed, for the purpose set forth.

1,171,242. ATTACHING MEANS FOR GUN-SILENCERS. ANDREW T. PRATHER, Rodeo, N. Mex. Filed Nov. 14, 1914. Serial No. 872,150. (Cl. 89—31.)



1. In an article of the class described, a silencer with a threaded openng, a sleeve, means for securing the sleeve to the muzzle of a gun, the sleeve being provided with a threaded opening, and a nipple with an outer thread having one end meshing in the second threaded opening for abutting against the outer end of the muzzle of a gun, the other end of the nipple projecting from the sleeve for meshing in the threaded opening in the silencer to permit the silencer to turn home against the sleeve to accommodate the adjustment of the sleeve relatively to the gun barrel.

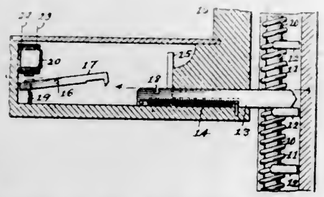
2. In an article of the class described, a sleeve having a longitudinal slot, a band disposed across the slot, means for securing the ends of the band to the sleeve, there being an inner thread in the outer end of the sleeve, and a nipple with an outer thread meshing with the thread in the sleeve for turning home against the muzzle of a gun disposed in the sleeve, the nipple projecting from the sleeve for the purpose specified.

3. In combination with a gun barrel having a projection and a silencer having a threaded opening, a sleeve having a longitudinal slot in which the projection on the gun barrel is disposed, a band disposed across the slot in the rear of the projection, means for securing the ends of the band to the sleeve, there being an inner thread in the outer end of the sleeve; and a nipple with an outer thread meshing with the thread in the sleeve and abutting against the end of the gun barrel, the outer end of the nipple meshing in the threaded opening in the silencer.

4. In combination with a gun barrel having a sight and a silencer having a threaded opening, a sleeve, means for securing the sleeve to the gun barrel relatively to the sight, there being an inner thread in the outer end of the sleeve, and a nipple with an outer thread meshing with the thread in the sleeve and abutting against the end of the gun barrel, the outer end of the nipple meshing in the threaded opening in the silencer to permit

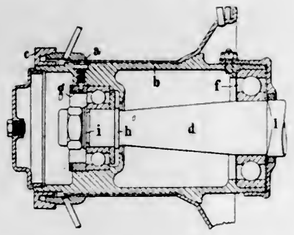
the silencer to turn home against the sleeve to accommodate the adjustment of the sleeve relatively to the gun barrel.

1,171,243. ELEVATOR SAFETY DEVICE. PROKOP JACK PROKOP, New York, N. Y. Filed June 19, 1915. Serial No. 35,002. (Cl. 187—84.)



The combination with an elevator shaft, of a car therein, a cable for suspending the same, a slide on said car, means for forcing said slide outwardly, means for holding the slide inwardly, means for rendering said holding means inoperative, a rod in said shaft extending from top to bottom thereof, a coil spring on said rod, and cleats on said spring at intervals for slide engagement when in outermost position.

1,171,244. DETACHABLE WHEELS AND FITTING VEHICLES THEREWITH. JOHN VERNON PUGH, Coventry, England. Filed Aug. 18, 1913. Serial No. 785,396. (Cl. 21—31.)



1. In combination a wheel hub for a certain side of a vehicle, a set of components for operatively mounting the same, complementary faces whereby said hub and components coöperate one with the other and a corresponding hub and set of components for the other side of said vehicle in which the complementary faces are purposely differentiated to prevent the interchange of said hubs.

2. In combination a wheel hub and components for operatively mounting the same on the right hand side of a vehicle, complementary faces whereby said hub and components coöperate with the other, a corresponding hub and components for the left hand side of said vehicle and complementary faces to said last named members differing from those of the first named in a plurality of dimensions.

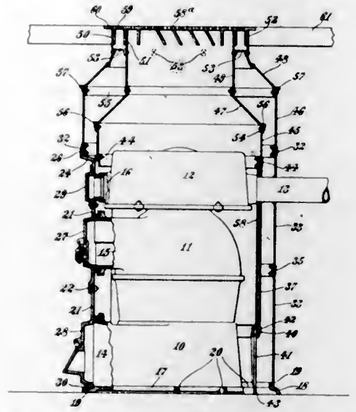
3. In combination an axle end which is restricted to a certain side of a vehicle, a wheel hub for mounting thereon, complementary faces belonging to said hub and axle which coöperates for the attachment of said hub, and a corresponding hub and axle for the opposite side of said vehicle with complementary faces performing similar functions but of different proportions to prevent the interchange of hubs.

4. In combination an axle end which is restricted to a certain side of a vehicle, a wheel hub for mounting thereon, a member intermediate between said axle and hub and having a face complementary to a face provided upon each, and a corresponding axle, hub, and intermediate member for the opposite side of said vehicle, wherein the complementary faces are purposely differentiated from those first named.

5. In combination an axle end for the right hand side of a vehicle, a turned element provided upon said end, an axle end for the left hand side of the vehicle, a corresponding turned element of different proportions upon said left hand axle, and a wheel hub provided with a turned part complementary to one of said turned elements but which will not coöperate with the other.

[Claims 6 to 13 not printed in the Gazette.]

1,171,245. HOT-AIR-FURNACE. BOYD E. RAINEY, St. Louis, Mo. Filed Dec. 7, 1914. Serial No. 875,933. (Cl. 126—99.)



1. In a double jacket furnace, a furnace body, a front wall secured thereto and having forwardly projecting side flanges provided at their outer edges with laterally projecting portions, inner and outer casings forming with said furnace body inner and outer jackets communicating at their base, the edges of said inner casing having outwardly turned flanges to engage said outer casing at a point within the angle formed by said side flanges and their laterally projecting portions, means securing the edges of both of said casings at their point of engagement to the laterally projecting portions of said side flanges, and a register connected with said casings and having inner and outer sections communicating respectively with said jackets.

2. In a double jacket furnace, a furnace body, a front wall secured thereto, inner and outer casings arranged in spaced relation and forming with said furnace body inner and outer jackets communicating at their base, a ring on said inner casing, a casing spaced from said inner casing and suspended from said ring and forming an insulating space between said inner and outer jackets, and a register connected with said casings and having inner and outer sections communicating respectively with said jackets.

1,171,246. METHOD OF MANUFACTURING DEHYDRATED ZINC SULFID. CHARLES RANSON, Paris, France. Filed Sept. 6, 1910. Serial No. 580,541. (Cl. 23—13.)

1. The process which comprises reacting upon a zincate with a soluble sulfid to produce zinc oxysulfid as a precipitate, and then subjecting said precipitate in the presence of a fluosilicate to the action of a sulfur containing reagent capable of replacing the oxygen of the oxysulfid by sulfur.

2. The process which comprises reacting upon a zincate with a soluble sulfid to produce zinc oxysulfid as a precipitate, then subjecting said precipitate in the presence of a fluosilicate to the action of a sulfur containing reagent capable of replacing the oxygen of the oxysulfid by sulfur, and then dehydrating the product.

3. The process of preparing pigments which comprises treating zinc sulfid containing zinc oxid with a sulfur-containing reagent in the presence of a halogen compound capable of facilitating the sulfurization of the same by the sulfur-containing reagent.

4. The process of preparing pigments which comprises treating zinc sulfid containing zinc oxid with a sulfur-containing reagent in the presence of a compound containing a halogen acid radical capable of facilitating the sulfurization of the same by the sulfur-containing reagent.

5. The process of preparing pigments which comprises treating zinc oxy-sulfid with a reagent containing sulfur in available form in the presence of a compound containing fluorin and capable of facilitating the sulfurization of the same by the sulfur containing reagent .

[Claims 6 to 10 not printed in the Gazette.]

1,171,247. THREAD OR CORD. HARRY KING RAYMOND, Akron, Ohio, assignor, by mesne assignments, to The B. F. Goodrich Company, a Corporation of New York. Filed July 29, 1910. Serial No. 574,481. (Cl. 28—5.)

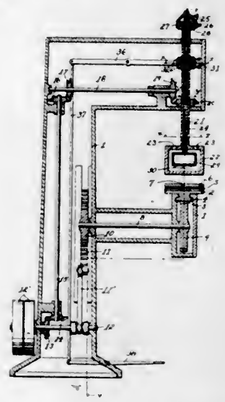


1. As a new article of manufacture, a cord having a vulcanizable rubber core, with a series of rubber-coated threads wound spirally around the same in the same direction.

2. As a new article of manufacture, a cord having an elastic core, with a plurality of threads wound spirally around the same in the same direction, the threads having been previously treated with rubber cement.

3. As a new article of manufacture, a cord having a rubber core surrounded by a plurality of threads treated with rubber cement, said threads being wound spirally around the core in the same direction.

1,171,248. IRONING-MACHINE. MICHAEL J. REILLY, Chicago, Ill. Filed Mar. 3, 1913. Serial No. 751,942. (Cl. 68—9.)



1. An ironing machine comprising a hollow pedestal; a driving shaft located in the lower portion of said pedestal; a vertically reciprocatory rack bar in said pedestal; an operative connection between said shaft and rack bar; a shaft and two gears thereon, one of said gears meshing with said rack; a reciprocatory support and a rack bar thereon meshing with said other gear; and an ironing member above and coöperating with said support, substantially as described.

2. An ironing machine comprising a hollow pedestal; a driving shaft located in the lower portion of said pedestal; a vertical shaft in said pedestal having a bevel gear connection with said shaft; a horizontal shaft having a bevel gear connection with said vertical shaft; a rotating ironing member having a bevel gear connection with said horizontal shaft; a reciprocatory table coöperating with said ironing member; and an operative connection between said table and said driving shaft, substantially as described.

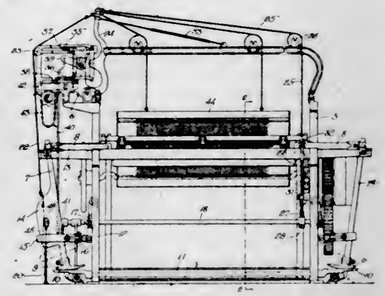
3. An ironing machine comprising a frame; a laterally reciprocatory support mounted in said frame and carrying a rack bar; a manually movable ironing table mounted upon the top of said support; an operating shaft in said frame in operative relation with said rack bar; a gear on said shaft meshing with said rack bar; a second gear on said shaft; a reciprocatory rack bar meshing with said second gear; a vertically reciprocatory rotating ironing member arranged over said ironing table; and means for heating said ironing member, substantially as described.

4. An ironing machine comprising a frame; a laterally reciprocatory support mounted in said frame and carrying a depending rack bar; a manually movable ironing table mounted upon the top of said support; an operating shaft in said frame in operative relation with said rack bar; a gear on said shaft meshing with said rack bar; a second gear on said shaft; a reciprocating rack bar meshing with said second gear; a vertically reciprocatory hollow shaft arranged over said ironing table; a hollow ironing member secured to the lower end of said hollow shaft; means for rotating said hollow shaft; means for reciprocating said hollow shaft vertically; a vertically reciprocatory gas supply pipe in said hollow shaft; and a burner at the lower end of said pipe for heating said ironing member, substantially as described.

5. An ironing machine comprising a frame; a laterally reciprocatory support mounted in said frame and carrying a depending rack bar; a manually movable ironing table mounted upon the top of said support, said ironing table having a T-slot and a headed stud connection with said support; an operating shaft in said frame in operative relation with said rack bar; a gear on said shaft meshing with said rack bar; a second gear on said shaft; a reciprocating rack bar meshing with said second gear; a vertically reciprocatory hollow shaft arranged over said ironing table; a hollow ironing member secured to the lower end of said hollow shaft; means for rotating said hollow shaft; means for reciprocating said hollow shaft vertically; a vertically reciprocatory gas supply pipe in said hollow shaft; and a burner at the lower end of said pipe for heating said ironing member, substantially as described.

[Claim 6 not printed in the Gazette.]

1,171,249. APPARATUS FOR PRODUCING OPEN-WORK FABRICS. JOHN REYNOLDS, New Bedford, Mass., assignor to Butler Mill, New Bedford, Mass., a Corporation of Massachusetts. Filed Apr. 29, 1915. Serial No. 24,641. (Cl. 139—48.)



1. In a loom having picker stick mechanism and stop motion, a picker stick having an enlargement therein intermediate of the ends thereof, picker actuating mechanism operatively in engagement with the outer side of said enlargement, means for temporarily throwing out said mechanism from its engagement with said enlarge-

ment without disconnecting the same from said picker stick, and means for throwing out the stop motion of said loom simultaneously with said picker actuating mechanism.

2. In a loom having picker stick mechanism and stop motion, a picker stick having an enlargement therein, a lug strap encircling said picker stick and operatively connecting said enlargement with the picker actuating mechanism, means for temporarily moving aside and out of engagement with said enlargement the said lug strap, and means for throwing out the stop motion of said loom simultaneously with the disengagement of said strap from said enlargement.

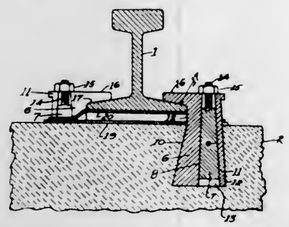
3. In a loom having picker stick mechanism and stop motion, a picker stick formed with a broad blade intermediate the ends thereof, a lug strap encircling said picker stick and operatively connecting said blade with the picker actuating mechanism, and means for moving out of engagement with said blade during a predetermined period the said lug strap without disconnecting the same from said picker stick, while the remainder of the mechanism of said loom continues in motion.

4. In a loom having picker stick mechanism and stop motion, a picker stick having an enlargement intermediate the ends thereof, a lug strap encircling said picker stick and operatively connecting the said enlargement with the picker actuating mechanism, a dobby head, means actuated by said dobby head for disengaging during an even number of picks the said lug strap from the said enlargement, combined with means controlled by said dobby head for throwing out the stop motion of said loom while said strap is out of engagement with said enlargement.

5. In a loom having picker stick mechanism and stop motion, a picker stick having a blade intermediate the ends thereof, a lug strap encircling said picker stick and operatively connecting the said blade with the picker actuating mechanism, a dobby head, means actuated by said dobby head for disengaging during an even number of picks the said lug strap from the said blade, combined with means controlled by said dobby head for throwing out the stop motion of said loom while said strap is out of engagement with said blade.

[Claims 6 to 9 not printed in the Gazette.]

1,171,250. CUSHION FOR RAILROAD-RAILS. GEORGE RIELLY, Santa Rosa, Cal. Filed Sept. 14, 1914. Serial No. 861,494. (Cl. 238—2.)



1. The combination with a contrete tie, of means for securing a rail to the tie, a flat wear plate positioned on the upper surface of the tie and having openings to receive the securing means, a curved spring plate having relatively straight portions engaging the wear plate, said straight portions having slots adapted to accommodate the securing means, said slots being of a length to allow movement of the spring plate without the walls of the slots engaging the fastening means.

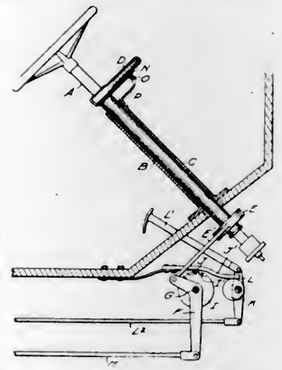
2. The combination with a concrete tie, of means for securing a rail to the tie, a flat wear plate positioned on the upper surface of the tie and having openings to receive the securing means, a spring plate having a substantially flat rail seat, and substantially flat wear plate engaging portions, curved portions connecting the rail engaging sections and wear plate engaging portions to provide resiliency, each of the plates having openings to receive the rail fastening means, the openings of the spring plate extending from the edges thereof and terminating within the flat surface of the rail engaging portion to allow movement of the spring plate with relation to the fastening means.

1,171,251. BOTTLE-STOPPER. HENRY P. ROBERTS, Boston, Mass., assignor to Charles H. McDermott, Winthrop, Mass. Filed Mar. 13, 1911, Serial No. 614,220. Renewed June 25, 1915. Serial No. 36,403. (Cl. 215—21.)



The herein described bottle stopper including a stopper member adapted to be inserted into the mouth of the bottle, a metallic cap receiving the upper end of the stopper member and provided in opposite sides thereof with corresponding pivot openings, and a bail formed from a single length of wire and including a semicircular clamping portion adapted to engage the exterior bead of the bottle neck to retain the stopper securely in position, the ends of the said semicircular clamping portion terminating in vertically and oppositely disposed loops which bear frictionally against opposite sides of the bottle neck and the end portions of the said loops being extended upwardly at substantially right angles to the semicircular clamping portion and having the extremities thereof bent inwardly so as to engage the before mentioned pivot openings in the metallic cap, the said bail being adapted to be swung into and out of operative position about the inwardly bent upper ends of the arms as pivots.

1,171,252. GEAR CHANGING AND LOCKING DEVICE. FRANK PIERRIE ROESCH, Douglas, Ariz. Filed Aug. 17, 1915. Serial No. 45,886. (Cl. 74—39.)



1. In a gear changing mechanism for power vehicles, a hollow shaft mounted to turn on the steering post of the vehicle, a controlling wheel on the said shaft and under the control of the operator, an eccentric on the said hollow shaft and having an eccentric rod, a lever connected with the said eccentric rod, gear shifting means connected with the said lever, and a locking mechanism controlled by the clutch control of the vehicle and normally locking the lever to hold said gear shifting means in inactive position.

2. In a gear changing mechanism for power vehicles, a hollow shaft mounted to turn on the steering post of the vehicle, a controlling wheel on the said shaft and under the control of the operator, an eccentric on the lower end of said hollow shaft, a bell-crank lever connected with the said eccentric, gear shifting means connected with the said lever, a locking mechanism controlled by the clutch control of the vehicle and normally locking the bell crank lever to hold said gear shifting means in inactive position, an indicator on the said controlling wheel and provided with spaced marks indicating the various positions of the gear, and a fixed pointer adapted on the said marks to indicate the position of the gear at the time.

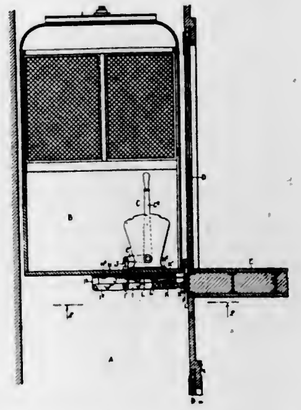
3. In a gear-changing mechanism for power vehicles, a hollow shaft mounted to turn on the steering post of the vehicle, a controlling wheel on the said shaft and under the control of the operator, an eccentric on the said hollow shaft, a bell crank lever connected with the said eccentric and connected with the gear shifting means, a notched wheel on the said bell crank lever, a spring arm having a tooth engaging one of the notches of the said notched wheel, and a cam engaging the said spring arm and controlled by the clutch mechanism of the vehicle.

4. In a gear changing mechanism for power vehicles, a hollow shaft mounted to turn on the steering post of the vehicle, a controlling wheel on the said shaft and under the control of the operator, gear shifting means connected with and controlled from the said hollow shaft, and including a notched wheel, a spring arm having a tooth for engaging one of the notches of the wheel to normally lock the said gear shifting means in inactive position, a cam engaging the said spring arm and controlled by the clutch control of the vehicle, and an indicator on the said controlling wheel.

5. In a gear changing mechanism for power vehicles, a hollow shaft mounted to turn, a controlling wheel on the said shaft and under the control of the operator, a bell-crank lever connected with the gear shifting means to shift the gears, means connected with the hollow shaft for controlling said lever, and a locking mechanism for locking the said lever and controlled by the clutch control of the vehicle.

[Claim 6 not printed in the Gazette.]

1,171,253. SAFETY DEVICE FOR ELEVATORS. AXEL J. ROSELL, New York, N. Y. Filed Feb. 4, 1915. Serial No. 6,044. (Cl. 187—49.)



1. An elevator shaft having a door provided with a lock to normally hold the door against opening in combination with a cage adapted to ascend and descend in the said shaft, a controller in the said cage and an actuating mechanism mounted on the said cage and having a notched member connected with the controller, and an operating member connected with the notched member and adapted to engage the said lock on the cage reaching a landing, to unlock the door to allow of moving the door into open or closed position, the said actuating mechanism having a locking member controlled by the door on opening and closing the same and adapted to engage the said notched member to lock the said controller as long as the door is open and to disengage the notched member to unlock the controller as soon as the door is closed.

2. An elevator shaft having a sliding door provided with a locking bar, and a spring catch held on the shaft and adapted to normally engage the said locking bar to hold the door against opening in combination with a cage adapted to ascend and descend in the said elevator shaft, a controller in the cage and actuating mechanism mounted on the cage and connected with the said controller to unlock the door and to lock the controller, the said actuating mechanism having a link connected with the controller, an operating member connected with the said link and adapted to engage the said catch to move the latter into unlocking position relative to the locking bar to allow of opening or closing the door at the time the cage reaches a landing and the said actuating mechanism having a fulcrumed locking member controlled by the said locking bar and adapted to engage and disengage the said link, lock the controller against movement as long as the door is opened and to unlock the controller as soon as the door is closed.

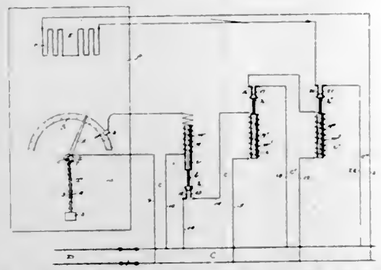
3. An elevator shaft having a sliding door provided with a centrally disposed locking bar and a spring catch held on the shaft and normally engaging the said locking bar to hold the door against opening, combined with a cage adapted to ascend and descend in the said shaft, a controller in the said cage, a slide mounted on the cage and connected with the said controller, the said slide having a spring pressed sliding member adapted to engage the said spring catch and move the same into unlocking position relative to the locking bar, and a locking lever fulcrumed on the said slide and having at one end a fork adapted to engage the said locking bar and to receive a swinging motion on moving the door into open or closed position, the said locking lever having a member at the other end adapted to engage the said controller and lock the same against movement during the time the door is open.

4. An elevator shaft having a sliding door provided with a vertically disposed locking bar, and a spring catch held on the shaft and normally engaging the said locking bar to hold the door against opening, combined with a cage adapted to ascend and descend in the said shaft, a controller in the said cage, a slide mounted on the cage and connected with the said controller, the said slide being provided with a spring-operated friction roller adapted to engage the said spring catch and move the same into unlocking position relative to the locking bar, and a locking lever fulcrumed on the said slide and having at one end a fork adapted to engage the said locking bar and to receive a swinging motion on moving the door into open or closed position, the said locking lever being adapted to engage the said controller and lock the same against movement during the time the door is open.

5. An elevator shaft having a sliding door provided with a vertically disposed locking bar and a spring catch held on the shaft and normally engaging the said locking bar to hold the door against opening, combined with a cage adapted to ascend and descend in the said shaft, a controller in the said cage, a slide mounted on the cage and adapted to engage the said spring catch, a pair of connected links of which one is fulcrumed on the cage and the other is connected with the said slide, a connecting link connecting the said pair of connected links with the controller, the said connecting link having a notch, and a locking lever fulcrumed on the said slide and having at one end a fork adapted to engage the said locking bar and to receive a swinging motion on opening and closing the door, the other end of the said locking lever being adapted to engage and disengage the said link notch to lock and unlock the controller.

[Claim 6 not printed in the Gazette.]

1,171,254. TEMPERATURE-REGULATING SYSTEM. EDWARD H. RUCKLE, Chicago, Ill., assignor to Hughes Electric Heating Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1915. Serial No. 16,853. (Cl. 177—355.)



1. In combination, a main circuit, a series of relays each connected by an energizing circuit with said main circuit, each relay of the series except the last controlling the energizing circuit of the next relay, a current supply circuit controlled by the last relay of the series, a thermostat device controlling the circuit of the first relay of the series, the current carrying capacity of the energizing circuits from the first to the last progressively increasing.

2. In combination, a main circuit, a series of electro-magnetic switch devices each having an energizing circuit connected with said main circuit, each switch device except the last controlling the energizing circuit of the next device of the series, a current supply circuit connected with the main circuit and controlled by said last switch device, a thermostat device and a switch operated by said thermostat device to control the energizing circuit of the first electro-magnetic switch device of the series, the energizing circuits of the other electro-magnetic switch devices being opened when the energizing circuit of the first is closed.

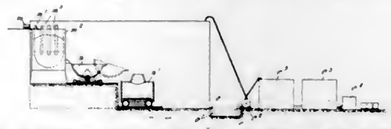
3. In combination, a main circuit, a series of relays each connected by an energizing circuit with said main circuit, each relay of the series except the last controlling the energizing circuit of the next relay, a current supply circuit connected with the main circuit and controlled by the last relay, a thermostat device and a switch operated by the thermostat device to control the circuit of the first relay of the series, the operating power of the relays from the first to the last progressively increasing.

4. In combination, a main circuit, a series of relays each connected by an energizing circuit with said main circuit, each relay of the series except the last controlling the energizing circuit of the next relay, a current supply circuit connected with the main circuit and controlled by the last relay, a thermostat device, and a switch operated by the thermostat device to control the circuit of the first relay of the series, the winding resistance of each relay being less than that of the preceding relay.

5. In combination, a main circuit, a supply circuit for electrical translating devices connected with said main circuit, a main relay and an energizing circuit therefor connected with said main circuit, an electro-thermostat device for controlling the circuit for said main relay, and a plurality of auxiliary relays each having an energizing circuit connected with said main circuit, the energizing circuit of the first auxiliary relay being controlled by the main relay and the energizing circuits for the other auxiliary relays being each controlled by the preceding auxiliary relay, said supply circuit being controlled by the last auxiliary relay, the auxiliary relay energizing circuits and the supply circuit being open when the main relay circuit is closed, and closed when the main relay is open.

1,171,255. TREATMENT OF ORES. OTTO CARL RUDOLPH, Aldwych, London, England, assignor to Otto Stalmann, Salt Lake City, Utah. Filed Dec. 16, 1914. Serial No. 877,553. (Cl. 75—18.)

1. A process for the treatment of ores consisting in fusing the ore charge by electrical means without reducing the same, blowing air through the liquid charge thereby volatilizing its volatile metallic constituents and subsequently recovering said volatile metallic constituents.



2. A process for the treatment of ores consisting in passing electric current through the ore charge until it is fused, transferring the liquid charge to a converter, blowing air under pressure through said liquid charge, thereby volatilizing the bulk of its volatile metallic constituents, condensing the volatile metallic constituents and subsequently recovering the same.

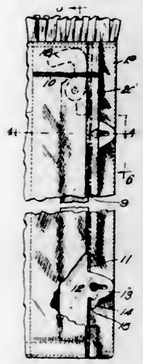
3. A process for the treatment of complex ores consisting in fusing the ore charge by subjecting same to the action of an electric current, transferring the liquid matte thus obtained to a converter, blowing air under pressure through said liquid matte, thereby volatilizing the bulk of its volatile metallic constituents, condensing the volatile metallic constituents by aqueous means and subsequently recovering the same.

4. A process for the treatment of complex ores containing zinc consisting in fusing the ore charge by electrical means, transferring the liquid charge to a converter blowing air under pressure through said liquid matte, thereby volatilizing the bulk of its volatile metallic constituents, dissolving the volatilized zinc constituent in a liquid and finally subjecting the solution thus obtained to electrolytic treatment.

5. A process for the treatment of complex ores containing volatile metals such as zinc, lead and silver in combination with sulfur, consisting in fusing the ore charge and partially volatilizing its metallic constituents by electrical means, blowing air under pressure through the liquid charge to volatilize the remaining part of its volatile metallic constituents, dissolving the volatile zinc constituent and precipitating the volatile lead constituent given off during the fusing and blowing operations by a liquid, removing the precipitated lead from said liquid and finally recovering the metallic zinc by electrolytic treatment.

[Claim 6 not printed in the Gazette.]

1,171,256. WASHABLE CORSET. YOLE SAYNISCH, New York, N. Y. Filed Sept. 17, 1915. Serial No. 51,142. (Cl. 2—74.)



1. In a corset, a washable fabric body, front and rear steels each having notched, spaced projections, said fabric having pockets at the longitudinal edges thereof each adapted to receive a steel with its projections, said pockets having openings in the edges thereof through which said projections of the steels are adapted to protrude, the notches of the projections being adapted to engage the edge of a pocket at the openings, said projections of steels having the usual closure fastening means.

2. In a corset, a washable fabric body, front and rear steels having notched, space projections, said fabric having pockets at the longitudinal edges thereof, each of said pockets having a slit adjacent the upper end thereof through which a steel with its projections may be inserted or removed from the pocket, each of said pockets having openings in the edge thereof through which the projections are adapted to protrude, the notches of the projections being adapted to engage the edge of the pocket at the openings, whereby the steel is prevented from lateral displacement within the pocket, a link at the upper end of the steel for facilitating the manipulation thereof and adapted to engage the upper end of the pocket, whereby the lower end of the steel is brought into engagement with the lower end of the pocket, thereby locking the steel from longitudinal displacement within the pocket.

3. In a corset, a washable fabric body, front and rear steels each having spaced, lateral projections, said fabric having longitudinal pockets adjacent the longitudinal edges thereof, each pocket having a slit adjacent the upper end thereof through which a steel may be inserted in the pocket or removed therefrom with the projections thereof, each of said pockets having openings in the edge thereof through which said projections are adapted to protrude, each of said projections having a longitudinal notch in proximity to the steel body for engaging the edge of the pocket at the lower end of the opening, a link at the upper end of the steel, and means for maintaining the link at predetermined positions on said steel, said link being adapted to engage the upper end of the pocket, thereby forcing the lower end of the steel against the lower end of the pocket, substantially as and for the purpose set forth.

4. A steel for corsets having spaced lateral projections, a link pivotally connected to one end of the steel, and means for locking the link in predetermined positions on the steel, said steel having a longitudinal notch in each projection in proximity to the steel body.

5. In a corset, a washable fabric body having pockets at the longitudinal edges thereof, a steel removably associated with each pocket, said steel having spaced, notched projections, said pockets having opening in the edges through which the projections are adapted to protrude, the notches of the projections being adapted to engage the edge of a pocket, and means for locking the steel in its pocket, said projections of the steels having the usual closure fastening means.

1,171,257. SASH-BALANCE CONNECTION. JOHN H. SAYRES, Brooklyn, N. Y. Filed Sept. 27, 1912. Serial No. 722,671. (Cl. 16—16.)



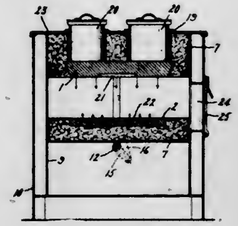
1. A suspension hook for a sash weight comprising a single wire doubled back upon itself to afford a double strand curved in the direction of its length to form an open loop having two strands to pass through the weight eye, and means at the opposite ends of the hook to engage a sash chain, said means at one end of the loop comprising the oppositely bent ends of the wire lying substantially in register and normally spaced apart in the plane of the loop to facilitate the adjustment of the chain, substantially as described.

2. A sash weight connection comprising an open metallic loop, the sides of which are spaced apart transversely to the plane of the loop to accommodate a suspension chain between the same, and the ends of which are provided with cross members on one of which may be threaded a link of a suspension chain engaged beneath the cross member at the opposite end of the loop, substantially as described.

3. A sash weight connection of the type described, comprising a wire bent to form an open loop one leg of which is longer than the other and having chain-engaging bights at the opposite ends of the loop, said loop in operating position having its shorter leg passed through the eye of a sash weight while the longer leg overlies said eye with its bight to one side thereof and substantially vertically above the bight of the shorter leg, in combination with a sash chain passing freely through the bight of the longer upper leg of the loop and having its terminal link threaded into engagement with the bight of the shorter leg of the loop, whereby under operating conditions the chain extends substantially vertically to the bight of the shorter leg of the loop with the result that practically the entire strain of the connection is taken by the bight of the shorter leg of the loop and by the terminal link of the chain lying vertically in normal position of greatest strength and at a point of attachment substantially level with the top of the weight.

4. A sash weight connection of the type described, comprising a wire bent back upon itself to form a double strand and curved in the direction of its length to afford an open loop one leg of which is longer than the other and having chain-engaging bights at the opposite ends of the loop, said loop in operating position having its shorter leg passed through the eye of a sash weight while the longer leg overlies said eye with its bight to one side thereof and substantially vertically above the bight of the shorter leg, in combination with a sash chain passing freely through the bight of the longer upper leg and having its terminal link threaded into engagement with the bight of the shorter leg of the loop, whereby under operating conditions the chain extends substantially vertically to the bight of the shorter leg of the loop with the result that practically all the strain of the connection is taken by the bight of the shorter leg of the loop and by the terminal link of the chain lying vertically in normal position of greatest strength and at a point of attachment substantially level with the top of the weight.

1,171,258. ELECTRIC HEATER. STEPHAN SCHNEIDER, Berlin-Niederschönhausen, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 6, 1914. Serial No. 816,945. (Cl. 219—19.)



1. An electric heating device comprising a heat storage mass of high heat storage capacity formed of a plurality of separable parts made to fit closely together in their closed positions, and means for rendering both the exterior and interior surfaces of the separable members simultaneously effective for cooking operations.

2. An electric heating device comprising a heat storage mass of high heat storage capacity formed of a plurality of members which fit closely together in their closed positions, thermal insulating means for said members, means for separating the members, and means coöperating with said members to form a chamber in which the article to be heated is received.

3. In a heating device, a heat storage mass comprising two plates located the one above the other, means for thermally insulating said plates, an electric heating device located near the surface of one of the plates, means for depressing the lower plate to form a space between the two, coöperating thermal insulation to complete the closure of said space to form a chamber, and a closable open-

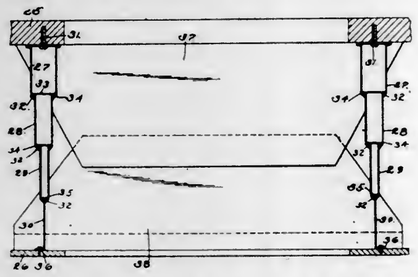
ing in said insulation through which articles to be heated may be inserted into said chamber.

4. In a heating device, a heat storage mass comprising two plates located the one above the other, means for thermally insulating said plates, means for separating the plates to form a space between the same, coöperating thermal insulating means to complete the closure of said space to form a chamber, said thermal insulating means being provided with a closable opening through which articles to be heated may be inserted into said chamber, and one or more pockets communicating with the upper surface of the upper plate in which cooking utensils may be received.

5. A heating device comprising a heat storage mass having high heat storage capacity and good conductivity and formed of two separable members, means for separating said members and for adjusting the space between them, and means coöperating with said members to form a chamber in which the article to be heated is received.

[Claims 6 and 7 not printed in the Gazette.]

1,171,259. VESTIBULE-DIAPHRAGM FOR RAILWAY-CARS. EDWARD A. SCHREIBER, Chicago, Ill., assignor to Egbert H. Gold, Chicago, Ill. Filed Nov. 24, 1914. Serial No. 873,766. (Cl. 105—61.)



1. A vestibule diaphragm for railway cars comprising a plurality of hollow sheet metal elements having open sides and arranged telescopically one within the other and formed with inturned flanges along said open sides which bear respectively upon opposite sides of the adjacent elements.

2. A vestibule diaphragm for railway cars comprising a plurality of hollow, arched, sheet metal elements having open sides and arranged telescopically one within the other and formed with inturned flanges along said open sides which bear respectively upon opposite sides of the adjacent elements.

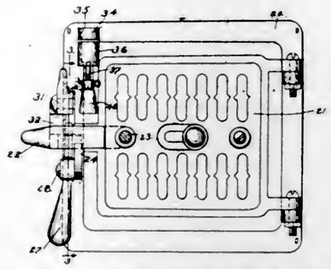
3. A vestibule diaphragm for railway cars comprising a plurality of hollow sheet metal elements having open sides and arranged telescopically one within the other and formed with inturned flanges along said open sides which bear respectively upon opposite sides of the adjacent elements, and an element consisting of a piece of sheet metal which extends into the narrowest of said hollow elements and is formed at its inner end with a guiding bead bearing against opposite sides of said hollow element.

4. A vestibule diaphragm for railway cars comprising a plurality of arched hollow sheet metal elements having open sides and arranged telescopically one within the other and formed with inturned flanges along said open sides which bear respectively upon opposite sides of the adjacent elements, and an element consisting of a piece of sheet metal which extends into the narrowest of said hollow elements and is formed at its inner end with a guiding bead bearing against opposite sides of said hollow element.

5. A vestibule diaphragm for railway cars comprising a plurality of elements having a sliding engagement one with the other on lines substantially longitudinal of the car and means on each element engaging opposite sides of the adjacent element for preventing said elements from being disengaged one from another when the diaphragm is expanded.

[Claims 6 to 12 not printed in the Gazette.]

1,171,260. LOCKING DEVICE FOR STOVE-DOORS. EDWARD A. SCHREIBER, Chicago, Ill., assignor to Egbert H. Gold, Chicago, Ill. Filed Jan. 25, 1915. Serial No. 4,268. (Cl. 126—196.)



1. The combination in a structure to be latched of a latch bar, and a pivoted weighted catch placed to clear said bar in its normal position when closed and to engage the bar to lock it in closed position when the structure is tilted backwardly.

2. The combination in a structure to be latched of a latch bar, a catch plate thereon, and a pivoted catch placed to clear said plate in the normal position of the latch bar when closed and to engage the plate to lock the closed latch bar when the structure is tilted backwardly.

3. The combination in a structure to be latched of a latch bar, a catch plate thereon, and a pivoted catch movable in a plane transverse to the plane of the latch bar and placed to clear said plate in the normal position of the latch bar when closed and to engage the plate to lock the closed latch bar when the structure is tilted backwardly.

4. The combination in a structure to be latched of a latch bar, a catch plate thereon, and a pivoted weighted catch placed to clear said plate in the normal position of the latch bar when closed and to engage the plate to lock the closed latch bar when the structure is tilted backwardly.

5. The combination in a structure to be latched of a latch bar, a catch plate thereon, and a swinging, weighted catch placed to clear said plate in the normal position of the latch bar when closed and to engage the plate to lock the closed latch bar when the structure is tilted backwardly.

[Claims 6 to 17 not printed in the Gazette.]

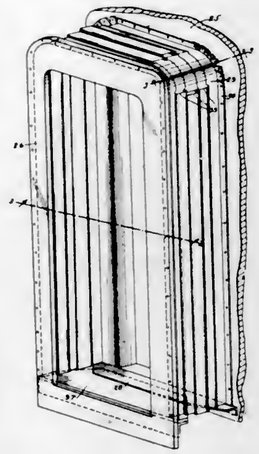
1,171,261. VESTIBULE-DIAPHRAGM FOR RAILWAY-CARS. EDWARD A. SCHREIBER, Chicago, Ill., assignor to Egbert H. Gold, Chicago, Ill. Original application filed Nov. 24, 1914, Serial No. 873,766. Divided and this application filed Oct. 9, 1915. Serial No. 55,001. (Cl. 105—61.)

1. A vestibule diaphragm for railway cars comprising a plurality of panels in collapsible arrangement, the edges of which panels are in the form of hooks providing flanges substantially parallel to the body portions of the panels respectively, the hooks on adjacent panels being adapted to interlock as and for the purpose described.

2. A vestibule diaphragm for railway cars comprising a plurality of panels in collapsible arrangement each consisting of a pair of side members joined by a top member, the edges of which panels are in the form of hooks providing flanges substantially parallel to the body portions of the panels respectively, the hooks on adjacent panels being adapted to interlock as and for the purpose described.

3. A vestibule diaphragm for railway cars comprising a plurality of panels in collapsible arrangement each consisting of a pair of side members joined by a top member, the edges of which panels at the top and at the sides of the structure are in the form of hooks providing flanges substantially parallel to the body portions of the panels respectively, the hooks on adjacent panels being adapted to interlock as and for the purpose described.

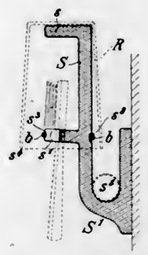
4. A vestibule diaphragm for railway cars providing interlocking, collapsible panels, one of which consists of a sheet of metal bent twice on parallel lines to form oppositely opening recesses to receive adjacent panels.



5. A vestibule diaphragm for railway cars providing interlocking, collapsible panels, one of which consists of a sheet of metal bent twice on parallel lines to form oppositely opening recesses to receive adjacent panels, the edges of the panels being provided with co-engaging stop flanges.

[Claims 6 to 17 not printed in the Gazette.]

1,171,262. SANITARY HOLDER FOR TOILET ARTICLES, &c. JEAN SÉNÉGAS, New York, N. Y. Filed Mar. 29, 1915. Serial No. 17,793. (Cl. 132—11.)

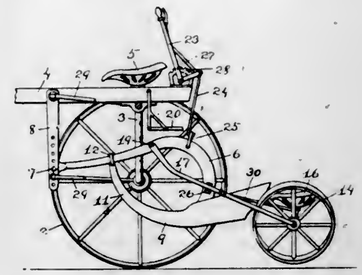


1. A holder of the character designated comprising a standard having a top portion for supporting a glass, an integral attaching portion with a pocket-like shelf upon one side of the standard and a brush shelf upon the opposite side of the standard having a recess to receive a brush handle.

2. A holder of the character designated comprising in a single element a standard with an offset portion for its attachment in position, a shelf at the upper end and a shelf below the same having recesses and with an annular groove, and an elastic ring retained within said groove.

3. A holder of the character designated comprising in a single element a standard with an offset portion for its attachment in position, a shelf at the upper end and a shelf below the same having recesses and with an annular groove, and an elastic ring retained within said groove, there being a pocket-like shelf formed between the standard and its offset attaching portion.

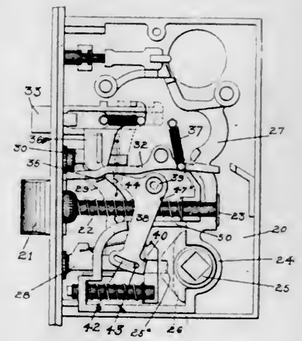
1,171,263. MACHINE FOR SETTING PLANTS. FRANCIS O. SEYMOUR, Keokuk, Iowa. Filed June 30, 1915. Serial No. 37,230. (Cl. 55—72.)



1. A machine for setting out plants, including carrying wheels, an axle connecting the same, a draft pole mounted upon said axle, a seat for the driver, a rearwardly extending beam having at its forward end a pivotal connection with said draft pole, a furrow-opening shoe at the lower end of said beam, inclined coverer wheels having lateral draft rods provided at their forward ends with a pivotal connection with said beam, a seat for a helper upon the axle of said inclined wheels, and means for alining said shoe and the coverer wheels.

2. A machine for setting out plants, including carrying wheels, a reverse-U-form axle connecting the same, a draft pole upon said axle, a seat for the driver, a link suspended from said pole, a rearwardly extending beam having at its forward end a pivotal connection with the lower end of said link, a furrow-opening shoe at the lower end of said beam, said shoe having a forward upward extending portion secured to the intermediate portion of said beam, inclined coverer wheels having lateral draft rods provided at their forward ends with a pivotal connection with said beam, a seat for a helper upon the axle of said inclined wheels, and means for alining said shoe and the coverer wheels.

1,171,264. LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Dec. 31, 1912. Serial No. 739,498. (Cl. 70—29.)



1. In a lock, a latch bolt, manual retracting means therefor including a hub, night latch mechanism for dogging said hub, and an additional or auxiliary dogging means for said hub operated automatically by the closing of the door to engage said hub and thereby prevent the rotation thereof; substantially as described.

2. In a lock, a latch bolt, manual retracting means therefor including a hub, a night latch slide for dogging said hub accessible at the face of the lock case, and an

additional or auxiliary dogging means for said hub operated automatically by the closing of the door to engage and block said hub; substantially as described.

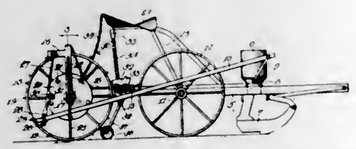
3. In a lock, a latch bolt, manual retracting means therefor including inner and outer hubs, night latch mechanism associated with the outer hub and comprising dogging and releasing slides, and an additional or auxiliary dogging device for the outer hub operated automatically by the closing of the door; substantially as described.

4. In a lock, a latch bolt, a retracting hub therefor, and means operated automatically on the closing of the door to engage and dog said hub; substantially as described.

5. In a lock, a latch bolt, a hub for retracting the same, a lever for directly engaging said hub, and means to actuate said lever automatically on the closing of the door; substantially as described.

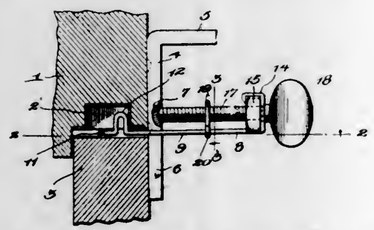
[Claims 6 to 27 not printed in the Gazette.]

1,171,265. ATTACHMENT FOR CORN-PLANTERS. GEORGE A. SHRAUD, Chicago, Ill. Filed Sept. 27, 1915. Serial No. 52,758. (Cl. 111—6.)



In a corn planter, the combination with a main wheeled frame, of a hopper and seed dropping mechanism mounted thereon and including a rotatable valve rod, an arm rigid with said rod, an auxiliary frame attached to the rear portion of the first named frame, an axle transversely journaled on said auxiliary frame, a wheel rigidly mounted on said axle near each of its ends, one of the wheels of the last named frame having markers and outwardly extended projections, said projections located around the hub of the wheel, a rod longitudinally and adjustably mounted in said axle and extended from one end of the same, an indicator on the outer end of said rod, a link pivoted to the upper portion of the auxiliary frame and having means to contact with said projections, and a connection uniting the lower portion of said link and said valve rod.

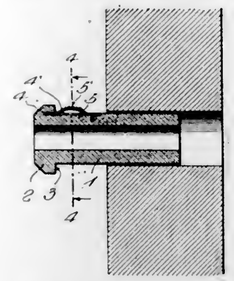
1,171,266. DOOR-SECURER. JESSE W. SIMMONS, Nevada, Tex. Filed May 6, 1915. Serial No. 26,349. (Cl. 16—8.)



1. A door securer comprising a cross bar, a connector for said bar comprising a pair of parallel arms connected at one end and straddling said bar, laterally extending loops disposed adjacent said connected ends, the free ends of said arms being bent to form nut receiving loops, a nut having notches therein for engaging said loops, a screw operatively mounted in said nut, and a guide for said screw slidably mounted on said arms.

2. A door securer comprising a cross bar, a connector for said bar comprising a pair of parallel arms connected at one end and straddling said bar, laterally extending loops disposed adjacent said connected ends, the free ends of said arms being bent to form nut receiving loops, a nut having notches therein for engaging said loops, a screw operatively mounted in said nut, and a U-shaped guide spanning the space between said arms and having eyes at its free ends slidably engaged with said arms to form a guide for said screw.

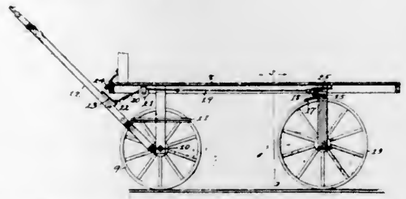
1,171,267. INSULATOR FOR ELECTRICALLY-CHARGED WIRES. GEORGE R. SMITH, Arlington, Md. Filed Jan. 4, 1915. Serial No. 362. (Cl. 173—311.)



1. A tubular insulator for electric wiring having a one-piece outwardly bowed spring metal gripping strip secured at one end to the outer face of said insulator, said strip being thickened intermediately of its ends and provided with outwardly extending teeth formed in said thickened portion whereby said gripping member is strengthened without interfering with its resiliency.

2. A tubular insulator for electric wiring having a head at one end terminating at its inner end in a laterally extending shoulder, said shoulder being provided with an under-cut forwardly extending socket arranged adjacent the outer face of said insulator, said insulator having a longitudinally extending groove in its outer face merging into said socket and forming a continuation thereof, a one-piece arcuate spring metal strip mounted in said groove with one end thereof engaged with the inner end of the groove and the other end thereof inserted in said socket, said strip being thickened intermediately of its ends and having forwardly projecting teeth formed in said thickened portion on the outer face of said strip.

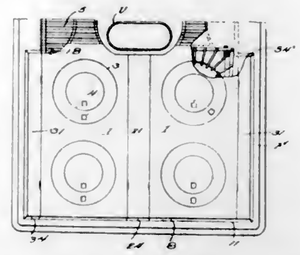
1,171,268. BRAKE FOR PLATFORM-TRUCKS. JOHN LEWIS SMITH, Savannah, Mo. Filed Oct. 6, 1915. Serial No. 54,361. (Cl. 21—8.)



The combination with a truck having wheels, a platform, and a handle movable in a vertical plane, of a shaft secured beneath said platform provided with arms eccentric to the axis thereof, a brake-shoe on each arm adjacent to one of said wheels, a crank-arm on said shaft, means for arbitrarily connecting said crank-arm with said handle, and means for retracting said crank-arm, when released from said handle, to release said brake-shoes.

1,171,269. GAS-STOVE TOP. WILLIAM W. SMITH, Trenton, N. J., assignor to Sanitary Stove Top Company, a Corporation of New Jersey. Filed July 24, 1915. Serial No. 41,780. (Cl. 126—214.)

1. As a new article of manufacture, an attachment for application to a gas stove, the same comprising a main section having a top plate and depending side flanges provided with notches, other sections whereof each has a top plate and means for supporting the same in the plane of said first-named top plate, and tongues projecting from certain edges of said last-named sections with their shanks engaging said notches and their tips bent aside behind said flanges, whereby the sections cannot be separated while their top plates remain in said plane.



2. The combination with a gas stove including a row of burners and a frame-like top and its grate; of an attachment therefor comprising a main section consisting of a top plate with lid-openings, depending side flanges notched at standard intervals, and a wide flange depending from the front end of the top plate to rest on said frame, this section being open at its rear end; means for closing the notches along one side of said section; and a side section along the other side and having a flange resting at its lower edge on the frame, and right-angular tongues at standard intervals detachably engaging said notches.

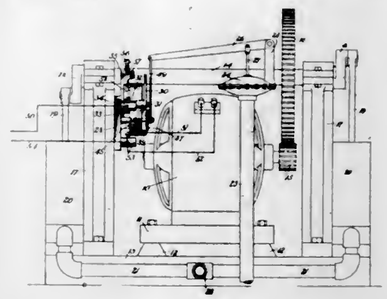
3. The combination with a gas stove including a row of burners and a frame-like top and its grate; of an attachment therefor comprising a main section consisting of a top plate with lid openings adapted to aline with the burners, depending side flanges cut out at their lower edges to overlie the grate and notched at standard intervals, and a wide flange depending from the front end of the top plate to rest on said frame, this section being open at its rear end; means for closing the cut-out along one side of said section, and a side section along the other side of the main section resting at its lower edge on the frame to close the cut-out in the contiguous flange, and right-angular tongues on the side section at standard intervals detachably engaging said notches.

4. The combination with a gas stove including a row of burners and a frame-like top and its grate; of a removable top comprising a main section having a top plate with lid-openings adapted to aline with the burners in said row, side sections selectively employed along the sides of said main section, flanges along the outer edges of the side sections and the front ends of all sections adapted to rest on said frame, the rear ends of said main section being slatted, bolts passing between the slats and through the grate, and means for holding said sections edge to edge while their top plates remain in a single plane.

5. The combination with a gas stove including a row of burners and a frame-like top and its grate; of an attachment therefor comprising a main section consisting of a top plate with lid openings adapted to aline with the burners, depending side flanges cut out at their lower edges between the corners of the section to overlie the grate and notched at standard intervals, a wide flange depending from the front end of the top plate to rest on said frame, this section being open at its rear end, and means for selectively removing portions of the section at said rear end; means for closing the cut-out along one side of said section; and a side section along the other side of and shorter than said main section and comprising a top plate adapted to aline with that of the main section, angular tongues at its inner edge adapted to engage said notches, and flanges along its outer edge and both ends for resting on said frame.

[Claims 6 to 11 not printed in the Gazette.]

1,171,270. AUTOMATIC SWITCH FOR CONTROLLING THE OPERATION OF PUMPS. KURT SORGE, New York, N. Y. Filed Sept. 18, 1914. Serial No. 862,317. (Cl. 230—24.)



1. A device for controlling the operation of pumps and the like, a pump, a driving motor therefor, a switch for making and breaking the motor circuit, a wheel for operating said switch, means for driving said wheel from the motor, a pressure device operated by variations in pressure produced by the pump for connecting said wheel with its driving means, and means to arrest the motion of said wheel, said wheel being self-operative upon the reduction of the pressure to disconnect from the driving means.

2. A device for controlling the operation of pumps and the like, a pump, a driving motor therefor, a switch for making and breaking the motor circuit, a wheel for operating said switch, means for driving said wheel from the motor, a pressure device operated by variations in pressure produced by the pump for connecting said wheel with its driving means, and adjustable means for arresting the motion of said wheel when the pressure reaches a predetermined point so as to open the circuit and bring the pumps to a state of rest.

3. A device for controlling the operation of pumps and the like, a pump, a driving motor therefor, a switch for making and breaking the motor circuit, a wheel for operating said switch, means for driving said wheel from the motor, a pressure device operated by variations in pressure produced by the pump for connecting said wheel with its driving means, adjustable means for arresting the motion of said wheel when the pressure reaches a predetermined point so as to open the circuit and bring the pumps to a state of rest, said wheel being operative by gravity to partially rotate and move out of contact with said driving means, whereby the circuit will be closed upon the reduction of the air pressure.

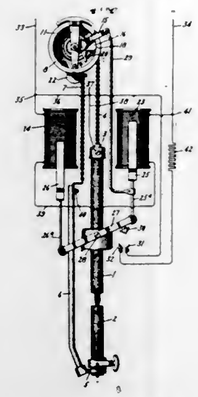
1,171,271. ARC-LAMP CLUTCH. REGINALD G. STANDERWICK, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 23, 1912. Serial No. 727,359. (Cl. 176—93.)

1. In combination with a pulley formed with a laterally extending peripheral flange, an arm pivoted on the axis of the pulley, a clutch pivoted on the arm having a part extending toward the flange, said clutch being weighted to turn on its pivot in a direction opposite to the direction of the clutch engaging movement of the arm, means for actuating said arm and thereby operating the clutch, and means for releasing said clutch when the arm is released.

2. In combination with a pulley formed with a laterally extending peripheral flange, an arm pivoted on the axis of the pulley, a clutch pivoted on the arm between the axis and the flange of the pulley and having a part extending toward the latter, said clutch being weighted to turn on its pivot in a direction opposite to the direction of the clutch engaging movement of the arms, means for actuating said arm and thereby operating the clutch, and means for releasing said clutch when the arm is released.

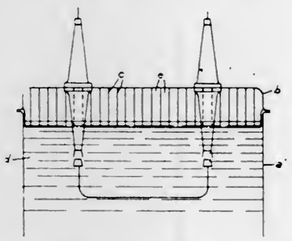
3. In combination with a pulley formed with a laterally extending peripheral flange, an arm pivoted on the

axis of the pulley, a clutch pivoted on the arm and having a part extending toward the flange, said clutch being weighted to turn on its pivot in a direction opposite to



the direction of the clutch engaging movement of the arm, means for actuating said arm and thereby operating the clutch, and a stop for engaging the clutch when the arm is released.

1,171,272. OIL-SWITCH. GEORG STERN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 21, 1913. Serial No. 780,102. (Cl. 175—282.)



1. In a circuit-interrupting device, the combination of a vessel partially filled with oil, means for interrupting the circuit in said vessel beneath the oil, and means for dividing only the space above the oil into a plurality of non-communicating chambers open at the lower end only.

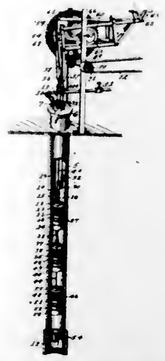
2. A circuit-interrupting device, comprising a vessel partially filled with oil, circuit terminals extending into said vessel to a point beneath the surface of the oil, and partitions extending through the space above the oil to divide only said space into a plurality of non-communicating pockets open at the lower end only and with their lower ends beneath the surface of the oil in said vessel.

3. An oil switch comprising a vessel partially filled with oil, relatively movable coöperating contacts mounted to separate in said vessel beneath the oil, a cover for said vessel, and means coöperating with said cover to form a plurality of pockets open only to the oil in said vessel.

4. An oil switch comprising a vessel partially filled with oil, relatively movable coöperating contacts mounted to separate in said vessel beneath the oil, and a cover for said vessel provided with a plurality of ribs extending downwardly into the oil to form a plurality of separate chambers open only to the oil.

5. An oil switch comprising a vessel containing oil and having an air cushion above the oil, relatively movable cooperating contacts mounted to separate in said vessel beneath the oil, and a cover for said vessel having a plurality of ribs extending downwardly from said cover to below the oil level to divide the air cushion into a plurality of separate air chambers and thereby restrict any ignition of explosive gases which may occur in said chambers.

1,171,273. PUMP. SPENCER ALLEN STONE, Chillicothe, Mo. Filed June 5, 1914. Serial No. 843,196. (Cl. 103—82.)



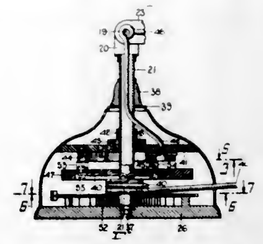
1. A pump comprising a cylinder, a plurality of plungers, a rod connected with one of said plungers, a hollow stem telescoping on the said rod, a shoulder formed on the hollow stem, a plunger having its head supported on said shoulder, means for holding said head in place on the shoulder, a pipe connection secured on the upper end of said hollow stem, a rod connected with the said pipe connection and means connected with the rods for actuating said plungers.

2. A pump comprising a cylinder, a plurality of plungers in said cylinder, a rod connected with one of the plungers, tubular stems telescoping on each other, and on the said rod, the tubular stems being shouldered forming seats for the heads of the plungers carried by said stems, a tubular section on each tubular stem for holding the plunger head in place on said shoulder, a tubular section on the upper end of each tubular stem, upwardly extending rods secured to said tubular sections, and means connected with the said rods for actuating the several plungers.

3. A pump comprising a cylinder, a plurality of plungers in said cylinder, a rod connected with one of said plungers and extending upward beyond the top of the cylinder, a plurality of tubular stems telescoping with each other and with the said rod, each of said tubular stems being provided with a shoulder forming a seat for the plunger head of one of the plungers, a tubular section on the stem for holding the plunger head in place, spring controlled valves for the plungers, the valves for the plungers of the tubular stems being slidably mounted on the said tubular sections, a tubular section on the upper end of each tubular stem, rods connected with the tubular sections and extending upward above the top of the cylinder, and means connected with the said rods for actuating the plungers independently of each other.

1,171,274. PORTABLE ELECTRIC LAMP. JULIUS LOEB STRAUSS, New York, N. Y., assignor to Rose Strauss Co., New York, N. Y., a Copartnership composed of Charles M. Rose and Julius L. Strauss. Filed Jan. 6, 1915. Serial No. 735. (Cl. 240—53.)

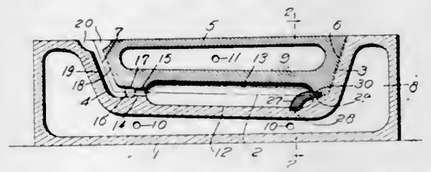
1. A lamp as characterized, comprising a rotary standard, said standard having a plurality of pivotally-connected sections; a supporting base for said standards; a reel pivotally mounted in said base and embodying electric contacts; an electric circuit embodying a lamp-cord operatively attached to said contacts to be wound on said reel, said cord extending beyond said base; a lamp socket mounted on said standard; electric contacts connected with said standard to be rotated therewith, said contacts operatively and continuously engaging the contacts on said reel; and means connecting said socket and the contacts connected with said standard.



2. A lamp as characterized, comprising a rotary standard, said standard having a plurality of pivotally-connected sections; a supporting base for said standard; a reel pivotally mounted in said base and embodying electric contacts; an electric circuit embodying a lamp-cord operatively attached to said contacts to be wound on said reel, said cord extending beyond said base; a lamp socket mounted on said standard; electric contacts connected with said standard to be rotated therewith, said contacts operatively and continuously engaging the contacts on said reel; and a local circuit embodying wires connecting said socket and the contacts on said standard, said wires being housed in said standard and wrapped about the pivots uniting the sections of said standard.

3. A lamp as characterized, comprising a freely rotatable standard embodying an electric lamp socket; a stationary base for pivotally supporting said standard; an electric-supply circuit having stationary terminals in said base; and a local circuit in said standard embodying the lamp socket thereof and terminals movably engaging said first-mentioned terminals.

1,171,275. SASH-WEIGHT MOLD. SYLVESTER JOHN SULLIVAN, Hot Springs, Ark. Filed Oct. 28, 1915. Serial No. 58,391. (Cl. 22—149.)



1. A mold for sash weights, comprising chambered upper and lower sections, the lower section having a transverse recess in its upper face and having the side walls of the recess inclined outwardly away from each other, the upper section fitting within the recess, means for centering the sections with respect to each other, the sections having on their abutting faces coöperating grooves forming mold cavities and having coöperating grooves leading from one end of the first-named grooves and coöperating to form pouring passages, said last-named passages communicating with a common passage extending to the upper surface of the mold and being enlarged to facilitate pouring, the upper section having vent grooves at the opposite side wall from the pouring passages for permitting the venting of the air trapped in the mold cavities, each of the first-named grooves of the lower section having a radial depression at the end adjacent to the vent grooves, and the sections having coöperating grooves at the said end forming axial passages leading from the mold cavities, and cores held by the axial passages and the radial depressions of the first-named grooves, said cores being curved longitudinally and being frusto-conical in shape.

2. A mold for sash weights, comprising chambered upper and lower sections provided with openings for permitting the circulation of a cooling fluid or permitting the escape of air from the chambers, the lower section having a transverse recess in its upper face and having the side walls of the recess inclining outwardly away from each other, the upper section fitting within the recess, means for centering the sections with respect to each other, the sections having on their abutting faces coöperating grooves forming mold cavities and having pouring passages at one end and vent passages at the other end, said sections having means for supporting a core at the end of each mold cavity adjacent to the vent passages, each of said cores being curved longitudinally and being frusto-conical and having its small end at the axis of the mold cavity and its large end at the under side thereof, each core supporting means comprising cooperating axial grooves leading from the mold cavity at the end adjacent to the vent passage, and a radial depression at the bottom of the mold cavity.

3. A mold for sash weights, comprising chambered upper and lower sections provided with openings for permitting the circulation of a cooling fluid or permitting the escape of air from the chambers, the lower section having a transverse recess in its upper face and having side walls of the recess inclining outwardly away from each other, the upper section fitting within the recess, means for centering the sections with respect to each other, the sections having on their abutting faces coöperating grooves forming mold cavities and having pouring passages at one end and vent passages at the other end, said sections having means for supporting a core at the end of each mold cavity adjacent to the vent passages, each of the said cores being curved longitudinally and being frusto-conical and having its small end at the axis of the mold cavity and its large end at the under side thereof.

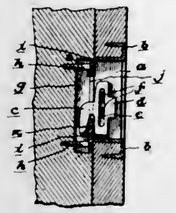
4. A mold for sash weights, comprising chambered upper and lower sections provided with openings for permitting the circulation of a cooling fluid or permitting the escape of air from the chambers, the lower section having a transverse recess in its upper face and having the side walls of the recess inclining outwardly away from each other, the upper section fitting within the recess, means for centering the sections with respect to each other, the sections having on their abutting faces cooperating grooves forming mold cavities and having pouring passages at one end and vent passages at the other end, said sections having means for releasably supporting a core at the end of each mold cavity adjacent to the vent passages, and a core supported in each mold cavity.

5. A mold for sash weights, comprising upper and lower sections, the sections having on their abutting faces coöperating grooves for forming mold cavities having pouring passages at one end and vent passages at the other, said sections having means for supporting a core at the end of each mold cavity adjacent to the vent passages, each of the said cores being curved longitudinally and being frusto-conical and having its small end at the axis of the mold cavity and its large end at one side thereof.

1,171,276. WINDOW-BEAD FASTENER. GEORGE L. SUMMERS, Huntington, W. Va. Filed Apr. 26, 1915. Serial No. 23,951. (Cl. 16—29.)

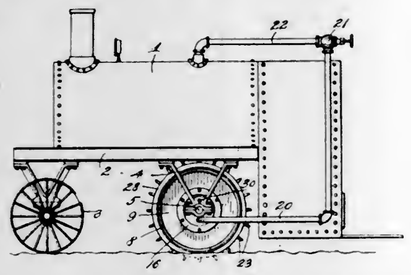
1. In combination, a latch plate anchored in the window frame, a window bead provided with a vertical slot coincident with the latch plate, a tubular housing inserted in said slot, the inner and outer sides of this housing being open and the housing being provided with means for anchoring it in the window head, a gravitating latch inclosed in the housing, this latch being provided with an inwardly-extending, downwardly-turned hook adapted to engage said latch plate, the plate-engaging edge of the hook being beveled downwardly and inwardly, and also with an outwardly-extending finger piece terminating at a distance from the outer face of the bead.

2. In combination, a latch plate anchored in the window frame, a window bead provided with a vertical slot coincident with the latch plate, a tubular housing inserted in said slot, the inner and outer sides of this housing being open and the housing being provided with means for anchoring it in the window bead and also with a latch guiding means extending across the housing, a gravi-



tating latch inclosed in the housing and slotted longitudinally for the passage therethrough of said guiding means, this latch being provided with an inwardly extending, downwardly-turned hook adapted to engage said latch plate, the plate-engaging edge of the hook being beveled downwardly and inwardly, and also with an outwardly-extending finger piece terminating at a distance from the outer face of the bead.

1,171,277. APPARATUS FOR TREATING THE SOIL. HEMAN D. THAYER, Conneaut, Ohio. Filed Oct. 22, 1913. Serial No. 796,694. (Cl. 97—38.)



1. In apparatus for treating the soil, a steam supply, and means for delivering steam to a plurality of discharge devices adapted to embed themselves in the soil without disturbing the surface thereof and supply steam thereto under such surface, said discharge devices being isolated one from the other under the soil.

2. In apparatus for treating the soil, a steam supply, a rotary member having devices for supplying the steam to the soil under the surface thereof, and means for directing a supply of steam to only such of said devices as are embedded in the soil.

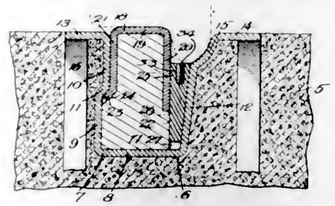
3. In apparatus for treating the soil, a steam supply, a rotary member having devices for supplying the steam to the soil under the surface thereof, and valve mechanism for directing a supply of steam to only such of said devices as are embedded in the soil.

4. In apparatus for treating the soil, a steam supply, a rotary member having devices for supplying the steam to the soil under the surface thereof, means for controlling the supply of steam to only such of said devices as are embedded in the soil, and means for directing the steam supplied to the soil and preventing the blowing of the soil.

5. In apparatus for treating the soil, a steam supply, a rotary member having devices for supplying the steam to the soil under the surface thereof, means for controlling a supply of steam to only such of said devices as are embedded in the soil, and confining pockets formed about the steam supplying devices.

[Claims 6 to 11 not printed in the Gazette.]

1,171,278. COMPOUND RAIL. OLIVER C. THOMPSON, Phoenix, Ariz. Filed Apr. 30, 1915. Serial No. 24,865. (Cl. 239—16.)



1. A compound rail comprising a composite road-bed provided with channels therein, a trough disposed in each channel, said trough comprising a horizontal floor, a vertical outer wall, and an inclined inner wall bearing away from the outer wall, said outer wall having its upper portion off-set inwardly whereby a shoulder is provided at a suitable height in said outer wall, outwardly extending flanges provided at the upper edges of the inner and outer walls, said flanges having depending anchors embedded in the road-bed, said inner wall being connected with its horizontal flange by a curved portion exposing a concaved surface toward the outer wall, a filler adapted to be disposed within said trough, and having a reduced upper portion, a crown plate adapted to be disposed upon said filler, said plate including a horizontal tread portion and depending side flanges engaging the sides of the reduced upper portion of the filler, one of said flanges being provided with an outwardly flared portion adapted to co-act with the shouldered portion of the outer trough wall for preventing vertical movement of the filler and crown plate, and a wedge bar adapted to be disposed between said filler and crown plate, and the inclined wall of the trough, for locking the parts in position.

2. A compound rail comprising a composite road-bed provided with a channel, a trough disposed therein and having an inclined wall, a shoulder formed on the opposite wall of the trough, means for anchoring said trough to the road-bed, a filler disposed within the trough, a crown plate carried by the filler, a wedge bar adapted to be disposed between the crown plate and filler, and inclined trough wall, for forcing said crown plate and filler against the opposite trough wall, and means on the crown plate for engaging the said shouldered portion of the trough wall whereby to prevent vertical movement of the crown plate and filler.

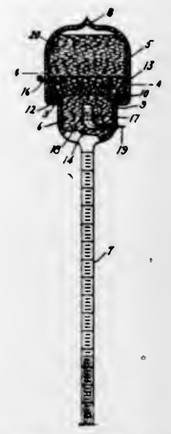
3. A compound rail comprising a composite road-bed having a channel formed therein, a trough disposed in said channel and secured to the road-bed, a filler adapted to be disposed in said trough, a crown plate removably disposed upon said filler, a wedge bar adapted to be disposed between the filler and crown plate and one wall of the trough, and co-acting means between the opposite wall of the trough and the crown plate for preventing vertical movement of the crown plate and filler.

4. A compound rail including a trough, a filler disposed therein and provided with a removable crown plate, a wedge bar adapted to be disposed between the crown plate and filler and one wall of the trough for maintaining said crown plate and filler in position, said wedge bar adapted to be maintained in position by action of passing car wheels.

5. A compound rail including a trough having a wall provided with an offset portion, a rail portion adapted to be disposed in the trough, a wedge bar adapted to be disposed in the trough between one wall thereof and the rail portion, and a crown plate forming a part of the rail portion and being arranged and engaged between the offset trough wall and said wedge bar.

1,171,279. ELECTROLYTIC METER. JAMES N. TUTTLE, Harwichport, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 27, 1914. Serial No. 827,602. (Cl. 171—266.)

1. An electrolytic meter comprising a containing vessel integrally constructed and hermetically inclosing the operative elements of the meter, said operative elements comprising an electrolyte, a cathode, a body of anode mercury, and a movable diaphragm adapted to act as a valve, preventing the passage of mercury from the anode to the cathode, except electrolytically, but permitting the return of the mercury deposited at the cathode to the body of anode mercury.



2. An electrolytic meter comprising a containing vessel integrally constructed and hermetically inclosing the operative elements of the meter, said operative elements comprising an electrolyte, a cathode, a body of anode mercury, and a movable diaphragm of finely woven silk fabric adapted to act as a valve, preventing the passage of mercury from the anode to the cathode, except electrolytically, but permitting the return of the mercury deposited at the cathode to the body of anode mercury.

3. An electrolytic meter comprising a containing vessel, an electrolyte, a cathode, a body of anode mercury, and a movable diaphragm of a material permeable to the electrolyte, but not to mercury, operatively arranged to separate the anode mercury from the cathode.

4. An electrolytic meter comprising a containing vessel, an electrolyte, a cathode, a body of anode mercury, and a movable diaphragm of a material permeable to the electrolyte, but not to mercury, adapted to act as a valve, preventing the passage of mercury from the anode to the cathode, except electrolytically, but permitting the return of the mercury deposited at the cathode to the body of anode mercury.

5. An electrolytic meter comprising a containing vessel, an electrolyte, a cathode, a body of anode mercury, and a movable diaphragm of finely woven silk fabric adapted to act as a valve, preventing the passage of mercury from the anode to the cathode, except electrolytically, but permitting the return of the mercury deposited at the cathode to the body of anode mercury.

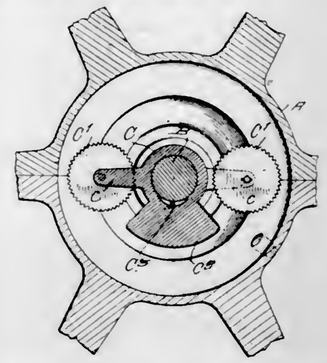
[Claims 6 to 11 not printed in the Gazette.]

1,171,280. LUBRICATING-PULLEY. HARVEY GEORGE VANCE, St. Louis, Mo. Filed Mar. 11, 1915. Serial No. 13,715. (Cl. 64—26.)

1. In a lubricating pulley of the character described, a lubricating ring disposed around the pulley shaft and having a counter weight normally holding the same against movement with the pulley and having other means automatically limiting its rotation with respect to the shaft.

2. In a lubricating pulley of the character described, a lubricating ring disposed around the pulley shaft and having a counter weight whereby to normally prevent its rotation with respect to the shaft and also having locking means engageable with the shaft to limit relative movement.

3. In a lubricating pulley of the character described, a lubricating ring disposed around the pulley shaft and having means for automatically locking the same to the pulley shaft upon rotative movement thereof.



4. In a lubricating pulley of the character described, a lubricating ring disposed around the pulley shaft and having an inner groove extending partly around the shaft and provided with shallow ends, and a roller disposed in the groove whereby to automatically lock the said ring with the shaft upon rotative movement of the former with respect to the shaft.

5. A lubricating pulley including a hub portion having a lubricant chamber and a bore through which the shaft extends, provided with annular recesses adjacent its ends around the shaft and communicating with the lubricant chamber, and draw springs disposed within the said recesses and sprung around the shaft in direct engagement therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,171,281. INTERLOCKING SHEET-PILING. FRANK F. VANDEVORT, Germantown, Pa. Filed Mar. 20, 1914. Serial No. 826,053. (Cl. 189—22.5.)



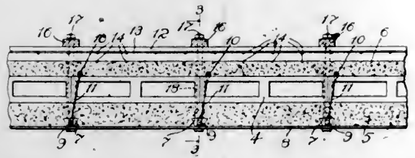
1. Sheet piling formed in sections, and having pivotally joined interlocking edges, one part of the interlocking joint consisting of two longitudinal flanges spaced apart to form an open jaw, and the other part consisting of a thickened edge forming a head, said head having its longest transverse diameter greater than the entrance opening between the jaw flanges, but said entrance opening being slightly greater than the transverse diameter of the head taken from its pivoting point to the opposite margin of the head so that the latter may enter between the jaw flanges by a hinging movement into engaging position within the jaw.

2. A piling unit for sheet piling formed in sections and having pivotally jointed interlocking edges, said unit comprising a piling sheet having at one edge two longitudinal flanges spaced apart to form an open jaw and having at its opposite edge a thickened head, the longest transverse diameter of the latter being greater than the entrance opening between the jaw flanges, but said entrance opening being slightly greater than the transverse diameter of the head taken from its pivoting point to the opposite margin of the head, so that the latter may enter between and engage the jaw flanges of an adjacent unit by a hinging movement.

3. A sheet piling unit having at one edge a pair of longitudinal recurved flanges forming an open jaw with restricted opening, and at its opposite edge a thickened bead forming a head having a hook along one side and a shoulder on the opposite side, the transverse diameter of the head from the end of the hook to the opposite margin

of the shoulder being greater than the entrance opening of the jaw, while the transverse diameter of the head from the base of the hook to the opposite margin of the shoulder is less than said opening, whereby said unit may be interlocked with a like unit by a hinging motion, in which the hook of the head is first inserted in the entrance opening and the head then swung into the jaw while pivoted at the base of the hook, substantially as described.

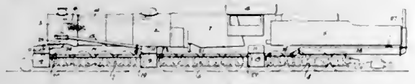
1,171,282. CONCRETE BUILDING CONSTRUCTION. ACHILLES H. VAN PAEMEL, Chicago, Ill. Filed May 6, 1915. Serial No. 26,232. (Cl. 72—48.)



1. A building construction comprising a wall of concrete formation having wooden uprights embedded in the inner portion thereof, said uprights being formed in sections with dowels connecting said sections; upright metallic rods embedded in said concrete formation; and wire tie members connecting said dowels and rods, substantially as described.

2. A building construction comprising a wall of concrete formation having wooden uprights embedded in the inner portion thereof with their inner faces flush with the inner face of said formation, said uprights being formed in sections with dowels connecting said sections; upright metallic rods embedded in said concrete formation; wire tie members connecting said dowels and rods; and horizontal tubes embedded in said wall formation, substantially as described.

1,171,283. LOCOMOTIVE. SAMUEL M. VAUCLAIN, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 18, 1914. Serial No. 872,841. (Cl. 105—17.)



1. The combination in a locomotive, of three pairs of cylinders spaced apart; a boiler; high pressure pipes leading from the boiler to a central pair of cylinders; a low pressure pipe leading from one of the high pressure cylinders to the two low pressure cylinders at one end; and a second pipe leading from the other high pressure cylinder to the low pressure cylinders at the opposite end.

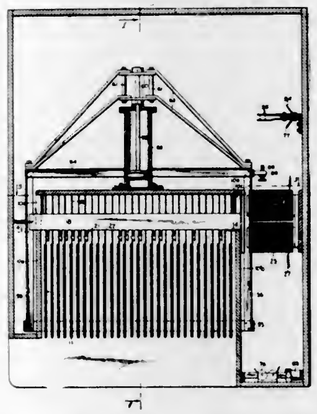
2. The combination in a locomotive, of three frames pivotally connected; driving mechanism on each frame; two cylinders on each frame; a boiler rigidly mounted on the central frame and overhanging the forward frame; two pipes leading from the live steam supply of the boiler to the cylinders on the intermediate frame; a flexibly connected pipe leading from one of said cylinders on the intermediate frame to the cylinders on the forward frame; and a flexibly connected pipe leading from the other cylinder on the intermediate frame to the two cylinders on the rear frame.

3. The combination in a locomotive, of three frames connected together by articulated joints; independent driving mechanism mounted on each frame; two cylinders mounted on each frame, all of the cylinders being of the same diameter; a boiler mounted on the intermediate frame and overhanging one of the other frames; two high pressure pipes leading from the steam supply of the boiler to the cylinders on the intermediate frame; a pipe leading from one of the intermediate cylinders to the two cylinders at the forward end of the locomotive; and a pipe leading from the other cylinder on the intermediate frame to the cylinders mounted on the rear frame.

4. The combination in a locomotive, of three frames connected together by articulated joints; independent driving mechanism mounted on each frame; two cylinders mounted on each frame; all of the cylinders being of the same diameter; a boiler mounted on the intermediate frame and overhanging one of the other frames; two high pressure pipes leading from the steam supply of the boiler to the cylinders on the intermediate frame; a pipe leading from one of the intermediate cylinders to the two cylinders at the forward end of the locomotive; a pipe leading from the other cylinder on the intermediate frame to the cylinders mounted on the rear frame; the forward cylinders exhausting into the smoke box of the boiler; and a feed water heater through which the exhaust passes from the rear cylinders.

5. The combination in a locomotive, of three frames connected together by articulated joints; driving wheels mounted on each frame; two cylinders mounted on each frame and connected to the driving wheels so that the mechanism on each frame is independently driven; a boiler mounted on the intermediate frame and overhanging the forward frame; a tender mounted on the rear frame; a pipe leading from the steam dome of the boiler; two high pressure pipes leading from said pipe to the steam chest of the cylinders on the intermediate frame; a flexibly connected pipe leading from the exhaust side of one of said cylinders to the steam chest of the forward cylinders; a flexibly connected pipe leading from the cylinder on the intermediate frame to the steam chest of the low pressure cylinders on the rear frame; a pipe leading from the exhaust side of both forward low pressure cylinders to the smoke box of the boiler, said pipe having a flexible connection; a pipe leading from the exhaust side of both rear cylinders; a feed water heater connected to said pipe; and an exhaust pipe connected with the feed water heater and terminating at the rear of the tender.

1,171,284. STREET-INDICATOR. HARRY WALTER VERNSON, Blue Rapids, and HOBART FRED LUTZ, Lawrence, Kans. Filed Feb. 20, 1915. Serial No. 9,556. (Cl. 40—56.)



1. In an indicator for electric trolley systems, a series of separate cards bearing indicating matter for different stations along a car route, and adapted to gravitate from a non-indicating to an indicating position, a series of movable elements to sustain the cards on a car normally in non-indicating positions, means to actuate the said card-sustaining elements, said means including elements on the car, and co-acting selective elements stationed along the car route and corresponding with individual cards, lifting means to restore the cards to non-indicating positions, actuating means for said lifting means, said last mentioned actuating means comprising electrically controlled co-acting devices on the car and along the car route, and means controlled by the upward movement of the lifting means to throw the last mentioned actuating means out of action and to permit the lifting means to drop after raising the cards.

2. In an indicator for electric trolley systems, a series of separate cards bearing indicating matter for different stations along a route, and adapted to gravitate from non-indicating to indicating positions, a series of movable sustaining elements arranged to hold said cards on a car in non-indicating positions, means to actuate the sustaining element of a particular card to permit said cards to assume an indicating position, a lifting device to restore the cards to non-indicating positions, fluid operated actuating means for the lifting device, and electrically actuated controlling means for said fluid operated means, said controlling means including a valve in the fluid operating means to control the supply of motive fluid thereto, an electromagnet to open said valve, a second electromagnet, automatic means including co-acting elements on the trolley and along the car route to energize the second magnet and bring the first magnet and the armature of the second magnet in electric circuit with the trolley conductor, a third magnet having an armature forming a catch for the first mentioned armature, and means to temporarily bring the third magnet into electric circuit with the conductor by the upward movement of the lifting device.

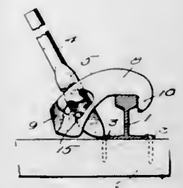
3. In an indicator for electric trolley systems, a series of separate cards bearing indicating matter for different stations along a car route, and adapted to gravitate from a non-indicating to an indicating position, a series of movable elements to sustain the cards on a car normally in non-indicating positions, means to actuate the said card-sustaining elements, said means including elements on the car, and co-acting selective elements stationed along the car route and corresponding with individual cards, a lift frame having bars thereon, the cards having members disposed above said bars adapted to be engaged by the latter when the cards drop, means to raise said lift frame, and co-acting means on the car and along the route to control said lift frame and cause the same to have a lifting movement after an operation of any of the co-acting selective devices.

4. In an indicator of the character described, a series of separate indicating cards, adapted to gravitate from non-indicating to indicating position, a series of slides each having members thereon variously positioned to correspond with and engage a plurality of cards to sustain the latter in raised, non-indicating positions, actuating means to separately move the slides out of engagement with their respective cards, and selective devices along the car route controlling the said actuating means.

5. In an indicator of the character described, a series of separate indicating cards, adapted to gravitate from non-indicating to indicating position, a series of slides each having members thereon variously positioned to correspond with and engage a plurality of cards to sustain the latter in raised, non-indicating positions, actuating means to separately move the slides out of engagement with their respective cards, and selective devices along the car route controlling the said actuating means; together with a lift frame common to all the cards to lift the same from indicating to non-indicating positions, operating means for the lift frame, and means adjacent to the several selective devices along the route to cause said operating means to function after an operation of each selective device.

1,171,285. CLAW-BAR. JAMES GROVER VINSON, Graham, Ky., assignor of one-half to William G. Duncan, Jr., Greenville, Ky. Filed May 6, 1915. Serial No. 26,374. (Cl. 254—27.)

1. As an article of manufacture, a claw bar consisting of a handle portion having a head at one end provided with a point and having a notch or recess at the point forming a claw for engaging the head of a spike, and a shackle pivotally connected with the head and having a hook for engaging over a rail and a heel at the opposite end for engaging the tie, said shackle comprising a pair of similar and similarly arranged arc-shaped plates arranged on opposite sides of the head, the head having a transverse pivot pin extending beyond the opposite faces of the head, and each plate having an opening provided with three notches for engagement by the adjacent end of the pin, said notches being spaced apart from each other and the notches of the plates being similarly arranged and being adjacent to the heel of the shackle, said plates being connected at the end remote from the hook by a transverse connection, and the openings being adjacent to the connection.



2. As an article of manufacture, a claw bar consisting of a handle portion having a head at one end provided with a point and having a notch or recess at the point forming a claw for engaging the head of a spike, and a shackle pivotally connected with the head and having a hook for engaging over a rail and a heel at the opposite end for engaging the tie, said shackle comprising a pair of similar and similarly arranged arc-shaped plates arranged on opposite sides of the head, the head having a transverse pivot pin extending beyond the opposite faces of the head, and each plate having an opening provided with three notches for engagement by the adjacent end of the pin, said notches being spaced apart from each other, and the notches of the plates being similarly arranged and being adjacent to the heel of the shackle.

3. As an article of manufacture, a claw bar having at one end a claw for engaging the head of a spike, a shackle permanently connected with the bar by a swinging connection, the shackle having a hook at one end for engaging over a rail and a heel at the opposite end for engaging the tie, said connection comprising a slotted opening extending transversely of the shackle, and a pivot pin on the bar for engaging the opening, said opening having recesses or depressions at the opposite ends thereof, for permitting the pivot pin to be adjusted transversely of the shackle.

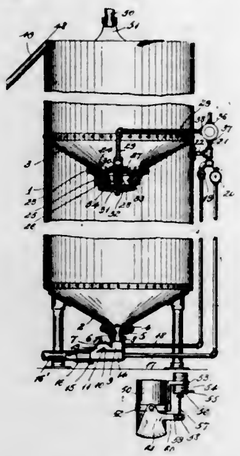
4. As an article of manufacture, a claw bar having at one end a claw for engaging the head of a spike, and a shackle permanently connected with the bar by a swinging connection, said connection comprising an opening extending transversely of the shackle and a pivot pin for engaging the opening, said opening having recesses or depressions at the opposite ends thereof for engagement by the pivot pin to permit the said pin to be adjusted transversely of the shackle.

1,171,286. SAND-BLAST MACHINE. HOWARD L. WADSWORTH, Cleveland, Ohio. Filed Apr. 22, 1912. Serial No. 692,279. (Cl. 51—12.)

1. In a sand blast machine, a sand receptacle having a hopper bottom, and a mixing and discharge device at the lower end of said hopper bottom and comprising a casing in communication with the receptacle, said casing being provided with an air channel, a sand channel communicating with said air channel at the top, a sand trap located in said sand channel and preventing the gravitation of the sand into the air channel, means for driving the sand from the sand channel, and means for supplying air to the air channel.

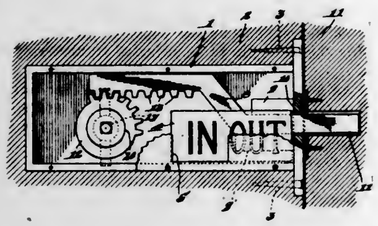
2. In a sand blast, a sand receptacle, and a mixing device comprising a casing, an air channel, a sand channel communicating therewith, a sand inlet to the sand channel, a trap arranged in said sand channel comprising suitable projections forming the trap, an air line for driv-

ing the sand from siad trap, and an air line connected to the air channel.



3. In a sand blast, a sand receptacle, a mixing device comprising a casing connected to the tank by a sand inlet, a sand outlet, an air channel substantially in alinement with said sand outlet, a sand channel communicating with said air channel at a point out of alinement with the sand inlet, a projection extending upward into the sand channel, a projection extending downward into the sand channel nearer the sand inlet, said projections in said sand channel forming a trap for preventing the free discharge of sand from the receptacle, an air line connected to said casing and arranged to drive the sand from said trap into the air channel, and an air pipe supplying air to said air channel.

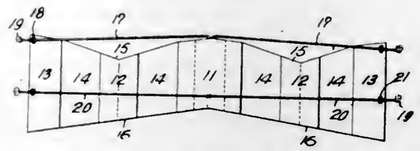
1,171,287. INDICATOR FOR DOORS. PAUL W. WASCHAU, Maywood, Ill. Filed Apr. 12, 1915. Serial No. 20,907. (Cl. 40—66.)



1. An indicator for doors comprising a housing having an exposure opening in one side thereof; a shiftably mounted member arranged in said housing having indications thereon adapted for exposure at said exposure openings; means for shifting said member, said means comprising a rack bar connected with said member; a manually operable pinion meshing with said rack bar; and means on said pinion for engagement with said member to limit shifting movement thereof in one direction, substantially as described.

2. An indicator for doors comprising a housing having an exposure opening in one side thereof; a shiftably mounted member arranged in said housing having indications thereon adapted for exposure at said exposure opening; means for shifting said member, said means comprising a rack bar connected with said member; a manually operable pinion meshing with said rack bar; and an annular shoulder on said pinion for engagement with said member to limit shifting movement thereof in one direction, substantially as described.

1,171,288. LIFE-PRESERVER. FRANK C. WHEELER, Montreal, Quebec, Canada. Filed June 14, 1915. Serial No. 34,001. (Cl. 9—17.)

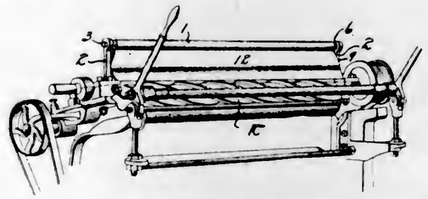


1. In a life preserver, a fabric jacket opening at the front having therein spaced slabs of cork, arranged at front, back and sides, the front slabs being longer than the back and the back slabs longer than the side slabs.

2. In a device of the character described, a jacket comprising a fabric strip having the lower edge thereof sloping downwardly from the center toward the ends, and the upper edge thereof sloping downwardly from the center and ends to intermediate points, whereby the ends of said strip are of greater depth than the center, and the center of greater depth than the points intermediate itself and the ends, and floats mounted in said fabric strip in spaced relation at the center, ends and intermediate points.

3. In a life preserver, a fabric jacket, back, front and side floats secured therein, the front float being of greater depth than the back float and extending farther up and down on the wearer than the back float, the back float being designed to lie against the back of the wearer's shoulders and upwardly to the base of the neck, and the side floats each smaller than the back float and positioned against the sides of the wearer's body under the arms, ropes rigidly connected to the back float and passing over the wearer's shoulders and adjustable through the front floats, and a second rope connected to the back float passing around the wearer's body under the arms and adjustable through the front floats.

1,171,289. WIPER ATTACHMENT FOR SHEARING-MACHINES. CLAUDE M. WHITTIER, Methuen, Mass., assignor to Mills Machine Company, Lawrence, Mass., a Corporation of Massachusetts. Filed Sept. 21, 1915. Serial No. 51,835. (Cl. 184—102.)



1. An attachment for shearing machines comprising a hollow adjustable supporting member, a wiper member, and means for detachably holding said wiper member within said hollow adjustable supporting member.

2. An attachment for shearing machines comprising a tubular supporting member, a folded wiper member, and a core insertible within the folded portion of said wiper for holding the same in the tube.

3. An attachment for shearing machines comprising a tubular supporting member having a longitudinal slot, and a square bracket end, a folded wiper member, and a core insertible within the folded portion of said wiper for holding the same in the tube, and an adjustable plug at the end of said tube opposite the bracket end.

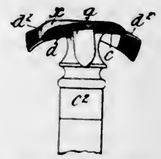
4. An attachment for shearing machines, comprising a hollow supporting member having a slot, a folded wiper member having depending shear contacting aprons, and a core removably inserted in the fold of said wiper body to hold the same in the hollow supporting member so that the said shear contacting aprons depend through said slot.

5. An attachment for shearing machines, comprising a hollow supporting member having a slot, a wiper member,

a removable core for holding said wiper member within said hollow supporting member so that a portion thereof projects therefrom through said slot, and means for removably locking said core within the supporting member.

[Claims 6 and 7 not printed in the Gazette.]

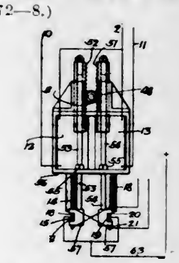
1,171,290. SAFETY-RAZOR. THOMAS WILD, Moseley, Birmingham, England. Filed Feb. 6, 1915. Serial No. 6,552. (Cl. 30—12.)



1. A safety razor, including a back plate and guard plate whose inner blade-clamping faces are each formed with a registering longitudinal twist, a blade adapted to be clamped between these faces so as to strain it to the longitudinal twist, and a handle whose axis is set inclined to the cutting edge or edges of the blade; the clamping of the blade putting a diagonal curvature into said blade in addition to a transverse curvature, substantially as described.

2. A safety razor including, a back clamping plate and a complemental guard clamping plate, each having a substantially spiral formation so that the same are twisted longitudinally, a substantially flat blade adapted to be clamped between the clamping faces of said guard and back plates and to be strained into a longitudinal twist corresponding to said plates, and a handle to which said plates are secured, said handle extending at right angles from the clamped plates as a whole and at an angle out of right angles to the twisted edges thereof.

1,171,291. SYSTEM OF REMOTE CONTROL. JOHN D. WILLIAMSON, Jr., Philadelphia, Pa., assignor to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 13, 1915. Serial No. 7,991. (Cl. 172—8.)



1. The combination of a motor; a reversing switch therefor; two electro-magnets for governing the operation of said switch; a pair of contacts connected to control the energization of said electro-magnets and movable by the motor; a third electro-magnet; a contact operative by the movable member of said electro-magnet into engagement with one or the other of said first contacts; and a switch for controlling energization of the third electro-magnet.

2. The combination of a motor; reversing means therefor; a solenoid having a movable member controlling said reversing means; current varying means in circuit when the solenoid winding for governing the position of said movable member; with a device other than said current varying means for mechanically shifting the position of said movable member.

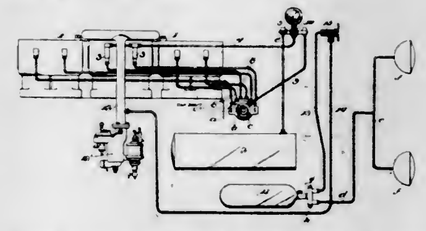
3. The combination of a motor; reversing means therefor; two solenoids having movable members controlling said reversing means; gearing connecting said members; a current varying device governing the flow of current to the solenoid windings for adjusting the positions of their movable members; and means for manually actuating the gearing connecting the movable solenoid members for also controlling the positions of the same.

4. The combination of a motor; a reversing switch therefor; two solenoids for controlling said switch; a rheostat for governing the flow of current to the solenoid windings and determining the positions of their movable members; means for mechanically actuating the movable members of the solenoids; with floating mechanism actuated by the motor for operating one of the two elements comprised by said means and the rheostat, the other of said elements being manually controlled.

5. The combination of a motor; an electro-magnetic reversing switch therefor; two electro-magnets governing the operation of said switch and each having means for operating it to cause operation of the motor in either direction; means for varying the current flow to said electro-magnets to adjust the positions of their movable members; and mechanism for adjusting said members.

[Claims 6 to 12 not printed in the Gazette.]

1,171,292. SELF-STARTER FOR EXPLOSION-ENGINES. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio. Filed July 5, 1912. Serial No. 707,934. (Cl. 123—180.)



1. The combination with a plural cylinder explosion engine, of an acetylene gas supply in communication with the engine cylinders on their charging stroke, means acting upon the piston of one of said cylinders when the engine is at rest and adapted to successively act upon the pistons of the other cylinders in the sequence of the motor functions by acting on the firing stroke, a controlling member for the acetylene gas supply and a controlling member for the said piston actuating means, the latter controlling the acetylene controlling member.

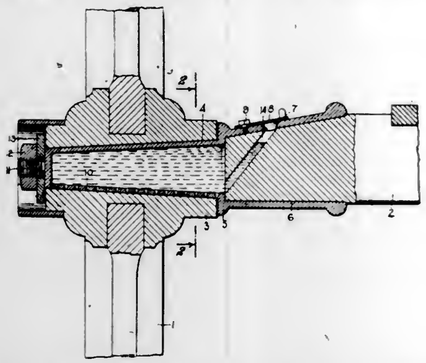
2. The combination with a plural cylinder explosion engine, of an acetylene gas supply in communication with the engine cylinders on their charging stroke, means acting upon the piston of one of said cylinders to set the engine in motion and adapted to act successively on the pistons of the other cylinders to continue said motion in the sequence of the motor functions by acting on the firing stroke, a controller for the said actuating means, a controller for the acetylene supply, said controllers operatively connected, whereby when the actuating means controller is operated the acetylene controller is correspondingly operated.

3. The combination with a plural cylinder explosion engine, of an acetylene gas supply in communication with the engine cylinder on its charging stroke, air means acting upon the piston of one of said cylinders when the engine is at rest and adapted to successively act upon the pistons of the other cylinders in the sequence of the motor function by acting on the firing stroke, a controlling member for the acetylene gas supply, and a controlling member for the air actuating means, the latter controlling the acetylene controlling member.

1,171,293. VEHICLE-SKEIN. WILLIAM WILTON WOOD, Jr., Huntington, N. Y. Filed Feb. 19, 1915. Serial No. 9,292. (Cl. 64—27.)

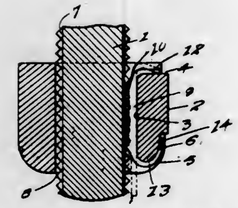
In a device of the character described, the combination with an axle having an aperture therein extending

from the periphery adjacent one end to said end, of a skein comprising a hollow bearing portion having apertures in the lower part thereof, a thimble for telescoping over said end of said axle and over said aperture, said



thimble being formed with an inlet aperture registering with one of the passageways in said axle whereby oil may be inserted into said bearing portion through said inlet and said passageway, and a covering member for said inlet aperture.

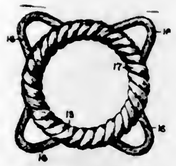
1,171,294. NUT-LOCK. HARVEY J. YAGER, Seattle, Wash. Filed June 30, 1915. Serial No. 37,284. (Cl. 151—23.)



1. In combination with a bolt having a longitudinal channel extending across its threads, a nut threaded to engage the bolt and having a longitudinal groove communicating with its bore, and a locking key extending through said groove, arranged for slight longitudinal movement therein and having segment threads to match those of the nut and bolt, said key having bendable end extensions adapted to be engaged with the inner and outer sides of the nut to hold the key in initial position with its threads and register with those of the nut and bolt and to lock the key in locking position with its threads in the channel of the bolt and out of registry with the threads of the nut and bolt.

2. In combination with a bolt having a longitudinal channel extending across its threads, a nut threaded to engage the bolt and having a longitudinal groove communicating with its bore, and a locking key extending through said groove, arranged for slight longitudinal movement therein and having segment threads to match those of the nut and bolt, said key having bendable end extensions adapted to be engaged with the inner and outer sides of the nut to hold the key in initial position with its threads and register with those of the nut and bolt and to lock the key in locking position with its threads in the channel of the bolt and out of registry with the threads of the nut and bolt, said nut having a radial groove at its inner side bendable arm of the key and also having a curved groove in its outer side for engagement by the other bendable arm of the key, the last named arm having a head providing oppositely projecting lugs for engagement by a hammer claw or other implement.

1,171,295. GROMET. WILLIAM A. YOUNG, New York, N. Y. Filed Apr. 3, 1915. Serial No. 18,966. (Cl. 137—121.)



1. As an article of manufacture, a gromet having a flat coil consisting of a loosely twisted skein disposed to form a ring; a covering for said ring formed by wrapping the loose end of said skein around the same to form successive spiral wraps, the outer wrap being seated upon the finished end of the skein to bind the latter in position; and a suitable filling for said ring and wraps, said filling being impervious to water.

2. As an article of manufacture, a gromet having a flat coil consisting of a loosely twisted skein disposed to form a ring; and a cover for said ring formed by wrapping the loose end of said skein around the same to form successive spiral wraps, the outer wrap being seated upon the finished end of the skein to bind the latter in position, said gromet being saturated with a permeating fluid impervious to water.

3. As an article of manufacture, a gromet having a flat coil consisting of an unraveled fiber skein disposed to form a ring; and a covering for said ring formed by wrapping the loose end of said skein around the same to form successive spiral wraps, the outer wrap being seated upon the finished end of the skein to bind the latter in position, said gromet being saturated with a permeating fluid impervious to water, said fluid having a non-setting, dense body for avoiding the passage of water therethrough.

4. As an article of manufacture, a gromet having a relatively large body portion, and a series of loops integrally connected with said body portion and extending laterally therefrom, said loops being adapted to form auxiliary seals for the protection of areas adjacent the area covered by said body portion.

5. As an article of manufacture, a gromet having a relatively large, circular body portion formed of skeined material wrapped upon itself, a portion of said material being extended laterally from said body portion to form auxiliary, relatively small loops.

1,171,296. ICE-PICK AND THE LIKE. LOTHAR R. ZIFFERER, New York, N. Y. Filed Mar. 24, 1915. Serial No. 16,569. (Cl. 83—62.)



1. A device of the class described embodying, in combination, a handle provided with a bore therewithin, said handle being formed with a neck of reduced diameter, a ferrule surrounding said neck and overlying the handle and adjacent thereto, a hollow sleeve arranged within the bore of the handle provided at one end with an enlarged and threaded socket and at the other end with a head arranged to abut against the ferrule upon the handle neck, means for securing said sleeve within the handle body, a shank within the sleeve having its acting end projected from the handle through the neck thereof, a head on the shank arranged to lie against the inner end of the threaded socket within the sleeve, and a threaded device secured within said socket, and in engagement with the shank head to lock the same against movement, substantially as described.

2. A device of the class described embodying, in combination, a handle provided with a bore therewithin, a ferrule surrounding and overlying one end of the handle, a hollow sleeve within the bore of the handle provided at one end with an enlarged and threaded socket and at the other end with a head arranged to abut against the ferrule end of the handle, means for securing said sleeve within the handle body consisting of a projection struck out from the sleeve into the handle body, a shank within the sleeve having its acting end projected from the handle through the ferrule end thereof, a head on the shank arranged to lie against the inner end of the threaded socket within the sleeve, and a threaded device secured within said socket and in engagement with the shank head to lock the same against movement, substantially as described.

3. A device of the class described, embodying, in combination, a handle provided with a bore therewithin, a ferrule surrounding and overlying one end of the handle, a non-yielding sleeve arranged within the bore of the handle provided at one end with an enlarged and threaded socket, means for securing said sleeve within the handle body, a shank within the sleeve having its acting end projected from the handle through the ferrule end thereof, a head on the shank arranged to lie against the inner end of the threaded socket and in engagement with the shank head to lock the same against movement, substantially as described.

4. A device of the class described, embodying in combination a handle provided with a bore therewithin, a non-yielding sleeve within the bore of the handle, a shank within the sleeve having its acting end projected from the handle, a head on the shank normally disposed within the sleeve, said sleeve being provided with means for engaging with the shank head to lock the shank against longitudinal movement in one direction, and other means independent of the sleeve for preventing longitudinal movement of the shank therewithin in an opposite direction, substantially as described.

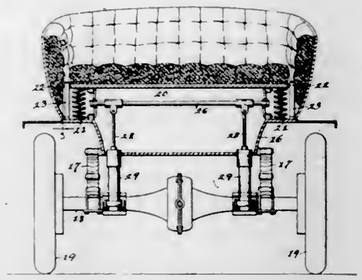
5. A device of the class described, embodying in combination a handle provided with an axial bore therewithin, a sleeve within the bore of the handle, a shank within the sleeve having its acting end projected from the handle, said shank and sleeve being configured to prevent longitudinal movement of the shank within the sleeve in one direction, and removable locking means axially alined with the shank to prevent longitudinal movement of the shank in the opposite direction, substantially as described.

1,171,297. SEAT-SPRING. MALCOLM GROVER ADAMS, Hamlet, N. C. Filed Dec. 10, 1914. Serial No. 876,426. (Cl. 21—44.)

1. The combination in a vehicle, of a body, an axle, resilient devices interposed therebetween, a seat, devices interposed between said axle and seat of a resilient character, and means for yieldingly resisting movement of said seat with respect to said axle in one direction.

2. The combination in a vehicle, of a body, an axle, resilient means interposed therebetween, a seat, resilient means interposed between said axle and seat permitting their movement toward each other, and means for yieldingly resisting movement of said axle and seat from each other.

3. The combination in a vehicle, of a body, an axle, resilient means interposed therebetween, a seat, resilient means interposed between said axle and seat, permitting their movement toward each other, stops for limiting such movement, and means for yieldingly resisting movement of said axle and seat from each other.

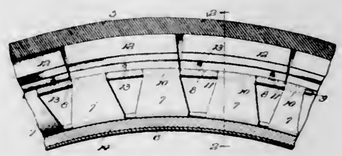


4. The combination in a vehicle, of a body, an axle, resilient means interposed therebetween, a seat, resilient means interposed between said body and seat, permitting movement toward each other, and means in operative connection with said axle and seat for yieldingly resisting movement of said axle and seat from each other.

5. The combination in a vehicle, of a body, an axle, resilient means interposed therebetween, a seat, a pivotal support between said body and seat, resilient means interposed between said body and seat, permitting their movement toward each other, and means in operative connection with said axle and seat for yieldingly resisting movement of said axle and seat from each other.

[Claims 6 and 7 not printed in the Gazette.]

1,171,298. TIRE. GOTTLIEB ANGER, McKees Rocks, Pa. Filed July 26, 1915. Serial No. 41,958. (Cl. 152—8.)



1. A tire comprising a casing, a rim on which the casing is mounted, curved transverse resilient strips and flat transverse resilient strips located in alternate order in the casing, the free ends of the curved strips being at the sides of the tire, a connection between the free ends of the curved strips and the outer ends of the flat strips, and bearing members between the flat strips and the inner surface of the casing at the tread thereof.

2. A tire comprising a casing, a rim on which the casing is mounted, curved transverse resilient strips and flat transverse resilient strips located in alternate order in the casing, the free ends of the curved strips being at the sides of the tire, a connection between the free ends of the curved strips and the outer ends of the flat strips, bearing members between the flat strips and the inner surface of the casing at the tread thereof, and a seat for the curved strips mounted on the rim between the base portions of the casing.

3. A tire comprising a casing, a rim on which the casing is mounted, curved transverse resilient strips and flat transverse resilient strips located in alternate order in the casing, the free ends of the curved strips being at the sides of the tire, and said ends and the outer ends of the flat strips having eyes, rings passing through said eyes and forming a connection between the free ends of the

curved strips and the outer ends of the flat strips, and bearing members between the flat strips and the inner surface of the casing at the head thereof.

1,171,299. LEUCOCYTIC EXTRACT AND METHOD OF MAKING THE SAME. ROBERT A. ARCHIBALD, Oakland, Cal. Filed July 13, 1914. Serial No. 850,591. (Cl. 167—7.)

1. An extract obtained from the liberated protoplasm of digested normal leucocytes in permanent solution and possessing the characteristic when injected parenterally of stimulating the produceion of a leucocytosis and increasing the activity of the individual leucocytes.

2. An extract in soluble form neutral in reaction which is obtained from the liberated protoplasm of digested normal leucocytes in permanent solution and possessing the characteristic when injected parenterally of stimulating the production of a leucocytosis and increasing the activity of the individual leucocytes.

3. The process of preparing leucocytic extract, which consists in separating the normal leucocytes from blood, diluting the resultant mass, incubating the same to facilitate antodigestion or lysis, and separating the liquid content from the mass.

4. The method of preparing leucocytic extract, which consists in separating the normal leucocytes from the blood, adding distilled water to said leucocytes, heating the mixture to destroy any antiferments it may contain, incubating the mixture to facilitate antodigestion or lysis of the leucocytes, and then separating the liquid content from the mass.

5. The method of preparing leucocytic extract, which consists in adding a weak solution of acetic acid to blood, whereby the red blood corpuscles are destroyed, centrifuging the resultant mixture to precipitate the leucocytes, removing the supernatant fluid, emulsifying the precipitate, neutralizing the acidity thereof, adding distilled water to the emulsion, heating the mixture to destroy any antiferments that it may contain, incubating the mixture to facilitate antodigestion or lysis of the leucocytes, and removing the supernatant fluid.

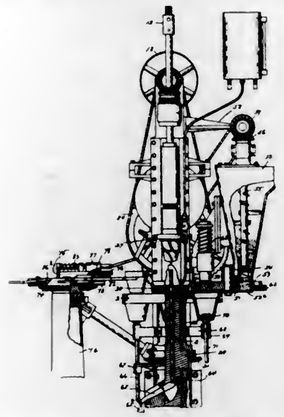
[Claim 6 not printed in the Gazette.]

1,171,300. CLOTHES-PROP. THOMAS W. ARTER, Bellaire, Ohio. Filed Oct. 16, 1915. Serial No. 56,196. (Cl. 68—12.)



A clothes prop comprising a pair of bars of uniform width and thickness arranged parallel with each other, each bar being formed with an outer bifurcated end, a pair of reversely arranged split loops embracing the pair of bars and having their ends secured to the inner ends of said bars, and adjustable set screws threaded in the loops to register with the bifurcations in the outer ends of said bars for engagement therein and also to bind the bars together between the ends thereof.

1,171,301. MOLDING-MACHINE. WILLIAM J. BAIRD, Detroit, Mich. Original application filed July 9, 1910, Serial No. 571,198. Divided and this application filed Apr. 5, 1915. Serial No. 19,253. (Cl. 25—26.)



1. In an automatic machine for shaping plastic material, the combination with a movable mold carrier, provided with a series of molds, an ejector for each of said molds, means for intermittently shifting the mold carrier, a movable charge carrier, means for feeding material to said charge carrier, a plunger for delivering a charge of material from said charge carrier to one of the molds of said mold carrier, a rotary former adapted to coöperate with the molds of said mold carrier, means for reciprocating the rotary former to move the same into one of the molds of the mold carrier during the rest period thereof, and means for simultaneously elevating the ejector of another of said molds and actuating the plunger of said charge devices to fill another of said molds.

2. In an automatic machine for shaping plastic material, the combination with a series of molds adapted for movement in a horizontal plane, means for feeding a measured charge of material to said molds, comprising a traveling charge carrier adapted to overlie said mold and to traverse a portion thereof, means for feeding material into said charge carrier, a former adapted to coöperate successively with each of said molds, means for reciprocating said former to cause it to enter one of the molds, and means for simultaneously forcing a charge of material from said traveling carrier into another of said molds.

3. In an automatic machine for shaping plastic material, the combination with a traveling carrier, of a series of molds thereon, a rotary feed table overlying the mold carrier, said feed table being provided with a series of uniform pockets adapted to successively register with the molds of the mold carrier, a fixed hopper adapted to deliver material to said feed table, and a rotary former positioned for coöperation with the charged molds.

4. In an automatic machine for shaping plastic material, the combination with a rotary carrier, of a plurality of molds thereon, a rotary disk having a series of apertures extending therethrough, pivoted for movement in a plane above the molds for the successive registration of its apertures with the molds, means for charging the disk openings with plastic material, a plunger positioned for operation at the point of registration of a disk opening with a mold, a rotary and reciprocatory former, and means controlled by the reciprocatory movement of the former for intermittently operating the plunger.

5. In an automatic machine for shaping plastic material, the combination with a traveling carrier, of a series of molds thereon, a rotary feed table overlying the mold carrier, said feed table being provided with a series of uniform pockets adapted to successively register with the molds of the mold carrier, a fixed hopper adapted to deliver material to said feed table, a rotary former positioned for coöperation with the charged molds, mechanism for intermittently and simultaneously operating the mold carrier, and the feed table, and automatic means for locking the mold carrier, and feed table against relative movement during the rest intervals.

[Claims 6 and 7 not printed in the Gazette.]

1,171,302. REFILLABLE POWDER-PUFF. KATHERINE K. BAKELAAR, Passaic, N. J. Filed June 9, 1915. Serial No. 33,070. (Cl. 132—28.)



1. A refillable powder puff, comprising a flat casing of puff material having a filling mouth along its edge for filling the casing with powder, one side of the said casing having a plurality of apertures formed therein for the passage of the powder from the interior of the casing to the face of the said apertured side, and separable fastening devices for fastening the sides of the casing together at the mouth.

2. A refillable powder puff, comprising a casing having a filling mouth, and formed of two sides of puff material united along the edges except at the mouth, one of the sides having a plurality of apertures formed therein, a fabric closure within the mouth of the casing, and having members secured to opposite sides of the casing, separable fastening devices for securing the members of the closure together, and a distributer of loosely woven fabric overlying the inner face of the apertured side of the casing to distribute the powder in the casing to the said perforations and to retard the passage of the powder to the outer face of the said apertured side.

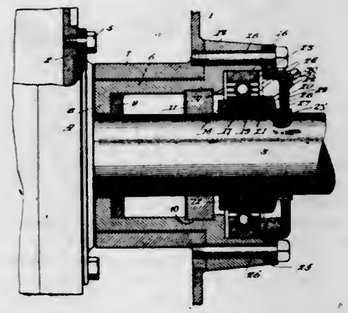
3. A refillable powder puff, comprising a flat casing having a filling mouth and formed of two sides united along their edges except at the said mouth, the said sides being formed of pile fabric material with the piles at the outer faces, the body of one of the sides being formed with a plurality of perforations covered by the surrounding pile, a piece of netting overlying the inner face of the perforate side of the casing and secured at its edge to the edge of said side, and closing means for normally holding the said mouth in closed position and including separable fastening devices.

4. A refillable powder puff, comprising a flat casing having a filling mouth along its edge for filling the casing with powder, the casing being formed of two sides formed of pieces of pile fabric united along their edges except at the said mouth, the pile of the pieces being on the outer faces of the sides, one of the sides having perforations, separable fastening members on the inner faces of the sides at the mouth for closing the latter, and a fabric closure within the said mouth and formed of two pieces of closely woven fabric, one of which is doubled and attached along one edge to the inside of the said casing at its mouth, the other piece of fabric (being not doubled) and attached along one edge to the inside of the opposite side of said casing at its mouth, the opposite edge of said piece of fabric being folded to form a closing flap and carrying means for releasably engaging a fastening means attached to the said doubled piece of fabric at a point adapted to bring it into engagement therewith.

5. A refillable powder puff, comprising a flat casing having a filling mouth along its edge for filling the casing with powder, the casing being formed of two sides formed of pieces of pile fabric mounted along their edges except at the said mouth, the pile of the pieces being on the outer faces of the sides, one of the sides having perforations, separable fastening members on the inner faces of the sides at the mouth for closing the latter, a fabric closure within the said mouth and formed of two pieces of closely woven fabric, one of which is doubled and attached along one edge to the inside of the said casing at its mouth, the other piece of fabric (being not doubled) and attached along one edge to the inside of the opposite side of said casing at its mouth, the opposite edge of said piece of fabric being folded to form a closing flap and carrying means for releasably engaging a fastening means attached to the said doubled piece of fabric at a point adapted to bring it into engagement therewith, and a piece of netting overlying the inner face of the said perforate side of the casing, the edge of the said netting being secured to the edge of the perforate side.

[Claim 6 not printed in the Gazette.]

1,171,303. BALL-BEARING FOR WASHING-MACHINES. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed Feb. 25, 1911. Serial No. 610,761. (Cl. 64—36.)



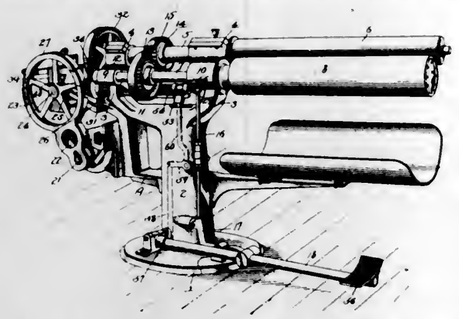
1. In a bearing of the kind described, the combination with a tubular housing, an annular grooved boxing arranged within said housing having an enlarged outer end engaging the end of the housing and secured thereto, said enlarged portion forming an oil chamber, said boxing having an annular flange at its inner end, a packing arranged against said flange, a ring arranged within said groove, a trunnion extending through said boxing, a collar carried by said trunnion having a reduced end, rings having ball races carried respectively by the boxing and collar within said oil chamber, balls disposed within said rings, a cap for closing said boxing having an annular groove provided with vents, and a packing ring arranged in said grooves bearing against said collar.

2. The combination with a pair of concentrically arranged cylinders, one of said cylinders having a trunnion and the other a housing to receive said trunnion, a boxing arranged in the housing of the outer cylinder, said trunnion extending into said boxing, said boxing having an annular flange at its inner end and provided with an oil chamber at its outer end, a packing ring surrounding said trunnion against said flange, said boxing having an annular groove, a ring arranged within said groove, a collar fixed on said trunnion having a reduced end, rings having ball races carried respectively by the boxing and collar within said oil chamber, balls disposed between said rings in said ball races, an adjustable ring for securing one of said rings upon said collar, and means for locking said adjustable ring in adjusted position.

1,171,304. REVERSING MECHANISM. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to The Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed Apr. 29, 1911. Serial No. 624,126. (Cl. 74—59.)

1. The combination with a pair of separable rotating members, of a driven shaft, a driving connection between said members, driving members loosely mounted upon said

driven shaft, clutch members carried by said driving members, a double co-acting clutch member keyed on the driven shaft and capable of moving longitudinally thereon into and out of engagement with the clutch members of the driven shaft, a lever for shifting said clutch member, a spring-actuated yoke, a link connecting said lever to said yoke, mechanism for shifting one of said separable members in respect to the other member, and a compound treadle mechanism for actuating said yoke and mechanism.



2. In a machine, the combination with coöperating members, of a driven member for operating said coöperating members, driving members loosely mounted thereon, means for locking either of said driving members thereto, a lever for shifting said means, a spring actuated yoke for operating said lever, and a treadle mechanism for controlling said yoke.

3. The combination with a bearing shaft, of a tubular driven member mounted thereon, a driving pinion carried by said tubular member, spaced driving members loosely mounted on said driven member having female clutch members, a double male clutch member keyed to the driven member for locking either of said driving gears to the driven member, a collar carried by said male clutch member, a lever connected to said collar, a spring actuated yoke mounted upon said bearing shaft, having an arm extending laterally therefrom, a link connected to said lever having adjustable connection with said arm, and a treadle mechanism for actuating said yoke.

4. The combination with a gear to be driven, of a driven member carrying a pinion meshing with said gear, driving members loosely mounted on said driven member, female clutch members carried by said driving members, a male clutch member keyed to the driven member and normally held in engagement with one of the female clutch members, means for moving said movable clutch member out of engagement with one clutch member and into engagement with the other and a treadle mechanism for actuating said means.

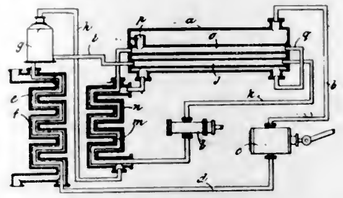
5. The combination with a driven member, of driving members mounted on said driven member having clutch members, a co-acting clutch member keyed to the driven member, a lever for shifting said last mentioned clutch member, a spring actuated yoke provided with an arm, a link connected to said lever adjustably connected to said arm, and a treadle mechanism for reciprocating said yoke.

[Claims 6 to 17 not printed in the Gazette.]

1,171,305. METHOD OF AND MEANS FOR TAKING ENERGY FROM A SOURCE OF NATURAL OR WASTE HEAT. CHARLES HYDE BEADLE, Southampton, England. Filed Sept. 3, 1915. Serial No. 48,853. (Cl. 60—6.)

1. A method of taking energy from a source of heat by means of a liquid and a gas soluble therein conducted through a closed cycle of thermal operations, wherein effusion of gas from the liquid at one part of the cycle is effected solely by a direct transference of temperature from the liquid and gas at another part of the cycle where heat is evolved by the reëntrance of the gas into solution in the liquid.

2. A method of taking energy from a source of heat by means of a liquid and a gas soluble therein conducted through a closed cycle of thermal operations, wherein gas is effused from the liquid at one part of the cycle and heat energy from an exterior source is taken into the liquid and gas only at a part of the cycle different from that where effusion of gas takes place.



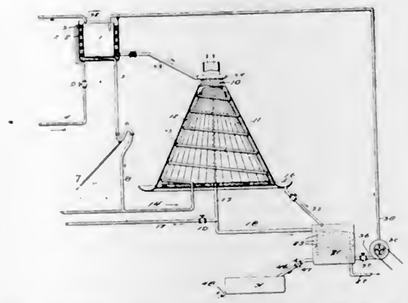
3. A method of taking energy from a source of heat by means of a liquid and a gas soluble therein conducted through a closed cycle of thermal operations, wherein gas effused from the liquid is cooled, recalorified by heat from a source exterior to the cycle, and returned into solution in weak liquid from which gas has been effused, and the heat evolved by reëntrance of the gas into solution is employed to cause effusion of gas.

4. A method of taking energy from a source of heat by means of a liquid and a gas soluble therein conducted through a closed cycle of thermal operations, wherein gas is effused from the liquid at one part of the cycle, the effused gas is expanded doing work, the expanded gas is recalorified by taking heat from the said source, the recalorified gas is returned into solution in the said liquid evolving heat at another part of the cycle, and this heat is transferred directly to the liquid and gas at the part of the cycle where effusion takes place.

5. A method of taking energy from a source of heat by means of a liquid and a gas soluble therein conducted through a closed cycle of thermal operations, wherein gas is effused from the liquid at one part of the cycle, the effused gas is cooled by expansion, the expanded gas is recalorified by heat received from a source exterior to the cycle, the liquid weakened by effusion of gas therefrom is cooled, the recalorified gas is returned into solution in the cooled liquid in stages at other parts of the cycle, and the heat evolved by this return of the gas into solution is employed to cause effusion of the gas from the liquid at the part of the cycle first-mentioned.

[Claim 6 not printed in the Gazette.]

1,171,306. METHOD OF DEALCOHOLIZING BEER. WILLIAM BECKER and DANIEL HAYDEN MONTGOMERY, Virginia, Minn., assignors to Clara Lucie Montgomery and Margaret Marie Becker, Virginia, Minn. Filed Sept. 16, 1915. Serial No. 51,098. (Cl. 195—1.)



1. The herein described method of dealcoholizing beverages, the same consisting in raising the temperature of a charge of such beverage to substantially 167° F., then converting the charge into spray to permit it to give off its alcohol, then raising the charge again to a temperature no higher than at first, then repeating this process, and finally cooling the product and conducting it to a point of storage.

2. The herein described method of dealcoholizing beverages, the same consisting in raising the temperature of a charge of such beverage to not over 167° F., then spraying the charge into a sheet and subjecting the sheet to substantially the same temperature to permit it to give off its alcohol, then collecting the charge and raising it again to substantially the same temperature, then repeating this process, and finally cooling the product and conducting it to a point of storage.

3. The herein described method of dealcoholizing beverages, the same consisting in raising the temperature of a charge of such beverage to not over 167° F., then spraying the charge into a sheet and subjecting the sheet to substantially the same temperature to permit it to give off its alcohol, then collecting the treated beverage, cooling it, and finally conducting it to a point of storage.

4. The herein described method of dealcoholizing beverages, the same consisting in spraying the beverage, collecting the spray into a flowing sheet and subjecting it to heat to raise its temperature to not over 167° F. and cause it to give off the alcohol, then collecting the beverage without its alcohol vapors and again heating it to substantially the same temperature, then pumping it back and retreating it, and finally conveying the de-alcoholized beverage to a point of storage.

1,171,307. COMBINED SPRING AND SHOCK-ABSORBING MEANS FOR VEHICLES. JOHN E. BECKMAN, Chicago, Ill. Filed Dec. 14, 1914. Serial No. 877,081. (Cl. 267—30.)

1. In a combined spring and shock absorbing device, a pair of springs each having a single arch with its convexed surface opposed to the other, a frame connected to and uniting said springs in contact with one another, and an arm pivotally supported between its ends and connected at its ends to the said springs near one of their ends.

2. In a combined spring and shock absorbing device, a pair of oppositely and singly arched springs, a frame connected thereto between their ends, and an arm pivotally supported between its ends and connected at its ends to said springs on each side of their middle portions.

3. In a combined spring and shock absorbing device, a pair of oppositely and singly arched springs, a frame pivotally connected thereto between their ends, and an arm pivotally supported between its ends and connected at its ends to said springs on each side of their middle portions.

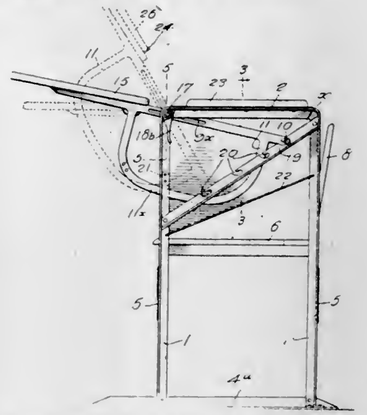
4. In a combined spring and shock absorbing device, a pair of oppositely and singly arched springs, a frame connected thereto between their ends, and an arm pivotally supported between its ends and loosely connected at its ends to said springs on each side of their middle portions.

5. In a device of the character described, the combination with a support, of a pair of spaced apart arms pivotally mounted thereon, a pair of springs each having a single arch with its convexed surface opposed to the other and connected at their ends to the said arms outwardly from the pivots thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,171,308. DESK. HENRY EASTMAN BENNETT, Williamsburg, Va. Filed Dec. 3, 1914. Serial No. 875,217. (Cl. 45—82.)

1. The combination with a desk seat frame, of a desk top, a supporting arm for said desk top slidably and pivotally mounted with respect to the frame for slidably or rotatably adjusting the positions of the top, common means for locking the arm in either its slidable or rotatable position of adjustment, complementary guide means carried by said frame, auxiliary locking means arranged to engage said complementary guide means to hold one end of the arm, and laterally extending guide means carried by the arm and arranged to engage a portion of the frame.



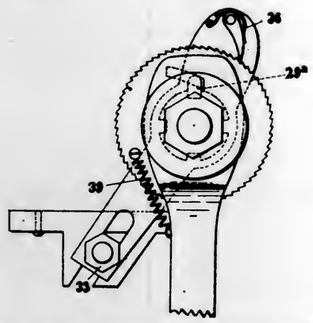
2. The combination with a desk seat frame, of a desk top, a supporting arm for said desk top slidably and pivotally mounted with respect to the frame for slidably or rotatably adjusting the positions of the top, common means for locking the arm in either its slidable or rotatable position of adjustment, and auxiliary means arranged to engage and hold one end of the arm, said auxiliary locking means comprising an inclined cross member secured to said frame and provided with L-shaped slots arranged to receive the laterally extending pin on the end of said arm.

3. The combination with a desk seat frame, of a desk top, a supporting arm for said desk top slidably and pivotally mounted with respect to the frame for slidably or rotatably adjusting the positions of the top, said arm being provided with a laterally extending pin at one end, common means for locking the arm in either its slidable or rotatable position of adjustment, auxiliary means arranged to engage and hold one end of the arm, said auxiliary locking means comprising an inclined cross member secured to said frame and provided with L-shaped slots arranged to receive the laterally extending pin on the end of said arm, a laterally extending arc-shaped member secured to said arm and arranged to engage a portion of the frame for guiding the arm, and means carried by the frame for preventing the displacement of the guide means.

4. The combination with a desk seat frame, of a desk top, a supporting arm for said desk top pivotally mounted upon said frame and arranged to swing to bring said top into a horizontal position, said arm being movable horizontally while the top is in a horizontal position, and means carried by said arm and arranged to engage the frame for holding the arm in fixed position with respect to the frame in any of its positions of horizontal adjustment.

5. The combination with a desk seat frame, of a desk top, a supporting arm for said desk top pivotally mounted upon said frame and arranged to swing to bring said top into a horizontal position, said arm being movable horizontally while the top is in a horizontal position, means carried by said arm and arranged to engage the frame for holding the arm in fixed position with respect to the frame in any of its positions of horizontal adjustment, a curved guide member carried by the arm, and an L-shaped guide member carried by said frame and arranged to extend over said curved guide member for preventing the lateral movement of said arm with respect to the frame.

1,171,309. CRANKING DEVICE. LAWRENCE BENSON, Norwich, Conn. Filed Mar. 8, 1915. Serial No. 13,061. (Cl. 123—185.)



A cranking device of the type described, including an engine-shaft, a cranking shaft, said shafts having a detachable connection therebetween, and said cranking shaft having an attached member or extension provided with a plurality of longitudinal slots with their outer ends opening out through the corresponding end of said extension, a resiliently controlled ratchet disk having a cam-slot and mounted upon said extension, a resiliently held pawl hung from a fixture and engaging said ratchet-disk, a cranking lever fulcrumed upon said extension and having a radial slot in its inner face, near one end and a bolt having a lateral extension, said bolt being slidably mounted upon said cranking shaft extension, within said radial slot of the cranking lever, and positioned to enter a coincident groove of said cranking shaft extension, the lateral extension of said bolt being received by said cam-slot of said ratchet disk.

1,171,310. FRONT SIGHT. NED BISBEE, Glencove, Wash. Filed Mar. 10, 1915. Serial No. 13,420. (Cl. 33—52.)



1. A firearm provided with a reversible front sight having an angular flat and obliquely disposed surface the apex of one angle of said surface merging into the sighting point of the sight.

2. A front sight for firearms provided with a top sighting point and having an angular shaped flat and obliquely disposed bright surface the apex of one angle of said surface coinciding with the top sighting point.

3. A front sight for firearms having a head, one end of which is diamond shaped and the other end is provided with an inclined bright surface leading to the lighting point on top of the head.

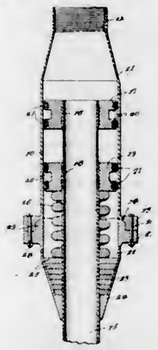
4. A front sight for firearms having a head approximately diamond shape in cross section, one end of the head having tapering sides and the other end having an inclined top surface leading to the top point of the head.

5. A front sight for firearms, comprising a head, a shank and a base, the head having a sighting point on top, one end of the head having tapering sides leading to a central point and the other end of the head having an inclined bright surface leading upwardly to the said sighting point.

[Claims 6 to 11 not printed in the Gazette.]

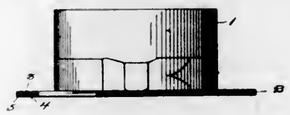
1,171,311. EXPANSIBLE-PIPE COUPLING. SPARROW G. BLACKWOOD and VAN E. BRADLEY, Raleigh, N. C. Filed May 15, 1914. Serial No. 838,774. (Cl. 137—28.)

1. A pipe coupling comprising a tubular body portion having one end tapered and terminating in an internally threaded neck, the opposite end portion being provided with an outwardly extending collar having its inner portion cut to form a beveled bearing surface, a pipe extending into said body portion and having its inner end portion threaded, a plurality of heads threaded upon the inner end portion of said pipe and positioned in spaced relation and provided with annular ribs having grooves formed therein, packing rings mounted in the grooves of said heads, a cap fitting about said pipe and having one end portion extending into the collar of said body portion and conforming to the contour of the interior thereof, a collar for said cap engaging the collar of said body portion and removably connected therewith, the outer end portion of said cap being tapered and terminating in a thickened neck forming an abutment shoulder, packing rings placed within the tapered portion of said cap about said pipe, and a spring positioned about said pipe between said last named packing rings and one of said heads.



2. A pipe coupling comprising a tubular body portion having one end portion provided with an outstanding collar, a pipe extending into said body portion and having its inner end portion threaded, a plurality of heads threaded upon the inner end portion of said pipe and positioned in spaced relation and provided with annular ribs having grooves formed therein, packing rings mounted in the grooves of said heads, a cap fitting about said pipe and having one end portion engaging the collar of said body portion and removably connected therewith, the outer end portion of said cap being tapered and terminating in a thickened neck forming an abutment shoulder, packing rings placed within the tapered portion of said cap about said pipe, and resilient means positioned between said last named packing rings and one of said heads.

1,171,312. STRAW HAT. SAMUEL H. BLUM, New York, N. Y.; Jacob Van Raalte and Milton Dammann, New York, N. Y., executors of said Blum, deceased, assignors to Blum & Koch, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,725. (Cl. 2—108.)



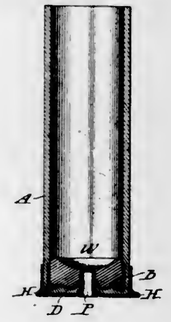
1. A straw hat comprising a crown of flexible nonstiffened straw, and a brim of similar straw from the crown outward for a portion of the width of the brim, the brim being stiffened for the area from the flexible portion to the outer edge of the brim, and the brim being substantially flat and of substantially uniform thickness throughout.

2. A straw hat comprising a crown of flexible nonstiffened straw and a substantially flat brim similarly formed from the crown outward for a portion of the width of the brim, the brim being stiffened for the area from the flexible portion to the outer edge of the brim, and a stiffening wire embedded in the straw of the brim and bounding the line of juncture between the flexible and the stiffened portions of the brim, the wire being spaced inwardly from the free edge of the brim.

3. A straw hat comprising a crown of flexible nonstiffened straw and a substantially flat brim similarly formed from the crown outward for a portion of the width of the brim, the brim being stiffened for the area from the flexible portion to the outer edge of the brim, a stiffening wire embedded in the straw of the brim and bounding the line of juncture between the flexible and the stiffened portions of the brim, and a wire embedded in the peripheral portion of the brim, and spaced outwardly of the brim from the first wire.

4. A straw hat comprising a crown whose head-engaging edge portions are susceptible of distortion to conform to the contour of the head, and a flat brim having that portion engaging and immediately surrounding said edges of the crown of flexible non-stiffened straw, the area of the brim from the flexible portions to the outer edge of the brim being stiffened.

1,171,313. SHOTGUN CARTRIDGE-CASE. WILLIAM OLA BONHAM, Highland Home, Ala. Filed Nov. 11, 1914. Serial No. 871,578. (Cl. 102—17.)

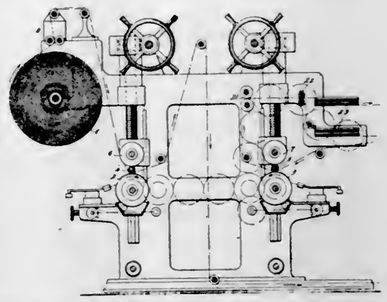


A cartridge comprising a cylindrical paper member having one of its ends closed and provided with a central aperture, a priming pocket received within said central aperture, an outer metallic base member having a portion of greater diameter than the cylindrical member and having an upwardly extending flange engaging the outer face of the cylindrical paper member, an inner metallic lining for the base of the cylindrical paper member, a convex disk of a diameter equal to the inner diameter of the metallic lining, and means engaging said convex disk to force the metallic lining into the inner wall of the cylindrical paper member and to force the edges of the closed end of the cylindrical paper member into the enlarged portion of the base flange.

1,171,314. INTAGLIO-PRINTING MACHINE. ALBERT BROSCHEK, Hamburg, Germany. Filed Oct. 2, 1912. Serial No. 723,531. (Cl. 101—124.)

1. The combination with suitable intaglio perfecting web printing mechanism, and suitable cutting and folding mechanism, of adjustable compensating web feeding mechanisms arranged between said printing mechanism and said cutting and folding mechanism.

2. A machine of the character described, comprising in combination a pair of intaglio perfecting web printing couples, a sheet folding mechanism, cutting mechanism for separating the web into sheets to be folded and adjustable web feeding mechanism, adapted to maintain the speed of the sheet entering the cutting mechanism in conformity with the surface speed of said intaglio printing couples.



1,171,315. GRAPPLE. ALBERT BRYANT, Moulton, Ala. Filed June 3, 1915. Serial No. 31,927. (Cl. 57—9.)

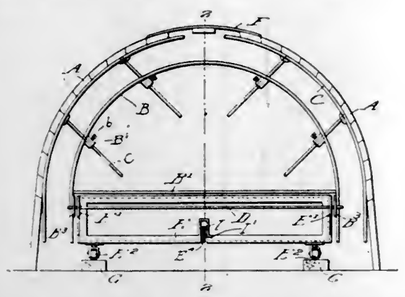


1. A grapple comprising a stock, gripping elements secured to one end of said stock and provided with inwardly extending teeth at their gripping ends, a flexible connection having one end secured to the inner end of said stock, and a trip mechanism carried by the other end of said flexible connection and including arms pivoted at their inner ends, the outer ends of said arms being adapted to engage the adjacent faces of the gripping elements to retain the same in distended position and actuated by contact with an obstacle to permit said gripping elements to move to normal gripping position.

2. A grapple comprising a stock, gripping elements secured to one end of said stock and provided with inwardly extending teeth at their gripping ends, a flexible connection having one end secured to the inner end of said stock, a trip mechanism carried by the other end of said flexible connection and including arms pivoted at their inner ends, the outer ends of said arms being adapted to engage the adjacent faces of the gripping elements to retain the same in distended position and actuated by contact with an obstacle to permit said gripping elements to move to normal position, and a ring connected to said stock and adapted to move longitudinally of said gripping members to prevent the same being spread apart when released by said trip mechanism.

3. A grapple comprising resilient gripping elements, and means including members pivoted to each other and detachably engaging said elements to retain the same distended.

1,171,316. COLLAPSIBLE CORE FOR CONCRETE CULVERTS. ARTHUR E. CAMBLIN, Stella, Nebr. Filed June 4, 1915. Serial No. 32,092. (Cl. 25—131.6.)



1. In a culvert core, a plurality of collapsible supports for mold boards, each of which supports consists of a rigid arch member, a pair of side wings having adjustable connection with the sides of the arch member for movement toward and away from the same, a curved top cap connecting the upper adjacent ends of said side wings and coöperating with the latter to support the mold boards, a roller mounted trip gate beneath and hingedly connected to the arch member, and connections between the several trip gates whereby they may be simultaneously moved upon the said hinged connections to inoperative positions.

2. In a culvert form a plurality of collapsible supports for mold boards, each of which supports consists of a rigid arch member, a pair of curved side wings disposed at the sides of the arch member and having inwardly projecting adjusting arms, means carried by the arch member for adjustably holding the arms of the side wings whereby to support the latter in selected positions with respect to the sides of the arch member, a curved top cap connecting the upper adjacent ends of said side wings and coöperating with the latter to support the mold boards, an adjustable support beneath and hingedly connected to the arch member, and connections between the adjustable supports of the several arch members whereby they may be simultaneously moved to inoperative positions.

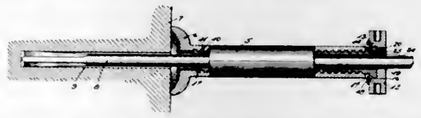
3. In a culvert core, a plurality of collapsible supports for mold boards, each of which supports consists of a rigid skeleton arch member comprising an inverted U-shaped body strip and a connecting cross strip, the body strip being provided with a plurality of tubular bearings, curved side wings disposed at the sides of the said arch member and having inwardly projecting adjusting rods extending through the said bearings, set screws threaded into the bearings and engageable with the said adjusting rod to hold the side wings in selected adjustment with respect to the sides of the arch member, a curved top cap lapping the upper adjacent ends of the side wings to cover the space therebetween, an adjustable support for the arch member hingedly connected thereto, and connections between the several supports whereby they may be simultaneously adjusted to inoperative positions for the purpose described.

4. In a culvert core, a plurality of collapsible supports for mold boards, each of which supports consists of a rigid arch member, adjustable side wings carried by the arch member, a top cap connecting the upper adjacent ends of the side wings and bridging the space therebetween, a substantially rectangular trip gate hingedly connected to the lower portion of the arch member and adapted to normally assume a vertical position therebeneath in use, rollers carried by the trip gate, tracks upon which the rollers are mounted, to permit of ready movement of the trip gate to horizontal inoperative position, connections between the trip gates of the several supports whereby the trip gate may be simultaneously moved to inoperative position, said connections being in the form of a draw bar in sections, means carried by the sections of the draw bar whereby they may be detachably united in use, and means for actuating the draw bar in order to simultaneously move the several trip gates.

5. In a culvert core, a plurality of collapsible supports for mold boards, each of which consists of a rigid arch member, adjustable side wings carried by the arch member, a top cap connecting the upper adjacent ends of the side wings, a trip gate below and hingedly connected to the arch member and provided with hook members extending in relatively opposite directions from the ends thereof, eye rods engageable with the said hook extensions of adjacent trip gates whereby to connect the same throughout the series of supports and permit of their simultaneous movement to inoperative positions, rollers carried by the said trip gates, and tracks upon which the rollers are disposed whereby to permit of ready movement of the several trip gates to inoperative positions.

[Claim 6 not printed in the Gazette.]

1,171,317. DEVICE FOR REMOVING STUCK DRILLS. ROBERT CLYDE CAMERON, Goldfield, Nev. Filed Oct. 17, 1914. Serial No. 867,121. (Cl. 254—30.)



1. In a device of the class described, a sleeve having an outer thread, a member having a threaded opening in which the thread on the sleeve meshes, a flange at an end of the sleeve with an opening registering with the opening in the sleeve, a disk rotatably mounted on the flange and provided with an opening registering with the opening in the flange, and having a recess at one side of the opening, the outer wall of which is eccentric relatively to the axis of the opening, and a cam finger pivoted to the flange and disposed in the recess in the disk to be embraced between the disks at the outer wall of the recess and a drill which may be disposed through the opening.

2. In a device of the class described, a sleeve having an outer thread, a member having a threaded opening in which the thread on the sleeve meshes, a disk for rotating on the sleeve and provided with an opening registering with the opening in the sleeve, and a recess at one side of the opening, the outer wall of which diverges relatively to the plane of the opening in the sleeve, and a cam disposed in the recess for the purpose specified.

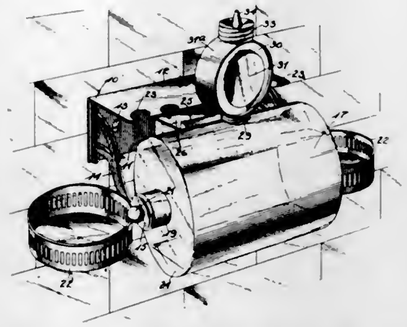
3. In a device of the class described, a sleeve having an outer thread, a member having a threaded opening in which the thread on the sleeve meshes, a disk for rotating on the sleeve and provided with an opening registering with the opening in the sleeve, and a recess at one side of the opening, the outer wall of which diverges relatively to the plane of the opening in the sleeve, and a pivoted cam disposed in the recess for the purpose specified.

4. In a device of the class described, a sleeve having an outer thread, a member having a threaded opening in which the thread on the sleeve meshes, a flange at an end of the sleeve registering with an opening in the sleeve, a disk rotatably mounted on the flange and provided with an opening registering with the opening in the flange, and having a recess at one side of the opening, the outer wall of which is eccentric relatively to the axis of the opening in the flange, and a cam finger pivoted to the flange and disposed in the recess, the rear of the cam finger being curved concentric with its pivot and a support for the cam finger secured to the first disk and having a curved face with which the rear of the curved finger engages.

5. In a device of the class described, a member having a threaded opening, a sleeve having an outer thread meshing in the threaded opening, a disk secured to the sleeve and provided with an opening registering with the opening in the sleeve and having a tapering recess, and a wedge disposed in the recess normally embraced by the disk, and a drill disposed in the opening.

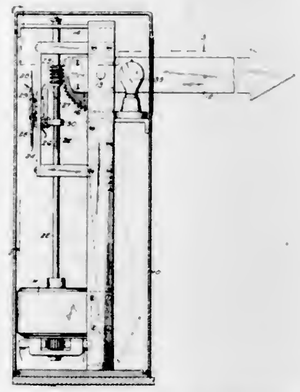
[Claims 6 and 7 not printed in the Gazette.]

1,171,318. LIQUID-SOAP DISPENSER. ALBERT G. CARLING, New York, N. Y. Filed Oct. 16, 1914. Serial No. 866,949. (Cl. 221—94.)



A device of the class described, a bracket to be attached to a support, a liquid soap reservoir tiltably mounted in said bracket, means for maintaining said reservoir in a normal pre-determined position, means limiting the movement of the reservoir, said reservoir having an opening on the lateral surface thereof, a cylindrical ejector having a tubular threaded portion on the lateral surface for engaging the opening of the reservoir, said ejector having an outlet on the lateral surface thereof which is disposed inoperatively when said reservoir is disposed in a normal position, the end walls of said ejector being depressible whereby the volume of the ejector can be decreased substantially as and for the purposes set forth.

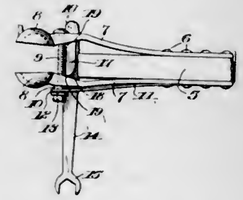
1,171,319. AUTOMOBILE-SIGNAL. CARROLL P. CARPENTER and JOSEPH A. BOHL, Plainfield, N. J. Filed July 16, 1915. Serial No. 40,207. (Cl. 177—339.)



1. In a signal for automobiles or the like, the combination of a casing, a signal arm mounted within the casing on a horizontal pivot and movable laterally and upwardly from the casing into display position, a segmental worm gear secured to the arm concentrically with said pivot, a power shaft journaled in the casing in substantially the same plane as the gear, a worm carried by the shaft meshing directly with the gear and serving to control all of its movements, said shaft having a screw threaded portion adjacent one end of the worm, means to rotate the shaft positively in either direction, a follower mounted upon the threaded portion of the shaft and movable toward or from the worm according to the direction of rotation of the shaft, and means to automatically control the aforesaid means for driving the shaft, the last mentioned means including an arm having pin and slot connection with said follower.

2. In a signal for automobiles or like vehicles, the combination of a casing, an arm mounted within the casing and movable around a horizontal axis outwardly therefrom into straight position, a segmental worm gear connected to the arm and arranged concentrically with respect to the axis of the pivot, a reversible motor having its shaft lying adjacent the gear and in the same plane thereof, a worm carried by the shaft and meshing constantly with the gear to control all of the movements of the arm, the shaft adjacent one end of the worm being screw threaded, a follower mounted upon the threaded portion of the shaft and movable thereby toward or from the worm according to the direction of rotation of the motor, a source of electrical energy for the motor, main wires between the source of energy and the motor, an auxiliary wire adapted to be brought into connection with either of the other wires by hand operation to initiate the operation of the motor, a pair of spaced contacts, a switch blade having pin and slot connection with the follower and movable from one of said contacts to the other, a spring to cause said blade to snap from one contact to the other during such movement to automatically stop the motor when it has caused the arm to be moved into either its housed or its display position, and a lamp circuit and lamp associated with the aforesaid main circuit and caused to glow when the signal arm is in display position.

1,171,320. PITMAN-SPREADER. JERRY F. CHRONINGER, Delphos, Kans. Filed Mar. 5, 1914. Serial No. 822,607. (Cl. 29—84.)



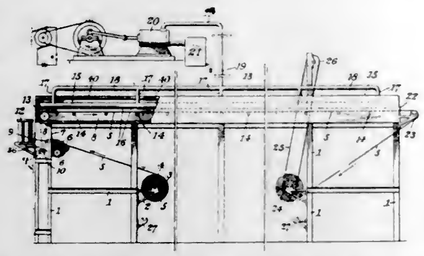
1. A tool having an elongated body provided with a spreader lug rigidly mounted on and offset from one face thereof, said lug having its edge at one end curved and leading to a side edge of the lug and forming a biting point thereat for the purpose specified.

2. A tool having an elongated body provided with a spreader lug mounted on and offset from one face thereof, said lug being elongated and disposed longitudinally of the body, said lug having its end edges curved toward opposite edges of the lug and coöperating with said side edges to form diagonal offset biting points as set forth.

1,171,321. APPARATUS FOR COATING AND DRYING PHOTOGRAPHIC PAPERS, PHOTOGRAPHIC-FILM SUPPORT AND SIMILAR MANUFACTURES. FRANKLIN M. COSSITT and LEWIS D. CASTOR, Binghamton, N. Y., assignors to Ansco Company, Binghamton, N. Y. Filed May 14, 1914. Serial No. 838,447. (Cl. 91—55.)

1. In a coating and drying apparatus the combination of a vacuum chamber, means to create and maintain the vacuum in the chamber, coating devices adapted to apply the coating material to one side only of the stock, supporting and guiding devices for the coated stock located

in the vacuum chamber and adapted to maintain the coated side of the stock free from contact with other surfaces, and means to move the stock first to the coating devices and then away therefrom through the vacuum chamber.



2. In a coating and drying apparatus the combination of a vacuum chamber, means to create and maintain the vacuum in the chamber, coating devices adapted to apply the coating material to one side only of the stock, means to automatically maintain the level of the coating material within the coating tank, supporting and guiding devices for the coated stock located in the vacuum chamber and adapted to maintain the coated side of the stock free from contact with other surfaces, and means to continuously move the stock to the coating devices, then through the vacuum chamber and away therefrom.

3. In a coating and drying apparatus the combination of a vacuum chamber, means to create and maintain the vacuum in the chamber, a condenser connected with said means, coating devices adapted to apply the coating material to one side only of the stock, supporting and guiding devices for the coated stock located in the vacuum chamber and adapted to maintain the coated side of the stock free from contact with other surfaces, and means to continuously advance the stock first to the coating devices and then away therefrom through the vacuum chamber.

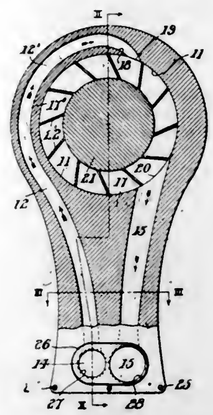
4. In a coating and drying apparatus the combination of a vacuum chamber, means to create and maintain the vacuum in the chamber, coating devices adapted to apply the coating material to one side only of the stock, means to automatically supply and determine the level of the coating material within the tank, and means to continuously move the stock first to the coating devices and then away therefrom through the vacuum chamber.

5. In a coating and drying apparatus the combination of a vacuum chamber provided with openings in its walls for the entrance and exit of the stock, devices to retard the suction of air at the said openings, means to create and maintain a vacuum in the chamber, coating devices, supporting and guiding devices for the coated stock located in the vacuum chamber and adapted to maintain the coated side of the stock free from contact with other surfaces, and means to continuously move the stock from the exterior of the vacuum chamber through its wall to the coating devices, then through the vacuum chamber, and then through its wall to the exterior thereof.

[Claim 6 not printed in the Gazette.]

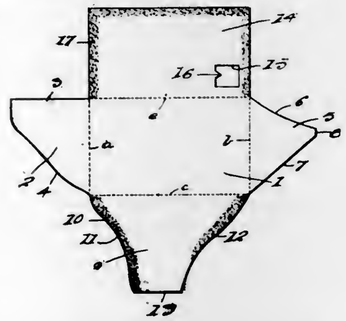
1,171,322. HYDRAULIC FAN. ALEXANDER CZEREPIENSKI and JOHN BARAN, Buffalo, N. Y. Filed Mar. 20, 1915. Serial No. 15,734. (Cl. 253—136.)

In a hydraulic motor, a body-portion, there being a cylindrical recess formed adjacent the upper end thereof, a water motor including stub axles journaled within the side walls of the body-portion and having a solid hub received in said recess, radial vanes carried by the hub adapted to wipe the end wall of the recess, inlet and outlet passage-ways formed in the body-portion below the recess and communicating therewith, the inlet passage-way extending to the upper end of the body-portion and communicating with the recess at that point, there being inlet and outlet openings in the lower end of the body-portion communicating with the inlet and outlet passage-ways, and a removable front wall for the body-portion



having openings therein communicating with the inlet and outlet openings of the body- portion.

1,171,323. SAFETY-ENVELOP. ANTONIO D'AGOSTINO, Utica, N. Y., assignor of one-half to Nicholas Gentile, Lawrence, Mass. Filed Feb. 17, 1915. Serial No. 8,805. (Cl. 229—75.)

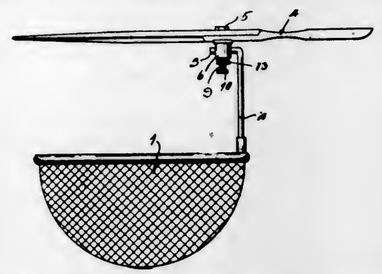


A safety envelop having a body, a side flap, having a straight upper edge and an inclined lower edge, a smaller side flap formed on the opposite side of the body, said smaller side flap having a curved upper edge and an inclined lower edge, a bottom sealing flap having adhesive material around the edges thereof, and a face portion substantially rectangular in form provided with an opening somewhat smaller than a postage stamp at the right hand upper corner, said opening being provided with an extended tongue and said face portion folded up against the side and bottom flap, a portion of the contents of the envelop will be exposed through the opening so that when a postage stamp is attached thereto it will adhere to the contents to one of the side flaps as well as the face portion, thereby preventing the same from being opened without detection.

1,171,324. FRUIT-PICKER. GEORGE E. DARE, Ontario, Oreg. Filed Oct. 29, 1914. Serial No. 869,256. (Cl. 56—99.)

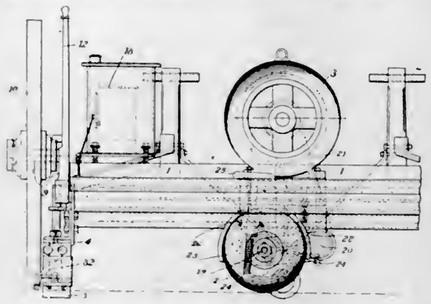
A fruit picker comprising, a receptacle, an upstanding arm carried by the receptacle and having its upper end projecting above the receptacle and provided with a right angular projection thereon, the said projection having an

annular groove therein, cutting members located at the upper end of the arm and having a cylindrical shaped body depending therefrom, said cylindrical shaped body having a transversely extending opening therein adapted to loosely receive the angular projection on the arm, and



having a longitudinal opening therein communicating with the transverse opening and in alinement with the annular groove in the projection, and a set screw threadedly received by the longitudinal opening and having a reduced inner end received by the annular groove in the angular projection on the upstanding arm.

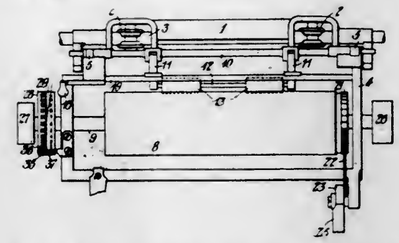
1,171,325. PORTABLE MACHINE FOR GRINDING RAILS. CÉLESTIN DELMEZ, Antwerp, Belgium. Filed Feb. 10, 1914. Serial No. 817,848. (Cl. 51—12.)



1. In a machine of the character described, the combination with a framework and grinding mechanism carried thereby, a plurality of cart wheels, crank axles carried by the said framework for supporting the said cart wheels, means carried by the grinding mechanism for supporting it on the rails, the said cart wheels arranged at right angles to the said supporting means, means for operating the crank axles and lifting the grinding mechanism, and spring means for holding the said mechanism in its raised position, the parts arranged as and for the purpose described.

2. A machine of the character described comprising a main frame, cart wheels for supporting the main frame, an auxiliary frame, a plurality of tubes mounted in the auxiliary frame for supporting a motor driven grinding element in sliding relation therewith, a shock absorbing means on each side of the auxiliary frame, said shock absorbing means comprising a pivoted bifurcated shackle, a spring held plunger mounted for sliding engagement in the shackle, said plunger having a hooked upper terminal, links pivoted to the shackle, a rod disposed within one of the aforesaiad tubes, crank arms at each end of the rod for pivotal connection with the aforesaid links, a series of pins fixed to each side of the main frame, whereby the hooked terminal of the plunger may be suspended upon the pins for supporting the auxiliary frame, and a flexible connection on one of the shackles for disengaging the hooked terminal from the pins, whereby the other shackle will be released from its pin simultaneously with the first shackle.

1,171,326. TYPE-WRITING MACHINE. ADOLPHUS S. DENNIS, Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 10, 1913. Serial No. 766,672. (Cl. 197—119.)



1. In a typewriting machine, the combination with a rotary platen, of a line-space indicator rotatable therewith, a stop operative to positively limit the rotation of the indicator in a forward or line-spacing direction and permitting an unlimited rotation of the indicator with the platen in the opposite direction, and a series of indicating numbers brought into indicating position in ascending order as the platen is rotated backwardly from the stop position, thereby indicating directly the number of line-space distances through which the platen has been rotated backwardly from the stop position.

2. In a typewriting machine, the combination of a rotary platen, an indicator having a frictional driving connection therewith to permit the indicator to rotate with the platen in either direction, a stop permanently in operative position to limit the rotation of the indicator in a forward or line-spacing direction and permitting the indicator to rotate with the platen through more than one complete rotation of the platen in the opposite direction, and a series of indicating numbers brought into indicating position in ascending order as the platen is rotated in said opposite direction from the stop position.

3. In a typewriting machine, the combination with a rotary platen, of a line-space indicator having a frictional driving connection therewith, a stop continuously in operative position to limit the rotation of the indicator in line-spacing direction whenever the indicator reaches a position determined by said stop, said stop permitting an unlimited rotation of the indicator in the reverse direction, and a series of indicating numbers arranged to indicate directly as the platen is rotated in said reverse direction, the number of line-space distances through which the platen has been rotated from the stop position.

4. In a typewriting machine, the combination with a rotary platen, of a disk mounted on the platen axle and having a frictional driving connection therewith to cause the disk to rotate with the platen in either direction, a stop on said disk, a stationary stop in the path of said first-mentioned stop and limiting the rotation of the disk with the platen in line-spacing direction, and a line-space indicating scale on the disk provided with indicating numbers arranged to be brought into indicating position in ascending order as the platen is rotated backwardly from the stop position.

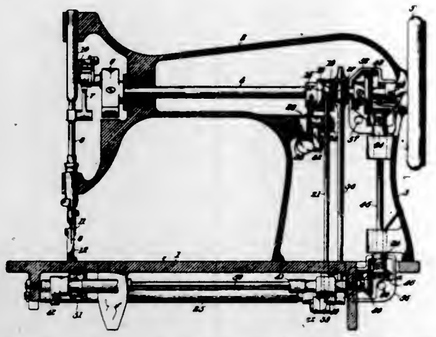
5. In a typewriting machine, the combination of a rotary platen, disks mounted on the platen axle and rotatable independently of each other and of the platen, said disks being frictionally held for rotation with the platen, line-space indicating characters on the disks, stops on the disks, and a coöperating stationary stop to limit the rotation of each disk.

[Claims 6 to 16 not printed in the Gazette.]

1,171,327. GEAR-MOUNTING. PHILIP DIEHL, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 31, 1912. Serial No. 728,779. (Cl. 74—56.)

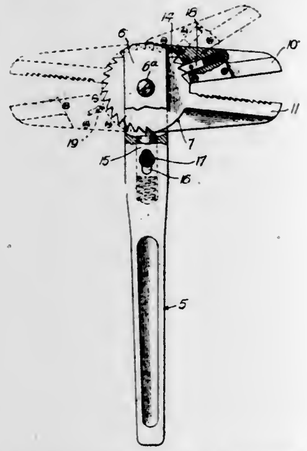
In a sewing machine, a frame constructed with a bed-plate and a bracket-arm formed with a hollow standard

and a tubular arm extending therefrom and overhanging said bed-plate, transversely arranged bearing bossed members carried by and fixedly secured to said frame and provided with inner shaft bearings and outer securing surfaces, shafts journaled in said bearing bossed members,



gear members operatively connecting said shafts, gear casings in which said gear members are inclosed, said gear casings comprising separate halves provided with transversely arranged walls fixedly secured only upon said outer securing surfaces to effect substantially air tight receptacles.

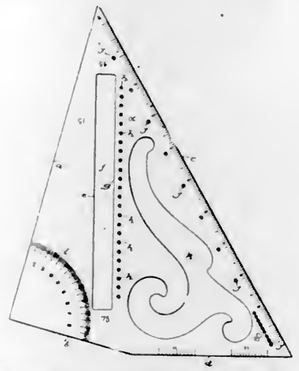
1,171,328. WRENCH. OVAL L. DILLON, Bloomington, Ill., assignor of one-third to Arthur C. Funk and one-third to Lawrence F. Funk, Shirley, Ill. Filed Nov. 12, 1914. Serial No. 871,682. (Cl. 81—59.)



1. In a wrench the combination of a handle, a head carried by said handle and adapted to be turned into different degrees of angularity with respect to said handle, said head consisting of two parts independently movable about a common center, a jaw extending from each of said parts, the periphery of said parts being formed with teeth, means for engaging said teeth to lock the head in turned position, a portion of the teeth on one of said parts sloping in an opposite direction from the direction of slope of the remaining teeth, a shiftable member carried by one of said jaws and adapted to engage with the oppositely sloping teeth for locking the jaws in adjusted position with respect to each other, substantially as described.

2. In a wrench the combination of a handle, a head carried by said handle and adapted to be turned into different degrees of angularity with respect to said handle, said head consisting of two parts independently movable about a common center, a jaw extending from each of said parts, the periphery of said parts being formed with teeth, means for engaging said teeth to lock the head in turned position, a portion of the teeth on one of said parts sloping in an opposite direction from the direction of slope of the remaining teeth, a shiftable member carried by one of said jaws and adapted to engage with the oppositely sloping teeth for locking the jaws in adjusted position with respect to each other, and all of said teeth being spaced apart an equi-distance, substantially as described.

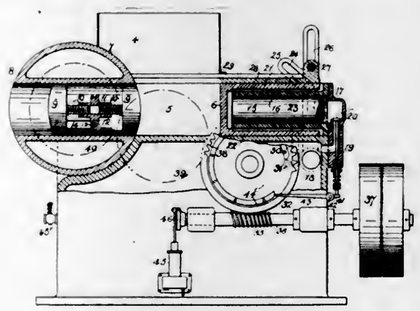
1,171,329. DRAFTING APPLIANCE. EARL J. EARLY, Philadelphia, Pa. Filed Jan. 6, 1914. Serial No. 810,557. (Cl. 33—104.)



1. A drafting instrument consisting of a four-sided piece of sheet material whose internal angles are forty-five degrees, sixty degrees, ninety degrees and one hundred and sixty-five degrees respectively, the last-named angle lying between the sixty and ninety degree angles.

2. A drafting instrument consisting of a four-sided piece of sheet material whose internal angles are forty-five degrees, sixty degrees, ninety degrees and one hunded and sixty-five degrees respectively, the last-named angle lying between the sixty and ninety degree angles, said piece having formed in it an elongated opening having a straight side and a line of uniformly spaced holes formed immediately adjacent and parallel to said side.

1,171,330. DOUGH-WORKING APPARATUS. LAURENCE EMBREY, Stoke-upon-Trent, England. Filed Feb. 12, 1915. Serial No. 7,831. (Cl. 107—15.)



1. A dough divider comprising means for cutting off pieces of dough from a mass thereof, a receiver of definite volume, a piston for forcing said pieces into said receiver, an expansible fluid pressure motor for impelling said piston toward said receiver, and mechanical means for moving said piston away from said receiver, substantially as and for the purpose hereinbefore set forth.

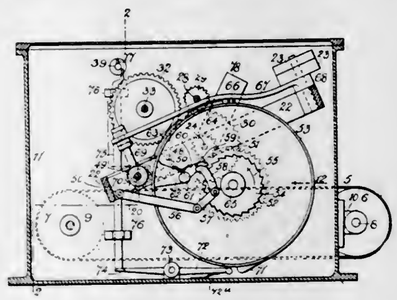
2. A dough divider comprising means for cutting off pieces of dough from a mass thereof, a receiver of definite volume, a piston for forcing said pieces into said receiver, an expansible fluid pressure motor for impelling said piston toward said receiver, and mechanical means for moving said piston away from said receiver, a reservoir for compressed fluid for operating said fluid pressure motor, and a pump for supplying compressed fluid to said reservoir, substantially as and for the purpose hereinbefore set forth.

3. A dough divider comprising means for cutting off pieces of dough from a mass thereof, a receiver of definite volume, a piston for forcing said pieces into said receiver, an air pressure motor for impelling said piston toward said receiver, mechanical means for moving said piston away from said receiver, a reservoir for compressed air for operating said air pressure motor, and means for maintaining said reservoir full of air at constant pressure, substantially as hereinbefore set forth.

4. A dough divider comprising a hopper for a mass of dough, means for cutting off pieces of dough from said mass, a receiver and a piston for forcing said pieces into said receiver, meaus for reciprocating said piston, comprising a ram connected to said piston, a cylinder for said ram, a reservoir for compressed air, an air conduit between said reservoir and cylinder, a valve for controlling said conduit, means for operating said valve for each reciprocation of the ram, and mechanism for returning the ram, against the pressure air in the cylinder after each operative stroke of the ram, substantially as hereinbefore set forth.

5. A dough divider comprising a dough chamber, a rotatable receiver of definite volume, a cylinder, a piston slidable therein, a pressure air reservoir, a rotary driving member, teeth on a portion of the periphery of said driving member,, gearing intermittently engaging said teeth and operatively connected to said receiving chamber, a cam on said rotary driving member, valve mechanism operable by said cam and controlling the admission of pressure air to said cylinder, a projection on said driving member and a push plate on the piston and engaging with said projection to return the piston against the air pressure in the reservoir, substantially as described.

1,171,331. APPARATUS FOR STRETCHING DOUGH AND LIKE GLUTENOUS MATERIAL. LAURENCE EMBREY, Fenton, England. Filed Apr. 14, 1915. Serial No. 21,225. (Cl. 107—9.)



1. In a machine for stretching dough, a rotary spindle to engage and wind the dough, means for feeding dough to the spindle and means operable by the dough to determine the number of turns applied by the spindle to the dough.

2. In a machine for stretching dough, means for feeding dough, a rotary spindle to engage and wind the fed dough, means for separating the wound dough from the spindle, and means operable by the dough to determine the number of turns applied to the dough by the spindle.

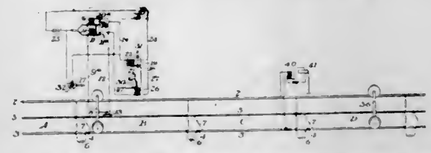
3. In a machine for stretching dough, a rotary spindle to engage and wind the dough, means for separating the wound dough from the spindle and means for timing the operation of said separating means to occur after a predetermined number of turns has been applied to the dough.

4. In a machine for stretching dough, a rotary spindle to engage and wind the dough, said spindle being movable axially and means for timing the axial movement of the spindle to occur after a predetermined number of turns has been applied to the dough.

5. In a machine for stretching dough, means for feeding dough, a rotary spindle to engage and wind the fed dough into a coil about itself, means for driving said spindle, means for withdrawing said spindle axially, a cam for operating said withdrawing means, a clutch for driving said cam, means for driving said clutch and means operated by the fed strip of dough for engaging said clutch with said cam.

[Claims 6 to 19 not printed in the Gazette.]

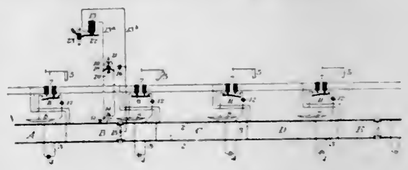
1,171,332. TRAIN SIGNALING AND CONTROL SYSTEM. THOMAS M. FREEBLE, Rochester, Pa. Filed Sept. 24, 1910. Serial No. 583,573. (Cl. 246—58.)



1. In a system of the character described, a relay mounted on the vehicle, a track circuit and connections for controlling the relay, a normally closed local circuit controlled by the relay, an electro-magnet in said local circuit, a brake valve normally held in closed position by the magnet, means for automatically opening the valve when the magnet is deënergized, a brake valve and contacts controlled by said valve for closing the circuit of said magnet independently of the relay, said contacts being so arranged that the circuit of the magnets can only be closed thereby when the last named brake valve is in a low-speed position; substantially as described.

2. In a system of the character described, a brake valve located on the vehicle, a magnet for normally holding the brake valve closed, means for automatically opening said valve when the magnet is deënergized, a track circuit for controlling the magnet, a brake valve, and contacts controlled by said valve for closing the circuit of said magnet, said contacts being so arranged that the circuit of the magnet can be closed thereby only when the last named valve is in a low-speed position; substantially as described.

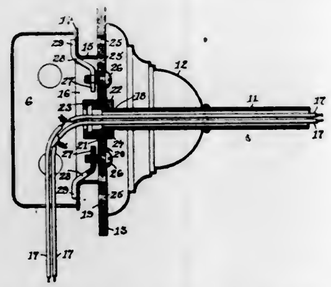
1,171,333. SAFETY APPARATUS FOR RAILWAYS. THOMAS M. FREEBLE, Rochester, Pa. Filed Apr. 12, 1911. Serial No. 620,681. (Cl. 246—58.)



In safety apparatus for railways, the combination with track rails divided into separate block sections of two relay magnets for each block section, and connected directly across the track rails of that section to be controlled wholly by track conditions in that section, a track contact for each block section, said contact having a circuit connection with one of the track rails of that section, a source of current supply included in said connection, two electrically series connected movable contact

members also included in said connection, said members being respectively controlled by the relay magnets of two other different block sections, a contact device carried by the train for engagement with the said track contacts, an electro-magnet, means for normally energizing said magnet independently of the said track contacts, connections whereby said magnet may be energized through the track contacts, means controlled by the speed of the train for controlling said connections, and a train controlling device controlled by said magnet, substantially as described.

1,171,334. COMBINATION FIXTURE-INSULATOR. CHARLES HENRY GAFFNEY, Medford, Mass. Filed Oct. 8, 1915. Serial No. 54,896. (Cl. 240—85.)



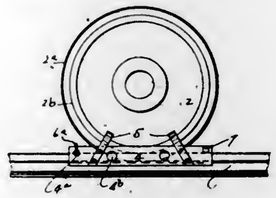
1. A fixture insulator constructed of compressed fiber in the form of a flat ring having a central cross-bar, and comparatively large openings at each side of the cross-bar, said cross-bar having a central screw-threaded hole and a series of screw holes at each side of the central hole, an externally and internally screw-threaded fitting extending through the center screw-threaded hole, an internally screw-threaded fitting screwed on to the first mentioned fitting, whereby the insulator is clamped between the two fittings, a screw through two of the screw holes, each screw screwing into one end of a clamp, said screws and clamps being adapted to fasten the insulator to a splicing box, all for the purpose as described.

2. In an electric light fixture, a splicing box embedded in a wall, a fixture insulator on the splicing box flush with the surface of wall and constructed of compressed fiber in the form of a flat ring having a flat central cross-bar and a comparatively large semi-circular opening at each side of the cross-bar, said cross-bar having a central screw-threaded hole and a series of screw holes at each side of the central hole, an externally and internally screw-threaded fitting screwed through the central screw-threaded hole, an internally screw-threaded fitting screwed on to the first mentioned fitting, thereby clamping the insulator between the two fittings, screws through two of the screw holes, each screw screwing into one end of a clamp, said screws and clamps fastening the insulator to the splicing box, as described.

3. In an electric light fixture, a splicing box embedded in a wall, a fixture insulator on the splicing box flush with the surface of the wall and constructed of compressed fiber in the form of a flat ring having a flat central cross-bar and a comparatively large semi-circular opening at each side of the cross-bar, said cross-bar having a central screw-threaded hole, an externally and internally screw-threaded fitting screwed through the central screw-threaded hole, an internally screw-threaded fitting screwed on to the first mentioned fitting, thereby clamping the insulator between the two fittings, an electric light tube having a screw-threaded end screwed into the first mentioned fitting and means for fastening the fixture insulator to the splicing box, as described.

4. In an electric fixture, a fixture insulator of compressed fiber and having a central screw-threaded hole, and comparatively large side openings, an externally and internally screw-threaded fitting screwed through the central screw-threaded hole, and against the face of the fixture insulator, an externally screw-threaded fitting screwed on to the first mentioned fitting and against the back of the fixture insulator, thereby clamping the insulator between the two fittings, a light bracket having an externally screw-threaded inner end, and means for rigidly and securely fastening the light bracket to the fixture insulator, consisting of screwing the inner end of the light bracket into the first mentioned fitting in the fixture insulator, as described.

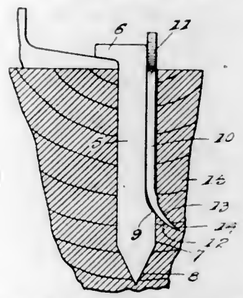
1,171,335. WHEEL-LOCKING DEVICE. THOMAS L. GRAY, Seattle, Wash., assignor of one-half to Gilbert Alonzo Kent, King county, Wash. Filed Oct. 6, 1914. Serial No. 865,304. (Cl. 188—48.)



1. In a device for clamping the wheels of a car to the rails, the combination of a pair of angle bars separably and adjustably connected at each of their ends, lugs on each of the angle bars, the upper end of each of which are adapted to project inside of the outer lines of the wheel, whereby movement of the wheel with respect to the rail is prevented when the said angle bars are adjusted.

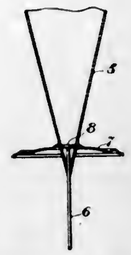
2. In a device for clamping the wheels of a car to the rails, the combination of a pair of angle bars one leg of one of which is wider than its other leg, means for separably and adjustably connecting the ends of the angle bars to each other, the said means including an eye bolt, a straight bolt and a wing nut for each bolt, lugs on one leg of each of the angle bars which are bent inwardly so as to project inside of the outer lines of the wheel and which prevent vertical movement of the wheel with respect to the rail when the said nuts are screwed up on their respective bolts.

1,171,336. SPIKE. FRANK R. GREENE, Springfield, Mass. Filed Jan. 13, 1915. Serial No. 2,021. (Cl. 85—23.)



In combination, a spike having a curved shoulder adjacent its pointed end and extending from one side face to the opposite side face, and a locking key of uniform thickness throughout the major portion of its length, having lateral enlargements at one end of the longitudinal edges thereof to provide a head and having the inner surface of the opposite end curved conformably with and adapted for engagement with the curved shoulder and having the outer face of the last mentioned end concave to define a point or cutting edge and to insure deflection thereof when the locking key is driven home.

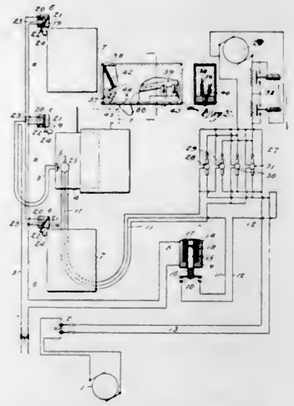
1,171,337. GRAVE-VASE. MELVILLE P. HAYWARD, Quincy, Mass. Filed Mar. 22, 1915. Serial No. 16,190. (Cl. 47—18.)



1. A grave vase comprising a cone-shaped body portion, a spike secured thereto and a flange encircling the smaller end of the body of the vase and rigidly secured thereto for maintaining the vase in an upright position when the spike is thrust into the ground as far as the flange.

2. A grave vase comprising a cone-shaped body, a spike secured thereto and a cup-shaped flange encircling the smaller end of the cone-shaped body and rigidly secured thereto with its depending rim pointing in the direction of the end of the spike.

1,171,338. SAFETY DEVICE. HENRY G. HILLMAN, New York, N. Y., assignor to John Tefft Clarke, New York, N. Y. Filed Apr. 22, 1911. Serial No. 622,709. (Cl. 172—152.)



1. A safety system for vehicles comprising, in combination with a vehicle, an electric motor for said vehicle, a power circuit for said motor, a door controlling entrance to and egress from said vehicle, a door circuit operated by said door, a controlling device for controlling the direction and application of power through said power circuit to said motor, a control circuit for said controlling device which includes a hand controller on the vehicle, and an electro-magnetic switch for operating said control circuit and having its coils energized from said door circuit.

2. A safety system for vehicles comprising, in combination with a vehicle, an electric motor for said vehicle, a power circuit for said motor, a door controlling entrance to and egress from said vehicle, a door circuit operated by said door, a controlling device for controlling the direction and application of power through said power circuit to said motor, a control circuit for said controlling device to automatically start the motor gradually and to stop said motor, said control circuit including a hand controller on the vehicle, and an electro-magnetic switch for operating said control circuit and having its coils energized from said door circuit.

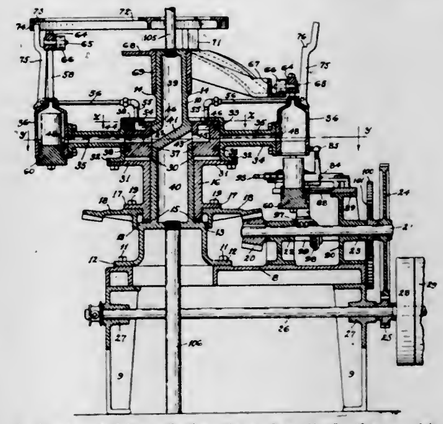
3. A safety system for vehicles comprising, in combination with a vehicle adapted to move from one station to another, an electric motor for said vehicle, a power circuit for said motor, a door at each station controlling entrance to and egress from the vehicle, a door circuit operated by a door, an electro-magnetic controlling device for automatically starting the motor gradually and stopping said motor, said control circuit including a hand controller on the vehicle, and an electro-magnetic switch for operating said control circuit and having its coils energized from said door circuit.

4. A safety system for elevators comprising, in combination with an elevator car, an electric motor for said car, a power circuit for said motor, a plurality of floor doors, a door circuit operated by said doors, a controlling device for controlling the application of power through said power circuit to said motor, a control circuit for said controlling device extending from the car to said device, a hand controller located on said car in said control circuit, and an electro-magnetic switch for operating said control circuit and having its coils energized from said door circuit.

5. In a safety device of the character described, in combination, an elevator car, a plurality of floor doors, a door circuit, a switch at each door in said circuit actuated by the opening and closing of the door, means for moving the elevator car, an operating circuit therefor, a controlling device for said operating circuit, a controlling circuit for said operating device, a manual controller located in the car and included in said controlling circuit, and means independent of said manual controller to open said controlling circuit when the door is opened.

[Claims 6 and 7 not printed in the Gazette.]

1,171,339. STEAM-COOKER. EUGENE T. HOSKINS, Seattle, and JOHN H. BURPEE, Bellingham, Wash. Filed Feb. 24, 1915. Serial No. 10,366. (Cl. 126—272.)



1. In a machine of the class described, the combination with a supporting frame, of a fixed hollow shaft secured to the top of said supporting frame to project upwardly therefrom, the hollow space within said fixed shaft being divided into an upper chamber and a lower chamber by an integral partition; a steam supply pipe communicating with the upper chamber of said fixed shaft; an escape pipe connected with the bottom portion of the lower chamber of said fixed shaft; a stationary valve-member of annular form fixed securely on said fixed shaft at a point registering with said partition therein, said valve-member being provided with a recess in a segmental portion of its periphery and with an annular recess in a position above said peripheral recess, and with

a slotted opening of the form of the segment of a circle concentrically disposed to extend from the top surface thereof into said annular recess; a passageway extending between said annular recess and the lower chamber of said fixed shaft; a passageway between the upper chamber of said shaft and said peripheral recess; a passageway of small crosa-section extending from the periphery of said valve-member to the lower chamber of said fixed shaft in a radial line near one end of said peripheral recess; another passageway of larger cross-section extending on a line near the other end of said peripheral recess to communicate with the lower chamber of said fixed shaft; a wheel rotatably and concentrically disposed on said valve-member, the hub portion of said wheel being bored to fit the periphery of said valve-member and to provide an annular inwardly projecting top flanged portion for covering said slotted opening in the top of said valve-member, said wheel being provided with a plurality of passageways extending radially through it from its periphery to the periphery of said valve-member; means for communicating rotary motion to said wheel; a plurality of can receptacles, each adapted by suitable means to inclose a can within it, each of said can receptacles being secured to the periphery of said wheel in a position registering with a different one of said passageways extending radially therethrough and each provided with a passageway communicating with the adjacent radial passageway in said wheel; a steam pipe disposed to adapt it to conduct steam for intermittent periods of time between said annular space in said valve-member and the interior space within each of said can carriers; a suitably supported cam-plate disposed above and adjacent to the path of said cam receptacles; and power driven mechanism associated with said cam-plate and said can receptacle whereby each of said can receptacles may be opened and closed to remove one can therefrom and to place another can therein during its travel from one circumferential point to another.

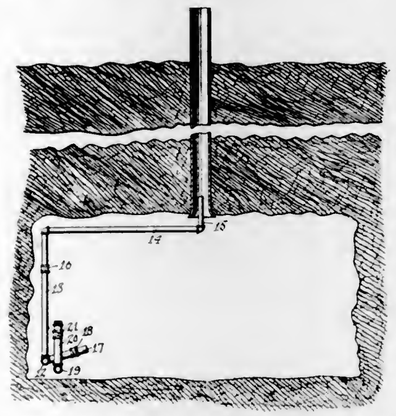
2. A machine of the class described, which embodies a supporting frame, a fixed hollow shaft secured to the top surface of said supporting frame to project vertically upward therefrom; a wheel associated with said fixed shaft and adapted to be rotated therearound in a horizontal plane: a plurality of can receptacles secured at equidistant points on the periphery of said wheels each of said can receptacles being provided with an opening through its bottom end through which opening a can may pass; a plug for each of said can receptacles, said plug being formed to adapt it to be disposed in said opening in the bottom end of its receptacle to cause such receptacle to be closed to hold steam therein under high pressure; means associated with each of said receptacles whereby air therein contained may escape therefrom during the operation of inserting its said plug into said opening in its bottom end; means for causing steam to circulate through the interior of each of said receptacles; and mechanism associated with the plug of each of said receptacles and with said supporting frame whereby said plug may be inserted within and extracted from said opening in the bottom end of its receptacle during the travel of said receptacle between two points in its circular path in response to the rotation of said wheel.

3. A machine of the class described, which embodies a plurality of revoluble can receptacles each having an opening in its bottom end through which a can may pass into and out from its interior, a plug formed closely to fit within said opening and adapted to be inserted therein and to be withdrawn therefrom; guiding lugs disposed on each of opposite sides of each of said receptacles; two connecting rods slidably disposed in the guiding lugs of each of said receptacles and having their lower ends secured to said plug at opposite sides thereof; a connecting yoke secured to the upper ends of each pair of said connecting rods; a roller pivotally mounted on each of said yokes to project from one side thereof; and a suitably supported fixed cam disposed in the path of said rollers and formed to lower and raise said rollers during the pasaage of said receptacles between two points in the circular path traveled by said receptacles, whereby said plugs may be forcibly withdrawn from and reinserted within said openings in the bottoms of said receptacles.

4. A machine of the class described, which embodies a plurality of revoluble can receptacles each having an opening in its bottom end through which a can may pass into and out from its interior, a plug removably disposed closely to fit within said opening, and means for permitting air to escape from the interior of said receptacle during the operation of inserting said plug into its position within said opening tightly to close said receptacle.

5. A machine of the class described, which embodies a plurality of removable can receptacles each having an opening in its bottom end through which a can may pass into and out from its interior; mechanism for causing said can receptacles to move in a circular path; a plug for each of said receptacles, said plug being removably disposed closely to fit the opening within said receptacle; and automatic means operatively associated with said mechanism whereby a can may be disposed on said plug at required times to be carried thereby into said receptacle in response to the operation of said mechanism.

1,171,340. MINE-VENTILATING SYSTEM. FREDERICK A. HOSKINS, Dubuque, Iowa. Filed June 25, 1913. Serial No. 775,760. (Cl. 98—28.)



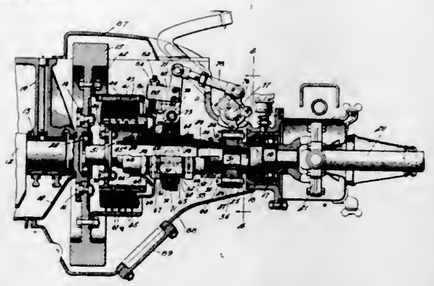
A mine ventilator including the combination with a mine drift and drill holes extending from the drift to the surface of the ground, of air exhausting means positioned in the drill holes and blow-out pipes, each located near the floor inclined upwardly toward one wall of the drift and spaced from the wall toward which it is directed.

1,171,341. CLUTCH MECHANISM. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 1, 1913. Serial No. 751,627. (Cl. 192—10.)

1. In a motor vehicle, the combination with a motor and its crank case, the crank case having an extension provided with a bearing in alinement with the crank shaft of the motor, and a sectional clutch shaft supported at one end in said bearing and at its other end in the crank shaft, said clutch shaft comprising end sections adapted to be removed from the supporting bearings axially and an intermediate section adapted to be disconnected from the end sections and removed laterally.

2. In a motor vehicle, the combination with the motor crank shaft and the propeller shaft, of a sectional clutch shaft intermediate the crank and propeller shafts, said clutch shaft comprising end sections and an intermediate laterally removable connecting member.

3. In a motor vehicle, the combination with the motor crank shaft and the propeller shaft, of a sectional clutch shaft intermediate the crank and propeller shafts and comprising end sections and an intermediate laterally removable connecting member, means connecting one of said end sections with the propeller shaft, and a clutch adapted to connect the other of said end sections with the crank shaft.

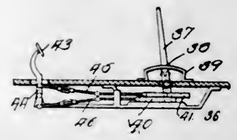


4. In a motor vehicle, the combination of a driving shaft, a driven shaft, an intermediate sectional clutch shaft comprising end sections and an intermediate connecting section, a casing having bearings for the driving shaft and one of said sections, a bearing in the driving shaft for the other of said end sections, and clutch members adapted for forming a driving connection between the last mentioned end section and the driving shaft.

5. In a motor vehicle, the combination of a driving shaft, a driven shaft, and an intermediate sectional clutch shaft comprising an end section connected with the driven shaft, an end section adapted to be connected with the driving shaft, and an intermediate section having telescopic engagement with the end sections.

[Claims 6 to 8 not printed in the Gazette.]

1,171,342. GEAR-SHIFTING LEVER. PHILIP C. JOHNSON, Larue, Ohio. Filed Oct. 7, 1913. Serial No. 793,905. (Cl. 74—39.)



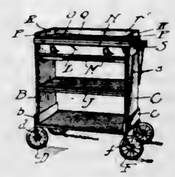
1. The combination with a transmission gearing including gears and clutches, of a pivoted operating lever connected with the clutches, a pair of overlapping and oppositely slidable slotted plates embracing a portion of the lever below the pivot thereof, means for holding the plates in normal position, and a foot pedal connected to the plates and arranged to draw them in opposite directions and into engagement with the lever to move the latter into vertical neutral position.

2. The combination with a clutch shifting lever, the lower portion of which is adapted for movement in one direction and the other portion for movement thereon in a direction at right angles thereto, of a pair of slotted plates embracing the lower portion of the lever, and means for moving the plates slidably over each other to move the lever into an upright position.

1,171,343. TABLE-WAGON. CARL R. KLOK, Chicago, Ill. Filed Apr. 3, 1915. Serial No. 18,912. (Cl. 21—65.)

1. A table-wagon comprising a body having upright end walls, a bottom connecting said walls, a pair of wheels for the lower end of each wall, and a top connecting the upper ends of said walls and provided with an upwardly folding extension leaf.

2. A table-wagon comprising a body having upright end walls, a bottom connecting said walls, a pair of wheels for the lower end of each wall, and a top connecting the upper ends of said walls, said top having a pair of extension leaves hinged to the opposite edges thereof, said leaves being arranged to swing over and rest with their outer edges together on said top.



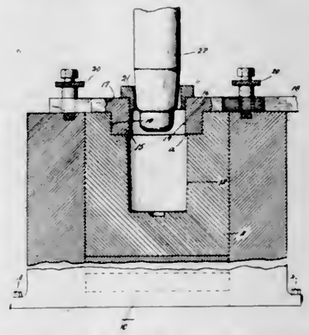
3. A table-wagon comprising a body having upright end walls, a bottom connecting said walls, a pair of wheels for the lower end of each wall, and a top connecting the upper ends of said walls, said top having a pair of extension leaves hinged to the opposite edges thereof, said leaves being arranged to swing over and rest with their outer edges together on said top, said leaves having end strips to engage said walls and thereby hold the leaves in horizontal position.

4. A table-wagon comprising a body having upright end walls, a bottom connecting said walls, a pair of wheels for the lower end of each wall, and a top connecting the upper ends of said walls, said top having a pair of extension leaves hinged to the opposite edges thereof, said leaves being arranged to swing over and rest with their outer edges together on said top, said leaves having end strips to engage said walls and thereby hold the leaves in horizontal position, and one only of said leaves having an outer edge strip on the bottom thereof to form a rear guard for the top when the leaves are folded, said end strips forming right angle extensions of said guard when the leaves are folded.

5. A table-wagon comprising a body having upright end walls, a bottom connecting said walls, a pair of wheels for the lower end of each wall, and a top connecting the upper ends of said walls, said top overhanging said walls, brackets on one wall immediately below the overhanging end of said top, and a handle connecting said brackets, serving as a towel rack.

[Claims 6 to 16 not printed in the Gazette.]

1,171,344. APPARATUS FOR CONCENTRIC PUNCHING. AMOS LEGERE, South Bethlehem, Pa., assignor of one-half to Grover Butz, Bethlehem, Pa. Filed Oct. 29, 1915. Serial No. 58,565. (Cl. 207—10.)



1. In apparatus of the class noted, the combination of an operatively disposed punch, a die holder operative to be centered therebeneath, a die having a central bore and a concentric counter bore therein, a stripper having a boss which boss is removably seated within the counter bore of the die, said stripper including the boss having a central bore therethrough, and a centering collar having a boss for removable insertion within the stripper bore which collar including the boss has a central bore therethrough, the bore of said collar, stripper and die all being concentrically disposed in assembled position.

2. In apparatus of the class noted, the combination of an operatively disposed punch, a die holder operative to

be centered therebeneath, a die having a central tapered bore and a concentric counter bore therein, an elongated stripper embracing a solid portion provided with a depending boss and an extension forming a handle, said boss being adapted for removable insertion in the counter bore of said die and the bottom of said boss being adapted to overhang said tapered bore and the said solid portion of the stripper including the boss having a central bore therethrough, and a centering collar having a boss for removable insertion in the stripper bore which collar and boss has a central bore therethrough, the bore of said collar, stripper and die all being concentrically disposed in assembled position.

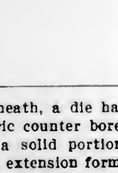
3. Apparatus of the class noted embracing a die having a counter-sunk cavity therein and a stripper equipped with a portion shaped for removable insertion within the counter-sunk portion of said cavity.

4. In apparatus of the class noted, the combination of an operatively disposed punch, a die holder operative to be centered beneath said punch, a die having a billet receiving bore, a stripper operatively fitted to said die and having a bore therethrough in concentric register with the die bore and a centering collar having a boss, which boss is adapted for removable insertion within the stripper bore, said collar having a central opening therethrough of a diameter of substantially the same diameter as the greatest cross-section of said punch.

5. In apparatus of the class noted, the combination of an operatively disposed punch, a die holder, a die having a tapered billet receiving bore therein, which bore terminates in a counter bore, and a stripper having a boss, which boss is fitted to said counter boss and is constructed to overhang said tapered bore, said stripper including said boss having a bore therethrough in concentric register with said die bore.

[Claims 6 to 10 not printed in the Gazette.]

1,171,345. COLLAPSIBLE TUBE. JOHN F. MEISSNER, Milwaukee, Wis. Filed Jan. 6, 1915. Serial No. 832. (Cl. 221—60.)



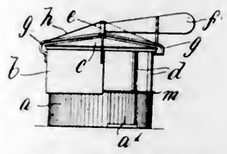
A collapsible tube provided with a discharge opening at one end and having the opposite ends of the tube doubled up against one of its sides, a clip bent over the doubled end and provided with a series of perforations alternately disposed upon opposite sides of a central line of said clip and dented upon one of the opposed sides in line with the perforations upon the other side to crowd the material of the doubled end into said perforations to firmly close said end.

1,171,346. OPEN-AIR SHELTER. HENRY JOHN FOX ROSE, Chesham, England. Filed Nov. 2, 1914. Serial No. 869,959. (Cl. 20—1.)

1. In an open air shelter the combination of a fixed body portion having openings at the sides, a wind screen pivotally supported from the center of the roof of the structure and a vane so set and attached with respect to the screen that when operated upon by the wind it causes the sheltering portion of said screen to be moved into such a position as to shelter the interior of the structure substantially as described.

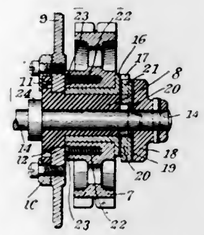
2. In an open air shelter the combination of a fixed body portion having openings at the sides, means for supporting a vertical pivot shaft at the center of the roof, a part adapted to rotate upon the said shaft, means in connection with the said part for carrying a screen and other means in connection with the said part for carrying a wind vane substantially as and for the purposes described.

3. In an open air shelter the combination of a fixed body portion having openings at the sides, means for supporting a vertical pivot shaft at the center of the roof, a part adapted to rotate upon the said shaft, means in connection with the said part for carrying a screen, other means in connection with the said part for carrying a wind vane and a roller in connection with the lower portion of the screen adapted to bear against the circular edge of a suitable part in connection with the body portion substantially as and for the purposes set forth.



4. In an open air shelter the combination of a substantially circular body portion having openings at the sides, means for supporting a vertical pivot at the center of the roof, a framework rotatable about said pivot, a screen with an open portion connected to the said framework and a wind vane carried by the said framework and so set with respect to the screen as to cause the open portion thereof to be automatically directed away from the wind substantially as described.

1,171,347. ADJUSTABLE BEARING AND COUPLING FOR PULLEYS. FRANK L. MORSE, Ithaca, N. Y., assignor to Morse Chain Company, Ithaca, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,213. (Cl. 64—53.)



1. The combination of an adjustable bearing member, a sprocket wheel rotatably mounted on said bearing member, a driven shaft or element, and a coupling connection for maintaining the same speed and direction of rotation between said sprocket wheel and shaft.

2. In a chain driving mechanism, the combination of a sprocket wheel having a transversely adjustable bearing, a driven shaft or element, and a coupling connection for maintaining the same speed and direction of rotation between said sprocket wheel and shaft.

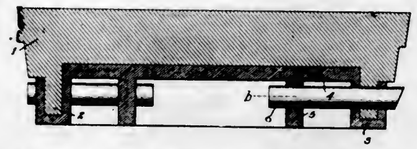
3. The combination of a rotatably adjustable bearing member, a sprocket wheel rotatably mounted thereon, a shaft extending within said bearing member and eccentric thereto, and a coupling connection for maintaining the same speed and direction of rotation between said sprocket wheel and shaft.

4. The combination of a shaft, a rotatably adjustable bearing member eccentric to said shaft, means for rigidly holding said eccentric bearing in any position to which it may be adjusted, a sprocket wheel rotatably mounted on said eccentric bearing member, and a coupling connection for maintaining the same speed and direction of rotation between said sprocket wheel and shaft.

5. In a chain driving mechanism, the combination of a sprocket wheel having a transversely adjustable bearing, a shaft parallel with the axis of said bearing, the driving and driven parts each having a coupling member, and an intermediate coupling member for transmitting motion from one of said coupling members to the other, the intermediate and side coupling members having coöperating projections and grooves.

[Claims 6 to 13 not printed in the Gazette.]

1,171,348. SAFE OR VAULT DOOR. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Dec. 24, 1915. Serial No. 68,481. (Cl. 109—4.)

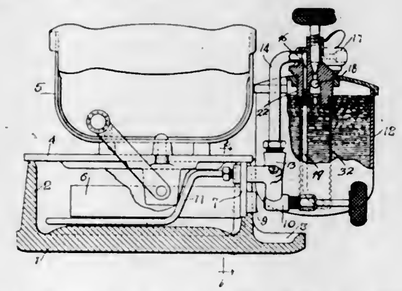


1. A safe or vault door comprising, a door proper, a flange projecting integrally and rearwardly therefrom, a bolt-frame having a forwardly presenting groove engaging said flange, and bolts slidable through the bolt-frame and flange, combined substantially as set forth.

2. A safe or vault door comprising, a door proper, a flange projecting integrally and rearwardly therefrom, a bolt-frame having an outer member provided with a forwardly presenting groove engaging the flange on the door and provided with an inner member united with the outer member, and bolts slidable through the flange of the door and through the inner and outer members of the bolt-frame, combined substantially as set forth.

3. A safe or vault door comprising, a door proper, a flange projecting integrally and rearwardly therefrom, an outer bolt-frame member having a forwardly presenting groove engaging said flange, a bolt-frame member connected with said grooved member and covering the back of the door proper, an inner bolt-frame member connected with the last-mentioned bolt-frame member and disposed inwardly of the grooved bolt-frame member, and bolts slidable through the inner member and grooved member of the bolt-frame, combined substantially as set forth.

1,171,349. SELF-HEATING SMOOTHING-IRON. CLEMENT L. V. MUNDHENK, Dayton, Ohio. Filed Apr. 25, 1914. Serial No. 834,367. (Cl. 158—23.2.)



1. In a device of the character described, a burner adapted to be supported in one position to direct the flame upward and in another position to direct the flame downward, a supporting device rigidly secured to said burner, a supply tube rigidly secured to said supporting device and extending at substantially right angles to said burner a fuel tank rigidly connected at one end with said supply tube and extending alongside thereof, whereby said tank will be supported in an upright position when the burner is in a position to direct the flame downward and will be inverted when the burner is in a position to direct the flame upward, said tank having means to feed the fuel to the burner when the latter is in either of said positions.

2. In a smoothing iron, the combination with a hollow body portion and a burner adapted to be mounted therein, of a fuel tank having an opening in the upper end thereof, a cap to close said opening, said cap having an outlet port, a supply tube rigidly secured to said cap, communicating with said port, connected with said burner and adapted to support said cap and said tank, and means to support said burner and said supply tube in their proper positions relatively to said body portion.

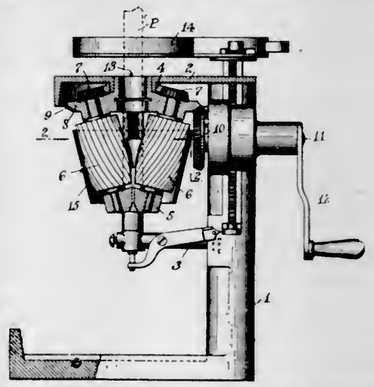
3. In a smoothing iron, the combination, with a hollow body portion, and a burner mounted therein, of a fuel tank having an opening in the upper end thereof, a screw-threaded cap to close said opening, said cap having an outlet port, and a supply tube rigidly secured to said cap, connected with said burner and adapted to support said cap and said tank in proper relation to said burner, said cap also having a valve-controlled air port to permit air to be pumped into said tank, whereby the movement of said tank to disconnect the same from said cap will relieve the air pressure therein and interrupt the feed of the fuel to said burner.

4. In a smoothing iron, the combination, with a hollow body portion having a recess in the wall thereof at one end of said iron, of a burner mounted in said hollow body portion and arranged to direct the flame downward, a supporting device secured to said burner, mounted in said recess and having parts coöperating with said wall to retain the same in proper position relatively thereto, a generating tube carried by said supporting member and extending beneath said burner, a supply tube secured to said supporting member and connected with said generating tube and extending upwardly therefrom, a fuel tank having an opening in the upper end thereof, a cap to close said opening, said cap being rigidly secured to said supply tube and having an outlet port communicating therewith.

5. In a smoothing iron, the combination, with a hollow body portion having a recess in the wall thereof at one end of said iron, of a burner mounted in said hollow body portion and arranged to direct the flame downward, a supporting device secured to said burner, mounted in said recess and having parts coöperating with said wall to retain the same in proper position relatively thereto, a generating tube carried by said supporting device and extending along said burner, a tube secured to said supporting device, connected with said generating tube and extending upwardly therefrom, a fuel tank having an opening in the upper end thereof, a cap to close said opening, said cap being rigidly secured to said supply tube and having an outlet port communicating therewith, a boss extending inwardly about said outlet port, and a tube connected with said outlet port and extending to a point near the bottom of said tank.

[Claims 6 to 10 not printed in the Gazette.]

1,171,350. PENCIL-SHARPENING MACHINE. LOUIS MYERS, New York, N. Y., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Original application filed Dec. 22, 1913, Serial No. 808,1[illegible]. Divided and this application filed Mar. 9, 1915. Serial No. 13,162. (Cl. 120—96.)

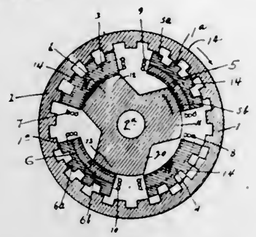


1. In a pencil sharpening machine, the combination of a support, a frame mounted thereon and revolving about a vertical axis, a cutter in said frame and revolving relatively thereto, a sheath secured to said revolving frame and surrounding said cutter.

2. In a pencil sharpening machine, the combination of a support, a frame mounted thereon and revolving about a

vertical axis, a cutter in said frame and revolving relatively thereto, a sheath secured to said revolving frame and surrounding said cutter, said sheath having a discharge opening at its lower end.

1,171,351. APPARATUS FOR TRANSMITTING POWER. ALFONS H. NEULAND, San Francisco, Cal., assignor to Neuland Electrical Company, Inc., a Corporation of New York. Filed Mar. 22, 1913. Serial No. 756,162. (Cl. 172—239.)



1. An electromagnetic power transmitting apparatus comprising a rotatable element provided on one of its faces with regular teeth, a second rotatable element provided on one of its faces with regular teeth, a stationary structure provided with two mutilated faces, one of said mutilated faces opposing the teeth of the first rotatable element, the other mutilated face opposing the teeth on the second rotatable element and a magnetizing winding on said stationary element producing a magnetic flux common to both rotating elements, said flux causing a rotation of one rotatable element to be accompanied by the synchronous rotation of the other.

2. An electro-magnetic power transmitting apparatus comprising a rotatable element provided on its face with a plurality of projections, a second rotatable element provided on its face with a plurality of projections, a plurality of stationary cores spaced apart circumferentially arranged between said rotatable elements, and means for producing a magnetic flux in said cores, substantially all of said flux traversing each of the rotatable elements.

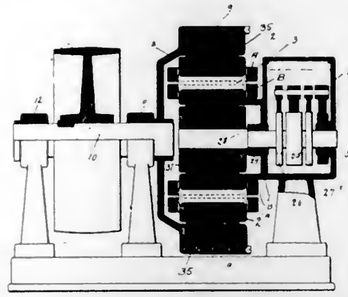
3. An electro-magnetic power transmitting apparatus comprising a rotatable element, a plurality of projections of regular size and spacing on the face thereof, a second rotatable element, a plurality of projections of regular size and spacing on the outer face thereof, and a plurality of magnetic cores spaced apart circumferentially producing a magnetic circuit between said rotatable elements, the faces on one side of said cores corresponding to the teeth on the first element and the faces on the other side of said cores corresponding to the teeth on the second element.

4. An electro-magnetic power transmitting apparatus comprising a rotatable element provided on its face with regular projections, a second rotatable element provided on its faec with a different number of regular projections, stationary cores having their opposite faces arranged adjacent said rotatable elements, said faces being spaced apart circumferentially a distance equal to substantially one-half the thickness of the projections on the second element, and magnetizing windings surrounding said cores.

5. An electro-magnetic power transmitting device comprising a rotatable element, a plurality of regular projections on the face thereof, a second rotatable element arranged adjacent thereto, a different number of regular projections on the face thereof, stationary cores having their opposite faces arranged adjacent said rotatable elements, said faces being spaced apart circumferentially a distance equal to one-half the thickness of the projections on the second element, the faces of the cores lying adjacent the second element corresponding to the faces of the projections on said element, and the other faces corresponding to the face of the first element and magnetizing windings surrounding said cores.

[Claims 6 to 24 not printed in the Gazette.]

1,171,352. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, San Francisco, Cal., assignor to Neuland Electrical Company, Inc., a Corporation of New York. Filed Apr. 21, 1913. Serial No. 762,525. (Cl. 171—252.)



1. In a dynamo electric machine of the commutating type, a stationary magnetized structure, induced windings on said structure, a rotatable element adapted to produce a varying flux through portions of said stationary structure and induced windings, a second rotatable element traversed by said varying flux and rotated thereby at a higher angular velocity than and in electrical synchronism with said first rotatable element and a commutator attached to said second rotatable element.

2. In a dynamo electric machine of the commutating type, a plurality of magnetized toothed pole pieces, induced windings on said pole pieces, a rotatable element adapted to produce a varying flux in said pole pieces, a second rotatable element traversed by said varying flux and rotated thereby at a higher angular velocity than and in electrical synchronism with said first rotatable element and a commutator attached to said second rotatable element.

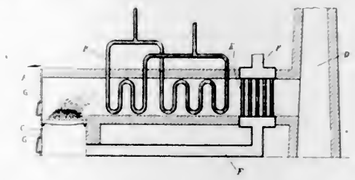
3. In a dynamo electric machine of the commutating type, a plurality of stationary magnetic poles, rotatable means for varying the magnetic flux through said poles, a commutator and means operative by said varying flux to rotate the commutator at a different angular velocity than said rotatable flux varying means.

4. In a dynamo electric machine of the commutating type, the combination of a plurality of stationary magnetic pole-pieces, windings on said pole-pieces, a rotatable element operating to vary the magnetic flux through said pole-pieces, a commutator and means operative by said varying flux to rotate the commutator.

5. In a dynamo electric machine of the commutating type, a stationary structure provided with a plurality of magnetic pole-pieces, windings on said pole-pieces, a rotatable element arranged adjacent said pole-pieces adapted to vary the magnetic flux therein, a rotatable member adapted to be rotated by said varying flux at a different angular velocity than said element, and a commutator attached to said rotatable member.

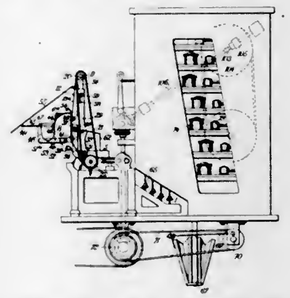
[Claims 6 to 32 not printed in the Gazette.]

1,171,353. STEAM-SUPERHEATER. JOHN PRIMROSE, Dongan Hills, N. Y. Filed Aug. 15, 1914. Serial No. 856,903. (Cl. 122—485.)



The combination with a furnace having a passage or chamber for connecting the fire box and chimney, of a superheater located in said passage and adapted to receive the gases immediately issuing from the fire-box, and a duct for conveying air to the fire extending through a chamber in said furnace and located between the superheater and the chimney whereby the heat of the gases after leaving the superheater will be transferred directly to the air which supports combustion.

1,171,354. AUTOMATIC TYPE-WRITER ACTUATOR. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 25, 1913. Serial No. 775,654. (Cl. 197—20.)



1. The combination with a typewriting machine having a platen, of an envelop magazine, type-operating means, master sheet mechanism controlling said type-operating means, a bodily movable envelop carrier having means for positively seizing the envelops *seriatim* and withdrawing them from the magazine, and means controlled by the master sheet mechanism for causing said carrier to pass the magazine and for advancing the envelop positively and arresting it at a predetermined position upon the platen with reference to the writing line thereon.

2. The combination with a typewriting machine having a platen, of an envelop magazine, type-operating means, master sheet mechanism controlling said type-operating means, a bodily movable envelop carrier having means for positively seizing the envelops *seriatim* and withdrawing them from the magazine, and means controlled by the master sheet mechanism for causing said carrier to pass the magazine and for advancing the envelop positively and arresting it at a predetermined position upon the platen with reference to the writing line thereon, and then line-spacing the envelop and discharging it while advancing another envelop to the printing line on the platen.

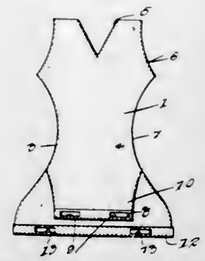
3. The combination of a typewriting machine having a platen, an envelop magazine, type-operating means, master sheet mechanism controlling said type-operating means, and means controlled by said master sheet mechanism for positively withdrawing envelops *seriatim* at predetermined intervals from said magazine, and positively carrying them to a predetermined position upon said platen.

4. The combination of a typewriting machine having a platen, an envelop magazine, type-operating means, master sheet mechanism controlling said type-operating means, and means controlled by said master sheet mechanism for positively withdrawing envelops *seriatim* at predetermined intervals from said magazine, and positively carrying them to a predetermined position upon said platen, and then effecting the line-feeding and discharge of the envelops.

5. The combination with a typewriting machine having a platen, of an envelop magazine, type-operating means, master sheet mechanism controlling said type-operating means, and means controlled by said master sheet mechanism for positively seizing the envelops *seriatim* and withdrawing them from the magazine and advancing them to a predetermined position upon the platen.

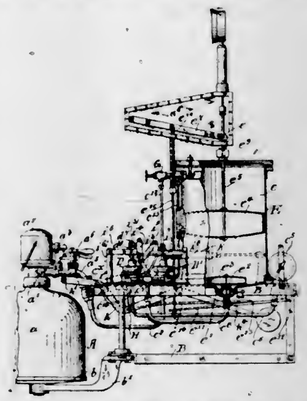
[Claims 6 to 26 not printed in the Gazette.]

1,171,355. CORSET-COVER. GRACE C. ROGERS, New York, N. Y. Filed Apr. 29, 1914. Serial No. 835,270. (Cl. 2—41.)



A corset cover consisting of front and rear sections of different lengths secured together along their longitudinal edges, and each having its lower edge provided with a hem, each of the said hems having a pair of elongated openings therein, and the lower edge of the shorter section being of a lesser width than the lower edge of the longer section.

1,171,356. FILLING-MACHINE. PHILIP J. SAULSON, New York, N. Y., assignor to Beverage Machine & Bottle Company, Inc., a Corporation of New York. Filed Oct. 29, 1914. Serial No. 869,344. (Cl. 226—15.)



1. In a filling machine, the combination of means to supply the liquid for filling, means to conduct the liquid to the receptacle to be filled, means to supply gas, means to conduct the gas to the receptacle to be filled, valves to permit or prevent the flow of liquid and gas to the receptacle, means under the control of the operator to open said valves, and independent automatically operated means to close the same valves.

2. In a filling machine, the combination of means to supply the liquid for filling, a vessel intermediate the supply and the receptacle to be filled, a filling terminal, pipe connections between the supply, the intermediate vessel and the filling terminal, valves to control said connections, means under the control of the operator to operate said valves to permit liquid to flow into the intermediate vessel, independent automatically actuated means to operate said valves to permit liquid to flow from the intermediate vessel to the filling terminal, and separate means to close the outlet of the intermediate vessel when the same is empty.

3. In a filling machine, the combination of means to supply the liquid for filling, a vessel intermediate the supply and the receptacle to be filled, a filling terminal, pipe connections between the supply, the intermediate vessel and the filling terminal, valves to control said connections, means under the control of the operator to operate said

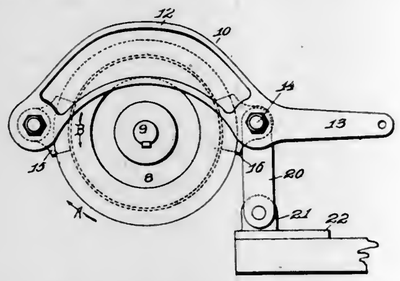
valves to permit liquid to flow into the intermediate vessel, automatically actuated means to operate said valves to permit liquid to flow from the intermediate vessel to the filling terminals, means to supply gas under pressure to said intermediate vessel to drive the liquid therein to the filling terminal, and independent means to close the liquid outlet of the intermediate vessel when the same is empty.

4. In a filling machine, the combination of means to supply the liquid for filling, a measuring vessel, a filling terminal, pipe connections between the supply, the measuring vessel and the filling terminal, a gas supply and independent pipe connections between the gas supply, the measuring vessel and the filling terminal.

5. In a filling machine, the combination of means to supply the liquid for filling, a measuring vessel, a filling terminal, pipe connections between the supply, the measuring vessel and the filling terminal, a gas supply and pipe connections between the gas supply, the measuring vessel and the filling terminal, a valve to control said gas connections, whereby gas displaced by the liquid entering the measuring vessel is conducted to the filling terminal and gas is admitted to the measuring vessel to drive the liquid therefrom to the filling terminal.

[Claims 6 to 17 not printed in the Gazette.]

1,171,357. FRICTION BRAKE AND RATCHET. LUDWIG SCHMIDT, St. Louis, Mo. Filed Feb. 14, 1914. Serial No. 818,665. (Cl. 74—13.)



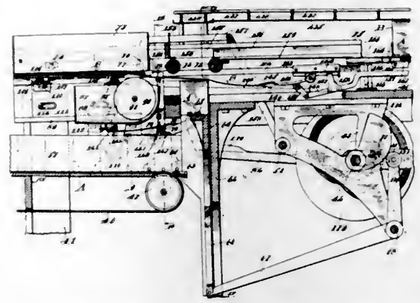
1. A device of the class described comprising a grooved wheel, a pivoted yoke, shoes carried thereby, said shoes communicating with the wheel, and located slightly above the center line of axis to automatically bind the same whenever the wheel chances to move in reverse direction.

2. A device of the character described comprising a pivoted yoke, in combination with a grooved wheel partially encircled by said pivoted yoke, shoes carried by the yoke and designed to communicate with the periphery of the wheel, said shoes positioned slightly above the center line of axis of the wheel and designed to firmly hold the wheel by frictional contact whenever the same chances to operate in reverse direction.

3. A device of the character described comprising a pivoted yoke in combination with a sheave wheel, bevel-faced shoes carried by the pivoted yoke and communicating with the groove of the sheave, the pivot line of said shoes being slightly above the center line of axis so as to provide a frictional locking surface whenever the sheave wheel chances to operate in reverse direction, and means for holding one shoe in set position, substantially as specified.

4. A device of the character described comprising a brake consisting of a double pivoted yoke a pair of shoes pivotally connected thereto, means for supporting the pivoted yoke and one of the shoes in a set position, a grooved wheel, the pivotal center of the shoes being on a line slightly above the center line of axis of the wheel, said shoes being so positioned as to permit the wheel to freely operate in one direction and to cause the shoe on the free end of the pivoted yoke to partially move with the wheel when chancing to operate in a reverse direction firmly locking the same by frictional contact.

1,171,358. PACKAGE-WRAPPING MACHINE. AXEL R. SCHOLIN, Chicago, Ill. Filed Apr. 24, 1913. Serial No. 763,278. (Cl. 93—2.)



1. In a wrapping machine the combination of a table upon which packages to be wrapped are adapted to travel; means for delivering packages to said table at one end thereof; a wrapper magazine; means for withdrawing a wrapper from said magazine for application to each of the packages delivered to said table; means for applying an adhesive to the side of the wrapper adapted to contact with the package; means for applying the wrapper to all except the lateral faces of the package leaving the lateral edges of the wrapper projecting beyond the corresponding faces of the package; means for advancing the packages upon said table; means for folding the upper and lower portions of the projecting edges of said wrapper into engagement with the corresponding end faces of the package; means for applying adhesive to the inner sides of the projecting flaps formed at the vertical edges of the ends of the package upon folding of said upper and lower portions of said lateral edges of said wrapper; and means for folding said flaps over the before folded edge portions of the wrapper substantially as described.

2. In a wrapping machine the combination of a table upon which packages to be wrapped are adapted to travel; means for delivering packages to said table at one end thereof; a wrapper magazine; means for withdrawing a wrapper from said magazine for application to each of the packages delivered to said table; means for applying an adhesive to the side of the wrapper adapted to contact with the package; means for applying the wrapper to all except the lateral faces of the package leaving the lateral edges of the wrapper projecting beyond the corresponding faces of the package; means for advancing the packages upon said table; means for simultaneously folding the upper and lower portions of the projecting lateral edges of said wrapper into engagement with the corresponding end faces of the package; means for applying adhesive to the inner sides of the projecting flaps formed at the vertical edges of the ends of the package upon folding of said upper and lower portions of said lateral edges of the wrapper; and means for folding said flaps over the before folded edge portions of the wrapper, substantially as described.

3. In a wrapping machine the combination of a table upon which packages to be wrapped are adapted to travel; means for delivering packages to said table at one end thereof; a wrapper magazine; means for withdrawing a wrapper from said magazine for application to each of the packages delivered to said table; means for applying an adhesive to the side of the wrapper adapted to contact with the package; means for applying the wrapper to all except the lateral faces of the package leaving the lateral edges of the wrapper projecting beyond the corresponding faces of the package; means for advancing the packages upon said table; means for folding the upper and lower portions of the projecting edges of said wrapper into engagement with the corresponding end faces of the package; means for applying adhesive to the inner sides of the projecting flaps formed at the vertical edges of the ends

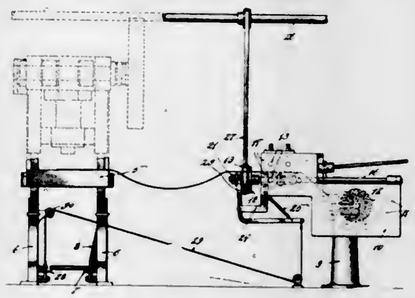
of the package upon folding of said upper and lower portions of said lateral edges of said wrapper; and means for successively folding said flaps over the before folded edge portions of the wrapper, substantially as described.

4. In a wrapping machine the combination of a table upon which packages to be wrapped are adapted to travel; means for delivering packages to said table at one end thereof; a wrapper magazine; means for withdrawing a wrapper from said magazine for application to each of the packages delivered to said table; means for applying an adhesive to the side of the wrapper adapted to contact with the package; means for applying the wrapper to all except the lateral faces of the package leaving the lateral edges of the wrapper projecting beyond the corresponding faces of the package; means for advancing the packages upon said table; means for simultaneously folding the upper and lower portions of the projecting lateral edges of said wrapper into engagement with the corresponding end faces of the package; means for applying adhesive to the inner sides of the projecting flaps formed at the vertical edges of the ends of the package upon folding of said upper and lower portions of said lateral edges of the wrapper; and means for simultaneously folding said flaps over said before folded edge portions of the wrapper, substantially as described.

5. In a wrapping machine, the combination of a package guiding mechanism; means for delivering packages to said guiding mechanism; a wrapper magazine; means for withdrawing a wrapper from said magazine for application to each of the packages delivered to said guiding mechanism; means for applying the wrapper to all except the lateral faces of the package leaving the lateral edges of the wrapper projecting beyond the corresponding faces of the package; means for advancing the packages in said guiding mechanism; means for folding the upper and lower portions of the rojecting edges of said wrapper into engagement with the corresponding lateral faces of the package; means for applying adhesive to the inner sides of the projecting flaps formed at the vertical edges of the lateral faces of the package upon folding of said upper and lower portions of said lateral edges of said wrapper; and means for folding said flaps over the before folded edges of the wrapper, substantially as described.

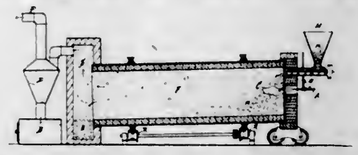
[Claims 6 to 21 not printed in the Gazette.]

1,171,359. FEEDING ATTACHMENT TO PUNCH AND DIE PRESSES. ALEXANDER L. SCHRAM, Hillsboro, Ill., assignor to Schram Glass Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 6, 1914. Serial No. 865,296. (Cl. 164—48.)



In combination with a press arranged for connection with power and means for connecting and disconnecting the press with power, a roll supporting oil bath comprising power driven rollers for moving material through the bath and to the bed of the press, a clutch spring actuated in one direction, a lever connected with the clutch, a pedally operated lever connected with the press and a flexible connection between the lever connected with the clutch and the lever connected with the press, substantially as set forth and for the purposes stated.

1,171,360. PROCESS FOR THE PRODUCTION OF ALUMINUM. HEINRICH F. D. SCHWAHN, Belleville, Ill. Filed June 1, 1915. Serial No. 31,574. (Cl. 204—63.)

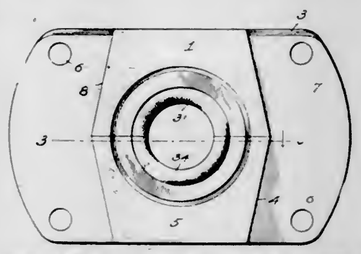


1. The hereindescribed process of producing alumina in a finely divided state in combination with carbon for the production of aluminum, which consists in subjecting aluminum sulfate within a suitable container to a current of hot gases resultant from the combustion of a directly fired fuel having carbon and hydrogen in its composition, while agitating said sulfate by revolving said container, substantially as set forth.

2. The hereindescribed process of producing alumina in a finely divided state in combination with carbon for the production of aluminum, which consists in subjecting aluminum sulfate to heat and to the action of the moving gases resultant from the combustion of a suitable fuel by its direct firing upon said sulfate while revolving its container to agitate the reaction mass, dehydrate and reduce said sulfate of aluminum to alumina and combine it with carbon and suspend said alumina in said moving gases to be carried off for its recovery, substantially as set forth.

3. The hereindescribed process of producing alumina in a finely divided state and in combination with carbon for the production of aluminum, which consists in subjecting aluminum sulfate in a concentrated and powdered condition to the action of the hot products from the combustion of suitable fuels which includes gases having carbon and hydrogen in their composition, by direct firing upon said sulfate, which is suitably agitated by the revolving of its container to expose continuously said sulfate to the hot products of said combustion to liberate progressively the alumina in form of finely divided particles to combine with some of the amorphous carbon resultant from said combustion and become suspended in the resultant spent gas which is permitted to pass off continuously from said container for the recovery of its alumina and sulfur content, substantially as set forth.

1,171,361. LUBRICATOR. THOMAS W. SMITH, Scranton, Pa. Filed Feb. 16, 1915. Serial No. 8,536. (Cl. 184—24.)



1. In a lubricator, a body comprising sections each of which has a hollow portion, of dove-tail form in outline, open at its inner end and also has a flange provided with a dove-tail opening; the sections being interlocked with the dovetail opening in the flange of one snugly receiving the dovetail hollow portion of the other and with the open ends of the hollow portions opposed.

2. In a lubricator, the combination of hollow body portions having opposed inner ends and also having semi-circular apertured partition walls and also having central and end seats, semi-circular open-work reducers removably arranged in the inner ends of the hollow body portions

and against the partition walls and having projections disposed in said seats, wicks extending through the apertures of the partition walls and arranged at the inner sides of said walls, and semi-circular packing sections arranged in the reducers and against said wicks.

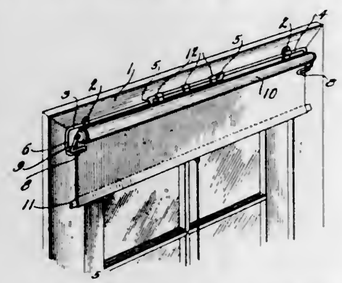
3. In a lubricator, the combination of hollow body portions having opposed inner ends, removable and renewable reducers arranged in said inner ends of the body portion, packing means arranged in said reducers, and means for transferring lubricant from the interiors of the body portions to the packing means.

4. In a lubricator, the combination of hollow body portions having opposed inner ends, removable and renewable reducers arranged in said inner ends of the body portion, semi-circular packing sections removably arranged in said reducers, and means for transferring lubricant from the interiors of the hollow body portions to the packing sections.

5. The combination in a lubricator, of a hollow body having inner and outer compartments, reducing means arranged in the inner compartment of the body, packing means in the reducing means, and means for transferring lubricant from the outer compartments of the body to the packing means.

[Claim 6 not printed in the Gazette.]

1,171,362. WINDOW-SHADE FIXTURE. ULRICH SPRINCHORN and OSCAR KALLANDER, Jamestown, N. Y. Filed July 8, 1915. Serial No. 38,723. (Cl. 156—23.)



1. A windowshade fixture of the class described comprising adjustable sections overlapping and having their ends engaging each other, and a locking member freely slidable on the overlapping portion when said sections are in adjusted positions, said member extending between the overlapping portions of the sections whereby on movement of the locking member toward an engaging end to cause binding action thereby locking the sections from relative movement.

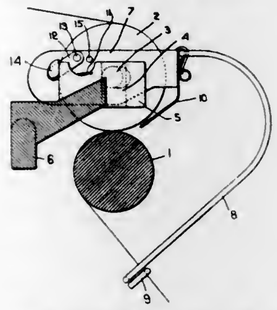
2. A windowshade fixture of the class described comprising adjustable sections overlapping each other, and a locking member comprising a clip having its ends reversely bent about the overlapping portions of the sections and passing therebetween at its intermediate portion, the end of each section being slidably engaged with the other section, whereby upon movement of the clip toward an engaging end to cause binding action tending to prevent relative sliding movement of said sections.

3. A windowshade fixture of the class described comprising adjustable sections overlapping each other, the end of each section being slidably engaged with the other section, locking means for holding the sections at adjusted positions movably mounted on the overlapping portions, said means comprising wedging clips, and means associated with the clips for rendering the wedging action of said clips effective.

4. A windowshade fixture of the class described comprising adjustable rod sections overlapping each other, and locking means on the overlapping portions consisting of a plurality of clip members slidably engaging the overlapping portions and passing therebetween, certain of said clip members constituting wedge elements and one of said clip members intermediate those last-mentioned coacting to prevent yielding and separation of the overlapping portions during wedging action of the other clip members.

5. As a new article of manufacture, a windowshade fixture comprising a rod adapted to extend across a window, the material of the rod adjacent to each end being bent downwardly at right angles to its body portion, then inwardly from the right angle portion and back upon the inwardly bent portion in superposed relation thereto to form a guide element adapted to coöperate at one side of the windowshade, the material then being bent outwardly and inwardly, then back upon itself in superposed relation and in parallel relation to the aforesaid rebent portion to form a guide element adapted to coöperate with the windowshade at its opposite side, the guide elements thus formed lying in the same horizontal plane, each extremity of the rod element being bent upwardly from the guide elements to form an offstanding supporting arm for said shade, substantially as described.

1,171,363. TWISTER STOP-MOTION. CHARLES STANSFIELD, Jamestown, N. Y., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 7, 1914. Serial No. 865,423. (Cl. 19—25.)



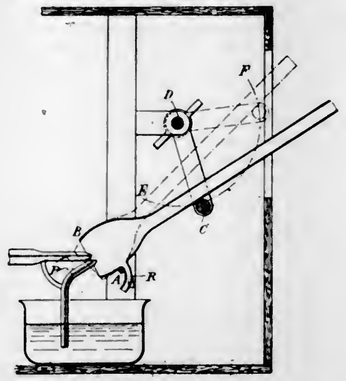
1. In a twister provided with top and bottom rolls and bearing members for the top roll, a pivotally mounted holder provided with a tongue to enter between the top and bottom rolls and stop rotation of the former upon breakage, failure, or undue slackness of the thread, a recess in the top roll bearing member at the rear of the bearing, a latch pivotally mounted on said holder at the rear of the bearing and automatically swinging into engagement with said recess when the holder moves to stopping position, whereby the holder is automatically locked in said position.

2. In a twister provided with top and bottom rolls and bearing members for the top roll, a pivotally mounted holder provided with a tongue to enter between the top and bottom rolls and stop rotation of the former upon breakage, failure, or undue slackness of the thread, a recess in the top roll bearing member at the rear of the bearing, a latch pivotally mounted on said holder at the rear of the bearing and automatically swinging into engagement with said recess when the holder moves to stopping position, whereby the holder is automatically locked in said position, and a pin on said holder to support the latch out of operative position when desired.

1,171,364. INHALER. ANNIBALE STEFANINI, Pisa, and GIUSEPPE GRADENIGO, Turin, Italy. Filed Jan. 27, 1914, Serial No. 814,783. Renewed Sept. 10, 1915. Serial No. 50,108. (Cl. 128—2.)

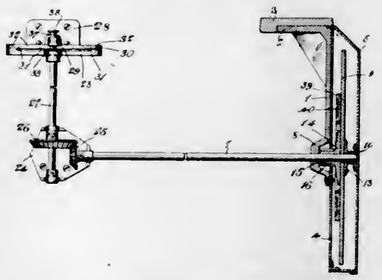
1. In an inhaler, the combination with a tube having an enlarged portion at its lower end provided with a draining aperture provided with a spout, a framework, a pivot on said framework adapted to engage said spout for supporting the lower end of said tube, and means carried by the framework for varying the angle of inclination of the tube.

2. An inhaler comprising a tube, an enlarged portion at the lower end of said tube, and open at its end, a frame, a pivot secured on said frame for pivotally supporting said enlarged lower portion of said tube, a bolt on said frame, a stirrup pivotally mounted on said bolt and supporting said tube and means for securing said pivoted stirrup, in any inclined position on said bolt, according to the inclination to be given to said tube.



3. An inhaler comprising an inhaling tube, an enlarged portion at the lower end of said tube, an aperture at the end of said enlarged portion, a frame, a pivot secured on said frame, for pivotally supporting said enlarged lower portion of said tube, a bolt secured on said frame, a stirrup pivotally mounted on said bolt and supporting said tube, means for adjusting said pivoted stirrup in any desired inclined position according to the inclination to be given to said tube, an inhaling solution receptacle, a connecting tube between said solution receptacle and the lower end of said tube, a nozzle opening in said enlarged portion of said tube and adjacent the opening of said connecting tube, for sucking said solution and atomizing same within said tube.

1,171,365. AUTOMOBILE-SIGNAL. DELPHIS E. ST. JACQUES, Springfield, Mass. Filed Jan. 29, 1915. Serial No. 5,066. (Cl. 40—70.)

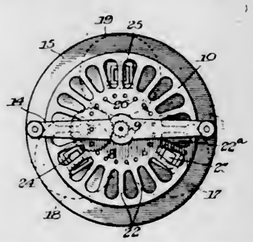


1. An automobile signal comprising a bracket secured to the frame of an automobile, an enlarged portion formed on said bracket, and provided with an aperture therein, a cover secured to the bracket and provided with an opening therein, a bearing secured to said cover and in horizontal alinement with the aperture of the enlarged portion, a shaft extending through the enlarged portion and into the bearing, a disk mounted on said shaft, means mounted in the enlarged portion for controlling the disk at predetermined points, and means for rotating the shaft.

2. An automobile signal comprising a bracket secured to the frame of an automobile, an enlarged portion formed on said bracket, and provided with an aperture therein, a cover secured to the bracket and provided with an opening therein, a bearing secured to said cover and in horizontal alinement with the aperture of the enlarged portion, a shaft extending through the enlarged portion and into the bearing, a disk mounted on said shaft and provided with directions thereon, means mounted in the enlarged portion for controlling the disk at predetermined points, a reinforcing disk secured to the rear walls of the disk and provided with a recess therein, a weight mounted in said recesses adapted to balance said disk and means for rotating the shaft.

3. An automobile signal comprising a bracket secured to the frame of an automobile, an enlarged portion formed on said bracket and provided with an aperture therein, a casing secured to said bracket and extending beyond the lower ends of the bracket, said casing provided with an aperture therein in horizontal alinement with the aperture of the enlarged portion, a cover secured to the bracket and to the casing and provided with an opening therein, a bearing secured to said cover and in horizontal alinement with the aperture of the enlarged portion and the aperture of the casing, a shaft extending through the enlarged portion and into the bearing, a disk mounted on said shaft, means mounted in the enlarged portion for controlling the disk at predetermined points, and means for rotating the shaft.

1,171,366. MOTOR. WILLIAM F. STRAUB and ALBERT A. RADTKE, Chicago, Ill.; said Straub assignor to Electric Time Recorder Company, Chicago, Ill. Filed Feb. 11, 1913. Serial No. 747,653. (Cl. 172—36.)



1. In a device of the character described the combination with a plurality of electromagnets symmetrically arranged about an axis, an armature rotatable about said axis adapted for successive movements in response to energizations of said electromagnets, and means under the control of said electromagnets to cause the proper angular alinement of said armature, said means including a pivoted armature for each electromagnet and means whereby said second armatures control said first aforesaid armature.

2. In a device of the character described the combination with a plurality of electromagnets symmetrically arranged about an axis, an armature rotatable about said axis adapted for successive movements in response to energizations of said electromagnets, and means under the control of said electromagnets to cause the proper angular alinement of said armature, said means including a pivoted armature for each electromagnet and means whereby said second armatures control said first aforesaid armature, said last aforesaid means including a plurality of pins upon said first aforesaid armature, and a cam upon each of said second aforesaid armatures.

3. In a device of the character described the combination with a plurality of electromagnets symmetrically arranged about an axis, an armature rotatable about said axis adapted for step-by-step movement in response to different energizations of said electromagnets, and means controlled by said electromagnets and in inductive relation thereto to mechanically center said armature in each of its resting positions.

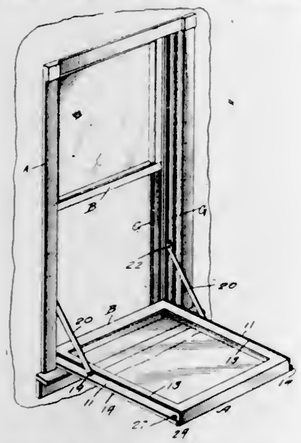
4. In a device of the character described the combination with a plurality of electromagnets, an armature adapted for step-by-step movement in response to differ-

ent energizations of said electro-magnets, and means controlled by said electro-magnets and in inductive relation thereto to mechanically center said armature in each of its resting positions.

5. In a device of the character described the combination with a plurality of electro-magnets, an armature adapted for step-by-step movement in response to different energizations of said electro-magnets, and means controlled by said electro-magnets and in inductive relation thereto to mechanically center said armature in each of its resting positions, said means including an armature.

[Claims 6 to 12 not printed in the Gazette.]

1,171,367. WINDOW. AIKEN C. TAYLOR, Richmond, Va., assignor to Emanuel P. Summerfield, Norfolk, Va. Filed Dec. 21, 1914. Serial No. 878,412. (Cl. 30—42.)



1. The combination with a window frame and a guide strip located at one side thereof said strip having side members bent centrally and longitudinally to form inturned double flanges, said strip also having longitudinally extending flanges at both the free longitudinal edges thereof, of a vertically swinging sliding sash, a sash strip extending longitudinally of one of the side bars of the sash, said sash strip having a longitudinally extending flange at one of its longitudinal edges, the opposite longitudinal edge of said sash strip overlying a longitudinally extending recess cut in the sash bar, the construction being such that when the sash is in its vertical, closed position, the flange of said sash strip will interlock with the adjacent flange at one side of the guide strip, the flange at the opposite side of the guide strip lying in the groove formed by the longitudinal edge portion of the sash strip and the recess in the sash bar, whereby a weather-tight joint is formed at both the inner and outer faces of the sash bar, and a follower connected with the sash and sliding upon the inturned double flanges of the guide strip of the frame.

2. The combination with a window frame and a guide strip carried thereby, said guide strip having a pair of oppositely disposed inwardly extending longitudinal flanges, said flanges forming a slot between their confronting edges, longitudinally extending flanges formed on the guide strip outward of the first mentioned pair of flanges, of a vertically swinging, sliding sash, a sash strip carried by one of the side bars of the sash, said strip having a flange extending along one of its longitudinal edges adapted to interlock and form a weather-tight joint with the adjacent outer flange of the guide strip, the other outer flange of said guide strip being adapted to lie beneath the opposite longitudinal edge portion of the sash strip when the window is in its vertical closed position and form a weather-tight joint therewith, a pivot stud carried by the sash strip and projecting into the slot formed by the confronting longitudinal edges of the first mentioned flanges of the guide strip, and a follower pivotally connected to the sash strip and sliding on the guide strip.

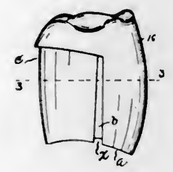
3. The combination with a window frame and a guide strip located at one side thereof, of a vertically swinging sliding sash, a sash strip carried by the sash, means pivotally connecting the sash strip with the guide strip, a follower connected with the sash strip and sliding over the guide strip, said guide strip, when the window is in its vertical closed position interlocking at its longitudinal edges with the longitudinal edges of the sash strip to form a weather-tight joint at both the inner and outer longitudinal faces of the sash bar, a depressible locking pin on the sash adapted to engage with the adjacent flange of the guide strip to hold the window in its vertical closed position, and a cam strip carried by the guide strip adapted to contact with and depress the locking pin to permit the opening of the window.

4. The combination with a window frame having a guide strip located at one side thereof and provided with inturned double resilient flanges, of a vertically sliding and swinging sash, a link pivoted at one end to the sash, and a cam-like roller constituting a follower carried at the free end of the link and slidably engaging the double flanges of the guide strip, said roller being adapted when the sash is tilted to bind against the guide strip to assist in holding the window stationary in tilted position.

5. The combination with a window frame and a guide strip located at one side thereof and carrying a tripping member, of a vertically sliding and swinging sash, and a movable locking pin mounted in a socket in the sash and adapted when the sash is in its vertical closed position to project outward of the socket and to interlock with the guide strip to hold the window against swinging movement, said pin being movable inward of the sash to unlocking position by engagement with the tripping strip to permit the swinging of the window to open position.

[Claims 6 and 7 not printed in the Gazette.]

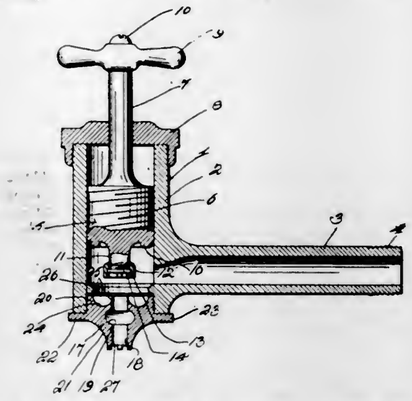
1,171,368. DENTAL BRIDGE. GEORGE W. TODD, Omaha, Nebr. Filed Apr. 24, 1915. Serial No. 23,575. (Cl. 32—12.)



In devices for the purpose described, the combination of a plurality of teeth each having grooves formed in its sides between its front and back extending from near its top to open on its base and a second groove formed in a space opening on the first named grooves, and provided with a recess in its back and sides extending from near its top to open on its base and said first named grooves, a plurality of connected clasps each having a curved part with opposed inwardly projecting ridges and a transversely disposed reinforcing strip connecting said ridges, said teeth being adapted to be mounted upon said clasps, the curved part and the ridges of a clasp engaging respectively in a recess and the first named grooves of a tooth, said reinforcing strip engaging in the second groove thereof.

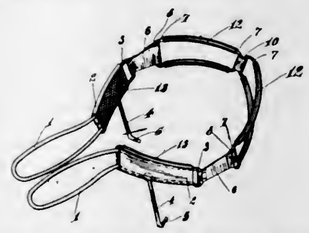
1,171,369. FAUCET. GEORGE W. TOPPING, Point Richmond, Cal. Filed Sept. 19, 1914. Serial No. 862,560. (Cl. 137—4.)

1. A faucet comprising a cylindrical member externally screw threaded and having a valve face ground on its lower edge, an extended reduced portion, a valve removably secured on said reduced portion and a stem extending from the upper portion of the member, a tubular body having an inlet opening near the lower portion thereof, a valve seat in said tubular body below the inlet opening, a nozzle removably secured to said tubular body, a valve seat in said nozzle, said seat being in a plane below the valve seat in the tubular body, the cylindrical member being fitted in said tubular body, the valve on said extended reduced portion being adapted to engage the valve seat in said nozzle thereby controlling the flow of liquid through said nozzle, the valve face on said cylindrical member being adapted to engage the valve seat in said tubular body when the said nozzle is removed thereby closing the flow of water so that said valve on the reduced portion can be refitted, and a cap fitted to the upper portion of the tubular body.



2. A faucet comprising a cylindrical member externally screw threaded and having a valve face ground on its lower edge, an extended reduced portion, a valve removably secured on said reduced portion and a stem extending from the upper portion of the member, a tubular body having an inlet opening near the lower portion thereof, a valve seat in said tubular body below the inlet opening, a nozzle removably secured to the lower portion of the tubular body, a valve seat in said nozzle, said seat being in a plane below the valve seat in the tubular body, the cylindrical member being fitted in the tubular body, the valve on said extended reduced portion being adapted to engage the valve seat in the nozzle thereby controlling the flow of liquid through said nozzle, the valve face on said cylindrical member being adapted to engage the valve seat in said tubular body when said nozzle has been removed, thereby closing the flow of water and the reduced portion adapted to exetnd to a point below the tubular body, whereby the valve on said extended portion can be expeditiously refitted.

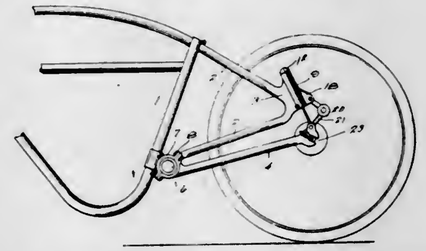
1,171,370. ADJUSTABLE FRUIT-JAR HOLDER. WILLIAM L. TULL, Gridley, Cal., assignor of one-half to Albert A. Whitney, Stockton, Cal. Filed July 23, 1914. Serial No. 852,608. (Cl. 65—26.)



1. A holder of the character described comprising two handle members, each handle member having an outer portion and an inner portion at an angle thereto, the latter being adapted to partially surround a jar or the like, a link connected with each of said inner portions, another link hinged to each of said first named links, said last named links being hinged together, said first named links being adapted to fold inwardly to decrease the diameter of the holder, as described.

2. A holder of the character described comprising two handle members, each handle member comprising an outer portion and an inner portion at an angle thereto, the latter being adapted to partially surround a jar or the like, a link connected with each inner portion, another link hinged to each of said first named links, a collar disposed around and joining the opposite ends of said last named links, said first named links being adapted to fold inwardly to decreaae the diameter of the holder, as described.

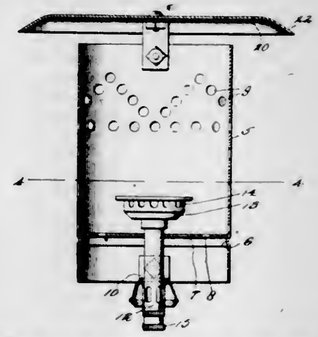
1,171,371. REAR SPRING-FRAME FOR MOTOR-CYCLES. OTTO A. WAGNER, Ensign, Kans. Filed June 26, 1915. Serial No. 36,439. (Cl. 208—94.)



1. A motorcycle frame having rear stays, in combination with a rear wheel fork pivotally connected to the frame, shock absorbers each comprising a barrel carried by the rear stays, a piston, a rod connecting the piston to one of the rear fork arms and a spring in the barrel and bearing on the piston and a friction shock absorber having one arm pivotally connected to an arm of the rear fork and the other arm pivotally connected to said barrel.

2. A motorcycle frame having rear stays, in combination with a rear wheel fork pivotally connected to the frame, shock absorbers each comprising a barrel carried by the rear stays, a piston, a rod connecting the piston to one of the rear fork arms and a spring in the barrel and bearing on the piston and a friction shock absorber having one arm pivotally connected to an arm of the rear fork and the other arm pivotally conected to said barrel, the barrels being provided with rearwardly extending lugs for the attachment of the last-named pivots and the first-named pivots being common to the other arm of the friction shock absorbers and to the piston rods.

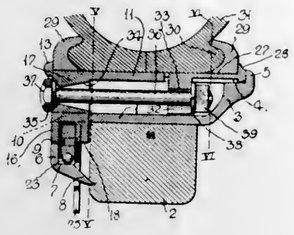
1,171,372. HEATER. JOHN WHIKEHART and ROE M. SMITH, Zanesville, Ohio. Filed Jan. 9, 1915. Serial No. 1,385. (Cl. 126—248.)



A heater comprising a cylindrical drum having a plurality of perforations, a plate having a plurality of per-

forations secured adjacent the lower extremity of said drum, a burner secured to the lower portion of said drum projecting upwardly through said plate, a supporting member having angularly directed ends pivotally secured at diametrically opposite points adjacent the upper extremity of said drum, and a circular plate of greater diameter than said drum and having a downwardly directed marginal portion secured centrally to the central portion of said supporting means.

1,171,373. DEMOUNTABLE RIM. PHINEAS S. WHITING, Akron, Ohio, assignor to Maria E. Whiting, Wayne county, Mich. Filed Dec. 26, 1914. Serial No. 879,178. (Cl. 152—21.)



1. In a demountable rim, a felly band, a locking ring shiftable circumferentially of said band, and a circumferentially split rim on said felly band adapted to hold a tire and secured in place by said locking ring with the parts of said rim disposed to be crowded away from each other by pressure of air within said tire, whereby said rim is locked relative to said felly band.

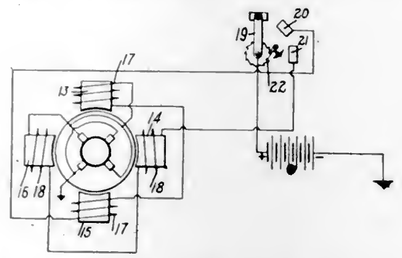
2. A demountable rim comprising an outer annular member, an inner annular rim member seated upon the inner edge of said outer annular rim member and adapted to coöperate therewith in holding a tire, and means shiftable within and circumferentially of said outer rim member adapted to secure said members in place, said members being disposed to be crowded away from each other by pressure of air in the tire to hold said means locked relative to said outer annular rim member.

3. In a demountable rim, an outer rim member having transverse slots, an inner rim member slidable on said outer rim member, bosses forming part of the outer rim member, lugs forming part of the inner member and extending through the slots of said outer rim member and transversely alining with said bosses, and means loosely held by said bosses and extending through said lugs for holding the inner rim member relative to the outer rim member.

4. In a demountable rim, an outer rim member having the inner edge thereof provided with open transverse slots, bosses forming part of said outer rim member and having tapering openings therein, an inner rim member slidable transversely of said outer rim member, bifurcated lugs carried by said inner rim member and extending through the slots of said outer rim member and alining with the bosses of said outer rim member, and bolts loosely held in the tapering openings of said bosses and clamped in the bifurcation of said lugs to retain said inner rim member on said outer rim member.

5. In a demountable rim, a felly band, an outer rim member thereon, a locking ring between said outer rim member and said felly band and shiftable circumferentially thereof, and an inner rim member on said outer rim member and movable transversely thereof, said rim members being distended by internal pressure of the tire casing adapted for mounting on said rim members whereby the outer rim member is held against said locking ring and said locking ring against said felly band, and said inner rim member held against said felly band.

1,171,374. STARTING MECHANISM FOR AUTOMOBILES. CHARLES E. WILSON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 586. (Cl. 172—239.)



1. In a dynamo-electric machine, the combination with a field magnet frame, and a longitudinally movable armature, of a plurality of field magnet windings, one of which is arranged to produce the normal number of field magnet poles and another of which is adapted to produce one-half the normal number of field magnet poles.

2. In a dynamo-electric machine, the combination with a field magnet frame, and a longitudinally movable armature having a multipolar winding, of a plurality of field magnet windings, one of which is arranged to produce a smaller number of field magnet poles than that for which the armature is wound.

3. In a dynamo-electric machine, the combination with a field magnet frame, and a longitudinally movable armature having a multipolar winding, of a plurality of field magnet windings, one of which is arranged to produce one-half the number of field magnet poles for which the armature is wound.

4. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for actuating one of said gear wheels into and out of mesh with the other, said means comprising a dynamo-electric machine having a longitudinally shiftable armature, a multipolar winding for said armature, and a plurality of field magnet windings, one of which produces a smaller number of poles than that for which the armature is wound.

5. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for actuating one of said gear wheels into and out of mesh with the other, said means comprising a dynamo-electric machine having a longitudinally shiftable armature, a multipolar winding for said armature, a plurality of field magnet windings, one of which produces a smaller number of poles than that for which the armature is wound, and means for successively connecting said field magnet windings in circuit with the armature.

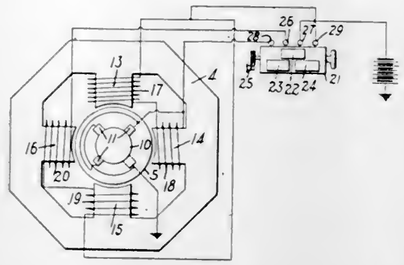
[Claims 6 to 9 not printed in the Gazette.]

1,171,375. STARTING MECHANISM FOR AUTOMOBILES. CHARLES E. WILSON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 588. (Cl. 172—239.)

1. In a starting mechanism, the combination with an electric motor having field-magnet windings and a longitudinally shiftable armature, of means for controlling the current in said windings to rearrange the polarity of the field-magnet poles for shifting said armature longitudinally and to cause the field-magnet poles to have their normal polarity for rotating said armature.

2. In a starting mechanism, the combination with an electric motor having field-magnet windings and a longitudinally shiftable armature, of means for successively controlling the current in said windings to rearrange the polarity of the field-magnet poles for shifting said armature longitudinally and to cause the field-magnet poles to have their normal polarity for rotating said armature.

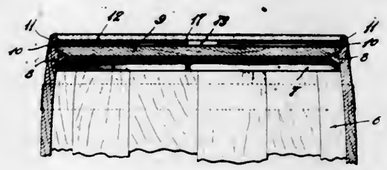
3. In a starting mechanism, the combination with an electric motor having field-magnet windings and a longitudinally shiftable armature, of means for energizing said windings to produce an abnormal arrangement of the field-magnet poles for shifting said armature longitudinally and to produce a normal arrangement of said field-magnet poles for rotating said armature.



4. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for actuating one of said gear wheels into and out of mesh with the other, said means comprising a dynamo-electric machine having a longitudinally movable armature connected to the movable gear wheel and means for changing the polarity of at least one of the field-magnet poles for shifting said armature longitudinally and simultaneously opposing its rotation.

5. In a starting mechanism, the combination with a pair of coacting gear wheels, of means for actuating one of said gear wheels into and out of mesh with the other, said means comprising a dynamo-electric machine having a longitudinally movable armature and a controlling means for temporarily completing a circuit for the dynamo-electric machine, producing an abnormal arrangement of the polarity of the field magnet poles and producing the normal arrangement of the polarity of the field-magnet poles.

1,171,376. CLOSURE FOR BARRELS AND SIMILAR CONTAINERS. WILLIAM M. WIRTH, St. Louis, Mo. Filed Aug. 11, 1913. Serial No. 784,108. (Cl. 217—89.)



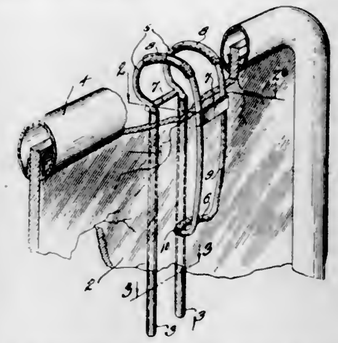
1. In combination with a container and a cover therefor, an inclined shoulder V-shaped in cross-section in the inner surface of the said container, there being an annular depression in said surface at a point above the said V-shaped shoulder, and the upper wall of said annular depression being inclined upwardly and inwardly, and a split ring arranged to engage the said upper wall of the said annular depression and press down the said cover, into tight contact with the said V-shaped shoulder.

2. In combination with a container a metallic-ring placed within the open end of said container and having an inner inclined shoulder for the support of a cover, and a second inclined shoulder formed above the first mentioned inclined shoulder, a split ring having an inclined periphery to engage said upper inclined shoulder, a cover removable and replaceable as a unit from said container, and a toggle-lever linking together the adjacent ends of said split ring.

3. In a closure, a split flexible-ring having its ends cut on a bevel, and adapted one to overlap the other, an inclined portion formed on the outer periphery of said ring, and a toggle-lever linking together said beveled ends, said ring being hollow, and said toggle-lever being arranged to rest within said hollow ring after said ring has been expanded.

4. A container having in its inner periphery an inclined shoulder V-shaped in cross section and an annular depression above said inclined shoulder, the upper wall of which annular depression is inclined upwardly and inwardly, a cover resting upon said inclined shoulder, and a flexible ring fitted within said annular depression to hold the cover in position.

1,171,377. WIND-SHIELD CLEANER. SAMUEL C. WOLFE, Angola, Ind. Filed July 6, 1915. Serial No. 38,302. (Cl. 15—59.)



1. A windshield cleaner of the class described comprising a wiper member adapted to be moved over the surface to be cleaned, a tubular covering or casing for said wiper member snugly fitting and shiftably arranged on said wiper member, the covering having an uninterrupted contact surface whereby said casing may be shifted as wear takes place to bring into position an unworn contact surface, and means for manipulating said wiper member.

2. A windshield cleaner of the class described comprising a wiper member adapted to be moved over the surface of said shield at one side, a handle for manipulating the wiper member coacting with the surface at the opposite side of the shield, and connecting means therebetween arching the shield and holding the wiper and handle members in the surface engaging positions aforesaid, said connecting means having a relatively broad contact bearing on the shield for maintaining the cleaner against rocking movement during cleaning movements.

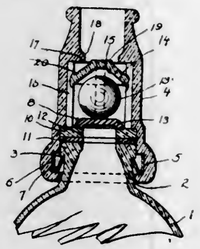
3. A windshield cleaner of the class described comprising spaced wiper members adapted to be moved over the surface of the shield, and a handle for manipulating the same, the wiper members having means slidably engaged with the shield at spaced points whereby to maintain the cleaner in a vertical plane during wiping movement.

4. A windshield cleaner of the class described comprising a rod bent intermediate its length to bring the end portions adjacent to each other, said end portions comprising spaced wiper members adapted to be moved over the surface of the shield, the rebent portion of the rod being bent over the shield to provide a spring arch holding the cleaner on the shield, said rebent portion engaging the shield at the other side and forming a handle for manipulating the wiper members.

5. A windshield cleaner of the class described comprising a rod consisting of resilient material, said rod being bent intermediate its length to bring the ends thereof in spaced parallel relation to each other to form wiper members adapted to be moved over the surface of the shield, the rebent portion of the rod being bent over the shield to engage the same at the other side and to form a yieldable handle for manipulating the wiper members.

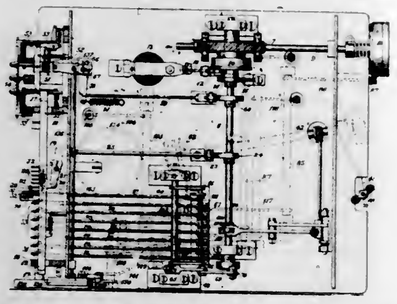
[Claims 6 and 7 not printed in the Gazette.]

1,171,378. NON-REFILLABLE BOTTLE. HARRY WOOD, Nutley, N. J. Filed Dec. 12, 1913. Serial No. 806,312. (Cl. 215—103.)



A non-refillable bottle comprising the combination with the neck of a bottle having a flange formed thereon, of a cylindrical neck member, said cylindrical member having one end enlarged and provided with an internal angular recess adapted to fit down on the flange of the neck of the bottle, an annular shoulder formed interiorly of the cylindrical neck member adjacent its upper open end, a valve seat upon the outer end of said bottle, a valve positioned upon said valve seat, a weight resting upon said valve, a guard member comprising a body portion of circular contour and provided with an inverted frustoconical engaging head and having a plurality of spaced legs connected to and extending downwardly therefrom adapted to rest upon said valve seat to limit the outward movement of said weight and prevent the bottle from being refilled after once being emptied, the upper interior shoulder of the cylindrical member limiting the outward movement of said guard member when said bottle is held in a tilted position.

1,171,379. PRINTING-TELEGRAPH RECEIVER. JOHN EDWARD WRIGHT, Pittsburgh, Pa. Filed July 24, 1914. Serial No. 852,807. (Cl. 178—28.)



1. In a printing telegraph receiver, the combination with a translator, permutataion plates or bars therein and means for moving the same according to the impulse transmitted, stop devices coöperatively associated with the said plates and adapted to move into the paths through portions of said plates which their adjustment may afford, of a type-wheel capable of rotary and of longitudinal movement, and means for adjusting the same to its different positions, the movements of which are limited in extent by engagement with those stop devices which by their movement are interposed into the path of movement of said means.

2. In a printing telegraph receiver, the combination with a translator, permutation elements therein, means for moving the same according to the impulses transmitted, and stop devices which move according to the adjustment of such elements, of a type wheel and rack bars shifted by the rotary and by the longitudinal movements of the same respectively, and limited in the extent of their movement by engagement with the stop devices which by their movement are interposed in their path.

3. In a printing telegraph receiver, the combination of a type-wheel capable of rotary and longitudinal movement, and parts having a movement proportional thereto, of a translator, a single group of coöperating permutation plates or bars therein, means for moving said plates in response to the particular impulses transmitted, a part of said plates being adapted to control the rotation and another part the longitudinal movement of the type-wheel, stop devices engaging with and movable according to the adjustment of the permutation plates into the path of the parts moving with the type-wheel, for determining the extent of the two movements imparted to the type-wheels, all of said stop devices being associated with and operated by the said single group of permutation plates.

4. In a printing telegraph receiver, the combination with a type-wheel capable of rotary and of longitudinal movement, of a translator, permutation elements therein, means for moving said elements in response to particular impulses transmitted, a part of such elements being adapted to control the rotary and another part the longitudinal movement of the type wheel, and three classes of stop devices or levers movable according to the adjustment of the permutation elements, and all associated with and operated by a single group of the same, one class being adapted to determine the extent of rotary movement of the type-wheel, another class the longitudinal movement of the same, and the third class adapted to cause other operations of the instrument.

5. In a printing telegraph receiver, the combination with a type-wheel capable of rotary and of longitudinal movement, of a translator, a series of notched permutation bars therein, means for moving said bars longitudinally according to the character of the impulses transmitted, a retaining bar, levers normally resting upon the retaining bar and adapted when said bar is withdrawn to fall into such alined notches as the adjustment of the permutation bars may present, means for withdrawing the retaining bar when the permutation bars are adjusted, and means for turning or lifting the typewheel and for performing other operations in the machine according to that one of said levers which may be shifted.

[Claims 6 to 20 not printed in the Gazette.]

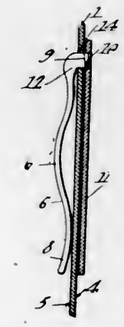
1,171,380. TRAIN-PIPE COUPLING. ALBERT L. ARTHUR, Ukiah, Cal., assignor of one-half to W. D. L. Held, Ukiah, Cal. Filed Apr. 2, 1915. Serial No. 18,771. (Cl. 137—89.)



1. A train pipe coupling including two interfitting sections, one of the sections being provided with a longitudinal bifurcation and having longitudinal slots in the sides of the bifurcation, the upper walls of the slots being provided with notches and a coacting section or member having a laterally reduced portion to fit the said bifurcation and provided with laterally projecting lugs slidable along the said slots and arranged to engage the notches whereby the sections will be interlocked and held against outward movement and maintained in their interlocked relation by gravity.

2. A train pipe coupling of the class described including a section or member having a longitudinal bifurcation and provided with a socket at the inner end thereof, said sections being also provided at opposite sides of the bifurcation with longitudinal slots and having notches in the walls of the slots and a coacting section or member laterally reduced to fit the bifurcation and provided with a point or nipple arranged in the said socket, the laterally reduced portion of the section or member being also provided with laterally projecting lugs slidable in the said slots and engaging the notches and a yieldable gasket surrounding the point or nipple and arranged in the said socket, said gasket permitting a limited rocking movement of the sections to engage the lugs with the notches and disengage them therefrom without affecting the air tight connection between the sections or members.

1,171,381. LOSS-PREVENTING DEVICE. ROBERT BARNES and ORLEY M. DRAKE, Davenport, Iowa. Filed May 12, 1915. Serial No. 27,682. (Cl. 24—3.)

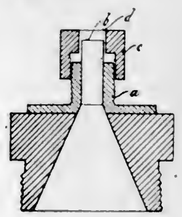


1. A loss preventing device comprising a spring tongue, a backing strip substantially co-extensive in length with the tongue, and an article piercing connection uniting one end of the tongue with the corresponding end of the strip, the strip being alined with the tongue thereby to reinforce against the action of the tongue, the article wherewith the device is assembled.

2. A loss preventing device comprising a spring tongue, a backing strip alined with the tongue, and an article piercing connection uniting the tongue with the strip, the connection being of circular cross section to permit the same to be article-journaled, whereby the backing strip will act as a counterweight for the tongue and hold the latter in a vertical, depending position.

3. The combination with a pocket-carried article, of a pocket-engaging tongue journaled in the article; and a counterweight distinct from the tongue and assembled with the tongue, the counterweight constituting a means for holding the tongue vertical, irrespective of the position of the article with respect to the vertical.

1,171,382. NOZZLE OF PRESSES FOR MOLDING PLASTIC MATERIALS. AMANDUS BARTELS, Harburg-on-the-Elbe, Germany. Filed Mar. 27, 1915. Serial No. 17,514. (Cl. 25—17.)

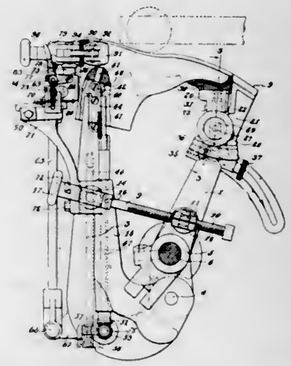


1. A nozzle for presses for molding plastic materials, comprising a second nozzle having a slightly larger outlet orifice arranged in front of the ordinary nozzle of the press, for the purpose of molding the plastic material into rods of determined uniform thickness, substantially as described.

2. A nozzle for presses for molding plastic materials, comprising a second nozzle having a slightly larger outlet orifice arranged in front of the ordinary nozzle of the press, the said second nozzle being adjustably arranged in front of the first nozzle, substantially as described.

3. A nozzle for presses for molding plastic materials comprising a second nozzle having a slightly larger outlet orifice arranged in front of the ordinary nozzle of the press and being adjustably arranged by means of screw-thread, for the purpose of molding the plastic material into rods of determined uniform thickness, substantially as described.

1,171,383. SHOE-JACK. WILLIAM C. BAXTER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 24, 1913. Serial No. 750,325. (Cl. 12—127.)



1. A shoe supporting jack having, in combination, a toe post, a heel post fulcrumed upon the toe post, an adjusting member connecting the toe and heel post to vary the distance between the two, a toe rest mounted upon the toe post and having provision for adjustment about an axis lying substantially in the work engaging surface of the toe rest, a last block supported upon the heel post, and mechanism mounted upon the heel post for actuating the last block to clamp the shoe upon the jack.

2. A shoe supporting jack having, in combination, a toe post and a heel post arranged to support a shoe with the bottom lying substantially in a horizontal plane, and mechanism for adjusting the heel post toward the toe post and for simultaneously imparting a vertical movement to the heel post to decrease the vertical distance between the heel post and toe post and enable lasts of varying length and depth to be properly jacked.

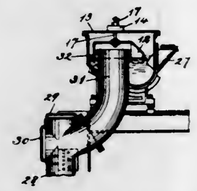
3. A shoe supporting jack having, in combination, a toe post, a heel post fulcrumed upon the lower portion of the toe post and arranged to swing inwardly and upwardly toward the toe post to accommodate lasts of varying length and depth, and mechanism for adjusting the heel post toward and from the toe post.

4. A shoe supporting jack having, in combination, a heel post, a toe post, mechanism for securing a relative movement of the heel and toe posts toward and from one another, a toe rest supported in curved ways upon the toe post, a worm journaled upon the toe post, and means conveniently accessible to the operator for actuating the worm to adjust the toe rest about an axis lying substantially in the surface of the sole.

5. A shoe supporting jack comprising a toe post, a toe rest support slidingly mounted in curved ways on the toe post, a toe rest detachably connected to the support, mechanism for adjusting the support angularly about an axis located substantially in the work engaging surface of the toe rest, and a wedge interposed between the toe rest and support for securing a bodily vertical adjustment of the toe rest.

[Claims 6 to 11 not printed in the Gazette.]

1,171,384. SEALING-BELL FOR RETORT STANDPIPES. HOWARD BRUCE, Baltimore, Md., assignor to The Bartlett Hayward Company, Baltimore, Md., a Corporation of Maryland. Original application filed Jan. 7, 1914, Serial No. 810,723. Divided and this application filed Feb. 24, 1915. Serial No. 10,275. (Cl. 48—171.)



1. The combination with a standpipe of a gas retort; a hydraulic main with which the standpipe communicates; a sealing bell over the discharge-end of the standpipe; knuckles having a universal connection with the hydraulic main and bolts pendantly carried by the knuckles and having their lower ends rotatably engaging the sealing bell.

2. The combination with a standpipe of a gas retort; a hydraulic main with which the standpipe communicates; a sealing bell over the discharge-end of the standpipe; knuckles having a universal connection with the hydraulic main and a bolt extending through each knuckle and having a stop device on its lower end said stop devices on each bolt being accurately and similarly distant from the outer ends of the bolts and said stop devices being held sealed against the bell wall and rotatable with respect thereto.

3. The combination with a standpipe of a gas retort; a hydraulic main with which the standpipe communicates; a sealing bell over the discharge-end of the standpipe and a plurality of rotatable bolts passing through the hydraulic main said rotatable bolts having their outer ends squared and dressed off accurately at a right angle to the bolt length and the inner ends of the bolts being rotatably connected to the bell.

4. The combination with a standpipe of a gas retort; a hydraulic main in which the discharge-end of the standpipe projects; and a sealing bell in the hydraulic main and over the discharge-end of the standpipe,—said sealing bell having a series of outwardly-extending hollow projections and straight depending portions separating said hollow projections and the bottom edges of said projections and straight portions being in the same plane.

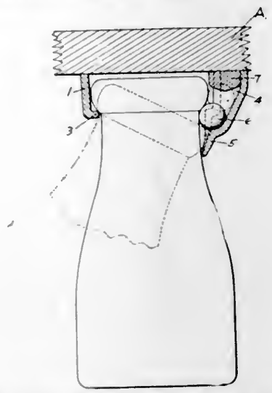
5. The combination with a standpipe of a gas retort; a hydraulic main with which said standpipe communicates; a sealing bell having a flat top and a plurality of hollow extensions around the side thereof, and a plurality of adjustable suspending devices engaging the top of the bell.

[Claims 6 to 11 not printed in the Gazette.]

1,171,385. MILK-BOTTLE LOCK. FRANK CANFIELD and FRED O. PERMIN, Portland, Oreg.; said Canfield assignor, by mesne assignments, to The Loxit Manufacturing Company, a Corporation of Colorado. Filed Nov. 5, 1914. Serial No. 870,064. (Cl. 232—42.)

1. A locking device for a bottle having a flange around its mouth, comprising a body open at its bottom and having an inwardly projecting supporting flange around its bottom, and forming a bottom opening of less diameter than the exterior diameter of the bottle flange, and having a pocket formed in its side and opening inwardly, and a locking member movably mounted in said pocket and projecting inwardly and adapted to underlie and support the flange of a bottle placed in said locking device, said locking device having one side open to permit the removal of the bottle laterally therefrom.

2. A locking device for a bottle having a flange around its mouth, comprising a wall member of horse shoe shape and having an inturned bottle supporting flange at its lower edge, and at its opposite side having an inwardly open pocket formed in an extension thereof, a locking member movably mounted in said pocket and adapted to cooperate with said inturned flange in supporting a bottle by its flange, the diameter of the bottom opening of said device being less than the extreme outer diameter of the bottle flange to be supported therein, whereby said bottle must be inserted in an angular position through said bottom opening and removed laterally from said locking device, substantially as described.



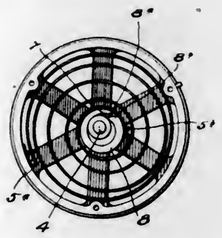
3. A locking device for milk bottles comprising in combination with a door frame and a door, a body open at its bottom and at one side and adapted to be secured to the door frame with its open side against said door, and having an inturned bottle supporting flange formed around its bottom opening, and having a pocket formed in one side thereof and opening inwardly, a locking member loosely mounted in said pocket and means preventing access to said locking member when a bottle is inserted therein, substantially as described.

4. A bottle lock comprising a body having an open side and an open bottom provided with an inturned bottle supporting flange therein and an inwardly opening pocket formed at one side thereof, and a ball loosely placed in said pocket, substantially as and for the purpose described.

5. A bottle lock of the character described comprising a U-shaped body having an open side and an open bottom with an inturned bottle supporting flange portion at one side at the bottom thereof and an inwardly opening pocket formed in the opposite side thereof, a ball loosely disposed in said pocket, and a resilient element mounted in the upper part of said pocket, substantially as and for the purpose indicated.

[Claim 6 not printed in the Gazette.]

1,171,386. CARRIAGE-SPRING CONNECTION. ARTHUR CRUTCHLEY, Brooklyn, N. Y. Filed Dec. 21, 1914. Serial No. 878,355. (Cl. 185—45.)



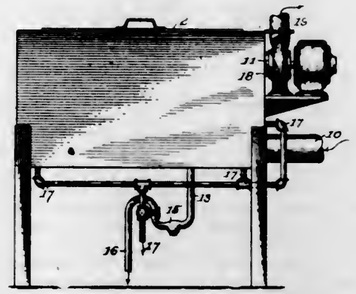
1. In a writing machine, a drum mounted for rotary movement, a flexible element adapted to be wound on the drum, a spring for actuating the drum to wind the flexible element thereon, said spring having one end secured to the drum, a stationary member adapted to hold the other end of the spring against movement, and a connection between the said end of the spring and stationary member, said connection including a collar member encircling the stationary member and connected to the spring, and a lug carried by the stationary member, said lug and said collar being provided with interengaging elements whereby the connected end of the spring is held against movement in an unwinding direction but is free to move in a winding direction.

2. In a writing machine, a rotary drum, a flexible element windable upon the same, a spring for actuating the drum to wind the flexible element thereon, said spring having one end thereof connected to the drum, a normally stationary spindle, a collar member encircling the same and attached to the other end of the spring, said spindle being provided with a lug extending radially thereof, the collar being provided with an inwardly directed lip adapted to cooperate with the spindle, said lug being adapted to engage said lip to prevent movement of the collar in an unwinding direction but to permit movement thereof in a winding direction, the inner diameter of said collar being sufficient to permit its rotation over said lug.

3. In a writing machine, a drum mounted for rotary movement, a flexible element windable upon the same, a spring for actuating the drum to wind the flexible element thereon, a normally stationary spindle, a collar encircling the spindle, said collar and said spindle being provided with coöperating means engageable upon contractive movement of the spring and disengageable upon expansive movement thereof, one end of the spring being secured to the drum and the other end thereof being secured to the collar.

4. In a machine of the class described, a revoluble member, a flexible element windable thereon, a spring for actuating the said member to wind the flexible element thereon, a normally stationary member concentrically associated with said revoluble member, an automatically releasable means for connecting the spring to the stationary member, said means comprising an abutment carried on the stationary member and an engaging portion carried on the spring and adapted to engage said abutment under winding movement of said spring and adapted to disengage itself from said abutment under unwinding influence of said spring.

1,171,387. AIR-COOLING APPARATUS. GEORGE F. DICKSON, Chicago, Ill., assignor to J. G. Cherry Company, Cedar Rapids, Iowa, a Corporation of Iowa. Filed Feb. 26, 1915. Serial No. 10,713. (Cl. 62—131.)

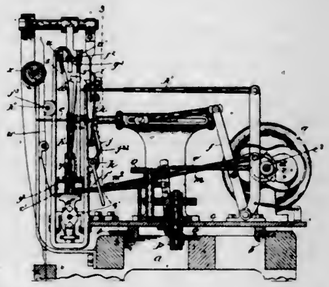


1. In an air cooling apparatus, the combination of a main casing provided with vertical transverse end partitions and a transverse horizontal partition associated with one of said vertical partitions, the said partitions providing a lower inlet chamber an upper outlet chamber and a return chamber, a series of pipes extending horizontally between the vertical partitions aforesaid, and a vertically disposed overflow passage having a drain opening on an approximate level with the horizontal partition aforesaid, the aforesaid transverse horizontal partition being located near the bottom of the apparatus to confine the incoming air to a minor portion of the series of pipes in the initial cooling of the passing air, substantially as set forth.

2. In an air cooling apparatus, the combination of a main casing provided with vertical transverse end partitions and a transverse horizontal partition associated with one of said vertical partitions, the said partitions providing a lower inlet chamber an upper outlet chamber and a return chamber, a series of pipes extending horizontally between the vertical partition aforesaid, a vertically disposed overflow passage having a drain opening on an approximate level with the horizontal partition aforesaid, the aforesaid transverse horizontal partition being located near the bottom of the apparatus to confine the incoming air to a minor portion of the series of pipes in the initial cooling of the passing air, and a series of drain pipes connecting with the bottom portions of the inlet, outlet and return chambers, aforesaid, substantially as set forth.

3. In an air cooling apparatus, the combination of a main casing provided with vertical transverse end partitions and a transverse horizontal partition associated with one of said vertical partitions, the said partitions providing a lower inlet chamber an upper outlet chamber and a return chamber, a series of pipes extending horizontally between the vertical partitions aforesaid, an air mover connected with the outlet chamber aforesaid, and a vertically disposed overflow passage having a drain opening on an approximate level with the horizontal partition aforesaid, the aforesaid transverse horizontal partition being located near the bottom of the apparatus to confine the incoming air to a minor portion of the series of pipes in the initial cooling of the passing air, substantially as set forth.

1,171,388. WARP-DRAWING MACHINE. MILLARD F. FIELD, Boston, Mass. Filed May 11, 1898. Serial No. 680,335. (Cl. 139—94.)



1. In a warp-drawing machine provided with heddles consisting of thin perforated plates, a selecting device adapted to engage said heddles singly and separate them successively from the aggregate mass suspended in the harness, substantially as described.

2. In a warp-drawing machine, means to assemble a series of perforated sheet metal heddles compactly and in orderly sequence, and a selector to engage each heddle singly and separate it from the series preparatory to presentation for the drawing-in operation.

3. In a warp-drawing machine provided with heddles consisting of thin perforated plates, a selecting device to select and separate a single heddle from the aggregate mass, and a gripper to seize the separated heddle and turn its eye to proper position from the drawing-in operation.

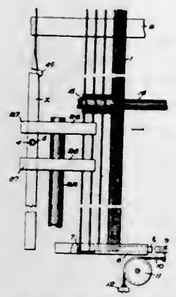
4. In a warp-drawing machine, means for supporting a series of perforated sheet metal heddles, a gripper to engage said heddles separately, and mechanism to operate the gripper to properly present the eye of the heddle for the drawing-in operation.

5. In a warp-drawing machine, means to assemble a series of flat flexible heddles and hold them compactly in orderly sequence, a selector to engage the heddles singly and separate them successively from the series, a gripper

to grip each separated heddle and mechanism to operate the gripper and thereby control the separated heddle and properly present its eye for the drawing-in operation.

[Claims 6 to 120 not printed in the Gazette.]

1,171,389. WARP-DRAWING MACHINE. MILLARD F. FIELD, Winthrop, Mass. Original application filed May 11, 1898. Serial No. 680,335. Divided and this application filed June 8, 1915. Serial No. 32,853. (Cl. 139—94.)



1. In a thread-placing machine, the combination with a thread-placing device, means to support a series of detached metallic heddles, a heddle facer to face a heddle to the thread-placing device, and a rotary screw to engage and convey heddles along singly and successively to the facer.

2. In a machine for acting upon detached, metallic heddles, the combination with means for supporting a plurality of banks of such heddles on a stringer bar or the like, each bank crowded closely together on its stringer bar, means for turning a heddle when separated from its bank and a rotary screw for engaging the edges of the heddles on each stringer bar and conveying them singly and successively to the turning device.

3. In a machine for acting upon flat, metallic heddles, the combination with a stringer bar on which said heddles are arranged and a rotary screw device located at the side edges of the heddles and adapted to engage the latter and assist in positioning them singly and successively.

4. In a machine for acting upon metallic heddles, the combination with means for supporting a series of such heddles, means for crowding said heddles closely together in a compacted bank on said support, from which bank the heddles may be released singly and successively, and rotary screw means for conveying and positioning said released heddles.

5. In a machine for acting upon metallic heddles, a stringer bar on which said heddles are arranged, means for guiding said heddles at their lower ends, means for crowding the heddles together in a bank from which they may be released one by one, and rotary screw means for positioning the released heddles.

[Claims 6 to 16 not printed in the Gazette.]

1,171,390. BLADE-HOLDER. ANDREW L. HATFIELD, Newark, N. J., assignor to Hyfield Manufacturing Company, a Corporation of New York. Original application filed Sept. 27, 1913, Serial No. 792,077. Divided and this application filed Dec. 5, 1913. Serial No. 804,787. (Cl. 51—16.)



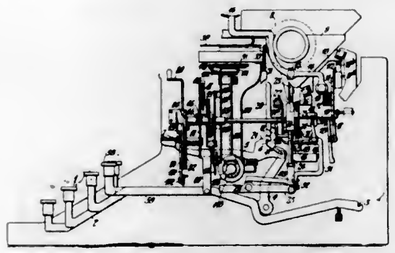
1. A blade holder comprising in combination with a pair of opposite jaws adapted to clamp a blade between themselves, a handle extending from said jaws having a transverse aperture adapted to receive a supporting pin and substantially parallel to the biting ends of said jaws, said aperture being enlarged at its opposite ends both upward and downward with respect to the plane of the jaws and said enlargement increasing from the center of the handle to the opposite ends of the aperture, whereby the holder may rock transversely upon the supporting pin and is prevented from movement longitudinally of the handle.

2. A blade holder comprising in combination with a pair of opposite jaws adapted to clamp a blade between themselves, a handle extending from said jaws having a transverse aperture adapted to receive a supporting pin and substantially parallel to the free ends of said jaws and varying in size from the center of the handle to the opposite ends of said aperture whereby the holder may rock transversely upon said supporting pin and is prevented from movement longitudinally of the handle.

3. A blade holder comprising in combination with a pair of opposite jaws adapted to clamp a blade between themselves, a handle extending from said jaws having a transverse aperture adapted to receive a supporting pin and substantially parallel to the biting ends of said jaws, said aperture being of uniform width in planes extending through the handle longitudinally and of greater width at the ends than at the center in a plane transverse to the handle, whereby the holder may rock transversely upon the supporting pin and is prevented from movement longitudinally of the handle.

4. In a blade holder, the combination of a pair of clamping jaws, members extending transversely between said jaws and spaced from each other in a line parallel to the gripping edges of the jaws and at a distance therefrom, a back support between said clamping jaws intermediate said gripping edges and spaced members having its front edge toward the gripping edges adapted to receive the back of a razor blade and its opposite or rear edge recessed or cut away to receive said spaced members and form shoulders engaging the same to prevent lateral displacement of the back support.

1,171,391. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 1, 1913. Serial No. 776,753. (Cl. 197—156.)



1. In a typewriting machine, the combination of a shiftable platen, a card holder, a frame therefor, means to shift said frame up and down with the platen, the position of the card holder relative to the printing point being substantially constant during the platen-shifting and the printing operations, and a ribbon vibrator mounted to vibrate in said frame.

2. In a ribbon vibrating mechanism, the combination of a vertically disposed arm, a three-armed lever pivoted thereto, a vibrator having a slot and pin connection to said lever at one side of its pivot, and a second vibrator having a slot and pin connection on the other side of said pivot, said vertical arm having a slot concentric with said pivot, and said lever having a pin working in said slot.

3. In ribbon vibrating mechanism, the combination of a vertically disposed arm, a three-armed lever pivoted thereto, a vibrator having a slot and pin connection to said lever at one side of its pivot, a second vibrator having a slot and pin connection on the other side of said pivot, said vertical arm having a slot concentric with said pivot, said lever having a pin working in said slot, mechanism to move said lever about its pivot to selectively project the vibrators into active position, and means to reciprocate said arm, lever and vibrators as a unit.

4. In a typewriting machine, the combination of a shift key lever, a rock shaft operated thereby, an arm on said shaft, a vertically movable frame connected to said arm, a vibrator lever pivoted to said frame, a universal bar, a vibrator, means to connect one arm of the vibrator lever to the vibrator and the other arm to the universal bar, and a guide frame for the vibrator connected to said vertically movable frame to move up and down therewith.

5. The combination in a typewriter, of a shiftable platen, a frame connected to shift with the platen, a vibrator lever mounted on said frame, a vibrator connected to said vibrator lever, means to operate said vibrator lever, a second frame in which the vibrator is slidably mounted, a card-holding device mounted on said second frame, and a connection between said frames whereby the card-holding device is shifted up and down with the platen.

[Claims 6 to 31 not pirnted in the Gazette.]

1,171,392. CHEWING-GUM AND METHOD OF MAKING THE SAME. ADOLPHUS G. MEIER, St. Louis, Mo. Filed Oct. 9, 1913. Serial No. 794,195. (Cl. 127—4.)

1. A chewing gum containing an added mixture consisting of a fugitive ingredient and an insoluble, absorbent vehicle therefor.

2. A chewing gum containing an added mixture consisting of a fugitive ingredient and an insoluble dentifrice forming an absorbent vehicle for said ingredient.

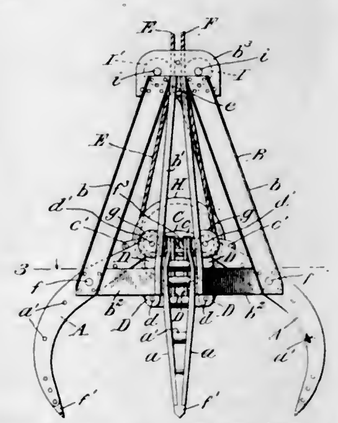
3. A chewing gum containing an added mixture consisting of a fugitive ingredient and chalk, the latter forming a vehicle for said ingredient.

4. A chewing gum containing an added mixture consisting of an antiseptic and an insoluble, absorbent vehicle therefor.

5. A chewing gum containing an added mixture consisting of an antiseptic and an insoluble dentifrice forming an absorbent vehicle for said antiseptic.

[Claims 6 and 7 not printed in the Gazette.]

1,171,393. EXCAVATING APPARATUS. CHARLES A. MORRIS, Montclair, N. J.; Clara R. Morris, executrix of said Charles A. Morris, deceased, assignor to The Hayward Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1913. Serial No. 783,866. (Cl. 37—30.)



1. In an excavator, the combination with a head or frame, of a plurality of members pivoted to said head or frame, a vertically movable member, links connecting said pivoted members with said vertically movable member, a hoist line coöperating with said vertically movable member for imparting movement thereto in a direction to close said pivoted members, said links and the vertically movable member operating to increasingly apply force upon the pivoted members as the latter move inwardly toward each other, and a dump line having running engagement directly with said pivoted members for imparting movement thereto in an outward direction.

2. In an excavator, the combination with a head or frame, of a plurality of members pivoted to said head or frame, a sliding part, means for directing the movement of said sliding part relatively to said head or frame, links connecting said sliding part with the pivoted members, a hoist line for imparting movement in one direction to said sliding part, said links and the sliding part forming a toggle mechanism operated by the hoist line for exerting force increasingly upon the pivoted members as the latter swing inwardly toward each other, and a dump line having running engagement with said pivoted members for imparting movement so as to swing them in an outward direction, said running engagement between the dump line and the pivoted members being positioned above the pivotal points of said members.

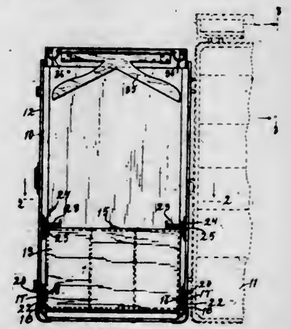
3. In an excavator, the combination with a head or frame, of a plurality of members each pivoted intermediate the ends thereof to said head or frame, a sliding part linked to said pivoted members, a hoist line for imparting movement to said sliding part, thereby operating to swing the pivoted members inwardly toward each other, and a dump line having running engagement with said pivoted members above the pivot thereof, said dump line operating directly upon the pivoted members for swinging them outwardly into an open position.

4. In an excavator, the combination of a plurality of pivoted members, a sliding part linked to said members, a hoist line contacting with said sliding part for imparting movement thereto in a direction for swinging the pivoted members inwardly toward each other, and a dump line having running engagement with said pivoted members for imparting movement thereto in an outward direction to open the same.

5. In an excavator, the combination of a head or frame, a plurality of members each pivoted intermediate the ends thereof directly to a rigid part of said frame, a sliding part linked to the pivoted members, a hoisting line attached at one end to the head or frame and having a running connection with the sliding part for imparting movement to the sliding part and the links so as to act with increasing force upon the pivoted members during the closing movement thereof, and a dump line having a running connection with said pivoted members for positively opening the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,171,394. TRUNK SHOE-BOX. GEORGE HENRY WHEARY, Racine, Wis. Filed Oct. 5, 1914. Serial No. 864,976. (Cl. 190—13.)



1. The combination with a trunk provided with a removable box having an inner open side and a hinged cover, of a means for securing the box to the trunk, com-

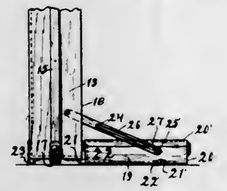
prising trunnions and slotted plates interposed between the opposite side portions of the box and the side walls of the trunk, said trunnions and plates forming a detachable and a pivotal connection between said trunk walls and the box, and means releasably locking the upper portion of the box to the trunk.

2. The combination with a trunk, of a box therefor, comprising a box-like member having an open side and a hinged cover, said box being positioned in the lower portion of the trunk with its lower part spaced a distance above the lower part of the trunk to permit inward movement of said trunk part without injury to the box, trunnions and slotted plates interposed between the opposite side portions of the box and the side walls of the trunk, said trunnions and plates forming a detachable and a pivotal connection between the said trunk walls and the box, and means releasably locking the upper portion of the box to the trunk walls.

3. The combination with the wardrobe section of a trunk, a box positioned in the lower portion of said section and having its lower edge portion spaced above the lower wall of said section, said box having an inner open side and a hinged cover therefor, means pivotally connecting the lower portion of said box to the trunk section to permit the upper portion of said box to be swung outwardly from said section, and means locking the upper portion of said box against outward movement.

4. The combination with the wardrobe section of a trunk, a box positioned in the lower portion of said section and having its lower edge portion spaced above the lower wall of said section, said box having an inner open side and a hinged cover therefor, the lower edge portion of said cover being hinged to the lower portion of the box, means detachably and pivotally connecting the lower portion of said box to the trunk section to permit the upper portion of the box to be swung outward from said section, said means comprising trunnions and slotted plates, and means locking the upper portion of said box against outward movement, means pivotally connecting the lower portion of said box to the trunk section to permit the upper portion of said box to be swung outwardly from said section, and means locking the upper portion of said box against outward movement.

1,171,395. REMOVABLE WARDROBE-TRUNK TRAY. GEORGE HENRY WHEARY, Racine, Wis. Filed Dec. 2, 1914. Serial No. 875,061. (Cl. 190—13.)



1. A trunk tray, comprising a removable tray member adapted to rest upon one of its ends in upright position when removed from the trunk, and a container hinged to the tray member and adapted to be swung to a position to hold and brace the tray in upright position.

2. A trunk tray, comprising a removable tray member adapted to rest upon one of its ends in upright position when removed from the trunk, a container normally positioned within the tray and having its lower outer edge portion hinged to the lower front edge portion of the tray, said hinged connection permitting the container to be swung out of the tray to a position to hold and brace the tray in upright position, and means locking the container in said holding and bracing position.

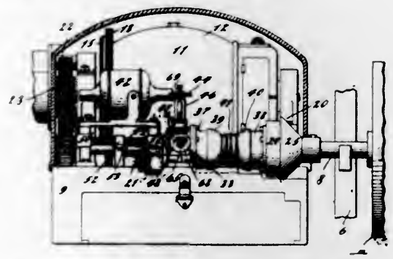
3. A trunk tray, comprising a removable tray member adapted to rest upon one of its ends in upright position when removed from the trunk, a container normally positioned within the tray, hinges connecting the lower outer edge portion of the container to the lower end portion of the tray, said hinged connection permitting the container to be swung out of the tray to a horizontal position on the floor in front of the tray, and a brace member pivoted to the tray and having a locking engagement with the container.

4. A trunk tray, comprising a removable tray member of rectangular form provided with reinforcing strips mounted on the outer sides and ends of the tray, said tray adapted to rest upon one of its ends in upright position when removed from the trunk, supporting members formed on the lower end of the trunk, a container normally positioned within the tray, offset hinges connecting the lower outer edge portion of the container to the lower edge portion of the tray, said hinged connection permitting the container to be swung out of the tray to a horizontal position with its lower portion approximately in horizontal alinement with the reinforcing strip on the lower end of the tray, and a brace member pivoted to the tray and having a locking engagement with the container.

5. A trunk tray, comprising a removable tray member of rectangular form provided with reinforcing strips mounted on the outer sides and ends of the tray, said tray adapted to rest upon one of its ends in upright position when removed from the trunk, supporting members formed on the lower end of the trunk, a container normally positioned within the tray, offset hinges connecting the lower outer edge portion of the container to the lower end portion of the tray, means for holding the container in position within the tray, said hinged connection permitting the container to be swung out of the tray to a horizontal position with its lower portion approximately in horizontal alinement with the reinforcing strip on the lower end of the tray, and brace members pivoted to the opposite sides of the tray and having locking engagements with the opposite sides of the container.

[Claims 6 and 7 not printed in the Gazette.]

1,171,396. MARGIN-REGULATING MECHANISM FOR WEB-ROLLS. GLENN S. WILLIAMSON, New York, N. Y., and CHARLES E. MANDELICK, Ridgefield Park, N. J., assignors to Publishers Utilities Company, a Corporation of New York. Original application filed Aug. 5, 1911, Serial No. 642,544. Divided and this application filed Jan. 21, 1915, Serial No. 3,591. Renewed Nov. 1, 1915. Serial No. 59,148. (Cl. 242—76.)



1. In a margin regulator for web rolls of printing presses, the combination with a roll spindle, a rotary shaft driven thereby, an electric motor acting upon said shaft for adjusting the web roll axially and circuits and contact devices for causing the motor to run in opposite directions.

2. A margin regulator for web rolls of printing presses, comprising the combination of a roll spindle, an electric motor for adjusting the roll spindle axially, a clutch for connecting and disconnecting said motor and the roll spindle and circuits and contact devices for causing the motor to run in opposite directions.

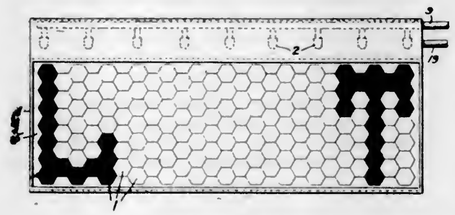
3. In a web roll apparatus for printing presses, the combination with a roll spindle, of an electric motor for shifting the same axially, and connections between said motor and the spindle including a frictional slip device.

4. In a web roll apparatus, the combination with a roll spindle, of means for adjusting the same axially comprising a rotary electric motor, and circuit changing means for causing the motor to rotate in either direction.

5. In a web roll apparatus, the combination with a roll spindle, of an electric motor, reducing gearing connections between said motor and spindle for moving the latter axially, and means including circuits and contact devices for causing the motor to run in opposite directions and for stopping the same.

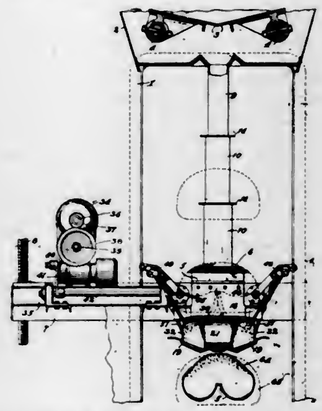
[Claims 6 to 23 not printed in the Gazette.]

1,171,397. SIGN. EDWARD J. BRADY, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 13, 1914. Serial No. 844,869. (Cl. 40—28.)



A sign comprising the combination of cells having walls, elements movable within the cells and normally forming the sign surface, illuminating means from which light falls obliquely upon the sign surface, and means for withdrawing the elements into the cells to permit the walls thereof to totally obscure the light in all directions from the faces of the elements, substantially as described.

1,171,398. APPARATUS FOR CHARGING AND DISCHARGING GAS-RETORTS. HENRY A. CARPENTER, ROBERT L. HIBBARD, and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 15, 1913. Serial No. 748,644. (Cl. 214—23.)



1. In a charging apparatus, a frame, a hopper carried by the frame, a charger, a telescopic chute located between the hopper and the charger and permanently spaced from the latter, and means positionable between the discharging end of the chute and the charger for intermittently inclosing the space therebetween and to complete an inclosed passageway between the hopper and charger, whereby the charger and its charge may be moved laterally of the chute axis without affecting the position of the chute.

2. In a charging apparatus, a frame, a hopper carried by the frame, a charger, a telescopic chute located between the hopper and charger and permanently spaced from the latter, said charger being normally positioned to receive material through the chute and being movable from such position in a direction to intersect the chute axis, and means positionable between the discharge end of the chute and the charger for inclosing the space therebetween and to complete an inclosed passageway between the hopper and charger when said charger is in its normal position.

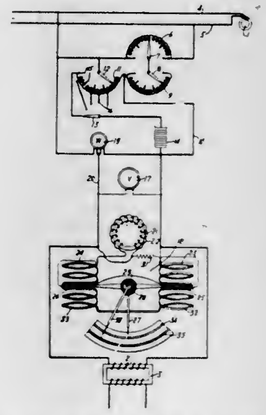
3. In a charging apparatus, a frame, a hopper carried by the frame, a charger, a telescopic chute located between the hopper and charger and permanently spaced from the latter, said charger being normally positioned to receive material through the chute and being movable from such position in a direction to intersect the chute axis, and means positionable between the discharge end of the chute and the charger for inclosing the space therebetween and to complete an inclosed passageway between the hopper and charger when said charger is in its normal position, said chute comprising a series of telescopic sections with each section provided with means for preventing the escape of dust from the chute at the joints of said sections.

4. In a charging apparatus, a frame, a hopper carried thereby, a horizontally-operable charger, a telescopic chute located between the hopper and charger and permanently spaced from the latter, means positioned between the discharge end of the chute and charger for inclosing the space therebetween, and mechanism for moving said means into and out of its inclosing position at will.

5. In a charging apparatus, a frame, a hopper carried thereby, a horizontally-operable charger, a telescopic chute located between the hopper and charger and permanently spaced from the latter, means positioned between the discharge end of the chute and charger for inclosing the space therebetween, and mechanism for moving said means into and out of its inclosing position at will, said means being permanently located with respect to the discharge end of the chute.

[Claims 6 to 20 not printed in the Gazette.]

1,171,399. ELECTRICAL SYSTEM. LEWIS W. CHUBB, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Original application filed May 24, 1909, Serial No. 497,972. Divided and application filed Sept. 12, 1910, Serial No. 581,734. Divided and this application filed Oct. 9, 1915. Serial No. 54,963. (Cl. 172—237.)



1. A form-factor changing apparatus for an electric circuit comprising a variable impedance device connected in the electric circuit for peaking the voltage wave, an electrolytic valve, and means for supplying the valve with

variable voltage, said valve being connected in shunt relation to the circuit for limiting the heights of the voltage wave peaks to any desired value.

2. A form-factor changing apparatus for an electric circuit comprising means connected in the electric circuit for changing the heights of the voltage wave peaks, a valve device, and means for changing the value of the voltage impressed across the valve device, said valve device being adapted to discard any desired portion of the voltage wave-peaks as changed by the first-mentioned means.

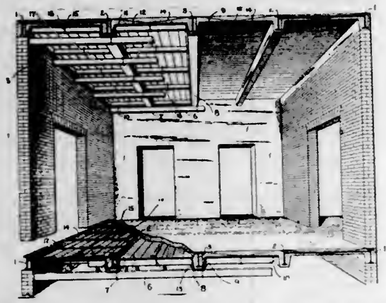
3. A form-factor changing apparatus for an electric circuit comprising means for peaking the voltage wave, a valve device, and means for supplying the valve device with variable voltage, said valve device being connected in shunt relation to the circuit for limiting the heights of the voltage wave peaks to any desired value.

4. Apparatus for changing the form-factor of a peaked voltage wave comprising a circuit upon which the voltage wave is impressed, and variable-voltage means connected in shunt to a part of the circuit for limiting the heights of the voltage-wave peaks.

5. The method of obtaining in an electric circuit a voltage wave having a definite form-factor which consists in combining two voltage waves, and then discarding certain portions of the resultant wave.

[Claims 6 to 9 not printed in the Gazette.]

1,171,400. BUILDING CONSTRUCTION. EDWARD A. C. HOGE, Elmhurst, N. Y., assignor to Keystone Fireproofing Company, New York, N. Y., a Corporation of Delaware. Filed May 3, 1915. Serial No. 25,389. (Cl. 72—71.)



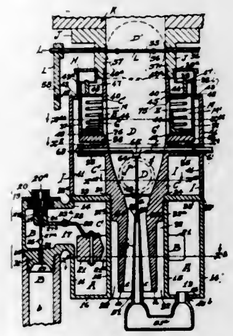
1. A floor structure combining a plurality of girders spaced apart to form an end-bay, and a number of intermediate bays, a series of spaced compression members interposed between the girders of the end-bay and bearing against the outermost girder at or adjacent the upper flange thereof for resisting the overturning of said girder, a series of tension cables attached to the outermost girder of the end-bay and extending successively over the intermediate girders, means located at and intermediate of each bay for bearing down on the loops of said cables, and a cementitious fire resisting matrix embedding all of said elements and forming the body of the floor.

2. A floor structure combining a plurality of girders spaced apart to form an end-bay, and a number of intermediate bays, a series of spaced compression members interposed and terminating between the girders of only the end-bay, the ends of said members engaging the girders substantially at their upper flanges, a series of tension twisted-wires attached to the outermost girder of the end-bay and extending successively over the intermediate girders, means located at and intermediate of each bay for bearing down on the loops of said twisted-wires, and a matrix of plaster of Paris embedding all of said elements and forming the body of the floor.

3. A floor structure combining a plurality of girders spaced apart to form an end-bay and a number of intermediate bays; a series of spaced straight compression members interposed and terminating between the girders of only the end-bay, the ends of said members being spaced away from the lower flanges of said girders; a series of tensioned twisted-wires attached to the outermost girder of the end-bay and extending successively over the intermediate girders; means located at an intermediate point of each bay for bearing down on the loops of said twisted wires; and a matrix of plaster of Paris embedding all of said elements and forming the body of the floor.

4. A floor structure combining a series of girders spaced to form an end-bay and a number of intermediate bays; a plurality of struts spaced laterally between the girders of the end-bay and positioned closely adjacent the upper edges of said girders and wedged therebetween; a series of spaced tensioned twisted-wires secured to the upper edge of the outermost girder and extending successively over the upper edges of the intermediate girders; means applied to an intermediate point of each loop drawing said twisted-wires taut in each bay; and a matrix of plaster of Paris embedding said elements and forming the body of the floor structure.

1,171,401. CARBURETER. JOHN MACDONALD PURCELL, Venice, Cal., assignor to Gem Carbureter and Auto Specialty Company, Oakland, Cal., a Corporation of Arizona. Filed Mar. 5, 1913. Serial No. 752,209. (Cl. 48—155.2.)



1. A carbureter for producing a volatilized combustible mixture, comprising a portion having a circulating chamber therein; a venturi communicating with said chamber; a carbureting liquid container communicating with said venturi; means for regulating the quantity of liquid contained in said container; valve means in said venturi for discharging a quantity of liquid therein; means for moving said valve; air controlling means in said chamber; throttling means for controlling said last named means; means for heating a quantity of air; an air jacket for containing said heated air; a series of ports communicating with said chamber; another series of ports communicating with said air jacket; and valve means under tension for controlling the quantity of heated air taken into said chamber substantially as described.

2. A carbureter for producing a volatilized combustible mixture, comprising a portion having a circulating chamber therein for producing whirling or vortex currents of volatilized mixture; a venturi communicating with said chamber and having a relatively reduced strangulation portion therein; a carbureting liquid container communicating with said venturi; means for regulating the quantity of liquid contained in said container; valve means in said venturi for discharging a quantity of liquid therein; means for moving said valve and controlling the quantity of said liquid discharged; air controlling means in said chamber for controlling the proportion of air taken therein; throttling means for controlling said last named means simultaneously with said valve moving means; means for heating a quantity of air; an air jacket for containing said heated air; a series of ports communicating with said chamber; another series of ports communicating with said air jacket; and valve means under tension for controlling the quantity of heated air taken into said chamber, substantially as described.

3. A carbureter for producing a volatilized combustible mixture, comprising a portion having a circulating chamber therein; a venturi communicating with said chamber; a carbureting liquid container communicating with said venturi; means for regulating the quantity of liquid contained in said container; valve means in said venturi for discharging a quantity of liquid therein; means for moving said valve; air controlling means in said chamber; throttling means for controlling said last named means; means for heating a quantity of air; an air jacket for containing said heated air; a series of ports communicating with said chamber; another series of ports communicating with said air jacket; an annular valve under tension for controlling said quantity of heated air taken into said chamber; and adjustment means for varying the tension of said valve, substantially as described.

4. A carbureter for producing a volatilized combustible mixture, comprising a portion having a circulating chamber therein; a venturi communicating with said chamber; a carbureting liquid container communicating with said venturi; means for regulating the quantity of liquid contained in said container; valve means in said venturi for discharging a quantity of liquid therein; means for moving said valve; air controlling means in said chamber; throttling means for controlling said last named means; means for heating a quantity of air; an air jacket for containing said heated air; a series of ports communicating with said chamber and having deflecting edges therein; another series of ports having deflecting surfaces therein and communicating with said air jacket; an annular valve under tension for controlling said quantity of heated air taken into said chamber; and adjustment means for varying the tension of said valve to produce most minute adjustment of the air taken into both series of ports substantially as described.

5. A carbureter for producing a volatilized combustible mixture, comprising a portion having a circulating chamber therein; a venturi communicating with said chamber; a carbureting liquid container communicating with said venturi; means for regulating the quantity of liquid contained in said container; valve means in said venturi for discharging a quantity of liquid therein; means for moving said valve; air controlling means in said chamber; throttling means for controlling said last named means; means for heating a quantity of air; an air jacket for containing said heated air; a series of ports communicating with said chamber and having deflecting edges therein; another series of ports having deflecting surfaces therein and communicating with said air jacket; an annular valve under tension for controlling said quantity of heated air taken into said chamber; and adjustment means for varying the tension of said valve to produce most minute adjustment of the air taken into both series of ports; said deflecting surfaces of said ports producing a whirling or vortex motion of the carbureted mixture in said chamber, substantially as described.

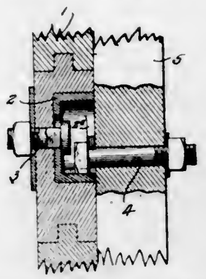
[Claim 6 not printed in the Gazette.]

1,171,402. NAILING-STRIP MOUNT FOR FREIGHT-CARS. JOHN M. ROHLFING, St. Louis, Mo. Filed May 6, 1915. Serial No. 26,262. (Cl. 105—15.)

1. The combination with a car wall of a socket mount whose front wall is provided with an opening, the upper portion of which is enlarged so as to receive the head of a bolt, and a bolt which, when its head is introduced into said opening, is turned to secure proper coöperation with said socket mount.

2. The combination with a car wall of a socket mount which is circular in shape and whose front wall is provided with a key hole opening designed to coöperate with a bolt head, the upper enlarged portion of said opening preventing the removal of the bolt head when said bolt head occupies its engaging position relative to said socket mount.

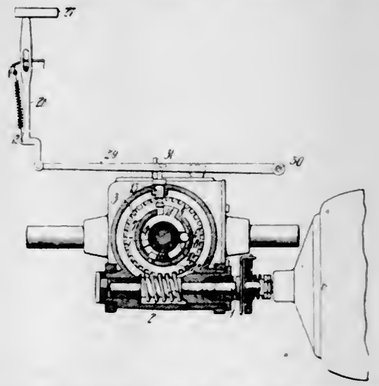
3. The combination with a car wall of a socket mount which is circular in shape and provided with a key hole opening in its front wall, means for securing said socket mount to said car wall, a bolt, the head of which is adapted to pass through the key hole opening in the wall of the socket mount, and a nailing strip supported by said bolt.



4. The combination with a car wall of a nailing strip mount comprising a substantially hollow member seated in said wall, means for securing said member to said wall and a nailing strip engaging bolt having its head removably seated in said hollow member.

5. The combination with a car wall, of a cup-shaped socket counter-sunk in said wall, means for rigidly fixing said socket to said wall, lugs integral with the front of said socket, which lugs are spaced apart and arranged to form an irregular opening, and a nailing strip supporting bolt, the head of which is adapted to pass through said irregular opening and engage behind the lugs on the socket.

1,171,403. CLUTCH. FREDERICK A. HART, Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 9, 1910, Serial No. 596,451. Divided and this application filed June 27, 1912. Serial No. 706,125. (Cl. 192—22.)



1. The combination with a shaft, of a driving sleeve loose on the shaft, a cup fast on the shaft and embracing said sleeve, a roll between said sleeve and said cup running in a pocket in said cup, a roll carrier for positioning said roll, a lug on said roll carrier extending through a peripheral opening in said cup, and means for detaining said roll carrier by said lug to hold said roll in said pocket.

2. The combination with a driving sleeve, of a shaft on which it is adapted to rotate and which it is adapted to drive, a cup on said shaft embracing a part of said sleeve and forming a pocket therewith, a gripping roll within said pocket, a roll carrier comprising a lug extending beyond the periphery of said cup, a pin normally engaging said lug to hold said roll and said cup idle, and a spring between said roll carrier and said cup adapted to carry said roll to seizing position when said pin is withdrawn.

3. The combination with a driving sleeve, of a shaft on which it is adapted to rotate and which it is adapted to drive, a cup on said shaft embracing a part of said sleeve and forming a pocket therewith, a gripping roll within said pocket, an annular ring having a roll-carrying opening in which said roll moves freely, a lug on said ring extending radially beyond the periphery of said cup, means for holding said lug against turning, and a single spring for said roll effective on said ring and tending to move said ring to carry said roll to effective position.

1,171,404. STORAGE AND DISPLAY RECEPTACLE. EDMUND MACKAY and JOHN J. FERRALL, New York, N. Y., assignors to National Biscuit Company, a Corporation of New Jersey. Filed Feb. 17, 1914. Serial No. 819,187. (Cl. 220—91.)



1. A storage and display package comprising a receptacle having a plurality of openings in one side thereof, a pair of guides adjacent to the ends of said openings, members extending vertically-forwardly from said guides, a covering section arranged intermediate said members for covering one of said openings, and a second covering section disposed within said guides for covering the other of said openings and engaging one edge of said first-named covering section to secure said first-named covering section in place, substantially as specified.

2. A storage and display package comprising a receptacle having a plurality of openings in one of its sides arranged one above the other, a pair of guides in said receptacle adjacent to the ends of said openings, flanges extending vertically-forwardly from said guides, a covering section disposed intermediate the flanges on said guides for covering the lowermost of said openings, and a second covering section disposed within the upper portions of said guides for covering the other of said openings, and engaging, at its lower edge, the upper edge of said first-named covering section for securing the latter in position within said receptacle, substantially as specified.

3. A storage and display package comprising a receptacle having a plurality of openings arranged therein one above the other, vertical guides at the opposite ends of said openings, flange members extending forwardly from the lower portions of said guides, a covering section for one of said openings disposed intermediate said flange members, and a second covering section supported upon said flange members for covering the other of said openings, substantially as specified.

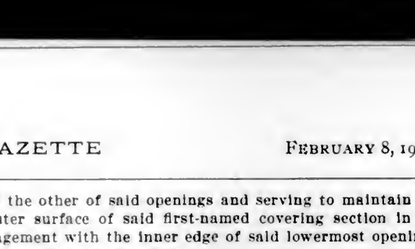
4. A storage and display package comprising a receptacle having a plurality of openings therein arranged one above the other, and having their inner edges arranged in vertical planes one behind the other, guides arranged upon opposite sides of said receptacle adjacent to the ends of said openings, flange members extending vertically-forwardly from the lower portions of said guides, retaining members extending from the lower ends of said guides at right angles to said flange members, a covering section disposed intermediate said flange members, and in front of said retaining members for covering the lower of said openings, and a covering section, disposed within said guides, having its outer surface engaging the inner edge of the other of said openings and serving to maintain the outer surface of said first-named covering section in engagement with the inner edge of said lowermost openings, substantially as specified.

5. A storage and display package comprising a receptacle having a plurality of openings therein arranged one above the other, and having inwardly extending flanges along the edges of said openings, and the inner edges of said flanges arranged in vertical planes, one behind the other, vertical guides arranged upon opposite inner sides of said receptacle adjacent to the ends of said openings, each comprising a pair of separated parallel members, and a flange member extending vertically forward from the inner of said parallel members and at right angles thereto, a covering section fitted intermediate the flange members at the lower ends of said guides, and having its outer surface engaging the inner edge of the flange of the lower of said openings, and a second covering section disposed within the upper ends of said guides to the rear of said first-named covering section and supported upon said flange members and having its outer surface engaging the inner edge of the flange of the upper of said openings, and its lower edge engaging the rear upper portion of said first-named covering section whereby to hold the same in position within said receptacle, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

14,058. ROOFING. CALVIN RUSSELL, Penn Yan, N. Y., assignor to Carrie H. Russell, Penn Yan, N. Y. Filed Apr. 8, 1914. Serial No. 830,549. Original No. 1,070,738, dated Aug. 19, 1913, Serial No. 757,069. (Cl. 108—8.)



1. As an improved article of manufacture, a roofing shingle consisting of a body having approximately one third of its length made of general rectangular form in plan and the remaining approximately two-thirds of its length made of triangular form in plan, said body composed of an integral felt sheet material impregnated with hydrocarbon composition.

2. In a roof, the combination of a suitable foundation, with a plurality of horizontal rows of shingles each composed of pliable sheet fibrous material of uniform thickness impregnated with hydrocarbon compound and having a portion of its length of general rectangular form with parallel side edges and the remaining portion of the length substantially in triangular form, said shingles arranged side by side in overlapping rows and in close surface contact with the shingles of the next under adjacent row and with the vertical juncture spaces between the shingles of the adjacent rows in staggered relation and in vertical alinement with the pointed upper ends of the underlying shingles, and the lower edges of the approximately rectangular portions being extended over the upper edges of the parallel side edges and so as to cover the space between adjacent triangular portions of the shingles in the next adjacent row below and the upper ends of the shingles bent out of alinement with the lower portions so as to interlock with adjacent side and under shingles.

3. In a roof, the combination of a suitable foundation, with a plurality of horizontal rows of shingles each composed of pliable fibrous material impregnated with hydrocarbon compound and having a portion of its length of general rectangular form with parallel side edges and the remaining portion of the length in triangular form, said shingles arranged side by side in overlapping rows and with the vertical juncture spaces between the shingles of the adjacent rows in staggered relation and in vertical alinement with the pointed upper ends of the underlying shingles, and the lower edges of the approximately rectangular portions being extended over the upper edges of the parallel side edges and so as to cover the space between adjacent triangular portions of the shingles in the next adjacent row below, and nails extending through the two overlapping rows of shingles and between the upper ends of the shingles of the second removed row below said nails passing through the lower side parts of the triangular portions of the shingles of one row and the upper or point ends of the shingles of the next row below.

4. In a roof, the combination of a suitable foundation, with a plurality of horizontal rows of shingles each composed of pliable fibrous material impregnated with hydrocarbon compound and having a portion of its length of general rectangular form with parallel side edges and the remaining portion of the length in triangular form, said shingles arranged side by side in overlapping rows and with the vertical juncture spaces between the shingles of the adjacent rows in staggered relation and in vertical alinement with the pointed upper ends of the underlying shingles, and the lower edges of the approximately rectangular portions being extended over the upper edges of the parallel side edges, and so as to cover the space between adjacent triangular portions of the shingles in the next adjacent row below, the triangular body portions of the shingles of one row curved downward and resting upon the foundation at points intermediate of the triangular parts of the shingles of the next row below so as to interlock, and nails for nailing the shingles in pairs to the foundation.

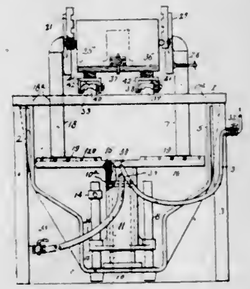
5. In a roof, the combination of a suitable foundation, with a plurality of horizontal rows of shingles each composed of pliable fibrous material impregnated with hydrocarbon compound and having approximately one-third of its length of general rectangular form with parallel side edges and the remaining approximately two-thirds of the length in triangular form, said shingles arranged side by side in overlapping rows and with the vertical juncture spaces between the shingles of the adjacent rows in staggered relation and in vertical alinement with the pointed upper ends of the underlying shingles, and the lower edges of the approximately rectangular portions being extended over the upper edges of the parallel side edges and so as to cover the space between adjacent triangular portions of the shingles in the next adjacent row below, the triangular body portions of the shingles of one row being curved downward and resting upon the foundation at points intermediate of the triangular parts of the shingles of the next row below and the side parts of the general rectangular body portions of the shingles of the next row above being curved downward upon said downwardly curved triangular portions so that the shingles of the several rows interlock with shingles of the rows above and below, and nails for securing the shingles to the foundation.

6. In a roof, the combination of a suitable foundation, with a covering consisting of a series of horizontal rows of shingles each formed of felt paper impregnated with hydrocarbon compound and coated with vitreous material and having said shingles made substantially rectangular at the bottom portion and triangular or pointed at the upper portion, the height of the upper portion being greatly in excess of the height of the lower portion said rows of shingles overlapping and the vertical spaces between adjacent shingles of one row being staggered with respect to the vertical spaces of the adjacent rows, the body portions of the overlapping shingles being curved downward so as to interlock laterally and vertically, and nails for securing the overlapping shingles to the foundation.

7. In a roof structure, the combination of a suitable foundation, with a covering of overlapping shingles cemented together under the normal action of the sun's rays and weather conditions, said covering consisting of a plurality of horizontal rows of shingles each shingle formed with one end pointed whereby that end is of greatly less surface area than the body of the remaining end of the shingle, and in which the lower portions of said shingles of one horizontal row overlap the vertical spaces between adjacent shingles of the next relatively lower row, and the body portions of the shingles at the upper ends bent downward toward the foundation, the bent portion thereof acting to secure the shingles in firm interengagement and the under surface of the shingles of one row cemented to the upper surfaces of the adjacent lower rows by the exudation of the hydrocarbon contents of the shingles, and nails driven through the shingles into the foundation for positioning the shingles when setting them in place upon the roof, the whole forming a lightweight roof covering and in which the shingles are automatically cemented into a continuous covering under the action of the weather elements.

8. In a roof, the combination of a suitable foundation, with a covering consisting of a series of overlapping horizontal rows of shingles each formed of felt paper impregnated with hydrocarbon and having a pliable body, said shingles made with one end portion of substantially rectangular shape and with the other end portion reduced in width, said end portions of relatively different lengths vertically considered, the lower portion of the shingles of said rows of shingles overlapping the vertical spaces between adjacent shingles of the next relatively lower row and said spaces of one row staggered with respect to similar vertical spaces between the shingles of adjacent rows, and the body portions of the shingles at the upper ends bent downward toward the foundation and acting to interlock the rows of shingles, and nails for securing the overlapping shingles to the foundation.

14,059. MOLDING-MACHINE. JOHN T. STONEY, Cleveland, Ohio. Filed May 15, 1914. Serial No. 838,888. Original No. 1,004,602, dated Oct. 3, 1911, Serial No. 600,906. (Cl. 22—45.)



1. In a molding machine, the combination with a suitable stationary table, of a piston supported beneath said table, a cylinder sliding upon said piston, members carried by said cylinder and extending above said table, means carried by said members for engaging and supporting the opposite sides of a mold and adapted to jar against the said table.

2. In a molding machine, the combination with a table, of a mold-holding device adapted to jar upon said table, a jarring mechanism beneath the table, which mechanism carries the said holding device, and means for adjusting the mold holding device to accommodate molds of various widths.

3. In a molding machine, the combination with a suitable stationary table, of a piston supported beneath said table, a cylinder sliding upon said piston, upright members carried by said cylinder and adjustable toward and from each other, said members extending above the table, means carried by the said members for engaging and supporting the opposite sides of a mold and adapted to jar against the said table.

4. A molding machine comprising a stationary table, a piston supported beneath said table, a cylinder sliding upon said piston, means for admitting a fluid between the piston and cylinder to raise the latter, an exhaust port carried by the cylinder near the upper portion thereof and adapted to be uncovered as the cylinder is raised upon the piston, whereby a vibrating motion is imparted to the cylinder, a mold supporting means carried by the said cylinder and adapted to impinge against the table as the cylinder is vibrated.

5. A molding machine comprising a stationary table, means for supporting the table, a bracket supported by the table, a piston carried by the said bracket, a cylinder surrounding the piston, means for admitting air between the piston and cylinder, an outlet port carried by the cylinder and adapted to be uncovered as the cylinder is raised to impart a vibratory motion to the cylinder, a mold supporting means carried by the said cylinder, said means being adapted to impinge against the table as the cylinder is vibrated.

6. In a molding machine, the combination with a vibrating mechanism, of a platform carried by the said vibrating mechanism, uprights mounted upon the said platform, said uprights being adjustable upon the platform, pivoted members carried by the said uprights to which the flask or core box may be secured, the same being adapted to impinge against the table as the cylinder is vibrated.

7. In a molding machine, the combination with a vibrating mechanism of a platform carried by the vibrating mechanism, uprights secured upon the platform, swinging plates secured upon the said uprights, said plates being provided with grooves adapted to receive projecting members upon the flask or core box, and means for securing the said projecting members in adjusted position with respect to the grooves.

8. In a molding machine, the combination with a jarring mechanism having a part which is movable, a pair of mold supports mounted upon that part of the jarring mechanism which is movable, said supports being adjustable toward and from each other.

9. In a molding machine, the combination with a jarring cylinder member and a piston member which are relatively movable, oppositely disposed mold supporting devices mounted upon that one of said members which moves, said supporting devices being slidably mounted, thereby to be adjustable toward and from each other.

10. In a molding machine, the combination with a jarring mechanism having a part which is movable, a pair of mold supports mounted upon that part of the jarring mechanism which is movable, said supports being adjustable toward and from each other, plates pivotally mounted at the upper end of said supporting devices and adapted to support the mold.

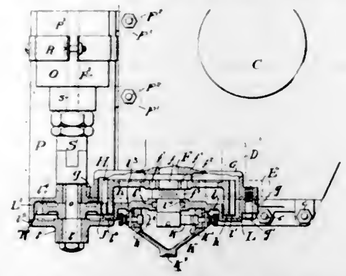
11. In a molding machine, the combination with a platform, means for raising and lowering said platform, a pair of supporting members adjustable upon said platform toward and from the center thereof, and means carried by said supporting members for engaging and holding the mold.

12. In a molding machine, the combination with a platform, means for raising and lowering said platform, a pair of upright members mounted upon said platform, said members being adjustable upon said platform, there being coöperating guiding means on the platform, and uprights, said uprights at their upper ends being adapted to support a mold.

13. In a molding machine, the combination with a raising and lowering mechanism having a part which is movable; of oppositely disposed mold supports carried by the movable part of said mechanism, said supports being adjustable toward and from each other, and means whereby the mold is rotatably mounted upon the supports.

14. In a molding machine, the combination with a raising and lowering mechanism having a part which is movable; of oppositely disposed upstanding posts, said posts carried by the movable part of said mechanism being adjustable toward and from each other, and means carried by said posts adapted to receive a mold said means being rotatably mounted upon the said posts.

14,060. ATTACHMENT FOR INSTALLING MAGNETOS ON GAS-ENGINES. WALTER G. SWIFT, Providence, R. I., assignor, by direct and mesne assignments, to Splitdorf Electrical Company, Newark, N. J. Filed Apr. 22, 1915. Serial No. 23,256. Original No. 1,107,374, dated Aug. 18, 1914, Serial No. 797,482. (Cl. 123—149.)



1. In an attachment for installing magnetos on gas-engines of the "Ford" type, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face and adapted to be mounted on the cam-shaft with the said overhanging rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a gear-housing section formed with an interior, annular recess arranged to receive the overhanging rim of the timing-gear and adapted to be bolted to the engine casting to inclose both gears, and a stud-shaft extending rearwardly from the magneto-gear through the gear-housing section to adapt it to be connected with the magneto.

2. In an attachment for gas-engines of the "Ford" type adapted to connect a magneto to be driven therefrom, the combination with the main engine casting and the cam-shaft mounted in bearings therein, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face and adapted to be mounted on the end of the cam-shaft with its rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a stud-shaft for connecting the magneto to its drive-gear, and a gear-housing section fitted to the front of the engine casting and adapted to inclose both gears, said housing-section formed with an annular channel adapted to receive the overhanging rim of the timing-gear and a recessed front wall set in from the gear-inclosing portion to allow the replacement of the commutator on the cam-shaft in its original position without disturbing the relation of its parts.

3. In an attachment for installing magnetos on gas-engines of the "Ford" type, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having an extended tooth-face, and adapted to be mounted on the cam-shaft with the said overhanging rim projecting beyond the front face of the engine casting, a magneto-drive-gear arranged to mesh with the teeth on the projecting rim of the timing-gear, a gear-housing section formed with an interior, annular recess arranged to receive the projecting rim of the timing-gear and adapted to be bolted to the engine casting to inclose both gears, a table bolted to the gear-housing section and extending rearwardly therefrom, a magneto mounted on said table, and means to connect the magneto to be operated from the drive-gear.

4. In a magneto driving-connection for "Ford" engines, the combination with the main engine casting and the cam-shaft projecting therefrom, of a substitute timing-gear formed with an overhanging rim having a tooth-face of substantially twice the width of the original gear which it replaces and adapted to be mounted on the projecting end of the cam-shaft with its overhanging rim extending beyond the front face of the engine casting, a magneto-drive-gear arranged in position outwardly from the front face of the engine casting to adapt it to mesh with the overhanging portion of the timing-gear, a stud-shaft driven from said magneto-gear, and a gear-housing section formed with a bearing for the stud-shaft and adapted to be bolted to the engine casting to inclose both gears.

5. In an attachment for gas-engines of the "Ford" type, the combination with a timing-gear formed with an overhanging rim having an extended tooth-face, of a gear-housing section adapted to be bolted to the front-face of the engine casting and formed with a cap for the crank-shaft bearing, and an annular, interiorly recess adapted to receive an overhanging arm of the timing-gear an exteriorly-recessed wall for receiving the commutator an extension formed with a bearing for the magneto drive-shaft and a flange inclosure for the magneto drive-gear, and a plate fitted to the outside of the housing to cover the drive-gear.

6. In a device of the class described, the combination of an engine-frame, a driving shaft projected therefrom, a gear housing for said engine frame inclosing said driving shaft, said gear housing having a table detachably supported thereto and extending rearwardly away from the face of said gear housing, a magneto mounted on said table, a stud shaft mounted within said gear housing, gears within said housing arranged to connect said driving-shaft to said stud shaft and means for connecting said stud shaft to said magneto shaft.

7. In a device of the class described, the combination of an engine frame, a driving shaft projecting therefrom, a gear housing attached to said frame and inclosing said driving shaft, gears inclosed within said housing, a table supported by said housing, a magneto adapted to be mounted on said table and driven by said gears, and a cover plate for one of said gears.

8. In a device of the class described, the combination of an engine frame, a driving shaft projecting therefrom, a gear housing attached to said frame and inclosing said driving shaft, gears inclosed within said housing, a table having its main support on said housing and a secondary support on said engine frame, a magneto adapted to be mounted on said table and driven by said gears and means for closing the front of said housing to cover said gears.

9. In combination, an internal combustion engine, a magneto for firing fuel in said engine, a housing adapted to be fastened to said engine, means for driving said magneto, a table detachably fastened to said housing, and adapted to carry said magneto said housing inclosing said driving means.

10. In combination, an internal combustion engine, means for firing fuel in said engine, a housing adapted to be fastened to said engine, means for driving said firing means from said engine, said housing serving to inclose said driving means and having a table fastened thereto and extending rearwardly therefrom, said table carrying said firing means.

11. In combination, an internal combustion engine, means for firing fuel in said engine, a housing adapted to be fastened to said engine, means for driving said firing means from said engine, said housing serving to inclose said driving means and having a table fastened thereto and extending rearwardly therefrom, said table adapted to be fastened at its extremity away from the housing to the engine frame and to carry said firing means.

12. In combination, an internal combustion engine, two sets of means for firing fuel in said engine, a housing adapted to be fastened to said engine, means for driving said sets of firing means from said engine, said housing serving to inclose the driving means of one of said firing means and having a table fastened thereto and extending rearwardly therefrom, said table carrying one of said firing means, a portion of the second set of firing means being carried on the front of said housing.

13. In combination, an internal combustion engine and a plurality of means for firing fuel in said engine, a housing attached to said engine and supporting a table which carries one of said firing means, a shaft from said engine, extending into said housing and a shaft adapted to be connected to the firing means on said table and extending into said housing, means for driving the last mentioned shaft from the first, said first mentioned shaft also serving to operate a second firing means, whereby both said firing means are driven at the proper speed to fire said engine.

14. In combination, an internal combustion engine, a magneto for firing the fuel in said engine cylinders, a reserve means for firing the fuel including a commutating device, a housing adapted to be fastened to said engine, means for driving said magneto and said commutating device, means for putting oil into the crank-case of said engine, breathing means for allowing air to pass freely back and forth to the interior of said engine crank-case, said housing carrying the magneto and commutating device, the oiling and breathing means and encompassing said driving means.

15. In combination, an internal combustion engine, a magneto for firing the fuel in said engine cylinders, a reserve means for firing the fuel including a commutating device, a housing adapted to be fastened to said engine, means for driving said magneto and said commutating device, means for putting oil into the crank-case of said engine, breathing means for allowing air to pass freely back and forth to the interior of said engine crank-case, a table detachably fastened to said housing for carrying said magneto, the said oiling means being integral with the housing and carrying the breathing means, said commutating device being carried on the frame of said housing, said housing inclosing said driving means.

16. In combination, an internal combustion engine, a magneto for firing fuel in said engine, a housing adapted to be fastened to said engine, means for driving said magneto, said housing having a table attached thereto for carrying said magneto whereby the torque strain is taken by said housing which incloses said magneto driving means and means associated with said table to provide a supplemental support therefor.

DESIGNS.

48,513. ELECTRIC-LIGHT WALL-BRACKET FIXTURE. FREDERICK C. BAKER, Portland, Oreg. Filed Feb. 26, 1915. Serial No. 10,875. Term of patent 7 years.



The ornamental design for an electric light wall bracket fixture, substantially as shown.

48,514. LAMP. SAMUEL H. BAKER, Pasadena, and CARRIE S. FORD, Santa Monica, Cal. Filed Dec. 4, 1915. Serial No. 65,146. Term of patent 14 years.



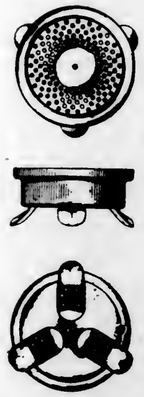
The ornamental design for a lamp, as shown.

48,515. GLASS VESSEL. GEORGE DOUGHERTY, Tiffin, Ohio, assignor to United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 9, 1915. Serial No. 60,603. Term of patent 7 years.



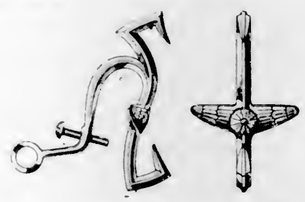
The ornamental design for a glass vessel, substantially as shown.

48,516. DISH-STAND. JOHN P. EUSTIS, Newton, and ALBERT T. BROWN, Arlington, Mass., assignors to J. P. Eustis Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Nov. 22, 1915. Serial No. 62,931. Term of patent 7 years.



The ornamental design for a dish stand, as shown.

48,517. HANGER FOR LIGHT-REFLECTING BOWLS. WILLIAM J. GRADY, Decatur, Ill., assignor to Faries Manufacturing Co., Decatur, Ill., a Corporation of Illinois. Filed Nov. 8, 1915. Serial No. 60,448. Term of patent 3½ years.



The ornamental design for a hanger for light reflecting bowls, as shown.

48,518. WALL-COVERING. ROBERT B. GRIFFIN, New York, N. Y. Filed Oct. 19, 1915. Serial No. 56,812. Term of patent 7 years.



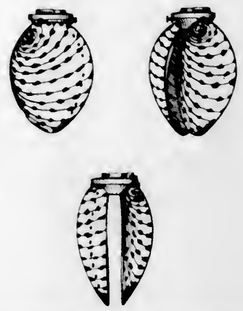
The ornamental design for wall covering, substantially as shown.

48,519. EMBLEM. HENRY R. HANSEN, Jersey City, N. J. Filed Oct. 17, 1914. Serial No. 867,256. Term of patent 3½ years.



The ornamental design for an emblem, as shown.

48,520. LAMP-SHADE. ARCHIBALD L. HETTRICH, San Rafael, Cal. Filed Dec. 1, 1915. Serial No. 64,597. Term of patent 14 years.



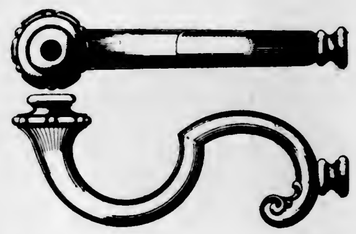
The new and ornamental design for a lamp shade, substantially as shown.

48,521. ARM FOR CHANDELIERS OR BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1915. Serial No. 62,927. Term of patent 3½ years.



The ornamental design for an arm for chandeliers or brackets, as shown.

48,522. ARM FOR CHANDELIERS OR BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 3, 1915. Serial No. 64,919. Term of patent 3½ years.



The ornamental design for an arm for chandeliers or brackets, as shown.

48,523. CANOPY EXTENSION FOR SUPPORTING CHAIN FIXTURES. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 16, 1915. Serial No. 67,284. Term of patent 3½ years.



The ornamental design for a canopy extension for supporting chain fixtures, as shown.

48,524. TIRE. EDWARD F. LYON, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,122. Term of patent 14 years.



The ornamental design for a tire, as shown.

48,525. PLAYING-CARD. WALTER C. MAJOR, New York, N. Y., assignor to Russell Playing Card Company, Millitown, N. J., a Corporation of New Jersey. Filed Nov. 27, 1915. Serial No. 63,902. Term of patent 14 years.



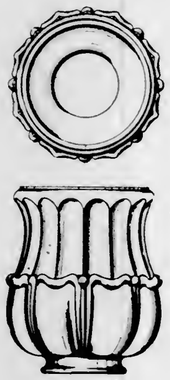
The ornamental design for a playing card, substantially as shown.

48,526. PLAYING-CARD. WALTER C. MAJOR, New York, N. Y., assignor to Russell Playing Card Company, Milltown, N. J., a Corporation of New Jersey. Filed Nov. 27, 1915. Serial No. 63,903. Term of patent 14 years.



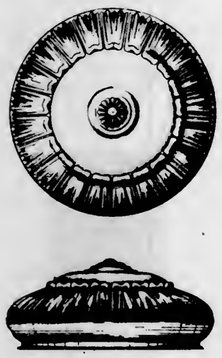
The ornamental design for a playing card, substantially as shown.

48,527. LAMP SHADE, GLOBE, OR REFLECTOR. HARRISON D. MCFADDIN, East Orange, N. J. Filed Dec. 11, 1915. Serial No. 66,386. Term of patent 3½ years.



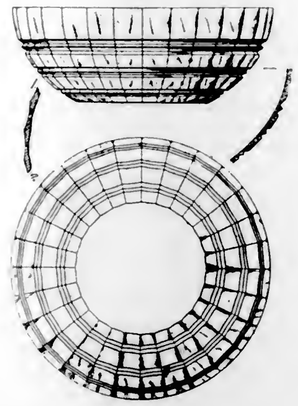
The ornamental design for a lamp shade, globe or reflector as shown.

48,528. LAMP SHADE, GLOBE, OR REFLECTOR. HARRISON D. MCFADDIN, East Orange, N. J. Filed Dec. 11, 1915. Serial No. 66,387. Term of patent 3½ years.



The ornamental design for a lamp shade, globe or reflector as shown.

48,529. NAPPY. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Hersey & Co., Newark, Ohio. Filed Dec. 15, 1914. Serial No. 877,453. Term of patent 14 years.



The ornamental design for a nappy, substantially as shown.

48,530. SOCKET-COVER AND GLOBE FOR ELECTRIC-LIGHT FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to Reliance Metal Spinning Company, New York, N. Y., a Copartnership consisting of Samuel Shapiro, Joseph Shapiro, Solomon Shapiro, Dave Shapiro, and Morris Berman. Filed Sept. 16, 1915. Serial No. 51,104. Term of patent 7 years.



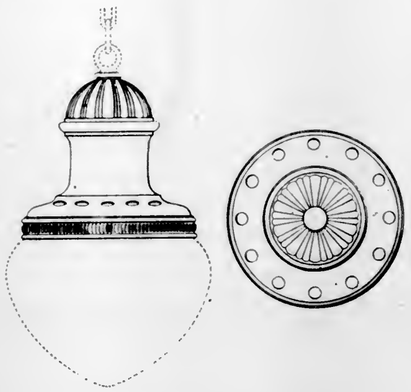
The ornamental design for a socket cover and globe for electric light fixtures, as shown.

48,531. CANOPY FOR ELECTRIC-LIGHT FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to Reliance Metal Spinning Company, New York, N. Y., a Copartnership consisting of Samuel Shapiro, Joseph Shapiro, Solomon Shapiro, Dave Shapiro, and Morris Berman. Filed Sept. 16, 1915. Serial No. 51,105. Term of patent 7 years.



The ornamental design for a canopy for electric light fixtures, as shown.

48,532. ELECTRIC-LIGHT CASING. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to Reliance Metal Spinning Company, New York, N. Y., a Copartnership consisting of Samuel Shapiro, Joseph Shapiro, Solomon Shapiro, Dave Shapiro, and Morris Berman. Filed Sept. 16, 1915. Serial No. 51,106. Term of patent 7 years.



The ornamental design for an electric light casing, as shown.

48,533. OVAL BACK FOR ELECTRIC-LIGHT FIXTURES. BENJAMIN SCHWARTZMAN, New York, N. Y., assignor to Reliance Metal Spinning Company, New York, N. Y., a Copartnership consisting of Samuel Shapiro, Joseph Shapiro, Solomon Shapiro, Dave Shapiro, and Morris Berman. Filed Sept. 16, 1915. Serial No. 51,107. Term of patent 7 years.



The ornamental design for an oval back for electric light fixtures, as shown.

48,534. SHELL FOR LIGHTING-FIXTURES. GEORGE M. TEPFER, New York, N. Y., assignor to National Metal Spinning & Stamping Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,900. Term of patent 7 years.



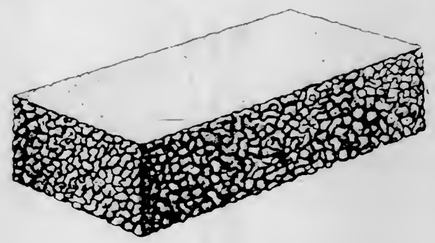
The ornamental design for a shell for lighting fixtures, as shown.

48,535. TOY. ARTHUR DE LANNAG TWYEFFORT, Newark, N. J., assignor to Japan Import and Export Commission Co., New York, N. Y., a Corporation of New York. Filed Apr. 15, 1915. Serial No. 21,618. Term of patent 7 years.



The ornamental design for a toy as shown.

48,536. BRICK OR SIMILAR ARTICLE. WILLIAM P. VARNEY, Chicago, Ill., assignor to Hydraulic Press Brick Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 17, 1914. Serial No. 872,670. Term of patent 14 years.



The ornamental design for a brick or similar article as shown and described.

48,537. HANGER FOR LIGHT-REFLECTING BOWLS. EDWIN L. WHITE, New York, N. Y., assignor to J. B. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Nov. 11, 1915. Serial No. 60,989. Term of patent 7 years.



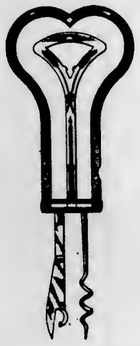
The ornamental design for a hanger for light reflecting bowls, as shown.

48,538. CANDLE. HAROLD H. WILL, Syracuse, N. Y., assignor to The Will & Baumer Co., Syracuse, N. Y., a Corporation of New York. Filed Sept. 14, 1915. Serial No. 50,712. Term of patent 14 years.



The ornamental design for a candle, substantially as shown and described.

48,539. COMBINATION IMPLEMENT. MICHAEL WOICULA, Wilmington, Del. Filed Nov. 8, 1915. Serial No. 60,439. Term of patent 7 years.



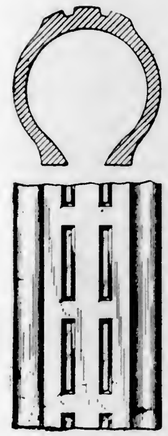
The ornamental design for a combination implement, as shown.

48,540. COMBINED SUGAR AND CREAMER. JOHN P. CASEY, Flemington, N. J. Filed Sept. 3, 1915. Serial No. 48,891. Term of patent 14 years.



The ornamental design for a combined sugar and creamer, as shown.

48,541. TIRE. JOHN C. MCLEAN, Lakewood, Ohio. Filed Nov. 29, 1915. Serial No. 64,175. Term of patent 7 years.



The ornamental design for a tire, substantially as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 8, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 66,162. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) JAMES M. KLINE, West Milton, Pa. Filed Oct. 5, 1912.



Consisting of the representation of a horseshoe-calk having a center core, the tip of which is colored blue, the body of the calk being colored red, the exclusive right to the specific form of the calk not being claimed.

Particular description of goods.—Horseshoe-Calks.

Claims use since the 15th of August, 1912.

Ser. No. 72,017½. (CLASS 38. PRINTS AND PUBLICATIONS.) JAMES DAVIS WARD, Limehurst Grange-over-Sands, England. Filed July 29, 1913.

RADIX

Particular description of goods.—Printed Books and Catalogues.

Claims use since the 7th day of January, 1912.

Ser. No. 72,996. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAVILLE, SOMES & CO., Boston, Mass. Filed Sept. 22, 1913.



Particular description of goods.—Queen Olives, Spaghetti, and Cocoa.

Claims use since June 1, 1904.

Ser. No. 74,722. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill. Filed Dec. 20, 1913. Under ten-year proviso.

CHAMPION

Particular description of goods.—Rakes, Tedders, Hay-Loaders, Hay-Presses, Stackers, Combined Rakes and Stackers, Corn-Pickers, Corn-Shellers, Cornstalk Rakes, Huskers, and Shredders, Ensilage-Cutters, Feed-Grinders, Harrows, Knife and Tool Grinders, Binder-Hitches, Binders, Reapers, Headers, Header-Binders, Mowers, Corn-Binders, Seeders, Planters, Land-Packers, Land-Rollers, Manure-Spreaders, Stalk-Cutters, Weeders, Grain-Drills, Fertilizer-Drills, Lime-Sowers, and Separate Parts for Each of Said Machines.

Claims use since 1860.

Ser. No. 75,509. (CLASS 38. PRINTS AND PUBLICATIONS.) CHARLES M. POSTL, Chicago, Ill., assignor to Postl, Incorporated, Chicago, Ill., a Corporation of Illinois. Filed Jan. 28, 1914.



Particular description of goods.—Pamphlets and Brochures.
Claims use since on or about the 1st day of November, 1913.

Ser. No. 75,777. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) S. F. BOWSER & CO. INC., Fort Wayne, Ind. Filed Feb. 9, 1914.



Applicant disclaims the exclusive use of the words "Established 1885," "Self-Measuring Oil Tanks," "Pat'd. by," "S. F. Bowser & Co., Inc.," "Pump No.," and "Ft. Wayne, Ind. U. S. A.," the inclosing oval, the center circle, and the solid rectangle at the bottom.
Particular description of goods.—Fluid-Measuring Pumps and Meters.
Claims use since Nov. 13, 1913.

Ser. No. 75,873. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & Co., Chicago, Ill. Filed Feb. 12, 1914. Under ten-year proviso.



Particular description of goods.—Seasonings for Meat, Flavors for Food, Pie-Fillings, Flavoring-Paste for Food, Flavoring Extracts for Food, and Cocoa.
Claims use since December, 1893.

Ser. No. 78,167. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE EDWARD KATZINGER COMPANY, Chicago, Ill. Filed May 9, 1914.

Ekco

Particular description of goods.—Metallic Bowls, Pans, Pots, Kettles, and Cake-Stands; Funnels; Strainers; Mugs; Dippers; Jelly-Molds; Spoons; Hooks; and Metal Dough-Troughs.
Claims use since Nov. 7, 1904.

Ser. No. 78,168. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE EDWARD KATZINGER COMPANY, Chicago, Ill. Filed May 9, 1914.

Ekco

Particular description of goods.—Dough-Cutters, Jaggers, Mixers, Dividers, and Markers; Dough and Confectionery Ornamenting Instruments; Culinary Knives and Scrapers; Sifters; Strainers; Egg-Beaters; Cake-Fillers; Iron Mortars; Bakers' Peels; Rolling-Pins; Scoops; Candy Shears, Hammers, and Hatchets; Ice Shavers, Breakers, and Tongs; Shovels; Ice-Cream Dishers and Molds; and Oven Hoes and Pokers.
Claims use since Oct. 23, 1908.

Ser. No. 81,397. (CLASS 15. OILS AND GREASES.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Sept. 22, 1914.



Particular description of goods.—Fitch Ordnance-Salve, Prepared Graphite, and Ferrule-Grease, Which are for Lubricating Purposes.
Claims use since January, 1900.

Ser. No. 82,353. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PARKVILLE MILLING COMPANY, Parkville, Mo. Filed Nov. 2, 1914.

HONEYMOON

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 1, 1901.

Ser. No. 82,987. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUECKHEIM BROS. & ECKSTEIN, Chicago, Ill. Filed Nov. 30, 1914.

TRISUM

Particular description of goods.—Candy or Candied Popcorn.
Claims use since Nov. 2, 1914.

Ser. No. 83,075. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NOTAMISS SPARK GAP CO., Des Moines, Iowa. Filed Dec. 4, 1914.



The word "Notamiss" and the drawing of the spark-gap where it appears mounted on the spark-plug at the upper right-hand side of the drawing and also where it appears below the curved arrow being disclaimed.
Particular description of goods.—Spark-Gap Devices.
Claims use Aug. 1, 1914.

Ser. No. 83,200. (CLASS 6. CHEMICALS, MEDICINES, and PHARMACEUTICAL PREPARATIONS.) THE LINCOLN MANUFACTURING COMPANY, Canton, Ohio. Filed Dec. 10, 1914.

SALVO

Particular description of goods.—Water-Softening Compound and Bath-Powder.
Claims use since Mar. 7, 1914.

Ser. No. 84,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH B. ANNIS CO. INC., New York, N. Y. Filed Jan. 26, 1915.

CHOPOLIV.

Comprising the word "Chopoliv."
Particular description of goods.—A Relish Composed of Celery, Pimentos, and Olives.
Claims use since Feb. 17, 1914.

Ser. No. 84,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WM. CRUGER CUSHMAN, New York, N. Y. Filed Feb. 19, 1915.

CHOCOLAC

Particular description of goods.—A Drink Composed of Cocoa, Milk, and Sugar.
Claims use since Nov. 10, 1914.

Ser. No. 85,114. (CLASS 17. TOBACCO PRODUCTS.) INDUSTRIAL CIGAR CO., Pittsburgh, Pa. Filed Mar. 12, 1915.

Arco

Particular description of goods.—Tobies.
Claims use since Jan. 18, 1909.

Ser. No. 85,316. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NO-VARY PRODUCTS CO., Minneapolis, Minn. Filed Mar. 22, 1915.

BO-KA

Particular description of goods.—Canned Salmon, Sauer-Kraut, Canned Fruits, Canned Vegetables, Evaporated Milk, Hominy, Dried Fruits, Raisins, Olives, Oysters, Coffee, Tea, Rice, Succotash, Pork and Beans, Evaporated Fruits, Flavoring Extracts for Foods, Vinegar, Olive-Oil, Pickles, Chilli Sauce, Catsup, Salad-Dressing, Table Sauces for Foods, Fruit Butters, Jams, Jellies, Honey, Fruit Preserves, Peanut-Butter, Mince-Meat, and Molasses.
Claims use since April, 1911.

Ser. No. 85,654. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN UNDERWOOD & COMPANY, New York, N. Y. Filed Apr. 2, 1915.



ADDENDAGRAPH

In the mark the letter "U" is blue. Said letter "U" incloses a red field, and in said field is a blue ornamental letter "A."
Particular description of goods.—Adding-Machines, Combined Type-Writing and Adding Machines, Being Essentially Adding-Machines, and Parts of Such Machines.
Claims use since about the middle of February, 1915.

Ser. No. 85,949. (CLASS 10. FERTILIZERS.) RALPH C. WHEELER, Berkeley, Cal. Filed Apr. 14, 1915.

GS
GERM O SOIL

Particular description of goods.—Nitrogen Bacteria and Fertilizers.
Claims use since Apr. 3, 1915.

Ser. No. 86,058. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SCHACHT RUBBER MFG. CO., Huntington, Ind. Filed Apr. 19, 1915.

DAISY

Particular description of goods.—Sink, Bath, and Basin Stoppers, Plugs, Bumpers, Force-Cups, and Hand-Cups.
Claims use since Nov. 2, 1907.

Ser. No. 86,133. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. DE MENDONÇA, Lisbon, Portugal. Filed Apr. 23, 1915.



No claim being made to any of the matter appearing on the drawing except the words "Marie Antoinette" and the picture.
Particular description of goods.—Canned Sardines.
Claims use since June 8, 1910.

Ser. No. 86,709. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE MEILAHN, Burlington, Iowa. Filed May 18, 1915.

"Try Me"

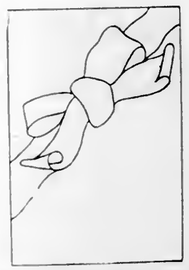
Particular description of goods.—Bread.
Claims use since Oct. 1, 1913.

Ser. No. 86,727. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE LOUIS COLEMAN, Chicago, Ill., and Memphis, Tenn. Filed May 19, 1915.

COLEMAN
SWEET KARAMEL
KO-KO-TULU

No claim being made to the words "Sweet Karamel" or the word "Coleman" except in connection with the remainder of the mark.
Particular description of goods.—Chewing-Gum.
Claims use since about 1893.

Ser. No. 86,734. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE L. GRAY & Co., San Francisco, Cal. Filed May 19, 1915.



Particular description of goods.—Dried Fruits and Raisins.
Claims use since about Aug. 1, 1895.

Ser. No. 86,741. (CLASS 32. FURNITURE AND UPHOLSTERY.) MAISON BLANCHE CO., New Orleans, La. Filed May 19, 1915.

MAIBLANCO

Particular description of goods.—Chairs Upholstered, Chairs Not Upholstered, Dining-Room and Ornamental Tables, Sideboards, Bedsteads, Bed-Springs, Bureaus, Chiffonniers, Washstands, Cedar Boxes, Clothes and Shirt-Waist Boxes, Cabinets, and Window-Screens and Ornamental Screens Such as Used for Divisional Purposes in Apartments.
Claims use since Jan. 1, 1913.

Ser. No. 87,842. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) M. EWING FOX & Co., New York, N. Y. Filed July 9, 1915.

CEMENITE

Particular description of goods.—Water-Paint of Cement-Like Character for Brick and Concrete Walls and Ceilings.
Claims use since on or about Jan. 4, 1915.

Ser. No. 87,991. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEPHEN F. GILMAN, Neligh, Nebr. Filed July 17, 1915.

So-Lite

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 1, 1906.

Ser. No. 87,998. (CLASS 39. CLOTHING.) HARRY A. WILKUS, New York, N. Y. Filed July 17, 1915.

KEWPIE

Particular description of goods.—Silk Underwear—viz., Ladies' Bodices, Corset-Covers, Combinations, Chemise, Gowns, and Petticoats.
Claims use since about January, 1915.

Ser. No. 88,051. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) J. C. PUSHEE & SONS, Boston, Mass. Filed July 20, 1915.



Consisting in the tip of the handle of the brush being red, the said color of the tip portion extending along the handle about a half an inch from the extreme outer end and also across and around the tip. We have adopted and used a red tip, a green tip, a black tip, a blue tip, a yellow and a white tip, each distinctly contrasting with the rest of the handle.
Particular description of goods.—Painters' Brushes,
Claims use since June 24, 1915.

Ser. No. 88,094. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDSON LE VERNE WOOD, Barceloneta, Porto Rico. Filed July 21, 1915.



Particular description of goods.—Fresh Pineapples and Fresh Citrus Fruits.
Claims use since 1909.

Ser. No. 88,160. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM J. KELLEY, Chicago, Ill. Filed July 24, 1915.

FAIRY

Particular description of goods.—Talcum Powder, Benzoin and Almond Cream Lotion, Vanishing Cream, Cold-Cream, Toilet Water, Crystal Shampoo, Antiseptic Tooth-Paste, Dandruff Remedy and Scalp-Tonic, Rice Powder, Cucumber-Cream, Tooth-Powder, Liquid Face-Powder, Liquid Shampoo, Freckle-Cream, Massage-Cream, and Rouge.
Claims use since June 17, 1915.

Ser. No. 88,353. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE C. C. C. COMPANY, Los Angeles, Cal. Filed Aug. 2, 1915.

SUB K-NINE

Particular description of goods.—Toy Animals.
Claims use since April, 1915.

Ser. No. 88,365. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) THE LEATHER PRODUCTS COMPANY, Denver, Colo. Filed Aug. 2, 1915.



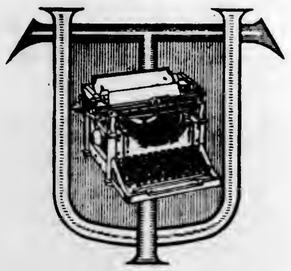
No claim being made to the words "Elk Hide" apart from the mark shown in the drawing.
Particular description of goods.—Halters and Hame-Straps.
Claims use since Sept. 1, 1913.

Ser. No. 88,527. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) AMSTERDAM BROOM CO., Amsterdam, N. Y. Filed Aug. 11, 1915.



Particular description of goods.—Brooms.
Claims use since Jan. 1, 1909.

Ser. No. 88,585. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed Aug. 12, 1915.



The letter "U" is of gold, with a central blue band. The letter "T" is of blue, with a central gold band. The vertical stem and both ends of the horizontal bar of the letter "T" extend through the letter "U." The inclosure within the letters "T" and "U" forms a red field. The representation of a type-writer is positioned approximately in the center of said field. No claim is made to the representation of the type-writer apart from the mark shown in the drawing.

Particular description of goods.—Type-Writing Machines and Type-Writing-Machine Parts.

Claims use since about April, 1903.

Ser. No. 88,708. (Class 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CRIPPEN COMPANY, INC., New York, N. Y. Filed Aug. 20, 1915.



Particular description of goods.—Mechanical Music-Playing Instruments and Music-Sheets Therefor.

Claims use since about Feb. 1, 1915.

Ser. No. 88,760. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHNSON & ALEXANDER CO., Chicago, Ill. Filed Aug. 23, 1915.



Consisting of the word "Oriole" and the representation of a male Baltimore oriole in its natural colors of black and orange, standing on a spray of apple leaves and blossoms and partly outlined against an orange plaque or disk.

Particular description of goods.—Peanuts and Peanut-Candies—Namely, Salt-Toasted Peanuts, Sugar-Toasted Peanuts, Peanut-Squares, and Peanut-Brittle.

Claims use since July 1, 1913.

Ser. No. 88,855. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CAMPERDOWN MILLS, Greenville, S. C. Filed Aug. 28, 1915.

CAMPERDOWN

Comprising the word "Camperdown."

Particular description of goods.—Cotton Piece Goods.

Claims use since about July, 1906.

Ser. No. 88,871. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CLEVELAND CYCLONE FENCE CO., Cleveland, Ohio. Filed Aug. 30, 1915.

The Fencing Masters

Particular description of goods.—Tree and Flower Guards Made of Wire; Fences and Playground Equipment—viz., Gates and Fences Made of Wire and Steel Tubing and Gates Made of Wire or Steel Tubing, or Both.

Claims use since Mar. 1, 1915.

Ser. No. 89,014. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) J. R. SIMON & CO., New York, N. Y. Filed Sept. 3, 1915.

GREGORIAN CREPE

Gregorian Crepe

Picture being fanciful, no claim being made to the word "Crepe."

Particular description of goods.—Silk and Cotton Piece Goods.

Claims use since Nov. 1, 1915.

Ser. No. 89,040. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE SPARKADE COMPANY, Cleveland, Ohio. Filed Sept. 4, 1915.

Sparkler

Particular description of goods.—Carbonated Beverages, Non-Alcoholic.

Claims use since about the 28th day of August, 1915.

Ser. No. 89,127. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE HART & HEGEMAN MANUFACTURING COMPANY, Hartford, Conn. Filed Sept. 10, 1915.

SILVER STAR

Particular description of goods.—Electrical Switches, Electrical Cut-Outs, Switch-Plates, Switch-Receptacles, Switch Wall-Cases, Switch-Mounting Frames, Switch and Panel Boxes, Conduit Fittings and Mountings, Switch-Bases, Sockets, Attachment-Plugs, Fuses, Fuse-Boxes, Flush Plates, Rosettes, Shade-Holders, Ground-Clamps, and Molding-Taplets.

Claims use since at least as early as September, 1915.

Ser. No. 89,128. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE HART & HEGEMAN MANUFACTURING COMPANY, Hartford, Conn. Filed Sept. 10, 1915.



Particular description of goods.—Electrical Switches, Electrical Cut-Outs, Switch-Plates, Switch-Receptacles, Switch Wall-Cases, Switch-Mounting Frames, Switch and Panel Boxes, Conduit Fittings and Mountings, Switch-Bases, Sockets, Attachment-Plugs, Fuses, Fuse-Boxes, Flush Plates, Rosettes, Shade-Holders, Ground-Clamps, and Molding-Taplets.

Claims use since 1897.

Ser. No. 89,251. (CLASS 26. MEASURING AND SCIENTIFIC APPIANCES.) PATHÉ FRÈRES, Jersey City, N. J. Filed Sept. 16, 1915.

GLOBE FILMS

Consists of the conventional representation of a terrestrial hemisphere associated with the words "Globe Films," the word "Films" by itself being disclaimed.

Particular description of goods.—Cinematograph-Films.

Claims use since on or about the 5th day of July, 1915.

Ser. No. 89,307. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE G. B. WILLIAMS CO., Quitman, Ga. Filed Sept. 18, 1915.



Particular description of goods.—Vanilla Extracts for Flavoring Food.

Claims use since January, 1915.

Ser. No. 89,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE VANOLA COMPANY, Winston-Salem, N. C. Filed Sept. 22, 1915.

Vanola

Particular description of goods.—Candy Lozenges.

Claims use since July 1, 1915.

Ser. No. 89,429. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BALLARD & BALLARD CO., Louisville, Ky. Filed Sept. 24, 1915.



Applicant disclaims any right to the exclusive use of the word "Kentucky."

Particular description of goods.—Mill Feed, Commonly Called Mixed Wheat Feed, and Known as Farm Feed.

Claims use since about the 20th day of August, 1915.

Ser. No. 89,438. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE HART & HEGEMAN MANUFACTURING COMPANY, Hartford, Conn. Filed Sept. 24, 1915.

NUTMEG

Particular description of goods.—Electrical Switches, Electrical Cut-Outs, Switch-Plates, Switch-Receptacles, Switch Wall-Cases, Switch-Mounting Frames, Switch and Panel Boxes, Conduit Fittings and Mountings, Switch-Bases, Sockets, Attachment-Plugs, Fuses, Fuse-Boxes, Flush Plates, Rosettes, Shade-Holders, Ground-Clamps, and Molding-Taplets.

Claims use since at least 1906.

Ser. No. 89,443. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ORANGE JULEP SYRUP COMPANY, St. Louis, Mo. Filed Sept. 24, 1915.

ORANGE JOOL

The applicant herewith disclaims the word "Orange" apart from the mark shown in the drawing.

Particular description of goods.—Beverage-Syrup for Use in Making Soft Drinks.

Claims use since Sept. 3, 1915.

Ser. No. 89,466. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUISIANA NUT & PRODUCE COMPANY, New Orleans, La. Filed Sept. 25, 1915.

LOUISIANA NUT & PRODUCE COMPANY DIXIE

Particular description of goods.—Pecan Meats.

Claims use since October, 1914.

Ser. No. 89,477. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) F. A. CLAUBERG & Co., New York, N. Y. Filed Sept. 27, 1915.

RAZOR MAN

No claim being made to the words "Razor Man."

Particular description of goods.—Razors and Razor-Blades.

Claims use since about Oct. 1, 1914.

Ser. No. 89,506. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAMERCY CHOCOLATE CO., New York, N. Y. Filed Sept. 28, 1915.

GRAMERCY N.Y.

The exclusive use of the letters "N. Y." not being claimed except in connection with the mark as shown in the drawing.

Particular description of goods.—Candy.

Claims use since Aug. 15, 1913.

Ser. No. 89,632. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) GUSTAV A. HARTER, Chicago, Ill. Filed Oct. 4, 1915.

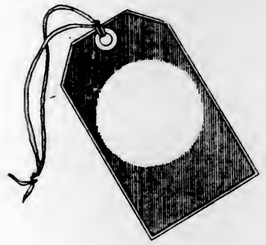
R

Particular description of goods.—Metal Shades and Globes.

Claims use since July 27, 1914.

Ser. No. 89,636. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MUTUAL COFFEE CO., Montgomery, Ala. Filed Oct. 4, 1915.

RED TAG



The mark being lined to indicate red, no claim being made to the exclusive use of the red tag.

Particular description of goods.—Coffee.

Claims use since Jan. 15, 1910.

Ser. No. 89,663. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GOULD STORAGE BATTERY CO., Depew and New York, N. Y. Filed Oct. 5, 1915.

The Strong Right Arm
of a Starting-Lighting System

Particular description of goods.—Storage Batteries.

Claims use since Sept. 28, 1915.

Ser. No. 89,678. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CLEVELAND FRUIT JUICE COMPANY, Cleveland, Ohio. Filed Oct. 6, 1915.

CLEVELAND BRAND Goldenmoon FRUITS & SIRUPS

No claim is made to the exclusive use of the words "Cleveland Brand Fruits & Sirups" apart from the mark as shown in the drawing.

Particular description of goods.—Non-Alcoholic Beverages—viz., Soft Drinks and Fruit Syrups, Juices, and Flavorings Used in Making the Same.

Claims use since Sept. 1, 1915.

Ser. No. 89,881. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GENERAL BAKING COMPANY, New York, N. Y. Filed Oct. 16, 1915.

Bond Bread

No claim being made to the word "Bread."

Particular description of goods.—Bread.

Claims use since about June 1, 1915.

Ser. No. 90,004. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VAN DUZER EXTRACT COMPANY, Springfield, Mass. Filed Oct. 21, 1915.

VAN DUZERS FRUIT TRADE MARK EXTRACTS

The words "Fruit," "Trade Mark," and "Extracts" being disclaimed.

Particular description of goods.—Food-Flavoring Extracts.

Claims use since about the year 1850.

Ser. No. 90,021. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Oct. 22, 1915.

TRIANGLE TARRED FELT

Applicant disclaims the exclusive right to the use of the words "Tarred Felt."

Particular description of goods.—Tarred Felt.

Claims use since on or about the 13th day of October, 1915.

Ser. No. 90,059. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TONY M. KYTROS, Bingham Canyon, Utah. Filed Oct. 23, 1915.

F.F.F. T. M. Kytros

The signature shown being the facsimile of the applicant's.

Particular description of goods.—A Preparation for Preventing the Feet from Odor and Perspiration.

Claims use since the 5th day of April, 1915.

Ser. No. 90,190. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER COMPANY, Bristol, R. I. Filed Oct. 28, 1915.

OVERLAND

Particular description of goods.—Boots, Shoes, and Slippers Having Rubber Soles Vulcanized to Fabric Uppers.

Claims use since Oct. 8, 1915.

Ser. No. 90,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SHAW & TRUESDELL COMPANY, Brooklyn, N. Y. Filed Oct. 30, 1915.



Particular description of goods.—Scratch and Chick Foods.
Claims use since Oct. 1, 1914.

Ser. No. 90,257. (CLASS 39. CLOTHING.) N. CURTIS & Co., Boston, Mass. Filed Nov. 1, 1915. Under ten-year proviso.



Particular description of goods.—Leather Shoes.
Claims use since on or about Sept. 1, 1865.

Ser. No. 90,262. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. B. FOX CO. INC., New Orleans, La. Filed Nov. 1, 1915.



Consists of the representation of a Mexican rose, the words "Fox High Patent Hard Winter Wheat Flour" being disclaimed except in connection with said representation.
Particular description of goods.—Wheat-Flour.
Claims use since about Sept. 1, 1915.

Ser. No. 90,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAUL F. BEICH CO., Bloomington, Ill. Filed Nov. 2, 1915.



No claim being made to the exclusive use of the words "The Good Eating Kind" except in association with the mark shown.
Particular description of goods.—Candy.
Claims use since May 1, 1914.

Ser. No. 90,326. (CLASS 6. CHEMICALS MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED HARVEY, INC., Kansas City, Mo. Filed Nov. 2, 1915.



Particular description of goods.—Smelling-Salts, Rice Powder, Lilac Vegetal, (a Toilet Water,) Hair-Tonic, Cold-Cream, Talcum Powder, Tooth-Paste, Tooth-Powder, Toilet Waters, Massage-Cream, Potpourri, (a Sachet of Rose-Leaves and other Dried Flowers,) Lavender-Flowers, Eau-de-Cologne, Rouge, Benzoin and Almond Lotion, Witch-Hazel Cream.
Claims use since July 31, 1915.

Ser. No. 90,347. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) METROPOLITAN MACARONI MANUFACTURING CO. INC., New York and Brooklyn, N. Y. Filed Nov. 2, 1915.



Particular description of goods.—Macaroni.
Claims use since Oct. 26, 1915.

Ser. No. 90,511. (CLASS 39. CLOTHING.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed Nov. 8, 1915.



Particular description of goods.—Soles and Heels for Boots and Shoes Formed of an Artificial Composition.
Claims use since on or about the 1st day of September, 1915.

Ser. No. 90,543. (CLASS 15. OILS AND GREASES.) EDWARD M. LIST, Philadelphia, Pa. Filed Nov. 9, 1915.



Particular description of goods.—Lubricating Oils and Greases.
Claims use since Apr. 15, 1914.

Ser. No. 90,561. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN M. KROYER, Stockton, Cal. Filed Nov. 10, 1915.



Particular description of goods.—Air-Filters Essentially Adapted for Use with Gas-Engines.
Claims use since the 20th day of October, 1915.

Ser. No. 90,565. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MORIMURA BROS., New York, N. Y. Filed Nov. 10, 1915.



Particular description of goods.—Dolls.
Claims use since Oct. 12, 1915.

Ser. No. 90,608. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRAIRIE STATE MILLING COMPANY, Chicago, Ill. Filed Nov. 12, 1915.



The words "Prairie State" and "Chick Feed" are disclaimed as part or features of the mark.
Particular description of goods.—Poultry Feed.
Claims use since May 15, 1915.

Ser. No. 90,610. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRAIRIE STATE MILLING COMPANY, Chicago, Ill. Filed Nov. 12, 1915.



The words "Chick Feed" are disclaimed as part or features of the mark.
Particular description of goods.—Poultry Feed.
Claims use since May 15, 1915.

Ser. No. 90,611. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PRAIRIE STATE MILLING COMPANY, Chicago, Ill. Filed Nov. 12, 1915.



The words "Brand" and "Horse Feed" are disclaimed as part or features of the mark.
Particular description of goods.—Horse Feed.
Claims use since May 15, 1915.

Ser. No. 90,622. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Nov. 12, 1915.



COLONIAL

Particular description of goods.—Cloth-Brushes, Tooth-Brushes, Hair-Brushes, Nail-Brushes, Infants' Brushes, Shaving-Brushes, Powder-Puffs.
Claims use since the year 1897.

Ser. No. 90,635. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BETTIE RICHARDS, Philadelphia, Pa. Filed Nov. 13, 1915.



Particular description of goods.—Fruit Butter, Jam, Jelly, Marmalade, and Fruit Preserves.
Claims use since Sept. 1, 1915.

Ser. No. 90,636. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) A. G. SPALDING & BROS., New York, N. Y. Filed Nov. 13, 1915.

DEDSTOP

Particular description of goods.—Golf-Clubs.
Claims use since July 15, 1915.

Ser. No. 90,637. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES S. SHEPHERD, Bonner Springs, Kans. Filed Nov. 13, 1915.



The representation of an apple is in red color. No claim is made to the exclusive use of said representation of an apple except in association with the remainder of the mark.
Particular description of goods.—Vinegar.
Claims use since Nov. 10, 1911.

Ser. No. 90,699. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN WILLIAM GLENN, Buffalo, N. Y. Filed Nov. 17, 1915.



No claim being made herein to the words "Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Chewing-Gum.
Claims use since Aug. 24, 1915.

Ser. No. 90,772. (CLASS 39. CLOTHING.) BENEDICT REIS, New York, N. Y. Filed Nov. 19, 1915.



No claim is made to the words "'Reis' Storm Cloth Trade-Mark—No Rubber—No Odor—No Weight—Guaranteed Waterproof."
Particular description of goods.—Waterproof Clothing and Head-Gear—Namely, Rain or Storm Coats, Capes, Fishing-Clothes, Boating-Garments, Hats, Caps, Hoods, and Gloves.
Claims use since Aug. 1, 1915.

Ser. No. 90,908. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROGERS COMPANY, Tacoma, Wash. Filed Nov. 24, 1915.



Particular description of goods.—Coffee and Flavoring Extracts for Foods.
Claims use since 1909.

Ser. No. 90,928. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE CIGAROLA COMPANY, Brooklyn, N. Y. Filed Nov. 26, 1915.

CIGAROLA

Particular description of goods.—Cigarette-Rollers.
Claims use since July, 1915.

Ser. No. 90,934. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. GOODMAN & SONS, INC., New York, N. Y. Filed Nov. 26, 1915.



Particular description of goods.—Macaroni, Spaghetti, Vermicelli, Elbows, Egg-Noodles, Egg-Barley, Egg Flakes, and Egg-Alphabets.
Claims use since 1910.

Ser. No. 90,946. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM F. MALLOY, New York, N. Y. Filed Nov. 26, 1915.

ZOMO

Particular description of goods.—Brass, Copper, Bronze, German-Silver, and Zinc Plates, and Copper and Zinc Engravers' Plates, and Photo-Engravers' Copper and Zinc.
Claims use since March, 1914.

Ser. No. 91,030. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE V-RAY COMPANY, Marshalltown, Iowa. Filed Nov. 29, 1915.

VIOLET-RAY

Particular description of goods.—Spark-Plug Electrodes.
Claims use since Sept. 15, 1915.

Ser. No. 91,036. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY MAILLARD, New York, N. Y. Filed Nov. 30, 1915.



Particular description of goods.—Candy.
Claims use since Nov. 26, 1915.

Ser. No. 91,052. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) AMERICAN ALLOYS COMPANY, Newark, N. J. Filed Dec. 1, 1915.

AMALOY

Particular description of goods.—Crown-Posts and Metal Strips from Which Crown-Posts are Made.
Claims use since Oct. 20, 1915.

Ser. No. 91,063. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E. K. T. MEDICINE CO., Oakland, Cal. Filed Dec. 1, 1915.

EKT

Particular description of goods.—A Cough Medicine.
Claims use since Nov. 10, 1915.

Ser. No. 91,139. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) PARKER BROTHERS, Portland, Me., and Salem, Mass. Filed Dec. 3, 1915.

BROADWAY

Particular description of goods.—Games.
Claims use since Oct. 20, 1915.

Ser. No. 91,187. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL FILM MANUFACTURING CO., New York, N. Y. Filed Dec. 6, 1915.



No claim being made to the word "Productions" except as used in conjunction with the other features of the mark.

Particular description of goods.—Moving-Picture Films.
Claims use since Dec. 3, 1915.

Ser. No. 91,203. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) BELDING BROS. & CO., Rockville, Conn., and New York, N. Y. Filed Dec. 6, 1915.



Particular description of goods.—Dental Floss.
Claims use since January, 1907.

Ser. No. 91,221. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAUSER PACKING CO., Los Angeles, Cal. Filed Dec. 6, 1915.

VIOLET

Particular description of goods.—Shortening Compound.
Claims use since Jan. 1, 1902.

Ser. No. 91,238. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill., and New York, N. Y. Filed Dec. 6, 1915. Under ten-year proviso.

TIGER

Particular description of goods.—Silk Sewing Threads and Silk Embroidery-Threads.
Claims use since January, 1887.

Ser. No. 91,264. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE BURKE GOLF COMPANY, Newark, Ohio. Filed Dec. 7, 1915.

Harry Vardon

The same being the autograph signature of Harry Vardon.

Particular description of goods.—Golf Clubs and Heads.
Claims use since about Jan. 1, 1909.

Ser. No. 91,266. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) I. B. KLEINERT RUBBER COMPANY, New York, N. Y. Filed Dec. 7, 1915.

Paraloid

Particular description of goods.—Waterproof Sheeting for Surgical and Sanitary Use.
Claims use since the 1st day of November, 1915.

Ser. No. 91,276. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa. Filed Dec. 7, 1915.

Ideal

Particular description of goods.—Bottle Washing and Rinsing Machines.
Claims use since about May 19, 1910.

Ser. No. 91,291. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DAVIS & GECK, INC., Brooklyn, N. Y. Filed Dec. 8, 1915.

KALMERID

Particular description of goods.—Surgical Ligatures and Sutures.
Claims use since June 13, 1914.

Ser. No. 91,319. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. G. MCDONALD CHOCOLATE CO., Salt Lake City, Utah. Filed Dec. 8, 1915.



The pictures of the boys shown being fanciful.
Particular description of goods.—A Popcorn Confection.
Claims use since Nov. 15, 1915.

Ser. No. 91,341. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JOHN D. BERGER, Cincinnati, Ohio. Filed Dec. 9, 1915.

K-I

Particular description of goods.—Electric-Wire Couplings and Electric Splicing-Sleeves for Electric Wire and Electric-Wire Cables.
Claims use since the month of January in the year 1892.

Ser. No. 91,359. (CLASS 33. GLASSWARE.) THE SUPER-GLASS COMPANY, Philadelphia, Pa. Filed Dec. 9, 1915.

SUPER-GLASS

No claim being made to the word "Glass" apart from the mark shown in the drawing.

Particular description of goods.—Plate and Sheet Glass.
Claims use since June 8, 1915.

Ser. No. 91,375. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ELLWOOD S. KILLE, Camden, N. J. Filed Dec. 10, 1915.



Particular description of goods.—Furniture-Polish.
Claims use since Apr. 1, 1915.

Ser. No. 91,408. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL FILM MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 11, 1915.



No claim being made to the use of the word "Productions" except as used in conjunction with the other features of the mark.

Particular description of goods.—Moving-Picture Films.
Claims use since Dec. 7, 1915.

Ser. No. 91,436. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & CO., New York, N. Y. Filed Dec. 13, 1915.

Pussy Willow

Particular description of goods.—Silk Piece Goods.
Claims use since November, 1910.

Ser. No. 91,437. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & CO., New York, N. Y. Filed Dec. 13, 1915.

MADAME BUTTERFLY

Particular description of goods.—Silk Piece Goods.
Claims use since July 1, 1909.

Ser. No. 91,460. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SAGINAW MANUFACTURING CO., Saginaw, Mich. Filed Dec. 13, 1915. Under ten-year proviso.

GILBERT



Particular description of goods.—Wood Split Pulleys.
Claims use since about the year 1892.

Ser. No. 91,470. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HENRY JAMES COLLIS, Taunton, Mass. Filed Dec. 14, 1915.

20TH CENTURY

Consisting of the words "20th Century."

Particular description of goods.—Skate-Straps and Athletic Ankle-Supporters.
Claims use for skate-straps since June, 1915, and for athletic ankle-supporters since March, 1912.

Ser. No. 91,482. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL FILM MANUFACTURING CO., New York, N. Y. Filed Dec. 14, 1915.



No claim being made to the term "Photo-Plays" except as used in conjunction with the other features of the mark.

Particular description of goods.—Moving-Picture Films.

Claims use since Dec. 13, 1915.

Ser. No. 91,492. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HARRIS ENGINE COMPANY, Wilmington, Del. Filed Dec. 15, 1915.

HARRIS

Particular description of goods.—Gasolene-Engines.
Claims use since Dec. 31, 1912.

Ser. No. 91,504. (CLASS 39. CLOTHING.) BYCK BROS. & CO., Louisville, Ky. Filed Dec. 15, 1915.

Bybroco

Particular description of goods.—Leather Shoes.
Claims use since the 1st of August, 1905.

Ser. No. 91,505. (CLASS 39. CLOTHING.) BYCK BROS. & CO., Louisville, Ky. Filed Dec. 15, 1915.

FOOTGARD

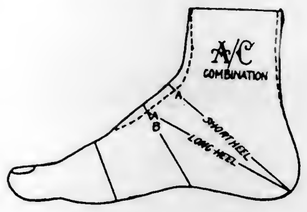
Particular description of goods.—Leather Shoes.
Claims use since the 15th of July, 1915.

Ser. No. 91,540. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILLARD E. COOK, Philadelphia, Pa. Filed Dec. 17, 1915.

LINGO

Particular description of goods.—A Card Game.
Claims use since Nov. 15, 1915.

Ser. No. 91,544. (CLASS 39. CLOTHING.) HURLEY SHOE COMPANY, Rockland, Mass. Filed Dec. 17, 1915.



No claim being made to the printed matter on the drawing excepting the letters "A C," and no claim being made for the representation of the foot apart from the mark shown in the drawing.

Particular description of goods.—Leather Boots and Shoes.

Claims use since December, 1913.

Ser. No. 91,605. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GEOMETRIC TOOL CO., New Haven, Conn. Filed Dec. 20, 1915

GEOMETRIC

Particular description of goods.—Taps, Dies, Die-Heads, Chucks, Tool-Holders, Threading-Machines, Threading-Tools, and Grinders.

Claims use since 1905.

Ser. No. 91,624. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Dec. 20, 1915.

When Hope and Experience Meet

Particular description of goods.—A Newspaper-Section.
Claims use since Dec. 9, 1915.

Ser. No. 91,625. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Dec. 20, 1915.

Educational Stuff!

Particular description of goods.—A Newspaper-Section.
Claims use since Dec. 9, 1915.

Ser. No. 91,629. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN TAYLOR D. G. CO., Kansas City, Mo. Filed Dec. 20, 1915.



Particular description of goods.—Long-Cloth.
Claims use since about Jan. 1, 1903.

Ser. No. 91,668. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed Dec. 21, 1915.

BRIDGE



Particular description of goods.—Hose-Supporters.
Claims use since Sept. 9, 1915.

Ser. No. 91,693. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NYAL COMPANY, Detroit, Mich. Filed Dec. 22, 1915.

Bedtime

Comprising the word "Bedtime."
Particular description of goods.—Cold-Cream.
Claims use since Dec. 4, 1915.

Ser. No. 91,707. (CLASS 39. CLOTHING.) THE BEEBE-HOWES COMPANY, INC., New York, N. Y. Filed Dec. 23, 1915.



The picture being fanciful and no claim being made to the word "Hose" apart from the mark shown in the drawing.

Particular description of goods.—Hosiery.
Claims use since June 1, 1915.

Ser. No. 97,718. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) E. B. ESTES & SONS, New York, N. Y. Filed Dec. 23, 1915.

IDEAL

Particular description of goods.—Wooden Clothes-Pins.
Claims use since Dec. 1, 1915.

Ser. No. 91,739. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VICTOR MANUFACTURING COMPANY, Greenville, S. C. Filed Dec. 23, 1915.

BOLIVAR

Comprising the word "Bolivar."

Particular description of goods.—Unbleached Cotton Sheetings and Shirtings.

Claims use since June 22, 1912.

Ser. No. 91,753½. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM W. POWERS, Blountsville, Ala. Filed Dec. 24, 1915.

Silver Cola

Particular description of goods.—Soft Drinks and Syrup for Making the Same.

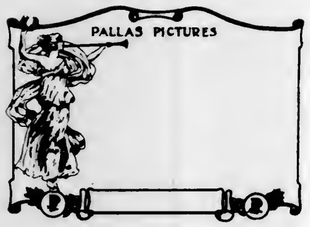
Claims use since October, 1915.

Ser. No. 91,758. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BLAKE & KNOWLES STEAM PUMP WORKS, New York, N. Y. Filed Dec. 27, 1915.

TWINPLEX

Particular description of goods.—Condensing Apparatus and Air-Pumps.
Claims use since the month of November, 1910.

Ser. No. 91,760. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BOSWORTH INCORPORATED, Los Angeles, Cal. Filed Dec. 27, 1915.



No claim being made to the use of the word "Pictures" except as used in conjunction with the other features of the mark.
Particular description of goods.—Moving-Picture Films.
Claims use since Nov. 25, 1915.

Ser. No. 91,800. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HILTON COLLINS CO. INCORPORATED, Louisville, Ky. Filed Dec. 28, 1915.

MASCOT

Particular description of goods.—Base-Ball Bats.
Claims use since Dec. 8, 1915.

Ser. No. 91,824. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE VOGUE COMPANY, New York, N. Y. Filed Dec. 29, 1915.

VOGUE

Particular description of goods.—Photographic Films.
Claims use since Dec. 14, 1915.

Ser. No. 91,825. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE VOGUE COMPANY, New York, N. Y. Filed Dec. 29, 1915.



Particular description of goods.—Photographic Films.
Claims use since Dec. 14, 1915.

Ser. No. 91,826. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE VANITY FAIR PUBLISHING COMPANY, INC., New York, N. Y. Filed Dec. 29, 1915.

VANITY FAIR

Particular description of goods.—Photographic Films.
Claims use since Dec. 14, 1915.

Ser. No. 91,844. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE TELBAX CO., Elkhart, Ind. Filed Dec. 30, 1915.



Particular description of goods.—Card Games.
Claims use since Feb. 1, 1915.

Ser. No. 91,848. (CLASS 43. THREAD AND YARN.) CAMPBELL, METZGER & JACOBSON, New York, N. Y. Filed Dec. 31, 1915.

CONVENT

Particular description of goods.—Embroidery-Cotton; Embroidery - Silk; Embroidery - Cord; Embroidery - Rope; Embroidery-Yarn; Embroidery Silk, Wool, Thread, Cotton, and Linen in Skeins and Balls; Embroidery-Floss; and Embroidery-Tinsel.
Claims use since May, 1909.

Ser. No. 91,849. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CAMPBELL, METZGER & JACOBSON, New York, N. Y. Filed Dec. 31, 1915.

LUSTRANE

Particular description of goods.—Braid and Tape.
Claims use since January, 1912.

Ser. No. 91,850. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) GLOVER EQUIPMENT COMPANY, Indianapolis, Ind. Filed Dec. 31, 1915.

ANTIDAM

Particular description of goods.—Automobile Tops, Seat-Covers, Dust-Hoods, and Radiator-Covers.
Claims use since Nov. 21, 1910.

Ser. No. 91,852. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE NATIONAL MOTION-AD SERVICE, Chicago, Ill. Filed Dec. 31, 1915.



Particular description of goods.—Motion-Picture Films.
Claims use since Sept. 15, 1915.

Ser. No. 91,870. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HAPPY FARMER TRACTOR CO., Minneapolis, Minn. Filed Jan. 3, 1916.



Particular description of goods.—Tractor-Engines.
Claims use since Oct. 1, 1915.

Ser. No. 91,913. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE HOLLISTON MILLS, Norwood, Mass. Filed Jan. 4, 1916.

STERLISTON

Comprising the word "Sterliston."
Particular description of goods.—Book-Cloths.
Claims use since Dec. 1, 1915.

Ser. No. 92,061. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) E. B. ESTES & SONS, New York, N. Y. Filed Jan. 11, 1916.

ALPINE

Particular description of goods.—Wooden Toothpicks.
Claims use since Dec. 1, 1915.

Ser. No. 92,105. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ADOLPH GIESBERG, Boston, Mass. Filed Jan. 13, 1916.

·NO-RO·

Particular description of goods.—Marine Motors.
Claims use since Oct. 15, 1914.

Ser. No. 92,113. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) YOUNGLOVE GROCERY CO., Tacoma, Wash. Filed Jan. 13, 1916.

ROCK DELL

Particular description of goods.—Raspberry-Shrub.
Claims use since 1903.

Ser. No. 92,122. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FLOYD W. JEFFERSON, New York, N. Y. Filed Jan. 14, 1916.

ALPINE ROSE.

Comprising the words "Alpine Rose."
Particular description of goods.—Cotton Piece Goods.
Claims use since March, 1884.

Ser. No. 92,129. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PIN-AP-OLA COMPANY OF DELAWARE, New York, N. Y. Filed Jan. 14, 1916.

PIN-AP-OLA

Comprising the words "Pin-Ap-Ola."
Particular description of goods.—A Pineapple Drink.
Claims use since May 1, 1915.

Ser. No. 92,162. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MONAGHAN MILLS, Greenville, S. C. Filed Jan. 15, 1916.

BUCK EYE

Comprising the word "Buckeye."
Particular description of goods.—Unbleached Cotton Sheetings and Shirtings.
Claims use since about May 1, 1896.

Ser. No. 92,245. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) I. GOLDBERG, INC., New York, N. Y. Filed Jan. 19, 1916.

25

Particular description of goods.—Brandy.
Claims use since 1895.

Ser. No. 92,249. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CHRISTIAN MOERLEIN BREWING CO., Cincinnati, Ohio. Filed Jan. 19, 1916.

HIT

Particular description of goods.—Near Beer.
Claims use since about June, 1908.

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TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 8, 1916.

108,376. WHEAT-FLOUR. ACME MILLING COMPANY, Talbott, Tenn.
Filed February 19, 1915. Serial No. 84,615. PUBLISHED NOVEMBER 23, 1915.

108,377. REFRIGERATORS, REFRIGERATING-MACHINES, AND PARTS AND ACCESSORIES THEREOF. AKTIEBOLAGET NOVATOR, Stockholm, Sweden.
Filed July 29, 1914. Serial No. 80,145. PUBLISHED NOVEMBER 23, 1915.

108,378. BAKING-POWDER AND CREAM TARTAR. ALLEN & LEWIS, Portland, Oreg.
Filed October 21, 1915. Serial No. 89,974. PUBLISHED NOVEMBER 30, 1915.

108,379. OIL-FILTERS. WILLIAM ANDREWS INCORPORATED, New York, N. Y.
Filed September 15, 1915. Serial No. 89,200. PUBLISHED NOVEMBER 23, 1915.

108,380. OIL-FILTERING MATERIALS. WILLIAM ANDREWS INCORPORATED, New York, N. Y.
Filed September 15, 1915. Serial No. 89,201. PUBLISHED NOVEMBER 23, 1915.

108,381. PREPARED ROOFING. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed August 10, 1915. Serial No. 88,518. PUBLISHED NOVEMBER 23, 1915.

108,382. PREPARED ROOFING. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed August 10, 1915. Serial No. 88,519. PUBLISHED NOVEMBER 23, 1915.

108,383. TOILET POWDER. A. BOURJOIS & Co., INC., New York, N. Y.
Filed October 20, 1915. Serial No. 89,954. PUBLISHED NOVEMBER 23, 1915.

108,384. COFFEE. BOWERS BROS., INC., Richmond, Va.
Filed October 16, 1915. Serial No. 89,869. PUBLISHED NOVEMBER 30, 1915.

108,385. COFFEE. BOWERS BROTHERS, INC., Richmond, Va.
Filed October 16, 1915. Serial No. 89,871. PUBLISHED NOVEMBER 30, 1915.

108,386. PREPARATIONS FOR DANDRUFF, FALLING HAIR, AND IRRITATIONS OF THE SCALP. JOHN H. BRECK, Springfield, Mass.
Filed August 20, 1915. Serial No. 88,704. PUBLISHED NOVEMBER 23, 1915.

108,387. POPCORN, PEANUTS, AND CANDIES. BURNEE CORPORATION, New York, N. Y.
Filed June 16, 1915. Serial No. 87,329. PUBLISHED NOVEMBER 16, 1915.

108,388. OLIVE-OIL. LOUIS CARAVETTA, Chicago, Ill.
Filed October 11, 1915. Serial No. 89,788. PUBLISHED NOVEMBER 30, 1915.

108,389. CANNED VEGETABLES. CENTRAL LAKE CANNING CO., Central Lake, Mich.
Filed October 11, 1915. Serial No. 89,790. PUBLISHED NOVEMBER 30, 1915.

108,390. WHEAT-FLOUR. THE COMMERCIAL MILLING CO., Detroit, Mich.
Filed July 23, 1915. Serial No. 88,138. PUBLISHED AUGUST 24, 1915.

108,391. CHEMICALS SUITABLE FOR THE SEPARATION AND PURIFICATION OF MIXTURES CONTAINING OILS. DE LA VERGNE MACHINE CO., New York, N. Y.
Filed September 25, 1915. Serial No. 89,456. PUBLISHED NOVEMBER 23, 1915.

108,392. NON-INTOXICATING MALT BEVERAGE. DICK & BROS. QUINCY BREWERY CO., Quincy, Ill.
Filed October 7, 1915. Serial No. 89,705. PUBLISHED NOVEMBER 30, 1915.

108,393. LIVER-TONIC. DILLEHAY BROS., New Decatur, Ala.
Filed May 10, 1915. Serial No. 86,509. PUBLISHED AUGUST 17, 1915.

108,394. NAIL ENAMEL AND BEAUTIFIER. THE GLAZO COMPANY, Fort Wayne, Ind.
Filed October 19, 1915. Serial No. 89,946. PUBLISHED NOVEMBER 23, 1915.

108,395. BOTTLE-SEALS. FERDINAND GUTMANN & Co., New York, N. Y.
Filed August 16, 1915. Serial No. 88,644. PUBLISHED NOVEMBER 23, 1915.

108,396. COFFEE. H. R. HALL COMPANY, Chicago, Ill.
Filed October 13, 1915. Serial No. 89,835. PUBLISHED NOVEMBER 30, 1915.

108,397. COATS, VESTS, TROUSERS, OVERCOATS, AND RAIN-COATS. HART SCHAFFNER & MARX, Chicago, Ill.
Filed May 6, 1915. Serial No. 86,430. PUBLISHED NOVEMBER 30, 1915.

108,398. CANE AND MAPLE SYRUP, MOLASSES, AND SORGHUMS. NEW ORLEANS COFFEE CO., LTD., New Orleans, La.
Filed October 8, 1915. Serial No. 89,738. PUBLISHED NOVEMBER 30, 1915.

108,399. SHEET MATERIAL USED AS A COVERING FOR SURGICAL DRESSINGS. REID BROS., Seattle, Wash.
Filed August 26, 1915. Serial No. 88,828. PUBLISHED NOVEMBER 23, 1915.

108,400. CANDY. REYMER & BROTHERS, INCORPORATED, Pittsburgh, Pa.
Filed September 18, 1915. Serial No. 89,302. PUBLISHED NOVEMBER 23, 1915.

108,401. PIPES. SITTING BULL CORPORATION, New York, N. Y.
Filed September 24, 1915. Serial No. 89,447. PUBLISHED NOVEMBER 23, 1915.

108,402. PREPARATION FOR SKIN DISEASES AND PIMPLES. FRANK SPAGNUOLO, Youngstown, Ohio.
Filed December 4, 1914. Serial No. 83,077. PUBLISHED NOVEMBER 9, 1915.

108,403. ROOFING AND WATERPROOFING CEMENT CONSISTING OF CERTAIN NAMED INGREDIENTS. STANDARD PAINT COMPANY, Boundbrook, N. J., and New York, N. Y.
Filed August 18, 1915. Serial No. 88,680. PUBLISHED NOVEMBER 23, 1915.

108,404. OUTER ONE-PIECE GARMENTS OR SUITS FOR CHILDREN. LEVI STRAUSS & COMPANY, San Francisco, Cal.
Filed August 30, 1915. Serial No. 88,911. PUBLISHED NOVEMBER 23, 1915.

108,405. LAUNDRY-TUBS. THE TRENTON POTTERIES COMPANY, Trenton, N. J.
Filed August 14, 1915. Serial No. 88,633. PUBLISHED NOVEMBER 23, 1915.

108,406. IRON TABLET TO BE USED AS A TONIC. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 9, 1915. Serial No. 89,773. PUBLISHED NOVEMBER 30, 1915.

108,407. TOOTH-PASTE. THE TROPICAL PHARMACAL CO., New York, N. Y.
Filed October 9, 1915. Serial No. 89,776. PUBLISHED NOVEMBER 30, 1915.

108,408. MOTION-PICTURE FILMS. THANHOUSER FILM CORPORATION, New Rochelle, N. Y.
Filed October 2, 1915. Serial No. 89,616. PUBLISHED NOVEMBER 23, 1915.

108,409. ROTARY PUMPS AND MOTORS. VIKING PUMP COMPANY, Cedar Falls, Iowa.
Filed April 29, 1915. Serial No. 86,283. PUBLISHED AUGUST 10, 1915.

108,410. BRICKS. WASHBURN BROS. COMPANY, Glasco, N. Y.
Filed October 28, 1915. Serial No. 90,197. PUBLISHED NOVEMBER 30, 1915.

108,411. LIQUID WALL-COATING CAPABLE OF BEING WASHED. ADAMS & ELTING COMPANY, Chicago, Ill.
Filed September 18, 1915. Serial No. 89,283. PUBLISHED NOVEMBER 23, 1915.

108,412. CURED MEATS, PARTICULARLY HAMS AND BACON. HARRY D. BAUMGARDNER, Frederick, Md.
Filed July 16, 1913. Serial No. 71,729. PUBLISHED NOVEMBER 30, 1915.

108,413. CANDY. J. S. BELL CONFECTIONERY CO., Cambridgeport, Mass.
Filed August 11, 1915. Serial No. 88,529. PUBLISHED NOVEMBER 16, 1915.

108,414. WHEAT-FLOUR. REMMELS MILLING COMPANY, Lisbon, N. D.
Filed August 9, 1915. Serial No. 88,515. PUBLISHED NOVEMBER 16, 1915.

108,415. CHAMOIS-LEATHER. BLACK HORN SALES CO., Scranton, Pa.
Filed June 16, 1915. Serial No. 87,328. PUBLISHED SEPTEMBER 28, 1915.

108,416. PREPARATION FOR THE STOMACH, LIVER, AND BOWELS. THE BLACKO MEDICINE CO., Charleston, W. Va.
Filed October 5, 1915. Serial No. 89,655. PUBLISHED NOVEMBER 30, 1915.

108,417. SARDINES. BRAWN WILLARD CO., Portland, Me.
Filed July 6, 1915. Serial No. 87,764. PUBLISHED AUGUST 17, 1915.

108,418. CONFECTIONERY—NAMELY, CHOCOLATES. BUNTE BROTHERS, Chicago, Ill.
Filed August 14, 1915. Serial No. 88,608. PUBLISHED NOVEMBER 16, 1915.

108,419. CROCHET-COTTON. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed October 23, 1915. Serial No. 90,048. PUBLISHED NOVEMBER 16, 1915.

108,420. LADIES' SHIRT-WAISTS, DRESSES, HOUSE-DRESSES, CHILDREN'S DRESSES, AND WASH-SKIRTS. CARSON, PIRIE, SCOTT & CO., Chicago, Ill.
Filed October 27, 1915. Serial No. 90,136. PUBLISHED NOVEMBER 23, 1915.

108,421. CHEWING-GUM AND WHITE-SUGAR MINT-FLAVORED CONFECTION. CLARENCE ARTHUR CRANE, Cleveland, Ohio.
Filed August 11, 1915. Serial No. 88,532. PUBLISHED NOVEMBER 16, 1915.

108,422. LUBRICATING-OILS AND RUST-PREVENTIVES. M. HARTLEY DODGE, New York, N. Y.
Filed April 29, 1915. Serial No. 86,263. PUBLISHED OCTOBER 19, 1915.

108,423. LUBRICATING-OILS AND RUST-PREVENTIVES. M. HARTLEY DODGE, New York, N. Y.
Filed April 29, 1915. Serial No. 86,264. PUBLISHED OCTOBER 19, 1915.

108,424. HANDKERCHIEFS. MARSHALL FIELD & CO., Chicago, Ill.
Filed October 23, 1915. Serial No. 90,056. PUBLISHED NOVEMBER 16, 1915.

108,425. HEATING APPLIANCE IN THE NATURE OF A FUEL-ECONOMIZER. FRANEY, SHORE & CO., New York, N. Y., assignor to Combusto Devices Corporation, New York, N. Y., a Corporation of New York.
Filed January 13, 1914. Serial No. 75,154. PUBLISHED SEPTEMBER 1, 1914.

108,426. SOLIDIFIED-ALCOHOL FUEL. PAUL N. FRIEDLAENDER, New York, N. Y.
Filed October 25, 1915. Serial No. 90,079. PUBLISHED NOVEMBER 23, 1915.

108,427. COCOA. GALLANIS BROS., Chicago, Ill.
Filed October 2, 1915. Serial No. 89,599. PUBLISHED NOVEMBER 23, 1915.

108,428. PREPARED CAKE-FLOUR. C. A. GAMBRILL MFG. CO., Baltimore, Md.
Filed June 23, 1915. Serial No. 87,524. PUBLISHED AUGUST 10, 1915.

108,429. SPARKLING WINES AND CHAMPAGNE. JOHN G. GARRISH, Philadelphia, Pa., and New York, N. Y.
Filed October 28, 1915. Serial No. 90,172. PUBLISHED NOVEMBER 30, 1915.

108,430. BAKED GOODS—VIZ., CAKE, BREAD, PIES, FRIED CAKES, CRULLERS, DOUGHNUTS, BISCUITS, CRACKERS, AND CONFECTIONS. GENERAL COLONIAL COMPANY INC., New York, N. Y.
Filed July 7, 1915. Serial No. 87,805. PUBLISHED NOVEMBER 9, 1915.

108,431. CHEESE. A. GROSSENBACH CO., Milwaukee, Wis.
Filed July 6, 1915. Serial No. 87,774. PUBLISHED NOVEMBER 23, 1915.

108,432. SUSPENSION MECHANISM FOR ROAD-VEHICLES. L. P. HALLADAY COMPANY, Streator, Ill.
Filed September 10, 1915. Serial No. 89,129. PUBLISHED NOVEMBER 23, 1915.

108,433. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. B. HELLER & COMPANY, Chicago, Ill.
Filed August 26, 1914. Serial No. 80,816. PUBLISHED NOVEMBER 30, 1915.

108,434. TEA. JUDSON GROCER COMPANY, Grand Rapids, Mich.
Filed September 28, 1915. Serial No. 89,510. PUBLISHED NOVEMBER 16, 1915.

108,435. BOOTS, SHOES, SLIPPERS, OVERGAITERS, AND LEGGINGS OF CERTAIN NAMED MATERIALS. ALFRED A. KOHN, New York, N. Y.
Filed October 1, 1915. Serial No. 89,581. PUBLISHED NOVEMBER 30, 1915.

108,436. CERTAIN NAMED LIBRARY FURNITURE. THE MACEY COMPANY, Grand Rapids, Mich.
Filed June 19, 1915. Serial No. 87,434. PUBLISHED NOVEMBER 23, 1915.

108,437. TREE-DEADENER. MODERN REMEDY CO., Overton, Tex.
Filed October 13, 1915. Serial No. 89,837. PUBLISHED NOVEMBER 30, 1915.

108,438. CHEESE. JOHN MORRELL & CO., Ottumwa, Iowa; Sioux Falls, S. D.; Mobile, Ala., and Memphis, Tenn.
Filed September 28, 1915. Serial No. 89,517. PUBLISHED NOVEMBER 23, 1915.

108,439. HOG-FATTENER. NATIONAL HOG FATTENER CO., Chicago, Ill.
Filed September 2, 1915. Serial No. 88,987. PUBLISHED NOVEMBER 23, 1915.

108,440. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES. NITSCHE & GÜNTHER OPTISCHE WERKE, Rathenow, Germany.
Filed April 27, 1915. Serial No. 86,232. PUBLISHED NOVEMBER 23, 1915.

108,441. FELTED VEGETABLE-FIBER HEAT-INSULATING MATERIAL. NORTHERN INSULATING COMPANY, St. Paul, Minn.
Filed July 30, 1915. Serial No. 88,306. PUBLISHED NOVEMBER 23, 1915.

108,442. EDIBLE COTTON-SEED OIL. A. C. NOWLAND CO., Philadelphia, Pa.
Filed August 21, 1915. Serial No. 88,745. PUBLISHED NOVEMBER 30, 1915.

108,443. COMPOUND FOR POLISHING VARNISHED SURFACES. EDWARD O'ROURKE, New York, N. Y.
Filed September 13, 1915. Serial No. 89,170. PUBLISHED NOVEMBER 23, 1915.

108,444. COTTON PIECE GOODS. OSTRANDER & COMPANY, INC., New York, N. Y.
Filed November 2, 1915. Serial No. 90,355. PUBLISHED NOVEMBER 30, 1915.

108,445. GINGHAMS. OSTRANDER & COMPANY, INC., New York, N. Y.
Filed November 2, 1915. Serial No. 90,356. PUBLISHED NOVEMBER 30, 1915.

108,446. MOLASSES. PENICK & FORD, LTD., New Orleans, La.
Filed September 3, 1915. Serial No. 89,012. PUBLISHED NOVEMBER 30, 1915.

108,447. PREPARATION OF CASTOR-OIL. FREDERICK N. PERDUE, East Orange, N. J.
Filed October 6, 1915. Serial No. 89,690. PUBLISHED NOVEMBER 23, 1915.

108,448. CITRUS FRUITS. MARCUS ALLEN RICE, Citra, Fla.
Filed September 2, 1915. Serial No. 88,990. PUBLISHED NOVEMBER 30, 1915.

108,449. VENTILATING-SHADES FOR CONTROLLING THE ENTRY OF LIGHT AND AIR INTO BUILDINGS. SIMON VENTILIGHTER CO., INC., New York, N. Y.
Filed June 18, 1915. Serial No. 87,397. PUBLISHED NOVEMBER 30, 1915.

108,450. MEN'S AND BOYS' COATS AND TROUSERS. THE SNELLENBURG CLOTHING COMPANY, Philadelphia, Pa.
Filed June 15, 1915. Serial No. 87,314. PUBLISHED AUGUST 10, 1915.

108,451. LINIMENT TO BE APPLIED EXTERNALLY FOR ALLAYING INFLAMMATION OF THE JOINTS AND MUSCLES. FERDINAND SONNENBERG, Detroit, Mich.
Filed October 4, 1915. Serial No. 89,643. PUBLISHED NOVEMBER 2, 1915.

108,452. CANNED FRUITS, VEGETABLES, OYSTERS, AND FISH, TABLE-SYRUPS, OLIVES, SPICES, CATSUP, VINEGAR, AND FRUIT PRESERVES. SUSSMAN, WORMSER & CO., San Francisco, Cal.
Filed July 2, 1915. Serial No. 87,715. PUBLISHED NOVEMBER 16, 1915.

108,453. CANNED SALMON. THLINKET PACKING COMPANY, Portland, Oreg.
Filed August 19, 1915. Serial No. 88,698. PUBLISHED NOVEMBER 23, 1915.

108,454. CANNED PEAS. WATERTOWN CANNING COMPANY, Watertown, Wis.
Filed September 28, 1915. Serial No. 89,530. PUBLISHED NOVEMBER 16, 1915.

108,455. TANKS. THE JAMES H. WATSON COMPANY, Bradley, Ill.
Filed August 6, 1915. Serial No. 88,471. PUBLISHED NOVEMBER 23, 1915.

108,456. HYDRATED LIME. WESTERN LIME & CEMENT CO., Milwaukee, Wis.
Filed June 17, 1915. Serial No. 87,379. PUBLISHED NOVEMBER 23, 1915.

108,457. DISPLAY-CASES. WILMARTH SHOW CASE COMPANY, Grand Rapids, Mich.
Filed August 20, 1915. Serial No. 88,721. PUBLISHED NOVEMBER 23, 1915.

108,458. MEDICINE FOR THE TREATMENT OF TUBERCULOSIS. THE ADDILINE MEDICINE CO., Columbus, Ohio.
Filed September 7, 1915. Serial No. 89,047. PUBLISHED NOVEMBER 30, 1915.

108,459. FRUIT FLAVORING-SYRUP FOR NON-ALCOHOLIC BEVERAGES. THE ALLEN RED TAME CHERRY COMPANY, Toledo, Ohio.
Filed January 25, 1915. Serial No. 84,070. PUBLISHED NOVEMBER 30, 1915.

108,460. COMPOUNDS FOR REMOVING CARBONACEOUS DEPOSITS FROM CYLINDERS OF INTERNAL-COMBUSTION ENGINES. J. A. ANDERSON, Omaha, Nebr.
Filed October 22, 1915. Serial No. 90,012. PUBLISHED NOVEMBER 23, 1915.

108,461. POWDER AND DYNAMITE. ATLAS POWDER COMPANY, Wilmington, Del.
Filed April 21, 1915. Serial. No. 86,076. PUBLISHED NOVEMBER 16, 1915.

108,462. COMPOUND OF BALSAM USED FOR CUTS, BURNS, BOILS, AND OTHER SKIN AILMENTS. DANIELE BIOLLINO, New York, N. Y.
Filed June 24, 1915. Serial No. 87,550. PUBLISHED AUGUST 24, 1915.

108,463. OLIVE-OIL. J. E. BLANC & L. DELERY, New York, N. Y.
Filed April 27, 1915. Serial No. 86,221. PUBLISHED NOVEMBER 30, 1915.

108,464. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. R. A. CARMICHAEL & CO., Detroit, Mich.
Filed October 29, 1914. Serial No. 82,249. PUBLISHED NOVEMBER 30, 1915.

108,465. CARBONATED NON-ALCOHOLIC BEVERAGES MADE FROM CERTAIN INGREDIENTS SOLD AS SOFT DRINKS. CENTRAL CONSUMERS COMPANY, Louisville, Ky.
Filed October 16, 1915. Serial No. 89,878. PUBLISHED NOVEMBER 30, 1915.

108,466. CHICK AND HEN FEED. F. B. CHAMBERLAIN CO., St. Louis, Mo.
Filed June 19, 1915. Serial No. 87,410. PUBLISHED NOVEMBER 30, 1915.

108,467. UNION-SUIT OVERALLS, OVERALLS, COATS, SHIRTS, ROMPERS, AND BLOUSES. CHATHAM SHIRT CO., New York, N. Y.
Filed September 27, 1915. Serial No. 89,478. PUBLISHED NOVEMBER 30, 1915.

108,468. METALLIC FENCE-POSTS. CHICAGO STEEL POST COMPANY, Chicago, Ill.
Filed March 22, 1915. Serial No. 85,297. PUBLISHED NOVEMBER 23, 1915.

108,469. BUTTER. THE FOX RIVER BUTTER COMPANY, Chicago, Ill.
Filed August 29, 1912. Serial No. 65,484. PUBLISHED NOVEMBER 30, 1915.

108,470. WATER-BOTTLES, COMBINATION WATER-BOTTLE AND FOUNTAIN-SYRINGE, FOUNTAIN-SYRINGES, AND BULB-SYRINGES. GOODYEAR'S INDIA RUBBER GLOVE MFG. CO., New York, N. Y., and Naugatuck, Conn.
Filed September 1, 1915. Serial No. 88,956. PUBLISHED NOVEMBER 23, 1915.

108,471. MOTION-PICTURE FILMS. DAVID W. GRIFFITH, Los Angeles, Cal.
Filed September 30, 1915. Serial No. 89,543. PUBLISHED NOVEMBER 16, 1915.

108,472. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. HOOPLE & ALDERSON, New York, N Y.
Filed June 18, 1909. Serial No. 43,088. PUBLISHED NOVEMBER 23, 1915.

108,473. LIQUID SHELLAC USED IN STIFFENING HATS. KASEBIER-CHATFIELD SHELLAC CO., New York, N. Y.
Filed September 17, 1915. Serial No. 89,279. PUBLISHED NOVEMBER 30, 1915.

108,474. LIQUID SHELLAC USED IN STIFFENING HATS. KASEBIER-CHATFIELD SHELLAC CO., New York, N. Y.
Filed September 17, 1915. Serial No. 89,280. PUBLISHED NOVEMBER 23, 1915.

108,475. REMEDY FOR CATARRH, CROUP, HAY-FEVER, EARACHE, NEURALGIA, FROST-BITES, AND QUINSY. SAM'L J. KEYES, Easton, Pa.
Filed July 2, 1914. Serial No. 79,516. PUBLISHED NOVEMBER 30, 1915.

108,476. COOKING-FATS. KOSHER PRODUCTS CO., Chattanooga, Tenn.
Filed September 24, 1915. Serial No. 89,439. PUBLISHED NOVEMBER 16, 1915.

108,477. FLAT PAINT. W. W. LAWRENCE & COMPANY, Pittsburgh, Pa.
Filed August 18, 1914. Serial No. 80,663. PUBLISHED OCTOBER 19, 1915.

108,478. HAIR-TONIC. MARIETTA D. LEITER, Syracuse, N. Y.
Filed October 12, 1915. Serial No. 89,823. PUBLISHED NOVEMBER 23, 1915.

108,479. COTTON-WARP FABRICS WITH WOOL OR MOHAIR OR ALPACA FILLINGS. LESHER WHITMAN & CO., INC., New York, N. Y.
Filed October 20, 1915. Serial No. 89,961. PUBLISHED NOVEMBER 30, 1915.

108,480. TEA, COFFEE, COCOA, AND JELLY-TABLETS. THOMAS J. LIPTON, London, England, and New York, N. Y.
Filed August 3, 1915. Serial No. 88,388. PUBLISHED NOVEMBER 16, 1915.

108,481. TEA. THOMAS J. LIPTON, London, England, and New York, N. Y.
Filed August 3, 1915. Serial No. 88,389. PUBLISHED NOVEMBER 16, 1915.

108,482. TEA, COFFEE, COCOA, AND JELLY-TABLETS. THOMAS J. LIPTON, London, England, and New York, N. Y.
Filed August 3, 1915. Serial No. 88,390. PUBLISHED NOVEMBER 16, 1915.

108,483. TEA. THOMAS J. LIPTON, London, England, and New York, N. Y.
Filed August 3, 1915. Serial No. 88,391. PUBLISHED NOVEMBER 16, 1915.

108,484. CORN REMEDIES. EDWARD CARTER LYTLE, Baltimore, Md.
Filed June 24, 1915. Serial No. 87,564. PUBLISHED NOVEMBER 23, 1915.

108,485. KNITTED UNDERWEAR. THE MAY COMPANY, Cleveland, Ohio.
Filed May 29, 1915. Serial No. 86,995. PUBLISHED NOVEMBER 30, 1915.

108,486. COFFEE. MCCORD-STEWART COMPANY, Atlanta, Ga.
Filed September 7, 1915. Serial No. 89,067. PUBLISHED NOVEMBER 16, 1915.

108,487. FRICTION-TAPE. THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio.
Filed October 16, 1915. Serial No. 89,890. PUBLISHED NOVEMBER 16, 1915.

108,488. SHIRTS, PAJAMAS, LADIES' SHIRT-WAISTS, BOYS' BLOUSES, AND UNDERWEAR. MATTHEW J. MURPHY, Philadelphia, Pa.
Filed September 27, 1915. Serial No. 89,484. PUBLISHED DECEMBER 7, 1915.

108,489. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed August 31, 1915. Serial No. 88,929. PUBLISHED NOVEMBER 30, 1915.

108,490. REMEDY FOR SCIATIC AND ALL OTHER FORMS OF RHEUMATIC TROUBLES. JOHN S. NICHOLS, Bellevue, Tex.
Filed October 27, 1914. Serial No. 82,219. PUBLISHED DECEMBER 7, 1915.

108,491. PREPARATION FOR THE TREATMENT OF CERTAIN NAMED DISEASES. ANTON NOGORSKI, Milford, Conn.
Filed September 2, 1915. Serial No. 88,988. PUBLISHED NOVEMBER 30, 1915.

108,492. PLATES, CUPS, SAUCERS, BOWLS, PITCHERS, JARS, VASES, AND PLATTERS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed September 11, 1915. Serial No. 89,155. PUBLISHED NOVEMBER 30, 1915.

108,493. CANDY. PACKAGE CONFECTIONERY COMPANY, Boston, Mass.
Filed October 16, 1915. Serial No. 89,897. PUBLISHED NOVEMBER 30, 1915.

108,494. STOCK, DAIRY, AND POULTRY FEED CONTAINING CERTAIN NAMED INGREDIENTS. RALSTON PURINA COMPANY, St. Louis, Mo.
Filed August 20, 1915. Serial No. 88,718. PUBLISHED NOVEMBER 30, 1915.

108,495. LAXATIVE HEADACHE-POWDERS. RED STAR DRUG CO., Baltimore, Md.
Filed October 9, 1915. Serial No. 89,770. PUBLISHED NOVEMBER 23, 1915.

108,496. CARPETS. ROXBURY CARPET COMPANY, Boston, Mass.
Filed October 15, 1915. Serial No. 89,866. PUBLISHED NOVEMBER 30, 1915.

108,497. WAXY COMPOSITION USED IN THE PROCESS OF EMBOSSING. OTTO SCHMIDT, New York, N. Y.
Filed February 17, 1915. Serial No. 84,588. PUBLISHED NOVEMBER 9, 1915.

108,498. BREAD. SPECIALTY BAKING COMPANY, New York, N. Y.
Filed August 21, 1915. Serial No. 88,748. PUBLISHED NOVEMBER 16, 1915.

108,499. GARTERS. A. STEIN & COMPANY, Chicago, Ill.
Filed October 18, 1915. Serial No. 89,931. PUBLISHED NOVEMBER 30, 1915.

108,500. MEN'S OUTER SUITS. THE SULTZBACH CLOTHING CO., New York, N. Y.
Filed December 26, 1914. Serial No. 83,542. PUBLISHED NOVEMBER 30, 1915.

108,501. MALTED MILK. THEW, HOOKER & GILBEY, LIMITED, London, England.
Filed September 30, 1915. Serial No. 89,555. PUBLISHED NOVEMBER 30, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

13,498. POCKET AND TABLE CUTLERY SOLELY. NEW YORK KNIFE COMPANY, Walden, N. Y.
Registered July 13, 1886. Renewed July 13, 1916.

LABELS

REGISTERED FEBRUARY 8, 1916.

19,021.—*Title:* "WHEATSWORTH BISCUIT INDIVIDUAL SERVICE PACKAGE." (For Graham Biscuits.) F. H. BENNETT BISCUIT COMPANY, New York, N. Y. Filed January 10, 1916.

19,022.—*Title:* "WHEATSWORTH CRACKER MEAL." (For Cracker-Meal.) F. H. BENNETT BISCUIT COMPANY, New York, N. Y. Filed January 10, 1916.

19,023.—*Title:* "COLLIS 20TH CENTURY PADDED SKATE STRAP." (For Skate-Straps.) HENRY JAMES COLLIS, Taunton, Mass. Filed January 7, 1916.

19,024.—*Title:* "KO-ZY UNION SUIT." (For Union Suits.) HARRY H. CONDIT, Indianapolis, Ind. Filed January 13, 1916.

19,025.—*Title:* "THE ROST FYEROUT AUTOMATIC CHEMICAL FIRE EXTINGUISHER." (For Fire-Extinguishers.) CONTINENTAL DISTRIBUTORS, INCORPORATED, Chicago, Ill. Filed January 10, 1916.

19,026.—*Title:* "CORYZINE." (For a Deodorant and Antiseptic.) CORYZINE MANUFACTURING COMPANY, Baltimore, Md. Filed December 17, 1915.

19,027.—*Title:* "CREMO-VESCO." (For Increasing the Body of Thin Cream.) CREMO-VESCO COMPANY, Brooklyn, N. Y. Filed November 26, 1915.

19,028.—*Title:* "BELGIAN HARE FELT." (For Fur Hats.) THE DANBURY COMPANY, Danbury, Conn. Filed November 23, 1915.

19,029.—*Title:* "INDEX." (For Flavoring Extracts.) ELLIOTT GROCERY COMPANY, Logansport, Ind. Filed December 18, 1915.

19,030.—*Title:* "CORNHILL." (For Blue-Print-Paper Rolls.) FROST & ADAMS CO., Boston, Mass. Filed November 18, 1915.

19,031.—*Title:* "P. POLLACK'S LAST EDITION STOGIES." (For Stogies.) DAVID GOLDEN, Chicago, Ill. Filed September 30, 1915.

19,032.—*Title:* "MYOWN." (For a Hair-Tonic.) WILLIAM A. HEFFRON, Michigan, N. D. Filed December 17, 1915.

19,033.—*Title:* "GOOD HEALTH." (For Bread. KALAMAZOO VEGETABLE PARCHMENT CO., Kalamazoo, Mich. Filed January 15, 1916.

19,034.—*Title:* "GOOD TASTE." (For Bread.) KALAMAZOO VEGETABLE PARCHMENT CO., Kalamazoo, Mich. Filed January 15, 1916.

19,035.—*Title:* "GOLD LABEL." (For Bottled Goods.) LION BREWING COMPANY, Wilkes-Barre, Pa. Filed December 16, 1915.

19,036.—*Title:* "THE OLD ORIGINAL ROCKFORD SOCK 701." (For Hosiery.) NELSON KNITTING COMPANY, Rockford, Ill. Filed December 20, 1915.

19,037.—*Title:* "THE OLD ORIGINAL ROCKFORD SOCK 551." (For Hosiery.) NELSON KNITTING COMPANY, Rockford, Ill. Filed December 20, 1915.

19,038.—*Title:* "INDIAN." (For Glass-Cutters.) SMITH, & HEMENWAY COMPANY, INCORPORATED, New York, N. Y. Filed January 19, 1916.

19,039.—*Title:* "RED DEVIL." (For Tools.) SMITH & HEMENWAY COMPANY, INCORPORATED, New York, N. Y. Filed January 19, 1916.

19,040.—*Title:* "ARROW CLINCH NAILS." (For Nails.) THE H. C. TACK COMPANY, Cleveland, Ohio. Filed December 29, 1915.

19,041.—*Title:* "XX IRON CLINCHING NAILS." (For Nails.) THE H. C. TACK COMPANY, Cleveland, Ohio. Filed December 29, 1915.

19,042.—*Title:* "USIT FACE POWDER DE LUX." (For Face-Powder.) USIT MANUFACTURING COMPANY OF AMERICA, INC., Buffalo, N. Y. Filed January 7, 1916.

19,043.—*Title:* "PUNCH ÉLITE." (For Swedish Punch.) A. O. ZETTERLUND, New York, N. Y. Filed November 1, 1915.

PRINTS

REGISTERED FEBRUARY 8, 1916.

4,196.—*Title:* "HE SHO' THINKS HE'S HIDIN'." (For Wheat Breakfast Food.) CREAM OF WHEAT Co., Minneapolis, Minn. Filed January 19, 1916.

4,197.—*Title:* "SECURITY." (For Key Hook and Rings Combined.) HARRY A. GRAMMES, Allentown, Pa. Filed January 19, 1916.

4,198.—*Title:* "LITTLE POLLY." (For Brooms.) HARRAH & STEWART MANUFACTURING COMPANY, Des Moines, Iowa. Filed March 16, 1915.

4,199.—*Title:* "JOHNSON WELL SCREEN." (For Well-Screens and Pump-Rod Couplings.) EDWARD E. JOHNSON, St. Paul, Minn. Filed January 5, 1916.

4,200.—*Title:* "WEDNESDAY—LUXURY DAY." (For Advertising Dry Goods.) L. KLEIN, Chicago, Ill. Filed December 7, 1915.

4,201.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,202.—*Title:* "SOME REAL 'COMMONSENSE' THAT EVERY PIPE SMOKER WILL UNDERSTAND." (For Smoking-Tobacco.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,203.—*Title:* "THE MAKING OF VELVET TOBACCO IS AN OPEN SECRET." (For Smoking-Tobacco.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,204.—*Title:* "VELVET, THE SMOOTHEST SMOKING TOBACCO." (For Smoking-Tobacco.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,205.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,206.—*Title:* "VELVET SMOKAROLS." (For Smoking-Tobacco and Pipe.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,207.—*Title:* "VELVET IS MATURED BY NATURE'S OWN METHOD." (For Smoking-Tobacco.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,208.—*Title:* "'CONDITION' YOUR OWN TOBACCO." (For Smoking-Tobacco.) LIGGETT & MYERS TOBACCO COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 20, 1916.

4,209.—*Title:* "BIG TAG SALE." (For House-Furnishings.) MERCHANTS SERVICE AGENCY, Chicago, Ill Filed November 23, 1915.

4,210.—*Title:* "RUDY'S CUSTOMERS PROFIT SHARING SCHEDULE." (For Furnaces.) RUDY FURNACE COMPANY, Dowagiac, Mich. Filed November 10, 1915.

4,211.—*Title:* "SAGINAW CREAMERY CO., SAGINAW, MICH." (For Butter-Fat.) SAGINAW CREAMERY COMPANY, Saginaw, Mich. Filed November 25, 1914.

4,212.—*Title:* "SPEEDY SERVICE—STERLING QUALITY." (For Paper.) THE WHITAKER PAPER COMPANY, Cincinnati, Ohio. Filed April 10, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

FEND *v.* MIGGETT.

Decided November 16, 1915.

1. INTERFERENCE—DEFINITENESS OF ISSUE.
   Where an independent inventor copies a claim from a patent, the patentee may not rely upon a difference of structure not recited in the claim to escape a judgment of priority.
2. SAME—PATENTEE—INCONSISTENT POSITIONS.
   A patentee in interference cannot be heard to contend for the non-patentability of his claims, because that would give him a right of opposition based upon a patent *pro tanto* void.
3. SAME—SAME—ESCAPING JUDGMENT.
   A patentee may escape judgment in an interference by filing a disclaimer or by filing an application for reissue containing properly-limited claims only.

ON PETITION.

AUTOMOBILE.

Mr. Lynn A. Williams for Fend.

Messrs. Parker and Burton and *Messrs. Bacon & Milans* for Miggett.

EWING, *Commissioner:*

If an infringer's use includes a specific feature which is essential to patentable novelty and is not recited in the claim, the defect is sometimes cured by construction. (*Fowler & Wolfe Mfg. Co.* v. *McCrum-Howell Co.*, 215 Fed. Rep., 905.)

In interference proceedings, however, more exact definition is demanded. Where an independent inventor copies a claim from a patent, the patentee may not rely upon a difference of structure not recited in the claim to escape a judgment of priority. If he were permitted to do so, he might win an interference proceeding on a narrow construction and yet would be free in suits upon his patent to contend for a broad construction.

Nor can a patentee be heard to contend for the non-patentability of an invention defined in the claim of his patent, for this would be to give him a right of opposition based upon a patent which *pro tanto* is void and from which no right can be derived. (*Kennedy* v. *Hazelton*, 128 U. S., 667.)

In all such cases a patentee may escape a judgment of priority by filing a disclaimer. (*Moore and McKee* v. *Bradley* v. *Deering*, 180 O. G., 879.)

It would seem that he may escape a judgment by filing an application for reissue containing properly-limited claims only. (*Lattig and Goodrum* v. *Dean*, 117 O. G., 1798; 25 App. D. C., 591, and particularly the discussion therein of Rule 125 and of *Bender* v. *Hoffmann*, 85 O. G., 1737.)

The Examiner having held that Fend can make the claim, the interference is suspended for one month. If within that time the patentee (Miggett) files a disclaimer or a reissue application limited to claims which Fend cannot make, the interference will be dissolved, and the patentability of the claim to Fend will thereafter be considered *ex parte*. Otherwise the interference will take the usual course.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

HOPKINS *v.* PETERS AND GUBELMANN.

Decided November 29, 1915.

1. INTERFERENCE—PIECEMEAL PROSECUTION.
   Where a party under order to show cause why judgment on the record should not be rendered against him prosecuted unsuccessfully a motion to dissolve on the ground of inoperativeness of his opponent's machine and thereafter attempted to attack its operativeness on other grounds, *Held* that the Office properly refused to consider the second contention of inoperativeness.
2. SAME—SAME—RULES 122 AND 130.
   Rules 122 and 130 *Held* consistent with law, reasonable, and salutary.

Mr. F. R. Cornwall, *Mr. L. S. Bacon*, and *Mr. J. H. Milans* for the appellant.

Mr. D. G. Haynes, *Mr. Frank P. Davis*, and *Mr. B. C. Stickney* for the appellees.

SHEPARD, *C. J.:*

This is an interference proceeding relating to a calculating-machine, the issue of which is contained in the following three counts.

1. In a calculating machine, the combination of a plurality of sets of accumulators, a key mechanism whereby any one or any number of the accumulators may be caused to register one or more numbers at a time, and means whereby the accumulations on one set of accumulators may be controlled by the accumulations on another set of accumulators.
2. In a calculating machine, the combination of a plurality of sets of accumulators, a key mechanism whereby any one or any number of the accumulators may be caused to register one or more numbers at a time, and automatic means whereby the accumulations on one set of accumulators may be controlled by the accumulations on another set of accumulators.
3. In a calculating machine, the combination of a plurality of sets of accumulators, a number key mechanism for said sets of accumulators, and means whereby the accumulations of one set of accumulators may be con-

trolled by the other set of accumulators while the number key mechanism is inactive.

William S. Gubelmann filed his application January 10, 1900; Peters filed April 14, 1905; and Hopkins filed April 9, 1906.

Hopkins and Peters having failed in their preliminary statements to carry their invention back of Gubelmann's filing date the Examiner of Interferences entered a decision June 2, 1911, and a rule to Hopkins and Peters to show cause within thirty days why judgment on the record should not be entered in favor of the senior party, Gubelmann. Within the time Hopkins filed a motion to dissolve on several grounds, including a charge that Gubelmann's device, as disclosed, was inoperative. This was referred to the Primary Examiner. Peters also filed a similar motion, which was likewise referred. The Primary Examiner denied the motion on all grounds, and motions for rehearing were overruled. On appeal to the Commissioner by Hopkins the decision of the Primary Examiner was sustained, March 16, 1912. The Examiner of Interferences then rendered judgment for Gubelmann on the record. Hopkins then, on March 25, 1912, filed a motion to the Examiner of Interferences for leave to take testimony on the inoperativeness of Gubelmann's machine. This was denied. April 11, 1912, motions were entered by Hopkins and Peters to stay the time for appeal and this was granted. April 15, 1912, the Examiner of Interferences again considered the second motion to take testimony and denied it. Hopkins appealed to the Commissioner. He then, on August 12, 1912, filed another motion to dissolve on the ground of inoperativeness. September 9, 1912, the Examiner of Interferences denied this motion. Hopkins appealed from this decision to the Commissioner, who affirmed the decision of the Examiner of Interferences, October 18, 1912. He held that the motion presented questions not raised in the original motion to dissolve heard by the Primary Examiner, saying:

Where a party is under an order to show cause why judgment should not be rendered against him for the reason that the date of conception alleged in his preliminary statement falls to overcome the filing date of another party, and in response to such order to show cause, presents a motion asserting the inoperativeness of his adversary's device, it is incumbent upon him to present his full case in the first instance or to give a reasonable excuse for failure to do so. He cannot in fairness to the senior party be permitted, by way of piecemeal motions or arguments, to attack the operativeness of the device.

He also held that the statements relating to the building of the model by Hopkins are insufficient to excuse delay. December 18, 1912, the Examiner of Interferences rendered a decision vacating the award of priority to Gubelmann on March 23, 1912, and set the case down for hearing on January 16, 1913. On that date the Examiner of Interferences again considered the question of inoperativeness raised by Hopkins's second motion and held that Gubelmann's device was inoperative on several grounds, and then awarded priority to Hopkins. Motions by Peters and Gubelmann to vacate this judgment were denied, September 24, 1913, and they then appealed to the Examiners-in-Chief. The Board of Examiners-in-Chief, on June 25, 1914, reversed the judgment of the Examiner of Interferences, and awarded priority to Gubelmann. They held that Hopkins had no right to bring the question of inoperativeness again before the Examiner of Interferences. On appeal to the Commissioner this decree was affirmed, December 18, 1914. In this opinion it was stated:

A careful consideration of the alleged features of inoperativeness presented under the fifth and sixth grounds shows that they are specifically different from the grounds urged before the Primary Examiner.

They relate to the same portion of the machine, namely, that shown in Fig. 62 of Gubelmann's drawings, but to an entirely different part of that mechanism and were not urged before the Primary Examiner or, apparently, even alleged to have been discovered until after his decision.

The question of what Hopkins was entitled to urge as a basis for an award of priority was fully considered in the decision of the Assistant Commissioner and if there was any error therein its correction should have been sought by a petition for rehearing. As stated above, the present Commissioner has ruled that that decision constitutes the law of this case.

The Examiners-in-Chief therefore properly held that as between Hopkins and Gubelmann, Gubelmann was entitled to an award of priority. As fully pointed out by them, Gubelmann is entitled to an award of priority over Peters.

From that decision Hopkins has appealed.

The question arose on the construction of Rules 122 and 130. These are settled rules of practice in the Patent Office, consistent with law, and are intended to regulate the practice in the Patent Office, looking toward a speedier disposition of applications for patents.

Rule 122 provides that a motion like this to dissolve should contain a full statement of the grounds relied upon, and should, if possible, be made not later than thirty days after the statements of the parties in interference have been received and approved.

Rule 130 provides that where the patentability of a claim to an opponent is material to the right of a party to a patent, the party may make the non-patentability of the claim at final hearing before the Examiner of Interferences as a basis for the decision upon the priority of invention. The final clause of the rule reads, that—

a party shall not be entitled to take such step, however, unless he has duly presented and prosecuted a motion under Rule 122 for dissolution upon the ground in question, or shows good reason why such a motion was not presented and prosecuted.

As the objections to the operativeness of Gubelmann's machine contained in this second motion had not been heard by the Primary Examiner and no reason given why the objections were not raised before him, the Commissioner was right in refusing to consider the question. (*Cutler* v. *Leonard*, 31 App. D. C., 297–301; *Broadwell* v. *Long*, 36 App. D. C., 418–423.)

The foregoing rules are reasonable and tend to prevent a practice which has grown up in the Office from which, by constant motions and raising of new questions, the burdens of inventors have been increased and proceedings in the Patent Office unduly prolonged. See *Allen* v. *U. S., ex rel. Lowry*, (26 App. D. C., 8,) where these practices are commented upon.

As Gubelmann was the first to file an application and his opponents failed to carry their dates of invention back of his filing date, the Commissioner was right in refusing to entertain the subsequent

dilatory motions and in awarding priority to Gubelmann.

The decision is affirmed, and the clerk will certify this decision, and the proceedings herein, to the Commissioner of Patents.

Affirmed.

Court of Appeals of the District of Columbia.

DEAKIN *v.* SCHWARTZ.

Decided December 6, 1915.

INTERFERENCE—PRIORITY—DILIGENCE.

Where S. claims conception November 25, 1911, and filed his application on January 27 following, and D. executed his application June 17, 1911, and filed it March 27, 1912, and between these dates installed commercial systems embodying the broader counts of the issue which have been awarded to him, though not the particular counts here on appeal, *Held* that the circumstances preclude a finding of lack of diligence by D. as to the subject-matter of the appealed counts.

Mr. Howard M. Morse, *Mr. De Witt C. Tanner*, and *Mr. J. G. Roberts* for the appellant.

Mr. C. C. Bulkley for the appellee.

ROBB, *J.*:

Appeal from a decision of the Patent Office awarding priority of invention as to counts 3 to 12, inclusive, in an interference proceeding to the appellee Schwartz.

As originally declared, the proceeding involved twelve counts. Of those counts, priority of invention as to counts 1 and 2 was awarded appellant, and appellee acquiesces in that award. We reproduce count 1 as illustrative of the two counts awarded appellant and counts 7 and 10 as illustrative of the counts awarded appellee:

1. In a telephone system, a calling line, called line, a plurality of stations on said called line, a means of completing connections between said calling and said called lines, said means having one called line branch and a plurality of calling line branches, any of which latter branches may be selected by said calling line, a ringer at each station connected with said called line, arranged to operate only when supplied with a particular kind of arrangement of current, and means of supplying the proper arrangement or kind of current to operate the ringer at any one of said stations connected to said called line, depending upon which of said calling line branches of said means of completing connections between said calling and said called lines is selected by the calling line.

7. In a party line telephone system, a calling and a called subscriber's line, a connector for seizing the called line, and means including a selector for extending connection from the calling line to said connector, said selector including a plurality of banks of contacts, multiple connections from a plurality of contacts of one of said banks to said connector, and independent connections from corresponding contacts of a second of said banks to said connector.

10. In a party line telephone system, a calling and a called subscriber's line, a connector for seizing the called line, and means including a selector for extending connection from the calling line to said connector, said selector including a plurality of banks of contact, multiple connections from a plurality of contacts of one of said banks to said connector, independent connections from corresponding contacts of a second of said banks to said connector, a plurality of ringing generators in said connector for supplying ringing current to the called line, a relay in each of said independent connections for controlling the selection of one of said generators, and means for energizing one of said relays when connection is made with said connector, the relay energized being dependent upon the level of the selector switch employed in extending the connection.

Prior to the present invention the use of two-party and four-party lines in both manual and automatic telephone systems was common. The characteristic feature of the present invention, as succinctly stated by the Examiner of Interferences—

is the provision of means for selectively ringing any one of the subscribers upon a party line, after the calling subscriber's line has been automatically connected thereto.

The tribunals of the Patent Office agree that counts 1 and 2 embody this general idea and dominate all of the other counts. It is further agreed that appellant not only conceived and disclosed this broad invention but that he actually reduced the same to practice by installation in telephone-exchanges in Berkeley and Oakland, Cal., prior to the earliest date claimed by appellee as his date of conception and disclosure. In other words, before appellee's entry into the field at all, appellant had publicly and successfully installed the subject-matter of counts 1 and 2.

On June 17, 1911, appellant signed and executed before a notary public the application herein, Figure 2 of which, the Patent Office tribunals concede, discloses the subject-matter of the counts that have been awarded to appellee. The evidence upon this point is very clear. A Mr. McCann, at the time chief clerk of appellant, who then was chief engineer of the Bay Cities Home Telephone Company, together with the stenographer checked the sheets of the application several times and, in that way, became familiar with it. On the date in question, at the request of appellant, who had communicated with the notary over the telephone, he took the application to the notary, who placed his seal on his jurat. Upon Mr. McCann's return, appellant requested that he have the notary place his seal upon every sheet of the application. Thereupon, on the same day, Mr. McCann returned to the notary, who impressed a small pocket-seal upon each of the other pages. The notary, an entirely disinterested witness, not only fully corroborated this witness but, by reference to his notarial record-book, was enabled accurately to fix the date. Had this application been filed immediately thereafter, it would have constituted a reduction to practice of all of the counts of the issue but, on January 25th, following, appellee filed his application and claims conception and disclosure as on November 25, 1911. On March 27, 1912, or about two months after appellee filed his application, appellant filed the application which he had executed as above noted.

The Examiner of Interferences ruled that, even though the execution of appellant's application of June 17, 1911, be considered sufficient evidence of conception and disclosure of the invention, there was no evidence to show that appellant had been diligent in—

developing his invention from a time just prior to the date upon which Schwartz entered the field up to the time when Deakin's application was filed—

and, accordingly, awarded priority to Schwartz as to those counts. The Examiners-in-Chief affirmed this ruling, as did the Assistant Commissioner.

It was earnestly contended before the Patent Office, as before this court, that the difference between the two groups of counts, that is between the dominating counts awarded to appellant and the counts awarded to appellee, is one of words and not of substance. While we are impressed with this contention, we prefer to place our decision upon a different ground. The evidence clearly and conclusively shows that when in June of 1911 appellant executed the application which he subsequently filed in an

unchanged condition, he was publicly installing an apparatus containing the dominating subject-matter of the invention. And, assuming that the group of counts here involved discloses another and modified form of the invention, what was more natural than that he should first reduce to practice the broad invention? Before the Patent Office appellee, while admitting that apparatus containing the subject-matter of counts 1 and 2, that is containing the dominating invention, was installed in Berkeley and Oakland, Cal., contended that the evidence did not establish that this installation took place prior to March, 1912. The Patent Office, however, ruled that it took place prior to November 25th, 1911, appellee's date of conception and disclosure. According to the proof, therefore, appellant just prior to appellee's entry into the field was diligently engaged in testing out the main invention, and within four months from the reduction to practice of the main invention he filed his application disclosing that invention and the modified form which is the subject-matter of this interference. At the time of the taking of the testimony, appellant had assigned his invention to the Western Electric Company and was himself in Antwerp, Belgium. While, of course, his testimony might have been taken, we think the evidence fully warrants the conclusion that the filing of the application so soon after the reduction to practice of the dominating invention precludes a finding of lack of diligence as to the subsidiary invention. Obviously, the only reason for delaying the filing of the application was the trying out of the invention, and to hold, under the circumstances of this case, that the short time that elapsed was more than sufficient for that purpose would be to perpetrate an injustice and deprive the real inventor of the fruits of his efforts.

The decision is reversed.

Reversed.

Notice of Registration---No. 1.

BRANCH REGISTRATION OFFICE,
UNITED STATES PATENT OFFICE,
PANAMA-PACIFIC INTERNATIONAL EXPOSITION,
San Francisco, California, December 1, 1915.

CERTIFICATE OF PROPRIETORSHIP.

This certifies that Grieshaber Freres & Co., residents of 12 Rue de Quatre Septembre, Paris, France, and citizens of France, have presented satisfactory proof showing them to be the proprietors of trade-mark issued by the Government of France, numbered 141,305, dated 21st of November, 1912, for photographic accessories manufactured by said Grieshaber Freres & Co. and imported by them for exhibition at the Panama-Pacific International Exposition, San Francisco, 1915, and installed in the pavilion of France, said exhibit consisting of two framed photographs with said trade-mark displayed thereon.

This certificate is issued by the United States Patent Office in accordance with the provisions of the act of Congress approved September 18, 1913. (H. R. 7595, Pub. No. 14.)

Date of admission and installation of exhibit in the pavilion of France, April 11, 1915.

(Signed) WILLIAM OSBORN,
In Charge, Branch Registration Office, San Francisco, Cal.

Approved:

THOMAS EWING,
Commissioner of Patents.

NOTICE.

The following notice appearing in the *Illustrated Official Journal* of the British Patent Office for January 12, 1916, is published for the information of those interested.

THOMAS EWING,
Commissioner.

Renumbering Specifications on Publication.

In order to give the public the advantage of having abridgments of specifications up to date while retaining their numerical sequence, applications for patents made subsequent to 1915 will be given new numbers when their complete specifications are accepted, or become open to public inspection before acceptance. The new numbers will start with No. 100,001 (without any indication of date), and will supersede the original application numbers in all proceedings after acceptance of the complete specifications.

It is intended in future to issue abridgments of specifications in the *Journal* a few weeks later than that in which their acceptance or publication is advertised, so that they will be available for search purposes soon after the printed copies of the specifications are on sale; but, until the system is fully in force, they will only be issued when there are sufficient to make up a full sheet of sixteen pages.

The present series of abridgments will run concurrently with the new series in the *Journal* until April, 1917, when it will be entirely superseded.

W. TEMPLE FRANKS,
Comptroller-General.

Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 28, 1916.

The Office is in receipt of a letter from a prominent attorney having a large German business, in which the writer states that, while British patent agents are prohibited by their own government from doing business with Germany for foreigners, the German Patent Office will accept all applications from the United States, and that applications may be filed either by direct communication or through American solicitors.

In view of the fact that there seems to be a general misunderstanding upon the point, this information is published for the benefit of those interested.

THOMAS EWING,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1916.

Ed. Crager & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selig Lasher, 103 Bleecker street, New York, N. Y., for registration of a trade-mark and trade-mark registered September 1, 1891, No. 20,089, to Ed. Crager & Co., 6 Great Jones street, New York, N. Y., and a notice of such declaration sent by registered mail to said Ed. Crager & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ed. Crager & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1916.

Adler Bros. & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Los Angeles Soap Company, of 633 East First street, Los Angeles, Cal., for registration of a trade-mark and trade-mark registered June 15, 1886, No. 13,403, to Adler Bros. & Co., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Adler Bros. & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Adler Bros. & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF FEBRUARY 15, 1916.

Patents	839—No.	1,171,405 to No. 1,172,243, inclusive.
Designs	35—No.	48,542 to No. 48,576, inclusive.
Trade-Marks	125—No.	108,502 to No. 108,626, inclusive.
Labels	8—No.	19,044 to No. 19,051, inclusive.
Prints	7—No.	4,213 to No. 4,219, inclusive.
Reissues	13—No.	14,061 to No. 14,073, inclusive.
Total	1027	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	1	North Carolina	5	.....
Arizona	3	.....	North Dakota	4	1
Arkansas	5	.....	Ohio	55	3
California	45	4	Oklahoma	3	2
Colorado	10	1	Oregon	11	2
Connecticut	15	2	Pennsylvania	89	13
Delaware	.....	.....	Rhode Island	8	3
Florida	1	2	South Carolina	4	.....
Georgia	3	3	South Dakota	2	.....
Idaho	2	1	Tennessee	7	1
Illinois	80	13	Texas	16	1
Indiana	27	5	Utah	4	.....
Iowa	11	1	Vermont	4	1
Kansas	6	.....	Virginia	7	2
Kentucky	16	.....	Washington	13	1
Louisiana	6	2	West Virginia	7	.....
Maine	6	2	Wisconsin	28	4
Maryland	5	2	Wyoming	2	.....
Massachusetts	53	7			
Michigan	21	4	Alaska, District of	.....	.....
Minnesota	18	1	Canal Zone	.....	.....
Mississippi	1	1	District of Columbia	8	2
Missouri	15	7	Hawaii Territory	.....	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	4	2	Porto Rico	.....	.....
Nevada	4	.....	U. S. Army	.....	.....
New Hampshire	4	.....	U. S. Navy	.....	.....
New Jersey	43	8			
New Mexico	1	.....	Total to residents of the United States	822	136
New York	129	31			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Mexico	1	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	1	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	9	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Scotland	1	.....
Cuba	.....	.....	South Africa	1	.....
Denmark	1	.....	Spain	1	.....
England	14	.....	Sweden	2	.....
Finland	.....	.....	Switzerland	4	1
France	4	.....	Tunis	1	.....
Germany	7	3	ransvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	2	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	1	.....			
Japan	1	.....	Total to residents of foreign countries	52	4
Luxemburg	.....	.....			
Mexico	.....	.....			

Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorization from the applicant is filed in connection with the application. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 12, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application awaiting office action.	Oldest amended application awaiting office action.	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 15	Jan. 6	309
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 10	Dec. 13	839
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Jan 17	Jan. 29	92
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Oct. 19	Jan. 26	365
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 25	Jan. 5	284
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	June 10	Dec. 1	466
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Nov. 11	Jan. 5	447
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 22	Jan. 5	1097
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	July 27	Dec. 28	510
235	10. Carriages and Wagons	Sept. 16	Jan. 25	702
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 13	Feb. 1	145
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 30	Jan. 25	442
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 8	Dec. 22	428
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Sept. 7	Jan. 12	174
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 4	Feb. 3	326
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Sept. 13	Jan. 6	458
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Nov. 2	Jan. 17	177
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Dec. 27	Jan. 13	193
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Dec. 11	Jan. 8	190
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 25	Jan. 20	145

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application awaiting office action.	Oldest amended application awaiting office action.	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 22	Jan. 6	294
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 26	Jan. 3	332
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	July 31	Jan. 24	419
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Sept. 8	Jan. 6	412
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 11	Jan. 28	126
106	26. Electricity, Generation; Motive Power.	June 18	Dec. 11	550
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 5	Jan. 10	211
65	28. Internal-Combustion Engines	Oct. 2	Dec. 27	416
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 16	Dec. 21	314
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 27	Jan. 28	292
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Oct. 16	Dec. 13	271
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	July 10	Jan. 17	689
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 6	Dec. 21	405
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Sept. 17	Jan. 20	210
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Sept. 21	Jan. 25	535
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Jan. 27	Oct. 25	670
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	July 22	Dec. 10	594
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Dec. 7	Jan. 14	223
321	39. Water Distribution	Sept. 25	Dec. 30	345
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 12	Jan. 29	844
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 25	Jan. 24	344
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	July 3	Oct. 19	847
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Sept. 20	Dec. 15	170

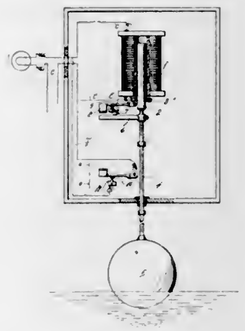
Oldest new case, June 10; oldest amended, Oct. 19.
Total number of applications awaiting action..... 17,311

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Dec. 24	Jan. 25	877
	Designs	Sept. 1	Jan. 11	49/
	Labels and Prints	Jan. 18	Jan. 14	89

PATENTS

GRANTED FEBRUARY 15, 1916.

1,171,405. LIQUID-LEVEL ELECTRICAL INDICATOR. DAVE ARLON, Dallas, Tex. Filed Feb. 26, 1915. Serial No. 10,841. (Cl. 177—311.)



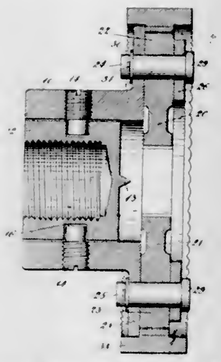
1. In an electrical indicator, the combination of a solenoid, of an alternating current electrical circuit connecting with said solenoid, a switch included in said circuit, a second electrical circuit, a switch included in said circuit, both circuits connecting with and adapted to illuminate a globe, a solenoid rod depending from the solenoid and exercising a controlling relation over the switches whereby the second named circuit energizes said globe with maximum brightness when the solenoid rod is in its lowermost position, the first named circuit energizes said globe when the rod is displaced from its lowermost position and starts upwardly, and whereby said illuminated globe is extinguished when the rod reaches its uppermost position.

2. In an electrical indicator, the combination of two alternating current electrical circuits, of a solenoid included in one circuit, a switch included in each circuit, a solenoid rod depending from the solenoid and adapted to open and close said switches, and said rod actuating said switches to decrease the flow of current through the solenoid and circuit as said rod rises upwardly through said solenoid.

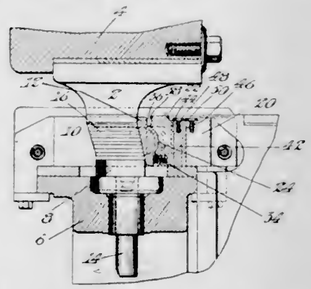
3. In an electrical indicator, the combination with a solenoid, of two electrical circuits connecting with said solenoid, the said circuits having connection with an illuminating globe, a solenoid core rod depending from the solenoid and adapted to carry a liquid float on its extremity, the globe adapted to be energized with maximum brightness when the rod is displaced from the solenoid, said globe adapted to be gradually dimmed as the rod is drawn into said solenoid and a switch arranged to open the circuit and terminate the energization of said globe when the rod has passed into the solenoid.

1,171,406. LATHE-DOG. WILLIAM AVERY, Foxboro, Mass. Filed Jan. 3, 1914. Serial No. 810,247. (Cl. 82—40.)

A lathe dog comprising a sleeve constructed for engagement with a lathe spindle and having a pair of opposing openings and a collar loosely mounted on the sleeve provided with opposing pins constructed to loosely engage the openings in the sleeve, the collar further being provided with pivotally mounted clamping jaws and an operating means therefor.



1,171,407. HEEL-COMPRESSING MACHINE. WILLIAM RODERICK BARCLAY, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 5, 1913. Serial No. 777,473. (Cl. 12—48.)



1. In a heel compressing machine, a heel compressing mold including a breast die movable to different angular positions with reference to other portions of the mold, said die being movable also bodily in directions substantially parallel to the plane of the top lift portion of the heel.

2. In a heel compressing machine, a heel compressing mold including a top lift die and a breast die normally maintained while in inactive position in a predetermined angular relation to the plane of the top lift die, said breast die being movable automatically to a different angular position during the compressing operation to cause its compressing face to incline relatively toward the heel engaging surface of the top lift die.

3. In a heel compressing machine, a heel compressing mold including a breast die normally maintained while in

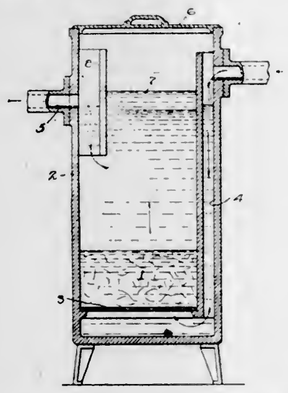
inactive position with its compressing face in substantially perpendicular relation to the top lift engaging surface of the mold, the parts of said mold having provision for relative movement to bring said face of the breast die into a different angular relation to other portions of the mold during the compressing operation.

4. In a heel compressing machine, the combination with a top lift die upon which the heel is supported, of a breast die normally maintained while in inactive position with its compressing face substantially perpendicular to the plane of the top lift die, said breast die being movable to cause its compressing face to assume an inclined position with reference to the plane of the top lift die during the compressing operation.

5. In a heel compressing machine, a heel compressing mold including a top lift die upon which the heel is supported, said die being movable vertically with reference to other portions of the mold to raise the heel after compression, and a breast die normally retracted from the path of said movement of the top lift die and having its compressing face substantially perpendicular to the plane of said die while in retracted position, said breast die having provision also for angular movement with reference to the top lift die so as to conform during the compressing operation to the incline of a sloping heel breast.

[Claims 6 to 16 not printed in the Gazette.]

1,171,408. EXTRACTION PROCESS. EDWIN O. BARSTOW, Midland, Mich., assignor of one-half to Thomas Griswold, Jr., Midland, Mich. Filed Jan. 22, 1912. Serial No. 672,539. (Cl. 87—6.)



1. In an extraction process of the character described employing a chlorinated solvent, the step which consists in passing the solvent recovered from the extracted material through a relatively stationary mass composed of a suitable neutralizing agent, and thereupon allowing such solvent to settle.

2. In an extraction process of the character described employing a chlorinated solvent, the step which consists in passing the solvent recovered from the extracted material through a relatively stationary mass composed of dry slacked lime.

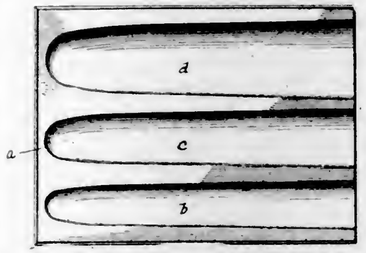
3. In an extraction process of the character described employing a chlorinated solvent, the step which consists in passing the solvent recovered from the extracted material upwardly through a collected body of such solvent including a layer of neutralizing agent.

4. In an extraction process of the character described employing a chlorinated solvent, the step which consists in passing the solvent recovered from the extracted material upwardly through a layer of dry slaked lime included at the bottom of a collected body of such solvent.

5. The method of separating the more soluble constituents of a material from the relatively less soluble constituents thereof, which consists of the following cycle of steps, viz: treating such material with a chlorinated solvent; recovering such solvent from the extracted material by distillation; treating such recovered solvent with a neutralizing agent; and then treating more material with such solvent; and then repeating such cycle.

[Claims 6 to 9 not printed in the Gazette.]

1,171,409. PACKAGING COINS. PRESSLEY E. BISLAND, Bronxville, N. Y., assignor to Abbott Coin Counter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 9, 1915. Serial No. 44,559. (Cl. 133—9.)



1. A tray for packaging coins, comprising a block provided with a groove to receive a rouleau of coins, said groove being of such curvature in cross section as to contact with the coins at points below their center, the bottom of said groove being inclined relatively to the upper edges thereof, whereby the coins are automatically caused to slant toward the lower portion of the groove.

2. A tray for packaging coins comprising a block having a horizontally placed upper surface and provided with a groove to receive a rouleau of coins, said groove being of such curvature in cross section as to contact with the coins at points below their center, the bottom of said groove being inclined from end to end whereby the coins are automatically caused to slant toward the lower portion of the groove.

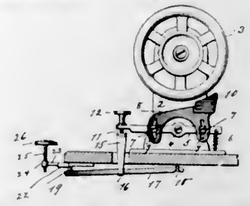
3. A tray for packaging coins comprising a block provided with a groove to receive a rouleau of coins, said groove being of such curvature in cross section as to contact with the coins at points below their center and being wider and deeper at one extremity than at the other, whereby when the rouleau is placed therein the coins automatically fall into slanting position toward the wider and deeper portion, and the slant of the coins is increased toward said portion.

4. A tray for packaging coins comprising a block provided with a groove to receive a rouleau of coins, said groove being of such curvature in cross section, as to contact with the coins at points below their center, the bottom of said groove being inclined from end to end, the angle of inclination being sharper at the shallow portion of the groove than at the deeper portion, whereby the coins are automatically caused to slant toward the lower portion of the groove.

5. A tray for packaging coins, comprising a block provided with a groove to receive a rouleau of coins, said groove being of such curvature in cross section as to contact with the coins at points below their center, the bottom of said groove being inclined, the angle of inclination being sharper and the groove narrower at its shallow portion, whereby the coins are automatically caused to slant toward the lower portion of the groove, and the rear coins may be readily engaged by the finger of the operator.

1,171,410. BRAKE ATTACHMENT FOR SEWING-MACHINES. MICHELANGELO BONO, New York, N. Y. Filed June 17, 1915. Serial No. 34,634. (Cl. 74—13.)

1. A brake attachment for sewing machines comprising a support, a machine head mounted thereon, a brake wheel carried by the head, a movable member operatively connected to the head, a brake shoe carried by said member and adapted to engage the wheel, and a vertically movable operative element arranged in proximity to the plane of the support at the edge thereof and operatively connected to said movable member.



2. A brake attachment for sewing machines comprising a support, a machine head mounted thereon, a brake wheel carried by the head, a lever pivoted to the head, a brake shoe mounted on the lever and adapted to engage the wheel, and a vertically movable operative element arranged in proximity to the plane of the support at the edge thereof and operatively connected to said lever.

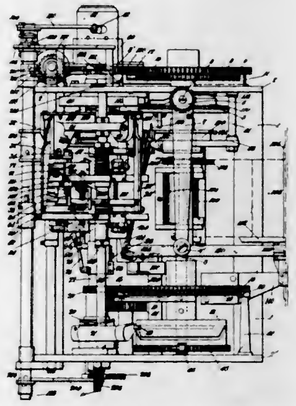
3. A brake attachment for sewing machines comprising a support, a machine head mounted thereon, a brake wheel carried by the head, a lever pivoted to the head, a brake beam adjustably secured to the lever, a brake shoe seated on said beam and adapted to engage the wheel, and an operative element arranged in proximity to the plane of the support at the edge thereof and operatively connected to said lever.

4. A brake attachment for sewing machines comprising a lever fitted to a sewing machine head, a brake shoe operatively connected to said lever, a threaded pin engaging the lever and having an elongated foot, a nut carried by the pin, a link having an elongated slot engaged by said foot, a lever operatively connected to the link, and arm-controlled means located at the front of the sewing machine table for operating said last named lever.

5. A brake attachment for sewing machines comprising a lever fitted to a sewing machine head, a brake shoe operatively connected to said lever, a link depending from the lever, a transversely arranged lever engaging the link, a longitudinally arranged lever extending along the front of the table and engaging the transverse lever, and an arm-controlled button operatively connected to the longitudinal lever.

[Claims 6 and 7 not printed in the Gazette.]

1,171,411. PACKETING-MACHINE FOR COINS AND OTHER ARTICLES. CHARLES LAURENCE BURDICK, London, England. Filed Mar. 7, 1913. Serial No. 752,666. (Cl. 93—2.)



1. A coin packeting machine having formers for shaping the coin receptacle consisting of outer and inner members, the outer member being in two parts, one of which is arranged to swing outward or be displaced to eject the packeted article.

2. A coin packeting machine having formers for shaping a coin receptacle consisting of an outer casing as 50—51, an interior former at the bottom as 94, an interior former at the upper end as 125 and means for adjusting the circumference of each in order to form receptacles of varying diameters.

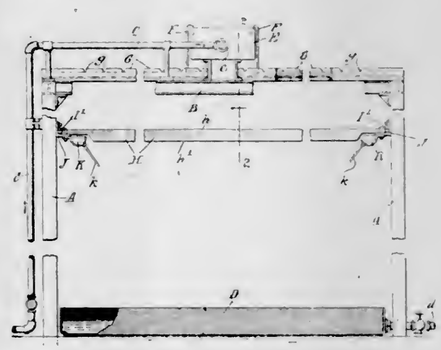
3. In a machine of the class described, members arranged to insert horizontally a strip of paper and to form a cylindrical coil, members arranged to place the article to be packeted in the shaped coil, members designed to fold the ends of the coil and a member as 58 which by a lateral movement ejects the packet.

4. A packeting machine having a central member positioned to receive paper or covering, members above and below serving as interior guides or formers for shaping the covering, folders for closing the ends of the packet and means for withdrawing the formers while the folding is being performed.

5. A packeting machine having a central member positioned to receive paper or covering, members above and below serving as guides or formers for shaping the covering, folders for closing the ends of the packet and means for forming an interior crease or ridge in the covering to support the coins while the ends of the packet are being folded.

[Claims 6 to 13 not printed in the Gazette.]

1,171,412. COOLING-TOWER. EDWIN BURHORN, Hoboken, N. J. Filed Sept. 6, 1912. Serial No. 718,857. (Cl. 261—3.)



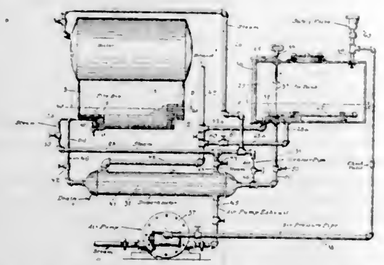
1. In a cooling tower the combination with elevated water distributing means, of a series of cooling members arranged in parallel manner to constitute a cooling deck, a cooling deck below said deck, adapted to receive water directly therefrom, and a gutter beneath the ends of said members for receiving water therefrom and delivering it to the said deck below.

2. In a cooling tower the combination with elevated water distributing means, of a series of cooling members arranged in parallel manner to constitute a cooling deck, and a combined separator and angle iron, as 1', for holding the members and maintaining them apart.

3. In a cooling tower the combination with elevated water distributing means of a series of cooling members arranged in parallel manner to constitute a cooling deck, and a combined gutter and angle iron, as K', for supporting said members and receiving water from their ends.

4. In a cooling tower the combination with elevated water distributing means, of a series of cooling members arranged in parallel manner to constitute a cooling deck, and overlying T-shaped separators having their vertical portions depending between the cooling members and adapted and located for maintaining the members apart.

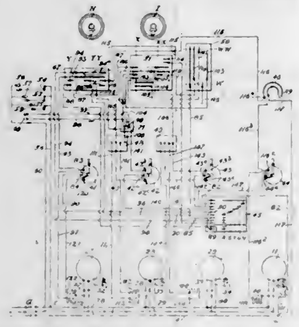
1,171,413. OIL-BURNING APPARATUS. CHARLES H. BURK, Orizaba, Mexico, assignor of one-half to H. C. Pierce, St. Louis, Mo., trustee for The Pierce-Fordyce Oil Association, of Texas. Filed Feb. 10, 1914. Serial No. 817,743. (Cl. 158—36.)



1. In an oil burning apparatus, a burner, an oil storage tank, an oil pipe leading from the tank to the burner, a superheater surrounding the oil pipe, a source of steam supply, a steam pipe leading therefrom to the burner and to the superheater, an exhaust pipe leading from the superheater, a coil connected with said exhaust pipe and located in the oil storage tank, combined with valved connections arranged so as to cut in and cut out the coil with the exhaust pipe, substantially as described.

2. In an oil burning apparatus, the combination with the boiler and fire box of a boiler furnace, of a burner located in the fire box, an oil storage tank, an oil pipe leading from the tank to the burner, a superheater surrounding the oil pipe, a heating coil located in the tank, an exhaust pipe leading from the superheater, a steam pipe leading from the boiler to the burner, a connection between the steam pipe and superheater, a cut-off valve included in the last named connection, a branch pipe leading from the exhaust pipe to the coil, a cut-off valve included in said branch pipe, a discharge pipe leading from the coil to the exhaust pipe, and a valve in the exhaust pipe between the connections with the branch and discharge pipes.

1,171,414. CHARGING AND DISCHARGING APPARATUS. HENRY A. CARPENTER, ROBERT L. HIBBARD, and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 2, 1914. Serial No. 875,208. (Cl. 214—23.)



1. A carriage, a platform frame on the carriage, a fuel charging and discharging device on the platform frame, a motor therefor, a motor operated closure for the charger and discharger, a feeder for the charger, a motor therefor, a circuit common to all the motors, and a master controller for the circuit adapted to control all of said motors.

2. A carriage, a platform frame on the carriage, a fuel charging and discharging device on the platform frame, a motor therefor, a motor operated closure for the charger and discharger, a feeder for the charger, a motor therefor, a circuit common to all the motors, a master controller for the circuit, motor driven means for imparting a vertical movement to the platform frame, and a circuit therefor independent of the first circuit.

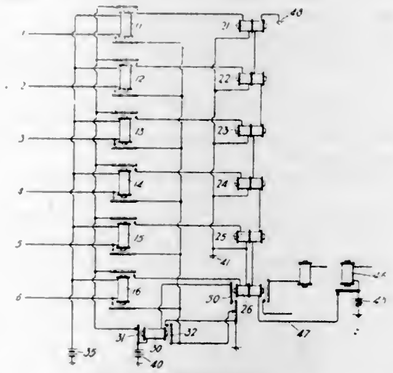
3. A carriage, a platform frame on the carriage, a fuel charging and discharging device on the platform frame, a motor therefor, a motor operated closure for the charger and discharger, a feeder for the charger, a motor therefor, a circuit common to all the motors, a master controller for the circuit, motor driven means for imparting a vertical movement to the platform frame, a circuit therefor independent of the first circuit, a motor for the carriage, and a circuit therefor.

4. A carriage, means for receiving a charge, means for discharging the charge from the receiving means, means for imparting a reciprocating movement to the discharge means, controlling means common to and controlling the operations of the receiving means, discharging means and said movement-imparting means for providing a predetermined cycle of operations to the several means, and means controlling the starting of such cycle.

5. In combination with a gas retort having a support, a carriage, a vertically reciprocatory frame on the carriage, discharging means on the vertically reciprocatory frame, and coacting means on the retort support and carriage to indicate when the carriage is in position to permit operation of the charger and discharger.

[Claims 6 to 86 not printed in the Gazette.]

1,171,415. SELECTING SYSTEM. OSCAR A. DANIELSON, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 20, 1914. Serial No. 825,970. (Cl. 178—23.)

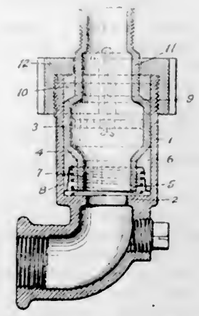


1. A selecting system comprising a plurality of selecting relays, a plurality of devices controlled thereby, circuits for said relays and devices, means for altering the circuit conditions of said relays and said devices so that said relays may function without affecting said devices, and means for restoring the circuit conditions so that any of said relays which have so functioned may affect the corresponding said devices.

2. A selecting system comprising a plurality of selecting relays, an energizing and a holding circuit therefor, a plurality of selecting devices, actuating circuits for said devices controlled by said relays, and means for altering the circuit conditions of said relays and devices and establishing new circuit conditions for said relays, whereby the operative functions of said relays and said devices may overlap.

3. A selecting system comprising a plurality of selecting relays, a plurality of selecting devices each controlled by a corresponding said relay, circuits influencing the action of said relays and coöperating with said relays and said devices, and means for altering the condition of said circuits for allowing said relays to operate without affecting said devices and then cause the relays which have so operated to subsequently affect said devices.

1,171,416. SWIVEL PIPE-JOINT. ELBERT G. ELVIN, Somerville, N. J., and FREDERICK W. MARTIN, New York, N. Y., assignors, by direct and mesne assignments, to Franklin Railway Supply Company, Wilmington, Del., a Corporation of Delaware. Filed July 30, 1913. Serial No. 781,941. (Cl. 137—34.)



1. In a swivel pipe joint, the combination of a cylindrical body section, a cylindrical sleeve fitted therein and having a tapered shoulder and a smaller cylindrical portion, and a tapered packing ring engaging said shoulder, the wall of the body and the smaller portion of the sleeve, and provided with a cavity at its inner end subject to the fluid pressure.

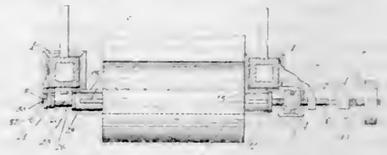
2. In a swivel pipe joint, the combination of a cylindrical body section, a sleeve fitted therein and having an inner tapered shoulder and an outer tapered shoulder, a tapered packing ring engaging the inner shoulder and the wall of the body section and provided with a cavity subject to the fluid pressure, a gasket engaging the outer tapered shoulder and with the inner surface of the wall, and a nut on said body for holding said gasket.

3. In a swivel pipe joint, the combination of a cylindrical body section, a cylindrical sleeve fitted therein and having a tapered shoulder, a tapered packing ring engaging said shoulder and the wall of the body section, and provided with a cavity at its inner end, and a metal spring ring lining the inner portion of the packing ring for pressing the same against the wall of the body section.

4. In a swivel pipe joint, the combination of a cylindrical body section, a sleeve fitted therein and having an inner tapered shoulder and an outer tapered shoulder, a tapered packing ring engaging the inner shoulder and the wall of the body section, a spring bearing against said packing ring, a soft metal gasket engaging the outer tapered shoulder and the inner surface of the wall of the body, and a nut for holding the gasket against the outer tapered shoulder of said sleeve.

1,171,417. EXPANSIBLE SHAFT. JAK ESENKO, Mill Creek, British Columbia, Canada. Filed May 29, 1915. Serial No. 31,229. (Cl. 242—72.)

1. An expansible shaft structure comprising a supporting table provided with a bracket, a longitudinally slotted cylinder, a swivel bearing operatively associated with said cylinder, a rotary partitioned coupling terminally engaging said cylinder, a cam shaft arranged in said cylinder and rotary coupling and capable of longitudinal movement with respect to said members, spring bars movably arranged in the slotted portions of said cylinder and formed with integral ribs having a bearing upon the said cam shaft through the longitudinal movement of which latter member said spring bars are actuated, a socket terminally carried by said cam shaft, a ball retained in said socket and normally having a bearing upon the aforesaid bracket and an expansion spring arranged about said cam shaft within said rotary coupling and abutting the partition in said member and the said socket whereby a longitudinal movement is imparted to said cam shaft as said cylinder is swung from the said swivel bearing.



2. An expansible shaft structure comprising a supporting table provided with a bracket, a longitudinally slotted cylinder, a swivel bearing operatively associated with said cylinder, a rotary partitioned coupling terminally engaging said cylinder, a cam shaft arranged within said cylinder and rotary coupling and capable of longitudinal movement with relation thereto, spring bars arranged in the slotted portions of said cylinder and formed with integral ribs having a bearing upon the said cam shaft through the longitudinal movement of which a transverse movement is imparted to said spring bars, a socket terminally carried by said cam shaft, a ball retained in said socket and normally having a bearing upon the aforesaid bracket and an expansion spring arranged about a portion of said cam shaft within said rotary coupling and abutting the partition in said member and the said socket whereby movement is imparted to said cam shaft when said cylinder is swung from its swivel bearing.

3. An expansible shaft structure comprising a supporting table provided with a bracket, a longitudinally slotted cylinder, a rotary shaft formed with an integral annular cap secured to said cylinder, a swivel bearing for said rotary shaft, a rotary partitioned coupling terminally engaging said cylinder, a cam shaft arranged within said cylinder and rotary coupling and capable of longitudinal movement with relation thereto, spring bars arranged in the slotted portions of said cylinder and formed with integral ribs having a bearing upon the said cam shaft through the longitudinal movement of which a transverse movement is imparted to said spring bars, a socket terminally carried by said cam shaft, a ball retained in said socket and normally having a bearing upon the aforesaid bracket and expansion means within said coupling and associated with said socket and cam shaft for imparting a longitudinal movement to the latter member as said rotary shaft is swung in its swivel bearing.

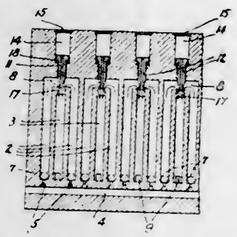
4. An expansible shaft structure comprising a supporting table, a swivel bearing carried by said table, a shaft supported in said swivel bearing, a guide bracket carried by said table and in engagement with said shaft, a longitudinally slotted cylinder, a cap formed integral with the said shaft and engaging said cylinder, a guide tongue formed integral with said cap and projected into said cylinder, a rotary partitioned coupling terminally engaging said cylinder, a cam shaft arranged in said cylinder and rotary coupling and formed with a bore in one end to receive the said tongue and capable of longitudinal movement with respect to the said members, spring bars movably arranged in the slotted portions of said cylinder and formed with integral ribs having a bearing upon the said cam shaft through the longitudinal movement of which latter member said spring bars are actuated, a socket terminally carried by said cam shaft, a ball retained in said socket, an expansion spring arranged about said cam shaft within said rotary coupling and abutting the partition in said member and the said socket whereby

longitudinal movement is imparted to said cam shaft as said cylinder is swung together with the first named shaft in the said swivel bearing and means carried by said table and normally in frictional engagement with the said ball whereby longitudinal movement of the same and its connections is normally obviated.

5. An expansible shaft structure comprising a supporting table, a swivel bearing carried by said table, a slotted cylinder operatively associated with said swivel bearing, rotary connection for one end of said cylinder, a support carried by said table for said rotary connection and capable of disengagement therefrom, a cam shaft arranged in said cylinder and capable of longitudinal movement with relation thereto, means disposed in the slotted portions of said cylinder for frictional engagement with said cam shaft and operable thereby to engage or disengage a roll of paper upon said cylinder and means carried by said table and normally disposed in the plane of rotation of said cam shaft whereby relative longitudinal movement of the same is normally obviated.

[Claim 6 not printed in the Gazette.]

1,171,418. COKING AND GAS-GENERATING OVEN. WILLIAM FEICKS, Bloomfield, N. J. Filed Jan. 22, 1912. Serial No. 672,771. (Cl. 202—9.)



1. In a coking or gas generating oven, upright heating flues in the walls thereof consisting of primary and interposed secondary heating flues, means for supplying gas and air to the lower portions of said primary heating flues in such proportions as to effect only partial combustion of the gas in these flues, connections between said primary and secondary heating flues, regulating bodies, removably inserted into the oven structure through openings above the heating space formed by the oven wall and having their lower ends normally extended within restricted openings formed by the heating flues, and air passages formed by said regulating bodies.

2. In a coking or gas generating oven, upright heating flues in the walls thereof, a series of regulating bodies inserted into the oven structure through openings above the heating flues, said regulating bodies being supported outside the heating space of the oven wall and having their lower ends normally extended into the upper connecting passages of the heating flues, means affording a vertical adjustment of said regulating bodies, air passages formed by said regulating bodies for conducting air into the heating space of the oven wall, and means for adjusting the air supply to such passages, such means as well as regulating bodies being accessible and removable through identical closable openings in the oven structure.

3. In a coke oven or gas furnace having primary and secondary heating flues in communication by passages, the combination of means for regulating the cross sectional areas of said passages, said means comprising devices arranged to be inserted in the oven walls in proximity to said passages and having passages for the supply of air.

4. In a coke oven or gas furnace having primary and secondary heating flues in communication by passages and means for supplying air and gas to said flues, the combination of nozzles supported in the oven walls and arranged in proximity to the passages, said nozzles having means for supplying additional air to said communicating passages, and being adjustable in said oven, whereby the cross sectional areas of said passages may be regulated.

5. In a coke oven or gas furnace having heating flues in the walls thereof, some of said heating flues having restrictions at their upper ends, removable regulating plugs suspended through openings in the oven wall above said restrictions and having their lower ends normally extended within said restrictions, the relative shape of the flue restrictions and the lower plug ends being such that the openings in the flues are increased or decreased according to the vertical position of the plugs, and means for affording vertical adjustment of said plugs.

[Claims 6 and 7 not printed in the Gazette.]

1,171,419. FUSED BIFOCAL LENS. EDWARD J. FINK, Sycamore, Ill. Filed Jan. 21, 1911. Serial No. 603,893. (Cl. 88—54.)



1. A bifocal lens consisting of a two-part major lens, and a minor lens inclosed within the major lens, the edges only of the parts of the major lens being fused together.

2. A bifocal lens consisting of two major lens portions each having outer curved surfaces and inner joining surfaces, and a minor lens located in a cavity between the major lens portions, the edges only of the major lens portions being joined by fusion.

3. A bifocal lens consisting of two major lens portions each having outer curved surfaces and inner joining surfaces, and a minor lens located in a cavity between the major lens portions, the edges only of the major lens portions being beveled and joined by fusion.

4. A lens consisting of two lens portions having their beveled edges only fused together.

5. A bifocal lens consisting of a two-part major lens and a minor lens between them, the lower edge only of the minor lens being united by fusion to a lower edge only of a major lens.

[Claims 6 to 9 not printed in the Gazette.]

1,171,420. PASS OR TICKET FOR RAILWAYS AND THE LIKE. EVERET A. FLEMING, Chicago, Ill. Filed Oct. 14, 1912. Serial No. 725,740. (Cl. 11—15.)



1. A pass or ticket comprising a strip divided by vertical lines into three sections, each provided with appropriately designated spaces to receive data concerning the going and return trips, located respectively on separate portions thereof, said designated spaces appearing on the obverse faces of the end sections and on the reverse face of the central section and registering when the sections are superposed, said end sections forming respectively the pass or ticket proper and a record coupon, and the going and return trip portions of said central section being divided to form separate identification coupons, substantially as described.

2. A pass or ticket comprising a strip divided by weakened vertical lines into three substantially equal sections, each provided with appropriately designated spaces for receiving data concerning the holder of the pass or ticket and each section having appropriately designated spaces to receive data concerning the going and return trips on its right and left hand portions, respectively, said designated spaces appearing alternately on the opposite faces of said sections and registering when the sections are folded upon one another, said end sections forming respectively the pass or ticket proper and a detachable record coupon and the right and left hand portions of said central section being divided by a weakened vertical line to form detachable identification coupons, substantially as described.

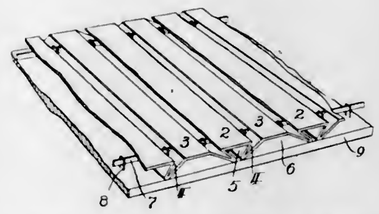
3. A pass or ticket comprising a pass or ticket section and a coupon section, each of said sections having appropriately designated spaces for receiving data concerning the holder and the going and return trips, said coupon section being divisible into two detachable coupons bearing respectively said designated spaces for the going and return trips and each having an appropriately designated space for the signature of the user of the pass or ticket, said pass or ticket section and each of said coupons bearing the same serial number, substantially as described.

4. A pass or ticket comprising a strip divided by vertical lines into three substantially equal sections, each having appropriately designated spaces for receiving data concerning the holder of the pass and the going and return trips, said designated spaces being located on the obverse face of the end sections and the reverse face of said central sections and registering when said sections are superposed, said designations for the going and return trips being located on the right and left hand portions respectively of each of said sections, and the right and left hand portions of said central sections being divided by a vertical line to form separate detachable coupons, each of said coupons having an appropriately designated space for the signature of the user of the pass, and said coupons and said end sections each bearing the same serial number, substantially as described.

5. A pass or ticket comprising a strip divided into a plurality of sections, each provided with appropriately designated spaces to receive data concerning separate trips arranged to register when said sections are superposed, said designated spaces for the separate trips being arranged, respectively, on separate portions of each of said sections, and the said separate portions of one of said sections being divided to form a plurality of separately detachable identification coupons, each bearing the designated spaces pertaining to one trip, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,171,421. PLASTER-BOARD. SILAS M. FORD, St. Paul, Minn. Filed Aug. 9, 1915. Serial No. 44,508. (Cl. 20—13.)

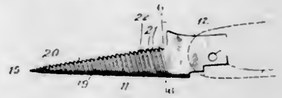


1. A plaster board comprising a sheet of flexible material corrugated to form lath-like projections and intermediate plaster receiving recesses, every other projection being formed in the shape of a keyed lath with inwardly inclined sides, and the intermediate projections being formed with outwardly inclined sides, the inclination of the sides being such that the air spaces beneath said projections will overlap the intermediate plaster receiving recesses both above and beneath the same.

2. A plaster board comprising a sheet of flexible material corrugated to form lath like projections and intermediate plaster receiving recesses, every other projection having inwardly inclined sides and the intermediate projections having outwardly inclined sides, the inclination of the sides being such that the air spaces beneath the outwardly inclined projections will underlie the plaster receiving recesses at the sides of said projections.

3. A plaster board comprising a sheet of flexible material corrugated to form lath-like projections and intermediate recesses, every other projection having inwardly inclined sides and the intermediate projections having outwardly inclined sides, and reinforcing strips incorporated in said sheet and extending transversely of the corrugations, whereby to hold them to form in use.

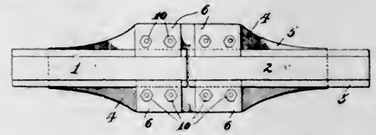
1,171,422. POCKET-KNIFE PUNCH. JAMES E. FULLER, New York, N. Y., assignor to New York Knife Company, New York, N. Y., a Corporation of New York. Filed June 12, 1915. Serial No. 33,648. (Cl. 7—11.)



1. A pocket knife punch adapted to be closed into and opened from a pocket knife handle, the said punch having a knife-edged body portion adapted to enter the knife handle groove when closed and a flange portion adapted to overlie the knife handle edge when closed, said punch formed with a rounded exterior surface and tapered to a stabbing point, and said exterior surface formed with a series of cross ribs inclined substantially as and for the purposes set forth.

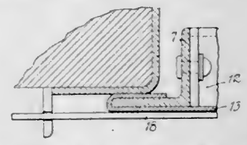
2. A pocket knife punch blade constructed of a generally split-cone-like shape with concave interior and a rounded convex exterior surface and tapered to a stabbing point, said convex surface formed with a series of slightly inclined cross ribs, the first of which is in proximity to the blade point.

1,171,423. RAIL-JOINT. EDOUARD GABOURY, Quebec, Quebec, Canada. Filed Jan. 14, 1915. Serial No. 2,226. (Cl. 239—6.)



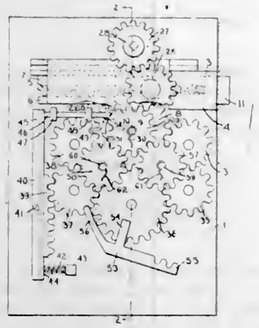
A rail joint, comprising, a bed plate having a comparatively wide central portion adapted to underlie abutting rail ends and extend considerably beyond the same at each side, and having its ends of the same width as and covered by the rail ends, the intermediate portions being tapered from the central portion to such end portions, pairs of clamping plates adapted to engage the rail flanges to couple the rail ends to said bed plate; and means for securing said clamping plates in position at the central portion of the bed plates.

1,171,424. DOOR. WAINWRIGHT B. GERVAIS, Chicago, Ill., assignor to Variety Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 30, 1914. Serial No. 828,156. (Cl. 189—46.)



In a door frame of L shaped angle bars, the bars on the top and both sides having one flange of each forming an open frame, the other flange extending out to form a peripheral flange about said frame, a bar joining the bottom of said side bars and a sheet of sheet metal lying loosely on and closing said open frame and being bent over the latter flanges of said angle bars, said latter flanges being adapted to be outside of the door casing.

1,171,425. LOCK. LIBORIO G. GIARDINO, Campello, Mass. Filed June 22, 1915. Serial No. 35,659. (Cl. 70—69.)



1. A lock comprising a plurality of locking bolts, independently operable racks and gears for actuating said bolts and means adapted to cause the actuation of both said bolts in unison.

2. A lock comprising a plurality of locking bolts, independently operable means for actuating one of said bolts and a master key adapted to cause the actuation of both said bolts in unison and means operable by said master key for locking said bolts in projected or retracted position.

3. A lock comprising a main locking bolt and an auxiliary locking bolt, means including racks and gears for actuating both bolts in unison from a master key, means for actuating the auxiliary bolt by an auxiliary key independently of the main bolt when the latter is retracted and means operable by the master key for locking the main bolt in retracted position whereby the actuation thereof by the auxiliary key is prevented.

4. A lock comprising a main locking bolt, an auxiliary locking bolt and means for actuating the said bolts including racks and gears, the auxiliary lock being operable by an auxiliary key and both locks being operable simultaneously by a master key.

5. A lock comprising a main locking bolt, an auxiliary locking bolt and means for actuating the said bolts including racks and gears, the auxiliary lock being operable by an auxiliary key and both locks being operable simultaneously by a master key and means for retaining the gear which actuates the main bolt from rotation when the latter is retracted, whereby the auxiliary bolt may be operated independently of the main bolt.

[Claims 6 to 14 not printed in the Gazette.]

1,171,426. TRAIN-STOP SYSTEM. LOUIS A. GLADDING and JAMES H. SULLIVAN, Newport, R. I. Filed Oct. 10, 1913. Serial No. 794,411. (Cl. 246—58.)

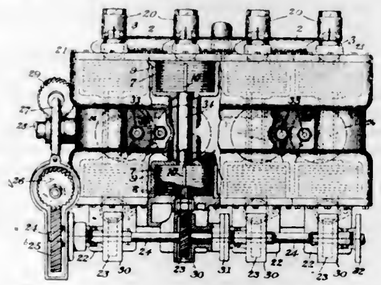


1. In a train stop apparatus, the combination of a controlling lever for throwing on and off the propulsion power, a latch device including a movable member adapted to be grasped when the handle of the lever is grasped, for permitting the lever to be manually operated, a device acting on the lever with a tendency to throw the same to power-off position, a bracket on the lever, an operating lever pivotally mounted on the bracket and engaging the member, and electromagnetic means carried by the controlling lever and having a movable element engaging the second-mentioned lever to operate the said member to release the latch device.

2. In a train stop apparatus, the combination of a lever for throwing on and off the power, means tending to move the lever to off position, a latch device for locking the lever in any desired position and including a grip member arranged adjacent the handle portion of the lever, in combination with a lever fulcrumed on the controlling lever adjacent the handle portion thereof and normally engaging the grip member of the latch device, an armature having a portion wiping against the last-mentioned lever for actuating the grip member of the latch device, and an electromagnet mounted on the controlling lever at a point inwardly from the handle portion thereof for operating the armature.

3. In a train stop system, the combination of a throttle lever, means tending to move the lever to throttle closing position, a latch on the lever, a toothed sector with which the latch engages to hold the lever in throttle open position, a handle for operating the latch, an electromagnet on the lever, an operating lever mounted on the throttle lever to operate the said handle for releasing the latch from the tooth sector, and an armature actuated by the magnet for moving the said operating lever to latch releasing position, and a circuit for the magnet adapted to be closed under emergency conditions of traffic.

1,171,427. INTERNAL-COMBUSTION ENGINE. JOHN GOOD, Brooklyn, N. Y. Filed Jan. 7, 1914. Serial No. 810,721. (Cl. 123—59.)



1. A multi-cylinder combustion engine having rotary multiple disk intake and exhaust valves rotating on axes which are transverse to their respective cylinder axes and also transverse to the row of cylinders, intake and exhaust ports controlled by said rotary valves and disposed on opposite sides of the cylinder axes, respectively, a common drive-shaft for all of said valves, and gear means connecting the shaft with the engine crank-shaft.

2. In a combustion engine, a plurality of cylinders each having a rotary valve-shaft disposed transversely to its cylinder axis and also to the row of cylinders, a pair of rotary multiple disk valve-members secured to each shaft, the members of each pair being exposed to the combustion pressure of its cylinder in opposite directions, and a common drive-shaft for all of the said valve-shafts.

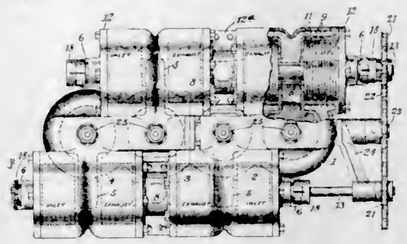
3. In a combustion engine, a plurality of cylinders, a valve-shaft for each cylinder journaled transversely thereof and also transversely of the row of cylinders, oppositely disposed intake and exhaust valves mechanically connected to each other by the valve-shaft and respectively exposed in opposite directions to the combustion pressure, a gear on each of the valve-shafts, a common drive-shaft engaging said gears and means independent of the valve members for adjusting said valve shafts in an endwise direction.

4. In a combustion engine, a row of cylinders each having a valve-shaft carrying a series of disks and rotating on axes and also to the row of cylinders transverse to their cylinder axes, a series of port disks interlapping with the shaft disks and forming a valve therewith, a longitudinal drive-shaft geared to each of the valve-shafts for operating the respective disks thereof, and a gear means for operating the drive-shaft from the engine crank-shaft.

5. In a combustion engine, a row of cylinders, a valve-shaft for each cylinder having a series of disks thereon, and journaled at the head of each cylinder to rotate on axes transverse to the cylinder and to the row of cylinders, in combination with a complementary series of disks for each series of shaft-borne disks, interlapping but not contacting therewith, a longitudinal drive-shaft on one side of the cylinder geared to each valve-shaft thereof and driven by the engine crank-shaft, and means independent of the drive shaft for adjusting the valve shafts in an endwise direction.

[Claim 6 not printed in the Gazette.]

1,171,428. INTERNAL-COMBUSTION ENGINE. JOHN GOOD, Brooklyn, N. Y. Filed Jan. 17, 1914. Serial No. 812,632. (Cl. 121—24.)



1. The combination, in an internal combustion engine comprising cylinders in a row, of two sets of rotary valves disposed respectively on opposite sides of said row, each set controlling the intake and exhaust ports of alternate cylinders in the row.

2. In a multi-cylinder internal combustion engine the combination of a rotary valve shaft common to several cylinders and operating a rotary valve for each said cylinder, said valve comprising a series of movable ported members and a series of relatively fixed ported members interlapping therewith, the said members by their rotation being adapted to open and close passages through the valves to the respective cylinders served thereby.

3. In a multi-cylinder internal combustion engine, the combination of a rotary valve shaft common to several cylinders, rotary valves operated thereby each comprising a series of ported members borne on the shaft and a series of relatively fixed ported members interlapping with the others, the relatively movable members coacting with the fixed members to open and close a passage from the cylinder extending through said members in a direction parallel to the valve shaft, and means for rotating the valve shaft.

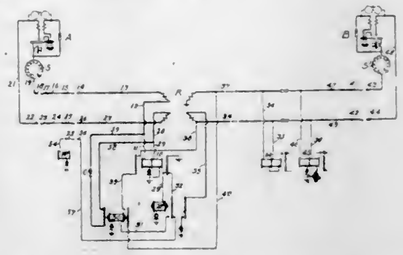
4. In a multi-cylinder internal combustion engine, a rotary valve shaft extending alongside of several cylinders, a plurality of labyrinth valves operated by such shaft, each valve comprising a series of relatively fixed ported members and a series of relatively movable ported members interlapping therewith, and means for preventing displacement of the rotary members by the thermal expansion of their operating means.

5. In a multi-cylinder internal combustion engine, a rotary valve shaft extending alongside of several cylinders, a plurality of labyrinth valves, each comprising a series of relatively fixed disks and a series of relatively rotary disks interlapping therewith, the latter being secured to the valve shaft adjacent the cylinders and an expansion joint in the shaft between the cylinders.

[Claims 6 to 8 not printed in the Gazette.]

1,171,429. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 23, 1915. Serial No. 41,480. (Cl. 179—18.)

1. In a telephone exchange system, the combination with a talking circuit divided into sections, a repeating coil uniting said sections inductively, of a relay included in one section of said circuit, a sender adapted to operate the same, a relay included in the other section of said circuit, a shunt circuit about said last-mentioned relay controlled by said first mentioned relay, and an automatic switch adapted to be set by the impulses so produced.



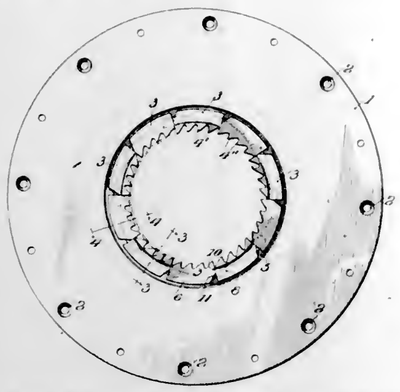
2. In a telephone exchange system, the combination with telephone lines, offices wherein said lines terminate, a trunk circuit interconnecting said offices and divided into incoming and outgoing sections, a repeating coil uniting said sections inductively, means for associating a calling line with the incoming section of said trunk, a stepping relay in said section adapted to be energized when a calling line is connected thereto, a relay adapted to be operated by said stepping relay and to apply current to the outgoing section of said trunk, a stepping relay included in said trunk at the distant office adapted to be energized by the closure of said circuit, a shunt about said stepping relay adapted to be closed upon each operation of said stepping relay in the incoming section, and an automatic switch adapted to be set by said stepping relay at the distant office.

3. In a telephone exchange system, the combination with telephone lines, offices wherein said lines terminate, a trunk circuit interconnecting said offices and divided into incoming and outgoing sections, a repeating coil uniting said sections inductively, means for associating a calling line with the incoming section of said trunk, a stepping relay in said section adapted to be energized when a calling line is connected thereto, a slow relay adapted to be operated from the front contact of said stepping relay and to apply current to the outgoing section of said trunk, a stepping relay included in said trunk at the distant office energized by the closure of said circuit, a shunt circuit about said relay adapted to be closed upon each operation of said stepping relay in the incoming section, and an automatic switch adapted to be set by said stepping relay at the distant office.

4. In a telephone exchange system in combination with telephone lines, offices wherein said lines terminate, a trunk circuit interconnecting said offices and divided into incoming and outgoing sections, a repeating coil uniting such sectons, means for associating a calling line with the outgoing section of said trunk, a stepping relay 10 in the incoming section and adapted to be energized when a calling line is connected thereto, a slow relay 28′ adapted to be energized from the front contact of said stepping relay and to apply current to the outgoing section of said trunk, a second slow relay 30 adapted to be operated from the back contact of said stepping relay, a stepping relay 60 included in said trunk at the distant office energized by the closure of said circuit, a shunt about said relay controlled at front contacts of said slow relay 30 and stepping relay 10 and adapted to be closed each time the stepping relay is energized, and an automatic switch adapted to be set by said stepping relay 60 in the distant office.

5. In a telephone exchange system, the combination with a talking circuit divided into sections, means for inductively uniting said sections including feed coils and a source of current, an electromagnet included in one section of said circuit, a sender adapted to operate the same, an electromagnet included in the other section of said circuit, a shunt circuit about said last mentioned magnet controlled by said first mentioned magnet, and an automatic switch adapted to be set by the impulses so produced.

1,171,430. ROTARY METAL-CUTTING-OFF DEVICE. GEORGE GORTON, Racine, Wis. Filed July 16, 1914. Serial No. 851,374. (Cl. 29—105.)



1. A rotary cutting off device having a central work receiving opening, in combination with a cutter ring wedged in said holder around said opening, said holder and ring having coöperating wedging surfaces to lock the ring in the holder by the wedging action of said surfaces on relative rotary movement of the holder and ring in one direction and to loosen said ring in said holder on relative rotary movement in the opposite direction, said ring being composed of a series of separate removable cutter blocks abutting end to end and held thus tightly together to form the ring when locked in the holder.

2. A saw comprising a blade having a central work receiving opening, and a cutter ring fitted to the blade in said opening and composed of separate removable cutter blocks each formed with a series of cutters, said blade and blocks being formed with coöperating surfaces to force the blocks inwardly to locking position tightly abutting at their ends on forward rotation of the blade.

3. A saw comprising a blade having a central work receiving opening, the edge of the blade around said opening forming a series of inclined cutter block seats, and a cutter ring fitting said edge around said opening and composed of a series of separate removable cutter blocks abutting end to end and fitted to said seats respectively.

4. A saw comprising a blade having a central work receiving opening and an endless series of inclined cutter block receiving seats around said opening, and an endless series of separate similar removable cutter blocks fitted on said seats, respectively, each seat being longer than its cutter block, substantially as described.

5. A saw comprising a blade having a central work receiving opening, the edge of the blade around said opening forming an endless series of similar eccentric segmental cutter block seats separated by radial shoulders with respect to the axis of the blade, and a series of cutter blocks removably engaging said seats and longitudinally slidable thereon and movable radially of the blade to and from operative rocked position and inoperative position.

[Claims 6 to 10 not printed in the Gazette.]

1,171,431. DRINKING-CUP. ROBERT GORTON, West Newton, Mass. Filed Nov. 28, 1913. Serial No. 803,576. (Cl. 229—53.)

1. A collapsible drinking cup open at the top for filling and having a relatively small or restricted delivery opening and provided with a collapsible lip guard bridging the cup from one side thereof to the other at one corner of the cup and to one side of its filling opening.

2. A drinking cup open at the top for filling and having a relatively small or restricted delivery opening near one corner thereof at the top and a collapsible lip guard bridging the cup from one side thereof to the other at one corner of the cup and on one side of its filling opening.



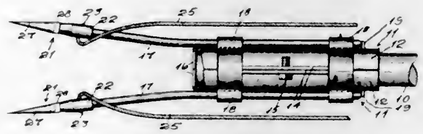
3. A collapsible drinking cup open at the top for filling and having a relatively small or restricted delivery opening and with its body portion provided with vertical edges about which the sides of the cup open and close to an equal extent, and a lip guard for said delivery opening united with the side edges of the cup near one corner thereof and extending therefrom toward the middle portion of the cup and covering only that portion of the filling opening between the delivery opening and the middle portion of the cup.

4. A collapsible drinking cup open at the top for filling and having a relatively small or restricted delivery orifice at one corner of the cup, and a collapsible lip guard bridging the cup from one side thereof to the other at one corner of the cup and on one side of its filling opening, said lip guard being of general triangular shape having its apex at one corner of the cup and its free edge, which is relatively wide and forms the base of the triangle, bridges the filling opening at one side thereof.

5. A sanitary drinking cup formed from a single piece of stock the open top of which cup has extended thereacross to bridge the cup faces at a cup corner, a narrow strip constituting a mouthpiece the ends of which strip are secured to said cup faces so as to cover the cup rim at said places of attachment which strip thus secured partially closes the cup top, said cup rim and a free edge of said strip being coöperatively shaped and assembled with respect to one another to provide a restricted pouring opening.

[Claims 6 and 7 not printed in the Gazette.]

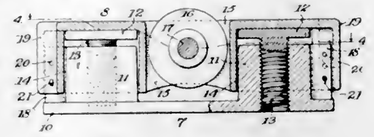
1,171,432. FISH-SPEAR. SHELBY F. HENDERSON, Henderson, Cal. Filed May 7, 1914. Serial No. 837,023. (Cl. 43—6.)



1. In apparatus of the character described, a clamping casing formed in a plurality of hinged casing sections provided at their apposite corresponding edges with flaps, adjustable means connecting the flaps, a plurality of knuckles arranged longitudinally of each casing section, a stop element carried by each casing section rearwardly of one knuckle, and a spear carrying rod arranged within the knuckles of each casing section with its rear end engaging the stop.

2. In apparatus of the character described, a plurality of oppositely arranged casing sections, each casing section being provided at its forward end with an inwardly extending flap to contact with a handle, each casing section being provided with knuckles stamped therefrom and a stop element stamped therefrom and arranged rearwardly of the rear knuckle; means pivotally connecting corresponding longitudinal edges of the casing sections; adjustable means connecting the opposite corresponding edges of the casing sections; and spear carrying rods arranged in the knuckles and contacting with the stops.

1,171,433. SIDE BEARING FOR RAILWAY-CARS. JOHN J. HENNESSEY, Milwaukee, Wis. Filed Nov. 5, 1915. Serial No. 59,725. (Cl. 64—64.)



1. In a side bearing for railway cars the combination of a base member adapted for attachment to a bolster and provided with vertically adjustable supports, and a bearing member having sockets fitting over said supports.

2. In a side bearing for railway cars the combination of a base member provided with means for attachment to a bolster and with vertically adjustable supports, and a bearing member provided with a roller and formed on opposite sides of the roller with sockets fitting over said supports.

3. In a side bearing for railway cars the combination of a base member formed with a flange for attachment to a bolster and with spaced vertically adjustable supports, a bearing member formed with a central open recess and on opposite sides of the recess with sockets fitting over said supports and closed on the side opposite the base member, and a horizontal roller mounted in said recess transversely to the bearing member and projecting therefrom on the side opposite the base member.

4. In a side bearing for railway cars the combination of a base member provided with a vertically adjustable rest threaded in said member, and a bearing member having a socket removably fitting over said rest.

5. In a side bearing for railway cars the combination of a base member provided with a polygonal rest having a vertical stem threaded in said member, and a bearing member having a polygonal socket removably fitting over said rest.

[Claims 6 and 7 not printed in the Gazette.]

1,171,434. LIQUID FUEL FOR INTERNAL-COMBUSTION ENGINES. GEORGE EDWARD HEYL and THOMAS THORNE BAKER, London, England. Filed Dec. 8, 1914. Serial No. 876,065. (Cl. 44—8.)

1. A liquid fuel for internal combustion engines consisting of the middle oils of coal tar or analogous tars, from which the naphthalene and tar acids have been almost entirely removed, mixed with a mineral oil liquid fuel, and freed from deposited matter.

2. A liquid fuel for internal combustion engines consisting of the middle oils of coal tar or analogous tars, from which the naphthalene and tar acids have been almost entirely removed, mixed with gasolene, and freed from deposited matter.

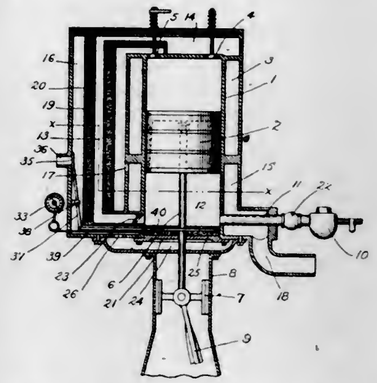
3. A liquid fuel for internal combustion engines consisting of the middle oil of coal tar distilled from tar between temperatures of 170° C.–230° C., said tar being that from which the naphthalene and tar acids have been substantially removed and mixed with a mineral oil liquid fuel.

4. A fuel liquid for internal combustion engines consisting of the middle distillates of coal tar from which the naphthalene and tar acids have been almost entirely removed and a preciplitate has been deposited by the addition of a moderte quantity of mineral oil and a larger quantity of mineral oil liquid mixed therewith.

5. A liquid fuel mixture for internal combustion engines consisting of the middle distillates of coal tar or analogous tars from which the naphthalene and tar acids have been almost entirely removed, such middle distillates being those containing up to 20% by volume of naphthalene and about 6.5% of tar acids, such as cresols, phenols, said naphthalene being removed from said middle distillates so that the liquid remains free from any deposits of naphthalene at 5° C., and becomes a substance which completely vaporizes and burns in an internal combustion engine, the tar acids being removed down to ½% by washing or by neutralization and a hydrocarbon liquid fuel mixed with said treated tar oils whereby a fuel is produced which when mixed with air ignites under the action of an electric spark more readily and quicker than the vapors of either of such tar oils or liquid fuels separately.

[Claims 6 and 7 not printed in the Gazette.]

1,171,435. INTERNAL-COMBUSTION ENGINE. GEORGE H. HINCHLIFFE, Boston, Mass. Filed Feb. 20, 1914. Serial No. 820,054. (Cl. 123—75.)



1. In an internal combustion engine, the combination with a cylinder, of a piston therein, one end of the cylinder constituting the working end thereof and the other end constituting a heating chamber for the combustible fluid, means to deliver a combustible fluid charge to said chamber, a passage forming communication between said chamber and the working end of the cylinder, a jacket surrounding said chamber, and means whereby the exhaust gases from the engine are exhausted through said jacket, the heat of said exhaust gases operating to heat the charges of combustible fluid delivered to said chamber.

2. In an internal-combustion engine, the combination with a cylinder, of a piston therein, one end of the cylinder constituting the working end thereof and the other end constituting a heating chamber for the combustible fluid, means to deliver a combustible fluid charge to said chamber, a passage forming communication between said chamber and the working end of the cylinder, a jacket surrounding said chamber, means whereby the exhaust gases from the engine are exhausted through said jacket, the heat of said exhaust gases operating to heat the charges of combustible fluid delivered to said chamber, and a heat-retaining member situated within said chamber.

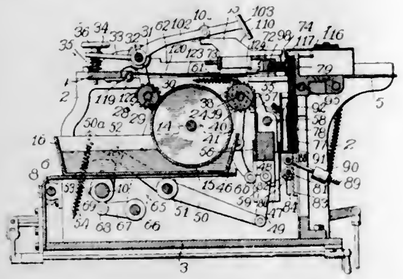
3. In an internal combustion engine, the combination with a cylinder, of a piston therein, one end of the cylinder constituting the working end thereof and the other end constituting a heating chamber for the combustible fluid, means to deliver a combustible fluid charge to said chamber, a passage forming communication between said chamber and the working end of the cylinder, a jacket surrounding said chamber, an exhaust passage leading from the working end of the cylinder to said jacket and through which said inlet passage extends, and a jacket of heat-retaining material surrounding said inlet passage whereby the exhaust gases serve to heat the combustible charges delivered to the chamber and inlet passage.

4. In an internal combustion engine, the combination with a cylinder, of a piston therein, said cylinder presenting at one end a working chamber and at the other end a heating chamber, means to deliver a combustible charge to the heating chamber, means constituting communication between the heating chamber and the working end of the cylinder, a jacket for the heating chamber, an exhaust passage leading from the working end of the cylinder to said jacket and through which the products of

combustion are exhausted, a by-pass port leading from said exhaust passage, and a thermostatically-controlled valve for said port.

5. In an internal combustion engine, the combination with a cylinder, of a piston therein, said cylinder presenting at one end a working chamber and at the other end a heating chamber, means to deliver a combustible charge to the heating chamber, means constituting communication between the heating chamber and the working end of the cylinder, a jacket for the heating chamber, an exhaust passage leading from the working end of the cylinder to said jacket and through which the products of combustion are exhausted, a by-pass port leading from said exhaust passage, a valve for said port, and a thermostat in said heating chamber by which the valve is controlled.

1,171,436. FLY-LEAFING MACHINE. CLARENCE W. HOBBS, Worcester, Mass. Filed Nov. 11, 1911. Serial No. 659,673. (Cl. 93—57.)



1. In a fly-leafing machine, means for supporting a pad of fly-leaves, means for positioning a box relatively thereto, means for gumming the box, means for pressing the gummed surface of the box against the pad of fly-leaves, and means for locking the pressing means from movement arranged to be released by a box when in position.

2. In a fly-leafing machine, means for gumming the inner surface of a box side, means for holding a pad of fly-leaves, means for pressing the gummed surface of the box against the exposed fly-leaf in said pad, and means for registering a box with said gumming and pressing means, consisting of an inclined guide plate and a gage plate inclined in a plane at an angle to said guide plate and adjustably attached thereto.

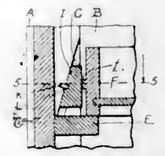
3. In a fly leafing machine, a stationary pressing member, a reciprocating carriage having a movable pressing member, a beveled guide plate having a pivotal connection with the framework and normally held in position to guide a box between the pressing members, cam surfaces formed on said carriage operating to raise the guide plate as the carriage moves forward, and means for determining the position ofthe box after the guide plate has been raised.

4. In a fly leafing machine, a stationary pressing member, a reciprocating carriage, a movable member carried by said carriage, a spring for moving said carriage forward, means for holding said carriage from forward movement capable of being released by the insertion of a box, a movable frame, a gum plate carried by said movable frame, separable fingers supporting said gum plate against pressure, and means for moving said gum plate from its raised position between said pressing members to a position below said pressing members.

5. In a fly-leafing machine, a pocket for fly-leaves, a pressure plate in front of the fly-leaves held in said pocket, a reciprocating presser bar coöperating with said pressure plate to press a box against a fly-leaf, a fixed rod held by the framework of the machine, a finger detachably supported on said rod, a spindle slidable in said finger provided with a head overlapping the fly-leaves held in said pocket.

[Claims 6 to 11 not printed in the Gazette.]

1,171,437. FURNITURE-DRAWER GUIDE. SIDNEY J. HOGAN, Chattanooga, Tenn. Filed Aug. 17, 1915. Serial No. 45,902. (Cl. 45—77.)



1. The combination of a drawer, a structure for receiving said drawer, and a pair of guide bars operatively related with said structure for the movement of said bars sidewise in paths inclined to a plane which is vertical and parallel to the drawer path, substantially as described.

2. The combination of a drawer and a structure for receiving said drawer and a pair of guide bars having their ends slidable up and down on said structure on inclined lines, substantially as described.

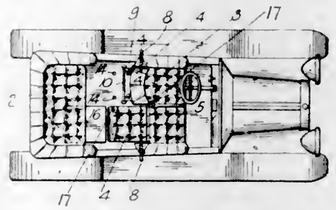
3. The combination with a drawer and a structure for receiving the drawer, of guide bars located at opposite sides for the space to be occupied by the drawer when the latter is in its position of rest and being held for inclined up and down movement, whereby said bars may be adjusted toward and from each other, substantially as described.

4. The combination with a drawer and a structure for receiving the drawer, of guide bars located at opposite sides of the space to be occupied by the drawer when the latter is in its position of rest and having upright opposing faces and being held for up and down movement on inclined ways, whereby said bars may be adjusted toward and from each other, substantially as described.

5. The combination with a drawer and a structure adapted to receive the drawer and having inclined grooves adjacent the space occupied by the corners of the drawer when the latter is in its position of rest, of guide bars having their ends resting in said grooves and movable up and down therein, whereby said bars may be adjusted toward and from each other, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

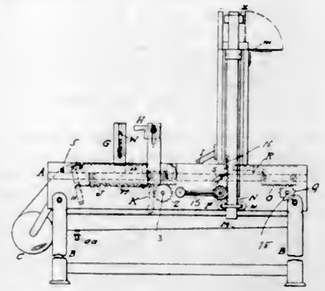
1,171,438. AUTOMOBILE. ELIZABETH E. HOWELL, Denver, Colo. Filed Aug. 19, 1914. Serial No. 857,579. (Cl. 21—43.)



1. A motor-vehicle having a rear-seat and a front-seat, rearward of the latter an adjustable back which is hinged to be lowered to position in a plane with said seats, and which has at its rear side a hand-rail and in the fastening thereof, a normally vacant socket for the attachment of a removable leg, means for maintaining said back in its normal position, and a leg having a part adapted to be removably inserted in said socket, and a foot to engage the floor of the vehicle.

2. A motor-vehicle having a rear-seat, a front-seat, rearward of the latter a back composed of two adjustable members which are hinged to be lowered to a position in a plane with said seats, and a device having means coöperating with correlative parts of said members for maintaining them in their normal position, the said device extending above the plane of the front seat whereby to divide the same into two seating spaces, and to provide an arm rest for an occupant of the seat.

1,171,439. SLICING AND WRAPPING MACHINE. JOSEPH HREN, Kingston, N. Y. Filed Aug. 17, 1915. Serial No. 45,997. (Cl. 93—2.)



1. A machine of the character described, comprising a hopper adapted to receive a charge to be sliced and wrapped, means for slicing said charge, a carriage adapted to receive the sliced charge, and wrapper-gripping means on the carriage.

2. In a machine of the character described, a carriage having a container, web-cutting means at one side of the container, and web-gripping means at the other side of the container, combined with a hopper, means for moving the carriage beneath the hopper, and a blade adapted to be projected across the hopper and above the carriage.

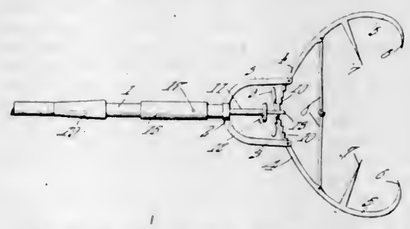
3. In a machine of the character described, a table adapted to receive a plurality of webs, a hopper, a carriage adapted to reciprocate intermediate said table and hopper, a container in the carriage, and web cutting means and web-gripping means arranged on opposite sides of the container.

4. In a machine of the character described, a table adapted to receive a plurality of webs, a carriage having a container, a movable platen, adapted to extend the table, and means operable by the carriage for extending or retracting said platen.

5. In a machine of the character described, a table adapted to receive a plurality of webs, a carriage having a container, a platen slidable beneath the table, a shaft, arms on the shaft, rods on the arms and abutments on the rods, said arms and abutments being adapted to be engaged by the carriage.

[Claims 6 to 10 not printed in the Gazette.]

1,171,440. GRAPPLE FOR CATCHING FISH. OMER F. IMMELL, Blair, Wis. Filed May 26, 1915. Serial No. 30,633. (Cl. 43—6.)



1. In a device of the character described, a pair of levers having arms forming jaws and other arms which are crossed, and a slidable member having means engaging said crossed arms for swinging the levers, the crossed arms having ratchet teeth engageable with said member when the jaws are swung toward one another for preventing the jaws from separating.

2. In a device of the character described, a pair of pivoted levers having arms forming jaws and other arms which are crossed, a plunger having a slotted portion receiving the crossed arms, a spring for moving said plunger to swing the jaws toward one another, the crossed arms having ratchet teeth engageable with said slotted portion for holding the jaws together, and a prop embodying a pair of sections having their adjacent ends pivoted together and their remote ends pivoted to the jaws so that when the prop is straightened out it will hold the jaws separated.

3. In a device of the character described, a tubular handle having a fork at one end, levers pivoted to the arms of the fork and having jaws projecting away from the handle and crossed arms projecting within the fork, and a plunger rod slidable within the handle and slidably engaged to said crossed arms for swinging the jaws to and from each other.

4. In a device of the character described, a tubular handle having a fork at one end, levers pivoted to the arms of the fork and having jaws projecting away from the handle and crossed arms projecting within the fork, a plunger rod slidable within the handle and slidably engaged to said crossed arms for swinging the jaws to and from each other, a spring between the plunger rod and handle for moving said rod into the handle, and means for normally holding the jaws separated and adapted to release the jaws when they are thrust astride an object.

5. In a device of the character described, a tubular handle having a fork at one end, levers pivoted to the arms of said fork and having jaws projecting away from the handle and crossed arms projecting within the fork, and a plunger rod slidable within the handle and having a slotted portion receiving said crossed arms, the said arms having ratchet teeth engageable with said slotted portion to prevent the separation of the jaws.

[Claims 6 and 7 not printed in the Gazette.]

1,171,441. RAIL-FILLER. HARRY C. INNES, Cincinnati, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed Feb. 27, 1914. Serial No. 821,565. (Cl. 104—14.)



1. As an article of manufacture, a rail filler of material preformed to extend under the ball of a rail against the web thereof and present a surface outward to paving material, and being of sufficient density to maintain its shape in handling but sufficiently plastic to adapt itself to any irregularities in the rail or other surrounding material.

2. As an article of manufacture, a rail filler of material preformed to extend under the ball of a rail against the web thereof and present a surface outward to paving material, and being of sufficient density to maintain its shape in handling but sufficiently plastic to adapt itself to any irregularities in the rail or other surrounding material, and an outwardly non-adhesive outer coating or covering adhesively secured on said plastic material, and sufficiently yieldable to yield with said plastic material to said irregularities.

3. In combination, a track rail comprising a ball, a web and a base, and paving structure comprising substantially non-elastic material along the sides of said rail and with a concavity between said paving structure and web below the ball of the rail, a filler of plastic elastic material supported in said cavity by said substantially non-elastic material.

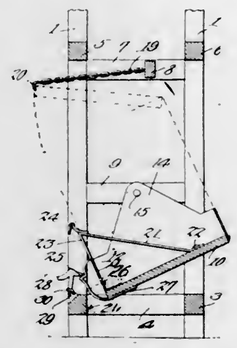
4. In combination, a track rail comprising a ball, a web and a base, and a paving structure adjacent to said ball and base, and comprising substantially non-elastic material along the side of said base and with a concavity between said paving structure and web below the ball and above the base, a filler of preformed plastic elastic material in said cavity and supported by said substantially non-elastic material against extrusion off of said base.

5. As an article of manufacture, a rail filler of material preformed to extend under the ball of a rail against the

web thereof and present a surface outward to substantially non-elastic paving material, of sufficient density to maintain its shape in handling but sufficiently plastic to adapt itself to any irregularities in the rail or other surrounding material, and to be confined back of the vertical plane of the inner side of the ball of the rail, but to support said substantially non-elastic material against extension under the ball of the rail.

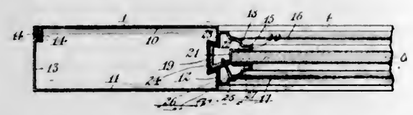
[Claims 6 to 8 not printed in the Gazette.]

1,171,442. AUTOMATIC CAKE-RACK. SEABORN W. JONES and ALONZO W. POSTLETHWAITE, San Antonio, Tex. Filed Sept. 4, 1914. Serial No. 860,218. (Cl. 211—6.)



In a device of the class described, a frame; a shelf; a receptacle removably mounted on the shelf and having a hinged lid; end walls upstanding from the shelf; pivot elements carried by the frame and engaging the end walls; a flexible member the rear end of which is fixedly connected to the frame, the forward end of which is detachably engaged with the lid adjacent the forward edge of the lid; a spring pressed latch on the frame and a latch-engaging keeper located on the shelf, both of which are independent of the receptacle, the latch and the keeper coöperating to hold the receptacle and the shelf in a forwardly and downwardly tilted position, the latch bearing against the keeper to act as a cushion when the shelf swings forwardly into a horizontal position; and means for preventing the receptacle from sliding off the shelf when the shelf is tilted; the pivot elements engaging the end walls in approximate horizontal alinement with but slightly above the center of gravity of the receptacle when the latter is full, thereby to effect an approximate balancing of the shelf and the receptacle, to prevent undue strains on the flexible member when the receptacle and the shelf are tilted forwardly, and to prevent an inversion of the shelf and the receptacle.

1,171,443. METALLIC DOOR AND THE LIKE. CARL W. LARSON and CARL OLOFSON, Jamestown, N. Y., assignors to Dahlstrom Metallic Door Company, Jamestown, N. Y., a Corporation of New York. Filed Feb. 23, 1912. Serial No. 679,440. (Cl. 189—53.)

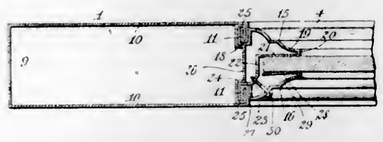


1. A metallic door or the like having hollow stiles and rails, each formed of sheet metal bent to provide side walls and an inner edge wall having a dove-tail depression, a panel molding comprising two parts, one a backing molding and the other a fastening molding, a panel held between said backing and fastening moldings, said backing molding being formed of sheet metal having a backing wall, an oblique facing wall extending from one edge of said backing wall and marginal portions entering said dove-tailed depression and bearing against the side and inner walls thereof and said fastening molding having an oblique facing wall with marginal flanges arranged at right angles to each other and bearing respectively against the inner edge walls of said stiles and rails and against the panel, and means for securing said fastening molding in place.

2. A metallic door comprising hollow stiles and rails having dove-tailed depressions in their inner edges, a panel bounded by said stiles and rails, and panel moldings formed of strips of metal, one strip being bent into substantially tubular form with the marginal portions thereof entered into and fitting against the walls of said dove-tailed depressions and the other being bent to provide a facing wall and two bearing walls arranged at right angles to each other and bearing respectively against the inner edge walls of said stiles and rails and said panel, an angle bar fitting into the tubular molding to stiffen the same and hold the marginal portions thereof to said dove-tailed depressions, and screws passing through the fastening molding and taking into the tubular molding and the angle bar held therein.

3. A metallic door having hollow stiles and rails, each formed of a sheet of metal bent to provide side walls and an inner edge wall having a depression, a molding formed of sheet metal bent into substantially tubular form to provide a backing wall and a facing wall with the marginal portions of said metal bent at an angle to fit into said depressions, a panel placed against said molding, a fastening molding bearing against the edges of said stiles and rails and against the panel, and screws passing through said fastening molding and taking into the tubular molding.

1,171,444. METALLIC DOOR AND THE LIKE. CARL W. LARSON and CARL OLOFSON, Jamestown, N. Y., assignors to Dahlstrom Metallic Door Company, Jamestown, N. Y., a Corporation of New York. Filed Feb. 23, 1912. Serial No. 679,442. (Cl. 189—46.)



1. A door or the like formed of sheet metal and having hollow stiles and rails with opposite side walls, the inner marginal portions of said side walls being bent inward and into the form of a channel, a panel molding having its marginal portions engaging the channels of said side walls, and a reinforcing strip for each stile and rail, said reinforcing strips having their marginal portions bent into channels interlocking with the channels of said side walls with the marginal portions of said panel molding between the two and being also bent to form offsets in contact with the marginal portions of said panel holdings where they engage the channels of said side wall.

2. A door or the like formed of sheet metal and having hollow stiles and rails with opposite side walls, the inner marginal portions of said side walls being bent inward and into the form of a channel, a panel molding having its marginal portions engaging the channels of said side walls, and a reinforcing strip for each stile and rail, said reinforcing strips being arranged transversely between said side walls and having their marginal portions bent into the form of channels interlocking with the channels of said side walls with the marginal portions of said panel molding between the two and being also bent medially into the form of a channel lying between the interlocking seams.

1,171,445. METALLIC DOOR OR THE LIKE. CARL W. LARSON, Jamestown, N. Y., assignor to Dahlstrom Metallic Door Company, Jamestown, N. Y., a Corporation of New York. Filed Mar. 6, 1912. Serial No. 681,870. (Cl. 189—46.)

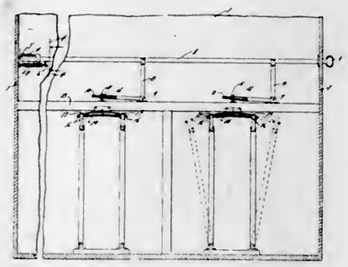


1. A metallic door or the like having hollow stiles and rails and a panel bounded by said stiles and rails, each stile being formed of two sheets of metal, one sheet forming even faced side walls and an outer edge wall and having its marginal portions re-bent parallel with said side walls, said marginal portions being separated from said side walls by spaces, the other sheet being bent to provide a transverse wall, a double backing wall against which the panel bears and rebent marginal portions arranged at right angles to said transverse wall and interlocked with the re-bent marginal portions of said side walls, and means for retaining the panel against said backing wall.

2. A metallic door or the like having hollow stiles and rails and a panel bounded by said stiles and rails, each stile being formed of sheet metal bent to provide opposite even faced side walls with re-bent inner marginal portions parallel with said side walls and an inner edge wall having channeled marginal portions bent at right angles thereto and engaging the re-bent marginal portions of said side walls, and a panel having its marginal portions entered into the channeled portions of said inner edge wall and clamped therein with the inner marginal portions of said side walls.

3. A metallic door or the like having hollow stiles and rails, each stile and rail being formed of sheet metal bent to provide straight opposite side-walls, having re-bent inner marginal portions parallel with said side walls, an inner edge wall separating said side walls and having opposite marginal portions bent at right angles thereto and doubled upon themselves to provide a receiving space between said doubled portions in which the re-bent inner marginal portions of said side walls are retained, each inner edge wall being bent upon itself to provide a double backing wall extending into the space bounded by said stiles and rails, a panel having its marginal portions bearing against said backing walls, fastening moldings bearing against said panel, and screws passing through said moldings and taking into the inner edge walls of said stiles and rails.

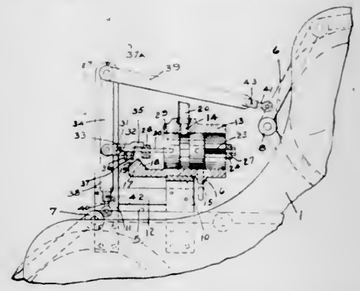
1,171,446. CATTLE-STANCHION. OSCAR LARSON, Stowe, Vt. Filed July 14, 1915. Serial No. 39,762. (Cl. 119—148.)



1. The combination with a pull rod, of bell-cranks, bolts terminally carried by said bell-cranks, eye-bolts carried by said first named bolts, tubular casings adapted to receive one end of said eye-bolts, retaining rods slidably arranged in said casings, stanchion bars terminally engaged by said retaining rods and pivotally connected at their lower ends, releasable connection between said retaining rods and said eye-bolts and expansion springs within said casings in engagement with said retaining rods.

2. The combination with a pull rod, of bell cranks, bolts releasably carried by said bell cranks, eye-bolts carried by said first named bolts, tubular casings receiving the ends of said eye-bolts, collars within said casings receiving the ends of said eye-bolt, retaining rods formed with terminal apertures movably arranged in said tubular casings, expansion springs connecting said retaining rods and the said collars, angle pieces normally connecting said eye-bolts and the apertured ends of said retaining rods whereby they are releasably retained in adjusted relation and stanchion bars terminally engaged by said retaining rods and pivotally connected at their lower ends.

1,171,447. APPARATUS FOR FEEDING BATTER TO A BAKING-MACHINE. JAMES W. LAWHEAD, Wilmington, Ohio. Filed Mar. 4, 1912. Serial No. 681,429. (Cl. 107—29.)



1. A batter pump for baking machines comprising a cylinder having inlet and outlet ports, opposing pistons, means for positively controlling each of said pistons when spaced on either side of said inlet port to relatively move them away from each other to charge said cylinder, and means for positively controlling each of said pistons when spaced on either side of said outlet port to relatively move them toward each other to effect a discharge.

2. A batter pump for baking machines comprising a cylinder having inlet and outlet ports, opposing pistons, means for pocketing a quantity of batter between said pistons through said inlet, means for transferring said pocketed batter to a position over said outlet, and means for effecting a discharge of said batter by a movement of on piston toward the other.

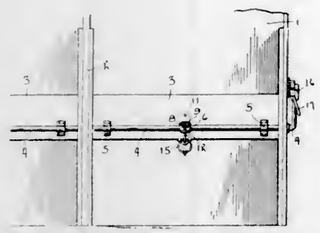
3. A batter pump for baking machines comprising a cylinder having inlet and outlet ports, opposing pistons, means for pocketing a quantity of batter between said pistons through said inlet, means for transferring said pocketed batter to a position over said outlet, and means for positively controlling each of said pistons and moving them relatively to decrease the size of said pocket when over said outlet port to expel said batter.

4. A batter pump for baking machines, comprising a cylinder having inlet and outlet ports, opposing pistons, means for pocketing a quantity of batter between said pistons through said inlet, means for transferring said pocketed batter to a position over said outlet and maintaining said pistons in relatively unchanged positions, and means for positively arresting one of said pistons and moving the other after said transfer to expel the batter.

5. A batter pump for baking machines comprising a cylinder having inlet and outlet ports, opposing pistons, means for moving said pistons apart to form a pocket between them, means for simultaneously moving both pistons to transfer the batter drawn in to a position opposite the outlet, and means for positively arresting one of said pistons while further movement of the other causes the discharge of the batter.

[Claims 6 to 18 not printed in the Gazette.]

1,171,448. ANIMAL-RELEASING DEVICE. CHARLES J. LINDHOLM, Milwaukee, Wis. Filed Feb. 19, 1915. Serial No. 9,326. (Cl. 119—116.)

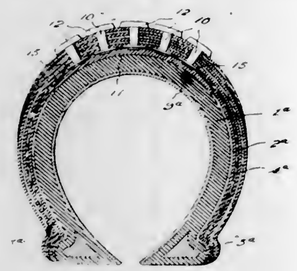


1. A releasing device of the type described, including a longitudinal member, means for supporting the same, a bracket movably applied to said longitudinal member, a spring resting upon said bracket and having one end secured to said bracket and provided at its opposite end with a detent-like pin arranged to extend through said bracket and engage said longitudinal member, a halter or strap attaching member, and a resiliently exerted bolt controlled by said spring-pin retained bracket, said halter or strap-attaching member being connected to said bolt.

2. A releasing device of the type described, including a longitudinal member having a notch, means for supporting said longitudinal member, a bracket movable upon, and having said longitudinal member extending therethrough, a spring having one end secured to said bracket, the opposite end of said spring being equipped with a detent-like pin extending through said bracket and engaging a notch in said longitudinal member, a bolt equipped with a halter or strap-attaching member, said bracket having an opening receiving one end of said bolt, and a resilient member applied to exert pressure upon said bolt and provide for the removal of said strap-attaching member from the latter as said bolt is disengaged from said bracket.

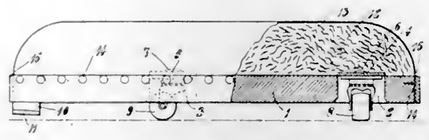
3. A releasing device of the type described, including a rotary longitudinal rod member, means for supporting the same, a bracket applied to turn with said rotary longitudinal rod member, means for the retention of said rotary longitudinal rod member in set position, a bolt held in engagement with said bracket and equipped with a strap or halter-attaching member, and a spring applied to exert pressure upon, and cause said bolt to become disengaged from said bracket as the latter receives movement from the turning or actuating of said rotary longitudinal member.

1,171,449. PROCESS OF RETREADING OLD AUTOTIRES. CORNELIUS D. MCGIEHAN, Jersey City, N. J. Filed Jan. 8, 1915. Serial No. 1,261. (Cl. 154—14.)



A process of retreading tires which consists in cleaning the old tire or carcass, reinforcing the interior of the same, applying to the outer surface a layer of frictionized canvas having all the interstices filled with rubber, and a thick outer coating of rubber, applying a rubber reinforcing layer to the outer tread portion of the tire, building up the tire of intermediate layers of asbestos frictionized cloth and canvas, connecting to the tread portion of the layers steel studs having heads on the outer side or tread surface, and said studs being upset upon the inner side of the tread surface, said tire being then wrapped, clamped, inflated and vulcanized.

1,171,450. KNEE-REST. MALCOLM W. MCINTYRE, Newport, Ky. Filed Apr. 19, 1915. Serial No. 22,368. (Cl. 155—22.)



1. A knee rest comprising freely rotatable transporting means and braking means operated by shifting the position of a weight supported by said rest.

2. A knee rest comprising a base, freely rotatable transporting means on the base, and means on the base to engage with the surface over which the rest travels, thereby braking said transporting means.

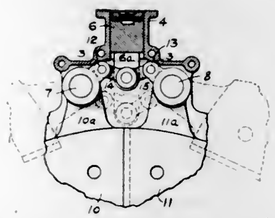
3. A knee rest comprising a base, freely rotatable transporting means on the base, and means on the base to engage with the surface over which the rest travels, thereby braking said transporting means, said means being brought into said contact by tilting said rest through different disposition of the weight thereon.

4. A knee rest comprising a base, a forward transporting means thereon, a rearward transporting means thereon, said rearward transporting means being close to the rear of said base, but said forward means being a considerable distance back from the front of the base, and braking means near the front of said base adapted to make contact with the floor or surface over which said rest travels when weight is imposed on said knee rest forwardly of the forward transporting means, but said knee rest being adapted to bear on its forward and rear transporting means when said weight is imposed back of said forward transporting means.

5. A knee rest comprising a base, rear casters on said base near its rear end, forward casters on said base a considerable distance back from its front end and only slightly forward of its middle, and braking means on said base extending down therefrom near its front end, out of contact with the floor or surface when all of said casters bear on said floor or surface, but making contact with said floor or surface when said main rest is tilted forward raising its rear casters from the floor or surface, and thereby preventing the movement of said main rest upon its forward casters.

[Claims 6 and 7 not printed in the Gazette.]

1,171,451. FIRE-DOOR APPARATUS. FREDERICK W. MAICEIN, New York, N. Y., assignor to Albert G. Elvin, Somerville, N. J. Filed Sept. 6, 1913. Serial No. 788,387. (Cl. 110—177.)



1. In a fire door apparatus, the combination of a pair of doors, each having a pivoted arm, a fluid pressure cylinder, a piston therein, and a pair of toggle links connecting the piston to said arms and so located as to be in line with the pivots of the respective arms in the predetermined full open position of the doors.

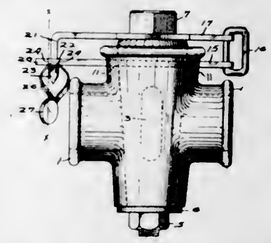
2. In a fire door apparatus, the combination of a pair of doors, each having an arm and pivoted to swing laterally and vertically, a fluid pressure cylinder, a piston therein, and a pair of toggle links pivotally connected to the piston and to said arms, said links being so located as to fall within the straight lines from the door pivots to piston connection when the door reaches the predetermined full open position.

1,171,452. FLOOR OR WALL SCREED. THOMAS Z. MERRITT, Omaha, Nebr., assignor of forty-nine one-hundredths to John E. Wakefield, Omaha, Nebr. Filed Apr. 28, 1915. Serial No. 24,570. (Cl. 72—105.)



In concrete or similar floor or wall construction, the combination with a support, adhesive portions disposed at spaced intervals in horizontal alinement on the support, a plurality of plates having the entire areas of their inner sides formed rectilinear and mounted on said adhesive portions, each being provided on its outer side with a pair of transversely inclined flanges extending parallel in one direction, said plates being formed outwardly of said flanges with apertures to permit a passage therethrough of a part of said adhesive portions, a plurality of fiber-blocks each being disposed upon a plate between the flanges thereof, and a layer of plastic material surrounding said blocks and leaving a part of each block exposed.

1,171,453. VALVE-LOCK. FRANK J. MILLER, Fostoria, Ohio. Filed Aug. 28, 1915. Serial No. 47,819. (Cl. 137—7.)

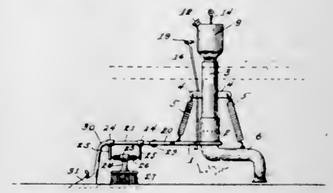


1. In a valve lock, the combination of a pair of strips, means for securing the strips to the valve to prevent rotation of the cock of the valve relative to the valve casing, one strip having an opening and the other strip having an arrow head snugly fitting the opening so as to prevent entrance therein except on applying pressure, the arrow headed strip having an opening, a locking member extending through the opening of the arrow headed strip to prevent withdrawal of the arrow headed strip through the first named opening.

2. In a valve lock, the combination of a pair of strips, means for securing the strips to the valve to prevent rotation of the rock of the valve relative to the valve casing, one strip having an opening and the other strip having an arrow head snugly fitting the opening so as to prevent entrance therein except on applying pressure, the arrow headed strip having an opening, a sealing strip extending through the opening in the arrow headed strip to prevent withdrawal of the arrow head through the first named opening.

3. In a valve lock, the combination of a pair of strips, means for securing the strips to the valve to prevent rotation of the cock of the valve relative to the valve casing, one strip having an opening and the other strip having an arrow head snugly fitting the opening to prevent entrance therein except by pressure on the arrow headed strip, one of the strips being elastic and so positioned relative to the other strip as to tend to cause withdrawal of the arrow headed strip from the opening, the arrow headed strip having an opening and a sealing strip extending through the opening in the arrow headed strip.

1,171,454. TRACK SWEEPING AND OILING DEVICE. WALTER R. NATHANIEL, Houston, Tex. Filed Aug. 6, 1912. Serial No. 713,644. (Cl. 184—3.)



1. A device of the character described comprising a body portion, an outlet spout having its upper end connected with said body portion, a tubular member slidably connected with the upper end portion of said outlet spout, a receptacle carried by said tubular member, a spring connected with said body portion and with said tubular member, and a spring connected with said tubular member and with said outlet spout.

2. A device of the character described comprising a body portion, an outlet spout positioned beneath said body portion with its upper end connected with the same, a tubular member positioned above said body portion with its lower end slidably connected with the upper end portion of said outlet spout, a reservoir carried by said tubular member, a spring connected with said body portion and with said tubular member, a second spring connected with said tubular member and with said outlet spout, and means for moving said body portion into and out of an operative position.

3. A device of the character described comprising a body portion, an outlet spout connected with said body portion, a reservoir, a tubular member supporting said reservoir and connected with the upper end of said outlet spout whereby the contents of said reservoir may pass through said tubular member into said outlet spout, resilient means connected with said body portion and tubular member, and resilient means connected with said outlet spout and tubular member.

1,171,455. VENDING-MACHINE. JOHN EDWARD NEALY, New York, N. Y. Filed May 17, 1915. Serial No. 28,579. (Cl. 211—7.)



1. A vending machine comprising an elongated casing divided by a horizontal wall into a small upper compart-

ment and a large lower compartment, a locking rod within the casing, a door for closing the lower compartment which door is controlled by said locking rod, a vertically movable member located in the upper compartment and detachably engaging said locking rod and an L shaped member for closing the front and top of said upper compartment and by which said member is carried.

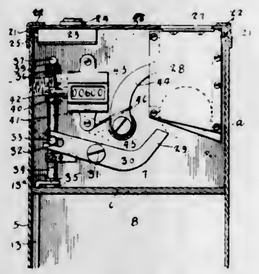
2. A vending machine comprising an elongated casing divided by a horizontal wall into a small upper compartment and large lower compartment, a locking rod within the casing, a door for closing said lower compartment, means carried by the door arranged to be engaged by said locking rod, a wall slidable into position with relation to the upper compartment and completing said upper compartment when placed in position, and means carried by said wall for controlling said locking rod.

3. In a device of the character described, an elongated casing divided into an upper compartment and a lower compartment, a vertically movable locking rod extending along the edge of the lower compartment, a door for closing said lower compartment, means carried by said door arranged to be engaged by said locking rod, a bent end upon the top of said locking rod having a recess formed therein, an L shaped member comprising a front and a top wall slidable into position with relation to the upper compartment and completing said compartment when placed in position, a vertically movable sleeve having flanges arranged to engage the bent end of the locking lever when said L shaped member is slipped into position and means carried by said L shaped member for controlling said locking rod.

4. A vending machine comprising an elongated casing divided into a small upper compartment and a large lower compartment, a door arranged to close the front of said lower compartment, a vertically disposed locking rod for locking said door which locking rod extends into said upper compartment, a movable wall for said upper compartment and a locking mechanism mounted upon said movable wall and movable into position to engage said locking rod when said wall is placed in position, and key controlled locking means for locking said movable wall in place.

5. A vending machine comprising an elongated vertically disposed casing divided by a horizontal wall into a small upper compartment and a large lower compartment, a door hinged to the front of the casing and serving to close the front of the lower compartment, a vertically disposed locking rod extending along one side of the lower compartment and passing through said horizontal wall, interengaging members between said locking rod and said door, said upper compartment having a removable side wall and a locking mechanism mounted upon said side wall and movable into engagement with said locking rod by the placing of said side wall in position.

1,171,456. COIN-CONTROLLED MECHANISM. JOHN EDWARD NEALY, New York, N. Y. Filed May 17, 1915. Serial No. 28,580. (Cl. 194—65.)

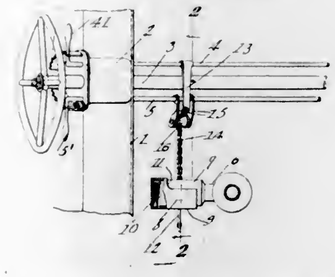


1. In a device of the character described, the combination with a vertically disposed coin chute opened at its upper and lower ends, of a lever pivoted outside of said chute, and having one end disposed beneath the lower end of said chute, a manually operable oscillatory shaft disposed outside of said chute, a curved lever mounted thereon and movable therewith, said coin chute having an opening in one of its sides through which said lever swingingly moves, said lever having a convex upper face and the movement of said lever being in an arcuate path and across said coin chute.

2. In a device of the character described, the combination with a pivoted lever having a curved upwardly directed tail, of a coin chute beneath which the tail end of said lever is disposed, a second lever which acts in said coin chute to force the coin deposited therein against the first named lever, a handle for actuating said second lever, a vertical movable sleeve, a stud carried thereby, said stud engaging in a recess formed in the first named lever, and means normally tending to force said sleeve downwardly.

3. In a device of the character described, the combination with a pivoted lever having a curved upwardly directed tail, of a coin chute beneath which the tail end of said lever is disposed, a second lever which acts in said coin chute to force the coin deposited therein against the first named lever, a handle for actuating said second lever, a vertical movable sleeve, a stud carried thereby, said stud engaging in a recess formed in the first named lever, means normally tending to force said sleeve downwardly and a fixed guide rod upon which said sleeve is slidably disposed.

1,171,457. AIR-CONTROLLER FOR EXPLOSIVE-ENGINES. WILLIAM H. OLDHAM, Elkton, Ky. Filed Feb. 6, 1915. Serial No. 6,521. (Cl. 123—124.)



1. The combination with an air controlling valve and spark and throttle controlling devices of an explosion engine, of means operatively connecting said devices and valve and operating to open the valve when both of said devices are advanced.

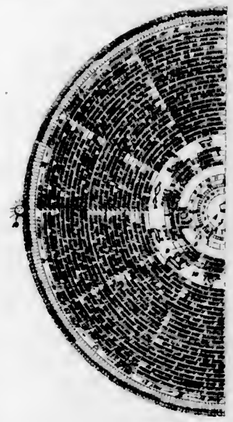
2. The combination of an air controlling valve and oscillatory spark and throttle controlling rods, of an operative connection between said rods and valve and operating to open said valve when both of said rods are advanced.

3. The combination with a normally closed air intake valve and spark and throttle controlling devices of an explosion engine, of an arm carried by the spark controlling device, a flexible element connecting said arm and valve, and means carried by the throttle controlling device for engaging said flexible element, said arm, flexible element and means operating to open the valve when both of said devices are advanced.

4. The combination with a normally closed air intake valve and throttle and spark controlling rods of an explosion engine, of an arm carried by the spark controlling rod, a flexible element connecting said arm and valve, and a member carried by the throttle controlling rod and engaging said flexible element to open the valve.

5. The combination with a spring closed air intake valve and throttle and spark controlling rods of an explosion engine, of an arm attached to the spark controlling rod, a flexible element connecting said arm and valve, and an arm carried by the throttle controlling rod and having a roller engaging said flexible element.

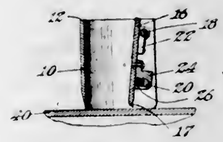
1,171,458. ASTROLOGICAL CLOCK. KAREN M. PHILLIPS, New York, N. Y. Filed July 3, 1914. Serial No. 848,844. (Cl. 35—12.)



1. In a registering device, a stationary dial indicating the hours of the day, a movable dial extending beyond the edge of the stationary dial and having radial dividing lines spaced apart distances corresponding to the two-hour divisions of the stationary dial, and concentric circles intersecting the lines providing segmental annular spaces designating the different parts of the zodiac and personal characteristics corresponding to certain days in the year and a representation of the sun adjustable with regard to both the stationary and movable dials.

2. In a registering device, a stationary dial indicating the hours of the day, a removable dial thereon indicating the house and desthy corresponding to a particular hour in the day, a movable dial extending beyond the edge of the stationary dial and having radial dividing lines spaced apart distances corresponding to the two-hour divisions of the stationary dial, and concentric circles intersecting the lines providing segmental annular spaces designating the different parts of the zodiac and personal characteristics corresponding to certain days in the year and a representation of the sun adjustable with regard to both the stationary and movable dials.

1,171,459. CUTTING-DIE. JOSEPH H. POPE, Hamilton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 30, 1912. Serial No. 712,229. (Cl. 164—29.)



1. A die having a cutting blade movable transversely in the die during the cutting operation, and a rigid cutting portion having an edge so shaped that the die as a whole presents a complete peripheral cutting edge throughout the cutting operation.

2. A die having a rigid portion sharpened for cutting at one edge and having extremities disposed in parallel relation, and a transversely movable cutting blade arranged in sliding contact at its ends with the parallel extremities of the rigid portion.

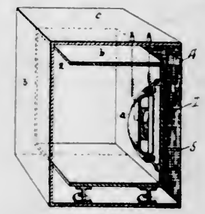
3. A die having oppositely disposed parallel cutting edges, and a blade arranged between said parallel edges and movable transversely between said edges and in direct engagement therewith during the cutting operation.

4. A die having oppositely disposed portions with cutting edges, transverse supports located between said portions, and a straight cutting blade pivoted to one support and movably connection with the other.

5. A die having oppositely disposed cutting edges and a movable blade interposed between the edges, both surfaces of the blade being beveled so that they are inclined in the same general direction to the surface of the stock to be cut.

[Claims 6 to 14 not printed in the Gazette.]

1,171,460. TELEPHONE-TRANSMITTER. STEPHEN C. PORTER, New York, N. Y. Filed June 12, 1915. Serial No. 33,707. (Cl. 179—122.)



1. The combination of a resonator whose front is open to the passage of sound waves and whose back is substantially flat throughout and a sensitive telephone transmitter mounted therein facing the back thereof with its diaphragm only slightly separated therefrom.

2. The combination of a rosonator whose front is open to the passage of sound waves, a sensitive telephone transmitter therein facing the back of the resonator with its diaphragm slightly separated therefrom and a second resonator with a like front outside the first with its open front opposed to and slightly separated from the back of the first resonator.

1,171,461. WRAPPING-PAPER FOR LOAVES OF BREAD AND THE LIKE. STANLEY M. RAMSEY, Cincinnati, Ohio. Filed Mar. 15, 1915. Serial No. 14,563. (Cl. 91—68.)

1. A wrapping paper for bread and the like, comprising portions of waxed and unwaxed areas in such relative proportions as to secure the desired ventilation.

2. A wrapping paper for bread and the like, comprising alternate strips of waxed and unwaxed areas in such relative proportions as to secure the desired ventilation.

3. A wrapping paper for bread and the like, having its side edges coated with water-proof material sufficiently heavy to adhere to each other when subjected to heat and pressure, and with intermediate portions of the sheet free from waterproof coating.

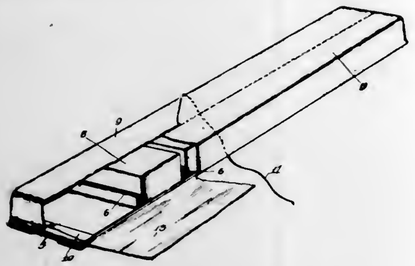
4. A wrapping paper for bread and the like comprising alternate strips of waxed and unwaxed material, with waxed edges for sealing under heat and pressure.

5. A wrapping paper for bread and the like comprising alternate strips of waxed and unwaxed material, with waxed edges for sealing under heat and pressure, the waxed strips being sufficiently close to maintain a substantially uniform thickness for the sheet when winding into a roll.

1,171,462. SANITARY CONTAINER AND OPENER. JOSEPH RICE, Chicago, Ill. Filed Oct. 28, 1914. Serial No. 868,983. (Cl. 229—51.)

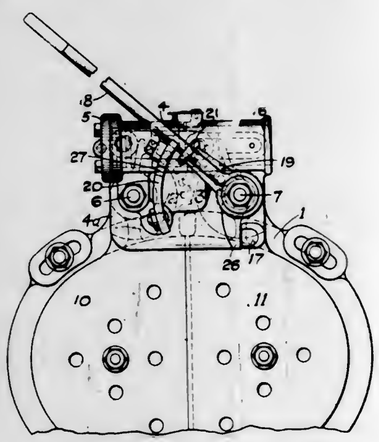
1. A container comprising a base; a cover having its edges secured to said base and inclosing a chamber; ribs

on said base dividing the chamber into small chambers; and a cord secured at one end of the container, extending between the ribs and the cover and having its other end protruding between edges of the base and cover providing a means adapted to tear the cover to open the small chambers consecutively.



2. A container comprising walls inclosing a chamber; partitions in the chamber dividing the latter into a row of small compartments; and a severing string secured to the wall at one end of the chamber passing through each of the compartments and protruding from the other end of the chamber, adapted to sever one of the walls and open the compartments consecutively.

1,171,463. FIRE-DOOR DEVICE. SAMUEL D. ROSENFELT, Chicago, Ill., assignor to Franklin Railway Supply Company, Wilmington, Del., a Corporation of Delaware. Filed Aug. 11, 1914. Serial No. 856,224. (Cl. 110—176.)



1. In a fire door apparatus, the combination of a door, a pivotally mounted member for actuating the same, and a hand lever for operating said member and also having a limited longitudinal movement relative thereto.

2. In a fire door apparatus, the combination of a door, a pivotally mounted member for actuating the same, and a hand lever also mounted on said pivot and having a loose connection with said member permitting a limited longitudinal movement relative thereto.

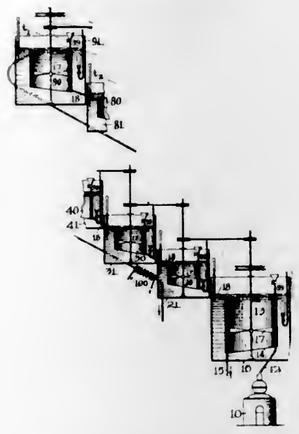
3. In a fire door apparatus, the combination of a vertically movable door, a pivotally mounted member for actuating the same, a hand lever mounted to turn with said member but having a limited longitudinal movement relative thereto, and a latch plate having notches to be engaged by said lever.

4. In a fire door apparatus, the combination of a door pivoted at its upper side to swing laterally and vertically, a rocker member mounted on said pivot for actuating said door, and a hand lever mounted to turn with said rocker but having a limited longitudinal movement relative thereto.

5. In a fire door apparatus, the combination of a door pivoted at its upper side to swing laterally and vertically, a rocker member mounted on said pivot for actuating said door, and a hand lever also mounted on said pivot and having a loose connection with said rocker permitting a limited longitudinal movement.

[Claims 6 to 8 not printed in the Gazette.]

1,171,464. PROCESS OF AND APPARATUS FOR FRACTIONATION. MARTIN A. ROSANOFF, Worcester, Mass. Filed Apr. 29, 1911. Serial No. 624,134. (Cl. 196—21.)



1. The process of separating a mixture of substances to obtain a condensate having a constant composition, which consists in subjecting a mixture to the action of a constant temperature zone having the boiling point of the desired condensate as its constant temperature, the liquid acted upon having an initial boiling point below the temperature of the zone but not below the initial boiling point of the completely condensed vapor given off by the mixture of the same substances boiling at the temperature of the zone.

2. The process of separating mixed substances to obtain a condensate and a vapor or vapor mixture each having a predetermined composition, which consists in subjecting a liquid mixture or condensate to the action of a constant temperature zone having the boiling point of a desired condensate as its constant temperature, connecting this first zone with another constant temperature zone having the temperature of condensation of a desired vapor or vapor mixture as its constant temperature, and allowing the vapor from the first named zone to pass into the second zone and the condensate from said second zone to pass into the first zone, the liquid or condensate acted upon having an initial boiling point below the temperature of the zone into which it is introduced, but not below the initial boiling point of the completely condensed vapor given off by the liquid mixture of the same substances boiling at the temperature of that zone, and the vapor mixture acted upon having an initial temperature of condensation above the temperature of the zone into which it is introduced but not above the boiling point of the liquid mixture of the same substances whose vapor, completely condensed, would have the temperature of the last mentioned zone for its boiling point.

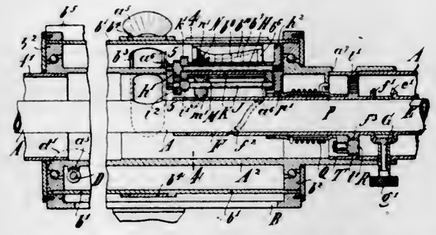
3. The process of separating mixed substances to obtain a condensate and a vapor or vapor mixture each having a predetermined composition, which consists in subjecting a liquid mixture or condensate to the action of a constant temperature zone having the boiling point of a desired condensate as its constant temperature, connecting this first zone with another constant temperature zone of lower temperature having the temperature of condensation of a desired vapor or vapor mixture as its constant temperature, and allowing the vapor from the first named zone to pass into the second zone and the condensate from said second zone to pass into the first zone, the liquid or condensate acted upon being that condensed in the second zone having an initial boiling point below the temperature of the zone into which it is introduced, but not below the initial boiling point of the completely condensed vapor given off by the liquid mixture of the same substances boiling at the temperature of that zone, and the vapor mixture acted upon being that vaporized in the first zone having an initial temperature of condensation above the temperature of the zone into which it is introduced but not above the boiling point of the liquid mixture of the same substances whose vapor, completely condensed, would have the temperature of the last mentioned zone for its boiling point.

4. The process of separating mixed substances to obtain a vapor mixture having a constant composition which consists in subjecting a mixed saturated vapor to the action of a constant temperature zone having the initial temperature of condensation of the desired vapor as its constant temperature, the mixed saturated vapor acted upon having an initial temperature of condensation above the temperature of the zone but not above the boiling point of the liquid mixture of the same substances whose vapor, completely condensed, would have the temperature of the zone for its boiling point.

5. The process of separating mixed substances which consists in passing the mixture along a course, subjecting the same to the action of constant temperatures in a plurality of different zones along said course, the constant temperature of each zone being above the initial boiling point of the liquids condensed in the next cooler zone, and allowing a condensate to pass into the next warmer zone from a cooler zone.

[Claims 6 to 17 not printed in the Gazette.]

1,171,465. DEVICE FOR DETERMINING THE REQUIRED SIGHT ADJUSTMENT FOR INDIRECT FIRING. OTTO SCHMITZ, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Oct. 19, 1911. Serial No. 655,587. (Cl. 88—2.7.)



1. An instrument for determining the required setting of a gun sight comprising a setting member for the range, a second setting member for the field angle of the object, an indicator which gives the reading for the required setting of the gun sight, comprising an index on one of the setting members and a member coöperating therewith carrying a scale, gearing interposed between the setting members and the scale, and means actuated by the motion of the setting members and connected to the gearing to make allowance for the firing angle.

2. In a device for determining the required gun sight adjustment, the combination with a mounting, an adjustable member for elevation, a drum and a second adjustable member for range; of an observation scale comprising a graduation on said drum and an index on said first adjustable member; connections between said first adjustable member and said drum adapted to displace the drum relative to said first adjustable member, an amount recorded on the observation scale, corresponding to the field angle adjustment of said first member with regard to the target, and means for displacing the drum relative to said second adjustable member an amount also recorded on the observation scale corresponding to the firing angle for the range at the said field angle adjustment.

3. In a device for determining the required gun sight adjustment, the combination with a mounting, an adjustable member, a drum and a second adjustable member; of an observation scale comprising a graduation on said drum and an index on said first adjustable member; connections between said first adjustable member and said drum adapted to displace the drum relative to said first adjustable member, an amount recorded on said observation scale, corresponding to the field angle adjustment of said first member with regard to the target; connections between said second adjustable member and said drum, adapted to displace the drum relative to said second adjustable member an amount recorded on the observation scale, corresponding to the firing angle for the range at the said field angle adjustment.

4. In a device for determining the required gun sight adjustment, the combination with a mounting, a housing, a drum and a sleeve, of an observation scale comprising a graduation on said drum and an index on said housing, a set of gears between said housing and said drum adapted to displace the drum relative to said housing and independent of said sleeve, an amount recorded on the observation scale corresponding to the field angle adjustment of said housing with regard to the target; a portion of said set of gears between said sleeve and said drum, adapted to displace the gun relative to the sleeve and independent of said housing an amount recorded on the observation scale corresponding to the firing angle for the range at said field angle adjustment.

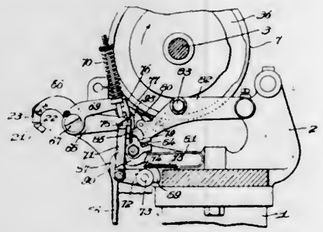
5. In a device for determining the required gun sight adjustment the combination with a mounting, a housing adapted to rotate in said mounting, a drum revoluble in said housing and a revoluble sleeve mounted co-axially with said drum and said housing; an observation scale comprising a graduation on said drum and an index on said housing; external gear teeth on said sleeve; internal gear teeth in said drum; a pinion in mesh with both said external and internal gears, said pinion revolubly mounted in a casing surrounding said sleeve and adapted to rotate thereon; a spring between said housing and said pointer tending to turn the casing in one direction; a cam plate attached to said mounting; a pointer actuated by said cam plate and mounted to oscillate in said housing in coöperation with gear wheels between said pointer and said casing constructed to increase the revolving angle of said drum relative to the revolving angle of said pointer; a helical groove in said sleeve; a sliding piece guided in said housing and adapted to have axial displacement, said sliding piece engaging said groove and said pointer operated by said sliding piece.

[Claim 6 not printed in the Gazette.]

1,171,466. SEWING-MACHINE. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe-Machinery Company, Boston, Mass., a Corporation of Maine. Original application filed Sept. 25, 1912, Serial No. 722,300. Divided and this application filed May 31, 1913. Serial No. 771,000½. (Cl. 112—20.)

1. In a sewing machine the combination of a work support, a movable presser-foot adapted to bear upon the work upon the support, a dog and rack mechanism for intermittently locking the foot under heavy pressure upon the work, a dog disengager adapted to be positively moved into a position for disengaging the dog from the rack and to be locked in such position, and a shiftable part or treadle having connections whereby the movement of the treadle acts first to move the disengager to a position to disengage the dog, and then to lock such disengager in such position, and then to lift the foot while the disengager remains stationary.

2. In a sewing machine the combination of a work support, a movable presser-foot adapted to bear upon the work upon the support, a dog and rack mechanism for intermittently locking the foot under heavy pressure upon the work, a dog disengager adapted to be positively moved into a position for disengaging the dog from the rack and to be locked in such position, and a shiftable part or treadle having connections whereby the operative movement of the treadle acts first to move the disengager to a position to disengage the dog, and then to lock such disengager in such position, and then to lift the foot while the disengager remains stationary, while the return movement of the treadle restores the presser-foot before restoring the disengager to reëngage the dog and rack.



3. In a sewing machine the combination of a work support, a movable presser-foot adapted to bear upon the work upon the support, a dog and rack mechanism for intermittently locking the foot under heavy pressure upon the work, a dog disengager such as the plate 90 fitted for swinging movement only and adapted to be positively swung toward the dog into a position for disengaging the dog from the rack and to be locked in such position, and a shiftable part or treadle having connections whereby the movement of the treadle operates first to swing the disengager to a position to disengage the dog, and then to lock such disengager in such position, and then to lift the foot while the disengager remains stationary.

4. In a sewing machine the combination of a movable work-engaging member, a locking device therefor, a movable disengager adapted to swing for unlocking said device, and a shiftable part or treadle having connections acting in its operative movement for first moving said disengager to a position to unlock said device, then locking said disengager stationarily in such position, and thereafter during the further movement of said part or treadle retracting said work engaging member from the work while the disengager is locked in position to hold said device unlocked; the reverse movement of said part or treadle acting to first restore the work engaging member before restoring the disengager to permit the relocking of said device.

5. In a sewing machine the combination of a presser-foot adapted to be lifted and lowered and during stitching to be locked under pressure and unlocked, a swinging presser-foot lever, a locking device coöperating with said lever for intermittently locking the presser-foot, a disengager adapted to be moved to a position to unlock said device and to be itself locked in such position, a controlling part or shiftable treadle normally unconnected with said lever so as not to partake of its stitching movements, connections actuable from said treadle during the first part of the treadle's shifting for moving said disengager to unlock said device and for locking said disengager in such position, and other connections actuable by the continued treadle shifting movement for lifting said presser-foot after the unlocking of said device.

1,171,467. INTERPRETATIVE MUSICAL NOTATION. ALWIN SCHROEDER, Brookline, Mass. Filed July 16, 1915. Serial No. 40,198. (Cl. 84—18.)

1. A system of interpretative musical notation in which spaces wider than those required in the ordinary printing are provided between notes or groups of notes to assist the performer in the rendition of the music, substantially as and for the purpose described.



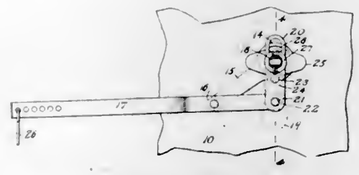
2. A system of interpretative musical notation in which the several notes of a group of notes, all of which have the same indicated time-value, are separated by spaces, not all of which are equal, the spacing corresponding to the duration to be given to the notes in performance of the music, whereby nuances of tempi are indicated, substantially as and for the purpose described.

3. A system of interpretative musical notation in which the several notes of a group of notes are separated by spaces, not all of which are equal, the spacing corresponding to the duration to be given to the notes in performance of the music, whereby nuances of tempi are indicated, substantially as and for the purpose described.

4. A system of interpretative musical notation in which spaces wider than those required in the ordinary printing are provided between the end of one phrase or figure and the beginning of the next, substantially for the purpose described.

5. A system of interpretative musical notation in which the several notes of a group of notes are separated by spaces, not all of which are equal, the spacing corresponding to the duration to be given to the notes in performance of the music, and wider spaces provided wherever desirable between the ending of one phrase and the beginning of the next, substantially as and for the purposes described.

1,171,468. FLUSH-VALVE-OPERATING MECHANISM. WILLIAM H. SCHULTE, Trenton, N. J. Filed June 5, 1913. Serial No. 771,846. (Cl. 4—5.)



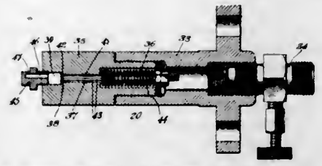
1. A flush valve actuating mechanism including a spindle, a lever, a fulcrum for the lever, a pair of links slotted to receive the spindle and connected with said lever, and a cam mounted upon the spindle and engaging the links to move the lever.

2. A flush valve actuating mechanism including a spindle, a lever, a fulcrum for the lever, a pair of links slotted to receive the spindle and connected with said lever, and a double cam mounted upon the spindle between the links and engaging the links to move the lever upon a movement of the cam in either direction.

3. A flush valve actuating mechanism including a spindle, a cam keyed to the spindle, a pair of slotted links guided by the spindle and inclosing the cam, a friction roll located between the links and engaged by the cam, the said links being adapted to operate a lever mechanism when actuated by the cam.

4. A flush valve actuating mechanism including a threaded sleeve, a nut secured to the sleeve and having an extension adapted to serve as a fulcrum, a spindle adapted to rotate in said sleeve, a lever mounted upon said fulcrum, slotted links mounted upon the spindle and connected with said lever, and a cam mounted upon the spindle between the links and engaging the links to actuate the lever when the cam is rotated.

1,171,469. EXPLOSIVE-ENGINE NOZZLE. JOHN SIMONS, Elizabeth, N. J., assignor to Samuel L. Moore & Sons Corporation, Elizabeth, N. J., a Corporation of New Jersey. Filed Mar. 11, 1912. Serial No. 682,945. (Cl. 137—80.)



1. In a device of the character described, an injector nozzle, comprising a body, a head removably attached to said body and having an interior spraying valve, and a restricted outlet opening located in a part removably attached to the valve head.

2. The combination of a combustion engine cylinder and an injector nozzle having means attached thereto for permitting the escape of air before it reaches the outlet of the nozzle.

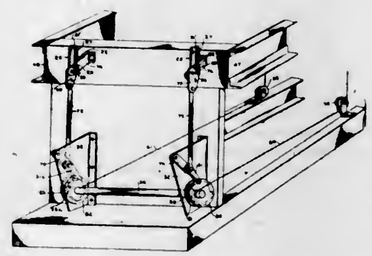
3. The combination of a combustion engine cylinder and an injector nozzle having means attached thereto for permitting the escape of air before it reaches the outlet of the nozzle, comprising a hand valve.

4. The combination of a combustion engine cylinder and an injector nozzle having means attached thereto for permitting the escape of air before it reaches the outlet of the nozzle, comprising a hand valve controlling an aperture leading to the outer air.

5. The combination of a combustion engine cylinder and an injector nozzle having an interior spraying valve, a restricted outlet opening, and means attached thereto for permitting the escape of air before it reaches the outlet of the nozzle.

[Claims 6 to 13 not printed in the Gazette.]

1,171,470. DUMPING-CAR. WILLIAM D. SKIDMORE, Pelham, N. Y. Filed Nov. 3, 1914. Serial No. 870,072. (Cl. 105—190.)



1. In a dumping car, the combination with a car body, running gear, and means adapted to pivotally support said body upon said running gear; of means adapted when in one position to maintain said body horizontal and when in another position to allow said body to tilt, said means comprising a chain secured to said car body on each side of the middle line thereof, and means adapted to hold or release both of said chains at the same time.

2. In a dumping car, the combination with a car body, running gear, and means adapted to pivotally support said body upon said running gear; of means adapted when in one position to maintain said body horizontal, when in another position to allow said body to partially tilt, and when in another position to allow said body to tilt to its full extent, said means comprising a chain secured to said body on each side of the middle line thereof, and means adapted to hold, partially release, or fully release both of said chains at the same time.

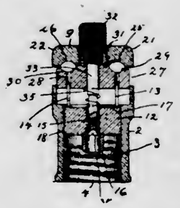
3. In a dumping car, the combination with a car body, running gear, and means adapted to pivotally support said body upon said running gear, of means adapted to maintain said body in a horizontal carrying position, comprising a chain one end of which is secured to said car body and the other end of which is secured to a rotatable shaft and a portion of which chain is adapted to be wound upon said shaft, a plurality of ratchet wheels upon said shaft, a pawl adapted to engage with each of said ratchet wheels, one of said pawls being longer than the other, and means adapted to disengage either of said pawls from its ratchet respectively.

4. In a dumping car, the combination with a car body, running gear, and means adapted to pivotally support said body upon said running gear; of means adapted to maintain said body in a horizontal carrying position comprising a chain secured to said car body on each side of the middle line thereof, the other ends of which chains are secured to a rotatable shaft and a portion of each of which chains is adapted to be wound upon said shaft, a plurality of ratchet wheels upon said shaft, a pawl adapted to engage with each of said ratchet wheels, one of said pawls being longer than the other, and means adapted to disengage either of said pawls from its ratchet.

5. In a dumping car, the combination with a car body, running gear, and means adapted to pivotally support said body upon said running gear; of means adapted to support said body in a horizontal position, comprising chains 60 and 61, secured to said car body at the sides of the middle line thereof, the other ends of which chains are secured to a rotatable shaft 36 and portions of which chains are adapted to be wound upon said shaft, ratchet wheels 33 upon said shaft 36, a pawl adapted to engage with each of said ratchet wheels, one of said pawls being longer than the other, and means adapted to disengage either of said pawls from its ratchet.

[Claims 6 and 7 not printed in the Gazette.]

1,171,471. INCANDESCENT-LAMP SOCKET. MARTIN V. SMITH, Hartford, Conn., assignor to James E. Hamilton, Simsbury, Conn. Filed Oct. 17, 1914. Serial No. 867,107. (Cl. 173—340.)



1. An incandescent lamp socket comprising means for connection therewith of wires, means for the connection therewith of an incandescent-lamp, contacts insulated from each other, means for electrically connecting said contacts with the terminals of said lamp when said lamp is connected with said socket, and means for moving said contacts into electrical connection with said wires by and on the connection of said lamp with said body.

2. An incandescent lamp socket comprising means for clamping wires thereof, means for the connection therewith of an incandescent-lamp, contacts insulated from each other, means for connecting said contacts with the terminals of said lamp when the latter is connected with said socket, and means for simultaneously moving said contacts into electrical connection with said wires.

3. An incandescent lamp socket comprising means for clamping wires thereto, means for the connection therewith of an incandescent lamp, contacts insulated from each other, means for electrically connecting said contacts with the terminals of said lamp when the latter is connected with said socket, and means for moving said contacts into electrical connection with said wires by and on the connection of said lamp with said body.

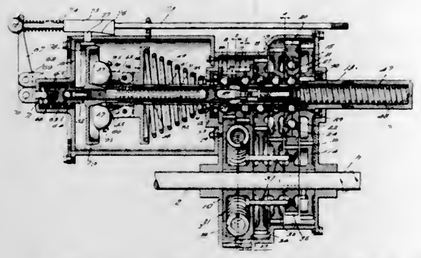
4. An incandescent lamp socket comprising means for connection therewith of wires, means for the connection

therewith of an incandescent-lamp, a bridge-member having contacts, means for electrically connecting said contacts with the terminals of said lamp when the latter is connected with the socket, the bridge member being in position to be operated by the lamp by and on the connection thereof with said body for causing said contacts to be moved into electrical connection with said wires.

5. An incandescent lamp socket comprising a socket-member, a pair of contacts insulated from each other, and means actuated by the lamp on the insertion of the base thereof into said socket-member, for advancing said contacts.

[Claims 6 to 15 not printed in the Gazette.]

1,171,472. AUTOMATIC SPEED-VARYING TRANSMISSION MECHANISM. AUGUSTUS A. ST. CLAIR, Indianapolis, Ind. Filed Mar. 8, 1915. Serial No. 12,739. (Cl. 74—97.)



1. In combination, a driving shaft, a driven shaft, a plurality of gearings between such two shafts, said gearings producing different speed relationships between such shafts, each of said gearings including a releasable clutch connection, and a clutch-setting device for setting the clutch in any of said gearings, said clutch-setting device including a device responsive to centrifugal force for causing the release of all the clutches when the speed of the driving shaft falls below a predetermined value.

2. In combination, a driving shaft, a driven shaft, a gearing between such two shafts, said gearing including a releasable clutch connection, and a clutch-setting device for setting the clutch in said gearing, said clutch-setting device including a device responsive to centrifugal force for causing the release of the clutch and the disconnection of the two shafts when the speed of the driving shaft falls below a predetermined value.

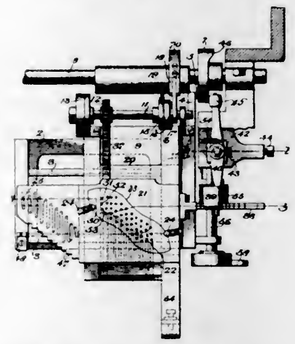
3. In combination, a driving shaft, a driven shaft, a plurality of gearings each interconnecting said driving and driven shafts, each of said gearings including a gear loosely mounted on one of said shafts, said shaft carrying said loose gears being hollow, means longitudinally slidable within said hollow shaft for clutching any of said loosely mounted gears to said shaft as said longitudinally slidable means slides in one direction along said hollow shaft and for leaving said loosely mounted gears loose on said shaft as said longitudinally sliding means slides in the other direction along said hollow shaft, controllable means operated by power from one of said shafts for producing a movement of said longitudinally slidable means along said hollow shaft in said first-named direction, and means tending to move said longitudinally slidable means in the opposite direction along said hollow shaft.

4. In combination, a driving shaft, a driven shaft, a plurality of gearings of different gear ratio each interconnecting said driving and driven shafts, each of said gearings including a gear loosely mounted on one of said shafts, said shaft carrying said loose gears being hollow, means longitudinally slidable within said hollow shaft for clutching any of said loosely mounted gears to said shaft, and manually controllable means operated by power from one of said shafts for producing a movement of said longitudinally slidable means along said hollow shaft in the direction to increase the speed of the driven shaft relative to that of the driving shaft.

5. In combination, a driving shaft, a driven shaft, a plurality of gearings each interconnecting said driving and driven shafts, each of said gearings including a gear loosely mounted on one of said shafts, said shaft carrying said loose gears being hollow, means longitudinally slidable within said hollow shaft for clutching any of said loosely mounted gears to said shaft as said longitudinally slidable means slides in one direction along said hollow shaft and for leaving said loosely mounted gears loose on said shaft as said longitudinally sliding means slides in the other direction along said hollow shaft, controllable means operated by power from one of said shafts for producing a movement of said longitudinally slidable means along said hollow shaft in said first-named direction, means tending to move said longitudinally slidable means in the opposite direction along said hollow shaft, and a centrifugal device responsive to the speed of the driving shaft for rendering inoperative said power-operated means for producing longitudinal sliding of said longitudinally slidable means when the speed of the driving shaft falls below a predetermined value.

[Claims 6 to 35 not printed in the Gazette.]

1,171,473. MACHINE FOR HOLDING AND FEEDING BRUSH-BACKS. HERMAN A. STEIERT, Sharon Hill, Pa. Filed Dec. 21, 1914. Serial No. 878,349. (Cl. 15—7.)



1. In a device of the character stated, a support for the brush-back, means for imparting a reciprocating forward and backward movement thereto, means for imparting series of spaced step by step inward movements to said support, means for imparting a side movement thereto at the end of each series of inward movements, means for throwing said support outwardly at the end of each series in inward movements and means with which the support engages to limit its outward and lateral throws for initially locating said support in proper position for each series of inward movements.

2. In a device of the character stated, a support for the brush-back, means for imparting series of step by step inward movements to the support for a predetermined time and releasing the same at the end of each series, means for guiding the inward movement of the support and releasing the same at the end of each series, means for moving the support laterally when released at the end of each series of inward movements, means for throwing the support outwardly when released at the end of each series of inward movements and means for engagement with the support to limit outward movements and the side throws to locate the support in position for each series of inward step by step movements.

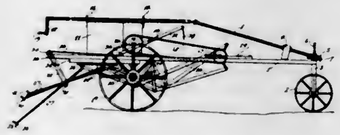
3. In a device of the character stated, a support for the brush-back, means for imparting a reciprocating forward and backward movement thereto, means each adapted in succession to impart series of step by step movements inwardly to the support at predetermined times, and releasing the same at he end of each series of inward movements, means for guiding the support for each series of step by step movements and releasing the same at the end of each series of inward movements, means for moving the support laterally when released, means for throwing the support outwardly at the terminations of a series and means for engagement with the support for limiting the lateral and the outward throw of the support to locate it in position for the next inward series of movements.

4. In a device of the character stated, a support for the brush-back, a carrier having a plurality of laterally and longitudinally spaced teeth adapted for serial engagement with the support, means for actuating the carrier to cause the teeth in turn to engage the support and to impart series of step by step movements inwardly to the support at predetermined times and to release the support at the end of each series, means for guiding the support in its step by step movement and releasing the same at predetermined times, means for moving said support laterally when released, means for throwing the support outwardly at the termination of a series, and means for limiting the lateral movement and outward throw of the support to locate it in position for the next series of inward movements.

5. In a device of the character stated, a frame, a support for the brush-back movable on the frame, means suitably spaced apart for imparting series of step by step movements inwardly to the support at predetermined times and releasing it at the end of each series, a series of stepped tracks and a guide member common to the support and the frame of the machine and adapted for engagement for guiding the support for each series of step by step movements and releasing it at the end of each series, means for moving the support laterally when released, means for throwing the support outwardly at the termination of a series, and means for limiting the lateral movements and outward throws of the support to locate it in position for the next inward series of movements.

[Claims 6 to 15 not printed in the Gazette.]

1,171,474. WALKING-TRACTOR. EDWARD SWANSON, Hallock, Minn. Filed July 3, 1915. Serial No. 38,001. (Cl. 21—124.)



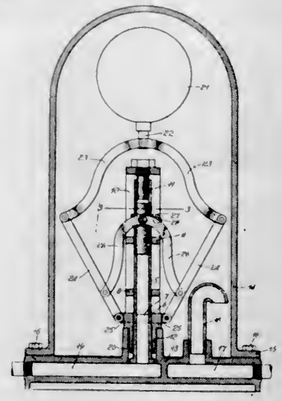
1. In a walking tractor, a main frame, a power-driven crank shaft carried by said main frame, slotted guide plates carried by said main frame, shoes arranged in said slotted guide plates, walking bars carried by said shoes, transmission mechanism connecting said shoes and the aforesaid crank shaft, bearing plates carried by said walking bars and means pivotally carried by said frame and engaging said walking bars for supporting and guiding the latter members.

2. In a walking tractor, a main frame, a power-driven crank shaft carried by said main frame, slotted guide plates carried by said main frame, shoes slidably arranged in said slotted guide plates, rockers carried by said main frame, connection between said rockers and said sliding shoes, connection between said rockers and the said crank shaft, walking bars carried by said shoes, bearing plates carried by said walking bars and means pivotally carried by said frame and engaging said walking bars for supporting and guiding the latter members.

3. In a walking tractor, a main frame, a power-driven crank shaft carried by said main frame, slotted guide plates carried by said main frame, shoes arranged in said slotted guide plates, transmission mechanism connecting said shoes and said crank shaft, walking bars carried by said shoes, bearing plates carried by said walking bars, slotted plates pivotally carried by said frame and a rod connecting said slotted plates and engaging said walking bars.

4. In a walking tractor, a main frame, a power-driven crank shaft carried by said main frame, slotted guide plates carried by said main frame, shoes slidably arranged in said slotted guide plates, transmission mechanism connecting said shoes and said crank shaft, walking bars carried by said shoes, bearing plates carried by said walking bars, slotted plates pivotally carried by said frame, a rod connecting said slotted plates and engaging said walking bars and manually operable means connecting said slotted plates for raising and lowering the same to vary the inclination of said walking bars with said frame.

1,171,475. VALVE. JOSEPH E. SWENDEMAN, Providence, R. I. Filed Apr. 6, 1911. Serial No. 619,219. (Cl. 137—103.)



1. The combination with a valve casing having an inlet and having a valve seat provided with an outlet orifice, a valve in the form of a tube having one end adapted to rest on said seat and in open communication with said outlet orifice at all times during the operation of the valve, an apertured guide for said valve, a stationary element closing the other end of said valve and a float of constant displacement capacity and continuously subject to substantially balanced pressure connected laterally through said guide to said valve for moving said valve with relation to said seat and in relation to said stationary element.

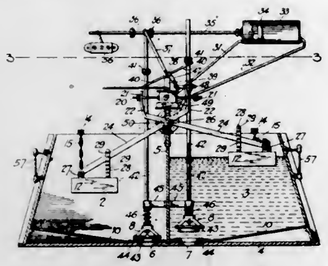
2. The combination with a valve casing having an inlet and having a valve seat provided with an outlet orifice, a valve in the form of a tube having one end adapted to rest on said seat and in open communication with said outlet orifice at all times during the operation of the valve, an apertured guide for said valve, a stationary element carried by said guide closing the other end of said valve and a float of constant displacement capacity subject to substantially balanced pressure for moving said valve with relation to said seat and with relation to said stationary element.

3. The combination with a valve casing having an inlet and having a valve seat provided with an outlet orifice, a valve in the form of a tube having one end adapted to rest on said seat and in open communication with said outlet orifice at all times during the operation of the valve, an apertured guide for said valve, a stationary element carried by said guide closing the other end of said valve and a float of constant displacement capacity and continuously subject to substantially balanced pressure, said float being disposed in alinement with said valve, and a linkage connecting the float with said valve to impart axial movement to the latter.

4. A valve comprising a base having an inlet and having an outlet therethrough, a valve seat communicating with said outlet, a frame upon the base overhanging the valve seat, a tubular valve member slidable in the frame for movement toward and from the seat and hav-

ing its venting end constantly open to the outlet, a stationary plug depending from the frame and closing the upper end of the valve member, a closed float above the valve member, in alinement therewith and connected thereto by a linkage to impart axial movement thereto, and a hood mounted upon the base inclosing all of said elements.

1,171,476. APPARATUS FOR MEASURING LIQUIDS. NED V. TANNER, Tonopah, Nev. Filed Mar. 1, 1915. Serial No. 11,257. (Cl. 73—28.)



1. A measuring apparatus comprising two containers having openings for the discharge of their contents, independently self-closing valves controlling the flow through said openings, a conduit which is adjustable to supply material alternately to the containers, floats in said containers, and mechanism for opening either valve by movement of the float in the respective container to a determinate level, and for simultaneously varying the condition of the conduit to supply material to the other container.

2. A measuring apparatus comprising two containers having outlets for the discharge of their contents, valves controlling the flow through said outlets, a conduit adjustable to supply material alternately to said containers, floats in the containers, a fluid-operated actuative element, mechanism for effecting by the action of said element, movements of the valves to alternately open and close the respective outlets of the containers, and a simultaneous variation in the condition of the conduit to supply material alternately to the two containers, a device automatically controlling the supply of a motive fluid to the said element, and means for the operation of said device by action of the floats.

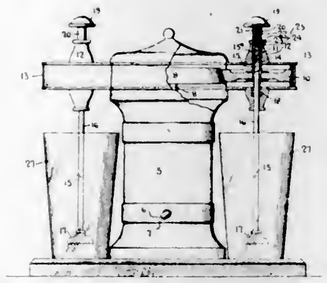
3. A measuring apparatus comprising two containers having outlets for the discharge of their contents, valves controlling the flow through said outlets, a conduit adjustable to supply material alternately to said containers, floats in the containers, a fluid-operated actuative element including a reciprocating member, a device automatically controlling the supply of a motive fluid to the said element to alternately move its said member in opposite directions, means for the operation of said device by the action of the floats, and mechanism for effecting by the movements of said member, movements of the valves to alternately open and close the respective outlets in the containers, and a simultaneous variation in the condition of the conduit to supply material alternately to the two containers.

4. A measuring apparatus comprising two containers having outlets for the discharge of their contents, valves controlling the flow through said outlets, a conduit adjustable to supply material alternately to said containers, floats in the containers, an actuative element including a reciprocating member, a device controlling the supply of a motive agent to the said element to alternately move its said member in opposite directions, means for the operation of said device by the action of the floats, and a rock shaft adapted to be operated by the movements of said member, and operatively connected with the two valves to move them alternately for opening the respective outlets of the containers, and with the said conduit to vary its condition for supplying material alternately to the two containers.

5. A measuring apparatus comprising two containers having outlets for the discharge of their contents, valves controlling the flow through said outlets, a conduit adjustable to supply material alternately to said containers, floats in the containers, an actuative element including a reciprocating member, a device controlling the supply of a motive agent to the said element to alternately move its said member in opposite directions, means for the operation of said device by the action of the floats, adjustable collars on said member, and a rock shaft having an arm disposed to be engaged by said collars for moving the shaft alternately in opposite directions, the said shaft having an operative connection with the two valves to move them alternately for opening the respective outlets of the containers, and with the said conduit to vary its condition for supplying material alternately to the two containers.

[Claims 6 to 13 not printed in the Gazette.]

1,171,477. DRINK-MIXER. ADOLPH THORMAHLEN, New York, N. Y. Filed May 10, 1915. Serial No. 27,013. (Cl. 31—63.)



1. In a device of the character described, the combination with a rotative driven member, a stem slidable therethrough, an agitator carried by said stem, means for driving said stem from said member, means normally tending to elevate said member, and yielding manually operable means arranged to thrust said member downwardly against the action of said elevating means.

2. In a device of the character described, the combination with a casing having a rotative bevel gear mounted therein, of a rotative pinion arranged to contact with said gear, a bearing carried by said casing, a sleeve carried by said pinion and mounted to rotate in said bearing, a stem passing through said sleeve and through said pinion, spring means normally tending to elevate said pinion and said sleeve, a pin carried by said sleeve which passes through an elongated slot in said stem, a cap, spring means bearing between said cap and a part of said stem, and means for holding said cap against upward movement.

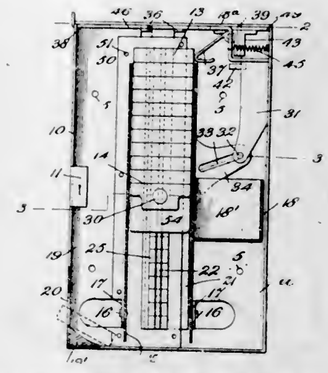
3. In a device of the character described, the combination with a casing having a rotative bevel gear mounted therein, of a rotative pinion arranged to contact with said gear, a bearing carried by said casing, a sleeve carried by said pinion and mounted to rotate in said bearing, a stem passing through said sleeve and through said pinion, spring means normally tending to elevate said pinion and said sleeve, a pin carried by said sleeve which passes through an elongated slot in said stem, a cap, means for holding said cap against upward movement, a spring located in said cap and a ball upon which said spring bears, said ball having a seating upon the upper end of said stem.

4. In a device of the character described, the combination with a centrally arranged driven bevel gear, of a plurality of beveled pinions arranged thereabout to contact therewith and be driven thereby, means normally tending to impart upward movement to said pinions, stems passing through said pinions, agitators carried by said stems, and manually operable means for thrusting said pinions downwardly against the action of their elevating means to bring them into engagement with said bevel gear as and for the purposes set forth.

5. In a device of the character described, the combination with a horizontally disposed rotative driving element of a horizontally disposed rotative driven element, means normally tending to impart vertical movement to said driven element to move the same out of engagement with the driving element, a sleeve carried by said driven element, an agitator vertically movable with relation to said sleeve to rotate therewith, a manually operable member for moving said agitator, a fixed bearing member in which said sleeve turns and a bayonet joint connected between said manually operable member and said bearing member.

[Claim 6 not printed in the Gazette.]

1,171,478. VENDING-MACHINE. WILLIAM J. TINTERA, Stapleton, N. Y. Filed Apr. 16, 1915. Serial No. 21,819. (Cl. 194—80.)



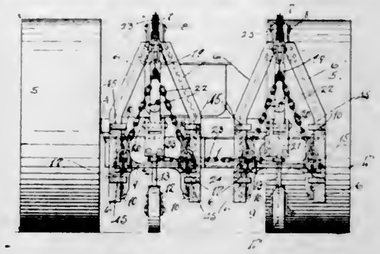
1. In a vending machine a casing adapted to serve as a guide for a stack of articles, a carrier mounted for movement along the casing, fixed teeth located adjacent the path of movement of the carrier, a locking dog carried by the carrier and engageable with the teeth to hold the carrier against retractive movement, a rack plate movably mounted and having teeth located adjacent the first mentioned teeth, a dog movably mounted upon the carrier and engageable with the last mentioned teeth, means for moving the rack plate and a pushing device connected with the last mentioned means and adapted to remove the uppermost article from the stack.

2. In a vending machine means for guiding a stack of articles, a carrier movably mounted along said means and adapted to advance the articles step by step, a plate movably mounted along the said guiding means and engageable with the carrier to advance the same, an arm having pin and slot connection with the plate, a slide to which the arm is attached, means for moving the slide and a pusher finger pivotally connected with the slide and adapted to remove the uppermost article from the stack.

1,171,479. TRACTOR-PLOW. JAMES J. TRACY, Cleveland, Ohio. Filed Oct. 17, 1912. Serial No. 726,201. (Cl. 97—70.)

1. The combination with a tractor; of a plow support; a guideway consisting of two spaced U-shaped members opening toward each other, said guideway being vertically mounted on said tractor; and a frame provided with rollers adapted to contact the front and sides of said two U-shaped members, thereby securing said frame against rocking in any direction, said frame being connected to said plow support.

2. The combination with a tractor; of a plow-support; a guideway consisting of two spaced U-shaped members opening toward each other, said guideway being vertically mounted on said tractor; a frame provided with rollers adapted to contact the front and sides of said two U-shaped members, thereby securing said frame from lateral movement, said frame being connected to said plow-support about a horizontal pivotal axis; and means adapted to raise and lower said plow-support.



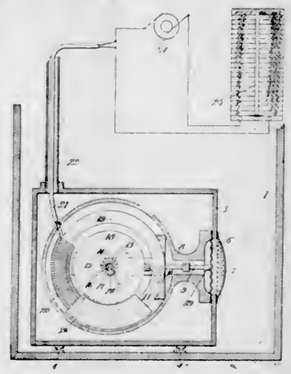
3. The combination with a tractor; of a plow support; two spaced U-shaped guides opening toward each other, said guides being vertically mounted on said tractor; a frame slidably mounted between said members and attached to said support; and means adapted to move said support vertically, said means being connected to said support near its center of gravity, and said plow support extending rearward from said frame.

4. The combination with a tractor; of a plow support; a guideway consisting of two spaced U-shaped members opening toward each other, said guideway being vertically mounted on said tractor; a frame slidably mounted between said members and attached to said support; and means adapted to move said support vertically, said means being connected to said support slightly forward of its center of gravity.

5. The combination with a tractor; of a plow support; means connecting said tractor and said plow support, said means being vertically slidably mounted on said tractor; a boom pivotally mounted on said tractor and extending over said support; a cable attached to the outer end of said boom and to said support slightly forward of the center of gravity of the latter; and means adapted to actuate said boom, thereby raising and lowering said support through said cable.

[Claims 6 to 10 not printed in the Gazette.]

1,171,480. ELECTRICAL FLUID-PRESSURE INDICATOR. FREDERICK J. TROLL, Baltimore, Md., assignor to The Loadometer Company, Baltimore, Md., a Corporation of Delaware. Filed July 14, 1910. Serial No. 571,999. (Cl. 177—351.)



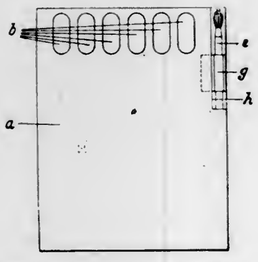
1. In a fluid pressure indicating device, a hermetically sealed receptacle adapted to be immersed in a body of fluid and having an opening therein, a flexible diaphragm closing said opening and exposed to the surrounding fluid, a closed circuit carrying an alternating current, a reactance device located in the receptacle and including a rota-

table disk, and means operated by the movements of the diaphragm due to the varying pressure of the fluid thereon for rotating said disk and thereby varying the self induction of the reactance device including a connection between the diaphragm and the disk.

2. A fluid pressure indicating device comprising a hermetically sealed receptacle adapted to be immersed in a body of fluid, and having an opening in one of its walls, a flexible diaphragm closing said opening and exposed to the surrounding fluid, a closed circuit carrying an alternating or pulsating current, a self induction coil in said circuit and located in the receptacle, a rotary disk adjacent to said coil and means operated by the movements of the diaphragm due to the varying pressure of the fluid thereon, for varying the self induction of the coil, comprising a shaft and operable by the diaphragm, and a metallic sheath on the disk adapted to more or less envelop the coil.

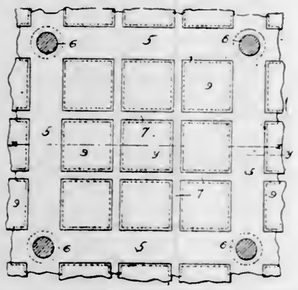
3. A fluid pressure indicating device comprising a hermetically sealed receptacle adapted to be immersed in a body of fluid, and having an opening in one of its walls, a flexible acid proof diaphragm closing said opening and exposed to the surrounding fluid, a self induction coil in the receptacle, a rotary disk adjacent to the coil, a metallic sheath carried by the disk and adapted to more or less envelop the coil, a shaft on which the disk is mounted, and connections between the diaphragm and shaft whereby the shaft is rotated by the movement of the diaphragm due to the varying pressure of the liquid.

1,171,481. PAINTING-BOOK. GUSTAVE TUCK, London, England. Filed Feb. 14, 1913. Serial No. 748,423. (Cl. 41—4.)



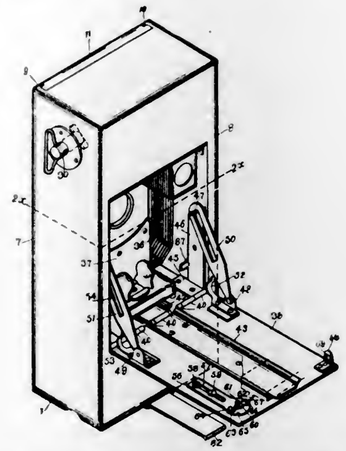
A book of the type referred to having, in combination, covers, the leaves to be colored, the colors fastened on the inside of one of the covers, holes through the leaves registering with one another to permit ready access to said colors, and suitable means for holding a brush on the inside of the book, the leaves being cut away so as to form a pocket for said brush which will allow direct access to the brush whether the book is open or closed and also permit the leaves to remain flat at all times.

1,171,482. REINFORCED CONCRETE STRUCTURE. ROBERT B. TUFTS, Norfolk, Va. Filed Apr. 28, 1914. Serial No. 834,994. (Cl. 72—15.)



A reinforced concrete floor structure comprising a plurality of intersecting concrete girders forming rectangular panels, column supporting said panels at the intersections of said girders, concrete beams dividing each panel into a plurality of smaller spaces, said beams intersecting each other and made integral at their ends with the girders forming the panel, said girders and beams formed with ledges surrounding said smaller spaces, and precast panel units closing said spaces, said panel units having less thickness than the thickness of the girders and beams and resting on said ledges with their upper faces flush with the upper faces of the girders and beams.

1,171,483. CAMERA. HENRY H. TURNER and SIMON SCHIDAKOVITCH, Rochester, N. Y., assignors to Gundlach-Manhattan Optical Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 24, 1913. Serial No. 743,994. (Cl. 95—11.)



1. In a camera, the combination of a camera body, a leaf fastened directly to said camera body, a bed plate, said leaf and bed plate both having knuckles formed integral therewith and pintles for connecting them directly together, runways on said leaf and said bed plate, upright arms on said leaf, side arms pivotally mounted on said plate, studs on said upright arms with which said side arms engage, springs on said bed plate for engaging with said side arms and pushing them upward against said lugs, a lug on one of said upright arms and integral therewith, with which one of said springs engages and by which it is flexed when the bed plate is closed.

2. The combination in a camera of a camera body having a rectangular opening central thereof, a bellows frame adapted to engage with and fill said opening, said bellows frame having runners on each side thereof, said camera body having grooves with which said runners are adapted to engage.
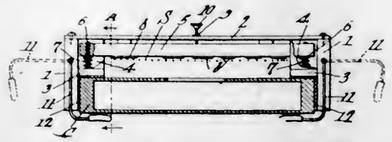
3. The combination in a camera of a camera body having a rectangular opening central thereof, a bellows frame adapted to engage with and fill said opening, said bellows frame having runners on each side thereof, said camera body having grooves with which said runners are adapted to engage, lugs at the top and bottom of said bellows frame adapted to engage with the ends of said central compartment to be fastened thereto.

4. The combination in a camera of a camera body having a rectangular opening central thereof, a bellows frame adapted to engage with and fill said opening, said bellows frame having runners on each side thereof, said camera body having grooves with which said runners are adapted to engage, brackets on the ends of said bellows frame, rollers mounted in said brackets.

5. In a camera, the combination of a camera body, a frame comprising a leaf and a bed plate having knuckles integral therewith by which they are directly pivoted together, said leaf being permanently and immovably fastened to the camera body, brackets fastened on said leaf

having upright arms with lugs integral therewith, said arms pivotally mounted on the bed plate and engaging with said lugs, said frame being constructed so as to permit the complete assembling thereof independent of the camera body, and the subsequent insertion and fastening thereof to the camera body.

1,171,484. AUTOHARP. JOHN W. VAN HOY, Concord, N. C. Filed July 22, 1914. Serial No. 852,408. (Cl. 84—82.)

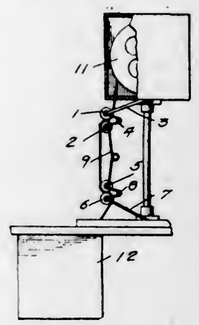


1. A chord selecting attachment for musical instruments, including guides for engaging side portions of a musical instrument, a connection between the guides, each of the guides having parallel pockets therein, damper bars slidably mounted at their ends in the pockets, means for yieldingly supporting the damper bars within the guides, a stem upon each bar and slidably mounted in the connection, and a key upon each stem.

2. A chord selecting attachment for musical instruments, including opposed blocks for engaging the side portions of a musical instrument, clips for binding said blocks upon the side portions of the instrument, yieldingly supported damper bars slidably mounted within the blocks, a connection between the blocks, and means slidably mounted within the connection for actuating the respective bars.

3. A chord selecting attachment for musical instruments, including opposed guide blocks, means carried thereby for detachably connecting said blocks to the side portions of the instrument, a connection between the blocks and adapted to bridge over the strings of the instrument, damper bars yieldingly supported at their ends within the blocks and below the connection, and means slidably mounted within the connection and connected to the bars for depressing said bars.

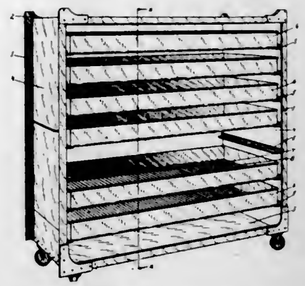
1,171,485. MOVING-PICTURE MACHINE. GEORGE C. VANMEER, Burk's Falls, Ontario, Canada. Filed Apr. 12, 1915. Serial No. 20,826. (Cl. 88—17.)



1. In a device for maintaining a moving elongated film taut, a pair of horizontally disposed rollers, means for resiliently pressing said rollers together, a second pair of horizontally disposed rollers located beneath and in spaced relation to the first mentioned rollers, means for pressing said last mentioned rollers, resiliently, together, and resilient means for forcing the adjacent rollers of the pairs, apart.

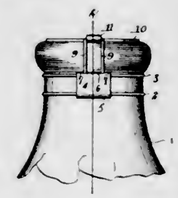
2. In a device for maintaining an elongated moving film taut, a roller, brackets for supporting said roller, a second roller located beneath the first mentioned roller, springs connected to said rollers to press the same together, a pair of rollers disposed beneath the first mentioned rollers and resilient means for normally forcing the first mentioned rollers and the last mentioned pair of rollers apart.

1,171,486. COOLING AND DRAINING CABINET. BRUCE M. WARNER, Albion, Mich., assignor to Union Sanitary Rack Manufacturing Co., Albion, Mich. Filed May 8, 1914. Serial No. 837,149. (Cl. 34—39.)



In a cabinet for cooling and draining doughnuts and the like, the combination of a casing comprising top, bottom and end walls, there being a series of pan ledges at the ends of the casing, a series of pans disposed one above another on said ledges, there being spaces between the pans and the casing being open at the front and rear for the free circulation of air between the pans and through the casing, and racks consisting of supporting bars having cross bars secured thereto, the racks being disposed within the pans with their cross bars in an elevated position above the bottoms of the pans for drainage and the circulation of air, all coacting for the purpose specified.

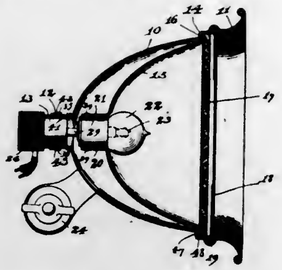
1,171,487. MILK-BOTTLE CLOSURE. WILLIAM WATERS, West Rutland, Vt. Filed Mar. 9, 1915. Serial No. 13,298. (Cl. 215—34.)



1. A closure for milk bottles comprising a resilient neck engaging member comprising a single strand of wire having a loop formed intermediate of its ends, and bent upon itself to form a pair of semi-circular spaced arms, a metallic plate having one of its edges bent around one of the strands of wire to secure the free ends thereof together, and having its other edge cut out to receive said looped portion, and a closing disk pivoted in said looped portion.

2. A closure for milk bottles comprising a resilient neck engaging member formed by bending a single piece of wire intermediate of its ends to form a loop, the free ends of the loop being bent in opposite directions from the loop and being subsequently turned backwardly upon themselves to form parallel strands in spaced relation and means for holding said strands in said relation, said means comprising a metallic plate having one of its edges bent around the free ends of the strand of wire and having its oppositely disposed edge bifurcated to receive the loop and having the furcations bent around the strand of wire on opposite sides of said loop, and a closure disk pivotally mounted in said loop.

1,171,488. ELECTRIC SEARCH-LAMP. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed Jan. 4, 1915. Serial No. 319. (Cl. 240—41.)



1. In an electric lamp, the combination of an outer casing provided with a tubular socket adapted to form a support for an electric connector, an inner reflector seated within said casing and having a separate tubular socket adapted to register with said first socket and adapted to form a support for a lamp projecting within said reflector, a connector supported independently of said second socket projecting outwardly from said first socket and provided with resilient contact means on its inner end, and a lamp seated within said inner socket and provided with a contact member on its outer base portion adapted to engage said resilient contact means.

2. In an electric search lamp, the combination of an outer bowl-shaped casing provided with an integral tubular socket portion, a bowl-shaped reflector nested within said outer bowl and provided with an integral tubular socket portion co-axial with said first extension, an electrical cylindric plug connector detachably supported co-axially in said outer socket, and a lamp bulb provided with a base detachably supported within said reflector extending through said inner socket and adapted directly to engage said connector.

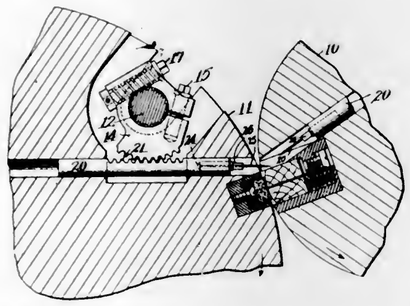
3. In an electric search lamp, the combination of an outer bowl-shaped casing provided at its base with a tubular extension projecting from and co-axial with the bowl, an inner bowl-shaped reflector nested within said outer casing and provided with an outwardly projecting tubular rear extension co-axial with and disconnected from said first extension, an electrical connector plug detachably supported in said outer extension, a connection extending through said plug and provided at its inner end with a resilient contact, a lamp bulb within said reflector and provided with a base extending through said inner tube, and a contact plate on said base adapted directly to engage said resilient contact member.

4. In an electric search lamp, the combination of an outer bowl-shaped casing provided with a tubular socket, a reflector nested within said outer casing and provided with a tubular socket substantially co-axial with said outer socket, said outer socket being provided with a T-shaped slot open at its outer end, a cylindrical plug of resilient material provided with a transverse pin projecting from said cylinder and adapted to enter said T-shaped slot, a resilient eccentrically disposed contact member on the inner end of said plug and provided with an electrical connection extending through said plug, an electric bulb contained within said reflector and provided with a base supported within said inner socket, and a contact eccentrically mounted on the rear end of said base adapted to engage said resilient contact member, the ends of the lateral arms of said T-shaped slot being suitably spaced around the circumference of said outer socket to provide an on and off position for said contact.

5. In an electric search lamp, the combination of an outer bowl-shaped casing provided with a tubular socket portion having a T-shaped slot in its circumference open at its outer end, an inner reflector seated within said outer casing and provided with a tubular socket portion registering and co-axial with said outer socket, an electric bulb within said reflector and provided with a cylindrical base supported within said inner socket, said inner socket and base being provided with mutual interlocking engagement whereby said base may be rotated through an angle of substantially ninety degrees within said socket, the socket when in either of said extreme angular positions being located at different longitudinal positions within said socket, a cylindrical plug of insulating material supported within said outer socket and having a locking pin adapted to enter said T-shaped slot, an electrical connection extending through said plug and provided with a resilient post contact at its inner end, said post contact being eccentrically mounted in the inner end of said plug, said plug being adapted to be adjusted by means of said pin in said T-shaped slot in two distinct locking positions ninety degrees apart from each other, an electric bulb contained within said reflector and provided with a resilient base adapted to be adjusted in two positions within said inner socket ninety degrees apart from each other, and a contact on the outer end of said base adapted to engage and register with said resilient post member when said base and said connector are in relatively the same angular position, and adapted to be out of contact when said base and connector are in different angular positions.

[Claims 6 to 9 not printed in the Gazette.]

1,171,489. PAPER-PIN HOLDING AND ADJUSTING DEVICE. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed June 16, 1913. Serial No. 773,916. (Cl. 101—115.)



1. In a paper folding device, the combination with the cylinder, of a pin operating device carried thereby, means connected with said device for simultaneously operating a plurality of paper holding pins, and means connected with said device for individually adjusting each pin with respect to the device, said device being provided with means at intervals for coöperating with said adjusting means.

2. In a paper folding device, the combination with the cylinder, of an oscillatable pin operating rod carried thereby, a plurality of means connected with said rod for simultaneously operating a plurality of paper holding pins, means connected with said rod for individually adjusting each pin micrometically with respect to the rod, and independent means for clamping the operating devices in adjusted positions on the rod.

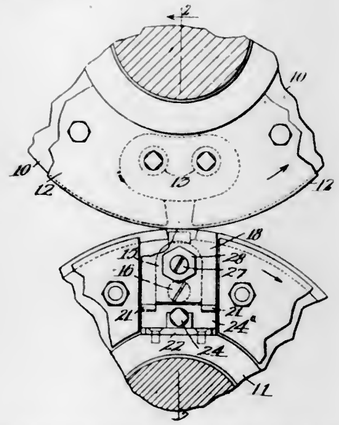
3. In a paper folding device, the combination with the cylinder, of a pin operating rod carried thereby, a plurality of means connected with said rod for simultaneously operating a plurality of paper holding pins, a series of teeth on the rod at separated points, and a worm connected with each pin operating device for engaging said teeth and moving each pin operating device, individually with respect to the rod.

4. The combination with a cylinder, of a longitudinal rod thereon having a series of circumferential teeth, a member rotatably mounted on the rod, means supported by said member and engaging said teeth for adjusting said member about the rod, means for clamping the member to the rod in its adjusted positions, a movable pin holder, and means for transmitting the motion of said member to the holder.

5. The combination with a cylinder, of a rotatable rod thereon having a plurality of series of teeth thereon, a plurality of segmental gears each rotatably mounted on the rod, means for adjusting each of said gears about the rod, means for clamping the gears to the rod in their adjusted positions, and a longitudinally reciprocable pin holder having a rack thereon for engaging the teeth of one of said segmental gears, whereby said holder can be reciprocated and adjusted.

[Claims 6 to 9 not printed in the Gazette.]

1,171,490. BEARING DEVICE FOR PRINTING-COUPLES. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed July 2, 1913. Serial No. 777,002. (Cl. 101—111.)



1. In a printing couple, the combination of a plate and impression cylinder with a ring fastened to each end of one of said cylinders, blanket rods carried by said rings, a bearing block mounted at each end of the other cylinder opposite the margin openings thereof for engaging said ring and holding the cylinders apart, and means for radially adjusting said bearing block.

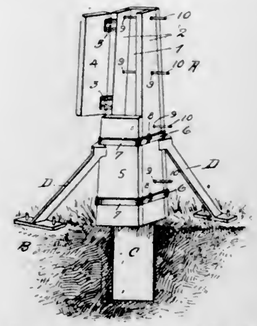
2. The combination with a printing cylinder, of guide blocks thereon at the ends of the margin openings, said guide blocks having guides thereon, sliding blocks guided on said guides to move radially, said sliding blocks having convex outer surfaces conforming substantially with the exterior diameter of the plate cylinder, and a longitudinal screw mounted on said plate cylinder for adjusting said blocks radially along the guides.

3. The combination with a printing cylinder, of a guide block thereon at the end of the margin opening, said guide block being provided with substantially radial guiding surfaces, a sliding block mounted on said guide block and guided thereby to move radially, a screw for holding said guide block on the end of the cylinder, means for adjusting said sliding block on the guide block, and a screw for fastening the sliding block in adjusted positions.

4. The combination with a printing cylinder, of a guide block thereon, a sliding block guided on and carrying said guide block, a longitudinal screw mounted on said plate cylinder, a wedge block engaging said screw and adapted to be adjusted thereby longitudinally, said sliding block having a slanting surface engaging said wedge block, whereby the sliding block is adjusted radially.

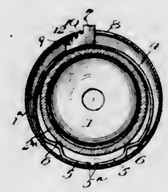
5. The combination with a printing cylinder, of guide blocks thereon at the ends of the margin openings, said guide blocks having guides thereon, sliding blocks guided on said guides, said blocks having convex outer bearing surfaces, longitudinal screws mounted on said plate cylinder, wedge blocks engaging said screws and adapted to be adjusted thereby and with said sliding blocks for adjusting them outwardly, and means for holding the sliding blocks in adjusted positions.

1,171,491. POST-MOLD. DAVID L. WOODS, Meadville, Pa. Filed Apr. 10, 1912. Serial No. 689,805. (Cl. 25—118.)



A fence post mold comprising a back plate, side plates rigidly secured to said back plate and having holes for the reception of short lengths of wire, a front portion made in two sections each hinged to the same side plate, clamps encircling said molds, said clamps having fixed U-shaped portions encircling the body portion of the mold and removable U-shaped portions across the front of said mold and extending along the side portions until they connect with said fixed portions, one of said clamps being at the bottom and one at the top of each of said front sections, said mold having braces at its corners to hold it in proper position, and said mold being of less dimensions at its top than at its bottom.

1,171,492. SOCKET-COVER AND SHADE-HOLDER. HORACE R. YARDLEY, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,228. (Cl. 240—115.)



1. A device of the class specified comprising a shell or casing, a spring clip arranged therein, a member for adjusting the size of said spring clip, said member being adapted to move inwardly and outwardly to vary the size of said spring clip and passing through a slot in the shell or casing to permit actuation of said clip from outside of the shell or casing, and means whereby said clip may be locked in an inward position by a sidewise movement of said member.

2. A device of the class specified comprising a shell or casing, a spring clip arranged therein, and a member for adjusting the size of said spring clip, said member being adapted to move inwardly and outwardly to vary the size of said spring clip and passing through a slot in the shell or casing to permit actuation of said clip from outside of the shell or casing, said member and shell or casing being provided with means for engaging one another so as to hold said member in an inward position, by a sidewise movement of said member.

3. A device of the class specified comprising a shell or casing, a spring clip arranged therein, and a member for

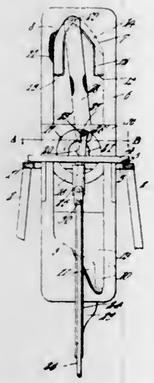
adjusting the size of said spring clip, said member being adapted to move inwardly and outwardly to vary the size of said spring clip and passing through a slot in the shell or casing to permit actuation of said clip from outside of the shell or casing, said member and shell or casing being provided with means for holding said member in an inward position, said means comprising a shoulder on said member and an abutment on said shell or casing to engage said shoulder, which shoulder and abutment may be engaged and disengaged by a sidewise movement of said member.

4. A device of the class specified comprising a shell or casing, a spring clip arranged therein, and a member for adjusting the size of said spring clip, said member being adapted to move inwardly and outwardly to vary the size of said spring clip and passing through a slot in the shell or casing to permit actuation of said clip from outside of the shell or casing, said member and shell or casing being provided with means for holding said member in an inward position, said means comprising a series of shoulders arranged in step-like manner on said member and an abutment on said shell or casing for engaging said shoulders.

5. A device of the class specified comprising a shell or casing, a spring clip arranged therein, and a member for adjusting the size of said spring clip, said member being adapted to move inwardly and outwardly to vary the size of said spring clip and passing through a slot in the shell or casing to permit actuation of said clip from outside of the shell or casing, said member and shell or casing being provided with means for holding said member in an inward position, said means comprising a series of shoulders arranged in step-like manner on said member and an abutment on said shell or casing for engaging said shoulders, said shoulders being provided with outwardly extending projections.

[Claims 6 to 8 not printed in the Gazette.]

1,171,493. POWER-TRANSMITTING MECHANISM. CHARLES L. YOKOM, Mount Vernon, Oreg. Filed Mar. 22, 1915. Serial No. 16,197. (Cl. 74—27.)

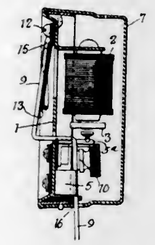


1. Power transmitting mechanism including a guide having upwardly converging deflectors at its upper end, a guide member spaced from and substantially parallel with said deflectors, there being a slot in the lower portion of the guide and a deflector leading thereto, a gear mounted for rotation within the guide, a rack bar having an endless series of teeth extending along opposed edges and ends thereof, said ends being rounded, an outstanding roller upon each end portion of the rack, one of said rollers being movable against and along the upper deflector and upon the guide adjacent thereto and the other roller being movable along the lower deflector and into the slot, said rack being constantly in mesh with the gear and being mounted to swing and slide within the guide, and a switch pivotally connected to the guide and adjacent one of the upper deflectors, said switch being in the path of the roller at one end of the rack.

2. Power transmitting mechanism including a guide having upwardly converging deflectors at its upper end, a guide member spaced from and substantially parallel with said deflectors, there being a slot in the lower portion of the guide and a deflector leading thereto, a gear mounted for rotation within the guide, a rack bar having an endless series of teeth extending along opposed edges and ends thereof, said ends being rounded, an outstanding roller upon each end portion of the rack, one of said rollers being movable against and along the upper deflector and upon the guide adjacent thereto and the other roller being movable along the lower deflector and into the slot, said rack being constantly in mesh with the gear and being mounted to swing and slide within the guide, a switch pivotally connected to the guide and adjacent one of the upper deflectors, said switch being in the path of the roller at one end of the rack, a slide, a guide therefor, and a link connection between the slide and the rack.

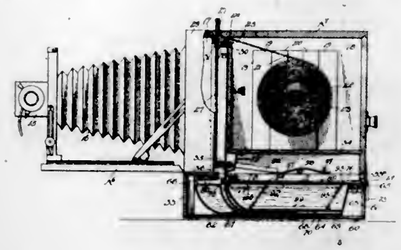
3. Power transmitting mechanism including a guide having upwardly converging deflectors at its upper end, a guide member spaced from and substantially parallel with said deflectors, there being a slot in the lower portion of the guide and a deflector leading thereto, a gear mounted for rotation within the guide, a rack bar having an endless series of teeth extending along opposed edges and ends thereof, said ends being rounded, an outstanding roller upon each end portion of the rack, one of said rollers being movable against and along the upper deflector and upon the guide adjacent thereto and the other roller being movable along the lower deflector and into the slot, said rack being constantly in mesh with the gear and being mounted to swing and slide within the guide, a switch pivotally connected to the guide and adjacent one of the upper deflectors, said switch being in the path of the roller at one end of the rack, and means concentric with the gear and coöperating with the respective rollers on the rack for holding the end portions of the rack in mesh with the gear while passing thereacross.

1,171,494. CUT-OUT FOR AN ELECTRIC SIGNAL. GEORGE L. BARRETT, Springfield, Ohio. Filed Sept. 6, 1913. Serial No. 788,427. (Cl. 175—282.)



A device of the character described comprising a base having an opening, electrical connectors mounted on said base, an electrical conductor leading to one of said connectors, the other of said connectors comprising a contact member, a lever pivotally mounted on the back of said base on an axis transverse to the plane thereof, extending through the opening in said base to a point near said contact member and having a portion constituting a handle to enable said lever to be moved into and out of engagement with said contact member, a second conductor connected to and movable with said lever, and a U-shaped loop of resilient wire having its ends secured to said base on opposite sides of said lever and having its transverse portion extending beneath said lever and exerting outward pressure thereon.

1,171,495. PHOTOGRAPHIC AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed Jan. 3, 1910. Serial No. 535,939. (Cl. 95—13.)



1. In a photographing and developing apparatus, means for exposing film to light, a container for fluid designed to act on the coated surface of the film, means for delivering film from the means for exposing it to light to the container and supporting said film therein, means for drawing the supported film from the container, and means for cutting the film.

2. In a photographing and developing apparatus, means for exposing film to light, a container for liquid, means for delivering the film to the container and for supporting said film in the container, means for drawing the film from the container, a second container to which the drawn film is delivered, and means for cutting the film.

3. In a photographing and developing apparatus, an inclosing casing adapted to contain a supply of film and having means for exposing said film to the action of light, trays within the casing adapted to contain fluid for treating the film, means for drawing film from said exposing chamber and projecting it into one tray, a reciprocable member for drawing said film from one of the trays and delivering it to the other tray, and means for severing the film.

4. In a photographing and developing apparatus, means for exposing film to light, fluid receptacles, means for drawing film from the exposing means and projecting the same into one receptacle, reciprocating means for drawing film from one receptacle and moving it with relation to the other of said receptacles, means operated by said reciprocating means for severing the film, and means operated by the said reciprocating means for submerging the film in the second mentioned receptacle.

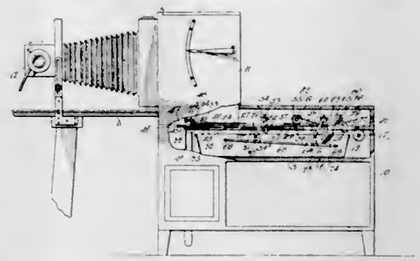
5. In a photographing and developing apparatus, means for exposing film to light, means for drawing film from the means for exposing it to light, a container to which the film is delivered, means for drawing the film from the container, a second container to which the film is delivered, means for cutting the film, means for operating the cutting means, and means carried by the cutter operating means for submerging the film.

[Claims 6 to 29 not printed in the Gazette.]

1,171,496. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed May 20, 1911. Serial No. 628,414. (Cl. 95—90.)

1. In an apparatus relating to photography having means for containing film, means for drawing film from the means for containing film, rollers between which the film is delivered from the means for drawing film, a reciprocating frame, a bearing in which one of the rollers is rotatable and in which a companion roller is rotatable and slidable, whereby the relation of one roller to the other may be changed, a receptacle with relation to which the frame is movable and with relation to which the film carried by the rollers is moved, means for rotating one of the rollers as the frame is moved for dislodging the film from the rollers and delivering it in the receptacle, and means for separating the rollers after dislodgment of the film from the said rollers.

2. In an apparatus relating to photography having means for containing film, means for drawing film from the means for containing film, rollers between which the film is delivered from the means for drawing film, a frame having journal bearings for the rollers, one of said journal bearings being slotted to permit movement of one roller with relation to the other roller, whereby the said rollers are permitted to assume operative and inoperative positions with relation to each other, means for rotating one of the rollers when the rollers are in operative relation to each other, and means for effecting movement of one of the rollers with relation to the other roller.



3. In an apparatus relating to photography having means for containing film, means for drawing film from the means for containing film, rollers between which the film is delivered from the means for drawing film, a frame, journal bearings carried by the frame in which the rollers are rotatable, the journal bearings being slotted to permit sliding movement of one roller with relation to the other roller, means for holding the rollers in operative relation to each other, means for rotating one of the rollers when the rollers are in operative relation to each other, and means for moving one of the rollers out of operative relation to the other roller.

4. In an apparatus relating to photography having means for containing film, means for drawing film from the means for containing film, rollers between which the film is delivered from the means for drawing film, a frame, journal bearings carried by the frame in which the rollers are rotatable, the journal bearings being slotted to permit sliding movement of one of the rollers with relation to the other roller, means for holding the rollers in operative relation to each other, means for rotating one of the rollers when the rollers are in operative relation to each other for dislodging film therefrom, a receptacle to receive the dislodged film, an immersing member, and means for moving the immersing member into the receptacle to press the film into the receptacle.

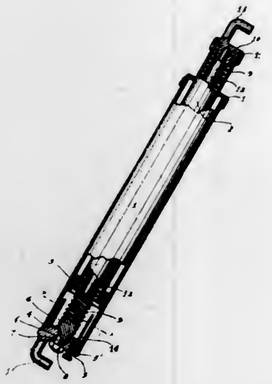
5. In an apparatus relating to photography having means for containing film, means for drawing film from the means for containing film, carrying members to which the film is delivered, means for cutting the film delivered to the carrying member, a receptacle to which the film is delivered by the carrying members, an immersing member operatively mounted with relation to the receptacle, arms from which the immersing member is suspended, and means for oscillating the arms.

[Claims 6 to 36 not printed in the Gazette.]

1,171,497. DOOR CHECK AND CLOSER. CHARLES V. BERRY, Mansfield, Ohio. Filed July 12, 1915. Serial No. 39,241. (Cl. 16—87.)

1. A door check comprising telescopic cylinders, a plunger on the inner cylinder operable in the outer cylinder, a head for the outer cylinder arranged in opposition to the plunger and provided with a central opening and a port, a regulating valve in the port of the head, a stemmed boss having its stem detachably secured in the opening of the head, a head on the outer end of the inner cylinder provided with an inwardly extending apertured boss, a coiled spring having its ends secured to the bosses, the peripheries of the bosses being spirally grooved to receive the spring ends, a closure rod secured in the aperture of the second boss and arranged within the spring, the outer

cylinder having its inner wall grooved for by-passes adjacent its head, and integral hooks on the heads.



2. A door check comprising telescopic cylinders, a plunger on the inner cylinder operable in the outer cylinder, a head for the outer cylinder arranged in opposition to the plunger and provided with a central opening and a port, a regulating valve in the port of the head, a stemmed boss having its stem detachably secured in the opening of the head, a head on the outer end of the inner cylinder provided with an inwardly extending apertured boss, a coiled spring having its ends secured to the bosses, a closure guide rod fitted in the apertured boss, the peripheries of the bosses being spirally grooved to receive the spring ends, and integral hooks formed on the heads adapted to engage in brackets on relatively movable elements whereby an equal pull is exerted on the outer and inner telescopic members at the same time, when movement is imparted to the door.

3. A door check comprising a cylinder, a telescopic member, a plunger on the latter, a head for the cylinder, a boss on the head, a closure rod attached to the telescopic member, and a coiled spring secured to the boss and normally tending to hold the telescopic member telescoped, said boss being spirally grooved to receive the coils of the spring end whereby equal pull is exerted on the cylinder and the plunger at the same time.

4. A door check comprising an outer cylinder in combination with an inner cylinder adapted to telescope therewith, a plunger carried by the inner cylinder, a spring inclosed within the inner cylinder, a closure rod fitted within the inner periphery of the spring, grooves formed in the outer cylinder adjacent to one end thereof and adapted to provide by-passes for air in the outer cylinder.

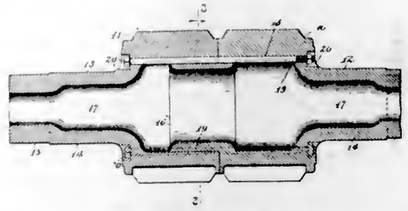
5. A door check comprising telescopic cylinders, a head for one cylinder provided with an aperture boss, a closure rod disposed in the aperture of the boss, and a coiled spring arranged within the cylinders to normally hold the cylinders telescoped.

[Claims 6 and 7 not printed in the Gazette.]

1,171,498. MILL-PINION. EDWARD S. BLACK, Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Oct. 16, 1915. Serial No. 56,200. (Cl. 74—41.)

1. An article of the class described comprising a shell, a half-shaft formed integral therewith provided with a power transmitting end, and a second half-shaft secured to said shell and held in alinement with the first-mentioned half-shaft thereby and provided with a power transmitting end.

2. An article of the class described comprising a shell, a half-shaft formed integral therewith, and a second half-shaft secured to said shell and held in alinement with the first-mentioned half-shaft thereby, the remote extremities of said half-shafts being formed with journal portions and with power transmitting ends.



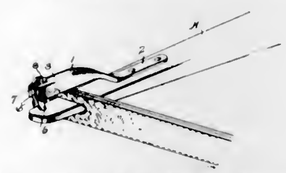
3. A mill pinion formed of cast manganese steel, and including a toothed shell with a half-shaft cast integral therewith, a second half-shaft, and means securing said second half-shaft to said shell and in alinement with the first-mentioned half-shaft.

4. A mill pinion formed of cast manganese steel, and including a toothed shell with a half-shaft cast integral therewith, a second half-shaft, and means securing said second half-shaft to said shell and in alinement with the first-mentioned half-shaft, the remote extremities of said half-shafts being formed with power-transmitting ends.

5. An article of the class described, comprising a shell, a hollow half-shaft formed integral therewith, and projecting from the one end thereof, a second hollow half-shaft secured to said shell and held in alinement with the first-mentioned half-shaft thereby, said half-shafts provided with journal portions.

[Claim 6 not printed in the Gazette.]

1,171,499. TRACE-HOLDER FOR WHIFFLETREES. FRANK BOGERD, Ottawa, Ill. Filed Apr. 25, 1914. Serial No. 834,470. Renewed Dec. 10, 1915. Serial No. 66,224. (Cl. 21—79.)

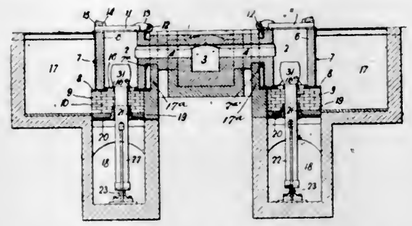


A whiffletree having a bracket secured thereto, upon its upper surface, said bracket having an upraised portion with its outer end about in vertical alinement with the end of the whiffletree, said bracket upraised portion being chambered, the resultant chamber opening through the underside thereof, and a latch pivoted in the outer end of said bracket upraised portion and right-angled in general outline with its horizontal arm positioned to initially rest upon said upraised portion of the bracket and its vertical arm to guard the entrance to the point of application of the trace.

1,171,500. CRUCIBLE-FURNACE. WILLIAM MILTON BROWN, Johnstown, Pa. Filed Apr. 2, 1914. Serial No. 829,147. (Cl. 75—186.)

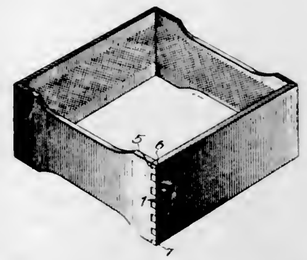
1. A crucible furnace comprising in combination, a crucible heating chamber, having an opening in the bottom thereof, vertically movable crucible supporting means extending through said opening into the heating chamber, and mechanism for elevating said supporting means to lift the crucibles to the level of the top of the furnace, said supporting means having a reduced upper end forming a shoulder thereon, an annular ring on said reduced portion, and a refractory block on the top of said ring having a reduced portion extending into the ring on the top of said crucible supporting means.

2. A crucible furnace comprising in combination, a crucible heating chamber, having an opening in the bottom thereof, vertically movable crucible supporting means extending through said opening into the heating chamber, and mechanism for elevating said supporting means to lift the crucibles to the level of the top of the furnace, said supporting means having a reduced upper end forming a shoulder thereon, an annular ring on said reduced portion,



a refractory block on the top of said ring having a reduced portion extending into the ring on the top of said crucible supporting means, said refractory block when in lowered position being slightly above the plane of the top of said heating chamber.

1,171,501. BEE-SECTION. THOMAS D. BUDD, La Crosse, Wis. Filed July 13, 1914. Serial No. 850,575. (Cl. 6—12.)



1. A bee section the inner surface of which is provided with a coating or continuous film of wax manually or mechanically spread thereon in adhesive contact therewith.

2. A bee section, the inner surface of which is provided with a coating or continuous film of wax, manually or mechanically spread thereon and incorporated with the fibers opposed thereto.

3. A bee section, the inner surface of which is provided with a continuous layer or film of wax spread thereon to correspond in width with the thickness of comb subsequently formed and attached thereto by honey bees.
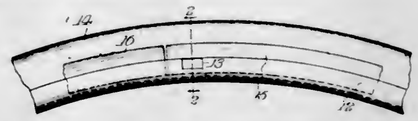
4. A bee section, the inner surface of which is provided with a continuous layer or film of beeswax spread thereon of less width than the width of the frame and located at a point removed from both edges thereof.

5. A bee section formed from a strip having thereon a layer or film of beeswax continuously extending from end to end thereof, having tongued and grooved ends, and thereafter bent and interlocked to form said section.

1,171,502. VEHICLE-TIRE RIM. WILLIAM L. BURGESS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 25, 1912. Serial No. 727,668. (Cl. 152—21.)

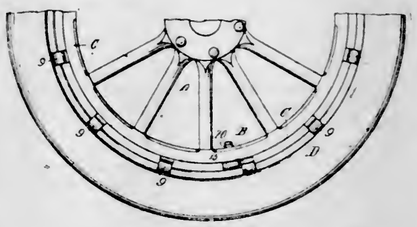
1. In a vehicle tire rim, the combination of a locking ring having a recess therein, and a rim flange adapted to receive said locking ring, said rim flange also having a recess therein which registers with the recess of said locking ring, whereby a tool may be introduced through said recesses and the locking ring may be pried out of engagement with the rim flange, substantially as described.

2. In a vehicle tire rim, the combination of a locking ring split on a substantially transverse line and having an aperture in its inner surface near one end, and a rim flange adapted to receive said locking ring, said rim flange having an aperture therethrough registering with the aperture of said locking ring, whereby a tool may be introduced through said apertures and the locking ring may be pried out of engagement with the rim flange, substantially as described.



3. In a vehicle tire rim, the combination of a movable retaining flange, a rim flange, and a locking ring adapted to engage said rim flange and having a portion projecting beneath said retaining flange, said locking ring and said rim flange having registering recesses therein whereby a tool may be introduced through said recesses and said retaining flange may be moved laterally to clear said locking ring and the latter may then be removed from engagement with said rim flange, substantially as described.

1,171,503. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. HENRY N. CARRAGHER, Fall River, Mass. Filed May 24, 1915. Serial No. 29,982. (Cl. 152—21.)



1. In a wheel having a felly band, a demountable rim, and means for securing them in the same plane, and limiting the movement of one in relation to the other, in one direction circumferentially:—a shoulder upon the inside of the rim, a shoulder upon the outside of the band; a removable wedge-shaped key mounted tangentially and inserted transversely between said shoulders; a cam surface formed in said key; a cam to engage said surface and operating in a plane at right angles to the radius of the wheel; a spring tending to move said cam, and, through said cam surface, said key transversely between said shoulders; manual means to move said cam rotatively about, and longitudinally in, the radius of the wheel, for the purpose of raising the cam out of spring engagement with the key to permit the removal of the key and unlock the rim from the band; means to hold the cam in locking position; means to hold said cam in unlocked position.

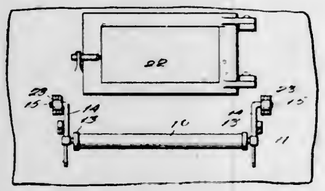
2. In a wheel having a felly band, a demountable rim, and means for securing them in the same plane, and limiting the movement of one in relation to the other, in one direction circumferentially:—a shoulder upon the inside of the rim, a shoulder upon the outside of the band; a removable wedge-shaped key mounted tangentially and inserted transversely between said shoulders; said key having an opening therethrough with a cam surface toward the advancing end of the key; a manually operated stem supported in suitable means secured to the felly band of the wheel, and capable of limited longitudinal, and rotary movements in and about the radius of the wheel; a cam fixed to the lower end of said stem, and of suitable size to be moved into and out of engagement with said cam surface in said cam opening; spring means tending to hold the cam in said rotary engagement; means to hold said stem and cam in a fixed longitudinal position,

either locked or unlocked; and a spring always tending to move said cam toward or against said cam surface; and means to limit, forward and back, the rotary movement of said stem and cam.

3. In a wheel having a felly band, a demountable rim, and means for securing them in the same plane, and limiting the movement of one in relation to the other, in one direction circumferentially; a shoulder upon the inside of the rim, a shoulder upon the outside of the band; a removable wedge-shaped key mounted tangentially and inserted transversely between said shoulders; and means operating in a plane at right angles to the radius of the wheel, and constantly tending to move said key transversely between said shoulders.

4. In a wheel having a felly band, a demountable rim, and means for securing them in the same plane, and limiting the movement of one in relation to the other, in one direction circumferentially; a shoulder upon the inside of the rim, a shoulder upon the outside of the band; a removable wedge-shaped key mounted tangentially and inserted transversely between said shoulders; means operating in a plane at right angles to the radius of the wheel, and constantly tending to move said key transversely between said shoulders; manual means to move said cam rotatively about, and longitudinally in, the radius of the wheel, for the purpose of raising the cam out of spring engagement with the key to permit the removal of the key and unlock the rim from the band; means to hold the cam in locking position; and means to hold said cam in unlocked position.

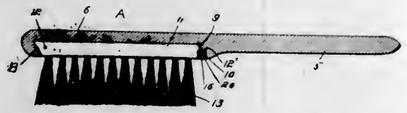
1,171,504. SUPPORTING APPARATUS FOR FURNACE HOES OR POKER-BARS. JAMES A. COFFEE, Lawrenceville, N. J. Filed Sept. 17, 1915. Serial No. 51,257. (Cl. 126—173.)



1. The combination with an approximately horizontal shaft arranged near the door opening of a furnace and extending for substantially the length of the door opening and provided at its ends with cranks, means for connecting the cranks with the furnace casing, and a roller having an opening to receive the shaft and extending for substantially the entire length of the door opening and having a smooth periphery.

2. The combination with an approximately horizontal shaft arranged near the door opening of a furnace and having cranks, of means for pivotally connecting the cranks with the furnace casing to swing upwardly and outwardly to its operative position, means to lock the cranks in the elevated position, and a roller carried by the shaft and extending throughout the greater portion of its length.

1,171,505. BRUSH. ROY D. CURTIS, San Diego, Cal. Filed June 7, 1915. Serial No. 32,722. (Cl. 15—29.)



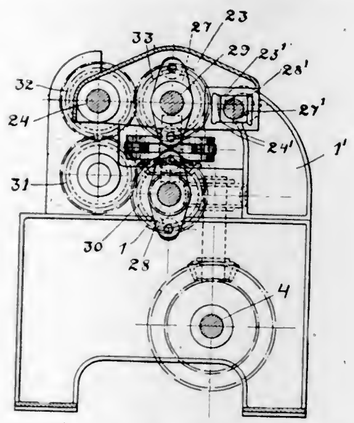
1. A brush including a head recessed to provide a pocket, the end walls of said pocket being oppositely beveled, a bristle head removably fitted within said pocket and constructed to coöperate with one of said end walls for moving said bristle head into engagement with the opposite end wall, and means for locking said parts operatively associated.

2. A brush including a head recessed to provide a pocket, the end walls of said pocket being oppositely beveled, a bristle head removably fitted in said pocket and comprising a plurality of separate pivotally mounted sections, each of said sections being constructed to coöperate with one of said end walls for moving said bristle head as a unit into engagement with the opposite end wall, and means for locking the parts operatively associated.

3. A brush including a head recessed to provide a pocket having one end wall provided with a shoulder, a bristle head removably fitted within the pocket and comprising a plurality of separate pivotally mounted sections, each of said sections being formed with a projection at one end adapted to lie flush with said shoulder, and a transverse key passed through said pocket above said projections and shoulder for holding the bristle head positioned within the pocket.

4. A brush including a head recessed to provide a pocket, the end walls of said pocket being oppositely beveled, a shoulder formed by one of said end walls, a bristle head removably fitted within said pocket and comprising a plurality of separate pivotally mounted sections, each of said sections having a projection at one end thereof constructed to coöperate with one of said end walls for moving the said bristle head as a unit into engagement with the opposite end wall, and adapted to lie flush with said shoulder in operative position, and a transverse key passed through said pocket above said projections and shoulder for holding the bristle head positioned within the pocket.

1,171,506. MACHINE FOR PRODUCING BLANKS FOR NAILS, HOOK-NAILS, HOOKS, OR THE LIKE. JOHAN HILMER DAHLGREN, Stockholm, Sweden. Filed Jan. 8, 1913. Serial No. 740,752. (Cl. 10—67.)

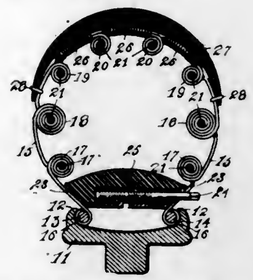


In a machine for producing blanks for nails, hook nails, hooks or the like, the combination of rotatable rollers arranged at opposite sides of the material and adapted to move in circular paths, holders for said rollers, shafts for said holders, means for automatically moving certain of said shafts toward and away from the material during the operation, and means for separating the finished blank from the remainder of the material.

1,171,507. COIL-SPRING VEHICLE-TIRE. EDWARD G. DE LOE, Jamestown, N. Y. Filed July 28, 1915. Serial No. 42,294. (Cl. 152—8.)

1. A vehicle tire comprising spring cross wires each turned in a plurality of integral flat spaced spiral coils, means for holding said spring cross wires in line to form a tire, and means for attaching said tire to a wheel rim.

2. A vehicle tire comprising spring cross wires, a plurality of flat spaced spiral coils turned in each of said cross wires, hoops inserted through the centers of said spiral coils to hold said cross wires in line, and means for attaching the tire to a wheel rim.



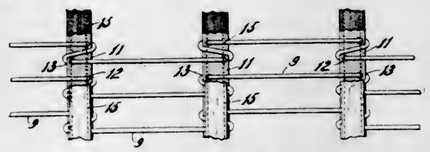
3. A vehicle tire comprising spring cross wires, a plurality of flat spaced spiral coils turned in each of said cross wires, said spiral coils graduated as to the number of convolutions to give greater resiliency to the sides of said tire than to the tread, different sized hoops inserted through the centers of said spiral coils to hold said cross wires in form, and means for attaching the tire to a wheel rim.

4. A vehicle tire comprising a plurality of spring cross wires placed side by side around said tire, each of said spring cross wires turned in a plurality of flat spaced spiral coils having openings through their centers and in line with one another, different sized hoops inserted through said spiral coils to form said cross wires in the shape of a tire, and hoops on the ends of said cross wires for attachment to a wheel rim.

5. A vehicle tire comprising spring cross wires, a plurality of spiral coils in each of said wires, hoops inserted through said spiral coils to hold said spring cross wires in line, a hoop attached to each end of said cross wires for attaching to a wheel rim, two spaced hoops within said tire to bear against the inner sides of said cross wires, and spaced means extending out between said cross wires for spreading said spaced hoops to give tension to said cross wires from outside the tire.

[Claims 6 to 13 not printed in the Gazette.]

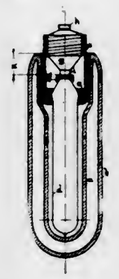
1,171,508. FLY-NET. WILLIAM ERDMANN, Milwaukee, Wis., assignor to Gem Hammock and Fly Net Company, a Corporation of Wisconsin. Filed Sept. 24, 1910. Serial No. 583,596. (Cl. 54—81.)



1. A fly net, comprising pairs of longitudinal bars, one of the bars of each pair being provided with cord openings, transverse cords extending from one pair of bars to another and between the bars and through the openings of one of the bars of each pair of bars and partly around one of the bars and having double looped portions extending between the bars of each pair of bars, and lines of stitches extending longitudinally of the bars and through both bars of each pair of bars and through portions of the loops to bind the parts together.

2. A fly net, comprising pairs of longitudinal bars, one of said bars of each pair being provided with cord openings adjacent their edge portions, transverse cords extending from one pair of bars to another and between the bars of a pair and through the openings of one of the bars and around one side and both edges of the bar provided with the openings, said portions of the transverse cords extending between the bars of a pair of bars and partly around one of the bars forming double looped portions, and lines of stitches extending longitudinally of and through both bars of each pair of bars and through portions of the loops to bind the parts together.

1,171,509. ELECTRIC-LIGHTING DEVICE. EUGEN ESSICH, Stuttgart, Germany. Filed Apr. 22, 1915. Serial No. 23,199. (Cl. 240—100.)



1. An electric lighting device, comprising an incandescent lamp, a two-part vacuum insulating means entirely surrounding the lamp, preventing heat escape from the lamp in all directions and permitting the removal of the lamp.

2. An electric lighting device, comprising in combination an incandescent lamp containing a body of gas, and vacuum insulation means including a hollow lamp carrying member, for minimizing the escape of heat transversely and axially at both ends of said lamp.

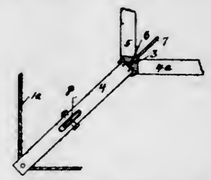
3. In an electric lighting device, the combination with a gas filled incandescent lamp, and a socket in which the same is mounted; of a heat insulating pocket-like double-walled vacuum envelop adapted to inclose both lamp and socket and readily detachable therefrom, said envelop including a heat insulating plug adapted to close the aperture of introduction of said envelop.

4. In an electric lighting device, in combination a gas-filled incandescent lamp having a socket, a pocket-like double walled exhausted envelop inclosing said lamp and socket, and a heat insulating plug, extending transversely across the lamp axis and the aperture of introduction of said envelop and adapted to effect heat insulation axially of said lamp.

5. In an electric lighting device, the combination with a gas filled incandescent lamp, and a socket in which the same is mounted; of a heat insulating pocket-like double-walled vacuum envelop adapted to inclose both lamp and socket and readily detachable therefrom, and a heat insulating plug associated with said socket and adapted to effect electrical connection with the lamp.

[Claims 6 to 8 not printed in the Gazette.]

1,171,510. COMBINED AWNING AND HOUSE CONSTRUCTION. ALEXANDER FORSYTH, Standish, Mich. Filed Mar. 18, 1915. Serial No. 15,371. (Cl. 156—15.)

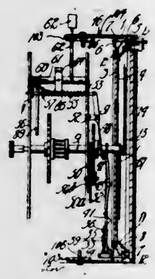


1. In a device of the class described, the combination of a building frame, a corner post, an arm hinged at its upper end to said corner post and adapted to be raised and lowered in the plane of the diagonal of said post, a bar pivoted at its upper end to said arm, the said corner post formed with a diagonally disposed slot to receive said bar, and an awning carried by said arm, for the purposes set forth.

2. In a device of the class described, the combination of a building frame, a corner post of triangular cross section having its diagonal face disposed outwardly, an arm hinged at its upper end to the diagonal face of said post, a bar hinged at its upper end to said arm, the said corner post formed with a diagonally disposed slot to receive said bar, a rope secured to the end of said arm, and an awning carried by said arm and rope for the purposes set forth.

3. In a device of the class described, the combination of a building frame, a corner post of triangular cross section having its diagonal face disposed outwardly, an arm hingedly at its upper end to said corner post, a bar pivoted at its upper end to said arm, said corner post formed with a diagonally disposed slot to receive said arm, a pivotally mounted sliding block secured to said bar, and adapted to engage the outer face of said post, a rope secured to the end of said arm, and an awning carried by said arm and rope for the purposes set forth.

1,171,511. ALARM-CLOCK. FRANK GATES FORTE, Oakleigh, near Melbourne, Victoria, Australia. Filed Feb. 17, 1913. Serial No. 749,022. (Cl. 161—6.)



1. The combination with a clock work mechanism and an alarm device, of means whereby any number of alarms at intervals such as five minutes may be set at the one time, each giving at a predetermined time during the period of time indicated upon the dial of the clock, a short alarm, a continuous alarm, or a repeat alarm.

2. The combination with a clock work mechanism and an alarm device, of a device having means for setting a plurality of alarms at will at one time for predetermined times during the period of time indicated on the dial of the clock mechanism and also having means for re-setting or cutting out the alarms at will, automatic means for returning the signal starting means to normal after each alarm signal has been given, and means for causing to be given at each of the said predetermined times, a short alarm, a repeat alarm or a continuous alarm.

3. The combination with a clockwork mechanism and an alarm device, of means whereby any number of alarms may be set each to give, at a predetermined time during the period of time indicated upon the dial of the clock, a short alarm, a continuous alarm or a repeat alarm.

4. The combination with a clockwork mechanism and an alarm device, of a device having means for setting a plurality of alarms at will at one time for predetermined times during the period of time indicated on the dial of the clock mechanism and also having means for resetting or cutting out the alarms at will, and means for causing to be given at each of the said predetermined times, a short alarm, a continuous alarm, or a repeat alarm.

5. The combination with a clockwork mechanism and an alarm device, of a device having means for setting a plurality of alarms at will at one time for predetermined times during the period of time indicated on the dial of the clock mechanism and also having means for resetting or cutting out the alarms at will, and a regulator for controlling the duration of the alarm and for causing to be given at each of the said predetermined times, a short alarm, a continuous alarm or a repeat alarm.

[Claims 6 to 14 not printed in the Gazette.]

1,171,512. HEATER. WILLIAM GILCHRIST and RALPH W. DAYKIN, Cleveland, Ohio; said Daykin assignor of one-tenth of the entire right to Martha R. House, Cleveland, Ohio. Filed Mar. 8, 1915. Serial No. 12,905. (Cl. 237—21.)



1. A heater of the class described comprising heating means, a conduit in communication therewith and having a laterally directed outlet, a perforate member pivotally mounted upon the upper edge of said outlet, and a plate pivotally mounted upon the upper edge of said member.

2. A heater of the class described comprising a chimney having a laterally directed outlet, heating means below, and a member pivotally mounted upon said chimney and adapted to swing across the outlet of the latter.

3. A heater of the class described comprising a casing, a conduit therein having an inlet below and provided above with a laterally directed outlet, heating means below the inlet of said conduit, and a suspension member pivotally attached over said outlet and adapted to swing with reference to the plane thereof for the purpose specified.

4. A heater of the class described comprising a casing having a side outlet, heating means below; and a pair of coöperating members pivotally mounted above said outlet and adapted to lie in substantial alinement with said opening.

5. A heater of the class described comprising a casing having one flat side, heating means below, a chimney in communication therewith and opening through the top of said flat side, a grille pivotally connected above said opening, and a pair of plates each pivotally connected to the free end of said grille, one of said plates being provided with suspension means.

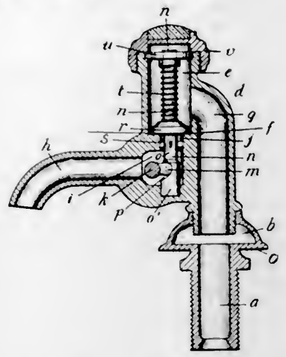
[Claims 6 to 17 not printed in the Gazette.]

1,171,513. TUCK-LOOP-SECURING DEVICE. HARRY GOLDENBERG, New York, N. Y. Filed May 14, 1915. Serial No. 28,158. (Cl. 24—182.)



In combination, a belt having overlapping portions forming a loop, a buckle having a bar engaged with the said loop, a tuck loop formed as an endless structure, having a portion of its length positioned between the said overlapping portions, and a clenching device, the said clenching device comprising a pair of side bars positioned one on each side of the said tuck loop, each extending across the front face of the said belt, over the lateral edges thereof, and inwardly from the said edges for an appreciable distance across the rear face of the said belt, and cross-bars connecting the ends of the said side bars at the rear face of the said belt, and prongs on the said cross-bars embedded in material of the said belt.

1,171,514. SELF-CLOSING FAUCET. JOHN V. GRACE, Portland, Oreg. Filed May 20, 1914. Serial No. 839,916. (Cl. 137—4.)



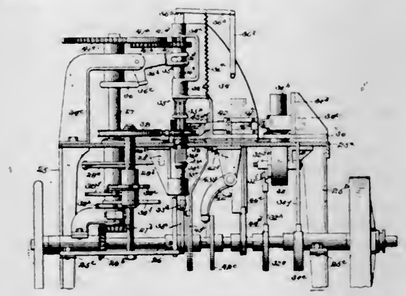
1. In a faucet of the character described, a valve having a two-piece stem set one on the other, pin-like means detachably connecting these pieces, a valve-head on the lower end of the upper of such stem pieces, the lower stem-piece being made with a recess, a valve chamber in which the upper stem piece of the valve stem reciprocates, means for guiding the upper end of such upper stem-piece, another chamber below the valve chamber in which the lower piece of the valve-stem reciprocates, the latter chamber having a lateral spout; guiding means for such lower piece of the stem, a passage connecting said lower chamber with the valve chamber, the valve head on the upper valve stem piece seating on the inlet end of said passage, a spring normally holding the valve-head on its seat, a valve operating handle having a stem traversing said lower chamber, and an arm on said stem bearing in said recess of the lower piece of the valve-stem.

2. In a faucet ofthe character described, a valve having a two-piece stem set one on the other, pin-like means detachably connecting these pieces, a valve-head on the lower end of the upper of such stem pieces, the lower stem-piece being made with a recess, a valve chamber in which the upper stem piece of the valve stem reciprocates, another chamber below the valve chamber in which the lower piece of the valve-stem reciprocates, the latter chamber having a lateral spout, a passage connecting said lower chamber with the valve chamber, the valve head on the upper valve stem piece seating on the inlet end of said passage, a spring normally holding the valve-head on its seat, a valve operating handle having a stem traversing said lower chamber, an arm on said stem bearing in said recess of the lower piece of the valve-stem, a guide-piece removably seated in the upper end of the valve chamber and in which the upper end of the upper piece of the valve stem reciprocates, and a chambered cap threaded on the upper end of the valve chamber and holding said guide-piece in place.

3. A valve-body comprising an inlet passageway, a valve-chamber parallel and integral with one side of said passageway, and with which the latter connects, a lateral spout below the valve chamber, said spout having a chamber provided at its inlet end, and a passage connecting the latter chamber with the valve-chamber, in combination with a valve consisting of a two-piece stem set one on the other, means connecting said stem pieces so as to permit the upper stem-piece to be lifted off the lower stem-piece, a valve-head on the lower end of the upper stem-piece, guiding means for the upper end of the upper stem-piece, means for guiding the lower stem-piece in said chamber at the inlet end of the spout, the valve-head seating on the inlet end of the passage, a spring normally holding the valve-head on its seat, and a handle coöperating with the lower stem piece, whereby the valve-head may be lifted off its seat.

4. A valve-body comprising an inlet passageway, a valve-chamber parallel and integral with one side of said passageway, and with which the latter connects, a lateral spout below the valve chamber, said spout having a chamber provided at its inlet end, and a passage connecting the latter chamber with the valve-chamber, a removable guide-piece for the upper end of the upper piece of the stem, a chambered cap threaded on the upper end of the valve chamber and holding said guide-piece in place, means for guiding the lower stem piece in said chamber at the inlet end of the spout, the valve-head adapted to seat on the inlet end of the passage, a spring normally holding the valve-head on its seat, and a handle coöperating with the lower stem piece, whereby the valve-head may be lifted off its seat.

1,171,515. PILL-BOX-MAKING MACHINE. FRANK GRAEBER, Norristown, Pa., assignor to George W. Plumly Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 6, 1913. Serial No. 752,450. (Cl. 93—43.)



1. In a machine of the class described, a blank carrier adapted to receive disconnected blanks, means for positioning the blanks relative to each other while within the carrier, means for temporarily withdrawing the positioned blanks from the carrier, and means for covering and securing the blanks together while temporarily withdrawn.

2. In a machine of the class described, a blank carrier adapted to receive disconnected blanks, means for positioning the blanks relative to each other while within the carrier, means for temporarily withdrawing the positioned blanks from the carrier, means for covering and securing the blanks together while temporarily withdrawn, and means for automatically removing the completed blank from the carrier after the latter has been returned to its position therein.

3. In a machine of the class described, a blank carrier intermittently movable on a vertical axis to provide a path of travel to blanks, covering mechanism, said carrier moving the blanks to said covering mechanism, means for temporarily removing the blanks from the carrier to permit the covering operation and for returning the covered blank to the carrier, and means for removing the covered blank element from the carrier after it has been returned thereto.

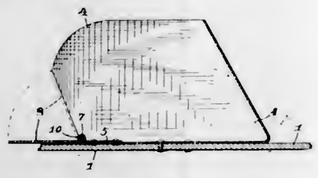
4. In a machine of the class described, a blank carrier intermittently movable on a vertical axis to provide a path of travel to blanks, covering mechanism, said carrier moving the blanks to said covering mechanism, means for temporarily removing the blanks from the carrier to permit the covering operation and for returning the covered blank to the carrier, means for removing the covered blank element from the carrier after it has been returned thereto, the covering operations and the removal of the covered blank from the carrier taking place at different points in the travel of the latter.

5. In a machine of the class described, an intermittently movable carrier, means for forming and positioning a blank element within the carrier, covering mechanism spaced from said means to provide a travel of the carrier from said means to the covering mechanism, to permit reception of a complemental blank element prior to reach-

ing the covering mechanism, means for temporarily withdrawing the blanks from the carrier to permit the covering mechanism to act thereon, said carrier acting to carry the covered blanks after being returned to position.

[Claims 6 to 44 not printed in the Gazette.]

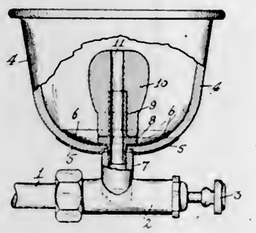
1,171,516. CONVEYER-BUCKET. CLARENCE E. GREELY, St. Paul, Ind. Filed Feb. 20, 1915. Serial No. 9,737. (Cl. 193—6.)



1. A conveyer having a belt and a series of conveyer buckets, in combination with an apron between each two adjacent buckets, said apron being hinged to the forward bucket and extending above the bottom line of the buckets at an angle to the belt and over the space between said buckets so as to lie against the wall of the preceding bucket above the bottom thereof whenever the buckets are traveling at such an angle as to cause the apron to swing forwardly.

2. A conveyer bucket closed at one end and open at the forward end in the line of travel for the purpose of permitting the discharge of material, in combination with a plate attached to asid bucket, an apron extending forwardly from said bucket and adapted to occupy the space between the two adjacent buckets above the bottom line of the buckets and hinged members connecting said apron and said plate.

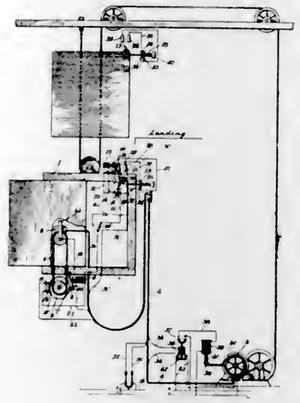
1,171,517. SANITARY DRINKING-FOUNTAIN. LUTHER T. HAWS, Berkeley, Cal. Filed Aug. 24, 1915. Serial No. 47,118. (Cl. 137—109.)



1. A sanitary drinking fountain comprising a cock-controlled supply pipe having a threaded stem; a delivery pipe having a threaded lower end adapted to engage the threaded stem of the supply pipe, and having a collar above said lower end; a drain cup of yielding material enveloping the delivery pipe; an outer clamp plate under the base of said drain cup and bearing on the upper end of the supply pipe stem; and an inner clamp plate on the upper surface of the base of the drain-cup and bearing under the collar of the delivery pipe.

2. A sanitary drinking fountain comprising a cock-controlled supply pipe having a threaded stem; a delivery pipe having a threaded lower end adapted to engage the threaded stem of the supply pipe, and having a collar above said lower end; a mouth-guard of yielding material carried by the delivery-pipe; a drain-cup of yielding material enveloping the mouth-guard; an outer clamp plate under the base of said drain cup and bearing on the upper end of the supply pipe stem; and an inner clamp plate on the upper surface of the base of the drain cup and bearing under the collar of the delivery pipe.

1,171,518. SAFETY CONTROL SYSTEM FOR ELEVATOR-CARS. HENRY GEORGE HILLMAN, Morris Park, and SAMUEL M. WARD, Jr., New York, N. Y., assignors to John T. Clarke, New York, N. Y. Filed Aug. 2, 1910. Serial No. 575,100. (Cl. 187—50.)



1. In a safety control system for elevators, the combination of a landing, a door at said landing, a latch for the door, a magnet operating the latch, a car, controller mechanism therefor, a device for locking the controller mechanism at its neutral position, a magnet operating said device, a circuit common to each of said magnets and through which each receives current when the controller is in the neutral position irrespective of the position of the car, and means for causing the complete energization of the controller lock magnet when a door is open.

2. In a safety control system for elevators, the combination of a landing and a door at said landing, a door latch, a magnet for operating the latch, a circuit through which the magnet is operated, a car, controller mechanism for the car, a locking member operatively related to the controller mechanism, an electro-responsive device controlling the locking member and in circuit with the latch magnet, and a door switch controlling said circuit and operated when the door is opened to vary the current in said circuit and operate the electro-responsive device to lock the controller in its neutral position.

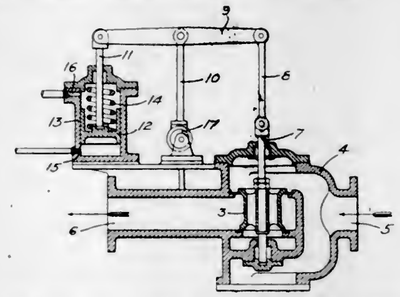
3. In a safety control system for elevators, the combination of a landing and a door at said landing, a door latch, a magnet for operating the latch, a circuit through which the magnet is operated, a car, controller mechanism for the car, a locking member operatively related to the controller mechanism, an electro-responsive device operating the locking member and in series circuit with the latch magnet, and a door switch operatively connected with said circuit and operated when the door is opened to cut the latch magnet out of circuit and vary the current in electro-responsive device to operate the locking member and lock the controller mechanism at its neutral position.

4. In a safety control system for elevators, the combination of a plurality of landings with a door at each landing, a latch at each door, a car, a magnet carried on the car and operating the latches at the different landings, a circuit controlling said magnet, contacts at each landing, contacts on the car connected in multiple circuit with the latch magnet and successively engaging the said landing contacts, car controller mechanism having a neutral position, a device for locking the controller in its neutral position, an electro-responsive device operating said locking device, and door switches at the landings in circuit with the landing contacts each operated when its door is opened and the car adjacent the corresponding landing to short circuit the latch magnet and increase the current through the electro-responsive device to lock the controller.

5. In a safety control system for elevators, the combination of a plurality of landings with a door at each landing, a latch at each door, a car, a magnet carried on the car and operating the latches at the different landings, a circuit controlling said magnet, contacts at each landing, contacts on the car connected in multiple circuit with the latch magnet and successively engaging the said landing contacts, car controller mechanism having a neutral position, contacts in the latch magnet controlling circuit operated by the controller mechanism to prevent the closing of said circuit until the controller is at its neutral position, a device for locking the controller in its neutral position, an electro-responsive device operating said locking device, door switches at the landings in circuit with the landing contacts, and each switch operated when its door is opened and the car adjacent the corresponding landing to short circuit the latch magnet and increase the current through the electro-responsive device to lock the controller.

[Claims 6 to 16 not printed in the Gazette.]

1,171,519. REDUCING-VALVE. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor to Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Jan. 30, 1915. Serial No. 5,250. (Cl. 50—38.)



1. In combination with a reducing valve, means responsive to the pressure delivered by the valve for actuating the valve, and means for oscillating the valve during its operation.

2. In combination, a balanced valve, means responsive to the pressure delivered by said valve for controlling the operation of the valve, and means for periodically moving said valve toward and away from its seat.

3. In combination, a reducing valve, an oscillating member for moving said valve toward and away from its seat, and means responsive to the fluid pressure delivered by the valve for controlling the effective opening of the valve.

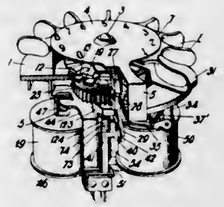
4. In combination, a reducing valve, means responsive to the pressure delivered by said valve for controlling the effective opening of the valve, and a periodically reciprocating agent for imparting an oscillatory motion to said valve and to said means.

5. In combination, a reducing valve, means for periodically reciprocating the valve, and a piston responsive to the pressure of the fluid delivered by said valve for proportioning the effective opening of the valve, the weight of the piston being so proportioned with relation to the weight of the valve that oscillations are imparted to said piston by said means.

[Claim 6 not printed in the Gazette.]

1,171,520. CALLING DEVICE. HENRY HOVLAND, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Feb. 12, 1915. Serial No. 7,659. (Cl. 179—90.)

1. In a calling device, a movable member, a power means adjusted responsive to the movement of said member, an impulse counting mechanism adapted to be controlled in accordance with the set position of said member, an electromagnet for controlling said mechanism, means for locking said impulse counting mechanism while said member is moved, and means for locking said member while the mechanism is moved.



2. In a substation calling device for automatic telephone exchanges, a dial provided with an endless series of finger holds, a stationary plate carrying numerals each of which may be opposite any one of said finger holds, a motor spring wound up by the actuation of said dial, a notched wheel locked during the actuation of said dial, a pivoted pawl for locking said dial in its actuated position, an electromagnet, means controlled thereby for moving said notched wheel, and means operative after said notched wheel has been moved a distance determined by the movement of the dial for unlocking said dial and for locking said notched wheel.

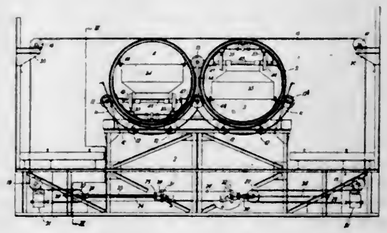
3. In a calling device, a dial having a plurality of operating positions, finger holds for actuating said dial, a lever adapted to be actuated by engagement with the finger in a finger hold, means operative thereby to hold said dial locked when moved to any of its operating positions, an impulse counting mechanism, an electromagnet to control said mechanism, and means controlled from a distant station and operative upon the locking of said dial to actuate said electromagnet.

4. In a calling device, a movable member, a power storing mechanism connected with said movable member and adapted to be adjusted responsive to movement of said member, an impulse counting mechanism, an electromagnet, means for locking said member whenever said mechanism is unlocked and for locking said mechanism whenever said member is unlocked, and means under the joint control of said power storing mechanism and said electromagnet for operating said impulse mechanism.

5. In a calling device, a number plate, a forwardly moving finger hold dial, a notched wheel fixed thereto, a locking member, a movable lever adapted to be engaged by the finger when in a finger hold, a stationary stop, said lever when engaged by the finger upon actuation of the dial controlling said locking member to engage said notched wheel to lock the dial, an electromagnet, an impulse counting mechanism controlled thereby after the locking of said dial, and means for unlocking said dial after said mechanism has operated.

[Claims 6 to 9 not printed in the Gazette.]

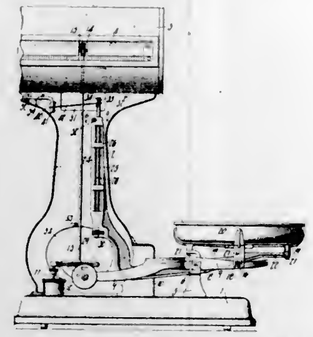
1,171,521. ROTARY CAR-DUMPING MECHANISM. GUSTAVE E. HUTTELMAIER, Scottdale, Pa. Filed June 20, 1913. Serial No. 774,926. (Cl. 214—11.)



A car dumping mechanism comprising a pair of rotary car dumping cylinders, curved supports for said cylinders, and means whereby the cylinders are rotated on said sup-

ports to empty cars positioned therein, said means comprising a fluid pressure cylinder having a piston rod therefor, and a flexible connection secured to said piston rod and said dumping cylinders, said flexible connection engaging with and rotating the cylinders to invert cars in one cylinder when the other is turning into car receiving position.

1,171,522. SCALE. LOUIS JAENICHEN, Detroit, Mich., assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Filed Apr. 16, 1915. Serial No. 21,629. (Cl. 73—104.)



1. A scale comprising in combination a frame including a base, a main beam supported by and pivoted to swing vertically in respect to the frame, a check arm pivotally mounted on the main beam, a check link attached to the check arm and arranged to swing freely in respect thereto, one end of the check link being supported by and adapted for free swinging movement in respect to the frame, and means carried by the check arm for adjusting one end of the check link in a vertical direction to cause the check link to become parallel to the line joining the axis of the pivot for the main beam to the axis of the pivot for the check arm, said adjusting means being accessible from above the base without tilting or lifting the scale.

2. A scale comprising in combination a base and a hollow closed pedestal rising from the base, a main beam supported by and pivoted to swing vertically in respect to the base, a check arm pivotally mounted on the main beam, a load-receiving member secured to the check arm, said check arm extending into the hollow pedestal, a check link attached to the check arm within the pedestal and arranged to swing freely in respect to the lever, means for supporting one end of the check link, said link being arranged to swing freely on the supporting means, means carried by the check arm for adjusting one end of the check link in a vertical direction to cause the check link to become parallel to the line joining the axis of the pivot for the main beam to the axis of the pivot for the check arm, said pedestal having an opening formed in its wall adjacent the adjusting means for the check link, and a closure for the opening movable from closed to open position, whereby the adjusting means is rendered accessible without lifting or tilting the scale when the closure is in open position.

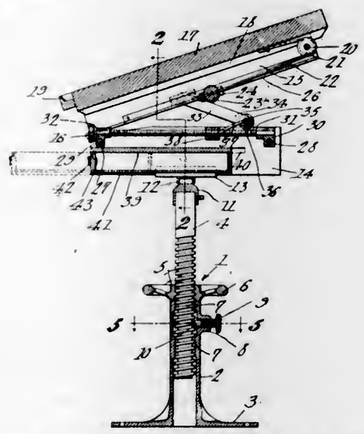
3. A scale comprising in combination a frame including a base, a main beam supported by and pivoted to swing vertically in respect to the frame, a check arm pivotally mounted on the main beam, said check arm having a substantially vertical portion, said portion including a vertically movable adjusting member, a check link attached to the adjusting member and arranged to swing freely in respect thereto, means for separately supporting one end of the cehck link, said link also being arranged to swing freely in respect to the supporting means, means for moving the adjusting member in respect to the arm of the check arm, whereby the check link may be accurately adjusted with reference to the line joining the axis of the pivot for the main beam to the axis of the pivot for the check arm, said means for moving the adjusting member being accessible from above the base without lifting the scale.

4. A scale including in combination, a base and a hollow closed pedestal rising from the base, a main beam supported by and pivoted to swing vertically in respect to the frame, a check arm pivotally mounted on the main beam, said check arm having a substantially vertical portion extending into the hollow pedestal, said portion including a vertically movable adjusting member, a check link attached to the adjusting member and arranged to swing freely in respect thereto, means located within the pedestal for separately supporting one end of the check link, said link also being arranged to swing freely in respect to the supporting means, means for moving the adjusting member in respect to the arm of the check arm, whereby the check link may be accurately adjusted with reference to the line joining the axis of the pivot for the main beam to the axis of the pivot for the check arm, said pedestal having an opening in the wall thereof adjacent the means for moving the adjusting member, and a freely removable closure for the opening, whereby the parts are rendered accessible without lifting or tilting the scale.

5. A scale including in combination a base and a hollow closed pedestal rising from the base, a main beam supported by and pivoted to swing vertically in respect to the frame, a check arm pivotally mounted on the main beam, said check arm having a substantially vertical portion extending into the hollow pedestal, said portion including a split upper end, a vertically movable adjusting member slidable through said end, means for forcing the portions of the end together to clamp the adjusting member in adjusted position, said arm also having a slot across which the adjusting member passes, a nut in the slot for moving the adjusting member, a check link attached to the adjusting member and arranged to swing freely in respect thereto, means located within the pedestal for separtely supporting one end of the check link, said link also being arranged to swing freely in respect to the supporting means, means for moving the adjusting member in respect to the check arm, whereby the check link may be accurately adjusted with reference to the line joining the axis of the pivot for the main beam to the axis of the pivot for the check arm, said means for moving the adjusting member being accessible from above the base.

[Claims 6 to 9 not printed in the Gazette.]

1,171,523. DRAWING-TABLE. HARRY S. KUHN, Waynesboro, Pa. Filed Mar. 12, 1915. Serial No. 13,940. (Cl. 45—110.)



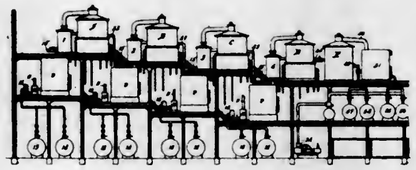
1. In a device of the character described, a frame having a pair of hinged arms adapted to be swung upwardly and downwardly, a board slidable upwardly and downwardly upon the arms, a rod carried by the arms, inwardly projecting flanges carried by the arms, carriages having pairs of grooved wheels engaging the flanges, a weight carried by the carriages, a pulley wheel journaled upon the rod, and a flexible element attached to the board and weight and passing over the pulley wheel.

2. In a device of the character described, a frame comprising lower and upper members hinged together, the upper member being adapted to swing upwardly and downwardly, a board carried by the upper member, a swinging member pivoted to one of the aforesaid members and having its free portion bearing against the other member, a rotatable screw carried by the last mentioned member against which the swinging member bears, a nut threaded upon the screw, and a yieldable connection between the nut and swinging member.

3. In a device of the character described, comprising a frame embodying a pair of bars and a pair of arms hinged thereon to swing upwardly and downwardly thereabove, a pair of members pivoted to the arms, a rod engaged to the free portions of the said members, wheels journaled upon the rod and running upon the bars, a rotatable screw carried by the bars, a nut threaded upon the screw, and a bow spring terminally secured to the rod and having its central portion secured to the nut.

4. In a device of the character described comprising a standard, a transverse member carried by the standard, a frame embodying side bars, angle iron T-heads carried by the ends of the said member in which the said side bars are seated, and a board carried by the frame.

1,171,524. APPARATUS FOR DISTILLING MINERAL OILS. ALEXANDER LACKMAN, New York, N. Y. Filed Apr. 4, 1912. Serial No. 688,377. (Cl. 196—13.)



1. In an oil distilling plant, a plurality of stills in series, each such still having individual heating means and vapor removing means, an oil outlet leading from a low point and an oil inlet at a higher point, and means for feeding oil through such series of stills, the oil from each such still being passed into the next succeeding still in heat-receiving relationship to the outgoing vapors from such next succeeding still.

2. In an oil distilling plant, a plurality of stills in series, each such still having individual heating means and vapor removing means, and means for feeding oil through such series of stills, the oil from each such still being passed into the next succeeding still in heat-receiving relationship to the outgoing vapors from such next succeeding still and being passed in at the top of the body of oil in such next succeeding still.

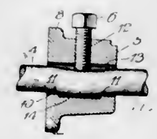
3. In an oil distilling plant, a plurality of stills in series arrangement, each such still being provided with heating means adapted to maintain a fixed temperature therewithin, means for passing oil through the series, such means comprising a feed conduit for each still adapted to deliver oil into such still at the top of a body of oil therein and vapor-removing means for each such still, the vapor-removing means being adapted to impart heat to the oil feed conduit supplying such still.

4. In a still, a still chamber, means for heating said chamber, means for removing vapors therefrom, a vertical partition dividing said chamber into sub-chambers, means for introducing heated oil into one such chamber at a high point, means for removing oil from such sub-chamber at a low point and delivering it into another sub-chamber at a higher point, and oil outlet means for the chamber tapping a sub-chamber at a low point.

5. In a still, a still chamber, means for heating said chamber, means for removing vapors therefrom, a transverse vertical partition extending part way up the chamber and dividing it into sub-chambers of unequal size, means for introducing heated oil into the larger sub-chamber at a high point, means for removing oil near its base and introducing it into the smaller sub-compartment at a higher point and oil outlet means tapping the smaller sub-chamber at a low point.

[Claims 6 and 7 not printed in the Gazette.]

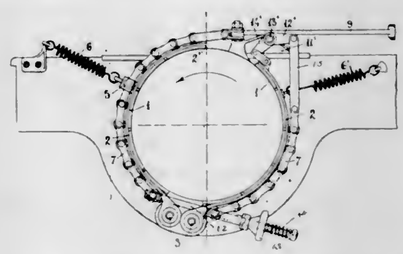
1,171,525. ROD-CLAMP. HENRY H. LAMPERT, Chicago, Ill. Filed Apr. 16, 1913. Serial No. 761,515. (Cl. 24—135.)



1. A clamp for the purpose described, having an external bearing surface and an opening passing therethrough to receive a rod, said opening being ovoid in transverse outline, a pair of shoulders in the smaller side of said opening having opposing inwardly facing biting corners, and a set screw properly threaded into said clamp to engage a rod intermediate said shoulders and force the rod into contact therewith.

2. A clamp for the purpose described, having an external bearing surface and an opening passing therethrough to receive a rod, said opening being substantially ovoid in transverse outline, a pair of shoulders in the smaller side of said opening, one of said shoulders having an inwardly facing biting corner, and a set screw properly threaded into said clamp to engage a rod intermediate said shoulders and force the rod into contact therewith.

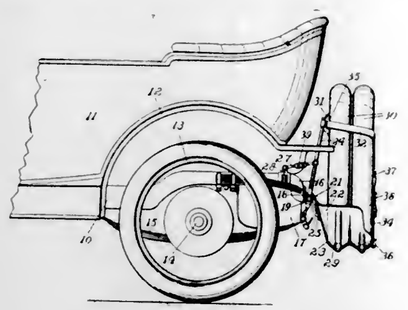
1,171,526. BRAKE. VINCENZO LANCIA, Turin, Italy. Filed Mar. 23, 1914. Serial No. 826,767. (Cl. 74—37.)



1. In a band brake for motor cars, a drum, two blocks pivoted at fixed points and adapted to press against the surface of the drum, means for keeping the said blocks normally away from the drum, a chain surrounding the blocks, means for connecting one of the ends of the chain to the end of the corresponding block for pressing the latter on the drum on the tightening of the chain, and means for exercising a pull on the other end of the chain for the purpose of tightening it on the blocks.

2. In a band brake for motor cars, a drum, two blocks pivoted at fixed points and adapted to press against the surface of the drum, means for keeping the said blocks normally away from the drum, a chain surrounding the blocks, a lever pivoted at a fixed point and one arm of which is connected to one end of the chain, while the other arm is pivoted to the free end of the corresponding block, and means for exercising a pull on the other end of the chain in order to press the blocks against the drum.

1,171,527. MOTOR-VEHICLE. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 14, 1913. Serial No. 767,615. (Cl. 224—29.)



1. In a motor vehicle, the combination with the frame, of a tire carrier connected to the frame by a horizontal pivot and having a tire supporting part extending away from the frame, and adjustable braces from a rigid part of said carrier to the frame.

2. In a motor vehicle, the combination with the frame, of a tire carrier directly pivoted to the frame and having a tire supporting part extending away from the frame, and having rigid upright arms, and braces from said arms to the fame.

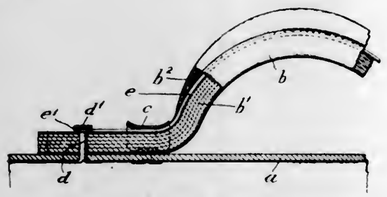
3. In a motor vehicle, the combination with the frame, comprising side members and a rod conecting the side members, of a tire carrier connected to the rod and having a tire supporting part extending beyond the ends of the frame side members, and braces from a rigid part of said carrier to the frame.

4. A tire carrier comprising a tire supporting lower part, secondary supporting upper parts, said parts having three spaced strap connections, and securing means in the form of straps extending from said connections and connected together adjacent the middle of the carrier, one of said straps being readily detachable for the purpose set forth.

5. A tire carrier comprising a tire supporting part, upright arms secured to the ends of said part, a rigid back piece connecting the upper ends of said arms, and straps connected to the upper ends of said arms and to said supporting part and connected together adjacent the middle of the carrier, one of said strap being readily detachable for the purpose set forth.

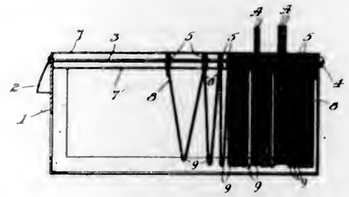
[Claims 6 and 7 not printed in the Gazette.]

1,171,528. BAG-HANDLE. ADOLPH LOWY, New York, N. Y. Filed Oct. 12, 1915. Serial No. 55,366. (Cl. 190—57.)



A bag having a handle, a metallic ligament running through and concealed in the handle, a keeper fastened to the bag through which the handle and ligament pass and a rivet passing through the end of the handle and into the bag around which rivet and under the head thereof, the end of said metallic ligament is turned and by which it is anchored in place.

1,171,529. FILING DEVICE. RICHARD MCKNIGHT, Chicago, Ill., assignor, by mesne assignments, to The Flexi-File Company, a Corporation of Illinois. Filed Dec. 26, 1914. Serial No. 879,082. (Cl. 129—16.)



1. A filing device comprising a plurality of substantially parallel bars loosely supported in a horizontal plane for free movement toward and from each other; and a flexible element supported by said bars forming depending folds between the same, substantially as described.

2. A filing device comprising a plurality of substantially parallel supporting members freely movable in a direction transversely of the length thereof; and a flexible element supported by said supporting elements so as to form depending folds between said supporting elements, substantially as described.

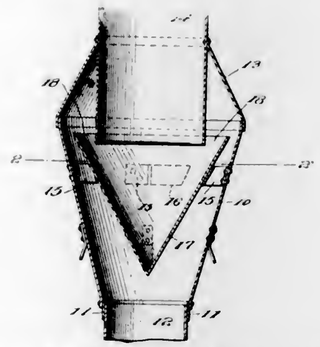
3. A filing device comprising a plurality of substantially parallel supporting members having their ends loosely supported to permit of free movement of said members in a direction transversely of the length thereof; and a flexible element supported by said supporting element so as to form depending folds between said supporting elements, substantially as described.

4. A filing device comprising a plurality of substantially parallel supporting members loosely mounted for independent movement toward and from each other; and flexible pockets formed between and depending from adjacent supporting members, substantially as described.

5. A filing device comprising a plurality of substantially parallel supporting members loosely mounted for independent movement toward and from each other; and a strip of flexible material arranged between and connected at its ends to each pair of adjacent supporting members to form depending pockets, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

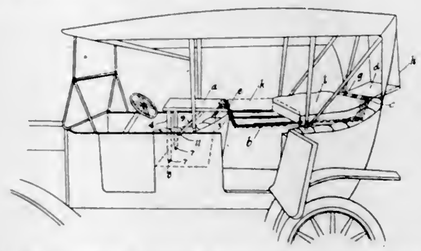
1,171,530. SPARK-ARRESTER. WILLIAM C. MICHAELS, Judson, N. D. Filed Mar. 17, 1915. Serial No. 14,959. (Cl. 110—141.)



1. In a spark arrester, a shell adapted to be supported upon a smoke stack, a plurality of bracket devices spaced apart and rigidly connected at their outer ends to said shell and directed inwardly therefrom, the inner portion of each bracket being extended laterally and in segmental form, and a cinder receiver supported loosely upon the segmental portions of said brackets and maintained thereby concentrically of the shell.

2. In a spark arrester, a shell converging toward the top and adapted to be supported upon a smoke stack, a tubular member open at the ends and suspended within said shell, a plurality of bracket devices spaced apart and attached at their outer ends to the shell and projecting inwardly therefrom, the inner portion of each bracket being extended laterally and in segmental form, and a cinder receiver supported loosely upon the segmental portions of said brackets and maintained thereby concentrically of the shell, the upper end of the cinder receiver being larger than the tubular member and projecting above the lower end of the same.

1,171,531. BED TO BE USED IN VEHICLES. JOHN C. MUTHER, San Diego, Cal. Filed July 19, 1915. Serial No. 40,582. (Cl. 21—43.)



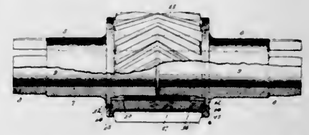
1. In a bed for a vehicle, a plurality of adjustable supports each consisting of three members, each of which is provided with a bent portion adapted to hook over the back of a vehicle seat and a straight portion, said straight portions being each adapted to lie parallel to each other, coinciding slots in two of said straight portions and said third member provided in an off-set portion, near the end of its straight portion, with a bolt hole conforming to said slots, and with another straight outwardly extending portion on its bent portion at an oblique angle to said other straight portion, and a plurality of means for fastening said three members securely together.

2. A bed for a vehicle comprising a plurality of adjustable supports each provided at its ends with bent portions adapted to hook on at one end on the back of a front seat of a vehicle and at its other end on the back of the rear seat of said vehicle, a plurality of hooks mounted in the back of said front seat, a front extension member adapted to be mounted at its rear end on said hooks by means attached to said front extension member and to supports in the side of said vehicle by other means attached thereto, a plurality of legs hinged to said front extension member, a plurality of rear extension support members mounted on the back of the rear seat of said vehicle and attached, one to each of said first mentioned support members, a rear extension member mounted on said rear extension support members, and a plurality of cushions mounted on and across said adjustable support members.

3. In combination with a two seated vehicle, a plurality of hooks disposed and mounted in the back of the front seat of said vehicle, a front extension member provided with means at its one edge adapted to fit on said hooks, a plurality of legs hinged to said front extension member, a plurality of cables attached thereto to secure same in position, a plurality of adjustable supports each adapted at one end to hook over and rest on the back of the front seat of a vehicle and at the other end to hook over and rest on the back of the rear seat of said vehicle, a plurality of rear extension supports each adapted to be mounted on one of said adjustable supports and on the back of the rear seat of said vehicle provided with a backwardly extending portion thereon, a rear extension member adapted to be mounted on said backwardly extending portion, and the cushions of said vehicle disposed on said supports in connection with said front extension member and said rear extension member to form a bed.

4. In a device of the kind described, a three piece adjustable support comprising two members each provided with a straight portion and a hook portion at one end and a plurality of slots disposed in said straight portions so that when said two members are placed with the straight portions resting one on the other and their hooked ends extending in opposite directions said slots will coincide, said third member provided with a similarly hooked portion at one end and a straight portion adjacent thereto provided with an off-set at the extended end of said straight portion with a hole therein, extending from said hooked portion and adapted, when placed side by side with either of said other members, to have said hooked portions coincide and said off-set to rest on said other members, and the hole in said off-set coincide with said slots, and an outwardly extending straight portion on its hooked portion at an oblique angle to its other straight portion, and means for fastening said members securely together.

1,171,532. MILL-PINION. WESLEY G. NICHOLS, Chicago Heights, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed May 4, 1915. Serial No. 25,696. (Cl. 74—28.)



1. An article of the class described comprising a divided shaft, flanges carried thereby and removed a slight distance from the adjacent extremities of said divided shaft, said flanges defining spaced confronting shoulders, and a drum spanning the division of said shaft and contacting with said confronting shoulders.

2. An article of the class described comprising half-shafts with removed power transmitting ends, flanges carried by, and spaced a distance from, the adjacent extremities of said half-shafts, and a shell carried by the adjacent ends of said half-shafts and contacting with the confronting shoulders defined by said flanges.

3. A mill pinion comprising cast manganese steel half-shafts with power transmitting ends, flanges carried by, and spaced a distance from, the adjacent extremities of said half-shafts, and a cast manganese steel toothed shell carried by the adjacent ends of said half-shafts and contacting with the confronting shoulders defined by said flanges.

4. An article of the class described comprising half-shafts, flanges carried by, and spaced a distance from, the adjacent extremities of said half-shafts, a drum provided with annular recesses at the opposite ends thereof, said drum fitting upon the adjacent extremities of said half-shafts and receiving said flanges within said annular recesses.

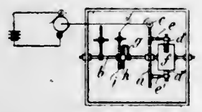
5. An article of the class described comprising a divided shaft, thereby defining two half-shafts, a toothed shell spanning the division between and rigidly secured to said half-shafts; means engaging said shell and holding the same against shifting lengthwise of said half-shafts, said half-shafts formed with power transmitting ends, and with intermediate journal portions.

[Claim 6 not printed in the Gazette.]

1,171,533. DRIVING MEANS FOR CLOCKS. CHARLES EDOUARD O'KEENAN, Paris, France. Filed Jan. 14, 1911. Serial No. 602,731. (Cl. 74—29.)

1. A driving mechanism for clocks, comprising a driven shaft, a motor of a continuously operating type for applying power to said shaft, a friction-device between said motor and said driven shaft, said friction-device having a constant resistance value less than the value of the normal driving force of said motor, said constant resistance value of said friction-device being equal to the force necessary to produce a given constant speed of movement of mechanism driven from said driven shaft.

2. A driving mechanism for clocks, comprising a driven shaft, a motor for applying power to said shaft, a friction-device between said motor and said driven shaft, said friction-device having a constant resistance value less than the value of the normal driving force of said motor, said constant resistance value of said friction-device being equal to the force necessary to produce a given constant speed of movement of mechanism driven from said driven shaft, said friction device comprising a drum, and a flat spring brush adapted to bear upon said drum.



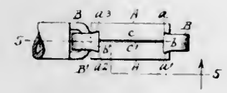
3. A driving mechanism for clocks, comprising a driven shaft, a motor for applying power to said shaft, a friction-device between said motor and said driven shaft, said friction-device having a constant resistance value less than the value of the normal driving force of said motor, said constant resistance value of said friction-device being equal to the force necessary to produce a given constant speed of movement of mechanism driven from said driven shaft, said friction device comprising a polished drum, and a pair of flat spring brushes adapted to bear upon said drum.

4. A driving mechanism for clocks comprising a motor-driven driving disk, a driven shaft, on which said driving disk is loosely mounted, a train of gearing and a resilient connection between said driven shaft and train of gears, a drum having a friction surface mounted on said shaft, a pair of friction brushes on said driving disk bearing on said friction drum with constant force, said brushes and drum constituting a friction couple of fixed value between said disk and driven shaft, whereby motion of said driving-disk producing a driving couple in excess of said friction couple is not transmitted to said driven shaft.

5. In mechanism for imparting a constant degree of motion to an energy-consuming device, the combination of an electric generator having a variable output, an electric motor driven by current from said generator, and a transmission mechanism comprising a driving part, a driven part, and an intermediate slip connection having a friction couple of fixed value, said generator normally driving said motor with a minimum force greater than the value of the friction couple of said intermediate slip connection, whereby the driving couple is normally greater than the said friction couple, and said intermediate slip connection permits relative movement of said driving part and driven part during normal operation of the mechanism.

[Claims 6 to 9 not printed in the Gazette.]

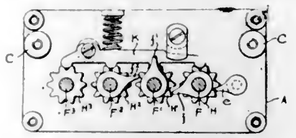
1,171,534. FLEXIBLE SHAFT. EDD C. OLIVER, Detroit, Mich. Filed Aug. 22, 1910. Serial No. 578,342. (Cl. 64—30.)



1. In a flexible shaft, a link having a body portion consisting of a plate formed into a cylinder, a single tongue integral with said body portion extending from each edge of said plate that forms an end of said body portion, each of said tongues being similarly bent over upon itself so as to form a closed engaging loop.

2. A link for a flexible shaft stamped from a single blank, consisting of a cylindrical rolled body portion having a tongue with a widened outer end extending from one edge, a dovetailed indentation in said body portion at the edge opposite that from which the tongue extends, said tongue being bent to have its end engage in said indentation, substantially as and for the purpose described.

1,171,535. MECHANICAL COUNTER. EDD C. OLIVER, Detroit, Mich. Filed Nov. 18, 1912. Serial No. 731,919. (Cl. 235—13.)



1. In a counter, a series of shafts, a star wheel on each of said shafts in a plane at right angles to the axis thereof, said shafts being so arranged that said star wheels shall be in different planes parallel to each other, and a single integral pawl extending in a single plane and engaging all of said star wheels.

2. In a counter, a series of shafts, a star wheel on each of said shafts in a plane at right angles to the axis thereof, said shafts being so arranged that said star wheels shall be in different planes parallel to each other, and a single integral pawl extending in a single plane and engaging all of said star wheels, each antecedent shaft being provided with a finger adapted to engage the star wheel on the following shaft.

1,171,536. COTTER-PIN. ALLEN EDWARD OSTRANDER, Ridgewood, N. J., assignor, by direct and mesne assignments, of one-half to Martin L. Martus and one-half to Charles B. Schoenmehl, Waterbury, Conn. Filed Nov. 12, 1913. Serial No. 800,604. (Cl. 74—8.)

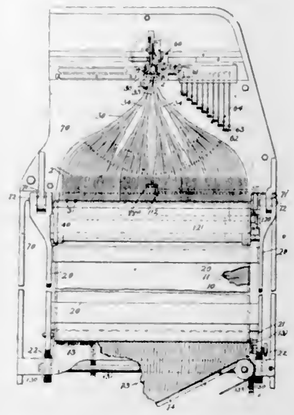


1. A cotter pin made of a piece of half round metal bent so as to provide a loop at one end and to have two limbs of unequal length that extend with their flat surfaces adjacent, the end portion of the long limb being doubled on itself and intermediate the ends of the pin terminating in a bevel, the apex of which lies adjacent a flat portion of such long limb, and the short limb terminating in a bevel lapping the bevel of the long limb on its outer side, so that when the eye is given a blow the short limb is adapted to slide longitudinally and to lap the doubled portion of the long limb and form an end portion comprising three thicknesses of metal transversely of the pin.

2. A cotter pin made of a single piece of metal bent so as to provide a loop at one end and a doubled portion at its opposite end and to have two limbs of unequal length, the doubled portion terminating intermediate the ends of the pin in a bevel, the apex of which lies adjacent such long limb and between the inner face of the long limb and the short limb, the short limb terminating in a bevel on the outer side of the bevel of the long limb so that when the eye is given a blow the short limb is adapted to occupy a position parallel with the doubled portion of the long limb and form an end portion comprising three thicknesses of metal transversely of the pin.

1,171,537. MULTIPLE-MAGAZINE TYPOGRAPHIC MACHINE. DAVID PETRI-PALMEDO, Bridgeport, and EDWARD F. GODDARD, Stratford, Conn., assignors to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 16, 1913. Serial No. 795,398. (Cl. 199—7.)

1. In a typographic machine, the combination of a plurality of matrix magazines, a single distributer only adapted to separate the matrices in accordance with the magazine and the particular channel thereof in which they severally belong, which distributer includes a plurality of guiding devices, and means adapted to be operated by a single presentation of any matrix thereto for moving said guiding means so as to guide said matrix into the proper magazine channel of the particular magazine in which it belongs.



2. In a multiple magazine typographic machine, the combination of a plurality of magazines of normal width arranged one behind another, key actuated matrix releasing mechanism capable of releasing matrices from either magazine at will, and distributing mechanism which is always in operative relation with all magazines and is capable of delivering matrices into any magazine regardless of whether matrices are being concurrently released from one magazine or another, and means whereby a single presentation of any matrix to and a single testing of any matrix by said distributing mechanism will cause said matrix to be immediately delivered into the proper channel of the magazine in which it belongs without interfering with the concurrent release of the matrices from the same or any other magazine.

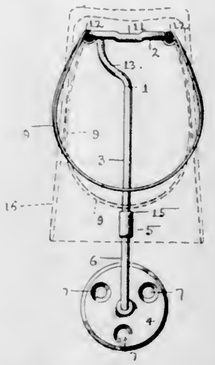
3. In a typographic machine, the combination of a plurality of magazines, a single distributer which has at its upper end a single matrix receiving throat, and below said throat, repeatedly sub-divided diverging channels, movable guiding devices in said channel for directing a matrix during its downward travel from said receiving throat into either branch of any of the channels, and means adapted to be selectively operated by any of the channels, and means operated by any matrix for simultaneously so moving the required guiding devices that they will guide said matrix into the particular channel of the particular magazine in which said matrix belongs.

4. In a typographic machine, the combination with a plurality of matrix magazines, a single distributer which includes a series of repeatedly subdivided diverging distributing channels which begin at their upper ends with a single matrix receiving throat and which terminate at their lower ends in as many channels as there are magazine channels in all the magazines, said terminal channels being located respectively over said magazine channels, gates in said channels, matrices which are differentiated from each other in as many different ways as there are magazine channels, and mechanism adapted to be selectively operated by any matrix for simultaneously moving as many of said gates as may require movement to guide said matrix into the particular magazine channel in which it belongs.

5. In a typographic machine containing keyboard operated matrix-releasing mechanism, the combination of a plurality of matrix magazines of normal width which are arranged one behind another and are movable as a unit to bring either magazine into operative relation to the matrix releasing mechanism, and a single distributer which is always in operative relation to all of said magazines regardless of the position of said magazines with respect to said matrix releasing mechanism.

[Claims 6 to 26 not printed in the Gazette.]

1,171,538. HOLDER FOR TUMBLERS. GEORGE J. PIKE, Grand Rapids, Mich. Filed Feb. 15, 1913. Serial No. 748,611. (Cl. 65—65.)



1. In a holder for tumblers, a support having at its upper end a horizontal ring, and a leaf spring attached at its ends to the ring on its opposite sides and adapted to yieldingly engage the interior surface of a tumbler.

2. In a holder for tumblers, a support, and a leaf spring attached at its ends to the support and having an opening through its middle portion for the free passage of the support therethrough and adapted to yieldingly engage the interior surface of a tumbler, the spring being adapted to be by the tumblers compressed in a direction transverse to the support, its middle portion being thus moved along the support away from the point of attachment of the spring to the support.

3. In a holder for tumblers, a support having at its upper end a horizontal ring, and a leaf spring attached at its ends to the ring on its opposite sides and having an opening through its middle portion for the free passage of the support therethrough and adapted to yieldingly engage the interior surface of a tumbler.

4. In a holder for tumblers, a support, and a leaf spring attached at its ends to the support and adapted to yieldingly engage the interior surface of a tumbler, and a stop on the support to limit the downward movement of the spring, the spring being adapted to be by the tumblers compressed in a direction transverse to the support, its middle portion being thus moved along the support away from the point of attachment of the spring to the support.

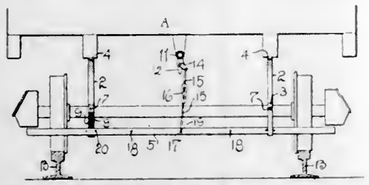
5. In a holder for tumblers, a support having at its upper end a horizontal ring provided with a recess, and a leaf spring attached at its ends to the ring and adapted to be turned on the ring, one of its ends being adapted to enter such recess and to be releasably held therein, said spring being adapted to yieldingly engage the interior surface of a tumbler.

1,171,539. AUTOMATIC TRAIN-STOP. ROBERT T. POPLIN and WILLIAM F. FERGUSON, Butterfield, Mo. Filed July 3, 1915. Serial No. 37,907. (Cl. 188—2.)

1. The combination with a car and an air brake system including a train pipe and a vent valve, of hangers supported from the car body, a valve actuating member loosely supported for vertical movement in said hangers and extending transversely of the car and beyond and above the rails over which the car travels, said member being operatively connected with the vent valve to open the vent valve upon contact of the member with the rails caused by a descent of the car body relative to the rails.

2. The combination with a car and an air brake system including a train pipe and a vent valve, of hangers de-

pending from the car, a transversely extending bar loosely supported in said hangers for vertical movement and extending beyond the rails upon which the car runs, said hangers supporting the bar normally in spaced relation to the rails, springs urging the bar downward toward the lower ends of the hangers and resisting accidental upward movement of the bar, and an operative connection between said bar and the vent valve.

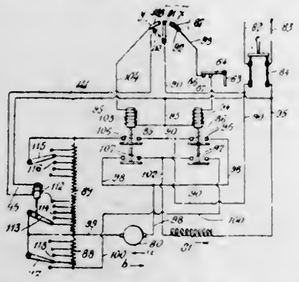


3. The combination with a car and an air brake system including a train pipe and a vent valve, of hangers depending from the car, a transversely extending bar loosely supported in said hangers for vertical movement and extending beyond the rails upon which the car runs, said hangers supporting the bar normally in spaced relation to the rails, springs urging the bar downward toward the lower ends of the hangers and resisting acidental upward movement of the bar, and an operative connection between said bar and the vent valve, said connection being adjustable for length.

4. The combination with a car and an air brake system including a train pipe and a vent valve, of hangers depending from the car, a transversely extending bar loosely supported in said hangers for vertical movement and extending beyond the rails upon which the car runs, said hangers supporting the bar normally in spaced relation to the rails, springs urging the bar downward toward the lower ends of the hangers and resisting accidental upward movement of the bar, and an operative connection between said bar and the vent valve, said connection being adjustably engageable with the bar at a plurality of points.

5. The combination with a car and an air brake system including a train pipe and a vent valve, of supporting members depending from the car, a bar extending transversely of the car and carried by said supporting members and having free vertical movement, means yieldingly resisting the vertical movement of the car, and means connecting the bar to the vent valve comprising a turn buckle and rods engaged by the turn buckle and respectively with the bar and vent valve.

1,171,540. MOORING-WINCH. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Co., New York, N. Y., a Corporation of New York. Filed Mar. 24, 1913. Serial No. 756,456. (Cl. 172—152.)



1. In combination with a reversible electric motor adapted to be operatively connected to a winch drum, non-overhauling gears between the motor and the winch drum a controller having a non-circuit closing position and comprising a reverser, and means for limiting the motor torque in one direction of motor rotation, to a relatively low value, such that the motor may be stalled without injury when operating in said direction, said motor being adapted to exert a relatively high torque in the opposite direction to free the gears of the winch drum.

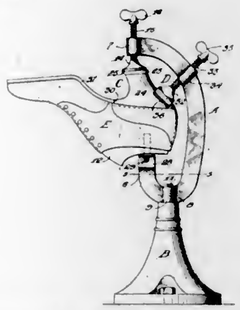
2. In combination with a reversible electric motor adapted to be operatively connected to a winch drum, non-overhauling gears between the motor and the winch drum a controller having a non-circuit closing position and comprising a reverser, a resistor in one direction of motor rotation for limiting the motor torque to a relatively low value to permit the motor to be stalled without injury when operating in said direction, said motor being adapted to exert a relatively large torque in the opposite direction to free the gears of the winch drum.

3. In combination with a reversible electric motor adapted to be operatively connected to a winch drum, non-overhauling gears between the motor and the winch drum a controller having a non-circuit closing position and comprising a reverser, means for limiting the motor torque in one direction of motor rotation to a relatively low value, such that the motor may be stalled without injury when operating in said direction, said motor being adapted to exert a relatively high torque in the opposite direction to free the gears of the winch drum, and means for automatically stopping the motor at a predetermined limit only when rotating in the direction in which it has the relatively large torque.

4. In combination with a reversible electric motor adapted to be operatively connected to a winch drum, non-overhauling gears between the motor and the winch drum a controller having a non-circuit closing position and comprising a reverser, a pair of motor circuits established by the reverser, an adjustable resistor of relatively high resistance in one of said circuits to limit the motor torque to a relatively low value in one direction of motor rotation, an adjustable resistor of relatively low resistance in the other motor circuit, and means for automatically stopping the motor at a predetermined limit when rotating in the direction in which it has the relatively large torque.

5. In combination with a reversible electric motor adapted to be operatively connected to a winch drum, non-overhauling gears between the motor and the winch drum a controller having a non-circuit closing position and comprising a reverser, a pair of motor circuits established by the reverser, a resistor for limiting the motor current and torque for driving the winch in a hauling-in direction, to a relatively low value, to permit the motor to be stalled without injury when the winch is hauling-in, and a resistor of relatively low resistance for driving the winch in an unwinding direction whereby the motor is adapted to exert a relatively large torque for freeing the gears when the winch is operated in a paying-out direction.

1,171,541. HEEL-RETAINER. WILLIAM H. ROMMEL, Carlisle, Pa. Filed Aug. 5, 1914. Serial No. 855,146. (Cl. 12—125.)



1. A portable heel retainer comprising in combination, a substantially C shaped element, means for holding the work intermediate the extremities of said element and normally tending to throw the heel toward the main body portion of the same, and a clamp member to counteract movement of said heel carried by said element intermediate its extremities and movable either toward or from one of said extremities, in the plane thereof.

2. A portable heel retainer comprising in combination, a substantially C shaped element having its lower extremity directed upwardly to form an inverted arch portion, means for holding the work intermediate the extremities of said element, and a clamp member carried by said element intermediate its extremities and movable toward or from the work.

3. A portable heel retainer comprising in combination, a substantially C shaped element having its lower extremity directed upwardly to form an inverted arch portion, a standard carrying said element and pivotally connected therewith at the crown of said inverted arch portion, means for holding the work intermediate the extremities of said element, and a clamp member carried by said element intermediate its extremities and movable toward or from the work.

4. A portable heel retainer comprising in combination, a substantially C shaped body portion, a clamp member carried thereby adjacent one extremity thereof and movable toward or from the other extremity, a second clamp member movably carried by said body portion intermediate its extremities and having its axis of movement intersecting the axis of movement of said first clamp member at an acute angle, and a pin for carrying a last extending from said body portion adjacent the extremity opposite to said first mentioned clamp member and directed toward the same.

5 In a retainer for French heels, the combination of a last, a body portion in engagement with said last and retained against movement longitudinally thereof, a clamp member, means carried by said body portion and movable toward or from the sole of said last, adjustably carrying said clamp member, to present its plane at an acute angle to the heel section of said last, and a second clamp member carried by said body portion movable toward and from the sole portion of said last in a line intersecting the axis of movement of said first clamp member at an acute angle.

[Claims 6 to 10 not printed in the Gazette.]

1,171,542. TITANIC-OXID-CONCENTRATE PRODUCT AND METHOD OF OBTAINING THE SAME. AUGUSTE J. ROSSI and LOUIS E. BARTON, Niagara Falls, N. Y., assignors to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed May 22, 1914. Serial No. 840,197. (Cl. 23—13.)

1. As a new article of manufacture, a usually powdered product darkish, to light, gray in color, or, if calcined, of a yellowish color, and distinguished, by analysis, as consisting principally of titanic oxid, as containing also sodium oxid and iron oxid, and by the exceptional ease, rapidity, and completeness with which its titanic oxid dissolves in concentrated sulfuric, and other, acids.

2. As a new article of manufacture, a usually powdered product distinguished, by analysis, as consisting principally or titanic oxid and as containing also sulfuric anhydrid.

3. As a new article of manufacture, a usually powdered product distinguished, by analysis, as consisting principally of titanic oxid and as containing also free sulfur.

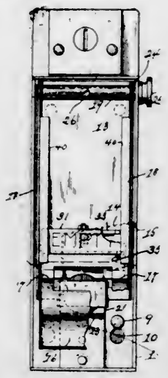
4. As a new article of manufacture a powdered product distinguished by analysis as consisting principally of titanic oxid and as containing also sodium oxid, iron oxid and sulfuric anhydrid.

5. As a new article of manufacture a powdered product distinguished by analysis as consisting principally of titanic oxid and as containing also sodium oxid, iron oxid in quantity less than soda and sulfuric anhydrid in quantity less than iron oxid.

[Claims 6 to 13 not printed in the Gazette.]

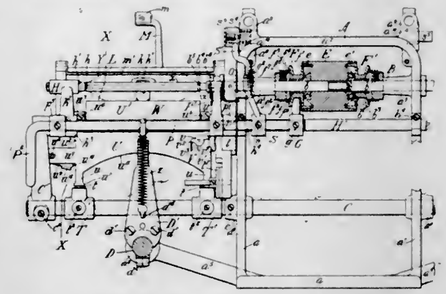
1,171,543. COIN-CONTROLLED VENDING-MACHINE. OTTO RUZSICSKA and GEORGE M. LAUB, Newark, N. J. Filed June 17, 1915. Serial No. 34,570. (Cl. 194—1.)

1. A coin-actuated vending machine, comprising a case provided with a coin slot, a package compartment, a combined weight and locking device movably located in said package compartment, comprising an angled plate, a spring-actuated, pivoted pawl carried by said plate, the free end of said pawl adapted to be moved into registry with an aperture formed in the package compartment and to further project into a coin chute located on the rear of said package compartment after the last package has been discharged, in order to prevent further coins from being inserted therein.



2. A combined weight and locking device for coin-actuated vending machines, comprising in combination with a case and its actuating parts, an angled plate, said plate adapted to be movably mounted in the package compartment of said machine, a spring-actuated pawl pivotally secured to a stud carried by said plate, the free end of said pawl being provided with an engaging element, designed to engage with an aperture formed in the package compartment and further projecting into a coin chute located on the rear of the package compartment after the last package has been discharged, in order to prevent the insertion of further coins.

1,171,544. WINDING-MACHINE. CLAES RYDEN, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Sept. 30, 1912. Serial No. 723,156. (Cl. 242—43.)



1. In a winding machine, the combination with the winding-spindle, of a thread guide adapted to be traversed with a straight-line movement maintained constantly parallel with the axis of the winding spindle, a separate oscillating arm to reciprocate the guide, pressure-means independent of the guide adapted to bear on the winding to be moved through the growth in diameter of the cop, and means operated by the movement of said pressure-means to vary the effect of the oscillating arm to progressively shorten the traverse of the thread-guide throughout the winding of the cop.

2. In a winding machine, the combination with the winding-spindle, of a thread-guide adapted to be traversed with a straight-line movement maintained constantly parallel with the axis of the winding-spindle, a separate

oscillating arm for reciprocating the guide, independent pressure-means bearing on the winding to be moved away from the axis of the cop by the growth in diameter of the latter, and means operated by said pressure-means to shorten the range of action of the guide-reciprocating arm to gradually reduce the extent of traverse of the thread-guide from start to finish of the cop.

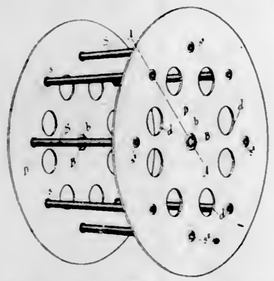
3. In a winding machine, the combination with the winding-spindle, of a thread-guide adapted to be traversed with a straight-line movement maintained constantly parallel with the axis of the winding-spindle, a separate oscillating arm for reciprocating the guide, means to connect the guide with the arm, independent pressure-means adapted to bear on the winding to be moved through the growth in diameter of the cop, and means operated by said pressure-means to shift the point of connection of the guide on the oscillating arm to cause a gradual shortening of the traverse of the guide throughout the winding.

4. In a winding machine, the combination with the winding-spindle, of a thread-guide adapted to be traversed with a straight-line movement maintained constantly parallel with the axis of the winding-spindle, a separate oscillating arm for reciprocating the guide, means to connect the guide with the arm, means to shift the point of connection of the guide along the arm, a pressure-roll adapted to bear on the winding, and means operated by the movement of said pressure-roll as the cop increases in diameter to cause the shifting-means to move the point of connection of the guide toward the axis of the arm to gradually shorten the length of the layers of winding.

5. In a winding machine, the combination with the winding-spindle, of a thread-guide, means for reciprocating the guide, with a straight-line movement maintained constantly parallel with the axis of the winding-spindle, a frame movable away from the axis of the winding-spindle, a pressure-roll mounted on said frame and adapted to bear on the cop to move the frame, and means operated by the movement of the frame to gradually shorten the extent of traverse of the thread-guide as the cop increases in diameter.

[Claims 6 to 20 not printed in the Gazette.]

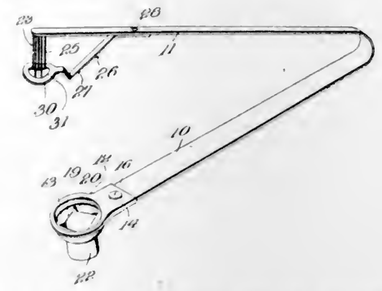
1,171,545. REEL OR RUNNER. THOMAS J. SANDS, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Dec. 2, 1912. Serial No. 734,577. (Cl. 242—77.)



As a new article of manufacture, a reel comprising two relatively thin disks having axial bores of metal sleeves flanged through said bores in eyelet-fashion, and a plurality of tubular cross-members extending between said disks and arranged in a circle concentric with the common axis of the disks, said tubes formed with flanges abutting the inner faces of the disks and having their ends extending through holes in the disks and clenched against the outer faces thereof.

1,171,546. SEEDER. WILLIAM G. SCHNEE, Kansas City, Mo., assignor of fifty-one one-hundredths to Thomas J. Letchworth, Kansas City, Mo. Filed May 11, 1915. Serial No. 27,394. (Cl. 146—5.)

1. A device of the character described including a body portion having coacting arms, a cup carried by one of said arms and provided with an opening, a seeding element carried by the other of said arms and adapted for movement to project into the opening of the cup to coact with the cup, and an ejector mounted upon one of said arms and engageable intermediate its length with the other arm for movement relative to the seeding element to coact therewith.



2. A device of the character described including coacting arms, a cup carried by one of said arms and provided with an annular opening provided at a point intermediate its length with substantially rectangular walls, and a seeding element carried by the other of said arms and adapted for movement to project into said opening to coact with the said walls.

3. A device of the character described including coacting arms, a cup carried by one of said arms and provided with an opening having substantially straight rectangular walls, a seeding element carried by the other of said arms and including a plurality of prongs disposed at the corners of a rectangle equal in area to the area of said opening, the said prongs being adapted for movement to project into said opening to coact with the walls thereof, and an ejector arranged to coact with said seeding element.

4. A device of the character described including coacting yieldably supported arms, a cup mounted upon one of said arms, the said cup including a body disk having a plurality of tongues formed therefrom bent to define a substantially frusto conical socket open at its ends, and a spout supported by said tongues, a seeding element carried by the other of said arms and including a head having a plurality of prongs extending therefrom, said prongs being adapted for movement to project into the said socket to coact therewith, and an ejector carried by one of said arms and adapted to coact with the seeding element, said ejector including a yieldable shank, and a head embracing the seeding element and adapted for movement longitudinally thereof, the head of said ejector being normally disposed in a plane passing through the prongs of the seeding element adjacent the free ends thereof and the said seeding element being adapted to engage the other of said arms whereby the head will be moved longitudinally of the said prongs as the prongs are moved into coacting relation within the socket.

5. A device of the character described including coacting arms, a cup carried by one of said arms and provided with a longitudinally tapered opening having angularly disposed walls projecting therein, and a seeding element carried by the other of said arms and adapted for movement to project into said opening to coact with said walls.

[Claims 6 to 12 not printed in the Gazette.]

1,171,547. APPARATUS FOR SPINNING MECHANISM. DAVID S. SEAMAN, Providence, R. I. Filed July 8, 1913. Serial No. 777,870. (Cl. 118—62.)

1. In combination, a spinning cap having its lower rim adapted to serve as a yarn guide, a skirt attached to the cap and having its lower rim also adapted to operate as a yarn guide, and means for adjusting the skirt into and out of operative position.

2. In combination, a spinning cap having its lower rim adapted to serve as a yarn guide, a skirt attached to the cap and having its lower rim of greater diameter than the cap rim and also adapted to operate as a yarn guide, and means for adjusting the skirt into and out of operative position.

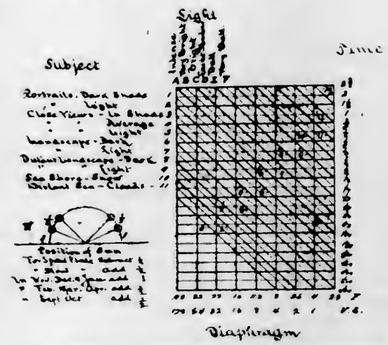


3. In combination, a spinning cap equipped with a plurality of yarn guide rims, and adjusting means whereby any one of the guide rims may be placed in operative position.

4. In combination, a cap having an integral rim forming a yarn guide, and a skirt attached to the cap and having an integral rim adapted to form a yarn guide, the cap rim and the skirt rim being adapted to operate in alternative order.

5. In combination, a spinning cap having its lower rim adapted to serve as a yarn guide, a slot located in the cap, a skirt surrounding the cap and engaging the slot, the skirt having a flaring rim adapted to serve as a yarn guide and being movable within the said slot, so that it may be held out of operative position.

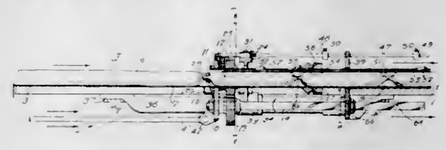
1,171,548. CHART FOR DETERMINING EXPOSURES. ARTHUR D. SHILAND, Cleveland, Ohio. Filed Sept. 7, 1915. Serial No. 49,277. (Cl. 235—61.)



1. In a chart for determining the time of exposure and amount of opening of the diaphragm, of a camera shutter, a series of subject characteristics and horizontal lines, coinciding respectively therewith, and a series of light values and vertical lines coinciding respectively therewith and intersecting said horizontal lines, in combination with a series of time values corresponding respectively with the horizontal lines and a series of widths of diaphragm openings corresponding respectively with said vertical lines, and parallel diagonal lines intersecting with the intersections of the horizontal and vertical lines for determining the correct time values relative to amounts of diaphragm opening when considered with predetermined subject matter and sight conditions specified upon the horizontal and vertical lines.

2. In a chart for determining the time of exposure and amount of diaphragm opening to be used with predetermined subject matter and light condition, a series of horizontal lines coinciding respectively with the description of subject matter, a series of vertical lines coinciding respectively with the description of light conditions, and a series of parallel diagonal lines intersecting the intersections of said vertical and horizontal lines, and a series of time values coinciding with said horizontal lines and a series of amounts of diaphragm opening corresponding with said vertical lines, each diagonal line being followed to its intersection with the horizontal line corresponding with the desired time of exposure, and thence the vertical line intersecting therewith and with said horizontal line being followed to one of the series of amounts of diaphragm openings.

1,171,549. SAUSAGE-MACHINE. JOHN CALVIN SMITH and SION ARRINGTON DARNELL, Mobile, Ala., assignors of one-third to Arthur D. Davis, Mobile, Ala. Filed Apr. 26, 1915. Serial No. 23,842. (Cl. 17—6.)



1. A sausage machine, comprising a feed table, a carriage movable longitudinally thereof, guides for the carriage, means for reciprocating the carriage, a tubular casing journaled longitudinally of the carriage, clamping mechanism in the casing for clamping a sausage roll within the same, means operated by the movement of the carriage away from the feed table for rotating the casing and releasable therefrom on the reverse movement of the carriage, means controlled by the movement of the carriage in opposite directions for operating the clamping mechanism to clamp the roll when the carriage moves away from the feed table and release the roll when the carriage moves toward the table, a pair of clamping links mounted on the carriage at the front end of the casing for movement toward and from each other to clamp the roll, and means controlled by the movement of the carriage in opposite directions for moving the links toward and from each other.

2. In a sausage machine, comprising a reciprocating carriage and a tubular casing journaled longitudinally of the carriage for receiving a sausage roll, and having clamping mechanism for clamping the roll to the casing, means for rotating the casing when the carriage moves in one direction, said means comprising a gear wheel on the tube, a shaft journaled parallel with the tube and having a gear wheel meshing with the gear wheel thereon, said shaft having a spiral groove, a ratchet wheel on the shaft and having a lug for engaging the groove, a fixed support upon which the ratchet wheel is journaled, and a pawl engaging the wheel to prevent reverse movement thereof.

3. In a sausage machine, comprising a reciprocating carriage and a tubular casing journaled longitudinally of the carriage for receiving a sausage roll, and having clamping mechanism for clamping the roll to the casing, means for rotating the casing when the carriage moves in one direction, said means comprising a gear wheel on the tube, and a shaft journaled parallel with the tube and having a gear wheel meshing with the gear wheel thereon, means in connection with the shaft for rotating the shaft when the carriage moves with the roll clamped and for releasing the shaft when the carriage moves in the opposite direction.

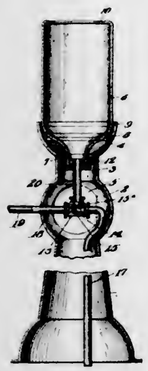
4. In a sausage machine, a tubular casing adapted to receive a sausage roll, said casing being supported for rotat-

ing movement and for longitudinal movement, means for guiding the casing in its longitudinal movement, means for reciprocating the casing, means within the casing for clamping the sausage roll to the casing, means operated by the movement of the casing in opposite directions for controlling the clamping mechanism to clamp and release the roll, means controlled by the movement of the casing when the sausage is clamped to rotate the casing and releasable from the casing when the casing moves in the opposite direction, means at the end of the casing for separating a link from the roll, said separating means comprising a pair of parallel links mounted for movement toward or from each other, and means controlled by the movement of the casing in opposite directions for operating the links.

5. In a sausage machine, a tubular casing adapted to receive a sausage roll, said casing being supported for rotating movement and for longitudinal movement, means for guiding the casing in its longitudinal movement, means for reciprocating the casing, means within the casing for clamping the sausage roll to the casing, means operated by the movement of the casing in opposite directions for controlling the clamping mechanism to clamp and release the roll, means controlled by the movement of the casing when the sausage is clamped to rotate the casing and releasable from the casing when the casing moves in the opposite direction, and means at the end of the casing for separating a link from the roll.

[Claims 6 to 21 not printed in the Gazette.]

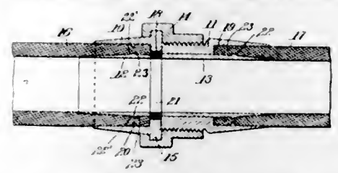
1,171,550. MEASURING AND DISPENSING DEVICE. CHARLES B. SPRAGUE, Penn Yan, N. Y. Filed Oct. 26, 1914. Serial No. 868,727. (Cl. 221—116.)



A measuring and dispensing device, embodying a hollow pedestal having a bowl-shaped portion at its upper end, a pair of annular gaskets secured within said portion, an inverted bottle having an upper vent and having its shoulder seated upon one of said gaskets, the bottle fitting within the other gasket to hold the bottle upright, the bottle having a neck depending within the pedestal, an apertured stopper fitting within the neck, a three-way valve disposed within the pedestal and having a handle, the pedestal having a door in front of said handle adapted to be opened for permitting access to be had to the handle, an upstanding pipe attached to said valve to enter said stopper, a supply pipe extending upwardly within the pedestal and connected to said valve, and a discharge pipe connected to said valve and extending through one side of the pedestal.

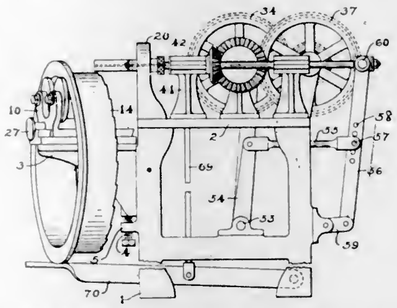
1,171,551. HOSE-COUPLING. JOHN H. STEPHENS, Vernon, Tex. Filed July 8, 1913. Serial No. 777,939. (Cl. 137—28.)

1. A hose coupling comprising coupling members, a clamping thimble in each of said coupling members, each coupling member having spaced internal hose engaging lugs, each thimble having spaced external hose engaging lugs formed with beveled outer ends to facilitate insertion of the thimbles into the hose sections and having perpendicular shoulders at their inner ends to prevent accidental movement outward of the hose sections, the lugs on the coupling members being in transverse alinement with the lugs on the corresponding clamping thimble with the lugs on the coupling members arranged between the lugs on the clamping thimbles so as to clamp the hose tightly between the thimbles and coupling members.



2. A hose coupling comprising a coupling member having spaced internal hose engaging lugs, a thimble adapted to fit within the coupling member to clamp the hose section between it and the coupling member and having spaced external hose engaging lugs formed with beveled outer ends to facilitate insertion of the thimble into the hose section and perpendicular shoulders at their inner ends to prevent accidental movement of the thimble outwardly of the hose section.

1,171,552. CUSHION-TIRE-DRILLING MACHINE. WILLIAM C. STEVENS, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Mar. 8, 1915. Serial No. 13,045. (Cl. 144—93.)



1. In a machine for drilling cushion tires, in combination, a frame, a needle for drilling tires on said frame, a plate on said frame adjacent said needle, means for moving tires carried on said plate and means for adjusting said plate whereby the direction of the tire relative to the needle may be changed.

2. In a machine for drilling cushion tires, a frame, a needle for drilling tires on said frame, a plate on said frame adjacent said needle, movable tire supporting means carried by said plate and means for adjusting said plate whereby the direction of the tire relative to the needle may be changed.

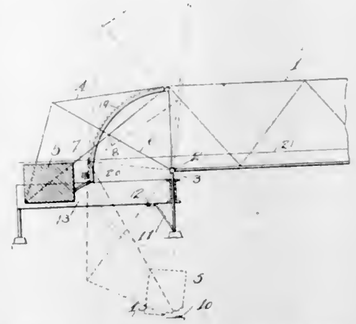
3. In a machine for drilling cushion tires, a frame, a needle for drilling tires on said frame, a plate on said frame adjacent said needle, a tire supporting and advancing drum rotatably mounted on said plate, means for adjusting said plate whereby the direction of the tire relative to the needle may be changed and mechanism for passing said needle over said drum.

4. In a machine for drilling cushion tires, a frame, a needle for drilling tires in said frame, a plate on said frame adjacent said needle, a rotatable tire supporting and advancing drum on said plate, means for rotatatively adjusting said plate whereby the direction of the tire relative to the needle may be changed, means for guiding the tire in its movement and means for reciprocating said needle over said drum.

5. In a machine for drilling cushion tires, a combination with means for moving and supporting a tire during its movement, of means for drilling the tire, means for changing the angle of the supporting means to the drilling means, and means for guiding the tire on the support, said last named means being conformable with the angular movement of the supporting means.

[Claims 6 to 16 not printed in the Gazette.]

1,171,553. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Apr. 1, 1913. Serial No. 758,140. (Cl. 14—38.)



1. A bascule bridge comprising a movable span, a counterweight frame associated with said movable span upon which the counterweight is supported, said counterweight frame having a plurality of angularly disposed members, said members having an angular open space between them, the open end of said space being at the bottom thereof, a cross support extending under said movable span, inside and outside bearings for said movable span, mounted upon said cross support, said cross support received in said space between said angularly disposed members when the movable span is moved to its open position.

2. A bridge comprising a main span, a counterweight support connected therewith, a series of angular members connected together to form a plurality of triangles, said angular members connected with said counterweight support, concrete connected with said angular members and in which they are embedded.

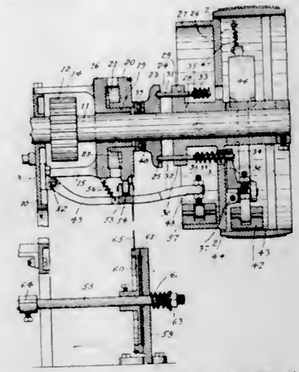
3. A bascule bridge comprising a fixed portion, a movable portion mounted on trunnions, an inside and outside bearing for the trunnions, an inside support for the inside bearing and a brace between said support and said fixed portion so as to take the horizontal thrust of said inside bearing.

4. A bascule bridge comprising a main span provided with a plurality of trusses, a fixed support, a portion of which extends underneath the main span, a counterweight carrying part comprising a member behind the support and extending upwardly therefrom, a second member extending upwardly from said first member at a distance from its point of connection with the span, said second member also connected with said span, a third member projecting rearwardly from the upper chord of the main span, the three members forming a supporting frame, a series of triangular members connected with said frame, a counterweight connected with said triangular members, there being an open space between said first member and said series of triangular members so that said members clear the support in all of the various positions of the main span.

5. A bascule bridge comprising a main span, trunnions upon which it is mounted, said main span terminating at said trunnions, a triangular frame built out from said span toward the rear thereof, a series of triangular frames carried upon said first mentioned triangular frame as a support, a counterweight carried by said series of triangular frames, said series of triangular frames separated from the first triangular frame by a space open at the bottom, a cross support under said main span, said cross support received in to said space when the main span is open.

[Claims 6 and 7 not printed in the Gazette.]

1,171,554. DRIVING MECHANISM FOR PRINTING-PRESSES. CHARLES P. STRITE, Minneapolis, Minn., assignor, by mesne assignments, to Horton Manufacturing Company, Minneapolis, Minn., a Corporation. Filed Apr. 1, 1914. Serial No. 828,738. (Cl. 74—45.)



1. In combination with the drive shaft of a printing press, a power-operated pulley loose on said shaft, a brake drum fast on the shaft, means associated with said brake drum for operatively connecting the brake drum with the pulley to drive the shaft, said means comprising devices movable with the brake drum and movable relatively thereto for engagement with a portion of the pulley whereby a governing control of the drive shaft is effected, a brake coöperating with said brake drum, and means under the control of the operator for simultaneously applying the brake and releasing said connecting means, or vice versa.

2. In a printing-press a main driving shaft, a power-operated pulley loose on said shaft, a driving disk fast on the shaft, a braking device pivotally connected with a stationary member, means normally holding said brake in engagement with a portion of the disk to hold said disk and shaft stationary, a spring tending to swing said member upon its pivot to withdraw the braking action, and means for operatively connecting the driving disk and the pulley so that the pulley may exercise a governing control over the driving disk, actuation of said connecting means operating to withdraw the brake-holding means and permit operation of the spring.

3. In a printing-press, a main driving shaft, a power-operated pulley loose on said shaft, a driving disk fast on the shaft having a laterally-extended annular rim, an arm pivotally connected with a stationary member having a brake shoe positioned to engage with said rim, means engaging said arm to hold said brake in engagement with the rim when the pulley and disk are disconnected, a spring tending to swing said arm upon its pivot to withdraw the brake, and means for operatively connecting the driving disk and the pulley, actuation of said connecting means operating to withdraw the brake-holding means and permit operation of the spring.

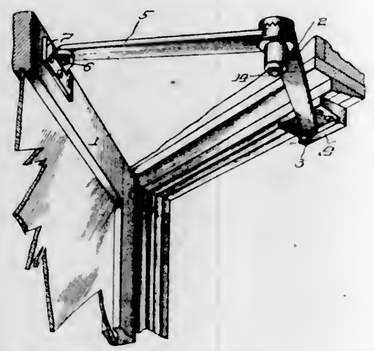
4. In a printing-press, a main driving shaft, a power-operated pulley loose on said shaft, a driving disk fast on the shaft, a pivoted brake member adapted to engage a portion of said driving disk to hold the disk and shaft stationary, means for operatively connecting the driving disk and the pulley so that the pulley may exercise a governing control over the driving disk, and a rotary member under the control of the operator for simultaneously withdrawing the brake and actuating said connecting means.

5. In a printing-press, a main driving-shaft, a power-operated pulley loose on said shaft, a driving disk fast on

the shaft, a pivoted brake member adapted to engage a portion of said driving disk to hold the disk and shaft stationary, means for operatively connecting the driving disk and the pulley so that the pulley may exercise a governing control over the driving disk, a rotary member under the control of the operator for simultaneously withdrawing the brake and actuating said connecting means, and means for holding said rotary member wherever set.

[Claims 6 to 10 not printed in the Gazette.]

1,171,555. CASEMENT-WINDOW ADJUSTER. JAMES SWANSON, Chicago, Ill., assignor to Orr & Lockett Hardware Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1913. Serial No. 776,030. (Cl. 16—22.)



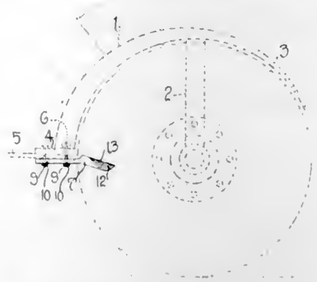
1. In a device of the character described, the combination of an arm having an annular toothed flange at one end and a pivot pin projecting from said arm and located concentrically of said toothed flange, said parts being formed integrally; a second arm having an annular toothed flange and an opening concentric therewith for receiving said pin, said toothed flanges intermeshing with each other; a coiled spring surrounding said pin; a tubular cap mounted on said pin and constituting a housing for said spring; and means secured upon the outer end of said pin and overlapping the end of said cap for holding said parts in assembled relation, whereby said housing and pivot pin turn with said first arm.

2. In a device of the character described, the combination of an arm having an annular toothed flange at one end and a pivot pin projecting from said arm and located concentrically of said toothed flange, said parts being formed integrally, said pin having a non-circular outer end; a second arm having an annular toothed flange and an opening concentric therewith for receiving said pin, said toothed flanges intermeshing with each other, said second arm being provided upon its opposite face with a socket concentric with the said opening; a coiled spring received within said socket and surrounding said pin; a tubular cap seated in said socket and constituting a housing for said spring, said cap at its outer end fitting closely the outer end of said stud; and a screw threaded in the outer end of said pin for holding said cap in place, whereby said pivot pin, housing and screw constitute a unitary part of said second arm and turn with it.

1,171,556. DRILL ATTACHMENT. JOHN A. SWANSON, Bantry, N. D. Filed Aug. 21, 1915. Serial No. 46,751. (Cl. 97—79.)

1. A device of the class described including an elongated plate having spaced openings formed therein, one end of said plate being longitudinally slotted to form spaced blades, said blades being arranged obliquely with respect to each other and converging inwardly toward their inner edges, said blades being disposed diagonally with respect to the plate, and means whereby to support said plate, as and for the purpose set forth.

2. The combination with the forwardly converging disks of a drill and a frame supporting said disks including a member disposed substantially in line with the axis of the disks, of a device mounted upon said member for holding the disks in convergent relation including a body adjustably mounted upon the member for movement toward and from the axis of the disk and having rearwardly divergent extensions engaging on the outer faces of the disks and holding them in proximity to each other, said extensions being downwardly and laterally deflected and acting as scrapers.

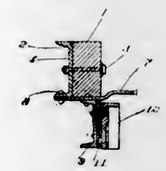


3. The combination with the frame and convergently related disks of a disk drill, of means for holding the said disks in convergent relation including a substantially flat plate adjustably mounted upon the frame for movement toward and from the axis of the disk, the plate at its rear end having an approximately V-shaped slot formed in it to provide extensions of the plate having rearwardly diverging inner edges engaging on the outer faces of the disks and holding them in proximity to each other.

4. A guide and cleaner of the character described including a supported member formed at one end to provide outwardly and convergently related spaced walls adapted to engage on the outer faces of a pair of converging disks and retain said disks in proximity to each other, the convergently related spaced walls terminating at their inner ends in a relatively enlarged opening.

5. A guide and cleaner of the character described including a plate bifurcated at one end to provide blades having their inner edges convergently related and adapted to engage on the outer faces of a pair of converging disks and retain said disks in proximity to each other, the bifurcation refining said blades terminating at its inner end in an enlarged opening greater in width than the space between the cutting edges of the blades.

1,171,557. DRAFT-SUPPORT. THOMAS H. SYMINGTON, Rochester, N. Y. Filed Nov. 30, 1914. Serial No. 874,620. (Cl. 105—76.)

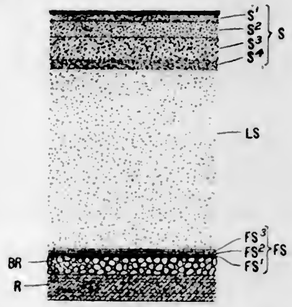


1. In a wooden underframe car having wooden center sills, a metal reinforcement consisting of metal channels having their webs covering and secured to the outer faces of the sills and extending from end to end of the car, the flanges being turned outward, metal plates one at each end spanning the sills and secured at their edges to the bottom flanges of the channels, and draft sills at each end in the form of channel irons having their top flanges secured to and depending from the plates.

2. In a wooden underframe car having wooden end sills and center sills, a metal reinforcement consisting of metal channels having their webs covering and secured to the outer faces of the sills and extending from end to end of the car, the flanges being turned outward, metal plates one at each end spanning the sills and secured at their edges to the bottom flanges of the channels, draft sills at each end in the form of channel irons having their top flanges secured to and depending from the plates and vertical angle irons, one at each end of each long channel, said angle irons each having a flange riveted to the end sill and a flange riveted to the web of the channel.

3. In a wooden underframe car, wooden center sills, a metal reinforcement consisting of metal channels having their webs secured to the outer faces of the sills and extending from end to end of the car, metal plates one at each end spanning the sills and secured at their edges to the bottom flanges of the channels, and draft sills depending from the plates and secured at their upper edges to the said plates which span the sills.

1,171,558. PLANT-GROWING APPARATUS. FREDERICK W. TAYLOR, Philadelphia, Pa.; Edward W. Clark, 3d, executor of said Taylor, deceased. Filed July 26, 1910. Serial No. 573,958. (Cl. 47—37.)



1. In a putting green or the like the combination with a porous root bearing layer of a water reservoir located below said layer, lifting sand interposed between said reservoir and said layer, the lifting sand and root bearing layer being so constructed that a substantial percentage of moisture, insufficient, however, to fill the void space therein, will be maintained in the root bearing layer through the water holding and lifting action of the lifting sand and the root bearing layer, and provisions whereby an approximately constant water level can be maintained in the said reservoir.

2. In a putting green or the like the combination with a porous root bearing layer of a water reservoir located below said layer, lifting sand interposed between said reservoir and said layer, the lifting sand and root bearing layer being so constructed that a substantial percentage of moisture, insufficient, however, to fill the void space therein, will be maintained in the root bearing layer through the water holding and lifting action of the lifting sand and the root bearing layer, means for supplying water to said reservoir and an overflow connection limiting the height of the water level in said reservoir.

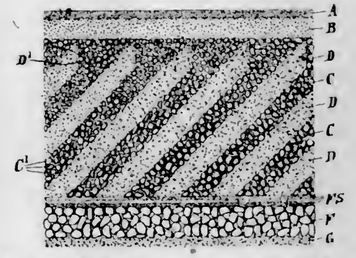
3. In a putting green or the like having a non-level surface the combination with a porous root bearing layer of a water reservoir located below said layer, and lifting sand interposed between said reservoir and said layer, and varying in composition with the variations of the surface level to adapt the lifting sand to supply the portions of said layer at different levels uniformly with moisture drawn from said reservoir by the lifting sand.

4. In a putting green or the like having a non-level surface the combination with a porous root bearing layer of a water reservoir located below said layer, and lifting sand interposed between said reservoir and said layer, and arranged in columnar portions of different granular characteristics to correspond with the surface portions of the green at different levels, to adapt the lifting sand to supply the portions of said layer at different levels uniformly with moisture drawn from said reservoir by the lifting sand.

5. In a putting green or the like having a non-level surface the combination with a porous root bearing layer of substantially uniform thickness, of a water reservoir located below said layer and lifting sand interposed between said reservoir and said layer and of such granular composition that water drawn from the reservoir by the wick-like action of the lifting sand will be maintained at every point in the upper surface of the lifting sand in amount not less than a predetermined percentage.

[Claims 6 to 14 not printed in the Gazette.]

1,171,559. BED FOR GROWING GRASS AND OTHER VEGETATION. FREDERICK W. TAYLOR, Philadelphia, Pa.; Edward W. Clark, 3d, executor of said Taylor, deceased. Filed Jan. 4, 1912. Serial No. 669,317. (Cl. 47—36.)



1. In a root growing bed the combination with bodies of material having a large water absorbing and holding capacity and containing root food, of material readily penetrable by growing roots which spaces said bodies apart and has a considerable air containing void space.

2. In a root growing bed the combination with bodies of material having a large water absorbing and holding capacity and containing root food, of intervening bodies spacing the first mentioned bodies apart and formed of material readily penetrable by growing roots, and having a considerable air containing void space.

3. In a root growing bed the combination with bodies of material having a large water absorbing and holding capacity and containing root food, of material readily penetrable by growing roots which spaces said bodies apart and has a considerable air containing void space, said bodies overlapping one another so as to intercept substantially all water tending to pass downward through the bed.

4. In a root growing bed the combination with a regularly disposed series of bodies of material having a large water absorbing and holding capacity and containing root food, of material readily penetratable by growing roots which spaces said bodies apart and has a considerable air containing void space.

5. In a root growing bed the combination with bodies of material having a large water absorbing and holding capacity and containing root food, of intervening bodies spacing the first mentioned bodies apart and formed of material readily penetrable by growing roots and having a considerable air containing void space, said bodies being inclined to the horizontal and overlapping one another.

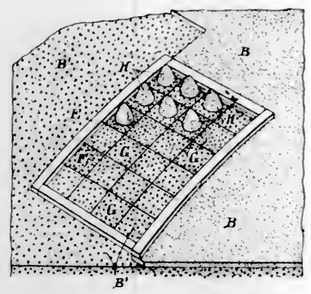
[Claims 6 to 15 not printed in the Gazette.]

1,171,560. GRASS-GROWING APPARATUS AND METHOD OF MAKING THE SAME. FREDERICK W. TAYLOR, deceased, Philadelphia, Pa., by Edward W. Clark, 3rd, executor, Philadelphia, Pa. Filed Sept. 9, 1915. Serial No. 49,653. (Cl. 47—36.)

1. In a root growing bed, a germinating layer consisting of a mixture of finely shredded peat moss with the seeds to be germinated.

2. In a root growing bed, a germinating layer consisting of a mixture of finely shredded peat moss with the

seeds to be germinated and with a small amount of plant food.



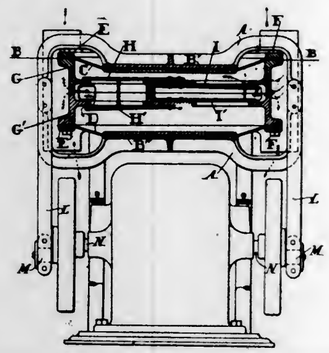
3. In a root growing bed, a top soil consisting of a germinating layer composed of a mixture of finely shredded peat moss with the seeds to be germinated, and a layer beneath the germinating layer composed of peat moss mixed with plant food.

4. In a plant growing bed the combination with a deep rooting subsoil of a blanket layer placed thereon and consisting in substantial part of shredded peat moss.

5. In a plant growing bed the combination with a deep rooting subsoil of a blanket layer placed thereon and consisting in substantial part of shredded peat moss and also containing plant food.

[Claims 6 to 11 not printed in the Gazette.]

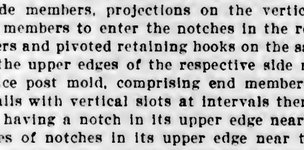
1,171,561. DOUBLE-ACTING DIAPHRAGM-PUMP. JOSEPH H. TEMPLIN, Philadelphia, Pa., assignor, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Mar. 17, 1909. Serial No. 484,046. (Cl. 230—5.)



1. A double acting pump including in combination a pump casing open at each side, a transverse partition dividing the pump casing centrally thereof, said partition having a chamber formed therein with openings leading from each side of the partition, valves for said openings, a flexible diaphragm attached to each outer end of the pump casing, each diaphragm being of slightly greater area than the area of the respective ends to which it is attached, a circular platen attached to each diaphragm centrally thereof, said platen being of less diameter than the inner end of the casing whereby each diaphragm and platen may be vibrated across a plane containing the connection of the diaphragm to the casing, a rigid yoke connecting said platen, a rotating shaft, eccentric members carried by said rotating shaft, links connected to said yoke at opposite ends thereof and coöperating directly with the respective eccentric members.

2. A double acting pump including in combination, a pump casing open at each side, a transverse partition dividing the pump casing centrally thereof, said partition having a chamber formed therein with openings leading from each side of the partition, valves for said openings, a flexible diaphragm attached to each outer end of the pump casing, each diaphragm being of slightly greater area than the area of the respective ends to which it is attached, a circular platen attached to each diaphragm centrally thereof, said platen being of less diameter than the inner end of the casing whereby each diaphragm and platen may be vibrated across a plane containing the connection of the diaphragm to the casing, a rigid yoke connecting said platen, a rotating shaft, eccentric members carried by said rotating shaft, links connected to said yoke at opposite ends thereof and coöperating directly with the respective eccentric members, each of said links having a rigid connection with the yoke and a rigid connection with the bearing block coöperating with the eccentric members.

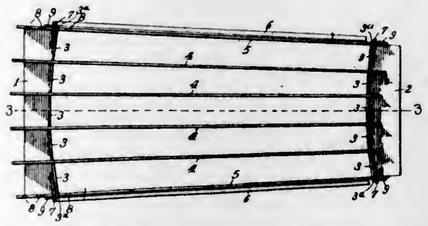
1,171,562. PULLEY. DANIEL T. TIMBERLAKE, St. Louis, Mo. Filed Jan. 2, 1915. Serial No. 213. (Cl. 254—190.)



1. In a pulley, a block provided near one end with an attaching hook, a bearing member projecting forwardly from said block below said hook, a grooved wheel journaled on the block, and there being an opening formed in said block between the point of the hook and said grooved wheel.

2. In a pulley, a block provided near one end with an attaching hook, bearing members on said block below and to the sides of said hook, a grooved wheel journaled on said block and there being an opening formed in said block to the side of said grooved wheel.

1,171,563. MOLD. JOSEPH S. TINDALL, Cedar Springs, Mich. Filed Apr. 11, 1914. Serial No. 831,314. (Cl. 25—121.)



1. A fence post mold, comprising end walls and side walls, means for detachably securing said walls to each other, said end walls also having vertical slots having ends extending beyond the end walls at intervals, and longitudinal partitions supported in said slots and adapted to be withdrawn longitudinally through the same.

2. A fence post mold, comprising end members having horizontal base portions and vertical walls, side members having notches in their upper edges, hooks on the bases of the end members to engage the lower edges of the respective side members, projections on the vertical walls of the end members to enter the notches in the respective side members and pivoted retaining hooks on the said walls to engage the upper edges of the respective side members.

3. A fence post mold, comprising end members having vertical walls with vertical slots at intervals therein, side walls each having a notch in its upper edge near one end and a series of notches in its upper edge near the other end, hooks on the end members to engage the lower edges

of the respective side walls, projections on the end members to enter the said notches in the side walls, pivoted retaining hooks on the end members to engage the upper edges of the respective side walls, and longitudinal partitions adapted to be supported in said vertical slots and to be withdrawn endwise therefrom.

1,171,564. THERMALLY-OPERATED MEANS FOR AUTOMATICALLY DISRUPTING ELECTRIC ALARM-CIRCUITS, &c. HUBERT S. TURNER, San Diego, Cal. Filed Sept. 18, 1914. Serial No. 862,337. (Cl. 200—33.)



1. Thermally operated means, comprising metallic members joined together by binding means having a lower fusing point than said members, in combination with metallic heat conducting antennæ extending into said binding means and adapted to conduct heat thereto from the surrounding medium.

2. Thermally operated means, comprising metallic members of low heat conductivity joined together by binding means having a lower fusing point than said members, in combination with metallic heat conducting antennæ of high heat conductivity extending into said binding means and adapted to conduct heat thereto from the surrounding medium.

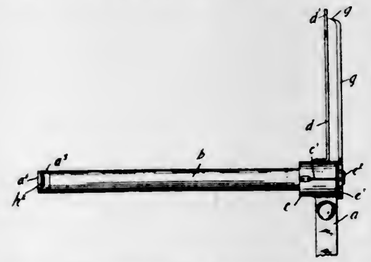
3. Thermally operated means, comprising metallic members of low heat conductivity joined together by binding means having a lower fusing point than said members, in combination with fanned out metallic antennæ of high heat conductivity extending into said binding means and adapted to conduct heat thereto from the surrounding medium.

4. A thermostatic conducting strand for electrical alarm circuits, comprising an electrically continuous strand formed of spring metal sections joined together at their ends by metallic binding means having a lower fusing point than said sections, projecting studs formed in sections of said strand to outwardly bow such sections when said strand is attached to supporting means, said sections outwardly bowed serving to break the electrical continuity of said strand when said binding means is softened.

5. A thermostatic conducting strand for electrical alarm circuits, comprising an electrically continuous strand formed of metal sections joined together at their ends by binding means having a lower fusing point than said sections, in combination with metallic heat conducting antennæ extending into said binding means and adapted to conduct heat thereto from the surrounding medium.

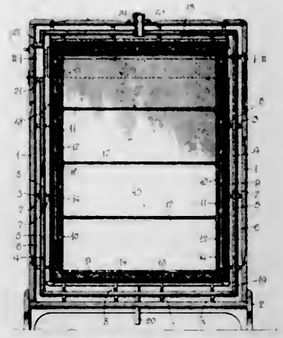
[Claims 6 to 10 not printed in the Gazette.]

1,171,565. TRUING-TOOL FOR LATHE WORK. CHARLES FREDOLIN URBAN, Milwaukee, Wis. Filed Mar. 20, 1914. Serial No. 826,123. (Cl. 33—172.)



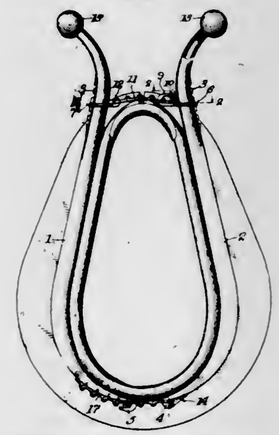
A truing tool comprising an adjustable tool holder, a truing tool adjustably mounted in the holder, said tool consisting of a fixed sleeve, an indicator dial mounted on said sleeve, a rod rotatable within said sleeve, and provided at one end with means for registering the degree of rotation on the indicator dial, yielding means for holding said registering means in zero position, a movable contact member carried by the dial and adapted to bear on the work to be trued, said contact member being made with a gear rack, a pinion on the end of the rotatable rod, said pinion in mesh with said rack, so that a movement of the contact member will transmit said movement, in multiplied form, to the rotatable rod.

1,171,566. REFRIGERATOR. HANS VON WOLFORSDORF, Detroit, Mich. Filed Dec. 26, 1914. Serial No. 879,155. (Cl. 45—134.)



In a refrigerator, a casing, a shell in said casing coöperating therewith in providing a dry air chamber, a porous structure in said shell coöperating therewith in providing a moist air chamber, a drain trough in said shell at the lower edges of said porous structure, said porous structure comprising inner earthen walls, outer fibrous walls, vertically disposed earthen conduits between said walls, a receptacle on said porous structure within said shell adapted to supply water to said conduits, branches forming part of said conduits adapted to conduct water to the walls of said porous structure and a porous material surrounding said conduits and the branches thereof.

1,171,567. HAMES. JAMES M. WALSH, Stockbridge, Wis., assignor to Walsh Harness Company, Stockbridge, Wis., a Corporation of Wisconsin. Filed Jan. 25, 1915. Serial No. 4,159. (Cl. 54—29.)



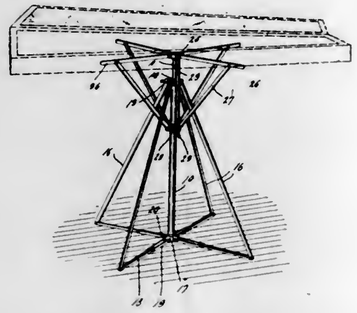
1. The combination with hames removably fitted to a collar and having a round cross section and longitudinal notched ribs on their outer sides adjacent to their upper ends, of rings fitting over and adapted to turn on the

round ribbed portions of the hames in engagement with notches in the ribs and having notches in their inner sides adapted to register with and pass over the ribs when the rings are turned into abnormal position, and a flexible connection between the inner sides of the rings adjacent to the notches therein.

2. The combination with hames having a round cross section and longitudinal notched ribs adjacent to their upper ends, of rings fitting over and adapted to turn on the round portions of the hames and having notches in one side corresponding with the ribs and adapted to pass over them when the rings are turned into abnormal position, one of the rings being provided with a hook, and a chain connected at one end with the other ring and adapted to be detachably engaged by any of a number of its links with said hook.

3. The combination with hames having a round cross section and longitudinal notched ribs adjacent to their upper ends, of rings fitting over the round portions of the hames and into notches in the ribs and having notches in one side adapted to pass over the ribs between the notches therein when the rings are turned on the hames into a certain abnormal position, one of said rings having a hook, a chain pivotally connected with the other ring and adapted to be engaged by any of a number of its links with said hook, and a dog pivotally connected with the hook and adapted to prevent accidental disengagement of the chain therefrom.

1,171,568. COLLAPSIBLE STAND. CHARLES B. WANAMAKER, Indianapolis, Ind., assignor to Leedy Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Oct. 14, 1912. Serial No. 725,701. (Cl. 45—117.)



1. In a folding stand, the combination of two longitudinally telescoping members, a plurality of arms pivotally connected to the inner of said members, a collar mounted on the outer of said members and movable longitudinally thereon, a plurality of links connecting said collar with said arms, and a rigid member releasably connecting said collar and the inner of said members in definite longitudinal relationship whereby when the collar is slid along the outer member the inner member slides with it.

2. In a folding stand, the combination of two longitudinally telescoping members, a plurality of arms pivotally connected to the inner of said members, a collar mounted on the outer of said members, a plurality of links connecting said collar with said arms, and a rigid member releasably connecting said collar and the inner of said members in definite longitudinal relationship.

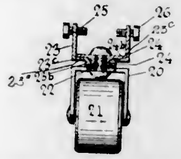
3. In a folding stand, a tubular member, an inner member telescoping with said tubular member, a folding base attached to said tubular member at two longitudinally spaced points thereon, a collar on said tubular member and located between said two longitudinally spaced points, and a folding top carried partly by said collar and partly on said inner member, said collar being longitudinally movable on said tubular member.

4. In a folding stand, a tubular member, a plurality of arms pivotally mounted on said tubular member at a fixed point longitudinally thereof, a second plurality of arms pivotally mounted on said tubular member at a different fixed point longitudinally thereof and shorter than the first plurality of arms, a plurality of links connecting the arms of said first plurality of arms with the arms of the second plurality of arms, an inner member telescopingly mounted in said tubular member, a plurality of arms hinged on said inner member, a collar slidably mounted on said tubular member between the points where the first and second pluralities of arms are mounted, and links connecting said collar with the arms pivotally mounted on said inner member.

5. In a folding stand, a tubular member, a plurality of arms pivotally mounted on said tubular member at a fixed point longitudinally thereof, a second plurality of arms pivotally mounted on said tubular member at a different fixed point longitudinally thereof and shorter than the first plurality of arms, a plurality of links connecting the arms of said first plurality of arms with the arms of the second plurality of arms, an inner member telescopingly mounted in said tubular member, a plurality of arms hinged on said inner member, a collar slidably mounted on said tubular member between the points where the first and second pluralities of arms are mounted, links connecting said collar with the arms pivotally mounted on said inner member, and a rigid connecting member for connecting said collar and said inner member so that they may be made to slide together relatively to said tubular member.

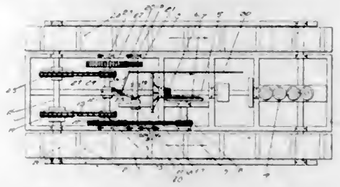
[Claims 6 to 9 not printed in the Gazette.]

1,171,569. CASTER. FRANK W. WANDA, Madison, Me. Filed Nov. 22, 1915. Serial No. 62,746. (Cl. 16—167.)



A caster, including a frame having a rotary member mounted therein, attaching means therefor comprising angular members, the horizontal portion of said angular members being in interfitted and interlocking connection, said interlocking connection including interfitting hubs, one of said horizontal portions being undercut and the other horizontal portion having a terminal received by said undercut, and an axial rivet received by one of said hubs.

1,171,570. STEERING MECHANISM FOR TRACTORS. WILLIAM H. WASHBURN, Portland, Oreg. Filed May 2, 1913. Serial No. 765,081. (Cl. 21—114.)



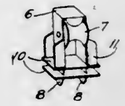
1. In a device of the character described, an engine shaft, a drive shaft mounted adjacent thereto, a sleeve upon one end thereof, a differential gear connecting the sleeve and shaft, a drive wheel fixed upon the sleeve and another upon said shaft, mechanism operatively connecting the engine shaft with the differential gear, a friction disk fixed upon the rear end of the engine shaft, a friction wheel adapted to bear thereon, mechanism fixed upon the drive shaft operatively connected with the friction wheel, and means for shifting the friction wheel to control the relative speed of the drive wheels.

2. In a device of the class referred to, in combination with two main drive or traction wheels, a two part axle therefor, a differential connecting the parts thereof, power furnishing mechanism, positive driving connections from said power furnishing mechanism to said differential for driving both parts of said axle together, an auxiliary driving connection from said power furnishing mechanism to one part of said axle, and means for varying the speed of said auxiliary drive, whereby the speed and direction of one part of said axle can be controlled independently of the other part of said axle and independently of the positive drive to said differential.

3. In a device of the class referred to, in combination with two main drive or traction wheels, a two part axle therefor, a differential connecting the parts thereof, power furnishing mechanism, positive driving connections from said power furnishing mechanism to said differential for driving both parts of said axle together, an auxiliary friction drive connection from said power furnishing mechanism to one part of said axle and means for varying the speed of said frictioin drive whereby to drive one part of said axle faster or slower through said friction drive independently of said positive drive to said differential, for steering purposes substantially as described.

4. In a device of the character described the combination of a drive shaft, a drive wheel mounted rigidly on one end of the drive shaft, a sleeve revolubly mounted on the other end of the drive shaft, a drive wheel rigidly mounted on the outer end of the sleeve, a differential gear connecting the inner end of the sleeve with the drive shaft, means for driving the differential gear at a fixed ratio with the engine speed and means for driving the drive shaft at variable speed ratios as compared with the engine speed.

1,171,571. ROPE-AWNING. CHARLES E. WEIBLEY, Harrisburg, Pa. Filed Feb. 3, 1914. Serial No. 816,288. (Cl. 156—15.)



1. In combination with an awning, a rope guide comprising a pulley, rigid support plates rigidly mounted on opposite sides of the awning material, and a metal housing for the pulley rigidly secured to said plates.

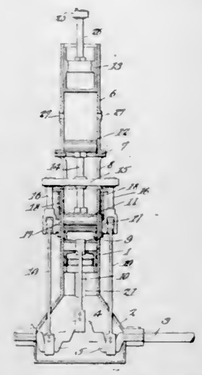
2. In combination with an awning composed of flexible material, a rope for raising the awning, a rope guide comprising a pulley, a housing in which the pulley is rotatively mounted and through which the rope passes, and means for rigidly mounting the housing in an upright position on the flexible material so that it stands at right angles to the portion of the material to which it is secured.

3. In combination with an awning composed of flexible material, a rope-guide support, comprising a rigid flat plate rigidly secured to the material so that one of its flat faces engages a portion of the material and lies flat against it, and a rope-guide comprising a rotatably mounted pulley rigidly secured to said flat plate.

4. In combination with a shade composed of flexible material, a rope-guide comprising a rotatable pulley, a housing in which said pulley is rotatably mounted, and rigid plates located on opposite sides of said material and rigidly secured thereto and to which said housing is rigidly secured.

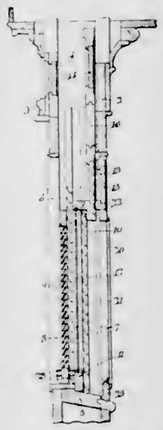
5. In combination with a shade, composed of flexible material, a rigid rope-guide support mounted on and reinforcing and stiffening the awning material at the point of connection of the rope-guide, and a rope-guide rigidly mounted on the material and rigidly secured to the rope-guide support so that it occupies an invariable position with relation to the portion of the material to which it is secured.

1,171,572. ENGINE. GEORGE W. WEIDNER, Cadillac, Mich. Filed June 14, 1915. Serial No. 24,110. (Cl. 121—41.)



An engine embodying a pair of alining cylinders, one having a crank case at that end remote from the other cylinder, a crank shaft journaled for rotation within the crank case and having a pair of cranks and an intermediate crank projecting in opposite directions, a pair of pistons working within each cylinder, a member disposed between and secured to the adjacent ends of the cylinders and having an opening, a piston rod connecting the adjacent pistons of the two cylinders, a yoke secured to said piston rod and working in said opening, connecting rods connecting said yoke and said pair of cranks, a connecting rod connecting the intermediate crank and that piston adjacent the crank case, the first mentioned cylinder having longitudinal slots adjacent the crank case and the last mentioned piston having outstanding arms working in said slots, longitudinal rods attached to said arms, the cylinders having guides for the last mentioned rods, a yoke secured to the last mentioned rods remote from the crank case, and a piston rod connecting the last mentioned yoke and that piston remote from the crank case.

1,171,573. SHIP-WINDOW. JOHN S. WHITE, Woodlynne, N. J. Filed Oct. 3, 1914. Serial No. 864,902. (Cl. 20—52.1.)



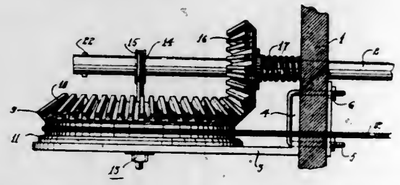
1. In a ship window, the combination of the window aperture formed in a wall having inner and outer partitions; a space between said partitions above the window aperture for stowage of the sashes, the window aperture being of greater height in the inner partition than the outer partition, a sash stowing away in said storage space

of a height only sufficient to close the aperture in the outer partition, whereby a clear space is provided between the top of the aperture in the inner partition, and the top of the sash, and a small pane inserted in the outer partition in position to permit light to pass through the above mentioned clear space.

2. In a ship window, the combination of a window aperture having inner and outer partitions, a space between said partitions above the window aperture for stowage of sashes, the window aperture being of greater height in the inner partition than the outer partition, a small pane inserted in the outer partition below the lower end of the inner partition, a storm sash stowing away in said stowage space also provided with a small pane which registers with the first mentioned small pane when the storm sash is in its raised position.

3. In a ship window, the combination of the window aperture formed in a wall having inner and outer partitions; a space between said partitions above the window aperture for stowage of the sashes, the window aperture being of greater height in the inner partition than the outer partition; a sash stowing away in said stowage space of a height only sufficient to close the aperture in the outer partition, whereby a clear space is provided between the top of the aperture in the inner partition and the top of the sash, a small pane inserted in the outer partition in position to permit light to pass through the above mentioned clear space, a storm sash stowing above the window and also provided with small panes, the lower of said panes corresponding in position to the first mentioned small pane when the storm sash is in the raised position.

1,171,574. CRANKING DEVICE. FRANK W. YARDE, Rock Falls, Ill. Filed July 28, 1914. Serial No. 853,689. (Cl. 74—53.)



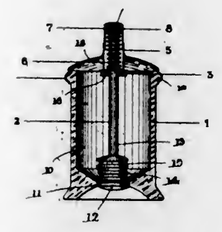
1. In a cranking device for internal combustion engines, a shaft movable axially, a gear upon said shaft, a spring engaging the gear, a second gear in mesh with said first gear, a shaft for said second gear, a coil spring secured to the shaft and to the second gear, said second gear being provided with a peripheral groove, an operating element secured to the second gear and operating within the groove to rotate the gear against tension of the coil spring, said coil spring having a greater resisting power than said first mentioned spring to provide for axial movement of the shaft previous to turning movement of said second gear, as and for the purpose set forth.

2. In a cranking device for internal combustion engines, an operating gear provided with a peripheral groove, a shaft upon which said gear is loosely mounted, a support for the gear having a slot formed therein through which said shaft extends, an operating element coiled about said gear and fitting said groove to rotate, when pulled, said gear, a means within said gear to resist such movement, and means engaging with said gear for cranking the engine in the manner stated.

3. In a cranking device for internal combustion engines, an operating shaft, a first gear upon said shaft, a spring engaging the first gear and embracing said shaft, the said spring normally maintaining the said operating shaft in an inoperative position, a second gear having a vertical axis and in mesh with said first gear, said second gear being further provided with a peripheral groove, a shaft for said second gear, a support for the gear and the shaft, said support having an elongated opening formed therein through which the vertical shaft extends, an operating element secured to the second gear and operating in the groove aforesaid, a coil spring secured to the shaft and to the second gear, the said coil spring having a greater resisting power than the spring first mentioned to provide for horizontal movement of the gears and the operating shaft in unison previous to a turning movement of the gears caused by the application of a pull upon said operating element.

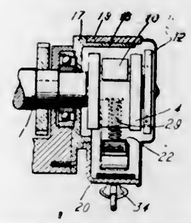
4. In a cranking device for internal combustion engines, a crank operating shaft movable axially into and out of engagement with the crank shaft of the engine, a first gear upon said crank operating shaft, means urging said gear and said crank operating shaft axially out of engagement with said crank shaft, a second gear in mesh with said first gear, a flexible element coiled about said second gear and operable to rotate it and the crank operating shaft to bodily move said shaft into engagement with the crank shaft, a means resisting movement of the element in the manner stated, and a means to limit bodily movement of said gear and said crank operating shaft, substantially as described.

1,171,575. SALT-SHAKER. LOUIS ZSIDAKOVITZ, Newark, N. J. Filed June 15, 1914. Serial No. 845,217. (Cl. 221—62.)



In a device of the character described, the combination with a receptacle apertured at its bottom, a plunger having a head adapted to be raised to close said aperture, a transverse guide bar at the upper end of said receptacle, a sleeve around said plunger above the guide bar free to move with respect to both said parts and having at its lower end an inwardly directed flange adapted to seat upon said guide bar, whereby the sleeve is free to tilt laterally with respect to said guide bar, a nut on the end of the plunger above said guide bar and sleeve, an upper sleeve depending from said nut into telescopic relation to the said lower sleeve, and a spring on said plunger within said sleeves engaging at its upper end the underside of said nut and at its lower end engaging the said inwardly directed flange of the lower sleeve, said spring thereby tending to hold the sleeve seated upon the guide bar axially of the plunger and the guide bar seated upon the top of the receptacle and the plunger raised.

1,171,576. INTERRUPTER. THEODORE ARTMEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 11, 1913. Serial No. 784,090. (Cl. 123—166.)



1. In an interrupter, the combination with a stationary contact member, of a lever having a substantially

semi-circular bearing member, integral therewith, a contact member controlled by said lever to coact with said stationary contact member, means for actuating said lever, and resilient means for normally retaining said lever in one position.

2. In an interrupter, the combination with a stationary contact member, of an oscillatable lever of substantially channel-shape in cross-section and having a substantially semi-circular bearing member integral therewith, a contact member controlled by said lever to coact with said stationary contact member, means for actuating said lever, and means for yieldingly maintaining said lever in one position.

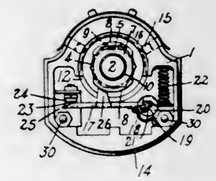
3. In an interrupter, the combination with a plurality of relatively movable contact members, of a lever having a lost-motion connection to one of said contact members, and resilient means for actuating one of said contact members in opposite directions.

4. In an interrupter, the combination with a plurality of relatively movable contact members, of a spring which carries one of said contact members, a lever of substantially channel shape in cross section and having a hook to form a lost motion connection to said spring, means for actuating said lever, and means for yieldingly holding said lever in one position.

5. In an interrupter, the combination with a plurality of relatively movable contact members, of a spring having a stationary support and which carries one of said contact members, a lever having a lost-motion connection to said spring, and a second spring for normally retaining said lever in one position.

[Claims 6 to 13 not printed in the Gazette.]

1,171,577. INTERRUPTER. THEODORE ARTMEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 10, 1914. Serial No. 861,076. (Cl. 123—166.)



1. In an interrupter, the combination with a rotatable member, an angularly adjustable member mounted thereon, and means for locking said adjustable member, of a cam actuated by said adjustable member, and a pair of relatively movable contact members controlled by said cam member.

2. In an interrupter, the combination with a rotatable member, an adjustable nut mounted thereon, and a locking nut, of a cam member having a lost-motion connection to said adjustable nut, and a pair of relatively movable contact members controlled by said cam member.

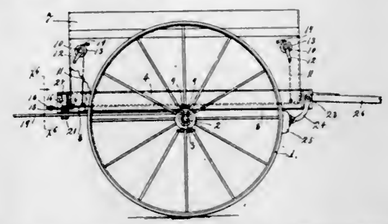
3. In an interrupter, the combination with a rotatable member, and an angularly adjustable member mounted thereon, of a pair of relatively movable contact members, and a cam member for controlling said contact members, said cam member being operatively connected to said adjustable member.

4. In an interrupter, the combination with a pair of relatively movable contact elements, a movable member for carrying one of said elements, and a cam member for controlling said movable member, of a rotatable shaft having a screw-threaded portion, a nut on said screw-threaded portion and coacting with one of said members, and means for retaining said nut in position.

5. In an interrupter, the combination with a pair of relatively movable contact elements, a movable member for carrying one of said contact members, and a cam member for controlling said movable member, of a rotatable shaft, and a member angularly adjustable relatively thereto and having a lost-motion connection to one of said members.

[Claims 6 to 10 not printed in the Gazette.]

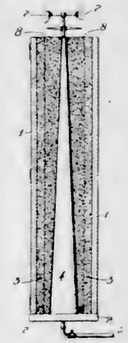
1,171,578. CONVERTIBLE DUMP-CART. JOHN F. ALBRECHT, Glencoe, Minn. Filed July 13, 1914. Serial No. 851,048. (Cl. 21—20.)



1. A cart comprising a rectangular frame, having inwardly projecting flanges located below its upper face, a bolster secured to the transverse center of said frame, wheels journaled on said bolster, dump doors secured to said frame, means for securing said dump doors closed, and a body having its lower edge portion telescoped within said frame and removably supported on the inwardly projecting flanges thereof.

2. A cart comprising a rectangular frame, having inwardly projecting flanges located below its upper face, a bolster secured to the transverse center of said frame, wheels journaled on said bolster, a tie bar at the longitudinal center of the frame, resting on said bolster and having flanges, located in the plane of the flanges of said frame, dump doors secured to said frame, and located below the flanges of said tie bar and frame, means for securing said dump doors closed against the flanges of said tie bar and frame, and a body having its lower edge portion telescoped within said frame and removably supported on the inwardly projecting flanges of said frame.

1,171,579. APPARATUS FOR MOLDING OR CASTING. GROSVENOR ATTERBURY, New York, N. Y. Filed Oct. 8 1909. Serial No. 521,664. (Cl. 25—128.)



1. In a mold for casting cementitious blocks, a base, a removable casing on said base, a removable partition within said casing spaced therefrom, a tapered core within said partition and spaced therefrom, and means on said core to contact with the blocks when they are removed.

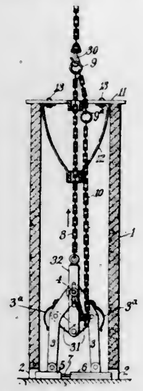
2. In a mold for casting cementitious blocks, a base, a removable casing on said base, a removable partition within said casing spaced therefrom, a tapered core within said partition and spaced therefrom, means on said core to contact with the blocks when they are removed, and means for applying heat to said core.

3. In a mold for casting cementitious blocks, a base, a removable casing on said base, a core within said casing and spaced therefrom, and a removable partition inter-

posed between said core and casing, whereby cementitious material may be introduced between said partition and said casing, and a granular substance may be introduced between said partition and said core, and whereby on removal of the partition the granular substance contacts with the cementitious block.

4. In a mold for casting cementitious blocks, a base, a removable casing on said base, a removable partition within said casing spaced therefrom, a tapered core within said partition and spaced therefrom, and a plurality of brushes on said core to contact with the blocks when they are removed.

1,171,580. LIFTING DEVICE FOR HOLLOW BLOCKS. GROSVENOR ATTERBURY, New York, N. Y. Filed Mar. 31, 1910. Serial No. 552,487. (Cl. 57—9.)



1. A lifting device adapted for use with a hollow block, having oppositely-disposed recesses near its lower end, comprising pivoted members, lowering means adapted to maintain the lifting device in a closed position, lifting means adapted to open said pivoted members and cause them to enter the recesses of said block, centering devices secured to said lifting means and a centering and finding device for said lifting means independent thereof and adapted to engage the upper end of the block substantially as described.

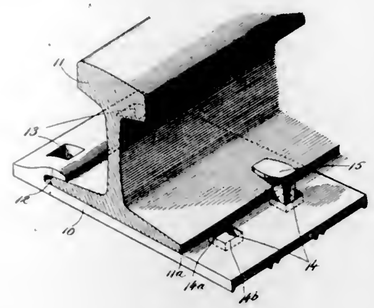
2. In combination with a lifting device adapted for use with a hollow block having oppositely-disposed recesses near its lower end, said lifting device being adapted to enter said recesses of said block, a finding device independent of the lifting device and adapted to engage the upper end of the block to thereby center the lifting device in the block and steady the block during the lifting operation.

3. In combination with a lifting device adapted for use with a hollow block having oppositely disposed recesses near its lower end, a centering and finding device independent of the lifting device and adapted to guide said lifting device while being lowered into said hollow block and to steady the block during the lifting operation.

4. In combination with a lifting device, adapted for use with a hollow block, having oppositely disposed recesses near its lower end, a centering and finding device independent of the lifting device and comprising a top plate and guides so arranged as to automatically center the said lifting device when it is lowered into the blocks so that the lifting device will register with the recesses and to automatically steady the block during the lifting operation.

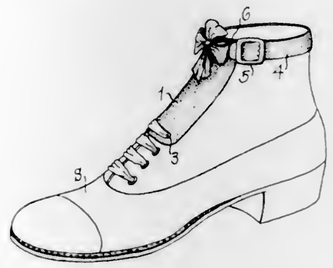
5. In combination with a lifting device adapted for use with a hollow block having oppositely-disposed recesses near its lower end, a centering and finding device independent of the lifting device and adapted to guide and control the same comprising a top plate and guides, the said guides being adjustable in radial recesses in said top plate, whereby said centering device may be used with blocks having openings of different sizes.

1,171,581. TIE-PLATE. EDMUND H. BARRETT, Butte, Mont. Filed May 27, 1914. Serial No. 841,233. (Cl. 238—2.)



In a device of the class described, a plate adapted to rest upon a tie and support a rail, said plate having an upwardly and inwardly directed jaw adapted to engage the upper surface of a rail base, said jaw being formed to leave a clearance between the lateral edge of said rail base and the junction of the lower surface of said jaw with the upper surface of said plate, said plate having a spiking aperture adapted to be overlapped by the edge of the rail base opposite said jaw when said rail base is in contact with said jaw, the uncovered portion of said aperture being of less width transversely of the rail than the usual spike adapted to be used therewith whereby the driving of said spike forces the rail base into wedging engagement between said jaw and the upper surface of said plate.

1,171,582. SHOE-LACE COVER. SALVATORE BERTONA, Bay Pond, N. Y. Filed Oct. 1, 1915. Serial No. 53,587. (Cl. 36—72.)



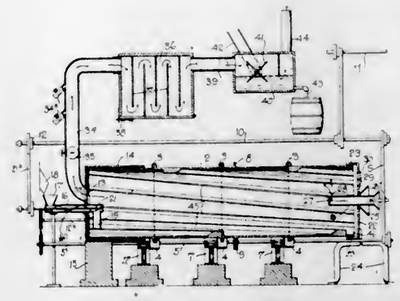
1. The combination with a shoe having a lacing opening in its upper and anchoring means on the upper adjacent the edges of said opening, of a shoe lace cover comprising a flexible body adapted to be positioned over said opening, the lower extremity of said body being provided with openings for the passage of a shoe lace, and means carried by the under face of said body for detachable engagement with the anchoring means on the upper.

2. The combination with a shoe having a lacing opening in its upper and lacing hooks on the upper adjacent the edges of said opening, of a shoe lace cover comprising a flexible body adapted to be positioned over said opening, the lower extremity of said body being provided with openings for the passage of a shoe lace, and means carried by the under face of said body for detachable engagement with said hooks.

3. The combination with a shoe having a lacing opening in its upper and lacing hooks on the upper adjacent the edges of said opening, of a shoe lace cover comprising

a flexible body adapted to be positioned over said opening, the lower extremity of said body being provided with openings for the passage of a shoe lace, and eye members carried by the under face of said body for detachable engagement with said hooks.

1,171,583. ORE-ROASTING APPARATUS. HARRISON T. BENSON, Denver, Colo., assignor of one-half to Winfield S. Barnes, Philadelphia, Pa. Filed Aug. 11, 1915. Serial No. 44,990. (Cl. 75—138.)



1. An ore roasting furnace including a roasting cylinder, shelves extending longitudinally on the inside face of the cylinder and inclined relative to the longitudinal axis thereof, the forward faces of the shelves being inclined centrally and rearward whereby the ore may roll from the shelves after the shelves have risen a relatively short distance above the ore bed.

2. An ore roasting furnace, including a roasting cylinder, means for rotating said cylinder, shelves extending longitudinally on the inside face of the cylinder and inclined relative to the longitudinal axis thereof, the forward faces of the shelves being inclined centrally and rearward whereby the ore may roll from the shelves after the shelves have risen a relatively short distance above the ore bed, a stationary hood inclosing one end of said cylinder and having an opening extending therethrough, and a feed pipe extending through said hood and mounted therein and projecting into the cylinder and having a downwardly directed terminal portion discharging ore at a point adjacent the bottom of the cylinder.

3. An ore roasting furnace including a roasting cylinder, a rotatable cylinder, shelves mounted upon the inner face of the cylinder and extending longitudinally thereof and inclined relative to the longitudinal axis, the forward faces of the blades being inclined centrally and rearward relative to the direction of motion of the cylinder, and a feed pipe entering one end of the cylinder and having a downwardly directed terminal portion discharging ore at a point adjacent the bottom of the cylinder.

4. An ore roasting furnace, including a cylinder, means for supporting same, a cap closing one end of said cylinder, and a blast pipe entering said cylinder through said cap and provided at its inner end with a baffle plate, as specified, and at said plate and on the upper face of the pipe with a laterally extending slot.

5. An ore roasting furnace, comprising a rotatable cylinder, means for rotating same, shelves extending on the inside faces of the cylinder and inclined relative to the longitudinal axis thereof, the forward faces of the shelves being inclined centrally and rearward whereby the ore will roll from the shelves after the latter have risen a relatively short distance above the ore bed, a hood inclosing the receiving end of said cylinder, a feed pipe supported in said hood and extending therefrom into the cylinder, and having a downwardly directed terminal portion discharging ore at a point close to the bottom of the cylinder, the cylinder having an opening through which said pipe passes, and a flue connected at one end to said hood in registry with a portion of said opening in the cylinder, as and for the purpose set forth.

1,171,584. WINDMILL OR MOTOR. FREDERICK E. BLAKELY, Douglas, Ariz. Filed May 1, 1915. Serial No. 25,145. (Cl. 170—22.)

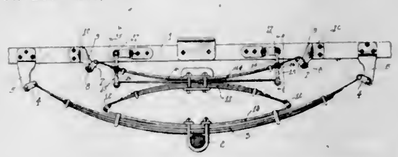


1. A wind mill or motor, consisting of a vertical revoluble shaft, a support for the shaft, upper and lower sets of radial arms mounted thereon, vertical cables or their equivalents connecting said sets of arms, sail members slidably mounted on said cables, a governor coöperating with the revoluble members of the motor and operatively connected therewith, and connecting lines between the slidably mounted sail members and the said governor.

2. A wind mill or motor, consisting of a hollow vertical revoluble shaft, a support therefor, upper and lower sets of radial arms secured to the said shaft, vertical cables or their equivalents connecting said sets of arms, sail members slidably mounted on said cables; a centrifugal governor coöperating with the revoluble members of the motor; a shaft on which the governor revolves; a swivel and a swivel-line secured thereto and to the said shaft upon which the governor revolves, the said line extending upward within the said hollow vertical shaft, and ring-lines connecting said swivel and sail members.

3. A wind mill or motor, consisting of a revoluble shaft and a sail-carrying means and support therefor; a speed controlling governor device for the aforementioned elements comprising a revolubly mounted vertical shaft, a pulley revolubly mounted thereon, a slidable collar carried thereby, a collar integral with said pulley, arms and fly-balls connecting said collars, a line having its ends attached to one of said arms and collar; a pulley on the revoluble shaft, and a connecting power-belt between said pulley and the governor pulley.

1,171,585. VEHICLE-SPRING. ETHELBERT J. BREWSTER, Fresno, Cal. Filed Dec. 5, 1914. Serial No. 875,631. (Cl. 267—27.)



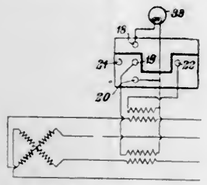
1. A vehicle spring of the character described comprising the combination with a vehicle having a frame and

axle, of a spring structure interposed between said frame and axle, such structure comprising units, the first unit consisting of a series of springs clamped to the axle and flexibly connected with the frame, the second unit comprising two series of springs clamped together in inverted position with respect to each other, one series of the said second unit being flexibly connected with the first unit and the other series of the second named unit being flexibly connected with the vehicle and a rebound spring interposed between the inverted springs and flexibly connected with the vehicle, as described.

2. A vehicle spring of the character described comprising the combination with a vehicle having a frame and axle, of a spring structure interposed between said frame and such axle, such spring structure being divided into units, the first unit comprising a series of springs clamped to said axle and flexibly connected with said frame, the second unit comprising a series of springs flexibly connected with said first named springs and flexibly connected with said frame, and a third unit comprising a spring clamped between said second named springs and being linked to said frame, as described.

3. A vehicle spring of the character described comprising the combination with a vehicle having a frame and axle, of a spring structure interposed between the frame and axle, such spring structure being divided into units, the first unit comprising a series of springs clamped to the axle and flexibly connected with the frame, the second unit comprising a series of springs connected with the first-named springs and flexibly connected with the frame, the third unit comprising a rebound spring clamped between said second named springs, and a pair of links connected at each end of said rebound spring and to said vehicle, the members of each pair of links being pivotally connected together, as described.

1,171,586. METER-SWITCH. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 28, 1911. Serial No. 635,907. (Cl. 175—183.)



1. A switch comprising adjacent conducting segments, terminal members respectively engaging the said segments, and three side-by-side terminal members that may engage either of two of the segments but only two of which may simultaneously engage one of them.

2. A switch comprising adjacent conducting segments, means for making connections respectively to the said segments, and three unequally spaced terminal members that may engage either of two of said segments but only two of which may simultaneously engage one of them.

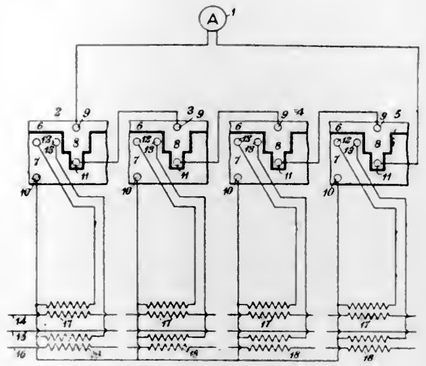
3. A switch comprising adjacent conducting segments, terminal members respectively engaging the said segments, and other unequally spaced terminal members that may engage either of two segments and only two of which may simultaneously engage one of them but certain others of which may not simultaneously engage it.

4. A switch comprising two adjacent conducting segments, terminal members respectively engaging the said segments, and three unequally spaced terminal members that may engage either of the two segments, all of the last mentioned terminal members normally engaging one of said two segments.

5. A switch comprising adjacent conducting segments, terminal members respectively engaging the said segments and other unequally spaced terminal members that may engage either of two segments, all of the last mentioned terminal members normally engaging one of said two segments but only two of them simultaneously engaging the other segment.

[Claims 6 to 19 not printed in the Gazette.]

1,171,587. SWITCH FOR METERS. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 28, 1911. Serial No. 635,908. (Cl 175—183.)



1. A switch comprising two conducting segments only having stepped adjacent edges, means for making connections respectively with the said segments, and terminal members that may engage either of said segments and certain of which normally engage one of the segments while another normally engages the other segment but may not engage it simultaneously with the aforesaid members.

2. The combination with an instrument, and a plurality of circuits, of a plurality of switches each of which comprises conducting segments, a terminal member continuously engaging one of said segments, that of one switch being connected to the instrument, another terminal member that may engage either of the segments, that of one switch being connected to the instrument while those of the other switches are severally connected to the aforesaid terminals of the remaining switches, another terminal member that continuously engages the other segment, and still other terminal members that may engage either segment, the said members being associated by connection with the said circuits.

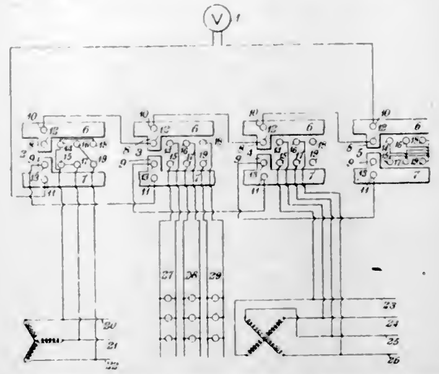
3. A switch comprising conducting segments having stepped adjacent edges, means for making connections respectively with the said segments, a terminal member normally engaging the narrowest portion of the stepped extension of one of the segments and interposed in the path of movement thereof, other terminal members interposed in the path of movement of a wider portion of the said stepped extension but normally engaging the other segment.

4. The combination with an ammeter, and a plurality of polyphase circuits, of a plurality of switches each of which comprises two conducting segments having stepped adjacent edges and terminal members, some of which continuously engage the respective segments and others of which may engage either of them, and connections between the switches whereby the meter may not be simultaneously associated with phases of different circuits.

5. The combination with an instrument, and a plurality of circuits, of a plurality of switches each of which comprises conducting segments and terminal members, some of which continuously engage the respective segments and others of which may engage either of them, and connections between the terminal members normally engaging corresponding segments of different switches.

[Claims 6 to 8 not printed in the Gazette.]

1,171,588. METERING-SWITCH. HAROLD W. BROWN, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 28, 1911. Serial No. 635,909. (Cl. 175—183.)



1. A switch comprising two conducting segments having lateral extensions, means for making circuit connections respectively thereto, and a plurality of pairs of adjacent terminal devices, the members of each pair being respectively and simultaneously engaged by the segments while those of adjacent pairs may be engaged thereby in succession only.

2. A switch comprising two conducting segments having lateral extensions, terminal members respectively continuously engaging the same, and a plurality of pairs of terminal members that may be engaged only in succession by the conducting segments.

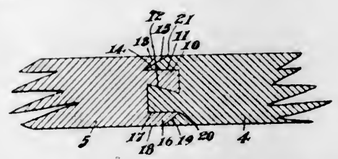
3. A switch comprising two conducting segments having lateral extensions, means for making circuit connections respectively thereto, and a plurality of pairs of adjacent terminal members that may be engaged only in succession by the conducting segments.

4. A switch comprising conducting segments each having a lateral extension, terminal members respectively continuously engaging the said segments, and two sets of terminal members that may be engaged respectively by the lateral segment extensions, the members of each set being engaged thereby in succession.

5. A switch comprising movable conducting segments each having a lateral extension, means for making circuit connections respectively to the segments, and two sets of terminal members that are respectively interposed in the paths of movement of the lateral segment extensions, the members of each set being engaged thereby in succession.

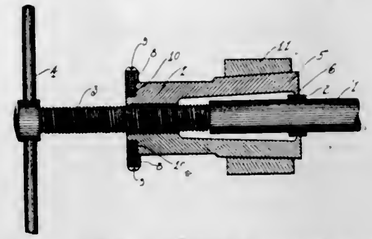
[Claims 6 to 8 not printed in the Gazette.]

1,171,589. JOINT. JAMES A. BROWNFIELD, Covington, Ky. Filed May 3, 1915. Serial No. 25,369. (Cl. 20—92.)



A joint construction for securing adjacent members together, comprising an undercut tongue, a pointed tongue located adjacent to the undercut tongue, having an inclined edge and a straight edge forming an extension of one face of the member, and a second pointed tongue spaced from the undercut tongue, having an inclined edge parallel to the inclined edge of the first mentioned pointed tongue and forming an extension of the opposite face of the member, the space between the undercut tongue and the second mentioned pointed tongue being adapted to receive the undercut tongue of the coöperating member, and the inclined edges of the first and second mentioned pointed tongues being adapted to coöperate respectively with the inclined edges of the second and first mentioned tongues of the coöperating member.

1,171,590. BEARING-PULLER. ERNEST P. CAMPBELL, Stockton, Cal., assignor of one-half to Joseph E. Goodman, Stockton, Cal. Filed June 17, 1915. Serial No. 34,679. (Cl. 29—85.)



1. A bearing puller comprising a plurality of finger members having radial movement with respect to each other, means carried by the finger members for clamping them against the bearing and a pin threaded through the finger members and arranged to be advanced against the end of the shaft to move same through the bearing as described.

2. A device of the character described comprising a threaded pin having a handle, a plurality of finger members each having a shank threaded on said pin, a collar surrounding said finger members and secured thereto by screws projecting through said collar member and into orifices in said finger members, said orifices being of greater diameter than said screws, and means moving over said finger members and adapted to hold them in fixed position with respect to each other, as described.

3. A device of the character described comprising a threaded member having a handle, a plurality of finger members screw mounted on said threaded member, such finger members being slightly tapered, a collar slidably mounted on said finger members, means binding said finger members together and arranged to allow said finger members radial movement with respect to each other, as described.

1,171,591. COIL FOR ELECTRICAL APPARATUS. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 16, 1912. Serial No. 678,107. (Cl. 173—324.)



1. A terminal structure comprising a conductor to which solder readily adheres, and a flexible lead soldered to one end of the conductor, the other end of said conductor being welded to a conductor to which solder can not readily be made to adhere.

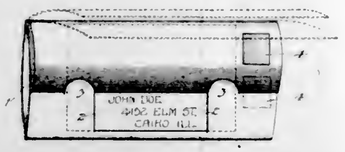
2. The combination with a conducting wire which cannot readily be soldered, of a terminal structure comprising a short section of unlike conducting material welded to the end of said wire, and a flexible conducting lead soldered to said short section.

3. A terminal structure comprising a conductor to which solder does not readily adhere, a short section of conducting material to which solder readily adheres, the said short section being welded to the said conductor, and a terminal member soldered to the short section.

4. The combination with an aluminum wire, of a terminal structure comprising a section of solderable conducting material welded to one end of said wire and a terminal member soldered to the said section.

5. The combination with an aluminum wire, of a terminal structure comprising a copper conductor having one end welded to one end of said wire and a flexible terminal member soldered to the other end of the copper conductor.

1,171,592. MAILING-FOLDER. ALBERT MERRILL COIT, Chicago, Ill. Filed Jan. 12, 1914. Serial No. 811,520. (Cl. 120—74.)



1. A mailing folder having a plurality of folded sections and a card between two of said sections, one of said last named sections being slitted to receive said card and to receive also, to a less extent, the other of said sections whereby said card projects beyond said other section with the address thereon exposed to view, said folder being secured in folded position by the locking of said other section within said slits.

2. In combination, a mailing folder comprising a folded sheet having one section provided with substantially parallel slits which diverge at one end and double-back on themselves about to the line where they began to diverge, to provide locking tabs, and a return card received within said parallel slits and confined against lateral movement, said locking tabs engaging another section and holding the folder shut.

3. A mailing folder comprising in combination, a folded sheet having a plurality of sections, an outer section being shorter than an adjacent inner section, a card arranged between said two latter sections and extending beyond the free edge of the shorter one, tongues formed by slitting the longer section to engage said shorter section near said free edge thereof to lock said sections in their folded positions, the slits forming said tongues being adapted to receive two of the corners of said card and position it laterally, relatively to said folder, and vertically in one direction with a portion thereof exposed to view, said card being positioned vertically in the opposite direction by one of the creases made by folding said sheet.

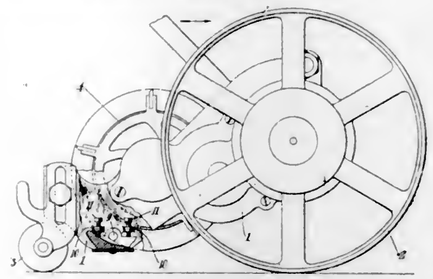
4. A mailing folder comprising a folded sheet having substantially parallel slits, a four sided card held within said slits with a pair of opposite margins covered and a middle area exposed to view, and other of said margins being covered by one of the folded over portions, whereby less than one entire edge of said card is exposed, and locking tabs formed by extensions of said slits for holding said folder closed.

5. The combination with a return card having the mailing address at the top thereof, of a folder therefor comprising a folded sheet between the two outermost folds whereof the card is arranged, one of said folds having hook shaped slits which hold said card and which also lock the outer fold, the edge of the latter and the parallel portions of said slits forming a window at the top of the folder through which the address is visible.

1,171,593. STATIONARY KNIFE-BAR FOR LAWN-MOWERS. HARRY T. COLDWELL, Newburgh, N. Y. Filed Feb. 18, 1915. Serial No. 8,976. (Cl. 56—19.)

1. A reversible stationary knife for lawn mowers provided with plane portions on its upper and lower faces, and having a vertically disposed longitudinal edge connecting said faces, said longitudinal edge being provided with a recess extending longitudinally thereof, portions of the surface of said recess directly intersecting both upper and lower plane faces of the knife, to form acute angular cutting edges.

2. A reversible stationary knife for lawn mowers having plane portions on its upper and lower faces adjacent to each of its longitudinal edges, each of said longitudinal edges being provided with a recess extending longitudinally thereof, portions of the surface of each recess directly intersecting both the upper and lower plane faces of the knife and extending inwardly therefrom whereby four acute angular cutting edges are provided.

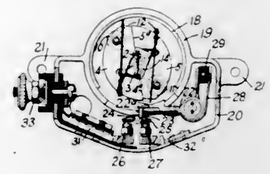


3. In a lawn mower the combination with a rotary cutter, of a stationary knife bar, having its entire knife engaging surface in a single plane tangential to the circular path of the cutting edges of the rotary cutter, means for securing said bar rigidly in position with respect to the rotary cutter, a reversible stationary knife consisting of a flat blade of uniform thickness throughout its length and width and of uniform cross section throughout its length and having its upper face engaging the plane knife engaging surface of the knife bar, the longitudinal edges of said knife being provided each with two cutting edges, adapted to be brought into operative relation with the rotary cutter, and means for securing said flat blade detachably to the said knife bar.

4. In a lawn mower the combination with a rotary cutter, of a stationary knife bar, having its entire knife engaging surface in a single plane tangential to the circular path of the cutting edges of the rotary cutter, means for securing said bar rigidly in position with respect to the rotary cutter, a reversible stationary knife consisting of a flat blade of uniform thickness throughout its length and width and having its upper face engaging the plane knife engaging surface of the knife bar, said blade comprising a body portion having its longitudinal edges reduced in thickness, and provided with edge portions of high grade steel applied to and embracing said reduced portions, and having their upper and lower faces flush with the faces of the central part of said body portion, each of the longitudinal edges of said blade being ground to form a cutting edge at both of its intersections with the plane faces of the blade, and means for securing said flat blade detachably to the said knife bar.

5. In a lawn mower the combination with a rotary cutter, of a stationary knife bar, having its entire knife engaging surface in a single plane tangential to the circular path of the cutting edges of the rotary cutter, means for securing said bar rigidly in position with respect to the rotary cutter, a reversible stationary knife consisting of a flat blade of uniform thickness throughout its length and width and having its upper face engaging the plane knife engaging surface of the knife bar, said blade comprising a body portion having its longitudinal edges reduced in thickness, and provided with edge portions of high grade steel applied to and embracing said reduced portions, and having their upper and lower faces flush with the faces of the central part of said body portion, each of the longitudinal edges of said blade being recessed and having portions extending inwardly directly from the intersection of said edge with the upper and lower plane faces of the blade, and means for detachably securing said blade against the bottom face of the knife bar, constructed to permit the blade to be inverted and turned end for end, whereby said blade will in each of its four operative positions, present an acute angular cutting edge in opposition to the cutting edges of the rotary cutter.

1,171,594. SPARK-ADVANCER. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 16, 1911. Serial No. 660,652. (Cl. 123—117.)



1. A spark advancer comprising a pair of contact members, a rotatable member, means for controlling the engagement and disengagement of said contact members at points varying in angular relation with respect to said rotatable member according to the speed of said rotatable member, and means comprising a concave surface connected to one of the contact members for making the period of engagement of said contact members substantially uniform at varying speeds.

2. A spark advancer comprising a revoluble member that is adjustable both radially and circumferentially with respect to its axis and path of revolution, and a switch member actuated thereby and having a concave face that is eccentric with respect to the axis of revolution of the revoluble member and is interposed in the path of movement thereof, whereby the extent of the said face that is engaged by said revoluble member varies in accordance with the speed of said revoluble member.

3. A spark advancer comprising a revoluble member that is adjustable both radially and circumferentially with respect to its axis and path of revolution in accordance with its speed of revolution, a switch member that is interposed in the path of movement of, and is actuated by, the said member, and a contact member having a resilient lost-motion connection with the switch member.

4. A spark advancer comprising a revoluble membe that is adjustable both radially and circumferentially with respect to its axis and path of revolution, a switch member actuated thereby and having a face that is eccentric with respect to the axis of revolution of the revoluble member and is interposed in the path of movement thereof, and a contact member having a resilient lost-motion connection with the switch member.

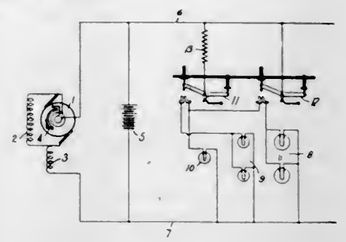
5. A spark advancer comprising a rotatable member, a switch member, means on said rotatable member for actuating said switch member at points varying in angular relation with respect to said rotatable member according to the speed of said rotatable member, and means for making the periods of actuation of said switch member substantially constant at varying speeds, said means comprising a concave surface on said switch member.

[Claims 6 to 15 not printed in the Gazette.]

1,171,595. VEHICLE-LIGHTING SYSTEM. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 10, 1912. Serial No. 670,522. (Cl. 171—97.)

1. The combination with a source of current, of a distributing circuit supplied from said source, translating devices of different capacities, means for connecting the one or the other of the said devices to the distributing circuit, a resistor that is connected in series with the device of low capacity when the same is connected to the distributing circuit, and means for shunting said resistor when all of said devices are connected to said circuit.

2. The combination with a source of current, of a distributing circuit supplied from the source, translating devices of different capacities, means for connecting the one or the other of the said devices to the distributing circuit, and a resistor that is connected in series with the device of low capacity when the same is connected to the distributing circuit.



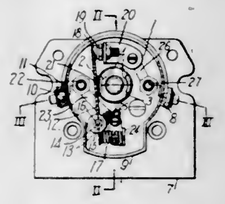
3. A lighting system for a vehicle comprising a source of current, a distributing circuit supplied from said source, head, side and tail lights for the vehicle, means for connecting the head and tail light to the distributing circuit, means for connecting the side and tail lights to the distributing circuit, and a resistor in series with the latter means.

4. The combination with a source of electromotive force, of a distributing circuit supplied from said source of electromotive force, translating devices of different capacities, a resistor, and means for connecting said resistor in series with the device of low capacity when the same is connected to the distributing circuit, and means for shunting said resistor when the device of high capacity is connected in circuit with the device of low capacity.

5. In a vehicle lighting system, the combination with a source of electromotive force, of a distributing circuit supplied by said source of electromotive force, head, side and tail lights for said vehicle, means for connecting the head and tail lights to the distributing circuit, means for connecting the side and tail lights to the distributing circuit, a resistor in series with the latter means, and means for shunting said resistor.

[Claims 6 and 7 not printed in the Gazette.]

1,171,596. INTERRUPTER. FRANK CONRAD, Pittsburgh, and THEODORE ARTMEYER, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 11, 1914. Serial No. 837,721. (Cl. 123—166.)



1. In an interrupter, the combination with a pair of relatively movable contact pieces, of means comprising a member having a cam surface for actuating one of said contact pieces, an axially extending pin connected to said member and a rotatable member having a plurality of shoulder portions coacting with said pin to form a lost-motion connection to the cam member.

2. In an interrupter, the combination with a rotatable shaft having shoulder portions, and a cam mounted thereon and having a pin for engaging said shoulder portions to form a lost-motion connection thereto, of a pair of relatively movable contact members, and a lever carrying one of said contact members and coacting with said cam.

3. In an interrupter, the combination with a rotatable member having shoulder portions and a cam mounted

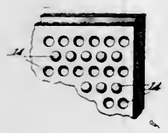
thereon and having a projection for coacting with said shoulder portions to form a lost-motion connection thereto, of an adjustable member, a pair of relatively movable contact members mounted on said adjustable member, a lever carrying one of said contact members and coacting with said cam.

4. In an interrupter, the combination with a rotatable member having shoulder portions, and a cam mounted thereon and having a pin for engaging said shoulder portions to form a lost-motion connection thereto, said cam being provided with a pair of oppositely disposed recessed portions, of a pair of relatively movable contact members, and means actuated by said cam for separating said contact members.

5. In an interrupter, the combination with a rotatable member, and a cam mounted thereon, of a lever coacting with said cam, and a pivotal support for said lever comprising a pin and an insulating bushing on said pin.

[Claims 6 to 9 not printed in the Gazette.]

1,171,597. STORAGE-BATTERY SEPARATOR. JASPER N. DAVIS, Denver, Colo. Filed Sept. 21, 1914. Serial No. 862,700. (Cl. 204—29.)



1. In storage battery separator construction, an envelop of suitable material, open at one end, the sides of which are formed with interior and exterior vertical corrugations, and a cap for said envelop having corrugated side flaps, portions of which are omitted at the center, and a depressed perforated portion adapted to extend into the end of the envelop, said depressed portion having an opening at one end.

2. In storage battery separator construction, an envelop open at one end, comprising a member of suitable non-conducting perforated materials and a member of suitable absorbent material pressed together and formed with inner and outer vertical corrugations, and a cap therefor having depending corrugated side flanges, portions of which are omitted at the center, and a depressed perforated portion having an aperture at one end thereof, said depressed portion being adapted to fit within the end of the envelop.

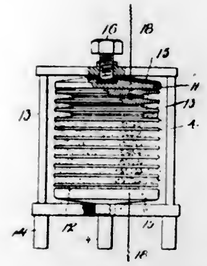
3. In storage battery separator construction, an envelop open at one end and comprising an outer layer of non-conducting non-absorbent perforated material, and an inner layer of absorbent acid-proof material, the sides of said envelop being formed with inner and outer vertical corrugations, and a cap of suitable material for said envelop, having depending side flanges, the central portions of which are omitted, said cap having a depressed perforated portion adapted to extend into the end of the envelop, and an opening at one end.

4. In storage battery separator construction, an envelop open at one end and comprising an outer layer of perforated hard rubber and an inner layer of asbestos, said layers being pressed to form inner and outer vertical corrugations, and a cap of suitable material for said envelop, having corrugated side flanges, portions of which are omitted midway of their length, and a depressed perforated portion adapted to extend into the end of the envelop, said cap having an aperture at one end.

5. In storage battery separator construction, an envelop open at one end and comprising an outer layer of non-conducting, non-porous perforated material, and an inner layer of acid-proof porous material, said layers being pressed together to form inner and outer longitudinal corrugations, and a cap for said envelop, having corrugated side members, and a depressed perforated portion which fits in the envelop, the cap having an opening at one end.

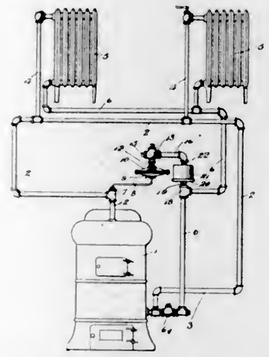
[Claim 6 not printed in the Gazette.]

1,171,598. SPARK-GAP FOR RADIOTONE WIRELESS-TELEGRAPH SYSTEMS. LEE DE FOREST, New York, N. Y., assignor, by mesne assignments, to Radio Telephone & Telegraph Company, a Corporation of Delaware. Filed Mar. 10, 1910. Serial No. 548,485. (Cl. 250—38.)



In an apparatus for producing powerful electrical oscillations, a plurality of metal disks forming electrodes, and superposed upon each other, and soft compressible varnish fabric interposed between adjacent disks to form an air tight space therebetween.

1,171,599. TRIPLICATE VACUUM AND AIR TRAP. RUEL E. DEWEY, Grand Rapids, Mich. Filed Mar. 12, 1915. Serial No. 14,035. (Cl. 237—68.)



1. In a device of the character described, a valve casing, a valve located therein, an outlet to the casing, a rod connected to the valve extending downwardly therefrom, a flexible diaphragm secured to the lower end of the rod, a support for the diaphragm connected with and positioned below the valve casing, a member in said support forming with the diaphragm a tight inclosure, an inlet pipe to the inclosure, a pipe leading into the valve casing, a float chamber joined with the inlet pipe, a float containing a dilating fluid, a valve on the float, and a valve seat a short distance above the valve formed at the entrance of the passageway from the chamber to the float, substantially as described.

2. In a device of the character described, a valve casing, inlet and outlet pipes connected thereto, a valve in the casing, a member connected to the casing containing a tight inclosure having a flexible side, an inlet pipe leading into the inclosure, a rod connecting the valve and flexible side, a float chamber connected with the inlet pipe to the valve casing with an outlet passage from the interior of the chamber to the pipe, an inlet to the float chamber, a hollow float filled with a dilating fluid in the chamber, and a valve carried by the float adjacent the entrance of the outlet passage, substantially as described.

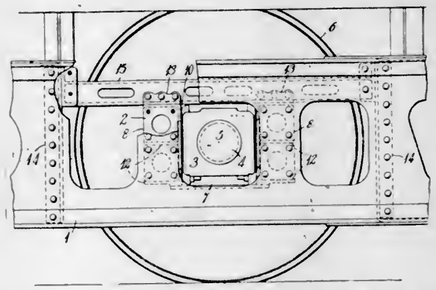
3. In a device of the character described, a valve casing, inlet and outlet pipes connected thereto, a valve in the casing, an inclosure having a flexible side, a pipe leading into the inclosure, connections between the valve and the flexible side of the inclosure whereby the valve moves with said side, a chamber connected with the inlet pipe with a passage from the chamber to the valve casing normally open, and a thermostatic device within the chamber having means to close the passage upon rise of the temperature in the chamber above a predetermined degree.

4. In a device of the character described, a valve casing, an inlet pipe connected thereto, a valve in the casing, an inclosure having a flexible side secured to the casing, a pipe leading into the inclosure, a rod connecting the valve and flexible side of the inclosure, a float chamber connected with the inlet pipe with a passage from the chamber to the valve casing normally open, and a combined float and thermostatic regulator having means to close the passage either by elevation of the float on entrance of water into the float chamber or by expansion of the float on entrance of vapor having a temperature above a predetermined degree.

5. In a vapor heating system a supply main to conduct heat carrying vapor to radiators in the system, a return main to conduct the condensation, vapor and air from the radiators, a device including a float chamber connected to the return main, a valve casing containing a valve, connections between the valve casing and float chamber providing a passageway from the return main through the float chamber to the valve casing, and means in the float chamber permitting the free passage of air through the float chamber but acting to close the passage therefrom on attempted passage of water or heat carrying vapor, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,171,600. ELECTRIC LOCOMOTIVE. GEORGE M. EATON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 28, 1913. Serial No. 776,210. (Cl. 105—259.)



1. In a vehicle, the combination with a side frame and auxiliary pedestals secured to said frame, and having longitudinal upwardly projecting members near the free ends thereof, of bracing means secured to said upwardly projecting members of said pedestals.

2. In a vehicle, the combination with a side frame and auxiliary pedestals secured to said frame and projecting transversely therefrom, of a bracing member secured to said frame and engaging the free ends of said pedestals.

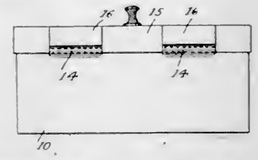
3. In a vehicle, the combination with a side frame and auxiliary pedestals secured to said frame and projecting transversely therefrom, of a longitudinal member attached to said frame on each side of said pedestals and rigidly associated with free ends thereof.

4. In a vehicle, the combination with a side frame and auxiliary pedestals secured to said frame and projecting transversely therefrom, of a longitudinal bracing member associated with said frame and engaging the upper surfaces of the free ends of said pedestals and fastened thereto.

5. In a vehicle, the combination with a side frame and transversely projecting pedestals independently attached thereto, of means secured directly to said side frame and engaging said pedestals for rigidly bracing said pedestals against lateral strains.

[Claims 6 to 10 not printed in the Gazette.]

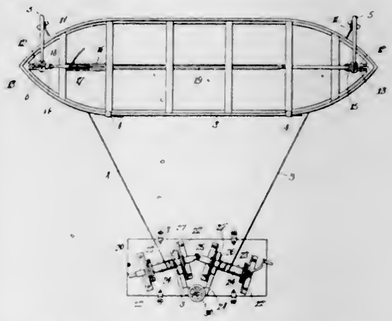
1,171,601. BOX-HINGE. PHILIP EICKENBERG, Minneapolis, Minn. Filed Jan. 11, 1915. Serial No. 1,585. (Cl. 220—11.)



1. In combination with the overlapping rear and cover walls of a box, a hinge formed of the material of said walls and comprising a tongue cut on three sides from the cover wall so as to leave a portion of the material at the edge of the cover wall to form a hinge pintle, and a tongue cut from said rear wall and formed with a curved bearing-portion to receive and encircle said pintle, said pintle being rotatably secured to the box between said encircling tongue and the rear wall of the box.

2. In combination with the overlapping rear and cover walls of a box, a hinge formed of the material of said walls and comprising a tongue cut on three sides from the cover wall so as to leave a portion of the material at the edge of the cover wall to form a hinge pintle, and a tongue cut from said rear wall and formed with a curved bearing-portion to receive said pintle, said cover tongue being turned outwardly at an acute angle and the end of said box wall tongue being curved outwardly so that the pintle portion may be pushed under the same and when the parts are assembled and the cover closed the edge of the cover tongue will engage the curved portion of the wall tongue and the edge of the wall tongue will engage the inside of the cover tongue to make a dust-excluding closure of the hinged parts.

1,171,602. LIFE-BOAT ATTACHMENT. JOSEPH FORCIER, Bremerton, Wash. Filed May 14, 1915. Serial No. 28,237. (Cl. 9—22.)



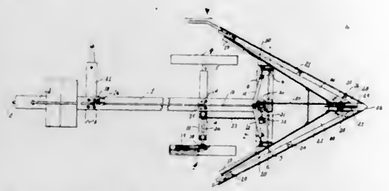
1. In life saving apparatus, the combination with boat davits and cables therefor of means for operating the cables comprising a portable base, cable drums mounted thereon and arranged at an angle to each other, means for simultaneously operating said drums, brakes therefor and a common controlling means for the brakes.

2. In life saving apparatus, the combination with boat davits and cables therefor, of winding mechanism for the cables comprising a portable base, angularly positioned drum shafts, means for connecting the drum shafts for simultaneous operation, operating means for the drum shafts, separate brake bands for said shafts, a lever common to both bands and means for actuating the lever.

3. In life saving apparatus, the combination with boat davits and cables therefor, of means for winding and unwinding the cables comprising angularly positioned shafts universally connected together, a brake for each shaft, a V-shaped lever connected to the brakes and an operating device for the lever.

4. In a life-saving apparatus, the combination with boat davits and cables therefor, of means for winding and unwinding the cables comprising angularly positioned shafts universally connected together, a brake for each shaft, an operating lever common to both brakes and means for operating the lever to apply the brake.

1,171,603. BEAN-CUTTER. HORACE S. FOUTZ, Modesto, Cal. Filed Oct. 2, 1915. Serial No. 53,702. (Cl. 56—1.)



1. A bean cutter of the character described comprising a wheel mounted support, a pair of vertical beams mounted on the support, a guide on each beam, a pair of independent beams movable on such guides, a V-shaped fender mounted on such movable beams, cutters on the fender, and means for raising and lowering said movable beams, as described.

2. A bean cutter of the character described comprising a wheel mounted supporting structure, a vertically disposed rectangular frame carried by the supporting structure, a guide on each end of the rectangular frame, an independent beam movable on each guide, a cutter and fender structure mounted on the independent beams, and means for raising and lowering said movable beams, as described.

3. A bean cutter of the character described comprising a supporting frame, a V-shaped cutter frame carried by the supporting frame, a nose at the apex of the V-shaped cutter frame, such nose being provided with a slot, and a revoluble cutter wheel operating through said slot, as described.

4. A bean cutter of the character described comprising a supporting frame, a cutter frame mounted on the supporting frame, a nose on the cutter frame provided with a slot, a revoluble cutter wheel projecting through said slot, said nose curving from its forward end rearwardly and upwardly toward the cutter wheel to lift and carry the bean vines into proximity with the cutter wheel, as described.

5. A bean cutter of the character described comprising a beam mounted on wheels, guides secured to the forward end of said beam, a V-shaped frame movable on the guides, cutting blades arranged along the lower edges of said V-shaped frame, guards disposed on the frame above the cutting blades, a nose on the frame provided with a slot, and a revoluble cutter projecting through the slot, as described.

1,171,604. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Mar. 22, 1912. Serial No. 685,419. (Cl. 30—12.)

1. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame, and means for retaining said curved portions in curvilinearly movable relation.

2. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion opposed to the curved portion of the frame, and means for retaining said curved portions in curvilinearly movable relation, the guard having means for engaging a blade to retain the blade in shaving relation to the guard in different positions of adjustment.



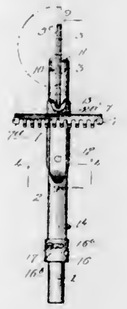
3. A safety razor comprising a frame, a guard having a portion thereof provided with an aperture, said guard being mounted to move with relation to the frame, a member pivotally mounted with relation to the frame and curved to form a cam extending into the aperture of a portion of the guard and operative to move said guard with relation to the frame.

4. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the frame and having curvilinear movement thereon, and a retainer below the guard extension and having a curved portion coacting with the curved portion of said extension.

5. A safety razor comprising a frame having a curved portion, a guard having an extension provided with a curved portion coacting with the curved portion of the frame end having curvilinear movement thereon, and a retainer below the guard extension and having a curved portion coacting with the curved portion of said extension, the guard having means to coact with a blade, to retain the blade in shaving relation to the guard in different positions of adjustment.

[Claims 6 to 24 not printed in the Gazette.]

1,171,605. RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed June 6, 1912. Serial No. 702,006. (Cl. 30—12.)



1. A razor comprising a handle, a movable member thereon, a guard carried by said member, a blade holder rotatively carried by the handle, and coacting means movable relatively to said handle to rotate said holder relatively to said guard.

2. A razor comprising a handle, a movable member thereon, a guard carried by said member, a blade holder rotatively carried by the handle, and means connected with said member and with said holder to coact to rotate said holder upon relative movement of said handle and member with relation one to another.

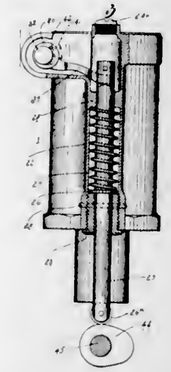
3. A razor comprising a handle, a movable member thereon, a guard carried by said member, a blade holder rotatively carried by the handle, said holder having actuating devices connected with it on opposite sides of its axis of rotation, the guard-carrying member having means to coact with said device to rotate said holder when said handle and member are moved relatively one to another.

4. A razor comprising a handle, a movable member thereon, a guard carried by said member, a blade holder rotatively carried by the handle, said holder having hooks, and the guard-carrying member having a pin to coact with said hooks to rotate said holder when said handle and member are moved relatively one to another.

5. A razor comprising a handle, a hollow member thereon, a guard carried by said member, and a blade holder rotatively carried by the handle, said blade holder having hooks within said handle, the guard-carrying member having a pin to coact with said hooks to rotate the blade holder upon movement of said handle and member relatively one to another.

[Claims 6 to 30 not printed in the Gazette.]

1,171,606. GREASE-CUP. VICTOR GAZZOLO, Stockton, Cal. Filed Mar. 3, 1915. Serial No. 11,720. (Cl. 184—37.)



1. A device of the character described comprising a grease cup having an outlet, a piston movable in said cup, a pin movable vertically adjacent said cup, an arm engageable by said pin, a worm gear mounted adjacent said cup, said arm being adapted to engage said worm gear to impart rotary motion to the latter, a ratchet wheel disposed within said cup and engageable by said worm gear, and means interposed between said ratchet wheel and said piston whereby with the movement of said ratchet wheel said piston will be moved, as described.

2. A device of the character described comprising a grease cup having an outlet, a piston movable in said cup, a turnable pin adapted to operate said piston, and means for turning said pin, such means comprising a turnable disk in the upper end of said cup engaging said pin, means for manually turning said disk, a ratchet wheel disposed around said disk and provided with a plurality of tapered recesses in its inner periphery, pins disposed in said recesses and adapted to be brought into frictional engagement between said ratchet wheel and said disk when said ratchet wheel is turned in one direction, and means for moving said ratchet wheel a predetermined distance at predetermined times, as described.

3. A device of the character described comprising a grease cup having an outlet, a piston movable in said cup, a pin movable adjacent said cup, a pin disposed transversely with respect to said first named pin, an arm engageable with said first named pin and provided with a collar surrounding said transverse pin, said collar being provided with a plurality of tapered recesses, pins in said recesses adapted to wedge between said collar and said transverse pin when the collar moves in one direction, a worm gear on said transverse pin, a ratchet wheel within said cup engageable by said worm gear, and means interposed between said ratchet wheel and said piston whereby with the movement of said ratchet wheel said piston will be moved, as described.

4. A device of the character described comprising a grease cup having an outlet, a piston movable in said cup, a ratchet wheel disposed within said cup, means interposed between said ratchet wheel and said piston whereby with the movement of said ratchet wheel said piston will be moved, a hollow pin disposed transversely adjacent said cup and provided with a worm gear engaging said ratchet wheel, a tension member disposed within said hollow pin to hold said pin against undesired rotary movement, a collar disposed around said rotary pin and adapted to be frictionally engaged therewith when moved in one direction, and means for intermittently rotating said collar, as described.

5. A device of the character described comprising a grease cup having an outlet, a piston movable in said cup, a ratchet wheel disposed within said cup, means interposed between said ratchet wheel and said piston whereby with the movement of said ratchet wheel said piston will be moved, a pin disposed transversely adjacent said cup and provided with a worm gear engaging said ratchet wheel, a collar disposed around said rotary pin and adapted to be frictionally engaged therewith when moved in one direction, and means for intermittently rotating said collar, as described.

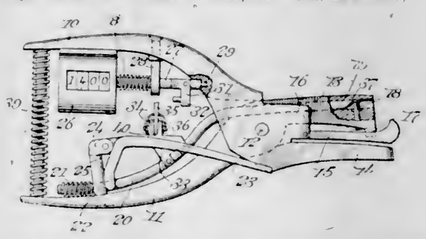
1,171,607. STABLE-CLEANING APPARATUS. JOHN P. GRANT, Grandy, Minn. Filed Apr. 2, 1915. Serial No. 18,770. (Cl. 214—10.)



1. A barn structure having a built-in gutter, in combination with a stable cleaning apparatus comprising a scraper arranged to travel on the bottom of the gutter and having a cutting edge and an open skeleton bottom rearward of its cutting edge, the bottom of the gutter closing the bottom of the scraper during the tilting thereof and its movement through the gutter, of a draft device having branch cables secured to the back of the scraper, and a spacing bar connecting the branch cables in the vicinity of the cutting edge of the scraper and holding the same over the sides of the scraper.

2. A barn structure having a gutter, in combination with a stable cleaning apparatus comprising an open bottom scraper, arranged to travel in the gutter, a roller equipped support, and a rocking bridge fulcrumed on said support, with freedom for a limited endwise bodily movement, said bridge having laterally spaced sides, forming an extension of the gutter, and over which bridge the scraper travels to an unloading position.

1,171,608. PUNCH. SELAH E. GREENE, Ogden, Utah. Filed June 29, 1914, Serial No. 847,989. Renewed Sept. 28, 1915. Serial No. 53,159. (Cl. 235—46.)



1. A punch comprising pivotally mounted jaws terminating in operating handles, one of said jaws being provided with a stationary perforating element and with a movable perforating element, means for moving said movable perforated element into an operative position, and a register operated by said last mentioned means when the same is moved to a position to hold said movable perforating means in an operative position.

2. A punch comprising pivotally mounted jaws provided with operating handles, a movable perforating element carried by one of said jaws, means for moving and holding said movable perforating element in an operative position, a register provided with operating means carried by one of said handles, and means carried by the operating means of said movable perforating element for actuating the operating means of said register when said movable perforating element is held in an operative position.

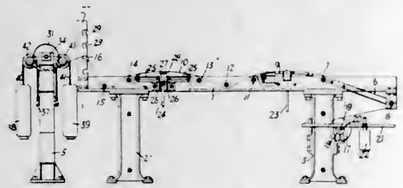
3. A punch comprising jaws provided with operating handles, a movable marking element carried by one of said jaws, a register carried by one of said handles, and common means for holding said movable marking element in an operative position and actuating said register when said marking element is in an operative position.

4. A punch comprising jaws provided with operating means, a marking element movably carried by one of said jaws, a register carried by one of said operating means, and common means carried by the other of said operating means for releasably holding said marking means in an operative position and actuating said register when said marking means is in an operative position.

5. A punch comprising jaws provided with operating handles, one of said jaws being provided with a longitudinally extending passage and with a second passage communicating with said longitudinally extending passage, marking means movably mounted in said passage, a rod slidably connected with one of said handles and extending into said longitudinally extending passage, means for moving said rod to a position to engage said marking means and hold the same in an operative position, yieldable means for normally holding said rod in an inoperative position, a register carried by the other of said handles, and means carried by said rod for actuating said register when said rod is moved to hold said marking means in an operative position and said handles are moved to a closed position.

[Claims 6 to 8 not printed in the Gazette.]

1,171,609. APPARATUS FOR MANUFACTURING INSULATION. EMIL HAEFELY, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1912. Serial No. 700,026. (Cl. 93—81.)



1. Apparatus for manufacturing tubular bodies comprising a coating surface, a plurality of spaced drying surfaces, a forming mandrel and means for simultaneously applying relatively high heat and pressure to a strip of fabric as it is wound upon the forming mandrel.

2. A machine for manufacturing tubular bodies comprising a coating table, means for guiding a strip of fabric over the table, a plurality of drying surfaces, means for guiding the fabric over the drying surfaces in succession, a forming mandrel, means for rotating the forming mandrel and means for exerting a yielding pressure on the convolutions of fabric as they are wound upon the mandrel.

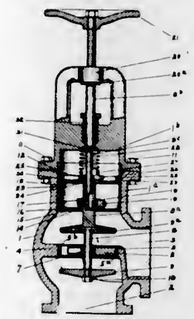
3. A machine for manufacturing tubular bodies comprising a coating table, means for guiding a strip of fabric over the table, a plurality of drying surfaces, means for guiding the fabric over the drying surfaces in succession, a forming mandrel, means for rotating the forming mandrel, a carriage comprising a pressure plate, means for applying heat thereto and means for yieldingly forcing the pressure plate toward the forming mandrel.

4. A machine for manufacturing tubular bodies comprising a coating table, means for guiding a strip of fabric over the table, a plurality of drying surfaces, means for guiding the fabric over the drying surfaces in succession, a forming mandrel, means for rotating the forming mandrel, and a carriage comprising a yieldingly supported pressure plate, means for applying heat thereto, means for forcing the carriage as a whole toward the forming mandrel and adjustable means for restraining the last-named means.

5. A machine for manufacturing tubular bodies comprising a coating table, means for guiding a strip of fabric over the table, a plurality of drying surfaces, means for guiding the fabric over the drying surfaces in succession, a forming mandrel, means for rotating the forming mandrel, a carriage comprising a beam extending longitudinally of the forming mandrel, a pressure plate yieldingly supported on the carriage, heating apparatus adapted to heat the pressure plate, means for forcing the carriage as a whole toward the forming mandrel and yielding means for restraining the forces exerted by the last-named means, whereby the pressure between the plate and the forming mandrel may be adjusted as desired.

[Claims 6 to 10 not printed in the Gazette.]

1,171,610. AUTOMATIC VALVE. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 16, 1911. Serial No. 655,057. (Cl. 137—4.)



1. A casing forming a valve chamber and a piston chamber with a partition between said chambers, there being a constantly open restricted passage through said partition connecting said chambers, a valve in said valve chamber movable to open position by the flow of the fluid being transmitted and adapted to close when the fluid pressure is released in either direction, a piston in said piston chamber connected by a stem to said valve, a spring within the piston chamber operative when said valve comes to open position to hold it in open position against the normal flow of the fluid, said piston chamber having an access opening through which said spring is removable and said piston having a constantly open passage therethrough to equalize the pressure on opposite sides of said piston.

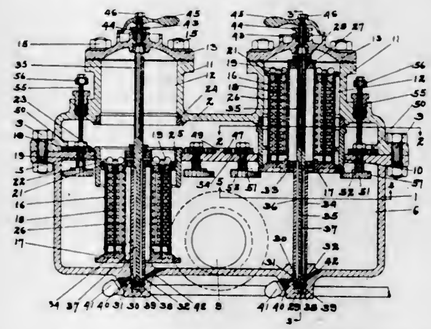
2. A casing forming a valve chamber having inlet and outlet seats, a piston chamber having an access opening with a closure for same and a partition between said chambers having a constantly open restricted passage therethrough, a valve in said valve chamber adapted to close on said seats and movable to open position by the flow of the fluid being transmitted, a piston in said piston chamber having a restricted opening therethrough and a connection to said valve, a spring in said piston chamber removable through said access opening operative when said valve reaches open position to hold it in open position against the normal flow of the fluid and means to manually operate said valve.

3. A casing forming a valve chamber having inlet and outlet seats, a piston chamber having an access opening with a closure for same and a partition between said chambers having a constantly open restricted passage therethrough, a valve in said valve chamber adapted to close on said seats and movable to open position by the flow of the fluid being transmitted, said valve having a stem with a recess and a piston secured to said stem, said piston having a restricted constantly open passage therethrough, a manually operated stem projecting through an opening in said closure and extending into said recess, a valve seat in said opening and a valve on said manually operated stem to close on said seat, a helical spring surrounding said manually operated stem and carried by said piston within said piston chamber, said spring being operative when said first named valve reaches open position to hold it in open position against the normal flow of the fluid.

4. A casing forming a valve chamber and a piston chamber with a partition between said chambers, a valve in said valve chamber movable to open position by the flow of the fluid being transmitted, said valve comprising two disks connected by a stem, one of said disks being cast about said stem and the other removably attached thereto, a piston in said piston chamber connected to said valve, a spring in said piston chamber operative when said valve reaches open position to hold it in open position against the normal flow of the fluid, said partition and piston each having a constantly open restricted passage therethrough with a gradually inclined annular channel thereto.

5. A casing forming a valve chamber and a piston chamber having a removable cap, a lining for said piston chamber with a head forming a partition between said chambers having a constantly open restricted passage therethrough, said lining further having an outwardly extending flange intermediate of its ends fitted between said casing and cap and secured thereby, a valve in said valve chamber movable to open position by the flow of the fluid being transmitted, said valve having a stem with a recess extending through an opening in said partition, a helical spring operative when said valve comes to open position to hold it in open position against the normal flow of the fluid, a piston having a restricted passage therethrough with means to secure the same to said stem, said means being adapted to hold said spring in place between said piston and cap and a manually operated stem projecting through an opening in said cap and through said helical spring into said recess of the valve stem, substantially as described.

1,171,611. STRAINER. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed July 3, 1914. Serial No. 848,931. (Cl. 210—16.)



1. The combination of a casing, a movable strainer element therein having a cylinder within said element closed at its respective ends and a piston in said cylinder having a connection extending through an opening in one of said ends and secured to said casing, said piston and connection coöperating with said cylinder to guide said strainer element in its movement, substantially as described.

2. The combination of a casing, a movable strainer element therein having a cylinder within said element closed at its respective ends, a piston in said cylinder having a connection extending through an opening in one of said ends and secured to said casing, said piston and connection coöperating with said cylinder to guide said strainer element in its movement and means to admit a motive agent through said connection to act upon said piston and cylinder to cause said movement, substantially as described.

3. The combination of a casing, a movable strainer element therein having a cylinder within said element closed at its respective ends, a piston in said cylinder having a connection extending through an opening in one of said ends and secured to said casing, said piston and connection coöperating with said cylinder to guide said strainer element in its movement, means to admit a motive agent through said connection to act upon said piston and cylinder to cause said movement and a control for said means adapted to be manipulated from outside of said casing, substantially as described.

4. The combination of a casing, movable strainer element within said casing having a cylinder within said element closed at its respective ends, a piston in said cylinder having a tubular connection extending through an opening in one of said ends and secured to said casing, said piston and connection coöperating with said cylinder to guide said strainer element in its movement and means including a shaft extending into said tubular connection adapted to admit a motive agent to act upon said piston and cylinder to cause said movement and control the same from outside of said casing, substantially as described.

5. The combination of a casing, a perforated cylindrical strainer element, a valve disk forming the base of said element and having a cylinder projecting therein closed at its respective ends, a piston in said cylinder having a connection extending through an opening in one of said ends and secured to said casing, said piston and connection cooperating with said cylinder to guide said strainer element and valve disk in their movement, means to admit a motive agent through said connection to act upon said pitson and cylinder to cause said movement, devices independent of said motive agent means arranged to be operated from outside said casing to tighten and hold said strainer element and valve disk in one position and a control for said motive agent means adapted to be manipulated from outside said casing, substantially as described.

1,171,612. EMBROIDERY-FRAME. ALFRED HOFMANN, Union Hill, N. J. Filed Aug. 28, 1915. Serial No. 47,735. (Cl. 112—7.)

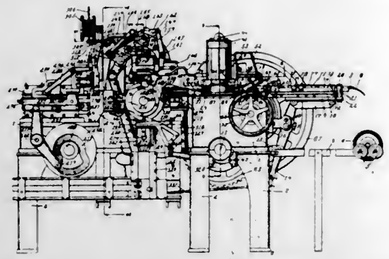


1. An embroidery frame comprising a rectangular casing having transverse bars and apertured longitudinal bars, and a plurality of holders, having toothed transverse bars and toothed longitudinal bars, that project beyond the transverse bars, the ends of said longitudinal bars being adapted to be received by the apertured casing-bars, and springs mounted on the longitudinal holder-bars, beyond one of said transverse bars.

2. In an embroidery machine, a holder composed of rods which are of rounded shape in cross section, said rods be-

ing provided with a plurality of grooves extending through the arches thereof, and teeth fitted into said grooves, the points of said teeth being set back from the lines of tangents to the rods that are projected at right angles to the teeth.

1,171,613. BOX-MAKING MACHINE. ALBERT S. HOWELL, Chicago, Ill., assignor to Sanitary Package Company, Kalamazoo, Mich. Filed Feb. 11, 1915. Serial No. 7,528. (Cl. 93—42.)



1. In a structure of the class described, the combination of a feed table provided with spaced rearwardly projecting delivery fingers at its rear end, a block to which said feed table delivers, forwardly projecting receiving fingers on said block disposed so that said delivery fingers of said feed reciprocate between them, a plurality of stock holding bars disposed to rest on the stock fed across the table, the rear ends of said holding bars being disposed above said receiving fingers, a reciprocating cross head, a pair of relatively fixed feed jaws supported to reciprocate at the ends of said block, pivotally mounted coacting jaws, said cross head being adapted to release said jaws on its work stroke and to hold them open during the return stroke of the feed table, actuating springs for said jaws, means for holding the stock during the return stroke of the feed table, scoring knives carried by said feed table and disposed between said stock holding bars to act on the stock on the return stroke of the feed table, and a yielding guide bar mounted on said table to engage one edge of the stock.

2. In a structure of the class described, the combination of a feed table provided with spaced rearwardly projecting delivery fingers at its rear end, a block to which said feed table delivers, forwardly projecting receiving fingers on said block disposed so that said delivery fingers of said feed table reciprocate between them, a plurality of stock holding bars disposed to rest on the stock fed across the table, the rear ends of said holding bars being disposed above said receiving fingers, a reciprocating cross head, feed jaws carried by said table, said cross head being adapted to release said jaws and to hold them open during the return stroke of the table, means actuated by said cross head for holding the stock during the return stroke of the feed table, scoring knives carried by said feed table and disposed between said holding bars to act on the stock on the return stroke of the feed table, a yieldingly supported guide bar mounted on said table to engage one edge of the stock, and operating connections for said cross head and feed table.

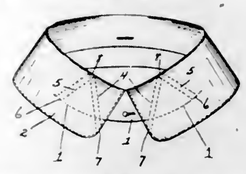
3. In a structure of the class described, the combination of a reciprocating feed table, a block to which said feed table delivers, a reciprocating cross head, feed jaws movable with said table, said cross head being adapted to release said jaws on its work stroke and to hold them open during the return stroke of the feed table, means for holding the stock during the return stroke of the feed table, and scoring knives carried by said feed table and adapted to act on the stock on the return stroke of the feed table.

4. In a structure of the class described, the combination of a feed table, a plurality of spaced stock holding bars disposed to rest on the stock fed across the table, feed jaws movable with the table, means for releasing said jaws at the limit of the feed stroke of the table and holding them open during the return stroke thereof, means for holding the stock during the return stroke of the feed table, and scoring knives carried by said feed table and disposed between said stock holding bars to act on the stock on the return stroke of the feed table.

5. In a structure of the class described, the combination of a feed table, feed jaws movable with the table, means for releasing said jaws at the limit of the feed stroke of the table and holding them open during the return stroke thereof, means for holding the stock during the return stroke of the feed table, and scoring knives carried by said feed table to act on the stock on the return stroke of the feed table.

[Claims 6 to 47 not printed in the Gazette.]

1,171,614. FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co. Inc., Troy, N. Y., a Corporation of New York. Filed Nov. 5, 1915. Serial No. 59,771. (Cl. 2—71.)



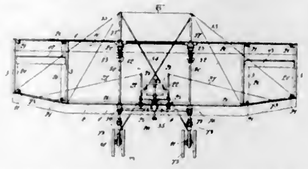
1. A fold-collar having a band, a folded over top, and a continuous tape extending diagonally across both the band and top when the collar is opened out flat, the opposite ends of said tape being attached respectively to the lower edge of the band and to an edge of the top, the intermediate portion of said tape being attached to the collar substantially at the junction of the band and top, whereby when the collar is folded, said tape forms downwardly divergent necktie-retaining loops between the band and the folded-over top.

2. A fold-collar having a band, a folded-over top, and two tapes extending, when the collar is opened out flat, divergently from the lower edge of the band severally to a free edge of the top, said tapes being attached at their middle and at their respective ends to the body of the collar.

3. A fold-collar having a band, a folded-over top, and a continuous tape extending when the collar is opened out flat, divergently from the lower edge of the band to an end edge of the top, said tape being attached to the body of the collar at its ends and at an intermediate point substantially at the junction of the band and top.

4. A fold-collar having a band, a folded-over top, and a continuous tape extending, when the collar is opened out flat, diagonally across the line of junction of the top and band, said tape being attached at its ends respectively to the band and top, and being also attached at an intermediate point approximately at said line of junction of the band and the top whereby, when the collar is folded, said tape forms downwardly divergent necktie-retaining loops between the band and the folded-over top.

1,171,615. AEROPLANE. JAMES S. LANG, Boston, Mass. Filed Mar. 27, 1912. Serial No. 686,712. (Cl. 244—29.)



1. In an aeroplane, the combination with a main lifting plane, of auxiliary balancing planes arranged adjacent the working face of said main plane on opposite sides of the machine, connections arranged to support said auxiliary planes and upon and by which said auxiliary planes may be moved in reverse directions, a brace of pivoted levers parallelly arranged and connecting with one another whereby the same may be moved in unison, and connections attached respectively to said levers and extending therefrom in reverse directions to connect with said connections first above mentioned, whereby said auxiliary planes may be moved simultaneously in reverse direction as said levers are pivotally moved.

2. In an aeroplane, the combination with the operator's seat, of a steering wheel arranged in front of said seat, an operating lever located between said seat and said wheel, said lever being provided with means whereby it may be moved in reverse directions by the arm of one seated in said seat and grasping said wheel.

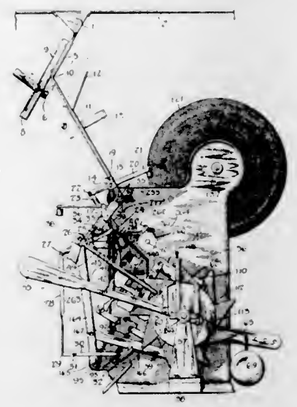
3. In an aeroplane, the combination with the operator's seat, of a steering wheel arranged in front of said seat, a brace of pivoted levers parallelly arranged and connecting with one another whereby the same may be moved in unison, said levers being located between said seat and said wheel and upon opposite sides thereof, each of said levers being provided with means whereby they may be moved in reverse direction by the arms of one seated in said seat and grasping said wheel.

4. In an aeroplane, the combination with the operator's seat, of a steering wheel arranged in front of said seat, a brace of pivoted levers parallelly arranged and connecting with one another whereby the same may be moved in unison, said levers being located between said seat and said wheel and upon opposite sides thereof whereby said levers may be operated by the arms of one grasping the wheel, said levers being each provided on the inside thereof with arm rests adapted to receive the arms of the operator positioned as aforesaid.

5. An aeroplane having rudders pivotally arranged in pair, means connecting said rudders whereby the same may be moved simultaneously in the same direction after one of said rudders has had a predetermined movement, and means for controlling said rudders whereby the separate rudders may be moved in reverse directions or both rudders moved simultaneously in the same direction as one of said rudders after such rudder has had a determinate movement as aforesaid.

[Claim 6 not printed in the Gazette.]

1,171,616. VENDING-MACHINE OR THE LIKE. LIONEL M. LEVINE, New York, N. Y. Filed Oct. 5, 1914. Serial No. 865,191. (Cl. 211—33.)



1. In a vending machine, the combination of means for feeding a web, means for detaching a portion of said web, and means for controlling the operation of said feeding means, said controlling means being adapted to have its effect regulated by the position of the forwardly presented edge of the next portion to be detached.

2. In a vending machine, the combination with means for feeding a web, of means for regulating the amount of feed of said feeding means, said regulating means including a part adapted to be engaged by the end of said web for controlling the operation of said regulating means to depend upon the position of the forward edge of said web.

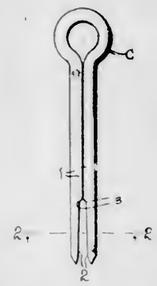
3. In a vending machine, web-feeding means, a shaft geared to said web-feeding means, and means for varying the amount of feeding movement imparted to said shaft from one operation of the web-feeding means to the next.

4. In a vending machine, an oscillatory frame, clamping arms oscillatably mounted on said frame and under tension tending to separate them, means for feeding a web to said clamping arms, means for forcing said clamping arms together during their movement in one direction and for releasing said arms, during their movement in the opposite direction, said means including an adjustable abutment carried by each of said clamping arms and tracks suitably disposed to engage said abutments.

5. In a vending machine, means for feeding articles, means for blocking the feeding movements of said feeding means, means for operating said feeding means periodically, and means for rendering said blocking means inoperative during the periods of rest of said feeding means and rendering said feeding means operative again during the periods of activity of said feeding means.

[Claims 6 to 55 not printed in the Gazette.]

1,171,617. COTTER-PIN. LEO C. LIGHT, Rome, N. Y. Filed Sept. 11, 1915. Serial No. 50,129. (Cl. 74—8.)



As a new article of manufacture, a cotter pin having the opposed faces of the end portions of the shanks thereof cut-away to afford reduced extremities, the inner end of the reduced portions of the shanks being defined by shoulders.

1,171,618. ENAMELING-POWDER SIFTER OR DREDGER. WILLIAM LINDSAY, Chicago, Ill., assignor to L. Wolff Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Aug. 12, 1912, Serial No. 714,491. Divided and this application filed Oct. 9, 1913. Serial No. 794,199. (Cl. 83—60.)



1. In an apparatus of the character described, in combination: an enameling powder sifter having a hollow handle of smaller sectional capacity than said sifter secured thereto; and means adapted to force enameling powder through the hollow handle to said sifter from adjacent the opposite end.

2. In an apparatus of the character described, in combination: an enameling powder sieve having a hollow handle of smaller sectional capacity than said sifter; and means adapted to force enameling powder through said hollow

handle to the sieve, said means comprising a current of compressed air passing along the interior of the hollow handle and in a direction from the outer end thereof to the sieve.

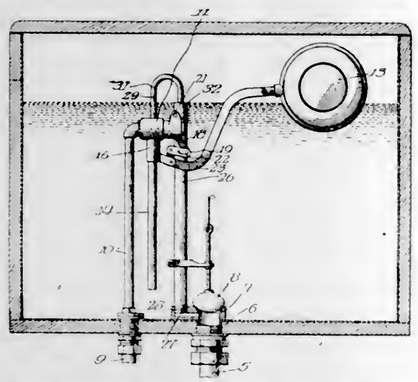
3. In an apparatus of the character described, in combination: an enameling powder sieve having a hollow handle; means adapted to force enameling powder through the hollow handle to the sieve; and mechanism for imparting a vibratory movement to said sieve.

4. In an apparatus of the character described, in combination: a powder sieve having a hollow handle; and means for supplying compressed air to the hollow handle at a point adjacent the outer end and at points intermediate the ends thereof, whereby to force powder along the hollow handle toward the sieve.

5. In an apparatus of the character described, in combination: an enameling powder sifter having a hollow handle; means for supplying compressed air to said hollow handle at a point adjacent the outer end and at points intermediate the ends thereof, whereby to force powder through the hollow handle toward the distributer; and mechanism for imparting a vibratory movement to said sifter.

[Claims 6 to 11 not printed in the Gazette.]

1,171,619. REFILL DEVICE FOR WATER-CLOSET BOWLS. JOHN M. MCGUIRE, Chicago, Ill., assignor to L. Wolff Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 10, 1914. Serial No. 866,016. (Cl. 4—5.)



1. In a device of the character described the combination of a valve casing, a valve in said casing, a delivery pipe extending downwardly from above the bottom of said casing, a waste pipe adapted to communicate with the closet bowl, and a refill pipe having one end disposed in said waste pipe and the other end communicating with the valve casing near its bottom and below the top of said feed pipe.

2. In a device of the character described the combination of a closet tank, a pipe adapted to communicate with a closet bowl and to deliver water thereto for flushing, a pipe for refilling said bowl after flushing, and a water seal above the outlet of said tank normally covering the end of said refill pipe through which water is received for refilling.

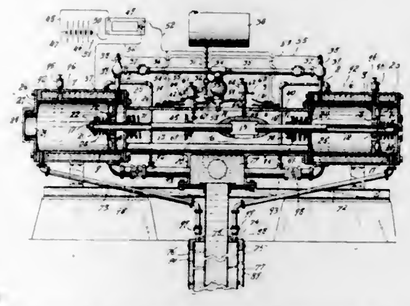
3. In a device of the character described the combination of a closet tank, a pipe for introducing water into the closet bowl for flushing, a refill pipe for introducing water into said closet bowl after flushing for refilling, a water seal above the outlet of said tank normally covering the receiving end of said refill pipe, and means for applying water to said receiving end under pressure for refilling.

4. In a device of the character described the combination of a tank adapted to be connected to a closet bowl, a valve for admitting water thereto after flushing, a casing for said valve, and a refill pipe communicating with said casing near its bottom and above the outlet of said tank, said casing being formed to provide a water seal cover and end of said refill pipe, said seal being in communication with the interior of said casing.

5. In a device of the character described the combination of a closet tank, an overflow pipe therefor, a pipe for introducing water into a closet bowl for flushing, a refill pipe for introducing water into said closet bowl after flushing for refilling, a water seal independent of the water in the tank after flushing and normally covering the receiving end of said refill pipe, and means for applying water to said receiving end for refilling.

[Claims 6 and 7 not printed in the Gazette.]

1,171,620. INTERNAL-COMBUSTION PRESSURE-PUMP. JOHN A. MCINTYRE, Denver, Colo. Filed Nov. 27, 1914. Serial No. 874,111. (Cl. 160—1.)



1. A pump of the class described, comprising two stationary chambers, pistons located in the respective chambers, a stem to which both pistons are made fast, the pistons dividing their respective chambers into inlet and outlet compartments, the stem being longitudinally movable in the chambers, means outside of the chambers for limiting the movement of the pistons in both directions, each piston having ports, spring-held valves normally closing the said ports in the outlet side, and adapted to open in response to explosions in the inlet compartments, a water-containing chamber in communication with the source of supply, and conduits leading from the outlet compartments of the piston chambers to said water-containing chamber.

2. The combination of two piston chambers, pistons therein respectively dividing the chambers into inlet and outlet compartments, the pistons having normally closed check valve-controlled ports adapted to open in response to explosions in the inlet compartments of the chambers, conduits leading from the outlet compartments of the chambers to the water to be raised, a stem to which both pistons are secured, said stem being hollow and forming communication between the outlet compartments of the piston chambers and the atmosphere for exhaust purposes, means for alternately producing explosions in the inlet compartments, and means for maintaining the pistons stationary during such explosions.

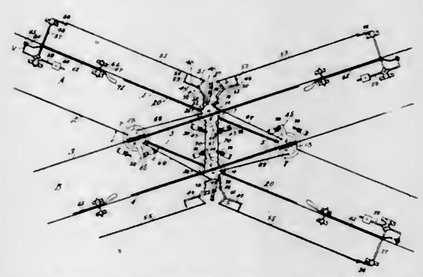
3. The combination of two chambers, pistons therein respectively dividing the chambers into inlet and outlet compartments, the pistons having ports, spring-held check valves normally closing the said ports on the outlet compartment sides of the pistons and adapted to open in response to the explosions in the inlet compartments of the chambers, a stem to which both pistons are secured, the stem being hollow and open to the atmosphere between the chambers and having perforations in the inlet compartments of the chambers which are open when the piston ports are closed, the piston check valves being adapted to close said perforations when the said ports are open.

4. The combination with two chambers, pistons therein respectively dividing the chambers into inlet and outlet compartments, the pistons having ports, spring-held check valves normally closing the said ports on the outlet compartment sides of the pistons, said valves being adapted to open in response to explosions in the inlet compartments of the chambers, a hollow stem to which both pistons are secured, the said stem being open to the atmosphere beyond the chambers and having perforations in the outlet compartments of the chambers which are open when the piston ports are closed, the piston check valves being slidable on the stem to close said perforations when the piston ports are open, means for alternately producing explosions in the inlet compartments of the chambers, means for conducting the explosive force from the outlet compartments of the chambers to the water to be raised.

5. The combination of two chambers, pistons therein respectively dividing the chambers into inlet and outlet compartments, the pistons having ports, spring-held check valves normally closing the said ports on the outlet compartment sides of the pistons, said valves being adapted to open in response to explosions in the inlet compartments of the chambers, a hollow stem to which both pistons are secured, the said stem being open to the atmosphere beyond the chambers and having perforations in the outlet compartments of the chambers which are open when the piston ports are closed, the piston check valves being slidable on the stem to close said perforations when the piston ports are open, means for alternately producing explosions in the inlet compartments of the chambers, means for conducting the explosive force from the outlet compartments of the chambers to the water to be raised, and means for holding the pistons stationary during the explosions, the pistons however, being free to travel in response to the partial vacuum produced in the inlet compartment by the explosion.

[Claims 6 to 8 not printed in the Gazette.]

1,171,621. RAILROAD-CROSSING DEVICE. JOHN W. MATTHEWS, Difficult, Tenn. Filed May 26, 1915. Serial No. 30,640½. (Cl. 104—117.)



1. In a device of the class described, a pair of intersecting tracks comprising rails; a rotatable member journaled at the angle defined by the rails; a rail section carried by the rotatable member and adapted to be alined with the respective rails when the rotatable member is operated; operating means for rotating the rotatable member; an arm projecting from the rotatable member; and opposed springs with which the arm successively coacts, the springs constituting a resilient buffeting mechanism for the rotatable member, substantially as described.

2. In a device of the class described, a pair of intersecting tracks comprising rails; a rotatable member journaled at the angle defined by the rails; a rail section carried by the rotatable member and adapted to be alined with the respective rails when the rotatable member is operated; operating means for rotating the rotatable member; and opposed springs coacting with the rotatable member, the springs constituting a resilient buffeting mechanism for the rotatable member; and means for adjusting the springs, substantially as described.

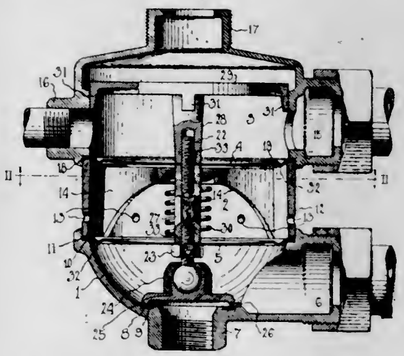
3. In a device of the class described, a pair of intersecting tracks comprising rails; a rotatable member journaled at the angle defined by the rails; a rail section carried by the rotatable member and adapted to be alined with the respective rails when the rotatable member is operated; operating means for rotating the rotatable member; an arm projecting from the rotatable member; and opposed springs with which the arm successively coacts, the springs constituting a resilient buffeting mechanism for the rotatable member; and means for adjusting the springs, substantially as described.

4. In a device of the class described, a pair of intersecting tracks comprising rails; a base located at the angle defined by the rails; a rotatable member journaled on the base; a rail section carried by the rotatable member and adapted to be alined with the respective rails when the rotatable member is operated; operating means for rotating the rotatable member; an arm projecting from the rotatable member; and opposed springs with which the arm successively coacts, the springs constituting a resilient buffeting mechanism for the rotatable member; a resilient telescoping structure pivotally assembled with the rotatable member and constituting means for holding the engaging elements in coacting relation; and means for pivotally supporting the telescoping structure, substantially as described.

5. In a device of the class described, a pair of intersecting tracks comprising rails; a base located at the angle defined by the rails; a rotatable member journaled on the base; a rail section carried by the rotatable member and adapted to be alined with the respective rails when the rotatable member is operated; operating means for rotating the rotatable member; an arm projecting from the rotatable member; and opposed springs with which the arm successively coacts, the springs constituting a resilient buffeting mechanism for the rotatable member; a resilient telescoping structure pivotally assembled with the rotatable member and constituting means for holding the engaging elements in coacting relation; and means for pivotally supporting the telescoping structure, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,171,622. VALVE. HENRY C. MAUL, Detroit, Mich., assignor to The Michigan Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 30, 1915. Serial No. 53,382. (Cl. 126—351.)



1. A valve of the type described comprising a casing, a gas valve in a part of said casing adapted to control passage of gas therethrough, a water valve in sliding engagement with the walls of said casing adapted to control passage of water thereto, parallel diaphragms in said casing coöperating with said casing in forming an atmospheric chamber, said diaphragms adapted to cause said valves to move equidistant in synchronism, means between said diaphragms holding said gas valve normally closed, and means coöperating with said holding means adapted to limit the movement of said diaphragms in one direction.

2. A valve of the type described comprising a casing, a gas valve in a part of said casing adapted to control passage of gas therethrough, a water valve in another part of said casing adapted to control passage of water therethrough, spaced parallel diaphragms between said

valves adapted to cause said valves to move in synchronism, said diaphragms coöperating with said casing in forming a chamber in communication with the atmosphere whereby gas leakage in said casing may escape to the atmosphere, and means between said diaphragm holding said gas valve normally closed.

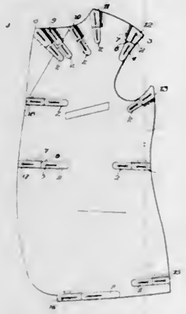
3. A valve comprising a gas chamber having gas inlet and outlet connections, a water chamber having water inlet and outlet connections, a valve in each chamber, an intermediate chamber providing an outlet for leakage of gas and water in said valve, a spider in said chamber, diaphragms forming the top and bottom of said intermediate chamber, means connecting said valves and said diaphragms and devoid of stuffing boxes to cause said valves to move in synchronism, and means engaging said spider and one of said diaphragms adapted to hold said gas valve normally closed.

4. A valve of the type described, comprising a gas chamber having gas inlet and outlet connections, a water chamber having water inlet and outlet connections, an intermediate atmospheric chamber between said gas and water chambers affording an outlet for escaping gas and water in said valve, diaphragms forming the top and bottom of said atmospheric chamber held in place by said gas and water chambers, valves in said gas and water chambers, and valve stems interlocked with said diaphragms to cause the valves to move in synchronism.

5. A valve of the type described comprising a gas chamber having gas inlet and outlet connections, a water chamber having water inlet and outlet connections, an atmospheric chamber between said gas and water chambers affording an outlet for escaping gas and water in said valve, diaphragms forming the top and bottom of said atmospheric chamber held in place by said gas and water chambers, means connecting said gas and water chambers to maintain said atmospheric chamber therebetween, valves in said gas and water chambers, and a sectional valve stem interlocked with said diaphragms to cause said valves to move in synchronism.

[Claim 6 not printed in the Gazette.]

1,171,623. GARMENT-PATTERN. DAVID J. MONAGHAN, Rochester, N. Y. Filed June 2, 1915. Serial No. 31,760. (Cl. 33—14.)

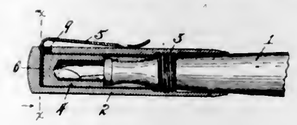


1. A pattern comprising a stiff flat body portion having a guide edge for a marking tool, said edge having the main layout points of a small sized garment included therein, relatively adjustable members on said body portion at the main points and each carrying a single main point for shifting the main points beyond the marking edge to lay out larger garments, and separate indicating means for each of said members for determining the adjustment.

2. A pattern comprising a stiff flat body portion having an edge for a marking tool, the edge having the main layout points of a small sized garment included therein, relatively adjustable slides on said body portion and each having a single main point thereon adapted to be brought into register with a main point on the marking edge when the slide is in its innermost position, said slides being movable to carry their points beyond the marking edge in directions which said points would shift in garments of progressively increasing sizes, and indicating means for each slide for determining such shifted positions.

3. A pattern comprising a stiff flat body portion having an edge for a marking tool, said edge including therein the main layout points of a small sized garment, headed rivets on said body portion, slotted slides guided by said rivets and each having a single main layout point at its outer end which is adapted to register with a main layout point on the body portion when the slide is in its innermost position and is shifted by the slide in the direction which said point would shift in garments of progressively increasing sizes, washers surrounding the rivets between the slides and the body portion, and indicating means for each slide for determining the adjustment of the slide.

1,171,624. FOUNTAIN-PEN CLIP. FRANK H. MOONEY, Hinsdale, Ill., assignor to The Conklin Pen Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Oct. 20, 1915. Serial No. 56,867. (Cl. 24—11.)

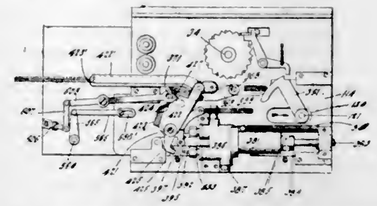


1. The combination with a fountain pen cap having an opening in its side adjacent to the closed end of its socket, of a clip of L-form having its short leg provided near its inner end with a restricted portion for interengaging with the side walls of said opening when the short leg of the clip is inserted a predetermined distance into said opening and the long leg of the clip is placed lengthwise of the cap, and means within the cap operable to coact with the end wall of the cap socket to grip the short leg of the clip and firmly hold the clip in operative relation to the cap.

2. In a fountain pen, the combination of a cap having an opening in a side thereof flush with the end wall of the cap socket, said opening being enlongated lengthwise of the cap, a spring metal clip of L-form having its short leg of a width greater than the width of said opening and restricted adjacent to its inner end to conform to the width of the opening, said clip having its short leg inserted into said opening with its restricted portion interlocked with the side walls of said opening when the long leg of the clip is disposed lengthwise of the cap, and an interior cap member fitted into said cap and cooperating with the end wall of the cap socket to firmly grip and hold the short leg of the clip in rigid relation to the cap.

3. In a fountain pen, the combination of a cap, having an opening in a side thereof adjacent to its closed end, said opening being elongated lengthwise of the cap and having its outer end substantially flush with the inner end wall of the cap socket, a spring metal clip of L-form having its short leg of a length to project through said opening and substantially to the opposite side of the cap socket and being of a width which is greater than the width of said opening and less than the length of the opening to permit the leg to be inserted through the opening when the clip is disposed transversely of the cap, said short leg also having a side edge notched adjacent to its inner end to restrict the width of the leg at such point to the width of said opening, whereby a turning of the clip from transverse to lengthwise position relative to the cap when the short leg is inserted a predetermined extent in said opening will lock said short leg against removal from the opening, and an interior cap member movably inserted within the cap and coöperating with the end wall of the cap socket to firmly grip the short leg of the clip to prevent a turning thereof relative to the cap.

1,171,625. FARE-REGISTER. OTTO N. MOORE, Indianapolis, Ind., assignor to Ohmer Fare Register Company, Rochester, N. Y. Filed Sept. 7, 1909. Serial No. 516,470. (Cl. 235—44.)



1. In a fare register, the combination with means for indicating any desired fare and means for accumulating and registering the accumulation of a plurality of such fares, of fare-recording members, intermediate connections between said fare-recording members and the indicating mechanism, collection-point recording members, means for setting said collection-point recording members, conductor-designating recording member, and means for setting said conductor-designating recording member, operating means for actuating the accumulating mechanism in accordance with the setting of the indicating means, and means controlled by said operating means for producing a record from the fare recording members.

2. In a fare register, the combination with fare indicating members, adapted to indicate any desired fare between minimum and maximum, of fare recording members intermediate connections between said fare-indicating mechanism and the fare-recording members for setting the fare recording members in accordance with the fare indicating members, cash fare accumulating mechanism, ticket fare register mechanism, means for selecting the cash fare accumulating mechanism or the ticket fare registering mechanism for actuation in accordance with a setting of the indicating mechanism, a recording designator for ticket fares, collection-point recording members, means for setting said collection-point recording members, a conductor-designating recording member, means for setting said conductor-designating recording member, means cooperating with said recording members for producing a record therefrom, means for interfering with the recording operation of the means coöperating with the ticket-fare designator, an actuating member, and intermediate connections between said actuating member and the several parts for controlling the ticket-fare selecting mechanism and for actuating the several parts.

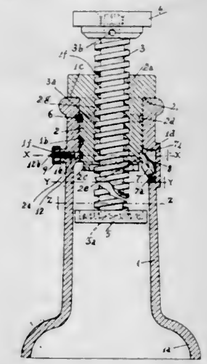
3. In a fare register, the combination with fare indicating members, adapted to indicate any desired fare between minimum and maximum, of fare recording members, intermediate connections between said fare-indicating mechanism and the fare-recording members for setting the fare recording members in accordance with the fare indicating members, a recording designator for ticket fares, means coöperating with said recording members for producing a record therefrom, means for interfering with the recording operation of the means coöperating with the ticket-fare designator, an actuating member, and intermediate connections between said actuating member and the several parts for controlling the ticket-fare selecting mechanism and for actuating the several parts.

4. In a fare register, the combination with fare indicating members, adapted to indicate any desired fare between minimum and maximum, of fare recording members, intermediate connections between said fare-indicating mechanism and the fare-recording members for setting the fare-recording members in accordance with the fare indicating members, cash fare accumulating mechanism, ticket fare registering mechanism, means for selecting the cash fare accumulating mechanism or the ticket fare registering mechanism for actuation in accordance with a setting of the indicating mechanism, a recording designator for ticket fares, means coöperating with said recording members for producing a record therefrom, means for interfering with the recording operation of the means coöperating with the ticket-fare designator, an actuating member, and intermediate connections between said actuating member and the several parts for controlling the ticket-fare selecting mechanism and for actuating the several parts.

5. In a fare register, the combination with fare indicating members, adapted to indicate any desired fare between minimum and maximum, of fare recording members, intermediate connections between said fare-indicating mechanism and the fare-recording members for setting the fare recording members in accordance with the fare indicating members, a recording designator for ticket fares, collection-point recording members, means for setting said collection-point recording members, a conductor-designating recording member, means for setting said conductor-designating recording member, means coöperating with said recording members for producing a record therefrom, means for interfering with the recording operation of the means coöperating with the ticket-fare designator, an actuating member, and intermediate connections between said actuating member and the several parts for controlling the ticket-fare selecting mechanism and for actuating the several parts.

[Claims 6 to 28 not printed in the Gazette.]

1,171,626. JACK. SAMUEL E. MOORE, Williamsville, Ill. Filed Apr. 26, 1915. Serial No. 23,897. (Cl. 254—98.)



1. In a jack, the combination of a stand, a bushing adapted to rotate in the stand, a screw rotative in the bushing, a holding device normally effective to prevent rotation of the bushing during predetermined upward turning of the screw, and means for releasing said holding device to permit the bushing to rotate with the screw.

2. In a jack, the combination of a stand, a bushing rotative clockwise and counter clockwise in the stand, a screw rotative in the bushing, and means adapted to prevent rotation of the bushing in one direction and adapted to permit rotation of the bushing in the opposite direction.

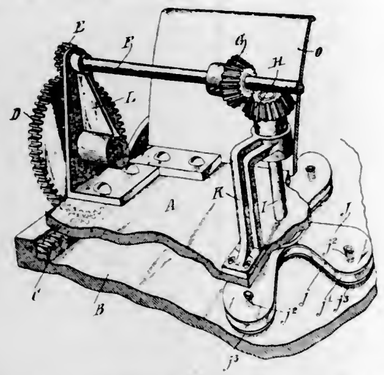
3. In a jack, the combination of a stand, a bushing rotative in the stand and having a clutch member, and a screw rotative in the bushing and having a clutch member complemental to the clutch member of the bushing and engaging therewith to cause the screw and the bushing to rotate together.

4. In a jack, the combination of a stand, a bushing mounted on and rotative in the stand and having a circumferential series of notches, a latch adapted to engage in any notch of said series of notches to prevent rotation of the bushing in either direction; means for releasing said latch; and a click adapted to engage in any notch of said series of notches to stop rotation of the bushing in one direction when the latch is disengaged and adapted to permit rotation of the bushing in the opposite direction when the latch is disengaged.

5. In a jack, the combination of a stand, a bushing mounted on the upper end of the stand and rotative in

the stand and having a circumferential series of notches, and also having a clutch member, a latch adapted to engage in any notch of said series of notches, a screw rotative in the bushing, and a disk connected with the screw and having a clutch member complemental to the clutch member of the bushing, said disk being effective to release the latch immediately before complete engagement of the clutch members.

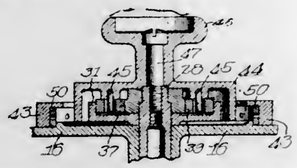
1,171,627. BRONZING-MACHINE. CHARLES M. MULLER, New York, N. Y. Filed Dec. 8, 1914. Serial No. 876,019. (Cl. 91—59.)



1. In an organization for applying bronze to fabrics, a movable platform having mounted thereon a revoluble dust drum provided with screened discharge ports, and a plurality of revoluble wipers in series, a platen with racks and gears in mesh with said racks actuating said drum and wipers, and means for causing said platform and platen to move back and forth with respect to each other.

2. In an organization for applying bronze to fabrics, a movable platform having mounted thereon a revoluble dust drum provided with screened openings for sprinkling the bronze onto the fabric, and one or more series of revoluble interfitting adjustable wipers, and a platen for holding the fabric under treatment, the same being provided with racks meshing with gears to actuate the dust drum and wipers when the platform is moved along the platen, or vice versa.

1,171,628. QUANTITY-SETTING CLUTCH MECHANISM. THOMAS F. MULLIGAN, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Filed Apr. 21, 1913. Serial No. 762,529. (Cl. 192—22.)



1. Quantity setting clutch mechanism comprising a rotating member, a rotatable member concentric therewith, a friction cup fixed to the rotating member, a cam upon the rotatable member, centrally bored friction rollers disposed between the cup and the cam for locking the rotating member and the rotatable member into fixed relation, and a rotatable cover having studs to directly engage in the bores of the rollers for moving some of them into and others out of locking position.

2. Quantity setting clutch mechanism comprising a rotating member, a rotatable member concentric therewith, a friction cup secured to the rotating member, a cam upon the rotatable member, sets of adjustable centrally bored friction rollers disposed between the cup and the cam locking the rotating member and the rotatable member into fixed relation, and a rotatable cover having studs to engage in the bores of the rollers for simultaneously engaging one set and disengaging the other from locking relation depending upon the direction of rotation of the cover.

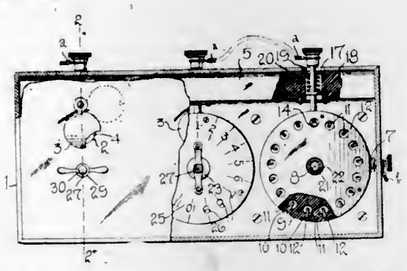
3. Quantity setting clutch mechanism comprising a rotating member, a rotatable member concentric therewith, a friction cup concentrically secured to the rotating member, a cam secured to the rotatable member and disposed within the friction cup, centrally bored friction rollers disposed between the friction cup and the cam for locking the rotating member and the rotatable member into fixed relation, and a rotatable cover having studs loosely fitting the bores of the rollers to move the rollers out of frictional engaging position.

4. Quantity setting clutch mechanism comprising a rotating member, a rotatable member concentric therewith, an annular friction cup concentrically secured to the rotating member, a cam secured to the rotatable member and disposed within the friction cup, centrally bored friction rollers disposed between the friction cup and the cam for locking the rotating member and the rotatable member into fixed relation, spring members disposed between pairs of the rollers to hold them in operative contact with the friction cup and the cam, and a cover carried by the rotating member having studs to directly but loosely engage in the bores of the rollers for moving some of the rollers out of clutching engagement by means of which the rotatable member is set in either direction with respect to the rotating member.

5. Quantity setting clutch mechanism comprising a rotating member, a rotatable member, an annular friction cup concentrically secured to the rotating member, a diamond-shaped cam concentrically secured to the rotatable member and disposed within the friction cup, apertured lugs upon the diamond-shaped cam adjacent the obtuse angles thereof, four centrally bored friction rollers disposed between the friction cup and the diamond-shaped cam for locking the rotating member and the rotatable member into fixed relation, spring members passing through the apertured lugs and disposed between pairs of the rollers to hold the rollers normally in operative contact with the friction cup and the diamond-shaped cam, and a cover carried by the rotating member having studs to engage loosely in the roller bores, the cover being rotatable in both directions and operative to engage the rollers to move one of each pair into clutching contact and the other one out of such contact for setting the rotatable member in one direction or the other with respect to the rotating member depending on the direction the cover is rotated.

[Claims 6 to 9 not printed in the Gazette.]

1,171,629. CIRCUIT-CLOSER. SAMUEL MYERS, Tower, Minn. Filed June 7, 1915. Serial No. 32,625. (Cl. 175—282.)

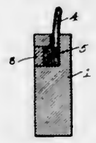


1. A circuit closer comprising a rotatable member provided with peripheral recesses and with recesses in a face thereof in communication with the first named recesses, a rotatable contact arm having one extremity insertible within the last named recesses, contact members within the first named recesses and adapted for engagement with the contact arm, and a second contact member adapted to engage the contact members within the first named recesses.

2. A circuit closer comprising a rotatable member provided with peripheral recesses and with recesses in a face thereof in communication with the first named recesses, a rotatable contact arm having one extremity insertible within the last named recesses, contact members within the first named recesses and adapted for engagement with the contact arm, and a second contact member adapted to engage the contact members within the first named recesses, said second named contact member being capable of endwise movement, and means for automatically maintaining said second named contact member in engagement with the periphery of the rotatable member.

3. A circuit closer including a conductor plate, a shaft electrically connected therewith, a non-conductive disk rotatably supported by the shaft, a conductor arm rotatably supported by the shaft intermediate the plate and the disk, means coacting with the disk and the shaft for maintaining the conductor arm in electrical connection with the plate, means for maintaining the conductor arm in a predetermined position relative to the disk, and a contact member coacting with the conductor arm.

1,171,630. BRUSH CONNECTION. JOHN NAYDOR, Lakewood, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Filed Mar. 12, 1915. Serial No. 13,866. (Cl. 200—26.)



1. The method of attaching a stranded conductor to a brush, which consists in spinning a part of the conductor in an opening in the brush until the strands are forced into a compact mass.

2. The method of attaching a stranded pigtail to a brush, which consists in forming two intersecting channels therein, fitting a coiled end of the pigtail into one of the channels, passing the other end through the other channel and applying a rotating tool to said coil to spin the strands into a compact mass.

3. The method of attaching a stranded conductor to a brush, which consists in drilling two intersecting holes into the same, one being larger than the other to form a seat for the end of the conductor, passing a stranded conductor through both of said holes, wadding one end of it in the larger hole, and spinning such wadded portion until the strands are compacted into a dense mass and forced into intimate contact with the walls of the hole and with said seat.

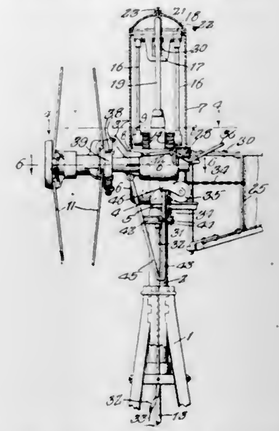
4. A brush having a channel therein, one end of a stranded conductor in said channel, said end being wadded and spun into a compact mass with the strands in intimate contact with the walls of the channel.

5. A brush having intersecting channels and a stranded conductor extending into both of said channels with one end spun into intimate contact with the walls of one of the channels.

[Claim 6 not printed in the Gazette.]

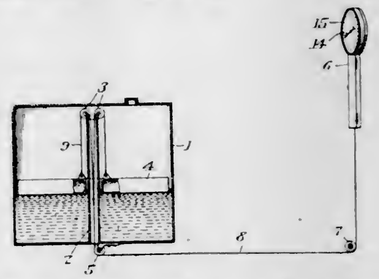
1,171,631. WINDMILL. LA VERNE W. NOYES, Chicago, Ill., assignor to Aermotor Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1914. Serial No. 830,627. (Cl. 170—77.)

A wind mill including a wind wheel; a supporting head for said wheel; means for placing the wheel in and out of the wind; an upright column upon which said head is mounted to turn about an upright axis; a coupler movable along the column and provided with means to enable it to be moved up and down; an upright sheave; a bracket



upon which the sheave is mounted to rotate and itself mounted upon the mill head to be movable about an upright axis; and a tie member connecting said coupler with said means.

1,171,632. GASOLENE-TANK INDICATOR. GERARD NUESELL, New York, N. Y., assignor of one-half to Frank Vermeulen, New York, N. Y. Filed July 22, 1915. Serial No. 35,621. (Cl. 73—82.)

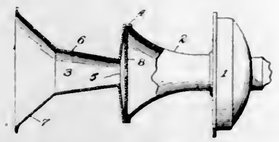


A gasolene tank indicator comprising a tank, a float movably mounted therein, pulleys located in the tank, a tube mounted in the tank, a pulley journaled at the bottom of the tank below the said tube, flexible elements connected with the float and trained over the first mentioned pulleys and joined together and entering the tube, a flexible element trained under the second mentioned pulley and entering the tube and connected with the first mentioned flexible element, an indicator proper, a pulley journaled therein, the second mentioned flexible element being trained over the last mentioned pulley, a weight attached to the end of the second mentioned element, an indicator arm mounted at the indicator proper and means connected with the last mentioned pulley for turning the said arm.

1,171,633. SOUND-ABSORBING DEVICE. EDWARD OSBORN and JAMES J. NOLAN, Albany, N. Y. Filed Feb. 13, 1915. Serial No. 8,017. (Cl. 179—187.)

1. The combination with a telephone transmitter, of a supplemental mouth piece secured to the mouth piece of the transmitter, and a diaphragm of sound absorbing material interposed between said mouth pieces and partially

covering the transmitter mouth piece to absorb sound waves other than those sent directly through the mouth piece.

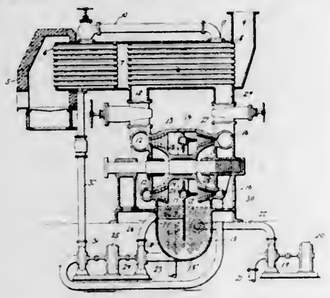


2. The combination with a telephone transmitter, of a supplemental mouth piece secured to the mouth piece of the transmitter, and a cloth diaphragm interposed between said mouth pieces and partially covering the transmitter mouth piece to absorb sound waves other than those sent directly through the mouth piece.

3. The combination with a telephone transmitter, of a sound absorbing device secured to the mouth piece of the transmitter and comprising a cup-shaped body disposed upon the outer end of the transmitter mouth piece and having the flange thereof surrounding the transmitter mouth piece concentrically of such mouth piece and the end wall thereof formed with an opening alining with the opening in the mouth piece and of less diameter than that of the mouth piece, a supplemental mouth piece secured to the end wall of said body, concentrically of the opening therein and projecting outwardly therefrom and a diaphragm of sound absorbing material interposed between the transmitter mouth piece and the end wall of said body across the opening in the end wall of the body to absorb sound waves other than those sent directly through the mouth piece.

4. A sound absorbing device for telephone transmitters comprising a two-part mouth piece secured to the transmitter, and a diaphragm of sound absorbing material interposed between said parts and partially closing the opening through said parts to absorb sound waves other than those sent directly through the mouth piece.

1,171,634. STEAM APPARATUS. OSCAR P. OSTERGREN, Brooklyn, and CHARLES D. MOSHER, New York, N. Y. Filed Mar. 24, 1914. Serial No. 826,864. (Cl. 121—95.)



1. A heat engine comprising means for converting heat into work by expanding gas, means for adding heat to said expanding gas in the engine, means for cooling said gas and compressing it to its original pressure, means for lowering the temperature during said compression, and means for raising the temperature to its original point.

2. The method of utilizing steam for power purposes consisting in generating steam from water, superheating the said steam, converting its expansive properties into energy, condensing a portion of the expanded steam into water, and feeding the said condensate together with the uncondensed expanded steam back into said superheater.

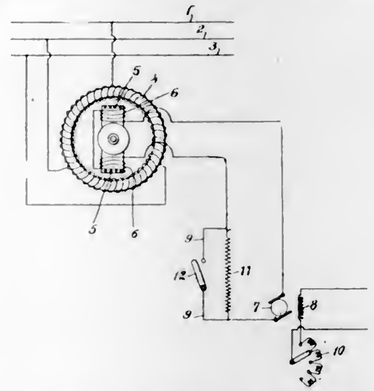
3. The method of utilizing steam for power purposes consisting in generating steam from water, superheating the said steam, converting its expansive properties into energy, condensing a portion of the expanded steam into water, and feeding the said condensate together with the uncondensed expanded steam back into said superheater, and means for heating said condensate prior to mixing the same with said uncondensed steam.

4. The method of utilizing steam for power purposes consisting in generating steam from water, superheating the said steam, converting its expansive properties into energy, condensing a portion of the expanded steam into water, and feeding the said condensate together with the uncondensed expanded steam back into said superheater, and means for heating said condensate prior to mixing the same with said uncondensed steam, by a portion of the heat of said condensate prior to its mixture with said uncondensed steam.

5. The method of utilizing steam for power purposes consisting in generating steam from water, superheating the said steam, converting its expansive properties into energy, condensing a portion of the expanded steam into water, and mixing said condensate with said uncondensed expanded steam and forcing the same back into said superheater.

[Claims 6 to 10 not printed in the Gazette.]

1,171,635. STARTING SYNCHRONOUS ELECTRIC MACHINES. ALDEN B. OWEN, Ridgway, Pa. Filed Sept. 27, 1913. Serial No. 792,094. (Cl. 172—279.)



1. The method of starting a synchronous electric machine which consists in supplying alternating current thereto to start the machine as an induction motor, and applying a source of direct current to the direct current field coils of the machine at the start to polarize the field.

2. The method of starting a synchronous electric machine which consists in supplying alternating current thereto to start the machine as an induction motor, applying a source of direct current to the direct current field coils of the machine at the start and decreasing the resistance of the direct current field circuit upon the machine reaching synchronous speed.

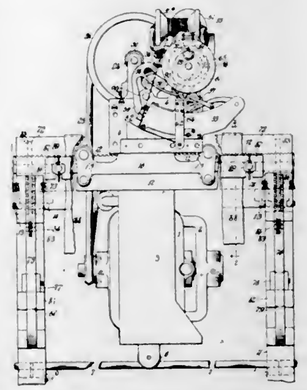
3. The method of starting a synchronous electric machine which consists in supplying alternating current to start the machine as an induction motor, applying a weak source of direct current to the field coils of the machine substantially before attainment of the maximum speed of the machine possible under induction motor operation, and still below the speed at which the motor will slip into synchronism under direct current excitation, and increasing the strength of the direct current source upon the machine reaching synchronous speed.

4. The method of starting a synchronous electric machine which consists in supplying alternating current thereto to start the machine as an induction motor, and applying a source of direct current to the field coils of the machine substantially before attainment by the machine of the maximum speed possible under induction motor operation and still below the speed at which the motor will slip into synchronism under direct current excitation.

5. The method of starting a synchronous electric machine which consists in supplying an alternating current thereto to start the machine as an induction motor and applying a source of direct current to the field coils of the machine substantially before the attainment by the machine of that speed at which it will slip into synchronism under a direct current excitation of the field coils.

[Claim 6 not printed in the Gazette.]

1,171,636. CARPET-SEWING MACHINE. JASPER C. OWENS, Bridgeport, Conn., assignor of one-half to Silas T. Velie, Bridgeport, Conn. Filed Oct. 1, 1913. Serial No. 792,733. (Cl. 112—24.)



1. In a carpet sewing machine, carrying a shuttle for making a lock stitch, and a looper for effecting a loop stitch, mechanism for changing from one form of stitching to the other, comprising a housing plate securely mounted on the main shaft and having an inwardly projecting hub, a cam journaled on said hub for actuating the looper, a change pin operatively mounted in the housing plate and adapted to engage the cam and cause said cam to rotate with the shaft, and to remain idle when the change pin is withdrawn and the shuttle is operating, and means for locking said pin when either the shuttle or looper is in operation.

2. In a carpet sewing machine having supporting standards, removable brackets mounted thereon, and a spring controlled carpet supporter mounted in said brackets.

3. In a carpet sewing machine of the character described, a carpet supporter having its edge shaped to conform to the seam to be stitched, supporting guides for the carpet supporter, springs underlying said carpet supporter, a recessed guide carried by the machine having the bottom of said recess shaped to conform to the edge of the carpet supporter, and means for actuating the guide to temporarily depress the carpet supporter during the operation of overcasting.

1,171,637. PROCESS OF WORKING CLAD METALS. WILLIAM MARSHALL PAGE, Philadelphia, and WIRT TASSIN, Chester, Pa., assignors, by mesne assignments, to Duplex Metallic Company, a Corporation of Pennsylvania. Filed Apr. 28, 1910. Serial No. 558,094. (Cl. 80—63.)

1. The process of producing a strong, highly conductive clad metal conductor which comprises rolling down a clad metal billet to wire rod size and allowing the extended article to cool slowly from a temperature above 1300° F.

2. The process of producing a strong, highly conductive metal conductor which comprises rolling a copper-clad billet to final shape and wire rod size within a range of temperatures between 1800° F. and 1300° F. and allowing the finished metal to cool slowly from a temperature above 1300° F.

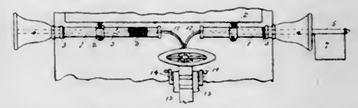


3. The process of producing a strong, highly conductive metal conductor which comprises heating a copper clad billet to a temperature just below the melting point of copper and finishing to wire rod at a temperature about 1300° F.

4. The process of producing a strong, highly conductive metal conductor which comprises rolling a copper clad billet through blunt-edged oval passes to wire rod size, the temperature during the rolling operation being maintained between 1800° F. and 1300 F. and finishing at a temperature above 1300° F.

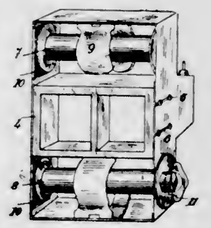
5. The process of producing a strong, highly conductive metal conductor which comprises heating a copper clad billet nearly to the melting point of copper, rolling the same through blunt-edged oval grooves with repeated looping to a wire rod size and during the rolling operation maintaining the temperature above 1300° F.

1,171,638. SIGNALING DEVICE. HARRY JOSEPH PENNINGTON-HAYWARD, Birmingham, England. Filed Oct. 15, 1912. Serial No. 725,935. (Cl. 116—31.)



A signaling device comprising two tubular supports each having a bell-mouthed end, a rod slidably mounted within each of said tubular supports and provided with springs which project the rods outwardly through the bell-mouthed ends, signals attached to said rods and normally contained within the bell-mouthed ends of said supports, cables attached to the inner ends of said rods, and controlling means for the cables to draw the signals within the bell-mouthed ends, said controlling means permitting of each cable being released independently of the other, so that its respective rod and signal can move out beyond its respective bell-mouthed end of the support under the influence of said spring.

1,171,639. PHOTOGRAPHIC APPARATUS FOR TAKING MULTIPLE STEREOSCOPIC VIEWS ACROSS A VERTICALLY-UNWINDING FILM. EMILE PIPON, Paris, France. Filed Feb. 13, 1913. Serial No. 748,134. (Cl. 95—31.)



1. A photographic apparatus for taking multiple stereoscopic views on vertically disposed films comprising in combination, a recessed casing constituting a camera having two lenses and shutters, a small camera partitioned off from said casing movable within the same, for register-

ing the images correctly sized by said small camera cross-wise on a film, superposed means from which the film is wound and unwound vertically, held within the recess of said casing, means for allowing a charging and discharging of the apparatus in daylight, and means for displaying in succession a plurality of numbers insuring the proper succession of the operations, substantially as described.

2. A photographic apparatus for taking multiple stereoscopic views on vertically disposed films comprising in combination, a recessed casing constituting a camera having two lenses and two shutters, a small camera partitioned off from said casing movable within the same, for registering the images correctly sized by said small camera cross-wise on a film, two superposed film spools upon which the film is wound and unwound vertically, held within the recess of said casing, a spring plate co-operating with said recess allowing a charging and discharging of the apparatus in daylight, and a hinged cover provided with openings for the display of numbers insuring the proper succession of the operations, substantially as described.

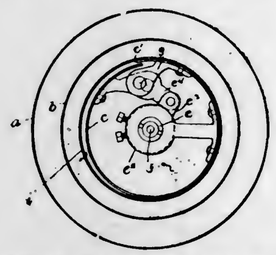
1,171,640. COMBINED BUTTON AND FASTENER. GEORGE W. PRENTICE, Providence, R. I.; Emma Frances Prentice executrix of said George W. Prentice, deceased. Filed Aug. 26, 1912. Serial No. 716,998. (Cl. 24—96.)



1. A combined button and fastener comprising a head and projecting prongs, said prongs being bent to provide an abutment for the under side of the button-head, and an opening adapted to receive one member of a setting tool.

2. A combined button and fastener comprising a head and projecting prongs, said prongs being bent to provide an abutment for the under side of the button-head, and an opening adapted to receive one member of a setting tool, one wall of said opening constituting an abutment adapted to be engaged thereby.

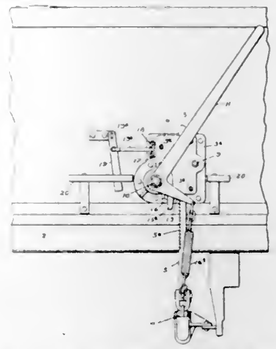
1,171,641. CONTRACTING CORE FOR CEMENT-LINED PIPE. GEORGE W. PRIEST, Newton, Mass. Filed June 13, 1910. Serial No. 566,507. (Cl. 25—128.)



1. A contracting core for cement-lined pipe comprising a sheet-metal shell, slitted from end to end, a center-shaft, brackets arranged on the interior of the shell for supporting said shaft, arms extended from said shaft, and arms also secured to the interior of the shell which are loosely connected with the arms on the shaft, to be moved by rotation of said shaft to expand and contract the shell, said arms on the shell having holes through them, and other arms secured to the shell adapted to extend over the aforesaid arms, having holes through them which register with the holes in the aforesaid arms when the shell is expanded and a rod extended through the holes in said arms for locking them, substantially as described.

2. An expansible core for cement lined pipes including a sectional shell, means for operating the shell to form the same into a true cylindrical, or into a body partly collapsed, and a flexible sheath adapted to be operated with and by the shell to present an unbroken smooth molding surface to the exterior of the shell.

1,171,642. LEVER HAND-BRAKE FOR RAILWAY-CARS. WILLARD G. RANSOM, Davenport, Iowa. Filed June 1, 1914. Serial No. 842,039. (Cl. 188—40.)



1. In a car brake, the combination of a longitudinally reciprocating ratchet bar, a lever having a long arm and a short arm, capable of rotation about a common axis, and a yielding connection between said long arm and said ratchet bar.

2. In a car brake, the combination of a longitudinally reciprocating bar, a lever having a long arm and a short arm capable of rotation about a common axis, said short arm adapted to be rigidly connected to said ratchet bar by the rotation of said lever on its axis.

3. In a car brake, the combination of ratchet bar capable of longitudinal reciprocation, a lever, a long arm and a short arm associated with said lever and capable of rotation about a common axis, said lever having a yielding connection to said ratchet bar through said long arm, and a rigid connection to said ratchet bar through said short arm.

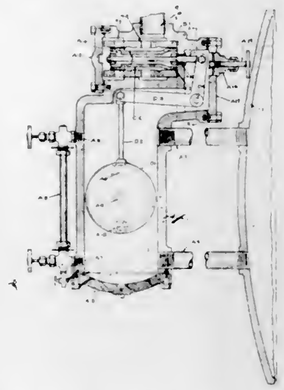
4. In a car brake, the combination of a ratchet bar capable of longitudinal reciprocation, a lever provided with a long and short arm extending at right angles thereto and all capable of rotation about a common axis, means forming a quick acting low power connection between said lever and ratchet bar during the initial movement of said lever and a high power slow acting connection during the remainder of said lever movement.

5. In a car brake, the combination of a ratchet, a lever, means connecting said lever and ratchet whereby a low power quick action followed by a high power slow action is imparted to said ratchet by a single movement of said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,171,643. FEED-WATER REGULATOR. FREDERICK L. RAY, Louisville, Ky. Filed Sept. 9, 1914. Serial No. 860,941. (Cl. 137—101.)

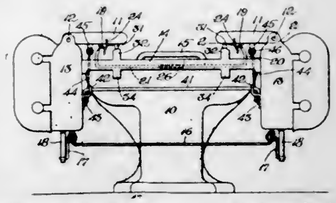
1. In a boiler feed water regulator, a float, parts forming a float chamber, a tubular piston having a stem, parts connecting said float and said stem, parts forming a piston chamber of cylindrical interior, having inlet and outlet openings and ports therein, a plate separating said float chamber from said piston chamber, said plate being pierced so that the piston stem is movable therethrough, and a head closing the opposite end of said piston chamber; the said piston having a cylindrical outer surface, which near each end of the piston is of such diameter as to fit the cylindrical interior of the cylinder-chamber, but which is of less diameter between said end portions, the limits of motion of said piston being such that the inlet port is always in communication with the annular space between the inner cylindrical wall of the piston chamber and that portion of the piston surface which is of less diameter, but the outlet is in certain positions in communication with said annular space, and in other positions is cut off by the end of the piston, the space between the before mentioned separating plate and the nearest end of the piston being connected with the space between the other end of the piston and the head before mentioned by the tubular interior of the piston, the space between the before mentioned head and the end of the piston nearest to it being at all positions in communication with the outlet port above mentioned.



2. In a feed water regulator, a float designed to rise and fall with the level of water in the boiler, parts forming a valve casing into which lead openings designed for inlet and outlet, a bushing having two sets of perforations, so placed that one set is adjacent to the inlet, and the other adjacent to the outlet, a tubular piston movable within fixed limits in said bushing and having its outer surface so formed that its ends fit closely to the bushing but leave an annular space intermediate between said ends, between the walls of said chamber and the surface of said piston, the said perforations being further so placed that said annular space in certain positions of the piston is in communication with both sets of perforations and in other positions is in communication only with the inlet set of perforations, all in combination with means for causing said piston to go forward or back according as the float rises or falls, parts forming a passage leading from the outlet chamber to the boiler, the outlet opening being so extended by a groove in the inner surface of the casing, and the bushing being so placed in the opening which receives it that the outlet opening directly communicates with the space adjacent to the head.

3. In a feed water regulator, a float designed to rise and fall with the level of water in the boiler, parts forming a valve casing into which lead openings designed for inlet and outlet, a bushing having two sets of perforations, so placed that one set is adjacent to the inlet, and the other adjacent to the outlet, a piston movable within fixed limits in said bushing and having its outer surface so formed that its ends fit closely to the bushing but leave an annular space between said ends and between the walls of said chamber and the surface of said piston, the said perforations being further so placed that said annular space in certain positions of the piston is in communication with both sets of perforations and in other positions is in communication only with the inlet set of perforations, all in combination with means for causing said piston to go forward or back according as the float rises or falls, and parts forming a passage leading from the outlet chamber to the boiler, the bushing having annular interior grooves with sharp edges, substantially as described.

1,171,644. WATER-CLOSET SEAT. WARREN C. REES, Somerville, Mass., assignor to Aseptic Service Company, Boston, Mass., a Corporation of Maine. Filed Oct. 12, 1915. Serial No. 55,540. (Cl. 4—18.)



1. A water closet seat, comprising independent sections or members, locks for holding the seat members in operative position, and means for releasing the lock of either section when that of the other section is released.

2. A water closet seat comprising two separate sections, a lock for each section adapted to hold the same in operative position, means controlled by pressure of a weight on either section for releasing the lock thereof, connections whereby the release of either lock also releases the other.

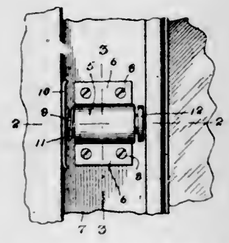
3. In combination with a seat composed of distinct and separate parts and adapted to occupy either a substantially horizontal position for use or a retracted and inoperative position, a separate lock for holding each section in operative position, and means for releasing the locks of both sections when either section is sat upon.

4. A seat composed of distinct sections adapted to be respectively raised and lowered, means acting on said sections tending constantly to raise them, latches arranged for automatic engagement with the seat sections when lowered to retain them in lowered position, said latches having means for causing their disengagement when the seat is sat upon, means whereby the release of either latch causes the other to be released, and connecting means from one seat section to the other for preventing raising of either while the other remains lowered.

5. The combination with a toilet, of seat sections pivotally mounted at opposite sides of the toilet and extending therefrom toward one another when in the position for use, said sections being raisable about their pivots, a latch for each section arranged to hold the same in the lowered position, connecting means between said latches for causing similar actuation of either when the other is actuated, and connections between the sections arranged to prevent raising or lowering movement of either relatively to the other.

[Claims 6 to 12 not printed in the Gazette.]

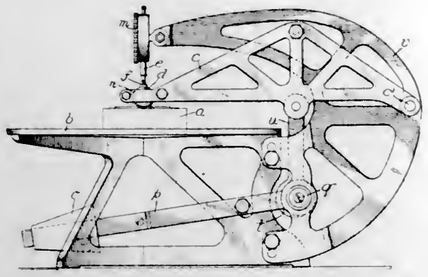
1,171,645. SASH-HOLDER. JOHN REINERT, Millvale, Pa. Filed July 7, 1915. Serial No. 38,493. (Cl. 16—19.)



A sash holder comprising a casing formed from a single length of material and including a barrel, and oppositely disposed attaching flanges, said barrel having one end wall provided with a restricted central opening, a headed plunger slidable within the barrel and through said opening, a shoe on the free end of said plunger disposed exteriorly of the open end of the barrel, a spring

encircling said plunger and terminally engaging the said end wall of the barrel and said shoe to normally maintain the latter in extended position, and said head of the plunger being adapted to engage said end wall to limit the movement of said plunger in one direction.

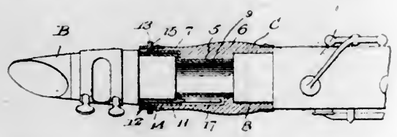
1,171,646. MEASURING INSTRUMENT. JAMES B. REPLOGLE, Chicago, Ill. Filed Nov. 14, 1913. Serial No. 800,916. (Cl. 73—51.)



1. A machine for measuring the working thickness of objects subject to heavy working pressure including an engaging element against which the object may be held; a universally mounted follower for engaging an opposite portion of the object being measured; means for applying heavy working-like pressure to the follower; and a micrometric gage having an actuating element provided with means for causing it to move toward the object as the object is depressed by the follower to measure the working height of the object.

2. A machine for measuring the working thickness of objects subject to heavy working pressure including an engaging element against which the object may be held; a universally mounted follower for engaging an opposite portion of the object being measured; means for applying heavy working-like pressure to the follower; and a micrometric gage having an actuating element provided with means for causing it to move with light pressure toward the object as the object is heavily depressed by the follower to measure the working height of the object.

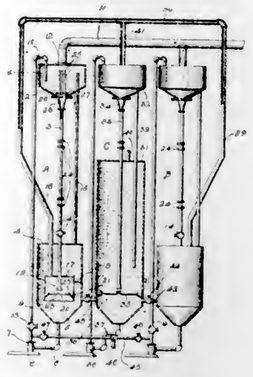
1,171,647. TUNING-SLIDE FOR CLARINETS. WILLIAM F. REYNOLDS, Dayton, Ohio. Filed May 1, 1915. Serial No. 25,226. (Cl. 84—7.)



A tuning joint comprising a barrel, a lining within said barrel, a slide tube within the lining having a socketed end receiving the mouth piece of a musical instrument, external threads formed on the socketed end of the slide tube, an adjusting collar engaging said threads, a turning nut on the collar having swiveled connection with the lining, and a guide pin carried by the slide tube and engageable in the lining to prevent rotation of said slide tube.

1,171,648. ABSORBING, CONDENSING, AND PURIFYING APPARATUS. JOHN F. RHOADES, Millinocket, Me. Filed Dec. 17, 1914. Serial No. 877,757. (Cl. 23—13.)

1. In an absorbing, condensing, and purifying apparatus, an upper closed tank, a closed tank arranged below the upper tank, a pipe communicating the tanks with one another, a gas feed pipe communicating with the upper tank and means to draw a liquid placed in the lower tank therefrom and conduct it to the upper tank whereby it will drop back into the lower tank through the pipe connecting the tanks.



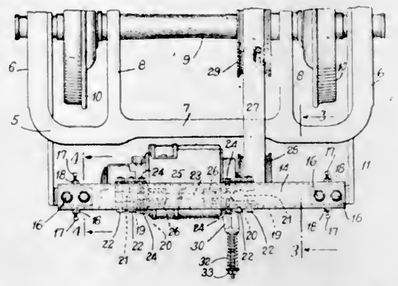
2. In an absorbing, condensing and purifying apparatus, a storage tank, a plurality of closed upper tanks arranged above the plane of the storage tank, a plurality of closed lower tanks, means to establish a communication between the lower and storage tanks, vertical pipes connecting the lower tanks with some of the upper tanks, means for connecting the storage tank with one of the upper tanks, a gas pipe communicating with the upper tanks that are connected to the said lower tanks and means for connecting the lower tanks and the storage tank with respective upper tanks to draw a liquid from the lower and storage tanks and deposit it into the upper tanks.

3. In an absorbing, condensing, and purifying apparatus, a closed tank, an inverted container within said closed tank being spaced circumferentially therefrom, a closed tank arranged above said first tank, a pipe arranged vertically and communicating said tanks with one another, a gas feed pipe communicating with the upper tank, a gas outlet pipe extending through the lower tank and communicating with the inverted container, said first named connecting pipe extending through the upper closed wall of the container and arranged to discharge into said container, a baffle plate arranged below the discharge end of said first named connecting pipe and within said inverted container, and a gas outlet pipe extending within said container and arranged for communication with the upper tank.

4. In an absorbing, condensing and purifying apparatus, tanks arranged one above the other, a pipe connecting the tanks, means for forcing the liquid from the lower tank upwardly into the upper tank whereby it will drain by force of gravity from the upper tank back into the lower tank, a gas or vapor inlet pipe connected with the upper tank whereby the gas is drawn downwardly by water flowing back into the lower tank from the upper tank, a second set of tanks, means to circulate liquid contained in the tanks and means carried by the first tank for conducting the unabsorbed gas or vapor in the lower of the first tanks to the upper of the second set of tanks.

5. An absorbing, condensing and purifying apparatus including a storage tank, a plurality of closed upper tanks, a plurality of closed lower tanks, means to establish a communication between the lower tanks and some of the upper tanks and between the storage tank and one of the upper tanks, a gas pipe communicating with those of the upper tanks that are connected to the lower tanks, an overflow pipe connecting the upper tank with the lower and storage tanks.

1,171,649. DYNAMO SUSPENSION. WILLARD F. RICHARDS, Buffalo, N. Y., assignor to Gould Coupler Company, a Corporation of New York. Filed June 26, 1915. Serial No. 36,442. (Cl. 105—238.)



1. A dynamo suspension having, in combination with a car truck, two supporting bars secured one adjacent each side sill of the truck and extending from the truck and bent downwardly and inwardly toward one another, a cross bar with depending flanges connecting the outer inwardly bent ends of said supporting bars, pivot blocks secured between said flanges, a dynamo pivotally supported from said pivot blocks, and a belt driving the dynamo from an axle of the truck.

2. A dynamo suspension having, in combination with a car truck, two supporting bars secured one adjacent each side sill of the truck and extending from the truck and bent downwardly and inwardly toward one another, a cross bar with depending flanges connecting the outer inwardly bent ends of said supporting bars, pivot blocks secured between said flanges, a dynamo pivotally supported from said pivot blocks, a belt driving the dynamo from an axle of the truck, an arm extending outwardly and downwardly from said cross bar, and tension means carried by said arm tending to swing the dynamo to maintain tension on the belt.

3. A dynamo suspension having, in combination with a truck, two supporting bars extending from the truck having their outer ends bent downwardly and inwardly toward one another, a cross bar with depending flanges connecting the outer inwardly bent ends of said supporting bars, pivot blocks secured between said flanges, a dynamo pivotally supported from said pivot blocks, and a belt driving the dynamo from an axle of the truck.

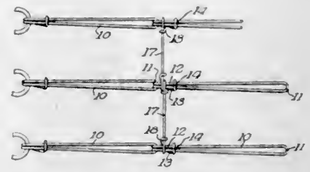
4. A dynamo suspension having, in combination with a truck, two supporting bars extending from the truck, a cross bar with depending flanges connecting the outer of said supporting bars, pivot blocks secured between said flanges, a dynamo pivotally supported from said pivot blocks, and a belt driving the dynamo from an axle of the truck.

5. A dynamo suspension having, in combination with a car truck, two supporting bars extending from the truck having their outer ends bent downwardly and inwardly toward one another, a cross bar connecting the outer inwardly bent ends of said supporting bars, said cross bar having flanges, pivot blocks secured between said flanges, a dynamo pivotally carried by said blocks, and a belt driving the dynamo from an axle of the truck.

[Claims 6 to 25 not printed in the Gazette.]

1,171,650. WIRE FABRIC. HENRY RICHARDSON, Chicago, Ill. Filed Apr. 15, 1914. Serial No. 831,910. (Cl. 245—5.)

1. A wire link fabric including a plurality of links or units, each composed of a single length of wire and formed with a two-ply body member, the two limbs of which are integrally joined at one end of said body member and a two-ply loop at the other end of said body member, the end portion of the wire forming one ply of said two-ply loop being secured, and the end of the wire forming the other ply of said two-ply loop being left free; said links being connected end-to-end to form longitudinal strands, and transverse connecting members between adjacent longitudinal strands.



2. A wire link fabric including a plurality of links or units, each composed of a single length of wire and formed with a two-ply body member, the two limbs of which are joined at one end by a U-bend of the wire lying substantially in the plane of the fabric and a two-ply loop at the other end of said body member lying in a plane substantially vertical to that of the fabric, the end portion of the wire forming one ply of said two-ply loop being secured, and the end of the wire forming the other ply of said two-ply loop being left free; said links being interlooped end-to-end to form longitudinal strands, and transverse connecting members between adjacent longitudinal strands.

3. A wire link fabric including a plurality of links or units, each composed of a single length of wire and formed with a two-ply body member, the two limbs of which are integrally joined at one end of said body member and a two-ply loop at the other end of said body member, the two piles of which are formed as extensions of the two limbs of said body member and lie in planes substantially vertical to that of the fabric, the end portion of the wire forming one ply of said two-ply loop being extended above and across the limb of the body member on which it is formed and then secured, and the end of the wire forming the other ply of said two-ply loop being unsecured; said links being interlooped end-to-end to form longitudinal strands, and transverse connecting members between adjacent longitudinal strands.

4. A wire link fabric including a plurality of links or units, each composed of a single length of wire bent to form a two-ply body member with a loop at one end and a two-ply substantially vertical loop at the other end, said links being connected end-to-end to form longitudinal strands, and cross-connecting members for said strands, each having a terminal loop embracing both piles of the vertical loop of a link to which it is connected.

5. A wire fabric link consisting of a single length of wire bent to form a two-ply body member, the two limbs of which are integrally joined at one end of said body member, and a two-ply loop at the other end of said body member lying in a plane substantially vertical to that of the fabric; the end portion of the wire forming one ply of said two-ply loop being extended above and crosswise of the body member, and the end of the wire forming the other ply of said two-ply loop being left free beneath the body member.

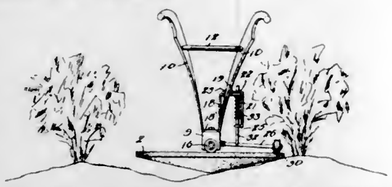
[Claim 6 not printed in the Gazette.]

1,171,651. AGRICULTURAL IMPLEMENT. ROBERT A. RICHARDSON, Madison, Ga. Filed June 29, 1915. Serial No. 37,110. (Cl. 55—13.)

1. An implement of the class described, comprising a support, and a disk having a continuous surface and adapted to roll over the ground and break the crust, said disk being of greater thickness at its center than at its periphery connected with the support of a central pivot and arranged to be rotated by engagement with the ground.

2. An implement of the class described, comprising a support arranged for connection with draft means, a disk having a conical smoothing surface for engagement with the ground, said disk connected centrally with said support by a vertical pivot and constructed to engage the

ground at one side of its center and to be rotated while it is pulled over the ground.



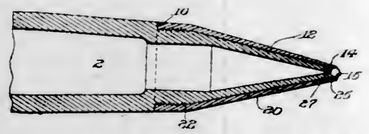
3. An implement of the class described, comprising a beam, a disk having a bottom portion of conical form, with a continuous surface to engage the ground, a pivot connecting said disk and beam and arranged to permit rotation of said disk as it is pulled along while in engagement with the ground on one side of its center, and means to apply a yielding pressure to said disk on that side which engages the ground.

4. An implement of the class described, comprising a draft beam, handles connected therewith, a disk having its bottom portion of greater thickness at the center than at the periphery and having a substantially continuous surface for engagement with the ground and adapted to roll over the ground and break the crust, a substantially vertical pivot connecting said disk centrally with the beam, and means between said beam and disk to apply a yielding pressure to the disk on that side of its center which engages the ground.

5. An implement of the class described, comprising a draft beam, handles connected therewith, a disk having its bottom portion of conical form and having an unbroken smoothing surface to engage the ground, said disk being connected to said beam by a central pivot, an anti-friction roll carried by said beam and bearing upon the upper face of the disk, and yielding means to transmit pressure to the edge of the disk located at one side of said beam.

[Claims 6 to 8 not printed in the Gazette.]

1,171,652. FOUNTAIN-PEN. VAN VECHTON RIESBERG, Philadelphia, Pa., assignor of one-half to Frank H. Dougherty, Philadelphia, Pa. Filed Mar. 17, 1914. Serial No. 825,436. (Cl. 120—43.)

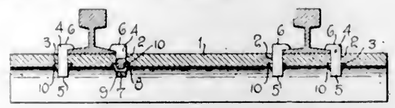


1. In a fountain pen the combination with a substantially cylindrical elongated barrel having one end tapered to form a point, of a substantially conical cap operative to cover said point and spaced therefrom adjacent said point, threads upon the exterior of said barrel operative to engage with threads upon the interior of said cap, a cup formed upon the end of said barrel, a ball in said cup, and means operative to conduct a fluid from the interior of said barrel to the surface of said ball and to the space between said cap and said barrel, said conical cap being operative to maintain said ball within said cup.

2. In a fountain pen the combination with a substantially cylindrical elongated barrel forming an ink reservoir and tapered at one end, of means operative to close the other end of said barrel, a substantially cone-shaped cap removably positioned upon said barrel and spaced therefrom adjacent its extremity and having an opening at its smaller end, a ball, a cup-shaped seat for said ball upon the tapered end of said barrel, and a duct leading from said reservoir to the surface of said seat, said cone-shaped cap being operative to maintain said ball in rotatable relation with said seat and said duct to conduct a fluid to the space between said cap and said barrel.

3. In a fountain pen, the combination with a substantially cylindrical elongated barrel having one end tapered to form a point, of a cap interiorly tapered less sharply than said barrel and positioned over said point whereby a space is left between said point and said cap, a depression formed on the end of said point, a ball in said depression having its surface extending into said space, and means operative to conduct fluid from the interior of said barrel to said ball and thence to said space whereby a body of said fluid will be constantly maintained within said space and in contact with said ball.

1,171,653. RAILWAY-TIE AND FASTENER. CHESTER A. RIGGS, Banner, Kans., assignor of one-half to William A. Riggs, Banner, Kans. Filed Aug. 30, 1915. Serial No. 48,029. (Cl. 238—4.)

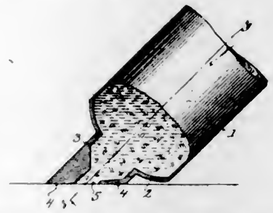


1. The combination with a railway tie having an opening formed therein, of a rail fastening device insertible in said opening, and a spring carried by said fastening device and adapted to automatically spring out into engagement with the tie below the opening upon the insertion of the fastening device into the opening.

2. The combination with a railway tie of a rail fastener therefor, the tie being formed with openings extending therethrough and with counter-sinks at the lower ends of the openings, and fastening devices being insertible in said openings and provided with springs having upwardly and outwardly movable ends adapted to spring out into the counter-sinks upon the insertion of the fastening devices into said opening.

3. The combination with a railway tie having openings extending therethrough and terminating at their lower ends in counter-sinks, of rail fastening devices, said fastening devices including shanks insertible in said openings and having openings passing therethrough, and recesses above and communicating with the ends of said openings, and springs extending through said openings and having upwardly projecting ends adapted to be accommodated in said recesses, and to spring out into the counter-sinks upon the insertion of the fastening devices into the opening.

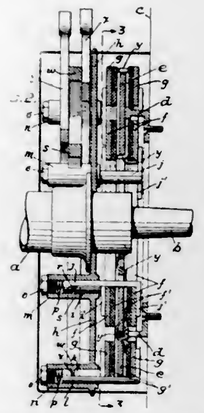
1,171,654. RECEPTACLE-NOZZLE. ROBERT R. RITZ, Milwaukee, Wis. Filed Nov. 12, 1913. Serial No. 800,644. (Cl. 91—67.4.)



A distributer closure for receptacles comprising a nozzle terminating with an oblique distributing face and provided with a bore tapering reduced inwardly from said face to an intermediate point and then enlarged for communication with the interior of the receptacle.

1,171,655. AUTOMOBILE-BRAKE. WILLIAM W. ROACH, Philadelphia, Pa. Filed May 19, 1915. Serial No. 29,061. (Cl. 74—13.)

1. A disk brake comprising a friction disk turning with the wheel, a pair of annular friction plates, said plates arranged on opposite sides of the disk, a fixed plate and a number of pockets carried thereby, slides secured to the nearer friction plate and extending into said pockets, slides secured to the more distant friction plate and extending into said pockets and beyond the other slides, wedges each extending between a pair of slides in one of the pockets, and a manually operable turnable device carrying said wedges.



2. A disk brake comprising a friction disk turning with the wheel, a pair of annular friction plates, said plates arranged on opposite sides of the disk, a series of pairs of slides secured to the respective plates, a turnable ring, a series of wedges carried on one face of the ring and movable between the slides of the respective pairs, and an arm for operating the ring.

3. A disk brake comprising a friction disk turning with the wheel, two pairs of annular friction plates located at different distances from the wheel's axis, the two plates of each pair located on opposite sides of the disk, and means to simultaneously move the two plates of each pair toward each other against opposite faces of the disk.

4. A disk plate comprising a wheel, a friction disk, brackets secured to the wheel and supporting the disk, two annular friction brakes on opposite sides of the disk outside said brackets, two annular friction brakes on opposite sides of the disk inside said brackets, means to simultaneously move the outside plates toward each other against the disk, and independent means to simultaneously move the inside plates toward each other against the disk.

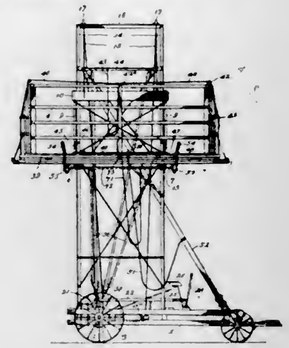
5. A disk brake comprising a friction disk turning with the wheel, two pairs of annular friction plates located at different distances from the wheel's axis, the two plates of each pair located on opposite sides of the disk, a series of pairs of slides secured to the respective plates of each pair, two turnable rings, a series of wedges carried on one face of one ring and movable between the slides of the respective pairs of slides of one series, a series of wedges carried on one face of the other ring and movable between the slides of the respective pairs of the other series, and independently operable arms for operating the respective rings.

[Claims 6 and 7 not printed in the Gazette.]

1,171,656. COMBINED GRAIN BARGE AND STACKER. CLEMENS A. ROBBEN, Norton, Kans. Filed Aug. 19, 1914. Serial No. 857,508. (Cl. 57—53.)

1. In a machine of the character described, a truck, standards mounted upon said truck, an elevator to traverse said standards, a barge dumpingly mounted upon said elevator, a cable attached to the barge for righting the same after dumping, and means on the elevator for automatically taking up slack in said cable.

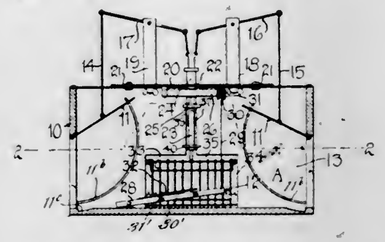
2. In a machine of the character described, a truck, standards swingingly mounted upon said truck, a barge arranged to traverse said standards, braces pivotally connected to said standards and adapted to swing therewith, a bolt connecting said braces, slotted brackets in which said bolt is adapted to move to allow the braces to move with the standards, and manually-controlled means to normally hold said bolt from movement in the slotted brackets.



3. In a machine of the character described, a truck, standards swingingly mounted upon said truck, a barge arranged to traverse said standards, braces pivotally connected to said standards and adapted to swing therewith, a bolt connecting said braces, slotted brackets in which said bolt is adapted to move to allow the braces to move with the standards, a latch to normally hold said bolt from movement in the slotted brackets, and means for moving said latch out of the path of the bolt.

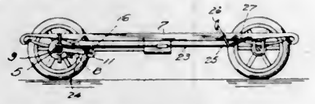
4. In a machine of the character described, a truck, standards swingably-mounted upon said truck, an elevator to traverse said standards, a barge dumpingly-mounted upon said elevator, a cable attached to the barge for righting the same after dumping, and a sheave on the elevator for automatically taking up slack in said cable.

1,171,657. ANIMAL-TRAP. ROY H. ROBERTSON, Herrin, Ill. Filed Apr. 21, 1915. Serial No. 22,844. (Cl. 43—26.)



An animal trap including a body casing, having alined door openings therein, swinging doors adapted to close said openings, a trigger, a trigger rod movable vertically through the top of the casing, having a notch therein, a latch normally engaged within the notch, means connecting the upper end of the trigger rod with the doors to normally retain them in an open position, means connecting the free end of the latch with the trigger, whereby to disengage the latch from the trigger rod upon actuation of the trigger to permit the doors to swing to a closed position, and means connected with the trigger rod and operable by a trapped victim for resetting the doors in open position, after they have been closed, subsequent to the entrance of the victim into the casing.

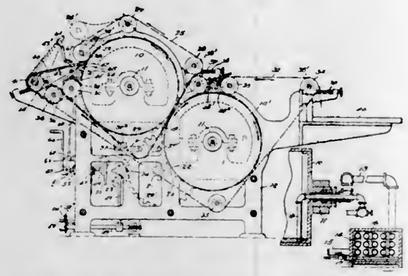
1,171,658. ANTISKID DEVICE FOR AUTOMOBILES. CHARLES P. ROSS, Seattle, Wash. Filed Dec. 17, 1914. Serial No. 877,676. (Cl. 21—8.)



1. In a device of the class described, the combination with a vehicle, of a chambered frame connected for swinging movements to the vehicle, a bar extending into the chamber of said frame, a ground-engaging element carried by the outer end of said bar, a spring tending to push the bar outwardly with respect to the frame chamber, means connected with said bar and a rigid support for limiting the rearward swinging movements of the frame and the extent of the bar's projection from the latter, means for yieldingly holding said frame in inoperative position, and manually-controlled means for causing said frame to be swung into position to render said element operative.

2. In a device of the class described, the combination with an automobile, of a frame connected to the rear end of said automobile, a bar connected to said frame for relative longitudinal movements, a ground-engaging element carried by said bar, a spring tending to push the bar outwardly with respect to the frame, means connected with said bar to limit the rearward swinging movements of the frame and the extent of the bars projection therefrom, and means connected to said frame whereby the same is moved to carry said element into or out of operative positions.

1,171,659. LAUNDRY-MANGLE. JOHN C. ROSS, Seattle, Wash., assignor of one-half to Bourret-Kirkwood Co., Seattle, Wash., a Corporation of Washington. Filed Feb. 18, 1915. Serial No. 8,977. (Cl. 68—9.)



1. In a mangle, the combination with the machine frame, two cylinders journaled therein and arranged one in advance of the other and at a higher elevation than the rear cylinder, endless aprons for the respective cylinders, the apron for the forward cylinder being arranged to feed to and remove the work from such cylinder at the forward side thereof and the other belt is arranged to feed the work to and remove the same from the rearmost cylinder at the upper side thereof, whereby the work is caused to traverse almost the entire peripheries of the cylinders in its travel through the machine.

2. In a mangle, the combination with the machine frame, a pair of steam-heated cylinders journaled therein, endless aprons for the respective cylinders, and driving and guide rollers for carrying and directing the aprons, of power transmission mechanism for driving the cylinders and aprons at selected speeds and in different directions, said mechanism comprising toothed gear wheels operatively connecting said cylinders and driving rollers, a shaft operatively connected with said gears, a friction member splined to said shaft, means to regulate the position of said friction member axially of the shaft, a second friction member, a spring tending to retain said second member out of engagement with the first-named member, means to effect the engagement of said members in opposition to the spring, devices for securing the members in such engagement, and means connected with said devices whereby the latter is rendered inoperative and allow said spring to disengage said members to stop the machine.

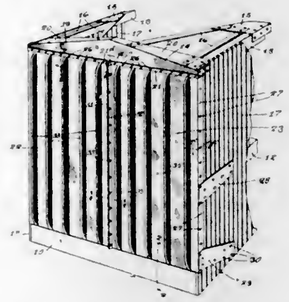
3. In a mangle, the combination with the machine frame, cylinders journaled therein, a ribbon conveyer hingedly connected to the frame in front of one of said rollers, endless aprons for the respective drums and extending into proximity to said conveyer, guide and power-driven rollers for the aprons, and means hingedly connected to the frame for supporting the guide-roller for one of the aprons, said means being adapted to hold the respective roller in operative position in relation to the adjacent cylinder and the conveyer or to be tilted up to give access to the referred to cylinder and permit the tilting up of the conveyer.

1,171,660. METHOD FOR THE MANUFACTURE OF FUEL. MARCO ROSSI, Barcelona, Spain. Filed May 17, 1913. Serial No. 768,387. (Cl. 44—1.)

1. A process for manufacturing fuel in an agglomerated form, consisting in treating with carbon bisulfid a carbonaceous substance or mass adapted to be softened by it and then molding the mass, substantially as described.

2. A process for manufacturing fuel in an agglomerated form, consisting in treating with carbon bisulfid a carbonaceous substance or mass and a binder adapted to be softened by the said carbon bisulfid, and then molding the treated mass, substantially as described.

1,171,661. RAILWAY-CAR. THOMAS NATHAN RUSSELL, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill, a Corporation of Illinois. Filed Dec. 4, 1914. Serial No. 875,432. (Cl. 105—192.)



1. In a railway car, the combination of a sheet-metal end plate, two sheet-metal end-closure plates arranged side by side and connected at their upper edges to said end plate, said end-closure plates having their adjacent edges turned at an angle to form attaching flanges, a compressible weather-strip interposed between said flanges, means for connecting said flanges firmly together, and inclosing means projecting from the upper edge of the end plate about the upper ends of said flanges.

2. In a railway car, the combination of a sheet-metal end plate, two sheet-metal end-closure plates arranged side by side below said end plate, an offset flange formed on the lower edge of said end plate overlapping said end-closure plates, means for securing said flange to said end-closure plates, flanges formed at the adjacent edge of said end closure-plates, a compressible weather-strip interposed between said last-named flanges, and means for connecting said last-named flanges firmly together, the flange extending across the lower edge of the end plate being pressed outward at the junction of said two end-closure plates for inclosing the upper ends of the two connected flanges.

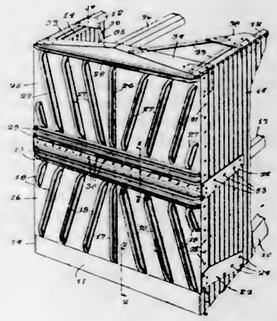
3. In a railway car, the combination of a sheet-metal end plate comprising a vertically-extending portion having an offset flange at its lower edge, and two sheet-metal end-closure plates arranged side by side below said end plate with said flange overlapping their upper edges and firmly connected thereto, the ends of the vertically-extending portion of the end plate being turned at an angle to extend along the outer face of the side sheathing, the offset at the lower edge of the end plate being faded out at the turned ends thereof.

4. In a railway car, the combination of an end sill, an end-closure plate secured at its lower end to said end sill and having a plurality of strengthening ribs pressed therein extending upward in vertical position from said end sill to substantially the upper end of said plate and spaced at intervals between the side edges thereof, and an end plate structure extending downward on the outer face of said end-closure plate, said end plate structure comprising bracing means for strengthening it against bowing outward at an intermediate point whereby the end plate and the end-closure plate mutually reinforce each other against strain longitudinally of the car.

5. In a railway car, the combination of a sheet-metal end plate comprising a vertically-extending portion, a sheet-metal end-closure plate secured at its upper end to said end plate, a tie-plate secured to said end-closure plate at its side edge and extending along the side of the car, means for securing said tie-plate to the belt rail of the car, and a flange on the lower end of said end-closure plate secured to the upper face of the end sill of the car, said end-closure plate being provided with vertically-extending strengthening ribs adapted to strengthen said end-closure plate against being bowed outward relative to said end sill and said end plate.

[Claims 6 to 17 not printed in the Gazette.]

1,171,662. RAILWAY-CAR. THOMAS NATHAN RUSSELL, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1914. Serial No. 875,433. (Cl. 105—192.)



1. An end-closure for a railway car comprising a sheet-metal plate extending across the end of the car with its side edges turned to extend along the sides of the car on the outer face of the side sheathing, and portions formed integrally with said plate and inclined to conform to the slope of the roof of the car, the ends of said inclined portions being turned down between the side plates and the side sheathing of the car.

2. An end-closure for a railway car comprising a sheet-metal plate extending across the end of the car with its side edges turned to extend along the sides of the car on the outer face of the side sheeting, portions formed integral with said plate and inclined to conform to the slope of the roof of the car, and diagonally-extending brace-bars connected with said inclined portions and with the side plates of the car a short distance from the end of the car.

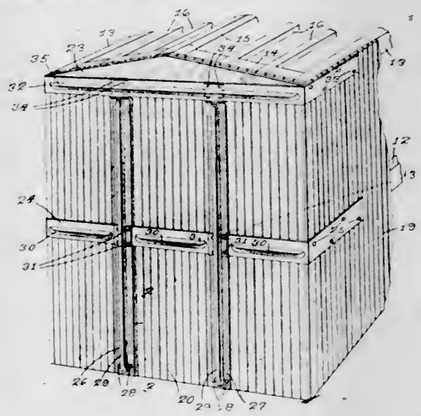
3. An end-closure for a railway car comprising a sheet-metal plate extending across the end of the car with its side edges turned to extend along the sides of the car on the outer face of the side sheathing, portions formed integral with said plate and inclined to conform to the slope of the roof of the car, gussets firmly secured in position upon the side plates of the car a short distance from the end of the car, brace-bars connected with said gussets and extending therefrom diagonally inward to the said inclined portions, and means for securing said brace-bars to said inclined portions.

4. An end closure for a railway car comprising a sheet-metal plate extending across the end of the car, and means at the upper edge of said plate for preventing said plate from bowing outward at its middle point, said plate being provided with a strengthening rib pressed in horizontal position therein across its lower edge portion, and with a vertically-extending strengthening rib and a plurality of other strengthening ribs parallel with each other and diverging with said vertically-extending rib pressed in said plate extending upward from said horizontally-extending rib to substantially the upper edge of the plate.

5. An end-closure for a railway car comprising a sheet-metal plate extending across the end of the car, a flange turned inward along the lower edge of said plate, and means for securing said flange to the upper face of the end sill of the car, said plate being provided with a straight strengthening rib pressed in horizontal position therein across its upper edge portion below the edge of the plate, and with a plurality of diverging strengthening ribs pressed therein extending downward from said horizontally-extending strengthening rib to substantially the lower edge of the plate.

[Claim 6 not printed in the Gazette.]

1,171,663. RAILWAY-CAR. THOMAS NATHAN RUSSELL. Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 4, 1914. Serial No. 875,435. (Cl. 105—192.)



1. In a device for strengthening the end of a car, the combination of a metal strip secured across the outer face of the car end and provided with a strengthening rib pressed in the strip longitudinally thereof, and a second metal strip secured across the outer face of the car end at an angle to said first-named strip and extending under the said first-named strip and under the strengthening rib thereof, said second strip being provided with strengthening ribs pressed therein longitudinally of said strip at opposite sides of its point of contact with said first-named strip.

2. In a device for strengthening the end of a car, the combination of a metal strip secured across the outer

face of the car end and provided with a strengthening rib pressed in the strip longitudinally thereof, and a second metal strip secured across the outer face of the car end at an angle to said first-named strip and extending under the said first-named strip and under the strengthening rib thereof, said second strip being provided with strengthening ribs pressed therein longitudinally of said strip at opposite sides of its point of contact with said first-named strip, and said first-named strip having an offset pressed in the bearing face thereof to fit snugly over said second strip.

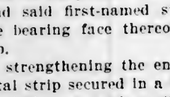
3. In a device for strengthening the end of a car, the combination of a metal strip secured in a horizontal position across the end of the car, and another metal strip secured in vertical position across the outer face of the car end and across said horizontally-extending strip, said second-named strip being provided with a vertically-extending strengthening rib pressed therein, and said first-named strip being provided with horizontally-extending strengthening ribs pressed therein at opposite sides of said second-named strip, and means for securing said strips together at their crossing point independently of the said ribs.

4. In a device for strengthening the end of a car, the combination of a metal strip secured across the outer face of the car end, and a plurality of other metal strips each secured across the outer face of the car end and the outer face of said first-named strip and each provided with a strengthening rib pressed therein longitudinally of the strip across said first-named strip, said first-named strip being provided with strengthening ribs pressed therein longitudinally of the strip both between said second-named strips and also from said second-named strips toward the ends of the first-named strip.

5. In a device for strengthening the end of a car, the combination of a metal strip secured in horizontal position across the end of the car, another metal strip secured in vertical position across the outer face of the car end and across said horizontally-extending strip, and a third metal strip secured across the upper portion of said car end and across the upper end of said second-named strip, said third-named strip being provided with a strengthening rib pressed therein extending across said second-named strip, said second-named strip being provided with a strengthening rib pressed therein extending across said first-named strip, and said first-named strip being provided with strengthening ribs pressed therein at opposite sides of said second-named strip.

[Claims 6 to 8 not printed in the Gazette.]

1,171,664. VALVE-DISK. WILLIAM F. SCHACHT, Huntington, Ind. Filed Feb. 3, 1915. Serial No. 5,930. (Cl. 103—66.)



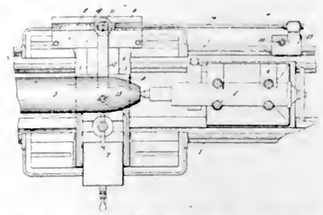
1. The herein described process of manufacturing reinforced composition valve disks and the like, consisting in forming a blank of suitable material, then inserting into said blank a series of independent reinforcing rods or nails, and finally shaping and vulcanizing the blank.

2. The herein described method of producing metal reinforced rubber valve disks, consisting in forming a blank out of a piece of rubber composition, inserting into said blank a series of independent radially disposed reinforcing wires or nails, then placing such reinforced blank in a mold to shape same and vulcanizing such reinforced plank.

3. The herein described reinforced valve disk consisting of a composition body having a series of independent radially disposed reinforcing wires or nails embedded therein, substantially as described.

4. The herein described reinforced valve disk comprising a vulcanized disk of rubber composition, and a series of independent radially disposed reinforcing nails or wires embedded in said disk, substantially as described.

1,171,665. PROJECTILE-TURNER. WILLIAM SCHELLENBACH, Wyoming, Ohio. Filed Aug. 25, 1915. Serial No. 47,219. (Cl. 82—11.)



1. A device of the class described, comprising a bed, a longitudinally movable carriage, a transversely movable tool-slide carried thereby, a pivot block slidably supported by the carriage, means for restraining said block against movement, and a radius link pivotally connected to the pivot block and tool-slide.

2. A device of the class described, comprising a bed, a longitudinally movable carriage, a transversely movable tool-slide carried thereby, a pivot block supported by the carriage, means carried by the carriage for preventing transverse movement of the pivot block, means secured to the bed for preventing longitudinal movement of the pivot block, and a radius link pivoted on the pivot block and on the tool-slide.

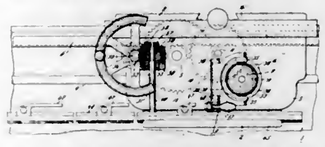
3. A device of the class described, comprising a bed, a longitudinally movable carriage, a transversely movable tool-slide carried thereby, a grooved guide plate secured to the carriage, a pivot block confined within the groove of said guide plate, means rigidly securing said pivot block to the bed and a radius link pivoted to the pivot block and tool-slide.

4. A device of the class described, comprising a bed, a longitudinally movable carriage, a transversely movable tool-slide carried thereby, a grooved guide plate detachably secured to the carriage in parallel alinement with the bed, a pivot block confined within the groove of said guide plate, adjustable means for securing the pivot block to the bed, and a radius link pivoted at one end to the pivot block and at the opposite end to the tool-slide.

5. A device of the class described, comprising a bed having a plurality of parallel slide ways, a carriage longitudinally movable thereon, a transversely movable tool-slide carried by the carriage, a grooved guide plate detachably secured to the carriage in parallel alinement with the slide-ways, a pivot block confined within the groove of the guide plate, a bracket slidably mounted on one of said slide-ways, means for clamping said bracket to the slide-way in adjusted position, a rigid connection between the bracket and pivot block and a radius link pivoted at one end to the pivot block, and at the opposite end to the tool-slide to control the transverse tool slide movement during the longitudinal carriage travel.

[Claim 6 not printed in the Gazette.]

1,171,666. LENGTH-STOP. WILLIAM L. SCHELLENBACH, Hartwell, Ohio. Filed June 14, 1915. Serial No. 33,935. (Cl. 82—21.)



1. In a device of the class described, a bed, a carriage slidable thereon, means for traversing the carriage on the bed, a clutch and clutch-actuator on the carriage for connecting or disconnecting said traversing means, a member supported by and movable on the carriage, having devices for engaging and automatically operating said clutch-actuator, and means for moving said member relative to said carriage taking motion from said carriage traversing means.

2. In a device of the class described, a bed, a carriage slidable thereon, means for traversing the carriage on the bed, a clutch and clutch-actuator on the carriage for connecting or disconnecting said traversing means, a member supported by and movable on the carriage, having devices for engaging and automatically operating said clutch-actuator, means for moving said member relative to said carriage taking motion from said carriage traversing means, and means for moving said clutch-actuator into and out of the path of travel of said devices on the sliding member.

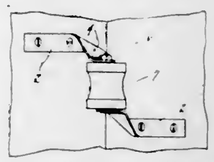
3. In a device of the class described, a bed, a carriage slidable on the bed, means for traversing the carriage on the bed, a clutch and clutch-actuator on the carriage for connecting or disconnecting said traversing means, a member supported by and movable on the carriage having devices for engaging and automatically operating said clutch-actuator, and means taking motion from said traversing means for moving said member on the carriage in a direction reverse to that in which the carriage is traveling.

4. In a device of the class described, a machine bed, a carriage and apron slidable thereon, means on the apron for traversing said carriage in either direction on the bed, a clutch mechanism on the apron controlling said traversing means, a member supported by and movable relative to the apron, and mechanism operated by said traversing means for sliding said member relative to the apron, whereby its devices engage the clutch-actuator at predetermined times in the traverse of the carriage.

5. In a device of the class described, a machine bed, a carriage and apron slidable thereon, means on the apron for traversing said carriage in either direction on the bed, a clutch mechanism on the apron controlling said traversing means, a member supported by and slidable relative to the apron, mechanism operated by said traversing means for sliding said member relative to the apron, whereby its devices engage the clutch actuator at predetermined times in the traverse of the carriage, means for fixing said member to the bed, and means for disconnecting the drive of said member relative to the carriage traversing means.

[Claims 6 to 14 printed printed in the Gazette.]

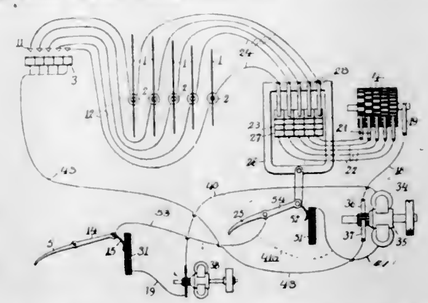
1,171,667. SUPPORTING-BRACKET. HUGO C. H. SCHROTH, Sacramento, Cal. Filed Aug. 6, 1914. Serial No. 855,424. (Cl. 173—321.)



A bracket, as described, comprising a flat body member, the same being bent at one end to form another portion lying in a plane disposed at right angles to said body member, the flat of said bent portion lying in a plane outside of the plane of the adjacent edge of said body member, as described.

1,171,668. PIANOFORTE CONTROL. MELVIN L. SEVERY, Arlington Heights, Mass., and GEORGE B. SINCLAIR, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed Mar. 8, 1913. Serial No. 753,013. (Cl. 84—131.)

1. A musical instrument comprising sonorous bodies actuated by electromagnets, a timbre controller for said magnets, and means whereby the strength of current delivered to said magnets is automatically varied by the operation of said timbre controller.



2. A musical instrument comprising sonorous bodies actuated by electromagnets, means for delivering electric pulsations to said magnets, a current-switching device for sending at will any selected set of pulsations into any of a plurality of magnets, and means connected and operable with said switching device for varying the voltage of the energizing current.

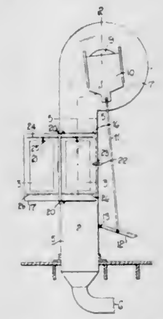
3. A musical instrument comprising a source of electric energy; a circuit including said source; electromagnets also included in said circuit; sonorous bodies in proximity to said electromagnets; means for producing pulsations in the electric current of the circuit; a current switching device for sending at will any selected sets of pulsations into any of a plurality of said magnets; a pedal operating said switching device; a rheostat in the circuit common to all of said magnets; and a brush also in said circuit, movable along said rheostat by said pedal.

4. A musical instrument comprising sonorous bodies actuated by electromagnets; means for producing sets of electric pulsations of different frequencies; a current-switching device for sending at will pulsations of any of said frequencies to any of a plurality of said magnets; means connected and operable with said switching device for varying the current strength to correspond with the different adjustments of said switching device; and means independently controlling the strength of the current pulsations.

5. A musical instrument having sonorous bodies electrically actuated, means for producing a variety of tones of different timbre from any one of said bodies, and means for regulating the loudness of such tones.

[Claim 6 not printed in the Gazette.]

1,171,669. MACHINE FOR DRESSING CHICKENS. WILLIAM SHORT, Denison, Iowa. Filed June 19, 1915. Serial No. 35,089. (Cl. 17—30.)



1. In an apparatus of the character described, an air conduit, and a movable fowl carrier mounted upon the conduit and adapted to be operated to dispose a fowl

carried thereby within the conduit and subject the same to a blast of air passing therethrough whereby the feathers are removed from the body of the fowl.

2. In an apparatus of the character described, a conduit having an opening therein intermediate of its ends, and a fowl carrier rotatably mounted in said opening and adapted to be positioned to dispose a fowl carried thereby within the conduit and subject the same to a blast of air passing therethrough whereby the feathers are removed from the body of the fowl.

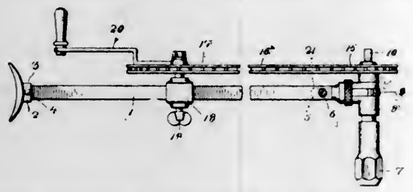
3. In an apparatus of the character described, an air conduit having an opening intermediate of its ends, a rotatable fowl carrier mounted in said opening and provided with means to receive a plurality of fowls, said carrier being operable to close the opening of the conduit and dispose one of the fowls thereon within said conduit to subject the same to a blast of air passing through the conduit whereby the feathers are removed from the fowl.

4. In an apparatus of the character described, an air conduit provided with an opening intermediate of its ends, a rotatable carrier mounted in said openings and consisting of a plurality of radially disposed wings, means for suspending a fowl between adjacent wings of the carrier, said carrier being operable to dispose one of the fowls within the conduit, the contiguous wings of the carrier closing the opening in the conduit, and means for locking the carrier against rotation.

5. In an apparatus of the character described, an air conduit having a blast fan at one end, a rotatable carrier mounted in the opening intermediate of its ends and provided with means to receive a plurality of fowls, said carrier being operable to dispose one of the fowls thereon within the conduit whereby the same is subjected to a blast of air passing therethrough and also close the opening in the conduit, and means for locking the carrier against rotation.

[Claim 6 not printed in the Gazette.]

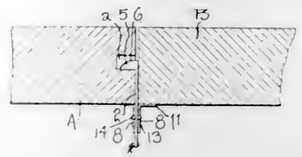
1,171,670. BIT-STOCK. IRA E. SISK, East St. Louis, Ill. Filed Sept. 23, 1914. Serial No. 863,194. (Cl. 145—67.)



The combination of a bearing head, a bit chuck having a journaled portion extending through and rotatable in the head, a gear wheel fast on said journal portion at the opposite side of the head from the body of the chuck, a ratchet driving member terminating in a shank extending laterally from the bearing head and perpendicular to the axis on which the chuck journal revolves, said shank being non-circular in cross section, and interchangeable chuck-operating members formed with sockets corresponding in shape with and adapted to receive and hold said shank, one of said operating members embodying a straight stock and straight drive gearing the elements of which together with the above mentioned gear wheel are in a common plane parallel to said stock.

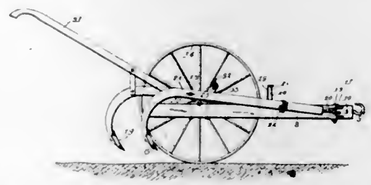
1,171,671. DOOR-FASTENER. FRANK T. SKOGLAND, Minneapolis, Minn. Filed Aug. 14, 1915. Serial No. 45,516. (Cl. 16—8.)

1. A device of the character described comprising a shank having teeth formed in one of its longitudinal edges and a laterally projecting ear on one end, a door engaging member slidably and rotatably mounted at one of its ends upon said shank, said member being provided with means for interlocking engagement with the teeth on said shank when said member and shank are disposed in parallel planes, whereby the member is held against pivotal or sliding movement with respect to the shank, and a spring latch element fixed at one of its ends to the door engaging member and having its other free end angularly disposed for engagement with the untoothed edge of the shank, whereby the door engaging member is held against casual pivotal movement with respect to the shank and retained in interlocking engagement therewith.



2. A device of the character described comprising a shank having teeth upon one edge, one end of the shank being formed with laterally projecting spaced ears disposed in planes at right angles to the plane of the shank, the shank being longitudinally slotted and a door engaging member having opposed cheeks engaging on each side of the shank connected by a web formed with a plurality of perforations adapted to receive and engage with the teeth on the shank, a pivot pin passing through the cheeks of the door engaging member and permitting the door engaging member to be rotated in one direction to carry its web out of engagement with the teeth on the shank, the end of the door engaging member being formed with a laterally extending flange, and a spring mounted upon the door engaging member and extending down beneath the shank and acting to prevent the accidental rotation of the door engaging member upon its pivot pin, from a locking to an unlocked position.

1,171,672. ONE-HORSE CULTIVATOR. JOHN L. SMITH, Noland, Ark. Filed Feb. 18, 1914. Serial No. 819,512. (Cl. 97—10.)

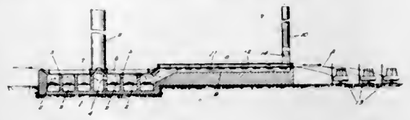


1. A cultivator including a wheel frame, shovel frames associated with said wheel frame, auxiliary shovel frames mounted on the main shovel frames and being movable laterally to increase or diminish the range of cultivation, and means pivotally mounted on the main shovel frames and being adjustably associated with the auxiliary shovel frames to hold the latter in predetermined adjusted positions substantially as specified.

2. A cultivator including a wheel frame, main shovel frames associated with the wheel frame, auxiliary shovel frames pivotally mounted on the main shovel frames and being movable in a horizontal arc to increase or diminish the range of cultivation, threaded bolts pivotally mounted on said main plow frames and being detachably engaged with the auxiliary plow frames to hold the latter in predetermined adjusted positions.

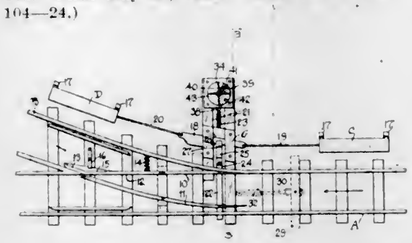
1,171,673. METHOD OF ANNEALING FENCE-WIRE. WILLIAM H. SOMMER, Peoria, Ill. Filed May 7, 1914. Serial No. 837,026. (Cl. 148—20.)

1. The herein described method of annealing wire, which consists in passing the wire through an annealing furnace having a combustion chamber and a gaseous passage with a stack leading directly from the chamber and an escape leading from the gaseous passage to provide an escape for waste gases which do not escape through the chamber stack, and previous to such passage of the wire through the furnace, subjecting such wire to the heat of the waste gases from said furnace in the gaseous passage, without the products of combustion coming into contact with said wire.



2. The herein described method of annealing wire, which consists in passing the wire through a molten metal bath of a furnace having a combustion chamber and a gaseous passage with a stack leading from the chamber and an escape leading from the gaseous passage to provide an escape for waste gases which do not escape through the chamber stack, and previous to the wire entering said bath passing the same through a pre-heater, said pre-heater comprising the gaseous passage being heated by the waste gases from the molten metal bath but without the products of combustion coming into contact with the wire.

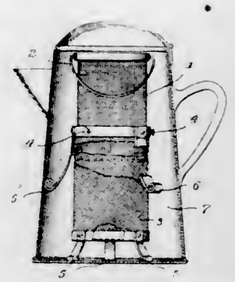
1,171,674. TRACK-SWITCH. JOHN T. SOUTH, Rice, Tex. Filed May 12, 1915. Serial No. 27,620. (Cl. 104—24.)



1. In a switching mechanism, the combination with movable point rails, which control the entrance from a main track to a siding, of a draw rod connected to the point rails, a controlling bar engageable with the draw rod for moving the rails to open track position, a housing mounted adjacent the main track, and a housing mounted adjacent the siding, each of said housings comprising hollow upper and lower sections, and U-shaped brackets secured to the rear faces of the sections for maintaining the adjacent horizontal edges of the same in spaced relation, a lever pivoted in each of said housings, and means operatively connecting said levers with the controlling bar, said levers being adapted to be operated by a trip bar passed through the space between the sections of the housing.

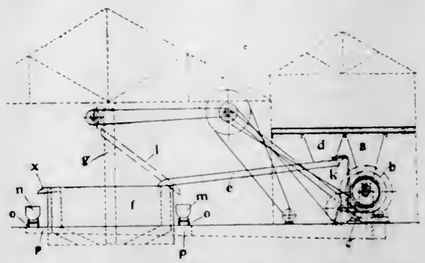
2. In a switching mechanism, the combination with movable point rails, which control the entrance from a main track to a siding, and a draw rod pivotally connected to the point rails and movable transversely with respect to the track for opening the rails, yieldable means operatively connected to the draw rod for normally maintaining the point rails in closed track position, a vertical shaft operatively connected to the draw rod, and means for locking the shaft in adjusted position, whereby the draw rod may be maintained against movement when the point rails are in closed track position or maintained against movement when the rails are in open track position, said means comprising a stationary latch plate having spaced notches, an arm fixed upon the shaft, an arm loose upon the shaft, and a latch member pivoted to the said loose arm, said latch member being engageable in the notches of the plate.

1,171,675. COFFEE-FILTER. HARRY A. SPARBER, Lethbridge, Alberta, Canada. Filed Apr. 4, 1914. Serial No. 829,604. (Cl. 53—3.)



The herein described filter for use in a coffee pot and comprising a filtering vessel of screen material having an open upper end and having supporting legs at its lower end, a foraminous material container adapted to slidably fit within the filter vessel, a band around the filtering vessel, clamping screws carried by the band and to secure the container in adjusted position within the filtering vessel and spacing arms also carried by the band and adapted to engage the wall of the pot.

1,171,676. TREATMENT OF SLAG FOR THE MANUFACTURE OF BRICKS AND FOR OTHER PURPOSES. EDGAR ROUSE SUTCLIFFE, Leigh, England. Filed Aug. 17, 1914. Serial No. 857,250. (Cl. 75—145.)



1. A process for treating slag, consisting in granulating molten slag in a thick mixture of lime and water, draining and drying the mass, and compressing it, substantially as described.

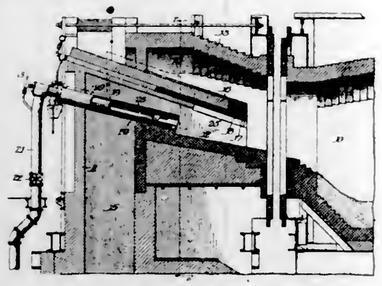
2. A process for treating slag, consisting in granulating molten slag in a thick mixture of lime and water, to which slag in a finely divided condition is added; draining and drying the mass, and compressing it, substantially as described.

3. A process for treating slag, consisting in granulating molten slag in a thick mixture of lime and water, separating the lighter from the heavier particles of the mass, and then separately treating the masses produced, substantially as described.

1,171,677. APPARATUS FOR BURNING GAS. NELSON THOMAS and ANSON W. ALLEN, Birmingham, Ala. Filed July 10, 1914. Serial No. 850,131. (Cl. 158—109.)

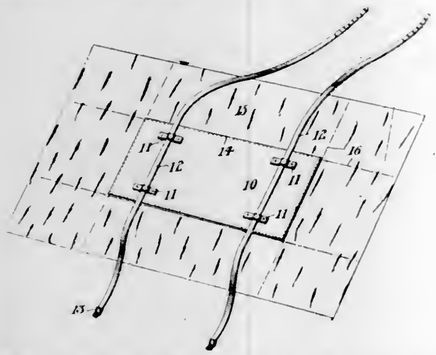
1. In a burner for open hearth furnaces, the combination of a pipe projecting inwardly from the rear wall of the burner, a second pipe surrounding said first pipe and providing a water space between said pipes, inlet and outlet water connections to said space, a gas connection to said inner pipe, a third small pipe located internally of said inner pipe and terminating short of the mouth thereof, means for maintaining said small pipe in axial alinement with the pipe in which it is

held, means for supplying high pressure air to said small pipe and additional means for supplying air around the gas pipe, substantially as described.



2. In a gas burning device for open hearth furnaces, the combination of a large conduit and a small conduit, each of which is adapted to supply air, said conduits uniting at the point of discharge, a water-cooled gas pipe located in said smaller conduit and projected inwardly from the end wall of the device and terminating short of the mouth of said smaller conduit and substantially midway in the length thereof, and a small high-pressure air pipe located internally of said gas pipe and terminating short of the mouth of said gas pipe, substantially as described.

1,171,678. SUITCASE ATTACHMENT. GUILFORD D. TROTTER, Stayton, Oreg. Filed Aug. 24, 1914, Serial No. 858,239. Renewed Aug. 28, 1915. Serial No. 47,890. (Cl. 190—52.)

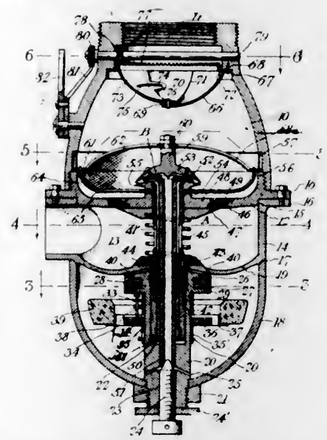


The combination with a receptacle, of an auxiliary receptacle carried thereby, comprising a stiffened sheet section, guide straps secured to the outer face of said section, fastening straps arranged in said guides, a flexible section stitched to said sheet, and extending laterally from each edge thereof, and adapted to be folded to assume a position within the peripheral edges of the stiffened sheet, and be retained in position by said straps passing about both receptacles.

1,171,679. CARBURETER. CLARENCE WILLIAM ERNST VELLGUTH, San Francisco, Cal. Filed Oct. 3, 1911. Serial No. 652,566. (Cl. 48—154.1.)

1. In a device of the class described, a mixing chamber, a nozzle, fuel connections therefor, air connections for the nozzle, a circumscribing cage around the nozzle dividing the mixing chamber an air inlet in the chamber at one side of the cage, and an outlet opposite the inlet, said nozzle being adapted to direct air and fuel toward the side of the cage adjacent the air inlet.

2. A device of the class described comprising a cupola part having an outlet opening and throttle means, a floor member carried by the cupola and having an enlarged air port therein, a valve yieldingly seated in the port, and air chamber member therebeneath having a downwardly extending tubular stem, and a bowl centrally apertured and engaged around the stem with its peripheral edge against the air chamber member, fuel supply and governing means for the bowl, the interior of said stem having communication with the interior of the bowl, a tubular member slidable in the stem and having a reduced portion a spaced distance within the stem, a collar threaded in the upper portion of the stem and engaged in said reduced portion to limit movement of the tubular member, said tubular member being engaged through said valve, having lateral communication with the air chamber and being closed at its lower end, a duct member extending through the lower end of the tubular member and above its upper end, a stationary valve element in the bowl alined with the duct member, a nozzle device carried at the upper end of the tubular member for mixture and ejection of air and fuel passing through the tubular member.

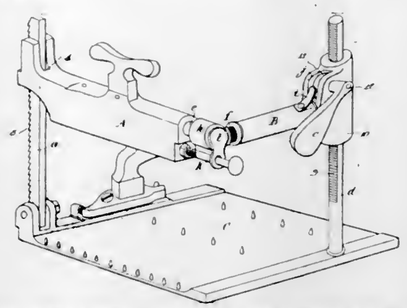


3. In a device of the class described, a mixing chamber, an air space therebeneath, a tubular member projecting into the chamber from the air space, and forming communication therebetween, a fuel duct in the tubular member, fuel connections therefor, a peripheral lip carried by the tubular member at its end within the mixing chamber, a collar on the duct having a surface adjacent the lip converging theretoward and stopping short of its outer edge, a head member thereover and in spaced relation with the collar and forming an annular passage converging toward the lip, a screen member circumscribing and extending laterally from the tubular member beneath the lip and abutting the walls of the mixing chamber at the periphery of the screen, the opposed surfaces of said lip and head being inclined toward the intermediate portion of said screen, an auxiliary air inlet beneath and within the boundary of the screen, and outlet means oppositely thereof in the mixing chamber.

1,171,680. MEAT-HOLDER FOR MEAT-CUTTING MACHINES. JOHANNES CORNELIUS VAN BERKEL, Copenhagen, Denmark. Filed Nov. 23, 1915. Serial No. 62,975. (Cl. 17—14.)

1. A meat holder, comprising a stationary toothed standard, an arm movably mounted thereon, a spring controlled disk mounted on the arm having a flat and a toothed face, and means for actuating the disk for bringing the teeth of the disk into engagment with the teeth of the standard for causing the arm to be moved

longitudinally of the standard as the teeth of the disk travel along the teeth of the standard, and into or out of engagement with the meat, and for locking the arm against movement when moved to the desired position, said disk being adapted to be rotated to cause the flat face of the disk to be presented to the toothed surface of the standard to allow the arm to be moved freely on the standard.



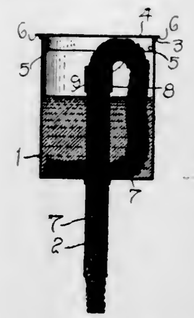
2. A meat holder, comprising a table having standards thereon, an arm movably mounted on one of the standards, an auxiliary arm connected to said arm, and movably mounted on the other standard, said arms being movably connected together, said last mentioned standard having teeth thereon, a spring controlled disk mounted on the auxiliary arm having a flat and a toothed face, and means for actuating the disk for causing the teeth to be brought into engagement with the teeth of the standard for causing the auxiliary arm to be moved longitudinally of the standard, as the teeth of the disk travel along the teeth of the standard, to bring an arm into or out of engagement with the meat, and for locking the arms against movement, said disk being adapted to be rotated to cause the flat face of the disk to be presented to the toothed surface of the standard to allow the auxiliary arm to be moved freely on the standard.

3. A meat holder, comprising a table having toothed standards thereon, an arm movably mounted on one of the standards, means on the arm for engaging the teeth of the standard, and means on the arm for engaging the standard for connecting the arm to the standard, said arm being capable of oscillation on the standard, a bar having sliding engagement with the arm, means for limiting the movement of the bar, an auxiliary arm removably connected to said bar, and means carried by said auxiliary arm for connecting said arm to the other standard, and for holding the arms against movement.

1,171,681. LUBRICATOR. WILLIAM WECKWERTH and FRED C. CONRAD, Hoquiam, Wash. Filed Mar. 1, 1915. Serial No. 11,286. (Cl. 184—64.)

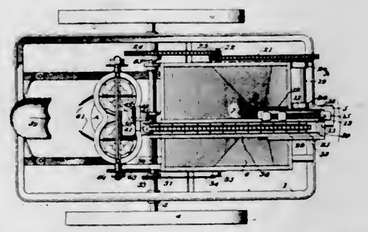
1. A lubricator including a body having an open upper end, a beading extending around the open end thereof, a cover having a downwardly depending flange adapted to extend in the body, a horizontal flange adapted to engage over the beading to support the cover, a tube extending centrally through the bottom of the body, said tube extending into the body at a point adjacent the top thereof, a sleeve upon the upper end of the tube, an arcuate supporting arm substantially U-shaped in cross section formed integral with said sleeve, and a wick arranged within the body and extending down through the tube, said wick being adapted to be arranged over the arcuate supporting arm, as and for the purpose set forth.

2. A lubricator including a body having an open upper end, a beading extending around the open end thereof, a cover having a downwardly depending flange adapted to extend in the body, a horizontal flange adapted to engage over the beading to support the cover, a tube extending centrally through the bottom of the body, said tube extending into the body to a point adjacent the top thereof, a sleeve upon the upper end of the tube, and arcuate supporting arm substantially U-shaped in cross section formed integral with said sleeve, and a wick arranged within the body and extending down through the tube, said wick being adapted to be arranged over the arcuate supporting arm, and said tube being provided with an elongated slot at a point adjacent its lower end, whereby an instrument may be inserted therethrough to adjust the wick within the tube.



3. A device of the character described including a container, a tube extending into one end of the container, a wick arranged within the tube, and a wick support disposed at the inner end of the tube and including a radially extending outwardly and downwardly curved wick supporting arm, the arm being transversely curved to form a seat for the wick.

1,171,682. POTATO-PLANTER. ALVIN D. WELKER and LIONEL E. SNYDER, Wadsworth, Ohio. Original application filed Feb. 27, 1915, Serial No. 11,095. Divided and this application filed July 23, 1915. Serial No. 41,495. (Cl. 193—2.)



1. In a potato planter having a double cutting box, the combination of a hopper, an elevator in said hopper, an endless traveling conveyer to receive the potatoes from the elevator and carry them to the cutting box, and means interposed between the conveyer and the cutting box to receive a potato from the conveyer and deliver it to one side of the cutting box and to allow another potato to drop directly from the conveyer into the other side of the cutting box.

2. In a potato planter having a double cutting box, the combination of a hopper, an elevator therein, an endless traveling conveyer extending from front to rear of the hopper and alongside of the elevator, means for diverting the potatoes from the elevator to the conveyer, means to insure the conveyance of one potato at a time and the return of others to the hopper, a receiver interposed between one end of the conveyer and the top of the cutting box, and means to operate the elevator, conveyer and receiver so as to insure the delivery of the potatoes one at a time successively to one side of the cutting box and then to the other.

3. In a potato planter having a double cutting apparatus, adapted to cut two potatoes at a time, the com-

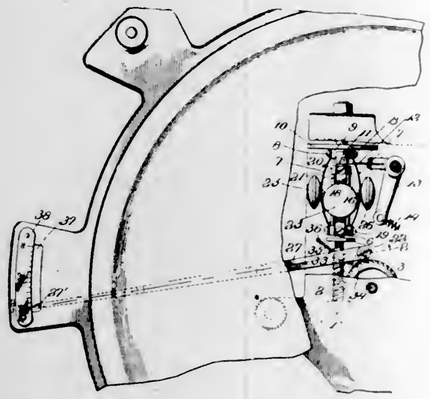
bination of a hopper for the potatoes, means comprising endless traveling carrier chains to transfer the potatoes one at a time from the hopper to the cutting apparatus, and a tilting receiver interposed between the delivery end of the transferring means and the cutting apparatus to positively deliver one potato to one part of the cutting apparatus and simultaneously permit the delivery of another potato to the other part of the cutting apparatus.

4. In a potato planter having a double cutting apparatus, the combination of a potato supplying medium, including an endless traveling conveyer adapted to deliver one potato at a time to the double cutting apparatus and a tilting receiver interposed between the delivery end of the conveyer and the mouth of the double cutting apparatus and adapted when tilted to discharge a potato from the conveyer directly into one portion of the cutting apparatus and to permit the substantially coincident delivery of the next potato from the conveyer directly into the other portion of the cutting apparatus while the receiver is tilted and beneath the uppermost end of the tilted receiver.

5. In a potato planter, the combination with a hopper, of an elevator therein, an endless traveling conveyer arranged at one side of said elevator, and means at the opposite side of said elevator for diverting the potatoes laterally from said elevator to said conveyer.

[Claim 6 not printed in the Gazette.]

1,171,683. COMBINED SPEED-GOVERNOR AND SPEEDOMETER FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Mar. 5, 1914. Serial No. 822,688. (Cl. 74—45.)



1. In a device of the character described, the combination of a motor-driven shaft; an element secured to and revolving with said shaft, a sleeve slidably mounted on said shaft and revolving therewith, a brake disk on said sleeve, weighted spring connections between said element and said sleeve, a second sleeve slidably mounted on said first sleeve and revolving with said shaft, weighted spring connections between said element and said second sleeve, projections on said second sleeve extending parallel with said motor-driven shaft, a disk carried by said projections, a scale, an indicating needle or pointer associated therewith, and operating connections between said last-named disk and said needle or pointer.

2. In a device of the character described, the combination of a motor-driven shaft, an element fixed to said shaft and revolving therewith, a brake disk slidably mounted on said shaft and revolving therewith, weighted spring connections between said disk and said element, a sleeve slidably mounted on said shaft to revolve therewith, weighted spring connections between said sleeve and said element, a disk connected to said sleeve, a scale, a pointer associated therewith, and means in operative relation with said last-named disk and connected to said pointer.

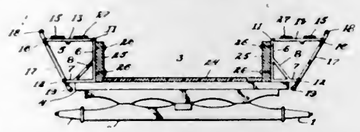
3. In a device of the character described, the combination of a motor-driven shaft, a disk having flat faces on its periphery and secured to said shaft, a brake disk slidably mounted on said shaft and revolving therewith, two weighted springs connected at one end to diametrically opposite flat faces of said first-named disk and at the other end to said brake disk, a sleeve slidably mounted on said shaft and revolving therewith, two weighted springs connected at one end to diametrically opposite flat faces of said first-named disk and at the other end to said sleeve, rods projecting from said sleeve through openings in said flat-faced disk, a scale, a pointer associated therewith, and operative connections between said rods and pointer.

4. In a device of the character described, the combination of a motor-driven shaft, two concentric sleeves slidably mounted on said shaft and revolving therewith, weighted spring connections between said sleeves and said shaft, a brake disk operated by one of said sleeves, and an indicating pointer operated by the other sleeve.

5. In a device of the character described, the combination of a motor-driven shaft, a block anchored to said shaft, two sleeves slidably mounted on said shaft and revolving therewith, weighted spring connections between each of said sleeves and said block, a brake disk on one of said sleeves, projections extending from the other sleeve through openings in said block, an indicating pointer, and operative connections between said rods and said pointer.

[Claims 6 to 8 not printed in the Gazette.]

1,171,684. WAGON-RACK BRACKET. FRANK WOODARD and WILLIAM J. KAMP, Golden Eagle, Ill. Filed Feb. 24, 1915. Serial No. 10,305. (Cl. 21—74.)

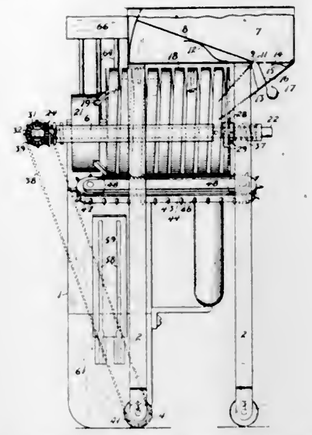


1. A wagon rack bracket comprising a lower horizontal arm, a vertical arm at the inner end of said arm and an adjustable arm pivotally connected to the upper end of the vertical arm, an adjustable brace, means to pivotally connect said brace either at its lower end or at an intermediate point to the outer end of the lower arm, and means pivotally connecting the said brace either at its upper end to an intermediate point of said adjustable arm or connecting an intermediate point of said brace to the outer end of said adjustable arm so that said adjustable arm may be arranged either in a substantially horizontal inclined or vertical position.

2. A wagon rack bracket comprising a lower horizontal arm, a vertical arm at the inner end of said arm and an adjustable arm pivotally connected to the upper end of the vertical arm, an adjustable upright brace having a pair of apertures arranged adjacent its upper extremity, and a pair of apertures adjacent its lower extremity, a bolt adapted to pass through the apertures of the upper extremity of said brace and an end or an intermediate portion of said adjustable arm, and a second bolt adapted to pass through the apertures of the lower extremity of said brace and into the outer end of the lower horizontal arm.

1,171,685. NAILING-MACHINE. HENRY W. YORK, San Francisco, Cal. Filed Sept. 14, 1914. Serial No. 861,518. (Cl. 1—6.)

1. In a nailing machine, a rotatable helix for arranging the nails and having coils spaced apart sufficiently to permit the nails, but not their heads, to pass therebetween, and means for feeding nails into the interior of the helix, said interior being free from obstructions which would prevent the nails so fed from lying within said helix and in contact therewith.



2. In a nailing machine, a rotatable helix for arranging the nails, and having coils spaced apart sufficiently to permit the nails, but not their heads, to pass therebetween, means for feeding nails into the interior of the helix, and narrow members within the helix each adapted in the rotary movement of the helix to impinge upon a nail lying lengthwise therein to turn said nail in a direction extending transversely of the helix.

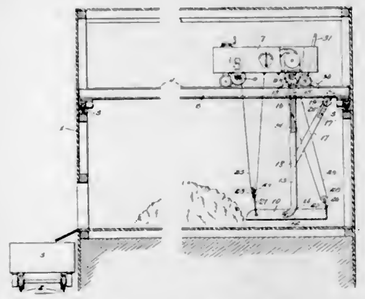
3. In a nailing machine, a rotatable helix for feeding the nails, the coils of the helix being spaced apart sufficiently to permit the nails, but not their heads, to pass therebetween, and projections extending inwardly at suitable intervals from the helix to agitate the nails therein.

4. In a nailing machine, a rotatable helix for feeding the nails, and a dislodger outside the helix and having prongs extending between the coils of the helix.

5. In a nailing machine, a rotatable helix for feeding the nails, and a dislodger outside the helix consisting of a movable suitably-supported endless belt and having prongs extending between the coils of the helix.

[Claims 6 to 8 not printed in the Gazette.]

1,171,686. FEEDING OR LOADING APPARATUS. FRANK ZAITZ, Leadville, Colo., assignor of one-third to V. Homer Peerman and one-third to Auge L. Gross, Leadville, Colo. Filed May 25, 1915. Serial No. 30,395. (Cl. 37—16.)



1. In a feeding or loading apparatus, the combination of a main carriage, a second carriage mounted to travel upon the main carriage, hangers pivotally supported from and provided with wheels to travel upon the main carriage, a bucket pivotally mounted upon said hangers, means for controlling said bucket from the second carriage, and means for connecting said bucket for travel with the second carriage.

2. In a feeder or loader, a main carriage mounted to travel in one direction, a secondary carriage mounted to travel upon the main carriage in a direction at right angles thereto, hangers provided with wheels or rollers pivotally supported from and mounted to travel on the main carriage, a bucket pivotally mounted upon said hangers, bracing means connected with the hangers, and having wheels or rollers arranged to pivotally engage and travel upon the main carriage, means for controlling the bucket from the secondary carriage, and means for connecting the bucket for travel with said secondary carriage.

3. In a feeder or loader, the combination of main track rails, a carriage mounted to travel upon said rails, said carriage having track rails arranged at right angles to the first-named track rails, a secondary carriage mounted to travel upon the rails of the main carriage, winding devices upon said secondary carriage, a wheeled axle mounted to run upon the track rails of the main carriage, suspended hangers slidably and pivotally engaging said axle, a bucket pivotally supported upon said hangers, bracing means provided with wheels or rollers to pivotally engage and travel upon the track rails of the main carriage, cables connected with the front and rear portions of the bucket and controlled by said winding devices upon the secondary carriage, and traction grapples upon the secondary carriage adapted to be thrown into and out of engagement with the said wheeled axle.

1,171,687. MAGNIFYING DEVICE FOR THREADING NEEDLES. WILLIAM C. ADAMS, Boston, Mass. Filed May 29, 1915. Serial No. 31,287. (Cl. 88—1.)



1. A magnifying device for threading needles comprising a magnifying lens and a support therefor; said support being provided with a hook for engaging the bore of a spool in order to hold the support in an upright position.

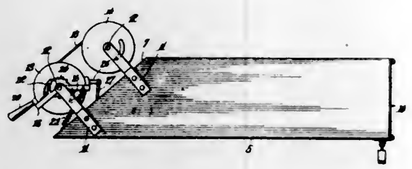
2. A magnifying device for threading needles comprising a magnifying lens, a supporting rim therefor and a flexible supporting member hinged to said rim and having its lower end turned to form a resilient hook whereby it may be mounted within the bore of a spool.

3. A magnifying device for threading needles comprising a magnifying lens, a supporting rim therefor and a flexible supporting member hinged to said rim the lower end of said flexible supporting member being turned to form a hook or clamp whereby it may be temporarily attached to a fixed support.

1,171,688. TICKET-HOLDER. ERNEST L. ALLEN, Elrosa, Minn. Filed May 5, 1915. Serial No. 26,102. (Cl. 211—29.)

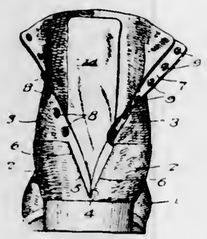
The combination with a receptacle having a discharge opening, of a ticket ejector comprising a pair of spaced parallel members pivotally supported for rocking movement above said opening, cross pieces connecting said parallel members at both ends, a freely pivoted ejector associated with one of said cross pieces and normally disposed in inactive position, a casing inclosing said parts, a handle projecting from the other of said cross pieces through a slot in said casing and adapted when

depressed to move said ejector to active position, means for automatically returning said parts to normal posi-



tion upon release of said handle, and said ejector being operable during return movement.

1,171,689. SHOE. NATHANIEL D. ALLEN, San Francisco, Cal. Filed May 21, 1915. Serial No. 29,622. (Cl. 36—50.)



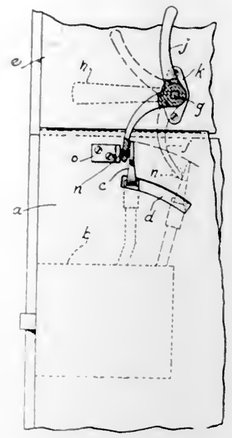
1. A shoe comprising an upper and a reinforcing member therefor extending around the counter portion of the upper, the upper being slit centrally of its rear portion from the top to the heel seat and the reinforcing member cut out at the center of the counter portion from the top to the heel seat to expose the slit in the upper, and a fly secured to one edge of the slit portion of said upper and adapted to overlap the upper at the other side of the slit therein.

2. A shoe comprising an upper and a reinforcing member therefor extending around the counter portion of the upper, the upper being slit centrally of its rear portion from the top to the heel seat and the reinforcing member being cut out at the center of the counter portion from the top to the heel seat to expose the slit in the upper, a fly secured to one edge of the slit portion of said upper and adapted to overlap the upper at the other side of the slit therein, and a tongue having one end secured to the counter portion of said upper at the lower end of the slit therein to facilitate the application of the shoe to the foot.

3. A shoe comprising an upper and a reinforcing member therefor extending around the counter portion of the upper, the upper being slit centrally of its rear portion from the top to the heel seat and the reinforcing member being cut out at the center of the counter portion from the top to the heel seat to expose the slit in the upper, a fly secured to one edge of the slit portion of said upper and adapted to overlap the upper at the other side of the slit therein, and fastening devices having the members thereof carried by the inner surface of said fly and the outer surface of that portion of the upper which the fly overlaps, respectively.

4. A shoe comprising an upper and a reinforcing member therefor extending around the counter portion of the upper, the upper being slit centrally of its rear portion from the top to the heel seat and the reinforcing member being cut out at the center of the counter portion from the top to the heel seat to expose the slit in the upper, a tongue having one end secured to the counter portion of the upper at the lower end of the slit therein to facilitate the application of the shoe to the foot, and means for fastening the upper about the foot at the slit therein.

1,171,690. LATCH-OPERATING DEVICE. JOHN T. ALLMAND, Detroit, Mich., assignor to Fisher Closed Body Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 20, 1915. Serial No. 51,526. (Cl. 70—42.)



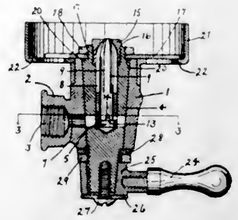
1. In a door construction, comprising upper and lower separable door sections and an inside latch lever for the lower door section yieldingly forced to one end of its swinging arc, the combination of a stop adjacent such end of the swinging arc of the latch lever, and a device secured to the upper door section and comprising an arbor passing through the upper door section, a handle on the outside end of the arbor, and a lever arm on the inside of the arbor, the end of which is engaged between the latch lever and the stop when the device is inoperative and adapted to contact the latch lever to operate the same when the lever arm is swung.

2. In a door construction, comprising upper and lower separable sections and an inside latch lever yieldingly urged toward one end of its swinging arc, the combination of a stop adjacent said end of the latch lever swinging arc, and a device secured to the upper door section, comprising an arbor rotatably held in the upper door section, a handle on the outside end of the arbor and a lever arm on the inside end of the arbor and provided at its extreme end with cushioning means for contacting the stop and the latch lever when the parts are in inoperative position, said lever arm serving to swing the latch lever when the lever arm is swung.

3. In a door construction, comprising upper and lower separable door sections and a latch lever yieldingly urged toward one end of its swinging arc, the combination of a stop secured adjacent said end of the swinging arc, and a device rotatably mounted in the upper door section, comprising an arbor passing through the upper door section, a handle on the outside end and a two-arm lever secured to the inside end, one arm of which is pinched between the stop and the yieldingly urged latch lever when the parts are inoperative and which serves to actuate the latch lever when the lever arm is swung, and the other arm of which acts as a lever handle on the inside of the door.

4. In a door construction, comprising upper and lower separable sections and a latch lever that is ordinarily yieldingly urged toward one end of its swinging arc, the combination of a stop adjacent the end of said swinging arc, and a device rotatably mounted in the upper door section and comprising an arbor passing through the upper door section, a handle on the outside end, and a lever arm on the inside end of the arbor provided at its extreme end with a rivet-shaped rubber button which contacts with the stop and the latch lever when the parts are in inoperative position.

1,171,691. COMBINATION GAS-VALVE. JAMES W. ASHBAUGH, Bremen, Ohio. Filed June 1, 1915. Serial No. 31,429. (Cl. 158—119.)



1. A combined air and gas controlling valve comprising a valve casing having a gas inlet portion, a valve plug within said casing arranged to decrease the supply of gas by a turning movement, and means for decreasing the size of the orificial outlet for said gas and for emitting it in solid cylinder form as its supply is decreased.

2. A combined air and gas controlling valve comprising a valve casing having a gas inlet portion, a hollow valve plug within said casing arranged to communicate with said inlet in a manner to decrease the supply of gas by a turning movement, and means within said hollow plug operable upon such turning movement to decrease the size of the orificial outlet.

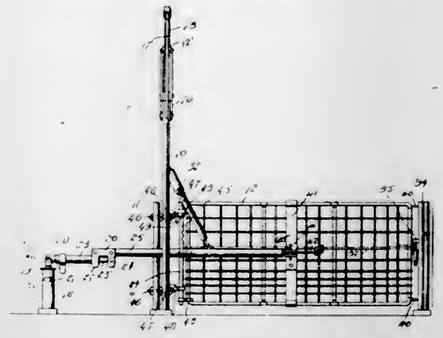
3. A combined air and gas controlling valve comprising a valve having a gas inlet portion, a valve plug within said casing arranged to decrease the supply of gas by a turning movement, an air mixer structure including a movable shutter, means for moving said shutter to decrease the air supply, and means for decreasing the size of the orificial outlet for the gas and for emitting it in solid cylinder form, said two last named means being operated by the turning of said plug.

4. A combined air and gas controlling valve comprising a valve casing having a gas inlet portion, a hollow valve plug within said casing arranged to communicate with said inlet in a manner to decrease the supply of gas by a turning movement, a nozzle within said plug, said nozzle having a plurality of longitudinally extending slits beginning at the outlet end, and means whereby the slitted end of said nozzle is squeezed together by a turning movement of said plug to decrease the gas supply and at the same time decrease the size of the orificial outlet.

5. A combined air and gas controlling valve comprising a valve casing having a gas inlet portion, a hollow valve plug within said casing arranged to communicate with said inlet in a manner to decrease the supply of gas by a turning movement, a nozzle within said plug, said nozzle having a plurality of longitudinally extending slits beginning at the outlet end, said nozzle carrying a cam formation at its rear end, connecting means between said nozzle and said plug preventing their relative rotation, and a pin carried by said casing engaging said cam formation to wedge the slitted end of said nozzle together to decrease the size of the orificial outlet when said plug is turned to decrease the supply of gas.

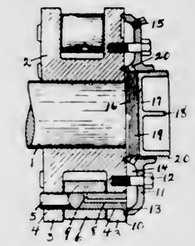
1,171,692. GATE-OPENER. SAMUEL B. BENIGAR, Greenfield, Ohio. Filed Feb. 16, 1914. Serial No. 819,044. (Cl. 39—39.)

An operating mechanism for a swinging gate comprising a vertical hollow post having slots in its opposite sides, a member rotatably mounted therein and having laterally extending pins engaged in the slots to limit the rotary movement of said member, the upper end of said member having a pair of apertured ears, a lever having one end pivotally mounted between the ears, a member having a plurality of pairs of depending legs, one pair of which is pivotally connected to the other end of said lever while another of the pairs of legs is adapted to straddle said lever in normal position, a link rigidly connected to the said legged member and adapted to be loosely connected to the gate and means for raising the said link to open the gate and swing the said lever in a vertical arc over the said post and simultaneously rotate the member within the post, and means carried by the said



lever for embracing engagement with the said link to hold the lever and link against lateral movement when the gate is open, said legged member holding the lever against pivotal movement when the gate is closed.

1,171,693. LUBRICATING DEVICE. BENN L. BERKEY, Portland, Oreg. Filed July 13, 1915. Serial No. 39,616. (Cl. 184—1.)



1. In a lubricating device, the combination of an annular roll carrier; pins having bearing surfaces thereon mounted in the carrier and having openings extending inwardly from their ends and radially to the bearing surfaces; rollers on said pins having a journal contact with said bearing surfaces on said pins; and a chamber for lubricant embracing said openings.

2. In a lubricating device, the combination of an annular roll carrier; pins having bearing surfaces thereon mounted in the carrier and having openings extending inwardly from their ends and radially to the bearing surfaces, the radial portions of the openings extending in a direction toward the center of the carrier; rollers on said pins having a journal contact with said bearing surfaces on said pins; and a chamber for lubricant embracing said openings.

3. In a lubricating device, the combination of an annular roll carrier; pins having bearing surfaces thereon mounted in the carrier and having openings extending inwardly from their ends and radially to the bearing surfaces; rollers on said pins having a journal contact with said bearing surfaces on said pins; and a chamber for lubricant embracing said openings comprising a cover plate locking said pins against turning.

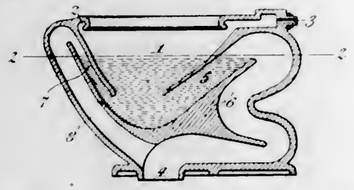
4. In a lubricating device, the combination of an annular roll carrier; pins having bearing surfaces thereon mounted in the carrier and having openings extending inwardly from their ends and radially to the bearing surfaces; rollers on said pins having a journal contact with said bearing surfaces on said pins; and a chamber for lubricant embracing said openings comprising a cover plate having an annular shoulder on its periphery adapted

to engage the ends of the pins to lock the pins in place and against turning.

5. In a lubricating device, the combination of an annular roll carrier; pins having bearing surfaces thereon mounted in the carrier and having openings extending inwardly from their ends and radially to the bearing surfaces; rollers on said pins having a journal contact with said bearing surfaces on said pins; a chamber for lubricant embracing said openings; and means for exerting pressure on the lubricant in the chamber.

[Claims 6 and 7 are not printed in the Gazette.]

1,171,694. WATER-CLOSET. JOHN J. BOYNE, Buffalo, N. Y. Filed Dec. 13, 1915. Serial No. 66,505. (Cl. 4—22.)

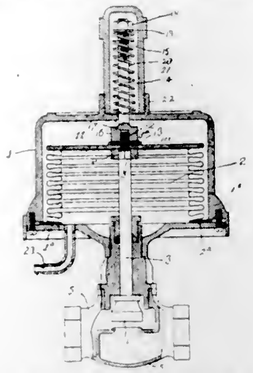


1. A water closet comprising a bowl, an outlet below the bowl, a siphon having an ascending passage extending upwardly from the bowl and a descending passage extending downwardly from the upper end of said ascending passage to said outlet, and an overflow having an ascending passage extending upwardly from the bottom of said bowl and a descending passage extending downwardly from the upper end of said last mentioned ascending passage to said outlet, the upper ends of the passages of the overflow being arranged higher than the upper ends of the passages of said siphon, and the capacity of the descending passage of the overflow being greater than the companion ascending passage.

2. A water closet comprising a bowl, an outlet below the bowl, a siphon having an ascending passage extending upwardly from the bowl and a descending passage extending downwardly from the upper end of said ascending passage to said outlet, and an overflow having an ascending passage extending upwardly from the bottom of said bowl and a descending passage extending downwardly from the upper end of said last mentioned ascending passage to said outlet, the upper ends of the passages of the overflow being arranged higher than the upper ends of the passages of said siphon, and the capacity of the descending passage of the overflow being greater than the companion ascending passage and the lower ends of the ascending passages of the siphon and overflow being on the same level.

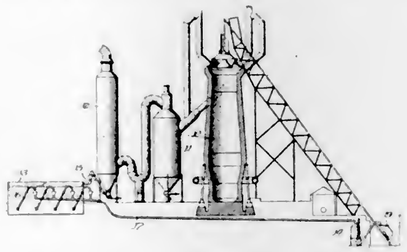
1,171,695. VACUUM-AIR-LINE GOVERNOR. JOSEPH H. BRADY, Kansas City, Mo. Filed June 30, 1915. Serial No. 37,192. (Cl. 137—4.)

In a pressure regulated valve, a valve body having a threaded opening in the upper side thereof, a supporting element having a central bore, terminating in a relatively large recessed portion at one end thereof, said supporting element having its ends screw threaded, the threaded recessed end engaging within the threaded opening of the valve body, a circular plate having a depending flange threaded to engage the other threaded end of the supporting element, said circular plate also having an opening to receive one end of a nipple, a bonnet having an enlarged lower end to provide a seat for the circular plate, a bellows in the bonnet, a gasket secured to the lower end of the bellows, said gasket being interposed between the seat of the bonnet and circular plate, for holding the bellows in position, a disk forming the upper end of the bellows, said disk having a central opening, a valve stem extending through the bore of the supporting element and having an outer threaded end extending through said central opening in said disk, a valve on the inner end of the valve stem, said valve being adapted to move in the recessed portion of the supporting element, and a spring pressed rod having an enlarged



head provided with a threaded opening to receive the threaded end of the valve stem, said valve stem and the rod clamping the disk therebetween.

1,171,696. METHOD OF AND APPARATUS FOR RECOVERING SLUDGE. HERMANN A. BRASSERT and WALTHER MATHESIUS, Chicago, Ill. Filed Dec. 8, 1915. Serial No. 65,751. (Cl. 75—5.)



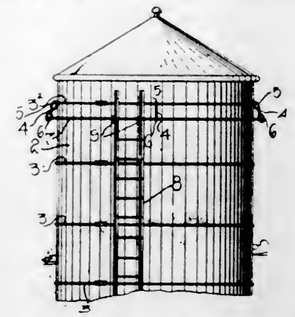
1. The method of utilizing the sludge from gas washers, which consists in discharging the washed water of a gas washer into a settling tank, removing the sludge by gravity from the bottom of said settling tank, conveying the sludge to the bottom of the skip hoist of a blast furnace, then discharging said sludge into the blast furnace, substantially as described.

2. Apparatus of the character described, comprising in combination a blast furnace, a gas washer, a settling tank, and means for conveying the sludge collected in said settling tank to the top of said blast furnace and there combining the same with the furnace burden, substantially as described.

3. In apparatus of the character described, the combination of a blast furnace, a gas washer, a settling tank, means for discharging the wash water from the washer into said settling tank, means for discharging the sludge from the bottom of said settling tank, means for conveying said sludge to the hoist for said blast furnace, and means for hoisting said sludge to the top of said blast furnace and there combining it with the furnace burden, substantially as described.

1,171,697. SUPPORT FOR SILO-LADDERS. HOWELL C. BROWN, Morning Sun, Iowa. Filed Apr. 5, 1915. Serial No. 19,255. (Cl. 228—20.)

1. The combination with a structure, of a hoop entirely surrounding and normally equally spaced at all points from the structure but movable into eccentric relation thereto upon the application of weight to one portion of the hoop, and a ladder coacting with the hoop and having sliding detachable engagement therewith.



2. The combination with a structure, of a hoop entirely surrounding and normally equally spaced at all points from the structure but movable into eccentric relation thereto upon the application of weight to one portion of the hoop, and a ladder coacting with the hoop and having sliding detachable engagement therewith, said ladder being disposed with its upper end between the hoop and the wall of the structure whereby the depression of one portion of the hoop under the weight of the ladder will cause the hoop to swing into eccentric position and clamp the ladder between the hoop and the structure.

3. The combination with a structure and a hoop having a greater diameter than the structure extending therearound and suspended therefrom for movement into eccentric relation to the structure, of a ladder slidably and detachably engaging the hoop having outwardly projecting hooks engaging the hoop, the ladder being disposed between the hoop and the wall of the structure whereby on the application of weight to the ladder that portion of the hoop engaged by the ladder will swing inward toward the structure and clamp the ladder toward the structure.

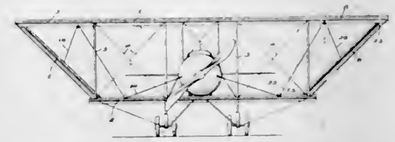
4. The combination with a structure and a hoop extending around the structure and disposed against the wall thereof, of a hoop greater in diameter than the first named hoop and entirely surrounding the wall of the structure, hangers pivotally connected to the first and second named hoops and normally extending outward and downward from said structure to support the second named hoop in uniformly spaced relation from the wall of the structure, and a ladder having its upper end provided with outwardly projecting hooks engaging over said second named hoop and disposed between the second named hoop and the wall of the structure.

5. The combination with a silo, of a hoop entirely surrounding the upper end of the silo but normally spaced therefrom, hangers pivotally mounted upon the silo wall normally extending downward and outward therefrom and flexibly connected to said hoop at a plurality of points whereby the hoop shall be normally supported in uniformly spaced relation to the silo wall but may swing inward at one point when weight is applied to that portion of the hoop, and a ladder having outwardly projecting hooks engaging the hoop and shiftable therealong whereby when the ladder is engaged with the hoop the hoop will swing inward toward the silo and the ladder will be clamped between said hoop and the silo wall.

[Claims 6 and 7 not printed in the Gazette.]

1,171,698. AEROPLANE-STABILIZER. JOHN L. BROWN, Momence, Ill. Filed June 29, 1915. Serial No. 37,024. (Cl. 244—29.)

1. In an aeroplane, a stabilizer comprising small planes arranged at the rear lateral margins of the aeroplane, said planes being concavo-convexly curved and said planes being set at angles of 45° in the lateral direction of the aeroplane so as to swing with their concaved sides forward upwardly and inwardly toward the center of the aeroplane, and means for so swinging the stabilizing plane at the high side and allowing the stability plane at the low side to swing neutrally in the path of the wind.



2. In an aeroplane, a stabilizer comprising small planes arranged at the rear lateral margins of the aeroplane, said planes being concavo-convexly curved and said planes being set at outward and upward angles of 45° in the lateral direction of the aeroplane so as to swing with their concaved sides forwardly, upwardly and inwardly toward the center of the machine, and means for operating said planes, said means being operative for adjusting the plane at the high side in the stated manner while permitting the plane at the low side to swing neutrally in the path of the wind.

1,171,699. MARKER FOR GOLF-COURSES. THOMAS J. W. BROWN, Washington, D. C. Filed Apr. 1, 1915. Serial No. 18,452. (Cl. 116—12.)



1. A marker for golf courses comprising in combination a flag section and a handle section having a pivotal connection at the end thereof universally secured at a point above the center of gravity of the said flag section.

2. A marker for golf courses comprising in combination a flag section and a handle section connected by a universal joint at a point above the center of gravity of the said flag section.

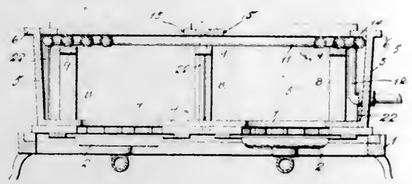
3. A marker for golf courses comprising in combination a counterweighted flag section and a handle section having a pivotal connection at the extreme end thereof universally secured at a point above the center of gravity of the said flag section.

4. A marker for golf courses comprising in combination a flag section having an enlarged bulbous counterweight at its lower end, and a handle section connected by a universal joint to said flag section at a point above the center of gravity of the latter.

1,171,700. HEATING DEVICE FOR GAS STOVES AND RANGES. JOSEPH T. BUNN, Washington, D. C. Filed Oct. 13, 1914. Serial No. 866,522. (Cl. 126—215.)

1. In a heating casing the combination of an inclosed rectangular body, said body comprising a base having side walls, said base provided with burner openings in its lower portion, a plurality of standards carried by said body, and fitting snugly against said side walls, horizontal supporting bars carried by said standards, coils carried upon said supporting bars, said casing be-

ing adapted to receive heat from a stove through said burner openings whereby said coils will be heated, said casing provided with a top having openings formed therein above the openings formed in said base whereby the heat within said casing can only be expelled through the last-mentioned openings thereby necessitating the passing of the heat around the coils.



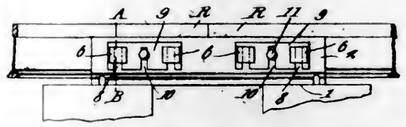
2. In a heating device of the class described the combination of an inclosed casing, said casing provided with burner openings in its lower portion, said casing being adapted to be carried by a gas stove whereby the heat from the burners of the gas stove will pass upwardly into said casing through said burner openings, vertical standards carried by the inner portions of said casing, and fitting against the side portions thereof, horizontal supporting bars carried by the upper ends of said standards, a plurality of coils loosely mounted upon said bars and provided with an inlet pipe and an exhaust pipe, said coils being capable of being removed when desired, a top carried by said casing, said top bearing upon said coils whereby the coils will be held against accidental displacement, means for detachably retaining said top in position, said top provided with a plurality of openings whereby the heat within said casings will be exhausted through said last-mentioned openings, whereby the heat will circulate about said coils before being exhausted.

3. In a heating device of the class described the combination of an inclosed casing, said casing provided with burner openings in its lower portion, said casing being adapted to be carried by a gas stove whereby heat from the burner of the gas stove will pass upwardly into said casing through said burner openings, a plurality of coils carried within said casing, means for releasably supporting said coils adjacent the top portion of said casing, a top carried by the upper portions of said casing and bearing upon said coils for holding said coils against accidental displacement, detachable rods passing through said top and through the lower portions of said casing whereby said top will be positively retained in position, said top provided with openings whereby the heat in said casing will circulate around the said coils so as to escape through said last-mentioned openings.

4. In a heating device of the class described, the combination of a casing comprising a base having side walls, a plurality of standards carried by said base and fitting snugly against said side walls, horizontal supporting bars carried by said standards, coils carried upon said supporting bars, said casing being adapted to be carried by a gas stove, means formed upon the lower portions of said casing for allowing heat from the gas stove to be injected into the lower portions of said casing, a top carried by said casing above said coils, said top having openings, whereby the heat within said casing can be expelled only through said openings, thereby necessitating the passage of the heat around said coils.

1,171,701. RAIL-JOINT. CLINTON H. CALDWELL, Johnsonburg, Pa. Filed Nov. 6, 1915. Serial No. 60,103. (Cl. 239—11.)

1. The combination with abutting rails and opposed fish plates fitted against the sides of the rails, said rails and fish plates having alining slots, of bolts insertible into the alining slots, each bolt having a flat head insertible through the slots and adapted to engage the outer face of one of the fish plates when the bolt is given a one quarter turn, an angular enlargement upon that end of each bolt remote from the head and provided with a rib, a key having slots for the reception of the ribs on the bolts thereby to hold the bolts against rotation and with the heads in engagement with the fish plates adjacent thereto, and means upon the rails for detachably engaging the keys.



2. The combination with abutting rails and fish plates engaging the sides thereof, said rails and fish plates having alining slots, of bolts insertible through the slots, each bolt including a flat head insertible through the slots and adapted to engage the outer side of one of the fish plates when the bolt is given a one quarter turn, an enlargement upon that end of each bolt remote from the head and having a rib and separate keys having slots for the reception of the ribs upon the bolts engaging the respective rails, and means engaging the keys and extending from the rails for holding the keys against removal from the rails.

1,171,702. METHOD OF FORMING A SHEET-METAL NUT. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 15, 1910. Serial No. 555,717. (Cl. 113—5.)



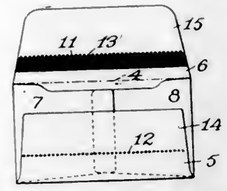
1. The method of shaping sheet metal, consisting in bending the peripheral portion of a sheet metal blank to form a substantially cylindrical portion, thus producing a cup, and simultaneously pressing the inner face of said portion into cylindrical form and the outer face thereof into polygonal form.

2. The method of forming a polygonal nut, consisting in bending the peripheral portion of a sheet metal blank to form a substantially cylindrical portion, thus producing a cup, simultaneously pressing the inner face of said portion into cylindrical form and the outer face thereof into polygonal form, and cutting threads in the inner cylindrical face of the cup to form the nut.

3. The method of forming a nut, consisting in bending the peripheral portion of a sheet metal blank to form a substantially cylindrical portion, thus producing a cup, simultaneously pressing the inner face of said portion into cylindrical form and the outer face thereof into polygonal form, cutting threads in the inner cylindrical face thus formed, and forming an opening in the closed end of the cup.

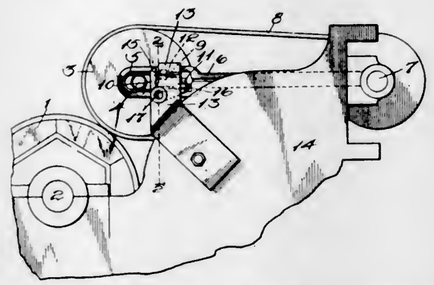
1,171,703. ENVELOP. CHARLES E. CATHER, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed June 19, 1912. Serial No. 704,492. (Cl. 229—70.)

An envelop of the class described, formed from a blank having end and bottom flaps folded over upon its body portion and attached together to constitute the back of the envelop, one of said flaps having a free detachable extension beyond the portion thereof which is attached to the other flaps, and the envelop having a seal flap with a gummed surface for attachment to the back of the envelop to close the same, said seal flap having a free detachable extension beyond said gummed surface



adapted to overlap the other free detachable extension when said seal flap is in closed position.

1,171,704. DOUGH-MOLDING MACHINE. ELMER A. CLARK, Joliet, Ill. Filed July 16, 1914. Serial No. 851,378. (Cl. 107—9.)



1. In a dough molding apparatus, the combination with a pair of superposed rolling elements, and a rising-and-falling frame carrying one of them; of a projecting member provided upon said frame; and locking means operable consequent upon the descent of the frame and engageable with said projecting member for momentarily holding said frame against upward movement.

2. In a dough molding apparatus, the combination, with a pair of superposed rolling elements; and a rising-and-falling frame carrying one of them; a projecting member provided upon said frame; a locking member engageable with said projecting member to hold said frame against upward movement, and an impact element operable consequent upon the descent of said frame and adapted to strike against and actuate said locking member.

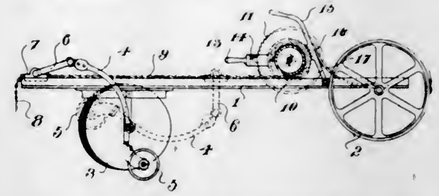
3. In a dough molding apparatus, the combination, with a pair of superposed rolling elements; and a rising-and-falling frame carrying one of them; a projecting member provided upon said frame; a locking member engageable with said projecting member to hold said frame against upward movement, and an impact element operable by said projecting member consequent upon the descent of said frame and adapted to strike against and actuate said locking member.

4. In a dough molding apparatus, the combination, with a pair of superposed rolling elements, and a rising-and-falling frame carrying one of them; of a projecting member provided upon said frame; and locking means operable by said projecting member consequent upon the descent of the frame for momentarily holding said frame against upward movement.

5. In a dough molding apparatus, the combination, with a pair of superposed rolling elements, and a rising-and-falling frame carrying one of them; of a projecting member provided upon said frame; and locking means operable by said projecting member and engageable with the same consequent upon the descent of the frame for momentarily holding said frame against upward movement.

[Claims 6 and 7 not printed in the Gazette.]

1,171,705. MEANS FOR RAISING AND LOWERING AGRICULTURAL AND OTHER MACHINES. ARCHER CORNELL, Emoyeni, Zululand. Filed Nov. 9, 1914. Serial No. 871,181. (Cl. 97—56.)



1. In means for raising and lowering agricultural and other machines, a two armed lever pivoted to said machine, a running wheel mounted at the free end of the lower arm, a winding drum on said machine, hand operated means to rotate said drum, a haulage chain connected between its ends with the upper arm of said lever and fixedly connected at one end to said drum, and releasable locking means operative upon said drum substantially as set forth.

2. In means for raising and lowering agricultural and other machines, an oscillating frame pivotally mounted on said machine, running wheels at the lower end of said frame, chain connections with the upper end of said frame, a winding drum adapted to wind up one of said chain connections, and a releasable holding means operative upon said drum substantially as specified.

3. In means for raising and lowering agricultural and other machines, a lever pivotally mounted between its ends on said machine, a running wheel mounted on the lower end of said lever, a chain, a drum adapted to wind up said chain, a link connection between the upper end of said lever and said chain, a toothed wheel connected with said drum, a detent adapted to engage the teeth of said wheel, and a spring constantly pressing said detent toward said wheel substantially as set forth.

4. In means for raising and lowering agricultural and other machines, a swingable two armed lever, a running wheel on one arm of said lever, a haulage chain, a link connection between the other arm of said lever and said chain, a drum mounted in bearings on said machine, a ratchet wheel connected with said drum, a detent engaging said ratchet wheel, a spring operative upon said detent to constantly press same toward said ratchet wheel, releasing means for said detent, a lever pivotally mounted on the axis of said drum, and a pawl on said lever in operative engagement with said ratchet wheel substantially as set forth.

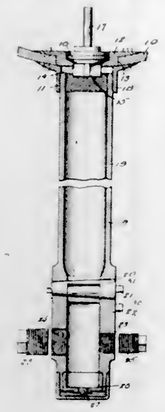
5. In a portable machine comprising a main frame and permanent running wheels, the combination of a swingable double ended lever pivotally mounted on said frame, a temporary running wheel of the caster variety on one end of said lever, a haulage chain, a connection between the other end of said lever and said chain, winding means mounted on said frame and operatively connected with said chain, locking means operative upon said winding means, and releasing means operative upon said locking means substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,171,706. OUTLET-FITTING FOR TANKS. ELIHU FRANK CRABTREE, Baltimore, Md. Filed July 20, 1915. Serial No. 40,923. (Cl. 137—21.)

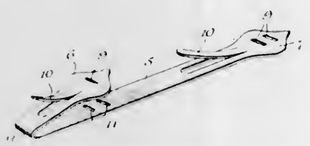
1. The combination of a tank, an outlet fixture therein having an inner seat, a valve therefor, means to operate the valve through the interior of the tank, a cock portion including a casing, a valve therein spaced outwardly of the tank, means without the tank to operate the last named valve, said casing being extended outwardly of the last named valve and having a multiplicity of outlet openings of individually various standard sizes threaded to receive respective sizes of pipe, and respective plugs engaged in the openings.

2. An outlet fixture for tanks comprising a body casing having a duct passage therethrough, and having its inner end formed for connection with a tank, a valve intermediately of its length, a multiplicity of outlet openings



therein outwardly of the valve of various individual sizes, the openings being threaded for engagement with different standard sizes of pipe, and respective closing plugs removably engaged therein.

1,171,707. ENVELOP-ATTACHING CLIP. TOMASO DI TERLIZZI, Somerville, Mass. Filed Apr. 6, 1915. Serial No. 19,614. (Cl. 40—20.)



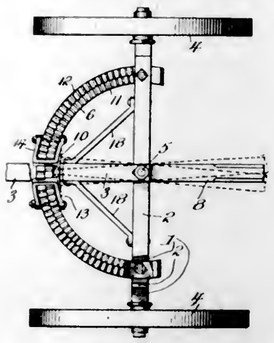
1. A device of the class described comprising a strip having enlarged terminals provided with spaced slots, the said strip being bent near one terminal to form a bight for receiving a cord, and means cut from the strip at the terminals thereof and engaged with the slots for fastening the strip to an envelop at two points thereof.

2. A device of the class described comprising a strip having enlarged terminals provided with spaced slots, the said strip being bent near one terminal to form a bight for receiving a cord, and bendable tongues cut from the strip at the terminals thereof and adapted to be threaded through the slots for the fastening of the strip to an envelop at two points thereof.

1,171,708. FIFTH-WHEEL FOR VEHICLES. LUTHER T. DUNNING, Aulander, N. C. Filed Mar. 30, 1915. Serial No. 18,077. (Cl. 21—39.)

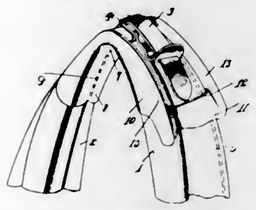
1. In a vehicle, the combination of the front axle and front bolster, a tongue, a pivotal element connecting the axle and bolster and tongue together for independent angular movement, the fifth wheel presenting a lower member attached to the axle and the upper member attached to the bolster, and means pivotally mounted on the lower fifth wheel member and adapted to engage with the upper pivotal wheel member, said means being reversely arranged on opposite sides of the tongue and adapted to be disengaged by the tongue when the latter is turned in either direction.

2. In a vehicle, the combination of the front axle, the front bolster, a tongue, a pivotal element connecting the axle, and bolster and tongue together for independent angular movement, a fifth wheel comprising a lower member attached to the axle and an upper member attached to the bolster, said lower member having concentrically arranged racks the teeth of each are reversely arranged, the pawls pivotally mounted on the lower fifth wheel member and adapted to engage the



racks of the upper fifth wheel member, said pawls being reversely arranged and on opposite sides of the tongue and adapted to be disengaged by the tongue when the latter is turned in either direction, both of said pawls normally engaging the racks and coacting therewith to normally lock the fifth wheel members together.

1,171,709. PAD FOR HORSE-COLLARS. JULIUS R. FLEMMING, Yoakum, Tex. Filed Feb. 10, 1914. Serial No. 817,862. (Cl. 54—67.)



In a device of the class described, in combination, a harness collar having its opposite ends tapering substantially to a point, connecting elements carried respectively by the ends of said collar and adapted to draw the ends together, a tab consisting of a main body portion having inwardly converging sides edges, the connected ends of said collar overlying the inner narrowmost portions of said tab, one of the sides of said tab being secured fixedly upon the adjacent side of said collar, side portions extending continuously throughout the length of said tab and of such a width as to project beyond the attached ends of said collar and gradually increasing in width toward the ends of said tab, and an offset portion formed upon said tab and located beyond the end of the body portion on one side, the side portions of said tab continuing beyond said body portion and connected with said offset portion.

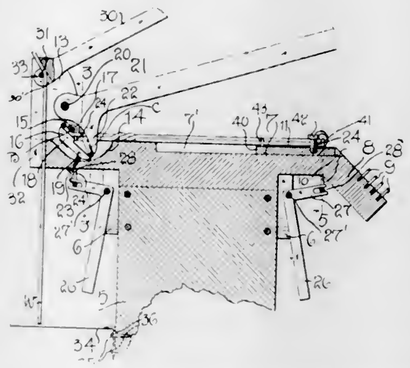
1,171,710. ATTACHING DEVICE FOR CONNECTING ELECTRIC LAMPS TO CURRENT-CARRYING CONDUCTORS. MELCHOR HORTAL FREIXAS, New York, N. Y. Filed July 2, 1915. Serial No. 37,749. (Cl. 173—340.)

1. An attaching device for detachably connecting electric lamps to electric current carrying conductors comprising a prong adapted to enter the space between the conductors, levers adapted to engage the conductors at the opposite sides of the prong, and coöperating with the prong to hold the device on the conductors, springs holding said levers in clamping position, and means for taking current from said conductors.



2. An attaching device for detachably connecting electric lamps to electric current carrying conductors comprising a prong adapted to enter the space between the conductors, levers adapted to engage the conductors at the opposite sides of the prong, and coöperating with the prong to hold the device on the conductors, springs holding said levers in clamping position, pins adapted to penetrate the insulation on the conductors and engage the wires under the clamping action produced by said prong and levers, and means for taking current from said pins.

1,171,711. WIRE-BENDING MACHINE. ELSBERRY GASTON, Ottumwa, Iowa. Filed June 21, 1915. Serial No. 35,366. (Cl. 140—71.)



1. In a wire bending machine, a movable die member, and a lever adapted to engage one wire to be bent to form a hook thereon and also effect a movement of the die member to engage the same with a second wire to be bent and form a hook in the latter wire.

2. In a wire bending machine, a lever adapted to engage and form a hook in a wire member, and means actuated in the operating movement of the lever to engage a second wire member and form a hook therein.

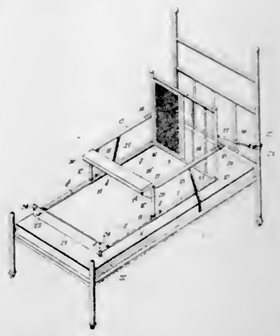
3. A machine for forming terminal hooks upon wire implement handles, including relatively movable elements to simultaneously engage the wire handles and form the hooks therein.

4. A machine for forming terminal hooks upon wire implement handles, including a lever to directly engage one wire and form a hook therein, and a movable element engaged by said wire in the formation of the hook to operate upon a second wire handle member and simultaneously form a hook therein.

5. A machine for operating upon implements having two handle members formed of wire, said machine including a lever provided with means to engage one of the wire members and form a hook therein, and a movable element engaged by the hook as it is formed in the first wire member whereby said element is moved and engaged with the second wire member to also form a hook therein.

[Claims 6 to 23 not printed in the Gazette.]

1,171,712. INVALID-REST FOR BEDS. WILLIAM S. GIBSON, Ossining, N. Y. Filed Mar. 6, 1915. Serial No. 12,575. (Cl. 5—41.)



1. A device of the class described comprising a longitudinally adjustable base frame, a back pivotally secured to one end of the base, arms pivotally supported on the base and adjustably connected with the back, a foot rest adjustably mounted on the opposite end of the base, and means for holding said foot rest in different adjusted inclined positions.

2. A device of the class described comprising a longitudinally adjustable base frame, a back pivotally secured to one end of the base and adapted to be folded thereupon, arms pivotally mounted on the base and pivotally connected with the back and adapted to be positioned upon said back when folded, a foot rest pivotally supported at the opposite end of the base, and adapted to be swung to one side and in parallelism therewith to folded position.

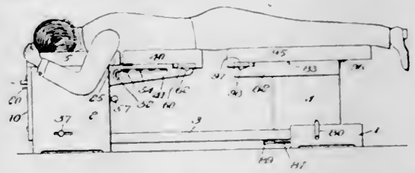
3. In a device of the class described, a base including adjustable sections, a back pivotally secured to one of said sections, arms carried by the said section adjustably connected with the back, a table supported by said arms, and a foot rest supported by the other of said sections.

4. In a device of the class described, a base including adjustable sections, a back pivotally mounted upon one of said sections, supports rising vertically from the said section and pivotally connected therewith, arms connecting the supports with said back, said arms having adjustable connection with the latter and movable longitudinally of said base, and a foot rest on the forward end of the other of said sections.

5. In a device of the class described, a base including adjustable sections, a back pivotally mounted at the end of one of said sections, supports rising from the opposite end of the section and pivotally connected thereto, a table detachably and swingingly mounted on said supports, adjustable connections between said back and supports, and a foot rest on the forward end of the other of said sections of the base.

[Claims 6 to 9 not printed in the Gazette.]

1,171,713. CHIROPRACTIC TABLE. JOHN K. GILKERSON, Los Angeles, Cal. Filed Feb. 16, 1914. Serial No. 818,903. (Cl. 128—16.)



1. A chiropractic table comprising an abdominal rest, a thigh rest, pivoted supporting members for the thigh and abdominal rests, means for holding the members in

horizontal position, means to hold the members in downwardly and inwardly inclined position, and means for raising the opposed ends of the abdominal and thigh rests and supporting them in upwardly and inclined position relative to the pivoted supporting means therefor.

2. In a chiropractic table, an upright member having a pair of spaced side walls, a head rest in two sections horizontally hinged to said side walls so as to meet at the center of the table and means for raising and lowering said hinged sections comprising a slide engaging the under sides thereof.

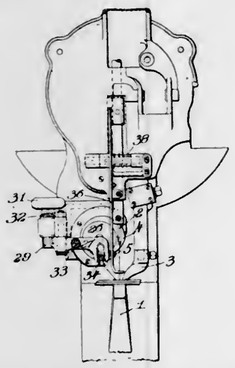
3. In a chiropractic table, an upright member having a pair of spaced side walls, a head rest in two sections horizontally hinged to said side walls so as to meet at the center of the table, a vertical ratchet bar secured to one of said side walls, and a spring pressed latch to engage said ratchet and support the slide.

4. In a chiropractic table, an inverted U frame positioned in a vertical plane, a rest on top of said frame, a vertical ratchet bar rigidly secured to the frame, a spring pressed latch adapted to engage the ratchet bar to lock the same against a downward movement and a pivoted operating lever connected to said latch.

5. In a table of the character described, a member having a pair of side walls, a horizontal shaft supported between said walls, a pair of levers journaled intermediate therein, on said shaft, a rest supported on the rear ends of the levers and pivoted spring pressed ratchet bars to engage the forward ends of the levers to lock them against upward movement.

[Claims 6 to 12 not printed in the Gazette.]

1,171,714. SOLE-SEWING MACHINE. JOHN WILLIAM GODDARD, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 30, 1913. Serial No. 776,583. (Cl. 112—20.)



1. A lock stitch sole sewing machine, having in combination, a straight barbed needle, a shoe supporting horn, a looper located in the horn, a discoidal shuttle rotating in a plane inclined to the path of the needle, means for imparting a plurality of revolutions to the shuttle for each reciprocation of the needle, and means for reciprocating the shuttle bodily in a substantially axial direction toward and from the path of the needle.

2. A lock stitch sole sewing machine, having in combination, a straight barbed needle, a shoe supporting horn, a looper located in the horn, a discoidal shuttle rotating in a plane inclined to the path of the needle, a casing in which the shuttle is mounted, a shuttle driver also mounted in the casing, means for imparting a plurality of revolutions to the shuttle driver for each reciprocation of the needle, and means for reciprocating the casing to move the shuttle in a substantially axial direction toward and from the path of the needle.

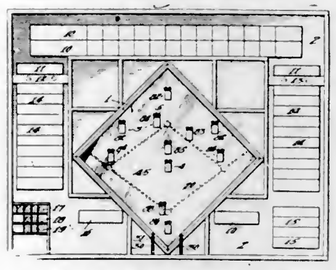
3. A lock stitch sole sewing machine, having in combination, a straight barbed needle, a shoe supporting horn, a looper located in the horn, a discoidal shuttle, a casing in which the shuttle is mounted, a shuttle driver also mounted in the casing, co-axial telescoping shafts for imparting to the shuttle driver a plurality of revolutions for each reciprocation of the needle, and means for reciprocating the casing to move the shuttle in a substantially axial direction toward and from the path of the needle.

4. A lock stitch sole sewing machine, having in combination, a straight barbed needle, a shoe supporting horn, a looper located in the horn, a discoidal shuttle, a casing in which the shuttle is mounted, a shuttle driver also mounted in the casing, co-axial telescoping shafts for imparting to the shuttle driver a plurality of revolutions for each reciprocation of the needle, an eccentric, and a link connecting the eccentric and casing for reciprocating the casing to move the shuttle in a substantially axial direction toward and from the path of the needle.

5. A lock stitch sole sewing machine, having in combination, a straight barbed needle, a shoe supporting horn, a looper located in the horn, a discoidal shuttle having a beak adapted to engage the loop of thread drawn by the needle, and a positioning device arranged to move into engagement with both sides of the loop of needle thread between the work and the point at which the beak of the shuttle engages the loop and aline said loop with the beak of the shuttle.

[Claims 6 to 12 not printed in the Gazette.]

1,171,715. SCORE-BOARD. LEIGH M. GRIFFITH and FRANK A. GAUHUTT, Los Angeles, Cal. Filed Nov. 5, 1913. Serial No. 799,414. (Cl. 235—1.)

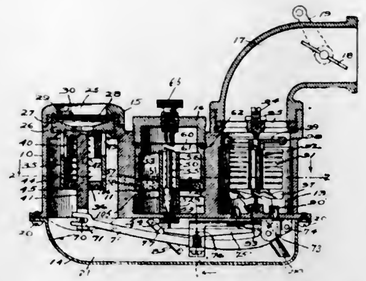


1. In a score board, a vertical glass member, opaque markings on said glass member representing the markings of a base ball field, illuminated units behind said glass member representing the players and ball, and means whereby said units can be secured and supported on the back of said glass member in such a manner that the units can be freely slid from place to place on said glass member without being detached therefrom.

2. In a score board, a vertical glass member, opaque markings on said glass member representing the markings of a base ball field, illuminated units behind said glass member representing the players and ball, and vacuum means whereby said units can be secured and supported on the back of said glass member in such a manner that the units can be freely slid from place to place on said glass member without being detached therefrom.

3. In a score board, a vertical glass member, opaque markings on said glass member representing the markings of a base ball field, illuminated units behind said glass member representing the players and ball, vacuum means whereby said units can be secured and supported on the back of said glass member in such a manner that the units can be freely slid from place to place on said glass member without being detached therefrom, and a thin film of lubricating material over the back surface of said glass member said film serving to reduce the friction as the units are slid from place and also serving to prevent the vacuum from being broken in said vacuum means due to leakage between said vacuum means and said glass member.

1,171,716. CARBURETER. VICTOR E. HAAS, Toledo, Ohio, assignor of one-half to Samuel E. Starr, Toledo, Ohio. Filed June 7, 1915. Serial No. 32,641. (Cl. 48—154.1.)



1. In a carbureter, the combination of an air valve and a liquid hydrocarbon valve, the liquid hydrocarbon valve operated by the air valve, a pair of levers mechanically connecting the two valves, an adjustable pivoted frame for supporting the levers, one of the levers pivotally supported near the pivot of the frame and the other of the levers pivotally supported at the end of the frame remote from the pivot of the frame.

2. In a carbureter, the combination of a hydrocarbon liquid valve, a compression spring for seating the valve, a metallic diaphragm abutting one end of the spring, an adjustable screw abutting the diaphragm at a point opposite to and on the opposite side of the point at which the spring abuts the diaphragm, a lever for opening the valve, an air valve for operating the hydrocarbon liquid valve against the operation of the spring, and a chamber for receiving the hydrocarbon liquid and the air.

3. In a carbureter, the combination of an air valve having a flange, a sleeve in which the valve moves, having slotted openings, a hydrocarbon liquid valve, a pair of levers connecting the valves for opening the liquid valve, as the air valve is opened, a chamber located beneath the valves for receiving the air and liquid, a mixing chamber, the air passing beneath the inlet of the hydrocarbon liquid and with the hydrocarbon liquid into the mixing chamber.

4. In a carbureter, the combination of an air inlet valve and a hydrocarbon liquid valve and a mixing chamber, a communicating chamber for conducting the air beneath the hydrocarbon liquid valve to the mixing chamber, pipes extending to the bottom of the communicating chamber for conducting the liquid hydrocarbon, its vapors and air, into the mixing chamber.

5. In a carbureter, the combination of an air inlet valve and a hydrocarbon liquid valve, a pair of levers connecting the valves for opening the liquid valve proportionate to the opening of the air valve, a chamber located beneath the valves for receiving the air and the liquid as they pass through the openings formed by the valves, a deflector for deflecting air current toward the bottom of the chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,171,717. KNOCKDOWN MANTEL. JOHN W. HADDOX, Parkersburg, W. Va. Filed June 23, 1915. Serial No. 35,840. (Cl. 20—73.)

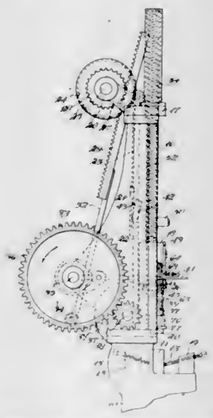
1. A mantel having channeled side members extending vertically in spaced relation and each provided with a slot in one side wall, a shelf, means for supporting said shelf, a mirror section, a bracket adjustably connected with the rear face of the mirror section at opposite sides thereof, said brackets each having an end lying in a plane parallel with the rear face of the mirror section and in spaced relation therewith for insertion in a slot in the side wall of one side member, a flange on the mirror section provided with spaced and heated studs, and a cornice section provided with a flange having spaced slots therein adapted to receive said studs beneath the heads thereon.

2. A mantel having channeled side members extending vertically in spaced relation, said side members each having a vertical row of openings in the front face thereof, pilasters each having a flange upon opposite sides, one of said flanges upon each pilaster lying in a plane parallel with the front face of one of said side members and provided with openings registering with openings in the side members, means for connecting the pilaster with the side members passing through said openings, a mirror section, means adjustably mounted on



the mirror section for connecting the mirror section with the side members, a channeled cross piece connected with the remaining flanges on the side members and provided with a side wall having spaced openings, a shelf U-shaped in cross section disposed upon said pilaster and provided with a side wall having an upstruck portion terminating in a flange, for contact with the side wall of the cross piece, said flange having openings therein registering with the openings in the side wall of the cross piece, and means for fastening the shelf to the cross piece passing through said openings.

1,171,718. DROP-HAMMER. EDWIN C. HAMILTON, Somerville, Mass., assignor to G. Lanza Davison, Winthrop, Mass. Filed July 6, 1914. Serial No. 849,079. (Cl. 78—25.)



1. In a drop hammer the combination with a hammer and means for guiding the same, of complemental ratchet

and clutch elements connected with the hammer and guide respectively, and positive means connected to the hammer and the clutch element respectively, arranged to come into engagement with one another during the working stroke of the hammer for holding said ratchet and clutch elements out of connection during such stroke said means being operative for bringing said elements into coöperation on the rebound of the hammer.

2. In a drop hammer the combination with a guiding element and a hammer arranged to travel along said element, a ratchet block carried by the hammer, a complemental clutch block mounted on the guiding element and movable in a direction transverse to the movement of the hammer, positively acting means for moving and holding said block away from said ratchet during the descent of the hammer, means for automatically returning the clutch to normal position when the hammer has completed its stroke, and means automatically operated by the hammer for moving said clutch into engagement with the ratchet on the rebound of the hammer.

3. In a drop hammer the combination with a hammer and a guiding element, of a ratchet carried by the hammer, a clutch block mounted on the guiding element, a cam device connected with the clutch element, and a clutch actuator carried by the hammer and arranged to act upon said cam device to hold the clutch element away from the ratchet during the working stroke and to hold the clutch element against the ratchet in the subsequent rebound of the hammer.

4. In a drop hammer the combination of a frame and a hammer element arranged to travel upon said frame, complemental ratchet and clutch elements, one of which is mounted on the hammer and the other of which is mounted on the frame, and one of which is further movable toward and away from the other, a cam member connected with said movable element, and an actuator operated by the relative movement between the hammer and frame for engaging said cam member on one side during the descent of the hammer, said actuator being constructed and actuated to cause a positive separation between the ratchet and clutch elements throughout the travel of one element past the other, and to engage the other side of said cam member yieldingly on the rebound of the hammer, so as to bring said elements into engagement.

5. In a machine of the character described, the combination of a stationary guide and a moving hammer member, a ratchet element and a complemental clutch element, each of said elements having a plurality of cooperating teeth, one of said elements being carried by the hammer and the other being mounted on the guide, and one of said elements being movable toward and away from the other, and means operated by the movement of the hammer for holding said elements apart with a positive action during the working stroke of the hammer and for bringing said elements into engagement in a yielding manner upon the rebound of the hammer.

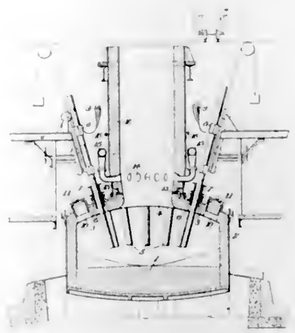
[Claims 6 to 18 not printed in the Gazette.]

1,171,719. PROCESS OF PRODUCING FERROSILICON. HERBERT CHAMPION HARRISON, Niagara Falls, N. Y., assignor to Electro Metallurgical Company, Niagara Falls, N. Y., a Corporation of West Virginia. Filed June 12, 1912. Serial No. 703,261. (Cl. 204—63.)

1. The process of producing ferrosilicon, which consists in electrically smelting agglomerates containing silica with carbon slightly in excess of that required to reduce the silica, in presence of iron.

2. The process of producing ferrosilicon, which consists in electrically smelting a porous charge-body consisting of hard, impermeable agglomerates containing silica with carbon slightly in excess of that required to reduce the silica, in presence of iron.

3. The process of producing ferrosilicon, which consists in feeding a charge containing agglomerates of silica with carbon slightly in excess of that required to reduce the silica and a source of iron through a preheating zone into a zone wherein silicon-reduction and alloying is electrically effected, with evolution of carbon monoxid, and utilizing said carbon monoxid to effect the preheating.

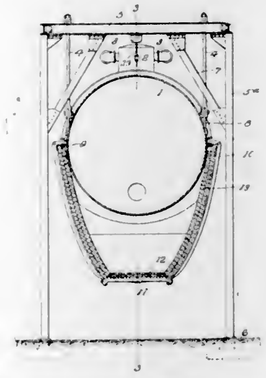


4. The process of producing ferrosilicon, which consists in feeding a charge comprising agglomerates of silica with carbon slightly in excess of that required to reduce the silica and an iron compound through a preheating zone into an intermediate zone wherein iron-reduction is effected, delivering the iron and agglomerates into a final zone wherein silicon-reduction is electrically effected, with production of carbon monoxid, and utilizing said carbon monoxid to effect the iron-reduction.

5. The process of producing ferrosilicon, which consists in feeding a charge comprising agglomerates of silica with carbon slightly in excess of that required to reduce the silica and an iron compound through a preheating zone into an intermediate zone wherein iron-reduction is effected, delivering the iron and agglomerates into a final zone wherein silicon-reduction is electrically effected, with production of carbon monoxid to effect the iron-reduction, and burning the residual carbon monoxid to effect the preheating.

[Claims 6 to 10 not printed in the Gazette.]

1,171,720. STILL AND STILL-SETTING. HERBERT HENDERSON, Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed July 9, 1915. Serial No. 38,987. (Cl. 122—510.)



1. In a still and still setting, a structural steel framework comprising bridge members and columns, a still body, hanger rods supporting said still body from said bridge members and a fire box hung from said still body.

2. In a still and still setting, a suitably supported cylindrical still body, a plurality of arch bars of metal suspended from each side of said still, yoke plates uniting the bottom of said arch bars and completing the arch and a lining of refractory material for said arch.

3. In a still and still setting, a suitably supported still body and a depending fire box for said still suspended from the sides thereof, said fire box comprising a plurality of metal arch bars provided with lugs allowing a layer of arch brick to be keyed into each such bar.

4. In a still and still setting, a suitably supported cylindrical oil still having a longitudinal lug on each side, a plurality of metal arch bars pinned into each such lug and suspended therefrom, a bottom yoke plate uniting the ends of the two series of arch bars thus formed and a lining of refractory material for the inverted arch formed by such arch bars and the bottom yoke plate.

5. In a still and still setting, a framework having bridge members, a cylindrical oil still suspended within said framework from said bridge members and an arch-shaped fire box inclosing the bottom of said still and supported from its sides, said fire-box being free to move with the still.

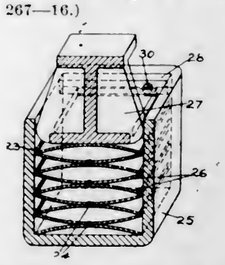
[Claims 6 to 9 not printed in the Gazette.]

1,171,721. HATCH-COVER FOR SHIPS. ARCHIBALD HOGG, Newcastle-upon-Tyne, England. Filed June 16, 1915. Serial No. 34,393. (Cl. 114—201.)



In hatchway-covers for ships, the combination of plates shaped and connected together to form corrugations, and stiffeners arranged transversely of the corrugations of said plates, said stiffeners extending into the corrugations of said plates and being attached thereto and means for closing the ends of the covers transverse of the corrugations thereof.

1,171,722. SHOCK-ABSORBER. EDGAR J. HOUGH, Washington, D. C. Filed Apr. 3, 1915. Serial No. 18,991. (Cl. 267—16.)



1. A shock absorbing device comprising a container and a curved plate of resilient material within said container, said plate being constructed and arranged to imprison a cushioning fluid between itself and the walls of said container.

2. A shock absorbing device comprising a container and a plurality of curved plates of resilient material within said container, said plates being constructed and arranged to imprison a cushioning fluid between themselves and the walls of said container and between each other.

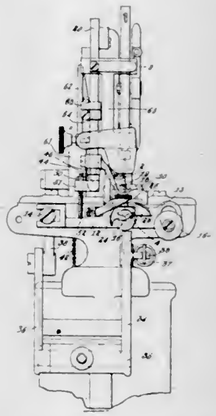
3. A shock absorbing device comprising a container and a plurality of curved plates of resilient material within said container, said plates being constructed and arranged to loosely imprison a cushioning material between each other.

4. A shock absorbing device comprising a container and a curved plate of resilient material within said container and in loose engagement with the walls thereof, said plate being constructed and arranged to imprison a cushioning fluid between itself and said walls.

5. A shock absorbing device comprising a container and a plurality of curved plates of resilient material within said container, said plates being in loose engagement at their edges and being constructed and arranged to imprison a cushioning fluid between each other.

[Claims 6 to 16 not printed in the Gazette.]

1,171,723. INSOLE-LIP-SEWING MACHINE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 4, 1914. Serial No. 870,206. (Cl. 112—20.)



1. A machine for securing together the two contiguous flaps of an insole having, in combination, means for inserting fastening devices in said flaps, supporting means for the flaps, a pressure device bearing on the face of the insole opposite the flaps to hold the insole flaps in position to receive the fastening devices, mechanism for moving said device into and out of contact with the insole, reciprocating insole feeding means, and means operatively connected to said mechanism and controlled by the movement of said feeding means for releasing the pressure device during the feed.

2. A machine for securing together the two contiguous flaps of an insole having, in combination, means for securing the flaps together, flap clamping means, a pressure device to hold the flaps in position to be clamped, insole feeding means, and means operated by a movement of the feeding means to release the pressure device during the feed.

3. A machine for securing together the two contiguous flaps of an insole having, in combination, means for securing the flaps together, a work table to support the flaps, a presser foot to clamp the flaps on said table, a pressure device to hold the insole flaps in position to be clamped, a feeding mechanism, and means to release the pressure of said device during the feed while the presser foot remains in engagement with the flaps.

4. A sewing machine for securing together the two contiguous flaps of an insole having, in combination, stitch forming mechanism, clamping means to hold the flaps, a presser roll to hold the insole flaps in stitch receiving position, a feeding mechanism, an operating lever connected with the presser roll, and a stop coöperating with said lever and adapted to be engaged by said feeding mechanism to operate said lever and release the presser roll from the insole during the feed.

5. A sewing machine for securing together the two contiguous flaps of an insole having, in combination, stitch forming mechanism, a flap clamping mechanism, a pressure device to hold the flaps in stitch receiving position, an operating lever with a stop connected to said pressure

device, and a four-motion feed bar adapted to engage said stop prior to its feeding movement and operate said lever to release the pressure device from the insole during the feed.

1,171,724. INFANT FOOD. EDWARD MEAD JOHNSON, Jersey City, and JAMES J. QUILLIGAN, Grantwood, N. J., assignors to Mead Johnson & Co., Jersey City, N. J., a Corporation of New Jersey. Filed May 12, 1915. Serial No. 27,612. (Cl. 99—11.)

1. An infant food consisting of a mixture of desiccated dextrin, desiccated maltose, and wheat flour.

2. An infant food consisting of a mixture of desiccated dextrin and desiccated maltose and wheat flour, the amount of wheat flour in the mixture being substantially equal to the amount of dextrin plus the amount of maltose.

3. An infant food consisting of a mixture of desiccated dextrin, desiccated maltose, and wheat flour, in substantially the following proportions:—1 part dextrin, 1 part maltose, 2 parts wheat flour.

4. An infant food consisting of a mixture of desiccated dextrin, desiccated maltose, wheat flour, and a small percentage of potassium carbonate.

5. An infant food consisting of a mixture of desiccated dextrin, desiccated maltose, wheat flour, and a small percentage of potassium carbonate, the amount of wheat flour being substantially equal to the amount of dextrin plus the amount of maltose.

[Claim 6 not printed in the Gazette.]

1,171,725. COATED ARTICLE. WHITNEY B. JONES, Perth Amboy, N. J., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Mar. 5, 1913. Serial No. 752,231. (Cl. 91—68.)

1. A coated article, comprising a metallic or other base, an exterior coating containing a polymerized phenolic condensation product, and an intermediate varnish coating, said intermediate varnish coating capable of adhering strongly both to said base and to said exterior coating.

2. A coated article, comprising a metallic or other base, an exterior coating containing a polymerized phenolic condensation product, and an intermediate relatively flexible varnish coating, said intermediate varnish coating capable of adhering strongly both to said base and to said exterior coating.

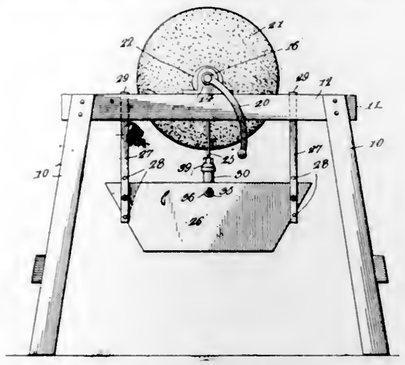
3. A coated article, comprising a metallic or other base, an exterior coating containing a polymerized phenolic condensation product, and an intermediate coating containing an oil varnish, said intermediate coating capable of adhering strongly both to said base and to said exterior coating.

4. A coated article, comprising a metallic or other base, an exterior coating containing a polymerized phenolic condensation product, and an intermediate coating containing a linseed oil varnish, said intermediate coating capable of adhering strongly both to said base and to said exterior coating.

1,171,726. WATERING DEVICE FOR GRINDSTONES. JOSEPH H. KING, San Diego, Cal. Filed May 28, 1915. Serial No. 31,045. (Cl. 51—7.)

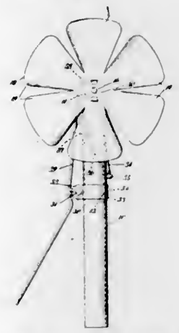
1. The combination with a grinding wheel and supporting apparatus therefor, of a water box, means having connection with said supporting apparatus to adjustably support said water box, pump means swingingly mounted in said water box and arranged below said grinding wheel and means including an eccentric for positively actuating said pump means at a speed proportionate to the speed of rotation of said grinding wheel.

2. In combination with a grinding wheel, a supporting mechanism therefor, of a water box, a plurality of supporting irons adjustably supporting said water box below said grinding wheel and in vertical alinement therewith, a pump cylinder, means swingingly supporting said pump cylinder within said water box, a jet pipe extending from said pump cylinder, the outlet end of said jet pipe terminating directly below said grinding wheel and at a point in close proximity to the periphery thereof, an



eccentric mounted to rotate with said grinding wheel, a piston in said pump cylinder, and a ring on the upper end of said piston having connection with said eccentric as and for the purpose specified.

1,171,727. REVOLVING HAND-FAN. VALENTIN M. KLUGE, New York, N. Y. Filed June 16, 1914. Serial No. 845,422. (Cl. 230—33.)



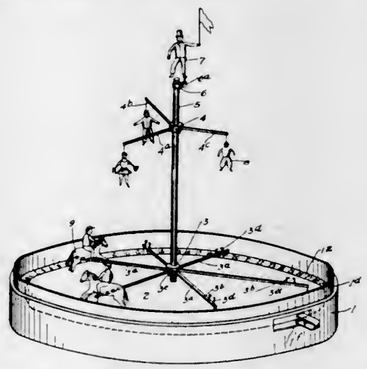
1. A revolving hand fan, comprising a handle, a shaft journaled in the upper part of the handle, a plurality of spirally twisted blades disposed radially from a common center rigidly held on the shaft, a flexible element having a part thereof movably wrapped around the shaft, spring actuated means on the handle, and connected to one end of the flexible element, a band mounted on the handle and a hand-lever fulcrumed to the band, a pivot carried by the band, said hand-lever being formed with an eye pivotally engaged with said pivot, one end of the hand-lever being connected to the other end of the flexible element and the other end of said hand-lever being spaced from the handle so that when forced toward the handle the upper end of the lever will be swung to guide the flexible element in one direction in frictional contact with the shaft and against the tension of the spring actuated means which will reversely guide the flexible element when the pressure on the handle is relaxed whereby the shaft and said blades will be revolved to produce currents of air.

2. A revolving hand fan, comprising a tubular handle, a slot in the handle, a shaft journaled in the upper part of the handle, a plurality of radially disposed spirally twisted blades, means rigidly holding the blades on the shaft, and in spaced relation to the handle, a cable having a part thereof movably wrapped around the

shaft, spring actuated means within the tubular handle and operable through the slot, and connected to one end of the cable, and a hand-lever fulcrumed to the handle of the fan, one end of the hand-lever being connected to the other end of the cable, and the other end of said hand-lever being spaced from the handle so that when forced toward the handle the upper end of the lever will be swung to guide the cable in one direction in frictional contact with the shaft and against the tension of the spring actuated means which will reversely guide the cable when the pressure on the handle is relaxed whereby the shaft and said blades will be revolved to produce currents of air.

3. A revolving hand fan, comprising a tubular handle, a shaft journaled in the upper part of the handle, a plurality of spirally twisted blades radially disposed from a common center rigidly held on the shaft, a cable having a part thereof movably wrapped around the shaft within the handle, a vertical slot in the handle, a spring within the tubular handle, said spring being anchored at one end to the handle and connected to one end of the cable at its other end, and a hand-lever fulcrumed to the handle of the fan, one end of the hand-lever being connected to the other end of the cable, and the other end of said hand-lever being spaced from the handle so that when forced toward the handle the upper end of the lever will be swung to guide the cable in one direction in frictional contact with the shaft against the tension of the spring which will reversely guide the cable when the pressure on the handle is relaxed whereby the shaft and said blades will be revolved to produce currents of air.

1,171,728. GAMING AND AMUSEMENT DEVICE. JISAKU KODAMA, Coronado, Cal. Filed June 7, 1915. Serial No. 32,738. (Cl. 46—56.)



1. In a device of the class described, the combination of a stationary annular base piece, a post centrally and revolubly mounted therein, a disk secured thereto, an annular piece secured to the inner surface of said base portion provided with an annular row of characters thereon, a spider secured above said disk adapted to revolve therewith, a figure representing a racing device mounted on each of said arms and means to facilitate the revolution of said disk.

2. In a device of the class described, the combination of a stationary annular base, a disk revolubly mounted therein, a spider secured above said disk adapted to revolve therewith, a figure representing a racing device mounted on each of said arms, means to facilitate the revolution of said disk and another spider secured above said first mentioned spider provided with a plurality of suspended figures thereon adapted to swing.

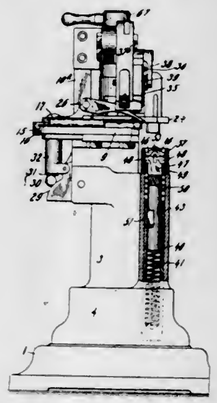
3. In a device of the class described, the combination of a stationary annular base portion, an annular piece provided with an annular row of characters thereon, a disk revolubly mounted therein, a spider secured above said disk adapted to revolve therewith, a figure representing a racing device mounted on each of said arms, means to facilitate the revolution of said disk, another spider secured above said first mentioned spider provided with a plurality of suspended figures thereon adapted to swing, a clamp piece mounted on the upper end of said central post provided with an outwardly extending lug and a figure mounted on said outwardly extending lug adapted to revolve with said post.

4. In a device of the class described, the combination of a stationary annular base portion provided with an annular row of characters thereon, a disk revolubly mounted therein, a spider secured above said disk adapted to revolve therewith, a figure representing a racing device mounted on each of said arms, means to facilitate the revolution of said disk, another spider secured above said first mentioned spider provided with a plurality of suspended figures thereon adapted to swing, a clamp piece mounted on the upper end of said central post provided with an outwardly extending lug and a figure mounted on said outwardly extending lug adapted to revolve with said post and a cover for said base piece.

5. In a device of the class described, the combination of a round base piece, a vertical post centrally and revolubly mounted therein, a transparent disk secured to said post, an annular piece secured to said base piece provided with an annular row of characters thereon, a spider secured to said post above said disk provided with a plurality of figures mounted thereon, indicating needles secured to the outwardly extending ends of the arms of said spider pointing to the row of characters on said annular piece.

[Claims 6 and 7 not printed in the Gazette.]

1,171,729. TICKETING-MACHINE. FREDERICK KOHNLE, Dayton, Ohio. Filed June 17, 1914. Serial No. 845,725. (Cl. 93—89.)



1. A device of the nature disclosed comprising rigid track surfaces arranged progressively at different elevations to provide a support and abutment for a tag strip, the supporting surface having a longitudinal guiding margin against which the strip is urged and a longitudinal channel coincidently adjacent said guiding margin, alternately arranged strip margin tension means urged toward the surfaces respectively to confine the strip, laterally urged tension and guiding means opposite said guiding margin, and a yielding clip at the terminal of said supporting surface engaging the strip margin opposite said guide margin.

2. A device of the nature disclosed comprising rigid track surfaces arranged progressively at different elevations to provide a support and abutment for a tag strip, the supporting surface terminating with a cutter edge and provided with a longitudinal guiding margin and a longitudinal channel coincidently adjacent said guid-

ing margin, alternately arranged strip margin tension means urged toward the surfaces respectively to confine the strip, laterally urged tension and guiding means opposite said guiding margin, and a yielding clip at the terminal of said supporting surface engaging the strip margin opposite said guide margin.

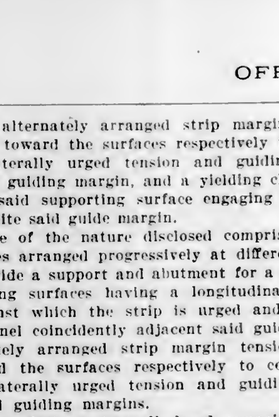
3. A device of the nature disclosed comprising rigid track surfaces arranged progressively at different elevations to provide a support and abutment for a tag strip, the supporting surfaces having a longitudinal guiding margin against which the strip is urged and a longitudinal channel coincidently adjacent said guiding margin, alternately arranged strip margin tension means urged toward the surfaces respectively to confine the strip, and laterally urged tension and guiding means opposite said guiding margins.

4. A device of the nature disclosed comprising rigid track surfaces arranged progressively at different elevations to provide a support and abutment for a tag strip, said track surfaces having a longitudinal guiding margin, means engaging a surface of the strip for urging the same against said guiding margin, and strip margin tension means in relative alternate arrangement urged toward the respective opposing surfaces to confine the strip.

5. A device of the nature disclosed comprising rigid track surfaces arranged progressively at different elevations to provide a support and abutment for a tag strip, said track surfaces having a longitudinal guiding margin, means engaging a margin of the strip for urging the same against said guiding margin, and tension means in relative alternate arrangement urged toward the respective opposing surfaces to confine the strip, and feeding devices for intervally advancing the strip between said surfaces and tension means.

[Claims 6 to 12 not printed in the Gazette.]

1,171,730. INKING DEVICE FOR TICKETING-MACHINES. FREDERICK KOHNLE, Dayton, Ohio. Filed June 17, 1914. Serial No. 845,726. (Cl. 101—71.)



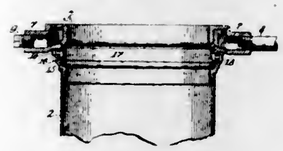
1. In a device of the character disclosed, a printing press movable toward and from an impression surface, and inking mechanism for inking the printing surface of said press, comprising an oscillating member unitarily combined with said press, an inking pad, a yielding floating knuckle pivotally connecting said pad to said oscillating member in a laterally extended direction, and means for oscillating said member.

2. In a device of the character disclosed, a printing press movable toward and from an impression surface, an inking pad movable against the printing surface of said press, an oscillating member, and a radially yielding floating knuckle member pivotally connecting said pad to said oscillating member, and capable of yieldingly compressing said pad against the printing surface of said press, and means operating through the movement of said press for actuating said oscillating member.

3. In a device of the character disclosed, a printing press movable toward and from an impression surface, an inking pad, means unitarily combined with said press for pivotally supporting said pad and moving the pad between the printing and impression surfaces of said press, and yieldingly compressing it against the printing surface, during the printing movement of said press.

4. In a device of the character disclosed, comprising printing devices movable toward and from an impression surface, an inking pad therefor, lever means combined unitarily with said printing devices, and a coupling pivotally connecting said pad and lever means having its fulcrum yieldingly movable and its swing yieldingly confined, whereby the pad may be moved transversely into approximate parallelism with the printing surface of said printing devices, and compressed against the same.

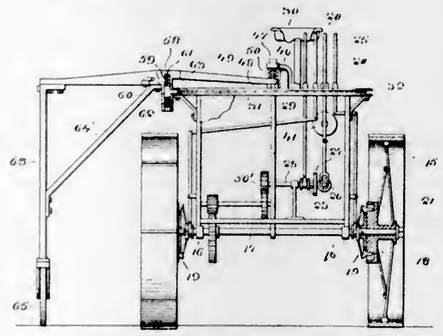
1,171,731. STOVE AND RANGE. JOSEPH E. LEONARD and GEORGE H. ILTEN, Cedar Rapids, Iowa. Filed Feb. 27, 1915. Serial No. 11,096. (Cl. 126—39.)



1. In a stove or range having a combustion-chamber, an oven served thereby and a connecting flue, a gas-burner conforming to the cross-sectional contour of said flue, and forming a connecting collar between the flue and the oven, presenting no interior obstruction to the passage of the products of combustion from the range, said collar being recessed interiorly, with gas-outlets within said recess and opening downwardly, whereby said outlets are protected from falling soot, substantially as described.

2. In a stove or range having a combustion chamber, an elevated oven served thereby, and a connecting flue for the products of combustion, an annular gas-burner finaged for connection with the bottom of the oven, a collar connected with the upper end of the flue, and a connection of said burner and collar, substantially as described.

1,171,732. TRACTION-ENGINE. NOAH A. LYLE, Bancroft, Idaho. Filed June 29, 1915. Serial No. 36,982. (Cl. 21—114.)



1. In a push tractor, a wheel supported motor driven frame having a top member, a king bolt extending axially through said top member, and two arms pivoted on the king bolt, said arms constituting, respectively, a push bar and a stabilizing bar.

2. In a push tractor, a wheel supported motor driven frame having a top member, a king bolt extending axially through said top member, and two arms pivoted on the king bolt, said arms constituting, respectively, a push bar and a stabilizing bar, said stabilizing bar having a downwardly extending limb and a caster wheel carried thereby.

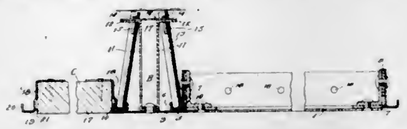
3. In a push tractor, a wheel supported motor propelled frame having a top member, a king bolt extending axially through said top member, a push bar and a stabilizing bar pivoted on the king bolt, and springs above and below said push bar and stabilizing bar.

4. In a push tractor, a wheel supported motor propelled frame having a top member, a king bolt extending axially through the top member, a bracket on the top member supporting the upper end of the king bolt, springs on the king bolt between the bracket and the top member, and a push bar and a stabilizing bar pivoted on the king bolt between the springs.

5. In a push tractor, a wheel supported motor propelled frame having a circular top member provided with an annular groove, a king bolt extending axially through the top member, arms pivoted on the king bolt and constituting, respectively, a push bar and a stabilizing bar, the latter having a downwardly extending limb carrying a ground engaging caster wheel, a brace connecting the arms and maintaining them in angular relation, slidable resiliently supported lugs connected with the respective arms and engaging the annular groove in the top member, a chain guided in the annular groove and having its ends connected with one of the arms, a vertical shaft supported for rotation on the frame and carrying a driving sprocket over which the chain is guided, and means for driving the sprocket carrying shaft including a worm gear.

[Claims 6 to 8 not printed in the Gazette.]

1,171,733. WALL-MOLD. CHARLES D. MCARTHUR, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Apr. 22, 1914. Serial No. 833,618. (Cl. 25—131.)



1. In combination in a wall mold, a channel iron having its flanges projecting outwardly from the wall to be formed and having a longitudinal rib intermediate the flanges projecting in the same direction, a lagging panel on each side of the channel iron with its rear face flush with the rear face of the channel, an angle member secured along the edge of each panel adjacent the channel iron with one flange thereof extending laterally and fitting against the outer face of the web of the channel iron and with the other flange spaced away from the panel thus providing a slot to receive the flange of the channel iron, and coöperating securing means between the said rib and the lateral flanges of the angle member.

2. In combination in a wall mold, a channel iron having its flanges projecting outwardly from the wall to be formed and having a longitudinal rib intermediate the flanges projecting in the same direction, and having laterally extending flanges at its outer edge, a lagging panel on each side of the channel iron with its rear face flush with the rear face of the channel iron, an angle member secured along the edge of each panel adjacent the channel with one flange thereof extending laterally and fitting against the outer face of the web of the channel iron and with the other flange spaced away from the panel to provide a slot to receive the flange of the channel, and removable locking pins between the said laterally projecting flanges of the angle member and the flanges of the said rib, the said laterally projecting flanges having outwardly projecting lips adapted to hold the ends of the pins against lateral movement.

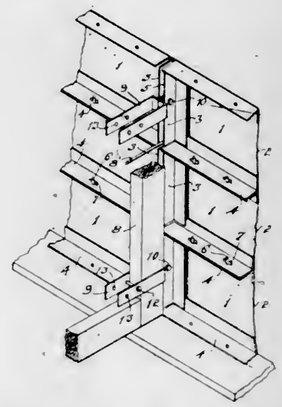
3. In combination in a wall mold, a channel iron having its flanges projecting outwardly from the wall to be formed and having a longitudinal rib intermediate the flanges projecting in the same direction, and having laterally extending flanges at its outer edge, a lagging panel on each side of the channel iron with its rear face flush with the rear face of the channel iron, an angle member secured along the edge of each panel adjacent the channel with one flange thereof extending laterally and fitting against the outer face of the web of the channel iron and with the other flange spaced away from the panel to provide a slot to receive the flange of the channel, pins extending through the flanges of the said rib and engaging the laterally projecting flanges of the angle members, and wedges for holding the pins with respect to the flanges of the ribs.

4. In combination in a wall mold, a channel iron having its flanges projecting outwardly from the wall to be formed and having a longitudinal rib intermediate the flanges projecting in the same direction, and having laterally extending flanges at its outer edge, a lagging panel on each side of the channel iron with its rear face flush with the rear face of the channel iron, an angle member secured along the edge of each panel adjacent the channel with one flange thereof extending laterally and fitting against the outer face of the web of the channel iron and with the other flange spaced away from the panel to provide a slot to receive the flange of the channel, and removable locking pins between the said laterally projecting flanges of the angle member and the flanges of the said rib, the said laterally projecting flanges having outwardly projecting lips adapted to hold the ends of the pins against lateral movement.

5. In combination in a wall mold, a channel having its flanges projecting outwardly from the wall to be formed and having a flanged rib extending longitudinally of the channel between the flanges, a panel having a slot along one side to receive one of the flanges of the channel and also having a flange engaging the outer face of the web of the channel, a securing pin engaging at its inner end such last mentioned flange and at its outer end extending through the flange on the said rib, and a wedge extending through the pin behind the flange on said rib.

[Claim 6 not printed in the Gazette.]

1,171,734. WALL AND CULVERT MOLD. CHARLES D. MCARTHUR, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, Pa., a Corporation of New Jersey. Filed Apr. 22, 1914. Serial No. 833,619. (Cl. 25—131.)



1. In combination in a wall mold, a series of panels placed edge to edge with their end edges in substantial alinement, a second similar series of panels with their end edges abutting the end edges of the first set, flanges rigid with the end edges of the two sets of panels, but spaced apart a slight distance, a supporting beam extending longitudinally opposite the said flanges, and clamps

having their inner ends secured between the opposing flanges and their outer edges secured to the supporting beam.

2. In combination in a wall mold, a series of panels placed edge to edge with their end edges in substantial alinement, a second similar series of panels with their end edges abutting the end edges of the first set, flanges rigid with the end edges of the two sets of panels, but spaced apart a slight distance, a supporting beam extending longitudinally opposite the said flanges, and forked clamps having their forked ends embracing and secured to the beam and their other ends lying between and secured to the said flanges.

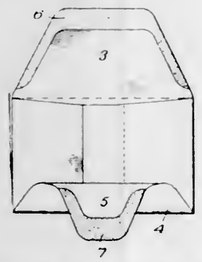
3. In combination in a wall mold, a series of panels placed edge to edge with their end edges in substantial alinement, a second similar series of panels with their end edges abutting the end edges of the first set, flanges rigid with the end edges of the two sets of panels, but spaced apart a slight distance, a supporting beam extending longitudinally opposite the said flanges, and clamps having their inner ends secured between the opposing flanges and their outer edges secured to the supporting beam, the said panels being provided with flanges on their side edges against which the beam engages.

4. In combination in a wall mold, a series of panels placed edge to edge with their end edges in substantial alinement, a second similar series of panels with their end edges abutting the end edges of the first set, flanges rigid with the end edges of the two sets of panels, but spaced apart a slight distance, a supporting beam extending longitudinally opposite the said flanges, and clamps having their inner ends secured detachably to the said opposing flanges and their outer edges secured detachably to the supporting beam, the said panels being provided with flanges on their side edges against which the beam engages holding the panels in alinement.

5. In combination in a wall mold, a series of panels placed edge to edge with their end edges in substantial alinement, a second similar series of panels with their end edges abutting the end edges of the first set, flanges rigid with the end edges of the two sets of panels, but spaced apart a slight distance, a supporting beam extending longitudinally opposite the said flanges, forked clamps having their inner ends secured to the said flanges and having their forked ends embracing the beam, and means lying to the rear of the beam for clamping the sides of the forks against the sides of the beam.

[Claim 6 not printed in the Gazette.]

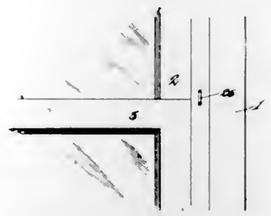
1,171,735. COIN-MAILING ENVELOP. PETER I. MCCABE, Hartford, Conn., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed May 21, 1914. Serial No. 840,114. (Cl. 229—69.)



1. As a new article of manufacture, an envelop made from a blank having end and bottom flaps, the end and bottom flaps being attached to each other to form a back for the main pocket of the envelop, one of said flaps forming said back having a free extension adapted to lie against said back, with its edges gummed for attachment to said back to form a supplemental pocket, and a seal flap on said blank for closing the main pocket and covering the supplemental pocket.

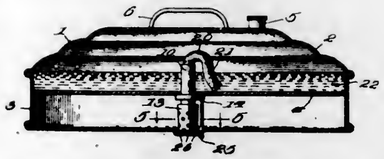
2. As a new article of manufacture, an envelop made from a blank having end and bottom flaps, with the end flaps overlapping and the bottom flap folded over said overlapping end flaps to form a back for the main pocket of the envelop, one of said flaps forming said back having a free extension adapted to lie against said back, with its edges gummed for attachment to said back to form a supplemental pocket, and a seal flap on said blank for closing the main pocket and covering the supplemental pocket.

1,171,736. SASH-LOCK. WILLIAM H. MCCLANAHAN, Crothersville, Ind. Filed Apr. 11, 1913. Serial No. 760,400. (Cl. 16—119.)



A sash lock in combination, a spring actuated bolt for each sash, a key in operative relation with said bolts, said key provided with recessed portions spaced longitudinally thereof and bolt-engaging portions on said key at the formation of the recesses therein, said bolt-engaging portions disposed eccentrically to the axis of said key and out of alinement with each other whereby said bolts are alternately withdrawn from locking position by the engagement thereof with said bolt-engaging portions.

1,171,737. DISINFECTING DEVICE. THOMAS V. MADIGAN, Brooklyn, N. Y. Filed Feb. 8, 1915. Serial No. 6,819. (Cl. 167—3.)



A device of the class described comprising a reservoir adapted to contain a disinfecting fluid, a delivery tube leading outwardly from said reservoir and having its outer end provided with a plurality of longitudinal slits, an absorbent feed member housed with said tube and having its inner end disposed in the reservoir, and a perforated tube compressing cap threaded on the outer end of the tube, whereby the discharge of fluid from said tube may be varied by compressing the feed member.

1,171,738. SCRAPER. FRANÇOIS MALLET, Paris, France. Filed Feb. 9, 1914. Serial No. 817,599. (Cl. 145—47.)

1. A scraper, comprising in combination, a blade having a hemispherical hollow bulge and having an aperture at the center of the bulge, a rod adapted to extend through said aperture, a cup member disposed on said rod and having a cavity therein adapted to receive the convex surface of said bulge, a hemispherical member disposed on said rod and lying within said bulge, and means for clamping the walls of said bulge tightly between said cup member and hemispherical member.

2. A scraper, comprising in combination, a blade having a hemispherical hollow bulge with an elongated aperture at the center thereof, a rod having a threaded portion adapted to extend through and beyond said aperture and bulge, a collar on said rod, a cup member disposed on said rod and so arranged as to have its upper surface abut said collar and having in its lower surface a cavity adapted to receive the convex surface of said bulge, a hemispherical member disposed on said rod and lying within



said bulge, a clamping nut disposed on said threaded portion, and a retractile member disposed on said rod between said hemispherical member and clamping nut, substantially as described.

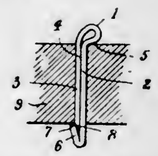
1,171,739. PROCESS OF INTRODUCING IRON INTO FOODS, DRUGS, AND BEVERAGES. HOWARD L. MARSH, Philadelphia, Pa. Original application filed Dec. 5, 1914, Serial No. 875,553. Divided and this application filed Jan. 27, 1915. Serial No. 4,608. (Cl. 23—24.)

1. The process of preparing a substance containing iron in a soluble form for introduction into beverages, foods and drugs, which consists in subjecting a solution of ferric saccharate to a temperature between 212 and 350 degress F. and under a pressure exceeding normal atmospheric pressure.

2. The process of preparing a substance containing iron in a soluble form for introduction into beverages, foods, and drugs, which consists in heating ferric saccharate under pressure to a temperature of approximately 300 degrees F.

3. The process of preparing a substance containing iron in a soluble form for introduction into beverages, foods and drugs, which consists in subjecting a solution of ferric saccharate containing substantially no free alkali, to a temperature between 212 and 350 degrees F. and under a pressure exceeding normal atmospheric pressure.

1,171,740. COTTER-PIN. MARTIN L. MARTUS, Waterbury, Conn., assignor of one-half to Charles B. Schoenmehl, Waterbury, Conn. Filed June 28, 1913. Serial No. 776,266. (Cl. 74—8.)



1. A cotter pin formed of a single piece of wire and comprising two shank portions arranged side by side, one of said shanks being longer than the other and forming a fixed member and having its one end portion turned over and disposed flat against the side of said shank to form the introductory end of the pin, the shorter one of said shanks being movable with respect to the fixed shank and having its end beveled and adapted to be driven in back of the returned end of the longer shank for the purpose of spreading the same, and a loop uniting the shanks and forming a head upon one side of the movable shank and in line with the fixed shank to permit the movable member to be driven in along side of and with respect to the longer shank for the purpose specified.

2. A cotter pin formed of two limbs joined by a loop, one of the limbs being folded back upon itself and the other limb lapping the extreme end of the folded portion of said folded limb intermediate of the length of said pin.

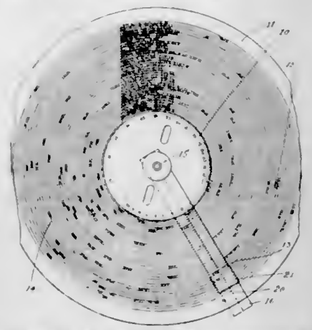
3. A cotter pin formed of a piece of metal bent back upon itself near both ends of the pin, and said metal having beveled and lapping termini intermediate the ends of said pin.

4. A cotter pin formed of a piece of metal bent back upon itself near both ends of the pin one end of the pin forming an offset loop and said metal having lapping oppositely beveled termini intermediate the ends of said pin.

5. A cotter pin formed from a single piece of metal looped intermediate its ends and formed into two parallel limbs, the long limb having an end portion folded back upon itself and the short limb lapping the tip of said folded end portion, whereby a blow on the loop will produce a pin having three thicknesses of metal at one end.

[Claim 6 not printed in the Gazette.]

1,171,741. GEOLOGIST'S CALCULATING DEVICE. WARREN J. MEAD, Madison, Wis. Filed Mar. 19, 1912. Serial No. 684,853. (Cl. 235—88.)



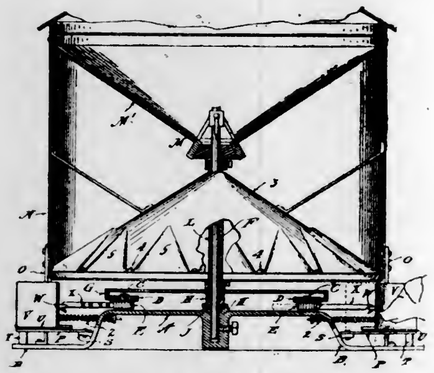
1. A geologist's calculating device comprising two relatively movable members, one formed with a completely numbered logarithmic scale, the other comprising an extended plane surface adjacent said scale line, said surface being ruled with a multiplicity of parallel lines, the spaces between each adjacent pair of parallel lines having therein the designation of a definite mineral compound, said extended surface having marked thereon an indicator at the beginning of all of said parallel spaces and extending perpendicularly across the same and pointing perpendicularly to the scale edge, each of said spaces being ruled across with lines perpendicular to said scale edge and so positioned relative to said indicator and the scale as to indicate the logarithmic percentage positions with reference to the scale of the different oxid constituents of said minerals and being designated in said spaces by the chemical symbols of said oxids, and a member movable uniformly along said scale and said spaces having an indicating line extending transversely across the same.

2. A geologist's calculating device comprising two concentric disks pivotally connected for relative movement, one having marked thereon a complete circular logarithmic scale, the other comprising an extended plane surface limited in one direction by the line of said scale, said surface being ruled with a multiplicity of concentric circles, the spaces between each adjacent pair of circles having therein the designation of a definite mineral compound, said extended surface having marked thereon an indicator representing the beginning of all

said concentric spaces and extending radially across the same and pointing radially to the scale edge, each of said concentric spaces being ruled across with radial lines so positioned relative to said indicator and the scale as to indicate the logarithmic percentage positions with reference to the scale of the different oxid constituents of said minerals and being designated in said spaces by the chemical symbols of said oxids, and an arm mounted for independent rotation about the common center of and having a radial line extending across said scale and said concentric spaces.

3. A geologist's calculating device comprising two concentric disks pivotally connected for relative movement, one having marked thereon a complete circular logarithmic scale, the other comprising an extended plane surface limited in one direction by the line of said scale, said surface being ruled with a multiplicity of concentric circles, the spaces between each adjacent pair of circles having therein the designation of a definite mineral compound, said extended surface having marked thereon an indicator representing the beginning of all said concentric spaces and extending radially across the same and pointing radially to the scale edge, each of said concentric spaces being ruled across with radial lines so positioned relative to said indicator and the scale as to indicate the logarithmic percentage positions with reference to the scale of the different oxid constituents of said minerals and being designated in said spaces by the chemical symbols of said oxids, an arm mounted for independent rotation about the common center of and having a radial line extending across said scale and said concentric spaces, and a marker slidable along said arm to be positioned at the margin of any selected concentric space.

1,171,742. FEED-GRINDER AND FEEDING-MACHINE. ALFRED F. MEYER, Morton, Ill. Filed Mar. 2, 1914. Serial No. 822,042. Renewed June 23, 1915. Serial No. 35,940. (Cl. 83—13.)



1. In a machine of the class described, the combination of a grinding device, a member operatively connected to said grinding device, a cup or tray adapted for a reciprocating or vibratory movement arranged to receive material from said grinding device, and adapted to be moved by an animal feeding from it and including means to operatively engage the member, and means to carry and guide the said cup or tray in its reciprocating movement.

2. In a machine of the class described, the combination of a grinding device, rotatable means operatively connected to it, a feeding cup or tray mounted for a reciprocating movement adapted to be moved in one direction by an animal feeding from it, and arranged to receive reduced material from said grinding device, and adapted in its said movements to impart movement to said rotatable means.

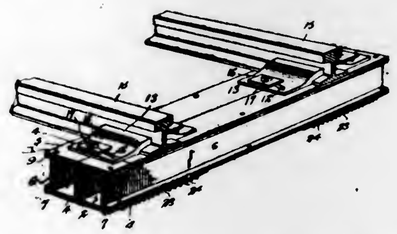
3. In a feed grinding machine, the combination of a grinding device, a member operatively connected to the same, a feed cup or tray mounted to have a reciprocating motion relative to the grinding device and arranged to receive the latter material reduced by it and operated by the nose of an animal feeding from it and including a part to engage and operate said member.

4. In a feed grinding machine, the combination of a grinding device, a member operatively connected to the same, a feed cup or tray mounted to have a reciprocating motion relative to the grinding device and arranged to receive from the latter material reduced by it and operated by the nose of an animal feeding from it and including a part to engage and operate said member, and means constantly tending to operate the said cup or tray elastically in opposition to the movement imparted by the animal.

5. In a machine of the class described, the combination of a feed grinding device, a rotatable member operatively connected to it, a feeding cup or tray adapted for a reciprocating movement and operated by an animal feeding directly from said cup or tray, and mechanism intermediate the cup or pocket and the rotatable member to engage the latter and impart movement to it in the movement of the said cup or tray.

[Claims 6 to 19 not printed in the Gazette.]

1,171,743. RAILWAY-TIE. MARTIN MINNICH, Covington, Ohio. Filed Apr. 27, 1915. Serial No. 24,297. (Cl. 238—5.)

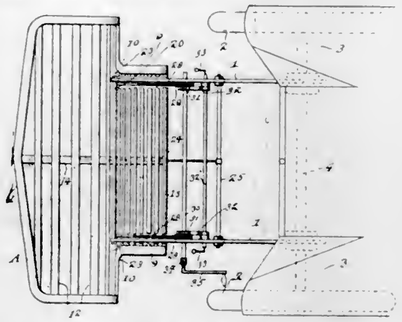


A tie constructed to include two similar metallic channel members having their webs abutting and connected, sides also comprising metal channel members received between the flanges of the first mentioned channel members and the flanges of the last mentioned channel members secured to the flanges of the first mentioned channel members in the outer longitudinal edges thereof, and longitudinally disposed transversely fluted members on the underface of the tie at the opposite ends thereof and secured to the elements comprising the tie.

1,171,744. AUTOMOBILE-FENDER. ALFRED MURCH, West Fitchburg, Mass. Filed Aug. 21, 1915. Serial No. 46,668. (Cl. 105—33.)

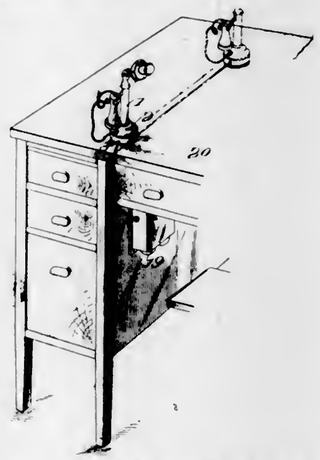
1. In an automobile fender, the combination with the front axle thereof, of forwardly extending fender supporting bars secured in fixed relation to the axle and arranged substantially parallel to each other, a fender body, a spacing tube secured in fixed relation to said fender body at the rear thereof and bridging the space between said supporting bars, a bolt extending through said supporting bars and tube, resilient means for yieldingly resisting the rearward movement of the upper portion of the fender body, and means for locking said fender body at any point in the rearward movement.

2. In an automobile fender, the combination with the front axle thereof, of forwardly extending fender supporting bars secured in fixed relation to the axle and arranged substantially parallel to each other, a fender body, a spacing tube secured in fixed relation to said fender body at the rear thereof and bridging the space between said supporting bars, a bolt extending through said supporting bars and tube, resilient means for yieldingly resisting the rearward movement of the upper portion of the fender body, means for locking said fender body at any point in the rearward movement, said means comprising a curved rack bar bearing a fixed relation to the fender body, a pinion on one of the fender supporting bars driven by said curved rack bar, and pawl and ratchet means for locking said pinion.



3. In an automobile fender, the combination with the front axle thereof, of forwardly extending fender supporting bars secured in fixed relation to the axle and arranged substantially parallel to each other, a fender body, a spacing tube secured in fixed relation to said fender body at the rear thereof and bridging the space between said supporting bars, a bolt extending through said supporting bars and tube, resilient means for yieldingly resisting the rearward movement of the upper portion of the fender body, means for locking said fender body at any point in the rearward movement, and combined stops, guides and braces secured to the fender body and slotted to straddle the fender supporting bars.

1,171,745. TELEPHONE ATTACHMENT. GEORGE P. MUNDY, Washington, D. C. Filed Mar. 6, 1915. Serial No. 12,492. (Cl. 179—147.)



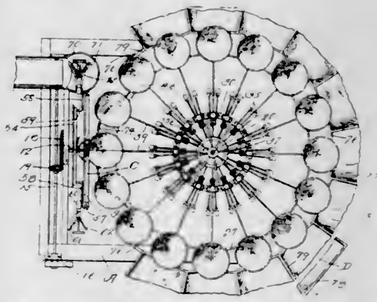
1. The combination with the base of a desk telephone, of a cylindrical member within the base and extending below the same, a rotatable plate closing the lower end of the cylindrical member, a reel within the cylindrical member and upon which is wound the cord leading from the telephone to the bell-box, a spring having one end secured to the reel and the opposite end to the plate.

2. The combination with a desk telephone, of a cylindrical member secured to the lower end and forming the base, of a spring wound reel within the cylindrical member, and having a drum on its upper face, the cord carrying the wires leading from the telephone wound upon the drum and passing to the center of the reel and wound thereon and passing outwardly to the bell box, whereby a constant tension is kept on the cord between the bell box and the telephone.

3. The combination with a desk telephone, of a cylindrical member secured to the lower end thereof and forming the base, of a spring wound reel within the cylindrical member, and a drum carried by the upper face of the reel and upon which is coiled the cord leading from the phone and carrying the wires, said cord passing from the drum to the inner periphery of the reel and wound thereon and passing outwardly through an opening in the cylindrical member, whereby a constant tension is kept on the cord between the bell box and the telephone.

4. The combination with a desk telephone having a cylindrical member secured to the lower end thereof and forming the base of the telephone, a horizontally arranged reel within the cylindrical member, a spring for winding the reel and having one end connected to the cylindrical member, the upper end of the reel having a drum secured thereto and upon which is wound the cord carrying the wires from the phone and said cord passing from the drum to the inner periphery of the reel and wound thereon and passing outwardly through the cylindrical member, whereby a constant tension is kept upon the cord between the telephone and the bell box.

1,171,746. FRUIT-GRADING MACHINE. JOHN NELSON, Selah, Wash. Filed Sept. 8, 1914. Serial No. 860,698. (Cl. 130—32.)



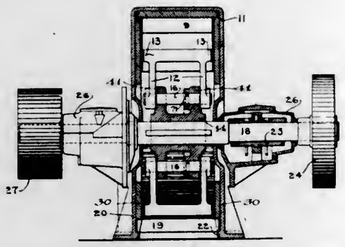
1. An assorting device comprising a rotatable vertical shaft, wheels fixed on said shaft at spaced points, arms pivoted on the upper wheel, weights adjustably mounted on said arms adjacent their outer ends, a plurality of arms pivoted on the lower wheel, links connecting the inner ends of corresponding arms on the upper and lower wheels, an article carrier pivoted on the outer end of each arm mounted on the lower wheel, means for locking the carriers against pivotal movement, and trips for releasing said locking means, said trips being disposed at different elevations.

2. In an assorting apparatus, the combination of a series of rotating distributing arms having a yielding movement in a plane parallel to their axis of rotation, the extent of said movement being governed by the weight of the article, tilting cups mounted on the arms to carry the article, a latch mounted on the outer end of each arm including diverging portions engaging the cup at different points, one of said portions being provided with an opening, a finger on the cup engageable through said opening to lock the cup against tilting movement, and trips disposed at different elevations for operating said latch device to disengage the finger from said opening and permit tilting movement of the cup.

3. An assorting apparatus comprising a series of rotating distributing arms, article supporting means carried by each arm, means for feeding articles singly to the supporting means, said means comprising a hopper, a rotatable wheel, a plurality of carriers each rotatably

mounted on the wheel and movable bodily through the hopper during the rotation of the wheel to gather an article, means for independently rotating said carriers at a predetermined time during rotation of the wheel to discharge the article therein into the coöperating article supporting means, and means for subsequently rotating the carrier to properly position same for passage through the hopper.

1,171,747. PULVERIZER. RAY C. NEWHOUSE, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 15, 1911. Serial No. 608,661. (Cl. 83—73.)



1. In a pulverizer, a casing, a shaft mounted to rotate within said casing, a suspension member fixed to said shaft, a single pin adjustably mounted in said suspension member, means for positively locking said pin in an adjusted position and against rotation relative to said suspension member, and a single hammer engaging said pin on opposite sides of said locking means, said hammer being swingable upon said pin as a pivot.

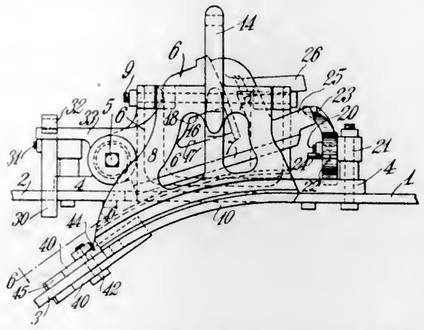
2. In a pulverizer, a casing having inwardly projecting recessed side portions, a shaft extending through said casing, bearings for said shaft located on opposite sides of said casing, said bearings extending into the recessed portions of said casing, and a hammer suspended from a portion of said shaft between said bearings, said hammer having side projections extending outwardly toward said casing.

3. In a pulverizer, a casing having inwardly projecting recessed side portions, a rotary shaft extending through said casing, bearings for said shaft located on opposite sides of said casing, said bearings extending into the recessed portions of said casing, a suspension member secured to said shaft intermediate said bearings, a single pin adjustably mounted in said suspension member, means for positively locking said pin in an adjusted position and against rotation relative to said suspension member, and a single bail-shaped hammer having inwardly extending arms engaging the overhanging ends of said pin on opposite sides of said locking means, said hammer being swingable upon said pin as a pivot.

4. In a pulverizer, a casing, a shaft mounted to rotate within said casing, a suspension member fixed to said shaft and having an opening, a single pin adjustably mounted in said suspension member and having an opening alinable with said suspension member opening, means engageable with said openings for positively locking said pin in an adjusted position and against rotation relative to said suspension member, and a single hammer engaging said pin on the opposite sides of said locking means, said hammer being swingable upon said pin as a pivot.

1,171,748. TROLLEY-TRACK SWITCH DEVICE. WILLIAM H. NORMINE, Chicopee Falls, Mass., assignor to Fisk Rubber Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed Dec. 20, 1915. Serial No. 67,875. (Cl. 104—180.)

1. The combination with an interrupted main line track and a branch line track, of switch members one thereof arranged to connect the interrupted main line sections and the other to connect the main line with the branch track, said members arranged so that an actuation of one causes a movement of the other, a device pivoted to the main line track adjacent the common intersection of both said members therewith, said device arranged to drop on said track by gravity and means on one of said members to raise and hold the device away from said track when either of said members is positioned to connect said tracks.



2. The combination with an interrupted main line track and a branch track of switch members one thereof arranged to connect the interrupted main track and the other to connect the main line with the branch track, said members arranged so that as one member is thrown into connecting position the other is withdrawn therefrom, a stop pivoted to the main track on the exit side of the switch, and arranged normally to block the track, means on one of said members operable to retract said stop when the member is positioned to connect the interrupted main track, a second stop pivoted to the branch track and arranged normally to block the latter, means on the other of said members to retract the stop when the member is positioned to connect the main and branch tracks, and a protective device pivoted to the main track adjacent the common intersection of both said members therewith and arranged to drop by gravity upon said track, two actuating members formed on said device, and a finger for each of said actuating members formed on one of said switch members, said fingers arranged alternately to engage its respective actuating member whereby, when one switch member is withdrawn from connecting position the said device may drop into locking position upon the main track and remain in such position until the other switch member is thrown into connecting position.

3. A switch for trolley tracks, comprising in combination, a frame, two pivoted switch members adapted to connect an interrupted main line track and the main line track to a branch track respectively, said members arranged so that as one thereof is thrown into connecting position, the other is withdrawn therefrom, a stop device pivoted to the frame adjacent the common intersection of said members with the main track, and arranged to drop by gravity into blocking position on the main track, a pair of actuating arms formed on said device, and fingers formed on one of said switch members and engageable with said arms, all constructed and arranged so that one of said fingers engages its respective arm on said device to hold the latter away from the track when one switch member is in connecting position and the other finger engages the other arm to raise the device when the other member is in connecting position, whereby during the transition of said members the main track may be blocked.

4. A switch for trolley tracks, comprising, in combination, a frame, two switch members pivoted thereto and adapted respectively to connect interrupted main track sections and to connect a main track to a branch track, said members arranged so that as one thereof is moved into position to connect its tracks the other is withdrawn from connecting position, a pawl pivoted to the frame adjacent the entrance side of said switch members and arranged to drop by gravity upon the main track to block the latter, two actuating arms on said pawl, a finger for each arm formed on one of said switch members, one finger arranged when one switch member is in connecting position to hold the pawl away from the track and the other finger arranged when the other member is in connecting position to hold the pawl away from the track, said fingers arranged to alternately engage their respective arms, whereby as one member is withdrawn from connecting position the pawl may drop on the track and remain so positioned until the other member is thrown into connecting position.

5. The combination with an interrupted main line track, of a branch line track, switch members arranged respectively to connect the interrupted main line track and the latter to the branch line track, a stop adjacent the intersection of the main and branch line tracks and arranged when in one position to block the former, and mechanism operable by movement of either said members to move the stop to blocking position during the interval of operation of either said members.

1,171,749. SHOE-HEEL DEVICE. PETER L. PETERSON, Manti, Utah. Filed Apr. 25, 1914. Serial No. 834,445. (Cl. 36—8.)

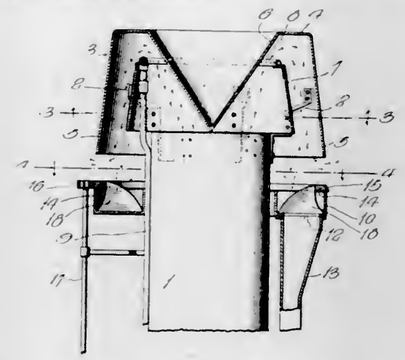


1. A device of the character described, comprising a plate curved to conform to the shape of and adapted to be secured to the counter of an inner shoe at the rear end thereof, and provided with a socket at its upper edge, and a second plate adapted to be secured to the inside of an overshoe and curved to conform closely to the shape of the first plate and provided with a hook of a size to enter said socket, said plates being adapted to be arranged and connected to the inner shoe and overshoe in such relation that as the overshoe is fitted in place on the inner shoe, the hook will engage with the socket to hold the overshoe against removal.

2. A device to secure an overshoe on an inner shoe comprising a single sheet metal plate curved to conform to the shape of and adapted to be secured to the counter of an inner shoe at the rear portion thereof, said plate bent outwardly at the upper edge to provide a socket, and a second member adapted to be secured to the inside of an overshoe comprising a single sheet metal plate curved to conform closely to the shape of the first plate and provided at its upper edge with a tongue bent over to form a hook to be received in the socket of said first plate, said plates being adapted to be arranged and connected to the inner shoe and overshoe in such relation that as the overshoe is fitted in place on the inner shoe, the hook will engage with the socket to hold the overshoe against removal.

1,171,750. SMOKE AND DUST CONSUMER. ANDREW POOL and RALPH KAAN, Indiana Harbor, Ind. Filed Oct. 21, 1915. Serial No. 57,072. (Cl. 110—142.)

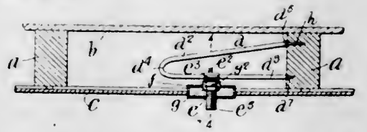
1. The combination with a smoke stack; of a hood over said stack and spaced therefrom, said hood being closed at its top and open at its bottom, the lower edge of the wall thereof being extended below the top of said stack, a substantially cylindrical open-ended deflector within said hood and spaced from the top and side walls thereof, whereby smoke from the stack is deflected upwardly and then downwardly and out the open bottom of said hood, a water spray pipe on the upper edge of said deflector to spray the water both inwardly and outwardly in a substantially horizontal plane, thereby causing the smoke to pass twice through the water during its passage from the stack to the outer atmosphere.



2. The combination with a smoke stack; of a hood disposed thereabove, said hood being closed at its top and open at its bottom, whereby the smoke is deflected downwardly, a water spray pipe therein, a dust pan disposed around said stack below said open-bottomed hood and having an opening in its bottom, said pan being substantially U-shaped in cross section with a flat bottom, a plurality of scrapers in said pan to convey the dust deposited therein to the discharge opening, the straight edges of said scrapers being movable over the flat bottom of said pan, a ring seated on one of the upper edges of said pan and carrying the scrapers, said scrapers being substantially the width of the pan to maintain the ring in operative position, and means for revolving said ring to move the scrapers.

3. The combination with a smoke stack; of a hood over said stack and spaced therefrom, the lower edge of the wall of said hood being extended below the top of the stack, a substantially cylindrical open ended deflector within said hood and spaced from the top and side walls thereof, a water spray pipe on the upper edge of said deflector, an additional inverted cone-shaped deflector depending from the top of said hood within the first mentioned deflector, a dust pan disposed around said stack and having an opening in its bottom, a discharge pipe leading therefrom, a plurality of rotatably mounted scrapers in said pan, and means for moving said scrapers.

1,171,751. MEANS FOR SECURING JUNCTION-BOXES IN CEILINGS AND WALLS. WALTER E. SANDS, Fanwood, N. J. Filed Oct. 19, 1914. Serial No. 867,338. (Cl. 248—35.)

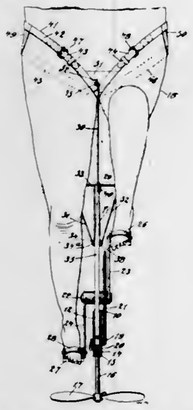


1. A support for junction boxes, comprising a yoke-shaped device having diverging side arms one of which is provided at its free end with a laterally directed foot member, the other arm being pointed at its free end, and a junction box attaching device adjustable longitudinally of said yoke-shaped device.

2. A support for a junction box, comprising a yoke-shaped device adapted to be secured to one of the beams of a ceiling or wall construction and to project horizontally in the direction of an adjacent beam and an attaching device for junction boxes mounted on said yoke-shaped device and adjustable longitudinally thereof, or toward and from the adjacent beam.

3. A support for junction boxes, comprising a yoke-shaped device having diverging side arms one of which is provided at its free end with a foot member, the other arm being pointed at its free end, and a junction box attaching and wire supporting device adjustable longitudinally of said yoke-shaped device.

1,171,752. SWIMMING DEVICE. HYMAN SELTZER, New York, N. Y. Filed Oct. 30, 1914. Serial No. 369,419. (Cl. 9—21.)



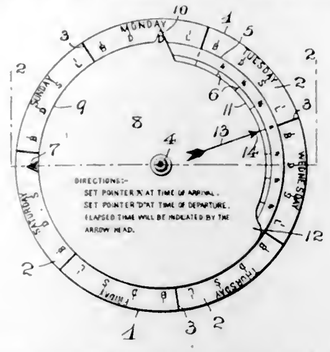
1. A swimming device comprising a frame bar, a propeller journaled in the frame bar, foot operated means for driving the propeller, and a retainer attached to the frame bar to permit relative movement of the frame bar and retainer and means for holding the frame bar in fixed position to the retainer, when the device is in use.

2. A swimming device comprising a supporting frame in the form of a bar adapted to be straddled by a person, propeller-carrying shaft journaled in the lower end of the bar against longitudinal displacement, pedal-operated geared means for rotating the propeller shaft by the feet, a retainer pivoted to the bar intermediate its ends and comprising a front rod and a pair of back rods, means limiting the movement of the bar in the direction of the retainer, means carried by the frame and retainer for co-operation in holding the parts in the last mentioned position with the propeller beneath the feet of the operator, and a body engaging member provided with means for connecting the retainer thereto.

1,171,753. TIME-COMPUTER. WILLIAM C. SERRELL, Buffalo, N. Y., assignor of one-half to John H. Smith, East Orange, N. J. Filed Mar. 1, 1909. Serial No. 480,510. (Cl. 235—88.)

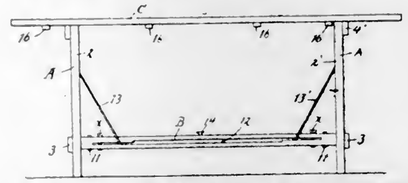
1. A device for determining an elapsed space of time comprising a base provided with a single marginal scale, a disk movably disposed upon said base-plate, said disk being also provided with a marginal scale, a face-plate movably mounted upon said disk, an index extending from said disk, an index extending from said face-plate, said face-plate being also provided with a pointer, both of said indexes co-acting with the scale upon said base and said pointer being arranged that the result is read on the scale mounted upon said disk opposite said pointer.

2. A device for determining an elapsed space of time comprising a base provided with a single marginal scale, a disk movably disposed upon said base-plate, said disk being also provided with a marginal scale, a face-plate movably mounted upon said disk, said face-plate having a marginal cut-away portion arranged so as to expose a part of the scale upon said disk, an index extending from said disk, an index extending from said face-plate



at the one end of said cut-away portion, said face-plate being also provided with a pointer mounted midway between the ends of said cut-away portion, both of said indexes co-acting with the scale upon said base and said pointer being arranged that the result is read on the scale mounted upon said disk opposite said pointer.

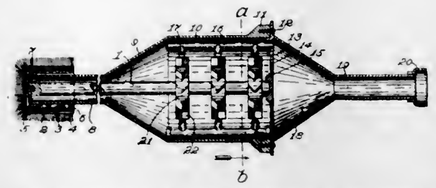
1,171,754. IRONING-BOARD STANDARD. JOHN J. SMITH and FRED O. CASSIDY, Owego, N. Y. Filed July 7, 1915. Serial No. 38,557. (Cl. 68—10.)



1. In ironing board standards leg frames consisting of two parallel frames each composed of two legs joined together by an upper and lower cross bar; two diagonal braces connecting between the upper and lower cross bar; a bail hinged to said diagonal braces; a connecting bar each end of which is hinged to the lower cross bar of the opposite leg frame, said bar being composed of two parallel strips; a slot projecting between the strips; the slot having an upper extension at one end and a lower extension at the other end; said bails being slidably mounted within said slot; a button mounted on the upper surface of the connecting bar; a turn screw mounted in the parallel strips at each end of connecting bar between the slot and the end of bar; a pin mounted in upper cross bar of one leg frame; a recess in upper cross bar of opposite leg frame; an ironing board having an opening on under side in one end and adapted to receive the pin of upper cross bar of leg frame and a pin mounted on underside of other end adapted to enter the recess in opposite leg frame, all for the purposes specified.

2. In an ironing board support, leg frames, each composed of two leg members connected together by upper and lower cross-bars, a connecting bar hingedly secured to the lower crossbars of each leg frame said bar being provided with a longitudinal slot intermediate its ends, supporting bails pivotally secured to the leg frames and adapted to traverse the slot in the connecting bar when the leg frames are folded upon said connecting bar, means to narrow the slot in the connecting bar to bind upon the bails when the leg members are in vertical position whereby the leg bars are braced and means carried by the connecting bar for securing the leg frames in position when said frames are folded upon said connecting bar.

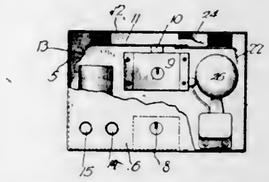
1,171,755. HOSE-NOZZLE BRUSH. NORMAN J. SMITH and WILLIAM F. LIZER, Waterloo, Iowa, assignors, by direct and mesne assignments, of one-half to said Smith and one-half to Fred W. Pett, Waterloo, Iowa. Filed Feb. 1, 1915. Serial No. 5,524. (Cl. 15—37.)



1. In combination, a chamber adapted to be placed in communication with a source of fluid supply under head, a rotor mounted in said chamber and adapted to be rotated by said fluid when passing through the chamber, said chamber having a delivery-nozzle provided with a plurality of small peripheral orifices, a shaft extending axially from said rotor through said nozzle, and a hollow intersticed brush mounted on the outer end of said shaft and surrounding the peripherally orificed part of said nozzle.

2. In combination, a nozzle adapted to be placed in communication with a supply of fluid under head, a rotary shaft in said nozzle, the end of the nozzle being inclosed and having a bearing-orifice through which said shaft extends, said nozzle having a plurality of small peripheral orifices near said end, and a cup-shaped peripherally orificed body detachably mounted on the outer end of said shaft, about the peripherally orificed part of said nozzle and permeable brushing-means mounted on the outside of said body adapted to receive water passed under pressure from said nozzle through its peripheral orifices and through the peripheral orifices of said body while the latter is rotating about the nozzle.

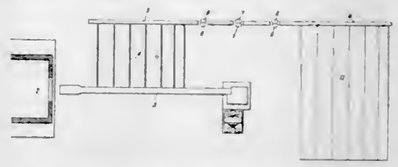
1,171,756. LOCK CIRCUIT-CLOSER. LEON SOULLIÈRE, Detroit, Mich., assignor of one-half to Fred A. Raubolt, Wyandotte, Mich. Filed Feb. 11, 1915. Serial No. 7,576. (Cl. 200—30.)



A circuit closer comprising a lock having a key actuated bolt normally protruding from the top of the lock, a contact arm extending over said lock in proximity to the bolt and in a plane below the upper end of said bolt, a resilient contact arm extending on to the end of said bolt and on to said contact arm and adapted to form part of an electric circuit, and a contact piece above the first mentioned contact arm adapted to be engaged by said resilient contact arm when raised by said bolt to establish a circuit independent of the first contact arm.

1,171,757. METHOD OF FINISHING WELDED PIPES. FRANK N. SPELLER, Pittsburgh, Pa., assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 8, 1913. Serial No. 747,044. (Cl. 29—81.)

1. The method of finishing welded pipes which consists in altering the cross sectional contour of a welded pipe while heated to a temperature below that at which the scale sets to thereby loosen and remove the scale from the surfaces of the pipe.



2. The method of finishing welded pipes which consists in altering the cross sectional contour of the welded pipe while heated to a temperature slightly below that at which the scale sets on the interior of the pipe to thereby loosen and remove scale from the surfaces of the pipe.

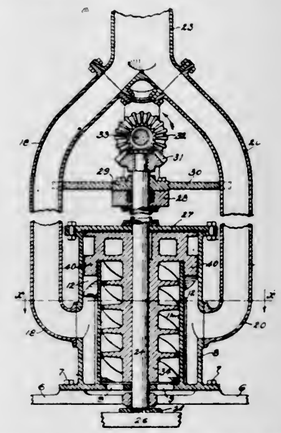
3. The method of finishing welded pipes which consists in distorting and restoring the cross sectional contour of a welded pipe while heated to a temperature below that at which the scale sets to thereby remove the scale from the surfaces of the pipe.

4. The method of finishing welded pipes which consists in distorting and restoring the cross sectional contour of a welded pipe while heated to a temperature slightly below that at which the scale sets to thereby remove the scale from the surfaces of the pipe, and lessening the diameter of the pipe in the distorting and restoring operations.

5. The method of finishing welded pipes which consists in distorting and then restoring the cross sectional contour of the welded pipe while heated to a temperature below that at which the scale sets on the interior of the pipe to thereby loosen and remove scale from the surfaces of the pipe, and alongating the pipe in the distorting and restoring operations.

[Claims 6 and 7 not printed in the Gazette.]

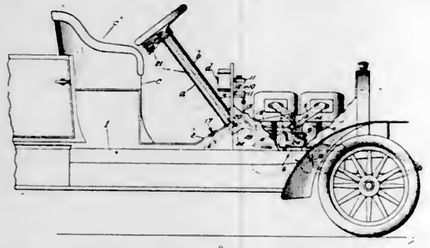
1,171,758. HYDRAULIC IRRIGATING - MACHINE. PAUL J. STALEC, Seattle, Wash. Filed Sept. 21, 1914. Serial No. 862,665. (Cl. 103—43.)



In a hydraulic machine of the class described, the combination with a pump cylinder having inlet passageways through its bottom end wall and having a plurality of outlet passageways through its side wall, said outlet passageways being equi-distant from each other, of discharge pipes each connected with a different one of said outlet passageways, a tubular formed portion disposed concentrically within said cylinder to encircle said openings in the bottom wall of said cylinder, with which bottom wall said tubular portion is integrally connected

whereby is formed an annular space between the exterior of said portion and the interior surface of the side walls of said cylinder; a plurality of partitions disposed each within said annular space between adjacent ones of said outlet openings to extend from said bottom end wall of said cylinder to a plane higher than said outlet passageways, a shaft rotatably disposed to extend concentrically through said cylinder; a hub secured on said shaft within said cylinder to extend throughout the length thereof said hub having its upper end portion enlarged to fit within the upper end portion of the boring of said cylinder said enlarged end portion having an annular flange which extends downwardly within the upper portion of the annular space between said tubular portion and the wall of said cylinder; a plurality of spirally disposed arms integrally secured to the bottom surface of said annular flange which arms extend downwardly to a plane adjacent to the top end surfaces of said partitions, a plurality of spirally disposed fins secured integrally to the periphery of that portion of said hub that is surrounded by said tubular portion, and passageways within said enlarged portion of said hub for connecting respectively the spaces between adjacent ones of said fins with the spaces between said spirally disposed arms.

1,171,759. AUTOVEHICLE AND METHOD OF MAINTAINING SUCH VEHICLES IN GOOD WORKING CONDITION. SAMUEL P. THOMPSON, Los Angeles, Cal., assignor of one-half to Robert A. Walton, Los Angeles, Cal. Continuation of application Serial No. 550,588, filed Mar. 21, 1910. This application filed Mar. 13, 1911. Serial No. 614,205. (Cl. 123—198.)

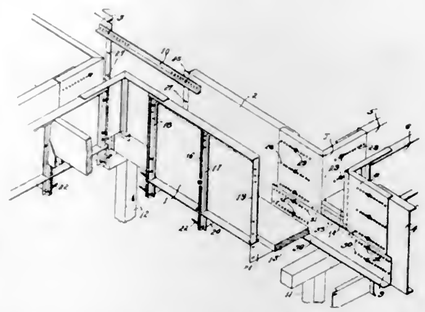


1. The combination with a frame, of two independent valve-operating levers mounted on the frame in position to be controlled by the operator from a single station, a decarbonizer container mounted on the frame, an internal combustion engine mounted on the frame, a fuel supply pipe for said engine, a carbureter to supply fluid fuel to the engine through said pipe, a throttle valve to control the opening through the pipe, a spray nozzle mounted in the supply pipe between the carbureter and the engine, a decarbonizing conducting pipe between the container and the spray nozzle, an automatically closing valve between the decarbonizer conducting pipe and the spray nozzle, means between the automatically closing valve and one of the levers for temporarily opening the valve between the decarbonizer conducting pipe and the spray nozzle when said lever is actuated, and means between the throttle valve and the other lever whereby the operation of the other lever will open the throttle valve.

2. The method set forth of maintaining internal combustion driven auto-vehicles in good working condition which consists in suddenly and forcibly saturating with a combustible carbon solvent in the internal combustion chambers of such vehicle, the solid carbon deposits that may occur from time to time therein, by compressing into the pores of such deposits the combustible solvent and then supplying air and burning out the solvent and carbon substantially and for the purpose set forth.

3. The method set forth of maintaining an internal combustion engine in good working condition, which consists in suddenly saturating with a combustible solvent such solid carbon deposits as may occur from time to time in the combustion cylinder of the engine by compressing into the ignition end of such cylinder air heavily charged with the solvent and then suddenly supplying a charge of carbureted air comparatively poor in carbon; and igniting the carbureted air.

1,171,760. BEAM AND GIRDER MOLD. WILLIAM M. VENABLE, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Feb. 20, 1915. Serial No. 9,515. (Cl. 25—131.5.)



1. In combination, a pair of alined girder panels with their ends spaced apart, a pair of opposing beam panels at right angles to the girder panels of less depth than such girder panels with their ends adjacent the space between the girder panels, a pair of lap corner panels each having a pair of wings which are at right angles to each other and overlap the inner faces of the girder and beam panels, and a girder splice plate overlapping the inner faces of the girder panels and lying beneath the lap corner panels.

2. In combination, a pair of alined girder panels with their ends spaced apart, a pair of opposing beam panels at right angles to the girder panels of less depth than such girder panels with their ends adjacent the space between the girder panels, a pair of lap corner panels each having a pair of wings which are at right angles to each other and overlap the inner faces of the girder and beam panels, a girder splice plate overlapping the ends of the girder panels and lying beneath the lap corner panels and the beam, and a supporting bracket for the beam panels secured to the outer face of the girder splice plate and projecting beneath the lap corner panels.

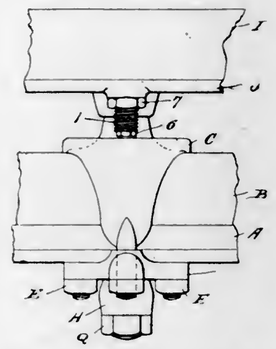
3. In combination, a pair of alined girder panels with their ends spaced apart, a pair of opposing beam panels at right angles to the girder panels of less depth than such girder panels with their ends adjacent the space between the girder panels, a pair of lap corner panels each having a pair of wings which are at right angles to each other and overlap the inner faces of the girder and beam panels, and a girder splice plate overlapping the inner faces of the girder panels and lying beneath the lap corner panels, the said splice plate extending down to the lower edges of the girder panels.

4. In combination, a pair of alined girder panels with their ends spaced apart, a pair of opposing beam panels at right angles to the girder panels of less depth than such girder panels with their ends adajacent the space between the girder panels, a pair of lap corner panels each having a pair of wings which are at right angles to each other and overlap the inner faces of the girder and beam panels, a girder splice plate overlapping the inner faces of the girder panels and lying beneath the lap corner panels, means whereby the lap panels are secured adjustably to the girder and beam panels, and means whereby the splice plate is secured adjustably to the girder panels.

5. In combination, a pair of alined girder panels with their ends spaced apart, a pair of opposing beam panels at right angles to the girder panels of less depth than such girder panels with their ends adjacent the space between the girder panels, a pair of lap corner panels each having a pair of wings which are at right angles to each other and overlap the inner faces of the girder and beam panels, and a girder splice plate overlapping the inner faces of the girder panels and lying beneath the lap corner panels, the said lap corner panels having adjustable connections with the beam and girder panels, and the girder splice plate having adjustable connections at its ends with the girder panels.

[Claims 6 to 9 not printed in the Gazette.]

1,171,761. VEHICLE-GEAR. FRANK E. WILCOX, Mechanicsburg, Pa. Filed June 11, 1915. Serial No. 33,469. (Cl. 21—24.)



1. The combination of a head block plate, an axle, means at the side of the head block plate and axle including a king bolt constituting a pivotal center about which the axle turns, and an adjustable bearing element between the head block plate and axle at one side of the king bolt and directly above the axle.

2. The combination of a head block plate, an axle, a clip on the axle, means at the side of the head block plate and axle including a king bolt constituting a pivotal center about which the axle turns, and a bearing element between the head block plate and the axle clip at one side of the king bolt and directly above the axle.

3. The combination of a head block plate with a perforated lug, an axle clip with a perforated lug, a perforated axle yoke, a king bolt passed through the perforations in said elements, and a bearing between the front part of the head block plate and the top of the clip which bearing transmits the weight above the head block plate to the clip.

4. The combination of a head block plate with a perforated lug, an axle clip with a perforated lug, a perforated axle yoke, a king bolt passed through the perforations in said elements, and an adjustable bearing between the head block plate and the top of the clip and at one side of the clip lug which bearing transmits the weight above he head block plate to the clip.

5. The combination of a head block plate, an axle, an axle clip, fifth wheel members secured respectively to the axle and head block plate, a king bolt serving as a pivotal center about which the axle turns, and adjustable means between the head block plate and the clip and in line with the axle for transmitting the weight directly to the axle; said adjustable means serving to hold the upper fifth wheel member out of excessive frictional contact with the lower fifth wheel member.

[Claims 6 and 7 not printed in the Gazette.]

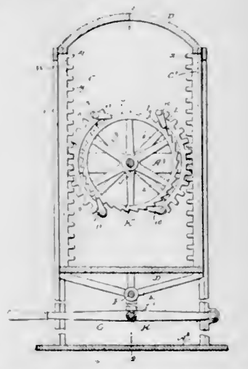
1,171,762. FASTENER FOR WINDOW-PANES. ELEAZAR T. WILKINSON, Philadelphia, Pa., assignor to David Lupton's Sons Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1911. Serial No. 650,865. (Cl. 20—56.4.)

1. A fastening device for a window pane, comprising a sash bar having a projecting resistance point, and a metal strip having a portion thereof extending between the window pane and the tongue of the sash bar, said metal strip having a projecting ledge forming a pane holding element, said strip having its upper edge inclined, whereby it may after insertion between the window pane and the tongue of the sash bar be slid lengthwise underneath the resistance point and wedged beneath the same with the pane beneath its pane holding element.



2. A fastening device for a window pane comprising a sash bar having a pin with a flanged head attached to the tongue thereof, and a metal strip with a projecting ledge forming a pane-holding element, said strip having an inclined edge whereby it may after insertion between the pane and tongue of the sash bar be wedged beneath the flanged head of the pin, with the pane beneath its pane-holding element.

1,171,763. POWER-TRANSMISSION DEVICE. LORIN E. ALLEN, Endicott, N. Y. Filed Feb. 6, 1913. Serial No. 746,659. (Cl. 74—54.)



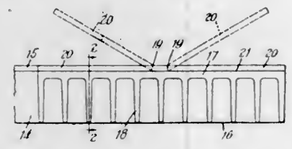
1. In a device for the transmission of power, frame supports, a frame slidably mounted within said supports and provided with two parallel series of racks, each series being mounted on the inner side of said frame and opposite to the other series, a shaft extending through said frame, a notched wheel mounted rigidly on said shaft, two parallel segments supported on said shaft and disposed on each side of said wheel, said segments being provided with cogs meshing with the racks on the frame, dogs pivotally mounted on said segments and adapted to engage the notches on the wheel and means pivotally mounted on said support to move the frame back and forth.

2. In a device of the character described, a suitable supporting frame, a rack frame mounted for reciprocation within said supporting frame, said rack frame being provided with two parallel series of racks oppositely disposed, a shaft disposed transversely of the rack frame, a ratchet wheel keyed to said shaft, gear segments loosely mounted on said shaft and in engagement with the racks, spring controlled dogs carried by the segments for engagement with the ratchet wheel and means for reciprocating the rack frame.

3. In a device of the character described a suitable supporting frame, an open rack frame mounted for reciprocation within said supporting frame and provided with opposing racks, a driven shaft, a ratchet wheel within the rack frame keyed to said shaft, gear segments in mesh with the racks and loosely mounted on said shaft, spring controlled dogs carried by the segments and means for reciprocating the rack frame.

4. In a device of the character described a suitable supporting frame, a rack frame mounted for reciprocation within said supporting frame, said rack frame being provided at each end with a series of racks, the racks of each series being spaced from each other and disposed opposite to the corresponding racks of the other series, a driven shaft transversely disposed with reference to the rack frame, a ratchet wheel keyed to said shaft and disposed midway between the opposing series of racks, a series of segmental gears in mesh with the racks on one side of the frame, a second series of segmental gears in mesh with the racks at the other side of said frame, said segmental gears being loosely mounted on said shaft, a plurality of dogs carried by the segmental gears for engagement with the ratchet wheel and reciprocating means for the rack frame.

1,171,764. PROCESS FOR MAKING TOOLS. HENRY B. BARDEN and CLIFFORD A. BARDEN, Wallingford, Vt. Filed Nov. 19, 1914. Serial No. 872,926. (Cl. 76—111.)



1. A process for making tools which consists in forming a strip of metal with a rib extending along one edge thereof, then in detaching said rib from said strip inwardly from opposite directions substantially to the center thereof, then in bending said detached portions into contact with each other, and then in welding said portions together their entire lengths to form a solid shank.

2. A process for making tools which consists in forming a strip of metal with an enlargement, then in stamping said strip to form a work member and to sever said enlargement from opposite directions inwardly substantially to the center of said strip, then in bending the severed portions of said enlargement outwardly and into contact with each other, and then in welding said severed portions together their entire lengths to form a solid shank.

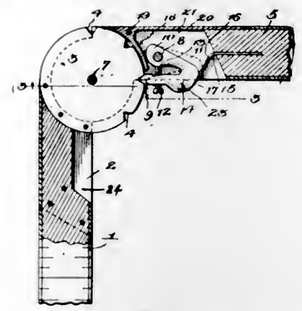
3. A process for making tools which consists in forming a strip of metal having a semicylindrical enlargement symmetrically disposed along one edge of said strip with the flat face thereof outermost, then in severing portions of said enlargement from said strip, then in bending said severed portions to bring the flat faces thereof in contact with each other to form a cylindrical shank, and then in welding said flat faces together.

4. A process for making tools which consists in forming a strip of metal having an enlargement symmetrically disposed along one edge of said strip, then in placing said strip between dies to form teeth thereon and to sever said enlargement from opposite ends of said strip inwardly to points adjacent to the center thereof, then in bending the severed portions of said strip outwardly in the plane of said strip and into contact with each other, and then in welding said severed portions together to form a solid shank.

1,171,765. COMBINED CARPENTER'S SQUARE AND MITER-GAGE. CLARENCE F. BENJAMIN, Milford, Conn. Filed May 10, 1915. Serial No. 27,138. (Cl. 33—119.)

1. An instrument of the character described comprising pivotally connected sections, one section being formed with a series of notches, and a locking device pivoted on the other section and including a latch adjustable on the device and adapted to engage in a notch of the first section and means for adjusting the latch.

2. An instrument of the character described comprising pivotally connected sections, one section being formed with a series of notches, and a locking device movably mounted on the other section and including a yieldable latch adapted to engage in a notch of the first section and means for adjusting the yieldable latch of the locking device.



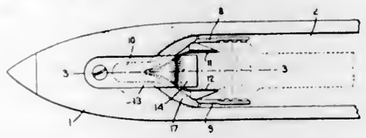
3. In an instrument of the character described, movably connected sections, one of which is provided with a series of notches, means on the other section to engage in the notches of the first section to retain the sections in fixed adjustment, other means on the other section for locking the sections in fixed adjustment, and a common operating means for the aforesaid means.

4. An instrument of the character described comprising pivotally connected sections, one section being formed with a series of notches, and a locking device movably mounted on the other section and comprising a body portion and an integral latch extending alongside of the body portion of the locking device, and a screw member carried by the latch and adapted to bear on the body of the locking device for adjusting the latch.

5. An instrument of the character described comprising pivotally connected sections, one section of which has a series of notches therein, a locking device pivoted on the other section and adapted to engage in a notch of the first section to hold the sections in fixed angular relation, said device having a flat face, and a spring adapted to engage the flat face of the locking device to hold the latter disengaged from the notched section.

[Claims 6 to 11 not printed in the Gazette.]

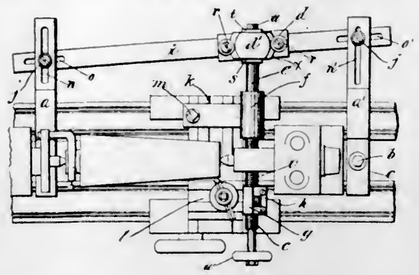
1,171,766. LOOM-SHUTTLE. THOMAS BOUCHER, Manchester, N. H., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed July 23, 1915. Serial No. 41,582. (Cl. 139—27.)



1. In a loom shuttle for bobbins having butts provided with rings and with parallel guiding faces beyond said rings, a pair of spring jaws adapted to engage said bobbin rings, a pair of integral floating, resilient guides having upwardly extending outwardly flared ends projecting above said jaws adapted to engage the flat faces of the bobbin butts, rotate and direct the same between said jaws as the bobbin is thrust into the shuttle and means for retaining said floating guide in the shuttle.

2. In a loom shuttle for bobbins having butts provided with rings and with parallel guiding faces, a pair of spring jaws to engage said bobbin rings, a floating guide comprising a pair of integral longitudinally extending resilient members having upwardly extending inclined and flared ends projecting above said jaws, adapted to engage the flat faces of the bobbin butts and rotarily direct the same into the bobbin jaws, said floating guides being retained in position by a guiding member for the base of the bobbins having an inclined portion engaging the upper edges of said guides and a flat base portion forming a support for said guides.

1,171,767. REMOVABLE TAPER ATTACHMENT FOR LATHES. HENRY C. BROWN, Brooklyn, N. Y. Filed Sept. 17, 1913. Serial No. 790,260. (Cl. 82—17.)



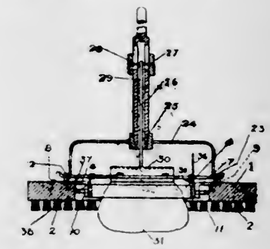
1. In a taper attachment for lathes, two arms or brackets constructed to be movably attached to the shears of a lathe and arranged to extend outwardly and back, a guide bar or track angularly and longitudinally adjustable on said arms, a saddle slidably mounted upon said guide bar or track; said saddle having an upper portion swiveled thereto, a bearing supported in said upper portion, a shaft rotatably mounted in said bearing and provided with collars on opposite sides of the bearing to prevent endwise movement of the shaft, and further provided with an intermediate smooth bearing portion, and a threaded portion, a sleeve bearing for said intermediate portion constructed and arranged for detachable connection to the lathe carriage; a nut provided with means to prevent end play and receiving the threaded portion of said shaft, said nut constructed for detachable connection to the tool slide and said shaft having a hand wheel at its forward end at the front of the lathe, all for the purpose set forth.

2. In a taper attachment for lathes the combination of two removable arms or brackets extending outwardly and rearwardly from the shears of a lathe, bolts and straps for detachably connecting the arms or brackets to the shears, a guide bar or track longitudinally and angularly adjustably mounted on said arms, a guide or saddle superimposed upon and straddling said guide bar or track and freely slidable thereon, said guide or saddle being provided with a swiveling upper portion and having a bearing, a shaft having one end rotatably mounted in said bearing and being provided with collars or shoulders on opposite sides of the bearing to prevent end play of the shaft, said shaft also provided with a smooth bearing portion, a threaded portion and an operating means; a sleeve arranged to rotatably and slidably support the smooth bearing portion of the shaft and constructed for detachable connection to the lathe carriage, a nut arranged for detachable connection to the lathe carriage for receiving the threaded portion of said shaft said nut also provided with means for preventing loose end play of the screw and being arranged at the front of the carriage, all constructed and arranged for the purpose specified.

3. The combination of removable arms or brackets constructed for detachable connection to the tracks of a lathe, a guide bar or track, angularly adjustable on said arms or brackets, a saddle or guide provided with a swiveling bearing slidably mounted on said saddle or guide, a shaft having one end rotatably mounted in said swiveling bearing and provided with adjusting collars on opposite sides of the bearing, said shaft further provided with a threaded portion and a smooth bearing portion intermediate the threaded portion and the swiveling bearing and also with an operating means at the forward end of the shaft, a sleeve for rotatably supporting the smooth portion and constructed for detachable connection to a lathe carriage, an adjustable nut for receiving the threaded portion of the shaft constructed for detachable connection to the lathe carriage whereby the tool may be adjusted for the required cut, all constructed and arranged for the purpose specified.

4. In a lathe for forming tapers, the combination of a bed, a carriage longitudinally slidable on said bed, a tool slide transversely slidable on the carriage, a pair of rearwardly extending arms or brackets adjustably mounted on said bed, a guide bar or track, angularly and longitudinally adjustable on said arms, a saddle having a swiveled upper portion slidably mounted on said guide bar, a bearing formed in the swiveled upper portion, a rotatable shaft having its rear end journaled in said bearing, collars on said shaft on opposite sides of the bearing for preventing endwise movement of the shaft, said shaft further having an intermediate smooth bearing portion and a threaded portion, a sleeve bearing to receive said intermediate bearing portion mounted on the carriage; a nut mounted on the tool slide for receiving the threaded portion of the shaft, said nut provided with means for preventing end play of the screw shaft through it, and said shaft having an operating hand wheel on its forward end, all for the purpose specified.

1,171,768. SCRUBBING AND MOPPING DEVICE. EDNA F. BROWNING, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,453. (Cl. 15—44.)



1. A scrubber and mopper including in combination an internally apertured scrubbing brush, a handle therefor, wringing means mounted on the brush, a mopper, and means mounted on said handle for moving the mopper through the wringing means.

2. A scrubber and mopper including in combination an internally apertured scrubbing brush, a handle therefor, wringing rollers mounted on said brush, and spring pressed together, and means for drawing a mopper between said wringing rollers.

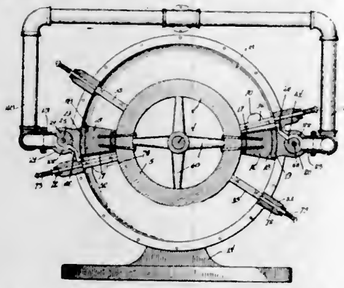
3. A scrubber and mopper including in combination an internally apertured scrubbing brush, a handle therefor, wringing rollers mounted on said brush and spring pressed together, and means for drawing a mopper between said wringing rollers and means for moving said rollers apart against the spring pressure.

1,171,769. ROTARY ENGINE. FRANK H. CARSON, Loana, Wis. Filed Oct. 27, 1913. Serial No. 797,503. (Cl. 121—67.)

1. In a rotary engine, the combination, of a casing, a rotor, auxilliary casings formed upon said casing, abutting plates slidably mounted in said auxiliary casings and adapted to be moved into or out of said casing, rods connected to said abutting plates, a plurality of levers connected to said rods, brackets formed upon said casing, pins carried by said brackets, arms connected to said pins, said arms having their free ends bifurcated, rollers seated in said bifurcations and cams carried by said rotor, said cams adapted to engage said rotors and operate said arms for moving said abutment plates out of said casing and into said auxiliary casings.

2. In a rotary engine, the combination, of a casing, a rotor, auxiliary casings formed upon said casing, abut-

ting plates slidably mounted in said auxiliary casings and adapted to be moved into or out of said casing, rods connected to said abutting plates, a plurality of levers connected to said rods, brackets formed upon said casing, pins carried by said brackets, arms connected to said pins, said arms having their free ends bifurcated, rollers seated in said bifurcations and cams carried by said rotor, said cams adapted to engage said arms for moving said abutment plates out of said casing and into said auxiliary casings and means for automatically moving said abutment plates into said casing after said rollers have passed over said cams.



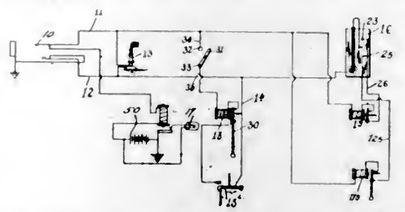
3. In a rotary engine, the combination of a casing, inlet valves carried by said casing, a rotor, auxiliary casings formed upon said casing, abutting plates slidably mounted in said auxiliary casings and adapted to move into or out of said casing, rods connected to said abutting plates, a plurality of levers connected to said rods, brackets formed upon said casing, pins carried by said brackets, arms connected to said pins, said arms having their free ends bifurcated, rollers seated in said bifurcations and cams carried by said rotor, said cams adapted to engage said rotors and operate said arms for moving said abutment plates out of said casing and into said auxiliary casings, means for automatically moving said abutting plates into said casing after said rollers have passed over said cams, and means controlled by the rotation of said rotor for regulating the passage of steam through said inlet.

4. In a rotary engine, a casing, a rotor, said rotor having a rim and spokes, piston heads connected to the rim of said rotor, inlet valves for said casing, arms connected to said inlet valves, rollers carried by said arms, springs connected to said arms and said casing, arms slidably connected to some of the spokes of said rotor, arms pivotally connected to other spokes of said rotor, said first named arms pivotally connected to said cams and said second named arms, weights carried by one of the ends of said arms, links pivotally connected to the other ends of said arms and to said cams, said cams adapted to engage said rollers for regulating the passage of steam through said inlet valves.

5. In a rotary engine, the combination of a casing, inlet valves carried by said casing, a rotor, auxiliary casings formed upon said casing, abutting plates slidably mounted in said auxiliary casings and adapted to move into or out of said casing, rods connected to said abutting plates, a plurality of levers connected to said rods, brackets formed upon said casing, pins carried by said brackets, arms connected to said pins, said arms having their free ends bifurcated, rollers seated in said bifurcations and cams carried by said rotor, said cams adapted to engage said rotors and operate said arms for moving said abutment plates out of said casing and into said auxiliary casings, means for automatically moving said abutting plates into said casing after said rollers have passed over said cams, said rotor having a rim and spokes, arms connected to said inlet valves, rollers carried by said arms, springs connected to said arms and said casing and means carried by said rotor for engaging said rollers and operating said arms for controlling the passage of steam through said inlet valves.

[Claim 6 not printed in the Gazette.]

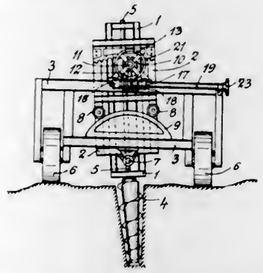
1,171,770. SIGNAL APPARATUS. RALPH B. CARTER, Bloomington, Ind., assignor, by direct and mesne assignments, of one-half to Theodore J. Louden, Bloomington, Ind. Filed June 7, 1913. Serial No. 772,266. (Cl. 179—5.)



1. Apparatus of the kind described including a telephone circuit and a central telephone exchange station, battery and subscriber's telephone connected therewith, fire alarm apparatus connected with said circuit, burglar alarm apparatus connected with said circuit, said telephone, fire alarm apparatus and burglar alarm apparatus including means to open the circuit when not in use and to close it when operated, and each also including a signaling means, a signal operable by the telephone and by each alarm signaling means, the signaling means in connection with the burglar alarm apparatus repeating more slowly than the fire alarm signaling means, said circuit controlling and signaling means of each alarm apparatus being serially included in independent bridges of the telephone circuit.

2. Apparatus of the kind described including a telephone circuit and a central station, battery and telephone connected therewith which opens the circuit when not in use, a thermometer connected with one side of the circuit, a plurality of distinguishable signals connected with the other side of the circuit and having independent terminals, and means controlled by the thermometer for engaging one of said terminals when the temperature is high and for engaging the other terminal when the temperature is low.

1,171,771. EXCAVATING-MACHINE. PETER AUGUST CHRISTENSEN, Christiania, Norway, assignor to Aurora Hanneborg, Haugrim, Norway. Filed Feb. 25, 1915. Serial No. 10,470. (Cl. 37—26.)



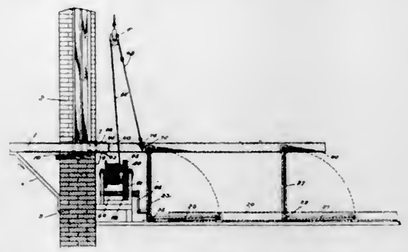
1. In an excavating machine, the combination of a vertical excavating screw, means for rotating the same, a carrying frame for the screw, a second frame, means for adjusting said first frame vertically on the second frame, a third frame traveling on wheels, longitudinal pins forming a rocking connection between the second and third frames, a self-locking operating mechanism for rocking the second frame upon the third frame, and a releasable coupling inserted in the said mechanism, so that the pivotal movement of the second frame upon the third frame may be effected only by hand or by mechanical power transmission, whereas, after the coupling has been released, the two frames may turn freely in relation to each other.

2. In an excavating machine, the combination of a vertical excavating screw, means for rotating the same, a

carrying frame for the screw, a second frame, means for adjusting said first frame vertically on the second frame, a third frame traveling on wheels, longitudinal pins forming a rocking connection between the second and third frame, a curved rack and intermeshing gear wheel, one of which is carried by the second frame and the other carried by the third frame, the rack being concentric with the axis of the said pins, a self-locking operating mechanism for adjusting the said gear wheel, and a releasable coupling inserted in the said mechanism, so that the pivotal movement of the second frame upon the third frame may be effected only by hand or by mechanical power transmission, whereas, after the coupling has been released, the two frames may turn freely in relation to each other.

3. In an excavating machine, the combination of a vertical excavating screw, means for rotating the same, a carrying frame for the screw, a second frame, means for adjusting said first frame vertically on the second frame, a third frame traveling on wheels, longitudinal pins forming a rocking connection between the second and third frame, a curved rack and intermeshing gear wheel, one of which is carried by the second frame and the other carried by the third frame, the rack being concentric with the axis of the said pins, a self-locking operating mechanism for adjusting the said gear wheel, and a releasable coupling inserted in the said mechanism, the coupling comprising a driving wheel arranged idly upon its shaft, a conically bored hub in frictional coöperation with a corresponding cone on said shaft, said operation being controlled by a hand wheel with a nut-like hub arranged outside the wheel on a threaded end portion of the shaft in order to be capable of being pressed forcibly against the cone by rotation of the hand-wheel, so that the pivotal movement of the second frame upon the third frame may be effected only by hand or by mechanical power transmission, whereas, after the coupling has been released, the two frames may turn freely in relation to each other.

1,171,772. EXPOSING-TABLE. GEORGE R. CORNWALL, Rye, N. Y. Filed Aug. 26, 1910. Serial No. 579,069. (Cl. 95—73.)



1. An exposing table apparatus including in combination an exposing frame, standards upon which said frame is mounted to swing about a substantially horizontal axis, a table upon which said standards are mounted, said table being rotatable about a substantially vertical axis, and means for swinging said standards to lower said exposing table at one side of its base.

2. An exposing table apparatus including in combination an exposing frame, standards upon which said frame is mounted to swing about a substantially horizontal axis, a table upon which said standards are mounted, said table being rotatable about a substantially vertical axis, and means for swinging said standards about a substantially horizontal axis whereby said exposing table may be lowered at one side of its base.

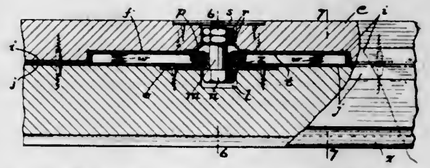
3. An exposing table apparatus including in combination an exposing frame, standards upon which said frame is mounted to swing about a substantially horizontal axis, a table upon which said standards are mounted to rotate about a substantially horizontal axis, means for varying the position of said exposing frame relative to said standards without moving said standards, and supporting means upon which said table is rotatable about a substantially vertical axis.

4. An exposing table apparatus including in combination an exposing frame, standards upon which said frame is mounted to swing about a substantially horizontal axis, a table upon which said standards are mounted to rotate about a substantially horizontal axis, and connections between said standards and said table for rocking said standards about said horizontal axis while holding them against the action of gravity.

5. An exposing table apparatus including in combination an exposing frame, standards upon which said frame is mounted to swing about a substantially horizontal axis, a table upon which said standards are mounted to rotate about a substantially horizontal axis, and a rack and pinion connection between said standards and said table, the rack being mounted on one and the pinion on the other.

[Claims 6 to 16 not printed in the Gazette.]

1,171,773. SASH-PIVOT CONSTRUCTION. HARRY W. CRANE, Philadelphia, Pa., assignor to International Window Manufacturing Company, a Corporation of Delaware. Filed Nov. 19, 1913. Serial No. 801,774. (Cl. 16—142.)



1. A sash pivot construction comprising two members shaped to form between them an elongated recess and flanged to form an opening for a pivot, a collar within said opening, a filler ring surrounding said flanges, tension devices within said recess on opposite sides of the pivot opening tending to maintain said members in the angular relation into which they are moved, and a pivot pin extending through the collar.

2. A sash pivot construction comprising two members shaped to form between them an elongated recess and flanged to form an opening for a pivot, a collar within said recess having a flange underlying one of said members, a pivot bolt extending through said collar, a head on the bolt contacting with the flange of the collar, a nut on said bolt, a spring washer confined by said nut against one of the said members, and tension devices within said recess on opposite sides of the first opening tending to maintain said members in the angular relation into which they are moved.

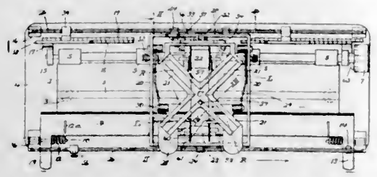
3. A sash pivot construction comprising two members shaped to form between them an elongated recess, a pivot pin extending through said recess, a bearing surrounding the pin and a filler ring surrounding the bearing, holding plates within said recess on opposite sides of the filler ring, each plate having flanges adapted to said recess, and a spring within said recess holding said plate in frictional contact with one of said members.

1,171,774. TYPE-WRITER. KENNEDY DOUGAN, Minneapolis, Minn. Filed Dec. 27, 1913. Serial No. 808,999. (Cl. 197—1.)

1. In combination, a manually-carried frame, a plurality of type movably mounted in said frame, and means for moving any one of said type for printing therewith by and through direct manual movement of said frame.

2. In combination, a manually carried frame, a plurality of type-bars projectably mounted in said frame, a guide for guiding any projected type-bar, type on said type-bars, and type-projecting means on said guide.

3. In combination, a manually carried frame, a plurality of type-bars projectably mounted in said frame, a guide for guiding any projected type-bar, type on said type-bars, and type-projecting means partly on said guide and partly carried in said frame.

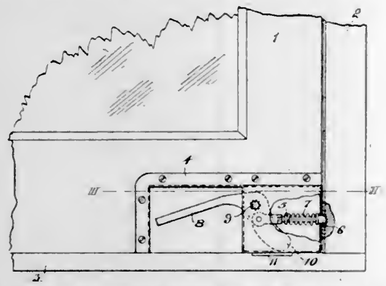


4. In combination, a printing guide, an abutment thereon, a manually carried frame, a type-bar and an arm carried by said frame, a type on said type-bar, adapted to be guided by said printing guide, and means including said arm whereby said type is thrust into the printing guide by downward pressure of the hand upon said frame.

5. In combination, a manually carried frame, a pair of oppositely movable type-bars carried by said frame, different type on said bars, a printing guide adapted for guiding either of said type, an abutment on said guide, and means whereby either of said type is thrust into said guide by downward pressure of the hand upon said frame.

[Claims 6 to 14 not printed in the Gazette.]

1,171,775. WINDOW-LATCHING DEVICE. IRA S. DOWNING, Cleveland, Ohio. Filed Apr. 8, 1913. Serial No. 759,614. (Cl. 16—53.)

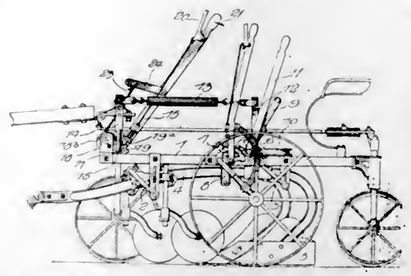


In combination with a sliding window having a glass and sash, a bolt mounted on the sash for movement back and forth and adapted to engage a recess in the frame at the side of the window sash when the window sash is in its lowest position, a lever pivoted to the sash and comprising a handle and an end portion arranged so that the end portion is moved down when the handle is moved up, such end portion being adapted to engage the frame at the bottom of the window sash and give the window sash its initial movement, and a pivotal connection between the bolt and the lever whereby the bolt is withdrawn from the recess when the said handle is moved up.

1,171,776. PLOW-DEPRESSING MEANS. MICHAEL EISENSCHENK, Cold Spring, Minn. Filed Sept. 2, 1915. Serial No. 48,691. (Cl. 97—36.)

1. A plow depressing attachment for gang plows including an anchor member to be attached to the plow frame, a coiled torsional spring anchored to said member, an arm projecting laterally from said spring, and a lever fulcrumed to said member and having connection with said arm, the lever being adapted for connection with the plow depressing means of the plow.

2. A plow depressing attachment for gang plows comprising an anchor member for attachment to the frame of the plow, a segmental rack carried by said member, a plow depressing lever fulcrumed on said member and having a dog coacting with said rack, and a coiled spring carried by the member and having connection with said lever.



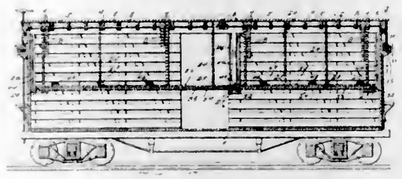
3. A plow depressing attachment for gang plows comprising an anchor member for attachment to the frame of the plow, a segmental rack carried by said member, a plow depressing lever fulcrumed on said member and having a dog coacting with said rack, a coiled torsional spring carried by said member, and an arm projecting laterally from said spring and having connection with the lever.

4. Plow depressing means comprising a shaft to be rocked forwardly to move the plows downwardly, an arm having connection with said shaft and rising therefrom, an additional upright arm in advance of the other arm, spring means for yieldably retaining the second arm in upright position, and a connection between the two arms.

5. Plow depressing means comprising a shaft to be rocked forwardly to move the plows downwardly, an arm having connection with said shaft and rising therefrom, an additional upright arm in advance of the other arm, spring means for yieldably retaining the second arm in upright position, and a coiled spring connecting the two arms.

[Claims 6 and 7 not printed in the Gazette.]

1,171,777. COMBINATION DOUBLE AND SINGLE DECK FOR STOCK-CARS. JOHN E. ENDERS and CHARLES J. ENDERS, Berryville, Va. Filed Oct. 2, 1913. Serial No. 793,033. (Cl. 105—15.)

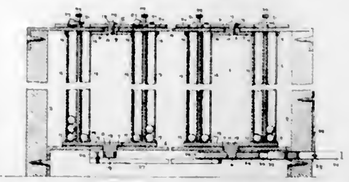


In combination with a stock car, a vertically movable deck, channel plates secured to said car, adjustable bolts secured to said deck and adapted to fit in said channel plates for constituting a guide and holding said deck against swinging movement within said car, and means for raising and lowering said deck.

1,171,778. VOTING-MACHINE. KIRBY FITZPATRICK, Oklahoma, Okla. Filed Dec. 23, 1914. Serial No. 878,766. (Cl. 232—3.)

1. A voting machine provided with revolvable sets of tubes, a head secured to such tubes and having holes alined with the bores of the tubes and a perforated top above the tops of the tubes.

2. In a voting machine, the combination of top and bottom revolvable heads, the top head having holes therein, tubes secured to both heads and having their upper ends in the holes of the top head, a plate secured to the top head and having holes alined with the holes in the top head and the top of the machine having holes therein and between the top head and the plate secured thereto.



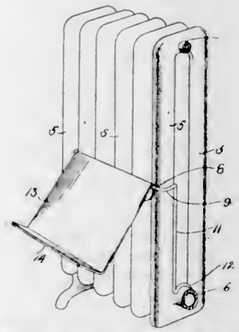
3. In a voting machine, the combination of top and bottom revolvable heads, the top head having holes therein arranged in sets of three, tubes secured to both heads and having their upper ends in the holes of the top head, a plate secured to the top head and having holes alined with the holes in the top head and the top of the machine placed between the top head and the plate and having holes in sets arranged similar to the sets of holes in the top head and plate.

4. The combination of a plate, having holes in sets of three with a disk secured in the midst of the set of holes and having a notch.

5. The combination of several sets of revolvable tubes adapted to serve as containers and provided with visual spaces to allow inspection of the contents, and means for revolving the tubes at the same time.

[Claim 6 not printed in the Gazette.]

1,171,779. FOOT-REST FOR RADIATORS. PETER J. FLECK, New York, N. Y. Filed May 12, 1915. Serial No. 27,647. (Cl. 155—9.)

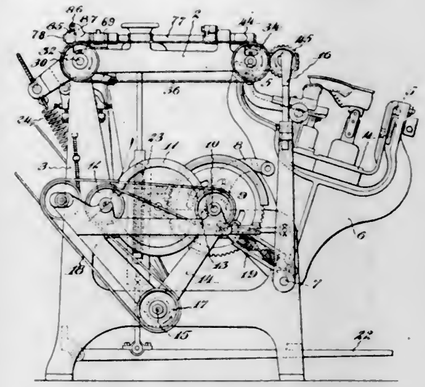


A foot rest comprising an attaching member comprising a bar having end portions curved to resiliently and detachably engage around sections of a radiator and directed laterally to form arms engaging the horizontal connecting portions of the radiator and a foot engaging portion carried by the bar.

1,171,780. SOLE-LEVELING MACHINE. WARREN FRASIER, Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 17, 1911. Serial No. 660,842. (Cl. 12—34.)

1. A sole leveling machine, having, in combination, a shoe supporting jack, a leveling roll, means for changing the relative longitudinal position of the roll and jack to cause the roll to traverse over the sole and pass off of opposite ends of the shoe, and means for actuating the roll in the direction of travel of the jack as the roll is moved into engagement with each end of the shoe, substantially as described.

2. A sole leveling machine having, in combination, a shoe supporting jack, a leveling roll, means for varying the relative longitudinal position of the roll and jack, and mechanism operatively connected with the roll and acting automatically to cause the roll to rub each portion of the sole in one direction only and different portions of the sole in opposite directions while maintaining a constant direction of movement of the jack, substantially as described.



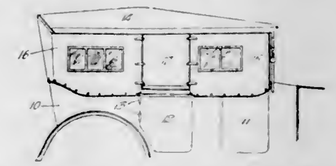
3. A sole leveling machine, having, in combination, a shoe supporting jack, a leveling roll, means for varying the relative longitudinal position of the roll and jack, and mechanism operatively connected with the roll and acting automatically to cause the roll to rub the sole in opposite directions from the ball line outwardly toward the ends of the shoe during the relative movement of the roll and jack in one direction, substantially as described.

4. A sole leveling machine, having, in combination, a shoe supporting jack, a leveling roll, means for varying the relative longitudinal position of the roll and jack, a pair of driving members rotated in opposite directions, and means for automatically connecting alternate driving members to the roll as the jack is moved thereunder to rotate the roll in opposite directions, substantially as described.

5. A sole leveling machine, having, in combination, a shoe supporting jack, a leveling roll, means for varying the relative longitudinal position of the roll and jack, a pair of driving members rotated in opposite directions, a cam, and operative connections between the cam and driving members to automatically connect one of the driving members to the roll, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,171,781. STORM-CURTAIN FOR AUTOMOBILES. WILLIAM H. FROST, Etiwanda, Cal. Filed Mar. 12, 1915. Serial No. 14,012. (Cl. 21—62.)

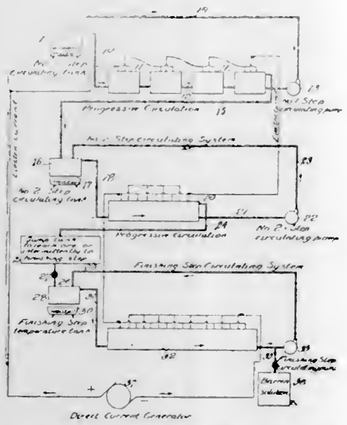


1. In combination, a body provided with a longitudinal chamber along its upper edge, a curtain roller mounted therein, a curtain having one end secured to said roller, curtain fastening means mounted on the other end of said curtain, a lid hinged to cover said chamber, means yieldably tending to close said lid over said chamber, and flexible means forming a water tight joint with the curtain and adapted to divert the water running down the curtain to the outer face of the body.

2. In combination, a body provided with a groove at its upper part, a curtain roller mounted in said groove, a curtain secured to said roller and adapted to wind thereon, means for holding the curtain in its unwound

position, a lid covering said groove, means tending to close said lid, and a flexible flap secured to said curtain and adapted to form a water tight joint with the lid and divert water running down the curtain to the outer face of the body.

1,171,782. METHOD FOR THE HYDRO-ELECTROLYTIC TREATMENT OF ORES. ROBERT RHEA GOODRICH, Tucson, Ariz. Filed May 25, 1915. Serial No. 30,446. (Cl. 204—15.)



1. The herein described method of depositing a metal electrolytically by maintaining a circulation throughout an entire system of cells while simultaneously causing an independent circulation of electrolyte in each of a number of groups of cells.

2. The herein described method of depositing a metal electrolytically by maintaining a circulation throughout the entire system of cells while simultaneously causing an independent circulation of electrolyte in each of a number of groups of cells, and maintaining the composition of an electrolyte constant during its circulation in each group.

3. The herein described method of depositing a metal electrolytically by maintaining a circulation throughout the entire system of cells while simultaneously causing an independent circulation of electrolyte to each of a number of groups of cells provided with different electrode surface areas in each group.

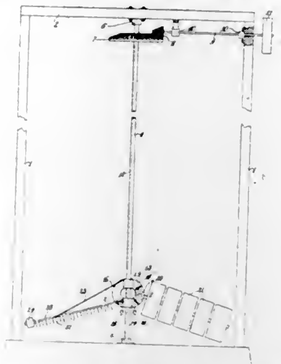
4. The herein described method of depositing a metal electrolytically by maintaining a circulation throughout the entire system of cells while simultaneously causing an independent circulation of electrolyte in each of a number of groups of cells provided with increasing electrode surface, said first circulation maintaining an inflow of solution to each group suitable to the current strength thereof.

5. The herein described method of depositing a metal electrolytically by maintaining a circulation throughout the entire system of cells in which the electrodes of the groups of cells of each are connected in series and the electrodes of each cell are connected in parallel while simultaneously causing an independent circulation of electrolyte in each group of cells.

[Claims 6 to 10 not printed in the Gazette.]

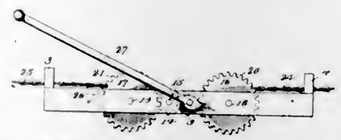
1,171,783. SILO-PACKER. ARTHUR W. GRAY, Ellensburg, Wash. Filed Mar. 1, 1915. Serial No. 11,176. (Cl. 100—56.)

The combination with an upright grooved driving shaft, of a hub having a key slidable vertically in the grooved shaft, a rake attached to the hub, a radial shaft pivoted in the hub to move bodily in a vertical direction, and



rollers on said radial shaft whereby the rollers may have a flexible movement as they travel over the silage.

1,171,784. WIRE-STRETCHER. WILLIAM ROY GREEN, Folsom, N. Mex. Filed Sept. 18, 1911. Serial No. 650,008. (Cl. 254—161.)



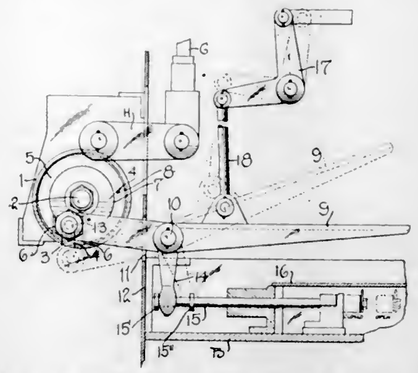
A wire stretcher including a frame, comprising side bars, removable braces spacing the side bars and projected thereabove to form chain guides, shafts removably journaled in the frame, a plurality of geared drums adapted for revolution and mounted on said shafts, anchor pins carried by the drums, a handle mounted on one of the shafts for revolving the drums, removable tying bolts detachably connecting the ends of the side bars and the braces and adapted to maintain the frame and drums in assembled operative position, and chains connected to said anchor pins and passing through the respective guides, the guides being of such dimensions that the chains are maintained in approximate alinement.

1,171,785. SAFETY CONTROLLING MECHANISM FOR ELECTRICALLY-PROPELLED VEHICLES. HARRY B. GREIG, Galion, Ohio. Filed May 14, 1915. Serial No. 28,127. (Cl. 74—46.)

1. In an electrically propelled vehicle, a motor controller, brake actuating means, a pedal, means tending to move the pedal to raised position, a circuit controlling switch, operative connections between the brake actuating means, the said switch, and the pedal arranged to release the brakes and close the circuit by and upon the movement of the pedal to depressed position, a disk carried by the controller shaft and formed with a flat bearing surface and a beveled recess leading thereto, and a spring-pressed latch carried by the pedal and movable through said recess onto said bearing surface, the disk being disposed on the shaft in such position that said recess will register with the latch when the controller is in neutral position.

2. In an electrically propelled vehicle, a motor controller, a pedal, a circuit controlling switch and brake actuating means operable by the pedal, a spring-pressed latch carried by the pedal and a disk carried by the controller shaft, said disk being formed with a flat bearing surface, with a beveled recess leading from its outer edge inwardly to said surface and designed to register with the latch when the controller is in neutral position,

and with a curved groove concentric to and surrounding the flat bearing surface and stopping on each side of said recess.



3. In an electrically propelled vehicle, a motor controller, a pedal, a circuit controlling switch and brake actuating means operable by the pedal, a spring-pressed latch carried by the pedal, and a disk carried by the controller shaft, said disk being formed with a flat bearing surface, with a beveled recess leading from its outer edge inwardly to said surface and designed to register with the latch when the controller is in neutral position, and with a curved groove concentric to and surrounding the flat bearing surface and stopping on each side of said recess, the inner wall of said groove being abrupt and the outer wall being inclined toward the edge of the disk.

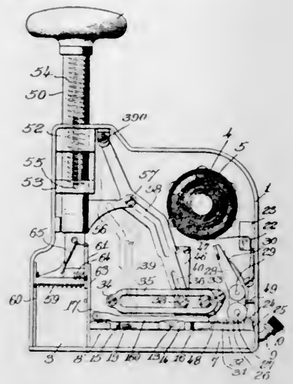
4. In an electrically propelled vehicle, a motor controller, a pedal, brake actuating means, a circuit controlling switch operatively connected to said pedal, a latch carried by said pedal, and a disk carried by the controller shaft, said disk being formed with a flat bearing surface, with a beveled recess leading from its outer edge to said surface and designed to register with said latch when the controller is in neutral position, and with a curved groove surrounding and concentric to said bearing surface, the inner wall of said groove being abrupt and the outer wall being inclined toward the edge of the disk, the ends of said groove terminating on opposite sides of the recess and the disk being formed at such point with cam surfaces inclined circumferentially from the ends of the groove to the side walls of the recess.

5. In an electrically propelled vehicle, a motor controller, brake actuating means including a bell-crank, a circuit controlling switch, a pedal pivotally supported intermediate of its ends and having a link connection with one arm of said bell-crank, a switch lever operatively connected to said switch and movable by the pedal, a spring-pressed latch carried by the inner end of the pedal, and a disk carried by the controller shaft, said disk being formed around said shaft with a flat bearing surface and being also formed with an inclined recess leading from its outer edge to said surface and adapted to register with the latch when the motor controller is in neutral position, the disk being further formed with a curved groove surrounding and concentric to said flat surface and terminating on opposite sides of said recess, the ends of the groove terminating in circumferentially inclined cam surfaces terminating at their highest points in the side walls of the recess.

[Claim 6 not printed in the Gazette.]

1,171,786. STAMP-AFFIXING DEVICE. ALFRED HALL, Los Gatos, Cal., assignor of one-third to William M. Whitten, Dorchester, Mass. Filed Oct. 2, 1911. Serial No. 652,394. (Cl. 216—28.)

1. A stamp affixing device comprising a stamp affixing plunger, a frame pivoted at one end to swing vertically, a rectilinearly movable carriage mounted on said frame, means operated from or by said plunger for moving the carriage the distance between the lines of perforations of a perforated strip of stamps, a plurality of feeding fingers journaled on said carriage, and means for locking the frame in operative position and for releasing it so that it may be swung on its pivot to insert the stamp strip therebeneath.



2. A stamp affixing device comprising a stamp affixing plunger, means for guiding and feeding a stamp strip the length of a single stamp beneath said plunger and means comprising coöperating rollers for braking the movement of said stamp and means for separating said rollers.

3. A stamp affixing device comprising a stamp affixing plunger, means for guiding and feeding a stamp strip the length of a single stamp beneath said plunger and a pair of spring pressed rolls between which the strip passes to the feeding means for retarding and preventing retrograde movement of the strip a pivotal support for one of said rollers and means for oscillating said support to permit the insertion of the stamp strip.

4. A stamp affixing device comprising a reciprocating stamp affixing plunger, a fixed knife, means for feeding the stamp strip over said fixed knife beneath the plunger, a co-acting knife carried by the plunger, and a spring for holding said knives in contact during the downward movement of the plunger to insure their co-action and means for holding the knife yieldingly in position to allow the knife to move upward upon the plunger reaching its downward limit.

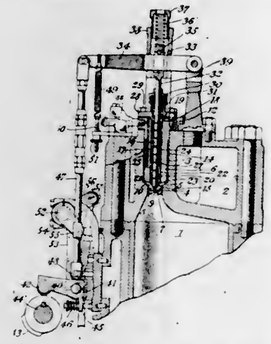
5. A stamp affixing device comprising a stamp affixing plunger a frame pivoted at one end to swing vertically, a rectilinearly movable carriage mounted on said frame, means operated from or by said plunger for moving the carriage the distance between the lines of perforations of a perforated strip of stamps, a plurality of feeding fingers journaled on said carriage, means for locking the frame in operative position and for releasing it so that it may be swung on its pivot to insert the stamp strip therebeneath, a spring plate connected at one end to said frame and extending in the direction of the feeding movement of the feeding fingers and having its free end pressing upon the stamp strip when the frame is in operative position.

[Claim 6 not printed in the Gazette.]

1,171,787. ATOMIZER FOR INTERNAL-COMBUSTION ENGINES. LEONARD B. HARRIS, Watertown, N. Y. Filed May 26, 1913. Serial No. 769,925. (Cl. 123—131.)

1. An atomizer for internal combustion engines, embodying a sleeve open at both ends and provided at one end with a head portion of larger diameter than the sleeve, said head portion terminating in a beveled annular seating face having radial slits formed therein, and said head portion having diagonally arranged intersecting grooves formed in the periphery thereof, some of which grooves intersect the said radial slits.

2. An atomizer for internal combustion engines, comprising a hollow plug having a beveled valve seat and an outlet opening at its lower end, said plug being provided with means for removably attaching the same for insertion within a bore of an engine cylinder, an atomizer sleeve removably fitted in said bore, said sleeve being open at both ends and having a head portion near one end of larger diameter than the sleeve, said head portion terminating in a beveled annular seating face, having radial slits formed therein, and said head portion having diagonally arranged intersecting grooves formed in the periphery thereof, some of which grooves intersect the said radial slits, and a valve normally closing the outlet opening in the end of the plug, said valve having a stem extending longitudinally through the sleeve with a portion thereof projecting beyond the upper end of the sleeve.



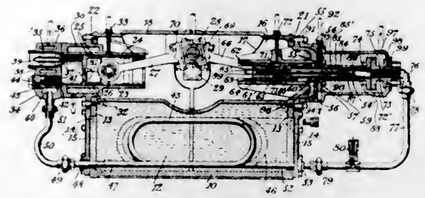
3. In combination with the head of an engine cylinder having a bore therethrough provided at its lower end with a conical seating face, a hollow plug having an opening at its lower end, said plug removably fitted in said bore and having a seating face making a ground joint connection with the corresponding seating face in the bore, an atomizer sleeve open at both ends removably fitted in said plug and provided at one end with a head portion of larger diameter than the sleeve, terminating in a beveled annular seating face having radial slits formed therein, and said head portion having diagonally arranged intersecting grooves formed in the periphery thereof, some of which grooves intersect the said radial slits, and a valve normally closing the outlet opening in the plug, said valve having a stem extending longitudinally through the sleeve with a portion thereof extending beyond the upper end of the sleeve.

4. In combination with the head of an engine cylinder having a bore therethrough, said bore terminating at its lower end in a conical seating face, a hollow plug having a conical seating end making a ground joint connection with said seating face, and said plug having an outlet opening in its lower end, an atomizer sleeve removably fitted in said plug and having an enlarged head near one end in the periphery of which is formed a plurality of diagonally arranged intersecting ways communicating with said opening and constituting interrupted passages for fuel oil, and a valve having a stem extending longitudinally through the sleeve with a portion projecting beyond the upper end thereof, said valve normally closing the outlet opening in the plug.

5. In combination with the head of an engine cylinder having a bore therethrough, a hollow plug mounted in said bore, said plug having an outlet opening at its lower end, means for removably attaching the plug to the head of the engine cylinder, a sleeve open at both ends removably mounted in said plug, said sleeve being of less diameter than the opening in the plug to provide an annular chamber around the sleeve, and said sleeve having an enlarged head portion at one end, the periphery of which is provided with diagonally arranged intersecting grooves forming interrupted oil passages leading form said chamber to said outlet opening, and said plug having separate oil and air passages leading to said annular chamber, and a valve with the sleeve normally closing the outlet opening in the plug, said valve having a stem extending longitudinally through the sleeve.

[Claims 6 to 10 not printed in the Gazette.]

1,171,788. COMPRESSOR. LEONARD B. HARRIS, Haddon Heights, N. J., assignor to Harris Patents Company, New York, N. Y., a Corporation of Delaware. Filed July 15, 1914. Serial No. 851,070. (Cl. 230—32.)



1. An air compressor, comprsing, in combination, a hollow base, an air cylinder at one side of said base separate from said base and supported entirely by said base, a second air cylinder separate from said base and supported entirely by said base at the other side of said base and opposite said first cylinder, a crank shaft disposed between said cylinders, the bottom, end walls and the upper wall of said base operating to confine water whereby said hollow base constitutes a reservoir, air displacers reciprocating in said cylinders and connected with said crank shaft, and air cooling coils in said reservoir connected with said cylinders.

2. An air compressor, comprising, in combination, a hollow base, an air cylinder at one side of said base separate from said base and supported entirely by said base, a second air cylinder separate from said base and supported entirely by said base at the other side of said base and opposite said first cylinder, a crank shaft disposed between said cylinders, the bottom, end walls and the upper wall of said base operating to confine water whereby said hollow base constitutes a reservoir, air displacers reciprocating in said cylinders and connected with said crank shaft, and air cooling coils in said reservoir connected with said cylinders, said base having a crank case inclosing said crank shaft, the upper wall of said base forming the bottom wall of said crank case.

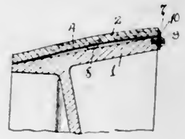
3. An air compressor, comprising, in combination, a hollow base having a bottom wall, end walls and an upper wall, an air cylinder separate from said base seating upon and supported entirely on one of said end walls, a second air cylinder separate from said base seating upon and supported entirely on the other end wall of said base opposite said first cylinder, a crank shaft disposed between said cylinders, the said bottom, end wall and upper wall of said base operating to confine water whereby said hollow base constitutes a reservoir, removable covers for said reservoir seating on said end walls, pistons reciprocating in said cylinders and connected with said crank shaft, and air cooling coils within said reservoir connected respectively with said cylinders.

4. An air compressor, comprising, in combination, a hollow base, an air cylinder separate from said base and entirely supported on said base at one side, a second air cylinder separate from said base and entirely supported on said base at the other side and opposite to said first cylinder, a crank shaft disposed between said cylinders and having a crank pin, pistons reciprocating in said cylinders, a connecting rod connecting said crank pin with one of said pistons, a crosshead guide for the other cylinder projecting toward said crank shaft, a crosshead moving in said crosshead guide and connected with the adjacent piston, a connecting rod on each side of said guide attached to said crosshead and attached to said crank pin, said base having a bottom, end walls and an upper wall for retaining water whereby said base constitutes a reservoir, said base having a crank case thereabove, the upper wall of said base forming the bottom wall of said crank case, and air cooling coils in said reservoir connected respectively with said cylinders.

5. An air compressor, comprising, in combination, a base having a water chamber, an air cylinder mounted on said base at one side, a second air cylinder mounted on said base opposite said first cylinder, a pair of cooling coils in said water chamber, means for connecting both of said cylinders with one of said cooling coils adjacent said cylinders, means for connecting the other coil with one of said cylinders, said water chamber having removable covers adjacent said cylinders, said cooling coils having integral extensions passing through said covers, the connection with said cylinders being formed on the exterior of said covers, and stuffing boxes in said covers where said coil extensions pass through the same.

[Claims 6 to 12 not printed in the Gazette.]

1,171,789. CLUTCH. FRANK J. HEMM, Piqua, Ohio. Filed Sept. 17, 1915. Serial No. 51,166. (Cl. 192—8.)



1. In a clutch, the combination with a clutch member having a circumferential flange along one edge, and a facing for said member, of a flat curved spring adapted to be inserted transversely between said member and such facing and having a flange thereon adapted to engage between such facing and such flange on said member to retain said spring in position.

2. In a clutch, the combination with a clutch member having a removable circumferential stop along one edge and a facing for said member, of a flat curved spring adapted to be inserted transversely between said member and such facing and having a flange thereon adapted to engage between such facing and such flange on said member to retain said spring in position.

3. In a clutch, the combination with a clutch member and facing therefor, of a spring adapted to be mounted on said member beneath said facing, said spring comprising a flat curved spring extending transversely of said member, and said spring being slightly flattened at its center.

4. In a clutch, the combination with a clutch member and a facing therefor, of a spring adapted to be mounted on said member beneath said facing, said spring comprising a flat curved spring extending transversely of said member, said spring being broader at its center than at its ends and being flattened at such broader portion.

5. In a clutch, the combination with a clutch member and a facing therefor, of a spring adapted to be mounted on said facing, said spring comprising a flat curved spring extending transversely of said member, said spring being provided with lateral extensions adapted to contact said member after compression of said spring.

[Claim 6 not printed in the Gazette.]

1,171,790. COMBINED UNDERREAMER AND BIT. GRANVILLE A. HUMASON, Shreveport, La., assignor to Rotary Expansion Bit Company, Los Angeles, Cal., a Corporation of California. Filed June 6, 1914. Serial No. 843,451. (Cl. 255—76.)

1. A combined underreamer and bit comprising a barrel, a pair of levers pivoted together and provided with cutters and slidable within said barrel, and means for sliding said levers in said barrel to expand or contract the levers, said levers being provided with an annular water course around their pivot and with water courses leading from the annular water course.

2. In a combined underreamer and bit, a pair of levers having lugs and pivoted together and provided with cutters, a wedge movable between said levers to expand their cutters, a barrel provided with slots to engage the lugs and a screw connected to the wedge to move said wedge.

3. In a combined underreamer and bit, a pair of levers pivoted together, a barrel in which said levers are slidable, means for locking said levers against longitudinal or rotative movement in said barrel when expanded, toggle links connected to said levers above their pivot, and means for actuating said toggle links to expand or contract said levers.

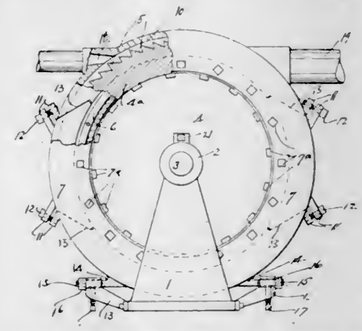


4. In a combined underreamer and bit, a pair of levers pivoted together, a barrel in which said levers are slidable, means for locking said levers against longitudinal or rotative movement in said barrel when expanded, toggle links connected to said levers above their pivot, a wedge movable between said levers above their pivot to expand them, and means for operating said toggle links and wedge.

5. In a combined underreamer and bit, a barrel, a pair of levers pivoted together and slidable within said barrel and provided with cutters, toggle links connected to said levers above their pivot, a screw, and means operated by said screw and connected with said toggle links for adjusting said levers.

[Claims 6 to 12 not printed in the Gazette.]

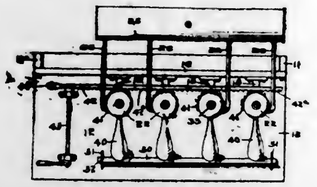
1,171,791. TURBINE. HERMAN JUNKE, Seattle, Wash. Filed Apr. 14, 1915. Serial No. 21,373. (Cl. 253—136.)



In a turbine, the combination with the main frame, of a segmental housing, the ends of each of the segments having a sliding joint with its adjacent segments, a lug on each end of each segment and a screw passing through each pair of abutting lugs, whereby the housing may be drawn down upon the runner of the turbine or forced

away from it, brackets upon the main frame and projections from the housing which slidably pass through the said brackets, the said projections terminating in screw ends, whereby the housing is adjustable horizontally with respect to the frame, and additional screws for adjusting the housing vertically with respect to the frame.

1,171,792. BOTTLE FILLING AND MEASURING MACHINE. ALFRED P. KLEE, Indianapolis, Ind. Filed Feb. 24, 1915. Serial No. 10,217. (Cl. 226—18.)



1. In a machine of the above class, the combination of a plurality of liquid measuring devices, means for regulating the flow of liquid into and out of said devices, engaging-means arranged upon the exterior surfaces of said devices, and a single operating means for engaging the engaging-means for simultaneously imparting oscillatory movement to said devices for bringing the latter into positions for the filling of a part of said devices and the discharging of the contents of the remaining devices.

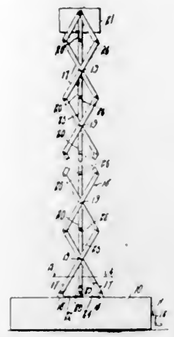
2. In a machine of the above class, the combination of a plurality of liquid measuring devices, means for regulating the flow of liquid into and out of said devices, segmental racks arranged circumferentially upon the exterior surfaces of said devices, and a single rack-bar engaging the several segmental racks for simultaneously imparting oscillatory movement to said devices and causing a part of the latter to discharge their contents and the remaining devices to be charged with liquid.

3. In a machine of the above class, the combination of a plurality of liquid measuring devicee, means for regulating the flow of liquid into and out of said devices, means for varying the quantity of liquid introduced into said devices, segmental racks arranged circumferentially upon the exterior surfaces of said devices, and a single rack-bar engaging the several segmental racks for simultaneously imparting oscillatory movement to said devices, causing a part of the latter to be brought to a point for the discharge of their contents and the remaining devices to be charged with liquid.

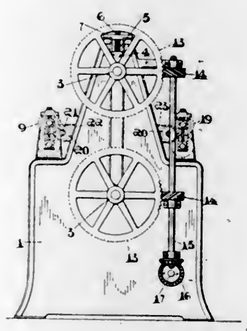
4. In a machine of the above class, the combination of a plurality of liquid measuring devices, means for regulating the flow of liquid into and out of said devices, means for simultaneously moving said devices to bring a part of said devices to a point for discharging their contents and the remaining devices to a point to be charged with liquid, and means for adjusting said devices independently of said last mentioned means for maintaining accurate registration of said devices with the points of charging and discharging of their contents.

1,171,793. EXTENSION-LADDER. GABRIEL J. KRAVAC, Melcher, Iowa. Filed July 30, 1915. Serial No. 42,842. (Cl. 227—1.7.)

An extension ladder comprising a pair of lazy tongs, rungs connecting the joints of the lazy tongs and extending therebetween, a support, a longitudinal screw mounted in the support, blocks mounted on the screw and movable toward and away from each other, brackets carried by the blocks and pivotally supporting the lower ends of the lazy tongs, a series of pivotally connected links extending longitudinally through the center of each of the lazy tongs, brackets carried by one of the sliding blocks, rock arms pivotally mounted on the brackets and each connected at one end to the lower end of each of the last-named links, and means carried by the other block for engagement with the other ends of the rock arms imparting an initial pivotal movement to the said links when the blocks are moved toward or away from each other.



1,171,794. ROTARY PUNCH AND PRESS. JOHN F. LAWSON, Oshawa, Ontario, Canada. Filed Nov. 27, 1915. Serial No. 63,894. (Cl. 164—22.)



1. The combination of two rotary supporting means; coöperating die beds journaled one on each of the supporting means eccentric to the axis thereof; means for moving said beds into substantial parallelism when brought by the rotation of their supports into coöperative position; and telescopic alining means connected part with each die-bed adapted to engage to hold the die beds in accurate parallelism while they are in coöperative position.

2. The combination of two rotary supporting means; coöperating die beds journaled one on each of the supporting means eccentric to the axis thereof; means for moving said beds into substantial parallelism when brought by the rotation of their supports into coöperative position; telescopic alining means connected part with each die-bed, adapted to engage to hold the die-beds in accurate parallelism while they are in coöperative position; and means for varying the distance between the axes of the supporting means.

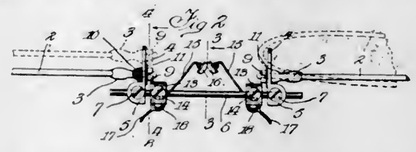
3. The combination of two rotary supporting means; coöperating die beds journaled one on each of the supporting means eccentric to the axis thereof; means for moving said beds into substantial parallelism when brought by the rotation of their supports into coöperative position; alining means connected part with each die-bed adapted to engage to hold the die-beds in accurate parallelism while they are in coöperative position; chain conveying means extending between the die beds; and a projecting finger on one of the die-beds adapted to engage and move said conveying means.

4. The combination of two rotary supporting means; coöperating die-beds journaled one on each of the supporting means eccentric to the axis thereof; means for moving said beds into substantial parallelism when brought by the rotation of their supports into coöperative position; alining means connected part with each die-bed adapted to engage to hold the die-beds in accurate parallelism while they are in coöperative position; chain conveying means extending between the die beds; and a projecting finger on one of the die-beds adapted to engage and move said conveying means; and means for adjusting the finger to vary its extent of projection.

5. The combination of two rotary supporting means; coöperating die-beds journaled one on each of the supporting means eccentric to the axis thereof; means for moving said beds into substantial parallelism when brought by the rotation of their supports into coöperative position comprising a non-rotating cam for each support held in fixed relationship thereto and a crank arm on the die-bed engaging said cam; and telescopic alining means connected part with each die-bed adapted to engage to hold the die-beds in accurate parallelism while they are in coöperative position.

[Claim 6 not printed in the Gazette.]

1,171,795. EYEGLASSES AND SPECTACLES. ZOËL MARCEL LÉGER, Moncton, New Brunswick, Canada. Filed May 10, 1915. Serial No. 27,198. (Cl. 88—50.)



1. In eye-glasses and the like, the combination with a bridge bar, of an arm pivoted to the bar and a lens pivoted to the arm.

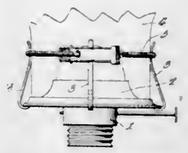
2. In eye glasses and the like, the combination with a bridge bar, of an arm pivoted to and adjustable longitudinally of the bar and a lens pivoted to and adjustable longitudinally of the arm.

3. In eye-glasses and the like, the combination with a bridge bar, of a longitudinally slotted arm, a sleeve upon the arm and loosely carried by the bar, means for adjustably securing the sleeve to the bar, a lens and means located in the slot of the arm for adjustably securing the lens to said arm.

4. In eye-glasses and the like a pair of lenses, studs secured to said lenses and having tapped holes therein, longitudinally slotted arms, screws passed through the slots in the arms and into said tapped holes, sleeves formed upon the arms, a bridge bar passed through the sleeves, set-screws securing the sleeves to the bar, a pair of fingers, sleeves formed upon the fingers located between the first mentioned sleeves and having said bar passed therethrough and set-screws securing the last mentioned sleeves to the bar.

5. In eye-glasses and the like, a pair of lenses, studs secured to said lenses and having tapped holes therein, longitudinally slotted arms, screws passed through the slots in the arms and into said tapped holes, sleeves formed upon the arms, a bridge bar passed through the sleeves, set-screws securing the sleeves to the bar, a pair of fingers, sleeves formed upon the fingers, located between the first mentioned sleeves and having said bar passed therethrough and set-screws securing the last mentioned sleeves to the bar, arms, one of which is fulcrumed between its ends upon one of said fingers, nose clips at one of the ends of said fulcrumed arms, finger pieces at the opposite ends of the fulcrumed arms and springs coiled about said fingers and attached at their ends respectively to the fingers and said fulcrumed arms.

1,171,796. LAMP-CHIMNEY HOLDER. FRANK W. LINSTROMBERG, Bourbon, Mo. Filed Mar. 15, 1915. Serial No. 14,499. (Cl. 240—98.)



1. A lamp chimney holder, including a resilient band, a clamping member comprising a channel, a lever pivoted therein, the extremities of said band being connected to the channel and lever, and means in said channel to retain said lever in clamped position.

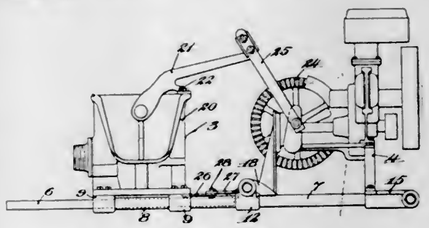
2. A lamp chimney holder, including a channel member having a lever pivoted on the walls thereof, a resilient band having one of its extremities connected to the channel member and the other extremity connected to the pivoted lever, said channel member having the walls thereof provided with locking abutments for engagement with the lever, as and for the purpose set forth.

3. A lamp chimney holder, including a resilient band, a clamping member comprising a strip of bendable metal having the marginal edges bent to form longitudinally extending lateral flanges affording a channel structure, a lever pivoted to said channel structure and of such a width as will facilitate its snug reception in the channel member, the opposite extremities of said resilient band being associated with the flanged strip and the lever, and locking abutments formed on the said lateral flanges by depressing the same inwardly, as and for the purpose set forth.

4. A lamp chimney holder, including a resilient band, a strip of bendable metal having the marginal edges formed to provide longitudinally extending lateral flanges, a lever pivoted on said flanges and snugly receivable therebetween, the extremities of said band being secured to said lever and said strip, respectively, depressions formed on the flanges and projecting inwardly to provide locking abutments for engagement with the marginal edges of the lever when in clamped position, and guide means for the said resilient band associated with said strip.

5. A lamp chimney holder comprising a channel member, a lever pivoted in said channel member, a resilient band having its extremities connected to the channel and lever respectively, and friction means for retaining said lever in clamping position.

1,171,797. PUMPING UNIT. GEORGE D. LORD, Boston, Mass. Filed May 29, 1914. Serial No. 841,725. (Cl. 103—65.)



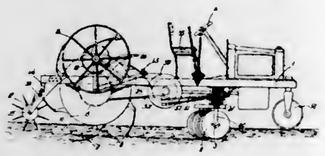
1. A separable base for a pumping unit comprising a pump supporting part and a motor supporting part each having parallel supporting members telescoping within one another when the two parts are operatively connected to position the pump and motor in operative relation and projecting to serve as handles for the convenient transportation of the unit when desired.

2. A separable base for a pumping unit comprising a pump supporting part and a motor supporting part each

having supporting members secured by traverse rods to form a substantially rectangular skeleton frame, the supporting members telescoping when in operative relation and projecting from the frame to serve as handles for the transportation of the unit.

3. A separable base for a pumping unit comprising a pump supporting part and a motor supporting part each having parallel supporting members alined with one another when the two parts are in operative relation, transverse members connecting the parallel supporting members to form a skeleton frame, and brackets secured to each frame for supporting the pump or motor.

1,171,798. APPARATUS FOR DIGGING THE GROUND. MARCEL MARIE GEORGES MALCOR, L'Ariana, Tunis. Filed June 20, 1912. Serial No. 704,862. (Cl. 97—72.)

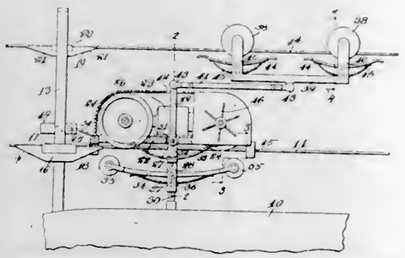


1. In an earth-working machine, the combination of means associated with one portion of the machine to work the surface of the soil and leave the worked soil in a loose layer, and spading means associated with the machine and located at the rear of said first-named means to spade the soil lying beneath the loose layer and deposit it on the surface thereof.

2. In an earth-working machine, the combination of means associated with one portion of the machine to work the surface of the soil to form a loose layer thereof, and a plurality of spades arranged in a rotary series and located at the rear of said first-named means to enter the unworked soil lying directly beneath the loose layer, raise the same and then deposit it on the surface of the loose layer.

3. In an earth-working machine, the combination of means associated with one part of the machine to work the surface of the soil to form a loose layer thereof, and spading means associated with the machine and located at the rear of the first-named means to work on adjacent lower layer of the soil and deposit it on the surface of the soil worked by said first-named means, said spading means comprising a plurality of spades arranged to rotate in a circular series, substantially as described.

1,171,799. COLLECTION AND DELIVERY APPARATUS. JOSEPH F. MONTINE, Nevinville, Iowa. Filed July 10, 1915. Serial No. 39,153. (Cl. 104—146.)



1. The combination of an elevated track, a motor truck mounted on said track, a car suspended from the truck, a hanger supporting the car, a pivotal connection between the hanger and the truck, a pivoted arm carried by the hanger and extending forwardly and rearwardly therefrom, guard rollers carried by the outer ends of the arm, said rollers being located beneath the track in proximity thereto, and a leveling spring for the arm.

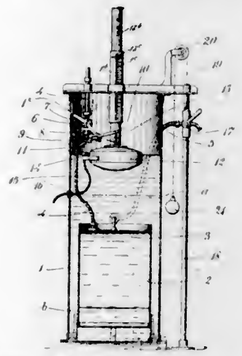
2. The combination of an elevated track, a motor truck mounted on said track, a car suspended from the truck, a hanger supporting the car, a pivotal connection between the hanger and the truck, a pivoted arm carried by the hanger and extending forwardly and rearwardly therefrom, guard rollers carried by the outer ends of the arm, said rollers being located beneath the track in proximity thereto, a leveling spring for the arm, an upstanding stem carried by the hanger, a current collector, a bracket supporting the collector, an arm supporting the bracket, said arm being carried by the aforesaid stem, and pivotal connections between the arm and the bracket, and between the arm and the stem.

4. The combination of an elevated track, a motor truck mounted on said track, a car suspended from the truck, a hanger supporting the car, a pivotal connection between the hanger and the truck, a pivoted arm carried by the hanger and extending forwardly and rearwardly therefrom, guard rollers carried by the outer ends of the arm, said rollers being located beneath the track in proximity thereto, a leveling spring for the arm, an upstanding stem carried by the hanger, a current collector, a bracket supporting the collector, an arm supporting the bracket, said arm being carried by the aforesaid stem, and universal joint connections between the arm and the bracket, and between the arm and the stem.

5. The combination of an elevated track, a motor truck mounted on said track, a car suspended from the truck, a hanger supporting the car, a pivotal connection between the hanger and the truck, guard rollers located beneath the track in proximity thereto, a tilting support for the rollers carried by the hanger, and leveling means for the support.

[Claims 7 to 20 not printed in the Gazette.]

1,171,800. VESSEL FOR INFLAMMABLE LIQUIDS. KARL MÜLLER, Schlieren, Switzerland. Filed Apr. 17, 1913. Serial No. 761,722. (Cl. 221—67.)

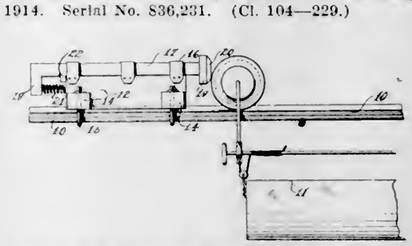


1. In a vessel for inflammable liquids, a reservoir for a neutral sealing liquid, a tank for an inflammable liquid arranged inside said reservoir and permanently covered by the content of the latter, said tank being closed at the top and open at the bottom and permanently filled with liquid, independent feed and discharge means for the inflammable liquid communicating with the interior of said tank, an automatically closing valve in each of said feed and discharge means and normally situated above the level of the sealing liquid, a float adapted to float on the sealing liquid, and means acted upon by said float for releasing the feed valve when the sealing liquid has reached its upper level during filling of the vessel and exerting no control on said valve during the withdrawal of inflammable liquid.

2. In a vessel for inflammable liquids, a reservoir for a neutral sealing liquid open at the top, a tank for an inflammable liquid arranged inside said reservoir and permanently covered by the content of the latter, said tank being closed at the top and open at the bottom, and permanently filled with liquid, independent feed and discharge pipes for the inflammable liquid communicating with the interior of said tank, a valve in each of said pipes and situated above the level of the sealing liquid, a float adapted to float on the sealing liquid, a lever pivotally mounted on the wall of the reservoir and arranged to be acted upon by the float for controlling said feed valve, and means for vertically adjusting the position of the discharge valve.

3. In a vessel for inflammable liquids, a reservoir for a neutral sealing liquid, a tank for an inflammable liquid arranged inside said reservoir and permanently covered by the contact of the latter, said tank being closed at the top and open at the bottom, a feed pipe for the inflammable liquid passing through said reservoir and connected to the tank, a flexible discharge pipe connected to the cover of said tank, an automatically closing valve outside the vessel on the outer end of said discharge pipe, a vertical rod on which said closing valve is slidably mounted, a valve in said feed pipe, a double armed weighted lever connected to the feed valve, a float adapted to float only in the sealing liquid, a lever pivotally mounted in the wall of the reservoir and arranged to be acted upon by the float when said tank is filled with inflammable liquid to close the feed valve.

1,171,801. BUMPER FOR LITTER-CARRIERS. HERRICK W. OSTERHOUT, Valley Falls, N. Y. Filed May 4, 1914. Serial No. 836,231. (Cl. 104—229.)



A device of the class described having means for attachment to a fixed track, guide members carried by a body portion and embracing one side edge thereof, a bar slidably mounted in said guide members for longitudinal movement and entirely supported upon the side edge of the body embraced by the guide members, a depending arm on one end of said bar, a spring connecting said arm and body portion and yieldingly holding the bar against movement in one direction, and a head on the other end of said bar provided with a yielding cushion on the outer end thereof.

1,171,802. REED-BOARD. PERCY PRESTON, Denison, Tex. Filed Mar. 19, 1915. Serial No. 15,498. (Cl. 84—34.)

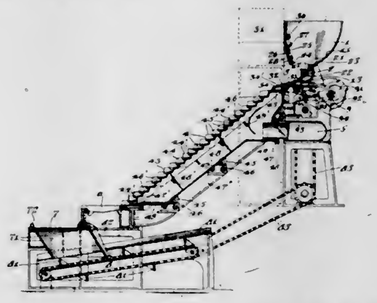


1. In a reed organ, a plurality of reed cells of graduated widths and depths, the widths and depths of the cells increasing in descending the scale, a plurality of pipe cells, said cells increasing in height and width in descending the scale, each pipe cell being in communication with two reed cells.

2. In a reed organ, a plurality of reed cells of graduated widths and depths, the widths and depths of the cells increasing in descending the scale, a plurality of pipe cells, said cells increasing in height and width in descending the scale, each pipe cell being in communication with two reed cells, the openings maintaining communication between the pipe and reed cells gradually decreasing in diameter in descending the scale.

3. In a reed organ, a plurality of reed cells of graduated widths and depths, the widths and depths of the cells increasing in descending the scale, a plurality of pipe cells, said cells increasing in height and width in descending the scale, each pipe cell being in communication with two reed cells, the openings maintaining communication between the pipe and reed cells gradually decreasing in diameter and depth in descending the scale.

1,171,803. BOILER AND OTHER FURNACE. JAMES REAGAN, Philadelphia, Pa. Filed Aug. 28, 1914, Serial No. 859,070. Renewed Oct. 15, 1915. Serial No. 56,144. (Cl. 110—38.)



1. The combination of a grate, a hopper, and an oscillatory feeder, said feeder having an upper and lower actuating face, the upper face being adapted to move transversely of the lower part of the hopper and cut out an increment of fuel therefrom, and the lower face being adapted to move such increment of fuel toward the grate.

2. The combination with a hopper, a grate, an oscillatory feeder having an upper and a lower actuating face, and a casing conforming to the rear side of said feeder, the feeder being so situated that its upper face will cut out an increment from a mass in said hopper during one oscillation and its lower face will advance such increment during an opposite oscillation.

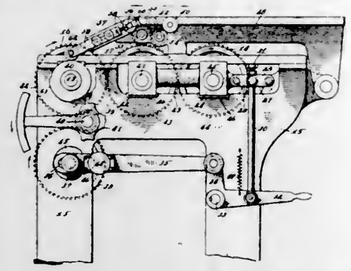
3. The combination of a grate, a hopper, and an oscillatory feeder, said feeder having an upper and a lower actuating face, the upper face being adapted to move transversely of the lower part of the hopper and cut out an increment of fuel therefrom, and the lower face being adapted to move such increment of fuel toward the grate, the feeder having cutting teeth and a movable part of the hopper having cutting teeth adapted to coact therewith.

4. The combination with a hopper, of a fuel-feeder, a furnace having a grate, a water supply for delivering water to the fuel as it passes to the furnace, a part of the hopper heated by the furnace for heating the water, a steam supply delivering steam to the said fuel, the furnace being constructed to produce such thermal conditions near its mouth as to dissociate the moisture while destructively distilling the fuel.

5. The combination with a hopper, a fuel-feeder, a furnace having a grate, a water supply for delivering water to the fuel as it passes to the furnace, a door heated by the furnace for heating the water, a steam supply delivering steam to the said fuel, the furnace being constructed to produce such thermal conditions near its mouth as to dissociate the moisture while destructively distilling the coal.

[Claims 6 to 21 not printed in the Gazette.]

1,171,804. THROW-OUT MECHANISM FOR PRINTING-PRESSES. JAMES D. REIFSNYDER and HENRY G. SCHWERDTLE, Philadelphia, Pa., assignors to Stokes & Smith Company, Summerdale, Pa., a Corporation of Pennsylvania. Filed Feb. 26, 1914. Serial No. 821,135. (Cl. 101—111.)



1. In a printing press, in combination, a form cylinder, an impression cylinder mounted in bearings movable toward and from the said form cylinder to bring the cylinders into and out of coöperative printing relation, means for feeding sheets to be printed to the impression cylinder, mechanism for separating the cylinders embodying a crank having an operative connection with the impression cylinder, a normally idle reciprocatory link having a connection with said crank, a rotary cam driven positively by the press when the press is in operation, a laterally movable actuating part carried by the said link and positioned adjacent to but normally out of line with the periphery of said cam, and electrically controlled means rendered operative upon the failure of a sheet to be taken by the impression cylinder, for moving the said actuating part in line with the periphery of the cam whereby the said normally idle link will be reciprocated to actuate the connections between the crank and the cylinder separating means.

2. In a printing press, in combination, a form cylinder, an impression cylinder, mechanism for feeding sheets of paper between said cylinders to be printed upon thereby, mechanism for separating said cylinders including a laterally movable actuating part, electrically actuated means for laterally moving said actuating part, a cam driven positively by the press when the press is driven, and arranged to engage said actuating part when moved laterally and positively impart a force to said mechanism and to one of said cylinders which separates the cylinders, a circuit passing through said electrically actuated means, said printing press having two conducting parts in said circuit and arranged to be separated by the sheet to be printed, whereby the absence of a sheet to be printed permits contact between said conducting parts and closes the circuit.

3. In a printing press, in combination, a form cylinder, an impression cylinder coöperating therewith and adapted to be moved into and out of printing engagement with said form cylinder, said impression cylinder having movable bearings, mechanism for moving said bearings to separate the cylinders including a laterally movable actuating part, electrically actuated means for laterally moving said actuating part, a cam driven positively when the press is driven and arranged to engage said actuating part when moved laterally and positively impart a force to said mechanism, which force moves said bearings and separates the cylinders, a circuit passing through said electrically actuated means, said printing press having two conducting parts in said circuit and arranged to be separated by the sheet to be printed, whereby the absence of a sheet to be printed permits contact between said conducting parts and closes the circuit.

4. In a printing press in combination, a form cylinder, an impression cylinder coöperating therewith and movable to and from said form cylinder, revolving means including a cam arranged to be continuously driven when the cylinders are rotated, said impression cylinder having movable bearings, a series of levers connected to said bearings for moving the same to and from the form cylinder, and electro-magnet mounted on one of said levers and having a sliding core, a roller movable by said core when the electro-magnet is energized into engagement with said cam to operate said levers and separate the form and impression cylinders, and a circuit including a pair of conductive parts adapted to be held apart by the sheet to be printed.

5. In a printing press, in combination, a form cylinder, an impression cylinder, mechanism for feeding sheets of paper between said cylinders to be printed upon thereby, mechanism for separating said cylinders including a laterally movable actuating part, a cam adjacent to said laterally movable part driven positively by the press when the press is driven, and normally having its edge projecting in the path of and preventing the lateral movement of said movable actuating part, electrically actuated means for laterally moving said actuating part, said cam being arranged to engage said actuating part when the same is moved laterally, and positively impart a force therethrough to said mechanism, which force separates the cylinders, a circuit passing through said electrically actuated means, said printing press having two conducting parts in said circuit and arranged to be separated by the sheet to be printed, whereby the absence of a sheet to be printed permits contact between said conducting parts and closes the circuit and moves said actuating part laterally when said cam will permit said lateral movement.

[Claims 6 to 9 not printed in the Gazette.]

1,171,805. GARMENT-SUPPORTER. FRIEND A. RUSS, Greenwich, Conn., assignor to The Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Continuation of application Serial No. 654,783, filed Oct. 14, 1911. This application filed Feb. 25, 1913. Serial No. 750,507. (Cl. 24—245.)



1. A hose supporter comprising a buckle having a pivoted lever and a sheet metal back, a supporting strap passed between said lever and back and having its lower extremity swaged to said back, and a garment fastening loop attached to said back, the edges of said back being folded to permanently secure all of said parts together, whereby all of the parts are assembled by metal bending operations and none of the parts can become separated from the back when the buckle is open.

2. In a hose supporter buckle having a pivoted lever and a sheet metal back, and a supporting strap passed between said lever and back, the said back being provided with vertically disposed and forwardly turned side ears and having its upper extremity folded downwardly to form a reinforcing lip between which and the body of the back is confined the end of the supporting strap, and the said lever being journaled between said ears so that its clamping edge will co-act with the front side of the reinforced portion of the back to lock the moving portion of said supporting strap when the buckle is closed.

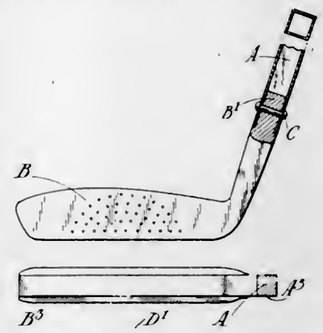
3. As an article of manufacture a hose supporter comprising a supporting webbing, a buckle having a pivoted lever and a sheet metal back, and a button clasp attached to said back, the said buckle having the upper edge of that portion of the back which co-acts with the lever edge folded downwardly to form a transversely disposed reinforcing lip between which latter and the body of the back is confined the end of the supporting webbing.

4. The combination with a hose supporter comprising a supporting strap, a button loop and a button tab, of a buckle provided with a sheet metal back having forwardly turned side ears between which is journaled a pivoted lever, the said back having its lower portion folded around the top side of said loop and its edge swaged down on to the end of said tab, and the said back having an edge folded and swaged down on to the end of said strap to permanently secure the same to the back, whereby all of the parts can be assembled by metal bending operations and none of the parts can become separated from the back when the buckle is open.

5. In a hose supporter, a buckle having a pivoted lever and a sheet metal back, and a supporting strap passed between said lever and back, the said back having its upper edge folded downwardly to form a reinforcing lip between which and the body of the back is swaged the end of the supporting strap, and the said lever being arranged to co-act with the front face of said lip to lock the moving portion of said supporting strap when the buckle is closed.

[Claim 6 not printed in the Gazette.]

1,171,806. GOLF-CLUB. EDWIN HAMILTON WINCKWORTH SCOTT, Beckenham, England. Filed Dec. 15, 1913. Serial No. 806,742. (Cl. 46—4.)



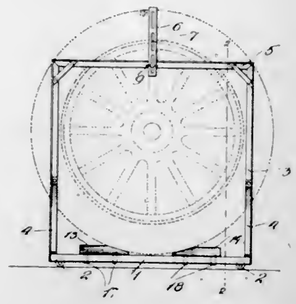
1. In a golf club the combination of a shaft formed of a single length of metal tube whereon three external surfaces so meet as to form two straight lines extending longitudinally of the shaft for at least one-half of its length, and a head whereon three surfaces meet to form two parallel straight lines as viewed from above by the player and whereof one is so positioned as to be in one plane with one said line upon the shaft and the other to be in one plane with the other said line upon the shaft.

2. In a golf club the combination of a shaft formed of a single length of metal tube whereon three external surfaces so meet as to form two parallel straight lines extending longitudinally of the shaft for at least one-half of its length, and a head whereon three surfaces meet to form two parallel straight lines as viewed from above by the player and whereof one is so positioned as to be in one plane with one said line upon the shaft and the other to be in one plane with the other side line upon the shaft.

1,171,807. WHEEL-TRUCK. HARVEY P. SIBERELL, Glendale, Cal. Filed July 19, 1915. Serial No. 40,798. (Cl. 21—65.)

1. A truck comprising a base having casters, a vertical frame on said base, slidable means on said base to support a wheel, and adjustable means on said frame coöperating with said slidable means to hold a wheel.

2. A truck comprising a base having casters, and a plurality of rails, a vertical frame mounted on said base, a clamping member on said frame, and slidable means on said rails coöperating with said clamping member to hold a wheel.

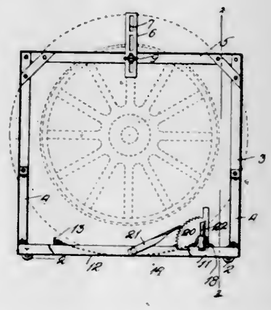


3. A truck comprising a base having casters and a plurality of rails, a plurality of wheel supporting blocks slidable on said rails, a vertical frame mounted on said base, and a wheel clamping member on said frame coöperating with said blocks to hold a wheel.

4. A truck comprising a base having casters and a plurality of rails, a plurality of wheel supporting blocks slidable on said rails and having oppositely inclining faces, a vertical frame mounted on said base, and an adjustable wheel clamping member on said frame coöperating with said blocks to hold a wheel.

5. A truck comprising a base having casters, and a plurality of rails, a plurality of wheel supporting blocks slidable on said rails, and having oppositely inclining faces, a vertical frame mounted on said base, and an adjustable clamping member centrally of the cross member of said frame and coöperating with said blocks to hold a wheel.

1,171,808. WHEEL-TRUCK. HARVEY P. SIBERELL, Glendale, Cal. Filed Sept. 1, 1915. Serial No. 48,550. (Cl. 21—65.)



1. A truck comprising a base, a vertical frame on said base, a flexible wheel support on said base, and means on said frame coöperating with said flexible support to hold a wheel.

2. A truck comprising an open sided base, a frame on said base, a flexible wheel support on said base, a clamping member on said frame coöperating with said flexible support to hold a wheel, and means to tauten said flexible support.

3. A truck comprising an open sided base having casters, a wheel support on said base, means to adjust said support, a frame on said base, and means on said frame coöperating with said wheel support to hold a wheel.

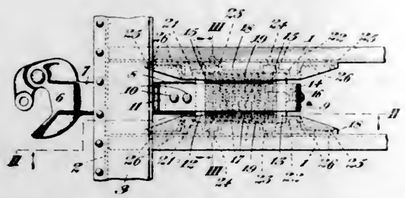
4. A truck comprising an open-sided base having casters, a vertical frame on said base, a clamping member on

said frame, a flexible wheel support rigidly secured at one end, and means connected to the other end of said flexible support to adjust same.

5. A truck comprising a base open at one side, a vertical frame on said base, a yielding wheel support on said base, means to adjust said support, and an adjustable means on said frame coöperating with said wheel support to hold a wheel.

[Claim 6 not printed in the Gazette.]

1,171,809. FRICTION-SPRING DRAFT-RIGGING. EDWIN E. SLICK, Westmont borough, Pa. Filed Oct. 30, 1913. Serial No. 798,178. (Cl. 213—64.)



1. In a railway draft rigging, a spring comprising a group of opposed corrugated plates, the direction of the corrugations in adjacent plates being angularly disposed with respect to each other, a follower plate at each end of said group of spring plates, a cheek plate on each side of said group, said cheek plates being provided with guides at their upper and lower portions, adapted to coöperate with the edges of said spring plate and thereby maintain them in operative position.

2. In a railway draft rigging, a group of opposed corrugated spring plates, the direction of the corrugations in adjacent plates being angularly disposed with respect to each other, a follower plate at each end of said group, a yoke and coupler shank surrounding said follower plates and spring plates, cheek plates provided with abutments adapted to coöperate with said follower plates, and also provided with guides at their upper and lower portions, adapted to contact with the edges of said corrugated spring plates and thereby maintain them in operative relation.

3. In a railway draft rigging, a group of opposed corrugated spring plates, the direction of the corrugations in adjacent plates being angularly disposed with respect to each other, a follower plate at each end of said group, a yoke and coupler shank surrounding said follower plates and spring plates, a cheek plate at each side of the group of spring plates, provided with abutments adapted to coöperate with said follower plates, and also provided with top, bottom and side guide portions adapted to contact with the edges of, and thereby maintain the spring plates and follower plates in operative relation.

4. In a railway draft rigging, a spring comprising a group of corrugated plates of different thicknesses, the direction of the corrugations in adjacent plates crossing each other, a follower plate at each end of said group, a cheek plate at each side provided with abutments adapted to coöperate with said follower plates, and also provided with top, bottom and side guide portions, adapted to contact with the edges of and to maintain the spring plates in operative relation, whereby cumulative and friction spring action is provided.

5. In a railway draft rigging a group of opposed spring plates each provided with a plurality of corrugations, the direction of the corrugations in adjacent plates being angularly disposed with respect to each other, a follower plate at each end of said group, a yoke and coupler shank surrounding said follower plate and spring plates in one direction, cheek plates provided with abutments adapted to coöperate with said follower plates, and also provided with side guides and top and bottom guides adapted to contact with the edges of said spring plates and maintain them in operative position.

[Claim 6 not printed in the Gazette.]

1,171,810. CONCEALED SKIRT-BAND FASTENING. PHILIP TERRY, New York, N. Y. Filed Sept. 22, 1915. Serial No. 51,974. (Cl. 24—229.)

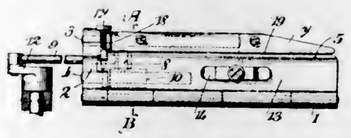


1. A fastening of the character described comprising complementary hook and eye members formed from blanks of wire doubled upon themselves at their mid-length, the single arms of said blanks being adapted to be passed through the end folds of wide hems parallel with the plies and then through the under plies of the hems, said arms being then bent backward upon themselves and the ends thereof bent at right angles to form angle arms which lie parallel with and in engagement with the inner side of the end folds of the hems, sufficient of the double end of the eye member blank being left outside the edge of the hem to form the engaging portion of the eye member, and sufficient of the double end of the hook member blank being left outside the hem to form, when bent to shape, the engaging arm of the hook member.

2. The combination with a band having wide hems at its ends, of complementary hook and eye members formed from blanks of wire doubled upon themselves at their mid-lengths, the single arms of said blanks being passed through the end folds of the hems parallel with the plies and through the under plies of the hems and then bent backward upon themselves and the ends thereof bent at right angles to form angle arms parallel with the inner side of the ends folds of the hems, the double end of the eye member blank forming the engaging portion of the eye member and the double end of the hook member blank being bent to form the engaging arm of the hook member.

3. The combination with a belt end having a wide hem, of a fastening member formed from a blank of wire doubled upon itself at its mid-length, the single arms of said blank being passed through the end fold of the hem parallel with the plies, and then through the under ply of the hem, and being bent backward upon itself and the ends thereof bent at right angles to form angle arms in engagement with the inner side of the end fold of the hem, the double end of said blank being shaped to form the engaging portion of the member.

1,171,811. APPARATUS FOR CUTTING EMBROIDERY BACKGROUND ALONG AN EMBROIDERED EDGE. ALOIS TSCHERNE, Rorschach, Switzerland, assignor to the Firm of Henri Levy, Rorschach, Switzerland. Filed May 18, 1911. Serial No. 628,101. (Cl. 164—47.)



1. A device of the character described comprising a reciprocable cutter, a stationary opposing member substantially vertically disposed and mounted longitudinally thereof and forming a slot therewith of uniform width through which the background of the embroidery is passed, means to reciprocate the cutter parallel to and longitudinally of the opposing member.

2. A device of the character described comprising a reciprocable cutter, a stationary support, an opposing member mounted longitudinally of the cutter and forming a slot therewith of uniform width through which the background of the embroidery is passed, means to swing the opposing member relatively to the cutter and support to increase or diminish the width of the slot, means to reciprocate the cutter parallel to and longitudinally of the opposing member.

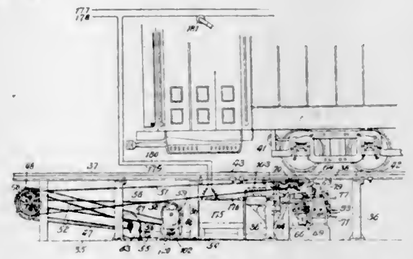
3. A device of the character described, comprising a pivoted fabric supporting member, a cutting member parallel thereto and forming therewith a longitudinal slot, means to reciprocate the cutter parallel to the supporting member, and means to move the free end of the latter toward and from the cutting member.

4. A device for cutting embroidery background along the embroidered edge, comprising a stationary member, a knife carrying member movable longitudinally of and parallel to the stationary member, a knife blade mounted on the carrying member, an adjustable member mounted on the stationary member coöperating with the blade to form a slot through which the background of the embroidery is passed, and means to adjust said adjustable member to maintain a minimum width of slot.

5. A device for cutting embroidery background along the embroidered edge, comprising a stationary member, a support on the latter, parallel thereto, a knife carrier slidably mounted on the support, means to reciprocate the carrier on the support, a knife blade on the carrier projecting beyond the edge thereof, and a fabric supporting member pivoted at its lower edge on the stationary member and projecting above the latter and forming with the knife edge a longitudinal slot through which the background of the fabric is passed.

[Claims 6 to 8 not printed in the Gazette.]

1,171,812. GRINDER. FREDERICK K. VIAL, Chicago, Ill., assignor, by mesne assignments, to Griffin Wheel Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1911. Serial No. 662,984. (Cl. 51—4.)



1. In combination, a track, grinding wheels located beneath each rail of said track, means to support a pair of car wheels connected by an axle to permit displacement of said track, means to displace opposite rails of said track angularly in horizontal planes, and means to move said grinding wheels in vertical planes to contact with said car wheels.

2. In a device of the class described, a track having means adjacent thereto for grinding the wheels of a car truck standing on said track, and a bar pivoted midway between the rails of the track, the ends of said bar being adapted to go under opposite sides of a pair of wheels of the truck so as to hold the truck while grinding is taking place.

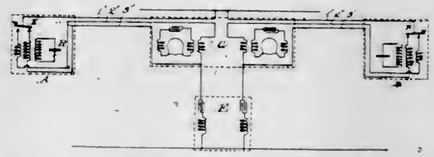
3. In a device of the class described a track having a pit thereunder, the rails of said track having displaceable sections, mechanism to grind said wheels, and two bars, each pivoted at a point between the rails and on respective sides of the displaceable sections so that when one pair of wheels of a car truck is on the displaceable sections one of these bars may be rotated to bring the ends thereof under the respective wheels of the other pair of wheels of the same truck so as to hold the truck in position on the track.

4. In a device of the class described, a track, a pair of grinding wheels adapted for use in grinding a pair of car wheels of a car truck standing on said track, means to support said pair of wheels to be ground, and means to lock another pair of car wheels of said truck in position on said track to hold said truck in position while said first mentioned pair of car wheels are being ground.

5. In a device of the class described, a track having displaceable sections, means to support a pair of truck wheels over said sections and thereby permit displacement of the sections, means to displace said sections, a pair of grinding wheels under the respective car wheels, power-driving connections therefor, and means to displace said grinding wheels both vertically and laterally independently of the movement of said displaceable sections so as to bring them in engagement with the respective car wheels at any desired point across the tread surfaces thereof.

[Claims 6 to 19 not printed in the Gazette.]

1,171,813. MUTIPLEX TELEGRAPHY. FREDERICK K. VREELAND, Montclair, N. J., assignor to Vreeland Apparatus Company, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 8, 1910. Serial No. 536,963. (Cl. 178—51.)



1. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of transmitters and selective receivers associated therewith, and means whereby each receiver is made sensitive to distant impulses of definite frequency and less sensitive to impulses of the same frequency from its companion transmitter, substantially as set forth.

2. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of tuned sifting circuits in parallel relation thereto, alternating current generators and selective receivers associated with said sifting circuits, and circuit controllers located in the sifting circuits for translating the generator currents into signal impulses, such circuit controllers making the receivers sensitive to distant signals when signal currents from their companion generators are interrupted, and less sensitive to signal currents from their companion generators, substantially as set forth.

3. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of tuned sifting circuits in parallel relation thereto and transmitters and receivers associated with said sifting circuits and with each other, each receiver being coupled to the line receiving distance signals and more feebly coupled to its companion transmitter for receiving transmitted signals, substantially as set forth.

4. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of tuned sifting circuits in parallel relation thereto, transmitters associated with said sifting circuits, receivers associated with said sifting circuits and connected to the line separately from their companion transmitters, such receivers being also connected inductively with their companion transmitters, and circuit controllers opening and closing alternately the circuits of companion transmitters and receivers, substantially as set forth.

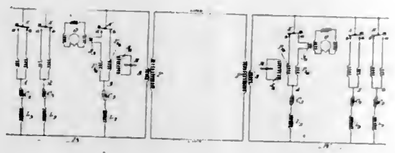
5. In a system of multiplex telegraphy by alternating currents, a bifurcated sifting circuit, in combination with receiving apparatus coupled to both branches of the sifting circuit, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,171,814. MULTIPLEX TELEGRAPHY. FREDERICK K. VREELAND, Montclair, N. J., assignor to Vreeland Apparatus Company, Inc., New York, N. Y., a Corporation of New York. Filed June 4, 1913. Serial No. 771,669. (Cl. 178—51.)

1. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with

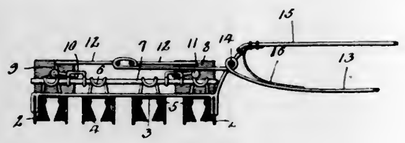
a line, of a transformer having a simple aperiodic high voltage winding connected to the line and a low voltage winding forming part of a complex tuned low voltage system whereby the self-induction of the transformer is neutralized at a plurality of definite frequencies, substantially as set forth.



2. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of a transformer of unequal windings having its high voltage winding connected to the line and a plurality of tuned sifting circuits connected in parallel to the low voltage winding of the transformer, said transformer being adapted to pass simultaneously and without reflection the currents transmitted and received by the several sifting circuits and transmitting and receiving means associated with the sifting circuits, substantially as set forth.

3. In a system of multiplex telegraphy by alternating currents of different frequencies, the combination with a line, of a transformer of unequal windings having its high voltage winding connected to the line and a plurality of tuned sifting circuits connected in parallel to the low voltage winding of the transformer and having when thus connected a large unbalanced reactance for small frequency differences relative to the equivalent line impedence, said transformer being adapted to pass simultaneously and without reflection the currents transmitted and received by the several sifting circuits and transmitting and receiving means associated with the sifting circuits, substantially as set forth.

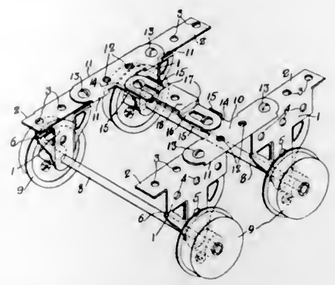
1,171,815. CURRYCOMB AND BRUSH. FRANK VYVIAL, Louise, Tex. Filed Sept. 3, 1915. Serial No. 48,900. (Cl. 119—88.)



A combination currycomb and brush comprising a plurality of combs spaced apart in parallelism, brushes arranged alongside of the combs, said brushes being arranged in pairs and disposed inwardly of the combs, wire holders connecting the brushes of each pair to each other, rods arranged at opposite sides of the device above said combs and brushes and connected to the ends of the wire holders at the respective sides of the device, lugs arranged adjacent to said rods respectively, arms pivoted upon said lugs, connections between said arms and rods, levers and rods interconnecting all of said arms for simultaneous movement, and means connecting said levers for operating the latter to move the brushes outwardly beyond the combs.

1,171,816. STRUCTURAL TOY. FRANCIS A. WAGNER, Dayton, Ohio. Filed Apr. 30, 1915. Serial No. 24,863. (Cl. 46—35.)

1. A structural element for a toy comprising a plate having its lateral edges converging toward one end thereof and having at its wider end a flange extending at an angle to the plane of said plate, said flange having a series of openings arranged parallel with the plane of said plate to receive fastening devices to connect said plate with other parts of the toy structure, and said plate having a series of similar openings in the body portion thereof adjacent to and parallel with said flange and also having a series of similar openings arranged medially thereof in a line extending at substantially right angles to said flange.



2. A structural element for a toy comprising a plate having its lateral edges converging toward one end thereof and having at its wider end a flange extending at an angle to the plane of said plate, said flange having a series of openings arranged parallel with the plane of said plate to receive fastening devices to connect said plate with other parts of the toy structure, and said plate having a depressed portion arranged near and parallel with said flange and forming a channel to receive another element of the toy structure, said plate also having a similar depressed portion arranged centrally thereof and at right angles to the first-mentioned depressed portion and each of said depressed portions having openings to receive fastening devices.

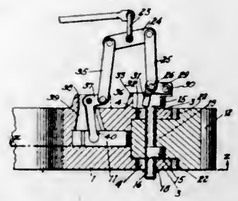
3. A structural element for a toy comprising a plate having at one end a flange extending at an angle to the plane of said plate, said flange having a series of openings arranged parallel with the plane of said plate to receive fastening devices to connect said plate with other parts of the toy structure and said plate having a depressed portion arranged adjacent to and parallel with said flange to form a channel to receive another element of the toy structure, said plate also having a similar depressed portion arranged substantially centrally thereof and at right angles to the first-mentioned depressed portion, and each of said depressed portions having openings to receive fastening devices.

4. A structural element for a toy comprising a plate having at one end a flange extending at an angle thereto and having its other end of a width less than the width of the flanged end, said flange and the narrow end of said plate having openings, a second plate having an elongated portion provided with projections arranged to engage the opposite edges of said flange when said second plate is placed in engagement with said flange, said elongated portion of said second plate having openings and said second plate also having a laterally extending portion to connect the same to another part of said toy structure, said laterally extending part having an opening to receive a fastening device.

5. A structural element for a toy comprising a plate having at one end a flange extending at an angle thereto and having its other end of a width less than the width of the flanged end, said flange and the narrow end of said plate having openings, a second plate having an elongated portion provided with projections arranged to engage the opposite edges of said flange when said second plate is placed in engagement with said flange, said elongated portion of said second plate having openings and said second plate also having a laterally extending portion to connect the same to another part of said toy structure, said laterally extending part having an opening to receive a fastening device, and a connecting device adjustably secured to the laterally extending portion of said second plate.

[Claims 6 to 16 not printed in the Gazette.]

1,171,817. CAR-COUPLING. WILLIAM T. WALLACE, Boyles, Ala. Filed July 9, 1915. Serial No. 39,010. (Cl. 213—10.)



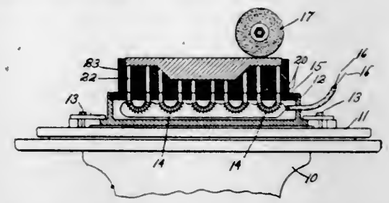
1. In a car coupler, a draw-head having elongated knuckle pin slots, a knuckle pin vertically movable in said slots and having reduced portions which when opposite the walls of the slots permit the pin to move horizontally therein, a knuckle pivoted by said pin to the draw-head and having a tail-wing adapted to swing into the draw-head, a lock shoulder which said tail-wing is adapted to engage when the knuckle is shifted bodily toward the draw-head, and a combination pin lifting the knuckle shifting and opening mechanism, substantially as described.

2. In a car coupler, a draw-head having at one side lugs provided with elongated pin holes and having an integral recess, shoulders in the top and bottom of said recess facing to the near side of the draw-head, a knuckle mounted between the ears and having a vertical pin hole, a locking pivot pin for the knuckle which is mounted in said ear slots and is shouldered to fill said slots in one position and to have clearance in said slots in another position, the lower shoulder on the pin being detachable, a tail-wing on the knuckle adapted to swing into said recess and, responsive to a body movement of the knuckle, to interlock with a wall of said recess, and having shoulders which in its locked position engage said shoulders on the draw-head and take the draft strain off the tail-wing, substantially as described.

3. A recessed draw-head having pin holes elongated from front to rear, a knuckle mounted to swing in the draw-head, a pivot pin for the knuckle vertically movable therein and provided with top and bottom shoulders adapted to be moved into and out of said elongated slots, said knuckle having shoulders adapted to bear against the draw-head to relieve said pin of buffing strains, and said head and knuckle having top and bottom internal shoulders disposed radially to the knuckle's axis and adapted to engage and interlock when the knuckle is shifted rearwardly in said draw-head, and mechanism for unlocking and swinging the knuckle outwardly, substantially as described.

4. In a car coupler, a draw-head having an internal recess, a knuckle seated in the recess and having a vertically movable pivot pin, top and bottom shoulders on the pin, and a recess in the knuckle to receive and swing about one of the pin shoulders, slots in the draw-head elongated from front to rear and adapted to receive the pin and its shoulders, an actuator seated in the head, a slideway for said actuator in which it is movable from rear to front of the head to engage the rear face of the knuckle, a bell crank lever pivoted on the draw-head which is slotted to permit the lower end of the lever to engage and move said actuator, a flexible operating means connected to the upper ends of said pin and lever and adapted to exert its pull first on the pin to move the shoulder thereof out of said elongated slots, and then on the actuator to shift and swing the knuckle, and a shoulder in the head with which a portion of said knuckle interlocks when shifted with its pivot pin bodily to the rear in coupling.

1,171,818. PROCESS OF FORMING JIGS OR FIXTURES. BENJAMIN M. WALPOLE, Providence, R. I., assignor to Builders Iron Foundry, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 24, 1914. Serial No. 868,382. (Cl. 22—203.)



1. An improved process of constructing a jig or fixture for an electric chuck which consists in positioning extension pole pieces in the mold, the work being used as a pattern and the ends of said pieces being brought into contact therewith while in the process of setting, and then depositing a binder of non-magnetic material about these pieces to permanently retain them in proper relation to each other.

2. An improved process of constructing a jig or fixture for an electric chuck which consists in placing extension pole pieces in a mold spaced apart to register with the pole pieces in the chuck, the work being used as a pattern and the contacting ends of said pieces being positioned to conform to the contour of the surface of the work, said pole pieces being temporarily held in spaced apart relation, and applying a non-magnetic binding material about these pieces to permanently bind them in fixed relation to each other.

3. An improved process of constructing a jig or fixture for electric chucks which consists in placing extension pole pieces in a mold spaced to register with the pole pieces in the chuck, the work being used as a pattern and the ends of said pieces being brought into contact therewith in setting, said pieces being temporarily supported in proper spaced apart relation, and applying a fluid binder which subsequently solidifies and hardens to support and retain said pieces in permanent relative position, thus producing a holding face conforming to the contour of the work, and subsequently surfacing that portion of the jig adapted to engage the chuck.

4. An improved process of constructing a jig or fixture for electric chucks which consists in casting or molding a plurality of spaced apart pole pieces spaced to register with the pole pieces in the chuck to which the fixture is to be applied, the ends of said pieces being positioned to contact with and conformed to the contour of that surface of the work to be held, said pole pieces being cast in a unit and supported in spaced apart relation by a tying member, and depositing a non-magnetic binding material around the pole pieces to retain them in permanent relation to each other thus producing a holding face conforming to the contour of the work and subsequently surfacing that portion adapted to engage the chuck.

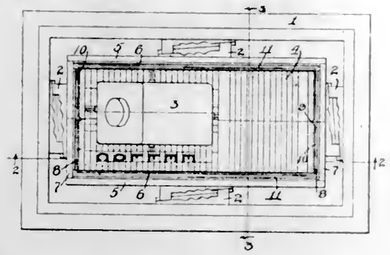
1,171,819. PROCESS OF MAKING ELECTROPLATES. ARTHUR R. WARREN, Chicago, Ill. Filed Sept. 8, 1914. Serial No. 860,602. (Cl. 204—8.)

1. In an electroplate form recessed members mounted therein forming a notched continuous channel around said form.

2. In a form for electroplates recessed members mounted therein forming a continuous channel thereabout to form an electrotype therefrom with a false margin adapted to be detached leaving a notched electrotype with a coppered edge.

3. In means for forming an electroplate with a beveled coppered edge a plurality of recessed members mounted in a form affording a continuous channel therearound, and other members adjacent thereto adapted to form a false margin on the electrotype plate.

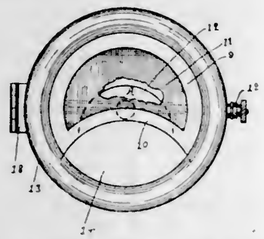
4. The process of forming an electroplate with coppered edges and V-shaped centering elements by molding a positive matrix from a form and electrolytically depositing copper thereon to form a thin negative plate, backing said plate with metal and finally planing the same down to a certain thickness whereby the outer margin of the plate is detached leaving the finished plate with the coppered edge.



5. The process of forming an electroplate from a form by molding a matrix from said form, depositing copper thereon to form a plate, backing the formed copper plate with metal, and finally planing said plate down on its rear surface until the outer margin thereof extending from a continuous channel in said plate becomes detached so that the coppered wall of said channel becomes the coppered edge of the finished plate.

[Claims 6 and 7 not printed in the Gazette.]

1,171,820. LAMP. WILLIAM A. WATKINS and AUSTIN A. GAMBLE, Riverside, Cal. Filed July 26, 1915. Serial No. 42,024. (Cl. 240—48.4.)



1. A lamp having an aperture in the face thereof and provided with a main reflector for projecting light rays through the aperture, a reverse reflector having an opposed relation to the main reflector and arranged substantially in the plane of the aperture and spaced from the edges thereof, a translucent plate across the area between the reverse reflector and one side of the aperture, and a transparent plate across the area between the reverse reflector and the other side of the aperture.

2. A lamp having an aperture in the face thereof and provided with a main reflector for projecting light rays through the aperture, a reverse reflector having an opposed relation to the main reflector and arranged substantially in the plane of the aperture and spaced from the edges thereof, an opaque rim projecting into the aperture on one side thereof, a translucent plate across the area between the opaque rim and the reverse reflector, and a transparent plate across the area between the reverse reflector and the opposite side of the aperture.

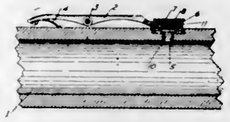
3. A lamp having an aperture in the face thereof and provided with a main reflector for projecting light rays through the aperture, a reverse reflector having an opposed relation to the main reflector and arranged substantially in the plane of the aperture and spaced from the edges thereof, said reverse reflector being inclined at an angle to the plane of the aperture, a translucent plate across the area between the reverse reflector and one side of the aperture, and a transparent plate across the area between the reverse reflector and the opposite side of the aperture.

4. A lamp having an aperture in the face thereof and provided with a main reflector for projecting rays through the aperture, a frame fitted within the aperture and including an opaque peripheral rim projecting into the aperture at one side thereof and a transverse element extending across the aperture, a translucent plate extending across the area defined by the frame, a reverse reflector carried by the transverse element and having an opposed relation to the main reflector, and a transparent plate across the area between the frame and the opposite side of the aperture.

5. A lamp having an aperture in the face thereof and provided with a main reflector for projecting light rays through the aperture, a frame arranged within the aperture and including an opaque peripheral rim projecting into the aperture from one side thereof and a transverse element extending across the aperture, a translucent plate extending across the area defined by the frame, a reverse reflector carried by the transverse element of the frame and having an opposed relation to the main reflector, said reverse reflector projecting inwardly at an angle to the plane of the frame, and a transparent plate across the area between the frame and the opposite side of the aperture.

[Claim 6 not printed in the Gazette.]

1,171,821. PADDED KEY FOR WIND INSTRUMENTS. DAVID M. WEAKLEY, East Lake, Ala. Filed Oct. 13, 1914. Serial No. 866,534. (Cl. 84—7.)



1. A key for wind instruments having a pad holder detachably mounted on an end thereof, substantially as described.

2. A key for wind instruments having a pad-holder detachably mounted on an end thereof and forming the finger plate for the key, substantially as described.

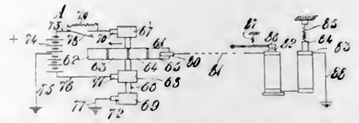
3. The combination of a key, a pad holder detachably connected to an end of said key, a pad, and means to attach said pad to said holder, substantially as described.

4. The combination with a key for wind instruments, of a pad holder, and a pad attached to the underface of said holder, said pad holder and pad being outwardly detachable from the key while attached to the instrument, substantially as described.

5. A padded key for wind instruments, having at one end an internally threaded ring, and a pad holder screwed inwardly into said ring and having in its innerface a key pad, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,171,822. AUTOGRAPHIC TELEGRAPHY. EMIL HENRIK WIDEGREN and KLAS AUGUST WIDEGREN, Alby, Sweden. Filed Dec. 20, 1913. Serial No. 807,917. (Cl. 178—19.)



1. Method of producing a diplex effect in actuating electric apparatus at a distance, consisting in generating a series of positive and negative pulsations from a source of continuous current, varying the relation of the magnetizing effects of the positive and negative pulsations, effecting a magnetizing effect corresponding to the sum of the positive and negative pulsations, and effecting another magnetizing effect corresponding to the difference between the positive and negative pulsations.

2. In means for producing a diplex effect in actuating electric apparatus at a distance by means of pulsating electric currents of alternating polarity obtained from a source of continous current, the combination of a sender arranged to transmit a continuous series of pulsations of alternating polarity from the said source, means for varying the proportion between the effective values of the positive and negative pulsations in a certain series of pulsations, a receiving relay, means for passing through the said relay the pulsations transmitted from the sender, means for causing the said relay to operate independently of the changes of polarity and the variation of the proportion between the effective values of the positive and the negative pulsations, another polarized receiving relay, and means for actuating the last named relay only when the said proportion is varied, substantially as and for the purpose set forth.

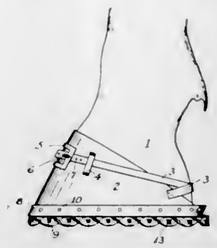
3. In means for producing a diplex effect in actuating electric apparatus at a distance by means of pulsating electric currents of alternating polarity obtained from a source of continous current, the combination of a sender arranged to transmit a continuous series of pulsations of alternating polarity from the said source, means for varying the proportion between the effective values of the positive and negative pulsations in a certain series of pulsations, a receiving relay, means for passing through the said relay the pulsations transmitted from the sender, means for causing the said relay to operate independently of the changes of polarity and the variation of the proportion between the effective values of the positive and the negative pulsations, another polarized receiving relay, means for actuating the last named relay only when the said proportion is varied, and means for periodically varying, at the sender, the resistance of the circuit for any direction of current, substantially as and for the purpose set forth.

4. In means for producing a diplex effect in actuating electric apparatus at a distance by means of pulsating electric currents of alternating polarity obtained from a source of continous current, the combination of a sender arranged to transmit a continuous series of pulsations of alternating polarity from the said source, means for varying the proportion between the effective values of the positive and negative pulsations in a certain series of pulsations, a receiving relay, means for passing through the said relay the pulsations transmitted from the sender, means for causing the said relay to operate independently of the changes of polarity and the variation of the proportion between the effective values of the positive and the negative pulsations, another polarized receiving relay, means for actuating the last named relay only when the said proportion is varied, and means for changing the potential of the source of current for the different directions of the pulsations, substantially as and for the purpose set forth.

5. In means for producing a diplex effect in actuating electric apparatus at a distance by means of pulsating electric currents of alternating polarity obtained from a source of continous current, the combination of a sender arranged to transmit a continuous series of pulsations of alternating polarity from the said source, means for varying the proportion between the effective values of the positive and negative pulsations in a certain series of pulsations, a receiving relay, means for passing through the said relay the pulsations transmitted from the sender, means for causing the said relay to operate independently of the changes of polarity and the variation of the proportion between the effective values of the positive and the negative pulsations, another polarized receiving relay, means for actuating the last named relay only when the said proportion is varied and an electric valve inserted in the circuit and arranged to offer greater resistance for the one direction of current than for the other, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,171,823. HORSESHOE. SAMUEL WIESENBERG, New York, N. Y. Filed Jan. 25, 1915. Serial No. 4,085. (Cl. 168—1.)



1. An anti-slipping horse shoe comprising in combination an upper for attachment to the hoof of an animal, a metallic bar twisted to present sharp edges for contact with the ground and shaped to fit the outline of said hoof, and metallic angular bands shaped to fit the outline of said hoof for connecting said upper and said bar.

2. In an anti-slipping horse shoe, the combination of an upper, means for securing said upper to the hoof of an animal, a twisted metallic bar, angular bands secured on each side of said upper at the lower extremity thereof, and bolts for removably securing said bar to said bands.

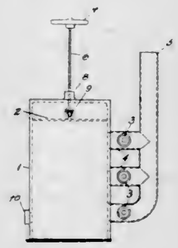
3. In an anti-slipping horse shoe, a removable gripping member comprising a twisted bar of metal, said bar presenting sharp edges for contact with the ground, metallic angular bands shaped to fit the outline of the hoof for supporting said gripping member, and means for supporting and removably securing said member to said angular bands.

4. In an anti-slipping horse shoe, the combination of an upper cut high at the toe and low at the heel, straps secured to said upper for attaching said shoe to the hoof of an animal, metallic angular bands secured on each side of said upper at the lower extremity thereof, a gripping member of a twisted bar of metal and bolts for removably securing said bar to said bands.

5. In an anti-slipping horse shoe, the combination of means for securing said shoe to the hoof of an animal, a bar of metal twisted to present sharp edges for contact with the ground, means for removably connecting said bar to said securing means, and a metallic plate removably attached to said connecting means.

[Claims 6 and 7 not printed in the Gazette.]

1,171,824. STUMP-BURNER. JOHN W. WILFONG, Joliet, Ill. Filed June 16, 1915. Serial No. 34,339. (Cl. 110—21.)

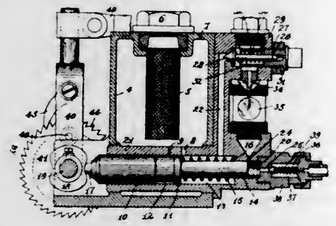


1. A stump burner, comprising, a cylindrical-shaped body adapted to be placed over and around a tree-stump; a smoke pipe connected to said body by means of three pipe joints fitted into openings in said body; a damper for each of said pipe joints; a valve plate filling the cross section of said body, and slidable in the same;

a screw bolt connected to said valve-plate and operable through a threaded opening in the top surface of said body and through the threaded opening of a collar secured thereto; a door, provided with an air-vent, through which door fuel is supplied, and when closed, its said air-vent produces the necessary draft for combustion, all substantially as illustrated and described.

2. In a stump burner, a casing forming a combustion chamber, said casing provided with an outlet for the products of combustion, and valvular means for regulating the vertical dimension of the combustion chamber and for controlling the outlet so as to concentrate the incoming air upon the remainder of the unburned stump.

1,171,825. LUBRICATOR. ROBERT WOOD, Brooklyn, N. Y., assignor to The Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 15, 1914. Serial No. 856,924. (Cl. 184—27.)



1. In a device of the kind described, a reciprocating plunger and means for actuating the same comprising a shaft, a cam mounted on the shaft, a fork secured to the shaft, a ratchet mounted on the shaft between the legs of the fork, said wheel being provided with ratchet teeth and with a peripheral groove, a pin passing through the fork and the wheel, and a pawl carried by the fork and engaging the teeth.

2. In a device of the kind described, a reciprocating plunger and means for actuating the same, comprising a shaft, cam means mounted upon the shaft, and optional means for operating the cam, one being rotary another oscillatory.

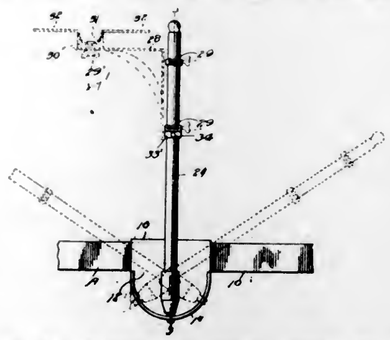
3. In a device of the kind described, a reciprocating plunger and means for actuating the same, comprising a shaft, cam means mounted upon the shaft, and optional means for operating the cam, one being constant, said constant means consisting of a pulley drive.

4. In a device of the kind described, a reciprocating plunger and means for actuating the same, comprising a shaft, cam means mounted upon the shaft, and optional means for operating the cam, one being constant and the other intermittent, and means for rendering said constant means inoperative when said intermittent means is operative.

5. In a device of the kind described, a reciprocating plunger and means for actuating the same comprising a shaft, a cam mounted thereon, a wheel mounted on the shaft, means for operating the wheel, and means for locking the wheel when desired to the wheel operating means.

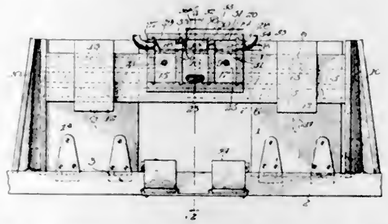
1,171,826. ADJUSTABLE STAND ATTACHMENT FOR BEDS. WILLIAM G. ABRAMSON, ROYAL J. KENNEDY, and EPHRAIM M. MCMILLAN, Oakland, Cal. Filed Apr. 14, 1914. Serial No. 831,791. (Cl. 45—82.)

In a device of the class described, the combination of a pair of spaced bearings provided with means for attachment to respective side rails of a bed, a shaft journaled in said bearings, an arcuate flange on one of said bearings disposed concentrically with respect to the axis of rotation of the shaft, said flange being provided with spaced openings, a tubular member secured to the end of the shaft adjacent the flange bearing, a locking rod carried by said tubular member and interchangeably engageable in the openings of the flange to lock the shaft against



rotation, and a supporting member carried by said member.

1,171,827. MECHANICAL MUSICAL INSTRUMENT. HARRY J. ANDERSON, Chicago, Ill., assignor to Newman Bros. Co., Chicago, Ill. Filed May 13, 1911. Serial No. 626,986. (Cl. 84—168.)



1. In an automatic piano player in combination, pumping bellows, storage bellows, a wind way rigidly attached to said pumping bellows to which said storage bellows are connected, a valve box or chest, connections leading from said box for note sounding and motor mechanism, said box being provided with a direct connection with said wind way, a second wind way provided with a governing pneumatic connecting one of said storage bellows with said box, a third wind way also provided with a governing pneumatic connecting another of said storage bellows with said box and valve means mounted in said box for connecting said first mentioned wind way with either the note striking or motor connection at the will of the operator.

2. In an automatic piano player in combination, a pumping bellows, a pair of storage bellows, a wind way connecting said pumping bellows with both of said storage bellows, a second wind way leading from one of said storage bellows and provided with a governing pneumatic, a third wind way leading from the other of said storage bellows also provided with a governing pneumatic, said second and third wind ways being in alinement, and a valve box to which said second and third wind ways are connected provided with means for controlling the air in said wind ways.

3. In a pneumatic piano player in combination, a feeder bellows, a pair of storage bellows, a wind way connecting said feeder bellows with both of said storage bellows, a valve box mounted intermediate of said storage bellows, a wind way provided with a governing pneumatic leading from each of said storage bellows to said valve box, and means carried by said box for controlling the air in said last mentioned wind ways.

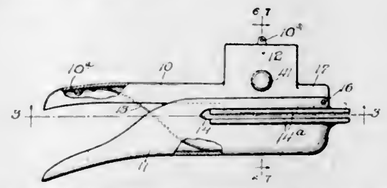
4. The combination of a pair of reservoir pneumatics, a built-up structure extending from one of said pneumatics to the other, said structure containing one or more unobstructed windways connecting said pneumatics

and containing also two windways of equal length separated from each other, but arranged in alinement, and connected one to each of said pneumatics, and governing or regulating pneumatics being connected to control said two last mentioned windways, said governing pneumatics being carried on the outer surface of said structure.

5. In an automatic piano player in combination, a pair of pumping bellows, a plurality of wind ways connecting said bellows and extending beyond said bellows, a pair of storage bellows connected to the ends of said wind ways, a pneumatically governed wind way leading from one of said storage bellows and a second pneumatically governed wind way leading from the other of said storage bellows, and pneumatic governors for the two last mentioned windways.

[Claims 6 to 10 not printed in the Gazette.]

1,171,828. CHECK-PROTECTOR. SIDNEY W. ANDERSEN, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,604. (Cl. 101—57.)



1. A device for protecting commercial and like paper, comprising two members pivotally connected together at one end and each having a handle portion at the opposite end thereof, whereby said members may be grasped and moved one toward the other, one of said members being provided adjacent its pivoted end with a serrated or like surface, and a rotatable disk mounted on the other of said members adjacent its pivoted end, said disk being arranged opposite to said serrated surface and provided with a plurality of circumferentially spaced embossing characters adapted to coöperate with said serrated surface and produce an impression upon the paper interposed between said members in the movement of one of said members toward the other.

2. A device for protecting commercial and like paper, comprising two members pivotally connected together at one end and each having a handle portion at the opposite end thereof, whereby said members may be grasped and moved one toward the other, each of said members being provided adjacent its pivoted end with a fixed embossing character, one of said members being additionally provided adjacent its pivoted end with a serrated or like surface, and a rotatable disk mounted on the other of said members adjacent its pivoted end, said disk being arranged opposite said serrated surface and provided with a plurality of circumferentially spaced embossing characters adapted to coöperate with said serrated surface and produce, in connection with said fixed embossing characters, an impression upon the paper interposed between said members in the movement of one of said members toward the other.

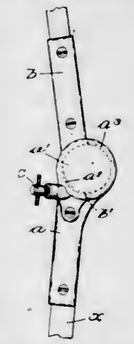
3. A device for protecting commercial and like paper, comprising two members pivotally connected together and adapted to be moved one toward the other, each of said members being provided with a fixed embossing character, one of said members being provided with a serrated or like surface, and the other of said members having mounted thereon a rotatable disk arranged opposite said serrated surface and provided with a plurality of circumferentially spaced embossing characters adapted to coöperate with said serrated surface and produce, in connection with said fixed embossing characters, an impression upon the paper interposed between said members in the movement of one of said members toward the other, and said members being additionally provided with coacting means adapted to serrate a portion of said paper beyond the impression produced by said embossing characters.

4. A device for protecting commercial and like paper, comprising two members pivotally connected together and adapted to be moved one toward the other, each of said members being provided with a fixed embossing character, one of said members being provided with a serrated or like surface, and the other of said members having mounted thereon a rotatable disk arranged opposite said serrated surface and provided with a plurality of circumferentially spaced embossing characters adapted to coöperate with said serrated surface and produce, in connection with said fixed embossing characters, an impression upon the paper interposed between said members in the movement of one of said members toward the other, and said members being additionally provided with opposed roughened or like surfaces adapted to serrate a portion of the paper beyond the impression produced by said embossing characters.

5. A device for protecting commercial and like paper, comprising two members pivotally connected together and adapted to be moved one toward the other, one of said members being provided with a serrated surface, and the other of said members having mounted thereon a rotatable disk arranged opposite said serrated surface and provided with a plurality of circumferentially spaced embossing characters adapted to coöperate with said serrated surface and produce an impression upon the paper interposed between said members, and an endwise movable locking member slidably mounted on the disk provided member and adapted to be moved by the other member into locking position and hold said disk in its operative position.

[Claim 6 not printed in the Gazette.]

1,171,829. LOCK-JOINT FOR AUTOMOBILE WINDSHIELDS. SAMUEL R. BAILEY, Amesbury, Mass. Filed Dec. 14, 1914. Serial No. 877,018. (Cl. 21—148.)



1. A lock joint comprising a fixed and movable member, said movable member having a trunnion rotatably mounted in the fixed member, and a locking screw threaded in the fixed member and obliquely movable with relation to the peripheral surface of the trunnion, into wedging engagement therewith, to lock the trunnion against rotation.

2. A lock joint comprising a fixed member, a movable member having a trunnion journaled therein, and a locking screw threaded in said fixed member in an axially tangential relation with the peripheral surface of the trunnion, said screw having an engaging face thereon disposed to be moved into wedging engagement with said peripheral surface.

3. A lock joint comprising a fixed and a movable member, said movable member having a trunnion journaled in the fixed member, a locking screw threaded in said fixed member in an approximately axially tangential relation with the peripheral surface of the trunnion and having a conical face at its end disposed to be moved into wedging engagement with said surface, to lock said trunnion against rotation.

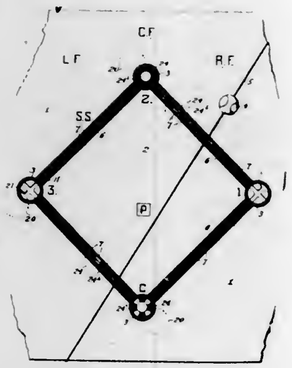
4. A lock joint comprising a fixed member having a circular cavity, a movable member having a trunnion

rotatably mounted in said cavity, and a locking screw threaded in said fixed member and disposed in an approximately axially tangential relation to the peripheral surface of the trunnion, said screw having an engaging face convergently arranged with relation to an adjacent portion of said peripheral surface, and movable into wedging engagement therewith, to lock the trunnion.

5. A lock joint comprising a movable member having a trunnion, a fixed member provided with a circular bearing chamber to receive said trunnion, and having a segmental recess leading from its bearing surface, to form converging bearing portions for the trunnion at the ends of said recess, and a locking device disposed to force said trunnion laterally between said bearing portions and wedge the same therebetween.

[Claims 6 and 7 not printed in the Gazette.]

1,171,830. BULLETIN-BOARD. JOHN WALLACE BAKER, Stamford, Conn., assignor to Mabel Crane Baker, Stamford, Conn. Filed Nov. 25, 1912. Serial No. 733,528. (Cl. 235—1.)



1. In a ball bulletin board, the combination of a wall having on the front surface thereof a ball field representation, a series of foot print representations arranged progressively and in close succession, said representations being normally invisible at the front of the board, and means movable between the respective foot print representations for bringing visibly to view at a distance in front of the board succeeding print representations of the series.

2. In a ball bulletin board, the combination of a wall having on the front surface thereof a ball field representation, a series of foot print representations arranged progressively and in close succession, said representations being normally invisible at the front of the board, and means for bringing visibly to view at the front of the board succeeding print representations of the series to indicate the continuous movement of a player between the fixed positions on the field, said representations and said means lying within the plane of the front surface of the board.

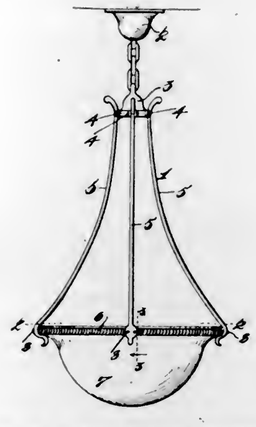
3. In a ball bulletin board, the combination of a surface having thereon a field representation, and a member to the rear of said surface and of contrasting color with respect to that of the field, said member being movable to indicate the continuous movement of the player from one point to another and visible at the front of the board.

4. In a bulletin board, the combination of a surface having thereon a field representation and a series of closely associated openings having the general outline of a foot, and means positioned to the rear of said surface and successively movable to said openings to show through said openings and indicate the progress of a player.

5. In a game bulletin, the combination of a surface having depicted thereon a field representation, a movable member at the rear of said surface, said member being of contrasting color relative to said surface, and successively visible and invisible at the front of said surface at a number of points about said field representation to progressively illustrate the progress of a factor in the game.

[Claims 6 to 25 not printed in the Gazette.]

1,171,831. ADJUSTABLE ELECTRIC FIXTURE. NATHAN I. BERGER, New York, N. Y. Filed June 5, 1915. Serial No. 32,295. (Cl. 240—117.)



1. An adjustable fixture, or the like, consisting of a frame, a plurality of members radially adjustably secured to said frame, and an adjustable yieldable rim carried by said frame arranged to retain globes of various diameters.

2. An adjustable fixture, or the like, consisting of a frame, a plurality of arms pivotally secured at one end thereof to said frame, and a yieldable rim secured to said arms at the free ends thereof.

3. An adjustable fixture, or the like, consisting of a frame, a plurality of arms pivotally secured at one end thereof to said frame, and a yieldable rim consisting of a coil spring carried by said arms at the free ends thereof, said spring being secured to said arms.

4. An adjustable fixture consisting of a permanently secured frame, a plurality of arms pivotally secured at one end thereof to said frame and arranged to be freely moved upon their pivotal points, and a continuous coil spring secured to said arms at their free ends, said springs being unsupported intermediate said arms and arranged to support a globe.

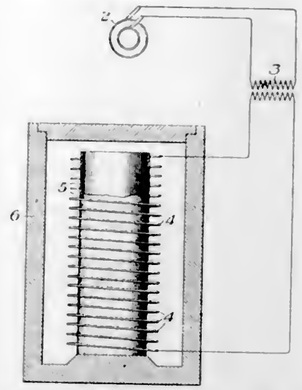
1,171,832. METHOD OF TREATING METALS. FREDERIC L. BISHOP, Pittsburgh, Pa. Filed Feb. 26, 1913. Serial No. 750,844. (Cl. 148—10.)

1. The method of treating solid metal to alter its molecular structure, consisting in temporarily subjecting it to the action of the magnetic field of an alternating electric current, and protecting the metal against oxidation during such treatment.

2. The method of treating solid metal to alter its molecular structure, consisting in heating it and at the same time subjecting it to the action of the magnetic field of an alternating current.

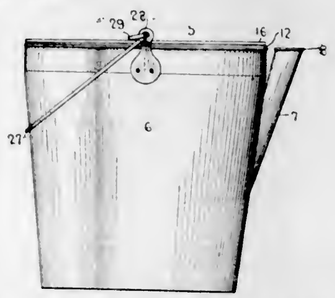
3. The method of treating solid metal to alter its molecular structure, consisting in heating it by means of induced electric currents set up therein and simultaneously subjecting it to the action of the magnetic field of an alternating current.

4. The method of treating solid metal to alter its molecular structure, consisting in temporarily subjecting it to the action of the magnetic field of an alternating current, and protecting the metal from the action of injurious gases during such treatment.



5. The method of treating solid metal to alter its molecular structure, consisting in temporarily subjecting it to the action of the magnetic field of an alternating electric current, and protecting the metal against heat losses during such treatment.

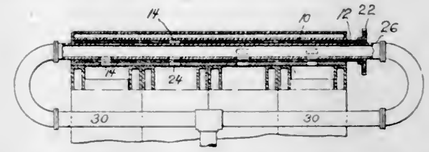
1,171,833. MILK-PAIL. HARRY SCHILLING BOYLE, North Platte, Nebr. Filed July 28, 1915. Serial No. 42,360. (Cl. 31—14.)



1. In a milk pail, the combination with a container, of a cover therefor having a milk-receiving opening and a screen across the same, a detachable strainer ring surrounding the opening beneath the cover, a bottom for said ring, strainer material in said ring on said bottom, said ring, bottom and strainer material being movable laterally to and from a position beneath the opening and screen, and means for detachably holding the ring, the bottom and the material in place beneath said opening and screen.

2. In a milk pail, the combination with a container, of a cover therefor comprising a depending conical member having a central milk-receiving opening, and a screen across the same, a detachable strainer ring surrounding the opening beneath the cover and screen, a bottom for said ring, strainer material in said ring on said bottom, crossed arms extending beneath the bottom and having upstanding portions located alongside the ring, one of said arms having its ends secured to the cover on opposite sides of the opening, and a pivotal connection between the central portions of the arms that permits the other arm to swing to a position alongside the secured arm and permit the ring, bottom, and strainer material to be slipped sidewise to and from a position on the fixed arm beneath the screen.

1,171,834. INTERNAL-COMBUSTION ENGINE. EDWARD S. BROWER, Ridgewood, N. J. Filed Apr. 2, 1912. Serial No. 688,060. (Cl. 123—59.)



1. In an internal combustion engine, the combination with a plurality of engine cylinders provided each with an intake port in the head thereof, of a relatively fixed supply tube extending through the heads of all the cylinders and provided with inlet ports registering with the intake ports of the individual cylinders, fuel supply connections to the opposite ends of the said supply tube, a rotary valve concentrically disposed with respect to the supply tube provided with valve ports therein to register with the inlet ports in the supply tube and the intake ports in the cylinders, and means for rotating the said valve in time with the functions of the different cylinders of the engine.

2. In an internal combustion engine, the combination with a plurality of engine cylinders provided each with an intake port in the head thereof, of a relatively fixed supply tube extending through the heads of all the cylinders and provided with inlet ports registering with the intake ports of the individual cylinders, a source of fuel supply, connections from said source of fuel supply to the opposite ends of the supply tube, and a rotary valve concentrically disposed with respect to the supply tube having valve ports therein to register with the inlet ports in the supply tube and the intake ports in the cylinders.

3. In an internal combustion engine, the combination with a plurality of alined engine cylinders each provided with an intake port in the head thereof, a substantially cylindrical valve chamber extending longitudinally through the heads of the cylinders and into which the various intake ports open, a relatively fixed supply tube extending entirely through said valve chamber and disposed concentrically therein, the said supply tube having ports registering with the intake ports of the cylinders, a source of fuel supply, connections from said source of fuel supply to the opposite ends of the supply tube, and a rotary valve journaled to rotate within the substantially cylindrical valve chamber and surrounding the relatively fixed supply tube, the said valve having ports to register with the intake ports of the cylinders and the inlet ports of the supply tube.

4. In an internal combustion engine, a plurality of alined cylinders having substantially cylindrical inlet and exhaust valve chambers extending longitudinally through the heads of all the cylinders, intake and exhaust ports opening from the individual cylinders into the inlet and exhaust valve chambers respectively, a ported exhaust valve rotatably mounted in the exhaust valve chamber, a relatively fixed supply tube extending through the inlet valve chamber and disposed concentrically therein, said supply tube having ports in line with the intake ports in the respective cylinders, a ported inlet valve rotatably journaled in the inlet valve chamber and surrounding the supply tube therein, a source of fuel supply, connections from said source of fuel supply to both ends of the supply tube, and gearing for rotating the exhaust valve and inlet valve in time with the different functions of the engine.

5. In an internal combustion engine, the combination with a plurality of alined engine cylinders having substantially cylindrical inlet and exhaust valve chambers extending longitudinally through the heads of all the cylinders, and intake and exhaust ports opening from the individual cylinders into the inlet and exhaust valve chambers respectively, of a relatively fixed ported supply tube extending through the inlet valve chamber and disposed concentrically therein, a source of fuel supply, con-

nections from said source of fuel supply to the opposite ends of the supply tube, a rotary ported inlet valve journaled in the inlet valve chamber and surrounding the supply tube therein, a ported exhaust tube disposed concentrically within the exhaust valve chamber, a substantially cylindrical ported exhaust valve rotatably mounted in the exhaust valve chamber and surrounding the exhaust tube therein, and gearing for rotating the exhaust and inlet valves in time to accord with the different functions of the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,171,835. WIND-SHIELD. CLARENCE P. BYRNES, Sewickley, Pa. Filed Apr. 18, 1913. Serial No. 761,968. (Cl. 21—148.)



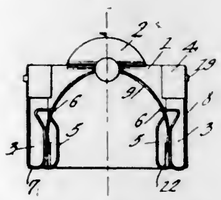
1. A complete wind shield having a plurality of separate panels, the upper panel being transparent and arranged so that the driver's line of vision passes through it when the panels are in closed position, said wind shield being adapted to protect the driver against rain when in said vertical position, at least one of said panels being movable relative to the other to allow passage of an air current between their adjacent portions, in combination with an additional rain shield panel of rigid translucent material arranged to be supported in an outwardly and downwardly inclined position in front of the upper wind shield panel with its lower outer free edge positioned above the lower edge of the upper panel to allow the driver's line of vision to pass through the upper wind shield panel below the edge of the rain panel, the rain panel acting in this position to protect from rain or snow that portion of the wind shield panel through which the line of vision passes; substantially as described.

2. A complete wind shield having a plurality of separate panels, said panels when in vertical position constituting a substantial closure for the front for the driver to keep out of the rain, etc., the upper panel being transparent and located so that the driver's line of vision passes through it, said upper transparent panel being provided with upper pivots to allow its lower edge to swing apart from the next panel to admit air between them, in combination with an additional rain shield panel of rigid translucent material arranged to be supported in an outwardly and downwardly inclined position in front of the swinging wind shield panel with its lower outer free edge positioned above the lower edge of the swinging wind shield panel to allow the driver's line of vision to pass through the swinging wind shield panel below the edge of the rain panel, the rain panel acting in this position to protect from rain or snow that portion of the swinging panel through which the line of vision passes; substantially as described.

3. A complete wind shield comprising a lower panel, and an upper transparent panel through which the line of vision passes, at least one of said panels being movable relatively to the other to allow passage of an air current between their adjacent portions, in combination with an additional rain shield panel of rigid material arranged to be supported in an outwardly and downwardly inclined position in front of the upper wind shield panel with its lower outer free edge positioned above the lower edge of the upper panel to allow the driver's line of vision to pass through the upper wind shield panel below the edge of the rain panel, and means for adjusting the rain shield panel to different angular positions relative to the upper wind shield panel, the rain panel acting in this position to protect from rain or snow that portion of the wind shield panel through which the line of vision passes; substantially as described.

4. A complete wind shield having a plurality of panels, the uppermost panel being transparent and arranged so that the line of vision passes through it, said upper transparent panel being pivoted to allow its lower portion to swing apart from the next panel and admit air between them, these parts when in vertical position closing in the front of the machine, in combination with an additional angular rain shield panel of rigid translucent material arranged to be supported in an outwardly and downwardly inclined position in front of the swinging wind shield panel with its lower outer free edge positioned above the lower edge of the swinging wind shield panel to allow the driver's line of vision to pass through the swinging wind shield panel below the edge of the rain panel, and means for adjusting the rain panel to different angular positions relative to the upper wind shield panel, the rain shield panel when in operative position acting to protect from rain or snow that portion of the swinging panel through which the line of vision passes; substantially as described.

1,171,836. LOSS-PREVENTING DEVICE. WILLIAM N. CAMPBELL, Pendleton, Oreg. Filed Aug. 30, 1915. Serial No. 48,088. (Cl. 24—3.)



1. In a device of the class described, a body; a pair of auxiliary arched clips projecting upwardly along the body adjacent the lateral edges of the body and comprising side arms; and an arched main clip, the crown of which lies between the auxiliary clips, the main clip comprising arms assembled with the body and outwardly arched with respect to the body to lie between the arms of the auxiliary clips and to coöperate with the auxiliary clips in retaining an article in the auxiliary clips.

2. In a device of the class described, a body comprising forwardly extended end walls, the upper ends of which are equipped with tubular sockets; and arched clips located below the sockets, the clips comprising arms which are upwardly extended along the outer faces of the end walls and are secured thereto to form reinforcements for the end walls.

3. In a device of the class described, a body; an arched clip lying along one face of the body and comprising arms extended along the opposite face of the body and secured thereto, the arms being bent upon themselves to form eyes; a rod engaged with the eyes; and means for securing the rod to the body.

4. In a device of the class described, a body provided at its upper edge with a rearwardly extended deflecting lip, an arched main clip assembled with the body and located below the lip; a body being provided at its upper edge with tubular sockets located upon opposite sides of the lip; and auxiliary clips assembled with the body and located below the sockets.

5. In a device of the class described, a body; an arched clip coacting with one face of the body, the arms of the clip being extended across one edge of the body and being prolonged to form extensions secured to the other face of the body; a resilient rod, the ends of which bear upon the extensions; and means for securing the intermediate portion of the rod to said other face of the body.

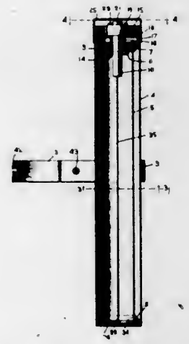
1,171,837. PARACHUTE. LEVI CEEDER, Chicago, Ill. Filed May 7, 1915. Serial No. 26,511. (Cl. 244—21.)



1. A parachute arranged when folded to be secured to the wearer and comprising a sheet, a waist encircling belt for the wearer, cords connecting said sheet and belt at corresponding intervals around their respective edges, a detachable chest encircling belt arranged to hold the major portion of the sheet when folded against the shoulders of the wearer, and means for detachably securing a portion of the periphery of the sheet when folded to the wearer's feet.

2. A parachute arranged when folded to be secured to the wearer and comprising a flat sheet folded when not in use on parallel lines into a generally rectangular pack, a waist encircling belt for the wearer, cords connecting said sheet and belt at corresponding intervals around their respective edges, the major portion of said rectangular pack being doubled over to lie against the shoulders of the wearer, a detachable belt encircling the doubled over portion of the pack and the chest of the wearer, and means for detachably securing the free end of the pack to the wearer's feet.

1,171,838. TELEPHONE-INDEX. FREDERICK W. COLBY, Boston, Mass. Filed Apr. 19, 1915. Serial No. 22,424. (Cl. 40—1.)



1. In a device of the class described, a cylindrical casing having a longitudinal slot, a cap, a spring actuated spool having a head rotatably secured to said cap, an annular guiding ring detachably secured to said spool at its opposite end, the spool having a longitudinal slot extending from said end to a point adjacent to the head thereof, and a strip attached to said spool and extending through the slot in the casing.

2. In a device of the class described, a cylindrical casing having a longitudinal slot, a cap detachably secured to one end of said casing, means to prevent relative rotation between the cap and the casing, a spool having a head rotatably secured to said cap, a helical spring secured to said cap and to said head, said spool being provided with a slot extending longitudinally thereof from a point adjacent said head to the opposite end, an annular guiding ring detachably secured to the end of said spool and adapted to maintain concentric rotation between said spool and said casing, a strip adapted to be secured to the slot in the spool and to project from the slot in the casing.

3. In a device of the class described, a rotatable bearing, an axial shaft therefor, a supporting member having a cross-head and a casing forming therewith a chamber, a spring inclosed in said casing attached at one end to the shaft and at the other to said casing, a collar on said shaft within the chamber having a spiral, peripheral portion terminating tangentially of said shaft adjacent a slot in said shaft whereby a substantially arcuate guideway is formed for directing the end portion of the spring to the shaft slot.

4. In a device of the class described, a cylindrical casing having a longitudinal slot, a cap for said casing, a spring-actuated spool having one end rotatably secured to said cap and free at its opposite end, means for maintaining said spool concentrically of said casing, means for detachably securing a strip of flexible material to said spool, and means for withdrawing the strip from the casing against the tension of the spring.

5. In a device of the class described, a cylindrical casing, a cap therefor, having a member provided with a central bearing, a spool having a shaft extending through said bearing, a collar surrounding said shaft and cut away to provide a spiral bearing surface terminating tangentially to said shaft, said shaft having a slot therein, a spring surrounding said collar and having its inner spiral bearing upon the spiral portion of said collar and its end terminating in said slot in the shaft, and means for securing the collar on the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,171,839. SHOCK-ABSORBING SPRING SUSPENSION DEVICE. JOHN J. CONVERY, Akron, Ohio. Filed May 11, 1914. Serial No. 837,672. (Cl. 21—101.)



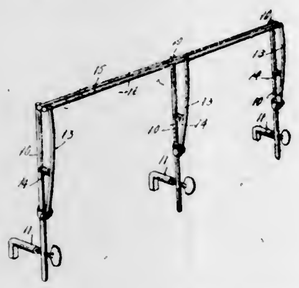
1. In a shock absorbing spring suspension mechanism, the combination of the supported member, and the underlying supporting member, of a lever pivoted to the latter, a compression coil spring which opposes the movement of said lever and supported member away from each other, a pair of tug links which respectively connect the lower end of said spring with the supported member, and the upper end of said spring with the end of said lever, the axis of said spring being inclined from its lower end upward and toward the pivot of the lever, and a compression coil spring interposed between the supported member and the lever at a point thereon intermediate of the pivot of the lever and the free end thereof which latter compression coil spring acts to oppose the movement of said lever and supported member toward one another.

2. In a shock absorbing spring suspension device for vehicles, the combination with an axle and the body frame thereover, of a device connected with an axle and provided with oppositely extended ears, two levers pivoted to said ears and extending in opposite directions therefrom, and two springs associated with each lever, to wit: one coil spring, and means connecting the same with the

body member and with the lever near the end thereof, and one coil spring under compression located between a rigid part of the body and said lever at a point intermediate of the pivot of the lever and the point at which the other spring is connected thereto,—the former spring being arranged to yieldingly oppose downward movement of the lever relatively to the body frame.

3. In a shock absorbing spring suspension mechanism for vehicles, the combination with an axle, and body frame thereover, of a device adapted to be secured to an axle and having two oppositely extended ears, and a vertically extended stem, a bracket plate adapted to be secured to the body frame and having three flanges, one having a hole through which said stem extends loosely, two levers respectively pivoted to said ears and extending therefrom in opposite but substantially horizontal directions, two compression coil springs interposed respectively between said levers and flanges on said bracket plate, and two other springs, one associated with each lever, and two tug links associated with each of the last named springs, one of said tug links being connected with a flange of said bracket plate, and the other with the associated lever near the end thereof.

1,171,840. BEDCLOTHES-HOLDER. ALFONZO D'APICE, Chicago Heights, Ill. Filed Feb. 2, 1915. Serial No. 5,731. (Cl. 24—81.)



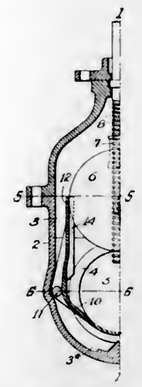
1. A bed clothes holder comprising a plurality of stationary members adapted to be detachably connected to the bed rails, a plurality of movable members, longitudinally extending bars secured respectively to the upper ends of said movable and stationary members and springs disposed between the stationary and movable members for tensioning the last mentioned members and their longitudinally extending bar toward the other of said members and their bar.

2. A bed clothes holder comprising a plurality of vertical members, bed rail engaging clamps carried by the lower ends of the vertical members, upwardly extending members pivotally mounted on the said vertical members, longitudinally extending bars secured to the upper ends of the vertical and upwardly extending members and springs disposed between the said members for tensioning one of the longitudinally extending bars in the direction of the other of said bars to clamp the bed clothes therebetween.

1,171,841. GATE-VALVE. FREDERICK H. DECHANT, Reading, and WILLIAM R. ROHRBACH, Sunbury, Pa. Filed Nov. 28, 1914. Serial No. 874,381. (Cl. 137—5.)

1. A stop valve having a casing with a valve chamber and a communicating flow passage-way, a gate valve, means for reversely moving the latter to open or close said passage-way, and a false-bottom shutter pivotally mounted in said chamber and arranged to be positively swung by operation of the valve.

2. A stop valve having a casing with a valve chamber and a communicating flow passage-way, a gate valve, means for reversely moving the latter to open or close said passage-way, and a pair of false-bottom shutters pivotally mounted in said chamber and arranged to be positively swung in reverse directions by operation of the valve.

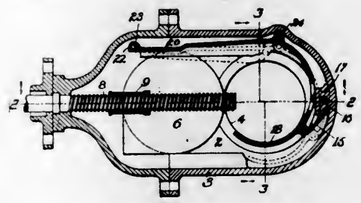


3. A stop valve having a casing with a valve chamber and a communicating flow passage-way, a gate valve, means for reversely moving the latter to open or close said passage-way, and a pair of false-bottom shutters pivotally mounted in said chamber and provided with valve-engaging portions whereby they are positively swung in reverse directions by operation of the valve.

4. A stop valve having a casing with a valve chamber and a communicating flow passage-way a gate valve, means for raising and lowering the latter to open or close said passage-way, and a pair of false-bottom shutters separately pivoted within said chamber and provided with upward extensions operatively engageable by the reciprocating valve.

5. A stop valve having a casing with a valve chamber and a communicating flow passage-way, a gate valve, means for raising and lowering the latter to open or close said passage-way, and a pair of valve-operated false-bottom shutters separately pivoted within said chamber and provided with upward extensions having guideways for the reciprocating valves.

1,171,842. HORIZONTAL GATE-VALVE. FREDERICK H. DECHANT, Reading, and WILLIAM R. ROHRBACH, Sunbury, Pa. Filed Oct. 15, 1915. Serial No. 55,932. (Cl. 137—5.)



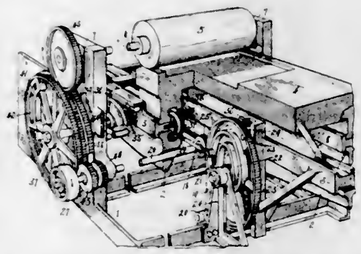
1. A horizontal gate valve having a casing with a valve chamber and a communicating flow passage-way, a reciprocating valve in said chamber, a false-bottom shutter pivotally mounted at the end of said chamber, and a valve-operated horizontal lever pivotally connected to said shutter.

2. A horizontal gate valve having a casing with a valve chamber and a communicating flow passage-way, a reciprocating valve in said chamber, a false-bottom shutter pivotally mounted at the end of said chamber, and a horizontal shutter-opening lever arranged to be positively actuated by the opening movement of the valve.

3. A horizontal gate valve having a casing with a valve chamber and a communicating flow passage-way, a reciprocating valve in said chamber, a false-bottom shutter pivotally mounted at the end of said chamber, and a horizontal shutter-opening lever; said lever being positively actuated by movement of the valve in one direction so as to position the shutter for positive operation by the reverse movement of the valve.

4. A horizontal gate valve having a casing with a valve chamber and a communicating flow passage-way, a reciprocating valve in said chamber, a false-bottom shutter pivotally mounted at the one end of said chamber, and a pivoted horizontal lever supported upon the reciprocating valve, and a link pivotally connected to said lever and the shutter.

1,171,843. BED AND CYLINDER DRIVE FOR PRINTING-PRESSES. MICHAEL A. DROITCOUR, Delphos, Ohio. Filed Jan. 18, 1915. Serial No. 2,964. (Cl. 101—158.)



1. In combination, a reciprocatory bed, a rotatable cylinder, means for imparting reciprocatory movements to the bed, means for intermittently driving the cylinder, and means independent of the bed and periodically operable through a portion of said cylinder driving means to drive the cylinder from said bed driving means synchronously with the movement of the bed.

2. In combination, drive means, a reciprocatory bed, a rotatable cylinder, means actuated by said drive means for reciprocating said bed, means independent of the bed and operable to periodically connect said bed driving means with said cylinder to cause the cylinder to rotate at a speed which is synchronous to the movement of the bed during a predetermined portion of its movement, and means operable in conjunction with a part of said cylinder driving means to drive the cylinder when not being driven from the bed driving means.

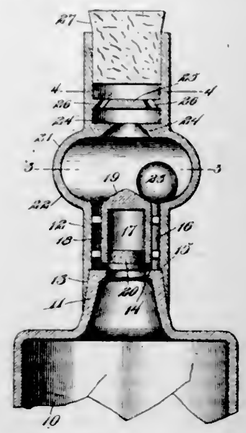
3. In combination, a reciprocatory bed, a rotatable cylinder, means for reciprocating said bed, means operable by said bed reciprocating means to periodically drive said cylinder at a speed which is synchronous with a portion of the movement of said bed, said cylinder driving means having in part a pair of coacting gears, and means operable to drive said coacting gears to rotate the cylinder when said cylinder driving means is not being driven by said bed driving means.

4. In combination, drive means, a reciprocatory bed, a rotatable cylinder, means actuated by said drive means for driving said bed, a shaft, geared connection between said shaft and cylinder, and separate means alternately operable one to drive said shaft from said bed driving means and the other to drive said shaft from said first mentioned drive means.

5. In combination, a reciprocatory bed, a rotatable cylinder, drive means for said bed, means for driving said cylinder at one speed during a portion of a cycle of operations, and means independent of the bed operable in conjunction with a part of said cylinder driving means and actuated by said bed driving means for driving the cylinder synchronously with the bed during a portion of the movement of the latter and when said first mentioned cylinder driving means is disconnected.

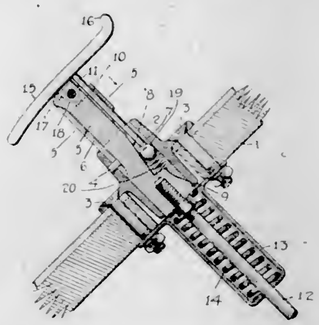
[Claims 6 to 39 not printed in the Gazette.]

1,171,844. NON-REFILLABLE BOTTLE. LOUIS DUROCHER, Watervliet, N. Y., assignor of one-half to Fred Turner, Troy, N. Y. Filed July 3, 1914. Serial No. 848,868. (Cl. 215—62.)



In a non-refillable bottle, a body, a tapering neck upstanding therefrom and provided with an inwardly extending flange, a hood engaging said neck and formed with a centrally arranged annular bulged portion, a substantially cylindrical valve slidably mounted in the hood and having one end open and the other end closed and tapering, a cork stopper inserted in the open end of the valve and adapted to seat on said flange and a ball cooperating with the walls of the bulged portion and the tapering end of the valve for limiting the movement of the latter within said hood.

1,171,845. FOOT-PEDAL CONTROL. JAMES G. HEASLET, Detroit, Mich., assignor to The Studebaker Corporation, a Corporation of New Jersey. Filed Sept. 4, 1915. Serial No. 48,945. (Cl. 74—81.)



1. A foot pedal throttle control embodying, in combination, a pedal mounted to be operated by foot pressure, and to control a throttle operating member, means to normally retain the pedal in such position as to maintain the throttle operating member in throttle-closing position, means for automatically locking the pedal against foot pressure, and means operated by foot movement to control said locking means.

2. A foot pedal throttle control embodying a movable member mounted to be operated by foot pressure for the purpose of controlling a throttle operating member, means for normally maintaining the throttle operating mechanism in throttle-closing position as opposed to foot

pressure, means for automatically locking the movable member against foot pressure, and means operable by foot movement to control said locking means.

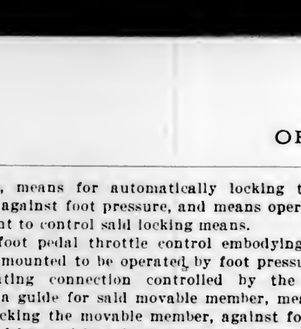
3. A foot pedal throttle control embodying a movable member mounted to be operated by foot pressure, a throttle-operating connection controlled by the movements thereof, a guide for said movable member, means for normally locking the movable member, against foot pressure, in any of its positions in the guide, and means, operable by foot movement, to control said locking means.

4. A foot pedal throttle control embodying a movable member mounted to be operated by foot pressure, a throttle-operating connection controlled by the movements thereof, a guide for said movable member, a locking member, means normally impelling the locking member into its locked position to preclude the operation of the movable member by foot pressure, and means operable by foot movement to release said locking member.

5. A foot pedal throttle control embodying a movable member mounted to be operated by foot pressure and provided with a surface inclined to the direction of travel of said member, a throttle-operating connection coöperating with the movable member and controlled by the movements thereof, a guide for said movable member, a spring actuated locking member normally in engagement with the inclined surface of the movable member for locking the latter against movement by foot pressure, and means operable by foot movement to depress the locking member against the tension of its spring, thereby allowing the movable member to be moved by foot pressure.

[Claims 6 to 9 not printed in the Gazette.]

1,171,846. TRANSMISSION MECHANISM FOR AUTOMOBILES. ROBERT S. HEEBNER, JOHN B. FELVER, and RAYMOND DRESHER, Lansdale, Pa., assignors to The Heebner-Felver Motor Co., Lansdale, Pa., a Copartnership composed of Robert S. Heebner and John B. Felver. Filed June 29, 1915. Serial No. 36,940. (Cl. 74—58.)



1. The combination of a casing, a change speed mechanism including two gear wheels slidable into and out of operative positions, a lever mounted on said casing and having a bifurcated end, means operated by one arm of said bifurcated end for moving one of said gear wheels, and means operated by the other arm of said bifurcated end for moving the other of said gear wheels.

2. The combination of a casing, a change speed mechanism having a lower shaft and an upper shaft and cooperating gearing between said shafts including two gear wheels slidable on said lower shaft into and out of operative positions, a lever mounted on said casing above said upper shaft and having a bifurcated lower end embracing said upper shaft, means operated by one arm of said bifurcated end for moving one of said gear wheels, and means operated by the other arm of said bifurcated end for moving the other of said gear wheels.

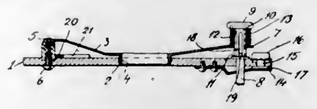
3. The combination of a casing, a change speed mechanism including a shaft and two gear wheels thereon and two shifting devices operatively connected to said gear wheels and movable independently of each other from a neutral position into operative positions, a lever mounted on said casing to move forwardly and backwardly from a neutral position and adapted to move said devices, said lever being movable laterally into and from operative relation to the respective shifting devices of said gear wheels and being moved out of operative relation to one device while being moved into operative relation to the other device, and a guard fixed to the casing and preventing lateral movement of said lever when out of its said neutral position.

4. The combination of a casing, a change speed mechanism having a lower shaft and an upper shaft and cooperating gearing between said shafts including two gear wheels slidable on said lower shaft and two shifting devices operatively connected to said gear wheels and movable independently of each other from a neutral position into operative positions, a lever mounted on said casing above said upper shaft to move laterally and forwardly and backwardly from a neutral position and having a bifurcated lower end embracing said upper shaft and adapted to move said devices, the two arms of said bifurcated end being movable into and from operative relation to the respective shifting devices of said gear wheels when said lever is moved laterally, one arm being moved into operative relation to one shifting device while the other arm is being moved out of operative relation to the other shifting device, and means preventing lateral movement of said lever when out of its said neutral position.

5. The combination of a casing, a change speed mechanism having a lower shaft and an upper shaft and coöperating gearing between said shafts including two gear wheels slidable on said lower shaft and two shifting devices operatively connected to said gear wheels and movable independently of each other from a neutral position into operative positions, a lever mounted on said casing above said upper shaft to move laterally and forwardly and backwardly from a neutral position and having a bifurcated lower end embracing said upper shaft and adapted to move said devices, the two arms of said bifurcated end being movable into and from operative relation to the respective shifting devices of said gear wheels when said lever is moved laterally, one arm being moved into operative relation to one shifting device while the other arm is being moved out of operative relation to the other shifting device, and a guard fixed to the casing and preventing lateral movement of said lever when out of its said neutral position.

[Claim 6 not printed in the Gazette.]

1,171,847. SPANNING-FRAME. KARL F. JENSEN, South River, N. J., assignor to Herrmann Aukam & Co., New York, N. Y., a Corporation of New York. Filed June 8, 1914, Serial No. 843,897. Renewed Aug. 4, 1915. Serial No. 43,708. (Cl. 112—7.)



1. A spanning frame comprising a support having in it one or more spanning apertures, in combination with one or more spanning members, each such member having an annular flange adapted to enter one of said spanning apertures, and to clamp fabric between it and the sides of the corresponding spanning aperture, and means for securing the said spanning members to said support on opposite sides of the corresponding spanning apertures.

2. A spanning frame comprising a support having in it one or more spanning apertures, in combination with one or more resilient spanning members, each such member having an annular flange adapted to enter one of said spanning apertures, and to clamp fabric between it and the sides of the corresponding spanning aperture, and means for securing the said spanning members to said support on opposite sides of the corresponding spanning apertures.

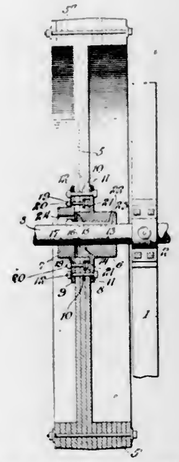
3. A spanning frame comprising a support having in it one or more spanning apertures, in combination with one or more spanning members, each such member having an annular flange adapted to enter one of said spanning apertures, and to clamp fabric between it and the sides of the corresponding spanning aperture, each such spanning member hinged to said support on one side of the corresponding spanning aperture, and means for securing the said spanning members to said support on the opposite side of the corresponding spanning apertures.

4. A spanning frame comprising a support having in it one or more spanning apertures, in combination with one or more resilient spanning members, each such member having an annular flange adapted to enter one of said spanning apertures, and to clamp fabric between it and the sides of the corresponding spanning aperture, each such spanning member hinged to said support on one side of the corresponding spanning aperture, and means for securing the said spanning members to said support on the opposite side of the corresponding spanning apertures.

5. A spanning frame comprising a support having in it one or more spanning apertures, in combination with one or more spanning members, each such member having an annular flange adapted to enter one of said spanning apertures, and to clamp fabric between it and the sides of the corresponding spanning aperture, means for securing each said spanning member to said support on one side of the corresponding spanning aperture, and a friction clamp for securing each such spanning member to said support on the other side of the corresponding spanning aperture.

[Claims 6 to 16 not printed in the Gazette.]

1,171,848. DEMOUNTABLE BAND-WHEEL. HARRY F. JOHNSTON, Beaver Falls, Pa., assignor to Keystone Driller Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed Aug. 24, 1915. Serial No. 47,119. (Cl. 64—17.)



1. A band wheel structure for heavy service, comprising a band wheel having a hub divided into two axially separable sections with one section adapted to be permanently fastened to the shaft carrying the band wheel and the other section permanently fastened to the band wheel with the sections provided with intermeshing axially extended lugs, and a removable fastening means for holding the hub sections together.

2. A band wheel structure comprising a band wheel having an interior web extending from the hub portion to the rim portion of the wheel, a hub section permanently fast to one face of the band wheel web and provided on the band wheel side with axially extended circumferentially spaced lugs, another hub section adapted to be permanently secured to the shaft upon which the wheel is mounted and provided with axially extended lugs positioned to intermesh with those of the other hub section, and fastening devices traversing both hub sections and the intervening web of the band wheel.

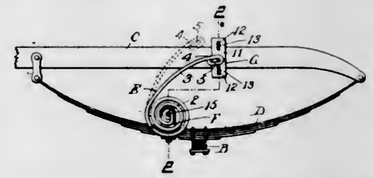
3. A band wheel provided with a divided hub consisting of two flanged sections with the flanges on opposite sides of the hub portion of the band wheel, with one section of the hub permanently fastened to the band wheel and the other section adapted to be permanently fastened to a shaft upon which the band wheel is mounted, and removable fastening devices traversing the flanges of the hub sections and the intervening portion of the band wheel, said hub sections having intermeshing projections from those faces of the flanged portions of the hub sections facing each other in the assembled wheel.

4. A band wheel for heavy work provided with a rim and interior web extending to the hub portion of the wheel, and a divided hub consisting of two sections each having a radial flange, with the flanges adapted to engage opposite sides of the web of the wheel, and the hub sections being provided with intermeshing axially extended lugs on the facing portions in the assembled wheel, one hub section being adapted to be permanently fastened to a shaft and the other hub section being permanently fastened to the wheel, and removable means for holding said hub sections in clamping relation to the web of the wheel.

5. A wheel provided with a two part hub with the two parts engaging the wheel from opposite sides, removable means for holding the two parts of the hub together, said two parts of the hub having an interior circular series of intermeshing lugs alternating with respect to the hub parts, one hub part being permanently fast to the wheel and the other hub part being adapted to be permanently secured to a shaft designed to carry the wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,171,849. SUPPLEMENTAL SPRING. JAMES K. KISSINGER, Reading, Pa. Filed Apr. 2, 1915. Serial No. 18,738. (Cl. 267—17.)



In combination with a vehicle axle and a spring-supported body thereon, a supplemental spring formed of a helically coiled bar with an extended outer-end portion, and end supports for said spring carried respectively by said body and axle, the coiled end of said spring having an internally toothed opening, and one of said supports being correspondingly toothed exteriorly to adjustably engage the same.

1,171,850. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 7, 1908, Serial No. 466,319. Renewed Oct. 22, 1910. Serial No. 588,541. (Cl. 173—343.)



1. The combination with an electric switch mechanism, comprising a pair of stationary contacts, and a movable contact for electrically connecting said stationary contacts, of a casing inclosing said switch mechanism, and

means extending through said casing for actuating said movable contact, said stationary contacts having integral extensions projecting through said casing and arranged to be inserted in a complementary receptacle.

2. The combination with an electric switch mechanism, comprising a pair of substantially parallel stationary contacts, and a movable contact for electrically connecting said stationary contacts, of a casing inclosing said switch mechanism formed in two parts, said stationary contacts having extensions passing through both parts of said casing for securing the same together, said stationary contacts being also provided with portions arranged to engage with portions of a complementary receptacle, and means extending through said casing for actuating said movable contact.

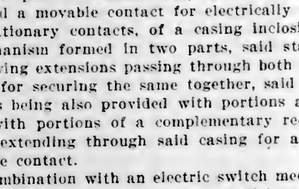
3. The combination with an electric switch mechanism, comprising a pair of substantially parallel stationary contacts, and a movable contact for electrically connecting said stationary contacts, of a casing inclosing said switch mechanism formed in two parts, said stationary contacts having extensions passing through both parts of said casing for securing the same together, and other extensions passing through said casing and arranged to be inserted in a complementary receptacle, and means extending through said casing for actuating said movable contact.

4. The combination with a switch mechanism, comprising a pair of stationary contacts and a movable contact for electrically connecting said stationary contacts, a casing for said switch mechanism, said stationary contacts having extensions projecting through said casing, a complementary plug member having apertures therein for receiving said extensions, said plug member being provided with contact fingers adapted to engage and frictionally hold said extensions.

5. The combination with a switch mechanism, comprising a pair of stationary contacts and a movable contact for electrically connecting said stationary contacts, a casing for said switch mechanism, said stationary contacts having extensions projecting through said casing, a complementary plug member having apertures therein for receiving said extensions, said plug member being provided with yielding contact fingers adapted to engage with said extensions, said fingers and said extensions being arranged to interlock.

[Claims 6 to 15 not printed in the Gazette.]

1,171,851. ATTACHMENT-PLUG FOR ELECTRICAL CONDUCTORS. CHARLES J. KLEIN, Milwaukee, Wis. Filed Jan. 13, 1913. Serial No. 741,773. (Cl. 173—359.)



1. In combination, a longitudinally divided base, a conducting shell threading thereon and holding the parts thereof together, and releasable means to automatically and positively lock said shell against reverse rotation after threading on said base.

2. An attachment plug comprising a two-part base, a pair of terminals carried between the parts of said base and protruding beyond the same, a conducting shell threaded upon both parts of said base and holding the same together, and resilient means interposed between one of said terminals and said shell for automatically locking the latter against reverse rotation.

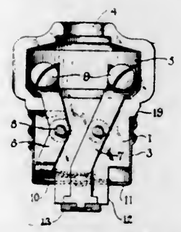
3. An attachment plug comprising a longitudinally divided base having a conductor entrance at one end, a pair of conducting members carried between the parts of said base and having terminal portions adjacent said conductor entrance, a conducting shell inclosing a portion of said base and holding the parts thereof together, and means interposed between one of said conducting members and said shell for automatically and releasably locking the latter to said base.

4. The combination with a two-part insulating base, of a terminal member carried thereby, a rotatable conducting shell inclosing a portion of said base and holding the parts thereof together, and means comprising a resilient shoulder on said shell and a coöperating shoulder on said base to releasably lock said rotatable member against reverse rotation.

5. An attachment plug comprising a substantially cylindrical base, a conducting shell rotatable upon one end of the same, contacts carried by said base and having terminal members within the opposite end of the same, and a resilient contact member carried upon said shell and electrically connected in a predetermined position with one of said contact members.

[Claims 6 to 9 not printed in the Gazette.]

1,171,852. ATTACHMENT-PLUG. CHARLES J. KLEIN, Milwaukee, Wis. Filed Oct. 28, 1913. Serial No. 797,874. (Cl. 173—359.)



1. In combination, a longitudinally divided base, a threaded conducting shell rotatably mounted thereon to hold the parts of said base together, said shell having a plurality of circumferential shoulders, and a resilient member carried by said base having a projection thereon adapted to engage a shoulder of said shell in any one of a plurality of rotary positions of the latter to automatically lock the same against reverse rotation.

2. An attachment plug comprising a base and a conducting shell rotatably threaded thereon, said shell having an inturned marginal portion provided with a plurality of circumferential shoulders thereon, a member carried by said base having a yieldable portion adapted to engage any of said shoulders to lock said shell against reverse rotation, and a resilient terminal member carried by said base for establishing electrical connection with said shell independently of said first mentioned member.

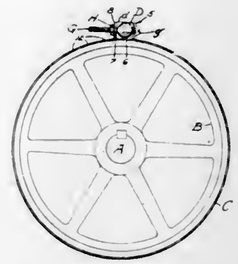
3. An attachment plug comprising a base and a conducting shell mounted thereon having an inturned marginal portion provided with a plurality of shoulders, a resilient contact member secured to said base and electrically engaging said marginal portion of said shell, and a resilient member superposed on said contact member having a shoulder adapted to successively engage said first mentioned shoulders to lock said shell against reverse rotation.

4. In electrical contact devices, in combination, a rotatable conducting member provided with a series of shoulders concentrically located with respect to its axis, a resilient contact member adapted to press upon said conducting member and a resilient locking member superposed on said contact member having a shoulder adapted to successively engage said first mentioned shoulders as said conducting member is rotated to lock the latter against reverse rotation.

5. In combination, a base, a conducting shell threaded thereon, a terminal member secured to said base and establishing electrical connection with said shell and a resilient member adjacent on said terminal member and having a part to engage and lock said shell against rotation.

[Claim 6 not printed in the Gazette.]

1,171,853. HANDLE-SUPPORTING ATTACHMENT FOR WHEELS. EDWARD KOHL, Cleveland, Ohio. Filed July 9, 1915. Serial No. 38,995. (Cl. 74—33.)



1. The combination of a handle and a supporting attachment therefor comprising a strap adapted to extend circumferentially of and be clamped to the peripheral surface of a wheel, a handle adjacent the end-portions of said strap, and means whereby the handle and said end-portions of the strap are secured together and the strap clamped to the aforesaid surface.

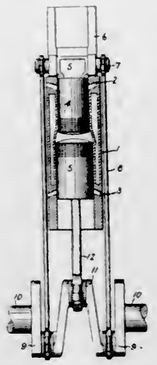
2. The combination of a handle and a supporting attachment therefor comprising a strap adapted to extend circumferentially of and be clamped to the peripheral surface of a wheel, a handle interposed between the end-portions of said strap and arranged substantially parallel with the axis of said wheel upon the application of the strap to the wheel, and means removably securing the strap to the wheel.

3. The combination of a handle and a supporting attachment therefor comprising a sheet-metal strap adapted to extend circumferentially of and be clamped to the peripheral surface of a wheel, a handle interposed between the end-portions of said strap, a bolt extending loosely through the end-portions of the strap and loosely through the handle and having a head arranged at the outer side of one end-portion of the strap, a nut screwed onto the bolt at the outer side of the other end-portion of the strap, and means for preventing rotation of the handle on the bolt.

4. The combination of a handle and a supporting attachment therefor comprising the combination, with a handle adapted to be applied at the periphery and to be arranged substantially parallel with the axis of a wheel, of a sheet-metal strap adapted to extend circumfereutially of and be clamped to the peripheral surface of said wheel, one end portion of the strap having an outwardly projecting arm overlapping one side of the inner end-portion of the handle and the other end-portion of the strap terminating in an outwardly projecting arm arranged at the opposite side of said portion of the handle, and means whereby the handle and said arms of the end-portions of the strap may be secured together and the strap tightened on the peripheral surface of the aforesaid wheel.

5. The combination of a handle and a supporting attachment therefor comprising the combination, with a handle adapted to be applied at the periphery and to be arranged substantially parallel with the axis of a wheel, of a sheet-metal strap adapted to extend circumferentially of and be clamped to the peripheral surface of said wheel, one end-portion of the strap having an outwardly projecting arm overlapping one side of the inner end-portion of the handle and said end-portion of the strap extending from the inner end of said arm across the handle to and overlapping the opposite side of said portion of the handle, and the other end-portion of the strap terminating in an outwardly projecting arm arranged opposite the last-mentioned side of said portion of the handle, and means for rendering the strap tight relative to the peripheral surface of the aforesaid wheel when the strap is mounted on said wheel.

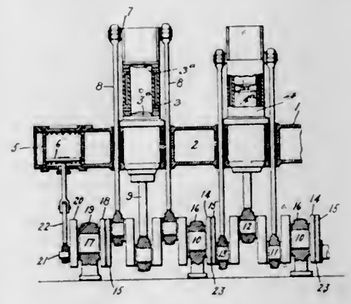
1,171,854. ENGINE. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 11, 1913. Serial No. 747,729. (Cl. 121—41.)



1. In an engine, the combination of a cylinder, oppositely moving working pistons mounted therein, the outer piston having a smaller effective area than the inner piston, a main shaft having angularly displaced cranks, side rods connecting the smaller piston with two of the cranks, and a rod connecting the larger piston with another of the cranks.

2. In an engine, a combination of a cylinder, working pistons mounted therein and arranged to move toward and away from each other, the outer piston having a smaller effective area than the inner piston, a main shaft having angularly displaced cranks, a pair of swinging side rods pivotally connecting the outer piston with cranks on the shaft, and a central rod connecting the inner piston with a crank on the shaft, the side rods being partially balanced by the central rod and partly by the motive fluid acting on the differential areas of the pistons.

1,171,855. INTERNAL-COMBUSTION ENGINE. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 25, 1913. Serial No. 802,914. (Cl. 121—41.)



1. In an engine, the combination of a plurality of cylinders, a support therefor, a pair of pistons for each cylinder, connecting rods for the pistons, a main crank shaft connected to the rods and divided into as many sections as there are working cylinders, each shaft section comprising a plurality of integrally formed cranks, a single journal, and integrally formed face plates at the ends which act as couplings, and a bearing for each of said journals.

2. In an engine, the combination of a plurality of cylinders, a support therefor, a pair of pistons for each cylinder, connecting rods for the pistons, a main crank shaft

connected to the rods and divided into as many sections as there are working cylinders, each shaft section comprising a crank at one end, a journal at the other end, and two intermediate cranks, with face plates carried by and formed integrally with the journal and the end crank to serve as couplings to unite the sections, thin disks between the face plates to aline the shaft sections with the cylinders, and a bearing for each of the journals.

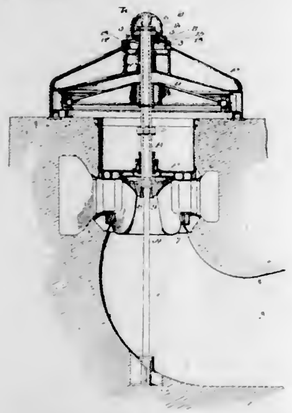
1,171,856. PROCESS FOR MAKING COMPOUND METALLIC ARTICLES. IRVING LANGMUIR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 9, 1913. Serial No. 759,931. (Cl. 91—70.2.)

1. The process of coating a metal of the iron group with an alloy of copper and aluminum which consists in bringing said alloy in contact with the metal to be coated in a reducing environment and in the presence of a cryolite flux, at a temperature sufficient to melt said alloy but not substantially higher.

2. The process of integrally joining iron and an alloy of copper and aluminum which consists in bringing said alloy into contact with the iron in the presence of hydrogen and molten flux having a solvent action on oxid of aluminum, at a temperature not substantially higher than necessary to secure fluidity of said alloy.

3. The process which consists in bringing an alloy of copper and aluminum into contact with steel in the presence of a reducing gas and a cryolite flux, at a temperature not substantially in excess of the melting point of said alloy, thereby effecting a homogeneous metallic union with said alloy and the steel and then reducing the section of the resulting compound article by mechanical working.

1,171,857. LOAD-SUSTAINING DEVICE FOR VERTICAL WATER-WHEELS. CHESTER W. LARNER, Cleveland, Ohio. Filed Aug. 5, 1912. Serial No. 713,318. (Cl. 253—120.)



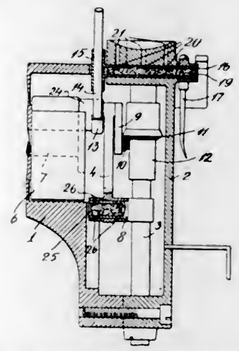
1. The combination of a vertical support or column, a shaft revoluble and having a limited endwise movement thereon, a generator rotor and a runner secured to the shaft, a spider constituting a guide bearing for the shaft, a shell surmounting the column and having a depending wall or skirt fitted with a bottom plate or closure that is accommodated in the bore of the spider, a roller path supported upon said bottom plate and upon which is borne the shaft and its load, and a foundation ring in proximity with the runner, the arrangement being such that the load may be shifted to said foundation ring without transferring any part of it to the guide bearing.

2. In a structure of the type recited, the combination of a revoluble hollow shaft, a generator rotor and a runner carried thereby, a spider which constitutes a guide bearing for the shaft, a fixed support or column telescoping the shaft, and a member surmounting the column and including a roller path which supports the weight of the shaft and its complemental parts.

3. In a structure of the type recited, the combination of a fixed vertical support, a shaft revoluble thereon, a generator rotor and runner carried thereby, a spider constituting a radial brace and guide bearing for the shaft, a shell or housing swung from the top of the vertical support, and a roller path carried by said shell and adapted to sustain the weight and thrust of the shaft and the elements connected therewith.

4. In a structure of the type recited, the combination of a revoluble hollow shaft, a generator rotor and a runner carried by the shaft, a spider which constitutes a guide bearing for the shaft, a fixed vertical support or column telescoping the shaft and carrying at its upper end a roller path on which the shaft is hung, means whereby the shaft may be lowered to permit of access to the roller path, and a foundation ring in the region of the runner and on which the latter rests when the shaft is lowered so that no weight is transferred to the spider.

1,171,858. TAKE-UP MECHANISM FOR SEWING-MACHINES. JAMES LEATHEM, Lebanon, Pa., assignor to Hermann Aukam & Co., New York, N. Y., a Corporation of New York. Filed Sept. 3, 1913. Serial No. 788,010. (Cl. 112—26.)



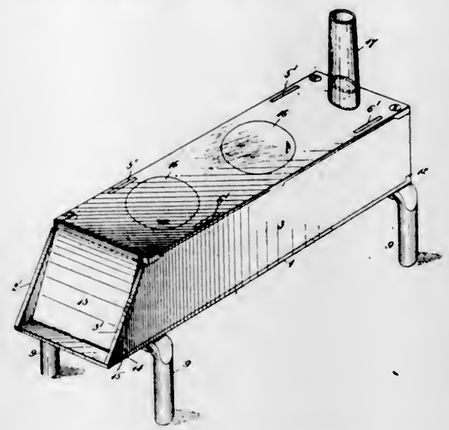
1. A take-up mechanism for sewing machines comprising in combination a driving shaft having a crank arm and crank pin, a lever arm mounted for oscillation on said crank pin and having as a rigid part of it a guide rod extending from it tangentially to a circle of which the center is the axis of said crank pin, a take-up shaft mounted for oscillation and having a sleeve mounted to slide on the said guide rod, and a take-up arm mounted on said take-up shaft.

2. A take-up mechanism for sewing machines comprising in combination a driving shaft having a crank arm and crank pin, an oscillatory guide member having an offset portion loosely mounted upon said crank pin, a take-up shaft mounted for oscillation having a sleeve slidably engaging said guide member, said take-up shaft being provided with an oil passage for supplying oil to the engaging surfaces of said guide member and sleeve, and a take-up arm mounted on said take-up shaft.

3. A take-up mechanism for sewing machines comprising in combination a crank shaft having a crank arm and crank pin, a member mounted for oscillation on said crank pin and having projecting from it a guide rod, a hollow take-up shaft provided with a sleeve mounted upon said guide rod, the interior of said sleeve in communication with the interior of said take-up shaft, a bearing for said take-up shaft provided with an oil duct, said take-up shaft provided with an oil duct extending from its outer bearing surface to its interior, whereby oil from the outer bearing surface of such take-up shaft may reach the said guide sleeve and guide rod, and a take-up arm mounted on said take-up shaft.

4. A take-up mechanism for sewing machines comprising a driving shaft having a crank arm, a hollow crank pin thereon, a take-up shaft mounted for oscillation, a bushing mounted upon said crank pin, a lever mounted upon said bushing and having a rigid part of it a guide member having sliding connection with said take-up shaft, said lever, bushing and hollow crank pin having registering oil ducts whereby the interior of said crank pin forms an oil reservoir for the bearing surfaces of said crank pin, bushings and lever, and a take-up arm mounted upon said take-up shaft.

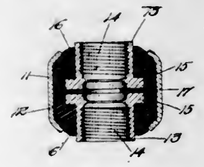
1,171,859. PORTABLE KNOCKDOWN STOVE. RIES E. LEONARD, Winthrop, Mass. Filed Dec. 23, 1914. Serial No. 878,698. (Cl. 126—9.)



1. A portable knock-down stove comprising bottom and top portions, each provided with slots, side portions provided with lugs engaging said slots, respectively, an end portion adapted to coöperate with said bottom, top and side portions, legs arranged to coöperate with said bottom portion, and bolts passing through said top and bottom portions and engaging said legs to bind all said portions together and to secure said legs to the stove.

2. A portable knock-down stove comprising bottom and top portions, each provided with slots, side portions provided with lugs engaging said slots, respectively, an end portion adapted to coöperate with said bottom, top and side portions, legs arranged to coöperate with said bottom portion, each leg having a bifurcated end extending at right angles thereto, and bolts passing through said top and bottom portions and through the bifurcated ends of said legs to bind all said portions together and to secure said legs to the stove.

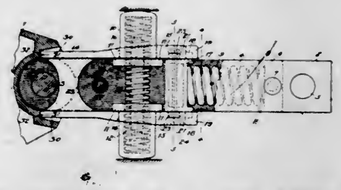
1,171,860. PROCESS OF MAKING INSULATING-JOINTS. LOUIS MCCARTHY, Boston, Mass. Filed June 1, 1914. Serial No. 842,008. (Cl. 173—365.)



1. The process of making an insulator which consists in dry molding about each of the end members successively an insulating material capable of being hardened by heat, placing a tube composed of superposed leaves of mica within a steel shell, assembling said end pieces about which has been molded said insulating material and a washer of sheet mica separating them within said shell and tube of mica, compressing the edges of the steel shell over the shoulders of the insulating material formed on the end members while the insulating material is still capable of being formed and baking the insulator.

2. The process of making an insulator which consists in dry molding about each of the end members successively an insulating material capable of being hardened by heat, placing a tube composed of superposed leaves of mica within a steel shell, expanding said tube of mica by heat and pressure to cause it to conform to the interior of said shell, assembling within said shell and tube of mica the end pieces about which has been molded said insulating material and a washer of sheet mica separating them, forming the steel shell while the insulating material is still capable of being formed, and subjecting the insulator to heat to harden the insulation about the end members.

1,171,861. DRAFT APPLIANCE FOR RAILWAY-VEHICLES. WILLIAM MCCONWAY, Jr., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 2, 1915. Serial No. 37,675. (Cl. 213—42.)



1. The combination with a coupler having a head and stem, of a frame mounted upon said stem, and yielding means carried by said frame for centralizing said coupler, said frame involving a bifurcated member having longitudinally extending branches, and detachable means for transversely connecting the free ends of said longitudinally extending branches, said longitudinally extending branches and said detachable means together constituting the boundaries of openings for the reception of said yielding means.

2. The combination with a coupler having a head and stem, of a frame mounted upon said stem, followers carried by and projecting laterally from said frame, and a spring operatively interposed between said followers, said followers and spring constituting yielding means carried by said frame for centralizing said coupler, and said frame involving longitudinally extending portions each having an open-ended slot adapted to receive one of said followers, and detachable means for retaining said followers in assembled positions on said frame.

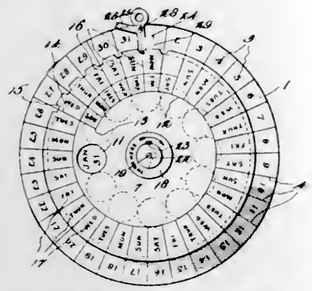
3. The combination with a coupler having a head and stem, of a frame mounted upon said stem, and yielding means carried by said frame for centralizing said coupler, said frame involving a bifurcated member having longitudinally extending slotted branches.

4. The combination with a coupler having a head and stem, of a frame mounted upon said stem, and yielding means carried by said frame for centralizing said coupler, said frame involving a bifurcated member having apertures therein through which said means for centralizing the coupler are adapted to extend, and detachable means forming a portion of the boundary of each of said apertures.

5. The combination with a coupler having a head and stem, of a frame mounted upon said stem, and yielding means carried by said frame for centralizing said coupler, said frame involving a bifurcated member having longitudinally extending branches, and detachable means having interlocking engagement with said branches and connecting said branches.

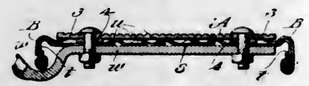
[Claims 6 to 9 not printed in the Gazette.]

1,171,862. PERPETUAL CALENDAR. PAUL P. MCMILLAN, New York, N. Y. Filed Mar. 12, 1915. Serial No. 13,913. (Cl. 40—115.)



In a calendar, a base disk, an intermediate disk, a notched top disk, a pivot holding the disks in operative relation, a latch member comprising a body having a pair of angularly extending arms pivoted to the base disk, one of the arms engaging in the notches in the top disk, and the other arm engaging on the periphery of the base disk to hold the top disk against rotation in one direction, and a loop on the end of the latch to provide a hanger.

1,171,863. COVER FOR AUTOMOBILE RUNNING-BOARDS. RAYMOND MANCHA, St. Louis, Mo. Filed May 17, 1915. Serial No. 28,644. (Cl. 21—55.)



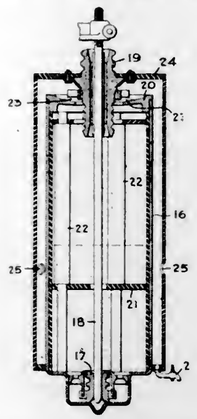
In an automobile, the combination of a sheet metal running board provided on its longitudinal edges with depending flanges and having projections on its top surface, a rust-proof metal protecting member covering the top surface of said board and resting on the projections thereon, and rust-proof metal side members arranged in telescopic engagement with the depending flanges on said running board and provided with portions that project laterally under said protecting member so as to form supporting devices for the side edge portions of same.

1,171,864. ELECTRIC SWITCH. EZRA B. MERRIAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed June 23, 1911, Serial No. 634,951. Divided and this application filed Aug. 15, 1912. Serial No. 715,228. (Cl. 175—282.)

1. In an electric switch, the combination with a substantially closed vessel containing insulating fluid and having a vent in one wall thereof, of relatively movable coöperating contacts separable beneath the surface of said fluid, and a diverter mounted to form a hollow chamber over the top of said vessel and extending down the sides of said vessel to surround said vent whereby fluid and gases escaping through said vent are conducted downwardly along the walls of said vessel.

2. A circuit interrupting device comprising a substantially closed vessel containing oil and having a vent in the top portion thereof, relatively movable contacts separable in said oil, and a diverter forming a hollow chamber over the top of said vessel to inclose said vent and extending down the sides of said vessel to conduct downwardly and along the walls of said vessel all gases and fluid escaping through said vent.

3. A circuit interrupting device comprising a substantially closed vessel containing oil and having a vent in the top portion thereof, coöperating fixed and movable contacts separable beneath the oil in said vessel, an insulator mounted in the top portion of said vessel through which said movable contact moves, and a casing mounted on said insulator outside said vessel to inclose said vent and form a hollow chamber around the top and a portion of the walls of said vessel.

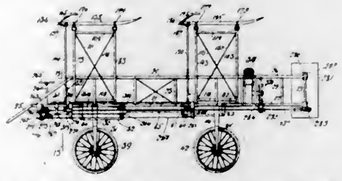


4. In an electric switch, the combination with a substantially closed vessel containing oil and having a vent in the top portion thereof, of relatively movable coöperating contacts separable in said oil, and a diverter mounted on the outside of said vessel inclosing said vent and providing a hollow chamber over the top and sides of said vessel, whereby fluid and gases escaping through said vent as said contacts separate are conducted downwardly along the walls of said vessel.

5. In an electric switch, the combination with a substantially closed vessel containing oil and having a vent in the top portion thereof, of relatively movable coöperating contacts mounted to separate beneath the surface of said oil, and a diverter of insulating material inclosing said vent and forming a hollow chamber around the top and extending down the sides of said vessel acting to direct downwardly gases and oil escaping from said vent as said contacts separate.

[Claim 6 not printed in the Gazette.]

1,171,865. FLYING-MACHINE. JOHN J. MILLIN, Brooklyn, N. Y. Filed Apr. 24, 1911. Serial No. 622,961. (Cl. 244—29.)



1. In a flying machine the combination of an aeroplane and automatic adjustable means to produce a partial vacuum adjacent to the upper surface of the aeroplane.

2. In a flying machine the combination of an aeroplane, means to alter the angular position of the aeroplane with respect to the transverse axis of the machine and adjustable means to produce partial vacuums adjacent to the upper surface of the aeroplane.

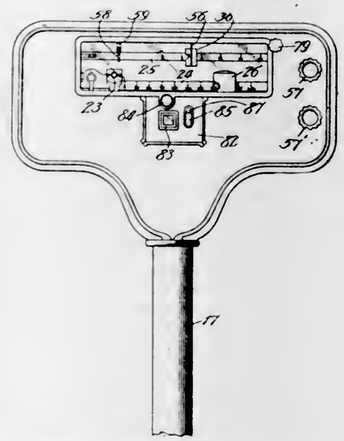
3. In a flying machine the combination of a pair of laterally opposed aeroplanes, means to alter the angular positions of the aeroplanes with respect to the transverse axis of the machine and adjustable means to produce partial vacuums adjacent to the upper surfaces of the aeroplanes, and to decrease the amount of vacuum on the ascending plane and increase the amount of vacuum on the descending plane.

4. In a flying machine the combination of an aeroplane, means to locate the aeroplane in different positions parallel to each other and adjustable means to produce partial vacuums adjacent to the upper surface of the aeroplane.

5. In a flying machine the combination of an aeroplane, automatic means to locate the aeroplane in different positions parallel to each other and adjustable means to produce partial vacuums adjacent to the upper surface of the aeroplane.

[Claims 6 to 21 not printed in the Gazette.]

1,171,866. COIN-OPERATED WEIGHING-SCALE. HERBERT S. MILLS, Chicago, Ill. Filed July 21, 1913. Serial No. 780,187. (Cl. 73—3.)



1. In a weighing scale, the combination of a scale-beam having an oscillatory member carrying a movable weight, a spring-held finger normally bearing against said member, mechanism for withdrawing said finger from said member and turning said member to reverse it, and means for operating said mechanism to return said finger and member to their initial positions.

2. In a weighing scale, the combination of a scale-beam having an oscillatory member carrying a movable weight, a rock-shaft geared to said member, a spring-pressed bell-crank connected with the rock-shaft, a spring-held finger normally bearing against said member and connected with the rock-shaft, an operating-shaft and a spring-raised reciprocably-supported bar connected therewith and containing a recess to register, in the advance-movement of the bar, and be snapped into engagement with the bell-crank, and by its return-movement to turn the bell-crank and thereby turn the rock-shaft to withdraw the finger from and reverse the beam-member, and means for freeing said bar from the bell-crank to return the latter by its spring, to normal position and the rock-shaft, beam-member and finger to their initial positions.

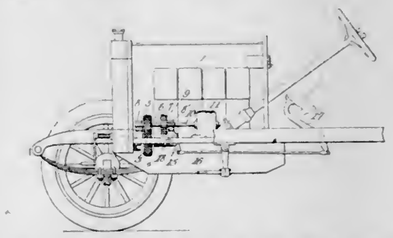
3. In a weighing scale, the combination of a scale-beam having an oscillatory member carrying a movable weight, a rock-shaft geared to said member, a spring-pressed bell-crank connected with the rock-shaft, a spring-held finger normally bearing against said member and connected with the rock-shaft, an operating shaft and a spring-raised reciprocably-supported bar connected therewith and containing a recess to register, in the advance-movement of the bar, and be snapped into engagement with the bell-crank and by its return-movement to turn the bell-crank and thereby turn the rock-shaft to withdraw the finger from and reverse the beam-member, a vertically-movable rod bearing against said bar, and means for depressing said rod against the bar for freeing therefrom the bell-crank to be returned by its spring to normal position and return the rock-shaft, beam-member and finger to their normal positions.

4. In a weighing scale, the combination of a scale-beam having an oscillatory member carrying a movable weight, a rock-shaft geared to said member and having a crank on one end, a spring-pressed bell-crank having one arm connected by a link with said crank, a pivotal finger spring-supported on said crank to bear against said member, an operating shaft and a spring-raised reciprocably-supported bar connected therewith and containing a recess to register, in the advance-movement of the bar, and be snapped into engagement with the other bell-crank arm and by its return-movement to turn the bell-crank and thereby turn the rock-shaft to withdraw the finger from and reverse the beam-member, and means for freeing said bar from the bell-crank to return the latter by its spring to normal position and the rock-shaft, beam-member and finger to their normal positions.

5. In a weighing scale, the combination of a scale-beam having an oscillatory member carrying a movable weight and provided near one end with projecting stops, and a spring-finger, a stop-stud on the stationary beam-head to be encountered by the projecting stops, and opposite notches on said head to be engaged by said finger, a spring-held finger normally bearing against said member, mechanism for withdrawing the spring-held finger from said member and turning said member to reverse it, and means for operating said member to return it and the pivotal finger to their initial positions.

[Claims 6 and 7 not printed in the Gazette.]

1,171,867. ELECTRIC ENGINE-STARTER. MARY PIERSON MITCHELL, Eaton, Ohio. Filed Mar. 14, 1914. Serial No. 824,829. (Cl. 74—7.)



A gearing comprising three parallel shafts, one being a driving shaft and being disposed between the other two, sprocket wheels upon said two shafts, a sprocket chain trained around said sprocket wheels, a gear secured upon one of said two shafts, one end of the first mentioned shaft terminating short of said sprocket chain and the other end thereof projecting beyond that shaft having the gear, a gear slidable upon the first mentioned shaft into and out of mesh with the aforesaid gear, and means for shifting the second mentioned gear.

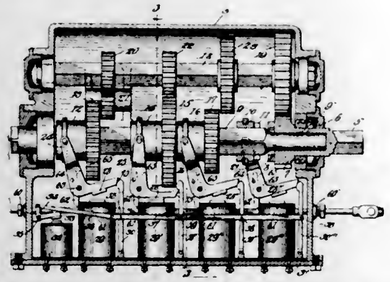
1,171,868. TRANSMISSION MECHANISM. MARY PIERSON MITCHELL, Eaton, Ohio. Filed July 8, 1914. Serial No. 849,815. (Cl. 74—58.)

1. In a speed change mechanism, a shaft, a plurality of members slidable thereon, operating members connected individually to the sliding members, means for operating the operating members selectively, catches for holding the respective operating members when they are operated, and means for operating all of the catches simultaneously.

2. A speed change mechanism embodying a plurality of individually movable members, means for operating each of said members, separate means for locking each of said means when the same is operated, and means for operating all of the locking means simultaneously.

3. In a speed change mechanism, a plurality of individually movable members, a separate operating member connected to each of said movable members, a separate electromagnetically operated means for each of the oper-

ating members to actuate it, separate means for locking each of the operating members, and electromagnetically operated means for operating all of the locking means simultaneously.

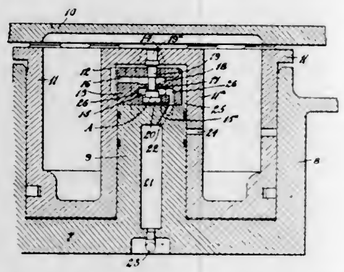


4. In a speed change mechanism, a shaft, a plurality of members slidable thereon, operating members connected individually to said slidable members and each having an armature, an individual electromagnet coöperating with each armature, a separate catch for each operating member, a rod connecting all of the catches and having an armature connected thereto, an electromagnet coöperating with the last mentioned armature, and means for energizing all of the electromagnets selectively.

5. In a speed change mechanism, a plurality of movable members, levers connected individually thereto, means for operating the levers selectively, a separate catch for each lever to lock it in position when it is operated, and means for operating all of the catches simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

1,171,869. JOLT RAMMING-MACHINE. EDGAR H. MUMFORD, deceased. Plainfield, N. J., by Rose S. Mumford, executrix, Plainfield, N. J. Filed June 17, 1915. Serial No. 34,710. (Cl. 121—19.)



1. The combination in a jolt ramming machine of a plunger member and a cylindrical member, relatively movable and provided with a fluid pressure chamber therebetween, one of said members being provided with an exhaust port, an admission port for introducing fluid pressure to said chamber, a valve casing in said chamber, and a valve in said casing for controlling said admission port, said valve being fluid pressure held in open position and being governed as to its closing movement by the said exhaust port when the latter is in registry with the said chamber.

2. The combination in a jolt ramming machine of a stationary plunger, a vertically movable cylinder mounted thereon, there being a fluid pressure chamber in the cylinder above the plunger and an exhaust port in the wall of the cylinder and an admission port in the plunger, a valve block mounted on the plunger and lying in said chamber and provided with a passageway in communication with said admission port, and a fluid pressure actuated valve in said block for controlling said passageway normally in open position and governed as to its closing movement when the exhaust port is brought into registry with the said chamber.

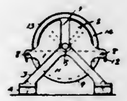
3. The combination in a jolt ramming machine of a stationary plunger, a vertically movable cylinder mounted thereon, there being a fluid pressure chamber in the cylinder above the plunger and an exhaust port in the wall of the cylinder and an admission port in the plunger, a valve block mounted on the plunger and lying in said chamber and provided with a passageway in communication with said admission port, and a fluid pressure actuated valve in said block for controlling said passageway normally in open position and governed as to its closing movement when the exhaust port is brought into registry with the said chamber, the wall of said passageway being rounded to direct the incoming current of fluid pressure downwardly against the valve.

4. The combination in a jolt ramming machine of a stationary plunger, a vertically movable cylinder mounted thereon, there being a fluid pressure chamber in the cylinder above the plunger and an exhaust port in the wall of the cylinder and an admission port in the plunger, a valve block detachably fastened to the top of the plunger and lying in said chamber and provided with a passageway in communication with said admission port, and a fluid pressure actuated valve in said block for controlling said passageway normally in open position and governed as to its closing movement when the exhaust port is brought into registry with the said chamber.

5. The combination in a jolt ramming machine of a cylinder member and a plunger member relatively movable, means for admitting fluid pressure into the cylinder member to raise the plunger member comprising a passageway, and a fluid actuated valve controlling said passageway, the wall of said passageway being formed to direct the incoming current of fluid pressure against a face of the valve to hold it in open position.

[Claim 6 not printed in the Gazette.]

1,171,870. HOG-OILER. JESSE B. NICCUM, Liberty, Ind. Filed Nov. 19, 1914. Serial No. 872,914. (Cl. 119—157.)

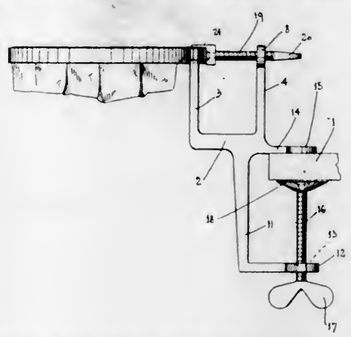


In a hog oiler the combination of end supports formed with vertical slotted guards, tie rods and sills adapted to removably connect them together, a semicircular trough formed with overhanging edges for detachably engaging with the rods, and a perforated cylinder formed with open ends and removably journaled in the slots of the guards and concentric with and depending within and in near proximity to the trough, for the purposes specified.

1,171,871. ADJUSTABLE SUPPORT FOR EMBROIDERY-HOOPS. JOHN NUSSER, Mallanaur, Pa. Filed Mar. 12, 1915. Serial No. 13,865. (Cl. 45—24.)

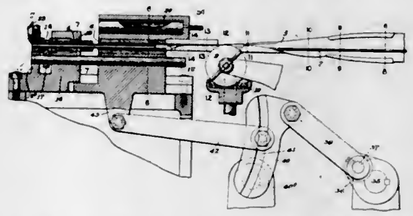
1. A device for the purpose set forth comprising a U-shaped body portion having the free end of each of its arms provided with a head, one of said heads having an arcuate face and the other of said heads formed with a threaded opening, a clamping screw extending through and engaging with the wall of said opening, a curved head swivelly mounted upon one end of said screw and associating with said imperforate head for clamping a fabric supporting member with said body portion, said swiveled head permitting of the angular adjustment of said member with respect to said screw, a pair of flanges projecting forwardly from the top of said swiveled head and capable of overlapping said member, means carried by the body portion for detachably clamping it to a support.

2. A device for the purpose set forth comprising a U-shaped body portion having the free end of each of its arms provided with a head, one of said heads having an arcuate face and the other of said heads formed with a threaded opening, a clamping screw extending through and engaging with the wall of said opening, a curved head swivelly mounted upon one end of said screw and associating with said imperforate head for clamping a fabric supporting member with said body portion, said swiveled head permitting of the angular adjustment of



said member with respect to said screw, a pair of flanges projecting forwardly from the top of said swivel head and capable of overlapping said member, a lateral projection carried by the bottom of said body portion, an angular-shaped arm depending from the bottom of said body portion, and means carried by said angular-shaped arm and associated with said projection for detachably clamping said body portion to a support.

1,171,872. MACHINE FOR MAKING PAPER TUBES. ALBERT D. PENTZ, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 6, 1913. Serial No. 788,482. (Cl. 93—82.)



1. In a tube machine, the combination with a reciprocating carriage carrying means embracing and engaging the forward tube so as to be capable of feeding the same, of stationary gripping means controlled and actuated by said reciprocating carriage to grip the tube and hold it arrested during movement of the carriage in one direction and to release it and permit it to be fed during movement of the carriage in the opposite direction.

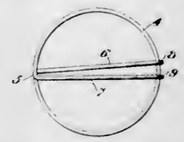
2. In combination in a tube making machine, a reciprocating carriage, a former adapted to fold strip material into tube form mounted thereon so as to move therewith, and means coöperating with said former to prevent movement of the tube during the folding movement of said former and to release the tube during the opposite movement of said former.

3. In combination in a tube making machine, a reciprocating carriage and a former for the tube carried thereby and provided with a heating device and a spring gib friction device, and means coöperating with said former and said spring gib friction device to release said tube during the forward movement of the former and to prevent movement of the tube during the opposite movement of the former, so that the tube is fed forward during the forward movement of the former and ironed by the former during its oppjosite movement.

4. In combination in a tube making machine, a reciprocating carriage and a former carried thereby provided with a heating device, a chuck having a limited longitudinal movement which is less than that of the former and arranged to grip the tube when at one limit of its movement and release the same at its other limit, and a connection between the former and the chuck comprising a spring gib friction device, so that the chuck releases the tube and the former carries the same forward during one movement of the former, and the chuck grips and holds the tube and the former irons the same during the opposite movement of the former.

5. In combination, means for forming and feeding forward a tube, means for cutting the same into lengths comprising a circular cutting tool movable with reference to the tube, and means actuated by movement of said tool toward the tube for rotating said tool when it is brought into engagement with the tube.

1,171,873. SPRING-CONNECTOR FOR SUSPENDERS AND THE LIKE. GEORGE H. PERRINE, Greenburg, N. Y., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 29, 1915. Serial No. 42,485. (Cl. 24—261.)



1. A spring connector for suspenders and the like, constructed of wire in ring form and open at one point in its circumference and the ends at this point crossed and extended from the open part across the ring and slidably engaging the opposite arc of the ring.

2. A spring connector for suspenders and the like, constructed of a single piece of wire bent in ring form and left open at one point in its circumference and the ends at this point crossed and extended across the ring and terminating in eyes slidably engaging the opposite side of the ring.

3. A spring connector for suspenders and the like consisting of a spring wire bent into annular shape and having its ends crossed at their meeting point and extending thence as bars crosswise of the device to an opposite point, said bars movably connected with the device at such opposite point and serving to receive the suspender parts to be connected.

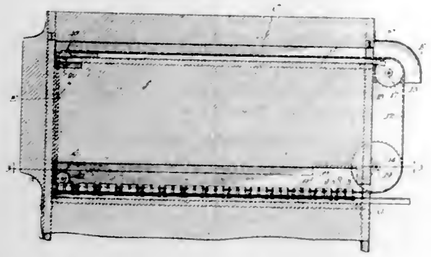
4. A spring connector for suspenders and the like formed of a single spring wire bent into annular form and having its ends bent at their meeting point and overlapped thereat and forming bars extending across the device to an opposite point and slidingly connected with the device at said opposite point and adapted to receive the opposing straps of the suspenders so that pulls on said straps will tend to separate said bars and compressibly distort the annular form of said device to thereby cause its spring action to become effective.

1,171,874. BAKER'S OVEN. WILLIAM FERDINAND PETERSEN, Chicago, Ill. Filed Sept. 12, 1913. Serial No. 789,416. (Cl. 107—57.)

1. An oven of the class described comprising a lower baking chamber, an upper warming chamber, a vertical passage-way connecting the inner ends of said chambers, endless chains extending through the chambers and the passage-way and around the outer end of the intervening wall between the chambers, tracks in said chambers, and trays adapted to travel on said tracks and to be conveyed from one chamber to the other by the endless chains.

2. An oven of the class described comprising a structure having a long longitudinal baking chamber, a long horizontal warming chamber above the baking chamber,

a vertical passage-way connecting the inner ends of said chambers; said inner chamber ends being closed except for the passage-way and the front ends thereof being open, upper and lower sprockets located at the front end of the structure, upper and lower sprockets located at the respective upper and lower ends of the vertical passage-way, an endless chain supported on said sprockets and extending through the passage-way and chambers, trays secured to said chain, and tracks within the chambers on which the trays travel.



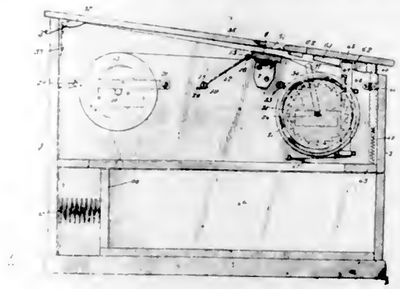
3. In a baker's oven, a baking chamber, a warming compartment adjacent thereto, a door-opening of substantially the same width as said chamber, tracks extending from said door-opening to the rear of said chamber, endless chains passing through said chamber and warming compartment, elongated trays disposed transversely thereto, carriers on the ends of said trays that engage said chains, recesses in the undersides of said carriers, and anti-friction means mounted in said recesses and adapted to engage said tracks.

4. In a baker's oven, a baking chamber, a door opening of substantially the same width as said chamber, tracks extending from said door-opening to the rear of said chamber, endless chains movable through said chamber, elongated trays disposed transversely thereto, carriers on the ends of said trays that engage said chains, recesses in the undersides of said carriers, rollers journaled in said recesses having their axes parallel to the length of said trays and traveling on said tracks when said trays are inside said chamber.

5. An oven of the class described comprising a structure having a long longitudinal baking chamber, a long horizontal warming chamber above the baking chamber, a vertical passage-way connecting the inner ends of said chambers; said inner chamber ends being closed except for the passage-way and the front ends thereof being open, an awning over the open front end of the warming chamber, an upper sprocket located in said awning, a lower sprocket arranged in front of the baking chamber, upper and lower sprockets located at the respective upper and lower ends of the vertical passage-way, an endless chain supported on said sprockets and extending through the passage-way of the chambers beneath the awning and vertically in front of the oven, trays secured to said chain, and tracks within the chambers on which the trays travel.

1,171,875. CASH AND CREDIT RECORDER. FREDOLF J. PETERSON, Salem, Ohio, assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Filed Feb. 14, 1911. Serial No. 608,625. (Cl. 235—5.)

In a cash and credit register, the combination of a casing, a partition dividing the upper portion of said casing into two compartments, a shaft journaled in the casing, a paper carrying roll located in each of said compartments and mounted upon said shaft, a take-up spool located in each compartment and spaced from said paper carrying spools, said take-up spools rotatable independent of each other, a writing table located between said spools, a hinged cover provided with an opening above said writing table, a ratchet wheel operatively connected to each of the take-up spools, a vertical sliding bar adapted to be actuated by the cover, a spring detent carried by said sliding bar and adapted to engage with one of said ratchet wheels, a manually operated sliding bar provided



with a spring detent adapted to engage with the other of said ratchet wheels, a spring actuated drawer located in said casing, a drawer catch adapted to hold said drawer in closed position and a lever connecting said door catch with said manually operated sliding bar.

1,171,876. RAILWAY SIGNAL-TORPEDO. ELMER C. PFEIL and OTTO BEMISDERFER, Hammond, Ind., assignors to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 19, 1913. Serial No. 790,703. (Cl. 246—20.)

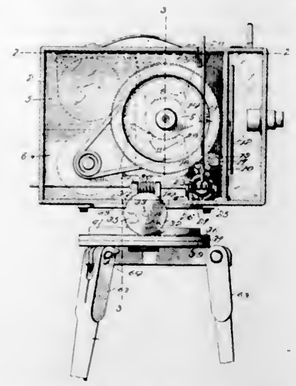


1. In a torpedo of the class described, an explosive compound container composed of a single piece of pliable material having a body-portion with a depression to receive an explosive compound, the body-portion having a pair of side flaps and a pair of end flaps, the width of each of one pair of flaps being substantially equal to that of the body-portion, the said flaps folded over the depression and over each other, a plate placed over the said flaps, a rail-engaging member connected to the plate and extending at right angles to the other pair of flaps, the last said pair of flaps closed over the plate and of a length to prevent overlapping the rail-engaging member for the purpose described, the plate and the flaps being cemented together and to the body-portion.

2. In a torpedo of the class described, an explosive compound container composed of a single piece of pliable material having a body-portion provided with a depression adapted to receive an explosive, the body-portion having side flaps and end flaps, the side flaps folded over the depression, a plate placed over the flaps and a rail-engaging member connected to the plate and extending transverse the body-portion, the end flaps being of a length less than half the length of the body-portion to prevent overlapping the rail-engaging member and folded over the plate, the flaps and plate and body-portion being cemented together.

3. In a torpedo of the class described, an explosive compound container composed of a piece of pliable material having a body portion provided with the depression to receive an explosive compound, and flaps carried by the body portion for closing the torpedo, a plate placed over said flaps, a rail-engaging member connected to the plate and a pair of end flaps closed over the plate, and of a length to prevent overlapping the rail-engaging member for the purpose described.

1,171,877. CAMERA-SHIFTING MECHANISM FOR MOVING-PICTURE CAMERAS. CLARENCE A. PHILLIPS, Washington, D. C. Filed Oct. 1, 1912. Serial No. 723,427. (Cl. 88—18.)



1. In an apparatus of the class described, a support, a camera rotatably mounted upon the support and embodying means for intermittently feeding a film, means for rotating the camera, and means for connecting and disconnecting the film feeding means and the camera rotating means.

2. In an apparatus of the character described, a camera, a support therefor upon which the camera is rotatably mounted, intermittently actuated means for feeding a film through the camera, and means operatively connectible with the film feeding means and operating coincidently therewith for rotating the camera coincidently with the movement of the film.

3. In an apparatus of the class described, a support, a camera mounted thereon and angularly movable, means for angularly moving the camera, the camera embodying means for intermittently feeding a film, and means for connecting and disconnecting the film feeding means and the camera moving means.

4. In an apparatus of the character described, a camera, a support therefor upon which the camera is rotatably mounted, means for intermittently shifting a film through the camera, and means adapted to be placed in operation to rotate the camera relative to said support in coincidence with the movement of the film.

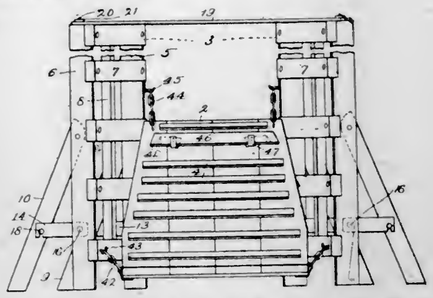
5. In an apparatus of the class described, a camera, a support upon which the camera is mounted for rotation upon vertical and horizontal pivots, and film feeding mechanism including an intermittently rotated film feeding shaft, and means adapted to be actuated by the shaft for causing rotation of the camera upon either of its pivots coincidently with the movement of the said shaft.

[Claims 6 to 34 not printed in the Gazette.]

1,171,878. CONVERTIBLE CATTLE CHUTE AND DEHORNING APPARATUS. SOLOMON B. PIERCE, Gashland, Mo., assignor of one-fourth to Hugh H. Preston, Gashland, Mo. Filed Apr. 8, 1915. Serial No. 19,916. (Cl. 119—99.)

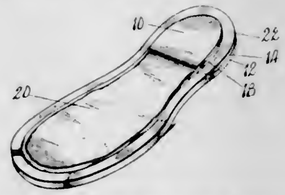
1. In an apparatus of the character described, an adjustable chute consisting of a floor capable of being adjusted to horizontal and inclined positions and having two holes in its forward portion, two sides having posts at their forward ends to removably enter the holes in the floor when the same is adjusted to horizontal position, and a lid mounted on the floor and adapted to cover the holes therein when the posts are removed from said holes and the floor is adjusted to an inclined position.

2. In an apparatus of the character described, a chute consisting of a floor having two holes in its forward portion, two adjustable sides having posts at their forward ends adapted to be set in the floor holes to adjust the forward ends of the sides toward each other or set outside the adjacent margins of the floor to spread the forward ends of said sides away from each other, means to support said sides when adjusted to either position, and means for suspending the floor from the sides at different inclinations when their forward ends are set outside the margins of said floor.



3. In an apparatus of the character described, a chute consisting of a floor having two holes in its forward portion, two adjustable sides having posts at their forward ends adapted to be fitted in the floor holes to adjust the forward ends of the sides toward each other, or set outside the adjacent margins of the floor to spread the forward ends of said sides away from each other, an adjustable stanchion removably secured to said posts, braces to support said sides when adjusted to either position, and means for supporting the floor from sides at different inclinations when their forward ends are set outside the margins of said floor.

1,171,879. SOLE FOR SPRING-HEEL SHOES. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 12, 1912. Serial No. 725,480. Divided and this application filed July 3, 1914. Serial No. 848,756. (Cl. 36—27.)



1. A sole for spring heel shoes having upper and lower flaps at its heel end and a wedge secured between said flaps and having formed about its heel end a shoulder extending through the upper flap into the wedge.

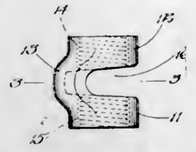
2. A sole for spring heel shoes having upper and lower flaps at its heel end, the upper flap being comparatively thin, and a wedge secured between said flaps and having formed about its heel end a shoulder extending through the upper flap into the wedge.

3. A sole for spring heel shoes having its heel end offset relatively to the plane of the bottom of the forepart of the sole, said sole having upper and lower flaps forming the heel end of the sole and a wedge secured between said flaps and having formed about its heel end a shoulder extending through the upper flap into the wedge.

4. A sole for spring heel shoes having its heel end offset relatively to the plane of the bottom of the forepart of the sole, said sole having upper and lower flaps forming the heel end of the sole and a wedge secured between said flaps and having formed about its heel end a

shoulder extending through the upper flap into the wedge and continued to form a shoulder extending about the forepart of the sole.

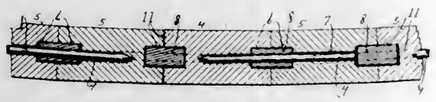
1,171,880. HICKEY. GARDNER W. PROUTY, Littleton, Mass., assignor to The Macallen Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 19, 1915. Serial No. 22,224. (Cl. 240—85.)



1. The improved hickey comprising two tubular end members having an opening between them, the tubular opening of one end member being in line with the tubular opening of the other end member, said end members being secured together by a single connecting member which is located entirely at one side of the longitudinal axis of the hickey.

2. The improved hickey comprising a pair of tubular end members, and a connecting member securing said end members together, said connecting member being located at one side of the longitudinal axis of the hickey, said end members having a single opening between them which extends more than half around the circumference of the hickey.

1,171,881. SILO AND TANK CONSTRUCTION. HARRY H. PUGH, Topeka, Kans. Filed Feb. 27, 1915. Serial No. 10,945. (Cl. 217—4.)



1. In silos, tanks, and similar structures, the combination of vertically disposed staves placed edge to edge, the contiguous vertical edges being formed with registering grooves and being beveled according to the radius of the structure and each stave except the first being formed with horizontal holes extending through its body from groove to groove, a cementing material for sealing the joints, splines for contiguous grooves, and spikes extending through said holes and driven through the contiguous splines and into the contiguous staves, the heads of the spikes being countersunk.

2. In silos, tanks, and similar structures, the combination of vertically disposed staves placed edge to edge the contiguous edges being formed with registering grooves and said staves except the first being formed with horizontal holes extending through their bodies from groove to groove, splines for contiguous grooves, and spikes extending through the holes in each stave and driven through the contiguous spline and into the contiguous stave.

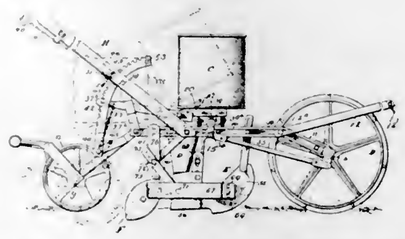
3. In tanks, silos, and similar structures, the combination of staves placed edge to edge the contiguous edges being formed with registering grooves and one of each contiguous pair of said staves being formed with transverse holes extending through their bodies from groove to groove, splines for the contiguous grooves, and spikes extending through the holes in one of each contiguous pair of staves and driven into the contiguous stave.

4. In silos, tanks, and similar structures, the combination of two contiguous staves formed with grooves along their contiguous edges and one of said staves having transverse holes extending through its body and terminating in its grooves, a spline fitting in said grooves, and spikes extending through said holes and driven through said spline and into the adjacent stave.

5. In silos, tanks, and similar structures, the combination of contiguous staves placed edge to edge and formed with spline-and-groove connections along their contiguous edges, one of the staves in each contiguous pair of staves being formed with prepared holes extending through the body of the stave edgewise, and spikes having their shanks fitting in said holes and driven through the contiguous spline and into the contiguous stave.

[Claim 6 not printed in the Gazette.]

1,171,882. PLANTER. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Feb. 25, 1911. Serial No. 610,722. (Cl. 111—32.)



1. In a seed distributer, a frame, supporting wheels for opposite ends of the frame, one of said supporting wheels having a carrier which is adjustably connected to the frame and is arranged to support the adjacent end of the same from said wheel at different selected heights, mechanism for the discharge of the matter which is to be distributed by the implement, means operated by the other supporting wheel for operating said mechanism, said mechanism including elements which are disconnectible from each other to stop the discharge of the matter, means for automatically disconnecting said elements from each other when the frame has been adjusted to a predetermined height, and means for locking the carrier of the first mentioned wheel in its different selected positions.

2. In a seed distributer, a frame having a handle, a supporting wheel for one end of the frame, a supporting means for the other end of the frame, the latter supporting means being arranged to adjust itself automatically when the adjacent end of the frame is raised or lowered and having relatively adjustable elements coöperating to lock it in its different positions and thereby cause the frame to be supported at different heights by the wheel and second supporting means, one of said elements being movable with the second supporting means and the other being releasable therefrom and engageable therewith and having means adjacent to the grip portion of the handle for adjusting it to and from its locking position, mechanism for the discharge of the matter which is to be distributed by the implement, said mechanism including elements which are disconnectible from each other to stop the discharge of the matter, and connections between one of the latter elements and the second supporting means, arranged to cause said elements to be disconnected from each other when the frame has been adjusted to a certain height from the ground.

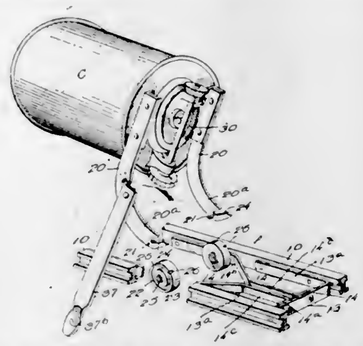
3. In a seed distributer, a frame, supporting wheels for opposite ends of the frame, a carrier for one of said supporting wheels, said carrier having its upper end pivotally connected to the frame, and being adjustable to different angles with relation thereto and supporting the frame at different heights from said wheel, a rack and a latch coöperating to lock the carrier in different positions of adjustment, mechanism for the discharge of the matter which is to be distributed by the implement, means operated by the other supporting wheel for operating said mechanism, said mechanism including elements which are disconnectible from each other to stop the discharge of the matter and means connected to said carrier for disconnecting said elements from each other when the frame has been adjusted to a predetermined height.

4. In an implement of the kind described, a frame, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper end pivotally connected to the frame and being adjustable to different angles with relation thereto and supporting the frame at different heights from said wheel, a rack and a latch coöperating to lock the carrier in different positions of adjustment, a hopper pivotally connected to the frame, dropping mechanism including gears which are disconnected from each other to stop the discharge of matter when the hopper is raised, means connecting the hopper with the carrier for raising the former automatically when the carrier has been adjusted to a predetermined position, and means for operating the dropping mechanism from the other supporting wheel.

5. In an implement of the kind described, a frame having a handle at one end, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper end pivotally connected to the frame and being adjustable to different angles with relation thereto and supporting the frame at different heights from said wheel, a rack and latch mechanism, one member of which is connected to the carrier and the other arranged adjacent to the handle, said mechanism operating to lock the carrier in different positions of adjustment, a hopper pivotally connected to the frame, dropping mechanism including gears which are disconnectible from each other to stop the discharge of matter when the hopper is raised, means connecting the hopper with the carrier for raising the former automatically when the carrier has been adjusted to a predetermined position, and means for operating the dropping mechanism from the other supporting wheel.

[Claims 6 to 12 not printed in the Gazette.]

1,171,883. PLANTER. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Original application filed Feb. 25, 1911, Serial No. 610,722. Divided and this application filed Nov. 29, 1911. Serial No. 663,130. (Cl. 111—32.)



1. In a machine of the kind described, a frame and a hopper, combined with a pivotal mounting for the hopper upon the frame, comprising interengaging members respectively formed with a projection and a channel to be traversed by the projection, the channeled element having an aperture communicating with its channel and the other member having an opening which permits it to be withdrawn from engagement with the channeled member when its projection is registered with the aperture in the latter.

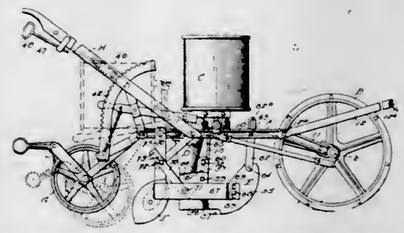
2. In a machine of the kind described, a frame and a hopper, combined with a pair of bent arms attached to the hopper and having their rear ends provided with lateral projections and with openings extending through the edges of the arms, and bearing members carried by the frame and having journals to be received by the openings in the arms, channels to be traversed by said projections and apertures communicating with the channels, the parts being relatively so disposed that the arms may be freely disconnected from the bearings when their projections are alined with the apertures in the latter and are held against accidental disconnection from the bearings in other positions thereof.

3. In a machine of the kind described, a frame provided with bearings, a hopper, a pair of arms projecting from the hopper and provided with openings to engage the bearings, said openings extending through the edges of the arms to permit the arms to be disengaged from the bearings, the bearings and arms being formed with parts which coöperate in holding the arms in engagement with the bearings and permit pivotal movement of the arms upon the bearings, the bearings also having means which permit the arms to be disengaged therefrom in a predetermined position of the arms.

4. In a machine of the kind described, a frame and a hopper, a pivotal mounting for the hopper on the frame comprising interengaging members, one provided with a channel and the other with a projection to traverse the channel and to be released therefrom at a predetermined point in an arcuate adjustment of the hopper.

5. In a machine of the kind described, a frame, a bearing connected to the frame, a hopper having a member pivotally engaged with the bearing member, one of said members having a channel and the other having a projection which traverses the channel in the pivotal movement of the hopper, the channel also having an aperture which communicates with the channel and permits the projection to enter or be removed from the channel when the hopper is in predetermined position.

1,171,884. PLANTER. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Original application filed Feb. 25, 1911, Serial No. 610,722. Divided and this application filed Nov. 29, 1911. Serial No. 663,133. (Cl 111—32.)



1. In a machine of the class described; a frame, an opener standard secured to the frame, an opener, a bar having a plurality of alined slots positioned against the standard, bolts passing through the bar and standard to lock the bar in adjusted position, and a pivotal connection between the bar and opener.

2. In a machine of the class described; a frame, an opener standard secured to the frame and depending therefrom, a sword opener having rearwardly divergent portions, bars each bearing against a respective side of the standard and each having a plurality of alined slots, bolts passing through the slots and through the standard, pivotal connections between respective divergent portions of the opener and the bars, a link pivoted to the forward end of the opener, and means for adjustably connecting the link to the frame.

3. In a machine of the kind described, a frame and bracing and stiffening means therefor, the bracing and stiffening means comprising longitudinal members which are fixedly connected with the frame and have portions

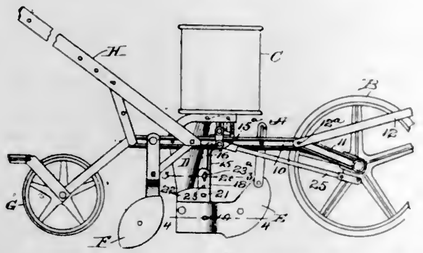
which extend approximately parallel with each other, an opener standard having members arranged at an angle with each other, one of said members being arranged between the approximately parallel portions of the bracing and stiffening means, the other member depending from the first-mentioned member of the standard, an opener and supporting arms adjustably mounted on the standard and connected to the opener.

4. In a machine of the kind described, a frame and bracing and stiffening means therefor, the bracing and stiffening means comprising longitudinal members which are fixedly connected with the frame and have portions which extend approximately parallel with each other, an opener standard having members arranged at an angle with each other, one of said members being arranged between the approximately parallel portions of the bracing and stiffening means, the other member depending from the first-mentioned member of the standard, an opener whose forward end is supported from the frame, and means for adjustably connecting the opener rearward of its forward end to the standard.

5. In a machine of the kind described, a frame and bracing and stiffening means therefor, the bracing and stiffening means comprising longitudinal members which are fixedly connected with the frame and have portions which extend approximately parallel with each other, an opener standard having members arranged at an angle with each other, one of said members being arranged between the approximately parallel portions of the bracing and stiffening means, the other member depending from the first-mentioned member of the standard, an opener having members projecting rearward from the front portion thereof, means for connecting said members adjustably to the standard, and adjustable supporting means supported from the frame and respectively connected to said members and the front portion of the opener.

[Claims 6 to 9 not printed in the Gazette.]

1,171,885. PLANTER OR THE LIKE. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Original application filed Feb. 25, 1911, Serial No. 610,722. Divided and application filed Nov. 29, 1911, Serial No. 663,133. Divided and this application filed Apr. 27, 1914. Serial No. 834,810. (Cl. 111—32.)



1. In a machine of the kind described, a frame, an opener-standard supported thereby, an opener, a seed-chute and common, vertically adjustable means, for connecting the opener to the chute and the chute and opener to the standard.

2. In a machine of the kind described, a frame, an opener-standard supported thereby, an opener, a seed-chute and common, vertically adjustable means, for connecting the opener to the chute and the chute and opener to the standard, comprising vertically slotted arms connected to the opener and embracing the chute and standard, and suitable bolts passing through the slots.

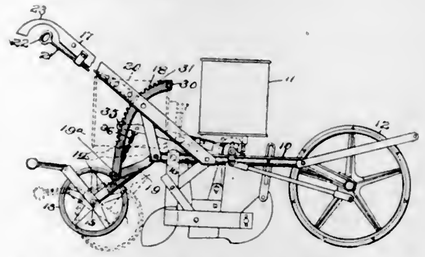
3. In a machine of the kind described, a frame, an opener having members projecting rearward from the front portion thereof, a seed chute having spaced forward edges, a standard secured to the frame and depending between said edges, and vertically adjustable supporting means connected to the front portion of the opener and to said members, respectively, the supporting means connected to said members constituting also clamp members to engage the outer surfaces of the chute edges and force them against the standard.

4. In a machine of the kind described, a frame comprising longitudinal members and bracing and stiffening means therefor, the bracing and stiffening means comprising a cross bar connecting the longitudinal members, other longitudinal members which are fixedly connected with the first-mentioned members and have portions extending convergently and other portions which extend approximately parallel with each other and secured to the cross bar, an opener, a standard having members arranged at an angle with each other, one of said members being secured between the approximately parallel portions of the bracing and stiffening means, the other member depending from the first mentioned member of the standard, a seed chute having a longitudinal opening in its forward side which receives the depending portion of the standard, and vertically adjustable means for securing the opener and seed chute to the standard.

5. In a machine of the kind described, a frame, a standard depending therefrom, a seed chute having spaced forward edge parts embracing the standard, an opener, bars on the opener embracing the spaced forward edges of the chute and the standard and provided with a plurality of vertical slots, seed protectors secured to the opener and embracing the bars and the lower end of the chute, and bolts passing through said slots, the standard and the edges of the chute to maintain all of these parts in adjusted positions.

[Claims 6 to 10 not printed in the Gazette.]

1,171,886. PLANTER OR THE LIKE. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Original application filed Feb. 25, 1911, Serial No. 610,722. Divided and this application filed Apr. 28, 1914. Serial No. 835,009. (Cl. 111—32.)



1. In an implement of the kind set forth, a frame having a handle provided with a hand grip, supporting wheels for opposite ends of the frame, one of said supporting wheels having a carrier which is pivotally connected to the frame and supports the adjacent end of the frame from the wheel at different selected heights, said carrier being arranged to adjust itself automatically with relation to the frame when downward pressure is imposed on the handle or the handle is raised to raise or lower the frame, and means for locking the carrier in its different selected positions, comprising interengaging elements one of which is movable with the carrier and the other of which is carried by the handle and has an actuating element adjacent to the hand grip.

2. In an implement of the kind set forth, a frame having a handle provided with a hand-grip, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper end pivotally connected to the frame and being adjustable to different angles with relation thereto, said carrier being arranged to adjust itself automatically with relation to the frame when downward pressure is imposed on the handle or the handle is raised to lower or raise the frame, and a rack and latch mechanism for locking the carrier in different selected positions of adjustment, one member of said mechanism being connected to the carrier and the other being carried by the handle and adjustable longitudinally thereof and having its adjusting element adjacent to the hand-grip.

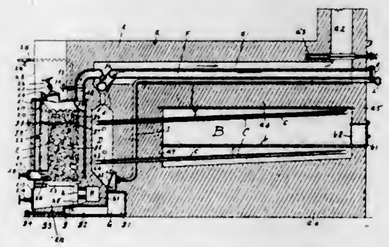
3. In an implement of the kind set forth, a frame having a handle provided with a hand-grip, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper ends pivotally connected to the frame and being adjustable to different angles with relation thereto, said carrier being arranged to adjust itself automatically with relation to the frame when downward pressure is imposed on the handle or the handle is raised to lower or raise the frame, and a rack and latch mechanism for locking the carrier in different selected positions of adjustment, one member of said mechanism being connected to the carrier and the other being carried by the handle and adjustable longitudinally thereof and having its adjusting element adjacent to the hand-grip, the hand-grip being provided with a portion at an angle to the length of the handle and the adjusting element being provided with a finger grip closely adjacent the angled portion of the hand-grip.

4. In an implement of the kind set forth, a frame having a handle at one end, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper end pivotally connected to the frame and being adjustable to different angles with relation thereto and supporting the frame at different heights from said wheel, a pivoted rack having connection with the carrier, guiding means for said rack, arranged on the handle, and a latch carried by the handle for engaging the rack.

5. In an implement of the kind set forth, a frame having a handle at one end, supporting wheels for opposite ends of the frame, a carrier for one of the supporting wheels, said carrier having its upper end pivotally connected to the frame and being adjustable to different angles with relation thereto and supporting the frame at different heights from said wheel, a pivoted rack having connection with the carrier, guiding means for said rack, arranged on the handle, a spring pressed latch carried by the handle for engaging the rack, and means adjacent to the grip portion of the handle for adjusting the latch in opposition to the spring.

[Claims 6 to 13 not printed in the Gazette.]

1,171,887. OVEN. LOUIS CHARLES REESE, Saginaw, Mich., assignor to Werner & Pfleiderer Co., Saginaw, Mich., a Firm. Original application filed Apr. 24, 1915, Serial No. 23,706. Divided and this application filed Oct. 25, 1915. Serial No. 57,736. (Cl. 107—63.)



1. In an oven, the combination with an inverted combustion furnace for heating the same, an oven chamber adapted to receive the articles to be heated, a fire chamber situated between the back walls of the furnace and the oven chamber, a flue running along the top of the oven and leading the spent fire gases from the fire chamber to the chimney, means arranged at the said flue and worked from the oven front for regulating the draft caused by the chimney in the same, a pipe open to the air and passing along inside the said flue and through the brickwork interposed between the same and the furnace for leading the air thus preheated into the latter, means arranged at the end of said pipe protruding from the oven front for regulating the amount of air flowing therethrough, a pipe open to the air and passing along inside the flue leading the fire-gases to the chimney and down through the back wall of the oven chamber for leading the air thus preheated to the lower part of the fire chamber, means for distributing the preheated air therein, and means arranged at the end of said pipe protruding from the oven front for regulating the inflow of air thereinto.

2. In an oven the combination with an inverted combustion furnace for heating the same, an oven chamber adapted to receive the articles to be heated, a fire chamber situated between the back walls of the furnace and the oven chamber and having at the top a narrow passage for the escape of the spent fire gases, means for distributing the burning fire gases coming from the furnace in said fire chamber, a wide channel receiving the spent fire gases from the narrow passage, a flue connecting the said channel with the chimney for leading the spent fire gases thereinto, means for regulating the draft caused by the chimney, a pipe open to the air and running along inside the flue, a coil connected to the said pipe and arranged in the channel situated between the flue and the fire chamber, a pipe connecting the said coil with the furnace, means for regulating the air thus passing into same, a pipe open to the air and running through the flue leading the fire gases to the chimney and down the back wall of the oven chamber, means for regulating the inflow of air into this pipe, means arranged at the said pipe for distributing the air preheated therein in the lower part of the fire chamber, a box arranged underneath the ashpit and the fire chamber for preheating the air therein, means for regulating the inflow of air into the said box, a pipe arranged in the brickwork of the oven for leading the preheated air from the said box to the upper part of the furnace, and means for regulating the amount of air passing through said pipe.

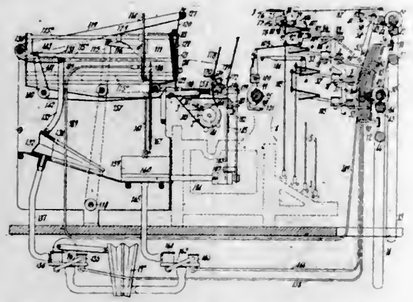
3. In an oven, the combination with an inverted combustion furnace for heating the same, an oven chamber adapted to receive the articles to be heated, a fire chamber situated between the back walls of the furnace and the oven chamber, means for distributing the burning fire gases coming from the furnace in said fire chamber, Perkins tubes so arranged as to transfer the heat from the fire chamber to the oven chamber, a flue for leading the spent fire gases from the fire chamber to the chimney, means for regulating the draft in the said flue, a pipe open to the air and passing through the said flue for leading the air thus preheated to the furnace, means for regulating the amount of air passing through the said pipe, a pipe open to the air and passing through the back wall of the oven chamber for leading the air thus preheated to the lower part of the fire chamber and means for regulating the amount of air passing through this pipe.

4. A baking oven heated by Perkins tubes, comprising a baking chamber, a double door for working the same, an inverted combustion furnace, a fire chamber in which the furnace ends of the Perkins tubes are heated, and which is situated between the back walls of the furnace and of the baking chamber, means for distributing the burning fire gases coming from the furnace in said fire chamber, a flue leading the spent fire gases from the fire chamber to the chimney, means for regulating the draft in this flue, a pipe open to the air passing through the said flue for leading the air thus preheated into the furnace, and means for regulating the amount of air passing through this pipe.

5. A baking oven heated by Perkins tubes, comprising an inverted combustion furnace, a baking chamber, a fire chamber in which the furnace ends of the Perkins tubes are heated, and which is arranged between the furnace and the baking chamber, ducts leading the fresh fire gases from the furnace to the fire chamber and adapted to retain the ashes contained in the fire gases, a pipe open to the air and arranged within the brickwork of the oven

for leading the air thus preheated into the furnace, means for regulating the air passing through the said pipe, a pipe open to the air arranged within the back wall of the oven chamber leading the air thus preheated to the lower part of the fire chamber and means for controlling the air passing through the said pipe.

1,171,888. AUTOMATIC TYPE-WRITER OPERATOR. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Aug. 31, 1911. Serial No. 646,975. (Cl. 197—130.)



1. The combination, with typewriting mechanism, including a platen; of a feeder to positively engage and carry envelops near to said platen; an actuator for rotating said platen; and means separate from and independent of said actuator for operating said feeder, the rotation of said platen by said actuator being concomitant with the feeding action of said feeder, so that the envelops will be positively manipulated to a predetermined position on the platen corresponding with the proper placement of the first line of typewriting by said typewriting mechanism on said envelops.

2. The combination, with typewriting mechanism, including a platen; of a feeder to positively engage and carry envelops near to said platen; an actuator for rotating said platen; and fluid-actuated, master-sheet-controlled means for actuating said feeder and said actuator concomitantly, so that the envelops will be positively manipulated to a predetermined position on the platen corresponding with the proper placement of the first line of typewriting by said typewriting mechanism on said envelops.

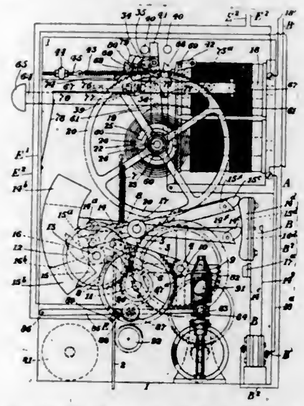
3. The combination, with typewriting mechanism including a platen; of a feeder to positively engage and carry envelops near to said platen; an actuator for rotating said platen; means for controlling the concomitant action of said feeder and said actuator, so that the envelops will be positively manipulated to a predetermined position on the platen corresponding with the proper placement of the first line of typewriting by said typewriting mechanism on said envelops, and removing mechanism for taking the envelops from said platen after the typewriting thereon has been completed.

4. The combination, with typewriting mechanism, including a platen; of a feeder to positively engage and carry envelops near to said platen; an actuator for rotating said platen; pneumatic means for actuating said feeder and said actuator concomitantly, so that the envelops will be positively manipulated to a predetermined position on the platen corresponding with the proper placement of the first line of typewriting by said typewriting mechanism on said envelops; removing mechanism for taking the envelops from said platen after the typewriting thereon has been completed; and means for actuating said removing mechanism concomitantly with the rotation of said platen.

5. The combination with typewriting mechanism including a platen, of a feeder to positively engage and carry envelops to said platen, an actuator for said feeder, means for rotating said platen, and an actuator for said means, said actuators being automatically controlled from a single master sheet to act concomitantly so that an envelop will be fed to said platen and properly placed by the rotation of said platen in a position to receive the first line of typewriting by said typewriting mechanism.

[Claims 6 to 61 not printed in the Gazette.]

1,171,889. ELECTRICALLY-ACTUATED TAXIMETER FOR CABS AND LIKE VEHICLES. CHARLES ROBINSON, Dunoon, Scotland. Filed Nov. 30, 1912. Serial No. 734,286. (Cl. 235—30.)



1. An indicating device for cabs and like vehicles having, in combination, an indicating dial, a totalizing dial, a pointer adapted to move over said indicating dial, a pointer adapted to move over said totalizing dial, electrically operable means for synchronously moving said pointers over said dials and means whereby the minimum fare chargeable may be added to the amount already registered on the totalizing dial.

2. An indicating device for cabs and like vehicles having, in combination, an indicating dial, a totalizing dial, a pointer adapted to move over said indicating dial, a pointer adapted to move over said totalizing dial, electrically operable means for synchronously moving said pointers over said dials, means whereby the indicating dial may be returned to the minimum fare indication and means whereby the minimum fare chargeable may be added to the amount already registered on the totalizing dial.

3. An indicating device for cabs and like vehicles having, in combination, an indicating dial, a totalizing dial, a pointer adapted to move over said indicating dial, a pointer adapted to move over said totalizing dial, electrically operable means for synchronously moving said pointers over said dials, means whereby the indicating dial may be returned to the minimum fare indication and means whereby the minimum fare chargeable may be added to the amount already registered on the totalizing dial synchronously with the return of the indicating dial to the minimum fare indication.

4. An indicating device for cabs and like vehicles having, in combination, an indicating dial, a pointer adapted to move over said dial and normally indicating the minimum fare payable, electrically operable means for moving said pointer over said dial so as to indicate the amount payable to each "fare," means whereby the indicating means are rendered operative upon the occupation of the vehicle by a passenger, and means for preventing any movement of the pointer until a distance corresponding to the minimum fare has been run.

5. An indicating device for cabs and like vehicles having, in combination, an indicating dial, a pointer adapted to move over said dial and normally indicating the minimum fare payable, electrically operable means for moving said pointer over said dial so as to indicate the amount payable to each "fare," means whereby the indicating means are rendered operative upon the occupation of the vehicle by a passenger and means for preventing any movement of the pointer until a time corresponding to the minimum fare has passed.

[Claims 6 to 9 not printed in the Gazette.]

1,171,890. CONTACTOR. JOHN J. RUDDICK, Newton, Mass. Filed Apr. 22, 1915. Serial No. 23,202. (Cl. 246—55.)



1. In a contactor, the combination with a trolley wire, of a flexible contact element extending longitudinally of the wire, insulated therefrom and held under tension in the direction of its length.

2. In a contactor, the combination with a trolley wire, of a jointed contact element extending longitudinally of the wire, insulated therefrom and held under tension in the direction of its length.

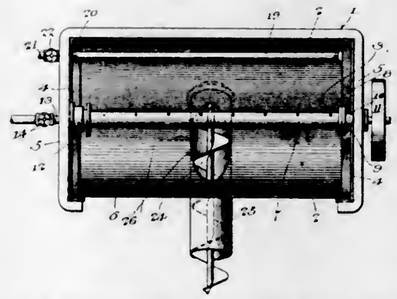
3. In a contactor, the combination with a trolley wire, of a flexible contact element extending longitudinally of the wire and insulated therefrom, and means for holding said contact element under tension in the direction of its length and yieldingly in position to be engaged by a trolley wheel passing over the trolley wire.

4. In a contactor, the combination with a trolley wire, of a jointed contact element extending longitudinally of the wire and insulated therefrom, and means acting on said element to hold it under tension in the direction of its length and yieldingly in position to be acted on by a trolley wheel passing over the wire.

5. In a contactor, the combination with a trolley wire, of a frame secured to said wire but insulated therefrom, a contact element removably sustained on said frame and extending longitudinally of the wire, and means acting on said element to hold it under tension in the direction of its length and yieldingly in position to be engaged by a trolley wheel passing over the trolley wire.

[Claims 6 to 8 not printed in the Gazette.]

1,171,891. SEPARATOR. JOSEPH SAILER, Oxnard, Cal. Filed Dec. 10, 1914. Serial No. 876,450. (Cl. 130—32.)

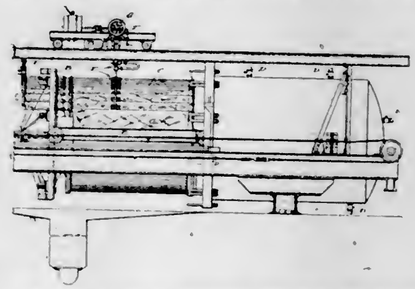


1. In a separator for removing pieces of beet from trash in the manufacture of beet sugar, the combination of a tank in which the trash is immersed in water, said tank having one side slightly lowered to form an overflow edge, means for agitating the trash in said tank, means for forcing waste matter from said trash over said overflow edge, and means for withdrawing pieces of beet from the center of the tank.

2. In a separator for removing pieces of beet from trash in the manufacture of beet sugar, the combination of a tank in which the trash is immersed in water, said tank having one side slightly lowered to form an overflow edge, a perforated agitating pipe extending through the center of said tank, means for forcing a fluid through the perforations in said pipe to agitate the mass of trash in said tank, means for forcing waste matter from said trash over said overflow edge, and means for forcing the pieces of beet that settle to the bottom of the tank toward a discharge opening through which said pieces are withdrawn.

3. In a separator for removing pieces of beet from trash in the manufacture of beet sugar, the combination of a tank in which the trash is immersed in water, said tank having one side slightly lowered to form an overflow edge, means for agitating the trash in said tank, a trash moving pipe extending across said tank at a point opposite said overflow edge, said trash moving pipe having trash moving perforations therein on the side toward the overflow edge, means for forcing a fluid through said trash moving perforations in such a manner as to force the lighter portions of said trash over the overflow edge, and means for withdrawing pieces of beet from the center of the tank.

1,171,892. PROCESS OF CLEANING FILTER MEDIUMS. ORANGE JAMES SALISBURY, Salt Lake City, Utah. Filed Nov. 24, 1914. Serial No. 873,764. (Cl. 210—13.)



1. The method herein described, of cleaning filter mediums of sticky substances formed thereon during the filtering operations, said method consisting, essentially, in heating the filter medium in the presence of moisture in the chamber in which filtration occurs; then removing the filter medium from the chamber and while the medium is still heated and maintaining the moist filter medium in contact with a brushing agent; and then imparting a relative motion to the contacting surface of the filter medium and brushing agent.

2. The method herein described of cleaning filter mediums of sticky substances formed thereon during the filtering operations, said method consisting, essentially, in heating the filter medium *in situ* in the presence of moisture in the chamber in which filtration occurs; then removing the filter medium from the chamber and while the medium remains heated; then maintaining a brushing agent in contact with the surfaces of the heated moist medium to be cleaned, and imparting a relative motion between the brushing agent and said heated filter medium.

3. The method herein described of cleaning filter mediums of sticky substances formed thereon during the filtering operations, said method consisting, essentially, in heating the filter medium *in situ* in the presence of moisture in the chamber in which filtration occurs; then removing the filter medium from the chamber and while the medium remains heated; then maintaining a brushing agent in contact with the surfaces of the heated moist medium to be cleaned; imparting a relative motion between the brushing agent and said heated filter medium, and at the same time supplying a heated washing fluid to the surface of the filter medium being brushed.

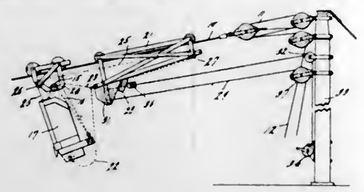
4. The method herein described of cleaning filter mediums of sticky substances formed thereon during the filtering operations, said method consisting, essentially, in softening the adhering impurities by the application of heat and moisture, while the filter medium remains in

the filtering chamber; then withdrawing the filter medium from said chamber while in its heated condition; and then subjecting the heated moist filtering medium to substantially a brushing action before the medium is allowed to substantially cool.

5. The method herein described, of cleaning filter mediums from sticky substances formed thereon during filtering operations, said method consisting, essentially, in heating the filter medium without removal from its support, brushing the outer surface of the medium; and maintaining the filter medium in a heated condition during the brushing operation, by admitting a heated fluid under pressure to the inner side of said filter medium.

[Claim 6 not printed in the Gazette.]

1,171,893. DRAG-LINE EXCAVATOR. HENRY B. SAUERMAN, Chicago, Ill., assignor of one-half to Jesse A. Shearer, Indianapolis, Ind. Filed July 26, 1915. Serial No. 41,841. (Cl. 37—19.)



1. An excavator comprising a track, a carriage slidably mounted on the track, an excavator bucket mounted on the carriage, a second carriage slidably mounted on the track, a drag line acting upon the second carriage, a dumping cable extended from the excavator bucket over a portion of the first carriage and over a portion of the second carriage, means for exerting a pull upon the forward end of the excavator bucket, and a stop-block arranged to act upon the dumping cable to dump the bucket by continued forward pull upon the drag line.

2. An excavator comprising a track, a carriage slidably mounted on the track, an excavator bucket mounted on the carriage, a second carriage slidably mounted on the track, a drag line acting upon the second carriage, a dumping cable extended from the excavator bucket and over a portion of the second carriage, means for exerting a pull upon the forward end of the excavator bucket, and a stop-block arranged to act upon the dumping cable to dump the bucket by continued forward pull upon the drag line.

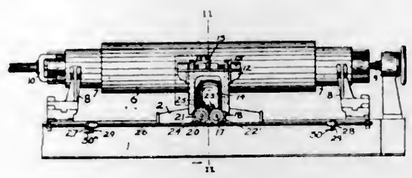
3. An excavator comprising a track, a carriage slidably mounted on the track, an excavator bucket, a second carriage slidably mounted on the track, a cable extending from said second carriage to the first carriage and thence downwardly to the forward end of the bucket, a dumping cable extending from the rear end of the bucket and thence upwardly over a portion of the first carriage and thence forwardly over a portion of the second carriage, a connection between the forward end of the bucket and the second carriage, a drag line, the bight of which is passed over a portion of the second carriage, a stop button carried by the drag line, and means carried by the dumping cable for engagement by said stop button.

4. An excavator comprising a track, a carriage slidably mounted on the track, an excavator bucket, a suspending cable for said bucket attached to its forward and rear ends and passed over a portion of the carriage, a second carriage, a cable attached to said second carriage and passed over a portion of the first carriage and thence downwardly to a point of attachment at the forward end of the bucket, a drag connection between said second carriage and the forward end of the bucket, a dumping cable attached to the rear end of the bucket and passed upwardly over a portion of the first carriage and thence over a portion of the second carriage, a drag cable connected with the first carriage, and a stop block arranged to act upon the dumping cable to dump the bucket by continued forward pull upon the drag line.

5. An excavator comprising a track, a carriage slidably mounted on the track, an excavator bucket, a suspending cable for said bucket attached to its forward and rear ends and passed over a portion of the carriage, a second carriage, a cable attached to said second carriage and passed over a portion of the first carriage and thence downwardly to a point of attachment at the forward end of the bucket, a drag connection between said second carriage and the forward end of the bucket, a dumping cable attached to the rear end of the bucket and passed upwardly over a portion of the first carriage and thence over a portion of the second carriage, a drag line acting upon the second carriage, a dumping cable extended from the excavator bucket and over a portion of the second carriage, means for exerting a pull upon the forward end of the excavator bucket, and a stop-block arranged to act upon the dumping cable to dump the bucket by continued forward pull upon the drag line, the bight of which is passed around a portion of the second carriage, and a stop block carried by said drag line and arranged to act upon the dumping cable to dump the bucket by continued forward pull upon the active end of the drag line.

[Claims 6 to 8 not printed in the Gazette.]

1,171,894. GRINDING-MACHINE. HENRY C. SHAW, Sewickley, Pa.; George E. Shaw, administrator of the estate of said Henry C. Shaw, deceased, assignor to A. Garrison Foundry Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 5, 1913. Serial No. 771,835. (Cl. 51—4.)



1. In a roll-grinding machine, means for supporting the roll, a table having limited travel longitudinally of the roll, a carriage supported by the table, a screw for feeding the carriage toward the roll, a pair of intermeshing gear-wheels, one being secured to the screw, a ratchet wheel rigid with each gear wheel, pawls for driving the ratchet wheels in opposite directions, means for operating one pawl at one limit of travel of the table, and means for operating the other pawl at the other limit of travel of the table.

2. A traveling table, a carriage thereon, a screw for moving the carriage transversely of the travel of the table, a ratchet wheel secured to the screw, a pawl for rotating the screw, and a cam sleeve adjustable longitudinally of the travel of the table, for operating the pawl when the table reaches a predetermined position.

3. A traveling table, a carriage thereon, a screw for moving the carriage transversely of the travel of the table, a ratchet wheel secured to the screw, a pawl for rotating the screw, a tapered sleeve, and a carrier for supporting and actuating the pawl, arranged to engage the sleeve and ride up the tapered surface thereof when the table reaches a predetermined position.

4. A traveling table, a carriage thereon, a screw for moving the carriage transversely of the travel of the table, a ratchet wheel secured to the screw, a pawl for rotating the screw, a tapered rotary eccentric sleeve, a carrier for supporting and actuating the pawl, arranged to engage the sleeve and ride up the tapered surface thereof when the table reaches a predetermined position, and means for preventing the sleeve from rotation.

5. In a roll-grinding machine, means for supporting the roll, a table having limited travel longitudinally of the roll, a carriage on each side of the roll, provided with a grinding wheel and supported by the table, a separate screw for feeding each carriage, a gear wheel on each screw, a shaft supported by the table and provided with gear-wheels meshing with the first gear-wheels, and cams for automatically feeding the carriages toward the roll at predetermined positions of the table.

[Claims 6 and 7 not printed in the Gazette.]

1,171,895. SPECTACLE-TEMPLE PIVOT-BUTT. HARRY F. SHINDEL, Glenside, Pa., assignor to T. A. Willson & Co., Inc., Reading, Pa., a Corporation of Pennsylvania. Filed June 25, 1914. Serial No. 847,182. (Cl. 88—53.)



1. A temple pivot-piece of doubled wire, the opposing end portions of the wire having grooved inner faces and the bend-portion thereof forming a pivot eye.

2. A temple pivot-piece of doubled wire, the opposing end portions of the wire having grooved inner faces and the bend-portion thereof being flattened and forming a pivot eye.

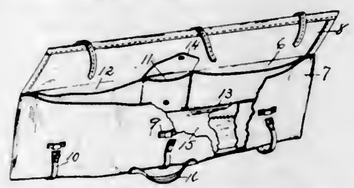
3. A spectacle temple comprising a shaft portion and a separately formed pivot piece of doubled wire; said shaft portion being interposed between and secured to the parallel end portions of the doubled wire and the bend portion of the latter forming a pivot eye.

4. A spectacle temple comprising a shaft portion and a separately formed pivot piece of doubled wire; said shaft portion being clamped between the parallel end portions of the doubled wire and the bend portions of the latter forming a pivot eye.

5. A temple shaft provided with a pivot-piece consisting of a doubled wire having opposing grooved portions which jointly engage the temple wire and a bend-portion forming a pivot-eye temple end.

[Claims 6 and 7 not printed in the Gazette.]

1,171,896. CARPENTER'S TOOL-BAG. MYRON N. SIMPSON, Glastonbury, Conn. Filed July 20, 1914. Serial No. 851,934. (Cl. 206—16.)



1. A carpenter's tool bag comprising an inclosed main pocket, supplemental pockets located at one edge of the main pocket, a saw compartment arranged at the opposite edge of the main pocket, an apron extending within the main pocket to cover the saws and protect their edges, and means for closing the open edge of the main pocket.

2. A carpenter's tool bag comprising an inclosed main pocket closed at its ends and one edge and open at its opposite edge, supplemental pockets located at the upper open edge thereof, a saw compartment located underneath the supplemental pockets, an apron depending from the lower edge of the supplemental pockets, and means for closing the open edge of the main pocket.

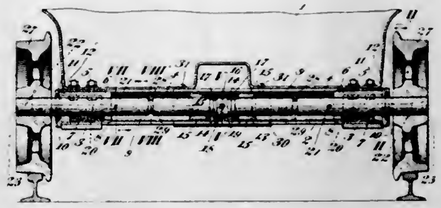
3. A carpenter's tool bag comprising a main pocket, a strip of material attached within and to one side of the main pocket and lengthwise thereof on a line between its top and bottom edges, providing supplemental pockets and an apron depending from the bottom of said supplemental pockets, and means for closing the open edge of the bag.

4. A carpenter's tool bag comprising a main pocket, a saw compartment located within said bag at one side of a center line lengthwise thereof, loops attached to the outside of said bag at one side of but adjacent to said center line, and straps passing around the bag and through said loops.

5. A carpenter's tool bag comprising a main pocket, a saw compartment located within said bag at one side of a center line lengthwise thereof, loops arranged in pairs with the members of each pair on opposite sides of the bag along one side of but adjacent to said central line, one pair of loops being disposed at the lengthwise center of the bag, and means for closing the open edge of the bag.

[Claim 6 not printed in the Gazette.]

1,171,897. CAR-AXLE. EDWIN E. SLICK, Westmont borough, Pa. Filed June 9, 1915. Serial No. 32,997. (Cl. 105—66.)



1. A pair of axles mounted within an outer tube or casing, each axle being provided with an outer bearing, an inner bearing and an end thrust bearing, a groove formed in its periphery and retaining means secured to the casing and adapted to contact with the wall of said groove.

2. A stub axle mounted within an outer tube or casing and provided with an inner and outer journal bearing and a circumferential groove, an end thrust bearing, a bolt extending through said casing and adapted to contact with the walls of said groove, and sealing means mounted on the outer end of the axle adapted to prevent the escape of lubricant from the casing.

3. A car axle mounted in an outer tube or casing and provided with an inner and outer journal bearing, a circumferential groove in said axle, a bolt passing through and secured to said casing and adapted to contact with the walls of said groove.

4. A car axle mounted within an outer tube or casing and provided with inner and outer journal bearings and a circumferential groove, means extending through said casing and adapted to contact with the walls of said groove, an end thrust bearing adapted to prevent the inward movement of said axle, the outer end of the outer bearing or casing, being spaced apart from the wheel or hub, whereby rubbing and friction at this point is avoided.

5. A car journal provided with a concentric annular groove at the outer end thereof, the outer portion of the wall of said groove being of slightly less diameter than the adjacent inner portion, an annular retainer of sheet metal containing a resilient washer, said retainer being adapted to be pressed into said groove and retained by the outer projection of the wall thereof.

1,171,898. RING-GUARD FOR STRAPS. SINGLETON SMITH, Milwaukee, Wis., assignor to The Wallace & Smith Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 8, 1914. Serial No. 865,630. (Cl. 24—183.)

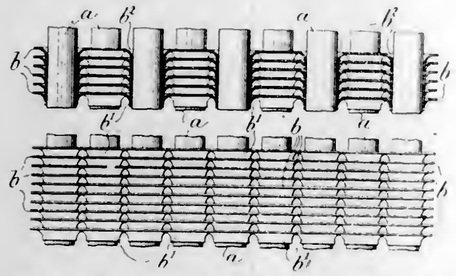
The combination with a strap having a looped engagement with a ring, of a guard therefor consisting of a member having two transverse slots through which portions of the strap loop extend, the medial transverse portion of the member between the two slots being offset

outwardly from the portions of said member on the outer sides of said slots to permit the strap portions to extend through the slots in approximtely a straight line and with the medial portion of the member extending over



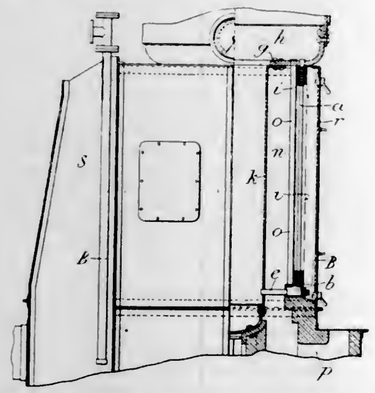
the outer side of the loop, the said member also having a hook-like portion which extends through and is engaged by the ring and is interposed between the ring and the looped portion of the strap.

1,171,899. MANUFACTURE OF GILLED TUBULAR APPARATUS. WILLIAM JOSEPH STILL, Southall, England. Filed Apr. 11, 1912. Serial No. 690,212. (Cl. 113—112.)



The herein described steps in the manufacture of apparatus embodying tubes expanded into intimate contact with flanged gills, through which they extend, which consists in first flaring the flanges of the holes at their junction with the gills, assembling the gills upon the tubes so that the free ends of the flanges on one gill enter the flared portions of the flanges of another gill leaving adjacent annular jointing recesses or zones around the tubes, introducing a fusible mixture in powdered condition between the gills when these are in a substantially horizontal position, vibrating the assembled parts so as to cause the fusible mixture to creep into the jointing recesses or zones and thereafter applying heat to melt the fusible mixture.

1,171,900. TUBULAR HEAT-INTERCHANGING APPARATUS. WILLIAM JOSEPH STILL, West Ealing, England. Filed Apr. 4, 1914. Serial No. 829,458. (Cl. 122—332.)



1. Heat interchanging apparatus comprising a water receiver having an enlarged upper drum-like portion adapted to serve as a water and steam drum and a downwardly extending portion of smaller cross section than the upper portion and through which water can freely flow in a vertical direction, tubes connected directly to the bottom of the enlarged upper portion of the receiver and extending downwardly toward and terminating near to the bottom of the downwardly extending portion of the receiver, headers connecting such tubes at their opposite and lower ends in sets and tubes connecting said headers to the downwardly extending portion of the receiver near to the bottom thereof.

2. Heat interchanging apparatus comprising a water receiver having an enlarged upper drum-like portion, adapted to serve as a water and steam drum and a downwardly extending portion of smaller cross section than the upper portion and through which water can freely flow in a vertical direction, straight vertically arranged tubes connected directly to the bottom of the enlarged upper portion of the receiver and extending downwardly toward and terminating around and near to the bottom of the downwardly extending portion of the receiver, headers connecting such tubes at their opposite and lower ends in sets and straight horizontal tubes connecting said header to the downwardly extending portion of the receiver near to the bottom thereof.

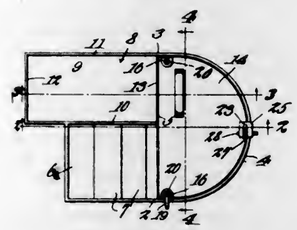
3. Heat interchanging apparatus comprising a receiver in the form of an upper steam and water drum having a central downcomer of smaller diameter, tubes surrounding the said downcomer and extending through and connected directly to the bottom of the upper drum, headers connecting such tubes at the lower ends in sets and a tube connecting each header laterally to the lower end portion of the downcomer.

4. Heat interchanging apparatus comprising a receiver in the form of an upper steam and water drum having a central downcomer of smaller diameter, a series of externally gilled tubes arranged around said downcomer, a series of plain tubes disposed between the gilled tubes and the downcomer, all of said tubes extending through and connected directly to the bottom of the upper drum, headers connecting a number of gilled and of plain tubes in sets and a tube connecting each header laterally to the lower end portion of the downcomer.

5. In heat interchanging apparatus embodying a receiver and a number of tubes arranged to be connected direct to such receiver at different levels, a series of headers each having a series of openings in its upper wall adapted to receive some of the tubes and in each of its opposed vertical walls a horizontal opening, one such opening being adapted to receive a tube for connecting the header to the lower end portion of the receiver and the other opening being provided with a removable plug adapted to permit the entry of a tool for expanding the single tube aforesaid into the header and receiver.

[Claims 6 and 7 not printed in the Gazette.]

1,171,901. BAPTISMAL FONT. JOHN S. STONE, Kansas City, Mo. Filed May 18, 1915. Serial No. 28,961. (Cl. 4—27.)



1. In a device of the character described including a primary receptacle: a relatively shallow receptacle formed adjacent the top of said primary receptacle and communicating with the primary receptacle; upright rods rotatably mounted in the primary receptacle; an adjustable platform slidably mounted on said rods; and means for locking the platform in predetermined relation with respect to the relatively shallow receptacle.

2. In a device of the character described including a primary receptacle; means for entering said receptacle; upright rods rotatably mounted in the primary receptacle, said rods having a plurality of transverse notches extending inwardly from one edge thereof; a secondary receptacle formed adjacent the top of the primary receptacle and communicating with the primary receptacle; an adjustable platform slidably mounted on the upright rods within the primary receptacle and adapted to be locked in predetermined relation with respect to the secondary receptacle by having its upper and lower faces engaged by the transverse notches of the upright rods.

3. In a device of the character described including a primary receptacle having one wall thereof inclined; steps secured to said inclined wall; upright rods rotatably mounted in the primary receptacle, said rods having a plurality of transverse notches extending inwardly from one edge thereof; a secondary receptacle formed adjacent the top of and communicating with the primary receptacle; an adjustable platform having elongated slots for the sliding reception of the upright rods, when said rods are in their unlocked position, but when the upright rods have been rotated to locked position, the opposed faces of the adjustable platform are engaged by the transverse slots to lock said platform in predetermined relation with respect to the secondary receptacle; a flexible stirrup secured to the upper face of the adjustable platform; and means for adjusting said platform.

4. In a device of the character described including a primary receptacle; steps secured to the interior of said receptacle; a relatively shallow receptacle formed adjacent the top and communicating with the primary eceptacle; upright rods rotatably mounted in said primary receptacle; a wrench engaging portion formed at the top of said rods; an adjustable platform slidably mounted in the rods; means for locking the platform in predetermined relation with the relatively shallow receptacle; an adjusting member secured to the platform and mounted for vertical sliding movement within the primary receptacle; bearings secured to the primary receptacle for the sliding reception of said adjusting member; teeth formed on said adjusting member; a shaft mounted in one of said bearings; a pinion secured to said shaft for operative engagement with the teeth, a pawl secured to the primary receptacle for engagement with the teeth; and a wrench engaging portion formed on one of said shafts.

1,171,902. SOLUBLE CATALYTIC AGENTS AND PROCESS OF MAKING THE SAME. NATHAN SULZBERGER. New York, N. Y. Filed Jan. 10, 1914. Serial No. 811,395. (Cl. 23—28.)

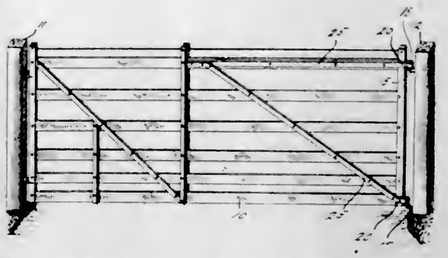
1. Process for making a catalyst, which comprises treating the solution of an oleate with the solution of a derivative of a metal belonging to the platinum-group in the absence of added material to preserve the colloidal state of the formed metal-oleate and which will prevent such metal-oleate from depositing its platinum-metal in a catalytic active state at a temperature of 50° C. or less.

2. Process for making a catalyst, which comprises treating the solution of an oleate with the solution of a palladium-derivative in the absence of added material to preserve the colloidal state of the formed palladium-oleate and which will prevent such palladium-oleate from depositing its palladium-metal in a catalytic active state at a temperature of 50° C. or less.

3. Derivative of oleic acid and a metal belonging to the platinum-group free from added material to preserve the colloidal state and which will prevent said derivative from depositing its metal at a temperature of 50° C. or lower, representing at ordinary temperature a yellowish oil, insoluble in water, soluble in ether, fats and oils and which spontaneously decomposes, becoming dark by precipitating its metal content.

4. Derivative of oleic acid and palladium free from added material to preserve its colloidal state and which will prevent said derivative from depositing its palladium at a temperature of 50° C. or less, representing at ordinary temperature a yellowish oil, insoluble in water, soluble in ether, fats and oils and which spontaneously decomposes and becomes dark by precipitating its palladium-content.

1,171,903. GATE. LAFE SWANK and JAMES E. VAN DEVENTER, Anderson, Ind., assignors to Dwiggins Wire Fence Company, Anderson, Ind., a Corporation of Indiana. Filed Feb. 15, 1915. Serial No. 8,218. (Cl. 39—87.)

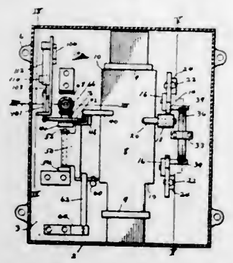


1. As an article of manufacture, a gate, comprising a plurality of vertically-spaced, substantially horizontal wooden bars, a metal member having an angular cross section and arranged transversely of said wooden bars at one end thereof and attached thereto, a metal hinge-bar attached to one of said horizontal wooden bars and extending a considerable portion of the length thereof, said hinge-bar having a portion substantially parallel to the plane of said wooden bar and another portion at a material angle to said wooden bar, the said hinge-bar being projected at one end beyond the vertical metal member and having an integral portion for the reception of a supporting hinge member, a second hinge-bar arranged in an inclined position relative to the first hinge-bar and the horizontal wooden bars, said second hinge-bar being attached at its upper outer end to the first hinge-bar and attached at the crossing points to the horizontal wooden bars, and at its lower end extended beyond the vertical metal member and provided with an integral portion for the reception of a supporting hinge member, said second hinge-bar having a portion parallel with the plane of the wooden bars and another portion at a material angle to said plane, a vertical metal member having an angular cross section arranged transversely of the wooden bars beyond the outer ends of the hinge-bars and attached to the wooden bars, a third metal member having an angular cross section arranged transversely of the wooden bars at their outer ends and attached thereto, and an inclined metal member having an angular cross section extending diagonally between the second and third vertical members and attached to the wooden bars at the crossing points.

2. As an article of manufacture, a gate, comprising a plurality of vertically-spaced, substantially horizontal wooden bars, a metal member having an angular cross section and arranged transversely of said wooden bars at one end thereof and attached thereto, a metal hinge-bar attached to one of said horizontal wooden bars and extending a considerable portion of the length thereof, said hinge-bar having a portion substantially parallel to the plane of said wooden bar and another portion at a material angle to said wooden bar, the said hinge-bar being projected at one end beyond the vertical metal member and having an integral portion for the reception of a supporting hinge member, a second hinge-bar arranged in an inclined position relative to the first hinge-bar and the horizontal wooden bars, said second hinge-bar being attached at its upper outer end to the first hinge-bar and attached at the crossing-points to the horizontal wooden bars, and at its lower end extended beyond the vertical metal member and provided with an integral portion for the reception of a supporting hinge

member, said second hinge bar having a portion parallel with the plane of the wooden bars and another portion at a material angle to said plane.

1,171,904. COMBINATION-LOCK. JOHN TOMCZAK, Kansas City, Kans. Filed Nov. 5, 1914. Serial No. 870,459. (Cl. 70—18.)



1. A lock comprising, in combination, a bolt, a movable detent member adapted in one position to permit movement of the bolt and in other positions to prevent movement thereof, an auxiliary guard member adapted to hold the bolt against movement regardless of the position of said detent member, means for positioning said detent member and means for shifting said guard member into position for permitting movement of the bolt, said positioning means and shifting means being adapted to be operated either separately or simultaneously.

2. A lock comprising, in combination, a bolt, a movable detent member provided with a notch adapted in one position of said member to permit movement of the bolt, and an auxiliary guard member mounted independently of said detent member, said guard member acting in one position to close the passage through said notch and movable to open the passage through said notch and release said bolt.

3. A lock comprising, in combination, a bolt, a movable detent member provided with a notch adapted in one position of said detent member to permit movement of the bolt, an auxiliary guard member mounted independently of said detent member and held normally in a position to close the passage through said notch, and means for positioning said detent and guard members for permitting movement of the bolt through the medium of said notch.

4. A lock comprising, in combination, a bolt, a movable detent member adapted in one position to permit movement of the bolt and in other positions to prevent movement thereof, means for setting said member in position to permit movement of the bolt, and means acting automatically and independently of said setting means to lock said member in its set position.

5. A lock comprising, in combination, a bolt, a movable detent member adapted in one position to permit movement of the bolt and in other positions to prevent movement thereof, and combined permutation setting and locking means for positioning said member for permitting movement of the bolt and simultaneously locking said member when positioned.

[Claims 6 to 10 not printed in the Gazette.]

1,171,905. COHERING OR BINDING COMPOSITION AND PROCESS OF MAKING THE SAME. ROBERT FULTON TOMPKINS, New York, N. Y., assignor to The Binder Company, a Corporation of New Jersey. Filed Aug. 11, 1913, Serial No. 784,121. Renewed Aug. 4, 1915. Serial No. 43,707. (Cl. 134—1.)

1. A cohering or binding composition comprising a glucosid, a tannin and a soluble silicate.

2. A cohering or binding composition comprising a glucosid, a tannin, a soluble silicate and water.

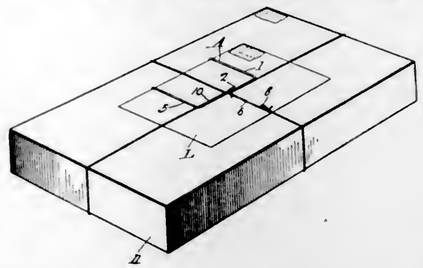
3. A cohering or binding composition comprising an aromatic glucosid, a tannin and a soluble silicate.

4. A cohering or binding composition comprising an aromatic glucosid, a tannin, a soluble silicate and water.

5. A cohering or binding composition comprising a glucosid, a tannin and sodium silicate.

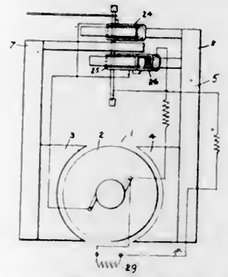
[Claims 6 to 17 not printed in the Gazette.]

1,171,906. PACKAGE-TIE. JOAO TOSTA, Lowell, Mass., assignor of one-half to Thomas T. Mello, Lowell, Mass. Filed Dec. 30, 1914. Serial No. 879,637. (Cl. 24—18.)



The herein described package tie, made from a single piece of wire and bent to provide a cross bar, two U-shaped members, one at each end of and at right angles to the cross bar, the longer terminals of the U-shaped members being projected beyond the cross bar and bent inwardly toward a common point, one terminating thereat in a hook, while the other is bent away from the cross bar at right angles, and a hook formed upon the free end of the last right angled portion.

1,171,907. ELECTRICAL MEASURING INSTRUMENT. HAROLD E. TRENT, Wilkinsburg, Pa. Filed Nov. 16, 1914. Serial No. 872,361. (Cl. 171—95.)



1. In an electrical measuring instrument, the combination with a stationary permanent magnet and a movable member having an actuating and a controlling winding thereon, of a winding for neutralizing the effect of the said controlling winding only when the movable member is in its initial position.

2. An ohmmeter comprising a permanent field magnet having pole pieces of variable cross sectional area, an armature having a main winding thereon, a controlling winding also associated with the said armature and a third winding for opposing the said controlling winding under predetermined conditions.

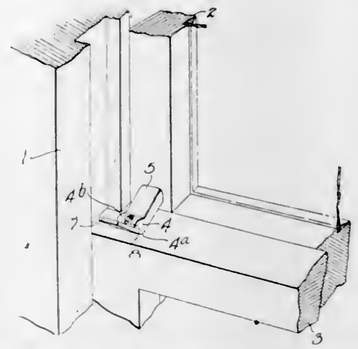
3. An electrical measuring instrument comprising a permanent magnet having polar extensions thereon, a movable member having two windings thereon that surround the said polar extensions, and a third winding for neutralizing the effect of one of the said windings under predetermined conditions.

4. An ohmmeter comprising a permanent magnet having polar extensions thereon, a current and a voltage winding surrounding the said polar extensions, a shaft upon which the said windings are disposed and a neutralizing winding adapted to oppose the said voltage winding under predetermined conditions.

5. An ohmmeter comprising a permanent field magnet having pole pieces placed side-by-side, parallel to each other and separated by air gaps, a polar extension on one of the said field magnet pole pieces and means for opposing the magnetic lines of force that traverse the said field magnet pole piece from which extends the polar projection under predetermined conditions.

[Claims 6 to 11 not printed in the Gazette.]

1,171,908. SASH-FASTENER. WILLIAM T. WARE, Jackson, Tenn. Filed Aug. 10, 1915. Serial No. 44,728. (Cl. 16—146.)



As a new article of manufacture, a sash fastener including a stock having the form of a segment of a cylinder, the flat faces thereof meeting at a rocking edge which is the center of curvature for the cylindrical surface, and the stock being formed with a slot arranged in a plane transverse to the rocking edge, said slot being contracted at the rocking edge and gradually flaring outwardly toward the cylindrical surface, an integral and radially disposed locking arm projecting from one side of the stock and terminating in a cam nose adapted to engage the upper sash, an integral and radially disposed finger piece projecting from the opposite side of the stock, the lower faces of the locking arm and finger piece forming continuations of the flat faces of the stock, and a headed fastening pin passing through the slot of the stock and serving to secure the device to the lower sash, the head of the pin frictionally engaging the cylindrical surface of the stock to hold the device against accidental movement, while the flared formation of the slot admits of the stock being readily swung about its rocking edge to move the locking arm into and out of operative position.

1,171,909. METHOD OF CONCRETE CONSTRUCTION. CARL WEBER, Chicago, Ill., assignor to Cement Gun Construction Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 25, 1915. Serial No. 57,695. (Cl. 18—59.)

1. The method of constructing a wall, or the like, of plastic material, which consists in forming the same in two sections or portions by impelling said material against a backing to form the first portion, removing the backing from the hardened portion thus formed to uncover its surface, and thereafter forming the other portion by impelling plastic material against said uncovered surface.

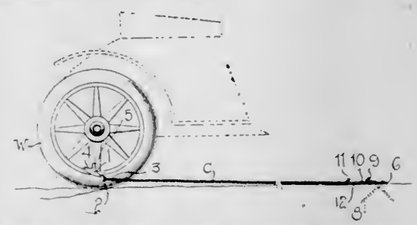
2. The method of constructing a reinforced concrete wall, or the like, which consists in securing concrete-reinforcing means to a side of the framework of the structure, applying a backing to said reinforcing means, impelling concrete against said backing through said reinforcing means to form one portion of the concrete covering, removing the backing and, after the said portion thus formed has hardened, similarly impelling concrete against the surface from which the backing was removed, to form the other portion of said covering.

3. The method of constructing a reinforced-concrete wall, or the like, which consists in securing concrete-reinforcing means to a side of the framework of the structure, applying a backing to said reinforcing means, impelling concrete against the backing-surface covered by said reinforcing means to form a thin inner cementi-



tious layer of relatively fine composition and one portion of the concrete covering against said surface, removing the backing, and, after hardening of the covering-portion thus formed, similarly impelling concrete against its surface from which the backing was removed, to form thereof a similar inner layer and the other portion of said covering.

1,171,910. MEANS FOR EXTRACTING WHEELS OF POWER-DRIVEN VEHICLES FROM HOLES. ELMER WHITMER, Glendive, Mont. Filed Mar. 6, 1915. Serial No. 12,688. (Cl. 21—114.)



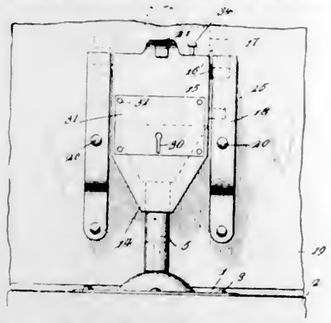
1. Means for the purpose set forth comprising an anchoring plate provided with perforations, an upstanding and rearwardly disposed hook member carried by one extremity of the plate, a yoke detachably engageable with the hook member, a flexible member engageable with the extremities of the yoke, and wheel engaging means engageable with the flexible member.

2. Means for the purpose set forth comprising an anchoring plate provided with securing means, a flexible member engageable with the plate, a yoke adapted to straddle the rim portion of a wheel structure, arms pivotally engaged with the yoke and positioned at opposite sides of the rim portion, the opposite extremities of said arms being provided with hooks, said flexible member being engageable with the hooks at adjacent extremities of the arms, and a second flexible member engageable with the opposite hooks of the arms and adapted to straddle the tread portion of the wheel structure.

1,171,911. HOOD FASTENER AND LOCK. JOSEPH B. WIEGEL, Magnolia, Minn. Filed June 12, 1914. Serial No. 844,714. (Cl. 70—27.)

1. A fastener and lock including a movably and resiliently mounted casing, engaging means projecting from the upper end of the casing, securing means for receiving the engaging means, said securing means preventing

movement of the casing, and locking mechanism disposed within the casing and associated with the securing means for preventing surreptitious removal of the casing.



2. A fastener and lock including a movably and resiliently mounted casing, trunnions projecting from the upper sides of said casing, a pair of supporting bars provided with recesses in their upper ends for receiving said trunnions, and locking mechanism disposed within the casing and associated with one of the supporting bars for preventing surreptitious movement of the casing.

3. A fastener and lock including an anchor plate provided with a slot, a cylinder disposed upon the plate, a rod extending through the cylinder and connected to the plate, a coil spring disposed about the rod, a head formed on the upper end of the rod for engagement with said spring, a casing secured to the upper end of the cylinder, means for detachably securing the upper end of the casing, said securing means preventing movement of the casing, and locking mechanism disposed within the casing and associated with the securing means for preventing the surreptitious removal of the casing.

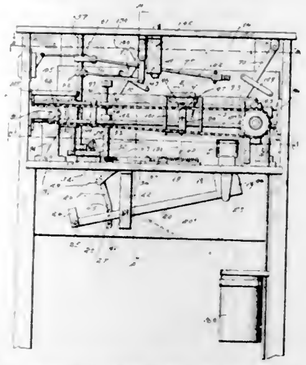
4. A fastener and lock comprising an anchor plate provided with a slot, a cylinder disposed upon the plate, a rod extending through the cylinder and connected to the plate, a spring disposed about the rod, a head on the upper end of the rod for engagement with said spring, a casing secured to the upper end of the cylinder, trunnions extending from the opposite side of said casing, a pair of supporting bars provided with recesses in their upper ends for receiving said trunnions, and locking mechanism in said casing for removable engagement with one of the supporting bars for preventing the surreptitious removal of the casing.

5. A fastener and lock comprising an anchor plate provided with a slot, a cylinder disposed upon the plate, a rod extending through the cylinder and connected to the plate, a spring disposed about the rod, a head on the upper end of the rod for engagement with said spring, a casing secured to the upper end of the cylinder, trunnions extending from the opposite side of said casing, a pair of supporting bars provided with recesses in their upper ends for receiving said trunnions, a bolt slidably and resiliently mounted in the casing for removable engagement with one of said supporting bars, means for operting the bolt, and means for controlling the operation of the bolt.

[Claim 6 not printed in the Gazette.]

1,171,912. COIN-CONTROLLED SCALE. DE FOREST CURTIS WILLIAMS, Pittsburgh, and WILLIAM MARSH UPDEGRAVE, Johnstown, Pa. Filed June 16, 1913. Serial No. 774,057. (Cl. 194—35.)

1. In a coin controlled machine having a vertical rotatable rod, a vertically movable shutter adapted to be operated by said rod, an inclined link loosely connected to said shutter and shaft by means of which said shutter is drawn to a vertically raised position, inclined hangers upon which said shutter is mounted, straps adapted to hold said hangers against horizontal movement, a lever on said rod by means of which it is rotated, a plunger having means thereon adapted to actuate said lever, a spring connected to said plunger whereby it is held in a normal outwardly projecting position, the weight of said shutter drawing upon said link being adapted to hold said rod in a normal position, a spring actuated dog adapted to engage said plunger when in a pushed in position and thereby hold said rod in a rotated position and hold said shutter in a raised position.



2. In a coin controlled machine having a vertical rotatable rod, a vertically movable shutter adapted to be operated by said rod, an inclined link loosely connected to said shutter and shaft by means of which said shutter is drawn to a vertically raised position, inclined hangers upon which said shutter is mounted, straps adapted to hold said hangers against horizontal movement, a lever on said rod by means of which it is rotated, a plunger having means thereon adapted to actuate said lever, a spring connected to said plunger whereby it is held in a normal outwardly projecting position, the weight of said shutter drawing upon said link being adapted to hold said rod in a normal position, and a spring actuated dog adapted to engage said plunger when in a pushed in position and thereby hold said rod in a rotated position and hold said shutter in a raised position, and a bell crank adapted to trip said dog whereby said plunger is released.

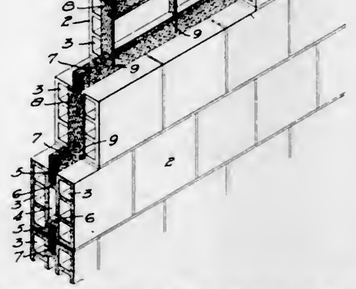
3. In a coin controlled machine having a vertical rotatable rod, a vertically movable shutter adapted to be operated by said rod, an inclined link loosely connected to said shutter and shaft by means of which said shutter is drawn to a vertically raised position, inclined hangers upon which said shutter is mounted, straps adapted to hold said hangers against horizontal movement, a lever on said rod by means of which it is rotated, a plunger having means thereon adapted to actuate said lever, a spring connected to said plunger whereby it is held in a normal outwardly projecting position, the weight of said shutter drawing upon said link being adapted to hold said rod in a normal position, a spring actuated dog adapted to engage said plunger when in a pushed in position and thereby hold said rod in a rotated postion and hold said shutter in a raised position, a bell crank adapted to trip said dog whereby said plunger is released, and a vertically operating latch adapted to hold said bell crank out of engagement with said dog.

4. In a coin controlled machine having a vertical rotatable rod, a vertically movable shutter adapted to be operated by said rod, an inclined link loosely connected to said shutter and shaft by means of which said shutter is drawin to a vertically raised position, inclined hangers upon which said shutter is mounted, straps adapted to hold said hangers against horizontal movement, a lever on said rod by means of which it is rotated, a plunger having means thereon adapted to actuate said lever, a spring connected to said plunger whereby it is held in a normal outwardly projecting position, the weight of said shutter drawing upon said link being adapted to hold said rod in a normal position, a spring actuated dog adapted to engage said plunger when in a pushed in position and thereby hold said rod in a rotated position and hold said shutter in a raised position, a bell-crank adapted to trip said dog whereby said plunger is released, a vertically operating latch adapted to hold said bell-crank out of engagement with said dog, and a spring adapted to actuate said latch to hold it in a normally raised position.

5. In a coin controlled machine having a vertical rotatable rod, a vertically movable shutter adapted to be operated by said rod, an inclined link loosely connected to said shutter and shaft by means of which said shutter is drawn to a vertically raised position, inclined hangers upon which said shutter is mounted, straps adapted to hold said hangers against horizontal movement, a lever on said rod by means of which it is rotated, a plunger having means thereon adapted to actuate said lever, a spring connected to said plunger whereby it is held in a normal outwardly projecting position, the weight of said shutter drawing upon said link being adapted to hold said rod in a normal position, a spring actuated dog adapted to engage said plunger when in a pushed in position and thereby hold said rod in a rotated position and hold said shutter in a raised position, a bell crank adapted to trip said dog whereby said plunger is released, a vertically operating latch adapted to hold said bell crank out of engagement with said dog, and a spring adapted to actuate said latch to hold it in a normally raised position, said bell-crank being spring actuated whereby it will engage and actuate said dog.

[Claims 6 to 58 not printed in the Gazette.]

1,171,913. FIREPROOF BUILDING-WALL. WILLIAM E. WILSON, Mason City, Iowa. Filed May 12, 1914. Serial No. 838,061. (Cl. 72—41.)

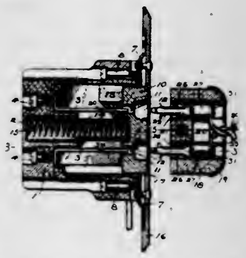


1. A wall composed of a series of blocks, each having a central opening extending through the block from end to end thereof, and each having a longitudinal, independent opening extending from end to end of the block, on each side of said central opening, each block having longitudinal, centrally arranged recesses above and below its central opening, vertical insulating pads inserted between the abutting ends of the blocks in the same course, horizontal pads fitting within the recesses in said blocks and interlocking with the ends of said vertical pads at their point of intersection, said vertical and horizontal pads closing the vertical and horizontal joints in said wall.

2. A wall composed of a series of blocks, each having a central opening extending through the block from end to end thereof and each having a longitudinal, independent opening extending from end to end of the block on each side of said central opening, each block having longitudinal, centrally arranged recesses above and below its central opening, insulating pads inserted between the abutting ends of the blocks in the same course, horizontal pads fitting within said central openings and extending lengthwise thereof, similar pads fitting within the recesses in said blocks and interlocking with the ends of said vertical pads at their points of intersection, said vertical and horizontal pads closing the vertical and horizontal joints in said wall and insulating said walls and joints against the passage of heat and cold.

3. A wall composed of a series of blocks, each having a central opening extending through the block from end to end thereof and each having a longitudinal, independent opening extending from end to end of the block on each side of said central opening, each block having longitudinal, centrally arranged recesses above and below its central opening, vertical insulating pads inserted between the abutting ends of the blocks in the same course and having centrally arranged slots to register with the ends of said central openings, horizontal pads fitting within the recesses in said blocks and interlocking with the ends of said vertical pads at their points of intersection and similar horizontal pads passing through said central openings and through the central slots in said vertical pads, said longitudinal and vertical pads insulating said walls and joints against the passage of heat and cold.

1,171,914. RECEPTACLE AND PLUG. GILBERT WRIGHT, Pittsfield, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Aug. 13, 1906. Serial No. 330,293. (Cl. 173—330.)



1. A receptacle having a side opening, a plurality of stationary contacts therein opposite said opening, and an outwardly impelled shutter provided with apertures through which the contacts protrude upon displacement of the shutter.

2. A receptacle having a side opening, a plurality of stationary contacts therein opposite to and below said opening, and a spring-pressed shutter of insulating material displaceable within said receptacle and provided with apertures through which the contacts protrude upon displacement of the shutter.

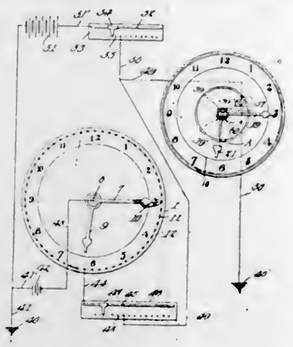
3. A receptacle having a side opening, contacts secured wholly within said receptacle and projecting part way toward said opening, a spring-pressed shutter displaceable within said receptacle and provided with means for guiding it therein and with means whereby the contacts may protrude therethrough upon displacement thereof.

4. A receptacle having a side opening, a cylindrical chamber formed therein opposite said opening, contacts secured on opposite sides of said chamber, a shutter of insulating material for said opening displaceable within said receptacle and provided with apertures through which the contacts protrude upon displacement of the shutter, and a spring seated in said chamber and pressing said shutter outwardly.

5. A receptacle having a parallel-sided box portion, two stationary contacts secured to the bottom thereof, binding posts connected to said contacts and disposed in diagonally opposite corners of the box, and a shutter displaceable within said receptacle and having two guide projections adapted to engage the other diagonally opposite corners of the box.

[Claims 6 to 11 not printed in the Gazette.]

1,171,915. ELECTRIC TRAIN BULLETIN-BOARD. CLIFFORD EARL ABERNETHY, Hickory, N. C. Filed Dec. 4, 1914. Serial No. 875,518. (Cl. 177—338.)



1. A system of the character described, embodying a master clock having a switch member and an annular series of contacts for the engagement therewith of said switch member, a plurality of displaying clocks each having a spring returned hand, electro-magnetically-operated means for advancing the hand of each displaying clock, means for preventing the return movement of the hand of each displaying clock, electro-magnetically-operated means controlling each second mentioned means, means for electrically connecting the switch member and contacts of the master clock to the first mentioned electro-magnetically-operated means of the displaying clocks, means for energizing the second mentioned electro-magnetically-operated means of the displaying clocks, the fourth and fifth mentioned means including selective switches whereby the displaying clocks may be controlled individually by the master clock.

2. A system of the character described, embodying a master clock having a switch member and an annular series of contacts for the engagement therewith of said switch member, a displaying clock having a spring returned hand, electro-magnetically-operated means for advancing the hand of the displaying clock, means for preventing the return movement of the hand of the displaying clock, electro-magnetically-operated means controlling the second mentioned means, a source of electrical energy and a selective switch connected in series with the switch member and contacts of the master clock and with the first mentioned electro-magnetically-operated means, and a source of electrical energy and a selective switch connected in series with the second mentioned electro-magnetically-operated means.

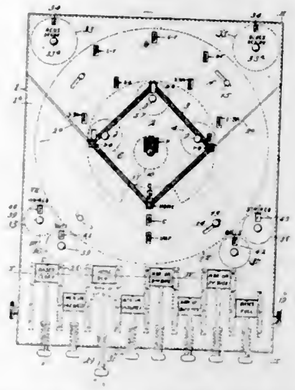
3. A system of the character described, embodying a master clock having a switch member and an annular series of contacts for the engagement therewith of said switch member, a displaying clock having a spring returned hand, electro-magnetically-operated means for advancing the hand of the displaying clock, means for preventing the return movement of the hand of the displaying clock, electro-magnetically-operated means controlling the second mentioned means, the two electro-magnetically-operated means being connected in parallel, a relatively weak source of electrical energy connected in series with the master clock and electro-magnetically-operated means, and a relatively strong source of electrical energy and a switch connected in series with said electro-magnetically-operated means, the first mentioned electro-magnetically-operated means being operated by the relatively weak source of electrical energy while the second mentioned electro-magnetically-operated means is only operated by the relatively strong source of electrical energy.

4. A system of the character described, embodying a master clock having a switch member and an annular series of contacts for the engagement therewith of said switch member, a displaying clock having a spring returned hand, electro-magnetically-operated means for advancing the hand of the displaying clock, means for preventing the return movement of the hand of the displaying clock, electro-magnetically-operated means controlling the second mentioned means, the two electro-magnetically-operated means being connected in parallel, a relatively weak source of electrical energy and a selective switch connected in series with the master clock and electro-magnetically-operated means, and a relatively strong source of electrical energy and a selective switch connected in series with said electro-magnetically-operated means, the first mentioned electro-magnetically-operated means being operated by the relatively weak source of electrical energy and the second mentioned electro-magnetically-operated means being operated only by the relatively strong source of electrical energy.

5. A displaying clock embodying a spring returned minute hand arbor having a minute hand, a ratchet wheel secured to said arbor, an oscillating lever, electro-magnetic means for oscillating said lever, a pawl carried by said lever and coöperating with the ratchet wheel for advancing the same, and electro-magnetic means carried by said lever for releasing said pawl from the ratchet wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,171,916. GAME. STEPHEN A. AKINS, Kansas City, Mo. Filed Mar. 25, 1915. Serial No. 16,892. (Cl. 46—63.)



1. In an apparatus of the character described, a plate having certain openings through which different plays may be disclosed and other openings through which players of two opposing teams may be displayed in order in their respective in and out field positions, means beneath the last mentioned openings to display the players of the opposing teams as required, means beneath the first mentioned openings to indicate different plays that arise during the progress of the game, and shutters to normally close said first-mentioned openings.

2. In an apparatus of the character described, a plate having a representation of a base ball field thereon an openings through which players of two opposing teams may be displayed in order in their respective in and out field positions, means beneath said openings to display the players of the opposing teams as required, means beneath other openings in the plate to indicate different plays during the progress of a game, shutters to close the last-mentioned openings, slideways in which said shutters operate, means for opening said shutters, and means for closing said shutters.

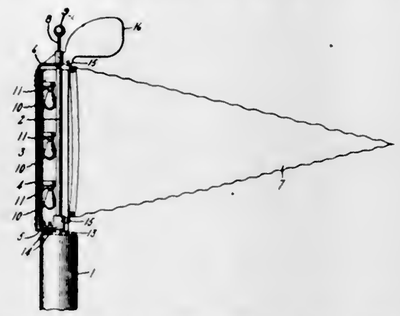
3. In an apparatus of the character described, a plate having openings through which players of two opposing teams may be displayed in order in their respective in and out field positions, means beneath said openings to display the players of the opposing teams as required, an endless apron containing various plays, which arise during the progress of the game, means for shifting said apron, and means beneath other openings in the plate for uncovering the underlying plays.

4. In an apparatus of the character described, a plate having openings through which players of two opposing teams may be displayed in order in their respective in and out field positions, means beneath said openings to display the players of the opposing teams as required, an apron containing different plays arranged in columns, means for shifting said apron, and means beneath other openings in the plate for uncovering the underlying plays.

5. In an apparatus of the character described, a plate having openings through which players of two opposing teams may be displayed in order in their respective in and out field positions, means beneath said openings to display the players of the opposing teams as required, an endless apron containing various plays which arise during the progress of a game, rollers over which said apron travels, means for rotating one of said rollers to shift the apron, and means beneath other openings in the plate for uncovering the underlying plays.

[Claims 6 to 13 not printed in the Gazette.]

1,171,917. ILLUMINATING APPARATUS. CHARLES M. AXFORD, Chicago, Ill., assignor to General Electric Company, a Corporation of New York. Filed Oct. 9, 1914. Serial No. 865,842. (Cl. 240—2.)



1. The combination with a vertically flying flag, of means for projecting light upon said flag to illuminate it mounted at the staff end of the flag and turning with the same when the wind shifts.

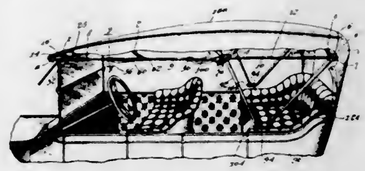
2. The combination of a vertically flying flag, means for projecting light upon said flag to illuminate it vertically pivoted at the staff end thereof, and means for turning the illuminating means with the flag when the wind shifts.

3. The combination of a vertically flying flag, means for projecting light upon said flag to illuminate it vertically pivoted at the staff end thereof, and means associated with said illuminating means for turning the same with but independently of the flag when the wind shifts.

4. The combination of a vertically flying flag, means for illuminating said flag including a reflector vertically pivoted at the staff end thereof and electric lamps mounted and arranged in proper relation to said reflector, and vane means associated with said reflector for turning it in proper relation to the flag when the wind shifts.

5. The combination of a flag flying from an upright staff, means for illuminating said flag including a vertical trough reflector pivotally mounted coaxial with the staff and a plurality of electric lamps mounted in said reflector, means for supplying current to said lamps including stationary and movable contact means associated respectively with the staff and the reflector, and vane means associated with said illuminating means for turning the same in proper relation to the flag when the wind shifts.

1,171,918. FULL-JOINT HINGE BOW-TOP. CLARENCE L. BAIR, Chicago, Ill., assignor to Auto Specialties Manufacturing Co., San Francisco, Cal., a Corporation of California. Filed Jan. 14, 1914. Serial No. 812,047. (Cl. 21—62.)



1. In the art described, a pair of normally alined horizontal side members, bows connected thereto, and a top member over said bows, said side frame members being separable between their ends into a plurality of sections and movable to a position where they are parallel and adjacent to each other, and links connecting the adjacent parts of the side frames in all positions.

2. In the art described, in combination with a vehicle body, a pair of socket members pivoted together on each side of the vehicle body, a horizontal normally alined side frame for each side of the vehicle pivotally connected at one end to one of the socket members on each side of the vehicle and at a point between its ends to the other adjacent socket member so that a substantial portion of each side frame overhangs one of its socket members, means supporting a top cover member from the side frames, means permitting selectively separating the overhanging portion of each side frame from the remainder of its side frame and moving it from its position in alinement with the remainder of the frame to a position parallel with its adjacent socket member, means for detachably connecting the thus moved side frame member to said adjacent socket member, and means allowing collapsing the portion of the side frame which is between the socket members.

3. In combination with a vehicle body and a support rising from each side thereof, a pair of side frames extending horizontally from said side supports, each of said side frames beyond its support being separable into two parts and movable from its said horizontal position in which it is in alinement with the rest of its side frame to a position where these parts are parallel to each other and parallel to the supports, means for detachably securing one of the parts of each side frame when in the last mentioned position to the adjacent side frame part, and means for securing the last mentioned side frame part to the fixed support, this in combination with means for supporting the top proper from the side frames whereby when said side frames are in alined horizontal position the top is supported in extended position and when the side frames are disconnected and supported as described the portion of the top carried by said side frames is supported in collapsed position.

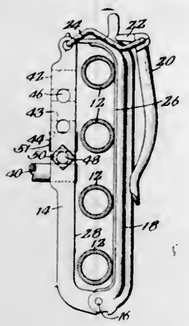
4. In the art described, a vehicle body, a support rising from each side of the body near the rear thereof, another support, such as a wind-shield rising from the front of the body, a pair of normally horizontal side frames, comprising a plurality of alined parts, connected to said rear support and to said wind-shield support, a top covering supported upon said side frames, said side frames being separable into a plurality of parts intermediate between the wind-shield and the rear supports and movable from said alined position to a position where they are parallel to each other and supported from the rear support whereby the portion of the top cover between the wind-shield and the rear supports is selectively collapsible or extensible for the purposes set forth.

5. In the art described, a side frame made in two sections, a link pivotally connected to each of said sections adapted to permit their movement between two positions; in one of which they are end to end and in

the other of which they are parallel to each other, and means for detachably connecting the sections of the side frame together in each of said positions.

[Claims 6 to 14 not printed in the Gazette.]

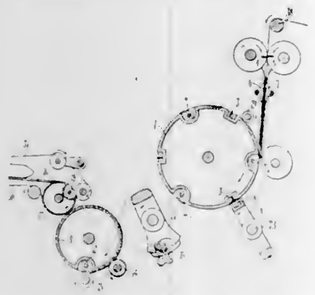
1,171,919. VEHICLE-TOP-BOW HOLDER. CLARENCE L. BAIR, Chicago, Ill., assignor to Auto Specialties Manufacturing Co., San Francisco, Cal., a Corporation of California. Filed Aug. 1, 1914. Serial No. 854,432. (Cl. 21—61.)



1. A bow holder having a rear or base member provided with a plurality of parallel holes extending therethrough in one direction adapted to selectively receive a stud upon the vehicle body, and with a plurality of transverse holes between and entering the first mentioned holes, and a conical locking screw or bolt insertible through the last mentioned holes for the purposes set forth.

2. A bow holder having a rear or base member provided with a plurality of parallel holes extending therethrough in one direction adapted to selectively receive a stud upon the vehicle body, and an idle pin, and with a plurality of transverse holes between and entering the first mentioned holes, and a conical locking screw or bolt insertible through the last mentioned holes for the purposes set forth.

1,171,920. SHEET-FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 4, 1914. Serial No. 822,483. (Cl. 101—120.)



1. In a sheet folding machine, a rotary sheet carrier and a device thereon arranged to respectively perforate and fold off the sheet at different points in the travel of the carrier.

2. In a sheet folding machine, a rotary sheet collector and a device thereon arranged to respectively perforate and fold off the collected sheets at different points in the travel of the collector.

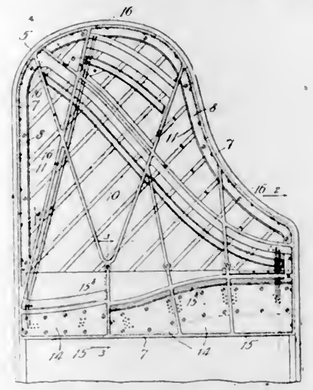
3. In a sheet folding machine, folding mechanism including coacting folding devices, one arranged to also perforate the sheet along the line of fold before the folding operation at a point different from its folding off point.

4. In a sheet folding machine, two rotary sheet carriers having coacting folding devices, the folding device on one carrier also serving to perforate the sheet along the line of fold before the folding operation at a point in the travel of the carrier different from its folding-off point.

5. In a sheet folding machine, folding mechanism including a rotary sheet carrier provided with a combined sheet perforating and tucking blade having a serrated edge.

[Claims 6 to 8 not printed in the Gazette.]

1,171,921. PIANO. WILLIAM M. BAUER, Chicago, Ill. Filed June 22, 1914. Serial No. 846,525. (Cl. 84—25.)



1. In a piano, in combination with the piano case, a metal rim secured to the inner face of the case and extending about the same and provided with an inwardly extending ledge, a sounding-board provided at each side of its edge portion with a wooden reinforcing portion firmly secured thereto and screws passing through the ledge at intervals and threaded into the reinforced portion of the sounding-board whereby it is secured to the ledge.

2. In a piano, in combination with the piano case, a metal rim secured to the inner face of the case and extending about the same and provided with an inwardly extending ledge, a sounding-board provided at each side of its edge portion with a reinforcing portion formed of laminated wood, said reinforcing portion being firmly secured to the edge portion of the sounding-board, and screws passing through the ledge at intervals and threaded into the reinforced portion of the sounding-board whereby it is secured to the ledge.

3. In a piano, in combination with the piano case, a T-metal rim secured at both of its flanges to the inner face of the case and extending about the same to provide an inwardly extending ledge, a sounding board provided at its edge-portion with wooden reinforcement firmly secured thereto, and screws at intervals firmly securing the sounding-board at its reinforced edge to bear thereat against said ledge.

4. In a piano, in combination with a piano case, a T metal rim secured at both of its flanges to the inner face of the case and extending about the same to provide an inwardly extending ledge, a sounding-board provided at each side of its edge portion with a wooden reinforcing portion firmly secured thereto, and screws passing through the ledge at intervals and threaded into the reinforced portion of the sounding-board whereby it is secured to the ledge.

5. In a piano, in combination with a piano case, a metal rim secured to the inner face of the case and extending about the same and provided with an inwardly extending ledge, a sounding-board provided at one side of its edge portion with a wooden reinforcing portion firmly secured thereto, screws passing through the ledge at intervals and threaded into the reinforced portion of the sounding-board whereby the sounding-board is secured to the ledge, and set screws threaded into the rim at intervals with their heads bearing against the wooden reinforced portion.

[Claim 6 not printed in the Gazette.]

1,171,922. MIXER. LAVERN BORDWELL, New York, N. Y. Filed Mar. 11, 1914. Serial No. 823,918. (Cl. 107—37.)



1. A mixer comprising a receptacle, a hinged cover therefor, and a unitary beater mechanism separate from the cover comprising a framework, beater blades carried thereby, actuating means for the said blades and a handle; the framework of the said beater mechanism and one section of the cover having an interlocking connection, said connection and cover providing means whereby the beater may be removed from the cover and removed from the receptacle when a portion of the cover has been swung outwardly.

2. A mixer comprising a receptacle, a hinged cover therefor, the cover and receptacle having interlocking connections; and a unitary beater mechanism separate from the cover comprising a framework, beater blades carried thereby, actuating means for the said blades, and a handle; said framework and one portion of the cover having an interlocking connection, said connection and cover providing means whereby the beater may be removed from the cover and removed from the receptacle when a portion of the hinged cover has been swung outwardly.

3. A mixer comprising a receptacle, a hinged cover therefor, the cover and receptacle having interlocking connections, whereby the cover may be fastened or removed from the receptacle; and a unitary beater mechanism separate from the cover comprising a framework, beater-blades carried thereby, actuating means for the said blades, and a handle; said framework and one portion of the cover having an interlocking connection, said connection and cover providing means whereby the beater may be removed from the cover and removed from the receptacle when a portion of the cover has been swung outwardly.

4. A mixer comprising a receptacle, a cover therefor, said cover having a depending flange, interlocking connections between the flange and the receptacle, whereby the cover is removably carried by the receptacle, said cover comprising two hinged portions; and a unitary beater mechanism separate from the cover comprising a framework, beater-blades carried thereby, actuating means for the said blades, and a handle; an interlocking connection between the beater framework and one section of the cover, whereby the beater may be removed from the receptacle and the cover when a section of the cover is swung away from the receptacle.

5. A mixer comprising a receptacle, a hinged cover, interlocking connections between the cover and the receptacle whereby the cover is removably carried thereby, a catch for holding the said sections of the cover together, and a unitary beater mechanism separate from the cover comprising a framework, beater blades carried thereby, actuating means for the said blades and the handle; an interlocking connection between the beater-blade framework and one section of the cover, whereby the beater may be removed from the receptacle and the cover when a section of the cover is swung away from the receptacle.

[Claims 6 to 14 not printed in the Gazette.]

1,171,923. MIXER. LAVERN BORDWELL, New York, N. Y. Filed Nov. 28, 1914. Serial No. 874,410. (Cl. 107—37.)



1. In a mixer, the combination with a receptacle having an open top, of a cover therefor comprising a ring-like member attachable to the top of the receptacle, two swinging members carried by the ring-like member, and an attachable beater mechanism, a flange carried by one of the swinging members adapted to interlock with the beater mechanism.

2. In a mixer, the combination with a receptacle having an open top, of a cover therefor comprising a ring-like member attachable to the top of the receptacle, two swinging members carried by the ring-like member, and an attachable beater mechanism, a flange on the swinging member, the two said flanges arranged to lie adjacent each other, and a catch carried by one of the said flanges for clamping them together.

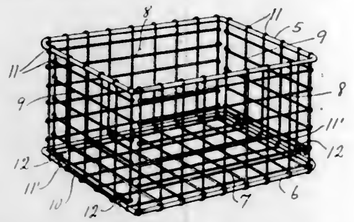
3. In a mixer, the combination with a receptacle having an open top, of a cover therefor comprising a body portion attachable to the top of the receptacle, the said body portion having an opening therein, two swinging members carried by the body portion to span the opening therein, and an attachable beater mechanism, the swinging members adapted to interlock with the beater mechanism.

4. In a mixer, the combination with a receptacle having an open top, of a cover therefor comprising a body portion attachable to the top of the receptacle, the said body portion having an opening therein, swinging members carried by the body portion, and an attachable beater mechanism, the swinging members adapted to interlock with the beater mechanism.

5. In a mixer, the combination with a receptacle having an open top, of a cover therefor comprising a body portion attachable to the top of the receptacle, the said body portion having an opening therein, swinging members carried by the body portion, and an attachable beater mechanism, the said swinging members when in their closed position forming an interlocking connection with the beater mechanism and in their open position allowing the withdrawal of the beater from the receptacle, and an attachment from its interlocking connection with the swinging members.

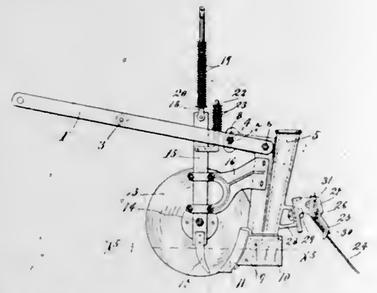
[Claims 6 to 18 not printed in the Gazette.]

1,171,924. COLLAPSIBLE CRATE OR RECEPTACLE. ALVIN D. BROWN, Norwich, N. Y. Filed Feb. 19, 1915. Serial No. 9,409. (Cl. 220—132.)



A collapsible crate including top and bottom rectangular marginal frame wires, wire mesh side sections permanently connected to the longitudinal portions of said marginal wires, a wire mesh bottom secured upon the bottom marginal wire, wire mesh end sections permanently connected to the ends of the top marginal wire for swinging movement with respect thereto, said side sections of the crate being adapted for lateral swinging movement upon the sides of the lower marginal wire, and said end sections being adapted to be swung inwardly over the top marginal wire and upon each other when the crate is collapsed, and hook members on the ends of the bottom marginal wire for engagement with the free ends of the wire end sections of the crate to retain the several parts of the crate in erect position.

1,171,925. GRAIN-DRILL. JOHN B. BUSHNELL, Minneapolis, Minn. Filed Jan. 20, 1913. Serial No. 743,093. (Cl. 111—11.)



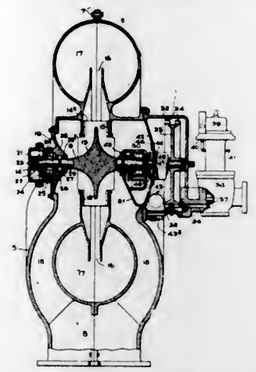
1. A furrow opener for seeding machines comprising a seed leg, a shoe at the lower end of said leg and constructed to form a furrow having an approximately flat bottom, and provided with a plow point extended obliquely backward from one side thereof, and a disk working against that side of the shoe from which said plow point extends obliquely, and extending below the bottom of said shoe.

2. A furrow opener for seeding machines comprising a seed leg, a shoe connected to the lower end of said leg and constructed to form a furrow having an approximately flat bottom, and provided with an oblique plow point plate projecting below the bottom of said shoe, in combination with a disk arranged to run in close engagement with said plow point plate with its lower edge projecting below the lower end of said plow point plate.

3. In an attachment for seeding machines, the combination with a drag bar, of a seed leg rigidly secured thereto and provided at its lower end with a shoe and having a forwardly projecting bearing, a disk support mounted for vertical movements in said forwardly projecting bearing, a disk journaled to said disk support, and a yielding connection between said disk support and drag bar.

4. In an attachment for seeding machines, the combination with a drag bar, of a seed leg rigidly secured thereto and provided at its lower end with a shoe and having a forwardly projecting bearing, a disk support mounted for vertical movements in said forwardly projecting bearing, a disk journaled to said disk support, a yielding connection between said disk support and drag bar, and a scraper applied to the lower end of said disk support and arranged to clean the lower portion of said disk.

1,171,926. MOTOR-DRIVEN GAS-COMPRESSOR. HENRY A. CARPENTER, Sewickley, Pa., assignor to General Electric Company, a Corporation of New York. Filed Mar. 31, 1914. Serial No. 828,492. (Cl. 230—11.)



1. In an apparatus of the character described, the combination with a completely closed casing, a partition therein dividing the interior into two chambers, a motor in one chamber, a fluid impeller in the other chamber, a shaft that passes through the partition and transmits rotary motion from the motor to the impeller and is wholly inclosed by the casing walls, and bearings for the shaft also inclosed by the casing.

2. In an apparatus of the character described, the combination with a completely closed casing that is divided in an axial plane into two principal sections, a partition therein dividing the interior into two chambers, a motor in one chamber, a fluid impeller in the other chamber, a shaft that passes through the partition and transmits rotary motion from the motor to the impeller and is wholly inclosed by the casing walls, and bearings for the shaft also inclosed by the casing.

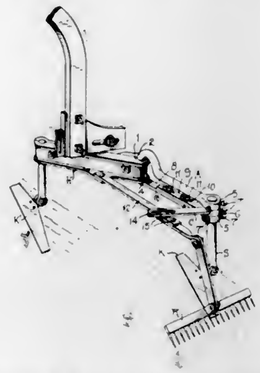
3. In an apparatus of the character described, the combination of a completely closed casing, a partition therein dividing it into chambers which are located side by side, an impeller in one of the chambers for compressing a fluid, a motor in another of said chambers, a shaft that apsses through said partition and transmits rotary motion from the motor to the impeller and is wholly inclosed by the casing walls, and bearing means for the shaft also inclosed by the casing.

4. In an apparatus of the character described, the combination of a completely closed casing, a partition therein for dividing it into chambers which are located side by side, the walls of one chamber confining the fluid being compressed and the walls of the other the motive fluid, an impeller in one of the chambers for compressing a fluid, a turbine rotor in another of said chambers, a shaft that passes through said partition and transmits rotary motion from the rotor to the impeller and is wholly inclosed by the casing walls, bearing means for the shaft also inclosed by the casing, and inlet and outlets for the impeller and rotor.

5. In an apparatus of the character described, the combination of a completely closed casing that is divided in an axial plane into two principal sections, a partition therein which divides the casing into chambers that are located side by side, the walls of said chambers serving to confine different fluids, an impeller in one of the chambers for compressing a fluid, walls surrounding the impeller which are located in its chamber and assist in compressing the fluid, a turbine rotor in another of said chambers, a shaft that passes through said partition, transmits rotary motion from the rotor to the impeller and is wholly inclosed by the casing walls, bearing means for the shaft also inclosed by the casing, means preventing the exhaust fluid of the rotor from passing through the partition, and inlet and outlets for the impeller and rotor.

[Claims 6 to 13 not printed in the Gazette.]

1,171,927. SURFACE-CULTIVATOR. WILLIAM CAVE, Newell, Iowa. Filed Sept. 18, 1915. Serial No. 51,395. (Cl. 97—35.)



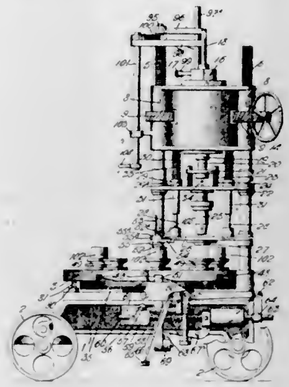
1. In combination with a cultivator including a head provided with an opening therethrough, an arm having an angular extremity disposed within said opening, a second arm having a lateral extension disposed within the opening through the opposite side of the head, both of said arms being arranged substantially parallel to the line of draft, means coacting with the extensions of the arms for maintaining said arms operatively engaged with the head, and a ground engaging implement operatively supported by the outer extremities of the arms.

2. In combination with a cultivator including a head provided with an opening therethrough, an arm having an angular extremity disposed within said opening from one side of the head, a second arm having a lateral extension disposed within the opening through the opposite side of the head, means coacting with the extensions of the arms for maintaining said arms operatively engaged with the head, and a ground engaging implement operatively supported by the outer extremities of the arms, one of said arms being capable of longitudinal adjustment.

3. In combination with a cultivator including a head provided with an opening therethrough, an arm having an angular extremity disposed within said opening from one side of the head, a second arm having a lateral extension disposed within the opening through the opposite side of the head, means coacting with the extensions of the arms for maintaining said arms operatively engaged with the head, a ground engaging implement provided with a shank operatively engaged with the outer extremities of the arms, a third arm opeartively engaged with the shank of the ground engaging implement and disposed laterally relative to the first named arms, a bar pivotally engaged with the head and adjustably engaged with the third mentioned arm, and a rake engaged with said arm.

4 In combination with a cultivator including a head provided with an opening therethrough, an arm having an angular extremity disposed within said opening from one side of the head, a second arm having a lateral extension disposed within the opening through the opposite side of the head, means coacting with the extensions of the arms for maintaining said arms operatively engaged with the head, a ground engaging implement provided with a shank operatively engaged with the outer extremities of the arms, a third arm aperatively engaged with the shank of the ground engaging implement and disposed laterally relative to the first named arms, a bar pivotally engaged with the head and adjustably engaged with the third mentioned arm, a rake, and means for securing said rake to the bar, a portion of said means serving to connect the bar with the third mentioned arm.

1,171,928. GLASS SEVERING AND PRESSING MECHANISM. GEORGE E. CLEVELAND, Fairmount, Ind., assignor to Cleveland Machine Company, a Corporation of Indiana. Filed Nov. 24, 1913. Serial No. 802,740. (Cl. 49—37.)

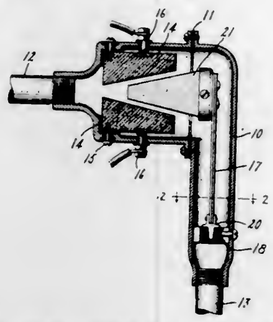


1. In a glass pressing device, the combination with a rotary table adapted to receive a press mold, of a press plunger movable to and from the table, a fluid pressure cylinder actuating the said plunger, a friction-drive mechanism constantly tending to rotate the said table, a latch for the table, means for initially releasing the said latch, means actuated by the initial movement of the table for admitting fluid pressure to the pressure cylinder to depress the plunger, timing means actuated by the descent of the plunger for admitting fluid pressure to the said cylinder to raise the plunger and to subsequently again release the table latch.

2. In a glass pressing device, the combination with a rotary table, and a press mold thereon, of a press plunger coöperating with said mold, constantly rotating means for the table, a fluid pressure actuator for the plunger, a valve for controlling the application of power thereto, an actuator for said valve comprising a disk carrying thereon two wipers, one radially and the other angularly adjustable thereon, and means controlled by the rotation of the table to drive said disk from the constantly rotating means for the table.

3. In a glass pressing device, the combination with a rotary mold-carrying table, of a press plunger movable to and from the table, a fluid pressure cylinder actuating the said plunger, a reversing valve controlling the application of pressure to the plunger, a rocking valve shaft, wipers adapted to reversely rock the said shaft, a gear driving the said table, a latch for the table, a source of power, a friction coupling interposed between the source of power and the table drive gear, and clutches interposed between the source of power and the wipers, means controlled respectively by the movement of the table and of the plunger for closing the clutches, and means connected with the wiper actuated by the descent of the plunger for releasing the table latch.

1,171,929. WATER-HEATER. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 26, 1910. Serial No. 594,276. (Cl. 219—40.)



1. A water heater comprising a member defining a passage through which water flows to be heated, electrical means associated with said member for heating the water, and means controlled by the temperature of the heated water for varying the effective area of said passage

2. A water heater comprising a member defining a passage through which water flows to be heated, electrical means located within said passage for heating the water, and means controlled by the temperature of the heated water in said passage for varying the effective area of said passage.

3. An electric water heater comprising electrodes between which water passes to be heated, and means responsive to changes in temperature for varying the effective passage area between said electrodes.

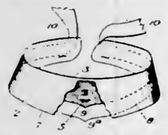
4. An electric water heater comprising a pair of conducting members between which water passes to be heated, and means responsive to changes in temperature for varying the position of said members with reference to each other.

5. An electric water heater comprising a fixed and a movable conducting member between which water passes to be heated, and means responsive to changes in temperature for moving said movable member with reference to said fixed member.

[Claims 6 to 10 not printed in the Gazette.]

1,171,930. NECKTIE. CHARLES W. T. DAVIES, New York, N. Y. Filed June 16, 1913. Serial No. 773,913. (Cl. 2—11.)

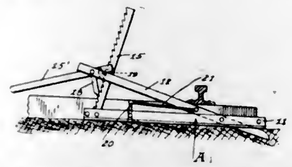
A necktie having free tying ends and a continuous



neckband which is composed of parts that permanently diverge angularly from a substantially central intermediate portion of said neckband, said neckband being provided in the region of the juncture of said portions with a projecting member adapted for use as a finger hold for manipulating the necktie.

1,171,931. TRACK-LINING JACK. CARL W. DEAN and RANSOM HUNT, Node, Wyo.; said Hunt assignor to said Dean. Filed Nov. 16, 1914. Serial No. 872,492. (Cl. 254—43.)

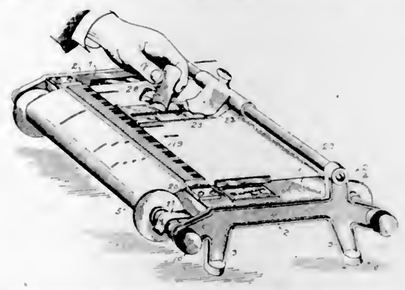
1. A track lining jack comprising a base member, an arm pivoted to said base member, a rail engaging lever pivoted to the base member and slidably engaged at its free end with said arm, and an operating lever pivoted to the rail engaging lever and engageable with said arm when moved in one direction to elevate the free end of the rail engaging lever.



2. A track lining jack comprising a base member, a toothed arm pivoted to said base member, a rail engaging lever pivoted to the base member and slidably engaged at its free end with said arm, an operating lever pivoted to the rail engaging lever, a pawl pivoted to the operating lever and engageable with the teeth of the arm when said operating lever is moved in a direction to raise the free end of the rail engaging lever, and a second pawl pivoted to the operating lever and engageable with the teeth of the arm to support the rail engaging lever during opposite movement of the operating lever.

3. A track lining jack comprising a base member, an arm pivoted to said base member, a rail engaging lever pivoted to the base member and slidably engaged at its free end with said arm, an operating lever pivoted to the rail engaging lever and engageable with said arm when moved in one direction to elevate the free end of the rail engaging lever, a brace lever pivoted to the base member, and a link connecting one end of said lever to said rail engaging means.

1,171,932. PERFORATED-MUSIC-SHEET CUTTER. WALTER G. DOTY, Dayton, Ohio. Filed Mar. 8, 1915. Serial No. 13,016. (Cl. 164—85.)



1. In a sheet perforating apparatus, a supporting bed for the material operated upon, a series of dies in said bed, a gage member movable to different positions in relation with said bed, and means for insuring the registration of the gage member in each position of adjustment with one of said dies, and a cutter adapted to coöperate with the dies.

2. In a sheet perforating apparatus, a supporting bed for the material operated upon, a series of dies located in said bed, a movable perforated gage member overlying the material operated upon the perforation of which is adapted to be registered with different dies of said series, and a cutter to be introduced through the perforation of the gage member and coöperating with the die.

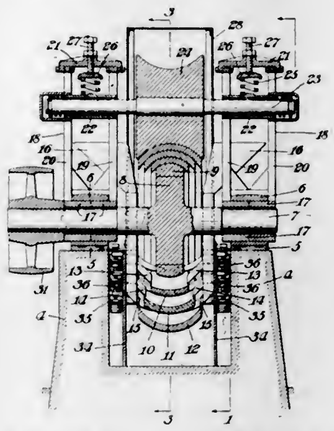
3. In a sheet perforating apparatus, a supporting bed for the material operated upon, a series of dies located in said bed, a cutter coöperating with the dies, a gage for said cutter movable to different positions to cause the cutter to register with dies corresponding with different notes, said gage having indicating means thereon for determining the position of the note represented by the perforation in the measure or bar.

4. In a sheet perforating apparatus, a supporting bed for the material operated upon, and a series of dies located in said bed, a cutter coöperating with the dies, a gage movable into registry with different dies of the series for determining the position of the perforations transversely in the sheet, and means upon the gage for determining the relative position of the perforation longitudinally in the sheet.

5. In a sheet perforating apparatus, a supporting bed for the material operated upon, a series of dies located in said bed, a cutter coöperating with the dies, a gage member for determining the point of operation of the cutter in longitudinal relation with the sheet, said gage member being transversely adjustable into registry with different dies of the series to determine the point of operation of the cutter in transverse relation with the sheet.

[Claims 6 to 37 not printed in the Gazette.]

1,171,933. GRINDING-MILL. GEORGE S. EMERICK, Nazareth, Pa., assignor, by mesne assignments, to J. Walter Keely, Philadelphia, Pa. Filed June 6, 1912, Serial No. 702,042. Renewed May 14, 1914. Serial No. 838,618. (Cl. 83—12.)



1. In a grinding mill, the combination of a grinding roller, means for rotatably supporting the grinding roller, a grinding ring surrounding and resting upon the top of the grinding roller, a presser roller engaging the top of the grinding ring, means for rotatably supporting the presser roller, the axis of one roller being movable toward and from the axis of the other roller, and a spring pressing one roller toward the other roller.

2. In a grinding mill, the combination of a grinding roller, means for rotatably supporting the grinding roller, a grinding ring surrounding and having its inner face engaged with the grinding roller, a presser roller engaging the outer face of the grinding ring, means for rotatably supporting the presser roller, one roller being movable toward and from the other roller and one roller being movable transversely to a plane extending between the axes of said rollers, a spring pressing one roller toward the other roller, and a spring supporting one roller against said transverse movement.

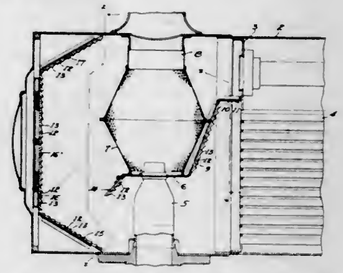
3. In a grinding mill, the combination of a grinding roller, means for rotatably supporting the grinding roller, a grinding ring surrounding and having its inner face engaged with the grinding roller, a presser roller engaging the outer face of the grinding ring, a frame movable transversely to a plane extending between the axes of said rollers, a part carrying the presser roller and being carried by said frame and being movable toward the axis of rotation of the grinding roller, a spring supporting said frame against said transverse movement, and a spring pressing said part toward the axis of rotation of the grinding roller.

4. In a grinding mill, the combination of a grinding roller, means for rotatably supporting the grinding roller, a grinding ring surrounding and having its inner face engaged with the grinding roller, a presser roller engaging the outer face of the grinding ring, a pivoted frame movable on its pivot transversely to a plane extending between the axes of said rollers, a part carrying the presser roller and being carried by said frame and being movable toward the axis of rotation of the grinding roller, a spring supporting said frame against said transverse movement, and a spring pressing said part toward the axis of rotation of the grinding roller.

5. In a grinding mill, the combination of a grinding roller, means for rotatably supporting the grinding roller, a grinding ring surrounding and having its inner face engaged with the grinding roller, a presser roller engaging the outer face of the grinding ring, a pivoted frame movable on its pivot transversely to a plane extending between the axes of said rollers, a part carrying the presser roller and being slidably connected to said frame and movable toward the axes of rotation of the grinding roller, a spring supporting said frame against said transverse movement, and a spring pressing said part toward the axis of rotation of the grinding roller.

[Claims 6 to 23 not printed in the Gazette.]

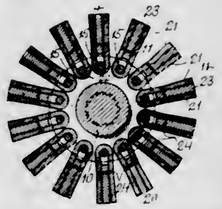
1,171,934. SPARK-EXTINGUISHER. GEORGE H. EMERSON, St. Paul, Minn. Filed Apr. 17, 1915. Serial No. 22,156. (Cl. 110—126.)



1. The combination, with a locomotive smoke box, an exhaust nozzle and a screen interposed between the nozzle and stack and a dead plate provided in the lower portion of said screen, of a roughened plate forming a forwardly and downwardly inclined extension of said dead plate, for the purpose specified.

2. The combination, with a locomotive smoke box having an exhaust nozzle, a stack, a screen interposed between said nozzle and stack, and a dead plate in the lower portion of said screen, of plates having roughened surfaces arranged upon each side of said dead plate, one of said roughened plates extending upwardly and backwardly from said dead plate toward the flue sheet of the boiler and the other roughened plate extending forwardly and downwardly from the forward portion of said dead plate.

1,171,935. FLEXIBLE ROLL FOR BOOTS AND SHOES. ORVILLE W. EWING, Derry, N. H. Filed Oct. 14, 1915. Serial No. 55,804. (Cl. 12—51.)



1. A tool for removing plaits or wrinkles from the toes of boots and shoes, comprising a rotatable body or hub,

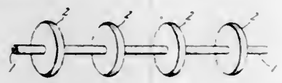
a circular series of parallel rods or pintles carried thereby, and a plurality of pounding and wiping members loosely hung upon said rods or pintles, said members having flat operative faces and being composed of relatively flexible cushioning material adapted to frictionally engage the toe portion of the upper, when the tool is rotated.

2. A tool for removing plaits or wrinkles from the toes of boots and shoes, comprising a rotatable body or hub, a circular series of parallel rods or pintles carried thereby, and a plurality of pounding and wiping members loosely hung upon said rods or pintles, and instructed and arranged both to swing thereon and to move bodily relatively thereto, each of said members comprising an inner stiff layer and outer layers of cushioning material.

3. A tool of the character described, comprising a rotatable hub having circumferential flanges at the ends thereof, a circular series of parallel rods socketed in said flanges, a series of substantially radial operating members each consisting of a cushioning friction material doubled over one of said rods between said flanges, and a layer of stiffer material intervening between the layers of folded portions of said first-mentioned material, and means for fastening said layers together.

4. A tool of the character described, comprising a rotatable hub, a circular series of parallel rods carried thereby, and a series of pounding and wiping members hung loosely on said rods to extend substantially radially from said hub when the latter is being rotated, each of said members having superimposed layers of material for frictionally engaging and wiping the work, each of said members comprising two or more connected relatively movable sections or tabs.

1,171,936. MEANS FOR PREVENTING CORONA LOSSES. GIUSEPPE FACCIOLI, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 27, 1911. Serial No. 623,630. (Cl. 173—13.)



1. A conductor comprising a longitudinal conducting element and a plurality of transverse conducting bodies with surfaces and edges curved to prevent corona and charged from said element and spaced along said element and away from one another to exert on the entire length of said element, between said conducting bodies, an electrostatic influence which renders the critical voltage of said conductor higher at all points between said bodies than the critical voltage of said conducting element alone.

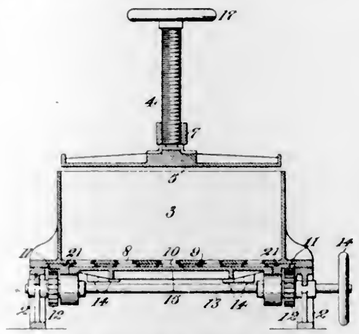
2. A conductor comprising a wire having on it a plurality of disks in electrical connection with the wire and spaced along it to cause the electrostatic field produced along said wire by each disk, to overlap the electrostatic field produced along said wire by each adjacent disk and thereby render the critical voltage of said conductor higher than that of said wire.

3. A conductor comprising a cylindrical conducting element having secured to it throughout its length a plurality of flat disks with edges curved on a radius great enough to prevent corona and spaced along said element to distribute the electrostatic stress along the entire surface of said element between disks in such a manner as to render the critical voltage of said conductor higher than that of said cylindrical conducting element constituting the minimum sections of said conductor.

4. A high potential conductor comprising a longitudinal portion and a plurality of transverse, smooth edged conducting portions electrically connected to said longitudinal portion at intervals which enable said transverse portions to coöperate and subject all of said longitudinal portion between said transverse portions to the electrostatic influence of said transverse portions and raise the critical voltage of said longitudinal portion.

5. A conductor comprising a conducting element having intermediate its ends enlarged portions with smooth surfaces and rounded edges, projecting above the adjacent surface of said element and spaced along said element to modify the distribution of electrostatic stress on said element between said enlarged portions and render the critical voltage of said conductor higher than that of said conducting element.

1,171,937. MOLDING-MACHINE. FREDERICK J. FISHER, San Francisco, Cal., assignor of nine-tenths to Otto Muller, San Francisco, Cal. Filed May 10, 1915. Serial No. 27,049. (Cl. 107—18.)



1. In a molding machine, a hopper having a plurality of discharge openings formed therein, a molding plate slidably mounted under the hopper, said plate having openings formed therein adapted to register with the openings in the hopper, a platform plate pivotally mounted on the lower side of the molding plate, and means for moving said plates in unison to bring the mold plate openings into and out of register with the discharge openings in the hopper.

2. In a molding machine, a hopper having a plurality of discharge openings formed therein, a molding plate slidably mounted under the hopper, said plate having openings formed therein adapted to register with the openings in the hopper, a platform plate pivotally mounted on the lower side of the molding plate, means for moving said plates in unison to bring the mold plate openings into and out of register with the discharge openings in the hopper, and means for exerting pressure on the contents of the hopper to fill the openings in the molding plate.

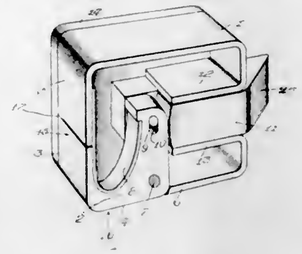
3. In a molding machine, a hopper having a plurality of discharge openings formed therein, a molding plate slidably mounted under the hopper, said plate having openings formed therein adapted to register with the openings in the hopper, a platform plate pivotally mounted on the lower side of the molding plate, means for moving said plates in unison to bring the mold plate openings into and out of register with the discharge openings in the hopper, and means for locking the platform plate with relation to the molding plate.

4. In a molding machine, a hopper having a plurality of discharge openings formed therein, a molding plate slidably mounted under the hopper, said plate having openings formed therein adapted to register with the openings in the hopper, a platform plate pivotally mounted on the lower side of the molding plate, means for moving said plates in unison to bring the mold plate openings into and out of register with the discharge openings in the hopper, means for locking the platform plate with relation to the molding plate, and means for exerting pressure on the contents of the hopper to fill the openings in the molding plate.

5. A machine of the character described, comprising a frame, a hopper adapted to receive a plastic material supported on said frame, said hopper having a plurality of discharge openings formed in the bottom, a plunger mounted in the hopper, means for raising and lowering said plunger, a molding plate mounted below the hopper, said plate having a plurality of openings formed therein adapted to register with the discharge openings in the hopper, a supporting or discharging plate pivotally mounted on the lower side of the molding plate, and means for moving said plates to one side of the hopper to discharge the contents of the molding plate.

[Claims 6 and 7 not printed in the Gazette.]

1,171,938. SECRET LATCH. JOHN H. GAETJE, Chicago, Ill. Filed Oct. 6, 1915. Serial No. 54,329. (Cl. 70—42.)



1. A latch including an angularly sectioned casing having lateral portions adjacent to one corner cut away, an operating member pivoted in said casing and presenting edge portions normally forming flush continuations of the sides from which said lateral portions were cut away, said operating member being movable about its pivotal mounting by digital friction against one of the said edge portions, the pivotal mounting being so disposed with respect to the last named edge portion that a pressure transverse to the latter will force the said member into its normal position.

2. A latch including an angularly sectioned casing having lateral portions adjacent to one corner cut away, an operating member pivoted in said casing and presenting edge portions normally formed flush continuations of the sides from which said lateral portions were cut away, said operating member being movable about its pivotal mounting by digital friction against one of the said edge portions, and a latching member movably mounted in the casing and operatively connected to said operating member.

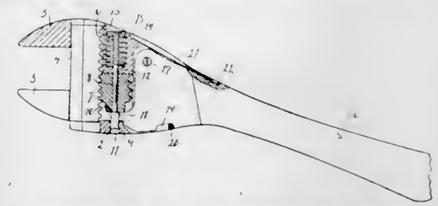
3. A latch including an angularly sectioned casing having lateral portions adjacent to one corner cut away, an operating member pivoted in said casing and presenting edge portions normally forming flush continuations of the sides from which said lateral portions were cut away, said operating member being movable about its pivotal mounting by digital friction against one of the said edge portions, and spring means normally maintaining the operating member with the said edge portions in their aforesaid positions.

4. A latch including a casing of substantially rectangular section having lateral portions adjacent to one corner cut away, and an operating member pivoted in said casing at a distance from said corner and presenting edge portions normally forming flush continuations of the sides from which said lateral portions were cut away.

5. A latch including a casing of substantially rectangular section having lateral portions adjacent to one corner cut away, and an operating member pivoted in said casing at a distance from said corner but near one of the sides from which said portions were cut and presenting edge portions normally forming flush continuations of the sides from which said lateral portions were cut away.

[Claims 6 to 9 not printed in the Gazette.]

1,171,939. WRENCH. MICHAEL I. GINSBURG, Philadelphia, Pa. Filed Mar. 18, 1914. Serial No. 825,718. (Cl. 81—126.)



1. A wrench including an adjustable jaw, an adjustable means, a spring for normally forcing the jaw toward the work through the medium of the adjusting means, said adjusting means being slidable coincident with the jaw, and a pivoted operating handle provided with means to coact with the adjusting means for holding the adjustable jaw against the work.

2. A wrench including an adjustable jaw, an adjustable means, a spring for normally forcing the jaw toward the work through the medium of the adjusting means, said adjusting means being slidable coincident with the jaw, a pivoted operating handle provided with means to coact with the adjusting means for holding the adjustable jaw against the work, and means for limiting the reverse movement of the handle.

3. A wrench including an adjustable jaw, an adjusting means, a spring for normally forcing the jaw toward the work through the medium of the adjusting means, said adjusting means being slidable coincident with the jaw, a pivoted operating handle provided with means to coact with the adjusting means for holding the adjustable jaw against the work, means for limiting the reverse movement of the handle, and a spring for normally forcing the handle toward its holding position.

4. In a device of the character stated a head provided with a stationary jaw, an adjustable jaw provided with a shank, the inner edge of said shank being provided with sectional threads, an adjusting screw meshing with said sectional threads, a spindle on which the adjusting screw is journaled, said spindle being slidably mounted in the head and provided with an enlarged portion to form a shoulder for coacting with the adjusting screw, a jaw threaded on the opposite end of said spindle, a spring coiled about said spindle, one end thereof resting against a portion of the head, and the other end resting against said nut for normally forcing the spindle outward and through the medium of the adjusting screw normally forcing the adjustable jaw toward the stationary jaw, a handle pivoted within the head provided with a locking toe adapted to coact with one end of the adjusting screw and having a notch in one edge thereof, a stop carried by the head and registering with said notch for limiting the movements of handle, and a spring carried by the handle and coacting with the head for normally forcing the handle in that direction which will cause the locking toe to engage the adjusting screw.

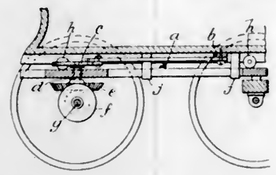
5. A wrench including a head provided with a stationary jaw, an adjustable jaw slidably mounted in said head, an adjusting screw for adjusting said adjustable jaw, a spindle slidably mounted in the head, on which the adjusting screw is journaled, means for normally forcing the spindle outward to force the adjustable jaw toward the stationary jaw through the medium of the adjusting screw, and a pivoted operating handle adapted to hold the adjustable jaw against the work through the medium of the adjusting screw.

[Claims 6 to 10 not printed in the Gazette.]

1,171,940. CHILD'S VEHICLE, &c. WILLIAM GOLDSTON, London, England. Filed July 11, 1913. Serial No. 778,571. (Cl. 208—139.)

1. In an amusement device, a pair of supporting frames; a connecting rod connected to one of the frames; a driv-

ing shaft and a driven shaft carried on the other frame; gears operatively connecting said shafts; a disk on the driven shaft and connected to said connecting rod; and means for supporting said frames one over the other.



2. In a device of the character described, a pair of supporting frames; a driving shaft and a driven shaft on one of said frames; a bevel gear mounted on said driving shaft; a gear on said driven shaft and engaging said first mentioned gear; a crank disk mounted on said driven shaft; and a connecting rod having one end connected to the crank disk and the other connected to the frame not carrying the shafts for imparting a relatively horizontal movement to said frames.

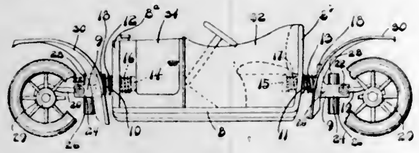
3. In a device of the character described, a pair of supporting frames; rollers for supporting one frame over the other; guides for said rollers; a driving shaft and a driven shaft mounted on one of said frames; a bevel gear on said driving shaft; a bevel gear on said driven shaft and engaging the first mentioned gear; a crank disk mounted on said driven shaft; and a connecting rod having one end connected to said crank disk and the other connected to the frame not carrying the shafts for imparting a relative movement to said frames.

4. In a device as described, a pair of frames; rollers for supporting one frame over the other; guides for said rollers; a driving shaft and a driven shaft mounted on one of said frames; interengaging gears on said shafts; a crank disk on said driven shaft; a crank pin adjustably carried on the crank disk; a connecting rod having one end connected to the crank pin and the other connected to the frame not carrying the shafts.

5. In a device as described, a pair of frames disposed one above the other, a driving shaft and a driven shaft on one frame, engaging gears on said shafts, a horizontal crank disk on said driven shaft and means operated by the disk for imparting relative movement to said frames.

[Claims 6 to 10 not printed in the Gazette.]

1,171,941. VEHICLE. WILLIAM B. GOODWIN, Columbus, Ohio. Filed Dec. 22, 1913. Serial No. 808,083. (Cl. 21—90.)



1. A vehicle construction comprising a primary chassis, secondary chassis located beyond the limits of the primary chassis, and pivots connecting the primary and secondary chassis, said secondary chassis being independent of one another.

2. A vehicle comprising a primary chassis, and a secondary chassis located at each end and beyond the limits of the primary chassis and having horizontal pivots attached to the primary chassis, each secondary chassis being independent of the other secondary chassis.

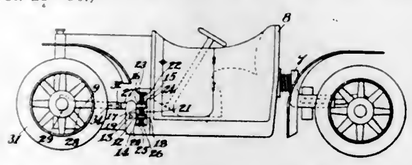
3. A vehicle comprising a primary chassis and a secondary chassis yieldingly secured to each end of the primary chassis, beyond the limits thereof, said secondary chassis being independent of one another.

4. In a vehicle, the combination of a body chassis, a steering wheel chassis pivotally and yieldingly secured to the front of the body chassis, and a driving wheel chassis pivotally and yieldingly secured to the rear of the body chassis, said steering wheel chassis and said driving wheel chassis being located beyond the limits of said body chassis.

5. In a vehicle the combination of a primary chassis, a secondary chassis secured to the front of the primary chassis, a secondary chassis secured to the rear of the primary chassis, road wheels mounted on both the front and the rear secondary chassis, means for yieldingly supporting the wheels to take up vertical movement thereof, and means for permitting yielding horizontal movement of each secondary chassis with relation to the primary chassis.

[Claims 6 to 8 not printed in the Gazette.]

1,171,942. VEHICLE. WILLIAM B. GOODWIN, Columbus, Ohio. Filed Mar. 29, 1915. Serial No. 17,603. (Cl. 21—90.)



1. A motor vehicle comprising a body chassis, a secondary chassis pivotally attached to the body chassis at the one end, and links pivotally attached to the axles of the road wheels, at the opposite end depending from the axles and pivotally attached to the body chassis whereby the body chassis is underslung with relation to the wheel axles.

2. In a motor vehicle the combination of a body chassis, a secondary chassis pivotally attached to the body chassis at one end, links pivotally attached to the body chassis at their lower ends at the opposite end of the body chassis said links being disposed vertically, means connecting the upper ends of the links with the road wheels, and a second means adapted to yieldingly maintain the links in their vertical positions.

3. In combination in a motor vehicle, a body chassis, road wheels, and links pivotally attached at their lower ends to the body chassis and means at their upper ends adapted to connect the links to the wheel axles.

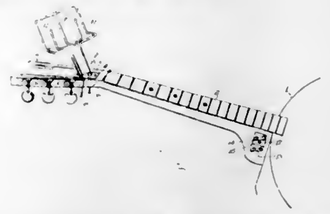
4. A spring suspension for motor vehicles comprising a pivotally mounted arm adapted to mount a road wheel at one of its ends, means located at the opposite end of the arm and adapted to permit yielding rotary motion of the arm about its pivotal point, a pivotally mounted link adapted to mount the arm at its pivotal point and adapted to permit substantial longitudinal movement of the arm, and means adapted to permit yielding rotary motion of the link.

5. In a motor vehicle the combination of a body chassis, a secondary chassis pivotally attached to the body chassis and adapted to carry the road wheels at one end of the body chassis, and links pivotally attached at opposite sides to the other end of the body chassis and adapted to carry the road wheels at the opposite end of the vehicle whereby the body chassis will have three point suspension.

1,171,943. MUSIC-BOOK HOLDER. GEORGE GUNDERSON, Grand Forks, N. D. Filed Sept. 17, 1913. Serial No. 790,171. (Cl. 84—133.)

1. A music book rack-attachment for the finger-board of a stringed music instrument, including a finger-board and a plate member having apertures arranged therein with respect to each other in such manner, and said plate member so applied to said finger-board, that a line

produced therethrough will be diagonal to the longitudinal section of said finger-board.



2. An attachment for the finger-board of a stringed musical instrument, including a finger-board, a plate member having apertures arranged therein with respect to each other in such manner and said plate so applied to said finger-board that a line produced therethrough will be diagonal to the longitudinal section of said finger-board, and a music book rack having bent finger-like members, the lower portions of said fingers being adapted to be received by said apertures, the resultant angle of said fingers serving to limit the extent of the insertion thereof in the finger-board.

1,171,944. BED OR THE LIKE. DWIGHT K. HALL, Montclair, N. J., assignor to Frank A. Hall, Montclair, N. J. Filed May 11, 1914. Serial No. 837,621. (Cl. 5—58.)



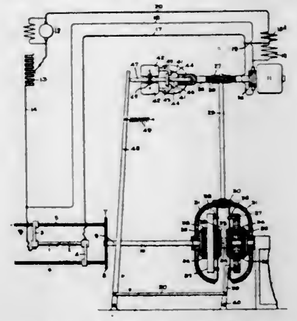
1. The combination with a bed structure having a side rail and a frame vertically movable in a plane outside the side rail, of a pivoted member carried by the side rail having its free end movable transversely into and out of the path of travel of said frame, a movable lever mechanism having connection with said side rail and adapted to have frictional engagement with said pivoted member for moving the pivoted member out of the path of the movable frame.

2. The combination with a bed structure having a side rail and a frame vertically movable in a plane outside the side rail, of a pivoted member carried by the side rail having its outer end movable transversely into and out of the path of movement of the frame, a lever pivoted to the side rail, a wiper having frictional engagement with said pivoted member for moving said member out of the path of the frame, said wiper having swinging connection with said lever and said side rail.

3. The combination with a bed structure having a side rail, a frame vertically movable in a plane outside the side rail, a member pivoted to the side rail and having transverse movement into and out of the path of travel of said movable frame, a lever pivoted to the side rail and provided with means for frictionally engaging the member to raise the same out of the path of travel of the frame.

1,171,945. REGULATING MECHANISM FOR ARC-LAMPS. JOHN L. HALL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 11, 1913. Serial No. 760,467. (Cl. 176—73.)

1. In an arc lamp, a pair of coöperating electrodes, a motor, speed responsive means connected to the motor for feeding the electrodes together or apart in accordance with the speed of the motor, the armature being connected across the arc, and means for varying the field excitation inversely as the voltage across the arc.



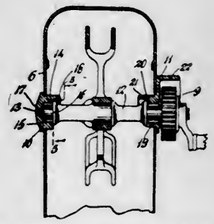
2. In an arc lamp, a pair of coöperating electrodes, a compound motor, speed responsive means connected to the motor for feeding the electrodes together or apart in accordance with the speed of the motor, the fields of the motor being accumulatively wound, the series field being connected in series with the arc, and the shunt field and the armature in shunt to the arc.

3. In an arc lamp, an electrode, an electric motor, speed responsive means connected to said motor for feeding said electrode toward or away from the second electrode, said motor having its armature and one field coil in shunt to the arc and a second coil in series therewith and accumulatively wound with respect to said shunt coil.

4. In an arc lamp, a pair of coöperating electrodes, an electric motor, means connected to the motor for feeding the electrodes together or apart in accordance with the speed of the motor, said motor having its armature and one field coil in shunt to the arc, and a second coil in series with the arc and accumulatively wound with respect to said shunt coil.

5. In an arc lamp, a source of constant potential current, a motor having its armature and a field coil connected across said source and a second coil connected in series therewith and accumulatively wound with respect to said shunt coil, a pair of electrodes and means for feeding said electrodes together or apart in accordance with the speed of the motor.

1,171,946. SHAFT-BEARING FOR BUCKET PUMPS. EDWARD F. HAPPENSACK, Cincinnati, Ohio, assignor to The O. P. Schriver Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 14, 1914. Serial No. 872,267. (Cl. 103—6.)

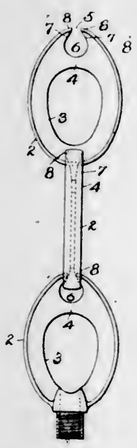


1. A bucket pump comprising a casing, a reel carrying shaft located in the casing, bearings adapted to mount said reel carrying shaft, mechanism adapted to rotate the shaft, each of said bearings consisting of a boss extending through the casing, and overhanging shields formed on the boss, adapted to prevent entrance of water to the bearing from the interior or exterior of the casing, said shields extending across the top and down the sides, with the bottom of the bearing exposed, the shield over the mechanism extending beyond the mechanism.

2. A bearing for the crank end of the reel carrying shaft of a bucket pump, comprising a cylindrical journal boss, a semicircular overhanging flange of a diameter substantially equal to that of the boss and projecting from the inner side thereof, and an enlarged overhanging flange projecting from the crank side of the boss and extending beyond the point of connection of the crank with a shaft.

3. In combination in a bucket pump, a casing, a bucket carrying shaft located within the casing, operating mechanism for the shaft, a bearing mounted on one side of the casing and adapted to mount one end of the shaft, said bearing comprising a journal boss, an overhanging shield formed on the journal boss and projecting within said casing, and a cap formed integrally with the journal boss and located on the exterior of the casing, and a second bearing adapted to mount the opposite end of the shaft and mounted on the opposite side of the casing, said second bearing consisting of a journal boss, an overhanging shield formed on the journal boss and extending within the casing, and a shield formed on the journal boss and extending to the exterior of the casing and beyond the operating mechanism.

1,171,947. INTERLOCKING CHAIN-LINK. ALBERT K. HARNLY, Reading, Pa. Filed Apr. 19, 1915. Serial No. 22,286. (Cl. 59—78.)



1. A chain having gapped links of substantially T-shaped cross-section, the gapped portion forming engaging jaws for a like connected link substantially as set forth.

2. A chain having gapped links of substantially T-shaped cross-section the web portion of which extends inward, said web being tapered away toward the gap, and the latter being of less width than the head of the T, thereby forming engaging jaws for a similar connecting piece.

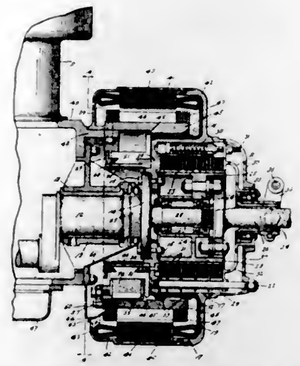
3. A chain made up of gapped links having a reinforcing bridge rearward of the gapped portion, and the latter forming engaging jaws for a similar connecting piece.

4. A chain made up of gapped links having a reinforcing bridge rearward of the gapped portion, and the latter forming engaging jaws, said bridge being of less thickness than the gapped jaws and the latter being adapted to pass over the bridge of a similar connected piece and engage the latter at a point opposite its jaws.

5. A chain having gapped links of substantially T-shaped cross-section the web portion of which extends inward, said web forming a reinforcing bridge rearward of the gap and being tapered away toward the latter to form engaging jaws for a similar connecting piece.

[Claims 6 to 9 not printed in the Gazette.]

1,171,948. SELF-STARTER FOR ENGINES. ROBERT H. HASSLER, Indianapolis, Ind., assignor to Nordyke & Marmon Company, Indianapolis, Ind., a Corporation of Indiana. Filed Nov. 23, 1912. Serial No. 733,056. (Cl. 172—36.)



1. A dynamo-electric machine, comprising a fixed field magnet structure of annular form, an armature structure surrounding said field magnet structure, a commutator surrounded by said field magnet structure, said armature and commutator being fixed relatively to each other and mounted to rotate together, said field magnet structure having a smaller internal diameter at one end than at the other, and brushes coöperating with said commutator and carried by and within said field magnet structure at the end having the larger internal diameter.

2. A dynamo-electric machine, comprising a field magnet structure of annular form, an armature structure surrounding said field magnet structure, a commutator surrounded by said field magnet structure, said armature and commutator being fixed relatively to each other and rotatable relatively to the field magnet structure, and brushes carried by and within said field magnet structure to coöperate with the circumference of said commutator, said field magnet structure having a larger internal diameter at one end than at the other and said commutator and brushes being located within the field magnet structure at said end having the largest internal diameter.

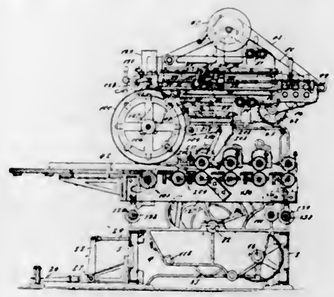
3. A dynamo-electric machine, comprising an annular field magnet structure, an armature structure surrounding said field magnet structure, a commutator surrounded by said field magnet structure and located toward one axial end thereof, a shaft on which said armature and commutator are carried, a second shaft co-axial with the first shaft, and a clutch for connecting said two shafts, said clutch being surrounded by said field magnet structure and located toward the other end thereof from that toward which said commutator is located.

4. A dynamo-electric machine, comprising an annular field magnet structure, an armature structure surrounding said field magnet structure, a commutator surrounded by said field magnet structure and located toward one axial end thereof, a shaft on which said armature and commutator are carried, a second shaft co-axial with the first shaft, and a clutch for connecting said two shafts, said clutch being surrounded by said field magnet structure and located toward the other end thereof from that toward which said commutator is located, said field magnet structure having a larger internal diameter at the end toward which the commutator is located than at the end toward which said clutch is located.

5. A dynamo-electric machine, comprising an annular field magnet structure, an armature structure surrounding said field magnet structure, a commutator surrounded by said field magnet structure and located toward one axial end thereof, a shaft on which said armature and commutator are carried, a second shaft co-axial with the first shaft, a clutch for connecting said two shafts, said clutch being surrounded by said field magnet structure and located toward the other end thereof from that toward which said commutator is located, and a web which separates said clutch from said commutator and armature.

[Claims 6 to 15 not printed in the Gazette.]

1,171,949. STAY-APPLYING MACHINE. EDGAR M. HAWKINS and CHARLES R. SEYMOUR, Rochester, N. Y., assignors to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 7, 1913. Serial No. 740,601. (Cl. 93—56.)



1. In a machine of the character described and in combination, means for feeding a stay-strip, means for severing said strip into stays for application to the work, and means for applying the several stays to the work; said severing means being adjustable independently of the feeding means in a direction lengthwise of the strip to sever the strip into stays of different desired lengths.

2. In a machine of the character described and in combination, means for feeding a stay-strip, means for severing said strip into stays for application to the work, a work support, and means for conveying the severed stays to the work on said work-support; said feeding means being operative to feed the stay-strip to a predetermined position relative to the stay conveying means and said severing means being adjustable independently of the feeding means in a direction lengthwise of the strip to sever the strip into stays of different desired lengths.

3. In a machine of the character described and in combination, means for feeding a stay-strip, means for severing said strip into stays for application to the work, a work-support, and a rotary conveyer for conveying the severed stays to the work on said support; said feeding means being operative to feed the stay-strip to a predetermined position relative to the conveyer and said severing means being adjustable independently of the feeding means in a direction lengthwise of the strip to sever the strip into stays of different desired lengths.

4. In a machine of the character described and in combination, means for feeding a stay-strip, means for severing said strip into stays for application to the work, a work-support, and a rotary conveyer having means for engaging the severed stays and conveying them to the work on said work-support, said feeding means being operative to feed the stay-strip to a position to be engaged by the conveyer and said severing means being adjustable independently of the feeding means in a direction lengthwise of the strip to sever the strip into stays of different desired lengths.

5. In a machine of the character described and in combination, means for feeding a stay-strip, means for severing said strip into stays for application to the work, a work-support, and a conveyer for conveying the severed stays to the work on said support; said feeding means being adjustable to feed different lengths of stay-strips to a predetermined position relative to the conveyer and said severing means being adjustable independently of the feeding means in a direction lengthwise of the stay-strip to sever said strip into stays of a length substantially corresponding to the length fed to the conveyer by the feeding means.

[Claims 6 to 11 not printed in the Gazette.]

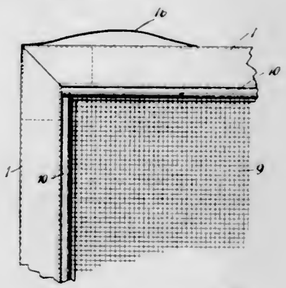
1,171,950. COLLAR-FASTENING CLIP. LLOYD C. HAYNES, Los Angeles, Cal. Filed Oct. 23, 1913. Serial No. 796,789. (Cl. 24—101.)



1. A clip for fastening collars to a shirt band which comprises a laterally extending body portion adapted to lie inside of the shirt band, and within the pocket thereon, and a tongue extending at an angle to the body and then parallel to the body from a point removed from the edge of the body, said tongue being adapted to pass through the button holes of the shirt band and collar, and a hook on one side of the extremity of the tongue said hook being located beyond the edge of the body and adapted to prevent accidental displacement of the collar when one end is being fastened at the front, the upper edge of the body being adapted to engage with the top of the pocket to prevent rotation of the clip.

2. As a new article of manufacture, a collar fastening clip comprising a single piece of sheet metal stamped to shape, a laterally extending body portion adapted to lie inside the neck band of a shirt and within the pocket thereon, an integral tongue extending at an angle from about the middle of the body portion, said tongue then extending parallel to the body and at right angles to the greatest length of the body to a point beyond the edge of the body portion, a hook on the free extremity of the tongue, said hook being located entirely beyond the edge of the body and extending parallel to the body portion and to one side of the tongue, the said hook being adapted to engage the back buttonhole of a collar.

1,171,951. REMOVABLE-GAUZE SCREEN. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Sept. 16, 1914. Serial No. 861,930. (Cl. 156—14.)



1. In a metal screen, in combination with a metal framework formed of a strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form the base of a channel and with one side carried upwardly from the base to form a side wall for the channel of a single thickness, wire gauze with its edges inserted in the channel and a non-resilient retaining bar to hold the wire gauze in place.

2. In a metal screen, in combination with a metal framework formed of a strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form the base of a channel and with one side carried upwardly from the

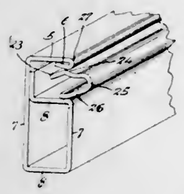
base to form a side wall for the channel of a single thickness, wire gauze with its edges inserted in the channel, a non-resilient retaining bar seated in the channel with a bead along the upper edge of the side wall of the channel to hold the retaining bar in place.

3. In a metal screen, in combination with a metal framework formed of a strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form the base of a channel and with one side carried upwardly from the base to form a side wall for the channel of a single thickness, wire gauze with its edges inserted in the channel and a non-resilient retaining bar to hold the wire gauze in place with a concavity in said bar to pass one edge of the channel.

4. In a metal screen, in combination with a metal framework formed of a strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form the base of a channel and with one side carried upwardly from the base to form a side wall for the channel of a single thickness, wire gauze with its edges inserted in the channel and a non-resilient semi-cylindrical retaining bar to hold the wire gauze in place with a concavity in the face of the bar to pass the edges of the channel.

5. In a metal screen, in combination with a metal framework formed of a strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form the base of a channel and with one side carried upwardly from the base to form a side wall for the channel of a single thickness, wire gauze with its edges inserted in the channel and a non-resilient semi-cylindrical retaining bar to hold the wire gauze in place with a bead along the upper edge of the side wall of the channel to hold the retaining bar, said bar provided with a concavity in the non-cylindrical face to pass the edges of the channel.

1,171,952. KNOCKDOWN WINDOW-SCREEN. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed July 9, 1915. Serial No. 38,973. (Cl. 156—14.)



1. In an all-metal window screen, a metal framework formed of a single strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form a side channel with the contacting portions tacked at intervals to retain the overlapping edges.

2. In an all-metal window screen, a metal framework formed of a single strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form a side channel with the contacting portions tacked at intervals to retain the overlapping edges and having the metal coated both inside and outside with baked rustproof enamel.

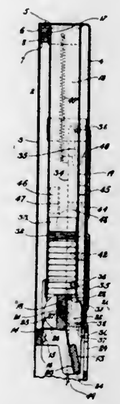
3. In an all-metal window screen, a metal framework formed of a single strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form a side channel with one portion of the metal strip extended upward to form a single wall with wire gauze seated in the channel and a non-resilient spline for holding the wire in place, the contacting portions of the framework tacked at intervals to retain the overlapping edges.

4. In an all-metal window screen, a metal framework formed of a single strip of sheet metal folded to form a hollow body portion with the sides of the strip contacting and extending laterally to form a side channel with one portion of the metal strip extended upward to form a single wall with wire gauze seated in the channel and a non-resilient spline for holding the wire in place, the contacting portions of the framework tacked at intervals to retain the overlapping edges, and the metal framework finished both inside and outside with baked rustproof enamel.

5. In a window screen, in combination with a metallic frame formed with a groove to receive the wire netting, with a bead along the lateral edge of the groove, of a spline to lock the wire netting in the groove, the spline provided with a longitudinal groove to permit the same to be inserted around the bead in seating the spline in the groove, the parts being so formed as to provide a space between the spline and the bead to allow for drying out when subjected to rain and moisture.

[Claims 6 to 10 not printed in the Gazette.]

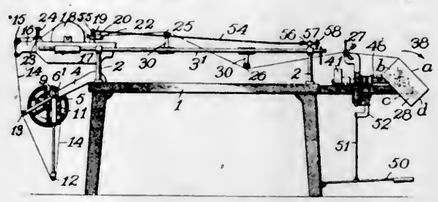
1,171,953. VENDING-MACHINE. HENRY D. HINCKLEY, Hartford, Conn., assignor, by mesne assignments, to The R. & H. Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 21, 1913. Serial No. 796,443. (Cl. 211—8.)



1. In a vending machine, the combination of an elongated casing, an elongated article container removably mounted in the casing, an article support sustained by said container, means between the container and the casing operative on the advancing movement thereof to tip said article support and to permit the gravitation therefrom of the article directly sustained thereby, spring means connected with the container and said other means and tending constantly to retract the latter, and a manually operative device connected with said first mentioned means to advance the same, one side of the casing having a longitudinal slot to receive said manually operative device.

2. A vending machine comprising a casing, an article container removably mounted in said casing, an article support sustained by said container, means between the container and the casing operative on the advancing movement thereof to tip said article support and permit the gravitation therefrom of the article directly sustained thereby, spring means connected with the container and said other means and tending constantly to retract the latter, and a manually operative device connected with said first mentioned means to advance the same, one side of the casing having a slot to receive and permit of the movement of said manually operative device.

1,171,954. PAPER-BOX-COVERING MACHINE. SAMUEL T. HOBBS, Worcester, Mass., assignor to Hobbs Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 27, 1912. Serial No. 711,789. (Cl. 93—54.)



1. In a box covering machine, means for applying gum to one side of a covering strip, a rocking shaft, a radial arm carried by said shaft, a rod held in said radial arm and bearing against the gummed surface of the covering strip, and means for adjusting the pressure of said rod against the covering strip, comprising an arm on said rocking shaft, a link connected at one end with said radial arm, and an adjusting screw connected with the opposite end of said link.

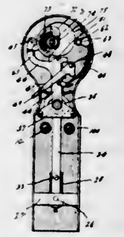
2. In a box covering machine, a framework comprising a pair of horizontal parallel rods, a frame supported by said rods and movable thereon, a roll carried by said frame, and means for clamping said frame to one of said parallel rods and simultaneously squaring the frame with said rod.

3. In a box covering machine, a framework comprising a pair of horizontal parallel rods, a frame supported by said rods and adjustable thereon, and means for attaching said frame to one of said parallel rods and simultaneously squaring the frame with said rod, comprising a pair of separated lugs on said frame arranged to contact with one side of said rod, and means supported by said frame for applying pressure against the opposite side of said rod between said lugs.

4. In a box covering machine, a framework, a rotatable box form supported by said framework, means for imparting a rotating movement to said box form, and means, operative upon the release of said box form from its rotating mechanism for locking said box form from rotative movement in either direction when said box form is in each of a number of predetermined positions.

5. In a box covering machine, a polygonal rotatable box form, means for rotating said box form, means for connecting and disconnecting said box form and its rotating mechanism, and means for locking said box form from rotative movement in either direction at a number of points in each complete rotation corresponding with the number of sides in said box form.

1,171,955. AUTOMATIC THERMOSTAT CONTROL. MARK C. HONEYWELL, Wabash, Ind., assignor to Honeywell Heating Specialty Company, Wabash, Ind., a Corporation of Indiana. Filed Feb. 16, 1914. Serial No. 818,899. (Cl. 236—7.)



1. In a time controlled thermostat, the combination of a thermostatic member, a shiftable carrier, an arm carried by said carrier and displaceable from its normal plane of movement in one portion, a lever, a driving connection between said lever and said arm in the displaceable portion thereof, a time train, a cam carried by said time train and operating upon said lever, and a manually manipulative member connected with said arm whereby its displaceable portion may be displaced and the said arm shifted independent of the lever.

2. In a time controlled thermostat, the combination of a thermostatic member, a shiftable carrier, an arm carried by said carrier and displaceable from its normal plane of movement in one portion, a lever, a driving connection between said lever and said arm in the displaceable portion thereof, a time train, and a cam carried by said time train and operating upon said lever.

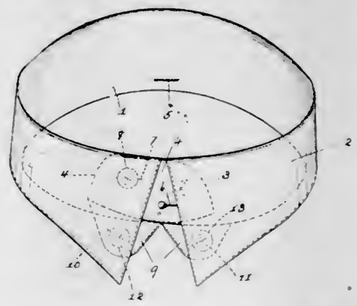
3. In a time controlled thermostat, the combination of a thermostatic element, a rotatable carrier, an arm carried by said carrier and at its free end displaceable from its normal plane of movement, a lever arranged adjacent said arm, a separable connection between said lever and the free end of the arm, a time train, a cam carried by said time train and operating upon said lever, and a manually manipulative member connected with said arm to displace its free end and operate the same independent of the lever.

4. In a time controlled thermostat, the combination of a thermostatic element, a rotatable carrier, an arm carried by said carrier and at its free end displaceable from its normal plane of movement, a lever arranged adjacent said arm, a separable connection between said lever and the free end of the arm, a time train, and a cam carried by said time train and operating upon said lever.

5. In a time controlled thermostat, the combination of a thermostatic element, a rotatable carrier, an arm carried by said carrier and at its free end displaceable from its normal plane of movement, a lever arranged adjacent said arm, a separable connection between said lever and the free end of the arm, a time train, a cam carried by said time train and operating upon said lever, a pin arranged substantially at right angles to the planes of said arm and lever, a manually manipulative sleeve mounted upon said pin and shiftable axially and rotatively upon said pin, and a connection between said sleeve and said arm whereby the said arm may be shifted from its normal plane by axial movement of the sleeve and may be shifted laterally by rotative movement of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,171,956. SOFT FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed Mar. 29, 1915. Serial No. 17,634. (Cl. 2—69.)

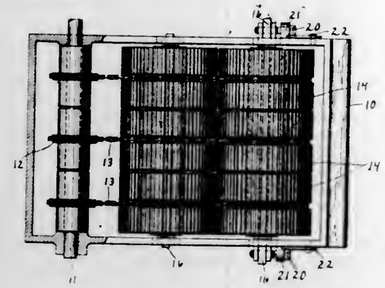


1. A soft fold-collar having a band, a soft folded-over top with ends extending below the band and provided with fastening devices, and tabs attached to and depending below the band and provided with fastening devices adapted to engage the respective fastening devices on the ends of the folded-over top.

2. A soft fold-collar having a band, a soft folded-over top with ends extending below the band, said band having a long end adapted to be inserted between the band

and folded-over top at the other end of the collar, buttons attached to the inner side of the respective ends of the folded-over top where they extend below the band, and a pair of buttonholed tabs attached to and depending below the bottom edge of said long end of the band and adapted to engage the respective buttons on the ends of the folded-over top.

1,171,957. FEEDER FOR PLANERS. PETER J. JOECKEN, Sheboygan Falls, Wis., assignor to Falls Machine Company, Sheboygan Falls, Wis., a Corporation of Wisconsin. Filed Oct. 11, 1912. Serial No. 725,135. (Cl. 144—250.)



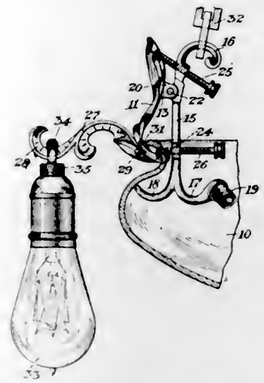
1. A feeder for planers, comprising a frame, a pair of parallel cross rods thereon angular in cross section, a series of slotted cylindrical cores slidably mounted on the cross rods to have vertical movement thereon, a series of feed rolls, each rotatably mounted on one of the cylindrical cores, sprocket teeth formed in a groove in the center of the face of each of the feed rolls, a suitably driven shaft on the frame in the plane of the cross rods and parallel therewith, sprocket wheels mounted on the shaft, chains connecting the sprocket wheels with the sprocket teeth of each of the feed rolls, the chains passing from the sprocket wheels around the feed rolls on the cross rod which is farther from the shaft and engaging the sprocket teeth of the other feed rolls in such passage, said cross rods being slidable in the frame toward or away from the shaft, and means for sliding the cross rod which is farther from the shaft to adjust the tension of the chains.

2. A feeder for planers, comprising a frame, a suitably driven shaft thereon, sprocket wheels on the shaft, chains passing around the sprocket wheels, cross rods slidably mounted across the frame in slots thereof, slotted cylindrical cores slidably mounted on the cross rods, feed rolls rotatably mounted on the cores and provided with sprocket teeth engaged by the chains, ears on the frame, set screws passing through the ears and threaded in the cross rod of the feed rolls which are farther from the shaft for adjusting the cross rod in the slots of the frame to tighten the chains, and a latch pivotally mounted on the frame adapted to fit between the head of the set screw and the side of the frame to lock the set screw in its adjustments.

1,171,958. COMBINED ADJUSTABLE BOWL-HANGER AND LAMP-SOCKET SUPPORT FOR LIGHTING-FIXTURES. WALTER R. KAHNS, Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Sept. 16, 1915. Serial No. 50,950. (Cl. 240—91.)

1. A device of the character described, comprising a hanger, a bar connected thereto at a predetermined point by a hinge joint whereby their ends may be swung toward or from each other, and a set screw passing through a screw-threaded hole in said bar at a predetermined distance above said hinge joint with its point bearing against the the upper surface of the hanger to regulate the relative positions of the bar and hanger and retain them in position.

2. A device of the character described, comprising a hanger, a bar connected thereto at a predetermined point by a hinge joint whereby their ends may be swung toward or from each other, a set screw passing through a screw-threaded hole in said bar at a predetermined distance above said hinge joint with its point bearing against the upper part of the hanger to regulate the relative positions of the bar and hanger and retain them in position, and a second set screw passing through a screw-threaded hole in said bar at a predetermined distance below said hinge joint adapted to bear against the inner surface of a bowl.



3. A device of the character described, comprising a hanger, a bar pivotally connected thereto, its upper end being hook-shaped and its lower end adapted to receive and support a lamp socket, and a laterally extending arm detachably secured at one end to said hanger.

4. A device of the character described, comprising a hanger, a bar pivotally connected thereto, its upper end being hook-shaped and its lower end divided into two oppositely disposed branches, a hollow exteriorly screw-threaded stud upon the end of one of said branches to receive a lamp socket, and a laterally extending arm detachably secured at one end to said hanger.

5. A device of the character described, comprising a hanger, a bar pivotally connected thereto, its upper end being hook-shaped and its lower end divided into two oppositely disposed branches, a hollow exteriorly-screw-threaded stud upon the free end of one of said branches to receive a lamp socket, a laterally extending arm detachably secured at one end to said hanger, and a set screw passing through a screw-threaded hole in said bar.

[Claims 6 to 8 not printed in the Gazette.]

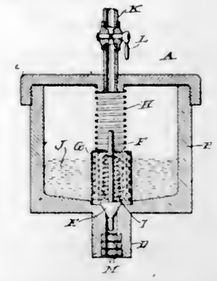
1,171,959. GAS-COMPRESSING OR GAS-CIRCULATING SYSTEM AND APPARATUS FOR USE THEREIN. ALEXANDER E. KEITH, Hinsdale, Ill. Filed Mar. 25, 1912. Serial No. 686,069. Renewed July 3, 1915. Serial No. 37,951. (Cl. 230—34.)

1. The combination of a valve and a non-gaseous fluid for covering the valve and a porous screen on the intake side of the valve and one on the outlet side.

2. The combination of a valve, a screen over the valve and over a volume of a non-gaseous fluid, the latter being sustained by the valve, a source of gas supply connected to the valve for operating the valve and for blowing the fluid away from the valve-opening while the gas is passing, said screen operating to restrict the ebullition of the fluid.

3. The combination of a volume of a non-gaseous fluid, a valve beneath the fluid, a source of gas supply connected to the valve, a gas chamber over the fluid for receiving the gas after it passes through the valve and fluid, an outlet from said chamber restricted in size to prevent a too rapid exit of the gas from the chamber, and to prevent also the fluid being carried over with the gas.

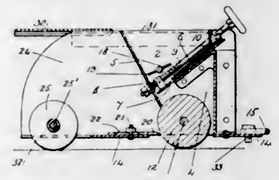
4. The combination of a combustion chamber for supplying gas under pressure, a valve, a pipe line connected to the chamber and the valve, and a heat screen between the chamber and the valve.



5. The combination of a combustion chamber for supplying gas under pressure, a valve, a pipe line connected to the chamber and the valve, and a perforated plate acting as a heat screen between the chamber and the valve.

[Claims 6 to 12 not printed in the Gazette.]

1,171,960. FERTILIZER-DISTRIBUTER. CHARLES R. KELLY, Cambridge Springs, Pa. Filed Apr. 19, 1915. Serial No. 22,409. (Cl. 111—34.)



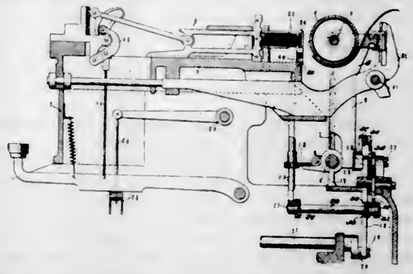
1. A fertilizer distributor, comprising a frame provided with a roller chamber and a hopper above the roller chamber, a land roller journaled in the roller chamber and supporting the frame, a scraper connected to the bottom of the frame behind the roller and projecting toward it, an agitator journaled in the hopper, and driving mechanism operating to revolve the agitator from the roller as the machine is drawn along.

2. A fertilizer distributor, comprising a frame provided with a roller chamber and a hopper above the roller chamber, a land roller journaled in the roller chamber and supporting the frame, a roller scraper connected to the bottom of the frame behind the roller, a mixing device journaled in the frame and arranged behind the roller and its scraper and revolved by contact with the ground, an agitator journaled in the hopper, and driving mechanism operating to revolve the agitator from the roller as the machine is drawn along.

1,171,961. TYPE-WRITING MACHINE. WELLINGTON P. KIDDER, Boston, Mass., and CHARLES W. SPONSEL, Hartford, Conn., assignors, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Mar. 29, 1907. Serial No. 365,407. (Cl. 197—158.)

1. In a typewriting machine, in combination, a type carrier, a ribbon carrier, a platen, separate means for shifting the platen and the ribbon carrier relative to the type carrier, and means for limiting the movement of one of the shifted parts when they are being shifted.

2. In a typewriting machine, in combination, a type carrier, an inking ribbon, a ribbon carrier therefor, a platen, separate means for shifting the platen and the ribbon carrier, and a flexible connection between the separate shifting means.



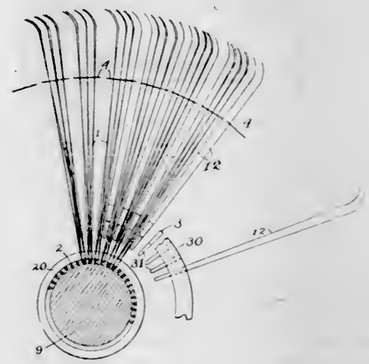
3. In a typewriting machine, in combination, a type carrier, an inking ribbon, a carrier therefor, a platen, separate means for shifting the platen and the ribbon carrier relatively to the type carrier, a flexible connection between the shifting means, and means for limiting the movement of said ribbon carrier.

4. In a typewriting machine, the combination of an inking ribbon, a shiftable platen, a carrier for the ribbon in the vicinity of the printing point of the platen, a yielding support for said carrier, means for shifting said carrier whereby the ribbon may be moved widthwise with respect to the printing point, and means for preventing said carrier from moving the ribbon from between the platen and the types when the former occupies any of a plurality of positions to which it may be shifted.

5. In a typewriting machine, in combination, a type carrier, a platen, an inking ribbon interposed between the type carrier and the platen, a ribbon carrier, separate means for shifting the platen and the ribbon carrier, and means for limiting the movement of the ribbon to positions within the field between the type and the platen when the two are moved to shifted position.

[Claims 6 to 37 not printed in the Gazette.]

1,171,962. ROTARY WIRE BRUSH. JOHN KINAN, Seattle, Wash. Filed Jan. 13, 1914. Serial No. 811,927. (Cl. 15—37.)



1. A brush comprising a central core, and having brushing elements each composed of a wire bent upon itself to bring its ends alongside each other, means for securing said brushing elements upon said core, a series of restraining plates engaging the wires intermediate their ends, said plates having holes through each of which is passed the two ends of a single wire, each plate receiving the wires of only a small segment of the brush.

2. A brush comprising a cylindrical bore, and having brushing elements each composed of a wire of flattened

cross section bent upon itself to bring its two ends alongside each other, means for securing said brushing elements upon said core, wire restraining members having a series of holes therein, each of a size but little more than sufficient to receive the two ends of an individual wire and engaging the wires well inward from their outer ends, said wires being crossed or reversed in position where they pass through the said restraining member and held thereby in crossed relation.

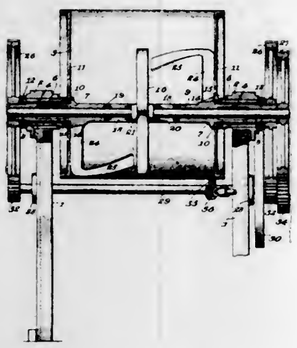
3. A brush comprising a cylindrical core, brushing elements each composed of a wire of flattened cross section bent at its middle upon itself, meaus for securing the bent ends of the doubled wires in groups upon said core, plates having series of holes therein each of a size to receive the two ends of a single wire and occupying a position well inward from their outer ends and outward of their supporting means, said wires being crossed or reversed in position where they pass through said plates.

4. A brush comprising a shaft, bristles composed of looped wires, binding wires extending lengthwise the shaft and each through the looped ends of a group of the bristle wires, a series of bars, each extending through the loops of a group of the remainder of the bristle wires, and means for holding said bars in place between the groups of bristles of the other set.

5. A rotary brush comprising a central core, bristle wires, each bent upon itself to form a loop, means for securing one set of bristles in groups with their looped ends at the central core, and means for securing the remainder of the bristles in groups between the groups of the first named set and with their looped ends somewhat outwardly of the central core.

[Claims 6 and 7 not printed in the Gazette.]

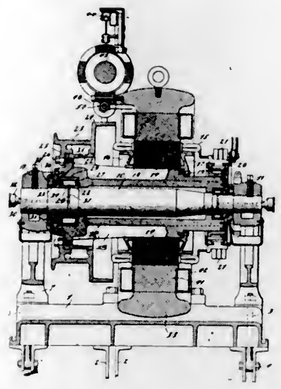
1,171,963. DOUGH-MIXER. WILLIAM G. KIRCHHOFF, St. Louis, Mo., assignor to American Bakers Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 29, 1912. Serial No. 717,723. (Cl. 107—36.)



1. A device of the class described comprising a hopper, an arm revolubly mounted therein in position to coöperate with an end wall, a blade on the arm and projecting laterally therefrom and formed to coöperate with a wall of the hopper to convey material horizontally within the hopper, a beater arm revolubly mounted within said hopper and operating adjacent the extremity of said mixing blade, means for revolving said mixing blade within said hopper, and means for revolving said beater arm within said hopper in the same direction but at a greater speed, whereby dough may be engaged by said blade and said arm and pulled and drawn out in the kneading operation.

2. A machine of the class described comprising a hopper, a driving member extending thereinto, a pair of mixing blades revolubly mounted thereon and spaced apart therefrom and each coöperating with adjacent sides of the hopper to feed dough horizontally within said hopper, a beater arm revolubly mounted within said hopper intermediate the inner extremities of said mixing blades and adapted to coöperate therewith to knead and pull out dough, and means for revolving said blades and said beater arm in the same direction at different speeds.

1,171,964. ELECTRIC MOTOR. NILS O. LINDSTROM, Nutley, N. J., assignor to Alonso B. See, Brooklyn, N. Y. Filed Aug. 1, 1914. Serial No. 854,460. (Cl. 172—152.)



1. In an electric hoisting motor, a stationary shaft, a supporting structure therefor, comprising a base and two standards into which the ends of the shaft fit, means for securing the ends of the shaft in said standards, a sleeve revolubly mounted on said shaft, aud a rotor and hoisting drum rigidly mounted on said sleeve.

2. In an electric hoisting motor, a stationary shaft, a supporting structure therefor, said shaft being of reduced diameter adjacent one end thereof, a sleeve loosely surrounding said shaft and roller bearing interposed between said shaft and sleeve, said roller bearing at the large end of the shaft being of greater size, and a rotor and hoisting drum rigidly mounted on said sleeve, said drum being in alinement with the larger set of roller bearings.

3. In an electric hoisting motor, a stationary shaft, a supporting structure therefor comprising a base and two standards into which the ends of the shaft fit, means for securing the ends of the shaft in said standards, a sleeve revolubly mounted on said shaft, and a rotor, hoisting drum, and brake drum rigidly mounted on said sleeve.

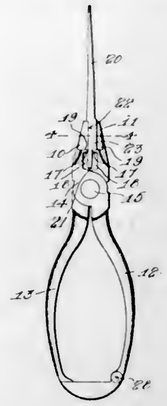
4. In an electric hoisting motor, a stationary shaft, a supporting structure therefor comprising a base and two standards into which the ends of the shaft fit, means for securing the ends of the shaft in said standards, a sleeve revolubly mounted on said shaft, and a rotor, hoisting drum, brake drum, and a commutator rigidly mounted on said sleeve.

5. In an electric hoisting motor, a stationary shaft, a supporting structure therefor, said shaft being of reduced diameter at one end, a sleeve rotatably mounted on said shaft, a rotor, hoisting drum and commutator carried by said sleeve, said commutator being disposed over the reduced end of the shaft and said drum over the other larger end thereof.

[Claims 6 and 7 not printed in the Gazette.]

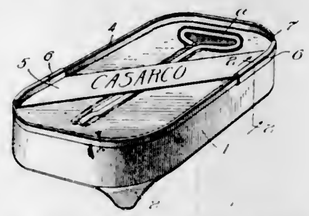
1,171,965. COMPOUND TOOL. WILLIAM F. MCCAULEY, Elkins, W. Va. Filed June 3, 1915. Serial No. 31,944. (Cl. 145—103.)

A tool adapted to be held between plier jaws, said tool having a shank provided with side flanges for engagement with the side of a plier jaw and having an abutment to the rear of the flanges for engagement with the rear edge of a plier jaw whereby the tool will be held



against longitudinal and transvere displacement between the plier jaws.

1,171,966. DECORATED CAN. FRANCIS P. MCCOLL, St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 24, 1913. Serial No. 750,198. (Cl. 220—92.)



1. A can having a projecting bead around the edge of one side, a strip extending across said side and having its ends engaged with said bead to hold the strip in place, and a key lying between said side and said strip and held in place by the strip.

2. A can having projecting beads at opposed edges, a strip extending across a side of the can and having its ends engaged with said beads to hold the strip in place, and a label lying between said side and said strip and held in place by the strip.

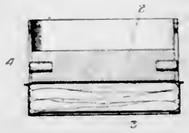
3. A can having a cup-shaped head fitting into the body with the mouth directed outwardly, the flanged portion of the head and the adjacent portions of the can body being bent to form a seam joining the head and body together, a strip of metal extending across the head and having its ends engaged with the seam to hold the strip in place.

4. A can having a cup-shaped head fitting into the body with the mouth directed outwardly, the flanged portion of the head and the adjacent portions of the can body being bent to form a seam joining the head and body together, a metal label extending across the head and having its ends bent around the seam to hold the label in place.

5. A rectangular can having a projecting bead around the edge of one side, a strip extending diagonally across said side and having its end bent around said bead to hold the strip in place, and a key lying between and held by said side and the strip.

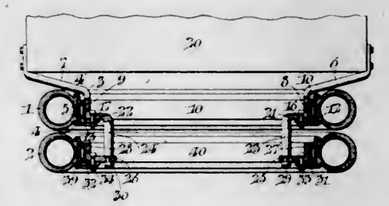
[Claims 6 to 12 not printed in the Gazette.]

1,171,967. PACKING DEVICE. FRANCIS P. MCCOLL, St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 9, 1913. Serial No. 760,078. (Cl. 100—57.)



A packing device for sardine cans comprising a container open at both ends and conforming in cross section to the shape of a sardine can, a transverse partition or bottom mounted in said container so as to be movable longthwise thereof, and interlocking means between the container and the partition or bottom constructed and ararnged to permit the partition or bottom to be moved from one end of the container toward the other and be held against separation from the container, and the depth or length of the container being equal to the depth of the can to be filled plus the thickness of said bottom or partition.

1,171,968. TIRE-HOLDER FOR AUTOMOBILES AND SIMILAR VEHICLES. GEORGE W. MATZ, Conshohocken, Pa. Filed Sept. 19, 1914. Serial No. 862,450. (Cl. 224—29.)

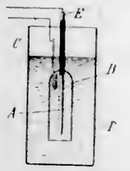


1. The combination of a plurality of supports adapted to be secured to a vehicle body, said supports comprising portions which extend substantially parallel to one another, and which have bearing surfaces upon their remote faces and seat portions extending at right angles to said bearing surfaces; a band extending through a circular arc which comprehends all of said supports, said band having a cross section which provides an extended wedge on its outer face adapted to engage directly with one incline upon a clencher rim; a plurality of clamping wedges adapted to engage directly the other and oppositely faced incline upon a clencher rim, said wedges having extended portions adapted to rest upon said seats; and securing means adapted to operatively engage said clamping wedges, substantially as set forth.

2. The combination of a plurality of supports adapted to be secured to a vehicle body, said supports comprising portions which extend substantially parallel to one another and which have bearing surfaces upon their remote faces and seat portions extending at right angles to said bearing surfaces, and being also provided with inwardly stepped extensions comprising seat portions arranged substantially at right angles to said bearing surfaces and prolongations arranged in substantial parallelism and at right angles to said seat portions; a plurality of bands extending through circular arcs comprehending said points of support, and each having a cross section which presents an extended wedge surface adapted to engage an oppositely faced incline upon a clencher rim, one of said bands being directly secured to said first mentioned bearing surfaces; supporting blocks removably mounted upon the prolonged extremities of the supports, the other of said bands being secured to said supporting blocks; groups of clamping wedges respect-

ively adapted to engage each of said bands and to engage an oppositely faced incline upon a clencher rim; and securing means adapted to operatively engage said clamping wedges, substantially as set forth.

1,171,969. ELECTROLYTIC RECTIFIER. RALPH D. MERSHON, New York, N. Y. Filed Jan. 23, 1912. Serial No. 672,896. (Cl. 175—315.)



1. The method of depolarizing the electrodes of electrolytic rectifiers and similar apparatus by the removal of bubbles therefrom, which consists in displacing an electrolyte from the vessel containing the electrodes by the accumulation therein of a gas under pressure and periodically liberating and discharging the accumulated gas to permit the return of the electrolyte, as set forth.

2. The method of depolarizing the electrodes of electrolytic rectifiers and similar apparatus by the removal of bubbles therefrom, which consists in displacing an electrolyte from the vessel containing the electrodes by the accumulation therein of a gas under pressure, and effecting by the pressure of a given volume of such gas the periodic liberation and discharge of the same, to permit the return of the electrolyte, as set forth.

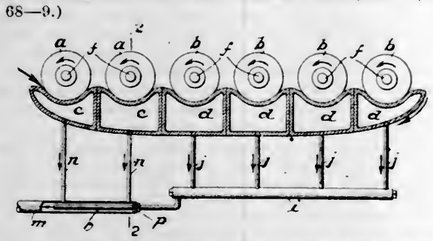
3. The herein described method of depolarizing the electrodes of electrolytic rectifiers and similar apparatus by the removal of bubbles therefrom, which consists in alternately exposing the electrodes to a gaseous medium and bring about resubmergence of the electrodes in an electrolyte.

4. The combination with a closed chamber, an electrolyte in said chamber, and an electrode immersed in the electrolyte in said chamber, of a vessel into which the electrolyte displaced by the accumulation of gas in the electrode chamber flows, and means for permitting the escape of the confined gas intermittently, and thereby permitting the return to the electrode chamber of the displaced electrolyte, as set forth.

5. An electrolytic apparatus comprising in combination an open chamber, a closed chamber connected therewith, electrodes contained in both of said chambers, an electrolyte, and a gas discharge valve operated by the pressure of a given volume of gas confined in the closed chamber, whereby electrolyte displaced from the closed to the open chamber by the accumulation of such gas will be intermittently returned to the closed chamber, as set forth.

[Claims 6 to 13 not printed in the Gazette.]

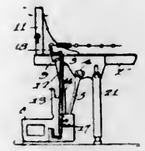
1,171,970. MANGLE. LOUIS R. MERTENS, Philadelphia, Pa., assignor to Charles J. Miller, Philadelphia, Pa. Filed Dec. 13, 1915. Serial No. 66,467. (Cl. 68—9.)



1. A mangle comprising front and rear steam chests and a series of corresponding and coöperating feed rollers, a steam supply for the several chests, a steam drain connected with one or more of the front chests and a separate steam discharge pipe connected with the remaining chests and extending into said drain and operating to induce a flow of steam thereinto from the front chests.

2. A mangle comprising front and rear steam chests and a series of corresponding and coöperating feed rollers, a steam supply for the several chests, a front steam drain, one or more pipes connecting the same with the front chest or chests, a rear steam drain and pipes connecting the same with the remaining chests, and a pipe extending from the rear steam drain into the front steam drain beyond the first named pipes.

1,171,971. FOLDING BED. WILLIAM L. MURPHY, San Francisco, Cal., assignor to Murphy Wall Bed Company, a Corporation of California. Filed Jan. 29, 1912. Serial No. 674,145. (Cl. 5—54.)



1. In a folding bed adapted to be moved about a horizontal axis, brackets having upwardly extending portions arranged on opposite sides of the bed, a bed frame, links pivotally attached to said brackets and said bed frame, and means on the bed frame engaging said upwardly extending portions of the brackets, the links being arranged to swing backward against said upwardly extending portions to limit the backward movement of the bed frame when said frame is moved into vertical position.

2. In a folding bed, brackets, links attached to said brackets, a bed frame pivotally mounted on said links, freely swinging legs at the foot of the bed frame, legs adjustably arranged on the frame between the foot and the point of connection of the frame and links and adjacent said point, said legs being arranged to contact with the floor in advance of the legs at the foot as the bed is moved into a horizontal position and relieve the links of the weight of said bed frame.

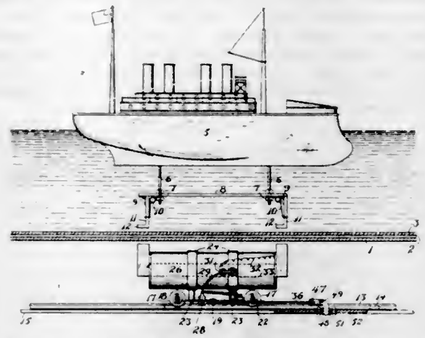
3. In a folding bed the combination of brackets having upwardly projecting portions, a bed frame mounted on said brackets, links connecting said bed frame and brackets, said links being arranged to contact with said upwardly projecting portions when the bed frame is in the vertical position and pins on said frame adapted to seat in depressions on said upwardly projecting portions when the bed is in the vertical position.

4. In a folding bed, a pair of brackets, upstanding guides thereon, a bed frame having pins to coöperate with said guides, links connecting said frames and brackets, a transverse projection on said brackets, a transverse rail on the bed frame, a mattress secured to said rail, and a counter-balancing spring extending in a vertical direction between said rails and projection and arranged to lie in front of said pins when the bed is horizontal to aid in holding the bed in said position.

5. In a folding bed, a pair of brackets, projections extending vertically from said brackets, a bed frame carrying pins engaging said projections, links pivoted to said brackets and frame and arranged to move into a forwardly-inclined position when said frame is extended and to move back into substantial parallelism with said projections when said frame is closed, spring anchoring means carried, respectively, by said frame and brackets, and counterbalancing springs located back of said links and extending in a substantially vertical direction between said anchoring means, said springs being arranged to lie in front of said pins when the bed is extended to thereby aid in holding the bed in such position.

[Claims 6 to 9 not printed in the Gazette.]

1,171,972. MAGNETIC MEANS FOR MOVING MINIATURE BOATS. LOUIS E. MYERS, Chicago, Ill. Filed June 12, 1915. Serial No. 33,850. (Cl. 46—49.)



1. In combination, a receptacle for water, a miniature ship in water in said receptacle, an armature extending longitudinally of the ship and supported thereby and having poles in close proximity with the bottom of the receptacle, a track beneath said receptacle, a truck on said track, and a magnet carried by said truck, the poles of said magnet extending in close proximity with the bottom of the receptacle.

2. In combination, a receptacle for water, a miniature ship in water in said receptacle, an armature extending longitudinally of the ship and supported thereby and having poles in close proximity with the bottom of the receptacle, a track beneath said receptacle, a truck on said track, an electro-magnet carried by said truck, the core of said magnet having upwardly directed poles extending in close proximity with the bottom of the receptacle, and means for including said magnet in an electric circuit.

3. In combination, a receptacle for water, a miniature ship in water in said receptacle, an armature extending longitudinally of the ship and supported thereby and having poles in close proximity with the bottom of the receptacle, a track beneath said receptacle, a truck on said track, an electro-magnet carried by said truck, the core of said magnet having upwardly directed poles extending in close proximity with the bottom of the receptacle, and means for electrically connecting the coil of said electro-magnet with a rail of said track.

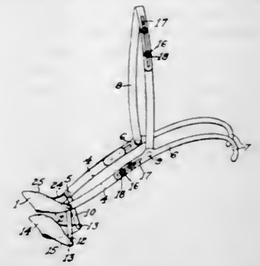
4. In combination, a receptacle for water, a miniature ship in water in said receptacle, an armature extending longitudinally of the ship and supported thereby and having poles in close proximity with the bottom of the receptacle, a sectional swiveled truck on said track, uprights pivotally supported by the sections of said truck, bands supported on said uprights, an electro-magnet within said bands, the core of said magnet having upwardly directed poles extending in close proximity with the bottom of the receptacle, and means for including the coil of said magnet in an electric circuit.

5. In combination, a receptacle for water, a miniature ship in water in said receptacle, an armature extending longitudinally of the ship and supported thereby and having poles in close proximity with the bottom of the receptacle, a truck on said track, an electro-magnet carried by said truck, the core of said magnet having upwardly directed poles extending in close proximity with the bottom of the receptacle, means for insulating therefrom the wheels on one rail, a metal roller on said rail, an arm supporting said roller, and insulating means for supporting said arm upon said truck.

[Claims 6 to 8 not printed in the Gazette.]

1,171,973. SANITARY APPLIANCE. JOHN W. PATTERSON, New York, N. Y. Filed Oct. 26, 1914. Serial No. 868,566. (Cl. 128—13.)

1. A sanitary appliance having the combination of a breath deflector for the nose, a breath deflector for the mouth, links connecting said deflectors, and adjustable straps for maintaining said deflectors upon the wearer.

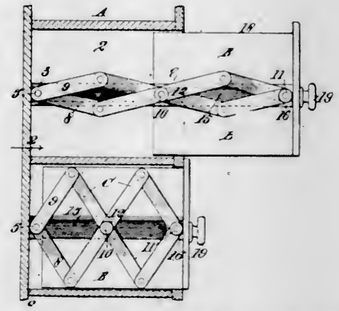


2. A sanitary appliance having the combination of a breath deflector for the nose, a breath deflector for the mouth, links connecting said deflectors, said deflectors being pivotally mounted with said links for angular adjustment, and means for securing said deflectors to the wearer.

3. A sanitary appliance having the combination of a breath deflector for the nose, a breath deflector for the mouth, said deflectors being configurated to direct the breath of the wearer to the sides of the wearer's face and away from the person operated upon, means for securing said deflectors to the wearer, links holding one of said deflectors connected to said securing means, and said latter deflector being pivotally mounted for angular adjustment.

4. A sanitary appliance having the combination of a breath deflector for the nose, a breath deflector for the mouth, said deflectors being configurated to direct the breath of the wearer to the sides of the wearer's face and away from the person operated upon, straps for securing said deflectors extending therefrom, and said deflectors being pivotally mounted for angular adjustment.

1,171,974. EXTENSIBLE SUPPORT. MYRON S. PELTON, Folsom, Cal. Filed Jan. 13, 1915. Serial No. 1,978. (Cl. 45—77.)



1. An extensible frame comprising a main supporting frame, a pair of spaced lazy tong frames supported at their inner ends on the main frame, inner and outer rollers mounted centrally on each lazy tong frame, L-shaped tracks mounted on the main frame for supporting the outer rollers of the lazy tong frames, a drawer disposed between the latter, and an inverted L-shaped track on each side of the drawer to engage with and be supported by the inner rollers.

2. An extensible frame comprising a main supporting frame, a pair of spaced lazy tong frames supported at their inner ends on the main frame, inner rollers mounted on the central and outer end portions of each lazy tong frame, a drawer arranged between the lazy tong frames, and an angle iron track secured to each side of the drawer and slidably supported by the central roller of the respective lazy tong frame, the outer end of each track being

formed with a downwardly opening pocket for receiving the outer end roller of the adjacent lazy tong frame.

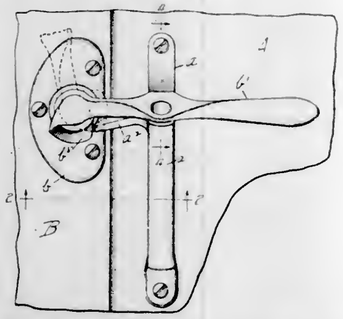
3. An extensible frame comprising a main supporting frame, a shaft journaled in said frame, a pair of interspaced lazy tong frames supported at their inner ends on said shaft, one of the inner links of each lazy tong frame being secured to the shaft and the other link being turnable thereon, inner and outer rollers mounted on the central pivots of the lazy tong frames, a track bar on each side of the main supporting frame upon which the outer rollers are guided and supported, and a drawer mounted between the lazy tong frames and supported on the inner rollers.

4. An extensible frame comprising a main supporting frame, a shaft journaled in said frame, a pair of interspaced lazy tong frames supported at their inner ends on said shaft, one of the inner links of each lazy tong frame being secured to the shaft and the other link being turnable thereon, inner and outer rollers mounted on the central pivots of the lazy tong frames, a track bar on each side of the main supporting frame upon which the outer rollers are guided and supported, a drawer mounted between the lazy tong frames and supported on the inner rollers, and a connection formed between the drawer and the lazy tong frame.

5. An extensible frame comprising a main supporting frame, a shaft journaled in said frame, a pair of interspaced lazy tong frames supported at their inner ends on said shaft, one of the inner links of each lazy tong frame being secured to the shaft and the other link being turnable thereon, inner and outer rollers mounted on the central pivots of the lazy tong frames, a track bar on each side of the main supporting frame upon which the outer rollers are guided and supported, a drawer, a track bar secured on each side of said drawer, said track bars being guided by and supported on the inner rollers and a connection formed between said track bars and lazy tong frames.

[Claim 6 not printed in the Gazette.]

1,171,975. LATCH. FLOYD N. PERKINS, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed Dec. 29, 1913. Serial No. 809,152. (Cl. 70—49.)

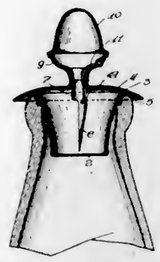


1. A fastener of the character described, comprising a door pull handle having an incline adapted to form a rest and with a laterally projecting tongue, and a pivoted lever provided with an inclined cam portion adapted in the closing of the door to engage the tongue and to cause said lever to swing across the meeting line of the door and its casing and to rest upon the incline of the door pull handle, and thereby to lock said door, substantially as described.

2. A fastener of the character described, comprising a door pull handle having a projecting tongue and a pivoted lever provided with a hub having as part an inclined cam adapted in the closing of the door to engage the tongue to operate said lever and thereby to lock said door, substantially as described.

3. In a device of the character described, a door, a casing therefor, a lever pivotally mounted on the casing, said lever being adapted to project opposite the door, a cam attached to the door, an arm projecting therefrom beyond the edge of the door and over the casing, and a cam attached to the lever adjacent its pivot adapted to engage said arm on movement of the lever from opposite the door to partially open the door, said door also being tightly closed by engagement of the lever with the cam attached to the door.

1,171,976. BOTTLE-STOPPER. THOMAS P. PICK, Chicago, Ill. Filed Dec. 30, 1913. Serial No. 809,539. (Cl. 215—8.)



1. A bottle stopper comprising a plug adapted to enter the neck of the bottle; a cover secured to the said plug at the upper end thereof and adapted to project beyond the rim of the bottle and equipped with a central perforation; a handle for said stopper having a stem adapted to enter the said perforation; and a latch member carried by the said handle and adapted to engage the said cover to secure the said handle to the cover.

2. A bottle stopper comprising as one member a hollow plug adapted to enter the bottle neck and equipped at its upper end with a perforation; and as another member a handle equipped with a pointed stem entering the said perforation; and a yielding latch carried by one of the said members and engaging the other thereof to removably secure the said members to each other.

3. A bottle stopper comprising a hollow plug adapted to enter the bottle neck and equipped at its upper end with a cover having a central perforation; and a handle having a stem entering the said stopper through the said perforation and equipped with means for yieldingly securing the said handle to the said stopper, the inner end of the said handle being sharply pointed.

1,171,977. DOLL. MAX POLITZER, New York, N. Y., assignor to Eugene J. Fraenkell, New York, N. Y. Filed Apr. 7, 1909, Serial No. 488,501. Renewed July 1, 1914. Serial No. 848,482. (Cl. 46—40.)

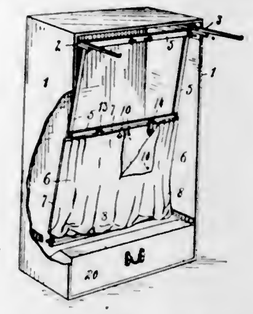


1. An animal doll having its body and its head except for a portion on one side thereof formed to represent the body and head of an animal and covered with material to represent fur, and having its head formed to represent a human face on the side which is not covered with the material representing fur and on the opposite side to represent the face of an animal, the covering material extending about the human face to have the appearance of a hood, and the head including the covering material

thereon being vertically pivoted to the body to permit either face to be turned to the front.

2. A toy comprising in combination a body, and a head for said body, said head having two faces thereon looking in opposite directions, one of said faces resembling that of a bear and the covering of said head being arranged to form projections serving as ears for said bear's face, the other of said faces resembling that of a person and the cover of said head being arranged around said person's face in the form of a cowl whereby said projections serve likewise to give a clownish effect.

1,171,978. TRUNK. OTTO RANGNOW, Philadelphia, Pa. Filed Sept. 10, 1915. Serial No. 49,911. (Cl. 190—13.)



1. In a trunk the combination of a garment compressor adjustably mounted within the trunk, a soiled linen receptacle having a front portion of flexible fabric forming an expansive bag and means for securing the said receptacle to the said compressor.

2. In a trunk the combination of a garment compressor adjustably mounted within the trunk, a soiled linen receptacle having a front portion of flexible fabric forming an expansive bag, said receptacle having a rigid back portion, and means for securing the upper and lower edges of the back portion to the said compressor.

3. In a trunk the combination of a compressor frame, a receptacle having a rigid back portion and a flexible front portion, an angle plate upon the lower portion of the compressor frame to support the receptacle, and fastening devices for holding the upper portion of the receptacle against the compressor frame.

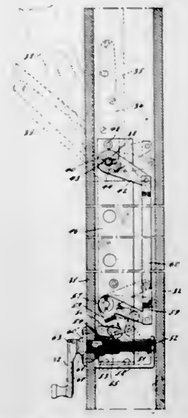
4. In a trunk the combination of a receptacle having a flexible front portion, said receptacle having an opening formed adjacent to the top thereof, a compressor adjustably secured in the trunk, and means for securing the receptacle in an upright position upon the compressor.

5. In a trunk the combination of a receptacle having a back portion of rigid material and a front portion of flexible material with the edges thereof secured to the said back portion, the said flexible front portion being divided at the upper edge thereof to form an opening, fastening devices attached to the back and front portions for holding the latter in the closed position, and means for securing the receptacle in a trunk.

1,171,979. DEVICE FOR OPERATING TRANSOMS AND CASEMENTS. OSCAR C. RIXSON, New York, N. Y. Filed Nov. 19, 1914. Serial No. 872,877. (Cl. 16—28.)

1. A mechanism for operating swinging closures comprising a manually operable rotatably mounted threaded shaft, a traveling nut mounted thereon, a lever pivoted intermediate its ends, a short pivoted link connecting one arm of said lever to said traveling nut and means for connecting the other arm of said lever to the swinging closure.

2. A mechanism for operating swinging closures comprising a support, a manually operable threaded shaft rotatably mounted on said support and prevented from endwise movement thereon, a lever pivoted intermediate its ends to said support, a traveling nut mounted on said threaded shaft, a short pivoted link connecting one arm of said lever to said traveling nut and means for connecting the other arm of said lever to the swinging closure.



3. In combination with a door or window frame and a swinging closure therefor, a support concealed within said frame, a manually operable threaded shaft rotatably mounted on said support and having one end thereof extending through an opening in said frame, a traveling nut mounted on said threaded shaft, a lever pivoted to said support intermediate its ends and a short pivoted link connecting one arm of said lever to said traveling nut and means for connecting the other arm of said lever to a swinging closure.

4. In combination with a door frame and a pivotally mounted transom having a crank arm rigidly secured to said transom and concealed in a space of said door frame, a support within said space, a threaded shaft rotatably mounted on said support and held against endwise movement, a traveling nut mounted on said screw, a bell-crank lever pivotally mounted on said support, a short pivoted link connecting one arm of said lever to said traveling nut and a rod connecting the other arm of said lever to said crank arm, said threaded shaft having one end thereof passing through an opening in the door frame whereby it may be manually rotated to open and close said transom.

5. In combination with a door and a door casing, a concealed mechanism for operating a transom comprising a rotatable shaft concealed in the door frame and having one end thereof extending exteriorly of the same, of a crank having a hub shaft coacting with said exposed end of said shaft and a crank arm extending into the path of the door in one of the angular positions thereof, said crank arm being pivoted to said hub shaft permitting it to be moved out of the path of the door by engagement with the latter when it occupies the position referred to.

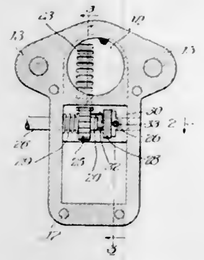
[Claims 6 and 7 not printed in the Gazette.]

1,171,980. VALVE. EDWIN WILLIAM ROGERS, Chicago, Ill. Filed Feb. 4, 1915. Serial No. 6,031. (Cl. 137—5.)

1. In a valve, the combination of a casing having a cover, a slide valve in said casing, said valve being provided with rack teeth of different lengths, a pinion engaging said rack teeth, and means for forcing said pinion into an inoperative position with relation to said valve, substantially as described.

2. In a valve mechanism, the combination of a casing, a valve mounted in said casing, a pinion and shaft for operating said valve, means for forcing said pinion

into an inoperative position with relation to said valve upon severing said shaft, and means for locking said pinion in such inoperative position, substantially as described.



3. In a locking valve for automobiles, the combination of a casing located in the intake manifold of an engine, a valve in said casing, a shaft and pinion for actuating said valve, and means for locking said pinion with relation to said valve upon severing of said shaft, substantially as described.

4. In a valve for automobiles, the combination of a casing having an opening corresponding to the opening in the intake manifold of an engine, a valve movable across said opening, a shaft for actuating said valve, and means for locking said valve operating means upon severing of said shaft, substantially as described.

5. In a valve of the class described, the combination of a casing having a cover, a slide valve having a rack upon one face thereof, said valve being mounted in the casing, a pinion engaging said rack, a shaft for actuating said pinion, a spring normally tending to elongate said shaft whereby said pinion is forced into an inoperative position upon severing of said shaft, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,171,981. LOCKING DEVICE. WILLIAM H. ROONEY, New York, N. Y. Filed June 25, 1915. Serial No. 36,409. (Cl. 70—79.)



1. A box provided with a door, a locking device for said door, means for electrically controlling such locking device, a second box, an electrically controlled lock for the door of said second box, and means connected with the first mentioned box for actuating the lock of the door of the secondly mentioned box when the door of the first mentioned box is opened.

2. In a system of the class described, a plurality of electrically operated locking devices, a plurality of independent receptacles each containing one of said locking devices, a circuit connecting the devices, a door to be secured by each of said devices, and means released by the movement of one of said doors for causing the locking devices associated with the other doors to secure the latter.

3. A series of boxes, each of which boxes is provided with a door, and an electrically controlled locking device for such door including a gravity device and means for mechanically operating the same at times, all of said locking devices being electrically connected, and a device in each box for completing an electric circuit through the locking devices of all boxes of the series, and retaining the doors of all other boxes of the series locked when the door of one box is opened.

4. In mechanism of the class described, a box, a door therefor, a pivoted member for securing the door in a closed position, said member being normally in a release position, and means for electrically operating said member, including a circuit closing device mounted adjacent to the door of another box and adapted to close when the door last mentioned is opened, said member being operated mechanically at times, and operated by gravity when released by mechanical or electrical means.

5. In mechanism of the class described, a box, a door therefor, a member pivoted within the box, a device on the door engaged by said member having an inclined portion, the opposite end constituting an armature, and one end of the member being heavier than the other, normally preventing engagement with the device on the door, a magnet for effecting such engagement, a circuit therefor, and a circuit closing device adjacent to the door of another box, said device on the door being positioned to tilt the pivoted member, causing the latter to assume position for engagement between the device and member.

1,171,982. GARMENT-FASTENER HOLDER. LEO ROSENMAN, Brooklyn, N. Y., assignor to R. K. M. Mfg. Company, a Corporation of New Jersey. Filed Aug. 12, 1914. Serial No. 856,397. (Cl. 2—58.)



1. The combination with a base-fabric and covering strip sewed together to provide gaps at intervals at the marginal edge of said covering strip, tying-stitches extending toward the said marginal edge of the covering strip and adjacent to said gaps, and fasteners located between the base-fabric and the covering strip and between said tying-stitches, said tying-stitches lying in close proximity to and extending in the same direction as the shanks of the inserted fasteners, and thereby providing means to prevent movement of the said fasteners laterally between said tying-stitches.

2. A fastener-holding means for garments, comprising a base-fabric and a covering-strip, and a line of stitching through said base-fabric and the covering-strip, said stitching being made near the marginal edge of said covering-strip, said stitching being interrupted at intervals along the said edge, but extending over and beyond said edge and along the exposed portions of the base-fabric in front of each interrupted portion in the edge, all arranged to provide spaced pocket-like receiving portions having openings located beneath said marginal edge.

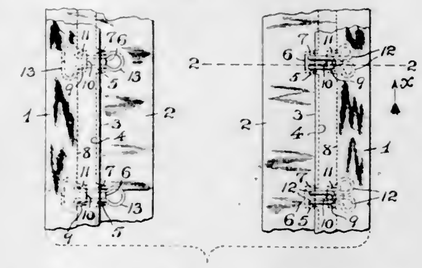
3. A fastener-holding means for garments, comprising a base-fabric and a covering-strip, and a line of stitching through the base-fabric and the covering-strip, said stitching being made near the marginal edge of said covering-strip, said stitching being interrupted at intervals along the said edge, but extending along the exposed portions of the base-fabric in front of each interrupted portion in the edge, all arranged to provide spaced pocket-like receiving portions having openings located beneath said marginal ends, combined with hooks and eyes arranged in said pocket-like receiving portions, said hooks and eyes having angular members connected with their base-portions, said angular members forming stops abutting in contact between the said base-fabric and the covering-strip with said stitching, and the said hooks and eyes having shanks extending into and from the openings of said pocket-like receiving portions.

4. A fastening-means for garments, comprising a base-fabric and a covering-strip, and a line of stitching through said base-fabric and the covering-strip, said stitching being made near the marginal edge of said covering-strip, said stitching being interrupted at intervals along the said edge, but extending along the exposed portions of the base-fabric in front of each interrupted portion in the edge, all arranged to provide spaced pocket-like receiving portions having openings located beneath said marginal edge of the fold, combined with hooks and eyes arranged in said pocket-like receiving portions, said hooks and eyes having angular members connected with their base-portions, said angular members forming stops abutting in contact between the said base-fabric and the covering-strip with the said stitching, and the said hooks and eyes having shanks extending into and from the openings of said pocket-like receiving portions, and another row of stitching passing directly back of and adjacent to the rear marginal edges of the positioned hooks and eyes.

5. A compound strip for garments adapted to receive fasteners, comprising a base-fabric and a covering strip, said covering-strip having a marginal fold, a row of stitching through said base-fabric and the covering-strip, said stitching being made close to and extending along the marginal fold, said stitching being interrupted at intervals along said fold, rows of stitching extending at right angles at said interrupted portions to said first-mentioned row of stitching, said right-angled rows of stitching extending from and beyond the marginal edge of the fold and onto the exposed portions of the base-fabric, and lines of stitching upon said base-fabric connecting the ends of said right-angled rows of stitching, all arranged to provide the compound strip with reinforced spaced pocket-like receiving portions having openings located beneath the marginal edge of the fold.

[Claims 6 and 7 not printed in the Gazette.]

1,171,983. GARMENT-FASTENER HOLDER. LEO ROSENMAN, Newark, N. J., assignor to R. K. M. Mfg. Company, a Corporation of New Jersey. Filed Aug. 11, 1915. Serial No. 44,855. (Cl. 2—58.)



1. In combination with a base-fabric and covering-strip, and a line of stitching through said base-fabric and covering-strip, and fasteners arranged between the said base-fabric and covering-strip, said fasteners being provided with loop-shaped portions and connecting shank-portions located between the said base-fabric and covering-strip, said stitching being provided at intervals with jump-stitches extending across said shank-portions and located in front of said loop-shaped portions.

2. In combination with a base-fabric and covering strip, a plurality of main line stitching sewed through said base-fabric and covering strip, said stitching being provided at intervals with jump-stitches, providing loops and all arranged to provide gaps, and fasteners arranged in said gaps and between the said base-fabric and covering strip, said fasteners being provided with loop-shaped portions and connecting shank-portions, and the said jump-stitches extending across said shank-portions and being located in front of said loop-shaped portions.

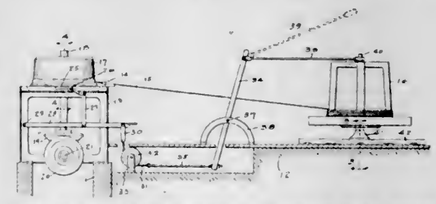
3. In combination with a base-fabric and covering strip, said covering strip having a marginal edge located upon said base-fabric, a plurality of main line stitchings sewed through said base-fabric and covering strip to provide gaps at intervals, and tying stitches extending angularly from each main line stitching, said tying stitches being arranged in sets to provide reinforcements in alinement back of one another, and one set of said tying stitches extending over and beyond the marginal edge of said covering-strip.

4. In combination with a base-fabric and covering strip, said covering strip having a marginal edge located upon said base-fabric, a plurality of main line stitchings sewed through said base-fabric and covering strip to provide gaps at intervals, and tying stitches extending angularly from each main line stitching, and tying stitches being arranged in sets to provide reinforcements in alinement back of one another, one set of said tying stitches extending over and beyond the marginal edge of said covering strip, all arranged to provide spaced pocket-like receiving portions, and fasteners arranged in said pocket-like receiving portions, said reinforcement closely hugging said fasteners to prevent movement of the fasteners between said reinforcements.

5. In combination with a base-fabric and covering strip, a plurality of main line stitchings sewed through said base-fabric and covering strip to provide gaps at intervals; tying stitches in each main line of stitchings, said tying stitches being arranged in pairs forming sets to provide reinforcements in alinement back of one another, and a jump-stitch providing a loop connected with each pair of tying stitches.

[Claims 6 to 8 not printed in the Gazette.]

1,171,984. WIRE-DRAWING SAFETY DEVICE. MICHAEL SHANNON, Muncie, Ind. Filed Aug. 16, 1915. Serial No. 45,739. (Cl. 205—20.)



1. A wire drawing apparatus including wire drawing means, a reel from which the wire is drawn by said wire drawing means, a spindle on which the reel is loosely mounted which has a base, a base frame on which the base of the reel spindle loosely rests so as to be slidable toward the wire drawing means when the wire becomes entangled, and means actuated by such movement of the reel for stopping the operation of the wire drawing means.

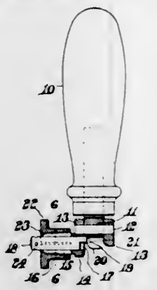
2. A wire drawing apparatus including wire drawing means, a reel from which the wire is drawn by such wire drawing means, means for slidably mounting said reel so that when said wire is entangled it will draw the wire bodily toward the wire drawing means, a lever, means actuated thereby for stopping the wire drawing means, and a connecting rod pivoted at one end of said lever and the other end adapted to loosely engage the end of the spindle so as to be readily removable therefrom and whereby when the reel slides toward the wire drawing means it will actuate said lever through the agency of said rod.

3. A wire drawing apparatus, including wire drawing means, a reel from which the wire is drawn by said wire drawing means, a spindle on which the reel is mounted which has a base, a base frame on which the base of the reel spindle rests loosely so as to be slidable toward the wire drawing means when the wire becomes entangled, a lever, means actuated thereby for stopping the wire drawing means, and a connecting rod pivoted at one end of said lever and the other end adapted to loosely engage the upper end of the reel spindle so as to be readily removed therefrom, and whereby, when the reel slides toward the wire drawing means, it will actuate said lever through the agency of said rod.

4. A wire drawing apparatus, including wire drawing means, a reel from which the wire is drawn by said wire drawing means, a spindle on which the reel is mounted, which has a base and has its upper end reduced, a base frame on which the base of the reel spindle rests loosely

so as to be slidable toward the wire drawing means when the wire becomes entangled, a lever, means actuated thereby for stopping the wire drawing means, and a connecting rod pivoted at one end of said lever and the other end provided with a loop for loosely engaging the reduced upper end of the spindle.

1,171,985. CHANNELING-TOOL. PETER SJOSTROM and AUGUST MOBERG, Maplewood, Mass. Filed May 20, 1915. Serial No. 29,423. (Cl. 12—106.)



1. In a device of the class described, the combination of a handle; a member connected to one end thereof by a transverse pivot and having a flange formed integral therewith adapted to engage the edge of a sole; and a knife carried by said member with a cutting edge approximately perpendicular to the inner face of said flange and opposite thereto.

2. In a device of the class described, the combination of a handle; a member connected to one end thereof by a transverse pivot and having a flange adapted to engage the edge of a sole; a knife member carried by said member with a cutting edge at one end approximately perpendicular to the inner face of said flange and adjustable endwise toward and from said flange; and means for locking said knife member in adjusted position.

3. In a device of the class described, the combination of a handle; a member connected to one end thereof by a transverse pivot and having a flange adapted to engage the edge of a sole; a knife having a shank mounted in said member and provided with a cutting edge approximately perpendicular to the inner face of said flange, said knife being adjustable about the axis of said shank; and means for locking said knife in adjusted position.

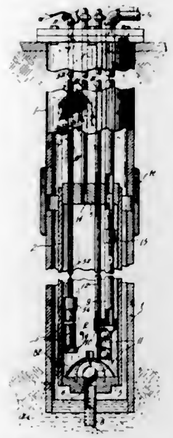
4. In a device of the class described, the combination of a handle; a pin perpendicular to the axis thereof; a bifurcated member mounted on said pin and having a sole-edge-engaging flange; a knife carried by said member with a cutting edge extending across the forked end thereof; and means whereby the knife may be adjusted toward and from said flange and locked in adjusted position.

5. In a device of the class described, the combination of a handle; a pin perpendicular to the axis thereof; a bifurcated member mounted on said pin and having a sole-edge-engaging flange; a cylindrical member carried by said bifurcated member and having at one end thereof a knife with a cutting edge extending across the forked end of said bifurcated member; and means whereby said cylindrical member may be adjusted about its own axis, may be moved endwise, and may be locked in adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

1,171,986. WELL-PUMPING SYSTEM. WILLIAM M. STEPHENSON, Dallas, Tex. Filed Sept. 6, 1913. Serial No. 788,483. (Cl. 103—8.)

1. A well-pumping system comprising a substantially closed receptacle mounted in the bottom portion of a well and having a valve inlet, of a discharge pipe leading from said receptacle out of the well, air supplying and air exhausting means having connection with said receptacle, and a device alternately actuated by the hydrostatic pressure of a fluid entering the receptacle during the period of its connection with the air exhausting means, and by gravity, automatically cutting off communication of the receptacle with the exhausting means, and establishing its communication with the supplying means when the receptacle is substantially full of the fluid, and automatically producing the reverse result when the receptacle is substantially empty.



2. A well pumping system comprising a substantially closed receptacle mounted in the bottom portion of a well and having a valve inlet, of a discharge pipe leading from said receptacle out of the well, air supplying and air exhausting means correlated with said receptacle, the latter normally having communication with the same, a device for simultaneously cutting off the air exhausting means from communication with the receptacle and establishing its communication with air supplying means, an electro-magnetic device controlling the last specified device, a circuit including the electro-magnetic device extending down the wall and normally broken within said receptacle, a device for closing said circuit within the receptacle actuated by hydrostatic pressure of the oil in the same when the oil rises to a certain height, and means for venting the receptacle to the atmosphere between the periods of its communication with the air supplying and air exhausting means.

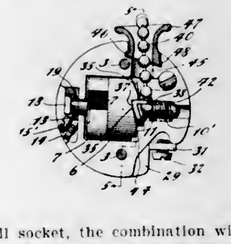
3. A well pumping system comprising a substantially closed receptacle mounted in the bottom portion of a well, and having a valve inlet, of a discharge pipe leading from said receptacle out of the well, air supplying and air exhausting means connected to said receptacle, a device for controlling communication of the receptacle with the air supplying and air exhausting means, means for venting the receptacle to the atmosphere between the periods of its communication with the air supplying and air exhausting means, and a normally closed valve disposed in the upper portion of the receptacle upon the discharge pipe and adapted to yield under a sufficient pressure to admit fluids from the receptacle to the discharge pipe.

4. A well pumping system comprising a substantially closed receptacle mounted in the bottom portion of a well, and having a valve inlet, of a discharge pipe leading from said receptacle out of the well, air supplying and air exhausting means connected to the receptacle, an automatic device controlling communication between the receptacle and the air supplying and air exhausting means, and a valve interposed in the pipe line connecting the receptacle with the exhausting means which valve during the exhausting of the receptacle allows the air to vent to the atmosphere until the pressure within the receptacle is substantially atmospheric, thereupon automatically giving said line communication with the air exhausing means.

5. A well pumping system comprising a substantially closed receptacle mounted in the bottom portion of a well, and having a valve inlet, a discharge pipe leading from said receptacle out of the well, air supplying and air exhausting means having connection to said receptacle, a device controlling the communication of the receptacle with the air supplying and air exhausting means, an electro-magnetic device controlling the operation of the device last specified, an electric circuit including the electro-magnetic device, said circuit being normally open, a second electro-magnetic device adapted when electrified to close the said circuit, a second circuit including the second electro-magnetic device and extending into the well, and normally open within said receptacle, means within the receptacle for automatically closing said circuit due to the hydrostatic pressure of the oil in the receptacle when said oil reaches a certain height, and means for venting said receptacle to the atmosphere between the periods the air supplying and air exhausting means are in communication with said receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,171,987. ROTARY SNAP-SWITCH. JAMES S. STEWART, New York, N. Y. Filed Dec. 2, 1913. Serial No. 804,278. (Cl. 173—354.)



1. In a pull socket, the combination with a drum circuit controller having spaced contacts thereon and a shaft electrically connected to said contacts, of a terminal plate having an aperture therein and a lug extending from said plate opposite said aperture, said shaft passing through said aperture, and means for holding said shaft against said lug to maintain them in electrical contact.

2. In a rotary snap switch, in combination, a body having a chamber therein, a drum controller in said chamber having spaced contacts thereon, a shaft electrically connected with said contacts for rotatably supporting one end of said drum, a second stationary shaft for rotatably supporting the other end of said drum, said shaft having a bent portion inserted in a recess in said body, a terminal plate on said body against which said first named shaft abuts, ratchet teeth on said drum, a pawl mounted on said second named shaft for engagement with said ratchet teeth and a coiled spring on said second named shaft, having one end inserted in said recess, and the other end engaging with said pawl, for maintaining said pawl under tension and for forcing said first named shaft against said terminal plate.

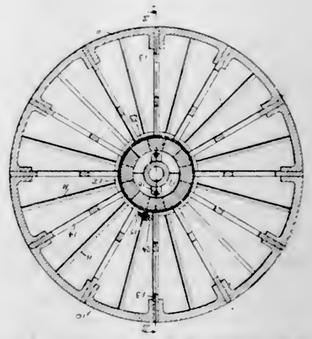
3. In a rotary snap switch, a circuit controller having a shaft forming part of the circuit connection, a terminal plate having an aperture therein through which said shaft passes, said plate having a lug against which said shaft abuts to maintain electrical contact between the parts and means on said plate for securing thereto a conductor wire.

4. In a pull socket, the combination with a body having a chamber therein, a drum circuit controller in said chamber, a shaft for rotatably supporting the same, ratchet teeth on one end face of the said drum, a boss on said face projecting beyond the plane of said teeth, a pawl loosely mounted on said shaft bearing against said boss, a coiled spring on said shaft bearing against said pawl, and a pull chain attached to said pawl passing through an opening in said drum, said opening being arranged at an angle to the face of the drum.

5. In a pull socket, in combination with a body having a chamber therein of a drum circuit controller in said chamber, a shaft for rotatably supporting one end of said drum, ratchet teeth formed on one end face of said drum, a pawl loosely mounted on said shaft, means including a part projecting from the face of said drum normally holding said pawl out of frictional engagement with the inclined faces of said teeth and means including a pull chain for tilting said pawl into engagement with said teeth upon the pulling of the chain.

[Claims 6 to 10 not printed in the Gazette.]

1,171,988. TRACTOR-WHEEL. ROY E. TOMBAUGH, Roann, Ind. Filed June 4, 1915. Serial No. 32,110. (Cl. 21—209.)



1. A tractor wheel having a felly with slots therein, movable cleats extending outwardly through said slots, a plurality of auxiliary hub members attached to said cleats, oppositely tapered tubular wedge members for holding said cleats in their outward position and oppositely threaded shafts for operating said wedge members.

2. A tractor wheel having slots in the felly thereof, cleats adapted to extend through said felly, expandible hub members connected to said cleats, means for expanding said hub members, and an expandible band surrounding said hub members for holding them in place.

3. A tractor wheel, cleats adapted to extend past the periphery of said wheel, expansible hub members connected to said cleats, means for expanding said hub members, and an expansible band surrounding said hub members for holding them in place.

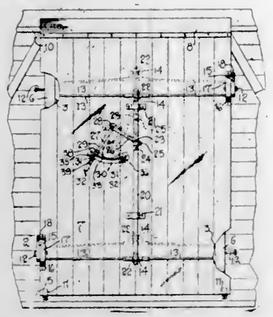
1,171,989. CAR-DOOR LOCK. CHARLES W. UNDERWOOD, Crowley, La. Filed Aug. 16, 1915. Serial No. 45,771. (Cl. 70—102.)

1. The combination with a door frame and a door, of members mounted on the door and adapted to have operative engagement with the door frame and being mounted for vertical movement relative to the door, and means for flexing said members and thereby placing them under tension upon a vertical movement.

2. The combination with a door frame and a door, of a plurality of transversely extending rotatable bars rotatably mounted upon the face of the door and projecting beyond it, hooks mounted on each end of said bars and adapted to operatively engage the door frame, upwardly and outwardly inclined walls with which the ends of the bars engage, and means for simultaneously rotating said bars and shifting them vertically upward into wedging engagement with said walls.

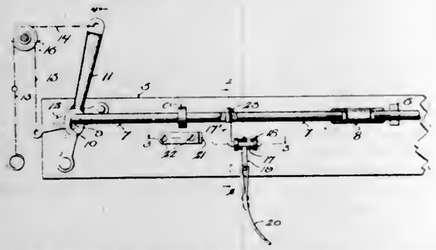
3. The combination with a wall having a door opening, of a sliding door mounted thereon for movement into position within said opening, a plurality of transversely extending bars rotatably mounted upon the face of the door and projecting therebeyond, each of said bars being formed with a cranked portion at its middle, radially disposed hooks mounted upon the ends of each bar, members

mounted upon the wall with which the hooks are adapted to engage when the door is in place, brackets mounted adjacent the side margins of the door and each having an outwardly extending web formed with an elongated upwardly and outwardly extending slot through which the corresponding end of the bar passes, a vertically movable member mounted upon the face of the door for sliding movement and having operative engagement with the cranked portions of said bars, and means for shifting said member upward to thereby rotate the bars and shifting them vertically to thereby cause the walls of said slots to force the outer ends of the bars outward away from the face of the door.



4. The combination with a wall having a door opening, of a door mounted for movement into position within said opening, a transversely extending bar rotatably mounted upon the door and projecting therebeyond, hooks carried by the bar, members carried by the wall with which the hooks are adapted to engage when the door is in place, brackets mounted adjacent the side margins of the door and having an elongated upwardly and outwardly extending slot through which the corresponding ends of the bar passes, and a movable member mounted upon the door and having operative engagement with the shaft and adapted to rotate the bar and shift the same vertically to thereby cause the walls of the slot to force the outer ends of the bars outward away from the face of the door.

1,171,990. LEVER LOCKING AND RELEASING MEANS. FRANK J. VICKMAN, Walsh, Wis. Filed Feb. 17, 1914. Serial No. 819,202. (Cl. 79—5.)

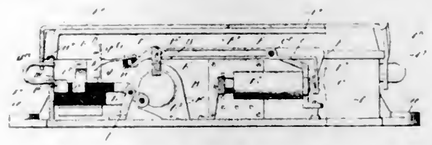


1. A device of the kind described comprising an actuating rod having one end provided with a hook, a pivoted lever provided with an intermediate slot through which the hook of the said rod projects, pivoted means adapted to engage the projecting portion of the hook to prevent movement of the rod, and means operable from a distant point for disengaging the movement preventing means from the hook and simultaneously operating the lever to actuate the rod.

2. A device of the kind described comprising a slidably mounted actuating rod, one end of the rod being bent at right angles, a pivoted lever provided with a slot through which the bent portion of the rod protrudes, a gravity locking device provided with means for engaging the protruding portion of the bent end of the rod to normally prevent movement of said rod, and means operable from a distant point for releasing the locking device and actuating the lever to cause the lever to impart a sliding movement to the rod.

3. A device of the kind described comprising a slidably mounted actuating rod provided with a right-angularly projecting hook at one end, a lever pivotally mounted and having an intermediate longitudinally extending slot through which the hook of the actuating rod projects, a pivotally mounted latch having a notch for engaging the projecting end of the said hook, and a cable operable from a distant point and having connections with the free ends of the lever and the latch.

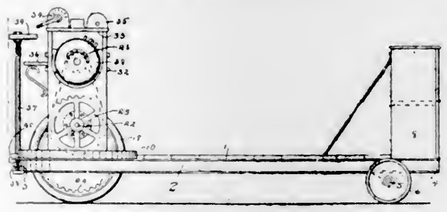
1,171,991. LOCKING SYSTEM FOR RAILWAY-SWITCHES. EUGENE W. VOGEL, Chicago, Ill., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 19, 1908. Serial No. 416,798. (Cl. 246—29.)



1. In a switch lock, a casing having alined inwardly projecting hubs, a revoluble shaft journaled in said hubs but prevented from moving axially therein, shoulders on the adjacent ends of said hubs arranged transversely of said shaft, shoulders on said shaft in position to aline with the shoulders on the hubs when the shaft occupies a predetermined position, a key interlocked with the shoulders on the hubs so as to be free to move into and out of engagement with the shoulders on the shaft and at the same time be held against a movement in the transverse direction, and means for actuating said key.

2. In a switch lock, a casing having alined inwardly projecting hubs, a revoluble shaft journaled in said hubs but prevented from moving axially therein, shoulders on the adjacent ends of said hubs arranged transversely of said shaft, shoulders on said shaft in position to aline with the shoulders on the hubs when the shaft occupies a predetermined position, a key interlocked with the shoulders on the hubs so as to be free to move into and out of engagement with the shoulders on the shaft and at the same time be held against a movement in the transverse direction, and a lever pivotally connected to the outer end of the key for moving the same from and toward the shaft.

1,171,992. THREE-WHEELED TRUCK. HAVELOCK WALSER, New York, N. Y. Filed Dec. 2, 1914. Serial No. 875,055. (Cl. 21—90.)

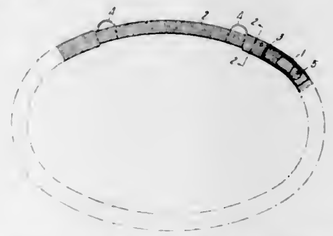


1. A truck having a tractor member comprising a double U shaped member, a traction wheel arranged within one said U, a motor adjustably supported in another said U and a chain from said motor for driving said tractor wheel, as and for the purpose set forth.

2. A truck having a double U shaped member comprising a rotatable and flanged tractor head, a ring secured to said truck and having a ball race and a guiding surface interior thereto, and a second ring secured to said tractor head and having a ball race and a guiding surface interior thereto, said rings serving to secure said tractor head and said truck in operable relation, in combination with a motor arranged in one said U and traction wheel driven by said motor and arranged in the other said U, and means for turning said tractor head upon said rings to change the direction of said traction wheel as herein specified.

3. In a device of the character described a tractor head having a yoke, a single traction wheel rotatably secured within said yoke and provided with an internal gear arranged upon an inner periphery of said wheel, a gear and pinion rotatably mounted in said yoke, said pinion adapted to mesh with the said internal gear, and a motor supported by said yoke for driving said gear and pinion and said traction wheel as and for the purpose set forth.

1,171,993. ELASTIC ARMBAND. CARTTER WEAVER, Pittsburgh, Pa., assignor to Weaver Products Manufacturing Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Oct. 9, 1913. Serial No. 794,320. (Cl. 241—5.)



1. An elastic band for personal wear, comprising a plurality of hollow wire members of different diameters, each smaller member telescoping at each end into a larger member, and each larger member being provided at each end with means for detachably securing a smaller member thereto.

2. An elastic band for personal wear, comprising two elastic members, the opposite ends of one of said members telescoping into the opposite ends of the other members, and means at the ends of the outer of said members for detachably securing the inner member thereto.

3. An elastic band for personal wear, comprising outer and inner wire members, the inner member being telescoped into the outer member, the end portion of the wire of the outer member being bent to form a hook and adapted to be passed between any two successive turns of the wire of the inner member.

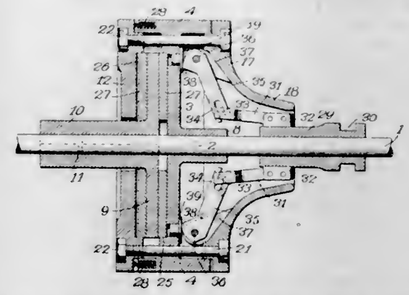
4. An elastic band for personal wear, comprising a hollow wire structure having two end portions of different sizes, one telescoping into the other, the free end of the wire at one end of the larger portion being bent to form a hook and adapted to be passed from the outside between any two successive turns of the wire of the smaller portion of the structure to adjustably secure together the ends of the wire structure.

5. An elastic band for personal wear, comprising a plurality of wire coils of different sizes telescoped into each other, and means for detachably securing said coils to each other, said coils being wound in opposite directions whereby they will slide easily past each other.

[Claim 6 not printed in the Gazette.]

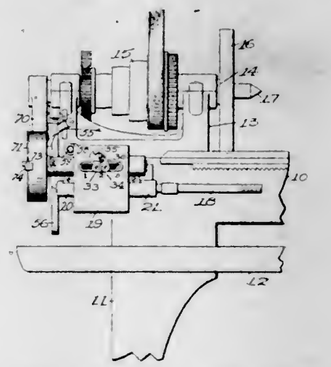
1,171,994. FRICTION-CLUTCH. CARL G. WESTLUND, Worcester, Mass., assignor to Carl G. Westlund Company, Worcester, Mass. Filed Mar. 6, 1914. Serial No. 822,799. (Cl. 192—7.)

1. In a friction clutch, the combination with a driven shaft, of a driving wheel loosely journaled thereon and capable of longitudinal movement, a driven wheel fixed to said shaft and having a rim surrounding said driving wheel, said driven wheel and its rim being diametrically divided, annular inclosing members disposed on opposite sides of said driven wheel, each providing lugs in slidable interlocking engagement with the rim of said driven wheel, said members being diametrically divided at an angle to the line of division of said driven wheel and rim, annular divided friction devices interposed on each side of said driving wheel, and means for moving one of said annular inclosing members toward said driving wheel to press said friction devices into engagement with the opposing surfaces of the driving and driven parts.



2. In a friction clutch, the combination with a driven shaft, of a divided driving wheel loosely journaled thereon and capable of longitudinal movement, a driven wheel fixed to said shaft, and providing a rim, said driven wheel and rim being diametrically divided to permit of assembly on said shaft, friction devices disposed on opposite sides of said driving wheel, one of said devices being between said driving wheel and said driven wheel, an annular member disposed on the opposite side of said other friction device, said annular member having slidable interlocking engagement with the rim of said driven wheel and being diametrically divided in an angle to the line of division of said driven wheel, and means for moving said annular member longitudinally of the shaft, to press the friction devices into engagement with the faces of said driving wheel.

1,171,995. GEARING FOR LATHES. ALONZO W. WHITCOMB, Worcester, Mass. Filed Nov. 27, 1914. Serial No. 874,158. (Cl. 74—58.)



1. In a lathe, a combination, a head stock, a spindle, a lead screw, and an intermediate shaft positioned parallel to said lead screw, a pinion on said spindle, a change gear on said intermediate shaft, driving connections from said pinion to said change gear, and a cover for said gears comprising a casing fixed to the head-stock and

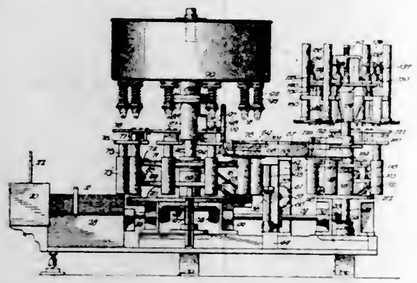
having an opening therein concentric with said intermediate shaft and change gear, a cover plate for said opening, and means to support the cover plate in position to close said opening.

2. In a lathe, in combination, a lead screw, an intermediate shaft parallel to said lead screw, a set of gears fixed to said lead screw, a set of gears slidable on said intermediate shaft, a box inclosing said sets of gears and having a slot in the front thereof, a gear-shifting block slidable in said slot, and a reversible stop movable into position to stop said block in mid-position when moved in either direction.

3. In a lathe, in combination, a spindle, a pinion on said spindle, a lead screw, an intermediate shaft positioned parallel to said lead screw and rotatable in fixed bearings, shiftable gear connections between said intermediate shaft and said screw, a change gear on said shaft, an arm movable about a fixed center, a driven gear rotatable about the pivot of said arm, reversible means to drive said gear from said pinion, and driving connections on said arm for driving said change gear from said driven gear, said arm and the entire driving connections from said pinion to said change gear being removable as a unit from said lathe.

4. In a lathe, in combination, a spindle, a pinion on said spindle, a lead screw, an intermediate shaft positioned parallel to said lead screw and rotatable in fixed bearings, shiftable gear connections between said intermediate shaft and said screw, a change gear on said shaft, an arm movable about a fixed center, a driven gear rotatable about the pivot of said arm, reversible means to drive said gear from said pinion, and driving connections on said arm for driving said change gear from said driven gear, the driven gear and the reversible connections from said pinion to said gear being supported upon a single stud and removable as a unit from said lathe.

1,171,996. BOTTLE-CAPPING MACHINE. STANLEY W. WILKINSON, North Chicago, Ill., assignor to Davis Milk Machinery Company, North Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1915. Serial No. 1,499. (Cl. 226—5.)



1. In a bottle capping machine, the combination with a rotary standard, of a plurality of capping mechanisms carried thereby, each comprising a holder for a plurality of stacked, flat, pasteboard caps, a cap feeding member moving across the holder to move the caps one by one to a position above the top of the milk bottle, and a member operating to force the fed cap into the throat of the bottle by a relative movement of the member and bottle, means for automatically feeding bottles to and from said mechanisms, and means for automatically operating said mechanisms as the standard is rotated to cap the bottles passing therethrough.

2. In a bottle capping machine, the combination with a rotary standard, af a plurality of capping mechanisms carried thereby, each comprising a hollow clamping jaw, a plunger adapted to reciprocate therethrough, a supply tube for caps, feeding mechanism to feed the caps one by one into the clamping jaw, and a vertically movable standard on which the bottle rests as it passes through the machine, means for automatically feeding bottles to and from the standard, and gearing for operating the various parts as the bottles are fed therethrough to cap the same.

3. In a bottle capping machine, the combination with a rotating supporting frame; of a plurality of radially arranged bottle capping mechanisms, each consisting of a plunger carrying rod depending from the supporting frame, a plunger carried thereby, a vertically movable member surrounding the plunger and terminating at its lower end in a clamping jaw adapted to engage the top of a bottle, a vertically-movable bottle-support, a cap-tube carried by the vertically-movable member, a slide reciprocating across the bottom of the tube to deliver the caps one by one beneath the plunger, and automatic means actuated by the vertical movement of the member to reciprocate the slide; means for rotating the supporting frame; a stationary frame; and connections between the stationary frame and the vertically movable bottle supports to raise the latter at a certain place in their rotation with the supporting frame.

4. In a bottle capping machine, the combination with a rotating supporting frame; of a plurality of radially arranged bottle capping mechanisms, each consisting of a plunger carrying rod depending from the supporting frame, a plunger carried thereby, a vertically movable member surrounding the plunger and terminating at its lower end in a clamping jaw adapted to engage the top of a bottle, a vertically-movable bottle-support, a cap-tube carried by the vertically-movable member, a slide reciprocating across the bottom of the tube to deliver the caps one by one beneath the plunger, a yoke connected to the slide, a cam lever pivoted on the vertically-movable member, and an abutment supported by the supporting frame to coöperate with the cam lever to reciprocate the slide; means for rotating the supporting frame; a stationary frame; and connections between the stationary frame and the vertically movable bottle supports to raise the latter at a certain place in their rotation with the supporting frame.

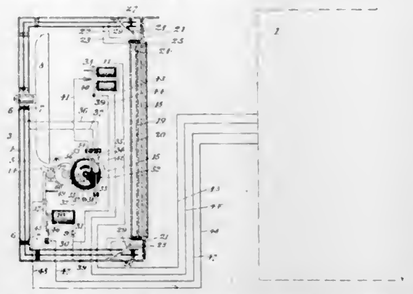
5. In a bottle capping machine, the combination with a rotating supporting frame; of a plurality of radially arranged bottle capping mechanisms, each consisting of a plunger carrying rod depending from the supporting frame, a plunger carried thereby, a vertically movable member surrounding the plunger and terminating at its lower end in a clamping jaw adapted to engage the top of a bottle, a vertically-movable bottle-support, a cap-tube carried by the vertically-movable member, a slide reciprocating across the bottom of the tube to deliver the caps one by one beneath the plunger, a yoke connected to the slide, a cam lever pivoted on the vertically-movable member having a cam slot in its upper end, and a roller in the slot journaled on a bearing supported by the supporting frame; means for rotating the supporting frame; a stationary frame; and connections between the stationary frame and the vertically movable bottle supports to raise the latter at a certain place in their rotation with the supporting frame.

[Claims 6 to 17 not printed in the Gazette.]

1,171,997. ELECTRIC BURGLAR-ALARM SYSTEM. JOHN P. WILLIAMS, New York, N. Y., assignor to Electric Bank Protection Company, a Corporation of Delaware. Filed May 21, 1910, serial No. 562,568. Renewed Aug. 11, 1915. Serial No. 45,040. (Cl. 177—314.)

1. In a burglar-alarm system, a structure to be guarded, a plurality of sets of casing plates comprised in said structure, an electrically-controlled alarm mechanism, an electrical protective system comprising circuit connections with said respective sets of casing plates and with said alarm mechanism, one set of said casing plates being normally connected with and another set normally disconnected from said alarm mechanism, and means governed by the action of the circuit which controls the alarm mechanism for automatically varying said circuit connections to throw said sets of casing plates out of and into circuit respectively with said alarm mechanism.

2. In a burglar-alarm system, a structure to be guarded, a plurality of sets of casing plates comprised in said structure, an electrically-controlled alarm mechanism, an electrical protective system comprising circuit connections with said respective sets of casing plates and with said alarm mechanism, one set of said casing plates being normally connected with and another set normally disconnected from said alarm mechanism, and means governed by the action of the circuit which controls the alarm mechanism for automatically varying said circuit connections to throw said sets of casing plates out of and into circuit respectively with said alarm mechanism during the period said circuit connections are operative with relation to the casing plates.



3. In a burglar-alarm system, a structure to be guarded, a plurality of sets of casing plates comprised in said structure, an electrically-controlled alarm mechanism, an electrical protective system comprising circuit connections with said respective sets of casing plates and with said alarm mechanism, one set of said casing plates being normally connected with and another set normally disconnected from said alarm mechanism, and means governed by the action of the circuit which controls the alarm mechanism for automatically and successively, varying said circuit connections to throw said sets of casing plates out of and into circuit respectively with said alarm mechanism.

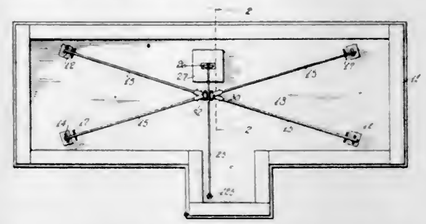
4. In a burglar-alarm system, a structure to be guarded, a plurality of sets of casing plates comprised in said structure, an electrically-controlled alarm mechanism, an electrical protective system comprising circuit connections with said respective sets of casing plates and with said alarm mechanism, one set of said casing plates being normally connected with and another set normally disconnected from said alarm mechanism, and means governed by the action of the circuit which controls the alarm mechanism for automatically and alternately varying said circuit connections to throw said sets of casing plates out of and into circuit respectively with said alarm mechanism.

5. In a burglar-alarm system, a structure to be guarded, a plurality of sets of casing plates comprised in said structure, an electrically-controlled alarm mechanism, an electrical protective system comprising circuit connections with said respective sets of casing plates and with said alarm mechanism, one set of said casing plates being normally connected with and another set normally disconnected from said alarm mechanism, a plurality of contacts comprised in said circuit connections, and rotary mechanism governed by the action of the circuit which controls the alarm mechanism and automatically operating to vary the circuit connections of said contacts to throw said sets of casing plates out of and into circuit respectively with said alarm mechanism.

[Claims 6 to 21 not printed in the Gazette.]
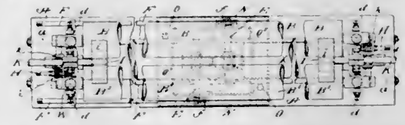
1,171,998. PLATFORM-SCALE. MARLON H. WINSLOW, Terre Haute, Ind. Filed Jan. 28, 1915. Serial No. 4,883. (Cl. 73—121.)

A weighing scale including a platform, a main beam arranged transversely of the platform, a knife edge bearing extending from opposite sides of said beam, a frame mounted on said knife edge bearing, levers for supporting the platform with their ends meeting and mounted in said frame, the levers on each side of said main beam being



connected one above the other with the frame on the corresponding side of said main beam, and stationary bearing stands on which each of said levers and said main beam are fulcrumed, substantially as set forth.

1,171,999. SUCTION-BOX FOR PAPER-MAKING MACHINES. ISAAC J. WITHAM, Hudson Falls, N. Y., assignor of one-half to George S. Witham, Sr., Hudson Falls, N. Y. Filed July 15, 1915. Serial No. 40,034. (Cl. 92—51.)



1. A suction box for paper making machines, comprising a pair of parallel horizontally arranged rolls with a space between them and a pair of supporting rolls therefor arranged beneath said space and having a space between their inner ends to afford a suction chamber, and means for sealing said space against the entrance of air thereto.

2. A suction box for paper making machines, comprising a pair of parallel horizontally arranged rolls with a space between them, head blocks arranged in said space and adjustable toward and from each other, a pair of rolls on which said first mentioned rolls rest arranged below the space between said upper rolls and having a space between their inner ends to provide a vacuum chamber and means for sealing said vacuum chamber against the entrance of air.

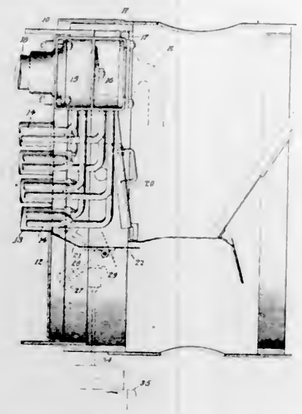
3. A suction box for paper making machines, comprising a pair of parallel horizontally arranged rolls with a space between them, head blocks arranged in said space and provided with chambered water seals, other rolls arranged below said upper rolls having a space between their inner ends and serving to support the middle portions of said upper rolls, and a casing surrounding said space and provided with means for excluding air therefrom.

4. A suction box for paper making machines, comprising a pair of parallel horizontally arranged rolls having a space between them, means for adjusting said rolls vertically and sidewise, end blocks arranged in the space between said rolls, means for adjusting said end blocks toward and from each other, other rolls arranged below said upper rolls having a space between their inner ends and means for adjusting said lower rolls at both their inner and outer ends.

1,172,000. DAMPER FOR BOILERS. CHARLES D. YOUNG, Altoona, Pa. Filed Jan. 16, 1915. Serial No. 2,542. (Cl. 110—163.)

1. The combination with a steam boiler having fire tubes and a superheater located in said fire tubes, of an oscillatory damper journaled in the smoke box of said boiler and adapted to control the flow of gases through

said fire tubes, mechanism operated by means of fluid pressure from the locomotive and adapted to close said damper when the flow of steam to the superheater is cut off and to open the same when the steam is turned on, comprising a movable piston stem provided with a slot therein, and an arm fixedly secured to the oscillatory damper shaft and projecting through said slot, substantially as described.



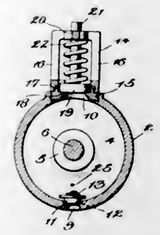
2. The combination with a steam boiler having fire tubes and a superheater located in said fire tubes, of a damper controlling the flow of gases through said fire tubes and provided with a shaft about which it is adapted to be oscillated, and means for closing said damper when the flow of steam through said superheater is shut off and to open the same when the flow is turned on, comprising a counter-weighted oscillatory arm fixedly secured to the said shaft, a fluid pressure mechanism provided with a reciprocatory element directly and operatively connected to said arm, and means for admitting fluid to and discharging the same from said fluid pressure mechanism to reciprocate said element.

3. The combination with a steam boiler having fire tubes and a superheater located in said tubes, of a damper for controlling the flow of gases from said fire tubes, said damper being provided with a shaft about which it is adapted to be oscillated, and means for actuating said damper adapted to close said damper when the flow of steam is cut off and to open the same when the steam is turned on, comprising a counter-weighted arm normally acting by gravity to maintain said valve closed, a cylinder, a reciprocating member in said cylinder directly connected to said counter-weighted arm, and means for admitting fluid to said cylinder to actuate said member.

4. The combination with a steam boiler having fire tubes and a superheater located in said fire tubes, of a damper controlling the flow of gases from said fire tubes, said damper being provided with a shaft about which it is adapted to oscillate, means for actuating said damper, adapted to close said damper when the flow of steam to the superheater is cut off and to open the same when the steam is turned on, comprising a counter-weighted arm normally acting by gravity to maintain said valve closed, a cylinder, a reciprocatory member in said cylinder, connected to said counter-weighted arm and actuated by fluid pressure to oscillate said arm against the force of gravity of said counter-weight, anti-friction means interposed between the reciprocating member, and the counter-weighted arm, and means for admitting fluid to and discharging the same from said cylinder to reciprocate the member therein and oscillate the damper.

5. The combination with a steam boiler having fire tubes and a superheater located in said fire tubes, of a damper controlling the flow of gases through said fire tubes and provided with a shaft about which it is adapted to be oscillated, and means for closing said damper when the flow of steam through said superheater is shut off and to open the same when the flow through the superheater is turned on, comprising a cylinder provided with a slot extending through the wall thereof, a piston and a piston stem movable in said cylinder, an arm fixedly secured to the said damper shaft, said arm projecting through said slot in the cylinder, and engaging with said piston stem, and means for admitting fluid to and discharging fluid from said cylinder to reciprocate said piston and stem to oscillate the damper.

1,172,001. PNEUMATIC BUMPER. EDWARD A. BAKER, SAMUEL W. JOHNSTON, and LESLIE H. JOHNSTON, Mansfield, Ohio. Filed June 19, 1915. Serial No. 35,083. (Cl. 213—2.)



1. In combination with an end sill of a car frame, a bracket spaced therefrom and supported by the car frame, a cylinder interposed between the end sill and bracket, a head for each end of the cylinder provided with a central opening, bushings disposed in the head openings and abutting the end sill and bracket, a plunger operable in the cylinder, a plunger rod slidable through the bushings and openings provided in the end sill and bracket, and a bumper on the plunger rod.

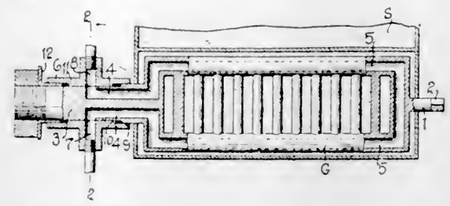
2. In combination with a cylinder having heads at its ends, each head having a central opening, a spring pressed plunger having a rod slidable through said openings, one of said heads having an air inlet which is open to the atmosphere at all times whereby upon the instroke of the plunger air may enter between the plunger and said head to prevent the formation of a vacuum in front of the plunger, an air inlet at the opposite end of the plunger, normally open dual function unitary means associated with said last named air inlet for allowing air to enter the cylinder and adapted upon the instroke of the plunger to be closed by the air compressed by the latter, and a relief valve at said opposite end of the cylinder.

3. In combination with a cylinder having heads at its ends, each head having a central opening, a spring pressed plunger having a rod slidable through said openings, means to allow air to enter the cylinder in front of the plunger so as to prevent the formation of a vacuum upon the inward movement of the plunger, a relief valve at the opposite end of the cylinder, said opposite end of the cylinder having an air inlet and normally open means associated with said last named air inlet for allowing air to enter the cylinder and adapted upon the instroke of the plunger to be closed by the air compressed by the latter.

4. In combination with an end sill of a car frame, a bracket spaced therefrom and supported by the car frame, a cylinder interposed between the end sill and bracket, a head for each end of the cylinder provided with a central opening, a plunger operable in the cylinder, a plunger rod slidable through the head openings and through openings provided therefor in the end sill and bracket, and a bumper on the plunger rod.

1,172,002. GRATE. RALPH M. BARNETT, Lenoir City, Tenn. Filed July 10, 1915. Serial No. 39,091. (Cl. 122—374.)

1. A fire grate having a conduit therein extending substantially entirely around the marginal portion thereof, said grate being provided with an extension having ports in communication with the extremities of the conduit.

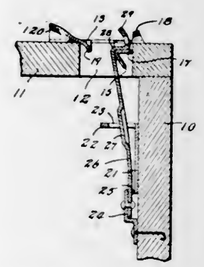


2. A fire grate having a conduit therein extending substantially entirely around the marginal portion thereof, said grate being provided with an extension having ports in communication with the extremities of the conduit, said extension serving as a trunnion, a sleeve surrounding said extension and provided with ports adapted to communicate with the ports of the extension.

3. A fire grate having a conduit therein extending substantially entirely around the marginal portion thereof, said grate being provided with an extension having ports in communication with the extremities of the conduit, said extension serving as a trunnion, a sleeve surrounding said extension and provided with ports adapted to communicate with the ports of the extension, the outer extremity of the extension being reduced to afford an annular shoulder and the intermediate portion of the bore of the sleeve being restricted to afford an annular shoulder, and packing interposed between said annular shoulders.

4. A fire grate having a conduit therein extending substantially entirely around the marginal portion thereof, said grate being provided with an extension having ports in communication with the extremities of the conduit, said extension serving as a trunnion, a sleeve surrounding said extension and provided with ports adapted to communicate with the ports of the extension, said extension having its outer extremity of reduced diameter to afford an annular shoulder, the intermediate portion of the bore of the sleeve being restricted to afford spaced annular shoulders, packing interposed between the shoulder of the extension and the adjacent shoulder of the sleeve, a gland nut coacting with the outer extremity of the sleeve, and packing interposed between said gland nut and the second annular shoulder of the sleeve.

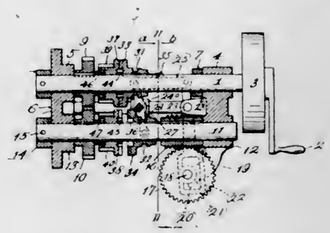
1,172,003. BOX-FASTENER. JAMES F. BEEHLER, St. Louis, Mo. Filed Apr. 5, 1915. Serial No. 19,126. (Cl. 70—80.)



1. In a box fastener, a plate provided with an opening, a portion of said plate in front of said opening being bent upward to form a sealing wire loop, the edge of said plate to the rear of said opening being bent downward to form a sealing wire guide, the rear edge of said plate being bent upward to form a lifting lip, and a resilient latching member, the upper end of which is provided with a hook which is adapted to pass through the opening in the plate and engage over that portion of said plate between the opening and the sealing loop.

2. The combination with a box and box lid, the latter being provided with an opening, of a plate positioned over said opening, which plate is provided with an aperture, an inclined striking plate depending from said plate in front of said aperture, a sealing wire loop on said plate in front of the aperture, a lifting lip on the rear edge of said plate, and a resilient member secured to the front wall of the box, the upper end of which resilient member is provided with a hook which is adapted to pass through the opening in the plate and engage the top of said plate in front of the opening therein.

1,172,004. ALTERNATE ROTARY DRIVING MECHANISM. EDWARD T. BETKER, Kansas City, Mo. Filed Apr. 17, 1915. Serial No. 22,066. (Cl. 74—50.)



1. In a mechanism of the character described, a main shaft constantly driven in one direction, a counter shaft constantly driven in a reverse direction by said main shaft, a transmission shaft driven in alternate directions by the main shaft and said counter shaft, and positively driven shifting mechanism to control the direction of travel of said transmission shaft.

2. In a mechanism of the character described, a main shaft constantly driven in one direction, a counter shaft constantly driven in a reverse direction by said main shaft, a transmission shaft geared to the main and counter shafts, clutches on the main and counter shafts to effect driving of the transmission shaft in alternate directions, and positively driven means to alternately shift said clutches in and out of gear.

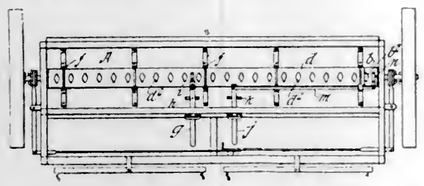
3. In a mechanism of the character described, a main shaft constantly driven in one direction, a counter shaft driven in a reverse direction by said main shaft, a transmission shaft geared to the main and counter shafts, clutches on the main and counter shafts to effect driving of the transmission shaft in alternate directions, a shifting lever to alternately shift said clutches in and out of gear, and positively driven means for actuating said shifting lever.

4. In a mechanism of the character described, a main shaft constantly driven in one direction, a counter shaft driven in a reverse direction by said main shaft, a transmission shaft geared to the main and counter shafts, clutches on the main and counter shafts to effect driving of the transmission shaft in alternate directions, a shifting lever to alternately shift said clutches in and out of gear, a rock-lever operably-connected to said shifting lever to actuate the same, and positively driven means for actuating said rock lever.

5. In a mechanism of the character described, a main shaft constantly driven in one direction, a counter shaft constantly driven in a reverse direction by said main shaft, a transmission shaft geared to the main and counter shafts, clutches on the main and counter shafts to effect driving of the transmission shaft in alternate directions, shifting means, to alternately shift said clutches in and out of gear, and positively driven worm gearing to operate said shifting means.

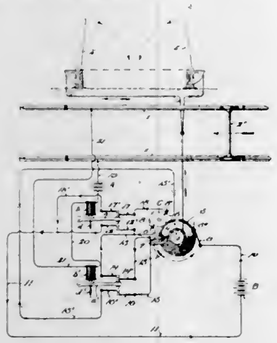
[Claims 6 to 8 not printed in the Gazette.]

1,172,005. FERTILIZER-SOWER. LEWIS A. BUTTERFIELD, Chicopee, Mass., assignor to Belcher & Taylor Agricultural Tool Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed Feb. 13, 1914. Serial No. 818,438. (Cl. 111—34.)



In a fertilizer distributer, a wheeled carriage, a hopper mounted on the carriage having downwardly convergent opposite sides and a horizontal bottom provided with a plurality of spaced delivery openings, a delivery controlling plate adjustably movable relatively to the bottom, having openings in spaced relations corresponding to those of the bottom, and adapted to fully or partially register therewith, and having an angularly extended lug at one end thereof, and a cut off plate, also having openings in spaced relations corresponding to those of the bottom and the controlling plate, in facewise contact against such plate, and adapted according to the positioning thereof, to have its openings in registry with those of such plate, and to have its opening entirely out of registry therewith, and terminating at one end of the controlling plate, a lever pivotally mounted on an intermediate part of the hopper, and having an adjustment imparting connection with the cut off plate, another lever also pivotally mounted on an intermediate part of the hopper, and a link, connected to said lever, extending parallel with the said plate, and having a connection with the lug extended from the end portion of the controlling plate.

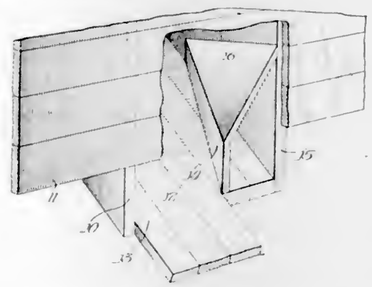
1,172,006. CIRCUIT-REVERSING DRUM FOR SIGNAL MECHANISM. ROBERT CAIRNS and JOSEPH W. CAIRNS, Watertown, Wis. Filed June 19, 1914. Serial No. 846,052. (Cl. 175—282.)



1. A circuit reversing drum for signal mechanism having a body of non-conducting material, a metallic ring mounted thereon, a contact member engageable with the ring, a metallic semi-circular plate fitted to the face of the drum body in circuit with the ring, an outer terminal contact extension at one end of the semi-circular plate, an inner terminal contact extension at the diametrically opposite end of the plate, and pairs of contact brushes having ends alined with an imaginary line intersecting the axis of the drum and the opposite contact extensions, whereby a circuit is closed from the main supply ring and one contact brush when the drum is at rest in one position and through the opposite contact ring when the drum has described a half revolution in the opposite direction.

2. A circuit reversing drum for signal mechanism having a body of non-conducting material, a metallic ring mounted thereon, a contact member engageable with the ring, a metallic semi-circular plate fitted to the face of the drum body in circuit with the ring, an outer terminal contact extension at one end of the semi-circular plate, an inner terminal contact extension at the diametrically opposite end of the plate, and pairs of contact brushes having ends alined with an imaginary line intersecting the axis of the drum and the opposite contact extensions, whereby a circuit is closed from the main supply ring and one contact brush when the drum is at rest in one position and through the opposite contact ring when the drum has described a half revolution in the opposite direction.

1,172,007. SELF-CLEARING ORE-POCKET. LELAND CLAPPER, Two Harbors, Minn. Filed July 30, 1914. Serial No. 854,134. (Cl. 193—29.)



1. In a bin, the combination of walls and a floor, the front wall having a discharge opening extending over a portion only of the width of the bin, said floor being downwardly and outwardly inclined toward said opening and of restricted area at a point contiguous to the opening, and a deflector located in the bin, said deflector having a double angle of inclination, whereby materials are directed toward the restricted discharge opening in substantially horizontal and vertical directions, substantially as described.

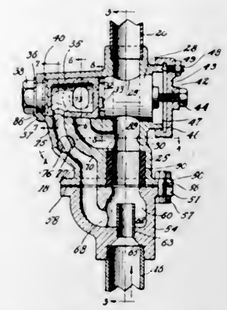
2. In a bin, the combination of walls and a sloping floor, one of the side walls extending substantially vertically, the front wall being provided with a discharge opening of a width less than the width of the bin, one edge of said opening substantially coinciding with said vertical wall, and an internal deflector for directing the materials to said opening, substantially as described.

3. In a bin, the combination of walls and a sloping floor, one of the side walls extending substantially vertically, the front wall being provided with a discharge opening of a width less than the width of the bin, one edge of said opening substantially coinciding with said vertical wall, and an internal deflector arranged at an angle to the angle of inclination of the floor and adapted to direct materials to said opening, substantially as described.

4. A bin having a vertical side wall, an inclined side wall, a sloping floor, and a front wall provided with an openign of a width less than the width of the bin, one side of the opening being located adjacent to the plane of said vertical wall, substantially as described.

5. In a bin, the combination of walls, a front and side wall extending substantially vertically, said front wall being provided with a discharge opening located with one edge substantially coincident with said vertical side wall, said opening being of a width less than the width of the bin, and a deflector at the opposite side of said opening from said vertical side wall, substantially as described.

1,172,008. CONTROLLING DEVICE FOR SAND-BLAST APPARATUS. FREDERICK A. COLEMAN, Gates Mills, and DAVID S. HAWKINS and ALBERT J. FARRELL, Cleveland, Ohio, assignors to The Coleman Foundry Equipment Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 31, 1914. Serial No. 815,611. (Cl. 51—12.)



1. The combination of a sand tank, a source of pressure fluid supply, a conduit therefrom to the sand tank, a sand conduit leading form the tank, means for directing pressure fluid from the source of supply to the last named conduit against the pressure in the tank, thereby balancing the same and stopping the flow of sand, means for thereafter closing the sand conduit at a point removed from the point where the sand is stopped, and an operating device common to both of the last mentioned means and adapted to operate the same in their proper order in respect to time.

2. A controlling device for a sand blast apparatus comprising a mixing chamber, a conduit for sand leading to said mixing chamber, an air passage leading to said mixing chamber, a conduit for the sand blast leading from said mixing chamber, an air passage leading to the sand blast conduit, a valve adapted to direct air to either or both of said air passages, a valve in the sand blast conduit, and a connection between said valves whereby the latter may be operated consequent upon the movement of the first mentioned valve.

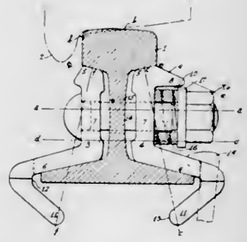
3. In a sand blast apparatus, the combination, with a sand tank, a source of pressure fluid supply, a conduit leading therefrom to the sand tank and a conduit for the sand leading from the sand tank, of a controlling device having a mixing chamber into which said conduit for sand opens, a conduit for pressure fluid leading from the source of pressure fluid to the controlling device, the controlling device having a pressure fluid passage therein leading to the mixing chamber, a passage therefrom for the sand blast, a passage leading to the sand blast passage at a point separated from the mixing chamber, a valve adapted to direct pressure fluid to either of these passages whereby the sand may be mixed with the pressure fluid or the flow thereof may be stopped by counteracting the pressure which forces it through the sand conduit, a second valve in the passage for the sand blast, and connecting members between said valves whereby the last named valve is operated by the movement of the first mentioned valve.

4. In a sand blast apparatus, the combination with a source of pressure fluid, a sand tank and a conduit therefrom to the source of pressure fluid and a conduit for the sand leading from the sand tank, of a controlling device comprising a mixing chamber into which the conduit for sand opens, a passage for the sand blast, a passage for pressure fluid leading to the mixing chamber, a passage leading to the sand blast conduit ahead of the mixing chamber, a valve directing the pressure fluid to either of said passages, a conduit leading from the source of pressure fluid to the controlling device and communicating with said valve, a second valve in the sand blast conduit, connections between said valve, and means for operating the first mentioned valve whereby the pressure fluid is shut off from the passage leading to the mixing chamber and directed to the sand blast conduit thereby counteracting the pressure on the sand in the sand conduit and a further movement of said valve operates to shut off the pressure fluid from the source of supply at the same time closing the valve in the sand blast conduit.

5. A controlling device for a sand blast apparatus comprising a mixing chamber, a sand tank, a conduit for sand leading to said mixing chamber, an air passage leading to said mixing chamber, a conduit for the sand blast leading from the mixing chamber, means for regulating the flow of air to the mixing chamber, a valve in the sand blast conduit on the side of the mixing chamber remote from said sand tank, means for creating a preponderance of pressure between the valve and the tank in the sand conduit forming a back pressure whereby the flow of sand is stopped and at the same time the sand blast conduit is cleaned, and means for thereafter closing the valve in said conduit.

[Claims 6 to 14 not printed in the Gazette.]

1,172,009. RAIL-JOINT. LEWIS R. COMPTON, East Orange, N. J., assignor to The Hatfield Rail-Joint Manufacturing Company, Macon, Ga., a Corporation of Delaware. Filed Jan. 31, 1914. Serial No. 815,639. (Cl. 239—9.)



1. In a rail joint, the combination with adjacent rails, of a pair of parallel strain transferring members comprising inner and outer members lapping adjacent ends of the rails on one side thereof, the outer member having a rail head engaging portion with a nose projecting therefrom adapted to resist thrusts on the rail heads, a rail base flange engaging member and a connecting web, a relatively short bolt passing through one of said rails and said members, a coiled spring compressed substantially to its maximum tension carried by said bolt between said nose and flange engaging portion and having opposite ends bearing on said members to maintain said inner member in engagement with the rails, said spring having the greatest possible cross section whereby a spring of a strength to resist the thrusts on the rails by the passing trains may be contained in a space within the adjacent edge of the base flange.

2. In railway track construction, the combination with a pair of rails having adjacent ends disposed in juxtaposition to form the rail joint, of a splice bar having a web lapping said juxtaposed ends, means for maintaining said bar in engagement with one of said rails, said means including a plate and a tensioned member disposed between said web and said plate, said splice bar having a laterally extending rib overhanging said member, said web, rib and plate forming an inclosed housing straddling said tensioned member to protect the same.

3. In combination with a rail, of a splice bar in wedging engagement with the rail, a resilient member between the engaging portions of said rail and bar and a compressed coiled spring with substantially contacting coils tending to move said bar toward said rail, said compressible member affording a slight movement between the rail and bar in the direction which would tend to further compress the spring.

4. In a rail joint, the combination with adjacent rails, of a splice bar bridging adjacent ends of said rails, a double shouldered bolt positioned through one of said rails and said bar, a coiled spring carried by said bolt and bearing on said bar and held by one of said shoulders, the adjacent coils of said spring disposed relatively close to each other near the bolt and relatively far apart outward of the bolt.

5. In a rail joint, the combination with two elements thereof, of a compressed coiled spring having coils trapezoidal in cross section and held compressed between said elements, a portion of certain adjacent coils being positioned relatively close to each other and another portion being spaced relatively far apart.

[Claims 6 to 16 not printed in the Gazette.]

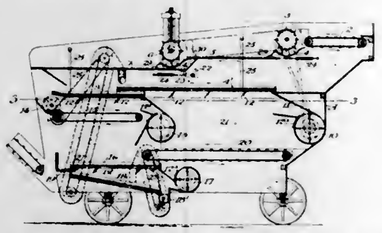
1,172,010. LOOSE-LEAF BOOK. WILLIAM A. COOKE, Jr., New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,126. (Cl. 129—1.)



1. A leaf for loose leaf books having a series of perforations adjacent an inner or binding edge for receiving the retaining prongs and having a second series of like perforations located along an outer edge, said sheet having its outer edges free and disconnected from other sheets.

2. A single leaf for loose leaf books having a series of perforations adjacent an inner or binding edge for receiving and retaining prongs and having a second series of perforations with corresponding relative positions located along the opposite outer edge of the sheet, said sheet having free outer edges.

1,172,011. THRESHING AND CLEANING MACHINE. JOEL S. COOPER, Santa Barbara, Cal. Filed Aug. 4, 1915. Serial No. 43,588. (Cl. 130—27.)



1. In an apparatus of the character described, a plurality of threshing cylinders, a feeding device, intermediate shaking tables substantially in a horizontal plane, a screen conveyer located below the tables, adapted to receive material passing through said tables, a fan discharging air through said conveyer, a shoe upon which a portion of the threshed material is received, an endless traveling conveyer upon which material is received directly from the shoe, a shoe upon which said belt conveyer discharges, a receiving conveyer into which the last named shoe delivers, an elevator by which material so received is raised to the proximity of the first named shoe, and a threshing mechanism to which material so raised is delivered for re-threshing.

2. In an apparatus of the character described, threshing cylinders located in a horizontal plane, one at the front, and a second midway of the length of the machine, open slat impulse reciprocating conveyers extending between the threshing members to deliver material from one to the other, a second impulse conveyer extending in line from the second thresher to the rear of the machine, said second cylinder and concave being removable, and a supplemental section of conveyer with means to connect and make the front and rear sections continuous.

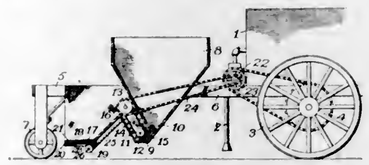
3. In a threshing machine, a pair of spaced threshing mechanisms, a table connecting the two mechanisms, said table having a hinged portion adjacent one of said mechanisms to allow the latter to be removed, and a second table extending from said one of the mechanisms and adapted upon removal of the latter to be connected to the first named table.

4. In a threshing machine, an upper threshing mechanism, a table therebeneath, a screen beneath said table at one end of the latter, a shoe beneath the other end of the table and underlying one end of the screen, and a second threshing mechanism beneath the discharge end of the shoe.

5. In a threshing machine, an upper threshing mechanism, a table therebeneath, a screen beneath said table at one end of the latter, a shoe beneath the other end of the table and underlying one end of the screen, a second threshing mechanism beneath the discharge end of the shoe, a conveyer beneath the shoe, a second shoe underlying said conveyer, means to elevate the unthreshed material from the second shoe onto the first shoe and means beneath said table to convey material dropping from the latter to the second shoe.

[Claims 6 to 13 not printed in the Gazette.]

1,172,012. ROAD-SANDING MACHINE. JOHN D. CURTIS, Worcester, Mass., assignor to Richardson Manufacturing Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 26, 1912. Serial No. 717,018. (Cl. 94—6.)

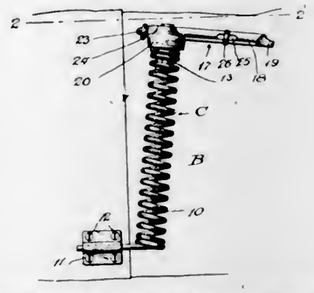


1. In an apparatus of the class specified, a vehicle supported on wheels, means for distributing oil or the like over a roadway, and means behind said distributing means for spreading sand over the roadway, part of the supporting wheels being in front of said distributing means and the remainder of the supporting wheels being behind the sand spreading means.

2. In apparatus of the class specified, a wheeled vehicle providing an oil distributing means and a sand distributing means disposed consecutively thereon in the forward travel of the vehicle, and in advance of one or more of the supporting wheels thereof, whereby the travel of said wheel or wheels over the oiled but unsanded roadway is avoided.

1,172,013. DOOR-SPRING. MAX H. DAENITZ, Hammond, Ind. Filed Nov. 10, 1915. Serial No. 60,651. (Cl. 16—100.)

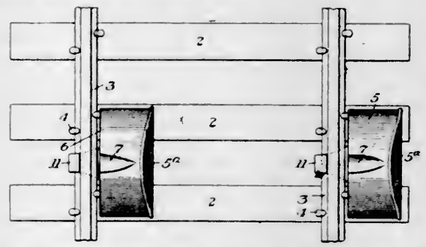
1. A door spring comprising a coiled torsion spring, the lower end of which has an approximately horizontal arm, a bracket, in which said arm is rotatively seated, adapted to be secured to a door jamb, a head piece extending into the hollow of the upper end of said coiled spring and non-rotatively secured thereto, said head piece having an upwardly extending many sided neck portion, a door closing lever having a handle adapted to engage the side of the door, and a socket portion fitting over the head piece and having a many sided aperture for the reception of the neck portion thereof, said lever having also a lug projecting out from said socket member and arranged to engage a fastening device secured to the door; substantially as described.



2. A door spring comprising a coiled torsion spring, the lower end of which has an approximately horizontal arm, a bracket, in which said arm is rotatively seated, adapted to be secured to a door jamb, a head piece extending into the hollow of the upper end of said coiled spring and non-rotatively secured thereto, said head piece having an upwardly extending many sided neck portion, a door closing lever having a handle adapted to engage the side of the door, and a socket portion fitting over the head piece and having a many sided aperture for the reception of the neck portion thereof, said lever having also a lug projecting out from said socket member, and arranged to engage a screw eye secured to the door, and said handle having a slot adapted for the reception of a second screw eye secured to the door.

3. A door spring comprising a coiled torsion spring, the lower end of which has a transversely extending arm, a bracket, in which said arm is rotatively seated, adapted to be secured to a door jamb, a head piece extending into the hollow of the spring at its upper end, and non-rotatively secured thereto, said head piece having an upwardly extending hexagonal neck portion, a door closing lever having a handle adapted to engage the side of a door, and a socket portion fitting over the upper end of the spring, said socket portion having a hexagonal aperture for the reception of said hexagonal neck, and a detachable connection between said lever and door.

1,172,014. CAR-REPLACER. JOHN L. DOLAN, Etna, Pa. Filed Mar. 23, 1915. Serial No. 16,368. (Cl. 104—163.)



1. A portable car replacer adapted to be placed at one side of a rail, the upper surface of the replacer sloping downwardly from the center toward each end, and a securing member rigidly connected thereto extending laterally from the lower portion at the rail side thereof and adapted to extend below the foot of the rail between the ties, said member having a projection adapted to engage that side of the foot of the rail farthest from the car replacer, a hook on the end of the projection, said hook being spaced a sufficient distance from the side of the replacer to permit the foot of a rail to pass between the hook and the replacer; substantially as described.

2. A portable car replacer adapted to be placed at one side of a rail, the upper surface of the replacer sloping downwardly from the center toward each end, a securing member rigidly connected thereto extending laterally from the lower portion at the rail side thereof and adapted to extend below the foot of the rail between the ties, said member having a projection adapted to engage the side of the foot of the rail farthest from the car replacer, a hook on the end of the projection, said hook being spaced a sufficient distance from the side of the replacer to permit the foot of a rail to pass between the end of the hook and the replacer, and downwardly extending projections adapted to engage the sides of the ties; substantially as described.

3. A portable car replacer adapted to be placed on one side of a rail, the upper surface of the replacer sloping downward from the center toward each end and from the outer side toward the rail side, there being a laterally sloping recess in the upper surface of the replacer at the center thereof, said recess sloping from the outer side toward the rail side, and a securing member formed integrally therewith extending laterally from the lower portion at the rail side thereof, said securing member being arranged to extend below the foot of the rail between the ties and engage the side of the foot farthest from the replacer; substantially as described.

4. A portable car replacer adapted to rest upon two adjacent rail supporting ties at the side of the rail, said replacer having an inclined upper surface, projections extending downwardly from the replacer, each of said projections being arranged to engage the inner face of one of said ties, and a securing member formed integrally therewith and extending from the replacer under the rail between the ties and arranged to engage the side of the foot of the rail farthest from the replacer to prevent lateral movement of the replacer, a hook on the end of the projection, said hook being spaced a sufficient distance from the side of the replacer to permit the foot of a rail to pass between the end of the hook and the replacer, said projection being spaced a sufficient distance from the side of the replacer to permit the foot of the rail to pass between the projection and the replacer; substantially as described.

5. A portable car replacer adapted to rest upon two adjacent rail supporting ties at the side of the rail, said replacer having an inclined upper surface, projections extending downwardly from the replacer, each of said projections being arranged to engage the inner face of one of said ties, the length of the replacer from the projections to the ends thereof being less than the width of a tie, a securing member formed integrally therewith extending from the center of the replacer under the rail, and a hook on the end of said member adapted to engage the side of the foot of the rail farthest from the replacer; substantially as described.

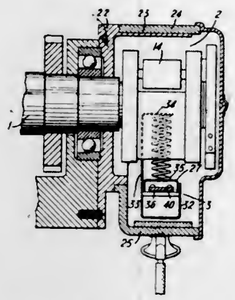
1,172,015. INTERRUPTER. JOHN B. DYER, Racine, Wis., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 14, 1915. Serial No. 28,124. (Cl. 123—166.)

1. In an interrupter, the combination with a pair of relatively movable contact members, and a resilient member for carrying one of said contact members, of a curved member adjacent the resilient member, and means for causing said resilient member to conform to the surface of the curved member in one position of said contact members.

2. In an interrupter, the combination with a pair of relatively movable contact members, and a resilient member for carrying one of said contact members, of means for separating said contact members, and a stationary

member having a convexly curved surface for limiting the movement of said resilient member in one direction.

3. In an interrupter, the combination with a pair of relatively movable contact members, and a resilient member for carrying one of said contact members, of a stop member having a convexly curved surface, and means for causing the resilient member to engage said curved surface.

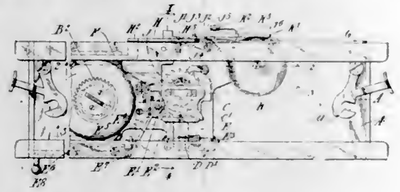


4. In an interrupter, the combination with a pair of relatively movable contact members, a resilient member for carrying one of said contact members, and a stationary member having a curved surface adjacent said resilient member, of means for separating said contact members and thereby causing said resilient member to gradually conform to said curved surface.

5. In an interrupter, the combination of a pair of relatively movable contact members, a resilient member for carrying one of said contact members, and a stationary member having a curved surface adjacent said resilient member, of means having a lost-motion connection to said resilient member for separating said contact members and thereby causing said resilient member to gradually conform to said curved surface.

[Claim 6 not printed in the Gazette.]

1,172,016. PLATEN-CARRIAGE HOLDER FOR TYPEWRITERS. HERBERT ETHERIDGE, Wimbledon Park, England, assignor to The Bar-Lock Typewriter Company, Limited, London, England. Filed Feb. 16, 1915. Serial No. 8,541. (Cl. 197—186.)



1. In a typewriter detachable platen-carriage holder, the combination of, two parallel runners (A) for the platen-carriage, transverse members connecting these runners, means whereby the operator without tools can detach the runners with their transverse members from the machine or attach them thereto, a spring driving-barrel mounted between the runners on one of the transverse members as viewed in plan, an escapement-wheel mounted on one of the transverse members of the runners and between the runners as viewed in plan, a toothed driving-wheel movable with the escapement-wheel which driving-wheel gears with the carriage, and dogs for the escape-wheel mounted on one of the transverse members between the runners as viewed in plan, so that all these parts can be operatively tested in relation to the carriage-holder without placing the holder and carriage on the machine base, substantially as set forth.

2. In a typewriter detachable platen-carriage holder, the combination of, two parallel runners (A) for the platen-carriage transverse members connecting these runners, means whereby the operator without tools can detach the runners with their transverse members from the machine or attach them thereto, a spring driving-barrel mounted between the runners on one of the transverse members as viewed in plan, an escapement-wheel mounted on one of the transverse members of the runners and between the runners as viewed in plan, a toothed driving-wheel movable with the escapement-wheel which driving-wheel gears with the carriage, dogs for the escape-wheel mounted on one of the transverse members between the runners as viewed in plan, a margin-stop member (G) mounted on the carriage-holder in position to coöperate with the usual stop on the platen-carriage and a key on the base, and a paragraph-stop member (H) on the carriage-holder and operatively connected with the margin-stop member (G) to be moved into operative position by the movement of the latter to the inoperative position, so that all these parts can be operatively tested in relation to the carriage-holder without placing the holder and carriage on the machine-base, substantially as set forth.

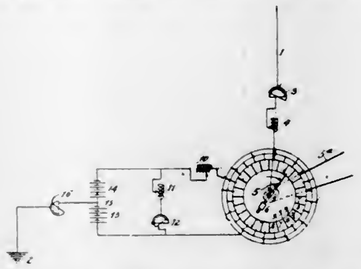
3. In a typewriter detachable platen-carriage holder, the combination of, two parallel runners (A) for the platen-carriage, transverse members connecting these runners, means whereby the operator without tools can detach the runners with their transverse members from the machine or attach them thereto, a spring driving-barrel mounted between the runners on one of the transverse members as viewed in plan, an escapement-wheel mounted on one of the transverse members of the runners and between the runners as viewed in plan, a toothed driving-wheel movable with the escapement-wheel which driving-wheel gears with the carriage, dogs for the escape-wheel mounted on one of the transverse members between the runners as viewed in plan, a rocking shaft (E^6) mounted on the carriage-holder and extending from one end toward the center of the holder, a back-spacing pawl (E) mounted on the holder and arranged to engage the teeth of the driving-wheel carried by the escapement-wheel, and operative connection between the pawl and the rocking-shaft whereby rocking of the shaft causes the pawl to turn the wheel engaged by it one tooth at each operation, all these parts being so arranged that they can be operatively tested in relation to the carriage-holder without placing the holder and carriage on the machine-base, substantially as set forth.

4. In a typewriter detachable platen-carriage holder, the combination of, two parallel runners (A) for the platen-carriage, transverse members connecting these runners, means whereby the operator without tools can detach the runners with their transverse members from the machine or attach them thereto, a spring driving-barrel mounted between the runners on one of the transverse members as viewed in plan, an escapement-wheel mounted on one of the transverse members of the runners and between the runners as viewed in plan, a toothed driving-wheel movable with the escapement-wheel which driving-wheel gears with the carriage, dogs for the escape-wheel mounted on one of the transverse members between the runners as viewed in plan, and a bell-mechanism and bell carried by the holder, so that all these parts can be operatively tested in relation to the carriage-holder without placing the holder and carriage on the machine-base, substantially as set forth.

5. In a typewriter detachable platen-carriage holder, the combination of, two parallel runners (A) for the platen-carriage, transverse members connecting these runners, means whereby the operator without tools con detach the runners with their transverse members from the machine or attach them thereto, a spring driving-barrel mounted between the runners on one of the transverse members as viewed in plan, an escapement-wheel mounted on one of the transverse members of the runners and between the runners as viewed in plan, a toothed driving-wheel movable with the escapement-wheel which driving-wheel gears with the carriage, dogs for the escape-wheel mounted on one of the transverse members between the runners as viewed in plan, a locking-bar carried by the holder and movable into position to lock the escapement mechanism, and means operatively connecting the locking-bar with the carriage as the latter arrives at the end of its travel to the left of the machine, so that all these parts can be operatively tested in relation to the carriage-holder without placing the holder and carriage on the machine-base, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,172,017. METHOD OF TRANSMITTING ENERGY BY ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Washington, D. C., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed May 12, 1906. Serial No. 316,521. (Cl. 250—6.)



1. A method of transmitting energy by electro-magnetic waves by mechanically commutating the source of energy at the same frequency as the waves to be produced.

2. The method of transmitting energy by electro-magnetic waves by mechanically communicating a direct current into alternating current, and commutating the resulting alternating current into direct current at the receiving end.

3. In the art of transmitting energy by high frequency electric oscillations, the method comprising producing high frequency currents by mechanically commutating the source, and commutating said currents as received to produce an indication without storing or losing the energy, substantially as described.

4. The method of signaling consisting in generating and receiving electro-magnetic waves by mechanically varying the potential to create oscillations in the sending conductor, and commutating them in the receiving circuit.

5. The method of signaling consisting in mechanically generating oscillations by changing the potential of a sending conductor alternately above and below that of the ground connection at wave frequency, and receiving said oscillations to produce signals by mechanically commutating them in a local circuit connected to a receiving antenna.

[Claims 6 to 25 not printed in the Gazette.]

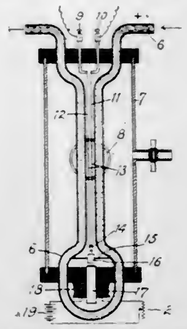
1,172,018. ELECTROMAGNETIC INDICATOR. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Mar. 14, 1908. Serial No. 421,220. (Cl. 171—95.)

1. An electromagnetic indicator comprising a loop of indicating wire whose members are adapted to be relatively laterally moved by changes in a field of force, and a loop of hollow cooled conducting wire arranged to form a field of force, substantially as described.

2. A galvanometer comprising a conductor adapted to produce a field of force, two parallel sets of stretched wires suspended in said field, and means for observing their movements relative to each other.

3. A galvanometer comprising a conductor adapted to produce a field of force, two parallel sets of stretched wires suspended in said field, and means for observing and recording their movements relative to each other.

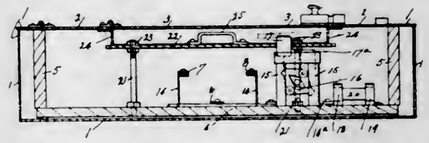
4. A galvanometer comprising a conductor having parallel portions adapted to produce a field of force, and plurality of wires stretched in said field of force and adapted to give an exaggerated indication by motions in opposite directions, substantially as described.



5. A galvanometer for high frequency currents comprising a loop of hollow water cooled conductor adapted to produce a field of force, and a plurality of oppositely movable wires suspended in said field of force and adapted to be altered in their spacing apart by variations in said field, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,172,019. SAFETY SWITCH-PANEL. ANDREW E. GRISWOLD, Seattle, Wash. Filed Jan. 21, 1915. Serial No. 3,462. (Cl. 247—13.)



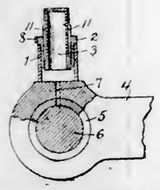
1. In an article of the class described, the combination of an outer casing, a system of switches within the casing, the switch operating means being of the push button type, spring contact members which frictionally hold the said switches bodily in place, whereby said switches are readily removable, a removable safety plate for covering the live electrical connections within the casing, the said plate being positioned above the said switches and supported from the said casing and the said plate being provided with a plurality of openings through which the said push buttons snugly but slidably project, whereby the safety plate may be removed without removing any of the push buttons.

2. In an article of the class described, the combination of an outer casing, an outer door for the casing, a system of switches within the casing, a safety plate for covering the live electrical connection within the casing, the said plate being provided with a plurality of openings, screw posts which project from the bottom of the outer casing, and holding nuts by means of which the said covering is removably supported, a push button for every switch, the said push buttons projecting above the said safety plate and slidably though snugly fitting the said openings, whereby the safety plate may be removed without removing any of the push buttons.

1,172,020. GREASE-CUP. ROBERT B. GREENWAY, San Bernardino, Cal. Filed Nov. 3, 1915. Serial No. 59,422. (Cl. 184—48.)

1. In a grease cup, an outer shell, a bushing having threaded engagement therewith, a hollow plug open at its inner end and closed at its outer end and having threaded engagement with the bushing, and means secured to the

outer shell for releasably holding the bushing and plug from turning.



2. In a grease cup, an outer shell, a bushing having threaded engagement therewith, a hollow plug open at its inner end and closed at its outer end and having threaded engagement with the bushing, and a spring secured to the outer shell and having means for releasably engaging the bushing and plug for holding them from turning.

3. In a grease cup, an outer shell, a bushing having threaded engagement therewith and provided with a slot, a hollow plug open at its inner end and closed at its outer end and having threaded engagement with the bushing, and a locking member secured to the outer shell and extending into said slot and adapted to releasably engage said plug.

4. In a grease cup, an outer shell, a bushing having threaded engagement therewith and provided with a slot, a hollow plug open at its inner end and closed at its outer end and having theaded engagement with the bushing, and a spring secured to the outer shell and extending into said slot and adapted to releasably engage said plug so as to hold it from turning in one direction.

5. In a grease cup, an outer shell, a bushing having threaded engagement therewith, a plug having threaded engagement with the bushing, and means secured to the outer shell for releasably holding the bushing from turning, and provided with a ratchet connection with the plug which will permit the plug to turn in one direction and will releasably hold it from turning in the opposite direction.

[Claims 6 to 9 not printed in the Gazette.]

1,172,021. PROCESS OF PROPAGATING PLANTS. ADOLF J. GRINBERG, New York, N. Y., and BERNARD FELDMAN, Plymouth, Mass. Filed Mar. 6, 1915. Serial No. 12,500. (Cl. 71—9.)

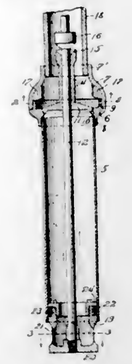
1. The process of propagating plant life which consists in adding to the soil about the roots of the plant a mixture composed of bran, sawdust, lime, ammonia, corn-starch, water and small pieces of iron, permitting access of atmospheric air to the mixture and from time to time adding further amounts of water, corn-starch and ammonia.

2. The process of propagating plants which consists in adding to the soil about the roots of the plants a mixture containing about six ounces of bran, six ounces of sawdust, one ounce of lime, one half ounce of corn-starch, one half ounce of ammonia liquid, one quart of water, and sufficient iron scrap or pieces to heat the mixture by oxidation, to about fifty parts of the soil, establishing communication between the atmospheric air and the mixture at the roots of the plants and adding from time to time, as required, further amounts of water, corn-starch and ammonia.

1,172,022. PUMP. GUSTAV E. HAAR, Anacostia, D. C., assignor to John H. Stephens, Vernon, Tex. Filed May 27, 1911. Serial No. 629,763. Renewed Jan. 14, 1916. Serial No. 72,182. (Cl. 103—75.)

1. In a lift pump, a working cylinder, a piston rod, a piston thereon working in the cylinder, a retainer valve sleeved on the rod, a valve seat on the sleeve of the retainer valve, and a valve on the rod to engage said seat.

2. In a lift pump, a pump cylinder, a shell connected to the upper end thereof and provided interiorly thereof with a valve seat, a retainer valve for engagement with said seat, a piston rod working through the retainer valve, a piston carried by the rod and working in said cylinder, a valve carried by the piston rod above the retainer valve, and a valve seat surrounding the piston rod and engaged by said piston rod valve when the piston is at the end of its down-stroke.



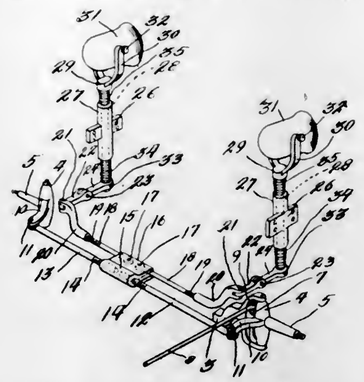
3. In a lift pump, a pump cylinder, a shell connected to the upper end thereof and provided interiorly with a valve seat, a retainer valve for engagement with said seat and movable vertically in the shell under pressure of liquid above and below said valve, means carried by the shell for limiting the upward movement of said valve, a piston rod working through the retainer valve, a piston carried by the rod and working in said cylinder, a valve on said rod above the retainer valve, and a valve seat surrounding the piston rod and engaged by said valve when the piston is at the end of its down-stroke in the cylinder.

4. In a lift pump, a pump cylinder, a shell connected to the upper end thereof, a tube or well casing connected to said shell, a retainer valve movable vertically in said shell under the pressure of liquid above and below said valve and having combined with it a sleeve provided in its upper end with a valve seat, lugs carried by the interior wall of the shell for limiting the upward movement of the retainer valve, a piston rod working through the retainer valve and carrying a valve to engage the valve seat on the retainer valve, and a piston on said rod working in the cylinder and provided with inlets through which the liquid enters the cylinder, the ports in the piston being formed in a manner to permit the entry of fluid within said cylinder prior to the lower end of the inlet port moving completely below the lower end of said cylinder.

5. In a lift pump, a pump cylinder, a shell connected to the upper end thereof, a tube or well casing connected to said shell, a retainer valve movable vertically in said shell under the pressure of liquid above and below said valve and provided with a valve seat, lugs carried by the interior wall of the shell for limiting the upward movement of the retainer valve, a piston rod working through the retainer valve and carrying a valve engaging the valve seat of the retainer valve, a piston on said rod working in the cylinder and provided with inlets through which the liquid enters the cylinder, and means for preventing leakage along the piston rod of the liquid raised above the retainer valve, the ports in the piston being formed in a manner to permit the entry of fluid within said cylinder prior to the lower end of the inlet port moving completely below the lower end of said cylinder.

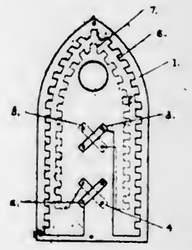
1,172,023. AUTOMATIC DIRIGIBLE LAMP FOR AUTOMOBILES. JOHN R. HILL, Knoxville, Tenn. Filed May 15, 1915. Serial No. 28,327. (Cl. 240—62.)

In combination with an automobile frame, a pair of sleeved bearings fixed to correspondingly opposite sides of the frame, rods yieldably mounted in said sleeved bearings to have slight vertical movements and having lamps at their upper ends, arms extending laterally from the lower ends of said rod and rearwardly, one arm being in parallelism to the opposite arm, links horizontally pivotally connected to the rear ends of the arms to oscillate vertically, transversely disposed substantially alined



links having their outer ends provided with vertical pivotal connections with the rear ends of the first links so as to oscillate horizontally, a connection between the opposite front wheels including a plate having vertical pivotal connections with the adjacent ends of the second alined links, so that the second links will oscillate horizontally relative to the plate, whereby as the front wheels are turned, the lamps will correspondingly move.

1,172,024. ELECTRICALLY-HEATED LAUNDRY-IRON AND LIKE APPARATUS. JOHN G. HOMAN, Steubenville, Ohio, assignor to Scientific Products Company, New Cumberland, W. Va., a Corporation of West Virginia. Filed June 25, 1915. Serial No. 36,242. (Cl. 219—63.)



1. An electric heating device comprising a body, contacting means associated with said body, a heating element associated with said body and having a plurality of heating circuits and contacting means for each circuit, said heating element being movable to permit one or another of said second named contacting means to electrically connect with said first named contacting means, whereby one or another of said heating circuits is energized according to the position of said element.

2. An electric heating device comprising a body, an invertible heating element associated with said body and having two heating circuits, connection means for one of said circuits on one side of the element and for the other circuit on the other side of the element, and connection means associated with said body for electrically connecting with one or the other of said first named connection means according to the position of the element with respect to the body.

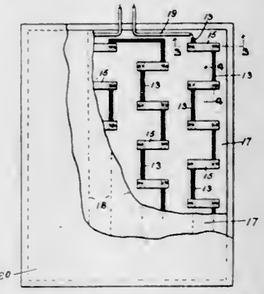
3. An electric heating device comprising a body, a heating element associated with said body and having two heating circuits, a pair of terminal contacts for one of said circuits on one side of said element, a pair of terminal contacts on the other side of said element for the other circuit, said pairs of contacts being disposed opposite each other, and a pair of contacts carried by said body and adapted to engage with one or the other of said pairs of terminal contacts, according to the position of the element with respect to the body.

4. An electric heating device comprising a body including an upper and a lower portion adapted to be secured together and having a chamber between them, a heating element contained in said chamber and having two heating circuits, a pair of terminal contacts for one of said circuits on one side of said element, a pair of terminal contacts on the other side of said element for the other circuit, and a pair of contacts carried by one of said body portions for engaging one or the other of said pairs of terminal contacts according to the position of said element in said chamber.

5. The combination with a device to be heated and contact means associated with said device, of a heating element mounted in said device, said heating element including an insulating base, a resistance member carried by said base, an insulating member covering said resistance member, and a relatively thin metallic plate carrying said resistance member, said base, insulating member and plate being secured together so as to form a unitary removable element, and said element having an exposed contact for an electrical connection with said contacting means.

[Claims 6 and 7 not printed in the Gazette.]

1,172,025. ELECTRIC HEATING DEVICE. JOHN G. HOMAN, Steubenville, Ohio, assignor to Scientific Products Company, New Cumberland, W. Va., a Corporation of West Virginia. Filed Oct. 2, 1915. Serial No. 53,714. (Cl. 219—46.)



1. An electric heating device comprising a support, a plurality of individual electrically-connected heating elements connected in spaced relation to said support, each of said elements having a metallic cover, and a metallic member associated with said elements for distributing the heat from the latter.

2. An electric heating device comprising a support, a plurality of individual heating elements connected in spaced relation to said support, each of said elements having a metallic cover, a plurality of widened metallic strips for connecting said elements electrically, and a metallic member associated with said elements for distributing the heat from the latter.

3. In an electric heating device a plurality of individual heating elements disposed in spaced relation, widened metallic strips for connecting said elements electrically, and a metallic member covering said elements and strips, for distributing the heat from said elements.

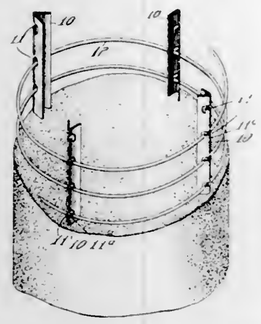
4. In an electric heating device, a plurality of individual heating elements disposed in spaced relation, each of said elements having a metallic cover, and a metallic member covering said elements and distributing the heat therefrom.

5. In an electric heating device, a plurality of individual heating elements disposed in spaced relation, each

of said elements having a metallic cover, a plurality of widened metallic strips for connecting said elements electrically, and a metallic member covering said elements and strips for distributing the heat from said elements.

[Claims 6 to 10 not printed in the Gazette.]

1,172,026. REINFORCEMENT FOR CONCRETE CONSTRUCTION. WILLIAM B. HOUGH, Chicago, Ill., assignor to Patented Devices Company, Portland, Me., a Corporation of Maine. Filed Mar. 29, 1912. Serial No. 687,175. (Cl. 72—76.)



1. A reinforcement for concrete construction, comprising encircling means, and a plurality of spacers arranged lengthwise of the encircling means, the spacers consisting of sheet metal blanks bent longitudinally so as to provide angularly expansible members, with the portion of said members adapted to contact with the encircling means being provided with transversely extending slots arranged in longitudinal series and of width adapted to permit insertion of the encircling means laterally, the ends of the slots arranged to receive the encircling means being extended downwardly and slightly rearwardly so as to provide an intermediate portion having upwardly presented lips extending into said slots so as to provide restrictions at points where the slots are disposed downwardly, said lips being adapted to grip said encircling means and prevent lateral displacement thereof when said members are expanded.

2. In a reinforcement for concrete construction provided with an encircling element, spacing means comprising blanks of sheet metal bent longitudinally so as to provide angularly expansible members, said members being provided with transversely disposed slots of width adapted to permit lateral insertion of an encircling element, said slots being arranged in longitudinal series with the ends of the slots being extended downwardly and slightly under the main portion of the slots so as to provide upwardly presented portions having corners or lips adapted to form restrictions at points where the slots extend downwardly and thereby provide gripping portions, whereby an element inserted in said slots will be held against lateral displacement when said members have been expanded.

1,172,027. DISK STOPPER FOR BOTTLES, &c. FRANK C. LAUDERMAN and LACEY Y. WILLIAMS, Toledo, Ohio. Filed May 22, 1915. Serial No. 29,721. (Cl. 215—14.)

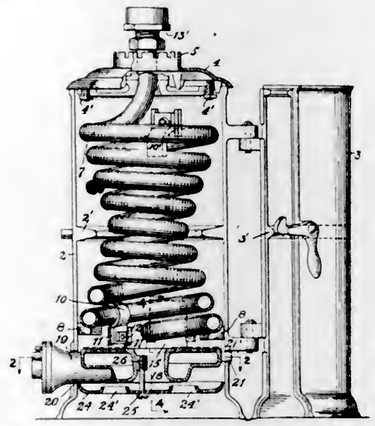
1. A disk stopper for bottles, jars, etc., of suitable material provided with an integral tab having a curved edge which when said tab is turned down upon the surface of the disk projects slightly beyond the adjacent edge of the disk and is adapted to frictionally engage the inner surface defining the opening to the bottle or jar.

2. A circular shaped disk stopper of suitable material having a tab with a curved edge struck from a greater radius than the radius from which the circular edge of the disk is struck, whereby when the tab is in a plane parallel with the disk the said curved edge of the



tab will project slightly beyond the adjacent circular edge of the disk.

1,172,028. WATER-HEATER. LINDLEY S. LAWSON, Homestead, Pa., assignor to Lawson Manufacturing Company, Homestead, Pa., a Corporation of Pennsylvania. Filed Nov. 18, 1914. Serial No. 872,741. (Cl. 122—249.)



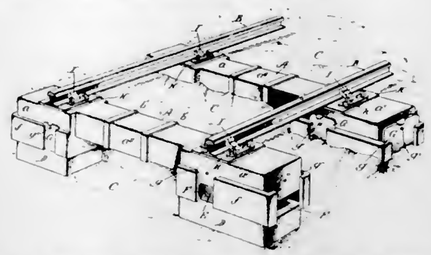
1. In a water heater, the combination of an upright casing adapted to open at one side, coil-supporting devices at the inner side of the casing, an upright circulation coil adapted to be moved sidewise into the casing through its open side with convolutions of the coil removably engaging said supporting devices, and clips removably secured to the interior of the casing and engaging the coil and removably holding the same in position on the coil-supporting devices.

2. In a water heater, the combination of an upright open-bottom casing, an upright circulation coil spaced upwardly from the lower end of the casing, a gas burner beneath the coil, the burner having a laterally disposed fuel inlet and the casing formed above its lower extremity with a side opening through which said fuel inlet extends, and a drip pan beneath the burner and fitting and closing the lower end of the casing, the pan formed with vertical air passages of such area as to supply the requisite amount of air to the burner.

3. In a water heater, the combination of a vertically divided upright casing with one portion thereof comprising a coil support and the other portion comprising a door, coil-sustaining lugs spaced apart and projecting from the inner wall of the coil-supporting casing section, an upright circulation coil adapted to be entered through the open side of said casing section and rest on the supporting lugs thereof, and clips removably secured to the inner side of said casing section and embrace the upper and lower portions of the coil and hold the latter in position on said lugs, and a burner supported beneath the casing.

4. In a water heater, the combination of a vertically divided casing with one section thereof comprising a support and with the other section comprising a door, the support-forming portion of the casing formed with a passage which intersects the joint between the two portions of the casing, a circulation coil adapted to be sustained within the support-forming portion of the casing, and a burner adapted to be entered in the support-forming portion of the casing when the door portion thereof is open, the burner having a laterally extending mixer tube which is adapted to be entered in said joint-intersecting opening in the casing and be confined therein when the door-forming portion of the casing is closed.

1,172,029. REINFORCED-CONCRETE CROSS-TIE. GEORGE MARSHALL, Fremont, Nebr. Filed Dec. 11, 1915. Serial No. 66,293. (Cl. 238—3.)



1. A railway cross-tie, comprising two end sections and a middle section formed of reinforced concrete, the middle section being flexibly connected at each end to the end sections in different vertical planes and said end sections being spring-supported, substantially as described.

2. A railway cross-tie, comprising a middle section and end sections, a plurality of vertically arranged rows of metal rods embedded in the three sections and having interlocking loops which connect the sections with each other between their abutting ends to permit a limited amount of flexibility between the sections.

3. A railway cross-tie, comprising a middle section and end sections made of reinforced concrete and provided with a plurality of vertically arranged rows of flexible connections between their ends, and shields which cover the joints of the sections.

4. A railway cross-tie, comprising a middle section and end sections having downwardly projecting flanges, a plurality of vertically arranged rows of flexible connections between the ends of the sections, reinforced concrete blocks having a telescopic connection with the end sections of the tie and springs interposed between said blocks and the tie.

5. A railway cross-tie, comprising reinforced concrete members having downwardly extending flanges provided with side openings, concrete blocks having a telescopic connection with the tie, springs mounted on the blocks and supporting the tie, and sliding doors mounted on the end sections of the tie.

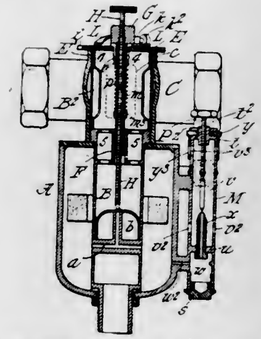
1,172,030. TIRE FOR AUTOMOBILES. THEODORE P. MOHR, New Orleans, La. Filed Oct. 11, 1915. Serial No. 55,269. (Cl. 152—8.)



1. A tire for automobiles comprising an outer shoe or casing of flexible material, a shield formed of a flat strip of spring metal curved transversely to fit within the tread portion of the shoe or casing and having inwardly curved portions extending circumferentially at a short distance from each side of the center of the strip forming a bridge portion therebetween and reinforcing portions therebeyond, said spring metal strip being rigidly connected together at its ends, and means located within the casing and shield for yieldably distending the parts, substantially as shown and described.

2. A tire for automobiles comprising an outer shoe or casing of flexible material, a shield formed of a flat strip of spring metal riveted together at its ends and fitting within the tread portion of the shoe or casing and having inwardly curved portions extending circumferentially at a short distance from each side of the center of the strip forming a bridge portion therebetween and reinforcing portions therebeyond, a supporting yieldable ring within the shoe or casing to bear against the inner side of the metal shield and formed of a helical spring of flat wire connected together at its ends, and yieldable material packed within the ring to fill the same, substantially as shown and for the purpose set forth.

1,172,031. CARBURETER. EDMUND E. MORAND, Westfield, Mass. Filed July 26, 1915. Serial No. 41,846. (Cl. 48—150.3.)



1. In a carbureter, the main inclosed liquid chamber and a central vertical chamber therewithin, having a lateral tubular extension for connection with the engine, and having a lateral opening provided with an apertured end wall, a passage connecting the chambers, and a movably carried needle valve for controlling said passage, a circular cap member for closing the top of the said central chamber and revolubly movable relatively thereto and having an outwardly extended flange provided with gear teeth, a revolubly movable shutter having valve apertures in its front, adapted to have open and closed relations to the apertures in the end wall of said opening, and comprising an annular flange having gear teeth at its edge portion in mesh with the teeth of said cap, means for revolubly moving the cap and therewith the shutter, and means actuated by the revoluble cap for proportionately moving the needle valve.

2. In a carbureter, the main inclosed liquid chamber and a central vertical chamber therewithin, formed with an open top, and lateral openings, one having a tubular extension for connection with the engine, and the other having a hollow hub provided with an apertured end wall, and said central chamber having therewithin a vertical upwardly open tubular jet, the lower portion of which is in connection with the main chamber, a circular cap member for closing the top of the said central chamber and revolubly movable relatively thereto and having an outwardly extended flange edgewise provided with teeth, means for revolubly moving said cap, a cup shaped shutter having valve apertures in its front, adapted to have open and closed relations to the said apertures of the hub end wall, and having its cylindrical flange-like portion surrounding the hub provided at its edge with teeth in mesh with the teeth of said cap flange, a needle valve for opening and closing said jet tube, and means actuated by the revoluble cap means for raising and lowering the needle valve proportionately with the movement of the apertured shutter.

3. In a carbureter, a main inclosing liquid chamber and a central vertical chamber therewithin having a lateral

tubular extension for connection with the engine, having a lateral opening provided with an apertured end wall, and having a passage connecting said chambers, and the central chamber having an axially vertical hub supported centrally therewithin, a cap for closing the top of the central chamber and revolubly movable relatively thereto and provided thereon with concentric opposed arc shaped cams, a block having laterally extending members in impingement on said cams, and provided with a depending sleeve extending and slidably engaged within the said axially vertical hub and means for preventing rotation of the sleeve relatively to the hub, a spring for imparting a downward force to said sleeve, a needle valve screw engaged through said sleeve and extended to a controlling relation to the said passage connecting said chambers, means for imparting revoluble movements to said cap and the cams carried thereby, a shutter for opening and closing the apertures in the wall of the lateral opening of the central chamber, and means actuated by the cap for conjointly operating said shutter.

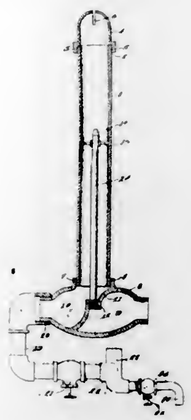
4. In a carbureter, a main inclosing liquid chamber and a central vertical chamber therewithin having a lateral tubular extension for connection with the engine having a lateral opening provided with an apertured outer wall, and having a passage connecting said chambers, and the central chamber having an axially vertical tubular hub centrally therewithin, provided with a spline way, a cap for closing the top of the central chamber and revolubly movable relatively thereto and provided with concentric opposed arc shaped cams thereon, a block, having opposite laterally extending members in impingement on said cams, and provided with a depending sleeve extending and slidably engaged within the said axially vertical hub, having a rib engaged in said spline way, and formed with a shoulder above the hub, a split bushing screw engaged through the top of the cap and forming a slide bearing for the sleeve, a spring in compression between the split bushing and the shoulder of said sleeve, a needle valve screw engaged through said block and sleeve and extended to a controlling relation to the said passage connecting said chambers, means for imparting revoluble movements to said cap and the cams carried thereby, a shutter for opening and closing the apertures in the lateral opening of said casing and means actuated by the cap for conjointly operating said shutter.

5. In a carbureter, a main inclosing liquid chamber and a central vertical chamber therewithin having a lateral tubular extension for connection with the engine, having a lateral opening provided with an apertured end wall, and having a passage connecting said chambers, and the central chamber having an axially vertical hub supported centrally therewithin, a cap for closing the top of the central chamber and revolubly movable relatively thereto and provided thereon with concentric opposed arc shaped inclined cam plates, each having its low end fastened to the cap and having an adjusting screw engaged through its high end and bearing on the top of the cap, a block having laterally extending members in impingement on said cam plates, and provided with a depending sleeve extending and slidably engaged within the said axially vertical hub and means for preventing rotation of the sleeve relatively to the hub, a spring for imparting a downward force to said sleeve, a needle valve screw engaged through said block and sleeve and extended to a controlling relation to the said passage connecting said chambers, means for imparting revoluble movements to said cap and the cams carried thereby, a shutter for opening and closing the apertures in the wall of the lateral opening of the central chamber, and means actuated by the cap for operating said shutter conjointly therewith.

[Claims 6 to 8 not printed in the Gazette.]

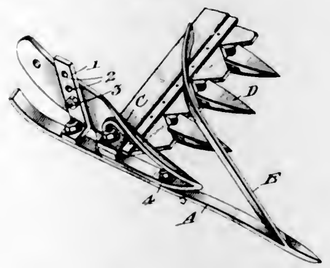
1,172,032. CRUDE-OIL BURNER. GEORGE D. MORTON, Key West, Fla. Filed June 25, 1913. Serial No. 775,696. (Cl. 158—75.)

In an oil burner, the combination with a T-joint divided into two compartments, a mixing chamber entering the joint and communicating with one of the compartments, an oil supply pipe entering the opposite compartment and extending longitudinally of the mixing chamber and terminating intermediate the ends thereof,



of a pipe leading from the compartment communicating with the mixing chamber, a T-shaped joint connected to said pipe, a fluid supply pipe connected to the top of said joint, and an outlet pipe of less diameter connected to the opposite end of the T-shaped joint.

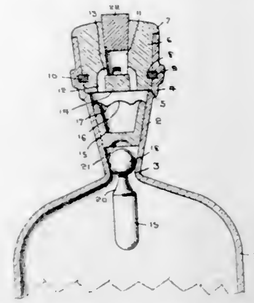
1,172,033. ATTACHMENT FOR MOWERS. HERMANN W. MUELLER, Von Ormy, Tex., assignor of one-half to Gustav Elley, Segnin, Tex. Filed May 13, 1914. Serial No. 838,358. (Cl. 56—30.)



1. An attachment for mowers comprising a body portion, a spreading arm integral with the forward end thereof, and extending rearwardly, upwardly and inwardly, a bracket secured to the rear portion of the body and extending upwardly therefrom and having a plurality of holes therein, a shoe secured at its forward end to the body portion, a bolt adapted to extend through the shoe and one of the holes in the bracket for securing the latter to the bracket, and means for securing the body portion to the sickle-bar of the machine.

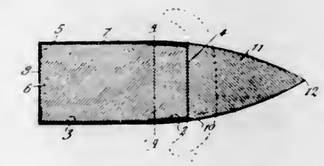
2. An attachment adapted to be connected with the sickle bar of a mower comprising a body portion, a shoe connected to the sickle bar to which the body portion is adapted to be attached along its length, a bracket carried by the body portion rearwardly from the point of attachment with the shoe, and provided with a series of openings whereby a second point of attachment to the shoe may be made, and an arm carried by the forward end of the body portion to extend upwardly and inwardly and to be entirely forward of the sickle bar, said body portion and arm preferably of spring-metal.

1,172,034. NON-REFILLABLE BOTTLE. JOHN R. MULLIN, Rome, N. Y., assignor of one-half to John F. Holzingér, Rome, N. Y. Filed June 30, 1915. Serial No. 37,248. (Cl. 215—68.)



A non-refillable bottle, comprising a bottle having an outwardly flared neck, said neck in its length having an offset portion to form an interior shoulder, the restricted lower end of the neck forming a seat, a ball valve having an integral weight adapted to engage said seat, a hollow cup-shape seal having tapered walls to engage the tapered inner walls of the neck, the upper edge of said seal having spaced lugs to form passages, said seal also having a socket in its lower end, a closure having an opening extending partway therethrough, the lower portion of said closure having a plurality of ports offset from said opening and having their inner ends curved to intersect said opening, said closure and neck having registering grooves and a yielding ring adapted to interlock with said grooves and secure the closure within the neck and the lower end of the closure against the shoulder of the neck.

1,172,035. PROJECTILE. CHARLES NEWTON, Buffalo, N. Y. Filed Mar. 22, 1915. Serial No. 16,013. (Cl. 102—28.)



1. A projectile comprising an inner jacket section which is closed at its front end, a rear core section arranged within the inner jacket section, an outer jacket section inclosing the inner jacket section and projecting forwardly beyond the latter, and a front core section arranged within the front part of the outer jacket section.

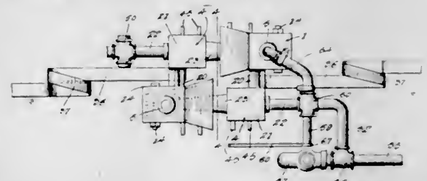
2. A projectile comprising an inner jacket section which is closed at its front end, a rear core section arranged within the inner jacket section, an outer jacket section inclosing the inner jacket section and projecting forwardly beyond the latter, and a front core section arranged within the front part of the outer jacket section, said rear core section being of harder material than said front core section.

3. A projectile comprising an inner jacket which is closed at its front end and open at its rear end, a rear core section arranged on said inner jacket section, an outer jacket section inclosing said inner jacket section and having a closed rear end and an open front end and having its front part projecting forwardly beyond the front end of said inner jacket section, and a front core section arranged in the outer jacket section in front of the inner jacket and rear core section.

4. A projectile comprising an inner jacket section which is closed at its front end, a rear core section arranged within the inner jacket section, an outer jacket section inclosing the inner jacket section and projecting forwardly beyond the latter, and a front core section arranged within the front part of the outer jacket section, said inner and outer jacket sections being connected at the front end of the inner jacket section.

5. A projectile comprising an inner tubular jacket which is closed at its front end and open at its rear end and which has the front part of its tubular wall constructed of smaller diameter than the rear part thereof, a rear core section arranged in the inner jacket section, an outer tubular jacket section having its rear part inclosing said inner jacket section and its front part projecting forwardly beyond said inner jacket section and forming an annular channel between the reduced front part of said inner jacket section and the bore of said outer jacket section, a filling of adhesive material arranged in said channel and connecting the adjacent parts of the inner and outer jacket sections, and a front core section arranged in the front part of the outer jacket section.

1,172,036. AUTOMATIC AIR-COUPLING. JOHN H. NICOLSON, Birmingham, Ala. Filed Nov. 12, 1914. Serial No. 871,751. (Cl. 188—13.)



1. In an automatic air coupler, a yieldably supported spherical head having communication with a train line, a receiving casing having an outlet, a gasket surrounding said outlet, and a substantially L-shaped member slidably seated in said receiving casing for receiving said head upon insertion into the casing.

2. In an automatic air coupler, a yieldably supported spherical head having communication with a train line, a receiving casing having an outlet, a gasket surrounding said outlet, a substantially L-shaped member slidably seated in said receiving casing for receiving said head upon insertion into the casing, a bushing rotatably mounted within said casing for engaging said substantially L-shaped member and forcing said spherical head into fluid-tight engagement with said gasket upon the insertion of the head into said casing and rearward movement of said L-shaped member.

3. In an automatic air coupler, a yieldably supported spherical head having communication with a train line, a receiving casing having an outlet, a gasket surrounding said outlet, a substantially L-shaped member slidably seated in said receiving casing, said L-shaped member having the upper surface of its base recessed for receiving a portion of said spherical head for limiting the inward movement of the head independent of movement of said L-shaped member, a bushing rotatably mounted within said casing for engaging said L-shaped member upon rearward movement of the same within said casing for forcing said spherical head into fluid-tight engagement with said gasket.

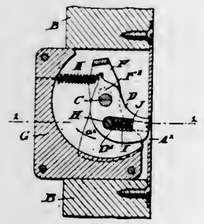
4. An automatic air coupler comprising the combination with an inserting member comprising a casing, a stem having one end slidably mounted within said casing, said stem having communication with an air line pipe, a ball head formed upon the other end of said stem, of a receiving member comprising a casing, a gasket formed within said casing and having communication with the air line of a car, a bolt extending transversely through said casing, an angle member slidably carried by said casing and seated upon said bolt for engagement with said

ball head for forcing the same into fluid-tight engagement with said gasket.

5. In an automatic air coupler the combination of an inserting member comprising a casing, a stem having one end slidably mounted within said casing, said stem having communication with an air line pipe, a ball head formed upon the other end of said stem, a receiving member comprising a casing, a gasket formed within said casing and having communication with the air line of a car, a bolt extending transversely through said casing, an angle member slidably carried by said casing and seated upon said bolt for engagement with said ball head for forcing the same into fluid-tight engagement with said gasket, and means for yieldably connecting said receiving member and said inserting member to a car for permitting of yieldable movement compensating the bumping of the car.

[Claim 6 not printed in the Gazette.]

1,172,037. DOOR-BUFFER. DOCTOR FRANKLIN OLIVER, Oakland, Cal. Filed June 5, 1914. Serial No. 843,165. (Cl. 16—77.)



1. A door buffer, comprising a brake mechanism having a fixed member and a movable member mounted to swing, and means for actuating the said movable member on slamming the door to move the same into engagement with the fixed member, the said movable member swinging free of the fixed member of the brake mechanism on closing the door with ordinary force.

2. A door buffer, comprising a brake mechanism having a fixed and a movable member normally free of the said fixed member, an oscillating member, and means for moving the said movable brake member by the said oscillating member into engagement with the said fixed brake member on slamming the door.

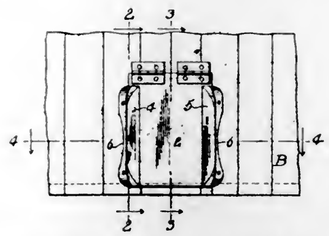
3. A door buffer, comprising a friction brake having a segmental fixed brake member and a movable brake member normally mounted to swing free of the said fixed brake member on closing the door with ordinary force, and means for engaging the said movable brake member with the said fixed brake member on slamming the door.

4. A door buffer, comprising a friction brake having a fixed segmental brake member and a movable brake member mounted to swing normally free of the said fixed brake member, and an actuating member controlled by the closing of the door and arranged to allow the said oscillating brake member to swing free of the fixed brake member on closing the door with ordinary force and to move the said oscillating brake member into frictional engagement with the said fixed brake member on slamming the door.

5. A door buffer, comprising a friction brake having a fixed segmental brake member and a movable brake member normally free of the said fixed brake member and adapted to engage the same, the movable brake member being capable of swinging and sliding radially, an actuating member mounted to swing on the axis of the said movable brake member and independently thereof, striking means adapted to engage the said actuating member on closing the door, and means connecting the said movable brake member with the said actuating member to move the movable brake member radially into engagement with the fixed brake member on slamming the door.

[Claims 6 to 8 not printed in the Gazette.]

1,172,038. SELF-CLOSING DOOR. JOHN L. ORNESS, La Moure, N. D. Filed Apr. 17, 1915. Serial No. 22,148. (Cl. 20—16.)



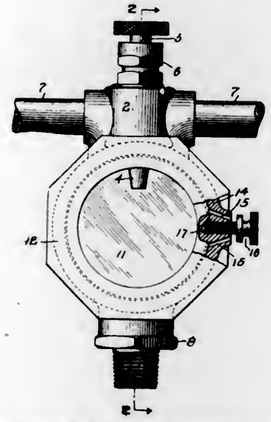
1. The combination of a wall having a door opening therein, a self-closing door for said opening, and elements carried by said door at opposite sides thereof and inclined laterally to overlap the side edges of the door opening.

2. The combination of a wall having a door opening therein, a self-closing door for said opening and a laterally inclined wing carried by one edge of said door forming an opening element for actuation by the nose or foot of an animal.

3. The combination of a wall having a door opening therein, a self-closing door for said opening, and outwardly inclined wings at opposite edges of said door forming opening elements therefor, said wings having their inner faces recessed to facilitate the engagement of the nose of an animal therewith from one side.

4. The combination of a wall having a door opening therein, a self-closing door for said opening, outwardly inclined wings at the opposite side edges of said door forming opening elements therefor, said wings and door having their inner faces at the side edges thereof recessed to facilitate the opening of the door by an animal from either side of the wall.

1,172,039. SIGHT-FEED OILER. FREDRIK OTTESEN, Pittsburgh, Pa. Filed Apr. 1, 1915. Serial No. 18,477. (Cl. 184—96.)



1. A sight feed oiler having a visible passageway through which oil is adapted to flow, and means for affording a circulation of air within the passageway, for the purpose described.

2. A sight feed oiler having a glass-inclosed passageway closed to the atmosphere save for a plurality of vents for affording circulation of air through the passageway.

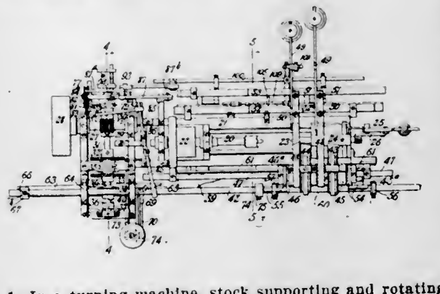
3. A sight feed oiler having a glass-inclosed passageway closed to the atmosphere save for a plurality of vents for affording circulation of air therethrough for the purpose described, and vent closing means.

4. In a sight feed oiler, the combination of a casing having receiving and delivering chambers in ported communication, a valve controlling such communication, the receiving chamber being provided with manifold connections whereby oil may pass through said chamber when communication with the delivering chamber is closed, the delivering chamber having a transparency through which the flow of oil may be observed.

5. A sight feed oiler having a chamber provided with a plurality of vents for affording circulation of air through the chamber, and a transparency for the chamber through which the flow of oil may be observed.

[Claims 6 to 11 not printed in the Gazette.]

1,172,040. WOOD-TURNING MACHINE. SAMUEL PAQUETTE, Chicopee, Mass. Filed Aug. 19, 1915. Serial No. 46,252. (Cl. 142—42.)



1. In a turning machine, stock supporting and rotating means cutters, and means for moving them one ahead of the other for action on the stock, means for causing the following cutter to operate nearer the stock axis than the leading cutter, means for reversely moving the cutters, and means for varying the relative positions of the cutters for causing the then following cutter to operate nearer the stock axis than the cutter moving ahead thereof.

2. In a turning machine, stock supporting and rotating means, a cutter, and means for moving it in one direction along the stock, a second cutter and means for moving it in the same direction along the stock after the first cutter has reached the location of the far end of the stock, means for reversely moving the second named cutter, means for reversely moving the first named cutter after the second cutter has reached the end of the stock first operated on, and means for so controlling the positions of the cutters in their back and forth movements that the relatively following one operates nearer the stock axis than the one moving in advance thereof.

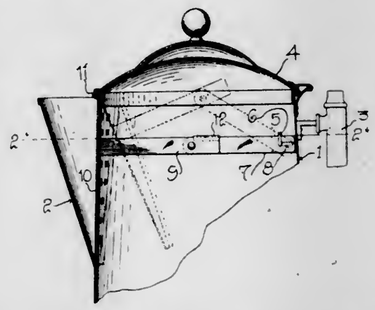
3. In a turning machine, in combination, stock supporting and rotating means, a carriage having a cutter, slidably mounted parallel with the axis of the stock and movable to present the cutter variably near the stock axis, means for imparting forward and return movements to the carriage, a pair of form bars, one of which is shiftable, the carriage coacting for its position control with one of the bars while moving in one direction, means for changing the position of the shiftable form bar, whereby on the reversed movement of the carriage it will coact with and be position-controlled by the other form bar, and means for reshifting the position of the movable form bar at the end of the reversed movement of the carriage.

4. In a turning machine, in combination, stock supporting and rotating means, a carriage having a cutter, a round longitudinal rail on which the carriage is mounted for sliding movements parallel with the axis of the stock and on which it has swinging movements to present the cutter variably near the stock axis, a longitudinal bar parallel with said rail and with which the carriage has connection, means for imparting back and forth movements to said bar, a pair of form bars, one of which is shiftable, the carriage coacting for its position control with one of the bars while moving in one direction, means for changing the position of the shiftable form bar, whereby on the reversed movement of the carriage it will coact with and be position-controlled by the other form bar, and means for reshifting the position of the movable form bar at the end of the reversed movement of the carriage.

5. In a turning machine, in combination, stock supporting and rotating means, a pair of cutter carriages slidably mounted for movement longitudinally and parallel with the axis of the stock, a longitudinally ranging bar and means for imparting back and forth movements thereto, latches mounted on, and also movable relatively to, the carriages and adapted for detachable engagements with said bar, and stationary cams at different positions in the length of the machine relatively to one of which the latch on one carriage coacts in the forward movement of such carriage, and relatively to which the latch of the other carriage coacts on the reverse movement of the bar, whereby as the carriages are caused to have their sufficiently long traverses relatively to the stock the movement of the one carriage continues for a period after the termination of the movement of the carriage relatively ahead thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,172,041. COFFEE-POT. MARY PARSONS, Wichita, Kans. Filed Jan. 23, 1915. Serial No. 3,978. (Cl. 53—3.)

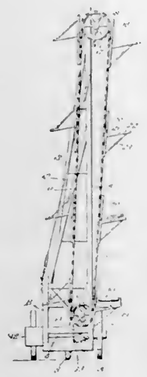


In combination with a container having an opening in a side thereof, a strainer plate for said opening, an arm carried by the plate and extending inwardly of the container, an inwardly disposed plate carried by the container at a point diametrically opposed to the opening, an upstanding hook member projecting laterally from said last named plate, an arm pivotally engaged with the first named arm and provided in its free extremity with a longitudinally disposed slot through which the hook member is adapted to project.

1,172,042. MACHINE FOR LOWERING LUMBER. JAMES A. PETERMAN, Franklin, La. Filed Mar. 29, 1915. Serial No. 17,713. (Cl. 193—8.)

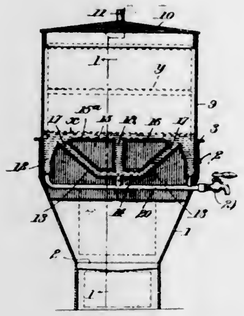
1. A device of the class described comprising a portable platform, a superstructure mounted thereupon, vertically extending masts disposed in spaced relation and carried upon the platform, means for bracing the masts, a pair of shafts journaled on opposite sides of the plane of the masts and adjacent the lower and upper ends respectively thereof, small sprocket wheels keyed upon the lower shafts, larger sprocket wheels keyed upon the upper shaft, conveyer chains carried by each of the pairs of larger and smaller sprocket wheels, a plurality of bars pivotally connected at spaced intervals to each of the conveyer chains, arms extending outwardly from said bars, braces connecting the arms and bars, said arms being disposed at a slight upward inclination with respect to the descending flight of the conveyer, said arms adapted to have material placed upon them whereby the

material may be lowered through the action of gravity, brake means for controlling the movements of the conveyer, a platform carried by the superstructure and provided with rollers, said arms adapted to pass said platform while descending, and means carried by the superstructure for counterbalancing the weight of the mechanism mounted thereupon.



2. A device of the class described comprising a portable platform, a pair of vertically extending masts disposed in spaced relation on said platform, a superstructure to which the masts are braced, an endless conveyer carried by the masts and being disposed in a plane at an inclination to the plane in which the masts lie, outwardly extending arms pivotally connected to the conveyer and adapted to receive lumber whereby the latter may be lowered by gravity, means for automatically receiving the lumber from the said arms, and means for counterbalancing the weight of the mechanism mounted on said platform.

1,172,043. BOILER. JOHN B. PLUM, North Yakima, Wash. Filed July 19, 1915. Serial No. 40,712. (Cl. 126—346.)



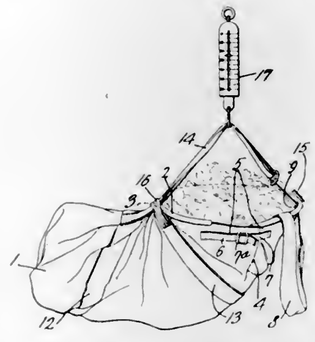
1. A boiler having a continuous bottom depressed at its center, and sloping upwardly at each side, and a smoke flue having continuous side and bottom walls conforming with the shape of said bottom and spaced therefrom to provide a relatively thin upwardly and outwardly inclined sheet of water of uniform thickness.

2. A boiler having a pocket extending along each outside wall, the bottom of said boiler having a portion intermediate said pockets of substantially the same level as the lowest points of said pockets, and other portions sloping upwardly from said lowermost portion to the highest point of said pockets, and a flue in said boiler having walls conforming with and spaced from said bottom.

3. A boiler having a smoke flue extending therethrough, said flue having a flat top wider than the bottom and adapted to support can holding trays, and inclined sides so disposed as to cause water to circulate upwardly therealong, when the flue is heated.

4. A boiler having an extended bottom surface formed of relatively high and low portions, with inclined portions connecting the same, thus presenting an irregular outline having reëntrant acute angles, whereby the heating surface is increased, and means for subjecting such irregular bottom to the action of heat.

1,172,044. COTTON-PICKING SACK. MARION J. POPE, Boswell, Okla. Filed Mar. 30, 1914. Serial No. 828,391. Renewed Nov. 12, 1915. Serial No. 61,159. (Cl. 150—2.)



1. In a device of the character described, a sack, a U-shaped rim member therefor, the sack having a lateral opening at its mouth between the ends of the rim member and having flaps at the sides of the said opening, and straps attached to the basal portions of the flaps, one strap having a buckle for the engagement of the other strap.

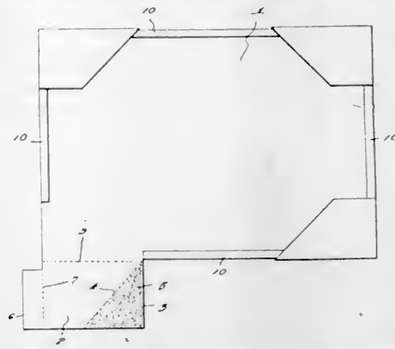
2. In a device of the character described, a sack, a U-shaped rim member therefor, the sack having a lateral opening at its mouth between the ends of the rim member and having flaps at the sides of the said opening, a shoulder strap and a belt attached to one arm of the rim member, and means for connecting the said flaps to pull them together and hold them in overlapped condition.

3. In a device of the character described, a sack, a rim member therefor, a strap attached to the lower portion of the sack, and a loop attached to the upper portion of the sack, the strap being adapted to be passed through the said loop and over the mouth of the sack, the free end of the strap having means for engaging one side of the rim member when the strap is passed over the mouth of the sack.

4. In a device of the character described, a sack, a rim member therefor, upper and lower flexible bands attached to the sack, a strap attached to the lower band, a loop attached to the upper band, the strap being adapted to be passed through the said loop and having means at its free end for engaging the rim member.

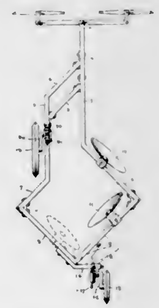
1,172,045. BOOK-COVER PROTECTOR. GEORGE PORTUNE, Cincinnati, Ohio. Filed Apr. 6, 1915. Serial No. 19,492. (Cl. 11—4.)

A book cover protector comprising a rectangular body, rectangular extended portions at the corners of and overlying the body, one corner of each extended portion being folded upon and glued to the extended portion, flaps carried by the extended portions and glued to the body,



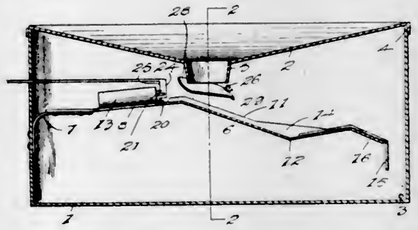
said extended portions and body forming pockets adapted to receive the corners of a book cover.

1,172,046. PLOW. HENRY PSENCIK, Ballinger, Tex. Filed July 30, 1915. Serial No. 42,749. (Cl. 97—40.)



A plow structure comprising a main beam having an outwardly extending rear end, an auxiliary beam having an outwardly extending rear end, integral arms at right angles to each other, means to attach the arms to the outwardly extending ends to form a substantially square structure at the rear ends of the beams, each element of the square structure extending at an angle of substantially 45° from the main beam, and a plurality of disks adjustably attached to said square structure.

1,172,047. BALL-ROLLING CONTACT FOR RAIN-SIGNALS, &c. WILLIAM E. R. RADEMAKER, Hoboken, N. J. Filed June 29, 1915. Serial No. 37,053. (Cl. 200—35.)



1. A device of the class described including a tiltable casing provided at one end with a relatively fixed contact, spaced conductors extending the entire length of the casing and located at the bottom thereof to form a track, a ball of less diameter than the casing and of greater diameter than the width of the space between the said conductors so as to roll upon the same out of contact with the casing, said ball constituting a movable contact and arranged to roll into and out of engagement with the relatively fixed contact, and means for connecting the wires of a circuit with the fixed contact and the conductors.

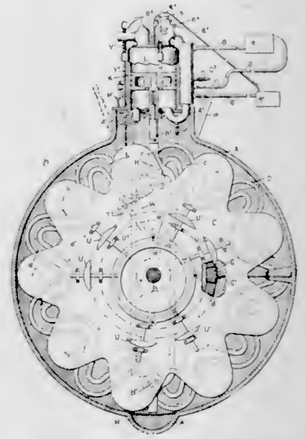
2. A device of the class described including a casing having a funnel or hopper and provided with a spout depending therefrom, a depressible member having an inclined chute and located below the spout, said depressible member having a collecting portion located at the lower end of the chute and adapted to be depressed by rainwater and circuit closing means operated by the said member.

3. A device of the class described including a casing having a funnel or hopper and provided with a spout depending therefrom, a depressible member forming a chute and located below the spout, said depressible member having a collecting portion and adapted to be depressed by rainwater and circuit closing means operated by the said member, and a wind shield forming a supplemental chute and interposed between the spout and the said member, said wind shield having side walls and an upwardly extending rear wall and a downwardly turned front portion.

4. A device of the class described including a depressible member consisting of a chute having a bend forming a collecting portion, said member being also provided with a downwardly extending terminal portion located beyond the collecting portion and circuit closing means operated by the said member.

5. A device of the class described including a depressible member consisting of a chute having a bend forming a collecting portion, said member being also provided with a downwardly extending terminal portion located beyond the collecting portion, a wick extending from the collecting portion over the terminal portion and circuit closing means operated by the said member.

1,172,048. INTERNAL-COMBUSTION ENGINE. HERMANN REICHE, Bellemead, N. J. Filed Mar. 8, 1907. Serial No. 361,197. (Cl. 123—64.)



1. The combination, with the reciprocating working member of an internal combustion engine and a projection operatively connected therewith, of a rotary member having a continuous guide on a lateral face thereof, said guide being postively engaged with said porjection and comprising waves of different heights arranged about the periphery of said rotary member in an endless series of identical groups so that the stroke will vary as the projection engages different waves.

2. The combination, with the reciprocating working member of an internal combustion engine, and a projection operatively connected therewith, of a rotary member having a guide forming a continuous path and comprising waves engaged by said projection, each wave corresponding to a forward and return stroke of the working member, and a wave of relatively small height being succeeded by two waves of greater height.

3. The combination, with the reciprocating working member of an internal combustion engine, and a projection operatively connected therewith, of a rotary member having a guide forming a continuous path and comprising waves engaged by said projection, each wave corresponding to a forward and return stroke of the working member, and a wave of relatively small height being succeeded by two waves of greater height, and means operated by the rotary member, for so governing the operation of the engine that it will have short compression and working strokes corresponding to the relatively low wave, and exhaust, air-suction, scavenging, and fuel-injection strokes corresponding to the two higher waves.

4. The combination, with the reciprocating working member of an internal combustion engine, provided with operating valves, of two projections operatively connected therewith; a rotary member having a guide forming a continuous path and comprising waves of different heights engaged by said projections, each wave corresponding to a forward and a return stroke of the working member and the number of waves being uneven, said waves being further arranged in groups of three; and means determinately related to each of said groups for actuating the engine valves at suitable times so that there will be short compression and working strokes, followed by a long exhaust stroke, a shorter air suction stroke, an air expulsion stroke of the same length as the air suction stroke, and a fuel injection stroke of the same length as the exhaust stroke.

5. The combination with the reciprocating working member of an internal combustion engine provided with operating valves, of two projections operatively connected therewith; a rotary member having a guide forming a continuous path and comprising waves of different heights engaged by said projections each wave corresponding to a forward and a return stroke of the working member and the number of waves being uneven, said waves being further arranged in groups of three; and means fixed to said rotary member in determined relation to each of said groups for actuating the engine valves at suitable times so that there will be short compression and working strokes, followed by a long exhaust stroke, a shorter air suction stroke, an air expulsion stroke of the same length as the air suction stroke, and a fuel injection stroke of the same length as the exhaust stroke.

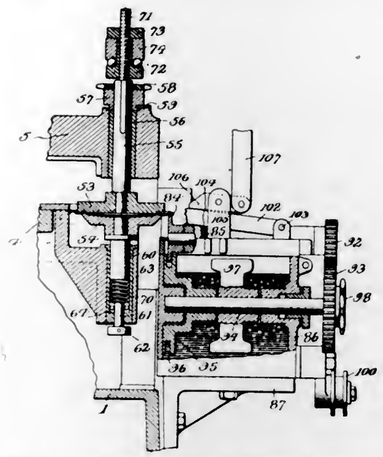
[Claims 6 to 23 not printed in the Gazette.]

1,172,049. END COATING AND CURLING MACHINE. DANIEL P. ROBINSON and JOHN COYLE, Baltimore, Md., assignors to Continental Can Company, Incorporated, Syracuse, N. Y., a Corporation of New Jersey. Filed July 18, 1914. Serial No. 851,780. (Cl. 113—80.)

1. An end coating machine including in combination upper and lower chucks rotating about a fixed axis, means for giving said chucks a relative movement toward and from each other to clamp and release a cam end, a coating roll associated with said chucks, and means operating in timed relation to the movement of the chucks for placing a can end between the chucks, and for removing the same after it has been coated.

2. An end coating machine including in combination upper and lower chucks rotating about a fixed axis, means for giving said chucks a relative movement toward and from each other to clamp and release a can end, a coating roll adjacent said chucks, means for supplying said coating roll with a coating material, and means operating in timed relation to the movement of said chucks for placing a can end between the chucks and removing the same after it has been coated.

3. An end coating machine including in combination upper and lower chucks rotating about a fixed axis, means for giving said chucks a relative movement toward and from each other to clamp and release a can end, a coating roll, a shaft supporting said coating roll whereby the same rotates about a fixed axis, and means for supplying said coating roll with coating material, said coating roll being positioned adjacent said chucks whereby a movement of said chucks causes the can end clamped thereby to engage the coating roll.



4. An end coating machine including in combination upper and lower chucks rotating about a fixed axis, means for yieldingly supporting said lower chuck, means for moving said upper chuck for clamping a can end against the lower chuck and for moving the can end and lower chuck to cause the end to engage a coating roll, a coating roll, means for supporting said coating roll whereby the same may rotate about a fixed axis adjacent the chucks, and means for supplying said coating roll with coating material.

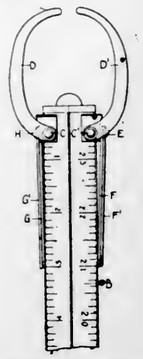
5. An end coating machine including in combination upper and lower chucks rotating about a fixed axis, means for yieldingly supporting said lower chuck, means for moving said upper chuck for clamping a can end against the lower chuck and for moving the can end and lower chuck to cause the end to engage a coating roll, a coating roll, a shaft for supporting said coating roll, a handing up roll for supplying the coating roll with coating material, means for rotating the handing up roll and coating roll, said coating roll being disposed adjacent said chucks.

[Claims 6 to 15 not printed in the Gazette.]

1,172,050. COMBINATION MEASURING INSTRUMENT. WALTER RODECK, New Durham, N. J. Filed Mar 23, 1915. Serial No. 16,347. (Cl. 33—173.)

1. A measuring instrument, comprising in combination, an ordinary rule, a sleeve slidable thereon, an outside caliper comprising a pair of arms pivoted on the front of the said sleeve, an inside caliper comprising a pair of arms, said last mentioned arms being fulcrumed on one side of the said sleeve, and a hermaphrodite caliper comprising a pair of members, one member forming an integral extension of the other side of the sleeve and the other member being fulcrumed on the said other sleeve side, the free ends of the inner and hermaphrodite caliper members frictionally engaging the sides of the rule.

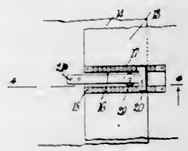
2. A measuring instrument, comprising in combination, an ordinary rule, a sleeve slidable thereon, an outside caliper comprising a pair of arms, said arms being pivoted on the front of the said sleeve, an inside caliper comprising a pair of arms fulcrumed on one side of the said sleeve, a hermaphrodite caliper comprising a pair of members, one member forming an integral extension of the other side of the sleeve and the other member being fulcrumed on the said other sleeve side, the free ends of the inner and hermaphrodite caliper members frictionally engaging the sides of the rule, and a spring tongue on the back of the sleeve and adapted to bear on the rule in position in the sleeve.



3. A measuring instrument, comprising in combination, an ordinary rule, a sleeve slidable thereon, an outside caliper comprising a pair of arms, said arms being pivoted on the front of the said sleeve, an inside caliper having its arms fulcrumed on one side of the said sleeve, a hermaphrodite caliper comprising a pair of members, one member forming an integral extension of the other side of the sleeve and the other member being fulcrumed on the said other sleeve side, the free ends of the inside and hermaphrodite caliper members frictionally engaging the sides of the rule, a spring tongue on the back of the sleeve and adapted to bear on the rule in position in the sleeve, and a clip arm extending integrally from the back of the sleeve overlying the said spring tongue to form with the latter a clamp for engagement with a pocket.

4. In combination with an ordinary rule, a sleeve slidable on the said rule, an outside caliper comprising a pair of arms, said arms being fulcrumed on the front of the said sleeve, and a pointer slidable on the said rule and having two points extending in opposite directions from the sides of the pointer, the said points operating in conjunction with the terminals of the said caliper arms to form a double outside caliper.

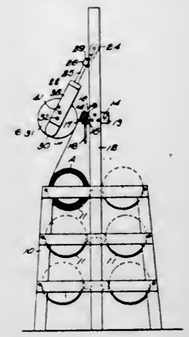
1,172,051. LEGGING. CHARLES E. ROGERS, Covington, Va. Filed Apr. 17, 1915. Serial No. 22,040. (Cl. 24—206.)



A legging comprising a body having an underlying and an overlying part, said underlying part having an edge recess, a serrated member secured to said underlying part adjacent to said recess, a resilient member secured to said overlying part and adapted to extend through said recess and having a head adapted to engage said serrated member, said overlying part having an opening over said resilient member, and a spring-pressed releasing button movably mounted in said opening and engaging said resilient member.

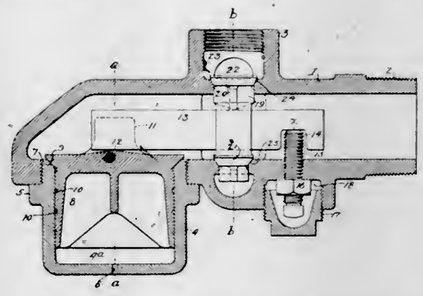
1,172,052. DEVICE FOR MEASURING WOVEN WIRE. TURNER CLAY RUSH, Lexington, Ky. Filed July 17, 1915. Serial No. 40,416. (Cl. 33—129.)

1. A measuring device for sheet material, including a structure having supports at opposite sides to receive rolled sheet material, a winding shaft, there being bearings on the structure at opposite sides thereof to receive the shaft and position the same relatively to the respective supports for the material, a register, a member carrying said register, said member being pivoted on the structure and movable on its pivot to carry the register from one side of the structure to the other according to the position of the shaft, the said register including a measuring member to be engaged and actuated by the sheet material as the latter is wound on the shaft, and means connecting the register with the pivoted member and adapted to permit reversal of the register to accord with the direction of movement of the cloth.



2. A measuring device comprising a structure having supports at opposite sides thereof to receive rolls of sheet material and having shaft bearings on opposite sides of the structure, a winding shaft adapted to be shifted to the bearings at either side, a pivotally mounted register device on said structure adapted to gravitationally engage the material on the winding shaft, the said register being pivoted to be swung to either side of the structure to engage material at either side and being mounted on an axis to turn through an angle transverse to the plane of rotation of the registering wheel.

1,172,053. DRIFTING-VALVE. KENNETH RUSHTON, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 599. (Cl. 137—53.)



1. The combination in a drifting valve, of a casing communicating with the steam passage of a cylinder and having a port communicating with fluid under pressure; a valve for closing the port to the interior of the casing; an air plunger; and a lever bearing upon the air plunger and arranged to actuate the valve when the plunger is raised so as to allow fluid under pressure to enter the casing and to break the vacuum in the cylinder.

2. The combination in a drifting valve, of a casing arranged to be coupled to the steam passage of a cylinder and having a port communicating with fluid under pressure and having a chamber communicating with the at-

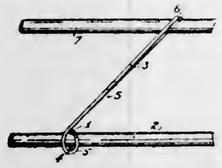
mosphere; a valve closing the passage leading from the port for fluid under pressure and to the interior of the casing; an air plunger; and a lever bearing upon the air plunger and the fluid pressure valve so that when a partial vacuum is formed in the cylinder the plunger will be raised and will open the valve to allow fluid under pressure to enter the casing and the cylinder.

3. The combination in a drifting valve, of a casing arranged to be coupled to the steam passage of a cylinder and having a port communicating with fluid under pressure; a valve for closing the port so as to cut off communication between the port and the interior of the casing; an air plunger; an adjusting screw; and a lever resting on the adjusting screw as a fulcrum and bearing against the air plunger and controlling the fluid pressure valve so that when the air plunger is raised; due to the partial vacuum in the cylinder, the valve will also be raised to allow fluid under pressure to enter the casing and to break the vacuum in the cylinder.

4. The combination in a drifting valve, of a casing arranged to be connected to the steam passage of a cylinder and having a port for fluid under pressure; a passage extending around the casing from the port, the port and passage communicating with the interior of the valve casing at the upper and lower end; a valve seat surrounding each opening; a double valve arranged to close against both seats; an air plunger; a lever arranged to be actuated by the plunger and to actuate the valve when a vacuum is formed in the cylinder and in the casing so as to cause the fluid under pressure to enter the casing and break the vacuum.

5. The combination in a drifting valve, of a casing arranged to be coupled to the steam passage of a cylinder and having a port arranged to be coupled to a steam supply pipe and having an enlarged threaded opening; an air valve casing screwed into the opening and having a small air port; a plunger mounted in said casing; a valve for controlling the passage of fluid under pressure to the casing; a lever pivotally mounted in the casing and extending through the steam valve and resting on the air plunger so that when a vacuum is formed in the cylinder of the casing the air valve will be raised and will cause the lever to actuate the steam valve to allow steam under pressure to enter the casing and the end of the cylinder to which it is connected.

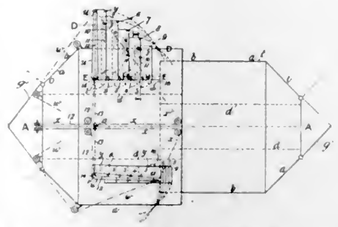
1,172,054. MEANS FOR ADJUSTABLY SECURING METALLIC MEMBERS. GEORGE RUSSELL, Melbourne, Victoria, Australia. Filed Aug. 23, 1915. Serial No. 46,945. (Cl. 72—112.)



A shear member or stirrup for tension bars comprising a length of wire doubled to form a pair of arms having a loop at one end, the portions of the arms adjacent to said loop being coiled to form complete convolutions in the arms, which convolutions lie in the planes of the respective arms, the latter extending past and engaging the outer sides of the loop, and a pin to pass through the convolutions and engage a tension bar lying between said convolutions at a point diametrically opposite to the point of engagement of the loop.

1,172,055. AEROSTAT. ROBERT COOKE SAYER, Redland, Bristol, England. Filed July 1, 1912. Serial No. 707,059. (Cl. 244—3.)

1. A vehicle constructed to traverse any media and to carry a maximum load driven with a minimum power, the periphery of said vehicle body being formed of outer and inner continuous skins to form a bag, diaphragms arranged to subdivide the bag into a plurality of separate chambers, said diaphragms being secured to the skins, each chamber or bag being filled with detached separate cells containing the lightest gas under pressure, special pressure cells arranged as diagonal struts in one of the peripheries, the interstices between the skins and bags forming a vacuum, and a vacuum of less intensity in the heart of the body.

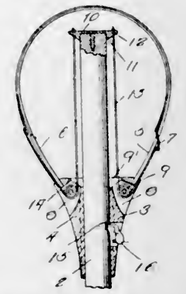


2. A vehicle constructed to traverse any media and to carry a maximum load driven with a minimum power, the periphery of said vehicle body being formed of outer and inner continuous skins to form a bag, diaphragms arranged to subdivide the bag into a plurality of separate chambers, said diaphragms being secured to the skins, each chamber or bag being filled with detached separate cells containing the lightest gas under pressure, special pressure cells arranged as diagonal struts in one of the peripheries, the interstices between the skins and bags forming a vacuum, a vacuum of less intensity in the heart of the body, an atmospheric passage extending through the body of the vehicle with its periphery similar and continuous with that of the body, and adjustable doors for partially closing one or both ends of the passage, to present inclined surfaces to the medium traversed, to steer the vehicle, providing the body with wings, said body being telescopically constructed.

3. A vehicle constructed to traverse any media and to carry a maximum load driven with a minimum power, the periphery of said vehicle body being formed of outer and inner continuous skins to form a bag, diaphragms arranged to subdivide the bag into a plurality of separate chambers, said diaphragms being secured to the skins, each chamber or bag being filled with detached separate cells containing the lightest gas under pressure, special pressure cells arranged as diagonal struts in one of the peripheries, the interstices between the skins and bags forming a vacuum, a vacuum of less intensity in the heart of the body, an atmospheric passage extending through the body of the vehicle with its periphery similar and continuous with that of the body, adjustable doors for partially closing one or both ends of the passage, to present inclined surfaces to the medium traversed, to steer the vehicle, providing the body with wings, said body being telescopically constructed, each wing being formed of a boom and a plurality of feathers, each feather hinging on the body at a different place and having a slot with an exit, a bolt secured to its adjacent feather in the slot, and a vacuum chamber, a flanged stop on the body, and ties to actuate the wings.

4. A vehicle constructed to traverse any media and to carry a maximum load driven with a minimum power, the periphery of said vehicle body being formed of outer and inner continuous skins to form a bag, diaphragms arranged to subdivide the bag into a plurality of separate chambers, said diapragms being secured to the skins, each chamber or bag being filled with detached separate cells containing the lightest gas under pressure, special pressure cells arranged as diagonal struts in one of the peripheries, the interstices between the skins and bags forming a vacuum, a vacuum of less intensity in the heart of the body, an atmospheric passage extending through the body of the vehicle with its periphery similar and continuous with that of the body, adjustable doors for partially closing one or both ends of the passage, to present inclined surfaces to the medium traversed, to steer the vehicle, providing the body with wings, said body being telescopically constructed, each wing being formed of a boom and a plurality of feathers, each feather hinging on the body at a different place and having a slot with an exit, a bolt secured to its adjacent feather in the slot, a vacuum chamber, a flanged stop on the body, ties to actuate the wings forming the body telescopically with glands flexibly packed with light gas pressure behind, chambers between and adjacent to the glands for the parts to traverse and receive the light gas pressure or vacuum to actuate the parts.

1,172,056. LANDING-NET FRAME. GEORGE F. SCHENFIELD, Clarkston, Mont. Filed May 5, 1915. Serial No. 26,048. (Cl. 43—9.)



1. In a device of the class described, a cylindrical head, a handle slidably engaged with said head, a pair of outwardly extending bowed arms secured to said head, flexible means connecting the said handle and the said arms, and means pivotally connected to the head to maintain the handle in a predetermined position.

2. In a device of the class described, a cylindrical head having a longitudinally extending bore therethrough, a handle slidably mounted in said bore, outwardly extending ears formed on said head, bowed resilient arms secured to said ears and arranged in such manner that the ends of the same overlap and flexible members connecting one end of the said handle to the ends of the said arms.

3. In a device of the class described, a head having a longitudinally extending bore therethrough, ears formed on said head and having chambers formed therein, a handle slidably mounted in said bore, pulleys rotatably mounted in said chambers, outwardly extending resilient arms connected to said ears, the free ends of the said arms overlapping and being slidably connected, flexible means connected to the said ends of arms and passing over the said pulleys and operatively connected to the aforementioned handle.

4. In a device of the class described, a cylindrical head having a longitudinally extending bore therethrough, ears formed on the said head and having chambers therein, pulleys rotatably mounted in said chambers, outwardly extending resilient bowed arms connected to the said ears and having the free ends thereof overlapping, a loop on one of said arms slidably engaged with the other arm, flexible means secured to one end of the said handle and passing over the pulleys and operatively connected to the ends of the aforementioned arms, and automatic means for maintaining the said handle and arms in predetermined positions.

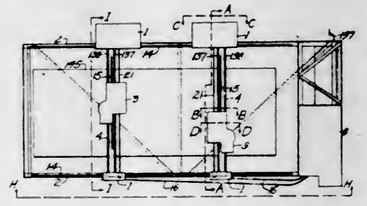
1,172,057. BISCUIT-CUTTER. WILLIAM HURLEY SCHERFIUS, Muskogee, Okla., assignor of one-half to Charles Gobie, Muskogee, Okla. Filed Nov. 2, 1915. Serial No. 59,225. (Cl. 107—51.)

1. A utensil of the class described, comprising a plurality of cutters soldered together to form a substantially cylindrical article and a handled rod passed axially therethrough, each of said cutters having a circular outer end and an inner end elongated along the axis of said article whereby the ends are parallel and the sides are inwardly tapered, the contacting ends and the contacting sides being soldered together on planes perpendicular to said rod.



2. A utensil of the class described, comprising a plurality of cutters soldered together to form a substantially cylindrical article, and a handled rod passed axially therethrough, each of said cutters having a circular outer end and an inner end elongated along the axis of said article whereby the ends are parallel and the sides are inwardly tapered, the contacting ends and sides being soldered together, and a disk soldered to each end of said cylindrical article having perforations for said rod and serving as bearings therefor.

1,172,058. AUTOMATICALLY-CONTROLLED MECHANISM. EMANUEL SCHEVER, New York, N. Y. Filed Dec. 16, 1912. Serial No. 737,072. (Cl. 164—34.)



1. A mechanism comprising, a body suitably mounted adapted to have travel, mechanism for causing said travel, a source of energy, a plurality of energy conductors adapted to control the actuation of the said motion causing mechanism in accordance with the transmission of the said energy through them, a record of motion marked in accordance with the path the body is desired to follow, movable means adapted by its motions to stop and permit the transmission of the said energy through the said conductors, the markings of the record being adapted to control the selection of the said movable means and to control their motions, whereby the successive extents and directions of travel of the body are caused in accordance with that called for by the record.

2. A mechanism comprising, a body suitably mounted adapted to revolve repeatedly in the forward or the backward direction, mechanism for causing the rotation of the body, a source of energy, a plurality of energy conductors adapted to control the actuation of the said rotation causing mechanism in accordance with the transmission of the said energy through them, a record of motion marked in accordance with the desired successive directions of rotation and the desired number of revolutions for each successive direction, movable means adapted by its motions to stop and permit the transmission of the said energy through the said conductors, the markings of the record being adapted to control the selection of the said movable means and to control their motions, whereby the successive extents and directions of rotation of the body are caused in accordance with that called for by the record.

3. A mechanism comprising, a body suitably mounted adapted to have translation in all directions in a plurality of planes, mechanism for causing said motion, a source of energy, a plurality of energy conductors adapted to control the actuation of the said motion causing mechanism in accordance with the transmission of the said energy through them, a record of motion marked in accordance with the desired successive directions of motion, movable

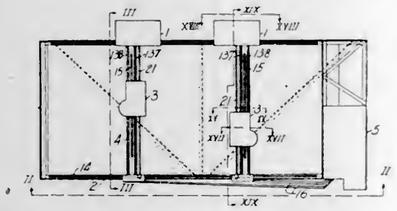
means adapted by its motions to stop and permit the transmission of the said energy through the said conductors, the markings of the record being adapted to control the selection of the said movable means and to control their motions.

4. A mechanism comprising, a body suitably mounted adapted to have rotation about an axis of variable inclination, mechanism for causing said rotation and for controlling the inclination of the said axis, a source of energy, a plurality of energy conductors adapted to control the actuation of the said motion causing mechanism in accordance with the transmission of the said energy through them, a record of motion marked in accordance with the desired successive directions of rotation and the successive inclinations of the said axis, movable means adapted by its motions to stop and permit the transmission of the said energy through the said conductors, the markings of the record being adapted to control the selection of the said movable means and to control their motions.

5. A mechanism comprising, a body suitably mounted adapted to have simultaneously translation and rotation, mechanism for causing said motions, a source of energy, a plurality of energy conductors adapted to control the actuation of the said motion causing mechanism in accordance with the transmission of the said energy through them, a record of motion marked in accordance with the desired successive kinds and directions of motion of the said body, movable means adapted by its motions to stop and permit the transmission of the said energy through the said conductors, the markings of the record being adapted to control the selection of the said movable means and to control their motions, whereby the said motion causing mechanism causes translation or rotation of the said body or both simultaneously in accordance with that called for by the record and in the desired directions.

[Claims 6 to 117 not printed in the Gazette.]

1,172,059. AUTOMATICALLY-CONTROLLED MECHANISM. EMANUEL SCHEYER, New York, N. Y. Filed Mar. 13, 1913. Serial No. 754,024. (Cl. 164—34.)



1. A device of the character described, comprising, a body suitably mounted to have motion, mechanism for causing said motion, a chamber, a piston in the said chamber adapted to control the said mechanism causing the motion of the body, a source of fluid pressure, a record marked in accordance with the desired speeds and directions of motion in combination with means controlled by the joint action of the record and the motion of the body for controlling the transmission of the said fluid pressure to the said chamber, whereby the speed and direction of the motion of the body are controlled by the record.

2. A device of the character described, comprising, a body suitably mounted to have motion, mechanism for causing said motion, a chamber, a piston in the said chamber adapted to control the said mechanism causing the motion of the body, a source of fluid pressure, a record marked in accordance with the desired successive directions of motion in combination with means controlled by the joint action of the record and the motion of the body for selecting the paths followed by the said fluid pressure to the said chamber in such manner, whereby the motion of the body is controlled by the record.

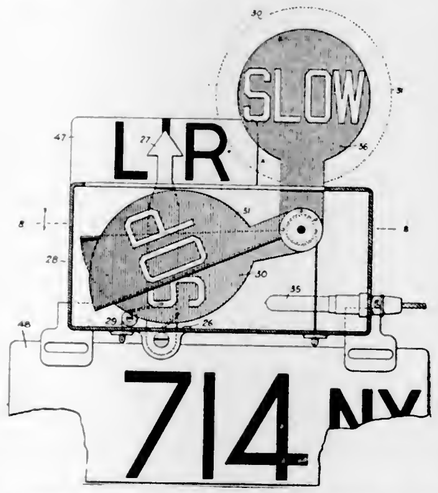
3. A device of the character described, comprising, a body suitably mounted to have motion, mechanism for causing said motion, a chamber, a piston in the said chamber adapted to control the said mechanism causing the motion of the body, a source of fluid pressure, a record perforated in accordance with the desired speeds and directions of motion in combination with means controlled by the joint action of the record and the motion of the body for controlling the transmission of the said fluid pressure to the said chamber, whereby the speed and direction of the motion of the body are controlled by the record.

4. A device of the character described, comprising, a body suitably mounted to have motion, mechanism for causing said motion, a chamber, a piston in the said chamber adapted to control the said mechanism causing the motion of the body, a source of fluid pressure, a record perforated in accordance with the desired speeds and directions of motion a series of tracker ducts, means for controlling the transmission of the said fluid pressure to the said chamber, the said means controlled by the relative movement of the record and tracker ducts and by the motion of the body, whereby the speed and direction of the motion of the body are controlled.

5. A mechanism comprising, a body suitably mounted to have motion, pneumatically controlled mechanism for causing motion of the body in reversible directions, a record marked in accordance with the desired successive directions of motion for the body, a selector, suitably constructed to control the flow of air to the said pneumatically controlled mechanism, comprising two parts adapted to have relative motion with each other in a fixed relation to the motion of the body, adapted by the relative position of the said two parts to cause actuation of the said pneumatically controlled mechanism for motion of the body in the forward direction when the position of the body is behind that called for by the record and in the backward direction when its position is ahead.

[Claims 6 to 91 not printed in the Gazette.]

1,172,060. TRAFFIC-SIGNAL FOR VEHICLES. ALBERT D. SCHNAARS, Jersey City, N. J., and CHARLES L. JOLY, New York, N. Y. Filed Mar. 11, 1914. Serial No. 824,042. (Cl. 116—31.)



A signal as characterized, comprising a stationary concealing member of contracted width; a single membered target having a speed reduction indicating symbol pivotally mounted to swing around a supporting shaft, to expose the symbols thereon, the width of said target being approximately the width of said concealing member; a fractional membered target having a speed suspension indicating symbol, the fractions of said target being adapted to spread in surface to cover the single membered target; and means embodying the brake controlling mechanism of an automobile operatively connected with said target to move the same successively to the service position thereof.

1,172,061. FAST YELLOW DYES AND PROCESS OF MAKING SAME. RUDOLF SCHÜLE, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, a Corporation of New York. Filed Mar. 17, 1913. Serial No. 754,822. (Cl. 8—1.)

1. The process of producing fast dyestuffs by combining the tetrazo compound obtained by tetrazotizing a diaminotriarylmethane base with two molecules of an arylmethylpyrazolonesulfonic acid.

2. The process of producing fast azo dyes by combining the tetrazo compound obtained by tetrazotizing a diaminotriarylmethane base with two molecules of two different arylmethylpyrazolonesulfonic acids.

3. The process of producing fast azo dyes by combining the tetrazo compound obtained by tetrazotizing a diaminotriphenylmethanesulfonic acid with two molecules of an arylmethylpyrazolone.

4. The process of producing fast azo dyes by combining the tetrazo compound obtained by tetrazotizing a diaminotriarylmethanesulfonic acid with one molecule of an arylmethylpyrazolone and one molecule of an arylmethylpyrazolonesulfonic acid.

5. As new articles of manufacture the hereinbefore described new azo dyes derived from tetrazotized diaminotriarylmethane compounds and arylmethylpyrazolone compounds, these new azo dyes dyeing animal fibers in an acid bath greenish yellow to orange yellow shades of great fastness to milling and being in the dry state yellow to brown powders, dissolving readily in water with a yellow color, which is not altered by the addition of hydrochloric acid, and which is rendered somewhat paler by the addition of caustic soda, and which yield on being reduced a diaminotriarylmethane compound and an arylmethylaminopyrazolone.

[Claims 6 and 7 not printed in the Gazette.]

1,172,062. CATALYST AND PROCESS OF PREPARING SAME. ALEXANDER SCHWARCMAN, Buffalo, N. Y., assignor to Spencer Kellogg and Sons, Inc., Buffalo, N. Y., a Corporation of New York. Filed Apr. 22, 1914. Serial No. 833,757. (Cl. 23—28.)

1. The process of making a catalytic preparation which comprises producing a composite precipitate of basic nature in a solution containing a salt of a catalytic metal and a salt of a difficultly reducible oxid by means of an alkaline solution containing a dissolved colloid, washing and drying.

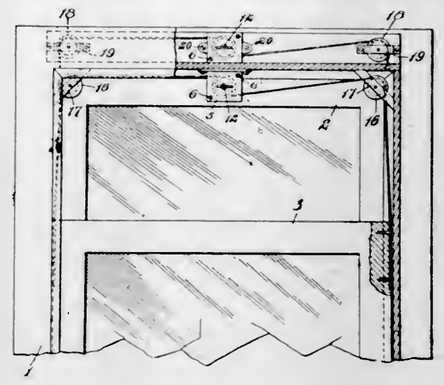
2. The process of making a catalytic preparation which comprises producing a composite precipitate of basic nature in a solution containing a salt of nickel and a salt of a difficultly reducible oxid by means of an alkaline solution containing a dissolved colloid, washing, drying and reducing by hydrogen.

3. As a new composition of matter, a catalyst containing nickel and alumina coprecipitated in the presence of a protective organic colloid.

1,172,063. SASH-BALANCE. JOHN A. SHARPS, Bablin, W. Va. Filed June 23, 1915. Serial No. 35,898. (Cl. 16—148.)

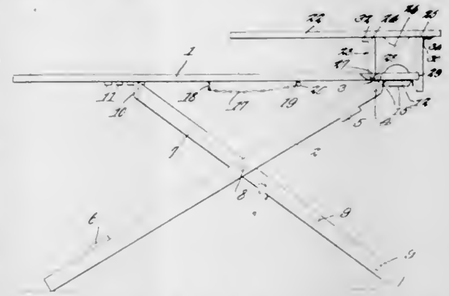
1. A sash balance comprising a pair of spaced palallel plates, a shaft journaled in said plates, a spring secured to the shaft and surrounding the same, a drum surrounding the spring, said plates having grooves to receive the drum and said spring being secured at its opposite end to the drum, flexible members connected to the drum and to the sash.

2. A sash balance comprising a pair of spaced parallel plates, a shaft rotatably mounted therein, said plates having an annular groove surrounding the shaft, a drum mounted to rotate in said groove concentric with the shaft, a spiral spring connected to the drum and shaft, a threaded extension on the shaft passing through the plate,



means to rotate the shaft to wind the spring thereon and means threaded on the extension for clamping the shaft against one of the plates and preventing rotation thereof.

1,172,064. IRONING-TABLE. WILLIAM E. SHEPHERD, Terre Haute, Ind. Filed Dec. 13, 1915. Serial No. 66,574. (Cl. 68—1.)



1. In a device of the character described, a stand, a board adapted to rest thereon, said board and stand having means to interengage with one another when the board is moved longitudinally relative to the stand, and a transverse cleat carried by the lower surface of said board and adapted to move downwardly into engagement with said stand when said means are interengaged.

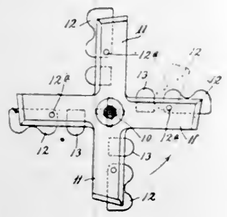
2. In a device of the character described, a stand provided at one side with an upper angularly extending lip, a board adapted to rest upon said stand, a transverse strap secured to the lower surface of said board and having a downwardly offset portion movable longitudinally into engagement with said lip, and a transverse cleat secured to the lower surface of said board and movable downwardly into engagement with the opposite side of said stand when said strap and lip are interengaged.

3. In a device of the character described, a stand embodying front and rear plates and a web connecting them, and a board adapted to be carried upon said stand, the front plate and web being adapted to rest on a support, and the rear plate having means engageable under the edge of said support.

1,172,065. DEVICE FOR SINKING FOUNDATION-TUBES. HENRY SLETTEN and ALEXANDER N. LIDELL, Minneapolis, Minn. Original application filed June 12, 1914, Serial No. 844,670. Divided and this application filed May 5, 1915. Serial No. 25,980. (Cl. 255—61.)

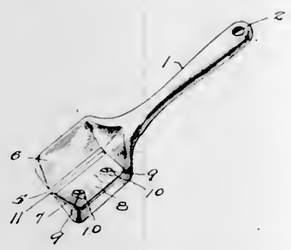
1. An expansible and contractible boring tool comprising a shaft having radial arms with beveled front edges,

and plow blades pivoted to said arms for inward and outward pivotal movements, the said plow blades when turned outward, projecting beyond the ends of said arms, and said arms having stops limiting the pivotal movements of said plow blades in an outward direction.



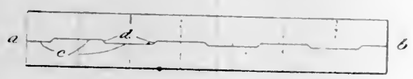
2. An expansible and contractible boring tool comprising a shaft having radial arms with beveled front edges, and plow blades pivoted to said arms for inward and outward pivotal movements, the said plow blades when turned outward, projecting beyond the ends of said arms, and said arms having stops limiting the pivotal movements of said plow blades in an outward direction, and supplemental plow blades fixed to said arms inward of said pivoted plow blades and projecting forward of the beveled front edges thereof.

1,172,066. PENCIL-SHARPENER. NINKO SPANOVIC, Pittsburgh, Pa., assignor to Herman A. Phillips, Washington, D. C. Filed Dec. 8, 1914. Serial No. 876,031. (Cl. 120—90.)



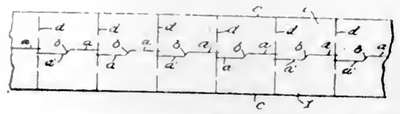
A pencil sharpener comprising a body member and a handle arranged longitudinally of each other, with an open end longitudinally extending slot bifurcating the body member, said member having its upper surface declining toward the slot and a blade fixed to said surface with its cutting edge protruding into the slot.

1,172,067. METHOD OF MAKING SHINGLES. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed Sept. 9, 1914. Serial No. 860,889. (Cl. 164—17.)



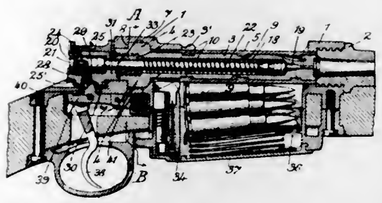
A process for making shingles consisting in taking a double shingle width strip, severing this strip into two equal similar parts having alternately directed complementary severed edges, said alternately directed edges being in the shape of a truncated triangle, and then cutting the two strips transversely by continuous transverse cuts through the middle of the projecting edges while in matching relation whereby similar shingles are formed.

1,172,068. MANUFACTURE OF SHINGLES. ALEXANDER S. SPIEGEL, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,867. (Cl. 164—17.)



A process of making shingles comprising longitudinally slitting a strip of material having parallel sides, intermittently on opposite sides of its center line, with the alternate adjacent ends of pairs of slits connected by cuts substantially transverse to the length of the strip while overlapping the other ends, then continuously cutting the strip transversely through the over-lapped ends.

1,172,069. SHORT STRAIGHT-PULL BREECH-ACTION FOR MILITARY HAND-FIREARMS. HANS STAMM, St. Gallen, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed Oct. 27, 1914. Serial No. 868,854. (Cl. 42—16.)



1. In a straight pull breech action for firearms, a breech frame, a breech bolt having integral locking nibs on its rear end adapted to engage recesses in the back part of the breech frame, a locking sleeve guided rectilinearly in the latter and on the breech bolt in front of the nibs, and means on the sleeve and bolt for locking the latter in the frame.

2. In a straight pull breech action for firearms, a breech frame, a breech bolt having integral locking nibs on its rear end adapted to engage recesses in the back part of the breech frame, a locking sleeve guided rectilinearly in the latter and on the breech bolt in front of the nibs, means on the sleeve and bolt for locking the latter in the frame, and means on the breech bolt to limit the backward and forward movement of the locking sleeve on the bolt.

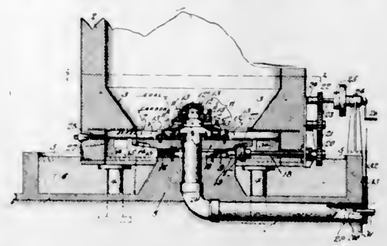
3. In a straight pull breech action for firearms, a breech frame, a breech bolt having integral locking nibs on its rear end adapted to engage recesses in the back part of the breech frame, a locking sleeve guided rectilinearly in the latter and on the breech bolt, helical ribs and grooves on the sleeve and bolt for locking the latter in the frame, a spring cartridge extractor at the front end of the breech bolt having a projecting nose engaging a recess at the front end of the locking sleeve, and a stop on the rear part of the breech bolt to limit the backward movement of the sleeve on the breech bolt.

4. In a straight pull breech action for firearms, a breech frame, a breech bolt having integral locking nibs on its rear end adapted to engage recesses in the back part of the breech frame, a locking sleeve guided rectilinearly in the latter and on the breech bolt, said sleeve having helical ribs engaging helical grooves in the bolt for locking the latter in the frame, means on the breech bolt for limiting the backward and forward movement of the sleeve on the bolt, and means to limit the opening movement of the breech action.

5. In a straight pull breech action for firearms, a breech frame, a breech bolt having integral locking nibs on its rear end adapted to engage recesses in the back part of the breech frame, a locking sleeve guided rectilinearly in the latter and on the breech bolt, said sleeve having helical ribs engaging helical grooves in the bolt for locking the latter in the frame, means on the breech bolt for limiting the backward and forward movement of the sleeve on the bolt, and a spring actuated member arranged on the frame to engage the recess in the front end of the breech bolt when the latter is near the end of its rearward movement.

[Claims 6 to 8 not printed in the Gazette.]

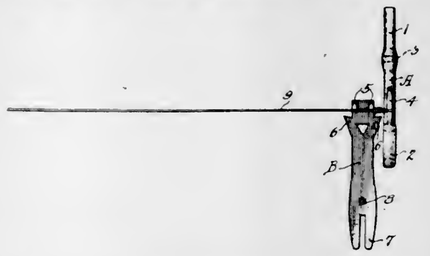
1,172,070. TWYER STRUCTURE FOR GAS-PRODUCERS. LEWIS STEELMAN, Milville, N. J. Filed Sept. 26, 1914. Serial No. 863,610. (Cl. 48—66.)



1. A rotary twyer-turret, comprising a hollow stepped pyramidal structure, each step consisting of a circular horizontal series of radiating twyers, whose exterior or crown surfaces are formed with curved outwardly radiating scrapers; substantially as described.

2. A rotary twyer-turret, comprising a hollow stepped pyramidal structure, each step consisting of a circular horizontal series of radiating twyers, whose exterior or crown surfaces are formed with curved outwardly radiating scrapers, both the twyers and the scrapers having a backward curvature with respect to the direction of rotation of the structure; substantially as described.

1,172,071. WIRE STRETCHING AND SPLICING DEVICE. MARCUS ALLEN STICKLEY, Strasburg, Va. Filed Apr. 26, 1915. Serial No. 24,059. (Cl. 140—117.)



1. In a device of the class described, the combination with a stretching member comprising a shank having an opening to receive the wire to be stretched, of a coöperating bearing member adapted to rest upon a wire to be connected to the wire before mentioned and to form a bearing seat for the shank aforesaid during rotation thereof in the stretching operation, said bearing member having a wire-engaging extremity for holding the wire on which it rests in alinement during said stretching action.

2. In a device of the class described, the combination with a stretching member comprising a shank having an opening to receive the wire to be stretched, of a coöperating bearing member adapted to rest upon a wire provided with a connecting loop and to form a bearing seat for the shank aforesaid during the rotation thereof in the stretching operation, and means on one end of said bearing member to hold it from lateral displacement from the wire, the other end having a loop-engaging fork for holding the loop aforesaid from distortion during drawing of the stretching wire therethrough.

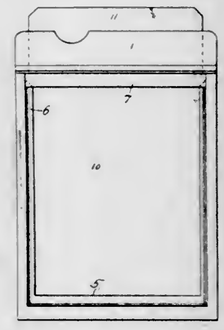
3. In a device of the class described, the combination with a stretching member comprising a shank having an opening to receive the wire to be stretched, of a coöperating bearing member adapted to rest upon a wire and to form a bearing seat for the shank aforesaid during rotation thereof in the stretching operation, said bearing member constituting a lever for actuating the stretching member when the wire is stretched to bend the wire in forming a connecting loop.

4. In a device of the class described, the combination with a stretching member comprising a shank having an opening to receive the wire to be stretched, of means to engage the stretching member for bending the wire to form a connecting loop when the wire is under tension, said means constituting a stop to prevent loss of said tension during fastening of the looped end.

5. In a device of the class described, the combination with a stretching member comprising a shank having an opening to receive the wire to be stretched, of a coöperating bearing member adapted to rest upon a wire and to form a bearing seat for the shank aforesaid during rotation thereof in the stretching operation, the bearing member also forming a stop to prevent slipping of said wire during wrapping of the looped end by the stretching member.

[Claims 6 to 8 not printed in the Gazette.]

1,172,072. LIGHT-PROOF RETAINER FOR FILMS, PLATES, OR SENSITIZED PHOTOGRAPHIC MATERIAL. EDWARD BOYLE STOTT, New York, N. Y. Filed Sept. 30, 1914. Serial No. 864,201. (Cl. 95—72.)



1. A light proof retainer for plates, films and the like, consisting of an inclosing envelop for said plate, one end of which is open, a reinforcing member adapted to receive said envelop extending along two sides and across one end and to close the open end, thereof, and a shutter operable therewith to be withdrawn while making an exposure.

2. A light proof retainer for plates, films or the like, having in combination with an ordinary plate holder, an envelop having both ends and front open, for inclosing said plate, and a shutter operable therewith and adapted to be inserted outward through said plate holder as and for the purpose set forth.

3. A device of the character described comprising an envelop of light proof material, a sensitized plate secured therein, a guide member for receiving said envelop, reinforcing the two longer sides thereof, and closing one end thereof, and end piece, and a shutter operable therewith all combined for joint operation as and for the purpose set forth.

4. A device of the character described adapted to assist in the daylight handling of plates and the like, comprising a fibrous envelop adapted to receive a plate, a metallic guide and reinforcing member for said envelop, and a removable shutter for said plate, said guide member guiding said shutter in its operation as herein specified.

5. A device of the character described comprising a metallic guiding member one end of which is open, a fibrous envelop slidably engaged within said member, a shutter adapted to operate between said envelop and said guide member, and a second metallic member secured to said envelop and adapted to receive the open end of said first metallic member and provided with a light stop through which said shutter is adapted to operate as, and for the purpose set forth.

1,172,073. PLASTIC COMPOSITION AND METHOD OF MAKING IT. JOHN M. TAYLOR, Bridgeport, Pa. Filed Jan. 14, 1915. Serial No. 2,216. (Cl. 106—22.)

1. The process which consists in mixing viscose with phenol or its homologues, and formaldehyde, and heating the resulting mass until it solidifies.

2. The process which consists in mixing viscose with substantially equal parts of phenol and formaldehyde, and heating the resulting mass to form a solid body.

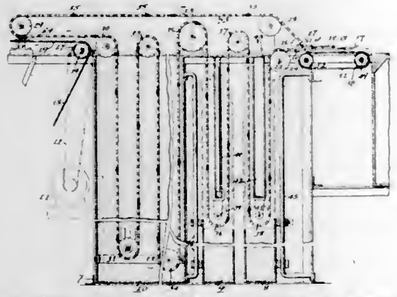
3. The process which consists in mixing viscose with phenol and formaldehyde and then heating the mass to form a solid body.

4. The process which consists in mixing viscose with phenol and formaldehyde and treating the resulting mass to solidify it.

5. The product resulting from the reaction of a mixture of phenol, formaldehyde and viscose, comprising a hard, dense, relatively infusible solid having properties similar to those of shellac.

[Claim 6 not printed in the Gazette.]

1,172,074. PHOTOPRINT-DEVELOPING MACHINE. CHARLES CARTER TOWNES, Portland, Oreg. Filed Mar. 31, 1915. Serial No. 18,254. (Cl. 95—94.)



1. A photo print machine, comprising a support, a tank for a developer, a tank for a fixer, means for independently adjusting the heights thereof, a washing tank, an endless conveyer movable through said tanks, and means on said conveyer for engagement with a print.

2. A photo print machine, comprising a support, a tank for a developer, a tank for a fixer, means for maintaining said developer and fixer at desired temperatures, a washing tank, and endless conveyer passed through said tanks, and means on said conveyer for engagement with a print.

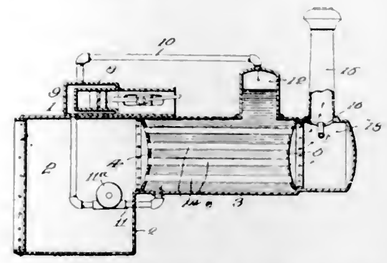
3. A photo print machine, comprising a support, a tank for a developer, means for leading a heated fluid thereto independently of the developer, a tank for a fixer, a washing tank, an endless conveyer passed through said tanks, and means thereon for engagement with a print.

4. A photo print machine, comprising a support, a tank for a developer, a tank for a fixer, an electrically energized heater in said fixer tank, a washing tank, an endless conveyer passed through said tanks, and means on said conveyer for engagement with a print.

5. A photo print machine, comprising a support, a tank for a developer, a tank for a fixer, a washing tank, an endless conveyer passed through said tanks, means for leading a print to said conveyer, means for preventing such print movement, means on said conveyer for rendering said prevention means inoperative, and means on said conveyer for print engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,172,075. GAS TRACTION-ENGINE. ROY C. TOWNSEND, Beloit, Wis. Filed Mar. 30, 1911. Serial No. 617,840. (Cl. 123—174.)

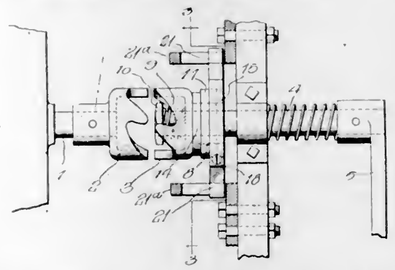


A traction engine comprising a cylindrical casing having an enlarged portion at one end and an inclosed compartment at the other end, heads fitted in said casing, a plurality of air draft tubes supported by said heads and extending through said casing and communicating with the inclosed compartment, an engine mounted on said casing and provided with a water jacket, a water dome on said casing communicating with the water in said casing, a water pipe extending from the top of the water jacket to the top of said dome, a water pipe leading from the bottom of said water jacket to the bottom of said cylindrical casing, an exhaust pipe leading from said engine to said inclosed compartment, a smoke stack on said compartment, said exhaust pipe leading into said smoke stack, and means for circulating the water from said casing through said water jacket.

1,172,076. PROCESS FOR CANNING CRABS, LOBSTERS, AND THE LIKE. KATSUSABURO USUI, Nemuromachi, Hokkaido, Japan. Filed May 29, 1915. Serial No. 31,230. (Cl. 99—8.)

Process for canning crabs, lobsters, and the like, which consists in first stripping off the carapace and articularly operating upon each leg of said crabs, lobsters, and the like, while alive, as to cause the blood and lymph circulating therein to flow out spontaneously, and subsequently treating same in usual manner, substantially as set forth.

1,172,077. POWER-TRANSMITTING DEVICE. WILLIAM F. VAN HOESEN, Schenectady, N. Y. Filed July 6, 1915. Serial No. 38,197. (Cl. 123—185.)



1. In combination, a starting shaft to be rotated in one direction, a radially disposed key member carried thereby and spaced from one end thereof, a stop on said end, a sleeve loosely surrounding the shaft and having in one end a notch receiving the key member therein, a clutch member carried by said sleeve, a spring interposed between the sleeve and the stop whereby to retain the key member in the aforesaid notch, a ring loosely surrounding but forwardly rotatable with the sleeve and having at one end a key shifting cam disposed at an angle to the direction of rotation of the shaft and normally positioned in contact with the rear side of said key member, and means to prevent retrograde rotation of said ring.

2. In combination, a starting shaft to be rotated in one direction, a radially disposed key member carried thereby

and spaced from one end thereof, a stop on said end, a sleeve loosely surrounding the shaft and having in one end a notch receiving the key member therein, a clutch member carried by said sleeve, a spring interposed between the sleeve and the stop whereby to retain the key member in the aforesaid notch, a ring loosely surrounding but forwardly rotatable with the sleeve and having in one end a notch into which the key member projects, said notch having a rear wall disposed at an angle to the direction of rotation of the shaft and normally positioned in contact with the rear side of said key member, and means to prevent retrograde rotation of the aforesaid ring.

3. In combination, a starting shaft to be rotated in one direction, a pin passed radially through said shaft at a point spaced from one end thereof, the opposite ends of the pin being projected in opposite directions from the shaft, a nut on said end of the shaft, a sleeve loosely surrounding the shaft between the nut and the pin and having a pair of notches in one end receiving said pin therein, a coiled spring surrounding the shaft and interposed between the nut and the sleeve, a ring loosely surrounding but forwardly rotatable with the sleeve, said ring having at one end a pair of pin retracting cams disposed at angles to the direction of rotation of the shaft and normally in contact with the rear sides of the opposite ends of the pin, and means for preventing rotation of the aforesaid ring in a retrograde direction.

4. In combination, a starting shaft to be rotated in one direction, a radially disposed key member projecting from said shaft at a point spaced from one end thereof, a stop on said end, a sleeve loosely surrounding the shaft and having in one end a notch receiving the key member therein, a clutch member carried by said sleeve, a spring interposed between the sleeve and the stop whereby to retain the key member in the aforesaid notch, a ring loosely surrounding but forwardly rotatable with the sleeve and having at one end a key shifting cam disposed at an angle to the direction of rotation of the shaft and normally positioned in contact with the rear side of said key member, a collar snugly surrounding the ring and adapted to be fixed against rotation, said collar having a tangentially disposed bore opening through its inner face, a toothed wedge shaped jaw member slidable in said bore and having its teeth presented for contact with the ring, and a spring in the bore for shifting said wedge member in one direction to force its teeth normally into contact with said ring.
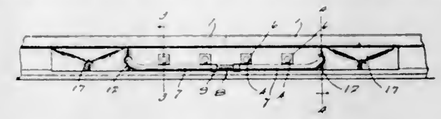
5. In combination, a starting shaft to be rotated in one direction, a radially disposed key member carried thereby and spaced from one end thereof, a stop on said end, a sleeve loosely surrounding the shaft and having in one end a notch receiving the key member therein, a clutch member carried by said sleeve, a spring interposed between the sleeve and the stop whereby to retain the key member in the aforesaid notch, a ring loosely surrounding but forwardly rotatable with the sleeve and having in one end a key shifting cam disposed at an angle to the direction of rotation of the shaft and normally positioned in contact with the rear side of said key member, a collar having ratchet means to prevent rotation of the ring in a reverse direction, a pair of lugs projected outwardly from said collar, and a pair of elongated guides in which said lugs are slidably mounted.

[Claim 6 not printed in the Gazette.]

1,172,078. COMBINED FISH-PLATE, BOND, AND PROTECTOR. LORENZO D. VAUGHN and WILLIAM P. SAMPLES, Grafton, W. Va. Filed May 22, 1915. Serial No. 29,839. (Cl. 173—283.)

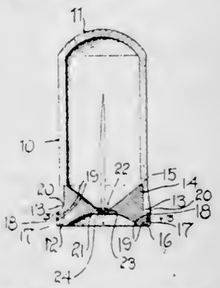
1. A rail bond comprising a body, attaching arms at the end of the body, said arms extending in an angular direction from the body, a fish plate through which said arms extend, a nut for securing said arms in the fish plate, said nut being provided with threaded portions extending into openings in the fish plate and engaging said arm.

2. A rail bond comprising a body, attaching arms at the end of the body, said arms being arranged at an angle with relation to the body, a fish plate through which said arms extend, and nuts for securing said arms in the fish



plate, said nuts being provided with threaded portions engaging the arms and the web of a rail.

1,172,079. TOOTHPICK-HOLDER. GALEN W. LEA VELL, Wenatchee, Wash. Filed Mar. 10, 1915. Serial No. 13,446. (Cl. 206—21.)



1. A tooth pick holder including a cylindrical body, a closure plug for the lower end of the body, the inner face of said plug being downwardly and centrally inclined, the plug being formed with a centrally located exit orifice through which the tooth picks contained in the body are adapted to pass, and a yieldable member disposed in said opening for preventing the complete exit of a tooth pick through the opening except when a force other than that of gravity is applied to the pick, said member having a diameter less than the greatest diameter of a tooth pick and greater than the smallest diameter of a tooth pick.

2. A tooth pick holder including a body, an end member closing one end of the body and provided with a downwardly and centrally inclined recess upon its inner face and with a central discharge opening, and a helical spring operatively mounted in said opening and adapted to engage a tooth pick for preventing the complete discharge thereof unless a force other than that of gravity is applied to the pick.

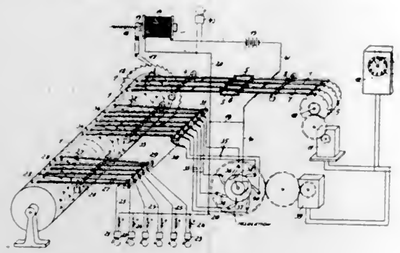
3. A tooth pick holder including a body member, a removable closure plug at the lower end thereof, said plug being provided with a conical inner face, and a centrally located discharge opening, there being an annular groove formed in the wall of said opening, and a helical spring seated in said groove, said spring being adapted to engage a tooth pick for preventing the complete discharge thereof, unless a force other than that of gravity is applied to the pick.

4. A tooth pick holder including a hollow body member closed at its lower end by a wall intersecting the body, the inner face of the wall having a downwardly and centrally inclined recess, the outer face of the wall having an upwardly and centrally inclined concavity, there being a central discharge perforation through said wall, and means disposed in said perforation for preventing the complete exit of a tooth pick therethrough except when a force other than that of gravity is exerted upon the pick.

1,172,080. MEANS FOR CLOSING AND OPENING ELECTRIC CIRCUITS. HERMANN VOIGT, Nonnendamm, near Berlin, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed Mar. 28, 1913. Serial No. 757,394. (Cl. 161—2.)

1. In means for automatically controlling electric circuits at predetermined times, the combination of two

groups of an equal number of connecting members each displaceable into different positions, a time change-over device and a combination change-over mechanism each adapted to displace the members of one of said groups from one position into another, automatic means for driving said time change-over device, automatic means for driving said combination change-over mechanism, and means constituting portions of the electric circuit to be controlled for connecting all of said connecting members in series when the members of both said groups are in corresponding positions.



2. In means for automatically controlling electric circuits at predetermined times, the combination of two groups of an equal number of connecting members each displaceable into different positions, a time change-over device and a combination change-over mechanism each adapted to displace the members of one of said groups from one position into another, automatic means comprising an electromagnet in the circuit to be controlled for driving said time change-over device, automatic means comprising clock-work for driving said combination change-over mechanism, and means constituting portions of the electric circuit to be controlled for connecting all of said connecting members in series and with said electromagnet when the members of both said groups are in corresponding positions.

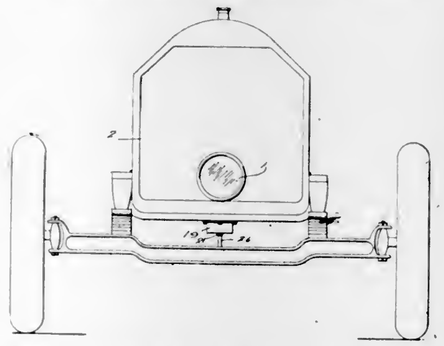
3. In means for automatically controlling electric circuits at predetermined times, the combination of two groups of an equal number of connecting members each displaceable into different positions, a time change-over device and a combination change-over mechanism each adapted to displace the members of one of said groups from one position into another, automatic means comprising an electromagnet in the circuit to be controlled for driving said time change-over device, automatic electric means comprising clock-work for driving said combination change-over mechanism, and means constituting portions of the electric circuit to be controlled for connecting all of said connecting members in series and with said electromagnet when the members of both said groups are in corresponding positions.

4. In means for automatically controlling electric circuits at predetermined times, the combination of two groups of an equal number of connecting members, and a third group of connecting members corresponding in number to the units of a predetermined cycle of time, said members being each displaceable into two positions, a time change-over device adapted to displace the members of one of said two groups and of the third group, automatic means for driving said time change-over device, a combination change-over mechanism adapted to displace the members of the remaining group, automatic means for driving said combination change-over mechanism, means for connecting all the members of said two groups in series when the same have corresponding positions, and means for connecting in series with the latter means the members of said third group, the two latter means constituting portions of the electric circuit to be controlled.

5. In means for automatically controlling electric circuits at predetermined times, the combination of two groups of an equal number of connecting members, and a third group of connecting members corresponding in number to the units of a predetermined cycle of time, said members being each displaceable into two positions, a time change-over device adapted to displace the members of one of said two groups and of the third group, automatic means for driving said time change-over device, a combination change-over mechanism adapted to displace the members of the remaining group, automatic means for driving said combination change-over mechanism, a commutator common to all of the connecting members of said third group, means for uniformly rotating said commutator once during each cycle of time, means for connecting all the members of said two groups in series when the same have corresponding positions, and means for connecting in series with the latter means the members of said third group, and said commutator, the two latter means constituting portions of the electric circuit to be controlled.

[Claims 6 to 10 not printed in the Gazette.]

1,172,081. DIRIGIBLE HEADLIGHT FOR AUTOMOBILES. ALBERT WAGNER, Lincoln, Nebr. Filed Aug. 6, 1915. Serial No. 44,051. (Cl. 240—62.)



1. The combination with an automobile of a dirigible headlight mounted on the automobile at the lower portion of the radiator thereof and provided with upper and lower pivots and having a limited vertical movement, coiled springs mounted on the said pivots for cushioning the headlight and means for connecting the headlight with the steering gear of the automobile.

2. The combination with supporting means provided with oppositely extending arcuate slots of a dirigible headlight pivotally mounted on a vertical axis, coiled springs connected with the headlight and having portions operating in the said slots and arranged to maintain the headlight normally in a central position and means for connecting the headlight with the steering mechanism of the automobile.

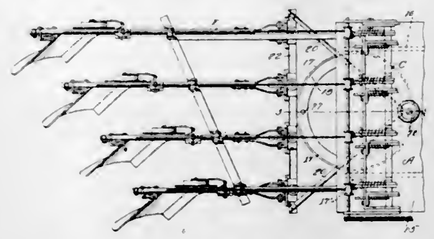
3. The combination with an automobile of a support or frame mounted thereon and provided with an upper tubular bearing or socket, a dirigible headlight provided with upper and lower pivots, the upper pivot being arranged in the said bearing or socket, a member having a socket receiving the lower pivot of the headlight, upper and lower springs for cushioning the headlight and means for connecting the said member with the steering gear of the automobile.

4. The combination with an automobile of a headlight mounted thereon and provided with a vertical pivot, an arm or lever extending from the pivot to the steering mechanism of the automobile, a device for interlocking the arm or lever with the pivot, and operating means connected with the said device, said operating mechanism including a cam located adjacent to the steering wheel and provided with opposite edges and a spring arranged to be engaged by the said edges for holding the cam against movement.

5. The combination with an automobile of a headlight mounted thereon and provided with a vertical pivot, an arm or lever extending from the pivot to the steering mechanism of the automobile, a collar slidably interlocked with the pivot and provided with means for engaging the arm or lever, a forked lever engaging the collar, a spring for urging the collar into engagement with the arm or lever, and operating mechanism connected with the said lever.

[Claims 6 and 7 not printed in the Gazette.]

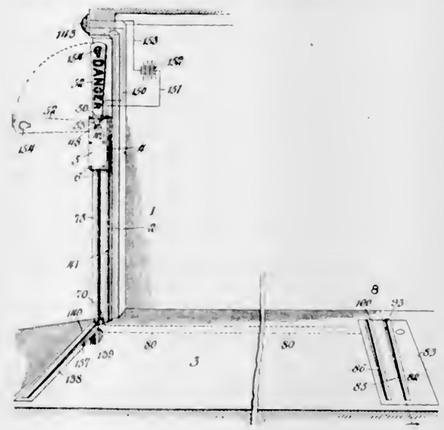
1,172,082. GANG-PLOW. ALMOND J. WAKEFIELD, Faulkton, S. D. Filed Apr. 22, 1914. Serial No. 833,726. (Cl. 97—68.)



1. The combination with a tractor, of a ring member pivotally mounted upon the tractor for movement in a vertical plane, a second member rotatably mounted within the ring member, arms secured to the second member, a bar connecting corresponding ends of said arms, and a plurality of plows connected to said bar.

2. The combination with a tractor, of a ring member having opposite disposed trunnions pivotally engaged with the tractor whereby said ring member is mounted to swing in a vertical plane, a second member rotatably mounted within the ring member, arms secured to the second member, a bar connecting corresponding ends of said arms, and a plurality of plows connected to said bar.

1,172,083. WARNING-SIGNAL MEANS FOR GARAGES. THOMAS D. WARNER, Jonesboro, Ark. Filed Mar. 17, 1915. Serial No. 15,109. (Cl. 177—339.)



1. A warning signal means for garages comprising a visual signal device located adjacent to the place of egress of automobiles from the garage, operating means for the signal device located within the garage in the path of the wheels and responsive to the passage of an automobile in a direction to emerge from the garage, and means for locking the signal operating means against action on the passage of the automobile into the garage.

2. A warning signal means for garages comprising signal instrumentalities located with respect to the place of egress of automobiles from the garage to apprise passers by of danger conditions, means located in the floor of the garage and spaced from the place of egress of an automobile therefrom and responsive to the passage of the automobile wheels to cause the actuation of the signal instrumentalities to indicate danger, and other means in the floor of the garage and located close to the place of egress and also in the path of the wheels of the automobile and responsive thereto while moving through a place of egress for restoring the indicating instrumentalities to a condition signifying safety.

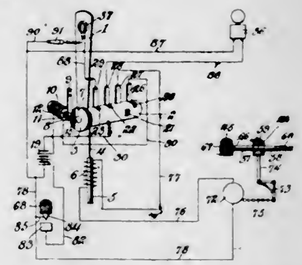
3. A warning signal means for garages located with respect to the place of emergence of automobiles from the garage to warn passers by of impending danger, means located in the floor of the garage and responsive to the passage of an automobile in one direction therefrom for setting the indicating means to the danger position, and means also located in the floor of the garage and responsive to the passage of the wheels of the automobile thereover in the same direction for causing the restoration of the indicating means to the safety indicating position, the first-named means responsive to the passage of the automobile being spaced from the second-named means responsive to the passage of the automobile by a distance within the garage greater than the length of the wheel base of the automobile.

4. A warning signal means for garages comprising visual and audible signal means located with respect to the place and emergence of automobiles from the garage to apprise passers by of impending emergence of an automobile, means located in the floor of the garage and responsive to the passage of an automobile therefrom for causing the display of the visual means in a position indicating danger and the sounding of the audible means, and other means in the floor of the garage and responsive the passage of the automobile therefrom for restoring the visual means to safety indicating position and for hushing the audible means.

5. A warning signal means for garages comprising visual and audible signal means, means responsive to the passage of an automobile for causing the display of the visual means in a position indicating danger, and the sounding of the audible means, and other means responsive to the passage of the automobile for restoring the visual means to safety indicating position and for hushing the audible means, the second-named means responsive to the passage of the automobile being located adjacent to the place of egress of the automobile from the garage and the first-named means responsive to the passage of the automobile being located within the garage at a distance from said second-named means to cause the display of the danger signal before the automobile reaches the place of egress.

[Claims 6 to 24 not printed in the Gazette.]

1,172,084. ELECTRICALLY-OPERATED WARNING-SIGNAL MEANS FOR GARAGES. THOMAS D. WARNER, Jonesboro, Ark. Filed Mar. 18, 1915. Serial No. 15,384. (Cl. 177—339.)



1. A warning signal means for garages comprising a visual signal device, electrical operating means therefor responsive to the passage of an automobile in one direction, and means for preventing operation of the signal device on the passage of the automobile in the other direction.

2. A warning signal means for garages comprising signal instrumentalities movable into safety and danger indicating conditions, electrical operating means therefor responsive to the passage of an automobile in one direction, and mechanical means for preventing operation of the signal instrumentalities on the passage of the automobile in the other direction.

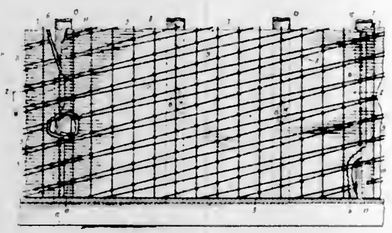
3. A warning signal means for garages comprising a visual signal device and audible signal means, electrical operating means for both the visual and audible devices and responsive to the passage of an automobile in one direction, and mechanical means for preventing operation of the signal means on the passage of the automobile in the other direction.

4. A warning signal means for garages comprising a signal device movable into safety and danger positions and located with respect to the garage to be observable when in the danger position by passers-by, electrical operating means for the signal means in part in spaced relation to the place of egress of the automobile from the garage and responsive to the passage of the automobile toward said place of egress to cause the actuation of the signal device to indicate danger, and other electrical means in part in the path of the automobile and responsive to the passage of the automobile from the garage for restoring the indicating device to a condition signifying safety.

5. A warning signal means for garages comprising a visual danger indicating means movable into and out of danger indicating position, electromechanical means responsive to the passage of an automobile in one direction for setting the indicating means to the danger position, and electromechanical means responsive to the passage of the automobile in the same direction for causing the restoration of the indicating means to the safety indicating position, the first-named means responsive to the passage of the automobile being spaced from the second named means responsive to the passage of the automobile in the direction of travel of the automobile to emerge from the garage.

[Claims 6 to 18 not printed in the Gazette.]

1,172,085. KEY-BASE FOR SIDE WALLS AND CEILINGS. RAYMOND D. WEARLEY, St. Louis, Mo., assignor, by direct and mesne assignments, to Plastic Products Company, St. Louis, Mo., a Corporation of Missouri. Filed May 11, 1912. Serial No. 696,742. (Cl. 72—116.)



1. A covering or key base for walls and ceilings, consisting of a flexible corrugated sheet of paper material having wires secured thereon and extending diagonally across the same throughout the length and width thereof and in regular interstitial relation, and longitudinal wires also extending over the corrugations of the sheet and both wires standing clear of the depressions between the corrugations and forming diversified angular key means relatively to the sheet, both the diagonally arranged and longitudinal wires being located on one side only of the corrugated sheet of paper and the longitudinal wires secured to the latter at intervals throughout the length of said wires, the fastenings for the longitudinal wires also securing the diagonal wires at the points of intersection of the latter with the longitudinal wires.

2. A covering or key base for walls and ceilings, consisting of a flexible sheet of corrugated paper material having corrugations extending fully and continuously thereover in a transverse direction, wire members extending in diagonal planes transversely thereof and angularly crossing the corrugations, longitudinal wire members intersecting the diagonal wire members and disposed in planes at right angles to the corrugations of the sheet, the diagonal and longitudinal wire members all being on one side only of the flexible sheet, and fastening devices secured over the points of intersection of the said diagonal and longitudinal wire members at intervals and also to the said sheet to hold the latter and the members primarily intact, the diagonal wire members being continuous and forming key means over the valleys between the corrugations of the sheet.

3. A covering or key base for walls and ceilings, consisting of a flexible piece of paper material comprising a flat backing sheet and a corrugated sheet secured to one side of the backing sheet and adapted to be rolled and unrolled, main wires secured against and extending longitudinally of the sheet and at right angles to and over the corrugations to provide key spaces between the wires and valleys of the corrugations, auxiliary wires passed over the sheet and disposed in diagonal relation to the sheet and to the main wires and also at diagonal angles to the corrugations and continuing across the sheet from one side to the other, the auxiliary diagonal wires forming additional key means relatively to the valleys between the corrugations, both the main and auxiliary wires being applied to one side only of the sheet, and means for fastening the main wires and portions of the auxiliary wires to the sheet at the points of intersection of the main and auxiliary wires prior to the application of the latter to a wall or ceiling, all of the wires being exposed on one side of the sheet over the corrugations, the said sheet being of imperforate structure.

4. A covering or key base for walls and ceilings, consisting of an imperforate flexible flat backing sheet and a corrugated sheet of paper material secured against one side of the backing sheet, and key wires extending both longitudinally and transversely in diagonal planes over the outer side of the corrugated sheet and at angles to the corrugations of the latter sheet, the wires being primarily fixed to the corrugated and backing sheets, the diagonal wires being projected at opposite ends beyond the longitudinal wires and provided with means for securing the same to a support.

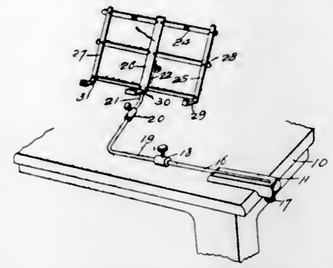
5. A covering or key base for walls and ceilings, consisting of a flexible sheet of imperforate paper material, comprising a flat backing sheet and an outer corrugated sheet secured to one side of the backing sheet and key wires extending longitudinally and also transversely in diagonal planes at varying angles to the corrugations of the said outer sheet, the wires extending diagonally of the outer sheet having looped terminals for interlocking association with similar wires of adjacent sheets, all the wires being primarily fixed to the backing and outer corrugated sheets and simultaneously applicable with the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,172,086. COPY-HOLDER. GUSTAV A. WEISSHAAR Brazil, Ind. Filed Mar. 1, 1915. Serial No. 11,220. (Cl. 248—20.)

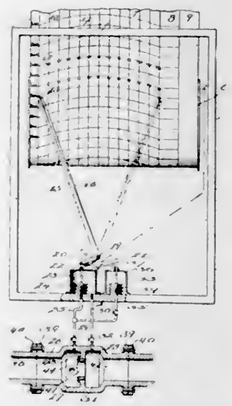
1. In a copy holder, a bracket having a groove in the upper surface thereof, said groove extending longitudinally of the bracket and having a slot formed in the bottom thereof, an arm secured to the bracket, a portion of said arm lying in the groove, whereby the arm is held in fixed relation with the bracket, and an anchoring screw extending through the slot for securing the bracket to a typewriter frame.

2. In a copy holder, a bracket having a groove in the upper surface, and an opening adjacent one end of the groove, an arm having a right angled portion extending through the opening, that portion of the arm adjacent the right angled portion lying in the groove, and means for securing the bracket to a typewriter frame to permit



the bracket to be adjusted in one direction, with relation to the frame.

1,172,087. GAS-VOLUME-MEASURING APPARATUS. HENRY P. WESTCOTT, Erie, Pa. Filed Mar. 4, 1915. Serial No. 12,031. (Cl. 234—34.)



1. In a gas volume measuring apparatus, the combination of an orifice meter, a recording gage comprising a longitudinally movable chart, a pair of marking arms movable transversely with relation to and over the chart, the arms being provided with a common fulcrum and one arm movable past the other over the chart, and pressure means interposed independently coöperating with the arms and between the said arms and communicating with the orifice meter on opposite sides of the orifice thereof for operating the said arms.

2. In a gas volume measuring apparatus, an orifice meter having a jet orifice therein, a chart mounted to move longitudinally, a pair of marking arms movable transversely over the chart, the arms having a common fulcrum and one movable past the other over the chart, air-tight casings having pressure tubes independently connected to the said marking arms for individually operating the latter to record differential and static pressures on the same chart, and pipe connections communicating with the meter on opposite sides of the jet orifice and also with the pressure tubes and one of the casings.

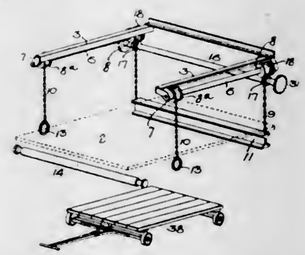
3. In a gas volume measuring apparatus the combination of a longitudinally shiftable chart having distinctive scales thereon to indicate static pressure pounds per square inch and differential pressure in inches of water, a pair of marking arms loosely mounted to simultaneously operate with and shift transversely across the said chart to record static and differential pressures, the one arm being movable past the other over the chart, an orifice meter having an orifice jet therein, air-tight casings having pressure devices therein independently connected to the said arms, and pipe connections between the orifice meter on opposite sides of the jet orifice and the said pressure devices and one of the casings.

4. In a gas volume measuring apparatus, the combination of a longitudinally shiftable chart having scale marks thereon to indicate static pressure pounds per square inch and differential pressure in inches of water, a pair of independently movable marking arms shiftable transversely over the chart and held by a fulcrum means common to both, the one arm being shiftable past the other in opposite directions, an orifice meter having a jet orifice therein, movable pressure devices independently connected to the arms, and pipes between the orifice meter on opposite sides of the orifice jet and the pressure devices to operate said marking arms for recording differential and static pressures on the chart.

5. In a gas volume measuring apparatus, a longitudinally movable chart having scale marks thereon in distinctive shades indicating static pressure pounds per square inch and differential pressure in inches of water, a pair of marking arms shiftable transversely over the chart and independently operative so that one will move past and under the other and also having marking means corresponding in shade to the said scale marks, an orifice meter having a jet orifice therein, pipe connections from opposite sides of the jet orifice of the orifice meter, and pressure devices with which the pipe connections communicate, said devices being independently attached to the marking arms.

[Claims 6 and 7 not printed in the Gazette.]

1,172,088. LAYBOY. JOSEPH ATWOOD WHITE, Philadelphia, Pa., assignor to The Moore and White Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 12, 1913. Serial No. 753,815. (Cl. 254—144.)



The combination in a lay-boy, of a frame; an extension at the upper end of the frame; means for supporting the extension independent of the frame and some distance from the outer end thereof; two longitudinal shafts, one on each side of the extension; a transverse shaft geared to the longitudinal shafts; means for actuating the transverse shaft; drums at each end of each longitudinal shaft; chains depending from the drums; a cross bar secured to the lower end of each inner chain; a cross bar detachably secured to the outer ends of the outer chains; and a platform carried by the cross bars.

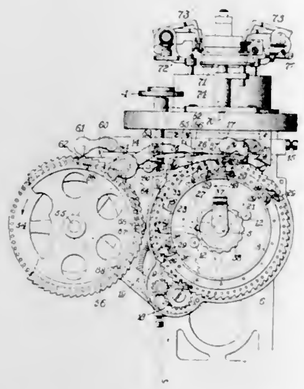
1,172,089. KNIFE-BLADE. RUDOLF WILD, Los Angeles, Cal. Filed Apr. 12, 1911. Serial No. 620,633. (Cl. 120—1.)



A knife blade having a longitudinally extending cutting edge, and having a concaved recess on each side of the blade, the said recesses extending diagonally of the blade, and approximately for the entire width of the blade, having their lower ends extending in the direction of the forward end of the blade, the said recesses having their

rear walls arranged in converging relation toward the cutting edge of the knife, and terminating at a point below the cutting edge and providing a second cutting edge, the said last mentioned cutting edge being concaved, as for the purposes specified.

1,172,090. PATTERN MECHANISM FOR KNITTING-MACHINES. FRANK B. WILDMAN and GEORGE L. BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed June 4, 1913. Serial No. 771,752. (Cl. 66—22.)



1. In combination in pattern mechanism for knitting machines, a main pattern member, measuring the fabric by actual length, a supplemental pattern member measuring the fabric by courses, means for operating the length pattern member during intermittent periods, means controlled by the course pattern member for correcting the time of starting of the length pattern member at the termination of each course measurement, and means controlled by the length pattern member when started for stopping the course pattern member, said length measuring pattern member controlling also the starting of the course measuring pattern member, substantially as described.

2. In combination a pattern member measuring the fabric by length, a course measuring member measuring the fabric by courses, said members operating in alternation, means for driving said members, means for correcting the time of starting of the length measuring member from the course measuring member at the end of each course measurement, and means for controlling the stopping of the course measuring member from the corrected length measuring member when the latter starts, substantially as described.

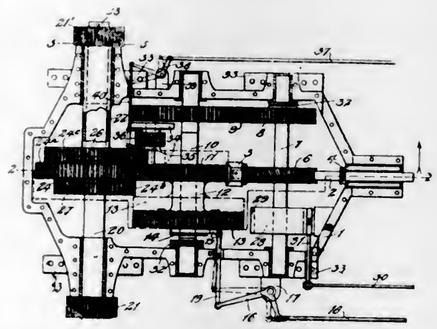
3. In combination a pattern member measuring the fabric by length, a course measuring member measuring the fabric by courses, said members operating in alternation, means for driving said members, means for correcting the time of starting of the length measuring member from the course measuring member at the end of each course measurement, and means for controlling the stopping of the course measuring member from the corrected length measuring member when the latter starts, and for subsequently controlling the starting of the course measuring member, substantially as described.

4. In combination in pattern mechanism for knitting machines, a main pattern member measuring the fabric by actual length, a supplemental pattern member measuring the fabric by courses, a measuring member, driving means for the main pattern mechanism controlled by the said measuring member, driving means for the measuring member itself including connections to the fabric roll, and a pawl, means controlled by the course measuring member to correct the timing of the measuring wheel and its driving pawl, and means for stopping the course measuring member to conform to the corrected timing of the measuring wheel and its pawl, substantially as described.

5. In combination in pattern mechanism for knitting machines, a main pattern mechanism measuring the fabric by actual length, a supplemental pattern mechanism measuring the fabric by courses, connections operated by the main pattern mechanism for both starting and stopping the supplemental pattern mechanism, and connections operated by the supplemental pattern mechanism for correcting the time of starting of the main pattern mechanism which thereupon, through the connections first mentioned, stops the supplemental pattern mechanism, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,172,091. TRANSMISSION SYSTEM. ARCHIE WILLIAMS, Climax, Minn. Filed Dec. 17, 1913. Serial No. 807,285. (Cl. 74—58.)

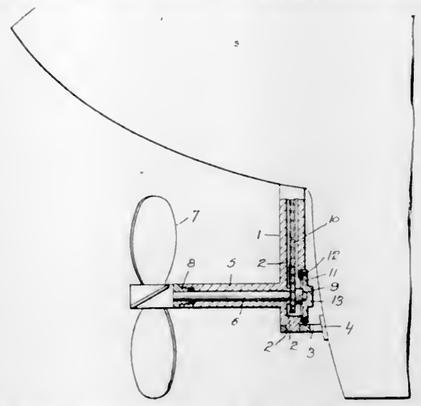


A transmission system of the class described, the combination of an axle, a driving shaft, a driven shaft having worm and gear connections with and adapted to be actuated by said driving shaft, a counter shaft intermediate the axle and the driven shaft, gear members connecting said counter and driven shafts, a primary transmission element on the counter shaft and comprising relatively small and large gears, a secondary transmission element mounted on the axle and comprising small and large forward speed gears and a reverse gear, a short shaft disposed intermediate the counter shaft and the axle, a reverse pinion shiftable laterally on and longitudinally of the said short shaft into meshing relation between the reverse gear on the secondary transmission element and the small gear on the primary transmission element when the latter is disposed with the small gear opposite to the reverse gear aforesaid, means for shifting the primary transmission element longitudinally on the counter shaft to obtain variable forward and reverse speeds, and means for slidably shifting the reverse pinion on its shaft.

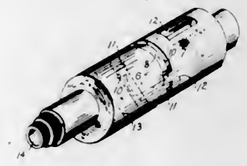
1,172,092. STEERING AND PROPELLING DEVICE. HERMAN WILLIN, New York, N. Y. Filed Oct. 29, 1913. Serial No. 797,969. (Cl. 115—35.)

In a steering and propelling mechanism for boats, a bracket carried by the boat, a vertically disposed tube having its lower end journaled in the bracket and its upper end journaled in a portion of the boat, said tube having a laterally projecting sleeve thereon adapted to receive the propeller shaft and having an opening therein located at a point diametrically opposite the sleeve, the said opening being of a greater diameter than the sleeve, one end of the propeller shaft being adapted to extend into the tube and be positioned adjacent the said opening, operating mechanism extending into the tube and connected to the propeller shaft, flanges formed on the tube and projecting into the opening, a plate adapted to close the opening in the tube and engaging the flanges, means

extending through the plate and the flanges for holding the plate in position, the said plate having a central bearing formed therein adapted to receive that end of the propeller shaft which extends into the tube.



1,172,093. VALVE FOR INTERNAL-COMBUSTION ENGINES. JOHN PALMER WILSON and JOHN FRAZER JACKSON, Sydney, New South Wales, Australia. Filed Apr. 7, 1915. Serial No. 19,789. (Cl. 136—12.)



1. In valves of the rotary type for internal combustion engines, a valve plug composed of two sections positioned end to end, the adjoining ends being provided with means to permit, on the reversal of the engine, one section to slip or non-rotate independently of the other section, one of said sections being provided with supply ports and the other with exhaust ports.

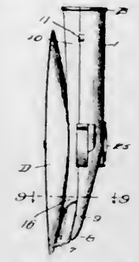
2. A valve for internal combustion engines, comprising a pair of hollow rotatable elements communicating one with the other, one of said sections provided with means for connection to a fuel supply and having exhaust ports, the other of said sections adapted to be rotated by the engine and having inlet ports, and a driving connection between said elements permitting one to be partially rotated independently of the other.

3. A valve for internal combustion engines, comprising a pair of hollow rotatable elements arranged end to end and having their adjacent ends interengaging to provide a gas-tight joint between said ends and to permit one element to be partially rotated independently of the other, one of said elements having means for connection to a fuel supply and provided with an exhaust port, the other of said elements having an inlet port and adapted to be rotated by the engine.

4. A valve for internal combustion engines, comprising a pair of hollow rotatable members each having an open end, one having a sleeve on its open end, the other having a socket at its open end to receive the sleeve of the other member, and coupling means between said members permitting one member to partially rotate independently of the other, one of said members having means for connection to a fuel supply and exhaust ports, and the other having inlet ports and adapted to be rotated by the engine.

5. In a valve of the rotary type for internal combustion engines, a valve plug formed of two sections positioned end to end, coupled between the adjoining ends of said sections to permit one section to partially rotate independently of the other, one of said sections having a socket at one end and provided with inlet ports, the other of said sections having a sleeve at one end arranged within the socket of the other member and provided with exhaust ports.

1,172,094. DRILL FOR GRAIN OR FERTILIZER. GEORGE M. WINWOOD, Jr., Springfield, Ohio. Filed Aug. 18, 1914. Serial No. 857,426. (Cl. 111—11.)

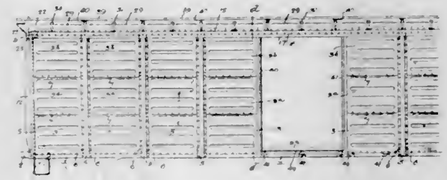


1. The combination with a furrow-opening disk; of an upright boot comprising a channeled body member standing alongside the disk with the edges of its front and rear walls wholly out of contact therewith excepting for a scraper on the front wall below the disk-pivot, and a second member removably insertible between the disk and the first member for closing the upper portion of its channel, for the purpose set forth.

2. The combination with a furrow-opening disk; of a boot composed of a channeled body member standing upright alongside the disk with its outer wall approaching the disk at the lower end of the channel, a cover plate adapted to overlie and close said channel and having its lower end cut off oblique and its rear edge formed into a lip closing against the rear wall of the body member, and means for removably attaching the two members.

3. The combination with a concavo-convex furrow-opening disk; of a boot comprising a channeled body member standing upright alongside the disk with its front wall having a scraping edge contacting therewith and its rear wall spaced from and out of contact with said disk, and a cover plate removably attached to the body member and shaped to close the open side of the same except at its rear end and fit closely against the convex side of said disk.

1,172,095. RAILWAY-CAR. JOHN S. WORTH and CHARLES BRECHT, Coatesville, Pa., assignors to John S. Worth and William P. Worth, Coatesville, Pa. Filed Jan. 9, 1915. Serial No. 1,283. (Cl. 105—192.)



1. The combination in a metal car of the "box" type, of a series of longitudinal side plates having short longitudinal corrugations, said plates extending from one end of the car to the doorway; and flanged vertical posts secured to the outside of the car and extending from the side sill to the upper cornice girder, the plates being depressed at the rivets which secure the plates to the posts so that the side walls of the car will be flush on the inside.

2. The combination in a railway car, the side sills and cornice girders extending the full length of the car; a series of longitudinal side plates extending in one piece from one end of the car to the doorway, the plates having a series of short longitudinal corrugations, the upper plates overlapping the under plates at one of the corrugations and having a projecting lip; and vertical posts secured to the plates between the corrugations and attached to the side sills and cornice girders.

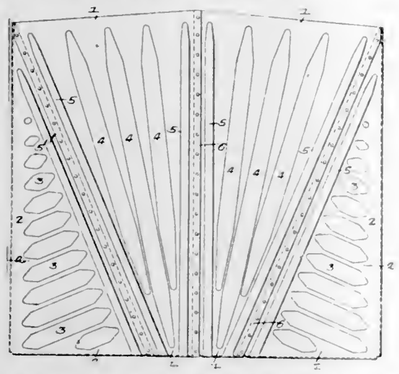
3. The combination in a railway car, of side sills and cornice girders extending the full length of the car; a series of side plates extending from one end of the car to the doorway and having short horizontal corrugations; vertical posts secured to the plates between the corrugations and to the side sill and cornice girder, the corrugations of the plate extending outward so as to provide a flat inner surface for the interior of the car.

4. The combination in a railway car, of a lower frame and an upper frame; a series of horizontally arranged plates at the sides and ends of the car, each of said plates having a series of short horizontal corrugations; and vertical side posts and end posts extending from the bottom frame to the top frame on the outside of the car and to which the plates are secured, the plates being depressed at the rivets so as to allow a smooth surface without projections on the interior of the car.

5. The combination in a car, of plates forming the walls of the car, the plates having short horizontal corrugations separated by a flat portion; and outside vertical posts made from bent sheet metal and flanged, the flanges of the posts being secured to the flat portions of the plates by rivets, the space between the flanges within the posts having small corrugations, the plates being depressed at the rivets so that the heads of the rivets will be back of the inside line of the plates.

[Claims 6 to 9 not printed in the Gazette.]

1,172,096. CAR END. JOHN S. WORTH and CHARLES BRECHT, Coatesville, Pa., assignors to John S. Worth and William P. Worth, Coatesville, Pa. Filed Jan. 23, 1915. Serial No. 3,891. (Cl. 105—192.)

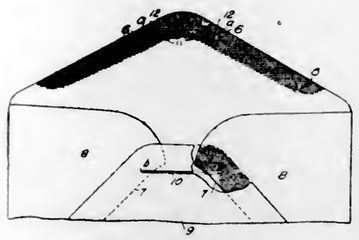


1. The combination of an end plate for a freight car consisting of four sections, the outer sections being wider at the base than at the upper end and the two central sections being wider at the upper end than at the base, the central sections being joined by a series of vertical rivets and the side sections being joined to the central sections by a series of rivets.

2. The combination of an end plate for a freight car made in four sections, the two outer sections being wider at the base than at the upper end and the two central sections being wider at the upper end than at the base, the sections being united by rows or rivets and each section being reinforced at the joints by ribs pressed up from the plates extending parallel with the rows of rivets.

3. An end plate for a freight car made in four sections, each section being substantially the full height of the car, the outer sections being wider at the base than at the upper ends and the two central sections being wider at the upper ends than at the base, the sections being secured together, the edges of one section lapping over and secured to the edges of another section; and reinforcing ribs struck up from the plates and extending parallel with said edges, each of said plates having reinforcing ribs extending from side to side of the plate.

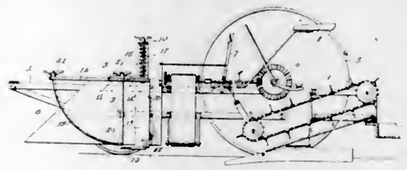
1,172,097. ENVELOP. WILLIAM ZUCKERMAN, New York, N. Y. Filed Oct. 28, 1915. Serial No. 58,378. (Cl. 229—77.)



1. In an envelop, a closing flap having slits at the edges transversely thereof, said slits converging toward each other, the portion of the flap between the slits having a notch at each slit, whereby said portion presents a tongue at the edge in each slit: side flaps; and a lower flap secured to the side flaps so that a portion of said side flaps is below the lower flap, said lower flap having a slot extending over the edges of the side flaps covered by the lower flap, the length of the slot being substantially equal to the distance between the slits at the edges of the closing flap, said slits being adapted to coincide with the edges of the side flap under the lower flap when the portion of the closing flap between the slits is engaged into the envelop through the slot, said notches being adapted to engage the edges of the side flaps at the slot when a pull is exerted on the closing flap.

2. In an envelop, securing flaps presenting inner edges at the back of the envelop, and a closing flap having slits at the edges transversely of the edges, said slits converging toward each other, the portion of the closing flap between the slits having a notch at each slit whereby said portion presents a tongue at the edge in each slit, said envelop having a slot in the back thereof for receiving the portion of the closing flap between the slits, said slits being adapted to coincide with the inner edges of the envelop when said closing flap portion between the slits is introduced into the envelop through the slot, the notches in said closing flap portion being adapted to engage the said inner edges at the slit in the back of the envelop when a pull is exerted on the closing flap after said closing flap portion has been inserted into the envelop.

1,172,098. BEET-HARVESTING MACHINE. FRANK P. ADDLEMAN, Austin, Colo. Filed Feb. 12, 1914. Serial No. 818,327. (Cl. 55—107.)

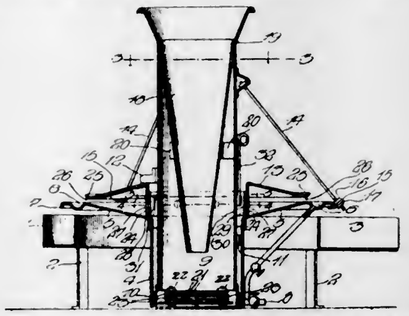


1. In a beet harvesting machine, the combination, of a main frame, guide means adjustable upon said frame, said means comprising a pair of converging plates disposed one at each side of the said frame, an auxiliary frame reciprocable relatively to said plates, an angularly disposed blade member carried by said auxiliary frame, means engageable with said frame to normally maintain same in its lowermost position, and means positioned forwardly of said frame and adjustable relatively thereto, said means being engageable with the beets acted upon for automatically moving said blade into cutting position.

2. In a beet harvesting machine, the combination, of guide means for the beets acted upon, said means comprising a pair of converging spaced apart plates, each plate having a vertical groove formed therein, a second frame reciprocable relatively to said plates, means forming a part of said last mentioned frame, said means operating within said groove, the latter serving as guides therefor, resilient means engageable with said second frame to normally maintain same in its lowermost position, an angular blade member carried by said frame, and means positioned forwardly of said frame, and between the said plates, said means being engageable with the beets acted upon for automatically moving said plate into cutting position, as and for the purpose set forth.

3. In a beet harvesting machine, the combination with the main frame, of plates affixed to the frame, each plate having a vertical groove formed therein, an enlargement formed upon each plate adjacent its forward end, the enlargements acting as guides directing the beets acted upon between the plates, a cutter frame mounted for reciprocal movement relatively to the plates, the frame sides fitting the groove in the said plates, a cutting element movable with the frame, an extension projecting forwardly of the frame, and a member adjustable relatively to the extension and to the frame, said member being engageable with the beets acted upon to direct the cutting element onto the beets and to gage the depth of the cut, as and for the purpose set forth.

1,172,099. AMALGAMATOR. ACHILLES ALLEN, Milton, Oreg., assignor of one-third to Thomas Crowley Frazier and one-third to Ora Estes Smith, Milton, Oreg. Filed Feb. 25, 1915. Serial No. 10,497. (Cl. 83—67.)



1. An amalgamator comprising a mercury vat, a cylinder mounted therein and spaced from the side walls and bottom thereof, a pair of vertically spaced laterally extending plates mounted on the wall of said vat and converging toward their outer edges, a wall between said plates having pulp supplying openings therein, the lower plate being wider than the upper, with its free edge extending beyond the edge of the upper plate and provided with a trough to receive the pulp discharged from said upper plate.

2. An amalgamator comprising a mercury vat, a cylinder mounted therein and spaced from the side walls and bottom thereof, a feed supply funnel extending into said cylinder, a pair of vertically spaced laterally extending plates mounted on said vat and converging toward their outer edges, the lower plate being wider than the upper, and valved supply means arranged between said plates.

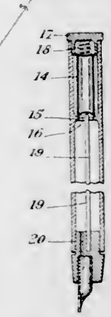
3. An amalgamator comprising a mercury vat, a cylinder mounted therein and spaced from the side walls and bottom thereof, a feed supply funnel extending into said cylinder, a pair of vertically spaced laterally extending plates mounted on said vat and converging toward their outer edges, the lower plate being wider than the upper and projecting at its outer edge beyond the outer edge of the upper plate and provided with a groove in its upper face beyond the outer edge of the upper plate, and means under the control of the operator for supplying pulp between said plates.

4. An amalgamator comprising a mercury vat, a cylinder mounted therein and spaced from the side walls and bottom thereof, a feed supply funnel extending into said cylinder, a pair of vertically spaced laterally extending plates mounted on said vat and converging toward their outer edges, the lower plate being wider than the upper end projecting at its outer edge beyond the outer edge of the upper plate and provided with a groove in its upper face beyond the outer edge of the upper plate, means under the control of the operator for supplying pulp between said plates, and a pipe leading from said groove to said vat.

5. An amalgamator comprising a mercury vat, a cylinder mounted therein and spaced from the side walls and bottom thereof, a feed supply funnel extending into said cylinder, a pair of vertically spaced laterally extending plates mounted on said vat and converging toward their outer edges, a collar carried by one of said plates and arranged between them to form a closure at their inner edges, said collar having apertures therein, and an annular plate slidably mounted on said collar and having apertures therein positioned to register at predetermined intervals with the apertures in said collar.

[Claims 6 to 8 not printed in the Gazette.]

1,172,100. FOUNTAIN-PEN. CHARLES MARIE VICTOR ALLENOU, Nantes, France. Original application filed June 29, 1912, Serial No. 706,784. Divided and this application filed Apr. 22, 1914. Serial No. 833,777. (Cl. 120—42.)



1. A fountain pen-holder to be fed with water only and having a water containing compartment and a coloring substance containing compartment, the latter compartment being located and movable within the former one and means for actuating said latter compartment from the exterior so as to secure or cut off at will and for any desired length of time communication between water and color compartments.

2. A fountain pen-holder to be fed with water only comprising a tubular body forming a water reservoir, a threaded removable cap at one end of said body, a partition on said body, a coloring substance receptacle resting on said partition, a spiral spring between said cap and said receptacle for applying the latter on said partition, an aperture in said partition, normally closed by the bottom of said receptacle and a rod secured on the movable pen-holder and projecting through said aperture for raising said receptacle for allowing the water entering said receptacle.

3. A fountain pen holder comprising a reservoir provided with two intercommunicating chambers, a solid pigment containing movable capsule in one of the cham-

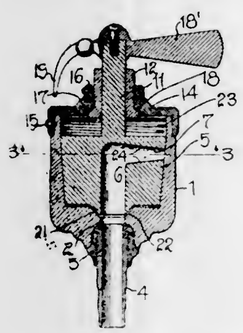
bers, said capsule having a closed end which is located adjacent the point of juncture of the chambers to close the opening between the said chambers.

4. A fountain pen holder comprising a hollow reservoir, an annular flange within the reservoir defining two intercommunicating chambers, a solid pigment containing movable capsule disposed in one of the chambers and which rests against the flange to close communication between the chambers.

5. A fountain pen holder comprising a reservoir, provided with an annular flange which refines two intercommunicating chambers, a movable capsule disposed in one of the chambers and adapted to contain a solid pigment, means for pressing the end of the capsule against the flange, whereby communication between the two chambers is disestablished.

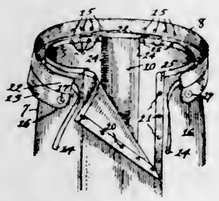
[Claims 6 to 8 not printed in the Gazette.]

1,172,101. VALVE. WILLIAM H. ARMSTRONG, Oakland, Cal. Filed Aug. 31, 1914. Serial No. 859,464. (Cl. 137—26.)



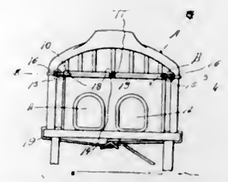
A device of the character described comprising a casing provided with a discharge opening in one of its walls and opposed induction ports in other of its walls, a valve rotatably mounted within the casing and provided with an axially disposed recess in communication with the discharge opening of the casing and having laterally directed ports in communication with the recess at its inner end adapted to be brought into register with the induction ports of the casing, each of said ports being of quadrant formation and gradually increasing in width from its outer end, said ports being positioned in the same plane transversely of the valve, the said ports having their major portions disposed at the same side of a given diameter through the valve.

1,172,102. MATERNITY-SKIRT. GUSTAV BAER, New York, N. Y. Filed June 26, 1915. Serial No. 36,563. (Cl. 2—42.)



A skirt having its upper edge at the rear folded inwardly and then outwardly on each side of the center line of the skirt to form a panel, a plurality of fastener members disposed horizontally on the inner face of each folded portion, a belt-like member secured to the upper edge of the skirt and depending within the same, the belt-like member being disconnected at the front from the skirt and provided with means for varying its length, and fastener members disposed horizontally on the outer surface of the belt-like member and adapted to mate with the first named fastener members.

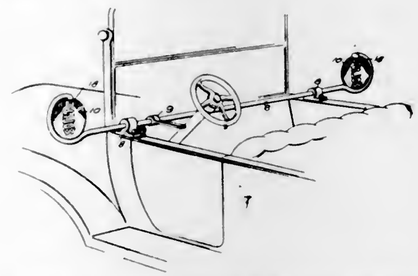
1,172,103. SEAT-GUARD. HOWARD D. BENNETT, Baltimore, Md. Filed Aug. 5, 1914. Serial No. 855,193. (Cl. 155—12.)



1. A seat guard of the class described comprising a fabric body having openings therein to receive the legs of the occupant of the seat, hems at the top and bottom of the body respectively securing elements detachably engaged through respective hems, said body being provided with a slit intersecting the upper hem, and an eye disposed in the slit and engaged around the securing means passing through the upper hem.

2. A seat guard of the class described comprising a yielding body having openings therein to receive the legs of the occupant of the seat, means carried by the body for securing same across the front of a seat, and a belt receiving attachment carried on the body portion centrally of the top thereof and whereby a belt may be detachably secured to the body.

1,172,104. SIGNAL FOR VEHICLES. WILBERT BLACK, New Orleans, La. Filed May 25, 1915. Serial No. 30,392. (Cl. 40—77.)



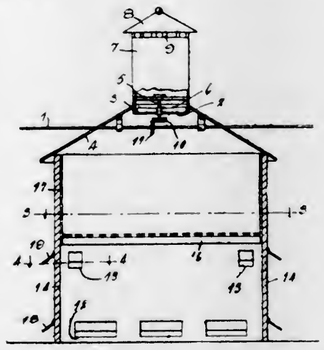
1. A signal for vehicle comprising a tubular rod adapted to be disposed transversely of a vehicle, bearings for said rod wherein the same is free to turn, the ends of said rod being adapted to project to each side of the vehicle, sign disks secured to the ends of the rod so as to participate in the turning movement thereof, incandescent lights secured to the ends of the rod, a switch controllable by said rod, conduits from said lamp through the rod to said switch, means for turning the rod, and yielding means for locking the rod when said disks are in operative or in inoperative position, said switch adapted to close the circuit to the lights when said disks are in operative position.

2. A signal for vehicles comprising a tubular rod adapted to extend across a vehicle so that the ends of the rod will project to each side of the vehicle, bearings for said rod wherein said rod is mounted to turn, a sign disk secured to each end of the rod to participate in the movement of the rod, an arm secured to the rod for turning it, a collar on said rod within one of the bearings, a resilient member within the bearing engaging the collar to normally turn the rod to place the disk in inoperative posi-

tion, means limiting the movement of the rod under the action of the spring, said collar having V-shaped notches at right angles to each other, a yielding plunger having a sharp end adapted to engage the notches whereby the rod is locked when the disks are in operative or in inoperative position, an incandescent lamp secured to each end of the rod, an insulating drum on said rod within the bearing, contacts carried by said drum, conduits within said tubular rod from the lamps to the contact points, and resilient contact points secured within the bearing and adapted to engage the contact points on the drum when the disks are placed into operative position, substantially as and for the purpose set forth.

3. A signal for vehicles, comprising a tubular rod adapted to extend across a vehicle so that the ends of the rod will project on each side of the vehicle, bearings for said rod wherein the rod is mounted to turn, a sign disk at each end of the rod, the ends of the rod partially encompassing the edge of the disk so as to rigidly secure the disk to the rod, an arm secured to the rod for turning it, a collar on said rod within one of the bearings, a resilient member within the bearing engaging the collar to normally turn the rod to place the disk in inoperative position, means limiting the movement of the rod under the action of the spring, and yieldable locking means for engaging the collar whereby the rod is adapted to be retained in either operative or in inoperative position.

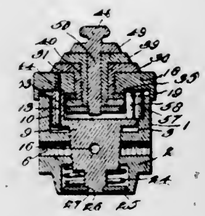
1,172,105. FRUIT-DRIER. GEORGE A. BRITT, Centerton, Ark. Filed Aug. 21, 1914. Serial No. 857,912. (Cl. 34—19.)



A fruit drying house comprising side walls, a roof secured over the upper edges of said side walls, an air flue positioned centrally on said roof communicating with the interior thereof, a fan in the lowermost portion of said flue, means extending through the roof for rotating said fan, a floor formed of relatively spaced slats positioned within the house intermediate the ends of said side walls, the said side walls having a series of air intake openings located just below the floor, and a second series of openings located in the side walls just above the base of the structure, the second-mentioned openings being located below the first-named openings, hinged covers arranged over said openings whereby the lower openings may be closed at unfavorable times, and means for rendering the upper portion of the walls above the floor proof against the passage of air therethrough so as to cause all air passing through the fruit to be drawn up through the slat floor and the lower openings preventing air from being admitted at unfavorable times.

1,172,106. COMBINATION LOCKING-VALVE. CLARENCE P. BRUMBY, East Point, Ga., assignor of one-half to Stonewall R. Jacobs, Atlanta, Ga. Filed July 8, 1914. Serial No. 849,735. (Cl. 137—7.)

1. A valve comprising a body, an axial bore in its upper end and also having an axial bore in its lower end, the body being provided with a tapered bore providing a valve seat, and connecting the bores, the body also having a transverse aperture communicating with the tapered bore, a valve engaging the valve seat, said valve being provided with a transverse aperture for communicating with the transverse aperture in the body, a flange extending upwardly from the upper end of the valve, a handle secured to the flange and forming a cap for the valve body, the handle being provided with an axial bore, disks on the under face of the handle positioned within the confines of the flange, means controlling the rotation of the disks and means controlled by the rotation of the disks to lock the relief or lock the valve.



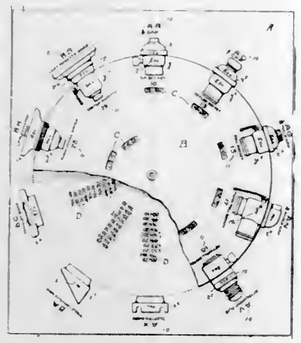
2. A locking valve comprising a body, said body provided with an enlarged axial bore, a tapered bore communicating with the axial bore, a second enlarged bore formed in the lower portion of the body and communicating with the tapered bore, said body also provided with a transverse aperture extending therethrough and communicating with the tapered bore, a tapered valve plug having a transverse aperture therethrough and having an enlarged central bore at its upper end, said plug seated within the enlarged bore of the valve body, means in the lower bore of the valve body engaging the lower end of the valve plug to hold the same in engagement with the wall of the bore, a circular handle provided with a central aperture and a peripheral flange mounted on the upper end of said valve body, disks positioned through the central portion of the aperture of the handle and rotatably seated in the enlarged central portion of the valve plug, each of said disks provided with a peripheral recess, vertical standing rollers secured in the enlarged axial bore of the valve plug adapted to engage the peripheral recesses of the disks to prevent movement of the same and allow the valve plug to be turned when bringing its aperture in registration with the transverse aperture of the valve body.

3. A locking valve comprising a cylindrical body having an upper and lower axial bore, a central bore forming a valve seat communicating with the upper and lower bores, said body also provided with a transverse extending recess or aperture communicating with the central bore, a valve plug also provided with an enlarged axial bore, its lower end tapered, a handle having a peripheral flange and provided with a central aperture mounted over said body and means for connecting the valve plug to said handle for the rotation of the same upon movement of said handle, a plurality of disks seated in the axial bore of the plug, their upper ends overlapping the handle, each of said disks provided with a peripheral recess and vertical rollers mounted in the axial bores of the body and plug and adapted to engage the recesses of the disks upon movement of the same and allow the valve plug to be turned upon movement of the handle.

1,172,107. ADVERTISING-DISPLAY. FRANK V. BURTON, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 5, 1914. Serial No. 870,476. (Cl. 11—7.)

1. An advertising display comprising separate representations of each part of a series of two-part devices each corresponding part in the series being adapted to combine with any of the coöperating parts in the series to

form a complete device, an independent identification symbol for each of the coöperating parts throughout the series, a combination of said symbols serving to identify a complete fitting of particular type.



2. An advertising display comprising separate representations of each part of a series of two-part devices each corresponding part in the series being adapted to combine with any of the coöperating parts in the series to form a complete device, independent identification symbols of one character for corresponding parts of each device in the series, and independent identification symbols of different character for each of the coöperating parts of said series, a combination of two symbols of different character serving to identify a complete device of particular type.

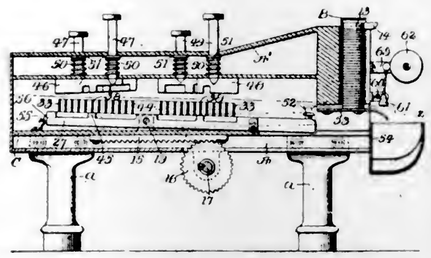
3. An advertising display comprising separate representations of each part of a series of two-part devices each corresponding part in the series being adapted to combine with any of the coöperating parts in the series to form a complete device, independent letter symbols for corresponding parts of each device in the series, and independent number symbols for each of the coöperating parts of said series, the combination of a letter and a number symbol serving to identify a complete device of particular type.

4. An advertising display comprising separate representations of each part of a series of two-part devices each corresponding part in the series being adapted to combine with any of the coöperating parts in the series to form a complete device, independent letter symbols for corresponding parts of each device in the series, said letter symbol comprising a plurality of letters, and independent number symbols for each of the coöperating parts of said series, each number symbol comprising a plurality of numerals, the combination of a letter and a number symbol serving to identify a complete device of particular type.

5. An advertising display, comprising separate representations of each part of a plurality of series of two-part fittings each corresponding part in each series being adapted to combine with any of the coöperating parts in that series to form a complete device, independent letter symbols for corresponding parts of each device in each series, each letter symbol comprising a plurality of letters, portion of said letter symbol serving to identify a particular series and differing in each series, and another portion of said letter symbol serving to identify a particular part in a series and corresponding for corresponding parts in each series, together with independent number symbols for each of the coöperating parts of each of said series, each of said number symbols comprising a plurality of numerals, portion of which identfy a particular series and differing for each series, and another portion of said symbol serving to identify a particular part in a series and corresponding for corresponding parts in each series; the combination of a letter symbol and a numeral symbol serving to identify a particular device.

[Claims 6 to 8 not printed in the Gazette.]

1,172,108. MONEY-CHANGING MACHINE. BERNARD H. CAMDEN, Parkersburg, W. Va. Filed Feb. 23, 1915. Serial No. 10,077. (Cl. 133—2.)



1. In a money changing machine, the combination, of a frame, a series of coin containing receptacles mounted on the frame, a carriage mounted on the frame, a plurality of coin ejecting rods fulcrumed on the carriage, banks of keys located respectively on either side of the fulcrums of said rods and operable to set and reject said coin ejection rods, and means for operating the carriage to eject the coins by the rods set, substantially as set forth.

2. In a money changing machine, the combination, of a frame, a series of coin containing receptacles mounted on the frame, a carriage mounted on the frame, a plurality of coin ejecting rods fulcrumed on the carriage, a plurality of levers fulcrumed on the carriage and operable to engage said coin ejecting rods, banks of keys located respectively on either side of the fulcrums of said levers and operable to engage the levers to set and reject said coin ejecting rods, and means for operating the carriage to eject the coins by the rods set, substantially as set forth.

3. In a money changing machine, the combination, of a frame, a series of coin containing receptacles mounted on the frame, a carriage mounted on the frame, a plurality of coin ejecting rods fulcrumed on the carriage, a plurality of levers fulcrumed on the carriage and adapted to engage with said ejecting rods on either side of the fulcrums thereof, a bank of keys located on one side of said lever fulcrums selective to set said coin ejecting rods by said levers, a bank of keys on the opposite side of said lever fulcrums selective to reject the set coin ejecting rods by said levers, and means for operating the carriage to eject the coins by the rods set, substantially as set forth.

4. In a money changing machine, the combination, of a frame, a series of coin containing receptacles mounted on the frame, a plurality of fulcrumed coin ejecting rods, a plurality of fulcrumed levers comprising nested rectangular frames adapted to engage with said ejecting rods on either side of their respective fulcrums, keys selective to engage said levers to set and reject said coin ejecting rods, and means to operate the rods set to eject the coins, substantially as set forth.

5. In a money changing machine, the combination, of a frame, a series of coin containing receptacles mounted on the frame, a carriage mounted on the frame, a plurality of coin ejecting rods fulcrumed on the carriage, a plurality of levers comprising nested rectangular frames fulcrumed on the carriage and adapted to engage with said ejecting rods on either side of the fulcrums thereof, keys selective to engage said levers to actuate said ejecting rods, and means to operate the set rods to eject the coins, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,172,109. TOOTH-BRUSH WITH DETACHABLE HANDLE. HORACE D. CAMMACK, Crossett, Ark., assignor of one-half to Clarence T. Sims, Crossett, Ark. Filed Mar. 15, 1915. Serial No. 14,467. (Cl. 15—39.)

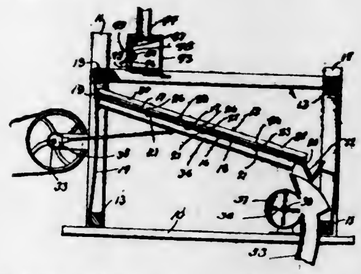
1. A device of the character described including a brush, an upstanding head on the back of said brush, a handle having a socket to engage said head, and coacting grooves and lugs on said brush and handle to hold the brush in adjusted position with relation to the handle.

2. A device of the character described comprising a brush having a rectangular recess in its back near one end, a correspondingly shaped plate adapted to be secured in said recess, a head having an enlarged slit its upper end upstanding from the center of the plate, said plate having transversely and longitudinally extending grooves in its upper surface, a handle having a socket to engage the head, and projecting lugs from the handle to engage the grooves to hold the brush in adjusted position with relation to the handle.



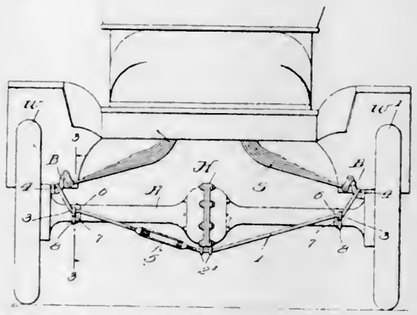
3. A device of the character described comprising a brush, an upstanding head having a base plate with transversely and longitudinally extending grooves on the back of the brush, a handle with a socket to engage said head, a bushing correspondingly shaped to the socket and secured therein, flanges on the outer end of the bushing, and lugs projecting from the said flanges in the handle to engage the grooves to hold the brush in adjusted position with relation to the handle.

1,172,110. WHEAT-SEPARATOR. ROY D. CHEEK, Olney, Ill. Filed Jan. 11, 1913. Serial No. 741,495. (Cl. 130—15.)



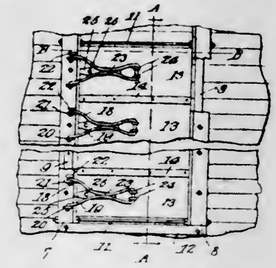
In a wheat separator, the combination with a frame structure and vertically arranged bowed spring bars carried thereby, both ends of each bar being anchored, of a sieve having its ends connected relatively near the upper and lower ends of the bars respectively, and means for agitating the sieve.

1,172,111. AXLE-TRUSS. CHRISTIAN CHRISTIANSEN, Sioux Falls, S. D. Filed Jan. 7, 1915. Serial No. 1,009. (Cl. 21—5.)



A device of the class described comprising a rod bent upon itself to form a pair of substantially parallel truss rods, each of said rods having a seat formed therein adjacent their adjoined end, said adjoined end beyond said seats being extended obliquely upward from said truss rods and adapted to overlie the spring hanger bracket, the opposite ends of said truss rods being bent upwardly to adapt the truss to underlie the differential casing, and threaded, a shorter rod bent upon itself to form a pair of substantially parallel truss rods, each of said rods having a seat formed therein adjacent their adjoined end, said adjoined end beyond said seats being extended obliquely upward from said truss rods and adapted to overlie the spring hanger bracket, the opposite ends of said truss rods being threaded, a pair of turn buckles adapted to coact with the threaded ends of said truss rods, U-shaped clips having downturned ends adapted to be received in said seats and designed to underlie the axle casing, and a pair of spaced parallel transverse bars joined at their opposite ends to the first mentioned pair of truss rods, and adapted to receive therebetween the flange of the differential casing.

1,172,112. SILO. WILLIAM CRAINÉ, Brookfield, N. Y. Filed Nov. 30, 1912. Serial No. 734,374. (Cl. 20—1.4.)



In a silo, the combination with a door and a frame, of a hinge which, when viewed in top plan and when the door is closed, comprises a straight portion disposed at an acute angle to the door, and a bend the chord of which is disposed approximately at right angles to the straight portion, the bend and the straight portion, when viewed in elevation, being made up of upper and lower arms which diverge toward their inner and outer ends, and are concaved into bracing contact intermediate their ends; the inner ends of the arms being united by an integral portion which is pivoted to the door, at a point approximately midway between the vertical edges of the door, the outer ends of the arms terminating in pintles pivotally received by the frame.

1,172,113. COLORING MEDIUM-FOR CONCENTRATED VISCOUS SUGAR. ALFRED DACHERT, Strassburg, and CHARLES HEITZ, Schiltigheim, Germany. Filed Feb. 10, 1914. Serial No. 817,878. (Cl. 127—4.)

That process of producing coloring tablets for candy which consists in producing an aqueous solution of sugar, gelatin and a color soluble in sugar mixtures, concentrating the solution to such degree that the mass may be formed into tablets, and dividing the mass thus formed into tablets.

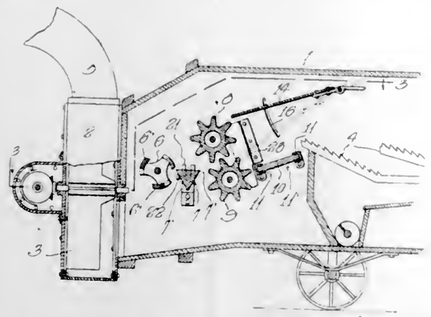
1,172,114. CUTTING ATTACHMENT FOR GRAIN-SEPARATORS. LOUIS DEBAKER, Luxembourg, Wis. Filed Oct. 28, 1915. Serial No. 58,432. (Cl. 146—29.)

1. In combination with a straw carrier, a straw cutter, a removable platform between said carrier and cutter, and a deflector pivoted above said platform and operating between said carrier and cutter.

2. In combination with a straw carrier, a cutter, feeding means therefor, and a removable platform located over the passageway between said carrier and the said cutter feeding means.

3. In combination with a straw carrier, a cutter, feeding means therefor, a removable platform located over the passageway between said carrier and said cutter feeding means, and a deflector pivoted above said platform and

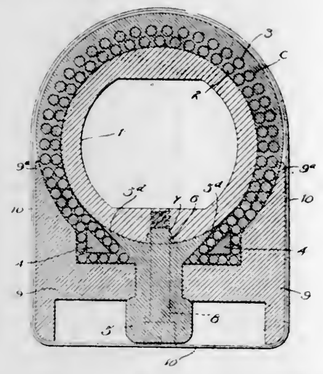
operating between said carrier and the said cutter feeding means.



4. In combination with a straw carrier, a straw cutter, a pair of spaced apart channel-shaped guide bars between said carrier and cutter, a platform slidable therein, and a deflector pivoted above said platform and operating between said carrier and cutter.

5. In combination with a straw carrier, a straw cutter, a removable platform between said carrier and cutter, and a deflector above said platform and movable into position between said carrier and cutter to deflect the straw downwardly.

1,172,115. METHOD OF MAKING TIRE-CASINGS. WALTER R. DENMAN, Akron, Ohio, assignor to Miller Rubber Company, a Corporation of Ohio. Filed July 29, 1915. Serial No. 42,619. (Cl. 154—14.)

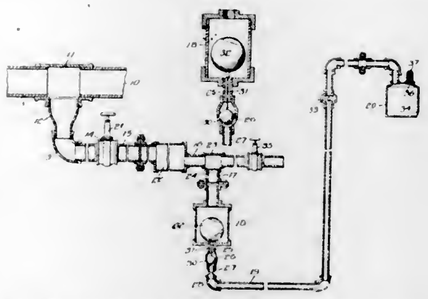


1. The herein described method of forming a tire shoe, or casing consisting in winding a plurality of superimposed plies of parallel flexible cords under tension completely around a ring core, slitting the carcass thus formed along its inner circumference, inserting bead cores at suitable points between the cord plies, building up the casing on the cord carcass, applying supporting rings to the ring core and at the sides of the casing respectively, wrapping the whole with cloth under tension and vulcanizing the whole while still on the ring core.

2. The herein described method of building a tire shoe or casing consisting in wrapping a plurality of superimposed plies of flexible coated cords completely around a ring core, interposing a strip of non-adhesive material between the inner and outer plies along the inner periphery of their circumference, slitting the cord carcass thus formed along the inner periphery, inserting bead cores on either side between the ends of the inner and outer plies, building up a tire casing over the carcass, applying suitable former rings to the ring core and at the sides of the tire casing, respectively, wrapping the entire structure with cloth under tension, and vulcanizing the whole while still on the ring core.

3. The herein described method of forming a tire shoe or casing consisting in wrapping a plurality of superimposed plies of parallel, flexible cords spirally around a ring core at reverse angles thereto, slitting the cord carcass along its inner periphery, applying the bead cores, building up the tread, and side portions of the shoe and vulcanizing the whole, while distended and while still on the winding or ring core.

1,172,116. DRAIN FOR PIPE-LINES. FILMORE C. DEVERICKS, Clarksburg, W. Va. Filed Jan. 8, 1910. Serial No. 536,987. (Cl. 137—103.)



1. An apparatus for automatically collecting and elevating liquid condensation in mains, comprising a reservoir connected with said main by means of suitable piping, means for regulating the flow of liquid to said reservoir, a storage tank for said liquid located above said main and connected with said reservoir by suitable piping, means within said reservoir controlled by the liquid collected therein for dispensing accumulated quantities of liquid at intervals to said storage tank, and means connected in said storage tank for maintaining atmospheric pressure therein, substantially as set forth.

2. An apparatus for automatically collecting and elevating liquid fuel carried by or condensed from gas as it is conducted through mains from natural gas wells, comprising a branch leading from the bottom of said main to drain off the liquid, a reservoir connected with said branch for accumulating the liquid, a valve in said branch for regulating the flow of liquid to said reservoir, a storage tank for said liquid located above said main, piping leading from said reservoir to said storage tank, a float controlled valve located within said reservoir for dispensing accumulated quantities of liquid therefrom, and an automatic valve connected in said storage tank for maintaining atmospheric pressure therein, substantially as set forth.

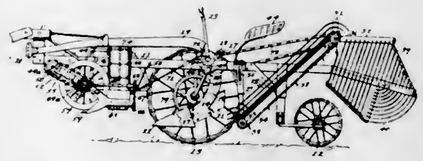
1,172,117. THERMOMETER. FAIRLEIGH S. DICKINSON, Rutherford, N. J. Original application filed Dec. 13, 1910, Serial No. 597,177. Divided and this application filed Dec. 11, 1915. Serial No. 66,344. (Cl. 73—52.)

1. A device of the character described, comprising a carrying case open at one end, a clinical thermometer insertible therein, said thermometer having a fragile bulb at its lower end and a handle at its upper end, said handle being partially insertible within and withdrawable from the open end of the case and adapted to combine simple endwise movement of the thermometer by contact with the walls of the case when inserted therein to afford a closure for the open end thereof and to limit the inward movement of the said thermometer, the latter when inserted in the said carrying case having its lower bulb end spaced from and out of contact with the closed end of the carrying case, and a tubular member through which the thermometer passes, said tubular member having resilient tongues adapted to engage the opposite sides of the thermometer so as to centrally position the same within the case and prevent contact of the thermometer with the sides of the case at points below the said upper end.



2. In a device of the character described, a case open at one end and closed at the other end, resilient centering means intermediate the ends of the said case, and a thermometer adapted to be inserted in the said case to engage the said centering means, the said thermometer having a bulb at one end and an integral handle at the other end, the said handle being adapted to be seated by a slip contact in the said open end of the case to center the outer end of the thermometer in the outer end of the case and to limit the inward movement of the thermometer in the case, the bulb of the thermometer being spaced from and out of contact with the said closed end of the thermometer at the time the handle is seated in the said open case end.

1,172,118. BEET-HARVESTER. ADOLPH F. DJUBERG, Consul, Saskatchewan, Canada. Filed July 1, 1915. Serial No. 37,483. (Cl. 55—9.)



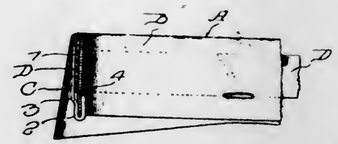
1. The combination of a frame, arms pivoted thereto, main wheels carried by said arms, a yoke carried by said arms diametrically opposite said wheels, means for moving said arms on their pivots to raise said wheels or to raise said yoke with respect to said frame, and a plow carried by said yoke.

2. The combination of a frame, arms pivoted thereto, main wheels carried by said arms, a yoke carried by said arms diametrically opposite said wheels, means for moving said arms on their pivots to raise or lower said frame with respect to said wheels and to lower or raise said yoke with respect to said frame, a plow suspended from said yoke, a rotary cutter, and means for actuating said cutter when said plow is in lowermost and operative position.

3. The combination of a frame, arms pivoted thereto, main wheels carried by said arms, a yoke carried by said arms diametrically opposite said wheels, means for moving said arms on their pivots to raise or lower said frame with respect to said wheels, a vegetable digger carried by said yoke, a vegetable receiving hopper, a conveyer interposed between said digger and hopper, and means for operating said conveyer actuated by said main wheels when said digger is in operative position.

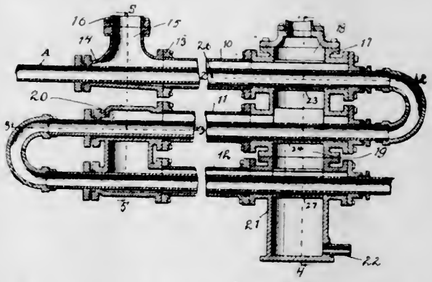
4. The combination of a frame, arms pivoted thereto, main wheels carried by said arms, a yoke carried by said arms diametrically opposite said wheels, means for moving said arms on their pivots to raise or lower said frame with respect to said wheels, a vegetable digger carried by said yoke, a conveyer adjacent thereto, a hopper adjacent said conveyer, a vegetable top cutter, a receiving basket for said tops, a conveyer interposed between said cutter and basket, and means for operating said conveyers and said cutter when said frame is lowered with respect to said wheels.

1,172,119. NECKTIE-HOLDER. CHARLES C. DRULEY, Middletown, Ind. Filed Apr. 1, 1915. Serial No. 18,542. (Cl. 24—49.)



A necktie holder comprising a single piece of stiff wire laterally offset adjacent one end, a part of the offset portion being bent back upon itself in substantially parallel spaced relation to form a longitudinally extending elongated loop spaced from the axis of the remaining portion of the wire and lying in a single plane therewith, and the terminal portion of the free end of said loop being disposed adjacent said offset and projecting inwardly at the inclination of the same, whereby the loop is adapted to be locked into engagement with the lower edge of a collar.

1,172,120. APPARATUS FOR EVAPORATING LIQUIDS. FRED ELDER, Vincennes, Ind., assignor of one-fourth to Joseph L. Ebner and Clement B. Wissing, Vincennes, Ind. Filed Apr. 9, 1913. Serial No. 759,988. (Cl. 257—183.)

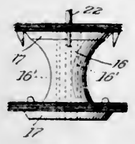


1. An evaporating apparatus comprising a plurality of parallel spaced liquid pipes one of the limiting pipes having a liquid inlet at one end, hollow heads connecting adjacent pipes, the heads at the ends of the pipes remote from the liquid inlet communicating with each other and the uppermost communicating head being provided with a vapor outlet, a heating pipe extending through each of the first named pipes, and means for maintaining the liquid in each of the first named pipes at a constant level above the contained heating pipe.

2. An evaporating apparatus comprising a plurality of parallel spaced liquid conveying pipes, one of the limiting pipes having a liquid inlet at the end, hollow heads connecting adjacent liquid conveying pipes, heating pipes extending longitudinally through respective liquid conveying pipes and through said heads, a trough formed integral with and connecting opposite walls of each head and encircling the uppermost heating pipe disposed in the head, the side edges of said trough being at a height relative to the heating pipe to maintain the liquid in the liquid conveying pipe at a constant level above the heat-

ing pipe, the heads at the ends of the liquid conveying pipe remote from the liquid inlet communicating with each other, and troughs formed integral with and connecting opposite walls of each head respectively and encircling respective lowermost heating pipes in each head, said last named troughs having a greater depth than the first named troughs and being positioned to receive the overflow of said first named trough.

1,172,121. ENGINE-VALVE. FRANCIS F. EMORY, Fitchburg, Mass. Filed Mar. 31, 1915. Serial No. 18,368. (Cl. 136—6.)



1. In an engine, the combination of a cylinder, inlet ports therefor, upper and lower valve seats for said ports, a valve for each of said ports, said valve being provided at each end thereof with a circumferential flange adapted for engagement with the corresponding valve seat, upwardly extending lugs carried by said valve and adapted for engagement with said lower seat, said upper seat being provided with a plurality of depending guide lugs adapted for engagement with the flange formed upon the adjacent end of said valve, and a valve stem secured to said valve.

2. In an engine, the combination of a cylinder, intake ports therefor, valve seats in said ports, a valve for each port and adapted to engage the seats therein, and means carried by said valve and one of said seats and coöperating with the other seat and said valve, respectively, for guiding the latter.

1,172,122. MEASURING ATTACHMENT FOR CAN-COVERS. GODFRED T. ENGLUND, Miami, Ariz. Filed Feb. 25, 1915. Serial No. 10,506. (Cl. 220—58.)



1. A device of the class described comprising a can top having an annular channel therein, a split expansible ring disposed within the channel and having its ends disposed in spaced relation and provided with beads, an extensible arm comprising a pair of members telescopically engaging each other, one of said members being provided with a measuring spoon the other member at one end being bent at right angles and looped over the ring at a point diametrically opposed to the ends of the ring, said arm adapted to be moved inwardly whereby to be housed within the cover, and adapted to be moved outwardly whereby to be used as a measuring instrument, and adapted to be adjusted longitudinally at will, said measuring spoon adapted to be engaged beneath the beaded ends of the ring when folded inwardly, whereby to maintain said spoon within the cover.

2. A device of the class described comprising an extensible arm including an outer and an inner member, said inner member at its edges being provided with longitudinal overhanging flanges adapted to engage the outer edges of the outer member, said inner and outer members being provided with coengaging longitudinal ribs, said outer member being provided at one end with a measuring spoon, the inner member being provided at one end with a right-angularly disposed portion, a can top, a ring disposed within the can top, means on the right angularly disposed portion adapted to hingedly engage said ring, and means carried by the ring adapted to engage the measuring spoon when the latter is folded inwardly whereby to maintain said spoon within the can top.

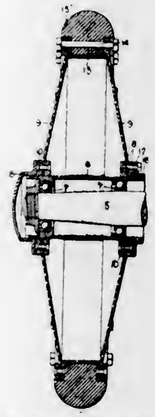
3. A device of the class described comprising a can top having a ring disposed therein, an extensible arm hingedly connected to the ring and adapted to be moved outwardly to extend beyond the can top, a measuring instrument carried by the extensible arm, and means carried by the ring adapted to be engaged by the instrument whereby to maintain the latter within the can top, substantially as described.

4. The combination with a can top, of an expansible ring disposed therein, an extensible arm provided at one end with a measuring implement and at its other end being hingedly connected to said ring, and means carried by the ring adapted to be engaged by the implement whereby to maintain the latter in housed position within the can cover at will.

5. A device of the class described comprising a can top, an extensible arm, a measuring implement carried by said arm, the arm being adapted to be housed within the can top and being adapted to be swung outwardly and extended whereby the implement may be used in dipping the contents of a can, means for hingedly connecting the extensible arm to the can top, and means whereby the arm and implement may be maintained in housed position within the can top at will.

[Claims 6 and 7 not printed in the Gazette.]

1,172,123. VEHICLE-WHEEL. CHARLES F. ERICKSON, New York, N. Y. Filed Feb. 12, 1915. Serial No. 7,688. (Cl. 152—28.)



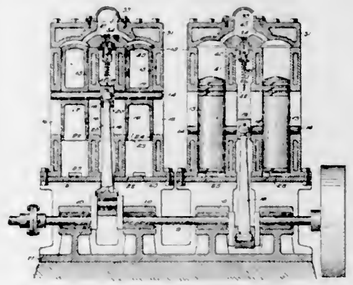
1. In a vehicle wheel, a hub having a right and left thread, a resilient rim, a diaphragm of pliable material on each side of the wheel, rings formed of segments carried by each of said diaphragms and engaging said rim, a shoe associated with said rings and rim, and clamping flanges carried by each of said diaphragms and threaded on said hub, substantially as and for the purpose set forth.

2. In a vehicle wheel, a hub having a right and a left thread, a resilient rim, a diaphragm of pliable material on each side of the wheel having a central opening, rings formed of segments engaging each diaphragm at the outer margin thereof, means connecting the opposite segments of the rings, whereby the segments of the rings are maintained in engagement with the rim, flanges in threaded engagement with the right and left threads of the hub, said flanges engaging a corresponding diaphragm at the central opening, means for locking the flanges to the hub, and a shoe associated with the rim and rings and engaged by the means connecting the segments of the rings.

3. In a vehicle wheel, a hub having a right thread on the outer surface at one end thereof and a left thread at the outer surface of the other end, a resilient rim, a diaphragm of pliable material on each side of the wheel having a central opening, each end of the hub being adapted to project through the central opening of a corresponding diaphragm, rings formed of segments engaging each diaphragm on each side thereof at the outer margin of said diaphragm, means connecting the opposite segments of the two diaphragms whereby the segments of the inner rings are maintained in engagement with the rim, pairs of flanges clamping the two sides of each diaphragm at the central opening and in threaded engagement with the threaded end projecting through the central opening of the diaphragm, means for locking the flanges to the hub, and a shoe associated with the rings and rim and engaged by the means connecting the segments of the rings of the two diaphragms.

4. In a vehicle wheel, a hub having a right thread at one end thereof and a left thread at the other end, a rim, a diaphragm of treated duck on each side of the wheel having a central opening, said hub having the ends thereof projecting through the central opening of the corresponding diaphragm, rings formed of segments engaging each diaphragm on each side thereof adjacent the outer margin of said diaphragm, the segments on the inner surface of the diaphragms adapted to engage with their inner edge the outer surface of the rim, bolts connecting the segments of the rings of the two diaphragms whereby the inner segments of the rings are maintained in engagement with the rim, a shoe engaging the rim and having annular recesses at each side thereof, the segments of the rings being located within said annular recesses of the shoe, the bolts connecting the segments of the rings of the two diaphragms engaging said shoe, a pair of clamping flanges engaging each diaphragm at the central opening, said flanges being in threaded engagement with the corresponding end of the hub projecting through the central opening of the diaphragm, and means for locking said clamping flanges to the hub.

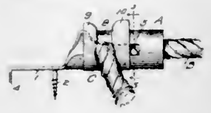
1,172,124. INTERNAL-COMBUSTION ENGINE. SETH SALOMON ERICKSON, New York, N. Y. Filed May 20, 1915. Serial No. 29,309. (Cl. 123—53.)



An engine as characterized comprising a plurality of power units, said units each embodying a cylinder and piston reciprocatively mounted therein; a crank shaft; a connecting rod operatively uniting said shaft and said pistons for imparting the combined thrust of said pistons on said shaft through a single rod; an explosion chamber for supplying said cylinders; and oil-injecting means for supplying said explosion chamber, said means embodying a pump operated by said connecting rod.

1,172,125. ROPE-CLAMP. LOUIS M. EVJEN, New York, N. Y. Filed May 27, 1915. Serial No. 30,797. (Cl. 24—136.)

1. A rope clamp comprising two relatively slidable members, each member having an open-ended slot, one slot extending in the direction in which the members relatively slide and the other slot extending transversely thereto and adapted to intersect the first-mentioned slot, whereby a rope is inserted successively in the slots and simultaneously clamped in both.



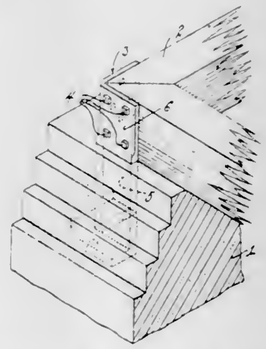
2. A rope clamp comprising a cylindrical body having a longitudinal slot extending inwardly from one end to receive a rope, and a member slidable on the body and having an open-ended slot extending transversely to the first-mentioned slot for initially receiving the rope when the slidable member is in one extreme position, the rope being engaged in the first-mentioned slot when the member is moved toward its other extreme position.

3. A rope clamp comprising a hollow body having a longitudinally extending slot open at one end, a member having means engaging in the slot for slidably connecting the member on the body, and said members having an open-ended slot extending transversely and adapted to intersect the first-mentioned slot.

4. A rope clamp comprising a hollow body having a longitudinally extending slot open at one end, a member having means engaging in the slot for slidably connecting the member on the body, and said member having an open-ended slot extending transversely to and adapted to intersect the first-mentioned slot, and means on the body for forming a stop to limit the movement of the member in a direction to receive the rope to be clamped.

5. A roper clamp comprising a hollow body open at both ends for permitting a rope to be inserted therethrough, said body having a longitudinally extending slot open at one end, a member on the outside of the body and curved to conform therewith and having an open-ended slot extending transversely to and adapted to intersect the first-mentioned slot, and means for limiting the sliding movement of the said member.

1,172,126. ANCHOR-BRACKET. CHARLES FINETTE, Aurora, Ill. Filed May 5, 1914. Serial No. 836,427. (Cl. 72—108.)

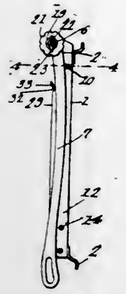


A bracket for anchoring sills to a foundation and securing the sills in assembled position, comprising an angular body portion and a base flange embedded in the foundation, an angular attaching portion extending above the foundation and means securing the sills to the angular attaching portion.

1,172,127. TRIMMING-BOARD. EUGENE FRITCH, Schenectady, N. Y. Filed Dec. 21, 1914. Serial No. 878,353. (Cl. 164—44.)

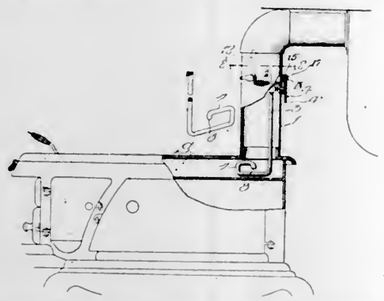
1. In a device of the class described, a base; a fixed cutter carried thereby; a cutting lever; a base-carried fulcrum for the lever; and spring means for moving the

lever transversely to cause the lever to coact with the cutter; the lever being provided adjacent its fulcrum with a depending finger flexed outwardly away from the base and adapted to coöperate with the fixed cutter when the lever is depressed, thereby to move the lever laterally against the action of the spring means when the depression of the lever is initiated.



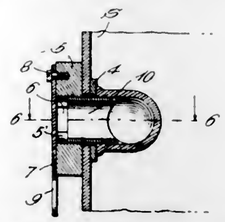
2. In a device of the class described, a base; a fixed cutter carried thereby; a cutting lever; a base carried fulcrum for the lever; a movable cutter mounted on the lever; and spring means for moving the lever transversely to cause the movable cutter to coact with the fixed cutter; the movable cutter being provided adjacent the fulcrum of the lever with a depending finger flexed outwardly away from the base and adapted to coöperate with the fixed cutter when the lever is depressed, thereby to move the lever laterally against the action of the spring means when the depression of the lever is initiated, the finger coöperating with the lower edge of the lever to aid in holding the movable cutter in place on the lever.

1,172,128. FUEL-ECONOMIZER. WALTER E. FROST, Auburn, Me., assignor to Fred O. Watson, Auburn, Me. Filed Feb. 4, 1915. Serial No. 6,120. (Cl. 126—15.)



A device to be used in connection with a stove having a smoke pipe provided with an opening through its side walls at a point spaced from its connection with said stove, an air tube disposed in said smoke pipe and extending into said stove, said air tube having an angular arm at one end, the end of said arm being screw threaded and extending into said smoke pipe opening, a nut arranged on the screw threaded end of said arm on the inside of the smoke pipe, a nut member secured on the threaded end of said arm on the outside of the smoke pipe, said nut member having a laterally disposed pivot ear, the latter being provided with a screw threaded aperture, a cover plate disposed adjacent said nut member, a pivot ear extending laterally from one edge of said cover plate and provided with an aperture therein, an extension projecting laterally from the opposite edge of said cover plate to provide a handle for the latter, a threaded pivot bolt having a head at one end thereof, said pivot bolt extending through the last mentioned aperture and having its threaded end engaged with the screw threaded aperture of said nut member, the head of said pivot bolt abutting the outer face of said cover plate and holding the latter in frictional contact with said nut member, and a lug on said nut member to limit the movement of said cover plate.

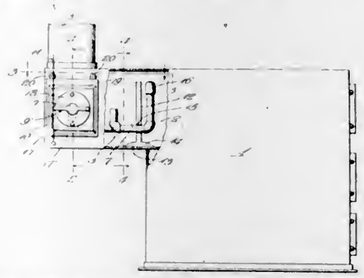
1,172,129. FUEL-ECONOMIZER. WALTER E. FROST, Auburn, Me., assignor to Fred O. Watson, Auburn, Me. Filed June 28, 1915. Serial No. 36,771. (Cl. 126—15.)



1. In a device to be used in connection with a stove having an opening through one of its walls, an air pipe within said stove, one end of which is disposed opposite said opening and being provided with internal screw threads, an externally threaded nipple extending through said opening and having the threads on one end thereof engaged with the threaded end of the air pipe, a nut member having an internally threaded opening therein, the latter receiving the other end of said nipple, the outer face of said nut member being provided with diametrically opposite grooves communicating with the opening therein to provide air ducts, and a cover plate pivotally mounted on said nut member to close the opening therein.

2. In a device to be used in connection with a stove having an opening through one of its walls, an air pipe within said stove, one end of which is disposed opposite said opening and being provided with internal screw threads, and externally threaded nipple extending through said opening and having the threads on one end thereof engaged with the threaded end of the air pipe, a circular nut member having a centrally disposed internally threaded opening therein, the latter receiving the other end of said nipple, a washer disposed between said end of the air pipe and the inner face of the wall of the stove to provide a tight joint, the outer face of said nut member being provided with diametrically opposite grooves communicating with the opening therein to provide open air ducts, a circular cover plate disposed adjacent said nut member to close the opening therein, and a pivot bolt extending through said cover plate and into said nut member to pivotally mount the former to the latter.

1,172,130. HEAT-CONSERVER AND SMOKE-CONSUMER. WALTER E. FROST, Auburn, Me., assignor to Fred O. Watson, Auburn, Me. Filed July 15, 1915. Serial No. 40,010. (Cl. 110—72.)



1. The combination with a furnace having a combustion chamber provided with a smoke flue, an opening in the side wall of said combustion chamber, a hinged housing mounted over said opening, an apertured plate mounted on the outer face of said housing, a spring pressed plate mounted to close the apertures in said plate and housing, an air conducting pipe mounted in said combustion chamber and having one end registereing with the openings in said housing and plate, said pipe having a transversely arranged inverted U-shaped portion extending upwardly at right angles therefrom intermediately of its ends, the inner end of said pipe being extended upwardly and adapted to discharge adjacent said inverted U-shaped portion, and a baffle plate arranged at the rear of said U-shaped portion and having means for engagement with said pipe for supporting it in operative position.

2. In a furnace the combination of a combustion chamber, a smoke pipe leading therefrom, a baffle plate arranged in said combustion chamber and comprising a supporting base, having a member rising therefrom, and provided in its opposite side edges with recesses, an air inlet pipe mounted in said combustion chamber and having one end thereof opening through one wall of said chamber and communicating with the outside atmosphere, the other end of said pipe being positioned to discharge adjacent said baffle plate, said air inlet pipe being mounted in the recesses of said baffle plate whereby said pipe is supported.

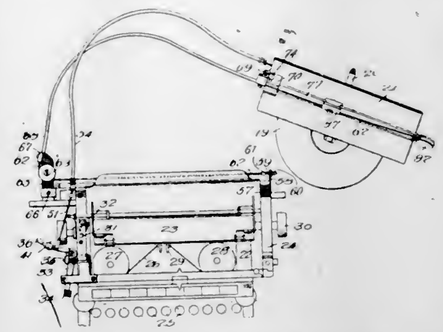
1,172,131. DEVICE FOR REMOVING OR PLACING TRANSFORMER FUSE-PLUGS. LOUIS V. GAFFNEY, Gaffney, S. C. Filed Oct. 4, 1912. Serial No. 723,928. (Cl. 81—3.)



In a device for removing or placing a transformer fuse plug, the combination of a pole, a comparatively narrow fixed arm having an arcuate jaw disposed at its upper end to face the axis of said pole and carried thereby, a second relatively narrow arcuate arm having an arcuate jaw complemental to said first mentioned arcuate jaw, said second arm being pivotally carried by said pole, a contraction spring interposed between said relatively narrow arms and having its end portions connected therewith to normally hold said arcuate jaws in abutting relation to form an annulus, and means facilitating the movement of said pivoted jaw against actuation of said spring.

1,172,132. LETTER-INDICATING MECHANISM. WILLIAM E. GRAY, Boise, Idaho. Original application filed Sept. 13, 1913, Serial No. 789,650. Divided and this application filed Apr. 11 1914. Serial No. 831,326. (Cl. 120—34.)

1. In a copy holder attachment for typewriters, the combination of an arm, a slide movable relatively to the said arm, a flexible member connected with said slide for actuating the same, means controllable at the will of the operator for disengaging said slide from said flexible member in order to adjust said slide relatively to said flexible member, a typewriting machine provided with movable keys, and a mechanism co-acting with said keys and controllable thereby for actuating said flexible member.



2. In a copy holder attachment for typewriters, the combination of a supporting arm, a revoluble drum carried by said arm, a flexible member secured to said drum and wound thereon, means for turning said drum in order to maintain said flexible member under tension, a pointer movable with and adjustable on said flexible member, a typewriting machine provided with movable keys and means co-acting with the keys of a typewriting machine for controlling said pointer by movements of said keys.

3. In a copy holder attachment for typewriters, the combination of a supporting arm, an indicating slide movable on the arm and provided with a pointer, a flexible actuating member extending along the said supporting arm and to which the slide is detachably connected, tensioning means mounted on the supporting arm and to which one end of the said flexible member is connected, a typewriting machine having a movable carriage and an adjustable connection between the opposite end of the flexible member and the carriage of the typewriter.

4. In a copy holder attachment of the character described, the combination with the movable carriage of a typewriter, of a bracket secured upon the rear portion of the carriage and having a rearwardly projecting apertured tongue, a bolt extending through the aperture of the tongue and provided with a threaded end upon one side of the tongue, a nut adjustable on the threaded end of the bolt, a flexible actuating member connected to the opposite end of the bolt, a supporting arm along which the said flexible member extends, an indicating slide movable on the supporting arm and having connection with the said flexible member intermediate the ends of the latter, and a tensioning device carried by the supporting arm and with which the other end of the flexible member is connected.

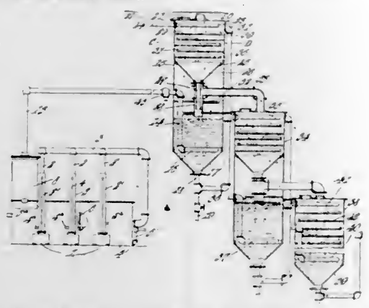
5. In a copy holder attachement of the character described, the combination with the movable carriage of a typewriter, of a supporting arm, an indicating slide having a guided movement along the arm, a flexible actuating member mounted along the supporting arm and extending through the said slide and attachable at one end to the carriage of the typewriter, a tensioning device for the opposite end of the flexible member, and means carried by the slide for adjustably engaging the flexible member.

[Claims 6 to 8 not printed in the Gazette.]

1,172,133. APPARATUS FOR USE IN THE SULFURATION OF LIQUIDS. LOUIS CHARLES GREVEMBERG, Calumet, La. Filed Feb. 26, 1915. Serial No. 10,860. (Cl. 127—1.)

1. In apparatus for sulfuration of liquids, the combination with separate units each including a casing, means for generating a gaseous bleaching agent, a nozzle within the lower portion of each casing, and means for directing the bleaching agent from the generating means to the

respective nozzles, of means for directing the liquid to be treated into the upper portion of the casing of one of the units, means for conveying liquid from the outlet of said unit into the upper portion of the second unit, means within the casing of each unit for breaking up into finely divided portions the liquid discharging downwardly within the casing, means within each casing for accumulating the downwardly discharging liquid and directing it in a stream into the lower portion of the casing, each of said casings having a gas outlet at its upper end, and means for directing the exhaust gas from the outlet of the second unit into intimate contact with the descending stream of fluid in the first unit.



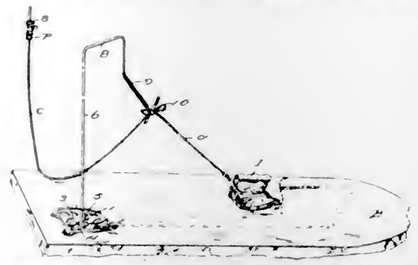
2. In apparatus for sulfuration of liquid, separate units each including a casing having a liquid outlet at its bottom and a gas outlet at its top, a nozzle in the lower portion of each casing for directing gas into the casing, a nozzle in the upper end portion of each casing for directing liquid into the casing, means for conducting a bleaching agent to the first named nozzle, a plurality of superposed baffles below the liquid discharging nozzles for reducing the discharged liquid into a finely divided state, means supported below the baffles in each casing for accumulating the descending liquid, a tubular member depending from each of said accumulating means for directing the fluid in a stream into the lower portion of the casing, a jacket surrounding each of said depending tubes, means for conducting exhaust gas from the outlet of one of the casings to the jacket of the other casing, and means for conducting liquid from the outlet of one of the casings to the liquid discharging means in the other casing.

3. In apparatus for sulfuration of liquid, a unit including a casing having a liquid outlet at the bottom thereof, and a gas outlet at the top, means for directing a gaseous bleaching agent into the lower portion of the casing, means for directing a liquid into the upper portion of the casing, superposed baffles within the casing for breaking up the discharged liquid into finely divided portions during the descent of the liquid, means within the casing for accumulating the finely divided liquid, a tube depending from said means for directing the liquid downwardly in a stream into the lower portion of the casing, said liquid during its descent through the baffles being brought into intimate contact with the ascending bleaching agent, and means for directing a gaseous bleaching agent around the depending tube and into intimate contact with the descending stream of liquid.

1,172,134. SAD-IRON-CORD SUPPORT. WILLIAM H. HAROLD, Walla Walla, Wash. Filed May 24, 1915. Serial No. 30,155. (Cl. 248—37.)

1. In a cord support for electric ironing devices, the combination with a rod having an arm at its upper end, a flexible and yieldable member hanging from the outer end of the arm, and a tape attached to the lower end of said member and adapted to be tied to the cord; of a base adapted to be mounted on an ironing board, and a pivotal connection between the lower end of the rod and the base adapting the former to be stood upright or folded on the board.

2. In a cord support for electric heating tools, the combination with a bracket having an upright plate with a curved upper edge notched in its periphery; of a disk behind said plate having a tooth adapted to enter its notches, a bolt through the plate and the center of the disk, a



spring on the bolt drawing the disk normally against the plate, a rod rising from the disk and having its upper end bent, and cord-supporting devices carried by said bent end.

1,172,135. COMBINATION IRONING-BOARD AND STEP-LADDER. HENRY HARRILD, Spokane, Wash. Filed Feb. 20, 1915. Serial No. 9,599. (Cl. 228—32.)



A device of the class described comprising an ironing-board having blocks extending one transversely and the other longitudinally and arranged on opposite sides of the board at one end of the latter, a ladder arranged entirely on one side of the board and having its side rails at one end pivoted each to one end of the transverse block, means whereby the ladder may be braced relatively to the board at will, a sleeve board disposed upon the longitudinal block, and a pin extending through the sleeve board, longitudinal block, ironing board and transverse block and being provided with a tightening element whereby the parts may be retained in assembled and adjusted position, said sleeve board being pivoted upon said pin, said ironing board and ladder adapted to engage a table edge between them at their adjacent ends at will.

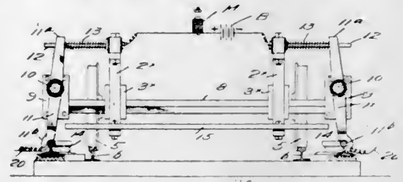
1,172,136. SASH-CORD ATTACHMENT. PAUL HEIN, New York, N. Y. Filed Jan. 27, 1914. Serial No. 814,700. (Cl. 16—16.)



The herein described means for connecting a weight to a window sash comprising the combination with the window sash having a groove at its outer edge, of a non-rotary anchor member rectangular in cross section fitted in said groove, said anchor member having rounded cylindrical ends and a hole extending transversely therethrough at right angles to the plane of the axes of said ends, a

flexible weight support having the inner end thereof extending into said anchor member, a transverse member detachably locking the flexible member end within the anchor member, and a pin passing through said transverse hole to lock the anchor in position.

1,172,137. CIRCUIT-BREAKER. FREDERICK F. HUDSON, deceased, Memphis, Tenn., by Annie Hudson, administratrix, Memphis, Tenn., assignor to Recording Safety Device Company, Memphis, Tenn., a Corporation of Arizona. Original application filed June 10, 1914, Serial No. 844,249. Divided and this application filed Apr. 30, 1915. Serial No. 24,878. (Cl. 246—58.)



1. The combination of a contact shoe comprising a shaft, a body portion pivotally mounted on the shaft, said body portion being provided with a pair of extensions on the lower portion thereof arranged to engage a contact rail, said extensions being spaced apart, and means for permitting a vertical movement of the shoe to compensate for inequalities in the contact rail.

2. The combination with a locomotive truck, of a pivoted contact shoe carried on each side of the truck, each of said contact shoes having a portion arranged to engage the contact rail for moving the shoes apart, and means for maintaining the electrical connection between the shoes, said last-named means comprising a bar carried by the truck, the ends of the bar being pressed upon by portions of the shoe.

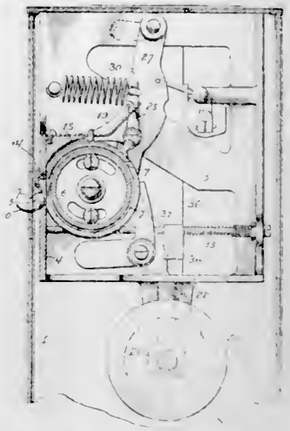
3. The combination with a locomotive truck frame, of hangers carried thereby, a vertically movable boxing carried by said hangers at each end of the truck frame, a spring disposed between each of said boxings and said frame, a rod extending through said boxings, a block carried by each end of said last named rod, and a pivotally mounted spring pressed contact shoe carried by each of said blocks.

4. The combination with a locomotive truck frame, of hangers carried thereby, a vertically movable boxing carried by said hangers at each end of the truck frame, a spring disposed between each of said boxings and said frame, a rod extending through said boxings, a block carried by each end of said last named rod, a pivoted rod carried by each of said blocks, and U-shaped contact shoes mounted on said pivoted rods and arranged to straddle said blocks.

5. The combination with a locomotive truck frame, of hangers carried thereby, a vertically movable boxing carried by said hangers at each end of the truck frame, a spring disposed between each of said boxings and said frame, a rod extending through said boxings, a block carried by each end of said last-named rod, a pivoted rod carried by each of said blocks, U-shaped contact shoes mounted on said pivoted rods and arranged to straddle said blocks, and means for guiding the contact shoes in their vertical movement.

1,172,138. VENDING-MACHINE. SAMUEL F. HYMAN, New York, N. Y., assignor to U. S. Stamp Distributing and Sales Corporation, a Corporation of New York. Filed Sept. 16, 1914. Serial No. 862,049. (Cl. 211—8.)

1. In a vending machine, the combination with a frame plate having a discharge slot and feeding means in rear of said frame plate, of a trough projecting outwardly from the frame plate below the discharge slot and provided at its inner edge with peeling fingers projecting inwardly through said slot and coöperating with the feeding means, and a blade secured to the outer face of the frame plate and overhanging said discharge slot.



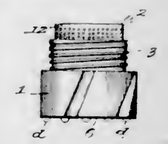
2. In a vending machine, the combination with a frame having a discharge opening, and a feed drum in rear of said opening, said drum having a central peripheral groove and pins between said groove and the ends of the drum, of a plate secured to said frame and having a peeler finger projecting through the discharge opening and into the central peripheral groove of the drum, said plate also having shorter peeler fingers projecting through the discharge opening and having their free ends disposed approximately between the peripheral pins on the drum and the ends of the drum.

3. In a vending machine, the combination with a frame provided with a discharge opening, and feeding means behind said opening, of a blade secured to the frame and having a portion overhanging said opening, the overhanging portion of the blade being bulged inwardly and having lower converging edges.

4. In a vending machine, the combination with a frame having a discharge opening, and a feed drum behind said opening, of a blade secured to the frame and having an inwardly bulged portion provided with lower divergent edges, the meeting point of said edges being located in front of and centrally between the ends of said drum.

5. In a vending machine, the combination with a frame having a discharge opening, of feeding means behind said discharge opening, guiding means disposed below and projecting into said opening, and a severing blade secured to the frame and depending in front of said guide opening.

1,172,139. SWELLED COUPLING AND BIT USED IN DIAMOND-DRILLING. NATHANIEL EDWARD JENKINS, Goldfield, Nev., assignor of one-half to William J. Mitchell, Spokane, Wash. Filed Oct. 2, 1913. Serial No. 793,009. (Cl. 255—72.)

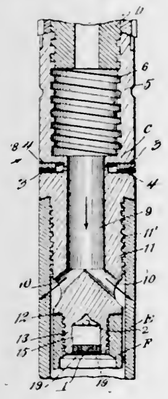


1. The combination with a tubular coupling member having an annular externally threaded flange at its upper end forming an external shoulder at its point of junction with the body of the member, said flange being adapted to be threaded into a tube, an annular internal shoulder adjacent the upper end of the flange against which the end of a second tube is adapted to bear, said member having a series of longitudinally extending water pas-

sages formed in the wall thereof, the upper ends of said passages extending longitudinally of the wall of the flange, and a drilling bit having a member threaded into the lower end of the coupling member and having a flange provided with perforations communicating with said water passages through which water is adapted to pass from the water passages of the coupling member into the bore of the bit member.

2. The combination with a tubular coupling member having an annular threaded flange at one end thereof, said flange being of less cross diameter than the cross diameter of the body of the coupling member whereby a shoulder is formed at the junction of the flange and the body of the member, said flange having an annular internal shoulder upon which a tube is adapted to rest, said flange being adapted to be threaded into a second tube, a drill bit having a member threaded into the opposite end of the coupling member and having an annular perforated flange, said coupling member having longitudinal water passages formed therein adapted to communicate at their lower ends with the perforations in the drill bit whereby water passing through the water passages of the coupling member pass into the bore of the drill bit.

1,172,140. RETURN WATER CONNECTION. NATHANIEL EDWARD JENKINS, Goldfield, Nev., assignor of one-half to William J. Mitchell, Spokane, Wash. Filed Oct. 2, 1913. Serial No. 793,010. (Cl. 255—72.)



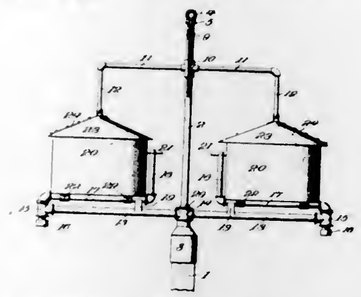
1. A water distributing connection comprising a body section having an axial water passage communicating with an outlet port opening through the side of the body section, said body section having a recess therein separate from and below the outlet port, and a longitudinally extending channel leading from the recess and opening through the side of the body section at a point above the outlet port.

2. A water distributing connection comprising a body section having an axial water passage terminating at its lower end in diverging outlet ports opening through the side of the body section, said body section having a recess in its lower end separate from and below the diverging outlet ports, and longitudinally extending diverging channels leading upward from the recess and opening through the side of the body section at points above the diverging outlet ports.

3. A water distributing connection comprising a body section having an axial feed water passage communicating with outlet ports which open through the side of the body section, said body section having a recess in one end thereof, and longitudinally extending channels leading from the recess upward through the body section and opening through the wall of the body section at points above the outlet ports, said body section also having a laterally positioned port leading from the axial water passage through the wall of the body section to the outside of the latter at a point above the first mentioned outlet ports.

4. A water distributing connection comprising a body section having an axial water passage communicating at one end with outlet ports opening through the side of the body section, said body section also having a recess in one end thereof separate from and below the outlet ports, and longitudinally extending channels leading from the recess and opening through the side of the body section at points above the outlet ports, and a perforated cap for the recess.

1,172,141. APPARATUS FOR STORING AND DISCHARGING REFUSE. SAMUEL EDWARD JENKINS, Richmond, Va. Filed Nov. 9, 1914. Serial No. 871,157. (Cl. 220—119.)



1. In combination, a fixed vertical support, rotatable horizontal brackets on said support, said brackets having swingable cans carrying arms mounted at their outer ends, cans mounted upon said arms and revolving around said arms as an axis, fixed arms above said cans, means for covering said cans when in normal position supported on said fixed arms.

2. In combination a fixed vertical support, rotatable horizontal brackets on said support, means carried by said support locking said brackets in normal position against rotation, said brackets provided with can supporting arms, cans mounted upon said arms, fixed arms above said cans, means depending from said fixed arms for covering said cans when in normal position, and refuse elevating means.

3. A device of the character substantially as described, comprising a vertical support, a horizontal support mounted on said vertical support, receptacle carrying arms rotatably mounted on said horizontal support, receptacles mounted upon said arms, means for holding said receptacles in normal position thereon, and means for closing said receptacles when in normal position.

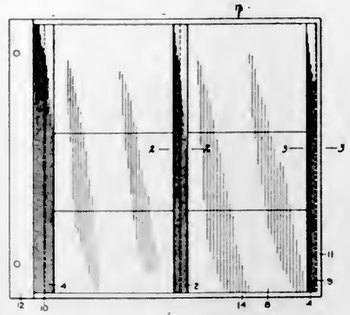
4. A device of the character substantially as described comprising a fixed vertical support, an arm rotatably and horizontally mounted upon said fixed support, receptacle supporting arms mounted upon said arm, receptacles upon said arms, supports depending from said fixed support, receptacle covers attached thereto, said covers adapted to rest upon and close said receptacles when rotated thereunder in normal position, and refuse elevating means carried by said fixed support.

5. A device of the character substantially as described, comprising a fixed vertical support, an arm rotatably and horizontally mounted upon said fixed support, receptacle carrying arms rotatably mounted at the outer ends of said horizontal arm, said receptacle carrying arms in normal position supported by and parallel with said horizontal arm, receptacles upon said arms, and refuse elevating means carried by said fixed support.

[Claims 6 to 20 not printed in the Gazette.]

1,172,142. DISPLAY-CARD. HARRY L. KALISH, New York, N. Y. Filed Feb. 24, 1915. Serial No. 10,247. (Cl. 211—34.)

1. In a display card of the character described, a body provided with integral side strips and an integral double center strip, the side strips being arranged to point in a direction opposite that portion of the center strip with which they coöperate, said side strips and said double center strip being formed by folding the body in a predetermined manner.



2. In a display card or sheet of the character described, a body formed from a single strip of material bent centrally for providing a central strip on each side, means extending through said central strips and the body for clamping the strips in position, and means arranged adjacent the edges of the body providing overhanging strips co-acting with the central strips in holding display members on said body.

3. In a display card of the character described, a body provided with a side strip on each edge and on each side of the body, and a central strip on each side of the body, all of said strips being formed from integral folds of the body, and a line of stitching extending along each edge and through the central strips, the side strips pointing in a direction opposite to that portion of the center strip with which they coöperate.

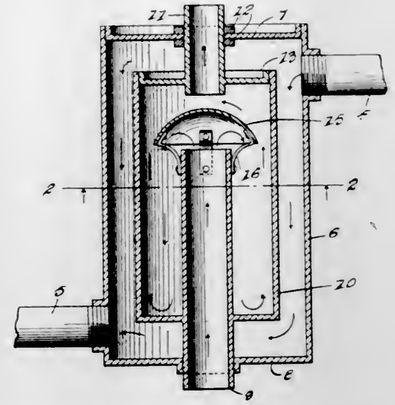
4. In a dispaly card of the character described, a body formed with the center arranged in folds whereby a strip is provided on each side, a centrally arranged line of stitching for clamping said strips in position and holding the same against unfolding, whereby overhanging clamping strips are produced, a pair of folded strips arranged on each edge of said body, a line of stitching for clamping the flaps on the edge to the body, said side strips pointing in a direction opposite to that portion of the center strip with which they coöperate, and a border connected with said body.

5. In a display card of the character described, a body provided with a pair of folds adjacent the center, said folds extending in opposite directions, said body being bent adjacent the base of said folds so that the folds will be in line but on opposite sides of the body, securing means for connecting said folds together centrally whereby overhanging strips are produced, a pair of strips arranged on the edge produced by forming two adjacent folds of said body, and means for clamping said folds to said body so as to provide clamping overhanging strips, the same strips pointing in a direction opposite to that portion of the center strip with which they coöperate.

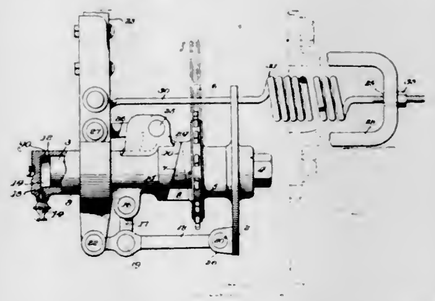
1,172,143. AIR-HEATING DEVICE FOR GAS-ENGINES. CORNELIUS KEAIRNES, Soldier, Iowa. Filed Sept. 4, 1914. Serial No. 860,237. (Cl. 257—241.)

1. A device of the character described comprising a casing, inlet and outlet pipes communicating with said casing adjacent the opposite extremities thereof, a heating drum completely inclosed by said casing and arranged in spaced relation thereto, an inlet pipe extending through one end of said casing and a distance into said drum, an outlet pipe communicating with said drum and extending through the opposite end of said casing, and a concavo-convex deflector plate secured over and in spaced relation to the inner end of said inlet pipe.

2. A device of the character described comprising a casing including an apertured bottom and a removable cover, a heating drum arranged in spaced relation within said casing including a removable cover and an apertured bottom, an inlet pipe secured in the apertures in the bottom of said casing and heating drum and communicating with the latter, an outlet pipe communicating with said heating drum and extending through and rigidly secured in the cover of said drum, and means removably securing said outlet pipe in the cover of said casing.



1,172,144. PICK-MOTION FOR LOOMS. HARRY H. KELLEY, Atlanta, Ga. Filed Oct. 8, 1914. Serial No. 865,717. (Cl. 139—48.)



1. In a pick motion for looms, the combination of a shaft, a cam on the shaft, a sleeve mounted to slide on the shaft, said sleeve having a cam with which the aforesaid cam coöperates, a picker stick, a support, an arm pivoted to the picker stick and pivotally mounted at its opposite end to the support, a link pivoted to the sleeve and the arm, a second link pivoted to the picker stick and the sleeve, whereby when the cams move the sleeve the upper end of the picker stick will travel in a horizontal path, and means for retracting the sleeve and with it the picker stick after operation of the cams.

2. A pick motion for looms, comprising a shaft, a rotating cam mounted on the shaft, a sleeve slidably mounted on the shaft and operated in one direction by the cam, a picker stick, means including an arm and links, and a spring for operating said sleeve with said picker stick to cause the upper end of the latter to travel in a horizontal path, and a pneumatic cushion to absorb the shock when the sleeve is operated.

3. A pick motion for looms comprising a support, a shaft extending outwardly therefrom, a rotating cam mounted on the shaft, a sleeve mounted on the shaft and having a cam surface with which the first mentioned

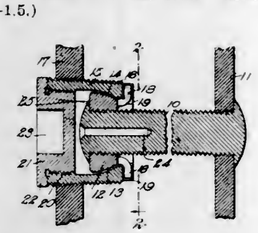
cam coöperates, said sleeve having openings, there being a chamber formed between the ends of the shaft and the sleeve and with which the openings communicate, whereby to form a cushion for the sleeve, a picker stick, an arm pivoted to the picker stick and the support, a link connecting the arm and the sleeve, a second link pivoted to the sleeve and to the picker stick, whereby to cause the upper end of the picker stick to move in a horizontal path.

4. In a pick motion for looms, the combination of a slidable sleeve, means for sliding the sleeve in one direction, a support, a picker stick, an arm pivoted to the support and to the lower portion of the picker stick, a link pivotally connected to the sleeve and to the picker stick above the pivotal point of the arm, means for moving the picker stick in the reverse direction, and means for cushioning the picker stick when it is returned to normal position.

5. A pick motion for looms comprising a frame, a picker stick, means for moving the picker stick in one direction including a cam, a sliding element actuated by the cam, and links between the frame, picker stick and sliding element, said cam, sliding element and links causing the lower end of the picker stick to move in the arc of a circle and the upper end of the said picker stick to move in a straight line, and means independent of the cam for quickly reversing the movement of the picker stick.

[Claims 6 to 10 not printed in the Gazette.]

1,172,145. STAY-BOLT. HARRY A. LACERDA, Schenectady, N. Y. Filed Oct. 12, 1915. Serial No. 55,421. (Cl. 85—1.5.)



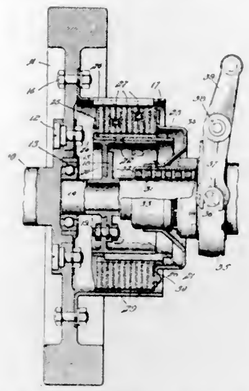
1. A stay bolt for boilers and like structures, comprising a bolt, a tubular plug, and a nut screwing on the said bolt, the said plug and nut forming a ball and socket joint with each other and the said plug and nut having coacting means to hold the members of the said ball and socket joint together.

2. A stay bolt for boilers and like structures, comprising a bolt, a tubular plug provided at its inner end with notches, and a nut screwing on the said bolt and extending within the said plug, the plug and the nut forming a ball and socket joint with each other and the nut having lugs extending loosely in the said notches.

3. A stay bolt for boilers and like structures, comprising a bolt, a tubular plug, a nut screwing on the said bolt, the bolt having a head adapted to engage the outer end of the nut, the said plug and nut forming a ball and socket joint with each other and the said plug and nut having coacting means to hold the members of the said ball and socket joint together, and a cap screwing on the outer end of the said plug to close the latter.

4. In a stay bolt, a tubular plug provided at its inner end with an interior socket, the inner edge of the plug being provided with notches, and a nut screwing on the said bolt and held at its outer end against a head of the bolt, the nut having a spherical surface to engage a correspondingly shaped surface of said socket, the nut having outwardly extending lugs on its inner face, fitting loosely into the said notches of the plug to allow a swinging movement of the stay bolt and lengthwise movement thereof, the said nut being spaced from the outer end of the plug and free to move back and forth within the same, and a cap having a screw connection with the outer end of the tubular plug.

1,172,146. CLUTCH. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 28, 1913. Serial No. 751,332. (Cl. 192—10.)

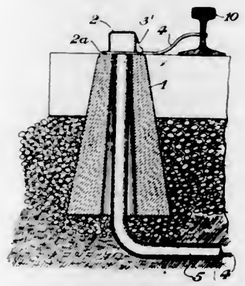


1. In a clutch, the combination of an outer casing having interiorly arranged axially extending keys, a plurality of friction members carried by said casing and having recesses on their peripheries adapted to receive said keys, a spider having a sheet metal periphery provided with integral outwardly pressed axially extending portions, a plurality of friction members alternately arranged with respect to the first-mentioned friction members and engaging said portions, and means for pressing said friction members into gripping engagement.

2. In a clutch, an outer casing having axially extending openings formed therein and with the metal on opposite sides of said openings turned inwardly to form keys on the interior of the casing.

3. In a clutch, an outer casing having I-shaped cuts therein, said cuts providing tongues on opposite sides thereof, and said tongues being turned to positions substantially normal to the surface of the casing, as and for the purpose described.

1,172,147. PROTECTING DEVICE FOR ELECTRIC CONDUCTORS. MATTHEW H. LOUGHRIDGE, New York, N. Y. Filed Aug. 18, 1911. Serial No. 644,846. (Cl. 247—17.)



1. A protecting device for electric conductors, comprising an envelop having an open-ended bore therethrough; a conduit; a hollow cap covering one end of said envelop, said cap having a supporting flange provided with a plurality of recesses and having a lateral passage for said conductor; perforated studs passing through said recesses and embedded in said envelop; and means engaging said studs to retain said cap in place.

2. A protecting device for electric conduits, comprising an envelop embedded in a supporting medium and having a bore therethrough to receive said conduit; a hollow cap for the outer end of said envelop, said cap having a supporting flange provided with recesses; means rigid in said envelop and engaging said recesses; and locking means engaging said last-mentioned means and said flanges to retain the cap in position on said envelop.

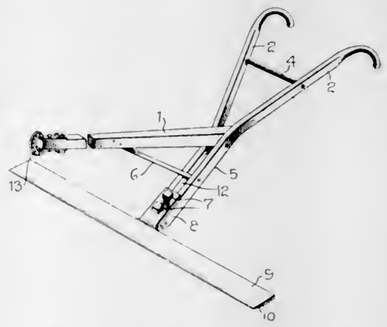
3. A device as characterized, comprising a weighted envelop having a frusto-conical formed body of solid masonry, said body having an axially-disposed, tapered passage, the wall of said body being increased in thickness toward the lower end thereof for lowering the center of gravity in said body; a tubular conduit having a vertical cylindrical extension loosely fitting in said tapered passage and supported independently of said frusto-conical body; and a removable cover for said conduit.

4. A protecting device for electric conductors comprising an envelop having an open-ended bore therethrough; a vertical tubular conduit extending through said bore and of smaller diameter, the envelop and conduit being independently supported and movable relatively one to the other, electrical conductors loosely placed within said conduit; and a hollow cap supported by said envelop and covering the exposed opening of said bore and the end of said conduit.

5. A protecting device for the outlets of a system of underground tubular conduits, comprising a weighted envelop supported independently of the conduit and having a frusto-conical body with the greater weight in the lower end, said body having a bore therethrough to receive the ends of said conduit, said bore being of larger diameter than said conduit and the exposed end of said conduit being protected with a removable cap.

[Claims 6 and 7 not printed in the Gazette.]

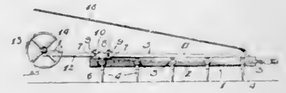
1,172,148. CULTIVATOR. BERT C. LUCKEY, Liberty, Tex., assignor of one-twentieth to Paul F. Schwandt, Liberty, Tex. Filed Aug. 2, 1913. Serial No. 782,664. (Cl. 97—9.)



A cultivator of the class described, comprising a pair of handles secured to the beam and flared upwardly therefrom and in spaced parallelism below the beam; wooden blocks secured by transverse bolts in spaced relation between the lower extremities of the handles, and a transversely disposed, elongated cultivator blade having a shank engaging upon said blocks secured in position by bolts passing through the shank of said blade and the space between the blocks, one of said bolts in contact with the upper end of the lower block and the other bolt in contact with the lower end of the upper block, whereby the cultivator blade is anchored against vertical movement, as hereinbefore set forth.

1,172,149. CLEANING MEANS FOR HARROWS. FLOYD MCKENNON, La Grande, Oreg. Filed July 16, 1915. Serial No. 40,269. (Cl. 55—34.)

1. The combination with a harrow, of a longitudinally disposed lever fulcrumed between its ends thereon, and an operating element leading rearwardly from the front end of said lever, whereby the latter may be rocked to dispose its rear end downwardly, thus forcing the harrow upwardly.

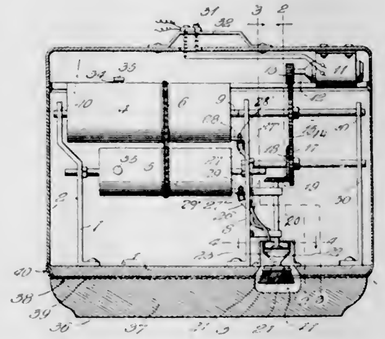


2. The combination with a harrow, of a longitudinally disposed lever fulcrumed between its ends thereon, and having a truck member on its rear end, and an operating element leading rearwardly from the front end of the lever, whereby the latter may be rocked to dispose its rear end downwardly, thus raising the harrow.

3. The combination with a harrow comprising a plurality of independently movable sections, of a longitudinally disposed lever fulcrumed between its ends on each of said sections, an independent operating element leading rearwardly from the front ends of the levers, whereby the latter may be so rocked as to dispose their rear ends downwardly, thus raising the harrow sections.

4. The combination with a harrow comprising a plurality of independently movable sections, of a longitudinally disposed lever fulcrumed between its ends on each section, truck members on the rear ends of said levers, and operating elements leading rearwardly from the front ends thereof, whereby the said levers may be so rocked as to dispose their rear ends downwardly, thus raising the harrow sections.

1,172,150. CLEANSING APPARATUS. MICHAEL MAIELLO, Washington, Pa. Filed July 8, 1915. Serial No. 38,678. (Cl. 15—8.)



1. A device of the character described comprising a base, a cleaning fluid containing tank revolubly mounted on said base, a brush revolubly mounted on said base, a tube extending from said brush, means for feeding the fluid contained in said tank into said tube at predetermined intervals, and means for revolving said tank and said brush, as and for the purpose set forth.

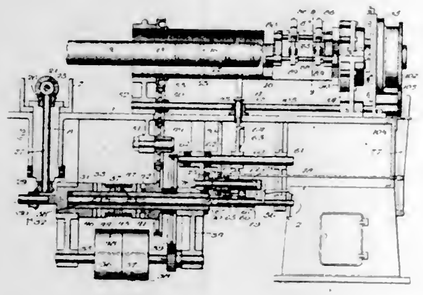
2. A device of the character described comprising a base having an opening therein, a cleaning fluid containing tank revolubly mounted on said base, a brush extending through the opening in said base, a liquid feeding device eccentrically carried by said tank, a tube extending from said brush, means for revolving said tank for engaging said feeding device with the free end of said tube at predetermined intervals, and means for revolving said brush, as and for the purpose set forth.

3. A device of the character described comprising a base having an opening therein, a fluid containing tank revolubly mounted on said base, a fountain brush extend-

ing through said opening, a tube extending from one end of sand tank, an absorbent feeding device carried by the outer end of said tube, a tube extending from said brush and provided at its free end with a flared mouth, said mouth being disposed in the path of said feeding device for feeding the fluid contained in said tank to said tube at predetermined intervals.

4. A device of the character described comprising a base having an opening therein, fluid containing tanks horizontally arranged one above the other, means under the control of the operator for rotating one of said tanks, means connecting said positively rotated tank with the other tank and adapted to impart rotary movement thereto, outlets for said tanks having absorbent feeding devices to receive the fluid from said tank, a fountain brush projecting through the opening in said base, and means arranged in the path of the feeding devices of said tanks for feeding the fluid contained therein into said brush.

1,172,151. AUTOMATIC MACHINE FOR MAKING SPIRALLY-WOUND TUBES. LEWIS C. MALTBY, Washington, D. C. Filed Aug. 28, 1913. Serial No. 787,127. (Cl. 93—80.)



1. An automatic machine for making spirally-wound tubes comprising a mandrel, means for forming the tube on said mandrel, cutting-means traveling around the mandrel, and means for causing alternate intermittent action of the winding and cutting mechanisms.

2. An automatic machine for making spirally-wound tubes comprising a stationary mandrel, means for forming the tube on said mandrel, cutting means adapted to travel around the mandrel for cutting the tube while still on the mandrel, and means for automatically and alternately driving the winding and cutting mechanism.

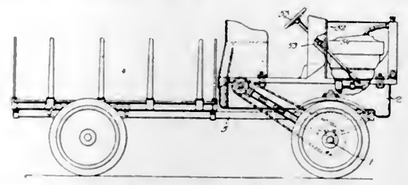
3. An automatic machine for making spirally-wound tubes comprising a stationary mandrel, means for forming the tube on said mandrel, cutting means adapted to travel around the mandrel for cutting the tube while still on the mandrel, means for automatically and alternately driving the winding and cutting mechanism, and a steady-head for automatically gripping and holding one end of the mandrel during the cutting operation.

4. An automatic machine for spirally-wound tubes, comprising a mandrel upon which the tube is formed, means for winding the tube on the mandrel, cutting-means which travels periodically around the mandrel, and mechanism for automatically stopping and starting the winding and cutting means alternately and causing the latter to make two complete revolutions around the mandrel.

5. In an automatic machine for making spirally-wound tubes, a mandrel composed of a hollow tube with means for heating the latter, and removable alternately-arranged hard and soft steel rings or spacers located on the mandrel, and cutters which rotate around the mandrel and are located opposite the hard rings whereby to cut the tube in predetermined lengths.

[Claims 6 to 20 not printed in the Gazette.]

1,172,152. MOTOR-ACTUATED STEERING MECHANISM. HENRY H. MARKER, Mount Clemens, Mich., assignor to Pull-More Motor Truck Company, Detroit, Mich., a Corporation of Maine. Filed Apr. 4, 1914. Serial No. 829,429. (Cl. 74—79.)



1. In a steering mechanism, a steering member, a driven shaft, means actuated by said driven shaft for imparting movement to said steering member, a driving shaft in longitudinal axial alinement with said driven shaft adapted to impart movement thereto, and means having a variable angular relation to said driven shaft adapted to move said shaft to control the operation of said driven shaft by said driving shaft.

2. In a steering mechanism, the combination of a power actuated driving shaft, means for transmitting motion in either direction from the driving to the driven shaft, manually operable means having a variable angular relation to said driven shaft and adapted for controlling said motion transmitting means to cause the same to transmit motion in the desired direction to the driven shaft, said means including a member to reciprocate said driven shaft by the turning of the driven shaft to stop the transmission of motion, a screw shaft actuated by the driven shaft, a nut on said screw shaft, and a steering member pivotally connected to said nut to be actuated thereby.

3. In a steering mechanism, the combination of a power actuated driving shaft, a driven shaft having a screw thread, means for transmitting motion in either direction from the driving to the driven shaft, a nut on the screwthreaded portion of the driven shaft adapted to be moved to move the shaft and control said motion transmitting means, hand operable means having a variable angular relation to said driven shaft and adapted for moving the nut and shaft, and a steering member indirectly actuated by said driven shaft.

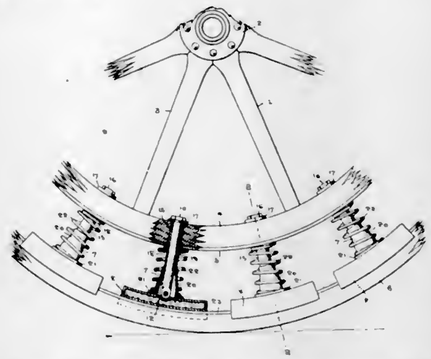
4. In a steering mechanism, the combination of a power actuated driving shaft, a driven shaft having a screw thread, means for transmitting motion in either direction from the driving to the driven shafts, manually operable means having a variable angular relation to said driven shaft including a nut on the screw threaded portion of said driven shaft for controlling the operation of said motion transmitting means to cause the same to transmit motion in either direction, which means is controlled in its operation by said nut, and a steering member indirectly actuated by said driven shaft.

5. In a steering mechanism, the combination of a motor driven driving shaft, a longitudinally movable driven shaft having a screwthreaded portion, means for transmitting motion in either direction from the driving shaft to the driven shaft, said means being actuated to transmit motion in the desired direction by a longitudinal motion of the driven shaft, a nut on the screwthreaded portion of the driven shaft, a hand steering member having a variable angular relation to said driven shaft, means for transmitting motion to the nut to move the driven shaft longitudinally, by turning of the hand member, and a steering member indirectly actuated by said driven shaft.

[Claims 6 to 15 not printed in the Gazette.]

1,172,153. CUSHIONING MEANS FOR VEHICLE-WHEELS. CLEMENT S. MARTIN, Rockville, Md. Filed July 26, 1915. Serial No. 42,057. (Cl. 152—8.)

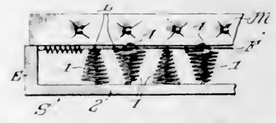
1. The combination with a wheel having a felly, of a cushion tire, a plurality of shoes adapted for engagement with the tire, a bar pivoted to each shoe, tubular sockets extending through the felly and each receiving the free end of one of the bars, a flange formed on each of said sockets, a nut carried by each of said sockets for locking the sockets in engagement with the felly, a flared cap upon each of the bars and having one of its ends resting on the adjacent shoe and its opposite end engaging the end of the adjacent socket, and a spring extending from each of the shoes to the felly and surrounding the respective socket and cap thereof, the outer ends of the springs engaging the caps to hold the said caps seated upon the shoes.



2. The combination with a wheel having a felly, of a cushion tire, a plurality of shoes engaging said tire, a lubricant containing tank formed on each of said shoes, a bar pivotally mounted on each of said shoes and connecting said shoes with the felly of the wheel, said tanks having ports leading to said bars for lubricating the said bars.

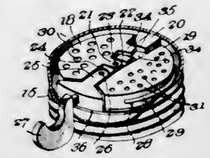
3. A cushioning attachment for wheels, comprising a cushion tire, a plurality of spaced shoes engaging said tire, a lubricant containing tank on each of said shoes, a bar pivotally mounted on each of said shoes, tubular sockets on said wheel, each adapted to receive the free end of one of the bars, a cap surrounding one end of each of the sockets and having its opposite end resting against the adjacent shoe, a cushioning spring surrounding each of the tubular sockets and caps, each of said tanks having ports leading to the adjacent bar for lubricating the same.

1,172,154. BED-SPRING. JOHN B. MARTIN, Cincinnati, Ohio. Filed Dec. 3, 1914. Serial No. 875,287. (Cl. 5—29.)



In a bed spring, the combination of a frame composed of angle iron side bars, upstanding end members connecting said side bars with their upper ends disposed in a plane above the plane of the side bars, a woven wire fabric arranged between said ends and side bars, coiled springs connecting said fabric and the upper edges of said ends forming a housing below said fabric, a plurality of longitudinally alined uniformly compressible truncated cone-shaped spiral springs secured at one end to the side members of said frame, said springs being arranged in close proximity and alternately with the base of one disposed downwardly and the base of the next upwardly, all of said springs being of the same height, the final coil in each spring which has its base extending upwardly being each bent into a longitudinally extending loop at the outer side of the spring which loops project above the woven wire fabric to form mattress retaining means, and wire loops connecting one of the wires of the fabric at each side edge thereof with the upper ends of the spiral springs.

1,172,155. CONDIMENT-HOLDER. WILLIAM MAYER and CHARLES S. LEVY, San Francisco, Cal. Filed Dec. 12, 1914. Serial No. 876,900. (Cl. 65—45.)



1. A condiment holder having two compartments, in combination with a top or cap having sifting apertures, spring-actuated valve members normally obstructing the sifting apertures and having apertures which may be placed in registry therewith, and a lever whereby either valve member may be displaced against the tension of its actuating spring while the other valve member remains in its obstructing position.

2. In a two-compartment condiment holder, a sifting top consisting of a cap having apertures, a brace bar engaging the under face of the top portion of said cap, said brace bar having recesses, approximately semi-circular valve members having lugs engaging one of said recesses, a lever engaging the other recess and having a handle projecting through the wall of the cap, said wall being slotted for the passage thereof, a rivet extending through the brace bar and through the lugs of the semi-circular valve members, said rivet constituting a pivot member for said lugs, and a second rivet extending through the brace bar and through the lever, said rivet constituting a fulcrum for the lever, said valve members being provided with apertures adapted to register with the sifting apertures in the cap.

3. In a two-compartment condiment holder, a sifting top consisting of a cap having apertures, a brace bar engaging the under face of the top portion of said cap, said brace bar having recesses, approximately semi-circular valve members having lugs engaging one of said recesses, a lever engaging the other recess and having a handle projecting through the wall of the cap, said wall being slotted for the passage thereof, a rivet extending through the brace bar and through the lugs of the semi-circular valve members, said rivet constituting a pivot member for said lugs, and a second rivet extending through the brace bar and through the lever, said rivet constituting a fulcrum for the lever, said valve members being provided with apertures adapted to register with the sifting apertures when said valve members are displaced against the tension of the actuating spring, and a lever whereby said valve members may be actuated, said cap being provided with a washer or diaphragm having openings alining with the valve members and communicating with the compartments of the holder.

1,172,156. KITCHEN UTENSIL. JOSEPH MESSINA, Benld, Ill. Filed July 30, 1915. Serial No. 42,777. (Cl. 30—20.)

A vegetable peeler comprising a hollow tubular member providing a handle and recessed near one end thereof to

provide an elongated semi-cylindrical portion, said hollow tubular member having slots above and below said semi-cylindrical portion circumferentially disposed at diametrically opposite points, a concavo-convex blade provided with a reduced portion adapted to overlie the recess



in the hollow tubular member, said reduced portion being provided with a cutting edge, bolts passing through the slots in the hollow tubular member, and through the blade adjacent said cutting edge, and nuts threadably engaged with the bolts and bearing upon one side edge of the blade distant from the cutting edge thereon.

1,172,157. LABEL. ADA MILBURN, Kansas City, Kans. Filed Jan. 18, 1913, Serial No. 742,829. Renewed May 22, 1915. Serial No. 29,925. (Cl. 40—2.)



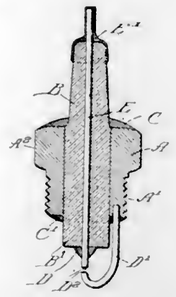
A poison label comprising a main body strip of material of a uniform thickness weakened on a continuous line so as to provide relatively separable upper and lower portions, the back of the upper portion of the strip having an adhesive, a strip of material of uniform thickness secured to the back of the first strip at a point immediately above the weakened line thereof and having an adhesive on its back surface and an abrasive material on its front surface, the latter being disposed flush with the upper portion of the first strip and being normally concealed by that portion of the first strip below said weakened line.

1,172,158. PROCESS OF RESTORING RUBBER. FREDERICK MOENCH, Rushville, Ill. Filed June 16, 1915. Serial No. 34,387. (Cl. 18—52.)

1. The process of restoring rubber which consists in enveloping old rubber with a plastic mixture containing linseed oil, turpentine, and an earthy material, and subjecting the rubber so enveloped to a continuous heat out of the influence of air.

2. The process of restoring rubber which consists in applying thereto a covering layer formed of a plastic mixture of linseed oil, turpentine, and a clayey material, and subjecting the same to continuous heat out of the influence of air by placing the covered rubber within a closed retort.

1,172,159. SPARK-PLUG. FREDERICK MOENCH, Rushville, Ill. Filed June 23, 1915. Serial No. 35,780. (Cl. 123—169.)

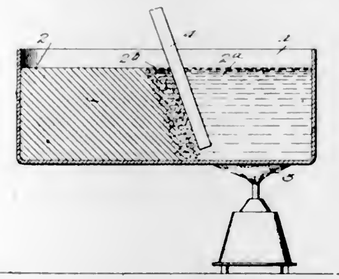


1. A spark plug consisting of an insulator, a threaded base through which the insulator extends, an electrode extending through the insulator, and soldered metallic connections between the said electrode and the insulator and between the insulator and the said base, and permanently uniting these parts to form a substantially single piece plug, said soldered connections being located at the inner ends of the insulator and nut whereby to permanently close the spaces between the same and the electrode.

2. A spark plug comprising a nut forming a single piece base, an insulator extending through the said nut, and permanent soldered connections between the insulator and the nut located at the opposite ends of the latter and around the insulator whereby to permanently close the space between them.

3. A spark plug comprising a nut forming a single piece base, having a bore and a single series of threads, an insulator extending through the bore of the said nut and projecting at its inner end beyond the inner end of the nut, soldered metallic connections between the said insulator and the said nut, located at the respectively opposite ends of the nut and entirely closing the ends of its bore, and electrodes carried by the said insulator and the said nut.

1,172,160. ALUMINUM-PLATING PROCESS. FREDERICK MOENCH, Rushville, Ill. Filed Aug. 16, 1915. Serial No. 45,674. (Cl. 91—70.2.)



1. The herein described process of plating metal which consists in bringing the metal which is to be used as the plating medium, to a semi-fluid state and rubbing the metal to be plated in the semi-fluid portions of the plating medium and subsequently moving the metal to be plated into the melted portion of the plating medium.

2. The herein described process of plating metal, which consists in heating an oblong body of metal to be used as a plating medium near one end until the latter is melted near its heated end, plunging into the melted portion of the plating medium an article to be plated, rubbing said article against the semi-fluid portion of the plating medium, and removing the article thus rubbed to the more fluid portion of the plating medium without permitting the access of air.

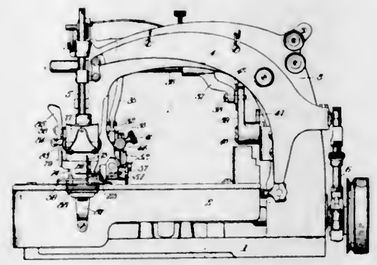
3. The herein described plating process which consists in heating one end of a vessel containing a metal to be used as the plating medium, whereby a portion of the metal is melted, and a portion remains in the solid state, immersing an article to be plated in the melted portion of the plating medium, rubbing said article against the semi-fluid portion between the melted portion and the solid portion of the plating medium, and removing the article to the more fluid portion of the melted plating medium to permit the melted metal to have access to the parts rubbed, and subsequently withdrawing the article to be plated from the melted portion of the plating medium.

1,172,161. SOLDERING-IRON. FREDERICK MOENCH, Rushville, Ill. Filed Oct. 2, 1915. Serial No. 53,769. (Cl. 113—105.)



As an article of manufacture, a soldering iron having a body portion provided with beveled faces at one of its ends, and having intersecting slots disposed at right angles to said beveled faces.

1,172,162. SEWING-MACHINE. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1910. Serial No. 540,879. (Cl. 112—16.)



1. A plait forming machine including in combination, a work support, a feeding mechanism, a plait forming member, an actuating member, devices between said actuating member and said plait forming member, and manually actuated means located beneath the work support and connected to said actuating member for operating said plait forming member to form a plait.

2. A plait-forming member including in combination, feeding mechanism, a plait-forming member, manually operated means for causing said plait-forming member to form a single plait substantially at right angles to the line of feed, and means whereby said plait-forming member may be shifted so as to form reverse plaits.

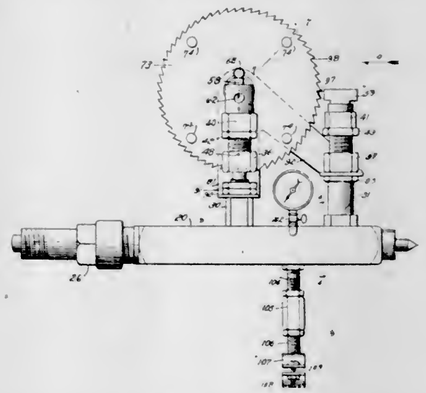
3. A sewing machine including in combination, stitch forming mechanism, a work support, a feeding mechanism, a plait forming member, a lever for actuating said plait forming member, and manually actuated means located beneath the work support and connected to said lever for operating said plait forming member to form a plait without stopping the stitching mechanism.

4. A sewing machine including in combination, stitch forming mechanism, a feeding mechanism, a plait-forming member, a manually actuated means for actuating said plait-forming member without stopping the stitching mechanism, and means for shifting the position of the plait-forming member whereby reverse plaits may be made.

5. The combination with stitch forming mechanism, a work support, an upper folding device located above the work support, a plait forming member operable upon the fabric passing beneath said folding device, an actuating member, devices connecting said actuating member to said plait forming member, and manually operated means located beneath the work support and connected to said actuating member for operating the plait forming member to form a plait in the fabric beneath the folder at the will of the operator.

[Claims 6 to 39 not printed in the Gazette.]

1,172,163. DRILL-TESTING APPARATUS. EARL H. OBERTOP, Goldfield, Nev. Filed Sept. 23, 1914. Serial No. 863,199. (Cl. 73—51.)



1. In a drill testing apparatus, a body member having a liquid receiving chamber therein, a piston reciprocally mounted in said chamber adapted to be impacted by a member on the drill, a disk revolubly mounted on and carried by the body chamber, means operated through the liquid for rotating said disk, and adjustable means for frictionally engaging the disk.

2. In a drill testing apparatus, a body member having a liquid receiving chamber therein, a piston in said chamber adapted to be advanced by the impact of a member on a drill, a revoluble disk mounted on and carried by the body member, a plunger adapted to be actuated by the fluid in the body member, a piston removably attached to said plunger, a spring for normally maintaining said piston and plunger in their lowermost positions, and a pawl carried by said piston adapted to engage the disk to rotate the latter intermittently on each impulse of the plunger.

3. In a drill testing mechanism, a rotary disk, a reciprocal member adapted to be actuated by a drill, means controlled by said reciprocal member for rotating said disk in step by step fashion on successive advance movements of the reciprocal member, and means for impeding the rotation of said disk.

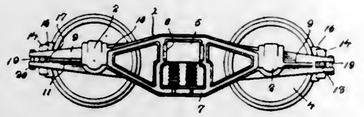
4. In a drill testing mechanism, a rotary disk, a reciprocal member adapted to be actuated by a drill, means controlled by said reciprocal member for rotating said disk in step by step fashion on successive advance movements of the reciprocal member, means for impeding a frictional member engaging the plate, means for holding said member against rotation, and means for adjusting the frictional engagement with the plate to various degrees.

5. In a drill testing apparatus, a body member having a liquid receiving chamber therein, a piston in said chamber, a spring for normally retracing the piston in each

chamber adapted to be impacted by a drill, a rotary disk, means for indicating the froce of the impact of said piston on the disk, means for rotating the disk, and friction means for impeding the rotation of the disk.

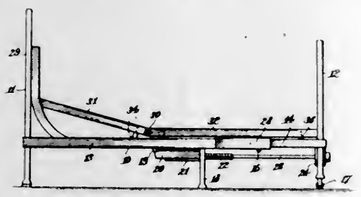
[Claims 6 and 7 not printed in the Gazette.]

1,172,164. WHEEL-TRUCK AND BRAKE-GEARING. WILLIAM A. OTTO, Milwaukee, Wis. Filed July 31, 1914. Serial No. 854,356. (Cl. 188—24.)



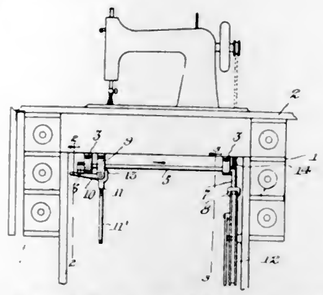
A wheel truck including side plates, each having a diamond-shape body portion and triangular extensions beyond the ends of said body portion, and also provided with journal boxes integral with the inner ends of the diamond-shape body portion and the outer surfaces of the inner ends of the triangular extensions, said triangular extensions being longitudinally slotted at their outer ends and having reinforcing ribs on their outer surfaces extending between the journal boxes and slots and in axial alinement with the latter, axles journaled in the bearing boxes, wheels carried by said axles and arranged to lie inwardly of the slotted ends of the side pieces, brake beams provided with integral brake shoes to engage the tread surfaces of the wheels and having extensions beyond said shoes slidably fitted in the slots of the side pieces, said beams having extensions projecting through the slots in the side pieces and provided with angular enlargements slidably engaging said slots and spaced from said extensions, the latter being of greater depth than the slots to serve as stops engaging the inner surfaces of the side pieces to hold the brake beams from longitudinal movement, and said lugs being arranged to project inwardly and to lie in rear of the faces of the brake heads and in advance of the rear surfaces thereof, and adapted to abut against the inner walls of the slots when the brake shoes are worn to a predetermined extent, and fastenings passing through the ends of the triangular extensions and crossing the slots.

1,172,165. ADJUSTABLE BED. ELLIS W. OWENS, Granville, N. Y. Filed Apr. 16, 1915. Serial No. 21,787. (Cl. 5—13.)



In a bed, the combination of a bedstead consisting of a head section, side rails hereon, with the inner ends of the side rails curved upwardly upon the head section, a foot section, side rails thereon and in sliding engagement with the side rails of the head section, a spring consisting of relatively movable head and foot sections, rails on the head and foot sections of the spring and operating over the side rails of the head section of the bedstead, with the foot section of the spring movable with the foot section of the bedstead, means for increasing or decreasing the length of said bedstead by relatively sliding said head and foot sections thereof, said relative movement of said head and foot sections of the bedstead being adapted to cause the head and foot sections of the spring to operate over the rails of the head section of the bedstead and change the angularity of the head section of the spring with respect to the foot section thereof.

1,172,166. SEWING-MACHINE BRAKE. ALEXANDER RACK, Philadelphia, Pa. Filed Apr. 13, 1915. Serial No. 21,042. (Cl. 74—13.)



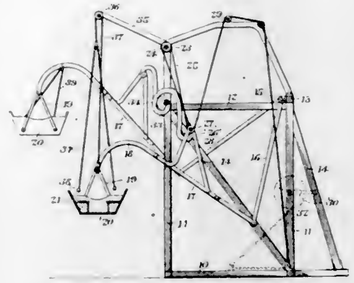
1. In a sewing machine brake, the combination of bearings depending from the underside of the machine, a horizontal shaft journaled in said bearings, a crank arm secured to said shaft and lying in the same plane therewith, a second crank arm mounted on the remaining end of said shaft and extending in a direction opposite to the first mentioned crank arm, a shoe formed integral with the free end of the second mentioned crank arm and U-shaped in cross section, a bracket secured to the underside of the machine, a bell crank lever pivotedly mounted in said bracket and comprising a substantially horizontal extension and a vertical extension, said horizontal extension adapted to engage the underside of said first mentioned crank arm, and a coil spring having one end secured to the machine and the opposite end attached to the second mentioned crank arm intermediate its ends, said spring adapted to work in opposition to said bell crank.

2. In a sewing machine brake, the combination of bearings depending from the underside of the machine, a horizontal shaft journaled in said bearings, a crank arm secured to said shaft and lying in the same plane therewith, a second crank arm mounted on the remaining end of said shaft and extending in a direction opposite to the first mentioned crank arm, a shoe formed integral with the free end of the second mentioned crank arm and U-shaped in cross section, a bracket secured to the underside of the machine, a bell crank lever pivotedly mounted in said bracket and comprising a substantially horizontal extension and a vertical extension, said horizontal extension adapted to engage the underside of said first mentioned crank arm, and a coil spring having one end secured to the machine and the opposite end attached to the second mentioned crank arm intermediate its ends, said spring adapted to work in opposition to said bell crank, and a vertically extending lug formed integral with said bell crank lever adjacent its pivot and adapted to normally engage one side of said bracket.

1,172,167. SWING. ALEXANDER RACK, Philadelphia, Pa. Filed Apr. 20, 1915. Serial No. 22,657. (Cl. 155—35.)

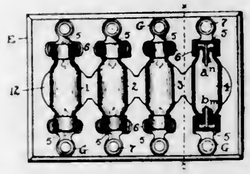
1. A swing comprising a supporting frame, levers swingingly mounted in the frame, carrier frames pivotally connected to the levers, carriers depending from the free ends of the said carrier frames, cranks rotatably mounted in the frame and connected with the carrier frames, and means for impelling one of the carrier frames for the simultaneous actuation of both of said carrier frames.

2. A swing comprising a supporting frame, levers swingingly mounted in the frame, carrier frames pivotally connected to the levers, carriers depending from the free ends of the said carrier frames, cranks rotatably mounted in the frame and connected with the carrier frames, means for impelling one of the carrier frames for the simultaneous actuation of both of said carrier frames, and means for raising and lowering the carrier frames to permit access to the carrier.



3. In a swing, a supporting frame, carrier frames movably mounted in the supporting frame, carriers pivotally mounted in the carrier frames, means operable from one of the carriers to impart impelling action to the carrier frame, independent means for raising and lowering the carrier frames, cranks controlling the course of movement of the carrier frames, and levers pivotally connected to the supporting frame and carrier frames for permitting swinging movement of the latter relative to the movements of the crank.

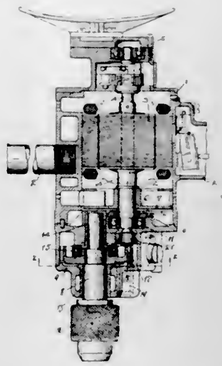
1,172,168. ELECTRIC-SPARK-DISCLOSING MEANS FOR INTERNAL-COMBUSTION ENGINES. HARRY A. SCHADE, East Cleveland, and FRANCIS N. RICHARDSON, Cleveland, Ohio. Filed Apr. 9, 1910. Serial No. 554,537. (Cl. 175—183.)



Electric spark disclosing means for internal combustion engines comprising a transparent vacuum tube for each engine having a barrel-shaped body and relatively reduced ends provided each with an inwardly projecting nipple and electric terminals through said nipples, caps of conducting material sleeved upon said ends and provided with said electric terminals at their middle, the said tubes being constructed alike at both ends and reversible as to their ends and the said terminals terminating in the respective ends of the tube.

1,172,169. ELECTRICALLY-OPERATED TOOL. FRANKLIN SCHNEIDER, Cleveland, Ohio, assignor to The Van Dorn & Dutton Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 20, 1913. Serial No. 749,646. (Cl. 172—36.)

1. The combination in an electrically operated tool; of a casing open at one end; a motor armature received in said casing, the spindle of said armature being journaled in the closed end of said casing and extending exteriorly of the open end; a second casing removably clamped to said motor casing about the open end of the same and bearing a rotatable shaft adapted to receive a tool; means adapted to operatively connect the spindle and the shaft, said means being carried entirely in said second casing and being removable therewith; said second casing having one end wall formed integral therewith and serving as a partition to close the open end of said motor casing, such end wall being provided with a bearing for the extending end of such motor spindle and being adapted to prevent the leakage of lubricant from said second casing into said motor casing.



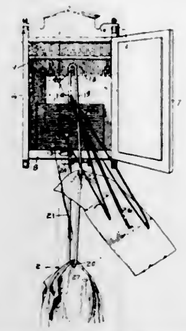
2. The combination in an electrically operated tool: of a casing open at one end; a motor armature received in said casing, the spindle of said armature being journaled in the closed end of said casing and extending exteriorly of the open end; a second casing removably clamped to said motor casing about the open end of the same and bearing a rotatable shaft adapted to receive a tool; means adapted to operatively connect the spindle and the shaft, said means being carried entirely in said second casing and being removable therewith; said second casing having one end wall formed integral therewith and serving as a partition to close the open end of said motor casing, such end wall being provided with a bearing for the extending end of such motor spindle and being adapted to prevent the leakage of lubricant from said second casing into said motor casing; and a packing gland for such shaft mounted in the end wall of said second casing beyond such bearing.

3. The combination in an electrically operated tool; of a casing open at one end; a motor armature received in said casing, the spindle of said armature being journaled in the closed end of said casing and extending exteriorly of the open end; a second casing removably clamped to said motor casing about the open end of the same and bearing a rotatable shaft adapted to receive a tool; means adapted to operatively connect the spindle and the shaft, said means being carried entirely in said second casing and being removable therewith; said second casing having one end wall serving as a partition to close the open end of said motor casing, such end wall being provided with a bearing for the extending end of such motor spindle and being adapted to prevent the leakage of lubricant from said second casing into said motor casing; a packing gland for such shaft mounted in end wall of said second casing beyond such bearing; and a fan attached to such shaft within said motor casing adjacent to the open end of the latter, said fan fitting loosely within said casing and serving to support such shaft in its proper position before the positioning of said second casing.

1,172,170. SAFETY TOWEL-HOLDER. FRANK M. SELMIER, Indianapolis, Ind. Filed Feb. 11, 1913. Serial No. 747,613. (Cl. 45—32.)

1. The combination of a support, a rod upon which towels are strung and tied in bundles, said rod having tie-holding releasable means, means connecting the ends of the rod after the towels are strung to prevent their removal from the rod when untied, and means to remov-

ably secure the rod to the support, said rod being placed with the towels resting upon said support, said towels before use being untied and released to a portion of the rod from which the towels are to be used.



2. In a towel-holder, the combination of a shelf, a rod upon which towels are strung, the rod being bent to bring its ends in close relation to each other, a lock for removably securing the ends of the rod to each other and means for removably securing the rod to the shelf.

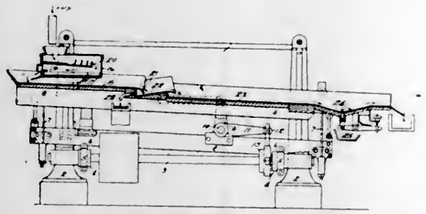
3. In a towel-holder, a cabinet having a shelf, a rod removably locked to said shelf, said rod extending upwardly of the shelf and thence down again, upon which towels are strung, and means for removably locking the ends of the rod together.

4. A shelf, a rod locked to said shelf, said rod extending upwardly of the shelf and thence down below the shelf and thence to the place of beginning, means for locking and unlocking the ends of the rod to each other and means comprising a padlock for removably securing the rod to the shelf.

5. A shelf having a perforated lug, a rod having a slot through which the lug passes, a lock to prevent the removal of the rod from the lug, said rod extending upwardly of the shelf and thence outwardly and thence downwardly below the shelf and thence rearwardly and upwardly to the shelf and thence out to the place of beginning, the ends of the rod being perforated, a lock passing through said perforations to lock the ends together.

[Claim 6 not printed in the Gazette.]

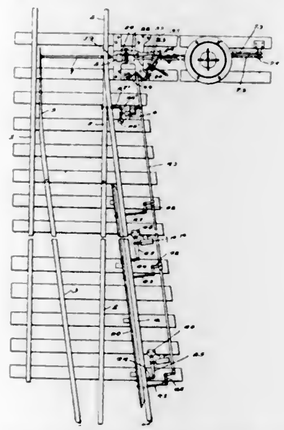
1,172,171. PAN-MOTION AMALGAMATOR. KARL SENN, Alameda, Cal. Filed Dec. 26, 1913. Serial No. 808,703. (Cl. 83—68.)



1. In an amalgamating apparatus, a table arranged at an incline and having an amalgam plate at its high end, said table having a pocket adjacent said high end, the inner end of the plate being downturned to extend in the pocket, an amalgam plate in the pocket having its outer end inclined downwardly in a direction toward the high end of the table and having its tailing end turned downwardly, a third amalgam plate on the table having one end underlying said tailing end of the second amalgam plate and having its outer end portion concaved to form a pan the bottom of which extends below the plane of the third plate, said pan having a discharge outlet and said pocket also having a discharge outlet.

2. In an amalgamating apparatus an inclined table having an amalgam plate at its high end, a pocket at the inner end of the plate, said plate having its inner end extending downwardly in the pocket, an amalgam plate in the pocket beneath said inner end of the first plate inclined downwardly toward the high end of the table, a third amalgam plate extending from the pocket through the low end of the table, said third plate having a concaved part adjacent its outer end to form a pan, said pocket and pan having outlets, and the outer end of the third plate having a discharge portion.

1,172,172. RAILWAY-SWITCH MECHANISM. MARSHALL L. SHEPHERD, Montgomery, Ala., assignor to Shepherd Automatic Switch Company, Inc., Montgomery, Ala., a Corporation of Alabama. Filed Apr. 2, 1915. Serial No. 18,752. (Cl. 104—77.)



1. In a railway switch, a self-closing switch point, a switch throwing bar, means for operating said bar, a locking device for locking the bar in switch opening and closing positions, and a lost motion elastic connection between the switch point and bar operative to permit the switch point to be held open by the wheels until cleared after the bar has returned to normal position.

2. In a railway switch, a self-closing switch point, a switch throwing bar, a plurality of separate and independent devices for operating said switch throwing bar, a locking device for locking the switch throwing bar in switch opening and closing positions, and a lost-motion elastic connection between the switch point and bar operative to permit the switch point to be held open by the wheels until cleared after retraction of said bar.

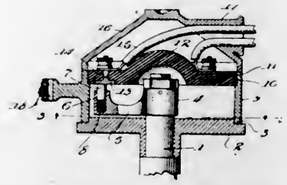
3. In a railway switch, a self-closing switch point, a switch throwing bar, a plurality of separate and independent devices for operating said switch throwing bar, a locking device adapted to be released prior to the throwing of the switch and set for a relocking action, and a lost-motion elastic connection between the switch point and bar operative to permit the switch point to be held open by the wheels until cleared after retraction of said bar.

4. In a railway switch, a self-closing switch point, a switch throwing bar, a train controlled element for operating said bar, a locking device adapted to be released prior to the throwing of the switch and set for a relocking action, and a lost motion elastic connection between the switch point and bar operative to permit the switch point to be held open by the wheels until cleared after the bar has returned to normal position.

5. In a railway switch, a self-closing switch point, a switch throwing bar, a switch throwing device, an actuating element operated thereby, switch throwing and locking means controlled by said element and coöperating with the same and the switch bar, and a lost-motion telescopic spring controlled connection between said actuating element and the switch point, said connection comprising parts movable in unison in one direction and independently in the opposite direction.

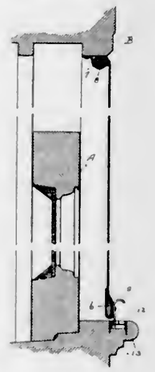
[Claims 6 to 20 not printed in the Gazette.]

1,172,173. TIMER FOR INTERNAL-COMBUSTION ENGINES. THOMAS B. SHRYOCK, Lawrenceburg, Ky. Filed Mar. 27, 1915. Serial No. 17,395. (Cl. 123—167.)



A timer of the class described comprising a disk surrounding the timer shaft, an annulus disposed concentrically of said shaft and resting upon said disk and capable of rotation relatively to said shaft and disk, an arm secured to said shaft and radiating therefrom, a contact brush carried by the outer end of said arm and disposed in a plane parallel with the shaft, a disk seated in the outer end of said annulus and adapted to move therewith, contact plates on the inner surface of said disk adapted to be successively engaged by said brush in the rotation of the latter under the action of the timer shaft, binding posts projecting through the opposite face of said disk and connected with the wires leading to the spark plugs of the engine, a hood secured to the outer edge of said annulus and inclosing said last-mentioned disk, binding posts and the adjacent ends of the wires and formed with an opening through which the wires pass, and means for moving said annulus whereby said contact plates will be moved relatively to said brush to change the time of the spark.

1,172,174. WINDOW-SCREEN. ARTHUR C. SOULE, San Francisco, Cal., assignor to Sanitary Screen & Shade Company, a Corporation of California. Filed Sept. 24, 1912. Serial No. 722,111. (Cl. 156—14.)



1. In a window screening device, a flexible screen, holding members attached to various points along the side edges thereof, and channeled members wherein said holding members are slidably secured, and a spring securing device at the top of said screen for supporting the same in position.

2. In a window screening device, a flexible screen, beads sewed to numerous points along the side edges thereof, and spring members adapted to hold said beads in slidable position.

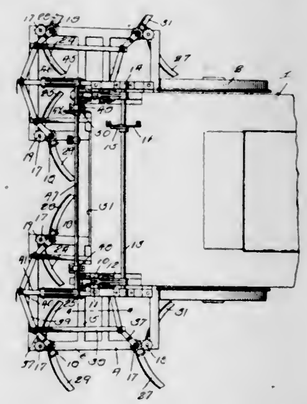
3. In a window frame a screening device, comprising a flexible screen provided with holding means, secured along the sides thereof, channeled members in which said holding means are slidably and removably mounted, and a rod at the top of said screen removably engaging a spring holding device secured to the upper portion of the window frame and adapted to keep said screen in vertical position.

4. In a window frame, a screening device, comprising channeled members removably secured to said frame, a flexible screen having its sides slidably and removably mounted in said channeled members, means at the top of said screen engaging said channeled members, adapted to hold said screen in a vertical position within said channeled members, and means at the bottom for locking said screen in said position.

5. In a window screen, a flexible screen, holding devices secured along the sides thereof, channeled members for said holding devices and means secured at the bottom side of said screen and engaging said channeled member for retaining said holding devices at any given point along the channeled members.

[Claim 6 not printed in the Gazette.]

1,172,175. WEED-CUTTING MACHINE. CHARLES SAMUEL SPITZER, Shaniko, Oreg. Filed Nov. 4, 1914. Serial No. 870,277. (Cl. 56—16.)



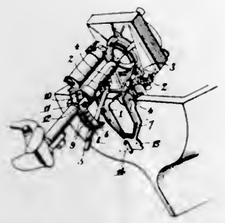
1. In a weed cutting machine, the combination with a pair of spaced frames, of cutting blades mounted upon the same, a pair of spaced standards extending upwardly from each frame, a car, a lever mounted upon the car, means connecting the lever and the said standards for raising the latter, a second lever mounted upon the car and links connected to the last mentioned lever and to the blades.

2. In a weed cutting machine, the combination with a frame, of a pair of cutting blades pivotally mounted thereon and geared together, links pivotally connected to one member of each pair of blades, a bar, a carriage for supporting the same, the said links being also pivotally connected together and to the end of the bar and means for moving the carriage in either direction.

3. In a weed cutting machine, the combination with a tubular socket, having a groove in one side thereof, of a blade having a slit therein, which slit produces fingers on the blade, one of said fingers lying within the groove and the other within the socket and a set screw bearing against the last mentioned finger for maintaining the blade in place.

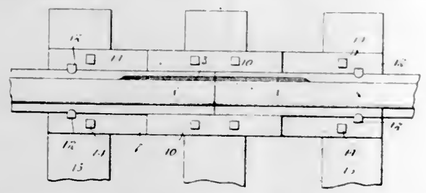
4. In a weed cutting machine, the combination with a frame, of a pair of stub shafts rotatably mounted at each corner thereof, cutting blades on the lower ends of the stub shafts, gears on the upper ends thereof and means for rotating the gears to operate the blades.

1,172,176. MOTOR ATTACHMENT. WILLIAM STANLEY, Chicago, Ill. Filed Sept. 8, 1915. Serial No. 49,542. (Cl. 115—17.)



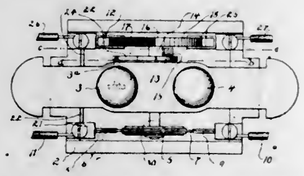
A tilting bracket arranged intermediate the motor and the securing bracket therefor, said tilting bracket including arms pivotally connected to the securing bracket and to the motor, a main member projecting from the arms, means carried by the main member to adjustably secure the motor thereto, and means for locking the main member to the securing bracket.

1,172,177. RAIL-JOINT. WILLIAM A STEPHENSON, Estelline, Tex. Filed July 9, 1915. Serial No. 38,953. (Cl. 239—13.)



The herein described construction of rails, and means for connecting the rails, each of said rails having its end widened so that its web, upon its inner face, is flush with the side of its head, the outer face being inclined from the head and bulged at the base flange thereof, said rails being formed with longitudinally extending key hole slots, a plate upon which the rails rest, said plate having a key-shaped rib, the plate having flanges disposed opposite the rib and the inner edges of the flanges being beveled, guides upon the plate to direct the same into engagement with the inclined edges of the flanges when the key-shaped rib is inserted in the key hole slots, and means comprising spikes passing through the plate and contacting with the flanges of the rails for sustaining the rails upon the plate.

1,172,178. SWITCH FOR ELECTROLIERS. THEODORE C. STROUT, Waterbury, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed June 28, 1912. Serial No. 706,435. Renewed Jan. 18, 1916. Serial No. 72,873. (Cl. 175—293.)



1. In a push-button switch, the combination with a snap switch adapted to close a main line circuit and buttons for operating the same, of a multiple contact device arranged for selectively controlling branches of the main line circuit, and means connected with the snap switch for operating the multiple contact device.

2. In a push-button switch, the combination with a snap switch adapted to close a main line circuit and buttons for operating the same, of a sectional contact disk arranged to selectively control branches of said main line circuit, and connections between said contact disk and snap switch whereby the contact disk is turned by the operation of the snap switch.

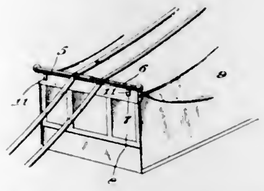
3. In a push-button switch, the combination with a snap switch adapted to close a main line circuit and push buttons for operating the same, a shaft upon which said snap switch turns, a sectional contact disk arranged to selectively control branches of said main line circuit, a ratchet connected with said contact disk, and a pawl operated by the snap switch for turning said contact disk.

4. The combination with a push button snap switch provided with an oscillating switch plate arranged to control a main line circuit and manually operable means for moving said switch plate in both directions, of a rotary commutator arranged to control branches of the main line circuit and driving connections between said switch and commutator.

5. The combination with a snap-switch mechanism including an oscillating snap-switch, and manually operable means to cause the movement of the switch plate in either direction, of a commutator arranged to control branches of the main line circuit adapted for step-by-step rotation in one direction, and driving connections between said switch and commutator operative in one direction of movement of said switch plate.

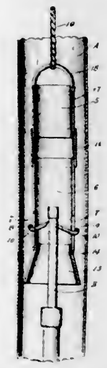
[Claims 6 to 8 not printed in the Gazette.]

1,172,179. CURTAIN-HOLDER FOR BUGGIES. THOMAS G. TAYLOR, Leaksville, N. C. Filed Feb. 17, 1915. Serial No. 8,834. (Cl. 21—81.)



In a device of the class described, comprising a rod, resilient clamps depending therefrom and having spreadable legs, and a buffer arranged between the legs of each clamp.

1,172,180. FISHING-TOOL. IGNACIO TREVINO, Alice, Tex. Filed June 7, 1915. Serial No. 32,736. (Cl. 57—9.)



1. A device of the class described comprising a tubular member having a longitudinal bore and opposed elongated slots, gripping members mounted in said slots for vertical pivotal movement, one of said members comprising a half disk having a beveled edge, the other of said members comprising a disk having a V-shaped opening extending to the periphery thereof, said members having their adjacent edges disposed in overlapped relation, a cone-shaped guiding element detachably secured to the lower end of the member, and means for suspending the latter.

2. A device of the class described comprising a hollow tubular member having opposed longitudinally extending slots, gripping members arranged in overlapping relation within said tubular member, each of said gripping members having a curved stem projecting through said slots and normally engaging the lower end wall of the latter, a pin passed through said stem whereby each of said members is supported for pivotal movement, said tubular member being interiorly threaded adjacent its lower end, an exteriorly threaded cone-shaped element associated therewith, and means for suspending the device.

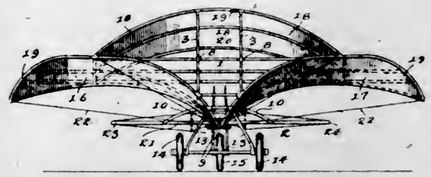
1,172,181. CIGARETTE-FORMER. THOMAS TRIBE, Colorado Springs, Colo. Filed Jan. 24, 1912. Serial No. 673,046. Renewed July 7, 1915. Serial No. 38,512. (Cl. 131—5.)



1. A portable cigarette former comprising a split tubiform casing forming a slot longitudinally throughout the extent thereof, the casing at the end edges of the slot being rounded, an inner forming tube of greater length than the casing and adapted to telescope within the casing whereby a cigarette paper wrapped upon the tube will be sustained in its wrapped condition and its outermost longitudinal edge will protrude through the slot in the casing, and a presser rod detachably inserted within the inner forming tube and adapted to be extracted therefrom on the removal of the tube from the casing for the packing of the tobacco in the wrapper held within said casing, the said presser rod when engaged in the inner tube and also when the latter is inserted within the casing being designed to act upon one end of the wrapper for the folding of the same.

2. A portable cigarette former comprising a split tubiform casing forming a slot longitudinally throughout the extent thereof, the casing at the end edges of the slot being rounded, an inner forming tube of greater length than the casing and adapted to telescope within the casing whereby a cigarette paper wrapped upon the tube will be sustained in its wrapped condition and its outermost longitudinal edge will protrude through the slot in the casing, a presser rod detachably inserted within the inner forming tube and adapted to be extracted therefrom on the removal of the tube from the casing for the packing of the tobacco in the wrapper held within said casing, the said presser rod when engaged in the inner tube and also when the latter is inserted within the casing being designed to act upon one end of the wrapper for the folding of the same, and a finger knob formed on the presser rod to provide an abutment shoulder engageable with one end of the inner forming tube to limit the sliding movement of the presser rod inwardly within the tube.

1,172,182. FLYING-MACHINE. GEORGE M. WANEE, Oakland, Cal. Filed Oct. 8, 1915. Serial No. 54,826. (Cl. 244—12.)



1. A flying machine including a frame structure, a pair of supporting wings carried by the main structure, the said wings having outer portions extending laterally beyond the frame structure and longitudinally and transversely curved, and having the inner portions extending downwardly in converging relation, and united to form a forward keel beneath the main supporting surface, an upper plane forming an arched hood extending over the converging portions of the first-named planes and rigidly secured at its extremities to said plane about midway of the length of the outer portions of the planes, and a tail frame carrying an auxiliary supporting plane and rudders and a vertical plane forming a rear keel in line with said forward keel.

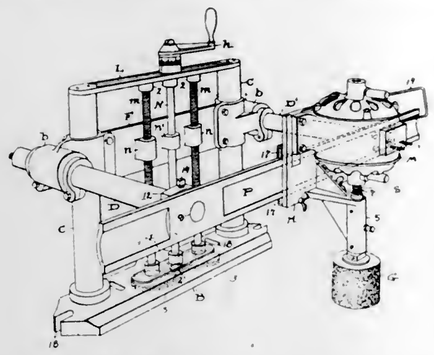
2. A flying machine including a main frame having a central portion formed of vertical uprights and bracing connections therebetween, and main supporting planes each composed of frame members connected with said uprights, and a fabric covering said frame members, said planes having downwardly and inwardly curved and converging portions united in V-shaped formation secured to the uprights and outer longitudinal and transversely curved portions, and a fixed upper plane arranged in arched formation over the inner halves of the main planes and the converging inner portions thereof and also comprising a frame and a fabric covering, the respective planes being provided with curved main bars rigidly connected with each other and with the main frame uprights, and transversely extending horizontal braces rigidly uniting the respective sets of wing bars with the uprights.

3. A flying machine including a main frame, a tail frame extending from the main frame, a supporting surface carried by the main frame and comprising arched lower planes having their inner ends depending in convergent relation and united to form a keel, and a rigid, arched upper plane overhanging the inner portions of the lower planes and fixed thereto, a tail plane upon the tail frame comprising a substantially triangular body and having rudder wings mounted to swing vertically on inclined axes extending along opposite converging sides of said body, means for adjusting said rudder wings, and a vertical plane depending from the tail frame partially beneath the tail plane and partially in advance thereof and in line with the keel formed by the lower planes.

1,172,183. MACHINE FOR SHARPENING PLANER-BLADES. FRANK WEDLINGTON WARDWELL, Jr., Cleveland, Ohio. Filed Apr. 20, 1914. Serial No. 833,301. (Cl. 51—7.)

1. A machine for sharpening planer blades having a frame with two standards, a bracket slidable on each standard and rigidly connected, horizontally disposed supports secured in said brackets, a guide-bar fixed on the inner ends of said supports, two adjusting screws supported between said standards and in adjusting relations with said brackets, and an actuating shaft intermediate said screws and geared therewith to rotate the same.

2. In a machine as described, the combination of the upright frame having a base and a pair of standards fixed therein and a rigid cross connection at the top of said standards, a bracket slidably mounted on each standard and cross piece connecting the same, and horizontally disposed tubes mounted in said brackets, in combination with means to raise and lower said brackets and tubes comprising a pair of screws supported between said standards and having fixed nuts in the plate connecting the said brackets and means to rotate said screws simultaneously.

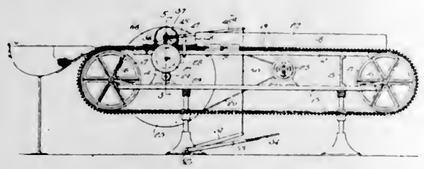


3. In a machine for sharpening planer blades, a horizontally disposed guide-bar having a fixed support at one end and an adjustable support at the other end adapted to fix said bar at different levels, in combination with a motor and a sharpening device operatively connected and means supporting the same in a traveling relation on said bar.

4. In a machine as described, a set of horizontally disposed supports, a guide bar pivotally supported at one end by one of said supports and means connected with the other support to level said bar, said means comprising a stud engaging said bar against the end of said support, a screw to tighten the said stud on said bar and leveling screws adapted to fix the horizontal position of the bar.

5. In a machine as described, a pair of laterally disposed supports and a guide bar mounted on the free ends of said supports, in combination with leveling means at one end of said bar comprising a screw rod through the corresponding support and a stud having a head bearing on said bar engaged by said screw, a thimble on the neck of said stud inside said bar, a box on said support and leveling screws top and bottom through said box having bearings on said thimble.

1,172,184. MACHINE FOR MARKING CIGARS. WILLIAM E. WATERMAN, Boston, Mass., assignor to Waitt & Bond Inc., Roxbury, Boston, Mass., a Corporation of Maine. Filed Dec. 30, 1914. Serial No. 879,662. (Cl. 101—83.)



1. A cigar-marking machine comprising a rotary die carrier having dies and end journals, means coöperating with said journals to prevent horizontal movements and permit vertical movements of the die carrier so that the dies are pressed yieldingly downward by the weight of the carrier, a traveling cigar carrier, a support for the latter, and connections between the two carriers whereby they are moved progressively in unison to present cigars successively to the dies.

2. A cigar-marking machine comprising a rotary die carrier having dies and end journals, means coöperating with said journals to prevent horizontal movement and permit vertical movements of the die carrier so that the dies are pressed yieldingly downward by the weight of the carrier, means for yieldingly opposing downward movement of the die carrier, a traveling cigar carrier, a support for the latter, and connections between the two carriers whereby they are moved progressivly in unison to present cigars successively to the dies.

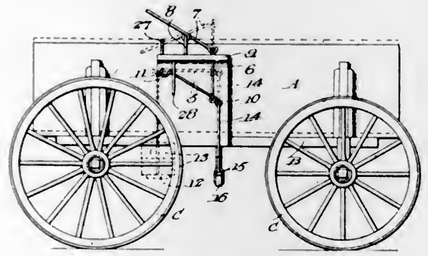
3. A cigar-marking machine comprising a rotary die carrier having dies and end journals, means coöperating with said journals to prevent horizontal movements and permit vertical movements of the die carrier so that the dies are pressed yieldingly downward by the weight of the carrier, adjustable means for yieldingly opposing downward movement of the die carrier, a traveling cigar carrier, a support for the latter, and connections between the two carriers whereby they are moved progressively in unison to present cigars successively to the dies.

4. A cigar-marking machine comprising a rotary die carrier having dies and end journals, vertically movable bearings for said journals, springs supporting said bearings and yieldingly opposing their downward movement, a traveling cigar carrier, a support for the latter, and connections between the two carriers whereby they are moved progressively in unison to present cigars successively to the dies.

5. A cigar marking machine comprising a rotary die carrier having dies and end journals, vertically movable bearings for said journals, springs supporting said bearings and yieldingly opposing their downward movement, means for regulating the resilience of said springs, a traveling cigar carrier, a support for the latter, and connections between the two carriers whereby they are moved progressively in unison to present cigars successively to the dies.

[Claims 6 to 10 not printed in the Gazette.]

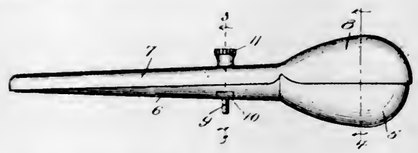
1,172,185. WAGON-SCALE. THOMAS M. WHITLOCK, Oakwood, Mo., assignor of one-half to James Fred Harris, Hannibal, Mo. Filed Nov. 6, 1914. Serial No. 870,665. (Cl. 73—8.)



1. The combination with a vehicle running gear and body, of fulcrum beams fixed transversely to the body in spaced relation to each other, a lever arranged between the fulcrum beams and swingingly suspended from the bottom of the body, a pair of fork-like levers adapted to work against the fulcrum beams, loop members pivotally connected to the ends of the levers, hooks on opposite sides of the first-named lever and detachably engaged by the loop members on the ends of the second named levers adjacent thereto, hook members carried by the bolsters of the running gear and detachably engaged by the loop members on the ends adjacent thereto of the second named levers, and weighing mechanism supported by the running gear and having connection with the first-named lever.

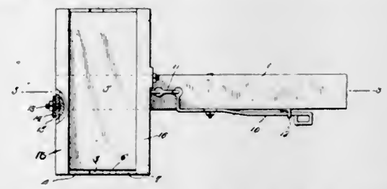
2. The combination with a vehicle running gear and body, of fulcrum beams fixed transversely to the body in spaced relation to each other, a lever arranged between the fulcrum beams and swingingly suspended from the bottom of the body, a pair of fork-like levers adapted to work against the fulcrum beams, loop members pivotally connected to the ends of the levers, hooks on opposite sides of the first-named lever and detachably engaged by the loop members on the ends of the second named levers adjacent thereto, hook members carried by the bolsters of the running gear and detachably engaged by the loop members on the ends adjacent thereto of the second-named levers, weighing mechanism supported by the running gear and having connection with the first-named lever, and means for moving the weighing mechanism into operative or inoperative position.

1,172,186. DARNER. ANTOINETTE M. WINTER, Butte, Mont. Filed Mar. 12, 1915. Serial No. 13,929. (Cl. 223—14.)



A darner comprising a substantially egg-shaped body having an outwardly tapered arm integrally formed with the smaller end thereof, said arm being provided with a cut-away portion adjacent to the smaller end of the body to provide a flat surface, an inwardly arched spring fixed medially thereof to the flat surface, a channeled arm having a bowl, the said arm and bowl being correspondingly shaped to substantially one-half of the first-named arm and body respectively to receive the same, a nut embedded in the first-named arm, and a headed set screw passed through both of said arms and spring and adjustably engaged in the nut to resist the action of the said spring for the bringing of the first-named arm and body and the second named arm and bowl toward each other.

1,172,187. BRAKE-SHOE HOLDER. PAUL L. YEAGER, Roaring Creek, Pa. Filed Apr. 28, 1915. Serial No. 24,499. (Cl. 21—82.)

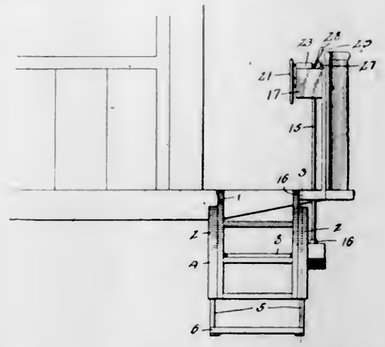


1. The combination with a brake block, of relatively movable clamping members carried thereby, means for adjusting one of the members and holding the same in adjusted position and comprising in part a spring lever and adjustable shoe retaining members carried by the clamping members.

2. The combination with a brake block, relatively movable shoe clamping members carried thereby, means for preventing vertical movement of the shoe within the clamping members, adjustable means for preventing lateral displacement of the shoe, and means for adjusting one of the clamping members toward and away from the other clamping member and comprising a link and a pivoted spring bell crank lever, together with a rack segment for holding the lever in adjusted position.

3. The combination with a brake beam and a brake block thereon, of angular clamping members, one of which is permanently secured to the block and the other of which is movable toward and away from the permanently secured members, adjustable retaining means carried by the clamping members, a link connected to the movable member, a spring bell crank lever pivoted to the brake beam and having one leg connected to the link, and a rack segment carried by the brake beam and arranged to hold the opposite end of the lever in adjusted position.

1,172,188. EXTENSIBLE CAR-STEP. ALFRED ARNT, Bainbridge township, Berrien county, Mich., assignor of one-half to Edward Hendricks, Benton Harbor, Mich. Filed July 7, 1915. Serial No. 38,515. (Cl. 105—87.)



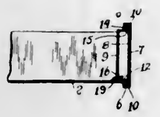
1. The combination with a set of steps, of an extensible step below the bottom step of said set capable of movement toward and away from the bottom step, casings secured to the side members of said set of steps, rack bars slidably mounted within said casings respectively and having the outer ends thereof connected with said extensible step, pinions meshing with said rack bars, means for rotating said pinions to lower and raise said step, lugs on said rack bars respectively below the teeth thereon, lugs in said casings in the path of movement of the first-mentioned lugs and adapted to be engaged thereby to limit the downward movement of the rack bars, and lugs on said rack bars above the teeth thereon adapted to be engaged by the adjacent teeth in said pinions when said rack bars are in lowered position to produce a binding action between the pinions and rack bars to augment the action of said first lugs and prevent accidental downward movement of said step when occupied.

2. The combination with a set of steps, of an extensible step normally in engagement with the under surface of the bottom step of said set and capable of movement to lowered position, means for lowering and raising said step, a vertical shaft for operating said means, an operating shaft, driving connections between said operating shaft and vertical shaft, a crank disk on said vertical shaft having one face thereof formed with a depression, a spring actuated locking bolt normally in engagement with said depression to hold said crank disk against turning movement and said step elevated, and a lever connected to said locking bolt and operable to retract the bolt against the action of the spring.

1,172,189. DRAWER-HEAD. EDWARD W. BAUER, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed July 6, 1914. Serial No. 849,341. (Cl. 45—7.)

1. A drawer having a drawer body open in the front with flanges projecting outwardly from the sides and bottom thereof, a front plate having channeled edges extending across the forward end of said drawer and interlocking with said flanges, a second plate placed adjacent to said chanel plate and having rearwardly projecting flanges on the sides and bottom thereof and an upwardly projecting lip engaging in the channel at the top of the front plate, said flanges on the side being fastened to the drawer body.

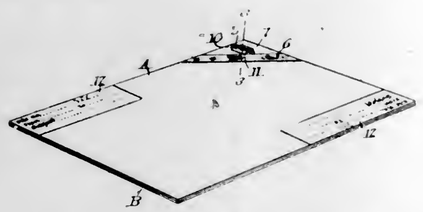
2. A drawer having a drawer body open in the front with flanges projecting outwardly from the sides and bottom thereof, a front plate having channeled edges extending across the forward end of said drawer and interlocking with said flanges, a middle plate placed adjacent to said channel plate and having rearwardly projecting flanges on the sides and bottom thereof and an upwardly projecting lip engaging in the channel at the top of the front plate, said flanges on the side being fastened to the drawer body, an inner plate having a projection formed at the top thereof to engage under the top channel of the front plate, flanges on the sides adapted to bear against the middle plate and a V-shaped flange formed on the bottom edge by which said inner plate is held between the bottom flange of the middle plate and projections provided in the bottom of the drawer.



3. A drawer having a drawer body open in the front with flanges projecting outwardly from the sides and bottom thereof, a front plate having channeled edges extending across the forward end of said drawer and interlocking with said flanges, a middle plate placed adjacent to said channel plate and having rearwardly projecting flanges on the sides and bottom thereof and an upwardly projecting lip engaging in the channel at the top of the front plate, said flanges on the side being fastened to the drawer body, an inner plate having a projection formed at the top thereof to engage under the top channel of the front plate, flanges on the sides adapted to bear against the middle plate and a V-shaped flange formed on the bottom edge by which said inner plate is held between the bottom flange of the middle plate and projections provided in the bottom of the drawer, said middle and inner plates inclosing an air space between them.

4. A drawer having a drawer body open in the front with flanges projecting outwardly from the sides and bottom thereof, a front plate having channeled edges extending across the forward end of said drawer and interlocking with said flanges, a middle plate placed adjacent to said channel plate and having rearwardly projecting flanges on the sides and bottom thereof and an upwardly projecting lip engaging in the channel at the top of the front plate, said flanges on the side being fastened to the drawer body, an inner plate having a projection formed at the top thereof to engage under the top channel of the front plate, a middle plate, projections in the bottom of the drawer between which and the flanges on the middle plate said inner plate is held in place.

1,172,190. LETTER-FILE. JOSEPH H. BAUGH, Wilmington, N. C. Filed Apr. 26, 1915. Serial No. 24,010. (Cl. 129—25.)



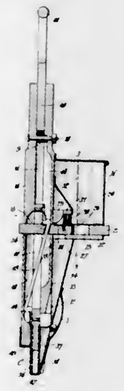
1. A file comprising a pair of relatively stiff sections, and a hinge joint on one of the sections near one corner thereof to permit the major portion of the section to be raised and lowered for accessibility to the contents between the sections.

2. A file comprising a pair of relatively stiff sections, a hinge joint on one of the sections near one corner thereof to permit the major portion of the section to be raised and lowered for accessibility to the contents between the sections, and index slips secured at diagonally opposite corners on the top section.

3. A file comprising a pair of relatively stiff sections detachably connected with each other, and a hinged joint formed on one of the sections to permit a major portion thereof to be raised and lowered for accessibility to contents between the sections.

4. A file comprising a pair of relatively stiff sections detachably connected with each other, a hinged joint formed on one of the sections to permit a major portion thereof to be raised and lowered for accessibility to contents between the sections, and index slips secured at diagonally opposite corners of the section having the hinged joint.

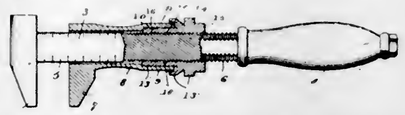
1,172,191. CORN-PLANTER. NATHAN E. BEVERLY, Baden, Va. Filed July 7, 1915. Serial No. 38,479. (Cl. 111—20.)



1. In a hand corn planter, a frame comprising side members and a hopper, means for connecting together and spacing apart the side members, said means including a bolt extending transversely through the side members near their upper ends and having a spacing sleeve interposed between said side members, plates secured externally on the side members and the walls of the hopper, said walls being also secured externally on the side members, a plunger mounted for vertical reciprocation between the side members, said plunger having a vertical slot engaging the spacing sleeve and whereby the plunger is guided and its movement is limited, said plunger having also a vertical slot through which passes an obliquely disposed rod, the terminals of which have offsets secured on opposite faces of the plunger; the side members of the frame being provided with recesses in their opposed faces wherein the offset portions of the oblique rod are guided; and a seed slide arranged for horizontal reciprocation through the hopper and through the frame members, said slide having an aperture for the passage of the oblique rod whereby it is actuated.

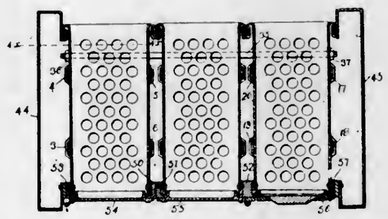
2. In a hand corn planter of the class described, a frame comprising side members permanently connected together and spaced apart, a hopper connected with one of the side members, a seed slide arranged for reciprocation transversely through the hopper and the side members, a slide actuating plunger mounted for vertical reciprocation between the side members of the frame and having a shoe at its lower end, a valve casing mounted at the lower end of the frame, a seed duct connecting the valve casing with the hopper, a valve hinged in the casing and adapted to be actuated by the plunger shoe, and an actuating spring for the valve, said spring being secured on the valve and extended upwardly to impinge on the external face of the seed duct.

1,172,192. WRENCH. WILLIAM J. BOLING, Montgomery, W. Va. Filed Nov. 10, 1914. Serial No. 871,375. (Cl. 81—161.)



In a device of the class described, in combination a wrench shank, a fixed jaw thereupon, said shank being formed rectangular in cross section, said shank being formed upon opposite longitudinal edges with a serrated convex portion, a slidable carriage having a rectangular bore through which said shank projects, a jaw formed at one end of said carriage, a sleeve being threaded internally throughout its length, and having diametrically opposite arcuate dove-tailed grooves adapted to be presented opposite the non-serrated surfaces of said shank, said sleeve being threadedly connected to the serrated portions, said carriage being formed at one end with a transverse shoulder and in a plane with said shoulder having internal threads adapted to engage with the sleeve in threaded relation, an integral collar formed upon said sleeve and extending around said carriage, and an integral mill disk formed upon said sleeve in advance of said collar and having an outwardly flaring surface connecting with said collar.

1,172,193. LOCK-BOX. RAYMOND G. BULLOCK, Jamestown, N. Y. Filed Feb. 26, 1913. Serial No. 750,839. (Cl. 211—36.)



1. A letter box formed of a single sheet of metal having a bottom and two upturned sides, said box having its upper edge slightly offset outwardly forming shoulders in the sides to receive the bottom of a box placed above it, the top of each box being closed by the box above it, leaving the front and back of the box open for filling and emptying the box.

2. The combination in a case of letter boxes, of letter boxes arranged in vertical series, each of said boxes being formed of a single sheet of metal and having a bottom and two sides therein, the upper edge of each of the sides being slightly offset to receive the bottom of a box above it, a socket arranged at the side of the box near the bottom, a lug projecting upwardly from the top of each box to engage with a socket at the bottom of the box above.

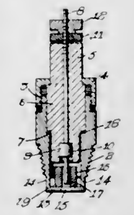
3. A mail box having a bottom and two sides, the bottom having flanges bent down on each end thereof, each of said sides having its forward edge bent outwardly and back upon itself and having its rear edge bent outwardly and back upon itself, said double portion being again bent outwardly and back upon the box, leaving an interval between itself and the box.

4. A mail box having a bottom and two sides, the bottom having flanges bent down on each end thereof, each of said sides having its forward edge bent outwardly and back upon itself and having its rear edge bent outwardly and back upon itself, said double portion being again bent outwardly and back upon the box, leaving an interval between itself and the box, the upper portion of said folded metal being provided with a lug, a recess in the bottom of said folded portion corresponding to said lug.

5. A metal box having a bottom and two sides, each of said sides having its upper edge offset outwardly to form a socket with shoulders therein to receive the bottom of the box next above it, the top of each box being closed by the box above it, leaving the front and back of the box open for filling and emptying the box.

[Claims 6 to 8 not printed in the Gazette.]

1,172,194. SPARK-PLUG. HARRY J. BUTLER and LOUIS P. CASPER, Louisville, Ky. Filed Sept. 25, 1914. Serial No. 863,457. (Cl. 123—169.)



1. A spark plug, comprising a holder having means for engaging an engine, an insulator held within the holder and having a longitudinal opening, an electrode held in the opening, said holder being extended at the end provided with means for engaging the engine beyond the insulation and having the said end partially closed and provided with an opening at the electrode, the edge of the opening being spaced apart from the electrode to form a spark gap, and a movable member encircling the electrode and adapted to rest against the closed end, said member comprising a sleeve of non-conducting material having an opening for receiving the electrode, said opening being of greater cross section than the cross section of the electrode to permit the movable member to move laterally with respect to the electrode and to move freely longitudinally of the electrode.

2. A spark plug, comprising a holder and an insulator held within the holder and having a longitudinal opening, an electrode detachably held in the opening of the insulator, a sleeve of non-conducting material mounted to slide on the electrode below the insulator, the holder having its lower end partially closed to limit the movement of the movable member away from the insulation, said partial closure being spaced apart from the electrode to provide a spark gap.

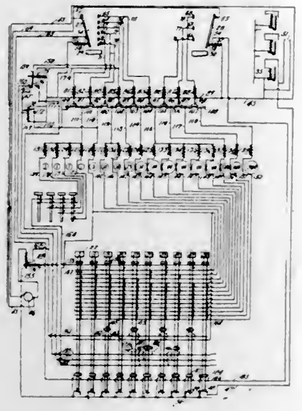
3. In a spark plug, the combination with an electrode, of a member of non-conducting material slidable freely on one of the electrodes to clean and polish the same, the other electrode having means for limiting the movement of the sleeve away from the first named electrode.

4. In a spark plug, the combination with the electrodes, of a member of non-conducting material mounted for free movement between the electrodes, and normally engaging both electrodes for cleaning and polishing the same.

1,172,195. ELECTRICALLY-OPERATED CASH-REGISTER AND MONEY-CHANGING DEVICE. EDWARD E. CARTER and ERNEST LIGHTFOOT, Los Angeles, Cal., assignors of three-eighths to C. F. Holland, Los Angeles, Cal. Filed May 2, 1914. Serial No. 835,862. (Cl. 194—2.)

1. In a change maker, a hopper adapted to receive coins of different diameters and values, a series of coin containers, a coin ejector on each container, a magnet for operating each ejector, normally open electrical circuits connecting with said means by which the depositing of a coin will operate to cut out the magnets controlling ejectors of coins corresponding to the coin deposited in the

hopper together with those controlling ejectors of coins of a higher denomination, a bank of keys representing sales of different amounts, and means whereby the operation of said keys will operate when a coin is deposited in the hopper to close circuits through the magnets controlling coin ejectors for discharging coins of a value equivalent to the difference between an amount designated by the operated key and the amount deposited in the hopper.



2. In a change maker, a hopper adapted to caliper coins of different diameters, a plurality of contact members in said hopper, electrical circuits connecting each of said contact members, magnets in each of said circuits, a series switch comprising a series of normally closed contact members adapted to be operated by the energizing of any of the magnets on energizing of the latter to open the series switch at various points, a plurality of coin receivers, a coin ejector for each receiver, a magnet for actuating each coin ejector, electrical connections between said magnets and the series switch, a bank of keys, and means on the keys for controlling circuits to the ejector magnets, whereby the depression of the key will effect the discharge of a coin or coins of a value less than the value of the coin or coins deposited in the hopper.

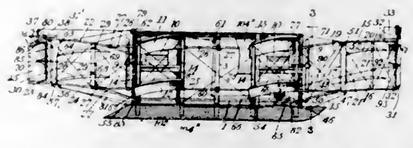
3. The combination with a bank of cash register keys of a series of bus-bars, contact members controlled by said keys normally out of connection with the bus-bars, coin containers, a coin ejector on each of said containers, a magnet adapted to operate each ejector, electrical connections between said magnets and the bus-bars, a coin receptacle, means by which the deposit of a coin in said receptacle will operate to control the flow of electrical current to the ejector magnets, means whereby the depression of a key will operate to complete electrical circuits through the bus-bars and ejector magnets according to the difference between the value of a coin deposited in the hopper and the amount of the sale represented by the key depressed to effect the discharge of a coin or coins from the containers, and automatic means operating when a container on which the ejector is operated is empty will act to effect the discharge of coins corresponding in value from either of the containers.

4. In an electrical change maker, a coin receiving hopper, an inclined electrical contact member in said hopper connected with one terminal of a source of electrical supply, a series of spaced contact members adapted to be electrically connected to the first named contact member on the deposit of a coin in the receptacle according to the diameter of the coin, a magnet connected to each of said spaced contact members connected with the other terminal of the course of electrical supply, a series of coin receptacles, coin ejectors thereon, magnets for operating said ejectors, normally closed switches for controlling the flow of current to said ejector magnets adapted to be actuated by the before-mentioned magnets, a bank of normally open contacts, keys for controlling said contacts, and connections between the contacts and the coin ejectors and the source of electrical supply, whereby the depression of a key will coöperate with a coin deposited in the hopper to complete a circuit through a coin ejector magnet to operate the ejector and for the discharge of a coin from the container.

5. In an electrical change maker, a coin receiving hopper, an inclined electrical contact member in said hopper connected with one terminal of a source of electrical supply, a series of spaced contact members adapted to be electrically connected to the first named contact member on the deposit of a coin in the receptacle according to the diameter of the coin, a magnet connected to each of said spaced contact members connected with the other terminal of the source of electrical supply, a series of coin receptacles, coin ejectors thereon, magnets for operating said ejectors, normally closed switches for controlling the flow of current to said ejector magnets adapted to be actuated by the before-mentioned magnets, a bank of normally open contacts, keys for controlling said contacts, connections between the contacts and the coin ejectors and the source of electrical supply, whereby the depression of a key will operate with a coin deposited in the hopper to complete a circuit through a coin ejector magnet to operate the ejector and for the discharge of a coin from the container, and means operable to effect the discharge of coins from adjacent containers when the container having the actuated coin ejector thereon is empty.

[Claims 6 to 9 not printed in the Gazette.]

1,172,196. HYDROAEROPLANE. JOHN H. CHAPMAN, Middleport, N. Y., assignor, by direct and mesne assignments, to Richardson Aeroplane Company, Inc., New Orleans, La., a Corporation of Louisiana. Filed Mar. 30, 1915. Serial No. 18,170. (Cl. 244—29.)



1. A hydro-aeroplane comprising a tunnel frame, propellers mounted tandem and centrally in alinement with the tunnel frame, fixed planes passing through the tunnel frame and projecting beyond the sides thereof, movable elevating and lowering planes mounted in pairs in advance of and at the rear of the tunnel frame, and means for operating the same.

2. A hydro-aeroplane comprising a tunnel frame, propellers mounted tandem and centrally in alinement with the tunnel frame, fixed planes passing through the tunnel frame and projecting beyond the sides thereof, movable elevating and lowering planes mounted in pairs in advance of and at the rear of the tunnel frame, and mechanism for operating said elevating and lowering planes independently or in unison in pairs.

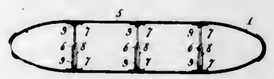
3. A hydro-aeroplane comprising a tunnel frame, propellers mounted tandem and centrally in alinement with the tunnel frame, fixed planes passing through the tunnel frame and projecting beyond the sides thereof, movable elevating and lowering planes mounted in pairs in advance of and at the rear of the tunnel frame, a pivotal lever having cable connections with the two sets of elevating and lowering planes, a segment member fixed to said lever, and other levers independent of each other for controlling independently the sets of elevating and lowering planes.

4. A hydro-aeroplane comprising a tunnel frame, propellers mounted tandem and centrally in alinement with the tunnel frame, fixed planes passing through the tunnel frame and projecting beyond the sides thereof, movable elevating and lowering planes mounted in pairs in advance of and at the rear of the tunnel frame, a pivotal lever having cable connections with the two sets of elevating and lowering planes, a segment member fixed to said lever, other levers, each having connections with distinct pairs of the elevating and lowering planes and movable with said segment member as the first mentioned lever is operated.

5. A hydro-aeroplane comprising a tunnel frame, propellers mounted tandem and centrally in alinement with the tunnel frame, fixed planes passing through the tunnel frame and projecting beyond the sides thereof, movable elevating and lowering planes mounted in pairs in advance of and at the rear of the tunnel frame, a pivotal lever having cable connections with the two sets of elevating and lowering planes, a segment member fixed to said lever, other levers and pawls carried thereby for engagement with the teeth of said segment member and movable with the latter as the first mentioned lever is actuated.

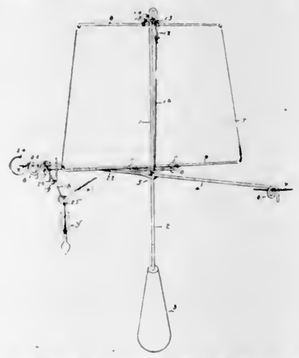
[Claims 6 to 12 not printed in the Gazette.]

1,172,197. HOT-WATER BAG. CHARLES P. COOK, Marshalltown, Iowa. Filed June 9, 1911. Serial No. 632,216. (Cl. 128—39.)



In a hot-water bag the combination of rows of transversely extending stay members, said stay members consisting of pairs of elongated metallic slotted links connected together, of disks secured upon the opposing walls of said bag, and of eyes formed upon said disks, each pair of links being looped to said eyes so as to have their ends designed to engage said disks.

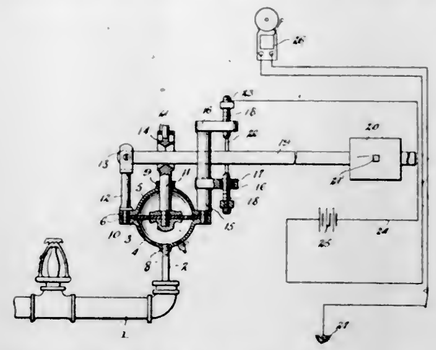
1,172,198. AERONAUTICAL DEVICE. CHARLES W. CORNELL, Jr., San Francisco, Cal., assignor of one-half to William N. McCaw, San Francisco, Cal. Filed Aug. 13, 1914. Serial No. 856,700. (Cl. 244—24.)



A glider including a runner having spiral guides on the opposite ends thereof; a mast rigidly attached to said runner to form a frame; a sail pivoted on said frame, a latch pivoted on said mast and engaging said sail; a trigger pivoted on said runner adjacent to and projecting beyond the end thereof; a link extending between said latch and said trigger; a tension member adapted to hold said link taut; and means on said trigger for detachably holding an object.

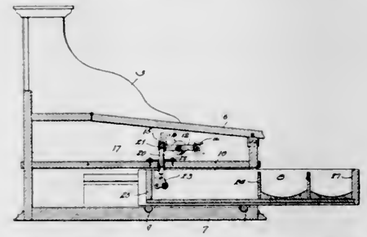
1,172,199. ALARM APPARATUS. WILLIAM H. DANA and THOMAS F. BRODERICK, Lawrence, Mass. Filed May 25, 1915. Serial No. 30,386. (Cl. 177—382.)

An alarm system of the class described comprising a casing in communication with a source of pressure, a diaphragm in said casing under the influence of the pressure, a stem secured to said diaphragm centrally thereof and projecting upwardly through the casing, posts secured to said casing at diametrically opposite sides of said stem, collars on the upper ends of said stem and one of said posts, a lever passed through said



collars and having one end thereof pivotally connected to the remaining post, a weight on the outer end of said lever adapted to lower the latter when the diaphragm is relieved of pressure, an electric circuit under the control of said lever, and means associated with the collar on said post for limiting the swinging movement of said lever.

1,172,200. DRAWER-STOP DEVICE. HOWARD A. DODGE, Los Angeles, Cal. Filed Apr. 6, 1914. Serial No. 829,793. (Cl. 235—22.)



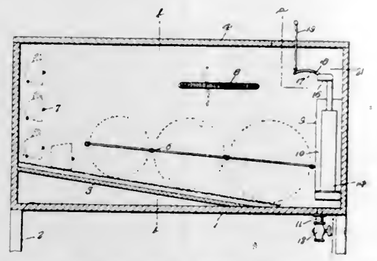
1. In a drawer stop device in combination with a casing having an apertured shelf and a drawer mounted under said shelf, of a lever pivotally mounted upon said casing, finger plates secured to the oppositely disposed ends of said lever, a pivoted latch secured adjacent one end of said lever adapted to project through a slot in said casing and enter the path of outward opening movement of said drawer, and means secured to said drawer arranged to engage said latch when the drawer is in a partly open position.

2. A drawer stop device comprising the combination with a casing having an apertured floor, of a drawer formed with a plurality of compartments slidably mounted beneath the floor, a lever pivoted in a chamber above the floor, frictional means engaging the lever to hold it in adjusted positions, and a latch pivoted on said lever extending through the aperture in the floor and adapted to be positioned to be engaged by the drawer on the opening movement of the latter to limit the opening movement of the drawer and prevent exposure of the rearmost compartments in the drawer.

3. In a drawer stop device, the combination of a casing, a shelf having an aperture therethrough separating said casing into superposed compartments, a drawer having partitions therein dividing the same into a series of compartments slidably mounted beneath the shelf, a lever pivotally mounted in the uppermost compartment.

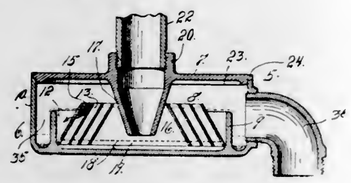
a latch pivoted on said lever and depending therefrom through the aperture in the shelf and adapted to be moved in and out of the path of travel of a strike on the drawer and whereby outward movement of the drawer may be limited, and means frictionally engaging the lever for retaining same in its adjusted position.

1,172,201. DISH-WASHING MACHINE. NELSON EGBERT, Valois, N. Y. Filed Sept. 10, 1915. Serial No. 50,069. (Cl. 141—9.)



The herein described dish washing machine comprising a body having an inclined bottom and a valved draining spout and also provided with a fixed covering portion and with a removable cover, a pump arranged in the body under the fixed covering portion and having a discharge spout, a deflector for directing the water discharged from the spout to any desired portion of the body, said deflector being pivotally connected to the spout at the upper side and discharging end of the latter, and a rod for operating and holding the deflector, said rod being attached to the deflector and extending through an opening in the fixed portion of the cover.

1,172,202. DENTAL AMALGAMATOR. JAMES N. FLOOD, Denver, Colo. Filed Sept. 4, 1914. Serial No. 860,177. (Cl. 83—67.)

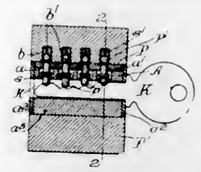


An amalgamator comprising a receptacle provided with a mercury coated spirally arranged inclined plate forming a relatively long channel whose inner extremity is in communication with the central part of the plate and whose outer extremity is in communication with the outer portion of the receptacle, and an inner wall surrounding the spiral plate, the height of the said wall being less than that of the said plate for the purpose set forth.

1,172,203. MAGNETIC LOCK. PERCY WHEATON FULLER, Boston, Mass., assignor to Albert B. Tenney, Lexington, Mass. Filed June 19, 1914. Serial No. 846,156. (Cl. 70—50.)

1. In a lock, two relatively movable lock-members of which one is a magnet, and a movable tumbler of magnetic material normally preventing relative movement between said lock-members, one of said lock members being adapted to receive a key containing magnetic material in position to reduce the air gap in the magnetic field adjacent to the movable tumbler, and thereby to operate the tumbler to permit relative movement between said lock-members.

2. In a lock, two relatively movable lock-members, of which one is a magnet and the other is located between the poles of the magnet, a movable tumbler of magnetic material normally preventing relative movement between said lock-members, the lock-member located between the poles of the magnet being adapted to receive a key containing magnetic material in position to reduce the air gap in the magnetic field adjacent to the movable tumbler, and thereby to operate the tumbler to permit relative movement between said lock-members.



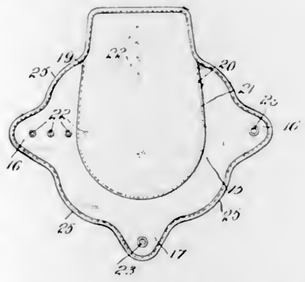
3. In a lock, a fixed lock-member and a rotatable lock-member, one of said lock-members being a magnet, and a movable tumbler of magnetic material normally preventing movement of the rotatable lock-member, one of said lock-members being adapted to receive a key containing magnetic material in position to reduce the air gap in the magnetic field adjacent to the movable tumbler, and thereby to operate the tumbler to permit the rotation of the rotatable member.

4. In a lock, a fixed lock-member comprising a magnet, a rotatable lock-member of non-magnetic material located between the poles of the magnet, and a movable tumbler of magnetic material normally preventing rotation of said rotatable lock-member, said rotatable lock-member being adapted to receive a key containing magnetic material in position to reduce the air gap in the magnetic field adjacent to the tumbler, and thereby to actuate the tumbler and permit rotation of said rotatable lock-member.

5. In a lock, a fixed lock-member comprising a magnet, a movable lock-member of non-magnetic material located between the poles of the magnet, one at least of the poles of said magnet being provided with a pin engaging socket, and said movable lock-member being provided with a key way and a pin hole opening into said key way, a tumbler pin of magnetic material movable in said pin hole and pin socket normally holding said movable lock-member against movement, said key way adapted to receive a key containing magnetic material in position to reduce the air gap in the magnetic field adjacent to the tumbler pin and thereby to withdraw the pin from said pin engaging socket.

[Claims 6 to 14 not printed in the Gazette.]

1,172,204. LUNCH-WRAPPER. CLEMENT J. GERHARDSTEIN, San Francisco, Cal. Filed Apr. 9, 1915. Serial No. 20,266. (Cl. 150—52.)

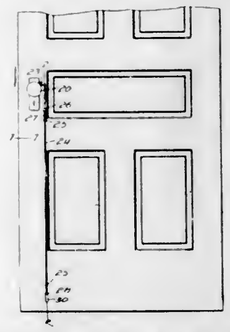


1. A lunch wrapper comprising a sheet of flexible material provided at the sides and ends thereof with oppositely extending flaps, one of said flaps being of a width exceeding that of the remaining flaps, a hem surrounding the edge of the sheet, and an impervious lining sheet having a portion thereof inserted in the hem portion of the relatively wide flap.

2. A lunch wrapper comprising a sheet of flexible material provided at the sides and ends thereof with oppositely extending flaps, one of said flaps being of a width exceeding that of the remaining flaps, tongues extending outwardly in the angles between the flaps, a hem surrounding the edge of the sheet, and an impervious lining sheet having a portion thereof inserted in the hem portion of the relatively wide flap.

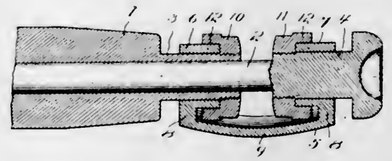
3. A lunch wrapper comprising a sheet of flexible material provided at the sides and ends thereof with oppositely extending flaps, one of said flaps being of a width exceeding that of the remaining flaps, a hem surrounding the edge of the sheet, and an impervious lining sheet having a portion thereof inserted in the hem portion of the relatively wide flap, the opposite flaps being provided with fastening means whereby they may be adjustably connected together.

1,172,205. DOOR-OPENER. SANFORD E. GILLENTINE, Anguilla, Miss. Filed June 22, 1915. Serial No. 35,658. (Cl. 70—119.)



The combination with a door having a latch actuating knob provided with a shank, of a clamp mounted on said shank, said clamp being provided on the rear face thereof with a headed stud, a vertically movable spring actuated rod slidably supported on the door and having a fork engaging the headed stud, and a toe piece at the lower end of said rod.

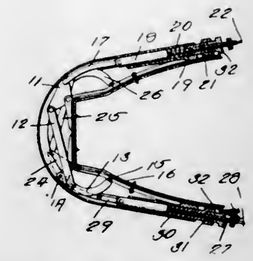
1,172,206. AIR-HAMMER. ALONZO GRIGGS, Charleston, S. C. Filed Apr. 10, 1915. Serial No. 20,519. (Cl. 78—14.5.)



1. The combination with a pneumatic hammer including a barrel having a reduced and threaded end and a snap having a threaded end, of a cuff including opposite cylindrical heads to slidably receive the ends of the snap and barrel and a plate extension rigidly connecting the heads and means having threaded connection with the snap and barrel and slidably receiving the heads of the cuff.

2. The combination with a pneumatic hammer including a barrel having a reduced and threaded end and a snap having a threaded end, of a cuff including opposite cylindrical heads to slidably receive the ends of the snap and barrel and a plate extension rigidly connecting the heads and nuts threaded upon the ends of the snap and barrel, said nuts having portions of increased diameter to slidably receive the heads of the cuff.

1,172,207. BRIDLE. ANDREW J. HENTSCHEL, Schulenburg, Tex. Filed Dec. 10, 1914. Serial No. 876,462. (Cl. 54—15.)

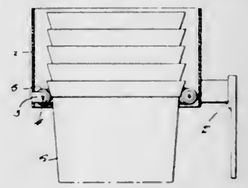


1. In a bridle, a frame, levers pivoted to the said frame, pressure members connected to the levers and arranged to engage the nostrils of a horse, means connected to said pressure members for actuating the same, the said last mentioned means for each pressure member being located on the opposite side of the frame to the pressure member itself and means for rendering said operating means inoperative.

2. A bridle comprising a frame, a U-shaped member secured to the frame and in spaced relation thereto, pressure members pivotally mounted on the said U-shaped member, means on the said frame for actuating the said pressure members and means for rendering said actuating means inoperative.

3. In a bridle, a U-shaped frame having apertures on the opposite sides thereof, a U-shaped member secured to the said frame at the ends thereof and in spaced relation to the outer face of said frame, pressure members pivotally mounted on the said U-shaped member and constructed and arranged to normally lie in the space between the frame and the U-shaped member, means for actuating said pressure members, resilient means tending to prevent said actuation, means to vary the tension of said resilient means and means to prevent the actuation of the said actuating means.

1,172,208. VENDING-MACHINE FOR SANITARY DRINKING-CUPS. HARRIET HILL, New York, N. Y. Filed Apr. 27, 1915. Serial No. 24,294. (Cl. 211—8.)



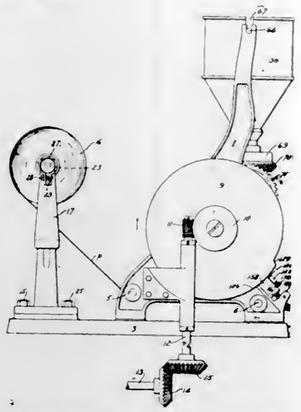
1. A cup dispenser comprising a collar, a series of rollers journaled in the collar and engageable with the lowermost cup of a stack to support the stack.

2. A cup dispenser comprising a collar having inwardly disposed lugs, a ring supported in the lugs and a series of rollers journaled upon the ring.

1,172,209. POWDER-FOLDING MACHINE. WILFORD A. HILL, Waltham, Mass., assignor, by direct and mesne assignments, to Hill Powder Company, Boston, Mass., a Corporation of Massachusetts. Filed June 12, 1907, Serial No. 378,547. Renewed Apr. 10, 1914. Serial No. 831,053. (Cl. 93—3.)

1. A powder-folding machine, comprising paper-feeding mechanism, a pivotal folder for forming the fold which receives the powder, a cutter which serves the paper and constitutes part of a folder to double one edge

of the paper over the other, a final folder and end wiper, bending devices for doubling back the ends of the folded paper, and means for actuating the above-named parts in the proper order.



2. A powder-folding machine, comprising paper-feeding mechanism, a pivotal folder for forming the fold which receives the powder, a cutter which severs the paper and constitutes part of a folder to double one edge of the paper over the other, a final folder and end wiper, means for actuating the above-named parts in the proper order, and means operative after the ends of the folded paper have been turned over by the end wiper for sharply bending back said ends at the end folds.

3. A powder-folding machine, comprising paper-feeding mechanism, a stationary folder-carrying frame, a cutter for severing the paper, a series of folders for forming the fold which receives the powder, doubling the paper over the powder-containing fold, folding down the ends of the paper, and pinching devices for doubling back the end folds, mounted in said frame and operating in stationary locations.

4. A powder-folding machine, comprising paper-feeding mechanism, a cutter for severing the paper, a series of folders for forming the fold which receives the powder and doubling the paper over the powder-containing fold, end wipers for bending over the ends of the folded paper, pinchers carried by said end wipers and brought into operative position by the latter, and means for pressing said end wipers and pincers inward toward each other to double back the paper at the end folds.

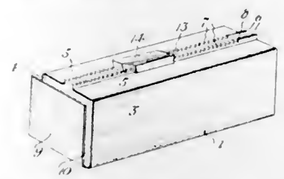
5. A powder-folding machine, comprising paper-feeding mechanism, a cutter for severing the paper, a series of folders for forming the fold which receives the powder and doubling the paper over the powder-containing fold, plungers carried by one of said folders and movable longitudinally thereof, end wipers for bending over the ends of the folded paper formed upon said plungers, and means for forcing said plungers inward after the conclusion of the end-wiping movement to double back the ends of the paper.

[Claims 6 to 59 not printed in the Gazette.]

1,172,210. CHALK-HOLDER. WARREN OSWELL JACKSON, Ogden, Utah. Filed Apr. 26, 1915. Serial No. 24,170. (Cl. 33—87.)

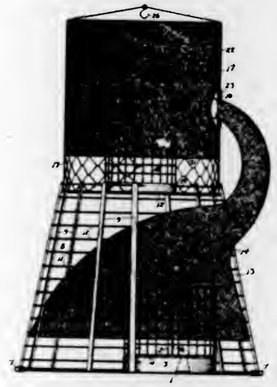
1. A chalk holder comprising a body adapted to hold a block of chalk and provided with a transverse slot near one end to expose a portion of the chalk, such body having a longitudinal slot, a flange at the side of said slot and provided with ratchet teeth, a follower movable longitudinally in the body, a guide for the follower connected thereto and a dog connected to the guide for engagement with the ratchet teeth.

2. A chalk holder comprising a hollow body formed of a single piece of sheet metal and having an end wall spaced from one end thereof forming a slot between said end wall and said hollow body, said hollow body having a longitudinal slot in one side and ratchet toothed flanges on opposite side of said slot, a follower in said hollow



body, a guide engaging and slidable on said ratchet toothed flanges and extending along said longitudinal slot, said guide being connected to the follower, and a dog for engaging the ratchet teeth of the flanges and mounted on said guide.

1,172,211. FLY-TRAP. LOUIS JACOBS, San Francisco, Cal. Filed Feb. 4, 1915. Serial No. 6,156. (Cl. 43—22.)



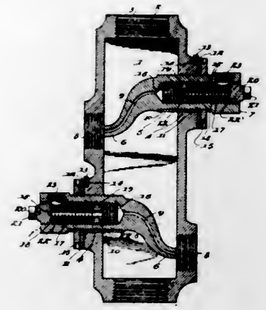
The combination of a frame having a metal top, a bait holder therewithin, a trap in the frame formed of fine woven wire mesh and tapering upwardly, the upper portion of the trap extending through a hole in the side of the frame, an upper frame supported upon the top of the lower frame, a bait holder within said upper frame, a trap of fine wire mesh in said upper frame, said trap tapering upwardly to a small hole in the top, the upper portion of the upper frame, above the junction of the trap therein with the surface of the upper frame, having a lining of fine woven wire mesh, said lining having an aperture therethrough, the tapering upper end of the lower trap removably communicating with said aperture.

1,172,212. SANDER. CHRISTIAN A. JOHNSON and HANS THISSENIUS, Laramie, Wyo. Filed Jan. 15, 1915. Serial No. 2,437. (Cl. 105—263.)

1. A sand box provided with a nozzle receiving opening in one side thereof and a sand discharge opening in the opposite side thereof, in combination with an air nozzle adjustably threaded in the first-named opening, said nozzle being internally bored and threaded and provided at its outer end with a lateral opening communicating with the bore, said opening being adapted to receive an air supply pipe, locking means for holding the nozzle against rotation, and a sieve disposed within the nozzle and in communication with said lateral opening.

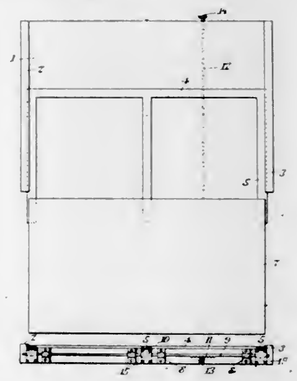
2. A sand box provided with a sand receiving opening in one side thereof and a sand discharge opening in the opposite side thereof, in combination with an air nozzle adjustably threaded in the first-named opening, said

nozzle being internally bored and threaded and provided with a lateral opening communicating with said bore to receive the end of an air supply pipe, means for holding the nozzle against displacement, and a sieve disposed within the bore of the nozzle, said sieve having enlarged end portions in threaded engagement with the interior



of the nozzle and a reduced tubular body portion having a bore opening through the inner enlarged end portion thereof, said tubular body being disposed to provide an air chamber in line with said lateral opening and provided with a multitude of small openings connecting its bore with said air chamber.

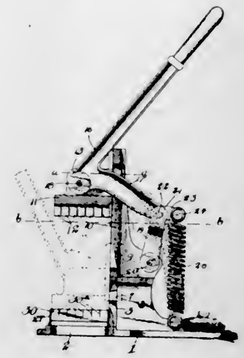
1,172,213. FORM-LOCK EXTENSION. JOHN J. JOHNSON, St. Paul, Minn. Filed July 24, 1915. Serial No. 41,703. (Cl. 101—50.)



In combination with a type bed, a form lock extension comprising a cross bar movably mounted upon the bed and having ratchet bars connected therewith, guides mounted on the bed, a cam rod movably mounted in the guides and provided with cams, said cam rod also having a set of gear teeth, a shaft journaled under the bed, a pinion carried by the shaft and meshing with the teeth of the cam rod, pawls movably mounted in the bed and engageable with the teeth of the ratchet bars, said pawls having openings adapted to receive the cams upon the cam rod and springs located under the pawls and engaging the same and being under tension with a tendency to hold the pawls toward the teeth upon the ratchet bars.

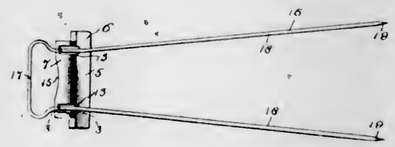
1,172,214. OPERATING MECHANISM FOR POTATO-CUTTERS. WOLFF KAUFMAN, Paterson, N. J. Filed Nov. 20, 1915. Serial No. 62,598. (Cl. 74—39.)

1. In a machine of the class described, a member provided with a longitudinal slot and also provided on one side with bearings, a member movable on said slotted member and provided with guide arms having guide grooves in their opposing sides receiving the opposite side edges of said slotted member so that said guide edges of the slotted member form guides for said movable member, a bell crank lever pivotally connected to the movable member and having one of its arms extended through the slot of the slotted member and a link pivotally mounted on said bearings and also pivotally connected to the said arm of the lever.



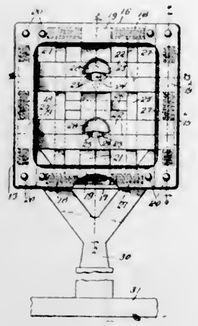
2. In a machine of the class described, a member provided with a longitudinal slot and also provided on one side with bearings, a member movable on said slotted member and provided with guide arms having guide grooves in their opposite sides receiving opposite side edges of said slotted member so that said guide edges of the slotted member form guides for said movable member, a bell crank lever pivotally connected to the movable member and having one of its arms extended through the slot of the slotted member and a link pivotally mounted on said bearings and also pivotally connected to the said arm of the lever, the said lever arm having a rearwardly projecting portion extending beyond said link and a spring connected to said extended portion of the lever arm and serving to move the movable member in one direction.

1,172,215. HAT-FASTENER. EDWARD HENRY KLEIN, Brooklyn, N. Y. Filed Dec. 31, 1913. Serial No. 809,690. (Cl. 132—25.)



A fastener comprising a keeper substantially cylindrical in cross section at its ends and having a recess located between the said cylindrical ends, said keeper having at one side circular perforations and at its opposite side slots the long dimensions of which are disposed at right angles to the axis of the keeper, the slots and perforations being located directly opposite each other transversely of the keeper, and a pin having opposite side portions provided with enlarged end portions which are less in length than the diameter of the keeper, said enlarged end portions adapted to pass freely through the slots and being of greater transverse breadth than the diameter of the perforations, the opposite side portions of the pins being permanently and slidably held in the perforations and adapted to enter and withdraw from the slots.

1,172,216. CANE-STRIPPER. JAMES H. KNIPP, McGlone, Ky., assignor of one-half to William B. Whitt, McGlone, Ky. Filed July 10, 1915. Serial No. 39,168. (Cl. 130—31.)



1. In a cane stripper, a rectangular frame opposed members of which constitute housings having slots in their inner side walls, a pair of stripping members guided in the slots of the opposed housings, and springs within the housings operating to force the stripping members in the direction of each other.

2. In a cane stripper, a rectangular frame opposed members of which constitute housings having slots in their inner side walls, a pair of stripping members guided in the slots of the opposed housings, and springs within the housings operating to force the stripping members in the direction of each other, said stripping members being provided with arcuate recesses in their meeting faces.

3. In a cane stripping device, a rectangular frame opposed members of which constitute housings having slots in their inner side walls, a plurality of pairs of stripping members guided in the slots, and springs arranged in the housings and forcing the stripping members of each pair in the direction of each other.

4. In a cane stripping device, a frame, the side, top and bottom members of which constitute housings having slots in their inner side walls, a plurality of pairs of spring actuated stripping members guided in the slots of opposed side members, and a single pair of spring actuated stripping members guided in the slots of the top and bottom members, the stripping members of each pair being provided in their meeting faces with arcuate recesses producing feed openings at the points of intersection of the several pairs of stripping members.

5. In a cane stripping device, a frame, the side, top and bottom members of which constitute housings having slots in their inner side walls, a plurality of pairs of spring actuated stripping members guided in the slots of opposed side members, and a single pair of spring actuated stripping members guided in the slots of the top and bottom members, the stripping members of each pair being provided in their meeting faces with arcuate recesses producing feed openings at the points of intersection of the several pairs of stripping members, in combination with guide members pivotally mounted adjacent to the feed openings.

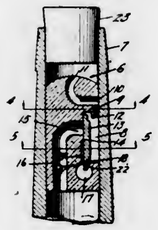
1,172,217. COUPLING. PETER KUBINA, Star Junction, Pa. Filed Dec. 15, 1914. Serial No. 877,397. (Cl. 213—56.)

1. The herein described construction of car couplers, comprising two flat longitudinally extending plates one resting on the other and both secured to the platform of a car and both of the plates projecting beyond the end of the car, the extending end of the lower plate being slotted and the end of the upper plate being bent upwardly and angularly over the slotted end of the lower plate, the angular end of the said upper plate being bent upon itself to provide an eye and being continued in contacting relation with the first mentioned bent portion and having its end engaging with the lower plate to the rear of the slot therein, and a gravity coupling pin adapted to be received in the slot of the lower plate and having a body portion bent and received in the eye.



2. A coupler constructed of two separable plates having overlying body portions which are connected to the platform, the lower plate having its end slotted, the upper plate having its end bent over and extending angularly above the lower plate and the end thereof further bent to provide an eye, a member passing through the eye and having its ends bent and continued longitudinally below the eye, one of the said ends being extended at a right angle with relation to the eye to provide a pin which is received in the slot of the lower plate, the outer member being extended transversely of the eye and bent angularly to provide a handle, substantially as and for the purpose set forth.

1,172,218. NON-REFILLABLE BOTTLE. DEL ROY LANGSTAFF, Los Angeles, Cal. Filed May 26, 1914. Serial No. 841,018. (Cl. 215—69.)

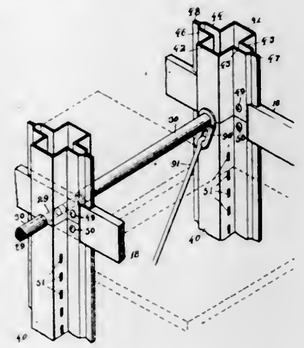


1. An attachment for bottle necks, comprising a body member adapted to be mounted in the neck of a bottle having a recess on its peripheral side wall, a discharge passage connecting with said recess and opening at the upper end of the body member and having a passage leading from the underside of the body member to the vertical wall of the recess, and a plate pivoted in the lower wall of the recess normally abutting against the rear wall of the recess to close the upper end of the last-named passage.

2. An attachment for bottle necks, comprising a body member adapted to be mounted in the neck of a bottle having a recess on its peripheral side wall, a discharge passage connecting with said recess and opening at the upper end of the body member and having a passage leading from the underside of the body member to the vertical wall of the recess, and a tiltable plate pivoted in the lower wall of the recess normally abutting against the rear wall of the recess to close the upper end of the last-named passage, and a depending lip on said body member projecting below the upper edge of said pivoted plate to limit the movement of the latter.

3. In a non-refillable bottle, comprising the combination with a bottle neck, of a body member adapted to be mounted in the bottle neck having a recess on one side thereof and formed with an opening extending therethrough beneath the recess and communicating with the recess through a slot, a depending lip on the upper wall of the recess on the outer face of which is formed a channel which connects at one end to the recess and at the opposite end to a curved passage in the body member, and a plate in said recess having its lower end pivotally engaged in the slot and its upper end projecting rearwardly of the lip, said plate normally closing an opening which communicates with the interior of the bottle neck below the body member.

1,172,219. LIBRARY-STACK CONSTRUCTION. WARREN B. LOOK, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Aug. 10, 1914. Serial No. 856,049. (Cl. 211—27.)



1. An upright support comprising sections each of which is made up of a pair of channels having outwardly extending meeting edges, a supporting bar extending across the sections between said channels, a bearing plate interposed between consecutive sections on each side of said supporting bar.

2. An upright support comprising sections each of which is made up of a pair of channels having outwardly extending meeting edges, a supporting bar extending across the sections between said channels, a bearing plate interposed between consecutive sections on each side of said supporting bar, a bar extending transversely of said supporting bar, a depression in said supporting plate to receive said bar.

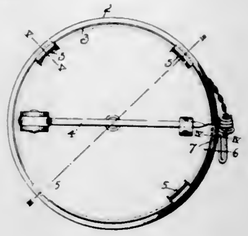
3. An upright support comprising sections each of which is made up of a pair of channels having outwardly extending meeting edges, a supporting bar extending across the sections between said channels, a bearing plate interposed between consecutive sections on each side of said supporting bar, a bar extending transversely of said supporting bar, a depression in said supporting plate to receive said bar, a cap for covering the end of said bar and a recess in the edge of said supporting plate to receive the end of said cap.

4. An upright support comprising sections each of which is made up of a pair of channels having outwardly extending meeting edges, said meeting edges being partly cut away on opposite sides of said sections at the ends thereof, a cap for covering the opening of the top section, said cap conforming to the outline of the end of the section and having depending lugs that engage with said cutaway portions.

5. An upright support comprising sections each of which is made up of a pair of channels having outwardly extending meeting edges, said meeting edges being partly cut away on opposite sides of said sections at the ends thereof, a cap for covering the opening of the top section, said cap conforming to the outline of the end of the section and having depending lugs that engage with said cut away portions, bolts extending through said lugs and said meeting edges to fasten the cap to the section.

[Claims, 6 to 8 not printed in the Gazette.]

1,172,220. REEL-CASE. GEORGE W. MCKINSTRY and GEORGE H. DAY, Southbridge, Mass., assignors to American Optical Company, Southbridge, Mass., a Corporation of Massachusetts. Original application filed Sept. 24, 1910, Serial No. 583,811. Divided and this application filed Aug. 21, 1912. Serial No. 716,282. (Cl. 220—10.)

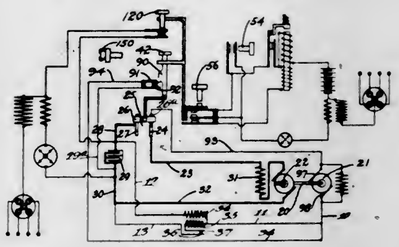


1. In a device of the character described, a casing comprising a back plate having a plurality of tongues, a cover having a turned edge with a recess therein adapted to receive the tongues and permit them to slip under the edge as the back is rotated, and a keeper tongue on the back plate adapted to slip in the recess and prevent further rotation of the back or cover.

2. A casing for a device of the character described comprising a cover section curving inwardly at the rear, and a back plate fitting against the rear of the cover, said back plate having tongues cut therefrom and bent to frictionally engage the inner face of the cover to secure the parts together, one of said parts having a recess formed therein, and the other part having a tongue fitting into the recess to lock the cover and base plate against relative rotation.

3. In a device of the character described, the combination with a dome like cover section, of a back plate coöperating with said cover section, said back plate being formed with portions over-lapping the edge of the dome like cover section, and with an additional portion extending inwardly away from the back plate and fitting within the cover section, whereby the over-lapping and inwardly projecting portions of the back plate regulate the relative position of the parts, one of said parts having a recess formed in the edge thereof, and the other of said parts having a projecting tongue fitting within the recess to lock the parts against relative rotation, substantially as described.

1,172,221. SYSTEM OF ELECTRICAL DISTRIBUTION AND CONTROL. FORREST B. MACNAB, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed Dec. 26, 1912. Serial No. 738,647. (Cl. 123—148.)



1. In a system of power distribution and control, the combination with an engine, of a starting and ignition system therefor; said starting system being normally disconnected from the engine and a main operating member operable to effect the coupling of said starting system and engine together for starting purposes, and to

bring the ignition system into operation to furnish ignition for the engine.

2. In a system of power distribution and control, the combination with an engine, of a starting device and a plurality of ignition systems of different types therefor; and a controlling element operable to bring said starting device and a plurality of the ignition systems into operation to start the engine and to concurrently furnish different types of ignition therefor.

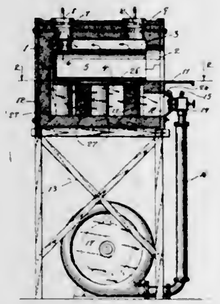
3. In a system of power distribution and control, the combination with an engine; of a starting device and a plurality of ignition systems therefor; a controlling element operable to bring said starting device and a plurality of the ignition systems into operation to start the engine and to furnish ignition thereto respectively; and means for maintaining one of said ignition systems inoperative condition, when said controlling element returns to its normal position.

4. In a system of power distribution and control, the combination with an engine; of a starting device and a plurality of ignition systems; of coupling means for connecting the engine and starting device together; and a main operating member for establishing said ignition systems, and operating said coupling mechanism to connect the engine and starting device together, concurrently.

5. In a system of power distribution and control, the combination with an engine, of a starting device and a plurality of ignition systems for starting and igniting said engine; of coupling means for connecting the engine and starting device together; a main operating member for establishing said ignition systems and operating said coupling mechanism to connect the engine and starting device together; and independent elements for controlling said ignition systems, operable independently of or concurrently with said main operating member.

[Claims 6 to 19 not printed in the Gazette.]

1,172,222. METALLURGICAL FURNACE AND FURNACE PARTS. THEODORE W. MUCKLE, Denver, Colo., assignor to Willis W. Case, Jr., Denver, Colo. Filed June 1, 1915. Serial No. 31,500. (Cl. 75—40.)



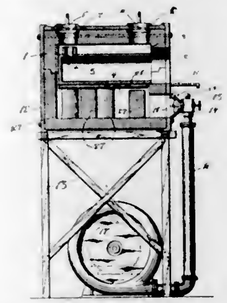
1. In a metallurgical furnace, having a combustion chamber, a muffle chamber, and a burner opening, in combination with a burner, a plurality of flame diverting elongated pedestals, triangular in cross-section, arranged in offset positions in said combustion chamber, one of said pedestals being disposed adjacent said burner opening, and being of lesser height than the other of said pedestals, substantially as described.

2. A metallurgical furnace part, consisting of a flat imperforate plate, detachedly supported and readily replaceable within said furnace, substantially above the bottom of the combustion chamber, forming a top for said combustion chamber and a bottom for the ore treating chamber, and said plate being slightly less in dimensions than the interior of the furnace, and adapted to flatly and positively support an ore treating vessel, without the intervention of supporting stools.

3. A metallurgical furnace comprising walls forming a hollow interior; an imperforate, readily replaceable flat plate detachedly supported therein, and dividing said interior into a combustion chamber and an ore treating chamber, and providing a top for said combustion chamber and a bottom for said ore treating chamber, the edges of said plate being slightly spaced from the walls of the furnace; and a fuel burner discharging into said combustion chamber below said plate.

4. A metallurgical furnace, comprising walls forming a hollow interior of uniform dimensions; an imperforate readily replaceable refractory plate detachedly supported therein and dividing said interior into a combustion chamber and a muffle chamber, said plate extending substantially the length and breadth of said uniform interior but slightly spaced at its edges therefrom, and adapted to flatly and positively support a muffle without the intervention of supporting stools; and a fuel burner discharging into said combustion chamber below said plate, whereby said plate receives on its whole under surface the direct impact of the flames of combustion and baffles the resultant heat around its spaced edges into said muffle chamber.

1,172,223. FURNACE PART. THEODORE W. MUCKLE, Denver, Colo., assignor to Willis W. Case, Jr., Denver, Colo. Original application filed June 1, 1915. Serial No. 31,500. Divided and this application filed Aug. 16, 1915. Serial No. 45,794. (Cl. 158—1.)



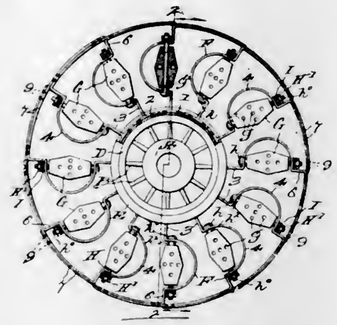
1. In a metallurgical or similar furnace, having a combustion chamber and a burner opening leading thereto, a hollow separable boss member communicating with said burner opening, comprising upper and lower portions, the lower portion of said boss member being fixed and the upper portion being removably seated on said lower portion to directly open and close a large portion of said burner opening to the atmosphere, and a burner for said burner opening.

2. In a metallurgical or similar furnace having a combustion chamber and a burner opening leading thereto, a burner adjacent said opening, and a two part boss member interposed between said burner opening and said burner, forming an open continuation therebetween, the lower portion of said boss being fixed and the upper portion being removably seated on said lower portion to open and close a large portion of said burner opening to the atmosphere as desired.

3. In a metallurgical or similar furnace having a combustion chamber and a burner opening leading thereto, a burner adjacent said opening, having a nozzle of substantially lesser diameter than said burner opening, and a two-part boss member interposed between said burner opening and burner, forming a conical continuation therebetween, the lower portion of said boss being fixed and the upper portion being removably seated on said lower portion to open and close the upper portion of said burner opening to the atmosphere as desired.

1,172,224. SPRING-WHEEL. EDWARD K. RABEY, Deanes, Va. Filed June 14, 1915. Serial No. 34,109. (Cl. 152—29.)

1. In a resilient wheel the combination with an inner wheel or hub provided with a fixed metal band mounted thereon, of a resilient outer portion secured to said band and comprising a series of spring members projecting radially from said band, and having the central part of said radial portions curved to form U-shaped loops, and the elongated outer ends of said spring members overlapping and secured together, and bent to form a resilient metal tread for the wheel, with buffers mounted in said loops, substantially as described.



2. In a resilient wheel the combination with an inner wheel or hub provided with a fixed metal band mounted thereon, of a resilient outer portion secured to said band and comprising a series of spring members projecting radially from said band, and having the central part of said radial portions curved to form U-shaped loops, and the elongated outer ends of said spring members overlapping and secured together, and bent to form a resilient metal tread for the wheel, with bolts spanning said loops and passing through perforations in said spring members, and buffers mounted on said bolts, and adapted to take up the shock when said loops are compressed, substantially as described.

3. In a resilient wheel the combination with an inner wheel or hub provided with a fixed metal band mounted thereon, of a resilient outer portion secured to said band and comprising a series of spring members projecting radially from said band, and having the central part of said radial portions curved to form U-shaped loops, and the elongated outer ends of said spring members bent at right angles to said radial portions and overlapping and riveted together, to form a resilient metal tread for the wheel, with buffers mounted in said loops, substantially as described.

4. In a resilient wheel the combination with an inner wheel or hub provided with a fixed metal band mounted thereon, of a resilient outer portion secured to said band and comprising a series of spring members projecting radially from said band, and having said radial portions curved to form loops, and the elongated outer ends of said spring members bent at right angles to said radial portions and overlapping and riveted together, to form a resilient metal tread for the wheel, with bolts spanning said loops and passing through perforations in said spring members, springs and nuts on the outer ends of said bolts adapted to hold said loops under initial compression, and buffers mounted on said bolts, and adapted to take up the shock when said loops are compressed, substantially as described.

5. In a resilient wheel the combination with an inner wheel or hub provided with a fixed metal band mounted thereon, of a resilient outer portion secured to said band and comprising a series of spring members projecting radially from said band, and having said radial portions curved to form loops, and the elongated outer ends of said spring members bent at right angles to said radial portions and overlapping and riveted together, to form a resilient metal tread for the wheel, with bolts spanning said loops and passing through perforations in said spring members, springs and nuts on the outer ends of said bolts adapted to hold said loops under initial compression, and rubber buffers provided with wear plates mounted on said bolts, and adapted to take up the shock when said loops are compressed, substantially as described.

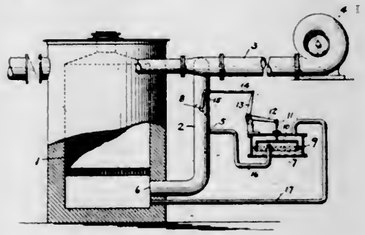
1,172,225. ARTIFICIAL-STONE COMPOSITION. PIERRE ROBERT, Garnett, S. C., assignor of one-half to James C. Richardson, Robertsville, S. C. Filed Jan. 11, 1915. Serial No. 1,675. (Cl. 106—31.)

1. As a composition of matter, an artificial stone composition comprising clayey earth and pine needles dried and mixed together, and crude sap thoroughly mixed with the dried mixture aforesaid, substantially as described.

2. The process of manufacturing an artificial stone composition of the character described, consisting in heating clayey earth and thoroughly drying the same, mixing into said heated earth the fibrous products of the pine tree, while the application of heat is being continued, thoroughly mixing with the above ingredients the resinous and gummy products of the pine tree, and finally molding the same, substantially as described.

3. The herein described process of manufacturing an artificial stone composition which consists in heating clayey earth until dry, mixing in with this earth pine needles and continuing the application of heat until the needles are thoroughly dried, adding crude sap and driving off the excess of moisture therefrom by continuing the heat, and finally molding the product to the desired shape, substantially as described.

1,172,226. MANUFACTURE OF GAS. JOHN M. RUSBY, Philadelphia, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1909. Serial No. 532,310. (Cl. 48—87.)



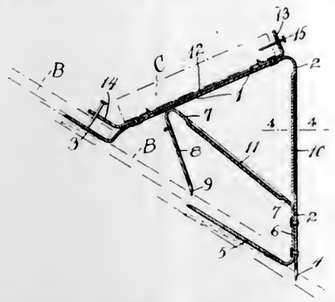
1. The combination of a gas generator, a fluid feed pipe, and a regulating valve with a meter consisting of a portion of said feed pipe to one side of said valve and of such length that there is a drop of pressure in it due to friction loss, of two pipes connected with the opposite ends of said portion of said feed pipe and of means responsive to the differential pressure in the last mentioned pipes, substantially as described.

2. The combination of a gas generating apparatus and its fluid feed pipe, a meter consisting of a portion of said pipe of such length that there is a drop of pressure in it due to friction loss, a regulating valve to one side of said portion of the fluid feed pipe, means adapted to operate said valve, and two pipes connected with said means and with the ends of said portion of said fluid feed pipe, substantially as described.

1,172,227. ROOF-BRACKET. EDMUND A. SCHADE, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 2, 1915. Serial No. 11,475. (Cl. 20—86.)

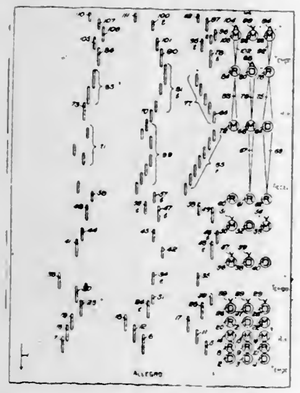
A roofing bracket comprising a frame having a substantially horizontal load supporting member, a foot and a substantially parallel lug at one end thereof and extending at an angle oblique thereto, the said lug having

a nail hole located above the foot, a supporting standard projecting downwardly from the other end of said load supporting portion and having a lower roof engaging edge, a second supporting standard arranged below said



horizontal load supporting portion, and having at its lower end a roof engaging edge, an upwardly directed foot on the first mentioned standard arranged to be projected beneath a roof shingle.

1,172,228. PERFORATED NOTE-SHEET. JOSEPH H. SHALE, New Rochelle, N. Y., assignor to American Piano Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 19, 1910. Serial No. 598,200. (Cl. 84—162.)



1. A perforated note sheet having thereon and confined within a narrow marginal area thereof a plurality of separate groups of lever symbols, each group comprising a plurality of symbols and each symbol indicating by its distinctive appearance the mode of operation of a controlling device; and additional indicia correlated with said lever symbols indicating the manner of operation of such controlling devices to the extents indicated by the lever symbols themselves.

2. A perforated note sheet having thereon and confined within a narrow area disposed lengthwise the sheet, a plurality of separate groups of indicia, each group comprising a plurality of lever symbols alined transversely of the note sheet, and each symbol indicating by its distinctive appearance the mode of operation of a controlling device.

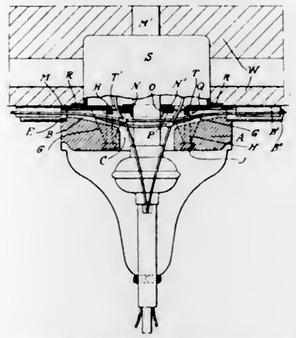
3. A perforated note sheet having thereon and confined within a narrow area disposed lengthwise the sheet, a plurality of groups of indicia, each group comprising a plurality of lever symbols located at different points along the length of said narrow area at points of change of expression, each group comprising a plurality of lever symbols in substantially the same relative positions on the sheet as those of the other groups and indicating expression changes by variations in the distinctive appearance of different symbols.

4. A perforated note sheet having thereon a plurality of independent lever symbols disposed at variable intervals along the length of the sheet, said symbols indicating the mode of operation of a controlling device; and additional indicia indicating the manner of operation of said device.

5. A perforated note sheet having thereon a plurality of independent discontinuous lever symbols indicating by their distinctive appearance the mode of operation of a controlling device; and indicia of the manner of operating said device to such extent.

[Claims 6 to 11 not printed in the Gazette.]

1,172,229. ELECTRIC FIXTURE. JOSEPH GEORGE TURNBULL, New York, N. Y., assignor to Turnbull Engineering Company, Inc., a Corporation of New York. Filed Sept. 12, 1914. Serial No. 861,734. (Cl. 247—5.)



1. In a lighting fixture, the combination of an outlet block, cable and moulding therefor, said outlet block comprising channel portions through which the cable is readily insertible, groves in said channel portions adapted to act as stops to the cable molding, closing means for each channel which are adapted to be easily knocked out so as to permit the use of one or more channels and means for permitting the ready attachment of said block as desired without shifting the block.

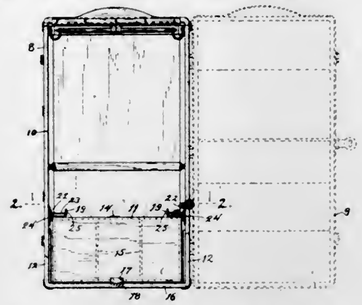
2. In a lighting fixture, an outlet block comprising channel portions having downwardly sloping bottoms, groves in said channel portions, closing means for each channel portion adapted to be readily knocked out, tapered holes and screws adapted to be inserted in said holes, the tapered holes permitting of the insertion of the screws in numerous positions so that the block may be attached as desired without shifting.

3. In a lighting fixture, the combination of an outlet block, cable and cable molding, a ground plate therefor comprising bent up portions for holding strips of the said molding, turned-up portions adapted to act as stops for said strips of molding, openings for running the cable through the plate and means for readily attaching said plate to said block.

4. A lighting fixture, of the class described, comprising in combination an outlet block, an outlet box and a ground plate adapted to be interposed between said block and box, means for fastening said plate to said box comprising a nipple having an externally tapered threaded slotted body portion, means attached to said box to which said nipple may be attached and a lock-nut for said nipple.

5. A lighting fixture, of the class described, comprising in combination a cable, cable moldings, an outlet block, a ground plate therefor and an outlet box, means for attaching said outlet box to said ground plate, said ground plate having a turned-up portion adapted to act as a stop to strips of said molding, said outlet block having groves to act as stops to the other strips of said molding and said plate having a punched up portion adapted to have inserted therethrough strips of said molding, channels in said outlet block and openings in said ground plate for running the cable through threaded screw holes in said ground plate and means for readily attaching said outlet block to said ground plate through said threaded screw holes.

1,172,230. TRUNK SHOE-BOX-SECURING MEANS. GEORGE HENRY WHEARY, Racine, Wis. Filed Oct. 4, 1913. Serial No. 793,273. (Cl. 190—13.)



1. The combination with a trunk provided with a removable box, of a securing means therefor, comprising a means for removably connecting the bottom portion of the box to the trunk, and locking members removably connecting the upper portion of the box to the opposite sides of the trunk and locking said box portion against inward or outward movement.

2. The combination with a trunk provided with a removable box, of a securing means therefor comprising a means for connecting the bottom portion of the box to the trunk, and locking members connecting the upper portion of the box to the opposite sides of the trunk, said locking members reinforcing the trunk sides against inward and outward strain.

3. The combination with a trunk provided with a removable box, of a securing means therefor, comprising a means for removably connecting the bottom portion of the box to the trunk, loops mounted on the opposite side portions of the trunk, and spring actuated bolts mounted on the box and engaging the loops for removably connecting the upper portion of the box to the trunk and for locking said box portion against inward or outward movement.

4. The combination with a trunk provided with a removable box, of a securing means therefor, comprising a means for connecting the bottom portion of the box to the trunk, loops mounted on the opposite side portion of the trunk and provided with bolt openings, and bolts mounted on the box and adapted to enter the bolt openings of the loops, the casings of said bolts provided with portions which engage the loops and lock the trunk sides to the box against lateral strains.

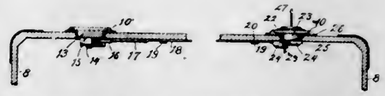
5. The combination with a trunk provided with a removable box, of a securing means therefor, comprising a means for connecting the bottom portion of the box to the trunk, loops mounted on the opposite side portions of the trunk and provided with bolt openings, and spring actuated bolts mounted on the box and adapted to enter the bolt openings of the loops, the casings of said bolts provided with projecting hook portions which engage the loops and lock the trunk sides to the box against lateral strains.

[Claim 6 not printed in the Gazette.]

1,172,231. AUTOMATIC TRUNK-LOCK. GEORGE HENRY WHEARY, Racine, Wis. Filed Feb. 24, 1914. Serial No. 820,390. (Cl. 70—27.)

1. An automatic lock, comprising a hasp latch member, a hasp lock member spaced therefrom, and a means connecting the two members together when the lock member is in locked position, said connecting means unlocking the latch member when the lock member is unlocked.

2. An automatic lock, comprising a latch member, a hinged hasp member lockingly engaged thereby, a hasp plate, a hinged hasp member provided with a bolt having a locking engagement with the plate, and a means connected to the latch member and extending to a position adjacent to the hasp plate and engaged by the bolt for unlocking the latch member when the last mentioned hasp member is unlocked from the plate.

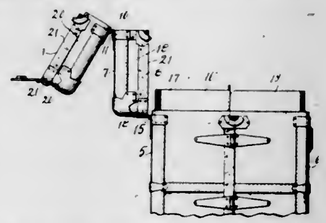


3. An automatic lock, comprising a spring actuated latch member, a hinged hasp member lockingly engaged thereby, a hasp plate spaced therefrom, a hinged hasp member having a lock which lockingly engages the plate and also having a projecting portion extending from one of its movable parts, and a bar connected to the latch member and extending to a position adjacent to the projection of the lock and engaged and moved thereby to unlock the latch member when the lock is unlocked from the plate.

4. An automatic lock, comprising a spring actuated latch member, a spring actuated hinged hasp member lockingly engaged thereby, a hasp plate spaced from the latch member, a hinged hasp member having a slidable bolt which lockingly engages the plate and also having pin-like portion projecting from the slidable bolt, and a bar having a connection with the latch and provided with an opening into which the pin portion extends when the lock engages the plate to unlock the latch member when the lock is unlocked from the plate, the connection between the bar and the latch permitting the latch to freely move in one direction.

5. An automatic lock, comprising a spring actuated latch member, a spring actuated hinged clasp member, lockingly engaged thereby, a hasp plate spaced from the latch member, a hinged hasp member having a lock which lockingly engages the plate and also having pin-like portion projecting from a movable portion of the lock, a bar having a connection with the latch and provided with an opening into which the pin portion extends when the lock engages the plate to unlock the latch member when the lock is unlocked from the plate, the connection between the bar and the latch permitting the latch to freely move in one direction, and means for limiting the movement of the bar.

1,172,232. WARDROBE-TRUNK. GEORGE HENRY WHEARY, Racine, Wis. Filed Feb. 20, 1915. Serial No. 9,565. (Cl. 190—13.)



1. A wardrobe trunk, comprising a two section trunk member each section of which has an open end, and a two part cover for said open ends, one part of said cover being hinged to one of the sections.

2. A wardrobe trunk, comprising a two section trunk member having upper open ends, and a two part top cover member covering the open ends, one of the parts of said cover having a hinged connection with one of said trunk sections.

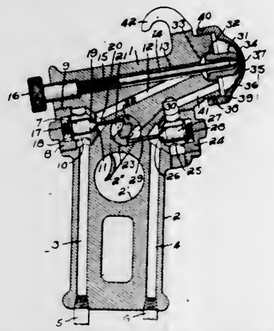
3. A wardrobe trunk, comprising a two section hinged together trunk member having upper open ends, and a two part hinged together top cover hinged to one of the sections and covering both open ends to permit one of the cover parts to be swung to open position while the other cover part remains in closed position.

4. A wardrobe trunk, comprising a body section, a wardrobe section hinged thereto, both sections having upper open ends, an inner cover hinged to the body section and covering the open end thereof, and an outer cover hinged to the inner cover and covering the open end of the wardrobe section.

5. A wardrobe trunk, comprising a body section having an upper open end, a drawer mounted in said section and projecting upwardly above the upper portion of the section, an inner top cover part hinged to the section and provided with side flanges which overlap the projecting portion of the drawer, a wardrobe section hinged to the body section and having an upper open end provided with a collar, and an outer top cover hinged to the inner top cover and provided with side flanges which overlap the collar of the wardrobe section.

[Claim 6 not printed in the Gazette.]

1,172,233. TOOL FOR APPLYING COATING. HERBERT W. DAY, Wollaston, Mass., assignor to The Spray Engineering Company, Boston, Mass., a Corporation of Maine. Filed Oct. 26, 1915. Serial No. 58,035. (Cl. 91—45.)



1. Means for applying coating comprising means for maintaining a film, and means for breaking through and discharging said film, the film maintaining means being relatively located with respect to the film discharging means so as to supply a film substantially transverse to the direction of movement of the film breaking and discharging means.

2. Means for applying coating comprising means for continuously maintaining a film through capillarity, and valve-controlled means for breaking through said film and discharging the same in a stream against the surface to be coated, the film maintaining means being relatively located with respect to the film discharging means so as to supply a film substantially transverse to the direction of movement of the film breaking and discharging means.

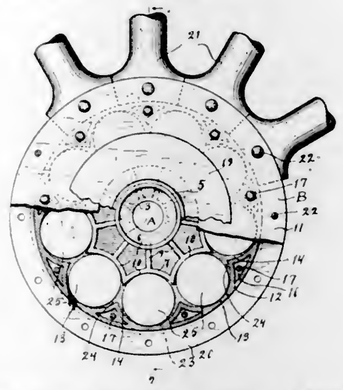
3. Means for applying coating comprising means for maintaining a film of coating material, and means for applying fluid under pressure to and discharging said film in a stream, the film maintaining means being relatively located with respect to the flow of the stream of film discharging fluid so as to supply a film substantially transverse to the direction of said flow at the film.

4. Means for applying coating comprising means for maintaining a film of coating material, and means for projecting a stream of fluid under pressure against said film, the film maintaining means being relatively located with respect to the flow of the stream of film discharging fluid so as to supply a film substantially transverse to the direction of said flow at the film.

5. Means for applying coating comprising means for maintaining a film of coating material, and means for projecting a stream of fluid under pressure against a limited area of said film and for discharging the same in a stream, the film maintaining means being relatively located with respect to the flow of the stream of film discharging fluid so as to supply a film substantially transverse to the direction of said flow at the film.

[Claims 6 to 14 not printed in the Gazette.]

1,172,234. RESILIENT WHEEL. JOHN B. DRAHONOVSKY, Milwaukee, Wis., assignor, by direct and mesne assignments, to J. B. D. Holding Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 24, 1915. Serial No. 29,957. (Cl. 152—43.)

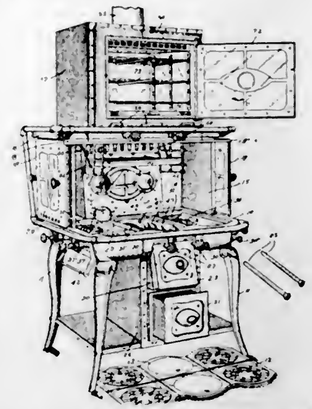


In a resilient wheel, the combination of an inner hub member having a rim provided with a plurality of concavities on its outer periphery, an outer hub member concentrically disposed with respect to said member and comprising an annular ring and a rim extending transversely from said ring and having a plurality of concavities on its inner periphery, the concavities on said rims forming a plurality of radially disposed pockets, yielding blocks of material disposed in said pockets and adapted to be compressed between said hub members, a movable metallic hub cap carried by said outer hub member forming a guide for one said of the rim of the inner hub member, the ring of the outer hub member forming a guide for the other side of the rim of the inner hub member, and a plate secured to said inner hub member, forming a guide for the ring of the outer hub member.

1,172,235. COMBINATION STOVE AND GAS-RANGE. JOHN B. EHRLICH, Indianapolis, Ind. Filed Apr. 4, 1914. Serial No. 829,487. (Cl. 126—36.)

1. A stove which is convertible for solid and fluid fuel, comprising a heating chamber divided into compartments, a fire pot mounted in one of said compartments, a damper between such fire pot and the adjacent compartment, the bottom of said last-named compartment being provided with removable plates, and pivotally mounted fluid fuel burners which may be swung up through the bottoms of such last-named compartment when said removable plates are removed, said fluid fuel burners being carried by members which are each provided with a horizontal slot and a slot having vertical and horizontal portions, and fixed pins mounted in said slots, whereby the burners may be swung upward or downward and by horizontal motion may be locked in upper position.

2. A stove which is convertible for solid and fluid fuel, comprising a heating chamber divided into compartments, a fire pot mounted in one of said compartments, a damper between such fire pot and the adjacent compartment, the bottom of said last-named compartment being provided with removable plates, pivotally mounted fluid fuel burners which may be swung up through the bottoms of such last-named compartment when said removable plates are removed, and a hand lever having a slot and pin connection with the burners for pivotally moving said burners.



3. A stove which is convertible for solid and fluid fuel, comprising a heating chamber having a plurality of compartments, a fire pot in one of said compartments, a sliding damper for closing or opening the draft passage from that compartment to the adjacent compartment, a flue, and a swinging damper having a rod connection with the first damper and operable therewith to open or close the connection between said last-named compartment and said flue, and a damper controlling a direct connection between said first-named compartment and said flue, and a fluid fuel burner removably associated with said second compartment.

4. A stove which is convertible for solid and fluid fuel, comprising a heating chamber having a plurality of compartments, a fire pot in one of said compartments, a sliding damper for closing or opening the draft passage from that compartment to the adjacent compartment, a flue, and a swinging damper operable with the sliding damper to open or close the connection between said last-named compartment and said flue, and a fluid fuel burner removably associated with said second compartment.

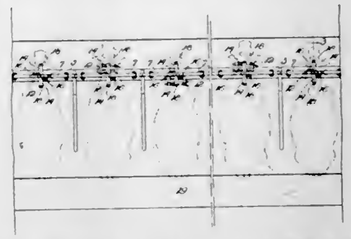
5. A stove which is convertible for solid and fluid fuel, comprising an oven, a fire pot, flues for conducting the products of combustion from such fire pot under and around said oven, a burner for fluid fuel located beneath said oven, the floor of said oven being provided with an opening above said fluid fuel burner for admitting flames therefrom into the oven, and a combined valve and baffle plate for controlling said opening, said burner being mounted so that it can be reversed to direct the flames either upward or downward, and a broiler hung below said oven in position to be heated by the flames from said burner when such flames are directed downwardly.

[Claims 6 to 17 not printed in the Gazette.]

1,172,236. ANIMAL-STALL. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed Oct. 22, 1915. Serial No. 57,297. (Cl. 119—27.)

1. In combination, a series of stalls each one of which is adapted to receive any one of the units of a herd indiscriminately, animal-holding devices for the several stalls, a gutter at the rear of the series, manually operated means for quickly adjusting the animal-holding devices longitudinally of the stalls after the animal is in place therein and for securing said animal-holding devices in adjusted position, whereby each of the units of the herd is alined with the said gutter irrespective of the length of said units.

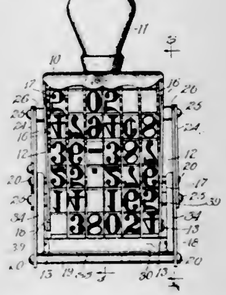
2. In combination, a stall provided with a gutter, longitudinal guiding means centrally located in the front of the stall and bearing a fixed relation to the gutter, a stanchion carried by the guiding means and movable along the same, and stanchion securing mechanism for securing the stanchion in fixed positions on the guiding means and manually and quickly releasable to permit the adjustment of the stanchion while an animal is held thereby.



3. In combination, a stall provided with a gutter, a tubular guide, a stanchion, a stanchion-carrying member running in a slot in the guide, and means for locking the stanchion-carrying member in a variety of positions in the guide, and adapted to release and lock the same quickly to permit its adjustment while an animal is held thereby.

4. In combination, a stall provided with a gutter at its rear, a longitudinal tubular guide at its front, a stanchion, a stanchion-carrying member running in a slot in the guide, and a slotted sleeve embracing the tubular guide and adapted by rotation to lock the stanchion-supporting member in a variety of positions.

1,172,237. SELF-INKING HAND-STAMP. HARRY S. FOLGER and CASPER L. REDFIELD, Chicago, Ill.; said Redfield assignor to said Folger. Filed Oct. 7, 1914. Serial No. 865,440. (Cl. 101—161.)



1. A stamp, a frame in which the stamp is vertically movable, a pad pivoted to the stamp and engaging the lower face thereof, and means by which upon manually depressing the stamp the pad will be automatically moved downward to clear the stamp face and then will be swung rearwardly out of the path of the descending stamp.

2. A stamp, a frame within which the stamp is vertically movable, an ink pad pivoted to the stamp and engaging the lower face thereof, and connections by which upon manually depressing the stamp the pad will be moved first downwardly more rapidly than the stamp to clear the stamp face and then will be moved rearwardly out of the path of the descending stamp.

3. A stamp, a frame within which the stamp is movable, an ink pad engaging the face of the stamp, a rack secured to the frame, a second rack secured to the pad, and a gear secured to the stamp and engaging said racks, said racks and gear serving to move the pad with respect to the stamp when the stamp is moved in the frame.

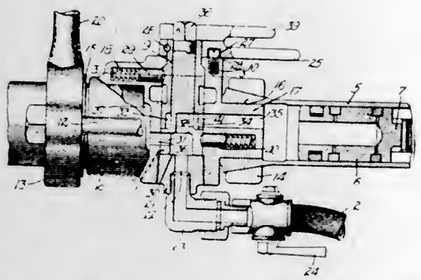
4. A frame, a stamp movable in the frame, a pad suspended on the stamp and arranged to engage the stamp

face when said stamp is elevated in the frame, and gear and rack connections for removing the pad from the stamp face when said stamp is depressed in the frame.

5. A frame, a stamp movable in the frame, a pad pivoted to the stamp and movable to engagement with the stamp face, and means by which upon depressing the stamp the pad will be first removed from the stamp face and then swung upon its pivot.

[Claims 6 to 14 not printed in the Gazette.]

1,172,238. PRESSURE-FED TOOL. GEORGE H. GILMAN and WILLIAM C. MICHAEL, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 24, 1908. Serial No. 469,067. (Cl. 121—10.)



1. In a pressure fed tool, the combination with a pressure fluid feeding device, of a tool cylinder, a piston working in said cylinder, intermediate connecting means to connect the feeding device and cylinder rigidly, independently operable valves in said connecting means, one for the tool and the other for the feeding device, and grasping handles for both of said valves located externally of said intermediate connecting means and both having an operating movement in the same general direction.

2. In a pressure fed tool, the combination with a hammer drill, of a pressure fluid feeding device attached thereto and independently operable valves having independent outlets leading respectively to the feeding device and hammer drill, said valves having overlying handles and serving one to control the feeding device and the other the hammer drill.

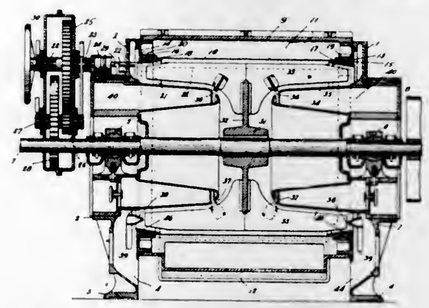
3. In a pressure fed tool, the combination with a hammer drill of a pressure fluid feeding device attached thereto and independently operable valves arranged coaxially with each other and serving one to control the feeding device and the other the hammer drill.

4. In a pressure fed tool, the combination with a pressure fluid hammer drill, of a pressure fluid feeding attachment secured thereto, a plurality of independently operable valves one for the tool and the other for the feeding attachment and serving to admit pressure fluid to or exhaust the same from the tool independently of its admission to or exclusion from the feeding attachment, and a plurality of grasping handles connected to said valves located on the same side of said tool and arranged adjacent each other.

5. In a pressure fed device the combination with a pressure fluid hammer drill of a valve for admitting pressure fluid to or excluding the same therefrom a pressure feeding attachment secured thereto, said attachment being provided with a feeding cylinder, an independently operable valve for said feeding attachment having a plurality of positions and serving to open said attachment to the atmosphere or to the fluid pressure, or to close the same both to the atmosphere and the fluid pressure at will, while permitting in each position the admission of fluid pressure to or its exclusion from the tool and separate means located externally of said device for independently controlling the operation of said valves, there being a single supply passage leading to both valves, and separate inlet passages leading from said valves to said hammer drill and feeding attachment, respectively, said valves being interposed between said supply passage and said inlet passages and one valve admitting pressure fluid by way of the other valve to the inlet passage controlled thereby.

[Claims 6 to 30 not printed in the Gazette.]

1,172,239. PULP-SCREEN. ANTON J. HAUG, Nashua, N. H., assignor to Improved Paper Machinery Company, Nashua, N. H., a Corporation of Maine. Filed June 2, 1914. Serial No. 842,524. (Cl. 92—34.)



1. In a machine of the character described, the combination with a casing, a horizontally positioned screen drum located therein, a pulp outlet in communication with the interior of the casing, a sliver outlet in communication with the interior of the screen drum, a feed spout projecting into the interior of said screen and comprising inner and outer fixed annular spout members having between them a circumferential discharge orifice, and impeller means between the feed spout and the screen.

2. In a machine of the character described, the combination with a casing, a screen drum located therein, a pulp outlet in communication with the interior of the casing, a sliver outlet in communication with the interior of the screen drum, feed spouts projecting from opposite ends of the interior of said screen drum and comprising each fixed inner and outer annular spout members having a circumferential discharge orifice between them and impeller means between the feed spouts and the screen drum.

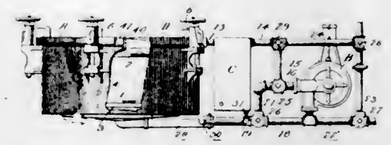
3. In a machine of the character described, the combination with a casing, a horizontally positioned screen drum located therein, a pulp outlet in communication with the interior of the casing, a sliver outlet in communication with the interior of the screen drum, a feed spout comprising inner and outer annular spout members communicating with a feed supply and provided with means for discharging the stock radially and symmetrically into the interior of the screen, and impeller means between the feed spout and the screen comprising a plurality of impeller blades, and means for rotating the same.

4. In a machine of the character described, the combination with a casing, a horizontally positioned screen drum located therein, a pulp outlet in communication with the interior of the casing, a sliver outlet in communication with the interior of the screen drum, an annular feed spout extending into the interior of said screen and provided with means for discharging material radially and symmetrically within the screen, and impeller blades between the feed spout and the screen.

5. In a machine of the character described, the combination with a casing, a screen drum located therein, a pulp outlet in communication with the interior of the casing, a sliver outlet in communication with the interior of the screen drum, annular feed spouts projecting within the screen from opposite end thereof, an impeller shaft passing through the feed spouts, impeller blades driven thereby and occupying the space between the feed spouts and the screen, said feed spouts having provision for discharging the stock radially and symmetrically upon the impeller blades.

[Claims 6 to 17 not printed in the Gazette.]

1,172,240. DYEING APPARATUS. DAVID MORLEY HEY, Chattanooga, Tenn., assignor to Vacuum Dyeing Machine Company, Chattanooga, Tenn., a Corporation of Tennessee. Filed Apr. 5, 1910. Serial No. 553,469. (Cl. 8—19.)



1. In a dyeing apparatus, the combination with a dye vat, of a pump, a connection between the pump and the dye vat at the inlet side of the dyeing chamber, a connection between the pump and the dye vat at the outlet side of the dyeing chamber, and a heating tank interposed in the latter connection, said tank being divided longitudinally by a depending baffle into communicating chambers and provided with a heating element arranged below said baffle.

2. In a dyeing apparatus, the combination with a dye vat, a pump, a connection between the pump and the dye vat at the inlet side of the dyeing chamber, a connection between the pump and the dye vat at the outlet side of the dyeing chamber, a heating tank having a plurality of compartments connected by a passage extending longitudinally of said tank and a heating element adjacent to such passage, said heating tank being arranged in the connection between the outlet side of the dyeing chamber and the pump, and a supplemental heating element in the connection between the pump and the inlet side of the dyeing chamber.

3. In a dyeing apparatus, a vat having a treating chamber, a heating chamber arranged outside said vat and adapted to receive overflow therefrom gravitally, a pump whose pressure side has a connection with the liquor-receiving portion of the vat for circulating liquor through the latter, and a connection between said heater and the suction side of the pump.

4. A dyeing apparatus comprising a vertical cylindrical vat, an inlet in the bottom of said vat, liquid-distributing means adjacent said inlet, a pump, piping connecting said pump with said inlet and with the overflow of the tank, and heating means interposed in said piping on both sides of said pump.

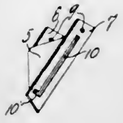
5. A dyeing apparatus comprising a dye vat, a chamber arranged outside of the dye vat and having connection with the discharge side of the latter, said chamber being provided interiorly with means for causing the liquor to flow circuitously therethrough and having means for heating the liquor, and connections between the discharge side of the heating chamber and dye vat, said connection including a centrifugal pump arranged to force the heated dye liquor under pressure into the dye vat.

[Claims 6 to 8 not printed in the Gazette.]

1,172,241. CONNECTING-BRACE FOR THE LEGS OF CURTAIN-STRETCHING AND OTHER FRAMES. WALLACE P. HOUGH, Pittsburgh, Pa. Original application filed Apr. 17, 1914, Serial No. 832,413. Divided and this application filed Nov. 14, 1914. Serial No. 872,084. (Cl. 45—24.)

1. A brace for the purpose set forth, comprising a flat brace plate having oppositely-disposed turned-over flanges, one longer than the other and both extending forward of the flat brace and each provided with an opening, the longer flange being further provided with a longitudinally-disposed connecting opening.

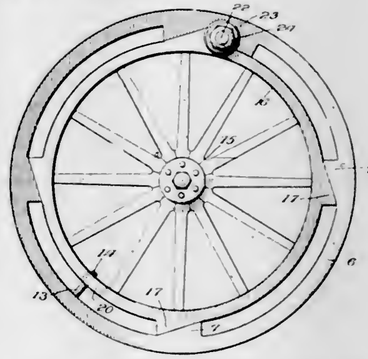
2. A brace for the purpose set forth, comprising a flat brace plate having oppositely-disposed turned-over flanges, one longer than the other and both extending forward of the flat brace and each provided with an opening, the longer flange being further provided with a longitudinally-disposed connecting opening terminating at one end in a shouldered portion.



3. The combination with the end member of a frame and a leg pivotally attached thereto, of a connecting brace plate comprising a body plate having oppositely-disposed turned-over flanges, one longer than the other and both extending forward of the body to and at each side of said end member and pivotally connected thereto, the longer and outer disposed flange of said brace being adjacent the inner side of the leg and provided with a longitudinally-disposed opening terminating at its outer end in a shouldered portion, and a screw on the inner side of said leg which passes through the said flange opening to form a slidable connection with the brace plate, said brace adapted to limit the adjustment of the leg when extended, lock the same in place when so adjusted, and to adjust itself flush with the rear and sides of the member when the leg is folded alongside of said member.

4. A brace for the purpose set forth, comprising a flat brace plate of substantially triangular form having a pair of paralleling turned-over flanges one of which is longer than the other and both extending forward of the plate and each provided with an opening thereat, the longer flange being further provided with a longitudinally-disposed opening extending to and terminating in a shouldered portion at the rear thereof.

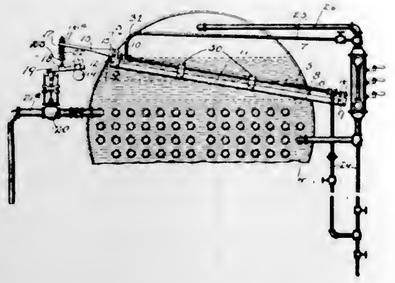
1,172,242. DEMOUNTABLE RIM. CREED H. MCKENDREE, Lakeview, Oreg., assignor of one-tenth to E. H. Smith, one-tenth to F. P. Lane, one-tenth to W. A. Massingill, one-tenth to C. D. Arthur, and one-tenth to Manuel Sanders, Lakeview, Oreg. Filed Aug. 7, 1915. Serial No. 44,336. (Cl. 152—21.)



In a wheel, the combination with a wheel rim, of a plurality of members on said wheel rim, each member comprising a plurality of inclined faces divided by a central depression in the same direction, a demountable rim provided with a plurality of members, each member comprising a plurality of faces inclined oppositely to said wheel rim members, said faces being divided by a raised central portion inclined in the same direction for a portion of its length and reversely inclined to the adjacent faces for the remainder of its length, the wheel rim member-

and the demountable rim members being adapted to engage each other to hold the demountable rim in place upon the wheel.

1,172,243. BOILER FEED-WATER REGULATOR. ROGER W. ANDREWS, Pittsburgh, Pa., assignor, by mesne assignments, to Erie Pump & Equipment Company, Erie, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,159. (Cl. 236—13.)



1. The combination of a boiler, a feed water pipe, a balanced valve in said pipe, and a feed water regulator; said regulator being adapted to vary the level of the water in said boiler and comprising an expansion tube; one end of the operative portion of said tube and the desired maximum water level in said boiler being approximately in the same horizontal plane, and the other end of said tube and the desired minimum water level being approximately in the same horizontal plane; the upper end of said tube being connected to said boiler above the maximum water level, and the lower end of said tube being connected to said boiler below the minimum water level; one end of said tube being rigidly supported, and operating means connecting the other end of said tube with said valve and in such relation thereto as to supply less water to the boiler than the load requires when the load is increasing and to supply more water to the boiler than the load requires when the load is decreasing, said relation being such as to hold said valve substantially closed when the water in said boiler is at the maximum level, and to hold said valve open the maximum amount when the water is at the minimum level.

2. The combination of a boiler, a feed water pipe connected to said boiler, a valve in said pipe, and a feed water regulator; said regulator being adapted to vary the level of the water in said boiler and comprising an expansion tube; one end of said tube and the desired maximum water level of said boiler being approximately in the same horizontal plane, and the other end of said tube and the desired minimum water level being approximately in the same horizontal plane; said tube being connected to said boiler above and below the mean water level; one end of said tube being rigidly supported; and operating means connecting the other end of said tube in such relation with said valve as to begin to supply water to said boiler when the water level commences to fall from its maximum level, but in an amount less than that demanded by the load during the first part of the opening movement of the valve and in an amount greater than that demanded by the maximum load during the latter part of the opening movement of the valve and at the time that the water level has reached its minimum level.

3. The combination of a boiler, a feed water pipe, a valve in said pipe, and a feed water regulator; said regulator comprising an expansion tube; said tube being inclined, and being positioned with the center of the operative portion thereof in substantially the same horizontal plane as the mean water level in said boiler; the upper end of said tube being connected to said boiler above the mean water level, the lower end of said tube being connected to said boiler below the mean water level; one end of said tube being rigidly supported, and operating means connecting the other end of said tube with said valve; said tube and said means being arranged so as to commence to open said valve as the level falls from its maximum point, but to supply water to the boiler in an amount less than that demanded by the load on the boiler, and to hold said valve wide open when the minimum water level is reached.

4. The combination of a boiler, a feed water pipe connected to said boiler, a differential valve in said pipe, and a feed water regulator being adapted to vary the height of the water in the boiler, and comprising an expansion tube; said tube being inclined and being positioned with the center of the operative portion thereof in approximately the same horizontal plane as the mean water level in said boiler, and being operatively connected to said boiler above and below the mean water level therein; one end of said tube being rigidly supported, and operating means connecting the other end of said tube with said valve; the ports in said valve being long and relatively narrow with non-parallel sides, so as to deliver less water to the boiler than the load demands when the valve is first opened by said tube, but to deliver as much as the maximum load demands when said valve is fully opened.

5. The combination of a boiler, a feed water pipe connecting with said boiler, a graduated valve in said pipe, and a feed water regulator comprising an expansion tube; one end of the operative portion of said tube and the desired maximum water level in said boiler being in approximately the same horizontal plane, the other end of the operative portion of said tube and the desired minimum water level being in approximately the same horizontal plane, the upper end of said tube being connected to said boiler above the mean water level, the lower end of said tube being connected to said boiler below the mean water level, one end of said tube being rigidly supported, and operating means connecting the other end of said tube with said valve, the ports of said valve being of such shape as to supply water to said boiler at a rate less than that demanded by the load as the water begins to sink below its maximum level, but at a rate equal to that demanded by the load if the level sinks to a minimum safe level, said relation being such as to begin to open said valve when the water in said boiler commences to fall from its maximum level, and to hold said valve open the maximum amount when the water is at the minimum level.

[Claim 6 not printed in the Gazette.]

REISSUES.

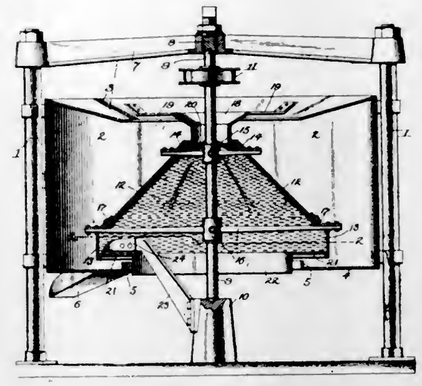
14,061. CENTRIFUGAL DRIER. FRANK B. ANDERSON, Cleveland, Ohio, assignor of one-third to Charles O. Anderson and one-third to Albert D. Anderson, Cleveland, Ohio. Filed Jan. 3, 1916. Serial No. 70,022. Original No. 1,122,460, dated Dec. 29, 1914, Serial No. 651,212. (Cl. 210—34.)

1. In a centrifugal drier, the combination of a cone-shaped screen; means for introducing material to the upper end of the same and against the inner surface thereof; means for rotating the screen; a shelf extending inwardly from the lower end of the screen, said shelf rotating therewith; and a scraper overlying said shelf, adapted to remove the material from the same while the screen is in rotation.

2. In a centrifugal drier, the combination of a cone-shaped screen; means for introducing material to and against the upper portion of the inner surface thereof; means for arresting the material at the lower end of the screen and continuously removing the same while the screen is in rotation; and means for rotating the screen.

3. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; a shelf extending inwardly from the lower edge of the screen; and means for continuously removing the accumulated material from the shelf while the screen is in rotation.

4. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; an annular shelf extending inwardly from the lower edge of the screen and rotatable therewith; and a fixed scraper overlying the shelf.



5. In a centrifugal drier, the combination of a cone-shaped screen; a perforate skirt depending therefrom and movable therewith; an annular shelf extending inwardly from the lower end of the skirt; a scraper overlying the shelf; and means for rotating the screen.

6. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; an inwardly-projecting shelf located adjacent the lower end of the screen, said shelf being fixed with reference to the screen and rotatable therewith; and means for continuously removing material which accumulates upon the shelf while the screen is in rotation.

7. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; an inwardly-projecting shelf located adjacent the lower end of the screen, said shelf being fixed with reference to the screen and rotatable therewith; a fixed arm extending into the lower portion of the screen; and a plow or scraper secured to the inner end of said arm and overlying the shelf, said plow or scraper being curved and adapted to cut away and remove the material which accumulates upon the shelf and the adjacent portion of the screen.

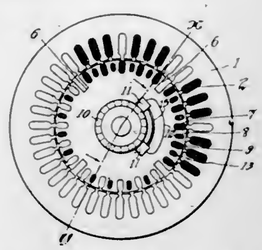
8. In a centrifugal drier, the combination of a cone-shaped screen; means for introducing material into the smaller end of the same and against the inner surface thereof; means for rotating the screen; a shelf extending inwardly from the opposite larger end of the screen, said shelf rotating therewith; and a scraper overlying the shelf, adapted to remove the material from the same while the screen is in rotation.

9. In a centrifugal drier, the combination of a cone-shaped screen; means for introducing material to and against the inner surface of the smaller end thereof; means for arresting the material at the opposite end of the screen and continuously removing the same while the screen is in rotation; and means for rotating the screen.

10. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; a shelf extending inwardly from the discharge end of the screen; and means for continuously removing the accumulated material from the shelf while the screen is in rotation.

11. In a centrifugal drier, the combination of a cone-shaped screen; means for rotating the same; an inwardly-projecting shelf located adjacent the larger, discharge end thereof, said shelf being fixed with reference to the screen and rotatable therewith; and means for continuously removing material which accumulates upon the shelf while the screen is in rotation.

14,062. ALTERNATING-CURRENT MOTOR. DONALD M. BLISS, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 10, 1916. Serial No. 71,369. Original No. 1,126,363, dated Jan. 26, 1915, Serial No. 614,277. (Cl. 172—276.)



1. An armature comprising a core of magnetic material, having polar projections, and provided with a short circuited system of conductors and a commutated winding, and a commutator and short circuited brushes for the commutated winding, substantially as described.

2. An armature comprising a core of magnetic material having polar projections and provided with a short-circuited system of conductors and a distributed commutated winding, substantially as described.

3. An armature comprising a core of magnetic material having two sets of axially extending openings, near the periphery thereof, and substantially equidistant therefrom, a closed circuited winding in one of said sets of openings and a commutated winding in the other of said sets, the said core having also an additional set of axially extending openings, whereby polar projections are formed, substantially as described.

4. In an alternating current motor, a core of magnetic material having uniformly distributed axially extending openings near the periphery thereof, a uniformly distributed commutated winding in some of said openings, and a short circuited system of conductors in some, but not all, of the remaining openings, substantially as described.

5. In an alternating current motor, the combination with a field frame or stator having poles, of a rotor comprising a core having polar projections equal in number to the poles of the stator, the said core being provided with a uniformly distributed commutated winding and a short circuited winding, substantially as described.

6. A synchronous motor having stator and rotor members of magnetic material, one of said members being provided with a primary or inducing winding, and the other of said members being provided with two secondary or induced windings, one being a commutated winding uniformly distributed, and the other being a short circuited winding having its active conductors arranged in spaced-apart groups equal in number to the number of poles produced by the primary or inducing winding, the space between any two adjacent groups being greater than the space between any two adjacent active conductors of a group, substantially as described.

7. A synchronous motor having a stator and a rotor, one of said members having a primary or inducing winding, and the other of said members having two secondary or induced windings, one being a commutated winding uniformly distributed, and the other a short circuited winding having its active conductors arranged in spaced apart groups equal in number to the number of poles produced by the primary or inducing winding, the space between any two adjacent groups being greater than the space between any two adjacent active conductors of the group, and a commutator and adjustable short-circuited brushes for the commutated winding, substantially as described.

8. A synchronous motor, having a stator and a rotor, one of said members having a primary or inducing wind-

ing, and the other of said members having two secondary or induced windings, one being a commutated winding uniformly distributed, and the other a short circuited winding having its active conductors arranged in spaced-apart groups equal in number to the number of poles produced by the primary or inducing winding, the space between any two adjacent groups being greater than the space between any two adjacent active conductors of a group, and means for determining and shifting the axis of commutation of the commutated winding, substantially as described.

9. An armature comprising a core of magnetic material having polar projections and provided with a short-circuited system of conductors and a commutated winding, the active conductors of said system and winding being located in the faces of the polar projections, substantially as described.

10. In an alternating current motor, the combination with a field frame or stator adapted to be energized by alternating current, of a rotor comprising a core of magnetic material having polar projections and provided with a short-circuited system of conductors and a distributed commutated winding, and means for adjusting the angular position of the rotor with respect to the impressed alternating electromotive force, substantially as described.

14,063. PROCESS OF PREPARING ACETALDEHYDE FROM ACETYLENE. PAUL DUDEN and GUSTAV PETERS, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Jan. 4, 1916. Serial No. 70,284. Original No. 1,151,928, dated Aug. 31, 1915, Serial No. 2,076. (Cl. 23—24.)

1. The process of preparing acetaldehyde from acetylene, which consists in combining acetylene with the elements of water in presence of sulfuric acid, a mercury compound, and an agent capable of impeding the separation of mercury.

2. The process of preparing acetaldehyde from acetylene, which consists in combining acetylene with the elements of water in presence of a mercury compound and a ferric salt.

3. The process of preparing acetaldehyde from acetylene, which consists in combining acetylene with the elements of water in presence of a mercury compound and ferric sulfate.

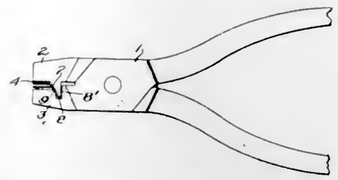
14,064. PROCESS OF PREPARING ACETALDEHYDE FROM ACETYLENE. PAUL DUDEN and GUSTAV PETERS, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Jan. 4, 1916. Serial No. 70,283. Original No. 1,151,929, dated Aug. 31, 1915, Serial No. 2,077. (Cl. 23—24.)

1. The process of preparing acetaldehyde from acetylene, which consists in combining acetylene with the elements of water in presence of a mercury compound and a compound of hexavalent chromium.

2. The process of preparing acetaldehyde from acetylene, which consists in combining acetylene with the elements of water in presence of a mercury compound and chromic acid.

14,065. BRACE-FORMER. FRANKLIN J. FENSTERMACHER, New York, N. Y., assignor to Southworth Machine Company, Portland, Me., a Corporation of Maine. Filed Dec. 19, 1913. Serial No. 807,797. Original No. 1,054,964, dated Mar. 4, 1913, Serial No. 610,114. (Cl. 81—15.)

1. Apparatus of the kind described, comprising a pair of dies mounted for co-active relative opening and closing movement, one of said dies being formed with a recess intersecting its body intermediate its ends and extending transversely thereof, the front edge of said recess sloping forwardly to form an inclined surface, said die being formed with lateral horizontal extending open-ended recesses communicating with said recess, the back edge of said recess being transverse of said lateral recesses and serving as a stop for metal disposed therein and bridging said first end recess, and a tongue on said other die taking into said transverse recess to shape such metal to the incline of its front edge.



2. Apparatus of the kind described, comprising a pair of dies mounted for co-active relative opening and closing movement, one of said dies being formed with a transverse recess across its face, the front edge of such recess sloping forwardly to form an inclined surface, said die being formed with a lateral horizontally extending open-ended recess communicating with said first named recess, the back edge of said first named recess being transverse of said open-ended recess and serving as a stop for metal disposed in said lateral recess and bridging said first named recess, and a tongue on said other die taking into said transverse recess to shape said metal to the incline of its front edge.

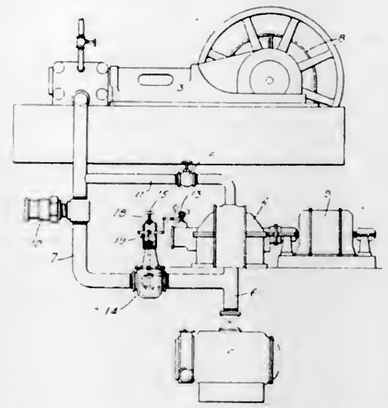
3. Apparatus of the kind described, comprising a pair of dies mounted for co-active relative opening and closing movement, one of said dies being formed with a transverse recess across its face, the front edge of said recess sloping forwardly to form an inclined surface, means at the sides of said die for receiving and guiding metal in strip form to extend across said recess, the back edge of said recess being transverse and serving as a stop for such metal, and a tongue on said other die taking into said transverse recess to shape said metal to the incline of its front edge.

4. A tool comprising two handles having a pivotal movement, a jaw formed on each handle, one of said jaws formed with a recess intersecting its body intermediate its ends and extending transversely thereof, the front edge of said recess sloping forwardly to form an inclined surface, lateral horizontally-extending open-ended recesses formed upon said jaw communicating with said recess, the back edge of said recess being vertical and serving as a stop for metal disposed in said lateral recesses and bridging said first-named recess, and a tongue on said other jaw taking into said transverse recess to shape said metal to the incline of its front edge.

14,066. LOW-PRESSURE TURBINE. WARREN B. FLANDERS, Habana, Cuba, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 20, 1915. Serial No. 67,902. Original No. 1,158,999, dated Nov. 2, 1915, Serial No. 472,230. (Cl. 121—118.)

1. In combination with a turbine, a supply passage for delivering motive fluid to the turbine, a condenser, a by-pass communicating directly with said supply passage and said condenser, a single valve for controlling the operation of the turbine located in said by-pass, and a governor responsive in operation to the speed variations of said turbine for controlling the operation of said valve.

2. In combination with a high pressure engine, a low pressure engine, a passage for delivering motive fluid exhausted from the high pressure engine to the low pressure engine in open communication with the exhaust port of the high pressure engine and the inlet port of the low pressure engine, a condenser, a by-pass in direct communication with the exhaust port of the high pressure engine and with the inlet of the condenser and a single means for controlling said low pressure engine comprising a valve located in said by-pass, and a governor actuated by the low pressure engine for controlling the operation of said valve.



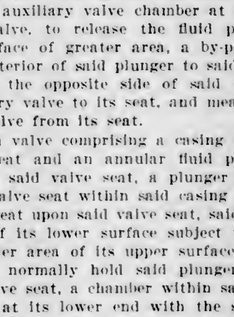
3. In combination with a high pressure engine, a low pressure engine, a passage in open communication with the exhaust port of said high pressure engine and the inlet port of the low pressure engine for delivering fluid exhausted from the high pressure engine to the low pressure engine, a condenser into which said low pressure engine discharges, a by-pass in open communication with the exhaust port of the high pressure engine and with the inlet of the condenser, and a single valve for controlling the operation of the low pressure engine located in said by-pass, and a governor for the low pressure engine controlling said valve.

4. In combination, a high pressure engine, a low pressure turbine, receiving fluid exhausted from the engine, a condenser in open communication with the turbine, a branched passage in open communication with the exhaust port of the engine, the inlet port of the turbine and the inlet of the condenser, and a single control valve for the turbine located in said passage, between the exhaust port of the engine and the inlet of the condenser, and means responsive to variations in the load on the turbine for controlling the valve.

5. In combination, an engine, a turbine receiving fluid exhausted from said engine, a condenser in communication with the exhaust ports of both the engine and the turbine, a passage in open communication with the exhaust port of the engine and the inlet port of the turbine, a single valve for controlling the operation of the turbine, located between the exhaust port of the engine and the inlet to the condenser, and a governor for the turbine for controlling the operation of said valve.

14,067. FLUSHING-VALVE. JOSEPH G. PERKINS, Cincinnati, Ohio, assignor, by mesne assignments, to Perkins-Skinner Valve Co., a Corporation of Illinois. Filed Apr. 17, 1915. Serial No. 22,210. Original No. 1,118,440, dated Nov. 24, 1914, Serial No. 818,650. (Cl. 137—93.)

1. A flush valve comprising a casing having a fluid supply and exhaust ports and an interposed valve seat, a plunger loosely fitting the interior of said casing and constituting a valve to engage said valve seat, said plunger having a portion of one surface and a relatively greater area of its opposite surface exposed to the fluid pressure within said casing to normally hold said plunger in engagement with its valve seat, and to cause said valve to automatically open when said fluid pressure is released from said greater pressure area, an auxiliary valve chamber, an exit port with a valve seat through the wall of said chamber, an auxiliary plunger loosely fitting the interior of said auxiliary valve chamber and constituting a valve to engage said auxiliary valve seat, a port leading from the exterior of said plunger to said auxiliary valve chamber at one side of said auxiliary valve, to release the fluid pressure on said plunger surface of greater area, a by-pass port leading from the exterior of said plunger to said auxiliary valve chamber at the opposite side of said valve to restore said auxiliary valve to its seat, and means to force said auxiliary valve from its seat.



2. A flush valve comprising a casing having inlet and outlet openings, a valve seat interposed between said inlet and outlet openings, a plunger movable to and from said valve seat within said casing and constituting a valve to seat upon said valve seat, said plunger having a portion of its lower surface subject to fluid pressure and a greater area of its upper surface subject to fluid pressure to normally hold said plunger in engagement with its valve seat, a chamber within said plunger, communicating at its lower end with the space above said plunger and communicating at its upper end by means of a restricted by-pass with the space beneath said plunger, an auxiliary valve located in said chamber in position to engage a valve seat carried by said plunger to close a port leading from the lower portion of said plunger, and means to lift said auxiliary valve from its seat.

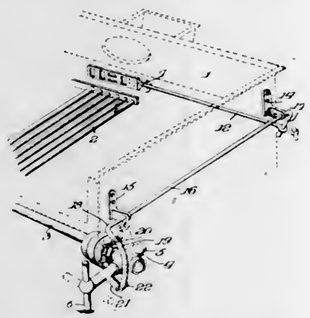
3. A flush valve comprising a casing having fluid supply and exit ports and interposed valve seat, a plunger loosely fitting the interior of said casing and constituting a valve to engage said valve seat, said plunger having a portion of one surface and a relatively greater area of its opposite surface exposed to the fluid pressure within said casing to normally hold said plunger in engagement with its valve seat, and to cause said valve to automatically open when said fluid pressure is released from said greater pressure area, an auxiliary valve chamber within said plunger, an exit port with a valve seat through the wall of said chamber, an auxiliary plunger loosely fitting the interior of said auxiliary valve chamber and constituting a valve to engage said auxiliary valve seat, a port leading from the exterior of said plunger to said auxiliary valve chamber at one side of said auxiliary valve, to release the fluid pressure on said plunger surface of greater area, a by-pass port leading from the exterior of said plunger to said auxiliary valve chamber at the opposite side of said valve to restore said auxiliary valve to its seat, and means to force said auxiliary valve from its seat.

4. A flush valve comprising a casing having an annular valve seat and an annular fluid pressure chamber surrounding said valve seat, a plunger movable to and from said valve seat within said casing and constituting a valve to seat upon said valve seat, said plunger having a portion of its lower surface subject to fluid pressure and a greater area of its upper surface subject to fluid pressure to normally hold said plunger in engagement with its valve seat, a chamber within said plunger, communicating at its lower end with the space above said plunger and communicating at its upper end by means of a restricted by-pass with the space beneath said plunger, an auxiliary valve located in said chamber in position

to engage a valve seat carried by said plunger to close a port leading from the lower portion of said plunger, and means to lift said auxiliary valve from its seat.

5. A flush valve comprising a casing having inlet and outlet openings, a valve seat interposed between said inlet and outlet openings, a plunger movable to and from said valve seat within said casing and constituting a valve to seat upon said valve seat, said plunger having a portion of its lower surface subject to fluid pressure and a greater area of its upper surface subject to fluid pressure to normally hold said plunger in engagement with its valve seat, an auxiliary valve chamber communicating at one of its ends with the space above said plunger and communicating at its other end by means of a restricted by-pass with the space beneath said plunger, an imperforate auxiliary plunger valve located in said auxiliary valve chamber in position to engage a valve seat to close a port which when open serves to permit the escape of fluid from the auxiliary valve chamber and the space above the first plunger, and means to lift said auxiliary plunger valve from its seat.

14,068. GAS-RANGE. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 24, 1915. Serial No. 68,577. Original No. 1,160,755, dated Nov. 16, 1915, Serial No. 878,722. (Cl. 126—42.)



1. The combination with an oven having a baking burner, a gas supply valve for said burner, a broiler burner in the oven, a gas supply valve for the broiler burner, a damper in the oven, and means operated by the gas supply valve of the broiler burner for opening the damper when the valve is open and closing the damper before the valve for the baking burner is opened.

2. The combination with an oven, of a baking burner in the lower end of the oven, a broiler burner in the upper end of the oven, gas supply valves for said burners, a damper for the oven, and means operated by the gas supply valve of the broiler burner for opening the damper when the valve is open and closing the damper before the valve of the baking burner is opened.

3. The combination with a gas oven having a baking burner in its lower end, a gas supply valve for said burner, a broiler burner in the upper end of the oven, a gas supply valve for the broiler burner, a damper for the oven, and means connecting the gas supply valve of the broiler burner and the damper, whereby the damper is opened when the broiler burner valve is open and closed before the valve of the baking burner is opened.

4. The combination with a gas range having a baking burner in its lower end, a gas supply valve for said burner, a broiler burner in the upper end of the oven, a gas supply valve for the broiler burner, a damper for the oven, means operated by the movement of the gas supply valve of the broiler burner for opening the damper when the valve is opened and closing the damper when the valve is closed, and means connecting the two valves whereby but one valve is allowed to be opened at the same time.

5. The combination with a gas range having a baking burner in its lower end, a gas supply valve for said burner, a broiler burner in the upper end of the oven, a gas supply valve for the broiler burner, a damper for the oven, means connecting the gas supply valve of the broiler burner with the damper for opening the damper with the opening of the valve and closing the damper with the closing of the valve, and a rod connecting the gas supply valve of the broiler burner with the gas supply valve of the baking burner, whereby both valves cannot be opened at the same time.

6. The combination with a gas range having a lower baking burner, a gas supply valve for the said burner, a broiler burner in the upper end of the oven, a gas supply valve for the broiler burner, a damper for the oven, means connecting the gas supply valve of the broiler burner with the damper for opening the damper with the opening of the valve and closing the damper with the closing of the valve, and a rod pivotally connected to the valve stem of one valve and having a keyhole slot connection with the valve stem of the other valve, whereby both valves can not be opened at the same time.

7. The combination with a gas range having a lower baking burner, a valve for said burner, a broiler burner within the upper end of the oven, a gas supply for the said burner, a damper for the oven, means connecting the gas supply valve of the broiler burner with the damper for opening the damper when the valve is opened and closing the damper when the valve is closed, a projection carried by the valve stem of one valve, a rod pivotally connected to the said projection, the valve stem of the other valve having a transverse member carried thereby and working in a keyhole slot in the lower end of the rod, whereby both valves can not be opened at the same time.

8. The combination with a gas range having a baking burner, a gas supply valve for the said burner, a broiler burner in the upper end of the oven, a gas supply valve for the said burner, a damper for the oven, means connecting the damper and the valve for the broiler burner, whereby the damper is opened with the opening of the valve and closed with the closing of the valve, an arm carried by the valve stem of one valve, a rod pivotally connected to the said arm, a transverse member carried by the valve stem of the other valve and lower end of the rod having an elongated portion provided with a keyhole slot and adapted to receive the transverse member carried by the valve stem, whereby both valves cannot be opened at the same time.

9. The combination with a combined baking and broiling oven having a baker burner and a broiler burner, gas valves for the two burners, a smoke outlet for the oven, and means controlled by one of said valves for opening the smoke outlet when the broiler burner is operating and the baker burner is not operating, and closing said outlet when the baker burner is operating and the broiler burner is not operating, the parts combined for the purpose described.

10. The combination with a combined baking and broiling oven having a baker burner and a broiler burner, gas valves for the two burners, a smoke outlet for the oven, a damper for the outlet, and an operative connection between one of said valves and the damper which opens the damper when the broiler burner gas valve is open and the baker burner gas valve is closed, and closes the damper when the broiler burner valve is closed and the baker burner valve is open, the parts combined for the purpose described.

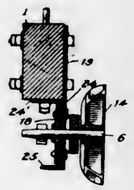
11. The combination with a combined baking and broiling oven having baking and broiling burners, and also having a smoke outlet, of a controlling member for said outlet, and means operating said controlling member to open it whan the broiler burner is operating and the baker burner not operating, and to close said member when the baker burner is operating and the broiler burner is not operating, the parts combined for the purpose described.

12. The combination with a combined baking and broiling oven having a baker burner at its bottom and a broiler burner at its upper portion, and also having a smoke outlet, of a damper for said outlet, fuel supply for said burners, fuel control for the burners, and an operating member connected with the damper and fuel control to open the damper when the broiler burner is operating and the baker burner not operating and to close the damper when the baker burner is operating and the broiler burner is not operating, the parts combined for the purpose described.

13. The combination with a combined broiling and baking oven, of a baker burner in the bottom and a broiler burner in the top of the oven, a smoke outlet in the top of the oven, a damper controlling the outlet, fuel controls for said burners, and an operative connection between the fuel controls and said damper and opening the damper when fuel is fed to the broiler burner and fuel cut off from the baker burner and the damper closed when fuel is fed to the baker burner and fuel cut off from the broiler burner, the parts combined for the purpose described.

14. The combination with a combined baking and broiling oven, of a baking and a broiling burner, fuel controls for said burners, locking means between said fuel controls to prevent the opening of both fuel controls at the same time, the oven having a smoke outlet, a controlling member for the outlet, and operating means between the controlling member and the fuel controls opening the outlet when the broiler burner is operating and the baker burner not operating and closing the outlet when the baker burner is operating and the broiler burner not operating, the parts combined for the purpose described.

14,069. END CONSTRUCTION. THOMAS H. SYMINGTON, Rochester, N. Y. Filed Jan. 6, 1916. Serial No. 70,675. Original No. 1,125,917, dated Jan. 19, 1915, Serial No. 843,922. (Cl. 213—42.)



1. In a center construction the combination with the center-sills, end-sill and bolster, of a pair of draft plates attached to the center sills and extending over the said bolster and under the end sill, a portion of each plate extending downwardly beyond the center sills, each of said portions being provided with a reinforcing flanged member overlying and secured to the corresponding draft plate and abutting the under face of the corresponding center sill.

2. A draft gear construction comprising center sills and end sills, draft plates connected to the vertical faces of the center sills and extending under the end sill, each plate being provided with a portion extending downwardly beyond the corresponding center sill, a reinforcing member connected to the said portion, said member having portions extending at an angle to each other to provide an outwardly extending flange, the said plate having portions lying on opposite sides of the said flange and intermediate of the ends of said reinforcing member, the said reinforcing member being connected to the corresponding center sill.

3. In a center construction consisting of wooden center sills, an end sill and a bolster, draft plates connected to the vertical faces of said center sills and extending over and to the rear of the bolster, each of said plates having a depending portion, cheek plates overlying and in engagement with and respectively secured to said depending portions, a reinforcing member connected to each depending portion, said member having a flange connected to the adjacent center sill and extending toward the bolster, and reinforcing means overlapping said reinforcing member and connected to said plate adjacent said bolster, said reinforcing means extending vertically toward the upper edge of said draft plate.

4. In a center construction and in combination with the end sill, center sills and bolster of a pair of draft plates connected to the inner faces of the center sills and extending under the end sill and over the body bolster, a portion of each of said plates depending below the center sills, and stiffening means overlying and connected to the outer faces of the depending portions of said plates and involving a plurality of flanges, each of said plates having portions lying on opposite sides of one of the flanges and intermediate of the ends of the corresponding stiffening means, one of the flanges of each of said means being in contact with and connected to the adjacent sill.

5. A draft gear construction consisting of depending draft plates secured to the inner faces of the sills, parallel angle irons secured to the outer faces of the plates beneath the sills, having one flange horizontal, the horizontal flange of the upper angle iron being secured to the bottom of the sill, cheek plates overlying the vertical flanges of the angle irons and fastened to both the angle irons and the draft plates.

6. A center construction consisting of wooden center sills, an end sill and a bolster, draft plates secured to the inner faces of the center sills each having a depending portion below the sills, the rear ends of the plates abutting against the bolster and the front ends against the end sill, cheek plates secured to the draft plates beneath the sills and horizontal reinforcing members in the form of angle irons secured to the top and bottom edges respectively of the depending portion of each draft plate, the upper angle irons having horizontal flanges secured to the bottoms of the draft sills.

7. A center construction consisting of wooden center sills, an end sill and a bolster, draft plates secured to the inner faces of the center sills and extending below the sills, the rear ends of the plates abutting against the bolster and the front ends against the end sill, cheek plates secured to the draft plates beneath the sills, reinforcing bars between the cheek plates and the draft plates, part of the reinforcing bars as well as the draft plates themselves, abutting against the bolster.

8. A center construction consisting of wooden center sills, an end sill and a bolster, draft plates secured to the inner faces of the center sills and extending below the sills, the rear portions of the plates abutting against the bolster and the front ends against the end sill, cheek plates secured to the draft plates beneath the sills, reinforcing members in the form of parallel angle irons having vertical flanges extending between the cheek plates and the draft plates and secured to both, the upper members having horizontal flanges secured to the bottoms of the draft sills and abutting at their rear ends against the bolster.

9. A center construction consisting of wooden center sills, an end sill and a bolster, draft plates secured to the inner faces of the center sills and extending below the sills, the rear portions of the plates abutting against the bolster and the front ends against the end sill, cheek plates secured to the draft plates beneath the sills, reinforcing members in the form of parallel angle irons having vertical flanges extending between the cheek plates and the draft plates and secured to both, the upper members having horizontal flanges secured to the bottoms of the draft sills and abutting at their rear ends against the bolster, the cheek plates being slotted be-

tween the reinforcing members and having flanges at the edges of the sills extending through the draft plates which are correspondingly slotted.

14,070. PROCESS OF DETINNING. FRANZ VON KÜGELGEN, Holcombs Rock, Va., and GEORGE O. SEWARD, East Orange, N. J., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee, a Corporation of New York. Filed Aug. 27, 1907. Serial No. 390,412. Original No. 851,946, dated Apr. 30, 1907, Serial No. 365,603. Division A. (Cl. 75—55.)

1. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and passing through the vessel such a surplus of chlorin above the amount necessary for the reaction that the heat generated by the reaction is absorbed by the large amount of cool gas and the temperature thereby kept below the point at which the iron is attacked.

2. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and passing through the vessel such a surplus of chlorin that the heat generated by the reaction is absorbed by the larfe amount of cool gas and the temperature thereby kept below the point at which the iron is attacked.

3. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and passing over the scrap within the vessel such a large amount of cool gas that the temperature is thereby kept below the point at which the iron is attacked.

4. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and maintaining within the vessel such an active flow of chlorin that the heat generated by the reaction is absorbed, and the temperature thereby kept below the point at which the iron is attacked.

5. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and causing such a large amount of cool gas to flow over the scrap that the temperature is thereby kept below the point at which the iron is attacked.

6. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and maintaining within the vessel such an active flow of chlorin and so cooling the chlorin that the heat generated by the reaction is absorbed and the temperature of the scrap thereby kept below the point at which the iron is attacked.

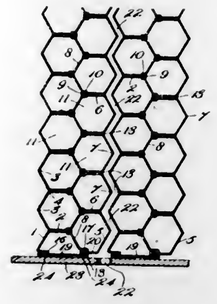
14,071. PROCESS OF DETINNING. GEORGE O. SEWARD, Jersey City, N. J., and FRANZ VON KÜGELGEN, deceased, Holcombs Rock, Va., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee, a Corporation of New York. Filed Oct. 30, 1915. Serial No. 58,942. Original No. 851,946, dated Apr. 30, 1907, Serial No. 365,603. (Cl. 75—55.)

1. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, and so limiting the quantity of scrap that the heat generated by the reaction is absorbed by the contents of the vessel and the temperature prevented from rising to a point at which the iron is attacked.

2. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, so limiting the quantity of scrap that the heat generated by the reaction is absorbed by the contents of the vessel, and applying a cooling medium to cool said contents, whereby the temperature is kept below that at which the iron is attacked.

3. The recovery of tin from tin scrap by treating the latter in a closed vessel with dry chlorin to form stannic chlorid, so limiting the quantity of scrap that the heat generated by the reaction is absorbed by the contents of the vessel, and water-cooling the vessel, whereby the temperature is kept below that at which the iron is attacked.

14,072. RADIATOR-CELL STRUCTURE. HERBERT CHAMPION HARRISON, Lockport, N. Y., assignor to Harrison Manufacturing Company Inc., Lockport, N. Y., a Corporation of New York. Filed Dec. 15, 1914. Serial No. 877,434. Original No. 1,076,115, dated Oct. 21, 1913, Serial No. 729,117. (Cl. 257—130.)



1. In a radiator, a unit comprising a pair of opposed zig-zag outer plates folded to provide partitions at their reëntrant portions, and an intermediate zig-zag division plate engaging said partitions to provide two rows of polygonal cells separated by a single thickness of metal.

2. In a radiator, a unit comprising a pair of opposed zig-zag outer plates folded to provide partitions at their reëntrant portions, and an intermediate division plate provided with pairs of projections extending alternately from its opposite faces for engaging said partitions of the adjacent plates, thereby forming two rows of polygonal cells separated by a single thickness of metal.

3. In a radiator, a unit comprising a pair of opposed zig-zag outer plates folded to provide partitions at their reëntrant portions, an intermediate zig-zag division plate engaging said partitions to provide two rows of polygonal cells separated by a single thickness of metal, and means for closing the end cells of the said rows.

4. In a radiator, a unit comprising a pair of opposed zig-zag outer plates folded to provide partitions and provided with end pockets, a zig-zag division plate engaging said partitions to provide two rows of polygonal cells separated by a single thickness of metal, and a closing strip extending within said pockets for closing the end cells of said rows.

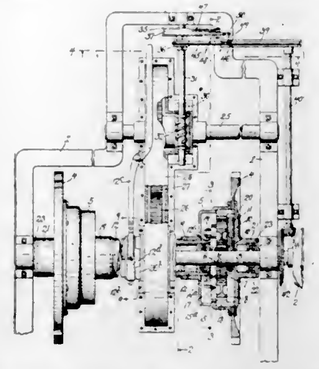
5. In a radiator, the combination of a plurality of units each comprising a pair of opposed zig-zag outer plates folded to provide partitions at their reëntrant portions, an intermediate zig-zag division plate engaging said partitions to provide two rows of polygonal cells separated by a single thickness of metal, and means for spacing said units apart with the projecting portions of the zig-zag outer walls of the several units opposed to the reentrant portions of the zig-zag walls of the adjacent units.

6. In a radiator the combination of a pair of radiator units each composed of a pair of zig-zag outer plates separated by a zig-zag division plate of a single thickness of metal to form a double row of cells; and means to separate said units to form a zig-zag water passage between them, substantially as described.

7. A radiator unit comprising a pair of zig-zag outer plates and a zig-zag intermediate plate of a single thickness contacting with said outer plates to form a double row of cells, substantially as described.

8. A radiator section made up of a plurality of radiator units each unit comprising a pair of opposing zig-zag outer plates forming partitions constituting cell walls, and each provided with an intermediate zig-zag division plate of a single thickness engaging said partitions to provide a double row of polygonal cells separated by a single thickness of metal, and the outer plates of adjacent units being spaced apart to form zig-zag water passages, substantially as described.

14,073. POWER-TRANSMISSION AND SPEED-CONTROLLING DEVICE. WILLIAM P. ALLEN, Chicago, Ill. Filed Sept. 9, 1915. Serial No. 49,836. Original No. 1,112,586, dated Oct. 6, 1914, Serial No. 737,380. (Cl. 74—35.)



1. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis; and means controllable at will for rotating the trammel device about the axis of the shaft.

2. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis, means for rotating the trammel device about the axis of the shaft, and means for varying at will the rate of such rotation.

3. In a power-transmitting device, in combination with a rotating shaft; an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a plate surrounding the shaft and means for holding it against rotation therewith; a trammel plate mounted on the shaft between the last-mentioned plate and the spur gear, said trammel plate having slots in diametrical lines, transverse to each other; abutments on the gear engaging said slots in one of said lines, and abutments on the plate engaging the slots in the other of said lines; a sleeve co-axial with the shaft engaged endwise with the plate for rotating or holding the same against rotation about the shaft; a casing journaled on the sleeve and rigid with said internal gear, and means for holding the sleeve against rotation about the shaft.

4. In a power-transmitting device, in combination with a rotating shaft, an eccentric thereon; a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing therewith and journaled concentrically with the shaft; a sleeve encompassing the shaft, and roller bearings by which it is spaced therefrom and journaled thereon, the means by which the internal gear is journaled concentrically with the shaft comprising a casing rigid with said gear and journaled on the sleeve; a trammel device for controlling the rotation of the spur gear about its own axis, comprising a plate within the last-mentioned casing engaged by the sleeve for holding thereby or rotation therewith; a trammel plate interposed between the last-mentioned plate and the spur gear having sliding connection with both, said connections being for sliding in lines transverse to each other, and means for controlling the rotation of the sleeve about the shaft.

5. In a power-transmitting device, in combination with a rotating shaft, a casing sleeve encompassing the shaft for a part of its length; two power-transmitting wheels, one at each end of the sleeve, each having a hollow hub constituting a gear casing, said casing being journaled at one end directly on the sleeve, and at the other end indirectly on the shaft beyond the end of the sleeve; ball bearings interposed on the shaft between the same and the sleeve for journaling the latter on the former, and ball bearings by which the outer end of the wheel hub is journaled on the shaft; collars which close the outer ends of the casing hubs and are journaled directly on the shaft, and gear trains within the casing hubs of the power wheels, respectively, for transmitting rotation from the shaft to said wheels.

6. In a power-transmitting device, in combination with a rotating shaft, a casing sleeve encompassing the shaft for a part of its length; a power transmitting wheel at one end of the sleeve having a hollow body constituting a gear casing, said casing being journaled at one end directly on the sleeve, and at the other end indirectly on the shaft beyond the end of the sleeve; ball bearings interposed on the shaft between the same and the sleeve for journaling the latter on the former, and ball bearings by which the outer end of the wheel hub is journaled on the shaft; a collar which closes the outer end of the casing hub and is journaled directly on the shaft; means for closing the opposite end of the sleeve, and a gear train within the casing hub of the power wheel for transmitting rotation from the shaft to said wheel.

7. In a power-transmitting device, in combination with a rotating shaft, a sleeve encompassing the same for a portion of its length; bearing devices by which the sleeve is spaced from and journaled on the shaft; a power-transmitting wheel mounted on the shaft at one end of the sleeve comprising a gear casing encompassing the shaft and having hubs, one of said hubs being journaled directly on the sleeve and the other on the shaft beyond the end of the sleeve; a gear train within said gear casing for communicating rotation from the shaft to the power-transmitting wheel, said train comprising an element adapted to be either rotated or held non-rotatable with respect to the shaft, the sleeve having one end extended into the gear casing for engaging said element; one member of a spiral gear pair connected with the sleeve for rotation therewith; a shaft having the other member of such pair engaging said first member, means for communicating rotation to said last-mentioned shaft, and a brake device for retarding the rotation of said shaft.

8. In a power-transmitting device, in combination with a rotating power shaft, a sleeve encompassing said shaft for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; a power-transmitting wheel mounted on the shaft at one end of the sleeve comprising a gear casing which encompasses the shaft and has hubs of which one is journaled directly on the sleeve and the other on the shaft beyond the sleeve; a gear train within said casing for communicating rotation from the shaft to the power-transmitting wheel, said train comprising an element adapted to be either rotated with, or held non-rotatable with respect to, the shaft, the sleeve having one end extended into the gear casing for engaging said element; one member of a spiral gear pair connected with the sleeve for rotation therewith; a shaft having the other member of such pair engaging said first member for communicating rotation to the last-mentioned shaft, and means for controlling its rotation at will.

9. In a power-transmitting device, in combination with a rotating power shaft, a sleeve encompassing said shaft for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; a power-transmitting wheel mounted on the shaft at one end of the sleeve comprising a gear casing which encompasses the shaft and has hubs, of which one is journaled directly on the sleeve and the other on the shaft beyond the sleeve; a gear train within said casing for communicating rotation from the shaft to the power-transmitting

wheel, said train comprising an element adapted to be either rotated with, or held non-rotatable with respect to, the shaft, the sleeve having one end extended into the gear casing for engaging said element; a worm gear connected with the sleeve for rotation therewith; a shaft having a worm engaging said worm gear; a brake device operable at will for retarding the rotation of said shaft; frictional driving means and means for varying the frictional engagement to vary the speed at which the shaft is rotated.

10. In a power-transmitting device, in combination with a rotating shaft, a sleeve encompassing the same for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; two power-transmitting wheels mounted on the shaft at opposite ends of the sleeve, each comprising a gear casing encompassing the shaft and having hubs one of which is journaled directly on the sleeve and the other on the shaft beyond the sleeve; gear trains within said casings for communicating rotation from the shaft to said power-transmitting wheels, respectively; said gear trains comprising each an element adapted to be rotated or to be held non-rotatable with respect to the shaft, the sleeve having its ends extended into the casing for engaging said elements, respectively, and means for controlling the rotation of the sleeve.

11. In a power-transmitting device, in combination with a rotating shaft, a sleeve encompassing the same for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; two power-transmitting wheels mounted on the shaft at opposite ends of the sleve, each comprising a gear casing encompassing the shaft and having hubs one of which is journaled directly on the sleeve and the other on the shaft beyond the sleeve; gear trains within said casings for communicating rotation from the shaft to said power-transmitting wheels, respectively; said gear trains comprising each an element adapted to be rotated or to be held non-rotatable with respect to the shaft; the sleeve having its ends extended into the casing for engaging said elements, respectively; one member of a spiral gear pair connected with the sleeve for rotation therewith; a shaft having the other member of such pair engaging said first member; means for communicating rotation to said shaft; a brake wheel on said shaft and a brake device for engaging the brake wheel.

12. In a power-transmitting device, in combination with a rotating shaft, a sleeve encompassing the same for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; two power-transmitting wheels mounted on the shaft at opposite ends of the sleeve, each comprising a gear casing encompassing the shaft and having hubs one of which is journaled directly on the sleeve and the other on the shaft beyond the sleeve; gear trains within said casings for communicating rotation from the shaft to said power-transmitting wheels, respectively; said gear trains comprising each an element adapted to be rotated or to be held non-rotatable with respect to the shaft; the sleeve having its ends extended into the casing for engaging said elements, respectively; one member of the spiral gear pair connected with the sleeve for rotation therewith; a shaft having the other member of such pair engaging said first member, and means for communicating rotation to said shaft and for controlling its rotation at will.

13. In a power-transmitting device, in combination with a rotating shaft, a sleeve encompassing the same for a portion of its length, and bearing devices by which the sleeve is spaced from and journaled on the shaft; two power-transmitting wheels mounted on the shaft at opposite ends of the sleeve, each comprising a gear casing encompassing the shaft and having hubs one of which is journaled directly on the sleeve and the other on the shaft beyond the sleeve; gear trains within said casings for communicating rotation from the shaft to said power-transmitting wheels, respectively; said gear trains comprising each an element adapted to be rotated or to be held non-rotatable with respect to the shaft; the sleeve having its ends extended into the casing for engaging said elements, respectively; one member of a spiral gear pair connected with the sleeve for rotation therewith; a shaft having the other member of such pair engaging said first member; means for variably resisting the rotation of said shaft, means for variably communicating rotation to the same, and means for controlling at will said resisting means and said rotating means.

14. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate train for rotating said sleeve, and means for varying at will the speed of said separate train.

15. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate train for rotating said sleeve, said separate train comprising a clutch engageable and disengageable for transmitting or interrupting the transmission of motion from said train.

16. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate train for rotating said sleeve, said separate train comprising a clutch engageable and disengageable at will to transmit or interrupt the transmission of motion from said train, and means for varying at will the speed of said separate train.

17. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate train for rotating said sleeve, said train comprising a spiral gear pair and a brake for retarding the motion of the more rapidly rotating of the two members of said pair.

18. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate train for rotating said sleeve, said train comprising a spiral gear pair and means for retarding at will the speed of said separate train.

19. In combination with a power shaft and a power wheel, a gear train whose members are connected for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted; a sleeve on the shaft connected for rotation by said retardable part; a separate gear train connected for controlling the rotation of said sleeve, and a brake device for retarding said train.

20. In combination with a power shaft and a power wheel, a gear train whose members are connected for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted; a separate train for controlling the rotation of said retardable part, such train comprising a member geared up to revolve at several times the angular velocity of such part, and a brake device for retarding the motion of such geared up member.

21. In combination with a power shaft and a power wheel, a gear train whose members are connected for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted; a spiral gear pair having one member connected for rotation by said retardable part, and a brake device for variably resisting rotation of the other member of said pair.

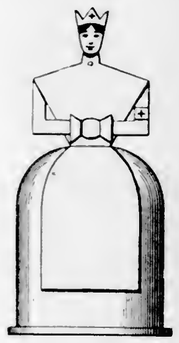
22. In combination with a power shaft and a power wheel thereon, a gear train whose members are mounted on the shaft for transmitting motion between the shaft and the wheel, said train comprising a part whose retardment tends to increase and whose acceleration tends to reduce the motion transmitted between the shaft and wheel; a sleeve on the shaft and means connecting it with said retardable part of the train; a separate gear train for rotating said sleeve, and a brake device for retarding said train.

23. In a power-transmitting device, in combination with a rotating shaft and eccentric thereon, a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis, and means for controlling the rotation of the trammel device about the axis of the shaft comprising a spiral gear pair, and means by which one member of the pair is actuated by the trammel device.

24. In a power-transmitting device, in combination with a rotating shaft and eccentric thereon, a spur gear journaled on the eccentric; an internal gear having a greater number of teeth than the spur gear meshing with the latter and journaled concentrically with the shaft; a trammel device for controlling the rotation of the spur gear about its own axis, and means for controlling the rotation of the trammel device about the axis of the shaft comprising a spiral gear pair; means by which one member of the pair is actuated by the trammel device, and means for controlling at will the other member of the pair.

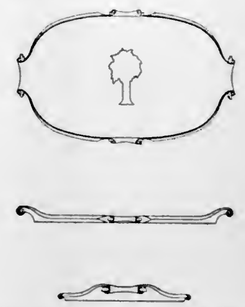
DESIGNS.

48,542. YARN-BALL HOLDER. DOROTHY P. BENJAMIN, New York, N. Y. Filed Dec. 4, 1915. Serial No. 65,144. Term of patent 3½ years.



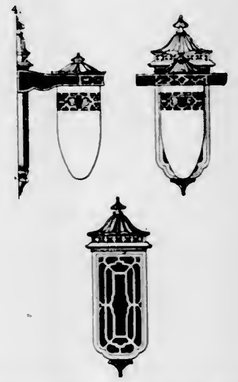
The ornamental design for a yarn ball holder, as shown.

48,543. TEA-TRAY. CLEVENGER A. EASTMAN, Columbia, S. C. Filed Sept. 23, 1915. Serial No. 52,310. Term of patent 3½ years.



An ornamental design for a tea tray as shown.

48,544. LIGHTING-FIXTURE. IHNA T. FRARY, Hudson, Ohio, assignor to The Hocking Glass Company, Lancaster, Ohio, a Corporation of Ohio. Filed Sept. 8, 1915. Serial No. 49,642. Term of patent 7 years.



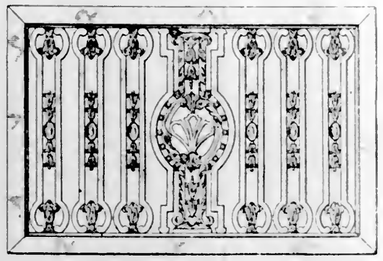
The ornamental design for a lighting fixture, as shown.

48,545. PICTURE-FRAME. WALTER W. GIVEANS, Newark, N. J. Filed Oct. 12, 1915. Serial No. 55,587. Term of patent 14 years.



The ornamental design for a picture frame, as shown.

48,546. GRILLE. HARRY B. GREENE, Hasbrouck Heights, N. J. Filed Dec. 20, 1915. Serial No. 67,910. Term of patent 14 years.

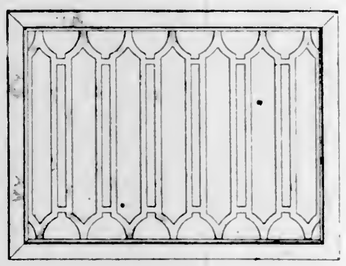


The ornamental design for a grille substantially as shown.

48,547. GRILLE. HARRY B. GREENE, Hasbrouck Heights, N. J. Filed Dec. 20, 1915. Serial No. 67,911. Term of patent 14 years.

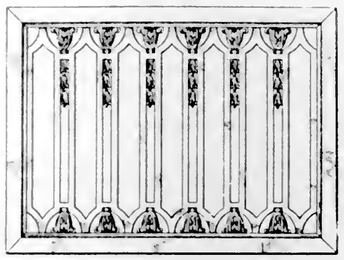
The ornamental design for a grille substantially as shown.

48,548. GRILLE. HARRY B. GREENE, Hasbrouck Heights, N. J. Filed Dec. 20, 1915. Serial No. 67,912. Term of patent 14 years.



The ornamental design for a grille substantially as shown.

48,549. GRILLE. HARRY B. GREENE, Hasbrouck Heights, N. J. Filed Dec. 20, 1915. Serial No. 67,913. Term of patent 14 years.



The ornamental design for a grille substantially as shown.

48,550. BOTTLE-CAP REMOVER. NELSON L. JACOBUS, West Orange, N. J., assignor to Electro-Chemical Engraving Co., a Corporation of New York. Filed Apr. 10, 1915. Serial No. 20,582. Term of patent 7 years.



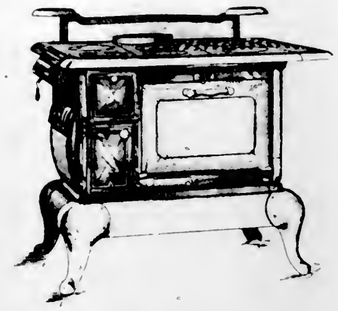
The ornamental design for a bottle cap remover, substantially as shown.

48,551. BOTTLE. WALTER F. KOKEN, St. Louis, Mo., assignor to Koken Barbers' Supply Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 6, 1915. Serial No. 65,430. Term of patent 7 years.



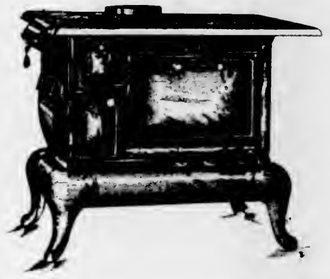
The design for a bottle, as shown.

48,552. STOVE. MAX R. LEHMAN, Quincy, Ill., assignor to Orbon Stove and Range Company, Belleville, Ill., a Corporation of Illinois. Filed Dec. 4, 1915. Serial No. 65,138. Term of patent 7 years.



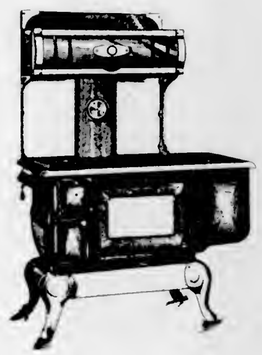
The ornamental design for a stove, as shown.

48,553. STOVE. MAX R. LEHMAN, Quincy, Ill., assignor to Orbon Stove and Range Company, Belleville, Ill., a Corporation of Illinois. Filed Dec. 4, 1915. Serial No. 65,139. Term of patent 7 years.



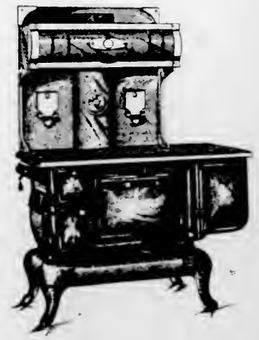
The ornamental design for a stove, as shown.

48,554. STOVE. MAX R. LEHMAN, Quincy, Ill., assignor to Orbon Stove and Range Company, Belleville, Ill., a Corporation of Illinois. Filed Dec. 4, 1915. Serial No. 65,140. Term of patent 7 years.



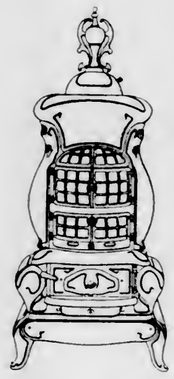
The ornamental design for a stove, as shown.

48,555. STOVE. MAX R. LEHMAN, Quincy, Ill., assignor to Orbon Stove and Range Company, Belleville, Ill., a Corporation of Illinois. Filed Dec. 4, 1915. Serial No. 65,141. Term of patent 7 years.



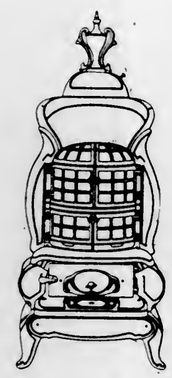
The ornamental design for a stove, as shown.

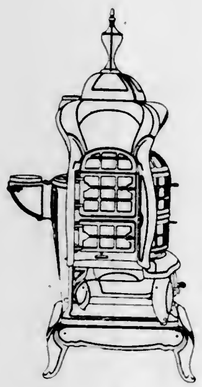
48,556. HEATING-STOVE. MAX RICHARD LEHMAN, Quincy, Ill., assignor to The Globe Stove & Range Company, Kokomo, Ind. Filed Nov. 8, 1915. Serial No. 60,444. Term of patent 3½ years.

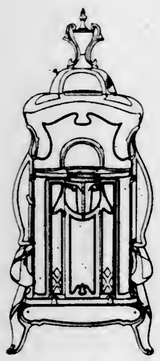


The ornamental design for a heating stove, as shown.

48,557. HEATING-STOVE. MAX RICHARD LEHMAN, Quincy, Ill., assignor to The Globe Stove & Range Company, Kokomo, Ind. Filed Nov. 8, 1915. Serial No. 60,445. Term of patent 3½ years.







The ornamental design for a heating stove, as shown.

48,558. BADGE OR INSIGNIA. WILLIAM LEHMBERG, Philadelphia, Pa. Filed Oct. 20, 1915. Serial No. 56,999. Term of patent 3½ years.



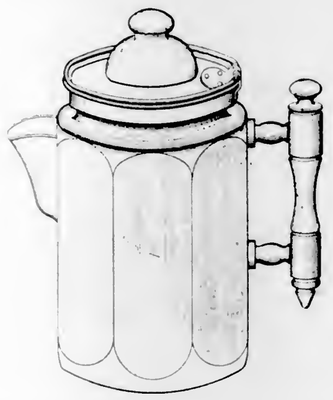
The ornamental design for a badge or insignia as shown.

48,559. PERCOLATOR. WALTER LUTTRINGHAUS, Maywood, Ill. Filed Mar. 27, 1915. Serial No. 17,549. Term of patent 7 years.



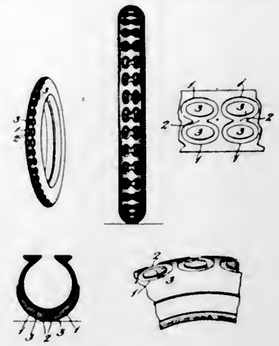
The ornamental design for a percolator, as shown.

48,560. PERCOLATOR. WALTER LUTTRINGHAUS, Maywood, Ill. Filed Mar. 27, 1915. Serial No. 17,550. Term of patent 7 years.



The ornamental design for a percolator, as shown.

48,561. TREAD-SURFACE FOR TIRES. PHILIP S. MALICKSON, Philadelphia, Pa. Filed Oct. 15, 1915. Serial No. 56,156. Term of patent 7 years.



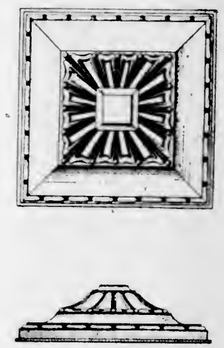
The ornamental design for the tread surface of a tire as shown and described.

48,562. GRAVE-MARKER. JAMES F. MCCLOSKEY, Woonsocket, R. I. Filed Oct. 22, 1914. Serial No. 868,137. Term of patent 14 years.



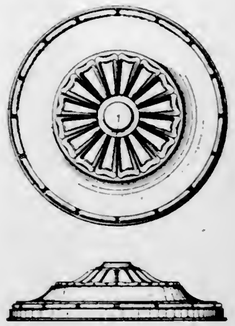
The ornamental design for a grave maker, as shown.

48,563. SHELL FOR LIGHTING-FIXTURES AND ANALOGOUS DEVICES. HARRISON D. MCFADDIN, East Orange, N. J. Filed Nov. 13, 1915. Serial No. 61,420. Term of patent 7 years.



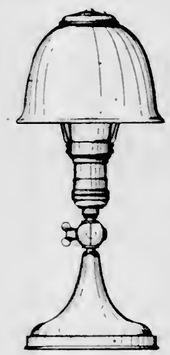
The ornamental design for a shell for lighting fixtures and analogous devices as shown.

48,564. SHELL FOR LIGHTING-FIXTURES AND ANALOGOUS DEVICES. HARRISON D. MCFADDIN, East Orange, N. J. Filed Nov. 13, 1915. Serial No. 61,421. Term of patent 7 years.



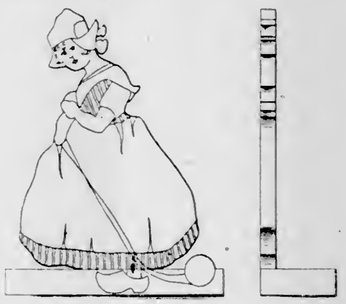
The ornamental design for a shell for lighting fixtures and analogous devices as shown.

48,565. PORTABLE LAMP. HARRISON D. MCFADDIN, East Orange, N. J. Filed Dec. 11, 1915. Serial No. 66,388. Term of patent 14 years.



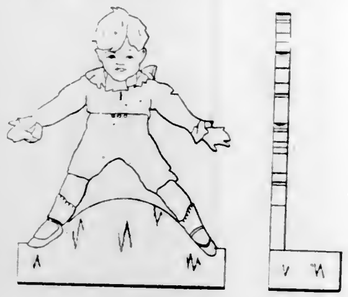
The ornamental design for a portable lamp as shown.

48,566. DOOR-PORTER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,982. Term of patent 3½ years.



The ornamental design for a door porter as shown.

48,567. DOOR-PORTER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,983. Term of patent 3½ years.



The ornamental design for a door porter as shown.

48,568. DISPLAY-STAND. WILLIAM MENTOR NICHOLSON, Ashland, Ky. Filed Dec. 10, 1915. Serial No. 66,206. Term of patent 14 years.



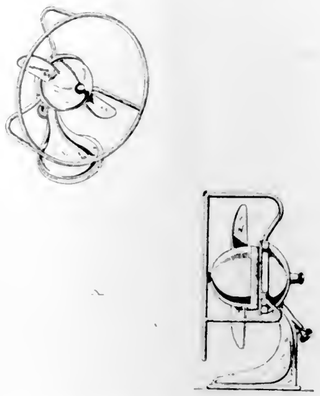
The ornamental design for a display stand, as shown.

48,569. FAN-MOTOR CASING. WARREN NOBLE, Cleveland, Ohio, assignor to The Frantz Premier Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 18, 1915. Serial No. 56,619. Term of patent 14 years.



The ornamental design for fan motor casing as shown.

48,570. CASING AND STAND FOR ELECTRIC FANS. WARREN NOBLE, Cleveland, Ohio, assignor to The Frantz Premier Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 18, 1915. Serial No. 56,620. Term of patent 14 years.



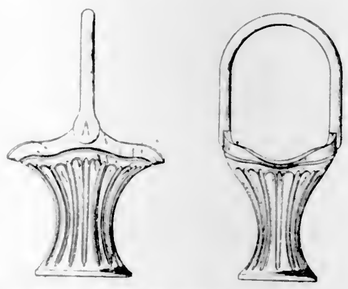
The ornamental design for casing and stand for electric fans as shown.

48,571. PNEUMATIC VEHICLE-TIRE. RALPH G. NULL, Indianapolis, Ind., assignor to G. & J. Tire Company, a Corporation of New Jersey. Filed Oct. 28, 1915. Serial No. 58,493. Term of patent 14 years.



The ornamental design for a pneumatic vehicle tire, as shown.

48,572. VASE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Dec. 8, 1915. Serial No. 65,834. Term of patent 14 years.



The design for a vase as shown.

48,573. EMBLEM, BROOCH, BUTTON, FOB, OR SIMILAR ARTICLE. FREDERICK SCHWINN, Attleboro, Mass. Filed Dec. 27, 1915. Serial No. 68,960. Term of patent 14 years.

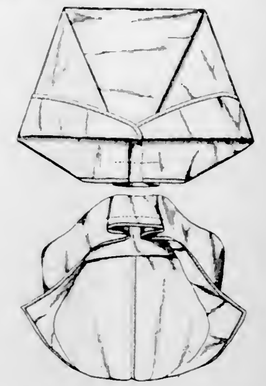
The ornamental design for an emblem brooch, button, fob or similar article, as shown.

48,574. BOOK-RACK. CONSTANCE WINDE, New York, N. Y. Filed Nov. 24, 1915. Serial No. 63,316. Term of patent 3½ years.



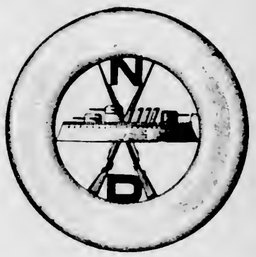
The ornamental design for a book rack, as shown.

48,575. CAP OR BONNET. NELL F. WINGET, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,623. Term of patent 14 years.



The ornamental design for a cap or bonnet, as shown.

48,576. BUTTON. HOWARD F. WOODFIN, Rutland, Vt. Filed Dec. 1, 1915. Serial No. 64,593. Term of patent 3½ years.



The ornamental design for a button, as shown.

TRADE-MARKS

PUBLISHED FERBUARY 15, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 49,670. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) NEW YORK KNIFE COMPANY, New York, N. Y. Filed May 12, 1910.



Particular description of goods.—Pocket and Table Cutlery the Blades or Operative Portions of Which are Either Made of Precious Metal or Plated with Precious Metal.

Claims use since Oct. 15, 1878.

Ser. No. 63,047. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL C. F. PAARMAN, Lake Placid, N. Y., and Palm Beach, Fla. Filed Apr. 22, 1912.

POINCIANA

Particular description of goods.—Creams for Skin and Foot-Powder.

Claims use since July, 1911.

Ser. No. 72,364. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN SEXTON & COMPANY, Chicago, Ill. Filed Aug. 15, 1913.

SEXTON'S SILVERBAR SOAP

No exclusive right is claimed in the words "Sextons" or "Soap" except in the arrangement shown in the drawing.

Particular description of goods.—Soap.

Claims use since July 1, 1913.

Ser. No. 74,496. (CLASS 39. CLOTHING.) LOUIS H. SCHAARSCHMIDT, Limbach, Germany. Filed Dec. 19, 1913.



Particular description of goods.—Unshrinkable Sanitary Wool Underwear—viz., Drawers and Union Suits.

Claims use since 1908.

Ser. No. 75,075. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. P. FULLER & Co., San Francisco, Cal. Filed Jan. 10, 1914.

FULLTONE

Particular description of goods.—Varnishes.

Claims use since about July 1, 1913.

Ser. No. 75,079. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. P. FULLER & Co., San Francisco, Cal. Filed Jan. 10, 1914.

FLEXOR

Particular description of goods.—Varnishes.

Claims use since about July 1, 1913.

Ser. No. 75,160. (CLASS 12. CONSTRUCTION MATERIALS.) ROBINSON-BRETT LUMBER CO., Keene, N. H. Filed Jan. 13, 1914.

Old Hampshire



The words "Old Hampshire" and "The Old Man of the Mountain" and the circular field or disk in which the same appears are shown in different shades of red.

Particular description of goods.—Sheet Fabric Roofing Material.

Claims use since Jan. 1, 1910.

Ser. No. 76,538. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA STAR MILLING CO., Columbia, Ill. Filed Mar. 11, 1914.

ELECT

Particular description of goods.—Wheat-Flour.

Claims use since 1896.

Ser. No. 80,100. (CLASS 4. ABRASIVE DETERGENT, AND POLISHING MATERIALS.) LOS ANGELES SOAP COMPANY, Los Angeles, Cal. Filed July 27, 1914.



Particular description of goods.—Soap.

Claims use since March, 1908.

Ser. No. 81,326. (CLASS 37. PAPER AND STATIONERY.) B. D. RISING PAPER CO., Housatonic, Mass. Filed Sept. 18, 1914.

UNIFORMITY

The word "Uniformity" being disclaimed.

Particular description of goods.—Flat Writing-Paper.

Claims use since July 1, 1914.

Ser. No. 81,399. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Sept. 22, 1914.



Particular description of goods.—Golf Caddy-Bags, Fishing-Rod Cases, Tennis-Racket Cases, and Base-Ball-Bat Bags Made of Canvas and Leather Alone or in Combination, Skate-Sails, Ax-Sheaths, Knife-Sheaths, Fishing Rods, Reels, Spinners, Fish-Lures Known as Spoons, Leader-Boxes, Fly-Boxes, Tackle-Boxes, Fishing-Baskets, Minnow-Pails, and Fishing-Lines, Golf-Clubs, Tennis-Rackets, Squash-Rackets, Tennis-Balls, Tennis-Racket Cases, Base-Balls, Base-Ball Bats, Base-Ball Gloves, Masks, Body-Protectors, Sliding-Pads, Bat-Bags, Rugby-Balls, Foot-Balls, Foot-Ball Pads, Shin-Guards, Basket-Balls, Thigh-Guards, Snow-Shoes, Toboggans, Skis, Ski-Binding, Boxing-Gloves, Striking-Bags.

Claims use since January, 1900.

Ser. No. 82,455. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BLOOMINGDALE BROS., New York, N. Y. Filed Nov. 7, 1914.

AMORA

Comprising the word "Amora."

Particular description of goods.—Gin, Cocktails, Punch, and Vermuth.

Claims use since Nov. 15, 1913.

Ser. No. 82,943. (CLASS 11. INKS AND INKING MATERIALS.) JAMES E. STEVENS, Boston, Mass. Filed Nov. 27, 1914.

JESTER

Particular description of goods.—Stencil and Cartoon Inks.

Claims use since Apr. 1, 1914.

Ser. No. 82,976. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLEMING BROTHERS, Chicago, Ill. Filed Nov. 30, 1914.



Particular description of goods.—Veterinary Medicines for the Treatment of Colic, Sore Eyes, Sweeny, Fistula, Poll-Evil, Spavin, Lump-Jaw, Ringbone, Heaves, and Preventing the Growth of Horns, also General Liniment and Healing-Oil.

Claims use since Nov. 9, 1914.

Ser. No. 84,622. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DENTAL IMPROVEMENT CO., Chicago, Ill. Filed Feb. 19, 1915.

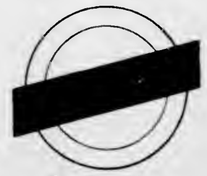
DIC

Particular description of goods.—Artificial Teeth, Porcelain Posteriors, Facings, Crowns, Backings, Ready-Made Adaptable Backings, Backing-Plates, Pins, Parts of Teeth and Backings, Flat-Pin Facings, Curved-Pin Crowns, Interchangeable Teeth, Facings, and Crowns, and Dental Instruments.

Claims use since Feb. 1, 1915.

Ser. No. 85,348. (CLASS 37. PAPER AND STATIONERY.) THE SELBERT PAPER CO., Cincinnati, Ohio. Filed Mar. 23, 1915.

The Paper



that delivers the goods

No claim being made to the words "The Paper that Delivers the Goods" apart from the mark shown in the drawing.

Particular description of goods.—Wrapping-Paper.

Claims use since Feb. 10, 1915.

Ser. No. 86,035. (CLASS 32. FURNITURE AND UPHOLSTERY.) HASTINGS CABINET CO., Hastings, Mich. Filed Apr. 19, 1915.



HASTINGS
The
DOLLAR
CABINET

No claim being made to the words "Hastings The Dollar Cabinet" and the representation of a cabinet apart from the mark shown in the drawing.

Particular description of goods.—Kitchen-Cabinets.

Claims use since Feb. 1, 1915.

Ser. No. 86,249. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) K. HIRADE & CO., Seattle, Wash. Filed Apr. 28, 1915.



The Japanese character shown on the drawing means literally "great good fortune" or "good luck."

Particular description of goods.—Shoyu, a Japanese Condiment or Table Sauce.

Claims use since Jan. 1, 1910.

Ser. No. 86,590. (CLASS 39. CLOTHING.) CHICAGO-KENOSHA HOSIERY COMPANY, Kenosha, Wis. Filed May 13, 1915.

LEATHER STOCKINGS

No claim being made to the word "Stockings" apart from the mark shown in the drawing.
Particular description of goods.—Hosiery.
Claims use since 1895.

Ser. No. 86,630. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) UNION FILTER & NOVELTY COMPANY, New York, N. Y. Filed May 14, 1915.

UNION



No claim being made to registration of the word "Union" apart from the mark shown in the drawing.
Particular description of goods.—Hand-Cleaning Pastes.
Claims use since about February, 1913.

Ser. No. 86,811. (CLASS 39. CLOTHING.) OSHKOSH OVERALL CO., Oshkosh, Wis. Filed May 21, 1915.

ALL OVER

Particular description of goods.—Overalls.
Claims use since February, 1915.

Ser. No. 86,843. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ARIS ZOGRAPHOS, New York, N. Y. Filed May 22, 1915.

ARISTO

Comprising the word "Aristo."
Particular description of goods.—Soap.
Claims use since May 3, 1915.

Ser. No. 87,118. (CLASS 39. CLOTHING.) WARING HAT M'F'G CO., Yonkers, N. Y. Filed June 4, 1915.

THE YOUNGER GENERATION

Particular description of goods.—Felt, Cloth, Straw, and Silk Hats and Caps.
Claims use since October, 1913.

Ser. No. 87,119. (CLASS 39. CLOTHING.) WARING HAT M'F'G CO., Yonkers, N. Y. Filed June 4, 1915.



No claim is made to the words "New York, U. S. A."
Particular description of goods.—Felt, Cloth, Straw, and Silk Hats and Caps.
Claims use since Feb. 18, 1915.

Ser. No. 87,264. (CLASS 12. CONSTRUCTION MATERIALS.) ALFRED H. ANNAN, Dallas, Tex. Filed June 12, 1915.

THERMOWAX.

Particular description of goods.—Fillers for Cement and Concrete Flooring.
Claims use since the 3d day of February, 1914.

Ser. No. 87,549. (CLASS 12. CONSTRUCTION MATERIALS.) BEAVER CLAY MANUFACTURING COMPANY, New Galilee, Pa. Filed June 24, 1915.

BEAVER CLAY

Applicant hereby disclaims the exclusive use of the word "Clay."
Particular description of goods.—Bricks Made of Clay.
Claims use since about the 1st day of January, 1906.

Ser. No. 87,719. (CLASS 39. CLOTHING.) THE SIMMONS SALES CO., Springfield, Mo. Filed July 2, 1915.

SIMMONS

Particular description of goods.—Men's Dress-Trousers, Men's Overcoats, Boys' Dress-Trousers, Boys' Overcoats, Men's Dress-Shirts, Men's Work-Shirts, Boys' Dress-Shirts, Boys' Work-Shirts, Men's Woven Undershirts, Men's Woven Underdrawers, Boys' Woven Undershirts, Boys' Woven Underdrawers, Men's Woven Combination-Suits, Boys' Woven Combination-Suits.
Claims use since Apr. 1, 1913.

Ser. No. 88,232. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANASTASSIOS C. KANELAKOS & Co., New York, N. Y. Filed July 27, 1915.



Particular description of goods.—A Medicinal Tonic.
Claims use since June 1, 1915.

Ser. No. 88,233. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANASTASSIOS C. KANELAKOS & Co., New York, N. Y. Filed July 27, 1915.



Particular description of goods.—A Face-Cream.
Claims use since June 1, 1915.

Ser. No. 88,234. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANASTASSIOS C. KANELAKOS & Co., New York, N. Y. Filed July 27, 1915.



Particular description of goods.—A Hair-Tonic.
Claims use since June 1, 1915.

Ser. No. 88,408. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) DUQUESNE REDUCTION CO., Pittsburgh, Pa. Filed Aug. 4, 1915.

D.E.C

Particular description of goods.—Metallic Ingots Formed of Copper.
Claims use since Apr. 1, 1915.

Ser. No. 88,436. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS GUILLAUME MARTENS, Geneva, Switzerland. Filed Aug. 5, 1915.



No claim being made to the use of the words "Yoghourt, Laboratories Du Yoghourt Geneve," apart from the mark shown in the drawing.
Particular description of goods.—Milk.
Claims use since Dec. 15, 1913.

Ser. No. 88,441. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUSTAVE A. REUTER, Chicago, Ill. Filed Aug. 5, 1915.

CHOC-O-NUTS

Particular description of goods.—Candy.
Claims use since July 12, 1915.

Ser. No. 88,841. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MECHANICAL RUBBER CO., Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Filed Aug. 27, 1915.

CHAMPION

Particular description of goods.—Garden-Hose Composed of Rubber and Rubber Fabric.
Claims use since 1898.

Ser. No. 88,931. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SOL STERN, New Orleans, La. Filed Aug. 30, 1915.

BLACK

Particular description of goods.—A Vegetable Hair, Grown on Trees, Which is Commonly Called Spanish Moss.
Claims use since Mar. 1, 1915.

Ser. No. 89,139. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH TETLEY & Co. INC., New York, N. Y. Filed Sept. 10, 1915. Under ten-year proviso.

TETLEY'S

Particular description of goods.—Teas.
Claims use since on or about July 10, 1889.

Ser. No. 89,297. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) MINNESOTA CHEMICAL MFG. CO., St. Paul, Minn. Filed Sept. 18, 1915.



Particular description of goods.—Varnish-Preserver.
Claims use since about Sept. 2, 1915.

Ser. No. 89,322. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEONARD G. PAGE, St. Joseph, Mo. Filed Sept. 20, 1915.



No claim being made to the word "Page's" except in association with the trade-mark as shown, so far as the present application is concerned.
Particular description of goods.—Coffee, Tea, Spice, and Flavoring Extracts for Foods.
Claims use since January, 1915.

Ser. No. 89,328. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SHIN-SHINE MANUFACTURING CO., Buffalo, N. Y. Filed Sept. 20, 1915.

SHIN-SHINE

Particular description of goods.—Shoe-Polishing Cloth and Applicator.
Claims use since June 1, 1915.

Ser. No. 89,483. (CLASS 17. TOBACCO PRODUCTS.) JACOBSTEIN BROTHERS, Rochester, N. Y. Filed Sept. 27, 1915.

125 SPECIAL

No claim being made to the word "Special" apart from the mark shown in the drawing.
Particular description of goods.—Cigars and Cigarettes.
Claims use since Oct. 10, 1909.

Ser. No. 89,755. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GENERAL ABRASIVE CO., INC., Niagara Falls, N. Y. Filed Oct. 9, 1915.



Particular description of goods.—Corundum, Emery, and Silicon Carbid.
Claims use since Oct. 1, 1915.

Ser. No. 89,987. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MILLER MANUFACTURING COMPANY, Springfield, Mass. Filed Oct. 21, 1915.



The words "Extract of Vanilla" being disclaimed, the facsimile signature being that of W. T. R. Miller, a former official of The Miller Manufacturing Company.
Particular description of goods.—Extracts for Food-Flavoring Purposes.
Claims use since on or about the year 1894.

Ser. No. 89,994. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL CHEMICAL COMPANY, Dallas, Tex. Filed Oct. 21, 1915.

OUDUST

Particular description of goods.—Polish for Furniture, Floors, Pianos, Carriages, and Automobiles.
Claims use since Mar. 1, 1915.

Ser. No. 90,024. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CURTISS AEROPLANE CO., Buffalo, N. Y. Filed Oct. 22, 1915.

Curtiss

The mark is as written by Glenn H. Curtiss, president of The Curtiss Aeroplane Co.
Particular description of goods.—Aeroplanes, Flying-Boats, Hydroaeroplanes, and the Parts Thereof, Not Including Engines.
Claims use since Jan. 1, 1909.

Ser. No. 90,073. (CLASS 32. FURNITURE AND UPHOLSTERY.) BOSTON FLOOR CO., LIMITED, Boston, Mass. Filed Oct. 25, 1915.

E-Z

Particular description of goods.—Portière and Curtain Molding and Runners Therefor.
Claims use since Dec. 22, 1914.

Ser. No. 90,078. (CLASS 37. PAPER AND STATIONERY.) FRANK H. EMERSON, Boston, Mass. Filed Oct. 25, 1915.

FRIENDSHIP

Particular description of goods.—Stationery—Namely, Letter-Paper, Correspondence-Cards, and Envelops.
Claims use since April, 1912.

Ser. No. 90,098. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE PORTAGE RUBBER CO., Barberton, Ohio. Filed Oct. 25, 1915.

SUMMIT

Particular description of goods.—Rubber Vehicle-Tires.
Claims use since September, 1915.

Ser. No. 90,191. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. S. PIERCE CO., Boston, Mass. Filed Oct. 28, 1915.

FIGARO

Particular description of goods.—French Pastes—Namely, Macaroni, Vermicelli, Spaghetti, Noodles, and Elbows.
Claims use since November, 1907.

Ser. No. 90,193. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ADOLPH SOMMER, Cambridge, Mass. Filed Oct. 28, 1915.

TENOL

Particular description of goods.—A Belt-Dressing and Waterproofing for Leather.
Claims use since Feb. 15, 1902.

Ser. No. 90,194. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ADOLPH SOMMER, Cambridge, Mass. Filed Oct. 28, 1915.

CLAROL

Particular description of goods.—A Belt-Dressing and Waterproofing for Leather.
Claims use since Mar. 27, 1899.

Ser. No. 90,218. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YERXA, ANDREWS & THURSTON INC., Minneapolis, Minn. Filed Oct. 29, 1915.

The geographical words in the trade-mark "Minneapolis, Minnesota," are disclaimed.
Particular description of goods.—Semolinas, Wheat-Flours, and Wheat-Offals.
Claims use since Nov. 14, 1914.

Ser. No. 90,254. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CENTRAL FOUNDRY COMPANY, New York, N. Y. Filed Nov. 1, 1915.

C F

Particular description of goods.—Cast-Iron Plumbing Supplies and Fittings Consisting of Soil-Pipe and Fittings; Closet Bends and Flanges; Cesspools; Drain-Traps; Waste Stacks and Vents; Pipe-Joints; Manhôle Frames and Covers; Sinks; Service and Valve Boxes; Water Pipe and Mains for High and Low Pressure Work.
Claims use since 1899.

Ser. No. 90,283. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE PITTSBURGH GAGE & SUPPLY COMPANY, Pittsburgh, Pa. Filed Nov. 1, 1915.

Gainaday

Particular description of goods.—Laundry Washing-Machines, Wringers, Mangles, Flat-Irons, and Clothes-Driers.

Claims use since Sept. 26, 1915.

Ser. No. 90,303. (CLASS 5. ADHESIVES.) AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Nov. 2, 1915.



Particular description of goods.—Glue, Mucilage, and Adhesive Pastes.

Claims use since Jan. 1, 1890.

Ser. No. 90,316. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) COHN & ROSENBERGER, INC., New York, N. Y., and Providence, R. I. Filed Nov. 2, 1915.

COVE-LINK

Particular description of goods.—Bracelets.

Claims use since Aug. 19, 1915.

Ser. No. 90,371. (CLASS 39. CLOTHING.) TAMOR BROS., New York, N. Y. Filed Nov. 2, 1915.

CONTINENTAL

No claim being made to the exclusive use of the word "Continental" except in association with the remainder of the mark as shown.

Particular description of goods.—Hosiery.

Claims use since July 30, 1915.

Ser. No. 90,421. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE UNITED INJECTOR COMPANY, New York, N. Y. Filed Nov. 4, 1915.

THE HANCOCK

Particular description of goods.—Oil-Cups.

Claims use since Oct. 28, 1915.

Ser. No. 90,440. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL GAUGE AND EQUIPMENT CO., La Crosse, Wis. Filed Nov. 5, 1915.



No claim to the words "La Crosse, Wis.," is made except in connection with the mark as shown.

Particular description of goods.—Gasolene-Tank Gages, Oil-Tank Gages, Oil-Gages, Hose-Line Gages, Safety-Gages, Tire-Gages, Dash-Board Gages, Oil-Gages, Air-Tank Gages, Gasolene-Lighting Gages, Pressure-Gages, Vacuum-Gages, Compound Gages, Altitude-Gages, and Steam-Gages.

Claims use since the 1st day of May, 1915.

Ser. No. 90,442. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE C. L. ROBB MFG. CO., Bellefontaine, Ohio. Filed Nov. 5, 1915.

OIL-GLOW

Particular description of goods.—Shoe-Polish.

Claims use since June 4, 1912.

Ser. No. 90,541. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES GUSTAVE DUREL, New Orleans, La. Filed Nov. 9, 1915.

SUGAR HOUSE

Particular description of goods.—Coffee and Chicory.

Claims use since March, 1909.

Ser. No. 90,616. (CLASS 27. HOROLOGICAL INSTRUMENTS.) TIME SYSTEMS COMPANY, Portland, Me., and Chicago, Ill. Filed Nov. 12, 1915.



No claim is made for the exclusive use of the words "Automatic" and "Pneumatic" apart from the mark shown or the other exclusive words, arrangements, and features thereof.

Particular description of goods.—Clocks, Parts of Clocks, Clock Systems, Synchronizing Mechanisms, Tower-Clocks, Rewinding Mechanisms for Clocks.

Claims use since the 1st day of October, 1915.

Ser. No. 90,620. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Nov. 12, 1915.



COLONIAL

Particular description of goods.—Buttons, (Jet, Pearl, Glass, Fancy, Crochet, Ivory;) Button-Molds, Dress-Shields, Hose-Supporters, Waist-Supporters; Hair-Pins, (Wire, Celluloid, Horn, Rubber;) Hair-Curlers, (Kid, Leather;) Pins: Hat-Pins, (Glass, Pearl, Jet, Shell, Rhinestone, Metal Made of Composition, Fancy;) Stick-Pins, (Jet, Pearl, Metal of Composition, Glass, Fancy;) Safety-Pins; Hair-Wavers, Dress-Pins of All Metal with Glass Heads, Snap-Fasteners, Snap-Fastener Tape, Hook-and-Eye Tape, Needles for Hand-Sewing, Bodkins, Stilettos, Ribbon-Wire, Bonnet-Wires, Tatting-Shuttles, Knitting-Needles, Curling-Irons, Crochet-Hooks, Collar-Supporters, Collar-Wire, Girdle-Banding, Girdles, Corset-Clasps; Corset-Laces, (Silk, Cotton, Linen;) Tie-Laces, Shoe-Laces, Pump-Bows, Taffeta-Ribbon Binding, Finishing-Braid, Embroidery-Edging; Tapes, (Cotton, Linen, Mercerized;) Dress-Belting, (Cotton, Linen, Mercerized;) Elastic Cords, Elastic Braids, Feather-Edge Braids, Novelty-Braids, Bias Tape, Neckties, Neckscarfs, and Jabots, Windsor Ties, Vanity-Bags Made of Composition, Button-Hooks Made of Composition, Shoe-Horns Made of Composition, Back Combs Made of Celluloid, Side Combs Made of Celluloid, Casque-Combs Made of Celluloid, Chignon-Combs Made of Celluloid, Barrettes, Bandeaux, Fabric Belts for Personal Wear; Fans, (Japanese, Silk, Feather, and Linen with Bone Sticks, Wood Sticks, Pearl Sticks, Ebony Sticks, Tortoise-Shell Sticks, and Celluloid Sticks;) Celluloid Fans, Belts for Personal Wear, Toilet-Combs, Feather-Stitch Braids.

Claims use since the year 1897.

Ser. No. 90,678. (CLASS 39. CLOTHING. LACK MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 16, 1915.

MIDDY

No claim being made to the exclusive use of the word "Middy" apart from the mark shown in the drawing.

Particular description of goods.—Children's, Misses', and Ladies' Shirt-Waists, Dresses, Skirts, Coats, and Blouses.

Claims use since about Oct. 28, 1915.

Ser. No. 90,710. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SPRAY ENGINEERING COMPANY, Boston, Mass. Filed Nov. 17, 1915.

SPRACO

Particular description of goods.—Spray-Nozzles.

Claims use since on or about Nov. 10, 1915.

Ser. No. 90,711. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SPRAY ENGINEERING COMPANY, Boston, Mass. Filed Nov. 17, 1915.



No claim being made to the representation of a nozzle apart from the mark shown in the drawing.

Particular description of goods.—Spray-Nozzles.

Claims use since on or about Nov. 10, 1915.

Ser. No. 90,817. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CLARK-SMITH HDW. CO., Peoria, Ill. Filed Nov. 22, 1915.

"GOLD TIP"

Particular description of goods.—Lawn-Mowers and Handles for Shovels, Spades, Post-Spades, Scoops, Hoes, Rakes, Spading-Forks, Barley-Forks, Hay-Forks, Dung-Forks, and Agricultural Forks.

Claims use since on or before the 1st day of January, 1913.

Ser. No. 90,866. (CLASS 39. CLOTHING.) THE ATLAS UNDERWEAR CO., Piqua, Ohio. Filed Nov. 23, 1915.



The trade-mark consists of the representation of a human figure encircled by a measuring-tape extending between the legs and obliquely upward over one shoulder, all inclosed within a circle as shown, the picture being fanciful.

Particular description of goods.—Undergarments—Namely, Men's Union Suits.

Claims use since Apr. 1, 1915.

Ser. No. 91,080½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Dec. 1, 1915.

PRAIRIE MAID

Particular description of goods.—Oleomargin.
Claims use since Nov. 15, 1915.

Ser. No. 91,081½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Dec. 1, 1915.

BLENDA

Particular description of goods.—Oleomargarin.
Claims use since Feb. 1, 1909.

Ser. No. 91,096. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CELRO-KOLA COMPANY, Portland, Oreg. Filed Dec. 2, 1915.

CELRO-KOLA

Particular description of goods.—Syrup for Soda-Water.
Claims use since Nov. 6, 1915.

Ser. No. 91,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTRAL MILLS CO., Kansas City, Mo. Filed Dec. 2, 1915.



FARMER BOY

Particular description of goods.—Wheat-Flour, Rye-Flour, Cornmeal, Cereals, and Mill Feed from Wheat or Corn.
Claims use since Nov. 5, 1915.

Ser. No. 91,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. MURDOCK MFG. CO., Kansas City, Mo. Filed Dec. 2, 1915.

MOUNTAIN ROSE

Particular description of goods.—Coffee.
Claims use since Aug. 27, 1915.

Ser. No. 91,130. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE INLET PACKING CO., INC., Portland, Oreg. Filed Dec. 3, 1915.

MOTOR



Particular description of goods.—Canned Salmon.
Claims use since January, 1914.

Ser. No. 91,134. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE F. KREITLEIN, Indianapolis, Ind. Filed Dec. 3, 1915.



Particular description of goods.—Ready-Mixed Paints and Varnishes.
Claims use since about Nov. 1, 1914.

Ser. No. 91,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANKLIN-CARO CO., Richmond, Va. Filed Dec. 4, 1915.

HONEY-FRUIT

The trade-mark consists of the representation of a beehive and a bee, associated with the words "Honey-Fruit," no claim being made to the words "Honey-Fruit" apart from the mark shown in the drawing.
Particular description of goods.—Chewing-Gum.
Claims use since June 13, 1911.

Ser. No. 91,174. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) TYLER BROS. RAZOR STROP CO., Hamtramck, Mich. Filed Dec. 4, 1915.

"TY"

Particular description of goods.—Razor-Strops.
Claims use since Nov. 1, 1915.

Ser. No. 91,175. (CLASS 38. PRINTS AND PUBLICATIONS.) THE TRIBUNE COMPANY, Chicago, Ill. Filed Dec. 4, 1915.

The Co-Operator

Particular description of goods.—A Weekly Newspaper.
Claims use since Feb. 15, 1914.

Ser. No. 91,181. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MELIES MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 4, 1915.



Particular description of goods.—Moving-Picture Films.
Claims use since Oct. 15, 1915.

Ser. No. 91,184. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Dec. 6, 1915.

Schmanderbar

Particular description of goods.—Oleomargarin.
Claims use since July, 1906.

Ser. No. 91,186. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Dec. 6, 1915.

REGINA

Particular description of goods.—Oleomargarin.
Claims use since Jan. 10, 1911.

Ser. No. 91,218. (CLASS 6. CHEMICALS, MEDICINES AND PHARMACEUTICAL PREPARATIONS.) JOSEPH FABRICKI, Spring Valley, Ill. Filed Dec. 6, 1915.

"Illena"

Particular description of goods.—A Medicinal Remedy for Rheumatism, Lame Back, Headache, Neuralgia, Diphtheria, Lameness, Frost-Bites, Bruises, Toothache, and Catarrh.
Claims use since October, 1913.

Ser. No. 91,219. (CLASS 38. PRINTS AND PUBLICATIONS.) L. FRANK & SON COMPANY, Milwaukee, Wis. Filed Dec. 6, 1915.

FRANKONESS

Particular description of goods.—A Monthly Periodical.
Claims use since November, 1913.

Ser. No. 91,225. (CLASS 2. RECEPTACLES.) THE J. P. LEWIS COMPANY, Beaver Falls, N. Y. Filed Dec. 6, 1915.

SAN-PAC

Particular description of goods.—Pulp Plates.
Claims use since Nov. 1, 1915.

Ser. No. 91,258. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

HONEY DEW

Particular description of goods.—Oleomargarin.
Claims use since Nov. 24, 1915.

Ser. No. 91,259. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

NEPCO

Particular description of goods.—Oleomargin.
Claims use since Apr. 1, 1915.

Ser. No. 91,265. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JANESVILLE BARB WIRE COMPANY, Janesville, Wis. Filed Dec. 7, 1915.

APEX

Particular description of goods.—Metal Fence-Posts.
Claims use since Mar. 24, 1915.

Ser. No. 91,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y. Filed Dec. 8, 1915.

LEVIATHAN

Particular description of goods.—Canned Salmon.
Claims use since Oct. 2, 1915.

Ser. No. 91,080½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Dec. 1, 1915.

PRAIRIE MAID

Particular description of goods.—Oleomargin.
Claims use since Nov. 15, 1915.

Ser. No. 91,081½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Dec. 1, 1915.

BLENDA

Particular description of goods.—Oleomargarin.
Claims use since Feb. 1, 1909.

Ser. No. 91,096. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CERRO-KOLA COMPANY, Portland, Oreg. Filed Dec. 2, 1915.

CERRO-KOLA

Particular description of goods.—Syrup for Soda-Water.
Claims use since Nov. 6, 1915.

Ser. No. 91,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CENTRAL MILLS CO., Kansas City, Mo. Filed Dec. 2, 1915.



FARMER BOY

Particular description of goods.—Wheat-Flour, Rye-Flour, Cornmeal, Cereals, and Mill Feed from Wheat or Corn.
Claims use since Nov. 5, 1915.

Ser. No. 91,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. MURDOCK MFG. CO., Kansas City, Mo. Filed Dec. 2, 1915.

MOUNTAIN ROSE

Particular description of goods.—Coffee.
Claims use since Aug. 27, 1915.

Ser. No. 91,130. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE INLET PACKING CO., INC., Portland, Oreg. Filed Dec. 3, 1915.

MOTOR



Particular description of goods.—Canned Salmon.
Claims use since January, 1914.

Ser. No. 91,134. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE F. KREITLEIN, Indianapolis, Ind. Filed Dec. 3, 1915.



Particular description of goods.—Ready-Mixed Paints and Varnishes.
Claims use since about Nov. 1, 1914.

Ser. No. 91,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANKLIN-CARO CO., Richmond, Va. Filed Dec. 4, 1915.

HONEY-FRUIT

The trade-mark consists of the representation of a beehive and a bee, associated with the words "Honey-Fruit," no claim being made to the words "Honey-Fruit" apart from the mark shown in the drawing.
Particular description of goods.—Chewing-Gum.
Claims use since June 13, 1911.

Ser. No. 91,174. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) TYLER BROS. RAZOR STROP CO., Hamtramck, Mich. Filed Dec. 4, 1915.

"TY"

Particular description of goods.—Razor-Strops.
Claims use since Nov. 1, 1915.

Ser. No. 91,175. (CLASS 38. PRINTS AND PUBLICATIONS.) THE TRIBUNE COMPANY, Chicago, Ill. Filed Dec. 4, 1915.

The Co-Operator

Particular description of goods.—A Weekly Newspaper.
Claims use since Feb. 15, 1914.

Ser. No. 91,181. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MELIES MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 4, 1915.



Particular description of goods.—Moving-Picture Films.
Claims use since Oct. 15, 1915.

Ser. No. 91,184. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Dec. 6, 1915.

Rheinländer-Brau

Particular description of goods.—Oleomargarin.
Claims use since July, 1906.

Ser. No. 91,186. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Dec. 6, 1915.

REGINA

Particular description of goods.—Oleomargarin.
Claims use since Jan. 10, 1911.

Ser. No. 91,218. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH FABRICKI, Spring Valley, Ill. Filed Dec. 6, 1915.

"Illena"

Particular description of goods.—A Medicinal Remedy for Rheumatism, Lame Back, Headache, Neuralgia, Diphtheria, Lameness, Frost-Bites, Bruises, Toothache, and Catarrh.
Claims use since October, 1913.

Ser. No. 91,219. (CLASS 38. PRINTS AND PUBLICATIONS.) L. FRANK & SON COMPANY, Milwaukee, Wis. Filed Dec. 6, 1915.

FRANKONESS

Particular description of goods.—A Monthly Periodical.
Claims use since November, 1913.

Ser. No. 91,225. (CLASS 2. RECEPTACLES.) THE J. P. LEWIS COMPANY, Beaver Falls, N. Y. Filed Dec. 6, 1915.

SAN-PAC

Particular description of goods.—Pulp Plates.
Claims use since Nov. 1, 1915.

Ser. No. 91,258. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

HONEY DEW

Particular description of goods.—Oleomargarin.
Claims use since Nov. 24, 1915.

Ser. No. 91,259. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Nov. 26, 1915.

NEPCO

Particular description of goods.—Oleomargin.
Claims use since Apr. 1, 1915.

Ser. No. 91,265. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JANESVILLE BARB WIRE COMPANY, Janesville, Wis. Filed Dec. 7, 1915.

APEX

Particular description of goods.—Metal Fence-Posts.
Claims use since Mar. 24, 1915.

Ser. No. 91,279. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y. Filed Dec. 8, 1915.

LEVIATHAN

Particular description of goods.—Canned Salmon.
Claims use since Oct. 2, 1915.

Ser. No. 91,280. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKIN-ERSKINE MILLING COMPANY, Evansville, Ind. Filed Dec. 8, 1915.

TOP O' THE MILL

Particular description of goods.—Prepared Self-Rising Whole-Wheat, Corn, Rice, Pancake Flour.
Claims use since Sept. 16, 1915.

Ser. No. 91,294. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDINGER & CO., INCORPORATED, Louisville, Ky. Filed Dec. 8, 1915.

PRODUCER

Particular description of goods.—Poultry and Stock Feed.
Claims use since Dec. 3, 1915.

Ser. No. 91,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE & BARKER SALMON PACKING CO., Point Roberts, Wash. Filed Dec. 8, 1915.

OUTLOOK



Particular description of goods.—Canned Salmon.
Claims use since Oct. 19, 1915.

Ser. No. 91,297. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM GRANT GREENAWALT, Frederick, Md. Filed Dec. 8, 1915.



"Compound Dandelion Liver Disks 25 Cents" are disclaimed except in the particular relation shown.
Particular description of goods.—Liver Remedy.
Claims use since Nov. 1, 1915.

Ser. No. 91,305. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HIGGINSVILLE MILLING CO., Higginsville, Mo. Filed Dec. 8, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 13, 1915.

Ser. No. 91,306. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HELWIG MANUFACTURING COMPANY, St. Paul, Minn. Filed Dec. 8, 1915. Under ten-year proviso.

HELWIG

Particular description of goods.—Wrenches, Clippers, Punches, Drills, Hammers, Grinding-Machines, Flue-Expanders, Wire-Cutters, Seamers, Shears, and Presses.
Claims use since about the 1st of October, 1854.

Ser. No. 91,331. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SMITH & NESSLE CO., INC., New York, N. Y. Filed Dec. 8, 1915.



Particular description of goods.—Oatmeal, Corn Flakes, Farina, and Wheat Cereal.
Claims use since Oct. 14, 1915.

Ser. No. 91,332. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SMITH & NESSLE CO., INC., New York, N. Y. Filed Dec. 8, 1915.

AMBASSADOR

Particular description of goods.—Canned Tuna-Fish and Canned Sardines.
Claims use since Sept. 13, 1915.

Ser. No. 91,353. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MULLER, MACLEAN & CO., INC., New York, N. Y. Filed Dec. 9, 1915.



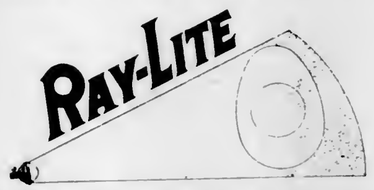
Particular description of goods.—Iron and Brass Wood-Screws.
Claims use since prior to Mar. 5, 1907.

Ser. No. 91,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAHNKE-WALKER MILLING CO., Union City, Tenn. Filed Dec. 10, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since Oct. 1, 1915.

Ser. No. 91,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN DAIRY COMPANY, Indianapolis, Ind. Filed Dec. 11, 1915.



Particular description of goods.—Eggs.
Claims use since Oct. 1, 1915.

Ser. No. 91,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MENTHOLATUM COMPANY, Wichita, Kans., and Buffalo, N. Y. Filed Dec. 11, 1915.

A. A. Hyde

Consisting of the facsimile signature of Mr. A. A. Hyde, the president of our company.
Particular description of goods.—A Salve for External Application in the Treatment of Inflammations and Eruptions of the Skin and in the Treatment of Croup, Sore Throat, Catarrh, and Like Afflictions Involving or Resulting from Congestion.
Claims use since Nov. 19, 1915.

Ser. No. 91,446. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 13, 1915.

HOLLYWOOD

Particular description of goods.—Biscuit.
Claims use since Oct. 30, 1915.

Ser. No. 91,469. (CLASS 5. ADHESIVES.) BAYARD & CO. INC., New York, N. Y. Filed Dec. 14, 1915.



No claim being made to the exclusive use of the words "Surpassingly Strong Guaranteed Graded Glues," nor the word "Glue," apart from the mark as shown in the drawing.
Particular description of goods.—Glues.
Claims use since Nov. 27, 1915.

Ser. No. 91,475. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HILLSIDE ORANGE ASS'N, Lindsay, Cal. Filed Dec. 14, 1915.

EQUITY

Particular description of goods.—Citrus Fruits.
Claims use since Nov. 30, 1915.

Ser. No. 91,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIVERSIDE MUTUAL ORANGE CO., Riverside, Cal. Filed Dec. 14, 1915.

JEWEL

Particular description of goods.—Oranges, Grape-Fruit, and Lemons.
Claims use since Nov. 13, 1915.

Ser. No. 91,483. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL FILM MANUFACTURING CO., New York, N. Y. Filed Dec. 14, 1915.

RED FEATHER PHOTO PLAYS

No claim being made to the term "Photo-Plays" except as used in conjunction with the other features of the mark.

Particular description of goods.—A Series of Different Motion-Picture Photoplays.

Claims use since Dec. 13, 1915.

Ser. No. 91,485. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHILIP WUNDERLE, Philadelphia, Pa. Filed Dec. 14, 1915. Under ten-year proviso.

Fancies

Particular description of goods.—Candy.

Claims use since about July 1, 1890.

Ser. No. 91,497. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALLER BAKING COMPANY, Pittsburgh, Pa. Filed Dec. 15, 1915.

"VIM"

Particular description of goods.—Bread.

Claims use since about Oct. 4, 1914.

Ser. No. 91,513. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BUCKEYE COTTON OIL COMPANY, Cincinnati, Ohio. Filed Dec. 16, 1915.

Buco

Particular description of goods.—Cotton-Seed Feed.

Claims use since Nov. 9, 1915.

Ser. No. 91,529. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHWABACHER BROS. & CO. INC., Seattle, Wash. Filed Dec. 16, 1915.

EMO

Particular description of goods.—Coffee.

Claims use since July 1, 1910.

Ser. No. 91,535. (CLASS 38. PRINTS AND PUBLICATIONS.) THE UNITED STATES PRINTING & LITHOGRAPH COMPANY, Norwood, Ohio. Filed Dec. 16, 1915.

SUPERLA

Parti ular description of goods.—Paintings and Gravures.

Claims use since Nov. 29, 1915.

Ser. No. 91,538. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO P. BRAUN COMPANY, Chicago, Ill. Filed Dec. 17, 1915.

BELMAR

Particular description of goods.—Oleomargarin.

Claims use since July 21, 1913.

Ser. No. 91,543. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVERETT, AUGHENBAUGH & CO., Waseca, Minn. Filed Dec. 17, 1915. Under ten-year proviso.

WASECA MILL CO.
MONITOR

Particular description of goods.—Cereals and other Wheat Products—viz., Wheat-Flour, Wheat-Bran; Wheat Offals—viz., Wheat-Screenings, Wheat-Middlings, and Mixed Feed.

Claims use since 1885.

Ser. No. 91,553. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHENIX CHEESE CO., New York, N. Y. Filed Dec. 17, 1915.

KNICKERBOCKER BRAND

No claim, however, being made to the word "Brand."

Particular description of goods.—Cheese.

Claims use since July 23, 1908.

Ser. No. 91,559. (CLASS 39. CLOTHING.) SECKENDORF, INC., New York, N. Y. Filed Dec. 17, 1915.

Seckendorf

Particular description of goods.—Buckram, Willow, and Wire Hat-Frames.

Claims use since Jan. 1, 1915.

Ser. No. 91,584. (CLASS 38. PRINTS AND PUBLICATIONS.) UNITED CIGAR STORES COMPANY, New York, N. Y. Filed Dec. 18, 1915.

CIGARS
UNITED

Particular description of goods.—Premium-Tokens.

Claims use since prior to Jan. 1, 1905.

Ser. No. 91,592. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MECCA MACHINERY COMPANY, New York, N. Y. Filed Dec. 20, 1915.

Frost King

Particular description of goods.—Gas-Engine-Radiator Protectors for Automobiles.

Claims use since Nov. 10, 1915.

Ser. No. 91,614. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KIM BUCK GOGGANS, M. D., Hackleburg, Ala. Filed Dec. 20, 1915.

KBG

Particular description of goods.—A Preparation for the Treatment of Pellagra.

Claims use since Apr. 1, 1914.

Ser. No. 91,617. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed Dec. 20, 1915.

NEW CENTURY

Particular description of goods.—Electric Batteries.

Claims use since May, 1902.

Ser. No. 91,637. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUCAPINE CHEMICAL COMPANY, Atlanta, Ga. Filed Dec. 21, 1915.

Eucapine Salve

No claim being made to the exclusive use of the word "Salve."

Particular description of goods.—A Salve.

Claims use since Sept. 1, 1915.

Ser. No. 91,638. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. FOSTER & CO., Fort Smith, Ark. Filed Dec. 21, 1915.

ARKOMA

Particular description of goods.—Baking-Soda.

Claims use since about Aug. 11, 1915.

Ser. No. 91,673. (CLASS 39. CLOTHING.) SIMON STERNS & Co., New York, N. Y. Filed Dec. 21, 1915.

Clozabelle

Comprising the word "Clozabelle."
Particular description of goods.—Combination Suits and Drawers.
Claims use since Dec. 7, 1915.

Ser. No. 91,695. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) PARAMOUNT GLASS PERCOLATOR MFG. CO., New York, N. Y. Filed Dec. 22, 1915.

PARAMOUNT

Comprising the word "Paramount."
Particular description of goods.—Kitchen Hardware—viz., Percolators.
Claims use since Sept. 22, 1915.

Ser. No. 91,721. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LEO GOLDBERGER, New York, N. Y. Filed Dec. 23, 1915.

PATHFINDER

Particular description of goods.—Electric Lights and Batteries.
Claims use since Dec. 4, 1915.

Ser. No. 91,722. (CLASS 2. RECEPTACLES.) HOWELL-NEIL COMPANY INC., Jersey City, N. J. Filed Dec. 23, 1915.

HYGIEA LAC

Particular description of goods.—Milk and Cream Cans, Ice-Cream Receivers, and Covers for Milk-Cans, Cream-Cans, and Ice-Cream Receivers.
Claims use since Dec. 20, 1915.

Ser. No. 91,734. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PFANSTIEHL COMPANY, North Chicago, Ill. Filed Dec. 23, 1915.

ALPHA

Particular description of goods.—Electric Contacts.
Claims use since about June 15, 1914.

Ser. No. 91,735. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PFANSTIEHL COMPANY, North Chicago, Ill. Filed Dec. 23, 1915.

CRECIUM

Particular description of goods.—Electric Contacts.
Claims use since about Dec. 13, 1915.

Ser. No. 91,775. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 27, 1915.

CELIA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 29, 1915.

Ser. No. 91,776. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 27, 1915.

ADA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 30, 1915.

Ser. No. 91,777. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Dec. 27, 1915.

SHEBA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 29, 1915.

Ser. No. 91,780. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) NORTON DOOR CHECK CO., Chicago, Ill. Filed Dec. 27, 1915. Under ten-year proviso.

NORTON

Particular description of goods.—Door-Checks and Door-Springs.
Claims use since the year 1880.

Ser. No. 91,820. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE H. C. TACK COMPANY, Cleveland, Ohio. Filed Dec. 29, 1915.

Particular description of goods.—Nails and Tacks.
Claims use since Nov. 7, 1914.

Ser. No. 91,882. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

AMY

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 30, 1915.

Ser. No. 91,884. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

INEZ

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 19, 1915.

Ser. No. 91,885. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

SANTA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 28, 1915.

Ser. No. 91,886. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

KOMO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 19, 1915.

Ser. No. 91,887. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

FAWN

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Oct. 1, 1915.

Ser. No. 91,888. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 3, 1916.

CHERUB

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 18, 1915.

Ser. No. 91,973. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 6, 1916.

NEMO

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 20, 1915.

Ser. No. 91,974. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 6, 1916.

TRIX

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 17, 1915.

Ser. No. 91,975. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Jan. 6, 1916.

LEDA

Particular description of goods.—Light-Weight Rubber Shoes.
Claims use since on or about Sept. 28, 1915.

Ser. No. 92,007. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SABO MANUFACTURING COMPANY INCORPORATED, New York, N. Y. Filed Jan. 7, 1916.



Particular description of goods.—Moving-Picture-Projection Apparatus.
Claims use since about Dec. 1, 1915.

Ser. No. 92,046. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ORANGE WHISTLE CO., St. Louis, Mo. Filed Jan. 10, 1916.

WHISTLE

Particular description of goods.—Non-Alcoholic Beverages Sold as Soft Drinks and Syrups for the Manufacture of the Same.
Claims use since Jan. 3, 1916.

Ser. No. 92,059. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WEINER BROS., New York, N. Y. Filed Jan. 10, 1916.

WINNER



Particular description of goods.—Satin Cloth.
Claims use since July 14, 1915.

Ser. No. 92,079. (CLASS 48. MALT EXTRACTS AND LIQUORS.) NACIF. P. HACHÉ & HERMANOS, Santiago, Dominican Republic. Filed Jan. 12, 1916.

CERVEZA SPORT

Sport

No claim being made for the word "Cerveza" apart from the mark shown in the drawing.
Particular description of goods.—Beer.
Claims use since Nov. 11, 1915.

Ser. No. 92,080. (CLASS 32. FURNITURE AND UPHOLSTERY.) INDIAN HEAD TABLE CO., Nashua, N. H., and New York, N. Y. Filed Jan. 12, 1916.



Particular description of goods.—Dining-Tables.
Claims use since Oct. 1, 1912.

Ser. No. 92,102. (CLASS 15. OILS AND GREASES.) CACERES & COSCIA, Buenos Aires, Argentina. Filed Jan. 13, 1916.

"BAIKAL"

Particular description of goods.—Lubricating Oils and Greases and Naphtha.
Claims use since Oct. 1, 1912.

Ser. No. 92,173. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WEISS & HELLER CANADA LIMITED, Toronto, Canada. Filed Jan. 15, 1916.

Zenith

Comprising the word "Zenith."
Particular description of goods.—Electric Glow-Lamps, Electric-Arc Lamps, and Flash-Light Batteries.
Claims use since about July 15, 1915.

Ser. No. 92,185. (CLASS 2. RECEPTACLES.) CEMENT PRODUCTS COMPANY, Wilmington, N. C. Filed Jan. 17, 1916.

"SANISEP"

Particular description of goods.—Sewage-Disposal Tanks.
Claims use since Sept. 15, 1915.

Ser. No. 92,207. (CLASS 15. OILS AND GREASES.) VISCOSITY OIL COMPANY, Chicago, Ill. Filed Jan. 17, 1916.



Particular description of goods.—Lubricating-Oils.
Claims use since about the 1st of January, 1915.

Ser. No. 92,209. (CLASS 15. OILS AND GREASES.) VISCOSITY OIL COMPANY, Chicago, Ill. Filed Jan. 17, 1916.

Viscomotor

Particular description of goods.—Lubricating-Oils.
Claims use since about the 1st day of January, 1915.

Ser. No. 92,237. (CLASS 22. FURNITURE AND UPHOLSTERY.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Jan. 19, 1916.

LITTLE PARIS SHOP

Particular description of goods.—Show-Cases.
Claims use since about Aug. 21, 1913.

Ser. No. 92,281. (CLASS 48. MALT EXTRACTS AND LIQUORS.) P. BALLANTINE & SONS, Newark, N. J. Filed Jan. 21, 1916.

JUBILEE

Particular description of goods.—Beer.
Claims use since Jan. 9, 1916.

Ser. No. 92,316. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed Jan. 21, 1916. Under ten-year proviso.

Welch

Particular description of goods.—Grape-Juice.
Claims use since 1892.

Ser. No. 92,317. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WELCH GRAPE JUICE COMPANY, Westfield, N. Y. Filed Jan. 21, 1916. Under ten-year proviso.

Welch's

Particular description of goods.—Grape-Juice.
Claims use since 1892.

Ser. No. 92,324. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CLEVELAND HOME BREWING CO., Cleveland, Ohio. Filed Jan. 22, 1916.

YAKO

Particular description of goods.—Beer.
Claims use since Nov. 2, 1915.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 15, 1916.

108,502. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. JOSEPH A. ARNOLD, Providence, R. I.
Filed March 10, 1915. Serial No. 85,058. PUBLISHED NOVEMBER 23, 1915.

108,503. INSULATED ELECTRICAL CONDUCTORS AND CABLES. BISHOP GUTTA-PERCHA COMPANY, New York, N. Y.
Filed February 26, 1915. Serial No. 84,784. PUBLISHED AUGUST 3, 1915.

108,504. BOOTS AND SHOES MADE OF LEATHER OR OF LEATHER AND CANVAS. DONALD J. CAMERON, Syracuse, N. Y.
Filed August 12, 1914. Serial No. 80,489. PUBLISHED NOVEMBER 23, 1915.

108,505. PREPARATION IN POWDER AND TABLET FORM FOR TREATING CERTAIN NAMED AILMENTS. JOHN B. CARROLL, St. Louis, Mo.
Filed October 28, 1915. Serial No. 90,168. PUBLISHED NOVEMBER 23, 1915.

108,506. RICE. CHARLES E. CORMIER RICE CO. LIMITED, New Orleans, La.
Filed February 3, 1915. Serial No. 84,276. PUBLISHED MAY 18, 1915.

108,507. WAGONS, FARM-TRUCKS, AND WAGON RUNNING-GEARS. JOHN DEERE PLOW COMPANY OF OMAHA, Omaha, Nebr.
Filed July 13, 1915. Serial No. 87,909. PUBLISHED AUGUST 31, 1915.

108,508. WAGON-BOXES AND WAGON-SEATS. JOHN DEERE WAGON COMPANY, Moline, Ill.
Filed July 22, 1915. Serial No. 88,109. PUBLISHED AUGUST 31, 1915.

108,509. SOAP. ELK SOAP CO., El Paso, Tex.
Filed October 13, 1915. Serial No. 89,833. PUBLISHED DECEMBER 7, 1915.

108,510. CERTAIN NAMED FOODS. GOLDBERG BOWEN & Co., San Francisco, Cal.
Filed July 3, 1913. Serial No. 71,511. PUBLISHED NOVEMBER 30, 1915.

108,511. WOOLEN AND MOHAIR PIECE GOODS AND PIECE GOODS OF CERTAIN NAMED COMBINATIONS. GOODALL WORSTED CO., Sanford, Me., and New York, N. Y.
Filed August 27, 1915. Serial No. 88,836. PUBLISHED OCTOBER 26, 1915.

108,512. PREPARATION FOR THE PURPOSE OF CLEANSING AND SOFTENING THE SKIN. HART SALES COMPANY, INC., New York, N. Y.
Filed October 9, 1915. Serial No. 89,759. PUBLISHED DECEMBER 7, 1915.

108,513. COATS, VESTS, TROUSERS, OVERCOATS, AND RAIN-COATS. HART SCHAFFNER & MARX, Chicago, Ill.
Filed November 10, 1915. Serial No. 90,560. PUBLISHED DECEMBER 7, 1915.

108,514. WASTE-PIPE CLEANSER. B. HELLER & CO., Chicago, Ill.
Filed October 28, 1915. Serial No. 90,180. PUBLISHED DECEMBER 7, 1915.

108,515. SCALE-SOLVENT. B. HELLER & CO., Chicago, Ill.
Filed October 28, 1915. Serial No. 90,181. PUBLISHED DECEMBER 7, 1915.

108,516. UNION SUITS, SHIRTS, DRAWERS, AND HOSIERY. PETER HILL CO., Atlanta, Ga.
Filed September 1, 1915. Serial No. 88,959. PUBLISHED DECEMBER 7, 1915.

108,517. SOAP. HUBEN MFG. CO., New York, N. Y.
Filed August 13, 1915. Serial No. 88,595. PUBLISHED DECEMBER 7, 1915.

108,518. TOILET SOAP. INDEXICAL SOAP COMPANY, Portland, Me., and Malden, Mass.
Filed September 2, 1915. Serial No. 88,984. PUBLISHED NOVEMBER 9, 1915.

108,519. READY-MIXED PAINT. OLIVER JOHNSON & COMPANY, INC., Providence, R. I.
Filed July 7, 1915. Serial No. 87,806. PUBLISHED DECEMBER 7, 1915.

108,520. READY-MIXED PAINT. OLIVER JOHNSON & COMPANY, INC., Providence, R. I.
Filed July 7, 1915. Serial No. 87,807. PUBLISHED DECEMBER 7, 1915.

108,521. OINTMENT FOR EXTERNAL USE. JOHN S. KENNY, New York, N. Y.
Filed October 25, 1915. Serial No. 90,092. PUBLISHED DECEMBER 7, 1915.

108,522. TONIC FOR TREATMENT OF DISEASES OF POULTRY. KORINEK VETERINARY REMEDY COMPANY, Medford, Oreg.
Filed January 26, 1914. Serial No. 75,454. PUBLISHED DECEMBER 7, 1915.

108,523. COTTON-WARP WORSTED LININGS. LESHER, WHITMAN & CO. INC., New York, N. Y.
Filed April 8, 1915. Serial No. 85,780. PUBLISHED NOVEMBER 16, 1915.

108,524. CERTAIN NAMED PIECE GOODS AND DRESS FABRICS. LESHER, WHITMAN & CO. INC., New York, N. Y.
Filed August 30, 1915. Serial No. 88,880. PUBLISHED NOVEMBER 9, 1915.

108,525. BANDAGING MATERIAL. ADOLPH LINDNER GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed May 21, 1915. Serial No. 86,807. PUBLISHED DECEMBER 7, 1915.

108,526. HAIR-TONIC AND FACE-CREAM. WILLIAM F. LOTT, Washington, D. C.
Filed October 22, 1915. Serial No. 90,032. PUBLISHED NOVEMBER 30, 1915.

108,527. CERTAIN NAMED CLOTHING FOR MEN, BOYS, WOMEN, GIRLS, AND BABIES. MONTGOMERY WARD & CO., INC., New York, N. Y.; Chicago, Ill.; Brooklyn, N. Y.; Fort Worth, Tex.; Kansas City, Mo., and Portland, Oreg.
Filed January 4, 1915. Serial No. 83,662. PUBLISHED DECEMBER 7, 1915.

108,528. CALCIUM SALT FOR INTRAVENOUS USE IN THE TREATMENT OF DISEASES. PITMAN-MOORE CO., Indianapolis, Ind.
Filed May 7, 1915. Serial No. 86,456. PUBLISHED AUGUST 3, 1915.

108,529. IGNITERS AND PYROPHORIC MATERIAL THEREFOR. "PROGRESS" MASCHINEN INDUSTRIE KOMMANDIT GES., Munich, Germany.
Filed July 21, 1914. Serial No. 79,968. PUBLISHED NOVEMBER 30, 1915.

108,530. IGNITERS AND PYROPHORIC MATERIAL THEREFOR. "PROGRESS" MASCHINEN INDUSTRIE KOMMANDIT GES., Munich, Germany.
Filed July 21, 1914. Serial No. 79,969. PUBLISHED NOVEMBER 30, 1915.

108,531. COMPOSITION FOR USE IN TREATING ROUP AND AS A CONDITIONER FOR FOWLS. R. F. F. Co., Liberty, Mo.
Filed October 18, 1915. Serial No. 89,926. PUBLISHED NOVEMBER 23, 1915.

108,532. CERTAIN NAMED GOODS. EDWARD M. RAPHEL & CO. INC., New York, N. Y.
Filed July 14, 1915. Serial No. 87,933. PUBLISHED NOVEMBER 30, 1915.

108,533. DENTIFRICE. ANNIE E. RAUEL, Washington, D. C.
Filed October 19, 1915. Serial No. 89,953. PUBLISHED DECEMBER 7, 1915.

108,534. WHEAT-FLOUR. THE ROWLAND COMPANY, Athens, Ga.
Filed September 7, 1915. Serial No. 89,086. PUBLISHED OCTOBER 26, 1915.

108,535. OLIVE-OIL AND MACARONI. ANDREA RUSSO, Chicago, Ill.
Filed October 18, 1915. Serial No. 89,927. PUBLISHED NOVEMBER 30, 1915.

108,536. BALED HAY. THE SHOEMAKER COMPANY, Oakwood, N. Y.
Filed March 10, 1915. Serial No. 85,063. PUBLISHED AUGUST 3, 1915.

108,537. WATERPROOFING SOLUTION. SLATUM MFG. CO., Kansas City, Mo.
Filed July 19, 1915. Serial No. 88,027. PUBLISHED NOVEMBER 30, 1915.

108,538. PREPARATION FOR THE TREATMENT OF THE SCALP. THE SOL-U-MET MFG. CO., Atlanta, Ga.
Filed October 5, 1915. Serial No. 89,670. PUBLISHED NOVEMBER 9, 1915.

108,539. SOAP. JOHN T. STANLEY CO. INC., New York, N. Y.
Filed October 5, 1915. Serial No. 89,671. PUBLISHED DECEMBER 7, 1915.

108,540. PINEAPPLE BEVERAGE. JACOB TIM, New York, N. Y.
Filed November 9, 1915. Serial No. 90,548. PUBLISHED DECEMBER 7, 1915.

108,541. FRESH APPLES. TRI-STATE FRUIT CO., Lewiston, Idaho.
Filed September 24, 1915. Serial No. 89,451. PUBLISHED NOVEMBER 30, 1915.

108,542. SILK PIECE GOODS. WAHNETAH SILK COMPANY, New York, N. Y.
Filed October 30, 1915. Serial No. 90,247. PUBLISHED DECEMBER 7, 1915.

108,543. SYRUPS TO BE USED IN MIXED DRINKS FOR BARS, HOTELS, AND CAFÉS. FRED R. WHITTAKER, Somerville, Mass.
Filed April 9, 1915. Serial No. 85,828. PUBLISHED NOVEMBER 30, 1915.

108,544. SAD-IRONS. BLESS & DRAKE, Newark, N. J.
Filed September 7, 1915. Serial No. 89,050. PUBLISHED DECEMBER 7, 1915.

108,545. HAIR-WASH AND HAIR-TONIC. THE BOYD COMPANY, Brooklyn, N. Y.
Filed July 21, 1915. Serial No. 88,065. PUBLISHED DECEMBER 7, 1915.

108,546. HATS AND CAPS. BERNARD BURNSIDE, Seattle, Wash.
Filed July 13, 1915. Serial No. 87,908. PUBLISHED OCTOBER 26, 1915.

108,547. TOOTH-PASTES, TOOTH-WASHES. R. A. CARMICHAEL & CO., Detroit, Mich.
Filed December 7, 1914. Serial No. 83,107. PUBLISHED DECEMBER 7, 1915.

108,548. FLOOR DRAINS AND TRAPS. CRAMPTON-FARLEY BRASS CO., Kansas City, Mo.
Filed September 4, 1915. Serial No. 89,022. PUBLISHED NOVEMBER 23, 1915.

108,549. BOLTS OF WOVEN FABRIC MANUFACTURED FROM WOOL, COTTON, LINEN, OR SILK OR COMBINATIONS THEREOF. JOHN CULBERTSON & SONS, Philadelphia, Pa.
Filed October 30, 1915. Serial No. 90,226. PUBLISHED DECEMBER 7, 1915.

108,550. SAWS. HENRY DISSTON & SONS INCORPORATED, Philadelphia, Pa.
Filed October 30, 1915. Serial No. 90,229. PUBLISHED DECEMBER 7, 1915.

108,551. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. FABRIQUE DE MACHINES "MIKRON" S. A., Madretsch, near Biel, Switzerland.
Filed June 28, 1915. Serial No. 87,628. PUBLISHED DECEMBER 7, 1915.

108,552. ASPHALT FELTS, ASPHALT FABRICS, ASPHALT WALLS, ASPHALT FLOORS, AND ASPHALT PAVEMENTS. J. L. FULTON & CO., Chicago, Ill.
Filed May 19, 1913. Serial No. 70,489. PUBLISHED NOVEMBER 23, 1915.

108,553. LEATHER SHOES. GAGNON SHOE CO., Webster, Wis.
Filed July 29, 1915. Serial No. 88,273. PUBLISHED DECEMBER 7, 1915.

108,554. CERTAIN NAMED ARTICLES OF ART NEEDLEWORK. THE GIRARD MANUFACTURING COMPANY, Philadelphia, Pa.
Filed August 14, 1915. Serial No. 88,619. PUBLISHED DECEMBER 7, 1915.

108,555. RUBBER BOOTS AND SHOES. GOODYEAR RUBBER COMPANY, Middletown, Conn.
Filed July 9, 1915. Serial No. 87,843. PUBLISHED DECEMBER 7, 1915.

108,556. NATURAL AND DISTILLED WATER AND NON-ALCOHOLIC CARBONATED BEVERAGES. JOHN H. GORDON, New York, N. Y.
Filed June 10, 1915. Serial No. 87,218. PUBLISHED AUGUST 3, 1915.

108,557. ANTISEPTIC SOLUTION. HARRY B. GREEN, Woodbury, N. J.
Filed October 22, 1915. Serial No. 90,028. PUBLISHED DECEMBER 7, 1915.

108,558. TEXTILE RUGS, MATTINGS, AND CARPETS. HODGES FIBRE CARPET COMPANY, Springfield, Mass., and New York, N. Y.
Filed November 1, 1915. Serial No. 90,265. PUBLISHED DECEMBER 7, 1915.

108,559. CERTAIN NAMED CHEMICAL FOR WATERPROOFING TEXTILE FABRICS. ISAIAH WELLINGTON HOYER, Philadelphia, Pa.
Filed October 16, 1915. Serial No. 89,884. PUBLISHED DECEMBER 7, 1915.

108,560. TONIC FOR THE TREATMENT OF CHILLS, FEVER, YELLOW JAUNDICE, GALL-STONES, AND INDIGESTION. WILLIAM H. JOHNSON, Sapulpa, Okla.
Filed October 7, 1915. Serial No. 89,714. PUBLISHED DECEMBER 7, 1915.

108,561. RATCHET-WRENCHES AND TOOL-HOLDERS THEREFOR. HENRY M. KOLB, Philadelphia, Pa.
Filed November 5, 1915. Serial No. 90,436. PUBLISHED DECEMBER 7, 1915.

108,562. CERTAIN NAMED RECEPTACLES FOR USE IN THE MAPLE-SUGAR INDUSTRY. THE LEADER EVAPORATOR CO., Burlington, Vt.
Filed February 19, 1915. Serial No. 84,630. PUBLISHED NOVEMBER 23, 1915.

108,563. WATER-CLOSET TANKS, WATER-CLOSETS, URINALS, BASINS, LAVATORIES. JOHN MADDOCK & SONS, Trenton, N. J.
Filed October 4, 1915. Serial No. 89,638. PUBLISHED DECEMBER 7, 1915.

108,564. TREATMENT FOR THROAT, LUNG, LIVER, KIDNEY, AND BLADDER DISEASES. HARRY M. MANSPEAKER, Oklahoma, Okla.
Filed June 10, 1915. Serial No. 87,220. PUBLISHED SEPTEMBER 14, 1915.

108,565. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. MERCK & CO., New York, N. Y.
Filed October 21, 1915. Serial No. 89,988. PUBLISHED NOVEMBER 30, 1915.

108,566. CERTAIN NAMED CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. MERCK & CO., New York, N. Y.
Filed October 21, 1915. Serial No. 89,989. PUBLISHED DECEMBER 7, 1915.

108,567. LOCKS. MILLER LOCK COMPANY, Philadelphia, Pa.
Filed September 16, 1915. Serial No. 89,242. PUBLISHED DECEMBER 7, 1915.

108,568. DENTIFRICE AND MOUTH-WASH. ORISTO CHEMICAL CO., Grand Rapids, Minn.
Filed October 19, 1915. Serial No. 89,950. PUBLISHED NOVEMBER 23, 1915.

108,569. CINEMATOGRAPH-FILMS. PATHÉ FRÈRES, Jersey City, N. J.
Filed September 16, 1915. Serial No. 89,249. PUBLISHED DECEMBER 7, 1915.

108,570. CINEMATOGRAPH-FILMS. PATHÉ FRÈRES, Jersey City, N. J.
Filed September 16, 1915. Serial No. 89,250. PUBLISHED DECEMBER 7, 1915.

108,571. BLOOD TONIC AND PURIFIER. RHUMTON CO., Holland, Mich.
Filed October 6, 1915. Serial No. 89,691. PUBLISHED DECEMBER 7, 1915.

108,572. HORSE-COLLARS. SCHWAHN-SEYBERTH SADDLERY CO., Eau Claire, Wis.
Filed June 5, 1915. Serial No. 87,152. PUBLISHED DECEMBER 7, 1915.

108,573. YOUNG MEN'S COATS, VESTS, TROUSERS, AND OVERCOATS. HENRY A. SEINSHEIMER, Cincinnati, Ohio.
Filed September 28, 1915. Serial No. 89,526. PUBLISHED DECEMBER 7, 1915.

108,574. CARBONS FOR PROJECTORS AND SIMILAR PURPOSES. SPEER CARBON COMPANY, St. Marys, Pa.
Filed October 6, 1915. Serial No. 89,695. PUBLISHED DECEMBER 7, 1915.

108,575. LIQUID PETROLATUM, ALSO KNOWN AS WHITE OIL, FOR CERTAIN NAMED PURPOSES. STANDARD OIL COMPANY, Richmond, Cal.
Filed September 20, 1915. Serial No. 89,329. PUBLISHED DECEMBER 7, 1915.

108,576. ASPHALTUM. STANDARD OIL COMPANY, Richmond, Cal.
Filed September 25, 1915. Serial No. 89,471. PUBLISHED NOVEMBER 30, 1915.

108,577. ASPHALT SHINGLES. SUNDERLAND BROTHERS COMPANY, Omaha, Nebr.
Filed September 2, 1915. Serial No. 88,991. PUBLISHED NOVEMBER 23, 1915.

108,578. TONIC MEDICINAL PREPARATION FOR CERTAIN NAMED DISEASES. THE SYDNEY ROSS CO., New York, N. Y.
Filed October 22, 1915. Serial No. 90,037. PUBLISHED DECEMBER 7, 1915.

108,579. BABBITT METAL. SYRACUSE SMELTING WORKS, Brooklyn, N. Y.
Filed September 18, 1915. Serial No. 89,303. PUBLISHED NOVEMBER 23, 1915.

108,580. MOTOR-VEHICLE TIRES, INNER TUBES AND OUTER SHOES; BICYCLE-TIRES, COMPOSED OF CERTAIN NAMED FABRICS. THE TIRE STORE, Greensburg, Pa.
Filed July 24, 1915. Serial No. 88,176. PUBLISHED NOVEMBER 16, 1915.

108,581. CERTAIN NAMED BELTING, HOSE, AND NON-METALLIC TIRES. TRAVELLER TIRE AND TUBE CO. INC., New York, N. Y.
Filed September 14, 1915. Serial No. 89,199. PUBLISHED NOVEMBER 30, 1915.

108,582. CERTAIN PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. JULES WARNESSON, Chicago, Ill.
Filed September 22, 1915. Serial No. 89,393. PUBLISHED DECEMBER 7, 1915.

108,583. CANDY. STEPHEN F. WHITMAN & SON, INCORPORATED, Philadelphia, Pa.
Filed August 21, 1915. Serial No. 88,752. PUBLISHED NOVEMBER 30, 1915.

108,584. AUTOMOBILE ACCESSORIES — NAMELY, SHOCK-ABSORBERS, BUMPERS, REBOUND DEVICES, AND SNUBBERS. AUTO DEVICE MFG. CO., Milwaukee, Wis.
Filed June 12, 1915. Serial No. 87,325. PUBLISHED DECEMBER 7, 1915.

108,585. WEATHER-BOARDING. AYCOCK WOOD BRICK VENEER CO., Aycock, Fla.
Filed July 24, 1915. Serial No. 88,154. PUBLISHED AUGUST 31, 1915.

108,586. CREAM-SEPARATORS. BEATRICE CREAMERY COMPANY, Chicago, Ill.
Filed November 2, 1915. Serial No. 90,312. PUBLISHED DECEMBER 7, 1915.

108,587. LEATHER BOOTS AND SHOES. THE BECK SHOE COMPANY, Brooklyn, N. Y.
Filed May 20, 1912. Serial No. 63,639. PUBLISHED APRIL 7, 1914.

108,588. LEATHER GLOVES. CALIFORNIA GLOVE COMPANY, San Francisco, Cal.
Filed October 13, 1915. Serial No. 89,832. PUBLISHED DECEMBER 7, 1915.

108,589. INFANTS' AND CHILDREN'S KNITTED UNDERWEAR—NAMELY, SHIRTS, DRAWERS, AND UNION SUITS. THE WILLIAM CARTER COMPANY, Needham Heights, Mass.
Filed August 9, 1915. Serial No. 88,494. PUBLISHED NOVEMBER 30, 1915.

108,590. BROAD SILK PIECE GOODS. DUPLAN SILK COMPANY, New York, N. Y.
Filed November 1, 1915. Serial No. 90,258. PUBLISHED DECEMBER 7, 1915.

108,591. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed October 15, 1915. Serial No. 89,859. PUBLISHED DECEMBER 7, 1915.

108,592. SPARK-PLUGS. ECLIPSE MANUFACTURING COMPANY, Indianapolis, Ind.
Filed September 27, 1915. Serial No. 89,482. PUBLISHED DECEMBER 7, 1915.

108,593. LAMP-DIMMERS. ELECTRIC AUXILIARIES CO., Chicago, Ill.
Filed September 4, 1915. Serial No. 89,026. PUBLISHED DECEMBER 7, 1915.

108,594. LAMP-GUARDS FOR ELECTRIC LAMPS. FLEXIBLE STEEL LACING COMPANY, Chicago, Ill.
Filed October 12, 1915. Serial No. 89,818. PUBLISHED DECEMBER 7, 1915.

108,595. COFFEE, TEA, SPICES, RICE, AND PEANUTS. THE JAMES G. GILL CO., INC., Norfolk, Va.
Filed January 16, 1914. Serial No. 75,225. PUBLISHED DECEMBER 7, 1915.

108,596. WHEAT-FLOUR. W. R. GRACE & CO., New Orleans, La.
Filed September 8, 1915. Serial No. 89,095. PUBLISHED DECEMBER 14, 1915.

108,597. SPECIALTIES—NAMELY, CRANK-HOLDERS, LICENSE-NUMBER HOLDERS, AND ANTIRATTLERS. W. S. GRAFFAM, Northampton, Mass.
Filed May 24, 1915. Serial No. 86,854. PUBLISHED DECEMBER 7, 1915.

108,598. SAUSAGES. LOUIS S. HAFNER, New Hampton, Iowa.
Filed July 21, 1915. Serial No. 88,077. PUBLISHED OCTOBER 5, 1915.

108,599. WHEAT, RICE, BARLEY, OATS, AND CORNMEAL. RICHARD HAUGHTON, Paoli, Pa.
Filed October 23, 1915. Serial No. 90,058. PUBLISHED DECEMBER 7, 1915.

108,600. CHEESE. HAUPT & BERGI, New York, N. Y.
Filed October 12, 1915. Serial No. 89,821. PUBLISHED DECEMBER 7, 1915.

108,601. DOOR-HINGES AND ENAMELED WARE. HERR & COMPANY, Lancaster, Pa.
Filed May 11, 1915. Serial No. 86,540. PUBLISHED NOVEMBER 23, 1915.

108,602. FRESH APPLES. HOOD RIVER APPLE & STORAGE COMPANY, Van Horn, Hood River county, Oreg.
Filed September 28, 1915. Serial No. 89,507. PUBLISHED DECEMBER 7, 1915.

108,603. GRINDING AND CRUSHING MACHINERY ADAPTED FOR GRINDING OR REDUCING ROCK OR THE LIKE. THE JEFFREY MANUFACTURING COMPANY, Columbus, Ohio.
Filed June 24, 1915. Serial No. 87,561. PUBLISHED AUGUST 17, 1915.

108,604. MOUTH, THROAT, AND TOOTH WASH. JOHNSON-ENDERLE-PAULEY DRUG CO., St. Louis, Mo.
Filed November 1, 1915. Serial No. 90,274. PUBLISHED NOVEMBER 23, 1915.

108,605. DIGESTIVE TABLETS. JOHNSON-ENDERLE-PAULEY DRUG CO., St. Louis, Mo.
Filed November 1, 1915. Serial No. 90,276. PUBLISHED NOVEMBER 23, 1915.

108,606. LEATHER BOOTS AND SHOES. ALFRED KIMBALL SHOE CO., Lawrence, Mass.
Filed November 12, 1915. Serial No. 90,601. PUBLISHED DECEMBER 7, 1915.

108,607. CHEMICAL COMPOSITION OR LIQUID COMPRISING MINERAL AND VEGETABLE TURPENTINE. LEADOIL COMPANY, INC., New York, N. Y.
Filed October 2, 1915. Serial No. 89,604. PUBLISHED NOVEMBER 23, 1915.

108,608. UNDERSHIRTS, NIGHT-SHIRTS, PAJAMAS, AND ATHLETIC UNDERWEAR. HAROLD S. LETERMAN, New York, N. Y.
Filed December 23, 1913. Serial No. 74,808. PUBLISHED DECEMBER 7, 1915.

108,609. BREAD. CASSITY E. MASON, Tarrytown, N. Y.
Filed October 2, 1915. Serial No. 89,607. PUBLISHED DECEMBER 7, 1915.

108,610. CREAMERY-BUTTER. MISSISSIPPI CREAMERY ASSOCIATION, Jackson, Miss.
Filed October 16, 1915. Serial No. 89,894. PUBLISHED DECEMBER 7, 1915.

108,611. COFFEE. MUTUAL COFFEE CO., Montgomery, Ala.
Filed September 1, 1915. Serial No. 88,970. PUBLISHED DECEMBER 7, 1915.

108,612. HOSIERY. ONEIDA KNITTING COMPANY, Philadelphia, Pa.
Filed February 11, 1915. Serial No. 84,460. PUBLISHED AUGUST 3, 1915.

108,613. WELDING-RODS. OXWELD ACETYLENE COMPANY, Chicago, Ill.
Filed October 30, 1915. Serial No. 90,238. PUBLISHED DECEMBER 7, 1915.

108,614. CANNED FRUITS, CANNED VEGETABLES, AND CATSUP. PARK GRANT AND MORRIS, Fargo, N. D.
Filed May 11, 1914. Serial No. 78,204. PUBLISHED AUGUST 17, 1915.

108,615. HOSIERY FOR CHILDREN. PARKER HOSIERY MILL & DYE WORKS, INC., Portsmouth, Va.
Filed November 2, 1915. Serial No. 90,357. PUBLISHED DECEMBER 7, 1915.

108,616. CINEMATOGRAPH-FILMS. PATHE FRERES, Jersey City, N. J.
Filed September 21, 1915. Serial No. 89,359. PUBLISHED DECEMBER 7, 1915.

108,617. MEDICINAL PREPARATIONS FOR THE TREATMENT OF GONORRHEA, PILES. S. W. PEARCE, Kansas City, Mo.
Filed September 20, 1915. Serial No. 89,323. PUBLISHED NOVEMBER 23, 1915.

108,618. REMEDY FOR VENEREAL DISEASES. EVA J. POWELL, Findlay, Ohio.
Filed August 13, 1914. Serial No. 80,549. PUBLISHED AUGUST 3, 1915.

108,619. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,222. PUBLISHED DECEMBER 7, 1915.

108,620. DUSTING-CLOTHS AND CLOTHS FOR POLISHING METAL SURFACES. ISRAEL L. SCHEINMAN, Detroit, Mich.
Filed September 30, 1915. Serial No. 89,553. PUBLISHED DECEMBER 7, 1915.

108,621. CANDY AND COFFEE. SHELBY CANDY & COFFEE CO., Memphis, Tenn.
Filed July 14, 1915. Serial No. 87,935. PUBLISHED NOVEMBER 30, 1915.

108,622. ARTIFICIAL MINNOWS, ARTIFICIAL FISH-BAITS, AND ARTIFICIAL LURES. SOUTH BEND BAIT CO., South Bend, Ind.
Filed August 23, 1915. Serial No. 88,770. PUBLISHED DECEMBER 7, 1915.

108,623. CERTAIN NAMED FOODS. STEELE-WEDELES COMPANY, Chicago, Ill.
Filed May 17, 1915. Serial No. 86,677. PUBLISHED SEPTEMBER 7, 1915.

108,624. WIRE. STROMBERG-CARLSON TELEPHONE MANUFACTURING CO., Rochester, N. Y.
Filed October 11, 1915. Serial No. 89,809. PUBLISHED DECEMBER 7, 1915.

108,625. VEHICLE-GEARS. THAYER & CO., INC., New York, N. Y.
Filed March 23, 1915. Serial No. 85,351. PUBLISHED SEPTEMBER 14, 1915.

108,626. KNIT UNDERWEAR AND HALF-HOSE. THE WINSTED HOSIERY COMPANY, Winsted, Conn.
Filed November 2, 1915. Serial No. 90,377. PUBLISHED DECEMBER 7, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

13,064. LAGER-BEER. C. CONRAD & Co., Mainz, Geisenheim-on-the-Rhine, Germany, and St. Louis, Mo.; Anheuser-Busch Brewing Association, a Corporation of Missouri, assignee.
Registered March 2, 1886. Renewed March 2, 1916.

LABELS

REGISTERED FEBRUARY 15, 1916.

19,044.—*Title:* "HARTMAN'S PREPARATION FOR PNEUMONIA, COUGHS, COLDS, CROUP, SORE THROAT AND RHEUMATIC PAINS." (For a Preparation.) JAMES F. HARTMAN, East Boston, Mass. Filed January 3, 1916.

19,045.—*Title:* "PURE 100 SPECIAL." (For Whisky.) KAUFMAN BROS. CO., Jacksonville, Fla. Filed January 17, 1916.

19,046.—*Title:* "KELLOGG'S TOASTED RICE FLAKES." (For Rice Preparations.) KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich. Filed January 24, 1916.

19,047.—*Title:* "LA TOSCA." (For Razors.) JOSEPH PALAZZOLO, New York, N. Y. Filed January 15, 1916.

19,048.—*Title:* "THIMBLE'S PHOSPHOR ROACH PASTE." (For Rat and Roach Poison.) FREDERICK N. THIMBLE, New York, N. Y. Filed November 26, 1915.

19,049.—*Title:* "INTEREST." (For Cigars.) ANTHONY S. WEILER, Milwaukee, Wis. Filed December 4, 1915.

19,050.—*Title:* "HY-FLYER." (For Cigars.) AL. L. WERTMAN, Auburn, Ind. Filed October 21, 1915.

19,051.—*Title:* "THE HOME OF THE WHITE KING SQUAB." (For a Food Product Prepared from Squabs.) WHITE KING SQUAB PRODUCTS CO., Vineland, N. J. Filed October 19, 1915.

PRINTS

REGISTERED FEBRUARY 15, 1916.

4,213.—*Title:* "HERMES." (For Flour.) BLISH MILLING COMPANY, Seymour, Ind. Filed November 22, 1915.

4,214.—*Title:* "WATT'S HOUSE.", (For Electric Equipment.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed January 24, 1916.

4,215.—*Title:* "UNWIRED HOUSE." (For Electric Equipment.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed January 24, 1916.

4,216.—*Title:* "CANDOIT." (For Toys.) THE FALLIS TOY SHOP, Denver, Colo. Filed December 17, 1915.

4,217.—*Title:* "HOME TRADE STAMP." (For a Trading-Stamp.) GUS. G. MARTIN, Chicago, Ill. Filed January 24, 1916.

4,218.—*Title:* "RED RAVEN SPLITS." (For Aperient Waters.) RED RAVEN CORPORATION, Red Raven, Pa. Filed January 25, 1916.

4,219.—*Title:* "R. J. V. ROACH AND RAT LAST MEAL." (For Roach and Rat Poison.) RAOUL J. B. VEZINA, Springfield, Mass. Filed December 6, 1915.

REPORT

OF THE

COMMISSIONER OF PATENTS

TO CONGRESS

FOR THE YEAR ENDED DECEMBER 31, 1915.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1916.

To the Senate and House of Representatives of the United States of America in Congress assembled:

In compliance with section 494 of the Revised Statutes I have the honor to submit the following report of the business of the Patent Office for the year ended December 31, 1915:

RECEIPTS.

Detailed statement of all moneys received for patents, for copies of records or drawings, or from any source whatever.

Applications:		
Cash received	$1,969,048.65	
Cash refunded	7,312.31	
Net cash		1,961,736.34
Certificates of deposit		60,405.00
Total cash and certificates		2,022,141.34
Copies:		
Cash received	213,043.44	
Cash refunded	3,256.96	
Net cash		209,786.48
Certificates of deposit		1,259.10
Total cash and certificates		211,045.58
Recording assignments:		
Cash received	32,627.05	
Cash refunded	1,362.75	
Net cash		31,264.30
Certificates of deposit		155.00
Total cash and certificates		31,419.30
Registration of prints and labels:		
Cash received	8,753.00	
Cash refunded	504.00	
Net cash		8,249.00
Certificates of deposit		54.00
Total cash and certificates		8,303.00
Court costs:		
Cash received	85.90	
Cash refunded		
Net cash		85.90
Certificates of deposit		
Total cash and certificates		85.90
Aggregates.		
Cash received	2,223,558.04	
Cash refunded	12,436.02	
Net cash		2,211,122.02
Certificates of deposit		61,873.10
Total cash and certificates		2,272,995.12
Receipts from sale of Official Gazette and other publications through Government Printing Office		17,778.85
Grand total		2,290,773.47

EXPENDITURES.

Amounts expended under the several appropriations from January 1 to December 31, 1915.

Salaries	$1,313,924.75
Scientific library	3,105.06
International Union for Protection of Industrial Property	655.62
Stationery	10,221.24
Postage on foreign matter	1,039.00
Furniture, carpets, ice, telephones, washing towels, and sundries	23,977.99
Photolithographing:	
Current issue	49,037.26
Reproductions	51,244.96
Photographic copies	3,996.28
Photostat supplies	3,988.47
Foreign patents	15,136.00
Printing and binding:	
Official Gazette, with indexes	157,840.44
Specifications	392,078.83
Miscellaneous	26,834.99
Defending suits	361.26
Total	2,053,442.15

RECEIPTS AND EXPENDITURES.

Receipts from all sources		$2,290,773.47
Expenditures		2,053,442.15
Surplus		237,331.32

Surplus earnings of the Patent Office, deposited in the Treasury of the United States.

Amount of total net surplus in Treasury, Jan. 1, 1915		$7,548,175.16
Net surplus for the year 1915		237,331.32
Total net surplus, Dec. 31, 1915		7,785,506.48

SUMMARY OF THE BUSINESS OF THE PATENT OFFICE.

Applications for patents for inventions	67,138
Applications for patents for designs	2,734
Applications for reissues of patents	197
Total	70,069
Applications for registration of trade-marks	8,432
Applications for registration of labels	982
Applications for registration of prints	486
Disclaimers filed	25
Appeals on the merits	2,021
Total	11,946
Patents issued, excluding designs	43,207
Design patents issued	1,545
Patents reissued	182
Total	44,934
Trade-marks registered	6,262
Labels registered	803
Prints registered	371
Total	7,436
Patents expired during the year	20,404
Applications forfeited for nonpayment of final fees	11,331
Applications allowed, awaiting final fees	18,943
Trade-mark applications passed for publication	6,247

PATENTS ISSUED.

Patents issued to citizens of the United States, with the ratio of population to each patent granted.

States.	Patents and designs.	One to every—	States.	Patents and designs.	One to every—
Alabama	203	10,532	North Carolina	177	12,465
Arizona	77	2,654	North Dakota	161	3,584
Arkansas	135	11,662	Ohio	2,999	1,590
California	1,943	1,224	Oklahoma	289	5,794
Colorado	475	1,682	Oregon	315	2,136
Connecticut	1,129	987	Pennsylvania	3,941	1,945
Delaware	74	2,734	Rhode Island	301	1,803
Florida	141	5,327	South Carolina	90	16,838
Georgia	234	11,150	South Dakota	163	3,582
Idaho	104	3,131	Tennessee	240	9,103
Illinois	4,517	1,248	Texas	630	6,185
Indiana	955	2,828	Utah	146	2,557
Iowa	714	3,116	Vermont	98	3,632
Kansas	449	3,766	Virginia	334	6,172
Kentucky	293	7,815	Washington	663	1,722
Louisiana	191	8,672	West Virginia	266	4,591
Maine	166	4,472	Wisconsin	1,084	2,153
Maryland	379	3,418	Wyoming	48	3,041
Massachusetts	2,693	1,250			
Michigan	1,585	1,773	Alaska	8	8,044
Minnesota	779	2,665	Canal Zone	6	.....
Mississippi	103	17,447	District of Columbia	300	1,104
Missouri	1,180	2,791	Hawaii	24	7,996
Montana	189	1,990	Philippine Islands	14	545,387
Nebraska	346	3,446	Porto Rico	4	279,503
Nevada	41	1,997	United States Army	2	.....
New Hampshire	153	2,814	United States Navy	18	.....
New Jersey	2,129	1,192	United States Cutter Service	1	.....
New Mexico	50	6,546			
New York	6,575	1,386	Total	[1] 40,321	

[1] Not including 182 reissues, 1 patent without residence, and 96 patents withdrawn.

Patents granted to residents of foreign countries.

Argentina	19	France	340	New South Wales	38	Switzerland	129
Austria-Hungary	136	French Indo-China	1	New Zealand	44	Tasmania	1
Belgium	46	Germany	1,209	Norway	38	Transvaal	12
Bermuda	1	Greece	7	Peru	1	Turkey	1
Brazil	5	Guatemala	1	Queensland	3	Uruguay	1
Bulgaria	1	Honduras	1	Roumania	1	Venezuela	1
Canada	706	India	6	Russia	22	Victoria	53
Chile	1	Ireland	20	Salvador	2	Wales	14
China	3	Isle of Jersey	3	Scotland	81	West Australia	14
Cuba	18	Italy	83	South Africa	5		
Denmark	36	Japan	10	South Australia	8	Total	4,334
Dutch West Indies	1	Mexico	17	Spain	3		
England	1,009	Netherlands	30	Straits Settlements	2		
Finland	1	Newfoundland	2	Sweden	93		

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836, and exhibit in detail the business of the Office during the last calendar year:

Comparative statement of the business of the Office from 1837 to 1915, inclusive.

Year.	Applications.[1]	Caveats filed.[2]	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289.08	$33,506.98	.....
1838	.....	.....	520	42,123.54	37,338.92	$4,784.62
1839	.....	.....	425	38,019.97	34,543.51	3,476.46
1840	765	228	473	38,056.51	39,020.67	.....
1841	847	312	495	40,413.01	52,666.87	.....
1842	761	291	517	36,505.63	31,241.43	5,264.20
1843	819	315	519	35,315.81	30,776.96	4,538.85
1844	1,045	380	497	42,509.26	36,344.53	6,164.73
1845	1,246	452	503	51,076.14	39,395.65	11,680.49
1846	1,272	448	638	50,261.16	46,158.71	4,105.45
1847	1,531	533	569	63,111.19	41,878.35	21,232.84
1848	1,628	607	653	67,576.69	58,905.84	8,670.85
1849	1,955	595	1,077	80,752.78	77,716.44	3,036.34
1850	2,193	602	993	86,927.05	80,100.95	6,826.10
1851	2,258	760	872	95,738.61	86,916.93	8,821.68
1852	2,639	996	1,019	112,056.31	95,916.91	16,139.43
1853	2,673	901	961	121,527.45	132,869.83	.....
1854	3,324	868	1,844	163,789.84	167,146.32	.....
1855	4,435	906	2,013	216,459.35	179,540.33	36,919.02
1856	4,960	1,024	2,505	192,588.02	199,931.02	.....
1857	4,771	1,010	2,896	196,132.01	211,582.09	.....
1858	5,364	943	3,710	203,716.16	193,193.74	10,522.42
1859	6,225	1,079	4,538	245,942.15	210,278.41	35,663.74
1860	7,653	1,084	4,819	256,352.59	252,820.80	3,531.79
1861	4,643	700	3,340	137,354.44	221,491.91	.....
1862	5,038	824	3,521	215,754.99	182,810.39	32,944.06
1863	6,014	787	4,170	195,593.29	189,414.14	6,179.15
1864	6,972	1,063	5,020	240,919.98	229,868.00	11,051.98
1865	10,664	1,932	6,616	348,791.84	274,199.34	74,592.50
1866	15,269	2,723	9,450	495,665.38	361,724.28	133,941.10

Comparative statement of the business of the Office from 1837 to 1915, inclusive—Continued.

Year.	Applications.[1]	Caveats filed.[2]	Patents and reissues.	Cash received.	Cash expended.	Surplus
1867	21,276	3,597	13,015	$646,581.92	$639,263.32	$7,318.60
1868	20,445	3,705	13,378	681,565.86	628,679.77	52,886.09
1869	19,271	3,624	13,986	693,145.81	486,430.74	206,715.07
1870	19,171	3,273	13,321	669,456.76	557,147.19	112,309.57
1871	19,472	3,366	13,033	678,716.46	562,091.64	116,624.82
1872	18,246	3,090	13,590	699,726.39	665,595.00	34,131.39
1873	20,414	3,248	12,864	703,191.77	691,178.98	12,012.79
1874	21,602	3,181	13,599	738,278.17	679,288.41	58,989.76
1875	21,638	3,094	14,837	743,453.36	721,657.71	21,795.65
1876	21,425	2,697	15,595	757,987.65	652,542.60	105,445.05
1877	20,308	2,809	14,187	732,342.85	613,152.62	119,190.23
1878	20,260	2,755	13,444	725,375.55	593,082.89	132,292.66
1879	20,059	2,620	13,213	703,931.47	529,638.97	174,292.50
1880	23,012	2,490	13,947	749,685.32	538,865.17	210,820.15
1881	26,059	2,406	16,584	853,665.89	605,173.28	248,492.61
1882	31,522	2,553	19,267	1,009,219.45	683,867.67	325,351.78
1883	34,576	2,741	22,383	1,146,240.00	675,234.86	471,005.14
1884	35,600	2,582	20,413	1,075,798.80	970,579.76	105,219.04
1884	35,717	2,552	24,233	1,188,089.15	1,024,378.85	163,710.30
1885	35,908	2,513	22,508	1,154,551.40	992,503.45	162,047.95
1886	35,613	2,622	21,477	1,141,506.60	991,472.22	150,037.38
1887	35,797	2,261	20,506	1,118,516.10	973,108.78	145,407.32
1888	40,575	2,481	24,158	1,281,728.05	1,052,955.96	228,772.09
1889	41,048	2,311	26,292	1,340,372.66	1,099,297.74	241,074.92
1890	40,552	2,408	25,244	1,271,285.78	1,139,713.35	131,572.43
1891	40,733	2,290	23,559	1,286,331.88	1,110,739.24	175,592.59
1892	38,473	2,247	23,760	1,242,871.64	1,141,038.45	101,833.19
1893	38,439	2,286	20,867	1,187,439.58	1,100,047.12	87,392.46
1894	40,680	2,415	22,057	1,245,246.93	1,106,389.49	138,857.44
1895	43,982	2,271	23,373	1,324,059.83	1,113,413.71	210,646.12
1896	47,965	2,176	23,794	1,375,641.72	1,122,843.13	252,798.59
1897	35,842	1,659	22,267	1,137,734.48	1,136,196.20	1,538.28
1898	41,443	1,716	25,527	1,325,457.03	1,211,783.73	113,673.30
1899	41,980	1,731	26,499	1,350,828.53	1,260,019.62	90,808.91
1900	46,449	1,842	27,373	1,449,398.16	1,297,385.64	152,012.52
1901	49,641	1,851	27,886	1,552,859.08	1,393,345.54	159,513.54
1902	50,213	1,771	31,699	1,642,201.81	1,448,645.81	193,156.00
1903	52,143	1,808	30,934	1,657,326.53	1,476,000.38	181,326.15
1904	54,971	1,896	30,399	1,806,758.14	1,479,633.22	327,124.92
1905	56,482	1,885	31,965	1,790,921.38	1,554,891.20	236,030.18
1906	58,762	1,967	36,620	1,910,618.14	1,631,458.36	279,159.78
1907	61,475	2,110	33,682	1,896,847.67	1,712,303.42	184,544.25
1908	65,839	1,948	37,421	2,042,828.14	1,955,151.14	87,677.00
1909	64,629	970	35,930	2,025,536.69	2,005,711.94	19,824.75
1910	69,121	.....	34,084	2,019,388.03	1,953,689.91	65,698.12
1911	70,976	.....	37,731	2,118,158.30	2,022,066.11	96,092.19
1912	70,367	.....	35,788	2,084,417.79	1,947,383.28	137,034.51
1913	70,404	.....	41,850	2,251,892.82	2,000,770.12	251,122.70
1914	70,069	.....	44,934	2,290,773.47	2,053,442.15	237,331.32
1915						

[1] Including patents, designs, and reissues.

[2] Caveat law repealed June 25, 1910.

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of letters patent commenced, together with the total number of each issued during the year.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	1	.....	.....	.....	.....	.....	109	.....	.....	.....	.....	.....	.....	.....
1837	110	.....	.....	.....	.....	.....	436	.....	6	.....	.....	.....	.....	.....
1838	546	.....	1	.....	.....	.....	515	.....	13	.....	.....	.....	.....	.....
1839	1,061	.....	7	.....	.....	.....	404	.....	10	.....	.....	.....	.....	.....
1840	1,495	.....	20	.....	.....	.....	458	.....	6	.....	.....	.....	.....	.....
1841	1,923	.....	30	.....	.....	.....	490	.....	13	.....	.....	.....	.....	.....
1842	2,413	.....	36	.....	.....	.....	488	.....	11	510	.....	.....	.....	.....
1843	2,901	1	49	.....	.....	.....	494	14	7	497	.....	.....	.....	.....
1844	3,395	15	60	.....	.....	.....	478	12	11	503	.....	.....	.....	.....
1845	3,873	27	67	.....	.....	.....	475	17	13	638	.....	.....	.....	.....
1846	4,348	44	78	.....	.....	.....	566	59	14	569	.....	.....	.....	.....
1847	4,914	103	91	.....	.....	.....	495	60	23	653	.....	.....	.....	.....
1848	5,409	163	105	.....	.....	.....	584	46	30	1,077	.....	.....	.....	.....
1849	5,993	209	128	.....	.....	.....	988	49	26	993	.....	.....	.....	.....
1850	6,981	258	158	.....	.....	.....	884	83	25	872	.....	.....	.....	.....
1851	7,865	341	184	.....	.....	.....	757	90	20	1,019	.....	.....	.....	.....
1852	8,622	431	209	.....	.....	.....	890	109	29	961	.....	.....	.....	.....
1853	9,512	540	229	.....	.....	.....	846	86	28	1,844	.....	.....	.....	.....
1854	10,358	626	258	.....	.....	.....	1,759	57	51	2,013	.....	.....	.....	.....
1855	12,117	683	286	.....	.....	.....	1,892	70	83	2,505	.....	.....	.....	.....
1856	14,009	753	337	.....	.....	.....	2,315	107						

Statement showing the number of the first patent, design patent, and reissue patent, etc.—Continued.

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.						
	Patents.	Designs.	Reissues.	Trade-marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-marks.	Labels.	Prints.	Total certificates.
1857	16,324	860	420				2,686	113	97	2,896				
1858	19,010	973	517				3,467	102	126	3,695				
1859	22,477	1,075	643				4,165	108	231	4,504				
1860	26,642	1,183	674				4,363	183	232	4,778				
1861	31,005	1,366	1,106				3,040	142	147	3,329				
1862	34,045	1,508	1,253				3,221	195	116	3,532				
1863	37,266	1,703	1,369				3,781	176	227	4,184				
1864	41,047	1,879	1,596				4,638	139	248	5,025				
1865	45,685	2,018	1,844				6,099	221	296	6,616				
1866	51,784	2,239	2,140				8,874	294	290	9,458				
1867	60,658	2,533	2,430				12,301	325	400	13,026				
1868	72,959	2,858	2,830				12,544	446	420	13,410				
1869	85,503	3,304	3,250				12,957	506	534	13,997				
1870	98,460	3,810	3,784	1			12,157	737	439	13,333	121			121
1871	110,617	4,547	4,223	122			11,687	905	464	13,056	486			486
1872	122,304	5,452	4,687	608			12,200	884	529	13,613	491			491
1873	134,504	6,336	5,216	1,099			11,616	747	501	12,864	492			492
1874	146,120	7,083	5,717	1,591	1		12,230	886	483	13,599	559	232		791
1875	158,350	7,969	6,200	2,150	233		13,291	915	631	14,837	1,138	232		1,370
1876	171,641	8,884	6,831	3,283	465		14,172	802	621	15,595	959	472		1,431
1877	185,813	9,686	7,452	4,247	937		12,920	699	568	14,187	1,216	392		1,608
1878	198,733	10,385	8,020	5,463	1,329		12,345	599	509	13,444	1,455	492		1,947
1879	211,078	10,975	8,529	6,918	1,821		12,133	592	488	13,213	572	355		1,227
1880	223,211	11,567	9,017	7,790	2,176		12,926	515	506	13,947	349	203		552
1881	236,137	12,082	9,523	8,139	2,379		15,548	565	471	16,584	834	202		1,036
1882	251,685	12,647	9,994	8,973	2,581		18,135	861	271	19,267	947	304		1,251
1883	269,820	13,508	10,265	9,920	2,885		21,196	1,020	167	22,383	902	906		1,808
1884	291,016	14,528	10,432	10,822	3,791		19,147	1,150	116	20,413	1,021	513		1,534
1885	310,163	15,678	10,548	11,843	4,304		23,331	773	129	24,233	1,067	391		1,458
1886	333,494	16,451	10,677	12,910	4,695		21,797	595	116	22,508	1,029	378		1,407
1887	355,291	17,046	10,793	13,939	5,073		20,429	949	99	21,477	1,133	380		1,513
1888	375,720	17,995	10,892	15,072	5,453		19,585	835	86	20,506	1,059	327		1,386
1889	395,305	18,830	10,978	16,131	5,780		23,360	723	75	24,158	1,229	319		1,548
1890	418,665	19,553	11,053	17,360	6,099		25,322	886	84	26,292	1,415	304		1,719
1891	443,987	20,439	11,137	18,475	6,403		22,328	836	80	23,244	1,762	137		1,899
1892	466,315	21,275	11,217	20,537	6,540		22,661	817	81	23,559	1,737	[1] 6		1,743
1893	488,976	22,092	11,298	22,274	None.	1	22,768	902	99	23,769	1,677	None.	2	1,679
1894	511,744	22,994	11,397	23,951	None.	3	19,875	928	64	20,857	1,806	None.	4	1,810
1895	531,619	23,922	11,461	25,257	None.	7	20,883	1,115	59	22,057	1,529	None.	3	1,532
1896	552,502	25,037	11,520	27,586	6,546	10	21,867	1,445	61	23,373	1,813	1	32	1,846
1897	574,369	26,482	11,581	29,399	6,547	42	22,098	1,631	65	23,794	1,671	14	16	1,701
1898	596,467	28,113	11,646	31,070	6,561	58	20,404	1,803	60	22,267	1,238	200	35	1,743
1899	616,871	29,916	11,706	32,308	6,761	93	23,296	2,139	92	25,527	1,649	511	100	2,260
1900	640,167	32,055	11,798	33,957	7,272	193	24,660	1,758	81	26,499	1,721	737	93	2,551
1901	664,827	33,813	11,879	35,678	8,009	286	25,558	1,734	81	27,373	1,928	878	159	2,965
1902	690,385	35,547	11,960	37,606	8,887	445	27,136	640	110	27,886	2,006	767	158	2,931
1903	717,521	36,187	12,070	39,612	9,654	603	31,046	536	117	31,699	2,186	990	270	3,446
1904	748,567	36,723	12,189	41,798	10,644	873	30,267	557	110	30,934	2,158	1,114	297	3,569
1905	778,834	37,280	12,299	43,956	11,758	1,170	29,784	486	129	30,399	4,490	836	359	5,679
1906	808,618	37,766	12,428	48,446	12,588	1,529	31,181	625	159	31,965	10,568	709	656	11,933
1907	839,799	38,391	12,587	59,014	13,297	1,874	35,880	589	151	36,620	7,878	667	315	8,860
1908	875,679	38,980	12,738	66,892	13,964	2,189	32,737	757	168	33,682	5,191	618	220	6,029
1909	908,436	39,737	12,906	72,083	14,582	2,409	36,574	687	160	37,421	4,184	492	148	4,824
1910	945,010	40,424	13,066	76,267	15,074	2,557	35,168	639	123	35,930	4,239	370	120	4,729
1911	980,178	41,063	13,189	80,506	15,444	2,677	32,917	1,010	157	34,084	4,205	659	248	5,112
1912	1,013,095	42,073	13,346	84,711	16,103	2,925	36,231	1,342	158	37,731	5,020	633	243	5,896
1913	1,049,326	43,415	13,504	89,731	16,736	3,168	33,941	1,683	164	35,788	5,095	708	290	6,093
1914	1,083,267	45,098	13,668	94,796	17,444	3,458	39,945	1,715	190	41,850	6,817	719	338	7,874
1915	1,123,212	46,813	13,858	101,613	18,163	3,796	43,207	1,545	182	44,934	6,262	803	371	7,436

[1] Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al. v. Keuffel et al.* (55 O. G., 1139) with the registration No. 6,545, June 14, 1892. Resumed June 9, 1895, with the registration of No. 6,546.

Expenditures for photolithographic and photographic work s , -1.

Fiscal year.	Contractor.	Price per page. Current issue.	Price per page. Reproduction of exhausted copies, etc.	Price per page. Photographic copies.	Total.
1912–1913	Columbia Planograph Co.	[1] $0.63 / [2] .50			$140,000
	Sackett & Wilhelms Co.		[3] $0.52 / [4] .60		
	F. W. Ernst			[6] $0.09 / [8] .10	
1913–1914	Columbia Planograph Co.	[1] .57½ / [2] .48			140,000
	Sackett & Wilhelms Co.		[4] .57 / [3] .47		
	Leet Bros.			[6] 0.078 / [5] 0.078	
1914–1915	Norris Peters Co.	[1] .64 / [2] .50			140,000
	A. J. Imgram		[3] .40½ / [4] .50		
	Commercial Photo Co.			[6] 0.064	
	Leet Bros.			[5] 0.067	
	Webb & Bocorselski		[3] .42		
	Columbia Planograph Co. / The Norris Peters Co.	[1] .61½ / [2] .49			
1915–1916	A. J. Imgram		[3] .39 / [4] .49		[9] 140,000
	Commercial Photo Co.			[6] .056 / [5] .06	
	Webb & Bocorselski		[3] .40		

[1] For 100 thin, 2 thick, and 1 bond copies.
[2] For 50 thin, 2 thick, and 1 bond copies of trade-marks and designs.
[3] For 50 copies each, mechanical and design patents and trade-marks.
[4] For 100 copies each, mechanical and design patents and trade marks.
[5] Size, 10 by 15 in.
[6] Size, 8 by 12½ in.
[7] For 50 thin, 2 thick, and 1 bond copies of designs.
[8] For 2 copies of drawings of foreign patents.
[9] Estimated.

Number of patents issued by the United States to December 31, 1915, and by foreign countries to December 31, 1914.

Countries.	To 1870, inclusive.	1871 to 1914.	Total.	Countries	To 1870, inclusive.	1871 to 1914.	Total.
Argentina[1]	83	13,009	13,092	Mexico[2]	22	13,199	13,221
Australia		15,676	15,676	Netherlands	4,535	455	4,990
Austria		86,392	86,392	Newfoundland	40	495	535
Austria-Hungary	15,350	67,583	82,933	New South Wales	236	11,740	11,976
Bahamas[1]		2	2	New Zealand	109	16,702	16,811
Barbados[1]		151	151	Norway	737	26,179	26,916
Belgium[2]	35,044	236,000	271,044	Paraguay		102	102
Bolivia	42	65	107	Peru[1]		160	160
Brazil[1]	185	8,885	9,070	Portugal	245	8,537	8,782
British Guiana	32	94	126	Queensland	67	6,368	6,435
British Honduras	1	19	20	Russia[2]	1,464	30,844	32,308
Canada	4,081	159,167	163,248	St. Helena[1]		4	4
Ceylon[1]	58	809	867	South African Republic		1,262	1,262
Chile	266	2,696	2,962	South Australia	123	6,221	6,344
Colombia[1]		1,067	1,067	Spain		54,390	54,390
Congo Free States[1]		284	284	Straits Settlements		338	338
Costa Rica[1]		72	72	Sweden	1,629	39,789	41,418
Cuba		1,994	1,994	Switzerland		68,282	68,282
Denmark	464	26,778	27,242	Tasmania	43	2,426	2,469
Ecuador		10	10	Trinidad	6	262	268
Fiji Islands[2]		47	47	Tunis[1]		1,081	1,081
Finland	112	5,250	5,362	Turkey[1]		2,560	2,560
France	103,934	399,458	503,392	Union South Africa		4,007	4,007
Germany	9,996	288,324	298,320	Uruguay[1]		455	455
Great Britain	53,408	440,099	493,507	Venezuela		295	295
Guatemala		57	57	Victoria	822	12,463	13,285
Hawaii		148	148	West Australia		3,524	3,524
Hongkong		235	235				
Hungary		61,688	61,688	Totals	238,437	2,305,659	2,544,096
India	445	13,210	13,655	United States	120,573	1,012,595	1,133,168
Italy and Sardinia	4,723	126,038	130,761				
Jamaica	22	250	272	Total to 1870	359,010		
Japan		27,016	27,016	Total, 1915		3,318,254	3,677,264
Leeward Islands		29	29	United States, 1915			43,207
Liberia		2	2				
Luxembourg[1]		10,498	10,498	Grand total, including 1915, U. S.			3,720,471
Malta[1]		106	106				
Mauritius[1]	113	311	424				

[1] Estimated, no report received since before 1913.
[2] No information at hand for 1914.

Number of applications pending December 31, 1915.

Year of filing.	Applications filed.	Including all divisional applications and continuations, not in issue or forfeited.				
		Dec. 31, 1915.	15 years or longer.	10 years or longer.	5 years or longer.	2 years or longer.
Prior to 1901		29	29			
In 1901	43,973	6				
1902	48,320	14				
1903	49,289	16				
1904	51,168	45				
1905	54,034	73				
				183		
1906	65,471	125				
1907	57,679	188				
1908	60,143	265				
1909	64,408	529				
1910	63,293	1,356				
					2,646	
1911	67,370	3,916				
1912	68,968	6,961				
1913	68,117	13,648				
						26,171
1914	67,774	26,978				
1915	67,138	49,483				
Total		102,632				
In issue		22,449				
Forfeited		16,312				
Grand total		141,393				
Applications in interference and on appeal, included in above table		1,766	9	68	324	1,049

Comparison of pending applications by years.

	December 31, 1914.		December 31, 1915.	
Cases filed prior to	1900	37	1901	29
Cases filed in	1900	13	1901	6
Do	1901	17	1902	14
Do	1902	29	1903	16
Do	1903	60	1904	45
Do	1904	83	1905	73
Do	1905	141	1906	125
Do	1906	249	1907	188
Do	1907	454	1908	265
Do	1908	790	1909	529
Do	1909	1,748	1910	1,356
Do	1910	3,710	1911	2,916
Do	1911	7,498	1912	6,961
Do	1912	15,203	1913	13,648
Do	1913	28,867	1914	26,978
Do	1914	50,947	1915	49,483
Totals		109,846		102 632

Attention is invited to the following comparisons:

Number of applications pending fifteen years or longer:

January 1, 1912	59
January 15, 1914	84
June 30, 1914	52
December 31, 1914	37
December 31, 1915	29

Number of applications pending ten years or longer:

January 1, 1912	289
June 30, 1914	241
December 31, 1914	230
December 31, 1915	183

Number of applications pending eight years or longer:

June 1, 1914	799
December 31, 1914	629
December 31, 1915	419

Number of applications pending five years or longer:

January 1, 1912	4,296
June 30, 1914	4,231
December 31, 1914	3,621
December 31, 1915	2,646

Number of applications pending two years or longer:

June 30, 1914	31,677
December 31, 1914	30,032
December 31, 1915	26,171

Total number pending not in issue or forfeited:

January 1, 1912	108,126
June 30, 1914	116,832
December 31, 1914	109,846
December 31, 1915	102,632

Number of applications in issue:

January 1, 1912	11,804
June 30, 1914	22,623
December 31, 1914	22,613
December 31, 1915	22,449

Total number pending, not including forfeited applications:

January 1, 1912	119,930
June 30, 1914	139,455
December 31, 1914	132,459
December 31, 1915	125,081

Allowances and publications.

	1914.	1915.	Decrease.
Patents	56,469	54,944	1,525
Reissues	172	169	3
Designs	1,612	1,769	[1] 43
Trade-marks	7,463	5,691	1,772
Labels	728	810	[1] 82
Prints	327	371	[1] 44
Totals	66,771	63,554	3,217

[1] Increase.

Patents and certifications issued.

	1914.	1915.	Increase.
Patents	39,945	43,207	3,262
Reissues	190	182	[1] 8
Designs	1,715	1,545	[1] 170
Trade-marks	6,817	6,262	[1] 555
Labels	719	803	84
Prints	338	371	33
Totals	49,724	52,370	2,646

[1] Decrease.

OTHER DETAILS OF BUSINESS.

During the year a total of 70,069 applications for patents, reissues of patents, and designs and 187,366 amendments in pending applications for patent were filed. The number of amendments filed shows a reduction from last year of 18,960. This is, doubtless, one result of the effort to make thorough actions. The reduction in the number of amendments which

follows the complete disposition of applications lightens the work, and, it is hoped, will make it possible to bring the work more nearly up to date. The reduction effected during the past year has required 69,043 actions on new cases and 188,721 actions on amended cases. The total number of actions was 257,764. Counting the members of the examining corps, excluding those who are assigned to other work, but including the Primary Examiners, this amounts to fourteen actions per week per member of the corps throughout the year. The weekly average of actions on new cases was 1,328 and on amended cases 3,629, making the total average weekly actions 4,957. The number of letters recorded, constituting the general correspondence of the Office, was 285,102, an increase of 8,401 over the work of the preceding year. In addition to this 51,346 letters of inquiry were returned with circulars of information answering the questions propounded. The fees received by mail and express amounted to $1,332,088.95, and the fees paid by hand to the Financial Clerk amounted to $891,469.09. There were received 12,644 pieces of registered mail and 4,149 express parcels.

During the year 1,401 applications previously allowed and forfeited for non-payment of the final fee within the time allowed by law were renewed, and 6,968 cases previously allowed and forfeited were abandoned on account of failure to renew. The number of cases abandoned within the year by reason of failure to further prosecute was 20,779. The total abandonments were 27,747.

In the Drafting Division, 1,051 drawings were made for inventors, who paid $3,768 therefor, and 7,247 drawings, previously filed, were corrected at the request of the inventors, for which the Office received $6,502.05. Nine tracings were made at a cost of $14.00. A total of $10,284.05 was received as fees for work by the Drafting Division. In addition to this 39 drawings, having a value of $205.50, were made for the use of the Office, and 4,171 drawings were corrected as to minor features without charge to inventors.

In the Assignment Division 28,714 deeds, transferring title to patents, etc., containing 13,071,250 words and averaging 455 words per deed, were recorded, for which the Office received $48,502.30. In addition to this the Assignment Division prepared 1,350 abstracts of title, for which fees amounting to $1,959.45 were paid. The total earnings of the Assignment Division were $50,461.75, although the table on page 1 of this report shows the receipt of only $31,419.30 by this division. The difference in these amounts covers work charged to miscellaneous deposit accounts, which are entered under the general head "Moneys received for copies."

Type-written copies of records to the extent of 26,424,000 words were furnished, and other copies containing 3,469,400 words made by outsiders were compared and certified by the Office. For the whole of this work $29,893.40 was paid. For the certificates attached to such of these copies as were certified the Office received $1,162.00.

Inventors and attorneys were furnished with 50,378 photographic copies of drawings, 8 x 12½, at fifteen cents each, and 5,066 photographic copies, 10 x 15, at twenty-five cents each; also, 31,236 small-sized photostat copies at fifteen cents each, and 37,911 large-sized photostat copies at twenty-five cents each. The amounts received for these photographic and photostat copies were $8,823.20 and $14,163.15, respectively. In addition 10,696 small-sized photostat copies were made for the use of the Office. The expenditures during the year on account of supplies for the photostat machine were $3,988.47.

Printed copies of the specifications and drawings of patents to the number of 2,764,921 were sold at five cents each, bringing into the Office on this account $123,613.40 in cash and coupons to the value of $14,632.65, sold in previous years. Copies to the number of 1,103,470 were shipped to foreign countries in exchange, and 160,502 were drawn for Office use.

CONDITION OF THE WORK IN THE OFFICE.

If the business of the Office be considered with reference to the average time of pendency of applications, the showing as to promptness is satisfactory. The average time that applications upon which patents are granted are in the Office is only about twenty-two months, and ninety-seven per cent. of all applications are disposed of within five years; but, since important patents are frequently unduly delayed, the proper way to handle the business is to enforce the prosecution of all applications as rapidly as is reasonably possible. One of the Law Examiners is assigned to this particular duty. That the work is being done, and with fair success, is shown by the reductions indicated in the foregoing comparative table of distribution of applications by the years in which they were filed as of January 1, 1916, and January 1, 1915, respectively. Every year shows a decrease. The total decrease in the number of applications pending in the examining divisions or on appeal, omitting allowed and forfeited applications, is 7,214 applications. After making allowance for the slight falling off of applications this year there remains a net gain of 6,578 applications. Thus it appears that the Office completed its examination of almost ten per cent. more applications than it received during the year. This does not indicate that the corps is unnecessarily large. It is in pursuance of a definite policy to require prompt prosecution by applicants and their attorneys. This has brought up for final disposition many applications where heretofore dilatory proceedings have been resorted to.

The method by which the Office can force the prosecution of applications is to hold the applicant strictly to the rule requiring complete response to each Office action. If the response filed within a period of one year from the date of the Office action is not complete the Office may hold the application abandoned for lack of proper prosecution.

Now that the amendment work is substantially

up to date risk of having an application held abandoned for lack of proper prosecution can be entirely avoided by filing amendments six weeks or two months in advance of the expiration of the year. If the proposed amendment is not a complete response, the applicant will be notified, so that the response may be completed within the year. It is not the intention to suggest that the filing of amendments be delayed, but to urge that they be not delayed in any case to so near the end of the year that correction of defects cannot be made within the statutory period of one year.

The number of applications awaiting official action January 1, 1916, compared with January 1, 1915, is less both in new applications and in applications which have been acted upon and amended. The total reduction is 3,270 applications. That this is a real gain and not the result of merely hasty actions is shown by the fact that the total number of applications pending before the Office, including applications in all stages short of abandonment, on January 1, 1916, was 3,513 less than the total number pending on January 1, 1915. On January 29, 1916, there were awaiting action by the Office 17,591 applications. At the present rate of reduction and continuing the policy of final disposition of applications without hasty actions the work can be brought up to date in about three years. It should be brought up to date and kept there, for when the Office is behind it is working at a disadvantage both to itself and to the public.

INTERFERENCES.

For approximately two years the practice has been followed of having all prospective interferences submitted to one of the Law Examiners before declaration thereof. From the first this practice has resulted in the correction of numerous inadvertencies and errors. Somewhat more than thirty per cent. of all interferences proposed have been wholly disapproved and six per cent. disapproved in part. As a consequence there has been a considerable reduction not only in the number of interferences, but also in the number of motions for dissolution of interferences.

Since the latter part of 1914 in cases where a difference of one year exists between the filing dates of pending applications found to disclose and claim common patentable subject-matter inquiry has been made of the junior applicant as to his claimed dates of conception, disclosure, and reduction to practice of the common subject-matter. When the response has revealed a date of conception subsequent to the filing date of the senior application, the junior party has been notified that no interference would be declared, but that the senior application would be allowed and when patented be cited as a reference against the junior party's application. This procedure has resulted in a still further and large reduction in the number of interferences declared; but application of it at present is suspended because of a mandamus respecting which an appeal is now pending before the Court of Appeals of the District of Columbia.

While it is not desired to argue in this report the legal questions involved, it seems proper to point out certain facts which have led to the adoption of the course which has been followed.

It was found by actual count of all interferences arising in one year which had been finally determined that where the difference between the filing dates exceeded one year the junior party was successful in less than six per cent. of the cases. This meant that the Office was trying out twenty cases for every one in which an outcome differed from what a judgment on the record would have effected. This disproportion seemed so large as to require that steps be taken to cut it down. Under the scheme adopted a letter has been written to the junior party asking his dates of invention, and interferences were of course declared in all cases where the junior party in his response set up dates showing that he could possibly overcome the filing date of the senior party. It was found that in about two-thirds of this class of cases the dates of conception alleged by the junior party did not go back of the filing date of the senior party, and the prospective interferences were never started.

Special care has been taken to avoid passing out any patents which a junior party in an interference might be able to show should not issue. The Law Examiner has fully discussed the art with the Primary Examiner, suggesting further search whenever this seemed to be advisable, and has also carefully considered all possible irregularities of prosecution of the applications.

Among the duties of the Patent Office the chief one would seem to be to grant a patent to an applicant entitled thereto as promptly and with as little cost and trouble to the applicant as may be possible. To hold him back in order to try out questions of priority which do not in fact exist and which the Office has only to inquire to find do not exist is to permit the processes of the Office to be used for purposes not set forth in the statutes. Such interferences have in the past been a fruitful source of oppression.

The ultimate purpose of all of the supervisory work discussed herein is to make better the conditions under which the work of examination is carried on. The prime function of the Office is to gather the appropriate known art and determine questions of patentability in view of it. The Examiner, if his opinion as to patentability is to be valuable, must know his art. His time should be kept free to study his art and to consider questions of patentability thoughtfully and thoroughly. It is therefore important that the examining corps be relieved of as many matters not essential to searching or passing upon patentability as is possible.

What the public needs from the Office more than anything else is good searches. Any member of the examining corps has an opportunity of wide usefulness. Any one who does not make the best searches of which he is capable, with the facilities provided, not only brings discredit and trouble upon the Office, but causes loss and disappointment

the extent of which cannot be estimated. In many cases it is so large as to be tragic, for inventors are prone to trust the favorable conclusions of the Office and soberly take grave risks in backing their inventions, which if taken in other enterprises would be recognized as risks which should be avoided as unwarranted.

But with the Office doing the best work of which it is capable it still would remain true, in my belief, that it would pay the public if twice as much money were spent in making it possible to make better searches. Great sums now wasted on needless litigation and fruitless enterprises would be saved. The resultant increase in refusal of patents would diminish the fees collected by the Office; but for all fees lost in this way far greater sums would be saved to the inventors and business interests of the country.

REQUIREMENT OF DIVISION.

One of the Law Examiners has been assigned to the work of passing upon requirements for division of applications.

The submission of final requirements for division to a Law Examiner has shown the existence of wide variations of practice among the Primary Examiners. Such divergence has been found particularly as to claims to a process, a product, and a machine, to an improved element and its combination with a machine, broadly stated, and to improvements in parts of an old machine and subcombinations and elements thereof theoretically capable of use in other machines and other arts.

Care has been taken to avoid requirements of division which might result in the issuance to an applicant of two patents of doubtful validity over each other, as where a process and product or a process and machine are so intimately related as to make joinder advisable, or where the process can only be carried out by the machine, or the product only made by the process, or where they are stated in the same or like terms.

The necessity of classification, so that the statutory examination can be made, has been borne in mind, and where process, product, or machine are of broader application and utility than with each other and the development of trade and invention have pointed to severance and the fields of search have become divergent divisions have been approved. Division is not believed proper where the result might be issuance of two patents resting on the same patentable novelty. Division in such cases is not the appropriate action. Division has been approved as to elements, parts, and subcombinations of a machine where they are clearly separable in structure and function from the other parts of the machine, are capable of use in other relations, and when the course and development of trade and invention has pointed them out as severable. In such cases Office classification indicates and follows a natural development. Where such a development has not taken place, it is not thought necessary for the Office to anticipate the development. A mere theoretical independence of intellectual conception or of possible use is not believed sufficient in itself to warrant division.

Of the requirements formally submitted to the Law Examiner since September 1, 1915, for approval for final action, forty-two per cent. have been disapproved.

CLASSIFICATION.

During the year 1915 eight classes, containing 17,500 patents, have been revised, fully defined, and published as additional revised classes. Six others, containing 8,200 patents, have been established, subdivided, and published, but without definitions. Eight others, including about 30,000 patents, have been substantially completed by the classifiers and await approval, final revision, and the necessary clerical work to make them available for use. Two hundred and two new subclasses have been created and established in classes already existing.

Estimating that 21,000 of the patents granted in 1915 went into previously-defined classes and adding the 17,500 patents in the newly-defined classes, the number of patents in revised classes with published definitions increased by 38,500. This addition is estimated to bring the number of patents in defined classes, allowing a percentage for partially completed classes, to be defined, up to approximately 576,000. The whole number of published classes is now 262, of which 130 have published class and subclass definitions, copious cross references, and search notes.

At the rate of progress measured by the completed assignment of patents to classes indicated above the classification of all of the patents could not be accomplished under thirty years.

In the work of revising and defining utilization of Examiners having detailed knowledge of the particular subject-matter to be classified is of undoubted advantage when that knowledge is applied in coöperation with an Examiner having some practice and skill in the theory of classification and able to keep in mind the relationships of all the arts. The difficulty of utilizing men in the examining divisions when those divisions are doing their best to keep the examining work up to date has been great. In view of the high pressure required to keep up the work of examination classification has been carried on in some divisions with many interruptions and in others has had to be completely dropped. Examiners employing all their time on examination cannot be utilized to study the relationship of their particular classes to others. In those divisions that have been able to give some time and work in willing coöperation with a classifier good results have followed.

It is hoped that such increase in the examining corps may be obtained in the near future that in each division having unrevised classes at least one man with some knowledge of the arts of that division may be utilized continuously for classification purposes in coöperation with a man from the division devoted to classification. At the present time some of the classifiers are endeavoring to supervise work in more than one division, and present experience indicates that this is practicable. More-

over, there is a large amount of clerical work which must be provided for and which with the present clerical force the Office cannot perform.

TRADE-MARK DIVISION.

The Trade-Mark Division of designs and trade-marks examines applications for patents for designs, applications for registration of trade-marks, and applications for registration of prints and labels. The work in this division has steadily increased. As the reference files constantly grow larger and the number of applications filed is constantly increasing the force provided is unable to keep pace with the work and is gradually falling farther and farther behind. This is bad both for the Office and for the commercial public. Applicants are compelled to wait for long periods of time before the first action can be made by the Office, and after response to the Office action is made by the applicant the congestion of the work necessitates another delay on the part of the Office.

I am asking Congress to provide one additional First Assistant and four Second Assistant Examiners for the Trade-Mark Division, so that the important work gradually piling up in the division may be properly disposed of within a reasonable time after its receipt.

EXCHANGE OF PATENT COPIES WITH CANADA.

A joint resolution of Congress approved January 14, 1915, authorized an exchange of copies of patents with the Canadian Patent Office. Copies of all patents issued since October 7, 1913, have been forwarded to the Canadian Patent Office; but on account of the lack of available force in the Patent Office and the pressure of current work it has up to this time been impossible to draw from the files a set of copies earlier than the date mentioned. I hope, however, to be able to complete this work within the near future.

THE PANAMA-PACIFIC EXPOSITION.

Operation of the act of September 18, 1913.

In obedience to the act of September 18, 1913, known as the "Kahn Act," an office was established at San Francisco, California, on July 1, 1914, under the joint direction of the Commissioner of Patents and the Register of Copyrights.

Including informal and incomplete applications eighteen applicants presented themselves asking for Certificates of Proprietorship for the Patent Office. Four of these applications involved foreign mechanical patents distributed as follows: one English; one Canadian; two French.

The two French applications were found to be incomplete and were subsequently withdrawn by the applicants.

The English applicants have not yet complied with the requirements of the Patent Office.

The remaining fourteen applications involved French trade-marks. At the time of presentation all of these were informal and incomplete and were returned to the applicants for completion in accordance with the requirements of the Office. Two were never returned. One was returned with requirements complied with and the certificate has been issued. The eleven remaining applications were returned after December 4, 1915, the date upon which the branch office became non-existent by law, and were refused on the ground that the applications were too late.

It is evident from the showing that the disposition of foreign exhibitors at the Panama-Pacific International Exposition to take advantage of the provisions of the act was so slight as to be practically negligible.

The cost of maintaining the branch Patent Office at San Francisco, as required by law, from July 1, 1914, until the close of the exposition was $1,304.45. The amount appropriated for this purpose was $15,000, and the balance of $13,695.55 remains unexpended. To the expenditures for the maintenance of the branch Patent Office should be added $1,800, the salary for one year to Mr. William Osborn, clerk in charge, detailed from the Patent Office, but paid from the regular appropriation for salaries.

RULES.

As stated in my last report, a committee was appointed to revise the Rules of Practice. Their recommendations were published in the OFFICIAL GAZETTE and further amendment was found advisable in view of suggestions received from a number of attorneys practising before this Office. The revised rules were, with the approval of the Secretary of the Interior, adopted to be effective January 1, 1916.

In the new rules the practice has been in many respects more clearly stated, and the procedure with reference to certain classes of appeals and in interferences has been simplified.

THE PATENT OFFICE BUILDING.

The crowded condition existing in this Office, which has frequently been called to the attention of Congress, is steadily growing worse. The patent copies kept for sale, to the number of about forty-seven millions, are scattered all over the Office. This fact increases enormously the difficulty of "pulling" them. Moreover, as they are stacked upon wooden shelves and are exposed, the danger of fire is very serious.

The new building for the use of the Department of the Interior now being erected in the square bounded by F, G, Eighteenth, and Nineteenth streets in all probability will be ready for occupancy near the end of the year. The removal of the offices of the Secretary of the Interior from the Patent Office Building and of the General Land Office from the building now occupied by it to the new building will enable the Patent Office to expand, and thus have relief from the congested conditions which in some parts of the Office have become almost unendurable.

There is no doubt that much could be done to increase the safety of the employees and property of this Office in case of fire. Moreover, when the new building for the Interior Department is completed and a large part of the Land Office Build-

ing, as is now contemplated, turned over to the Patent Office, it will require considerable remodeling to make the best use of the space available. I therefore ask Congress to appropriate $2,500 for the preparation of plans, so that the work may be proceeded with as soon as the additional space is placed at our disposal.

SCIENTIFIC LIBRARY.

The collection of books, periodicals, and foreign patents in the Library of the Patent Office is of immeasurable value to the examining corps, inventors, manufacturers, and attorneys, but, owing to the small force available for reclassifying, indexing, and assembling the material at hand, we have experienced considerable difficulty in putting it in condition for ready reference. The library contains more than seventy-five thousand volumes of scientific works and more than two million foreign patents. There should be in charge of a library of the importance and value of the Patent Office Library a librarian of wide experience and special training. It is believed that he should be familiar with the art of making searches and should be selected from the examining corps. The present salary, $2,000, is less than the salary of a Second Assistant Examiner. Any member of the corps appointed to the place will seek to be promoted out of it. In order to avoid this difficulty and to keep a well-trained man in the position, the salary of the Librarian should be increased to that of a Principal Examiner, $2,700 a year.

We have in the Library a complete set of German patents not at present available for use, but which would be of great value if bound according to the classification of the German Patent Office. They would fill 2,100 large volumes. The estimate of the Public Printer for binding these patents is $16 a volume, a total of about $33,000. I have not been able to have this work done with the funds provided for binding. I ask that a special appropriation be made for this purpose.

LEGISLATION.

Personnel.

In view of the fact that legislation of great importance to proper development of the plan to reorganize the examining corps in the Patent Office is at this time pending in the House of Representatives after passage through the Senate on December 16, 1915, it is deemed important to include in this report the explanation of the legislation asked for, found in the report of last year. It will be remembered that the bill now before the House of Representatives passed both the House and Senate last year and failed to become a law because of an oversight.

The examining corps in the Patent Office is composed of an Examiner of Classification, an Examiner of Interferences, an Examiner of Trade-Marks, four Law Examiners, forty-three Principal or Primary Examiners, and three hundred and thirty-four Assistant Examiners. Of the Assistant Examiners sixty-three are paid $2,400 a year, seventy-three are paid $2,100 a year, eighty-eight are paid $1,800 a year, and one hundred and ten are paid $1,500 a year. It will be noted that the number of Assistant Examiners receiving only $1,500 a year is equal to the sum total of the Law Examiners, the Primary Examiners, and those Assistant Examiners receiving $2,400 a year. This disproportion of the number in the lowest grade to those in the higher grades slows down promotions. This has contributed materially to induce ambitious young men to leave the Office after they have been admitted to the bar. On an average, one Assistant Examiner to each examining division resigns every two years. This is a serious handicap.

It is urged that the examining corps be reorganized by reducing the number in the lower grades, so as to make them equal.

The cost of such changes applied to the present force would be about twenty-three thousand dollars.

I have, however, asked Congress to make the number of the four grades eighty-six, which would increase the number of Assistant Examiners by ten, and would increase the pay roll by about forty-two thousand dollars. As stated above, the bill which when finally passed would accomplish this reorganization has passed the Senate during the present Congress and has been reported favorably by the Committee on Patents of the House.

No increase in the number of examining divisions is recommended. While it is difficult for the Primary Examiners to oversee the work of more than six or seven Assistant Examiners, as must be done now in the larger divisions, the advantage to be gained by reducing the number of Assistant Examiners in these large divisions must be balanced against and is believed to be outweighed by the inconvenience of increasing the number of divisions, with the consequent splitting up of the classes of invention among the different Primary Examiners. It is believed, however, that if the number of Law Examiners, who are substantially of the same rank as the Primary Examiners, were increased a large amount of supervisory work in addition to what is now being done, as indicated below, could be accomplished under the direction of the Commissioner. This supervisory work would be directed toward unifying the practice in the different divisions to the end that there may be a more speedy prosecution of applications and more certainty of arriving at correct conclusions.

The present Board of Examiners-in-Chief consists of three members, two of whom constitute a quorum. An increase of two members is necessary, and for three reasons:

1. The number of cases appealed is so large that there is more work than three men can properly dispose of, and it is increasing. At present a Second Assistant Examiner is detailed to assist the members of the board in their work.

2. Where because of the necessary absence of one member an appeal is heard by two members, in the

event of a divided board it is the uniform practice to set down cases for rehearing before the full board. This increases the work of the Office and the cost to the applicant. With five Examiners-in-Chief, three of whom constitute a quorum, this difficulty would be obviated.

3. The enforced absence of two members of the board at one time suspends the work of the board. In the event of serious and protracted illness this would cause great inconvenience.

The number of interferences which must be passed upon by the Examiner of Interferences is so large that it is impossible for him personally to examine the records submitted. It is therefore proposed to divide the work between two Examiners of Interferences, one of whom shall take the contested cases in trade-marks and the other the interferences involving inventions. I ask Congress to provide an additional Examiner of Interferences for this purpose.

The act making appropriation for the sundry civil expenses of the Government contains a provision under the heading of "Public printing and binding" as follows:

> And no more than an allotment of one-half of the sum hereby appropriated shall be expended in the first two quarters of the fiscal year, and no more than one-fourth thereof may be expended in either of the last two quarters of the fiscal year, except that, in addition thereto, in either of said last quarters, the unexpended balances of allotments for preceding quarters may be expended.

Under the provisions of this act all printing of patents granted by the Office is done by the Public Printer. The patents are printed in the traditional form, and no provision is made for issuing them in any other form. Therefore unless the work may be done by the Public Printer patents cannot be granted. The general patent statute, however, provides that patents shall be granted after due proceedings have been had, which include the payment of a final fee within the time prescribed by the statute, and section 4885 expressly provides that the patent shall be granted in not less than three months after the payment of the final fee. If, therefore, the portion of the appropriation available at any time is exhausted, the Commissioner may find himself unable to comply with the provisions of the law as to the granting of patents because of the foregoing provision respecting the use of the appropriation.

If this difficulty should arise in the fall before Congress has convened or in the spring after a short session, the Office might be thrown into confusion, and the rights of patentees might be seriously jeopardized. I would, therefore, suggest that to the above-quoted passage from the appropriation act there be added the proviso that it shall not apply to the printing of Letters Patent for inventions.

Section 4934 of the Revised Statutes requires the payment of a fee of fifteen dollars upon the filing of each original application and a fee of twenty dollars upon the issuance of each patent. The cost of printing the patent after the examination of the application has been completed is much less than twenty dollars. The cost to the Office of the prosecution of applications is considerably more than fifteen dollars. It is believed that if the filing fee were made twenty dollars, and the final fee made fifteen dollars, no substantial falling off in the number of applications would be experienced. As about forty per cent. of the applications filed do not eventuate into patents, the increase in the receipts of the Office by the readjustment of fees suggested would probably exceed $125,000.

Attorneys.

It has been suggested many times that the privilege of practising before the Office should be granted only after examination similar to examinations held for admission to the bar. It is believed that this requirement would be too severe, as many persons not specially trained in the law and without any particular educational advantages may by careful study of the practice and of the useful arts learn adequately to prosecute applications. Fundamentally knowledge of the invention is more important than knowledge of the rules and is often possessed by men of a type of mind which does not acquire legal knowledge readily.

Last year, toward the end of the session, a bill was passed by the Senate and failed to pass the House of Representatives, which declared it to be unlawful for any person, firm, or corporation practising before the Patent Office to use the name of any member of either House of Congress or of any officer of the Government to advertise said business. I recommend that a law be enacted in the terms of this bill, (S. 7427, 63d Congress, 3d Session.) The attorneys who make use of letters from Members of Congress for purposes of advertising are not as a class entitled to be commended to their constituents. A recent investigation showed one concern in Washington which had pending for different applicants 94 applications for nutlocks. This is doubtless an exceptional instance; but it is nevertheless true that these advertisers take applications which conflict without considering the fact that they are representing conflicting interests. They make searches which careful examination will show to be inadequate and inaccurate, and they induce people whose circumstances they do not know to file applications both in this country and abroad which no attorney should permit a client to file. In this way they collect hundreds of thousands of dollars every year from people scattered all over the United States, and, on the whole, people of the poorer class. The Office never recommends these concerns. I trust the bill referred to may pass.

Payment and refundment of fees.

On pages 186, 187, and 188 of the Report of the Investigation of the United States Patent Office, made by the President's Commission on Economy and Efficiency in December, 1912, (62d Congress, 3d session, H. R. Document No. 110,) will be found some valuable recommendations regarding the payment of fees into the Patent Office and the refundment of such fees as were paid by mistake or were

in excess of what was required by law. The subjects therein discussed should receive congressional action in the interest of economy and efficient administration.

PAYMENT OF FEES.

Section 4935, R. S.	*Section 4935, R. S. (Proposed Amendment.)*
Patent fees may be paid to the Commissioner of Patents, or to the Treasurer, or any of the assistant treasurers of the United States, or to any of the designated depositories, national banks, or receivers of public money, designated by the Secretary of the Treasury for that purpose; and such officer shall give the depositor a receipt or certificate of deposit therefor. All money received at the Patent Office, for any purpose, or from any source whatever, shall be paid into the Treasury as received, without any deduction whatever.	Patent fees shall be paid to the Commissioner of Patents, and the Commissioner, or such person as he shall deputize, shall make daily deposits in some bank in the District of Columbia, to be designated by the Secretary of the Treasury for this purpose, of all moneys received as patent fees; and shall make deposits of such fees with the Treasurer of the United States, at such times and in such manner as the latter shall direct; and shall also make monthly reports in aggregate to the Secretary of the Treasury of all remittances received and moneys refunded.

The purpose of the proposed amendment to section 4935, Revised Statutes, is to eliminate the provision for payment by Treasury certificate of deposit. Less than three per cent. of the patent fees are paid by certificate of deposit, and this method of payment is a source of confusion and trouble. Under the regulations of the Treasury Department these certificates when issued are forwarded by the depositary to the Patent Office, and the depositor is therefore without means to control the actual time of payment into the Patent Office other than to receive the benefit of payment as of the date upon which the deposit is made.

The weekly issues of patents are made up of cases in which the final fees have been received by the Office not later than Thursday. Under the rules of the Patent Office the patents bear date as of the fourth Tuesday following the close of the issue, the intervening time being required to lithograph and engross the patent papers. It has happened in many cases that the failure to issue a patent upon a date arranged for by the inventor was due to the delay of the depositary in forwarding to this Office the certificate of deposit. For instance, an inventor residing in Chicago will make a payment of his final fee at the subtreasury on Monday, expecting that the patent will be in the issue which closes on the following Thursday; but if the depositary delays the transmission of this certificate until too late to reach the Office by Thursday the issue of the patent goes over one week, very often to the inconvenience and disappointment of the inventor, and it will be several days before the unfavorable condition becomes known to the inventor, at which time it will be too late to correct the error. In numerous other cases there has been a failure of the depositary to date the certificate, and this necessitates correspondence and further delay in the issuance of the patent, for the fee cannot be credited as having been paid unless the date of deposit thereof be shown.

When a certificate of deposit is used to pay the filing fee of an application, a bad situation sometimes arises. An inventor residing, say, in one of the Pacific Coast cities will lodge in this Office an application for patent, complete except as to the fee, and on the last day of the year within which he could make payment of the fee under the law he will make a deposit of the fee with a depositary. Eight or ten days thereafter and after the expiration of the year the Office will receive the certificate, but must antedate the completion of the application to the date of the deposit of the fee. This requires that the application be given a fractional serial number and otherwise disarranges the continuity of our records. When a final fee is paid by an inventor under similar circumstances, it acts to prolong by eight or ten days the period during which the application is pending, contrary to the purposes of the law.

Payment by certificate of deposit is discriminatory and unfair to inventors residing in small places remote from Washington in that such inventors, not having access to a depositary, are required to pay their fees in the form of remittance by cash, bank draft, or money order such a time in advance as to insure the receipt of the remittance within the lawful period. It is therefore apparent that section 4935, Revised Statutes, should be amended so as to require all fees to be paid directly into the Patent Office.

REFUNDMENT OF FEES.

Section 4936, R. S.	*Section 4936, R. S. (Proposed Amendment.)*
The Treasurer of the United States is authorized to pay back any sum or sums of money to any person who has through mistake paid the same into the Treasury, or to any receiver or depositary, to the credit of the Treasury, as for fees accruing at the Patent Office, upon a certification thereof being made to the Treasurer by the Commissioner of Patents.	The Commissioner of Patents is authorized to refund any money to any person who has paid the sum for fees to the Patent Office through mistake, or in excess, but no refundment of any money shall be made after the expiration of five years from the date of payment.

A decision of the Comptroller of the Treasury, dated November 23, 1911, (18 Comp. Dec., 368,) in the matter of refundments by the Patent Office, has placed upon the Office a very great burden and has increased considerably the cost of administration. Prior to the decision referred to section 4936, Revised Statutes, was considered to have created an appropriation out of which the Financial Clerk of the Patent Office was authorized to refund such fees as were paid into the Office by mistake or in excess. The old practice is found to have been in operation for about forty years without question. Under the new practice the Patent Office certifies to the Treasury Department an abstract of all fees received by the Patent Office, including thousands of five-cent items. This abstract, which is made monthly, comprises between four hundred and five hundred pages and embodies the name of each remitter, his address, the purpose for which the fee was paid into the Office, and the amount thereof. After such abstract of fees received has been sent to the Treasury the Commissioner of Patents certifies to the Treasurer a list of the comparatively few cases wherein refundments of excess fees or fees paid by mistake

are to be made. The certificate of refundment and the abstract of payments are audited, and thereafter a Treasury warrant for the amount to be refunded is drawn. About six thousand of such warrants are issued annually. Three-fourths of the number are for sums of less than one dollar. The number of warrants for five cents each run into the hundreds. The gross receipts of the Patent Office for the year ended December 31, 1914, were $2,264,419.76, and the refundments during the same year amounted to $12,526.94. This method of auditing and refunding by warrants through the Treasury is estimated to cost one dollar for each transaction—that is, for each warrant—so that, to quote from the report (p. 187) mentioned—

it will be seen that while the practice established under the ruling of the Comptroller conforms to the requirement of the law, the expense is out of proportion to the benefits.

The Commission referred to recommended that the law be amended so as to authorize refundments to be made by the Patent Office.

In view of the fact that persons who pay money into the Patent Office by mistake or in excess of the amount required are notified promptly that refundment will be made upon request it is believed that there should be some limitation upon the time within which such refundments can be made. For this reason it is proposed to add to section 4936, as amended, a provision that refundments on account of fees paid by mistake or in excess shall not be made after the expiration of five years from the date of payment. This limitation will enable the Office to close its transactions and not be required to make reference to records which in future years may not be available. A requirement that refundment shall be made within a reasonable and definite time after payment will also eliminate the liability to make duplicate refundments.

These items enter very largely into the operations of the Patent Office, and the public business will be facilitated, at a reduced cost, if sections 4935 and 4936, Revised Statutes, are amended in the particulars pointed out.

Assignments.

One of my predecessors—Commissioner Benton J. Hall—in his annual report to Congress for the year 1887 said:

Section 4898 provides that an assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration without notice unless such instrument be recorded in the Patent Office within three months from the date thereof. In my opinion, this requirement operates unjustly in providing that an assignment, if recorded after three months from the date thereof, shall have no effect as constructive notice to a subsequent purchaser or mortgagee for a valuable consideration. The provision in my judgment should be modified so as to declare that while the assignment should be valid without recording for the period of three months from and after its date, thereafter it should be void against subsequent purchaser or mortgagee for a valuable consideration without notice, unless it be recorded in the Patent Office prior to the date of such subsequent purchase or mortgage, so that should the assignee fail through forgetfulness or accident to file his instrument or assignment within three months he might still file it for record at a subsequent period, and it should then give constructive notice from the date of its actual filing.

I concur in the views expressed here and the suggested amendment to the law to carry it into effect.

Under section 4934 of the Revised Statutes, originally enacted in 1870, the maximum fee for recording each "assignment, agreement, power of attorney, or other paper" was three dollars. Assignments have been and are now being received and recorded weekly that embody hundreds of patents and thousands of words. Recently, for example, there were recorded eight writings, three of which contained 966 patents, applications, and trade-marks, and the legal fees for recording the eight writings were thirty dollars under the Revised Statute mentioned, as amended May 27, 1908. The actual time occupied by the clerical force in verifying and supplying missing data of these patents, digesting, indexing, recording, and comparing was 172 hours, equivalent to the time of one clerk for twenty-four and four-sevenths days. At a minimum fee of fifty cents per hour legally chargeable for this class of work the cost to the Office for recording these writings was eighty-six dollars, nearly three times the amount paid therefor.

In addition to the number of words in writing presented for record, a nominal fee for each additional patent, application, design, trade-mark, or invention enumerated therein should, in my judgment, be charged. It is therefore suggested that twenty-five cents be charged for each of said additional items. I may add that this recommendation was included in the report to Congress of the investigation of the United States Patent Office by the President's Commission on Economy and Efficiency in December, 1912, and reference is made therein to this matter on pages 185–196.

It is therefore recommended that section 4934 be suitably amended to provide for this change in fees. A proper amendment will be submitted at an early date for consideration of Congress.

Assignees' index.

In 1870 a special appropriation was made by Congress for the purpose of indexing all prior recorded deeds, assignments, etc., under the name of the inventor, and all assignments recorded since that date have been so indexed. Under this law, pursuant to the records established thereby, it is necessary to know at least the name of the applicant or inventor to make the necessary search to run down a chain of title. Experience has shown that it is frequently necessary or desired by attorneys, inventors, and the general public to ascertain what patents are owned by a particular individual, firm, or corporation.

There is no authentic manner at present in which such search can be made except in each of the volumes wherein are recorded assignments and the data of the application, where they are indexed from assignor to assignee. It is therefore very desirable that a consolidated assignees' index be established and kept up to date in the Patent Office for this purpose. Requests are frequently made for such an authentic, verified, and checked index from which a reliable search may be made to ascertain what patents are owned by given corporations, firms, or individuals. To perform this service, it is believed that three more index clerks will be required in addition to those now employed in the Assignment Division, and for the indexing covering the past seventeen years five or six additional clerks will probably be needed to bring up its arrearage within a reasonable time.

I will therefore submit at an early date to Congress a request for authority to establish this index and a request for additional clerks for this purpose.

Clerks of courts to file decrees.

I would also suggest that the law be amended to require the clerks of the Federal courts to file in this Office a copy of every decree granting or refusing an injunction in a suit for infringement of a patent and every final decree affecting the validity of a patent.

If such copies were filed in this Office and placed in the file of the patent, it would enable any one to determine the litigation in which this patent had been involved, a thing which is now practically impossible, since many of the decisions of the lower courts are not published.

Protection of designs.

The present method of protecting designs is cumbersome and so costly that designers make little use of it. The problems of a court in passing upon the validity and infringement of design patents are so simple, generally speaking, as not to require the assistance of expert opinion. Little or nothing, therefore, is gained by examination prior to the granting of a patent. It is recommended that protection of designs be put upon a registration basis and the fees be greatly reduced.

Subpœna duces tecum.

The present statute does not provide for *subpœna duces tecum* in interference cases. This remedy should be provided by amending section 4906 of the Revised Statutes by adding thereto the statement that the provisions of section 869 of the Revised Statutes with relation to the issuance of a *subpœna duces tecum* shall apply to contested cases in the Patent Office.

Applications filed by attorneys.

Under date of September 15, 1914, I wrote to a firm of attorneys practising before the Office a letter subsequently published in the *Scientific American* of September 26, 1914, page 246, as follows:

I am accepting two applications filed by you as attorneys to-day, wherein the inventor's name to the petition and specification is signed by you as attorneys and the oath is made by a member of your firm. The time for filing these applications expires under the Convention to-morrow. Therefore, in filing these applications in the form in which you have presented them, you are doing all that you can to save your client's rights, and in permitting them to be filed and giving them a serial number and date of filing of to-day, I am doing all I can with the same end in view. If this should not prove to be effective, the loss must be attributed to the troubled conditions of Europe and not laid at your door or that of the Office.

It will be necessary before patents are granted that applications be filed executed by the inventor himself, as provided in section 4888. Whether the applications to be filed can be tied to the applications which you are filing to-day under the provisions of section 4887 is, of course, a matter which only a court of last resort can determine. *Ex parte Tropenas* (90 O. G., 749) to the contrary notwithstanding, I think it a possible construction of section 4887 that its requirements may be satisfied by the filing of applications executed by an attorney.

I hope, however, in case there are a number of applications executed by attorneys, that Congress may be induced to validate patents granted or to be granted upon proceedings indicated above.

Pursuant to this letter there have been filed in this Office 263 applications signed by attorneys. In 132 of these applications substituted papers signed by the inventor have since been received. From among these 132 applications 33 patents have been granted as follows: Patents Nos. 1,125,794, 1,128,972, 1,128,973, 1,136,521, 1,140,137, 1,140,296, 1,142,222, 1,144,192, 1,144,905, 1,148,420, 1,150,414, 1,150,682, 1,151,928, 1,153,774, 1,153,821, 1,154,933, 1,156,295, 1,158,269, 1,159,264, 1,160,268, 1,161,147, 1,161,161, 1,161,254, 1,161,723, 1,161,744, 1,161,866, 1,162,226, 1,162,496, 1,165,128, 1,167,341, 1,168,748, 1,169,514, and 1,169,652. In addition to these patents two applications which have been allowed and the fees paid therein will result in patents on February 22d. Nine other applications have reached the stage of allowance, where they await only the payment of the final fee before the patent will be granted, and one application has become forfeited.

These applications were accepted in good faith under conditions which were beyond control, and it is recommended that Congress validate the patents granted and to be granted.

Respectfully submitted.

THOMAS EWING,
Commissioner of Patents.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Coffield reissue patent, No. 12,719, (original No. 807,779,) for a water-motor, *Held* not anticipated and valid. *Wayne Mfg. Co.* v. *Coffield Motor Washer Co.*, 227 Fed. Rep., 987.

(U. S. D. C.) The Stocking and Mendenhall reissue patent, No. 12,733, for a washing-machine, *Held* not anticipated and valid. *Iowa Washing Mach. Co.* v. *Montgomery Ward & Co.*, 227 Fed. Rep., 1004.

(U. S. D. C.) The Kenney patent, No. 847,947, for apparatus for removing dust, claims 1, 3, and 4 *Held* not anticipated and valid; claim 2 *Held* void. *Vacuum Cleaner Co.* v. *American Rotary Valve Co.*, 227 Fed Rep., 998.

(U. S. D. C.) The Kenney patent, No. 847,948, for apparatus for removing dust, *Held* void for lack of patentable novelty. *Vacuum Cleaner Co.* v. *American Rotary Valve Co.*, 227 Fed. Rep., 998.

(U. S. C. C. A.) The Pieper and Pieper patent, No. 704,099, for electric-motor regulation, *Held* not anticipated and valid. *Pieper* v. *S. S. White Dental Mfg. Co.*, 228 Fed. Rep., 30.

(U. S. C. C. A.) The Gimson patent, No. 709,008, for a die for cutting out leather, *Held* void for lack of patentable invention in view of the prior art. *Independent Die Co.* v. *Savels*, 228 Fed. Rep., 45.

Patent and Trade-Mark Rights of Citizens of the United States in Paraguay.

DEPARTMENT OF STATE,
Washington, February 2, 1916.

The Secretary of State presents his compliments to the Honorable the Secretary of the Interior and has the honor to inclose for the information of the Patent Office a copy of a report from the American Legation at Asunción, Paraguay, dated December 18, 1915, in regard to the rights of citizens of the United States in Paraguay with reference to patents and trade-marks.

LEGATION OF THE UNITED STATES OF AMERICA,
Asunción, Paraguay, December 18, 1915.

The Honorable the Secretary of State, Washington.

SIR: I have the honor to observe with you that under the most favored nation clause the citizens of the United States have the same rights as natives of Paraguay, in regard to patents and trade-marks, upon fulfilment of the formalities prescribed by law.

I have the honor to be, sir, your obedient servant,

(Signed) OSCAR L. MILMORE,
Chargé d'Affaires ad interim.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1916.

Ed. Crager & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selig Lasher, 103 Bleecker street, New York, N. Y., for registration of a trade-mark and trade-mark registered September 1, 1891, No. 20,089, to Ed. Crager & Co., 6 Great Jones street, New York, N. Y., and a notice of such declaration sent by registered mail to said Ed. Crager & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ed. Crager & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1916.

Adler Bros. & Co., their assigns or legal representatives, take notice.

An interference having been declared by this Office between the application of the Los Angeles Soap Company, of 633 East First street, Los Angeles, Cal., for registration of a trade-mark and trade-mark registered June 15, 1886, No. 13,403, to Adler Bros. & Co., of Philadelphia, Pa., and a notice of such declaration sent by registered mail to said Adler Bros. & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Adler Bros. & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 223—No. 4. TUESDAY, FEBRUARY 22, 1916. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Patents	912—No.	1,172,244 to No. 1,173,155, inclusive.
Designs	48—No.	48,577 to No. 48,624, inclusive.
Trade-Marks	133—No.	108,627 to No. 108,759, inclusive.
Labels	23—No.	19,052 to No. 19,074, inclusive.
Prints	3—No.	4,220 to No. 4,222, inclusive.
Reissues	2—No.	14,074, to No. 14,075, inclusive.
Total	1121	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	7	1
Arizona	1	.....	North Dakota	1	.....
Arkansas	2	.....	Ohio	65	7
California	51	14	Oklahoma	6	1
Colorado	14	1	Oregon	7	.....
Connecticut	21	2	Pennsylvania	74	13
Delaware	2	.....	Rhode Island	11	.....
Florida	5	1	South Carolina	2	.....
Georgia	4	4	South Dakota	3	.....
Idaho	2	.....	Tennessee	5	3
Illinois	95	10	Texas	16	2
Indiana	15	5	Utah	.....	.....
Iowa	16	2	Vermont	1	1
Kansas	8	1	Virginia	5	2
Kentucky	10	1	Washington	12	5
Louisiana	12	4	West Virginia	6	.....
Maine	2	4	Wisconsin	22	1
Maryland	12	4	Wyoming	1	.....
Massachusetts	55	7			
Michigan	29	5	Alaska, District of	.....	.....
Minnesota	15	2	Canal Zone	.....	.....
Mississippi	1	.....	District of Columbia	7	.....
Missouri	29	11	Hawaii Territory	3	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	7	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	.....	.....	U. S. Navy	.....	.....
New Jersey	55	4			
New Mexico	3	.....	Total to residents of the United States	876	153
New York	149	35			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	4	.....	Netherlands	1	1
Belgium	1	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	12	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Russia	2	.....
Costa Rica	.....	.....	Scotland	.....	.....
Cuba	.....	.....	South Australia	.....	.....
Denmark	1	.....	Spain	.....	1
England	21	2	Sweden	1	.....
Finland	.....	.....	Switzerland	3	.....
France	3	1	Tasmania	1	.....
Germany	30	1	Transvaal, South Africa	1	.....
Guatemala	.....	.....	Victoria	.....	.....
India	1	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	1	.....	Total to residents of foreign countries	84	6
Luxemburg	1	.....			
Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT NO. 1,156,036.

On January 21, 1916, a decision was rendered that Frederic K. Plympton was not the first inventor of the subject-matter covered by claim 2 of his Patent No. 1,156,036, subject, "Tags," and no appeal having been taken within the time allowed such decision has become final.

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 19, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 24	Jan. 10	301
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 18	Dec. 13	820
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working	Feb. 2	Feb. 1	85
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Nov. 13	Jan. 28	357
167	5. Bookbinding; Harvesters; Jewelry; Music.	Oct. 25	Jan. 5	282
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	June 16	Dec. 1	469
312	7. Educational Appliances: Clutches; Games and Toys; Motors; Optics; Velocipedes.	Nov. 15	Jan. 13	452
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Nov. 1	Jan. 15	1062
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Aug. 5	Dec. 29	514
235	10. Carriages and Wagons	Oct. 8	Jan. 28	721
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button; Eyelet, and Rivet Setting; Harness; Leather Manufacturs; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 27	Feb. 7	145
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 16	Feb. 8	434
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planning; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 16	Jan. 19	444
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 8	Feb. 2	169
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 7	Feb. 9	333
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Oct. 5	Jan. 13	460
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Nov. 2	Jan. 18	184
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Jan. 8	Jan. 14	190
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Jan. 7	Jan. 8	190
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 3	Feb. 2	145

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Fnishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 27	Jan. 6	292
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 26	Jan. 15	328
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Aug. 5	Jan. 25	418
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Sept. 8	Jan. 17	401
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 21	Feb. 5	122
106	26. Electricity, Generation; Motive Power.	June 19	Dec. 16	542
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Appratus.	Jan. 7	Jan. 13	209
65	28. Internal-Combustion Engines	Oct. 12	Jan. 10	401
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Nov. 23	Dec. 21	307
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel tion; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 10	Feb. 7	302
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Oct. 19	Dec. 14	268
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	July 10	Jan. 20	692
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 6	Dec. 29	316
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners	Nov. 24	Jan. 26	206
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Sept. 24	Feb. 2	526
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Oct. 27	Feb. 3	676
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	July 27	Jan. 13	594
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Dec. 9	Jan. 31	218
321	39. Water Distribution	Oct. 1	Jan. 15	342
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 17	Feb. 4	826
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 18	Jan. 24	343
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	Jan. 2	Nov. 2	837
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Nov. 13	Dec. 15	184

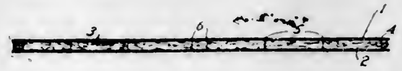
Oldest new case, June 16; oldest amended, Nov. 2.
Total number of applications awaiting action..... 17,182

	Trade-Marks, Designs, Labels and Prints.			
161	Trade-Marks	Jan. 3	Jan. 26	820
	Designs	Nov. 6	Jan. 12	489
	Labels and Prints	Feb. 10	Feb. 11	69

PATENTS

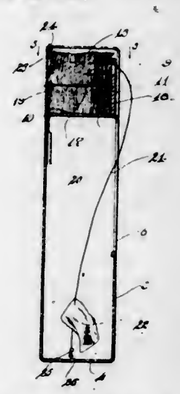
GRANTED FEBRUARY 22, 1916.

1,172,244. INSULATING MATERIAL. CHARLES M. ABBOTT, Watertown, Mass., assignor to Samuel Cabot, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 6, 1911. Serial No. 619,253. (Cl. 154—44.)



As an article of manufacture, a substantially fire proof insulating strip comprising a pair of covering sheets manufactured from sulfate of soda paper stock and a filler of substantially non-combustible insulating material disposed therebetween, said covering sheets comprising substantially twelve per cent. of the total weight of the strip and combining with the substantially non-combustible filler to prevent ignition of the strip.

1,172,245. INDIVIDUAL-TOWEL DEVICE. HENRY A. AMMANN, Spokane, Wash. Filed Dec. 2, 1915. Serial No. 64,715. (Cl. 45—32.)



1. In an individual towel device, a substantially horizontal shelf having a back, for supporting a stack of towels on edge, a weight actuated follower adapted to engage the foremost towel of the stack and adapted to be moved against said towels and toward said back to maintain the towels in stacked edge form and take up the slack of stack reduction in volume without bodily moving the stack, and a flexible stringer extending substantially horizontally through one upper corner of the stack and away from the latter to an accessible point with respect to the user, whereby the foremost towel may be grasped by the user and withdrawn from behind and over the top of said follower and along said stringer to the point of use, substantially as described.

2. In an individual towel device, a shelf having a back for supporting a stack of towels on edge, an actuated follower adapted to engage the foremost towel of the stack and adapted to be moved against said stack and toward said back to maintain the towels in stack form on edge and to take up slack of stack reduction in volume without bodily moving the stack, and a stringer extending substantially horizontally through the stack and away from the latter to an accessible point with respect to the user, whereby the foremost towel may be grasped by the user and withdrawn from behind and over the follower and along said stringer to the point of use, substantially as described.

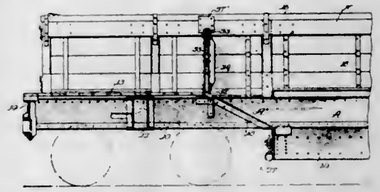
3. In an individual towel device, means adapted to engage the lower edges and back of a stack of towels to support the latter on edge, a follower, means adapted to move said follower against the foremost towel to maintain the towels in stack form, and a flexible stringer extending forwardly through said stack and away from the latter to a suitable point of use for withdrawal of the utmost towel of a stack by the user from behind and over said follower and along said stringer to such point of use, substantially as described.

4. In an individual towel device, a shelf and back, an upright follower adapted to be moved along said shelf, means adapted to move said follower along said shelf toward the back, a flexible stringer attached to said back, said stringer being provided with a point whereby towels may be strung upon such stringer, said stringer adapted to be passed through the upper part of said towels as they stand on edge and are held by said follower, and the said stringer being slack over the upper edge of the follower whereby the foremost towel may be withdrawn over the follower and slid along the stringer, substantially as described.

5. In an individual towel device, a shelf and back, an upright follower adapted to be moved along said shelf, means adapted to move said follower along said shelf toward the back, a flexible stringer adapted to be attached to said back, said stringer being provided with a point whereby towels may be strung upon such stringer, said stringer adapted to extend through the upper part of said towels as they stand on edge and are held by said follower, the said stringer being slack over the upper edge of the follower whereby the foremost towel may be withdrawn over the follower and slid along the stringer, and means for securing the forward end of said stringer whereby towels are secured against removal from said stringer, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,172,246. INTERCHANGEABLE BALLAST GONDOLA PLOW-CAR. JENS ANDERSON, Chicago, Ill., assignor to Enterprise Railway Equipment Company, Chicago, Ill. Filed Sept. 2, 1915. Serial No. 48,601. (Cl. 105—184.)



1. In an interchangeable plow, hopper ballast car and having fixed end floors and a central hopper section, pivoted floor sections at the ends of the hoppers, said floor sections in the horizontal position forming a portion of the floor over the ends of the hoppers and, in vertical position, forming the entire, vertical end walls of the car when the latter is being used as a ballast car, whereby when said pivoted floor sections are in horizontal position over the ends of the hoppers, a plow may be moved lengthwise of the car throughout its entire length.

2. In an interchangeable plow, hopper ballast car having fixed end floor portions and an intermediate hopper section, the end portions of the hoppers extending up to points over the inner wheels of the trucks, movable sections adapted to form the floor portions over said end portions of the hoppers when in horizontal position, said members being movable to a vertical position above said inner wheels of the trucks to thereby form the complete, vertical end walls of the car when the same is being used as a ballast car, whereby when said pivoted floor sections are in horizontal position over the ends of the hoppers, a plow may be moved lengthwise of the car throughout its entire length.

3. An interchangeable flat bottom gondola ballast car having fixed end floor portions and a hopper section intermediate the trucks, the hopper section comprising a plurality of longitudinally extending hoppers, the ends of said hoppers adjacent the ends of the car being provided with upwardly and outwardly inclined hopper bottom sheets extending to points above the inner wheels of the trucks, and floor sections extending transversely of the car and pivoted along their outer edges adjacent the inner edges of said fixed floor sections, said pivoted floor sections when in horizontal position covering only those portions of the hoppers above said inclined hopper bottom sheets, and in vertical position forming the end walls of the car when the latter is being used as a ballast car, whereby when said pivoted floor sections are in vertical position to form the end walls of the car the load is concentrated entirely between said end walls.

4. In a car of the character described, the combination with a car body provided with pivoted side doors, hopper section intermediate the trucks, each hopper having a center dump hopper door, permanent end floor sections, and pivoted floor sections adapted to cover portions of said hoppers when in horizontal position, the remainder of the car floor between said pivoted floor sections being formed by floor sections bodily displaceable from a horizontal position over the hoppers to an inclined position within the hoppers to form the bottoms thereof.

5. In a car of the character described, the combination with a car body provided with pivoted side doors and a hopper section intermediate the trucks, said car having means for forming the floor thereof when the same is used as a flat bottom gondola or plow car, said means consisting of fixed floor sections, pivoted floor sections, and bodily displaceable floor sections, said pivoted and bodily displaceable floor sections covering the hopper section when said pivoted and displaceable floor sections are in horizontal position.

[Claim 6 not printed in the Gazette.]

1,172,247. VACUUM-BOTTLE. CHARLES F. P. ANDERS Hoboken, N. J., assignor, by direct and mesne assignments, to Eugene L. Greenewald, Washington, D. C. Filed Nov. 23, 1910. Serial No. 593,891. (Cl. 215—118.)



1. A hollow walled container comprising an outer wall, a receptacle member disposed therein and joined thereto at its mouth, said receptacle member having a neck and a body of different diameters joined by a supporting shoulder below said mouth, a closure fitting in the mouth of said receptacle member, and a packing member, and extending to a point substantially opposite said shoulder to close the smaller part of the receptacle member at a point adjacent said shoulder, carried by the closure and fitting between the same and the neck of said receptacle member above said shoulder, said packing member resting on said shoulder.

2. A hollow walled container comprising an outer wall, a receptacle member disposed therein and integrally joined thereto at its mouth, said receptacle member having portions of two different diameters joined by a shoulder, the portion having the greater diameter being above the shoulder, a hollow closure fitting in the mouth of the receptacle member and terminating slightly below said shoulder, and a packing ring surrounding the closure and disposed above the said shoulder, said packing ring bearing against and resting on said shoulder whereby the closure is supported on said shoulder by said packing ring.

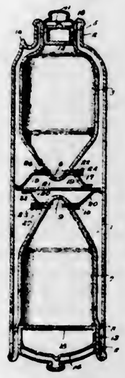
3. A double walled container comprising an inner member, an outer member inclosing the same, said members being integrally united at their mouths, and a spiral member yieldably centering and supporting said inner member at its bottom, said spiral member having the longitudinal axis thereof through the spirals substantially coinciding with the axes of the inner and outer members.

4. A double walled container comprising an inner member, an outer member inclosing the same and separated therefrom by a vacuum space, said members being integrally united at their mouths, and a spiral spring yieldably supporting and centering the inner member within the outer member, said spring engaging the bottom walls of both members and held in place by a part of one of said members.

5. A closure for double walled vessels comprising a hollow exhausted glass body adapted to fit into the mouth of a vessel and having a sealing tip on its upper side and an integral glass flange at the top end thereof, and a metal cover for said sealing tip and the top of said body, said cover having its peripheral edge extending beneath the edge of said integral glass flange, whereby said cover is permanently secured to said body over said sealing tip and said glass flange is provided with a metal protecting edge.

[Claims 6 to 12 not printed in the Gazette.]

1,172,248. VACUUM-BOTTLE. CHARLES F. P. ANDERS, Hoboken, N. J., assignor, by direct and mesne assignments, to Eugene L. Greenewald, Washington, D. C. Filed Dec. 2, 1910, Serial No. 595,324. Renewed Jan. 24, 1914. Serial No. 814,236. (Cl. 215—118.)



1. A vacuum bottle comprising an outer wall and two receptacles fitting therein from opposite ends of the wall, said receptacles being separated from the wall by a vacuum space.

2. A vacuum bottle comprising a tubular outer wall open at both ends, two receptacles fitting in said ends secured thereto and spaced from said outer wall, closures for said inner receptacles, and means for supporting the inner ends of said receptacles within said outer wall.

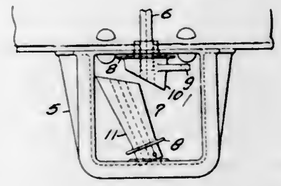
3. A vacuum bottle comprising a single outer wall and two opposed inner receptacles spaced from said wall, and yielding means between the inner ends of said inner receptacles for spacing and supporting said receptacles within the outer wall.

4. A vacuum bottle comprising a tubular outer wall open at both ends, two inner receptacles fitting in said ends and spaced from said outer wall, the ends of said inner receptacles and wall being secured together forming open necks for the inner receptacles, closures for said necks, and yielding means for supporting the inner ends of said receptacles within said outer wall.

5. A vacuum bottle comprising a tubular outer wall open at both ends, one of said openings being as great as the diameter of said tubular wall, two inner spaced receptacles fitting in said outer wall at the opposite ends and secured thereto at the ends, and means independent of the outer wall for supporting the inner ends of said receptacles.

[Claims 6 to 28 not printed in the Gazette.]

1,172,249. BRAKE-CHAIN DRUM. WILLIAM S. ATWOOD, Montreal, Quebec, Canada. Filed Nov. 9, 1914. Serial No. 871,054. (Cl. 254—149.)



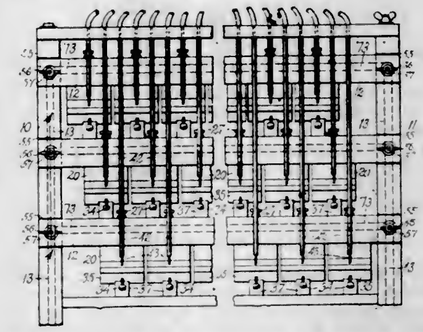
1. In combination, a rectangular supporting frame having two apertured sides, a brake chain drum held therebetween tapering from one end to the other and divided intermediate its ends in a plane inclined to the drum axis, and chain attaching means at the larger end of said drum, the apertured sides of the frame being spaced apart a distance less than the length of the tapering drum.

2. In combination, a chain drum comprising a body tapering from one end to the other and divided intermediate its ends into two portions of unequal length, the shorter portion being at the large end of the drum, and chain attaching means mounted on said shorter portion, the apertured sides of the frame being spaced apart a distance less than the length of the tapering drum.

3. In combination, a brake chain drum comprising a body tapering from one end to the other and divided intermediate its ends into two portions of unequal length, the shorter being at the large end of the drum, said portions separating in a plane inclined to the axis of the drum, and a chain attaching lug projecting from the shorter of said portions, the apertured sides of the frame being spaced apart a distance less than the length of the tapering drum.

1,172,250. PNEUMATIC ACTION. HARRY BAINTON, New York, N. Y. Filed Jan. 19, 1914. Serial No. 813,037. (Cl. 84—178.)

1. A pneumatic action, comprising a channel-rail having openings therein in communication with the channel therethrough, a plurality of independent valve actions provided with openings registering with the openings of the said channel-rail, a cylindrical member within the said opening of the valve action having a flange engaging the said valve action and extending upwardly therefrom into the opening of the said channel-rail, a cross-bar in said cylindrical member, and manually operable connecting devices, one for each valve action, extending exposed at the outside of the said channel-rail, and passing through the said openings and engaging the said cross-bar, for connecting the said valve-action independently and detachably with the said channel-rail.



2. A pneumatic action, comprising a channel-rail, and a plurality of valve-actions each having a suction-chamber therein and an opening therefrom in register with the channel in said channel-rail, a bushing in said opening, a cross-bar in said bushing, and a thumb-screw threaded in said cross-bar and extending through said opening and the channel-rail to the outside of the latter and detachably securing the valve-action thereto.

3. A pneumatic action, comprising a channel-rail, a valve-action secured thereto and having a bleeder-opening of greater than normal size between the suction-chamber and the tracker-duct, and a detachable connecting tube inserted in said tracker-duct, and having in register with said bleeder-opening a bleeder-opening of the size desired, said latter opening being the effective opening for the flow between the suction-chamber and the tracker-duct and a check-valve for said larger bleeder-opening closing toward the tracker-duct.

4. A pneumatic action, comprising a channel-rail, a valve-action secured thereto and having a bleeder-opening of greater than normal size between the suction-chamber and the tracker-duct, and a removable nipple communicating with the tracker-duct and having in register with the said bleeder-opening a bleeder-opening of smaller size controlling the flow of air between the suction-chamber and the tracker-duct and a check-valve for the larger bleeder-opening closing toward the tracker-duct.

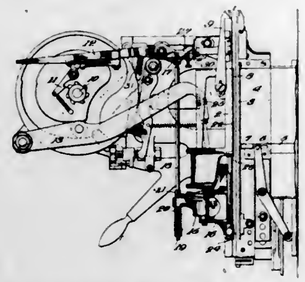
1,172,251. GALLEY MECHANISM FOR TYPE-COMPOSING MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Mar. 12, 1914. Serial No. 824,179. (Cl. 101—200.)

1. A galley mechanism for type composing machines equipped with signal controlled starting means and in combination therewith, an auxiliary line-controlled actuating means coupled with said signal controlled starting means.

2. In a galley mechanism, and in combination with the starting member thereof, line controlled actuating devices for said member including a member movable with the line, actuating devices for said starting member, and a restraining latch therefor, said restraining latch being controlled by the member responding to the movements of the line.

3. A galley mechanism provided with a line assembling channel, a line carrier and a type support movable longitudinally of said channel, and actuating devices including a starting member, and in combination therewith, actuating means coupled with said starting member, releasing

or control devices for said actuating means, and means coupled with the type support and acting upon said releasing devices at a predetermined point in the path of movement of the type support to effect the starting in action of the galley mechanism.

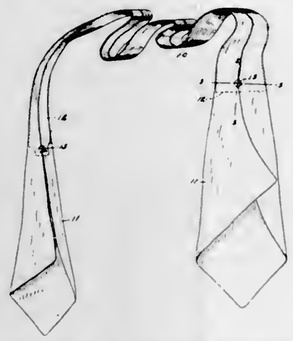


4. A galley mechanism provided with a line assembling channel, a type support movable in said channel, a line carrier movable longitudinally of the channel, and actuating devices for said carrier including driving and driven members and a one revolution clutch with a clutch closing member, and in combination therewith, a line controlled actuating mechanism coupled with said clutch closing member.

5. A galley mechanism embodying a line assembling channel, a type support, a reciprocatory line carrier and actuating mechanism therefor including a one revolution clutch with a starter therefor, and in combination therewith, a line controlled actuating mechanism for said starter, the same including a member coupled to move in unison with the type support, an actuating mechanism coupled with the starter for the clutch, a restraining latch for said starter actuating mechanism, and actuating devices intermediate the member coupled with the type support and the latch for retracting the latter.

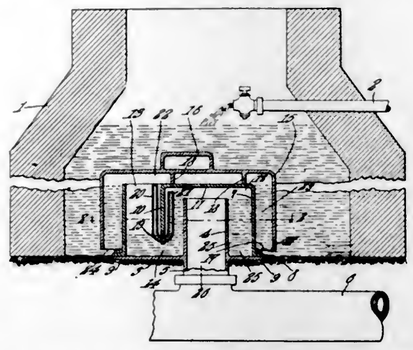
[Claims 6 to 10 not printed in the Gazette.]

1,172,252. NECKTIE. JOSEF BAUMGARTEN, Arlington, N. J. Filed June 22, 1914. Serial No. 846,674. (Cl. 2—11.)



The combination of a necktie, comprising a tubular casing having its longitudinal edges stitched together to a point spaced inwardly from each end of the necktie and a lining in the casing terminating at the ends of the stitching; with clips secured through the longitudinal edges of the casing at the ends of the stitching and through ends of the lining to hold the longitudinal edges and the ends of the lining together; said clips having their prongs turned inwardly to present a smooth surface at the underneath side of the tie to prevent the same from becoming caught in the clothing.

1,172,253. FLUSH-TANK SIPHON. JAMES W. BERRY, Iowa City, Iowa. Filed Apr. 17, 1915. Serial No. 22,168. (Cl. 137—106.)



1. A siphon comprising a ring having a partition across the same and a top between the partition and ring at one side of the partition, there being a chamber within the ring below the top, and a passage at the opposite side of the partition having its upper end open, the lower edge of the partition being spaced above the plane of the lower edge of the ring to provide an opening establishing communication between the lower portions of said passage and chamber, a bell mounted over the ring, there being an outlet portion extending downwardly from the upper portion of the said chamber, and a relief trap establishing communication between the upper portion of the said chamber and the chamber within the bell.

2. In a siphon, an upright ring having a vertical chordal partition and a top between the upper edges of the partition and ring over the center of the ring and providing a chamber at one side of the said partition, there being a passage at the other side of the partition and having its upper end open, the lower edge of the partition being spaced above the plane of the lower edge of the ring to provide an opening establishing communication between the lower portions of the said passage and the chamber, a bell mounted over the ring, an upstanding sleeve within said chamber providing an outlet passage, and a relief trap establishing communication between said chamber and the chamber within the bell.

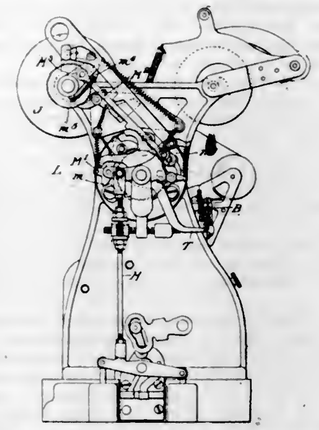
1,172,254. STRIP-PERFORATING MECHANISM FOR COMPOSING-MACHINES. JOSEPH BOURDAS SMITH BOOTH, Sidcup, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Apr. 24, 1915. Serial No. 23,753. (Cl. 164—89.)

1. A machine for forming perforations in a record strip embodying means to feed the strip, punches spaced from each other in the line of feed and means for operating said punches alternately.

2. A machine for forming perforations in a record strip embodying means for feeding the strip intermittently, a set of punches supported against movement in the direction of the strip feed movements, punches mounted to move in unison with the strip during feed movements and means for operating said punches alternately.

3. A machine for forming perforations in a record strip embodying means for feeding a strip intermittently, strip perforating punches movable in the direction of paper feed and means for advancing the punches to perforate the strip while the latter is stationary and for holding the punches in engagement with the strip while the latter is advancing.

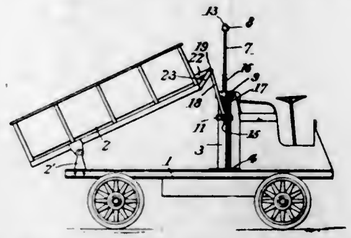
4. A machine for forming perforations in a record strip embodying means for intermittently feeding a strip including a pin wheel coöperating with feeding perforations in the strip, feed perforation forming punches located in advance of the pin wheel in the direction of the strip feed and movable toward and from the pin wheel, and means for advancing the punches to perforate the strip and for holding the punches advanced during the feeding movements of the strip.



5. A machine for forming perforations in a record strip embodying means for intermittently feeding the strip including pin wheels coöperating with feeding perforations in the strip, feed perforation forming punches located in advance of the pin wheels, a swinging frame in which the punches are mounted to swing toward and from the pin wheels and means for advancing the punches to perforate the strip and for holding the punches advanced during the feeding movements of the strip.

[Claims 6 to 9 not printed in the Gazette.]

1,172,255. STEAM HOIST AND DUMP FOR AUTO-TRUCKS. CHARLES B. BUCK, Washington, D. C. Filed June 11, 1915. Serial No. 33,533. (Cl. 21—20.)



1. A steam hoist for elevating boxes of dumping wagons of automobiles, etc., consisting of a truck and a pivotal box thereon, a steam cylinder, a piston mounted therein and a stem secured to the piston and movable through the end of the cylinder, a band movable about the piston, pivotal link connections between said band and box, and connections between the band and piston rod.

2. A steam hoist for elevating boxes of dumping wagons of automobiles, etc., consisting of a truck and a pivotal box thereon, a steam cylinder, a piston mounted therein and a stem secured to the piston and movable through the end of the cylinder, a band movable about the piston, pivotal link connections between said band and box, connections between the band and piston rod, and buffer means for preventing jar to the apparatus as the piston reaches its limit in opposite directions.

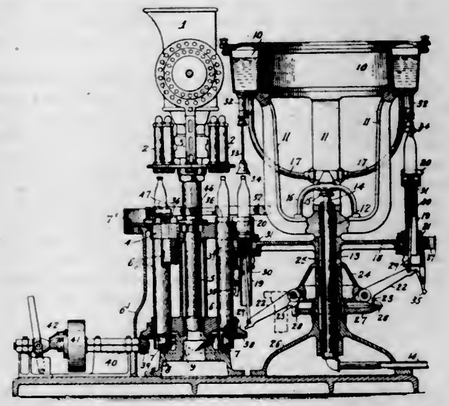
3. In combination with a truck having a box pivotally mounted thereon, a steam cylinder, a piston therein and a piston rod secured to the piston and movable through a suitably packed gland at the upper end thereof, a band surrounding the cylinder and provided with projecting portions, links pivotally connecting the box and band, and connections between the piston and band.

4. In combination with a truck having a box pivotally mounted thereon, a steam cylinder, a piston therein and a piston rod secured thereto and movable through a suitably packed gland at the upper end thereof, a band surrounding the cylinder and provided with projecting portions, links pivotally connecting the box and band, a cross bar connected to the piston rod, and rods connecting said bar and band.

5. In combination with a truck having a box pivotally mounted thereon, a steam cylinder, a piston therein and a piston rod secured thereto and movable through a suitably packed gland at the upper end thereof, a band surrounding the cylinder and provided with projecting portions, links pivotally connecting the box and band, a cross bar connected to the piston rods, rods connecting said bar and band, and a crosspiece upon the cylinder which is apertured for the reception of said rods.

[Claims 6 to 8 not printed in the Gazette.]

1,172,256. COMBINED FILLING AND CROWNING MECHANISM. ALBERT A. CARPER, Baltimore, Md., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Mar. 27, 1913. Serial No. 757,081. (Cl. 226—28.)



1. The combination with a rotary filling mechanism provided with a plurality of sets of filling devices, each of said devices including a bottle receiving socket having an open side, of a crowning mechanism in juxtaposition with the filling mechanism and provided with a plurality of sets of crowning devices, said sets being less in number than the filling devices, and each set including a bottle receiving socket having an open side, means for driving the two mechanisms so as to cause the sockets of the crowning devices to register successively with the sockets of the filling devices, and means for transferring a filled bottle directly from a socket of the filling mechanism to the corresponding registering sockets of the crowning mechanism.

2. The combination with a rotary filling mechanism provided with a plurality of sets of filling devices, each of said devices including a bottle receiving socket having an open side, of a crowning mechanism in juxtaposition with the filling mechanism and provided with a plurality of sets of crowning devices, said sets being less in number than the filling devices, and each set including a bottle receiving socket having an open side, means for driving the two mechanisms so as to cause the sockets of the crowning devices to register successively with the sockets of the filling devices, and a switch for transfer-

ring a filled bottle directly from a socket of the filling mechanism to the corresponding registering socket of the crowning mechanism.

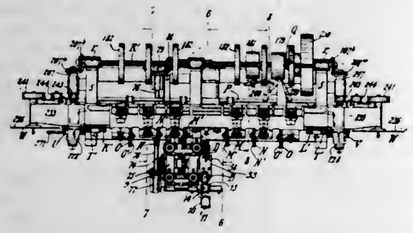
3. The combination, with a rotary filling mechanism provided with a plurality of sets of filling devices, each set including an orbitally-movable bottle-receiving socket, of a crowning mechanism in juxtaposition with the filling mechanism and provided with a plurality of sets of crowning devices, each set including an orbitally-movable bottle-receiving socket whose orbit is different from that of the filling machine sockets, means for directly driving one of the mechanisms, driving connections between the two mechanisms independent of said driving means, and arranged to bring the corresponding sockets of the two mechanisms in register with each other *seriatim*, and means for transferring bottles from the bottle-receiving sockets of the filling mechanism to the corresponding registering bottle-receiving sockets of the crowning mechanism.

4. The combination, with a rotary filling mechanism provided with a plurality of sets of filling devices, each set including an orbitally-movable bottle-receiving socket, of a crowning mechanism in juxtaposition with the filling mechanism and provided with a plurality of sets of crowning devices, said sets being less in number than the number of sets of filling devices, and each set including an orbitally-movable bottle-receiving socket whose orbit is different from that of the filling machine sockets, means for directly driving one of the mechanisms, driving connections between the two mechanisms independent of said driving means, and arranged to bring the corresponding sockets of the two mechanisms in register with each other *seriatim*, and means for transferring bottles from the bottle-receiving sockets of the filling mechanism to the corresponding registering bottle-receiving sockets of the crowning mechanism.

5. The combination with a rotary filling mechanism provided with a plurality of sets of filling devices, each device including an open bottle receiving socket, of a crowning mechanism in juxtaposition with the filling mechanism and provided with a plurality of sets of crowning devices, said sets being less in number than the number of sets of filling devices and each set including an open bottle receiving socket, means for so driving one of the mechanisms from the other that the sockets on the crowning mechanism will register successively with the sockets on the filling mechanism, means for transferring the filled bottles directly from the sockets on the filling mechanism to the sockets on the crowning mechanism, and driving means.

[Claims 6 to 9 not printed in the Gazette.]

1,172,257. MACHINE FOR MAKING CORRUGATED FASTENERS. SPENCER C. CARY and CHARLES S. WEEKS, New York, N. Y.; said Weeks assignor to Cary Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 22, 1912. Serial No. 710,963. (Cl. 10—31.)



1. In a machine for producing corrugated fasteners, the combination of stock slitting and serrating mechanism for producing a plurality of strips each of which is serrated at one edge thereof; means for corrugating each strip, and means for sharpening the serrated edge portion of said strips.

2. In a machine for producing corrugated fasteners, the combination of stock slitting and serrating mechanism for producing a plurality of strips each of which is serrated at one edge portion thereof, means for corrugating each strip so as to produce corrugations in register with the serrated edges of the strips and result in sawtooth edges on said strips, means for feeding stock to said slitting and serrating mechanism, and means for sharpening the sawtooth edges of said corrugated strips.

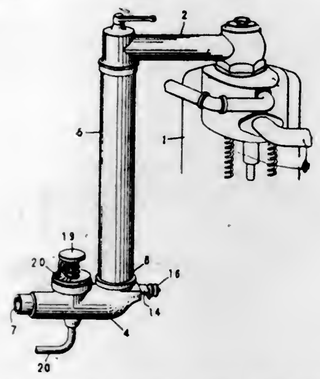
3. In a machine for making corrugated fasteners, the combination of means for slitting flat metal stock and simultaneously therewith producing serrations on one edge of the resulting separate strips, means for corrugating the serrated edged strips, and means for sharpening the strips on the serrated edge portions thereof.

4. In a machine for making corrugated fasteners, the combination of stock slitting rolls provided with dies for producing at the slitting operation serrations on one edge of each of the resulting strips, corrugating mechanism for operating on said serrated edge strips, and means for sharpening the strips on the serrated edges thereof.

5. In a machine for making corrugated fasteners, stock slitting and serrating mechanism embodying coöperating rolls provided with punches for simultaneously slitting and serrating flat metal stock to produce a plurality of serrated edge strips, combined with means for feeding flat stock to said rolls, means operating upon the serrated strips subsequently to the slitting and serrating operation for corrugating said strips, and means for sharpening the serrated edge portions of said strips.

[Claims 6 to 35 not printed in the Gazette.]

1,172,258. CARBURETING MECHANISM FOR GAS-ENGINES. JOSEPH C. COULOMBE, Northfield, Vt., assignor of one-half to William H. Barker, New York, N. Y. Filed Oct. 19, 1910. Serial No. 587,891. (Cl. 123—119.)



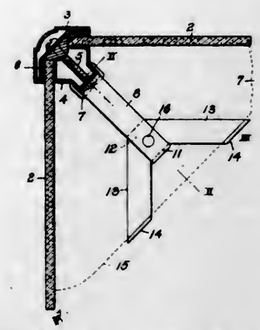
1. In a vaporizer having a vapor inlet and a fluid supply coöperating therewith and to be vaporized by the passage of vapor through the inlet and an outlet for the vaporized fluid connected with a suction device, means for maintaining a substantially constant mixture of fluid and vapor through said device upon varying conditions of suction, said means including a series of chambers intermediate the outlet side of the vaporizer and the suction device, each chamber having its walls imperforate and tapered toward a common central axis and each chamber having its inlet projecting within the preceding chamber.

2. In a vaporizer embodying an air inlet, a fluid supply to be mixed therewith and an outlet, a cylindrical casing extending from the outlet and having arranged therein a series of chambers, each chamber having imperforate walls and each chamber opening to a common central orifice connecting all of said chambers, the inlet of each chamber arranged within the next preceding chamber of the series, the chambers forming individual expansion chambers arranged in series to receive the fluid passing through the vaporizer and successively subject to suction whereby the speed of the fluid is controlled.

3. In combination with a vaporizer for an engine or the like, means intermediate said vaporizer and engine for controlling the speed of movement of the fluid through said vaporizer, said means embodying a series of annular chambers formed with imperforate tapered members nested one within the other and with their walls substantially parallel, all of said chambers being closed except for a central opening common to all of said chambers, the central opening to each chamber located within the annular walls of the next preceding chamber of the series.

4. In combination with a vaporizer for an engine or the like, actuated by the suction of said engine, a cylindrical casing intermediate said vaporizer and engine, said casing containing a series of conical imperforate walls arranged parallel to each other and extending toward the central axis of the casing, said walls having a common central opening therethrough arranged coaxially with the axis of the casing and with the central aperture of each of the succeeding walls gradually decreasing in diameter from the inlet toward the outlet of the casing.

1,172,259. WINDOW-BRACKET. JOHN H. CRIST, Oakmont, Pa. Filed Oct. 19, 1914. Serial No. 867,278. (Cl. 248—18.)



1. A bracket of the class described consisting of a formed strip having a doubled middle portion and terminal attaching portions, and an angular member embraced between the upper and lower members of the middle doubled portion, substantially as set forth.

2. A bracket of the class described consisting of a formed strip having a doubled middle portion and terminal attaching portions, and an angular member embraced between the upper and lower members of the middle doubled portion and fixedly secured thereto, substantially as set forth.

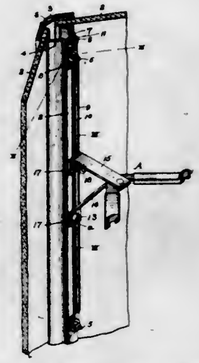
3. A bracket of the class described consisting of a formed strip having a doubled middle portion and terminal attaching portions, and an angular member embraced between the upper and lower members of the middle doubled portion and provided with upwardly extending lip terminals, substantially as set forth.

4. A bracket of the class described consisting of a formed strip having a doubled middle portion and terminal attaching portions, and an angular member embraced between the upper and lower members of the middle doubled portion and provided with telescoping extensible supporting portions, substantially as set forth.

5. The combination with a window frame construction of the class described having a central rib portion intervening between converging panes, of a supporting bracket having a confronting terminal, and a clip member adapted to embrace both of said portions and to hold them together, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,172,260. WINDOW-BRACKET. JOHN HENRY CRIST, Oakmont, Pa. Filed Oct. 31, 1914. Serial No. 869,590. (Cl. 248—19.)



1. The combination with a supporting rib or the like, of a slotted base secured thereon having outwardly spaced inwardly extending flanges and an intervening slot, a slidable member therein having integral bolding pins extending through said slot, a supporting bracket or the like connected therewith and a nut threaded on one of said pins whereby to rigidly clamp the slidable member in fixed relation to the base, substantially as described.

2. The combination with a supporting rib, of a slotted base secured thereto having outwardly spaced inwardly extending flanges and an intervening slot, a slidable member therein having integral studs extending through the slot, a supporting bracket adapted to seat on the outer ends of said studs, and a nut threaded on one of the studs whereby to rigidly clamp the slidable member in fixed relation to the slotted base and the supporting bracket to the slidable member, subtsantially as described.

3. The combination with a supporting member having outwardly spaced inwardly extending flanges and an intervening slot, of a slidable member held therein, studs on the slidable member extending through the slot, a head on the lower stud, a supporting bracket having slotted terminals adapted to engage said studs, and a nut threaded on the upper stud, whereby to clamp the slidable member in adjusted relation to the slotted base and to hold the supporting bracket rigidly seated on the slidable members, substantially as described.

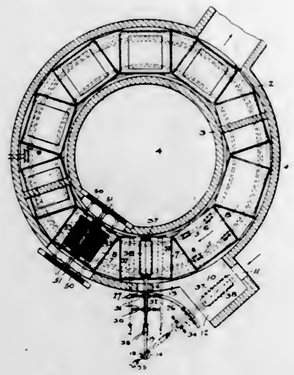
1,172,261. RETAINER-NECKTIE. CHARLES W. T. DAVIES. New York, N. Y. Filed May 5, 1914. Serial No. 836,465. (Cl. 2—11.)



A necktie provided with a single tab in the region of the juncture of its neckband and one of its tying ends whose connection to said neckband is along an extended or relatively wide hinging base line arranged substantially longitudinally of the necktie, said tab having a buttonhole whose stud-engaging end is normally located rearwardly or toward the neckband from the forward end of said extended base line, whereby, when strain is brought against the tab by pulling on the free end of

the tie preparatory to tying the knot, the forward connection point of the base line of the tab is prevented from assuming a position to the rear of the collar stud.

1,172,262. GLASS - MANIPULATING APPARATUS. GEORGE C. DERAT, Cheswick, Pa., assignor of one-half to George A. Koehler, Cheswick, Pa. Filed Jan. 30, 1915. Serial No. 5,265. (Cl. 49—44.)



1. A device of the character described, comprising a member divided longitudinally, and having two curved rocking working faces.

2. A device of the character described, comprising a cylindrical member divided longitudinally into two rocking parts.

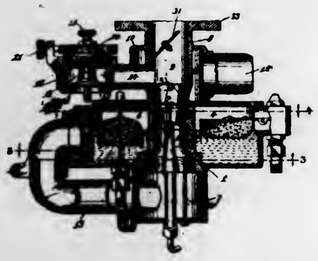
3. A device of the character described, comprising a member divided longitudinally into two parts having curved working faces, and means for rocking said parts on their curved faces.

4. A device of the character described, comprising a longitudinally divided spindle or shaft, having curved working faces on each half, and means for rocking said halves on their curved faces.

5. A device of the character described, comprising a longitudinally divided shaft having curved working faces, means for rocking said shaft halves on their curved faces, and means for elevating said shaft.

[Claims 6 to 8 not printed in the Gazette.]

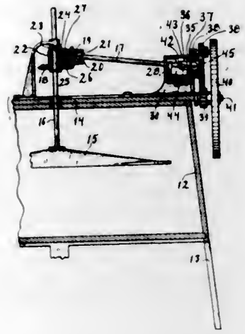
1,172,263. CARBURETER FOR KEROSENE AND THE LIKE. WADE HAMPTON DE FONTAINE, New York, N. Y. Filed Jan. 24, 1914. Serial No. 814,077. (Cl. 48—150.2.)



1. In a carbureter of the class described, a mixing chamber, a mixing tube, a fuel oil chamber, a jacketing passage adjacent to said tube and chambers and a removable pipe connecting said passage with the bottom and inside of said tube so that the air supply for said tube may either first pass through said passage or be independent thereof.

2. In a carbureter of the class described, a central mixing tube, a water chamber and a gasolene chamber upon one side of said tube and separated by a partition wall, a fuel oil chamber upon the other side of said tube, a mixing chamber upon said mixing tube, a jacketing passage outside of and adjacent to the mixing chamber and mixing tube and substantially surrounding the fuel oil chamber, and a removable pipe between said jacketing passage and the bottom inside of the mixing tube.

1,172,264. GEARING FOR WASHING-MACHINES. JOHN P. DORAU, Jefferson, Wis. Filed Nov. 30, 1914. Serial No. 874,575. (Cl. 74—7.)



1. In a washing machine, the combination of a vertical shaft, a shaft disposed at an angle thereto, a driving connection between said shafts comprising a wheel on the vertical shaft, means operatively connected to said angularly disposed shaft for continuously rotating said wheel, and mechanism including means integral with said angularly disposed shaft for vertically reciprocating the driving connection and the vertical shaft during the continuous rotation of said shafts.

2. In a washing machine, the combination of a vertical shaft, a shaft disposed at an angle thereto, a driving connection between said shafts comprising a wheel mounted on the vertical shaft, a member pivotally secured to said vertical shaft, and mechanism including means connected to said angularly disposed shaft and pivotally secured to said member for vertically reciprocating the driving connection and the vertical shaft during the continuous rotation of said shafts.

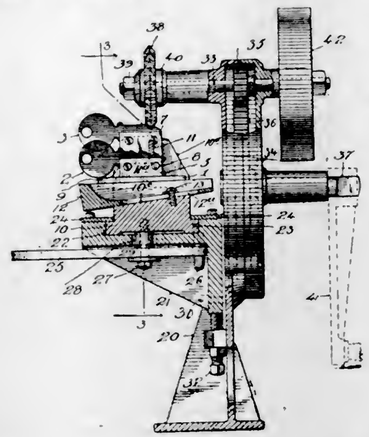
3. In a washing machine, the combination of a vertical shaft, a shaft disposed at an angle thereto, one of the ends of said angularly disposed shaft being out of alinement with the other, and a driving connection between said out of line end and said vertical shaft for continuously rotating said vertical shaft, the out of line end of said angularly disposed shaft causing said driving connection and vertical shaft to be vertically reciprocated during the continuous rotation of said shafts.

4. In a washing machine, the combination, with a vertical shaft, of a shaft disposed at an angle thereto, a driving connection between said shafts comprising a toothed wheel mounted on the vertical shaft, a member pivotally mounted on said vertical shaft adjacent said wheel, means pivotally carried by said member for engaging said wheel to continuously rotate the same, and means on said angularly disposed shaft for vertically reciprocating said driving connection and said vertical shaft during the continuous rotation of said shaft.

5. In a washing machine, the combination, with a vertical shaft, of a shaft disposed at an angle thereto, a driving connection between said shafts comprising a gearing connection between said shafts for continuously rotating said shafts, and means on said angularly disposed shaft for vertically reciprocating said driving connection and said vertical shaft during the continuous rotation of said angularly disposed shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,172,265. KEY - CUTTING MACHINE. HORACE L. EDGE, New York, N. Y. Filed May 4, 1915. Serial No. 25,694. (Cl. 90—13.)



1. A key cutting machine comprising a holder having means to hold a key and a key blank on different levels, a head adapted to adjustably receive said holder, said head having a stop to engage the key, and means coöperative with said holder and head for retaining the key in set rigid position against said stop.

2. A key cutting machine comprising a holder having means to hold a key and a key blank on different levels, a head adapted to adjustably receive said holder, said head having a stop to engage the key, and a member movable relatively to and between said holder and head and adapted to cause the holder to be raised to retain said stop in different recesses of the key.

3. A key cutting machine comprising a holder having means to hold a key and a key blank on different levels, a head adapted to receive said holder, said head having a stop to engage the key, and a wedge-like member movable relatively to said holder and head for raising the holder and retaining the key against said stop.

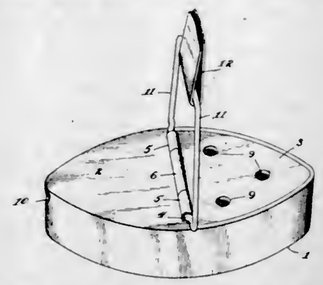
4. A key cutting machine comprising a holder having means to retain a key and key blank on different levels, a head having spaced jaws adapted to adjustably receive said holder therebetween, one of said jaws having a stop to coact with the key on the holder, and a member movable between the base of the head and said holder for retaining the key against said stop.

5. A key cutting machine comprising a holder having means to retain a key and key blank on different levels, a head having spaced jaws adapted to adjustably receive said holder therebetween, one of said jaws having a stop to coact with the key on the holder, and a wedge-like member between the base of the head and said holder, said base having an inclined surface for said member.

[Claims 6 to 10 not printed in the Gazette.]

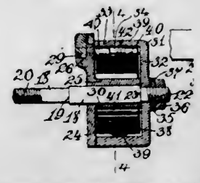
1,172,266. FOOT-WARMING STIRRUP. JOHN LOUIS EDGELL and GEORGE WAYNE COOK, Oceana, W. Va. Filed Feb. 19, 1915. Serial No. 9,363. (Cl. 126—204.)

A stirrup comprising a hollow body forming a tread member, adapted to receive a heating medium and provided with a fixed top member and a movable top member, said top members being provided at their opposing ends with overlapping lugs arranged in line with each other and a stirrup loop member having a bar at its lower side extending through the bores of said lugs and



forming the pintle of pivotal element of the movable top member.

1,172,267. SPRING-HINGE. SAMUEL M. EISNER, Newark, N. J., assignor to Self-Raising Seat Appliance Company, Newark, N. J., a Corporation. Filed July 16, 1914. Serial No. 851,293. (Cl. 16—25.)



1. A hinge comprising a pintle, a plate having a boss thereon and rotatably mounted on the pintle, the pintle having a reduced end forming a shoulder, a barrel consisting of an end plate and a flange, the end plate abutting on the shoulder, a nut on the end of the pintle to hold the barrel in place, means for holding the barrel in adjusted positions, and a coiled spring within the barrel and having its inner and outer ends formed into hooks, the boss of the plate and flange of the barrel having transverse recesses into which the hooked ends of the spring are adapted to be slid.

2. A hinge comprising a pintle, a plate having a boss thereon and rotatably mounted on the pintle, a reduced end on the pintle forming a shoulder, a barrel consisting of an end plate and a flange, the end plate abutting on the shoulder, a nut on the end of the pintle to hold the barrel in place, means for holding the barrel in adjusted positions, a coiled spring within the barrel and having its inner and outer ends formed into hooks, the boss of the plate and the flange of the barrel having transverse recesses into which the hooked ends of the spring are adapted to be slid, and a band embracing the spring to limit the uncoiling of said spring so as not to exceed the inside diameter of the barrel.

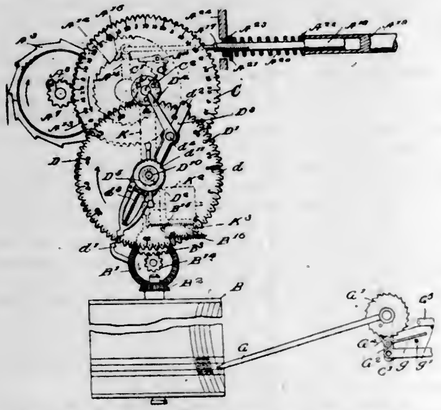
3. A hinge comprising a pintle, a plate having a boss thereon and rotatably mounted on the pintle, a reduced end on the pintle forming a shoulder, a barrel consisting of an end plate and a flange, the end plate abutting on the shoulder, a nut on the end of the pintle to hold the barrel in place, means for holding the barrel in adjusted positions, and a coiled spring within the barrel, the spring having its outer end recessed and bent up into hooks, a band passing around the spring and between the hooks to limit the uncoiling of the spring, the inner end of the spring being hook-shaped, the boss and the flange having transverse slots into which the hooked ends of the spring are adapted to be slid.

4. A hinge comprising a pintle, the pintle having a reduced screw-threaded end forming a shoulder on the pintle, a plate having a boss thereon, said plate rotating on the pintle, a tangentially arranged support on said plate, a barrel comprising an end plate and a flange, the

open end of the barrel being closed by the plate, the boss and the flange having transverse slots therein, a coiled spring with its ends formed so as to enter the slots, a washer on the reduced end of the pintle, the washer and the end plate of the boss having co-acting means for locking them against relative movement, the end plate abutting on the shoulder of the pintle, and a nut on the reduced end of the pintle and adapted to be screwed against the washer whereby the barrel can be fixed in different rotative positions to vary the tension of the spring.

5. An article of manufamture comprising a pintle, a plate having a boss thereon and rotatably mounted on the pintle, the plate being adapted to be held against movement longitudinally along said pintle, the plate having a tangentially arranged support at its top, a barrel consisting of an end plate and a flange, the pintle having a reduced portion over which the end plate fits, the end plate being adapted to bear against the shoulder formed by the reduced end of the pintle and thus being limited in its movement toward the plate, the boss and the flange having transverse slots therein, a nut on the reduced end of the pintle, means between the nut and the end plate of the flange for securing the flange in different adjusted positions, a coiled spring within the barrel, the coiled spring having its inner end bent into a hook to engage the slot of the boss and having its outer end recessed and turned to form double hooks to engage the slot in the flange, and a band encircling said spring and passing between the outer hooks.

1,172,268. LINE-MEASURING MECHANISM FOR COMPOSING-MACHINES. RICHARD CORNELIUS ELLIOTT, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Original application filed Sept. 30, 1908, Serial No. 455,541. Divided and this application filed Jan. 4, 1910. Serial No. 536,313. (Cl. 235—91.)



1. In a registering mechanism such as described the combination of the following elements, to wit; a plurality of individual registering devices, each arranged to register a plurality of different unit values, a differential transmission mechanism common to said registering devices; and a total register coupled with an controlled by said differential transmission mechanism.

2. In a registering mechanism such as described, the combination of the following elements, to wit; a plurality of individual registering devices each representing a different number of units and a multiple thereof; a differential transmission mechanism common to the several registering devices; and a total registering device coupled with said differential transmission mechanism.

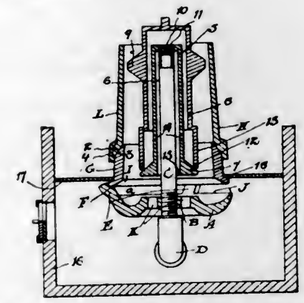
3. In a measuring and registering mechanism for composing machines the combination of the following elements, to wit; a plurality of individual registering devices each including a ratchet and an escapement device equipped to admeasure different degrees of movement, a differential transmission mechanism coupled with and controlled by said registering devices; and key controlled means for actuating the several escapement devices separately and in multiple and to either degree.

4. In a measuring and registering mechanism for composing machines the combination of the following elements, to wit; a plurality of individual registering devices each including a ratchet, and an escapement device, the latter provided with a plurality of admeasuring devices for effecting different degrees of movement of its associated ratchet and movable in different directions to bring said admeasuring means into play; and a differential transmission mechanism controlled by said individual registering devices to effect a degree of motion proportional to that of the individual registering devices when actuated separately or in multiple.

5. In a measuring and registering mechanism for composing machines, the combination of the following elements, to wit; a differential transmission mechanism provided with a plurality of pinions and movable supports therefor; a plurality of individual registers each provided with an escapement and a ratchet; and a yieldable connection between each of said ratchets and movable support for one of said pinions through which the motion of each individual registering device is transmitted to its pinion and thence to the transmission mechanism.

[Claims 6 to 15 not printed in the Gazette.]

1,172,269. OIL AND GAS BURNER. SAMUEL GRUNDY FORST, Toronto, Ontario, Canada. Filed June 22, 1915. Serial No. 35,522. (Cl. 158—61.)



1. A gas-generating oil-burner comprising a feed-pipe provided with a hole in its upper end; a hole-provided sleeve supported by said feed-pipe and surrounding the same, the internal bore of said sleeve being greater than the external diameter of said pipe; a conical base for said sleeve; a generator surrounding said sleeve and resting upon said conical base, and provided with one or more passage-ways facing said conical base to permit the escape of gas; the diameter of the bore of said generator being greater than the external diameter of said sleeve; a priming basin carried by the lower end of said feed pipe; a flue surrounding said generator, and means whereby said flue is removably supported above said priming basin to provide air openings; a portion of the gas formed in said generator passing through the holes formed in said sleeve into said sleeve, for the purpose specified.

2. A gas-generating oil-burner comprising a feed-pipe provided with a hole in its upper end; a hole-provided sleeve supported by said feed-pipe and surrounding the same, the internal bore of said sleeve being greater than the external diameter of said pipe to form an annular chamber within said sleeve; a conical base for said sleeve; a generator surrounding said sleeve and resting upon said conical base, and provided with one or more passageways facing said conical base to permit the escape of gas; the diameter of the bore of said generator

being greater than the external diameter of said sleeve, and the bore of the lower portion of said generator being greater than the bore of the rest of the generator to form an expansion chamber into which open the holes formed in said sleeve so that a portion of the gas in said expansion chamber may escape into said annular chamber through said holes and out of said annular chamber at the lower end thereof; a priming basin carried by the lower end of said feed pipe; a flue surrounding said generator, and means whereby said flue is removably supported above said priming basin to provide air openings.

3. A gas-generating oil-burner comprising a feed-pipe provided with a hole in its upper end; a hole-provided sleeve supported by said feed pipe and surrounding the same, the internal bore of said sleeve being greater than the external diameter of said pipe to form an annular chamber within said sleeve; a conical base for said sleeve; a generator surrounding said sleeve, and resting upon said conical base, and provided with one or more passageways facing said conical base to permit the escape of gas; the diameter of the bore of said generator being greater than the external diameter of said sleeve, and the bore of the lower portion of said generator being greater than the bore of the rest of the generator to form an expansion chamber into which opens the holes formed in said sleeve so that a portion of the gas in said expansion chamber may escape into said annular chamber through said holes and out of said annular chamber at the lower end thereof; a priming basin carried by the lower end of said feed pipe; a flue surrounding said generator, composed of a base member, and an upper member removably supported upon said base member and means whereby said flue is removably supported above said priming basin to provide air openings.

4. A gas-generating oil-burner comprising a feed-pipe provided with a hole in its upper end; a hole provided sleeve supported by said feed pipe and surrounding the same, the internal bore of said sleeve being greater than the external diameter of said pipe to form an annular chamber within said sleeve; a conical base for said sleeve; a generator surrounding said sleeve and resting upon said conical base, and provided with one or more passageways facing said conical base to permit the escape of gas; the diameter of the bore of said generator being greater than the external diameter of said sleeve, and the bore of the lower portion of said generator being greater than the bore of the rest of the generator to form an expansion chamber into which open the holes formed in said sleeve so that a portion of the gas in said expansion chamber may escape into said annular chamber through said holes and out of said annular chamber at the lower end thereof; a priming basin carried by the lower end of said feed pipe; a flue surrounding said generator, composed of a base member, and an upper member removably supported upon said base member, and an exteriorly-placed annular flange carried by said base member.

5. In a gas-generating oil-burner, the combination with a feed pipe; gas-generating means housing said feed pipe and supported thereby, and a priming basin screwed onto the lower end of said feed pipe, of a flue surrounding said gas generating means comprising a tubular base member having a chamfered upper-outer corner, and an upper tubular member having an inner chamfered corner at its lower end which rests against the chamfered corner of said base; a plurality of lugs carried by said upper member and overlapping said base member, and means carried by said priming basin for removably supporting said flue above the top edge of said priming basin to provide air passages.

[Claim 6 not printed in the Gazette.]

1,172,270. PROCESS OF DESICCATING A FERMENTED CEREAL PRODUCT. MOZES FRANZIE, The Hague, Netherlands. Filed Apr. 8, 1915. Serial No. 20,101. (Cl. 99—5.)

1. The process of making a dried and imperishable food product from a cereal, which consists in subjecting the treated cereal to the fermenting action of a fruit ferment, and then drying the product at a moderate rate.

2. The process of making a dried and imperishable food product from a cereal, which consists in subjecting the treated cereal to the fermenting action of banana extract, and then drying the product at a moderate rate.

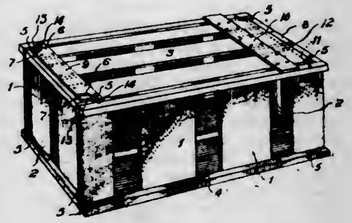
3. The process of making a dried and imperishable food product from a cereal, which consists in subjecting the treated cereal to the fermenting action of a fruit ferment, and then drying the product in a vacuum at a temperature less than 40° C.

4. The process of making a dried and imperishable food product from a cereal, which consists in boiling the cereal, subjecting the treated cereal to the fermenting action of a fruit ferment, and then drying the product at a moderate rate.

5. The process of making a dried and imperishable food product from a cereal, which consists in boiling the cereal, subjecting the boiled cereal to the fermenting action of a fruit ferment, drying the product at a moderate rate, then heating the dried product to a temperature between 75° C. and 80° C., and then slowly drying the heated product at a lower temperature.

[Claims 6 to 8 not printed in the Gazette.]

1,172,271. FOLDING CRATE. RUSSELL B. FULLER, Evansville, Ind. Filed June 14, 1915. Serial No. 34,043. (Cl. 217—48.)



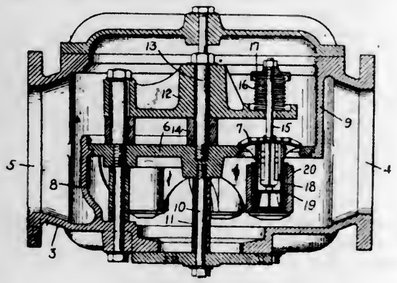
In a folding crate, sides and ends, hinge members having legs pivotally engaged with the sides and ends and provided with lateral bowed connecting portions for said legs, a bottom held by the lateral bowed portions of the hinge members at the bottom of the crate, a top having cross-pieces adapted to rest on the sides of the crate, said top at one end being engaged by the lateral bowed portions of the hinge members at that end of the crate, the other end of the top being provided with cut-away parts at its corners to receive the bowed portions of the hinge members at that end of the crate and also having an extension adapted to rest upon the end of the crate, and a loose, bodily removable locking bar adapted to rest upon the extension and to have its ends engaged with the bowed portions of the hinge members at that end of the crate.

1,172,272. VALVE. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership. Filed Nov. 4, 1913. Serial No. 799,081. (Cl. 137—32.)

1. A multi-port valve comprising a casing, a horizontally disposed valve-deck mounted therein having a plurality of openings therein, a fixed pressure plate mounted above and parallel to the deck, a plurality of movable valve-members each adapted to rest by gravity upon the valve-deck in position to close one of the openings therein, a plurality of springs mounted above the pressure plate and bearing thereon, and a connection from each spring to a movable valve-member, each of said springs acting through its said connection in a direction to lift the corresponding valve-member from its seat, substantially as set forth.

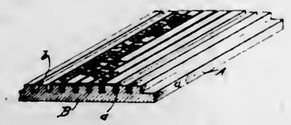
2. A multi-port valve comprising a casing, a horizontally disposed valve-deck mounted therein having a plu-

rality of openings therein, a fixed horizontal pressure plate mounted above and parallel to the deck, a plurality of movable valve-members each adapted to rest by gravity upon the valve-deck in position to close one of the openings therein, a stem on each valve-member projecting upwardly therefrom through an opening in the fixed pressure plate, a plurality of springs each coiled about a stem, connected at its upper end to the stem and bearing at its lower end upon the pressure plate, each spring being under compression to lift the corresponding valve-member from its seat but under insufficient compression to effect such lifting when unaided, and a dash-pot connected to each valve-member, below the valve-deck, substantially as set forth.



3. A multi-port valve comprising a casing, a horizontally disposed valve-deck mounted therein having a plurality of openings therein, a pressure plate mounted above the deck, a plurality of movable valve-members each adapted to rest by gravity upon the valve-deck in position to close one of the openings therein, a stem on each valve-member projecting upwardly therefrom through an opening in the pressure plate, the pressure plate having cylindrical flanges thereon one surrounding each opening, to form cups, and each valve stem having a cap secured to its upper end, and a plurality of springs each coiled about a stem, and positioned between the cap thereof and the adjacent cup formed on the pressure plate, said springs being under compression to lift their valve-members from their seats, but under insufficient compression to effect such lifting when unaided, substantially as set forth.

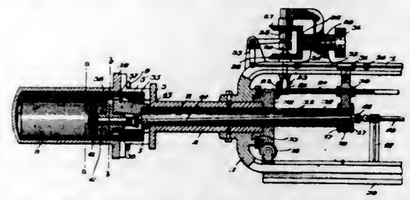
1,172,273. PRINTING-SURFACE. HARRY C. GAMMETER, Bratenahl, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 19, 1913. Serial No. 774,563. (Cl. 101—169.)



1. A unitary changeable printing surface consisting of a body having a series of parallel grooves and thin channel-shaped strips each formed with a line of characters thereon extending lengthwise of the strip, the flanges of such strips being resilient and the strips being mounted on the ribs between the grooves and held in place by the pressure of the flanges on the sides of the ribs.

2. A printing surface consisting of a body having a series of parallel grooves and thin channel-shaped strips of metal each embossed from the inside outwardly with a line of characters extending lengthwise of the strip, the flanges of adjacent strips occupying the same grooves in the body and the strips being held in place by the friction of the flanges on the sides of the ribs between the grooves.

1,172,274. GRINDING-MACHINE. CHARLES L. GARGAN, Rochester, N. Y. Filed Aug. 3, 1914. Serial No. 854,740. (Cl. 51—4.)



1. In combination with a suitable support, a rotary hollow shaft mounted for axial movement on said support, a rotary grinder having its axis of rotation parallel with the axis of rotation of the shaft and adjustable in parallel lines toward and from the axis of rotation of the hollow shaft, means extending through said shaft for rotating the grinder with the rotation of the hollow shaft, and independently adjustable work supporting devices secured to the support about the hollow shaft.

2. In combination with a main frame having a rigid sleeve projecting therefrom and formed with a flange at its free end, means for securing the work piece to said flange, a rotary hollow shaft movable axially within said sleeve, and adjustable bearing on said shaft, a shaft turning in said bearing, a tool on the shaft, and means extending through the hollow shaft and connected to the tool shaft for rotating said tool.

3. In combination with an open ended bearing sleeve, work securing devices attached to one end of the sleeve, a hollow shaft turning in said sleeve and axially movable therein, a rotary grinder mounted on said hollow shaft and adjustable toward and from the axis of rotation of said hollow shaft, and means extending through the hollow shaft for driving the grinder.

4. In combination with an open-ended bearing sleeve having a flange at one end, Z-shaped work supports adjustably secured to said flange, and a rotary tool carrying shaft mounted to turn in said sleeve and axially movable therein, and centering means removably secured to said shaft.

5. In combination with a main frame having a rigid open-ended sleeve projecting therefrom and formed with a flange at its free end, means for securing the work to said flange, a shaft mounted to turn in said sleeve and also to move axially therein, said shaft projecting from opposite ends of the sleeve, a tool carried by one end of said shaft, a gear wheel mounted on the main frame at the other end of said sleeve and having the shaft connected thereto to move therewith but to permit the shaft to move axially with relation to said gear wheel, means for moving the shaft axially, and means for turning the gear wheel to turn the shaft.

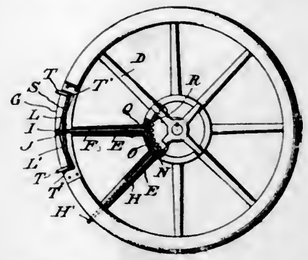
[Claims 6 to 14 not printed in the Gazette.]

1,172,275. ATTACHMENT FOR STEERING-GEARS. WILLIAM A. GILDAY, Philadelphia, Pa. Filed Mar. 10, 1915. Serial No. 13,462. (Cl. 74—33.)

1. In combination with a steering wheel, a tubular shell and segment wheel fastened thereto, a pawl mounted upon the wheel for engagement with the teeth of the segment, a lever mounted upon the wheel and pivoted to said pawl, and push buttons connected to the pawl and extending through apertures in the circumference of the wheel.

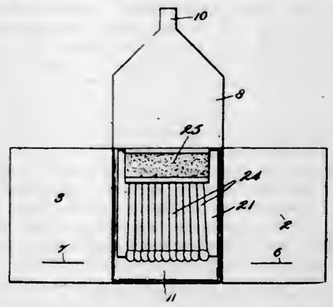
2. In combination with a steeering wheel, a tubular shell, a toothed segment fastened thereto, said wheel having spokes with longitudinal apertures leading therethrough and through the rim of the wheel, a lever pivoted to the wheel, rods pivoted one to each end of the lever, the end of one rod serving as a pawl, the ends of the rods extending into the rim of the wheel.

3. In combination with a steering wheel and steering shaft to which the same is fastened, a toothed segment, said wheel having spokes which are longitudinally apertured, a lever pivoted upon the wheel, rods pivotally connected to said lever and passing through said apertures, one end of one rod serving as a pawl for engagement with the teeth of the segment wheel, levers carried by the rim of the wheel and pivoted to one of said rods, push buttons pivotally connected to the levers upon the rim, and a spring for holding the pawl in engagement with the teeth of the rack bar.



4. In combination with a steering wheel and steering shaft to which the same is fastened, a toothed segment fixed to the wheel, said wheel having spokes which are longitudinally apertured, the rim of the wheel recessed, a plate secured to the rim, spring-pressed levers pivotally mounted upon the plate in said recess, rods passing through apertures in the spokes and to one of which rods the inner ends of said levers are pivoted, a lever pivoted upon the wheel near the inner ends of the rods, one of the latter serving as a pawl for engagement with the teeth of said segment, and push buttons connected to said levers and projecting beyond the rim of the wheel.

1,172,276. COMBINED WIND-SHIELD AND MATCH-BOX. TOURO GLUCKSMANN, New Orleans, La. Filed Feb. 5, 1915. Serial No. 6,284. (Cl. 206—36.)

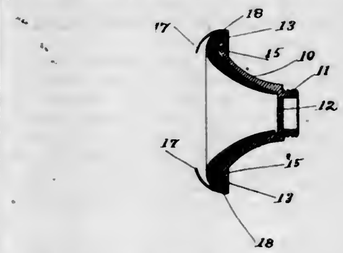


1. In a combined match holder and wind shield, the combination of a body portion; a pair of side members provided with slits integral with said body portion and divided therefrom by weakened lines; a third member provided with a tongue adapted to enter both of said slits and also integral with said body portion but divided therefrom by a weakened line; each of said members being adapted to fold at right angles to said body portion to form a wind shield or pocket closed on three sides; and means to secure matches and a striking surface in the wind shield pocket thus formed, substantially as described.

2. In a combined match holder and wind shield, the combination of a body portion; a pair of side members provided with slits integral with said body portion and divided therefrom by weakened lines; a third member provided with a tongue adapted to enter both of said slits and also integral with said body portion but divided therefrom by a weakened line; each of said members being adapted to fold at right angles to said body portion to form a wind shield or pocket closed on three sides; a fourth member integral with said body portion but divided therefrom by a weakened line; a pair of additional members integral with said fourth member, each divided from said fourth member by a weakened line, and one of said additional members provided with a tongue and the other with a slit whereby a pocket may be formed from said additional members when folded on said last named weakened lines; and means to secure matches and a striking surface in the wind shield pocket thus formed, substantially as described.

3. In a combined match holder and wind shield the combination of a body member; a mirror attached to said member; a pair of folding side members provided with slits integral with said body member; a third or cover member provided with a tongue adapted to enter said slits when said side members are folded to bring said slits into register; a fourth folding member provided with a slit and integral with said body member; a match package having a folding part thrust through said last named slit; a pair of additional folding members integral with said fourth member one provided with a slit and the other with a tongue adapted to be folded onto said fourth member to form a pocket; and a memorandum sheet carried by one of said additional folding members, substantially as described.

1,172,277. SANITARY MOUTHPIECE-PROTECTOR FOR TELEPHONES. EDWARD R. GORMAN, West Haven, Conn. Filed Jan. 5, 1915. Serial No. 711. Cl. 179—185.)



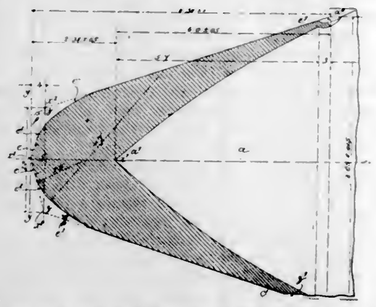
1. A sanitary mouth piece protector for telephones comprising in combination a base plate receivable over the edge of the mouth piece and provided with a series of flaps overlapping the orifice through the plate adapted by buckling under to prevent the withdrawal of the plate over and from the edge of the mouth piece, and a series of layers of fabric fitting within each other and the mouth piece having their outer edges secured to the base plate and singly detachable therefrom.

2. A sanitary mouth piece protector for telephones comprising in combination a base plate receivable over the edge of the mouth piece and provided with a series of flaps overlapping the orifice through the plate adapted by buckling under to prevent the withdrawal of the plate over and from the edge of the mouth piece, and a series of layers of fabric fitting within each other and the mouth piece having their outer edges secured to the base plate and singly detachable therefrom and provided with holding flaps by which they may be plucked singly from the plate and the series, substantially as and for the purpose specified.

1,172,278. ARMOR-PIERCING PROJECTILE AND CAP THEREFOR. ROBERT ABBOTT HADFIELD, Sheffield, England. Filed Nov. 8, 1907, Serial No. 401,362. Renewed June 20, 1914. Serial No. 846,383. (Cl. 102—28.)

1. An armor piercing shell provided with a steel cap, said cap having an obtuse conical point, an acute conical rear portion and an intermediate curved surface merging into the end portion and the rear portion, said

curved surface being of two radii of different lengths, the front portion of said curved surface being of a shorter radius and the rear portion of a longer.



2. An armor piercing projectile provided with a metal cap comprising a conical front end portion having an angle of conicity of about 150 degrees, a conical rear portion having an angle of conicity of about 36 degrees, and an intermediate portion having its surfaces merging into those of the front and rear portions and made of two different radii in the proportion of about 1.5 inches and 4.7 inches for a twelve inch projectile, substantially as described.

3. A cap for an armor piercing shell, having an obtuse conical point, the sides of the conical point being substantially at an angle of 15° to a plane transverse to the end of the point, said cap having an acute conical rear portion and a curved portion intermediate the point and the rear portion.

4. An armor piercing projectile made of high tenacity steel and having an ogival head the surface of which, in longitudinal section, is in the form of a segment of an ellipse as set forth, and a metal cap attached to said head and having an obtuse angled conical front end portion, an acute angled conical rear end portion and an intermediate portion having a curved surface in longitudinal section, the side walls of the cap extending back adjacent to a transverse plane through the front end of the chamber.

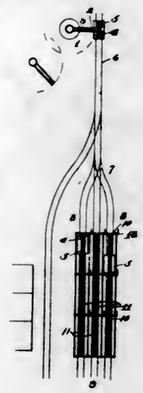
5. An armor piercing shell fitted with a small light cap and having a charging chamber not substantially less in length than three-quarters the length of the shell and being substantially cylindrical throughout the greater portion of its length, the various parts of the shell and cap being made in about the following proportions as compared to a twelve inch shell, namely the axial length of the shell head from the chamber to the tip about seven and three-eighths inches, the thickness of the shell wall at the shoulder about three and one-half inches, and the thickness of the wall tapering therefrom to a uniform thickness of about one and six-tenths inches; the axial length of the cap being about two and three-eighths inches and tapering therefrom to its end about the shoulder.

1,172,279. APPARATUS FOR APPLYING AIR-BLAST TO INGOTS. ROBERT ABBOTT HADFIELD, Westminster, England. Filed June 13, 1912. Serial No. 703,378. (Cl. 22—216.)

1. An apparatus for supplying air blasts for producing heat to feed ingots comprising suitable supports, air conductors carried on said supports, said conductors being positioned to cause impinging of the air on the ingots during their progress to the stripper, and means for moving the ingots along under the air supply.

2. An apparatus for supplying air blasts for producing heat to feed ingots comprising suitable supports, air conductors carried by said supports, said conductors having outlets arranged in a line to permit impinging of the blasts on the ingots during transit thereunder, and means for moving the ingots along under the air blast.

3. An apparatus for causing air jets to impinge on ingots immediately after casting, comprising a track from the casting pit to the strippers for bogies carrying the ingot molds, a series of vertical pipes, cross-pipes on the vertical pipes, a series of parallel, horizontal blast pipes, connected to the cross pipes and arranged over the track at such a height that the bogies and ingot molds will pass under them, said blast pipes being perforated on their under surfaces, and air valves in the vertical pipes.

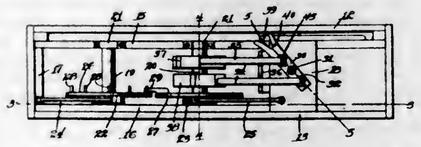


4. An apparatus for causing air jets to impinge on the upper ends of ingots in the molds immediately after casting to eliminate pipes, comprising a series of tracks from the casting pipe to the strippers, bogies or trucks on said tracks for carrying the ingot molds and the ingots therein, a series of vertical air pipes arranged adjacent the tracks and connected to the source of air supply, a series of lateral air pipes arranged on the upper ends of the vertical pipes and across the tracks, air valves in the vertical pipes and a series of parallel, horizontal blast pipes connected to the cross-pipes, arranged above each track and extending longitudinally of the tracks, said blast pipes being perforated on their lower surfaces and being arranged at such a height that the ingot molds on the bogies will pass beneath them but the upper ends of the ingots will be adjacent thereto said air pipes being connected in sections, that the air may be cut off from each section separately, substantially as described and shown.

5. An apparatus for supplying air blast to impinge on ingots immediately after casting, comprising longitudinally extending air conductors so arranged as to cause the air to impinge on the ingots while the latter are being moved adjacent the conductors.

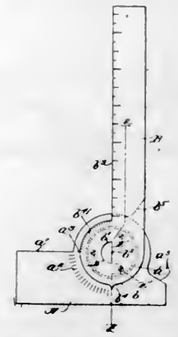
[Claims 6 to 15 not printed in the Gazette.]

1,172,280. PAWL-AND-RATCHET MECHANISM. WALTER L. HADLOCK, Wray, Colo. Filed Oct. 18, 1913. Serial No. 796,036. (Cl. 74—16.)



A device of the character described comprising a housing, a shaft rotatably mounted in said housing, ratchet wheels rigidly mounted upon said shaft and having their teeth positioned in staggered relation, a rocker bar pivotally mounted in said housing, hinge brackets pivotally connected with said rocker bar, fingers pivotally connected with said hinge brackets and having their free ends engaging said ratchet wheels, and a guiding strip mounted in said housing and provided with cutouts through which said fingers pass to guide the longitudinal movement of said fingers when said rocker bar is in motion.

1,172,281. PROTRACTOR. EJGIL J. S. HALVORSEN, Woburn, Mass. Filed July 9, 1915. Serial No. 38,974. (Cl. 33—118.)



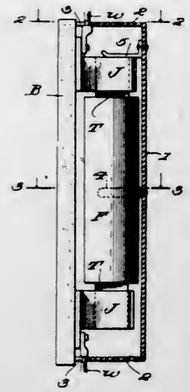
1. A protractor comprising a base member formed with a circular hole therethrough and with a straight edge alined with the center of said hole; a movable member extending across said hole at one side of the base member; a retaining and centering member for the movable member formed with an annular beveled edge fitted into said hole at the opposite side of said base member, and means securing said retaining and centering member to said movable member.

2. A protractor comprising a base member formed with a circular hole therethrough and with a straight edge alined with the center of said hole; a movable member extending across said hole at one side of the base member and made with a straight edge alined with the center of said hole; a disk formed with a beveled edge fitted into said hole at the opposite side of said base member; means securing said disk to said movable member; markings upon one of said members indicating degrees and an index on the other member coöperating with said markings.

3. A protractor comprising a base member formed with a circular hole therethrough and with a straight edge alined with the center of said hole; a movable member extending across said hole at one side of the base member and made with a straight edge alined with the center of said hole; a disk formed with a beveled edge fitted into said hole at the opposite side of said base member; means securing said disk and movable member together so as to clamp the base member between them; markings upon one of said members indicating angular degrees; an index on the other member coöperating with said markings, said base member and said movable member each being made with a sight hole having a straight edge alined with the center of said hole and marked to indicate said center.

4. A protractor comprising two relatively movable members, one of said members being formed with a circular hole therethrough and with a straight edge alined with the center of said hole and the other member extending across said hole at one side of the first mentioned member and made with a straight edge alined with the center of said hole; a disk having a beveled periphery fitted into said hole at the opposite side of said first mentioned member; means securing said disk and the second member together so as to frictionally hold the first mentioned member between them; markings upon one of said members indicating degrees; an index on the other member coöperating with said markings, and means to indicate the location of the center of said hole.

1,172,282. PROTECTOR FOR FUSIBLE CONDUCTORS. WALTER HANDLEY and OSCAR M. NICKERSON, Madison, Me. Filed Aug. 6, 1914. Serial No. 855,434. (Cl. 175—273.)



1. A fuse protector comprising a casing closed at its opposite ends and open at one of its sides, the portions of said ends at the open side of said casing being notched for the reception of the current conducting wires of a fuse block, a finger projecting inwardly from said casing near one end and adapted to contact with one of the jacks of said block and a pair of spring fingers projecting inwardly from said casing and adapted to yieldingly embrace a fuse.

2. A protector for application to an upright fuse having its opposite ends supported by a pair of jacks, said protector comprising a casing closed at its opposite ends and open at one side, said casing being adapted to form a covering for said fuse and said jacks, a finger projecting inwardly from said casing near its upper end and designed to rest upon the uppermost of said jacks and a U-shaped spring clip secured to said casing below said finger and adapted to embrace said fuse.

3. A fuse protector comprising an elongated casing closed at its opposite ends and open on one side, said casing being substantially semi-cylindrical, the end walls thereof being provided with notches for the reception of current conducting wires of a fuse block, and a U-shaped fuse embracing spring housed transversely in said casing and secured thereto at its bend, the two arms of said spring being bent to conform with the bend in said casing, the free ends of said arms turning inwardly from said casing and then deflecting outwardly and disposed at the open side of the casing to facilitate the engagement of the spring with a fuse.

4. A fuse protector comprising a casing open on one side, a resilient clip secured in said casing and adapted to engage a fuse, and a finger secured in said casing, said finger and said clip forming a means respectively for supporting and holding said casing in place on the fuse.

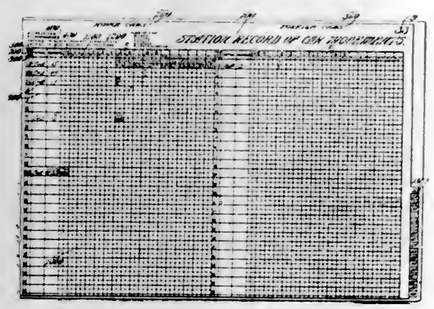
1,172,283. ENVELOP-SEALING DEVICE. CHARLES HANES, Stirling, Cal. Filed Nov. 6, 1914. Serial No. 870,658. (Cl. 229—78.)



The combination with an envelop having top, bottom and side flaps, of a sealing means therefor comprising a primary staple, said primary staple having an elongated body portion, angularly extending portions at the ends of said portion of said staple, tines running from said angularly extending portions, said tines inserted

through said side flaps and said angularly extending portions engaging said side flaps and retaining said body portion of said retaining member in spaced relation thereto, a retaining plate inserted between said side and bottom flaps, said tines of said primary staple member passing through said plate and through said bottom flap and bent so as to prevent the withdrawal of the same, and a second staple member having insertible tines passing through said upper flap and said lower flap and said retaining plate and in engagement with said primary inserted staple, whereby the same are bent to prevent their withdrawal.

1,172,284. CAR-RECORD BOOK. ALPHONSE S. HART, St. Louis, Mo., assignor to Con. P. Curran Printing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 22, 1915. Serial No. 29,826. (Cl. 11—7.)



1. A car record book, comprising pages provided with numbers that determine the particular page of the book on which the movement of a car of a certain number is recorded, a plurality of parallel vertical columns on each page, ten of which are provided with headings consisting of the numerals 0 to 9 inclusive and spaces on the page arranged at one side of said group of vertical columns in which information can be placed in horizontal alinement with the entries in said vertical columns.

2. A car record book, comprising pages provided with numbers that determine the particular page of the book on which the movement of a car of a certain number is recorded, a plurality of vertical columns on each page, ten of which are provided with headings consisting of the numerals 0 to 9 inclusive and a separate column on each page arranged parallel to and at one side of said group of vertical columns for receiving one or more digits of a car number.

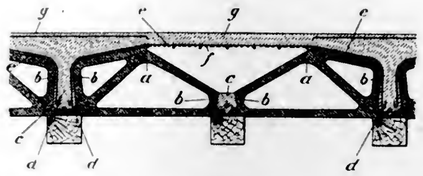
3. A car record book, comprising pages provided with numbers that determine the particular page of the book on which the movement of a car of a certain number is recorded, a plurality of vertical columns on each page, some of which are provided with headings consisting of the numerals 0 to 9, and independent columns arranged at the left of said group of vertical columns and subdivided into spaces by means of horizontal ruling, thereby enabling all information relating to a car of a certain number to be arranged horizontally across the page.

4. A car record book, comprising pages provided with numbers that determine the particular page of a book on which the movement of a car of a certain number is recorded, entry spaces extending transversely across each page and arranged in such a manner that a plurality of said spaces will be in vertical alinement, headings for said vertically alined spaces, and a column on each page that is adapted to receive information that distinguishes one first entry from another first entry arranged in vertical alinement with same.

5. A car record book, comprising pages provided with numbers that determine the particular page of the book on which the entries relating to a car of a certain number are recorded, a plurality of vertical columns on each page, ten of which are provided with headings consisting of the numerals 0 to 9, and vertical rulings that divide each of said columns into two portions or sections that are adapted to receive information relating to cars that are received and cars that are forwarded.

[Claims 6 to 13 not printed in the Gazette.]

1,172,285. CONSTRUCTION OF FERROCONCRETE FLOORS HAVING A LEVEL UNDERSURFACE. HERMANN HAUSS, Munich, Germany. Filed Jan. 18, 1913. Serial No. 742,802. (Cl. 72—66.)



1. A concrete structure comprising bricks, constituting molds for main and auxiliary parallel beams arranged in alternation, said bricks being formed with plane surfaces and arranged to provide a continuous plane inner surface for the structure, a reinforcement stretched between the main beams and materially spaced from the auxiliary beams, and a masonry slab supported by the reinforcement, spaced from and independent of the auxiliary beams, and integrally connecting the main beams.

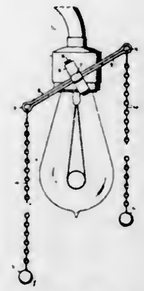
2. A concrete structure comprising a plurality of arch supporting bricks arranged in pairs in each arch and having sloping surfaces to provide a relatively large central cavity, a reinforcement bridging the cavity, and a masonry structure having spaced masonry beams between bricks of adjacent pairs connected by arches embodying said reinforcement, and masonry key beams between the bricks of the pairs independent of and spaced from the arches.

3. A floor comprising a series of bricks suitably supported and arranged in pairs, the bricks of each pair having oppositely arranged inclined upper surfaces to form a cavity between them, and plane bottom surfaces to form a plane horizontal ceiling surface and the bricks of adjacent pairs being spaced apart to form a cavity between them, concrete above the pairs of bricks and between bricks of adjacent pairs to constitute main beams and connecting arches, and concrete between the bricks of the pairs spaced from the connecting arches above the pairs of bricks constituting independent key beams.

4. A floor comprising a series of bricks suitably supported and arranged in pairs, the bricks of each pair having oppositely arranged and inclined upper surfaces to form a cavity between them, and plane bottom surfaces to form a plane horizontal ceiling surface and the bricks of adjacent pairs being spaced apart to form a pocket between them, concrete above the pairs of bricks and between bricks of adjacent pairs to constitute main beams and connecting arches, and concrete between the bricks of the pairs constituting independent key beams; and reinforcing means bridging the aforesaid cavity in the concrete above the pairs of bricks and anchored in the main concrete beams.

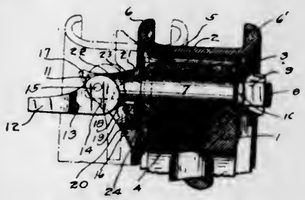
5. A floor, comprising a series of hollow bricks suitably supported and arranged in pairs, with the bricks of adjacent pairs spaced apart, the bricks of each pair having oppositely arranged inclined upper faces to form a cavity between them, and having downwardly inclined end surfaces, whereby to form a dovetail cavity between the bricks of adjacent pairs, concrete above the pairs of bricks and between the bricks of adjacent pairs, reinforcing rods bridging the cavity between the bricks of a pair and extending down the ends of the same and anchored in the concrete between the ends of adjacent pairs of bricks, and wire netting secured to the reinforcing rods and sustaining the concrete bridging the cavity between the pairs of bricks.

1,172,286. KEY-OPERATING ATTACHMENT FOR ELECTRIC-LIGHT SOCKETS. EDWARD G. HAYNE, Ottawa, Ill. Filed June 10, 1915. Serial No. 33,308. (Cl. 240—123.)



An attachment for socket keys comprising a substantially U-shaped clip having one of its walls of greater extent than the other, a pair of tongues projecting from and integral with the longer side wall and adapted to be bent around portions of the key, a bracing tongue on the opposite side wall projecting between the bent ends of the other tongues, a pull bar secured to said clip said bar being formed from a section of wire bent upon itself to form paralleling sections, the wire at the integral ends of the bar being formed into eyes, the ends of the wire terminating at the longitudinal center of said bar, said bar being attached at its longitudinal center to the clip by solder, and means engaging the eyes of the bar to receive a pull to rotate said clip and key.

1,172,287. LOCKING DEVICE FOR DEMOUNTABLE AUTOMOBILE-WHEEL RIMS AND THE LIKE. FRANK D. HILLER, Jr., Webster Groves, Mo., assignor to Hill-Ko Rim Lock Company, St. Louis, Mo., a Corporation of Missouri. Filed June 17, 1915. Serial No. 34,664. (Cl. 152—21.)



1. A locking device for demountable wheel-rims including a bolt adapted to transversely engage the felly of the wheel, a lever having a pair of spaced cam-extensions fitting eccentrically upon opposite sides of said bolt, said lever being pivotally fastened at its said extensions permanently to said bolt, and a rim-engaging member loosely fitting on said bolt intermediate of said lever and the felly of the wheel, said lever being adapted, when swung to rim-locking position, to camwise engage at its said extensions with said member to releasably secure the same in locking engagement with the rim.

2. A locking device for demountable wheel-rims including a bolt adapted to transversely engage the felly of the wheel, a lever having a pair of spaced cam-extensions, said lever being pivotally fastened to swing relatively to the bolt, and a rim-engaging member loosely fitting on said bolt intermediate of said lever and the felly of the wheel, said lever being adapted, when swung to rim-locking position, to camwise engage at its said extensions with said member on opposite sides of its said aperture to releasably secure said member in locking engagement with the rim, and to further engage at its said extensions with the inner faces of the walls of the aperture of said member, when said member is in rim-unlocking position, to lock said member from movement on the bolt relatively to said lever.

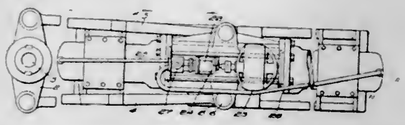
3. A locking device for demountable wheel-rims including a bolt adapted to transversely engage the felly of the wheel, a lever having a pair of spaced cam-extensions, said lever being pivotally fastened to swing relatively to the bolt, and an apertured rim-engaging member loosely fitting on said bolt intermediate of said lever and the felly of the wheel, said lever being adapted, when swung to rim-locking position, to camwise engage at its said extensions with said member on opposite sides of its said aperture to releasably secure said member in locking engagement with the rim, and to further engage at its said extensions with the inner faces of the walls of the aperture of said member, when said member is in rim-unlocking position, to lock said member from movement on the bolt relatively to said lever.

4. A locking device for demountable wheel-rims including a bolt adapted to transversely engage the felly of the wheel, an apertured rim-engaging member loosely fitting on said bolt, and a lever having a pair of spaced cam-extensions pivotally fastened to swing relatively to the bolt and adapted to camwise engage with said member, when swung to rim-locking position, to releasably lock said member in locking engagement with the rim, said lever being further adapted to project at its said extensions into, and frictionally engage with the walls of, the aperture of said member, when said member is in rim-unlocking position, to lock said member from movement on said bolt relatively to said lever.

5. In a locking device for demountable wheel rims, the combination with a bolt adapted to transversely engage the felly of the wheel and a lever having a pair of spaced cam-extensions pivotally fastened to swing relatively to the bolt, of a rim-engaging member loosely fitting on said bolt, said member having an aperture adapted to receive the extensions of said lever, when said member is in rim-unlocking position, to lock said member from movement on the bolt relatively to the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,172,288. FLUID-OPERABLE MECHANISM. REYNOLD JANNEY, New York, N. Y., and HARVEY D. WILLIAMS, Wallingford, Conn., assignors to The Waterbury Tool Company, New Britain, Conn., a Corporation of Connecticut. Filed June 22, 1914. Serial No. 846,619. (Cl. 138—2.)



1. The combination of piston mechanism and cylinder mechanism both mounted for relative reciprocatory movement, an oscillatory member, rods connected with the oscillatory member at opposite sides of its center of motion, one rod being connected with the piston mechanism and the other with the cylinder mechanism, and means for relatively operating the piston and cylinder mechanisms.

2. The combination of piston mechanism and cylinder mechanism both mounted for relative reciprocatory movement, an oscillatory member, rods connected with the oscillatory member at opposite sides of the center of motion, one rod being connected with the piston mechanism and the other with the cylinder mechanism, means for relatively operating the piston and cylinder mechanisms, and means for positively preventing the piston mechanism and cylinder mechanism from rocking.

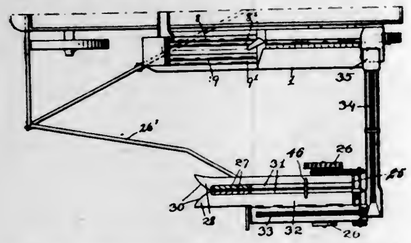
3. The combination of a pair of coaxial cylinders, a connecting device rigidly connecting the cylinders, a piston, the terminals of which are reciprocatory in the said cylinders, an oscillatory member, rods connected with the oscillatory member at opposite sides of its center of motion, one rod being connected with the piston and the other with said connecting device, and means for relatively reciprocating the piston and the cylinders.

4. The combination of piston mechanism and cylinder mechanism, both mounted for relative reciprocatory movement, an oscillatory member, rods connected with the oscillatory member at opposite sides of its center of motion, one rod being connected with the piston mechanism and the other with the cylinder mechanism, and a hydraulic variable pump for relatively operating the piston and cylinder mechanisms.

5. The combination of piston mechanism and cylinder mechanism, an oscillatory member, rods connected with the oscillatory member at opposite sides of the center of motion, one rod being connected with the piston mechanism and the other with the cylinder mechanism, and means for relatively operating the piston and the cylinder mechanisms.

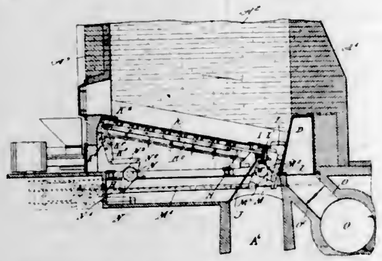
[Claims 6 to 8 not printed in the Gazette.]

1,172,289. CORN-HARVESTER. FRANK A. JOHNSON, Inwood, Iowa. Filed June 11, 1914. Serial No. 844,489. (Cl. 56—113.)



A corn harvester comprising a main supporting frame, longitudinal snapping rollers, a transverse drive shaft having driving connection with said rollers, an inclined feed chute laterally adjacent to said rollers, a conveyer at the lower lateral edge of said chute, a supplemental frame attachable to said first-named frame, snapping rollers in said supplemental frame, a transverse drive shaft upon said supplemental frame having jointed drive connection with said first-named shaft, a feed chute oppositely inclined to said first-named chute and terminating laterally adjacent to said conveyer, and coupling means for securing said supplemental frame to said first-named frame.

1,172,290. FURNACE. WILLIAM J. KENNEY, Chicago, Ill., assignor to Underfeed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed June 13, 1910. Serial No. 566,534. (Cl. 110—69.)



1. In a furnace, a support for a bed of fuel arranged within the furnace, a hollow bridge wall arranged in rear of and spaced apart from the support, means arranged between the bridge wall and said support for discharging clinkers and ashes downwardly from the support, a partition wall at each side of said support adjacent to the bridge wall, a third partition wall at the rear of said support, the partition walls extending downwardly so as to confine the discharging clinkers and ashes to the space directly in rear of the support, metal walls projecting above said support at each side thereof, there being passageways leading from the ends of the hollow bridge wall around the outside of the said metallic walls and the side partition walls and into the space beneath said support, and means for introducing air into the interior of said bridge wall.

2. In a furnace, a support for a bed of fuel extending across the same and dividing it into two compartments comprising an upper combustion chamber and a lower air well, a hollow bridge wall arranged in rear of and separated from said support, a downwardly extending partition at the rear of said support for closing the rear end of the air well and forming with the bridge wall a discharge chute for the reception of clinkers and ashes from said support, and there being passageways leading from the ends of said bridge wall into the air well so as to form an air space including both the interior of the bridge wall and the air well, and means for introducing air into said space.

3. In a furnace, a support for a bed of fuel arranged in the furnace, and separating it into a combustion chamber and an air well, a downwardly extending partition wall at the rear end of said support for closing the rear end of the air well, a hollow open-ended bridge wall in rear of said support and spaced apart from said partition wall, two side walls arranged between the ends of said partition wall and of said bridge wall so as to form a discharge chute for clinkers and ashes in rear of said support, there being passageways connecting the sides of the air well with the ends of said bridge wall so as to form an air space including the air well and the interior of the bridge wall, and means for introducing air into said space.

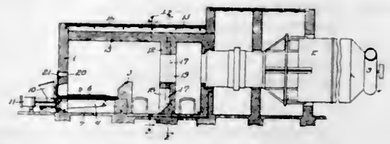
4. In a furnace, a support for a bed of fuel arranged in the furnace and separating it into a combustion chamber and an air well, a downwardly extending partition wall at the rear end of said support for closing the rear end of the air well, a hollow open-ended bridge wall in rear of said support and spaced apart from said partition wall, two side walls arranged between the ends of said partition wall and of said bridge wall so as to form a discharge chute for clinkers and ashes in rear of said support, there being passageways connecting the sides of the air well with the ends of said bridge wall so as to form an air space including the air well and the interior of the bridge wall, means for introducing air into said space, and means arranged within said chute for ejecting clinkers and ashes into the same.

5. A furnace having side walls undercut on the inner sides thereof so as to form longitudinally-extending overhanging portions, a support for a bed of fuel extending between said over-hanging portions so as to divide the furnace into a combustion chamber and an air well, a downwardly extending partition wall at the rear end of the support for closing the rear end of the air well, a hollow bridge wall arranged in rear of said support and spaced apart from said partition wall, means extending between the ends of said partition wall and bridge wall for forming therewith a discharge chute in rear of said support and separated from the air well, the ends of said bridge wall opening into the space beneath said over-hanging portions outside of said chute so as to form an air chamber including the space beneath said support and said over-hanging portions and the space within said bridge wall, and means for introducing air into said air chamber.

[Claims 6 to 10 not printed in the Gazette.]

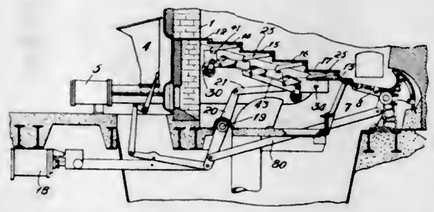
1,172,291. DRYING PLANT. WILLIAM J. KENNEY, Wilmette, Ill., assignor to Underfeed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 2, 1912. Serial No. 681,231. (Cl. 34—18.)

In a drying plant, a furnace having a hollow top wall, the interior of said top wall communicating with atmosphere, a rear wall having an outlet through the center thereof for the passage of the combustion gases, there being a conduit leading down through said rear wall from the interior of the top wall and opening into the furnace beneath said outlet, a bed in said furnace for supporting fuel, means for forcing the air necessary for combustion beneath said bed, a drying chamber connected



with said furnace and adapted to receive the combustion gases flowing through said outlet, and means for producing a draft from the furnace through said chamber.

1,172,292. SELF-CLEANING STOKER. WILLIAM JOHN KENNEY, Wilmette, and HENRY PHILLIP GROHN, Chicago, Ill., assignors to Under-Feed Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 20, 1913. Serial No. 807,828. (Cl. 110—44.)



1. In combination, a furnace, a retort in the furnace, a stepped-panel beside the retort for receiving clinkers and ashes therefrom, each step of said panel comprising a movable section, and means for moving said sections one at a time in the direction of the length of the panel so as to shift the panel bodily in the direction of its length.

2. In combination, a furnace, a retort in the furnace, a stepped-panel beside the retort for receiving clinkers and ashes therefrom, each step of said panel comprising a movable section, and means for moving said sections one at a time in the direction of the length of the panel and for returning the sections together.

3. In combination, a furnace, a retort in the furnace, there being a discharge passage for clinkers and ashes at one side of the furnace, a stepped-panel beside the retort for receiving clinkers and ashes therefrom and carrying them to said discharge passage, each step of said panel comprising a movable section, and means for moving said sections one at a time and while the others remain stationary a limited distance toward said discharge passage.

4. In combination, a furnace, a retort in the furnace, there being a discharge passage for clinkers and ashes at one side of the furnace, a stepped-panel beside the retort for receiving clinkers and ashes therefrom and carrying them to said discharge passage, each step of said panel comprising a movable section, and means for moving said sections one at a time a limited distance toward said discharge passage and leaving each section in the position into which it has been shifted until the succeeding sections have all been shifted.

5. In combination, a furnace, a retort in the furnace, a support beside the retort for receiving clinkers and ashes therefrom, there being a discharge passage for clinkers and ashes between said support and one of the walls of the furnace, said support containing upwardly-projecting members arranged at various distances from said discharge passage and each movable a limited distance from and toward the discharge passage, and means for moving each of said members toward said discharge passage while the other members remain stationary.

[Claims 6 to 9 not printed in the Gazette.]

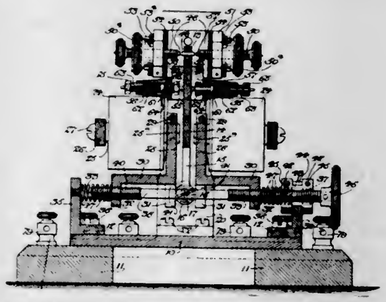
1,172,293. CONTAINER FOR TOILET POWDER. RUDOLF KOHLHEPP, Jersey City, N. J. Filed Mar. 4, 1915. Serial No. 11,981. (Cl. 132—28.)



1. A container for toilet powder comprising a casing having a slotted bottom, a nozzle projecting from the casing, an elastic bag within the casing that communicates with the nozzle, a pair of bag-squeezing members that are secured to the casing and project outwardly through the slotted bottom, and a pair of overlapping eyes carried by said members.

2. A container for toilet powder comprising a casing, a nozzle projecting therefrom, an elastic bag within the casing that communicates with the nozzle, a squeezer engaging the bag, a cap adapted to be projected over the casing, a spring-controlled plunger within the cap, and a puff carried by the plunger, the depth of the puff being less than the length of the nozzle.

1,172,294. RELAY. CHARLES L. KRUM, Chicago, Ill., assignor to Morkrum Company, Chicago, Ill., a Corporation of Maine. Filed June 1, 1908, Serial No. 435,866. Renewed Dec. 1, 1911. Serial No. 663,444. (Cl. 175—327.)



1. A polarized relay comprising a pivoted armature lever, a pair of electro-magnets arranged on opposite sides of said armature lever, means for holding said armature lever in position between the poles of said magnets, and an adjusting mechanism common to both of said magnets for simultaneously moving the separate magnets in opposite directions to and from said armature lever.

2. A polarized relay comprising a pivoted armature lever, a pair of contacts on opposite sides of said lever, a pair of electro-magnets arranged on opposite sides of said armature lever, and a right and left-hand screw mechanism for simultaneously adjusting said magnets to and from said armature lever.

3. A polarized relay comprising a pivoted armature lever, a pair of electro-magnets arranged on opposite sides of said armature lever, means for holding said lever in position between the poles of said magnets, a common screw mechanism engaging the frames of both of said magnets for simultaneously adjusting the same to and from said armature lever, and springs for taking up the lost motion in said screw mechanism.

4. A polarized relay comprising a pivoted armature lever, a pair of contacts on opposite sides of said lever, a pair of electro-magnets arranged on opposite sides of said armature lever, means for holding said armature lever in central position between said contacts and the poles of said magnets, a right and left-hand screw mechanism for simultaneously adjusting said magnets to and from said armature lever, and springs for taking up the lost motion of said screw mechanism.

5. A polarized relay comprising a pivoted armature lever, a pair of electro-magnets arranged on opposite sides of said armature, means for holding said armature lever in central position between the poles of said magnets, said magnets being adjustable to and from said armature lever, a screw having right and left-hand threaded portions respectively engaging the frames of said magnets, and means for holding said screw against longitudinal movement.

[Claims 6 to 30 not printed in the Gazette.]

1,172,295. BURNER FOR LINOTYPE-MACHINES. JOHN H. LA MOY, Glens Falls, N. Y., assignor of one-fourth to John A. Curley and one-fourth to Beecher W. Sprague, Glens Falls, N. Y. Filed Feb. 11, 1915. Serial No. 7,557. (Cl. 158—117.)



1. In a burner for use upon linotype machines, a stationary tube having outlet openings, a rotatable fuel feeding tube having a plurality of rows of serially arranged openings formed therein, positioned within said stationary tube, said rows of openings being of different lengths and adapted for registration with the outlet of said stationary tube at different times for regulating the quantity of fuel flowing therefrom.

2. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations formed in a line longitudinally thereof, a fuel inlet communicating with the open end of said tube, a rotary tube positioned within said first named tube and being provided with a plurality of perforations arranged in rows of different lengths, said perforations formed in said rotary tube being adapted for alining with the perforations formed in said first named tube upon different positions of said rotary tube.

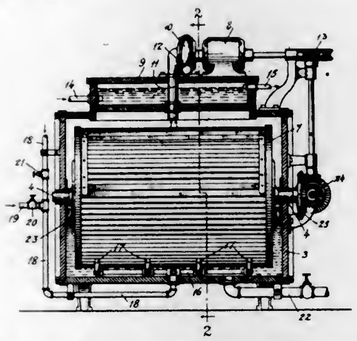
3. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations positioned in a line longitudinally of said tube, a second tube rotatably mounted within said first named tube, a valve casing connected to the open end of said first named tube, said second named tube extending into said valve casing and having communication with a fuel supply, said second named tube being provided with a plurality of serially arranged openings disposed in alining rows of different lengths, each row of openings formed in said rotary tube being adapted for alinement with the perforations formed in said first named tube upon various rotary positions of said rotary tube, and means for manually rotating said rotatable tube within said first named tube.

4. In a burner for use upon linotype machines, a tube having one end closed, said tube being provided with a plurality of serially arranged perforations positioned in a line longitudinally thereof, a second tube rotatably mounted in said first named tube, a valve casing connected to the open end of said first named tube, said second named tube extending into said valve casing and having communication with a fuel supply, said second named tube being provided with a plurality of serially arranged openings disposed in alining rows of different lengths, each row of said openings being adapted for alinement with the perforations formed in said first named tube upon various rotary positions of the rotary tube, means for manually rotating said rotatable tube within the first named tube, a dial carried by the outer end of said rotary tube and having graduations formed thereon corresponding to the number and position of the rows of openings, and graduations formed upon said stationary or first named tube for co-action with said dial-carried graduations.

5. In a burner for use upon linotype machines, a stationary tube having outlet openings, a rotatable fuel feeding tube having a plurality of rows of serially arranged openings formed therein rotatably mounted within said stationary tube, said rows of openings being of different lengths and adapted for registration with the outlet openings of said stationary tube at different times for regulating the quantity of fuel flowing therefrom, a dial carried by the outer end of said rotary tube and having graduations thereon corresponding to the number and position of the rows of openings, and graduations formed upon said stationary tube for co-action with said dial-carried graduations.

[Claim 6 not printed in the Gazette.]

1,172,296. WASHING-MACHINE. JAMES F. LESTER, New York, N. Y., assignor to Richard Merrifield, New York, N. Y. Filed Aug. 7, 1915. Serial No. 44,195. (Cl. 68—18.)



1. A washing machine comprising a casing adapted to contain a washing solution, a perforated cylinder rotatably mounted in said casing, means for rotating said cylinder, means for producing a vacuum in the upper part of said casing above the level of the washing solution, means for admitting fresh air at atmospheric pressure into said casing below the said cylinder, and baffle means below the solution level for causing substantially all of said air to pass into the cylinder through the perforations thereof.

2. A washing machine comprising a casing adapted to contain a washing solution, a perforated cylinder rotatably mounted in said casing, there being a space between the periphery of the cylinder and the inner surface of the casing, means for rotating said cylinder, means for producing a vacuum in the upper part of said casing above the level of the washing solution, means for admitting fresh air at atmospheric pressure into said casing below the said cylinder, and baffle means extending substantially completely across the above mentioned space below the solution level for causing substantially all of said air to pass into the cylinder through the perforations thereof.

3. A washing machine comprising a casing adapted to contain a washing solution, a perforated cylinder rotatably mounted in said casing, there being a space between the periphery of the cylinder and the inner surface of the casing, means for rotating said cylinder, means for producing a vacuum in the upper part of said casing above the level of the washing solution, means for admitting fresh air at atmospheric pressure into said casing below the said cylinder, and baffle means extending substantially completely across the above mentioned space below the solution level for causing substantially all of said air to pass into the cylinder through the perforations thereof, said baffle means comprising a rigid longitudanally extending portion secured to the casing and a flexible portion, one edge of said flexible portion being secured to said rigid portion and the other edge thereof being in substantial contact with the periphery of said drum.

4. A washing machine comprising a casing adapted to contain a washing solution, a perforated cylinder rotatably mounted in said casing, there being a space between the periphery of the cylinder and the inner surface of the casing, means for rotating said cylinder, means for causing fresh air at atmospheric pressure to pass upwardly through the cylinder, and baffle means extending substantially completely across the above mentioned space below the solution level whereby the passage of the air through said space is prevented.

5. A washing machine comprising a casing adapted to contain a washing solution, a perforated cylinder rotatably mounted in sand casing, means for rotating said cylinder, means for producing a vacuum in the upper part of said casing above the level of the washing solution, a condenser for cooling a part of said vacuum producing means whereby the escape of condensable vapors is prevented, and means for admitting fresh air at atmospheric pressure into said casing below the said cylinder.

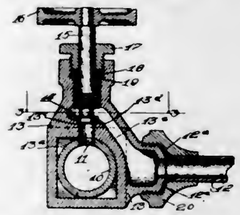
[Claim 6 not printed in the Gazette.]

1,172,297. CARPET-RENOVATING COMPOUND. SAMUEL MCCOMB and JAMES B. MCCOMB, New York, N. Y. Filed Nov. 5, 1914. Serial No. 870,497. (Cl. 87—5.)

1. A compound in powdered form consisting of soap, borax, soda ash, ultra marine blue, glycerin and oil of cedar leaves.

2. A compound in powdered form consisting of the following ingredients in substantially the proportions named, viz: 20 lbs. of white soap, 6 lbs. of borax, 3½ lbs. of soda ash, ¼ lb. of ultra marine blue, 8 oz. of glycerin and 3 oz. of oil of cedar leaves.

1,172,298. COMBINED VALVE AND PIPE-COUPLING. WILLIAM L. MORRIS, Fort Wayne, Ind., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Original application filed Jan. 16, 1912, Serial No. 677,995. Divided and this application filed May 29, 1915. Serial No. 31,092. (Cl. 137—75.)



1. A pipe fitting comprising a body having an integral pipe encircling sleeve and a passage extending through the body and communicating with the interior of the sleeve; a valve seat in said passage; a valve in the body coöperating with the valve seat; and means for sealing joints between the body and a pipe disposed in said sleeve.

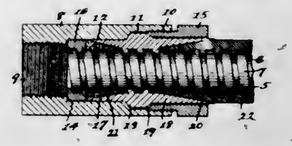
2. A pipe fitting comprising a body having an integral pipe encircling sleeve and a passage extending through the body around the sleeve and communicating with the interior of the latter; and means for preventing the passage of liquid between said sleeve and a pipe disposed in said sleeve.

3. In combination, a pipe having a lateral opening therein; a fitting encircling said pipe and covering said opening, said fitting having a passage extending around and separated from the pipe with one end registering with the opening in the pipe and its other end opening radially and outwardly from the pipe; and means sealing the joint between said pipe and said fitting.

4. In combination, a pipe having an opening in its side; a fitting encircling the pipe and covering said opening, there being a passage through said fitting having one end registering with the opening in said pipe, extending radially a short distance from said opening then turning at a sharp angle and extending around the pipe for substantially 90° with its other end directed outwardly away from the pipe; a valve in said passage at the sharp angle thereof adapted to control the flow of fluid through the passage; and means sealing the joint between the pipe and fitting.

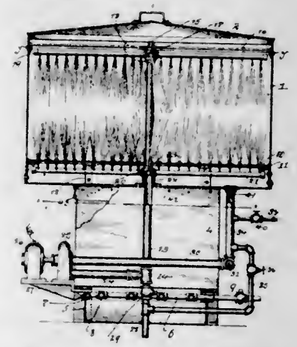
5. A pipe fitting comprising a body having an integral sleeve portion adapted to encircle a pipe, there being a passage leading from the interior of the sleeve through the body; and means for connecting a branch pipe to the body in communication with said passage.

1,172,299. HOSE CONNECTION. KARL O. MUEHLBERG, Manitowoc, Wis., assignor of forty-eight one-hundredths to J. Peter Eastman, Manitowoc, Wis. Filed Feb. 1, 1915. Serial No. 5,441. (Cl. 137—34.)



The combination with a metallic hose formed of helically wound strips: of a coupling provided with two shoulders therein, a sleeve threaded on said hose and provided with an external flange, a nut threaded on the end of said hose, packing locked between said sleeve and nut, and a gland threaded into said coupling and bearing on said flange to force the same against one of said shoulders to lock said parts together, the other of said shoulders serving as a bearing for said nut.

1,172,300. DISH-WASHING MACHINE. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 1, 1915. Serial No. 5,581. (Cl. 141—9.)



1. A dish-washing machine, comprising a receptacle having an inlet and an outlet for liquid, a support for dishes therein, two tanks for liquid, a pump having its delivery connected to said receptacle inlet and its inlet connected to said tanks and to said receptacle outlet, and means for closing communication between said pump inlet and one or the other of said tanks at will.

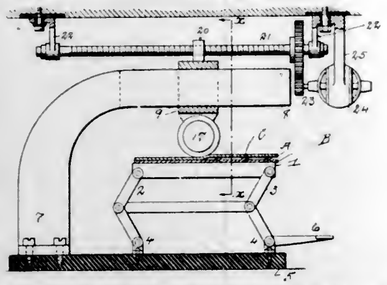
2. A dish-washing machine, comprising a receptacle having an inlet and an outlet for liquid, a support for dishes therein, two tanks for liquid, a pump having its delivery connected to said receptacle inlet, a valve casing, pipe connections from said valve casing to said receptacle outlet, to the inlet of said pump and to each of said tanks, and a valve in said casing movable to close one or the other of said tank connections at will.

3. A dish-washing machine, comprising a receptacle having an inlet and an outlet for liquid, a support for dishes therein, two tanks for liquid, a pump having its delivery connected to said receptacle inlet, a valve casing, pipe connections from said valve casing to a source of liquid supply, to the inlet of said pump and to each of said tanks, and a valve in said casing movable to close one or the other of said tank connections at will.

4. A dish-washing machine, comprising a cylindrical receptacle, a horizontal dish-supporting table of forami-

nated material therein having openings, a liquid supply pipe entering said receptacle, hollow hubs rotatable on said pipe and communicating therewith, and two groups of radial arms on said hubs and respectively disposed above and below said table having their outer ends approximating the wall of said receptacle; there being apertures on the lower portions of the upper arms and upper portions of the lower arms disposed to project liquid jets in angularly downward and upward directions upon said table and to cause by the reaction of said jets rotation of said hubs on said pipe.

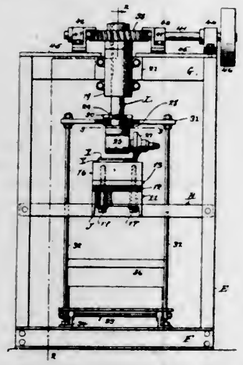
1,172,301. ELECTRICAL WELDING. THOMAS E. MURRAY and HARRY R. WOODROW, New York, N. Y.; said Woodrow assignor to said Murray. Filed Dec. 10, 1915. Serial No. 66,042. (Cl. 219—4.)



1. An electrical welding machine, comprising an insulated table upon which the bodies to be welded are superposed, one body lapping over a portion of the other body, a support movable in the direction of the edge of said overlapping body and having two depending arms differing in length, and roller electrodes carried by said arms; one of said electrodes bearing upon the overlapped body, and the other upon the overlapping body.

2. An electrical welding machine, comprising an insulated table upon which the bodies to be welded are superposed, one body lapping over a portion of the other body, a support movable in the direction of the edge of said overlapping body and having two depending arms differing in length, roller electrodes carried by said arms, and means for varying the pressure between said bodies and said roller electrodes.

1,172,302. ELECTRICAL WELDING. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 10, 1915. Serial No. 66,063. (Cl. 219—4.)



1. A welding machine, comprising two electrodes, one of said electrodes being a roller, means for moving said roller electrode in a closed curvilinear path, and means for varying the distance between said electrodes.

2. A welding machine, comprising two electrodes, one of said electrodes being a roller, a rotary shaft, an arm fast on said shaft carrying said roller and moving the same in a closed curvilinear path on the surface of one of the bodies to be welded, and means for moving one of said electrodes with relation to the other.

3. A welding machine, comprising two electrodes, one of said electrodes being a roller, a longitudinally slidable rotary shaft, an arm on said shaft carrying said roller, and means for sliding said shaft to move said roller with relation to the other electrode.

4. A welding machine, comprising a frame, two electrodes, one of said electrodes being a roller, a rotary slidable shaft, a shaft bearing mounted on said frame, a pinion on said shaft, a worm engaging said pinion, an arm on said shaft carrying said roller, and means for sliding said shaft in its bearing to move said roller with relation to the other electrode.

5. A welding machine, comprising two electrodes, one of said electrodes being a roller, a rotary shaft carrying said roller, a cross bar receiving said shaft and bearing upon a shoulder thereon above said roller, a fixed ring on said shaft above said cross bar, rollers in said ring bearing upon said bar, and treadle mechanism connected to said cross bar for raising and lowering said shaft.

1,172,303. SUGAR-MAKING PROCESS. JAMES NAYLOR, Jr., Arlington, N. J. Filed June 19, 1912. Serial No. 704,523. (Cl. 127—17.)

1. The herein described sugar making process which consists in introducing the masse-cuite into a separator, withdrawing the crystals and molasses separately therefrom, heating a portion of the molasses so withdrawn and returning said heated portion direct to the separator for admixture with the masse-cuite, while the separator is operating, to promote a more thorough washing and drying of the crystals.

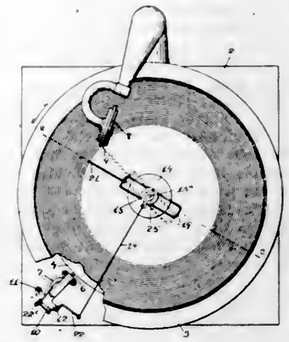
2. The herein described continuous sugar making process which consists in continuously introducing the masse-cuite into a continuously operating, centrifugal separator having a continuous and separate discharge both of the molasses and the sugar, heating a portion of the discharged molasses and returning said heated portion immediately and directly to the separator to thin the liquid therein and to wash and flash dry the crystals.

3. The herein described continuous sugar making process, which consists in delivering the masse-cuite from the mixer to the separator, withdrawing the sugar and molasses separately from the separator, heating about half of the molasses, more or less, so withdrawn, to at least about 200° F. and returning said heated portion immediately and directly to the separator, and at the point where the masse-cuite is being fed so that the two will mix and the latter be thinned, permitting the separator to operate.

1,172,304. MEANS FOR AUTOMATICALLY STOPPING THE MOTORS OF TALKING-MACHINES. LUDWIG NORMAN, Brooklyn, N. Y., assignor of one-half to Jacob Wolke, Brooklyn, N. Y. Filed Feb. 5, 1915. Serial No. 6,292. (Cl. 74—46.)

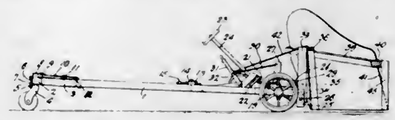
1. In a talking machine having a turntable provided with a center shaft, a swinging element and a controlling lever, a weight engaging said shaft and resting upon said table, a member upon said weight having cam means for raising the same upon turning of the weight in one direction, and means for causing it to turn with said weight in the opposite direction, said member having means for engagement with said swinging element, said weight having a top extension, and a cap releasably engaging said top extension and having spring means of connection with said lever.

2. In a talking machine having a turntable provided with a center shaft, a swinging element and a controlling lever, a weight engaging said shaft and resting upon said table, said weight having a top extension and an upper cam surface the ends of which are connected by a shoulder, a member upon said weight having a lower cam surface the ends of which are connected by a shoulder, a slide carried by said member and adapted for engagement



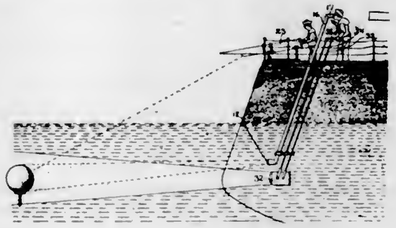
with said swinging element, a cap releasably engaging said top extension, and a spring lever having at one end means of connection with the controlling lever and at its opposite end connection with said cap.

1,172,305. SNOW-PLOW. PARK G. PAIGE, Austin, Nebr. Filed Apr. 14, 1915. Serial No. 21,318. (Cl. 37—5.)



The combination with a wheel supported beam having a head at one end, and brackets extending from the head, of a guide connecting the brackets, an adjustable head having upstanding members slidably and pivotally mounted on said guide, road engaging blades carried by the adjustable head and converging to a point, means for swinging said adjustable head about the guide, a lever, a sliding and pivotal connection between said lever and the adjustable head, and means for actuating the lever to raise and lower the adjustable head relative to the head upon the beam.

1,172,306. APPARATUS FOR DETECTING AND DESTROYING SUBMARINES, MINES, AND THE LIKE. HERSCHEL C. PARKER, Brooklyn, N. Y., and EDWIN G. HATCH, Hoboken, N. J., assignors of two-thirds to said Parker and one-third to said Hatch. Filed Feb. 26, 1915. Serial No. 10,704. (Cl. 114—0.5.)

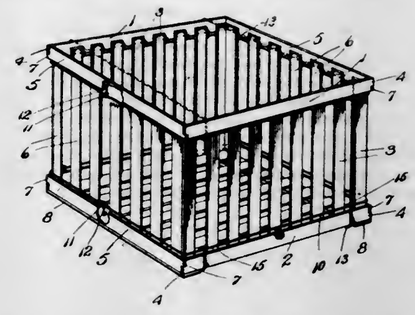


1. An apparatus of the kind described comprising a search light arranged to light an area of water beneath the surface, means above the surface for operating the search light, and an observation-tube independent of the light but projecting below the water and having a glass covered opening in the submerged part and an observation opening in the unsubmerged part.

2. An apparatus of the kind described comprising a search light, means for lighting a subsurface field of water with the search light, means located above the water for operating and directing the search light, and means independent of the light and light projecting means for taking observations in the said field of light.

3. An apparatus of the kind described comprising a tube having a submerged end with means for projecting light from said submerged end, means for projecting light rays into the upper end of the tube, and a second or observation tube having one end submerged, the second tube having a glass covered opening and the upper end of the tube having means for taking observations through the tube.

1,172,307. CRATE. PETER D. PEARCE, Grand Rapids, Mich. Filed Mar. 4, 1915. Serial No. 12,033. (Cl. 217—12.)



1. A crate including separable sides, ends, top and bottom, means for binding the sides and ends together and means for detachably connecting the top and bottom to said sides and ends including devices passing across said top and bottom and inserted through the sides of the crate and detachably engaging with the means binding the sides and ends together.

2. A crate including separable side, end, top and bottom members, each of said members being formed of spaced apart crate members with slats connecting the members, the ends of the slats terminating a short distance from the outer edges of said members, means to bind the sides and ends together and separate means for securing the top and bottom in place with the slats of said side, end, top and bottom members forming a smooth interior for the crate.

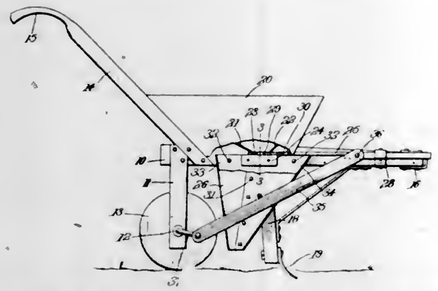
3. A crate including separable sides, ends, top and bottom, means for detachably binding the sides and ends together consisting of a plurality of broken wire devices encircling said sides and ends and each having means for detachably securing the ends thereof together, and means for detachably securing the top and bottom to the sides and ends of the crate.

4. A crate including separable sides, ends, top and bottom, a plurality of broken wire devices encircling the sides and ends each having means to detachably secure the ends thereof together, and means for connecting the top and bottom to the crate, said means engaging with the said broken wire devices and holding them in position, substantially as described.

5. In a crate, separable sides and ends each formed of spaced apart horizontal members connected together by vertical slats and broken wire members encircling the sides and ends adjacent the horizontal members, said wire members having one end formed into a ring and the opposite end into a locking element passing through said ring, said locking element lying on the inside of and extending vertically back of the adjacent horizontal member.

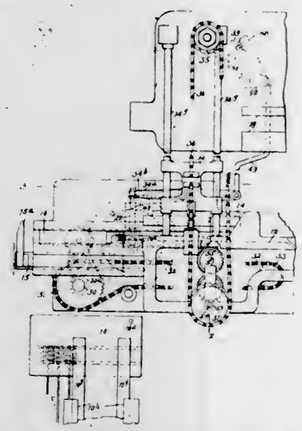
[Claim 6 not printed in the Gazette.]

1,172,308. CORN AND PEA PLANTER. CORNELIUS K. PEGUES, Cheraw, S. C. Filed Dec. 2, 1914. Serial No. 875,138. (Cl. 111—32.)



In a seed planter, the combination of a beam having a notch on one side, a plow standard fitting said notch, a block secured to the side of the beam below the upper surface of the latter and extending across said notch, a slide movable upon said block and guided at one side by said beam, a hopper secured to and extending at its sides below the upper face of the beam and serving as a guide for the opposite side of said slide, a bracket on the beam serving as a guide for the forward end of the slide, a delivery chute below the slide, and means for reciprocating the slide consisting of a rod pivotally connected thereto in front of the hopper and to the wheel.

1,172,309. LINE-SEPARATING MECHANISM FOR LINE-CASTING MACHINES. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New York. Filed Oct. 23, 1914. Serial No. 868,175. (Cl. 199—7.)



1. In a circulating matrix typographic machine, the combination of transfer rails, a space band magazine with which said rails communicate, a vertically movable first elevator, a vertically movable second elevator, a line transfer slide, and a space band transfer slide, with mechanism adapted to be set in operation by the first elevator for moving the line transfer slide, and mechanism adapted to be set in operation by said line transfer slide operating mechanism, for simultaneously moving the second elevator and the space band transfer slide.

2. In a circulating matrix typographic machine, the combination of transfer rails, a space band magazine which is in communication with the transfer rails, a vertically movable second elevator, a space band transfer slide movable in a path parallel with said transfer rails and having an arm for engagement with the space bands which lie between and are suspended from the transfer rails, means for raising and lowering said second elevator, and mechanism operatively connected with the elevator moving mechanism for simultaneously moving said space band transfer slide.

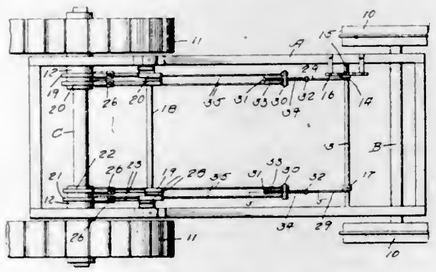
3. In a circulating matrix typographic machine, the combination of transfer rails, a space band magazine which is in communication with the transfer rails, a vertically movable second elevator, a space band transfer slide movable in a path parallel with said transfer rails and having an arm for engagement with the space bands which lie between and are suspended from the transfer rails, an upper driving sprocket wheel, a lower driven sprocket wheel, a chain belt running over said sprocket wheels and connected with said elevator, and mechanism driven by the lower sprocket for moving the space band transfer slide.

4. In a circulating matrix typographic machine, the combination of transfer rails, a space band magazine which is in communication with the transfer rails, a vertically movable second elevator, a space band transfer slide movable in a path parallel with said transfer rails and having an arm for engagement with the space bands which lie between and are suspended from the transfer rails, mechanism for raising and lowering said elevator, mechanism intermediate of said space band transfer slide and the elevator moving mechanism compelling the slide to move synchronously with the elevator toward the space band magazine when the elevator goes up and in the reverse direction when the elevator goes down.

5. In a circulating matrix typographic machine, the combination of transfer rails, a space band magazine which is in communication with the transfer rails, a vertically movable second elevator, a space band transfer slide movable in a path parallel with said transfer rails and having an arm for engagement with the space bands which lie between and are suspended from the transfer rails, an upper driving sprocket wheel, a lower driven sprocket wheel, a chain belt which runs over said sprocket wheels and is connected with said elevator, a train of gears driven by said lower sprocket wheel, said space band transfer slide having a rack which is engaged by the terminal gear of said train of gears.

[Claims 6 to 9 not printed in the Gazette.]

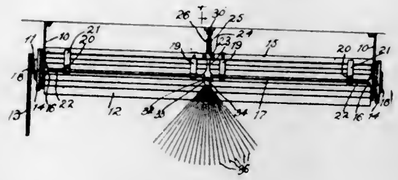
1,172,310. INTERMITTENT OPERATING MECHANISM. JOHN W. RANSOMER, Batesville, Ark. Filed Dec. 15, 1913. Serial No. 806,862. (Cl. 74—55.)



The combination with a motor vehicle frame and a drive axle rotatably mounted on the frame, a ring rotatably mounted on the axle, an arm on said ring, the ring being provided with a recess in its inner walls adjacent the axle, said recess tapering from its center toward each end, a drive shaft mounted on the frame, and including a crank portion, connections between the crank portion and the arm whereby the rotation of the

shaft will oscillate the ring, a bell-crank pivoted on the arm, a roller carried by the bell-crank and engaged in the recess of the ring, and adapted to connect the ring and axle during movement of the ring in one direction, a lever pivoted on the frame, and a yielding connection between the lever and bell-crank.

1,172,311. BURGLAR-CURTAIN FOR DISPLAY-WINDOWS. MAX RICHTER, Chicago, Ill. Filed Mar. 30, 1914. Serial No. 828,214. (Cl. 20—40.)



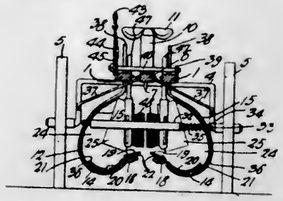
1. A burglar curtain for a display window comprising a shaft upon which the curtain is wound, a ratchet wheel mounted upon either end of said shaft, a pair of rods, each arranged to engage one of said ratchet wheels, spring means associated with each rod normally tending to move it from engagement with its associated ratchet wheel, a latch common to both of said rods provided with riding faces disposed on opposite sides of the latch normally tending to prevent the rods from moving under the action of their associated springs and a plurality of strands connected with said latch and stretched across a window pane arranged when engaged by an object thrown through the window pane to actuate the latch to permit the rods to move under the action of their associated springs.

2. A burglar curtain for a display window provided with a shaft upon which the curtain is wound, a ratchet wheel at each end of said shaft, a detent rod arranged to engage each of said ratchet wheels, means associated with said detent rods normally tending to move them from engagement with their associated ratchet wheels, a cam latch common to both of said rods arranged when in one position to permit the rods to move to release said ratchet wheels, means for manually operating said cam latch to force the rods into engagement with their associated ratchet wheels and a plurality of strands connected with said cam latch and stretched across the window pane arranged when engaged by an article thrown through the pane to operate the latch to permit said rods to move from engagement with their associated ratchet wheels.

3. In combination a curtain arranged when released to fall by gravity, a detent arranged to retain said curtain in raised position, spring means tending to move the detent to non-locking position, a latch normally engaged and retaining the detent in locking position, spring means normally holding the latch in position to retain the detent in locking position, a cam surface formed on said latch and means arranged when operated to move the latch to bring the cam surface thereof into engagement with the detent, whereupon the spring means associated with the detent may move the latch out of the path of the detent and move the latter to non-locking position.

4. In combination, a curtain arranged when released to fall by gravity, a detent arranged to retain said curtain in raised position, spring means tending to move the detent to non-locking position, a latch normally engaged by the detent serving to retain the detent in locking position, a cam surface formed on said latch, and means arranged when operated to move the latch to bring the cam surface thereof into engagement with the detent whereupon the spring means associated with the detent may move the latch out of the path of the detent and move the latter to non-locking position.

1,172,312. BOLL-WEEVIL EXTERMINATOR. FREDRICK RIEWE, Pottsville, Tex. Filed July 13, 1915. Serial No. 39,694. (Cl. 43—1.)



1. In a device of the class described, a wheel mounted frame; a pair of opposed troughs suspended from the frame, the troughs including end walls; and doors hinged to the end walls, the doors being adapted to be opened to permit a cleaning out of the troughs.

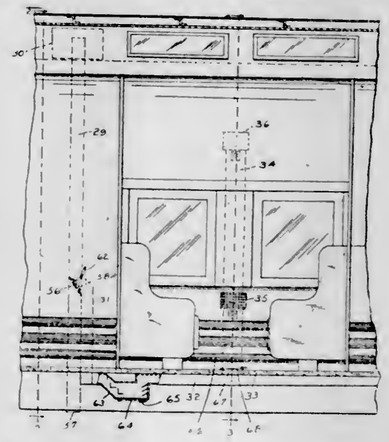
2. In a device of the class described, a wheel mounted frame; a pair of troughs suspended from the frame, the troughs comprising end walls; doors hinged to the end walls; and locking devices connecting the doors with the end walls.

3. In a device of the class described, a wheel mounted frame; a pair of troughs suspended from the frame, the troughs comprising end walls; and doors movably assembled with the end walls, the doors being equipped with rearwardly extended, deflected lips.

4. In a device of the class described, a wheel mounted frame; a pair of troughs suspended from the farme; upright standards journaled for rotation on the frame; approaching brushes carried by the standards, the standards being rotatable to swing the brushes toward and away from each other; and means for holding the standard against rotation.

5. In a device of the class described, a wheel mounted frame; a pair of troughs carried by the frame; upright standards mounted on the frame for rotation and for vertical adjustment; means for holding the standards in adjusted positions, both vertically and against rotation; and brushes projecting from the standards, the brushes coöperating with the space between the troughs.

1,172,313. VENTILATING APPARATUS FOR SLEEPING-CARS. WILLIAM P. RUSSELL, Chicago, Ill. Filed May 29, 1913. Serial No. 770,679. (Cl. 98—23.)



1. The combination with a car having an air duct adapted to deliver air into the interior of the car, of a supply pipe extending from the top to the bottom of the car, open to the outside atmosphere at both ends and

communicating with said duct, means at one end of said supply pipe for forcing air thereinto, and a deflecting valve at the intersection of said duct and pipe which in one position deflects air from the pipe into the duct and in the other position shuts off the duct from the pipe permitting the air to pass through the pipe from one end to the other.

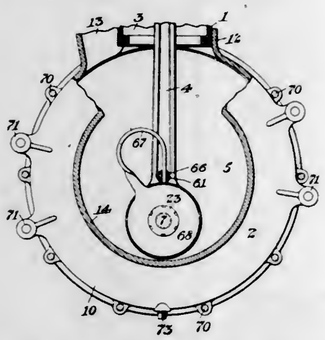
2. The combination with a car having an air duct in the wall thereof which opens into the car at two places lengthwise thereof, means for forcing air into the duct at one end thereof, and a deflector plate arranged over the opening nearest the end of the duct into which the air is introduced which operates to divide the air supply, deflecting some of it into the opening adjacent the plate and allowing the remainder to pass to the other opening.

3. The combination with a car having an air duct in the wall thereof provided with an opening into the interior of the car, of means for introducing air into said duct, a screen covering said opening, a hinged valve for closing said opening which is located behind said screen and is within and opens backwardly into the duct, a spring which tends to hold said valve open, a catch releasable from inside the car for holding the valve closed, and means extending into the car for closing the valve.

4. The combination with a car having an air duct in the wall thereof provided with an opening into the interior of the car, of means for forcing air into said duct, a screen covering said opening, a hinged valve for closing said opening which is located within and opens backwardly into the duct, a spring which tends to hold said valve open, a pair of catch members pivoted on the valve, springs which tend to press said catch members together, means engaged by said catch member when the valve is in closed position, a push button arranged to be operated from within the car for separating said catch members to release the valve, and means extending into the car for closing said valve.

5. The combination with a railway car and radiator for heating same, of means providing an air duct disposed directly under said radiator, having branch ducts opening into the car, means for introducing air into said first-mentioned duct, said duct being provided with a port through which air may be delivered against the radiator to coil the same, and a valve to close said port.

1,172,314. INTERNAL-COMBUSTION ENGINE. NORBERT H. SCHICKEL, Stamford, Conn. Filed Dec. 9, 1913. Serial No. 805,486. (Cl. 123—198.)



1. A crank case comprising a pair of chambers in axial alinement, an extension projecting from the walls of both chambers at right angles to said axis and communicating at its inner end with one of the same and a cylinder secured to said extension.

2. A crank case including a magneto chamber having a partition separating the same from the body of the case at one end and a removable cover for the other end, a bearing for the magneto armature carried by the partition, and a plate adjacent the cover having a bearing therein to support the other end of the magneto.

3. In combination, a crank case including a removable closure plate, a flywheel on one side of said plate, a driving pulley on the other side of said plate, and a shaft carrying said flywheel and said pulley passing through said plate and supported solely by the latter.

4. The combination of a crank case having an apertured end, a bushing carried by said end and projecting through the same, a shaft from the inside of the case to the outside of the same received in said bushing, a flywheel at the inner end of the shaft, a pulley at the outer end of the same, and bearings between the exterior of said bushing at opposite ends and said wheel and said pulley.

5. The combination of a plate having an aperture therein, a bushing in said aperture projecting from both faces of the plate, a shaft passing through the bushing, wheels on its ends adjacent the plate, and separate roller bearings between said wheels and the exterior of said bushing to cause the bushing to carry the weight of the wheels independently of the shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,172,315. SHOCK-ABSORBER. WILLIAM F. SERVICE, Jersey City, N. J., assignor to William F. Sterling, Mifflinburg, Pa. Filed Jan. 29, 1913. Serial No. 744,802. (Cl. 21—105.)



1. A pneumatic shock absorber comprising a low pressure cylinder, a high pressure cylinder telescoped in said low pressure cylinder, a piston for the low pressure cylinder between said cylinders and operatively connected to the high pressure cylinder, and a piston for the high pressure cylinder operatively connected to the low pressure cylinder whereby one cylinder expands while the other compresses as the cylinders are moved axially relative to each other, said cylinders being in communication at their inner and compression ends.

2. A shock absorber comprising a low pressure cylinder, a high pressure cylinder, a piston for the low pressure cylinder between the said cylinders and operatively connected to the high pressure cylinder for compressing air in the outer end of the low pressure cylinder, and a piston for the high pressure cylinder operatively connected to the low pressure cylinder for compressing air in the inner end of the high pressure cylinder, said pistons being adapted to compress alternatingly, said cylinders being in communication at their compression ends to permit air being compressed in the low pressure cylinder to be forced in the high pressure cylinder previous to its compression stroke.

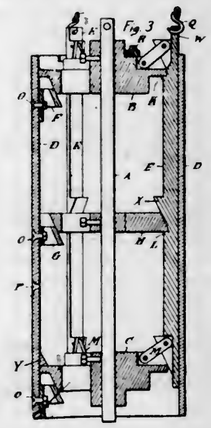
3. A shock absorber comprising a low pressure cylinder, a high pressure cylinder, a piston for the low pressure cylinder operatively connected to the high pressure cylinder for compressing air in the outer end of the low pressure cylinder, a piston for the high pressure cylinder operatively connected to the low pressure cylinder for compressing air in the inner end of the high pressure cylinder, said pistons being adapted to compress alternatingly, and means for permitting air to pass from the low pressure cylinder to the high pressure cylinder when a predetermined pressure has been attained in the low pressure cylinder at the compression stroke thereof.

4. A shock absorber comprising a low pressure cylinder, a piston for the low pressure cylinder, a high pressure cylinder secured to the said piston to serve as a piston rod therefor, said piston extending between the two cylinders, a piston for the high pressure cylinder, and a piston rod for the piston of the high pressure cylinder passing through the active end of the high pressure cylinder operatively connected to the low pressure cylinder, said cylinders being in communication at their compression ends.

5. A shock absorber comprising a low pressure cylinder, a piston having sliding engagement with the inner wall of the low pressure cylinder, a high pressure cylinder spaced from the low pressure cylinder and secured to the said piston to serve as a piston rod therefor, a piston for the high pressure cylinder, and a piston rod for the piston of the high pressure cylinder passing through the active end of the high pressure cylinder operatively connected to the low pressure cylinder, said cylinders being in communication at their compression ends, one of said pistons being adapted to permit air to pass it when at rest and when moving away from the compression end of its cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,172,316. COLLAPSIBLE CORE-BAR. CHARLES MILTON SIMS and HARRY WALLACE LEE, Anniston, Ala. Filed May 21, 1915. Serial No. 29,628. (Cl. 22—173.)



1. A collapsible core bar comprising two sets of staves, means connecting the sets of staves operating to produce a longitudinal movement of the one set of staves in one direction when the other set of staves is moved in the opposite longitudinal direction.

2. A collapsible core bar comprising a supporting head, a set of staves connected to the head, each stave of which is adapted to be moved longitudinally and laterally with respect to the head until the head is engaged when a further longitudinal movement of the staves moves the head in the same longitudinal direction, and a second set of staves connected to the head, each stave of which is moved laterally of the head by the longitudinal movement of the head.

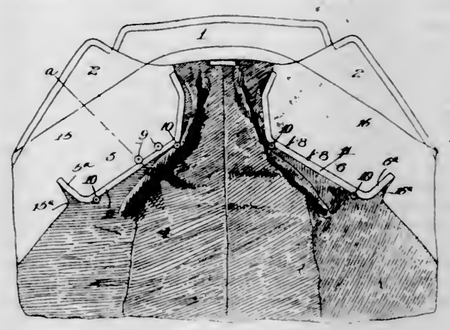
3. A collapsible core bar comprising two sets of staves, means connecting the two sets of staves causing the one set to inclose the other set when the other set is moved in the direction of the axis of the bar.

4. In a collapsible core bar in combination, a shaft, two sets of staves, means connecting the first set of staves to the shaft for moving this set toward the shaft and axially of the shaft, means connecting the second set of staves to the shaft for causing this second set to inclose the first set when the first set is moved in the aforesaid axial direction after the movement of the first set toward the shaft has been arrested.

5. In a collapsible core bar in combination, a shaft, two sets of staves, means connecting the first set of staves to the shaft for moving this set toward the shaft, means for arresting the movement of this first set of staves toward the shaft, means connecting the second set of staves to the shaft for causing this second set of staves to inclose the first set when the first set is moved in the direction of the axis of the shaft after the movement of the first set toward the shaft has been arrested.

[Claims 6 to 18 not printed in the Gazette.]

1,172,317. COAT. SAUNDERS B. SOLOMON, Rochester, N. Y. Filed Apr. 28, 1915. Serial No. 24,413. (Cl. 2—62.)



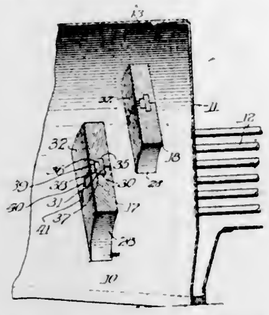
In a coat, the combination with the body portion forming the front of the coat and the under parts of the lapels, of a piece of the same cloth secured to each side of the body portion to constitute in one continuous piece the outer part of the lapel, the coat facing and, as a continuation of the latter, a free folding flap adapted to extend rearwardly and inwardly close against the body portion or forwardly and outwardly so that the flaps may jointly close the space or opening between the lapels, the facing portion of the piece being secured permanently to the body and extending inwardly beyond the fold line of the flap to lie in the same plane therewith.

1,172,318. BAFFLE MEANS FOR FIRE-BOXES. ENOCH P. STEVENS, Chicago, Ill., assignor, by mesne assignments, to American Arch Company, New York N. Y., a Corporation of Delaware. Filed Feb. 20, 1914. Serial No. 819,888. (Cl. 110—61.)

1. Baffle means for fire-boxes, comprising the combination with the side sheets of the fire-box, of supporting means on said side sheets, and a substantially vertical upwardly and forwardly arched baffle wall extending between said supporting means, substantially as described.

2. Baffle means for fire-boxes, comprising the combination with the side sheets of the fire-box, of supporting means on said side sheets, a baffle wall extending between said supporting means and consisting of upper and lower bricks and means for locking said bricks to-

gether, said baffle wall having a passage therethrough and between said bricks, said passage having a plurality of apertures communicating with said fire-box, and means for introducing gas into said passage, whereby said gas will pass through said apertures into said fire-box, substantially as described.



3. Baffle means for fire-boxes, comprising the combination with the side sheets of the fire-box, of supporting means on said side sheets, a baffle wall extending between said supporting means, said baffle wall consisting of a pair of lower bricks engaging each other at their inner edges, a pair of upper bricks resting on the upper edges of said lower bricks and locking means between said upper and lower bricks, a passage through said baffle wall, said passage having a plurality of apertures communicating with the interior of said fire-box, and means for introducing gas into said passage, whereby said gas will pass through said apertures into said fire-box, substantially as described.

4. Baffle means for fire-boxes, comprising the combination with the side sheets of the fire-box, of hollow supporting means on said side sheets, a baffle wall extending between said supporting means, said baffle wall consisting of a pair of lower bricks engaging each other at their inner edges, a pair of upper bricks resting on the upper edges of said lower bricks and locking means between said upper and lower bricks, passages extending inwardly from said supporting means between said upper and lower bricks, said passages provided with apertures communicating with the interior of said fire-box, and means for introducing gas from said supporting means into said passages, whereby said gas will pass through said apertures into said fire-box, substantially as described.

5. Baffle means for fire-boxes, comprising the combination with the side sheets of the fire-box, of hollow supporting means on said side sheets, each of said supporting means provided with a gas outlet, an upwardly and forwardly arched baffle wall extending between said supporting means, said baffle wall consisting of a pair of lower bricks engaging each other at their inner edges, a pair of upper bricks resting on the upper edges of said lower bricks and locking means between said upper and lower bricks, passages extending inwardly through said wall from the outlets of said supporting means and between said upper and lower bricks, said passages being provided with a plurality of apertures extending through the rear surface of said wall, and means for introducing gas into said hollow supporting means, whereby said gas will pass through said passages and said apertures into said fire-box, substantially as described.

1,172,319. WRENCH. CLARK E. SULLIVAN, Grand Rapids, Mich. Filed July 2, 1915. Serial No. 37,738. (Cl. 81—59.)

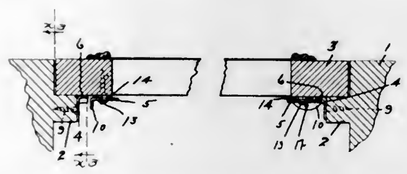
1. A wrench comprising a jaw with a chambered portion, a handle with a head pivoted within the chamber of the jaw and having teeth upon the end thereof, a second jaw with a shank portion movable through a slot in the chambered jaw and having teeth upon one edge for engagement with the teeth at the end of said handle, and a thumb projecting upon the chambered jaw forming means whereby the jaws may be adjusted, and means for holding the jaws in adjusted positions.



2. A wrench comprising a jaw with a chambered portion, a handle with a head pivoted within the chamber of the jaw and having teeth upon the end thereof, a second jaw with a shank portion movable through a slot in the chambered jaw and having teeth upon one edge for engagement with the teeth at the end of said handle, a thumb projecting upon the chambered jaw forming means whereby the jaws may be adjusted, a handle of the jaw of the wrench having threads, and an interiorly threaded ring engaging the threads upon the handle and adapted to bear against the projection of the chambered jaw to hold the two jaws in adjusted positions.

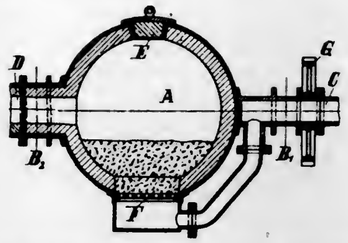
3. A wrench comprising a chambered jaw with a lateral projection, convexed upon its edge and milled, a pivotal pin passing through the chambered portion of the wrench, a handle with a head positioned within the chamber of the wrench and pivotally mounted upon said pin and having teeth at its end, the edges of the handle provided with threads, a screw ring upon said threads, a pin upon the handle adapted to limit the movement of the ring in one direction, a second jaw and a shank portion movable through the slot in the chambered jaw and having serrations upon one edge engaging the teeth upon the end of the handle.

1,172,320. STORM-SASH AND SCREEN FASTENER. MARTIN THOLSTRUP, Northfield, Minn. Filed Sept. 13, 1915. Serial No. 50,374. (Cl. 16—18.)



The combination with a stop strip and a frame seated thereon, of an anchor bracket pressed from a single piece of flat metal, secured to said stop strip and having a laterally projecting flange, set at an angle to the plane of the frame, and a turnbutton secured to said frame in position to be turned into overlapping engagement with the flange of the anchor bracket for drawing the frame onto the stop strip, said turnbutton having a laterally projecting flange with an aperture to receive a removable tool by which the turnbutton may be operated.

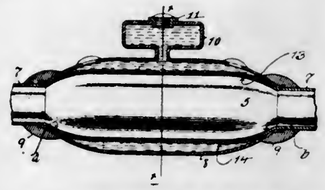
1,172,321. PROCESS FOR RECOVERING ZINC FROM ZINKIFEROUS MATERIALS. FRIEDRICH CARL WILHELM TIMM, Hamburg, Germany. Filed Oct. 7, 1913. Serial No. 793,792. Renewed Dec. 31, 1915. Serial No. 69,684. (Cl. 75—153.)



1. The process for recovering zinc from zinkiferous materials which consists in causing gas containing free oxygen to pass through a hot mixture of zinkiferous materials and solid carbonaceous substances during a comparatively short time, then withdrawing the mixture from the effect of the gas passing through it, then re-arranging the mixture in a practically even density, then causing the free oxygen containing gas to pass again through the mixture and repeating this working whereby the zinc is freed from the zinkiferous materials in different periods, the heat produced by passing the free oxygen-containing gas through the mixture being so regulated as to produce an un-molten, sintered residue.

2. The process for recovering zinc from zinkiferous materials which consists in causing air to pass in different periods through a mixture of zinc-containing materials and solid carbon-containing materials, thereby decreasing gradually the zinc content of the charge in different zinc-freeing periods, the charge being between each two such periods remixed in itself and being arranged in a practically even density, the heat being regulated so as to produce a sintered residue.

1,172,322. PROTECTIVE DEVICE FOR ELECTRIC-CABLE JOINTS. PHILIP TORCHIO, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,078. (Cl. 173—268.)



1. An electric cable, comprising a metallic sheath and a line conductor having a joint, the said sheath being removed sufficiently to expose said joint, and two metallic sleeves disposed one within the other and inclosing said joint: the said sleeves being insulated from said joint, united at their ends to one another, separated between said ends, and electrically connected at said ends to said sheath.

2. An electric cable, comprising a metallic sheath and a line conductor having a joint, the said sheath being removed sufficiently to expose said joint, and two metallic sleeves disposed one within the other and inclosing said joint, and an insulating body interposed between said sleeves: the said sleeves being insulated from said joint, united at their ends to one another, separted between said ends, and electrically connected to said sheath.

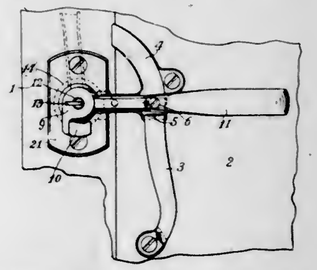
3. An electric cable, comprising a sheath, a line conductor having a joint, a body of pervious insulating material inclosing said joint, the said sheath being removed for a distance sufficient to expose said pervious body, a sleeve of impervious material of greater diameter than said body, inclosing the same and hermetically united at its ends to said cable sheath, and an insulating fluid adapted to permeate said pervious body contained in the space between said body and said sleeve.

4. An electric cable, comprising a sheath, a line conductor having a joint, a body of pervious insulating material inclosing said joint, the said sheath being removed for a distance sufficient to expose said pervious body, a sleeve of impervious material of greater diameter than said body, inclosing the same and hermetically united at its ends to said cable sheath, a receptacle communicating with the interior of said sleeve, and an insulating fluid adapted to permeate said pervious body contained in said receptacle and the space between said body and said sleeve.

5. An electric cable, comprising a sheath, a line conductor having a joint, a body of pervious insulating material inclosing said joint, the said sheath being removed for a distance sufficient to expose said pervious body, a sleeve of impervious material of greater diameter than said body, inclosing the same and hermetically united at its ends to said cable sheath, an insulating fluid permeating said pervious body, and a mass of insulating material of greater density than said fluid contained in the space between said body and said sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,172,323. LATCH AND LOCK. DANIEL W. TOWER, Grand Rapids, Mich., assignor to Grand Rapids Brass Company, Grand Rapids, Mich., a Corporation of Michigan. Filed May 25, 1914. Serial No. 840,817. (Cl. 70—29.)



1. In a device of the character described, a housing adapted to be attached to a door casing, a handle having an integral head rotative in the housing, means for limiting the rotative movement of the head and handle, a lock located within the housing for holding the handle at one extreme of its pivotal movement, and means adapted to receive a key for operating the lock located in the axis of the head.

2. In a device of the character described, a housing adapted to be attached to a door casing, a handle member having a substantially cylindrical head at one end thereof, rotative in the housing, a disk fixed to the head and within the housing, said disk having a recess in the periphery thereof, a slidable plate, a projection on the plate to enter the recess and lock the head, and means for sliding the plate arranged in the housing.

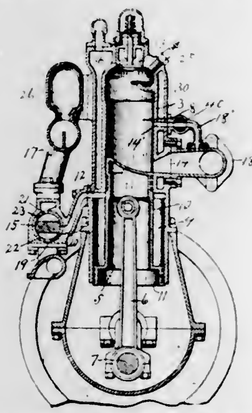
3. In a device of the character described, a housing adapted to be attached to a door casing, a handle member having a substantially cylindrical head at one end thereof, said head being rotative in the housing, a disk fixed on the head and having a peripheral recess, a stop extending from the housing into the recess, a locking plate slidably mounted adjacent the disk and having a projection to enter the said recess, and means for shifting said locking plate to move the projection into and out of the recess, said means being located in the cylindrical head.

4. In a device of the character described, a housing adapted to be attached to a door casing, a handle mem-

ber having a substantially cylindrical head at one end thereof, said head rotatably mounted in the housing, a disk fixed on the head and within the housing, said disk having a peripheral recess, a stop extending from the housing into the said recess, a locking plate slidably mounted opposite the disk and having a projection extending therefrom toward the disk, said projection being moved beyond the periphery of the disk or within the said recess by movement of the locking plate, a plate positioned adjacent the locking plate and having spring members bearing against the locking plate to frictionally retain it in position, a pin having its ends mounted rotatably in said plate and handle and having a slot to receive a key to project laterally therefrom to engage and move the locking plate.

5. In a device of the character described, a door, a casing therefor, a lever pivotally mounted on the casing and having a limited movement whereby the handle may be positioned opposite the door or clear of the same, a cam attached to the door having increasing thickness in the direction of movement of the lever when moved opposite the door, said lever also engaging the cam to tightly close the door, a plate attached to the handle member on the inner side thereof and adapted to bear immediately against the cam, and means for adjusting the said plate toward the cam member, substantially as described.

1,172,324. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. DANIEL M. TUTTLE, Canastota, N. Y., assignor to Stella S. Tuttle, Canastota, N. Y. Filed Nov. 27, 1912. Serial No. 733,870. (Cl. 123—59.)



1. In a two-cycle internal combustion engine, a pair of cylinders having valve-controlled intake and inlet ports and piston-controlled exhaust ports, and a constantly open passage connecting the valve chambers of both the intake and inlet valves, valves for said intake and inlet ports and a pressure equalizing chamber in direct and constant communication with said passage, said valve for the inlet port being spring closed and opened only by gas pressure in the passage.

2. A two-cycle internal combustion engine having its cylinder provided with constantly connected intake and inlet valve-chambers and a piston-controlled exhaust port, valves in said chambers, and a flange on the interior of the cylinder having a concave side facing the inlet to temporarily pocket a portion of the inflowing mixture and prevent its direct flow from the inlet to the exhaust port, said inlet valve being opened only by the gas pressure in said passage.

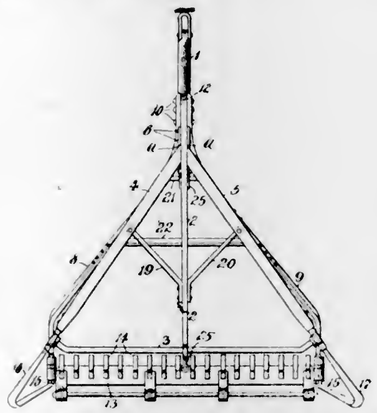
3. A two-cycle internal combustion engine comprising separate pairs of cylinders, each having an intake port, an inlet port, an exhaust port, and a piston controlling the exhaust port, synchronized valves for the intake ports and conduits each leading from the valve chamber of one pair of cylinders to the inlet port of the other pair of cylinders, said inlet ports having self-closing valves opened only by the gas pressure in the conduits leading thereto.

4. A two-cycle internal combustion engine comprising separate pairs of cylinders, each having an intake port, an inlet port, an exhaust port and a piston controlling the exhaust port, synchronized valves for the intake ports, conduits each leading from the valve chamber of one pair of cylinders to the inlet port of the other pair of cylinders, and an equalizing chamber communicating with conduits, said inlet ports having separate self-closing valves opened only by the pressure of fuel in the conduit leading thereto.

5. In a two-cycle internal combustion engine, a cylinder having an inlet port and an exhaust port and a piston controlling the exhaust port, said cylinder having an auxiliary exhaust passage between the exhaust port and the head of the cylinder, and a rotary valve in said passage, said inlet port having a self-closing valve in combination with means for introducing the fuel into the inlet port with sufficient pressure to hold the inlet valve open during a portion of the compression stroke of the piston after the exhaust port is closed by said piston.

[Claims 6 to 9 not printed in the Gazette.]

1,172,325. OYSTER-DREDGE. ABRAHAM H. VAN SCIVER, Providence, R. I. Filed June 18, 1914. Serial No. 845,759. (Cl. 43—11.)



1. In a dredge of the character described, comprising a solid neck and center bar combined in one piece, the forward part of the center bar elevated above the neck to form a dredge-righting comb, and side frames connected to the center bar.

2. In a dredge of the character described, comprising a solid neck and center bar of one piece of metal, the center bar being flattened and having the forward portion thereof elevated above the neck to form a dredge-righting comb, upper side frames made of angle iron whose forward ends are secured to the comb portion of the center bar and whose upper faces are practically on a line with the upper edge of the center bar, a toothed blade, and bows connecting the blade with said upper angle iron side frames.

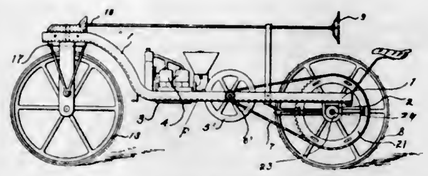
3. A dredge comprising a neck and center bar formed from a single length of material, the neck being rounded and the center bar being flattened, said bar being widened adjacent the neck to provide an outwardly projecting dredge-righting comb, side frames having their ends connected to the center bar, and a scraper bar carried by the side frames.

4. A dredge comprising an integral neck and center bar, upper and lower side frames having their forward ends connected to the center bar adjacent the neck, a scraper bar connected to the rear ends of the side frames, and scraper bar shielding shoes carried by the rear portions of the lower side frames.

5. A dredge comprising a neck formed of a single piece of material that is transversely rounded and having a flattened center bar projecting rearwardly therefrom, and side frames attached to the center bar.

[Claim 6 not printed in the Gazette.]

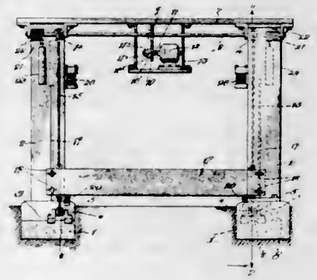
1,172,326. POWER MOWING-MACHINE. LUTHER G. WALKER, Pueblo, Colo. Filed Feb. 24, 1914. Serial No. 820,387. (Cl. 21—114.)



1. In combination, a mowing machine comprising tractor wheels, a drive shaft mounted in said wheels and adapted to be driven thereby, a casing around said shaft, cutter bar actuating mechanism mounted adjacent said shaft and adapted to be driven thereby, with a frame adapted to be connected at its rear end to said casing, said frame carrying a steering wheel at its front, an engine, a jack shaft, clutch mechanism between said engine and said jack shaft, and means for driving said traction wheels from said jack shaft.

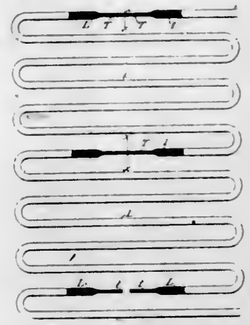
2. In combination, a mowing machine comprising tractor wheels, sprocket wheels mounted on said tractor wheels, a drive shaft mounted in said wheels and adapted to be driven thereby, a casing on said shaft, cutter bar actuating mechanism mounted adjacent said shaft and adapted to be driven thereby, with a frame adapted to be connected at its rear end to said casing, said frame carrying a steering wheel at its front, an engine, a jack shaft having sprocket wheels thereon, clutch mechanism between said engine and said jack shaft, and sprocket chains for actuating said first mentioned sprockets from said sprockets on the jack shaft.

1,172,327. AUTOMATIC CROSSING-GATE. OTIS M. WALRATH, Hanover, Ohio. Filed Mar. 18, 1915. Serial No. 15,223. Cl. 269—3.)



An automatic gate for grade crossings, comprising upright pillars spaced apart and arranged in pairs, the inner surfaces of the pillars having channels extending partially the length thereof, a driving shaft journaled upon said pillars, pulleys fixed to the shaft, bases for said pillars with recesses in their upper faces, the end walls of said pillars being flush with the opposite walls of said recesses, a gate, wheels mounted upon the opposite faces of the latter and adapted to travel in said channels and be guided by the walls thereof, the upper movement of the gate being limited by wheels thereof coming in contact with the upper ends of the channels, cables fastened at corresponding ends to the upper and lower edges of the gate and passing about said pulleys.

1,172,328. METHOD OF MANUFACTURING LACINGS. SIMON W. WARDWELL, Providence, R. I. Filed July 15, 1911. Serial No. 638,734. (Cl. 28—25.)



1. The herein described process of manufacturing lacings consisting in intermeshing fibrous strands to form a continuous tubular strip of fabric and changing at predetermined intervals the pattern to compact the strands forming portions of reduced cross section adapted to serve as tips.

2. The herein described process of manufacturing lacings consisting in intermeshing fibrous strands to form a continuous tubular strip of fabric and changing at predetermined intervals the pattern to compact the strands forming portions of reduced cross section adapted to serve as tips, and severing said strip in said reduced portions.

3. The herein described process of manufacturing lacings consisting in intermeshing fibrous strands with relative looseness to form a continuous tubular strip and changing the intermeshing operation at intervals to bring the strands more closely together to form a hard round cord of less diameter than the tubular portion adapted to serve as a tip.

4. The herein described process of manufacturing lacings consisting in intermeshing fibrous strands with relative looseness to form a continuous tubular strip and changing the intermeshing operation at intervals to bring the strands more closely together to form a hard round cord of less diameter than the tubular portion adapted to serve as a tip, and severing said cord portion between its ends.

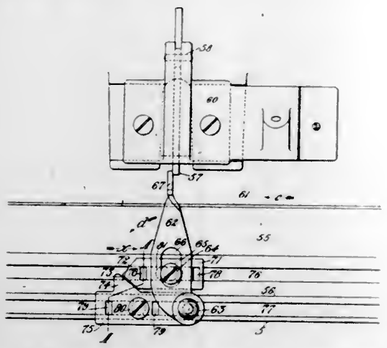
5. The herein described process of manufacturing lacings consisting in intermeshing fibrous strands to form a continuous strip of fabric having tubular portions substantially equal in length to the length required for the lacings and changing the intermeshing operation at intervals to compact the strands more closely together to form a hard, round, cord-like portion between each two adjacent tubular portions, and severing said cord portion between its ends to adapt the same to serve as tips for the main portion of the lacing.

[Claims 6 and 7 not printed in the Gazette.]

1,172,329. STOP-MOTION FOR BRAIDING-MACHINES. SIMON W. WARDWELL, Providence, R. I., assignor to Wardwell Braiding Machine Company, Portland, Me., a Corporation of Maine. Original application filed Mar. 17, 1911, Serial No. 615,076. Divided and this application filed Aug. 8, 1913. Serial No. 783,806. (Cl. 74—46.)

1. In a braiding machine, the combination with the braiding-mechanism, of stopping means for arresting the operation of the braiding-mechanism comprising a base 5 and ring 55 mounted on the base, said base and ring formed with peripheral grooves 77 and 76, members 71 and 75 constructed of sheet-metal with lugs 78 and 79 formed by indenting the metal on one side to force it out on the other, said lugs fitted to the grooves to hold the members from turning, and screws 64 and 80 to secure the members in position on the base and ring.

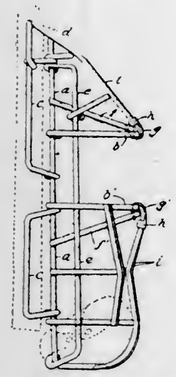
2. In a braiding machine, the combination with the braiding-mechanism, of means for arresting the operation of said mechanism comprising a member 55 having a groove 76, a member 71 constructed of sheet-metal with projecting lugs 78 engaging the groove 76, said lugs formed by indenting the metal on one side to force it out on the other.



3. In a braiding machine, the combination with the braiding-mechanism, of means for arresting the operation of said mechanism comprising a base 5 formed with a groove 77, a ring 55 mounted on said base and formed with a groove 76, a wedge-block 71 having lugs 78 engaging the groove 76, a stud 64 for securing the block 71 on the ring, a second wedge-block 75 having lugs engaging the groove 77, a screw 80 for securing the block 75 on the base 5, and an arm 62 pivoted on the block 75 and formed with a slot 66 adapted to be engaged by the head 65 of the stud 64.

4. In a braiding machine, the combination with the braiding-mechanism, of means for arresting the operation of said mechanism comprising a base 5, a brake-ring 55 mounted to turn on said base, a wedge-block 75 secured to said base, an arm 62 pivoted on the block 75, a second wedge-block 71 adapted to coöperate with the block 75 when the ring is turned on the base, and a stud 64 for securing the block 71 on the ring 55, said stud engaging the arm 62 to adapt the brake-ring to be moved from the arm.

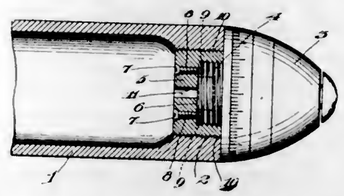
1,172,330. MASK. ROBERT L. WELCH, Chicago, Ill., assignor to A. G. Spalding & Bros., a Corporation of New Jersey. Filed May 18, 1915. Serial No. 28,882. (Cl. 2—119.)



1. In a baseball or like mask having a main frame and arching members extending therefrom, of cantaliver bracing sections *f* extending from the crown of the arch to opposite sides of the main frame in straight lines and inside the wires of the mask proper, substantially as described.

2. In a baseball mask, a main frame, wire sections extending therefrom, including arching members, a cantaliver bracing member extending in a straight line from the crown of each arched member to the side of the main frame and wholly inside the wires of the mask proper, and a clip for holding the arched and braced members together, substantially as described.

1,172,331. FUSE. HERBERT J. WHITE, Philadelphia, Pa., assignor to Frank S. Hodson, Philadelphia, Pa. Filed Nov. 9, 1915. Serial No. 60,482. (Cl. 102—36.)



1. A fuse composed of metal of relatively low tensile strength, having a relatively small plug at one end, a metal shield plug of relatively high tensile strength inclosing the first-mentioned plug and externally screw-threaded, and said shield plug adapted to screw into the threaded end of a shell, substantially as described.

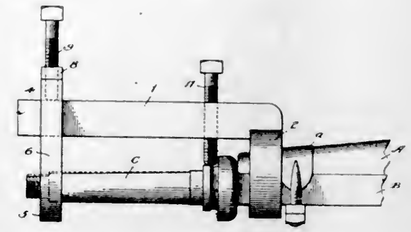
2. A fuse of the character described, composed of metal of relatively low tensile strength, and having a relatively small screw-threaded plug at one end, a shield plug having a screw-threaded socket in one end to receive the first-mentioned plug, screws projected through the shield and screwed into the first-mentioned plug securing the plugs together, said shield plug externally screw-threaded and adapted to screw into the threaded end of the shell, said shield plug of a metal of higher tensile strength than the main portions of the fuse, and of a tensile strength at least equal to the tensile strength of the shell to which it is connected, substantially as described.

3. The combination with a metal shell having a screw-threaded opening in its end, a metal fuse of lower tensile strength than the metal of the shell, and a shield plug fixed to the fuse forming a part of the fuse, said shield plug externally screw-threaded and fitting within the screw-threaded opening in the end of the shell, said shield of a higher tensile strength than the main portions of the fuse and of a tensile strength at least equal to the tensile strength of the metal of the shell, substantially as described.

4. The combination with a metal shell having a screw-threaded opening in its end, of a metal fuse of lower tensile strength than the metal of the shell, said fuse having a screw-threaded plug thereon, and a shield plug having a screw-threaded recess therein receiving the plug of the fuse, said shield plug adapted to engage the screw-threads of the shell and having a thread length and a thickness of metal between the fuse and the interior of the shell of a strength at least equal to the strength of the shell, whereby the explosion within the shell is compelled to burst the shell, substantially as described.

1,172,332. AXLE-ARM ADJUSTER. MARCUS W. WILLIAMS, Atlanta, Ga. Filed Sept. 25, 1914. Serial No. 863,481. (Cl. 153—38.)

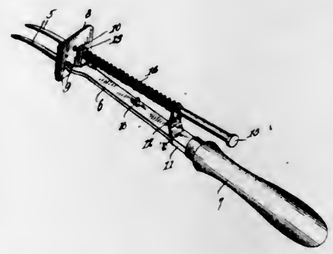
1. In an axle arm adjuster, the combination of a body member rotatable upon a vehicle-axle, an engaging loop provided on one end of said body portion, a set screw arranged in close proximity to the said loop and adapted to pass through the said body portion and engage axle arm, a yoke arranged to pass over the other end of the body portion and engage the end of the said axle arm upon a side opposite to the of the said set screw, and means including a set screw arranged to pass through the said yoke and bear upon the upper surface of the body portion.



2. In an axle arm adjuster the combination of a body member comprising a bar rotatably mounted upon a vehicle-axle, an integrally formed engaging ring provided on one end of the said bar, a set screw arranged in close proximity to the said ring adapted to pass through the said bar and bear upon the axle arm, a removable yoke arranged to pass over the other end of the bar and engage the outer end of the said axle arm upon a side opposite to that of the said screw, and means including a set screw arranged to pass through one end of the said yoke and bear upon the said bar.

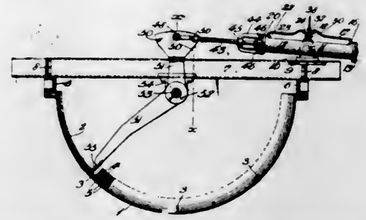
3. In an axle arm spindle adjuster, the combination of a body member comprising a non-yielding bar adapted to be rotatably mounted with relation to the spindle portion of a vehicle-axle and arranged to extend parallel with and for a distance substantially equal to the length of the said axle spindle, an integrally formed engaging ring provided on the innermost end of the said non-yelding bar at right angles thereto and adapted to encircle and engage the vehicle axle without engaging the spindle thereof, a set screw arranged in close proximity to the said ring and adapted to pass through the said non-yielding bar and bear upon the vehicle axle spindle, an adjustable yoke arranged to pass over the outer end of the said bar and engage the outer end of the vehicle axle spindle upon a side opposite that engaged by the aforesaid screw, and means for flexing the vehicle axle spindle, including a set screw arranged to pass through one end of said yoke and bear upon the upper surface of the said non-yielding bar.

1,172,333. FORK. SAMUEL B. WILLIAMS, St. Paul, Minn. Filed Apr. 30, 1915. Serial No. 24,992. (Cl. 30—5.)



The combination with a fork comprising a handle, a shank carried by the handle and prongs at the outer end of the shank; of a push plate slidably mounted on the prongs, said plate having eyes through which the prongs loosely pass, a rod connected to the back of the plate and extending rearward along the shank toward the handle, a slide mounted on the shank, said slide having an outstanding perforated ear through which the rod passes, a head on the rear end of the rod abutting against the ear, an outstanding perforated ear on the shank through which the forward end of the rod passes, and a spring coiled around the rod between the ears for holding the rod normally retracted.

1,172,334. MACHINE FOR BLADING TURBINES. JAMES WILLIAMSON, Newport News, Va. Filed July 23, 1914. Serial No. 852,712. (Cl. 29—23.5.)



1. A machine for securing blades and distance pieces in turbine grooves, comprising a support, a motor movably carried thereby, a lever fulcrumed in said support and operatively connected with said motor, a tool rigidly carried by the end of said lever, whereby said tool is made to travel in a circular path having the lever axis as its center.

2. A machine for securing blades and distance pieces in turbine grooves, comprising a support, a motor carried thereby, a lever fulcrumed in said support and operatively connected with said motor, a tool fixed to the end of said lever, whereby said tool is made to travel in a circular path having the lever axis as its center, means whereby said tool may be made to travel over different portions of the work, and actuating means for said motor.

3. A machine for securing blades and distance pieces in turbine grooves, comprising a support, a motor carried thereby and provided with a reciprocating piston rod, a lever pivotally supported and having spaced apertures in one end thereof, a fastening device passing through one of said apertures and connected with said piston rod and a tool rigidly fixed to the other end of said lever, whereby said tool is made to travel in a circular path having the lever axis as its center.

4. A machine for securing blades and distance pieces in turbine grooves, comprising a support, a motor having trunnions journaled in said support and provided with a reciprocating piston and piston rod, a guide for said piston rod, means to control admission and exhaust of motive fluid to reciprocate said piston, a lever pivotally supported and having a forked end, into which the end of said piston is adatped to extend, and means to secure the end of said piston rod at different points on said forked end.

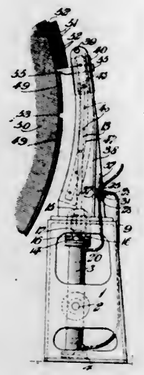
5. In a machine for securing blades and distance pieces in turbine grooves, a support consisting of longitudinal members, adapted to rest on the blade carrying member of the turbine, brackets carried by said members, a motor pivotally supported by said brackets and provided with a reciprocating piston and piston rod, means to control admission of motive fluid to reciprocate said piston, a lever having a hub pivotally supported by said member, said lever having apertures at one end at different radial points thereon, means to connect said piston with a predetermined aperture, and a tool secured to the other end of said lever and adapted to travel in a curvilinear path.

[Claims 6 to 14 not printed in the Gazette.]

1,172,335. MACHINE FOR BLADING TURBINE-ROTORS. JAMES WILLIAMSON, Newport News, Va. Filed July 23, 1914. Serial No. 852,713. (Cl. 29—23.5.)

1. A device for securing blades in turbine grooves of rotors, comprising a cross-head, means to reciprocate said cross-head in a curvilinear path concentric with a turbine groove, a tool fixedly carried by said cross-head and adapted to extend into a turbine groove whereby

said tool is caused to travel in a path concentric with the axis of the rotor.



2. A device for securing blades in turbine grooves, comprising a stationary frame, a reciprocating motor pivotally mounted thereon, a cross-head operatively connected with said motor, a tool carried by said cross-hend, reciprocating means for said motor, and guiding means for said cross-head to cause the free end of said tool to travel in a path concentric with a turbine groove.

3. A device for securing blades in turbine grooves, comprising a stationary frame, a reciprocating motor pivotally mounted thereon, and having a piston rod, a cross-head pivotally connected with said rod, a tool carried by said cross-bend, means to reciprocate said piston rod in a rectilinear path, and means to guide said cross-head in a curvilinear path.

4. A device for securing blades in turbine grooves, comprising a stationary support, a reciprocating motor pivotally mounted thereon, and provided with a reciprocating piston and piston rod, a guide for said piston, means to reciprocate said piston, a cross-head movably connected with said piston rod, a tool carried by said cross-head and extending into a turbine groove, and means to guide said cross-head to cause it to travel in a curvilinear path concentric with said groove.

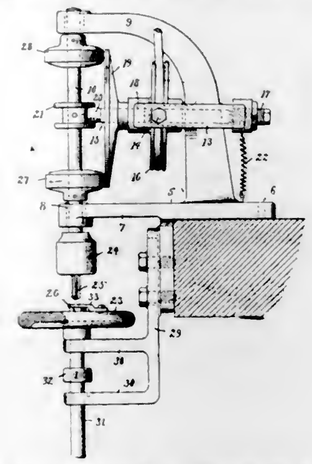
5. A device for securing blades in turbine grooves, comprising a motor consisting of a casing pivotally supported, a piston in said casing and a piston rod, a cross-head connected with said piston, means to guide said cross-head in a curvilinear path, a tool adjustably carried by said cross head, means to fix said tool in its adjusted position, and means to introduce motive fluid to either end of said piston.

[Claims 6 to 11 not printed in the Gazette.]

1,172,336. TAPPING-MACHINE. NILS H. ANDERSON, East Hampton, Conn., assignor to Fenn Manufacturing Co., Hartford, Conn., a Copartnership consisting of Wilson L. Fenn and Wilson A. Fenn. Filed June 18, 1915. Serial No. 34,841. (Cl. 10—136.)

1. In a tapping machine, the combination of a frame, a work table, a yoke mounted upon the frame, a driving shaft carried in the yoke, a disk carried by the driving shaft, a longitudinally movable spindle carried in the frame, a pair of friction members mounted on the spindle to engage the face of the disk connection between the spindle and shaft to cause the engagement and disengagement of the said disk and friction member.

2. In a tapping machine, the combination of a frame, a work table, a yoke pivotedly mounted upon the frame, a driving shaft carried in the yoke, a disk carried by the driving shaft, a longitudinally movable spindle carried in the frame, a pair of friction members mounted on the spindle one to engage the disk above its axis and the other to engage the disk below its axis connection between the spindle and shaft to cause the engagement and disengagement of the said disk and friction member.



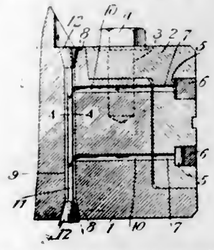
3. In a tapping machine, the combination of a frame, a longitudinally movable spindle carried in the frame, a rotary driving shaft pivotally mounted in the frame and engaging the spindle in a manner to be tilted thereby, a disk mounted on the shaft, a pair of friction members mounted on the spindle to engage the face of the disk.

4. In a tapping machine, the combination of a frame, a longitudinally movable spindle carried in the frame, a yoke pivotedly mounted upon the frame, a driving shaft carried in the yoke, and means to engage the spindle to rock the shaft, a disk carried by the driving shaft, a pair of friction members mounted on the spindle, one to engage the disk above its axis and the other to engage the disk below its axis.

5. In a tapping machine, the combination of a frame, a longitudinally movable spindle carried in the frame, a pivotally mounted driving shaft arranged at a right angle to the spindle, means to engage the spindle to rock the shaft, a disk carried by the shaft, a pair of friction members mounted on the spindle to engage the face of the disk by the tilting of the shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,172,337. PISTON AND PACKING RELIEF-VALVE. JOSEPH F. BATTY, Baltimore, Md. Filed Jan. 16, 1915. Serial No. 2,557. (Cl. 121—104.)



1. A piston provided with a bore passing therethrough, a packing ring groove and a conduit forming communication between said groove and bore, in combination with a valve stem working in said bore and a valve mounted on each end of said stem to automatically by compression alternately open communication between said groove and the space on the exhaust side of said piston, and close communication between said groove and the space on the compression side of said piston.

2. A piston provided with a bore passing therethrough, packing ring grooves and conduits forming communication between each groove and the bore, in combination with a valve stem working in said bore and a valve mounted on each end of said stem to automatically open and close communication between said grooves and the space on each side of said piston, the seating faces of said valves being presented toward each other.

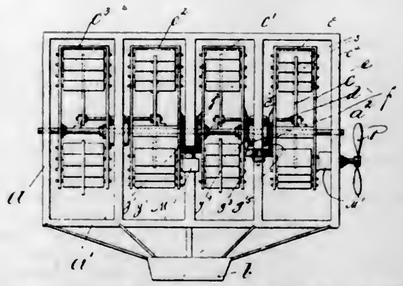
3. A piston provided with bores passing therethrough in the direction of travel thereof, annular packing ring grooves and radial conduits forming communication between the respective bores and the grooves, in combination with a valve stem working in each bore and valves mounted on each end respectively of said stem to alternately open and close communication between said grooves and the space on each side of said piston, the communication being open on the exhaust side when closed on the compression side.

4. A piston provided on each exterior face with registering recesses, bores forming communication between each two registering recesses, grooves to receive packing and further provided with conduits forming communication between the respective bores and said grooves, in combination with a valve stem working in each respective bore and a valve fixedly secured to each respective end of said stem, said valves corresponding in size and shape to said recesses and the portion of each stem between its valves being greater in length than its respective bore.

5. A cylinder, a piston working therein and provided on each exterior face with conical registering recesses, cylindrical bores connecting each two registering recesses, annular grooves to receive packing and radial conduits forming communication between the respective bores and said grooves in combination with packing rings fitting in said grooves, a valve stem approximately angular in cross-section working in each respective bore and a conical valve screwed on the respective ends of said stem and fitting said recesses, the walls of which act as seats therefor, the portion of each stem between its valves being greater in length than its respective bore.

[Claims 6 and 7 not printed in the Gazette.]

1,172,338. FLYING-MACHINE. BRUNO BEIER, Boonton, N. J. Filed Sept. 12, 1914. Serial No. 861,375. (Cl. 244—11.)



In a flying machine, a skeleton frame, a spindle extending longitudinally of and rotatively borne in said frame, a number of wings on said spindle divided into two series revolving in opposite directions, transmission means for operating said wings, shutter mechanisms for said wings, each shutter mechanism consisting of a number of swinging blades, cams on said frame and means operated from said cams and serving to impart motion to said shutter mechanism so as to close during the downward movement of said wings and to form aeroplanes and to open during the upward movement of said wings.

1,172,339. CORD. ARTHUR A. BRIGHAM, Brookline, Mass., assignor to Warren H. Butler, trustee, Danvers, Mass. Filed Dec. 27, 1913. Serial No. 809,123. (Cl. 28—5.)

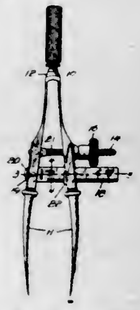
1. A braided cord containing strands which consist of a core of fibrous material covered with paper.

2. As a new article of manufacture a braided cord containing strands composed of a core of fibrous material



such as jute, linen or cotton, and provided with a cover of paper, which cushions the cores and prevents said cores from cutting.

1,172,340. MEASURING INSTRUMENT. EARL W. BRUNTON, St. Louis, Mo. Filed Mar. 5, 1915. Serial No. 12,328. (Cl. 33—148.)



1. In combination with a measuring instrument, including relatively movable legs and means for relatively adjusting the same, a scale member pivoted in one of said legs and slidingly passing through the other leg, ledges on said other leg and aross which the opposed longitudinal edges of the scale member are adapted to operate, one of said ledges serving as a reading projection to insure an accurate reading upon the scale member.

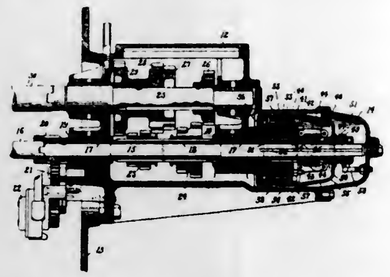
2. In combination with relatively movable measuring elements, and means for relatively adjusting the same, each of said elements having a slot, a scale member having an end pivoted in the slot of one of the elements and slidingly passing through the slot of the other element, and opposed ledges projecting from the inner face of the latter element and having the scale member operating across the same, the upper and lower walls of the slot inclining toward the ledges, to insure a proper sliding of the scale member in the slot of said latter element and preventing any accidental movements thereof.

3. In a measuring instrument including a pair of associated legs adapted to be moved toward or away from each other, a scale carried by one of the legs and coöperating with the other leg to denote the distance between the legs, and means for moving the legs toward or away from each other and for recording supplementary or micrometric degrees of distances that the legs are toward or away from each other and which distances are supplementary to degrees of graduation on said scale.

1,172,341. SPEED-CHANGING MECHANISM. EDWARD P. BULLARD, Jr., Bridgeport, Conn., assignor to The Bullard Machine Tool Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 22, 1911. Serial No. 667,293. (Cl. 74—58.)

1. In a speed changing device the combination with two trains of changeable speed-gears connected together, the second one of which is adapted to produce a number of speeds for each speed of the first train, a pair of slide rods for operating each train to produce different speeds and a locking lever adapted to be engaged with and disengaged from said rods to hold the gears in mesh.

2. In a speed changing device, the combination of two trains of gears including two sliding gears, a slide rod for operating each sliding gear, a single lever for operating either of said rods, and a pivotal locking button arranged to engage the said slide rods and adapted to be engaged and operated by the lever to unlock the particular rod desired to be operated.



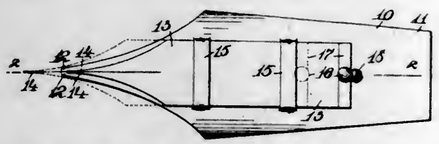
3. In a speed changing device, the combination of two trains of gears including two sliding gears, a slide rod for operating each sliding gear, a pivotal lever adapted to engage either rod for operating the same, a locking device arranged to engage either or both of the said rods and adapted to be operated by the movement of the lever so as to unlock the particular rod desired to be operated, and a second lever also designed to lock the said rods.

4. In a speed changing device, the combination of two trains of gears including two or more sliding gears, slide rods for operating said sliding gears, levers for operating either of the said rods, locking devices arranged to engage either of the said rods and adapted to be operated by the movement of the levers so as to unlock the particular rod desired to be operated, and further means to lock the said rods and to prevent the shifting of one of the sliding gears while the other is being changed.

5. In a speed changing device, the combination with two trains of changeable speed gearing connected together, the second one of which is adapted to produce a number of speeds for each speed of the first train, means for adjusting the gears and operating them jointly to produce a number of speeds, slide rods and levers for operating the two trains, a disk clutch mechanism through which the gearings are operated, and a lever for operating the clutch mechanism and to lock the rods.

[Claims 6 to 17 not printed in the Gazette.]

1,172,342. WRITING IMPLEMENT. ANDREW O. BURGESS, Newark, N. J. Filed Mar. 9, 1915. Serial No. 13,130. (Cl. 120—109.)



1. A writing implement comprising a pair of pen points one being fastened directly to the other so that they are in slidable relation in order to project either one forward of the other.

2. A writing implement comprising a main pen point with its rear end adapted to secure the pen to a holder, a second pen point, and means independent of the holder for slidably securing the second pen point on the main pen point.

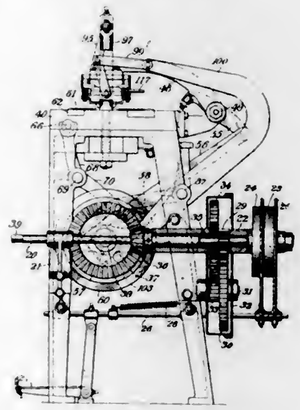
3. A writing implement comprising a pair of pen points in nested relation one on the other and held in limited longitudinal sliding relation so that the points can be made alternately available for writing.

4. A writing implement comprising a main pen point having guiding and limiting means thereon forward of its rear end, and a second pen point in said guiding means and adapted to be slid therein so as to be projected beyond the main point or caused to retreat in rear of said main point.

5. A writing implement comprising a main pen point having strips projecting from the back thereof, a second pen point resting against the top of the main pen point and sliding in the strips, the second point being arranged so that it can be slid to either force its nibs beyond the nibs of the main pen point or to cause them to retreat in rear of the nibs of the main pen point, and a finger-piece by means of which said second point can be slid.

[Claims 6 to 9 not printed in the Gazette.]

1,172,343. BLANK-FOLDING MACHINE. HARLEY M. CLEARWATER, Troy, N. Y., assignor, by mesne assignments, to Reece Folding Machine Company, Boston, Mass., a Corporation of Maine. Filed Oct. 23, 1913. Serial No. 796,772. (Cl. 223—55.)



1. In a folding machine, the combination of a support for the blank to be folded, a head having an extensive up and down movement above the support, an arm carrying the head and adapted to swing extensively upwardly and downwardly about a rear axis whereby to carry the head toward and from the support in an arc-shaped path, a die carried by the head, a presser carried by the head and moving up and down with the head and die and said presser also movable slightly relatively to the head toward and from the support when the head is in its lowermost position, and pressure-applying mechanism having connections constantly connected with the presser to seat and hold the same upon a folded blank and to permit upward movement of the head, the die, and the presser, after the pressing of the blank is completed.

2. In a folding machine, the combination of a support for the blank to be folded, standards at opposite sides of the support, a head movable toward and from the support between the standards, a die carried by the head, a presser carried by the head and movable relatively thereto whereby to be seated on the blank when the head is in its lowermost position, toggles connected to the standards, and the presser to actuate the latter, and power-applying mechanism constantly connected with the toggles to straighten and buckle the same.

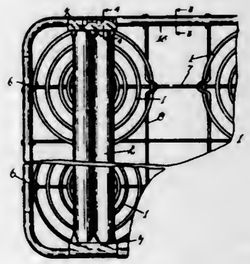
3. In a folding machine, the combination of a support for the blank to be folded, standards at opposite sides of the support, an arm extending rearwardly from between the standards and adapted to swing toward and from the support about a rear axis, a head fixed to the arm between the standards, a die carried by the head, a presser carried by the head and movable independently thereof toward and from the support when the head is in its lowermost position, toggles connected at their upper ends to the standards and at their lower ends to the presser, power-driven mechanism to swing said arm, and means constantly connected with the toggles and said power-driven mechanism to straighten the toggles when the head is in its lowermost position and to buckle and straighten the toggle in harmony with the up and down movement of the head.

4. In a folding machine, the combination of a support for the blank to be folded, an arm mounted to swing upwardly and downwardly above the support on an axis at the rear of the support, a head mounted on the forward end of the arm and carried thereby, a die or templet carried by the head, a presser carried by the head and movable relatively thereto when the die is seated on a blank on the support, toggles connected with the presser to actuate the same and permit movement thereof in company with the head, levers connected with the toggles to straighten and buckle the same, a cam connected with the aforesaid arm to swing the same, cams connected with the aforesaid lever to actuate the same in harmony with the movements of the head, and power driven mechanism to actuate all said cams.

5. In a folding machine, the combination of a support for the blank to be folded, an arm above the support and mounted to swing up and down on an axis in the rear of the support, a head carried by the forward end of the arm, a die carried by the head, a presser carried by the head and movable relatively to the die toward and from the blank-support, a cam shaft, a cam thereon, a reciprocatory link connected with the arm and coöperating with the cam to swing said arm, toggles connected with the presser to move the same relatively to the die and permit movement of the toggles in harmony with the movements of the head, levers connected with the toggles to straighten and buckle the same, cams mounted on the said cam shaft and connected with the said levers to actuate the same, and means to rotate the cam shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,172,344. CUSHION STRUCTURE. FRANK P. D'ARCY, Kalamazoo, Mich. Filed Sept. 20, 1915. Serial No. 51,588. (Cl. 155—25.)

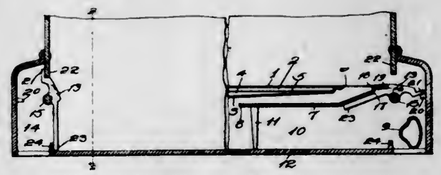


1. In a spring structure, the combination of the bottom border frame of wire, said frame being curved at the corners, coiled springs, spring supporting bar secured to said border wire, a cushion cover having its lower edges wrapped around said border frame, and binding members of sheet metal curved in cross section disposed to embrace said bottom border frame and said cover, the securing members at the corners being curved to correspond with the curves of the corners of the border frame, the distance between the edges of said securing members being less than the diameter of the border frame whereby the cover is secured to the frame and a metal binding edge provided for the cover.

2. In a spring structure, the combination of the bottom border frame of wire, coiled springs, spring supporting bars secured to said border wire, a cushion cover having its lower edges wrapped around said border frame, and binding members of sheet metal curved in cross section disposed between said supporting bars to embrace said bottom border frame and said cover, the distance between the edges of said securing members being less than the diameter of the frame and a metal binding edge provided for the cover, the cover being lapped below the ends of said cross bars to provide buffers.

3. In a spring structure, the combination of the bottom border frame of wire, coiled springs, spring supporting bars secured to said border wire, a cushion cover having its lower edges wrapped around said border frame, and binding members of sheet metal curved in cross section disposed to embrace said bottom border frame and said cover, the distance between the edges of said securing members being less than the diameter of the border frame whereby the cover is secured to the frame and a metal binding edge provided for the cover.

1,172,345. BAFFLE-PLATE. HENRY C. DIETRICH, Evansville, Ind., assignor to Crescent Stove Works, Evansville, Ind., a Corporation of Indiana. Filed Feb. 17, 1915. Serial No. 8,755. (Cl. 126—36.)



1. In a device of the character described, the combination with an oven of a gravity actuated shutter, a plurality of shoulders carried by said shutter, said shutter being pivoted at its lower edge and approximately the center thereof, a baffle plate movable into and out of said oven, said baffle plate having a plurality of shoulders carried by its outer edges and engageable with the shoulders of said shutter and supporting said baffle plate when inserted in said oven.

2. The combination of an oven with a baffle plate, supports carried by said baffle plate, a gravity actuated shutter, said shutter being pivoted at its lower edge and approximately the center thereof, a plurality of shoulders carried by said shutter, a plurality of shoulders carried by said baffle plate and engageable with the shoulders of said shutter and holding said shutter at one of its limits of movement when said baffle plate is inserted in said oven.

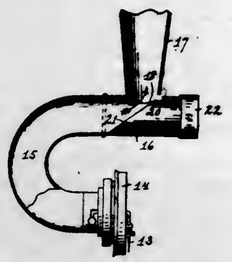
3. The combination with an oven of a baffle plate, a plurality of shoulders carried by said baffle plate, a pivotal support, said support being pivoted at its lower edge and approximately the center thereof, a plurality of shoulders carried by said support, said shoulders being engageable with the shoulders of said baffle plate and supporting said baffle plate in position when said plate is inserted in said oven.

1,172,346. SOUND-CONTROLLER FOR PHONOGRAPHS. ROWLAND E. FALDL, New York, N. Y. Filed Mar. 9, 1915. Serial No. 13,093. (Cl. 181—3.)

1. The combination with the sound box tube and horn tube of a phonograph, of a sound controller comprising a cylindrical plug rotatably fitted within the end of the sound box tube and which plug is made of sound absorbing material and truncated at an angle at its inner end.

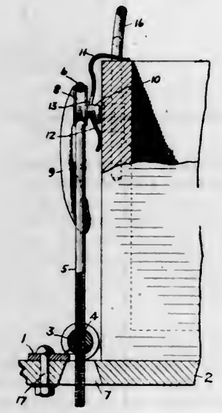
2. The combination with the sound box tube and horn tube of a phonograph, of a sound controller comprising a cylindrical plug rotatably fitted within the end of the sound box tube and which plug is made of sound absorbing material and truncated at an angle at its inner end

and provided with a head upon which are displayed notations corresponding to different degrees of volume of sound.



3. The combination with the sound box tube and horn tube of a phonograph, of a sound controller comprising a cylindrical plug rotatably fitted within the end of the sound box tube and which plug is made of sound absorbing material and a leaf spring for promoting a close contact betwen the outside of the plug and the inner surface of the tube.

1,172,347. HOLDDOWN FOR STORAGE BATTERIES. BRUCE FORD, Philadelphia, Pa. Filed Apr. 12, 1913. Serial No. 760,599. (Cl. 248—41.)



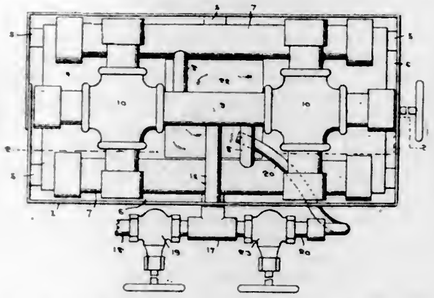
1. In a hold-down device the combination of a claw, a pintle turnable in the claw and provided with a threaded opening, a threaded hold-down rod engaging the threaded opening in the pintle, and clamping means connected with the free end of the rod.

2. A hold-down for storage battery boxes comprising the combination of a claw, a pintle turnable in the claw and provided with an opening, a rod arranged through the opening in the pintle and having an eye, a grooved disk turnable in the eye and provided with an eccentric headed-pin, and a hook member connected with the pin, substantially as described.

3. A hold-down for storage battery boxes comprising the combination of a claw, a pintle turnable in the claw and provided with an opening, a rod arranged through the opening in the pintle and having an eye, a grooved disk turnable in the eye and provided with an eccentric headed-pin, and a hook member detachably connected with the pin, substantially as described.

4. A hold-down for storage battery boxes comprising the combination of a claw member consisting of a bifurcated metal stamping, a transversely perforated pintle turnable in the claw, a rod penetrating the opening in the pintle and having a screw-and-thread connection therewith and arranged in the bifurcation of the claw and having at one end an eye, a grooved disk turnable in the eye and provided with a handle and with an eccentric headed-pin, and a hook member consisting of a stamping having a spring shank perforated for the reception of the headed-pin, and having marginal notches, substantially as described.

1,172,348. INTERNAL-COMBUSTION HEATER. CARL S. FRANK, Wichita, Kans. Filed June 30, 1915. Serial No. 37,402. (Cl. 158—63.)



1. A heater, comprising a retort chamber, cross heads connected to said retort chamber, means to convey gas producing fluid into said retort chamber, a pair of storage tubes in a plane below said retort chamber and on opposite sides thereof, pipe sections connecting said tubes with the retort chamber, the ends of the pipe sections projecting a distance into the retort chamber, and burners connected to said retort chamber, said burners having one of their ends entered in said retort chamber and extended upwardly to a point adjacent the top of said retort chamber, the opposite ends of said burners terminating below the cross heads.

2. A heater, comprising a retort chamber having cross heads in its length, means to convey a gas producing medium into the retort chamber, a burner adjacent each end of the retort chamber, one end of the burner entering said retort chamber and extending to a point adjacent the upper face thereof, the opposite ends of said burners terminating below said cross heads, and storage tubes connected to said retort chamber and forming a support therefor.

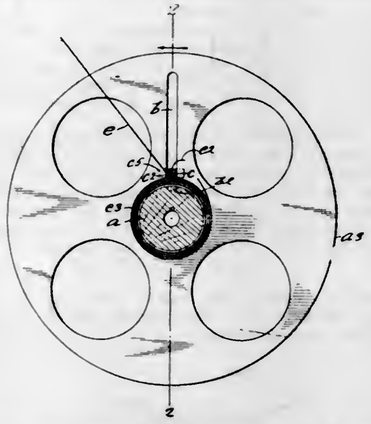
3. A heater, comprising a retort chamber, a pair of tubes below and on opposite sides of the retort chamber, pipes connecting said tubes with the retort chamber, said pipes and tubes forming a support for the retort chamber, a housing, a partition in the housing above the lower edge thereof, said partition being spaced from the walls of the housing to provide air passages, a cover for said housing having upwardly bowed portions, said bowed portions having series of openings therethrough, and burners attached to said retort chamber.

4. In a heater, the combination with a retort chamber and burners attached thereto, of a housing, a partition in said housing positioned above the lower edge thereof and spaced from the walls of the housing to form a passage, and a cover having upwardly bowed portions at a point above said burners, said bowed portions having openings therethrough.

1,172,349. REEL. LOUIS S. FRAPPIER, Brooklyn, N. Y., assignor to The Precision Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 25, 1913. Serial No. 763,488. (Cl. 242—70.)

1. The combination with a film reel, of a device provided with means for engagement with the end of a film section and means affording provision for connection to the reel at different distances from the hub, said film engagement means being adapted for disconnection from one film portion wound upon the reel and connection with another film portion whereby the latter may be wound on the former.

2. The combination with a film reel, of a device provided with means for engagement with the end of a film section and means for connection to the reel, said film engagement means being adapted for disconnection from one film portion wound upon the reel and connection with another film portion whereby the latter may be wound on the former, said reel connection means being radially adjustable on said reel.



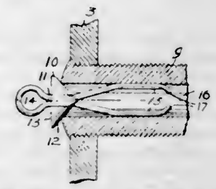
3. The combination with a film reel, of a split pin adapted to receive and hold the end of a strip of film, and means for adjustably holding said pin on said reel, said pin being adapted for disconnection from one film portion wound upon the reel and connection with another film portion whereby the latter may be wound on the former.

4. The combination with a film reel, of a split pin adapted to receive and hold the end of a strip of film, and means for holding said pin in desired position on said reel, radially thereof, said device being adapted to be removed from engagement with one part of the film wound upon the reel and be secured to the reel at a different distance from the hub to engage the film, whereby a separate film portion may be wound on a preceding portion.

5. The combination of a film reel provided with radial slots in the sides thereof, of a device having means for positive engagement with the end of a film, and means for connecting said device with said reel at any desired point along one of said slots, said device being adapted to be removed from engagement with one part of the film wound upon the reel and be secured to the reel at a different distance from the hub to engage the film, whereby a separated film portion may be wound on a preceding portion.

[Claim 6 not printed in the Gazette.]

1,172,350. STEAM-BOILER STAY-BOLT PLUG. BUAR B. FREER, Oil City, Pa. Filed Feb. 3, 1915. Serial No. 5,873. (Cl. 85—1.5.)



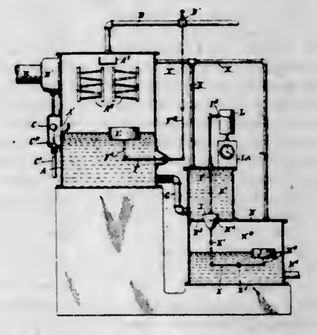
1. In a steam-boiler, a stay-bolt with an opening throughout its length, a closure for the opening, and a retaining member extending through the closure and having at one end a resilient portion in engagement with the wall of the opening and at the other end a suitable finger piece.

2. In a steam-boiler, a stay-bolt with an opening throughout its length, a non-corrosive closure for the opening, and a non-corrosive retaining member extending through the closure and having at one end a resilient portion in engagement with the wall of the opening and at the other end a suitable finger piece.

3. In a steam-boiler, a stay-bolt with an opening throughout its length, a closure for the opening, and a retaining member extending through the closure and having at one end a resilient portion in engagement with the wall of the opening and at the other end a suitable finger piece, the resilient portion of the retaining member contacting with the wall of the said opening for such distance as to prevent the closure from moving downwardly.

4. In a steam-boiler, a stay-bolt with an opening throughout its length, a stopper for the opening, and a retaining member extending through the closure, rigidly connected to the stopper and having at one end a resilient portion in engagement with the wall of the opening.

1,172,351. FLOW-MEASURING APPARATUS. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business under the firm-name of Harrison Safety Boiler Works. Filed Dec. 20, 1913. Serial No. 807,879. (Cl. 73—167.)



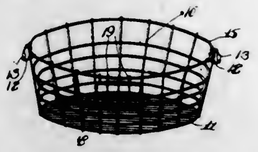
1. Liquid flow measuring apparatus comprising in combination, means providing a path of flow including an adjustable orifice or orifices for the liquid to be measured and a portion beyond the orifice or orifices wherein liquid may accumulate, liquid supply means adapted to maintain a substantially constant liquid head at the supply side of said orifice or orifices, means responsive to the accumulation of liquid in the said portion of said path of flow for adjusting the latter as required to permit a flow therethrough corresponding to the demand for the liquid flowing, and means connected to the orifice adjusting means for measuring the flow through said orifice or orifices.

2. Liquid flow measuring apparatus comprising in combination, means providing a path of flow including an adjustable orifice or orifices for the liquid to be measured and a portion beyond the orifice or orifices wherein liquid may accumulate, liquid supply means adapted to maintain a substantially constant liquid head at the supply side of said orifice or orifices, means responsive to the accumulation of liquid in the said portion of said path of flow for adjusting the latter as required to permit a flow therethrough corresponding to the demand for the liquid flowing, said orifice adjusting means including a member movable in approximately linear proportion to the change in flow corresponding to said movement.

3. Liquid flow measuring apparatus comprising in combination, means providing a path of flow including an

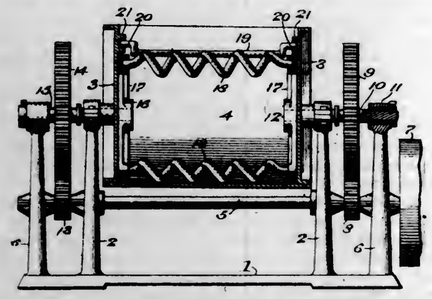
adjustable orifice or orifices for the liquid to be measured and a portion beyond the orifice or orifices wherein liquid may accumulate, liquid supply means adapted to maintain a substantially constant liquid head at the supply side of said orifice or orifices, means responsive to the accumulation of liquid in the said portion of said path of flow for adjusting the latter as required to permit a flow therethrough corresponding to the demand for the liquid flowing, said orifice adjusting means including a member movable in approximately linear proportion to the change in flow corresponding to said movement and measuring means connected to and actuated by said member and including provisions for compensating for departures from the linear ratio between the movements of said member and the changes in the rate of flow corresponding thereto.

1,172,352. CLOTHES-BASKET. LIZZIE J. GEORGIE, Denver, Colo. Filed Sept. 21, 1912. Serial No. 721,613. (Cl. 220—29.)



In a device of the class described, the combination of an open mesh body, said body provided with an edge wire, auxiliary hooks carried by said edge wire, said auxiliary hooks formed from single strands of wire being bent intermediate their ends, each strand comprising an eye, the strand then extending to form a double ply hooked portion, whereby the eye will be integral with the hook portion so as to prevent its opening, both plies of said hook portion embracing said edge wire and being soldered in position, whereby said auxiliary hooks will be permanently retained in a set position upon said edge wire, said eyes being permanently carried at a distance above said edge wires, handles having hooked ends engaging said eyes, whereby possible injury to said mesh body is prevented since said auxiliary hooks are prevented from slipping along said edge wire and said handles are pivotally supported above said edge wire.

1,172,353. APPARATUS FOR MIXING DOUGH. HUGO GOTTSCHALK, Burnham, Pa., assignor to Gottschalk & Co., Inc., Reedsville, Pa., a Corporation of Delaware. Filed Apr. 6, 1915. Serial No. 19,466. (Cl. 107—40.)



1. A non-rotatable mixing machine, comprising a mixing chamber and a rotatably mounted spiral member vertically revoluble in the chamber and extending substantially parallel to the axis of revolution, and adapted to engage the material to impart an endwise movement thereto during the revolution.

2. A non-rotatable mixing machine, comprising a mixing chamber, a rotatably mounted member vertically revoluble in the chamber and having means for engagement with the material to impart an endwise movement thereto during the revolution, and means for actuating said member.

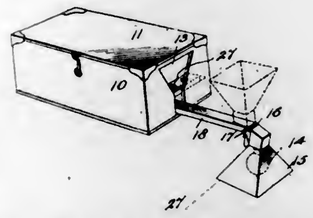
3. A device of the character stated, comprising a non-rotatable mixing chamber, a plurality of rotatable elements vertically revoluble in the chamber in the same direction and extending substantially parallel to the axis of revolution, and said elements having means for imparting an endwise movement to the material as they are revolving in the chamber.

4. A non-rotatable mixing machine, comprising a mixing chamber and a plurality of rigid spiral cross bars vertically revoluble within the chamber and rotatably mounted to impart an endwise movement to the material parallel to the axis of rotation as they are revolving in the chamber.

5. A non-rotatable mixing machine, comprising a mixing chamber, a plurality of rigid spiral cross bars, means for rotatably supporting the same within the chamber, means for actuating the supporting means to vertically revolve the bars within the chamber, the path of revolution being spaced from and parallel to the axis thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,172,354. PORTABLE LAMP. WILLIAM E. GROTE, New York, N. Y. Filed Apr. 20, 1915. Serial No. 22,696. (Cl. 240—8.5.)



1. A portable lighting apparatus comprising in combination a container having a forward opening, weighting batteries therein, a bar adapted to be slid completely within said container or outward through said opening at will, an electric lamp pivotally supported upon the outer end of said bar, a switch operated by movements of said bar, and appropriate electric connections between said switch, and battery and said switch and lamp substanstially as described.

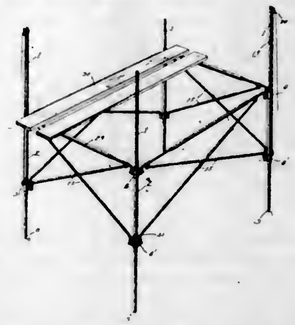
2. A portable lighting apparatus comprising in combination a container having a forward opening, weighting batteries therein, a bar adapted to be slid completely within said container or outward through said opening at will, an electric lamp and reflector pivotally supported on the outer extremity of said bar, said reflector being so shaped as to be adapted to close said opening when tilted upward, a switch operated by movements of said bar, and appropriate electric connections between said switch and battery and said switch and lamp, substanially as described.

1,172,355. SCAFFOLD. JAMES S. GUEST, Oakland, Cal. Filed June 21, 1915. Serial No. 35,243. (Cl. 20—81.5.)

1. A scaffold of the character described comprising upright corner posts, sleeves slidably mounted on said posts, horizontal telescopic tie rods connecting the upper end of said sleeves, and diagonal telescopic brace rods connecting the bottom of one sleeve with the opposite ends of the tie rods extending from said sleeve.

2. A scaffold of the character described comprising upright corner posts, sleeves slidably mounted on said posts, horizontal telescopic tie rods connecting the upper end of said sleeves, diagonal telescopic brace rods connecting the bottom of one sleeve with the opposite ends of the tie rods extending from said sleeve, and means for holding the telescopic parts of said brace rods in fixed relation to each other.

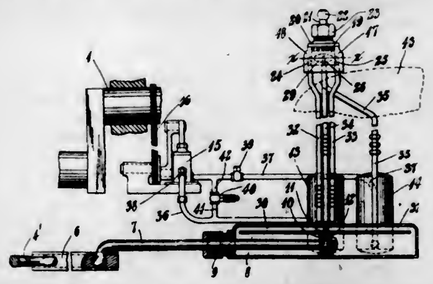
3. A scaffold of the character described comprising upright corner posts, sleeves slidably mounted on said posts, horizontal telescopic tie rods connecting the upper end of said sleeves, diagonal telescopic brace rods connecting the bottom of one sleeve, to the end of said tie rods at a point near the adjacent corner posts, and means for raising and lowering said sleeves.



4. A scaffold of the character described comprising upright corner posts, sleeves slidably mounted on said posts, horizontal telescopic tie rods connecting the upper end of said sleeves, a sleeve slidably mounted on said tie rods, a platform supported on said horizontal tie rods, and diagonal telescopic brace rods connecting the bottom of one sleeve to the opposite ends of the tie rods extending from said sleeve.

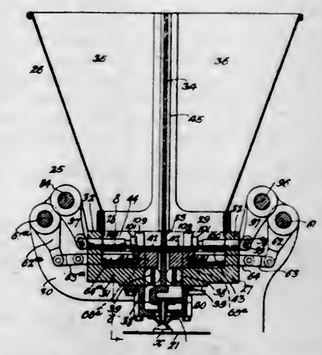
5. A scaffold of the character described comprising upright corner posts, sleeves slidably mounted on said posts, holding members attached to the upper and lower ends of said sleeves, said members having openings parallel to the axis of said sleeve, horizontal telescopic tie rods having angular bent ends adapted to fit the opening of the said members at the top of said sleeves and telescopic brace rods pivotally attached to said tie rods adjacent their bent ends and a pivotally attached stud adjacent the lower ends of said brace rods, said studs being adapted to fit the aperture of the lower of said holding members.

1,172,356. MOTOR-VEHICLE STEERING DEVICE. WILLIAM M. HANEY, Elmwood Place, Ohio. Filed Mar. 6, 1915. Serial No. 12,686. (Cl. 121—13.)



In combination with a motor vehicle, and steering means for said vehicle, liquid-pressure-operated means for operating the steering means, a pump comprising an inlet and an outlet and adapted to constantly apply pressure to a liquid, a controlling valve to apply a liquid under pressure to said liquid-pressure-operated means in either one of two directions, or to prevent the application of a liquid under said pressure to said liquid-pressure-operated means when said steering means is not to be operated in either direction, liquid-conducting means from said pump to said valve, liquid-conducting means from said valve to said liquid-pressure-operated means, liquid contained in and substantially continuous throughout said pump, said valve, said liquid-pressure-operated means, and the respective liquid-conducting means, substantially to the exclusion of gaseous mediums, and a by-pass from said outlet to said inlet for limiting rise of pressure of said liquid on said valve when said valve prevents the application of said liquid under said pressure to said fluid-pressure-operated means.

1,172,357. CAKE-COATING MACHINE. PEMBROKE D. HARTON, Philadelphia, Pa. Filed Feb. 21, 1914. Serial No. 820,168. (Cl. 91—3.)



1. In a cake coating machine, the combination of a frame, an icing receptacle carried thereby having a discharge head, said head having a plurality of nozzles with plural discharge orifices axially arranged, said receptacle having passages leading to the respective discharge outlets, a pair of laterally movable plungers extending substantially the full length mounted in the lower part of said receptacle and serving to force the material through said passages to the nozzles, and a pair of horizontally disposed partitions laterally movable and forming chambers in the bottom portion of said receptacle in which said plungers may move.

2. In a cake coating machine, the combination of a frame, an icing receptacle carried thereby having a discharge head, said head having a plurality of nozzles with plural discharge orifices axially arranged, said receptacle having passages leading to the respective discharge outlets, bars extending substantially the full length of said head and forming rocking valves in each of said passages, a pair of laterally movable plungers extending substantially the full length and mounted in the lower part of said receptacle above the valves, said plungers serving to force the material past said valves when they are open and through said nozzles, a pair of horizontally-disposed partitions laterally movable above said plungers and forming chambers in the bottom portion of said receptacle in which said plungers may move and means for operating said valves.

3. In a cake coating machine, the combination of a frame, an icing receptacle carried thereby having a discharge head, said head having a plurality of nozzles with plural discharge orifices axially arranged, said receptacle having passages leading to the respective discharge outlets, bars extending substantially the full length of said head and forming rocking valves in said passages, a pair of laterally movable plungers mounted in the lower part of said receptacle and serving to force the material through said nozzles when said valves are open, means for opening and closing said valves, and means independently thereof for actuating said plungers.

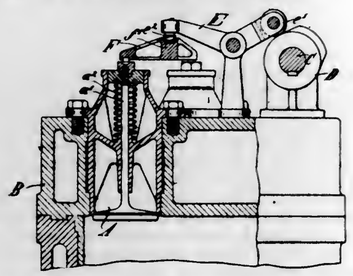
4. In a cake coating machine, the combination of a frame, an icing receptacle carried thereby having a discharge head, disposed in fixed position with relation to the frame said head having a plurality of nozzles with plural discharge orifices axially arranged, said receptacle

having passages leading to the separate discharge outlets of the respective nozzles, horizontally movable partitions arranged in the discharge head to separate portions of the coating material from the main body and forming chambers in the bottom portion of the separate compartments in said head communicating with the receptacle, and plungers below said partitions and serving to force the material in said chambers through the discharge orifices of the respective nozzles.

5. In a cake coating machine, the combination of a frame, an icing recpetacle carried thereby having a discharge head disposed in fixed position with relation to the frame, said head having a plurality of nozzles with a pair of discharge orifices axially arranged, said receptacle having passages leading to the respective discharge outlets, pivotally mounted bars forming rocking valves in said passages, means for operating said valves, laterally movable plungers mounted in the lower part of said receptacle and serving to force the material through said nozzles, when the valves are open and means above said plungers for separating the material operated upon by said plungers from the main body of the material in the receptacle.

[Claims 6 to 10 not printed in the Gazette.]

1,172,358. VALVE-GEAR. ERNST HERKT, Kiel, Germany, assignor to Fried. Krupp Aktiengesellschaft, Germaniawerft, Kiel-Gaarden, Germany. Filed May 27, 1912. Serial No. 699,896. (Cl. 123—90.)

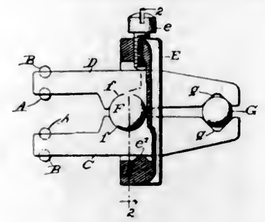


In a two stroke cycle internal combustion engine, a cylinder having in its cover three scavenging valves, each valve being closed by a spring and provided with a guide for its stem, a single operating lever and a floating intermediate piece in the form of a three-armed lever through which said operating lever opens all of said valves simultaneously, the ends of the arms of the intermediate piece resting freely by means of spherical surfaces on the correspondingly shaped ends of the valve stems; the middle part of the intermediate piece being provided on its upper surface with a spherical seat engaged by a correspondingly shaped bolt of the operating lever, the length of the arms and the position of the valves being such that in transmitting power to any one valve, the stems of the two other valves act as fulcrums for the intermediate piece.

1,172,359. CALIPER-GAGE. HENRY HESS, Philadelphia, Pa. Filed Oct. 18, 1912. Serial No. 726,414. (Cl. 33—174.)

1. A caliper gage comprising in combination a pair of opposed supports provided with gaging point contacts, three separate spheres located between said supports, and means for holding or clamping the whole together; said spheres being arranged in a triangle with its base transverse to the length of the gage and the single sphere at the apex being readily detachable whereby alterations of the gage dimension may be effected by change of the single sphere at the apex.

2. A caliper gage comprising in combination a pair of opposed supports provided with gaging point contacts, a plurality of interposed spherical pieces located between said supports, namely, two arranged in a given line transverse to the gage length and a single sphere at another point in the gage length, and means for holding or clamping the whole together, said single sphere being readily detachable whereby it may be interchanged for another sphere of different size for altering the gage size.

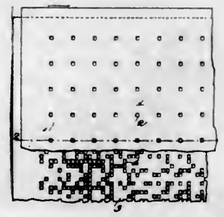


3. A caliper gage comprising in combination, opposed supports, contact spheres provided on the gaging portions of said supports, a plurality of interposed pieces located between and holding said supports spaced apart at one point in the gage length, and an interposed piece at another point, the latter being readily detachable whereby it may be interchanged for another sphere of different size for altering the gage size, and means for detachably clamping the whole together with said contact spheres in predetermined gaging relation.

4. A caliper gage comprising in combination, opposed supports, contact spheres provided on the gaging portions of said supports, a pivot means separating the supports at a point removed from the gaging contacts, and an interposed separator at another point, the latter being readily detachable whereby it may be interchanged for another sphere of different size and means for detachably clamping the whole together with said contact spheres in predetermined gaging relation.

5. A caliper gage comprising in combination, a pair of opposed supports provided with gaging contacts and shaped to receive a round separating pivot means between them, a round separating pivot piece interposed between said supports, said supports extending substantially beyond said round pivot means, and having a series of notches for receiving a round piece, a round piece engaged in one of said notches selectively, and means for clamping the whole together.

1,172,360. ADVERTISING MACHINERY. WALTER LEO HILDBURGH, Westminster, London, England. Filed Sept. 25, 1909. Serial No. 519,597. (Cl. 40—28.)



1. The combination of two superposed plates, each plate having visual areas so arranged that by the location of one plate in a predetermined relation to the other plate there will be produced an image, the two plates being relatively movable step by step to produce different images, the visual areas in one plate being in the form of separately disposed small areas equally spaced in parallel lines, the distance of separation between contiguous edges of adjacent areas being greater than the maximum extent of the movement of the two plates necessary to produce all the images in that direction, the other plate having visual areas substantially equal in size to the visual areas on the first plate, the dimensions of the visual areas in the direction of the step by step movement being smaller than the extent of one step of the step by step movement.

2. The combination of two superposed opaque plates, one plate having transparent areas so arranged that light will pass through them, the other plate having areas of visual effect substantially equal in size to the transparent areas of the first plate, the two plates being relatively movable step by step to produce different images by the coaction of the said transparent areas and the said areas of visual effect, the transparent areas on the one plate being in the form of separately disposed small areas equally spaced in parallel lines, the distance of separation between contiguous edges of adjacent areas being greater than the maximum extent of the movement of the two plates necessary to produce all of the images in those directions, the dimensions of the areas of visual effect and the areas of transparency in the direction of the step by step movement being smaller than the extent of one step of the step by step movement.

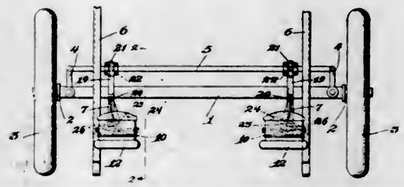
3. The combination of two superposed plates, each plate having visual areas so arranged that by the location of the one plate in a predetermined relation to the other plate there will be produced an image, the two plates being relatively movable step by step to produce different images, the visual areas in one plate being in the form of separately disposed small areas disposed in two sets of lines perpendicular to each other, each set of said lines being evenly spaced, the distance of separation between contiguous edges of adjacent areas being greater than the maximum extent of the movement of the two plates necessary to produce all the images in that direction, the other plate having visual areas substantially equal in size to the visual areas on the first plate, the dimensions of the visual areas in the direction of the step by step movement being smaller than the extent of one step of the step by step movement.

4. The combination of two superposed plates, one being an opaque plate with light transmitting areas and the other a marked plate with light transmitting areas and movable step by step, the marked plate having its light transmitting areas tinted in colors, the dimensions of the light transmitting areas of the marked plate, in the direction of the step by step movement, being smaller than the extent of one step of the step by step movement.

5. The combination of two superposed plates relatively movable step by step, one of said plates having equally spaced light transmitting areas, the other plate having light transmitting areas, the dimensions of such areas in the direction of the step by step movement being smaller than the extent of one step of the step by step movement.

[Claim 6 not printed in the Gazette.]

1,172,361. HEADLIGHT-OPERATING MECHANISM. GEORGE W. HOFFMAN, Millville, and ELLSWORTH HOFFMAN, Leesburg, N. J. Filed Nov. 23, 1915. Serial No. 62,942. (Cl. 240—62.)



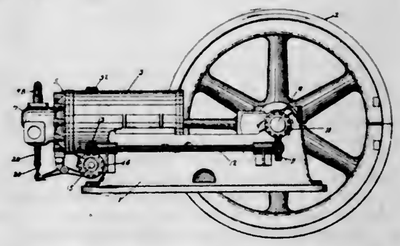
1. The combination with a vehicle frame, an axle supporting the same, wheels on the axle, and a transversely positioned steering rod for moving the wheels at an angle to the axle, of lamp brackets vertically positioned and having rotary mounting on the frame, levers pivotally supported between their ends and adapted to be moved by the steering rod, and members secured to turn with the brackets and having slot and pin connection with the levers, whereby the movement of the levers causes the movement of the brackets in one direction only, substantially as described.

2. The combination with a vehicle frame, an axle supporting the same, wheels on the axle, and a transversely positioned steering rod for moving the wheels at an angle to the axle, of lamp brackets vertically positioned and having rotary mounting on the frame, levers pivotally supported between their ends and adapted to be moved by the steering rod, cams secured to the brackets and having slots therein, pins on the levers in the slots, said slots throughout one-half of their length curved concentric with the pivots of the levers, substantially as described.

3. The combination with a vehicle frame, an axle supporting the same, wheels on the axle, and a transversely positioned steering rod for moving the wheels at an angle to the axle, of lamp brackets vertically positioned and having rotary mounting on the frame, levers pivotally supported between their ends and adapted to be moved by the steering rod, cams secured to turn with the brackets and having slots therein, pins on the levers located in the slots, the slots in the respective cams curved concentric with the pivot of the levers throughout one-half of their length, and the cam of one bracket located reversely to the cam of the other bracket, substantially as described.

4. The combination with a vehicle frame, an axle supporting the same, wheels on the axle, and a transversely positioned steering rod for moving the wheels at an angle to the axle, of brackets secured to the frame and having extensions thereon, lamp brackets having rotary mounting in the first-mentioned brackets, cams secured to the lower ends of the lamp brackets, levers pivotally connected to the extensions and having slots at one end, pins on the steering rod projected through the slots in the levers, said cams having slots therein, curved throughout one-half of their length concentric with the pivots of the levers, and straight throughout their other portions of their length, and pins on the levers located in the slots, substantially as described.

1,172,362. GAS-ENGINE. LUCIAN C. JACKSON, Buffalo, N. Y. Filed May 31, 1907. Serial No. 376,671. (Cl. 123—90.)



1. In a gas engine having a combustion chamber, an inlet valve to control the inlet opening to said chamber and a valve gear to operate said valve, said valve gear including a lever for operating the inlet valve, said lever having a contact member for opening the inlet valve and being adapted to be moved into and out of operative position with said valve.

2. In a gas engine having a combustion chamber, an exhaust valve to control the exhaust opening to said chamber and a valve gear to operate said valve, said valve gear including a lever for operating the exhaust valve, said lever having a contact member for opening the exhaust valve and being adapted to be adjusted whereby the exhaust valve will be partially opened on the compression stroke of the engine.

3. In a gas engine having a combustion chamber, inlet and exhaust valves to control the inlet and exhaust openings to said chamber and a valve gear to operate said valves, a contact member to open the inlet valve and

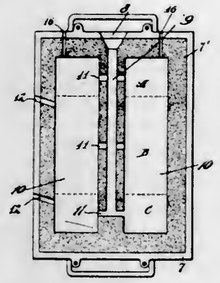
adapted to be moved into and out of operative position with said valve, and a contact member to open the exhaust valve and adapted to be adjusted whereby the exhaust valve will be partially opened during the compression stroke of the engine.

4. In a gas engine having an inlet valve, valve gear to operate said valve, the valve operative end of said gear having a contact member locked in operative position and adapted to be unlocked and moved out of operative position with said valve.

5. In a gas engine having an inlet valve, a spring to hold said valve closed, valve gear to operate said valve against the action of said spring, the valve operative end of said gear having an adjustable contact member locked in operative position and adapted to be unlocked and moved out of operative position with said valve.

[Claims 6 to 9 not printed in the Gazette.]

1,172,363. MOLD FOR BRAKE-SHOES. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed June 25, 1915. Serial No. 36,172. (Cl. 22—134.)



1. A brake shoe mold with the shoe cavity arranged on end, said cavity having an inlet port and a plurality of overflow ports arranged at successive heights.

2. A brake shoe mold with the shoe cavity arranged on end, and with a plurality of inlet and outlet ports communicating at successive heights with said cavity and with said inlet ports arranged substantially central of the section of the cavity to which they correspond.

3. A brake shoe mold with the shoe cavity arranged on end, and having an inlet port communicating therewith having a plurality of overflow ports communicating at successive heights with said cavity and dividing the same into a number of continuous compartments.

4. A brake shoe mold with the shoe cavity arranged on end, and having a plurality of overflow ports communicating at successive heights with said cavity and dividing the same into a number of continuous compartments, said mold having inlet ports communicating with each of said compartments.

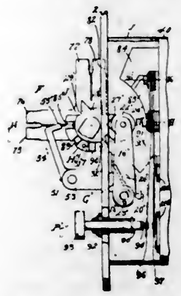
5. A brake shoe mold with the shoe cavity arranged on end, and having a plurality of overflow ports communicating at successive heights with said cavity and dividing the same into a number of continuous compartments, said mold having inlet ports communicating with substantially the central portion of each of said compartments.

[Claims 6 to 9 not printed in the Gazette.]

1,172,364. COMBINATION LIGHTING AND IGNITION SWITCH. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 3, 1913. Serial No. 745,797. (Cl. 175—282.)

1. A switch and a lock to lock the same, said lock being operable only when the switch is in Off position, and a second switch, said lock also serving when operated to lock said second switch in either On or Off position.

2. An electrical switch combination having two switch contacts each having an idle and on operated relation, and a lock operable only when one of said contacts is in its idle relation, but when said other contact is in either relation, said lock when actuated serving to prevent changing the relation of either contact.



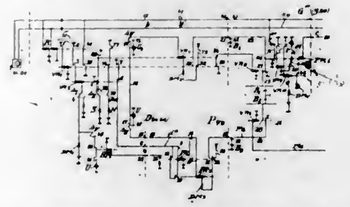
3. A lighting switch and an ignition switch for automobiles or the like, provided with a common locking means adapted to lock the lighting switch in either On or Off position, and the ignition switch in Off position only, said locking means being inoperable unless the ignition switch is in Off position.

4. A lighting switch and an ignition switch for automobiles or the like, and means for locking the lighting switch, said means being inoperable unless the ignition switch is in Off position.

5. An electrical switch having a movable wiper for controlling the ignition circuits and a second movable wiper for controlling the lighting circuits, a lock common to both of said wipers, and means for preventing the operation of said lock unless the ignition wiper is in its Off position.

[Claims 6 to 10 not printed in the Gazette.]

1,172,365. AUTOMATIC TELEPHONE-EXCHANGE. ARON KATZ, Charlottenburg, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed Jan. 28, 1913. Serial No. 744,722. (Cl. 179—18.)



1. In an automatic telephone exchange, calling lines, called lines, trunk lines, devices for selecting said called lines, other devices for selecting said trunk lines, and means for testing said trunk lines before said trunk selecting devices select one of said trunk lines.

2. In an automatic telephone exchange, calling lines, called lines, trunk lines leading to said called lines, devices for selecting said trunk lines leading to called lines, and means for testing said lines leading to called lines available for the selecting devices before the latter select a trunk line.

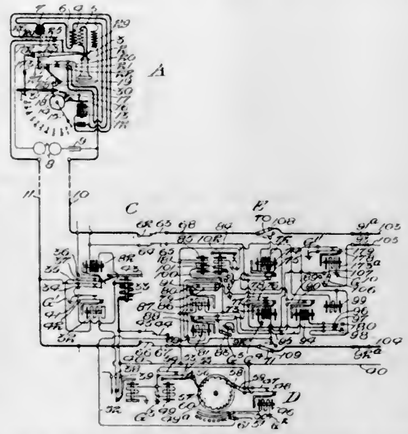
3. In an automatic telephone exchange, calling lines, called lines, trunk lines, electromagnetically operated selecting devices, adapted to be set upon trunk lines leading to called lines, and means for testing said trunk lines leading to called lines available for the selecting devices before the latter select a trunk line.

4. In an automatic telephone exchange calling lines, called lines, trunk lines selecting devices adapted to be set upon trunk lines leading to called lines, means for testing said trunk lines before they are selected by the selecting devices, and means for connecting a calling line with said selecting devices.

5. In an automatic telephone exchange calling lines, called lines, trunk lines, selecting devices adapted to be set upon trunk lines leading to said called lines, means for testing said trunk lines before they are selected by the selecting devices, means for connecting a calling line with said selecting devices, and means for disconnecting the testing means from a trunk line leading to called lines after testing.

[Claims 6 to 55 not printed in the Gazette.]

1,172,366. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. OMER KIRBY, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed June 19, 1909. Serial No. 503,109. (Cl. 179—18.)



1. In a two-wire or metallic circuit-controlled trunking system, trunk lines, a switch for selecting a trunk, means at the substation separate from the switch hook normally tending to control said switch to cause it to seize a trunk by the initial closure of a metallic circuit by a calling subscriber, and means for preventing this operation.

2. In a telephone system, a line circuit, means for performing a series of numerical switching operations, one for each digit of the called number, to extend connection toward the called subscriber, devices at the exchange or central station for transmitting impulses over the line circuit to operate said means, and a controller mechanism by the initial operation of which the calling party stops the transmission of said impulses in accordance with the digits of the called number, said mechanism being at rest while the impulses are being transmitted over the line, and the acts of the calling party for limiting said impulses alternating with the numerical switching operations at the exchange or central station.

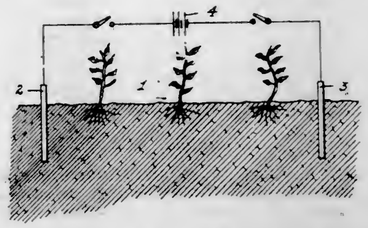
3. In a telephone system, means having motion in two intersecting planes for performing a series of numerical switching operations, one for each digit of the called number, to extend connection toward the called subscriber, a substation mechanism at the calling substation responsive to each switching operation, operating in synchronism therewith, and means the initial operation of which variably limits the operation of said mechanism, whereby the calling party controls the extent of said operations.

4. In a telephone system, means for performing a series of numerical switching operations, one for each digit of the called number, to extend connection toward the called subscriber, a visual indicator operating in synchronism with each of said operations, and mechanism the initial operation of which stops said indicator at any point in its operation, whereby the calling party may observe and control the said switching operations.

5. In a telephone system, a series of switches, means for automatically operating said switches to extend connection toward the called subscriber, and a mechanism by the initial operation of which the calling party terminates the operation of each switch in accordance with a digit of the called number, said mechanism being at rest during the actual operation of any switch, the actuation of said mechanism by the calling party alternating with the operations of said switches.

[Claims 6 to 48 not printed in the Gazette.]

1,172,367. DESTROYING INSECTS HARMFUL TO PLANT LIFE. ISIDOR KITSEE, Philadelphia, Pa. Filed Dec. 12, 1914. Serial No. 876,848. (Cl. 204—1.)



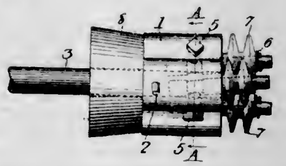
1. In the purifying of the soil from insects harmful to vegetable life, the method which consists in providing the soil with a compound carrying in combination a germicide element, electrolyzing said compound while in said soil, thereby freeing said element and causing through said element the destruction of obnoxious insects.

2. The method of destroying obnoxious insects their laryæ or eggs infecting the soil, which consists in impregnating the soil with a solution carrying an insecticide in a dormant state, electrolyzing the solution during the time that the same is in said soil thereby freeing the insecticide and making the same available for the destruction of said insects.

3. In the destruction of insects obnoxious to plant life, the improvement which consists in electrolyzing required compounds in the soil carrying the plants and causing, through the gases freed during the electrolytic action, the destruction of the insects infesting said soil.
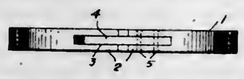
4. The method of destroying the larvæ or eggs of obnoxious insects which consists in providing the area inhabited by said larvæ or eggs with a compound carrying in chemical combination an insecticide element and electrolyzing said compound, thereby freeing said insecticide element.

1,172,368. FLUE-SCRAPER. ERNST KÖPKE, Honolulu, Hawaii. Filed Feb. 12, 1913. Serial No. 747,947. (Cl. 83—64.)



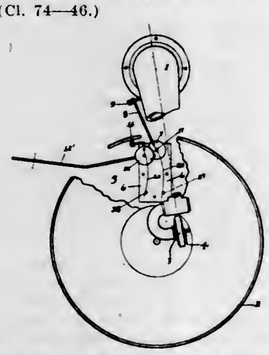
A flue scraper comprising a body portion, wheel supporting pins set in said body portion, each pin provided with an eccentric outer end projecting beyond said body portion, cutting wheels mounted on said eccentric outer ends, said pins adapted to be turned in said body portion to adjust said wheels, and means to clamp said pins in the body portion.

1,172,369. PISTON-RING. EMIL KOTTUSCH, Chicago, Ill., assignor to Arthur E. Stenzel, Congress Park, Ill. Filed June 21, 1915. Serial No. 35,220. (Cl. 121—108.)



A ring of the class described, comprising an annular ring, having longitudinal slots in the opposed ends thereof, said slots being considerably deeper on the outer surface than the inner surface and being of uniform width throughout and having parallel side walls and oblique end walls, said end walls being substantially straight and diverging from each other outwardly from the inner to the outer surface of the ring, a segmental insert having one end thereof slidably projecting into the slot in one end of the ring and rivets for securing the opposite extremity of the insert in the other slot, said segmental insert having inner and outer curved surfaces corresponding to the curve of the inner and outer surfaces of the ring and fitting flush with said inner and outer surfaces when the insert is in place in the ring, parallel side surfaces and oblique end edges corresponding to the oblique end walls of the slots and adapted to contact throughout with said oblique end walls when the ring is in compressed condition.

1,172,370. AUTOMATIC STOP MECHANISM FOR SOUND-REPRODUCING MACHINES. ERHARD KRAMM, Jr., Peoria, Ill. Filed Aug. 27, 1914. Serial No. 858,790. (Cl. 74—46.)



1. An automatic stop mechanism for sound reproducing machines, including a turn table, a swinging arm, a member mounted to oscillate and having an arm or extension adapted to be located in the path of movement of the swinging arm, so that said oscillatory member may be actuated thereby, and a second member mounted to oscillate and having a brake arm or member with means for normally tending to force the same into engagement with the turn table to stop the rotation of the same, said first mentioned oscillatory member having a cam shaped cut-out portion with a lug or projection at one end thereof, said second mentioned oscillatory member adapted to fit in said cut-out portion and having a recess or socket with which said lug or projection is adapted to engage whereby the brake arm or member is normally held in non-braking position, the engagement of the swinging arm with the arm or extension of the first mentioned oscillatory member being adapted to release said second mentioned oscillatory member from its locked condition, so that the brake arm or member may be forced against the turn table.

2. An automatic stop mechanism for sound reproducing machines including a turn table, a swinging arm, a pair of members mounted to oscillate, one of said oscillatory members having an arm or extension adapted to be positioned in the path of movement of the swinging arm, the other of said oscillatory members having a brake arm or member adapted to engage the turn table, coöperating parts on said oscillatory members whereby the brake arm or member may be held in a non-braking position, the oscillating mounting of each member including a pin having a head and an enlarged flange like portion on which the member fits loosely with a frusto-conical portion inclining downwardly located therebetween, a lug on each member and a spring for each member having one end held against movement and fitting against the frusto-conical portion of each pin with its other end engaging said lug on each member on the side opposite the side of the pin engaged, whereby the first mentioned oscillatory member is normally forced so that the arm or extension is moved toward the swinging arm and so that the second mentioned oscillatory member is normally moved toward a braking position.

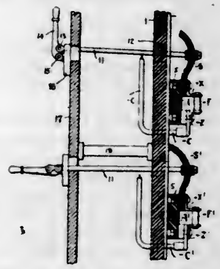
3. An automatic stop mechanism for sound reproducing machines, including a turn table, a swinging arm, a support, a pair of disks rotatably mounted on said support, one of said disks having a braking arm or extension and the other of said disks having an arm or extension adapted to be positioned in the path of movement of the swinging arm, said disks having coöperating locking parts whereby the brake arm or extension may be held in non-braking position, said rotatable mounting of the disks including a member extending above the surface of the disks, lugs on said support and a lug on each disk, and resilient means one for each disk engaging said lugs and said rotatable mounting member, whereby the disks are normally held in a braking position.

4. An attachment for sound reproducing machines, including a support, a pair of disks mounted to oscillate thereon, each of said disks having an arm or extension, one of said arms or extensions being provided with braking means, the oscillating mounting of said disks including a member extending above the surface of the disks, lugs on said support and lugs on said disks on the side opposite said lugs on said support, and resilient means one for each disk engaging one of said lugs on said support, and one of said lugs on said disks, and also engaging said oscillatory mounting on the side opposite to which it engages said lugs, whereby the disks are normally held in a braking position, said disks having coöperating parts whereby they may be locked in a non-braking position.

5. An automatic stop mechanism for sound reproducing machines, including a turn table, a swinging arm, a member mounted to oscillate and having an arm or extension adapted to be located in the path of movement of the swinging arm, so that said oscillatory member may be actuated thereby, and a second member mounted to oscillate and having a brake arm or member with means for normally tending to force the same into engagement with the turn table to stop the rotation of the same, said first mentioned oscillatory member having a cam shaped cutout portion with a lug or projection at one end thereof, said second mentioned oscillatory member adapted to fit in said cut-out portion and having a recess or socket with which said lug or projection is adapted to engage whereby the brake arm or member is normally held in non-braking position, the engagement of the swinging arm with the arm or extension of the first mentioned oscillatory member being adapted to release said second mentioned oscillatory member from its locked condition, so that the brake arm or member may be forced against the turn table, said second mentioned oscillatory member having a setting arm extending outwardly therefrom and providing means for oscillating said second mentioned oscillatory member so as to bring the lug or projection on the first mentioned oscillatory member into engagement with the recess or socket of the second mentioned oscillatory member to hold the brake in a non-braking position.

1,172,371. SWITCHBOARD. HUBERT F. KRANTZ, New York, N. Y., assignor to H. F. Krantz Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Sept. 27, 1911. Serial No. 651,565. (Cl. 175—298.)

1. A panel-board combining a board of insulating material; a positive and a negative bus-bar arranged parallel to each other and in a first plane parallel with said board; a first and a second positive terminal-piece located in a second plane containing said positive bus-bar and perpendicular to said board; a third and a fourth negative terminal-piece located in a parallel in a parallel third plane containing said negative bus-bar; the first positive and third negative terminal-pieces being in a fourth plane transverse to said other planes; a first and a second positive switch-blade arranged tandem-wise in the second plane; a third and a fourth negative switch blade arranged tandem-wise in said third plane; and means for causing said switch-blades to move in their respective planes into contact with their respective bus-bars.



2. A panel-board combining a board of insulating material; a series of parallel bus-bars all arranged in the same plane and located adjacent one side of said board; a part located at one side of the plane of said bars; a series of laminated resilient switch-blades spaced apart sidewise and located at one side of said board and supported by said part and each extending parallel with its respective bar at the same side of said board; means for moving said switch-blades in planes parallel with the longitudinal axes of said bus-bars to cause them to press endwise against said bus-bars; and means establishing connections between said switch-blades and branch-line circuits.

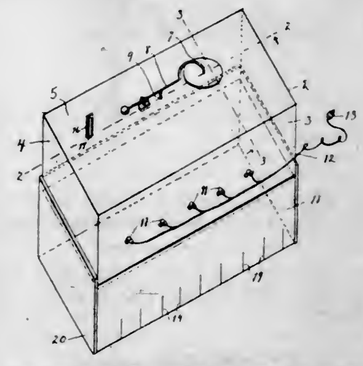
3. A panel board combining a board of insulating material; an elongated bus-bar mounted to extend along one face of said board; a series of switch-blades mounted in endwise succession adjacent said bus-bar and all arranged in alinement, said bus-bar and said succession of switch-blades being all positioned in a common plane arranged transversely to said board; actuating means for bringing one end of each of said switch-blades directly into contact with said bus-bar; a series of branch-line circuits; a number of insulating supports extending transversely of said bus-bars; and a series of connecting elements mounted on said supports also located in said plane establishing electrical connection between said circuit and said switch-blade, all of said corresponding elements being identically located and arranged with relation to said bus-bar.

4. A panel-board combining a fist strip of insulating material; a second strip of insulating-material spaced therefrom and extending parallel therewith; a base-board located in a different plane from that common to the two strips; a series of branch-line terminals of different polarities spaced along said first strip; a series of parallel elongated bus-bars of different polarities extending transversely to said strips, said bus-bars being spaced apart in correspondence with the spacing of said terminals; a second series of branch-line terminals of different polarities spaced along said second strip in correspondence with the spacing of said bus-bars; and a plurality of switch blades, each intervening between one of said terminals and its adjacent bus-bar.

5. A panel-board combining a series of parallel elongated bus-bars of different polarities spaced apart in the same plane; a number of parallel strips spaced apart rearward of said bus-bars and extending transversely thereto; a branch line terminal located on the rearward face of each strip adjacent its intersection with each bus-bar; and a plurality of switch-blades movable in planes transverse both to said above-mentioned plane and to said strips and parallel with said bus-bars and adapted to contact directly with said bus-bars.

[Claims 6 to 14 not printed in the Gazette.]

1,172,372. ELECTRIC BROODER. WILLIAM E. LANGSHAW, Olney, Pa. Filed Mar. 3, 1915. Serial No. 11,784. (Cl. 119—33.)



1. In a device of the character stated a housing consisting of a top having a flue opening therein, end walls and side walls, a textile fabric arranged over the lower or open side of the housing, sockets mounted in one of the side walls of the housing, electric light bulbs mounted in said sockets, a damper for normally closing the flue, a thermostat situated below the textile fabric for actuating said damper, a hover for supporting the housing comprising a back, end pieces, and cleats secured to said back and end pieces, said cleats forming the rest for the housing and a hover curtain secured to the edge of one of the side walls of the housing and depending therefrom to cover the open side of the hover.

2. In a device of the character stated a housing consisting of a top, end walls and side walls, a textile fabric arranged over the lower or open side of the housing, sockets mounted in one of the side walls of the housing, electric light bulbs mounted in said sockets, a hover for supporting the housing comprising a back, end pieces and cleats secured to said back and end pieces, said cleats forming the rest for the housing, a hover curtain secured to the edge of one of the side walls of the housing and depending therefrom to cover the open side of the hover and means within the hover for regulating or controlling the temperature of the compartments.

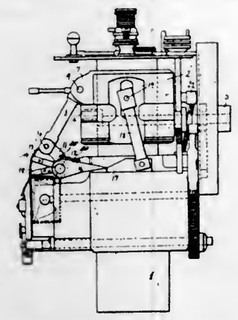
1,172,373. SEWING-MACHINE. JULIUS LARSEN, Copenhagen, Denmark. Filed July 16, 1912. Serial No. 709,806. (Cl. 112—29.)

1. In a sewing machine, a needle holder, a curved needle held by said needle holder, a presser foot serving as a guide for the needle, and a freely movable guide disposed between the presser foot and the holder which, if the curvature of the needle alters under pressure, moves downward owing to the pressure of the needle and supports the needle during its penetration of the work.

2. In a sewing machine, a needle holder, a curved needle held by said needle holder, a presser foot serving as a guide for the needle, a freely movable guide disposed between the presser foot and the holder, which, if the curvature of the needle alters under pressure, moves downward owing to the pressure of the needle, and a spring for returning the guide to its normal position when the needle assumes its normal curvature.

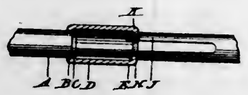
3. In a sewing machine, a needle holder, a curved needle held thereby, a presser foot also serving as a guide for the needle, a guide serving to support the needle between the

holder and the presser foot, an upright bar forming part of the machine, a collar slidably mounted on said bar,



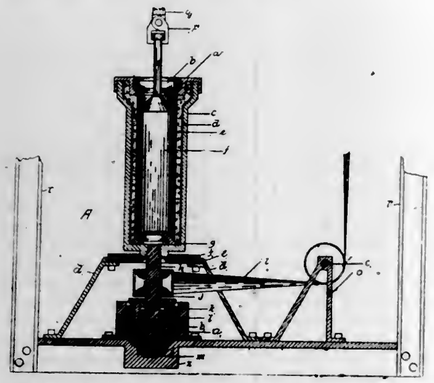
means for moving said collar, and a pivoted bar connecting said collar with the needle holder for operating the latter.

1,172,374. KEY RING OR HOLDER. WALTER A. LEIMER, Denver, Colo. Filed Dec. 11, 1914. Serial No. 876,684. (Cl. 59—99.)



A key-ring or holder whose ends are in alinement but spaced apart, in combination with a hollow sleeve member of even bore, containing flanges on its extremities, mounted to operate over one end of the ring and adapted to be moved across the aperture between the ends and to close the ends of said ring, one end being divided to form two spring members, each having a receiving channel to engage a flange on said movable sleeve member and tapered ends to said spring members to facilitate their connection with said sleeve member.

1,172,375. MACHINE FOR MAKING CONCRETE PIPE. LAURENCE E. MCCABE, Visalia, Cal. Filed Feb. 3, 1914. Serial No. 816,238. (Cl. 25—30.)



1. An apparatus for making hydraulic cement concrete pipe comprising a vertically disposed mold open at its upper end, and means for rotating said mold at high speed, a removable former in the lower end of said mold, a removable core within the mold above the former adapted to shape the interior of the pipe, and means for withdrawing the former together with the formed pipe after the pipe has sufficiently set.

2. An apparatus for making either wet or dry mix hydraulic cement concrete pipe, comprising a vertically disposed mold open at its upper end, means for rotating said mold at high speed, a removable lining within the mold, a removable former in the lower end of said mold, a removable core within the mold above the former adapted to shape the interior of the pipe, and means for withdrawing the core after the pipe has been formed, and for withdrawing the former and the formed pipe after the latter has sufficiently set.

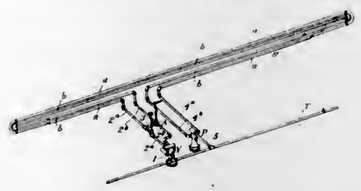
3. In a machine for making concrete pipe the combination of a rotatable spindle or support, a vertically disposed tubular mold mounted thereon open at its upper end, a removable core adapted to be inserted in the said mold to form a molding space between its outer wall and the inner wall of the mold, a socket shaping member removably attached to the upper end of the mold, means for rotating said mold and contained parts at high speed, and means for withdrawing the core from the mold, and for removing the molded pipe from the mold.

4. In a machine for molding tubular pipe the combination of a rotatable spindle, means for rotating said spindle at high speed, a tubular mold mounted upon the upper end of said spindle and rotated thereby, a cylinder adapted to fit within the mold, a former or pipe support within the lower end of said mold, and a core adapted to be inserted within said cylinder to form a molding space between the outer wall of said core and the said cylinder, means for removing the core, and means for removing the cylinder with the molded pipe, substantially as described.

5. In a machine for making concrete pipe the combination of a rotatable spindle or support, a vertically disposed tubular mold mounted thereon open at its upper end, a removable former in the bottom of said mold, a removable core within the said mold adapted to form a molding space between its outer wall and the inner wall of the mold, and a socket shaping mold member removably attached to the upper end of the mold, means for rotating said mold and contained parts at high speed, and means for withdrawing the core from the mold and for withdrawing the former and pipe from the mold.

[Claim 6 not printed in the Gazette.]

1,172,376. STEAM-HEATING SYSTEM. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed June 18, 1912. Serial No. 704,396. (Cl. 237—6.)



1. A heating system comprising a radiator divided into distinct sections, a supply pipe, means for selectively connecting said sections with said supply pipe in series or in multiple, and automatic means for varying the pressure in said sections to conform to the connection selected.

2. A heating system comprising a radiator divided into distinct sections, a supply pipe, means for selectively connecting said sections with said supply pipe in series or in multiple, and automatic means connecting said radiator sections for effecting variations in the pressure in said sections to conform to the connection selected.

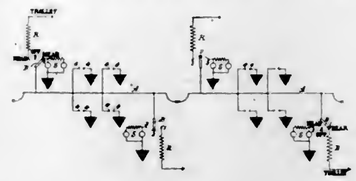
3. A heating system comprising a radiator formed of independent coils, a supply pipe, means for selectively connecting said coils with said supply pipe in series or in multiple, and automatic means for varying the pressure in said sections to conform to the connection selected.

4. A heating system comprising a radiator divided into distinct sections, a supply pipe, means for selectively connecting said sections with said supply pipe in series or in multiple, and a pressure trap connecting said radiator sections and provided with automatically operated means for effecting variations in the pressure in said sections to conform to the connection selected.

5. A heating system comprising a radiator divided into distinct sections, a supply pipe, a vapor trap controlling the passage of steam from said supply pipe, means for selectively connecting said sections with said supply pipe in series or in multiple, and a pressure trap connecting said radiator sections and provided with automatically operated means for effecting variations in the pressure in said sections to conform to the connection selected.

[Claims 6 to 14 not printed in the Gazette.]

1,172,377. CAR-DOOR SIGNAL SYSTEM. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed July 8, 1914. Serial No. 849,657. (Cl. 246—28.)



1. In a car door signal, the combination with a line wire, and ground connections therefor, of a source of current supply, means at one end of said line wire to selectively close the circuit to said source of power, or to said ground connections, a signal in each of the ground connections, and normally open ground branches from said line wire corresponding to and controlled by the respective doors of the car.

2. In a car-door signal system, the combination with a line-wire in the car, of a source of current-supply therefor, a grounded signal, branch-wires extending to the several doors of the car, and means for grounding each of said branches on the opening of the corresponding door.

3. In a car-door signal system, the combination with a line-wire in the car, of a source of current-supply therefor, a normally-energized signal in a grounded branch of said line-wire, and normally-open ground-branches for each door adapted to be closed by the opening of the corresponding door.

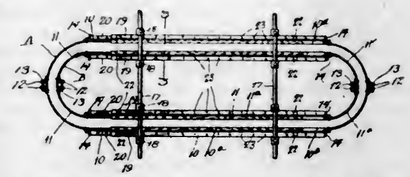
4. In a car-door signal system, the combination with a line-wire in the car, a source of current-supply connected thereto at one end of the car, a normally grounded signal at the opposite end, and normally-open ground branches for the respective doors adapted to be closed on the opening of a door.

5. In a car-door signal system, the combination with a line-wire in the car, of a source of current-supply and a grounded signal at each end of the car, switches at each end of the car for connecting the line-wire to the source of supply at one end and to the grounded signal at the other end, and branch ground-wires controlled by the respective doors of the car.

[Claims 6 and 7 not printed in the Gazette.]

1,172,378. FORM FOR CONCRETE TANKS. WILLIAM J. MCFARLAND, Griffith, Ind. Filed Apr. 11, 1914. Serial No. 831,124. (Cl. 25—130.)

1. A form for concrete tanks comprising two endless, parallel sheet metal walls, spaced apart, each wall comprising two similar halves, each consisting of two flat side portions, the one telescoping upon the other, and having quarter round end portions abutting against quarter round end portions of the other half, angle iron bars riveted to said end portions at their edges, bolts and nuts connecting said angle irons, and lengthwise extending reinforcement bars detachably secured upon the outer faces of said side portions, and arranged in pairs, those of each pair overlapping each other and being bolted together.

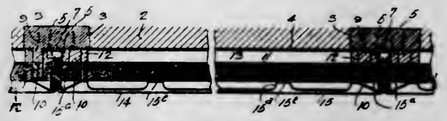


2. A form for concrete tanks comprising two endless, parallel sheet metal walls, spaced apart, each wall comprising two similar halves bolted together at the ends, each half consisting of two sheets, the one being adjustable lengthwise upon the other and each having quadrant ends, upright reinforcing bars secured to the outer faces of the walls, and lengthwise extending reinforcing bars detachably secured to said upright bars, and bolted together to form longitudinal reinforcements between the upright bars.

3. In a form for concrete tanks, two parallel endless walls, each comprising an endless, sheet metal wall consisting of two similar halves bolted together at their ends, each half comprising two flat sheets placed side by side, the one sheet having bent edges overlapping the edges of the other sheet, and each sheet having one end bent into the form of a quadrant abutting against the curved end of the opposite sheet, upright reinforcement members secured to the outer side of said wall, and lengthwise extending reinforcing bars detachably secured to said upright bars and extending therebetween, and having a plurality of bolt holes for the reception of bolts for bolting them together in different positions of adjustment.

4. In a form for concrete tanks, an endless, sheet metal wall formed of two similar halves, each having a straight middle portion curved end portions of quadrant form opposing each other, upright angle iron bars riveted to said end portions, adjacent their marginal edges intermediate end pieces extending between said angle iron bars, and bolts and nuts for connecting said angle iron bars and drawing them against the intermediate end pieces.

1,172,379. ACOUSTIC-CONTROLLING APPARATUS. JACOB MAZER, Pittsburgh, Pa. Filed July 14, 1913. Serial No. 778,964. (Cl. 20—4.)



1. In acoustical controlling apparatus, the combination with the wall, of an acoustical unit comprising an open-faced frame having a sound-absorbing element therein, said frame adapted to be secured to a wall, and a removable covering frame having a sound-absorbing material stretched thereover and adapted to be slipped into place over said foundation frame after the latter has been secured in position, said unit being so constructed that it may have a predetermined acoustical value due to the combined acoustical values of the foundation element and the covering element.

2. In acoustical controlling apparatus, an acoustical unit comprising an open-faced frame having a sound-absorbing element therein, said element being adapted to be altered in its acoustical value, and a separate covering frame having a sound-absorbing material stretched thereover and adapted to be slipped into place over said foundation frame after the latter has been secured in position.

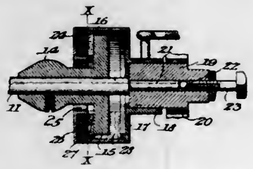
3. In acoustical controlling apparatus, an acoustical unit comprising a foundation frame having therein a sound-absorbing element which may be of predetermined and of alterable acoustical value, said foundation frame with its sound-absorbing element being adapted to be secured to the wall in any desired manner while retaining its acoustical value, a removable covering frame having a sound-absorbing material stretched thereover and adapted to be slipped into place over said foundation frame after the latter has been secured in position whereby the acoustical value of the total unit will be the combined acoustical effects of the foundation element and of the covering element.

4. In acoustical controlling apparatus, an acoustical unit comprising a foundation frame having a sound-absorbing element secured therein, a removable covering frame having a sound-absorbing material stretched thereover, said material being susceptible of decoration before it is placed in final position on the foundation frame, means whereby said covering element may be secured in position over said foundation element whereby the acoustical value of the covering element will be secured without alteration when the latter is placed in final position.

5. In acoustical controlling apparatus, an acoustical unit comprising a foundation frame, a sound-absorbing element therein, and means for securing said element in place in said foundation frame, and means whereby said foundation element and its absorbent material may be secured to the wall without altering the acoustical value of said parts, and a finishing covering for said unit.

[Claims 6 and 7 not printed in the Gazette.]

1,172,380. SPEED-REGULATOR FOR PHONOGRAPHS AND THE LIKE. ALBERT F. MADDEN, Newark, N. J., assignor to Edmund H. Lansing, Boston, Mass. Original application filed July 7, 1914, Serial No. 849,432. Divided and this application filed Oct. 31, 1914. Serial No. 869,644. (Cl. 74—45.)



1. A speed regulator for phonographs and the like comprising in combination a centrifugal device and a friction brake connected therewith, comprising an absorbent rake body and a disk drawn together by said centrifugal device and immersed in oil.

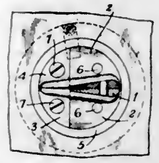
2. A speed regulator for phonographs and the like comprising in combination a rotary part to be driven, a centrifugal device operatively connected therewith, stationary and movable friction members engaging each other, one having an engaging face of absorbent material, said movable friction member controlled and rotating with said centrifugal device, and a casing inclosing said friction members and adapted to contain a body of oil in which said friction members are immersed.

3. A speed regulator for phonographs and the like comprising a centrifugal device, and a variable friction brake operated thereby, said friction brake comprising rotary and stationary parts opposed to each other and immersed in oil, one of said parts being formed of absorbent material and having its operating surface interrupted.

4. A speed regulator for motor driven phonographs and the like comprising in combination a rotary part to be driven and a speed governor therefor, said speed governor having a variable friction brake and said variable friction brake comprising rotary and stationary parts opposed to each other and immersed in oil, one of said parts being formed of absorbent material and having its operating surface grooved.

5. A speed regulator for phonographs and the like comprising in combination rotary part and a variable friction brake operatively related thereto, said variable friction brake having rotary and stationary parts opposed to each other and immersed in oil, the stationary part being formed of absorbent material and having its operating surface radially grooved.

1,172,381. STANDARD-SUPPORT FOR CLOTH-CUTTING MACHINES. HYMAN MAIMIN, New York, N. Y. Filed Oct. 6, 1915. Serial No. 54,320. (Cl. 248—41.)



1. A standard for a cloth cutting machines, in combination with a nest plate set into the base plate of the machine and to which the standard is secured, and a throat plate in the nest plate in front of the standard.

2. A standard for a cloth cutting machine, in combination with a nest plate set into the base plate of the machine and screws extending upwardly through the nest plate into the base of the standard to secure the standard to the nest plate, and a throat plate in the nest plate in front of the standard.

1,172,382. TELEPHONE ATTACHMENT. HENRY C. MERRITT, Jr., Tuckahoe, N. Y. Filed Oct. 28, 1914. Serial No. 869,136. (Cl. 211—7.)



1. A telephone attachment comprising a supporting element, means for securing said supporting element in spaced relation to the base of a desk telephone, a telephone accessory carrying element slidably mounted upon said support, and means carried by said accessory carrying element adapted to engage the base of a telephone to retain said element in closed position.

2. A telephone attachment comprising a supporting element, means for securing said supporting element in spaced relation to the base of a desk telephone, an accessory carrying element slidably mounted upon said supporting element, means for limiting the outward movement of said accessory carrying element, and means carried by said accessory carrying element adapted to engage the base of the telephone to retain said element in closed position.

3. A telephone attachment comprising a support, means for securing said support in spaced relation to the base of a desk telephone, a telephone accessory carrying element slidably mounted upon said support, arms carried by said accessory carrying element, and means carried by said supporting member adapted to be engaged by said arms to limit the outward movement of said acessory carrying element.

4. A telephone attachment comprising a support, means for securing said support in spaced relation to the base of a desk telephone, a telephone accessory carrying element slidably mounted upon said support, arms carried by said accessory carrying element, means on said support adapted to be engaged by said arms to limit the outward movement of said accessory carrying element, and means carried by said carrying element adapted to engage the base of a desk telephone to retain said element in closed position.

5. A telephone attachment comprising a support, means for securing said support to the base of a desk telephone, a telephone accessory carrying element slidably mounted upon said support, and a spring clip carried by said accessory carrying element adapted to engage the base of a telephone to retain said carrying element in closed position.

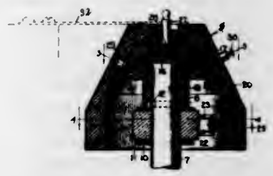
[Claim 6 not printed in the Gazette.]

1,172,383. LUBRICATING GREASE-CUP. FREDERICK MILLER, Oakland, Cal. Filed Oct. 4, 1913. Serial No. 793,431. (Cl. 184—98.)



An automatic lubricating cup for shaft bearings comprising in combination a hollow conical body portion, a threaded nipple on the small end of said body portion adapted to engage said bearing, a guide bar extending across the large end of said body portion, a reduced neck having screw threads thereon, a screw threaded cap adapted to fit said neck, a U-shaped yoke attached to the inside of said cap, said guide bars and said yoke having alining openings therethrough, a pin extending through said openings with the lower end thereof resting on the shaft of said bearing, an enlarged head on said pin seated within said yoke, and a spring interposed between said head and said cap.

1,172,384. TIMER AND DISTRIBUTER. DEXTER EDWARD MOULTON, Pierre, S. D. Filed Apr. 3, 1915. Serial No. 18,961. (Cl. 123—167.)



1. In a timer and distributer, a rotatably mounted sleeve of insulating material, symmetrically disposed contact members carried by said sleeve, a frustocone-shaped insulating member on said sleeve, a metallic contact strip on the lateral surface of said frustocone-shaped member extending to the central part of the small base of said member, an insulating casing having a cone-shaped recess fitting snugly over the frustocone-shaped member, symmetrically disposed contact points carried by said casing and adapted to be engaged by said strip on the lateral surface of the frustocone-shaped member when the same is rotated through the medium of the sleeve, a binding post carried by said casing and in engagement with the extension of the strip, a second binding post associated with the casing, a swinging arm carried by said post within the casing, means for maintaining said swinging arm in contact with the sleeve, whereby the contacts carried by the sleeve, will consecutively engage said arm, and means for turning said casing on the frustocone member.

2. In a timer and distributer, a vertical shaft, an insulating sleeve carried by the shaft and mounted to rotate therewith, symmetrically disposed contacts carried by said sleeve in engagement with the shaft, an insulating frustocone-shaped member engaging the upper part of the sleeve, said member being adapted to rotate with said sleeve, a metallic strip on the lateral surface of said frustocone-shaped member, said metallic strip extending to the central part of the smaller base of said frustocone-shaped member, an insulating dome having a cone-shaped recess fitting over the frustocone-shaped member, resilient means maintaining the engagement between said dome and frustocone-shaped member, symmetrically disposed contact points carried by said dome and adapted to be engaged by the strip when the frustocone-shaped member is rotated, a binding post in the top of the dome in contact with the strip portion in the smaller base of the frustocone-shaped member, a second binding post projecting through the lateral surface of the dome, a swinging arm carried by said second binding post within the dome adjacent the contacts in the sleeve, and a coil spring for maintaining said arm against the sleeve so that the contacts therein will engage the arm when the sleeve is rotated, said dome having means whereby the same can be turned on the frustocone-shaped member, substantially as and for the purpose set forth.

3. In a timer and distributer, a rotatably mounted insulating member having a frustocone-shaped head, a dome of insulating material fitting over said member and having a cone-shaped recess fitting snugly over the frustocone-shaped head, a resilient member maintaining the engagement of the dome with said head, a metallic strip carried by said head, contact points carried by said dome and adapted to be engaged by said strip intermittently when the member is rotated, a binding post in the top of the dome engaging the strip, a second binding post carried by the dome, an arm associated with said binding post and mounted to swing to and from said member, means for maintaining said arm in contact with said member, symmetrically disposed contacts carried by said member below the head adapted to engage said arm intermittently when said member is rotated, the number of contacts carried by the member and those carried by the dome being the same, and means for turning said dome on the frustocone-shaped head.

4. In a timer and distributer, a rotatably mounted insulating member having a frustocone-shaped head, and insulating, funnel-shaped casing fitting over said member and engaging said head, symmetrically disposed contact points carried by said casing, a metallic strip carried by said head and adapted to intermittently engage said contacts when said member is rotated, a binding post in the top of the casing engaging the strip, a second binding post carried by the casing, an arm associated with the last-mentioned binding post, contact points carried by the member below the head and adapted to engage said arm intermittently, and means for displacing the casing angularly on the member.

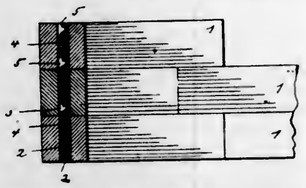
5. In a device of the class described, a rotatably mounted distributer of insulating material in the shape of a frustocone, an insulating, funnel-shaped casing covering said distributer and engaging the same, a resilient member maintaining the engagement between the distributer and casing, means carried by the casing and distributer whereby contacts are established at proper intervals, and means preventing the rotation of the casing on the distributer whereby the same can be displaced through an angle thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,172,385. TOY BUILDING-BLOCK. PAUL MÜLLER, New York, N. Y. Filed Nov. 12, 1915. Serial No. 60,999. (Cl. 46—35.)

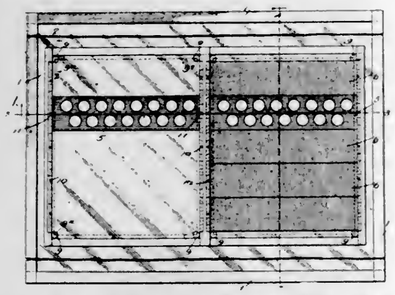
1. A toy building block provided with a threaded hole extending completely therethrough, and of a grub

screw engaging said hole and adapted to be countersunk therein, the length of the screw being less than the length of the hole, so that a clearance is adapted to be formed above said screw within said hole.



2. A toy comprising a plurality of superposed blocks having alined threaded holes extending therethrough from top to bottom, and a plurality of countersunk grub screws that engage the threads of adjoining holes at the junction between the blocks, while a clearance is formed between the several screws.

1,172,386. PRINTING DEVICE. ASHLEY GUY OGDEN, Baltimore, Md. Filed July 23, 1914, Serial No. 852,641. Renewed July 10, 1915. Serial No. 39,175. (Cl. 95—77.)



1. In a printing device, a frame, a glass plate carried by said frame, removable stop members carried by the glass plate for holding a sensitized plate in position, a negative slidably disposed on said frame and movable therealong to cover portions of the frame.

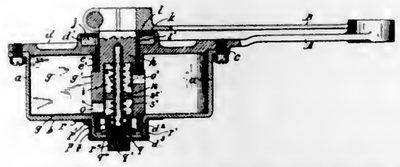
2. In a printing device, a frame, a glass plate carried by said frame, removable stop members carried by the glass plate for holding a sensitized plate in position, a negative slidably disposed on said frame and movable therealong to cover portions of the frame, and means for covering the exposed portions of the plate not covered by the negative.

3. In a printing device, a frame, a glass plate carried by said frame, removable stop members carried by the glass plate for holding a sensitized plate in position, a negative slidably disposed on said frame and movable therealong to cover portions of the frame, and means for covering the exposed portions of the plate not covered by the negative, said last-named means comprising a series of opaque slides of same width as the negative.

4. In a printing device, the combination with a negative, of a frame having a pair of parallel grooved guide members, the ends of said negative being arranged to slide in the grooves in said guide members, a glass plate disposed on one side of the negative and in close engagement therewith, and a plurality of opaque slides of the same width as the negative and arranged to cover the portions of the glass plate not covered by the negative.

5. In a printing device, the combination with a negative, of a frame having a pair of parallel grooved guide members, the ends of said negative being arranged to slide in the grooves in said guide members, a glass plate disposed on one side of the negative and in close engagement therewith, a plurality of opaque slides of the same width as the negative and arranged to cover the portions of the glass plate not covered by the negative, a series of removable stop members carried by said glass plate and having cut away portions arranged to receive the corners of a sensitized plate for holding the latter in position.

1,172,387. VEHICLE SHOCK-ABSORBER. ADOLPH J. PETELER, Yonkers, N. Y., assignor to John F. McGuire, New York, N. Y. Filed Jan. 13, 1915. Serial No. 1,968. (Cl. 21—105.)



1. A shock-absorber having a cylindrical casing with packing-socket upon the top, abutments fixed within the casing, a spindle having wings movable between the abutments and extended outward through the packing-socket, a yielding packing in the bottom of the socket, a wearing washer of yielding material upon the top of the packing, and a collar upon the spindle fitted to rest upon such washer to make a tight joint therewith.

2. A shock-absorber having a cylindrical casing with a removable cover having a packing-socket in the center, abutments fixed within the casing, a spindle having wings movable between the abutments and the spindle extended outwardly through the packing-socket, a yielding packing in the bottom of the socket, a wearing-washer of yielding material upon the top of such packing, and a collar made separate from the spindle and fitted tightly to the spindle in contact with the said washer, thus holding the cover between the said collar and wings.

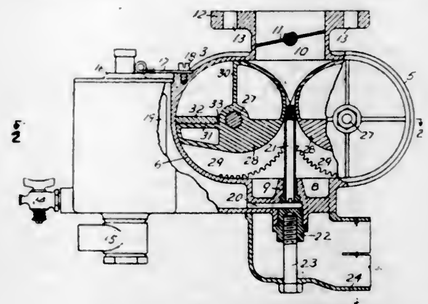
3. A shock-absorber having a cylindrical casing with a removable cover having a packing-socket in the center, abutments fixed within the casing, a spindle having wings integral therewith movable between the abutments, and the spindle extended outwardly therefrom, a yielding packing in the bottom of the socket, a wearing-washer of yielding material upon the top of such packing, and a collar having a hub forced tightly upon the spindle and a flange fitted to contact with the wearing-washer, thus holding the cover between the said flange and the integral wings.

4. In a shock-absorber, the combination, with a cylindrical casing having a packing socket upon the top, of abutments fixed within the casing, a spindle having wings movable between the abutments and extended outward through the packing-socket, a packing fitted to the socket and the said spindle, the spindle being hollow at its inner end with ports extended into its bore from opposite sides of each wing, said ports being at different points in the length of the spindle, an annular piston movable within the bore between the two points, a rod fixed in the center of the bore to guide the pistons, and spiral-springs operating upon opposite sides of the piston to hold it normally between the ports, and yielding under the pressure of the liquid forced through the ports by the movement of the wings toward the abutments.

5. A shock-absorber having a cylindrical casing with a packing-socket upon the top and a bushed bearing at the bottom of the socket, abutments fixed within the casing, a spindle having wings movable between the abutments and extended outward through the bearing and the packing-socket, a yielding packing in the bottom of the socket next the bearing, and a collar upon the spindle fitted to rest upon such packing to make a tight joint therewith, whereby the fluid in the casing is enabled to lubricate the bearing at all times.

[Claims 6 and 7 not printed in the Gazette.]

1,172,388. CARBURETER. SYDNEY I. PRESCOTT, Brooklyn, N. Y. Filed Feb. 12, 1915. Serial No. 7,678. (Cl. 48—155.1.)



1. In a carbureter, the combination with an air intake having a pair of members movable in two directions, of coöperating pneumatic means for retarding the movement of said members in both directions, and a fuel nozzle located between and coöperating with said members.

2. In a carbureter, the combination of an air intake having a pair of rocking members, of coöperating pneumatic means for retarding the movement of said members in both directions, and a fuel nozzle located between and coöperative with said members.

3. In a carbureter, the combination with an air intake having a pair of members adapted to be moved in one direction by the suction of an engine in connection with which the device is used and to be moved in the opposite direction by a force other than that of suction, of coöperating means for retarding the movement of said members in both directions, and a fuel nozzle located between and coöperating with said members.

4. In a carbureter, the combination with an air intake having a pair of members adapted to be moved in one direction by the suction of an engine in connection with which the device is used and to be moved in the opposite direction by gravity, of coöperating means for retarding the movement of said members in both directions, and a fuel nozzle located between and coöperating with said members.

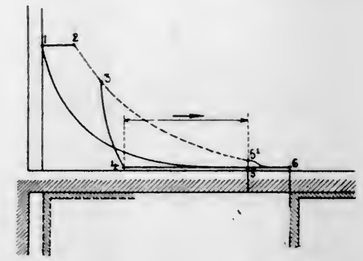
5. In a carbureter, the combination with an air intake having a pair of members adapted to be rocked in one direction by the suction of an engine in connection with which the device is used and to be rocked in the opposite direction by gravity, of coöperating means for retarding the movement of said members in both directions, and a fuel nozzle located between and coöperating with said members.

[Claims 6 to 19 not printed in the Gazette.]

1,172,389. STARTING TWO-STROKE INTERNAL-COMBUSTION ENGINES. THEODOR REUTER, Winterthur, Switzerland, assignor to Busch-Sulzer Bros. Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 9, 1911. Serial No. 601,716. (Cl. 123—181.)

1. A method of starting combustion motors by compressed air which consists in admitting compressed air to the motor cylinder interrupting the expansion of such air therein before the end of the expansion stroke and prior to the point at which products of combustion are released during normal operation, whereby to prevent excessive decrease of temperature and thereupon introducing and compressing a gas in the cylinder for combustion.

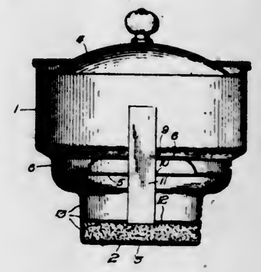
2. A method of starting combustion motors which comprises admitting a compressed fluid to the motor cylinder, allowing the same to expand against the piston, interrupting such expansion before the end of the expansion stroke and prior to the point at which products of combustion are released during normal operation, whereby to prevent excessive decrease of temperature in the cylinder, and in a following stroke admitting and compressing in such cylinder the material for the combustion charge.



3. A method of starting two stroke combustion motors which comprises expanding a compressed fluid in the motor cylinder, interrupting such expansion before the end of the expansion stroke, admitting a warmer gas to the cylinder during the remainder of such stroke, and in a following compression stroke compressing an element of the combustion charge in said cylinder.

4. A method of starting combustion motors by compressed air, which consists in admitting compressed air to the motor cylinder interrupting the expansion of such air therein before the end of the expansion stroke to prevent excessive decrease of temperature, and thereupon admitting warmer gas to the cylinder during the remainder of such stroke.

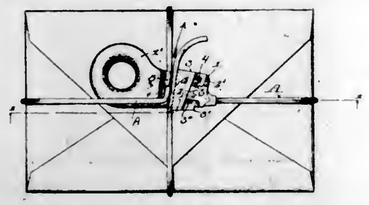
1,172,390. COFFEE-INFUSER. ISAAC D. RICHHEIMER, Chicago, Ill. Filed Nov. 2, 1914. Serial No. 869,771. (Cl. 53—3.)



1. In a coffee infusing device, the combination of a receptacle provided with a perforated bottom adapted to support a charge of coffee, perforated means adapted to spread the water as it is supplied to the receptacle, a guide mounted on said spreading means in spaced relation therewith, perforated means slidably mounted in said guide and spreading means and adapted to rest upon the charge of coffee and prevent it from floating in the water, and means for temporarily locking said spreading means and said slidably mounted means within said receptacle.

2. In a coffee infusing device the combination of a receptacle, having a lower portion of reduced size whereby it is adapted to be inserted in a suitable receiving means, the reduced portion forming a shoulder, a perforated bottom at the extremity of said reduced portion adapted to support a charge of coffee, a perforated plate for spreading the water as it is supplied to said receptacle, adapted to be supported by said shoulder, a guide mounted on said spreader plate, a standard slidably mounted in said guide and sprender plate, and a perforated plate carried by said standard and adapted to rest on the charge of coffee and prevent it from floating in the water.

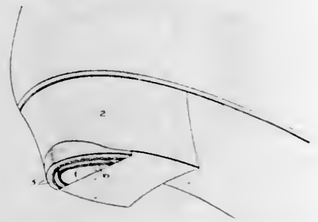
1,172,391. TIE-PLATE. EDGAR E. ROBERTS, Jackson, Tenn., assignor of one-half to Henry Damerell, Detroit, Mich. Filed May 22, 1914. Serial No. 840,290. (Cl. 24—18.)



1. A cord tie comprising a base having one end portion provided with a cord-end engaging slot, said base having a slot extending transversely thereacross, one wall of the slot being obliquely disposed and provided with an overhanging lip, a wedge guide in the slot beneath the lip, a slidable wedge in the channel and having a slot in its rear wall that is engaged by the guide, the opposite side wall of the channel forming a stationary gripping jaw that coöperates with the wedge to engage a cord and above said stationary jaw, the wall of the channel being provided with a cord-receiving groove.

2. A package tie comprising a base provided with a knot-engaging portion at one end, said base having a transversely extending channel formed therein, one wall of said channel being oblique and provided with an overhanging lip, the opposite wall of said channel having a gripping surface and above and parallel with the said gripping surface being provided with a cord-receiving groove, and a movable jaw mounted within the channel under the lip thereof and coöperating with the gripping surface.

1,172,392. CUSHION HEEL-PLATE. HUGH G. ROBINSON, Oakland, Cal. Filed Sept. 23. 1915. Serial No. 52,205. (Cl. 36—75.)

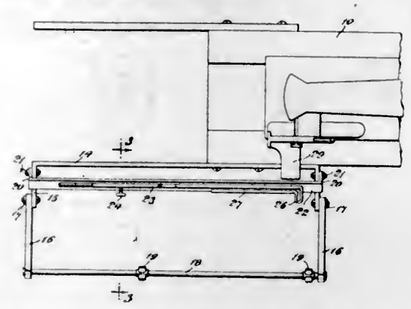


1. A soft rubber heel plate tapering toward each end and inward and having embedded and vulcanized therein close to the outer edge an approximately semi-circular metallic insert having front and rear continuous walls and a groove between said walls, each wall being tapered to both ends which terminate in the front edge of the wear plate.

2. A soft rubber heel plate tapering toward each end and inward and having embedded and vulcanized therein an approximately semi-circular metallic insert having front and rear continuous walls and a groove between said walls, the rear wall being thick enough to permit deep recesses to be formed in the rear surface of same to firmly secure it to the rubber, said walls being each tapered to both ends which terminate in the front edge of the wear plate.

3. A soft rubber heel plate having a concave upper surface that permits it to fit snugly against the worn off rear surface of the shoe heel, and a rounded rear side to correspond with the shape of the heel tapering toward each end and inward and having embedded and vulcanized therein an approximately semi-circular metallic insert having front and rear continuous walls and a groove between said walls, the rear wall being formed with recesses in its rear surface to firmly secure it to the rubber, the face of said walls being roughened or corrugated to prevent slipping and each wall being tapered to both ends which terminate in the front edge of the wear plate.

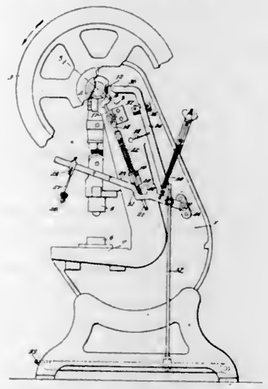
1,172,393. SEWING-MACHINE ATTACHMENT. ABRAHAM ROSEN, New York, N. Y., assignor to Silberstein-Rosen and Sons, New York, N. Y. Filed May 24, 1915. Serial No. 29,966. (Cl. 112—9.)



1. In a strip guiding attachment, a frame, a horizontal rail, bars pivoted to said frame carrying said rail whereby it may be raised or lowered, guides adjustable lengthwise on said rail, a bar having downturned slotted ends pivoted exteriorly of said frame, means for securing said bar in an adjusted position, a looped fabric folder having an open outer end, adjustable lengthwise of said bar and, means for maintaining said folder in an adjusted position on said bar.

2. In a strip guiding attachment, a frame, an adjustable support rail over which the fabric passes, guides movable on said rail, a folder into which the fabric may be freely entered from one end thereof, supports for said folder, said supports being adjustable angularly, vertically and laterally with respect to said frame, and means for securing said folder in an adjusted position.

1,172,394. SAFETY ATTACHMENT. EMIL ROTH, Cleveland, Ohio, assignor to The Cleveland Foundry Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 18, 1914. Serial No. 851,706. (Cl. 164—107.)



1. In a safety guard attachment for machines the combination, with a guard carrying member, of a manually operable member connected to the guard carrying member, a clutch for the machine, a clutch releasing member, said guard carrying member being independently movable with relation to the clutch releasing member until the guard is moved substantially to its protective position,

additional movement of the guard carrying member serving to actuate the clutch releasing member, a latch connected to said guard carrying member and adapted to lock the same in protective position, and striking means carried by the machine and adapted to release said latch at a predetermined time in the machine operation.

2. In a safety guard attachment for machines, the combination, with a guard carrying member and a manually operable member connected thereto and arranged to move the same into protective position, of a clutch releasing member operatively connected to said guard carrying member and arranged to be actuated only toward the terminating of the movement of said guard member into protective position, means independent of said manually operable member for retaining said guard in protective position, and means opeartive by the movement of the machine for disengaging said first means and restoring said guard to unprotective position in fixed phase relation with the machine operation.

3. In a safety guard attachment of the character set forth, the combination, with a guard carrying member, a clutch releasing member, and connections between said members whereby the former will be moved to releasing position upon the arrival of the latter at protective position, of means operative substantially simultaneously with the actuation of said clutch releasing member for locking said guard carrying member in protective position, and means operated by the clutch driven mechanism for unlocking said guard carrying member at a predetermined time in the movement of such mechanism.

4. In a safety guard attachment of the character set forth, the combination, with a guard carrying member, a clutch releasing member, and connections between said members whereby the former will be moved to releasing position upon the arrival of the latter at protective position, of means operative substantially simultaneously with the actuation of said clutch releasing member for locking said guard carrying member in protective position, means operated by the clutch driven mechanism for unlocking said guard carrying member at a predetermined time in the movement of such mechanism, and means for preventing the movement of said guard carrying member to unprotecting position even after such unlocking except simultaneously with the return movement of said clutch releasing member toward engaging position.

5. In a safety guard attachment of the character set forth, the combination, with a guard carrying member and a clutch releasing member operatively connected thereto so as to be actuated upon the arrival of said first member at protective position, of a latch device connected to said guard carrying member and adapted to secure the same in protecting position, and a disengaging member carried by the clutch driven mechanism and adapted to engage said latch member at a predetermined point in the operation of said mechanism whereby said guard carrying member is unlocked.

[Claims 6 to 8 not printed in the Gazette.]

1,172,395. ELECTRIC SIGNAL FOR AUTOMOBILES. RAYMOND B. RUDY, Niagara Falls, N. Y. Filed Mar. 3, 1915. Serial No. 11,707. (Cl. 177—337.)

1. In a signal for automobiles the combination of a casing; three electro-magnets in said casing with their poles located substantially 90° apart on a circle, leaving a space of substantially 180° between two consecutive poles; a pivot passing through said circle; a transparent bulls eye serving as a tail lamp concentric with said circle; an armature carried by said pivot adapted to be brought opposite each pole at different times and to occupy a mid position in said space when said magnets are not excited; a signal carried by said pivot and moving with said armature; electric circuits through said magnets; and means under the control of the operator for energizing and deënergizing each magnet at will and thereby causing the signal to assume any one of four predetermined positions, substantially as described.

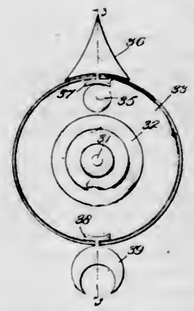
2. In a signal for automobiles the combination of a casing; three electro-magnets in said casing with their poles located substantially 90° apart on a circle, leaving a space of substantially 180° between two consecutive poles; a pivot passing through said circle; a transparent bulls eye serving as a tail lamp concentric with said circle; an armature carried by said pivot adapted to be brought opposite each pole at different times and to occupy a mid position in said space when said magnets are not excited; a signal carried by said pivot and moving with said armature; electric circuits through said magnets; means under the control of the operator for energizing and deënergizing each magnet at will and thereby causing the signal to assume any one of four predetermined positions, and turning said bulls eye; a lamp for illuminating said bulls eye; an armature carried by said pivot adapted to be brought opposite each pole at different times and to occupy a mid position in said space when said magnets are not excited; a signal carried by said pivot and moving with said armature; electric circuits through said magnets; means under the control of the operator for energizing and deënergizing each magnet at will and thereby causing the signal to assume any one of four predetermined positions, and turning said bulls eye; a transparent bulls eye concentric with said casing and serving as a tail lamp in said casing; a pivot on which said bulls eye turns; a lamp for illuminating said bulls eye; an armature carried by said pivot; a plurality of electromagnets for attracting said armature to different predetermined positions, and turning said bulls eye; and a transparent signal member rigid with said bulls eye and adapted to turn with said bulls eye, substantially as described.

3. In an automobile signal the combination of a casing; a transparent bulls eye concentric with said casing and serving as a tail lamp in said casing; a pivot on which said bulls eye turns; an armature carried by said pivot; a plurality of electromagnets for attracting said armature to different predetermined positions, and turning said bulls eye; a transparent signal member rigid with said bulls eye and adapted to turn with said bulls eye; a second signal member in fixed relation to said transparent signal member adapted to be turned with said bulls eye and armature; and means under the control of the operator for energizing each magnet at will, substantially as described.

4. In an automobile signal the combination of a casing; a transparent bulls eye concentric with said casing serving as a tail lamp in said casing; a pivot on which said bulls eye turns; a lamp for illuminating said bulls eye; a reflector in said casing; an armature carried by said pivot; a plurality of electromagnets for attracting said armature to different predetermined positions, and turning said bulls eye; a transparent signal member rigid with said bulls eye and adapted to turn with said bulls eye; a second signal member in fixed relation to said transparent signal member adapted to be turned with said bulls eye and armature; and means under the control of the operator for energizing each magnet at will, substantially as described.

5. In a signal for automobiles the combination of a casing; three electro-magnets in said casing having their poles located in a circle substantially 90° apart; a pivot member passing through the center of said circle and having an armature rigid therewith; a bulls eye inclosed by said casing serving as a tail lamp fixed to said pivot member and turning therewith; an annular opaque member fixed to said bulls eye and turning with the latter; a transparent member fixed to and turning with said opaque member; and a lamp for illuminating said bulls eye and transparent member during their movements, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]



1,172,396. VALVE. AUGUSTUS E. SCHLIEDER, Detroit, Mich. Filed Mar. 27, 1913. Serial No. 757,144. (Cl. 137—32.)

1. A valve comprising a metal head having a central orifice therethrough, a steel stem fitting within said

orifice and having a depression, said orifice being enlarged at one end to form a recess whose base is in line with the lower wall of said depression, and a welding substance merged with the metals of the head and stem and entering said depression.



2. A valve comprising a head having a central orifice therethrough, a stem having an annular groove near its upper end and fitting within said orifice, said orifice being enlarged at one end, said stem projecting into the enlarged portion of said orifice, and a welding metal in said enlarged portion merged with the metals of said head and stem and entering said annular groove.

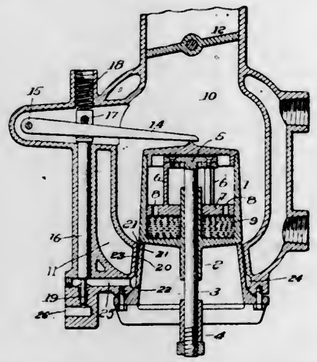
3. A valve comprising a metal head having a central orifice extending therethrough, a metallic stem fitting into said orifice and extending partially through the head, the end of said stem being fused and the orifice being filled with metal to unite with the fused end of the stem, substantially as described.

4. A valve for internal combustion engines comprising a head having a central orifice therethrough, a stem fitting within said orifice and extending into the head, said orifice being enlarged at one end and said stem projecting into the enlarged portion of said orifice, the end of said stem being fused within said orifice to partially fill the enlarged portion thereof, and the remaining portion of the orifice being filled with metal which unites with the fused portion of said stem, substantially as described.

5. A valve for internal combustion engines comprising a cast-iron head having a central orifice therein terminating at one end in a flaring recess, a steel stem fitting into said orifice, the end of said stem and the walls of said orifice being fused together and uniting to form a homogenous mass, and the shape of said recess causing the end of said stem when fused to assume a wedge form, thereby locking it in said orifice, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,172,397. CARBURETER. CARL F. SCHULZ, New York, N. Y. Filed Dec. 14, 1911. Serial No. 665,619. (Cl. 48—148.)



1. In a carbureter, a suction valve comprising a hollow body, a dash pot piston disposed therein, a stem connected to said piston and extending outwardly of such body, such body being provided with a bearing for such stem located in such position relatively to the inner walls thereof as to prevent leakage of liquid therefrom.

2. In a carbureter, a suction valve comprising a hollow body adapted to contain liquid, a dash pot piston in such body, a stem carrying the piston and extending outwardly of the said body, and a sleeve carried by the bottom of such body and extending inwardly thereof a sufficient distance that the open end thereof is above the normal surface level of the dash pot liquid in any position of the carbureter.

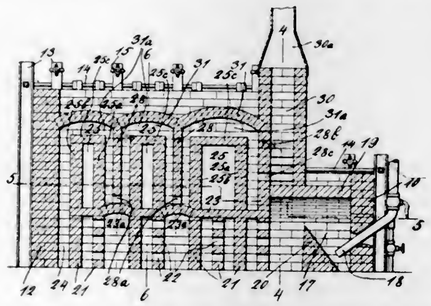
3. In a carbureter, the combination with a mixing chamber having an air inlet, of a suction valve for controlling the air inlet, a vaporizing chamber opening into the mixing chamber adjacent the air inlet, a fuel conduit leading into said vaporizing chamber, a heat jacket surrounding the mixing chamber and vaporizing chamber and means actuated by the suction valve for measuring the fuel proportionate to the air supply.

4. In a carbureter, the combination with a mixing chamber having an air inlet of a suction valve for controlling the air inlet, a vaporizing chamber opening into the mixing chamber adjacent the air inlet, a fuel supply conduit leading into the vaporizing chamber, a valve for said fuel conduit, a heat jacket surrounding the mixing chamber and the vaporizing chamber, and means acutated by the suction valve for controlling the said fuel valve.

5. A carbureter, having a mixing chamber, a circular flange constituting an air inlet having its end extending into the mixing chamber and formed as a valve seat, a valve seating thereon, a wall surrounding such flange and ending below the said seat, a fuel supply conduit leading to the space between said flange and wall and constituting a fuel vaporizing chamber there being an annular port therefrom to the mixing chamber, and means for applying heat to the fuel in such chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,172,398. FURNACE. THEODORE G. SELLECK, Milwaukee, Wis. Filed May 14, 1915. Serial No. 28,150. (Cl. 148—17.)

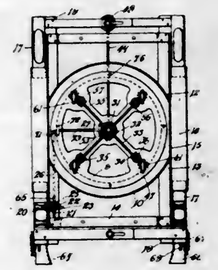


1. A furnace comprising a combustion chamber, a series of spaced transverse treating chambers to the rear of the combustion chamber, an upward extending flue at the rear end of the furnace, a longitudinal bottom flue beneath the treating chambers leading from the combustion chamber to the aforesaid rear flue, said bottom flue being composed of spaced transverse partitions having openings, and the openings of consecutive partitions being staggered, a top flue above each treating chamber, the top flue of the rear treating chamber leading from the top of the rear flue, perforated partitions in the spaces between the treating chambers, the spaces on opposite sides of the partitions communicating respectively with the top flues of adjacent treating chambers, a perforated partition in front of and spaced from the front treating chamber, the space between said last-mentioned partition and treating chamber being in communication with the top flue of said chamber, and an exit flue into which the perforations of the last-mentioned partition open.

2. A furnace comprising a combustion chamber, a series of spaced transverse treating chambers to the rear of the combustion chamber, an upward extending flue at the rear end of the furnace, a longitudinal bottom flue beneath the treating chambers leading from the combustion

chamber to the aforesaid rear flue, said bottom flue being composed of spaced transverse partitions having openings, and the openings of consecutive partitions being staggered an exit flue at the front end of the furnace and flues above the treating chambers in communication with the spaces between said chambers and communicating at one end with the rear flue and at the other end with the exit flue.

1,172,399. TURN-TABLE TRUCK. ALBERT L. SESSIONS, Bristol, Conn. Filed Apr. 18, 1913. Serial No. 761,956. (Cl. 104—211.)



1. A turn table truck including a portable frame, a turn table rotatably mounted on the frame and having means to support a vehicle, roller supports secured to the frame and arranged to move it in all directions, and means for controlling the position of the roller supports.

2. A vehicle moving truck including a portable frame, means supported by the frame to receive the wheels of a vehicle and including spools upon which said wheels rest, roller supports for said frame and arranged to move it in all directions, and driving connections between said spools and said roller supports.

3. A turn table truck including a portable frame, a turn table rotatably mounted on the frame and having means to support a vehicle, roller supports secured to the frame and arranged to move it in all directions, spools mounted on the support to receive the wheels of a vehicle, and a driving connection between said spools and roller supports.

4. A turn table truck including a portable frame, vehicle supports depending from said frame and arranged to receive the wheels of a vehicle, vehicle supporting spools mounted in said supports below said frame, roller supports mounted in said frame and rising above said vehicle support, and a driving connection between said spools and said roller suppports.

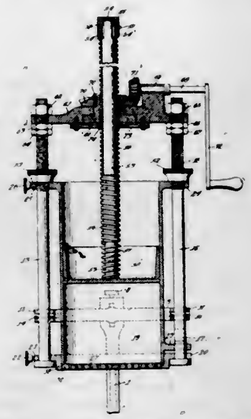
5. A turn table truck including a portable frame, a platform rotatably mounted on the frame, vehicle supports depending from said platform, spools rotatably mounted on said vehicle supports to receive the wheels of a vehicle, roller supports mounted in said frame and having rollers rising above said vehicle supports, and a driving connection between said spools and said roller supports.

[Claims 6 to 22 not printed in the Gazette.]

1,172,400. SUPPORT FOR A PRESS. RICHARD C. SPECHT and AXEL S. NIELSEN, San Francisco, Cal. Filed Jan. 8, 1914. Serial No. 810,994. (Cl. 107—14.)

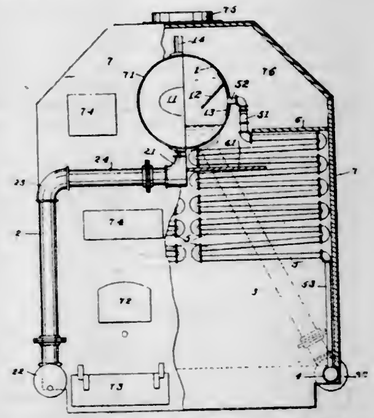
1. In a device of the class described, the combination of a support, a Y shaped yoke carried thereby, a pair of rods carried by the yoke, a cylindrical shell having a number of open ears to secure it in place on said rods, a die holding ring having open ears to secure it to the rods under the cylindrical shell and within which said cylindrical shell fits, and a cross bar on the upper ends of the rods and extending across the top of the cylindrical shell.

2. In a device of thec lass described, the combination of a support, a Y shaped yoke pivotally mounted therein, a pair of threaded rods rigidly supported by said yoke, a die holding ring having open ears to secure it to said rods, a cylindrical shell having a plurality of open ears to secure it to the rods and seated in the die holder, a



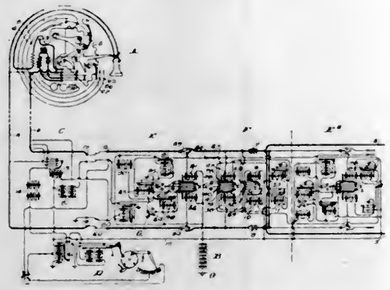
cross bar rigidly connected with the threaded ends of the rods and extending across the top of the cylindrical shell, and means to rigidly secure the shell to the rods.

1,172,401. STEAM-BOILER. HUGH S. STUDDERT, Seattle, Wash. Filed Sept. 29, 1914. Serial No. 864,035. (Cl. 122—359.)



In a steam generator, in combination, a casing, a horizontal steam drum extending outside the casing at each end, horizontal mud-drums at each side of the generator and projecting from the casing at each end, down-flow pipes at each end of, and entirely outside of, the generator connecting said steam-drum and said mud-drums, a series of generating coils connected in pairs immediately outside the steam drum and connecting said mud-drums and said steam drum, said generating coils having one opening into the steam drum for each pair of coils, said openings being placed above the water level in said steam drum, a baffle-plate in said steam drum immediately above the said openings and inclined downwardly, a baffle-plate at each side of the generator extending from end to end of the series of generating coils, and extending inward less than half the width of the generator, and a baffle-plate placed below said first baffle-plates, and extending from the rear forwardly less than the length of the generator and to the side less than the width of the generator.

1,172,402. TELEPHONE TRUNKING SYSTEM. CHARLES E. STEPHENSON, Sioux City, Iowa, assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 14, 1912. Serial No. 677,532. (Cl. 179—18.)



1. In a telephone system, a trunk line having one or more line conductors extending from one end to the other of said trunk line, automatic means for seizing one end of said trunk line, and a circuit including one of said line conductors for supplying a guarding potential to the opposite end of said trunk.

2. In a telephone system, a two-way trunk line having one or more line conductors extending from one end to the other of said trunk line, automatic means for seizing either end of said trunk line, and a circuit including one of said line conductors for supplying a guarding potential to the distant end of said trunk when either end of same is seized.

3. In a telephone system, a two-way trunk line, a plurality of multiple terminals for each end of said trunk line, automatic means for seizing either end of said trunk, and means for connecting a line conductor of said trunk with the multiple terminals at the distant end for placing a guarding potential on the multiple terminals at the distant end thereof when either end of said trunk is seized.

4. In a telephone system, a two-way trunk line, an automatic selector switch at either end of said line for seizing the same, whereby connection can be extended over said trunk in either direction, and a guarding potential extending over a line conductor of said trunk for preventing the selector at the distant end from seizing the same when one of said selectors has been operated to seize said trunk.

5. In a telephone system, a two-way trunk having a plurality of multiple contacts at each end thereof, a plurality of automatic switches for seizing said trunk through said multiple contacts, and means for connecting one of the talking conductors of said trunk with the multiple terminals at the distant end for placing a guarding potential upon the multiple contacts at the distant end thereof when one of said switches operates to seize said trunk.

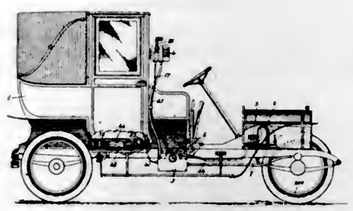
[Claims 6 to 17 not printed in the Gazette.]

1,172,403. CONTROL DEVICE FOR VEHICLES. JOSEPH D. SULSONA, New York, N. Y., assignor to Taximeter Control Company, New York, N. Y., a Corporation of New York. Filed June 8, 1911. Serial No. 631,906. (Cl. 21—90.)

1. In a motor vehicle a device operated from a wheel of the vehicle during progression for automatically causing the said progression to cease, means for setting said device in operative position and separate means for setting said device in inoperative position.

2. In a motor vehicle a device operated from a moving part of the vehicle during progression for automatically causing the said progression to cease, and passenger controlled means for setting said device into condition for operation.

3. In a motor vehicle a device operated from a moving part of the vehicle during progression for automatically causing the said progression to cease, passenger controlled means for setting said device into condition for operation, and driver controlled means for setting said device out of operative condition.

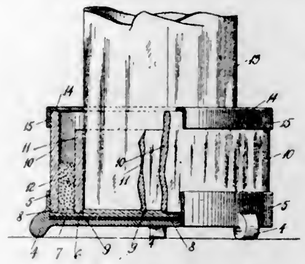


4. In a motor vehicle a device operated from a moving part of the vehicle during progression for automatically causing said progression to cease after a predetermined distance has been traversed by the vehicle, means for setting said device in operative position and separate means for setting said device in inoperative position.

5. In a motor vehicle the combination of a vehicle propelling means and a device operated from a moving part of the vehicle during progression, said device comprising means for successively causing an operative and inoperative condition in the vehicle propelling means.

[Claims 6 to 19 not printed in the Gazette.]

1,172,404. HEATER. JOHN SZOTÁK, Elizabeth, N. J. Filed Jan. 28, 1915. Serial No. 4,886. Renewed Nov. 15, 1915. Serial No. 61,730. (Cl. 126—263.)

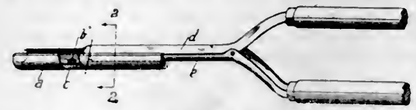


1. A heater for bottles, cans and cooking utensils, comprising, in combination, a metal base, a heat isolator placed on top of said base, a glass container adapted to be filled with a substance developing intense heat on contact with water, placed on said heat isolator, said container being adapted to communicate the heat developed therein to other containers suitably placed in respect to said first mentioned container.

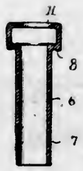
2. A heater for bottles, cans and the like, comprising, in combination, a metal base, an isolator placed on said base, a glass disk placed on said isolator, having circular grooves formed in its upper surface, glass cylinders placed on said glass disk having their lower edges engaged by said grooves, the space formed between said glass cylinders being partly filled with a substance adapted to develop intense heat on contact with water, and a metal covering ring confining said space formed between said cylinders, substantially as and for the purpose set forth.

1,172,405. HEATER FOR CURLING-IRONS. JOHN SZOTÁK, Elizabeth, N. J. Filed Jan. 28, 1915. Serial No. 4,887. (Cl. 126—226.)

A heater for curling irons comprising a bowl partly filled with a termal substance adapted to develop intense heat upon the application of water, two tubular projections formed on top of said bowl, the top of said bowl being so shaped as to closely fit the undulated tongue of a curling iron when said tubular projections are inserted into cylindrically bent flanges of said undulated tongue, and means for the admission of water to said bowl, said means being adapted to be closed by a stopper.



1,172,406. HOLLOW SHEET-METAL BOLT. THOMAS B. TAYLOR, Stratford, Conn. Filed Sept. 16, 1915. Serial No. 51,004. (Cl. 85—1.)



1. A bolt formed of a single piece of tubing, threaded upon one end portion, and having its other end enlarged and shaped to form a hollow open ended head said head including an extended annular shoulder and flat shouldered side faces arranged parallel with the sides of the bolt.

2. A bolt formed of drawn tubing and including a hollow shank and head, the head portion forming an annular shoulder upon its under side, and parallel side faces with an inturned annular edge.

3. A bolt formed of metal tubing and including a hollow shank, threaded upon one end portion and having a hollow head including an annular yieldable shoulder extended out from the shank and having shouldered side faces arranged parallel with the center of the bolt.

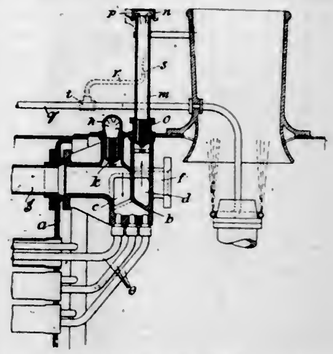
4. A bolt formed of a single piece of tubing, threaded upon one end portion, and having its other end bent to form a hollow open ended head and including an outwardly bent annular shoulder extended out from the shank of the bolt, and side faces and corner edges parallel with the center of the bolt and further shaped to include an inturned annular edge and an open top end.

1,172,407. COOLING ARRANGEMENT FOR FLUE-TUBE SUPERHEATER ELEMENTS. PETER THOMSEN, Cassel-Wilhelmshöhe, Germany, assignor to Schmidt'sche Heiss dampf-Gesellschaft M. B. H., Cassel-Wilhelmshöhe, Germany, a Corporation of Germany. Filed July 31, 1915. Serial No. 43,048. (Cl. 122—462.)

1. In a locomotive having flue tubes containing superheater elements, a saturated and a superheated steam collector between which said elements are connected, each of said collectors being provided with openings into the atmosphere at different levels and means for simultaneously opening or closing said openings according as steam is shut off from or admitted to the superheater.

2. In a locomotive having flue tubes containing superheater elements, a saturated and superheated steam collector between which said elements are connected, each of said collectors being provided with openings into the atmosphere at different levels and a back pressure valve for each opening for opening or closing said openings according as steam is shut off from or admitted to the superheater.

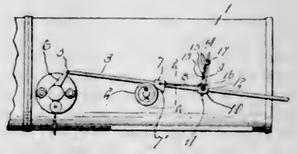
3. In a locomotive having flue tubes containing superheater elements, a saturated and a superheated steam collector between which said elements are connected, each of said collectors being provided with openings into the atmosphere at different levels and means controlled by the main throttle for simultaneously opening or closing said openings according as steam is shut off from or admitted to the superheater.



4. In a locomotive having flue tubes containing superheater elements, a saturated and a superheated steam collector between which said elements are connected, each of said collectors being provided with openings into the atmosphere, the opening from the superheated steam collector having a short stack erected thereupon with its upper end opening at a higher level than is the opening from the saturated steam collector, valves controlling each opening and means for opening or closing said valves simultaneously according as steam is shut off from or admitted to the superheater.

5. In a locomotive having flue tubes containing superheater elements, a saturated and a superheated steam collector between which said elements are connected, each of said collectors having an opening into the atmosphere, a short stack erected from the superheated steam collector opening, a nozzle supplied from the blower connection opening into said stack, and means for opening or closing the steam collector openings according as steam is shut off from or admitted to the superheater.

1,172,408. IGNITION DEVICE. LAURITZ M. THORESON, Twin Valley, Minn. Filed Apr. 10, 1914. Serial No. 831,037. (Cl. 123—164.)

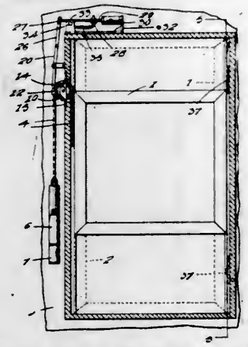


In a gas engine, an igniter, a trip rod therefor supported by a projection from the cylinder, a controlling member slidably mounted on the trip rod and having an inclined lower face adapted to coöperate with the said projection to lift the free end of the trip rod during its reciprocation, means for adjusting said controlling member comprising a sleeve fixedly mounted on the trip rod, a lever pivoted thereto, an arcuate rack bar on the upper side of said sleeve, a spring pressed bolt mounted longitudinally of the lever and arranged to engage the teeth of the rack bar, links pivoted to the said lever and to said controlling member for operating the same.

1,172,409. ELECTRIC WINDOW-CLOSING DEVICE. WALTER B. UPPERT, Hempstead, N. Y. Filed Apr. 23, 1915. Serial No. 23,461. (Cl. 16—19.)

1. In a window closing device of the class described the combination with upper and lower sashes, rotary elements provided with reversely arranged ratchet teeth, weights, flexible connections arranged on the rotary elements and connected with the weights and with the sashes, the latter being automatically closable by gravity when free to move, a double pawl provided with re-

versely arranged teeth engaging the ratchet teeth of the rotary elements and means for operating the pawl to release the sashes.



2. In a window closing device of the class described, the combination with upper and lower sliding sashes, rotary elements provided with ratchet teeth, separate flexible connections arranged on the rotary elements and connected with the said sashes and provided with independent weights, the weight of the upper sash being heavier than the latter and the lower sash being heavier than its weight whereby the sashes are automatically movable to their closed position by gravity, means for engaging the ratchet teeth for holding the sashes in an open position and electrically controlled means for releasing the rotary elements to permit the sashes to close by gravity.

3. A window closing device of the class described including upper and lower sashes, rotary elements provided with reversely arranged ratchet teeth, flexible connections arranged on the rotary elements and connected with the sashes and provided with weights, said sashes being automatically movable by gravity to their closed position, a pivotally mounted member provided with reversely arranged teeth engaging the ratchet teeth for holding the sashes in an open position and an electromagnet connected with the said pivoted members for withdrawing the same from engagement with the ratchet teeth to permit the sashes to close.

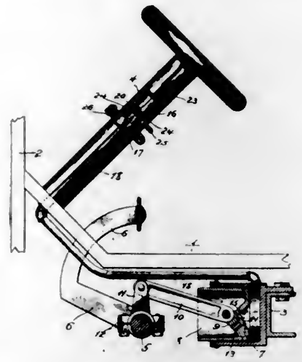
4. In a window closing device of the class described the combination with upper and lower sashes, rotary elements provided with ratchet teeth, flexible connections arranged on the rotary elements and connected with the sashes and provided with weights, said sashes being automatically movable by gravity to their closed position, a pawl provided with means for engaging the ratchet teeth for holding the sashes in an open position, and a solenoid having a core connected with the pawl for withdrawing the same from engagement with the ratchet teeth.

5. In a window closing device of the class described the combination of a window frame, and upper and lower sashes, rotary elements mounted on the window frame and provided with ratchet teeth, flexible connections arranged on the rotary members and connected with the sashes and provided with weights, a double pawl composed of spaced sides pivotally mounted on the frame at one side thereof and provided with means for engaging the ratchet teeth, said pawl being also provided with a stem extending above the top of the window frame, solenoid coils arranged upon the window frame or casing and provided with slidable cores, a plate connecting the cores, a rod extending from the plate to the said stem, and a spring connected with the plate for withdrawing the cores when the solenoids are deënergized.

[Claim 6 not printed in the Gazette.]

1,172,410. CLUTCH-CONTROLLING MEANS. WILLIAM E. VILLINGER, Williamsport, Pa. Filed Mar. 13, 1914. Serial No. 824,416. (Cl. 74—69.)

1. The combination with an automobile frame, a steering post, and a clutch pedal, of a valveless cylinder immovably secured to said frame, said cylinder being closed at one end, a valved piston in said cylinder, a rod pivotally connected with the piston and with the clutch pedal, an adjustable valve secured to the steering post, and a rigid pipe communicating at one end with said valve and at the other end with the closed end of said immovably secured cylinder.



2. The combination with an automobile frame, a clutch shaft, a pedal secured to said shaft, and an arm secured to said shaft, of a cylinder rigidly secured to the frame and having one end open, a valved piston in said cylinder, a piston rod pivoted at one end to said piston and at the other end to the arm on the clutch shaft, an adjustable valve supported in the automobile and a rigid pipe connection between said valve and the closed end of said cylinder.

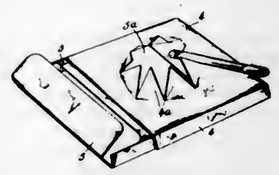
3. The combination with an automobile frame, a steering post, and a clutch pedal, of a cylinder rigidly secured to said frame, a valved piston in said cylinder, connecting devices between said piston and clutch pedal, a signel rigid pipe communicating with the cylinder near the closed end thereof, a valve casing secured to the steering post and communicating with the free end of said fixed pipe, said casing having a slot provided with a plurality of notches located in different planes, a valve in said casing adapted to close said pipe, and a pin rigid with said valve and passing through the slot in the casing.

4. The combination with an automobile, a steering post, a clutch shaft and a foot lever secured to the latter, of a cylinder rigidly secured to the frame of the automobile, a piston in said cylinder, a valve in said piston adapted to close communication through the piston when the latter is moved toward the closed end of the cylinder and open such communication when the piston is moved in the opposite direction, an arm on the clutch shaft, a pitman connecting said arm with the piston, a single pipe connected with the cylinder near the closed end thereof, and a valve carried by the steering post and communicating with the free end of said pipe for controlling the passage of air through said pipe when the piston moves toward the closed end of the cylinder to control the retardation of the return of said foot lever and clutch shaft.

1,172,411. ASH-RECEIVER. EDMOND A. VON KAENEL, Chicago, Ill. Filed Feb. 17, 1913. Serial No. 748,801. (Cl. 131—51.)

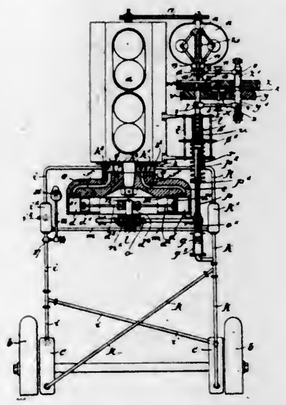
1. A combined cigarette box and ash tray comprising a box, one wall whereof is provided with a plurality of radiating incisions so that the portions of the wall on the sides of each incision may be bent outwardly, to provide angular recesses between the edges of the outwardly bent portions.

2. A combined cigarette box and ash tray comprising a box, a tray slidably mounted therein, the upper wall of said box being provided with a plurality of intersecting incisions so that the portions of the wall on the sides of each incision may be bent outwardly to provide sub-



stantially V-shaped recesses between the edges of the outwardly bent portions.

1,172,412. GEAR FOR ATTAINING A COMPENSATION BETWEEN DRIVING POWER AND LOAD. GEORG VON SAALFELD, Munich-Harlaching, Germany. Filed Mar. 5, 1915. Serial No. 12,422. (Cl. 138—22.)



1. A gear for attaining compensation between driving power and load embodying therein in combination with an engine, a hydraulic pump driven by said engine, a hydraulic motor, pipes between the inlet and the exhaust of said motor and the pressure side and the suction side of said pump forming a closed circulating system, means adapted to vary the capacity of said pump independently of the power applied thereto by said engine, a mechanical regulator operatively connected with said engine and having a normal tendency to vary the capacity of said pump in accord with a varying engine speed, operative connections between said regulator and said means, a fluid pressure regulator operatively connected with the pipe leading from the pressure side of said pump, and operative connections between said fluid pressure regulator and said connections between said mechanical regulator and the means controlling the capacity of the pump whereby variance in the load upon the hydraulic motor will vary the capacity of said pump without varying the load upon the engine.

2. A gear for attaining compensation between driving power and load embodying therein in combination with an engine, a hydraulic pump driven by said engine, a hydraulic motor, pipes between the inlet and the exhaust of said motor and the pressure side and the suction side of said pump forming a closed circulating system, means adapted to vary the capacity of said pump independently of the power applied thereto by said engine, a mechanical regulator operatively connected with said engine and having a normal tendency to vary the capacity of said pump in accord with a varying engine speed, a compressible member interposed between said regulator and said means, a fluid pressure regulator operatively connected with the pipe leading from the pressure side of said pump, and operative connections between said fluid pressure regulator and said connections between said mechanical regulator and the means controlling the capacity of the pump whereby variance in the load upon the hydraulic motor will vary the capacity of said pump without varying the load upon the engine.

3. A gear for attaining compensation between driving power and load embodying therein in combination with an engine, a hydraulic pump driven by said engine, a hydraulic motor, pipes between the inlet and the exhaust of said motor and the pressure side and the suction side of said pump forming a closed circulating system, means adapted to vary the capacity of said pump independently of the power applied thereto by said engine, a mechanical regulator operatively connected with said engine and having a normal tendency to vary the capacity of said pump in accord with a varying engine speed, operative connections between said regulator and said means, a fluid pressure regulator operatively connected with the pipe leading from the pressure side of said pump, operative connections between said fluid pressure regulator and said connections between said mechanical regulator and the means controlling the capacity of the pump whereby variance in the load upon the hydraulic motor will vary the capacity of said pump without varying the load upon the engine, and manually operative means whereby the volume of fluid passing through said circulating system may be varied.

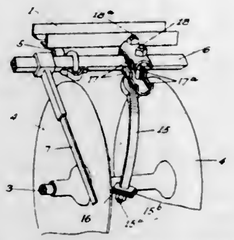
4. A gear for attaining compensation between driving power and load embodying therein in combination with an engine, a plurality of rotatable cylinder driven by said engine, a casing forming a pressure and a suction chamber communicating respectively with said cylinedrs, a hydraulic motor, pipes between the inlet and the exhaust of said motor and said pressure chamber and said suction chamber respectively, forming a closed circulating system, a piston mounted in each of said cylinders, a traveler, a pivot thereon, a rotatable member mounted upon said pivot, piston rods connected with said rotatable member and said pistons respectively, means whereby said traveler may be moved toward or from the axis of rotation of said cylinders to vary the effective stroke of said pistons, and the capacity of said cylinders, a mechanical regulator operatively connected with said engine and having a normal tendency to vary the capacity of said cylinders in accord with the varying engine speed, operative connections between said regulator and said means for moving said pivot, a fluid pressure regulator operatively connected with the pipe leading from said pressure chamber, and operative connections between said fluid pressure regulator and said connections between said mechanical regulator and the means for moving said traveler whereby variance in the load upon the hydraulic motor will vary the capacity of said cylinders without varying the load upon the engine.

5. A gear for attaining compensation between driving power and load embodying therein in combination with an engine, a plurality of rotatable cylinders driven by said engine, a casing forming a pressure and a suction chamber communicating respectively with said cylinders, a hydraulic motor, pipes between the inlet and the exhaust of said motor and said pressure chamber and said suction chamber respectively, forming a closed circulating system, a piston mounted in each of said cylinders, a traveler, a pivot, a rotatable member mounted upon said pivot, piston rods connected with said rotatable member and said piston respectively, a rotatable shaft provided with a gear and means engaging said traveler whereby said traveler may be moved toward or from the axis of rotation of said cylinders to vary the effective stroke of said pistons and the capacity of said cylinders, a mechanical regulator operatively connected with said engine and having a normal tendency to vary the capacity of said cylinders in accord with a varying engine speed, a reciprocatory rack engaging said gear, a flexible connection between said rack and said mechanical regulator, and a fluid pressure regulator operatively connected with the pipe leading from said pressure chamber, and with

said rack whereby variance in the load upon the hydraulic motor will vary the capacity of said cylinder without varying the load upon the engine.

[Claims 6 to 10 not printed in the Gazette.]

1,172,413. DISK-SHARPENER. FREDERICK C. WARNE, Mansfield, Ohio, assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Nov. 9, 1914. Serial No. 870,983. (Cl. 97—77.)



1. In a disk sharpener, the combination with a disk implement provided with a spring resisted rotatably mounted scraper carrying bar, and means for moving said bar; of a cutter carrying arm detachably connected to said bar and adapted to bring the cutter into and out of operative engagement with one of the disks of said implement through the movements of said bar.

2. In a disk sharpener for a disk implement having a pivotally mounted spring resisted scraper carrying bar, means for moving said bar, and an attaching arm carried by said bar and provided with a tool adapted to engage and be held against the periphery of said disk by the action of said spring resisted bar.

3. In a disk sharpener, the combination with a disk implement including a pivotally mounted bar, a spring for resisting the movements of said bar on its pivot, and means for moving said bar against the resistance of said spring; of an attaching arm connected to said pivotally mounted bar and provided at its free end with a cutter tool adapted to be brought into and held in engagement with a disk when said bar is moved by the action of said spring and the release of said bar actuating means.

4. In a disk sharpener for disk harrows, the combination with a disk gang frame provided with a plurality of disks and a spring resisted pivotally mounted scraper carrying bar, and mechanism for actuating and adjusting said scraper bar against the resistance of said spring; of a depending attaching arm provided with adjustable clamps having recesses adapted to receive and clamp over said bar, and a cutter tool at the depending end of said attaching arm adapted to be brought into and held in engagement with the periphery of a disk when said scraper bar actuating and adjusting mechanism is released.

1,172,414. PROCESS OF MAKING SAFETY-PAPER FOR CHECKS AND SIMILAR DEVICES AND THE SAFETY-PAPER ITSELF. JOSEPH B. WEIS, Holyoke, Mass., assignor to Perfect Safety Paper Co., Holyoke, Mass., a Corporation of West Virginia. Filed Jan. 6, 1911. Serial No. 601,056. (Cl. 92—40.)

1. The process of making safety paper which consists in adding to the paper a soluble ferrocyanid, and anilin or an anilin salt, as and for the purpose described.

2. The process of making safety paper which consists in adding to the paper a soluble ferrocyanid, a per-salt of iron insoluble in water but decomposable by a weak acid in the presence of the ferrocyanid, and anilin or an anilin salt, as and for the purpose described.

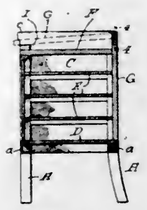
3. The process of making safety paper which consists in adding to the paper a soluble ferrocyanid, a per-salt of iron insoluble in water but decomposable by a weak acid in the presence of the ferrocyanid, a salt of manganese easily decomposable by alkalis or bleaching agents, and anilin or an anilin salt, as and for the purpose described.

4. The process of making safety paper which consists in adding to the paper a soluble ferrocyanid, and anilin chlorid.

5. The process of making safety paper which consists in combining the following materials in substantially the following proportions, 96 per cent. of pulp, ½ per cent. of ferric phosphate, 2 per cent. of manganese ferrocyanid, ½ per cent. of sodium ferrocyanid, and 1 per cent of anilin chlorid.

[Claims 6 to 14 not printed in the Gazette.]

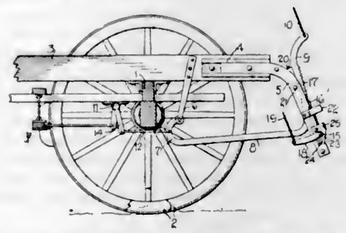
1,172,415. MUSIC-BENCH. FRANK J. W. WEISER, Chicago, Ill., assignor to George P. Bent Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1915. Serial No. 12,241. (Cl. 155—22.)



1. A music bench comprising a frame composed of four uprights, front, end and bottom panels forming a music cabinet, a horizontal seat fixed to the frame below the upper edges of the ends and forming a top for the cabinet, a supplemental seat pivoted at its rear edge to the rear upper ends of the frame above the horizontal seat and forming a rear closure for the cabinet when it is swung down in rear thereof, and stops for the front edge of the pivoted seat to hold said seat in inclined position when it is swung into its seating position above the fixed seat.

2. A music bench comprising an upright frame, a seat-member horizontally supported on the frame below the upper portion thereof, a second seat-member pivotally connected at one edge at the upper portion of the frame above the first seat-member to swing into positions above and at one side in the rear of the first seat-member, and stops to hold said second seat-member in inclined position when it is swung into place above said first seat-member.

1,172,416. BRAKE MECHANISM. RALPH M. WELLS, Short Creek, W. Va. Filed June 9, 1915. Serial No. 33,111. (Cl. 21—8.)

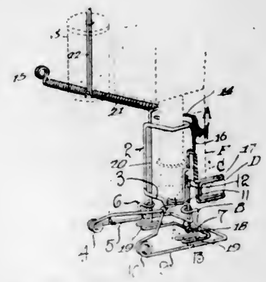


1. In combination with a body and a brake mechanism carried thereby, spaced straps depending from the body, a lever pivotally engaged with the body and extending between the spaced straps, an operative connection between the lever and the brake mechanism, a shaft rotatably supported by the straps below the lever, a dog fixed to the shaft and coacting with the lever for maintaining the same against movement in one direction, a rock arm secured to the shaft and provided with operating means whereby the dog may be disengaged from the lever, and means for imparting movement to the lever in one direction.

2. In combination with a body and a brake mechanism carried thereby, spaced straps depending from the body, a lever pivotally engaged with the body and extending between the spaced straps, an operative connection between the lever and the brake mechanism, a shaft rotatably supported by the straps below the lever, a dog fixed to the shaft and coacting with the lever for maintaining the same against movement in one direction, a rock arm secured to the shaft and provided with operating means whereby the dog may be disengaged from the lever, means for imparting movement to the lever in one direction, and a yoke carried by the straps for limiting the movement of the dog away from the lever.

3. In combination with a body and a brake mechanism carried thereby, a hanger depending from the body, a lever provided with an arcuate extremity pivotally engaged with the hanger, the opposite extremity of the lever being provided with an unstanding extension, spaced straps depending from the body and between which the extension is directed, said extension being provided with a rack, a dog pivotally supported by the straps and coacting with the rack, and an operative connection between the brake mechanism and the arcuate extremity of the lever.

1,172,417. ATTACHMENT FOR SEWING-MACHINES. JESSE P. WILSON, Duncan, Okla., assignor of one-half to Mary C. Evans. Filed Mar. 22, 1915. Serial No. 16,118. (Cl. 112—13.)



1. As a new article of manufacture, an embroidery attachment for a sewing machine including a member comprising a foot, vertically disposed members, one of said members being provided with means engageable with a presser foot, and a horizontally disposed member connected to the upper extremities of the vertical members, said horizontal member being provided with an extension to afford a mounting for a spool.

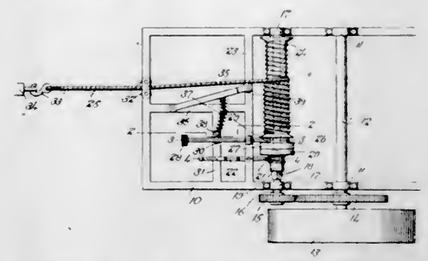
2. An attachment of the character described comprising a yieldable work engaging member provided with engaging means, said work engaging member being provided with loops, and a pad member comprising a foot, vertically disposed members adapted to be received within the loops of the work engaging member, and a spool supporting means carried by the member.

3. In combination with an embroidering attachment for a sewing machine, a pad member capable of detachable engagement with the embroidering attachment and comprising a horizontal member, a foot member connected with the horizontal member and in spaced relation thereto, said foot member being provided with loops, and spool supporting means carried by the horizontal member.

4. In combination with an embroidering attachment for a sewing machine, a pad member capable of detachable engagement with the mebroidering attachment and comprising a horizontal member, a foot member connected with the horizontal member and in spaced relation thereto, said foot member being provided with loops, and spool supporting means carried by the horizontal member, one extremity of the horizontal member being provided with an eye.

5. In combination with an embroidering attachment for a sewing machine, a pad member capable of detachable engagement with the embroidering attachment and comprising a horizontal member, a foot member connected with the horizontal member and in spaced relation thereto, said foot being provided with loops, spool supporting means carried by the horizontal member, and engaging means carried by the pad member at a point intermediate the horizontal member and the foot.

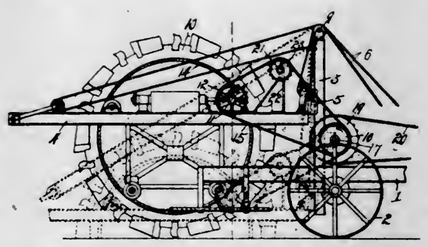
1,172,418. CABLE-GUIDE. TRUEMAN E. WOLFE, Miami, N. Mex. Filed July 17, 1914. Serial No. 851,673. (Cl. 242—158.)



1. A machine of the character described comprising a frame, a rotatable drum shaft, a drum rotatably mounted upon said shaft and provided with threads forming a spiral seat adapted to receive a cable, a guiding arm pivotally connected with said frame and having its free end extending toward said drum, a spring having one end connected with said frame and the opposite end connected with said arm to yieldingly hold the arm in engagement with the cable to exert a continuous pushing force upon one side of the cable and means for causing said drum to rotate with said drum shaft.

2. A machine of the character described comprising a frame, a rotatable drum shaft, a drum adapted to receive a cable rotatably mounted upon said shaft, a guiding arm movably connected with said frame and having its free end extending toward said drum, resilient means connected with said frame and with said arm to yieldingly hold the arm in engagement with the cable to exert a continuous pushing force upon one side of the cable, and means for causing said drum to rotate with said drum shaft.

1,172,419. CHAIN-SLACK CONTROL. CHARLES F. YOCUM, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed May 14, 1915. Serial No. 28,024. (Cl. 74—31.)



1. In a machine of the class described, in combination, a shaft, a sprocket-wheel carried by said shaft, a frame vertically adjustable with respect to said shaft, a second shaft carried by said frame, a sprocket-wheel carried by said second shaft, a sprocket-chain connecting the sprocket-wheels on said first and second shafts, and an idler sprocket carried by said frame for supporting the upper idler portion of said chain and compensating for

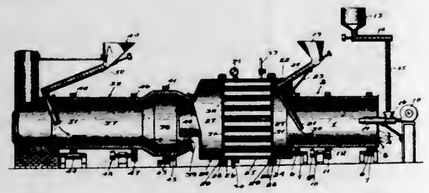
the varying difference in the distance between said shafts when said frame is vertically adjusted.

2. In a machine of the class described, an upright guide frame, a shaft which is stationary as against transverse movements with respect to said frame, a cutting-wheel frame guided for vertical movements by said guide frame, a cutting-wheel driving shaft carried by said cutting-wheel frame, sprocket-wheels on both said shafts, a sprocket chain connecting said sprocket wheels, the under portion of said chain serving as the driving portion thereof, and an idler member carried by said cutting-wheel frame above the horizontal plane of the axis of the cutting-wheel driving shaft and supporting the idler portion of said chain intermediate the sprocket-wheels.

3. In a machine of the class described, in combination, a main frame, a cutting-wheel frame carried by and vertically adjustable relative to said main frame, a shaft carried by each of said frames, sprocket wheels carried by said shafts, a sprocket chain connecting said wheels and having the lower portion thereof serving as the working portion, and an idler member carried by said adjustable frame and supporting the upper idler portion of said chain, said member being carried a predetermined extent above the horizontal plane of the sprocket-wheel which is carried by the cutting-wheel frame shaft.

4. In a machine of the class described, in combination a main frame, a cutting-wheel carrying frame carried by said main frame and vertically adjustable with respect thereto, a shaft carried by each of said frames, sprocket-wheels on said shafts, a sprocket chain connecting said sprocket wheels, and an idler wheel carried by said adjustable frame with its axis a predetermined extent above the horizontal plane of the shaft which is carried by said adjustable frame, said idler wheel, when adjusting frame is at its maximum lowered position, having its axis disposed near a straight line drawn through the axes of said shafts.

1,172,420. COMBINED PROCESS OF TREATING FELDSPATHIC AND PHOSPHATE ROCK. HARRY P. BASSETT, Catonsville, Md., assignor to The Spar Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 26, 1913. Serial No. 808,845. (Cl. 71—7.)



1. The herein described process of treating an alkali silicate and phosphate rock which consists in heating feldspathic rock and an alkali metal acid sulfate to a reacting temperature in the presence of a reducing agent and causing the fumes given off during the reaction to react upon phosphate rock.

2. The herein described process of treating feldspathic and phosphate rock, which consists in heating feldspathic rock and an alkali metal sulfate to a reacting temperature in the presence of a reducing agent, cooling the fumes given off during the reaction to a temperature of from about 212° to 400° F. and causing such fumes to react upon phosphate rock.

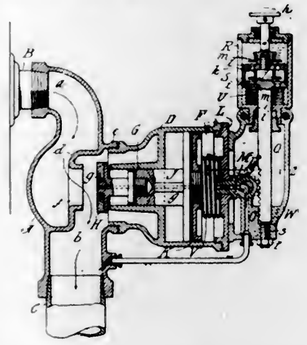
3. The herein described process of treating feldspar and phosphate rock, which consists in mixing feldspar and sodium acid sulfate in approximately the proportions of 50 parts by weight of feldspar to 100 parts by weight of sodium and sulfate, heating the mixture to a reacting temperature in the presence of a reducing agent and causing the fumes given off during the reaction to react upon phosphate rock at a temperature of from about 212° to 400° F.

4. The herein described process of treating feldspar or phosphate rock which consists in heating feldspar and sodium acid sulfate to approximately a red heat in the presence of a reducing agent, cooling the fumes given off during the reaction to a temperature of from about 212° to 400° F. and causing such fumes to react upon phosphate rock.

5. The herein described process of treating feldspar and phosphate rock which consists in mixing feldspar, sodium acid sulfate and carbonaceous matter in approximately the proportions of 50 parts by weight of feldspar, 100 parts by weight of sodium acid sulfate and 1 to 3 parts by weight of carbonaceous matter, heating the mixture to approximately a red heat and causing the fumes given off during the reaction to react upon phosphate rock at a temperature of from about 212° to 400° F.

[Claims 6 to 9 not printed in the Gazette.]

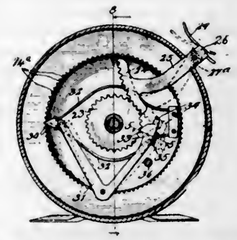
1,172,421. FLUSHING-VALVE. JOHN L. BECK, Springfield, Mass., assignor, by direct and mesne assignments, to The Sterling Valve Company, Springfield, Mass., a Corporation of Massachusetts. Filed Aug. 31, 1912, Serial No. 718,048. Renewed July 14, 1915. Serial No. 39,895. (Cl. 137—93.)



In a flushing apparatus, a casing comprising inlet and outlet passages and a valve-seat-opening connecting such passages, and a hollow cylinder the chamber of which is of greater diameter than that of the valve-seat-opening, a valve having a stem extending into the cylinder chamber and provided with a piston fitting and forming a movable wall in said chamber,—said valve, its stem and the piston having a contracted passage therethrough, forming communication between the valve seat opening and the cylinder chamber, a pressure relief passage leading from the cylinder chamber and connecting with said outlet passage having a rotative cock for opening and closing same, said cock having a gear wheel on its end, a rack bar having an engagement with said gear wheel, a spring against which said rack bar is moved in the valve opening direction, a liquid containing dash pot, constituting a retarding means against the resistance of which said spring is operable to force said rack bar in the valve closing direction, and an adjustable abutment screw for limiting the thrust of the rack bar in its cock opening movement.

1,172,422. FISHING-REEL. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin-Sellar Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 13, 1910. Serial No. 597,084. (Cl. 242—84.7.)

1. In a fishing reel, the combination with a spool, of a friction brake therefor, including a braking member having a longitudinal and rotary movement, thereby to impart a gradually increasing or decreasing braking force to said spool, and a thumb lever for imparting such movement to said member operated by a pressure transverse to the axis of the spool and spring means tending to release said brake whereby when said brake is released said spring means will tend to rotate said spool.



2. In a fishing reel, the combination with a frame, of a spool therein, a threaded support carried by the frame at one end of the spool, a brake for said spool including a sleeve carried by said support and traveling on said threads, a part rotated by said spool, said sleeve being movable into direct frictional engagement with said rotatable part, a thumbing lever carried by the frame, and connections between said lever and said sleeve for operating said sleeve to cause said brake to impart a gradually increasing or decreasing braking effect upon said spool, and spring means tending to release said brake whereby when said brake is released said spring means will tend to rotate said spool.

3. In a fishing reel, the combination with a frame, of a spool mounted to rotate therein, a bearing at one end of the frame for the spool, a braking sleeve mounted to rotate on said bearing and to be moved longitudinally toward the spool when rotated in one direction and away from the same when rotated in the opposite direction, a part rotated by said spool, said sleeve being movable into direct frictional engagement with said rotatable part, a gear carried by said sleeve, a thumbing lever pivoted in the frame and having a segmental gear intermeshing with said gear on the sleeve, and a thumb piece carried by said thumbing lever in position for convenient operation by the natural pressure of the thumb of the operator.

4. In a fishing reel, the combination with a spool, of a variable pressure brake therefor, thumbing means including a thumbing lever for operating said brake to apply a gradually increasing and decreasing braking force to the spool, a lock for said brake movable independently of the thumbing lever to enable the brake to be applied at desired time and with the required braking force as a positive drag on the spool, and means for unlocking the said brake when desired by the thumbing lever.

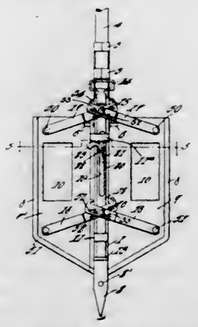
5. In a fishing reel, the combination with a spool, of a click therefor, a variable friction brake for the spool, thumbing mechanism including a thumb piece midway between the ends of the reel for actuating said brake to apply a gradually increasing or decreasing braking force to said spool, and means engaged by said thumbing mechanism for throwing said click out of operation at the desired times.

[Claims 6 to 19 not printed in the Gazette.]

1,172,423. ADJUSTABLE HEAD-GATE. JOHN H. BOGARD, San Saba, Tex. Filed Apr. 9, 1915. Serial No. 20,225. (Cl. 137—66.)

1. In a device of the class described, a carrying member; gate sections mounted to slide transversely of the carrying member; an actuating element mounted to slide longitudinally of the carrying member; means for holding the actuating element in adjusted positions on the carrying member; links pivoted at their outer ends to the gate sections and provided at their inner ends with longitudinal slots having transverse extensions; and projections carried by the actuating element, the projections being adapted to move in the slots and to be lodged in any of the extensions for adjustment.

2. In a head gate, a ground entering carrying member; laterally movable gate sections operating upon opposite sides of the carrying member; interengaging elements connecting the sections with the carrying member for right line lateral movement; an actuating element mounted to slide longitudinally of the carrying member; means for operatively connecting the actuating element and the sections to produce a right line lateral movement of the sections when the actuating element is depressed; an automatically acting locking device forming an operative connection between the carrying member and the actuating element; and a projection on the actuating element and adapted to be engaged by an operator to secure simultaneously a depression of the carrying member and a lateral expansion of the gate sections, the projection being independent of the locking device.



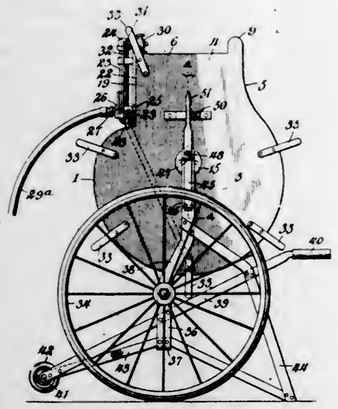
3. An adjustable head gate, including a longitudinal strip constituting a carrying member, a pair of transversely movable sections mounted upon the carrying member, an actuating plate connected to the carrying member for longitudinal reciprocatory movement, coöperating collapsing extension means attached to the actuating plate and to the sections, whereby the sections are collapsed and extended when the actuating plate is reciprocated, a foot actuating means carried upon the lower end of the actuating plate, a hand actuating means carried upon the upper end thereof, and coöperating means carried by the carrying member and the actuating plate for locking the plate against movement in one direction.

4. An adjustable head gate, including a longitudinal strip constituting a carrying member, a pair of transversely movable sections mounted upon the carrying member, an actuating plate connected to the carrying member for longitudinal reciprocatory movement, coöperating collapsing extension means attached to the actuating plate and to the sections, whereby the sections are collapsed and extended when the actuating plate is reciprocated, a foot actuating means carried upon the lower end of the actuating plate, a hand actuating means carried upon the upper end thereof, said actuating member being provided with a plurality of ratchet teeth, and a pivoted pawl mounted upon the carrying member and disposed in coöperative relation to the teeth to lock the actuating member and the sections against collapsing.

5. An adjustable head gate, comprising a plate provided with an earth entering point upon one end and a handle receiving member upon the opposite end, a handle mounted in the handle receiving end, two sections attached to the plate for extension and collapse, an actuating plate mounted upon the first plate for movement longitudinally of the first plate, said actuating plate being provided with an offset foot engaging portion at one end and an offset hand engaging portion at the opposite end, two pairs of links pivotally connected to the actuating plate and to the sections whereby the reciprocation of the actuating plate causes the extension and collapse of the sections, said actuating plate being provided with a plurality of longitudinally disposed ratchet teeth, and a pawl pivotally connected to the carrying plate with its engaging end in coöperation with the teeth of the actuating plate and so arranged as to permit the free movement of the actuating plate in one direction.

[Claim 6 not printed in the Gazette.]

1,172,424. MEASURING-TANK. EDGAR J. BRYAN, Riverside, Cal., assignor of one-half to William Thompson, Riverside, Cal. Filed May 21, 1914. Serial No. 840,079. (Cl. 221—98.)



1. A rotatable storage tank for liquids having its axis of rotation eccentric to the center of the main body of the tank and provided with a receptacle extending from the main body of the tank on the same side of the center of the latter as the axis of rotation, said receptacle communicating with the body of the tank for the filling of the receptacle by the movement of the latter to a low point, and said tank having means for locking it with the receptacle substantially centralized over the axis of rotation of the tank.

2. A rotatable storage tank for liquids having its axis of rotation eccentric to the center of the main body of the tank and provided with a receptacle extending from the main body of the tank on the same side of the center of the latter as the axis of rotation, said receptacle communicating with the body of the tank for the filling of the receptacle by the movement of the latter to a low point, and said tank having means for locking it with the receptacle substantially centralized over the axis of rotation of the tank, said receptacle and tank having means of communication including a check valve opening toward the tank, and said means of communication connecting with the receptacle and tank at points constituting low points thereof when the tank is in the normal upright position.

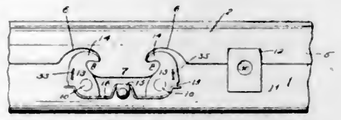
3. A rotatable storage tank for liquids provided with a measuring receptacle at one side of its axis of rotation with means of communication between the body of the tank and the receptacle for filling the latter when below the axis of rotation, and said receptacle being movable to a point above the main body of the tank, an outlet for liquid from the receptacle communicating therewith at a point constituting a low point in the receptacle when above the main body of the tank, a valve in said outlet provided with a manipulating member, an air inlet valve on the receptacle, and connections between the manipulating member and the air inlet valve for causing simultaneous movements of both valves, the first-named valve being permanently located in the outlet of the receptacle.

4. In combination with a support, a rotatable storage tank for liquids, comprising a main body, means for pivoting the body of the tank to the support eccentrically to the center of said body, the latter being provided with a receptacle formed by a continuation of the walls of the main body of the tank on the same side of the center of the latter as the axis of rotation, said receptacle having an inlet communicating with the body of the tank at one end of the receptacle to allow for the filling of the latter by the movement to a low point, and means provided on the support for locking the tank with the receptacle substantially centralized over the axis of rotation of the tank, whereby when the receptacle is in an upright position and full it does not unbalance the tank, and an outlet for drawing the liquid from the receptacle.

5. A rotatable storage tank, for liquids, of substantially cylindrical form with a radially disposed continuation having walls within the tank defining a receptacle in said continuation and also defining a tortuous passage between the main body of the tank and said continuation, the passage extending from the tank along one end of the continuation and entering the latter by a return bend at a point remote from the main body of the tank through that portion of the continuation forming the top thereof in the normal position of the storage tank.

[Claims 6 to 12 not printed in the Gazette.]

1,172,425. RIM FOR VEHICLE-WHEELS. RICHARD S. BRYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 25, 1912. Serial No. 693,079. (Cl. 152—21.)



1. The combination of a pair of complementary annuli each privided at its outer edge with tire engaging means; inter-engaging means on said annuli, respectively, adapted to secure the same together, said means being automatically operable to effect such engagement upon said annuli being brought together; and means adapted to retain said inter-engaging means inoperative when desired.

2. The combination of a pair of complementary annuli each provided at its outer edge with tire engaging means; inter-engaging means carried by said annuli whereby the outer surfaces of the same are maintained substantially flush with each other; hook members pivotally attached to the inner face of one annulus and adapted to engage the other annulus; and springs engaging said hook members and adapted to maintain the same in such engagement.

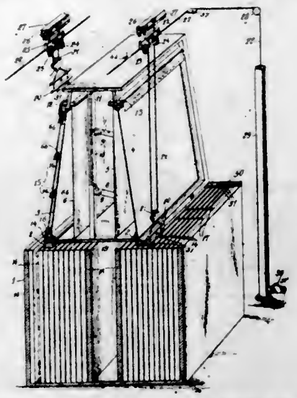
3. The combination of a pair of complementary annuli each provided at its outer edge with a flange adapted to engage the side of a tire; inter-engaging means carried by said annuli whereby the outer surfaces of the same are maintained substantially flush with each other; inter-engaging means carried by said annuli for determining the relative circular position thereof; hook members pivotally attached to the inner face of one annulus and adapted to engage the other annulus; and springs engaging said hook members and adapted to maintain the same in such engagement.

4. The combination of a pair of complementary annuli each provided at its outer edge with a flange adapted to engage the side of a tire; inter-engaging means carried by said annuli whereby the outer surfaces of the same are maintained substantially flush with each other; inter-engaging means carried by said annuli for determining the relative circular position thereof; hook members pivotally attached to the inner face of one annulus and adapted to engage the other annulus; and springs engaging said hook members and adatped to maintain the same either in or out of engagement with said other annulus.

5. The combination of a pair of complementary annuli each provided at its outer edge with a flange adapted to engage the side of a tire; inter-engaging means carried by the inner edges of said annuli whereby the outer surfaces of the same are maintained substantially flush with each other, inter-engaging means carried by said annuli for determining the relative circular position thereof; hook members pivotally attached to the inner face of one annulus and adapted to engage the other annulus, said members having flattened portions and shoulders adjacent to said flattened portions; and springs engaging said flattened portions whereby said hook members are maintained in engagement with said other annulus, said shoulders serving to hold said hook members out of such engagement when the same are turned so as to move the shoulders past the springs.

[Claims 6 to 18 not printed in the Gazette.]

1,172,426. ILLUMINATING AND STORING APPARATUS. EUGENE W. CALDWELL, New York, N. Y. Filed July 2, 1915. Serial No. 37,784. (Cl. 40—65.)



1. In illuminating and storing apparatus adapted for X-ray negatives or other transparencies, a series of longitudinally alined bases containing frame storage racks and guides, a series of interchangeable transparancy frames arranged in said storage racks and comprising a series of transverse holding strips provided with holding slots and with upper retaining or guiding slots to accommodate the transparencies and allow their ready insertion and removal, lifting members on said frame, a movable illuminating support mounted to slide transversely on each of said bases and expose the frames in the corresponding storage rack, each of said supports comprising an inclined diffusing illuminating surface, an inclined recessed frame support adjacent said illuminating surface, lights arranged within said support and adjustable diffusing shades between said lights and said illuminating surfaces, an automatically raising lifting device coöperating with said bases and comprising a traveling carriage mounted on a track extending longitudinally above said bases, a lifting cord extending along said track, a lifting weight connected to said cord and mounted in a pneumatic cushioning cylinder, an automatically closing cushioning valve and a throttling valve coöperating with said cushioning cylinder to cushion the descent of said lifting weight, hanger pulleys connected to said carriage with which said cord coöperates and a lifting pulley engaged by the loop of cord between said hanger pulleys and a connected lifting member to removably engage the lifting members in said frames and automatically lift one of said frames and hold the same in suspended position adjacent said recessed frame supports and allow the movement of said frame longitudinally of said bases.

2. In illuminating and storing apparatus adapted for X-ray negatives or other transparencies, a series of longitudinally alined bases containing frame storage racks, a series of interchangeable transparency frames arranged in said storage racks and comprising a series of transverse holding strips provided with holding slots and with upper retaining or guiding slots to accommodate the transparencies and allow their ready insertion and removal, lifting members on said frame, a movable illuminating support mounted to slide transversely on each of said bases and expose the frames in the corresponding storage rack, each of said supports comprising an inclined diffusing illuminating surface, an inclined recessed frame support adjacent said illuminating surface, lights arranged within said support and adjustable diffusing shades between said lights and said illuminating surfaces, an automatically raising lifting device coöperating with said bases and comprising a traveling carriage mounted on a track extending longitudinally above said bases, a lifting cord extending along said track, a lifting weight connected to said cord and mounted in a pneumatic cushioning cylinder, an automatically closing cushioning valve and a throttling valve coöperating with said cushioning cylinder to cushion the descent of said lifting weight, hanger pulleys connected to said carriage with which said cord coöperates and a lifting pulley engaged by the loop of cord between said hanger pulleys and a connected lifting member to removably engage the lifting members in said frames and automatically lift one of said frames and hold the same in suspended position adjacent said recessed frame supports and allow the movement of said frame longitudinally of said bases.

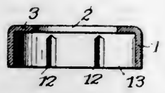
3. In illuminating and storing apparatus adapted for X-ray negatives or other transparencies, a series of bases containing frame storage racks, a series of interchangeable transparency frames arranged in said storage racks to accommodate the transparencies and allow their ready insertion and removal, lifting members on said frames, a movable illuminating support mounted to slide transversely on each of said bases and expose the frames in the corresponding storage rack, each of said supports comprising an inclined diffusing illuminating surface, an inclined recessed frame support adjacent said illuminating surface, lights arranged within said support, an automatically raising lifting device coöperating with said bases and comprising a traveling carriage mounted on a track above said bases, a lifting cord extending along said track, a lifting element connected to said cord and mounted in an element cushioning cylinder, hanger pulleys connected to said carriage with which said cord coöperates and a lifting pulley engaged by the loop of cord between said hanger pulleys and a connected lifting member to removably engage the lifting members in said frames and automatically lift one of said frames and hold the same in suspended position adjacent said recessed frame supports and allow the movement of said frame longitudinally of said bases.

4. In illuminating and storing apparatus adapted for X-ray negatives or other transparencies, a series of bases containing frame storage racks, a series of interchangeable transparency frames arranged in said storage racks to accommodate the transparencies and allow their ready insertion and removal, lifting members on said frames, a movable illuminating support mounted to expose the frames in the corresponding storage rack, each of said supports comprising a diffusing illuminating surface, a recessed frame support adjacent said illuminating surface, lights arranged within said support, an automatically raising lifting device coöperating with said bases and comprising a traveling carriage mounted on a track above said bases, a lifting cord extending along said track, a lifting element connected to said cord, hanger pulleys connected to said carriage with which said cord coöperates and a lifting pulley engaged by the loop of cord between said hanger pulleys and a connected lifting member to removably engage the lifting members in said frames and automatically lift one of said frames and hold the same in suspended position adjacent said recessed frame supports and allow the movement of said frame longitudinally of said bases.

5. In illuminating and storing apparatus adapted for X-ray negatives or other transparencies, a series of bases containing frame storage racks, a series of interchangeable transparency frames arranged in said storage racks to accommodate the transparencies and allow their ready insertion and removal, lifting members on said frames, a movable illuminating support mounted to expose the frames in the corresponding storage rack, each of said supports comprising diffusing illuminating surface, a recessed frame support adjacent said illuminating surface, lights arranged within said support, an automatically raising lifting device coöperating with said bases to removably engage the lifting members in said frames and automatically lift one of said frames and hold the same in suspended position adjacent said recessed frame supports and allow the movement of said frame longitudinally of said bases.

[Claims 6 to 21 not printed in the Gazette.]

1,172,427. NUT. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 17, 1913. Serial No. 748,797. (Cl. 85—32.)

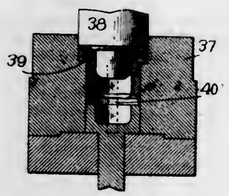


1. As an article of manufacture, a nut having at one end an interior flange, said flange being beveled on its under side and turned inwardly, whereby to space its free edge from the interior wall of said nut.

2. As an article of manufacture, a nut having a series of external longitudinal ribs and a series of internal longitudinal recesses corresponding to said ribs, and provided at one end with an interior flange, said flange being beveled on its under side and turned inwardly and extending past the ends of said internal recesses, to provide an annular space for the end of a pipe.

3. As an article of manufacture, a nut comprising an interiorly screw threaded body portion and an interior flange forming an extension of said body portion, said flange being reduced in thickness from its base to its free edge, and turned inwardly of said body portion to provide an annular space for the end of a pipe.

1,172,428. METHOD OF MAKING THE FEMALE MEMBER OF A UNION-COUPLING. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 17, 1913. Serial No. 748,798. (Cl. 29—157.)

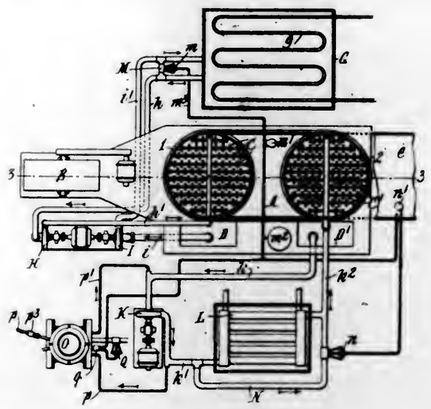


The herein described method of forming the female member of a union coupling, comprising forming a cup shaped blank, forming an opening in the closed end of the blank smaller than the internal diameter of the blank, thereby producing an internal annular flange surrounding said opening, inserting a bushing against the inner side of said flange and reducing the internal diameter of the blank to inclose said bushing between said shoulder and the wall of the blank.

1,172,429. METHOD FOR DEHUMIDIFYING AND COOLING AIR. WILLIS H. CARRIER, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y. Filed Aug. 4, 1909. Serial No. 511,117. (Cl. 34—24.)

1. The herein described method of dehumidifying air consisting in reducing the temperature of the air in successive stages by first bringing the air into direct contact with a finely divided substantially divided substantially unobstructed spray of liquid of lower temperature than the air, and separating the free moisture from the air, then bringing the cooled air after the separation of the free moisture therefrom into direct contact with a finely divided substantially unobstructed spray of liquid which is refrigerated before contact with the air to a lower temperature than the liquid first used to further reduce the temperature of the air, and thereafter separating the free moisture from the air, substantially as set forth.

2. The herein described method of dehumidifying air consisting in reducing the temperature of the air in successive stages by first bringing the air into direct contact with a finely divided substantially unobstructed spray of a relatively cold liquid, and separating the free moisture from the air, then further reducing the temperature of the air after the separation of the free moisture therefrom by passing the air through a substantially unobstructed spray or shower of a non-freezing liquid which is refrigerated before contact with the air to a lower temperature than the liquid first used, and then separating the free moisture from the air, substantially as set forth.



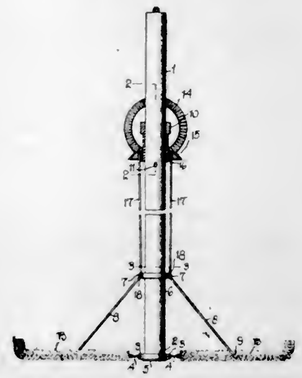
3. The herein described method of dehumidifying air consisting in reducing the temperature of the air in successive stages by first bringing the air into direct contact with a substantially unobstructed spray of a relatively cold liquid, and separating the free moisture from the air, then bringing the cooled air after the separation of the free moisture therefrom into direct contact with a substantially unobstructed spray of a moisture absorbing liquid which is refrigerated before contact with the air to a lower temperature than the liquid first used to further reduce the temperature of the air, and then separating the free moisture from the air, said moisture absorbing liquid being circulated and used repeatedly, substantially as set forth.

4. The herein described method of dehumidifying air consisting in reducing the temperature of the air in successive stages by first bringing the air into direct contact with a substantially unobstructed spray of a liquid which is circulated and refrigerated before contact with the air to keep it at a suitable temperature lower than that of the air, and separating the free moisture from the air, then bringing the cooled air after the separation of the free moisture therefrom into direct contact with a substantially unobstructed spray of a liquid which is circulated and refrigerated before contact with the air to keep it at a suitable temperature lower than the temperature of the liquid first used whereby the temperature of the air is further reduced, and then separating the free moisture from the air, substantially as set forth.

5. The herein described method of dehumidifying air consisting in reducing the temperature of the air in successive stages by first bringing the air into direct contact with a spray of a relatively cold liquid and separating the free moisture from the air, then bringing the cooled air after the separation of the free moisture therefrom into direct contact with a spray of a liquid which is refrigerated before contact with the air to a temperature lower than that of the liquid first used to further reduce the temperature of the air, and regulating the temperature in at least one of the cooling stages under the control of the temperature of the air leaving such stage to give a substantially predetermined temperature of the air after treatment, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,172,430. CAN-WASHER. PATRICK H. CARROLL, White Creek, N. Y., assignor of one-half to Marshall Gardner, White Creek, N. Y. Filed Nov. 27, 1915. Serial No. 63,851. (Cl. 141—7.)

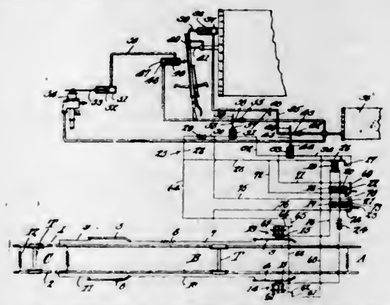


1. A can washer comprising a stem, a ferrule rotatably mounted on the stem adjacent an extremity thereof, brush members pivotally engaged with the ferrule, a second ferrule slidably mounted upon the stem, elongated members pivotally engaged with the second ferrule and operatively engaged with the brush members, and means imparting rotation to the last named ferrule.

2. A can washer comprising a stem, a ferrule rotatably mounted on the stem adjacent an extremity thereof, brush members pivotally engaged with the ferrule, a second ferrule slidably mounted upon the stem, elongated members pivotally engaged with the second ferrule and operatively engaged with the brush members, a sleeve slidably mounted on the stem, a member rotatably supported by the sleeve, rods connecting the member and the last named ferrule, and means for imparting rotation to the member.

3. A can washer comprising a stem, a ferrule rotatably mounted on the stem adjacent an extremity thereof, brush members pivotally engaged with the ferrule, a second ferrule slidably mounted upon the stem, elongated members pivotally engaged with the second ferrule and operatively engaged with the brush members, a sleeve slidably mounted on the stem, a member rotatably supported by the sleeve, rods connecting the member and the last named ferrule, a second member rotatably supported by the sleeve and in mesh with the first named member, said second named member being provided with means for rotating the same.

1,172,431. TRAIN - CONTROL SYSTEM. ANTONIO CASALE, Scranton, Pa. Filed Jan. 22, 1915. Serial No. 3,708. (Cl. 246—58.)



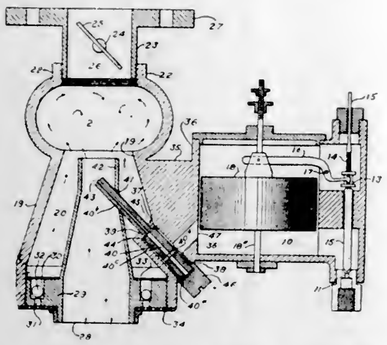
1. In a train control system, the combination with a partial track circuit including in series, insulated traffic rails, a resistance therebetween, and a sub-rail connected to one of the traffic rails; of a normally closed train carried circuit including a source of electrical energy, an electrically operated device adapted to hold a train stopping mechanism in inoperative position, and a normally closed and a normally opened switch connected in parallel to one another; and a train carried partial circuit cooperating with the partial track circuit and including a contact shoe at one end engageable with the sub-rail, an electrical device for closing the aforesaid normally open switch, and an electrical device connected to the aforesaid train carried partial circuit for shunting out the first mentioned electrically operated device when said resistance is cut out to release the train stopping mechanism; the normally closed switch being operatively connected to the contact shoe whereby when the contact shoe engages the sub-rail the normally closed switch will be opened; and means for electrically connecting the other end of the train carried partial circuit and the other traffic rail.

2. In a train control system, the combination with a partial track circuit including in series, insulated traffic rails, a resistance therebetween, a pair of sub-rails one of which is connected to one traffic rail, and a resistance between the sub-rails; of a normally closed train carried circuit including a source of electrical energy, a pair of electrically operated devices, one of which is adapted to hold a train stopping mechanism in inoperative position, and a normally open and a normally closed switch connected in parallel to one another; and a train carried partial circuit coöperating with the partial track circuit and including a contact shoe at one end engageable with the sub-rails, an electrical device for closing the aforesaid normally open switch, and a pair of electrical devices connected to the aforesaid train carried partial circuit, said pair of electrical devices of the train carried partial circuit being less sensitive than the aforesaid electrical device of the train carried partial circuit and being connected to the aforesaid normally closed train carried circuit, the last mentioned pair of electrical devices being adapted to shunt out one or the other of the electrically operated devices of the normally closed train carried circuit, one of the said pair of electrical devices of the train carried partial circuit being less sensitive than the other and being adapted to operate when both resistances are cut out for shunting said electrically operated device of the normally closed circuit which holds the train stopping mechanism in inoperative position, the normally closed switch being operatively connected to the contact shoe whereby the contact shoe in engaging the sub-rail will open the normally closed switch; and means for electrically connecting the other end of the train carried partial circuit and the other traffic rail.

3. In a train control system, the combination with a partial track circuit including in series, insulated traffic rails, a resistance therebetween, two pairs of sub-rails, the sub-rails of one pair being connected to the traffic rails, and a resistance between a sub-rail of one pair and a sub-rail of the other pair; of a normally closed train carried circuit including a source of electrical energy, an electrically operated device adapted to hold a train stopping mechanism in inoperative position, a second electrically operated device, a normally open switch, and a pair of normally closed switches, the normally closed switches being arranged in parallel to the normally open switch; and a train carried partial circuit coöperating with the partial track circuit and including a pair of contact shoes engageable with the sub-rails of the respective pairs to close the circuit through the said partial circuits, an electrical device for closing said normally open switch, an electrical device connected to the normally closed train carried circuit for shunting out the second electrically operated device of the normally closed train carried circuit, and an electrical device connected to the normally closed train carried circuit for shunting out the first mentioned electrically operated device of the normally closed circuit, the said electrical devices of the train carried partial circuit being of different resistances, whereby the second mentioned electrical device of the

train carried partial circuit will be operated when the first mentioned resistance is cut out and the third mentioned electrical device of the train carried partial circuit will be operated when both resistances are cut out; the normally closed switches being operatively connected to the contact shoes whereby the normally closed switches will be opened when the contact shoes engage the sub-rails.

1,172,432. CARBURETER. WILLIAM R. CLARK, Spokane, Wash. Filed June 18, 1912. Serial No. 704,399. (Cl. 48—155.2.)



1. A carbureter for explosion engines provided with a Venturi tube having the larger end freely open to the atmosphere, a fuel nozzle entering the tube near the smaller end and directed theretoward at an angle to the longitudinal center line of the tube, a laterally expanded mixing chamber at substantially the entrance end of which the smaller end of the Venturi tube terminates and freely communicates, and a secondary air duct surrounding the Venturi tube from the inlet of the latter to and communicating with the entrance end of the expansion chamber in surrounding relation to the outlet end of the Venturi tube.

2. A carbureter for explosion engines comprising a body portion inclosing a chamber tapering toward one end and then laterally expanding to form a mixing chamber in turn contracting toward the end remote from the first-named chamber, a Venturi tube extending centrally through the tapering portion of the first-named chamber with its smaller end terminating substantially at and discharging freely into the entering end of the laterally expanded mixing chamber in spaced relation to the walls of the smaller end of the first-named chamber, and means for introducing fuel into the Venturi tube.

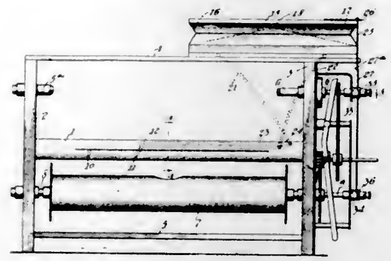
3. A carbureter comprising a body portion inclosing a chamber tapering toward one end, a substantially oblate spheroidal mixing chamber into which the smaller end of the tapering chamber opens, a Venturi tube extending substantially centrally through the tapering portion of the first-named chamber with its smaller end stopping close to and discharging freely into the entering end of the mixing chamber in spaced relation to the walls of the small end of the first-named chamber, and means for introducing fuel into the Venturi tube.

4. A carbureter comprising a body portion inclosing a chamber tapering toward one end, a substantially oblate spheroidal mixing chamber into which the smaller end of the tapering chamber opens, a Venturi tube extending substantially centrally through the tapering portion of the first-named chamber with its smaller end stopping close to and discharging freely into the entering end of the mixing chamber in spaced relation to the walls of the small end of the first-named chamber, and means for introducing fuel into the Venturi tube, said fuel introducing means being in the form of a nozzle entering the Venturi tube in substantially forty-five degree relation to the longitudinal axis of the Venturi tube and terminating adjacent to the smaller open end of the Venturi tube.

5. A carbureter for explosion engines comprising a body portion inclosing a chamber tapering toward one end, and a laterally expanded mixing chamber in free communication with the small end of the tapering chamber, an annular plug at the larger end of the first-named chamber carrying a centrally located Venturi tube terminating with its small end closely adjacent to the entering end of and freely opening into the mixing chamber and there spaced from the inner wall of the small end of the first-named chamber, the plug having means for the entrance of air therethrough into the first-named chamber, and means for the introduction of fuel into the Venturi tube.

[Claims 6 to 10 not printed in the Gazette.]

1,172,433. SHEET-CONTROLLING MECHANISM. WILLIAM C. P. COLLIGNON, Chicago, Ill., assignor to Schiller Piano Company, Oregon, Ill., a Corporation of Illinois. Filed May 18, 1914. Serial No. 839,211. (Cl. 84—161.)



1. The combination of a tracker having the usual row of apertures and also having two rows of supplemental apertures, and means for producing a relative movement between the tracker and music sheet in a direction lengthwise of the tracker, said means being operable through said supplemental apertures, and said mechanism comprising a double bellows and a cam and groove arrangement connected with the music spool spindles and actuated by said bellows.

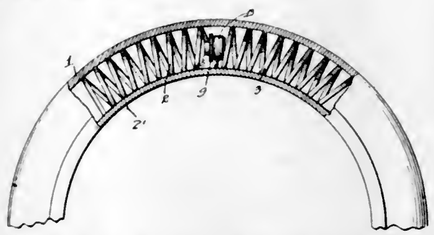
2. The combination of a tracker having two sets of apertures, whereof the apertures in the two sets are out of alinement crosswise of the tracker, a double bellows, pneumatic connections between said apertures and said bellows, one set of apertures being connected with one part of the bellows and the other set to the other part, and mechanism for producing a relative movement between the tracker and the music sheet connected with and operated by said bellows, said mechanism comprising spirally grooved members on the music roll spindles and a vertically adjustable rod connected with said bellows and provided with fingers arranged to work in said grooves.

3. The combination of the bellows having a swinging leaf, of music roll spindles provided with spirally grooved sleeve members, and an adjustable rod connected with said bellows and provided with fingers extending to and operating in said grooves.

1,172,434. VEHICLE SPRING-TIRE. EZRA M. CONRAD, Seville, Ohio. Filed Oct. 27, 1913. Serial No. 797,475. (Cl. 152—8.)

1. In a spring tire, a coil spring, a member secured to one end of the spring, a second member secured to the remaining end and rotatably connected with said first named member, and a pawl connected with one member to engage with the second member to lock the members against independent rotation.

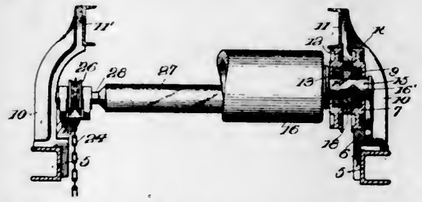
2. In a spring tire, a coil spring, a member secured to one end of the spring, a second member secured to the remaining end and rotatably connected with said first member, and a gear wheel carried by one of the members for rotating the same to coil the spring in a reduced diameter.



3. In a spring tire, a coil spring, a member secured to one end of the spring, a second member secured to the remaining end and rotatably connected with said first member, a gear wheel carried by one of the members and a pawl carried by the other member to engage with the teeth of the gear to lock the members against independent rotation.

4. In a spring tire, a coil spring, a flange member secured to one end of the spring, a second member secured to the remaining end, and a coupling ring fastened to the second member and having a flange for engagement with the flange of the first-named member for rotatably connecting the members together, and means carried by one of said members for engagement with the second member to lock the members against independent rotation.

1,172,435. FELT-TIGHTENER FOR PAPER-MAKING MACHINES. BENJAMIN DENVER COPPAGE, Wilmington, Del. Filed Sept. 2, 1915. Serial No. 48,673. (Cl. 64—5.)



1. In a device of the character described, a roll provided with a journal at each end, a pair of wheels carried by each journal, a lower track for one wheel of each pair, an upper track for the other wheel of each pair, a bearing interposed between each journal and its wheels, and gravity-actuated means for displacing said roll along said tracks.

2. In a device of the character described, a roll provided with a journal at each end, a pair of wheels carried by each journal, a lower track for one wheel of each pair, an upper track for the other wheel of each pair, a bearing interposed between each journal and its wheels, a weight for each bearing, and connections between said weights and bearings.

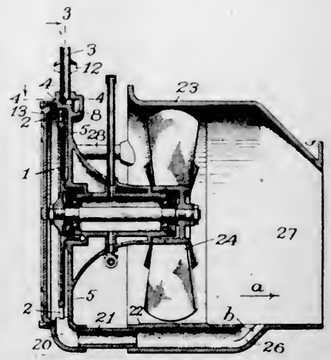
3. In a device of the character described, a roll provided with a journal at each end, a pair of wheels carried by each journal, a lower track for one wheel of each pair, an upper track for the other wheel of each pair, a bearing interposed between each journal and its wheels, a weight for each bearing, and connections between said weights and bearings, said connections passing over wheels slightly elevated with respect to the point of attachment between said connections and bearings.

4. In a device of the character described, a roll provided with a journal at each end, a pair of wheels carried by each journal, a lower track for one wheel of each pair, an upper track for the other wheel of each pair, a bearing interposed between each journal and its wheels, a weight for each bearing, a chain connecting each bearing and its weight, and a chain sprocket for each chain slightly elevated with respect to the point of attachment between each chain and its bearing.

5. In a device of the character described, a roll provided with a journal at each end, a pair of wheels carried by each journal, a lower track for one wheel of each pair, and upper track for the other wheel of each pair, a bearing interposed between each journal and its wheels, a roller-race interposed between each wheel and its bearing, and gravity-actuated means for displacing said roll along said tracks.

[Claims 6 to 11 not printed in the Gazette.]

1,172,436. STEAM-TURBINE. FRANS H. C. COPPUS, Worcester, Mass., assignor to Coppus Engineering and Equipment Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 11, 1912. Serial No. 730,561. (Cl. 253—159.)

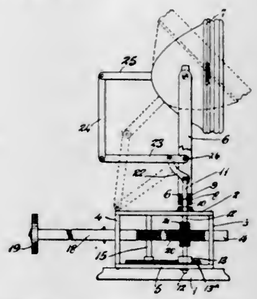


1. In a machine of the class described, a turbine wheel, a casing inclosing said wheel, a steam chamber, a series of steam pockets communicating with said steam chamber, and a series of steam nozzles directed against said wheel and removable through said steam pockets

2. In a machine of the class described, a casing, a steam chamber, a steam pocket having a valve controlled communication with said steam chamber but in a different plane, and a steam nozzle communicating with said pocket and removable therethrough.

3. In a machine of the class described, a casing, a steam chamber, a series of steam pockets communicating with said steam chamber but in a different plane, a series of steam nozzles removably held in said casing, said nozzles having shoulders, and means contacting with said shoulders for holding the nozzles from longitudinal movement.

1,172,437. SEARCH-LIGHT. RUSSELL P. CROTHERS, Cincinnati, Ohio. Filed June 16, 1915. Serial No. 34,418. (Cl. 240—61.)



1. In a searchlight controlling device, the combination with a serchlight, a pivotal member, means for pivotally mounting the light on said pivotal member, a common

operating shaft and operative connections from said shaft to the pivotal member and independent operative connections from said shaft to the searchlight whereby the light or the pivotal member may be independently acted upon by said operating shaft.

2. In a searchlight controlling device, the combination with a serchlight, a pivotal member, means for pivotally mounting the light on said pivotal member, a shaft slidably but nonrotatably engaging the pivotal member, and connections from the shaft to the light, whereby sliding the shaft will swing the light without affecting the pivotal member, and rotating the shaft will rotate the pivotal member without changing the position of the light therein.

3. In a searchlight controlling device, the combination with a searchlight, a pivotal member, means for pivotally mounting the light on said pivotal member, a shaft slidably but nonrotatably engaging the pivotal member, and connections from the shaft to the light, whereby sliding the shaft will swing the light without affecting the pivotal member, and rotating the shaft will rotate the pivotal member without changing the position of the light therein, and a single operating shaft for said first mentioned shaft.

4. In a searchlight controlling device, the combination with a searchlight, a pivotal member, means for pivotally mounting the light on said pivotal member, a shaft slidably but nonrotatably engaging the pivotal member, connections from the shaft to the light, whereby sliding the shaft will swing the light without affecting the pivotal member, and rotating the shaft will rotate the pivotal member without changing the position of the light therein, and a single operating shaft for said first mentioned shaft, having means thereon for engaging the said shaft horizontally only, a gear train for turning said shaft, and means on the operating shaft for engaging a member of the gear train perpendicularly only.

5. In a searchlight controlling device, the combination with a searchlight, a pivotal member, means for pivotally mounting the light on said pivotal member, a shaft slidably but nonrotatably engaging the pivotal member, and connections from the shaft to the light, whereby sliding the shaft will swing the light without affecting the pivotal member, and rotating the shaft will rotate the pivotal member without changing the position of the light therein, a horizontal shaft, having a horizontally cut rack for engaging the sliding shaft, a gear train, said horizontal shaft having a vertically cut rack for engaging a member of the gear train, and slidable but nonrotatable connection from the gear train to the sliding shaft, as and for the purpose described.

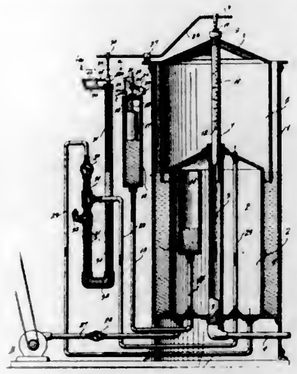
[Claim 6 not printed in the Gazette.]

1,172,438. AUTOMATIC AIR-CONTROLLING DEVICE. FRANK E. CROTTO, Dallas, Tex., assignor of one-half to Samuel Freshman, Dallas, Tex. Filed Sept. 4, 1914. Serial No. 860,179. (Cl. 230—24.)

1. In an automatic air controlling device, the combination of an outer shell, a high pressure reservoir contained within said shell, a low pressure reservoir contained within said shell, a guide tube carried within the high pressure reservoir, a perforated guide tube carried by the low pressure reservoir and having its lower extremity confined within the first guide tube mentioned and means for controlling the passage of air from high pressure to low pressure reservoir.

2. In an automatic air controlling device, the combination of an outer shell, a high pressure reservoir contained within said shell, a low pressure reservoir contained within said shell, a perforated guide tube correlated with the low pressure reservoir, a sealed tube contained within the perforated tube, a pull rod slidably confined within the sealed tube, a guide tube carried within the high pressure reservoir, the perforated guide tube of the low pressure reservoir slidably confined within the guide tube of the high pressure reservoir and means provided for controlling the air passage from the high pressure to the low pressure reservoir.

3. In an automatic air controlling device, the combination of an outer shell, a high pressure reservoir contained within said shell, an annular liquid receptacle formed between two said elements recited, guide tube within the reservoir, a discharge line connected with the guide tube, a floating air bell poised above the reservoir and having its lower open extremity hermetically sealed in the liquid contained in the annular space and a control valve.

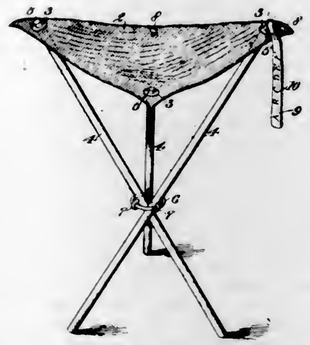


4. In an automatic air controlling device, the combination of an outer shell, a high pressure reservoir contained within the shell, an annular liquid receptacle formed between two said elements recited, a guide tube within the reservoir, a discharge line connected with the guide tube, a floating air bell poised above the reservoir and having its lower open extremity hermetically sealed in the liquid contained in the annular space, a pressure drum within the high pressure chamber, a float chamber correlated with the pressure drum and means correlated with float chamber for controlling the passage of air from the reservoir to the air bell.

5. In an automatic air controlling device, the combination of an outer shell, a high pressure reservoir contained within the shell, a low pressure reservoir contained in the shell, a pressure control line opening into the high pressure reservoir and communicating with the low pressure reservoir and a control valve embodied in the pressure control line adapted to control the passage of air through said line from the high pressure reservoir to the low pressure reservoir.

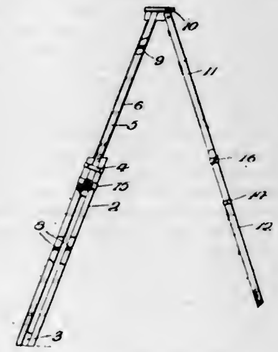
[Claims 6 to 15 not printed in the Gazette.]

1,172,439. CAMP-STOOL. ELIZABETH CROZIER, San Francisco, Cal. Filed July 7, 1914. Serial No. 849,406. (Cl. 155—32.)



A folding camp stool composed of three movably connected legs the upper ends of each of which are similarly reduced to form shoulders, a triangular seat having openings to receive the respective reduced ends of the legs, a strap secured at one end to the said end of one of the legs, said seat having an integral extension adjacent said third leg providing a freely movable flap, a fastener borne by said extension or flap, and a complementary fastener on the seat located so that when the seat is removed from the other two legs the latter may be disposed in parallelism and the seat wrapped around the legs and engaged with the first named fastener, said strap serving as a handle and also acting as means to permanently hold the seat on said leg to which the strap is secured.

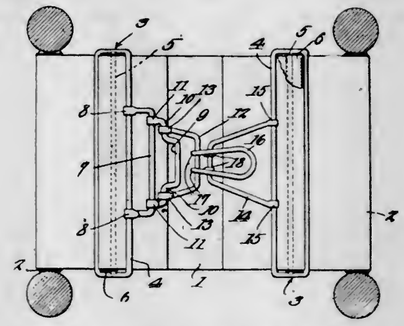
1,172,440. EXTENSION STEP-LADDER. GEORGE E. DARROW and GROVER C. TUDDER, Eugene, Oreg. Filed May 14, 1914. Serial No. 838,421. (Cl. 228—19.)



1. In a ladder of the class described, a section including side rails, each composed of a pair of spaced apart parallel bars and steps therebetween each comprising a pair of spaced apart step sections, the inner opposed edges of the bars forming the side rails being provided with V-shaped grooves extending for the greater portion of the length thereof, and an additional section including a pair of side rails disposed between the bars forming the aforesaid side rails, the last mentioned rails being each provided with V-shaped ribs to form wedges whereby to fit snugly in the aforesaid grooves of said bars, additional step sections carried between the last mentioned side rails adapted to aline with the aforesaid step sections when the additional section is in its lowermost position with respect to the first mentioned section, and means carried by the lower portions of said second mentioned side rails and engaged with the bars of the first mentioned side rails whereby to cause the V-shaped wedges of the second mentioned side rails to frictionally bind within the V-shaped grooves of the first mentioned side rails and permit the movable section to be retained in any adjusted position with respect to the stationary section of the ladder.

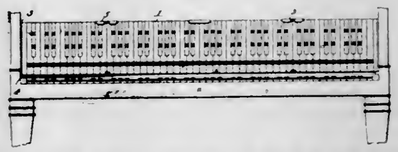
2. In the ladder of the class described a section including side rails, each composed of a pair of spaced apart parallel bars and steps therebetween, each comprising a pair of spaced apart sections, the inner opposed edges of the bars forming the side rails being provided with V-shaped grooves terminating at their outer edges in reduced flat portions, said grooves extending for the greater portion of the length thereof, an additional section including a pair of side rails disposed between the bars forming the aforesaid side rails, the last mentioned rails being each provided with V-shaped ribs to form wedges, whereby to fit snugly in the aforesaid grooves of said bars, said V-shaped wedges also terminating at their side edges in reduced flat portions adapted to abut the flat portions of the aforesaid side rails, additional step sections carried by the last mentioned side rails adapted to aline with the aforesaid side sections when the additional section is in its lowermost position and means whereby the lower portions of said last mentioned side rails are engaged with the bars of the first mentioned side rails, whereby to cause the V-shaped wedges to frictionally bind within the V-shaped grooves and permit the movable section to be retained in any adjusted position with respect to the stationary section.

1,172,441. CHAIR-SEAT. VAN TAYLOR DEAVER, Canton, N. C. Filed Aug. 17, 1914. Serial No. 857,205. (Cl. 155—4.)



In a device of the character described, an apron, a pair of transversely elongated buckles adjustably mounted upon the end portions thereof, a U-shaped member having its ends pivotally embracing a portion of one buckle, a latch embodying a curved loop having terminal hooks pivotally connected to the intermediate portion of said U-shaped member, and a series of U-shaped members one of which is relatively wide and has its ends pivotally embracing a portion of the other buckle, the other members of said series having their ends pivotally embracing the companion members, and the members of said series decreasing in width beginning with the said relatively wide member, the latch being engageable with the intermediate portions of the members of said series.

1,172,442. MUSICAL CHART. GENNARO DE BELLIS, Philadelphia, Pa. Filed Dec. 11, 1913. Serial No. 805,970. (Cl. 84—48.)

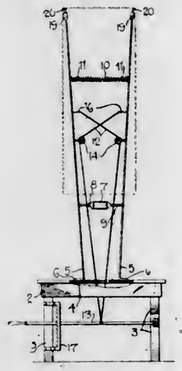


1. A musical chart comprising boards having hinged connection, and adapted to be supported in a vertical position above the keys of a piano, said boards having on their front faces lines indicating the facsimile of a piano key board registering with the key board of the piano on which the chart is supported, and a musical staff extending across the outer portion of the white keys, and two separate staves across the black keys, every representation of a key on the chart bearing a note located on the proper degree of the staff, one staff on the black keys bearing the appropriate sharp signs, the other staff bearing the corresponding flat signs, substantially as described.

2. A musical chart comprising boards having hinged connection, and adapted to be supported in a vertical position above the keys of a piano, said boards having on their front faces lines indicating the facsimile of a piano key board registering with the key board of the piano on which the chart is supported, and a musical staff extend-

ing across the outer portion of the white keys, and two separate staves across the black keys, every representation of a key on the chart bearing a note located on the proper degree of the staff, one staff on the black keys bearing the appropriate sharp signs, the other staff bearing the corresponding flat signs, all of said staves having a syllabic notation and alphabetical notations, substantially as described.

1,172,443. SACK-TURNING MECHANISM. ELLIS GRANT EDMONSON, Greenfield, Ohio, assignor to The American Pad & Textile Company, Greenfield, Ohio, a Corporation of Ohio. Filed Dec. 5, 1914, Serial No. 875,673. Renewed Jan. 7, 1916. Serial No. 70,886. (Cl. 139—47.)



1. In a sack turning mechanism, a base, outwardly extending, approximately parallel sack engaging members mounted upon the base, the outer ends of said members being movable toward each other, a spring urging the outer ends of the members away from each other, manually operable means for drawing the outer ends of said members toward each other, whereby to adjust the distance between the outer ends of said sack engaging members, and means for adjustably limiting the outward movement of the sack engaging members.

2. In a sack turning mechanism, a base, upwardly extending diverging sack engaging members, a spring urging said members apart, a lever mounted below the base, cables extending upward from the lever, pulleys mounted on the members and from which said cables pass, said cables being crossed after passing over the pulleys and being attached to the respective members, and a turn buckle limiting the outward movement of the members but permitting the movement toward each other.

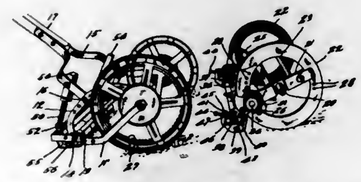
3. In a sack turning mechanism, a pair of sack holding members supported at one end and the free ends of each being movable toward each other, springs forcing said members apart, manually operable means for drawing said members toward each other, and a sack engaging bar removably mounted on the extermities of said members and having ends adapted to engage the bottom of a sack.

4. In a sack turning mechanism, upwardly extending sack engaging members, over which a sack is adapted to be inverted, and manually controllable means for adjusting the distance between the upper ends of said sack engaging members, said means including an adjustable, manually operable lever and means for holding the lever in a plurality of adjusted positions.

5. In a sack turning machine, a base, outwardly extending sack engaging members, a spring urging the outer ends of said members apart, a lever mounted below the base, cables extending from the lever and operatively connected to the members to cause the members to move toward each other upon a pull upon the cables, and means adjustably limiting the outward movement of the members but permitting their movement toward each other.

[Claims 6 and 7 not printed in the Gazette.]

1,172,444. LAWN-MOWER. HERBERT J. FARMER, Richmond, Ind. Filed Aug. 16, 1915. Serial No. 45,646. (Cl. 56—19.)



1. A lawn mower, comprising the combination of driving wheels, a reel hanger hung from the axis of said driving wheels, a cutting reel carried by said reel hanger and having its axis offset from the axis of the driving wheels, and a frame pivotally connected with the driving wheels at their axes, said frame interconnecting the driving wheels and having an offset ground-engaging portion for positioning it, and said reel hanger and cutting reel being rotatably adjustable about the axis of the driving wheels to different positions relative to the frame.

2. A lawn mower, comprising the combination of driving wheels, a reel hanger hung from the axis of said driving wheels, a cutting reel carried by said reel hanger and having its axis offset from the axis of the driving wheels, a frame pivotally connected with the driving wheels at their axes, said frame interconnecting the driving wheels and having an offset ground-engaging portion for positioning it, and means for attaching said reel hanger to said frame in different relative positions to vary the height of the cutting reel.

3. A lawn mower, comprising the combination of driving wheels, a reel hanger hung from the axis of said driving wheels, a cutting reel carried by said reel hanger and having its axis offset from the axis of the driving wheels, a frame pivotally connected with the driving wheels at their axes, and means for attaching said reel hanger to said frame with the cutting reel either in advance or in the rear of the vertical plane through the axis of the driving wheels.

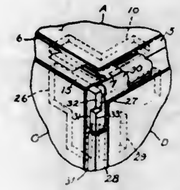
4. A lawn mower, comprising the combination of driving wheels, a reel hanger hung from the axis of said driving wheels, a cutting reel carried by said reel hanger and having its axis offset from the axis of the driving wheels, a frame pivotally connected with the driving wheels at their axes, said reel hanger and cutting reel being rotatably adjustable about the axis of the driving wheels to different positions relative to the frame, and a cutter bar hung from said reel hanger and adjustable about the axis of the cutting reel.

5. A lawn mower, comprising the combination of driving wheels, a reel hanger hung from the axis of said driving wheels, a cutting reel carried by said reel hanger and having its axis offset from the axis of the driving wheels, a frame pivotally connected with the driving wheels at their axes, means for attaching said reel hanger to said frame with the cutting reel either in advance or in the rear of the vertical plane through the axis of the driving wheels, a cutter bar carried by said reel hanger, and means for fastening said cutter bar to the reel hanger in different relative positions angularly about the axis of the cutting reel, so that the cutter bar bears the proper relation to the cutting reel and the ground both when the cutting reel is in advance of and in the rear of such vertical plane.

[Claims 6 to 13 not printed in the Gazette.]

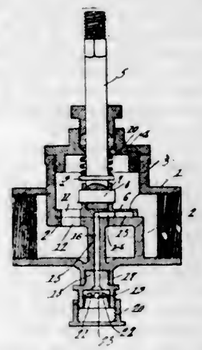
1,172,445. FOLDING METALLIC BOX. SAMUEL B. FIELD, Holbrook, Mass., assignor of one-fourth to Pneumatic Scale Corporation, Limited, Quincy, Mass., a Corporation of Maine, and three-fourths to William H. Doble, Quincy, Mass. Filed Aug. 6, 1915. Serial No. 44,109. (Cl. 220—17.)

1. In a metallic box, a panel composed of inner and outer plates spaced apart from each other, channel members for closing the spaces between the said inner and outer plates on two adjacent edges of the panel, and an angular filling member at the corner of the panel formed by the said two adjacent edges, said filling member having two arms which respectively engage with the adjacent ends of said two channel members.



2. A folding rectangular metallic box having panels each of which is composed of an inner and an outer wall plate spaced apart from each other, channel plates inserted between each pair of inner and outer plates to close the opening between the plates at the edges of the panel, some of said channel plates having portions which protrude outside beyond the edges of the plates, thereby forming angular recesses between the protruding portions of the channel plates in adjacent panels, and angle plates which fit into the space between the legs of the channel plates near a corner of the box and having projecting, shouldered portions, the projecting portions of one angle plate engaging with portions of an adjacent angle plate.

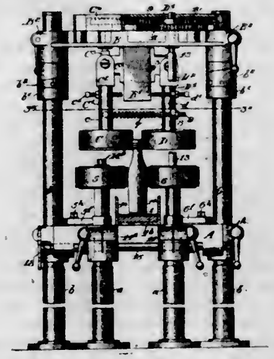
1,172,446. VALVE-LUBRICATING DEVICE. JOHN E. W. FOGAL, Quincy, Ill., assignor to Quincy Elevator Gate Co., Quincy, Ill. Filed Apr. 8, 1915. Serial No. 20,088. (Cl. 137—7.)



In a device of the character described, a valve casing having a partition therein provided with ports, a rotary valve bearing against said partition and having ports adapted to be brought into and out of registration with the aforesaid ports, the valve casing having a portion extending from the central portion of said partition to one wall of the casing and said portion having a duct extending therethrough to the center of the valve, the valve having lubricant cells between its ports and converging grooves extending from the cells and having their adjacent ends in communication with said duct.

1,172,447. CAPPING-MACHINE. HARRY PHIDIAS FORTÉ, Canajoharie, N. Y., assignee to Beechnut Packing Company, Canajoharie, N. Y., a Corporation of New York. Filed Dec. 4, 1913. Serial No. 804,668. (Cl. 226—4.)

1. In a capping machine, the combination with means for supporting a receptacle with its cap placed thereon, of two surfaces having a relative movement in opposite directions and arranged to engage the cap and impart a rotary movement thereto.



2. In a capping machine, the combination with means for transporting a receptacle to which a cap has been applied and means for holding it against rotation, of a continuously movable surface located at one side of the receptacle and adapted to engage the side of a cap and to rotate it upon the receptacle.

3. A capping machine comprising means for transporting and holding a receptacle and a surface adapted to frictionally engage a cap placed on the receptacle, one of said elements being movable relatively to the other so that the receptacle and surface pass each other and cause a rotary movement of the cap on the receptacle during the transporting of the latter.

4. A capping machine comprising means for transporting a receptacle, a surface located at one side of the receptacle and adapted to frictionally engage the side of a cap carried by the receptacle and into engagement with which said cap is carried during the transporting movement, one of said elements being movable relatively to cause the receptacle and frictional surface to pass each other and rotate the cap on the receptacle.

5. A bottle capping machine comprising means for transporting bottles and a surface located at one side of the receptacle into engagement with which caps placed on the bottles are carried during their transporting movement, said surface and transporting means having a further movement relatively one to the other and serving to effect a relative rotary movement between the bottles and their caps.

[Claims 6 to 30 not printed in the Gazette.]

1,172,448. DRAW-BENCH. GEORGE W. FROHLICH, Chicago, Ill. Filed Feb. 16, 1915. Serial No. 8,450. (Cl. 205—3.)



1. A machine for drawing shaped bars of sheet metal from stripped stock, including a series of sets of drawing instrumentalities, one set of such instrumentalities being on a substantially horizontal plane, the other set being rearwardly and upwardly inclined, separate chutes leading from each set of drawing instrumentalities downwardly and toward each other, the terminal of one of said chutes overlying the terminal of the other of said chutes and ending in front of the end of the latter chute, a

channel between adjacent sets of said instrumentalities into which the aforesaid chutes lead, an endless conveyer-belt in said channel, a receptacle at the forward end of said channel, means for operating the drawing instrumentalities, and means for operating said endless conveyer-belt.

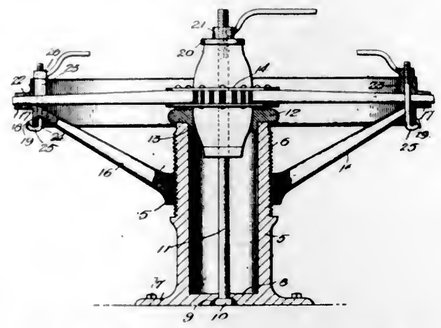
2. In a machine for drawing shaped bars of sheet metal from stripped stock, the combination, of a suitable frame structure, an endless chain-belt movably located in said frame structure, means, for drawing said stripped stock along said frame structure by said endless chain-belt, including a pair of gripping tongs, constructed for removable connection with said endless chain, means adjacent the rear end of said frame structure constructed to disengage said gripping tongs, a chute adjacent the rear end of said frame structure, an endless conveyer-belt in said frame structure, said conveyer-belt moving in a direction opposed to that of said endless chain-belt, said chute terminating above, and in axial line with, said endless conveyer-belt, a receptacle at the forward end of said frame structure, said receptacle being in communication with said endless conveyer-belt, and means for operating said endless chain-belt and the endless conveyer-belt.

3. In a machine of the nature described, a pair of formed bar drawing instrumentalities, including, in combination, a suitable frame structure, a pair of channels in said frame structure in parallel spaced relation, an endless-chain-belt in each of said channels, a trough between said channels constructed to receive the formed bars, a chute at the ends of said channels, a further channel adjacent to the heretofore mentioned two channels, said chute terminating in the latter channel, an endless-conveyer-belt in the latter channel, gripping tongs, said gripping tongs being provided with means for removable attachment to said endless-chain-belts, an inclined plane at the rear end of each of the pair of channels constructed to tilt said gripping tongs to disconnect said gripping tongs from said endless-chain-belts to drop through said chute onto the endless-conveyer-belt by gravity, and means for operating the two endless-chain-belts and the endless conveyer-belt.

4. A machine for drawing shaped bars from ribbon sheet metal, comprising, a multiplicity of sets of strip drawing mechanisms, each set of such mechanisms including an endless chain-belt, means constructed to operate the endless chain-belts in each set simultaneously, gripping tongs for each mechanism in each set, said gripping tongs being provided with means for detachable connection with said endless chain-belts, means on each individual strip drawing mechanism constructed to tilt said gripping tongs to disconnect them from said endless chain-belts, a channel common to all of the sets of strip drawing mechanisms, an endless conveyer-belt in said channel, a chute, leading from one set of said strip drawing mechanisms to said endless conveyer-belt, a further chute leading from the second set of strip drawing mechanisms to said endless conveyer-belt, said latter chute terminating in advance of the terminal of said first mentioned chute, and means for operating the endless conveyer-belt in the opposite direction from that in which the entire series of endless chain-belts are moving.

5. In a machine for drawing shaped bars from ribbon sheet metal, the combination of a suitable frame structure said frame structure including, two longitudinal walls in parallel spaced relation said walls being connected at their lower margins by a transverse bottom to afford a channel, an endless chain-belt, the upper stretch of said chain-belt being constructed to move rearwardly in said channel, a drawing die at the forward terminal of said channel, an inclined plane adjacent the farther terminal of said channel, said inclined plane being located at the upper margin of one of said walls, the upper outer margin of the opposing wall being chamfered, a further channel adjacent the latter wall, an endless conveyer-belt in the latter channel, a chute connecting the two aforementioned channels, said chute terminating above the upper stretch of said endless conveyer-belt, and means for operating the said endless chain-belt and the said endless conveyer-belt.

1,172,449. WHEELWRIGHT-MACHINE. ORLEY B. GRAVES, Coffeyville, Kans. Filed June 8, 1915. Serial No. 32,884. (Cl. 157—4.)



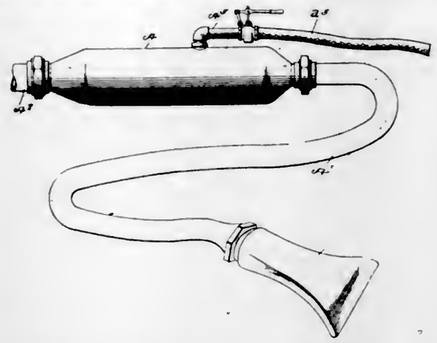
1. The herein described wheelwright machine, consisting of a hollow stand adapted to be connected to a base, and having its upper end exteriorly threaded, a rod extending axially within the stand and having a threaded upper end projecting above said stand, a bushing adapted to be arranged upon the upper end of the stand, and being provided with a downwardly extending flange engaging within the stand, said bushing adapted to receive the hub of a wheel, a collar threaded upon the stand and adapted to be turned relatively thereto and being provided with a plurality of radially extending arms, a spoke supporting ring carried by the arms for supporting the spokes of the wheel, an auxiliary ring adapted to be arranged upon the spokes and being provided with a plurality of bolts movable relatively to the auxiliary ring and provided with means for engaging said spoke supporting ring, means whereby said bolts may be tightened upon the spoke supporting ring, whereby to tighten said auxiliary ring upon the spokes, a follower slidably disposed upon the upper end of said rod and adapted to bear upon said wheel hub, and means connected with the rod and adapted to be turned upon the threaded portion thereof, into engagement with the follower, for tightening the wheel hub upon the bushing.

2. The herein described wheelwright machine, consisting of a hollow exteriorly threaded stand, a rod extending axially of the stand, and projecting at one end beyond the upper end of said stand, a bushing removably disposed upon the upper end of the stand and adapted to receive the hub of a wheel, a spoke supporting ring having a threaded connection with the stand whereby the ring may be adjusted vertically with respect to the stand, an auxiliary ring, means adapted to detachably connect said spoke supporting ring and said auxiliary ring, for adjusting them toward and away from each other, and means associated with the rod for tightening the wheel hub upon the bushing.

3. A device of the class described, including a hollow stand provided with an axially extending rod, projecting at one end beyond the upper end of the stand, a bushing detachably connected with the stand upon the upper end thereof, and adapted to receive a wheel hub, said rod adapted to extend through said hub, a spoke supporting ring connected with the stand and adapted to be adjusted vertically relatively thereto, an auxiliary ring, means connecting said spoke supporting ring and auxiliary ring, whereby the latter may be clamped with reference to the spoke supporting ring, and means whereby the hub may be forced against said bushing.

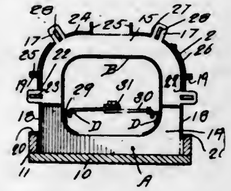
1,172,450. PNEUMATIC CLEANER. WILLIAM T. GRIFFIN, Washington, D. C., assignor of one-third to Andrew A. Hancock, Washington, D. C. Filed Sept. 11, 1905. Serial No. 277,956. (Cl. 230—13.)

In a pneumatic suction cleaning device, the combination of a hollow casing of a larger diameter in its middle portion than at its ends, one end being connected to a discharge pipe and the other end to a suction pipe, the discharge pipe being of a larger diameter than the suction pipe and both of a smaller diameter than the central portion of said casing which is free and unobstructed in



its central interior, and an injector connected with a suitable compressed air supply and leading through the side of said casing and turned parallel with and close to the sides thereof to discharge toward the discharge end of said casing, substantially as set forth.

1,172,451. MOLD. OWEN S. HALL, Red Lodge, Mont. Filed Apr. 28, 1915. Serial No. 24,462. (Cl. 25—127.)



In a mold of the class described, the combination of a plurality of spaced division plates having offset upper and lower portions and a downwardly inclined intermediate portion connecting said lower and upper portions, said plates being further provided with aliued core receiving openings, side members detachably interlocked with said plates, and a collapsible core-engaged through the openings in the plates.

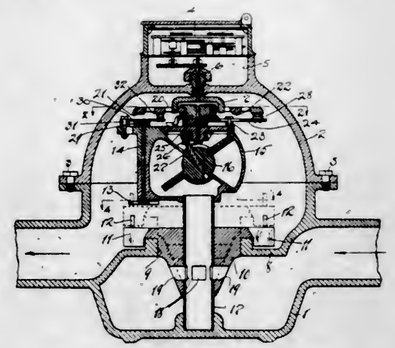
1,172,452. WATER-METER. FREDERICK W. HANKS, Cleveland, Ohio. Filed Apr. 12, 1913. Serial No. 760,725. (Cl. 73—167.)

1. In mechanism of the character described, the combination of a register; a low-duty measuring device; a high-duty measuring device; means adapted alternatively to connect said devices with the supply to be measured; and means adapted to operatively connect said devices with said register.

2. In mechanism of the character described, the combination of a register; a low-duty measuring device; and a high-duty measuring device; means adapted alternatively to connect said devices with the supply to be measured, said means being automatically controlled by variations in such supply; and means adapted to operatively connect said devices with said register.

3. In mechanism of the character described, the combination of a low-duty measuring device; a connection for supplying the fluid to me measured to said device; and a high-duty measuring device, said high-duty device being adapted to control said connection to the low-duty device.

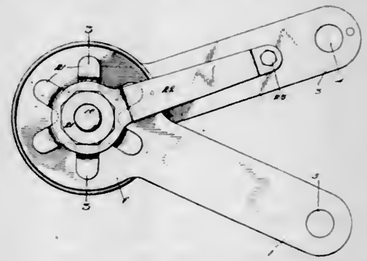
4. In mechanism of the character described, the combination of a low-duty measuring device; a connection for supplying the fluid to be measured to said device; and a high-duty measuring device, said high-duty device being normally inoperative and adapted when operative to shut off said connection to the low-duty device.



5. In mechanism of the character described, the combination of a register; a low-duty measuring device; a connection for supplying the fluid to be measured to said low-duty device; and a high-duty measuring device, said high-duty device being adapted to control said connection to the low-duty device; and independent means for operatively connecting said devices with said register.

[Claims 6 to 10 not printed in the Gazette.]

1,172,453. SHOCK-ABSORBER. EDWARD V. HARTFORD, Deal, and LOUIS MASTRANGEL, Hoboken, N. J.; said Mastrangel assignor to said Hartford. Filed Oct. 30, 1909. Serial No. 525,429. (Cl. 21—105.)



1. In an anti-vibration device, the combination of a pair of friction members, each arranged and adapted to provide a seat for a friction disk, said disks and said members having plane surfaces in contact over their entire areas, a friction member interposed between said pair of friction disks and provided with oppositely disposed plane surfaces adapted to contact with the contiguous plane surfaces of said disks over their entire areas, means in engagement with one of said friction members at a plurality of equi-distant points for maintaining all of said friction members and said disks in contact, to produce a constant predetermined frictional resistance, means for operating said members against such frictional resistance and means for varying the degree of frictional resistance between said members concurrently with the operation thereof.

2. In an anti-vibration device, a pair of friction members and a pair of friction disks contained therein, a friction member positioned intermediate of said disks, means for maintaining all of said friction members and disks in contact over their entire contacting areas, and creating a constant predetermined frictional resistance between all of said contacting parts, means for operating two

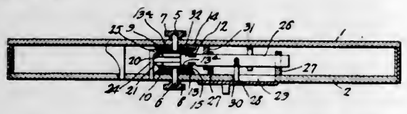
of said frictional members in one direction and the intermediate friction member in the opposite direction and means operating concurrently with the operation of said latter friction member to progressively increase the frictional resistance between all of said parts.

3. In an anti-vibration device, the combination of a plurality of friction members, means for applying pressure to one of said friction members at a plurality of equidistant points thereon to maintain all of said frictional members in constant contact and create a predetermined frictional resistance between said members, operating arms connected to said friction members, each of said arms and its associated members being movable in opposite directions, means acting on said pressure applying means for effecting a variation in the frictional resistance of said friction members and an arm connected to one of said operating arms and to said latter means, whereby upon the movement of said operating arm in one direction, the frictional resistance between said members will be progressively increased and in the opposite direction, the frictional resistance will be progressively diminished.

4. In combination with the movable parts of a vehicle, an anti-vibration device embodying a plurality of friction members, a bifurcated arm connecting certain of said members to one of said movable parts, an arm connecting another of said members to the other vehicle part, a spider spring in contact with one of said members, means for adjusting said spider spring to apply pressure to all of said members and maintain them in contact to exert a predetermined frictional resistance to the movement of said arms, and an arm connected to said adjusting means and to one of said operating arms to interpose a gradually increasing frictional resistance to the movement of the arms in one direction and a gradually decreasing frictional resistance to the movement of the arms in the opposite direction.

5. In an anti-vibration device, the combination of a plurality of centrally apertured friction members, a bifurcated operating arm connected to certain of said members, an operating arm connected to another of said members, a bolt passing through the apertures in said members for maintaining said members in alinement, a spider spring in contact with one of asid members, an adjusting nut in threaded engagement with said bolt and abutting against said spring, whereby the tension of the spring may be adjusted to create a predetermined frictional resistance between all of said friction members, and an arm connected to said nut and to one of said operating arms and movable with said latter arm to progressively vary the frictional resistance of said friction members.

1,172,454. PERMUTATION-LOCK FOR SUITCASES, GRIPS, &c. JACOB HENDRICKSON, Butt, Mont., assignor of one-half to Isak W. Johnson, Rossland, British Columbia, Canada. Filed Apr. 14, 1915. Serial No. 21,397. (Cl. 70—53.)



1. In a device of the character described, the combination with a pair of members movable to and from each other, of a manually operable tumbler carried by one member, means carried by the other member and engageable with the tumbler to be held thereby until the tumbler is set at a predetermined position, a lock bolt carried by one member and arranged to be moved into engagement with the tumbler to be held thereby until the tumbler is moved to another predetermined position, and means carried by the other member for the engagement therethrough of the bolt when the bolt is moved into engagement with the tumbler.

2. In a device of the character described, the combination with a pair of members movable to and from each other, of a manually operable tumbler carried by each of the said members, and elements carried by the said members and engageable with the opposite tumblers when the members are moved together and whereby each of the tumblers must be set to a predetermined position to enable the members to be separated.

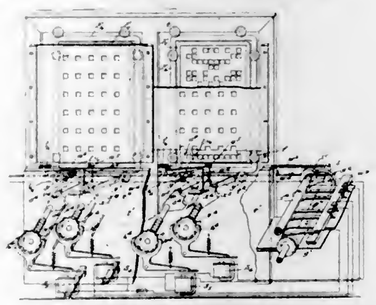
3. In a device of the character described, the combination with a pair of members movable to and from each other, of a manually operable tumbler carried by each member, a lock bolt carried by one member, an element carried by the other member through which the lock bolt is movable when the lock bolt is engaged to the tumblers, the bolt and tumblers having interengageable means whereby each of the tumblers must be set at a predetermined position to enable the bolt to be released.

4. In a device of the character described, the combination with a pair of members movable to and from each other, of a manually operable tumbler carried by each member, a lock bolt carried by one member, means carried by the other member for the engagement therethrough of the bolt when the bolt is moved into engagement with the tumblers, and means carried by the said members and engageable with the opposite tumblers, whereby the tumblers must each be set at two predetermined positions for successively releasing the bolt and last mentioned means.

5. In a device of the character described, the combination with a pair of members movable to and from each other, of a spindle journaled through each member, a tumbler disk secured to the inner end of each spindle, each tumbler disk having a notch in its periphery, and elements secured to the said members and having portions to move through the said notches and engage behind the opposite tumbler disks.

[Claims 6 to 11 not printed in the Gazette.]

1,172,455. ADVERTISING MACHINERY. WALTER LEO HILDBURGH, Westminster, London, England. Filed Oct. 23, 1909. Serial No. 524,165. (Cl. 40—65.)



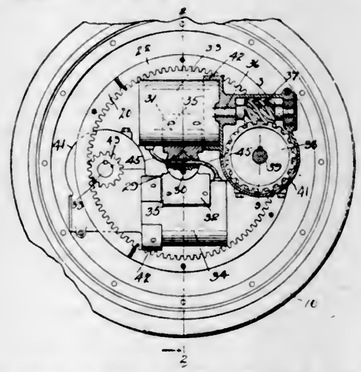
1. In a device of the character described, the combination with a pair of relatively movable superposed plates, one plate having equally spaced visual areas, the other plate having groups of similar visual areas, said groups being so arranged that by the relative shifting of the plates the groups of visual areas on the second plate may be successively caused to coöperate with the visual areas on the first plate to thereby produce a succession of predetermined images, means for moving one plate a distance approximately equal to the distance between areas in the first plate, means for returning said plate toward its normal position and means for intercepting the return of the plate, said latter means permitting a step by step movement of said plate.

2. In a device of the character described, the combination with a pair of relatively movable superposed plates, one plate having equally spaced visual areas; the other plate having groups of similar visual areas, said groups being so arranged that by the relative shifting of the plates the groups of visual areas on the second plate may be successively caused to coöperate with the visual areas on the first plate to thereby produce a succession of predetermined images, a reciprocating member, and means carried thereby for moving one plate a distance approximately equal to the distance between areas on the first plate, means for returning said plate to its normal position, and rotatable devices for intercepting the return movement of the plate, said devices permitting a step-by-step movement of said plate.

3. In a device of the character described, the combination with a pair of relatively movable superposed plates, one plate having equally spaced visual areas, the other plate having groups of similar visual areas, said groups being so arranged that by the relative shifting of the plates the groups of visual areas on the second plate may be successively caused to coöperate with the visual areas on the first plate to thereby produce a succession of predetermined images, a reciprocating member, and means carried thereby for moving one plate in two directions perpendicular to each other for a distance in each direction approximately equal to the distance in that direction between areas on the first plate, means for permitting the return of said plate to its normal position, and a rotatable device for intercepting the return movement in each direction, said devices permitting a step-by-step movement of said plate.

4. In a device of the character described, the combination with a pair of relatively movable superposed plates, one plate having equally spaced visual areas, the other plate having groups of similar visual areas, said groups being so arranged that by the relative shifting of the plates the groups of visual areas on the second plate may be successively caused to coöperate with the visual areas on the first plate to thereby produce a succession of predetermined images, a reciprocating member, means carried thereby for moving one plate in two directions perpendicular to each other for a distance in each direction approximately equal to the distance in that direction between areas on the first plate, means for permitting the return of said plate to its normal position, a rotatable device for intercepting the return movement in each direction, said devices permitting a step-by-step movement of said plate, and means for intermittently moving the devices.

1,172,456. MOTOR DRIVING-WHEEL. ALFRED HENRY HOADLEY, Providence, R. I. Filed Mar. 19, 1915. Serial No. 15,548. (Cl. 21—90.)



1. A wheel having a plurality of driving motors located within it and offset on opposite sides of the axle, the shafts of both motors being set at right angles to the wheel axle, and means for operatively connecting said motors to rotate said wheel on its axis.

2. A wheel having a plurality of driving elements within it and offset on opposite sides of the axle, the motor shafts being set substantially at right angles to the wheel axle, and means whereby each element is arranged to operate independently upon the wheel to rotate the same on its axle.

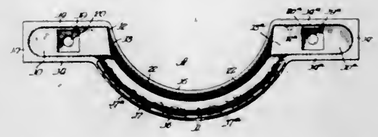
3. A wheel having a plurality of motors offset out of line with and on diametrically opposite sides of the axle, the motor shafts being set at right angles to the wheel axle and fixed thereto, and means for operatively connecting said motors to the wheel.

4. A wheel having a plurality of motors located within it and offset from the axis of the wheel axle and a train of gearing positively connecting each of said motors to the wheel.

5. A wheel having a pair of driving motors located within it and means including a worm, a worm wheel and two pinions connecting each motor to the wheel to drive the same.

[Claims 6 to 14 not printed in the Gazette.]

1,172,457. POCKET-IRON FOR BILLIARD-TABLES AND THE LIKE. FRANK C. HOBBS, Muskegon, Mich., assignor to Brunswick-Balke-Collender Co., a Corporation of Delaware. Filed Aug. 31, 1914. Serial No. 859,397. (Cl. 46—12.)



1. As an improved article of manufacture, a sheet metal pocket iron, comprising a main body, a part of said main body being curved, a cover on said main body, said cover being secured on said main body, there being retained between said body and cover, means for suspending a pocket net therefrom.

2. As a new article of manufacture, a billiard pocket iron, comprising a main body formed of sheet metal, said main body having end members and an arcuate middle member, and a cover for said main body, said cover being likewise formed of sheet metal, said cover being secured to said main body, there being means retained between said cover and body, and projecting through said body, for suspending a pocket net therefrom.

3. As a new article of manufacture, a billiard pocket iron, comprising a main body formed of sheet metal, said main body having end members of substantially rectangular cross section, a medial arcuate member, said arcuate member being of substantially V-shaped cross section, said members having marginal flanges, and a sheet metal cover for said main body, said cover having marginal flanges constructed to engage the marginal flanges of said main body, there being means retained between said cover and body, and projecting through said body, for suspending a pocket net therefrom.

4. As a new article of manufacture a flat sheet metallic blank formed to shape, with end members of rectangular cross section and a curved middle member of V-shaped cross section, which blank when so formed constitutes a pocket iron for billiard tables and the like, and cushioning means removably attached to the inner wall of said curved middle member.

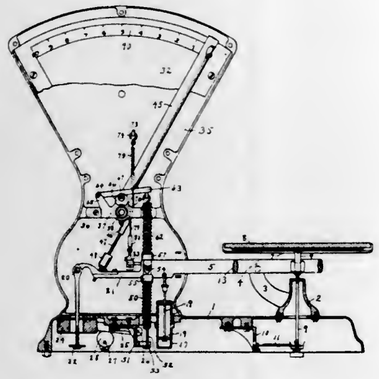
5. As a new article of manufacture a flat sheet metallic blank formed to shape, with end members of rectangular cross section and a curved middle member of V-shaped cross-section, which blank when so formed constitutes a pocket iron for billiard tables and the like, and pocket attaching means in connection with the outer wall of said middle member.

[Claims 6 to 15 not printed in the Gazette.]

1,172,458. SPRING-SCALE. LOUIS JAENICHEN, Detroit, Mich., assignor to Standard Computing Scale Company, Limited, Detroit, Mich., a Limited Partnership. Filed Oct. 8, 1913. Serial No. 794,084. (Cl. 73—46.)

1. In a scale, the combination of a base, a main weighing lever mounted intermediate its ends on the base, a load receiver connected to one arm of the lever, a pivot

extending from the opposite arm, a housing mounted on the pivot and having a bearing engaging the pivot and cups at opposite ends of the housing, said cups having inwardly extending fingers at their edges, alined vertical springs extending in opposite directions from said housing, means to secure the lower end of the lower spring, adjustable means to secure the upper end of the upper spring comprising an arm and an eccentric to position said arm, and an indicator connected to said lever.



2. In a scale, the combination of a base, a main weighing lever mounted intermediate its ends on the base, a load receiver connected to one arm of the lever, a pivot extending from the opposite arm, a housing mounted on the pivot and having a bearing engaging the pivot, alined vertical springs extending in opposite directions from said housing, means to secure the lower end of the lower spring, adjustable means to secure the upper end of the upper spring comprising an arm and an eccentric to position said arm, and an indicator connected to said lever.

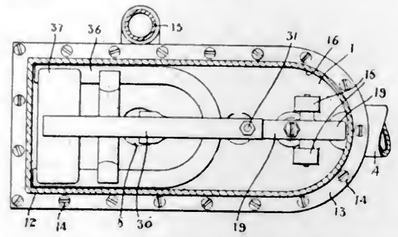
3. In a scale, the combination of a base, a main weighing lever mounted intermediate its ends on the base, a load receiver connected to one arm of the lever, a pivot extending from the opposite arm, a housing mounted on the pivot and having a bearing engaging the pivot and cups at opposite ends of the housing, said cups having inwardly extending fingers at their edges, alined vertical springs extending in opposite directions from said housing, means to secure the lower end of the lower spring, and the upper end of the upper spring, and an indicator connected to said lever.

4. In a scale, the combination of a base, a main weighing lever mounted thereon, a pair of alined springs extending in opposite directions from said lever, means to secure the outer end of one of said springs comprising an arm and an eccentric to position said arm, means to secure the outer end of the other spring, and an indicator connected to said lever.

1,172,459. THERMOSTATIC CONTROLLER FOR GAS WATER-HEATERS. HAROLD JARVIS, Toronto, Ontario, Canada. Filed Oct. 5, 1915. Serial No. 54,266. (Cl. 236—5.)

1. In a thermostatic controller for gas water heaters, the combination with a gas supply and a heater, of a valve adapted to close the gas passage to the heater, a fixed magnet armature connected to said valve, a magnet adapted to attract said armature to hold the valve closed, a thermostat adapted to control the opening and closing of the valve, and a spring tension means interposed between the thermostat and the valve to effect the quick opening and closing of the valve.

2. In a thermostatic controller for gas water heaters, the combination with a gas supply and a heater, of a valve adapted to close the gas passage to the heater, a pivotal arm supporting said valve and having a break joint intermediate of its length, a fixed magnet, an armature carried on said arm adapted to coöperate with said magnet, a tension spring holding said break joint, and a thermostat adapted to operate said arm to open and close the valve.



3. In a thermostatic controller for gas water heaters, the combination with a gas supply and a heater, of a valve adapted to close the gas passage to the heater, a lever pivotally supported adjacent to one end, a thermostat controlled by the heater and engaging said lever to swing it upon its pivot, an arm pivotally mounted on said lever and having one end spring held in contact with said lever, a valve mounted on the outer end of said pivotal arm adapted to close the gas passage to the heater, a magnet armature secured to the outer end of said pivotal arm, and a fixed magnet arranged to coact with said armature to attract the same to close the valve.

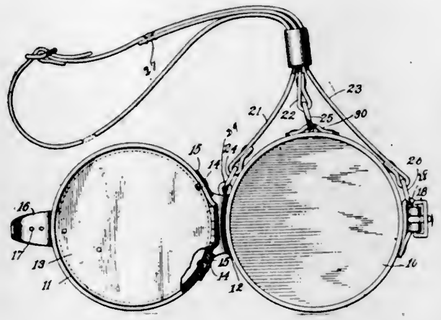
4. In a thermostatic controller for gas water heaters, the combination with a gas supply and a heater, of a valve chamber interposed in the gas supply, a valve seat arranged at the outlet from said valve chamber, a lever pivotally mounted within said valve chamber, an arm mounted intermediate of its length at one end of said lever, a valve at the outer end of said arm adapted to engage said valve seat to prevent the outflow of gas to the heater, a thermostat adapted to engage said lever between the pivot and the outer end supporting the valve arm and adapted to raise and lower said arm to open and close the gas passage, a magnet arranged adjacent to the outer end of the valve supporting arm, an armature carried on said arm adapted to coöperate with said magnet to hold the valve in its closed position, and a tension spring secured in the valve chamber and adjustably connected to the end of the valve arm at the end opposite to the end carrying the valve.

5. In a themostatic controller for gas water heaters, the combination with a gas supply and a heater, of a valve chamber interposed in the gas supply, a valve seat arranged at the outlet from said valve chamber, a lever pivotally mounted within said valve chamber, an arm mounted intermediate of its length on one end of said lever, a valve at the outer end of said arm adapted to engage said valve seat to prevent the outflow of gas to the heater, a carbon stick thermostat supported from said valve chamber and extending therewithin and engaging the valve operating lever between the pivot and the valve, a spiral compression spring engaging an extension from the lever and holding said lever in constant engagement with said thermostat, an adjustable contact means between said lever and said thermostat, a magnet armature carried by the valve supporting arm on its outer end, a magnet adapted to coact with said armature to hold the valve to its seat, and a tension spring connected to the inner end of said valve supporting arm.

[Claim 6 not printed in the Gazette.]

1,172,460. CARRYING-POUCH FOR WATCHMEN'S TIME-REGISTERS. CHARLES H. JENKINS, Belleville, N. J., assignor to Newman Clock Co., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1912. Serial No. 669,706. (Cl. 224—4.)

1. In a carrying pouch for a watchman's time register, in combination, a clock, a body portion closed at the upper and side portions thereof to exclude rain or dust, means projecting through said body portion and engaging with the clock to secure said clock in said body portion, a cover imperforate at its upper and side portions hinged to and telescoping over said body portion, two carrying straps connected to said cover portion on the periphery thereof and substantially opposite to each other, and a third strap connected to the periphery of said pouch and substantially midway between the aforesaid straps.

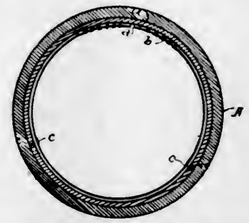


2. In a carrying pouch for a watchman's time register, carrying means for said pouch comprising two straps connected to the periphery of said pouch, said connections being at a distance from each other, and a single strap located also on the periphery of the pouch substantially midway between the aforesaid straps and connected to one of the aforesaid straps to maintain the pouch normally in upright position and to avoid undue oscillation of the pouch.

3. In a carrying pouch for a watchman's time register, in combination, a recording clock, a substantially circular shaped closure for the clock made in two parts, one part adapted to fit over the clock, means passing through said closure for securing the clock securely therein, the other part of the closure adapted to telescope over the first part of said closure member, a hinge adapted to secure together the parts of the closure, a strap member upon one of the parts of the closure and a buckle secured to the other part of the closure for maintaining part of the closure in adjusted relation, straps having their ends secured in the periphery of the outer closure part and on opposite sides thereof, and a third strap secured at one end to the periphery of the outer closure member midway between the points of securement of the other strap members and having its other end secured to one of the other straps to maintain the closure normally in an upright position and to avoid undue oscillation of the pouch.

4. A carrying pouch for a watchman's time register, comprising in combination, a recording clock, a substantially circular shaped closure for the clock made in two parts and having its ends substantially flat, one part adapted to fit over the lock, the other part adapted to telescope over the first mentioned part, a hinge adapted to secure the parts together, means upon the parts of the closure for maintaining them in adjusted relation, means passing through the telescoped portion of the casing into the clock for securing the clock thereto, an opening in the front end of the closure to give a view of the front of the clock, means in said opening to protect the clock from injury, two long straps having ends secured to pass over the shoulder of a watchman, and a short strap having an end secured in the periphery of the outer part of the closure and having its other end secured to one of the long straps between its ends to maintain the closure normally in an upright position and to avoid undue oscillation of the closure and the clock carried thereby.

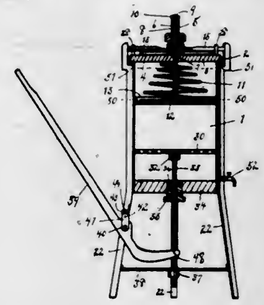
1,172,461. PISTON-RING CONSTRUCTION. CHARLES E. JOHNSON, Muskegon, Mich. Filed Dec. 5, 1913. Serial No. 804,949. (Cl. 121—108.)



1. In combination with a piston head and a cylinder, an assembled packing ring consisting of two cast iron outer rings divided at a given point, in combination with an inner ring made of spring steel ribbon curved irregularly to a proper degree to insure a perfectly uniform pressure its entire length when compressed to a perfect annular form and confined within the outer rings.

2. In combination with a cylinder and a piston therein, an assembled packing ring consisting of two cast iron outer rings machined to the exact diameter of the cylinder and open at a given point to allow of expansion, in combination with an inner ring made of spring steel ribbon curved irregularly to a proper form to be compressed to perfect annular form and placed inside the outer rings and insure perfectly uniform pressure the entire diameter of the rings between the inner ring and the outer rings and between the outer rings and the surface of the cylinder, and pins projecting from the outer surface of the inner ring in position to pass into the openings in the outer rings to hold said several rings in exact relative position with each other.

1,172,462. WASHING-MACHINE. CHARLES S. JOHNSON, Marcy, N. Y. Filed Jan. 31, 1914. Serial No. 815,819. (Cl. 68—19.)

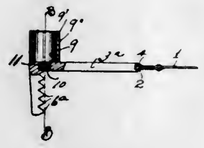


In a washing machine, the combination of a tub having a detachable cover, a rod slidingly mounted in said cover, a disk mounted to the end of said rod, a spiral spring mounted on said rod between said disk and said cover, whereby to permit said disk to yield, a second disk having concentric apertures, a rod attached to said second disk, a gland in the base of said tub for the vertical reciprocation of said second named rod, and a lever pivoted to links constituting a movable fulcrum for actuating said second named rod and said disk, whereby to wring the clothes placed between the said disks, above the water line in said tub.

1,172,463. TAPE ATTACHMENT. JOHN A. JOHNSON, Seattle, Wash. Filed Nov. 10, 1914. Serial No. 871,231. (Cl. 33—137.)

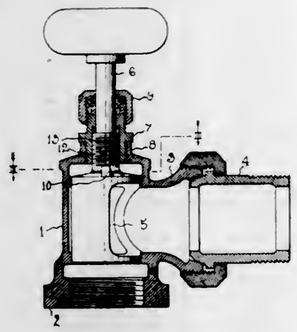
In an attachment for tape lines, the combination of an angular member and means for attaching one leg of the

member to the tape line, whereby the other leg is at a right angle to the tape line when the latter is taut, the last mentioned leg being provided with teeth for more securely holding the member to an object, a stud upon the first mentioned leg which projects in an opposite direction to



that of the toothed leg which is adapted to engage the edge of an aperture, a set of bushings which are adapted to sleeve over each other and the entire set to be mounted upon the said lug, whereby the distance may be measured from the centers of apertures of varying sizes to the center of another aperture.

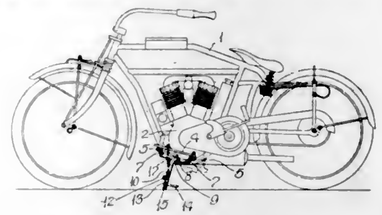
1,172,464. VALVE. CHARLES S. KELLUM, Detroit, Mich., assignor to The Lavigne Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 13, 1915. Serial No. 55,627. (Cl. 137—7.)



1. A valve comprising a main casing having an inlet opening at one end and an internal screwthreaded opening at the other end with a lateral nipple outlet between the ends, a ported sleeve closure rotatable in the casing in axial alinement with the inlet opening through which it is insertible, the upper end of the closure having a head from which extends a screwthreaded stem through the bushing opening of the casing, a bushing screwthreaded into the casing opening and on to the inclosed portions of the stem, the screw threads forming the engagement between the bushing and casing and between the bushing and closure being identical in pitch, a stop integrally formed on the casing, and a stop integrally formed on the closure adapted to be moved into abutment with the casing stop.

2. A valve comprising a substantially cylindrical casing having an axial inlet opening at one end and an alined axial bushing opening at the other end with a lateral outlet opening between them, a ported sleeve closure rotatable in the casing with the opening thereof adapted to register with the outlet opening of the casing, a stem formed integrally on the upper end of the closure in concentric relation with the casing bushing opening through which it extends, screw threads on the interior of the casing bushing opening, screw threads on the adjacent portions of the stem of similar pitch to the casing bushing opening threads, a bushing screwthreaded into the opening and on to the stem, and stops integrally formed respectively on the casing and on the closure and adapted to limit the motion of the closure.

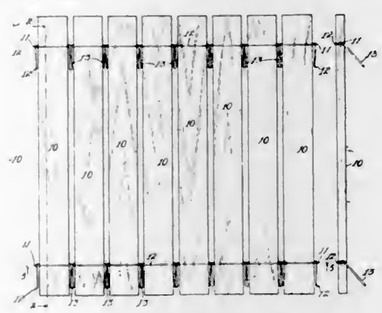
1,172,465. MOTOR-CYCLE SUPPORT. THOMPSON P. KNAPP, Highland Park, Mich. Filed June 28, 1915. Serial No. 36,620. (Cl. 208—75.)



1. A motorcycle support comprising a frame adapted for attachment to the foot board supports of a motor cycle, supporting members pivoted to the sides of said frame, a yoke connecting said members adjacent the lower ends thereof, extensions on the lower outer sides of said connected members coöperating with said members in providing prongs, foot pieces carried by said extensions and the lower ends of said supporting members, and means connecting one of said supporting members and said frame adapted to hold said supporting members normally in a raised position.

2. A motor cycle support comprising a frame adapted for attachment to the foot-board supports of a motorcycle, supporting members pivoted to the sides of said frame, a yoke connecting said members adjacent the lower ends thereof, foot pieces carried by the lower ends of said supporting members, and means connecting one of said supporting members and said frame adapted to hold said supporting members normally in a raised position.

1,172,466. CABLE-PROTECTOR. EDMUND LAND, Jacksonville, Fla. Filed May 6, 1914. Serial No. 836,722. (Cl. 154—53.)



1. A cable protecting fabric comprising strips of rigid protecting material positioned side by side, flexible connections between adjacent strips, and a piece of flexible binding material associated with each strip and of such length that adjacent pieces may be fastened together to secure adjacent strips together independently of and alternative to the corresponding flexible connections.

2. A cable protecting fabric comprising strips of wood, pairs of wires extending transversely of said strips, each pair being twisted together so as to secure said strips side by side with intervening spaces, and each pair being formed with elongated portions between adjacent strips to serve as alternative binding means when the wire between the corresponding adjacent strips is severed.

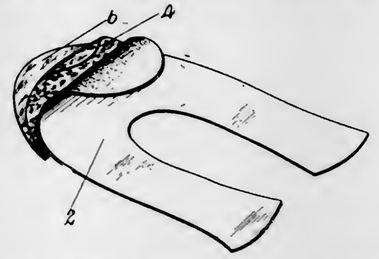
3. A cable protecting fabric comprising strips of rigid protecting material positioned side by side, a sheet of fabric overlying said strips and firmly secured thereto, and a piece of flexible binding material associated with each strip and of such length that adjacent ones of said pieces may be united to secure adjacent strips together independently of and alternative to the connection formed by that portion of said fabric sheet which flexibly unites them.

4. A cable protecting fabric comprising strips of wood positioned side by side, a sheet of fabric overlying said pieces, and pairs of wires extending transversely of said strips at intervals along their length, each pair being secured together to secure said strips in position and to secure said sheet to said strips, and each pair being formed with elongated binding portions.

5. A cable protecting fabric comprising strips of rigid protecting material positioned side by side, flexible connections between adjacent strips, and pieces of flexible binding material associated with adjacent ones of said flexibly connected strips and long enough to be fastened together to secure said adjacent strips together in case the said flexible connection between said adjacent strips be severed.

[Claims 6 to 8 not printed in the Gazette.]

1,172,467. SHOE. FRANK H. LATINVILLE, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 14, 1915. Serial No. 33,956. (Cl. 36—45.)



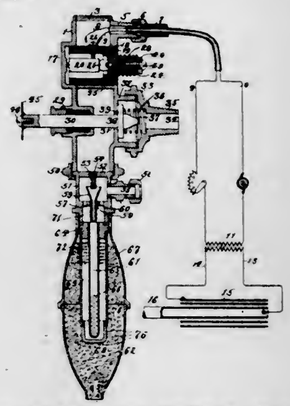
1. A shoe having a vamp which extends in one piece over the entire toe portion of the shoe combined with box toe materials secured to the inner side of said vamp by single faced stitches which extend through the box toe materials and the vamp but which do not appear on the outer surface of the vamp.

2. A shoe having a vamp which extends in one piece over the entire toe portion of the shoe, and box toe materials permanently secured to the inner side of said vamp by means extending through a portion of the vamp but which do not appear on the outer surface of the vamp.

3. A shoe having a vamp which extends in one piece over the entire toe portion of the shoe, box toe materials positioned on said vamp and having an upper edge extending transversely of the vamp, and single faced stitches permanently securing said box toe materials to said vamp along said transversely extending edge.

1,172,468. APPARATUS FOR STERILIZING WATER. ROSS M. LEGGETT, Akron, Ohio, assignor to The Neal-Armstrong Company, Akron, Ohio, a Corporation of Maine. Filed Sept. 7, 1915. Serial No. 49,301. (Cl. 210—1.)

1. In an apparatus for sterilizing water, a water supply means and a sterilizing fluid supply means, a tubular member constituting a mixing chamber, a jet nozzle in said mixing chamber, a receiving-pipe positioned in the floor of said mixing chamber and spaced from said jet nozzle and in alinement therewith to receive the water from said nozzle and the sterilizing fluid from said chamber, the floor of said mixing chamber provided with an aperture, a second chamber positioned below said floor, a receiving-pipe in alinement with said first receiving-pipe and spaced therefrom positioned below said second mixing-chamber and adapted to receive the mixture of sterilizing fluid through said orifice and the water passing through said first receiving-pipe whereby they are mixed and discharged into said second receiving-pipe, and a discharge pipe communicating with said second receiving pipe.



2. In an apparatus for sterilizing water, a water-supply means, a tubular member constituting a mixing chamber and having a jet-forming nozzle projecting into said chamber and in open communication with the interior thereof, an inlet for sterilizing fluid communicating with said mixing chamber, an adjustably-mounted receiving-pipe spaced from said jet nozzle and in alinement therewith to receive the water from said jet for creating a partial vacuum in said chamber for drawing the sterilizing fluid into said receiving pipe, a second mixing chamber positioned adjacent to said first mixing chamber and in open communication therewith, a depending-pipe in open communication with said second mixing-chamber and in alinement with said receiving pipe and spaced therefrom to permit the sterilizing fluid in said second mixing chamber to be drawn into said depending-pipe.

3. In an apparatus for sterilizing water, a water-supply means, a tubular member constituting a mixing chamber and having a jet-forming nozzle projecting into said chamber and in open communication with the interior thereof, an inlet for sterilizing fluid communicating with said mixing chamber, an adjustably-mounted receiving pipe spaced from said jet-nozzle and in alinement therewith to receive the water from said jet for creating a partial vacuum in said chamber for drawing the sterilizing fluid into said receiving-pipe, a second mixing chamber positioned adjacent to said first mixing chamber and in open communication therewith, a depending-pipe in open communication with said second mixing chamber and in alinement with said receiving-pipe and spaced therefrom to permit the sterilizing fluid in said second mixing-chamber to be drawn into said depending pipe, said depending pipe provided at its lower end with a plurality of minute orifices, a second pipe inclosing said last-named pipe and having its lower end closed and its upper end provided with minute perforations, and a casing inclosing said pipes and provided with a discharge opening at its lower end.

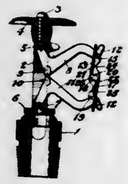
4. In an apparatus for sterilizing water, a water-supply means, a tubular member constituting a mixing-chamber and having a jet-forming nozzle projecting into said chamber and in open communication with the interior thereof, an inlet for sterilizing fluid communicating with said mixing-chamber, an adjustably-mounted receiving-pipe spaced from said jet nozzle and in alinement therewith to receive the water from said jet for creating a partial vacuum in said chamber for drawing the sterilizing fluid into said receiving pipe, a second mixing-chamber positioned adjacent to said first mixing-chamber and in open communication therewith, a depending-pipe in open communication with said second mixing chamber and in alinement with said receiving-pipe and spaced therefrom to permit the sterilizing fluid in said second mixing

chamber to be drawn into said depending-pipe, said depending pipe provided at its lower end with a plurality of minute orifices, a second pipe inclosing said last named pipe and having its lower end closed and its upper end provided with minute perforations, a casing inclosing said pipes and provided with a discharge opening at its lower end, a reticulated diaphragm extending across the space between said outer pipe and said casing.

5. In an apparatus for sterilizing water, a water-supply means, a tubular member constituting a mixing-chamber and having a jet-forming nozzle projecting into said chamber and in open communication with the interior thereof, an inlet for sterilizing-fluid communicating with said mixing-chamber, an adjustably-mounted receiving pipe spaced from said jet nozzle and in alinement therewith to receive the water from said jet for creating a partial vacuum in said chamber for drawing the sterilizing fluid into said receiving-pipe, a second mixing-chamber positioned adjacent to said first mixing-chamber and in open communication therewith, a depending-pipe in open communication with said second mixing-chamber and in alinement with said receiving-pipe and spaced therefrom to permit the sterilizing fluid in said second mixing-chamber to be drawn into said depending pipe, said depending pipe provided at its lower end with a plurality of minute orifices, a second pipe inclosing said last named pipe and having its lower end closed and its upper end provided with minute perforations, a casing inclosing said pipes and provided with a discharge opening at its lower end, a reticuled diaphragm extending across the space between said outer pipe and said casing, and a mass of comminuted material positioned in the space between said casing and said outer tube.

[Claims 6 and 7 not printed in the Gazette.]

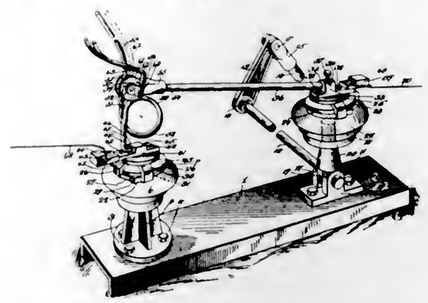
1,172,469. AUTOMATIC FIRE-EXTINGUISHER. GUSNAR O. LILJEGREN, St. Louis, Mo. Filed Sept. 1, 1915. Serial No. 48,561. (Cl. 236—16.)



1. In an automatic fire extinguisher, a fusible link comprising two duplicate and interchangeable end plates each having a hole near its outer extremity, a flange extending across the inner edge of each plate, an intermediate member having a shoulder engaging the flanges at the inner edges of said plates and having upper and lower portions bearing against the surfaces of said plates, flanges at the sides of said holes on the same side with said first-named flanges extending across the plane of said intermediate member and fusible solder engaging said flanges and said shoulder and the ends of said member to bind said parts together.

2. In an automatic fire extinguisher, a fusible link comprising two end plates adapted to engage with the strut levers, lateral flanges adjacent to the outer end of each plate, a lateral flange at the inner end of each plate on the same side thereof with the first-named flanges, an intermediate member having upper and lower portions bearing against the side surfaces of said plates and having a shouldered connection engaging with the flanges at the inner ends of said plates, the outer ends of said intermediate member being beyond the inner ends of said plates and a sufficient distance from the flanges near the outer ends of said plates to permit said intermediate member to move free of said flanges, and fusible solder engaging said flanges and the outer portions of said intermedite member and also engaging said shouldered connection effectively to bind said parts together.

1,172,470. HIGH-TENSION SWITCH. CLARENCE R. LININGER, Chicago, Ill. Filed May 14, 1915. Serial No. 28,074. (Cl. 175—282.)



1. In an electrical switch, a stationary contact member, but yieldable incident to pressure thereon, a movable contact member comprising a member revoluble in its action incident to engaging the stationary contact member, and combined additional contact members and ice and sleet removing devices carried by the movable contact member for engagement with the stationary contact member, and a contacting coil for insuring engagement of the contacting parts incident to pressure upon the coil, said coil constituting a support for the revoluble member and acting to cause the stationary but yieldable contact to lean against said revoluble member.

2. In a electrical switch, a stationary member having multiple electrical contact parts, a movable switch member having multiple contact terminals to coöperate with said parts, one of the multiple electrical contact parts of the stationary member constituting means to draw the stationary member toward one of the multiple contact terminals, said contact parts causing the drawing of the stationary member acting as a support for the movable switch member.

3. In an electrical switch, stationary supporting means, a contact member on said means and being yieldable incident to pressure thereon, said stationary contact member being formed into a contact coil and a curved arm beyond the coil, a movable switch member having a sleeve upon one end provided with forks, a revoluble contact member journaled in said forms to engage and receive said arm and cause the arm to yield incident to the pressure of the revoluble member thereon, opposing contacting terminals carried by said forks engaging upon and scraping against opposite sides of said arm, said coil acting as a support yieldable incident to pressure thereon by the movable switch member and acting as a contact received by the revoluble contact member.

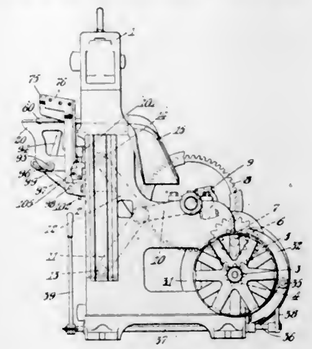
4. In a high tension switch, an electric movable switch member having a contact terminal, a stationary member having an electrical contact part, and provided with a support for the terminal, which support draws said part toward the terminal holding the terminal against the support.

5. In a high tension switch, an electric movable switch member having a revoluble contact terminal, a stationary member having an electrical contact part yieldable toward the terminal when in contact therewith, said member having an electrical support below and offset from said part to support the terminal, which support draws said part toward and against and holds the terminal against the support.

[Claim 6 not printed in the Gazette.]

1,172,471. COMPRESSING-MACHINE. THOMAS LUND, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 12, 1910. Serial No. 560,874. (Cl. 12—48.)

1. In a machine of the class described, the combination with compressing dies and a top-lift plate, of mechanism for moving said top-lift plate comprising relatively movable members, a lever pivoted at separate points respectively to each of said members, and frictional means for normally opposing the movement of one of said members.



2. In a machine of the class described, the combination with heel compressing dies and a top-lift plate, of mechanism for moving said toplift plate relatively to said dies comprising a pivoted lever and frictional means for actuating said lever.

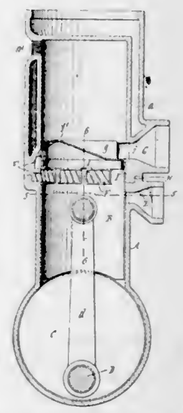
3. In a machine of the class described, the combination with a reciprocating head, of a mold carried by said head, a top-lift plate movably mounted in said mold, a lever pivoted to said head, and frictional means for turning said lever on its pivot to move said top-lift plate.

4. In a machine of the class described, the combination with heel compressing dies and a top-lift plate, of mechanism for moving said top-lift plate relatively to said dies comprising a lever having a movable fulcrum and frictional means normally holding said fulcrum stationary.

5. In a machine of the class described, the combination with a die, of a coöperating mold movable toward and from said die, an ejector in said mold and movable relatively thereto, and means comprising a frictionally mounted rod and connections between the rod and the ejector for causing the ejector to rise in the mold during the descent thereof and to drop during the first part of the ascent of said mold.

[Claims 6 to 45 not printed in the Gazette.]

1,172,472. INTERNAL-COMBUSTION ENGINE. HERBERT MCCORNACK, West Chester, Pa. Filed Nov. 18, 1910. Serial No. 593,073. (Cl. 123—73.)



1. In a two-cycle internal combustion engine, the combination of a cylinder provided in the cylindrical wall thereof with a plurality of admission passages, and an exhaust port, said admission passages being arranged at substantially corresponding angularity to the direction of the length of the cylinder such as to cause the charge to rotate in the cylinder, and a piston provided with an exhaust passage leading from one end thereof and adapted to register with the exhaust port in the wall of the cylinder, said admission passages and said exhaust port being located so as to be uncovered by the piston when it nears the end of its power stroke, substantially as set forth.

2. In a two-cycle internal combustion engine, the combination of a cylinder provided in the cylindrical wall thereof with a plurality of admission passages, and an exhaust port, said admission passages being arranged at substantially corresponding angularity to the direction of the length of the cylinder such as to cause the charge to rotate in the cylinder, and a piston provided at one end with an exhaust passage extending from the axial portion to the side thereof and adapted to register with said exhaust port in the wall of the cylinder, said admission passages and said exhaust port being located so as to be uncovered by the piston when it nears the end of its power stroke, substantially as set forth.

3. In a two-cycle internal combustion engine, the combination of a compression chamber, a cylinder provided in the cylindrical wall thereof with an admission passage which connects the compression chamber and the cylinder, and an exhaust port, said admission passage being arranged at substantially corresponding angularity to the direction of the length of the cylinder such as to cause the charge to rotate in the cylinder, and a piston provided with a port adapted to connect said compression chamber with said admission passage, and an exhaust passage leading from one end thereof and adapted to register with said exhaust port in the cylinder, said admission passage and said exhaust port being located so as to be uncovered by the piston when it nears the end of its power stroke, substantially as set forth.

4. In a two-cycle internal combustion engine, the combination of a cylinder provided in the cylindrical wall thereof with a series of relatively narrow admission passages extending for a considerable distance around the cylinder, and an exhaust port located between the termini of said series of admission passages, said admission passages being arranged at substantially corresponding angularity to the direction of the length of the cylinder such as to cause the charge to rotate in the cylinder, said admission passages and said exhaust port being located so as to be uncovered by the piston when it nears the end of its power stroke, substantially as set forth.

5. In a two-cycle internal combustion engine, the combination of a cylinder provided with a series of admission passages extending part way around the cylinder, and an exhaust port located between the termini of said series of admission passages, said admission passages being arranged at substantially corresponding angularity to the direction of the length of the cylinder such as to cause the charge to rotate in the cylinder, and a piston provided at one end with an exhaust passage extending from the axial portion to one side thereof and adapted to register with said exhaust port in the cylinder, substantially as set forth.

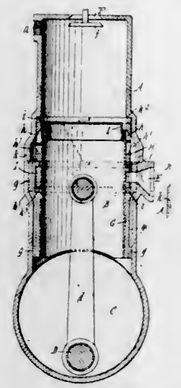
[Claims 6 to 14 not printed in the Gazette.]

1,172,473. INTERNAL-COMBUSTION ENGINE. HERBERT MCCORNACK, West Chester, Pa. Filed Nov. 18, 1910. Serial No. 593,074. (Cl. 123—73.)

1. In a two-cycle internal combustion engine, the combination of a cylinder having a compression chamber, a piston, a sleeve in the cylinder surrounding the piston, and a ring in the cylinder which fits the piston with a spring tension and is provided with admission ports, a space being formed in the cylinder outside of said sleeve and ring which connects said compression chamber with said admission ports, substantially as set forth.

2. In a two-cycle internal combustion engine, the combination of a cylinder having a compression chamber, a

piston, a sleeve in the cylinder surrounding the piston, a port ring which fits the piston with a spring tension and is provided with admission ports, a space being formed in the cylinder outside of said sleeve and ring which connects said compression chamber with said admission ports, and a packing ring which fits with a spring tension in the cylinder and bears against said port ring, substantially as set forth.



3. In a two-cycle internal combustion engine, the combination of a cylinder having a compression chamber, a piston, a sleeve and port rings in the cylinder surrounding the piston, said port rings fitting the piston and one ring being provided with admission ports and the other with a port connecting with a fuel supply port in the wall of the cylinder, and packing rings fitting in the cylinder in contact with said port rings, a space being formed in the cylinder outside of said sleeve and port rings which connects said compression chamber with said admission ports, substantially as set forth.

4. In a two-cycle internal combustion engine, the combination of a cylinder having a compression chamber, a piston, and a sleeve and port ring in the cylinder surrounding the piston, said port ring being stationary and fitting the piston and being provided with an admission port, a space being formed in the cylinder outside of said sleeve and port ring which connects said compression chamber with said admission port, and said cylinder being composed of parts which are joined between the ends of the cylinder adjacent to said port ring and sleeve, substantially as set forth.

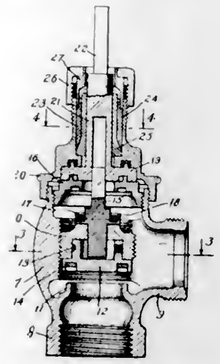
5. In a two-cycle internal combustion engine, the combination of a cylinder, a piston, a port ring through which the piston slides and which is fixed in a recess in the cylinder between the ends thereof and is provided with tangential admission ports for causing the charge to rotate in the cylinder, the cylinder being composed of parts which are joined at said recess for the port ring, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,172,474. VALVE. THOMAS J. MADIGAN, New York, N. Y., assignor to Madigan Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed June 3, 1914. Serial No. 842,572. (Cl. 137—4.)

1. A valve comprising the combination of a casing having a valve-seat, a movable valve-member, a cap detachably secured to the casing, a disk closing an opening in the casing on the side of the valve-member opposite said seat and having an auxiliary valve-seat formed thereon, said disk being inclosed by the cap and being positioned on the casing independently of the cap, and means extending through said cap for moving the valve-member into and out of engagement with either one of said valve-seats; substantially as described.

2. A valve comprising the combination of a casing having a valve-seat, a movable valve-member, a disk threaded in an opening in the casing on the side of the valve-member opposite said seat and having an auxiliary valve-seat formed thereon, a cap detachably secured to the casing independently of the disk and inclosing the same, and means extending through the cap for moving the valve-member into and out of engagement with either one of said valve-seats; substantially as described.



3. A valve comprising the combination of a casing having an interior thread and a seat on one side of the thread, a detachable closing-member threaded in an opening in the casing on the other side of the thread, a rotatable member lying adjacent to the closing-member, a cap engaging the casing and inclosing said closing-member and said rotatable member, said closing-member being held in position independently of said cap, a valve-member within the casing engaging said thread, a spline connection between said rotatable member and the valve-member and a handle connected to said rotatable member for rotating the same; substantially as described.

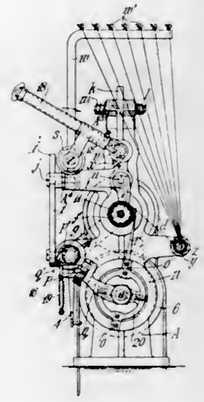
4. A valve comprising the combination of a casing having an interior thread and a seat upon one side of the thread, a detachable closing-member closing an opening in the casing on the other side of the thread, a rotatable-member lying adjacent to the closing-member, a valve-member within the casing coacting with the thread thereon, a rod passing through an opening in the closing-member and having sliding engagement with said valve-member and said rotatable member, a cap detachably mounted upon the casing and inclosing said closing-member and said rotatable member, said closing-member being held in poistion independently of said cap, and an operating handle connected to said rotatable member; substantially as described.

5. A valve comprising the combination of a casing having an interior thread and a seat upon one side of the thread, a detachable closing-member closing an opening in the casing on the other side of the thread, a rotatable-member lying adjacent to the closing-member, a valve-member within the casing coacting with the thread thereon, a rod passing through an opening in the closing-member and having sliding engagement with said valve-member and said rotatable member, a cap detachably mounted upon the casing and inclosing said closing-member and said rotatable member, said closing-member being held in position independently of said cap, packing pieces within the cap and around said rotatable member and a nut having threaded engagement with the cap and adapted to engage said packing pieces; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,172,475. BOBBIN-WINDING MACHINE. GEORGE L. MASON, Warehouse Point, Conn., assignor to Green & Hopson, Springfield, Mass., a Partnership consisting of Samuel M. Green and Harry B. Hopson. Filed June 15, 1914. Serial No. 845,180. (Cl. 242—39.)

1. A thread winding machine, comprising in combination, a frame, a split arbor mounted in said frame and adapted to receive a bobbin, means to rotate said arbor, a rod slidable within said arbor, means controlled by the starting of the machine to force said rod into engagement with said arbor to expand the latter against said bobbin, a guide member adapted to receive and position a plurality of threads to be wound upon said bobbin, means to oscillate said guide member, said guide member adapted to bear upon the peripheral surface of the wound threads upon said bobbin, means controlled by the movement of said guide member to stop the rotation of said arbor, when the threads have been built up to a predetermined diameter, and to withdraw said rod from engagement with said arbor, and means to place a tension on said threads.

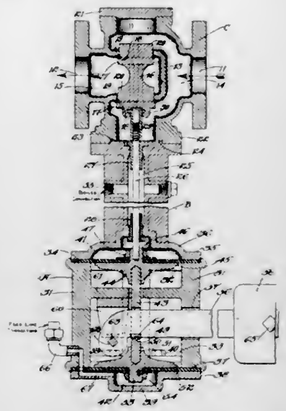


2. A thread winding machine, comprising in combination, a frame, a split arbor mounted therein and adapted to receive a bobbin, means to rotate said arbor, a tapered rod slidable within said arbor, a guide member adapted to receive and position a plurality of threads to be wound upon said bobbin, means to oscillate said member, said member adapted to bear upon the peripheral surface of the wound threads on said bobbin, and to be moved thereby, a rod slidably mounted in said frame, a connection between the latter and the tapered rod, a spring arranged to force said rod in one direction, a lever to force said rod in the other direction, a latch to hold said rod under pressure of said spring, a lever on said guide arranged, when the wound threads on said bobbin have reached a predetermined diameter to move said latch and release said spring, whereby said tapered rod is retracted from said arbor to release said bobbin, and means operable from said rod to start and stop the rotation of said arbor.

1,172,476. FEED-PRESSURE REGULATOR. GEORGE S. MELCHER, Sharon, Mass., assignor to Charles W. McConnel, Boston, Mass., Eldon Macleod, Westwood, Mass., and Fannie B. Look, Northampton, Mass., trustees. Filed Dec. 12, 1914. Serial No. 876,970. (Cl. 103—90.)

1. In an excess feed pressure regulator the combination with a valve, of a pair of diaphragms operating the valve member of said valve, one of said diaphragms being subjected to one pressure and the other of said diaphragms being subjected to another pressure, and a flexible connection interposed between said diaphragms for transmitting pressure from one to the other whereby one diaphragm may freely move into angular relation with the other diaphragm.

2. An excess feed pressure regulator comprising a valve body provided with a valve member, a pair of diaphragms connected to said valve member, one of which is subjected to initial pressure and the other to feed the line pressure, pressure transmitting mechanism interposed between said diaphragms, and means for exerting additional pressure on the diaphragm which is subjected to line pressure, said pressure transmitting mechanism consisting of a pair of members one in engagement with one diaphragm and the other in engagement with the other diaphragm, and of a flexible connection between said members whereby they may move with the diaphragms into angular relation with each other.



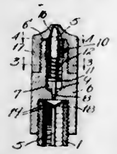
3. In an excess feed pressure regulator the combination with a valve having a valve member therein, of a pair of flexible diaphragms connected with said valve member, one of said diaphragms being subjected to one pressure and the other of said diaphragms to another pressure, a pair of buttons one engaging one of said diaphragms and the other engaging the other of said diaphragms, a yoke operatively connected with one of said buttons and a knife edge member engaging the end of said yoke and operatively connected with the other of said buttons thereby forming a flexible connection between said diaphragms whereby said diaphragms may move into angular relation with each other.

4. An excess feed pressure regulator comprising a body having inlet and outlet openings, a valve controlling the passage of pressure through said openings, a pair of diaphragms connected with said valve, said diaphragms having a space between them open to the atmosphere and one being subjected to initial pressure and the other to feed line pressure, a yoke bearing against one of said diaphragms, a knife edge member bearing against the other of said diaphragms having a knife edge portion contacting with the bifurcated end of said yoke, a lever projecting into the space between said diaphragms and through the bifurcated end of said yoke and resting on said knife edge member, a fixed member about which said lever moves as a pivot and a weight secured to said lever.

5. An excess feed pressure regulator having inlet and outlet openings, a valve controlling the passage of pressure through said openings, a pair of diaphragms connected with said valve and being subjected one to initial pressure and the other to feed line pressure, said diaphragms having a space between them open to the atmosphere, pressure transmitting mechanism interposed between said diaphragms comprising a yoke connected with one of said diaphragms and a knife edge member connected with the other of said diaphragms, the bifurcated end of said yoke having a shallow groove which rests on the V-shaped end of said knife edge member, a lever projecting into the space between said diaphragms and within the bifurcated portion of said yoke, said lever having a shallow groove the rounded apex of which rests on the V-shaped end of said knife edge member, a fixed member about which said lever moves as a pivot and a weight secured to said lever and operating to bring pressure to bear on the diaphragm which is subjected to initial pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,172,477. SAFETY-VALVE FOR PNEUMATIC TIRES. GEORGE MIZENER, Decornh, Iowa. Filed July 11, 1914. Serial No. 850,446. (Cl. 152—12.)



1. In a device of the kind described and in combination, a casing member provided with a chamber therein, with an opening therefrom at each end, a valve member common to both openings and arranged to close either one of said openings, and adjustable means for resiliently maintaining said valve member at one opening in position to normally close the opening.

2. In a device of the kind described and in combination, a casing member provided with a chamber therein, with an opening therefrom at each end, a single integrally formed valve member arranged at its ends to close either one of said openings, and adjustable means for resiliently maintaining said valve member upon its seat at one opening.

3. A safety valve for pneumatic tires, comprising a casing member arranged for attachment on the end of the tire valve stem, and provided with an aperture extending therethrough, said casing provided with a valve seat at said aperture, a valve member positioned in said casing, and arranged to normally seat on said valve seat, and adjustable means for normally maintaining said valve member upon its seat, said casing provided with a cap having an opening therethrough in alinement with the aperture in the casing and formed with a valve seat on the inner side thereat, said valve member arranged at one end to coöperate with said valve seat and close said opening after predetermined movement of the valve member.

4. A safety valve for pneumatic tires, comprising the combination of a casing member having a chamber therein at one end, and arranged at the opposite end to embrace the tire valve stem, said casing provided with an inlet aperture extending from said chamber to the tire end thereof and with an outlet, a valve member arranged in said chamber and movable to close the inlet aperture or outlet, and means for normally maintaining said valve member in position to close said inlet aperture.

5. A safety valve for pneumatic tires, comprising the combination of a casing member having a chamber therein at one end, and arranged at the opposite end to embrace the tire valve stem, said casing provided with an aperture extending from said chamber to the tire end thereof, a valve member arranged in said chamber and having both ends thereof tapered, means for normally maintaining said valve member in position to close said aperture, and a detachable cap arranged over the end of said casing, and provided with an outlet for said chamber, said valve arranged to close said cap outlet upon a predetermined movement of the valve toward the cap.

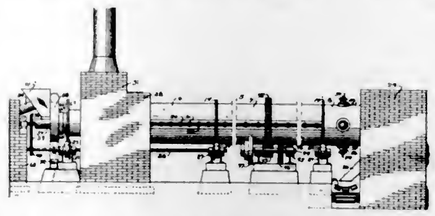
[Claims 6 to 8 not printed in the Gazette.]

1,172,478. WEB-TIP. ROSWELL A. MOORE, Waterbury, Conn., assignor to Waterbury Buckle Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 19, 1915. Serial No. 35,065. (Cl. 24—265.)



As a new article of manufacture, the combination of a web and a rigid tip on the end thereof, a portion of said tip being depressed out of the plane of the main body of the tip, the tipped end being of substantially the same thickness throughout, an ear on one edge of the tip, adapted to be bent over the attaching bar of a buckle with the body of the tip on the other side, whereby movement of the tipped end in either direction will be prevented.

1,172,479. ORE-ROASTING FURNACE. WILLIAM H. MOTTER, Denver, Colo., assignor to Mary A. Motter. Filed May 19, 1913. Serial No. 768,559. (Cl. 75—139.)



1. A furnace, comprising a cylinder composed of an inner member and an outer member supported around the inner member and leaving a space between said members, the outer member having a part extending beyond the inner member, a transverse pipe passing through said part and communicating with the exterior of the latter, a bell-member arranged in front of the inner member and supported by said pipe, said bell-member being in communication with said pipe, and a fire-box with which said part is in communication.

2. A furnace of the class described, comprising a cylinder composed of an inner member and an outer member supported around the inner member and leaving a space between said members, the outer member having a part extending beyond the inner member, transverse pipes arranged in said part and communicating with the exterior of the latter, means controlling the outer extremities of said pipes for regulating the admittance of air therein, a member supported by said pipes on the interior of said part and arranged in front of the inner member, said member directing the air into the inner member of said cylinder, a fire-box with which said part is in communication, and said bell directing the products of combustion into the space between the two members of said cylinder.

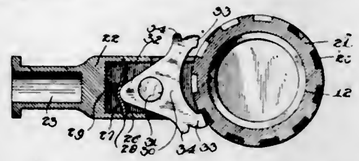
3. A furnace, comprising a cylinder composed of an inner member and an outer member supported around the inner member and leaving a space between said members, the outer member having a part extending beyond the inner member, a fire-box with which said part is in communication, said part being lined with fire clay having flanges formed thereon, a transverse pipe passing through said part and communicating with the exterior of the latter, adjustable caps controlling the outer extremities of the said pipe, and a member in communication with said pipe on the interior of said part, said member being arranged to discharge into the inner member of said cylinder, and to deflect the product of combustion into the space between the two members of said cylinder.

4. A furnace, comprising a cylinder composed of an inner member and an outer member, supported around the inner member and leaving a space between said members, the outer member having a part extending beyond the inner member, pipes passing through said part and communicating with the exterior of the latter, the said pipes having a member in communication therewith on the interior of said part, the said pipes being adapted to admit oxygen into the inner member of the cylinder for creating a suitable roast of the ore such as is required for subsequent treatment of the latter, and a fire-box with which said pipe is in communication.

5. A furnace, comprising a cylinder composed of an inner member and an outer member, supported around the inner member and leaving a space between said members, the outer member having a part extending beyond the inner member, a fire-box with which said part is in communication, transverse pipes passing through said part and communicating with the exterior of the latter, and a bell-member arranged on the interior of said pipe and in communication with said pipe.

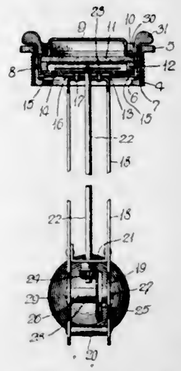
[Claims 6 to 8 not printed in the Gazette.]

1,172,480. PAWL-AND-RATCHET MECHANISM. WILLIAM S. NAPIER, Houston, and CLAUD B. ELLIOTT, Hempstead, Tex. Filed Jan. 27, 1913, Serial No. 744,474. Renewed Jan. 14, 1916. Serial No. 72,181. (Cl. 74—16.)



In a jack, the combination with a support, a rotatable member carried thereby, ratchet teeth formed thereon, spaced rings carried by said support above and below the teeth of said rotatable member, a handle carried by said rotatable member provided with a hollow head portion, a flexible strip mounted at one end of said head portion, a spring positioned between said strip and the inner end of said head portion, a pawl pivotally mounted within said housing, said pawl being substantially triangular and having its apex forming a heel contacting with said strip and having its base terminating in curved ends adapted to engage the teeth formed upon said rotatable member, and lugs formed upon said pawl adjacent the outer portions of the curved ends.

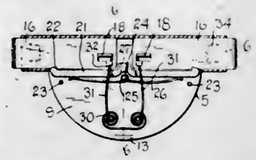
1,172,481. GASOLENE-GAGE. WALTER I. OESCHGER, Detroit, Mich. Filed Aug. 7, 1915. Serial No. 44,348. (Cl. 73—82.)



1. A gasolene gage comprising a plug adapted for closing a gasolene tank, a detachable indicator housed in said plug and provided with a transverse handle to facilitate its removal, a nut holding said cage in said plug, a bracket supported by said indicator independent of said plug, a rock shaft carried by said bracket, a float connected to said rock shaft and adapted to impart movement to said rock shaft, and means in said bracket moved by said rock shaft and adapted to actuate said indicator.

2. A gasolene gage comprising a plug adapted as the sole closure of a gasolene tank, a detachable cage seated in said plug and provided with a handle to facilitate its removal, a nut holding said cage in said plug, a closure plate for said cage, a dial plate on said closure plate, a pointer above said dial plate, and means carried by said closure plate independent of said plug and adapted to move said pointer.

1,172,482. LOCKING DEVICE. RICHARD E. PERKINS, Atlanta, Ga. Filed May 3, 1915. Serial No. 25,534. (Cl. 150—47.)



1. A locking device of the character described comprising a flat sheet metal case, longitudinally slidable locking plates mounted in said case, means arranged between the walls of the case normally acting to project the locking plates to their effective position, a manually shiftable keeper member mounted within the case to retain the plates in retracted position, means for attaching said locking case to a book cover whereby, when the plates are released, the same will be projected into bearing engagement at their outer ends with the walls of the pocket to retain the book therein.

2. A lock of the character described including a casing having a rectangular guideway integrally formed therewith and a slot communicating with one side of the guideway, longitudinally slidable locking plates mounted in said guideway, means arranged within the case and connected to the opposed ends of the plates to normally urge the same outwardly in opposite directions to their effective locking positions, and a manually shiftable keeper member common to both locking plates to hold the same in a retracted position.

3. In a locking device of the character described comprising a flat sheet metal case, a pair of locking plates mounted in said case for sliding movement, a common operating member loosely mounted between the walls of the case and attached at its extremities to the opposed ends of the respective plates and normally acting to project said plates outwardly in relatively opposed directions, a spring pressed manually operable keeper member mounted within the case to coöperate with the plates and hold the same in their retracted positions, said keeper member having a central finger piece projecting outwardly through one wall of the case.

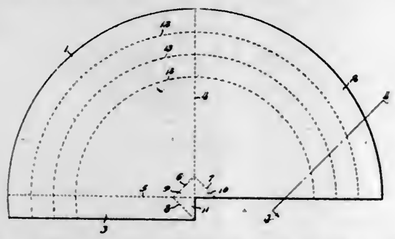
4. In a lock of the character described, a sheet metal case, slidable locking plates mounted in the case and provided with stop lugs on their inner ends, a common resilient operating member for said plates connected at its extremities to the inner opposed ends of the plates, a common keeper member for the plates mounted within the case and movable at right angles to the line of movement of the locking plates, a spring normally holding the keeper in engagement with said plates to hold the same in their retracted positions, said keeper being provided with a central finger piece projecting outwardly through one wall of the case.

1,172,483. FOLDING PAPER VESSEL. BERTON I. RIKE and JOHN R. KLIN, Dayton, Ohio, assignors to The Germless Paper Cup Company, Dayton, Ohio, a Corporation of Ohio. Filed Feb. 29, 1912. Serial No. 680,736. (Cl. 229—53.)

1. A folding paper vessel consisting of a semi-circular blank scored on a central line so as to form equal-sized quadrant-shaped sections, a flap extending from one of said sections, said sections being folded upon themselves so that their outlines will register, and the flap being folded over and secured by pasting to one of said sections.

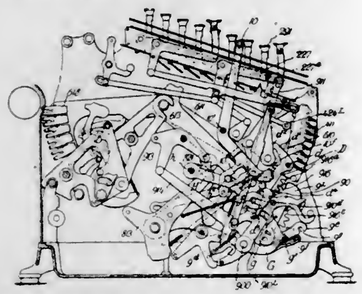
2. A folding paper vessel consisting of a semi-circular blank scored on a central line so as to form equal-sized quadrant-shaped sections, one of said sections being provided with a flap, said sections and flap being provided

with auxiliary score lines 6, 7 and 8 to form auxiliary triangular-shaped sections which overlap at the point of the cone when folded, said sections being folded upon themselves along the central score line so that the outlines of said sections will coincide, said flap being folded over the opposite section and pasted thereto.



3. A folding paper vessel consisting of a semi-circular blank scored on a central line so as to provide two equalized quadrant-shaped sections, a flap extending from one of said sections, said sections being folded upon themselves on the central score line and the flap being folded over the opposite section and pasted thereto, and one or more circular scores on said blank to form one or more circumferential ribs on said vessel when folded.

1,172,484. ADDING AND LISTING MACHINE. FRANK C. RINSCHE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 15, 1911. Serial No. 665,899. (Cl. 235—60.)



1. In a machine of the character described, the combination of type carriers, actuators, two sets of wheels intermeshed and shiftable to provide for direct engagement of either set with the actuators, transfer mechanism arranged to coöperate directly with either set of wheels, means for imparting a unit of movement to the lowest order wheel of a set as a result of shifting the wheels to bring that set into direct coöperative relation with the actuators, and means for changing the timing of direct engagement between either set of wheels and the actuators for totaling purposes.

2. In a machine of the character described, the combination of type carriers, actuators, two sets of wheels intermeshed and shiftable to provide for direct engagement of either set with the actuators, a prime mover and connections for engaging and disengaging actuators and wheels and for reciprocating the actuators, manipulative means for measuring excursions of actuators with either set of wheels in direct coöperative relation thereto, transfer mechanism arranged to coöperate directly with either set of wheels, means for imparting a unit of movement to the lowest order wheel of a set as a result of shifting the wheels to bring that set into direct cooperative relation with the actuators and subsequent engagement of wheels and actuators, and means for changing the timing of direct engagement between either set of wheels and the actuators for totaling purposes.

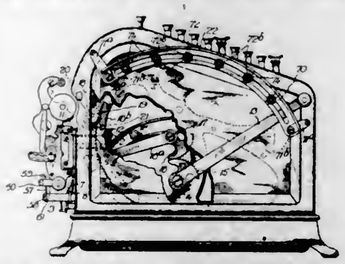
3. In a machine of the character described, the combination of type carriers, actuators, two sets of wheels intermeshed and shiftable to provide for direct engagement of either set with the actuators, transfer mechanism arranged to coöperate directly with either set of wheels, means for imparting a unit of movement to the lowest order wheel of a set as a result of shifting the wheels to bring that set into direct coöperative relation with the actuators, means for changing the timing of direct engagement between either set of wheels and the actuators for totaling purposes, and means for preventing setting of said last mentioned means immediately following shift of the sets of wheels.

4. In a machine of the character described, the combination of type carriers, actuators, two sets of wheels intermeshed and shiftable to provide for direct engagement of either set with the actuators, a prime mover and connections for engaging and disengaging actuators and wheels and for reciprocating the actuators, manipulative means for measuring excursions of actuators with either set of wheels in direct coöperative relation thereto, transfer mechanism arranged to coöperate directly with either set of wheels, means for imparting a unit of movement to the lowest order wheel of a set as a result of shifting the wheels to bring that set into direct cooperative relation with the actuators and subsequent engagement of wheels and actuators, means for changing the timing of direct engagement between either set of wheels and the actuators for totaling purposes, and means for preventing setting of said last mentioned means until after an operation of the prime mover has been had.

5. In a machine of the character described, the combination of type carriers, actuators, two sets of wheels intermeshed and shiftable to provide for direct engagement of either set with the actuators, a prime mover and connections for engaging and disengaging actuators and wheels and for reciprocating the actuators, manipulative means for measuring excursions of actuators with either set of wheels in direct coöperative relation thereto, transfer mechanism arranged to coöperate directly with either set of wheels, means tending to impart a unit of movement to the lowest order wheel of a set, tripping means set as an incident to shifting the wheels to bring that set into direct coöperative relation with the actuators, means for changing the timing of direct engagement between either set of wheels and the actuators for totaling purposes, and means for disabling the tripping means in operation of the prime mover.

[Claims 6 to 20 not printed in the Gazette.]

1,172,485. ADDING-MACHINE. FRANK C. RINSCHE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 9, 1914. Serial No. 823,399. (Cl. 197—176.)



1. In a machine of the class described, the combination of recording mechanism; a laterally shiftable paper carriage; a spring for shifting it one way; a handle reciprocating at right angles to said carriage and geared thereto for returning it; and tabulating stops for the carriage cooperating directly with said handle, the latter being flexible for lateral displacement to disengage it from the stops.

2. In a machine of the class described, the combination of recording mechanism; a laterally shiftable paper carriage; a spring for shifting it one way; a handle reciprocating at right angles to said carriage; a slotted bar along which said handle moves; and adjustable stops fitted to said bar, the handle being flexible for lateral displacement to disengage it from the stops.

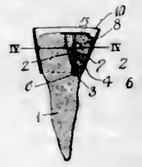
3. In a machine of the class described, the combination of recording mechanism; a laterally shiftable paper carriage; a spring for shifting it one way; a reciprocating handle connected to said carriage for returning it and which moves backwardly and forwardly along one side of the machine; and an indexing guide adjacent the path of said handle.

4. In a machine of the character described, the combination of recording mechanism; a laterally shiftable paper carriage; a spring for shifting it one way; a reciprocating handle geared thereto for returning it; tabulating stops for the carriage coöperating with said handle; a second series of tabulating stops; and means for releasing the carriage from said last-mentioned stops.

5. In a machine of the character described, the combination of recording mechanism; a laterally shiftable paper carriage; a spring for shifting it one way; a reciprocating handle geared thereto for returning it; tabulating stops for the carriage coöperating with said handle; other tabulating stops carried by the carriage; and a key and connections for releasing the carriage from said last-mentioned stops.

[Claims 6 to 9 not printed in the Gazette.]

1,172,486. STRENGTH-REINFORCEMENT FOR TOOTH-FILLINGS. WILLIAM E. SANBORN, Detroit, Mich. Filed Nov. 8, 1915. Serial No. 60,175. (Cl. 32—32.)



1. The combination with a tooth, of a cap, means adapted to detachably support the cap relative to said tooth whereby said cap may be vertically adjusted and a filling adapted to permanently hold said cap relative to said tooth.

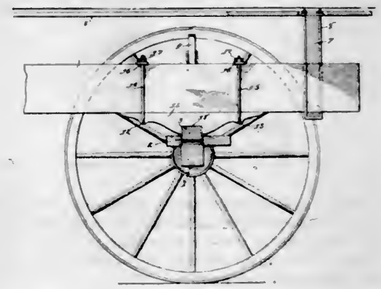
2. The combination with a tooth, of a tube carried thereby, a cap having a post mounted in said tube with one end of said cap extended on to said tooth, and a filling adapted to be placed under the opposite end of said cap.

3. The combination with a portion of a tooth, of tubes carried thereby, posts detachably mounted in said tubes, a cap carried by said posts, and a filling adapted to be interposed between said cap and the portion of said tooth.

4. As a new article of manufacture, a channel shaped cap having one end open, the other end closed, and a post protruding from within the channel of the cap.

1,172,487. HAY-RACK FASTENER. HERMAN M. SANDERS, Farmington, Minn. Filed June 12, 1914. Serial No. 844,752. (Cl. 21—74.)

1. A hay rack fastener comprising a pair of interchangeable yoke members made of a transverse dimension to correspond approximately to the thickness of the bed pieces of a hay rack and each provided with a centrally disposed transversely extending notch on its lower edge to be fitted and received over the bolster of a wagon, said yoke members provided with transversely extending notches adjacent each end thereof, U-bolt members mounted with the looped portions in the end notches of said yoke members and having the free ends thereof extended upwardly along the sides of said members and in proximity thereto, plates received across the upper edges of the bed pieces and fitted over the free ends of the U-bolt members, and nuts mounted on the ends of said U-bolt members to clamp the plates against the bed pieces and to bring the loops of said U-bolt members into a bearing engagement in the notches to hold the yoke members rigidly mounted on the bed pieces.



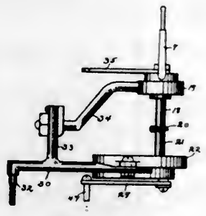
2. A hay rack fastener comprising a pair of interchangeable yoke members to be secured to the lower edges of the bed pieces of a hay rack and each provided with transversely extending notches on their lower edges to be received over the bolster of a wagon, said yoke members provided with notches disposed adjacent each end thereof U-bolt members mounted to have the loops thereof engaged in the end notches of said yoke members and the free ends extending up along the sides of the bed members, plates received across the upper edge of the bed members and fitted to the free ends of said U-bolt members, nuts received on said members to bear against the plates and to tighten the U-bolts against the yokes to secure the same in the proper operative relation upon the lower edges of the bed pieces, each of said yoke members provided with laterally extending flanges arranged to form a socket, and a cross member secured between said yoke members and in said socket to hold the yoke members in a spaced-apart relation and thus space the bed members of the rack.

3. A hay rack fastener comprising interchangeable yoke members to be secured to the lower edge of the bed pieces of the hay rack at each side thereof and provided on their lower edges with notches to be received over the bolster of the wagon, flanges formed from the inner faces of the yoke members adjacent said notches to provide sockets, a cross brace fitted between said yokes to rest at its ends in said sockets, means to hold the cross brace and the yoke members rigidly secured together, each of said yoke members provided with transversely extending notches on the lower faces thereof at each end, U-bolt members fitted to have the loops thereof received in said notches and the free ends extended up along the sides of the bed pieces, a clamp plate fitted over the free ends of said U-bolt members to bear against the upper edge of the bed pieces, and clamp nuts to bring the clamp plate to a proper bearing upon the bed pieces to secure the yoke members in the operative relation.

1,172,488. ADJUSTABLE HEADLIGHT FOR AUTOMOBILES. ANTON SCHALLER, New York, N. Y. Filed Feb. 12, 1915. Serial No. 7,673. (Cl. 240—62.)

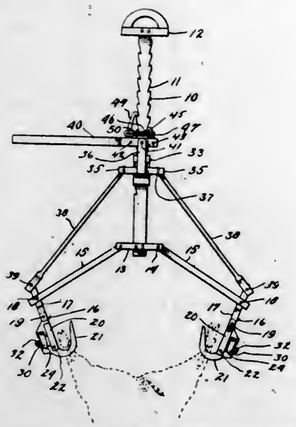
1. A device of the character described comprising a plurality of rotatable and vertical shafts out of alinement, a lever upon one of said shafts, means connected with a steering column for operating said lever, a pinion upon said shaft, a gear upon another of said shafts and in mesh with said pinion, a sector having an aperture and secured upon said second shaft, and a third shaft arranged within the aperture of said sector and a gear upon said shaft operated by said sector and a lamp bracket upon the last mentioned shaft all combined for joint operation as herein specified.

2. A device for directing the rays of a headlight comprising a casing having a centrally disposed and perforated dividing wall arranged therein, a plurality of shafts out of alinement, one end of each of said shafts being



supported by said carrier, and a plurality of gears and pinions and a sector in mesh with each other and adapted to rotate said shafts, one of said shafts serving to limit the extent of movement of said sector as herein specified and for the purpose set forth.

1,172,489. GAMBREL. GRANT M. SCHELLINGER, Downing, Wis. Filed Mar. 2, 1915. Serial No. 11,541. (Cl. 17—30.)



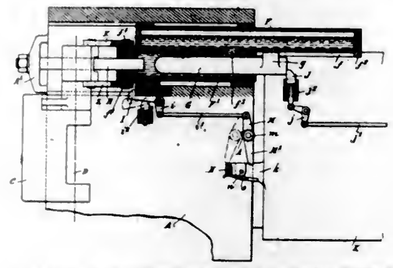
1. A gambrel comprising a bar, diverging arms pivoted upon the lower end thereof, hook members pivoted upon the lower ends of said arms, a sleeve slidable on said bar and connected with the upper ends of the hooks, and lever actuated means for moving said sleeve upwardly upon said bar.

2. A gambrel comprising a bar, diverging arms pivoted upon the lower end thereof, members pivotally connected with the free ends of said arms, pivoted hooks carried at the lower ends of said members, releasable keepers engaging said hooks for maintaining them in operative position, and means movable on said bar, and connected with the hooks for moving the same apart.

3. A gambrel comprising a bar provided with teeth, arms pivoted upon the lower end of said bar and carrying hooks, and means for moving said arms outwardly, said means comprising a sleeve slidable upon said bar, arms pivoted upon said sleeve and with the hooks, and means carried by said sleeve and operable to engage said teeth successively for moving said sleeve upwardly.

4. A gambrel comprising a bar provided with teeth, arms pivoted on the lower end thereof, hook members carried by said arms, and means for moving said arms outwardly comprising a sleeve slidable on said bar, arms connected with said sleeve and said arms, a lever pivoted upon said sleeve, and pawls on said lever engaging said teeth successively when said lever is moved up and down.

1,172,490. APPARATUS FOR THE SEMI-AUTOMATIC WORKING OF THE BREECH MECHANISM OF GUNS OF LARGE CALIBER. EUGÈNE SCHNEIDER, Paris, France. Filed July 8, 1915. Serial No. 38,740. (Cl. 89—4.)



1. In a gun, the combination of a cylinder containing fluid under pressure, two independent pistons in the cylinder, and means dependent on relative movements between the pistons and the cylinder for opening and closing the breech.

2. In a gun, the combination of a cylinder containing fluid under pressure, two independent pistons in the cylinder, and means dependent on relative movement between one piston and the cylinder for opening the breech and dependent on relative movement between the other piston and the cylinder for closing the breech.

3. In a gun, the combination of a cylinder containing fluid under pressure, two independent differently diametered pistons in the cylinder, and means dependent on relative movement between one piston and the cylinder for opening the breech and dependent on relative movement between the other piston and the cylinder for closing the breech.

4. In a gun, the combination of a cylinder containing fluid under pressure, two independent pistons in the cylinder, breech opening-and-closing mechanism, and means dependent on relative movement between both pistons and the cylinder for moving the mechanism in one direction and dependent on relative movement between the one piston and the cylinder and other piston for moving the mechanism in the other direction.

5. In a gun, the combination of a cylinder containing fluid under pressure, two independent differently diametered pistons in the cylinder, breech opening-and-closing mechanism, and means dependent on relative movement between both pistons and the cylinder for moving the mechanism in one direction and dependent on relative movement between the smaller piston and the cylinder and larger piston for moving the mechanism in the other direction.

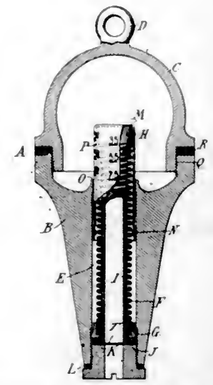
[Claims 6 to 31 not printed in the Gazette.]

1,172,491. SOUNDING-LEAD. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J. Filed June 12, 1911. Serial No. 632,639. (Cl. 73—5.)

1. In a sounding lead, the combination of a casing, a fluid pressure responsive device, means for registering the movements of said pressure responsive device, said casing constituting means for relieving one side of said pressure responsive device from water pressure, said pressure responsive device and registering means being carried by said lead, said registering device being within said casing out of contact with the water.

2. In a sounding lead, the combination of a casing, a fluid pressure responsive device, means for registering the movements of said pressure responsive device, said casing having a closed chamber therein into which said pressure responsive device is adapted to extend, said pressure responsive device and registering means being carried by said lead, said registering device being within said closed chamber.

3. In a sounding lead, the combination of a casing having a closed chamber therein, a movable fluid pressure member exposed on one side to water pressure and having its other side protected from water pressure by said closed chamber, and a sleeve adapted to be moved by said movable pressure member, said sleeve being carried by said lead.

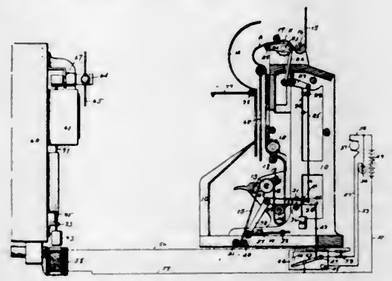


4. In a sounding lead, the combination of a casing having a closed chamber therein, a movable pressure member exposed on one side to water pressure and having its other side protected from water pressure by said closed chamber, a sleeve adapted to be moved by said movable pressure member, said sleeve being carried by said casing and being adapted to move in said closed chamber.

5. In a sounding lead, the combination of a casing having a closed chamber therein, an extensible tube open on its interior to water pressure and extensible into said closed chamber, a spring adapted to resist extension of said tube, and an indicating device movable by said tube in one direction and adapted to remain stationary upon movement of said tube in the other direction.

[Claims 6 to 10 not printed in the Gazette.]

1,172,492. MOVING-PICTURE MACHINE. DELBERT O. SEAMAN, Des Moines, Iowa, assignor of one-half to C. T. Smith, Des Moines, Iowa. Filed Dec. 9, 1914. Serial No. 876,324. (Cl. 88—17.)



1. In a device of the class described, the combination of a moving picture machine having a light aperture and a mechanism for feeding the film past said aperture, a movable shutter adapted in one position to cover said aperture, a support for a source of light spaced from said machine, a movable douser mounted on said support, means for holding a portion of the film taut, means adapted to normally extend across the path of said taut portion of the film, said last named means being adapted to be held away from its normal position by the taut portion of the film, and means whereby when the taut portion of the film is released and said last described means moves to its normal position, said shutter is moved to its closed position and said douser is moved into the path of light between said light supporting means and said light aperture.

2. In a device of the class described, the combination of a moving picture machine having a light aperture and a mechanism for feeding the films past said aperture, a movable shutter adapted in one position to cover said aperture, a support for a source of light spaced from said machine, a movable douser mounted on said support, certain mechanism including means for maintaining a loop in said film, a movable member extended into the path of said loop, and means whereby when said loop is taken up thereby moving said movable member, said shutter is moved to closed position and said douser is moved into the path of light between said supporting source of light and said moving picture machine.

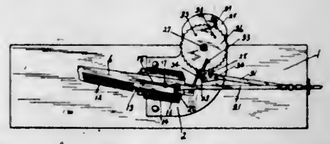
3. In a device of the class described, the combination of a moving picture machine having a light aperture and a mechanism for feeding the films past said aperture, a movable shutter adapted in one position to cover said aperture, a support for a source of light spaced from said machine, a movable douser mounted on said support, and means for operating said moving picture machine mechanism, said moving picture machine mechanism including means for maintaining a loop in the film, a pivoted lever having a portion adapted to stand within such loop, and means operatively connected with said lever whereby if said loop should be taken up, said shutter will be moved to closed position and said douser moved to position in the path of light between the light supporting means and the moving picture machine, and said mechanism operating means will be disconnected with the mechanism of the moving picture machine.

4. In a device of the class described, the combination of a moving picture machine having a light aperture, and having mechanism adapted to feed a film past said light aperture, said machine having also a movable shutter adapted in one position to close said aperture, means for supporting a source of light, a movable douser designed in one position to stand in the path of light between said light supporting means and said moving picture machine, and means designed to be controlled through a film passing through the moving picture machine, whereby if said film should become broken the shutter will be moved to closed position and said douser dropped into said path of light.

5. In a device of the class described, the combination of a moving picture machine having a light aperture and a movable shutter adapted to drop by gravity to position to cover said aperture, and having mechanism for feeding a film past said aperture, means for holding said shutter in open position when the machine is in operation, a lamp house, a movable douser thereon, adapted to drop by gravity to position in the path of light between the lamp house and the moving picture machine, means for holding said douser in inoperative position, means for maintaining a loop in the film in the moving picture machine, a movable member having a portion adapted to extend into said loop, and means whereby when said loop is taken up thereby moving said last described means, said shutter holding mechanism and said douser holding mechanism are released.

[Claims 6 to 17 not printed in the Gazette.]

1,172,493. TARGET-TRAP. WILLIAM I. SPANGLER, Tarlton, Ohio. Filed May 14, 1915. Serial No. 28,017. (Cl. 124—6.)



1. In a target trap, a base, a stand pivotally mounted on said base, a spring normally tending to rotate said stand in one direction, and means operable in opposition

to said spring to automatically change the angularity of said stand with respect to said base each time the trap is operated.

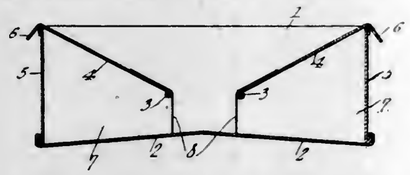
2. In a target trap, a base, a stand pivotally mounted on said base, a throwing arm carried by said stand, means for operating said throwing arm, a spring normally tending to rotate said stand in one direction, and means operable in opposition to said spring to change the angularity of said stand each time said arm is operated.

3. In a target trap, a base, a stand pivotally mounted on said base, a spring normally tending to rotate said stand in one direction, and ratchet and pawl mechanism operable in opposition to said spring to change the angularity of said stand with respect to said base each time the trap is operated.

4. In a target trap, a base, a stand pivotally mounted on said base, a spring normally tending to rotate said stand in one direction, a ratchet wheel, studs projecting from said wheel, a pawl structure, a finger carried by said stand arranged to project into the path of rotation of said studs, and means whereby said ratchet wheel is rotated.

5. In a target trap, a base, a stand pivotally mounted on said base, a spring normally tending to rotate said arm in one direction, a ratchet wheel, studs projecting from said ratchet wheel, a pawl normally holding said ratchet wheel against rotation in one direction, a finger carried by said stand arranged to project into the path of rotation of said studs, an arm pivoted to move about the center of rotation of said ratchet wheel, a pawl carried by said arm arranged to engage said ratchet wheel, operating mechanism for the trap as a whole, and an operative connection between said mechanism and said arm.

1,172,494. HEN'S NEST. JOHN J. SPLITEK, Faith, S. D., assignor of one-half to Gilbert Lee, Faith, S. D. Filed Aug. 30, 1915. Serial No. 48,030. (Cl. 119—48.)



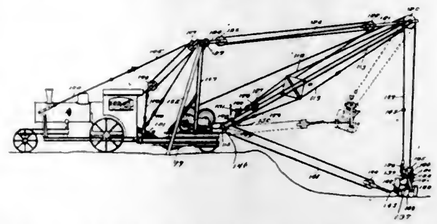
1. A hen's nest including a body having its bottom inclined downwardly from the center thereof, opposed upwardly diverging spaced doors extending transversely within the body and forming separate compartments thereunder, and projecting portions upon the upper ends of the doors.

2. A hen's nest including a body having its bottom inclined downwardly from the center thereof, opposed upwardly diverging spaced doors extending transversely within the body and forming separate compartments thereunder, and a curtain depending from the inner end portion of each door.

3. A hen's nest including a box-like body having its bottom inclined downwardly toward the ends thereof from the center, upwardly diverging hinged doors mounted transversely within the body and resting upon the upper ends of the end walls of the body, there being egg receiving spaces between the doors and between the lower end portion of each door and the bottom of the body, said doors and bottom forming egg receiving compartments in the end portions of the body, and curtains secured to the doors and normally closing the egg receiving openings under the inner ends of the doors.

1,172,495. EXCAVATOR. WILLIAM N. SPRINGER, Peoria, Ill., assignor to Avery Company, a Corporation of Illinois. Filed Mar. 1, 1911. Serial No. 611,565. (Cl. 37—19.)

1. In an excavator, the combination of the main frame, the means comprising a vertical pivot for flexibly connecting the main frame at its forward end to a traction engine to be supported thereby, the ground engaging wheels for supporting the rear end of the frame, each of the said wheels being independently adjustable with respect to the frame about a vertical axis, the manually controllable devices for turning the said wheels about their vertical axes, the excavating mechanism supported on the frame and comprising an earth engaging scoop movable with respect to the frame, and power mechanism for actuating the said scoop to cause it to gather and elevate earth.



2. In an excavator, the combination of the main frame, the means comprising a vertical pivot for flexibly connecting the main frame at its forward end to a traction engine to be supported thereby, the ground engaging wheels for supporting the rear end of the frame, each of the said wheels being independently adjustable with respect to the frame about a vertical axis, the horizontal tongues connected respectively to the said wheels for turning them about the said vertical axes, the excavating mechanism supported on the frame and comprising an earth engaging scoop movable with respect to the frame, and power mechanism for actuating the said scoop to cause it to gather and elevate earth.

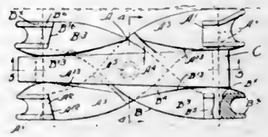
3. In an excavator, the combination of the main frame, the means comprising a vertical pivot for flexibly connecting the main frame at its forward end to a traction engine to be supported thereby, the ground engaging wheels for supporting the rear end of the frame, each of the said wheels being independently adjustable with respect to the frame about a vertical axis, the horizontal tongues connected respectively to the said wheels for turning them about the said vertical axes, the said tongues being extensible in length to provide increased leverage for turning the wheels, the excavating mechanism supported on the frame and comprising an earth engaging scoop movable with respect to the frame, and power mechanism for actuating the said scoop to cause it to gather and elevate earth.

4. In an excavator, the combination of the main frame, the means comprising a vertical pivot for flexibly connecting the main frame at its forward end to a traction engine to be supported thereby, the ground engaging wheels for supporting the rear end of the frame, each of the said wheels being independently adjustable with respect to the frame about a vertical axis, the releasable means for locking the said wheels in parallelism with the frame, excavating mechanism supported on the frame and comprising an earth engaging scoop movable with respect to the frame, and power mechanism for actuating the said scoop to cause it to gather and elevate earth.

5. In an excavator, the combination of the main frame, the means comprising a vertical pivot for flexibly connecting the main frame at its forward end to a traction engine to be supported thereby, the ground engaging wheels for supporting the rear end of the frame, each of the said wheels being independently adjustable with respect to the frame about a vertical axis, the horizontal tongues connected respectively to the said wheels for turning them about the said vertical axes, the releasable means for engaging the tongues to lock the said wheels in parallelism with the frame, the excavating mechanism supported on the frame and comprising an earth engaging scoop movable with respect to the frame, and power mechanism for actuating the said scoop to cause it to gather and elevate earth.

[Claims 6 to 19 not printed in the Gazette.]

1,172,496. RAIL-ANCHOR. ANDREW STARK, Chicago, Ill. Filed July 26, 1915. Serial No. 41,809. (Cl. 238—4.)



1. A rail anchor comprising a pair of gripper bars having ends formed for gripping one edge of the rail flange, said bars extending in oppositely oblique directions transversely of the rail, means adapted to grip the other edge of the rail flange, and spreading means accommodated between the aforesaid ends of the bars adapted to force them apart longitudinally of the rail for tightening their grip thereon.

2. A rail anchor comprising a pair of gripper bars having ends formed for engaging one edge of the rail flange, said bars being connected and extending in oppositely diagonal directions transversely of the rail, means for engaging the other edge of the rail flange, and a wedge adapted to be driven between the diverging end of said bars in horizontal direction transversely of the rail.
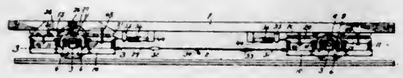
3. A rail anchor comprising a pair of gripper bars having hooked ends for engaging one edge of the rail flange, said bars being connected and extending in oppositely diagonal directions transversely of the rail, hooked means for engaging the other edge of the rail flange, and a wedge adapted to be driven between the diverging ends of said bars in horizontal direction transversely of the rail.

4. A rail anchor comprising a pair of gripper bars each having both ends formed for engaging the opposite edges of the rail flange, said bars being lapped one upon the other to extend in oppositely diagonal directions under the rail, a loose pivotal connection between said bars, and means for spreading the ends of said bars at each edge of the rail flange for tightening the grip of the bars upon said flange.

5. A rail anchor comprising a pair of gripper bars each having both ends formed for engaging the opposite edges of the rail flange, said bars being lapped one upon the other to extend in oppositely diagonal directions under the rail, and spreading means accommodated between the bars at both edges of the rail flange adapted to simultaneously force them apart longitudinally of the rail for tightening their grip thereon.

[Claims 6 to 15 not printed in the Gazette.]

1,172,497. CAR-TRUCK. FRED STEFFENS, St. Joseph, Mo. Filed Apr. 7, 1915. Serial No. 19,625. (Cl. 105—139.)



1. In a car truck, a car body, an axle, a lower frame revoluble with the axle, means supported by the axle for supporting the frame, an upper frame revoluble relatively to the car body and with the lower frame, resilient means supported by the lower frame and supporting the upper frame, and means supported by the upper frame and supporting the car body.

2. In a car truck, a car body, an axle, a lower frame revoluble with the axle, means supported by the axle for supporting the frame, an upper frame revoluble relatively to the car body and with the lower frame, resilient means supported by the lower frame and supporting the upper frame, and rollers supported by the upper frame and supporting the car body.

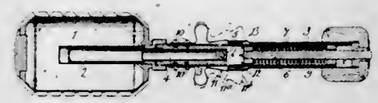
3. In a car truck, a car body having an arcuate vertically curved runway, an axle, a lower frame revoluble with the axle, means supported by the axle for supporting said frame, an upper frame revoluble relatively to the car body and with said lower frame, resiljent means supported by the lower frame and supporting said upper frame, and rollers supported by the upper frame and adapted for travel in said runway.

4. In a car truck, a car body having an arcuate runway curved in cross section, an axle, a lower frame revoluble with the axle, means supported by the axle for supporting said frame, an upper frame revoluble relatively to the car body and with the lower frame, resilient means supported by the lower frame and supporting said upper frame, and rollers supported by the upper frame and adapted to travel in said runway and having treads curved in cross section.

5. In a car truck, a car body having a horizontally arcuate vertically curved runway curved in cross section, an axle, a lower frame revoluble with the axle, means supported by the axle for supporting said frame, an upper frame revoluble relatively to the car body and with the lower frame, resilient means supported by the lower frame and supporting the upper frame, and rollers having treads curved in cross section and adapted to travel in said runway and supported by the upper frame.

[Claims 6 to 28 not printed in the Gazette.]

1,172,498. GRENADE. ERNEST HENRY STILL, London, England. Filed Mar. 27, 1915. Serial No. 17,373. (Cl. 102—29.)



1. A hand grenade comprising a charge container, a striker movable in relation thereto and means adapted normally to hold the striker inoperative and, by the action of throwing, to free the striker previous to the grenade being released from the hand.

2. A hand grenade comprising a charge container, a tubular shank connected thereto, a striker within such shank, a hand grip sleeve and obstructing means controlled thereby, such means being adapted to prevent movement of the striker while the hand grip sleeve is in one position and to release the striker when such hand grip sleeve occupies another position to which it moves automatically in the act of throwing the grenade.

3. A hand grenade comprising a charge container, a tubular shank connected thereto, a striker within such shank adapted to move toward the charge container, a movable hand grip sleeve surrounding said shank and to which the striker is connected so as to move therewith, and obstructing means adapted to prevent movement of the striker toward the charge container while the hand grip sleeve is in one position and until after the said sleeve has occupied another position to which it moves automatically in the act of throwing the grenade.

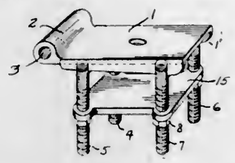
4. A hand grenade comprising a charge container, a tubular shank connected thereto, a striker within such shank, a spring urging the striker toward the charge container, means adapted to obstruct the striker and a hand grip sleeve having a portion adapted to normally overlap the striker obstructing means, the said hand grip sleeve being adapted to recede to release the obstructing means previous to the grenade being released from the hand.

5. A hand grenade comprising a charge container, a tubular shank pierced intermediate of its length and connected thereto, a striker within such shank, a movable hand grip sleeve surrounding said shank and to which the atriker is connected, a spring urging the striker toward the charge container and springs connected to the exterior of the tubular shank and having extremities protruding through the piercings in such shank, so as to engage the striker, the said springs being normally held in engagement by the hand grip sleeve a portion whereof

is adapted to overlap the springs and recedes to liberate the springs previous to the grenade being released from the hand.

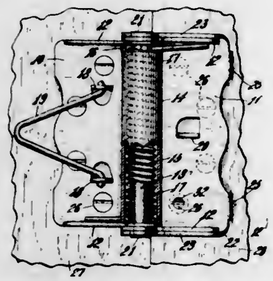
[Claims 6 to 9 not printed in the Gazette.]

1,172,499. VEHICLE-REPAIR CLIP. GUS STENZEL, Idria, Cal. Filed July 6, 1915. Serial No. 38,275. (Cl. 267—27.)



A vehicle spring repair plate comprising a plate having an eye extending transversely across one end and integral flanges at the sides thereof, four bolts integral with the flanges and plate for securing the plate to the spring of a vehicle, and bolts extending at right angles to the plane of the plate.

1,172,500. DETACHABLE HINGE. WILLIAM R. TAYLOR, Racine, Wis. Filed Oct. 20, 1915. Serial No. 56,828. (Cl. 16—25.)



1. A detachable hinge, comprising a pair of hinge plates having their ends bent up to form end flanges in parallel planes at right angles to the plates, a hinge pin passing through the end flanges of the hinge plates to pivotally connect them together, lugs projecting from the ends of the hinge, a connecting plate having end flanges bent up therefrom to correspond with the end flanges of the hinge plates and embracing the end flanges of the hinge plates and provided with notches to receive the said projecting lugs, a spring tending to force the hinge plates apart, and means for holding the hinge plates against the action of the spring.

2. A detachable hinge, comprising a pair of hinge plates having their ends bent up to form end flanges in parallel planes at right angles to the hinge plates, said end flanges extending beyond the hinge plates and the end flanges of one hinge plate fitting face to face against the outside of the end flanges of the other hinge plate, a hinge pin passing through the end flanges of the hinge plates, engaging lugs bent outwardly from the rear edges of the end flanges of the outer hinge plate, a connecting plate having end flanges bent up therefrom corresponding with the end flanges of the hinge plates and adapted to embrace the end flanges of the outer hinge plate between them, the end flanges of the connecting plate having shouldered notches at their rear edges to receive the engaging lugs, a spring tending to force the hinge plates apart, and means for holding the hinge plates against the action of the spring.

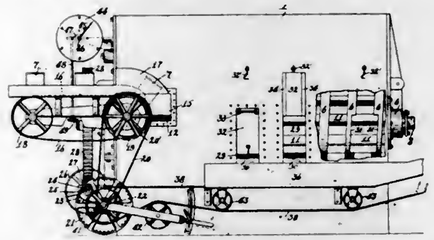
3. A detachable hinge, comprising a pair of hinge plates having end flanges bent up therefrom in parallel planes at right angles thereto and extending beyond the inner edge of the hinge plates, the end flanges of one hinge plate fitting face to face against the outside of the end flanges of the other hinge plate, a hinge pin passing through the end flanges of the hinge plates for pivotally connecting them together, a spring housing bent up from the inner edge of the inner hinge plate and closed at its ends by the end flanges therof, a coil spring within the spring housing surrounding the hinge pin with its ends engaging the respective hinge plates, engaging lugs at the ends of the hinge, a connecting plate adapted to fit behind the outer hinge plate and having end flanges to embrace the end flanges thereof, the end flanges of the connecting plate provided with notches to receive the connecting lugs, and means for holding the hinge plates against the action of the spring.

4. A detachable hinge, comprising a pair of hinge plates having end flanges bent up therefrom in parallel planes at right angles thereto, a hinge pin passing loosely through the end flanges, bearing sleeves loosely mounted on the hinge pin and provided with flaring ends, a coil spring surrounding the hinge pin and engaging the bearing sleeves with its ends bearing against the respective hinge plates, a connecting plate having end flanges embracing the end flanges of the hinge plates and holding the hinge pin in place, locking means between one of the hinge plates and the connecting plate depending upon the spring action on said hinge plate for locking them together, and means for holding the hinge plates against the action of the spring.

5. A detachable hinge, comprising hinge plates with end flanges bent therefrom in parallel planes at right angles thereto, the end flanges of the hinge plates being pivotally connected together, a spring acting on the respective hinge plates, a connecting plate having end flanges bent up therefrom, corresponding with the end flanges of the hinge plates and embracing the end flanges of the hinge plates between them, locking means between one of the hinge plates and the connecting plate depending upon the spring action on said hinge plate for locking them together, and means for holding the hinge plates against the action of the spring.

[Claims 6 to 8 not printed in the Gazette.]

1,172,501. COOKER. ALBERT R. THOMPSON, San Jose, Cal., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal., a Corporation of California. Filed Apr. 2, 1913. Serial No. 758,306. (Cl. 126—272.)



1. In a cooker, the combination of a heating box having a can-inlet and having also a plurality of can-outlets arranged at successively increasing distances from the inlet; means for advancing the cans in the box from the inlet to the plural outlets; means separately controlling said outlets for discharging the cans through any predetermined outlet; and separate controllable means for receiving the cans delivered from separate outlets.

2. In a cooker, the combination of a heating box having a can-inlet and having also a plurality of can-outlets arranged at successive points along the can-path; means for advancing the cans through the box; and an indicator timed to the travel of the cans to mark the arrival of a given can at any predetermined outlet.

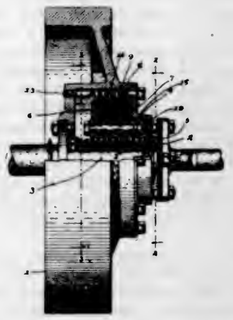
3. In a cooker, the combination of a heating box having a can-inlet and having also a plurality of can-outlets arranged at successive points along the can-path; means for advancing the cans through the box; means for separately controlling the discharge of the cans from any predetermined outlet, and an indicator timed to the travel of the cans to mark the arrival of a given can at any predetermined outlet.

4. In a cooker, the combination of a heating box having a can-inlet and having also a plurality of can-outlets; a can track within the box in communicative relation with the can-inlet, said track opening into each of the can-outlets to deliver the cans therethrough; and gates for separately controlling said outlets, each gate carrying means coacting with the can-track, when the gate is closed, to continue said track past the outlet it controls.

5. In a cooker, the combination of a heating box having a can-inlet and having also a plurality of can-outlets; a can track within the box in communicative relation with the can-inlet, said track having a section omitted at each of the can-outlets, to deliver the cans therethrough; and gates for separately controlling said outlets, each gate carrying a track section adapted, when the gate is closed, to supply the omitted section of the can-track at the outlet it controls.

[Claims 6 to 16 not printed in the Gazette.]

1,172,502. AUTOMOBILE-CLUTCH. FRED I. TONE, Indianapolis, Ind. Filed May 7, 1913. Serial No. 766,223. (Cl. 192—10.)



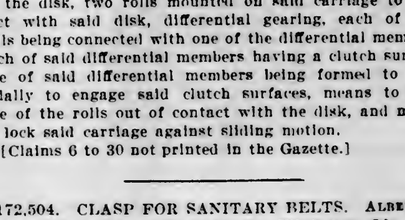
1. In an automobile clutch, in combination with a thin sheet metal disk, said disk having laterally extending flanges pressed out from the metal thereof on one face of the same and forming a groove and an annular fibrous member seated loosely in said groove, substantially as described.

2. In an automobile clutch, in combination with a series of thin sheet metal disks, a series of bolts on which said disks are laterally movable, said disks having lateral flanges pressed out from the body of the disks and bearing against said bolts, substantially as described.

3. In an automobile clutch, in combination with two series of thin sheet metal disks, members of frictional material between adjacent disks of different series, an outer series of bolts on which one series of disks are laterally movable, an inner series of bolts on which the other set is laterally movable, the disks of the respective series having outer and inner pressed out lateral flanges forming bearing portions which bear against said bolts.

1,172,503. FRICTION-GEARING FOR AUTOMOBILES. WALTER E. TRUFANT, Whitman, Mass. Filed Mar. 8, 1912. Serial No. 682,529. (Cl. 74—34.)

1. In a transmission gearing the combination of, a friction disk, a carriage mounted on a swivel in front of said disk, said carriage being pivoted to swing toward and from the disk, and being mounted to slide along the face of the disk, two rolls mounted on said carriage to contact with said disk, a differential gearing, each of said rolls being connected with one of the differential members, each of said differential members having a clutch surface, one of said differential members being formed to slide axially to engage said clutch surfaces, a latch to hold one of the rolls out of contact with the disk, a lever to apply pressure to said rolls at a point between them, and means to lock said carriage against sliding motion when said pressure is applied.



2. In transmission gearing the combination of, a friction disk, a carriage mounted on a swivel in front of said disk, said carriage being pivoted to swing toward and from the disk, and being mounted to slide along the face of the disk, two rolls mounted on said carriage to contact with said disk, differential gearing, each of said rolls being connected with one of the differential members, each of said differential members having a clutch surface, one of said differential members being formed to slide axially to engage said clutch surfaces, means to apply pressure to said rolls at a point between them, and means to hold one of the rolls out of contact with the disk.

3. In transmission gearing the combination of, a friction disk, a carriage mounted on a swivel in front of said disk, said carriage being pivoted to swing toward and from the disk, and being mounted to slide along the face of the disk, two rolls mounted on said carriage to contact with said disk, differential gearing, each of said rolls being connected with one of the differential members, each of said differential members having a clutch surface, one of said differential members being formed to slide axially to engage said clutch surfaces, means to hold one of the rolls out of contact with the disk, and means to lock said carriage against sliding motion when said pressure is applied.

4. In transmission gearing the combination of, a friction disk, a carriage mounted on a swivel in front of said disk, said carriage being pivoted to swing toward and from the disk, and being mounted to slide along the face of the disk, two rolls mounted on said carriage to contact with said disk, differential gearing, each of said rolls being connected with one of the differential members, each of said differential members having a clutch surface, one of said differential members being formed to slide axially to engage said clutch surfaces, and means to apply pressure to said rolls at a point between them.

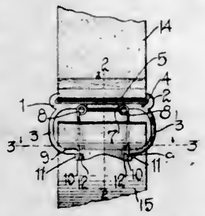
5. In transmission gearing the combination of, a friction disk, a carriage mounted on a swivel in front of said disk, said carriage being pivoted to swing toward and from the disk, and being mounted to slide along the face of the disk, two rolls mounted on said carriage to contact with said disk, differential gearing, each of said rolls being connected with one of the differential members, each of said differential members having a clutch surface, one of said differential members being formed to slide axially to engage said clutch surfaces, means to hold one of the rolls out of contact with the disk, and means to lock said carriage against sliding motion.

[Claims 6 to 30 not printed in the Gazette.]

1,172,504. CLASP FOR SANITARY BELTS. ALBERT T. VAN ALSTYN, New York, N. Y. Filed Apr. 26, 1915. Serial No. 23,883. (Cl. 24—188.)

1. In a buckle including a frame comprising stirrup and throat portions, a bar separating said portions, a multiple pronged spring member pivotally mounted on said bar, pockets on said frame opposite said bar for the reception of the ends of said prongs, said pockets having adjacent sides oppositely inclined for engagement with said prongs to compress the latter upon pres-

sure being exerted thereon and allow the same to finally spring into a protected and locked position in said pockets.



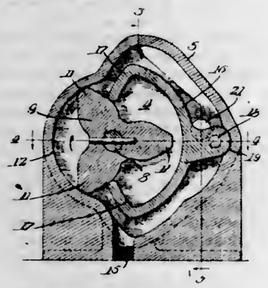
2. In a buckle including a frame comprising stirrup and throat portions, a bar separating said portions, a double pronged member pivoted to said bar and each prong provided with a coil spring said springs being oppositely tensioned with respect to each other, pockets on said frame opposite said bar for the reception of the ends of said prongs, said pockets having the adjacent sides oppositely inclined for engagement with said prongs to compress said springs upon pressure being exerted on said prongs and allow the latter to finally spring into a protected and locked position in said pockets.

3. In a buckle including a frame, a multiple pronged spring member mounted in said frame, and point pockets having inclined upper sides for engagement with said prongs to compress the latter and cause the same to finally spring into a protected and locked position in said pockets.

4. In a buckle including a frame, a multiple pronged spring member mounted in said frame and for penetrating the body to be buckled, and point pockets having the adjacent upper sides oppositely inclined for engagement with said prongs when the body to be buckled is pulled in a direction coincident with the direction of said prongs whereby the latter are compressed and finally sprung into a protected and locked position in said pockets.

5. The combination in a buckle including a resilient multiple pronged member, of pockets to receive and retain the pointed ends of the prongs of said member, said pockets being provided with inclined sides for engagement with said pointed ends to compress said prongs and cause the ends thereof to finally spring into a protected and locked position.

1,172,505. ROTARY PUMP. FRANK VAN CAUWENBERGH, Rockford, Ill. Filed Mar. 5, 1915. Serial No. 12,314. (Cl. 103—44.)



1. In a rotary pump, the combination of a rotary piston having three radially extending and equally spaced piston-arms, a stationary abutment with which said arms coöperate as the piston is rotated, and a rocking abutment engaging the periphery of the piston on diametrically opposite sides thereof, the periphery of the piston being shaped to maintain said rocking abutment in said engagement as the piston is rotated.

2. A rotary pump comprising a chamber having an intake and an exhaust opening spaced apart, a piston mounted to rotate in the chamber and having a plurility of integrally constructed piston arms adapted to coöperate with a portion of the chamber wall intermediate said intake and exhaust openings, a rocking abutment engaging the periphery of the piston and being arranged to preclude passage of liquid in the chamber between the said intake and exhaust openings, and means connected to and movable with said abutment and engaging the periphery of the piston for positively holding said abutment in engagement with the periphery of the piston continuously during complete rotation thereof.

3. In a rotary pump, the combination of a chamber having an intake and an exhaust opening spaced apart, a triangularly shaped piston mounted to rotate in the chamber so that the vertices thereof constituting pistons are adapted to engage a portion of the wall of the chamber intermediate the intake and exhaust openings, and an abutment pivotally mounted in the chamber at the side thereof opposite said wall-engaged portion and shaped to engage the periphery of the piston at diametrically opposite sides thereof, whereby to be maintained in engagement with the periphery of the piston as the same is rotated and to preclude passage of liquid from the exhaust to the intake opening through the abutment side of the chamber.

4. In a rotary pump, the combination of a piston chamber, a piston rotatably mounted therein and having a plurality of integrally constructed, radially extending piston arms adapted to coöperate with one side of the piston chamber as the piston is rotated, a rocking abutment pivotally mounted in the piston chamber and having a pair of integrally constructed arms spaced apart and engaging the peripheral face of the piston on diametrically opposite sides thereof, the periphery of the piston being so shaped that the abutment arms will engage the same at all times during rotation thereof, whereby to preclude passage of liquid from one to the other side of the piston at the abutment side thereof, and the casing being provided with an intake opening on one side of the piston and abutment and with an exhaust opening on the other side thereof.

5. A rotary pump comprising a casing forming a piston chamber, a piston rotatably mounted therein and having a plurality of rigid, radially extending arms, a stationary arcuate abutment with which said arms coöperate, a rocking abutment engaging the periphery of the piston on diametrically opposite sides thereof and being pivotally mounted and arranged in the chamber to preclude passage of liquid past the rocking abutment, the periphery of the piston being so shaped that said rocking abutment will be maintained in engagement therewith on diametrically opposite sides thereof, and the casing being provided with an intake and an exhaust opening to said chamber at opposite sides of the division in the chamber formed by the piston and the stationary and rocking abutments.

[Claim 6 not printed in the Gazette.]

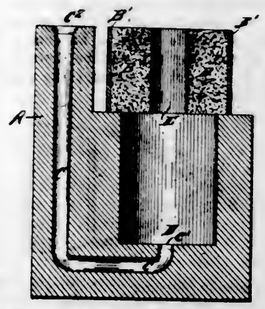
1,172,506. MEANS FOR CASTING METALS, INCLUDING THEIR ALLOYS. CHARLES VICKERS, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Aug. 29, 1914. Serial No. 859,156. (Cl. 22—113.)

1. As a new article, a mold for metal, or its alloys, composed principally of a non-metallic rapidly heat-diffusing substance, and comprising, for the casting proper, a mold composed principally of graphitized carbon, in combination with a less rapidly heat-diffusing riser.

2. As a new article, a mold for metal, or its alloys, composed principally of a non-metallic rapidly heat-diffusing substance, and comprising, for the casting proper, a mold composed principally of graphitized carbon, in combination with a riser member composed principally of sand.

3. As a new article, a mold for metals, or their alloys, composed partly of graphitized carbon and partly of another substance.

4. As a new article, a mold for metals, or their alloys, comprising a mixture of graphitized carbon with another substance.



5. As a new article a mold for metals, or their alloys, comprising a mixture containing graphitized carbon and amorphous carbon.

[Claims 6 to 9 not printed in the Gazette.]

1,172,507. COLORED MOLASSES AND METHOD OF PRODUCING SAME. ERNEST E. WERNER, Indianapolis, Ind. Filed May 15, 1915. Serial No. 28,264. (Cl. 99—11.)

1. The method of coloring molasses which consists in adding to the molasses a coloring substance capable of modifying a color factor of the molasses.

2. The method of coloring molasses which consists in adding to the molasses a coloring substance capable of modifying and of having its color modified by a color factor of the molasses.

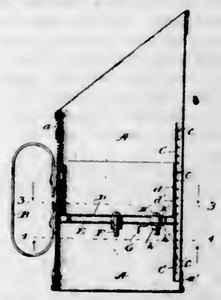
3. The method of coloring molasses which consists in adding to the molasses a coloring matter capable of having its color modified by the yellow color factor of the molasses.

4. The method of coloring molasses which consists in adding thereto a coloring substance in an amount not exceeding the maximum of such color which may be modified by the yellow color factor of the molasses.

5. The method of coloring molasses which consists in adding thereto a coloring substance capable of changing the yellowish tint observable in a film of molasses into a greenish tint.

[Claims 6 to 9 not printed in the Gazette.]

1,172,508. ADJUSTABLE MEASURE. ARTHUR S. WHEELER, Biltmore, N. C. Filed Nov. 30, 1914. Serial No. 874,721. (Cl. 73—165.)



1. In an adjustable measure, the combination with a body, of a bottom adjustable in said body, guiding means for the bottom fixed to the interior of the body transversely of the plane of the bottom, said means holding the bottom against rotation, and means coöperating with the guiding means for locking the bottom in adjusted position.

2. In an adjustable measure, the combination with a body, of a bottom adjustable in said body, a plurality of spaced ribs fixed in the body transversely of the plane of the bottom and having a series of notches arranged parallel to said plane, and a rotary locking member pivoted on the bottom and adapted to engage notches in all said ribs at the same time.

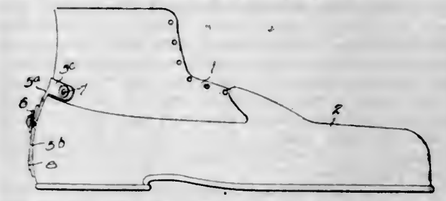
3. In an adjustable measure, the combination with a body, of a bottom adjustable in said body, a plurality of ribs fixed at intervals around the interior of the body transversely of the plane of the bottom and having a series of notches arranged parallel to said plane, and a locking member pivoted centrally of the bottom and having cam portions on its periphery to interlock with notches in all the ribs at the same time.

4. In an adjustable measure, the combination with a body, of a bottom adjustable in said body, means for preventing the bottom from turning in the body, and rotary means on the bottom for locking the same in its various adjustments.

5. In an adjustable measure, the combination with a body, of a bottom adjustable in said body, rotary means for locking said bottom at different adjustments, and separate means for clamping said locking means against working out of locked position in use.

[Claims 6 to 11 not printed in the Gazette.]

1,172,509. RUBBER-FOOTWEAR RETAINER. THEARON C. WILDER, Cattaraugus, N. Y. Filed Sept. 16, 1915. Serial No. 51,053. (Cl. 36—7.)

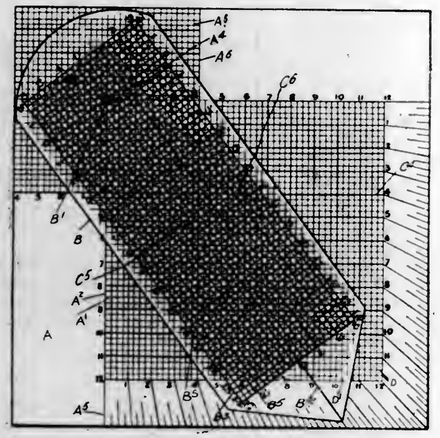


1. The combination with a shoe and an overshoe, of upper and lower snap fastener elements applied to the heel end of the shoe, a corresponding snap fastener element applied to the heel end of the overshoe, a retaining strap, and snap fastener elements applied to the opposite ends of said retaining strap and adapted to coöperate with the snap fastener elements on the shoe and overshoe, said snap fastener elements on the shoe, overshoe and strap being so arranged that the strap may be secured by its opposite ends to the shoe or to the shoe and overshoe to hold the overshoe in position on the shoe.

2. The combination with a shoe and overshoe, of upper and lower snap fastener elements applied to the heel end of the shoe, a snap fastener element applied to the heel end of the overshoe, a retaining strap formed in upper and lower adjustably connected sections, and snap fastener elements applied to the upper and lower sections of the retaining strap and adapted to coöperate with the snap fastener elements on the shoe and overshoe, said snap fastener elements on the shoe, overshoe and strap being so arranged that the strap may be secured by its opposite ends to the shoe or to the shoe and overshoe to hold the overshoe in position on the shoe.

3. The combination with a shoe and an overshoe, of an upper socket applied to the heel end of the shoe above the top of the overshoe, a lower socket applied to the heel end of the shoe below the top of the overshoe, a socket applied to the overshoe and positioned in a manner corresponding to the lower socket of the shoe, a retaining strap formed in upper and lower adjustably connected sections, and heads applied to the upper and lower sections of the retaining strap, said heads being adapted to be snapped into the upper socket of the shoe and the socket of the overshoe to secure the overshoe upon the shoe, or to be snapped into the sockets of the shoe to hold the strap flat against the shoe.

1,172,510. BEVEL-JOINT DETAILER PARTICULARLY ADAPTABLE FOR STRUCTURAL STEELWORK. BERTRAM HIGGINSON WILLIAMSON, Peterborough, Ontario, Canada. Filed Mar. 8, 1915. Serial No. 13,083. (Cl. 33—75.)



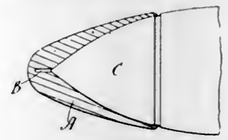
1. A bevel joint detailer comprising a base plate having a rectangular scale portion divided into equal portions by vertical and horizontal scale lines and provided with suitable indicating numbers, a transparent pointer arm pivotally connected to such base plate at one corner of the scale portion and extending over the same and provided with longitudinal and cross scale lines forming divided portions equal to the portions of the aforesaid rectangular scale, such horizontal and cross lines being suitably numbered.

2. A bevel joint detailer comprising a rectangular base plate having a rectangular scale portion divided into equal portions by vertical and horizontal scale lines and provided with suitable indicating numbers, a transparent pointer arm pivotally connected to such base plate at one corner of the scale portion and extending over the same and provided with longitudinal and cross scale lines forming divided portions equal to the portions of the aforesaid rectangular scale, such horizontal and cross lines being suitably numbered, and an angular scale portion extending from two sides of the rectangular scale portion, the scale lines of which are radial to the center of swing of the pointer arm.

3. A bevel joint detailer comprising a rectangular base plate having a rectangular scale portion divided into equal portions by vertical and horizontal scale lines and provided with suitable indicating numbers, a transparent pointer arm pivotally connected and intermediately of its center line to such base plate at one corner of the scale portion and extending over the same and provided with longitudinal and cross scale lines forming divided portions equal to the portions of the aforesaid rectangular scale, such horizontal and cross lines being suitably numbered, and a rectangular scale portion divided by horizontal and cross lines parallel with the horizontal and cross lines of the aforesaid scale portion, the center of which coincides with the corner of the aforesaid scale portion and the center of swing of the scale arm.

1,172,511. CAP FOR ARMOR-PIERCING PROJECTILES. JAMES MCNEAL ALLAN, Sheffield, England, assignor of one-half to Cammell Laird and Company Limited, Sheffield, England. Filed Dec. 21, 1914. Serial No. 878,409. (Cl. 102—28.)

1. A cap for armor piercing projectiles of the character described provided with a recess adapted to receive the point of the projectile and extend along the major axis of the projectile at least half way through the portion of the cap immediately in front of the projectile point, said recess being of cylindrical form and of such relatively small diameter in comparison with its length and the caliber of the projectile that at the moment of impact of the capped projectile with a hardened surface the metal in the nose of the cap will be distorted in such a direction that it will act to support the portions of the projectile surrounding its point.



2. A cap for armor piercing projectiles of the character described provided with a recess adapted to receive the point of the projectile and extend along the major axis of the projectile at least half way through the portion of the cap immediately in front of the projectile point, said recess being of cylindrical form and of a diameter approximately one fiftieth of the caliber of the projectile, whereby at the moment of impact of the capped projectile with a hardened surface the metal in the nose of the cap will be distorted in such a direction that it will act to support the portions of the projectile surrounding its point.

3. A cap for armor piercing projectiles of the character described provided with a recess that is closed at its outer end by the metal of the cap and the inner end of which is adapted to receive the point of a projectile, said recess being of cylindrical form and of such relatively small diameter in comparison with its length and the caliber of the projectile that at the moment of impact of the capped projectile with a hardened surface the metal in the nose of the cap will be distorted in such a direction that it will act to support the portions of the projectile surrounding its point.

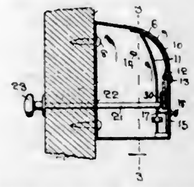
1,172,512. NON-PROJECTING HINGE. JOSEPH R. ANGELOVICH, San Francisco, Cal. Filed Sept. 18, 1915. Serial No. 51,475. (Cl. 16—27.)



1. In combination with a table having a beveled edge and a slot therein adjacent to said beveled edge and an extension leaf also having a beveled edge adapted to engage the first named beveled edge when the leaf is extended, a hinge member secured to said table and having a slideway in said slot, and a hinge member secured to the surface of the extension leaf which is uppermost when said beveled edges co-engage, and having a downwardly extending knuckle adjacent to the table and a slide piece hinged by means of said knuckle and slidable in said slideway.

2. In combination with a table having a beveled edge and a slot therein adjacent to said beveled edge and an extension leaf also having a beveled edge adapted to engage the first-named beveled edge when the leaf is extended, a hinge member secured to said table and having a slideway in said slot, and a hinge member secured to the surface of the extension leaf which is uppermost when said beveled edges co-engage, and having a downwardly extending knuckle adjacent to the table and a slide piece hinged by means of said knuckle and slidable in said slideway, the part of the hinge member secured to the extension leaf having a right-angled extension beyond the knuckle and formed with a terminal hook, and one of the sides of the slideway having a hole to receive said hook when the extension leaf is extended.

1,172,513. HOUSE MAIL-BOX. EDWARD E. BRUMBAUGH, Imler, Pa. Filed Feb. 29, 1912. Serial No. 680,654. (Cl. 232—23.)



1. In combination, a door having an opening therethrough, a mail box secured to the outer side of said door and covering said opening, a delivery door hinged to said mail box, a keeper upon the inner side of said delivery door, a rod pivotally mounted within said mail box, a latch mounted upon the forward end of said rod and actuated thereby, a leaf spring having one end secured upon said mail box and its free end bearing upon said latch for normally holding the latch in engagement with said keeper, said rod having its inner end reduced and provided with a flattened portion at one side and projecting through the rear wall of said mail box, a sleeve having a central bore provided with a flattened wall for adjustably receiving the reduced end and flattened portion of said rod to provide for the positive rotation of said rod and said latch, a set screw within said sleeve for engaging the flattened portion of said reduced end of said rod for retaining said sleeve in adjusted position thereon, said reduced end of said rod and said sleeve projecting into said door opening with one end of said sleeve protruding beyond the inner wall of said door, and a knob secured upon said sleeve at the inner side of said door for actuating said latch through the medium of said sleeve and said rod.

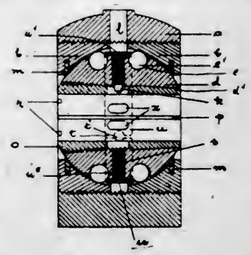
2. In combination, a door having an opening therethrough, a mail box secured to the outer side of said door and covering said opening, a delivery door hinged to said mail box, a keeper upon the inner side of said delivery door, a rod pivotally mounted within said mail box, a latch mounted upon the forward end of said rod and actuated thereby, a leaf spring having one end secured upon said mail box and its free end bearing upon said latch for normally holding the latch in engagement with the said keeper, said rod having its inner end reduced and projecting through the rear wall of said mail box, said reduced end of said rod being flattened at one side, a sleeve having a recess of the conformation of the reduced end of said rod for adjustably receiving said reduced end for assuring the rotation of said rod, a set screw within said sleeve for engaging the flattened portion of said reduced end for adjustably retaining said sleeve upon said reduced end of said rod, said reduced end of said rod and said sleeve being adapted for adjustment for doors of different thicknesses at the outer side of said mail box and previous to applying the mail box to the door, and a knob secured upon said sleeve at the inner side of said door for actuating said latch through said sleeve and said rod.

1,172,514. SHAFT AND AXLE BEARING. AUGUST CARLBORG and GUNNAR NYMAN, Tykö, Finland, Russia. Filed July 20, 1915. Serial No. 40,866. (Cl. 64—58.)

1. In a ball bearing the combination of a shell having a spherical inner surface, a spherical journal member in said shell, having in its circumference ball races, and a detachable ring embracing said journal member, partly over-hanging said ball races and adapted to retain balls therein.

2. In a ball bearing the combination of a shell having a spherical inner surface, a spherical journal member in said shell, having in its circumference ball races, and a detachable ring embracing said journal member, partly over-hanging said ball races and adapted to retain balls therein, said ring being transversely split and elastic.

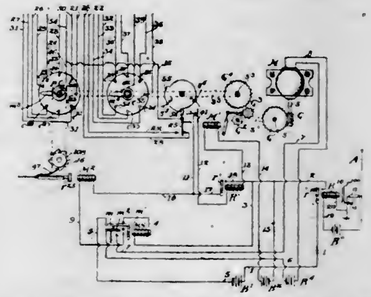
3. In a ball bearing the combination of a shell having a spherical inner surface, a spherical journal member in said shell, having in its circumference ball races, and a groove between said races, and a detachable ring embracing said journal member, partly over-hanging said ball races, said ring having a rib engaging said groove.



4. In a ball bearing the combination of a shell having a spherical inner surface, a spherical journal member in said shell having external ball races and a coned screw-threaded bore, said journal member having also a series of tapped holes, an externally screw threaded and longitudinally split compressible shaft gripping sleeve screwed into said bore, having slots positioned to severally register with said tapped holes when the sleeve is screwed in the bore, and a detachable ring embracing said journal member, partly over-hanging said ball races and having a hole adapted to register with any of said tapped holes.

5. In a ball bearing the combination of a shell having a spherical inner surface, a spherical journal member in said shell having external ball races and a coned screw threaded bore, said journal member having also a series of tapped holes, an externally screw threaded and longitudinally split compressible shaft gripping sleeve screwed into said bore, having slots positioned to severally register with said tapped holes when the sleeve is screwed in the bore, and a detachable ring embracing said journal member, partly over-hanging said ball races and having a hole adapted to register with any of said tapped holes, said ring having also an internal rib whereby it is enabled to engage the nick of a screw inserted into any of said tapped holes.

1,172,515. SYSTEM OF DISTANT SELECTION AND CONTROL BY MEANS OF ELECTROMAGNETIC WAVES. LEE B. CLARK and RAYMOND A. CLARK, Mutual, Okla., assignors, by mesne assignments, to Clark Brothers Wireless Selection and Control Company, Phoenix, Ariz., a Corporation of Arizona. Filed Jan. 24, 1910. Serial No. 539,898. Renewed July 12, 1915. Serial No. 39,499. (Cl. 177—353.)



1. In an electrical system of control having suitable transmitting apparatus, the following receiving apparatus responsive thereto: a receiving relay, a switch having actuating means controlled by said relay and contact

members controlled by said actuating means, operating relays controlled by the switch, and means for producing asynchronous action of the switch members through a predetermined part of their travel for selective purposes.

2. In an electrical system of control having suitable transmitting apparatus, the following receiving apparatus responsive thereto: a receiving relay, switch members controlled thereby, operating relays controlled by the switch members, and means controlled by the receiving relay for producing asynchronous action of the switch members through a predetermined part of their travel for selective purposes.

3. In an electrical system of control having suitable transmitting apparatus, the following receiving apparatus responsive thereto: a receiving relay, switch members controlled thereby, operating relays controlled by the switch members, and means including an electromagnet controlled by the receiving relay for producing asynchronous action of the switch members through a predetermined part of their travel for selective purposes.

4. In an electrical system of control having suitable transmitting apparatus, the following receiving apparatus responsive thereto: a receiving relay, a switch controlled thereby, operating relays controlled by the switch, said switch having a motor driven spindle, and a fixed and movable arm thereon with coöperating contacts for said arms connected to the relay circuits in corresponding pairs, and means for producing an angular variation between the fixed and movable arms on the spindle during part of the travel of the switch, whereby simultaneous contact for closure of any desired relay circuit may be produced at will.

5. In an electrical system of control having suitable transmitting apparatus, the following receiving apparatus responsive thereto: a receiving relay, a switch controlled thereby, operating relays controlled by the switch, a motor driven spindle for said switch, and two wiper arms on said spindle one fixed thereto and the other having lost motion thereon, but adapted to be driven thereby synchronously with the fixed wiper, and an electromagnet controlled by the receiving relay adapted to act on said movable wiper arm independently of the motor drive, whereby an angular difference in the positions of the two wipers may be produced during any desired portion of the switch travel.

[Claims 6 to 11 not printed in the Gazette.]

1,172,516. BUTTONING DEVICE. EDUARD ADOLPH CLOSMANN, Vienna, Austria-Hungary. Filed Aug. 25, 1913. Serial No. 786,512. (Cl. 24—40.)



1. A collar buttoning device comprising two plates one adapted to be engaged with the neck band of a shirt and with a collar adjacent one end thereof and the other adapted to be engaged with the collar adjacent the other end thereof, and means connecting said plates and permitting relative movement thereof, to move the ends of the collar to or from overlapping position, only in planes substantially parallel to the faces of the plates.

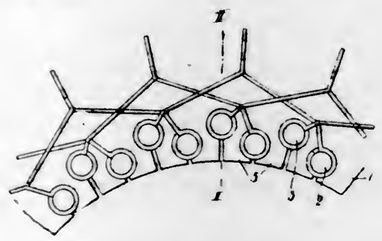
2. A buttoning device comprising two plates, a button on the rear face of one of the plates, a button on the front face of the same plate, a button on the front face of the other plate, and a pivotal connection between the plates, the axis of which extends perpendicular to the planes of the plates.

3. A collar buttoning device comprising two plates one adapted to be engaged with the neck band of a shirt and with a collar adjacent one end thereof and the other adapted to be engaged with the collar adjacent the other end thereof, means connecting said plates and permitting relative movement thereof, to move the ends of the collar to or from overlapping position, only in planes substantially parallel to the faces of the plates, and means acting to retain the plates in closed relation.

4. A buttoning device comprising two plates, a button on the rear face of one of the plates, a button on the front face of the same plate, a button on the front face of the other plate, a pivot pin connecting the plates and extending perpendicularly thereto, and a spring attached to one of the plates and engaging the other plate when the device is closed.

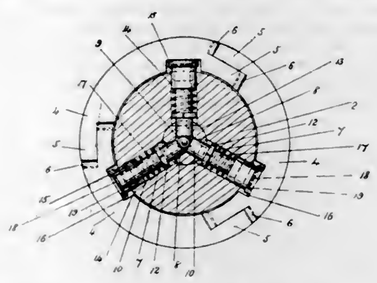
5. A collar buttoning device comprising a plate provided on its rear face with a button adapted to be engaged by a button hole in the neck band of a shirt and on its front face with a button adapted to be engaged by a button hole adjacent one end of a collar, a second plate having an extension situated in a plane in front of the first said plate and provided on its front face adjacent its free end with a button adapted to be engaged by the button hole at the other end of the collar, and means connecting said plates, whereby by relative movement of the plates the ends of the collar will be drawn into overlapping position and the buttons on the front faces of the plates into substantial alinement.

1,172,517. STATOR FOR ALTERNATING-ELECTRIC-CURRENT MACHINES. JENS LASSEN LA COUR, Vesterås, Sweden. Filed Apr. 9, 1914. Serial No. 830,714. (Cl. 172—120.)



A stator for alternating current machines having a slotted core and a main bar winding comprising one bar in each slot, said slots being arranged in rows in different distances from the air-gap, the slots of adjacent rows being in staggered relation to one another, substantially as and for the purpose set forth.

1,172,518. PISTON-PACKING. CHARLES W. DILKS, Plainfield, N. J. Filed May 28, 1915. Serial No. 30,979. (Cl. 121—108.)



1. A piston provided with radial chambers, packing segments, springs arranged in the said chambers and pressing the packing segments outwardly, and compensating devices arranged between the inner ends of the springs and operating to automatically equalize their outward pressure on the packing segments.

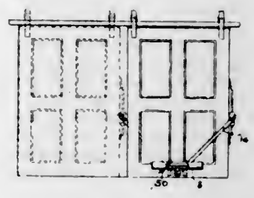
2. A piston provided with radial chambers, packing segments, springs arranged in the said chambers and pressing the packing segments outwardly, a ball arranged centrally in the piston, and slidable pressure pins bearing against the said ball and operatively connected with the said springs and operating to automatically equalize their outward pressure on the packing segments.

3. A piston provided with radial chambers arranged in two series, the chambers of one series being arranged in a plane parallel to and in staggered relation to the chambers of the other series, packing segments, springs arranged in the said chambers and pressing the packing segments outwardly, and compensating devices arranged between the inner ends of the springs pertaining to each series of chambers and operating to automatically equalize the spring pressure on the packing segments.

4. A piston provided with radial guide holes and chambers, pressure pins slidable in the guide holes and having collars arranged in the said chambers, abutment sleeves slidable in the chambers, springs interposed between the said sleeves and collars, packing segments bearing against the abutment sleeves, and a ball arranged between the inner ends of the said pins at the center line of the piston and operating to automatically equalize the pressure of the springs on the packing segments.

5. A piston provided with radial chambers, slidable pressure pins having collars arranged in the chambers and having stops at their outer ends, abutment sleeves slidable on the pins and having counterbores for the stops to slide in, springs interposed between the said collars and sleeves, packing segments bearing against the abutment sleeves, and a ball arranged between the inner ends of the pressure pins at the center line of the piston and operating to automatically equalize the pressure of the springs on the packing segments.

1,172,519. DOOR-OPERATING MECHANISM. ALBERT GOTTSCHALK, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Nov. 18, 1910. Serial No. 593,032. (Cl. 268—8.)

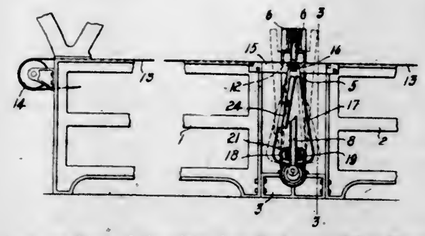


1. In a door operating mechanism, the combination of a vertically swinging arm for actuating the door, a fluid pressure motor for actuating said arm, a spring actuated latch for locking the arm in the closed position of the door, and a piston operated by fluid under pressure to release said latch when fluid is admitted to the main motor to open the door.

2. In a door operating mechanism, the combination of a vertically swinging arm for operating the door, said arm being inclined at an intermediate angle when in its closed position and adapted to swing to substantially the same angle on the other side of the vertical when in its open position, a fluid pressure motor for actuating said arm, a device for locking the arm in its closed position, and fluid pressure means for releasing said locking device.

3. In a door operating mechanism, the combination of a vertically swinging arm for actuating the door, said arm being inclined at an intermediate angle when in its closed position, and adapted to swing to substantially the same angle when in its open position, a fluid pressure motor for moving said arm, and means operating automatically, when the door is obstructed in its closing movement, to cut off the supply of fluid to the motor.

1,172,520. MACHINE FOR CUTTING ARTICLES FROM PLASTIC MATERIAL. THOMAS L. GREEN, Indianapolis, Ind. Filed June 4, 1908. Serial No. 436,585. (Cl. 107—21.)



1. A machine of the class described comprising in combination an apron, an oscillatory support, a bed plate mounted on said support and movable therewith, a reciprocating cutter carried by said support, and means for oscillating said support to cause said cutter and bed plate to travel in unison with said apron throughout the active cutting operation of said cutter.

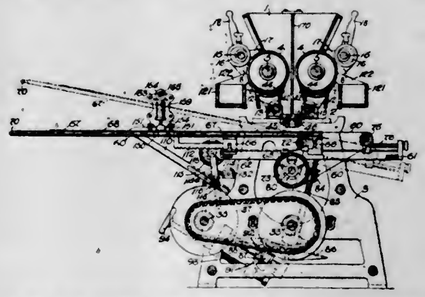
2. A machine of the class described comprising in combination an oscillatory support having guideways therein, a cross-head, a cutter carried by said cross-head, a bed plate carried by said oscillatory support, means for reciprocating said cross head to move said cutter toward and from said bed plate, and means for oscillating said support to cause said cutter and bed plate to move a substantial distance in unison with an apron between them throughout the active cutting operation of the cutter.

3. A machine of the class described comprising in combination a frame, a shaft journaled therein, supporting arms mounted to oscillate about said shaft, a cross-head connecting and guided by said arms, a cutter carried by said cross-head, means connecting said shaft with said cross-head to reciprocate the latter, a bed plate connecting and supported by said arms, and means for oscillating said arms to cause the cutter to travel a substantial distance in unison with an apron between them.

4. The combination of an oscillatory support, a cross-head guided therein, a cutter on said cross-head, a bed plate carried by said support, a carrier, and means for causing said cutter and bed plate to travel in unison with said carrier throughout a substantial distance and having provision for varying said distance.

5. A machine of the class described comprising in combination, an oscillatory support, a reciprocating cutter and a bed plate carried by said support, means for reciprocating said cutter, a carrier adapted to be fed between said cutter and plate, and means for causing said cutter and plate as a unit to move a substantial distance in unison with the carrier.

1,172,521. SHEETING AND BAR MACHINE. THOMAS L. GREEN, Indianapolis, Ind. Filed Feb. 20, 1909. Serial No. 479,060. (Cl. 107—12.)



1. In a machine of the class described, the combination of a hopper, a die base, and a forming die comprising a

plurality of normally stationary walls mounted in said base and angularly adjustable relatively to one another to different fixed positions to vary the space between them.

2. In a machine of the class described, the combination of a hopper, a die base, a forming die having opposed normally stationary adjustable die members mounted in said base and means to vary the angle and space between said members.

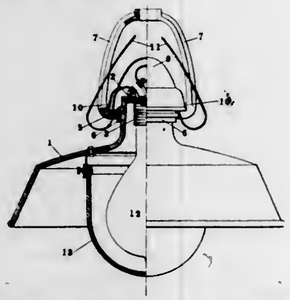
3. In a machine of the class described, the combination of a hopper, a die base having bearings therein, a delivery die therefor having opposed rotative die members fitting said bearings and means to turn one of said members for purposes of adjustment.

4. In a machine of the class described, the combination of a hopper, a die base, a forming die therefor having opposed die members seated in said base, means to turn the members to vary the distance between the two, and locking means to retain said members in position.

5. In a machine of the class described, the combination of a hopper, a forming die therefor, flat faced die cylinders journaled therein, segmental seats for the cylindrical surfaces thereof, and means to turn said cylinders to vary the opening between their flat faces.

[Claims 6 to 13 not printed in the Gazette.]

1,172,522. LAMP HOLDER AND REFLECTOR. EDWIN F. GUTH and RAYMOND V. OWEN, St. Louis, Mo., assignors to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 23, 1915. Serial No. 23,288. (Cl. 240—78.)



1. The combination of a reflector or shade of insulating material having a socket inclosing neck portion provided with a ventilating opening, and a metallic lamp socket within the neck portion and supported by the reflector, the cross-sectional area of said socket being less than that of the interior of the neck portion of the reflector.

2. The combination of a reflector having a hollow neck portion and an integral socket supporting bridge extending over the end thereof, and a metal lamp socket attached to said bridge, said socket having a smaller cross sectional area than the interior of the neck portion of the reflector.

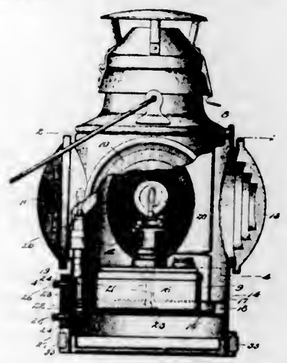
3. The combination of a reflector or shade of insulating material having a neck portion provided with an integral socket supporting bridge extending over the end thereof and an integral exterior shoulder, a reflector supporting member engaging the said shoulder, and a metal lamp socket supported by the bridge.

4. The combination of a reflector or shade of insulating material having a neck portion provided with an integral exterior shoulder, a reflector supporting member engaging with said shoulder, and a cap covering the end of the neck portion and supported on the reflector supporting member.

5. The combination of a reflector or shade of insulating material having a neck portion provided with an integral exterior shoulder, a reflector supporting member engaging with said shoulder, and a cap covering the end of the neck portion and supported on the reflector supporting member, the opening of said cap being sufficiently larger than the neck portion of the reflector to provide an opening between said cap and neck portion.

[Claim 6 not printed in the Gazette.]

1,172,523. RAILWAY-MARKER. JOSEPH F. HADDOCK, St. Louis, Mo. Filed Feb. 19, 1915. Serial No. 9,385. (Cl. 240—24.)



1. A device of the character described, comprising a lantern having a plurality of differently colored bull's-eyes adapted to be turned to given positions for the purpose of signal or warning, electric lamps operatively supported in the lantern and having conductors electrically connected therewith and extending part way around the lantern, a bracket-member rotatably mounted upon the lantern and provided with supporting means, and free electric contact-devices mounted on said bracket-member and in electrical and slidable engagement with said conductors.

2. A device of the character described, comprising a lantern having a plurality of differently colored bull's-eyes adapted to be turned to given positions for the purpose of signal or warning, contact-devices on the exterior of the lantern electrically connected with said lamps, a bracket-member rotatably mounted upon the lantern and provided with supporting means, and a plurality of insulated contact-members mounted on said bracket-member, one set of said contact-members being free and affording means of connection with a source of current supply when the lamp is supported in position on the car, and the other having slidable engagement with the contact-devices of said lantern and electrical connection with said free contact-members.

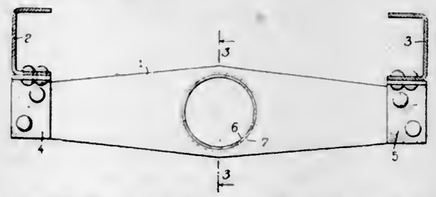
3. A device of the character described, comprising a bracket-member having insulated contact-members mounted thereon and provided with supporting means, a railway lantern having a plurality of differently colored bull's-eyes adapted to be turned to given positions for the purpose of signal or warning rotatably mounted in said bracket-member, and having electric lamps mounted therein, a pair of insulated contact-rails provided on the exterior of the lantern, conductors leading from said lamps to the respective contact-rails, and means slidably engaging said contact-rails and electrically connected with said contact-members.

4. A railway marker comprising a portable bracket-member having fixed insulated contact-members mounted thereon and provided with supporting means, a lantern rotatably mounted in said bracket-member having electrical lamps mounted therein and provided with differently colored bull's-eyes adapted to be turned to given positions for the purpose of signal or warning, conductors leading from said lamps to the exterior of the lantern, and contact-devices carried, respectively, by said lantern and said contact-members and having corresponding slidable engagement, the contact-devices carried by the lantern being insulated therefrom and from each other and electrically connected with respective conductors of said lamps, and the other contact devices being electrically connected with said contact-members.

5. A device of the character described, comprising a lantern having electric lamps mounted therein and provided with a plurality of differently colored bull's-eyes adapted to be turned to given positions for the purpose of signal or warning, a pair of insulated contact-rails mounted on the lantern, conductors leading from said lamps to the exterior of the lantern and to said rails, a portable bracket-member rotatably supporting the lantern and provided with supporting means, insulated contact-members mounted on said bracket-member, contact-arms extending from the contact-members and engaging the respective contact-rails, a support on the car for receiving the supporting means of said bracket-member whereby to support the lantern on the car, and means on the car for forming electrical connection with said contact-members.

[Claims 6 to 8 not printed in the Gazette.]

1,172,524. TORQUE-TUBE CONSTRUCTION. GEORGE T. HANCHETT, New York, N. Y. Filed July 24, 1914, Serial No. 852,830. Renewed July 22, 1915. Serial No. 41,393. (Cl. 21—90.)



1. In an automobile, the combination of frame side-members, a cross-member secured at its ends to said side-members, comprising a relatively thin and flexible metallic plate mounted in a vertical plane, and a torque tube having its end secured to said cross-member, substantially as set forth.

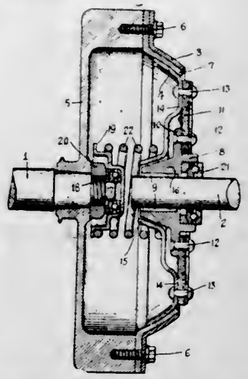
2. In an automobile, the combination of frame side-members, a cross-member secured at its ends to said side-members, comprising a relatively thin and flexible metallic plate mounted in a vertical plane, and a torque tube having its end mounted in an opening in said cross-member, and expanded around the opening to secure the end of said tube to the cross-member, substantially as set forth.

3. In an automobile, the combination of frame side-members, a cross-member extending between and secured to said side-members, and a torque tube having its end distant from the differential gears mounted in an opening in said cross-member, said cross-member being rigid in a vertical plane but somewhat flexible in a direction parallel to the torque tube, and said torque tube having its end extending through said opening enlarged peripherally around said opening, substantially as set forth.

4. In an automobile, the combination of frame side-members having horizontal flanges, a cross-member extending between said side-members and secured to said flanges, comprising a relatively thin and flexible metallic plate mounted in a vertical plane, and of a gradually increasing height from its ends to a point intermediate between said side-members, and a torque tube having its end extending through an opening in said cross-member intermediate its ends, said end being enlarged peripherally around said opening, substantially as set forth.

1,172,525. CLUTCH. GEORGE T. HANCHETT, New York, N. Y. Filed July 24, 1914, Serial No. 852,831. Renewed July 22, 1915. Serial No. 41,394. (Cl. 192—8.)

1. In a clutch, the combination of a driving and a driven shaft, a clutch member mounted to rotate with said driving shaft, a second clutch member, yielding means for rotatably connecting said second clutch member to said driven shaft, spring means mounted in the interior of the clutch for normally holding said clutch members in engagement, and flexibly holding the same substantially as set forth.



2. In a clutch, the combination of a driving and a driven shaft, a clutch member mounted to rotate with said driving shaft, a second clutch member, yielding means for rotatably connecting said second clutch member to said driven shaft, spring means mounted in the interior of the clutch for normally holding said clutch members in engagement, and flexibly holding the same substantially in alinement when out of engagement, and means on the driven shaft adapted to engage the driven clutch member and centralize the same with said driven shaft when said clutch members are out of engagement, substantially as set forth.

3. In a clutch, the combination of a driving and a driven shaft, a clutch member rotatable with said driving shaft, a clutch member rotatable with said driven shaft, connections between said second clutch member and driven shaft adapted to permit lateral movement of the latter when said clutch members are in engagement, and means for flexibly maintaining substantial alinement between said shafts when said clutch members are out of engagement, substantially as set forth.

4. In a clutch, the combination of a driving and a driven shaft, a clutch member rotatable with said driving shaft, a clutch member rotatable with said driven shaft, and means for flexibly maintaining substantial alinement between said clutch members when the latter are out of engagement, substantially as set forth.

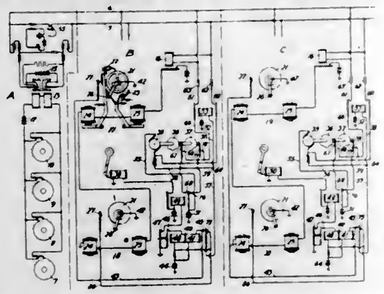
5. In a clutch, the combination of a driving and a driven shaft, a clutch member rotatable with said driving shaft, a clutch member rotatable with said driven shaft, and a spring so positioned as to normally tend to hold said clutch members in engagement, and to tend to hold said clutch members in substantial concentric alinement when they are out of engagement, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,172,526. SELECTIVE SIGNALING SYSTEM. JOHN BRAYTON HARLOW, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 20, 1915. Serial No. 22,569. (Cl. 177—342.)

1. In a selective signaling system, a sending station, a waystation, selectively operated circuit controlling means at said waystation, a signal at said waystation, a circuit therefor controlled by said selectively operated means for moving said signal into set or clear position, answer-back mechanism at the waystation adapted upon operation of said selectively operated means to transmit to the dispatcher a characteristic signal denoting the condition of said signal, and means controlled by said selectively operated means for causing a subsequent operation

of said answer-back means after the operation of said signal without changing the condition of said signal.



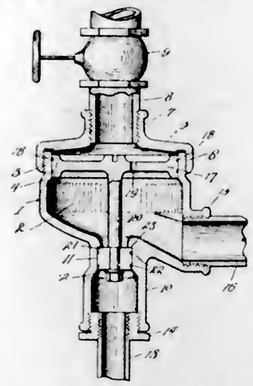
2. In a selective signaling system, a sending station, a waystation, selectively operated circuit controlling means at the waystation, a signal at said waystation, a circuit therefor controlled by said selectively operated means for causing said signal to move to set or clear position, answer-back operating means, means controlled by said selectively operated means for causing the operation of said answer-back means when said signal is moved into set or clear position, and means whereby a subsequent operation of said selectively operated means may be made to cause the operation of said answer-back mechanism without affecting the position of said signal.

3. In a selective signaling system, a sending station, a waystation, selectively operated circuit controlling means at the waystation, a semaphore signal at said waystation, a circuit for said semaphore signal, switching means controlled by the operation of said selectively operated means for determining the position of said semaphore signal, answer-back means, a circuit therefor controlled by said switching means and means whereby said answer-back means may be caused to operate upon a subsequent operation of the selectively operated means without affecting the position of said semaphore signal.

4. In a selective signaling system, a sending station, a waystation, selectively operated circuit closing means at said waystation, impulse sending means at said sending station for controlling the operation of said selectively operated means, a semaphore signal at said waystation, a circuit therefor, switching means at said waystation controlled by said selectively operated means in response to current impulses from the sending station to open and close the circuit of said semaphore signal to move it to set or clear position, answer-back mechanism at said waystation adapted to transmit a signal to the despatcher designating the position of said semaphore signal, a circuit for said answer-back means including contacts controlled by said selectively operated device and said switching means, the contact in the circuit of said answer-back means remaining closed so long as the signal is in the position last moved, whereby the subsequent operation of said selectively operated device in response to the same number of impulses last transmitted will cause another operation of said answer-back means without affecting the position of said semaphore.

5. In a selective signaling system, a sending station, a waystation, selectively operated circuit controlling means at the waystation, impulse sending means at the sending station for controlling the operation of said selectively operated means, a semaphore signal at the waystation, a circuit therefor, electromagnetic switching means at said waystation, an energizing circuit therefor closed by said selectively operated means in response to a certain number of impulses at the sending station and opened by said selectively operated means in response to a different number of current impulses, a locking circuit for said electromagnetic switching means for maintaining it operated and the circuit closed through said semaphore signal after the release of said selectively operated device, answer-back mechanism, a circuit therefor having one contact closed by said switching means when energized and a second contact for said answer-back mechanism closed by said selectively operated means when moved to position to close the circuit of said switching means, whereby repeated answer-back signals may be obtained at the will of the despatcher without affecting the position of the semaphore signal.

1,172,527. VALVE STRUCTURE. HERBERT E. HILL, South St. Joseph, Mo., assignor to Morris & Company, Chicago, Ill., a Corporation of Maine. Filed Jan. 2, 1915. Serial No. 156. (Cl. 137—26.)



1. A valve structure of the character described, comprising a casing provided with reduced tubular portions for connection with sources of water and steam, said tubular portions communicating with the interior of the casing and having inclined walls, piston valves mounted to move within the reduced tubular portions across the inclined walls to open positions whereby the reduced tubular portions are placed in direct communication through the medium of the interior of the casing and the water and steam are thoroughly mixed therein, the inclined portions serving as guides for the piston valves upon closing movement thereof, means connecting the piston valves so that they substantially simultaneously open, and an outlet device leading into the casing between the piston valves.

2. A valve structure of the character described comprising a shell having a cold water inlet near one end and provided with a contracted bore forming a tapered shoulder, a cold water piston mounted to reciprocate within the tapered bore and to move downwardly past the tapered shoulder and to be guided thereby upon its return movement, a tubular steam inlet having a contracted bore providing a tapered shoulder and having a substantially smaller diameter than the first named contracted bore, a steam piston valve mounted to reciprocate within the second named contracted bore to clear the tapered shoulder thereof upon opening and to be guided thereby upon its return movement, a piston rod rigidly connecting the piston-valves whereby the steam piston valve cannot open before the opening of the water piston-valve, and hot water outlet means leading into the shell between the piston-valves.

3. A valve structure of the character described, comprising a casing provided with tubular inlets for connection with sources of water and steam communication with the interior of the casing and having beveled walls, valves mounted to move within the tubular inlets and adapted to travel in proximity to the beveled walls to assume open positions whereby the tubular inlets are placed in direct communication through the medium of the interior of the casing and the water and steam thoroughly mixed within the interior of the casing, said valves being guided in their return movement into the tubular inlets by the beveled walls, an element connecting the valves so that they move together, and an outlet device leading into the casing between the tubular inlets.

1,172,528. PROCESS FOR IMPROVING WATER FOR BREWING AND MALTING PURPOSES. EDUARD JALOWETZ, EMIL RICHTER, and ALBERT SCHÜCKHER, Vienna, Austria-Hungary. Filed Jan. 18, 1912. Serial No. 671,925. (Cl. 210—1.)

1. The process of purifying water which comprises heating the water and simultaneously vigorously agitating all the particles thereof to cause a precipitation of carbonates throughout all particles of said water and removing the precipitate from said water.

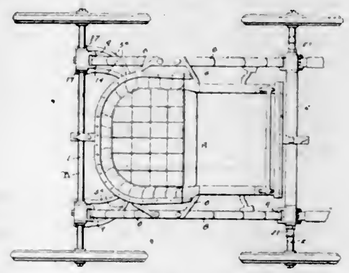
2. The process of purifying water which comprises heating the water and simultaneously vigorously agitating all the particles thereof to cause a precipitation of carbonates throughout all particles of said water and immediately removing the precipitate from said water.

3. The process of purifying water which comprises heating the water above the boiling point in a closed vessel and simultaneously vigorously agitating all the particles thereof to cause a precipitation of carbonates throughout all particles of said water and removing the precipitate from said water.

4. The process of purifying water which comprises heating the water above the boiling point in a closed vessel, and simultaneously vigorously agitating all the particles thereof to cause a precipitation of carbonates throughout all particles of said water and immediately removing the precipitate from said water.

5. The process of purifying water for brewing purposes which comprises heating the water in a partially filled closed vessel and simultaneously vigorously agitating all the particles thereof the temperature of the water being raised so much above the boiling point that under the vigorous agitation magnesium carbonate in all particles will be precipitated and removing the precipitate from the water.

1,172,529. SPRING-MOUNTING FOR VEHICLES. CHARLES C. JONES, Duluth, Minn. Filed May 15, 1914. Serial No. 838,734. (Cl. 21—97.)



1. A spring mounting for vehicles, including a bearing block having a polygonal opening in one side thereof adapted to fit over a vehicle axle and interlock therewith, a bearing sleeve rotatably mounted upon the bearing block, and a vehicle spring operatively connected to the bearing sleeve.

2. A spring mounting for vehicles including a bearing block having a polygonal opening in one side thereof adapted to fit over a vehicle axle and interlock therewith, a bearing sleeve rotatable upon the bearing, a second bearing sleeve, a bearing for the second bearing sleeve, and a leaf spring having the ends thereof flexibly connected to the two bearing sleeves.

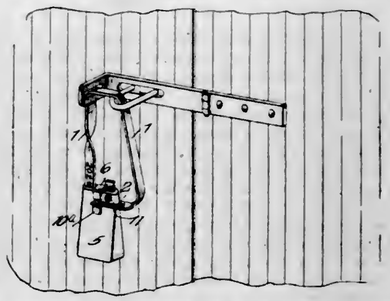
3. A spring mounting for vehicles including a bearing block having a polygonal opening in one side thereof adapted to fit over a vehicle axle and interlock therewith, a bearing sleeve rotatable on the bearing and formed with a shackle, means for holding the bearing sleeve in position upon the bearing, and a vehicle spring flexibly connected to the shackle.

4. A spring mounting for vehicles including a pair of approximately cylindrical bearing blocks having flanged ends and formed with polygonal side openings adapted to fit over and interlock with a vehicle axle, a bearing sleeve rotatable upon the bearing blocks between the flanged ends thereof, and a vehicle spring having a flexible connection with the bearing sleeve.

5. A spring mounting for vehicles including a pair of bearing blocks having flanged ends and formed with polygonal side openings adapted to fit over and interlock with the rear axle of a running gear, a bearing sleeve rotatable upon the bearing blocks between the flanged ends thereof, means upon the rear axle for holding the bearing blocks in position thereon, a second bearing sleeve mounted upon the bolster of the running gear, and a half elliptic spring having opposite ends thereof flexibly connected to the respective bearing sleeve.

[Claims 6 to 9 not printed in the Gazette.]

1,172,530. SEAL. RAYMOND H. JONES, Marysville, Cal. Filed Mar. 8, 1915. Serial No. 12,999. (Cl. 70—98.)



1. In a seal, the combination of a casing, a member adapted to coöperate with the part to be sealed, having at one end a portion operative by withdrawing movement of said member relatively to the casing to secure the opposite end thereof to the casing, and means within the casing operative upon such withdrawing movement of said member for locking such portion in securing position.

2. In a seal, the combination of a casing and a member adapted to coöperate with the part to be sealed having at one end a securing portion and an actuating portion therefor, said portions both extending longitudinally of said member and operative in the casing.

3. In a seal, the combination of a casing, a strip adapted to be applied to the part to be sealed and having at one end a securing portion and an actuating portion therefor arranged at one side thereof, and locking means in the casing for retaining said portions in securing position.

4. In a seal, the combination of a casing, a strip adapted to be applied to the part to be sealed and having at one end a securing portion and an actuating portion therefor, and means in the casing for frictionally holding said portions in non-securing position and for locking the same in securing position.

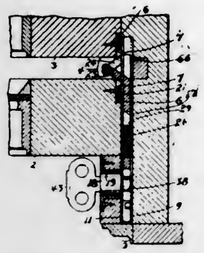
5. In a seal, the combination of a casing, a member adapted to coöperate with the part to be sealed having at one end a securing portion and an actuating portion therefor, said portions being operative in the casing, and identification characters on the securing and actuating portions and partially or wholly concealed within the casing when said portions are in non-securing position.

[Claims 6 to 11 not printed in the Gazette.]

1,172,531. SASH-LOCK. JOHN JORGENSON, San Francisco, Cal., assignor of one-half to Thomas Barnett, Oakland, Cal. Filed Aug. 23, 1915. Serial No. 46,762. (Cl. 16—121.)

1. In combination with window sashes and a window frame having a transverse recess therein, locking strips attached to the window sashes, a lock casing in said recess having its outer surface flush with the outer surface of the window frame, bolts guided transversely in said lock

casing and having terminal portions adapted respectively to enter notches in the upper and lower sashes, springs for pressing said bolts into said notches, and means extending through the window frame for moving said bolts against the action of said springs to withdraw the same from the notches.



2. In combination with window sashes and a window frame having a transverse recess therein, locking strips attached to the window sashes, a lock casing in said recess having its outer surface flush with the outer surface of the window frame, bolts guided transversely in said lock casing and having terminal portions formed obliquely therefrom and adapted respectively to enter notches in the upper and lower sashes, springs for pressing said bolts into said notches and means extending through the window frame for moving said bolts against the action of said springs to withdraw the same from the notches.

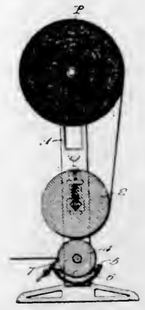
3. In combination with window sashes and a window frame having a transverse recess therein, locking strips attached to the window sashes, a lock casing in said recess having its outer surface flush with the outer surface of the window frame, bolts guided transversely in said lock casing and having terminal portions formed obliquely in opposite directions therefrom and adapted respectively to enter notches in the upper and lower sashes, springs for pressing said bolts into said notches, and means extending through the window frame for moving said bolts against the action of said springs to withdraw the same from the notches.

4. In combination with window sashes and a window frame having a transverse recess therein, locking strips attached to the window sashes, a lock casing in said recess having its outer surface flush with the outer surface of the window frame, bolts guided transversely in said lock casing and having terminal portions adapted respectively to enter notches in the upper and lower sashes, a finger extending integrally from each bolt toward the other, and means extending through the window frame adapted to engage either finger for controlling said bolts.

5. In combination with window sashes and a window frame having a transverse recess therein, locking strips attached to the window sashes, a lock casing in said recess having its outer surface flush with the outer surface of the window frame, bolts guided transversely in said lock casing and having terminal portions adapted respectively to enter notches in the upper and lower sashes, springs for pressing said bolts into said notches, a finger extending integrally from each bolt toward the other, and means extending through the window frame adapted to engage either finger for moving said bolts against the action of said springs to withdraw the same from the notches.

1,172,532. CRAPE-PAPER MACHINE. HENRY JOSEPHS, Green Bay, Wis., assignor to The Paper Novelty Co., Green Bay, Wis. Filed Nov. 12, 1914. Serial No. 871,763. (Cl. 92—69.)

1. In a crape paper machine the combination of a supporting structure, a bath containing trough arranged therein, an uncovered metal roll mounted to revolve in said trough, a revolubly mounted wooden roll arranged above and with its periphery in contact with said metal roll, a doctor arranged adjacent said metal roll with its operative edge contacting therewith on the side opposite that which applies moisture to the paper and to the contacting points of the roll, said doctor being positioned to scrape up and crape the paper passing over said metal roll, means for supplying paper to said rolls, said wooden roll and paper supply being so arranged relatively to each other that the paper passing from said supply means contacts with a sufficient area of said roll to impart a preliminary moistening to the paper before its passage between the contacting faces of the rolls, said rolls exerting a squeezing and moisture applying effect simultaneously on the paper passing between their contacting points.



2. In a crape paper machine the combination of a supporting structure, a bath containing trough arranged therein, an uncovered metal roll mounted to revolve in said trough, a revolubly mounted wooden roll arranged above and with its periphery in contact with said metal roll, means for adjusting the pressure of said wooden roll on said metal roll to control the squeezing action of said rolls on the paper passing between them, and a doctor arranged adjacent said metal roll with its operative edge contacting therewith on the side opposite that which applies moisture to the paper and to the contacting points of the rolls, said doctor being positioned to scrape up and crape the paper passing over said metal roll, said wooden roll being larger than said metal roll and arranged to impart a preliminary moistening to the paper before its passage between the contacting faces of the rolls, said rolls exerting a squeezing and moisture applying effect simultaneously on the paper passing between their contacting points.

1,172,533. PITCH-ASCERTAINING ATTACHMENT FOR SOUND-REPRODUCING RECORDS. THOMAS L. KANE, Kane, Pa. Filed Mar. 13, 1915. Serial No. 14,110. (Cl. 181—17.)



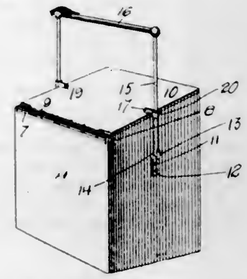
1. In a device of the class described, a record disk and independent means carried above the upper surface of the disk, at the edge thereof in a plane parallel with said surface for receiving a record of sound vibrations, said means comprising a ring having channels on the opposite sides thereof, one of the channels being adapted to receive the record.

2. An attachment for a graphophone disk comprising a ring formed of material adapted to receive a record, having a greater diameter than said disk and adapted to be carried upon the latter, the inner portion of the ring being cut away on its lower side to form an annular channel for gripping the edge of the disk, the upper surface of the ring overlapping the upper surface of the disk and carrying means for actuating a stylus for reproducing a given pitch and sustaining the latter.

3. An attachment for a graphophone disk comprising a ring formed of material adapted to receive a record, having a greater diameter than said disk and adapted to be carried upon the latter, the inner portion of the ring being cut away on its lower side to form an annular channel for gripping the edge of the disk, the upper surface of the ring overlapping the upper surface of the disk and carrying means for actuating a stylus for reproducing a given pitch, said means including a countersunk ring of material of less density than that forming the first ring.

4. The combination with a disk record, of a supplementary record having frictional engagement with the edge of the first record, and having a plurality of independent record surfaces in a given plane above the plane of said first mentioned record.

1,172,534. DIRT-RECEPTACLE. PAUL KANIZSAI, Cleveland, Ohio. Filed Mar. 14, 1914. Serial No. 824,699. (Cl. 220—22.)



1. A receptacle comprising a body portion, a cover hinged thereto, a handle pivotally connected to said body portion, and a connection between said cover and handle including a member mounted for movement relative to both, the relation of said connection, hinge and pivot being such that movement of the handle automatically imparts movement to the cover.

2. A receptacle comprising a body portion provided with a hinged cover, a handle member including a pair of arms pivotally connected to the outer face of the sides of said body portion, a pair of sleeves fixedly secured to the upper face of said cover, a shank pivotally mounted in each of said sleeves, and collars carried by the outer ends of said shanks and having said arms extending therethrough in a direction perpendicular to said shanks whereby when the handle member is shifted in one direction said collars slide thereabout and the cover is swung in the direction of opening.

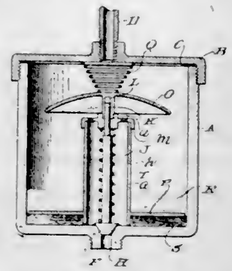
3. A receptacle comprising a body portion having a hinged cover, a handle member including a pair of arms pivotally connected to the sides of said body portion, and swivel connections upon said cover, said arms being adapted to have a sliding engagement with said connections whereby when said handle member is moved in one direction upon its pivot the cover will be shifted to another position.

1,172,535. GAS COMPRESSING OR CIRCULATING SYSTEM AND APPARATUS FOR USE THEREIN. ALEXANDER E. KEITH, Hinsdale, Ill. Filed July 10, 1912. Serial No. 708,673. (Cl. 137—32.)

1. In a gas compressing system, the combination of a check valve and seat, a chamber, an oil within said chamber, a passage for said oil from said chamber to said valve, a screen in said passage to retard the flow of oil to said valve, a compressed gas, suitable means connecting the gas with the valve, a chamber inclosing said valve, a gas outlet from said chamber, and a screen over said outlet.

2. In a valve, an oil chamber, a valve compartment, an oil passage from the chamber to the compartment, and a separate oil passage from the compartment back to the chamber.

3. In a valve, an oil chamber, a valve compartment, an oil passage from the chamber to the compartment, an oil retarding device in said passage, and a separate oil passage from the compartment back to the chamber.

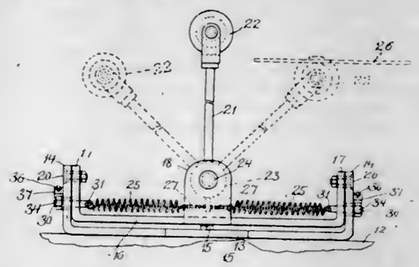


4. In a valve, an oil chamber, a valve compartment, an oil passage from the chamber to the compartment, and a separate oil passage from the compartment back to the chamber, and a screen in said second passage.

5. In a valve, an oil chamber, a valve compartment, an oil passage from the chamber to the compartment, an oil retarding device in said passage, and a separate oil passage from the compartment back to the chamber, and a screen in said second passage.

[Claims 6 and 7 not printed in the Gazette.]

1,172,536. TROLLEY-STAND. WASHINGTON H. KILBOURN, Greenfield, Mass. Filed June 12, 1915. Serial No. 33,848. (Cl. 191—66.)



1. A trolley stand comprising a rocking base, means pivotally connecting the base with the car and permitting the base to oscillate on an axis extending lengthwise of the car, a trolley arm, means pivotally connecting the arm with the base and permitting the arm to oscillate on an axis extending crosswise of the car, and resilient means carried by the rocking base and normally holding the trolley arm substantially perpendicular to the rocking base, said means being adapted to press the trolley wheel upwardly against the trolley wire, without pressing either of the flanges of the trolley wheel laterally against the wire, and without offering resistance to lateral movements of the trolley arm crosswise of the car, whereby when the trolley wheel leaves the wire it is laterally unsupported and drops to a position of safety.

2. A trolley stand comprising fixed supports adapted for attachment to the roof of a car, a rocking base pivoted to said supports and adapted to oscillate on an axis extending lengthwise of the car, a trolley arm pivoted to the rocking base and adapted to oscillate independently on an axis at right angles to the axis of the base, and oppositely acting springs connecting the trolley arm with the base, and adapted to normally hold the trolley arm substantially perpendicular to the base, the arm and base being adapted to oscillate laterally or crosswise of the car without resistance by said springs, whereby lateral spring pressure of either of the flanges of the trolley wheel on the trolley wire is prevented, and the arm is permitted to drop to a position of safety when the wheel leaves the wire.

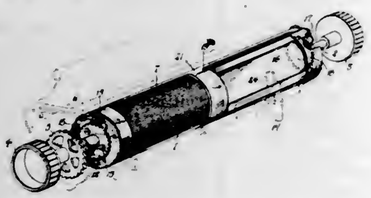
3. A trolley stand comprising fixed supports adapted for attachment to the roof of a car, a rocking base pivoted to said supports and adapted to oscillate on an axis extending lengthwise of the car, a trolley arm pivoted to the rocking base and adapted to oscillate independently on an axis at right angles to the axis of the base, and oppositely acting springs connecting the trolley arm with the base, and adapted to normally hold the trolley arm substantially perpendicular to the base, the arm and base being adapted to oscillate laterally or crosswise of the car without resistance by said springs, means being provided for limiting the lateral oscillations of the base and arm.

4. A trolley stand comprising fixed supports adapted for attachment to the roof of a car, a rocking base pivoted to said supports and adapted to oscillate on an axis extending lengthwise of the car, a trolley arm pivoted to the rocking base and adapted to oscillate independently on an axis at right angles to the axis of the base, oppositely acting springs connecting the trolley arm with the base, and adapted to normally hold the trolley arm substantially perpendicular to the base, the arm and base being adapted to oscillate laterally or crosswise of the car without resistance by said springs, and means carried by the rocking base for adjusting the tension of the springs.

5. A trolley stand comprising fixed supports adapted for attachment to the roof of a car, a rocking base pivoted to said supports and adapted to oscillate on an axis extending lengthwise of the car, a trolley arm pivoted to the rocking base and adapted to oscillate independently on an axis at right angles to the axis of the base, and oppositely acting springs connecting the trolley arm with the base, and adapted to normally hold the trolley arm substantially perpendicular to the base, the arm and base being adapted to oscillate laterally or crosswise of the car without resistance by said springs, the said fixed supports being provided with arc-shaped slots and with adjustable stops at the ends of said slots, and the rocking base being provided with studs projecting through said slots and movable therein between the stops.

[Claim 6 not printed in the Gazette.]

1,172,537. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 6, 1913. Serial No. 765,730. (Cl. 197—135.)



1. The combination of a cylindrical platen for a typewriting machine, and a duplex card-holding attachment therefor, in the form a cylindrical surrounding frame provided with spaces exposing different portions of the platen surface, said frame provided at each of said spaces with guides for the edges of a card, said guides curved to conform to the curvature of the platen and normally spaced from the platen to form therewith narrow guideways for the edges of the cards, whereby the latter may be guided into writing position over the platen at said spaces.

2. The combination of a typewriter platen, and an attachment consisting of a skeleton frame surrounding the platen and having ends over the platen ends.

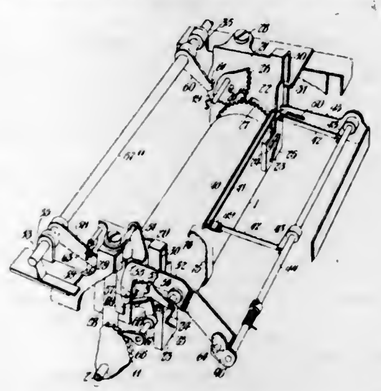
3. The combination of a rotary platen and a duplex card-holding attachment comprising a cylindrical surrounding frame thereon, with spaces exposing different sections of the platen surface, and guides on the frame for the edges of the cards, said guides arranged in pairs, one pair associated with each of said sections, each pair of guides, when the frame is in position on the platen, providing oppositely disposed guideways curved to conform to the curvature of the platen and positioned to receive the opposite edges of a card and hold it in writing position against the platen.

4. A duplex card-holding attachment for a typewriter platen, said attachment comprising a cylindrical frame to surround the platen, and having platen-exposing spaces arranged to expose portions of the platen on opposite sides thereof, and arc-shaped guides on said frame, said guides, when the frame is in position on the platen, providing guideways curved to conform to the curvature of the platen to receive cards and hold them in position against the platen.

5. An attachment for a typewriter platen comprising a cylindrical, skeleton frame to surround the platen, said frame providing platen-exposing spaces, and arc-shaped guides located adjacent the middle and ends of the frame, said guides providing, when the frame is in position on the platen, narrow, arc-shaped guideways at the ends of said spaces, permitting the edges of the cards to slide into position on the platen over the spaces to be written upon.

[Claims 6 to 24 not printed in the Gazette.]

1,172,538. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Original application filed Dec. 20, 1909, Serial No. 534,070. Divided and this application filed July 21, 1913. Serial No. 780,127. (Cl. 197—153.)



1. In a typewriting machine, the combination with a platen, of frames located at opposite ends of the platen for a ribbon normally extending along the printing line, ribbon-feeding mechanism, ribbon-reversing mechanism, and ribbon-displacing mechanism separate from the reversing mechanism and operable to shift both frames together as a single organism to move the ribbon from the printing line, to a position to permit the work-sheets or webs to be fed over the platen without dragging the ribbon, and to return the ribbon to the printing line.

2. In a typewriting machine, the combination with a platen, of ribbon frames located at opposite ends thereof for a ribbon extending along the printing line, ribbon-feeding mechanism, ribbon-reversing mechanism, and ribbon-displacing mechanism separate from the reversing mechanism and operating relatively to one of the frames for disengaging both frames together as a single organism from the feed mechanism to displace and replace the ribbon relatively to the printing line.

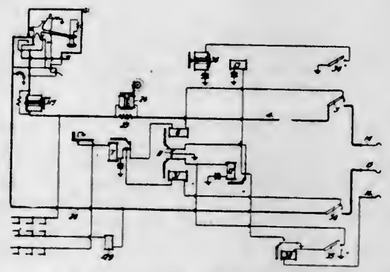
3. In a typewriting machine, the combination with a platen, of ribbon frames located at opposite ends thereof for a ribbon extending along the printing line, and ribbon-displacing mechanism for shifting both frames together as a single organism to shift the ribbon relatively to the printing line into position to permit work-sheets or webs to be fed over the printing line without dragging the ribbon, and to return the ribbon to the printing line.

4. In a typewriting machine, the combination with a rotatable platen, of ribbon mechanism comprising shifting frames for supporting a ribbon extending along the printing line, springs holding said frames in position, guides for directing the movement of the frames, rocking arms connected to each other and engaging the frames respectively, and shifting mechanism for operating the frames together as a single organism against the tension of said springs to displace the ribbon relatively to the printing line.

5. In a typewriting machine, the combination with a platen, movable frames at opposite ends of the platen to support a ribbon interposed between two sheets, and communicating means between the frames, of an arm on one of the frames, an intermediate lever to engage the arm, and a cam lever for actuating the intermediate lever to shift the frames together as a single organism and thus bodily elevate the ribbon from between the sheets.

[Claims 6 to 34 not printed in the Gazette.]

1,172,539. ELECTRICALLY-CONTROLLED METER SYSTEM. JACOB W. LATTIG, Glenside, Pa., and CHARLES L. GOODRUM, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Original application filed Aug. 29, 1904, Serial No. 222,657. Divided and this application filed Sept. 20, 1915. Serial No. 51,615. (Cl. 179—9.)



1. In a telephone system, the combination with automatic switching means, of subscribers' lines, call register controlling magnets connected in said lines, means to supply current for operating said switching means that will not operate said registers, and means controlled in finally completing the connection to supply current to operate said register.

2. In a telephone system, the combination with automatic switching means, of subscribers' lines, a call register controlling magnet connected in each of said lines, means to supply current for operating said switching means which flows in a direction that will not operate said register, and means controlled in finally completing the connection to change the current flow in the line to operate said register.

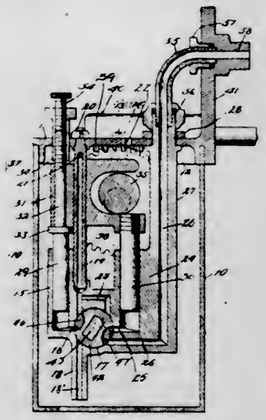
3. In a telephone system, the combination with automatic switching means, of subscribers' stations, subscribers' line circuits, a call register controlling magnet connected in each line circuit, automatic connective means for the lines comprising circuits and circuit terminals through which current is supplied to the line, and means controlled by a called subscriber in answering a call to change the direction of current supplied to the line of the calling subscriber and thereby operate the latter's register.

4. In a telephone system, the combination with automatic switching means, of subscribers' lines, a call register connected in one limb of each of said lines, means to supply to said switch in the establishment of a connection current flowing in a direction that will not operate said register, and means controlled in finally completing the connection to reverse the current flow in said limb of the line to operate said register.

5. In a telephone system, the combination with automatic switching means, of subscribers' lines, a call register controlling magnet connected in each of said lines, means to primarily supply current flowing in a direction that will not operate said register, and means controlled in finally completing the connection to reverse the direction of flow in one limb of the line to operate said register or to reverse the direction of flow in the other limb of said line to prevent the operation of said register.

[Claims 6 to 14 not printed in the Gazette.]

1,172,540. LUBRICATOR. JOHN F. MCCANNA, Chicago, Ill., assignor to McCord & Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 7, 1906, Serial No. 299,939. Renewed July 8, 1915. Serial No. 38,782. (Cl. 184—35.)



1. In a lubricator, a pair of coöperating pumps each having an inlet-outlet port, and a mechanically operated valve common to both ports.

2. In a lubricator, a main reservoir, a pair of pumps, an auxiliary reservoir, and a valve common to both pumps and which when in one position connects one of the pumps with the main reservoir and the other with the auxiliary reservoir and its other position connects the former pump with the auxiliary reservoir and the latter with its discharge passage.

3. In a lubricator, a main reservoir, a primary pump to which lubricant is supplied from a main reservoir, a delivery pump, an auxiliary reservoir, and a valve for placing the pumps in communication with the auxiliary reservoir in alternation.

4. In a lubricator, a reservoir, a primary pump, a delivery pump, and a valve which in one position places the primary pump in communication with the reservoir and the delivery pump in communication with its auxiliary reservoir and in its other position conducts to the delivery pump the lubricant discharged by the pirmary pump.

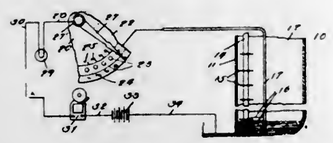
5. In a force feed lubricator, a pair of reciprocating pumps, an auxiliary reservoir to which the lubricant is delivered by one pump and from which it is drawn by the other pump, and a valve common to both pumps for placing such auxiliary reservoir in communication with the pumps in alternation.

[Claims 6 to 23 not printed in the Gazette.]

1,172,541. TANK-SOUNDER. PATRICK F. MCDONNELL, JOHN BRUNNER, and THOMAS THOMPSON, Cleveland, Ohio. Filed Mar. 24, 1914. Serial No. 826,997. (Cl. 177—351.)

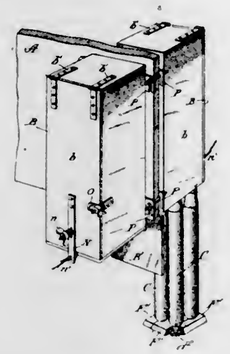
The combination with a metallic ship; of a rod of insulating material extending downward into said ship, a

series of conducting disks arranged along said rod in spaced relation to each other, an indicator provided with a circular series of contact points, a wire connecting each of said points with a respective disk, a battery and signal connected in series with the hull of said ship, an arm



rotatably mounted on said indicator and arranged to sweep over the contact point, means to rotate said arm, and an electric connection between said arm and the battery and signal.

1,172,542. BOMBS AND MEANS FOR HOLDING AND DISCHARGING THEM. JOSEPH B. MCMULLEN, Baltimore, Md. Filed Aug. 31, 1915. Serial No. 48,168. (Cl. 244—1.)



1. A bomb provided at one end with a firing pin provided with an enlarged head having a series of radially extending arms formed with a plurality of downwardly extending contact points.

2. A bomb, provided at one end with a firing-pin plug a firing pin mounted to move longitudinally in said plug and provided with an enlarged head having a plurality of downwardly extending contact points, and a protector for the head of the firing pin made in separable sections interposed between said head and the outer end of the screw plug.

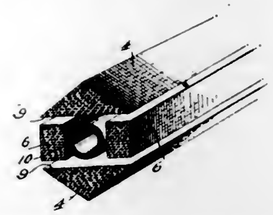
3. A bomb, provided with a guiding device consisting of a ring mounted to slide longitudinally on the bomb and a series of sheet metal resilient vanes attached to the ring adapted to lie close together parallel with the longitudinal axis of the bomb and to expand laterally therefrom.

4. A bomb, provided at one end with a cap having a tapered flange, and a guiding device for the bomb comprising a ring having a tapered recess adapted to receive the tapered flange of the cap and mounted to slide longitudinally on the bomb, and resilient sheet metal vanes attached to the ring normally tending to spread outward diagonally from the axis of the bomb but adapted to lie close together parallel with the bomb axis.

5. The combination with a bomb provided with automatically expansible vanes of a container having a door at one end, and means at the opposite end of the container for holding the vanes in a collapsed condition while the door is closed.

[Claims 6 to 13 not printed in the Gazette.]

1,172,543. PISTON-ROD PACKING AND THE METHOD OF MAKING SAME. CHARLES I. E. MASTIN, Midland Park, N. J. Filed May 9, 1913. Serial No. 766,520. Renewed Mar. 16, 1914. Serial No. 825,154. (Cl. 154—2.)



1. A one-piece packing strip having a plurality of wearing faces and formed of alternate layers of fabric and rubber, the fabric layers being distorted from a regular line, whereby adjoining layers will be interlocked.

2. A one-piece packing strip having a plurality of wearing faces and formed of alternate layers of fabric and rubber, the fabric layers being distorted from a regular line, whereby adjoining layers will be interlocked, the packing strip being formed with a longitudinally extending aperture.

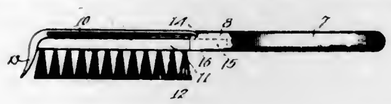
3. The process of manufacturing one-piece packing consisting in forming a slab of alternate layers of fabric and rubber, cutting sections from said slab, arranging said sections to form a packing strip larger in transverse dimensions than the completed strip, subjecting said arranged sections to pressure to reduce the dimensions of the strip and to heat to permanently unite all of said sections to form a homogeneous one-piece packing strip and to maintain the strip in its compressed condition and reduced dimensions.

4. The process of manufacturing one-piece packing consisting in initially forming a packing strip of alternate layers of fabric and rubber of larger cross sectional dimensions than the completed packing strip and then compressing said strip to reduce its cross sectional dimensions and subjecting it to heat while in its compressed condition to fix the strip in said compressed condition, whereby the completed strip will be of smaller cross sectional dimensions than the initially formed strip.

5. The process of manufacturing one-piece packing consisting in forming a slab of alternate layers of fabric and rubber, cutting from said slab triangular sections and rectangular sections, assembling two of said triangular sections and two of said rectangular sections to form a substantially hexagonal packing strip, placing said strip in a suitable mold, compressing it to reduce its cross sectional dimensions and then subjecting it to heat to permanently unite all of said sections to form a homogenous one-piece packing strip and to fix it in its reduced dimensions.

[Claims 6 to 16 not printed in the Gazette.]

1,172,544. BRUSH. ERNST METZNER, Racine, Wis. Filed Mar. 8, 1915. Serial No. 12,720. (Cl. 15—29.)



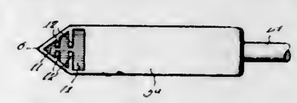
1. A brush comprising a body having an intermediate wide portion, a handle projecting from one end of said wide portion, and a series of hair parting teeth arranged in a transverse row at the opposite end of the wide portion, and a plurality of bristles sections attached to the wide portion of the body, said bristles sections corresponding in number to the hair parting teeth and each section being in longitudinal alinement with one of said teeth.

2. A brush comprising a body having an intermediate wide portion, a handle projecting from one end of said wide portion, and a series of hair parting teeth arranged in a transverse row at the opposite end of the wide portion, a series of longitudinal flanges arranged in pairs on the under side of the wide portion of the body, suitable bases secured between the flanges of each pair and bristles embedded in and projecting from said bases; said bases being equal in number to the hair parting teeth and each extending in longitudinal alinement with one of said teeth with the bristles projecting laterally therefrom in approximately the same general direction as said teeth.

3. A brush comprising a back, a plurality of bases secured to said back in parallel separated longitudinal arrangement, bristles embedded in and projecting from the bases, a handle extending from one end of the back and a series of hair parting teeth extending from the opposite end of the back in a transverse row, said teeth corresponding in number to the bases and each extending in longitudinal alinement with one of the bases.

4. A brush of the class described having a handle, a back provided with flanged parts and a series of independent bristles sections each separately secured in one of said flanged parts and consisting of an outer frame, a base removably mounted in said frame bristles embedded in and projecting from said base, and a hair-parting tooth extending laterally from the outer extremity of the outer frame.

1,172,545. SOLDERING-IRON. RICHARD B. MILES, Chicago, Ill. Filed July 21, 1915. Serial No. 41,055. (Cl. 113—105.)



1. A soldering-iron consisting of a block or body having an angular cavity in its upper surface and its front end tapered, one of the angles of said cavity being presented toward the tapered end of the block and said cavity being divided into communicating compartments.

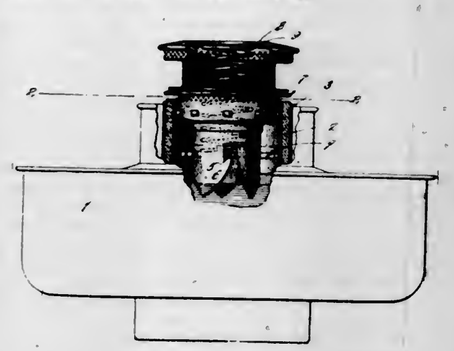
2. A soldering-iron consisting of a block or body having a cavity extended longitudinally therein from its rear end and having its front end tapered, said block or body having on its upper surface an angular cavity, one of said angles of said cavity being presented toward the tapered end of the block, and means extended into the first named cavity for securing the block or body to a support.

3. A soldering-iron consisting of a block or body having a cavity extended longitudinally therein from its rear end, said block or body having in its upper surface an angular cavity, one of said angles of said cavity being presented toward the tapered end of the block, means extended into the first named cavity for securing the block or body to a support.

4. A soldering-iron consisting of a block or body having a cavity extended longitudinally therein from its rear end, said block or body having its front end tapered to a point substantially in a plane with the upper surface of said block or body, the said block or body having in its upper surface an angular cavity, and means extended into the first named cavity for securing the block or body to a support.

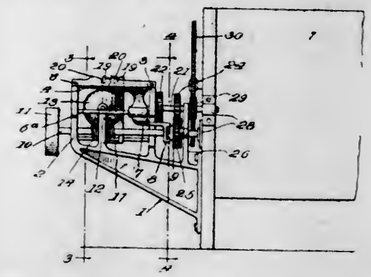
1,172,546. OIL-STOVE BURNER. JOSEPH T. MILLS, East St. Louis, Ill. Filed Sept. 17, 1915. Serial No. 51,201. (Cl. 158—94.)

1. In a wick-fed burner for oil-stoves, the combination of a wick-tube, a wick, a flame-spreader provided with upper and lower spreading-flanges, an air-tube at the lower end of said spreader, a series of laterally-extending hooks at the lower end of said air-tube, a part fixed within said wick-tube at about the plane of said hooks and adapted to be engaged thereby, and a suitable spring located within said flame-spreader and extending downwardly to a support fixed within said wick-tube, and having its lower end resting thereon and its upper end in engagement with some suitable portion of the said flame-spreader, whereby the said spring will normally support the weight of the said flame-spreader, and will retain the said lower spreading flange a suitable distance above the plane of the wick, to prevent smoking.



2. In an oil-stove burner having the usual wick-tube, a flame-spreader provided with upper and lower flame-spreading flanges, an air-tube having at its lower end laterally-projecting hooks, a spider having arms and fixed within said wick-tube, and a coil-spring located within said air-tube, with its lower end resting upon said spider and its upper end extending upward and engaging the inner surface of the said upper spreading-flange, whereby the entire flame-spreader will be held yieldingly in position with said lower spreading-flange elevated a distance above the upper end of said wick tube and the wick carried thereby; the said hooks normally engaging the underside of said spider-arms, to prevent said spring from lifting the parts too high.

1,172,547. OPERATING MEANS FOR REVERSE-GEARS. THOMAS M. MOON and GEORGE W. HALLSTROM, Fort Worth, Tex. Filed Aug. 26, 1915. Serial No. 47,440. (Cl. 74—50.)



1. In an operating mechanism for reverse gears, the combination of a pair of spaced upright standards, a trio of horizontally spaced horizontal bars extending from one standard to the other, a reverse gear control member having a guide slidable on the central bar, an operating member shifted intermittently in reverse directions and having a guide slidable on one of the other bars, a stop on the operating member, a second stop on the third bar, and a laterally shiftable coupling device carried by the control member for engagement with either stop.

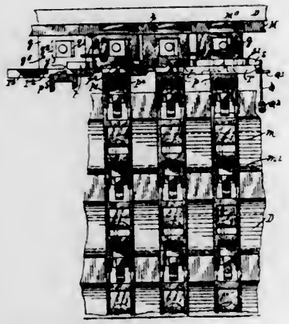
2. In an operating mechanism for reverse gears, the combination of a pair of spaced upright standards, a trio of horizontally spaced horizontal bars extending from one standard to the other, a reverse gear control member hav-

ing a guide slidable on the central bar, an operating member shifted intermittently in reverse directions and having a guide slidable on one of the other bars, a stop on the operating member, a second stop on the third bar, and a vertically swinging weighted coupling device pivoted to the control member for engagement with either stop.

3. In combination, a reverse gear having a control member to be shifted alternately in opposite directions, a coupling device carried by said member and shiftable laterally in opposite directions therefrom at right angles to its path of movement, a flat operating plate spaced laterally in one direction from said control member and having a pair of opposed cams, a driven wheel having an eccentric projection for engagement with said cams to shift the plate alternately in opposite directions in parallelism to the directions of movement of the control member, a keeper carried by said plate and adapted for engagement by the coupling device, whereby shifting of the operating plate will correspondingly move the control member, a fixed member spaced laterally in the opposite direction from the control member, and an additional keeper on said fixed member for coöperation with the coupling device when disengaged from the operating plate.

4. In combination, a trio of horizontal rigidly supported bars, one of said bars being disposed in a plane interposed between the others, a reverse gear control member mounted slidably on the central bar, a coupling device carried by said member and shiftable in opposite directions therefrom toward either of the other bars, an operating member slidably mounted on one of the latter and having a keeper adapted to be engaged by the coupling device when moved in one direction, and an additional keeper carried by the remaining bar for coöperation with said coupling device when shifted in the opposite direction.

1,172,548. VOTING-MACHINE. CHARLES C. MOORE, Jr., Lexington, Ky. Filed Nov. 16, 1907. Serial No. 402,417. (Cl. 235—54.)



1. A voting machine including counters, means for limiting the number of counters that may be operated by a voter, and a plurality of permanently attached means in front of said machine for operating any one of said counters.

2. In a device of the class described, counter mechanisms and corresponding counter actuating mechanisms, interlocking mechanism between the counter actuating mechanisms and additional permanently attached distinctly separate counter actuating mechanisms on the same side of the machine for the counter mechanisms.

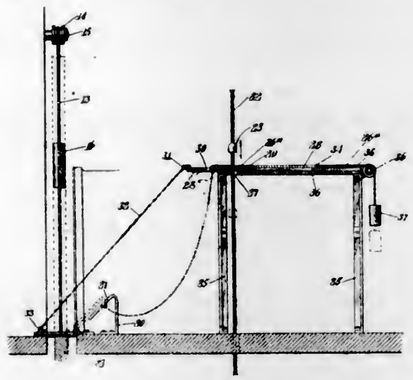
3. In a device of the class described, counter mechanisms and corresponding counter actuating mechanisms, interlocking mechanism between the counter actuating mechanisms, and additional distinctly separate counter actuating mechanisms for the counter mechanisms, both sets of counter actuating mechanisms being permanently attached on the same side of said machine.

4. In a device of the class described, counter mechanisms, a plurality of distinctly separate permanently attached sets of counter actuating mechanisms on the same side of the machine, and interlocking mechanism between the several counter actuating mechanisms in each separate set.

5. In a device of the class described, a group of counter mechanisms corresponding to a specific office, each counter mechanism corresponding to a specific candidate for the office, corresponding counter actuating mechanisms, interlocking mechanism between said counter actuating mechanisms, and additional distinctly separate counter actuating mechanisms constituting a permanently attached part of said machine for the counter mechanisms, the said counter actuating mechanisms being on the same side of the machine.

[Claims 6 to 46 not printed in the Gazette.]

1,172,549. SAFETY CONTROL DEVICE FOR ELEVATORS. ALBERT A. MORSE, New York, N. Y. Filed Aug. 15, 1914. Serial No. 856,927. (Cl. 187—46.)



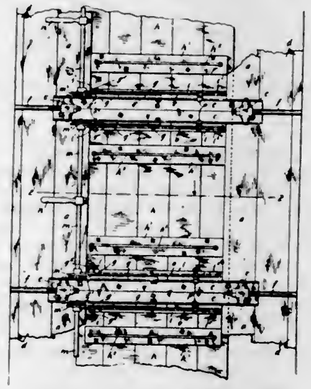
1. In an apparatus of the character described, the combination of an elevator shaft, a car, an operating cable therefor, and stops on said operating cable, with a longitudinal plate pivotally secured along one of its longitudinal edges to one edge of the car floor, means for limiting the inward movement of said longitudinal plate, standards mounted upon said car, a horizontal support secured to said standards having an opening therein adapted to receive the operating cable and the stops thereon, guides on said support, a plate slidably mounted on said support and adapted to work intermediate said guides; said slidable plate having a longitudinal slot therein terminating at one end in an enlarged opening corresponding in size with the opening in said horizontal support, means for maintaining said slidable plate normally retracted with its opening therein in register with the corresponding opening in said support, and a member connecting said longitudinal plate with said slidable plate to advance said slidable plate and cause the same to lock said operating cable in inoperative position when said longitudinal plate is adjusted to horizontal position, substantially as specified.

2. In an apparatus of the character described, the combination of an elevator shaft, a car, an operating cable therefor, and stops on said operating cable, with a longitudinal plate pivotally secured along one of its longitudinal edges to one edge of the car floor, means for limiting the inward movement of said longitudinal plate, standards mounted upon said car, a horizontal support secured to said standards having an opening therein adapted to receive the operating cable and the stops thereon, guides on said support, a plate slidably mounted on said support and adapted to work intermediate said guides; said slidable plate having a longitudinal slot therein terminating at

one end in an enlarged opening corresponding in size with the opening in said horizontal support, means for maintaining said slidable plate normally retracted with its opening therein in register with the corresponding opening in said support, and a flexible member connecting the other end of said slidable plate with said pivoted, longitudinal plate whereby to advance said slidable plate and cause the same to engage the stops on said operating cable in inoperative position when said longitudinal plate is adjusted to horizontal position, substantially as specified.

3. In an apparatus of the character described, the combination of an elevator shaft, a car, an operating cable therefor, and a series of stops arranged upon said operating cable corresponding in number to the number of floors, with a longitudinal plate pivotally secured along one of its longitudinal edges to the edge of the car and adapted to be folded to a horizontal position to bridge the space between the edge of said car and the wall of the shaft at each floor, a stop for limiting the inward movement of said plate, a support mounted upon said car, an opening in said support adapted to receive said operating cable and said stops thereon, a plate slidably mounted upon said support having a longitudinal slot therein to admit said operating cable and terminating at one end in an enlarged opening corresponding in size with the opening in said support and adapted to receive the stops on said operating cable, a counterweight, a flexible member secured at one end to said counterweight and at its other end to said slidable plate, means for maintaining said slidable plate normally retracted with the enlarged opening therein in register with the opening in said support, and a flexible member connecting the opposite end on said slidable plate and said pivoted longitudinal plate, whereby to shift said slidable plate as said pivoted, longitudinal plate is folded to its horizontal position, and to render said operating cable inoperative, substantially as specified.

1,172,550. COMBINED DOOR HINGE AND FASTENING. FREDOLIEN J. OBERER, Portland, Oreg., assignor, by direct and mesne assignments, to Ironclad Silo Company, Portland, Oreg., a Corporation of Oregon. Filed Jan. 16, 1914. Serial No. 812,605. (Cl. 268—9.)



1. The combination with a door casing of a pair of hinge-brackets pivoted at the bottom and the top of the door casing, a door hinged at one side to said hinge brackets, said hinge brackets formed with a gear segment; a revoluble shaft; pinions fixed on the ends thereof and meshing with said gear segments of the hinge brackets; and a latch element for fastening the opposite side of the door, such latch element operatively connected to said pinions.

2. The combination with a door casing of a pair of hinge brackets pivoted at the bottom and the top of the door casing, a door hinged at one side to said hinge brackets, said hinge brackets formed with a gear segment; a revoluble shaft; pinions fixed on the ends thereof and meshing with said gear segments of the hinge brackets; and latch-bolts connected to said pinions adapted to be engaged with and disengaged from said lock-lips by the rotation of said pinions.

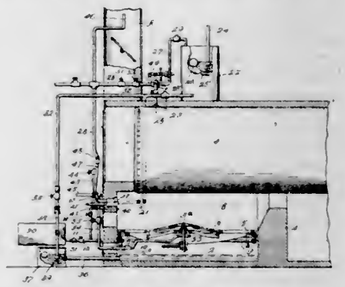
3. The combination with a door casing of a pair of hinge brackets pivoted at the bottom and the top of the door casing, a door hinged at one side to said hinge brackets, said hinge brackets formed with a gear segment; a revoluble shaft; pinions fixed on the ends thereof and meshing with said gear segments of the hinge brackets; a handle for rotating the shaft; and a latch element for fastening the opposite side of the door, such latch element operatively connected to said pinions.

4. The combination with a door casing of a pair of hinge brackets pivoted at the bottom and the top of the door casing, a door hinged at one side to said hinge brackets, said hinge brackets formed with a gear segment; a revoluble shaft; pinions fixed on the ends thereof and meshing with said gear segments of the hinge brackets; a handle for rotating the shaft; a lock-lip on the opposite side of the door; and latch bolts connected to said pinions adapted to be engaged with and disengaged from said lock-lips by the rotation of said pinions.

5. The combination with a door casing, of a pair of hinge brackets pivoted at the bottom and the top of the door casing, a door hinged at one side on said hinged brackets, means for latching the opposite side of the door, means for moving said hinge brackets in and out on their pivots to thereby move the door from and on its seat, means included in said moving means for holding the hinge brackets against rotation in a vertical plane either longitudinally or transversely, and connections between such hinge brackets moving means and said door latching means adapted to operate the latter concurrently with the former.

[Claims 6 and 7 not printed in the Gazette.]

1,172,551. SYSTEM OF SUPPLYING HYDROGEN GAS TO FURNACES. GEORGE F. PIERCE, Chicago, Ill. Filed Apr. 29, 1914. Serial No. 835,166. (Cl. 110—18.)



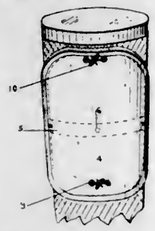
1. The combination with the grate of a furnace, of a vaporizer supported adjacent the under side of the grate, a pipe arranged beneath the vaporizer in coincidence therewith and connected thereto for communication, means for supplying water to the pipe, and automatic means for controlling the admittance of the liquid to the pipe to maintain the water therein at a predetermined level.

2. The combination with a furnace having a fire box and a grate in the latter, of a vaporizer comprising a perforated piping disposed beneath the grate in proximity to the underside and outer edge thereof, a series of spaced couplings depending from the perforated piping, a water supply pipe supported by the couplings in coincidence with the perforated piping, laterally extending dead heads secured to the couplings to support the vaporizer from the furnace wall, and means for replenishing the supply of water in the supply pipe.

3. In combination with a steam boiler, of a steam pipe communicating therewith, spaced steam pipes, nozzles connected with the latter and adapted to be arranged within a furnace structure, a manifold communicatively connecting the first steam pipe with the spaced steam pipes, a quick-opening valve in the manifold on each side of the connection with the first steam pipe, by passes leading from the latter to the manifold at points beyond the quick-opening valves, valves in the by passes, a U-shaped pipe communicating with the manifold at points beyond the by pass connections, and a jet leading from the U-shaped pipe for disposal in the stack of the furnace to provide a forced draft.

4. In combination with a steam boiler, of a steam pipe communicating therewith, spaced steam pipes, nozzles connected with the latter and adapted to be arranged within a furnace structure, a manifold communicatively connecting the first steam pipe with the spaced steam pipes, a quick-opening valve in the manifold on each side of the connection with the first steam pipe, by passes leading from the latter to the manifold at points beyond the quick-opening valves, valves in the by passes, a U-shaped pipe communicating with the manifold at points beyond the by pass connections, check valves arranged in the U-shaped pipe for opening toward each other, and a jet leading from the U-shaped pipe between the check valves for disposal in the stack of the furnace to provide a forced draft.

1,172,552. THIGH-GUARD. GEORGE L. PIERCE, Brooklyn, N. Y., assignor to A. G. Spalding & Bros., New York, N. Y., a Corporation of New Jersey. Filed Jan. 20, 1915. Serial No. 3,204. (Cl. 2—197.)



1. A guard for the purpose described, comprising an outside member or frame of fiber board or the like material, and of substantially half round shape, a cushion secured to the inner marginal edge portions of the frame, projecting appreciably beyond the edge, and a metal brace secured transversely of the frame and bent to correspond to the curve of the frame.

2. A guard for the purpose described, comprising an outside member of fiber board or the like material and of substantially half round shape, a metallic brace bent to conform to the inner curve of the frame and secured transversely thereof on the inside of the frame, and a waterproof covering overlying the inner surface of the frame and the brace.

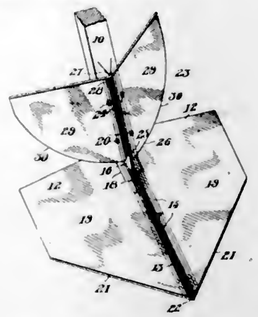
3. A guard for the purpose described, comprising an outside member or frame of fiber board or the like material and of substantially half round shape, a metallic brace secured to the inner surface of the frame transversely thereof, a covering of waterproof material overlying the inner surface of the frame and the brace, and a cushion secured to the inner marginal edge portions of the frame and projecting appreciably beyond the edge.

4. A guard for the purpose described, comprising an outside member or frame of fiber board or the like material and of substantially half round shape, a metallic brace secured to the inner surface of the frame transversely thereof, a covering of waterproof material overlying the inner aurface of the frame and the brace, and a cushion secured to the inner marginal edge portions of the frame and projecting appreciably beyond the edge, apertures being provided in the frame to accommodate lacings for holding the guard in place.

5. A guard for the purpose described, comprsing a comparatively rigid outside member or frame of fiber board or the like material and of substantially half round shape, a metallic brace bent to conform to the inner curve of the frame and secured transversely thereof on the inside of the frame, and a strip of cushioning material secured to the inner marginal edge portions of the frame and projecting appreciably beyond the edge, leaving the inner surface of the frame uncovered except at such marginal edge portions.

[Claims 6 and 7 not printed in the Gazette.]

1,172,553. PLOW-CULTIVATOR. FRENK PISTEK and JAMES HEJL. Ovid, Mich. Filed Sept. 15, 1915. Serial No. 50,803. (Cl. 97—11.)

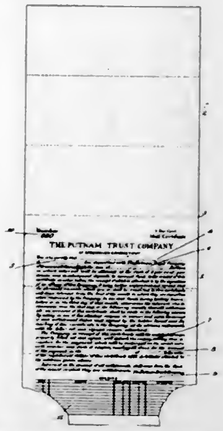


A plow construction comprising a supporting beam having a lower angular extension, the said beam having a forwardly projecting longitudinal V-shaped rib, a blade having a pointed forward end and having its longitudinal central portion seated upon the said extension, the said blade being formed of flexible material and having a centrally positioned incision at its rear end and opposite slots forming spaced retaining straps flatly engaging the opposite sides of the said bar rib, a mold board formed of relatively non-flexible material and having a centrally bent portion contacting the said bar rib, overlying the said straps, and removable bolts extending through the said bar and the said straps and mold board when the opposite curved edges of the mold board are operatively positioned adjacent the opposite rear portion of the said blade.

1,172,554. CERTIFICATE OF DEPOSIT. HENRY F. PRICE, Riverside, Conn., assignor to The Putnam Trust Company, Greenwich, Conn., a Corporation of Connecticut. Filed Nov. 5, 1914. Serial No. 870,374. (Cl. 11—13.)

1. A certificate of deposit, comprising a sheet carrying the certificate and being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner of the certificate, and having a plurality of detachable withdrawal forms, each being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner, and bearing directions to the bank to remit a check to the owner of the certificate drawn to his order said forms being adapted to be signed by the owner and to be removed by the bank and retained as a voucher for the payment of the sum entered on the form.

2. A certificate of deposit, comprising a sheet carrying the certificate and being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner of the certificate, said sheet also having a certain designating number, and having a plurality of detachable withdrawal forms, each being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner, and bearing directions to the bank to remit a check to the owner of the certificate drawn to his order each form bearing the same designating number as appears upon the certificate, said forms being adapted to be signed by the owner and to be removed by the bank and retained as a voucher for the payment of the sum entered on the form.

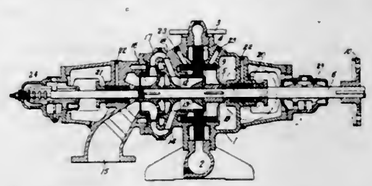


3. A certificate of deposit, comprising a sheet carrying the certificate and being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner of the certificate and having a plurality of detachable withdrawal forms, each being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner, and bearing directions to the bank to remit a check to the owner of the certificate drawn to his order and each form bearing a number, said numbers being serially arranged in the order in which the forms are detachable, said forms being adapted to be signed by the owner and to be removed by the bank and retained as a voucher for the payment of the sum entered on the form.

4. A certificate of deposit, comprising a sheet carrying the certificate and being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner, said sheet also having a certain designating number, and having a plurality of detachable withdrawal forms, each being suitably printed to provide for the entry of a sum of money and the entry of the name of the owner, and bearing directions to the bank to remit a check to the owner of the certificate drawn to his order each form bearing the same designating number as appears upon the certificate, and each form bearing a number, said numbers being serially arranged in the order in which the forms are detachable, said forms being adapted to be signed by the owner and to be removed by the bank and retained as a voucher for the payment of the sum entered on the form.

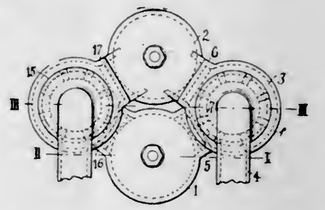
1,172,555. CENTRIFUGAL, TURBINE, OR SIMILAR PUMP. FREDERICK RAY, Short Hills, N. J., assignor to Alberger Pump and Condenser Company, New York, N. Y., a Corporation of New York. Filed Sept. 24, 1912. Serial No. 722,007. (Cl. 230—14.)

1. In a centrifugal, turbine or similar pump, the combination of a main casing having a single discharge passage a rotary impeller having a plurality of radial series of channels, a stationary water passage having a plurality of radial series of outlets arranged in parallel vertical planes corresponding in number with and situated opposite to the inner ends of the said series of channels, which water outlets inject the water into the inner ends of the channels intermittently, centrifugal pumping mechanism for drawing water from a suction and delivering it into the water passage whence it emerges through the series of outlets, and means including a sleeve attached to the rotary impeller and an air chamber in communication with said sleeve for allowing air to enter the inner ends of the series of channels alternately with the admission of water plugs, whereby each channel is filled with a succession of water plugs and alternate quantities of air.



2. In a centrifugal or like pump, the combination of a main casing having a single discharge passage a rotary impeller, having a multiple arrangement of series of radial channels, a stationary water supply having a multiple arrangement of series of radial outlets arranged in parallel vertical planes corresponding in number with and situated opposite to the series of impeller channels, said outlets delivering water with an injector-like action into the inner ends of the channels intermittently and offering a large surface to the air for the purpose of drawing in the air and mixing it with the water, and means including a sleeve attached to the rotary impeller and an air chamber in communication with said sleeve for allowing air to enter the inner ends of the channels of the impeller between the water plugs which are formed in said channels, whereby each channel is filled with a succession of water and air pistons, together with centrifugal pumping mechanism for drawing water from a suction and delivering it into the stationary water passage.

1,172,556. ENGINE-VALVE. OLIVER A. REED, Plainfield, N. J. Filed Mar. 1, 1911. Serial No. 611,684. (Cl. 123—59.)



1. In an engine, the combination of two power cylinders, a mechanically operated reciprocating inlet valve, an inlet port between the valve and each power cylinder, the valve being constructed to open the inlet port of one power cylinder when in one position and to open the inlet port of the other power cylinder when in another position, substantially as described.

2. In an engine, the combination of two power cylinders, a mechanically operated reciprocating inlet valve and a mechanically operated reciprocating outlet valve, separate ports between each valve and each power cylinder, the inlet valve being constructed to open the inlet port to one power cylinder when in one position and to open the inlet port to the other power cylinder when in the other position, and the outlet valve being constructed to open the outlet port to one power cylinder when in one position and to open the outlet port to the other power cylinder when in the other position, substantially as described.

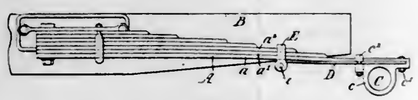
3. In an engine, the combination of two power cylinders, a pipe, a valve cylinder, separate ports between the valve cylinder and each power cylinder, and a mechanically operated piston valve constructed to connect the port of one power cylinder with the pipe when in one position and to connect the port of the other power cylinder with the pipe when in another position, substantially as described.

4. In an engine, the combination of two power cylinders, an inlet valve cylinder, an outlet valve cylinder, separate ports between each valve cylinder and each power cylinder, a mechanically operated piston valve in the inlet valve cylinder constructed to open the inlet port to one power cylinder when in one position and to open the inlet port of the other power cylinder when in another position, and a mechanically operated piston valve in the outlet valve cylinder constructed to open the outlet port to one power cylinder when in one position and to open the outlet port of the other power cylinder when in another position, substantially as described.

5. In an engine, the combination of two power cylinders, a pipe, a valve cylinder, separate ports between the valve cylinder and each power cylinder, and a piston valve provided with a port which registers with the port of one power cylinder and connects the port to the pipe when in one position and which registers with the port of the other power cylinder and connects the port to the pipe when in another position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,172,557. MEANS OF CONNECTION BETWEEN CANTALIVER-SPRINGS OF VEHICLES AND THE AXLES THEREOF. ALFRED ARNOLD REMINGTON, Birmingham, England. Filed Oct. 5, 1914. Serial No. 865,189. (Cl. 267—27.)



1. The combination, in a vehicle, of a body frame, an axle, a cantaliver spring connected at one end to said frame, means for connecting a long plate of said spring with said axle, and an independent auxiliary connecting means between the outer portion of a shorter plate of said spring and said axle, the auxiliary connection being inoperative under normal conditions and in case of fracture of the long plate being operative to retain the axle in connection with the spring and to impart endwise tension thereto.

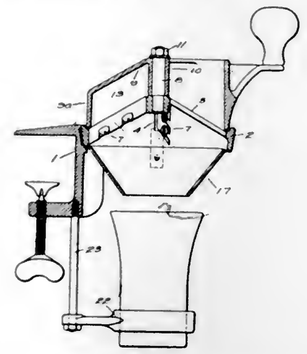
2. The combination, in a vehicle, of a body frame, an axle, a cantaliver spring connected at one end to said frame, means for connecting a long plate of said spring with said axle, a guard plate, connected with said axle and extending under the lowest plate of said spring, and a connector between the inner end of said guard plate and the outer portion of another plate of said spring.

3. The combination, in a vehicle, of a body frame, an axle, a cantaliver spring connected at one end to said frame, and having its lowest plate rigidly connected with said axle, a guard plate rigidly connected with said axle and extending under said lowest spring plate, and a connector uniting the free end of said guard plate with another plate of said spring at or near the outer or free end thereof.

4. The combination, in a vehicle, of a body frame, an axle, a cantaliver spring connected at one end to said frame and having its lowest plate connected with said axle, a guard plate disposed underneath the outer end of said spring, connected at its outer end to said axle and terminating at its inner end beneath a shorter plate of said spring, and a connector uniting the inner end of said guard plate with the outer end of said shorter spring plate.

5. The combination, in a vehicle, of a body frame, an axle, a cantaliver spring connected at one end to said frame, an axle bracket to which the lowest plate of said spring is connected, a guard plate rigidly connected with said bracket and extending under said spring to a point beneath the outer portion of a shorter plate thereof, and means connecting said guard plate with the outer portion of said shorter plate.

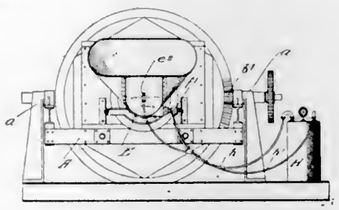
1,172,558. ICE-CUTTER. AUGUST A. RICKERT, Erie, Pa., assignor to Rickert-Shafer Company, Erie, Pa., a Corporation of Pennsylvania. Filed June 3, 1914. Serial No. 842,612. (Cl. 83—62.)



1. In an ice cutter, the combination of a cutter platform, the platform being conically shaped; knives in the platform; and a rotating driver having a cam feeding surface in spaced relation to the platform.

2. In an ice cutter, the combination of a cutter platform, the platform being conically shaped; knives in the platform; a rotating driver having a cam feeding surface in spaced relation to the platform; and a detachable funnel shaped receptacle below the platform.

1,172,559. MIXING-MACHINE. NILS M. ROSENDAHL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Aug. 28, 1911. Serial No. 646,378. (Cl. 94—9.)



1. A mixing machine comprising a frame, a rotary receptacle having inlet and outlet trunnion bearings on said frame, pivots for tilting said frame into position to discharge the contents of said receptacle from said outlet, means having an axis coincident with one of said pivots to rotate said receptacle, apparatus supported on said tilting frame to supply heat through said inlet, and means for feeding the materials to said inlet.

2. A mixing machine comprising a frame, a rotary receptacle having inlet and outlet trunnion bearings on said frame, pivots for tilting said frame into position to discharge the contents of said receptacle from said outlet, means having an axis coincident with one of said pivots to rotate said receptacle, apparatus supported on said tilting frame to supply heat through said inlet, and means for feeding the materials to said inlet, said apparatus comprising a burner, a combustion chamber for said burner, opening directly into said inlet, and flexible connections for supplying fuel to said burner.

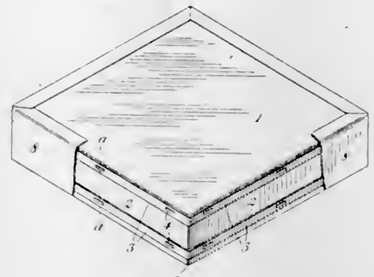
3. A mixing machine comprising a frame, a rotary receptacle having inlet and outlet trunnion bearings on said frame, pivots for tilting said frame into position to discharge the contents of said receptacle from said inlet, means having an axis coincident with one of said pivots to rotate said receptacle, apparatus supported on said tilting frame to supply heat through said inlet, means for feeding the materials to said inlet, and means for supplying fluid under pressure to blow the heat directly into said inlet.

4. A mixing machine comprising a frame, a rotary receptacle having inlet and outlet trunnion bearings on said frame, pivots for tilting said frame into position to discharge the contents of said receptacle from said outlet, means having an axis coincident with one of said pivots to rotate said receptacle, apparatus supported on said tilting frame to supply heat through said inlet, and means for feeding the materials to said inlet, said apparatus comprising a burner, a combustion chamber for said burner, opening directly into said inlet, flexible connections for supplying fuel to said burner, and means for supplying fluid under pressure to blow the heat directly into said inlet.

5. A mixing machine comprising a rotary receptacle having axial inlet and outlet openings, means for rotating said receptacle, a combustion chamber communicating directly with said inlet, a burner in said chamber, means immediately above said burner for feeding the materials to said inlet, and means for supplying fluid under pressure to blow the heat directly into said inlet.

[Claims 6 and 7 not printed in the Gazette.]

1,172,560. MANUFACTURE OF BOX-COVERS. HARRY ROTH, New York, N. Y. Filed May 14, 1915. Serial No. 27,978. (Cl. 229—49.)



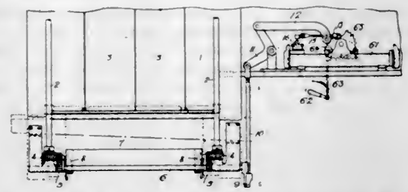
1. A paper-board box cover having a plurality of narrow bands of pliable metallic ribbon encompassing the side walls and corner joints thereof, each band being integral and continuous and being fastened to the walls whereby to reinforce said walls and to stay the corners, and a trimming sheet applied to the side walls and covering the metallic bands substantially as described.

2. A paper-board box cover having a plurality of narrow bands of pliable metallic ribbon encompassing the side walls and corner joints thereof, each band being integral and continuous and being secured to the walls at intervals by means of integral fastening tangs, whereby to reinforce said walls and to stay the corners, and a trimming sheet applied to the side walls and covering the metallic bands substantially as described.

3. A box cover comprising a paper blank bent to form the top and side walls of the cover, a plurality of metallic reinforcing bands encompassing the side walls and corner joints, each of said bands being integral and continuous and being fastened to the walls at intervals, one of said bands being disposed adjacent to the top edge of the cover.

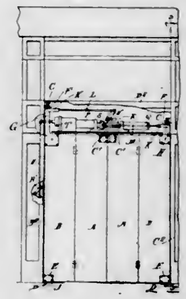
4. A box cover comprising a paper blank bent to form the top and side walls of the cover, a plurality of metallic reinforcing bands encompassing the side walls and corner joints, each of said bands being integral and continuous and being fastened to the walls at intervals, one of said bands being disposed along and overlapping the top edge of the cover.

1,172,561. DOOR-OPERATING MECHANISM. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed July 1, 1910. Serial No. 569,843. (Cl. 268—7.)



A door including a primary and a secondary panel, a vertical rock shaft arranged at the side of the doorway and to which the outer edge of the primary panel is connected, the outer edge of the secondary panel being hinged to the inner edge of the primary panel, connections intermediate the adjacent edges of said panels, whereby when one is rocked the other is coincidently rocked in the opposite direction, and means for rocking said shaft, the construction including automatic means for locking said panels at the limits of their movements, and means arranged to engage the inner edge of the secondary panel when the panels are extended into line with each other to prevent movement thereof independently of the vertical shaft rocking means.

1,172,562. OPERATING MECHANISM FOR ELEVATOR-HATCHWAY DOORS. HAROLD ROWNTREE, Chicago, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Mar. 8, 1912. Serial No. 682,525. (Cl. 268—3.)



1. An elevator hatchway frame having a doorway, in combination with a door composed of panels hinged together, at their meeting edges, a pivot pintle carried by the outer panel at its lower outer corner, a casting carried by said outer panel at its upper outer corner, a pivot screw engaging said casting in vertical line with the lower pivot pintle, means for rocking said panel about its pivots, and means for guiding the hinged panel.

2. An elevator hatchway frame having a doorway, in combination with a door composed of panels hinged together, a pivot pintle carried by the outer panel at its lower outer corner, a pivot seat for said pintle, a casting carried by said outer panel at its upper outer corner, said casting having a crank arm, a pivot screw arranged in vertical line with the pintle and engaging said casting, means engaging said crank arm for rocking said panel about its pintle axes, and means for guiding the hinged panel.

3. An elevator hatchway having a doorway, a door therefor comprising panels arranged at opposite sides thereof, said panels having pivot pintles at their lower outermost corners, castings connected to the upper outermost corners of said panels, pivot screws in vertical line with the pivot pintles and engaging said castings, said

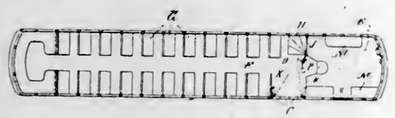
castings having crank arms, connections intermediate said crank arms, whereby said outer panels rock or swing together, and additional panels hinged to said pivoted panels, and means for guiding said hinged panels.

4. An elevator hatchway frame having a doorway, a panel arranged above the doorway in the frame and forming a chamber, a door for the doorway, comprising panels arranged at opposite sides thereof, said panels having pivot pintles at their lower outer corners, pivot seats for said pintles, castings secured to the upper outer corners of said panels, pivot screws arranged in vertical line with said pintles and engaging said castings, crank arms connected to or carried by said castings, a lever arranged within said chamber, rods connecting the ends of said lever to said crank arms at opposite sides thereof, means for rocking said lever, additional panels hinged to the pivoted panels, and means for guiding said hinged panels.

5. An elevator hatchway frame having a doorway, posts arranged on opposite sides of said doorway, a panel arranged above said doorway, to form a chamber, a door for the doorway comprising panels arranged at opposite sides thereof, said panels having pivot pintles at their lower outermost corners, pivot seats for said pintles, castings connected to the uppermost outer corners of said panels, pivot screws arranged in vertical line with said pintles and engaging seats in said castings, said castings having crank arms presented in opposite directions with reference to each other, a pivoted lever arranged within said chamber, rods connecting the ends of said levers to said crank arms respectively, whereby said crank arms and their connected or associated door panels are simultaneously rocked or moved in opposite directions when said lever is rocked, means connected to said lever for rocking the same, and means arranged within a side post of the frame for controlling the operation of said lever.

[Claims 6 and 7 not printed in the Gazette.]

1,172,563. PASSENGER-CAR. HAROLD ROWNTREE, Kenilworth, Ill., assignor to National Pneumatic Company, Chicago, Ill., a Corporation of West Virginia. Filed Oct. 16, 1912. Serial No. 725,987. (Cl. 105—205.)



1. A passenger car having a side entrance adjacent one end thereof, doors for controlling said entrance, a raised compartment for passengers in advance of and immediately adjacent said doorway, steps located opposite said doorway leading to said raised auxiliary compartment and means arranged within said doorway for controlling the operation of said doors.

2. In a passenger car, a car body having a seating space for passengers, a doorway and a door in the side of said car, adjacent one end thereof, a passenger compartment arranged on one side of said doorway and having an elevated floor, a stairway located opposite said doorway and leading to said raised compartment, and means for controlling the doors for the doorways, said means located inside said doorway and between the same and said stairway.

3. A passenger car having a car body with an interior seating space, a doorway in the side of said car body, adjacent one end thereof, an inclined floor leading from said doorway to the other end of said car, said inclined floor extending over the trucks at the rear end of the car, a raised platform at the extreme forward end of the car, a stairway located at the side of the car opposite the doorway therein, and leading to the raised compartment a door for said doorway and means to control said door, said means located between the doorway and stairway.

4. A passenger car having a car body with an interior seating space, a side doorway located adjacent the front end thereof, a door for controlling said doorway, a raised auxiliary compartment at the extreme forward end of said car, an inclined floor for the seating space of the car leading from the doorway to a point over the truck at the rear end of the car, means for operating the door, said means located immediately at the rear of the raised auxiliary compartment, a stairway located at the opposite side of the car from the doorway thereof, and leading from the main body portion of the car to the raised auxiliary compartment, and a conductor's seat located at the door control means.

5. A passenger car having front and rear trucks, a car body having a front floor portion raised over the front trucks, a side doorway immediately adjacent the rear of the front trucks, the car body having a rear floor portion inclined from the doorway and extending over the rear trucks.

[Claims 6 to 22 not printed in the Gazette.]

1,172,564. CLAMP FOR DENTAL FLASKS. ALEXANDER RUTAN, Blackington, Mass. Filed Aug. 10, 1914. Serial No. 855,971. (Cl. 18—32.)

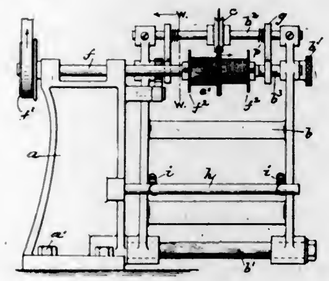


1. In a device of the class described, the combination with a unitary structure comprising a base, an upright portion and a top portion, of a separate stiffening core of tempered metal embedded in said upright portion.

2. In a device of the class described, the combination with a unitary structure comprising a base, an upright portion and a top portion, of a separate stiffening core of tempered metal extending throughout the length of the upright portion and into the base and top portions.

3. A clamp for the purpose described, constructed of non-flakable metal and having top and bottom portions and a single upright portion connecting the top and bottom portions, and stiffening means for improving the resiliency of the upright portion and comprising a core of tempered steel embedded in the upright portion.

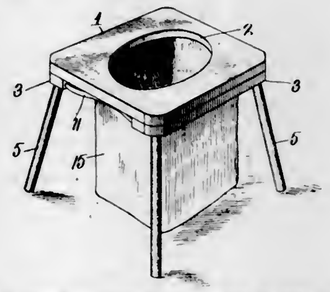
1,172,565. WIRE-WINDING DEVICE. CLAES RYDEN, Cranston, R. I. Filed Mar. 23, 1915. Serial No. 16,458. (Cl. 242—9.)



1. In a device of the character described, a standard, a revolving spindle mounted on the latter, means secured on the spindle to limit the length of traverse to form the inner wire layer, a pivotal frame carrying a guide wheel and a delivery wheel, both said wheels constructed to traverse laterally together in feeding the wire about the spindle, a shaft mounted on the frame and having right and left hand screw-threaded portions, stop pieces having nut ends engaging the threaded portions of said shaft, yielding means to hold the frame toward the spindle, a pinion carried by the said shaft, a rack bar pivoted on the standard, means to hold said bar in engagement with the pinion during the operation of forming a coil with tapered sides, and means to prevent rotation of the screw-shaft during operation to form a coil with straight sides.

2. In a device of the character described, a power-driven spindle, a tubular member fixed upon the latter and having upturned ends, to receive the winding feed wire in the form of a straight layer therebetween, a pivotal frame carrying a wire delivery wheel and a wire guide wheel embracing the latter, to permit the wire to feed in direct alinement with the peripheral centers of both said wheels in forming the respective layers about said tubular member, a shaft having right and left hand screw-threaded portions, stop pieces in engagement with the threaded portions of said shaft, to limit the traverse movement of both said wheels, means to impart a slight rotation of said shaft, in the initial feed of the wire to form the next contiguous layer, and to permit the wire to feed between the turns of the latter, in forming a coil to have opposed tapered sides.

1,172,566. OUTING-COMMODE. FRANKLIN M. SAWYER, Kansas City, Mo. Filed Apr. 19, 1915. Serial No. 22,320. (Cl. 4—32.)



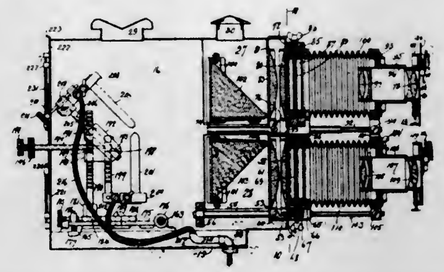
1. An outing commode comprising a seat having an opening, legs supporting the seat, vertical pins below the seat, a tube extending vertically between the ground and the seat and fitted around said pins at its upper end and communicating at such end with said opening, and means whereby the upper end of the tube is stretched taut around said pins so that it shall be held reliably in place.

2. An outing commode, comprising a seat having an opening, legs supporting the seat, vertical pins below the seat, a tube extending vertically between the ground and the seat and fitted around said pins at its upper end and communicating at such end with said opening, and means for effecting relative separating movement between certain of said pins whereby to stretch taut the upper end of the tube to hold the latter in position.

3. An outing commode, comprising a seat having an opening, legs supporting the seat, a pair of front pins depending from the seat near opposite sides thereof, an adjustable bar fitting against the underside of the seat rearward of the opening therein and provided with a pair of pins at its opposite ends, a tube fitting around said pairs of pins and extending downward from the seat and communicating at its upper end with the opening therein, and means for clamping said bar rigidly to the seat with the pins holding the tube stretched taut around them.

4. An outing commode, comprising a seat having an opening, legs supporting the seat, a pair of front pins depending from the seat near the opposite sides thereof, an adjustable bar fitting against the underside of the seat rearward of the opening therein and provided with a pair of pins at its opposite ends, a tube fitting around said pairs of pins and extending downward from the seat and communicating at its upper end with the opening therein, means for clamping said bar rigidly to the seat with the pins holding the tube stretched taut around them, and a spring for sliding said bar from the pair of pins secured to the seat to tighten the tube around the pins.

1,172,567. COMBINED DISSOLVING-VIEW APPARATUS AND MOVING-PICTURE MACHINE. EBERHARD SCHNEIDER, New York, N. Y. Filed Apr. 20, 1911. Serial No. 622,198. (Cl. 88—26.)



1. In an apparatus of the character described the combination of a supporting frame, a bracket adjustably connected thereto, a lantern of a dissolving view apparatus supported on said bracket, a pair of light chambers in the lantern, a single source of light in said lantern, means to move the light in line with each of said chambers, a pair of objectives connected to said lantern for the dissolving view apparatus, a moving picture machine adjustably carried on the supporting frame, lenses in the lantern for the latter and means to move the light in said lantern.

2. In an apparatus of the character described the combination of a lantern, a pair of light chambers in the lantern, a single source of light in the lantern, means to move the source of light to coact with either of said chambers, a pair of prisms in the lantern, a pair of condenser lenses for each prism, an objective for each of said condensers, a third pair of condenser lenses in the lantern, and shutters between the latter condenser lenses and the source of light and a shutter between the prisms and the source of light.

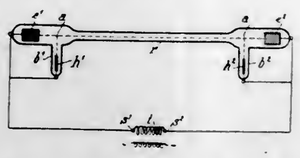
3. In an apparatus of the character described the combination of a lantern, a carriage in the lantern, a source of light carried by said carriage, means to move the carriage, a pair of prisms in the lantern, a pair of objectives coacting with said prisms, a pair of condenser lenses in the lantern, and a picture machine coacting with said lenses.

4. In an apparatus of the character described the combination of a suppotring frame, a lantern on said frame, a carriage in said lantern, a source of light carried by said carriage, means to move the carriage, a pair of prisms in the lantern, a pair of condenser lenses opposite each prism, an objective axially in line with each pair of condenser lenses, a third pair of condenser lenses connected to the lantern, a moving picture machine on the frame coacting with the latter condenser lenses, a shutter between the source of light and said prisms and a shutter between the source of light and the third pair of condensers.

1,172,568. METHOD OF AND APPARATUS FOR SECURING CONSTANCY IN THE LIGHT OF VACUUM-TUBES. FRITZ SCHRÖTER, Berlin-Wilmersdorf, Germany. Filed Apr. 3, 1913. Serial No. 758,527. (Cl. 176—125.)

1. The herein described method of rendering inactive the impurities in the light giving gas which when present change the light of a vacuum tube, which consists in temporarily establishing a subsidiary discharge within the tube and causing the same to atomize a material which is adapted to render the said impurities inactive.

2. The herein described method of rendering inactive the impurities in the light giving gas which when present change the light of a vacuum tube, which consists in temporarily establishing a subsidiary discharge within the tube and causing the same to atomize a material which is different from the electrode of the subsidiary discharge and is adapted when heated to give off a gas which prevents an increase of the voltage at the terminals and a change of the color of the light of the tube which would be caused by such an increase.



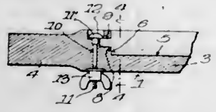
3. The herein described method of rendering inactive the impurities in the light giving gas which when present change the light of a vacuum tube, which consists in temporarily establishing a subsidiary discharge within the tube and causing the same to atomize a material which is adapted to render the said impurities inactive, and simultaneously heating the said material by an external source of heat.

4. The herein described method of rendering inactive the impurities in the light giving gas which when present change the light of a vacuum tube, which consists in providing within the tube apart from the main electrode a subsidiary electrode of suitable material susceptible of giving off a vapor capable of rendering the said impurities inactive, and causing atomization of the said subsidiary electrodes by means of an electrical discharge therefrom.

5. The herein described method of rendering inactive the impurities in the light giving gas which when present change the light of a vacuum tube, which consists in providing within the tube apart from the main electrodes a subsidiary electrode of suitable material susceptible of giving off a vapor capable of rendering the said impurities inactive, causing atomization of the said subsidiary electrode by means of an electrical discharge therefrom, and heating by means of the discharge from the subsidiary electrode a substance which is adapted when being thus heated to give off a gas which prevents an increase of the voltage and a change of the color of the light of the tube which is caused by an increase of the voltage.

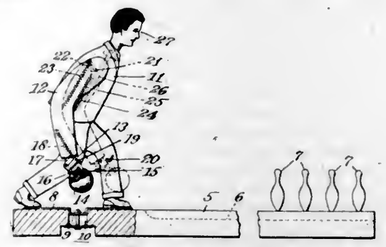
[Claims 6 to 14 not printed in the Gazette.]

1,172,569. SHARPENING DEVICE. FRANCIS M. SHEAFOR, Richland Center, Wis. Filed Oct. 1, 1915. Serial No. 53,550. (Cl. 51—16.)



A sharpening device of the class described comprising an elongated body rectangular in cross section, its end being reduced to provide hand grips, said body having a rectangular recess formed in one of its faces and opening through the adjacent faces, said recess having upright end walls, each of said walls having a transversely extending groove formed therein, said body also having transverse openings extending therethrough at right angles to said grooves, the upper ends of said openings being enlarged and adapted to communicate with said grooves, a block of abrading material rectangular in cross section and adapted to be adjustably received in said recess, transversely extending tongues on the ends of said block designed to project into said grooves, bolts in said openings having their heads disposed in said enlarged ends and adapted to bear against said tongues, and nuts on the threaded ends of said bolts for clamping said block in adjusted position in the body.

1,172,570. TOY BOWLING-ALLEY. WILLIAM E. TOELLE, New York, N. Y. Filed Apr. 23, 1915. Serial No. 23,354. (Cl. 46—61.)



1. In a ball projecting toy, the combination of an image having a movable arm and hand provided with projecting fingers adapted to extend into holes in a ball for holding the same, and means for swinging said arm to deliver the ball.

2. In a ball projecting toy, the combination of an image having a movable arm, a hand on said arm and provided with a projecting finger adapted to extend into a hole in a ball, and means for swinging said arm to deliver the ball.

3. In a ball projecting toy, the combination of an image having a movable arm, a hand on said arm and provided with projecting fingers adapted to extend into holes in a ball for holding the same, one of said fingers being movable, means for swinging the arm, and a device for tripping said movable finger during the forward movement of the arm.

4. In a ball projecting toy, the combination of an image having a movable arm, a hand on said arm and provided with projecting fingers adapted to extend into holes in a ball for holding the same, one of said fingers being movable, a spring acting on said movable finger, another spring for swinging the arm forward, and a tripping device for releasing said movable finger at the forward movement of the arm.

5. In a ball projecting toy, the combination of an image having a movable arm for delivering a ball, a spring for swinging said arm forward, a trigger mechanism mounted on the image for holding said arm in a retracted position, and a movable member on the image for releasing said trigger mechanism.

1,172,571. JEWELER'S TOOL. ALFRED A. TURNAGE, San Jose, Cal. Filed July 29, 1915. Serial No. 42,597. (Cl. 81—7.5.)



1. A tool comprising a tubular magazine, a chuck carried by one end of said magazine and having a central opening leading from the interior thereof, a plurality of tool shanks confined eccentrically in the magazine and shiftable independently therefrom into the opening in the chuck, slides on the exterior of the magazine for projecting said shanks, and spring means connecting the slides and the shanks.

2. A tool comprising a tubular magazine, a chuck carried by one end of said magazine and having a central opening leading from the interior thereof, a plurality of tool shanks confined in the magazine and shiftable independently therefrom into the opening in the chuck, slides disposed on the exterior of the magazine, and spring arms united at their opposite ends to the innermost ends of the shanks and to the slides.

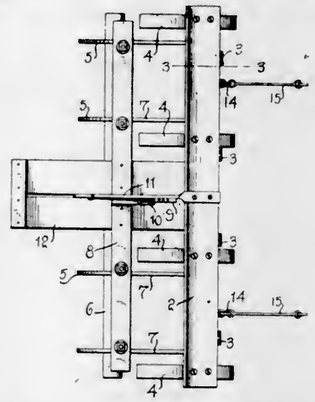
3. A tool comprising a tubular magazine having longitudinally disposed slots, independent slides moving over said slots, an apertured chuck at one end of the magazine, a plurality of tool shanks confined eccentrically in the magazine and shiftable therefrom into the chuck, and yielding connections between the slides and the shanks extending through the aforesaid slots.

4. A tool comprising a tubular magazine having stop shoulders accessible from its interior, a plurality of tool shanks confined in said magazine to be projected from one end thereof, slides for projecting said shanks, and spring pressed stops movable with said shanks for coaction with the aforesaid stop shoulders to lock the shanks in projected position.

5. A tool comprising a tubular magazine having stop shoulders accessible from its interior, slides on said magazine having outwardly extending springs, a plurality of tool shanks confined in the magazine to be projected from one end thereof and having portions connected to the springs of the slides, and stops on such portions of the shanks for engagement with the aforesaid stop shoulders to lock the shanks in projected position.

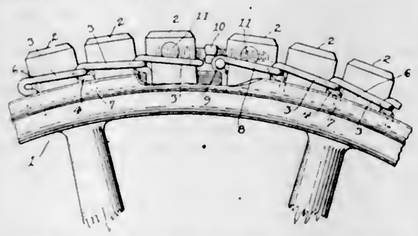
[Claims 6 and 7 not printed in the Gazette.]

1,172,572. CULTIVATOR. LUCIUS N. WADE, Mayview, Wash. Filed Nov. 10, 1915. Serial No. 60,748. (Cl. 97—14.)



A cultivator comprising a plurality of plow beams, a transversely disposed bar pivotally supported by said beams, gage runners carried by the bar, and means for imparting pivotal movement to the bar.

1,172,573. EMERGENCY-TIRE. ALBERT J. WESTBURG, Springfield, Ill. Filed Aug. 19, 1914. Serial No. 857,599. (Cl. 152—23.)



1. In an emergency tire for automobiles, a plurality of coacting links adapted to be carried about the rim of an automobile wheel, each of said links being substantially U-shaped and having hooks adapted to engage with the next adjacent link, said hook portions of each link provided with down-turned projections resting on the rim of the wheel, block fillers for each of said links, and means for attaching the first and last links together to form an endless tire, substantially as described.

2. In an emergency tire for automobiles, a plurality of coacting links adapted to be carried about the rim of an automobile wheel, each of said links being formed of wire bent substantially U-shaped, the ends of the wire forming each link being bent to provide parallel hooks positioned to engage the central end portion of the next adjacent link, said hook portions provided with down-turned projections resting on the rim of the wheel, block fillers for each of said links, and means for attaching the first and last link together to form an endless tire, substantially as described.

1,172,574. CONNECTING-ROD. FRANKLIN R. WHITE, Waterbury, Conn., assignor to The Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 26, 1915. Serial No. 36,419. (Cl. 74—48.)



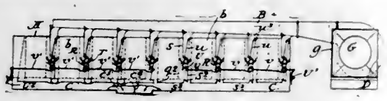
1. In a device of the class described, an elongated cage adapted to contain a spring, a fixed guide at one end of said cage, a removable guide located at the opposite end of said cage; a rod extending through said removable guide and having a shoulder, and an extension of reduced diameter, which extension extends through said cage and into said fixed guide; a collar located upon said shoulder and abutting against the inner end of said removable guide; and a coil spring located within said cage and surrounding the reduced extension of said rod, one end of said spring bearing against said fixed guide and the other against said collar and the inner end of said shoulder.

2. An apparatus of the class described comprising a cage adapted to contain a spring, guides at opposite ends of said cage forming spaced confronting shoulders, a rod extending through and slidably engaging the side walls of one of said guides, said rod being provided with a shoulder and an extension projecting from said shoulder coaxially with said rod, said extension being of reduced diameter and slidably engaging in the other of said guides, a collar located upon said shoulder and abutting against the inner end of one of said guides, and a coil spring located within said cage surrounding the reduced extension of said rod, one end of said spring bearing against said collar and rod shoulder, and the opposite end bearing against one of said guides.

1,172,575. DEHYDRATING APPARATUS. WILLIAM A. WOOD, Dunellen, N. J., assignor, by mesne assignments, to Air Utilities Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1913. Serial No. 783,848. (Cl. 34—39.)

1. In a dehydrating apparatus, the combination of a plurality of material treating chambers, an air supply

trunk, an air exhaust trunk, means for feeding air to the air supply trunk, and means whereby the air fed to the treating chambers may be caused to pass through each of said chambers at different levels.



2. In a dehydrating apparatus, the combination of a plurality of material treating chambers, an air supply trunk, an air exhaust trunk, means for feeding air to the air supply trunk and through said chambers, a series of dampers for directing the air into each of the material treating chambers at different levels, and means for simultaneously moving the dampers.

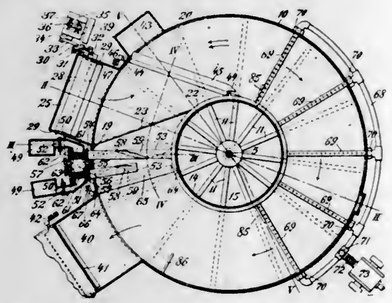
3. In a dehydrating apparatus, the combination of a plurality of material treating chambers, an air supply trunk, and air exhaust trunk, flues situated on opposite sides of the material treating chambers, one of said flues connected to the supply trunk and the other of said flues connected to the exhaust trunk, together with a plurality of dampers in the first named flue for directing the air into the material treating chambers at different levels.

4. In a dehydrating apparatus, the combination of a plurality of material treating chambers, an air supply trunk, an air exhaust trunk, flues situated on opposite sides of the material treating chambers, one of said flues connected to the supply trunk and the other of said flues connected to the exhaust trunk, dampers in the first named flues for directing the air into the material treating chambers at different levels, together with means for simultaneously moving said dampers.

5. In a dehydrating apparatus, the combination of a plurality of material treating chambers, an air supply trunk, an air exhaust trunk, flues situated on opposite sides of the material treating chambers, one of said flues connected to the supply trunk and the other of said flues connected to the exhaust trunk, valves in said flues, one of said valves controlling the entrance from the supply trunk and the other the entrance from the flue into the exhaust trunk, together with means for simultaneously actuating said valves.

[Claims 6 to 14 not printed in the Gazette.]

1,172,576. DRYING APPARATUS. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Mar. 16, 1915. Serial No. 14,665. (Cl. 34—32.)



1. In a drier, the combination of a series of horizontally arranged superposed rotatable disks, a casing for said disks, means whereby air currents will move over said disks in a direction opposite to the direction of movement of said disks, means for feeding material to be treated on to said disks, means for discharging the treated material from said disks, and means for giving motion to said disks.

2. In a drier, the combination of a series of superposed rotatable disks, a casing inclosing said disks, a series of air deflectors, means for feeding material to be treated on to said disks, an air inlet duct, an air outlet duct, means in said air inlet duct for varying the vertical depth of the incoming air currents, means in said air exit duct for varying the area of the duct, a discharge duct, adjustable means whereby the material on the disks will be directed to the discharge duct, and means for giving motion to the disks.
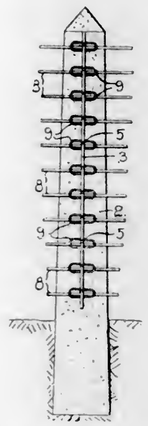
3. In a drier the combination of a series of horizontally arranged superposed rotatable disks, a series of air deflectors arranged to deflect the air forward in a direction opposite to the rotation of the disks, a casing inclosing said disks and deflectors, an air supply duct, an air exit duct, means for feeding material to be treated on to the disks, means for discharging the treated material from the disks, and means for giving rotary motion to the disks.

4. In a drier, the combination of a series of horizontally arranged superposed rotatable disks, a casing inclosing said disks, an air supply duct, an air exit duct, means for supplying additional air currents to the space intervening between any two superposed disks, means for feeding material to be treated on to the disks, means for discharging the treated material from the disks, and means for giving rotary motion to the disks.

5. In a drier, the combination of a series of superposed perforated rotatable disks, means whereby air currents will be caused to move over and above said disks in a circular direction, and means whereby air currents will be caused to move through said disks in a perpendicular direction.

[Claims 6 to 15 not printed in the Gazette.]

1,172,577. FENCE-POST. JAMES W. BEST, Westfield, Ill. Filed Aug. 28, 1915. Serial No. 47,800. (Cl. 256—48.)

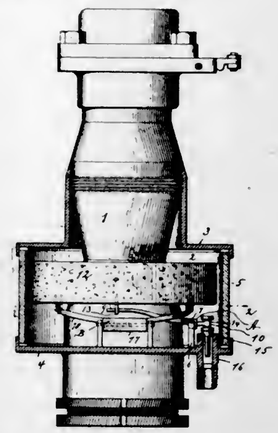


1. The combination with a concrete post, of a web embedded within the post, said web projecting beyond the face of the post and this projecting margin of the web being formed with a plurality of inwardly extending slots, a plurality of vertical slots each intersected by the inwardly extending slots and a plurality of wire seats each intersecting the rear wall of one of the vertical slots below the inwardly extending slot, and continuous loops formed of a bendable strand of material whereby a portion of said loops may be expanded, adapted to be inserted through the vertical slots and acting to lock the fence wire within each of the seats.

2. The combination with a concrete post, of a web embedded within the post, said web projecting beyond the face of the post and this projecting margin of the web being formed with a plurality of inwardly extending slots, a plurality of vertical slots each intersected by the inwardly extending slots and a plurality of wire seats each intersecting the rear wall of one of the vertical slots below the inwardly extending slot, and continuous loops formed of a bendable strand of material whereby a portion of said loops may be expanded, adapted to be inserted through the vertical slots and acting to lock the fence wire within each of the seats, said clips being substantially elliptical in form.

1,172,578. FLOAT-VALVE MECHANISM FOR CARBURETERS. SEBASTIAN G. BRINKMAN, Fords, N. J. Filed Nov. 5, 1914. Serial No. 870,364. (Cl. 137—104.)

1. A float valve mechanism for carbureters comprising a fuel chamber, an inclosed float, a pair of independent forks each of which engages the float, and a valve operatively connected to one of the forks.



2. A float valve mechanism for carbureters comprising a fuel chamber, an inclosed float, a pair of independent forks set at right angles to each other, one of said forks engaging the float at points located midway between the points of engagement of the other fork with the float, and a valve operatively connected to one of said forks.

3. A float valve mechanism for carbureters, comprising a fuel chamber, a pair of pivoted forks, set at right angles to each other and oscillable on horizontal axes only, a float directly engaged by each of the forks at points located midway between each other, lugs extending from one of said forks, and a valve operatively engaged by said lugs.

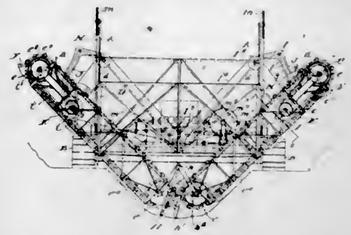
4. A float valve mechanism for carbureters, comprising a fuel chamber, an inclosed float, a plurality of members that are oscillable on a horizontal axis only and are each adapted to directly engage the float at different points, and a valve operatively connected to the float.

5. A float valve mechanism for carbureters, comprising a fuel chamber, an inclosed float, a plurality of fixed bearings arranged sidewise of each other, a plurality of members pivoted to said bearings and oscillable on a horizontal axis only, means for movably connecting said members to the float, a valve, and means on one of said members for actuating the valve.

1,172,579. EXCAVATOR. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Oct. 24, 1910. Serial No. 588,903. (Cl. 37—24.)

1. In an excavator, a pair of frames which converge downwardly, and which are disposed in the same vertical plane, an endless traveling series of buckets on each frame, means for operating said buckets, means for raising and lowering the frames, and means for changing the position of the excavator, a pivoted member for eleminating the ridge of dirt left between the lower ends of said frames, and means for operating said member.

2. In an excavator, a pair of frames which converge downwardly, and which are disposed in the same vertical plane, an endless traveling series of buckets on each frame, means for operating said buckets, means for raising and lowering the frames, means for changing the position of the excavator, a movable member for eliminating the ridge of dirt left between the lower ends of said frames, and means operated by the travel of one of said series of buckets for actuating said member



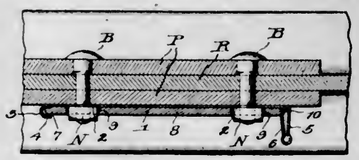
3. In an excavator, a pair of frames which converge downwardly, and which are disposed in the same vertical plane, an endless traveling series of buckets on each frame, means for operating said buckets, means for raising and lowering the frames, means for changing the position of the excavator, a shaft for the lower end of each frame, a member for eliminating the ridge of dirt left between the lower ends of said frames, and means operated by one of said shafts for actuating said member.

4. In an excavator, a pair of frames which converge downwardly, and which are disposed in the same vertical plane, an endless traveling series of buckets on each frame, means for operating said buckets, means for raising and lowering the frames, means for changing the position of the excavator, a body having said frames disposed at the rear end thereof, means whereby said body can back up to overhang the face of the cut made by said buckets, and means for cutting a shallow groove in the bottom of the ditch when the machine backs up.

5. In an excavator, a pair of frames which converge downwardly, and which are disposed in the same vertical plane, an endless traveling series of buckets on each frame, means for operating said buckets, means for raising and lowering the frames, means for changing the position of the excavator, a pivoted member for eliminating the ridge of dirt left between the lower ends of said frames, means for operating said member, a body having said frames disposed at the extreme rear end thereof, and means whereby the body is supported entirely in front of the face of the cut made by said buckets.

[Claims 6 to 14 not printed in the Gazette.]

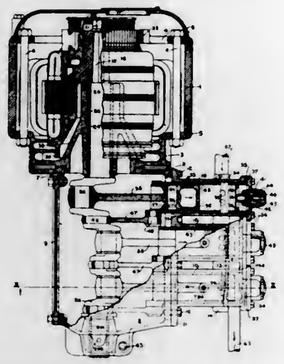
1,172,580. NUT-LOCK. LEONARD BURRY, Neoga, Ill. Filed Feb. 15, 1915. Serial No. 8,252. (Cl. 151—59.)



The combination with a bolt and a nut thereon, of a resilient washer plate contacting with the inner end of the nut and having an opening receiving the bolt, one end of said plate being bent outwardly upon itself to form a resilient keeper opening toward the other end of the plate, said last named end being bent laterally outward and then folded inwardly toward the keeper into slightly oblique relation with the plate to form a spring tongue whose inner end is spaced from said plate, and a rigid apertured nut locking plate greater in thickness than the distance between the keeper and the washer plate and between the tongue and said washer plate, one end of said locking plate being beveled on its inner side

whereby it may be inserted into the keeper only when disposed at an angle to the washer plate to place said keeper under tension when the locking plate is moved toward said washer plate to snap its other end behind the spring tongue, said last named end being beveled on its outer side for contact with the inner end of said tongue, whereby the tendency of the latter to spring to normal position will be exerted against such bevel to force the locking plate into contact with the washer plate.

1,172,581. MOTOR-DRIVEN COMPRESSOR. HERBERT W. CHENEY, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 15, 1912. Serial No. 698,024. (Cl. 230—34.)



1. In a compressor, the combination of a cylinder having a bore, a reciprocable sleeve having a bore continuous with the bore of said cylinder, and a piston sliding within said cylinder and sleeve.

2. In a compressor, the combination of a cylinder having a bore, a sleeve having a bore and reciprocable to abut the end of said cylinder, and a piston reciprocable within the bores of said cylinder and sleeve.

3. In a compressor, the combination of a cylinder, a sleeve movable to abut with its end the end of said cylinder, a piston movable within said cylinder and sleeve, and connections whereby said piston face passes said abutting ends at the time of abutment.

4. In a compressor, the combination of a cylinder, a piston reciprocable into and out of said cylinder, and a sleeve fitting said piston and reciprocable to abut the end of said cylinder at the time said piston enters said cylinder.

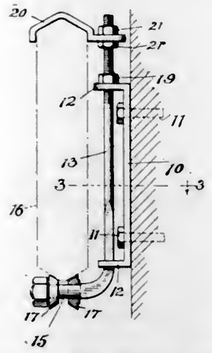
5. In a compressor, the combination of a cylinder having a support forming a counterbore, a piston reciprocable into and out of said cylinder, and a sleeve fitting said piston and reciprocable into and out of said counterbore to abut the end of said cylinder at the time said piston enters said cylinder.

[Claims 6 to 19 not printed in the Gazette.]

1,172,582. HANGER FOR WALL-RADIATORS. GEORGE I. CHITTENDEN, Cleveland, Ohio. Filed Mar. 19, 1914. Serial No. 825,733. (Cl. 248—30.)

1. A hanger for a wall radiator comprising supporting means adapted to be secured to the wall, a rod mounted in said supporting holding means, means on said rod for holding the rod at a fixed height relative to said supporting means and for adjusting the position of the rod, said rod having at its lower end a radiator seat, and an upper radiator clamp supported on said rod above the holding means.

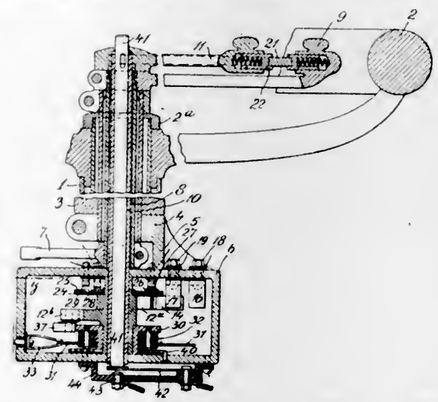
2. In a hanger for a wall radiator, a bracket adapted to be secured to the wall and having outstanding members, a rod passing through said members, a nut on said rod engaging the upper member and holding said rod in position relative to the bracket, said rod having at its lower end a laterally extending portion constituting a radiator seat, an upper radiator engaging device mounted on said rod above said nut, and means adjustable along said rod for holding said device any desired distance from the lower radiator seat.



3. In a hanger for a wall radiator, supporting means adapted to be secured to the wall and having outstanding members, a radiator supporting rod passing through said members and having upper and lower radiator engaging means, the lower portion of the rod being enlarged in one direction relative to the upper portion, said lower member having a slot leading outwardly from the part of the lower member which receives the enlarged part of the rod.

4. In a hanger for a wall radiator, a bracket adapted to be secured to the wall, said bracket having outstanding ears, a rod supported by said bracket and having at its lower end a radiator seat, the upper part of the rod being round and the lower part rectangular in cross section, the lower ear having a rectangular opening through which the rectangular part of the rod passes, and having a slot leading outward from said opening, said slot having a width equal substantially to the diameter of the upper part of the rod.

1,172,583. STARTER AND LIGHT CONTROL FOR MOTORS. WILLIAM H. COLLIER, Nashville, Tenn. Filed June 9, 1913. Serial No. 772,649. (Cl. 171—97.)



1. A combined starter and ignition system for motor vehicles, comprising a starter control switch and an ignition control switch and a common operating device for said switches, said operating device having a "running"

position in which only the ignition switch is closed, and a "starting" position in which both the ignition and starting switches are closed, and an intermediate "stop" position in which neither switch is closed, and means for moving said operating device automatically from the "starting" position past said "stop" position to said "running" position, said means arranged to permit said operating device to remain at the "stop" position when moved thereto from the "running" position.

2. A combined starter and ignition system for motor vehicles, comprising a starter control switch and an ignition control switch and a common operating device for said switches, said operating device having a "running" position in which only the ignition switch is closed, and a "starting" position in which both the ignition and starting switches are closed, and an intermediate "stop" position in which neither switch is closed, and means for moving said operating device automatically from the "starting" position past said "stop" position to said "running" position, said means arranged to permit said operating device to remain at the "stop" position when moved thereto from the "running" position, and a spring which engages said operating device when the latter is moved from the "stop" position to the "starting" position, said spring adapted to throw said operating device from the "starting" position past said "stop" position to the "running" position.

3. A combined starter and ignition system for motor vehicles, comprising a starter control switch and an ignition control switch and a common operating device for said switches, said operating device having a "running" position in which only the ignition switch is closed, and a "starting" position in which both the ignition and starting switches are closed, and an intermediate "stop" position in which neither switch is closed, and means for moving said operating device automatically from the "starting" position past said "stop" position to said "running" position, said means arranged to permit said operating device to remain at the "stop" position when moved thereto from the "running" position, and a spring which engages said operating device when the latter is moved from the "stop" position to the "starting" position, said spring adapted to throw said operating device from the "starting" position past said "stop" position to the "running" position, and means for arresting the operating device when the latter reaches said "running" position.

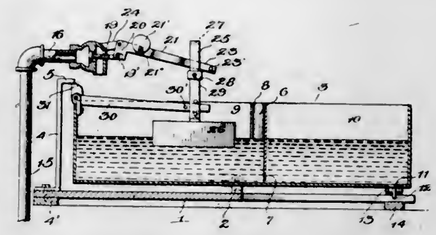
4. A control system for motor vehicles, comprising a hollow steering post, concentric steering, throttle, and switch shafts within same, steering gear operated by the steering shaft, and switch mechanism comprising a gap bracket connecting same to said steering gear, the throttle shaft having an arm working in the gap of said bracket, the switch shaft connected to and arranged to operate said switch mechanism.

5. A combined starter and lighting system for motor vehicles, comprising a starter control switch and a lighting circuit control switch, the latter adapted to control a plurality of lighting circuits singly and in combination, and operating means for said switches comprising a single movable operating member adapted in one position to close the starter switch and in other successive positions to adjust the lighting switch for the closing of various lighting circuits, ratchet mechanism for holding the lighting switch in any position to which it is adjusted, during operation of the starter switch by said operating member, means tending to restore said lighting switch to normal condition, and means for tripping said ratchet mechanism to permit such return of the lighting switch.

[Claim 6 not printed in the Gazette.]

1,172,584. WATERING-TROUGH. JOHN B. CONRAD, Nicolaus, Cal. Filed May 24, 1915. Serial No. 30,091. (Cl. 119—78.)

1. In a watering trough the combination of a tank pivotally mounted intermediately of its ends, a partition arranged transversely in said tank and having an opening at the bottom thereof and dividing said tank into compartments, a valved outlet for one of said compartments the other compartment having an inlet, and means for opening said valved outlet on the tilting of the tank at a predetermined angle, said inlet and partition opening being so proportioned relatively to each other as to cause the water to accumulate first in the inlet containing compartment.



2. A watering trough comprising a tilting tank provided with compartments communicating at their lower ends, a valved outlet for one of said compartments, float controlled means for supplying water to the other compartment, means for locking said tank against tilting when the water is at a predetermined height therein, and means for releasing said locking means on the lowering of the water below a predetermined level.

3. A watering trough comprising a tilting tank provided with compartments communicating at their lower ends, a valved outlet for one of said compartments, float controlled means for supplying water to the other compartment, means for locking said tank against tilting when the water is at a predetermined height therein, means for releasing said locking means on the lowering of the water below a predetermined level, and means for opening the valved outlet on the release of said locking means.

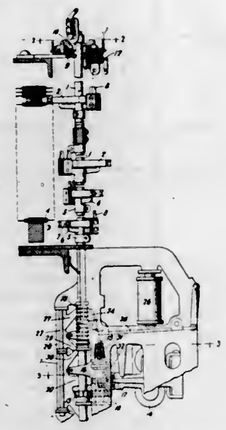
4. A tilting watering trough pivoted intermediately of its ends at a point nearer one end than the other, a transverse partition arranged in said tank and having an opening at its lower end providing communication between said compartments, said partition being arranged midway the length of said tank, one of said compartments having a discharge opening in the bottom thereof, a valve closing said opening and having a depending stem extending below the bottom of the compartment, means for engaging said stem on the tilting of said tank for opening said valve, a float mounted in the other compartment having an upwardly extending stem, levers slidably engaged with said stem, one of said levers being fulcrumed on said tank and having a latch, a coöperating catch member for engaging said latch to hold said tank against tilting until the water sinks below a predetermined level in the tank, and a valved supply pipe, the valve of which is connected with the other lever.

5. A watering trough comprising a rectangular tank pivotally mounted intermediately of its ends at a point nearer one end than the other, a transverse partition arranged in said tank midway the ends thereof and having an opening in its lower end forming a supply and a discharge compartment, a valved outlet for said discharge compartment, means for opening the valve of said outlet on the tilting of the tank, a standard arranged adjacent one end of said tank and having a finger extending laterally over the inlet compartment of the tank, a float disposed in said inlet compartment and having an upwardly extending stem with stops thereon, a lever fulcrumed on one wall of said inlet compartment and having one end slidably engaged with said float stem and the other end provided with a latch finger for engagement with the finger on said standard when the tank is in normal position, a valved supply pipe opening over said inlet com-

partment and a lever connected with the valve of said supply pipe and controlled by the rise and fall of the float.

[Claims 6 and 7 not printed in the Gazette.]

1,172,585. SELECTOR-SWITCH. HENRY F. DOBBIN, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 23, 1915. Serial No. 46,855. (Cl. 179—27.5.)



1. In an automatic switch, a brush support, a plurality of brushes on said support, a plurality of series of contacts arranged to be traversed by each brush, means for moving said support initially to select a brush and associate it with the desired one of its series of contacts, and means for moving said support secondarily to cause the selected brush to traverse the contacts in the selected series of contacts.

2. In an automatic switch, a brush support, a plurality of brushes on said support, a plurality of series of contacts arranged to be traversed by each brush, means for moving said support in one direction to select a brush and associate it with the desired one of its series of contacts, and means for moving said support in a different direction to cause the selected brush to traverse the contacts in the selected series of contacts.

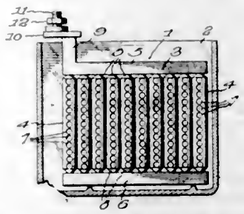
3. In an automatic switch, a brush shaft, a plurality of brushes fixed to said shaft, a plurality of series of contacts arranged to be traversed by each brush, means for rotating said shaft to select a brush and associate it with a desired one of its series of contacts, and means for moving said shaft longitudinally to cause the selected brush to traverse the contacts in the selected series of contacts.

4. In an automatic switch, a brush shaft, a plurality of brushes fixed to said shaft and spirally arranged thereon, a plurality of series of contacts arranged to be traversed by each brush, means for rotating said shaft to select a brush and associate it with the desired one of its series of contacts, and means for moving said shaft longitudinally to cause the selected brush to traverse the contacts in the selected series of contacts.

5. In an automatic switch, a brush shaft, a plurality of brushes fixed to said shaft and spirally arranged thereon, a plurality of series of contacts arranged to be traversed by each brush, means for rotating said shaft step by step to select a brush and associate it with a desired one of its series of contacts, and means for moving said shaft longitudinally step by step to cause the selected brush to traverse the contacts in the selected series of contacts.

[Claims 6 to 8 not printed in the Gazette.]

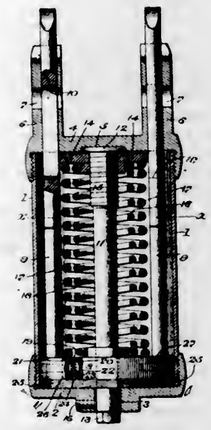
1,172,586. STORAGE BATTERY. JAMES WILLIAM EAST, Teague, Tex. Filed Sept. 13, 1915. Serial No. 50,447. (Cl. 204—29.)



The combination with a tank, of a plurality of L-shaped bars rectangular in cross section, a flat connecting plate joining the tops of the upright arms of said bars, a binding post on said plate, a plurality of tubes depending from the lower edges of the horizontal arms of said bars, an additional rectangular bar disposed in vertical alinement with each of the horizontal arms of the first mentioned bars and parallel thereto, and connecting the lower ends of said tubes, the opposite ends of the tubes at their junction with the bars being contracted, said last mentioned bars being adapted to rest on the bottom of said tank, each of said tubes having parallel rows of openings spaced equi-distant from each other, the diameter of each of the openings being one-half the diameter of the tubes, said openings being spaced in staggered relation, and active material in said tubes.

1,172,587. [WITHDRAWN.]

1,172,588. SHOCK-ABSORBER. ANSLEY H. FOX, Philadelphia, Pa., assignor to Fox Pneumatic Shock-Absorber Co., Philadelphia, Pa., a Corporation of Delaware. Filed May 13, 1915. Serial No. 27,755. (Cl. 21—50.)

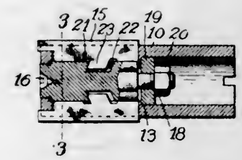


1. A shock absorber comprising in combination a casing adapted for connection with one member of a vehicle spring, a piston movable therein, a pair of compression springs bearing at one end against the piston and against an abutment at the opposite end, and tending to hold the piston in and return the same to normal position, means for adjusting the compression of said springs from the exterior of the casing, means for discharging air beneath said piston as it is moved against the action of the spring to act as a cushion upon the return movement of the piston, and means for connecting the piston with the other member of a vehicle spring.

2. A shock absorber comprising a casing adapted for connection with one member of a vehicle spring, a piston movable therein with its edges in close contact therewith, a bolt rotatably mounted in the casing and having bearings in said casing for its upper and lower ends and passing through said piston to assist in guiding it in its movement, an abutment in adjustable connection with the bolt, a compression spring bearing at one end against the abutment and at the opposite end against the piston to hold it in and return it to normal position, means carried by the piston for discharging air beneath said piston as it is moved against the action of the spring to act as a cushion upon the return movement of the piston, and rods connected with the piston on opposite sides of the bolt and extending exteriorly of the casing for connection with the other member of the vehicle spring.

3. A shock absorber, comprising in combination, a casing adapted for connection with one member of a vehicle spring, a cap connected with said casing and having a bearing in its inner face, a piston movable in said casing and engaging the walls thereof, a valve carried by the piston for discharging air beneath said piston as it is moved upwardly, a bolt rotatably mounted in the casing passing through the piston and having one end seated in said bearing and the opposite end extending exteriorly of the casing, an abutment adjustably mounted on the bolt, a pair of concentric compression springs bearing at one end against the abutment and at its opposite end against the piston to hold it in and return it to normal position, and rods connected with the piston on opposite sides of the bolt and extending exteriorly of the casing for connection with the other member of the vehicle spring.

1,172,589. REAMER. WILLIS S. FULLER, New Bedford, Mass., assignor to Morse Twist Drill & Machine Company, New Bedford, Mass., a Corporation of Massachusetts. Filed July 16, 1912. Serial No. 709,769. (Cl. 77—75.)



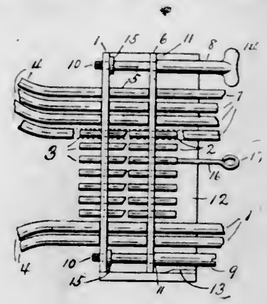
1. In a device of the class described, a stock bored to form a hollow tube, radially adjustable cutters in said stock, an annular shoulder formed on said stock and integral therewith in the bore of said tube near its forward extremity, and a rotary cam piece in said tube having its reduced forward extremity fitting within said annular shoulder as a bearing and its cam faces adapted to coact with said cutters.

2. In a device of the class described, a stock bored to form a hollow tube, radially adjustable cutters in said stock, an annular shoulder formed integral with said stock within said tube near its forward extremity, a rotary cam piece in said tube having its reduced forward extremity fitting within said annular member as a bearing and its cam faces adapted to coact with said cutters, and a second annular member within said tube fitting the reduced rear end of said cam piece and forming a bearing therefor.

3. In a device of the class described, a stock bored to form a hollow tube, an annular flange integral with said stock in the forward portion of said tube, radially adjustable cutters in said stock, a longitudinally adjustable rotary cam piece within said tube having its reduced forward extremity fitting within said annular flange as a bearing and its cam faces adapted by rotation of the cam piece to adjust said cutters, means for clamping said cutters to said cam faces by an endwise movement of the cam piece, and means for drawing the cam piece longitudinally in the stock.

4. In a device of the class described, a stock bored to form a hollow tube, an annular flange integral with said stock in the forward portion of said tube, radially adjustable cutters in said stock, a longitudinally adjustable rotary cam piece within said tube having its reduced forward extremity fitting within said annular flange as a bearing and its cam faces adapted by rotation of the cam piece to adjust such cutters, means for clamping said cutters to said cam faces by an endwise movement of the cam piece, means for drawing the cam piece longitudinally in the stock, and a second annular member within said tube fitting the reduced rear end of said cam piece and forming a bearing therefor.

1,172,590. TUBE-COUPLING IN MULTIPLE UNITS. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Jan. 6, 1913. Serial No. 740,380. (Cl. 137—34.)



1. A plurality of tubes having a division of each at a substantially common position as to their lengths, a nipple to each tube at said division, a sliding coupling to each pair of nipples at said division, a holder means at each side of said division, each holder retaining all the nipples at that side of the division in axial alinement of their ends to the ends of the nipples of the other division, and screw means for detachably drawing together and clamping said holders and couplings in connected relation, said screw means having a stop thereon adapted to check against the part of the apparatus with which said screw-means has its screw-engagement.

2. A plurality of tubes having a division of each at a substantially common position as to their lengths, a nipple to each tube at said division, a sliding coupling to each pair of nipples at said division, and a means for holding together all the nipples at each side of said division in opposite relation of their ends to the ends of the nipples of the opposite side, and a screw means for detachably drawing together and clamping said couplings as a unit, said screw means having a stop thereon adapted to check against the part of the apparatus with which said screw-means has its screw-engagement.

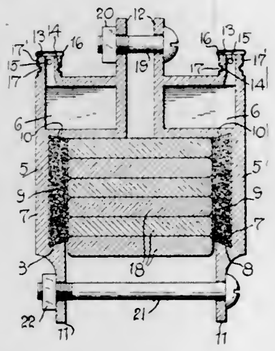
3. A plurality of tubes having a division of each at a substantially common position as to their lengths, a nipple to each tube at said division, a sliding coupling to each pair of nipples at said division, a holder means at each side of said division, each holder retaining all the nipples at that side of the division in axial alinement of their ends to the ends of the nipples of the other division, and means for detachably drawing together and clamping said holders and couplings in connected relation, and a guide flange attached to an edge of one of said holders and extending across and beyond the similar edge of the other said holder.

4. A plurality of tubes having a division of each at a substantially common position as to their lengths, a nipple to each tube at said division, a sliding coupling to each pair of nipples at said division, and a means for holding together all the nipples at each side of said division in opposite relation of their ends to the ends of the nipples of the opposite side, screw means for detachably drawing together and clamping said couplings as a unit, and a guide means determining the position of said holders one to the other as to the axial alinement of said nipples one to another.

5. A multiple unit coupling consisting of two opposed members, each comprising a plurality of nipples extending outwardly from each said member toward the other, each said nipple of one member being in axial alinement with the opposed nipple of the other member, and a flexible and slidable sleeve to each opposed pair of nipples and engaging both nipples of that pair, each said member and its nipples being adjacent to the other said member and its nipples.

[Claims 6 to 13 not printed in the Gazette.]

1,172,591. LEAF-SPRING OILER. GEORGE F. GARRITY, Scranton, Pa. Filed Aug. 24, 1914. Serial No. 858,351. (Cl. 184—1.)



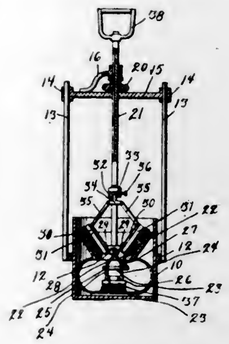
1. An oiling device of the character described comprising two similar sections, each having an oil chamber and an extension formed thereon adapted for engagement against one of the edges of the leaves of the vehicle spring, the said extension being provided with a channel in its inner face in connection with the oil chamber, a strip of absorbent material arranged in said channel, and means for securely clamping the two sections of the device upon the spring.

2. An oiling device of the character described comprising two similar sections, each having an oil chamber adapted for engagement upon the upper surface of a vehicle spring, said chamber having an integral extension provided with a channel in its inner face in connection with said oil chamber, a strip of absorbent material arranged within said channel and projecting beyond the inner face of said extension for engagement upon one edge of the spring leaves, and means for removable clamping said sections upon the spring.

3. An oiling device of the character described, comprising two similar sections, each provided with an oil chamber adapted for engagement upon the top of the vehicle spring, said chamber having an extension formed upon one end provided with a channel in its inner face, the bottom wall of the chamber having an orifice connecting the chamber with said channel, a strip of absorbent material arranged in said channel and projecting downwardly therefrom for engagement against one edge of the spring leaves, said chambers being provided upon their other ends with apertured ears, a clamping bolt connecting said ears, and a clamping bolt connecting the lower ends of said extensions.

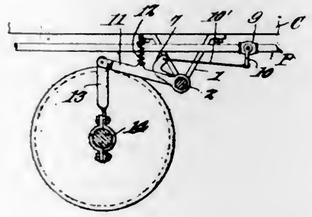
4. An oiling device for vehicle springs including an oil container provided with an integral extension spaced from one of the longitudinal edges of the spring leaves and having a channel in its inner face, a strip of absorbent material arranged in said channel and contracting with the edges of the leaves to supply oil to the opposed contacting faces of the leaves in their relative movement, one wall of the oil container being provided with a duct to constantly feed the oil to said absorbent strip, and means for securing the container upon the vehicle springs and effecting a pressure of the absorbent strip against the edges of the spring leaves.

1,172,592. CUSPIDOR CLEANER AND CARRIER. WILLIAM J. GHRAMES, Anadarko, Okla. Filed May 7, 1915. Serial No. 26,615. (Cl. 141—7.)



A cuspidor cleaner comprising a shaft having a hand-hold at one end and having its opposite end bifurcated and provided with brush clamping jaws, means for exerting clamping action of the jaws, a pair of collars slidably mounted upon the shaft and provided with means for holding them at different points thereon, pairs of toggle links pivoted to and connecting the collars, a brush carried by that link of each pair, nearer the bifurcated end of the shaft, and means for rotating the shaft with respect to the hand-hold.

1,172,593. BRAKE-CONTROLLING MECHANISM FOR RAILWAY-CARS. GEORGE M. HALLIBURTON and SAMUEL L. MCBURNEY, Port Arthur, Tex., assignors of one-third to Leo S. Madiem, Port Arthur, Tex. Filed Oct. 9, 1915. Serial No. 55,053. (Cl. 188—2.)



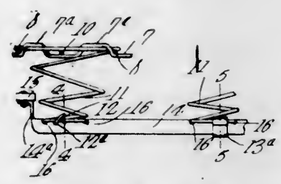
1. The combination with a car structure and a pipe of an air brake system, of a valve in said pipe, separately revoluble members supported under the car structure, means for transmitting motion from either of said members to the valve to place the valve in service application,

and separate means operated by the dropping of either end of an axle of the car, for shifting one of said first mentioned means.

2. The combination with a car structure and a pipe of an air brake system, of a valve in said pipe, separate revoluble members supported thereunder, means operated by either of said members for shifting the valve, separate means for yieldingly supporting said members in predetermined positions, and means operated by the dropping of either end of an axle of the car, for shifting one of said members to place the valve in service application.

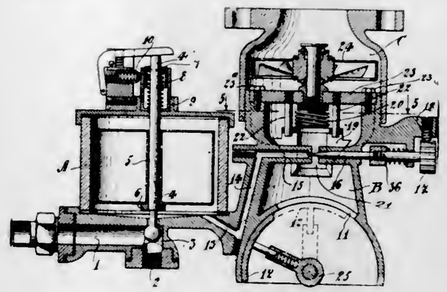
3. The combination with a car structure and a pipe of an air brake system, of a rod supported under said structure, separate sleeves mounted for rotation thereon, an arm mounted for rotation on the rod and between the sleeves, a connection between the arm and the valve, cooperating means upon the arm and the respective sleeves whereby the rotation of either sleeve will result in the actuation of the arm, yieldable means for holding each sleeve normally in a predetermined position, and means adapted to be actuated by the falling of one end of the axle, to rotate the sleeves and shift the valve to service application.

1,172,594. COUCH SPRING CONSTRUCTION. JOHN HANCOCK, Philadelphia, Pa. Filed July 13, 1911. Serial No. 638,324. (Cl. 5—29.)



In a spring construction, a cross bar; a tie wire engaged with the cross bar against upward and downward movement; a coiled wire spring resting on the cross bar and embodying a lower convolution threaded beneath the tie wire, the tie wire being of smaller diameter than the wire out of which the spring is made, whereby when the spring is rotated, the lower convolution thereof may distort the tie wire and form therein seats with which the said lower convolution of the spring engages.

1,172,595. CARBURETER. FORREST A. HEATH, Jersey City, N. J., and WILLIAM O. TAYLOR, New York, N. Y.; said Taylor assignor to New Jersey Carbureter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 3, 1911. Serial No. 612,027. (Cl. 48—154.1.)

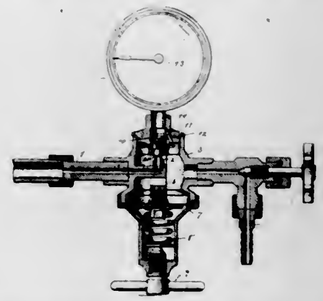


1. In a carbureting device having an atomizing chamber and a mixing chamber the combination of a spring pressed valve in the atomizing chamber, a bar detachably secured to the walls of the carbureting device, a valve spring between the valve and bar, and a mixing member carried by the bar.

2. In a carbureter a bar supporting at one side thereof downwardly extending air valve guiding members, a hollow air valve member slidable thereupon, fuel delivering means terminating within the opening of the valve and a rotatable mixing device having its axis of rotation in alinement with the axis of the opening in the hollow valve member.

3. A carbureter having an upright casing with a main air controlled valve at the lower portion thereof, a fuel supply leading to the interior of said casing and terminating above the main valve opening, a hollow air valve within which said fuel supply terminates, a transversely extending bar detachably secured in the upper part of said casing, depending members secured thereto for guiding said hollow air valve, an upright stud carried by said bar and located between said depending guiding members, and a mixing member mounted on said stud in the path of the gaseous mixture which passes upwardly past said bar.

1,172,596. VALVE FOR FLUID-PRESSURE REGULATORS. AUGUST HEITHECKER, Brooklyn, N. Y. Filed Apr. 14, 1915. Serial No. 21,192. (Cl. 50—23.)



A valve for fluid pressure regulators comprising a casing, an inclosed gas nozzle, a yoke movably mounted within the casing and having an upper threaded tubular extension, a diaphragm controlling the yoke, a nut tapped into the upper portion of the tubular extension, a screw suspended from the nut, a plug carried by the screw and slidably engaging the lower portion of the tubular extension, and a valve secured to the plug and coacting with the nozzle.

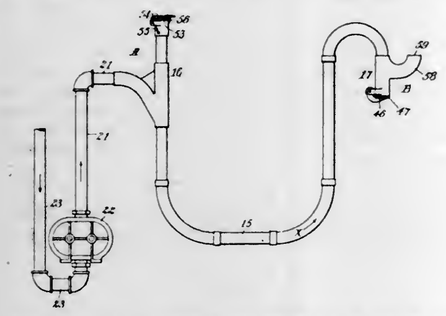
1,172,597. PROCESS OF PRODUCING DEPHOSPHORIZED HIGH-GRADE PIG-IRON. PAUL L. T. HÉROULT, New York, N. Y. Filed July 30, 1912. Serial No. 712,258. (Cl. 204—64.)

The process of refining phosphoric blast furnace pig iron which consists in treating it in an electric furnace in a non-oxidizing atmosphere with a basic slag containing oxid of iron at a temperature just sufficient to keep the slag molten and to cause it to combine with the phosphorus in the bath and to leave the carbon practically unchanged.

1,172,598. PNEUMATIC-DESPATCH-TUBE APPARATUS. JOHN S. JACQUES, Hingham, Mass. Filed Sept. 25, 1909. Serial No. 519,516. Renewed July 8, 1915. Serial No. 38,776. (Cl. 243—7.)

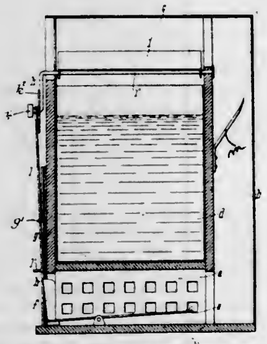
1. A pneumatic despatch tube apparatus having, in combination, two tubes connecting two stations and through which carriers are adapted to be transmitted, an air current creating device having an inlet connected to one of said tubes and an outlet connected to the other of said tubes, a switch located adjacent to the outlet end of

each of said tubes, a shaft rotatably mounted adjacent to the receiving end of each of said tubes, a pair of switches mounted on said shafts, one of said switches being connected in circuit with the switch at the outlet end of its respective tube, the other of said switches being connected in circuit with said air current creating device, means on said shafts adapted to be actuated by the passage of carriers through said tubes to rotate said shafts and close the switches thereon, and means on said shafts adapted to hold said last named switches in said closed condition while the electric circuits including the switches at opposite ends of said tubes respectively are energized.



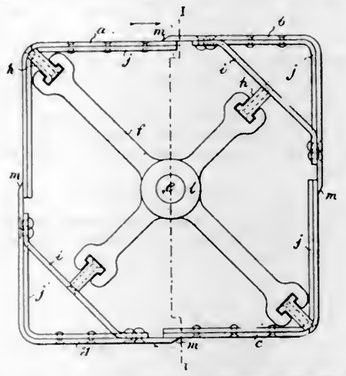
2. A pneumatic despatch tube apparatus having, in combination, two tubes connecting two stations and through which carriers are adapted to be transmitted, an air current creating device having an inlet connected to one of said tubes and an outlet connected to the other of said tubes, a switch arranged at the outlet end of each of said tubes, a shaft rotatably mounted adjacent to the receiving end of each of said tubes, a pair of normally open switches mounted on each of said rotary shafts, one of said switches being connected in circuit with the switch at the outlet end of its respective tube, the other of said switches being connected in circuit with said air current creating device, means on said shafts adapted to be actuated by the passage of carriers through said tubes to rotate said shafts and close the switches mounted thereon, means on said shafts adapted to hold said last named switches in said closed condition while the electric circuits including the switches at the opposite ends of said tubes are energized, and means adapted to return said switches to their normal positions upon the deënergizing of said last named circuit.

1,172,599. AUTOMATIC TRAP FOR MICE AND OTHER VERMIN. MICHAEL JAEGER, Darmstadt, Germany. Filed Oct. 11, 1912. Serial No. 725,261. (Cl. 43—26.)



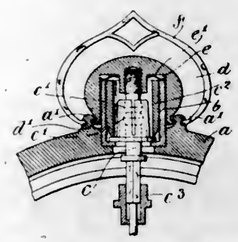
An animal trap of the character described comprising in combination with the trap door thereof, a support for said door, an operating rod, a trough shaped tilting platform upon said rod, adapted to be tilted to either side of the same, a crank upon the shaft for said platform, a rod attached to said crank connecting the tilting platform with said door for raising the trap door to its seat upon the fall of a trapped animal from said platform.

1,172,600. COLLAPSIBLE CORE FOR MAKING HOLLOW CONCRETE POSTS AND THE LIKE. PETER BURD JAGGER, London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Filed Mar. 4, 1911. Serial No. 612,394. (Cl. 25—128.)



A collapsible core comprising a number of rigid sections of which the edges of the alternate sections overlap the adjacent edges of the sections lying intermediate, a rod disposed within the sections, a series of members attached to the rod, slide bars slidingly engaged by said members and secured to the sections out of parallel with the rod, the slide bars actuating the inside sections being more sharply inclined to the rod than the slide bars actuating the outside sections and means associated with the rod for imparting lengthwise movement to the said member to thereby distend or contract the outer sections with a slower movement than the inner sections.

1,172,601. WATCH. AUGUSTE JAQUES, Chaux de Fonds, Switzerland, and CHARLES L. DEPOLLIER, New York, N. Y. Filed Nov. 9, 1915. Serial No. 60,493. (Cl. 58—95.)



1. In a watch, the combination of a pendant, a crown with a winding and setting arbor, and means to lock the crown positively against outward movement on the pendant.

2. In a watch, the combination of a pendant, a crown with a winding and setting arbor, and means to lock the crown positively against outward movement on the pendant, the crown and pendant having coöperating portions to form a tight seat when the crown is locked to the pendant.

3. In a watch, the combination of a watch-case center, a pendant, a crown adapted to form a tight joint with the pendant, and means to effect a locking engagement between the crown and the center to hold the crown against outward movement.

4. In a watch, the combination of a watch-case center, a pendant, a crown adapted to form a tight joint with the pendant, and headed studs secured to the center, the crown having a notched flange to engage said studs.

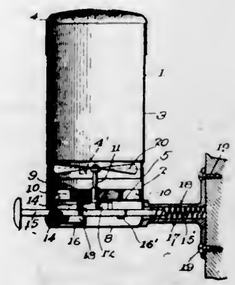
1,172,602. HAT, COAT, OR BAGGAGE CHECK. JOHN EDWARD JOHNSON, Ronceverte, W. Va. Filed Dec. 10, 1915. Serial No. 66,105. (Cl. 40—2.)



1. A wrap or baggage check, comprising two parts correspondingly numbered, one of said parts adjacent its edge having a pair of lugs, one extending at right angles to the other, said lugs having extensions extending toward the center of the part and at right angles to each other and adapted to overlie the other part, to retain the other part in position, and a spring clamp carried by one of the parts to attach the same to a wrap or baggage.

2. A wrap or baggage check, comprising two parts correspondingly numbered, one of said parts adjacent its edge having a pair of lugs, one extending at right angles to the other, said lugs having extensions extending toward the center of the part and at right angles to each other and adapted to overlie the other part, to retain the other part in position, the extension of one of the lugs having upon its under surface a protrusion, one of said parts having an annular groove upon its outer face to be engaged by said protrusion to materially assist in holding the parts of the groove in engagement with said lug, and clamping means carried by one of the parts to attach the same to a wrap or baggage.

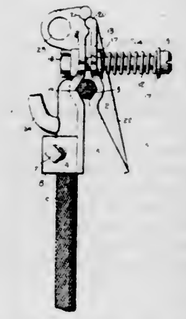
1,172,603. MEASURING AND DISPENSING DEVICE. NELSON P. JOHNSON, South Pasadena, Cal., assignor to Thoro Powdered Toilet Soap Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 2, 1915. Serial No. 106. (Cl. 221—108.)



1. In a dispenser, a container having a partition formed therein, the partition and bottom of the container being each formed with a discharge opening one above the other, a carrier mounted on the top of the partition and having pockets adapted to aline with the discharge openings, a cover plate positioned over the discharge openings in close proximity to the top face of the carrier, a spring carried by the cover plate to project into the pockets as they move under said plate, and means for intermittently rotating the carrier to bring the pockets into alinement with the discharge openings.

2. A dispenser for dry materials comprising a container having a discharge opening in the bottom thereof, a horizontal partition within said container having a discharg opening above said first mentioned opening, a carrier mounted on the partition having pockets adapted to aline with the discharge openings, a plate mounted above the carrier in close proximity thereto, said plate being in alinement with the discharge openings, a spring carried by the plate to project into the pockets as they are moved into registration with the discharge openings, a shaft extending through the partition and being rigidly secured to the carrier, an agitator secured to the shaft above the partition, a ratchet wheel secured to the shaft below the partition, a reciprocatory plunger movable through the container under the partition, a pawl pivoted at one end to the plunger and having a tooth to engage said ratchet wheel, and means for limiting the movement of the plunger in one direction.

1,172,604. SNAP CLAMP OR GRIP FOR ELECTRICAL CONDUCTORS. TOMLINSON FORT JOHNSON, Jr., Atlanta, Ga. Filed Feb. 18, 1914. Serial No. 819,360. (Cl. 173—273.)



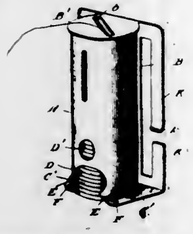
1. A grip for electric conductors comprising a pair of rigid jaws with a V entrance between, each jaw having a transverse groove, a stud projecting from one jaw, a spring on said stud for closing the jaws together, a projection on one of the jaws for lifting and lowering the device into engagement with an overhead conductor, and means on one of the jaws for the attachment of a cable thereto.

2. A grip for electric conductors comprising a pair of jaws with a V entrance between them, grooves on the jaws to bite upon the conductor, a bead and groove engagement between the jaws constituting a hinge, a spring between said hinge and said first mentioned grooves, a projection on one of the jaws for lifting and lowering them into engagement with an overhead conductor, a projection to permit the jaws to be forcibly pulled or drawn down over a conductor, and an enlargement on one of the jaws to which a cable is connected.

1,172,605. COIN-HOLDER OR CHANGE-MAKER. JOSHUA W. JONES, Harrisburg, Pa.; Commonwealth Trust Company, executor of said Joshua W. Jones, deceased, assignor to Jones Company, Harrisburg, Pa., a Firm composed of Joseph R. Jones, Philadelphia, Pa., J. Miley Jones, Robert Ross Jones, and John Paul Jones, Harrisburg, Pa., and William D. Jones, New York, N. Y. Filed Oct. 2, 1912. Serial No. 723,538. (Cl. 133—6.)

1. A coin holder and change maker embodying a tubular coin receptacle having a coin entrance at the top and an exit opening at the bottom extending in a plane at right angles to the axis of the receptacle, there being coin supporting ledges at the bottom of the receptacle spaced apart to form an opening entirely across the bottom of the receptacle to permit the passage of the user's finger between the ledges from the back to the front of the receptacle and the vertical walls of the receptacle being cut away to form openings at front and back above the level of the coin exit opening merging freely into said

opening and the opening across the bottom of the receptacle, whereby the bottom coin in the receptacle can be grasped at diametrically opposite points and extracted from the receptacle without obstruction by the coin supporting ledges.



2. A coin holder and change maker embodying a tubular coin receptacle having a coin entrance opening at the top and a transverse exit opening at the bottom, coin supporting ledges at the bottom of each side of the receptacle having between them a finger slot extending from back to front of the receptacle, and a narrow cross bar bridging said slot intermediate the ends of the same to prevent the escape of coins edgewise through the slot.

3. A coin holder and change maker embodying a tubular coin receptacle having a coin entrance opening at the top and a transverse exit opening at the bottom with a thumb opening above and merging into the exit opening, coin supporting ledges at the bottom of each side of the receptacle having between them a finger slot extending from back to front of the receptacle and merging into the exit and thumb openings at the front, and a narrow cross bar bridging said slot intermediate the ends of the same to prevent the escape of coins edgewise through the slot.

4. A coin holder and change maker embodying a tubular coin receptacle having a coin entrance opening at the top and an exit opening at the bottom, coin supporting ledges at the bottom of each side of the receptacle, said ledges having between them a finger slot, whereby coins may be discharged through the exit opening, and yielding retaining arms, located entirely without the tubular casing and secured at the rear to the receptacle, said arms having vertical extensions at the free ends working in guide slots in the ledges, whereby they are guided and their elastic movement limited.

5. In a coin holder and change maker, the combination with the tubular receptacle having a coin exit opening at the bottom, of a body plate to which said receptacle is permanently secured, said plate having at the top a circular slotted extension forming the top of the receptacle, integral spaced arms at the bottom forming coin supporting ledges for the receptacle below the exit opening, and projections at each edge extending parallel with the axis of the receptacle, said projections at each side being spaced apart intermediate the height of the receptacle, the downwardly extending projections having their lower ends bent forwardly.

[Claim 6 not printed in the Gazette.]

1,172,606. PAPER-WEIGHT, LETTER-CLIP, AND CALENDAR-PAD HOLDER. JOSHUA W. JONES, Harrisburg, Pa; Commonwealth Trust Company, executor of said Joshua W. Jones, deceased, assignor to Jones Company, Harrisburg, Pa., a Firm composed of Joseph R. Jones, Philadelphia, Pa., J. Miley Jones, Robert Ross Jones, and John Paul Jones, Harrisburg, Pa., and William D. Jones, New York, N. Y. Filed Dec. 4, 1913. Serial No. 804,683. (Cl. 40—146.)

1. A device of the character described, comprising a base having heavy side portions connected by a relatively light intermediate portion, and upwardly extending substantially flat plate members converging toward each other at their upper ends, said device embodying means for holding said plate members yieldingly in juxtaposition at their upper ends, one of said plate members having calendar pad holding means on its outer side.



2. A device of the character described, comprising a base embodying heavy side portions and an intermediate portion connecting the side portions, upwardly converging substantially flat plate members, said device embodying means for yieldingly holding said plate members in juxtaposition at their upper ends to form a paper clip, one of said plate members having a calender pad edge receiving recess therein.

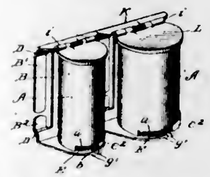
3. A device of the character described, comprising a base having a relatively light intermediate portion connecting its heavy side portions, upwardly converging substantially flat arms, said device embodying means for holding said arms yieldingly in juxtaposition at their upper ends, the upper ends of the arms being extended laterally to form a handle whereby the device may be lifted, the proximate faces of said lateral extensions being divergent to guide papers between the arms, one of said arms being provided with calendar pad holding means on its outer side.

4. A device of the character described comprising a heavy base formed of two parallel sections flexibly connected together, and an upwardly extending arm mounted on each of said base sections, said arms converging toward their upper ends to form a paper clip.

5. A device of the character described, comprising a heavy base formed of two parallel sections, an upwardly extending arm on each section, and a yielding connection between said sections bridging the space between the base of the arms, whereby papers held between the arms will rest on said connection and tend to hold the ends of the arms closed.

[Claims 6 and 7 not printed in the Gazette.]

1,172,607. COIN-HOLDER OR CHANGE-MAKER. JOSHUA W. JONES, Harrisburg, Pa.; Commonwealth Trust Company, executor of said Joshua W. Jones, deceased, assignor to Jones Company, Harrisburg, Pa., a Firm composed of Joseph R. Jones, Philadelphia, Pa., J. Miley Jones, Robert Ross Jones, and John Paul Jones, Harrisburg, Pa., and William D. Jones, New York, N. Y. Filed Jan. 28, 1914. Serial No. 814,964. (Cl. 133—5.)



1. In a coin holder and change maker, the combination with a cylindrical coin receptacle having openings at top and bottom for the entry and discharge of coins, of a frame plate having its lower portion extended forwardly at substantially right angles to form the bottom of the receptacle and its upper portion extended forwardly at substantially right angles, a top for the receptacle adapted to be pivotally mounted on the forwardly extended upper portion of the frame, and means connecting the receptacle and frame together at the back and bottom respectively.

2. In a coin holder and change maker, the combination with a cylindrical coin receptacle having openings at top and bottom for the entry and discharge of coins, of a frame having its lower portion extended forwardly at substantially right angles to form the bottom of the receptacle, parallel side arms formed integral with the frame and intermediate the ends thereof, and projecting downwardly from the top of the frame on opposite sides of the center, and bottom side arms formed intermediate the lower extremities of the first mentioned arms and the forwardly bent lower portion of the frame and projecting upwardly from the forwardly bent lower portion of the frame to cooperate with the top arms in retaining a belt.

3. In a coin holder and change maker, the combination with a cylindrical coin receptacle having openings at top and bottom for the entry and discharge of coins of a frame having its lower portion extended forwardly at substantially right angles to form the bottom of the receptacle, parallel side arms formed integral with the frame and intermediate the ends thereof, and projecting downwardly from the top of the frame on opposite sides of the center, and bottom side arms formed intermediate the lower extremities of the first mentioned arms and the forwardly bent lower portion of the frame and projecting upwardly from the forwardly bent lower portion of the frame to cooperate with the top arms in retaining a belt, said arms being offset toward the rear to admit the belt between them and the body of the frame.

4. In a coin holder and change maker, the combination of a frame plate having its lower end bent forwardly at substantially right angles and a plurality of slots in both portions of said frame member, of a cylindrical coin receptacle adapted to seat on the forwardly bent portion of the frame member and having openings at the top and bottom thereof for the entry and discharge of coins, a plurality of ears on said receptacle each adapted to register with one of said slots in the frame to extend therethrough and engage the outer side of the frame whereby the two members are connected together by the coöperation of the ears with the slots.

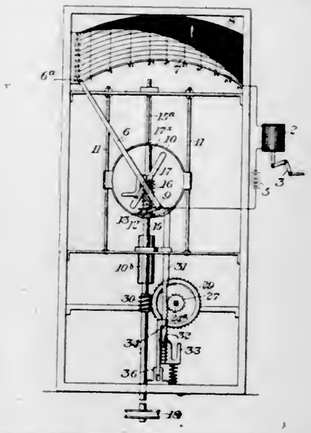
5. In a coin holder and change maker, the combination with a cylindrical coin receptacle having a discharge opening at the front, of a slide adapted to reciprocate in a straight line and co-extensive with the bottom of the receptacle and on which the coins are supported in the receptacle when the slide is retracted, a projection on the front of the slide for preventing the escape of coins through the opening the edge of the slide being recessed adjacent said projection and a projection on the back of the slide for engaging and advancing the lower coin through the opening in unison with the forward movement of the slide, said projection having an inclined face for imparting a lateral movement to the coin while it is being ejected.

[Claims 6 and 7 not printed in the Gazette.]

1,172,608. TRAIN-CONTROL APPARATUS. RAYMOND M. KAUFMANN, Pittsburgh, Pa. Filed July 30, 1914. Serial No. 854,086. (Cl. 246—58.)

1. Train control apparatus, comprising a speed controlling device, an electromagnet for operating the speed controlling device, a single movable member included in the circuit of said magnet, and means whereby the position of said member is dependent in part upon the speed of the train and in part upon track conditions, and which by its position controls the circuit of said magnet, together with indicating means coöperating with said movable member to indicate the speed of the train at all times; substantially as described.

2. Train control apparatus, comprising a speed controlling device, means including a magnet for operating said device, a movable member included in the circuit of said magnet, a fixed member which cooperates with the movable member to normally close said circuit, speed controlled means for normally determining the position of the movable member, and track controlled means for modifying the position of said member under predetermined track conditions without affecting the extent of its speed-controlled movement; substantially as described.



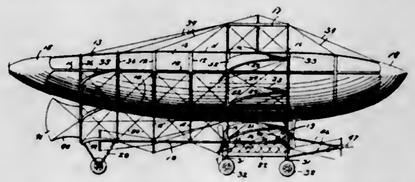
3. Train control apparatus, comprising speed controlling means including a magnet, an elongated contact member included in the circuit of said magnet and of varying dimensions throughout its length, a movable contact member also included in the circuit of said magnet, speed controlled means for moving the movable contact member with respect to the elongated contact member, and track controlled means for changing the position of said movable contact member relatively to the other contact member; substantially as described.

4. Train control apparatus, comprising speed controlling means including a magnet, a movable contact member in the circuit of said magnet, a coöperating contact member, speed driven means for moving the movable contact member longitudinally with respect to the coöperating contact member, and track controlled means for moving the movable member transversely with respect to the coöperating contact member; substantially as described.

5. Train control apparatus, comprising speed controlling means including a magnet, an elongated contact member included in the circuit of said magnet, said elongated member being of varying width, a movable coöperating contact member also included in the circuit of the magnet, speed controlled means for moving the movable contact member in one direction with respect to the coöperating contact member, and track controlled means for moving the movable contact member in another direction with respect to the coöperating contact member; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

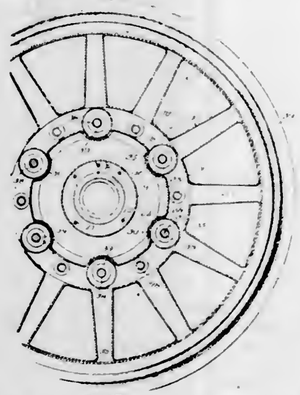
1,172,609. AIRSHIP. WILLIAM R. KELLEY, San Francisco, Cal. Filed Jan. 11, 1912, Serial No. 670,673. Renewed July 20, 1915. Serial No. 41,015. (Cl. 244—3.)



The combination in an airship, of a frame comprising top, bottom and side rods, the rods converging at each

end of the frame, cap members at each end of the frame fixedly secured to the said rods, a plurality of transverse rib bands rigidly connecting the said rods at spaced intervals, a plurality of inflatable cells attached to the rods and bands disposed between each adjacent pair of bands and constituting a balloon gradually tapering toward its opposite ends and means for propelling and steering the balloon.

1,172,610. RESILIENT WHEEL. MARTIN F. KETTLER, Houston, Tex., assignor to Downing Pneumatic Wheel Company, Houston, Tex. Filed Feb. 25, 1915. Serial No. 10,499. (Cl. 152—42.)



1. In a wheel of the class described, a hub, casing plates carried by the hub, a floating spoke rim disposed between the casing plates, the rim being formed interiorly at intervals with seats extending inwardly from its inner side, abutment members housed within the rim and in said seats, buffer members carried by the said casing plates and coöperating with said abutment members, and a pneumatic cushion interposed between the rim and hub and having depressions receiving the said seats upon the rim.

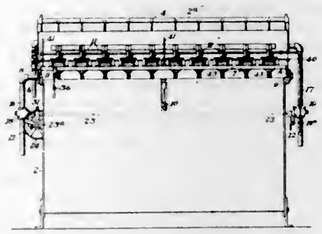
2. In a wheel of the class described, a hub, casing plates carried by the hub, a hollow floating spoke rim disposed between the casing plates, the rim being formed interiorly at intervals with seats bulging inwardly from its inner side, abutment sleeves housed within the rim and partly within the said seats, buffer members carried by said casing plates and coöperating with said abutment sleeves, and a pneumatic cushion interposed between the rim and hub and having depressions receiving said seats upon the rim.

3. In a wheel of the class described, a hub, casing plates carried by the hub, a floating spoke rim disposed between the casing plates, the rim being formed interiorly at intervals with seats extending inwardly from its inner side, abutment members housed within the rim and in said seats, buffer members carried by the said casing plates and coöperating with said abutment members, and a pneumatic cushion interposed between the rim and hub, that portion of the cushion which contacts with the rim being thickened and being formed with depressions receiving the said seats of the rim.

4. In a wheel of the class described, a hub, casing plates carried by the hub, a floating spoke rim disposed between the casing plates, the rim being formed interiorly at intervals with substantially semi-cylindrical seats projecting inwardly from its inner side in the direction of the axis of the wheel, abutment sleeves disposed within the concavities of the seats, buffer members carried between the casing plates and extending within the said sleeves and of a diameter less than the diameter of the sleeves, and a pneumatic cushion interposed between the rim and hub and having its periphery formed at intervals to receive the said seats upon the rim.

5. In a wheel of the class described, a hub, casing plates carried by the hub, a floating spoke rim surrounding said hub, the rim being formed interiorly at intervals with portions bulged in the direction of the axis thereof, abutment members disposed within the concavities of the said bulged portions and within the said rim, buffer members carried by the casing plates and arranged for cooperation with the abutment members, and a pneumatic cushion interposed between the rim and the hub and formed in its outer periphery with transverse depressions receiving the bulged portions of the said rim.

1,172,611. APPARATUS FOR BURNING AND HARDENING INCANDESCENT MANTLES. ELMER L. KNOEDLER, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Sept. 30, 1913. Serial No. 792,582. (Cl. 67—100.)



1. In apparatus for hardening and shaping mantles, a series of muffles, supporting means therefor, a holder for a series of mantles, said holder and the muffles being capable of a relative vertical movement, and the holder having openings which will pass the upper portions of the muffles, said holder also having a separate support for each mantle, said supports being movably seated in said openings and each having means for engaging and supporting the ring of a mantle, substantially as described.

2. In apparatus for hardening and shaping mantles, the combination with a group of muffles, and a burner for each muffle, of a holder for a group of mantle supports, and a separate support for each mantle removably mounted on said holder, each of said supports having means for engaging and supporting the ring of a mantle, and each of said supports also having means for separately centering it with respect to its corresponding muffle together with means for seating each support over a muffle independently of said holder, substantially as described.

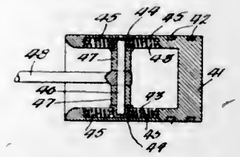
3. In apparatus for hardening and shaping mantles, the combination with a plurality of separate muffles, of a movable mantle carrier having seats for a plurality of separate mantle supports, a plurality of mantle supports adapted to said seats each of said supports having means for engaging and supporting the ring of a mantle, and means whereby each of said supports may be individually centered on its seat with respect to one of the muffles, together with means for seating each support over a muffle independently of said holder, substantially as described.

4. In apparatus for hardening and shaping mantles, a plurality of muffle cavities arranged to receive the mantles, a support or carrier for a plurality of mantles, and separate centering means for each mantle engaging its respective muffle arranged to center the mantles individually within the individual muffle cavities, substantially as described.

5. Apparatus for hardening and shaping mantles, comprising a muffle support, a plurality of muffles on said support, a mantle carrier, and a plurality of mantle holders arranged to be movably seated on said carrier, and the muffle support also having means for seating the mantle holders, substantially as described.

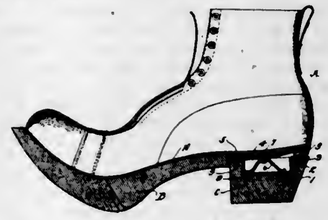
[Claims 6 to 20 not printed in the Gazette.]

1,172,612. INTERNAL-COMBUSTION ENGINE. JOHN ANDREW KREMER, Aurora, Ill. Filed Jan. 2, 1915. Serial No. 1140. (Cl. 123—78.)



In an internal combustion engine, a piston therefor operable in the combustion chamber of said engine, said piston being cylindrical and hollow and having one end open, the other end closed, the interior wall of the hollow piston having diametrically opposite elongated guide grooves machined in the wall, members mounted in the guide grooves, coil springs upon opposite sides of each member and coöperating with the end walls of the guide groove, a pivot pin having its opposite ends fitting in said member, sleeves on the pin, and a pitman pivoted to the pin between the sleeves.

1,172,613. SHOE CONSTRUCTION. PEDER CHRISTIAN TRONDRUP LARSEN, Chicago, Ill. Filed Dec. 28, 1914. Serial No. 879,346. (Cl. 36—37.)

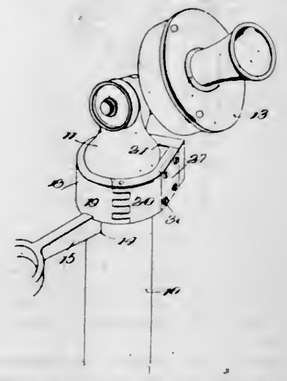


1. A shoe comprising a sole and a heel, the latter being formed with a recess in its upper side, a casing disposed in said recess and having an outwardly projecting flange seated on the heel and disposed in a plane lower than the adjacent portion of the sole, a heel plate arranged above said casing with its upper surface substantially the same plane as the adjacent portion of the sole, a connection intermediate the front end portion of said heel plate and the front portion of the flange of said casing affording yielding movement of the plate, a bowed spring arranged longitudinally of the shoe and disposed between the heel plate and the bottom of said casing, and a connection between the front end of the said spring and said casing, the rear end of said spring being disposed in spaced relation to the rear end of the casing but freely movable toward and from the same.

2. A shoe comprising a sole and a heel, the latter being formed with a recess, a heel plate disposed above said recess and having its upper surface substantially in the same plane as the adjacent upper surface portion of the sole, a connection between the front end of said heel plate and the sole permitting slight upward and downward movement of the plate, a spring disposed in said recess and of bowed form, a connection between the central portion of said spring and the central portion of the heel plate with the under side of which the spring engages, and a connection between the front end of said spring and the heel coacting to hold the heel plate in proper position and to hold the spring with its rear end spaced from the rear end portion of the recess but freely movable toward and from the same.

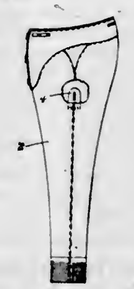
1,172,614. TELEPHONE-LOCK. JOHN E. LAVALLEY, Portland, Oreg. Filed May 18, 1915. Serial No. 28,887. (Cl. 179—189.)

1. A locking device for desk telephones including a locking collar having an intermediate section and terminal sections hingedly connected to the ends of the intermediate section, the collar being adapted to surround the standard portion of the instrument and engage between the receiver supporting arm and head portion of the instrument to hold the arm in lowered position, the intermediate portion of the collar being formed with a receiver supporting arm receiving slot and the end portions of the collar being shaped to abut against each other at substantially right angles when the collar is closed, and locking means for securing the end portions together.



2. A locking device for desk telephones including a collar having an intermediate receiver supporting arm engaging section and terminal sections hingedly connected to the ends of the intermediate section, the sections being shaped in such a manner that the free ends of the terminal sections may abut each other when the collar is closed, and coacting means carried by the terminal sections for interlocking engagement.

1,172,615. GARMENT ATTACHMENT. GEORGE F. LELANSKY, Canton, Ohio. Filed July 20, 1915. Serial No. 40,851. (Cl. 2—96.)

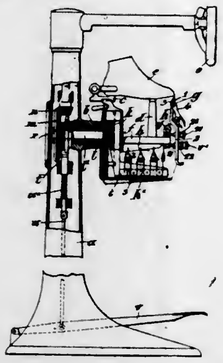


In a two-part garment, the combination of fastening means secured to the extreme bottom of the upper member of the two-part suit and below the waist-line thereof, and fastening means secured to the inside of the lower member of the two-part garment and below the waist-line of said lower member.

1,172,616. PULLING-OVER MACHINE. JOHANNES LOOSE, Stuttgart-Cannstatt, Germany, assignor to the Firm of Fortuna-Werke, Specialmaschinenfabrik, G. M. B. H., Stuttgart-Cannstatt, Germany. Filed Feb. 16, 1915. Serial No. 8,697. (Cl. 12—9.)

1. In a pulling-over machine a horizontal shaft, a last support thereon, a row of pliers disposed on said support, tensioning means for said pliers, means for turning the support on said horizontal shaft, a driving wheel at one end of this shaft for tightening said tensioning device,

driving wheels on the other end of said shaft, means for coupling the turning and tensioning means, and means for releasing the coupling between the turning and tensioning means.



2. In a pulling over machine, in combination, a last support, a plurality of rows of screw threaded bolts arranged on said support, one above the other, and pliers movably mounted in a substantially vertical position on said bolts.

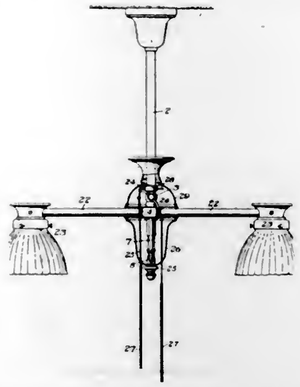
3. In a pulling over machine, in combination, a last support, a plurality of rows of screw threaded bolts arranged on said support, one above the other, stops and set screws on the lower row of bolts, set screws on the upper row of bolts, pliers movably mounted in a substantially vertical position on said bolts and between the stop of the lower bolt and the set screws on the bolts, and means for operating the pliers.

4. In a pulling over machine, in combination, a last support, a row of pliers movably fastened to said support by one arm each, intermediate arms pivoted to the pivot pins of said pliers, pawls pivoted to said intermediate arms, projections on the free arms of said pliers opposite said pawls and means for disengaging said pawls from said projections.

5. In a pulling over machine, in combination, a last support, a row of pliers movably fastened to said support by one arm each, intermediate arms pivoted to the pivot pins of said pliers, pawls pivoted to said intermediate arms, projections on the free arms of said pliers opposite said pawls, springs adapted to open said pliers and to keep said pawls engaged with the projections on said free arms, springs adapted to press said intermediate arms toward the fixed arms of said pliers, means for pulling said intermediate arms backward and downward in the direction of the fixed arms and means for disengaging said pawls from said projections.

1,172,617. INVERTED INCANDESCENT LAMP. HOWARD LYON, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed May 24, 1913. Serial No. 769,619. (Cl. 67—94.)

1. A chandelier for a plurality of separated incandescent gas lamps, comprising a fitting, an upwardly extending gas supply pipe connected to said fitting and constituting the support for the chandelier, a common gas and air chamber within said fitting, a plurality of laterally extending combined gas and air supply pipes connected to the fitting and communicating with the gas and air chamber, means for supporting a burner and glassware on the ends of each of said pipes, a mixing tube extending downwardly from the fitting and communicating with the gas and air chamber, a needle valve casing below the lower end of the mixing tube, a needle valve within said casing for controlling the supply of gas to the mixing tube, means for admitting air to the mixing tube, a gas supply tube communicating with the gas supply pipe and connected to the needle valve casing, and a valve for shutting off the supply of gas to the needle valve casing; substantially as described.



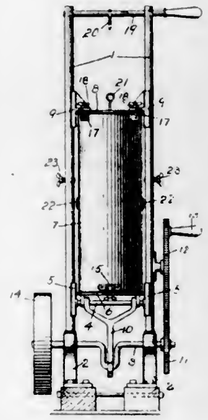
2. A chandelier for a plurality of separated incandescent gas lamps, comprising a fitting, an upwardly extending gas supply pipe connected to said fitting and constituting the support for the chandelier, a common gas and air chamber within said fitting, a plurality of laterally extending combined gas and air supply pipes connected to the fitting and communicating with the gas and air chamber, means for supporting a burner and glassware on the ends of each of said pipes, a mixing tube extending downwardly from the fitting and communicating with the gas and air chamber, a needle valve casing below the lower end of the mixing tube, a needle valve within said casing and controlling the supply of gas to the mixing tube, means for admitting air to the mixing tube, a gas supply tube communicating with the gas supply pipe and connected to the needle valve casing, and a valve for shutting off the supply of gas to the needle valve casing, together with a canopy inclosing the fitting, gas valve, mixing tube, needle valve chamber, and the tube connecting the needle valve chamber with the main gas supply pipe; substantially as described.

3. A fitting for chandelier for incandescent gas lamps having a body portion, there being a gas chamber and a gas and air chamber in said body portion in approximately the same horizontal plane, means for connecting oppositely extending inlet and outlet pipes to the gas chamber, means for connecting outlet pipes to the gas and air chamber, at right angles to the gas inlet and outlet pipes, and means for connecting a mixing tube to the gas and air chamber parallel with the gas inlet and outlet pipes; substantially as described.

4. A chandelier for a plurality of separated inverted incandescent gas lamps, comprising a fitting, there being a plurality of chambers within said fitting, a gas supply pipe connected to said fitting and communicating with one of said chambers, a plurality of laterally extending combined air and gas supply pipes connected to said fitting and communicating with the other chamber, a mixing tube connected to said fitting and extending downwardly therefrom, said mixing tube communicating with the second chamber, a needle valve casing below the mixing tube and in line therewith, a gas supply tube connected to the needle valve casing and the fitting, said gas supply tube opening communication between the first chamber and a space within the needle valve casing, means for supplying air to the mixing tube, and a needle valve within the needle valve casing for controlling the supply of gas; substantially as described.

5. A chandelier for a plurality of separated incandescent gas lamps, comprising a fitting, an upwardly extending gas supply pipe connected to said fitting and communicating with the gas chamber in said fitting, a needle valve casing supporting below said fitting, a gas supply pipe supporting the needle valve casing connected to the fitting and adapted to supply gas from the gas chamber in the fitting to the interior of the needle valve casing, a vertically disposed needle valve in said casing, a gas and air chamber within the fitting, a plurality of gas and air supply tubes extending in radial directions from the fitting and communicating with the gas and air chamber, and a downwardly extending mixing tube communicating with said chamber extending to a point slightly above the needle valve casing, said mixing tube extending parallel with the gas supply pipe connecting the gas chamber and the fitting with the needle valve casing; substantially as described.

1,172,618. CHURN. CHARLES A. MCKERAHAN, Wilmending, Pa. Filed Sept. 29, 1914. Serial No. 864,027. (Cl. 31—18.)



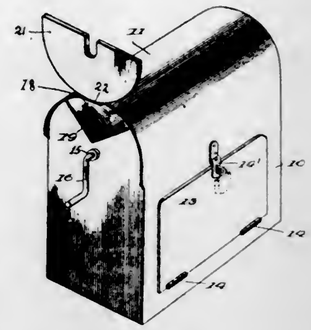
1. In a churn, the combination with standards, a container, a support for said container slidably mounted on said standards and removably secured to the container, of trunnions carried by the standards for suspending said container independently of the support.

2. In a churn, the combination with standards, a container, means for reciprocating said container within the standards, and clamps for securing the container to said means, of removable trunnions mounted in said standards for supporting said container upon disconnection from the reciprocating means, to permit charging and discharging of the container.

1,172,619. MAIL-BOX. JOHN G. MCNABB, Chico, Cal. Filed Jan. 7, 1915. Serial No. 1,005. (Cl. 232—49.)

1. A device of the class described comprising a receptacle having a semi-cylindrical top and a receiving opening in one end, a shaft mounted for rotation through said receptacle, a cylindrical member mounted to rotate with said shaft and in close engagement with the semi-cylindrical top of the receptacle and having a cavity in one side, and a crank carried by said shaft and maintaining the cavity of said cylindrical member normally in registering relation with the receiving opening of said receptacle and adapted to operate the cylindrical member in either direction.

2. A device of the class described comprising a receptacle having a semi-cylindrical top and vertical ends and a receiving opening in one of said ends, a shaft mounted for rotation through said receptacle, a cylindrical member closed at the ends and mounted to rotate with said shaft, said cylindrical member operating in close engagement with the semi-cylindrical top of the receptacle and having a cavity in one side and in one end thereof, and a crank carried by said shaft and maintaining the cavity of said cylindrical member normally in



registering relation with the receiving opening of said receptacle and adapted to operate the cylindrical member in either direction.

1,172,620. ARCH-SUPPORT FOR HOLLOW AND FLAT FEET. JOSEPH MAY, Frankfort-on-the-Main, Germany. Filed Jan. 20, 1914. Serial No. 813,234. (Cl. 36—71.)

1. An arch support for footwear comprising an arch-plate having a heel and ball part, a cover-piece for said plate, means for turning and adjusting the heel part at various angles relatively to the longitudinal center line of said cover piece, and means for guiding and allowing the ball part to slide longitudinally.

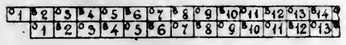
2. An arch support for footwear comprising an arch-plate having a heel and ball part, a cover-piece for said plate, means for turning and adjusting the heel part at various angles relatively to the longitudinal center line of said cover piece, a fixed guide plate having a number of slots arranged radially to the turning center of the heel part, and a pin in the ball part, said pin being adapted to engage with any of the slots in the guide plate.

3. An arch support for footwear comprising an arch-plate, having a heel and ball part, a cover-piece for said plate, means for turning and adjusting the heel part at various angles relatively to the longitudinal center line of said cover piece, a fixed guide permitting of free longitudinal movement of the arch-support, said guide having a number of guide slots arranged radially to the turning center of the heel part, and a pin in the ball part, said pin being adapted to engage with any of the slots so as to allow a sliding movement of the ball and of the arch-support.

4. An arch support for footwear comprising an arch-plate, having a heel and a ball part, a fixed plate having a number of holes, a pin on the heel part, said pin being adapted to engage with any of said holes, and means for preventing accidental disengagement of the pin from the hole.

5. An arch support for footwear comprising an arch-plate having a heel and a ball part, fixed plates for supporting the heel and ball parts, said plates being so arranged as to permit of adjustment of the arch-support, and means on said heel and ball parts engaging with the fixed plates, said means being such as to permit a turning movement of the heel part and longitudinal sliding movement of the ball part.

1,172,621. PRODUCTION OF CINEMATOGRAPHIC EFFECTS IN COLOR. THOMAS ALBERT MILLS, Clapham, London, England. Filed Dec. 3, 1912. Serial No. 734,701. (Cl. 95—2.)



1. Process of producing a color cinematographic picture film for projection without the aid of color screens or filters which consists in making each complete picture of said picture film a composite heliochrome more or less simulating the colors of nature by taking a single original or negative band exposed through recurring color filters, printing on a light sensitive surface from said negative band, treating such surface so that each of the positive images thereon will appear in color complementary to the color of the filter used in taking the corresponding negative image, printing on a fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, each positive image in color of the above-recited first printing and the above-recited first color treatment forming one element of a composite heliochrome and each positive image in color of the above-recited second printing and the above-recited second color treatment forming the other element or another element of a composite heliochrome, a single transparent base being the final support for all the light sensitive surfaces.

2. Process of producing a color cinematographic picture film for projection without the aid of color screens or filters which consists in making each complete picture of said picture film a composite heliochrome more or less simulating the colors of nature by taking a single original or negative band exposed through recurring color filters, printing on a light sensitive surface from said negative band, treating said surface so that each of the positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, printing on a fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, printing on a new light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printings, and treating such new surface so that each of the third series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, each positive image in color of the above-recited first printing and the above-recited first color treatment forming one element of a composite heliochrome, each positive image in color of the above-recited second printing and the above-recited second color treatment forming another element of a composite heliochrome and each positive image in color of the above-recited third printing and the above-recited third color treatment forming a further element of a composite heliochrome, a single transparent base being the final support for all the light sensitive surfaces.

3. Process of producing a color cinematographic picture film for projection without the aid of color screens or filters which consists in making each complete picture of said picture film a composite heliochrome more or less simulating the colors of nature by taking a single original or negative band exposed through recurring color filters, printing on a light sensitive surface from said negative band, treating such surface so that each of the positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, printing on a fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, covering the previous printing with a fresh light sensitive surface, printing on such fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, each positive image in color of the above-recited first printing and the above-recited first color treatment forming one element of a composite heliochrome and each positive image in color of the above-recited second printing and the above-recited second color treatment forming the other element or another element of a composite heliochrome.

4. Process of producing a color cinematographic picture film for projection without the aid of color screens or filters which consists in making each complete picture of said picture film a composite heliochrome more or less simulating the colors of nature by taking a single original or negative band through recurring color filters, printing on a light sensitive surface from said negative band, treating said surface so that each of the positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, covering the previous printing with a fresh light sensitive surface, printing on such fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative imageñ covering the above-recited second printing with a new light sensitive surface, printing on such new light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printings, and treating such new surface so that each of the third series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, each positive image in color of the above-recited first printing and the above-recited first color treatment forming one element of a composite heliochrome, each positive image in color of the above-recited second printing and the above-recited second color treatment forming another element of the composite heliochrome, and each positive image in color of the above-recited third printing and the above-recited third color treatment forming a further element of a composite heliochrome.

5. Process of producing a color cinematographic picture film for projection without the aid of color screens or filters which consists in making each complete picture of said picture film a composite heliochrome more or less simulating the color of nature by taking a single original or negative band exposed through recurring color filters, printing all images of one color on a light sensitive surface from said negative band, treating such surface so that each of the positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, printing all images of another color on a fresh light sensitive surface from said negative band, said negative band being stepwise shifted in relation to the previous printing, and treating such fresh surface so that each of the second series of positive images thereupon will appear in color complementary to the color of the filter used in taking the corresponding negative image, each positive image in color of the above-recited first printing and the above-recited first color treatment forming one element of a composite heliochrome, and each positive image in color of the above-recited second printing and the above-recited second color treatment forming the other element or another element of a composite heliochrome, a single transparent base being the final support for all the light sensitive surfaces.

[Claims 6 to 8 not printed in the Gazette.]

1,172,622. STOCKING. OSKAR MINKOS, Thalheim, Germany. Filed Sept. 20, 1913. Serial No. 790,948. (Cl. 2—23.)

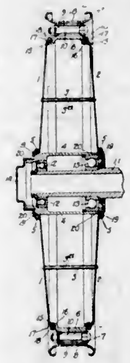


1. A stocking provided adjacent its upper end with a double walled section comprising a plurality of exterior loops, adapted to serve as a means for connecting a garter or suspender with the stocking, and a continuous inner wall.

2. A stocking provided adjacent its upper end with a double walled section the inner wall of which extends continuously about the stocking and in the outer wall of which are formed a plurality of openings to provide means for connecting a garter or suspender with the stocking.

3. A stocking provided adjacent its upper end with a double walled seamless section comprising a plurality of integral exterior loops, adapted to serve as a means for connecting a garter or suspender with the stocking, and a continuous inner wall.

1,172,623. WHEEL. WILLIAM J. P. MOORE, New York, N. Y. Filed June 19, 1915. Serial No. 35,019. (Cl. 21—69.)



1. In a wheel, the combination with an outer circular member and an inner central member, of a pair of annular disks between said members, and metallic members engaging the peripheries of the disks and also the members, the same being applied in a heated condition and allowed to shrink so as to bind the parts together.

2. In a wheel, the combination with a rim and a hub, of spaced apart annular disks, and circular rods for securing them to the rim and hub, said rods being applied in a heated condition and allowed to shrink on to form a tight connection.

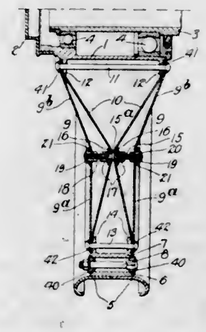
3. In a wheel, the combination with a rim and a hub, of a pair of annular disks having peripheral flanges, and circular metallic members surrounding the flanges and shrunk thereon to bind them to the rim and the hub.

4. In a wheel, the combination with a rim and a hub, of a pair of annular disks, and means for securing them at their peripheral edges to the rim and hub, comprising circular metallic members applied in a heated condition and allowed to shrink on to form a locking connection.

5. In a wheel, the combination with a rim and a hub, of a brake drum surrounding the hub, a pair of annular disks between the drum and the rim, and means for securing said disks at their edges to the drum and rim, comprising circular metallic members applied in a heated condition and allowed to shrink to bind the parts together.

[Claims 6 to 14 not printed in the Gazette.]

1,172,624. WHEEL. WILLIAM J. P. MOORE, New York, N. Y. Filed July 1, 1915. Serial No. 37,411. (Cl. 21—69.)



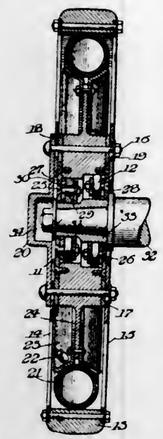
1. In a tension wheel, the combination with a hub and a rim, of a pair of bent outer disks and a pair of bent inner disks, all of which are secured centrally of the wheel and also at the rim, and tensioning means passing through said disks substantially at middle points of their width in the bending thereof, and comprising screw-threaded bolts carrying adjusting nuts which are capable of being tightened to regulate the tension of the parts.

2. In a wheel, the combination with the central member thereof and the outer rim, of a pair of annular outer disks and a pair of inner annular disks for bracing and stiffening the structure, all of said disks being secured to the central member and also to the rim, and a series of tension devices for regulating the tension of the several parts, the same consisting of screw-threaded bolts passing through the said disks at points substantially midway of their width, and provided with adjustment nuts whereby the tension is regulated.

3. In a wheel, the combination with a central member and a rim, of a pair of bent outer disks, a pair of inner cone-shaped bracing disks, all of said disks being secured at their inner peripheries to the central member, and at their outer peripheries to the rim, and tensioning means for the several disks consisting of a screw-threaded bolt passing through them substantially midway of their width and having thereon washer rings, nuts engaging said washers, and terminal nuts passing through openings in the outer disks, and adapted to keep the tension in said disks.

4. In a wheel, the combination with a central hub construction and an outer rim, of a pair of outer bent annular disks, a pair of inner cone-shaped annular bracing disks, all the disks being secured to the central member and to the rim, and tensioning means consisting of a screw-threaded bolt having a central spacing collar thereon between the conical parts of the inner members, nuts on the bolt on the other side of the inner disks from the spacing collar, and terminal nuts on the bolt passing through the outer disks and engaging the latter, said nuts coöperating with the bolt for producing the proper tension in the several disks.

1,172,625. VEHICLE-WHEEL. GEORGE A. MORFOOT, Chicago, Ill. Filed July 6, 1914. Serial No. 849,321. (Cl. 152—35.)



1. In a wheel of the class described, a hub member provided between its ends with a circumscribing radial flange, cushion seating members secured to the said flange, a cushion supported by said seating members, a tread member surrounding the said cushion, side plates secured to the opposite sides of the said tread member and fitting slidably against the end faces of the said member, the said plates being provided each with a series of openings, bolts fitted through the hub member and projecting at their ends through the said openings in the said plates, and a hub cap plate supported by the said bolts in spaced relation to one end of the said hub member and bearing against one face of one of said side plates.

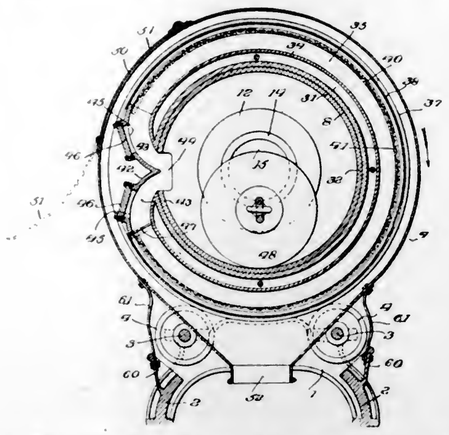
2. In a wheel of the class described, a hub member provided between its ends with a circumscribing radial flange, cushion seating members secured to the opposite sides of the said flange at the marginal portion thereof, a pneumatic cushion surrounding and seating upon the said seating members, a rigid tread member surrounding the said cushion, annular side plates secured at their outer marginal portions to the opposite sides of the said tread member and at their inner portions fitting slidably against the end faces of the said hub member, the said plates being provided each with a series of openings, bolts fitted through the hub member and projecting at their ends through the said openings in the said plates, and a hub cap plate supported by the said bolts in spaced relation to the outer end of the said hub member and bearing against the outer face of the outer one of the said side plates.

1,172,626. CRUSHER. OLIVER J. MOUSSETTE, Brooklyn, N. Y. Filed Feb. 2, 1915. Serial No. 5,719. (Cl. 83—9.)

1. A crusher comprising a rotary drum, an outlet leading laterally from the drum, a screened chamber encircling the drum, and a receiver interposed between the ends of said chamber over the said outlet and having divergent passages forming communications between the outlet and the chamber.

2. A crusher comprising a rotary drum having a lateral outlet, a trough encircling and rigid with the said drum, a screen carried by the outer side of the trough, and a receiver interposed between and connecting the ends of the trough and the ends of the screen and provided with divergent passages extending between the opening in the drum and the trough.

3. A crusher comprising a rotary drum having a lateral outlet, a trough secured rigidly to the drum and encircling the same and communicating at both ends with said outlet, a series of screens carried by the outer side of the trough and co-extensive therewith, and a barrier across one end of the trough.

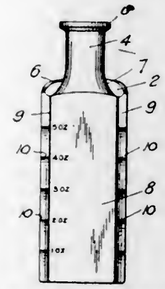


4. The combination of a base, a drum supported on the base, means on the base for rotating the drum, a standard rising from one end of the base, a lever pivoted to and rising from the upper end of the standard, a closure for the drum carried by the upper end of said lever, means on the standard to automatically limit the opening movement of the lever, and yieldable means mounted on the standard and connected with the lever for holding the lever at the limit of its movement in either direction.

5. The combination of a base, a drum mounted thereon, means on the base for rotating the drum, a standard rising from one end of the base and provided near its upper end with a lateral notch, a lever pivoted upon the standard above said notch, a lateral projection on the lever adapted to enter the said notch, a pin pivoted to and depending from the said projection, a guide for the lower end of said pin pivoted upon the standard, a spring coiled around the said depending pin and between and bearing upon the said lug and the said guide, and a closure for the drum carried by the free end of said lever.

[Claims 6 to 8 not printed in the Gazette.]

1,172,627. BOTTLE. FERDINAND W. NITARDY and HERBERT C. SCHAEFER, Denver, Colo. Filed Aug. 19, 1914. Serial No. 857,576. (Cl. 215—77.)

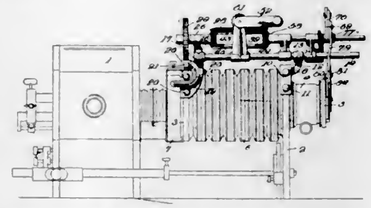


1. A container having an opening and a channel or passage positioned to receive liquid dripping from an edge of said opening, a groove in the body portion of the container for conducting said liquid to the bottom portion of the vessel, and transverse riffles in said groove for obstructing the downward flow of liquid.

2. A container having an opening, conductive means positioned to receive liquid dripping from an edge of said opening, and adapted to conduct said drippings along a determined course to the bottom portion of the container, and means for obstructing the downward flow of liquid along said course.

3. A container of angular section having an opening, a shoulder between said opening and the body portion of the container, a channel or passage formed on said shoulder to receive liquid dripping from an edge of said opening, grooves formed in the body portion of the container along the edges of the same, defined by two of its angles, in connection with opposite ends of said channel or passage, for conducting liquid to the bottom portion of the container, and means in connection with said grooves for obstructing liquid flowing through the same.

1,172,628. DISSOLVING APPARATUS FOR STEREOPTICONS. CHARLES H. PARTINGTON, Cincinnati, Ohio. Filed Mar. 31, 1915. Serial No. 18,344. (Cl. 88—28.)



1. In projection apparatus of the class described, which apparatus embodies a single source of illumination and a single lens set and a lens shutter, a reciprocatory slide carried actuating member, an actuating member for the shutter, a shaft having operative connection with the slide carrier shifting member, a shaft having operative connection with the actuating member for the shutter, and gear means operable to actuate the said shaft in predetermined sequence.

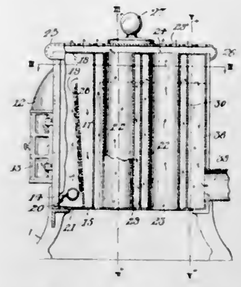
2. In projection apparatus of the class described including a slide carrier and an oculting shutter, a shiftable member for actuating the slide carrier, means for shifting the member to successively present the slides carried thereby for projection, means for actuating the shutter to alternately secure illumination and occultation, and means common to the two last mentioned means operable to actuate the same in predetermined sequence.

3. In projection apparatus of the class described including a slide carrier and an occulting shutter, spaced gears having gear portions relatively angularly spaced, each of said operating means including a shaft, gears carried by the shafts and operating between the first mentioned gears, and means for imparting rotary motion to the first mentioned gears whereby to cause their gear portions to coöperate with the gears upon the shafts in predetermined sequence.

4. In projection apparatus of the class described, which apparatus embodies a single source of illumination and a single lens set and a lens shutter, a reciprocatory slide carrier actuating member including a rack bar, a gear element for coöperation with the rack bar, spaced gears rotatable in unison and having relatively angularly positioned gear segments, a gear operatively connected with the first-mentioned gear element and working between the last-mentioned gears, means for rotating the last-mentioned gears, a shaft mounted for rotation, a gear element carried thereby and also working between the last-mentioned gears, and operative connection between the last-mentioned shaft and the said shutter.

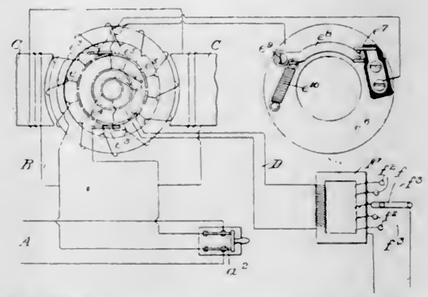
5. In projection apparatus of the class described, which apparatus embodies a single source of illumination and a single lens set and a lens shutter, a rotatable shaft, gears carried by the shaft and having their toothed faces presented toward each other in spaced relation, the said gears having gear segments relatively angularly disposed, a gear working between the first-mentioned gears, a slide carrier actuating member operated through the rotation of the last-mentioned gear, means for rotating the first-mentioned gears in unison, a shaft, a gear carried thereby and working between the first-mentioned gears, and operative connection between the said shaft and the lens shutter.

1,172,629. GAS-STOVE. CORYDON J. PETRIE, Geneva, Ohio. Filed Oct. 12, 1915. Serial No. 55,538. (Cl. 126—90.)



A stove including a casing, a burner pipe arranged therein adjacent one end, a forwardly inclined baffle arranged adjacent the burner extending from the stove bottom to a point adjacent the top thereof, a plurality of spaced partitions positioned transversely of the stove and extending from the bottom to the top thereof, alined partitions positioned longitudinally of the stove between the transverse partitions and extending from the bottom of the stove to a point adjacent the top thereof, an inclined baffle positioned in the compartment between the rear wall of the stove and the rear transverse partition, and vertical air flues between the transverse partitions at opposite sides of the baffles, said transverse partitions having openings at the lower corners thereof, the openings in adjacent partitions being at opposite sides thereof to cause a tortuous passage of the heat from the burner.

1,172,630. ROTARY CONVERTER. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed July 9, 1913. Serial No. 778,037. (Cl. 171—123.)

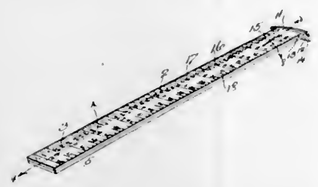


In a rotary converter, the combination with an armature having an ingoing direct current conductor and an outgoing alternating current conductor, of a speed controlled switch carried by the armature and arranged in series with the alternating current conductor, operating to open and close the alternating current circuit automatically in accordance with the speed of the armature, as determined by the direct current circuit.

1,172,631. RULE. ERVIN L. PROUT, Albion, Ill. Filed June 8, 1915. Serial No. 32,900. (Cl. 33—120.)

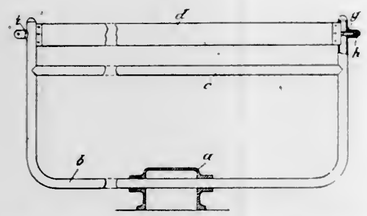
A measuring rule comprising two graduated sections pivotally united, curved plates secured upon the end

edges of the sections, one of the edges of one of said curved plates having a tongue, the other curved plate



having a groove on one of its edges to receive the tongue when said sections are closed.

1,172,632. HIDE-CARRIER FOR BOARDING-MACHINES. CARL A. RAUSCH, Leipzig-Gohlis, Germany, assignor to the Firm of Fortuna-Werke, Specialmaschinenfabrik, G. M. B. H., Stuttgart-Cannstatt, Germany. Filed May 27, 1915. Serial No. 30,760. (Cl. 149—21.)



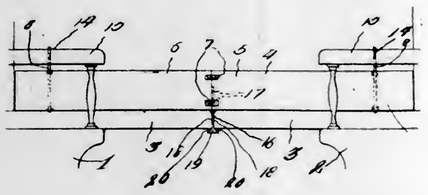
1. In a hide carrier for boarding machines, in combination, a thin and smooth band of strong material and a bow shaped carrier adapted to keep said band in stretched condition.

2. In a hide carrier for boarding machines, in combination, a thin steel band and a bow shaped carrier adapted to keep said band in stretched condition.

3. In a hide carrier for boarding machines, in combination, a thin steel band, a bow shaped carrier adapted to keep said band in stretched condition and means arranged on said band for adjusting it.

4. In a hide carrier for boarding machines, in combination, a thin and smooth band of strong material, a bow shaped carrier adapted to keep said band in stretched condition and a longitudinal stay rod adapted to brace the free arms of said carrier.

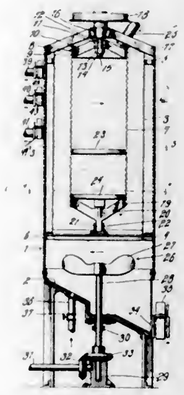
1,172,633. SAFEGUARD OR PROTECTOR FOR SLEEPING-BERTHS. JOHN OSWALD RONN, Hillsboro, Oreg. Filed Oct. 26, 1915. Serial No. 57,949. (Cl. 105—90.)



1. A safeguard or protector for sleeping berths comprising two sections hingedly united, the hinged connections being so arranged as to prevent the sections from hinging outwardly, each section toward its outer end having a rod swiveled transversely therethrough and extending vertically, said rod at its upper end terminating in a book designed to engage over the arm of the seat or chair forming a part of the sleeping berth.

2. A safeguard or protector for sleeping berths comprising two sections hingedly united, the hinged connections being so arranged as to prevent the sections from hinging outwardly, each section toward its outer end having a rod swiveled transversely therethrough and extending vertically, said rod at its upper end terminating in a hook designed to engage over the arm of the seat or chair forming a part of the sleeping berth, the adjacent hinged end of the section having a plate extending downwardly between the adjacent edges of the back forming the sleeping bunk or berth, and terminating in an enlarged face portion, to prevent the protector from being raised.

1,172,634. HYDRAULIC DISINTEGRATING APPARATUS. HERBERT W. SAVAGE, Cambridge, Mass. Filed Aug. 19, 1915. Serial No. 46,247. (Cl. 83—56.)



1. In apparatus of the character described, a tank having vertically spaced outlet devices, a stationary foraminous casing arranged within the tank in spaced relation thereto, a rotatable drum having its periphery formed of foraminous material and disposed within the stationary foraminous casing, a plurality of foraminous supports arranged within the drum for rotation therewith, and means to rotate the drum.

2. In apparatus of the character described, a tank having vertically spaced outlet devices, a stationary foraminous casing arranged within the tank in spaced relation thereto, a rotatable drum having its periphery formed of foraminious material and disposed within the stationary foraminous casing, a plurality of foraminous supports of different grades arranged within the drum for rotation therewith, and a propeller arranged within the tank beneath the drum for agitating the water.

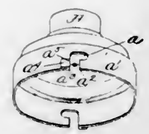
3. In apparatus of the character described, a tank, means to supply water thereto, a sieve-drum rotatably mounted in said tank, means to rotate the sieve-drum, means to supply the material to be disintegrated to said sieve-drum, a foraminous partition surrounding the said drum formed of a sieve or screen for finer mesh than that of the sieve-drum, means to agitate the water in the tank and a plurality of valved outlet openings arranged at different vertical heights and through any desired one of which water containing particles of the material in suspension may be drawn off.

4. In apparatus of the character described, a tank having vertically spaced outlet devices, a foraminous casing arranged within the tank and spaced therefrom and covering the outlet devices, a rotatable drum mounted within the foraminous casing and formed of foraminous material, means to rotate the drum, foraminous supporting means carried by the drum to hold material therein, means to introduce water into the tank, and a propeller arranged within the tank beneath the drum to agitate the water therein.

5. In apparatus of the character described, a tank having vertically spaced outlet devices, a foraminous casing arranged within the tank in spaced relation thereto, a rotatable drum having its periphery formed of foraminous material and disposed within the foraminous casing, means to supply material to be treated to the upper end of the rotatable drum, a water inlet for the tank, arranged in the bottom of the tank and below the drum, means to agitate the water, and means to rotate the drum.

[Claims 6 and 7 not printed in the Gazette.]

1,172,635. LOCK FOR SOCKET-SHELLS. RALPH ABRAHAM SCHOENBERG, New York, N. Y. Filed Dec. 26, 1914. Serial No. 878,988. (Cl. 173—362.)



1. A device of the character described comprising a cap with a bayonet slot and having a portion bent back upon itself to form a rounded edge for a portion of said slot; and a body having a boss to engage said edge to prevent relative rotation of the cap and body in one direction.

2. A device of the character described comprising an insulating member; a cap with a bayonet slot; a body having a boss to engage said slot to prevent relative rotation of the cap and body in one direction and having a stud to engage said slot to prevent relative rotation of the cap and body in the opposite direction and also to prevent relative longitudinal movement of the cap and body, said stud having internal extending means cooperating with said insulating member to prevent rotation of the latter.

3. A device of the character described comprising an insulating member with a recess; a cap with a bayonet slot; a body having a boss to engage said slot to prevent relative rotation of the cap and body in one direction and having a stud to engage said slot to prevent relative rotation of the cap and body in the opposite direction and also to prevent relative longitudinal movement of the cap and body, said stud having an internal extension to enter said recess and thereby prevent rotation of the insulating member.

4. A device of the character described comprising a cap with a bayonet slot; and a body having a headless stud riveted thereto to engage said slot to prevent relative longitudinal movement of the cap and body in the locked position.

5. A device of the character described comprising an insulating member; a cap with a bayonet slot; a body having means to coöperate with said slot to lock the cap and body together, said means having a member to engage said insulating member to prevent rotation thereof.

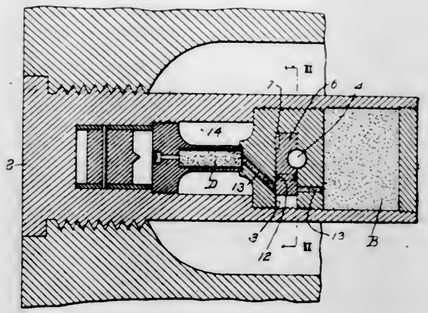
[Claims 6 and 7 not printed in the Gazette.]

1,172,636. PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed Jan. 29, 1915. Serial No. 5,022. (Cl. 102—39.)

1. In an explosive projectile the combination of a burster charge of high explosive, a detonator, a path of detonation transmission extending from said detonator to said burster charge, and means for alternately interrupting and making continuous said path.

2. In an explosive projectile the combination of a burster charge of high explosive, a detonator, a train of detonation transmission extending from said detonator to said burster charge a section of said train being movable from a position of interruption to a position of continuity.

3. In an explosive projectile the combination of a burster charge of high explosive, a detonator, a path of detonation transmission extending from said detonator to said burster charge and normally discontinuous, a member movable in sequence on the firing of the projectile from a gun for establishing the continuity of said path, and means for preventing retrogression of said movable member.



4. In an explosive projectile the combination of a burster charge, a detonator, a path of detonation transmission leading from said detonator to said burster charge, a break in said path, a member movable in such break and responsive within the range of such movement to centrifugal force exerted upon it on the flight of the projectile from a rifled gun, a centrifugally opening lock normally holding said movable member at one end of the range of its movement, and a centrifugally closing lock for said movable member at the opposite end of its range.

5. In an explosive projectile the combination of a burster charge, a safety chamber, a detonator stationary with relation to and adjacent said safety chamber and removed at an interval from said burster charge, a path of detonation transmission leading from said detonator to said burster charge, said path being normally interrupted, and means for establishing the continuity of said path.

[Claims 6 to 11 not printed in the Gazette.]

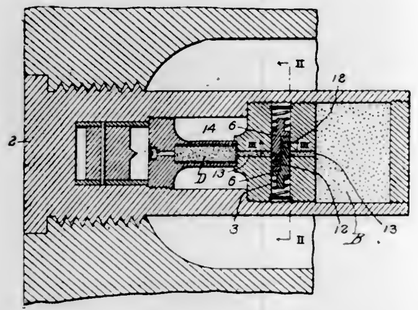
1,172,637. PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed Feb. 3, 1915. Serial No. 5,886. (Cl. 102—39.)

1. In an explosive projectile the combination of a burster charge, a detonator, a path of detonation transmission extending between said detonator and said burster charge, a plurality of detonation controlling members movable in different directions in a break in said path from positions in which the path is interrupted to positions in which the path is continuous.

2. In an explosive projectile the combination of a burster charge, a detonator, and a path of detonation transmission from said detonator to said burster charge, a pair of oppositely movable centrifugal bolts arranged in a break in said path, each of said bolts provided with a supplementary path of detonation transmission, the movement of said bolts permitting the alinement of said supplementary paths with one another and with the main path, and a locking means automatically securing said bolts against reverse movement when once they have in their movement brought all the said paths into alinement.

3 In an explosive projectile the combination of a burster charge, a detonator, and a path of detonation transmission from said detonator to said burster charge, a pair of overlapping spring-impelled and centrifugally receding bolts arranged in a break in said path and in the range of their movement establishing the continuity of said path across such break, and interlocking means arranged in the overlapping faces of said bolts.

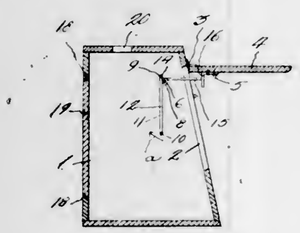
4. In an explosive projectile the combination of a burster charge and a detonator arranged on opposite sides of a dividing wall, a bore extending through said wall, a second bore crossing the bore first named and extending transversely to and on either side of the axis of rotation of the projectile as a whole, a pair of centrifugal bolts movable in the second named bore, a bore in each of said bolts, and columns of detonation-transmitting material filling the bore first named and filling the bores in the said pair of bolts.



5. In an explosive projectile the combination of a burster charge, a detonator, a wall separating said detonator from said burster charge, a pair of oppositely movable overlapping centrifugal bolts arranged in a runway formed in said wall, and a detonation path formed in said wall from said detonator to said burster charge and made continuous through said bolts when moved oppositely under centrifugal force.

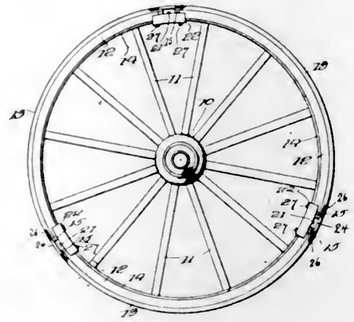
[Claim 6 not printed in the Gazette.]

1,172,638. HEN'S NEST. HARVEY O. SHERRICK, Elida, Ohio. Filed Oct. 20, 1915. Serial No. 56,892. (Cl. 119—49.)



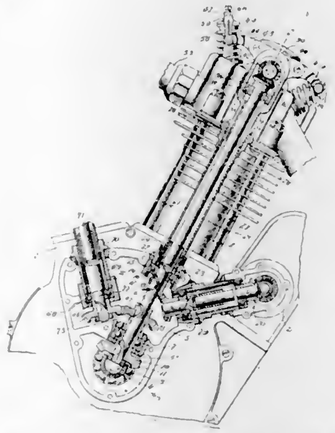
An improved nest comprising a housing having its front wall provided with a hinged closure having upon its inner face a pair of angular members, a rod arranged transversely of the housing near its upper portion adjacent the hinged connection of the closure, a tripping member constructed from a single length of spring wire pivoted upon said rod and having lateral arms adapted to engage the angle members of the closure to prop the closure open, said tripping member having downwardly depending arms in the path of the hen as it enters the housing, said downwardly depending arms having spring means extending upwardly to engage said transverse rod.

1,172,639. ADJUSTABLE WHEEL, FELLY, AND TIRES. EDWARD A. STENNETT, Red Oak, Iowa. Filed Feb. 2, 1915. Serial No. 5,705. (Cl. 21—158.)



A wheel including a divided outer tire and a divided inner tire united at their ends, a divided felly disposed between said outer and inner tires, and means for drawing said tires and the felly members supported thereby toward each other.

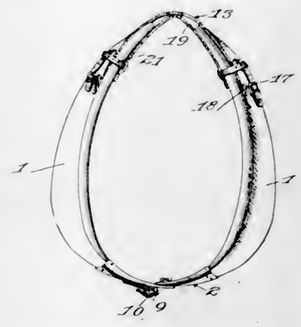
1,172,640. VALVE-OPERATING MECHANISM FOR GAS-ENGINES. ANDREW STRAND, St. Paul, Minn., assignor to Joerns Motor Manufacturing Co., St. Paul, Minn. Filed Nov. 13, 1914. Serial No. 871,888. (Cl. 123—55.)



1. In an internal combustion engine, a valve, the stem of said valve being notched and threaded at its upper end, a spring surrounding the stem and tending to hold said valve in closed position, a shouldered casing for the valve stem, a saddle, a set screw extending through said saddle, into said notch, a wedge shaped sleeve screwing onto said stem, a conical shaped shoulder member fitting over said sleeve, said spring engaging at opposite ends the shouldered casing and the shoulder on said conical member respectively, a pivoted lever, forked ends on said lever, a pivotal connection between the prongs on said end of said lever and the ears of said saddle, a wheel mounted between the prongs at the other end of said lever, a cam for contacting said wheel, and means for operating said cam.

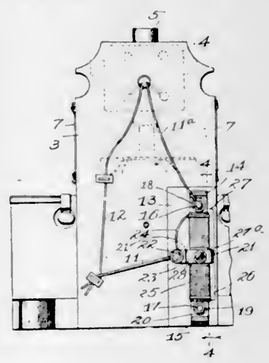
2. In an internal combustion engine, a crank shaft, a gear mounted on said crank shaft, overhead valves on said cylinders, cam shafts for operating said valves, means for operating said cam shafts, comprising an upper and lower shaft said lower shaft having a gear meshing with the gear on said crank shaft, and provided with an enlarged hollow portion, said upper shaft slidably secured in said enlarged portion of said lower shaft, a second gear on said lower shaft, a gear on the lower end of the other of said multiple operating shafts adapted to mesh with said second gear, and a third gear on said lower shaft adapted to drive a magneto, as and for the purpose described.

1,172,641. HORSE-COLLAR. LEWIS W. STROBER, Waukee, Iowa. Filed May 6, 1915. Serial No. 26,379. (Cl. 54—67.)



In a horse collar, having duplicate separable side sections, a detachable neck shield for connecting the side sections, the said shield comprising a pair of soft flexible strips fastened together at a point equidistant from their ends, the upper strip being bifurcated at each end to provide a plurality of fastening straps, two buckles on each side section to engage with the straps thus formed to fasten said side sections between said strips, and a strap secured to the innermost strip adjacent each end to pass transversely around the side section with which it is associated, said last mentioned strap being equipped with a fastening means.

1,172,642. HUMIDIFIER. CHARLES SUBERT, Chicago, Ill., assignor to Sanifacient Humidor Company, a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,362. (Cl. 98—44.)

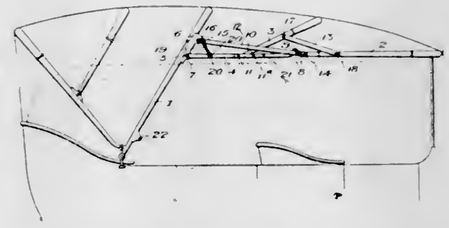


1. A humidifier comprising, in combination a liquid container, a moisture absorbing element in operative communication therewith, a fan, an electric motor for actuating the same to direct a current of air against said absorbent material, a source of electricity in circuit with said motor, an automatic switch interposed in said circuit for causing an intermittent motor action, and means for varying the relative duration of the intermittent periods.

2. The combination with a humidifier having an electric motor and a fan for directing a current of air against a moisture collecting surface, of an automatic electric switch interposed in the motor circuit, comprising shunt circuits of high and low resistance respectively, a metallic member formed from composite metals having varying coefficients of expansion, said member being surrounded by a resistance coil forming in lieu thereof said shunt circuit of high resistance which is normally closed, and means for closing a short circuit with said metallic member, comprising said shunt circuit of low resistance, when said metallic member is flexed by heat.

3. The combination with a humidifier having an electric motor and fan for directing a current of air against a moisture collecting surface, of an automatic electric switch interposed in the motor circuit, comprising a normally closed shunt circuit of high resistance, a metallic member composed of metals having varying coefficients of expansion adapted to be heated and expanded or flexed by a current passing through said shunt circuit, a contact member, the same being in position to contact with said metallic member when the latter is flexed, and connected to form a short circuit of low resistance, and means for adjusting said contact member to vary the distance between it and said metallic member and change the period of contact intervals.

1,172,643. VEHICLE-TOP. CHARLES E. TITCHENER, Binghamton, N. Y. Filed Feb. 26, 1915. Serial No. 10,822. (Cl. 21—62.)



1. In a vehicle top, the combination with a double or trussed pivoted link or lever comprising connected members arranged side by side, of a forwardly extending bow socket or member pivoted to said link or lever, an upwardly extending bow socket or member pivoted to the double or trussed link or lever in between the parts thereof, and a stop support or rest for engaging the upwardly extending bow socket or member with the double or trussed link or lever.

2. In a vehicle top, the combination with a pivoted link or lever, of a forwardly extending bow socket or member pivoted to said link or lever, an upwardly extending bow socket or member pivoted to the link or lever, a double supporting brace or strut comprising two independent braces, one of which is pivoted to the extension bow socket or member and the other being pivoted to the upwardly extending bow socket or member and to the forwardly extending bow socket or member, and a spring coöperating with the link or lever adapted to lift the said link or lever and thereby assist in the extension of the aforesaid parts.

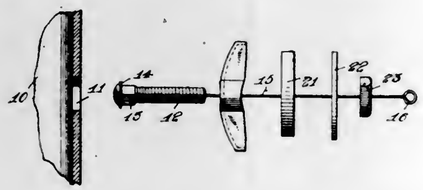
3. In a vehicle top, the combination with an upwardly extending foldable main bow socket, of a foldable extension top support comprising a link or lever pivoted to the aforesaid bow socket, a forwardly extending or extension bow socket pivoted to the link or lever, a main brace or strut pivoted to the forwardly extending bow socket and also to the upwardly extending bow socket aforesaid, an upwardly extending foldable bow socket pivoted to the link or lever, a supplemental brace or

strut pivoted to the upwardly extending bow socket, last-named and also to the forwardly extending bow socket, means for supporting the upwardly extending bow socket from the link or lever, and a balancing contractile coil spring connected to the link or lever and the main bow socket, said parts being so arranged that the main and supplemental braces sustain the extension top support aforesaid when the parts are raised and said parts being adapted to fold or collapse alongside of the main bow socket.

4. In a vehicle top, the combination with a main bow socket, of a top support comprising a double or trussed link or lever pivoted to the main bow socket, and a latch comprising an eye-bracket on the main bow socket adapted to enter the space between the parts of the double link, and a pin carried on the inside of said double link adapted to enter said eye-bracket.

5. In a vehicle top, the combination with main upright bow sockets or members having brackets provided with lugs, of forwardly extending double trussed links or levers, each comprising a pair of connected members arranged side by side constituting a rigid strut adapted to resist lateral flexing, swaying and displacement, the members of each pair of links or levers being pivoted to the respective lugs on opposite sides thereof, and a bow having its ends jointed to the respective double trussed links or levers between the members thereof and constituting a forward extension of said trussed links or levers.

1,172,644. REPAIR-PLUG. MORTON O. TRESTER, Lincoln, Nebr. Continuation of application Serial No. 797,620, filed Oct. 27, 1913. This application filed May 11, 1915. Serial No. 27,410. (Cl. 137—99.)



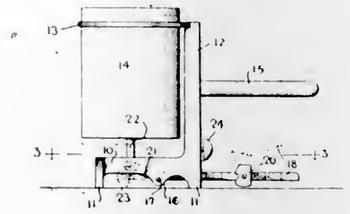
1. A device of the character described comprising a shank, a soft wire extending from said shank, a catch plate slidably mounted on said wire and movable upon said shank in substantial alinement with said shank, a sealing washer mounted on said wire and movable upon said shank after said shank and said catch plate are in position and fastening means normally supported by said wire for engaging said shank and said sealing washer, substantially as described.

2. In a device of the character described, a repair plug comprising a parent member consisting of an exteriorly screw threaded shank, one end of said shank enlarged to form a squared portion, a head member carried by said squared portion, a soft pliable wire projecting from the other end of said shank, a catch plate, a sealing washer, a rigid washer and fastening member, said wire normally supporting said elements and allowing said catch plate to be moved to a position substantially in alinement with said shank to facilitate its operation, substantially as described.

3. In a device of the character described, a repair plug including a parent member, said member consisting of an exteriorly screw threaded shank, said shank being enlarged at one end to form a squared portion, a head member formed adjacent said squared portion, a soft pliable wire having connection with said shank and extending therefrom in alinement therewith, a catch plate, a square opening in said catch plate to coöperate with the said squared enlargement, the said catch plate being normally mounted on said wire whereby it may be moved into a position substantially in alinement with said shank and sealing means normally carried on said wire and coöperating with said parent member and said catch plate, substantially as described.

4. In a device of the character described, a repair plug consisting of a parent member including an exteriorly screw threaded shank, a squared enlargement on said shank, a head portion provided adjacent said enlargement, a soft pliable wire carried by said shank portion and extending therefrom in substantial alinement, a catch plate consisting of a back portion, having an annular rim, a squared opening formed in said back portion to coöperate with said squared enlargement, said catch plate being normally mounted on said wire whereby it may be moved to a position substantially in alinement with said shank, a sealing washer normally arranged on said wire to coöperate with said parent member, a rigid washer normally mounted on said wire to cooperate with said sealing washer, and a fastening nut normally arranged on said wire to coöperate with said shank and retain said washers in a secure position, substantially as described.

1,172,645. MEASURING INSTRUMENT. LEON TROXLER, New Orleans, La. Filed Mar. 16, 1915. Serial No. 14,796. (Cl. 73—3.)



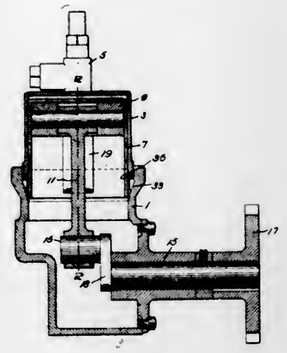
1. In a measuring instrument, a base provided with an upright, an annular guide at the upper end of the upright, a scale beam lever pivotally mounted on the base, a receptacle slidable in said annular guide and connected to said scale beam lever and supported thereby for sliding movement in said guide, and an alarm device connected to the upright for engagement by the scale beam lever to audibly indicate when the predetermined quantity of material has been placed in said receptacle.

2. In a measuring instrument, a base provided with an upright having a handle, a guiding device secured to the upper end of the upright, a scale beam lever pivotally secured to the base, a receptacle slidable in said guiding device and having a depending projection pivotally connected to the inner end of said scale beam lever, whereby the receptacle is supported for sliding movement in said guiding device by said lever, and an alarm device arranged to coact with said lever to audibly indicate when the predetermined quantity of material has been placed in the receptacle.

3. In a measuring instrument, a base, a scale beam lever pivotally connected to the base, a weight slidable on said lever, a receptacle slidably mounted above the base and depending for its support upon said lever, whereby upon depression of the receptacle incident to the weight of the material placed therein the inner end of the lever is depressed and the outer end thrown up, and an alarm disposed in the line of upward movement of the lever to audibly indicate when the predetermined quantity of material has been placed in the receptacle.

4. In a measuring receptacle of the character described, a base, a relatively long scale beam lever pivotally mounted adjacent one of its ends on said base, the shorter end of said lever being directed upwardly with relation to the remaining portion of the lever, a weight slidable on said lever, a receptacle slidably supported above the base and having connection with the upwardly extended portion of said lever, whereby upon downward movement of the receptacle incident to the weight of material placed therein the outer or longer end of the lever is swung upwardly on its pivot, and a device arranged in the path of upward movement of the longer portion of the lever for coaction with the latter to indicate when the predetermined amount of material has been placed in the receptacle.

1,172,646. PACKING FOR PISTONS AND THE LIKE. ANTON M. VEDOE, Everett, Mass., assignor to Bay State Pump Co., Boston, Mass., a Corporation of Massachusetts. Filed Jan. 18, 1915. Serial No. 2,798. (Cl. 137—115.)



1. A packing ring comprising end portions and a circumferentially continuous thin web portion intermediate said end portions having provision permitting the same to contract and bulge circumferentially inward on compression of said end portions toward one another.

2. A packing ring of Babbitt metal comprising end portions and a circumferentially continuous web portion thinner than said end portions and having provision permitting the same to contract inward on compression of said end portions toward one another.

3. A packing ring uninterrupted throughout its circumference comprising end portions and a relatively thin web portion intermediate said end portions having provision permitting the same to bulge circumferentially into light yielding engagement with a reciprocating element on compression of said end portions toward one another.

4. The combination of a reciprocable element with a packing ring comprising end portions and a relatively thin, circumferentially continuous web portion intermediate said end portions having provision permitting the same to bulge circumferentially into light yielding engagement with the reciprocating element on compression of said end portions toward one another in the direction of the axis of the ring, said ring being of a material softer than said element.

5. A packing ring comprising a thin end portion provided with a sharp circumferentially continuous edge, and a thin web intermediate the ends of the ring, said edge having provision permitting the same to contract circumferentially inward on compression of said ends toward one another.

[Claims 6 to 10 not printed in the Gazette.]

1,172,647. HYDROMETER. PAUL VOIGES, Brooklyn, N. Y. Filed Feb. 7, 1914. Serial No. 817,256. (Cl. 73—22.)

In a combined specific gravity and temperature indicating apparatus, a hollow body, a mercury bulb formed therewith, a tubular stem extending from said body oppositely to said bulb, said stem being of uniform cross section, a mercury tube extending from said bulb into said stem, graduations on said stem indicating the depth of immersion, a second series of graduations on said stem indicating the height of the mercury and a predetermined



quantity of ballast in spherical form loosely contained in said hollow body above the mercury bulb.

1,172,648. SELF-ADJUSTING ANTIFRICTION-BEARING. JOSEF VONRABER, Munich-Trudering, Germany. Filed Oct. 2, 1915. Serial No. 53,774. (Cl. 64—36.)



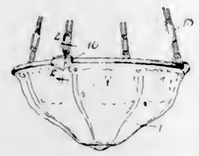
1. In a self-adjusting antifriction bearing, in combination an external casing member, having a spherically formed concave inner surface, a narrow ring-shaped projection in the middle of said inner surface, an inner casing member, said inner casing member provided with two ball races in its outer surface, and two rows of balls arranged between said ball races and the spherical inner surface of said external member.

2. In a self-adjusting antifriction bearing, in combination an external casing member, said member having a spherically formed concave inner surface, a narrow circumferential groove in the middle of said inner surface, a closed ring inserted in said goove, an inner casing member, said inner casing member provided with two ball races in its outer surface, and two rows of balls arranged between said ball races and the spherical inner surface of said external member.

1,172,649. LIGHTING - FIXTURE. FREDERICK W. WAKEFIELD, Vermillion, Ohio, assignor to The F. W. Wakefield Brass Company, Vermillion, Ohio, a Corporation of Ohio. Filed June 7, 1915. Serial No. 32,507. (Cl. 240—91.)

1. The combination with a bowl having a circumferential flange along its upper edge, of a split ring formed to snugly engage against such flange, and a plurality of hooks attached to said ring, one of said hooks being pro-

vided with a threaded opening adapted to receive a light bulb and maintain the same at a slight angle to the plane of the top of said bowl.



2. The combination with a bowl having a circumferential flange along its upper edge, of a split ring formed to snugly engage against such flange, and a plurality of hooks attached to said ring and lying within the periphery of said bowl, one of said hooks being provided with an integral extension having a threaded opening therein formed to receive a light bulb and maintain the same at a slight angle to the horizontal.

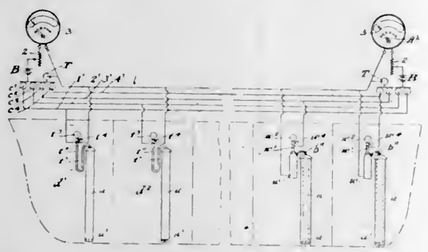
3. The combination with a bowl having a circumferentially disposed, laterally projecting flange of convex exterior about its edge, of a split ring of convex interior adapted to snugly contact the outside of such flange, and having alined openings at its ends, and a member adjustably engaging in such openings to securely engage said ring against such flange.

4. The combination with a bowl having a circumferentially disposed, laterally projecting flange of convex exterior about its edge, of a split ring of convex interior adapted to snugly contact the outside of such flange, and having alined openings at its ends, a member adjustably engaging in such openings to securely engage said ring against such flange, and a plurality of hooks engaging said ring exteriorly, thus leaving a substantially free interior thereon.

5. The combination with a bowl having a circumferentially disposed, laterally projecting flange of convex exterior about its edge, of a split ring of convex interior adapted to snugly contact the outside of such flange, and having alined openings at its ends, a member adjustably engaging in such openings to securely engage said ring against such flange, and a plurality of hooks having fingers extending slightly over each edge of said ring and clamped thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,172,650. WATER-LEVEL-INDICATING SYSTEM AND APPARATUS. ALLYN B. WALTON, Lorain, Ohio. Filed Dec. 18, 1909. Serial No. 533,947. (Cl. 177—351.)



1. In a water level indicator, the combination with an electrical measuring instrument, of a plurality of electrical switches adapted individually to connect therewith, said indicator being provided with a diagram whereon said switches are positioned in arrangement to indicate the different water-containing compartments and electrically-operated water-level appliances respectively associated with said compartments and switches, substantially as set forth.

2. In a water level indicator, the combination with a suitably calibrated electrical measuring instrument, of a plurality of associated switches adapted individually to connect therewith, said indicator being provided with a diagram indicating the water-containing compartments of a vessel; each diagrammed compartment having associated therewith one of said switches and electrically-operated water-level appliances respectively associated with said compartments and switches, substantially as set forth.

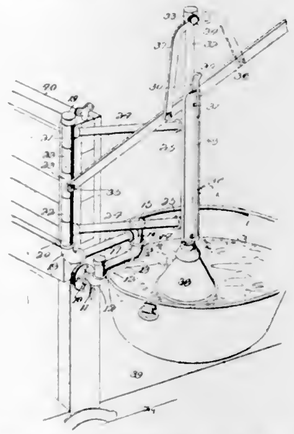
3. In a water-level indicating system, the combination with a base or support provided with a diagram indicating the several compartments of a vessel, and with associated contact appliances respectively positioned upon said diagram, of an electrical measuring instrument adapted to be connected through any of said contact appliances, and electrically-operated appliances for gaging the water-level, adapted respectively to be associated with the vessel's compartments, substantially as set forth.

4. A fluid-contact device comprising a tubular receptacle, affording two substantially balanced limbs or branches, a resistance conductor or electrode therein, a fluid conductive body within said tube adapted to immerse variable portions of said electrode, and one of the limbs or branches being sealed against the admission of external air and including a sealed expansion chamber containing a gaseous medium under less pressure than the external air, substantially as set forth.

5. A fluid-contact device comprising a tubular receptacle, affording two substantially balanced limbs or branches, a resistance conductor or electrode therein, a fluid conductive body within said tube adapted to immerse variable portions of said electrode; said tube being provided with a constricted passage-way for regulating the movement of the fluid body, and one of the limbs or branches being sealed against the admission of external air and including an expansion chamber adapted to contain a gaseous medium under different pressure than the external air, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,172,651. CLOTHES-WASHING APPARATUS. EZRA L. WHISLER, Centralia, Wash. Filed May 17, 1915. Serial No. 28,658. (Cl. 68—19.)



1. A device of the character described including a swingingly supported post a shaft swingingly connected to the post, a carriage freely connected with the shaft, a plunger having slidable connection with said carriage, and an operating lever freely secured to the shaft and having operative connection with said plunger.

2. A device of the character described including a shaft, means operatively supporting the shaft, a carriage including sleeves freely embracing the shaft, a sleeve upon the shaft and operatively supporting said first mentioned sleeves in spaced relation, arms extending from said first mentioned sleeves, and sleeves carried by said arms, a plunger freely mounted in said last mentioned sleeves, and an operating lever freely secured to said second mentioned sleeve and having operative connection with said plunger.

3. A device of the character described including a shaft, means swingingly supporting the shaft, a carriage freely connected to the shaft, a plunger mounted to reciprocate upon the carriage, a bar carried by the carriage, a guide supported by said bar, and an operating lever freely secured to the shaft and having operative connection with said plunger, said lever extending freely between the said guide and the bar.

4. A device of the character described including a shaft, means operatively supporting the shaft, a carriage swingingly connected to the shaft, a plunger mounted to reciprocate upon the carriage, a bar carried by the carriage, a guide supported by said bar, an operating lever freely and pivotally connected with said shaft, the lever extending freely between the said bar and the guide, and an arm having pivotal connection with the lever and with said plunger whereby actuation of the bar will reciprocate the plunger, said arm being reversible in its relation to the plunger to adjust the throw of said plunger.

5. A device of the character described including a shaft, means operatively supporting the shaft, a carriage swingingly connected with the shaft, a plunger mounted for reciprocation upon the carriage, a bar carried by the carriage, a guide supported by said bar and coöperating therewith, to provide a retaining loop, and a lever freely secured to said shaft and having operative connection with the plunger, the said lever extending freely between the said bar and guide and being adapted for engagement in said loop for holding the plunger in elevated position.

[Claims 6 to 12 not printed in the Gazette.]

1,172,652. TOOTH-CROWN. THOMAS H. WHITESIDE, Youngstown, Ohio. Filed Mar. 16, 1915. Serial No. 14,704. (Cl. 32—9.)

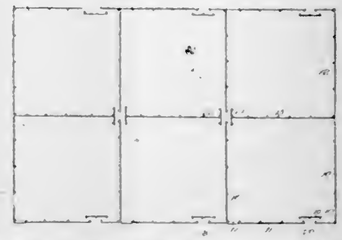


1. A tooth crown comprising a porcelain or equivalent facing having a recess provided with a flat base wall and an arcuate side wall, and also having pin receiving sockets communicating with said recess, and a metal backing having a solid bearing boss provided with a curved side wall, and facing securing pins carried by said bearing boss, said boss and pins adapted to respectively fit into said recess and pin receiving sockets.

2. A tooth crown comprising a porcelain or equivalent facing having a recess and pin receiving sockets in communication therewith, said facing also having a rabbeted portion providing an abutment shoulder, and a metal backing having a cap portion and a sheath portion, a bearing boss carried by said backing, and facing securing pins carried by said bearing boss, said bearing boss and facing securing pins adapted to respectively fit into said recess and pin receiving sockets of the facing, and the lower edge of said sheath portion flushly abutting with said shoulder.

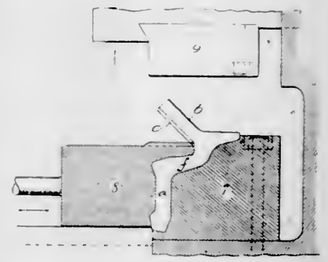
1,172,653. ENTRANCE FOR STOCK-YARD PENS. EDWARD F. WILLIAMS, Grain Valley, Mo. Filed Aug. 14, 1915. Serial No. 45,509. (Cl. 256—1.)

The combination with an inclosure, of a partition wall formed intermediate its length with a relatively narrow opening, barriers parallel to and slightly spaced from the partition wall, one at either side thereof and opposite the opening with their ends projecting materially beyond the sides of the opening, and partition wall sections con-



necting at their inner ends with the intermediate portions of the barriers, whereby passageways are furnished from any one of the subdivisions of the inclosure formed by the partition walls into all others.

1,172,654. PROCESS FOR MAKING RAIL-JOINT BARS. BENJAMIN WOLHAUPTER, New Rochelle, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed May 27, 1912. Serial No. 700,106. (Cl. 80—66.)



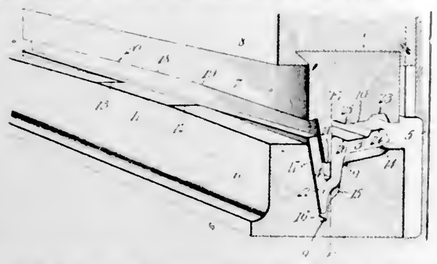
1. A process of making crowned-base joint-bars, which consists in subjecting a metal blank to a roll pass to produce a bar having a splice member in its final shape, and a base member of unfinished shape, then effecting an unequal redistribution of the metal in the base member to thereby recess one face only thereof and leaving projections of metal between the recesses, and subsequently transversely severing the bar at approximately the centers of said recesses.

2. A process of making crowned-base joint-bars, which consists in subjecting a metal blank to a roll pass to produce a bar having a splice member and a flange member of finished shape and a base member of unfinished shape, said flange member and base member being separated to leave a groove therebetween, then unequally redistributing the metal in the base member to thereby recess one wall only of said groove in alternate areas and leaving projections of metal between the grooves, subsequently transversely severing the bar at approximately the centers of the recesses, and then moving the said base member to a final position nearer the flange member.

1,172,655. PROCESS OF MAKING CAMBERED RAIL-JOINT BARS. BENJAMIN WOLHAUPTER, New Rochelle, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Apr. 24, 1913. Serial No. 763,348. (Cl. 29—16.)

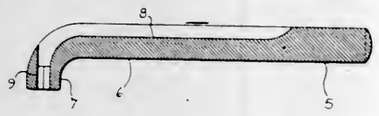
1. The process of making cambered rail joint bars which consists in subjecting a bar blank to shaping means to produce a bar section having final form and position along the central part thereof, and subsequently laterally displacing the end portion of the bar in a direction substantially parallel to the inclination of the under side of the foot thereof.

2. The process of making cambered rail joint bars which consists in subjecting a bar blank to shaping means to produce a bar section having an angle member and a base member of final form and position along the central



part of the bar, and subsequently displacing the end portions of the bar laterally in a diagonal direction to thereby bring the end portions of the head and base of the bar into new planes.

1,172,656. WRENCH-HOLDER. PAUL L. L. YORGENSEN, Hartford, Conn. Filed Sept. 28, 1915. Serial No. 52,982. (Cl. 81—177.)

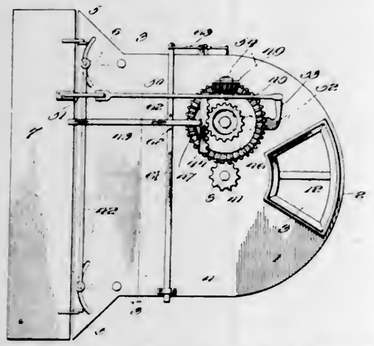


1. A holder for wrenches of the class described, comprising a body provided with a head at an angle thereto, the body and the head having jointly a wrench seat and that part of the seat which is in the body being in the form of a longitudinally extending groove.

2. A holder comprising a body provided with a head at an angle thereto, the body having a longitudinally extending groove and the head an inclosed hole into which the groove leads.

3. A holder comprising a body having a head at an angle thereto, the body being united with the head upon a curve and having a longitudinally extending groove, the head having an inclosed hole and the groove and hole being connected with each other upon a curve conforming practically to that between the head and the body.

1,172,657. STOKER. EDWARD YOUNG, Pony Lake, Nebr. Continuation of application Serial No. 847,292, filed June 25, 1914. This application filed Apr. 12, 1915. Serial No. 20,837. (Cl. 110—115.)



1. The combination with a casing, of a driving shaft mounted vertically therein, a pinion on said shaft, a door to cover or uncover the front end of the casing, deflectors mounted upon the casing adjacent said door, a lever fulcrumed upon the casing, a gear wheel mounted on said lever to be carried thereby into and out of engagement with said pinion, and means actuated by said gear wheel to operate the door and said deflectors.

2. The combination of a casing, fuel ejecting means therein including a rotatable and reversible shaft, means for controlling the discharge from the casing, means for actuating said discharge controlling means including a gear wheel mounted on the casing, means on the casing to move said gear wheel into or out of engagement with the said rotatable and reversible shaft, means below the casing for rotating and reversing said shaft, a lever mounted on the casing and operatively connected with said rotating and reversing means, and means driven by said gear wheel for actuating said lever.

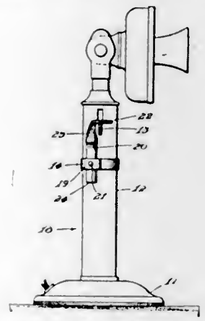
3. The combination of a casing, a stoker shaft journaled in the casing, an ejector carried by said shaft within the casing, laterally movable deflectors mounted in the casing adjacent the front end thereof, a vertically movable door mounted on the front end of the casing, a gear wheel mounted upon the casing, gearing between said wheel and the deflectors, gearing between said wheel and the door, and means for moving said gear wheel into and out of engagement with the stoker shaft.

4. The combination of a casing, a stoker shaft mounted therein, an ejector carried by said shaft within the casing, laterally movable deflectors mounted at the front end of the casing, a vertically movable door hinged upon the front end of the casing, means mounted on the casing and driven by the stoker shaft whereby to shift the deflectors from side to side and simultaneously raise and then again lower the said door, and means mounted on the casing and actuated by the shifting of the deflectors to reverse the direction of rotation of the ejector shaft.

5. The combination of a casing, a shaft mounted therein, laterally swinging deflectors at the front end of the casing, a vertically swinging door mounted upon the front end of the casing, means driven by the stoker shaft for actuating said door, and means driven by the stoker shaft for actuating the deflectors comprising a vibratory lever, a reversing bar slidably mounted on the casing and arranged to be actuated by the said lever, and means controlled by said reversing bar to reverse the direction of rotation of the said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,172,658. ATTACHMENT FOR TELEPHONE DESK SETS. LE ROY D. ALLEN, Chicago, Ill., assignor of one-half to Arthur W. Heath, Chicago, Ill. Filed Dec. 20, 1913. Serial No. 807,846. (Cl. 179—189.)



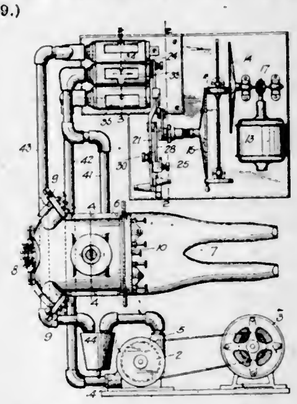
An attachment of the character described, comprising a two part clip arranged to extend around the standard of a desk telephone instrument, means for clamping said clip on said standard, one member of said clip having a horizontally extending latch supporting arm bent at right angles to the main portion of the clip, and a vertically extending latch member pivoted to said arm between its ends, on a horizontal pivot pin, the upper end of said latch member being bent to extend at right angles to the main portion of said latch member, whereby it may overlie and hold down the receiver hook of the telephone instrument, the lower end of said latch member serving as a finger piece whereby the latch member is operated, and the main portion of the clip serving to limit the backward movement of the latch member when released from the hook.

1,172,659. SILICON-CARBID ARTICLES. THOMAS B. ALLEN, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Sept. 17, 1912. Serial No. 720,871. (Cl. 51—1.)

1. A silicon carbid article, having a vitrified bond consisting of magnesium aluminum silicate, and free from material which reacts with carborundum at the vitrifying temperature of said bond.

2. A silicon carbid article, having a vitrified bond containing magnesium aluminum boro-silicate, and free from material which reacts with carborundum at the vitrifying temperature of the said bond.

1,172,660. SYSTEM FOR THE TREATMENT OF DISEASES OF THE HUMAN BODY BY VACUUM OR AIR-PRESSURE. CHARLES E. H. ARMBRUSTER, Denver, Colo. Filed Sept. 2, 1914. Serial No. 859,908. (Cl. 128—9.)



1. In a system of the character described, a device capable of being applied to the human body for producing an air-tight chamber over or around a part thereof, a suction-producing element, and an appliance which automatically places the said chamber alternately in communication with the said element and with the atmosphere, and which includes means for its adjustment to place the chamber continuously in communication with either the atmosphere or the said element.

2. In a system of the character described, a device capable of being applied to the human body for producing an air-tight chamber over or around a part thereof, a source of fluid-pressure, and an appliance which automatically places the said chamber alternately in communication with the said source and with the atmosphere, and which includes means for its adjustment to place the chamber continuously in communication with either the atmosphere or the said source.

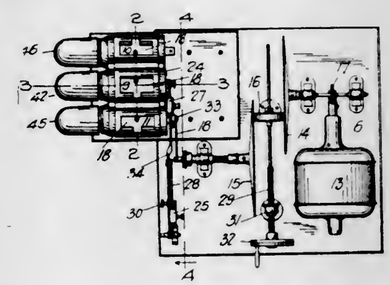
3. In a system of the character described, a device capable of being applied to the human body for producing an air-tight chamber over or around a part thereof, a fluid-exhaust and compression element having fluid admission and delivery ports in connection with said chamber, and an appliance in said connection which automatically places the said chamber alternately in communication with the said admission-port and the said delivery port and which includes means for its adjustment to place the chamber continuously in communication with either port.

4. In a system of the character described, a device capable of being applied to the human body for producing an air-tight chamber over or around a part thereof, a fluid-exhaust and compression element having fluid admission and delivery ports in connection with said chamber, and an appliance in said connections which automatically places the said chamber alternately in communication with the said admission-port and the said delivery port and which includes means for its adjustment to vary the partial vacuum or the pressure produced in the chamber by its connection with the said element, to a selected degree, or to place the chamber continuously in communication with either port.

5. In a system of the character described, a device capable of being applied to the human body for producing an air-tight chamber over or around a part thereof, a fluid exhaust and compression element having fluid-admission and delivery ports in connection with said chamber, and an appliance in said connections, which is adjustable to place the chamber in continuous communication with either port.

[Claims 6 to 8 not printed in the Gazette.]

1,172,661. MECHANISM FOR CONTROLLING THE FLOW OF FLUID TO AND FROM AN AIR-TIGHT CHAMBER. CHARLES E. H. ARMBRUSTER, Denver, Colo. Filed Sept. 2, 1914. Serial No. 859,909. (Cl. 230—32.)



1. A mechanism of the character described comprising a valve-housing having a port for its connection with an air-chamber, a second port for its connection with an air-pump and a third port for its connection with the atmosphere, a valve within said housing, capable of operation to establish and break communication between the first and second ports during alternate periods, and a valve in the connection of the first mentioned port with the air-chamber, for placing the chamber in communication with the atmosphere whereby to vary the degree of a vacuum or an air-pressure within the same.

2. Mechanism of the character described, comprising a valve-housing having a port for its continuous connection with an air-chamber, and two ports for its connection with the intake opening and the discharge-opening of an air-pump, a valve within said housing capable of operation for placing the first mentioned port alternately in communication with the two other ports, and adjustable valves adapted to close the connection of either of the said pump-openings with the valve-housing.

3. Mechanism of the character described comprising a valve-housing having a port for its continuous connection with an air-chamber, and two ports for its connection with the intake opening and the discharge-opening of an air-pump, a valve within said housing capable of operation for placing the first mentioned port alternately in communication with the two other ports, and adjustable valves adapted to close the connection of either of the said pump-openings with the valve-housing, and to simultaneously place the disconnected opening in communication with the atmosphere.

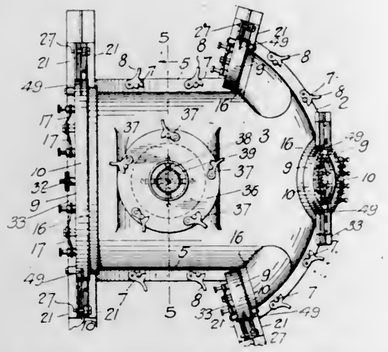
4. Mechanism of the character described comprising a valve-housing having a port for its continuous connec-

tion with an air-chamber, and two ports for its connection with the intake opening and the discharge-opening of an air-pump, a valve within said housing capable of operation for placing the first mentioned port alternately in communication with the two other ports, an adjustable valve in the connection between the first mentioned port and the air-chamber for placing the latter in communication with the atmosphere, and adjustable valves adapted to close the connection of either one of the said pump-openings with the valve housing and to simultaneously place the disconnected opening in communication with the atmosphere.

5. Mechanism of the character described comprising a valve-housing having a port for its continuous connection with an air-chamber, and two ports for its connection with the intake opening and the discharge-opening of an air-pump, a valve within said housing capable of operation for placing the first mentioned port alternately in communication with the two other ports, an adjustable valve in the connection between the first mentioned port and the air-chamber for placing the latter in communication with the atmosphere, and adjustable valves adapted to close the connection of either one of the said pump-openings with the valve housing.

[Claims 6 to 20 not printed in the Gazette.]

1,172,662. CASING FOR PRODUCING AN AIR-TIGHT CHAMBER OVER OR AROUND A PORTION OF THE HUMAN BODY. CHARLES E. H. ARMBRUSTER, Denver, Colo. Filed Sept. 2, 1914. Serial No. 859,910. (Cl. 128—9.)



1. A casing for producing an air-tight chamber over or around a portion of the human body, composed of two parts and having an orifice for the exhaust or admission of air and at the junction of said parts, an opening to receive a part of the body adjoining said portion, means for securing the parts of the casing in air-tight connection, and means for effecting an air-tight closure of the space between the edge of said opening and a part of the body extending through the same, composed of coöperative complementary sections which are applied around the opening to the two parts of the casing.

2. A casing for producing an air-tight chamber around a portion of the human body, having passages for parts of the body adjoining said portion and an orifice for the exhaust or admission of air and an opening separate from said passages to afford access to a portion of the body within the casing, a cover for closing said opening, and means to removably secure said cover in air-tight connection with the casing.

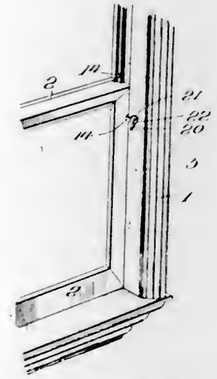
3. A casing for producing an air-tight chamber over or around a portion of the human body, having an orifice for the exhaust or admission of air, and an opening to receive a part of the body adjoining said portion, and means for effecting an air-tight closure of the space between the edge of said opening and the part of the body extending through the same, including a flexible sleeve having intermediate of its ends, a circumferential flange which holds the sleeve within the opening and closes the surrounding space of the same, whereby the sleeve extends partially within the casing and partially exteriorly of the same.

4. A casing for producing an air-tight chamber over or around a portion of the human body, having an orifice for the exhaust or admission of air, and an opening to receive a part of the body adjoining said portion, and means for effecting an air-tight closure of the space between the edge of said opening and the part of the body extending through the same, including a flexible sleeve having intermediate of its ends, a circumferential flange which holds the sleeve within the opening and closes the surrounding space of the same, whereby the sleeve extends partially within the casing and partially exteriorly of the same, and adjustable means for compelling said sleeve to engage and conform with a part of the body it encircles.

5. A casing for producing an air-tight chamber over or around a portion of the human body, having an orifice for the exhaust or admission of air, and an opening to receive a part of the body adjoining said portion, and means for effecting an air-tight closure of the space between the edge of said opening and the part of the body extending through the same, including a flexible sleeve having intermediate of its ends, a circumferential, flexible flange which holds the sleeve within the opening and closes the surrounding space of the same, whereby the sleeve extends partially within the casing and partially exteriorly of the same, the said flange being formed to provide an air-chamber at the line along which it joins the sleeve for the purpose specified.

[Claims 6 to 24 not printed in the Gazette.]

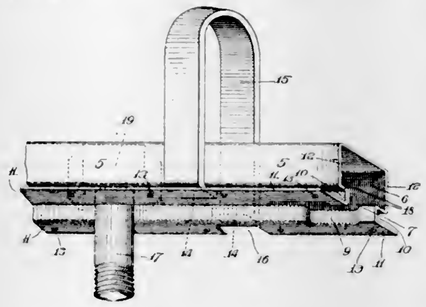
1,172,663. SASH-LOCK. JOHN CLAYTON BACKUS, Smethport, Pa. Filed Aug. 28, 1915. Serial No. 47,799. (Cl. 16—18.)



1. A device for the purpose set forth comprising a holding rack consisting of a sheet metal plate having one edge bent laterally and provided with ratchet teeth having their holding edges disposed at a right angle to the longitudinal plane of the plate and their other edges inclined inwardly, a dog pivoted at one end and arranged to ride upon the inclined edges of said ratchet teeth during movement of the rack in one direction and to extend across and engage squarely against the working edges thereof upon movement of the rack in the opposite direction, and a handle member extending from one edge of said dog and having its extremity bent laterally to provide a pressure tip.

2. A sash holder comprising a casing to be secured within a window frame, a holding rack consisting of a metal plate to be secured to a window sash having one longitudinal edge bent laterally and formed with ratchet teeth, the working edges of said teeth being disposed at a right angle to the line of movement of the sash, a dog consisting of a sheet metal plate having one end provided with lugs and fitting within the end of the casing, and a handle member struck from one edge of the plate intermediate the ends thereof, a pivot inserted through the casing and said lugs, and a spring spanning said pivot and having one arm bearing against the casing and another arm bearing against the free end of the dog to project the same into engagement with the holding rack.

1,172,664. CHANNEL STRUCTURE FOR HANGERS. WALTER D. BANES, Philadelphia, Pa., assignor to General Pressed Metal Company, a Corporation of Pennsylvania. Filed Mar. 28, 1914. Serial No. 827,833. (Cl. 72—105.)



1. A pressed metal channel structure comprising angularly extending walls forming a main longitudinally extending channel and a narrower channel parallel and communicating therewith, formed between parallel walls of relatively short vertical extension, longitudinally extending flanges in the plane of the outer margin of said narrower channel, one flange provided with a recess in its outer margin, for permitting the passage therethrough of one end of an anchor member, said flanges forming with the outer walls of the narrower channel and part of the walls of the main channel oppositely disposed exterior channels and an anchor member having converging free ends engaging in said exterior channels.

2. A pressed metal structure comprising angularly extending walls forming a main longitudinally extending channel and a narrower channel parallel and communicating therewith, longitudinally extending flanges in the plane of the outer margin of said narrower channel, said flanges forming with the outer walls of the narrower channel and part of the walls of the main channel oppositely disposed exterior channels and a U-shaped anchor member having converging free ends engaging in said oppositely disposed exterior channels.

3. A channel structure for hangers, comprising angularly extending walls forming a main longitudinally extending channel and a narrower channel parallel and communicating therewith, longitudinally extending flanges in the plane of the outer margin of said narrower channel forming with the outer walls of the narrower channel and part of the walls of the main channel oppositely disposed exterior channels, a U-shaped anchor member having converging free ends for engaging in said oppositely disposed exterior channels and a closure for the open end of said structure comprising a sheet metal blank of similar contour but greater dimension than the end of the channel structure forced into said open end thereby upsetting the marginal portions into a flange having frictional engagement with the parallel walls of the channel structure.

1,172,665. THRESHING-HARVESTER. NORMAN H. BEEBE and WILLIAM A. THOMAS, Wichita, Kans., assignors to Globe Machine Company, Wichita, Kans. Filed Sept. 25, 1911, Serial No. 651,175. Renewed Nov. 23, 1915. Serial No. 63,140. (Cl. 56—29.)

1. In a standing grain harvester, the combination with a traveling frame, of a casing mounted thereon, having a plurality of openings along one edge thereof, of independently operable vertical cylinders located adjacent to the openings, means carried by the cylinders for beating the grain from the standing stalks, and forcing the grain into the casing and means coöperating with the cylinders in removing the grain from the stalks.



2. In a standing grain harvester, the combination with a traveling frame, of a casing mounted thereon having a plurality of openings along one edge thereof, vertical cylinders located adjacent to the openings, dividers carried by the casing for feeding the stalks into the openings and obliquely to the cylinders, so that the grain can be removed, means carried by the cylinders for beating the grain from the standing stalks and forcing the grain into the casing and means coöperating with the cylinders in removing the grain from the stalks.

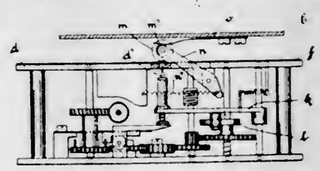
3. In a standing grain harvester, the combination with a traveling frame, of a casing mounted thereon having a plurality of openings along one edge thereof, vertical cylinders located adjacent to the openings, guides for feeding the stalks into the openings extending into the casing, and following the contour of the cylinders, so that the grain can be removed from the standing stalks, and means carried by the cylinders for beating the grain from the stalks and forcing the grain into the casing.

4. In a standing grain harvester, the combination with a traveling frame, of a casing mounted thereon having a plurality of openings along one edge thereof, vertical cylinders located adjacent to the openings, guides for feeding the stalks into the openings extending into the casing and following the contour of the cylinders, so that the grain can be removed from the standing stalks, and spirally arranged fingers connected to the cylinders extending over the openings for beating the grain from the stalks as the stalks are fed into the passages.

5. In a threshing harvester, the combination with a frame, of a casing mounted on the frame, independently operable vertical cylinders journaled in the casing, fingers mounted on the cylinders for beating the grain from the standing stalks and forcing the grain into the casing, and means in the casing for feeding the grain to the fingers whereby the grain can be whipped from the stalks.

[Claims 6 and 7 not printed in the Gazette.]

1,172,666. RECORDING DEVICE FOR VEHICLES. WILHELM G. BRUHN, Berlin-Wilmersdorf, Germany. Filed Nov. 25, 1913. Serial No. 802,941. (Cl. 234—1.)



1. A recording device for vehicles, comprising a casing having an inspection opening, a clock-work therein, a transparent recording sheet driven by said clock-work beneath said opening, and a cyclometer mechanism within the casing opposite said opening, said sheet arranged to move between said mechanism and opening thereby causing said mechanism to be viewed through said sheet.

2. A recording device for vehicles, comprising a casing,

a cover for said casing, a recording sheet, a clock-work for moving said sheet, a perforating pin arranged beneath said sheet, a platen for said pin arranged above said sheet, and means controlled by said cover for controlling the movement of said platen into and out of operative position.

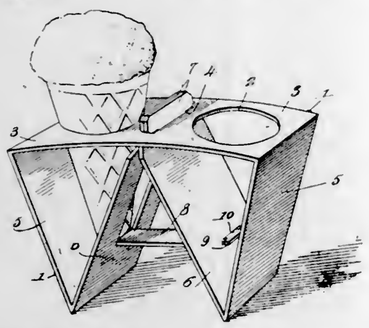
3. A recording device for vehicles, comprising a casing, a cover for said casing, a rotating record sheet beneath said cover, a pin for perforating the latter arranged beneath said sheet, a pivoted spring-retracted platen member for engaging the upper surface of the sheet and cooperating with said pin, and a spring on the cover to yieldingly hold the platen in operative position.

4. A recording device for vehicles comprising a casing, a rotating record sheet therein, a recording pin normally out of contact with the sheet, a cover rotatable on the casing, and means operated by the rotation of the cover to move the pin into contact with the sheet.

5. A recording device for vehicles, comprising a casing, a rotating recording sheet therein, a lever pivoted in the casing carrying a pin adapted to puncture the sheet, a cover for closing the casing rotatable thereon, and a cam on the cover adapted to actuate the lever by the movement of the cover on the casing to move the pin onto the sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,172,667. CONE-HOLDER. JOHN C. BUNNELL, Boise, Idaho. Filed Oct. 18, 1913. Serial No. 795,980. (Cl. 229—6.)



1. As an article of manufacture, a knock-down cone stand comprising a single strip of material having openings formed therein for the reception of the cones, supports formed by bending the said strip of material at each end, the terminals of the respective bent portion being detachably fastened to that portion of the strip having the openings formed therein, and means formed upon one of said supports adapted for detachable engagement with the other of said supports to serve as a brace for the stand.

2. A collapsible stand composed of a single strip of bendable material including a top portion having a plurality of openings formed therein through which the article to be supported extends, substantially V-shaped support members depending from the said top portion, one extremity of the said support members being detachably secured to the said top, and means carried by one of the said support members and disposed for engagement with the other of the said support members to maintain the two in spaced relation.

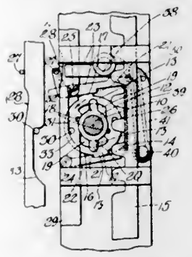
3. A collapsible stand composed of a single strip of bendable material including a top portion having a plurality of openings formed therein through which the article to be supported extends, the said top being further provided with a slot disposed at a point intermediate its ends, substantially V-shaped support members extending from the said top portion, locking tongues formed upon the free end of the said support members, the said tongues adapted to fit within the said slots to maintain the said support members immovable with respect thereto, an additional securing means carried by one of the said support members and disposed for engagement with the other of the support members, as and for the purpose set forth.

4. A collapsible stand composed of a single strip of bendable material including a top portion having a plurality of openings formed therein, the said openings adapted to form a support for the article acted upon by extending the said article therethrough, the said top being further provided with a slot formed therein at a point intermediate its ends, substantially V-shaped uniformly spaced apart support members depending from the said top portion, locking tongues formed, one upon the free end of each of the said support members, the said tongues adapted to both fit within the said slot above mentioned, an extension formed upon one of the said support members, a locking tongue formed upon the free end of the said extension adapted to engage the other of the said support members to maintain the two support members in uniform spaced relation, as and for the purpose set forth.

5. A collapsible stand composed of a single strip of bendable material including a top portion having a plurality of openings formed therein through which the article to be supported extends, the said top being further provided with a slot formed at a point intermediate its ends, substantially V-shaped support members formed by bending the respective ends of the said strip, locking tongues formed upon the inner free end of each of the said support members, the said tongues adapted to both fit within the slot of the top portion aforesaid, a tongue struck-out from one of the said support members, and a locking tongue formed upon the extremity of said extension adapted to fit within a slot formed within the other of the said support members to maintain the two members in uniform spaced relation, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,172,668. CONTROLLING DEVICE FOR VOTING-MACHINES. JAMES A. BUTLER, Winthrop, Mass., assignor to American Voting Machine Company, Boston, Mass., a Corporation of Maine. Filed Feb. 15, 1913. Serial No. 748,577. (Cl. 235—54.)



1. Apparatus of the kind described, comprising a key spindle, a slide bar at each side of said spindle, and means mounted to turn with said spindle, with a lost motion connection, and arranged to co-act with said slide bars to permit the key spindle to be turned forward to a determinate extent for voting, and to be turned back at predetermined times to change a vote.

2. Apparatus of the kind described, comprising a key spindle, a slide bar at one side thereof having tooth engagement with said spindle, a member mounted on said spindle to turn therewith with a lost motion connection, and a second slide bar having provision to control said member, to permit turning of the key spindle, a determinate extent for voting.

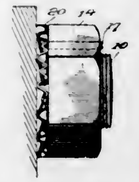
3. Apparatus of the kind described, comprising a key spindle, a slide bar having provision to be moved endwise by said key spindle, a member mounted on said key spindle to turn therewith with a lost motion connection, said member having stop elements, stop devices cooperative with said stop elements, and a second slide bar having provision to control said member, and thereby the spindle to permit the spindle to turn forward a determinate extent for voting, and to be turned back at predetermined times to change a vote.

4. Apparatus of the kind described, comprising a key spindle having opposite teeth fixed thereto, a slide bar formed with a rack engageable by said teeth, a ring mounted on said spindle with provision to be turned therewith with a lost motion connection, said ring having stop elements and there being fixed stop elements cooperative therewith, and a second slide bar having provision to control the turning of said ring and thereby the spindle for the purpose stated.

5. A device of the kind described, comprising a key spindle, equipped with teeth, a slide bar having a rack engageable by said teeth, a ring mounted on said spindle having a lost motion connection therewith, said ring having two sets of stop elements, a pair of stop arms cooperating with one of said sets of stop elements, and a slide bar coöperative with the other set of stop elements to control the turning of said ring and thereby of the key spindle for the purpose stated.

[Claims 6 and 7 not printed in the Gazette.]

1,172,669. NUT-LOCK. FRANK R. CALDWELL, South Knoxville, Tenn. Filed Dec. 10, 1914. Serial No. 876,526. (Cl. 151—2.)



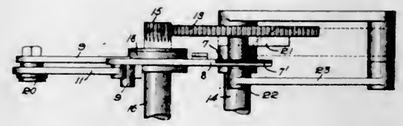
1. A device of the character described including a nut bored to engage a bolt, a corrugated locking washer formed to engage the bolt and providing a seat for the nut, alternate furrows of the corrugations of the washer being of less depth than the intermediate furrows, and a key carried by the nut and engaging within one of said alternate furrows.

2. A device of the character described including a nut bored to engage a bolt, a locking washer formed to engage the bolt, said washer being provided with a yieldably supported inclined face, one extremity of said face being disposed between planes comprehending the opposite side faces of the washer, and a key carried by the nut and engaging the washer upon one side of the said face.

3. A device of the character described including a bolt formed to receive a nut and provided with a flat side face, a nut engaging the bolt, a resilient corrugated locking washer having an opening formed therein to receive the bolt and provided with a flat face engaging the flat face of the bolt, alternate furrows of the corrugations of the washer being of less depth than the intermediate furrows, said nut upon one side being provided with an internally screw threaded bore having its axis arranged parallel to the axis of the nut, and an externally screw threaded key detachably fitting within said bore, said key being provided with a pointed terminal engaging within one of said intermediate furrows.

4. A device of the character described including a nut bored to engage a bolt, a locking washer adapted to engage the bolt, said washer being formed with intersecting oppositely inclined faces yieldably supported with their intersecting extremities arranged medially of the washer, and a key arranged eccentric to the axis of the nut and adjustable thereon to engage said inclined faces at the intersection thereof.

1,172,670. STITCH-FINGER FOR SHELL-STITCH MACHINES. WILLIAM H. CARTER, Needham Heights, Mass., assignor to The William Carter Company, Needham Heights, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1912. Serial No. 684,146. (Cl. 112—24.)



1. A forming finger adapted to receive and form permanently open loops of a shell or cluster border fabric consisting of a relatively broad, elongated plate held in fixed position and having its inner and outer edges in substantial parallelism throughout the major portion of its length, said finger being constructed and arranged to receive said open loops thereabout, said outer edge at its forward end having a portion extending forwardly throughout and tapering to said inner edge and having thereon an outwardly extending stitch-anchoring shoulder merging at both ends into said forwardly extending portion, said tapering portion being of sufficient length to receive thereabout and to support a plurality of open loops constituting a shell or cluster of a border fabric.

2. A forming finger constructed and arranged to receive and form permanently open loops of a shell or cluster border fabric consisting of a relatively broad, elongated plate having the outer edge thereof at its forward end provided with a portion extending forwardly throughout and tapering to the inner edge thereof and having thereon an outwardly extending stitch-anchoring shoulder, merging at both ends into said forwardly extending portion, said tapering portion being of sufficient length to receive thereabout and to support a plurality of open loops constituting a shell or cluster of a border fabric.

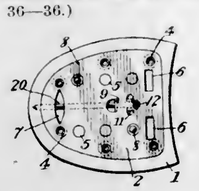
3. A forming finger constructed and arranged to receive and form permanently open loops of a shell or cluster border fabric consisting of a relatively broad, elongated plate having its inner and outer edges in substantial parallelism throughout the major portion of its length, said outer edge at its forward end having a tapering portion extending forwardly throughout to said inner edge and there terminating in a relatively narrow point bent away from said inner edge, said tapering portion having an outwardly extending stitch anchoring shoulder merging at both ends into said forwardly extending portion and being of sufficient length to receive thereabout and to support a plurality of open loops constituting a shell or cluster of a border fabric.

4. Shell or cluster border-forming mechanism for fabrics comprising in combination, a sewing needle, a crochet hook, means for imparting movement thereto, a fixed forming finger having its forward end tapered and terminating in a relatively narrow, stitch-retaining hook, the tapered portion of said finger being of sufficient length to receive thereabout and to support a plurality of open loops constituting a shell or cluster of a border fabric, said parts constituting stitch-forming means for forming stitches in series, means to cause a relative advance of the fabric with respect to said stitch-forming means, and means to cause a relative retrogression of said fabric between the formation and positioning of the first and the last of said series of stitches.

5. Shell or cluster border-forming mechanism for fabrics comprising in combination, a sewing needle, a crochet hook, means for imparting movement thereto, a fixed forming finger having its forward end tapered and terminating in a relatively narrow point, the tapered portion of said finger being of sufficient length to receive thereabout and to support a plurality of open loops constituting a shell or cluster of a border fabric, said parts constituting stitch-forming means for forming stitches in series, means to cause a relative advance of the fabric with respect to said stitch-forming means, and means

to cause a relative retrogression of said fabric between the formation and positioning of the first and the last of said series of stitches.

1,172,671. DETACHABLE RUBBER HEEL FOR BOOTS AND SHOES. CHARLES H. CHAPMAN, Winchester, Mass., assignor to Chapman Detachable Rubber Heel Company, a Corporation of Maine. Original application filed Jan. 20, 1910, Serial No. 539,064. Divided and this application filed Feb. 21, 1911. Serial No. 610,605. (Cl. 36—36.)



1. In a detachable rubber heel for boots and shoes, a sole clip, a rubber portion, a heel plate embedded in the said rubber portion of the heel and having a depending perforated lip and adjacent guide and stop lugs, and an attaching pin arranged to engage said lip and lugs and said sole clip and be arrested by said lugs when so engaged.

2. In a detachable rubber heel for boots and shoes, a sole clip, a rubber portion, a heel plate embedded in said rubber portion of the heel and having a hole, a depending perforated lip and adjacent guide lugs, said guide lugs serving as stops, and a connecting pin arranged to engage said lip and guide lugs and said sole clip and its head arranged to enter the hole next to said lugs.

3. In a detachable rubber heel for boots and shoes, a sole clip, a rubber portion, and a metal plate embedded therein and having a depending perforated lip, a pair of adjacent lugs and a hole next to the lugs, the said rubber portion having a transverse perforation extending through it in line with the lips and hole and between the lugs aforesaid, and a connecting pin adapted to enter and be concealed in the perforation in said rubber portion and engage the lip and lugs of said plate and said sole clip, a portion of the pin arranged to enter the hole in said plate to lock said pin in place.

4. In a detachable rubber heel for boots and shoes, a rubber portion, a metal plate embedded therein and having a depending perforated lip, a pair of adjacent lugs and a hole next to the lugs, the said rubber portion having a transverse perforation extending through it in line with the lips and hole and between the lugs aforesaid and arranged to receive, conceal and stop a connecting means, a clip to be secured to the sole of the boot or shoe, and means for detachably connecting the heel plate and clip.

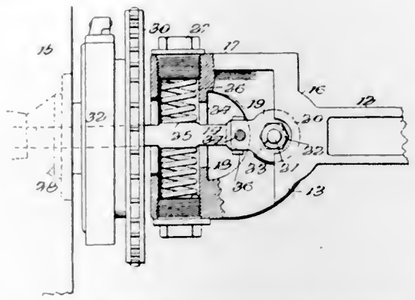
5. In a detachable rubber heel for boots and shoes, a heel plate and a rubber portion in which it is securely embedded, said heel plate having transverse holes in its breast end, and a clip adapted to be attached to the sole of the boot or shoe and provided with lips at one end depressed from the plane of the clip and having a double outward and downward curve thereby most efficiently to find and pass through the transverse holes in the heel plate and underlie their edges so as to effect a firm engagement of the clip and heel plate.

[Claim 6 not printed in the Gazette.]

1,172,672. SHOCK-ABSORBER. JAMES E. CHOSTNER, Benton, Mo. Filed July 24, 1915. Serial No. 41,708. (Cl. 21—187.)

1. A shock absorbing axle for vehicles including an axle proper terminating at its ends in yokes having vertically spaced arms, tubular housings connecting the free ends of the arms, spindles pivoted to the yokes and extending through slots formed in the housings, and springs inclosed in the housings and engaging against the upper and lower faces of the spindles.

2. A shock absorbing axle for vehicles including an axle proper terminating at its ends in yokes having vertically spaced arms, tubular housings connecting the free ends of the arms, spindles pivoted to the yokes and extending through slots formed in the housings, and springs inclosed in the housings and engaging against the upper and lower faces of the spindles, the yokes being formed with semi-circular recesses providing bearings and the spindles with substantially circular shaped terminals engaged in the bearings.



3. A shock absorbing axle including an axle proper terminating at its ends in yokes having vertically spaced arms and tubular housings connecting the free ends of the arms, the arms being formed with openings alining with the housings and the yokes have semi-circular recesses, spindles formed at one end with forked heads to straddle the yokes and seat in the recesses, those portions of the heads seating in the recesses being substantially circular in shape, pivotal connections between the forked heads of the spindles and the yokes, the spindles extending through slots formed in the housings, springs seated in the housings and engaging against the upper and lower faces of the spindles, and plugs closing the upper and lower ends of the housings and tensioning the springs.

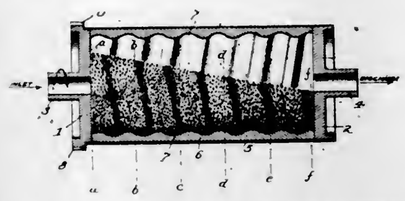
4. A shock absorbing axle including an axle proper terminating at its ends in yokes having vertically spaced arms and tubular housings connecting the free ends of the arms, the arms being formed with openings alining with the housings and the yokes have semi-circular recesses, spindles formed at one end with forked heads to straddle the yokes and seat in the recesses, those portions of the heads seating in the recesses being substantially circular in shape, pivotal connections between the forked heads of the spindles and the yokes, the spindles extending through slots formed in the housings, springs seated in the housings and engaging against the upper and lower faces of the spindles, plugs closing the upper and lower ends of the housings and tensioning the springs, arms secured to the spindles, and brake drum housings carried by the free ends of the arms to move with the spindles.

5. A shock absorbing axle including an axle proper, spindle members pivotally connected to the free ends of the axle cushioning means between the axle and spindle members normally holding the latter in alinement with the axle, arms secured to opposite sides of the spindle members to swing therewith and extending toward the free ends of the spindle members, and brake drum housings carried by the free ends of the arms.

[Claims 6 and 7 not printed in the Gazette.]

1,172,673. GRINDING-MILL. DAVID COLE, Tucson, Ariz. Filed Nov. 10, 1913. Serial No. 800,184. (Cl. 83—9.)

1. In a grinding mill, the combination of a rotatable hollow drum adapted to receive material at one end and discharge it, when ground, at the other end, and having a reversely feeding spirally corrugated inner surface; and means for rotating said drum, the spiral being of a direction to move the larger bodies of the charge in contact therewith, toward the inlet or receiving end of the drum when the latter is rotated in its normal grinding direction.

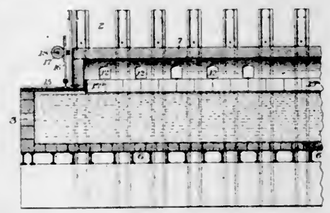


2. In a grinding mill, the combination of a substantially cylindrical hollow drum having on its inner face rounded corrugations extending in a reverse or backwardly feeding spiral around said drum in a direction to move the larger bodies of the charge in contact with said spiral toward the inlet or receiving end when the drum is rotated in its normal grinding direction, and of a pitch precluding the lifting of material or its carriage over the axis of the drum by said corrugations; hollow inlet and outlet trunnions mounted respectively at opposite ends of said drum, rotatably to support the same; and means for rotating said drum in a direction to effect such movement of the larger bodies of the charge toward the receiving end.

3. In a grinding mill, the combination of a substantially cylindrical hollow drum adapted to receive material at one end and discharge it, when ground, at the other end; a reversely feeding spiral conveying structure mounted on the inner face of said drum to turn therewith, and adapted to exert a feeding tendency on a charge contained by said drum, through the relative rotation of said drum with respect to said charge; and means for rotating said drum in a direction to cause said conveying structure to urge said charge toward the receiving end of said drum when the drum is turned in its normal grinding direction.

4. In a grinding mill, the combination of a substantially cylindrical imperforate drum adapted to receive material at one end and discharge it, when ground, at the other end; a reversely feeding spiral conveying structure mounted on the inner face of said drum to turn therewith, and adapted to urge toward its receiving end a charge within the drum by reason of the relative rotation of said drum with respect to said charge; and means for rotating said drum in a direction to cause said conveying structure thus to urge said charge toward the receiving end of said drum, the length and diameter of the drum and the pitch of said spiral conveying structure being so proportioned relatively to each other as to produce in the normal operation of the device, a space adjacent the discharge end containing a relatively small quantity of solid material and a relatively large quantity of water.

1,172,674. GLASS-FURNACE. THOMAS W. CONNINGTON, Clarksburg, W. Va. Filed Jan. 21, 1911. Serial No. 605,831. (Cl. 49—56.)



1. A glass furnace having refractory side and end walls, and a roof arch suspended over the central portion of the furnace, the edges of said roof arch terminating at a distance inside the side and end walls, the furnace having regenerators at its sides with uptakes leading from the regenerators above the side walls of the furnace, and there being ports leading from the uptakes into the furnace underneath said arch, sectional covers closing in the top of the furnace between the side and end walls and the central roof arch, and means for moving the cover sections vertically to fix their position with respect to the glass level of the furnace, substantially as described.

2. A glass furnace having refractory side and end walls, and a roof arch suspended over the central portion of the furnace, the edges of said roof arch terminating at a distance inside the side and end walls, the furnace having regenerators at its sides with uptakes leading from the regenerators above the side walls of the furnace, and there being ports leading from the uptakes into the furnace underneath said arch, sectional covers closing in the top of the furnace between the side and end walls and the central roof arch, and means for simultaneously raising and lowering a plurality of the cover sections, substantially as described.

3. A glass furnace having refractory side and end walls, and a roof arch suspended over the central portion of the furnace, the edges of said arch terminating at a distance from the end and side walls of the furnace, means for introducing the heating medium into the furnace underneath the roof arch only, means for closing in the top of the furnace around said arch at both sides and at one end, the other end forming a drawing extension of the full depth of the glass chamber of the furnace, and said extension having a plurality of drawing openings at the top, together with refractory floats placed between different drawing openings, substantially as described.

4. A glass furnace having refractory side and end walls, and a roof arch suspended over the central portion of the furnace, the edges of said roof arch terminating at a distance inside the side and end walls, means for introducing a heating medium into the furnace below the said arch, sectional covers closing in the top of the furnace at the edges of the arch, and means for adjustably supporting said covers above the glass level of the furnace, substantially as described.

5. A glass furnace having an arch suspended over its central portion, and having its lateral and side walls offset from the arch, heating flues leading into the furnace chamber underneath the arch, and cover members or shields for preventing heat from passing backwardly from the edge portion of the furnace into the offset portions thereof, together with means for raising and lowering said members; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

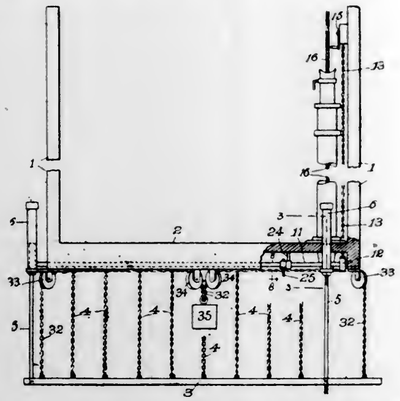
1,172,675. SAFETY APPLIANCE FOR ELEVATORS. JOSEPH D. COUTURE, Stratford, Conn. Filed Apr. 21 1915. Serial No. 22,796. (Cl. 187—40.)

1. A safety appliance for elevators, comprising a horizontal bar suspended from the car and spaced therefrom but capable of independent vertical movements, vertically disposed guided racks rigid with said bar, pinions carried by the car in meshing engagement with said racks and connections geared to said pinions and interposed between the latter and the devices which control the movements of the car whereby the rotation of the pinions will effect the stoppage of the car.

2. A safety appliance for elevators, comprising a bar suspended beneath the elevator car and carried thereby and capable of vertical movements, guided vertical rack carrying rods rigid with said bar and projecting upwardly therefrom, rotary pinions carried by the car and in mesh with said racks, and means carried by the car and geared with said pinions and operated by the latter to stop the car.

3. A safety appliance for elevators, comprising an elevator car, a bar carried thereby, flexible means for normally securing the bar in spaced relation to the elevator car but permitting the bar to be capable of free independent vertical movements, guided rack carrying rods extending vertically from the ends of said bar and movable

therewith, rotary pinions carried by said car and meshing with said racks, and means carried by the car and geared to said pinions for operation thereby for stopping the car.

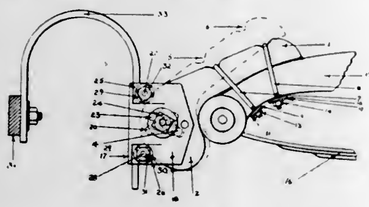


4. A safety appliance for elevators, comprising a bar suspended beneath the elevator car and carried thereby and capable of vertical movements, guided vertical rack carrying rods rigid with said bar and projecting upwardly therefrom, rotary pinions carried by the car and in mesh with said racks, devices carried by the car and capable of operation to stop the movement of the car, and instrumentalities geared with said pinions and carried by the car intermediate said pinions and devices for causing the latter to operate and stop the car when the pinions are rotated by the racks.

5. In a safety appliance for elevators, the combination with a car carrying rack guides, a bar carried by the car and normally spaced from the latter but capable of independent vertical movements, racks within said guides, pinions carried by the car and engaged by said racks, rods rigid with said bar and adapted to operate said racks to revolve said pinions when said bar strikes an obstruction and is moved toward the car, and means carried by the car and geared with said pinions for operation thereby for stopping the car.

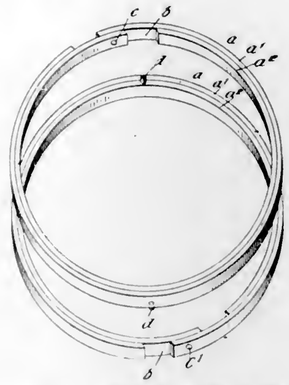
[Claims 6 to 10 not printed in the Gazette.]

1,172,676. BRACKET FOR AUTOMOBILE-BUFFERS. NATHAN W. CRANDALL, Los Angeles, Cal., assignor to Mary M. Lide, Los Angeles, Cal. Filed Sept. 22, 1915. Serial No. 52,008. (Cl. 213—39.)



An adjustable bracket for automobile buffers comprising a shank member and a clamping member pivotally connected together, a portion of said shank member extending within the side walls of said clamping member, oblique slots in the side walls of said shank member, and oblique slots in the side walls of said clamping member arranged to extend diagonally across the said oblique slots in said shank member, when said members are located in proper relation to each other, a bolt extending through all of the slots in said members, and slidable therein when said clamping member is rotated about its pivotal center, a nut upon the free end of said bolt for clamping said members together in predetermined positions, and a sleeve upon said bolt and between the side walls of said shank member to prevent the collapse of the said members when subjected to the clamping action of said bolt, all arranged and operating substantially as shown and for the purpose set forth.

1,172,677. PISTON-RING. FRANK E. DAVIDSON, New York, N. Y. Filed Dec. 11, 1914. Serial No. 876,640. (Cl. 121—108.)

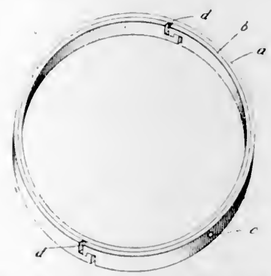


1. A piston ring composed of two expansive and contractive, concentrically arranged spring, ring-parts, each being split, one end of one split part overlapping the opposite end of the other split part and a fastening connecting said overlapping ends, one end of each part being free and the resilient action of the two ring parts being thereby exerted against each other.

2. A piston ring composed of two parts lying edgewise one upon the other, each part being formed of two concentrically arranged resilient split rings with overlapping ends fastened together, and means for holding said parts edgewise one upon the other against material relative rotation.

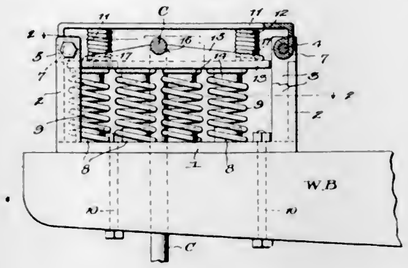
3. A piston ring composed of two parts lying edgewise one upon the other, each part formed of two concentrically arranged resilient split rings with overlapping ends fastened together, and means for holding said parts one upon the other against material relative rotation, said means consisting of pins on the parts adapted to fit in gaps between ends of the rings of the other parts.

1,172,678. PISTON-RING. FRANK E. DAVIDSON, New York, N. Y. Filed Mar. 31, 1915. Serial No. 18,214. (Cl. 121—108.)



A piston ring composed of two expansive and contractive split-parts lying concentrically one around the other and having their joints or splits located at points removed from each other, the split ends of the said parts having sliding interlocking lap joints to limit their expansive and contractive movement and means for fastening said parts together at a point intermediate said joints.

1,172,679. SADDLE-SPRING FOR DRILLS. OKEY HILL DE VAUGHN, Parkersburg, W. Va. Filed July 26, 1915. Serial No. 41,978. (Cl. 255—16.)



1. In a device of the class described the combination of vertically spaced plates held in fixed relation to each other, an intermediate plate movable between said fixed plates and provided with stirrup supporting means, and cushioning springs arranged between said intermediate plate and the base plate and also between said intermediate plate and the top plate.

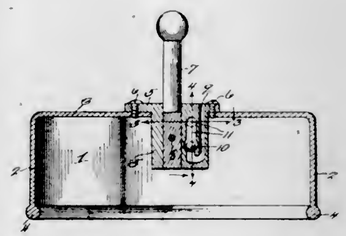
2. In a device of the class described the combination of vertically spaced plates held in fixed relation to each other, an intermediate plate movable between said fixed plates and provided with stirrup supporting means, cushioning springs arranged between said intermediate plate and the base plate and also between said intermediate plate and the top plate, and means carried by said base plate for guiding said intermediate plate and holding it against longitudinal and lateral displacement.

3. In a device of the class described the combination of a base plate, standards rising therefrom, a top plate mounted on said standards, a plate movably mounted between said top and base plates, cushioning springs arranged between said movable plate and said base plate and between said movable plate and top plate, and means carried by said plates for holding said springs in operative position.

4. In a device of the class described the combination of a rectangular base plate, standards rising from the corners thereof, said standards being in the form of angle irons L-shaped in cross section, the flanges at the sides of said standards being longer at their upper ends than the other flanges and apertured to form bearings, a top plate of a width equal to the distance between the apertured ends of the opposed standards and having their ends rolled to form bearings, bolts extending through the bearings in said standards and through those of the ends of said top plate, laterally extending bosses on the inner faces of said top and base plates, an intermediate plate arranged between said top and base plates and having bosses on both faces registering with those of the opposed plates, coiled springs arranged between said base and intermediate plates with their ends engaging the bosses thereof, similar springs between said intermediate and top plates with their ends engaged with the bosses thereof, and means carried by said intermediate plate for supporting a stirrup.

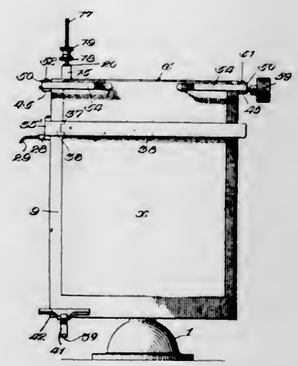
5. In a device of the class described the combination of a rectangular base plate, standards rising from the corners thereof, said standards being in the form of angle irons L-shaped in cross section, the flanges at the sides of said standards being longer at their upper ends than the other flanges and apertured to form bearings, a top plate of a width equal to the distance between the apertured ends of the opposed standards and having their ends rolled to form bearings, bolts extending through the bearings in said standards and through those of the ends of said top plate, laterally extending bosses on the inner faces of said top and base plates, an intermediate plate arranged between said top and base plates and having bosses on both faces registering with those on the opposed plates, coiled springs arranged between said base and intermediate plates with their ends engaging the bosses thereof, similar springs between said intermediate and top plates with their ends engaged with the bosses thereof, longitudinally extending transversely spaced ribs on the upper face of said intermediate plate provided with registering notches to receive a stirrup.

1,172,680. CLOTHES-POUNDER. JOHN P. DORAU, Jefferson, Wis. Filed Mar. 27, 1914. Serial No. 827,649. (Cl. 137—32.)



A valve structure for a reciprocating casing, comprising a casting extending through the upper wall of the casing and depending below the wall, a duct formed in the casting and passing from the upper surface thereof downward in the casing to a substantially elbow turn and provided with a valve seat adjacent to the termination of the elbow turn, said duct then extending upwardly substantially parallel with its downwardly extending portion and terminating in a right-angled outlet opening, said upwardly extending portion immediately above the valve seat being larger in diameter than the valve seat and the first part of the duct, and a ball valve coöperating with the seat.

1,172,681. COPY-HOLDER. GEORGE P. DOHERTY, Chicago, Ill. Filed Apr. 18, 1912. Serial No. 691,634. (Cl. 120—34.)

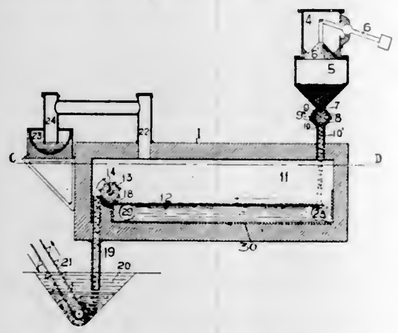


1. In combination, two parallel guide bars, a carriage slidably held upon said bars having a collar, a trip rod

slidably held within said collar, two dogs pivotally secured to said carriage having their ends contacting with said trip dog, springs to normally hold said dogs to said trip rod, a releasing lever pivotally secured to said carriage below said dogs having two upstanding arms arranged at times to contact with said dogs, a pin limiting the downward movement of said lever, and means limiting the upward movement of said lever.

2. In combination, two parallel guide bars, a carriage slidably held upon said bars having a collar, a trip rod slidably held within said collar, two dogs pivotally secured to said carriage having their ends contacting with said trip rod, springs to normally hold said dogs to said trip rod, a releasing lever pivotally secured to said carriage below said dogs having two upstanding arms arranged at times to contact with said dogs, and a pin limiting the downward movement of said lever.

1,172,682. PROCESS FOR CARBONIZING COAL. HENRY L. DOHERTY, New York, N. Y. Filed Dec. 27, 1909. Serial No. 535,036. (Cl. 48—92.)



1. The process of carrying out the distillation of coal at a temperature below the temperature of active dissociation of illuminating constituents of the distillation products of said coal to produce gas and coke which comprises continuously circulating a stream of molten metal in a closed circuit through a heating chamber and a carbonizing chamber, the said stream being heated to a temperature not above 1200° during its passage through said heating chamber whereby the temperature of distillation of said coal is maintained below that at which a substantial proportion of the distillation products will be broken up, feeding crushed coal onto the stream of molten metal at approximately its place of entrance into said carbonizing chamber, maintaining said coal in contact with said stream of molten metal during the progress of the latter through the carbonizing chamber, whereby the volatile matter of said coal is distilled therefrom, removing the fixed residue of such distillation from the stream of molten metal at the place of exit of said stream from said carbonizing chamber, removing the gaseous products of said distillation from said carbonizing chamber and subjecting them to condensation whereby the condensable constituents of said gaseous products are separated from the non-condensable constituents, substantially as described.

2. The process of manufacturing gas and carbonized materials which comprises establishing and maintaining a flowing bath or stream of molten material at a temperature not exceeding 1200° F., feeding a solid carbonaceous material containing hydrogen on and to said flowing bath, maintaining such carbonaceous material on and in contact with said bath till a desired amount of volatile material is expelled from said carbonaceous material by heat taken up from said molten material, withdrawing residual carbonaceous materials after the desired length of contact has been effected, reheating the molten material to a temperature not in excess of 1200° F. and returning the reheated molten material into contact with a fresh portion of carbonaceous material.

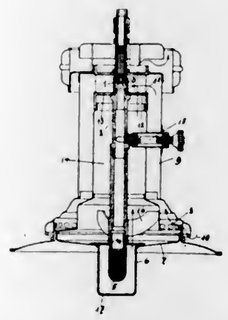
3. The process of manufacturing gas and carbonized fuel which comprises subjecting solid carbonaceous matter containing volatile compounds to heating by contact with a flowing bath of molten lead, said bath being maintained at a temperature such that the volatile constituents of the said carbonaceous matter are caused to be distilled therefrom but below 1200° F., and withdrawing the gases and vapors distilled from said carbonaceous material from contact with the molten lead without exposing them to a temperature that will cause the dissociation of the initial products of the distillation, substantially as described.

4. The process of manufacturing gas and producing carbonized fuel which comprises continuously circulating a bath of molten lead, or alloys of the same, first, through a heating chamber and, second, through a carbonizing chamber, feeding crushed coal onto said bath in said carbonizing chamber, contacting the said coal with the said bath during the progress of said bath through the said carbonizing chamber, whereby the volatile matter of said coal is distilled therefrom, and the carbonized residue of the coal left on the surface of said bath, removing the gaseous products of the distillation and the residual coke from said carbonizing chamber, substantially as described.

5. The process of manufacturing gas which comprises heating a bath of molten lead, in a furnace chamber, by direct contact with a heating flame, circulating the so-heated bath through a carbonizing chamber, feeding crushed coal to the heated bath in said carbonizing chamber, whereby a portion of the heat of the bath of molten material is communicated to the said crushed coal subjecting the same to destructive distillation, withdrawing the gaseous products of the distillation and the coke from said carbonizing chamber, subjecting the said gaseous products to condensation, whereby the condensable portion of said gaseous products is separated from the non-condensable portion, withdrawing the partially cooled bath of molten lead from said carbonizing chamber and returning it to said furnace chamber, reheating said bath of molten lead in said furnace chamber and returning the so reheated bath of molten lead to the said carbonizing chamber for heating another portion of coal, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

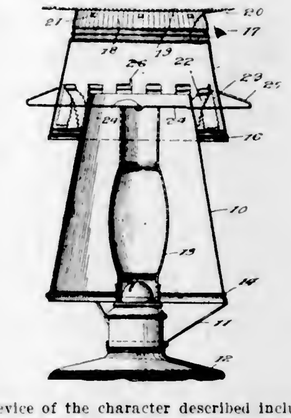
1,172,683. GAS-LAMP. ERNST DRESLER, Berlin-Neukölln, Germany, assignor to the Firm of Ehrich & Graetz, Berlin, Germany. Filed July 23, 1914. Serial No. 852,555. (Cl. 67—90.)



1. In an inverted incandescent compressed gas lamp of the type described the combination with the mixing tube and a heater for heating the primary air admitted to said mixing tube, of heat conducting ribs arranged to transmit heat from the lower end of said mixing tube to said heater.

2. In an inverted incandescent compressed gas lamp of the type described the combination with the mixing tube and a heater for heating the primary air admitted to said mixing tube, of heat conducting ribs arranged to transmit heat from the lower end of said mixing tube to said heater, and means for admitting outside air to said heater, said means being provided near the points of contact between said ribs and said heater.

1,172,684. HEATER. FREDERICK A. DUSTMAN, Holdenville, Okla. Filed Apr. 1, 1915. Serial No. 18,557. (Cl. 126—248.)



1. A device of the character described including a hollow body portion, a hood connected to one extremity of the body portion, and a cap plate carried by the hood in spaced relation to the adjacent extremity of the body portion, the said hood being provided with an air current deflecting tongue intersecting the plane of the adjacent end of the body portion.

2. A device of the character described including a frusto-conical body portion, a frusto-conical hood fitting over one end of the body portion and arranged concentrically therewith, means connecting the hood with the body portion and providing handles projecting outwardly from the wall of the hood, and a cap plate carried by the hood.

3. A device of the character described including a hollow body portion, a frusto-conical hood fitting over one end of the body portion, the said hood being provided with a series of circumferentially spaced tongues extending between the hood and the body portion, means connecting the hood with the body portion, and a cap plate carried by the hood in spaced relation to the adjacent extremity of the body portion.

4. A device of the character described including a hollow body portion, a hood fitting over one end of the body portion, coacting truss members extending through the body portion and through the hood for connecting the hood with the body portion, the said members projecting radially of the hood to provide handles, and a cap plate carried by the hood.

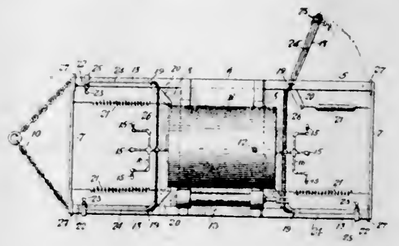
5. A device of the character described including a hollow body portion adapted to be operatively supported by a lamp to surround the chimney thereof, a hood fitting over the upper end of the body portion and arranged in spaced relation thereto, truss members connecting the hood with the body portion and adapted to seat upon the upper extremity of the chimney, and a cap plate carried by the hood, the hood being provided with a plurality of circumferentially spaced openings disposed in a plane intersecting the adjacent upper end of the hood.

[Claims 6 to 17 not printed in the Gazette.]

1,172,685. COMPOSITION OF MATTER FOR USE IN KILLING TREES AND OTHER VEGETABLE GROWTHS. JOHN F. H. EASON, Tyler, Tex., assignor of one-fifth to George L. Tinkle, one-sixth to Herbert C. Pittman, one-sixth to Jesse E. McKee, and one-twelfth to Granville M. Gann, Tyler, Tex. Filed Mar. 4, 1915. Serial No. 12,125. (Cl. 167—6.)

The herein described composition of matter for killing trees and the like, consisting approximately of pure water, 1 gallon, arsenic, 1 lb., sal soda, 1¼ lbs., carbolic acid, 4 ounces, and creosote, 4 ounces.

1,172,686. SPRAYING-SLED. CHARLES FRANKLIN ECKART and GUIDO GIACOMETTI, Olaa, Hawaii. Filed June 17, 1914. Serial No. 845,555. (Cl. 137—63.)



1. Apparatus for spraying the ground between adjacent rows of cultivated plants with deleterious material, comprising a sled, a tank carried thereby for holding the deleterious material, a cross member bracing the end of the sled, an arm pivoted to each side of the sled having an inwardly directed projection, a spring interposed between each of said projections and said cross member, a nozzle carried by each of said arms, and means to supply the deleterious material from said tank to each of said nozzles.

2. Apparatus for spraying the ground between adjacent rows of plants with deleterious material, comprising a sled, a tank mounted thereon, arms pivoted to the sled, a nozzle carried by each of said arms, connections between said nozzles and the tank, said arms being normally yieldingly held in extended positions whereby each nozzle may deliver the material to the ground to one side of the sled, and means for locking said arms in their inoperative positions in alinement with the runners of the sled.

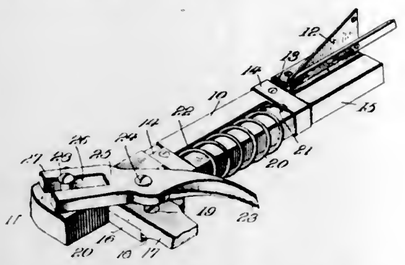
3. Apparatus for spraying the ground between adjacent rows of plants with deleterious material, comprising a sled, a tank mounted thereon, a pair of swinging arms associated with each end of the sled and pivotally connected therewith, a nozzle carried by each of said arms, connections between the nozzles and the tank, means to normally yieldingly hold said arms in extended position, and means to lock said arms in their inoperative position in alinement with the runners of the sled whereby said sled may be drawn in either direction between the rows of plants.

1,172,687. COMBINED WEED KNIFE AND PULLER. ELDER R. ECKMAN, Council Grove, Kans. Filed June 14, 1915. Serial No. 33,964. (Cl. 55—65.)

1. A device of the character described including a stock, an operating lever shiftable upon the stock, coacting blades carried by the operating lever, and means carried by the stock and freely engaging one of said blades, for causing a shifting of one blade relative to the other upon a movement of the lever.

2. A device of the character described including a stock, an operating lever shiftably mounted thereon, a fixed blade carried by the operating lever, a pivoted blade carried by said lever and adapted to coact with

the fixed blade, and means carried by the stock and adapted to slidably engage said last mentioned blade, for causing a shifting of one blade relative to the other upon the movement of the lever.



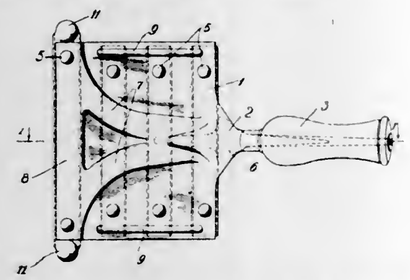
3. A device of the character described including a stock, an operating lever shiftably mounted thereon, a fixed blade carried by said lever, a pivoted blade carried by the lever and adapted to coact with the fixed blade, and means carried by the stock and slidably received by said last mentioned blade for actuating the said blade upon the movement of the lever.

4. A device of the character described including a stock, an operating lever slidably mounted thereon, a fixed blade carried by said lever, a pivoted blade carried by the lever and adapted to coact with the fixed blade, the said pivoted blade at one extremity being provided with an extension having a slot formed therein, and a pivot pin carried by the stock and freely engaging in said slot.

5. A device of the character described including a stock, an operating lever slidably mounted thereon, a fixed blade detachably connected to the said lever, a pivoted blade detachably connected to the lever and adjustable thereon toward or away from the fixed blade, the pivoted blade being adapted to coact with the fixed blade, and a pivot pin carried by the stock and freely engaging said pivoted blade.

[Claims 6 to 10 not printed in the Gazette.]

1,172,688. CURRYCOMB. JAMES EDGAR, deceased, Brooklyn, N. Y., by John Frederic Pierson and James R. Pierson, executors, New York, N. Y. Filed Apr. 29, 1910. Serial No. 558,499. (Cl. 119—86.)

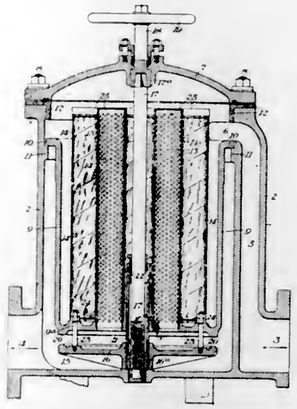


1. In a curry comb, the combination with a sheet metal back plate, of a U-shaped sheet metal combing bar secured beneath the forward part of said plate and having the ends of its top portion extended to form knocking lugs, said knocking lugs being of cupped formation.

2. In a curry comb the combination of a sheet metal back plate having an upwardly pressed reinforcing channel extending across its forward portion, a sheet metal combing bar secured beneath the forward part of said plate at said channel and having its ends extended beyond the plate and forming cup-shaped knocking lugs.

3. In a curry comb the combination of a sheet metal back plate having a transverse rib extending across its forward portion and diverging ribs extending from the base of the shank portion obliquely forward and outward and connecting with the end portions of such transverse rib and forming therewith a triangular reinforcement of said metal back plate, with a combing bar secured on said transverse rib at the under side of the back plate and having its ends extended beyond the sides of the plate to constitute knocking lugs, said knocking lugs being of cupped formation.

1,172,689. STRAINER OR FILTER. WILLIAM S. ELLIOTT, Pittsburgh, Pa. Filed Jan. 8, 1915. Serial No. 1,134. (Cl. 210—16.)



1. A strainer or filter, comprising an outer shell having inlet and outlet connections, an inner shell movably supported within the outer shell, a series of filter or strainer elements within the chamber of the inner shell, and means whereby the inner shell can be moved bodily with respect to the outer shell to act as a valve to close off the filter or strainer chamber of the inner shell, substantially as described.

2. Apparatus of the character described, comprising an outer shell having an inlet and an outlet connection, an inner shell movably supported within the outer shell and having a plurality of filter or strainer elements open at one end, a valve member for closing the open end of said elements, and means whereby the inner shell may also be actuated to form a valve to close off the admission of liquid from the outer shell to the filter elements, substantially as described.

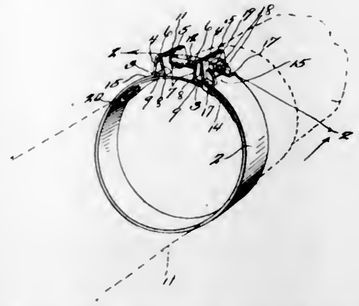
3. Apparatus of the character described, comprising an outer shell having an inlet and an outlet connection, an inner shell movably supported within the outer shell and having a plurality of filter or strainer elements open at one end, a valve member for closing the open end of said elements, and means whereby the inner shell may also be actuated to form a valve to close off the admission of liquid from the outer shell to the filter elements, and said outer shell having a bypass passage around the inner shell, substantially as described.

4. Apparatus of the character described, comprising an outer shell having inlet and outlet connections, an inner shell movably supported within the outer shell, there being an inlet port or passage to the inner shell, means for actuating the inner shell to close said port or passage, a plurality of filter or strainer elements carried by the inner shell, and a valve member for closing the discharge ends of said elements, substantially as described.

5. Apparatus of the character described, comprising an outer shell having inlet and outlet connections, an inner shell movably supported within the outer shell, there being an inlet port or passage to the inner shell, means for actuating the inner shell to close said port or passage, a plurality of filter or strainer elements carried by the inner shell, and a valve member for closing the discharge ends of said elements, said valve member having an initial independent movement and being then arranged to engage the inner shell and effect a movement thereof, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,172,690. HOSE-CLAMP. PETER E. ERICKSON, Port Chester, N. Y. Filed May 21, 1915. Serial No. 29,510. (Cl. 137—28.)

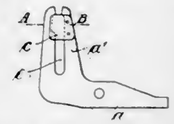


1. A hose clamp comprising a clamping band having laterally extending loops at its adjacent ends, each loop having an aperture, a tongue undgrlapping the adjacent end portions of the band and provided with a lug engaged by a part of one of said loops to prevent movement of the tongue in one direction, a bolt extending through the apertures of said loops and provided with a nut, the opposite edges of the tongue adjacent one of the loops having oppositely disposed ears extending toward each other and overlying the band behind the said one of the loops to prevent movement of the tongue in the opposite direction, said ears having lateral extensions also engaging behind the said one of the loops and engaging opposite edge portions of the nut to prevent displacement and movement of the nut.

2. A hose clamp comprising a clamping band, the adjacent end portions of the band being bent to form laterally extending loops, one side of each loop being bent and extending toward the first bend, the opposite sides of each loop having registering apertures, the aperture in the side of each loop which is bent toward the first bend being elongated, an elongated tongue underlying the adjacent end portions of the band and having a lug engaged by the edge of one of the elongated apertures which extends partially into the bent part of one side of one of the loops to prevent movement of the tongue in one direction, the opposite edges of the tongue adjacent the said one of the loops having oppositely arranged ears extending toward each other and overlapping one end portion of the band behind the said one of the loops to prevent movement of the tongue in the opposite direction, said ears having extensions extending laterally and in parallelism behind the said one of the loops, a bolt extending through the apertures of the adjacent loops and having a nut interposed between said extensions, which act to prevent movement and displacement of the nut, the opposite ends of the tongue having enlarged apertures to permit the hose to expand therein to prevent creeping of the clamp on the hose.

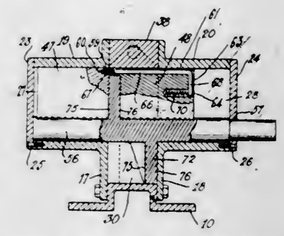
1,172,691. LOCKING DEVICE FOR THE NEEDLES OF CIRCULAR-KNITTING FRAMES. ALBIN ERNST, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed Mar. 27, 1914. Serial No. 827,712. (Cl. 66—21.)

1. The combination of a rocking jack of a circular knitting frame, a needle projecting into the slotted upper arm of said jack, and a plate fixed on the side of said arm extending across the slot to prevent lateral movement of the needle.



2. The combination of a plurality of rocking jacks of a circular knitting frame, a needle projecting into the slotted upper arm of each jack, and a plate fixed on one side only of each arm and extending across the slot thereof, said jacks being mounted in such close proximity to each other that the plates of adjacent jacks will prevent lateral movement of the needles in either direction.

1,172,692. POWER MECHANISM. PETER J. FANNING, Providence, R. I. Filed Nov. 4, 1914. Serial No. 870,175. (Cl. 121—67.)



1. In a power mechanism, the combination of a casing provided with a power chamber, a shaft rotatably mounted in the casing, an inclined disk in the chamber upon the shaft provided with parallel side faces, and a partition comprising two plates yieldingly connected with each other slidably mounted in the casing with their adjacent ends in contact with the side faces of the disk.

2. In a power mechanism, the combination of a casing provided with a power chamber, a shaft rotatably mounted in the casing, an inclined disk in the chamber upon the shaft provided with parallel side faces, and a partition comprising two plates yieldingly connected with each other slidably mounted in the casing provided with rounded adjacent ends in contact with the side faces of the disk.

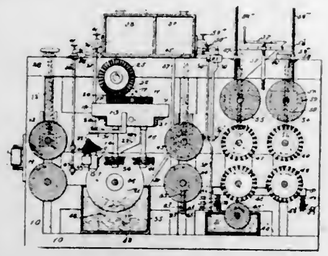
3. In a power mechanism, the combination of a casing provided with a power chamber, a shaft rotatably mounted in the casing, a disk in the chamber upon the shaft inclined relatively thereto and provided with side faces parallel to each other, and at every point at right angles to the shaft, and a partition comprising two plates detachably connected with each other resting upon the shaft with their inner ends adapted to contact with the side faces of the disk, and resilinet means for forcing the plates against said faces.

4. In a power mechanism, the combination of a casing provided with a power chamber and with lateral chambers opening into the power chamber, a shaft rotatably mounted in the casing transversely of the power chamber, an inclined disk in the power chamber upon the shaft, and a partition comprising two plates detachably connected with each other resting in the lateral chambers upon the shaft and of less length than the lateral chambers with their inner ends in contact with the faces of the disk, said casing being provided with passages extending from the power chamber to the outer end portions of the lateral chambers.

5. In a power mechanism, the combination of a casing provided with a power chamber, a shaft rotatably mounted in the casing, a disk upon the shaft in the chamber inclined relatively to the shaft and provided with side faces annularly curved and radially parallel with each other at right angles to the shaft, a partition comprising two plates slidably mounted in the casing longitudinally

of the shaft and embracing the faces of the disk, a rod slidably mounted in the margin of one plate longitudinally thereof having one end engaging the adjacent inner end of the second plate, and one upon the other end of the rod at substantially right angles to the rod, and a spring engaging the first plate in contact with the arm.

1,172,693. COATING-MACHINE. SAMUEL JAMES FISHER, Asheville, N. C. Filed May 17, 1911. Serial No. 627,756. (Cl. 91—25.)



1. In a coating machine, two sets of vertically disposed, rotary brushes, each set depending from a supporting block disposed between and resting upon spaced beams transverse the framework, a drive shaft horizontally positioned above and parallel to said beams, vertical shafts for said brushes terminating in gears seated on the bearing blocks, said shafts being journaled in said blocks, the gear of one brush shaft actuating the gear of the other by means of an intermediate gear, a pinion mounted on a shaft of one of each set of said brushes meshing with a beveled gear splined on said drive shaft and arranged to rotate therewith as well as travel lengthwise the shaft along the spline in obedience to the movement of said blocks.

2. In a coating machine, a supporting track horizontally arranged transverse the apparatus, a plurality of brush supporting blocks disposed thereon and adapted to travel thereon when actuated by a common feed as described, said feeding device arranged transverse the apparatus and journaled within the frame thereof and operable to advance or retract said blocks relative to each other, a plurality of vertically disposed, rotary brushes arranged in pairs, each pair of said brushes being mounted on vertical shafts journaled in said blocks and coöperable with each other by means of gears secured to the shafts of said brushes and said gears and means to actuate the same.

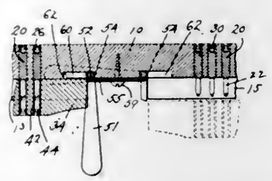
3. In a coating machine, the combination with a supporting track arranged horizontally and transverse the apparatus of a plurality of brush-supporting blocks disposed thereon and a right and left screw-feed journaled within the frame of the apparatus and proceeding transversely across the same and through the threaded portions of said brush-supporting blocks, said feed being operable to advance or retract said brush-supporting blocks relative to each other, a coupling intermediate said feed-screw and its threaded portions, vertically disposed, coöperable, rotary brushes mounted on stems journaled in said brush-supporting blocks and adapted to coat the edge portions of the stock to be treated.

4. In a coating machine, the combination with a horizontally disposed, rotary brush, adapted to coat the face of the stock, of a pressure-supply tank arranged to contain liquid under pressure, valves to said tank, a transverse, perforated pipe disposed adjacent said brush and parallel therewith, flexible tubes connecting said valves with vertical pipes attached to each end of said transverse pipe and communicating therewith, valves to said pipes and a plurality of perforated collars with nozzles attached, said collars being arranged upon said transverse pipe and adapted to open and close its perforations, all of said collars being independently adjustable.

5. In a coating machine, a plurality of vertically disposed, rotary brushes arranged in pairs, said pairs revolving synchronously by means of gears superposed and attached to their shafts and intermediate gears meshing therewith, said shafts being actuated from a pinion attached to one of each pair of shafts and meshing with beveled gears splined by bosses to a horizontal drive shaft extending transverse a supporting frame, bearing blocks supporting each pair of vertical shafts and arranged to advance and recede simultaneously relative to each other upon a right and left coupled screw extending transverse the frame and passing through their threaded portions, parallel members horizontally supporting said blocks and brackets connecting said blocks with said bosses.

[Claims 6 to 19 not printed in the Gazette.]

1,172,694. MULTIPLE CONNECTOR. ANDREW L. FLINT, East Weymouth, Mass. Filed Jan. 15, 1914. Serial No. 812,294. (Cl. 173—338.)



1. A connector comprising in combination a member provided with a plurality of contact sockets and a second member having a plurality of contact plugs corresponding to said sockets and adapted to enter the same; and a lever mechanism mounted on one of said members for forcing the same apart.

2. A connector comprising a block, a plurality of plug contact-members projecting from said block, a pair of parallel protecting flanges projecting from said block and extending along opposite sides of said plug contact-members, a block provided with a series of socket contact-members adapted to engage said plug members, and a pair of levers simultaneously operable for separating said blocks.

3. A connector comprising a block, a plurality of sets of plug contact-members projecting from said block, a plurality of pairs of parallel flanges on said block extending along opposite sides of said sets of contact-members, a plurality of blocks each provided with a set of socket contact-members corresponding to a set of said plug contact-members and adapted to engage said plug contact-members, a lever at each end of said first-mentioned block, and a pair of levers on said block between the ends of adjacent pairs of flanges, said levers being arranged to engage the socket-carrying blocks to effect the disengagement of the plug from the socket contact-members.

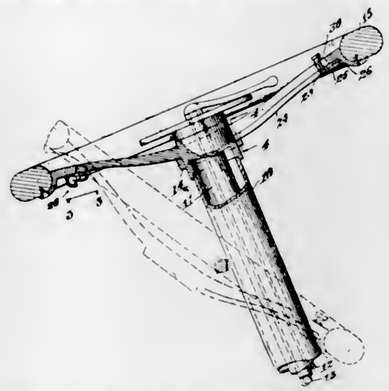
4. A connector comprising a block having a pair of parallel flanges, a series of plug contact-members secured in said block and projecting between said flanges, one or more pairs of levers supported by said block, plates mounted on said block and having yielding portions engaging said levers, in combination with one or more blocks provided with socket contact-members adapted to engage said plug contact-members, said levers having portions arranged to engage the socket carrying block to effect the disengagement of the contact-members from each other.

1,172,695. VEGETABLE-SLICER. JOHN C. FORSTER, Pittsburgh, Pa. Filed Sept. 22, 1915. Serial No. 52,074. (Cl. 146—11.)

A vegetable slicer of the type substantially as described, consisting essentially of a slicer blade provided with a pivot and guide pin fixed thereto and projecting laterally therefrom, and a single convolution spiral feed and cutting blade of relatively large diameter rigid on and concentric with said pin and spaced a substantial distance from said slicing blade and from the point of said pin.



1,172,696. PIVOTED STEERING-WHEEL FOR AUTOMOBILES. WILLIAM A. FRAZER, Los Angeles, Cal. Filed Aug. 14, 1915. Serial No. 45,561. (Cl. 74—33.)



1. The combination of a steering shaft of an automobile, a steering wheel removably mounted thereon, said steering wheel having four radial spider arms meeting at the center and forming a segmental hub at the center engaging said shaft, the arm away from the driver being provided with a longitudinal slot extending from said shaft, a wheel supporting member secured to said shaft and adapted to fit snugly in said slot, a universal joint at the lower side of said slotted arm connecting said supporting member and said slotted arm, the arm in longitudinal alinement with said first named arm having a longitudinal slot, and a manually controlled, spring-pressed latch disposed along the lower face of said last mentioned arm for locking said wheel to said steering shaft.

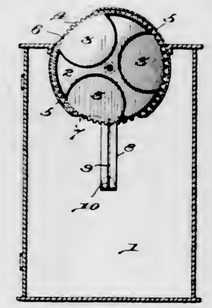
2. The combination of a steering shaft of an automobile, a steering wheel removably mounted thereon and having a plurality of radial arms meeting at the center and engaging said shaft, one of said arms having a longitudinal slot extending from said shaft, a wheel supporting member integral with said shaft adapted to fit snugly in said slot, a universal joint connecting said supporting member and said slotted arm, the arm in longitudinal alinement with said first named arm having a longitudinal slot adapted to permit the wheel to be lowered about said shaft, and a manually controlled latch locking said wheel to said steering shaft.

3. The combination of a steering shaft of an automobile, a steering wheel removably mounted thereon, said steering wheel having a plurality of spider arms meeting at the center and engaging said shaft, one of said arms being provided with a longitudinal slot, a wheel supporting connection secured to said shaft and adapted to register with said slot, a universal pivot connecting said supporting member to said slotted arm, and a manually controlled latch for locking said wheel to said steering shaft.

4. The combination of a steering shaft of an automobile, a steering wheel removably mounted thereon and having a plurality of radial arms, a rigid wheel supporting member secured to said steering shaft, a universal joint connecting the outer end of said supporting member to one of said radial arms, said universal joint allowing the wheel to be tilted in any direction when the latter is removed from the steering shaft, and manually operated means for locking said wheel to said shaft.

5. The combination of a steering shaft of an automobile, a steering wheel removably mounted thereon and having a plurality of radial arms, a rigid wheel supporting member secured to said steering post, a pivot having universal movement connecting said member to one of said arms, said pivot allowing the wheel to be tilted in any direction when the latter is removed from the steering shaft, and manually operated means for locking said wheel to said shaft.

1,172,697. COIN-DEPOSIT RECEPTACLE. BENJAMIN F. FREEMAN, Long Island City, N. Y. Filed Mar. 19, 1915. Serial No. 15,549. (Cl. 232—61.)



1. In a coin receptacle, the combination with a revoluble coin wheel extending through one face thereof, spaced teeth on the periphery of said wheel, and a gravity lock to engage said teeth and lock the same from rotation when the box is inverted, the portion of the wheel extending beyond the receptacle comprising unitary means to rotate the wheel and receive the locking means when the box is inverted.

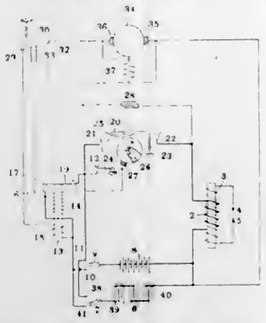
2. In a coin receptacle, the combination of a revoluble coin wheel, spaced teeth on the periphery of said wheel, a guide arm adjacent said wheel, and a gravity catch slidably mounted on said guide arm, said gravity catch being in its inoperative position when the coin receptacle is in normal vertical position and in its operative position when the receptacle is inverted, the catch falling into the space between the teeth to lock the wheel from rotation.

3. In a coin receptacle, the combination with a revoluble coin wheel of a guide arm adjacent said wheel, and a gravity catch slidably mounted on said guide arm, said arm having a transverse slot extending therethrough and extending throughout the length thereof, said gravity catch being in its inoperative position when the coin receptacle is in a normal vertical position and in its operative position when the receptacle is inverted.

4. In a coin receptacle, the combination with a revoluble coin wheel of a slotted guide arm adjacent said wheel extending downwardly, a gravity catch slidably mounted within said slotted guide arm and extending through the same, and weights on either end of said gravity catch, said gravity catch being in its inoperative position when the coin receptacle is in a normal vertical position and in its operative position when the receptacle is inverted.

5. In a coin receptacle, the combination with a revoluble coin wheel, of a slotted guide arm on either side of said wheel extending down from and substantially parallel to said wheel, a gravity catch slidably mounted within said slotted guide arms and extending through the same, and weights on either end of said gravity catch, said gravity catch being in its inoperative position when the coin receptacle is in a normal vertical position and in its operative position when the receptacle is inverted.

1,172,698. IGNITION APPARATUS FOR COMBUSTION-ENGINES. VALÈRE A. FYNN and BURNS DICK, St. Louis, Mo., assignors to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 5, 1914. Serial No. 810,330. (Cl. 123—148.)



1. In an ignition system, a primary circuit, a secondary circuit, electro-magnetically controlled means for making and breaking the primary circuit, and electro-magnetic means for holding said first mentioned means in the position assumed when making the circuit.

2. In an ignition system, a primary circuit, a secondary circuit, electro-magnetically controlled means for making and breaking the primary circuit, and a mechanically controlled device for interrupting the primary circuit, said mechanically controlled interrupter being arranged to interrupt the primary circuit in advance of the initial movement of the electro-magnetically controlled interrupter.

3. In an ignition system for internal combustion engines, the combination of a primary circuit, a secondary circuit, mechanically controlled means for opening and closing the primary circuit, electromagnetically controlled and normally open means for closing and opening the primary circuit, and meaps for holding the electro-magnetically controlled means in its closed position.

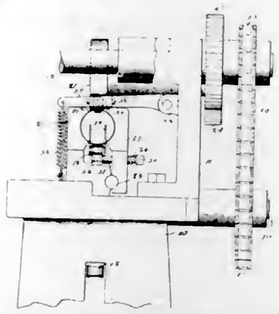
4. In an ignition system for internal combustion engines, the combination of a primary circuit, a secondary circuit, mechanically controlled and normally closed means for opening the primary circuit, electro-magnetically controlled and normally open means for closing and opening the primary circuit, and means for holding the electro-magnetically controlled means in its closed position.

5. In an ignition system for internal combustion engines, the combination of a primary circuit, a secondary circuit, mechanically controlled and normally closed means for opening the primary circuit, electro-magnetically controlled means for closing and opening the primary circuit, and means for preventing interruption of the primary circuit by the electro-magnetically controlled means.

1,172,699. TUBE AND PROCESS AND APPARATUS FOR MANUFACTURING SAME. JOHN F. GAIL and OTTO RUDD, Kenosha, Wis., assignors to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed May 1, 1915. Serial No. 25,324. (Cl. 219—10.)

1. The improved process of making thin-walled metal tubing, which comprises forming a sheet-metal blank into tubular form, uniting the adjoining edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, and then closing said cleft by autogenous welding, whereby an externally seamless tube is produced, and the tube-portions abutting the union are held against relative longitudinal displacement.

2. The improved process of making thin-walled metal tubing, which comprises forming a sheet-metal blank into tubular arm, uniting the adjoining edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, and then closing said cleft by electric welding, whereby an externally seamless tube is produced, and the tube-portions abutting the union are firmly held against relative longitudinal displacement.



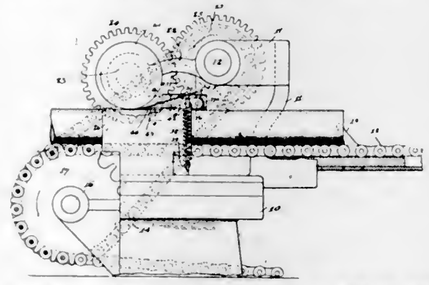
3. The improved process of making thin-walled metal tubing, which comprises forming a sheet-metal blank into tubular form, uniting the adjoining edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, then autogenously uniting the walls of said cleft by causing portions of the metal of the tube adjacent said cleft to flow into and close the same, whereby an externally seamless tube is produced, and the tube-portions abutting the union are held against relative longitudinal displacement.

4. The improved process of making thin-walled metal tubing, which comprises forming a sheet-metal blank into tubular form, uniting the adjoining edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, then electrically heating the metal of the tube by sending current through the parts thereof adjacent said cleft to cause the metal to flow into and close the cleft, whereby an externally seamless tube is produced, and the tube-portions abutting the union are firmly held against relative longitudinal displacement.

5. The improved process of making lock-seam metal tubing which consists in forming up a strip of sheet metal into tubular cross section and uniting the edges thereof by folding into a lock-seam, then perfecting said seam by electric welding, said welding being effected by passing a heating current through the seam portions and localizing the chief flow of said current to those parts of the metal which bound and form the external seam-cleft line, whereby such heated portions are fused and merged together and close said cleft.

[Claims 6 to 20 not printed in the Gazette.]

1,172,700. PROCESS AND APPARATUS FOR MAKING METAL TUBES. JOHN F. GAIL and OTTO RUDD, Kenosha, Wis., assignors to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed May 1, 1915. Serial No. 25,325. (Cl. 219—6.)



1. The improved process of making thin-walled steel tubing, which comprises forming a sheet-steel blank into tubular form, uniting the adjacent edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, associating a fillet of essentially similar metal with said cleft, and heating the fillet and adjacent tube-portions to effect autogenous union between the walls of the cleft, whereby the tube portions abutting the union are firmly held against relative longitudinal displacement.

2. The improved process of making thin-walled steel tubing, which comprises forming a sheet-steel blank into tubular form, uniting the adjacent edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, associating a fillet of essentially similar metal with said cleft, and heating the fillet and adjacent tube-portions to effect autogenous union between the walls of the cleft, whereby an externally seamless tube is produced, and the tube-portions abutting the union are firmly held against relative longitudinal displacement.

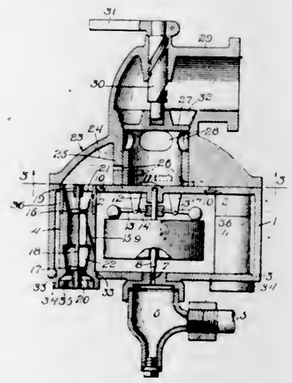
3. The improved process of making thin-walled metal tubing, which comprises forming a sheet-metal blank into tubular form, uniting the adjacent edges thereof into an internal, longitudinal, plural-ply seam having an external seam-cleft, applying a fillet of essentially similar metal to said cleft, and progressively electrically heating the fillet and the adjacent tube-portions to effect autogenous union between the walls of the cleft, whereby an externally seamless tube is produced, and the tube-portions abutting the union are firmly held against relative longitudinal displacement.

4. The improved process of making thin-walled metal tubing, which consists in forming a sheet metal blank into tubular cross-section, uniting the longitudinal edges of said blank by a seam having an external seam-cleft or joint underlaid and closed by a ply of the seam-forming metal, and completing said union by applying a fillet of essentially similar metal alongside said seam-cleft and progressively fusing said fillet into autogenous union with the walls of said cleft.

5. The improved process of making thin-walled metal tubing, which consists in forming a sheet metal blank into tubular cross-section, uniting the longitudinal edges of said blank by folding the edges thereof inwardly upon themselves and applying internally a locking strip engaging said folded portions, and perfecting the exterior of the seam of the tube by applying a fillet of essentially similar metal along the external seam-cleft and progressively fusing said fillet into autogenous union with the walls of said cleft.

[Claims 6 to 11 not printed in the Gazette.]

1,172,701. CARBURETER. LEVI S. GARDNER, Shreveport, La., assignor to Gardner Carburetor & Brass Works, Shreveport, La., a Corporation of Louisiana. Filed Apr. 10, 1911. Serial No. 620,222. (Cl. 48—150.3.)



1. A carbureter having an outlet, a plurality of carbureting units and separate passages leading from said units to the outlet; a valve device governed by the suction on the carbureter and arranged to open a varying number of said passages depending upon the position of the device, and manually controlled means for limiting the range of said valve device.

2. A carbureter comprising a plurality of independent carbureting units, each unit including means governed by the suction on the carbureter for regulating the amount of combustible, and means governed by the suction on the carbureter for varying the effective number of such units.

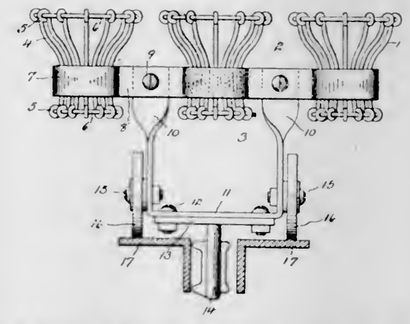
3. A carbureter comprising a plurality of independent carbureting units, each unit including means governed by the suction on the carbureter for regulating the amount of combustible, means governed by the suction on the carbureter for varying the effective number of such units, and adjustable manually controlled means for determining the maximum number of units which may be rendered effective.

4. A carbureter comprising a closed casing having an inlet in the bottom, a float-controlled valve within the casing for opening and closing said inlet, there being two series of registering openings distributed respectively in the top wall and in the bottom wall of the casing, and independent carbureting units each extending into and secured in corresponding openings of both of said series, and each of said units having a port leading into the space within the chamber surrounding the units.

5. A carbureter comprising a casing, a series of independent tubular carbureting chambers extending through the casing, each of said carbureting chambers having a port leading therefrom to the interior of the casing, said carbureting chambers being open at the top and at the bottom, and valves arranged in each of the carbureting chambers above and below the outlet end of the port to form the tops and bottoms of the chambers.

[Claims 6 to 24 not printed in the Gazette.]

1,172,702. CUP FOR CONVEYERS. HENRY R. GOTTHARDT, Louisville, Ky., assignor to Dow Wire & Iron Works, Louisville, Ky., a Corporation. Filed July 15, 1914. Serial No. 851,112. (Cl. 193—2.)



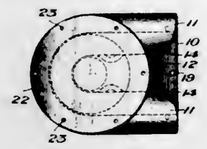
1. A device of the type described, including a cup or basket of spaced vertical malleable metal wire-members, said arrangement of wires being constricted near the lower ends of said wires, circular wire-members, threaded through the upper and lower ends of the aforesaid wires, and connected complemental plate-like members having opposed semi-circular formations embracing said basket or cup in the constricted portion of its wires.

2. A device of the type described, including a U-shaped member, complemental plate-like members having the upper ends of said U-shaped member connected thereto, said complemental plate-like members having opposed semi-circular formations and a cup or basket disposed in said semi-circular formations, substantially as described.

3. A device of the type described, including a plurality of baskets, each basket being formed of an arrangement of spaced malleable metal wires having eye-ended terminals and having a contracted bottle-neck conforming portion, annular wire-members threaded through said eye-ended

terminals, parallel base-members having semi-circular formation adapted to embrace said contracted neck-conforming portion of said wire-arrangement.

1,172,703. SEPARABLE FASTENER. REISTER R. GROOMS, Washington, D. C. Filed Aug. 10, 1915. Serial No. 44,718. (Cl. 24—224.)



1. A separable fastener comprising a socket member formed to provide inwardly rolled side walls having a channel extending longitudinally therebetween, the forward ends of said rolled side walls being flattened to provide a flared entrance to said channel, a headed-shank adapted to be engaged in said channel, an inner rolled wall formation continuous with said rolled side walls, and resilient means inclosed by said inner rolled wall formation and projected within said channel through openings formed in said rolled side walls for retaining said shank in its engaged postion, said shank having slight free movement within said channel when in such engaged position.

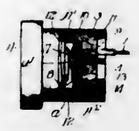
2. A separable fastener comprising a socket member formed to provide inwardly rolled side walls and having a channel extending longitudinally therebetween, the forward ends of said rolled side walls being flattened to provide a flared entrance to said channel, a headed-shank adapted to be engaged in said channel, an inner rolled wall formation continuous with said rolled side walls, resilient means inclosed by said inner rolled wall formation and projected within said channel through openings formed in said rolled side walls for retaining said shank in its engaged position, and means for securing said resilient means in operative position.

3. A separable fastener comprising a socket member formed to provide inwardly rolled side walls and having a channel extending longitudinally therebetween, the forward ends of said rolled side walls being flattened to provide a flared entrance to said channel, a headed-shank adapted to be engaged in said channel, an inner rolled wall formation continuous with said rolled side walls, said rolled side walls and said inner rolled wall formation being connected at the rear of said channel, resilient means inclosed by said inner rolled wall formation and having its free end extending parallel to the walls of said channel, abutments formed with said resilient means projecting into said channel from opposite sides thereof, and means for securing said resilient means in operative position.

4. A separable fastener comprising a socket member formed to provide inwardly rolled side walls and having a channel extending longitudinally therebetween, the forward ends of said rolled side walls being flattened to provide a flared entrance to said channel, an inner rolled wall formation continuous with said rolled side walls, said rolled side walls and said inner rolled wall formation being connected at the rear of said channel, a substantially U-shaped spring member inclosed by said inner rolled wall formation, means for retaining said spring member in position, abutments formed with said spring member and projecting into said channel from opposite sides thereof, and a headed-shank adapted to be inserted into said channel and engaged to the rear of said abutments.

1,172,704. SOCKET FOR INCANDESCENT ELECTRIC LAMPS. GUSTAV A. HARTER, Chicago, Ill. Filed May 13, 1912. Serial No. 696,894. (Cl. 173—358.)

1. In an electric lamp socket, the combination with a body portion of insulating material formed with a bore and a recess connecting therewith through a smaller hole, a metallic shell in said bore, and a metal abutment cast upon said shell and extending through the hole into the recess for securing the shell in the bore of the socket.



2. In an electric lamp socket, the combination with an insulating body portion formed with a bore and a recess connecting therewith, a metallic shell in the bore forming one of the terminals of the socket, a conductor, and a metal abutment cast upon the shell and extending into the communicating recess for securing the shell in the bore of the socket and in which metal abutment the end of the conductor is cast for securing the conductor to the shell.

3. In an electric lamp socket, the combination with a body portion of insulating material provided with a bore and a recess connecting therewith through a smaller hole, a metallic shell disposed in said bore, a washer disposed between the shell and the body portion near the base of the shell, and a metal abutment cast upon the shell and extending into the recess for holding the shell in the bore of the socket, the washer confining the metal to the base of the shell when it is cast thereon.

4. In an incandescent lamp socket, the combiantion with an insulating body portion having a bore at one end, a recess at the other end and a smaller hole connecting the bore with the recess and still another separate hole connecting the bore with this recess, a conductor extending from the recess side of the body portion through the last named small hole and bent therefrom into the other small hole, and means for securing the shell in the bore of the socket and for connecting the conducting wire thereto, consisting of a metal abutment cast upon the shell and extending into said recess, the extremity of the conductor being cast in the metal abutment.

5. In an electric lamp socket, the combination of an insulating body portion formed with a bore for receiving the lamp, a recess at the bottom of the bore with a hole connecting the recess and the bore, a conductor, a strip of metal folded over the conductor and inserted from the recess through the said hole into the bore, and a metal inlay cast in the recess to hold the strip in the bore to constitute an electric lamp terminal and to hold the conductor in contact with the strip.

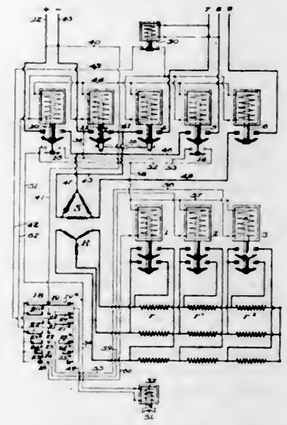
[Claims 6 to 8 not printed in the Gazette.]

1,172,705. MOTOR-CONTROLLER. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 29, 1909. Serial No. 520,128. (Cl. 172—179.)

1. In a controller for alternating current motors, in combination, electroresponsive switches for connecting the stator of the motor to an alternating current supply circuit for running, or to a direct current supply circuit for dynamic braking, a master switch controlling said electroresponsive switches, and means for insuring disconnection of the motor from one supply circuit prior to connection to the other supply circuit.

2. In a controller for alternating current motors, in combination, means for connecting the stator of the motor to an alternating current supply circuit for running, means for connecting the stator to a source of direct current supply for dynamic braking, a mechanical brake, and automatic operating means therefor interlocked with said first two mentioned means to withdraw said brake when the motor is connected to either supply circuit and to cause said brake to be applied whenever the motor is disconnected from circuit.

3. In a controller for alternating current motors, in combination, means for connecting the stator of the motor to an alternating current supply circuit for running, means for connecting the stator to a direct current supply circuit for dynamic braking, a mechanical brake, and an electroresponsive controlling winding for said brake, said winding being controlled by both of said connecting means to withdraw said brake when the motor is connected to either supply circuit and to cause said brake to be applied when the motor is disconnected from circuit.



4. In a controller for alternating current motors, in combination, means for connecting the stator of the motor to a source of alternating current for running, means for connecting the same to a source of direct current for dynamic braking, a mechanical brake arranged to be automatically applied upon disconnection of the motor from circuit, and means adapted, upon failure of voltage in the alternating current circuit, to cause said first mentioned means to disconnect the motor from circuit.

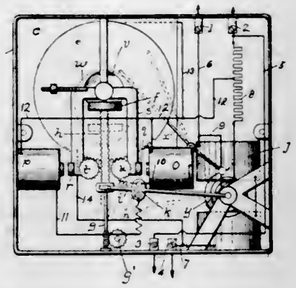
5. In a controller for alternating current motors, in combination, electroresponsive switches for connecting the stator of the motor to an alternating current supply circuit for running, electroresponsive switches for connecting the stator of the motor to a direct current supply circuit for dynamic braking, a master switch for controlling said first mentioned switches, a mechanical brake, an electroresponsive winding for withdrawing said brake, circuit connections whereby said winding is deenergized when the motor is disconnected from circuit, and a relay switch adapted, upon failure of voltage in the alternating current supply circuit, to cause the deenergization of said first mentioned electroresponsive switches, thereby disconnecting the motor from circuit and causing the application of the mechanical brake.

[Claims 6 and 7 not printed in the Gazette.]

1,172,706. AUTOMATIC MEANS FOR CORRECTING THE REGISTRATION OF METERS. FREDERIC W. HILD, Portland, Oreg. Filed Feb. 3, 1912. Serial No. 675,372. (Cl. 171—268.)

1. In an electricity measuring apparatus comprising an electricity meter including an index hand; a registering device; a constantly driven friction disk; a variable connection between the latter and the registering device, such connection including an adjustable pinion; means operable to position said pinion relatively to the center of said disk, and means for actuating said positioning means, the actuating means being controlled by the oscillation of said index hand.

2. In an electricity measuring apparatus comprising an electricity meter including an index hand; a registering device; a constantly driven friction disk; a variable connection between the latter and the registering device, such connection including an adjustable pinion; means operable to position said pinion relatively to the center of said disk, and means for actuating said positioning means, the actuating means controlled by the oscillation of said index hand; and the combination with said electricity meter of means for imposing a variable predetermined resistance to the oscillations of the index hand of said meter.



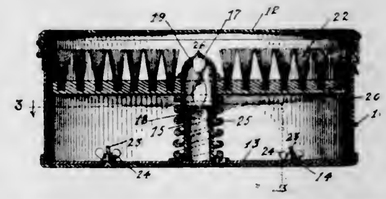
3. In an electricity measuring apparatus, the combination with an electricity meter including an index hand and a constantly driven disk, of means for imposing a variable predetermined resistance to the oscillations of the index hand of said meter, and such means cooperating with said driven disk.

4. In an electricity measuring apparatus, the combination with an electricity meter including an index hand and a constantly driven cam, of a stressed spring bearing on the spindle of said index hand, and a rockable member connected to the spring and operated by said cam whereby a variable stress is placed in said spring.

5. In a registering electricity meter, the combination with a constantly driven member of a shaft, a pinion driven by such constantly driven member, slidably mounted on said shaft which it rotates; such shaft being connected with registering mechanism; a double-faced rack-bar slidable on the shaft of the pinion and connected to the latter; a member movable transversely of said rack-bar; rack pinions journaled in such member at either side of the rack-bar, such pinions driven from said constantly driven member; armatures carried by the transversely movable member, electro-magnets located to attract such armatures respectively; an electricity meter having an oscillating hand connected with one pole of the circuit of the electromagnets; terminals in the respective circuits of said electromagnets, said terminals supported by a device capable of following the oscillations of the hand of said meter, said hand interposed between said terminals, and said device connected with said pinion so as to follow the movement of the same.

[Claim 6 not printed in the Gazette.]

1,172,707. SHOE-CLEANER. MELVIN E. HILL, Los Angeles, Cal. Filed Oct. 12, 1915. Serial No. 55,571. (Cl. 15—2.)



1. A shoe cleaner comprising a cylindrical housing, a hinged top cover therefor, a circular bottom plate removably mounted within said housing, a tubular guide extending vertically upward from the center of said bottom plate, said guide being closed at the top and provided with a rectangular passage therein, a sleeve slid-

ably mounted on said guide, a vertical helical shaft rigidly secured to said sleeve and mounted for longitudinal and rotary movement in said passage, a plurality of horizontal brushes secured to said sleeve extending radially therefrom, and a helical spring encircling said guide and engaging said plate and said brushes.

2. A shoe cleaner comprising a housing, a hinged top cover therefor, a tubular guide extending upwardly from the bottom of said housing, said guide being provided with a nut at the top thereof, a sleeve slidably mounted on said guide, a vertical helical shaft rigidly secured to said sleeve and mounted for longitudinal and rotary movement in said nut, a plurality of horizontal brushes secured to said sleeve and extending radially therefrom, and a helical spring encircling said guide and engaging said brushes to yieldingly hold the same in their upper position.

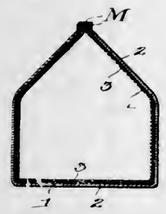
3. A shoe cleaner comprising a housing, a tubular guide mounted therein and extending vertically upward, a nut mounted at the top of said guide, a sleeve slidably mounted on said guide, a vertical helical shaft rigidly secured to said sleeve and mounted for longitudinal and rotary movement in said nut, a plurality of horizontal brushes secured to said sleeve, and a spring for holding said brushes in their upper position.

4. A shoe cleaner comprising a frame, a vertical guide, a sleeve slidably mounted on said guide, a helical vertical shaft rigidly secured to said sleeve, a nut mounted at the top of said guide and coöperating with said shaft to impart rotary movement to the latter, brush members rigidly mounted on said sleeve, and resilinet means holding said members in their upper position.

5. A shoe cleaner comprising a frame, a vertical guide, a brush-supporting member slidably mounted thereon, a horizontal brush, a vertical shaft rigidly secured to said brush-supporting member, means mounted on said guide and shaft for imparting to said shaft a rotary movement when the said shaft is vertically reciprocated, and resilient means engaging said brush-supporting member for holding the same in its upper position.

[Claims 6 and 7 not printed in the Gazette.]

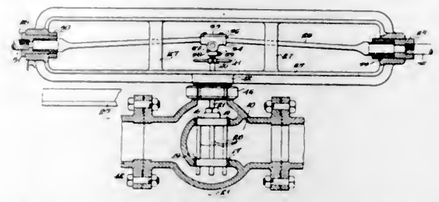
1,172,708. HAND-BAG AND THE LIKE. FREDERICK R. HOARD, Providence, R. I. Filed May 12, 1915. Serial No. 27,553. (Cl. 190—53.)



As a new article of manufacture, a bag composed of a body formed of fine metal wire mesh, inner and outer finishing facings engaged with the mesh, and unitary fastening means to rigidly and permanently secure the facings to the wire mesh so that the wire mesh and both facings form a unitary structure, said fastening means extending through the meshes of the wire so as to rigidly and simultaneously connect the facings to opposite sides of the wire mesh, said body being so shaped that the mesh also acts to cause the body at the mouth thereof to spring open and remain open when the mouth is unfastened.

1,172,709. THERMOSTATIC ARCH FLOW-REGULATOR. FRANK H. HOPKINS, Somerville, Mass., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 28, 1914. Serial No. 874,549. (Cl. 236—5.)

1. A valve-controlling apparatus comprising an elongated thermostatic element, means for holding the ends of said element rigidly, the intermediate portion of the element being displaced from a straight line joining said ends and being adapted to move in consequence of temperature-induced elongations and contractions in directions transverse to its length, the element being constructed with its transverse dimension in the direction of intended movement less than the transverse dimension in any other direction, whereby it is enabled to resist deflecting movement in any except the designed directions, and valve-operating means connected to the displaced portion of said element.



2. A valve-controlling apparatus comprising an elongated thermostatic element permanently set in arched form, means for holding the ends of said element fixed with respect to one another, whereby elongations and contractions due to temperature changes in said element cause the intermediate portion to be deflected laterally, said element being of non-circular cross section with its shortest transeverse dimension in the plane of the arch, whereby deflection in any other direction than in such plane is prevented, and a valve operating connection attached to the deflected part of the element.

3. A thermostatic valve-controlling apparatus comprising a permanently arched tube, a frame in which the ends of said tubes are fixed at a distance apart less than the total length of the tube, said tube being flattened in cross-section and having its longer transverse dimension perpendicular to the plane in which it is arched, whereby it is stiffened against deflection in any other plane than that of the arch, and valve-operating means connected to the tube at the crown of the arch.

4. A thermostatic valve-operating mechanism comprising in combination with a valve, a stem projecting from said valve, a thermostatic element connected to said stem and extending approximately perpendicular thereto and being arched or offset in the common plane of the stem and the element, and means for mounting the ends of said element at a fixed distance apart, whereby elongations and contractions of the element due to temperature changes cause the part thereof to which the valve stem is connected to be deflected in the direction of said valve stem, the thermostatic element having its transverse dimension in the direction of the valve stem less than the transverse dimension perpendicular to said stem.

5. The combination of a valve casing, a valve in said casing having a stem protruding through the casing, a holder mounted on the casing and having provisions for adjustment angularly about its point of connection, a nearly straight thermostatic element fixed at its ends to said holder and of slightly greater length than the distance between its ends, whereby it forms a flat arch, and connections between the central part of said element and the valve stem arranged to transmit the movements of such part to the valve in the directions of opening and closing movements of the latter.

[Claims 6 to 12 not printed in the Gazette.]

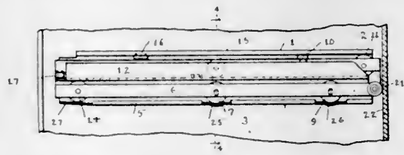
1,172,710. INSULATING-BLOCK FOR BUILDING PURPOSES. JOHN E. HOWE, New York, N. Y.; Florence D. Howe administratrix of said John E. Howe, deceased. Filed May 9, 1908. Serial No. 431,955. (Cl. 72—124.)

A composite insulating block comprising a corrugated waterproof sheet of stiffening fabric substantially impervious to plaster and sufficiently stiff to hold its shape under pressure during the molding process of making the block, a layer of insulating material secured along one side of said corrugated sheet in direct contact with the ridges of said corrugations, thereby forming air spaces between the corrugated sheet and the layer of insulating material and an outer waterproof sheet of stiffening fabric



substantially impervious to plaster applied to said insulating layer, the exterior face of at least one sheet of waterproof stiffening fabric having adherent thereto a mass of hardened waterproof plastic material mixed with binding or lightening material.

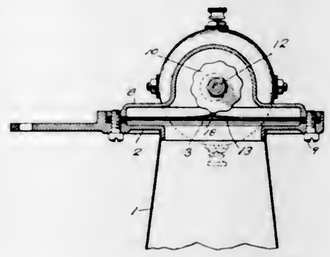
1,172,711. CABINET DRAWER AND CASE. DAVID E. HUNTER, Muskegon, Mich., assignor to The Shaw Walker Company, Muskegon, Mich., a Corporation of Michigan. Filed Dec. 26, 1914. Serial No. 878,996. (Cl. 45—77.)



1. In an organization of the character described, a case, a drawer reciprocatingly mounted in the case, means for yieldingly resisting the rebound of the drawer from its closed position, and means coacting with the first-mentioned mans in yieldingly resisting such rebound, and adapted to automatically return the drawer to its closed position after the rebound has been checked by the first-mentioned means.

2. In an organization of the character described, a case member, a drawer member, rollers carried by one member, and a track carried by the other member and having a depression into which one roller is adapted to enter by gravity in the drawer's closed position, and an incline oppositely disposed in a vertical direction from the depression, on which the other roller is adapted to travel in the first portion of the drawer's movement from its closed position.

1,172,712. DIAPHRAGM-HORN. MILLER REESE HUTCHISON, West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed May 11, 1911. Serial No. 626,487. (Cl. 116—1.)



1. In an alarm or signaling device, a diaphragm, rotary mechanical means for producing bodily vibration thereof, and a cushioning member normally in contact with the face of the diaphragm and having a portion adjacent to the center of the diaphragm but spaced therefrom to receive the impulses from said mechanical means, the cushioning movement of said member being predetermined so as not to interfere with harmonized bodily swings of the diaphragm in response to each forcing impulse.

2. A mechanically actuated diaphragm horn or signal, comprising a diaphragm, a rotary driver with projecting actuating portions, and a spring tongue coupled to said diaphragm and provided with a wear piece adjacent to but spaced from the center of the diaphragm adapted to receive actuating impulses from said driver and said tongue serving to transmit said impulses to said diaphragm so that the forcing impulses of the rotary driver are harmonized with the natural bodily movements of the diaphragm.

3. A mechanically actuated diaphragm horn or signal, comprising a diaphragm, a mechanical actuator, and a motor for driving said actuator, in combination with a cushioning member constituting the connection between said actuator and said diaphragm, said member being constructed and arranged to distribute each impulse and apply it at comparatively remote points over the diaphragm to impart vibrations to said diaphragm harmonized with the forcing movements of said actuator.

4. A mechanically actuated diaphragm horn or signal, comprising a diaphragm, high speed means for vibrating the same including a mechanical driver, and cushioning means for distributing and applying each impulse at regions at opposite sides of the center of the diaphragm, the extent of yielding movement of said cushioning means being so predetermined as not to interfere with harmonized bodily swings of the diaphragm in response to each forcing impulse of said driver.

5. A mechanically actuated diaphragm horn or signal, comprising a diaphragm, a motor, a rotary driver, and cushioning means normally applied to said diaphragm at spaced points about the center thereof and adapted to receive the impulses from said driver and impart them to said diaphragm to effect vibrations of the latter harmonized with the forcing impulses of said driver.

1,172,713. SIGNALING-HORN. MILLER REESE HUTCHISON, Orange, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed May 15, 1912. Serial No. 697,449. (Cl. 177—7.)



1. In a signaling device, the combination of an amplifying horn, a diaphragm associated therewith, means adapted to cause said diaphragm to vibrate to sound a signal, a device associated with said means adapted to alter the action of said means upon said diaphragm whereby the same may be actuated to sound a second and different signal, and means common to said first named means and said device for controlling said first named means and said device.

2. In a signaling device, the combination of an amplifying horn, a diaphragm associated therewith, electrically controlled means adapted to cause said diaphragm to vibrate to sound a signal, means to alter the action of said electrically controlled means upon said diaphragm whereby the same may be vibrated to sound a second and different signal, and means common to said electrically controlled means and said modifying means for controlling said electrically controlled means and said modifying means.

3. In a signaling device, the combination of an amplifying horn, a diaphragm associated therewith, an electromagnet adapted to cause said diaphragm to sound a signal, a circuit containing a source of current over which

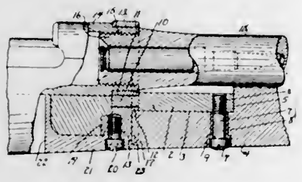
said magnet is energized, a vibratory make-and-break in said circuit, means in said circuit for changing the strength of current from said source, whereby the action of said magnet on said diaphragm is altered, so that the same produces a second and different signal, and a circuit controller common to said electromagnet and said means for closing a circuit through said magnet and said means and for eliminating said means from said circuit.

4. In a signaling device, the combination of a diaphragm, an electromagnet and a circuit making and breaking device adapted to act upon said diaphragm to cause the same to sound a signal, a source of current, a circuit, including said magnet and said source, a multiposition switch in said circuit, a current modifying device adapted to be connected in said circuit when said switch is in one of said positions and to be eliminated therefrom when said switch is in another of said positions whereby said magnet is energized by currents of different strength and said diaphragm is caused to sound different signals.

5. In a signaling device of the class described the combination of a diaphragm, an electromagnet and a circuit making and breaking device adapted to cause said diaphragm to sound signals, a source of current, a circuit in which said source and magnet are connected, a three position switch associated with said circuit, a current modifying device, said switch having a normal or open position in which said circuit is interrupted, a second position in which said current modifying device is included in said circuit and said magnet is energized by a relatively weak current to cause said diaphragm to sound a soft signal and a third position in which said device is eliminated from said circuit and said magnet energized by a relatively strong current to cause said diaphragm to sound a loud signal.

[Claims 6 to 9 not printed in the Gazette.]

1,172,714. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Dec. 6, 1915. Serial No. 65,239. (Cl. 42—75.)



1. In a military shoulder-arm, the combination with the receiver thereof, of a forestock, a tie-plate extending forward from the receiver, connected therewith and having a flat lower face, and a vertically arranged screw passing upward through the forestock and into the said tie-plate.

2. In a military shoulder-arm, the combination with the receiver and receiver-extension thereof, of a forestock formed in the upper face of its rear end with a groove, a forestock tie-plate located in the said groove, connected at its rear end with the receiver-extension and having a flat lower face, and a vertically arranged screw passing upward through the forestock into the said plate.

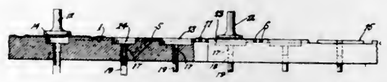
1,172,715. FIXTURE FOR WINDOW-SHADES. CARL E. KLAMM, Cleveland, Ohio. Filed May 8, 1915. Serial No. 26,704. (Cl. 156—27.)

A shade hanger comprising a slotted housing, strips attached to the inside of the housing beside the slot, said strips having tongues struck up therefrom, a slide in the upper part of the housing, having a bracket projecting through the slot and flanges engaging the outer side of the housing beside the slot, a depending rod pivoted at its upper end to the slide and having a beveled cross piece at its lower end engageable with said tongues,



and a finger piece projecting from said cross piece and through the slot.

1,172,716. PNEUMATIC DIAPHRAGM. JOSEPH KNAGGE, Chicago Heights, Ill., assignor to The Baldwin Company, Cincinnati, Ohio. Filed July 24, 1915. Serial No. 41,776. (Cl. 84—178.)



1. A supporting bed having a rectangular face bounded by depressed parts of said bed, and a diaphragm of flexible material freely disposed over said face and attached to said bed in said depressed parts immediately adjacent said rectangular face, and having the said freely disposed part of said diaphragm movable toward and away from said bed, and an air duct connection leading to the under face of said freely disposed flexible material.

2. A supporting bed having a series of adjacent rectangular faces disposed in a row in one plane, and depressed parts of said bed between each two of the said faces and also at the edges of said faces that are not adjacent, and a diaphragm of flexible material freely disposed over said faces and attached to said bed in said depressed parts immediately adjacent said rectangular faces, and having the said freely disposed part of said diaphragm movable toward and away from said bed, and an air duct connection leading to the under face of said freely disposed flexible material.

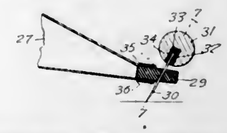
3. A supporting bed having a series of adjacent rectangular faces disposed in a row in one plane and depressed parts of said bed between each said face and the adjacent faces, and a diaphragm of flexible material freely disposed over said faces and attached to said bed in said depressed parts immediately adjacent said rectangular faces, and having the said freely disposed part of said diaphragm movable toward and away from said bed, and an air duct connection leading to the under face of said freely disposed flexible material.

4. A supporting bed having a rectangular face bounded by depressed parts of said bed, and a diaphragm of flexible material freely disposed over said face and attached to said bed in said depressed parts immediately adjacent said rectangular face by means of a fixed wedge inserted therein, and having the said freely disposed part of said diaphragm movable toward and away from said bed, and an air duct connection leading to the under face of said freely disposed flexible material.

5. A supporting bed having a face bounded by a depressed part of said bed and a diaphragm of flexible material freely disposed over said face and attached to said bed in said depressed part immediately adjacent said face, and having the said freely disposed part of said diaphragm movable toward and away from said bed, and an air duct connection leading to the under face of said freely disposed flexible material.

[Claims 6 to 11 not printed in the Gazette.]

1,172,717. GRAPHOPHONE. ARTHUR LAURENCICH, Washington, D. C., assignor of three-fourths to William F. Yates, New York, N. Y. Filed Apr. 22, 1915. Serial No. 23,170. (Cl. 181—3.)



1. In a graphophone, the combination, with a horn having a reduced end, of a plug carried by and projecting from said reduced end, a reproducer-needle carried by said plug, and a weight removably carried by the upper end of said needle.

2. In a graphophone, the combination, with a horn having a reduced end, of a plug carried by and projecting from said reduced end, a reproducer-needle carried by said plug, and a weight frictionally carried by the upper end of said needle.

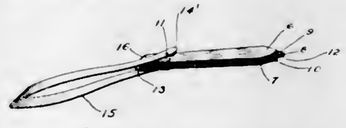
3. In a graphophone, the combination, with a horn having a reduced end, of a rubber plug carried by and projecting from said reduced end, a reproducer-needle carried by said plug, and a weight removably carried by the upper end of said needle.

4. In a graphophone, the combination, with a horn having a reduced end, of a plug frictionally carried by and projecting from said reduced end, a reproducer-needle carried by said plug, and a weight removably carried by the upper end of said needle.

5. In a graphophone, the combination, with a horn having a reduced end, of a plug carried by and projecting from said reduced end, a reproducer-needle carried by said plug, and a weight having an insert provided with a recess into which said needle projects.

[Claims 6 to 8 not printed in the Gazette.]

1,172,718. EYEGLASS-CLEANER. FRANK H. LENNARDS, Chicago, Ill., assignor of one-fourth to Adolph L. Benner, twenty-nine one-hundredths to Gustave Kettler, and twenty-one one-hundredths to Edward F. Nelson, Chicago, Ill. Filed Oct. 14, 1914. Serial No. 866,647. (Cl. 15—68.)



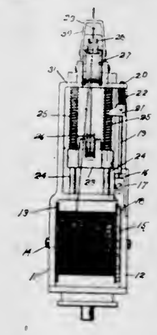
1. An eye-glass cleaner, comprising a plurality of parallel stiff flexible leaves of cleaning material superimposed one upon the other with their opposed faces normally in contact and secured together at one end, and a projection at the other end of one of said leaves adapted to be engaged by the article to be cleaned, for flexing said leaves so as to separate two of them and thereby facilitate the insertion of the article between them.

2. A device of the class described, comprising a plurality of leaves of stiff flexible material faced with cleaning material, said leaves being superimposed one upon the other with said cleaning material normally in contact and secured together at one end, one of the outer leaves having its other end turned upwardly and another of said leaves being extended beyond said upturned end so as to provide a projection adapted to be engaged by the article to be cleaned for facilitating the insertion of the article between said leaves.

3. A device of the class described, comprising two outer leaves and an intermediate leaf of stiff flexible material faced with cleaning material, said leaves being superimposed one upon the other and secured together at one end, said outer leaves having their ends turned upwardly and said intermediate leaf being extended beyond said outer leaves so as to provide a projection adapted to be engaged by the article to be cleaned for facilitating the insertion of the article between said leaves.

4. A device of the class described, comprising a plurality of superimposed leaves of cleaning material, a binding post securing said leaves together at one end, a part secured by said binding post upon the outer faces of the outer leaves and providing projections extending rearwardly therefrom, and a V-shaped clip adapted for use in holding the article to be cleaned having the arms thereof bifurcated so as to embrace said binding post when said arms are inserted under said projections.

1,172,719. CARRIER FOR BRAIDING-MACHINES. ARLON LITTLEFIELD, Providence, R. I., assignor to New England Butt Company, Providence, R. I., a Corporation of Rhode Island. Filed Feb. 19, 1915. Serial No. 9,273. (Cl. 28—24.)



1. In a braider, a carrier comprising a base portion, a pair of standards extending upwardly from said base, a reel located near the lower portion of said standards with its axis at a right angle to said standards, a tension member slidably supported above said reel, a ratchet wheel on the reel, a let-off pawl slidably supported by one of said standards and engaging said ratchet, and a controlling member for said pawl guided by said standard, said controlling member having a portion overhanging said tension member and in the path of movement thereof.

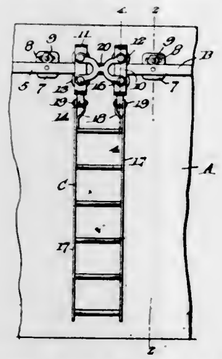
2. In a braider, a carrier comprising a base portion, a pair of standards extending upwardly from said base, a reel located near the lower portion of said standards with its axis at a right angle to said standards, a tension member slidably supported above said reel, a ratchet wheel on the reel, a let-off pawl slidably supported by one of said standards and engaging said ratchet, a rod attached to said pawl, a guide for said rod, and an operating finger attached to said rod and having a portion extending into the path of movement of the tension member, and means for yieldingly holding said pawl to its work.

3. In a braider, a carrier comprising a base portion, a pair of standards extending upwardly from said base, a reel located near the lower portion of said standards with its axis at a right angle to said standards, a tension member slidably supported above said reel, a ratchet wheel on the reel, a let-off pawl slidably supported by one of said standards and engaging said ratchet, a controlling member for said pawl guided by said standard, said controlling member having a portion overhanging said tension member and in the path of movement thereof, and means for guiding the lower end of said pawl.

4. In a braider, a carrier comprising a base portion, a pair of standards extending upward from said base, a reel located near the lower portion of said standards

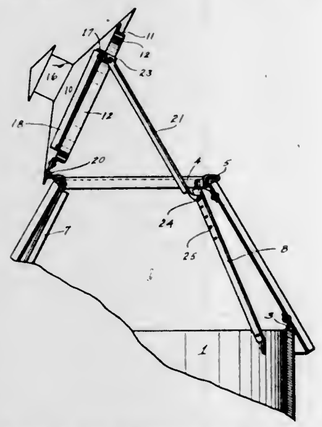
with its axis at a right angle to said standards, a spring pressed tension member slidably supported above said reel, a ratchet wheel on the reel, a let-off pawl engaging said ratchet, an operating rod for said pawl, an operating finger attached to said rod and having a portion extending into the path of movement of the tension member, and a spring acting against said finger to hold said pawl to its work.

1,172,720. SILO-LADDER. EUGENE MCGARY, Kirk, Ky. Filed Oct. 17, 1914. Serial No. 867,221. (Cl. 228—30.)



The combination with a track and a ladder, of a hanger comprising a pair of spaced open, substantially oval shaped straps providing reversely disposed hook ends, one hook end of each strap being cut and bent to provide an intermediate eye, and inwardly extending outer abutment ears respectively, said ears being brought into contacting relation with each other, upper and lower track rollers journaled in the hook ends of the straps and movable over the track, brackets fixed to the side rails of the ladder, and pivots passed through the side rails of the ladder and the brackets for connecting therebetween the eyes on the hanger whereby the ladder is freed for swinging movement relatively thereto.

1,172,721. SILO-ROOF. CHARLES E. MARTIN, Mansfield, Ohio. Filed Dec. 18, 1914. Serial No. 877,991. (Cl. 108—32.)



1. In a silo, a roof of frusto-conical form, a hood composed of an inner anchorage ring, an outer angle-iron ring spaced from the anchorage ring, and secured thereto, a ventilator above said rings, roofing sections secured to the ventilator and engaged with the outer ring, ties connected to the sections and with the anchorage ring and being engaged in part in the space between said rings, and means to hingedly connect the outer ring to the silo body.

2. In a silo, a cylindrical body, a frusto-conical roof, a ring at the top part of the roof, a hood hinged to the ring, a ring carried by the hood and adapted to be received within the ring secured to the roof, braces for the roof, and rods hinged to the hood at one end and adjustably connected to the braces at their opposite ends.

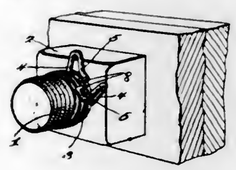
3. In a silo, a roof of frusto-conical form, an angle-iron ring bounding the edge of the opening at the roof top, and a hood hinged to the ring carrying a ring that is adapted to fit within the angular iron ring of the roof.

4. In a silo, a frusto-conical roof, a hood hinged to the roof, said hood being composed of inner and outer rings and section secured to the inner ring, braces for the rings, a pair of brackets borne by one of the braces, rods pivoted to one of the brackets, and means to secure the rods in adjusted position to the roof.

5. In a silo, a body having a roof the latter provided with a top opening, and a hood for the opening including inner and outer spaced concentric rings, means to rigidly connect the rings, roofing sections seated on the outer ring, and means between the sections and rings for securing the sections to the latter, said securing means extending in part in the space between the rings.

[Claim 6 not printed in the Gazette.]

1,172,722. NUT-LOCK. WILLIAM R. MILLARD, Cleburne, Tex. Filed June 5, 1914. Serial No. 843,153. (Cl. 151—30.)



1. A nut lock device comprising a single length of wire material constructed to form a spring coil having several convolutions, the end portions of the material beyond the coil being formed into loops, one arm of each loop at its extremity terminating in a hook, each hook extending toward and being substantially opposite the other arm of each loop and being designed to engage said other arm, thereby holding the loops pressed toward each other for expanding the coil whereby the same may be detached from a bolt shank.

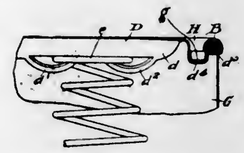
2. A nut lock device comprising a single length of wire material constructed to form a spring coil having several convolutions, the end portions of the end convolutions of the coil being extended substantially tangentially to the coil forming substantially triangular shaped loops, the extremity of one arm of each of said loops having a hook extending toward the opposite arm of said loop, said hooks designed to engage diagonally opposite arms of the opposite loops to hold the loops pressed together, thereby holding the convolutions of the coil expanded, whereby the coil may be easily detached from the bolt shank.

1,172,723. PROCESS FOR MAKING DENTAL CEMENTS. GEORGE S. MILLER, Chicago, Ill., assignor to Dental Cement Company, Ltd., Chicago, Ill. Filed Dec. 17, 1914. Serial No. 877,667. (Cl. 106—6.)

1. A process for forming dental cement which consists in adding boracic acid powder to powdered beryl, then adding powdered sodium-aluminum fluorid, then saturating the mixed powdered mass with pyro-phosphoric acid, then adding a desired quantity of water, placing the semi-liquid mass in a receptacle and exposing to heat for a sufficient time to produce a thorough melting, then removing and cooling the melted combined mass, reducing the same to a powdered form, and finally adding an additional quantity of pyro-phosphoric acid to the powdered mixture at the time it is to be used as a cement.

2. A process for forming detal cement which consists in adding boracic acid powder to powdered and washed beryl, then adding powdered sodium-aluminum fluorid, then saturating the mixed powdered mass with pyro-phosphoric acid, then adding a desired quantity of water, placing the semi-liquid mass in a receptacle and exposing to heat for a sufficient time to produce a thorough melting, then removing and cooling the melted combined mass, reducing the same to a powdered form, and finally mixing said powder with an additional and desired quantity of pyro-phosphoric acid at the time the cement is ready to be used.

1,172,724. SPRING-SEAT. WILLIAM A. MURRAY and WILLIAM A. MURRAY, Jr., Cincinnati, Ohio, assignors to The William A. Murray Spring Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 31, 1915. Serial No. 42,863. (Cl. 155—25.)

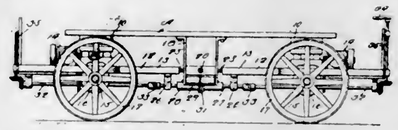


1. In a spring seat the combination of a bottom frame, cross strips secured to the frame and having inwardly projecting offsets adjacent to the frame, a covering whose edges embrace the frame and fit into the offsets, and clamps embracing the lower edge of the covering and the frame.

2. In a spring seat the combination of a bottom frame, cross strips having flanges at their ends encircling the frame and transverse offsets adjacent to the frame, a covering whose lower edge embraces the frame and fits into the offsets, and clamps embracing the covering and the frame.

3. As a new article of manufacture, a metallic cross strip for vehicle seats having adjacent to its ends transverse offsets adapted to receive the edge of a covering of a seat.

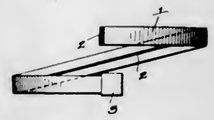
1,172,725. AUTOTRUCK. WILLIAM J. MUSSER, Zephyrhills, Fla. Filed Feb. 28, 1914. Serial No. 821,745. (Cl. 21—193.)



1. In a motor vehicle, the combination of a chassis frame, a truck frame pivoted to each end of said chassis frame for movement in a plane parallel to the chassis frame, wheeled axles carried by said truck frames respectively, brackets depending from respective sides of the chassis frame, a rod supported by said bracket and disposed between the inner ends of the truck frames, members slidably engaged on said rod, stems pivoted to said members respectively and slidably engaged in respective truck frames, journaled bearings pivoted on respective truck frames, a shaft journaled in said bearings, rollers journaled on said brackets respectively, an endless flexible member traveling on said rollers and entwined about said shaft whereby the rotation of said shaft will move the inner ends of the truck frames simultaneously in the same direction, and means operable from either end of the vehicle for effecting the rotation of said shaft.

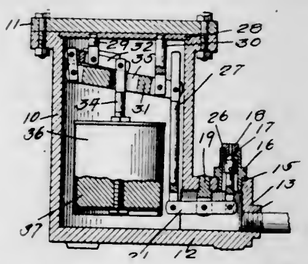
2. In a motor vehicle, the combination of a chassis frame, a truck frame pivoted to each end of said chassis frame for movement in a plane parallel to the chassis frame, wheeled axles carried by said truck frames respectively, brackets depending from respective sides of the chassis frame, a rod supported by said bracket and disposed between the inner ends of the truck frames, members slidably engaged on said rod, stems pivoted to said members respectively and slidably engaged in respective truck frames, journaled bearings pivoted on respective truck frames, a shaft journaled in said bearings, rollers journaled on said brackets respectively, a steering shaft journaled on each truck frame, a universal joint connecting each steering shaft with the adjacent end of the first named shaft, and means carried by each truck frame for effecting a rotation of the corresponding steering shaft.

1,172,726. BRACELET. GEORGE L. PAINE, North Attleboro, Mass. Filed Dec. 17, 1915. Serial No. 67,334. (Cl. 63—11.)



A bracelet comprising a band rectangular in cross section and with a hollow interior formed of a single strip of metal having its opposite side edges abutting, and a box fixedly secured on one end of the band to receive the other end of the band, the opposite ends of the band being oppositely beveled.

1,172,727. STEAM-TRAP. JAMES PARKER, Oswego, N. Y. Filed Mar. 30, 1915. Serial No. 18,139. (Cl. 137—103.)

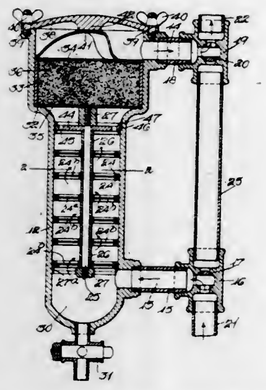


In a steam trap the combination of a casing having a reduced lateral extension adjacent its lower end, a valve casing threaded in the top of said extension and having an opening in its upper end, a post depending from the top of said extension, a lever pivotally supported on the lower end of said post, the sides of said extension being provided with openings in line with the pivotal support of the lever, plugs threaded in said opening and serving as a stop to prevent longitudinal movement of the pivotal support of the lever, a stem pivoted to the outer end of said lever and movable in the valve casing, a valve mounted on the free end of said stem for controlling the opening in the valve casing, a float in the first named casing and connections between the float and the inner end of said lever whereby the movement of the float will determine the position of the valve.

1,172,728. FILTER. HERBERT W. PERKINS, Lynn, Mass. Filed July 8, 1915. Serial No. 38,753. (Cl. 210—15.)

1. A filter comprising a vertical cylindrical conduit composed of a lower portion of relatively small diameter and provided with internal supporting means, an enlarged upper portion having a top opening, the lower portion

being provided with an inlet and the upper portion with an outlet, a plurality of spaced-apart horizontal sediment-collecting deflectors connected in a vertical series removably inserted in the lower portion of the conduit, and removably supported by said internal supporting means, said deflectors being formed to coöperate with said lower portion in forming a sinuous passage therethrough, a filtering body removably supported in the larger conduit portion, and a removable cover closing said top opening, the filtering body and the series of deflectors being removable through the top opening when the cover is removed.



2. A filter comprising a vertical conduit having an inlet at its lower portion, an outlet at its upper portion, a relatively large top opening adjacent to said outlets, and a removable cover for said opening, a plurality of sediment-collecting deflectors, each formed to fit a portion of the interior of the conduit, and each having a central orifice and an unobstructed water-conducting passage at one side of said orifice, and a rod coupling said deflectors together in a series with their water passages staggered, the deflectors being spaced apart on the rod, the conduit being provided internally with means for detachably supporting the series of deflectors between the inlet and outlet, and the series of deflectors being removable from the conduit through said top opening.

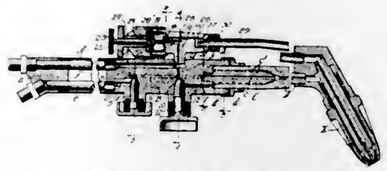
3. A filter comprising a vertical conduit having an inlet at its lower portion, an outlet at its upper portion, a relatively large top opening adjacent to the outlet, a removable cover for said outlet, and a seat below said top opening and outlet, a vertical series of sediment-collecting deflectors removably engaged with the conduit between said inlet and seat, a filtering body interposed between the deflectors and the outlet, and composed of a curb bearing on said seat, foraminous top and bottom members attached to said curb, and filtering material confined between said members.

4. A filter comprising a vertical conduit having an inlet at its lower portion, an outlet at its upper portion, a relatively large top opening adjacent to the outlet, a removable cover for said outlet and a seat below said top opening and outlet, a vertical series of sediment-collecting deflectors removably engaged with the conduit between said inlet and seat, a filtering body interposed between the deflectors and the outlet, and bearing removably on said seat, and a holding-down spring interposed between the cover and the filtering body confining the latter against the seat.

5. A filter comprising a vertical conduit having an inlet at its lower portion, an outlet at its upper portion, and a vertical series of horizontal apertured deflectors removably engaged with the conduit between the inlet and outlet, and coöperating with the conduit in forming a sinuous passage therethrough, said deflectors having unobstructed openings and openings partially obstructed by foraminous materials.

[Claims 6 and 7 not printed in the Gazette.]

1,172,729. MIXING-HEAD FOR GAS-TORCHES. JOHN G. PETTIS, Chicago, Ill., assignor to The Imperial Brass Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1914. Serial No. 877,042. (Cl. 158—27.4.)



1. A gas torch comprising a body and a valve casing, said body having passages therethrough, valves controlling said passages, and a device for mixing the gas issuing therefrom, and said valve casing having a chamber, a diaphragm in said chamber, an inlet passage to said chamber, a valve connected to said diaphragm controlling said inlet passage, and an outlet passage from said chamber.

2. A gas torch comprising a body and a valve casing, said body having passages therethrough, valves controlling said passages, and a device for mixing the gas issuing therefrom, and said valve casing having a chamber, a diaphragm in said chamber, axially extending means for regulating the movement of said diaphragm, an inlet passage to said chamber, a valve connected to said diaphragm controlling said inlet passage, and an outlet passage from said chamber.

3. A gas torch comprising a body and a valve casing, said body having passages therethrough, valves controlling said passages, and a device for mixing the gas issuing therefrom, and said valve casing having a chamber, a diaphragm in said chamber, a plunger attached to and extending axially from said diaphragm, a tubular set-screw through which said plunger extends, an inlet passage to said chamber, a valve connected to said diaphragm controlling said inlet passage, and an outlet passage from said chamber.

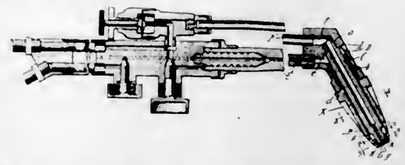
4. A gas torch comprising a body and a valve-casing, said body having two independent sets of gas passages therethrough, valves controlling said passages, a lateral passage extending from one of said gas passages out through the side of said body, and a device for mixing the gas issuing from said body, and said valve-casing having a chamber, a diaphragm in said chamber, an inlet passage to said chamber, a valve connected to said diaphragm and controlling said inlet passage, and an outlet passage leading from said chamber.

5. A gas torch comprising a body and a valve-casing, said body having two independent sets of gas passages therethrough, valves controlling said passages, a lateral passage extending from one of said gas passages out through the side of said body, and a device for mixing the gas issuing from said body, and said valve-casing having a chamber, a diaphragm in said chamber, means for regulating the movement of said diaphragm, an inlet passage to said chamber, a valve connected to said diaphragm and controlling said inlet passage, and an outlet passage leading from said chamber.

[Claims 6 to 12 not printed in the Gazette.]

1,172,730. TIP FOR COMBINED WELDING AND CUTTING TORCHES. JOHN G. PETTIS, Chicago, Ill., assignor to The Imperial Brass Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 14, 1914. Serial No. 877,043. (Cl. 158—27.4.)

1. A tip for gas torches comprising a tubular casing having an upper section and a lower section; said sections being screwed together, a tubular nozzle screwed into the upper section of the casing and extending through the lower section, said nozzle having a tapered head and a circumferential peripheral groove near its discharge end and also being provided with an axially extending discharge orifice, and a series of side discharge orifices extending from the circumferential peripheral groove outwardly through the head of said nozzle, and means for supplying different gases to said axially extending discharge orifices and said circumferential peripheral groove.



2. A tip for gas torches comprising a tubular casing having an upper section and a lower section, said sections being screwed together, a tubular nozzle screwed into the upper section of the casing and extending through the lower section, said nozzle having a tapered head and a circumferential peripheral groove near its discharge end and also being provided with an axially extending discharge orifice, and a series of side discharge orifices extending from the circumferential peripheral groove outwardly through the head of said nozzle and at converging angles to the axially extending discharge orifice, and means for supplying different gases to said axially extending discharge orifice and said circumferential peripheral groove.

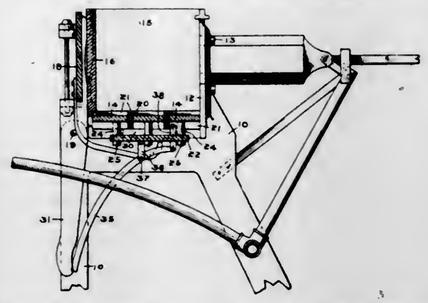
3. A tip for gas torches comprising a tubular casing, a polygonal tubular nozzle extending longitudinally in said casing having a head provided with a circumferential groove near its discharge end, an axially extending discharge orifice, and a series of equi-distant discharge orifices leading from said groove and arranged concentrically to said central orifice, and means for supplying different gases to said central and to said surrounding series of orifices.

4. A tip for gas torches comprising a tubular casing, a polygonal tubular nozzle extending longitudinally in said casing and having a tapering head provided with a circumferential peripheral groove near its discharge end constituting an annular gas chamber, an axially extending discharge opening and a series of side discharge openings extending from the circumferential peripheral groove outwardly through said head, the body of the nozzle in the rear of the groove being separated slightly from the surrounding wall of the casing to provide a gas passage-way to said groove, and means for supplying different gases to the axially extending discharge, and the gas passage-way leading to the circumferential peripheral groove.

5. A tip for gas torches comprising a tubular casing, a polygonal tubular nozzle extending longitudinally in said casing and having a tapering head provided with a circumferential peripheral groove near its discharge end constituting an annular gas chamber, an axially extending discharge opening and a series of side discharge openings extending from the circumferential peripheral groove outwardly through said head, the body of the nozzle in the rear of the groove being separated slightly from the surrounding wall of the casing to provide a gas passageway to said groove and the forward portion of the casing being tapered to correspond to the tapering conformation of the head of the nozzle and fitted closely around the same, and means for supplying different gases to the axially extending discharge and the gas passageway leading to the circumferential peripheral groove.

1,172,731. FACE-PLATE FOR CONCRETE-BLOCK MACHINES. CHARLES E. PHILLIPS, Indianapolis, Ind. Filed Aug. 27, 1915. Serial No. 47,655. (Cl. 25—41.)

1. The combination, with a concrete block machine-frame, of a face plate comprising a plurality of sections arranged with intervening spaces, a movable member arranged in said spaces for forming grooves in the block, means to move said member in a direction to project its groove forming portion a predetermined distance above the adjacent surface of the face plate, and means to move said member in the reverse direction to bring that portion of the groove forming member flush with the adjacent surface of the face plate when the block is completed.



2. The combination, with a concrete block machine-frame, of a face plate comprising a plurality of sections arranged with intervening spaces, a movable member arranged in said spaces for forming grooves in the block, means arranged on the machine-frame for arresting the movement of said member in advance of the face plate for elevating the groove forming portion of said member above the adjacent surface of said face plate, and means for lowering the projected portion of said member when the block is completed.

3. The combination, with a concrete block machine frame, of a face plate comprising a plurality of sections arranged with intervening spaces, a base-plate for mounting said face plate, means for holding said face plate in advance of said base-plate, means for securing the face plate to the base-plate, a movable member arranged in said intervening spaces of the face plate for forming the grooves in the block, means for elevating said movable member a predetermined distance above the adjacent surface of the face plate when the latter is seated, and means for retracting said movable member when the face plate is raised to free the block.

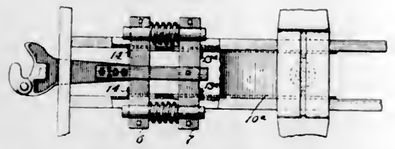
4. The combination, with a concrete block machine-frame, of a face plate comprising a plurality of sections arranged with intervening spaces, a base-plate, means for holding the face plate in advance of the base-plate, means for securing the face plate and base-plate together, a movable member arranged in the intervening spaces of the face plate, means for projecting the said member partly above the adjacent surface of the face plate, and means for moving said member flush with the adjacent surface of the face plate.

5. The combination, with a concrete block machine-frame, of a face plate comprising a plurality of sections arranged with intervening spaces, a base-plate, means for holding said face plate in advance of said base-plate, means for securing the face plate and base-plate together, a movable groove forming member arranged within said intervening spaces in the face plate, means for arresting the movement of said groove forming member in advance of the face plate when the latter is moved into position for the molding of a block, and a lever for returning said member to normal position when the block is completed

1,172,732. CAR-BODY-UNDERFRAME CONSTRUCTION. OSWALD S. PULLIAM, Pittsburgh, Pa. Filed July 10, 1911. Serial No. 637,641. (Cl. 213—42.)

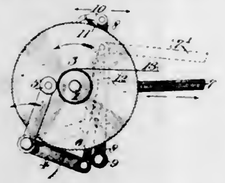
1. In a metallic car body under frame and in combination, an end sill, a metallic body bolster, metallic center sills extending through the body bolster to the end sill, and slotted to permit follower movements, draft rigging including a follower structure, and an integral metallic diaphragm having opposite faces in contact with and secured to the center sills in the plane of the bolster, said

diaphragm projecting forwardly a distance less than the distance between the bolster and end sill, said diaphragm also including a follower-engaging member positioned relative to predetermined sill slots to prevent rigging strain under buffer pressure on the center sills intermediate the bolster and end sill.



2. In a metallic car body underframe and in combination, an end sill, a metallic body bolster, metallic center sills extending through the body bolster to the end sill and slotted to permit follower movements, draft rigging including a follower structure, and an integral metallic diaphragm having opposite faces in contact with and secured to the center sills in the plane of the bolster, said diaphragm projecting forwardly of the body bolster a distance sufficient to provide a stop for the forward follower and insufficient to extend to the plane of the end sill, said forwardly projecting portion being slotted in correspondence with the sill slots, and having follower engaging members positioned relative to the sill slots and adapted to form stops for follower movements, said stops acting to prevent rigging strains under pulling and buffing pressures on the center sills intermediate the bolster and end sill.

1,172,733. TYPE-WRITING AND RECORDING MACHINE. JOSEPH RABER, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 19, 1909. Serial No. 478,967. (Cl. 242—55.)



1. In a recording machine, the combination with a revoluble spool adapted to receive the windings of a ribbon, and a ratchet wheel for revolving said spool, of a support, a lever of the third class pivoted to said support, a pawl pivoted to said lever and engaging said ratchet wheel, an actuator connected to said lever intermediate said support and said pawl for oscillating said lever and said pawl to rotate said ratchet wheel, a bell-crank lever actuated by the windings of the ribbon on said spool, and a connection between said bell-crank lever and said actuator for moving said actuator toward and away from said support, whereby said spool will be actuated varying distances proportionate to the quantity of ribbon wound thereon by uniform movement of said actuator.

2. In a recording machine, the combination with a revoluble spool adapted to receive the windings of a ribbon, and a ratchet wheel for rotating said spool to wind the ribbon thereon, of a lever, a pawl supported by said lever and engaging said ratchet wheel, an actuator connected to said lever for actuating said lever, a stationary support, a bell crank lever pivoted on said stationary support, and a connection between said bell crank lever and said actuator for varying the extent of movement of said first named lever by uniform movement of said actuator.

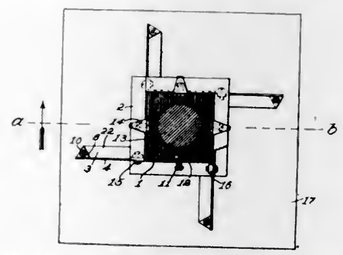
3. In a recording machine, the combination with a spool adapted to receive the windings of a ribbon, and a ratchet wheel for rotating said spool to wind the ribbon thereon, of a stationary support, a lever pivoted upon said stationary support, a pawl on said lever engaging said ratchet wheel, an actuator connected to said lever between said pawl and said support, a bell crank lever under control of the ribbon wound on said spool, and a link operated by said bell crank lever for varying the position of said actuator with respect to said pawl to vary extent of movement of said first named lever in proportion to the quantity of ribbon wound on said spool and by uniform movement of said actuator.

4. In a recording machine, the combination with a spool adapted to receive the windings of a ribbon, and a ratchet wheel for rotating said spool, of a lever of the third class, a pawl pivoted upon said lever and engaging said ratchet wheel, an actuator connected to said lever for actuating the same, a bell crank lever under control of the ribbon wound on said spool, and a connection between said bell crank lever and said actuator for moving said actuator toward and away from said pawl to vary extent of movement of said pawl by uniform movement of said actuator.

5. In a recording machine, the combination with a spool adapted to receive the windings of a ribbon, and a ratchet wheel for rotating said spool, of a support, a lever pivoted upon said support and having a slot therein, a pawl supported by said lever in engagement with said ratchet wheel, an actuator for actuating said lever, a bell crank lever controlled by the windings of the ribbon on said spool, a link connected to said bell crank lever, and a member connecting said link with said actuator and extending into said slot, whereby said actuator will be moved toward and away from said pawl to vary extent of movement of said pawl proportionate to the quantity of ribbon wound on said spool by uniform movement of said actuator.

[Claims 6 to 8 not printed in the Gazette.]

1,172,734. ADJUSTABLE KNOCKDOWN SOCKET. HENRY S. RAYMOND, Waterloo, Iowa. Filed Feb. 1, 1915. Serial No. 5,520. (Cl. 189—28.)



1. An adjustable knockdown socket, comprising in combination, a plurality of wall plates arranged to form an adjustable socket, each plate having one upright edge seated in contact with the inwardly-disposed face of an adjoining plate, to be adjustable therealong throughout the widths of the plates, and means for detachably securing said adjoining plates together.

2. An adjustable knockdown socket, comprising in combination, four like wall-plates set at right angles to each other to form a socket, one upright end only of each plate contacting with the inwardly-facing wall of an adjoining plate, said plates being adjustable past each other to vary the dimensions of their included space, and means for detachably securing said plates together in an adjusted position.

3. An adjustable knockdown socket, comprising a plurality of like plates adjustably secured together to provide an open-topped interspace of desired dimensions, set-screws mounted movably therein oppositely adapted to adjustably secure an included object between them, nuts on said set-screws, and elastic bodies detachably secured to said plates and bearing against said nuts to lock them in adjusted positions of the set-screws.

4. An adjustable knockdown socket, comprising a plurality of side-wall plates adjustably slidable past each other when assembled together to provide an interspace of desired dimensions, means for detachably securing said plates together in an adjusted position, set-screws mounted movably in said plates to hold an object seated in said interspace adjustably between them, nuts on said set-screws in said interspace, and a locking clip mounted on each set-screw, orificed to detachably receive an angle of the nut thereon and having one end secured detachably to the plate in which the set-screw is mounted.

5. An adjustable knockdown socket, comprising a plurality of like side-wall plates having outwardly flanged top and bottom edges, each plate having one edge flanged outwardly to provide a buttress having an angularly disposed foot-piece, each plate having a like plurality of transversely-alined orifices, and each buttress having orifices adapted to register with any of the orifices in another plate laid therealong endwise, detachably securing-means inserted in the registering orifices of said plates to hold the plates together, and adjustable clamping-means mounted in certain of the orifices of said plates to extend adjustably into their interspace to secure an included object detachably between them.

1,172,735. CONTROLLING MEANS FOR AUTOMOBILE-TOPS. FRANK C. REYNOLDS, Columbus, Ohio, assignor of one-half to Frank Ziegler and one-half to Z. H. Bradbury, Columbus, Ohio. Filed Sept. 22, 1911. Serial No. 650,726. (Cl. 21—62.)



1. The combination with a vehicle having running gear and a body thereon, of a vehicle top arranged to assume position of collapse and elevation above said body, and motor driven means carried by the vehicle and arranged to move said top relative to the body.

2. The combination with a vehicle having running gear and a body thereon, of a vehicle top arranged to assume positions of collapse and elevation above said body, and motor driven means mounted on the vehicle and arranged to collapse and to elevate said top.

3. The combination with a vehicle having running gear and a body thereon, of a vehicle top arranged to assume positions of collapse and elevation above said body, and motor driven means carried by the vehicle operable independently of the movement of the vehicle and arranged to move said top relative to the body.

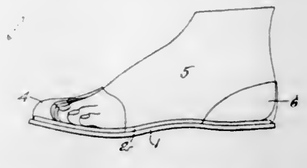
4. The combination with a vehicle having running gear and a body thereon, of a vehicle top arranged to assume positions of collapse or elevation, motor driven means carried by the vehicle and arranged to move said top relative to the body, and means for automatically rendering said last means inoperative.

5. The combination with a vehicle having running gear and a body thereon, of a vehicle top arranged to assume positions of collapse or elevation above said body, and motor driven means including straps retractable by said motor driven means for moving said top.

[Claims 6 to 26 not printed in the Gazette.]

1,172,736. DISPLAY-FORM FOR BOOTS AND SHOES. FRED B. RICE, Dover, Mass., assignor to Rice & Hutchins, Incorporated, Portland, Me., a Corporation of Maine. Filed Oct. 27, 1915. Serial No. 58,281. (Cl. 35—12.)

1. A display form for boots and shoes having a transparent foot-inclosing portion to confine the foot or foot model therein, while permitting a view of the same therethrough.



2. A display form for boots and shoes, comprising a transparent upper portion, in combination with a foot model therein, said transparent portion permitting a view therethrough of the foot model confined therein.

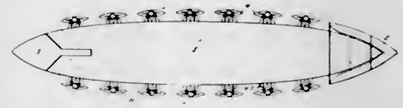
3. A display form for boots and shoes, having a transparent flexible foot-inclosing portion to confine the foot or foot model, while permitting a view of the same during flexing of the display form.

4. A display form for boots and shoes, having a transparent flexible upper to confine a foot or foot model, while permitting a view of the same during flexing of the display form.

5. A display form for boots and shoes, comprising a shoe with a transparent upper portion, and a flexible foot model therein, both shoe and model being capable of movement simulating walking, while permitting a view of the foot model through the transparent portion

[Claim 6 to 8 not printed in the Gazette.]

1,172,737. WAVE-MOTOR FOR GENERATING POWER AND PROPELLING SHIPS. BENJAMIN P. ROACH, Berkeley, Cal. Filed Apr. 9, 1915. Serial No. 20,332 (Cl. 115—4.)



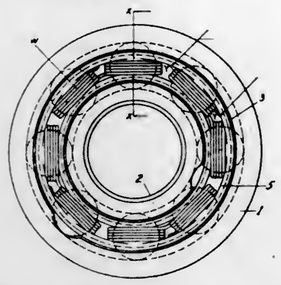
1. A ship having an operating bar connected thereto for angular movement and extending inboard and also extending outboard, an engine arranged in the ship and having a movable element connected to and actuated by the inboard portion of the said bar, a float arranged without the ship and connected to the outboard end of said bar for angular movement with said bar and a float-carried engine having a movable element connected to and actuated by said bar.

2. A ship having an operating bar connected thereto for angular movement and extending inboard and also extending outboard, a fluid compressing engine arranged in the ship and having a movable element connected to and actuated by the inboard portion of the said bar, a float arranged without the ship and connected to the outboard end of said bar for angular movement, a float carried fluid compressing engine having a movable element connected to and actuated by said bar and propelling means for the ship actuated by the fluid compressed by said engines.

3. A ship having a float at the bow thereof said float being substantially V-shaped in plan, arranged on opposite sides of the bow as well as directly in front of the bow and being pivotally connected to the ship and capable of vertical angular movement with reference to the ship.

4. A ship having a float at the stern thereof, said float having a forwardly extending segmental arm, and said ship having a vertically arranged well in the stern thereof, the said segmental arm of the float being arranged between the walls of said well and pivotally mounted so that the float is arranged for vertical angular movement with respect to the ship.

1,172,738. ANTIFRICTION-BEARING. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Aug. 29, 1912. Serial No. 717,702. (Cl. 64—59.)



1. In a device of the character indicated, in combination, a separator comprising a pair of mating sections each in the character of a trough-shaped annulus having inner and outer edge flanges, a series and antifriction-member seats formed in the body portion thereof and between said flanges and fingers upstanding between said flanges and at the sides of said seats, a series of antifriction members received upon said seats and between said fingers, and means carried by said fingers for holding said sections and members assembled; substantially as described.

2. In a device of the character indicated, in combination, a separator comprising a pair of mating sections each in the character of a trough-shaped annulus having inner and outer edge flanges, a series of antifriction-member seats formed in the body portion thereof and between said flanges and fingers upstanding between said flanges and at the sides of said seats, a series of antifriction members received upon said seats and between said fingers, said fingers being flared from said seats to normally stand free of said members, and means carried by said fingers for holding said sections and members assembled; substantially as described.

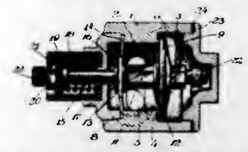
3. In a device of the character indicated, in combination, a separator comprising a pair of mating sections each in the character of a trough-shaped annulus having inner and outer edge flanges, a series of antifriction-member seats formed in the body portion thereof and between said flanges, fingers upstanding between said flanges and at the sides of said seats and openings between the opposed fingers of adjacent seats, a series of antifriction members received upon said seats and between said fingers, and means carried by said fingers and passing through said openings for holding said sections and members assembled; substantially as described.

4. In a device of the character indicated, in combination, a separator comprising a pair of mating sections each in the character of a trough-shaped annulus having inner and outer edge flanges, a series of antifriction-member seats formed in the body portion thereof and between said flanges, fingers upstanding between said flanges and at the sides of said seats and openings between the opposed fingers of adjacent seats, a series of antifriction members received upon said seats and between said fingers, said fingers being flared from said seats to normally stand free of said members, and means carried by said fingers and passing through said openings for holding said sections and members assembled; substantially as described.

5. In an antifriction bearing a device of the character indicated, the combination with a separator comprising opposed sections each provided with a pair of fingers extending toward the fingers of the other section, of an antifriction member received between and spaced from the elements of said pairs of fingers and holding separated the opposed sections, thereby to provide gaps between the pair of fingers of one section and that of the other, and resilient means bridging said gaps thereby to engage said antifriction member upon undue movement thereof between said fingers; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,172,739. CONDENSER WATER-VALVE. FRANK N. ROEHRICH, Jersey City, N. J., assignor to George P. Carroll, Bridgeport, Conn. Filed June 2, 1910. Serial No. 564,580. (Cl. 137—4.)



1. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a check valve adapted to close said seat, a diaphragm forming one end of said casing on the inlet side of said valve and presenting to the pressure of the fluid between itself and said valve an area approximately equal to the area of the valve also so presented when the valve is closed, a stem opening said valve on an inward thrust of said diaphragm, and a spring device tending to close said valve.

2. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a check valve adapted to close said seat, a diaphragm forming one end of said casing on the inlet side of said valve and presenting to the pressure of the fluid between itself and said valve an area approximately equal to the area of the valve also so presented when the valve is closed, a stem opening said valve on an inward thrust of said diaphragm, a spring device tending to close said valve and resisting such thrusting up to a predetermined limit, and means for adjusting the force of said device.

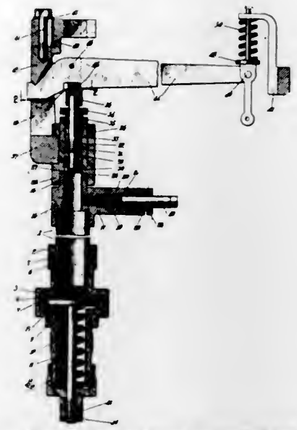
3. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a check valve adapted to close said seat, a diaphragm forming one end of said casing on the inlet side of said valve and presenting to the pressure of the fluid between itself and said valve an area approximately equal to the area of said valve also so presented when the valve is closed, a connecting member connecting said diaphragm and valve, extending outside of the diaphragm and opening the valve on being thrust inward, and a spring device outside of said casing and acting on the outer part of said member so as to tend to close the valve.

4. In combination a chamber casing having an inlet an outlet and a valve seat between them, a check valve adapted to close said seat, a diaphragm forming one end of said casing on the inlet side of said valve and presenting to the pressure of the fluid between itself and said valve an area approximately equal to the area of said valve also so presented when the valve is closed, a connecting member connecting said diaphragm and valve, extending outside of the diaphragm and opening the valve on being thrust inward, a spring device outside of said casing and acting on the outer part of said member so as to tend to close the valve, and means for adjusting the force of said device.

5. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a reciprocating valve adapted to close said seat and having a guide rod extending from its side away from the seat, an end piece closing one end of said casing and having on its inside a guiding spider in which said rod reciprocates, a diaphragm forming the other end wall of said casing, a connecting member connecting said diaphragm and valve, extending outside of the diaphragm, having an enlargement on its outer part and opening the valve on being thrust inward, an outer casing clamping the edges of said diaphragm to said chamber casing, and a compression spring bearing at opposite ends against said outer casing and said enlargement.

[Claims 6 to 13 not printed in the Gazette.]

1,172,740. REFRIGERATOR-THERMOSTAT. FRANK N. ROEHRICH, Jersey City, N. J., assignor to George P. Carroll, Bridgeport, Conn. Filed Oct. 11, 1912. Serial No. 725,180. (Cl. 236—6.)



1. In combination a temperature controlled motor member, movement multiplying mechanism in operative relation with said member, means operating on a predetermined rise of temperature about said member to permit it to move said mechanism a predetermined distance and on a subsequent fall of such temperature to cause said mechanism to follow said member back to its initial position, means operating in case of an excess of temperature about said member above such predeterminate rise to permit of a temporary expansion of said member in a part thereof other than in the part operative upon said mechanism, and means for increasing or decreasing the range of maximum movement of said mechanism.

2. In combination a chamber casing, a diaphragm inclosing said casing, a liquid occupying the space within said casing and diaphragm, movement multiplying mechanism in operative relation with said diaphragm, means operating on a predetermined rise of temperature about said liquid to permit said diaphragm to move said mechanism a predetermined distance and on a subsequent fall of such temperature to cause said mechanism to follow said diaphragm back to its initial position, means operating in case of an excess of temperature about said liquid above such predetermined rise to permit of a temporary expansion of a part of said casing, and means for increasing or decreasing the range of maximum movement of said mechanism.

3. In combination a chamber casing having two diaphragm openings, a motor diaphragm closing one of said openings, a relief diaphragm closing the other of said openings, a liquid occupying the space within said casing and diaphragms, movement multiplying mechanism in operative relation with said motor diaphragm, means operating on a predetermined rise of temperature about said liquid to permit said motor diaphragm to move said mechanism a predetermined distance and on a subsequent fall of such temperature to cause said mechanism to follow said diaphragm back to its initial position, relief mechanism preventing an outward movement of said relief diaphragm during such temperature changes but temporarily permitting such a movement in case of an excess of temperature about said liquid above such predetermined rise, and means for increasing or decerasing the range of maximum movement of said multiplying mechanism.

4. In combination a chamber casing, a diaphragm inclosing said casing, a liquid occupying the space within said casing and diaphragm, means for adjusting a part of the casing wall containing said liquid so as to be farther in or farther out, movement multiplying mechanism in operative relation with said diaphragm, means operating on a predetermined rise of temperature about said liquid to permit said diaphragm to move said mechanism a predetermined distance and on a subsequent fall of such temperature to cause said mechanism to follow said diaphragm back to its initial position, and means for increasing or decreasing the range of maximum movement of said mechanism.

5. In combination a chamber casing, a diaphragm inclosing said casing, a liquid occupying the space within said casing and diaphragm, means for adjusting a part of the casing wall containing said liquid so as to be farther in or farther out, movement multiplying mechanism in operative relation with said diaphragm, means operating on a predetermined rise of temperature about said liquid to permit said diaphragm to move said mechanism a predetermined distance and on a subsequent fall of such temperature to cause said mechanism to follow said diaphragm back to its initial position, means operating in case of an excess of temperature about said liquid above such predetermined rise to permit of a temporary expansion of a part of said casing, and means for increasing or decreasing the range of maximum movement of said mechanism.

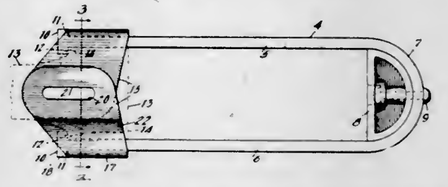
[Claims 6 to 33 not printed in the Gazette.]

1,172,741. MANUFACTURE OF LEAD ARSENATE. JOHN A. SCHAEFFER, Joplin, Mo., assignor to The Picher Lead Company, Joplin, Mo., a Corporation of Missouri. Filed Sept. 24, 1915. Serial No. 52,466. (Cl. 23—13.)

1. The method of manufacturing lead arsenate which consists in mixing very finely divided lead monoxid suspended in water with a solution consisting essentially of one or more soluble arsenates, and heating the mixture to induce the formation of the lead arsenate.

2. The method of manufacturing lead arsenate which consists in mixing fumed litharge suspended in water with a solution consisting essentially of one or more soluble arsenates, and heating the mixture to induce the formation of the lead arsenate.

1,172,742. DRAFT-YOKE FOR RAILWAY-CAR DRAFT-RIGGING. HARRY F. SCHWARTZENBERG, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Mar. 9, 1914. Serial No. 823,284. (Cl. 213—42.)

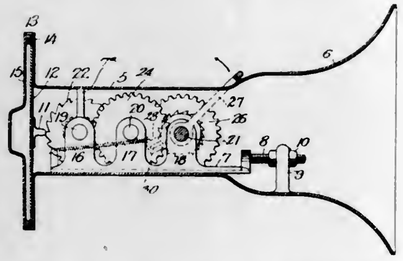


1. In a draft rigging for railway cars, in combination, a draw-bar, a U-shaped yoke strap engaging the draw-bar at its free ends, a pair of independent counterpart loops passing around the yoke strap, and means to secure said loops to the draw-bar, each of said loops having a straight wing and an out-turned wing, the out-turned wing of one loop being disposed adjacent the straight wing of the other loop.

2. In a draft rigging for railway cars, the combination with a draw bar having shoulders on top and bottom thereof, of a yoke having shouldered enlargements at the ends of the arms thereof adapted to engage the draw bar shoulders, a pair of counter part loops having over-lapped sides and passing around the yoke and draw-bar butt, said loops also engaging said enlargements on the ends of the yoke strap, and means to secure said loops to the draw bar, said enlargements on the ends of the yoke arms being engaged by the draw bar shoulders and the loops upon forward movement of the draw bar to thereby cause the yoke to move with the draw bar.

3. A device of the character described comprising a U shaped yoke having the ends of the arms thereof provided with T shaped heads, of a pair of substantially U shaped loops arranged to have their sides overlapped, said loops having shoulders arranged to engage the outer portions of said T shaped heads, the overlapped sides of said loops being provided with alined slots adapted to receive a coupler key.

1,172,743. MECHANICAL SIGNAL. CHARLES F. SENDALL, Brooklyn, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Feb. 14, 1912, Serial No. 677,458. Renewed July 8, 1914. Serial No. 849,833. (Cl. 116—1.)



1. In a signal, the combination with a projector of a diaphragm and wearpiece at the rear end of the projector, of a frame carried within the projector, an adjusting screw at the front end of the frame and carried by the projector, a ratchet wheel journaled at the rear end of the frame and adapted to make contact with the wearpiece, a pinion on the shaft with the ratchet wheel, a gear wheel meshing with the pinion and having a second pinion on its shaft, a shaft with a gear wheel meshing with the second pinion, a yoke on the outer ends of the latter shaft, an arm with a pawl on the shaft, a ratchet wheel connected with the latter gear wheel, and a spring adapted to return the arm with the pawl and the yoke to their normal positions.

2. In a signal, the combination with a projector, of a diaphragm and wearpiece at the rear end of the projector, of a frame carried within the projector, an adjusting device at the front end of the frame, a toothed wheel journaled at the rear end of the frame and adapted to make contact with the wearpiece, a pinion on the shaft with the toothed wheel, an intermediate shaft carrying a gear wheel meshing with the pinion, a shaft carrying a lever arm, an arm with a pawl on the shaft, a toothed wheel loosely mounted on the latter shaft, gearing connecting the last named toothed wheel and intermediate shaft, and a spring adapted to return the arm with the pawl and the lever arm to their normal positions.

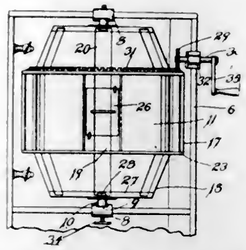
3. A warning signal for vehicles, having a diaphragm and a projector extending forward therefrom, in combination with a solidly supported rotary mechanical agitator in front of the diaphragm, an operating handle, and a multiplying gearing contained in the projector to impart speeded rotation to the agitator.

4. A warning signal for vehicles, having a diaphragm and a projector extending forward therefrom, in combination with a frame in the projector having means for adjustment with relation to the diaphragm, a rotary mechanical agitator and a multiplying gearing with one-way driving means mounted on said frame, and an oscillatory handle outside of the projector and in front of the diaphragm adapted by a partial revolution in one direction to impart speeded rotation to said actuator through said gearing and having means for returning it in the opposite direction.

5. A warning signal for vehicles, having a diaphragm and a projector extending forward therefrom, in combination with a solidly supported rotary mechanical agitator in front of the diaphragm, an operating lever arm, and a multiplying gearing contained in the projector to impart speeded rotation to the agitator.

[Claims 6 to 11 not printed in the Gazette.]

1,172,744. WASHING-MACHINE. ALBERT L. SESSIONS, Bristol, Conn. Filed Oct. 26, 1911. Serial No. 657,000. (Cl. 68—18.)



1. In combination with a tub, a receptacle rotatively arranged within the tub and consisting of a cylindrical portion with frustoconical shaped end portions, channels extending substantially in an axial direction along the periphery of the cylindrical portion and extending into the cone shaped portions, said channels having openings along their length into the interior of the receptacle, and means for rotating the receptacle.

2. In combination with a tub, a receptacle rotatively arranged within the tub and consisting of a cylindrical portion and tapered end portions with channels extending substantially in an axial direction along the periphery of the cylindrical and tapered end portions, partitions dividing the channels at the junction of the cylindrical portion and tapered end portion with openings through the partitions, and means for rotating the receptacle.

3. In combination with a tub, a receptacle rotatably arranged within the tub, channels including a bottom wall and side walls disposed within the periphery of the receptacle and open at their outer sides, the said channels extending lengthwise along the periphery of the receptacle and having openings therein forming unobstructed communication with the interior of the receptacle through the end walls thereof, and means for rotating the receptacle.

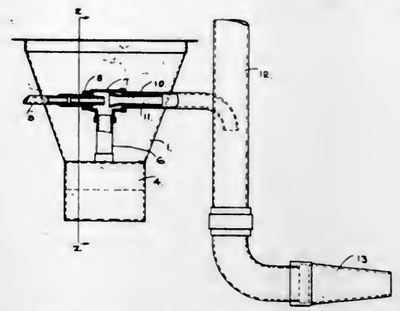
4. In combination with a tub, a receptacle rotatably arranged within the tub, channels extending lengthwise along the periphery of the receptacle, and into channels extending radially in the end walls of the receptacle, the latter having openings into the interior of the receptacle, and means for rotating the receptacle.

5. In combination with a tub, a receptacle rotatively arranged within the tub, said receptacle having a cylindrical portion and tapered end portions with channels in the tapered end portions, buckets arranged on the cylindrical portion and opening at their ends into said channels, said receptacle having openings from said channels into the interior of the receptacle at the ends and near the center thereof, and means for rotating the receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,172,745. APPARATUS FOR FEEDING PULVERIZED FUEL. GEORGE W. SHORT, Sharon, Pa. Filed Nov. 24, 1913. Serial No. 802,717. (Cl. 110—104.)

1. An apparatus of the class described comprising in combination, a supply hopper, a feed chamber, means connecting said supply hopper and said feed chamber to enable material in said supply hopper to feed by gravity into said feed chamber, a baffle plate for controlling the flow of said material to maintain a predetermined level of material in said feed chamber, an ejector nozzle above said feed chamber, a pipe connecting said ejector nozzle with said feed chamber, a blast pipe leading to a burner, and a supply pipe from said ejector to said blast pipe.



2. In an apparatus of the class described in combination, a supply hopper, a feed chamber, an inclined floor leading from said supply hopper to said feed chamber to permit material in said supply hopper to be fed by gravity to said feed chamber, a baffle plate adjacent said feed chamber to control the height of material in said feed chamber, an ejector nozzle above and operatively connected to said feed chamber to draw material vertically from said feed chamber, a high pressure pipe leading to said ejector nozzle, a delivery pipe leading from said ejector nozzle, and a blast pipe adapted to convey air under low pressure to a burner, said delivery pipe terminating within said blast pipe.

3. An apparatus for feeding pulverized fuel to a furnace comprising in combination a fuel supply hopper provided with an inclined floor, a feed chamber adjacent the lower end of said inclined floor, means to regulate the height of material within said feed chamber, a high pressure ejector above said feed chamber, a vertical pipe leading from the upper portion of said feed chamber to said ejector, a burner nozzle, and means for conducting material from said ejector to the burner nozzle.

4. In an apparatus for feeding pulverized fuel to a furnace, the combination of a supply hopper, a feed chamber below said supply hopper, means to conduct material from said supply hopper to said feed chamber, means to maintain a predetermined level of material within said feed chamber, a high pressure ejector nozzle above said feed chamber, a burner nozzle, and connections for delivering material from said ejector to said burner nozzle.

5. In a device of the character described in combination, a supply hopper, a feed chamber, means for conducting material by gravity from said supply hopper to said feed chamber, means for maintaining said material within said supply hopper at a predetermined height, devices for lifting said material from said feed chamber by means of ascending currents of air at a pressure less than atmospheric pressure, said last mentioned means including an ejector having provision for a high pressure air current, a burner nozzle, and a conduit leading from said ejector to said burner nozzle.

[Claim 6 not printed in the Gazette.]

1,172,746. RUST-PREVENTIVE DEVICE FOR GUN-BARRELS. JACOB SILVERSTEIN, Wilkes-Barre, Pa. Filed Sept. 3, 1915. Serial No. 48,821. (Cl. 42—91.)

1. Means for preventing the formation of rust in gun-barrels comprising an elongated body of porous material and a covering of interwoven textile material approximately the length of a gun-barrel, saturated with a rust preventive, and adapted to fill the bore of the barrel of the gun throughout its length.

2. Means for preventing the formation of rust in gun-barrels comprising an elongated body of fibrous material and a covering of interwoven textile material approximating the length of a gun-barrel, saturated with a rust preventive, and adapted to fill the bore of the barrel of the gun throughout its length.

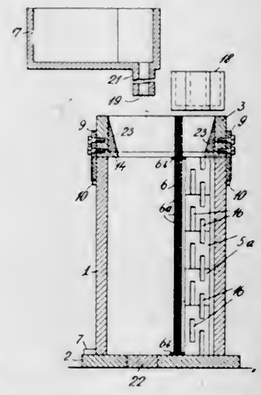


3. Means for preventing the formation of rust in gun-barrels comprising an elongated body consisting of a plurality of strands of fibrous material and a cover of interwoven textile material, approximating the length of a gun-barrel, saturated with a rust preventive, and adapted to fill the bore of the barrel of the gun throughout its length.

4. Means for preventing the formation of rust in gun-barrels comprising a rope like body of an absorbent material and a covering of interwoven textile material, a drawing head carried at one end of the body, and means for securing the head in position.

5. Means for preventing the formation of rust in gun-barrels comprising a rope like body of an absorbent material and a covering of interwoven textile material, a drawing head carried at one end of the body, and a coiled wire wrapping for securing the head in position.

1,172,747. PROCESS OF AND APPARATUS FOR FORMING COMPOUND INGOTS. JOHN SLATTERY, Chrome, N. J. Filed Jan. 5, 1915. Serial No. 554. (Cl. 22—201.)



1. The herein described method of casting compound metal ingots, which consists in flowing molten metal from different sources, into a suitable mold on opposite sides of a septum dividing that mold, each stream of molten metal entering the mold from above and in the form of a quiet stream which spreads out with little disturbance of the molten metal beneath, each increment of the molten metal remaining substantially at the level at which it encounters the molten metal already within the

mold, and by the heat of the molten metal melting the septum upward progressively and causing its material to combine with the cast metal, and regulating the flow of both streams of molten metal with reference to the rate of melting of the septum to preserve substantial integrity of each portion of the septum until the molten metal in contact with such portion has cooled to such extent that little diffusion of the two bodies of molten metal in one another will occur upon the melting of that portion of the septum.

2. The herein described method of casting compound metal ingots, which consists in flowing molten metal from different sources into a suitable mold on opposite sides of a septum dividing that mold, but affording restricted passages for contact of the two bodies of molten metal with one another, both streams of molten metal entering the mold from above, and mingling to some extent by passage through the restricted passages of the septum, and by the heat of the molten metal melting the septum upward progressively and causing its material to combine with the cast metal, and regulating the flow of both streams of molten metal with reference to the rate of melting of the septum to preserve substantial integrity of each portion of the septum until the molten metal in contact with such portion has cooled to such extent that little diffusion of the two bodies of molten metal in one another will occur upon the melting of that portion of the septum.

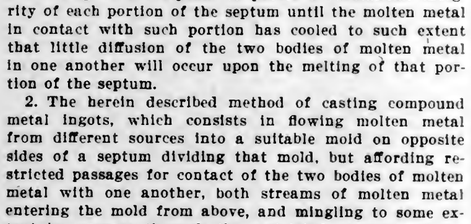
3. Apparatus for forming compound metal ingots comprising an ingot mold having a septum dividing its interior, in combination with means for introducing molten metal of different grades into the mold on opposite sides of said septum, both of such molten metal supply means comprising means for delivering the molten metal into the mold from above and for delivering such molten metals in quiet streams.

4. Apparatus for forming compound metal ingots comprising an ingot mold having a septum dividing its interior, in combination with pouring heads having bottom openings adapted to discharge two different bodies of molten metal, at least one of them in the form of a quiet stream into said ingot mold on opposite sides of said septum and not directed thereagainst.

5. Apparatus for forming compound metal ingots comprising an ingot mold having a septum dividing its interior, in combination with means for introducing molten metal of different grades into the mold from above on opposite sides of said septum and not directed thereagainst, one of said molten metal introducing means being a pouring head having a bottom spout.

[Claims 6 to 16 not printed in the Gazette.]

1,172,748. CONTROLLING MECHANISM FOR HYDRAULIC JACKS. RAYMOND W. SPARLING, Los Angeles, Cal. Filed Aug. 31, 1912. Serial No. 718,030. (Cl. 138—9.)



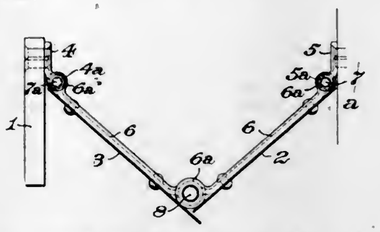
1. A controlling valve for hydraulic jacks, comprising a valve casing, a valve stem reciprocally mounted in said casing, a series of three valve cups mounted on said stem spaced apart to form a pair of chambers therebetween, said valve casing formed with a pair of spaced outer ports in communication with each other and adapted to be alternately opened and closed to the chambers on the reciprocation of the valve stem, an inlet and an outlet port in the casing intermediate the outer ports arranged so that the inlet port will be in constant communication with one of the chambers and the outlet port in constant communication with the other chamber, and a port arranged intermediate the inlet and outlet ports adapted to connect with one of the chambers when the valve stem is in one extreme position, and to communicate with the other chamber when the valve is in the other extreme position.

2. A controlling valve for hydraulic jacks, comprising a valve casing, a valve stem reciprocally mounted in said casing, a series of three valve cups mounted on said stem spaced apart to form a pair of chambers therebetween, said valve casing formed with a pair of spaced outer ports in communication with each other adapted to be alternately opened and closed to the chambers on the reciprocation of the valve stem, an inlet and an outlet port in the casing intermediate the outer ports arranged so that the inlet port will be in constant communication with one of the chambers and the outlet port in constant communication with the other chamber, and a port arranged intermediate the inlet and outlet ports adapted to connect with one of the chambers when the valve is in one extreme position, and to communicate with the other chamber when the valve is in the other extreme position, the lengths of the chambers between the valve cups being equal to the distance between the centers of the outer ports and the intermediate port, whereby one outer port and the intermediate port will communicate with the chamber connecting with the inlet port when the valve stem is in one position, and the other outer port and the intermediate port will communicate with the chamber connecting with the outlet port when the valve stem is in another position.

3. A controlling valve for hydraulic jacks, comprising a valve casing having a pair of outermost ports connected together by a by-pass and connecting with one end of the hydraulic jack casing, an intermediate port connecting with the opposite end of the hydraulic jack casing, an inlet port arranged between the intermediate port and one of the outer ports, and an outlet port arranged between the intermediate port and the other outer port, a valve stem reciprocally mounted in the valve casing, a series of three spaced valve cups on said stem forming a pair of chambers therebetween, one of which is in constant communication with the inlet port and the other in constant communication with the outlet port, said chambers being of a length equal to the distance between the centers of the intermediate port and the centers of the outermost ports, whereby when the valve is reciprocated the outlet port will be in communication through one of the chambers with the intermediate port and with one of the outer ports and thus be opened to the inlet port through the by-pass connecting the outer ports and the chamber connecting with the inlet port.

4. A controlling valve for hydraulic jacks, comprising a valve casing having a pair of outermost ports connected together by a by-pass and connecting with one end of the hydraulic jack casing, an intermediate port connecting with the opposite end of the hydraulic jack casing, an inlet port arranged between the intermediate port and one of the outer ports, and an outlet port arranged between the intermediate port and the other outer port, a valve stem reciprocally mounted in the valve casing, a series of three spaced valve cups on said stem forming a pair of chambers therebetween, one of which is in constant communication with the inlet port and the other in constant communication with the outlet port, said chambers being of a length equal to the distance between the centers of the intermediate port and the centers of the outermost ports, whereby when the valve is reciprocated the outlet port will be in communication through one of the chambers with the intermediate port and with one of the outer ports and thus be opened to the inlet port through the by-pass connecting the outer ports and the chamber connecting with the inlet port, and passages connecting the outermost ports with the interior of the valve casing at the ends of the outermost valve cups.

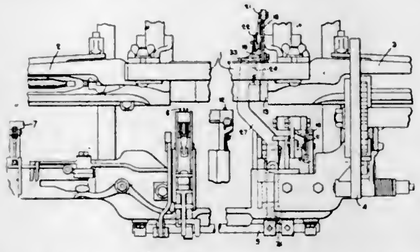
1,172,749. DIAPHRAGM FOR NON-VESTIBULE PASSENGER-TRAIN CARS. HOWARD STILLMAN, Berkeley, Cal. Filed Sept. 9, 1915. Serial No. 49,685. (Cl. 105—61.)



1. The combination, with a railroad car, of a diaphragm face plate, two metallic diaphragm plates, hinge straps secured to said diaphragm plates, hinge straps secured to the face plate, hinge straps secured to the car end, and pivotal connections coupling the diaphragm plates, through the several hinge straps, one to the other and to the face plate and car end, respectively.

2. The combination, with a railroad car, of a diaphragm face plate, two metallic diaphragm plates, hinge straps secured to said diaphragm plates, the opposite hinge plates being spaced apart vertically, hinge straps secured to the face plate, hinge straps secured to the car end, and pivotal connections between the car end straps and the straps of one of the diaphragm plates, between the face plate straps and those of the other diaphragm plate, and between the straps of the two diaphragm plates.

1,172,750. FILLING-POSITIONING DEVICE FOR LOOMS. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 26, 1914. Serial No. 879,008. (Cl. 139—85.)



1. In an automatic weft replenishing loom, a shuttle feeler movably mounted on the loom frame and when moved into operative position acting to feel for and detect when the lay beats up an improperly boxed shuttle at the transfer end of the loom, filling parting means carried by said shuttle feeler to part the filling in the rear of the shuttle when the lay beats up, a positioning head mounted on the lay to move across and above the raceway and provided with a face acting when the head is moved forward to aline the filling horizontally with, and position it in the field of operation of, the filling parting means.

2. In an automatic weft replenishing loom, a shuttle feeler movably mounted on the loom frame and when moved into operative position acting to feel for and detect when the lay beats up an improperly boxed shuttle at the transfer end of the loom, filling parting means carried by said shuttle feeler to part the filling in the rear of the shuttle when the lay beats up, a positioning head mounted on the lay to move across and above the raceway and provided with a reentrant face acting when the head is moved forward to aline the filling horizontally with, and position it in the field of operation of, the filling parting means.

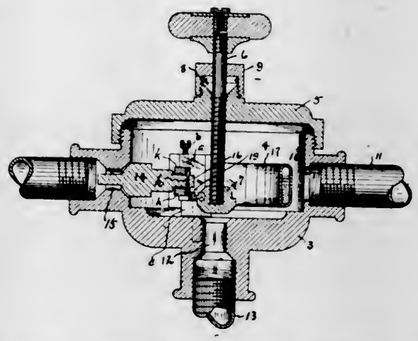
3. In an automatic weft replenishing loom, a shuttle feeler movably mounted on the loom frame and when moved into operative position acting to feel for and detect when the lay beats up an improperly boxed shuttle at the transfer end of the loom, filling parting means carried by said shuttle feeler to part the filling in the rear of the shuttle when the lay beats up, a positioning head mounted on the lay to move across and above the raceway and provided with a reëntrant face having a central positioning notch whereby when the head is moved forward the filling is carried by the face into the notch and positioned in the field of operation of the filling parting means.

4. In a loom, the combination of automatic filling replenishing means, means for parting the filling of the filling carrier to be abandoned adjacent to said filling carrier, a lay provided with a groove extending transversely of the raceway, a positioning head movably mounted on the lay extending into said groove and provided with a reëntrant face whereby when the head is moved forward the filling is guided by the face to the center of the head and positioned in the field of operation of the filling parting means.

5. In a loom the combination of automatic filling replenishing means, means for parting the filling of the filling carrier to be abandoned adjacent to said filling carrier, a positioning head mounted on the lay to move across and above the raceway and provided with a face acting when the head is moved forward to guide the filling to the center of the head and position it in the field of operation of the filling parting means, a lever pivoted to said head and having a slotted fulcrum on the lay, a spring connected to said lever and acting to retract the head, and a bunter lever fulcrumed on the loom frame and moved upon the call for filling replenishment into the path of said lever whereby upon the beat up the positioning head is moved into operative position and upon completion of the beat up the said lever moves on its fulcrum to maintain the positioning head in operative position without injury to the parts.

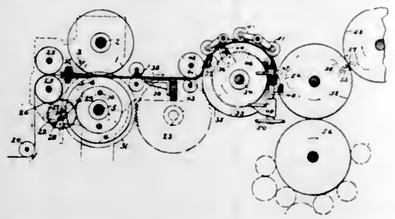
[Claims 6 to 9 not printed in the Gazette.]

1,172,751. THERMOSTATIC CONTROL FOR STEAM-TRAPS. WILLIAM W. STUBBS, Council Bluffs, Iowa, assignor to Anton Pawol, Omaha, Nebr. Filed Nov. 19, 1915. Serial No. 62,383. (Cl. 236—10.)



A steam trap, having in combination, an annular casing provided with a screw cap, an intake, an outlet, a valve seat and valve in the outlet, an elongated semicircular receptacle disposed within and adjacent to the side wall of the casing, said receptacle being provided at one of its ends with a head having a flange projecting toward the middle of the casing, a rock lever having its respective ends flexibly connected with the valve and opposite end of the receptacle, and a keeper traversing the flange of the receptacle and engaging the bottom of the casing for adjusting the valve longitudinally of the valve seat and to maintain the receptacle disengaged from the bottom of the casing.

1,172,752. PRINTING-MACHINE. ARTHUR K. TAYLOR, Baltimore, Md., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Aug. 5, 1910. Serial No. 575,785. (Cl. 101—117.)



1. The combination with a printing mechanism, of means for cutting sheets of different lengths, means including a cylinder having sheet taking devices for transferring sheets from the cutting mechanism to the printing mechanism, and means for varying the time when said sheet taking devices take the sheets.

2. The combination with a pair of cutting cylinders, of means for feeding a web thereto, means for varying the time of operation of the cutting cylinders to cut sheets of different lengths, sheet taking mechanism including devices for seizing the head of the sheet, means for causing said devices to seize the head of the sheet at the time the cutting sylinders operate, and a printing mechanism to which the sheets are delivered.

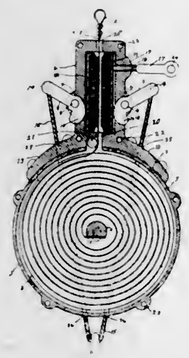
3. The combination with a constantly rotating cylinder having sheet taking devices, of continuously running means for delivering sheets of different lengths thereto, and means for varying the time at which the sheet taking devices operate to take the sheet to enable the different lengths of sheets to be properly taken.

4. The combination with a constantly rotating cylinder having sheet taking devices, of continuously running means for cutting and delivering thereto sheets of different lengths, and means for varying the time at which the sheet taking devices operate to take the sheet to enable the different lengths of sheets to be properly taken.

5. The combination with a cylinder having sheet taking grippers, of means including a cutting mechanism driven at varying speeds for delivering sheets of different lengths to the cylinder, gripper closing and opening devices, and means for varying the sheet taking position of the gripper closing devices to enable the different lengths of sheets to be properly taken.

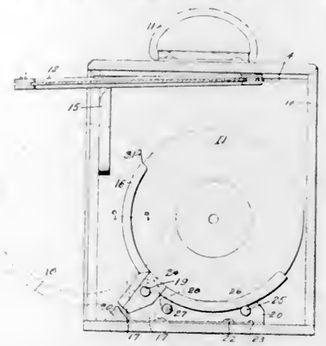
[Claims 6 and 7 not printed in the Gazette.]

1,172,753. FIRE-ESCAPE. PETER VESCOVI and EDMOND GOBATTI, Pueblo, Colo. Filed Aug. 4, 1913. Serial No. 782,871. (Cl. 254—156.)



In a fire escape of the character described, in which are provided a metal casing, a metal tape mounted in said casing with means for attaching the free end of said tape, the combination therewith of a yoke, friction blocks mounted in said yoke and operative on the interior thereof said metal tape passing between said friction blocks, a lever on either side of said yoke pivotally attached therein for operating said friction blocks, weight sustaining and attaching means attached to said levers, and a screw threaded bar for operating one of said friction blocks, which said yoke is attached to said metal casing and bears all strain in operation of said device, all substantially as set forth.

1,172,754. PHONOGRAPH-DISK HOLDER. LEANDER E. WILKINSON and JOSEPH M. PEIRCE, Fitchburg, Mass. Filed Aug. 3, 1915. Serial No. 43,458. (Cl. 211—16.)



1. A phonograph disk-holder having, in combination, a plurality of grooved disk-holding levers, a rod upon which said levers are pivoted, a pair of stop rods effective to position said levers in either open or closed position, and supports for said rods each having a plurality of open slots adapted to receive said rods and so disposed that said rods cannot be displaced therefrom by the action of the levers in any position.

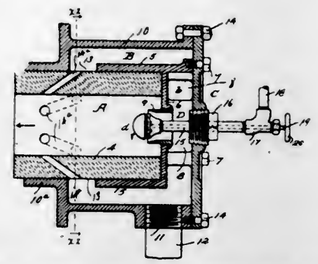
2. A phonograph disk-holder having, in combination, a plurality of disk-holding levers each having a projecting lug near its central portion, a rod upon which said lugs are pivoted, a second rod engaging said lugs and acting as a stop for said levers when in open position, a casing within which said rods are supported, and a numbered plate secured in said casing to designate said levers, said lugs being positioned closely adjacent said plate when the levers are in closed position and acting as indicators therefor.

3. A phonograph disk-holder having, in combination, a casing, a plurality of disk-holding levers, and means for pivotally mounting said levers in said casing, said means comprising brackets secured in said casing, and a rod extending through an opening in each lever, said rod being received within open slots in said brackets, and said slots being upwardly and rearwardly inclined, whereby said rod and levers may be readily inserted in and removed from said brackets as a unit after the brackets are mounted in said casing, and whereby they are held against accidental displacement therefrom.

4. A phonograph disk-holder having, in combination, a plurality of disk-holding levers, each having a projecting lug near its central portion, a rod upon which said levers are pivoted, a stop rod for said levers, and a numbered plate for designating said levers, said lugs engaging said stop rod to position said levers in open position, and said lugs being themselves positioned closely adjacent said numbered plate when the levers are in closed position and acting as indicators therefor.

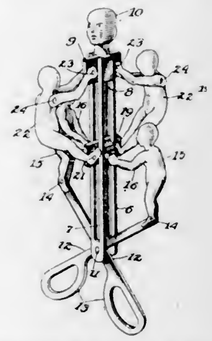
1,172,755. OIL-BURNER. WILLIAM W. WILSON, Los Angeles, Cal. Filed Feb. 11, 1913. Serial No. 747,649. (Cl. 158—1.5.)

1. An oil burner, comprising two spaced shells one within the other, forming a combustion chamber within the inner shell and an air chamber between said shells, means connecting said shells at an end of each and holding the same assembled, means for admitting air to said chamber, means for admitting oil and air separately to said combustion chamber at one part thereof, and means for further introducing air to said combustion chamber at another part thereof; said combustion chamber having a heat resisting lining through ports in which air passes to said combustion chamber; said inner shell having a head plate provided with an opening and a tube set in said opening and projecting within said combustion chamber and through which the oil and air are separately admitted to said combustion chamber.



2. An oil burner, comprising two spaced shells, one within the other, forming a combustion chamber within the inner shell and an air chamber between said shells, means connecting said shells at an end of each and holding the same assembled, means for admitting air to said air chamber, means for admitting oil and air separately to said combustion chamber at one part thereof, and means for further introducing air to said combustion chamber solely in one zone and at another part thereof; said combustion chamber having a heat-resisting lining through ports in which air passes to said combustion chamber; said inner shell having a head plate provided with an opening and a tube set in said opening and projecting within said combustion chamber and through which the oil and air are separately admitted to said combustion chamber.

1,172,756. TOY JUMPING-JACK. FRANK BACON, Cleveland, Ohio. Filed Nov. 3, 1915. Serial No. 59,355. (Cl. 46—40.)



1. A toy comprising a standard, a pair of crossed levers pivoted to said standard, a sliding block on the standard, and a pair of figures pivotally connected to the block, and to the levers respectively.

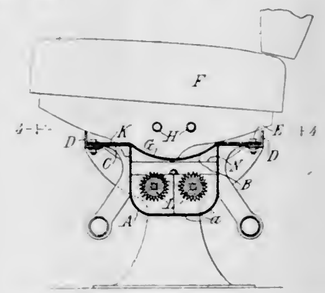
2. A toy comprising a standard slotted lengthwise, a pair of crossed levers pivoted to said standard, a block sliding in the slot, and a pair of figures pivotally connected to the block, and to the levers respectively.

3. A toy comprising a standard having longitudinal crossed slots, a block slidable in said slots, a pair of crossed levers pivoted to the foot of the standard, a pair of figures pivotally connected to said block, and to said levers respectively, and another pair of figures pivotally connected to said block and to the head of the standard.

4. A toy comprising a standard, crossed levers pivoted to the foot of said standard, a block slidable on the standard, a lower pair of figures pivotally connected to said block and to the levers respectively, and an upper pair of figures pivotally connected to said block and to the head of the standard.

5. A toy comprising a standard, crossed levers pivoted to the foot of said standard, a block slidable on the standard, a lower pair of figures pivoted at their feet to said levers respectively and having rigid arms pivoted to the block, and an upper pair of figures pivoted at their feet to the block and having swinging arms pivoted to the head of the standard.

1,172,757. ELECTRIC HEATER. ALFRED O. BAILEY, New York, N. Y., assignor to Gold Car Heating and Lighting Company, New York, N. Y., a Corporation of New York. Filed Sept. 25, 1915. Serial No. 52,648. (Cl. 237—28.)



1. In combination with a car seat frame having a central opening, a car seat adapted to be moved to uncover said opening, an electric heater casing comprising a perforate body, laterally extending flanges on said body adapted for attachment to said frame for supporting the casing below said car seat, and an imperforate cover for said body removable therefrom when the body is supported on said frame, said cover and said flanges acting as deflectors to deflect heat from said car seat and said construction permitting access to a heater in said casing upon movement of the car seat and removal of the casing cover.

2. In combination with a car seat frame having a removable car seat, an electric heater casing comprising an imperforate cover and a perforated body, outwardly extending flanges on said body for supporting the body on said frame, said cover removable from said body when the body is on the frame and permitting access to the body when the seat is removed.

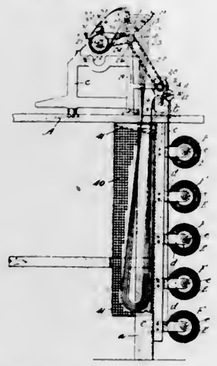
3. In combination with a car seat frame, having a removable car seat, an electric heater casing comprising a body and a bowed cover, outwardly extending flanges on said cover and said body respectively adapted to support said respective parts on said frame, said cover removable from said body when the latter is in place on the frame and permitting access thereto when the seat is removed and said cover acting as a deflector to deflect heat from said car seat.

4. In combination with a car seat frame formed with inwardly extending flanges, and having a removable car seat, an electric heater casing comprising a body and a cover, flanges extending outwardly from said body and adapted to rest on said seat flange and means for connecting said parts, said cover and body flange serving to deflect heat from said car seat, and said cover removable from said body when the latter is supported on said frame and permitting access to said body when the seat is removed.

5. In combination with a car seat frame having inwardly extending projections, and a central opening, a car seat movable to permit access to said opening, an electric heater casing comprising a body and a cover, flanges on said respective parts adapted to rest on said car seat projections and means for securing said parts together, said cover serving to deflect heat from said car seat, and removable while the body remains supported on the seat frame and permitting access to said body when the seat is moved.

[Claims 6 and 7 not printed in the Gazette.]

1,172,758. TYPE-WRITER ATTACHMENT. ENGLAND J. BARKER, Chicago, Ill. Filed Dec. 19, 1914. Serial No. 878,015. (Cl. 197—133.)



1. The combination with a writing machine of the kind specified having a reciprocable carriage and a rotatable platen journaled therein, of a support for said machine consisting of a flat top a portion of which back of the same is cut away, a suitable frame depending from said top, a supply-roller journaled in said frame upon which a continuous sheet of paper is mounted, feed-rollers to which said paper from said supply-roller is fed and from which the paper sags down below said top, and means above said top which is supported independently of said carriage, but is reciprocable therewith up over which the sagged stretch of paper passes to the platen.

2. The combination with a writing machine of the kind specified having a reciprocable carriage and a rotatable platen journaled therein, of a support for said machine consisting of a flat top having two elongated openings therein parallel to the line of motion of said carriage, a suitable frame depending from said top, a roller journaled therein parallel to one of said openings upon which a roll of paper is journaled, feed-rollers supported above said top whose axes are parallel to that of said feed-roller and from which the paper sags down through the other of said openings, a suitable track independent of the typewriting machine, and means above said support and supported independently of said carriage but reciprocable on said track up over which said sagged stretch of paper passes to the platen.

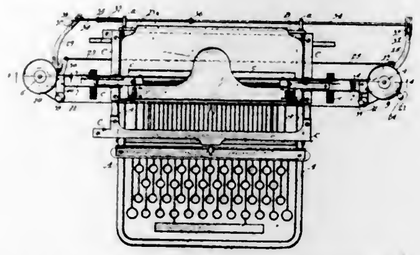
3. The combination with a writing machine comprising a reciprocable carriage and a rotatable platen journaled therein, of a supply-roller upon which is mounted a continuous roll of paper having stationary bearings, a guide-roller for directing the paper to the platen which is supported independent of and is reciprocable longitudinally with said carriage, and means for maintaining a hanging slack portion of said paper before it reaches said guide-roller.

4. The combiantion with a writing machine comprising a reciprocable carriage and a rotatable platen journaled therein, of a plurality of supply-rollers upon which are mounted continuous rolls of paper having stationary bearings, guide-rollers for directing the paper to the platen which are supported independent of and are reciprocable longitudinally with said carriage, and means for maintaining a hanging slack portion of said paper before it reaches said guide-rollers.

5. The combination with a writing machine comprising a reciprocable carriage, and a rotatable platen journaled therein, of a support having two parallel openings in the top thereof at the rear of said machine, a plurality of supply-rollers upon which rolls of paper are mounted below said top arranged one below the other, two feed-rollers journaled one above the other above the top of said support between said slots; said paper being drawn by said feed-rollers up through one of said slots and discharged therefrom down through the other of said slots to provide a pendent slack portion between the same and said writing machine.

[Claims 6 to 21 not printed in the Gazette.]

1,172,759. TYPE-WRITING MACHINE. ENGLAND J. BARKER, Chicago, Ill. Filed Apr. 28, 1915. Serial No. 24,401. (Cl. 197—153.)



1. In a typewriting machine, the combination with the transversely reciprocable carriage, the platen mounted thereon, a ribbon-reel carried by and located at each end of said carriage, and vertical spindles on which said reels are respectively mounted, of levers fulcrumed adjacent the lower ends of said spindles, and means for transmitting the motion thereof to said spindles, longitudinally disposed devices connecting said levers, and adjustable devices adapted to engage and actuate said device when said carriage is approaching the end of its reciprocable throw.

2. In a typewriting machine, the combination with the transversely reciprocable carriage, the platen mounted thereon, a ribbon-reel carried by and located at each end of said carriage, and vertical spindles on which said reels are respectively mounted, of levers fulcrumed adjacent the lower ends of said spindles, means including pawls pivotally connected to said levers, and suitable gearing for transmitting the motion thereof to said spindles, longitudinally disposed devices connecting said levers, and adjustable devices adapted to engage and actuate said device when said carriage is approaching the end of its reciprocable throw.

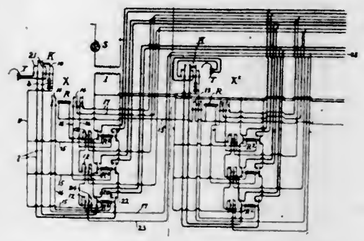
3. In a typewriting machine, the combination with the transversely reciprocable carriage, the platen mounted thereon, a ribbon-reel carried by and located at each end of said carriage, and vertical spindles on which said reels are respectively mounted, of levers fulcrumed adjacent the lower ends of said spindles, means including connected pawls pivoted to said levers and suitable gearing for transmitting the motion thereof to said spindles, a longitudinally disposed rod connecting said levers, and adjustable devices adapted to engage and actuate said rod when said carriage is approaching the end of its reciprocable throw.

4. In a typewriting machine, the combination with the transversely reciprocable carriage, the platen mounted thereon, a ribbon-reel supported by and located at each end of said carriage, and vertical spindles on which said reels are respectively mounted, of levers having a simultaneous corresponding movement and fulcrumed adjacent to said spindles, and means for transmitting the motion thereof in one direction to said spindles when the carriage is approaching the end of its reciprocable throw in one direction.

5. In a typewriting machine, the combination with the transversely reciprocable carriage, the platen mounted thereon, a robbon-reel supported by and located at each end of said carriage, and vertical spindles on which said reels are mounted, of levers having a simultaneous corresponding movement and respectively fulcrumed adjacent said spindles, and means including pawls respectively pivoted to said levers and having a simultaneous corresponding movement for transmitting movement to said spindles.

[Calims 6 to 16 not printed in the Gazette.]

1,172,760. SYSTEM OF CALL DISTRIBUTION. HENRY M. BASCOM, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed May 18, 1915. Serial No. 28,914. (Cl. 179—27.)



1. In a telephone system, the combination with a plurality of telephone sets, of a plurality of circuits, a group of devices individual to a telephone set for connecting the same to an idle circuit and containing one of said devices for each circuit, a connection-initiating device for preparing all the connecting devices for operation, and means for determining the operation of the connecting devices in said groups in rotation.

2. In a telephone system, the combination with a plurality of telephone sets, of a plurality of circuits, a group of devices individual to a telephone set for connecting the same to an idle circuit and containing one of said devices for each circuit, a connection-initiating device for preparing all the connecting devices for operation, and means individual to each circuit for determining the operation of the connecting devices in said groups in rotation.

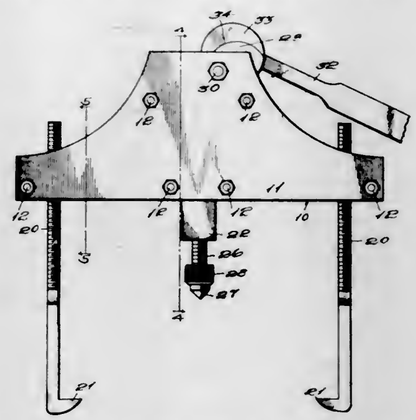
3. In a telephone system, the combination with a plurality of telephone sets, of a plurality of circuits, a group of devices individual to a telephone set for connecting the same to an idle circuit and containing one of said devices for each circuit, a connection-initiating device for preparing all the connecting devices for operation, and means governed by the connecting devices for determining the operation of the connecting devices in said groups in rotation.

4. In a system of call distribution, the combination with a plurality of telephone sets, of a plurality of call circuits, a group of devices individual to a telpehone set simultaneously available for connecting the same to an idle call circuit and containing one of said devices for each call circuit, and a group of devices common to the plural telephone sets and containing devices individual to each call circuit for controlling the operation of the connecting devices in rotation.

5. In a system of call distribution, the combination with a plurality of telephone sets, of a plurality of call circuits, a group of devices individual to a telephone set simultaneously available for connecting the same to an idle call circuit and containing one of said devices for each call circuit, and a group of devices common to the plural telephone sets and containing devices individual to each call circuit for controlling the operation of the connecting devices in rotation, these controlling devices being dependent for their opeartion upon the condition of the connecting devices.

[Claims 6 to 29 not printed in the Gazette.]

1,172,761. APPARATUS FOR REMOVING A WHEEL, PULLEY, OR THE LIKE FROM A SHAFT, AXLE, OR THE LIKE. ROBERT H. BERKSTRESSER, York, Pa. Filed May 22, 1915. Serial No. 29,768. (Cl. 29—85.)



1. In apparatus of the character described, a pair of spaced frame plates, means detachably connecting the frame plates, transverse and longitudinal guide devices carried by the inner sides of the frame plates, carriages slidably mounted upon the transverse guide devices, attaching members having screw-threaded engagement with the carriages, a slide arranged between the longitudinal guide devices, a punch longitudinally adjustably mounted upon the slide, and a cam arranged between the frame plates and pivotally connected therewith and adapted to contact with the slide to move it.

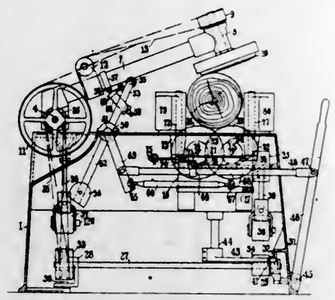
2. In apparatus of the character described, a pair of connected spaced frame plates provided upon their inner sides with transverse and longitudinal guide means, carriages slidably mounted upon the transverse guide means, attaching members having screw-threaded engagement with the carriages, a slide arranged between the longitudinal guide means and having a screw-threaded axial opening, a screw-threaded punch rotatably mounted in the axial opening of the slide and projecting outwardly beyond the inner end thereof and having means for turning it, a cam arranged between the frame plates and pivotally connected therewith to contact with the slide to move it, and means to turn the cam.

3. In apparatus of the character described, a pair of connected spaced frame plates provided upon their inner sides with longitudinal spaced guide strips, a slide mounted to operate between the guide strips, a cam having a reduced portion adapted to travel between the two sets of guide strips and providing shoulders upon opposite sides of the cam, means eccentrically pivotally connecting the cam with and between the frame plates nearer one pair of guide strips whereby one side of the cam contacts with the upper end of such pair of guide strips when the cam is in the inactive position and the shoulders contact with the upper ends of the opposite pair of guide strips when the cam is in the active position, means to turn the cam, and attaching means connected with the frame plates.

4. In apparatus of the character described, a pair of spaced connected side plates, a longitudinally extensible punching means mounted to reciprocate between the side plates and adapted to be manually operated to vary its length, a cam pivotally mounted between the side plates

adjacent one end of the punching means to contact with such end and effect the longitudinal movement thereof, a lever connected with the cam to turn it, and attaching elements connected with the side plates.

1,172,762. MACHINE FOR BARKING TREE-TRUNKS. ALBERT BEZNER, Ravensburg, Germany. Filed July 20, 1914. Serial No. 851,946. (Cl. 144—208.)



1. In a machine for barking tree-trunks, the combination, with the main horizontal driving shaft —4— of the machine, of an upwardly inclined oscillating arm —7— mounted on said main driving shaft, a cutter-head-shaft —8— carried by said oscillating arm and having its axis in a plane at right angles to the plane of the axis of the said main driving shaft, a flat conical cutter-head —10—mounted on the said cutter-head-shaft, means for transmitting rotary motion from said main driving shaft to said cutter-head-shaft, means for feeding the trunk forward under the cutter-head in such a manner to make every point of the surface of said trunk describe a spiral path, said feeding mechanism being mounted on a bracket —16— angularly adjustable on its vertical axis, and means for driving said feed-mechanism from said main driving shaft in a manner to allow of angular adjustment of said bracket.

2. In a machine for barking tree-trunks, the combination, with the main horizontal driving shaft —4— of the machine, of an upwardly inclined oscillating arm —7— mounted on said main driving shaft, a cutter-head-shaft —8— carried by said oscillating arm and having its axis in a plane at right angles to the plane of the axis of the said main driving shaft, a flat conical cutter-head —10— mounted on said cutter-head-shaft, means for transmitting rotary motion from said main driving shaft to said cutter-head-shaft, means for feeding the trunk forward under the cutter-head in such a manner to make every point of the surface of the said trunk describe a spiral path, said feeding mechanism being mounted on a bracket —16— angularly adjustable on its vertical axis, means for driving said feed-mechanism from said main driving shaft in a manner to allow of angular adjustment of said bracket, the said driving means consisting of an endless belt —81— passing from the main driving pully —26— over guide-rollers and forming a loop to engage another pulley —25— for driving the feed-mechanism.

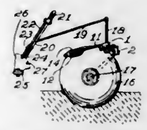
3. In a machine for barking tree-trunks, the combination, with the main horizontal driving shaft —4— of the machine, of an upwardly inclined oscillating arm —7— mounted on said main driving shaft, a cutter-head-shaft —8— carried by said oscillating arm and having its axis in a plane at right angles to the plane of the axis of the said main driving shaft, a flat conical cutter-head —10— mounted on said cutter-head-shaft, means for transmitting rotary motion from said main driving shaft to said cutter-head-shaft, means for feeding the trunk forward under the cutter-head in a manner to make every point of the surface of said trunk describe a spiral path, said feeding means being mounted on a bracket —16— angularly adjustable on its vertical axis, means for driving said feed-mechanism from said main driving shaft in a manner to allow of angular adjustment of said bracket, the said driving means consisting of a movably mounted shaft —27— susceptible of turning around a vertical axis.

4. In a machine for barking tree-trunks the combination, with the main horizontal driving shaft of the machine, of an upwardly inclined oscillating arm —7— mounted on said main driving shaft, a cutter-head-shaft —8— carried by said oscillating arm and having its axis in a plane at right angles to the plane of the axis of the said main driving shaft, a flat conical cutter-head —10— mounted on said cutter-head-shaft, means for transmitting rotary motion from said main driving shaft to said cutter-head-shaft, means for feeding the trunk forward under the cutter-head in a manner to make every point of the surface of the said trunk describe a spiral path, said feeding mechanism being mounted on a bracket —16— angularly adjustable on its vertical axis, means for driving said feeding mechanism from the said main driving shaft of the machine, in a manner to allow of angular adjustment of said bracket, and means for guiding the trunk, said guiding means being so constructed and arranged that their distance apart is controlled by the angular adjustment of the said bracket.

5. In a machine for barking tree-trunks, the combination, with the main driving shaft —4— of the machine, of an upwardly inclined oscillating arm —7— mounted on said main driving shaft, a cutter-head-shaft —8— carried by said oscillating arm and having its axis in a plane at right angles to the plane of the axis of said main driving shaft, a flat conical cutter-head —10— mounted on said cutter-head-shaft, means for transmitting motion from said main driving shaft to said cuter-head-shaft, means for feeding the trunk forward under the cutter-head in a manner to make every point of the surface of the trunk describe a spiral path, said feeding means being mounted on a bracket —16— angularly adjustable on its vertical axis, means for driving said feeding mechanism from said main driving shaft of the machine, in a manner to allow of angular adjustment of said bracket, and a stopping device, the position of which is controlled by the said angular adjustment of the bracket and which serves to limit the downward motion of the said oscillating arm —7—, thereby preventing the action of the cutter head against the trunk, until the bracket has reached its proper angular position.

[Claims 6 and 7 not printed in the Gazette.]

1,172,763. ABRADER FOR DISK-HARROW BLADES. WILLIAM D. BREMER, Cedar Falls, Iowa. Filed Aug. 26, 1915. Serial No. 47,479. (Cl. 97—77.)

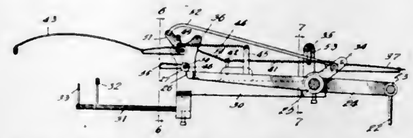


1. A disk-sharpening attachment for cultivators and the like, comprising a rock-shaft, an arm fixed thereon, clamping-means on the end of said arm, a sharpening device held removably by said clamping-means, another arm fixed on said rock-shaft, a lever, and a linking-connection between said lever and the second-mentioned arm.

2. A disk-sharpening attachment for cultivators and the like, comprising a rock-shaft, an arm fixed thereon, clamping-means adjustable longitudinally on said arm, a sharpening device held releasably by said clamping-means, and means for rocking said shaft to bring said sharpening device into or out of contact with a disk.

3. A disk-sharpening attachment for cultivators and the like, comprising a fixed transverse bar, a rock-shaft adjustably mounted on said bar, an arm adjustably mounted on said rock-shaft, stamping-means adjustably mounted on said arm, sharpening-means releasably held by said clamping-means, and means for rocking said shaft to bring said sharpening device into or out of contact with a disk.

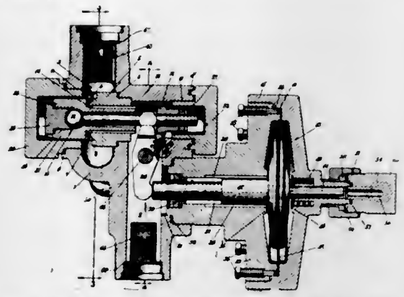
1,172,764. STOP-MOTION FOR KNITTING-MACHINES. WILSON W. BURSON, Rockford, Ill. Filed Mar. 22, 1912. Serial No. 685,546. (Cl. 66—7.)



1. A stop motion including, in combination: lever 24; a tension lever; an oscillatable member having a cut-away portion normally holding one end of said lever 24 against movement, said member having an arm by which it is moved; and spring-controlled means normally locked in inoperative position by said tension lever and adapted to be released when the tension on the tension lever increases beyond normal whereby said means engage and move the arm on said member to oscillate it, substantially as specified.

2. A stop motion including, in combination: a lever 24; a tension lever; a take-up lever; an oscillatable hub having a cut-away portion and normally holding said lever 24; an arm 49 secured to said hub; means intermediate the tension lever and said arm 49 adapted to be released when the tension increases beyond normal to thereby operate said arm 49; and means for moving said tension lever to operate the said arm 49 when the thread breaks, substantially as specified.

1,172,765. CHECK-VALVE MECHANISM. GEORGE P. CARROLL, Bridgeport, Conn., and FRANK N. ROEHRICH, Jersey City, N. J.; said Roehrich assignor to said Carroll. Filed Apr. 15, 1913. Serial No. 761,173. (Cl. 137—32.)



1. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a diaphragm forming one wall of said casing on the inlet side of said seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valve, and means permitting a pressure of fluid in said inlet, slightly in excess of the pressure of fluid in said outlet, to force said diaphragm outward, but in the absence of such excess forcing the diaphragm inward.

2. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a diaphragm forming one wall of said casing on the inlet side of said seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valve, a device tending to close said valve, and a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm.

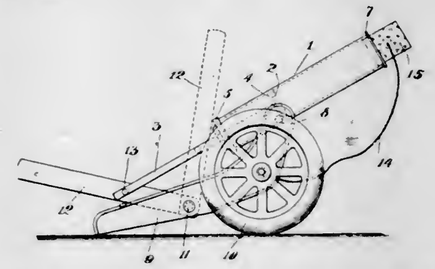
3. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a diaphragm forming one wall of said casing on the inlet side of said seat, a valve for closing said seat, means operating on an inward movement of said diaphragm to close said valve but on an outward movement thereof permitting fluid under pressure from said inlet to open the valve, a cover casing inclosing said diaphragm at its edge and having a passage connecting said outlet with the space outside of the diaphragm, and a spring device in said cover casing tending to move said diaphragm inward.

4. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a valve device tending to close said seat, and means permitting any excess of pressure in said outlet to have an intensive or cumulative effect in closing said seat and an excess of pressure in said inlet to overcome such tendency of said device and to open the seat.

5. In combination a chamber casing having an inlet, an outlet and a valve seat between them, a valve device tending to close said seat, and means permitting any excess of pressure in said outlet to have an intensive or cumulative effect on said device in closing said seat and an excess of pressure in said inlet to overcome such tendency of said device and to open the seat.

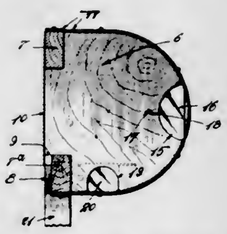
[Claims 6 to 14 not printed in the Gazette.]

1,172,766. TOY CANNON. JULIUS CHEIN, Montclair, N. J. Filed Dec. 9, 1914. Serial No. 876,354. (Cl. 46—46.)



A toy implement comprising a wheeled supported carriage having a long end beyond the wheel support to normally maintain the carriage in predetermined relation to the wheels, a barrel fulcrumed in the short end of the carriage beyond the wheels, a piston operative within the barrel, a piston rod projecting beyond the barrel, a lever fulcrumed in the long end of the carriage and connected to the piston rod, the carriage being formed to limit movement of the lever in one direction.

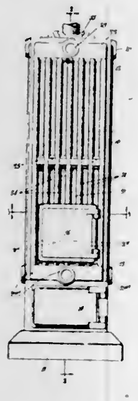
1,172,767. FLY-TRAP. LEVI S. COUPLIN, South Greenfield, Mo. Filed Dec. 2, 1912. Serial No. 734,644. (Cl. 43—22.)



A fly trap comprising a frame consisting of end members and longitudinal members connecting the end mem-

bers, the uppermost longitudinal frame member having its rearmost face flush with the rearmost margins of the end members and the lowermost longitudinal member having its rearmost face set forwardly of the rearmost margins of the end pieces, a plurality of wedge shaped elements, secured to the rearmost face of the lowermost longitudinal frame member, and spaced to form entrances, and a section of wire netting having its one margin secured to the rearmost face of the lowermost frame member and its other opposite margin secured to the lowermost face of the lowermost frame member.

1,172,768. COMBINED STOVE AND HOT-WATER HEATER. LOUIS COURTOT, Paris, France, assignor to American Radiator Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 29, 1914. Serial No. 835,109. (Cl. 122—235.)



1. In a stove of the character described, a wall element formed as a structural unit comprising a hollow connecting member, a plurality of separated tubes secured to and severally communicating with said hollow member, and connecting sections uniting the opposite, longitudinal sides of said tubes, substantially as specified.

2. In a stove of the character described, a wall element formed integrally as a structure unit comprising a hollow connecting member, a plurality of separated tubes secured to and severally communicating with said hollow member, and connecting sections uniting the opposite, longitudinal sides of said tubes, substantially as specified.

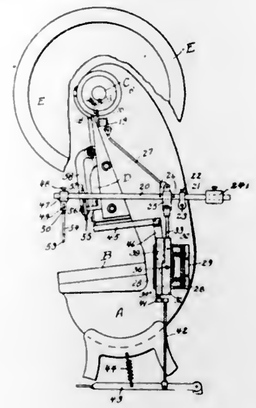
3. In a stove of the character described, a wall element formed as a structural unit comprising a hollow connecting member, a plurality of separated tubes secured to and severally communicating with said hollow member, and connecting sections uniting the opposite longitudinal sides of said tubes, and separate securing means for said panel communicating with said hollow connecting member, substantially as specified.

4. In a stove of the character described, a wall element formed as a structural unit comprising a hollow header, a plurality of separated tubes secured to and severally communicating with said hollow header, and connecting webs uniting the opposite, longitudinal sides of said tubes, substantially as specified.

5. In a stove of the character described, a wall element formed as a structural unit comprising a plurality of headers, a plurality of separated tubes secured to and severally communicating at their opposite ends with said headers, and connecting webs uniting the opposite longitudinal sides of said tubes, and a separate, hollow securing member for said panel communicating with said hollow connecting member, substantially as specified.

[Claims 6 to 19 not printed in the Gazette.]

1,172,769. SAFETY MECHANISM FOR PUNCH-PRESSES. WILLIAM A. D'ARCY and WILLIAM S. ROBERTSON, Rochester, N. Y. Filed Sept. 21, 1915. Serial No. 51,779. (Cl. 164—107.)



1. In a safety mechanism for punch presses and the like, in combination; a driving shaft; a driving pulley; a ram operated by said shaft; a clutch mechanism for connecting said pulley to said shaft; a treadle; a connection between said treadle and said clutch mechanism comprising disengageable latch members; and means operatively connected to said ram and actuated by the downward movement thereof for disengaging said latch members.

2. In a safety mechanism for punch presses and the like, in combination: a driving shaft; a driving pulley; a ram operated by said shaft; clutch mechanisms for connecting said pulley to said shaft; a movable member for operating said clutch mechanism; a treadle; a connection between said treadle and said movable member comprising disengageable latch members; resilient means for restoring said movable member to its position for unclutching said clutch mechanism; means operatively connected to said ram and actuated by the downward movement thereof for disengaging said latch members; and means operatively connected to said ram for positively restoring said movable member to its position for unclutching said clutch mechanism.

3. In a safety mechanism for punch presses and the like, in combination: a driving shaft; a driving pulley; a ram operated by said shaft; a clutch mechanism for connecting said pulley to said shaft; a treadle; means operatively connected to said ram and actuated thereby for disconnecting said clutch mechanism and said treadle; and means operatively connected to said ram and actuated by the downward movement thereof for positively returning said clutch to its unclutched position.

4. In a safety mechanism for punch presses and the like, in combination: a driving shaft; a driving pulley; a ram operated by said shaft; clutch mechanism for connecting said shaft and said pulley; a treadle; a connection between said treadle and said clutch mechanism comprising disengageable latch members; means operated simultaneously with the downward movement of said ram for disengaging said latch members; a movable guard arranged to sweep the space occupied by the arm or hand of the operator when under said ram; and means for operatively connecting said guard to said treadle, said guard being fully operated before said clutch mechanism is actuated by said treadle to its clutching position.

5. In a safety mechanism for punch presses and the like, in combination: a driving shaft; a driving pulley; a ram operated by said shaft; clutch mechanism for connecting said pulley to said shaft; a treadle; a connection between said treadle and said clutch mechanism comprising disengaging latch members; means operatively connected to said ram and actuated by the downward movement thereof for disengaging said latch members; means operatively connected to said ram for positively restoring said clutch mechanism to its unclutched position; and a movable guard mounted to sweep the space occupied by an operator's hand or arm when under said ram, said guard being operatively connected to said treadle and being fully operated thereby before said clutch mechanism is actuated by said treadle to its clutching position.

[Claims 6 to 8 not printed in the Gazette.]

1,172,770. MATERNITY-SHOE. MAX DEUTSCH, New York, N. Y. Filed Oct. 23, 1915. Serial No. 57,409. (Cl. 36—50.)



1. A shoe having its quarters constructed and arranged to open at the front and rear of the shoe, means for securing the front edges of the quarters together, said upper being provided with openings adjacent the rear edges of the quarters and adjacent the top edge of the inside quarter, and a lace adapted to be laced through said openings at the rear of the upper for holding the rear edges of the quarters together and through said openings at the top edge of the inside quarter and to be engaged by the securing means for the front edges of the quarters.

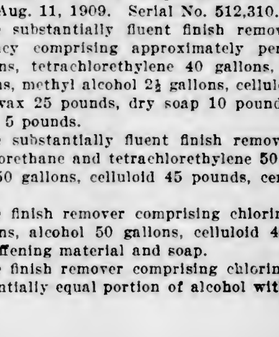
2. A shoe having its quarters constructed and arranged to open at the front and rear of the shoe, said upper being provided with openings adjacent the front and rear edges of the quarters and adjacent the top edge of the inside quarter, a non-elastic lace adapted to be laced through the front openings for holding the front edges of the quarters together, and an elastic lace adapted to be laced through the rear openings for holding the rear edges of the quarters together and through the openings at the top edge of the inside quarter and to be tied with said non-elastic lace at the front and top of the upper.

3. A shoe having its quarters constructed and arranged to open at the front and rear of the shoe, and means for securing the front edges of the quarters together, said quarters being provided with a series of openings adjacent the rear edges thereof and also with a series of openings arranged adjacent the top edge of one of said quarters, said last named openings being disposed substantially at a right angle to the openings at the rear of said quarters.

1,172,771. IGNITION SYSTEM. BURNS DICK and VALÈRE ALFRED FYNN, St. Louis, Mo., assignors to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 13, 1914. Serial No. 831,457. (Cl. 123—148.)

1. In an ignition system for combustion engines, a secondary ignition circuit, a primary ignition circuit comprising an exciting coil, means for interrupting the circuit through the exciting coil, said means being normally in its closed position, other means for interrupting the circuit through the exciting coil comprising a vibratile element operated by an electromagnet, said means being in shunt circuit with the first mentioned circuit interrupter, and means governed by the speed of the engine for rendering the shunt circuit inoperative.

2. In an ignition system for combustion engines, a secondary ignition circuit, a primary ignition circuit comprising an exciting coil, means for interrupting the circuit through the exciting coil, said means being normally in its closed position, other means for interrupting the circuit through the exciting coil comprising a vibratile element operated by an electromagnet, said means being in shunt circuit with the first mentioned circuit interrupter, and means for continuously holding the vibratile element in the position in which the shunt circuit is interrupted thereby.



3. In an ignition system for combustion engines, a secondary ignition circuit, a primary ignition circuit comprising an exciting coil, means for interrupting the circuit through the exciting coil, said means being normally in its closed position, other means for interrupting the circuit through the exciting coil comprising coöperating contacts connected in shunt circuit with the first mentioned interrupting means, and means for continuously maintaining said contacts in separated position.

4. In an ignition system for combustion engines, a secondary ignition circuit, a primary ignition circuit comprising an exciting coil, means for interrupting the circuit through the exciting coil, other means for interrupting the circuit through the exciting coil comprising cooperating contacts connected in shunt circuit with the first mentioned interrupting means, and means for continuously maintaining said contacts in separated position.

5. In an ignition system for combustion engines, a secondary ignition circuit, a primary ignition circuit comprising an exciting coil, means for interrupting the circuit through the exciting coil, other means for interrupting the circuit through the exciting coil comprising coöperating contacts connected in shunt circuit with the first mentioned interrupting means, a dynamo driven by the engine and means governed by the dynamo voltage for continuously maintaining said last named contact in separated position.

[Claims 6 to 9 not printed in the Gazette.]

1,172,772. FINISH-REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Aug. 11, 1909. Serial No. 512,310. (Cl. 87—5.)

1. The substantially fluent finish remover of syrupy consistency comprising approximately pentachlorethane 10 gallons, tetrachlorethylene 40 gallons, ethyl alcohol 50 gallons, methyl alcohol 2½ gallons, celluloid 45 pounds, ceresin wax 25 pounds, dry soap 10 pounds and sodium benzoate 5 pounds.

2. The substantially fluent finish remover comprising pentachlorethane and tetrachlorethylene 50 gallons, ethyl alcohol 50 gallons, celluloid 45 pounds, ceresin wax and soap.

3. The finish remover comprising chlorinated ethylene 50 gallons, alcohol 50 gallons, celluloid 45 pounds and waxy stiffening material and soap.

4. The finish remover comprising chlorinated ethylene, a substantially equal portion of alcohol with which nitro-

cellulose and waxy and soapy stiffening material have been incorporated.

5. The finish remover comprising considerable proportions of chlorinated ethylene and of loosening finish solvent material and incorporated stiffening material comprising wax and nitrated cellulose.

[Claims 6 to 14 not printed in the Gazette.]

1,172,773. FINISH-REMOVER. CARLETON ELLIS, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed May 19, 1911. Serial No. 628,271. (Cl. 87—5.)

1. The finish remover comprising approximately 40 parts of benzol, 30 parts of wood alcohol, 10 parts of acetone, one-half to 1 part of hard fractionated paraffin having a melting point of 60 degrees C. or more, 3 or 4 parts of pyroxylin, 8 parts of benzyl alcohol and 7 parts of pine oil.

2. The finish remover comprising approximately 40 parts of benzol, 30 parts of alcohol, 10 parts of acetone, a fraction of a per cent. of hard fractionated mineral wax having a melting point of 60 degrees C. or more, several per cent. of soluble cellulose ester, 8 parts of benzyl alcohol and 7 parts of pine oil.

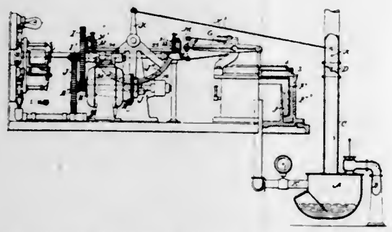
3. The finish remover comprising 40 parts of penetrating finish solvent material, 40 parts of loosening finish solvent material comprising wood alcohol, a fraction of a per cent. of hard fractionated mineral wax, several per cent. of soluble cellulose ester and 15 per cent. of relatively non-volatile remover solvent comprising substantially balanced wax solvent and wax precipitating components.

4. The finish remover consisting in greater part of substantially equal proportions of penetrating and loosening finish solvent material and containing a small percentage of hard mineral wax, several per cent. of non-waxy stiffening material and a number of per cent. of finish solvent material comprising substantially balanced wax solvent and wax precipitating components.

5. The finish remover consisting in greater part of volatile penetrating and loosening finish solvent material, a small proportion of film forming hard mineral wax and several per cent. of non-waxy colloidal stiffening material and a number of per cent. of relatively non-volatile miscible liquid comprising wax precipitating material.

[Claims 6 and 7 not printed in the Gazette.]

1,172,774. AUTOMATIC PRESSURE-CONTROLLED VALVE MECHANISM. FREDERICK W. ELLS, Milwaukee, Wis. Filed Sept. 9, 1914. Serial No. 860,930. (Cl. 48—191.)



1. A pressure regulating pontoon switch, including the combination with a motor controlling switch lever, of a liquid container, and a gas receiving bell in said container connected with said switch lever and sealed in the container liquid, a portion of said bell being formed to seat against a portion of the container, to limit upward movements of the bell and close the liquid receiving portion of the container.

2. A pressure regulating pontoon switch, including the combination with a motor controlling switch lever, of a liquid container, and a gas receiving bell connected with the lever and having an open lower end adapted to seal in the liquid of the container, said bell having a valve adapted to seat against a portion of the container to form a gas tight receptacle, when the bell has raised a predetermined distance in the sealing liquid, substantialy as described.

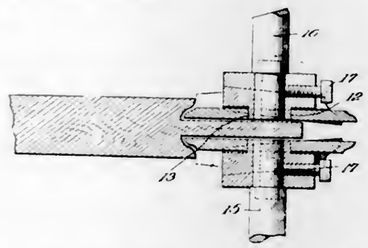
3. A pontoon switch, including a liquid container provided with an inturned flange, in combination with a gas receiving bell, having a valve member adapted to seat on said flange and close the container, substantially as described.

1,172,775. SHINGLING-GAGE. JACOB J. ENGBRECHT, Rothlemay, Mont. Filed Apr. 5, 1915. Serial No. 19,296. (Cl. 33—188.)



A shingling gage, comprising the combination with an elongated bar, of attaching members therefor, said members each including a support, a clamp for the support, an arm pivoted to swing relatively to the support and having its free end secured to the bar, an actuating lever for the clamp mounted on the pivot of said arm, and means for releasably securing said lever to the arm.

1,172,776. ROTARY CUTTER-HEAD. EMIL A. G. ENGLER, Red Wing, Minn. Filed May 5, 1915. Serial No. 25,934. (Cl. 144—231.)



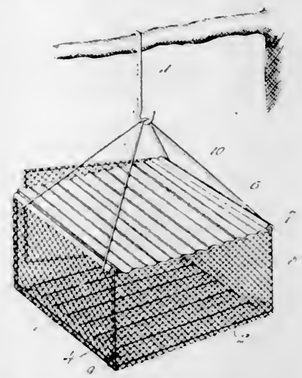
1. A cutter head, comprising a centrally apertured disk having a beveled marginal edge provided with peripheral recesses, said disk having grooves communicating with said recesses, knives mounted in said grooves, a block provided with a central boss extending into the central opening of said disk, said block being provided with grooves registering with the grooves of said disk and adapted to receive the projecting portions of said knives, means for clamping said block to a machine spindle, and means for clamping said block to said disk.

2. A sectional cutter head, comprising a disk member having a central opening and a marginal beveled portion provided with the peripheral recesses, said disk member having grooves communicating with said recesses in one face thereof, an apertured block provided with a boss extending into the opening of sad disk, said block being provided with grooves registering with the grooves of said disk, knives arranged within the grooves of said disk and block, said disk being provided with threaded bores, clamping blocks extending through said block into said threaded bores for clamping said block upon said disk, and means for fastening said head upon a machine spindle.

3. A sectional cutter head formed of a disk member having a central opening and a marginal beveled portion provided with peripheral recesses, one face of said disk being provided with grooves etxending from said recesses, a block provided with a central apertured boss extending into said central opening of said disk, said block provided with grooves registering with the grooves of said disk, cutting knives arranged within the grooves of said disk and block having cutting edges extending into the recesses of said disk, and bolts clamping said block over the projecting portions of said knives.

4. A cutter head, comprising a centrally apertured disk provided with peripheral recesses, said disk having grooves communicating with said recesses, knives mounted in said grooves, said disk having a peripheral contour the same as the cutting edges of said knives, a block provided with a central boss extending into the central opening of said disk, said block being provided with grooves registering with the grooves of said disk and adapted to receive the projecting portions of said knives, means for clamping said block to a machine spindle, and means for clamping said block to said disk.

1,172,777. COOP. THEODOR SAMUEL ESTEL. Platte Center, Nebr. Filed May 22, 1914. Serial No. 840,304. (Cl. 119—17.)

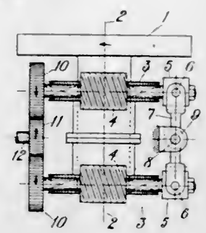


1. A collapsible coop comprising a floor portion made up of a plurality of spaced slats to provide for the circulation of air therethrough, a frame for the sides of the coop consisting of wire strands bent substantially U-shaped, the respective wire strand terminals being coiled about the floor portion adjacent the respective corners of the coop, sides made up of a single strip of wire netting bent to embrace the frame and to leave an entrance and exit opening therein, a roof comprising a single strip of imperforate sheet metal having its opposite edges coiled to embrace the respective connecting portions of the U-shaped strands, and means to suspend the coop in a position to provide for bodily swinging movement thereof for the purpose specified.

2. A coop comprising a floor of a construction permitting the circulation of air therethrough, a wire frame, means bent to encircle the frame in a manner leaving an entrance opening and exit opening therein, a roof consisting of a single strip of imperforate material having its opposite edges coiled to embrace portions of the wire frame, and means to suspend the coop for bodily swinging movement.

1,172,778. ANGULAR SPACING AND FEEDING MECHANISM FOR DIVIDING-ENGINES AND MACHINE-TOOLS. HERMAN W. FALK and PERCY C. DAY, Milwaukee, Wis., assignors to The Falk Company, Wauwatosa, Wis., a Corporation of Wisconsin. Filed Feb. 27, 1914. Serial No. 821,384. (Cl. 90—1.)

1. In angular spacing and feeding mechanism for dividing engines and machine tools, the combination of a rotary work support, two worm wheels attached to said support with their points of maximum eccentricity on opposite sides of its axis, worm shafts provided with axially movable thrust bearings and with worms meshing with the worm wheels, an equalizing lever pivotally connected with said thrust bearings and fulcrumed between said bearings to a support, and means for rotating said worm shafts.



2. In angular spacing and feeding mechanism for dividing engines and machine tools, the combination of a rotary work support provided with two worm wheels of different lead, two axially movable driving worms of different lead meshing respectively with said worm wheels, means for simultaneously rotating said worms, and a thrust transmitting and equalizing device connecting said worms.

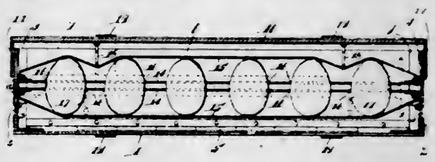
3. In angular spacing and feeding mechanism for dividing engines and machine tools, the combination of a rotary work support, two worm wheels attached to said support, worm shafts provided with axially movable thrust bearings and with worms of different lead meshing respectively with said worm wheels, means for simultaneously rotating the worms, and an equalizing lever pivotally connected with said thrust bearings and fulcrumed between said bearings to a support.

4. In angular spacing and feeding mechanism for dividing engines and machine tools, the combination of a rotary work support provided with two worm wheels, two pairs of axially movable worms meshing with said worm wheels, means for simultaneously rotating said worms, and thrust transmitting and equalizing devices connecting in pairs the worms which mesh with different worm wheels.

5. In angular spacing and feeding mechanism for dividing engines and machine tools, the combination of a rotary work support, two worm wheels attached to said support, two pairs of worm shafts provided with axially movable thrust bearings and with worms meshing with said worm wheels, equalizing levers pivotally connected with said thrust bearings and fulcrumed between said bearings to supports one of which is adjustable in a direction parallel with the worm shafts connected therewith, each pair of lever connected worms meshing with different worm wheels and each pair of unconnected worms meshing with the same worm wheel, and means for simultaneously rotating said worms.

[Claims 6 to 23 not printed in the Gazette.]

1,172,779. COLLAPSIBLE EGG-CASE. LYMAN FARGO, Duluth, Minn. Filed Sept. 26, 1914. Serial No. 863,598. (Cl. 217—27.)



1. A collapsible egg case comprising a foldable body open at its upper side; a cover for said body; a pair of superposed coöperating egg-engaging elements loosely arranged in said body between which the eggs are adapted to be clamped; means on the side walls of said body for limiting downward movement of the lower one of said egg-engaging elements; and foldable members on the under side of said cover for pressing the upper one of said egg-engaging elements downwardly, substantially as described.

2. A collapsible egg case comprising a foldable body open at its upper side; a cover for said body; a pair of superposed coöperating egg-engaging elements loosely arranged in said body between which the eggs are adapted to be clamped; means on the side walls of said body for limiting downward movement of the lower one of said egg-engaging elements; and wire members swingingly mounted on the under side of said cover adapted to depend from the latter for engagement with the upper one of said egg-engaging elements to press the same downwardly, substantially as described.

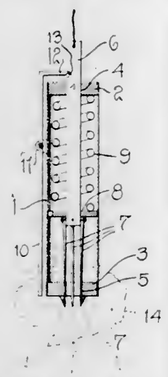
3. An egg case comprising a body open at its upper side; a cover for said body; egg-engaging elements loosely arranged in said body between which the eggs are adapted to be clamped; each of said egg-engaging elements comprising a peripheral frame; a flexible covering for said frame having sockets for the reception of eggs; and means for holding said egg-engaging elements intermediate the top and bottom walls of said case but out of contact therewith, substantially as described.

4. An egg case comprising a body open at its upper side; a cover for said body; egg-engaging elements loosely arranged in said body between which the eggs are adapted to be clamped, each of said egg-engaging elements comprising a peripheral frame; two superposed sheets of material secured to said frame, the adjacent sheets of said egg-engaging elements having registering perforations for the reception of the respective end portions of the eggs, and the other sheets being flexible and adapted to engage with the ends of the eggs; and means for holding said egg-engaging elements intermediate the top and bottom walls of the case but out of contact therewith, substantially as described.

5. An egg case comprising a body open at its upper side; a cover for said body; egg-engaging elements loosely arranged in said body between which the eggs are adapted to be clamped, each of said egg-engaging elements comprising a peripheral frame; two superposed sheets of flexible material secured to said frame, the adjacent sheets of said egg-engaging elements having registering perforations for the reception of the respective end portions of the eggs; the other sheets of said elements being adapted to flex from said first mentioned sheets and engage with the ends of said eggs clamped between said elements; and means for holding said egg-engaging elements intermediate the top and bottom walls of the case but out of contact therewith, substantially as described.

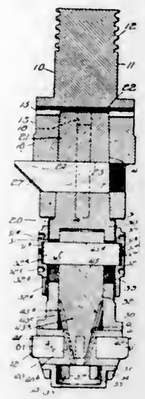
[Claims 6 and 7 not printed in the Gazette.]

1,172,780. COMBINED FISH-HOOK AND TRAP. JOHN W. FEARER, Kansas City, Mo. Filed Feb. 6, 1915. Serial No. 6,523. (Cl. 43—31.)



A device of the character described including a casing having an end closed, said end being provided with an opening, a rod mounted for reciprocation within the casing resilient impaling members connected to the rod and projecting through the opening in the end of the casing, said impaling members being normally curved and arranged to diverge when extended exteriorly of the casing, and automatic means for imparting movement to the rod in one direction to force the impaling members exterior of the casing.

1,172,781. BORING-BAR. ALEXANDER FORSYTH and FRANK ZELENY, Aurora, Ill. Filed Mar. 15, 1913. Serial No. 754,486. (Cl. 77—75.5.)



1. In a device of the class described, a tool carrying member, said tool carrying member being provided with a longitudinal socket and transverse grooves leading outwardly from said socket, tool holders mounted in said grooves and means to retain said tool holders in said grooves, said means comprising a cap having portions adapted to extend partially into said grooves and prevent vertical displacement therein of said tool holders.

2. In a device of the class described, a tool carrying member, said tool carrying member being provided with a longitudinal socket and transverse grooves leading outwardly from said socket, tool holders mounted in said grooves, means to retain said tool holders in said grooves, said means comprising a cap having portions adapted to extend partially into said grooves and prevent vertical displacement therein of said tool holders, and means to retain said cap in place.

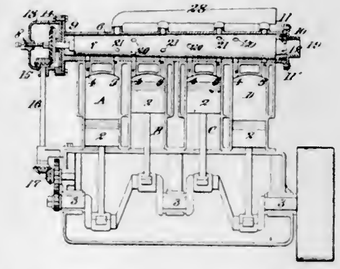
3. In a device of the class described, a tool carrying member, said tool carrying member being provided with a longitudinal socket and transverse grooves leading outwardly from said socket, tool holders mounted in said grooves, and means to retain said tool holders in said grooves, said means comprising a cap having portions adapted to extend partially into said grooves and prevent vertical displacement therein of said tool holders, said cap and said tool carrying member adjacent said cap both being threaded and a retaining ring threaded on said cap and tool carrying member to retain said cap thereon.

4. In a device of the class described, a tool carrying member, said tool carrying member being provided with a longitudinal socket therein and transverse grooves adjacent one extremity thereof leading outwardly from said socket, tool holders slidably mounted in said grooves and having their rear faces projecting into said socket, means to adjust said tool holders inwardly and outwardly with respect to said tool carrying member, and means to retain said tool holders in said grooves, said last named means comprising a cap having portions adapted to extend partially into said grooves and prevent vertical displacement therein of said tool holders.

5. In a device of the class described, a tool-carrying member, said member being provided with a longitudinal socket and transverse slots communicating with said socket, said member being further provided with grooves adjacent the lower portion thereof, communicating with said socket, tool-holders mounted to move laterally in said grooves, an adjusting member slidably mounted in said socket and adapted to co-act with said tool-holders to adjust the same laterally, a cross-key carried by said adjusting member, said key having its extremities extending through and slidably mounted in said slots, and a pair of collars threaded on the exterior of said tool-carrying member, said collars each having its adjacent flange inter-fitting and provided with a peripheral groove and forming together a common groove, said extremities of said key being seated in said common groove formed by the grooves in said collars, whereby rotation of said collars will operate to reciprocate said key in said transverse slots.

[Claim 6 not printed in the Gazette.]

1,172,782. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. GEORGE W. FOUKE, Sacramento, Cal., assignor, by mesne assignments, to National Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Apr. 25, 1912, Serial No. 693,074. Renewed July 21, 1915. Serial No. 41,188. (Cl. 123—52.)



1. In an internal combustion engine, the combination with a series of engine cylinders of a horizontally disposed valve casing formed with inlet and exhaust ports opening to the engine cylinders, a rotary tubular valve in said casing having diametrically spaced ports therein arranged to register with the inlet ports, and having diametrically disposed passages leading therethrough registerable with the exhaust ports, and a tube extending longitudinally into the valve to a point near the inner end thereof for introducing an explosive mixture into the interior of the tubular valve.

2. In an internal combustion engine, the combination with a series of engine cylinders of a horizontally disposed valve casing formed with inlet and exhaust ports opening to the engine cylinders, a rotary tubular valve in said casing having diametrically spaced ports therein arranged to register with the inlet ports, and having diametrically disposed passages leading therethrough registerable with the exhaust ports, and means for introducing an explosive mixture into the interior of the tubular valve, including a tube extending longitudinally into the valve and opening adjacent the inner end thereof, and a conduit leading to said tube.

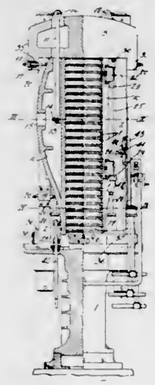
3. In an internal combustion engine, the combination with a series of engine cylinders of a horizontally disposed valve casing formed with inlet and exhaust ports opening to the engine cylinders, a rotary tubular valve in said casing having diametrically spaced ports therein arranged to register with the inlet ports, and having diametrically disposed passages leading therethrough registerable with the exhaust ports, and means for introducing an explosive mixture into the interior of the tubular valve, including a tube extending longitudinally into the valve and opening adjacent the inner end thereof, and a conduit leading to said tube, said exhaust passages passing through the tube and separated therefrom by cylindrical walls.

4. In an internal combustion engine, the combination with a series of engine cylinders of a horizontally disposed valve casing formed with inlet and exhaust ports opening to the engine cylinders, a rotary tubular valve in said casing having diametrically spaced ports therein arranged to register with the inlet ports, and having diametrically disposed passages leading therethrough registerable with the exhaust ports, means for introducing an explosive mixture into the interior of the tubular valve, including a tube extending longitudinally into the valve and opening adjacent the inner end thereof, and a conduit leading to said tube, said exhaust passages passing through the tube and separated therefrom by cylindrical walls, and means for adjusting the tubular valve lengthwise in its casing.

5. In combination with a multiple cylinder combustion engine having inlet and exhaust ports for each cylinder, a hollow cylindrical rotary valve having inlet ports through its wall and communicating with its interior and adapted to register with the cylinder inlet ports, interior webs extending across the hollow valve and forming exhaust ports entirely within the valve and extending completely therethrough, there being an exhaust port situated oppositely to each of the cylinder exhaust ports with which port the valve exhaust ports register when they register with the cylinder exhaust ports.

[Claim 6 not printed in the Gazette.]

1,172,783. EXPRESSING-PRESS. ALFRED W. FRENCH, Piqua, Ohio. Filed Apr. 14, 1913. Serial No. 760,849. (Cl. 100—50.)



1. The combination with a press having movable press plates between which the material is pressed, of a movable side wall at one side of said press plates, and means for moving said side wall toward the press plates into a position close to but spaced from the edge of said press plates, means being provided to prevent said side wall from being moved into contact with the press plates.

2. The combination with a press having movable press plates between which the material is pressed, of movable side walls at opposite sides of said press plates, means for moving said side walls toward and from the edges of said press plates, and stops for limiting the movement of said side walls toward said press plates.

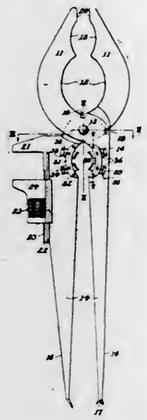
3. The combination with a press having vertically movable substantially horizontal press plates between which the material is pressed, of upright side walls at opposite sides of said press plates, means for moving said side walls toward and from the edges of said press plates, and stops for preventing the movement of said side walls into engagement with the edges of said plates.

4. The combination with a press having vertically movable spaced press plates between which the material is pressed, of a laterally movable side wall at one side of said press plates, and movable wedges for forcing said side wall toward the edges of said press plates.

5. The combination with a press having vertically movable spaced press plates between which the material is pressed, of laterally movable side walls at opposite sides of said press plates, movable wedges for forcing said side walls toward said press plates, and means for forcibly moving said wedges.

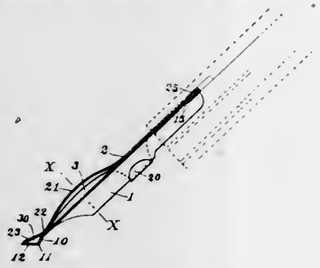
[Claims 6 to 27 not printed in the Gazette.]

1,172,784. THREAD-CUTTER. GEORGE GATIAL, Tarentum, Pa. Filed Oct. 1, 1915. Serial No. 53,543. (Cl. 10—125.)



An implement including pivotal supporting members, opposed curved surfaces formed in said members, said members having recesses formed therein opening into the curved surfaces, cutting dies positioned in said recesses, interlocking tongues and grooves between the dies and side walls of the recesses, arcuate plates positioned at the opposite sides of the curved surfaces, means for securing the same to the members, and means carried by the arcuate plates adapted to engage said dies to retain the same in adjusted position.

1,172,785. LETTERING-PEN. ROSS F. GEORGE and WILLIAM HUGH GORDON, Seattle, Wash. Filed Oct. 22, 1914. Serial No. 868,780. (Cl. 120—114.)



1. A lettering pen slit lengthwise to form a plurality of tangs, the tips of these tangs being bent upward to collectively form a plane writing surface which is an extension of the under surface of the tangs.

2. A lettering pen comprising a pen member having its writing end composed of separate tangs which are bent upward to form an under plane surface adapted for writing contact of its entire surface with the writing surface, and a fountain member extending lengthwise above the pen member.

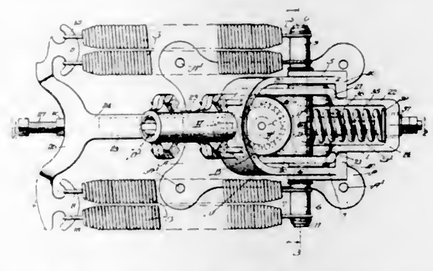
3. A lettering pen having its tip bent upward to form a downwardly facing writing plane, and means for feeding ink between said writing plane and the writing surface.

4. A lettering pen having a tip composed of a plurality of separated parts bent to collectively form a plane writing surface positioned to contact its entire surface with the writing surface when in use.

5. A lettering pen having a tip composed of a plurality of separated parts which collectively form a writing plane positioned to contact with the writing surface when in use, the outer tips of said parts being alined to form a narrow, transversely extending edge adapted to form a writing surface when the pen is reversed in position.

[Claims 6 to 10 not printed in the Gazette.]

1,172,786. TROLLEY-BASE. CHARLES E. GIERDING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Mar. 5, 1913. Serial No. 752,043. (Cl. 191—70.)



1. In the structure of the class described, the combination of a stationary base, a yoke member rotatively mounted on said base, trolley pole mechanism pivotally mounted on said yoke and operable through an arc of movement, service spring mechanism connected to said trolly pole mechanism and constantly tending to rotate it about its pivot, means on said trolley pole mechanism for shifting said yoke member longitudinally when said trolley mechanism is moving through a portion of its arc substantially parallel with the direction of movement of said yoke member and means yieldingly resisting the movement of said yoke member.

2. In a structure of the class described, the combination of a support, a member longitudinally shiftable on said support, a trolley pole device pivoted on said support, spring mechanism normally tending to rotate said trolley pole device on its pivot through a certain arc, means on said trolley pole device for engaging and shifting said member longitudinally at the time said means moves substantially parallel with the direction of movement of said member, and a buffer spring acting on said member to resist the longitudinal movement thereof.

3. In a structure of the class described, the combination of a supporting base, a turret member rotatably mounted on said base, a trolley arm pivotally mounted on said turret member, service spring mechanism acting on said trolley arm to maintain it in operative relation to the trolley wire, a movable member mounted on said turret and adapted to be shifted by said trolley arm when the trolley arm is in that abnormal position wherein its line of movement and that of said movable member substantially coincide, and a buffer spring adapted to oppose said movable member.

4. In a structure of the class described, the combination with a stationary base, a turret rotatably mounted on said base, a trolley pole fork pivoted on said turret, a spring mechanism tending to swing said trolley fork on its pivot, a yoke member mounted upon said turret, means on said trolley fork placed to correspond with an abnormal position of said trolley pole fork and adapted when the arc of movement of said means substantially coincide with the line of movement of said yoke member, and a buffer spring constantly opposing the movement of said yoke member.

5. In a structure of the class described, a stationary supporting base, in combination with a rotary turret mounted thereon, a bearing formed on said turret, a transverse shaft journaled therein, a yoke flanking said turret and rotatable therewith and having a slotted connection with said shaft to permit its longitudinal movement, a head formed at one end of said yoke, a heavy buffer spring interposed between said head and said turret for opposing the movement of said yoke, a forked trolley arm pivoted on said shaft and having buffer lugs projecting beyond said shaft, buffer shoulders formed on said yoke and disposed in a line passing through the axis of said shaft perpendicularly with respect to the line of longitudinal movement of said yoke, said shoulders being adapted to be struck by the buffer lugs of said trolley arm when the arm reaches an abnormal position and service spring mechanism acting on said arm and tending to swing it into said abnormal position.

[Claims 6 to 14 not printed in the Gazette.]

1,172,787. APPARATUS FOR TESTING THE QUALITY OF GERMINATION IN SEEDS. MACOMB B. GRAY, Billings, Mont. Filed Aug. 14, 1915. Serial No. 45,586. (Cl. 47—30.)



1. A seed testing apparatus comprising a water-tight receptacle having opposed longitudinal grooves in its side walls, a series of rods mounted to slide in said grooves, a sheet of water-absorbing material stitched transversely to form loops through which said rods are inserted, the downwardly projecting folds between said loops being stitched transversely to form seed pockets, and having depending parts forming wicks, whereby water is drawn up to moisten seeds placed in said pockets.

2. A seed testing apparatus comprising a water-tight receptacle having opposed longitudinal grooves in its side walls, a series of rods mounted to slide in said grooves, a sheet of water absorbing material mounted on said rods and having pockets formed therein to receive the seed to be tested, said sheet having parts depending below said pockets into the water in said receptacle.

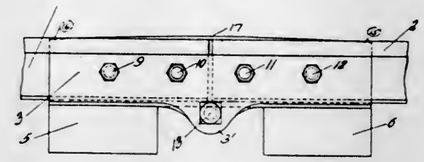
3. A seed testing apparatus comprising a water-tight receptacle, a series of rods mounted to slide in said receptacle, a sheet of water-absorbing material having loops formed therein to receive said rods and folds depending between said rods and stitched to form seed supporting pockets, said folds having portions depending into the water in said receptacle, forming wicks for said pockets.

4. A seed testing apparatus comprising a receptacle adapted to contain a supply of water, a sheet of water-absorbing material folded and stitched to form a series of seed-supporting pockets, said sheet being supported on the walls of said receptacle for opening and closing said pockets, the bottom of said pockets being normally above the water line in said receptacle and provided with a depending wick portion extending below the water line, for the purpose specified.

1,172,788. RAIL FISH-PLATES. CHARLES GREEN, Berkeley, Cal. Filed Aug. 9, 1915. Serial No. 44,436. (Cl. 239—3.)

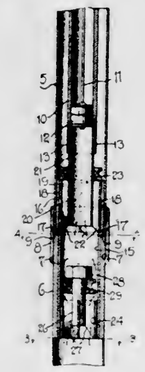
1. A pair of fish plates for connecting rails, one of said fish plates having its upper inner edge in contact with the rail and in substantially the same horizontal plane throughout its length as the upper surface of said rail, the outer edge of the upper portion of said fish plate being higher than the top of the rail and the top surface of said fish plate sloping toward the inner edge and tapering laterally in opposite directions toward its ends.

2. A pair of fish plates for connecting rails, one of said fish plates having the edge thereof in contact with the rail in substantially the same horizontal plane as the upper surface of the rail throughout its length, the outer edge of the top surface of the fish plate being slightly



higher than the inner edge thereof and sloping toward the inner edge, and tapering downwardly toward the ends, and a transverse flange connecting the upper portion of the fish plate at its center with the base thereof.

1,172,789. PUMP. JERRY E. GREGG, Cloudcroft, N. Mex. Filed Feb. 6, 1915. Serial No. 6,666. (Cl. 103—75.)



1. In combination, a well casing, a support connected to the lower end of said well casing, upper and lower valves arranged in the well casing, said upper valve including a tubular extension and a valve member loosely engaged upon said extension for vertical movement, and a plunger cylinder connected to said extension whereby the valves and the water chamber may be bodily removed from the well casing, said cylinder constituting a stop to limit the upward movement of the valve member.

2. In combination, a well casing, a support connected to the lower end of said well casing, a water receiving chamber adapted to rest upon said support, upper and lower valves removably mounted in the ends of said chamber, said upper valve including a central tubular extension and a valve member loosely engaged thereon for vertical movement, and a plunger cylinder detachably connected to said extension whereby the valves and the water chamber may be bodily removed from the casing, said cylinder constituting a stop to limit the upward movement of said valve member.

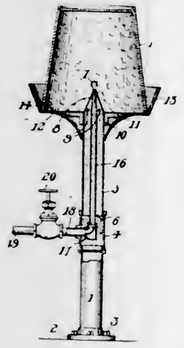
3. In combination, a valve casing, a sleeve connected to the lower end of said casing, the upper end of said sleeve forming an annular seat, a water receiving chamber fitting within said sleeve and resting upon the seat, upper and lower valves removably arranged in the opposite ends of said chamber, and a plunger cylinder detachably connected to the upper valve whereby said valves and the water receiving chamber may be bodily removed from the casing.

4. In combination, a valve casing, a sleeve detachably connected to the lower end of said casing, the upper end of said sleeve constituting an annular seat, a water receiving chamber having an enlarged upper end to rest upon said seat, upper and lower valves removably engaged in the opposite ends of said chamber, said upper

valve having a central tubular extension projecting above the water chamber, a valve member loosely engaged upon said extension for vertical movement, and a plunger cylinder detachably connected to said extension whereby the valves and the water receiving chamber may be bodily removed from the well casing, said cylinder constituting a stop to limit the upward movement of said valve member.

5. In combination, a well casing, a water receiving chamber, means on the lower end of said casing to receive and support said chamber, valves removably threaded in the opposite ends of said chamber, each of said valves including a casing having an outer body wall, the lower valve casing being provided with a central guide stem, a valve member loosely engaged upon said stem and normally closing the upper end of the casing, the casing of the upper valve having a cylindrical inner wall extended beyond the upper end of the casing and exteriorly threaded, a plurality of spaced longitudinal webs integrally connecting the inner and outer walls of said valve casing, a valve member loosely engaged upon the extension of the valve casing and normally closing the upper end thereof, and a plunger cylinder detachably connected to said extension and constituting a stop for said valve member, said water receiving chamber and the valves being bodily removed from the well casing when the plunger cylinder is withdrawn.

1,172,790. PARAFFIN-MACHINE. BENCE D. GRIFFITH, Mason City, Iowa. Filed Feb. 27, 1915. Serial No. 11,076. (Cl. 91—11.)

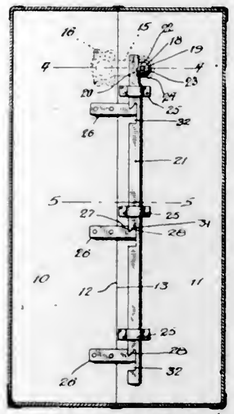


1. In a paraffin machine, the combination with a base support, of a hollow receptacle or container for paraffin open at its lower end and terminating at its upper end in a discharge nozzle, of a tubular connection between the lower open end of said reservoir and base adapted to contain paraffin, a tubular member within said reservoir or container, and a steam supply pipe connected to the lower end of said tubular member.

2. In a paraffin machine, the combination with a supporting base, of a paraffin reservoir open at its lower end, a hollow coupling between the lower end of said reservoir and base, a spray nozzle at the upper end of said reservoir, a tubular member within said reservoir open at its lower end and communicating at its upper end with said nozzle, and a steam supply pipe connected with the lower end of said tubular member, said reservoir being formed with openings adjacent to its upper end for the return of surplus paraffin to the reservoir.

3. In a paraffin machine, the combination with a vertically-disposed hollow paraffin reservoir or container open at its lower end, a cylindrical member connected to the lower end of said reservoir and adapted to contain paraffin, a tubular member within said reservoir, a steam supply pipe connected to the lower end of said tubular member, a vessel holder mounted upon the upper portion of said reservoir and having an annular flaring flange, and a flanged collar mounted upon the upper end of said reservoir.

1,172,791. TRUNK-LOCKING MECHANISM. GEORGE F. GRUBE, Evanston, and JULIUS V. MEYERING, Chicago, Ill. Filed Oct. 25, 1915. Serial No. 57,664. (Cl. 70—27.)



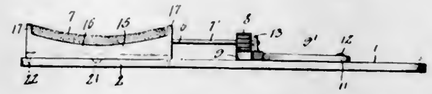
1. Locking mechanism for portable containers, having two relatively movable sections, comprising an internal lock member fixedly secured to the inside of one section and adapted to project into the interior of the other section, said lock member having a notch in one edge, a reciprocatory lock bar slidably mounted on the inside of the other section and having a notch in its edge for the reception of the notched end of the lock member, and having an integrally formed lock bolt at the end of said notch adapted to enter the notch in the lock member and coacting with said internal lock member to lock together the two sections of said container, an external locking member pivotally mounted on the outside of the section containing the lock bar, and operatively connected with said lock bar, and a socket member mounted on the outside of the other section and adapted for locking engagement with said external locking member.

2. Trunk locking mechanism comprising a plurality of internal lock members, fixedly secured to the inside of one section of a trunk and having bolt engaging portions, a reciprocatory lock bar slidably mounted on the inside of the other section and having lock bolts rigidly secured thereto and coöperating with said internal lock members to lock together the two trunk sections, said lock bar having also a toothed rack at one end, a hasp member pivotally mounted on the outside of the trunk section containing the lock bar, a segmental rack, fixedly secured to the hasp member, and meshing with said toothed rack of the lock bar, and a socket member secured to the outside of the other trunk section and adapted for locking engagement with said hasp member.

3. Trunk locking mechanism for securing together two sections of a trunk, comprising a plurality of internal lock members secured to the inside of one trunk section and having notched end portions extending into the other trunk section, a reciprocatory lock bar slidably mounted in said other trunk section and being formed with lugs, one for each lock member, said lugs having tapered edges adapted to be forced into said notches of the end portions of the internal lock members with a wedge-like action, a hasp member pivotally mounted on the outside of the trunk section containing the lock bar, a socket member engaged by said hasp member and secured on the other trunk section, and operative connections between said hasp member and lock bar for converting oscillatory movements of said hasp member into reciprocatory movements of said lock bar.

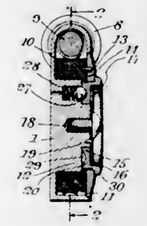
4. Trunk locking mechanism for securing together two sections of a trunk, comprising a plurality of internal lock members secured to one trunk section and having end portions adapted to extend into the other trunk section, said end portions being formed with notches in their upper edges and upstanding lugs beyond the notches, and each notch having an inclined edge slanting down from said lug, a reciprocatory lock bar slidably mounted in straps secured to said other trunk section, said lock bar being formed with lugs adapted to enter said notches in the internal lock members, and said lugs having inclined edges for engagement with the inclined edges of the notches, said lock bar being also formed with notches for the reception of the notched ends of the internal lock members, and means for reciprocating said lock bar including the hasp member of an external locking mechanism.

1,172,792. TOOTH-BRUSH. LEO A. HAMEL, Brooklyn, N. Y. Filed May 25, 1915. Serial No. 30,397. (Cl. 15—37.)



A tooth brush including a handle, a pair of spaced brackets upon the handle, said brackets having their opposite edges reduced to provide the same with tongues, a handle provided with a pair of depressions disposed centrally between the brackets, the walls provided by the said depressions being angular, the said handle being further provided with depressions disposed adjacent each of the opposite sides of the brackets, said brackets having their upper edges depressed, a shaft journaled within the said depressions, a brush arranged upon the shaft between the brackets, means arranged upon the handle, for rotating the shaft, a protector casing for the brush comprising a member including spaced resilient sides formed with tongues that engage within the depressions central between the brackets of the handle, the said protector member having ends that are centrally cut-away and the end walls provided by the cut-away portions depressed, the inner edges of the ends provided by the cut-away portions being grooved to receive the tongues of the brackets and the referred to depressed portions contacting with the shaft, the corners of said member being provided with spring tongues and the said spring tongues adapted to enter the remaining openings in the handle.

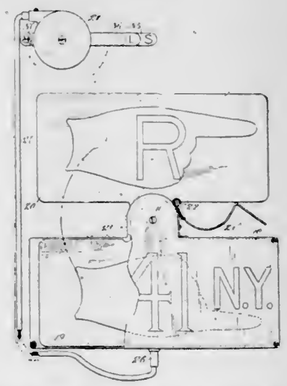
1,172,793. REVOLUTION-COUNTER. OSCAR D. HAPGOOD, Orange, Mass., assignor to Goodell-Pratt Company, Greenfield, Mass. Filed May 13, 1914. Serial No. 838,255. (Cl. 235—103.)



1. In a revolution counter, in combination, a casing having an annular recess in one of its exterior faces, the intervening casing portion forming a stub shaft, a spindle rotatably mounted in said casing, an annular dial rotatably mounted within said recess upon the said shaft and being connected operatively with the said spiudle to indicate the number of revolutions of the same, the said shaft having a reduced outer end portion, the said dial and the casing being provided with coöperating indicating means, and a second annular dial rotatably mounted within the casing recess upon the reduced shaft end inwardly of the first dial and concentric thereto, the second dial being connected with the first dial to indicate the number of revolutions of the latter, the second dial and the stub shaft having coöperating indicating means.

2. In a revolution counter, in combination, a casing having an annular recess in one of its exterior faces, the intervening casing portion forming a stub shaft, a spindle rotatably mounted in said casing, an annular dial rotatably mounted within said recess upon the said shaft and being connected operatively with the said spindle to indicate the number of revolutions of the same, the said shaft having a reduced outer end portion, the said dial and the casing being provided with coöperating indicating means, a second annular dial rotatably mounted within the casing recess upon the reduced shaft end inwardly of the first dial and concentric thereto, the second dial being connected with the first dial to indicate the number of revolutions of the latter, the second dial and the stub shaft having coöperating indicating means, the second dial also having a radially projecting portion overlying the outer face of the first dial.

1,172,794. SIGNAL DEVICE FOR AUTOMOBILES OR OTHER VEHICLES. SHOZO HATASHITA, Detroit, Mich. Filed Mar. 22, 1912. Serial No. 685,492. (Cl. 40—67.)

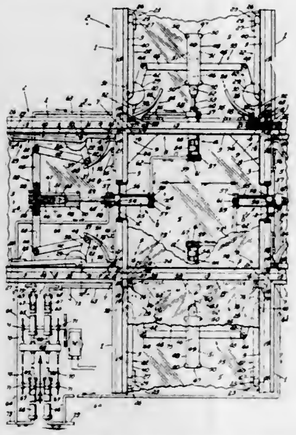


In a signal device for vehicles, a casing located at the rear end of the vehicle, and having a spring actuated hinged top or cover, a stud bolt mounted within said casing, a series of sleeves nested the one inside the other and journaled upon said stud bolt and each carrying a signal display plate, a corresponding series of levers located at the front end of the vehicle, connections respectively operated by said levers for independently rotating said sleeves so as to raise their corresponding signal plates out of said casing and against the action of said spring actuated cover, the latter constantly tending to return or restore said signal display plate into housed position within said casing.

1,172,795. AUTOMATIC RAILWAY-CROSSING. CHARLES A. HELFER, Los Angeles, Cal. Filed July 6, 1915. Serial No. 38,350. (Cl. 104—116.)

1. The combination with a railroad crossing having passages at the juncture of its crossing rails, of tread-blocks positioned opposite the respective passages and adapted to be moved into and out of said passages to respectively close the tread surface of the rails of one track and open the passages through the rails of the transecting track, and means to insert and retract the tread blocks in a parallel path with the adjacent rails and to swing said blocks into and out of alinement with said passages upon insertion and retraction respectively.

2. The combination with a railroad crossing having passages at the juncture of its crossing rails, of tread blocks positioned opposite the respective passages and adapted to be moved into and out of said passages to respectively close the tread surface of the rails of one track and open the passages through the rails of the transecting track, cams adapted to co-act with the adjacent rails to actuate the blocks, said cams being reciprocated in a parallel path with said rails to insert and retract the blocks and being turned relative to said rails to swing the blocks into and out of alinement with the passages, and means to operate the cams.



3. A railway crosaing comprising intersecting rails, having transverse passages at their intersections to accommodate the flanged portion of a car wheel, tread blocks adapted to move into and out of said passages to respectively close the tread surface of the rails of one track and open the passages through the rails of the transecting track, a separate cam connected with each tread block, and cams being adapted to co-act with the adjacent rails to actuate said tread blocks, and means to operate the cams.

4. A railway crossing comprising intersecting rails, having transverse passages at their intersections to accommodate the flanged portion of a car wheel, tread blocks adapted to move into and out of said passages to respectively close the tread surface of the rails of one track and open the passages through the rails of the transecting track, actuating means for said tread blocks, operating cylinders, and pistons working in said cylinders and connected with said actuating means.

5. A railway crossing comprising intersecting rails, having transverse passages at their intersections to accommodate the flanged portion of a car wheel, tread blocks adapted to move in pairs into and out of said passages, reciprocating cross-heads intermediate the respective pairs of tread blocks and connected therewith to actuate the same, and means for operating said cross-heads, the cross-heads of opposite pairs of tread blocks operating together to move the blocks to respectively close the tread surface of the rails of one track and open the passages through the rails of the transecting track.

[Claims 6 to 15 not printed in the Gazette.]

1,172,796. PROCESS FOR THE MANUFACTURE OF ARTIFICIAL LITHOGRAPHIC STONES. VICTOR HENRI JOSEPH HERENG, Ixelles-Brussels, Belgium. Filed May 27, 1913. Serial No. 770,225. (Cl. 106—25.)

1. A process for the manufacture of artificial lithographic stone, said process consisting in mixing cement, trass, white stone and sand, then compressing the mixture in the dry state in a suitable mold, then impregnating the mixture with water while subjecting it to a high pressure and finally drying slowly the compressed mixture.

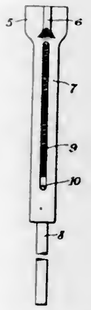
2. A process for the manufacture of artificial lithographic stone, said process consisting in mixing cement, trass, white stone and sand, then compressing the mixture in the dry state in a suitable mold, then impregnating the mixture with water when it is in a compressed state, then allowing the stone thus obtained to remain in water for a very long time, and finally drying the stone slowly.

3. A process for the manufacture of artificial lithographic stone, said process consisting in mixing cement, trass, white stone and sand, then compressing the mixture in the dry state in a suitable mold, then impregnating said mixture with water while subjecting it to the action of a high pressure, whereby the water is caused to penetrate into the mold, then maintaining said pressure until bubbles of air no longer rise to the surface of the water, then withdrawing the stone formed by the compression of the mixture from the mold, then maintaining the stone for a long time in the water, whereby the hardening of the stone is retarded, and finally drying the stone slowly at a regular temperature.

4. A process for the manufacture of artificial lithographic stone, said process consisting in mixing cement, finely ground white stone, trass and white sand, then screening and bolting said mixture, placing said mixture in a suitably perforated mold, ramming the mixture as the filling of the mold proceeds, then compressing the mixture in the dry state then placing the mold with the mixture contained therein in a vessel adapted to contain water, afterward subjecting the mixture to the action of water while it is compressed under a high pressure, whereby the air contained in the mass is completely expelled, then withdrawing the stone thus obtained from the mold, then maintaining the stone in water for a period of about 2 to 4 months and finally drying the stone in a damp place while being protected from currents of air, said drying operation being effected during about four months.

5. The process for the manufacture of artificial lithographic stone, said process consisting in forming said stone with a mixture of three parts of cement, one part of finely ground white stone, one part of trass and one part of white sand, then suitably compressing and impregnating said mixture and finally drying slowly the stone formed by the compression of the mixture.

1,172,797. WRENCH. PERCY W. HODGKINSON, Rochester, N. Y. Filed Nov. 8, 1915. Serial No. 60,427. (Cl. 81—13.)



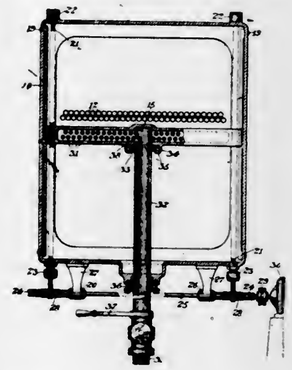
1. A wrench comprising a head adapted to fit and hold a non-circular bolt head or nut; and means adapted to engage adjacent stationary bodies and retain the head against rotation and in engagement with the bolt or nut.

2. A wrench comprising a head adapted to hold a bolt or nut; a projection, from the head, adapted to engage a stationary body adjacent the bolt and to prevent rotation of the head; and adjustable means for engaging another stationary body to retain the head in engagement with the bolt or nut.

3. A wrench comprising a head adapted to fit and hold a non-circular bolt-head or nut; an elongated body extending directly away from the head and adapted for engagement with a stationary surface opposite the bolt-head or nut, to retain the head in engagement therewith; and a lateral projection, from the head, to engage an adjacent stationary body and prevent rotation of the head.

4. A wrench comprising a head adapted to fit and hold a non-circular bolt-head or nut; an elongated body extending directly away from the head and adapted for engagement with a stationary surface opposite the bolt-head or nut, the body comprising two members relatively movable to vary the length of the body; and a lateral projection, from the head, to engage an adjacent stationary body and prevent rotation of the head.

1,172,798. CONDENSER-TUBE-CLEANING APPARATUS. WILLIAM HOOPES, Pittsburgh, Pa. Filed Apr. 6, 1915. Serial No. 19,483. (Cl. 257—28.)



1. In a surface condenser and in combination, a water box, an injector head adjustable to position within the water box and having a plurality of openings therein adapted to register with the tubes of the condenser, and a pipe fixed at one end in the said injector head and adapted to turn therein, the said pipe passing through the body of the water box so as to supply a fluid under pressure thereto from the exterior of the condenser.

2. In a surface condenser and in combination, a water box, an injector head adjustable to position within the water box, a plurality of nozzles fixed in and extending from one side of said injector head and adapted to register with predetermined tubes of the condenser, guides within the water box and in which the injector head is movable in being adjusted to position, and a pipe fixed at one end in said injector head and adapted to turn therein, the said pipe passing through the body of the water box so as to supply the fluid under pressure thereto from the exterior of the condenser.

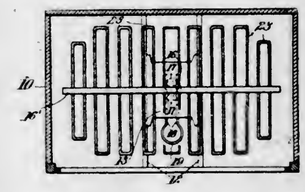
3. In a surface condenser and in combination, a water box, an injector head therein, guides within the water box and on which the said injector head is movable, means operated exteriorly of the water box for determining the position of the injector head therein, a plurality of nozzles fixed in and projecting from one side of the injector head and adapted to register with predetermined tubes of the condenser, and a pipe fixed at one end in said injector head and adapted to turn therein, the said pipe having a port in that portion thereof that lies within the injector head and which, exterior of the injector head, passes through the body of the water box so as to supply a fluid under pressure thereto from the exterior of the condenser.

4. In a surface condenser and in combination, a water box, an injector head adjustable to position within the water box, guides in which the said injector head is movable within the water box, a plurality of nozzles fixed in one side of the said injector head in a staggered relationship corresponding to the positions of the adjacent rows of condenser tubes, screw-threaded rods passing through the opposite ends of the said injector head and adapted to turn in the body of the water box, means exteriorly of the water box for turning the said rods to raise and lower the said injector head, and means for supplying a fluid under pressure to the said injector head.

5. In a surface condenser and in combination, a water box, an injector head adjustable to position within the water box, guides in which the said injector head is movable within the water box, a plurality of nozzles fixed in one side of the said injector head in a staggered relationship corresponding to the positions of the adjacent rows of condenser tubes, screw-threaded rods passing through the opposite ends of the said injector head and adapted to turn in the body of the water box, means exteriorly of the water box for turning the said rods to raise and lower the said injector head, a worm wheel attached to each of the said rods exteriorly of the water box, a shaft, worms thereon meshing with the said worm wheels, means for turning the said shaft, and means for supplying a liquid under pressure to the interior of the said injector head.

[Claims 6 and 7 not printed in the Gazette.]

1,172,799. DISPLAY-RACK. WILLIAM T. HORMES, Govans, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Oct. 15, 1914. Serial No. 866,813. (Cl. 211—16.)



1. An improvement in display racks comprising a rotatable shaft, means for supporting the same, a plurality of removable and interchangeable rods supported by said shaft, and holding members having their inner ends provided with hook-portions, the hook portions of each holding member being passed back of one rod at any point throughout the length thereof and between the latter and the next lower rod, and engaging the front of said next lower rod, whereby said rods may be interchangeably used as supporting and abutment members.

2. An improvement in display racks comprising a rotatable shaft, means for supporting the same, spaced apart cross beads secured to said shaft, supporting bars connecting said cross heads, removable and interchangeable rods supported by said supporting bars and article holders having hook portions, the hook portions of each holder being passed back to one rod at any point throughout the length thereof and between the latter and the next lower rod, and engaging the front of said next lower rod, whereby said rods may be interchangeably used as supporting and abutment members.

3. An improvement in display racks comprising a rotatable shaft, means for supporting the same, spaced apart cross heads secured to said shaft and U-shape in cross-section, interchangeable bars having their ends extended into the open portions of said cross heads, carrier rods supported by said supporting bars, and article holders having hook portions, the hook portions of each carrier being passed back of one rod at any point throughout the length thereof and between the latter and the next lower rod, and engaging the front of said next lower rod, whereby said rods may be interchangeably used as supporting and abutment members.

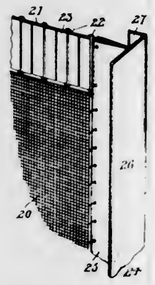
4. As an improvement in display racks, carrying rods, means for interchangeably supporting the same, and an

article holder having hook portions passed back of one rod and between the latter and the next lower rod at any point throughout the length thereof, and engaging the front of said next lower rod, whereby said rods may be interchangeably used as supporting and abutment members.

5. As an improvement in display racks, carrying rods, means for interchangeably supporting the same, and an article holder having hook portions engaging one of said rods at any point throughout the length thereof and terminating in fingers engaging the next lower rod, whereby said rods may be interchangeably used as supporting and abutment members.

[Claims 6 to 11 not printed in the Gazette.]

1,172,806. WINDOW-SCREEN. EDWARD JOHNSON, Sagamore, Pa. Filed June 1, 1915. Serial No. 31,421. (Cl. 156—39.)



1. A window screen comprising a spring-actuated roller, a chain attached to each end of the roller, a face plate connecting the free ends of said chains, and a netting stretched between said rollers, chains and face plate.

2. A window screen comprising a casing, a spring-actuated roller in said casing, a chain attached to each end of the roller, a face plate connecting the free ends of said chains, a netting stretched between said roller, chains and face plate, a frame-plate secured to the window frame, and means on said casing for slidably attaching the casing to the frame-plate.

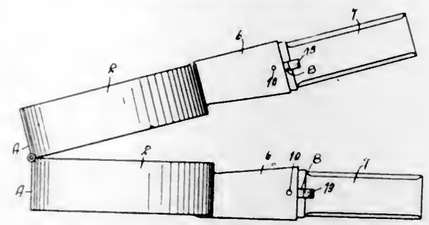
3. A window screen comprising a casing, a spring-actuated roller in said casing, a chain attached to each end of the roller, a face plate connecting the free ends of said chains, a netting stretched between said roller, chains and face plate, a frame-plate secured to the window frame, and means on said casing for slidably attaching the casing to the frame-plate, said means consisting of hooks on one of said connecting members and transverse straps on the other.

4. A window screen comprising a casing, a spring-actuated roller in said casing, a chain attached to each end of the roller, a face plate connecting the free ends of said chains, a netting stretched between said roller, chains and face plate, a frame-plate secured to the window frame, and means on said casing for slidably attaching the casing to the frame-plate, said means consisting of hooks on one of said connecting members and transverse straps on the other, said hooks being narrower than the length of the straps in order to permit a central and two extreme positions of the casing relative to said frame-plate.

5. A window screen comprising a casing, a spring-actuated roller in said casing, a chain attached to each end of the roller, a face plate connecting the free ends of said chains, a netting stretched between said roller, chains and face plate, a frame-plate secured to the window frame, means on said casing for slidably attaching the casing to the frame-plate, said means consisting of hooks on one of said connecting members and transverse straps on the other, said hooks being narrower than the length of the straps in order to permit a central and two extreme positions of the casing relative to said frame-plate, and latching members engaging with said hooks and preventing the removal of the casing when in either one of the extreme positions.

[Claims 6 to 10 not printed in the Gazette.]

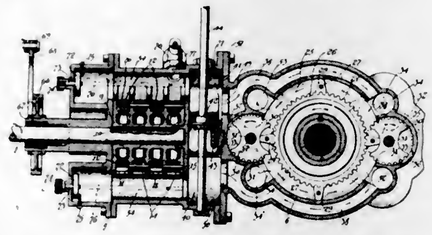
1,172,801. HAND-PRESS FOR SURGICAL DRESSINGS. NAEMA J. JOHNSON, Red Wing, Minn. Filed Mar. 5, 1915. Serial No. 12,391. (Cl. 100—41.)



1. In a device of the character described, the combination of wooden blocks, metal bindings extending around said blocks, hinges connected to said metal bindings, said hinges having integral flaps extending over the faces of the blocks, handle sockets formed integral with said straps, and detachable handles fitted in said sockets.

2. A press for hot sterilized dressings, comprising wooden blocks, metal bindings for said blocks, hinges connected to said bindings, straps formed integral with said hinges and extending over the faces of the blocks, handle sockets formed integral with the straps, wooden handles, provided with spring locking devices, said locking devices comprising spring actuated latches having outwardly projecting studs to engage perforations in the sides of the handle sockets.

1,172,802. HYDRAULIC POWER TRANSMISSION. ARCHIBALD T. KEENE, Chicago, Ill., assignor, by direct and mesne assignments, to Keene Hydraulic Transmission Company, a Corporation of Arizona. Filed June 30, 1913. Serial No. 776,689. (Cl. 138—3.)



1. In a device of the class described, a rotor having a circumferential groove and a gear received within said groove, said gear being formed in two separable parts and having teeth flush with the outer surface of said rotor.

2. In a device of the class described, a rotor having a plurality of circumferential grooves, a gear located in each of said grooves, each gear being made in separable sections and having a plurality of enlarged teeth with interposed small teeth said large teeth being flush with the outer surface of said rotor.

3. In combination, a plurality of individually balanced pump sections, a pair of pressure chambers on opposite sides thereof, a valve in each of said chambers, and means for simultaneously operating the said valves to by-pass the fluid from one or more of said pump sections, whereby said pump remains balanced regardless of the number of sections in use.

4. A hydraulic transmission comprising a plurality of intercommunicating chambers, one of said chambers having an opening therein to permit the introduction of a supply of fluid, another of said cahmbers having an opening therein constituting an outlet for said fluid, and means for temporarily shutting off direct communication between said two chambers.

5. In a hydraulic transmission, a series of communicating chambers providing a closed cycle for the flow of fluid, a pair of openings communicating with certain of said chambers, and means for temporarily obstructing the possible flow of fluid between the points with which said openings communicate.

[Claims 6 to 9 not printed in the Gazette.]

1,172,803. DRAFT-SPRING. WILLIAM A. KIMBELL, Birmingham, Ala. Filed July 21, 1915. Serial No. 41,166. (Cl. 267—12.)



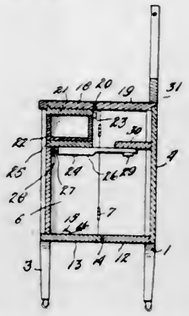
1. A draft spring device comprising in combination, a coiled spring and a holder therefor comprising an inner U-shaped member adapted to be inserted through the spring and having hooks at its free ends to engage one end of the spring, and an outer U-shaped member having at its free ends hook members inturned to engage the other end of the spring, one of these hook members having a forward extension which projects for a substantial distance through the spring and by engaging the inner walls thereof is adapted to prevent the sidewise disengagement in one direction of said outer member from the spring, said inner member being disposed to prevent the sidewise disengagement of said outer member in the opposite direction.

2. A draft spring device, comprising a coiled spring and a two-part spring holder, one part comprising a U-shaped inner member which is inserted endwise through the spring and provided with out-turned hooks at its ends to engage one end of the spring, the body of said member being in engagement with the inner wall of the spring, and the other part comprising an outer U-shaped member, the sides of which are adapted to snugly receive the spring between them, and the U-bend of which is disposed at the opposite end of the spring from the U-bend of the inner member and in position to be stopped against upward play by the out turned hooks of said inner member, the sides of said outer member having their ends inturned to engage the other end of the spring and under the U-bend of the inner member, and one of said ends being bent forwardly and at an incline downwardly so as to project through and engage the inner wall of the spring.

3. The combination, in a draft spring device, with a draft spring and a member which passes through the spring and is provided at one end with means to engage one end of the spring, of an outer removable frame member which is formed of a bent metal rod, the body of which is U-shaped and adapted to receive the spring and the free ends of which are inturned and bent to engage the other end of the spring, one of said bent ends being extended forward and adapted to pass through the spring to a point beyond the U-bend of the member, substantially as described.

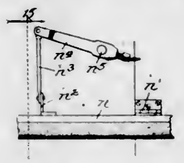
4. In combination, a coiled spring, a U-shaped inner member adapted to be passed through the spring and to yieldingly engage the inner wall thereof, out-turned hooks at the free ends of said member to engage one end of the spring, a U-shaped outer member adapted to fit snugly about and to yieldingly engage the outer wall of said spring, inturned hooks at the free ends of said outer member disposed to engage the outer end of said spring, the hooks of each member serving as stops to hold the other member in position in the spring, and a forward extension of one of said latter hooks which is inclined away from the plane of the inner member and is adapted to engage the inner wall of the spring, and to project beyond the U-bend of the outer member and on the opposite side thereof from the inner member, substantially as and for the purposes described.

1,172,804. FOLDING WASHSTAND. ANDREW KIRALY, Kingston, N. Y. Filed June 10, 1914. Serial No. 844,262. (Cl. 45—38.)



A folding wash stand consisting of a back, sides, a bottom, and a cover, each consisting of hingedly connected sections, each having one of its sections rigidly connected with the back, doors hingedly connected with the hinged sections of the sides, lugs carried by the hinged section of the bottom, pivotal latches carried by the sides for engaging said lugs to hold the hinged bottom section in its operative position, a shelf carried by the back, a drawer supporting frame carried by the hinged section of the cover, and a lever pivotally connected to the frame and having its ends detachably engaged with one of the doors and the shelf.

1,172,805. MUSICAL-INSTRUMENT PLAYER. PAUL BROWN KLUGH, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 18, 1905. Serial No. 287,989. (Cl. 84—161.)



1. In mechanism for mechanically playing a musical instrument, action pneumatics, sheet-propelling mechanism, a chest provided with wind-supplying apparatus and composed of a plurality of separately removable sections, means for removably securing the separate sections of said chest, disconnectible or severable means pneumatically connecting the sections of said chest, and detachable windways between said action pneumatics and one of the sections of said chest and between said sheet-propelling mechanism and another of the sections thereof.

2. In mechanism for mechanically playing a musical instrument, a casing, action-pneumatics and a windway communicating therewith supported within said casing, a chest provided with wind-supplying apparatus and composed of a plurality of separately removable sections removably secured within said casing, disconnectible or severable means pneumatically connecting the sections of said chest, and a valve-box associated with one of the sections of said chest and removable therewith, said valve-box being in detachable communication with said pneumatics through said windway.

3. In mechanism for mechanically playing a musical instrument, a casing, a chest, pump-bellows and reservoir-bellows separately secured to said chest; said chest being supported within said casing and said pump and reservoir

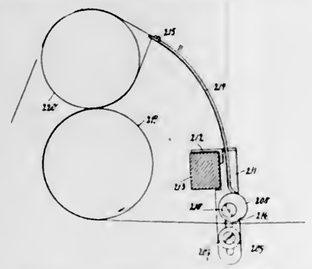
bellows being collectively disposed upon the outer front of said chest.

4. In mechanism for mechanically playing a musical instrument, sheet-propelling mechanism, action-pneumatics, a chest provided with wind-supplying apparatus and composed of a plurality of separately removable sections, supports for the sections of said chest, disconnectible or severable means pneumatically connecting the sections of said chest, pump-bellows and bellows-pedal connections secured to and collectively disposed upon the outer front of said chest, and windways from said mechanism and pneumatics detachably connected with said chest.

5. In mechanism for mechanically playing a musical instrument, a casing, sheet-propelling mechanism and a windway communicating therewith supported within said casing, a chest provided with wind supplying apparatus and composed of a plurality of separately removable sections removably secured within said casing, disconnectible or severable means pneumatically connecting the sections of said chest, and a valve-box associated with one of the sections of said chest and removable therewith, said valve-box being in detachable communication with said mechanism through said windway.

[Claims 6 to 34 not printed in the Gazette.]

1,172,806. THREAD STOP-MOTION FOR TWISTING AND SPINNING MACHINES. WLADYSLAW KOZLAWSKI, Warsaw, Russia. Original application filed Jan. 5, 1912, Serial No. 669,633. Renewed May 7, 1912, Serial No. 837,073. Divided and this application filed Mar. 28, 1914. Serial No. 827,975. (Cl. 19—25.)



1. An automatic thread stop motion for twisting and spinning machine comprising in combination a thread-guide lever held by the tension of the thread against an abutment and adapted to swing backward when the thread breaks and a clamping device operatively connected with the lever and clamping the thread on the breakage of it.

2. An automatic thread stop-motion for twisting and spinning machines comprising in combination a thread-guide lever held in erected position against an abutment and adapted to swing down when the thread breaks and a clamping device operatively connected with the lever and clamping the thread on the breakage of it, the said lever being of elastic material and bent by the tension of the thread, so that by the spring reaction of the lever on the breakage of the thread the downward movement of the lever is accelerated.

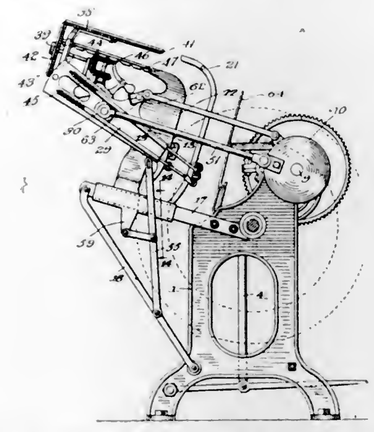
3. An automatic thread stop-motion for twisting and spinning machines comprising in combination a thread-guide lever held in erected position against an abutment and being elastically bent by the tension of the unbroken thread, the lever being directly connected with the one part of the clamping device adapted to engage a fixed part forming the other part of the clamping device.

4. An automatic thread stop-motion for twisting and spinning machines comprising in combination a thread-guide lever held in erected position against an abutment and being elastically bent by the tension of the unbroken thread, the lever being directly connected with the one part of the clamping device adapted to engage a fixed part forming the other part of the clamping device, the said one part forming an eccentric.

5. An automatic thread stop-motion for twisting and spinning machines comprising in combination a thread-guide lever held in erected position against an abutment and being elastically bent by the tension of the unbroken thread, the lever forming itself the one part of the clamping device adapted to engage a fixed part forming the other part of the clamping device.

[Claims 6 and 7 not printed in the Gazette.]

1,172,807. MULTICOLOR-PRINTING PRESS. MAX KRAVITZ, Philadelphia, Pa. Filed Apr. 19, 1915. Serial No. 22,494. (Cl. 101—88.)



1. In a multicolor printing press, a type form having type passages, a second type form adapted to be extended through said passages to bring the type forms into register for a printing action, and press mechanism for inking and moving the respective press forms at relatively different rates of speed from inking to printing position and vice versa.

2. In a multicolor printing press, a front type form having type passages, a rear type form adapted to be extended through said passages to bring the type forms into register for a printing action, and press mechanism for inking and moving the respective press forms at relatively different rates of speed from inking to printing position and vice versa.

3. In a multicolor printing press, type forms provided with type matter, one of said forms having openings formed by the type matter through which the type matter on the other form is adapted to pass to bring the type surfaces into register for a printing action, means for spreading the type forms for an inking action and bringing them together for a printing action, said means operating to move the respective printing forms at different rates of speed, a platen, an inking mechanism, and suitable press mechanism for operating the aforesaid parts.

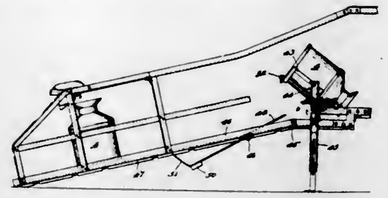
4. In a multicolor printing press, a type carrier, a type form supported thereby embodying type and spacers coöperating therewith to provide passages in the type form, a second type form provided with type adapted to enter said passages to bring the type forms into register for a printing action, and a press mechanism including inking means and means for moving the respective type forms at different relative rates of speed from inking to printing position and vice versa.

5. In a multicolor printing press, a type carrier, a type form supported thereby having type provided with grooves and spacers adapted to fit within grooves of adjacent type and to form passages between certain portions of the type matter, a second type carrier, a type

form supported thereby and having type adapted to pass through said passages to bring the type forms into register for a printing action, a platen, inking devices, and press mechanism for operating said inking devices and adapted upon the retraction of the platen to spread the forms apart for an inking action and upon the printing movement of the platen to bring the forms into coöperative printing position.

[Claims 6 to 12 not printed in the Gazette.]

1,172,808. MILK-CAN-WASHING MACHINE. HARRY D. LATHROP and WALTER H. PAULSON, Chicago, Ill. Filed Mar. 31, 1915. Serial No. 18,235. (Cl. 193—29.)



1. In a device of the class described, the combination of a guide; and an oscillatory member the axis of oscillation of which is located intermediate its ends, said member being arranged for coöperation with said guide and adapted, upon the deposit of a can thereon, from said guide, to be automatically oscillated by the weight of the can, to reverse the can, and said member being adapted by gravity to automatically return to initial position after the release of a can therefrom, substantially as described.

2. In a device of the class described, the combination of a guide; and an oscillatory member substantially semi-cylindrical in form, the axis of oscillation of which is located intermediate its ends and adjacent the longitudinal edges of said member, said member being arranged for coöperation with said guide to receive a can deposited thereon from said guide and automatically oscillate by the weight of the can, to reverse the latter, and said member being adapted, by gravity, to automatically return to initial position after the release of a can therefrom, substantially as described.

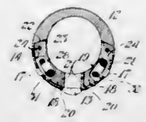
3. In a device of the class described, the combination of a guide; can reversing means arranged for coöperation with said guide, said means comprising a substantially semi-cylindrical member; and outwardly projecting trunnions on said member intermediate the ends thereof and adjacent the longitudinal edges of said member swingingly supporting the latter, said member being adapted to receive a can deposited thereon from said guide and automatically oscillate by the weight of the can, to reverse the latter, and said member being adapted, by gravity, to automatically return to initial position after the release of a can therefrom, substantially as described.

4. In a device of the class described, a main can guide; a can discharge guide; means adapted, upon the deposit of a can thereon from said main guide, to reverse the can and deposit the same on said discharge guide; and a cushioning device with which the can is adapted to contact in the deposit of the same on said discharge guide, substantially as described.

5. In a device of the class described, a main can guide; a can discharge guide; means adapted, upon the deposit of a can thereon from said main guide, to reverse the can and deposit the same on said discharge guide; and a cushioning device with which the can is adapted to contact in the deposit of the same on said discharge guide, said cushioning device comprising a normally elevated member adapted to yield downwardly upon engagement of a can therewith, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,172,809. JEWELRY-CALENDAR. HARRY LENO, Los Angeles, Cal. Filed Apr. 14, 1915. Serial No. 21,466. (Cl. 40—117.)

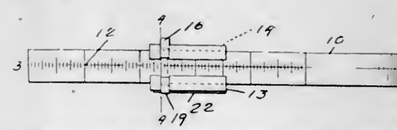


1. A circular member having a display aperture therein and a block receiving opening in the rear of the display aperture, a block adapted to fit into said block receiving opening, a pair of spindles mounted in said block, a ribbon on said spindles secured thereto and adapted to be wound past said display aperture, and means for securing said block in said block receiving opening.

2. A circular member having a display aperture in the outside of said member and a block receiving opening in the inside of said member, a segmental block adapted to fill said block receiving opening and complete the inside of said member, a pair of spindles mounted on said block, a ribbon on said spindles secured thereto and movable past said display aperture, and means at one end of said block for securing said block in said member.

3. A circular member having a display aperture in the outside of said member and a block receiving opening in the inside of said member, a block adapted to fit into said opening and toe under the wall at one end of said opening, a pair of spindles mounted on said block, a ribbon having its ends secured to the respective spindles and movable past the display aperture, a calendar display on said ribbon, a bolt passing through said block for securing said block in said member, and means for rotating said spindles to move said display.

1,172,810. GAGE. ANTHONY J. LEWANDOWSKI, Buffalo, N. Y. Filed June 14, 1915. Serial No. 34,035. (Cl. 33—169.)



1. A printing gage comprising a rule, a block having an undercut groove receiving the rule slidably therein, said block having a cutaway portion adjacent one end, a second block disposed within the cutaway portion and formed with a transverse undercut groove of slightly greater dimension than the groove of the block, one end of the smaller block projecting beyond one side of the first-named block, and a resilient means mounted on the opposite side of the block and bearing against the adjacent end of the smaller block to normally urge the smaller block against the edge of the rule.

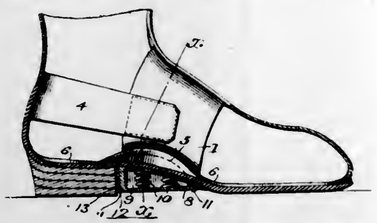
2. A printing gage comprising a rule, a block slidable on the rule, and a spring urged locking element slidable transversely through the block and normally held in frictional engagement with the rule, said element projecting from one side of the block for releasing engagement by a finger of the hand.

3. A printing gage comprising a rule, a block slidable on the rule, a locking element slidable in the block and having legs loosely straddling the rule, and a spring arranged to engage and yieldably hold one leg of said element in frictional engagement with the rule, with the other of said legs forming a finger piece whereby said element may be released.

1,172,811. SUPPORT FOR WEAK FEET AND RAISING FALLEN ARCHES THEREOF. BENJAMIN A. LEWIS, Philadelphia, Pa. Filed Apr. 8, 1915. Serial No. 20,066. (Cl. 36—71.)

1. In a shoe support of the character stated, a cushion composed of a top wall, sides, and a bottom tread form-

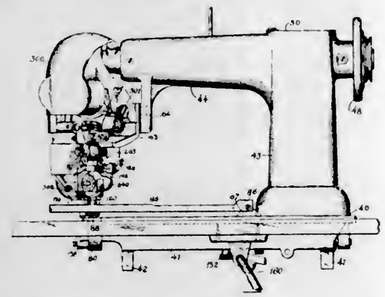
ing a closed hollow body, and a resilient device in said body adapted to bear against said tread and top wall, and being supported on said tread.



2. In a shoe support of the character stated, a cushion composed of a top wall, sides, and a bottom tread forming a closed hollow body, a resilient device in said body adapted to bear against said tread and top wall, and being supported on said tread, and a securing flange, the same extending outwardly from said top wall forwardly of said bottom tread.

3. In a shoe support of the character stated, a hollow body having sides, a bottom tread and a wall closing the rear of the body, a resilient member in said body rising from and supported on said tread, a front securing member on said body, and a shoulder in said rear closing-wall of the body, the same extending above said bottom tread, the said shoulder being provided with holes for the passage of securing-means and being arranged to have the heads of said securing-means seated on it.

1,172,812. BLINDSTITCH SEWING-MACHINE. JOHN G. LEWIS, St. Louis, Mo. Filed Dec. 24, 1910. Serial No. 599,071. (Cl. 112—24.)



1. In a machine of the character described, stitch-forming mechanism comprising a needle and coacting means for forming a series of complete stitches comprising keyed penetrant loops, said needle entering and emerging from the same side of the work, in combination with means, working always on one side of the work, to take the thread between a completed stitch and the source of thread supply, and to throw a bight of the thread from beyond one extreme of the penetrant range of the needle to beyond the other extreme of such range.

2. In a machine of the character described, stitch-forming mechanism comprising a needle and coacting means, including a loop taker for the needle thread, for forming a series of keyed penetrant loops; in combination with a bight looper, and means for moving the same to take a bight of the needle thread from between a point of anchorage thereof in the work and the source of thread supply, and cast the bight to encompass a succeeding point of emergence of the needle.

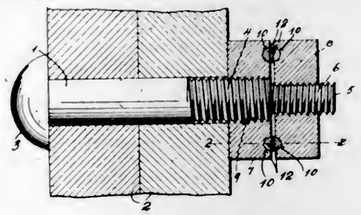
3. In a machine of the character described, stitch-forming mechanism comprising a needle and coacting means for forming a series of complete stitches comprising keyed penetrant loops, entering and emerging from the same side of the work, in combination with a bight looper and means for moving the same always on the same side of the work from one extreme of the penetration range of the needle to the other extreme, in the general direction of the needle path, and transversely across the needle path at the extremes of such looper movement, to take thread between a completed stitch and the source of thread supply and overcast a bight of such thread.

4. In a machine of the character described, stitch-forming mechanism comprising a needle arranged to enter and emerge from the same side of the work and coacting means for forming a series of complete stitches comprising keyed penetrant loops having opposite extremes of penetration on the same side of the work, in combination with a bight looper and means to move the same always on the same side of the work across the line of seam and up and down with respect to the surface of the work to take thread between a completed stitch and the source of thread supply and to overcast a bight of the thread lengthwise of the needle travel from one extreme of the needle penetration to encompass an opposite extreme of penetration.

5. In a machine of the character described, means to feed and present the work and stitch-forming mechanism, the latter comprising a needle and coacting means for forming a series of keyed penetrant loops, said needle entering and emerging from the same side of the work, in combination with a bight looper and means to move the active portion of said looper always on the same side of the work across the needle path to take a bight of the needle thread, lengthwise of said path to overcast said bight, and across said path again to lay said bight, the lines of said transverse movement of the looper lying beyond the extremes of the penetration range of the needle.

[Claims 6 to 38 not printed in the Gazette.]

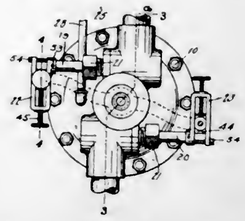
1,172,813. NUT-LOCK. MASON C. MCCOY, Waitsburg, Wash. Filed Nov. 10, 1914. Serial No. 871,332. (Cl. 151—17.)



In a nut lock of the class described, the combination of a bolt having right and left threads, a nut comprising a pair of sections carried by said threads, said sections provided with parallel registering grooves having straight side faces, cotter-pins carried within said grooves, each of said pins tapering inwardly toward one end to form shoulders, said shoulders having their inner portions beveled toward the body portion of said fingers so as to form biting edges, said pin having an enlarged head, said head bearing upon the outer surfaces of said sections, whereby said biting edges of said shoulders will be held in a biting engagement with the outer surfaces of said sections opposite to the surfaces engaged by said head, whereby said biting edges will hold said fingers from accidentally swinging to a closed position whereby said shoulders will hold said pin against accidental displacement.

1,172,814. OIL-BURNER. HUGH W. MCCREERY, Seattle, Wash. Filed Feb. 18, 1915. Serial No. 9,007. (Cl. 236—6.)

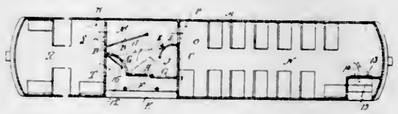
1. A fuel regulating device of the class described embodying a movable yoke, valves controlling the fuel and steam supply, respectively, provided with valve stems, arms fixedly secured to said valve stems, connecting devices extending between the ends of said yoke and said arms said devices each embodying a link and a screw provided with a ball to form a ball and socket joint and adapted to screw into said link to vary the length of said connecting device and screws for varying the point of attachment of said connecting devices longitudinally of said arms.



2. An automatic regulating device for fuel, embodying rotary valves provided with valve stems adapted to control the fuel and steam supply, respectively, crank-arms secured to said valve stems at right angles thereto, links articulated with said crank-arms and adapted to be moved longitudinally to rotate said valves, and means to adjust the points of articulation of said links lengthwise of said crank arms, and means for varying the length of said links.

3. An automatic regulating device for fuel, embodying a movable yoke, rotary valves provided with valve stems adapted to control the fuel and steam supply, respectively, crank-arms secured to said valve stems at right angles thereto, said crank-arms being in the form of U-shaped brackets having arcuate grooves on their inside surfaces, links each having one end connected with said yoke, the opposite end of each of said links being formed with a spherical enlargement adapted to fit within said arcuate grooves in one of said brackets, stirrups adapted to straddle said spherical enlargements, screws associated with said stirrups and said U-shaped brackets for moving said enlarged ends of said links lengthwise of said brackets, and means for varying the length of each of said links between its point of connection with said bracket and said yoke.

1,172,815. PASSENGER-CAR. DUNCAN MCDONALD, Montreal, Quebec, Canada, assignor to Pay-As-You-Enter Car Corporation, New York, N. Y., a Corporation of New Jersey. Filed Sept. 5, 1912. Serial No. 718,613. (Cl. 105—205.)



1. A passenger car having an entrance doorway in the side thereof intermediate its ends leading to the car platform, a door for controlling said doorway, means arranged on said platform inside the doorway for affording a conductor's station, means extending diagonally across the rear portion of said platform for confining the entrance way of entering passengers to a single path closely adjacent the conductor's station, and entry doorways beyond the single path by the conductor's station into the body of the car and respectively leading to the end portions of the car.

2. A passenger car having a transversely extending vestibule, intermediate the ends thereof and end portions, said end portions forming seating spaces, said vestibule being separated from the end portions by partitions, a door for controlling the entry of passengers into the vestibule, doorways communicating between the vestibule and the seating spaces at the respective ends of the car body, a curved railing arranged within the vestibule adjacent one of the partitions thereof, to afford a conductor's station, a railing extending from the opposite partition of the vestibule, to restrict the passage of the entering passengers past the conductor's station, and means located at the conductor's station for controlling the vestibule entry door.

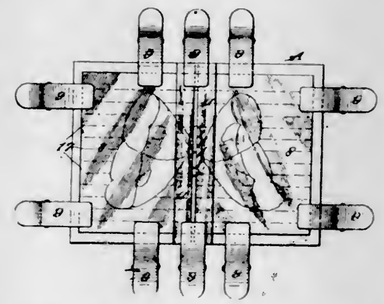
3. In a passenger car, a vestibule extending transversely across the car body, intermediate the ends of the latter to divide the car into end portions, each end portion having a seating space for the passengers, a side door controlling the entry of passengers in the vestibule, a railing arranged within the vestibule, to define a conductor's station, means located at the conductor's station for controlling the movements of the vestibule side door, a railing extending across the vestibule floor to restrict the passage way of entering passengers past the conductor's station, and an exit doorway, from each end portion of the car.

4. A passenger car, having a transversely extending vestibule, and partitions separating the vestibule from the respective ends of the car, an entry doorway through one of said partitions, and an entry way and an exit way through the other of said partitions, a framing separating the entry and exit doorways in said last mentioned partition, said framing having a door therein, a railing arranged inside the last mentioned door and forming a conductor's station, means arranged adjacent the conductor's station for controlling the operation of said door, a transversely extending railing for restricting the passage-way of entering passengers past the conductor's station, and an exit doorway at the far end of one of the end portions of the car body.

5. A passenger car having transversely extending partitions intermediate its ends and side wall portions connecting said partitions to form a completely inclosed vestibule space, entrance doorways through said partitions respectively leading from the inclosed vestibule space into the end portions of the car, a side entrance door for said inclosed vestibule space, an exit doorway in one of said partitions, said exit doorway located outside of the inclosed vestibule space, and an exit doorway at the far end of the other car end portion.

[Claims 6 to 8 not printed in the Gazette.]

1,172,816. SPREADING-BOARD FOR ENTOMOLOGICAL SPECIMENS. XIMENA M. MCGLASHAN, LEONORA G. MCGLASHAN, and CHARLES F. MCGLASHAN, Truckee, Cal. Filed May 5, 1915. Serial No. 25,928. (Cl. 208—12.)



1. A spreading block comprising a base-board, a glass plate forming a covering for said board and adapted to support a specimen, a pair of glass plates forming a covering for the specimen, and means for applying pressure on said plates to press the wings of the specimens and to secure the plates in position.

2. A spreading block comprising a base-board, a glass plate forming a covering for said board and adapted to support a specimen, a pair of glass plates forming a covering for the specimen, means for securing said covering plates in a fixed position on the specimen, a compression plate to cover the body and spread the legs of the specimen, and means for securing said plate.

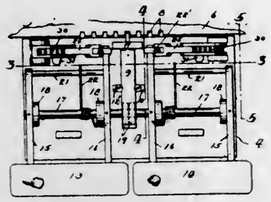
3. A spreading block comprising a base-board, a glass plate forming a covering for said board and adapted to support a specimen, a pair of glass plates forming a covering for the specimen, means for securing said covering plates in a fixed position on the specimen, a compression plate to cover the body and spread the legs of the specimen, and means for securing said plate and adjusting it vertically with relation to the base-board.

4. A spreading block of the character described comprising a base-board having a central opening formed therein, a glass plate having an opening formed therein registering with the first named opening, said glass plate forming a covering for the base-board and adapted to support a specimen, a pair of glass plates forming a covering for the specimen and means for securing said covering plates on the base-board.

5. A spreading block of the character described comprising a base-board having a central opening formed therein, a glass plate having an opening formed therein, registering with the first named opening, said glass plate forming a covering for the base-board and adapted to support a specimen, a pair of glass plates forming a covering for the specimen, means for securing said covering plates on the base-board, and a removable closure for the central opening in the base-plate.

[Claims 6 to 9 not printed in the Gazette.]

1,172,817. CALCULATING-MACHINE. RODNEY H. MARCHANT, Oakland, Cal., assignor to Marchant Calculating Machine Company, Oakland, Cal., a Corporation of California. Filed Nov. 13, 1914. Serial No. 871,905. (Cl. 235—63.)



1. A shift mechanism for calculating machines, comprising the combination with the carriage and base thereof, of a slidable bolt adapted to hold said carriage in a fixed position, a toothed rack formed on said carriage, oscillatable bearing plates pivotally mounted on said base, toothed pinions carried by said plates and meshing with said toothed rack, pawls having one end slidably mounted in said bearing plates and the points normally held out of engagement with said pinions, pivotally mounted shift bars operating said pawls to cause the same to engage and lock said pinions and then to oscillate said bearing plates and pinions to shift the said carriage, and means operated by said shift bars for withdrawing said bolt before said pawls engage said pinions.

2. A shift mechanism for calculating machines, comprising the combination with the carriage thereof, of a slidable bolt normally engaging slots in said carriage, a catch formed in said bolt, pivotally mounted shafts carrying shift bars, one bar for effecting movement of the carriage to the right and one for effecting movement to the left, latches carried by said shafts normally engaging the catch of said bolt, said latches being adapted to withdraw said bolt during the initial movement of said shift bars and to release the same before the completion of the movement, and spring means for urging said bolt into engagement with said carriage.

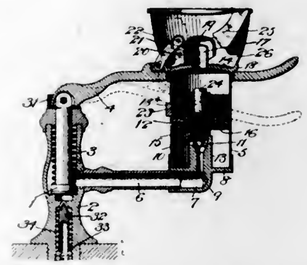
3. A shift mechanism for calculating machines, comprising the combination with the carriage thereof, of a spring operated slidable bolt adapted to engage slots in said carriage, shift bars attached to pivotally mounted shafts, one for effecting movement to the right and one for effecting movement to the left, oscillatable bearing plates mounted adjacent said carriage, toothed pinions carried by the free end of said bearing plates, a toothed rack attached to said carriage and engaged by said pinions, pawls adapted to engage the teeth and lock said gear wheels, said pawls being slidably mounted in said bearing plates and normally held out of engagement with said pinions, and connecting means between said shift bars and said pawls whereby the initial movement of the former causes the latter to enter into engagement with said pinions and further movement causes the shifting of said carriage.

4. In a calculating machine comprising a base, a carriage movable on said base, a toothed rack carried by said carriage, a shifting and locking mechanism mounted on said base comprising oscillatable bearing plates, toothed gears carried by said plates and engaging said toothed rack, shift bars pivotally mounted on the said base, pawls pivotally attached to said shift bars, said pawls having a slotted connection with said bearing plate so as to first lock the corresponding gear and then oscillate the bearing plate when said shift bar is actuated.

5. In a calculating machine the combination with the base and a carriage movable longitudinally thereon, of a shifting mechanism mounted on said base comprising pivotally mounted shift bars, oscillatable bearing plates adapted to be moved by said shift bars, toothed gears pivotally mounted in said bearing plates, a toothed rack carried by said carriage engaged by said gears, pawls having one end pivotally mounted on said shift bars and the other end slidably mounted on said bearing plates, points on said pawls adapted to enter between the teeth of said gears and lock the same when said shift bars are operated.

[Claim 6 not printed in the Gazette.]

1,172,818. DRINKING-FOUNTAIN. MOSES M. MARCUSE, New York, N. Y., assignor to West Disinfecting Company, New York, N. Y., a Corporation of New York. Filed Nov. 14, 1911. Serial No. 660,208. (Cl. 137—109.)



1. A drinking fountain having a filter box, a liquid supply passage leading thereinto at a point above the bottom of the box, a manually operated controlling valve for said passage, a handle for said controlling valve, an upwardly inclined discharge nozzle leading from said filter box, and a cap for said nozzle having a linked connection with said filter box and handle.

2. A drinking fountain having a filter box, a liquid supply passage leading thereinto, a manually operated controlling valve for said passage, an upwardly directed discharge nozzle leading from said filter box and a manually operated regulating valve vertically disposed within the filter box in position to regulate the flow of liquid from said passage into said filter box.

3. A drinking fountain comprising a valve casing, its valve, a laterally extended branch pipe, a filter box uprising from said branch pipe, an upwardly directed discharge nozzle for the filter box and a valve operating handle embracing the filter box.

4. A drinking fountain comprising a valve casing, its valve, a laterally extended branch pipe, a filter box uprising from said branch pipe, an upwardly directed discharge nozzle for the filter box, a valve operating handle embracing the filter box and a cap for the nozzle connected to the handle whereby the cap is opened and closed by the movement of the handle.

5. A drinking fountain having a liquid supply passage, a controlling valve therefor, a filter, a basin surmounting the filter divided into two compartments and a discharge nozzle for said filter located in one compartment and arranged to direct the flow of water when the valve is opened, into the other compartment.

[Claim 6 not printed in the Gazette.]

1,172,819. SHADE-ROLLER. GEORGE C. MATHERS, Chicago, Ill., assignor of one-half to Robert Protheroe, Chicago, Ill. Filed Oct. 21, 1914. Serial No. 867,735. (Cl. 156—36.)



1. A fixture for coöperation with the spring actuated spindle of a spring shade roller, comprising a bracket; a spindle-engaging member rotatably mounted in said bracket; and means for locking said member against rotation in said bracket or releasing the same for free movement therein, substantially as described.

2. A fixture for coöperation with the spring actuated spindle of a spring shade roller, comprising a bracket; a spindle-engaging member rotatably mounted in said bracket; and a stop on said bracket for engagement with said member to hold the latter against relative rotation, said member being shiftably mounted in said bracket to permit of movement thereof into and out of operative relation with said stop, substantially as described.

3. In a device of the class described, the combination with the spring actuated spindle of a spring shade roller mounted in one end of said roller to permit of relative rotary movement of said parts, of a bracket; a member rotatably mounted in said bracket to which said spindle is locked against relative rotation; and means for releasably locking said member against rotation in said bracket, substantially as described.

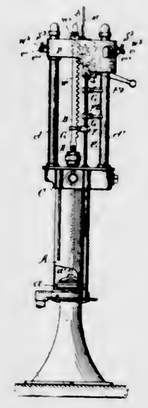
4. In a device of the class described, the combination with the spring actuated spindle of a spring shade roller mounted in one end of said roller to permit of relative rotary movement of said parts, of a bracket; a member rotatably mounted in said bracket to which said spindle is locked against relative rotation; means for releasably locking said member against rotation in said bracket; and means for rotating said member when released for rotation in said bracket, substantially as described.

5. In a device of the class described, the combination with the spring actuated spindle of a spring shade roller mounted in one end of said roller to permit of relative rotary movement of said parts, of a bracket; a member rotatably mounted in said bracket to which said spindle is locked against relative rotation; means for releasably locking said member against rotation in said bracket; and a flexible element adapted to be wrapped upon said member for releasing said member from said locking means and for rotating the same when released, substantially as described.

[Claim 6 not printed in the Gazette.]

1,172,820. MEASURING-PUMP. FRANK W. MEEGAN, New York, N. Y., assignor to Gilbert and Barker Manufacturing Company, Springfield, Mass., a Corporation of Massachusetts. Filed May 4, 1910. Serial No. 559,343. (Cl. 221—103.)

1. In a measuring pump, the combination with a cylinder and piston, a piston rod, vertical standards connected with the head of the piston and a head block carried by said standards, a rack bar connected with the piston rod, and extending through said head block and an actuating pinion on said head block engaging the rack bar, of a stop operatively connected with the rack bar, a vertically disposed threaded bar supported in the cylindrical head and bead block and held from rotation, a plurality of rotatable blocks having interiorly threaded apertures engaging said threaded rod, and a stop arm carried by each of said blocks, and adapted to be moved into and out of operative relation with the stop on said rack bar, said arms being of such length as to engage said rack bar and one of said standards to limit the rotary movements of said blocks.



2. In a measuring pump, the combination with a cylinder and piston, a piston rod, vertical standards connected with the head of the piston and a head block carried by said standards, a rack bar connected with the piston rod, and extending through said head block and an actuating pinion on said head block engaging the rack bar, of a stop operatively connected with the rack bar, a vertically disposed threaded bar supported in the cylinder head and head block and held from rotation, a plurality of rotatable blocks having interiorly threaded apertures engaging said threaded rod, and a stop arm carried by each of said blocks, and adapted to be moved into and out of operative relation with the stop on said rack bar, said arms being of such length as to engage said rack bar and one of said standards to limit the rotary movements of said blocks, and means for adjusting each of said arms independently with respect to its rotatable block, in a direction longitudinally of said threaded rod.

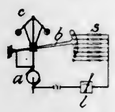
3. In a measuring pump, the combination of a reciprocable bar, a stop thereon, a rod parallel with said bar, a plurality of blocks on said rod each thereof mounted for limited swinging movement and adapted to be swung into and out of the path of said stop, contacting portions on said blocks eccentrically mounted therein to permit vertical adjustment relative to said stop, and means to seal said portions in their adjusted positions.

4. In a measuring pump, the combination with a reciprocable bar, of a rod parallel with said bar, and a plurality of stops carried by said rod, each thereof freely movable through a definite arc and arranged to be swung into and out of a position to be engaged by said bar, each of said stops including a movable eccentrically mounted portion arranged to engage said bar and to permit vertical adjustment of the stop and means for sealing said portions to the stops in their adjusted positions.

5. The combination in a measuring pump of a reciprocable member, a rod parallel therewith, stops on said rod, each thereof mounted for limited swinging movement and arranged to be swung into a position to be engaged by said member, vertically adjustable portions for said stops and means to seal said portions in their adjusted positions.

[Claim 6 not printed in the Gazette.]

1,172,821. METHOD OF RUNNING AND APPARATUS FOR PROTECTING ELECTRICAL MACHINES. GEORG MEYER, Berlin, and ALEXANDER KUEHNS, Schöneberg, Germany, assignors to Siemens-Schuckert-Werke G. M. B. H., Berlin, Germany. Filed Jan. 24, 1910. Serial No. 539,829. (Cl. 172—179.)



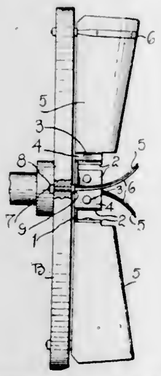
1. In an electric system of the character described, the combination, with an electrical machine, and a safety device in circuit therewith for protecting the same, of means responsive to the operative condition of said machine for adjusting said safety device corresponding to the load-capacity of the machine.

2. In an electric system of the character described, the combination, with an electrical machine, and a safety device in circuit therewith for protecting the same, of means responsive to the speed adjustment of said machine adjusting said safety device corresponding to the load-capacity of the machine.

3. In an electric system of the character described, the combination, with an electrical machine, and a safety device in circuit therewith for protecting the same, and apparatus for varying the speed of the machine, of means responsive to the adjustment of said apparatus for adjusting said safety device corresponding to the load-capacity of the machine.

4. In an electric system of the character described, the combination, with an electrical machine, of apparatus comprising a regulating frame having a plurality of parallel interconnected slots and a lever movable longitudinally in said slots and transversely to the same for varying the speed of the machine; a safety device in circuit with said machine for protecting the same; and means operated in dependence on the transverse motion of said lever for adjusting said safety device corresponding to the load-capacity of the machine.

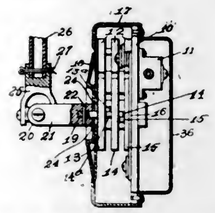
1,172,822. FAN ATTACHMENT. CHARLES R. MILTENBERGER, Albia, Iowa. Filed Dec. 23, 1914. Serial No. 878,720. (Cl. 230—8.)



1. A fan attachment comprising a hub, blades radiating therefrom, and transverse members carried by the outer extremities of the blades and projecting beyond a longitudinal margin thereof, said projecting portions of the members affording a securing means.

2. A fan attachment comprising a hub provided with laterally disposed lugs, fan blades provided with angularly disposed tails in engagement with the lugs, and securing means for the attachment carried by the outer extremities of the blades.

1,172,823. LOCKING-VALVE. WYLIE E. MURRAY and HARRY A. LEACH, St. Louis, Mo. Filed Dec. 8, 1913. Serial No. 805,370. (Cl. 137—7.)



1. A locking valve for internal combustion engines, comprising a center base plate, a housing located on each side thereof, a valve mounted on one side of said base plate and to one side of the center, a tumbler mechanism mounted on the opposite side of said base plate and secured to the stem of said valve for controlling the valve action and a combination mechanism controlling the tumbler mechanism, substantially as specified.

2. A locking valve for internal combustion engines comprising a base plate, a valve mounted on one side of said base plate and to one side of the center, a tumbler mechanism mounted on the opposite side of the base plate, a valve stem protruding through the base plate connecting the valve and tumbler mechanism, a housing incasing the valve and a housing incasing the tumbler mechanism, substantially as specified.

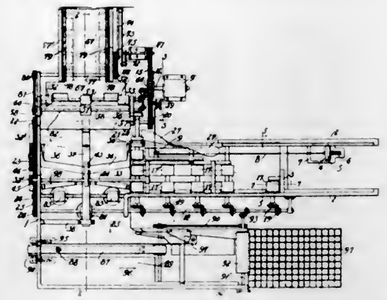
3. A locking valve for internal combustion engines comprising a base plate, a valve located on one side of said base plate, a valve stem protruding through said base plate, an oscillating tumbler mounted on the valve stem, a spring controlling the same and rotating locking disks located centrally on the base plate and contacting with the oscillating tumbler, substantially as specified.

4. A locking valve for internal combustion engines comprising a valve located on the fuel supply pipe near the carbureter, an oscillating tumbler means for operating the valve for controlling the passage of the fuel through said pipe, a spring for holding the valve in set position when the fuel is cut-off; rotating locking disks centrally located, a housing incasing the same, a combination mechanism mounted on said housing and operating the rotating locking disks which controls the movement of the oscillating tumbler, substantially as specified.

5. A device of the class described comprising a base plate, a valve located to one side thereof, a fuel supply pipe to which said valve is connected, a tumbler operating said valve, a shaft supported in the base plate, two loose and one stationary tumbler disks located on said shaft, a combination disk supported on the housing and connected to the shaft, a second combination disk supported independently of the housing, and a connecting means located between the two combination disks whereby both disks are operated simultaneously when opening or closing the valve, substantially as specified.

1,172,824. MACHINE FOR INSERTING MAIL-MATTER. VICTOR W. NEWMAN, Springfield, Mass. Filed July 27, 1915. Serial No. 42,139. (Cl. 93—6.)

1. In a machine of the class described, the combination, a device for receiving the empty envelops in which mailable matter is to be inserted, means for advancing the lowermost one of said envelops, one at a time, to a position for inserting the mailable matter, means in the path of the movable envelop for opening the flap, comprising a warped surface, and a pair of inter-engaging rollers to engage the folding line of the flap for causing the flap to lie in the plane of the envelop, means to retain the flap open during the period that mailable matter is being inserted, a receptacle for receiving a stack of the matter to be mailed, means for advancing one sheet at a time of said matter to a position transversely of the envelop, means for engaging the insertible matter intermediate of its length for moving the same into the envelop, a sealing device, means for advancing the envelop to a position for sealing the same, as described.



2. In a machine of the class described, means for advancing an envelop to a position for inserting the matter to be mailed, a device to open the flap of the envelop, a device to retain the envelop in its open position comprising a flexible arm engaging the flap and having a downwardly inclined bent portion to directly engage the flap, means to prevent the envelop from tipping, a receptacle for receiving the matter to be inserted, means to intermittently advance one sheet at a time into a position transverse to the plane of the open side of the envelop into which the matter is to be inserted, a slide adapted to engage the mailable matter and fold the same intermediate of its length, folding rollers positioned between the slide and the open edge of the envelop and between which the mailable matter passes, means to carry the envelop after the mailable matter is inserted to a sealing position, means to advance the same toward a suitable receptacle past the sealing mechanism, said means comprising an endless belt, and catches thereon for engaging the envelop, as described.

3. A flap opening device for envelops, comprising in combination, rollers for moving an envelop, a warped surface to initially open the flap, and means to engage the opposite sides of the flap at its folding line to permanently open the envelop.

4. A device for retaining the flap of an envelop in an open position, comprising, a platform having an opening to receive the envelop, the flap being located over the opening, a device to separate the walls of the envelop, and means to move the device against the flap to move the flap into the opening.

5. A feeding means for inserting mailable matter into an envelop, comprising in combination, a reciprocable slide, means for reciprocating the slide, a pair of folding rollers between which the slide moves to form a fold in the mailable matter after said matter has assumed a position transverse to the plane of the slide, and means for operating the slide and rollers, as described.

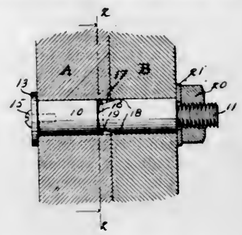
[Claim 6 not printed in the Gazette.]

1,172,825. SELF-LOCKING BOLT OR STUD. THOMAS F. OLDROYD, New London, Conn. Filed Apr. 17, 1915 Serial No. 22,126. (Cl. 85—2.4.)

1. In a device of the character described a shank structure, a head member detachably connected to one end of said shank structure, said shank provided with a tapering cut-out portion intermediate its ends, said cut-out portion forming an abrupt shoulder, and an expansible ring in said cut-out portion and normally lying flush with the periphery of said shank, for the purpose specified.

2. In a device of the character described, a shank structure, a head member arranged at one end thereof, a shoulder provided intermediate the ends of said shank, the perimetral edge of said shoulder being flush with the periphery of said shank and locking means engaging said shoulder and normally flush with the periphery of said shank, substantially as described.

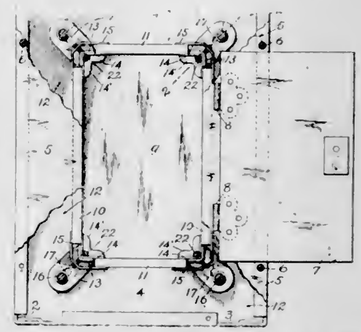
3. In a device of the character described, a shank structure, said shank structure provided with a tapering cut-out portion, said cut-out portion forming an abrupt shoulder intermediate the ends of said shank, and expansible means engaging said shoulder and normally flush with the periphery of said shank, substantially as described.



4. In a device of the character described, a shank structure, a head member arranged at one end thereof, said shank provided with a tapering cut-out portion, said cut-out portion forming an annular shoulder intermediate the ends of said shank, and resilient means engaging said shoulder, said means being normally flush with the periphery of said shank, substantially as described.

5. In a device of the character described, a shank structure, a head member arranged at one end thereof, said shank structure provided with an annular cut-out portion, said cut-out portion forming an annular shoulder intermediate the ends of said shank structure, the perimetral edge of said shoulder being flush with the periphery of said shank structure, and locking means engaging said shoulder normally flush with the periphery of said shank structure, substantially as described.

1,172,826. PANEL-BOARD CABINET. RAYMOND H. OLLEY, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed May 6, 1910, Serial No. 559,711. Renewed Feb. 4, 1911. Serial No. 606,642. (Cl. 247—13.)



1. The combination of a panal board, lining strips and means for securing the panel board and lining strips in position including a supporting member, a clamping member carried by the supporting member and having wings for engaging the inner faces of adjoining lining strips, and a web connecting the wings at the lower ends thereof and bearing upon the face of the base of the panel board, means engaging the outer faces of the lining strips and coacting with the clamping member to hold said strips, and means for clamping said member, substantially as and for the purpose described.

2. The combination of a panel board, lining strips, and means for securing the panel board and lining strips in position, said means including a supporting member, a clamping member supported by the supporting member

and having a clamping face for engaging the front face of the panel board and holding the panel board in position, and clamping faces engaging the inner faces of lining strips, a second clamping member coacting with the first clamping member and engaging the outer faces of the lining strips, means connecting one clamping member and the supporting member, the clamping members being movable relatively to each other and to the supporting member, and means for moving the clamping members relatively to each other and to the supporting member, said means operating to draw the clamping members toward each other when operated in one direction, substantially as and for the purpose described.

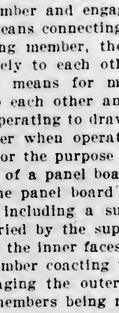
3. The combination of a panel board, lining strips and means for securing the panel board and lining strips in position, said means including a supporting member, a clamping member carried by the supporting member and having faces engaging the inner faces of the lining strips, a second clamping member coacting with the first clamping member and engaging the outer faces of the lining strips the clamping members being movable relatively to each other and to the support, means for moving one clamping member relatively to the support and the other clamping member, and means for drawing the clamping members toward each other relatively to the support, substantially as and for the purpose set forth.

4. The combination of a panel board and cabinet therefor, and lining strips, supports for the panel board, the paned board lying flat on the bottom of the cabinet, each support comprising a member secured to the bottom of the cabinet, inner and outer clamping members, engaging opposite faces of contiguous lining strips, the inner clamping member having a clamping face for frictionally engaging the face of the panel board and holding the same flat against the bottom of the cabinet and the inner clamping member being secured to the first-mentioned member, and means for drawing the clamping members together, substantially as and for the purpose described.

5. The combination of a panel board and cabinet therefor, and lining strips, supports for the panel board, each comprising a standard secured to the bottom of the cabinet and extending upwardly between the ends of contiguous lining strips, inner and outer clamping members arranged on opposite sides of the standard and engaging opposite faces of said strips, means for securing the inner member to the standard, and means for drawing the inner and the outer members toward each other, substantially as and for the purpose specified.

[Claims 6 to 21 not printed in the Gazette.]

1,172,827. OPHTHALMOSCOPE. GUSTAV W. OPITZ, New York, N. Y., assignor to General Optical Company, Inc., a Corporation of New York. Filed Nov. 17, 1913. Serial No. 801,371. (Cl. 88—22.)



1. In an instrument of the class described, two lens carriers mounted on a common axis, each carrier comprising a disk having a plurality of lenses arranged around its periphery and a plurality of slots cut in the periphery thereof, a rotatable member having pins projecting therefrom for engaging in the slots of one of said carriers and a pin carried by the said member for simultaneously engaging in the slots of both of said carriers.

2. In an instrument of the class described, a substantially elongated elliptically-shaped casing having a handle attached thereto at one end and sight openings in the faces of said casing adjacent the other end thereof, disk lens carriers mounted upon a common axis in the middle portion of said casing and entirely inclosed thereby, said carriers having lenses arranged around their peripheries adapted to be brought into alinement with the sight openings upon the rotation of the carriers, and gearing for intermittently rotating said carriers in a predetermined relation to each other, comprising a rotatable member having a portion of its periphery extending exteriorly of the casing for manual manipulation at a point adjacent the point of attachment of the handle to the casing.

3. In an instrument of the class described, two substantially elongated elliptically shaped plates having bent over flanges abutting each other to form a thin flat casing, having a handle attached thereto at its lower end, said casing having sight apertures in the upper narrow portions of the faces of said casing, a plurality of disk lens carriers mounted on a common axis in the middle portion of said casing and entirely inclosed therein, said carrier having lenses arranged thereon adapted to be brought into alinement with said sight apertures, and gearing comprising a rotatable member in the narrow portion of said casing adjacent the handle having a portion thereof extending exteriorly of the casing for rotating said carriers in a determined relation to each other.

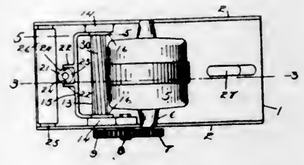
4. In an instrument of the class described, a substantially elongated elliptically shaped casing having a handle attached thereto at its lower end, said casing having sight apertures in the upper narrow portions of the faces thereof, a plurality of disk lens carriers mounted on a common axis in the middle portion of said casing and entirely inclosed therein, said carrier having lenses arranged thereon adapted to be brought into alinement with said sight apertures, and gearing comprising a rotatable member in the narrow portion of said casing adjacent the handle for rotating said carriers in a determined relation to each other, said casing having an extension with slots in the walls thereof, and a gear wheel in said casing for rotating said rotatable member, said gear wheel having a portion of its periphery projecting through said slots for manual manipulation.

5. In an instrument of the class described, two lens carriers mounted on a common axis, one of said carriers having a blank opening and lenses whose powers range from +1 D to +5 D, and from −1 D to −4 D arranged consecutively around its periphery in the order named, the other of said carriers having two blank openings and lenses whose powers range from −10 D to −30 D and from +10 D to +20 D arranged consecutively around its periphery in the order named, the blank opening in one carrier alining with the first of the two blank openings in the other carrier when the carriers are in initial position and means for imparting to each of said carriers a step by step movement in which the first named carrier is advanced five steps to each step of the second named carrier, whereby said lenses are successively brought into alinement to produce lenses whose powers range from 0 to −29 D and from +20 D to 0, in the order named, or vice versa.

[Claims 6 to 8 not printed in the Gazette.]

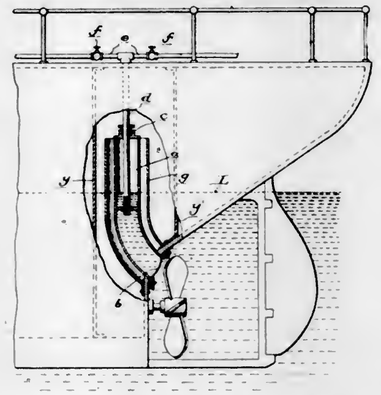
1,172,828. POWER-PLANE. JOSEPH G. OSGOOD and FRANK W. BACHMAN, Cincinnati, Ohio, assignors to said Osgood, trustee. Filed Oct. 12, 1914, Serial No. 866,394. Renewed July 15, 1915. Serial No. 40,123. (Cl. 145—5.)

In a plane of the character described, a bed plate provided with a slot and with outer side walls, a circular cutter operating in said slot, a yoke provided at each side with bushings journaled in said walls over said slot, the circular cutter being journaled eccentrically in the said bushings between their axis and said slot, and means connected with the yoke for oscillating the said bushings,



carrying the circular cutter with them, to raise and lower the latter.

1,172,829. VESSEL SCREW-PROPELLER PUMPING APPARATUS. JOSEPH THOMPSON PARKER, Washington, D. C. Filed Nov. 23, 1915. Serial No. 63,107. (Cl. 114—0.5.)



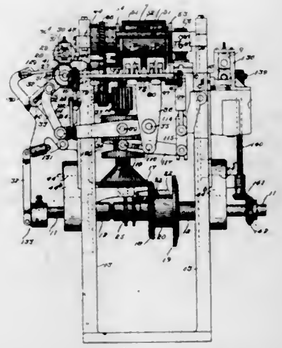
1. In an apparatus of the class set forth, the combination of a screw-propelled vessel, a tube extending through the hull having its lower end in communication with the sea at a point adjacent the propeller blades, a pipe depending into the upper end of this tube to a point below the normal load line, means being provided at the upper end of the tube for closing the upper end of the tube around said pipe, and a branch pipe or pipes connected to the aforesaid pipe.

2. In combination with a screw-propelled vessel, a tube having its lower end opening into the sea through the hull at a point adjacent the propeller, a piping system connected to the upper end of said tube, and a protecting jacket inclosing said tube from the hull to a point above the extreme load line, the lower end of said jacket being fastened to the interior of the hull of the vessel around the lower end of said tube, for the purpose set forth.

1,172,830. MACHINE FOR MAKING CLOSURE DISKS OR CAPS. FREDERIC K. PLYMPTON, Wellesley, Mass., assignor to Plympton Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1911. Serial No. 646,922. (Cl. 93—88.)

1. In combination, an anvil and coacting presser-member adapted to receive a closure between them, means for presenting between said parts the attaching portion of an extractor attachment, means for causing relative approach of said parts and thereby forcing a projection or projections of said attaching portion into the closure at one side of the latter, and means for bending the extractor attachment around the edge of the closure to form a handle at the other side of the closure.

2. In a machine for making closure-disks, etc., the combination with stock-feeding, article-forming, printing and attachment-applying devices, of means for paraffining or otherwise treating the article, and means for delivering the latter from the said devices to the said means such delivering means positively controlling the article during transfer.



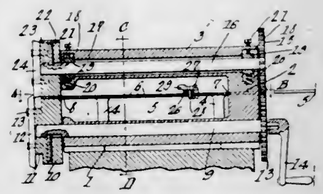
3. A machine for making closure-disks, etc., comprising devices for applying an extractor-attachment to a disk, and means for paraffining or otherwise treating the article, and maintaining continuous control of the article until after discharge from the said means.

4. In a machine for making closure-disks, etc., the combination with stock-feeding devices, of a device which cuts an article from the stock and fastens thereto an attachment by driving portions of the latter into the material of the article.

5. In a machine for making closure-disks, etc., the combination with stock-feeding and printing devices, of a device which cuts an article from the stock and fastens thereto an attachment by driving portions of the latter into the material of the article.

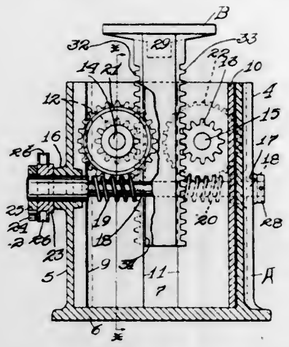
[Claims 6 to 24 not printed in the Gazette.]

1,172,831. METAL-CUTTING MACHINE. ANSLEY S. PORTER, Fitchburg, Mass. Filed Dec. 16, 1914. Serial No. 877,557. (Cl. 164—61.)



A metal cutting machine including a base, a post at one side thereof, a tubular arm extending laterally from the upper end of the post and overhanging the base, a shaft journaled within the base and extending from one side to the other thereof, bearing boxes movably mounted within the end portions of the arm, a shaft journaled within the boxes and shiftable radially of the arm, said shaft extending through the arm, coöperating means upon the two shafts at one end for transmitting motion from one shaft to the other, feed rolls connected to the shafts at their other ends and close to the base and the end of the arm respectively, there being a concentric boss extending outwardly from one of the rolls, a cutting disk secured to said boss, another cutting disk secured to the other roll and extending back of the first mentioned disk, a table extending between the arm and base and close to the inner sides of the rolls, and a gage strip adjustably mounted on the table and extending between the arm and base.

1,172,832. JACK. JESSE W. REES, St. Paul, Minn. Filed Mar. 23, 1914, Serial No. 826,759. Renewed July 1, 1915. Serial No. 37,588. (Cl. 254—97.)



1. A lifting jack, comprising, in combination, a base element, a shaft journaled in said base element, gear mechanism adapted to be driven by said shaft, means for revolving said shaft and a lifting head element formed with a bifurcated shank, each of the arms of said shank being formed with a set of rack teeth on opposite faces thereof, adapted to mesh with said gear mechanism to apply a lifting effort to the opposite sides of each of said bifurcations simultaneously.

2. A lifting jack, comprising, in combination, a base element, a driving shaft journaled in said base element, means for revolving said shaft, gear mechanism adapted to be actuated by said shaft, articulated supporting means removably seated in said base element and upon which part of said gear mechanism is journaled and permitted to be separated from connection with said drive shaft, and a lifting head element having a bifurcated shank, each of the bifurcations being formed with a pair of oppositely disposed sets of rack teeth adapted to mesh with the teeth of said gear mechanism, whereby a lifting effort is applied to the opposite sides of each of the bifurcations of said head element.

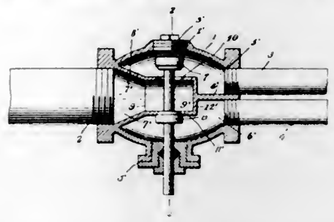
3. A lifting jack comprising a base, a lifting element having a bifurcated shank slidably mounted in said base, each of the arms of said shank being provided with rack teeth on its opposite sides, the adjacent faces of said arms being reduced, channel members disposed within said base and coöperating with the reduced faces of said arms to guide said lifting element in its reciprocal movements, a shaft journaled in said base, and mechanism adapted to be driven by said shaft and engaging the rack teeth on said arms to raise said lifting element.

4. A lifting jack comprising a base, spaced rectangular members disposed within and extending throughout the height and longitudinal depth of said base, said rectangular members being provided with vertical passage-ways opening toward one-another, a lifting element having a bifurcated shank, the adjacent faces of the arms of which are reduced to coöperate with the passage-ways in said rectangular members for guiding said lifting element in its reciprocal movements, each of the arms of said shank being provided with rack teeth on its opposite sides, a shaft journaled in said base, and mechanism adapted to be driven by said shaft and engaging the rack teeth on said arms to raise said lifting element.

5. A lifting jack comprising a base, spaced rectangular members disposed within and extending substantially throughout the height and longitudinal depth of said base, said rectangular members being provided with vertical passageways opening toward one-another, a lifting element having spaced arms disposed within said rectangular members, the adjacent faces of said arms having reduced portions adapted to slide within the passage-ways in said rectangular members to guide said lifting element in its reciprocal movements, each of the arms being provided with rack teeth on its opposite sides, a pair of spaced shafts journaled in and extending transversely across said rectangular members, pinions carried by said transverse shafts within said rectangular members and meshing with the rack teeth on said arms, worm gears carried by said transverse shafts between said rectangular members, and a longitudinal shaft journaled in said base between said rectangular members having right and left hand worms thereon engaging said worm gears for driving said transverse shafts.

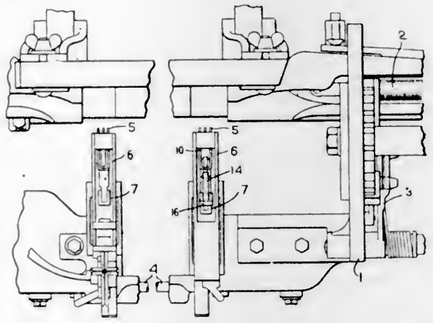
[Claims 6 to 12 not printed in the Gazette.]

1,172,833. VALVE. HARRY E. RICKER, Conneaut, Ohio. Filed Apr. 3, 1914. Serial No. 829,360. (Cl. 137—26.)



A valve including a body formed at one end with an inlet opening, a partition wall extending throughout the longitudinal center of the body to provide the latter with upper and lower compartments, said partition wall at its point of intersection with the inlet opening being formed with a flared mouth, the walls of said mouth merging inwardly and terminating in a cylindrical body portion formed with transverse alined openings communicating with the respective upper and lower compartments, and a valve for simultaneously controlling the said openings.

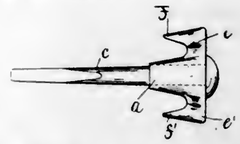
1,172,834. FILLING-DETECTING MECHANISM FOR LOOMS. WILLIAM RILEY, Reading, Pa., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 26, 1914. Serial No. 879,011. (Cl. 139—85.)



1. In filling detecting mechanism for looms, the combination of a filling fork to engage and be moved by contact with the filling, a vibrator having a hook to coöperate with the fork upon detection of filling absence, and a guard arm pivoted on said hook forward of, and having its free end normally extending above and beyond, the hook shoulder whereby upon abnormal movement of the fork by the filling it will on rebound rest upon said guard arm until the hook has moved forwardly to carry the hook shoulder out of fork engaging position.

2. In filling detecting mechanism for looms, the combination of a filling fork to engage and be moved by contact with the filling, a vibrator having a hook to vibrate with the fork upon detection of filling absence and hook shoulder, guarding means acting to prevent the fork upon rebound, after abnormal filling induced movement, from engaging the hook shoulder and thereby improperly effecting a change in the operation of the loom.

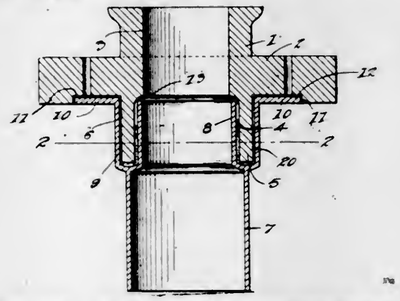
1,172,835. CLOTHES-LINE HOOK AND FASTENER. HOLT ROBINSON, Bradford, England. Filed Apr. 25, 1914. Serial No. 834,386. (Cl. 24—130.)



1. A hook or fastener of the character described comprising a supporting member, and a hub rotatably mounted upon said supporting member and provided with claws spaced therefrom and extending approximately parallel therewith.

2. A hook or fastener of the character described comprising a supporting member, and a hub rotatably mounted upon said supporting member and provided at one end with radiating arms having tapered claws extending approximately parallel with said hub.

1,172,836. WASTE-PIPE CONNECTION. GEORGE F. ROSER, Louisville, Ky. Filed Aug. 11, 1914. Serial No. 856,253. (Cl. 137—94.)



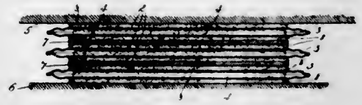
In a waste pipe connection, the combination with an outlet fixture having a transversely extending flange and a second flange depending from the transversely extending flange, of a member comprising spaced walls forming a chamber for receiving the depending flange, a sealing liquid in the said chamber for forming an air tight connection around the depending flange, a transversely extending flange formed upon the upper end of the outer of said spaced walls and adapted to coöperate with the first named transversely extending flange and to bear a packing upon its upper surface, the inner of said spaced walls being spaced from the depending flange to permit of the entrance of water therebetween to assist in forming an air tight connection around said depending flange.

1,172,837. TOOL AND PART OF A TOOL. AXEL B. ROSS, Port Richmond, N. Y., assignor of one-half to Frank H. Lindner, Bloomfield, N. J. Filed July 30, 1912. Serial No. 712,281. (Cl. 148—40.)

A rivet-set composed of iron containing one-tenth of one per cent. of carbon and eight-tenths of one per cent of manganese, the outer shell thereof being hardened to substantially one-thirty second of an inch.

1,172,838. DEVICE FOR PREVENTING THE TRANSMISSION OF SOUND. WALLACE C. SABINE, Boston, Mass. Filed July 8, 1914. Serial No. 849,861. (Cl. 248—30.)

1. The combination with an object exerting pressure and a base, of a sound-insulating device interposed between said object and base holding the same out of contact with one another, said device comprising an hermetic cell having a metallic shell the metal of which is flexible and under tension and which cell contains a gaseous fluid.



2. A sound-insulating device comprising an hermetic cell having a compressible, metallic shell containing a gaseous fluid and associated therewith a stratum of heavy mass.

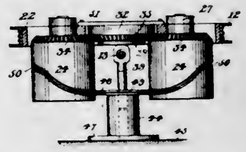
3. A sound-insulating device comprising an hermetic cell having a compressible, metallic shell containing a gaseous fluid and associated therewith a stratum of heavy mass and also a stratum of some sound-absorbing material.

4. A sound-insulating device comprising a compressible, hermetic cell containing both a gaseous fluid and some fibrous, sound-absorbing material.

5. A sound-insulating device comprising a compressible, hermetic cell containing both a gaseous fluid and some fibrous, sound-absorbing material, and associated therewith a stratum of heavy mass.

[Claims 6 to 8 not printed in the Gazette.]

1,172,839. AUTOMOBILE-ELEVATING JACK. PAUL SABO, Racine, Wis. Filed Sept. 28, 1915. Serial No. 53,031. (Cl. 254—86.)



1. In combination with an automobile, a supporting frame substantially centrally arranged therein, cylindrical actuating blocks vertically journaled in the said frame and having oppositely inclined guide grooves arranged encirclingly therearound, operating means for the said blocks, and a spool-shaped base support guidably mounted in operative engagement with the said grooves.

2. In combination with an automobile, a supporting frame substantially centrally arranged therein, cylindrical actuating blocks vertically journaled in the said frame and having oppositely inclined guide grooves arranged encirclingly therearound, operating means for the said blocks, and a guide post centrally carried by the said bracket and slidingly positioned through the central bore of the said spool-shaped support, the peripheral edge of the upper flange of the said support being complementally formed with respect to the said guide grooves and being in operative engagement therewith.

3. A vehicle jack comprising the combination with the vehicle frame and the engine shaft thereof, of a transverse supporting frame carried by the said vehicle frame having a centrally-arranged annulus having a curved upper edge, a pinion horizontally positioned and having an annular socket seated upon the said curved annular edge, oppositely-arranged actuating blocks cylindrical in form having toothed upper peripheries in mesh with the said pinion and vertically journaled in the said supporting frame, operative connections between the said engine shaft and pinion, and a base support between the said actuating blocks operatively connected thereto and adapted for vertical movement simultaneously with the revolving of the said blocks.

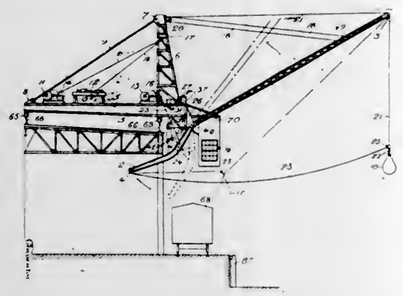
4. A vehicle jack comprising the combination with the vehicle frame and the engine shaft thereof, of a transverse supporting frame carried by the said vehicle frame

having a centrally-arranged annulus having a curved upper edge, a pinion horizontally positioned and having an annular socket seated upon the said curved annular edge, oppositely-arranged actuating blocks cylindrical in form having toothed upper peripheries in mesh with the said pinion and vertically journaled in said supporting frame, operative connections between the said engine shaft and pinion, the said pinion having a central socket on the under face thereof and the said base support having a central longitudinal bore therethrough and having its upper flange provided with a sharpened periphery, the said blocks being provided with encircling oppositely-inclined guide grooves with the said flange periphery normally positioned therein, and a guide post slidably mounted within the said support bore and having a spherical head journaled within the said pinion socket.

5. An elevating jack for vehicles comprising a supporting frame, oppositely-arranged cylindrical actuating blocks vertically journaled therein and provided with encircling oppositely inclined guide grooves, an operating pinion for the said blocks horizontally journaled therebetween, a guide post rotatably suspended centrally of the said pinion, and a spool-shaped base support provided with a central bore within which the said post is slidably positioned and having its upper flange provided with a sharpened peripheral edge operatively engaging within the said guide grooves of the blocks.

[Claim 6 not printed in the Gazette.]

1,172,840. DOUBLE-WHIP CRANE. HARRY SAWYER, Muskegon, Mich. Filed Nov. 23, 1914. Serial No. 873,445. (Cl. 212—47.)



1. In a crane, a crane frame, booms pivotally mounted thereon to swing independently in the same vertical plane, a load engaging device, and a load hoist for each boom, each of said load hoists connected to said load engaging device.

2. In a crane, a crane frame, booms pivotally mounted thereon to swing vertically, in the same vertical plane, means for independently rocking each boom about its pivot axis, a load engaging device, and a load hoist for each boom, each of said load hoists connected to said load engaging devices.

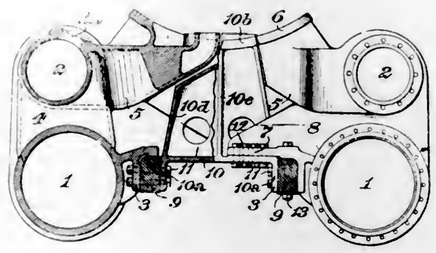
3. In a crane, a crane frame, a pair of booms pivotally mounted thereon on a common horizontal axis, means for independently swinging said booms upon said axis, a load engaging device and a load hoist associated with each boom, each load hoist connected to said load engaging device.

4. In a crane, a crane frame, a main and an auxiliary boom pivotally mounted on said frame to swing independently in the same vertical plane, said booms extending in opposite directions from each other, a load engaging device and a load hoist associated with each boom, each of said hoists connected to said load engaging device and coöperating to handle the load.

5. In a crane, a movable crane frame, booms pivotally mounted thereon to swing in the same vertical plane, means for independently swinging said booms, a load engaging device, a load hoist associated with each boom, and both connected to said load engaging device and cooperating to handle the load, and means for operating said hoists.

[Claims 6 to 14 not printed in the Gazette.]

1,172,841. LOCOMOTIVE-CYLINDER. FRANK F. SCOVILLE, Schenectady, N. Y. Filed Oct. 8, 1915. Serial No. 54,727. (Cl. 121—14.)



1. The combination of two locomotive cylinder members, each comprising a cylinder, a distribution valve chest, and steam and exhaust passages, said cylinder members abutting at their middle portions; an interposed connection member, of box form, adapted to fit between the end portions only of the cylinder members, and entirely clear of their steam and exhaust passages; and means for securing the cylinder members to the connection member.

2. The combination of two locomotive cylinder members, each comprising a cylinder, a distribution valve chest, and steam and exhaust passages, said members having smoke box seats on their tops, an interposed connection member having smoke box seats on its top registering with those of the cylinder members, and means for securing the cylinder members to the connection member.

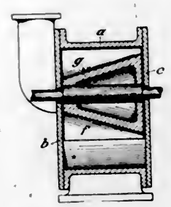
3. The combination of two locomotive cylinder members, each comprising a cylinder, a distribution valve chest, and steam and exhaust passages, said members having smoke box seats on their tops which are adapted to adjoin at their middle portions and are of greater length on their outer sides than on their adjoining middle portions; a connection member interposed between said cylinder members and having smoke box seats on its top abutting against the inner end portions of the cylinder member smoke box seats; and means for securing the cylinder members to the connection member.

4. The combination of two locomotive cylinder members, each comprising a cylinder, a distribution valve chest, steam and exhaust passages, and horizontal bearings adjoining its ends; an interposed connection member, of box form, adapted to fit between the end portions only of the cylinder members, and entirely clear of their steam and exhaust passages and having a base plate adapted to support the bearings of the cylinder members; and means for securing said bearings to said base plate.

5. The combination of two locomotive cylinder members, each comprising a cylinder, a distribution valve chest, steam and exhaust passages, and longitudinal flanges adapted to abut against the outer sides of the locomotive frame members; an interposed connection member, of box form, adapted to fit between the end portions only of the cylinder members, and entirely clear of their steam and exhaust passages, and having downwardly depending lateral flanges adapted to abut against the inner sides of locomotive frame members; and means for securing the cylinder members to the connection member through said longitudinal and lateral flanges.

[Claims 6 to 10 not printed in the Gazette.]

1,172,842. ROTARY PUMP OR BLOWER. OTTO SIEMEN, Berlin-Siemensstadt, and WERNER SIECKE, Berlin, Germany, assignors to Siemens-Schuckertwerke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed June 11, 1914. Serial No. 844,510. (Cl. 230—22.)

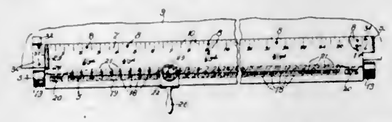


1. A rotary pump or blower of the class specified, comprising in combination a casing, a bladed runner therein, said runner and said casing being adapted to produce chambers during rotation of the pump or blower, which chambers will contract or expand in axial and radial direction simultaneously.

2. A rotary pump or blower of the class specified, comprising a casing, a bladed runner therein, an inlet and an exhaust, said casing and said runner being adapted to produce chambers during rotation of the pump or blower, which chambers will expand in axial as well as in radial direction away from said inlet and contract in a like manner toward said exhaust.

3. A rotary pump or blower of the class specified, comprising an essentially cylindrical casing, a bladed runner therein, said bladed runner having a hub or central body which is of conical form, whereby during a working phase chambers will be formed which are contracting or expanding in axial as well as in radial direction.

1,172,843. COMPUTING AND MEASURING MACHINE. IRA J. SMUCKER, Chicago, Ill. Filed Apr. 12, 1915. Serial No. 20,953. (Cl. 33—128.)

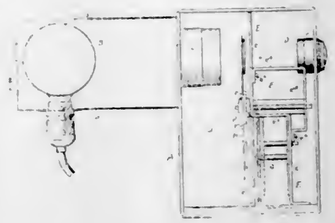


1. In a device of the class described, the combination with computing mechanism, of a lineal scale; a marking device provided at one end of said scale, said marking device comprising a stick of marking material arranged above and spaced slightly from said scale; a holder for said marking member; and an inclined surface leading upwardly toward said marking member, substantially as described.

2. In a device of the class described, the combination with computing mechanism, of a lineal scale; a marking device provided at one end of said scale, said marking device comprising a stick of marking material arranged above and spaced slightly from said scale; and a tubular holder for said marking member cut away at its under side at one end to expose said marking member, substantially as described.

1,172,844. STEREOPTICON ADVERTISING-CLOCK. ABRAHAM STEINBERG, Chicago, Ill., assignor to Kineto Machine Company, a Corporation of Illinois. Filed Jan. 25, 1915. Serial No. 4,244. (Cl. 88—27.)

1. A rotatable plate carrier comprising a hub and radial arms extending out from said hub and tappets on said arms, alternate ones of said tappets being at substantially the same distance from said hubs, and adjacent tappets being at a different distance, tables spaced from each other, means to rotate said carrier and means to move said tables to permit a tappet on one thereof to pass through said space, transparent plates adapted to be attached to said carrier and stereopticon means to project said plates.



2. A rotatable plate carrier comprising a hub and radial arms extending out from said hub and tappets on said arms, in combination with tables spaced from each other and means to move said tables, said tappets positioned so that when said tables are in position for one of said tappets to pass between said tables the following tappet will strike one of said tables, and means to rotate said carrier, stereopticon plates adapted to be attached to said carrier and stereopticon means to project said plate.

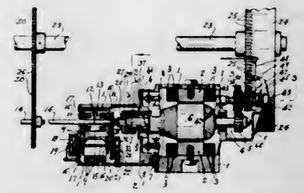
3. A rotatable carrier comprising a hub and radial arms extending out from said hub, in combination with a disk adapted to fit over said hub and against said radial arms, and means to removably secure said disk in place, plates, said disk provided with means to attach said plates thereto in determined positions, and provided with apertures registering with said plates and stereopticon means to project said plates.

4. A rotatable carrier comprising a hub and radial arms extending out from said hub, in combination with a disk adapted to fit over said hub and against said arms, means to removably secure said disk on said hub, pockets on said disk, and the bottoms of said pockets provided with apertures, stereopticon plates adapted to fit in said pockets, means to secure said plates in said pockets, a lens and a source of light.

5. A rotatable carrier comprising a hub, radial arms on said hub and tappets on said arms, adjacent ones of said tappets positioned at different distances from said hub, in combination with a pivoted arm, spaced tables on said arm, and said arm provided with a slot, a gear wheel, a wrist pin on said wheel adapted to fit and move in said slot, means to continuously move said gear wheel, stereopticon plates attachable to said carrier and means to project said plates.

[Claim 6 not printed in the Gazette.]

1,172,845. GEARING FOR STARTING MECHANISM. JOSHUA A. STRUTHERS, Jersey City, N. J., assignor to The Tri-Unit Electrical Co., a Corporation of New Jersey. Filed May 14, 1913. Serial No. 767,508. (Cl. 74—7.)

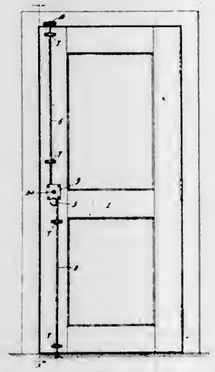


1. In electric starting mechanism for internal combustion engines, the combination with the crank-shaft of the engine of a fly-wheel provided with gear-teeth on its circumference, a dynamo electric machine, which also operates as a motor, provided with an armature shaft, a housing, a releasable transmission mechanism between said fly-wheel and said armature-shaft, comprising a

spur-gear fixed on said armature shaft, a short shaft journaled in said housing, a sleeve rotatably mounted on said short shaft so as to be longitudinally movable thereon, means for moving said sleeve longitudinally, a spur-gear on said sleeve adapted to be carried into mesh with said gear-teeth of said fly-wheel, and an automatic clutch coupling provided with gear-teeth and mounted on said sleeve, said gear-teeth of said clutch coupling being adapted to be carried into mesh with said spur-gear on said armature-shaft.

2. In electric starting mechanism for internal combustion engines, the combination with the crank-shaft of the engine of a fly-wheel provided with gear-teeth on its circumference, a dynamo electric machine, which also operates as a motor, provided with an armature shaft, a housing, a releasable transmission mechanism between said fly-wheel and said armature-shaft, comprising a spur-gear fixed on said armature shaft, a short shaft journaled in said housing, a sleeve rotatably mounted on said short shaft so as to be longitudinally movable thereon, means for moving said sleeve longitudinally, a spur-gear on said sleeve adapted to be carried into mesh with said gear-teeth of said fly-wheel, and an automatic clutch coupling provided with gear-teeth and mounted on said sleeve, said gear-teeth of said clutch coupling being adapted to be carried into mesh with said spur-gear on said armature-shaft, said clutch-coupling comprising a male-member secured upon said sleeve, a female-member carrying said gear-teeth of said coupling and adapted to receive said male-member, and automatic means between said male and female-members whereby rotation of the latter drives the former, and yet permitting an independent forward rotation of said male-member and the sleeve to which it is secured.

1,172,846. DOOR-LOCK. OLOF F. SWANSON, Chicago, Ill. Filed Dec. 8, 1914. Serial No. 876,106. (Cl. 70—74.)



In a lock, the combination with a door, of a locking mechanism therefor comprising a key-actuated rotatable barrel mounted in said door; a pair of locking bolts shiftably mounted on said door for movement in opposite directions thereon; means for shifting said bolts, said means comprising a pair of shiftably mounted bars connected with said bolts adapted, when actuated, to acuate said bolts; a pair of oscillatory arms arranged between and engaging with said bars for actuating the latter; a rotatably mounted spindle carrying said arms arranged coaxial with said barrel; a slot and tongue connection between said spindle and said barrel; and a tumbler cooperating with each of said bars adapted normally to yieldingly engage therewith to lock the corresponding bar at its respective terminals of movement, said arms, when rocked to actuate said bars, automatically engaging with said tumblers to move the same to releasing position, substantially as described.

1,172,847. SHIELD. MARGARET M. THOMAS, San Francisco, Cal. Filed Feb. 9, 1915. Serial No. 7,195. (Cl. 230—33.)

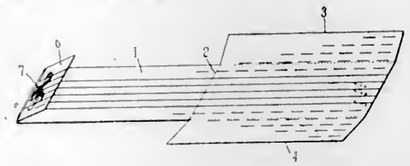


1. A shield composed of a body having an opening and a strip extending across the opening, said strip being secured at its ends to the body and having its intermediate portion free and located so as to allow the back of the hand to be disposed over the front of the body and a finger to be engaged beneath and over the strip and in said opening so as to support the body in part from the back of the hand.

2. A shield composed of a body having an opening, a strip extending across the opening, said strip being secured at its ends to the body and having its intermediate portion free and located so as to allow the back of the hand to be disposed over the front of the body and a finger to be engaged beneath and over the strip and in said opening so as to support the body in part from the back of the hand, and a reinforcing member secured to each side of the body and to said strip and having cut-out parts which register with the adjacent portions of said opening.

3. A shield composed of a body and member secured at its ends to the body and having its intermediate portion movable away from the body, said member being located so that the back of the hand may be placed over the front of the body and one of the fingers engaged beneath and over the front of the member so as to support the body from the strip.

1,172,848. INSTRUCTIVE GAME. MAY VALENTINE, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,829. (Cl. 35—12.)



1. A device of the character described comprising a panel charted to represent the staff, another panel charted to represent the piano keyboard, and movable pieces representing musical signs or characters, whereby said pieces may be placed upon said staff or keyboard to indicate the proper location and arrangement of the characters.

2. A device of the character described comprising a panel charted to represent the staff, and foldable wings secured to said panel, said wings being charted to represent the leger lines.

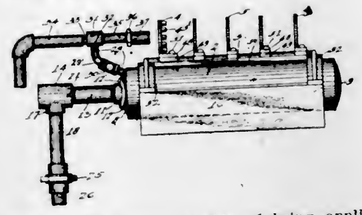
3. A device of the character described comprising a foldable panel charted to represent the staff, and foldable wings secured to the said panel, said wings being charted to represent the leger lines.

4. A device of the character described comprising a panel charted to represent the staff, and a foldable flap secured to said panel, said flap being charted to represent a clef.

5. A device of the character described comprising a panel charted to represent the staff and a clef, and a foldable flap secured to said panel and charted to represent a different clef.

[Claims 6 and 7 not printed in the Gazette.]

1,172,849. LIQUID-FUEL BURNER. PHINEAS A. VORE and VERNON W. VORE, Long Beach, Cal. Filed July 21, 1914. Serial No. 852,310. (Cl. 122—10.)



1. A liquid fuel burner capable of being applied to cooking stoves and the like comprising a base having a fuel chamber, a steam generator removably mounted thereon, water supply means for the generator, horizontally disposed float means disposed within the generator and pivoted in the water supply means for regulating the quantity of water delivered to the generator, a nozzle disposed above the generator and connected therewith, and means above the generator in the plane of the nozzle for deflecting the flame horizontally over the generator and affording additional radiating surface therefor.

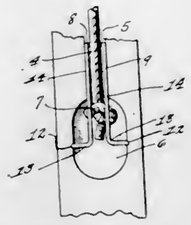
2. A liquid fuel burner capable of being applied to cooking stoves and the like comprising a base having a fuel chamber, a steam generator removably positioned thereon and above said chamber, a skeleton frame removably positioned on the generator and said base, a nozzle disposed over the generator and connected therewith, fuel supply means for the nozzle and water supply means for the generator, float means disposed within the generator and pivoted in the water supply means for regulating the quantity of water delivered therethrough, and means for limiting the quantity of steam delivered to the nozzle, in combination.

3. A liquid fuel burner capable of being applied to cooking stoves and the like provided with a fuel receptacle for holding a quantity of fuel for preliminary heating of the generator, a generator removably positioned on the fuel receptacle for supplying steam to the nozzle, means for supplying water to the generator, float means in the generator for regulating the quantity of water supplied thereto, a nozzle connected with the generator for spraying the flame therearound, means for supplying fuel to the nozzle, and adjustable means disposed in the plane of the nozzle, for deflecting the flame horizontally over the generator, in combination.

4. A liquid fuel burner capable of being applied to cooking stoves and the like provided with a fuel receptacle for holding a quantity of fuel for the preliminary heating of the generator, a generator removably positioned thereon for supplying steam to the nozzle, a skeleton frame removably positioned on the generator, a nozzle disposed over the generator for spraying the flame therearound, fuel supply means for the nozzle, means for connecting the nozzle with the generator for delivering a limited quantity of steam thereto, a plurality of disks in the plane of the nozzle and adjustably mounted on said frame for horizontally deflecting the frame at a desired angle from the nozzle and for affording a maximum radiating surface, and float controlled means connected with the generator for supplying water to the generator, in combination.

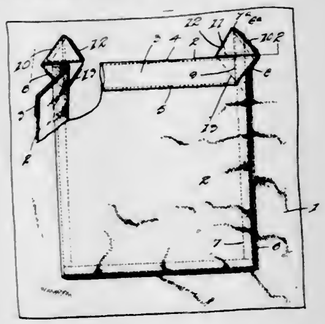
1,172,850. SASH-CORD FASTENER. ROBERT W. WADE, Baltimore, Md. Filed Apr. 3, 1914. Serial No. 829,394. (Cl. 16—16.)

A sash cord fastener comprising a single length of wire, bent to assume substantially two parallel arms of equal length, the ends of said arms being bent outwardly in alinement with and inwardly transversely to said arms, the inwardly extended portions being sharpened



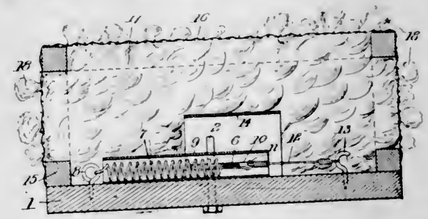
forming sash engaging ends, and having the upper connected end of said parallel arms bent inwardly at right angle thereto.

1,172,851. REINFORCED POCKET. HENRY HARRY WAGNER, Milwaukee, Wis. Filed Feb. 25, 1914. Serial No. 820,872. (Cl. 2—134.)



A device of the class described comprising a reinforcing strip secured to the upper edge of a pocket so that its longitudinal edges lie parallel with the edge of the pocket, said strip being folded so that an edge of the folded portion lies in a plane perpendicular to the strip, the folded portion again being folded so that an edge extends parallel with the upper edge of the pocket and the parallel extension being folded so that its end extends downwardly and diagonally into the pocket and stitches extending through the portions reinforcing the same.

1,172,852. ELECTRIC FIRE-ALARM. JULIOUS L. WEATHERS, Shelby, N. C. Filed Feb. 5, 1915. Serial No. 6,289. (Cl. 200—33.)



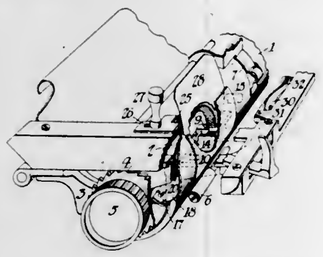
1. In a fire alarm system, an automatic circuit closer comprising a switch member, means for moving said switch member to circuit closing position, a fusible link normally restraining the movement of said switch member, a cage inclosing all of said parts, and a mass of com-

bustible material filling said cage and projecting through the walls thereof.

2. In a fire alarm system, an automatic circuit closer comprising a switch member, means for moving said switch member to circuit closing position, a fusible link normally restraining the movement of said switch member, a wire cage inclosing said parts, and a mass of fibrous combustible material contained in said cage and having portions projecting through the meshes thereof, whereby an outside flame may readily ignite the same.

3. In a fire alarm system, a circuit closer comprising a base, a pair of contact posts carried thereby, a switch member adapted to engage and electrically connect said posts, a spring urging said switch member toward said posts, a fusible link restraining the movement of said switch member, a mass of combustible material enveloping said parts, and a shield secured to the base and extending over the switch member so as to protect the same from contact with the said mass of combustible material.

1,172,853. TYPE-WRITING MACHINE. LESTER A. WERNERY, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 7, 1914. Serial No. 837,078. (Cl. 197—136.)



1. In a typewriting machine, in combination, a rotatable platen having a slot lengthwise thereof, a work-piece clamp adapted to engage the surface of said platen, a shank on said work-piece adapted in thickness to the width of said slot, and extending practically the length of said clamp, an extension on said shank, a rod rotatable within the platen and having an eccentric portion engaging said extension, a spring, an extension on said rod adapted to be engaged by said spring to cause the rod to hold the work-clamp against the surface of the platen, and a stop fixed in the path of said extension so as to release the work-clamp when the platen has been rotated to a certain point.

2. In a typewriting machine, in combination, a rotatable platen with a longitudinal slot in the surface thereof, a work-piece clamp adapted to engage the surface of said platen on both sides the slot, a slot engaging shank on the clamp, an extension to said shank, a hole in said extension, a latch over said hole, a rotatable rod within said platen, an eccentric portion on said rod, said rod being so mounted that the said eccentric portion may engage the hole in said shank extension and be latched therein, an extension on said shaft, a spring coiled about the platen shaft and engaging said shaft extension to draw the work-clamp against the platen, and means engaging said shaft extension whereby the work may be released from said work-clamp at a predetermined point in the rotation of the platen.

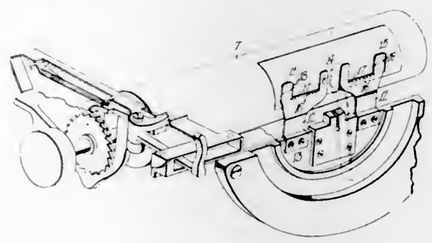
3. In a typewriting machine, the combination with a revoluble platen, of a plate movable to and from the platen surface to engage and release a work-piece, a shank on said plate, a spring engaging said shank, a fixed stop adjustable to and from its operative position, and means upon said plate operable by said stop whereby said plate is released in the rotation of said platen.

4. In a typewriting machine, the combination with a revoluble platen, of a plate movable to and from the platen surface to engage and release a work-piece, a stop, a shank on said plate adapted to be entered through a slot in the platen surface, an extension on said shank having a recess on one face thereof and a spring to cover said recess, and an eccentric rod adapted to engage with said recess and be held therein by said spring, said rod having an extension beyond the platen end where it meets said stop in the advance of the platen to release said plate.

5. In a typewriting machine, the combination with a revoluble platen, of a plate movable to and from the platen surface to engage and release a work-piece, a stop, a shank on said plate adapted to be entered through a slot in the platen surface, an extension on said shank having a recess on one face thereof and a spring to cover said recess, an eccentric rod adapted to engage with said recess and be held therein by said spring, said rod having an extension beyond the platen end where it meets said stop in the advance of the platen to release said plate, and a spring to return said rod and plate, to reseat the latter, on the return rotation of the platen.

[Claims 6 to 9 not printed in the Gazette.]

1,172,854. TYPE-WRITING MACHINE. LESTER A. WERNERY, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 16, 1915. Serial No. 56,179. (Cl. 197—135.)



1. In a typewriting machine, in combination with a carriage, platen and frame, of a pair of U-shaped springy clips secured to the frame in line with each other and in position to contact with the platen, the adjacent arms of the U's being close together, and the edges of the U's being flared.

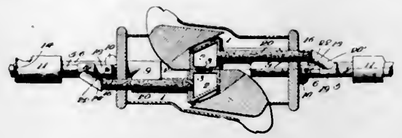
2. In a typewriting machine, the combination with a platen and a resilient paper clip comprising a pair of tongues fast to the machine frame, each of said tongues being as to its upper part of substantially U-shape, one side and the bottom edge of each of said U-shaped portions being flared.

3. In a typewriting machine, the combination with a platen and a resilient paper clip comprising a pair of tongues fast to the machine frame, each of said tongues being as to its upper part of substantially U-shape, each side of one arm of the U and the upper edge of the bottom of the U being flared.

4. In a typewriting machine, the combination with a platen and a pair of resilient paper clips secured to the frame of the machine, said paper clips each having two arms, the adjacent arms of each clip being close to the printing point, and the remote arms of the clip being flared on each side to permit adjustment of the platen and work thereon under said arm.

5. In a typewriting machine, the combination with a platen and a pair of resilient paper clips secured to the frame of the machine, said paper clips each having two arms, the adjacent arms of each clip being close to the printing point and the remote arms of the clip being flared on each side to permit adjustment of the platen and work thereon under said arm, each of said clips being provided with a gage extending between the bottoms of its two arms.

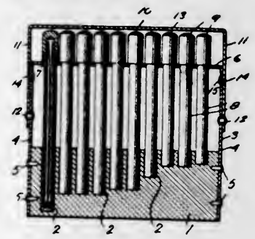
1,172,855. CONNECTION FOR TRAIN-PIPE AND COUPLING-HEADS. WALTER C. WHITE, Los Angeles, Cal., assignor to International Couplers Company, Los Angeles, Cal., a Corporation of California. Original application filed Aug. 13, 1912, Serial No. 714,862. Divided and this application filed Jan. 7, 1913, Serial No. 740,686. Renewed June 29, 1915. Serial No. 37,122. (Cl. 188—13.)



1. A train-pipe coupling comprising a coupler head having rearwardly projecting oppositely beveled lugs on its rear end at the center thereof, a train-pipe provided with a tapered tongue pivoted loosely between said lugs, a flexible tube extending laterally from said train-pipe and entering the coupler head through an opening in the rear wall thereof near the side of the same, and means on said train-pipe for applying pressure to the coupler head through the said projecting tongue and said lugs.

2. In a train-pipe coupling, the combination of a coupler head having rearwardly projecting lugs on its rear wall at its center, the opposed faces of said lugs being beveled and the coupler head being provided with an opening through its rear wall adjacent said lugs, a train-pipe having a tapered tongue at its end loosely pivoted between said lugs, a coupling on the said pipe, and a flexible tube extending from said coupling and passing through the opening in the rear wall of the coupler head.

1,172,856. NEEDLE-HOLDER. JOHN A. WILLIAMS, Richmond Hill, N. Y., assignor to The Williams-Purchas Manufacturing Co., Morris Park, N. Y., a Firm composed of said John A. Williams, Walter G. Purchas, and Maud I. Purchas, Richmond Hill, N. Y. Filed May 21, 1915. Serial No. 29,459. (Cl. 206—66.)



1. A holder for needles, comprising a block 1 having a series of sockets 2, a frame 3 having side members secured to the ends of the said block and a cross-member 6 provided with a series of openings 7, a series of tubes 8 provided with caps received within said openings and sockets, and a bail-shaped retainer 13 having its side members pivoted to the side members of the frame and its cross-member normally extending over the caps of the tubes.

2. A holder for needles, comprising a block 1 having a series of sockets 2, a frame 3 having side members secured to the ends of the said block and a cross-member 6 provided with a series of openings 7, a series of tubes 8 provided with caps received within said openings and sockets, a bail-shaped retainer 13 having its side members pivoted to the side members of the frame and its cross-member normally extending over the caps of the tubes, and yielding locking means 14, 15 on the frame and retainer for holding the latter in operative position.

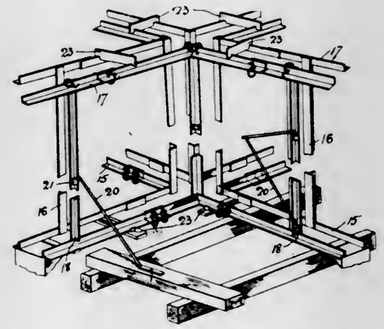
3. A needle holder comprising a flat oblong block having openings extending inward from one of its long narrow sides, a series of needle tubes of varying depth received at their inner portions in said openings and having their ends remote from the block substantially in alinement, a frame having side members secured to the ends of said block and a cross-member provided with a series of openings receiving the outer portions of said tubes, caps on said tubes above said cross-piece, and a bail-shaped retainer frame having side members hinged to the side members of the aforesaid frame and a cross-member normally lying over and adjacent said caps.

4. A needle holder comprising the combination of a block, a series of needle tubes received at their inner ends in said block, the needle compartments formed thereby extending varying distances into the block, a frame fixed to said block and having a cross-member with openings receiving the outer portions of the tubes, caps on the tubes, and a bail-shaped retainer frame hinged to said fixed frame and having a cross-member normally overlying said caps.

5. In a needle holder, a base block, a series of needle tubes of varying lengths carried thereby, a frame having side members fixed to the base block and a cross-member with openings receiving the outer portions of the tubes, caps for said tubes, and a bail-shaped retainer frame hinged to said fixed frame and adapted to be positioned over said caps or to be swung downward to serve as an easel support.

[Claims 6 and 7 not printed in the Gazette.]

1,172,857. WALL-MOLD. ROBERT WILSON, Hobart, Tasmania, Australia. Filed Sept. 15, 1915. Serial No. 50,792. (Cl. 25—131.)



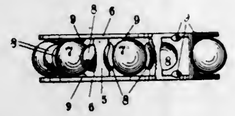
1. In a wall mold, the combination with horizontal ground irons, and standards supported thereon, of brackets at intervals along said standards, said brackets comprising an angle iron piece and blocks between each angle iron piece and the standard, goose-necks provided with hooked ends adapted to enter the space formed between the angle iron piece and the standard forming struts, and mold panels supported by the brackets.

2. In a wall mold, the combination with horizontal irons, and standards supported thereon, of brackets placed at intervals along the standards, said brackets consisting of short angle iron pieces, blocks between the angle iron pieces and the standards, said blocks being of lesser area than the angle iron pieces, panels between the standards and supported by the brackets, lugs on said panels, and wedges driven between the lugs and the angle iron pieces.

3. In a wall mold, horizontal ground irons, a web on each ground iron, standards upon said ground irons said standards being rabbeted in their lower ends to take into the web of the ground irons, short angle iron pieces secured at intervals to the standards and packed out from the same, mold panels supported on the angle iron pieces, distance pieces between the horizontal irons, and

goose-necks, having one end hooked into the space between the angle iron pieces and the standards and the other secured to the ground work to form struts.

1,172,858. BALL-RETAINER. FRANZ WINKLER, Schweinfurt, Germany. Filed Mar. 5, 1915. Serial No. 12,343. (Cl. 64—59.)



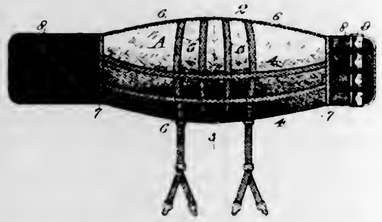
1. A retainer for ball-bearings comprising a ring-shaped member provided with ball-receiving perforations, flanges projecting radially from said ring member, and tongues projecting from said ring member adjacent said perforations approximately radially to the axis of the ring; said tongues being arranged in pairs and having their opposed faces spherically concaved to form seats for balls adapted to be retained therebetween and means for retaining said balls in place.

2. A retainer for ball-bearings comprising a ring-shaped member provided with ball-receiving perforations, flanges projecting radially from said ring member, a series of ball retaining tongues projecting from said ring member approximately radially to the axis of the ring, and a second series of tongues projecting from said end flanges and extending in a direction substantially at right angles to the first mentioned series of tongues, certain tongues of one series being adapted in conjunction with certain tongues of the other series, to retain a ball in position within said retainer.

3. A retainer for ball-bearings comprising a ring-shaped member having a series of ball-receiving apertures provided therein, flanges projecting radially from said member, a series of tongues extending from said ring-shaped member and arranged in pairs adjacent each ball receiving aperture, the opposed faces of said tongues being concave and conforming approximately to the curvature of a ball adapted to be seated therebetween, and a second series of tongues projecting from said end flanges at an angle thereto and in a direction opposite to said first mentioned tongues and adapted to retain the balls seated between said first mentioned tongues in place, substantially as described.

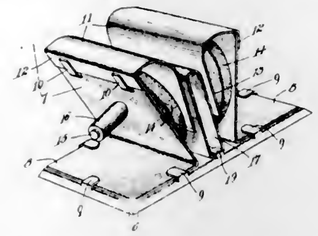
4. A retainer for ball-bearings, comprising a ring-shaped member provided with a number of ball-receiving perforations, radial flanges projecting from the edges of said ring member in substantially parallel planes, means disposed around the said perforations approximately radially to the axis of the ring so as to form pockets adapted to receive the balls and independent means carried by said ball retainer for retaining the balls seated in said pockets.

1,172,859. ABDOMINAL SUPPORTER. TOMI YAMASHITA, Oakland, Cal. Filed Sept. 13, 1915. Serial No. 50,349. (Cl. 2—188.)



An abdominal supporter comprising a main body, spaced tapes extending longitudinally of the body and secured at their ends thereto, said tapes being spaced from the top and bottom edges of the body, spaced tapes extending transversely of the body and secured to the top and bottom sides of the body, said longitudinal and transverse tapes intersecting at the front of the body and defining a series of independent spaced substantially rectangular parts, with the points of intersection between the top, bottom and ends of the body, and means to secure the body in position.

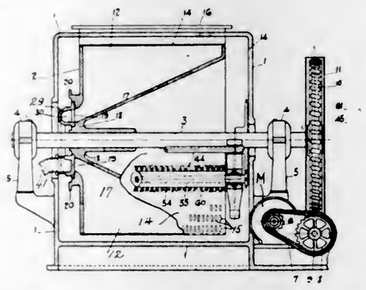
1,172,860. KNIFE-SHARPENER. FREDRICK C. ASCHBURNER, Chicago, Ill., assignor of one-half to John D. Pollard, Chicago, Ill. Filed Dec. 19, 1914. Serial No. 878,148. (Cl. 51—7.)



1. A knife sharpener comprising a base member; a pair of opposed abrasive wheels rotatably mounted on said base member with their inner faces upwardly and outwardly inclined; a guard for each of said wheels having a vertically positioned portion leading to the lower portion of said wheel; and a vertical guard arranged between said first mentioned guard and coöperating therewith to form vertical knife guides leading to the lower portion of said wheel, substantially as described.

2. A knife sharpener comprising a base member; a pair of upwardly and outwardly inclined supports secured to said base member; an abrasive wheel rotatably mounted in each of said supports with its inner face upwardly and outwardly inclined; a guard for each of said wheels having a vertically positioned portion leading to the lower portion of the wheel; and a vertical guard arranged between said guards and coöperating therewith to form vertical knife guides leading to the lower portions of said wheels, substantially as described.

1,172,861. SLUDGE-REDUCING MACHINE. HARRY H. STEPHENS, Philadelphia, Pa. Filed June 27, 1914, Serial No. 847,568. Renewed Jan. 25, 1916. Serial No. 74,278. (Cl. 210—14.)



1. In apparatus of the character described, the combination with a rotary drum having a plurality of compartments, of a screen covering said compartments, a stationary suction connection, and ports communicating with said compartments adapted to come successively into communication with said suction connection, the bottoms of said compartments increasing in distance from the axis of said drum from said ports to the opposite end of said drum.

2. In apparatus of the character described, the combination with a rotary drum having a plurality of compartments, of a screen covering said compartments, a stationary suction connection, ports in one end face of said drum communicating with said compartments and adapted to come successively into communication with said suction connection, said compartments communicating throughout their lengths directly with said ports and decreasing in depth directly from said ports to the opposite end of said drum.

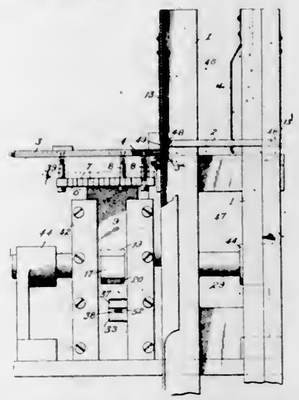
3. In apparatus of the character described, the combination with a rotary screen, of a plurality of compartments covered by said screen, a stationary suction connection, ports communicating with said compartments adapted to come successively into communication with said suction connection, means for removing material from said screen, said suction connection having a port communicating with said compartment ports and having an angular extent substantially equal to the angle between the point of entry of material on to said screen and the point of removal of material from said screen, and means for angularly shifting said suction connection.

4. In apparatus of the character described, the combination with a rotary drum having a plurality of longitudinally extending compartments, of a screen covering said compartments, a stationary suction connection having an arcuate port, said compartments having ports in a plane at right angles to the axis of rotation of said drum, said ports adapted to come into communication in succession with said port of said suction connection, and means for angularly shifting said suction connection with respect to the axis of said drum.

5. In apparatus of the character described, the combination with a rotary drum having longitudinally extending compartments, of a screen covering said compartments, an end of said drum having ports communicating with said compartments and disposed in a plane at right angles to the axis of rotation of said drum, a stationary suction connection having a port adapted to communicate with said ports in succession, and means rotatable with said drum holding said suction connection in operative relation with said end of said drum.

[Claims 6 to 10 not printed in the Gazette.]

1,172,862. SELECTIVE DEVICE FOR CARD-HANDLING APPARATUS. EDWIN DRAYTON BELKNAP, East Orange, N. J. Filed Mar. 2, 1914. Serial No. 822,045. (Cl. 83—92.)



1. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics, which magazine is provided with a slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a movable partition in said magazine and mechanism controlled by the distinguishing characteristics of the respective cards for moving said partition to one side or the other side of said slot.

2. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of said slot during the feeding of the card possessing such characteristics through the slot.

3. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of said slot during the feeding of the card possessing such characteristics through the slot, together with resilient devices located in said magazine above the level of the slot for retaining such cards as are lifted to them by the movable partition when returning to its normal position after each temporary depression.

4. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of the said slot during the feeding of the card possessing such characteristics through the slot, together with resilient devices located in said magazine above the level of the slot for retaining such cards as are lifted to them by the movable partition when returning to its normal position after each temporary depression, said partition having notches formed in its edges and said resilient means comprising yielding fingers mounted on the magazine walls, normally projecting into said notches and provided with beveled under faces.

5. In a card selecting apparatus the combination with separating means, of guides along which cards having perforations therethrough are fed, a reciprocating plunger having projections adapted to enter perforations in certain cards, means for forcing said plunger with yielding pressure against each card brought to rest in a certain position in said guides, and mechanism for actuating said separating means comprising a trigger connected to said separating means and a spring distended telescoping slide for operating the trigger, the said reciprocating plunger coöperating with the telescoping slide to telescope and disable the same from action on the trigger when the plunger does not make a full stroke, but permitting the slide to reciprocate freely and engage the trigger when the plunger does make a full stroke.

[Claims 6 to 8 not printed in the Gazette.]

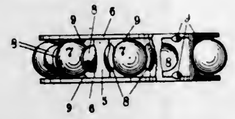
1,172,863. PROCESS FOR PRODUCING NITROGEN COMPOUNDS. OSCAR BENDER, Potsdam, Germany. Filed July 2, 1914. Serial No. 848,575. (Cl. 23—1.)

1. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and a nitrogen carrier, and separating the nitrogen compounds from the products of combustion.

2. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and aluminium

goose-necks having one end hooked into the space between the angle iron pieces and the standards and the other secured to the ground work to form struts.

1,172,858. BALL-RETAINER. FRANZ WINKLER, Schweinfurt, Germany. Filed Mar. 5, 1915. Serial No. 12,343. (Cl. 64—59.)



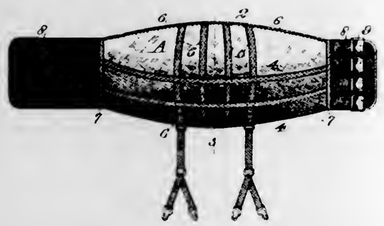
1. A retainer for ball-bearings comprising a ring-shaped member provided with ball-receiving perforations, flanges projecting radially from said ring member, and tongues projecting from said ring member adjacent said perforations approximately radially to the axis of the ring; said tongues being arranged in pairs and having their opposed faces spherically concaved to form seats for balls adapted to be retained therebetween and means for retaining said balls in place.

2. A retainer for ball-bearings comprising a ring-shaped member provided with ball-receiving perforations, flanges projecting radially from said ring member, a series of ball retaining tongues projecting from said ring member approximately radially to the axis of the ring, and a second series of tongues projecting from said end flanges and extending in a direction substantially at right angles to the first mentioned series of tongues, certain tongues of one series being adapted in conjunction with certain tongues of the other series, to retain a ball in position within said retainer.

3. A retainer for ball-bearings comprising a ring-shaped member having a series of ball-receiving apertures provided therein, flanges projecting radially from said member, a series of tongues extending from said ring-shaped member and arranged in pairs adjacent each ball receiving aperture, the opposed faces of said tongues being concave and conforming approximately to the curvature of a ball adapted to be seated therebetween, and a second series of tongues projecting from said end flanges at an angle thereto and in a direction opposite to said first mentioned tongues and adapted to retain the balls seated between said first mentioned tongues in place, substantially as described.

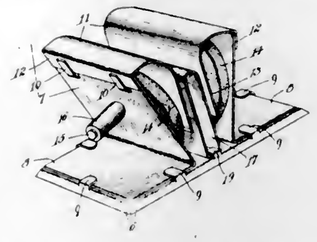
4. A retainer for ball-bearings, comprising a ring-shaped member provided with a number of ball-receiving perforations, radial flanges projecting from the edges of said ring member in substantially parallel planes, means disposed around the said perforations, approximately radially to the axis of the ring so as to form pockets adapted to receive the balls and independent means carried by said ball retainer for retaining the balls seated in said pockets.

1,172,859. ABDOMINAL SUPPORTER. TOMI YAMASHITA, Oakland, Cal. Filed Sept. 13, 1915. Serial No. 50,349. (Cl. 2—188.)



An abdominal supporter comprising a main body, spaced tapes extending longitudinally of the body and secured at their ends thereto, said tapes being spaced from the top and bottom edges of the body, spaced tapes extending transversely of the body and secured to the top and bottom sides of the body, said longitudinal and transverse tapes intersecting at the front of the body and definining a series of independent spaced substantially rectangular parts, with the points of intersection between the top, bottom and ends of the body, and means to secure the body in position.

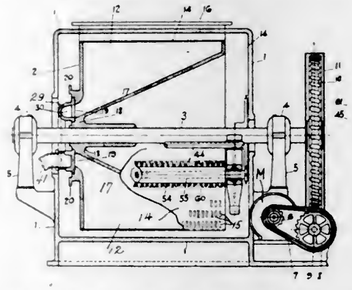
1,172,860. KNIFE-SHARPENER. FREDRICK C. ASCHBURNER, Chicago, Ill., assignor of one-half to John D. Pollard, Chicago, Ill. Filed Dec. 19, 1914. Serial No. 878,148. (Cl. 51—7.)



1. A knife sharpener comprising a base member; a pair of opposed abrasive wheels rotatably mounted on said base member with their inner faces upwardly and outwardly inclined; a guard for each of said wheels having a vertically positioned portion leading to the lower portion of said wheel; and a vertical guard arranged between said first mentioned guard and coöperating therewith to form vertical knife guides leading to the lower portion of said wheel, substantially as described.

2. A knife sharpener comprising a base member; a pair of upwardly and outwardly inclined supports secured to said base member; an abrasive wheel rotatably mounted in each of said supports with its inner face upwardly and outwardly inclined; a guard for each of said wheels having a vertically positioned portion leading to the lower portion of the wheel; and a vertical guard arranged between said guards and coöperating therewith to form vertical knife guides leading to the lower portions of said wheels, substantially as described.

1,172,861. SLUDGE-REDUCING MACHINE. HARRY H. STEPHENS, Philadelphia, Pa. Filed June 27, 1914, Serial No. 847,568. Renewed Jan. 25, 1916. Serial No. 74,278. (Cl. 210—14.)



1. In apparatus of the character described, the combination with a rotary drum having a plurality of compartments, of a screen covering said compartments, a stationary suction connection, and ports communicating with said compartments adapted to come successively into communication with said suction connection, the bottoms of said compartments increasing in distance from the axis of said drum from said ports to the opposite end of said drum.

2. In apparatus of the character described, the combination with a rotary drum having a plurality of compartments, of a screen covering said compartments, a stationary suction connection, ports in one end face of said drum communicating with said compartments and adapted to come successively into communication with said suction connection, said compartments communicating throughout their lengths directly with said ports and decreasing in depth directly from said ports to the opposite end of said drum.

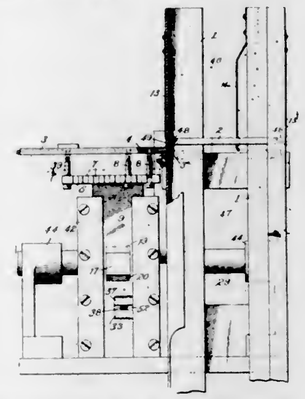
3. In apparatus of the character described, the combination with a rotary screen, of a plurality of compartments covered by said screen, a stationary suction connection, ports communicating with said compartments adapted to come successively into communication with said suction connection, means for removing material from said screen, said suction connection having a port communicating with said compartment ports and having an angular extent substantially equal to the angle between the point of entry of material on to said screen and the point of removal of material from said screen, and means for angularly shifting said suction connection.

4. In apparatus of the character described, the combination with a rotary drum having a plurality of longitudinally extending compartments, of a screen covering said compartments, a stationary suction connection having an arcuate port, said compartments having ports in a plane at right angles to the axis of rotation of said drum, said ports adapted to come into communication in succession with said port of said suction connection, and means for angularly shifting said suction connection with respect to the axis of said drum.

5. In apparatus of the character described, the combination with a rotary drum having longitudinally extending compartments, of a screen covering said compartments, an end of said drum having ports communicating with said compartments and disposed in a plane at right angles to the axis of rotation of said drum, a stationary suction connection having a port adapted to communicate with said ports in succession, and means rotatable with said drum holding said suction connection in operative relation with said end of said drum.

[Claims 6 to 10 not printed in the Gazette.]

1,172,862. SELECTIVE DEVICE FOR CARD-HANDLING APPARATUS. EDWIN DRAYTON BELKNAP, East Orange, N. J. Filed Mar. 2, 1914. Serial No. 822,045. (Cl. 83—92.)



1. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics, which magazine is provided with a slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a movable partition in said magazine and mechanism controlled by the distinguishing characteristics of the respective cards for moving said partition to one side or the other side of said slot.

2. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of said slot during the feeding of the card possessing such characteristics through the slot.

3. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of said slot during the feeding of the card possessing such characteristics through the slot, together with resilient devices located in said magazine above the level of the slot for retaining such cards as are lifted to them by the movable partition when returning to its normal position after each temporary depression.

4. The combination with a magazine for the reception of stencil or other cards having certain diverse classifying characteristics which magazine is provided with a horizontal slot in one side through which the cards may be fed into the magazine, and means for feeding said cards through said slot, of a horizontally movable partition in said magazine, means for normally holding the same above the level of said slot and means controlled by the distinguishing characteristics of certain cards for temporarily depressing said partition below the level of the said slot during the feeding of the card possessing such characteristics through the slot, together with resilient devices located in said magazine above the level of the slot for retaining such cards as are lifted to them by the movable partition when returning to its normal position after each temporary depression, said partition having notches formed in its edges and said resilient means comprising yielding fingers mounted on the magazine walls, normally projecting into said notches and provided with beveled under faces.

5. In a card selecting apparatus the combination with separating means, of guides along which cards having perforations therethrough are fed, a reciprocating plunger having projections adapted to enter perforations in certain cards, means for forcing said plunger with yielding pressure against each card brought to rest in a certain position in said guides, and mechanism for actuating said separating means comprising a trigger connected to said separating means and a spring distended telescoping slide for operating the trigger, the said reciprocating plunger coöperating with the telescoping slide to telescope and disable the same from action on the trigger when the plunger does not make a full stroke, but permitting the slide to reciprocate freely and engage the trigger when the plunger does make a full stroke.

[Claims 6 to 8 not printed in the Gazette.]

1,172,863. PROCESS FOR PRODUCING NITROGEN COMPOUNDS. OSCAR BENDER, Potsdam, Germany. Filed July 2, 1914. Serial No. 848,575. (Cl. 23—1.)

1. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and a nitrogen carrier, and separating the nitrogen compounds from the products of combustion.

2. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and aluminium

oxid, and separating the nitrogen compounds from the products of combustion.

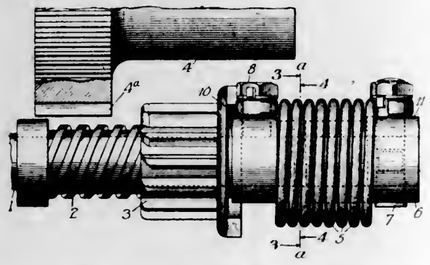
3. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and a compound containing aluminium and oxygen, and separating the nitrogen compounds from the products of combustion.

4. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and a nitrogen carrier and under pressure, and separating the nitrogen compounds from the products of combustion.

5. The herein described process of obtaining nitrogen compounds, which consists in burning a suitable fuel by means of air and in the presence of water and aluminium oxid, and cooling the combustion gases in the zone of highest temperature, and separating the nitrogen compounds from the products of combustion.

[Claims 6 to 9 not printed in the Gazette.]

1,172,864. STARTER FOR ENGINES. VINCENT BENDIX, Chicago, Ill. Filed Apr. 26, 1915. Serial No. 24,031. (Cl. 74—7.)



1. An engine starter comprising a driving member, a rotatable member driven thereby, a driving device mounted to travel longitudinally on said rotatable member and adapted to engage a part of the engine to be started, and a yielding driving connection between said two members comprising a spring having its ends anchored to said members respectively, and means for supporting the outermost coils of the spring, the other coils being unsupported.

2. An engine starter comprising a driving member, a rotatable member driven thereby, a driving device mounted to travel longitudinally on said rotatable member and adapted to engage a part of the engine to be started, and a yielding driving connection between said two members comprising a spring having its ends anchored to said members respectively, one of said members having a portion eccentric to its axis of rotation with its fat side adjacent the point of anchorage of the spring.

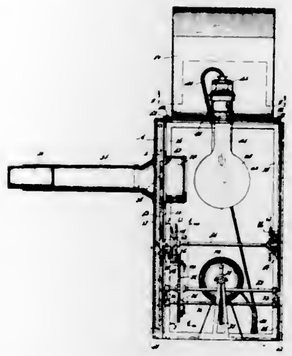
3. An engine starter comprising a driving member, a rotatable member driven thereby, a driving device mounted to travel longitudinally on said rotatable member and adapted to engage a part of the engine to be started, and a yielding driving connection between said two members comprising a spring having its ends anchored to said members respectively, which have portions eccentric to their axis of rotation with the fat side adjacent the points of anchorage of the spring.

4. An engine starter comprising a driving member, a rotatable member driven thereby, a driving device mounted to travel longitudinally on said rotatable member and adapted to engage a part of the engine to be started, a yielding driving connection between said members comprising a coiled spring, bolts on said members respectively to which the ends of the spring are anchored, and means adjacent the bolts for supporting the outermost coils of the spring, the other coils being unsupported.

5. An engine starter comprising a driving member extended to form a barrel, a rotatable member driven thereby, a driving device mounted to travel longitudinally on said rotatable member and adapted to engage a part of the engine to be started, and a yielding driving connection between said members comprising a coiled spring around the barrel and anchored at its ends to said members respectively, said members having eccentric portions whose fat sides are adjacent the points of anchorage of the ends of the spring.

[Claims 6 to 9 not printed in the Gazette.]

1,172,865. PROJECTING MACHINE. HUMBERT BIZZONI, Chicago, Ill., assignor to Theresa Reinshagen, Chicago, Ill. Filed June 9, 1915. Serial No. 33,057. (Cl. 88—27).



1. In a projecting machine, the combination of a projecting tube; a rotatable slide-holder adapted to accommodate a plurality of slides and successively carry the same into registration with said projecting tube upon rotation of said holder; a driving element; and means for imparting intermittent rotation to said holder upon operation of said driving element, said means being adjustable whereby the periods of movement and rest of said slide-holder may be varied, substantially as described.

2. In a projecting machine, the combination of a projecting tube; a rotatable slide-holder adapted to accommodate a plurality of slides and successively carry the same into registration with said projecting tube upon rotation of said holder; a driving element; means for imparting intermittent rotation to said holder upon operation of said driving element, said means comprising a rotary element adapted, upon rotation, to rotate said slide-holder; and tappets adapted for engagement with said rotary element for moving the same, substantially as described.

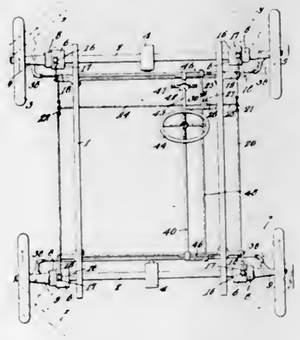
3. In a projecting machine, the combination of a projecting tube; a rotatable slide-holder adapted to accommodate a plurality of slides and successively carry the same into registration with said projecting tube upon rotation of said holder; a driving element; means for imparting intermittent rotation to said holder upon operation of said driving element, said means comprising a rotary element adapted, upon rotation, to rotate said slide-holder; and movably mounted tappets adapted for engagement with said rotary element to actuate the same, said tappets being adjustable toward and from each other whereby the periods of movement and rest of said slide-holder may be varied, substantially as described.

4. In a projecting machine, the combination of a projecting tube; a movably mounted slide-holder adapted to accommodate a plurality of slides and carry the same into successive registration with said projecting tube upon movement of said holder; a driving element; means for imparting intermittent movement to said holder upon operation of said driving element, said means comprising a member having projections adapted, when moved, to actuate said slide-holder; a plurality of movably mounted tappets adapted to successively engage with and move said projections; and an operative connection between said driving element and said tappets, substantially as described.

5. In a projecting machine, the combination of a projecting tube; a movably mounted slide-holder adapted to accommodate a plurality of slides and carry the same into successive registration with said projecting tube upon movement of said holder; a driving element; means for imparting intermittent movement to said holder upon operation of said driving element, said means comprising a member having projections adapted, when moved, to actuate said slide-holder; a rotary member connected for continuous rotation by said driving element; and a plurality of tappets mounted on said member adapted to successively engage with and move said projections, said tappets being adjustably mounted whereby the periods of movement and rest of said slide-holder may be varied, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,172,866. RUNNING-GEAR FOR MOTOR-VEHICLES. STPHEN SIGLE BLEVINS, Houston, Tex., assignor of one-half to Edward J. McMahon, Houston, Tex. Filed Mar. 27, 1914. Serial No. 827,742. (Cl. 21—90.)



1. A motor vehicle including front and rear wheels mounted to swing about individual vertical axes, reversible power transmitting mechanism for each wheel, and means for shifting said mechanisms to rotate the front wheels in either the same or different directions and to rotate the rear wheels in either the same or different directions.

2. A motor vehicle including front and rear wheels mounted to swing about individual vertical axes, reversible power transmitting mechanism for each wheel, means for shifting said mechanisms to rotate the front wheels in either the same or different directions and to rotate the rear wheels in either the same or different directions, steering mechanism, and means controlled by said shifting means for adjusting the steering mechanism to swing the front and rear wheels simultaneously into position either to guide the vehicle during the rotation of the wheels, or to revolve the vehicle about its center during such rotation of the wheels.

3. A motor vehicle including front and rear wheels mounted to swing about individual vertical axes, reversible power transmitting mechanism for each wheel, means for shifting said mechanisms to rotate the front wheels in either the same or different directions and to rotate the rear wheels in either the same or different directions, steering mechanism, and means controlled by said shifting means when moved to rotate the wheels in different directions, for adjusting said steering mechanism to swing the front and rear wheels into position to revolve the vehicle about its center during the rotation of the wheels.

4. The combination with the front and rear axles of a motor vehicle, alining shafts in each axle, wheels carried by certain of the shafts, gears carried by the shafts, and vertically movable reversing gears interposed between the first named gears, of means for simultaneously raising and lowering the reversing gears at one side of the vehicle, means for simultaneously raising and lowering the reversing gears at the other side of the vehicle, said means being operable together or independently, steering mechanism, and means actuated by one of said first named means for adjusting the steering mechanism to swing the front and rear wheels simultaneously into position to revolve the vehicle about its center during the rotation of the wheels at the two sides of the machine in opposite directions respectively.

5. In a motor vehicle, the combination with front and rear axles, spindles mounted to swing relative thereto about vertical axes, reversible driving mechanism within each axle and spindles, and wheels upon the spindles and driven by said mechanism, of arms extending from the spindles, a rack connected to each arm, the racks extending toward one side of the machine being lapped by the racks extending toward the opposite side of the machine, a longitudinal shaft, gears thereon meshing with one of the racks at each end of the vehicle, frames pivotally mounted upon the shaft, a pair of meshing gears within each frame, one gear of each pair meshing with one of the first mentioned gears on the shaft, and means for shifting the frames simultaneously to bring either gear of each pair into mesh with one of the racks thereby to move the racks at each end of the vehicle in either the same or in opposite directions as desired.

[Claim 6 not printed in the Gazette.]

1,172,867. LUBRICATING DEVICE. GEORGE W. BOWEN, Auburn, N. Y. Filed July 11, 1913. Serial No. 778,503. (Cl. 184—38.)

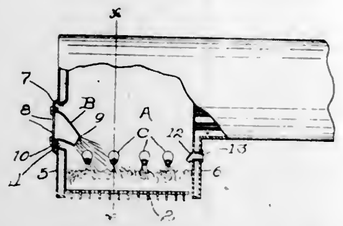


1. A lubricating device comprising a substantially cylindrical cup-shaped sheet metal body having a bottom formed with an axial opening, and a base comprising a stem extending through the opening in the bottom and having a head located on the bottom, a portion of the body being pressed inwardly to overlie the upper face of the head for retaining the base and the body against relative movement, substantially as and for the purpose described.

2. A lubricating device comprising a substantially cylindrical cup-shaped sheet metal body having a bottom formed with an axial opening and a non-circular socket around the opening, and a base comprising a stem extending through the opening in the bottom and having a head located in the socket and substantially fitting the same, a portion of the body overlying the upper face of the head for retaining the base and the body against relative movement, substantially as and for the purpose specified.

3. A lubricating device comprising a cup having an opening in its bottom, and a groove around the opening, the bottom of the cup forming one of the sides of the groove and the portion of the cup above the groove being of less diameter than the groove, and thereby forming the other side of the groove and providing the cup with an outwardly extending base, and a stem extending through the opening and having a flange lying on the bottom of the cup and having its margin fitting the groove, substantially as and for the purpose set forth.

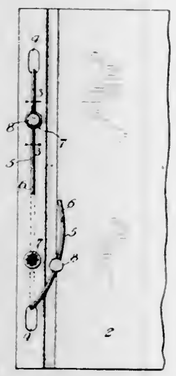
1,172,868. FURNACE ATTACHMENT. WILLIAM H. BROWN, Minneapolis, Minn. Filed Dec. 15, 1913. Serial No. 806,673. (Cl. 110—76.)



1. In combination with a furnace fire box having double side and end walls and a grate adapted to support fuel, and a plurality of spaced draft devices extending through said walls and substantially around the fire box, each of said draft devices being bent intermediate its ends so that its discharge opening feeds air directly upon the fuel at a point adjacent the fire box walls, and each of said draft devices having an annular bead intermediate its ends contacting with the inner face of the inner wall of said fire box, the outer edge of each of said draft devices being rolled to engage the outer face of the outer wall of said fire box.

2. The combination with a furnace fire box having side and end walls, one of the end walls being provided with an opening, the other walls being provided with a plurality of spaced openings, a door for closing the opening in the end wall, said door being provided with a comparatively large air feeding opening, means carried by the door within the opening therethrough for directing the air entering such opening downwardly upon the bed of fuel substantially in the center thereof, and air feeding means located in each of the openings in the other walls of the fire box having their discharge ends turned downwardly to deliver air on the fuel immediately adjacent the walls of the fire box.

1,172,869. LOOSE-LEAF BINDER. FRED E. CARDY, Chicago Ill. Filed Feb. 3, 1915. Serial No. 5,831. (Cl. 129—41.)



1. A loose leaf binder comprising in combination, a cover member, a socket member carried thereby, a flexible cord for holding said cover member in place and a stud member carried by said cord and adapted to engage said socket member.

2. In a loose leaf binder, the combination with the cover members, of socket members carried by one of said cover members, a flexible cord passing through apertures in said cover members and stud members carried by the ends of said cord and slidably mounted upon the same, said stud members being engaged frictionally with said cord when said stud members engage said socket members.

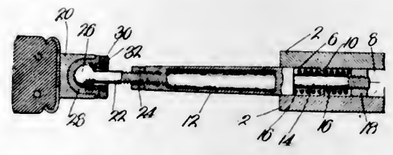
3. In a loose leaf binder, the combination of members forming a cover, a socket member mounted in one of said cover members, said socket member having projecting flanged portions extending along the inner and outer surfaces of one of said covers, a stud member having a flange corresponding to the flange portions of said socket member, a member securing the covers together, said stud and socket members engaging the member between them to secure said covers together.

4. In a loose leaf binder the combination of a flexible connector, and a stud member carried by the connector and constructed to secure the connector to the binder, having a sliding engagement with said connector and said member being positioned upon the connector transversely thereto.

5. The combination of a flexible connector, a stud member having a sliding engagement with said connector, and a socket member adapted to engage the stud member, said stud and socket members frictionally engaging said connector when engaged with one another.

[Claims 6 to 9 not printed in the Gazette.]

1,172,870. SPRING-WHEEL. ROSWELL M. CLARK, Kansas City, Mo. Filed Aug. 29, 1913, Serial No. 787,352. Renewed July 16, 1915. Serial No. 40,161. (Cl. 152—48.)



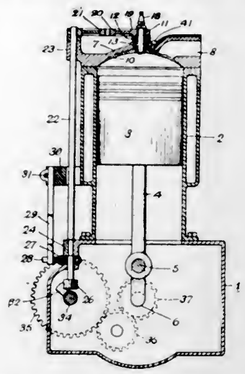
1. In a spring wheel, a tire member, a series of spokes pivotally connected at their outer ends to said tire member, a hub member provided with a series of radial passages for slidingly receiving the inner ends of said spokes, said passages widening inward and communicating with each other at their inner ends and slidingly fitting the spokes at their outer ends, the inner ends of adjacent spokes being adapted to engage and limit each other against further inward movement, and means for yieldingly opposing the sliding movement of each spoke in either direction of its length.

2. In a spring wheel, a tire member, a series of spokes connected at their outer ends to said tire member, a hub member provided with a series of radial passages for slidably receiving the inner ends of said spokes, the inner end of each spoke being provided with a reduced portion and a pair of coil springs carried by said reduced portion, a nut for securing said springs upon the spoke, and a fixed abutment within each passage for engaging the adjacent ends of the corresponding pair of springs.

1,172,871. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GEORGE L. COBB, Glade, Kans. Filed July 19, 1915. Serial No. 40,671. (Cl. 123—81.)

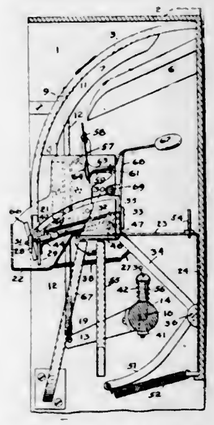
1. A valve motion comprising a valve shaft having a valve directly mounted thereon, a rock-shaft, gearing between said shafts, a tappet on the rock-shaft, a cam for actuating said tappet to rock said shaft, a cam shaft, and a spring adapted to actuate the valve reversely after actuation by the cam.

2. In an explosive-engine, a rock-shaft, a valve mounted directly thereon, a gear on said shaft, a port in said valve, a valve seat having inlet and exhaust ports, a second rock-shaft, a gear thereon to actuate the first gear and alternately connect the valve port with the inlet and exhaust ports, a spring for holding all of said elements at a neutral position, and timed means to positively actuate said parts in opposition to the spring, said



spring being adapted to return said parts to neutral position.

1,172,872. COIN-DETECTOR. JAMES E. COLEMAN, San Francisco, Cal. Filed Sept. 8, 1915. Serial No. 49,439. (Cl. 194—103.)



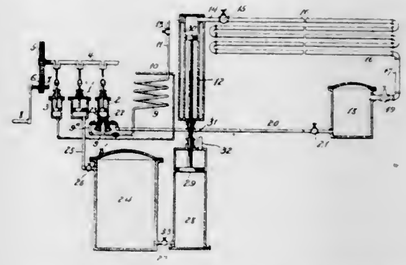
1. In a coin detector, a trough for containing mercury, means for guiding a coin into said trough, supporting means in said trough into operative relation with which said coin is guided, means for separating said supporting means and coin from the trough, and means for separating said supporting means and coin at different points dependent upon the lever at which the coin is held by the supporting means.

2. In a coin detector, a trough for containing mercury, means for guiding a coin into said trough, carrying means in said trough into operative relation with which said coin is guided, means for transferring said carrying means and coin out of said trough, and means for separating said carrying means and coin at different points in their transference dependent upon the level at which the coin is held by the carrying means.

3. In a coin detector, a trough for containing mercury, means for guiding a coin in a vertical position into said trough, clamping devices in said trough into the space between which said coin is guided, means for transferring said clamping devices and coin out of said trough, and means for releasing said coin from said clamping devices at different points in their transference dependent upon the level at which the coin is held by the clamping devices.

4. In a coin detector, a trough for containing mercury, means for guiding a coin in a vertical position into said trough, clamping devices in said trough into the space between which said coin is guided, means for transferring said clamping devices and coin out of said trough, means for releasing said coin from said clamping devices at one point in their transference if the coin is clamped at a given level, and at another point if clamped above or below said level.

1,172,873. REFRIGERATING APPARATUS. EUGENE P. CONNELLY, Boston, Mass. Filed Jan. 23, 1915. Serial No. 3,939. (Cl. 62—115.)



1. In a refrigerating apparatus, the combination of a gas compressor, a condenser, a storage cylinder into which the liquefied gas is forced by the gas compressor, a refrigerating coil connected with the top of said storage cylinder and with the gas compressor, an expansion valve intermediate the storage cylinder and the refrigerating coil, a piston at the bottom of said storage cylinder and means for actuating said piston whereby the liquefied gas in said cylinder is maintained under constant pressure and the passage of ammonia vapor to refrigerating coil prevented.

2. In refrigerating apparatus, the combination of a gas compressor, a storage cylinder, a condenser intermediate the compressor and cylinder and communicating with both, a refrigerating coil connected at one end with the top of said storage cylinder and at the other end with the compressor, an expansion valve intermediate the storage cylinder and refrigerating coil, a piston at the bottom of the storage cylinder, a piston rod connected with said piston and carrying a larger piston at its other end, a cylinder for said larger piston, and means for supplying a pressure fluid to said last-mentioned cylinder whereby the fluid in the storage cylinder is maintained under constant pressure, and the passage of ammonia vapor from said storage cylinder to the refrigerating coil prevented.

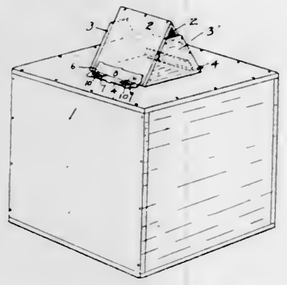
3. In refrigerating apparatus, the combination with a gas compressor, a storage cylinder, a condenser intermediate said compressor and cylinder and communicating with both, a refrigerating coil connected at one end with the top of the storage cylinder and at its other end with the compressor and an expansion valve intermediate the storage cylinder and refrigerating coil, of a piston at the bottom of the storage cylinder, a rod connected with said piston, a larger piston on the other end of said rod, an air cylinder in which said larger cylinder works, an air reservoir in communication with said air cylinder, an air compressor and a pipe leading from said air compressor to the air reservoir.

4. In refrigerating apparatus, the combination of a gas compressor, a condenser, a storage cylinder into which the liquefied gas is forced by the gas compressor, a refrigerating coil connected with the top of said storage cylinder and with a receiver, a relief valve in the pipe leading to the receiver, a pipe connecting the receiver and the gas compressor, an expansion valve intermediate the storage cylinder and the coil, a piston at the bottom of said storage cylinder and means for actuating said piston whereby the liquefied gas in said cylinder

is maintained under constant pressure and the passage of ammonia vapor to the refrigerating coil prevented.

5. In refrigerating apparatus, the combination of a gas compressor, a condenser, a storage cylinder into which the liquefied gas is forced by the compressor, a refrigerating coil connected with the top of said storage cylinder and with the gas compressor and passing through a brine tank, an expansion valve intermediate the storage cylinder and the refrigerating coil, a piston at the bottom of said storage cylinder, means for actuating said piston whereby the liquefied gas in said cylinder is maintained under constant pressure, and a coil communicating with said brine tank.

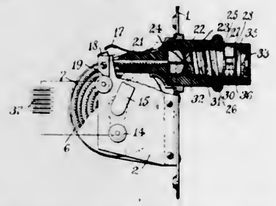
1,172,874. CARBOY-HAT FASTENER. CHARLES M. COOK, Tacoma, Wash. Filed June 3, 1915. Serial No. 31,818. (Cl. 217—36.)



1. In combination with a carboy casing and a hat therefor, said hat having inclined sides; of a plate secured to the casing; clips extending up from said plate; a plate secured to said inclined side of the hat; and lugs extending therefrom and engaging said clips on said first plate.

2. In combination with a carboy casing and a hat therefor, said hat having inclined sides; of a plate secured to the casing; spring clips connected at one end to said plate and free at the other end, said clips extending above the plate; a plate secured to said inclined side of the hat; and lugs extending therefrom and engaging under said clips on said first plate.

1,172,875. CIGAR-LIGHTER AND THE LIKE. JOHN G. COOK, Brooklyn, N. Y. Filed May 13, 1915. Serial No. 27,751. (Cl. 219—32.)



1. The combination of a drum with a cable thereon, a spring normally tending to revolve said drum so as to wind up said cable, a spring member carrying a contact and tending to move toward said cable in a direction substantially at right angles to the portion of the cable adjacent thereto and moved in the other direction by the lateral engagement therewith of said cable when fully wound, and a contact engaged by said movable contact when said cable is unwound.

2. The combination of a drum with a cable thereon, a spring normally tending to revolve said drum so as to wind up said cable, a spring member carrying a contact and tending to move toward said cable in a direction substantially at right angles to the axis of the portion of the cable adjacent thereto, and a stationary contact engaged by said movable contact when said cable is unwound, said cable having an enlargement near its outer end, making lateral engagement with and moving said spring-member, away from said stationary contact and axis when said cable is fully wound.

3. The combination of a socket, a screw threaded lining therein, a fuse carrier having a screw threaded sleeve, an external contact plate, insulating material between said sleeve and contact plate, and a fuse connecting said sleeve and contact plate, a resistance carrier having a screw threaded engagement with said screw threaded sleeve and said fuse carrier, and a resistance upon said resistance carrier one end of which is connected to an axially located terminal on said resistance carrier, and the other end of which is connected to a terminal adapted to engage with the contact plate on the fuse carrier.

4. A resistance carrier having a head and a resistance element on the front surface of said head, a shank of lesser diameter projecting from the rear of said head, a contact axially located on the end of said shank, a contact on the flange formed by the reverse side of said head between the periphery thereof and said shank, said contacts being connected with the terminals of said resistance.

5. A resistance carrier having a head formed with a recessed face and with a circumferential groove in its periphery, said groove and said recessed face forming between them a flange, said flange having a series of interruptions dividing the same into undercut projections, a shank for said head, a conducting sleeve thereon, a terminal at the end of said shank and a resistance wound on said projections and having its terminals connected electrically to said sleeve and to said contact respectively.

[Claim 6 not printed in the Gazette.]

1,172,876. TUNNELING-MACHINE. JOHN W. COOK, Miami, Fla., assignor of one-third to George A. Waldeck, Miami, Fla. Filed July 30, 1914. Serial No. 854,135. (Cl. 125—14.)



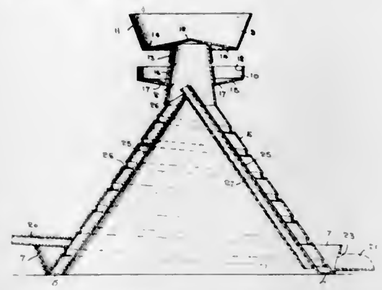
1. A machine of the class described comprising a support, a cutting frame carried thereby, a cutting head, said cutting head comprising a plurality of diverging cutting plates, a plurality of cutting fingers reciprocally mounted upon said cutting head, a reciprocating head supporting said fingers and comprising a plurality of diverging spaced arms, said cutting head provided with an opening formed in the rear thereof and a conveyer positioned in the rear of said cutting head for conveying cut material from said cutting head.

2. A rotary cutting device, comprising the combination with a disk, and means to carry the same, of a hollow cutter head having inclined integral arms, said arms having a plurality of sockets therethrough, means to rotatably attach the cutter head to the disk, a tool holder reciprocatingly mounted in the cutter head, tools carried by the tool holder adapted to extend through the sockets in the arms of the tool holder, and means to reciprocate said tool holder to move the tools into and out of engagement with an object.

3. A cutting device, comprising a disk, a cutter head, means to rotatably attach the cutter head to the disk, a tool holder within said cutter head, a plurality of cutting tools carried by the tool holder, means to guide said cutting tools, a grooved head on the tool holder, a collar engaging the groove in said head, means attached to said collar to reciprocate said tool holder, and means to rotate the cutter head and tool holder independently of the disk.

4. In a cutting device, the combination with a disk having a discharge opening therein, of a hollow cutter head, a tool holder reciprocatingly mounted within said cutter head, said tool holder comprising integral arms, said arms having their outer faces tapered, a head on the tool holder having a tapered end, and means engaging said head to operate the tool holder.

1,172,877. MILK-COOLER. PATTERSON E. CRANSTON, Richland Center, Wis. Filed July 3, 1914. Serial No. 849,005. (Cl. 257—179.)



A milk cooler, comprising an outer cone having shallow inwardly indented grooves therein, a conical neck upon the upper end of said cone, a reservoir upon said neck above said cone and disposed thereover, a deflector cup upon said neck beneath said reservoir for transmitting the milk flowing from said reservoir to the top of said cone to cause the milk to come in contact with all portions of the cooled surfaces of the cone, an inner cone within said outer cone and spaced therefrom to provide a compartment therebetween, said inner cone having a closed upper end extending into said neck, a bottom connecting the bases of said cones, means for filling said compartment between said cones with a cooling agent, means for receiving the cooled milk at the bottom of said outer cone, means for draining the milk from said receiving means, and an outlet pipe upon the inner wall of said inner cone projecting through the closed end of said inner cone and into said neck for conveying the warmer portions of said cooling agent from said neck to the exterior of said cooler.

1,172,878. ARTIFICIAL TOOTH. EDWARD P. CRESSLER, Peabody, Kans. Filed Sept. 29, 1914. Serial No. 864,098. (Cl. 32—9.)



1. An artificial tooth-structure including a tooth-member provided with a plurality of slots, at least one of which is arranged at an angle to the other and provided with undercut walls, a retaining-member provided with a tongue insertible in one of said slots, and a spreading-member disposed in said angularly-arranged slot and adapted to engage with said undercut walls and with the tongues, whereby the tooth and retaining members are interlocked.

2. A tooth-member provided with a plurality of slots, at least one of which is arranged at an angle to two others and provided with undercut walls, a retaining-member provided with tongues insertible in two of the slots, and a wedge-member disposed in said angularly-arranged slot and interlockingly engaging with said walls and tongues to secure the retaining-member to the tooth-member.

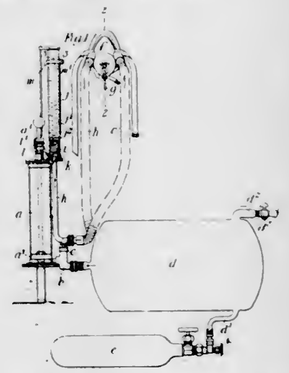
3. A tooth-structure including a tooth-member provided with a plurality of undercut, substantially parallel slots joined by an intermediate notch having inwardly-extending projections, a retaining-member provided with parallel tongues adapted to enter the slots, and a resilient wedge-member interlockingly disposed in said notch and engageable with the tongues to spread them apart and position them beneath the undercut walls of the slot.

4. A tooth-structure including a tooth member provided with an approximately H-shaped recess, a retaining-member provided with tongues extending into the recess, and a wedge-member disposed in said recess and interlockingly engaging with the walls of the recess and with the tongues.

5. A tooth-structure including a tooth-member provided with an approximately H-shaped recess having under-cut walls, a retaining-member provided with tongues extending into the recess, and a wedge-member disposed in said recess and engaging the undercut walls thereof and also effecting a spreading of the tongues toward other of the undercut walls of the recess.

[Claims 6 to 11 not printed in the Gazette.]

1,172,879. APPARATUS FOR ADMINISTERING OXYGEN TO PERSONS IN A STATE OF COLLAPSE BY ASPHYXIATION OR OTHER CAUSES. ROBERT HENRY DAVIS, London, England. Filed Jan. 13, 1915. Serial No. 2,044. (Cl. 128—13.)



1. An apparatus for resuscitating asphyxiated persons and the like, comprising a compression device for delivering a charge of resuscitating medium to the patient and means for normally preventing exhalation by the patient, in combination with automatic means for permitting the exhalation to be effected by the natural elastic recoil of the chest and lungs.

2. An apparatus for resuscitating asphyxiated persons and the like, comprising a compression device for delivering a charge of resuscitating medium to the patient, a valve for normally preventing exhalation by the patient, and automatic means for opening said valve and permitting the exhalation to be effected by the natural elastic recoil of the chest and lungs.
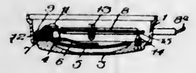
3. An apparatus for resuscitating asphyxiated persons and the like, comprising a compression device for delivering a charge of resuscitating medium to the patient, a valve for controlling the exhalation of the patient, and automatic means for closing said valve during the delivery stroke of the compressor and opening the valve during the suction stroke of the compressor.

4. An apparatus for resuscitating asphyxiating persons comprising a reciprocating pump for delivering a resuscitating medium to the patient, the plunger of which is furnished with a spring actuated trigger, an expiratory

pipe for conducting the exhalation, a valve normally closing the expiratory pipe and with which the trigger is brought into engagement when the plunger is at the end of the delivery stroke, and a trip piece for disengaging the trigger from the valve and arresting the suction stroke.

5. An apparatus for resuscitating asphyxiated persons comprising a single compression device for delivering a charge of resuscitating medium to the patient, a pipe extending from said compression device and adapted to be connected to the patient's head, an exhaling pipe also adapted to be connected to the patient's head, a valve for closing said exhaling pipe, and means operable by said compression device for opening said valve on the suction stroke of said compression device and closing said valve on the delivery stroke thereof and permitting the exhalation to be effected by the natural elastic recoil of the chest and lungs.

1,172,880. THERMOSTAT. WILLIAM L. DENIO, Rochester, N. Y. Filed Apr. 17, 1912, Serial No. 691,338. Renewed Dec. 2, 1915. Serial No. 64,744. (Cl. 200—31.)



1. In a thermostat, the combination with a member adapted to be affected by changes in temperature, of a pair of terminals moving when the first named member is affected by heat, and an adjustable stop for coöperating with one of said terminals to effect its disconnection with the other terminal.

2. In a thermostat, the combination with a member moving under changes in temperature, of a pair of terminals held with a yielding pressure, one against the other and against the member, and a stop for coöperation with the free end of one of said arms to effect the separation of said terminals upon the moving of the first named member.

3. In a thermostat, the combination with a casing of a disk arranged thereon and bending under changes of temperature, a pair of spring arms acting as terminals, one of said arms bearing against the disk, and the other of said arms bearing against the first named arm, and a stop for coöperation with the last named arm.

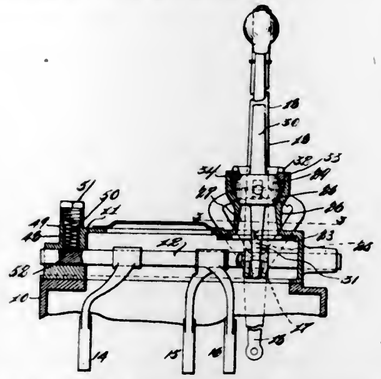
4. In a thermostat, the combination with a cup shaped casing having an opening therein, of a rubber disk arranged to close said opening and to bend under changes in temperature, of a spring arm arranged within the casing, insulated therefrom and bearing with pressure against the inner face of the disk, a second spring arm insulated from the casing and the first named spring arm and having a contact point which under low temperatures bears with pressure against the first named spring arm, and a stop located in the path of the second named terminal to cause the latter to separate from the first named terminal when the rubber disk bends under high temperatures.

5. In a thermostat, the combination with a casing, of a member carried by the casing and adapted to be affected by changes in temperature, a pair of terminals arranged within the casing in electrical connection and movable together under the action of the heat affected member, and an adjustable stop operable from the exterior of the casing and located in the path of one of the terminals to cause the separation of the terminals.

[Claims 6 and 7 not printed in the Gazette.]

1,172,881. GEAR-SHIFTING MECHANISM. JOHN F. DODGE, Detroit, and HORACE E. DODGE, Grosse Pointe, Mich., assignors to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Oct. 2, 1914. Serial No. 864,594. (Cl. 74—39.)

1. In a gear shifting mechanism, the combination of a lever support, a control-lever, a ball-and-socket joint between said lever and support, and an anti-rattling device applied to said joint, comprising a spring-pressed locking member mounted on said socket, said ball having a recess for receiving the end of said member.



2. In shifting gear mechanism, the combination of a lever support provided with a throat, a control-lever extending through said throat, a ball-and-socket joint between said lever and support, and an anti-rattling device applied to said joint, comprising a spring-pressed pin mounted on said socket, said ball having a recess for receiving the end of said pin.

3. In gear shifting mechanism, the combination of a transmission case cover provided with a hollow pedestal, a ball-and-socket joint between said lever and pedestal, said socket comprising two parts, respectively an extension from said pedestal and a nut or collar having a screw connection with said extension, means for preventing twisting of said lever, and comprising a stud projecting from said socket and a slot in said ball for engagement by said stud, and an anti-rattling device applied to said joint and comprising a spring-pressed pin on said socket and a recess in said ball, for the engagement of said pin.

4. In a gear shifting mechanism, the combination of a lever support provided with a throat, a control lever extending through said throat, a ball-and-socket joint between said lever and support, an anti-rattling device applied to said joint, and means diametrically opposite said anti-rattling device for preventing twisting of said lever.

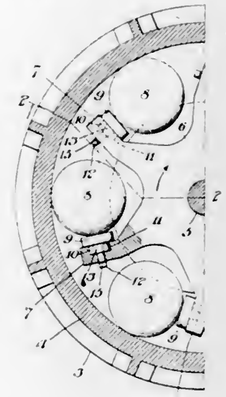
5. In a gear shifting mechanism, the combination of a lever support provided with a throat, a control lever extending through said throat, a ball-and-socket joint between said lever and support, an anti-rattling device applied to said joint, and means diametrically opposite said anti-rattling device for preventing twisting of said lever, said device and said means both comprising pins which project into said socket and engage said ball.

1,172,882. GRINDING-MILL. GEORGE S. EMERICK, Philadelphia, Pa. Filed July 10, 1914. Serial No. 850,092. (Cl. 83—45.)

1. In a grinding mill the combination of a frame, a grinding ring, a grinding ball within said ring, a driving member having an arm rearwardly of said ball, a driving block rearwardly of said ball and having a rearwardly extending boss located within a socket in said arm, a pin extending rearwardly from said block and through said arm and having means on the forward end thereof coöperating with said boss and preventing the removal of said boss from said socket, and means to prevent forward movement of said pin relatively to said arm.

2. In a grinding mill the combination of a frame, a grinding ring, a grinding ball within said ring, a driving member having an arm rearwardly of said ball, a driving block rearwardly of said ball and having a rearwardly extending boss located within a socket in said arm, a

pin extending rearwardly from said block and through said arm, a head on the forward end of said pin and coöperating with said boss to prevent forward movement of said block relatively to said pin, said boss being removable from said head transversely to said pin when said boss is outside of said socket, and the wall of said socket preventing such movement of said boss when it is within said socket, and means operative to prevent forward movement of said pin relatively to said arm.



3. In a grinding mill the combination of a frame, a grinding ring, a grinding ball within said ring, a driving member having an arm rearwardly of said ball, a driving block rearwardly of said ball and having a rearwardly extending boss located within a socket in said arm, a pin extending rearwardly from said block and through said arm, a transversely-extending dove-tail head on the forward end of said pin, said head being fitted within a slot extending transversely through said boss, said boss being removable from said head transversely to said pin when said boss is outside of said socket, and the wall of said socket preventing such movement of said boss when it is within said socket, and means adjustable to prevent forward movement of said pin relatively to said arm.

4. A driving block for grinding mills, having a driving face adapted to engage a grinding ball and having a removable stem adapted to be secured within a driving member.

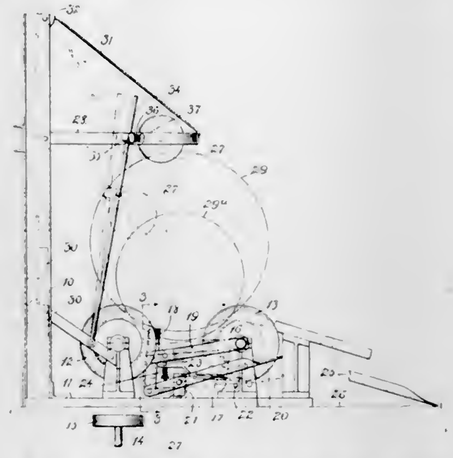
5. A driving block for grinding mills, having a driving face adapted to engage a grinding ball and having a stem removable from the block at right angles to the axis of the stem and adapted to be secured within a driving member.

1,172,883. RING-CORE-REVOLVING MACHINE. JOHN R. GAMMETER, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a Corporation of New York. Filed Sept. 8, 1914. Serial No. 860,644. (Cl. 154—9.)

1. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, and means for raising and lowering the core with respect to the lower rollers of said set.

2. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, a core-rest for engaging the lower periphery of said core to raise and lower the same with respect to the lower rollers of said set, and a treadle for operating said rest.

3. In a machine of the character described, the combination of a set of rollers, including a driving roller, for supporting the ring core or similar article by its periphery in a vertical position, and an inclined run-way for guiding the core to and from the level of the lower rollers of said set.

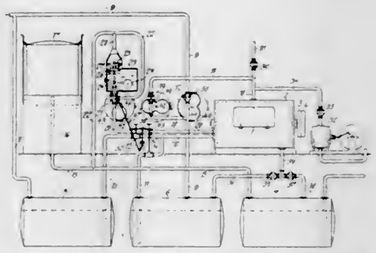


4. In a machine of the character described, the combination of a pair of lower grooved rollers for supporting the lower periphery of the core or similar article, a top support for maintaining said core in an upright position, and a vertically-movable core-rest mounted between said lower rollers.

5. In a machine of the character described, the combination of a pair of lower grooved rollers for supporting the lower periphery of the core or similar article, a top support for maintaining said core in an upright position, and an inclined run-way terminating at its upper end adjacent to the top side of one of the lower rollers.

[Claims 6 to 10 not printed in the Gazette.]

1,172,884. MEANS FOR SAFEGUARDING CLOSED VESSELS AGAINST FIRE AND EXPLOSION. PAUL GÜNGERICH, Berlin-Steglitz, Germany, assignor to Martini & Hilneke Maschinenbau-Aktien-Gesellschaft, Berlin, Germany, a Corporation of Germany. Filed Mar. 26, 1913. Serial No. 757,037. (Cl. 220—121.)



1. The combination, with a vessel having means whereby it may be closed to the surrounding air or thrown open, of a conduit for conveying an inflammable liquid to said vessel, a shut-off device controlling said conduit, a device for locking in its closed position the shut-off device which controls the flow through said conduit, and a pressure member operatively connected with said locking device and having a connection whereby it is exposed to the pressure prevailing within said vessel, so that the shut-off device will be unlocked when the pressure in said vessel attains a predetermined value.

2. The combination, with a vessel having means whereby it may be closed to the surrounding air or thrown open, of a conduit for conveying an inflammable liquid to

said vessel, a shut-off device controlling said conduit, a pressure member under the influence of the pressure prevailing in said vessel, and means controlled by said member for holding said shut-off device in its closed position until the pressure in said vessel attains a predetermined value.

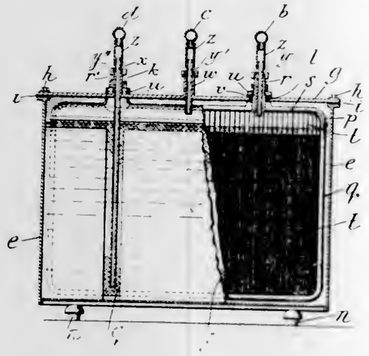
3. The combination, with a vessel having means whereby it may be closed to the surrounding air or thrown open, of a device for exhausting gas from said vessel, a connection for supplying protective gas to said vessel, a shut-off device controlling said connection, a device for locking said shut-off device in its closed position, and a pressure member connected with said locking device and having a connection whereby it is exposed to the pressure prevailing within said vessel, so that the shut-off device will be unlocked when a vacuum of a predetermined degree has been produced in said vessel.

4. The combination, with a vessel having means whereby it may be closed to the surrounding air or thrown open, of a connection for supplying protective gas to said vessel, a shut-off device controlling said connection, a device for locking said shut-off device in its closed position, and a pressure member connected with said locking device and having a connection whereby it is exposed to the pressure of protective gas supplied at a pressure above atmospheric pressure.

5. The combination, with a vessel having means whereby it may be closed to the surrounding air or thrown open, of a connection for supplying protective gas to said vessel, a shut-off device controlling said connection, a device for locking said shut-off device, a pressure member governing the position of said locking device, additional shut-off devices controlling the flow of protective gas, a hand crank rotatable in one direction only, and operative connections between said crank and said shut-off devices to cause the latter to be opened and closed in the proper succession.

[Claims 6 to 13 not printed in the Gazette.]

1,172,885. APPARATUS FOR THE PRODUCTION OF OXYGEN AND HYDROGEN GASES. GEORGE HALTER, New York, N. Y., assignor to Davis-Bournonville Company, New York, N. Y., a Corporation of New York. Filed Aug. 27, 1913. Serial No. 786,913. (Cl. 204—9.)



1. An electrolytic cell for the generation of oxygen and hydrogen comprising a container for electrolyte provided with anode and cathode, and a non-conducting inclosure for the anode to separate the gases and prevent electrolytic action except on the surfaces of the electrodes, the said inclosure comprising a separator of solid non-conducting material above the electrolyte and projecting a suitable distance below the surface of the same, and a suspended sack of non-conducting material secured to the separator and inclosing the anode below the surface of the liquid.

2. In an electrolytic cell for the generation of oxygen and hydrogen, the combination with an anode and cathode, of a complete non-conducting inclosure for the anode comprising a separator of porcelain or other suitable non-conducting and oxygen-resisting material over the anode, said separator having a closed top provided with an oxygen outlet and sides extending below the surface of the electrolyte, and an asbestos sack secured to and suspended below the separator and inclosing the anode below the surface of the electrolyte.

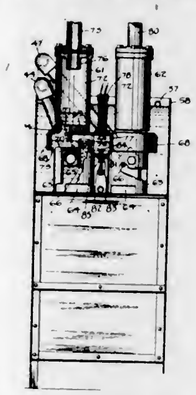
3. An electrolytic cell for the generation of oxygen and hydrogen comprising a tank capable of holding the electrolyte and constituting the cathode, an anode suspended in the electrolyte, a separator of porcelain or equivalent non-conducting material over the anode and inclosing the oxygen-collecting chamber, and an asbestos sack secured to and suspended below said separator and inclosing the anode below the surface of the liquid, said separator and sack constituting a complete non-conducting inclosure for the anode.

4. An electrolytic cell for the generation of oxygen and hydrogen comprising a tank capable of holding the electrolyte and constituting the cathode, a cover for the tank, an anode suspended in the electrolyte from the cover, a separator of porcelain or equivalent non-conducting material supported over the anode with its sides extending below the surface of the electrolyte, an asbestos sack secured to and suspended below said separator and inclosing the anode below the surface of the liquid, said separator and sack constituting a complete non-conducting inclosure for the anode, means for conducting off the oxygen from the interior of the separator, and means for conducting off hydrogen from the space beneath the cover outside of the separator.

5. In an electrolytic cell for the generation of oxygen and hydrogen, an anode comprising wires united in the form of a hollow body and a complete non-conducting inclosure for said anode comprising a separator of porcelain or equivalent material over the anode with its sides extending below the surface of the electrolyte, and an asbestos sack secured to and suspended below said separator and inclosing the anode below the liquid level.

[Claims 6 to 13 not printed in the Gazette.]

1,172,886. PRESSURE-REGULATOR. GEORGE HALTER, New York, N. Y., assignor to Davis-Bournonville Company, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1914. Serial No. 867,592. (Cl. 204—1.)



1. In a device of the character described, the combination of means for holding a body of liquid open to atmospheric pressure, separate gas inlets permitting the gases to escape upward into the body of water at equal distances below the surface, separate devices for collecting the gases rising through the water, and outlets of large area permitting free escape of the gases from said collecting devices.

2. In a device of the character described, the combination of a tank adapted to hold a body of liquid open to atmospheric pressure and provided with means for determining a certain level therein, separate gas inlets permitting the gases to escape upward into the body of water at equal distances below the surface, separate devices for collecting the gases rising through the water, and outlets of large area permitting free escape of the gases from said collecting devices.

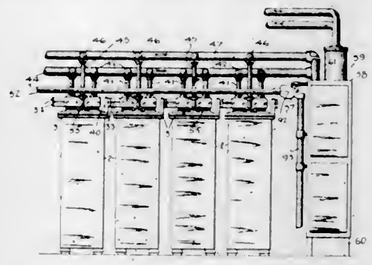
3. A device of the character described comprising a liquid holder open to atmospheric pressure and having separate gas inlets below the liquid level, and inclosures in said liquid holder open to the liquid and constructed separately to confine the rising gases and having delivery pipes leading from their upper portions, said inclosures having safety vents opening into the liquid in the liquid holder above said inlets.

4. A device of the character described, comprising a liquid holder open to atmospheric pressure and having separate gas inlets below the liquid level, inclosures in said holder arranged to confine the gases rising through the liquid and affording outlets therefor and having their interiors in open communication with the liquid in the holder, one of each of said inclosures having a chamber formed to pocket a body of the gas below the liquid level, and an igniter in said chamber.

5. In a device of the character described, the combination of a liquid holder open to atmospheric pressure, a gas inlet below the liquid level, an inclosure in said liquid holder open to the liquid and arranged to collect the rising gas, a gas outlet from the upper part of said inclosure, and a safety vent from the inclosure opening into the liquid in the liquid holder above the gas inlet.

[Claims 6 to 9 not printed in the Gazette.]

1,172,887. ELECTROLYTIC PLANT. GEORGE HALTER, New York, N. Y., assignor to Davis-Bournonville Company, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1914. Serial No. 867,593. (Cl. 204—1.)



1. An electrolytic cell for the production of oxygen and hydrogen having a narrow upright chamber inclosed by cathode surfaces, a top therefor, a separator of non-conducting material and inverted trough form disposed lengthwise of said chamber with its top beneath said top for the chamber, an anode beneath said separator composed of slitted sheet-metal and of hollow oblong form in horizontal section, and a sack fastened to said separator and inclosing the anode.

2. In a cell for electrolytic dissociation of water, a tank having a suitable top, a substantially horizontal conducting bar supported from said top, and a perforated sheet-metal anode secured at its upper edges to said bar, said anode being of hollow oblong form in horizontal section with curved ends and a curved bottom.

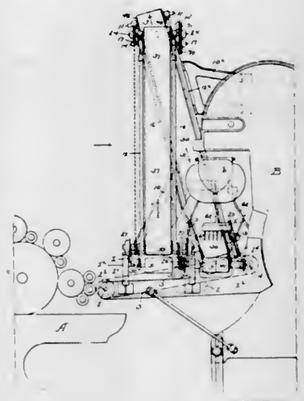
3. A cell for electrolytic dissociation of water, comprising a tank, a partition dividing the interior of said tank into narrow vertically-arranged compartments and together with the walls of the tank constituting the cathode part, and anodes in said compartments of hollow oblong horizontal section with curved ends, the partition comprising at each end two separated portions curved in substantial conformity to the ends of the anodes.

4. A cell for electrolytic dissociation of water, comprising a tank, a partition dividing the interior of the tank into narrow vertically-arranged compartments and together with the walls of the tank constituting the cathode part, and anodes in said compartment of hollow oblong horizontal section with curved ends, said partition comprising two plates assembled back to back with their end portions curved apart and around the ends of the anodes.

5. A cell for electrolytic dissociation of water, comprising a substantially rectangular tank having anodes and cathodes disposed in parallelism, the anodes being double, comprising spaced perforated plates, and a cathode between double anodes comprising two plates placed back to back.

[Claims 6 to 18 not printed in the Gazette.]

1,172,888. FEEDING DEVICE FOR CARDING-MACHINES. ROBERT J. HILL, Camden, N. J., and WILLIAM F. BOKUM, Philadelphia, Pa. Filed Aug. 8, 1914. Serial No. 855,806. (Cl. 19—7.)



1. The combination of a carding machine feeder having means for dumping successive masses of fiber, with a receiving apron onto which said successive masses of fiber are directly deposited, said apron traveling transversely across the delivery end of said feeding machine at such rate of speed in respect to the timing of the successive deliveries of fiber by the feeding machine as to cause the forward portion of each mass to lie on top of the rear portion of the mass in advance.

2. The combination of the feed apron of a carding machine, a feeding machine for delivering successive masses of fiber, and conveyer mechanism for receiving said successive masses, forming the same into a continuous strand or web, and laying the latter transversely back and forth across the feed apron of the carding machine.

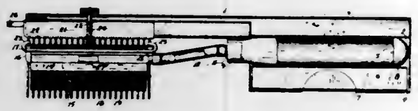
3. The combination of the feed apron of a carding machine, a feeding machine for delivering successive masses of fiber, and means for receiving said successive masses, forming them into a continuous strand or web and spreading the latter transversely across the feed apron of the carding machine, said means comprising a conveyer belt having horizontal and upwardly inclined runs, a transfer belt having upwardly inclined, horizontal and vertical runs, said vertical portion of the belt delivering onto the feed apron of the carding machine, and means for moving the delivery end of said belt laterally back and forth across said feed apron.

4. The combination of the feed apron of a carding machine, a fiber feeding machine for delivering successive masses of fiber, and means for receiving the said masses, forming them into a continuous strand or web, and delivering the same to the feed apron of the carding machine, said means comprising a conveyer belt having

horizontal and upwardly inclined runs, a transfer belt having upwardly inclined, horizontal and vertical runs and a confining belt having vertical runs, and means for moving the delivery ends of said transfer and confining belts laterally back and forth across the feed apron of the carding machine.

5. The combination of the feed apron of a carding machine, a fiber feeding machine delivering successive masses of fiber, and means for forming said masses into a continuous strand or web and delivering the same to the feed apron of the carding machine, said means comprising belt conveyer mechanism between the feeding machine and the feed apron of the carding machine, means for moving the delivery end of said conveyer mechanism transversely back and forth across the feed apron and a rake for acting upon the masses of fiber as the same start on their course from the feeding machine to the carding machine.

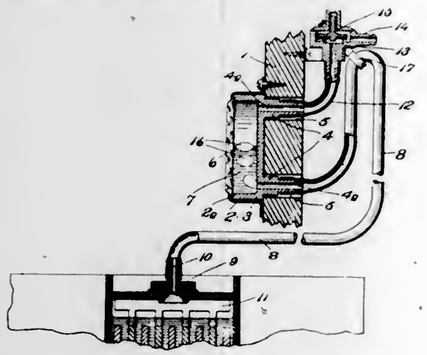
1,172,889. DYEING-COMB. CHARLES M. HOLDEN, San Francisco, Cal. Filed Nov. 1, 1915. Serial No. 59,066. (Cl. 132—4.)



1. A dyeing comb having a handle and wire teeth, and a liquid distributer contained within the teeth and formed of doubled fabric, the weft of which is removed at the edges, the exposed warp being of stiff material to form bristles.

2. A dyeing comb having a handle and teeth, a liquid distributer contained within the teeth, a perforated metallic tube contained within the distributer, a compressible reservoir communicating with said tube and supported upon the handle of the comb, and means for adjusting the distributer to and from the points of the teeth.

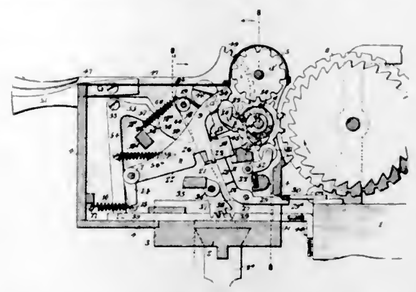
1,172,890. STORAGE-BATTERY INDICATOR. KARSTEN KNUDSEN, Grand Rapids, Mich. Filed July 31, 1914. Serial No. 854,357. (Cl. 204—53.)



1. In an automobile, a dash, a receptacle having a transparent front member secured to the dash in position for observation, inlet and outlet stems extending from said receptacle through the dash, a liquid partially filling the receptacle and covering the inlet, a conduit tube attached to each stem, a check valve attached to the opposite side of the dash and having connected thereto the conduit tube leading from the outlet, a storage battery, and a perforated plug fastened in a side thereof, the conduit attached to the inlet stem being attached to said plug, substantially as described.

2. In an automobile, a dash, a receptacle having a transparent side secured to the dash in position for observation, inlet and outlet stems extending from said receptacle, a liquid partially filling the receptacle, and covering the inlet, a storage battery, a perforated plug fastened in the side thereof, and a conduit interposed between the inlet stem and said plug and attached thereto, substantially as described.

1,172,891. COMPUTING MECHANISM. CHARLES F. LAGANKE and JOHN ASBURY SMITH, Harrisburg, Pa., assignors to Elliott-Fisher Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 27, 1906. Serial No. 308,279. (Cl. 235—134.)



1. In a computing mechanism, the combination with a series of denominational members, of a series of transfer members therefor, said members being horizontally disposed and pivotally mounted at their rear ends, a transfer motor for each transfer member, and a series of holding members mounted to swing from a point above each transfer member and normally engaging the under sides of said members, each of said holding devices being movable by a denominational member to release a transfer member.

2. In a computing mechanism, the combination with a series of peripherally toothed denominational members, of a series of transfer levers mounted to swing from their rear ends and each having a locking portion located at the front end thereof and disposed to engage an interdental space of a denominational member to lock said member against movement in either direction, a transfer dog carried by each transfer lever and disposed to engage a denominational member, a holding device for each transfer lever, said holding device being movable by a denominational member to release a transfer lever, and a transfer motor for each transfer lever.

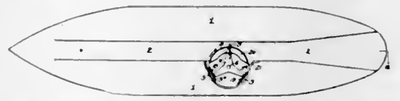
3. In a computing mechanism, the combination with a series of denominational members, of a series of transfer levers each comprising a horizontal arm extended forwardly from the fulcrum thereof and a vertical arm extended downwardly from the fulcrum, a transfer motor connected to the vertical arm of the lever, a vertically disposed transfer dog carried by the horizontal arm of the transfer lever and disposed to engage a denominational member, a support located above the horizontal arms of the transfer levers, holding devices pendent from said support and disposed normally to engage the lower edges of the several transfer levers, each of said holding devices being movable by a denominational member to release a transfer lever and thus permit the horizontal arm of said lever to drop down under the impulse of gravity assisted by a transfer motor.

4. In a computing mechanism, a denominational member, a transfer member therefor, a holding device for the transfer member, a second denominational member arranged to operate the holding device to release the transfer member, and retracting means movable to retract the transfer member and having continued movement to retract the holding device.

5. The combination with a typewriter including a carriage, of a computing device including a plurality of denominational members, a series of transfer devices for said members, a transfer motor for each transfer device, and mean operated by the typewriter carriage to restore the energy expended by the transfer motors.

[Claims 6 to 32 not printed in the Gazette.]

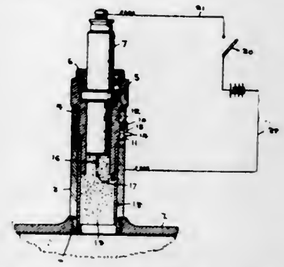
1,172,892. PROPELLING DEVICE FOR VESSELS. ANGELO RAFFAELE LERRO, Philadelphia, Pa. Filed Nov. 21, 1912. Serial No. 732,691. (Cl. 115—52.)



1. The combination of a vessel having a submerged longitudinal channel therein and a vertical well whose lower portion is submerged and in communication with said channel, a paddle wheel occupying said submerged portion of the well, and a tubular casing carrying said paddle wheel and occupying the upper portion of the well, said tubular casing being closed at the bottom.

2. The combination of a vessel having a submerged longitudinal channel therein and a vertical well whose lower portion is submerged and in communication with said channel, a paddle wheel contained in said submerged portion of the well, a casing carrying said paddle wheel and occupying the upper portion of the well, a motive power engine, and mechanism for transmitting power from said engine to the paddle wheel, part of said mechanism being carried by the casing, and means for disconnecting such part of the mechanism from the engine, whereby the paddle wheel, the casing and the mechanism carried thereby can be removed vertically from the well.

1,172,893. STARTING DEVICE FOR EXPLOSIVE-ENGINES. ORLIE F. LIPPINCOTT, Kenesaw, Nebr. Filed June 3, 1915. Serial No. 32,005. (Cl. 123—183.)

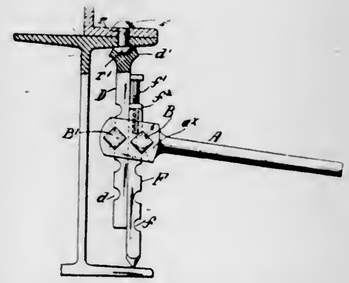


1. A starting device for engines comprising the combination with a cylinder having an opening therein, and a sleeve extending from said opening, of a jacket, a tube connected to the inner end of the jacket adapted to contain an explosive powder, a sparking arrangement carried by the jacket comprising a pair of pins connected in circuit with the positive and negative poles of an electric generator, a locking nut adapted to secure the sparking arrangement to the jacket, a lug adapted to interlock with a slot formed in said sleeve and a spring actuated latch carried by the lug adapted to interlock with the sleeve and hold the jacket against rotation.

2. A starting device for engines comprising the combination with a cylinder having a hollow sleeve projecting therefrom, said sleeve having a slot at its outer end and a notch coöperating with the slot, of a jacket having an enlarged collar at its outer end, a sparking device carried by the jacket comprising a pair of pins connected in circuit with the positive and negative poles of an electric generator, means to lock the sparking device to the jacket, a tube at the inner end of the jacket adapted to contain an explosive powder, a lug on the jacket adapted to cooperate with the slot in the sleeve and interlock therewith, a spring pressed latch slidably mounted in said lug adapted to engage the notch in the sleeve and hold the jacket against rotation and an operated pin carried by the latch.

3. A starting device for engines, comprising the combination with a cylinder and a hollow sleeve connected therewith, said sleeve having a bayonet slot in its outer extremity, of a jacket, a tube carried by the jacket adapted to contain an explosive powder, a sparking arrangement carried by the jacket comprising a pair of pins connected in circuit with the positive and negative poles of an electric generator, a lug integral with the jacket and adapted to enter and interlock with said slot, a latch slidably mounted in the lug and adapted to interlock the parts of the sleeve and hold the jacket against rotation, means to normally hold the latch in extended position, and means whereby the latch may be operated to release the same from engagement with the sleeve.

1,172,894. RIVET JAM-DOLLY. GEORGE MCARTHUR, Bayonne, N. J. Filed Sept. 17, 1915. Serial No. 51,128. (Cl. 78—46.)

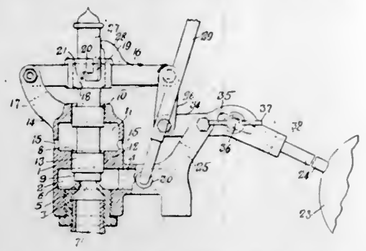


1. An implement of the character designated, comprising a dolly bar formed with a socket for contacting with a rivet head and with a series of coupling pin seats, a fulcrum bar formed with a series of coupling pin seats, a lever formed with a recessed head to embrace said dolly bar and said fulcrum bar and with coupling pin bearings in its side walls, coupling pins adapted to engage with the recessed lever head bearings and with the coupling pin seats in the dolly bar and the fulcrum bar, and means for securing said coupling pins in position, for the purpose described.

2. An implement of the character designated, comprising a dolly bar formed with a socket for contacting with a rivet head and with a series of coupling pin seats, a fulcrum bar formed with a series of coupling pin seats, a lever formed with a recessed head to embrace said dolly bar and said fulcrum bar and with coupling pin bearings in its side walls, coupling pins adapted to engage with the recessed lever head bearings and with the coupling pin seats in the dolly bar and the fulcrum bar, and means for securing said coupling pins in position, said recess head of the lever being also formed with supplementary segmental bearing extensions between the coupling pin bearings in the side walls of said lever head, for the purpose described.

3. An implement of the character designated, comprising a dolly bar formed with a socket for contacting with a rivet head and with a series of coupling pin seats, a fulcrum bar formed with a series of coupling pin seats, an extremity of said fulcrum bar being also formed with a female screw thread, an extension screw engaging therewith and a lock nut thereon, a lever formed with a recessed head to embrace said dolly bar and said fulcrum bar and with coupling pin bearings in its side walls, coupling pins adapted to engage with the recessed lever head bearings and with the coupling pin seats in the dolly bar and the fulcrum bar, and means for securing said coupling pins in position, for the purpose described.

1,172,895. VALVE. JOSEPH MCCARTHY, Franklin, Ohio. Filed Jan. 2, 1915. Serial No. 73. (Cl. 137—4.)



1. In a valve, a casing comprising a chamber having an inlet and an outlet and provided with a valve seat, said casing also having a guide opening in alinement with said valve seat, a valve member slidably mounted in said opening for movement into and out of engagement with said valve seat and removable from said guide opening, and an actuating arm mounted adjacent to the casing but out of alinement with said guide opening, said arm and said valve member having interlocking parts arranged for movement into and out of engagement by the rotation of said valve member, said arm and said valve member also having means to prevent the accidental disengagement of said interlocking parts.

2. In a valve, a casing comprising a chamber having an inlet and an outlet and provided with a valve seat, said casing also having a guide opening in alinement with said valve seat, a valve member slidably mounted in said opening for movement into and out of engagement with said valve seat and removable from said guide opening, an actuating arm mounted adjacent to said casing but out of alinement with said guide opening, said arm and said valve member having interlocking parts arranged for movement into and out of engagement by the rotation of said valve member, said arm and said valve member also having parts arranged to be brought into coöperative relation when said valve member is moved to its open position, to prevent the disengagement of said interlocking parts.

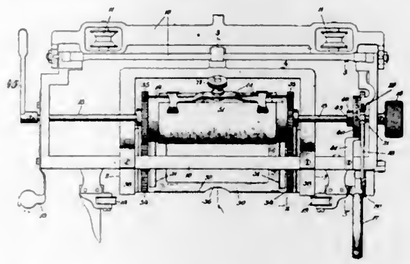
3. In a valve, a casing comprising a chamber having an inlet and an outlet and provided with a valve seat, said casing also having a guide opening in alinement with said valve seat, a valve member slidably mounted in said opening for movement into and out of engagement with said valve seat and removable from said guide opening, and an actuating arm mounted adjacent to the casing and out of alinement with said guide opening, said arm and said valve member having interlocking parts arranged for movement into and out of engagement by the rotation of said valve member, said valve member having a recess and said arm having a part arranged to enter said recess when said arm is moved in a direction to open said valve.

4. In a valve, a casing comprising a chamber having an inlet and an outlet and provided with a valve seat, said casing also having a guide opening in alinement with said valve seat, a valve member slidably mounted in said opening for movement into and out of said engagement with said valve seat and removable from said guide opening, and an actuating arm mounted adjacent to said casing, but out of alinement with said guide opening, said arm and said valve member having interlocking parts controlled by the rotation of said valve member and also having means to normally resist the rotation of said valve member when it is in either its open or its closed position.

5. In a valve, a casing comprising a chamber having an inlet and an outlet and provided with a valve seat, said casing also having a guide opening in alinement with said valve seat, a valve member slidably mounted in said opening for movement into and out of engagement with said valve seat and removable from said guide opening, said valve member having a part extending beyond the end of said valve casing, an actuating arm movably mounted adjacent to said casing, extending transversely to said valve member and having an annular portion adapted to receive said valve member, said annular portion being of a diameter greater than the greatest diameter of said valve member, whereby said valve member can be withdrawn from said guide opening through the annular portion of said arm, said annular portion of said arm having a bayonet slot and said valve member having a pin adapted to enter said slot, a part carried by said arm and adapted to be moved into engagement with said valve member to hold the same against rotatory movement and thus prevent the separation of said valve and said arm.

[Claims 6 to 11 not printed in the Gazette.]

1,172,896. PLATEN ATTACHMENT FOR STENCILING TYPE-WRITERS. LUDWIG MALZ, New York, N. Y., assignor, by mesne assignments, to Wallace Addressing Machine Company, Inc., a Corporation of New York. Filed June 9, 1909. Serial No. 501,107. (Cl. 197—135.)

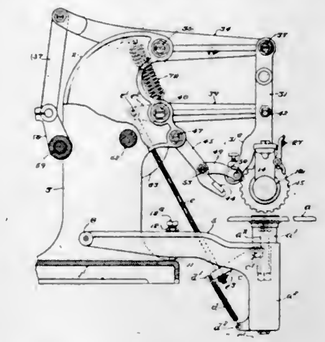


In an attachment for a typewriting machine having a rotatable cylindrical platen, a movable blank holder adapted to move into or from the space under the platen, gear-wheels at the ends of the platen, a movable blank-holding frame having at its ends racks adapted to be engaged by said gear-wheels whereby when said platen is rotated said frame is moved from under the platen, said platen being adapted to engage a blank in the blank-holding frame when the blank is being actuated, said holder-frame comprising a flat bottom part upon which the blank may rest and upstanding flanges forming side, front and rear guides for the blank, the front part of said holder being provided with a recess for permitting the blank to be engaged by the fingers.

1,172,897. MARKING OR NUMBERING MACHINE. FRANK W. MERRICK, Boston, Mass., assignor to Power Numbering Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 13, 1911. Serial No. 602,403. (Cl. 101—83.)

1. In a marking or numbering machine, in combination, a printing head having a reciprocating printing stroke, a work-support in the line of the said printing stroke, an intermittent lock operated independently of the pressure against the work, releasing the work-support as the printing surface closes upon the work, and operating while the printing head is withdrawn to retain the work-support in the position given to it by contact of the printing surface with the work, and means for operating the unlocked work-support to cause the work to meet the printing surface as the printing head makes its stroke, and also to take proper bearing against the printing surface for the impression, in addition to permitting the work-support to adjust itself under pressure of the printing surface against the work until the printing head has reached the limit of the printing stroke.

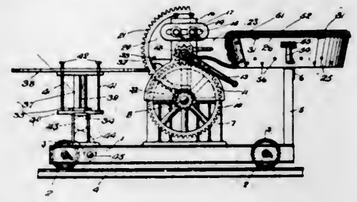
2. In a marking or numbering machine, in combination, a reciprocating printing head, and a self-adjusting work-support or backing, located in the line of the printing stroke of the printing head, controlled as to its position during printing and subsequently by the thickness of the work, and supporting the work for the impression.



3. In a marking or numbering machine, in combination, a reciprocating printing head, a work-support or backing, spring-actuated to meet the type and support the work for the impression and type-actuated in the opposite direction, and an intermittent lock releasing the work-support or backing for the impression and then relocking the same.

4. In a marking or numbering machine, in combination, a reciprocating printing head, a work-support or backing located in the line of the printing stroke, actuated by yielding force to carry the work to meet the printing head and support the work for the impression, and a lock normally holding the work-support or backing in fixed position and released by the printing head as the latter arrives at the printing point.

1,172,898. MOLDING-MACHINE. OSCAR P. NYSTROM, Holland, Mich. Filed Nov. 28, 1914. Serial No. 874,477. (Cl. 22—33.)



1. In a molding machine, spaced apart vertical supports, a cross member connecting the upper ends thereof, a post slidably mounted for vertical movement in the cross member, a table attached to the upper end of said post, means for raising and lowering the post and table, rods carried by the supports and extending upwardly through the table and means adjustable in a vertical direction carried in the upper ends of the rods, substantially as described.

2. In a molding machine, spaced apart supports, a shaft rotatably mounted between and carried by the supports, a casting having a thickened outer portion secured to the shaft, a gear segment secured to the casting, a second shaft mounted between the supports below the first shaft, a pinion thereon meshing with the gear segment, arms spaced apart and connected to the first shaft, a plate covering the space between said arms, a flask connected to the free ends of the arms, a manually operable handle and gearing connections between said handle and the second shaft, substantially as described.

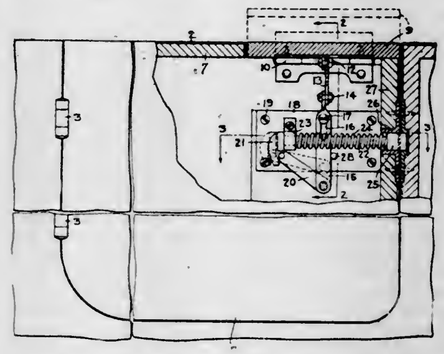
3. In combination, spaced apart upright supports, castings adjustably mounted at the upper ends for horizontal movement with respect to the supports, a shaft rotatably mounted in and between the castings, a gear segment connected therewith, spaced apart arms connected to the shaft, a flask connected to the free ends of the arms, means including a second shaft having a pinion thereon engaging the gear segment for rotating said first shaft and flask through substantially a half circle, and means for supporting the flask in substantially horizontal position at either extreme of its rotative movement.

4. In a molding machine, spaced apart vertical supports, a shaft rotatably mounted between and carried by the supports, a casting secured to the shaft, a gear segment at the outer portion of the casting, gearing connections operatively associated with said gear segment including a crank for the manual operation thereof, arms extending from the shaft, a flask connected to the free ends of the arms, a support for the flask at one side of the vertical supports, brackets extending from the vertical supports on the opposite side thereof, and set screws mounted in the ends of said brackets, said brackets positioned in spaced relation apart a distance substantially equal to the distance between said arms whereby the arms will rest on the screws when the flask is carried to one extreme of its movements, substantially as described.

5. In a molding machine, spaced apart vertical supports, a shaft carried by and between said supports, a gear segment on the shaft, gearing connections in engagement with the gear segment for rotating the shaft, a flask secured to and rotatable with the shaft, means to support the flask in substantially horizontal position at either side of the vertical supports, vertical supports at one side of the first supports, a cross member connecting the upper ends thereof, a post slidably mounted for vertical movement in the cross member, a table attached to the upper ends of said post, a shaft positioned beneath the post and having a cam engaging with the lower end of the post, means to turn said last mentioned shaft a partial rotation to thereby elevate or lower the post and the table connected thereto, and headed rods carried by the last mentioned vertical supports and extending upwardly through the table, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,172,899. DOOR-LATCH. CHARLES A. PAINTER, Jr., and JAMES P. MCKINNEY, Jr., Pittsburgh, Pa. Filed Oct. 18, 1915. Serial No. 56,486. (Cl. 70—42.)



1. In a door or like structure, the combination of a movable section in the top horizontal portion of the door, a locking device, and connections between said locking device and said movable section.

2. In a door or like structure, the combination of a movable section in the top horizontal portion of the door, a bolt and connections between said bolt and said movable sections.

3. In a door or like structure, the combination of a hinged section in the top horizontal portion of the door,

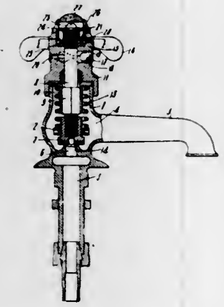
a locking device, and connections between said hinged section and said locking device.

4. In a door or like structure, the combination of a hinged section in the top horizontal portion of the door, a spring actuated bolt, and connections between said section and said bolt.

5. In a door or like structure, the combination of a hinged section in the top horizontal portion of the door, a bolt, a guide-plate, a toggle-arm connected to said guide-plate, and the inner end of said bolt being engaged by said toggle-arm.

[Claims 6 and 7 not printed in the Gazette.]

1,172,900. FAUCET-VALVE. THOMAS F. PAYNE, Pittsburgh, Pa. Filed Feb. 20, 1914, Serial No. 820,070. Renewed July 24, 1915. Serial No. 41,799. (Cl. 137—4.)



1. In a self closing faucet valve, a casing having an inlet and a discharge outlet and a port intermediate the inlet and outlet, a movable valve for controlling the port, a removable sleeve member fixedly held in the casing and having a bore provided with a longitudinal flat face, a stem for the valve, disposed in the sleeve and provided with a flat face portion coacting with the flat face of the sleeve, for preventing rotative creeping of the stem, and means associated with the stem, for operating the valve; the sleeve being adapted to limit the movement of the valve.

2. In a self-closing faucet valve, a casing having an inlet and a discharge outlet and a port intermediate the inlet and outlet, a valve for controlling the port, a removable sleeve member fixedly held in the casing and having a bore provided with a longitudinal flat face, a stem for the valve, disposed in the sleeve and provided with a flat face portion coöperating with the flat face of the sleeve, for preventing rotative creeping of the stem, a valve operating member loosely associated with the stem, an abutment member non-rotatably carried by but freely movable longitudinally of the stem and associated with the valve operating member, and means for limiting upward movement on the stem of the abutment member.

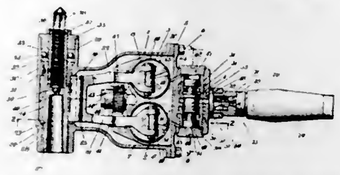
3. In a self-closing faucet, a casing, a valve therein having an upwardly extending stem portion provided with a longitudinal recess, a valve actuating member, a nut carried by the end of the stem and having a recess registering with the recess of the stem, a locking member disposed in the two recesses, and an abutment member carried by the stem and interposed between the actuating member and the nut and having a lug portion engaging one of the recesses.

4. In a self-closing faucet, a casing, a valve therein having an upwardly extending stem portion, provided with a longitudinal recess, a valve actuating member, a nut carried by the end of the stem and having a recess registering with the recess of the stem, a screw having a shank portion disposed in the two recesses, and an abutment member carried by the stem and interposed between the actuating member and the nut and having a lug portion disposed in the recess of the stem.

5. In a self-closing faucet, a casing, a valve therein having an upwardly extending stem portion provided with a longitudinal recess, a valve actuating member, a nut carried by the end of the stem and having a recess registering with the recess of the stem, a locking member disposed in the two recesses, an abutment member carried by the stem and having a lug portion disposed in one of the recesses, and a washer interposed between the abutment member and the valve actuating member.

[Claims 6 to 8 not printed in the Gazette.]

1,172,901. FLUID-OPERATED DRILL. CAID H. PECK, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1912. Serial No. 703,763. (Cl. 121—23.)



1. In a fluid operated drill, an elongated casing, a drill spindle in one end of said casing, ratchet levers for rotating said spindle extending longitudinally of said casing, cylinders in said casing at right angles to its length, oppositely reciprocable pistons in said cylinders, and connecting rods connecting said pistons and levers.

2. In a fluid operated drill an elongated casing, a drill spindle journaled in one end of said casing, ratchet levers engaging said spindle, said levers extending longitudinally of said casing, cylinders in said casing at right angles to its length, oppositely reciprocable pistons in said cylinders, and connecting rods connecting said pistons and said levers.

3. In a fluid operated drill, an elongated casing, a drill spindle in one end of the casing, a plurality of ratchet levers for actuating said spindle extending longitudinally of said casing, a plurality of cylinders in said casing at right angles to its length, pistons in said cylinders, connections for transmitting the motion to said pistons directly to said levers and means for successively actuating said pistons.

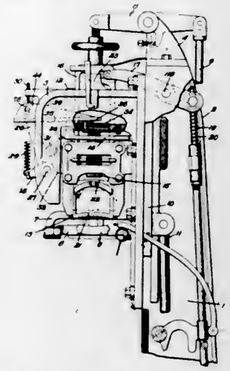
4. In a fluid operated drill, an elongated casing, a drill spindle in one end of the casing, a plurality of ratchet levers in said casing arranged to successively actuate said spindle, a plurality of cylinders in said casing arranged at right angles to said levers, and pistons in said cylinders directly connected with said levers.

1,172,902. HEEL-BREASTING MACHINE. THOMAS G. PLANT, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 9, 1910, Serial No. 560,239. Renewed May 29, 1912. Serial No. 700,495. (Cl. 12—47.)

1. In a machine for acting on the heels of boots and shoes, the combination of a tool to act upon the heel, a stop adapted to contact with and be positioned by the shoe to limit the active stroke of the tool, means for positively supporting the stop independent of the shoe when in the position determined by the shoe, and a positive lock for preventing movement of said stop supporting means in either direction while the tool acts upon the heel.

2. In a heel breasting machine, the combination of heel breasting means, a breasting stop adapted to engage the sole of a shoe, a support for sustaining the breasting stop independent of the shoe as it arrests the action of the breasting means, means for moving the support in stop supporting position, and a lock operated by movement of the support for holding the support in operative position.

3. In a heel breasting machine, the combination of heel breasting means, a breasting stop adapted to engage the sole of a shoe, a support sustaining the breasting stop independent of the shoe as it arrests the action of the breasting means, means for moving the support in stop supporting position, a lock for holding the support in supporting position, and means acting through upward movement of the breasting stop from the shoe to free the support from said lock.

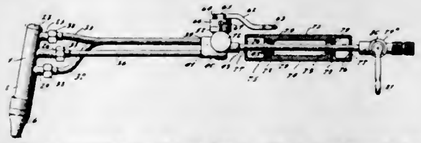


4. In a heel breasting machine, the combination of heel breasting means, a breasting stop movable into contact with the shoe, a wedge for sustaining the breasting stop independent of the shoe during its arresting action, and a lock operated by movement of the wedge into stop sustaining position for locking the wedge.

5. In a heel breasting machine, the combination of heel breasting means, a breasting stop movable into contact with the shoe, a support for sustaining the breasting stop independent of the shoe during its arresting action of the breasting means, a lock for said support, one member of which is carried by the said stop support and the other by the machine frame, and means for yieldingly maintaining the members of the lock in nonlocking relation and permitting them to interlock by movement of the support into supporting position.

[Claims 6 to 15 not printed in the Gazette]

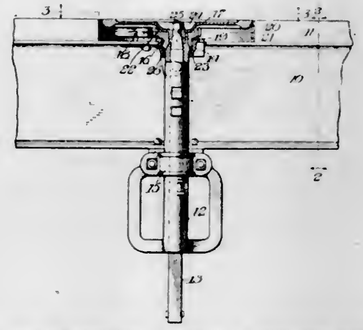
1,172,903. CUTTING-TORCH OR BLOWPIPE. MARION STUART PLUMLEY, Pittsburgh, Pa., assignor to Superior Oxygen Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 5, 1915. Serial No. 552. (Cl. 158—13.5.)



1. In a cutting torch, a head, pipes for supplying a combustible mixture and an oxygen jet under high pressure to said head, a valve controlling said high pressure oxygen and comprising a casing having a seat, a valve body movable from said seat by pressure of the oxygen, a diaphragm located on the opposite side of the valve from the said seat, and a screw for adjusting the position of the diaphragm relative to the valve body.

2. In a cutting torch, a head, pipes for supplying a combustible mixture and an oxygen high pressure jet to said head, a valve controlling the flow of high pressure oxygen and low pressure oxygen to the head and comprising a casing having an oxygen inlet, a passage connecting said oxygen inlet with the low pressure supply to the head, a separate and independent passageway connecting said oxygen inlet to the high prassure supply to the head, a valve chamber with which said second passage communicates and having a seat, a valve body movable from said seat by pressure of the oxygen, a diaphragm sealing said casing and located above the valve body, a plunger rod threaded in the casing, a button intermediate the plunger rod and the diaphragm and an operating lever carried by the plunger rod.

1,172,904. BRAKE-SHAFT. HERMAN PRIES, Michigan City, Ind.; Amelia Pries executrix of said Herman Pries. Filed Oct. 31, 1913. Serial No. 798,455. (Cl. 188—52.)



1. In brake mechanism, a pair of relatively non-rotatable telescoping shafts, a ratchet wheel on the outer shaft, a pawl coöperating with the ratchet wheel, a bracket for supporting the outer shaft, means for preventing vertical movement of the ratchet wheel with reference to the bracket, and a hand wheel attached to the inner shaft and adapted to seat in and be supported by the ratchet wheel.

2. In a brake shaft, in combination, a pair of telescoping shaft members, the outer member having a tapering counter-bored hub at its upper end, a bracket within which such hub is journaled and having a tapering socket, a hand wheel fixed upon the upper end of the inner shaft member, the hub of the wheel having a downwardly extending sleeve fitting within the counter-bore of the hub of the outer shaft member.

3. In a brake shaft, in combination, a pair of telescoping shaft members, the outer member having on its upper end a ratchet wheel provided with a recess in its upper face, a pawl coöperating with the ratchet wheel, and a hand wheel attached to the upper end of the inner shaft member and having a downwardly offset recessed portion adapted to enter the recess in the ratchet wheel.

4. In a brake shaft, in combination, a pair of telescoping shaft members, the outer member having the upper end of its bore enlarged, a hand wheel attached to the upper end of the inner shaft member, the hub of the hand wheel being depressed and having a downwardly extending flange adapted to enter the bore of the outer shaft member, the depressed portion of the hand wheel surrounding the upper end of the inner shaft member.

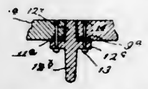
5. In a brake shaft, in combination, a pair of shaft members, one thereof being tubular and telescopically receiving the other shaft member within its bore, and a hand wheel having its hub extending at one side only of the plane of the rim of the wheel, such hub being mounted upon the inner one of the two shaft members and loosely entering the bore of the outer shaft member.

[Claims 6 and 7 not printed in the Gazette.]

1,172,905. VAULT-LIGHT. JOHN B. RICKETTS, Kansas City, Mo. Filed Jan. 16, 1915. Serial No. 2,575. (Cl. 94—7.)

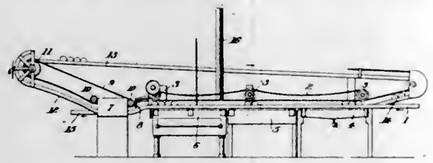
In combination with a pair of spaced adjoining panels having their bottoms provided with serrations in proximity to their adjacent sides, a bar having a vertical

rib extending up into the space between the panels, oppositely disposed flanges on the bar having serrations receiving the panel serrations, soft packing strips between



the serrations and abutting the rib, and vertical bolts passed through the flanges, packing strips and panels and located on opposite sides of the rib.

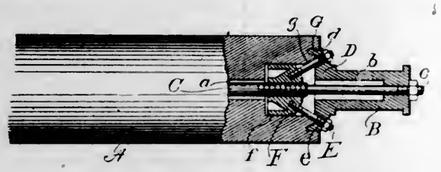
1,172,906. END-SEAM-SOLDERING MACHINE. DANIEL P. ROBINSON and JOHN COYLE, Baltimore, Md., assignors, by mesne assignments, to Continental Can Company, Inc., a Corporation of New York. Filed Nov. 9, 1911. Serial No. 659,345. (Cl. 113—68.)



1. A soldering machine for sheet metal cans including in combination, guides along which the can may be moved, means for moving the cans along the guides, and a soldering mechanism comprising a receptacle having a slot or recess in its upper side, means for supplying said receptacle with molten solder and for forcing a uniform bead of molten solder above the side edges of the slot or recess, one wall of said slot or recess being higher than the other, relative to the side face of the can body, whereby the bead of solder may be raised to a greater extent on one side than on the other.

2. A soldering machine for attaching can ends to can bodies including in combination, guides along which the can may be moved, means for moving the can along the guides, a soldering mechanism comprising a receptacle having a slot or recess at its upper side, means for supplying said receptacle with molten solder and forming a uniform bead of molten solder above the side edges of the slot or recess, one of the side edges of the slot or recess being raised higher than the other, relative to the side face of the can body, whereby said beads of solder through adhesion to the lower wall and through the capillary attraction of the other wall, are caused to form higher on one side than on the other, said beads of molten solder being so disposed relative to the guides as to be applied to the edge of the flange of the can end.

1,172,907. ROLL-HEAD. MORTIMER R. RUST, Fulton, N. Y. Filed July 1, 1915. Serial No. 37,463. (Cl. 92—49.)



1. In a roll head, the combination with a roll having a chamber in one end and an annular base seat concentric with the chamber, of a central shaft within the roll, a trunnion having a base constructed to fit the base seat in the end of the roll, a drawhead engaging the said shaft within the roll, and bolts passing through the base of the trunnion and engaging the drawhead.

2. In a roll head, the combination with a roll having a chamber in one end and an annular base seat concentric with the chamber, the said base seat having a peripheral portion of greater depth than the seat forming a flange seat, of a central shaft within the roll, a trunnion having a base constructed to fit the said flange seat, a drawhead engaging the said shaft within the roll, and bolts passing through the base of the trunnion and engaging the drawhead.

3. In a roll head, the combination with a roll having a chamber in one end and an annular base seat concentric with the chamber, of a central shaft within the roll, a trunnion having a base constructed to fit the base seat in the end of the roll, the said trunnion having a hollow central portion and the end of the said shaft passing through the trunnion and having an external nut, a drawhead engaging the shaft within the roll, and bolts passing through the base of the trunnion and engaging the drawhead.

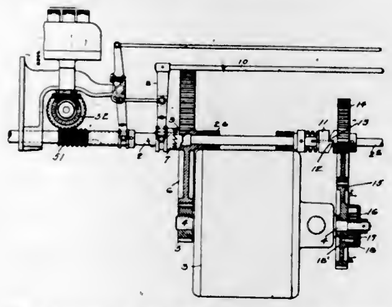
4. In a roll head, the combination with a roll having a chamber in one end and an annular base seat concentric with the chamber, of a central shaft within the roll, a trunnion having a base constructed to fit the base seat in the end of the roll, a drawhead engaging the said shaft within the roll and having a conical face, and bolts passing through the base of the trunnion inwardly and inclining toward the said shaft, the said conical face of the drawhead being provided with bolt holes threaded to engage the ends of the said bolts.

5. In a roll head, the combination with a roll having a chamber in one end, of a central shaft within the roll, a trunnion having a base arranged at the end of the roll, a drawhead, screw-threaded means for holding the drawhead in place upon the shaft within the said chamber, and means for securing the said trunnion and drawhead together.

1,172,908. MANUFACTURE OF HYDROGEN. KARL SCHAEFER, Charlottenburg, Germany, assignor to Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft, Berlin, Germany, a Corporation of Germany. Filed May 16, 1914. Serial No. 839,104. (Cl. 48—198.)

The process of producing hydrogen by alternately reducing and oxidizing heated iron by the alternate passing of reducing gas and steam, which consists in directly heating the iron in the first stage by means of a heating gas supplied in the presence of air in excess, and, during the following stages of alternately heating the iron with a reducing gas and steam, periodically reheating the iron exclusively by passing air in contact with it.

1,172,909. SYSTEM FOR AUTOVEHICLES. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 5, 1913. Serial No. 771,884. (Cl. 123—179.)



1. In a system of the class described, the combination with a combustion engine, of a shaft for transmitting power to and receiving power from the engine, an alternating current generator, operatively associated with the shaft, means whereby the shaft may start the engine without regard to maintenance of synchronous association of the shaft and alternating current generator, and means whereby the shaft may actuate the alternating current generator always in a certain phase relationship.

2. In a system of the class described, the combination with a combustion engine, of a dynamo forming part of a starting and ignition system and adapted to deliver alternating current, and means for connecting the engine with the dynamo so that the latter may actuate the engine at one ratio of speed and without regard to maintenance of synchronous coupling of engine and dynamo, and the engine may actuate the dynamo at a certain predetermined speed and phase relation.

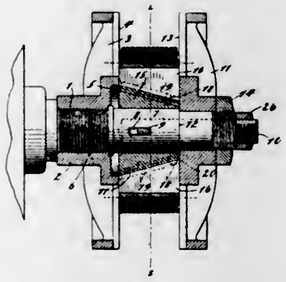
3. In a system of the class described, the combination with a combustion engine, of a dynamo forming part of a starting and ignition system, and having both alternating and direct current elements, and means for connecting the engine with the dynamo so that the latter may actuate the engine without regard to maintenance of synchronism between the engine and dynamo, and the engine may actuate the dynamo always in a certain phase relationship.

4. In a system of the class described, the combination with a combustion engine, of a dynamo forming part of a starting and ignition system and having both alternating and direct current elements, and means for connecting the engine with the dynamo so that the latter may actuate the engine at one speed ratio and the engine may actuate the dynamo at another speed ratio and in a certain predetermined phase relationship.

5. In a system of the class described, the combination with a combustion engine, of a shaft adapted to transmit power to and be driven by and in synchronism with the engine, a second shaft for transmitting power to and receiving power from the first shaft, an alternating current generator operatively associated with the second shaft, gearing connection between the two shafts and comprising a large gear associated with the first shaft and a relatively smaller gear associated with the second shaft, whereby the second shaft may drive the first shaft for starting of the engine and without regard to maintenance of synchronous association of the second shaft with the engine, and means for bringing the second shaft into synchronous step with the first shaft after said second shaft has been brought out of starting service, for actuation of the generator always in a certain phase relatively to the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,172,910. MANDREL FOR WINDING COILS. ARCHIBALD D. SCOTT, Jersey City, N. J., assignor to Varley Duplex Magnet Co., Jersey City, N. J., a Corporation of New Jersey. Original application filed Sept. 27, 1910, Serial No. 584,040. Divided and this application filed Dec. 18, 1915. Serial No. 67,675. (Cl. 242—9.)



1. A collapsible winding mandrel having a removable peripheral plate formed with guiding grooves running substantially parallel to the direction of rotation of the mandrel and offset from each other and connected by inclined grooves.

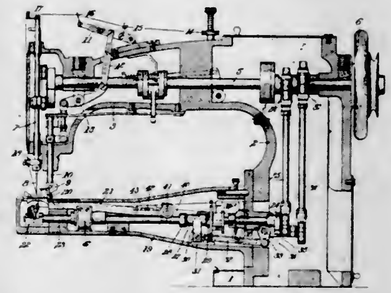
2. A winding mandrel having sets of strand guiding grooves on its receiving face, the grooves of each set running parallel to the direction of rotation, and the grooves of one set being offset from the grooves of another set and connected by inclined grooves.

3. A winding mandrel having a corrugated strand guiding face, the said face comprising spaced zones, the corrugations of alternate zones being parallel and contra-disposed relatively to adjacent zones.

4. A strand guide for winding mandrels consisting of a strip having sets of parallel grooves, the grooves of one set being offset laterally from the grooves of another set, and sets of oblique parallel grooves connecting the grooves of said first-named sets.

5. A strand guide for winding mandrels consisting of a strip having sets of parallel grooves running lengthwise of the strip, the grooves of one set being offset laterally from the grooves of another set substantially one-half the diameter of a groove, and sets of oblique parallel grooves connecting the grooves of said first-named sets.

1,172,911. SEWING-MACHINE. DUDLEY S. SEYMOUR, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 5, 1910. Serial No. 590,915. (Cl. 112—8.)



1. The combination of a thread-manipulating device mounted to move back and forth and laterally, a fabric-manipulating device mounted to move back and forth and up and down, a shaft, an eccentric member operated by said shaft, means operated by said eccentric member for giving said thread-manipulating device one of its movements, and said fabric-manipulating device one of its movements a second eccentric member operated by said shaft, and means operated by said second eccentric member for giving the thread-manipulating device its other movement and the fabric-manipulating device its other movement.

2. The combination of a looper mounted to move back and forth and laterally, a feed dog mounted to move up and down and back and forth, a shaft, an eccentric member operated by said shaft, means operated by said eccentric member for giving each said looper and said feed dog one of their movements, a second eccentric member operated by said shaft, and means operated by said eccentric member for giving the looper and the feed dog their other movements.

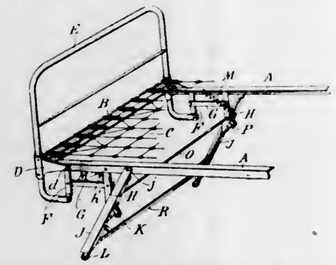
3. The combination of a looper, a looper-supporting shaft, a feed dog, a feed bar carrying said feed dog, an operating shaft, an eccentric member carried thereby, a rock shaft operated from said eccentric member, means connected to said rock shaft for moving the feed bar back and forth, and means connected to said rock shaft for moving the looper shaft endwise.

4. The combination of a looper, a looper-supporting shaft, a feed dog, a feed bar supporting the same, an operating shaft, an eccentric member carried thereby, a rock shaft operated by said eccentric member, a slotted arm carried by said rock shaft, a link adjustably connecting said slotted arm to said feed bar, and means for moving the looper shaft endwise from said rock shaft.

5. The combination of a looper, a looper-supporting shaft, a feed dog, a feed bar supporting the same, an operating shaft, an eccentric member carried thereby, a rock shaft operated by said eccentric member, a slotted arm carried by said rock shaft, a link adjustably connecting said slotted arm to said feed bar, a sleeve carried by said looper-supporting shaft, and a link connecting said sleeve to said rock shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,172,912. FOLDING BED. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS E. PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1913. Serial No. 797,754. (Cl. 5—9.)



1. In a folding bed, the combination with a mattress fabric frame, of legs pivoted thereto, latch abutments on said legs, an end frame pivoted to said mattress fabric frame, and means operated by said end frame for engaging said abutments to retain said legs in supporting position.

2. In a folding bed, the combination with a mattress-fabric frame, of folding legs therefor, a spring for operating said legs, a latching brace for said legs, and an end-frame pivoted on said mattress-fabric frame and controlling said latching-brace.

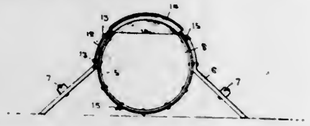
3. In a folding bed, the combination with a mattress fabric frame, of legs pivoted thereto, latch abutments carried by said legs, an end frame pivoted to said mattress fabric frame, a latching brace also pivoted to said mattress frame and adapted to engage said abutments when said legs are in unfolded position, and connections between said latching brace and end frame for operating the same.

4. In a folding bed, the combination with a mattress frame, of legs pivoted thereto, end frames also pivoted thereto, latching mechanism pivoted to said mattress frame and coöperating with said legs to retain them in unfolded position, and connections between said end frame and latching mechanism for controlling the latter.

5. In a folding bed, the combination with a mattress frame, of an end frame pivoted thereto, legs pivoted thereto separately from the end frame, springs for normally holding said legs in folded position, latching mechanism for holding said legs in unfolded position, and operating means for said latching mechanism controlled by the movement of said end frame.

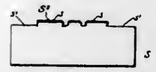
[Claims 6 to 12 not printed in the Gazette.]

1,172,913. POULTRY TROUGH OR FEEDER. HARRY SLATER, Indiana, Pa. Filed Aug. 4, 1914. Serial No. 854,956. (Cl. 119—61.)



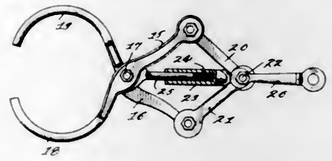
In a feeding device, the combination with a cylindrical body having an opening therein, extending the full length of said body, and supporting legs at either end of the body, of a plurality of circular partitions in said body, the end partitions having outwardly extending flanges on the portion inclosed within the walls of the body portion adapting the same to be fastened to said body portion, and inwardly extending flanges on the portion above the level of the opening in said body portion, a semi-cylindrical door, said door or cover being of less length than said body portion to admit of its passage between said legs, the ends of said door being overlapped by the inwardly extending flanges of said end partitions to provide a substantially tight closure throughout the length of the trough, stops to limit the movement of said door in either direction, and means to guide said sliding door.

1,172,914. LINOTYPE-SLUG. FRANK H. STEIFEL, Jersey City Heights, N. J. Filed June 24, 1915. Serial No. 36,026. (Cl. 199—2.)



A linotype slug of the character designated formed with type high surface printing characters, said printing characters being supported on a pedestal, with the quad line front edge below the base line of said printing characters and below the base line of the pedestal so as to prevent the contact of said quad line edge with ink roller or surface to be printed upon, as set forth.

1,172,915. COUPLING DEVICE FOR BRAKE-CHAINS. CHARLES B. STEVENS, New York, N. Y. Filed Aug. 11, 1915. Serial No. 44,985. (Cl. 24—232.)

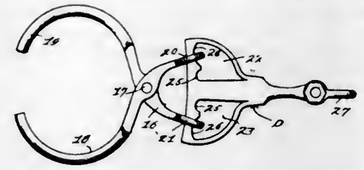


1. A coupling for brake chains comprising pivotally connected members having corresponding ends curved outwardly and inwardly and adapted to embrace the rim of a wheel, links pivotally connected to the ends of the members respectively remote from the curved end, a bolt pivotally connecting the remaining ends of said links, a cylinder pivoted on the bolt, a piston mounted on the pivotal connection between the members and slidable in the cylinder, and a shackle secured to the bolt connecting the links.

2. A coupling for brake chains comprising pivotally connected members having corresponding ends curved outwardly and inwardly and adapted to embrace the rim of a wheel, links pivotally connected to the ends of the members respectively remote from the curved ends, a bolt pivotally connecting the remaining ends of said link, a cylinder pivoted on the bolt, a piston mounted on the pivotal connection between the members and slidable in the cylinder, a spring interposed between the piston and the inner end of the cylinder, and a shackle secured to the bolt connecting the links.

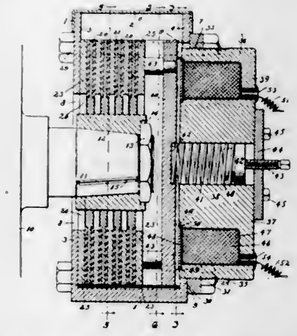
1,172,916. COUPLING DEVICE FOR BRAKE-CHAINS. CHARLES B. STEVENS, New York, N. Y. Filed Aug. 11, 1915. Serial No. 44,986. (Cl. 24—232.)

A coupling for brake chains comprising pivotally connected members having corresponding ends curved outwardly and inwardly and adapted to embrace the rim of a wheel, the remaining corresponding end of said members terminating in eye portions, a shank comprising a frame engaged through the eye portions and including a bar disposed between the eye portions, said frame being provided with recesses in which the eye portions of the coupling are adapted to seat respectively



in the open and closed positions of the coupling, and a shackle pivotally secured to said frame.

1,172,917. BRAKE. THOMAS W. THOMAS, Ashtabula, Ohio. Filed Oct. 30, 1914. Serial No. 869,474. (Cl. 74—70.)



1. In a brake of the character described, the combination with a rotatable member, of a casing having opposed end walls, one of said end walls having an aperture through which the aforesaid member projects, a series of disks carried by said member, a series of plates alternating with the disks of the aforesaid series, said plates and disks being movable longitudinally of the rotating axis of said member, means for preventing the rotation of the plates, one of the end plates of the series being arranged to abut the aforesaid end wall of the casing, a member arranged to bear against the opposite end plate of the series, an armature plate loctaed adjacent the end wall of the casing opposite the one through which the aforesaid rotatable member extends and having connection with the member which bears against the end plate of the series, the said adjacent end wall having an aperture, a magnet supporting plate connected to said end wall and having a threaded opening, and an electromagnet casing having a threaded portion for cooperation with the threaded opening of the magnet supporting plate.

2. A device of the character described comprising, in combination, a casing, a brake mechanism inclosed therein, an armature operatively connected therewith, one of the casing walls having an aperture, an electromagnet one end of which projects through said aperture for cooperation with the armature, and connections between the magnet and the casing whereby the face of the magnet may be adjusted with respect to the armature.

3. A device of the character described comprising, in combination, a casing, brake mechanism inclosed therein, an armature operatively connected with said mechanism, one wall of the casing having a threaded aperture, and a magnet casing having a threaded portion for coöperation with the aforesaid aperture whereby the face of the magnet may be adjusted toward and from the armature.

4. In a brake of the character described, the combination with a rotatable member, of a brake element carried thereby, an abutment wherewith one side of said element is arranged to engage, an engaging member for cooperation with the opposite side of the element, the element and engaging member being movable longitudinally of the rotating axis of the aforesaid rotatable member, a device arranged to bear against the engaging member, means tending to move the device toward the same, an armature connected to said device, a magnet supporting member, and an electromagnet, said magnet having a screw connection with the magnet supporting member whereby the former may be adjusted with respect to the latter.

5. In a brake of the character described, the combination with a rotatable member, of a brake element carried thereby, an abutment wherewith one side of said element is arranged to engage, an engaging member for coöperation with the opposite side of the element, the element and engaging member being movable longitudinally of the rotating axis of the aforesaid rotatable member, a device arranged to bear against the engaging member, means tending to move the device toward the same, an armature connected to said device, a magnet supporting plate having a threaded aperture, and an electromagnet, having a threaded portion for coöperation with the threaded aperture of the supporting plate.

[Claim 6 not printed in the Gazette.]

1,172,918. ARTIFICIAL TOOTH-CROWN. CHARLES J. THORP, Detroit, Mich. Filed Nov. 23, 1914. Serial No. 873,428. (Cl. 32—29.)

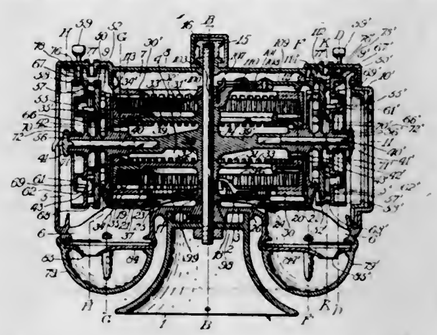


As a new article of manufacture, a tooth crown of composite metal of gold and silver.

1,172,919. MANUFACTURE OF RUBBER HEELS. HENRY C. WEBER, Port Jefferson, N. Y. Filed Sept. 8, 1915. Serial No. 49,416. (Cl. 18—59.)

The method of making rubber heels which comprises cutting solid rubber tires into slices approximating the thickness of the heels to be produced, grinding the faces of the slices to obtain uniform thickness, cutting out full-thickness heel blanks from the slices, and forcing washers flatwise into the interior of the blanks and simultaneously finishing the bottoms thereof and forming the nail holes leading to the washers under heat and pressure.

1,172,920. COIN-CONTROLLED APPARATUS. JOHN WINKELMEYER, Greenfield, Ind., assignor to Specialty Manufacturing Company, Greenfield, Ind., a Corporation of Indiana. Original application filed Nov. 3, 1911, Serial No. 658,404. Divided and this application filed June 28, 1912. Serial No. 706,416. (Cl. 194—85.)



1. Coin-controlled apparatus including a horizontal shaft, a rocker mounted to rock to and fro on the shaft

and comprising a web and a cylindrical rim fixed on the web and having two slots in the upper and lower portions thereof respectively, the web having two guides thereon for guiding coins from the upper to the lower one of the slots and having also a lug thereon adjacent to the upper one of the slots, and a wheel rotatable on the shaft and having projections thereon in a circle between the two guides.

2. Coin-controlled apparatus including a horizontal shaft, a rock mounted to rock to and fro on the shaft and comprising a web having a recess in one side thereof that extends concentrically to the shaft, the web having also two concentrical guides thereon on opposite sides respectively of the recess and a lug on the normal upper portion above the recess, and a wheel rotatable on the shaft opposite to the recessed side of the web and having projections thereon extending on a circle between the two guides and into the recess.

3. Coin-controlled apparatus including a fixed horizontal shaft having a fixed head, a rocker comprising a web having a projecting hub mounted rotatably on the shaft in contact with the head, the web having two concentrical guides thereon, the outer one of the guides extending from the normal upper to the lower portion of the web, the web having also a lug thereon spaced apart from the upper portion of the outer one of the guides, a wheel rotatable on the shaft and having projections thereon in a circle between the two guides, and a spring extending about the hub of the web and connected to the web and also to the head of the shaft.

4. Coin-controlled apparatus including a fixedly supported horizontal shaft, a wheel and a rocker adjacently arranged and independently rotatable on the shaft, the wheel having projections on one side thereof extending into the rocker and spaced apart to receive coins between them, the rocker having a recess receiving the ends of the projections and being provided with a lug on the upper portion thereof adapted to engage and force the coins in succession against the projections to turn the wheel, the rocker having a radially projecting operating arm, stops for limiting the movement of the rocker, and a spring anchored to and extending about the shaft and engaging the rocker for retracting the rocker to carry the lug away from the coins.

5. A machine including rotatably supported gearing, a movably supported lock coöperating with the gearing for preventing rotation of the gearing, a rocker supported adjacent to a rotatable element of the gearing and rotatable independently of the rotatable element, means carried by the rotatable element and the rocker enabling a coin to make operative connection of the rocker with the element, means carried by the gearing engaging and retracting the lock on movement of the rotatable element, stops for limiting the movement of the rocker, and a spring for retracting the rocker to one of the stops.

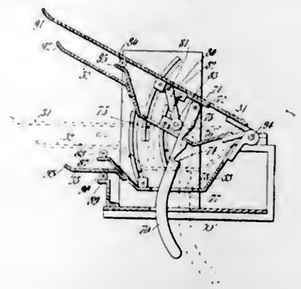
[Claims 6 to 17 not printed in the Gazette.]

1,172,921. AUTOMATIC COUNTING-MACHINE. GEORGE W. YOST, Palisade Park, N. J. Filed Mar. 23, 1914. Serial No. 826,660. (Cl. 235—98.)

1. An automatic counting machine, comprising a plurality of arms hinged at one of their ends, and of a different size corresponding to the different sizes of the articles to be counted, electrical connections brought into or out of circuit by said arms, and a pivoted notched arm connecting one or more of the arms.

2. An improved counter, comprising a plurality of arms, corresponding to the sizes of the articles to be counted, each of said arms being pivoted at one of its ends, a notched arm pivoted to the one of said counting arms and provided with a plurality of notches, adapted to be engaged by the other arms for holding them in position, and electrically operated means for counting the movement of said arms.

3. An improved counter, comprising a frame, a shaft supported by said frame, a plurality of arms pivoted to said shaft, said arms having different sizes, corresponding to the articles to be counted, a notched arm pivoted to one of said counting arms, and adapted to engage one or more of the other arms, spring-actuated means for holding said notched arm in position, contact pieces, one for each of said counting arms, curved contact bars adapted to be brought into electrical circuit with said contact pieces, and electrical connections with said bars for actuating the counting means.



4. In a counter, the combination of a frame, a shaft supported by said frame, a plurality of counting arms pivoted to said shaft, a notched arm pivoted to one of said counting arms, and adapted to engage one or more of the other arms, spring-actuated means for holding said notched arm in position, contact pieces, one for each of said counting arms, contact bars arranged in sets in the direction of the movement of the contact pieces on the counting arms, one bar of each set being the full length of the set, and having oppositely thereto two bars, a second bar of shortest size and a third bar of longer size than the second and shorter than the first, the contact piece of each counting bar initially contacting with the longest bar and the shortest bar, and closing the circuit thereby, but not causing any count to be made, counting means and electrical connections with said bars for actuating the counting means when the contact pieces close the circuit between the longest bar and the third bar.

1,172,922. PHOTOGRAPHIC APPARATUS. ALFRED ADAIR, Troyeville, Johannesburg, Transvaal, South Africa. Filed May 5, 1914. Serial No. 836,566. (Cl. 95—72.)



1. In a system of daylight photography an envelop of rigid construction closed at one end, a rigid collar at the other end capable of sliding relatively to said envelop and a light-tight material between said collar and said envelop to close the opening of the envelop in a light-tight manner or to allow of the passage of a plate into or out of said envelop.

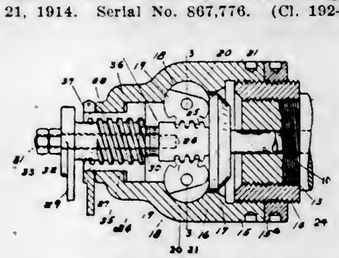
2. In a system of daylight photography, an envelop of rigid construction closed at one end and provided at the other end with a rigid collar capable of sliding relatively to said envelop and non-actinic material conected to said collar and to said envelop so that in one position of collar the material crumples up so as to close the opening of the envelop in a light tight manner, while in a second position of the collar the envelop is opened to admit of the passage of a plate.

3. In a system of daylight photography, an envelop of rigid construction closed at one end and provided at the other end with a rigid collar capable of sliding relatively to said envelop and non-actinic material forming a collar and connected around the outer side of said envelop and the inner side of said collar so that in one position of the collar it is crumpled up so as to close the opening of the envelop in a light tight manner, while in a second position it admits of the passage of a plate into or out of said envelop.

4. In a system of daylight photography, an envelop of stiff and durable material closed at one end and provided at the other end with a rigid collar capable of sliding relatively to said envelop and a collar of non-actinic material connected at one end around the outer side of said envelop and at the other end around the inner side of said collar so as to close the envelop in a light tight manner for one position of the collar and to open it so as to admit of the passage of a plate into or out of said envelop when the collar is in a second position.

5. In a system of day-light photography an envelop of rigid construction closed at one end, a rigid collar having a chambered or tapered end provided at the other end of said envelop and capable of sliding relatively thereto with the tapered end outward, and a non-actinic material adapted to close the opening of the envelop in a light-tight manner or to admit of the passage of a plate into or out of said envelop.

1,172,923. FRICTION-CLUTCH MECHANISM. BERT C. BALL and LEWIS E. YOUNIE, Portland, Oreg. Filed Oct. 21, 1914. Serial No. 867,776. (Cl. 192—1.)



1. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having a thrust surface opposed to the block; a pin rocking on a transverse axis and interposed between the block and the thrust surface, said pin having varying cross dimensions, the block assuming a position to set the clutch with a larger cross dimension of the pin interposed between the block and the surface; and means operating on the pin to force the block through the rocking of the pin to set position.

2. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having a thrust surface opposed to the block; a pin rocking on a transverse axis and interposed between the block and the thrust surface, said pin having varying cross dimensions, the block assuming a position to set the clutch with a larger cross dimension of the pin interposed between the block and the surface and in position to release the clutch with a smaller dimension of the pin interposed between the block and the surface; and means operating on the pin to force the block through the rocking of the pin to set position, said pin varying in dimension to force the block a greater distance with a given movement of the means in the early stages of the setting action than in the later stages of the setting action.

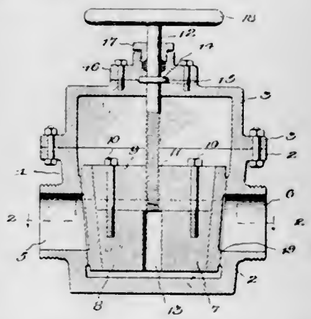
3. In a friction clutch mechanism, the combination of a shaft; a friction clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a connection between the block and the clutch; a head having a thrust bearing opposed to the block; a rocking thrust pin in said bearing and between the block and the bearing, said pin having varying cross dimensions, the block assuming a position to set the clutch with a larger cross dimension of the pin interposed between the block and the bearing and in position to release the clutch with a smaller dimension of the pin interposed between the block and the bearing; and means operating on the pin to force the block through the rocking of the pin to set position.

4. In a friction clutch mechanism, the combination of a shaft; a friction clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a connection between the block and the clutch; a head having a thrust bearing opposed to the block; a rocking thrust pin in said bearing and between the block and the bearing, said pin having varying cross dimensions, the block assuming a position to set the clutch with a larger cross dimension of the pin interposed between the block and the bearing and in position to release the clutch with a smaller dimension of the pin interposed between the block and the bearing; and means operating on the pin to force the block through the rocking of the pin to set position and operating on the pin to release the clutch.

5. In a friction clutch mechanism, the combination of a shaft; a friction clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a connection between the block and the clutch; a head having a thrust bearing opposed to the block; a rocking thrust pin in said bearing and between the block and the bearing, said pin having varying cross dimensions, the block assuming a position to set the clutch with a larger cross dimension of the pin interposed between the block and the bearing and in position to release the clutch with a smaller dimension of the pin interposed between the block and the bearing; and means operating on the pin to force the block through the rocking of the pin to set position, said pin varying in dimension to force the block a greater distance with a given movement of the means in the early stages of its setting action than in the later stages of the setting action.

[Claims 6 to 23 not printed in the Gazette.]

1,172,924. GATE-VALVE. HERBERT BARRY and ALLEN HINDGLASS, Huntsville, Tex., assignors of one-fourth to Beverly Wood, Huntsville, Tex., and one-fourth to Wilton Hall, Herreid, S. D. Filed Dec. 3, 1914. Serial No. 875,294. (Cl. 137—5.)

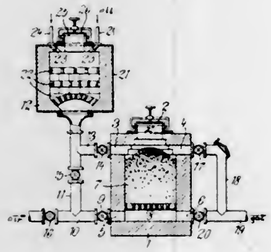


1. The combination of a valve casing comprising an upper and a lower member having laterally extending apertured flanges for detachable connection, said casing being substantially rectangular in configuration, the lower member having oppositely disposed ports arranged below its connection with the upper member, the end

walls of said lower member inclining downwardly and inwardly, a gate valve mounted in said casing and comprising a body portion and a lifting member, the body portion having inclined ends to fit snugly the ends of said lower member and provided with a recess in the upper face to receive said lifting member, means detachably connecting said lifting and body members, said members having registering bores extending transversely therethrough, the bore of the lifting member being threaded and smaller than the bore of the body member, a valve stem having threaded engagement with the bore of the lifting member and adapted to pass freely into the bore of the body member, said stem extending through the upper casing member and rotatable therein and held against vertical movement.

2. The combination of a casing comprising an upper and a lower member detachably connected, the lower member having oppositely disposed ports arranged below its connection with the upper member, a gate valve mounted in said casing comprising a body portion and a lifting member, the body portion being provided with a recess in its upper face forming a seat to receive said lifting member, said seat being unobstructed to permit the free vertical movement of said lifting member to facilitate its insertion and removal without disturbing the body portion of the valve, bolts extending through said lifting member and engaging said body member, said lifting member being of less width than said seat to facilitate the removal and insertion of the lifting member, and a valve stem rotatable in said upper member and having threaded engagement with said lifting member.

1,172,925. PROCESS OF PRODUCING HYDROGEN OR ILLUMINATING AND HEATING GAS. KURT EMIL BARTH, Charlottenburg, Germany, assignor to Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft, Berlin, Germany, a Corporation of Germany. Filed Feb. 14, 1913. Serial No. 748,316. (Cl. 48—211.)



1. The herein described process of producing hydrogen or an illuminating and heating gas from liquid fuel, which consists in burning solid fuel, passing the combustion gases from said solid fuel through a heat-absorbing refractory material, then discontinuing the passage of the combustion gases through said material and admitting liquid fuel into contact with said previously heated material which has been in contact with the combustion gases, to vaporize such liquid fuel, and then passing the vaporized fuel through the incandescent body of solid fuel to produce the desired gas.

2. The herein described process of producing hydrogen or an illuminating and heating gas from liquid fuel, which consists in burning solid fuel, passing the combustion gases from said solid fuel through a heat-absorbing refractory material, then discontinuing the passage of the combustion gases through said material and admitting liquid fuel into contact with the previously heated heat-absorbing material which has been in contact with the combustion gases, to vaporize such liquid fuel, and then passing the vaporized fuel alternately in opposite directions through the incandescent body of solid fuel to produce the desired gas.

3. The herein described process of producing hydrogen or an illuminating and heating gas from liquid fuel, which consists in burning solid fuel, passing the combustion gases from said solid fuel through a heat-absorbing, refractory material, then discontinuing the passage of the combustion gases through said material and admitting liquid fuel into contact with said previously heated material which has been in contact with the combustion gases, to vaporize such liquid fuel, then passing the vaporized fuel through the incandescent body of solid fuel to produce the desired gas, then interrupting the admission of liquid fuel to said heat-absorbing refractory material, admitting air to the solid fuel and also to the combustion gases coming from said solid fuel, and passing said combustion gases and air through said heat-absorbing refractory material.

4. The herein described process of producing hydrogen or an illuminating and heating gas from liquid fuel, which consists in first vaporizing said liquid fuel and then passing the resulting product alternately in opposite directions through a body of incandescent solid fuel.

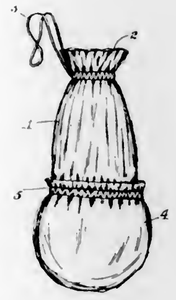
5. The herein described process of producing hydrogen or an illuminating and heating gas from liquid fuel, which consists in first vaporizing said liquid fuel and then passing the resulting product alternately upward and downward through a body of incandescent solid fuel.

1,172,926. INSULATING SUBSTANCE. LOWELL C. BASSFORD, Chicago, Ill., assignor to General Railway Supply Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 22, 1913. Serial No. 756,260. (Cl. 154—44.)



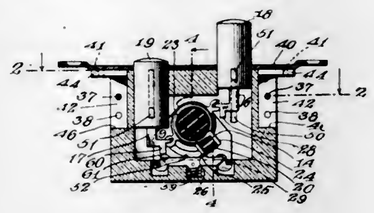
As a new article of manufacture, an insulating substance comprising a central strip of open weave fabric and a mass of vegetable fibers pricked through and intermeshed with said fabric, to lie on both sides thereof said fabric and intermeshed fibers when pressed forming a compact tensiled reinforced mass of fibers and a coating of fire and water-proof material on the outside of said mass, substantially as described.

1,172,927. BATHING-CAP. FLORENCE A. BLOCH, New York, N. Y. Filed July 12, 1915. Serial No. 39,289. (Cl. 2—106.)



As an article of manufacture, a cap, having an opening in its crown, means for closing said opening, and a lining member normally positioned within the crown but capable of withdrawal to form, with the cap proper, a bag or receptacle.

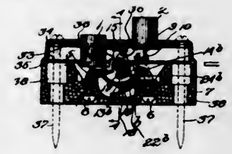
1,172,928. ELECTRIC SWITCH. TONJES AUGUST CARL BOTH, New York, N. Y., assignor, by mesne assignments, to Ralph A. Schoenberg, Branchport, N. J. Original application filed July 9, 1910, Serial No. 571,196. Divided and this application filed Sept. 16, 1910. Serial No. 582,332. (Cl. 175—293.)



1. In an electric switch the combination of a driving member; a driven member reciprocated by the driving member; a pivoted lever to temporarily lock the driven member against movement in one direction; and a second pivoted lever to temporarily lock the driven member against movement in the other direction, said levers being rockable independently of each other but each being depressed when the other is depressed.

2. An electric switch consisting of a hollow closed receptacle formed of complementary insulating portions; an axle of insulating material rotatably mounted on said portions and held by them against axial movement; a fixed contact member; a movable contact member having a non-circular portion in engagement with a non-circular portion of said axle so as to be rotated with the latter; a driving member mounted to rotate on said axle but free to rotate with relation thereto; a driven member actuated by the driving member and actuating the axle to move the movable contact; and locking means to temporarily lock the driven member.

1,172,929. ELECTRIC SWITCH. TONJES AUGUST CARL BOTH, Fairhaven, Mass., assignor to Ralph A. Schoenberg, New York, N. Y. Filed Aug. 14, 1914. Serial No. 856,867. (Cl. 175—293.)



1. A switch comprising a coiled spring having a projecting active end; means to tension the spring; means to move said end parallel to the axis of the coiled spring to free said end; and an actuated member operated by said freed end to make a circuit.

2. A switch comprising an immovable member; an oscillating actuating member; a coiled spring rendered operative by the coöperative action of said immovable and actuating members and having a projecting end to engage said immovable member while the spring is being put under tension, said end after said tension being disengaged from the immovable member by movement parallel to the axis of the coiled spring; and a contact-carrying member actuated by said spring.

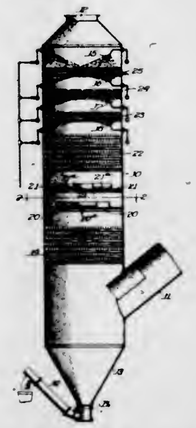
3. A switch comprising an immovable member; a coiled spring having two active ends; an oscillating actuating member which, when moved in one direction, moves one of said active ends to tension the spring, the other active end being in engagement with said immovable member during the tensioning and said other active end being released from such engagement by the actuating member when the tension is complete, said actuating member when moved in the opposite direction moving said other active end to tension the spring, the first-mentioned end being in engagement with said immovable member during the tensioning and released therefrom by the actuating member when the tension is complete; and a contact-carrying member actuated in either direction by the active end when so released.

4. A switch comprising an immovable frame; an oscillating actuating member; a spring having an end to engage the immovable member and rendered operative by the frame and actuating members; and an oscillating contact carrying member having a slot parallel to its axis, said end of the spring released from said frame by movement in said slot parallel to said axis and when released operating said contact-carrying member.

5. A switch comprising push buttons; a lever actuated by the push buttons; a shaft upon which said lever is mounted; a spring coiled about said shaft and having two projecting ends; a frame having two portions to limit movement of one of said ends in a direction about said shaft and another portion to resist the action of said end of the spring in a direction along said shaft; a cam on said lever to move said end out of engagement with one of said limiting portions so that said end may swing about said shaft as an axis; a contact lever operated directly by the movement of said end; and means to tension said spring as said end passes along said cam.

[Claims 6 to 11 not printed in the Gazette.]

1,172,930. METHOD OF AND APPARATUS FOR GAS-WASHING. HERMANN A. BRASSERT and CHARLES J. BACON, Chicago, Ill. Filed Dec. 8, 1915. Serial No. 65,673. (Cl. 75—30.)



1. The method of washing gas which consists in passing the gas vertically through a plurality of different forms of gas washing elements thereby causing the gas to form in alternate large bodies and numerous small streams, causing the gas to travel at a velocity of fifteen to twenty-five feet per second while combined in the large body, and at a velocity of five to fifteen feet per second while subdivided into the small streams, whereby the gas is alternately redistributed and its flow equalized, in the meantime causing the gas to contact descending streams of water, substantially as described.

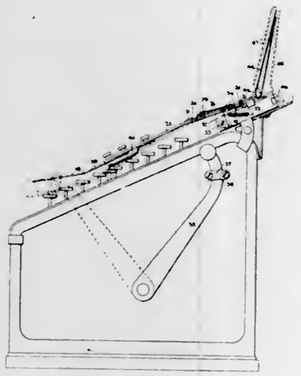
2. In apparatus for gas washing, the combination of a vertical tower, means for admitting gas at the lower end of the tower and discharging it from the upper end thereof, a plurality of rows of vertical hurdles in the lower end of the tower, redistributing trays separating said vertical hurdles and a plurality of series of inclined closely spaced baffles in the uppr end of said casing, substantially as described.

3. In a gas washing apparatus, the combination of a vertical casing having a lower inlet and an upper outlet opening, the lower portion of said casing containing a

relatively large number of rows of vertical hurdles, a pair of distributing trays interposed in said rows of vertical hurdles, and a plurality of series of rows of inclined closely spaced baffles in the upper end of said casing, substantially as described.

4. In a gas washer, the combination of a vertical tower of relatively great height, means for admitting gas at the lower end of said tower and discharging the same from the upper end thereof, means for admitting water to the upper end of said tower by a plurality of sprays, a relatively large number of rows of vertical hurdles in the lower portion of said tower, a pair of water and gas distributing trays located above said hurdles, a further series of vertical hurdles above said trays, and a plurality of rows of closely spaced inclined baffles in the upper portion of said top, substantially as described.

1,172,931. ATTACHMENT FOR ADDING-MACHINES. HUGH E. BROWN, Browns Station, Mo. Filed Jan. 31, 1913. Serial No. 745,414. (Cl. 235—60.)



1. In an attachment for adding machines, a frame having a member divided into spaces on which may be marked figures, the spaces being positioned apart to be disposed substantially in alinement with the columns of keys on an adding machine, and a carriage for moving on the frame, and provided with a member divided into similar spaces.

2. In an attachment for adding machines, a frame having a member divided into spaces on which may be marked figures, the spaces being positioned apart to be disposed substantially in alinement with the columns of keys on an adding machine, a carriage for moving on the frame, and provided with a member divided into similar spaces, and a finger on the carriage extending over and beyond the first member, so that it will project in the direction of a column of keys on an adding machine, to which the attachment may be secured.

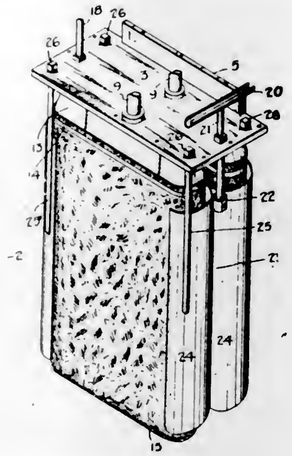
3. In an attachment for adding machines, a frame having a member divided into spaces on which may be marked figures, the spaces being positioned apart to be disposed substantially in alinement with the columns of keys on an adding machine, a carriage for moving on the frame, and provided with a member divided into similar spaces, and operating means for moving the carriage relatively to the frame one space at a time.

4. In an attachment for adding machines, a frame adapted to be secured to an adding machine, and having a member for exhibiting a factor to be used in multiplication, a carriage for moving on the frame, and having a member disposed at the first member for indicating a digit of the factor exhibited by said member.

5. In an attachment for adding machines, a frame adapted to be secured to an adding machine, and having a member for exhibiting a factor to be used in multiplication, a carriage for moving on the frame, and having a member disposed at the first member for indicating a digit of the factor exhibited by said member, and operating means for moving the carriage relatively to the frame one space at a time.

[Claims 6 to 16 not printed in the Gazette.]

1,172,932. ELECTROLYTIC CELL. WORTHY C. BUCKNAM, Jersey City, N. J., assignor to Davis-Bournonville Company, New York, N. Y., a Corporation of New York. Filed Oct. 22, 1914. Serial No. 867,986. (Cl. 204—1.)



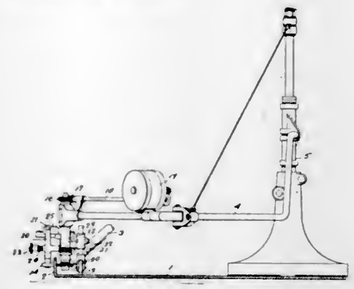
1. In a cell for the electrolysis of water, a tank body, a cover for closing the top of the same, a partition dividing the interior of the tank body into narrow vertical compartments, said partition and the walls of the tank body together forming the cathode element of the cell, anodes of large surface disposed vertically within said compartments, separators over the anodes and beneath the cover, and diaphragm sacks depending from the separators and inclosing the anodes, said partition on the one hand and the anodes, separators and sacks on the other hand being all supported from the cover.

2. In a cell for the electrolysis of water, a tank body the walls of which constitute part of the cathode element of the cell, a cover closing the top of the tank body and electrically connected therewith, anodes of large surface suspended and insulated from the cover, and diaphragms also supported from the cover, in combination with a partition constituting the remainder of the cathode element and dividing the interior of the tank body into narrow vertical compartments containing the anodes and diaphragms, and members supporting said partition from and in electrical connection with the cover and with its top at a distance below the same.

3. In a cell for the electrolysis of water, a tank body the walls of which constitute part of the cathode element of the cell, a cover closing the top of the tank body, and anodes and inclosing diaphragm sacks suspended from the cover, in combination with a cathode partition also supported from the cover and having a sliding fit in the tank body with its horizontal extremities extended laterally and receiving support from the opposite side walls of the tank.

4. In a cell for the electrolysis of water, the combination of a tank body, a cover for closing the top of the same, oblong anodes, separators and diaphragm sacks all supported from the cover, and a cathode element also supported from the cover and forming pockets for the protection of the sacks when the parts are inserted and removed.

1,172,933. APPARATUS FOR TRIMMING FLANGES. WORTHY C. BUCKNAM, Jersey City, N. J., assignor to Davis-Bournonville Company, Jersey City, N. J., a Corporation of New York. Filed Oct. 29, 1915. Serial No. 58,586. (Cl. 75—90.)



1. An apparatus for trimming the flanges of boiler heads or the like, comprising a mechanically propelled carriage having means for guiding it upon and along an upstanding flange at a uniform distance above the face of the head or similar body, and transversely directed jet-cutting means transported by said carriage so as to remove the upper portion of the flange at the desired height.

2. An apparatus of the character described, comprising a mechanically propelled carriage having horizontal wheels arranged to embrace the upstanding flange of a boiler head or the like and one or more wheels arranged to run on the face of the head to cause the horizontal wheels to travel at a constant height, and means transported by the carriage for delivering cutting gases laterally against the flange on which the carriage is guided.

3. An apparatus for trimming the flanges of boiler heads and the like, comprising a mechanically propelled carriage having wheels adapted to embrace an upstanding flange, a secondary carriage pivoted upon a vertical axis on the mechanically propelled carriage and having wheels adapted to travel upon one side of the flange, a spring for holding the secondary carriage with its wheels against the flange, and jet-cutting means on the secondary carriage adapted to operate upon the flange at a predetermined height.

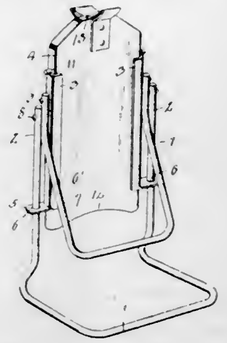
4. An apparatus for trimming the flanges of boiler heads and the like, comprising a mechanically propelled carriage having means for guiding it upon an upstanding flange, an arm pivoted upon a vertical axis on the mechanically propelled carriage, a member swiveled upon a vertical axis on said arm and having wheels spaced equidistant from the swivel axis to travel on the flange, and a cutting torch mounted on said swiveled member with its nozzle opposed to the flange and disposed centrally with respect to said spaced wheels.

5. An apparatus for trimming the flanges of boiler heads or the like, comprising a mechanically propelled carriage constructed to travel along an upstanding flange at a uniform distance above the face of the head or similar body, transversely directed jet-cutting means transported by said carriage, and means for shifting said jet-cutting means vertically so as to deliver the gases at the desired height against the flange.

[Claims 6 to 8 not printed in the Gazette.]

1,172,934. TIRE-SAVING JACK. CALVIN A. BUFFINGTON, Berkshire, N. Y. Filed Mar. 27, 1915. Serial No. 17,415. (Cl. 254—116.)

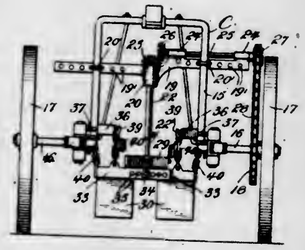
1. In a jack of the class specified, the combination of a supporting base, parallel standards rising therefrom in spaced relation to each other, a pair of runners slidable lengthwise of said standards, a lever fulcrumed on said standards and connected with said runners for raising and lowering the latter, and a rest held between said runners and reversible end for end and also provided at its opposite ends with bearing shoulders differing in shape.



2. In a jack of the class specified, the combination of a supporting base, parallel standards rising therefrom in spaced relation to each other, a pair of runners slidable lengthwise of said standards, a lever fulcrumed on said standards and connected with said runners for raising and lowering the latter, and a rest held between said runners and reversible end for end and also provided at its opposite ends with bearing shoulders differing in shape, one shoulder being concaved to support a wheel hub and the other being forked to engage a vehicle axle.

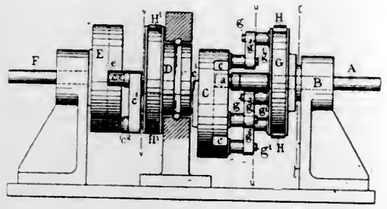
3. In a jack of the class specified, the combination of a supporting base, parallel standards rising therefrom in spaced relation to each other, a pair of runners slidable lengthwise of said standards, a lever fulcrumed on said standards and connected with said runners for raising and lowering the latter, and a rest held between said runners, said lever embodying substantially parallel arms terminally provided with pintles, the runners being formed with holes to receive saidpintles and the rest being formed with longitudinal series of holes to also receive said pintles to admit of the adjustment of the rest in relation to the runners.

1,172,935. INSECT-EXTERMINATING ATTACHMENT FOR CULTIVATORS. DELMER BURKET, South Bend, Ind. Filed June 12, 1915. Serial No. 33,751. (Cl. 43—1.)



A bug gathering attachment for cultivators, the same comprising a frame bar, a horizontal shaft and a vertically adjustable vertical shaft supported for rotation on said frame bar, said shafts having intermeshing bevel gears, a beater carried by the vertical shaft, angular yokes secured in the angles between the spindles and the limbs of the axle arch of the cultivator, said yokes having terminal hooks, receiving pans adjustably suspended from said hooks, means for mounting the frame bar on the axle arch of the cultivator, and means for transmitting motion from a ground wheel of the cultivator to the horizontal shaft.

1,172,936. REVERSING AND VARIABLE-SPEED GEAR. LEWIS BURN, Manchester, England. Filed June 8, 1915. Serial No. 32,964. (Cl. 74—5.)



1. A reversing and variable speed gear comprising in its construction a driving shaft carrying driving crank pins at its free end, a rotary driven disk with a plurality of diametric slots cut in its face with which the said crank pins of the driving shaft engage, said driven disk having crank pins, a rotary disk mounted eccentrically relatively to the slotted driven disk and forming a bearing or carrier therefor, a brake disk loose on the driving shaft and operatively connected to the driven disk, brakes to stop the rotation of either one of the disks, and a second slotted driven disk engaged and actuated by the crank pins on the first named driven disk.

2. Apparatus for reversing the direction of motion of gearing, comprising a driving shaft carrying driving crank pins, a driven disk having diametric slots engaged by said crank pins, and a brake disk loosely mounted on the driving shaft and connected to said slotted disk, the brake disk being operable to have its forward movement retarded and arrested to cause the slotted disk to move in an eccentric path and in a reverse direction.

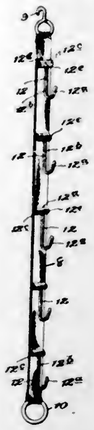
3. In an apparatus of the class specified, a driving shaft having terminal driving means, a rotary disk provided with diametric slots engaged by said means, a driven shaft also having a diametrically slotted disk thereon, the said disk of the driven shaft being operated by the first named disk, brake means coöperating with one of said disks, a rotary disk mounted to operate eccentrically relatively to the first named slotted disk, and means connected to the first named slotted disk and engaging the slotted disk on the driven shaft to actuate the latter.

4. In an apparatus of the class specified, a driving shaft carrying driving crank pins at its free end, a rotary driven disk with a plurality of diametric slots formed therein and engaged by the crank pins of the said driving shaft, a rotary disk mounted eccentrically relatively to the slotted disk and forming a bearing or carrier therefor, the said slotted disk also having crank pins connected thereto, a brake disk loosely mounted on the driving shaft and having links connected to the first named driven disk, and a driven shaft having a slotted disk thereon engaged by the crank pins of the first named driven disk.

1,172,937. ARTICLE-HANGER. MARY ELIZABETH BUTCHER, Cambridge, Mass. Filed Aug. 21, 1915. Serial No. 46,677. (Cl. 248—22.)

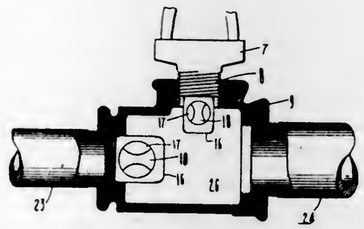
1. An article-hanger comprising a narrow strip of flexible material having means of suspension at one end, and an article-supporting member formed of a length of wire bent upon itself intermediate its ends and bent to form a hook proper, a shank extending therefrom, and each strand of wire being bent laterally at the end of the shank to provide an arm, said member being disposed through said strip with its arms holding it thereon.

2. An article-hanger comprising a narrow strip of flexible material having means of suspension at one end, and an article-supporting member formed with a hook in one end portion and laterally-extending arms at the other end, said member being disposed through said strip and the material of the strip being secured together at each



side of the arms whereby there is formed a loop of the material enveloping the arms.

1,172,938. FLUID SYSTEM. GUSTAVUS T. BUXTON and SIMEON A. ABBEY, Charlotte, N. C. Filed Apr. 2, 1915. Serial No. 18,679. (Cl. 210—16.)



1. A guard for water pipes provided with a plurality of apertures, each being of an area to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said pipe and to permit the water to flow through said guard and said pipe in its undiminished normal volume upon the arresting of any obstructing element by said guard.

2. A guard for sprinkler heads of fire extinguishing systems formed to provide a plurality of apertures to permit the passage of water therethrough, each aperature being of an area slightly less than the area of the discharge orifice of said sprinkler head, whereby any solid of a size which will not obstruct the discharge orifice of said sprinkler head may pass therethrough, the arresting of an obstructing element by said guard permitting the water to pass through said sprinkler head in its normal volume.

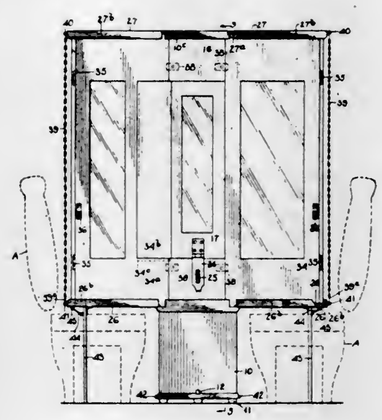
3. A guard for water pipes provided with a plurality of apertures, each being of an area to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said pipe and to permit the water to flow through said guard and said pipe in its undiminished normal volume upon the arresting of any obstructing element by said guard, and means for removably connecting said guard to said pipe.

4. A guard for sprinkler heads of fire extinguishing systems arranged and constructed to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said sprinkler head, and

will permit the water to issue from said sprinkler head in its normal volume upon the arresting by said guard of any solid of a size which would obstruct the discharge orifice of said sprinkler head.

5. A guard for water pipes and the like having a plurality of members connected together to form a series of openings, each opening being slightly less in size than the discharge orifice of the pipe, so as to permit the passage through said guard and said pipe of any solid, which will not obstruct the discharge orifice of said pipe, said guard preventing the entrance of any solid to said pipe which would obstruct the discharge orifice thereof, the water flowing through said guard and issuing from the discharge orifice of said pipe in its normal volume during the arrest of such obstructing element by said guard.

1,172,939. PORTABLE STAND. WILLIAM JAMES CARMINE, Jacksonville, Fla. Filed Jan. 19, 1915. Serial No. 3,058. (Cl. 45—37.)



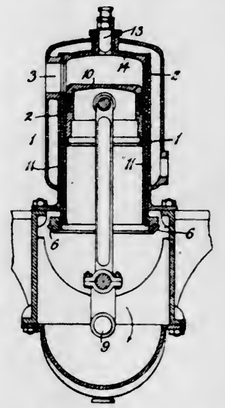
1. A folding stand comprising a base structure; a superstructure on said base structure the superstructure including end panels at the back and front, one of said end panels being hinged to swing upwardly and the other being fixed; and a laterally folding structure forming a lateral extension of the said base and superstructures, and comprising the following elements: a vertically swinging bottom wing at a side of the base structure and hinged to the latter near the top, a vertically swinging roof wing hinged to the said superstructure at the top, and a series of vertical panels hingedly connected with one another at opposed vertical edges, the said panels of the folding extension consisting of a panel forming a foldable extension of the adjacent fixed panel of the superstructure and hinged to the latter, intermediate panels forming a side of the folding structure, and a panel at the free end of the folding structure and forming a folding extension of the adjacent vertically swinging panel of the superstructure.

2. A folding stand comprising a base structure; a superstructure on said base structure comprising a fixed panel at one end and a swinging panel at the other end constituting a door; and a lateral folding structure forming a lateral extension of the base and superstructures, said folding structure consisting of a series of panels hinged together at their adjacent vertical edges, the panel at one end of the structure being hinged to the fixed panel on the superstructure and the panel at the opposite end of the folding structure being movable to a position into approximate alinement with the swinging panel of the superstructure and provided with a hinged auxiliary panel constituting an auxiliary door adjacent to said swinging panel.

3. A stand of the character described comprising a folding structure and a relatively fixed structure, said first mentioned structure having side and end members foldably connected with one another, one of said end members being hinged to the said fixed structure, and foldable members on the fixed structure forming the top and bottom of the folding structure, and a flexible securing device of a length to extend between the said top and bottom members when the latter are unfolded, said securing device having a detachable engagement with the bottom member, and means to engage the said end of the securing device and the fixed structure when the structure is folded.

4. A stand of the character described comprising a folding structure and a relatively fixed structure, said fixed structure comprising a base and a superstructure, and said folding structure comprising the following elements: top and bottom wings hinged to the top of the base to fold in a vertical plane, top wings hinged to the top of the superstructure, folding sides formed of a series of panels hinged to one another, one end panel having a hinge connection at a vertical edge thereof with the superstructure, and legs hinged to the bottom wings.

1,172,940. INTERNAL-COMBUSTION ENGINE. HOWARD C. CLEAVER, London, England. Filed Oct. 23, 1909. Serial No. 524,263. (Cl. 123—59.)

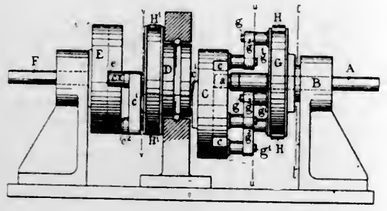


1. In an internal combustion engine, the combination of a plurality of cylinders, each of the cylinders having opposite induction and exhaust ports in adjacent pairs of said cylinders, pistons reciprocating in said cylinders, a crank shaft rotated by said pistons, a plurality of cylindrical valves with extended grooved walls adapted to rotate within said cylinders, means for rotating one of said cylindrical valves from said crank shaft, toothed flanges on each of said cylindrical valves, said toothed flanges adapted to communicate a rotary motion from the valve rotated from the crank shaft to the valves of the other engine units.

2. In an internal combustion engine, the combination of an inner and outer cylinder having induction and exhaust ports, of rotary cylindrical valves supported between the cylinders, a piston operating in the inner cylinder so that the walls of the piston will engage the inner walls of the inner cylinder, one of said valves having grooves in the outer surface thereof, said grooves being disposed at an angle with respect to the vertical plane of the piston.

3. An engine cylinder comprising an outer cylinder and an inner cylinder, the inner cylinder being supported in spaced relation with the outer cylinder to form an annular recess between the cylinders, each of the cylinders having intake and exhaust ports arranged at right angles to each other, a piston operating in the inner

1,172,936. REVERSING AND VARIABLE-SPEED GEAR. LEWIS BURN, Manchester, England. Filed June 8, 1915. Serial No. 32,964. (Cl. 74—5.)



1. A reversing and variable speed gear comprising in its construction a driving shaft carrying driving crank pins at its free end, a rotary driven disk with a plurality of diametric slots cut in its face with which the said crank pins of the driving shaft engage, said driven disk having crank pins, a rotary disk mounted eccentrically relatively to the slotted driven disk and forming a bearing or carrier therefor, a brake disk loose on the driving shaft and operatively connected to the driven disk, brakes to stop the rotation of either one of the disks, and a second slotted driven disk engaged and actuated by the crank pins on the first named driven disk.

2. Apparatus for reversing the direction of motion of gearing, comprising a driving shaft carrying driving crank pins, a driven disk having diametric slots engaged by said crank pins, and a brake disk loosely mounted on the driving shaft and connected to said slotted disk, the brake disk being operable to have its forward movement retarded and arrested to cause the slotted disk to move in an eccentric path and in a reverse direction.

3. In an apparatus of the class specified, a driving shaft having terminal driving means, a rotary disk provided with diametric slots engaged by said means, a driven shaft also having a dimetrically slotted disk thereon, the said disk of the driven shaft being operated by the first named disk, brake means coöperating with one of said disks, a rotary disk mounted to operate eccentrically relatively to the first named slotted disk, and means connected to the first named slotted disk and engaging the slotted disk on the driven shaft to actuate the latter.

4. In an apparatus of the class specified, a driving shaft carrying driving crank pins at its free end, a rotary driven disk with a plurality of diametric slots formed therein and engaged by the crank pins of the said driving shaft, a rotary disk mounted eccentrically relatively to the slotted disk and forming a bearing or carrier therefor, the said slotted disk also having crank pins connected thereto, a brake disk loosely mounted on the driving shaft and having links connected to the first named driven disk, and a driven shaft having a slotted disk thereon engaged by the crank pins of the first named driven disk.

1,172,937. ARTICLE-HANGER. MARY ELIZABETH BUTCHER, Cambridge, Mass. Filed Aug. 21, 1915. Serial No. 46,677. (Cl. 248—22.)

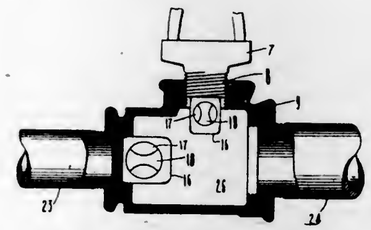
1. An article-hanger comprising a narrow strip of flexible material having means of suspension at one end, and an article-supporting member formed of a length of wire bent upon itself intermediate its ends and bent to form a hook proper, a shank extending therefrom, and each strand of wire being bent laterally at the end of the shank to provide an arm, said member being disposed through said strip with its arms holding it thereon.

2. An article-hanger comprising a narrow strip of flexible material having means of suspension at one end, and an article-supporting member formed with a hook in one end portion and laterally-extending arms at the other end, said member being disposed through said strip and the material of the strip being secured together at each



side of the arms whereby there is formed a loop of the material enveloping the arms.

1,172,938. FLUID SYSTEM. GUSTAVUS T. BUXTON and SIMEON A. ABBEY, Charlotte, N. C. Filed Apr. 2, 1915. Serial No. 18,679. (Cl. 210—16.)



1. A guard for water pipes provided with a plurality of apertures, each being of an area to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said pipe and to permit the water to flow through said guard and said pipe in its undiminished normal volume upon the arresting of any obstructing element by said guard.

2. A guard for sprinkler heads of fire extinguishing systems formed to provide a plurality of apertures to permit the passage of water therethrough, each aperature being of an area slightly less than the area of the discharge orifice of said sprinkler head, whereby any solid of a size which will not obstruct the discharge orifice of said sprinkler head may pass therethrough, the arresting of an obstructing element by said guard permitting the water to pass through said sprinkler head in its normal volume.

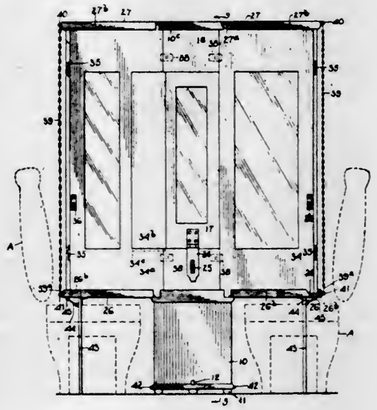
3. A guard for water pipes provided with a plurality of apertures, each being of an area to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said pipe and to permit the water to flow through said guard and said pipe in its undiminished normal volume upon the arresting of any obstructing element by said guard, and means for removably connecting said guard to said pipe.

4. A guard for sprinkler heads of fire extinguishing systems arranged and constructed to permit the passage therethrough of any solid of a size which will not obstruct the discharge orifice of said sprinkler head, and

will permit the water to issue from said sprinkler head in its normal volume upon the arresting by said guard of any solid of a size which would obstruct the discharge orifice of said sprinkler head.

5. A guard for water pipes and the like having a plurality of members connected together to form a series of openings, each opening being slightly less in size than the discharge orifice of the pipe, so as to permit the passage through said guard and said pipe of any solid, which will not obstruct the discharge orifice of said pipe, said guard preventing the entrance of any solid to said pipe which would obstruct the discharge orifice thereof, the water flowing through said guard and issuing from the discharge orifice of said pipe in its normal volume during the arrest of such obstructing element by said guard.

1,172,939. PORTABLE STAND. WILLIAM JAMES CARMINE, Jacksonville, Fla. Filed Jan. 19, 1915. Serial No. 3,058. (Cl. 45—37.)



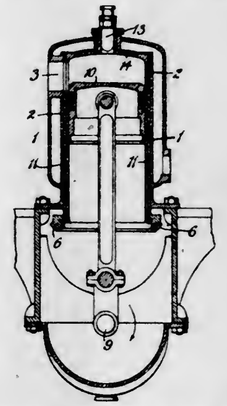
1. A folding stand comprising a base structure; a superstructure on said base structure the superstructure including end panels at the back and front, one of said end panels being hinged to swing upwardly and the other being fixed; and a laterally folding structure forming a lateral extension of the said base and superstructures, and comprising the following elements: a vertically swinging bottom wing at a side of the base structure and hinged to the latter near the top, a vertically swinging roof wing hinged to the said superstructure at the top, and a series of vertical panels hingedly connected with one another at opposed vertical edges, the said panels of the folding extension consisting of a panel forming a foldable extension of the adjacent fixed panel of the superstructure and hinged to the latter, intermediate panels forming a side of the folding structure, and a panel at the free end of the folding structure and forming a folding extension of the adjacent vertically swinging panel of the superstructure.

2. A folding stand comprising a base structure; a superstructure on said base structure comprising a fixed panel at one end and a swinging panel at the other end constituting a door; and a lateral folding structure forming a lateral extension of the base and superstructures, said folding structure consisting of a series of panels hinged together at their adjacent vertical edges, the panel at one end of the structure being hinged to the fixed panel on the superstructure and the panel at the opposite end of the folding structure being movable to a position into approximate alinement with the swinging panel of the superstructure and provided with a hinged auxiliary panel constituting an auxiliary door adjacent to said swinging panel.

3. A stand of the character described comprising a folding structure and a relatively fixed structure, said first mentioned structure having side and end members foldably connected with one another, one of said end members being hinged to the said fixed structure, and foldable members on the fixed structure forming the top and bottom of the folding structure, and a flexible securing device of a length to extend between the said top and bottom members when the latter are unfolded, said securing device having a detachable engagement with the bottom member, and means to engage the said end of the securing device and the fixed structure when the structure is folded.

4. A stand of the character described comprising a folding structure and a relatively fixed structure, said fixed structure comprising a base and a superstructure, and said folding structure comprising the following elements: top and bottom wings hinged to the top of the base to fold in a vertical plane, top wings hinged to the top of the superstructure, folding sides formed of a series of panels hinged to one another, one end panel having a hinge connection at a vertical edge thereof with the superstructure, and legs hinged to the bottom wings.

1,172,940. INTERNAL-COMBUSTION ENGINE. HOWARD C. CLEAVER, London, England. Filed Oct. 23, 1909. Serial No. 524,263. (Cl. 123—59.)



1. In an internal combustion engine, the combination of a plurality of cylinders, each of the cylinders having opposite induction and exhaust ports in adjacent pairs of said cylinders, pistons reciprocating in said cylinders, a crank shaft rotated by said pistons, a plurality of cylindrical valves with extended grooved walls adapted to rotate within said cylinders, means for rotating one of said cylindrical valves from said crank shaft, toothed flanges on each of said cylindrical valves, said toothed flanges adapted to communicate a rotary motion from the valve rotated from the crank shaft to the valves of the other engine units.

2. In an internal combustion engine, the combination of an inner and outer cylinder having induction and exhaust ports, of rotary cylindrical valves supported between the cylinders, a piston operating in the inner cylinder so that the walls of the piston will engage the inner walls of the inner cylinder, one of said valves having grooves in the outer surface thereof, said grooves being disposed at an angle with respect to the vertical plane of the piston.

3. An engine cylinder comprising an outer cylinder and an inner cylinder, the inner cylinder being supported in spaced relation with the outer cylinder to form an annular recess between the cylinders, each of the cylinders having intake and exhaust ports arranged at right angles to each other, a piston operating in the inner

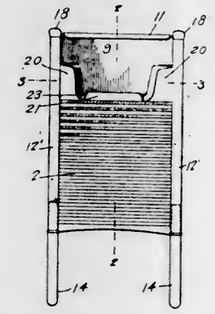
cylinder, and means adapted to rotate in the annular recess, said means adapted to alternately open and close the intake and exhaust ports of the cylinder.

4. In an internal combustion engine, the combination of a plurality of cylinders, each of the cylinders having opposite induction and exhaust ports in adjacent pairs of said cylinders, pistons reciprocating in said cylinders, a crank shaft rotated by said pistons, a plurality of cylindrical valves with extended walls adapted to rotate without said cylinders, means for rotating said cylindrical valves from said crank shaft.

5. In an internal combustion engine, the combination of a cylinder having induction and exhaust ports of a rotary cylindrical valve supported without the cylinder, a piston operating in the cylinder so that the walls of the piston will not engage the inner walls of the valve, said valve having grooves in the surface thereof, said grooves being disposed at an angle with respect to the vertical plane of the piston.

[Claims 6 to 9 not printed in the Gazette.]

1,172,941. WASHBOARD. THOMAS W. CLEMMENTS, Fredonia, Kans., assignor to Haysler Manufacturing Company, Fredonia, Kans. Filed May 15, 1915. Serial No. 28,349. (Cl. 68—29.)

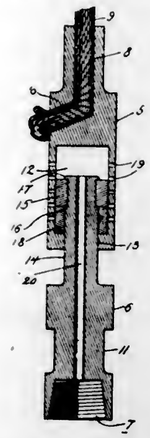


1. A wash board comprising a back plate bent intermediate its ends to form a substantially horizontal portion, a corrugated rubber secured to the lower portion of said back plate, and an angular shelf having one edge secured to said back plate at the top of said rubber and having a flat downwardly inclined top terminating at its inner edge contiguous to the inner edge of said horizontal portion, said back plate being provided with a atruck-out portion on each side of said shelf and adapted to coöperate therewith to direct the drainage on to the rubber.

2. A wash board comprising a back plate bent intermediate its ends to form a substantially horizontal portion, a corrugated rubber secured to the lower portion of said back plate, and an angular shelf having one edge secured to said back plate at the top of said rubber and having a flat downwardly inclined top terminating at its inner edge contiguous to the inner edge of said horizontal portion, said back plate being provided with a struck out portion on each side of said shelf and adapted to coöperate therewith to direct the drainage on to the rubber, and a top plate overhanging the said shelf and struck out portion.

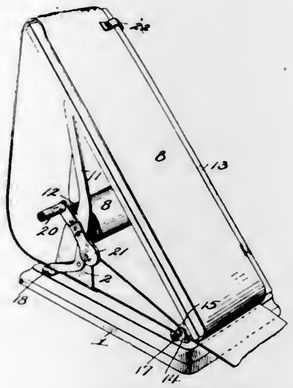
1,172,942. DRILL-JAR. ERASTUS L. CLEVELAND, Elyria, Ohio. Filed Mar. 15, 1915. Serial No. 14,385. (Cl. (255—27.)

1. A drill-jar comprising upper and lower relatively slidable members, the lower member having means for supporting a tool, and the upper member having a longitudinal cavity reduced at its lower end and opening through the bottom of said member, a ring seating in the bottom of the cavity, a stem extending from the lower member and passing into the cavity of the upper member through the reduced lower end thereof and the ring, the upper end of the stem having spaced shoulders, a head mounted on the stem between said shoulders, said head being loose in the cavity to provide a sliding and swiveling connection between the members, and a drill-rope directly connected to the upper member.



2. A drill-jar comprising upper and lower relatively slidable members, the lower member having means for supporting a tool, and provided with a longitudinal opening, and the upper member having a longitudinal cavity reduced at its lower end and opening through the bottom of said member, a ring seating in the bottom of the cavity, a stem extending from the lower member and passing into the cavity of the upper member through the reduced lower end thereof and the ring, the upper end of the stem having spaced shoulders, a head mounted on the stem between said shoulders, said head being loose in the cavity to provide a sliding and swiveling connection between the members, and a drill-rope directly connected to the upper member.

1,172,943. COPY-HOLDER. CHARLES C. COLLINS, Sioux City, Iowa. Filed June 12, 1915. Serial No. 33,817. (Cl. 120—29.)



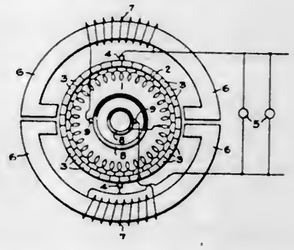
1. A device of the character described comprising a base member, upright supporting members secured to the base member and adapted to have a roll of paper journaled therein, a hinge tablet secured to the base member, and bracket arms each pivoted intermediate its ends to one of said supports and having one of its ends adapted to support said tablet in position and its other end adapted to rest upon said base member.

2. A device of the character described comprising a base member, upright supporting members secured to the base member, a roll supporting shaft journaled in said upright members, a tablet hinged to said base member, and bracket arms each pivoted to one of said uprights and provided with means to retain said shaft upon its bearing and with means to support said tablet, said shaft retaining means and said tablet supporting means being simultaneously moved into and out of position when said arms are moved upon their pivots.

3. A device of the character described, comprising a base, shaft-supporting means carried by said base adjacent to its rear end, a roll shaft removably journaled in said shaft-supporting means, a tablet hinged adjacent to its lower corners to the forward end of said base to provide a space between the lower edge of the tablet and said base for the passage of paper from the roll shaft over said tablet, and an arm pivoted intermediate its ends to said shaft-supporting means and having its upper end adapted to support said tablet and its lower end to rest upon said base, said arm having means intermediate its pivot and its upper end to engage said shaft to hold it against removal from its bearing, said shaft-engaging means being movable into and out of engagement with the shaft when said arm is moved into and out of position to support the tablet.

4. A device of the character described, comprising a base, a tablet hinged to said base adjacent to its forward end, shaft supporting means carried by said base, a roll shaft rotatably and detachably mounted in said supporting means, and means pivoted to said shaft-supporting means adapted to engage and retain said shaft in its bearings and having extensions to engage said tablet intermediate its ends and support said tablet when said shaft-engaging means is moved into position to engage the shaft.

1,172,944. DYNAMO-ELECTRIC MACHINE. EDGAR F. COLLINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 16, 1914. Serial No. 824,865. (Cl. 171—223.)



1. A dynamo electric machine comprising an armature having an armature winding, a commutator connected thereto, and brushes bearing on said commutator, a field magnet structure divided into a plurality of parts, each pole being formed by two of said parts, a field winding on each of said parts, each field winding adapted to produce flux in only one part of each pole, and means for supplying a pulsating current to said field windings, the frequency of the pulsations being proportional to the speed of the armature.

2. A dynamo electric machine comprising an armature having an armature winding, a commutator connected thereto, and brushes bearing on said commutator, a field magnet structure divided into a plurality of parts, each pole being formed by two of said parts, a field winding on each of said parts, each field winding adapted to produce flux in only one part of each pole, and means for deriving a pulsating current from said armature, said field windings being connected to said means.

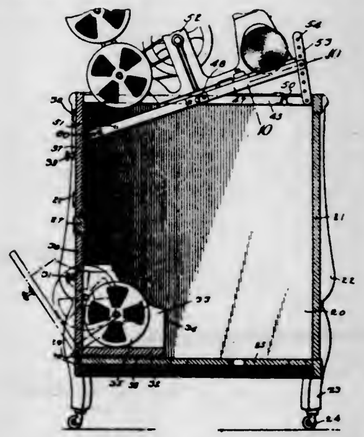
3. A dynamo electric machine comprising an armature having an armature winding, a commutator connected thereto, and brushes bearing on said commutator, field magnet structure divided into a plurality of parts, each pole being formed by two of said parts, a field winding on each of said parts, each field winding adapted to produce flux in only one part of each pole, and means for deriving a pulsating current from said armature, said field windings being connected between said means and said brushes.

4. A dynamo electric machine comprising an armature having an armature winding, a commutator connected thereto, and brushes bearing on said commutator, a field magnet structure divided into a plurality of parts, each pole being formed by two of said parts, a field winding on each of said parts, each field winding adapted to produce flux in only one part of each pole, and collecting means for deriving a pulsating current, said means being connected to said armature winding, said field windings being connected to said collecting means.

5. A dynamo electric machine comprising an armature having an armature winding, a commutator connected thereto, and brushes bearing on said commutator, a field magnet structure divided into a plurality of parts, each pole being formed by two of said parts, a field winding on each of said parts, each field winding adapted to produce a flux in only one part of each pole, and collecting means for deriving a pulsating current, said collecting means being connected to said armature winding, said field windings being connected between said collecting means and said brushes.

[Claims 6 to 14 not printed in the Gazette.]

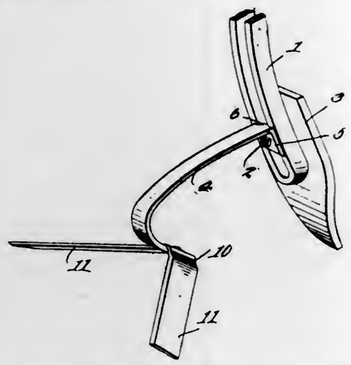
1,172,945. CABINET. WILLARD B. COOK, Newark, N. J. Filed Mar. 29, 1915. Serial No. 17,722. (Cl. 45—27.)



A cabinet comprising a compartment having an open front and spaced apart top sections, a platform adapted to form a closure for the space between the top sections, and pivotally mounted midway its ends between said sections, whereby it may be inverted, an apparatus mounted on one side of said platform and adapted when said side is uppermost to project above the cabinet and when in its reversed position to be inclosed within said compartment of the cabinet, the open front of the cabinet permitting the swinging of said apparatus into and out of said compartment, and the compartment being capable of use for storage when the apparatus is adjusted as for use, a closure for the open front of said compartment when the apparatus is adjusted to its uppermost position, means carried by the platform for locking the same in obverse or reverse position, means carried by one top section whereby the platform may be adjusted to and held at different predetermined positions, and a sup-

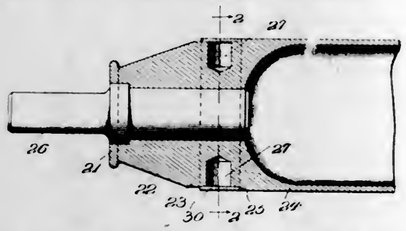
plemental cover connected with the cabinet and adapted to be adjusted thereover covering the joints at the sides of the tilting platform and form a finished top for the cabinet when the apparatus on the tiltable platform is adjusted into its inclosing compartment.

1,172,946. PLOW ATTACHMENT. NATHANIEL H. COOKSEY, Costelow, Ky. Filed Jan. 15, 1915. Serial No. 2,442. (Cl. 97—9.)



The combination with a standard and a shovel bearing against one face thereof, of a bar having a depending tongue at one end engaging the other face of the standard, means upon said depending end for projection into the standard to hold the bar against lateral displacement relative thereto, means extending through said depending end portion, the standard and shovel for binding them together, said bar having a downwardly and forwardly extending rear end portion, and a sweep carried by said rear end portion.

1,172,947. BALANCED ROLL FOR PAPER-MAKING MACHINES. BENJAMIN DENVER COPPAGE, Wilmington, Del. Original application filed June 17, 1914, Serial No. 845,698. Divided and this application filed Sept. 7, 1915. Serial No. 49,293. (Cl. 74—6.)



1. A rotatable machine element, adapted to be balanced, having near each end a series of predetermined and regularly spaced radial weight-receiving apertures.

2. A rotatable machine element, adapted to be balanced, having near each end a series of predeterminedly and regularly spaced radial weight-receiving apertures extending inward from the periphery.

3. A rotatable machine element, adapted to be balanced, having near each end a series of predeterminedly and regularly spaced radial weight-receiving apertures extending inward from the periphery, weights in the said apertures, and means for securing the weights in place.

4. A rotatable machine element, adapted to be balanced, having near each end a series of predeterminedly and regularly spaced radial weight-receiving apertures extending inward from the periphery, weights in the said apertures, and means for covering the ends of the apertures and adapted to secure the weights in place.

5. A rotatable machine element, adapted to be balanced, having near each end a series of predeterminedly and regularly spaced radial weight-receiving apertures extending inward from the periphery, weights in the said apertures, and bands extending around the elements near the ends respectively to cover the said apertures and adapted to secure the weights in place.

[Claims 6 to 12 not printed in the Gazette.]

1,172,948. SPRING. FRANCIS J. MILLEA, Springfield, Mass. Filed Jan. 20, 1915. Serial No. 3,352. (Cl. 5—21.)



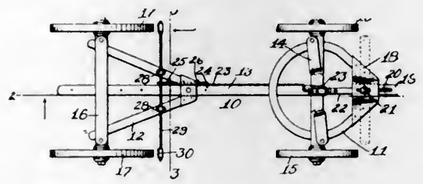
1. As an improved article of manufacture, a spiral spring consisting of a plurality of acute-angled convolutions arranged with their bends in offset relationship.

2. As an improved article of manufacture, a spiral spring consisting of a plurality of coils each of which has three bends therein, the arrangement being such that each bend is out of line with an adjacent bend either above or below the same.

3. As an improved article of manufacture, a spiral spring the coils of which consist of substantially straight connected reaches arranged in acute-angular relation to each other, and with adjacent apexes, lengthwise of the spring, out of line with each other.

4. As an improved article of manufacture, a spiral spring the coils of which consist of reaches arranged in acute-angular relationship, and of bends arranged to project beyond said reaches.

1,172,949. VEHICLE-BRAKE. WILLIAM COTHRAN and HENRY E. TANNER, Burlison, Tenn. Filed July 25, 1911. Serial No. 640,452. (Cl. 21—9.)



A vehicle brake arrangement, consisting of a draft pole, a rear hound connected thereto and consisting of rearwardly divergent members, said rear hound having its inner convergent end disposed adjacent the rear wheels of a vehicle, bearings mounted upon the divergent arms, a shaft mounted in said bearings, a U-shaped crank formed integrally intermediate the end of said shaft and disposed snugly between said pole and one of said arms whereby to hold said shaft against longitudinal displacement, a perforated member engaging said U-shaped crank, an angular flange formed on said member, and disposed under said pole, an actuating rod passing through said lugs, a right angular pin formed on said rod engaging an opening in said member, a laterally deflected stem formed at the opposite end of said rod and projecting over upon said pole, and longitudinally movable means engaging said deflected portion adapted to operate said rod.

1,172,950. THREAD-GUIDE AND GUARD FOR STOP-MOTIONS. FRANK CRAWFORD, Sr., New Brunswick, N. J., assignor to The Crawford Manufacturing Company, New Brunswick, N. J., a Corporation of New Jersey. Filed Nov. 3, 1915. Serial No. 59,452. (Cl. 66—7.)

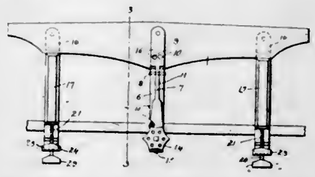


1. The combination in a stop motion, of a forked element; stop mechanism actuated by said element; and a combined guard and guide located in such a position in respect to the fork of the element that it will close the space between the arms of the fork and will hold the thread in position and will also act as a thread guide, one of the arms of the fork extending beyond the guard so that when a thread is placed on the guard it will be directed into the fork of the element.

2. The combination in a stop motion, of a bracket; stop mechanism carried by the bracket; a forked lever pivoted to the bracket and connected to the stop mechanism; a guard located at the end of the bracket beyond the lever and having a forked portion, one arm of the fork of the lever extending beyond the guard so that when a thread is drawn over the guard it will enter the fork of the lever.

3. The combination in a stop motion, of a casing; a bracket extending from the casing; stop mechanism carried by the bracket including a pivoted lever having a forked end, one arm of the fork extending beyond the other; a guard secured to the bracket beyond the lever and consisting of a plate bent to form a lower horizontal portion located below the fork of the lever; and a curved upper portion extending above the fork of the lever, said guard being of such a length that the long arm of the fork will project beyond the end of the guard so that when a thread is passed over the guard it will enter the fork of the lever and the horizontal portion of the guard will prevent the thread from being detached from the fork as it is unwound from the bobbin.

1,172,951. SAW-CLAMP. JAMES H. DALLIS, Philadelphia, Miss. Filed Jan. 21, 1914. Serial No. 813,451. (Cl. 76—78.)



1. A saw clamp comprising spaced pairs of supporting arms, the arms forming each pair being arranged in spaced relation to each other and having their opposed faces provided with longitudinal grooves, coöperating clamping jaws located at the upper ends of the arms, means for operating said jaws, roller supporting blocks slidably mounted in the grooves formed in the opposed faces of each pair of arms, and vertically disposed adjusting screws located between the arms forming each pair, and connected to the blocks, and adapted when adjusted to effect a simultaneous adjustment of the blocks.

2. A saw clamp comprising spaced pairs of supporting arms, the arms forming each pair being of unequal lengths and arranged in spaced relation, a fixed jaw secured to the longer arm of each pair, a vertically disposed operating lever pivoted to the shorter arm of one pair, a companion jaw carried by the upper end of the lever and an operating screw adjustable through the lower end of the lever and against the adjacent arm, and a spring having one end connected to the lower end of the lever and its opposite end connected to the adjacent arm, for the purpose specified.

1,172,952. GAS-STOVE. CLIFFORD S. DANGLER and GEORGE E. HILTON, Cleveland, Ohio, assignors to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 7, 1915. Serial No. 26,620. (Cl. 126—39.)



1. In a stove structure, the combination of vertical walls arranged at an angle to each other, of a vertically disposed plate secured at the corner of said walls and having a looped central portion forming a clamping member adapted to clamp the adjacent edges of said walls.

2. In a stove structure, the combination of two walls arranged at an angle to each other with adjacent parallel edges, of a corner member having a looped central portion and extending longitudinally the said adjacent edges of the walls and forming a clamping member therefor.

3. In a stove structure, the combination of two walls arranged at an angle to each other with adjacent parallel edges, of a corner member having a looped portion between and extending longitudinally the said adjacent edges of the walls and forming a clamping member, the arms of the corner member extending beyond the looped portion.

4. The combination with a gas stove having an oven at one side of the top burners, of a vertically disposed plate secured in the corner at the junction of the side of the oven and the back of the stove, and having a looped central portion forming a clamping member adapted to clamp the splasher plates arranged at right angles to each other and parallel to the side of the oven and the back of the stove.

5. The combination with a gas stove having an oven at one side of the top burners, of a triangular plate secured in the corner at the junction of one side of the oven and the back of the stove and having a vertically disposed central looped portion adapted to form pockets to receive and clamp the splasher plates in their vertical position, substantially as shown and described.

[Claims 6 to 11 not printed in the Gazette.]

1,172,953. ADAPTER. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 5, 1915. Serial No. 32,330. (Cl. 173—344.)



1. An adapter comprising a base with terminals for engaging those of a socket; a metal casing attached at one end to said base but insulated from its terminals; socket means at the other end of said casing including an insulating body in the casing and terminals carried by said body for engaging those of a lamp base; and a transformer in said casing held between the base end thereof and said body and serving to keep said body in place against the other end of the casing, said transformer having its primary connected to said base terminals and its secondary connected to said socket terminals, but being otherwise unattached to said base.

2. An adapter comprising a base including terminals for engaging those of a standard socket, a metal skirt,

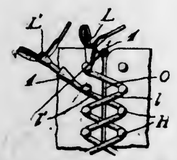
and a body of insulating material serving to unite said parts mechanically while separating them electrically; a cap-like metal part telescoping with and secured to said skirt so as to coöperate therewith to form a casing; miniature socket means of the bayonet type at the cap end of said casing including an insulating body in the casing secured so that it cannot turn and terminals carried by said body for engaging those of the miniature lamp base; a transformer in said casing held between said base and said body and serving to keep said body in place, said transformer having its primary connected to the base terminals and its secondary connected to the socket terminals, but being otherwise unattached; and an insulating wrapping about said transformer within the casing.

3. An adapter comprising a base including terminals for engaging those of a standard socket, a metal skirt, and a body of insulating material serving to unite said parts mechanically while separating them electrically; a cap-like metal part telescoping with and secured to said skirt so as to coöperate therewith to form a casing, said part having engagement means in its bottom; socket means of the bayonet type at the cap end of said casing, including an insulating body engaged with said engagement means of the cap bottom and so prevented from turning; terminals carried by said body for engaging a lamp base in said socket means; and a transformer in said casing clamped between said base and said body and serving to keep said body in engagement with the cap bottom, said transformer having its primary connected to the base terminals and its secondary connected to the socket terminals, but being otherwise unattached.

4. An adapter comprising a base with terminals for engaging those of a standard socket; a metal casing attached at one end to said base but insulated from its terminals; miniature socket means at the other end of said casing including an insulating body in the casing and terminals carried thereby for engaging those of a miniature lamp base; and a transformer in said casing having its primary connected to said base terminals and its secondary connected to said socket terminals, and clamped securely in place in the casing between the base end thereof and the aforesaid insulating body so as to render special means for securing it superfluous.

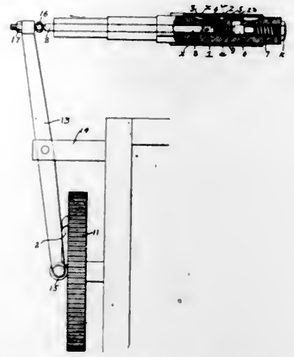
5. An adapter comprising a base including terminals for engaging those of a standard socket, a metal skirt, and a body of insulating material serving to unite said parts mechanically while separating them electrically; a cap-like metal part telescoping therewith to form a casing; miniature socket means at the cap end of said casing including an insulating body and terminals carried thereby for engaging those of a miniature lamp base; and a transformer in said casing having its primary connected to the base terminals and its secondary connected to the socket terminals, said transformer and said insulating body being securely clamped in place in the casing between the base and cap ends thereof by the securing together of the base and cap parts, so as to render special means for holding them in place superfluous.

1,172,954. SHOESTRING-FASTENER. ADAM DERRENBERGER, Rochester, Wash. Filed Apr. 22, 1915. Serial No. 23,229. (Cl. 24—143.)



A shoe string fastener comprising a hollow truncated cone-shaped ferrule, the smaller end of which is cut at an oblique angle to the longitudinal axis of the ferrule, the edges of said smaller end converging toward one side of the ferrule.

1,172,955. CLENCHING DEVICE. STEPHEN DERRINGER, Philadelphia, Pa., assignor to Emily K. Dietz, Philadelphia, Pa., trading under the firm-name of Dietz Machine Works. Filed Sept. 28, 1915. Serial No. 53,073. (Cl. 1—2.)



1. The combination with a tube mandrel, of an anvil movable therein; means for moving the anvil to clench one prong of a staple in a tube on the mandrel; and means for moving the tube to clench the second prong of said staple.

2. The combination with a tube mandrel, of an anvil movable therein; and means for successively causing relative longitudinal motion of the tube and anvil to successively clench the prongs of a staple in opposite directions within the tube.

3. The combination with a tube mandrel, of an anvil slidable therein; mechanism for moving said anvil in one direction longitudinally of the mandrel; and a spring for moving the anvil in the opposite direction.

4. The combination with a tube mandrel, of an anvil slidable therein; mechanism for moving said anvil in one direction; a spring for moving the anvil in the opposite direction; and a device for moving the tube on the mandrel to finish the clenching begun by the anvil.

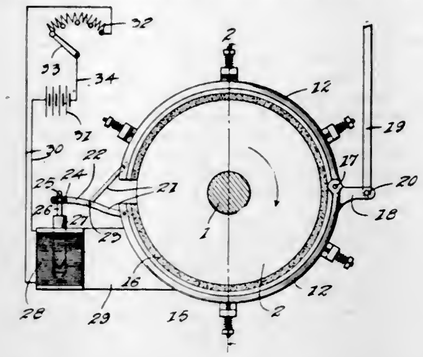
5. The combination with a tube mandrel, of an anvil slidable longitudinally thereof and having a clenching recess for the prongs of a staple in the tube on said mandrel; mechanism for reciprocating the anvil to clench one prong of the staple in the tube on the mandrel; and means for stripping the tube from the mandrel to clench the other prong of the staple.

[Claims 6 and 7 not printed in the Gazette.]

1,172,956. BRAKE-APPLYING MECHANISM. REGAN B. DICKARD, Austin, Tex. Filed Oct. 9, 1914. Serial No. 865,969. (Cl. 74—13.)

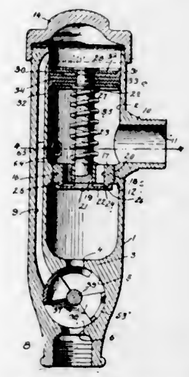
1. The combination with a brake operating rod and a rotary shaft, a disk mounted upon said shaft, sectional brake band engaged around the periphery of said disk, a collar rigidly secured to said shaft on one side of said disk, a hub bearing disposed between said collar and disk and being loosely mounted upon said shaft, a plurality of arms radiating from said hub their outer ends bent inwardly, means through the outer ends of said arms for adjustably holding the sectional brake band to the periphery of the disk, and means carried by one end of said sectional band for hingedly securing them together, their opposite ends being connected by links for operating the same, and means at the hinged end of the brake band to connect the same to the operating rod.

2. The combination with a brake operating rod and a rotary shaft, a disk mounted upon said shaft, a sectional brake band mounted around the periphery of said disk, a collar adjustably secured to said shaft, a bearing hub positioned between said collar and disk, a plurality of arms radiating from said hub having their outer ends bent inwardly, means carried by said arms for adjustably holding the brake sections upon the disk, one end of the section being hingedly connected and having a projection extending therefrom, said projection connected to the operating rod, the opposite end of said section being connected



by links, and electrically operated means connected to said links, providing means for drawing together the sections of the brake band and clamp the same upon the disk for rotation with said disk and shaft to move the brake operating arm in one direction.

1,172,957. AUTOMATIC FLUSH-VALVE. ANDREW J. DONNELLON, Cincinnati, Ohio. Filed Oct. 30, 1914. Serial No. 869,445. (Cl. 137—93.)



1. A flush valve including a cylindrical casing having therein an axial bore and a transverse bore normally in communication with each other, an inlet communicating with said transverse bore, a valve within the transverse bore and controlling the flow of liquid therethrough, a valve seat intermediate the upper and lower ends of the axial bore, a valve coöperating with the valve seat to close the opening through the bore, a piston in the outer end of the bore arranged to control the operation of the valve, the casing being provided with an outlet opening communicating with said axial bore at a point slightly beyond the valve seat, a by-pass, one end of the by-pass opening into the transverse bore, and the other end thereof opening into the axial bore at a point beyond the piston, the valve in the transverse bore normally closing the by-pass opening and arranged to close the opening into the axial bore when moved to uncover the by-pass opening so that pressure of water through the by-pass and against the outer side of the piston will force the valve from its seat.

2. A flush valve including a casing having an axial bore extending thereinto for substantially two-thirds of its length, the remaining third being provided with a transverse bore, the bores being in communication, the transverse bore being provided with an inlet opening, the axial bore being provided with an outlet opening, a valve seat in the axial bore at a point in advance of the outlet opening, a valve coöperating with the valve seat to close the passage therethrough, a piston controlling the opening movement of the valve, a spring to normally hold the valve closed, the casing being provided with a by-pass, one end of the by-pass opening into the transverse bore, the other end of the by-pass opening into the outer end of the axial bore and arranged to admit liquid to the outer side of the piston, and a valve within the transverse bore to control the flow of liquid into the by-pass or axial bore, said valve being manually controlled and arranged to automatically return to its normal position.

3. A flush valve including a casing having an axial bore formed therein, said bore extending for substantially two-thirds of the length thereof, the lower end of the casing being provided with a transverse bore, the axial and transverse bores being in communication, a valve seat intermediate the ends of the axial bore, the casing being provided with an outlet opening communicating with the axial bore at a point slightly above the valve seat, a valve coöperating with the valve seat to close the opening through the longitudinal bore, a piston operatively connected with the valve intermediate the valve seat and the upper end of the bore, the casing being provided with a by-pass, the lower end of the by-pass communicating with the transverse bore, the upper end of the by-pass communicating with the longitudinal bore at its upper extremity and arranged to direct water pressure against the upper surface of the piston to force the same downwardly and thereby open the valve, a spring to normally hold the valve closed, the by-pass being provided with a restricted outlet opening at a point slightly above the valve seat, an automatic valve controlling the flow of liquid therethrough to permit the valve to be reseated under the influence of the spring, and a controlling valve within the transverse bore to direct the flow of liquid into the longitudinal bore or by-pass and thereby control the operation of the valve.

1,172,958. CLEAN-OUT SERVICE CONNECTION. JAMES S. DONOHUE, Washington, D. C., assignor of one-half to Michael V. Moran, Washington, D. C. Filed Nov. 20, 1915. Serial No. 62,574. (Cl. 137—75.)



1. In a clean-out service connection, in combination with the gas main and service pipe, a T having one of its arms connected to the main, a cross having one of its arms provided with male threads threadedly connected to the female threads of one of the arms of the T, and having another arm connected to the service pipe, removable closures for the other two arms of the cross and a removable closure for the other arm of the T.

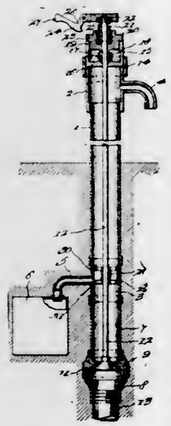
2. In a clean-out service connection, a T adapted for connection with the gas main, and a cross having one arm threadedly connected to one arm of the T and having a second arm adapted for connection with the service pipe, and removable closures for the other arms of the cross.

3. In a clean-out service connection, a cross adapted to have one arm connected to the service pipe, means to connect another arm to the gas main, and a removable closure for another arm of the cross in alinement with said first arm thereof.

4. In a clean-out service connection, a cross adapted to have one arm connected to the service pipe, a T connected to another arm of the cross, removable closures for the other arms of the cross, said T being adapted for connection to the main, and a removable closure for the other arm of the T.

5. In a clean-out service connection, a cross adapted for connection to a service pipe, a removable closure for the cross opposite to its point of connection with the service pipe to provide a straight passage into the latter, means to connect said cross to the main, and a removable closure for the cross located opposite to said main connecting means.

1,172,959. NON-FREEZING HYDRANT. GREEN HUNTER DORMON, Bastrop, La. Filed July 21, 1915. Serial No. 41,138. (Cl. 137—13.)

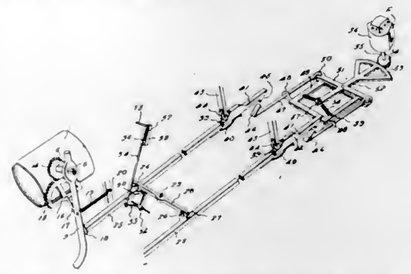


1. In a hydrant, the combination of a stock built up of an elongated section, relatively short upper and lower sections connected thereto, and other sections arranged between the lower short section and the main and including a coupling providing a valve seat, a valve cooperating with said seat, a receptacle independent of said stock and situated to one side thereof, a pipe connecting said receptacle and the interior of the stock through said lower short section, a secondary valve controlling passage to said receptacle and fitted to reciprocate in said lower short section, said secondary valve comprising a hub, spider arms radiating from said hub, and an open cylinder carried by said arms and having a notch in the lower edge thereof adapted to register with the opening to said pipe, and a stem connected to actuate said valves, substantially as described.

2. In a hydrant, the combination of a stock, a valve controlling passage to said stock, a stem carrying said valve, a head on said stock, a stuffing box on said head for receiving said stem, a plug provided with a recess and a notch, a plunger formed on said plug and fitting said stuffing box, a cap on the upper end of said stem, a spring confined between said cap and plug and occupying the recess in the latter, and a catch pivoted on said cap and coöperating with the notch on said plug to maintain the stem depressed, substantially as described.

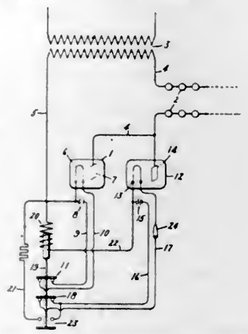
3. In a hydrant, the combination of a stock built up of an elongated section, relatively short upper and lower sections connected thereto, and other sections arranged between the lower short section and the main and including a coupling providing a valve seat, a valve coöperating with said seat, a receptacle independent of said stock and located to one side thereof, a pipe connecting said receptacle and the interior of the stock through said lower short section, a secondary valve controlling passage to said receptacle and fitted to reciprocate in said lower short section, said secondary valve comprising a hub, arms radiating from said hub, and an open cylinder carried by said arms and having a notch in the lower edge thereof adapted to register with the opening to said pipe, a stem fitted to reciprocate in said stock and carrying said valves, a head on said stock, a stuffing box on said head for receiving the stem, a perforated plug fitted on said head and provided with a recess and a notch, a plunger formed on said plug and fitting said stuffing box, a cap on the upper end of said stem, a spring fitted in the recess in said plug and operating against said cap to raise the same, a catch pivoted on said cap and adapted to snap into the notch in said plug for holding the parts depressed, and a weighted arm on said catch for automatically operating the same, substantially as described.

1,172,960. DIRECTION-INDICATOR. FREDERICK E. DRISKILL, Berwick, La. Filed Apr. 16, 1915. Serial No. 21,791. (Cl. 40—77.)



A device of the character described including a frame, rods slidable on said frame, a lever pivoted to the frame, arms on the lever and connected to the rods, indicating means actuated by the lever, latch dogs at the forward ends of the rods, springs to hold the lever in longitudinal alinement with the frame and independently movable operating bars provided with latch dogs arranged to engage the latch dogs on the rods to control the movement of the indicator.

1,172,961. PROTECTIVE DEVICE. SAUL DUSHMAN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 20, 1915. Serial No. 29,453. (Cl. 175—294.)



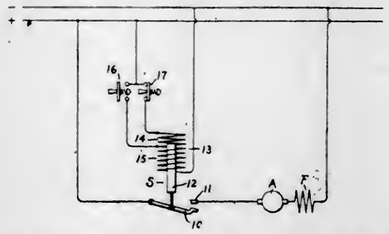
1. The combination of a source of alternating current, an electron discharge device, conducting a constant current with a variable impressed voltage exceeding a predetermined value, connected to said source, a load connected in series with said device, an auxiliary electron discharge device conducting a variable current at an impressed voltage exceeding the predetermined operating voltage of the first device, and means responsive to a predetermined rise of current in the second device to deenergize the first discharge device.

2. The combination of a discharge device having an electron-emitting cathode and being evacuated to a pressure so low that conduction of energy occurs substantially without positive ionization, a load connected in series with said device, a source of alternating current connected to supply current to said device and said load at a voltage exceeding the voltage at which the current of said device becomes substantially constant, a second pure electron-discharge device connected in parallel with the first device constructed to operate with a variable current over a voltage range exceeding the range of voltage over which the current is variable in the first device, and means responsive to a predetermined rise of current in said second device to deënergize both of said devices.

3. The combination of an electrical discharge device operating with a substantially constant current over a variable range of impressed voltage exceeding a predetermined value, a load in series with said device, rectifying means connected in parallel with said device, transmitting current of the same polarity as said discharge device, the current being variable with the voltage above the voltage value at which the current in said device is substantially constant and an electroresponsive device operatively connected to said means for deënergizing said discharge device upon a predetermined rise of current in said rectifying means.

4. The combination of a rectifier operating with a substantially pure electron discharge and having electrodes spaced closely to keep the energy loss due to space charge voltage drop at a low value, a second rectifier operating with a substantially pure electron discharge having electrodes spaced more widely apart to give a high space charge voltage, and connected to corresponding electrodes of the first rectifier, a source of electrical energy supplying said rectifiers, a load in series with both said rectifiers and an electroresponsive device operatively connected to said second rectifier for deënergizing both said rectifiers upon a predetermined rise of current.

1,172,962. ELECTROMAGNETIC SWITCH. JOHN EATON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 26, 1912. Serial No. 733,693. (Cl. 175—281.)

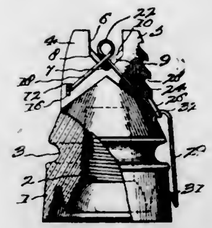


1. An electromagnetic switch comprising a switch member, an energizing winding therefor comprising coils one of which has sufficient magnetizing effect to operate the switch member and the other a neutralizing effect on the first mentioned coil such that the combined effect of the coils is sufficient to hold the switch member in its actuated postion but is insufficient to move it to such position, and means for temporarily deënergizing said second coil to operate the switch member.

2. An electromagnetic switch comprising a switch member, an energizing winding therefor comprising two differentially wound coils one of which has sufficient magnetizing effect to operate the switch member and the other a neutralizing effect on the first mentioned coil such that the combined effect of the coils is sufficient to hold the switch member in its actuated position but is insufficient to move it to such position, and a switch for short circuiting one of said coils to operate the switch member.

3. An electromagnetic switch comprising a switch member, an energizing winding therefor comprising two differentially wound coils one of which has sufficient magnetizing effect to operate the switch member and the other a neutralizing effect on the first mentioned coil such that the combined effect of the coils is sufficient to hold the switch member in its actuated position but is insufficient to move it to such position, a normally closed switch in the circuit of the winding and a normally open switch for temporarily short circuiting one of said coils to operate the switch member.

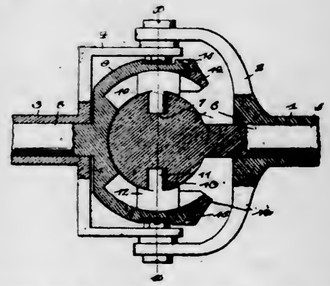
1,172,963. INSULATOR. AUGUST J. ENGELHARDT, New Orleans, La. Filed July 12, 1915. Serial No. 39,417. (Cl. 173—313.)



1. An improved insulator of the character described comprising a body portion, a pair of horns projecting from said body portion and providing a recess therebetween for receiving the line wire, a series of notches formed in one of said horns, a clamp pivoted in the other of said horns and including a pair of resilient V-shaped members for engaging the line wire at opposite sides of the recess, and a cross bar connecting said V-shaped members and adapted to coöperate with said series of notches to secure the clamp in engaging position, substantially as described.

2. An improved insulator of the character described comprising a body portion, a pair of horns extending from said body portion and spaced to provide a recess therebetween for receiving the line wire, longitudinally and laterally inclined walls constituting the base of said recess and operating to form a bight in the line wire, a clamp constructed of a single length of wire arranged to provide a pivot mounted in one of said horns, a pair of resilient V-shaped members looped centrally and arranged to engage the line wire at opposite sides of the recess, a cross bar connecting opposite ends of said V-shaped members, and a series of notches on the other of said horns for receiving said cross bar to hold the clamp in operative position, substantially as described.

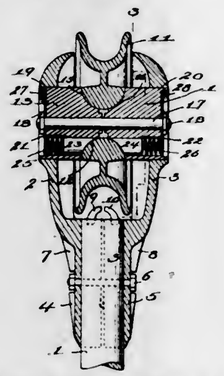
1,172,964. UNIVERSAL JOINT. WILLIAM J. EVANS, Linnburg, Iowa. Filed May 16, 1913. Serial No. 768,134. (Cl. 74—19.)



In a device of the class described a pair of elements, one of said elements having a ball at one end, said ball being provided at diametrically opposite points with open-

ings, and the other element having a socket to receive the ball, said socket being provided at opposite ends with curved grooves, connecting members between the ball and socket, the same comprising journals to enter the openings of the ball and blocks to operate in the grooves and the said blocks being curved to conform to the groove and ball, means detachably connected with the free terminal of the groove for closing the outer ends of the latter to prevent accidental slipping of the blocks therefrom and permitting of the assemblage or removal of said ball and connecting members between the ball and socket, and a detachable metallic sleeve embracing and fitted to each journal and adjusted to fit within the diametrically operated openings of the ball and engage with the walls thereof, whereby establishing a close fit between the journals and openings of the ball.

1,172,965. BEARING FOR WHEELS. CHARLES M. FEIST, Sioux City, Iowa. Filed Dec. 31, 1914. Serial No. 879,876. (Cl. 64—26.)



1. A bearing for wheels comprising an axle embodying alined axially adjustable sections having curved bearing surfaces on their adjacent ends to coöperate with a similarly curved bearing surface formed interiorly of the wheel, and lubricating plugs movable axially against the bearing surface of the wheel.

2. The combination of a wheel having its hub formed with a transversely convexed surface, an axle comprising alined axially adjustable section having concave bearing surfaces coöperative with said bearing surface of the wheel, and lubricating devices in the respective axle sections and movable axially against the bearing surface of the wheel.

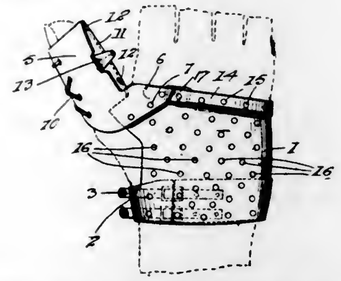
3. The combination with a mounting and a wheel having an interior convex bearing surface, of an axle comprising sections having complemental concave bearing surfaces coöperating with opposite sides of said interior convex bearing surface said axle sections being removable from the opposite outer sides of said mounting, and lubricating devices arranged axially in the respective axle sections.

4. The combination with a wheel having an interior convex bearing surface, of an axle comprising sections having complemental concave bearing surfaces coöperating with opposite sides of said interior convex bearing surface, and axially movable lubricating plugs in the adjacent ends of the axle sections.

5. The combination with a mounting having alined bores in opposite sides thereof and a wheel having an interior convex bearing surface, of an axle comprising sections having complemental concave bearing surfaces coöperating with opposite sides of said interior convex bearing surface, said axle sections being fitted into and removable from the outer ends of the bores in said mounting, and axially movable lubricating plugs arranged in the inner ends of the axle sections and accessible from the outer ends of said axle sections.

[Claims 6 to 11 not printed in the Gazette.]

1,172,966. CORN-HUSKING IMPLEMENT. ROY E. FERGUSON, Harlan, Iowa. Filed May 11, 1915. Serial No. 27,370. (Cl. 130—4.)



A husking device comprising a palm shield formed of a substantially rectangular piece of material and having wrist engaging extensions formed thereon, a thumb shield having direct connection with the palm shield, a husking hook carried by the thumb shield, and a strap extending across the front face of the palm shield and connected thereto and extending beneath a portion of the thumb shield, the said straps being adapted to engage the hand at a point adjacent the knuckles and to extend between the thumb and the index finger of the hand.

1,172,967. PAPER-FASTENER. CLARENCE GEO. FISHER, Rochester, N. Y. Filed Dec. 9, 1912. Serial No. 735,782. (Cl. 24—67.)

1. A paper fastener comprising a backing member provided with flexible points adapted to be arranged at substantially right angles to the body thereof, and a front member made of round wire and having a body portion and end portions extending transversely of the body portion and connected by said body portion and adapted to be engaged by said points and secured by bending said points into a plane substantially parallel with the body portion of said backing member.

2. A paper fastener comprising a backing member provided with flexible points adapted to be arranged at substantially right angles to the body thereof, and a front member made of round wire and having a body portion and end loops connected by said body portion and adapted to embrace said points and be engaged thereby and secured by bending said points into a plane substantially parallel with the body portion of said backing member.

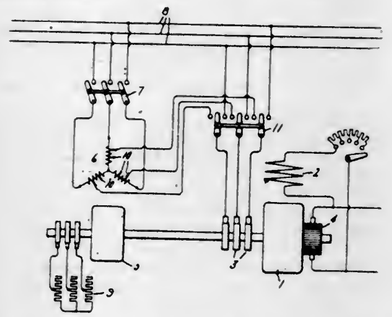
3. A paper fastener comprising a backing member provided with flexible points adapted to be arranged at substantially right angles to the body thereof, and a front member made of round wire and having a body portion and end portions extending transversely of the body portion and adapted to be engaged by said points and secured by bending said points into a plane substantially parallel with the body portion of said backing member, one of said members having a loop therein between its end portions, for the purpose described.

4. A paper fastener comprising a backing member provided with flexible points adapted to be arranged at substantially right angles to the body thereof, and a front member made of round wire and having a body portion and end loops adapted to embrace said points and be engaged thereby and secured by bending said points into a plane substantially parallel with the body of said backing member, one of said members having a loop therein between its end portions, for the purpose described.

5. A paper fastener comprising a backing member provided with flexible points adapted to be arranged at substantially right angles to the body thereof, and a wire front member having a body portion and end loops connected by said body portion and adapted to embrace said points and be secured by bending the points into a plane substantially parallel with the body of said backing member, and the body portion of said front member being offset for a portion of its length between said loops, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,172,968. SYNCHRONOUS DYNAMO-ELECTRIC MACHINE. LIONEL FLEISCHMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 5, 1914. Serial No. 843,219. (Cl. 171—123.)



1. In combination, alternating current mains, a synchronous dynamo electric machine, and means for starting said machine comprising an alternating current motor, the rotatable member of which is mechanically connected to the rotatable member of said synchronous machine, the primary winding of said motor being provided with taps, means for connecting the last mentioned winding to the alternating current mains, and means for connecting the armature winding of said synchronous machine to said taps.

2. In combination, alternating current mains, a rotary converter, means for starting said converter comprising an alternating current motor, the rotatable member of which is mechanically connected to the rotatable member of said converter, the primary winding of said motor being provided with taps, means for connecting the last mentioned winding to the alternating current mains, and means for connecting the armature winding of said converter to said taps.

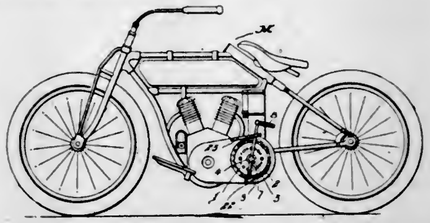
3. In combination, alternating current mains, a rotary converter, and means for starting said converter comprising an alternating current motor, the rotatable member of which is mechanically connected to the armature of said converter, the primary winding of said motor being provided with taps, means for connecting said last mentioned winding to said alternating current mains, and means for connecting the collector rings of the rotary converter to said taps, whereby said motor operates as a motor and as a compensator.

1,172,969. MOTOR-CYCLE STARTER. OLIVER FOBES, New Castle, Pa. Filed Apr. 8, 1915. Serial No. 20,009. (Cl. 74—54.)

1. The combination with a motor having a driving chain; of a starter therefor including means under the control of the operator for engagement with said chain, and means for normally holding said chain engaging means out of engagement with the chain.

2. The combination with a motor having a clutch sprocket, a driving chain engaged therewith, chain engaging means, means for normally holding said chain engaging means out of engagement with the chain, and means for actuating said clutch sprocket to position it for operation, said means being also operable to actuate the chain engaging means, whereby the engine is started.

3. The combination with a motor having a clutch sprocket, a driving chain engaged therewith, chain engaging means, means for normally holding said chain engaging means out of engagement with the chain, means for actuating said clutch sprocket to position it for operation, said means being also operable to actuate the chain engaging means, whereby the engine is started, and means for automatically returning said actuating means to normal position.

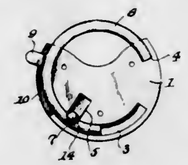


4. The combination with a motor having a driving chain, of a starter therefor including a pawl for engagement with said chain and a crank for actuating said pawl, and means for normally holding said pawl out of engagement with said chain.

5. The combination with a motor having a driving chain, of a starter therefor including a pawl for engagement with said chain, a spring engaging said pawl and exerting its tension to force it into engagement with said chain, means for normally holding said pawl out of engagement with said chain against the tension of said spring, and a crank for actuating said pawl to release it from said holding means and to forcibly engage it with said chain.

[Claims 6 to 15 not printed in the Gazette.]

1,172,970. PADLOCK. CHARLES W. FOWLER, Chicago, Ill. Filed Sept. 10, 1915. Serial No. 50,011. (Cl. 70—107.)



1. In a padlock, a slidable shackle having its major portion received in the body of the lock, a gravity pawl adapted to coact with the shackle and retain the same in locked position when the lock is sustained in its normal vertical position.

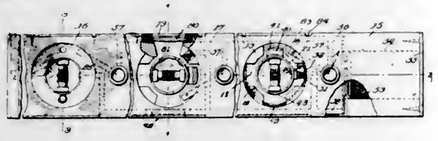
2. In a padlock, a body having a circular groove, a round shackle having its major portion received within the groove and one of its ends received in a socket in the body, when the said shackle is in locked position, the body having a radially arranged slot communicating with its passage, a ball in the slot, the shackle having a semi-cylindrical depression registering with the slot when the said shackle is in locked position, said depression adapted to partly receive a ball, and a handle for the shackle projecting through an elongated slot in the body.

1,172,971. LEVEL. DANIEL W. L. FRANK, Sr., Chicago, Ill. Filed Oct. 6, 1914. Serial No. 865,231. (Cl. 33—213.)

1. A vial for leveling instruments, comprising a transparent tube with the upper and lower walls thereof longitudinally convexed in an outward manner with relation to the longitudinal median line, and with plane side walls.

2. A vial tube mounting for levels, comprising a rotatably mounted sleeve means for locking the same in ad-

justed positions, means engaging said sleeve for rotating the same through minute arcs, and diametrically arranged means projecting through the side walls of said tube adapted to engage and support the remote ends of a vial tube.



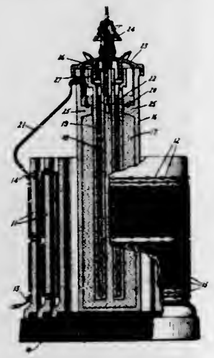
3. A vial tube mounting for levels, comprising a rotatably mounted sleeve, means for locking the same in adjusted positions, means engaging said sleeve for rotating the same through minute arcs, and diametrically arranged means projecting through side walls of said tube adapted to engage and support the remote ends of a vial tube in an expansible manner.

4. A vial tube mounting comprising a sleeve, apertured plates engaging the remote extremities of said sleeve, and means carried by one of said plates engaging said sleeve adapted to rotate the same with relation to said plates, and means carried by said sleeve for securing a vial tube therein.

5. A vial mounting for leveling and allied instruments, comprising a sleeve with annular grooves adjacent its extremities, means mounted upon opposite sides of and projecting through the side walls of the sleeve adapted to support a vial tube therebetween, transparent means located within said sleeve annular grooves, and holding plates engaging said sleeve adjacent the extremities thereof, adapted to anchor said sleeve to a supporting structure and confining said transparent plates within said grooves.

[Claims 6 to 19 not printed in the Gazette.]

1,172,972. PROTECTIVE DEVICE. JOHN J. FRANK, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 6, 1913. Serial No. 772,161. (Cl. 175—30.)



1. The combination with a spiral inductive winding and a supporting base for one end of said winding, of a vessel mounted within said winding upon said support and containing an electrolyte, an annular container mounted within said vessel to project into said electrolyte and adapted to contain insulating liquid in the space between its walls, an electrode mounted inside of said annular container, and a second electrode mounted outside of said container.

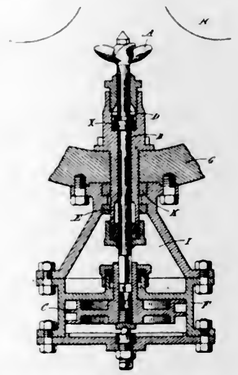
2. The combination of a spiral inductive winding, a vessel mounted within said winding and containing an electrolyte, a container mounted within said vessel to divide the electrolyte into two electrically connected portions and containing liquid insulating material for insulating said portions of the electrolyte, and electrodes extending into said portions of said electrolyte, said electrodes being connected to different points on said winding.

3. The combination with a cylinder of insulating material having a winding inductively wound thereon and a supporting base, of a vessel mounted within said cylinder and containing an electrolyte, means for supporting a mass of liquid insulating material within said vessel in position to divide the electrolyte therein into electrically connected portions, and electrodes extending into said portions of said electrolyte and connected to different points on said winding.

4. The combination with a cylinder of insulating material having a winding inductively wound thereon and a supporting base, of a liquid containing vessel within said cylinder and resting on said support, an electrolyte within said vessel, electrodes extending into said electrolyte and adapted to be operatively connected to said winding, and a chamber containing insulating liquid and mounted in said vessel to separate said electrodes by an insulating wall comprising part of said insulating liquid.

5. The combination with a cylinder of insulating material having a winding inductively wound thereon and a supporting base, of a liquid containing vessel within said cylinder and resting upon said support, an electrolyte within said vessel, a tubular member having a surrounding liquid containing chamber within said vessel, an insulating liquid in said chamber, an electrode arranged to extend into the electrolyte between the vessel and the tubular member, and a second electrode arranged to extend into the electrolyte within said tubular member.

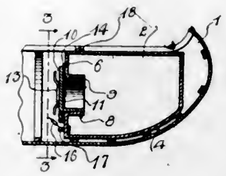
1,172,973. BOILER-CIRCULATOR. DOUGLAS FRANKLIN FRASER, Bombay, India. Filed June 26, 1914. Serial No 847,444. (Cl. 122—411.)



1. In a water circulator for boilers having a shaft passing through the bottom of the boiler and a rotary propeller on the shaft and inside the boiler, the combination of a nipple surrounding the shaft and having a threaded portion which is screwed through the shell of the boiler and projects exteriorly thereof, a nut screwed upon the exteriorly projecting threaded portion of the nipple and locking said nipple in position, a flanged collar bolted to the boiler and having a recess within which the said locking nut is arranged, and two stuffing boxes one at each end of the nipple, and means for actuating the shaft.

2. In a water circulator for boilers having a shaft passing through the bottom of the boiler and a rotary propeller on the shaft and inside the boiler, the combination of a nipple surrounding the shaft and having a threaded portion which is screwed through the shell of the boiler and projects exteriorly thereof, a nut screwed upon the exteriorly projecting threaded portion of the nipple and locking said nipple in position, a flanged collar bolted to the boiler and having a recess within which the said locking nut is arranged, said collar having a flared mouth, a casing bolted to the said flared mouth of the collar, two stuffing boxes one at each end of the nipple, and a turbine arranged within the said casing and engaging the lower end of the shaft for actuating the latter.

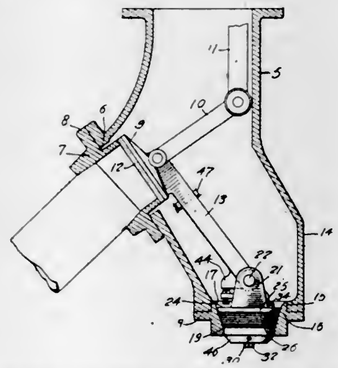
1,172,974. ATTACHMENT FOR CANOES. ROBIN ADAIR FRAYSER, Richmond, Va. Filed Nov. 26, 1915. Serial No. 63,546. (Cl. 9—1.)



1. The combination with a boat, of a water-tight locker having a plane top and inner end, the bottom and outer end being rounded both transversely and longitudinally, the plane inner end having a threaded opening therein, a pair of angle brackets secured by the horizontal arms to the top of said locker, the upright arms being adapted to be attached to the side of the boat, a closure adapted to be threaded into said threaded opening, an eye carried by said closure, an additional eye on the locker, a lock connected with one of said eyes and adapted to engage the other to prevent unscrewing of the closure.

2. In a device of the class described, a water tight locker having an opening in one of its ends, an internally threaded sleeve surrounding said opening and extending into the interior of said locker, a closure therefor comprising a plate, an externally threaded sleeve secured to the inner face of said plate, and adapted to engage said internally threaded sleeve, a reinforcing member on the inner face of said plate within said sleeve, and a cleat secured to the outer face of the plate for turning said closure.

1,172,975. HYDRANT. GEORGE N. FRAZER, Eugene, Oreg. Filed Mar. 12, 1915. Serial No. 13,981. (Cl. 137—13.)



1. A device of the class described, including a base section having a lateral inlet port and having an opening at its lower end, a member disposed within the inlet port and adapted to form a valve seat, a bushing disposed within said opening and provided with a funnel shaped bore, an inlet valve adapted to be moved relatively to said member for controlling the inlet port, a lever on which the inlet valve is carried, a plug adapted to be disposed within the said bushing and being provided with a series of washers having tapering outer edges adapted to coact with the bushing in forming a liquid proof joint, a closed nut carried by the plug and serving to maintain the washers against accidental displacement from the plug, said nut coacting with the plug in forming a chamber, said nut being provided with openings forming an exit from the chamber, said plug being provided with an outlet passage communicating with said chamber and with the interior of the base section, a lever hingedly connected to the plug, a drain valve operable by the lever whereby to control the said outlet passage, a hinge connection between first said lever and the plug, and coacting means between first said lever and the last said lever adapted to operate the latter when the inlet valve is moved into closed position whereby to raise the drain valve and adapted when the inlet valve is moved into open position to release the drain valve, substantially as described.

2. A device of the class described, including an inlet section having an inlet port and having an opening at its lower end, an inlet valve for controlling the inlet port, a lever on which said inlet valve is carried, a bushing adapted to be disposed within said opening and provided with a beveled bore, a plug adapted to be disposed within said bushing and being provided with a plurality of washers adapted to coact with the bushing in forming a liquid proof joint, a hinge connection between the plug and lever, a drain passage provided in the plug and adapted when opened to allow drainage of said base section, a drain valve lever hingedly connected with said plug, a drain valve carried by the drain valve lever and adapted to control the drain passage, and coacting means between first said lever and said drain valve lever, adapted to operate said drain valve lever whereby to lift the drain valve when the inlet valve is in seated position, and to release the drain valve when the inlet valve is in open position.

3. A device of the character described, including a base section provided with an inlet port and further provided with an opening, a valve for controlling the inlet port, a removable plug adapted to normally close said opening, a lever connected to said valve, said lever being hingedly connected to the plug, a drain passage provided in said plug, a drain valve adapted to control said drain passage, means for actuating the drain valve, and coacting means between said drain valve actuating means and said lever adapted to open the drain valve when first said valve is in closed position, and to release the said drain valve when the first said valve is in open position.

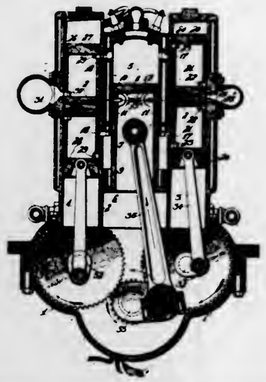
4. A device of the class described, including a base section, said base section being provided with an opening and with an inlet, a valve for controlling the inlet, a removable plug for controlling said opening, a connecting means between the inlet valve and plug, said connecting means adapted to move with the inlet valve, a drain passage provided in the plug, a drain valve for controlling said passage, and coacting means between the valve and said connecting means adapted to operate whereby to open the drain valve when the inlet valve is closed, and to release the drain valve when the inlet valve is open.

5. In a device of the class described, a plug provided with an annular flange at its upper end, a plurality of washers disposed upon said plug and bearing against said flange, a closed nut adapted to be threaded upon said plug against the washers, and adapted to form a chamber beneath the plug, said closed nut being provided with a plurality of openings forming a discharge means for the chamber, means for preventing accidental removal of the nut from the plug, said plug being provided with a drain passage communicating with said chamber, a drain valve lever pivoted upon the plug, a drain valve actuable by the lever for controlling the said drain passage, a valved lever hingedly connected with the plug, and adapted to move relatively thereto for controlling an inlet valve, a lug carried by said valve lever, and an adjustable pin carried by said drain valve lever, said pin adapted to be engaged by said lug when said valve lever is moved into position to close the inlet valve, whereby to open said drain valve, said pin adapted to be released

by the lug when said valve lever is moved into position for opening the inlet valve whereby to release the drain valve.

[Claims 6 and 7 not printed in the Gazette.]

1,172,976. FOUR-CYCLE INTERNAL-COMBUSTION ENGINE. CLAYTON E. FREDERICKSON, Berkeley, Cal. Filed Apr. 10, 1913, Serial No. 760,233. Renewed Jan. 8, 1916. Serial No. 71,135. (Cl. 123—75.)

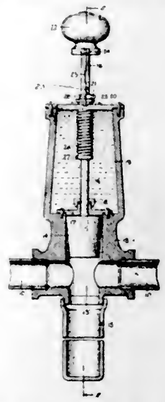


In an internal combustion engine, a cylinder and piston, a crank shaft and a connecting rod between said crank shaft and piston, said cylinder having inlet and outlet ports, an inlet and an exhaust valve cylinder in communication with the respective ports, hollow valves of the piston type operating in said valve cylinders, cooperative timed connections between said valves, and the crank shaft, said valves having packing rings adjacent each end, said exhaust valve cylinder having an exhaust port and said inlet valve cylinder having an inlet port, said valves having ports intermediate the end packing rings for registering with the respective ports of said valve cylinders and said piston cylinder, said valve operating connections including means for moving said valves to bring said ports into and out of register, and maintain said packing rings always out of register with the respective working cylinder ports whereby heated gases will be kept out of contact with the packing rings of the valves, the inlet and axhaust ports of the valves being staggered with relation to each other, substantially as shown and described.

1,172,977. CUT-OFF FOR CONDUITS. JOSEPH GILLEN, New York, N. Y. Filed July 1, 1915. Serial No. 37,557. (Cl. 137—92.)

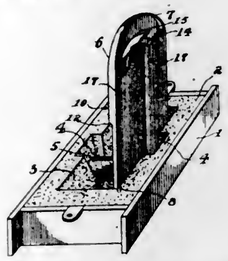
1. In a cut-off valve of the nature set forth, the combination of a valve casing providing a valve seat and having an upwardly projecting integral extension constituting a fluid chamber, there being provided a shoulder at the intersection of the fluid chamber and valve casing, a pair of plates at the top and bottom of the fluid chamber, the latter plate being secured upon said shoulder and each plate having a central hole alining with the hole in the other, a reciprocating valve within the casing adapted to seat upon the valve seat, a rigid stem secured to the valve and projecting through the holes in said plates, and detachable means for supporting the valve stem in its elevated position, said supporting means coöperating with the upper plate.

2. In a device of the character set forth, the combination of a casing having a fluid chamber in its upper portion and a valve seat below the same, a plate secured within the casing and separating the fluid chamber from the valve seat, said plate serving to retain a body of fluid above the valve seat, pipes leading to and from the casing on opposite sides of the valve seat, a reciprocating valve in the casing, a rigid stem connected to the valve and leading upwardly through said plate and the fluid in the chamber, a knob secured to the upper end of the



stem, and a rigid strut pivoted at one end to the knob and adapted to rest with its other end upon the top of the casing whereby the valve is held elevated from the seat.

1,172,978. IRON-MOLDER'S TOOL. EWEN M. GILLIES, Dorchester, Mass. Filed June 23, 1915. Serial No. 35,861. (Cl. 22—37.)



1. A device of the character described comprising a body having a core receiving recess, and members adjustable within said recess to conform to the contour of the core.

2. A device of the character described comprising a body having a core receiving recess, and slidably adjustable members movable in said recess and adjustable to conform to the contour of the core.

3. A device of the character described comprising a body having a core receiving recess, and a series of longitudinal parallel reeds, extending in said recess, said reeds being adjustably mounted on the body so as to be grouped in the recess to conform to the contour of the core.

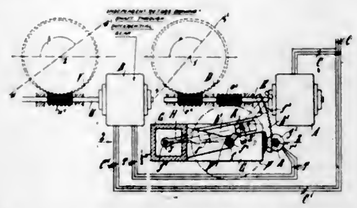
4. A device of the character described comprising a body having a core receiving recess, a suspending bar, and adjustable reeds having means slidably engaging said bar.

5. In a device of the character described comprising a body having a core receiving recess, a suspension bar, and reeds provided with hooked portions slidably adjustable on said bar.

[Claim 6 not printed in the Gazette.]

1,172,979. APPARATUS FOR ADJUSTING THE DIRECTIONS OF GUNS. RICCARDO GIRARDELLI, Rome, Italy. Filed Jan. 9, 1914. Serial No. 811,252. (Cl. 172—239.)

1. In an apparatus for directing a secondary gun upon the same target simultaneously with and in consequence of the laying of a primary gun; a training device (C A E e^1 D) and an elevating device for the primary gun; a training mechanism (U u^1 V) for said secondary gun, a distant controlling device (g^2 T B) for operating said mechanism, said controlling device having a transmitter (g^2) connected both to said primary training device and said primary elevating device.



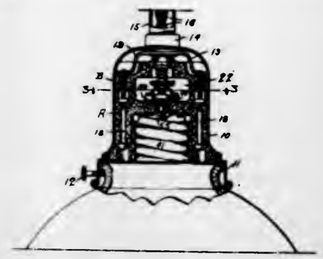
2. In an apparatus for directing a secondary gun upon the same target simultaneously with and in consequence of the laying of a primary gun; a training device and an elevating device for the primary gun; a training mechanism for said secondary gun; a distant controlling device comprising a receiver, a transmitter and a conductor between the two, said transmitter having driving connection both with said primary training device and said primary elevating device; a second conductor for said receiver connecting it with said primary training device for imparting angular adjustment to the secondary training mechanism independent of said transmitter but proportionally equal to the angle of training given to the primary gun.

3. In an apparatus for directing a secondary gun upon the same target simultaneously with and in consequence of the laying of a primary gun; a training device and an elevating device for the primary gun; a training mechanism for said secondary gun, a distant controlling device comprising a receiver, a transmitter and a conductor between the two; said transmitter having connection with a mechanical triangle, one side of which being fixed as to length and direction, another side having connection with said primary training device so as to always form an angle with said fixed side, of the same magnitude as the training angle of the primary gun; said other side also having connection with said primary elevating device whereby the length of said other side is adjustable according to the distance between the target and the primary gun; said transmitter connection thereby imparting angular adjustment to the transmitter proportionally equal to one of the other angles of the mechanical triangle; a second conductor for said receiver connecting it with said primary training device for imparting angular adjustment to the secondary training mechanism independent of said transmitter but proportionally equal to the angle of training given to the primary gun.

1,172,980. ELECTRIC-LAMP SOCKET. GILBERT W. GOODRIDGE and GEORGE B. THOMAS, Bridgeport, Conn., assignors to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed May 8, 1915. Serial No. 26,767. (Cl. 173—354.)

1. A pull socket comprising an insulating body having wire terminals at the lamp-receiving end of the socket, independent wire passages extending from said terminals through the body of the socket to the rear thereof, a switch chamber within the body of the socket, a switch within said chamber, an electrical connection through said switch to one of the lamp terminals, and a permanent electrical connection from the other lamp terminal to the other line terminal, said connection being established through the switch chamber.

2. In an electric lamp socket, an insulating body comprising a pair of insulating buttons recessed on their meeting faces to form a switch chamber, lamp terminals mounted on the outer face of one of said buttons, wire terminals on the same face of said button, a conducting strap within the switch chamber, a bolt connecting said strap with one of the wire terminals, and a switch terminal within the chamber in electrical connection with said strap.



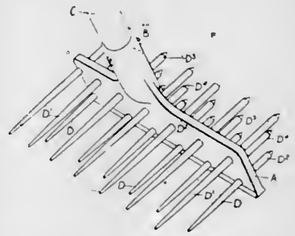
3. In an electric lamp socket, an insulating body comprising a pair of insulating buttons recessed on their meeting faces to form a switch chamber, lamp terminals carried on the outer face of the outer button, wire terminals on said outer face of the latter, a conducting strap within the switch chamber, a bolt connecting the same with one of the wire terminals, a switch terminal within the chamber in electrical connection with said strap, in combination with a standard secured by the bolt from said wire terminals and a coöperating screw passing through the inner button and taking into said standard to secure said buttons together.

4. In a pull socket, a pair of insulating buttons recessed on their meeting faces to form a switch chamber, a standard connecting said buttons and having an outwardly-faced, hollow-threaded teat within the area of the switch body to afford connection for a chain bell.

5. In a pull switch, metallic casing, and within the same a pair of insulating buttons forming a switch body, said buttons being recessed on their meeting faces to form a switch chamber, a pair of conducting straps lying within said chamber, a pair of lamp terminals on the outer face of the outer button, a pair of wire terminals on the same face of said button and electrical and mechanical connections therefrom to said conducting straps within the switch chamber.

[Claim 6 not printed in the Gazette.]

1,172,981. LAWN-SCARIFIER. WILLIAM A. GORMAN, New York, N. Y. Filed Dec. 29, 1914. Serial No. 879,475. (Cl. 55—10.)



1. An agricultural implement of the character described, comprising a handled body having rows of spike-like teeth projecting from each side, one side having a greater number of rows than the other, and the teeth on one side being longer than the teeth on the other side.

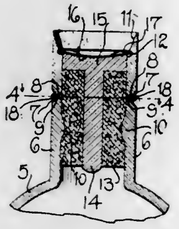
2. An agricultural implement of the character described, comprising a handled body having rows of spike-like teeth projecting from each side, one side having a greater number of rows and whose teeth are shorter than the teeth on the other side, the teeth of the forward row on each side being shorter than the rear row.

3. An agricultural implement of the character described, comprising a plate provided with a socket, a handle in

the said socket, and rows of spike-like teeth carried by the said plate and extending on opposite faces of the plate in transverse rows, the teeth of the forward row on each side being shorter than the teeth of the rear row, whereby the points of the teeth on both sides of the plate will be in a horizontal plane at the time the teeth enter the ground and the handle extends at an acute angle to the ground.

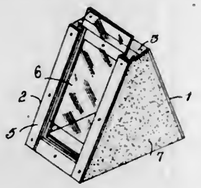
4. An agricultural implement of the character described, comprising a flat plate having a socket and provided with two rows of tapering teeth projecting from one face, and three rows of teeth having stubby points projecting from the other face, the teeth of the forward row of teeth on each face being shorter than the rear row.

1,172,982. NON-REFILLABLE BOTTLE. ELI E. GREGORY, Central City, Ky., assignor of one-half to William A. MacDonald, Central City, Ky. Filed May 3, 1915. Serial No. 25,546. (Cl. 215—106.)



A bottle including a neck having its mouth inclined upon the inner face thereof and further provided with a circumferential groove at the base of the inclination, a stopper insertible within the neck having a longitudinal bore, a plug engageable in the bore and provided with a concave upper face, and a pliable disk insertible within the mouth of the bottle, the edge of said pliable member contacting with the beveled face of the mouth as it is inserted therein, whereby the disk is caused to seat in the concave face of the plug and its edge engaged in the circumferential groove.

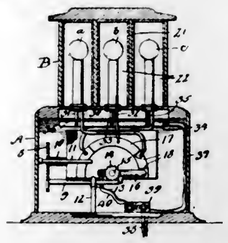
1,172,983. PLANT-PROTECTOR. SAMUEL K. GREEN, Paris, Ill. Filed Mar. 8, 1915. Serial No. 12,996. (Cl. 47—22.)



1. A plant protector comprising an inclined rectangular roof section of translucent material, and an inclined rectangular frame converging upwardly in respect to each other and hingedly connected at their upper ends, guides on the inclined side bars of the frame, a transparent panel slidable in said guides, and flexible translucent gables secured to the opposite edges of the frame and to such edges of the roof section.

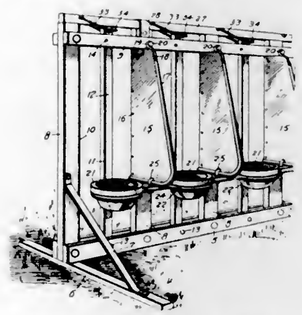
2. A plant protector comprising a pair of upwardly converging rectangular frames, a covering secured at its edges to one frame, a pair of flat guide strips secured to the inclined side bars of the other frame and having longitudinally disposed grooves opening through their inner edges and through their rear sides, a rectangular panel contacting slidably with the outer side of the last named frame and having its edges received slidably in the aforesaid grooves, a flexible hinge strip secured in contact with the extreme upper ends of the two frames and in contact with said upper ends of the guide strips, said hinge strip having one edge formed with an elongated notch receiving the upper end of the panel snugly therein, whereby to frictionally bind said panel to hold it in adjusted position and at the same time to prevent the entrance of cold air into the protector at this point, and a pair of flexible gables secured at their edges to the edges of the two frames.

1,172,984. SPEED-INDICATOR. EDWARD A. GRESENS and ALBERT FAERBER, Rush, N. Y. Filed May 1, 1914, Serial No. 835,681. Renewed June 22, 1915. Serial No. 35,697. (Cl. 264—15.)



In a speed indicator, the combination with a rotary shaft, of a governor actuated sleeve slidable on said shaft, a shifting arm actuated by said sleeve, a tubular guiding extension on said arm, a fixed guide rod on which said extension is slidable, a rack bar projecting from and operated by said arm, a pinion actuated by said rack bar, and indicating means controlled by said pinion.

1,172,985. FEED-RACK FOR CALVES. MICHAEL JOSEPH HAGER, Denmark, Wis. Filed Nov. 26, 1915. Serial No. 63,456. (Cl. 119—27.)



1. A feed rack including a pair of spaced lower beams spaced skids arranged transversely of, and supporting, said lower beams, a plurality of spaced stationary stanchions connected at their lower ends between said beams, a pair of spaced upper beams secured on opposite sides of the stationary stanchions near the upper ends of the latter, a slide bar arranged upon the upper ends of the stationary stanchions, guides carried by certain of said stationary stanchions for retaining the slide bar in position, a lever pivotally connected at its lower end to the slide bar, a link pivotally connected with the upper beams at one end, and at its other end being pivotally connected with said lever above the pivotal point of the latter, a plurality of movable stanchions arranged each between a pair of the stationary stanchions, and pivotally mounted adjacent their lower ends between the lower beams, stops carried by the upper beams for limiting the movement of the movable stanchions toward the stationary stanchions with which they are associated, latches pivotally carried by the movable stanchions and engaging in slots provided in said slide bar, said latches being provided with means for limiting their upward movement relatively to the slide bar whereby to be retained in position to be engaged by the slide bar when the latter is moved in one direction or another, a plurality of partitions carried each by one of said stationary stanchions, a bowl support carried by the partitions, and a plurality of feeding bowls carried by the support each between a pair of the partitions and equidistant from one of the stationary and one of the movable stanchions.

2. A feeding rack including a plurality of spaced stationary stanchions, means for supporting them, a plurality of movable stanchions arranged one between each pair of stationary stanchions, a sliding bar supported upon the stationary stanchions, means for shifting the sliding bar in one direction or another at will, latches carried by the movable stanchions and detachably engaging said slide bar, a plurality of partitions carried each by one of said stationary stanchions, a bowl supporting means supported by the partitions, and a plurality of bowls carried by the bowl supporting means and arranged between the partitions.

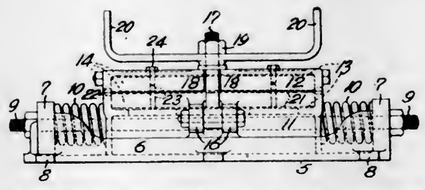
3. A feeding rack including a plurality of spaced stationary stanchions, means for supporting them, a plurality of movable stanchions arranged each between a pair of the stationary stanchions, means whereby the movable stanchions may be shifted toward and away from the stationary stanchions at will, a plurality of partitions supported each by one of the stationary stanchions, a bowl supporting device carried by the partitions and providing a plurality of rings arranged between the partitions, and a plurality of bowls supported each by one of the rings.

4. A feeding rack including a plurality of spaced stationary stanchions, a plurality of movable stanchions arranged between the stationary stanchions, means whereby the movable stanchions may be shifted at will toward and away from said stationary stanchions, a plurality of partitions carried each by one of the stationary stanchions, said partitions having their outer edges beaded, a wire extended through the beaded edge of each partition, said wire being anchored at its upper end whereby to help support the partition, a bowl supporting device, bolts carried thereby and having their upper ends hook-shaped and engaging each through an opening in one of the partitions above the wire carried thereby, said bowl supporting means providing a plurality of rings arranged between the partitions, and bowls supported each by one of the rings.

5. A feed rack including a plurality of stationary stanchions, a plurality of movable stanchions arranged between the stationary stanchions and movable toward and away therefrom, a plurality of partitions carried each by one of the stationary stanchions, a bowl supporting device comprising a channel iron returned upon itself and having its members at intervals bowed outwardly to provide rings, blocks arranged between the portions of the channel iron lying between the rings, means connecting the blocks with the channel iron, and bolts carried each by one of the blocks and provided with a hooked portion engaging one of the partitions.

[Claim 6 not printed in the Gazette.]

1,172,986. CABLE-GRIP. THOMAS HALL, Montreal, Quebec, Canada. Filed Apr. 10, 1914. Serial No. 831,098. (Cl. 114—226.)



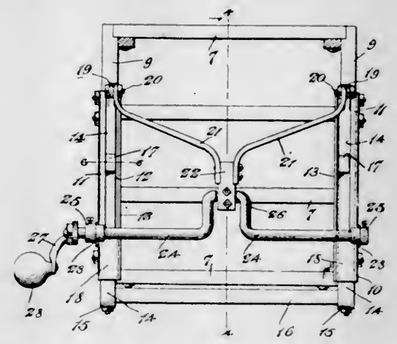
1. A device of the character described, comprising a framework, a clamp slidable and resiliently mounted thereon, and interchangeable and reversible grooved plates mounted therein.

2. A device of the character described, comprising a framework, a clamp slidable and resiliently mounted thereon, and plates mounted in said clamp having longitudinal grooves in both sides thereof; said grooves being substantially semi-circular in cross section.

3. In a device of the character described, a base, a rod supported thereby, a clamp resting on the base and slidable on said rod, shock absorbing means between the ends of the clamp and the ends of the base, and interchangeable longitudinally grooved gripping plates mounted in the members of said clamp.

4. In a device of the character described, a resiliently mounted two part clamp, a gripping plate mounted in each of said clamp parts, each of said plates having a plurality of longitudinal grooves in opposite faces thereof, a threaded aperture formed entirely therethrough for the reception of attaching means inserted through the clamp parts, and plate attaching means inserted through one of said clamp parts.

1,172,987. EXTENSIBLE CAR-STEP. WESLEY HAMM and ALANSON HOTALING, Philmont, N. Y. Filed Jan. 19, 1915. Serial No. 3,098. (Cl. 105—87.)

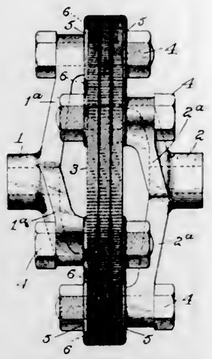


1. In combination, a pair of side members, steps secured between said side members, an extensible step, supporting means for said extensible step slidably secured to said side members, a rotatable shaft, means connecting said supporting means with said rotatable shaft, an operating crank arm carried by said shaft and arranged laterally of said side members and a weight connected with said crank arm for retaining said extensible step in elevated or downwardly extended position.

2. In combination, a pair of side members, steps secured between said side members, an extensible step, slide rods secured to said extensible step, flanged plates carried by said side members and slidably securing said rods, a rotatable shaft supported in said side members and including a crank arranged centrally between said slide rods, a pair of straps pivotally secured at their upper ends to the upper extremities of said slide rods and having downwardly converging lower ends, means pivotally connecting the lower extremities of said straps with said crank, and an operating crank arm carried by said shaft.

3. In combination, a pair of side members, steps secured between said side members, an extensible step, slide rods secured to said extensible step, plates carried by said side members, flanges formed upon said plates partially inclosing and slidably securing said slide rods, the lower extremities of the flanges of certain of said plates being enlarged to provide shoulders, stop lugs carried by said slide rods adapted to engage the shoulders to limit the downward movement of said extensible step, a rotatable shaft including a crank, means pivotally connecting said crank with the upper extremities of said slide rods, and an operating crank arm carried by said shaft.

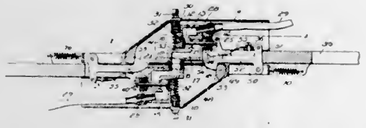
1,172,988. FLEXIBLE COUPLING. EDWARD JOHN HARDY, Coventry, England. Filed Nov. 17, 1914. Serial No. 872,617. (Cl. 64—13.)



1. A flexible joint member comprising a plurality of separate layers of fabric secured together with the threads of one layer arranged at an angle to the threads of another layer or layers, said layers forming a single flat ring or disk-like member.

2. A flexible joint member comprising a plurality of separate layers of textile fabric secured together with the crossing threads of one layer arranged at an angle to the crossing threads of another layer or layers, said layers, in respect to the direction of their threads, being spaced substantially evenly about the axis of the member, said layers forming a single flat ring or disk-like member, substantially as described.

1,172,989. COUPLING-HEAD. ISAAC A. HARRISON, Baltimore, Md., assignor of one-half to Joseph C. Howard, Baltimore, Md. Filed Aug. 11, 1909. Serial No. 512,433. (Cl. 188—13.)



1. A coupling head including a sealing gasket, means for locking said head with a complementary head, and means to operate the gasket for movement to sealing position wholly succeeding the operation of the locking means.

2. A coupling head including a sealing gasket, means operating said gasket, said means normally operative for movement in a direction to release the gasket, and means for interlocking said head with a complementary head, said interlocking means being adapted to hold the gasket operating means against the normal operation thereof.

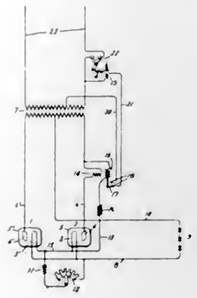
3. A coupling head including a valve carrier, means for supporting the carrier, a fluid channel formed in the carrier, a gasket forming the outlet end of the channel, a valve normally closing the channel, and means operative in the coupling movement of the head to release the carrier supporting means and open the valve.

4. A coupling head including a valve carrier formed with a fluid channel, means for operating the carrier in one direction, a valve normally closing said channel, a gasket encircling the outlet end of the channel, and means for permitting operation of the carrier operating means and simultaneously operating the valve in the coupling movement of the head.

5. A coupling head including a valve carrier formed with a fluid channel, a valve normally closing said channel, a gasket encircling the outlet end of the channel, means for forcing the carrier to arrange the gasket in sealing position relative to the complementary head, and means for supporting the carrier against the influence of its operating means.

[Claims 6 to 21 not printed in the Gazette.]

1,172,990. PROTECTIVE DEVICE. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 7, 1914. Serial No. 849,539. (Cl. 175—294.)



1. The combination of a source of alternating current, a discharge device having unidirectional conductivity and passing a substantially constant current with a variable impressed voltage, a load connected in series with said device and means responsive to an abnormal increase of energy in said device for deënergizing said device.

2. The combination of a source of alternating current, an electron discharge device having asymmetric conductivity, a load connected in series with said device and means for disconnecting said source in response to an abnormal rise of energy in said discharge device.

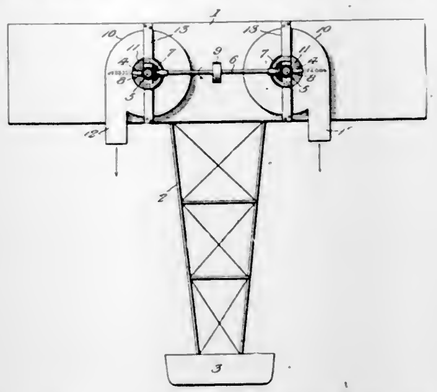
3. The combination of a source of current, a device supplied by said source having unidirectional conductivity and transmitting a substantially constant current with a variable voltage, a load connected in series with said device and means for deënergizing said device responsive to an abnormal voltage across the terminals of said device coincidently with a passage of current through said device.

4. The combination of a source of alternating current, a rectifying device operating with a pure electron discharge, a load circuit in series with said device and said source, and circuit controlling means for controlling the energy supply responsive to a passage of current through said rectifying device and increase of voltage in phase therewith across the terminals of said device above a predetermined value.

5. The combination of a source of alternating current, an incandescent cathode device operating with a substantially pure electron discharge, a load circuit fed from said source through said device, and means for deënergizing said device responsive to an increase of energy in said device above a predetermined value.

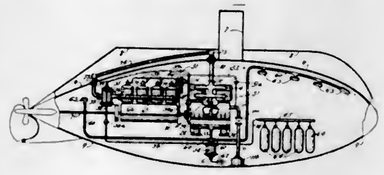
1,172,991. AEROPLANE-PROPELLING MECHANISM. FRED HEIDBREDER, Quincy, Ill. Filed July 3, 1914. Serial No. 848,916. (Cl. 244—18.)

The combination with a supporting surface, of twin rotary paddle propellers arranged at opposite sides of an equidistantly from the longitudinal center of said surface, said propellers being mounted to revolve on vertical axes, casings for said propellers having central inlet openings in their sides and tangential discharge nozzles facing rearwardly, and a driving shaft geared positively to the shafts of both of said propellers operating to



simultaneously drive both propellers at the same speed in opposite directions.

1,172,992. SUBMARINE. ALLEN HOAR, Long Beach, Cal., assignor to Abner R. Neff, Los Angeles, Cal. Filed Apr. 30, 1915. Serial No. 24,963. (Cl. 123—6.)



1. In a submarine, in combination, a hull having an engine compartment, a combustion power plant in said compartment, means for discharging overboard the products of combustion, air storge means, and means driven through the energy of the compressed air in said air storage means for operating said discharge means.

2. In a submarine, in combination, a hull having an engine compartment, a combustion power plant in said compartment, means for discharging overboard the products of combustion, air storage means, and means driven through the energy of the compressed air in said air storage means for operating said discharge means, the exhaust air from said driving means discharging into the interior of the vessel for the purposes of ventilation and to support the combustion in the power plant.

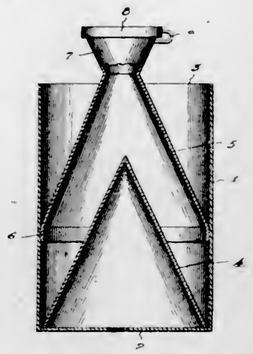
3. In a submarine, in combination, a hull having an engine compartment, a combustion power plant in said compartment, an exhaust pump for expelling overboard the burnt gases from the power plant, air storage means, and an air motor driven by the energy of the compressed air in said air storage means for operating said pump, the exhaust air from said air motor discharging into the interior of the vessel for the purposes of ventilation and to support the combustion in the power plant.

4. In a submarine, in combination, a hull having an engine compartment, a combustion power plant in said compartment, an exhaust pump for expelling overboard the burnt gases from the combustion power plant, an air motor for operating said pump, and a combined muffler and oil separator receiving the exhaust air from said motor and discharging the air thence into the interior of the vessel for the purposes of ventilation and to support the combustion in the combustion power plant.

5. In a submarine, in combination, a hull having an engine compartment, a combustion power plant in said compartment, cooling and condensing apparatus for the products of combustion, a pump for discharging overboard the products of combustion, air storage means, and means driven by the energy of compressed air in said air storage means for operating said pump.

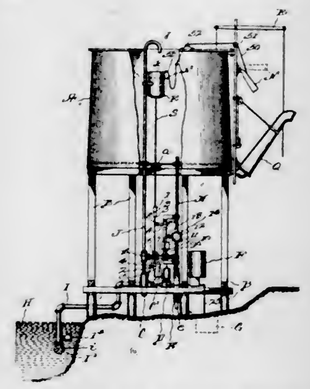
[Claims 6 to 11 not printed in the Gazette.]

1,172,993. SANITARY AND ECONOMICAL PASTE-CUP FOR CIGAR-MAKERS. HENRY S. HOLCOMB, Bath, N. Y. Filed Dec. 15, 1914. Serial No. 877,383. (Cl. 131—48.)



A paste cup for cigar makers comprising a cylindrical cup member, having a flat bottom and fully open at its upper end, a hollow conical feeding member slidably mounted in the cup member, an annular flange depending from the base of the feeding member, said flange engaging the inner surface of the side wall of the said cup member to prevent the feeding member from being tilted with relation to the cup member, a finger cup carried by and communicating with the apex of the feeding member, and a conical plunger removably mounted within the cup member, said plunger resting upon the bottom and having the diameter of its base smaller than the diameter of the cup member to permit of its being readily removed and shifted laterally with relation to the cup member by and on the insertion of the feeding member in the cup member to proper position the plunger with relation to the feeding member.

1,172,994. AUTOMATICALLY-CONTROLLED PUMPING-STATION. WILLIAM D. HUFF, La Fayette, La. Filed Nov. 19, 1914. Serial No. 873,074. (Cl. 103—86.)



1. An apparatus of the character described, comprising an over-head water tank, a pump for delivering

water thereto, an internal combustion engine for driving said pump, a water motor connected to the engine shaft for starting said engine, a pipe opening into said tank and adapted to supply water to said water motor, a valve controlling the flow of water through said pipe, a float mounted in said over-head tank, and means controlled by said float for operating said valve, with a by-pass for water connecting said pipe and said pump, substantially as described.

2. An apparatus of the character described, comprising an over-head water tank, a pump for delivering water thereto, an internal combustion engine for driving said pump, a rotary water motor, having its bucket wheel permanently connected to the engine shaft and serving as a fly wheel for same, for starting said engine, a pipe opening into said tank and adapted to supply water to said water motor, a valve controlling the flow of water through said pipe, a float mounted in said over-head tank, and means controlled by said float for operating said valve, substantially as described.

3. An apparatus of the character described, comprising an over-head water tank, a pump for delivering water thereto, an internal combustion engine for driving said pump, a rotary water motor, having its bucket wheel connected to the engine shaft and serving as a fly wheel for same, for starting said engine, a pipe opening into said tank and adapted to supply water to said water motor, a valve controlling the flow of water through said pipe, a float mounted in said over-head tank, and means controlled by said float for operating said valve, with a by-pass for water connecting said pipe and said pump, substantially as described.

4. An apparatus of the character described, comprising an over-head water tank, a pump for delivering water thereto, an internal combustion engine for driving said pump, a source of electricity, and an electric igniter for said engine, with an electric circuit connecting same to said source of electricity, a water motor connected to the engine shaft for starting said engine, a pipe opening into said tank and adapted to supply water to said water motor, a valve controlling the flow of water through said pipe, a float mounted in said over-head tank, and means controlled by said float for operating said valve, with a by-pass for water connecting said pipe and said pump, with means also controlled by the fall and rise of said float for completing or breaking the electric circuit through said igniter, for starting or stopping said engine, substantially as described.

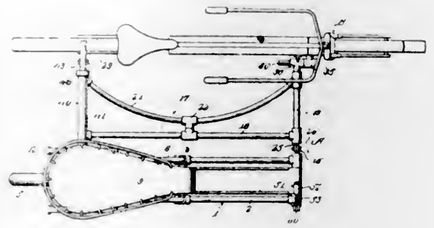
5. An apparatus of the character described, comprising an over-head water tank, a pump for delivering water thereto, an internal combustion engine for driving said pump, a source of electricity, and an electric igniter for said engine, with an electric circuit connecting same to said source of electricity, a rotary water motor, having its bucket wheel permanently connected to the engine shaft and serving as a fly wheel for same, for starting said engine, a pipe opening into said tank and adapted to supply water to said water motor, a valve controlling the flow of water through said pipe, a float mounted in said over-head tank, and means controlled by said float for operating said valve, with means also controlled by the fall and rise of said float for completing or breaking the electric circuit through said igniter, for starting or stopping said engine, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,172,995. SIDE CAR FOR MOTOR-CYCLES. CHARLES J. HUNTER, Newport News, Va. Filed Jan. 15, 1915. Serial No. 2,441. (Cl. 208—45.)

1. A side car for motorcycles comprising a rectangular frame, posts upstanding from the side bars of said frame at one end thereof, quadrantal bars each having one end thereof secured to the upper extremity of one of said posts and the remaining end secured to the adjacent side bar approximately centrally of the latter, and a plate resting upon said frame and having one end portion thereof curved to conform to the curvature of said quadrantal bars and the remaining end portion disposed in a horizontal plane and resting upon the adjacent horizontal portion of said frame.

2. A side car for motorcycles comprising a rectangular frame, posts upstanding from the side bars of said frame at one end thereof, quadrantal bars each having one end thereof secured to the upper extremity of one of said posts and the remaining end secured to the adjacent side bar approximately centrally of the latter, a plate resting upon said frame and having one end portion thereof curved to conform to the curvature of said quadrantal bars and the remaining end portion disposed in a horizontal plane and resting upon the adjacent horizontal portion of said frame, a pivotal connection between one end of said plate and the last-mentioned end of said frame, and means yieldably supporting the curved end of said plate.



3. A side car for motorcycles comprising a rectangular frame, posts upstanding from the side bars of said frame at one end thereof, quadrantal bars each having one end thereof secured to the upper extremity of one of said posts and the remaining end secured to the adjacent side bar approximately centrally of the latter, a plate resting upon said frame and having one end portion thereof curved to conform to the curvature of said quadrantal bars and the remaining end portion disposed in a horizontal plane and resting upon the adjacent horizontal portion of said frame, a pivotal connection between one end of said plate and the last-mentioned end of said frame, springs supporting the curved end of said plate, and means for adjusting said springs.

4. A side car for motorcycles comprising a rectangular frame formed of hollow metal tubing, posts upstanding from the side bars of said frame at one end thereof and formed of hollow metal tubes, quadrantal bars each having one end thereof secured to the upper extremity of one of said posts and the remaining end secured to the adjacent side bar approximately centrally thereof and formed of hollow metal tubing, a reinforcing tubular bar connecting the side bars of said frame centrally of the latter, and a seat plate carried by said quadrantal bars.

5. A side car for motor cycles comprising a rectangular frame, posts upstanding from the side bars of said frame at one end thereof, quadrantal bars each having one end secured to the upper extremity of one of said posts and the remaining end secured to the adjacent side bar approximately centrally thereof, a reinforcing bar interconnecting the side bars of said frame and a seat plate carried by said quadrantal bars.

[Claim 6 not printed in the Gazette.]

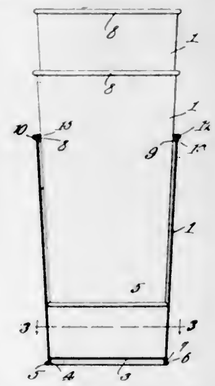
1,172,996. WAIST. WILLIAM C. HYNARD, New York, N. Y., assignor to Hynard and Jung Co., New York, N. Y., a Corporation of New York. Filed Dec. 24, 1914. Serial No. 878,899. (Cl. 2—98.)

A waist provided with an elastic waist band, the front of said band being free from the waist at the front but secured to the waist at the sides thereof, whereby vertical adjustment of the waist at the front relatively to the elastic band, is permitted while after adjustment



the elasticity of said band serves to hold down yieldingly the front of the waist against upward movement.

1,172,997. RECEPTACLE. HARRY A. INMAN, Amsterdam, and CHARLES T. BLOOMER, Newark, N. Y., assignors of one-third to said Inman, one-third to Bloomer Bros. Company, Newark, N. Y., and one-third to Empire Paper Tube & Box Co., New York, N. Y. Filed June 26, 1915. Serial No. 36,475. (Cl. 229—12.)



A receptacle adapted to be nested with others of like construction, comprising a frusto-conical tapered paper body, a sheet metal bottom fitted within the smaller end of the body and having an outstanding bead embracing said end, and a sheet metal ring fitting snugly within the larger end of the body and having an inturned flange at its lower edge and an outstanding bead at its upper edge embracing the larger end of the body, the first mentioned bead and inturned flange being of such proportions that when a number of the receptacles are nested, the beads and inturned flanges of the several receptacles will contact simultaneously with the respective bodies.

1,172,998. PROCESS FOR IMPROVING WATER FOR BREWING AND MALTING PURPOSES. EDUARD JALOWETZ, EMIL RICHTER, and ALBERT SCHUECKHER, Vienna, Austria-Hungary. Filed Nov. 7, 1912. Serial No. 730,013. (Cl. 210—1.)

1. The process of purifying water which comprises heating the water in a container open to the atmosphere and simultaneously vigorously agitating all the particles thereof to cause a precipitation of carbonate throughout all of the particles of said water, and removing the precipitate from said water.

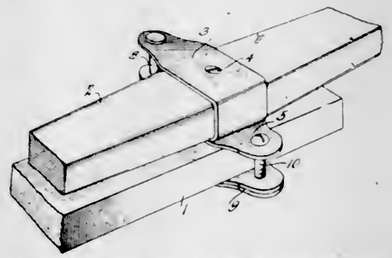
2. The herein described process of purifying water for brewing purposes which comprises heating the water in an open container and simultaneously vigorously agitating all the particles thereof to precipitate substantially all the calcium and magnesium corbonates in said water, and immediately removing the precipitate from the water.

1,172,999. TROUSERS STRETCHER AND HANGER. JOSEPH KAPPES, Baltimore, Md. Filed Jan. 4, 1915. Serial No. 454. (Cl. 223—19.)



A trousers stretcher and hanger formed from a single length of wire bent intermediate its ends to provide spaced elements providing trouser engaging members joined by overlapping strands forming a connecting portion extending between the members at a point intermediate the ends thereof, one extremity of the wire being continued and offset to provide a suspension device extending between the members to a point beyond the adjacent ends thereof, means connecting the overlapping strands of the connecting portion between the members, and means joining the extremity of the wire opposite to said first mentioned extremity to one of the members.

1,173,000. CLEVIS. WILLIAM F. KARROW, Seymour, Wis. Filed June 18, 1915. Serial No. 34,877. (Cl. 21—78.)



1. The combination with a vehicle draft members and a superposed swingletree, of a clevis comprising reversely disposed clip members for said swingletree and draft member, a connection between the contiguous sides of said clip members, and a pivot member connected at one end to the swingletree clip in rear of the swingletree and at its other end to the vehicle draft member clip in front of said draft member.

2. The combination with a vehicle draft bar and a swingletree connected therewith, of a clevis comprising a clip for each of said parts, a pivot connection between the clips, brace means, a pivotal connection intermediate one end thereof and the clip of the draft member on which said brace means is adapted to swing, and a pivot bolt connecting the other end of the brace means to the swingletree clip.

3. The combination with a vehicle draft bar and a superposed swingletree attached thereto, of a clevis for connecting said parts comprising a pair of clips, a brace plate, a pivotal connection for said plate at one side of the vehicle draft bar clip, and connecting means between the other end of said brace plate and the swingletree clip located at the opposite side of the draft bar clip.

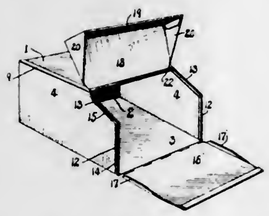
4. The combination with a vehicle draft bar and a superposed swingletree attached thereto, of a clevis consisting of a U-shaped clip surrounding the vehicle draft bar and having its closed end in rear of said bar, and a similarly shaped clip surrounding the swingletree and reversely positioned with respect to the first-mentioned clip, a pivotal connection between the contiguous faces of said clips, a base plate beneath the vehicle draft bar clip, a connecting member for the ends of the draft bar clip to which the base plate is pivotally attached, and a connecting member for the spaced ends of the swingletree clip to which the base plate is pivotally connected at its other end.

1,173,001. CHAIN-HOLDING HOOK. ALBERT P. KEEGAN, Providence, R. I. Filed Mar. 20, 1915. Serial No. 15,726. (Cl. 24—241.)



A holding device, comprising a flat body having an inwardly directed hook at one end and also having at its opposite end a lateral hook that rests in approximately the same plane as the adjacent portion of the body and has its free end deflected from said plane; and a tongue superimposed on and pivotally connected to the body and having an arm movable parallel to the body and arranged to be opposed to the deflected end of the second-named hook and to close the mouth of said hook and also having a resilient arm movable opposite the body and between the same and the end of the first-named hook and provided with means for coöperating with the hook to prevent movement of the tongue parallel to the body until after the resilient arm is pressed toward the body.

1,173,002. FILE-BOX. WILLIAM J. KENNEDY, St. Louis, Mo. Filed Apr. 19, 1915. Serial No. 22,309. (Cl. 129—43.)



1. A sheet metal box having a body provided with top, bottom, side and rear walls, the side walls having vertical front edges and inclined upper edges extending from said vertical front edges to the top wall, a front closure member hinged at its lower end to said body and adapted to engage said vertical front edges, and an upper closure member hinged to the front edges of said top wall, said upper closure member having a depending front flange adapted to overlap said front closure member to retain the latter in its closed position and also having triangular side flanges adapted to overlap the inclined upper edges of said side walls.

2. A sheet metal box having a body provided with top, side and rear walls, the side walls having vertical front edges and inclined upper edges extending from said vertical front edges to the top wall, said edges of the side walls being offset to receive closure members, a front closure member hinged at its lower end to said body and provided with flanges adapted to overlap the offset vertical front edges of the side walls, and an upper closure member hinged to the front edge of said top wall, said upper closure member having a depending front flange adapted to overlap said front closure member to retain the latter in its closed position, said upper closure member also having triangular side flanges adapted to overlap the offset upper edges of said side walls.

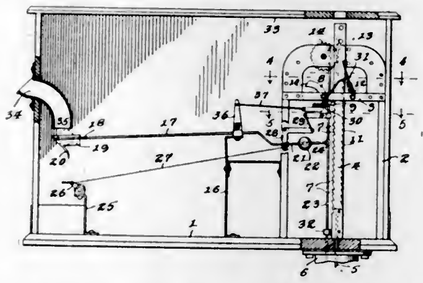
3. A file-box having top, bottom and rear walls formed of a single sheet of metal, side walls having their top, bottom and rear margins interlocked with said single sheet of metal, and closure members hinged to the front edges of said single sheet of metal.

4. A file-box comprising a sheet metal body open at one end, the front margin of the top wall of said body being folded backwardly, a sheet metal hinge member interlocked with the folded portion of said top wall, and a closure pivotally connected to said hinge member.

5. A file-box having a sheet metal body which is open at its front end, the front margin of the top wall of said body being folded downwardly and backwardly, a sheet metal hinge member extending across said top wall and interlocked with the folded portion thereof, so as to reinforce the sheet metal structure, and a closure pivoted to said hinge member.

[Claims 6 to 10 not printed in the Gazette.]

1,173,003. CHECK-CONTROLLED APPARATUS. DODGER L. KITTRELL, Nashville, Tenn. Filed Oct. 29, 1915. Serial No. 58,686. (Cl. 194—32.)

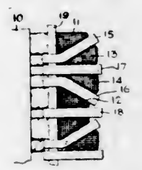


1. In check controlled apparatus, a rod capable of sliding movement and having rack teeth formed on opposite edges thereof, the teeth on one edge of the bar being arranged reversely to those on the other edge, a lever normally engaging the teeth on one edge of the bar and holding the bar against sliding movement in one direction, a pawl disposed at the opposite edge of the bar and normally out of engagement with the teeth thereon and adapted to coöperate with the adjacent rack teeth, check controlled means for moving the lever out of engagement with the teeth to permit movement of the bar in one direction and to engage the pawl with the adjacent teeth to prevent movement of the bar in the opposite direction, and means operable from said bar in the movement thereof when relieved of the influence of the lever to restore both the lever and the pawl to normal positions so that the direction of movement of the bar may be reversed.

2. In check controlled apparatus, a rod capable of sliding movement and having rack teeth formed on opposite edges thereof, the teeth on one edge of the bar being arranged reversely to those on the other edge, a lever normally engaging the teeth on one edge of the bar and holding the bar against sliding movement in one direction, a pawl disposed at the opposite edge of the bar and normally out of engagement with the teeth thereon and adapted to coöperate with the adjacent rack teeth, check controlled means for moving the lever out of engagement with the teeth to permit movement of the bar in one direction and to engage the pawl with the adjacent teeth to prevent movement of the bar in the opposite direction, means operable from said bar in the movement thereof when relieved of the influence of the lever to restore both the lever and the pawl to normal positions so that the direction of movement of the bar may be reversed, and hand operated means for sliding said bar.

3. In check controlled apparatus, a rod capable of sliding movement and having rack teeth formed on opposite edges thereof, the teeth on one edge of the bar being arranged reversely to those on the other edge, a lever normally engaging the teeth on one edge of the bar and holding the bar against sliding movement in one direction, a pawl disposed at the opposite edge of the bar and normally out of engagement with the teeth thereon and adapted to coöperate with the adjacent rack teeth, means operable under the weight of a coin to move the lever out of engagement with the adjacent teeth to permit movement of the bar in one direction and to engage the pawl with the adjacent teeth to hold the bar against movement in the reverse direction, and means operable from said bar in the movement thereof when relieved of the influence of the lever to discharge the coin from the first-mentioned means so that the lever and the pawl may be restored to normal positions and the direction of movement of the bar reversed.

1,173,004. ELECTRICAL APPARATUS. WILHELM KÖCHLING, Reinickendorf-Ost, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 22, 1915. Serial No. 29,786. (Cl. 175—356.)



1. A transformer comprising a core and a winding surrounding said core, said winding comprising layers of solid high voltage and low voltage coils of substantially triangular cross-section, the bases of the triangular cross-sections of the low voltage coils being at the interior of the winding and the bases of the triangular cross-sections of the high voltage coils, spaced therefrom, being at the exterior of the winding, providing a zigzag insulating and cooling passage betwen the coils.

2. An electrical winding comprising solid coils of substantially triangular cross-section, the apexes of the cross-sections of some of said coils extending outwardly and the apexes of adjacent coils, spaced therefrom, extending inwardly providing a zigzag insulating and cooling passage between the coils.

3. A transformer comprising a core and a winding surrounding said core and extending vertically, said winding comprising a plurality of stationary solid disk coils with adjacent faces of adjacent coils inclined to the vertical and spaced apart to form ventilating passages.

4. A transformer comprising a core and a winding surrounding and separated from said core, said winding comprising a plurality of stationary solid disk coils having faces inclined to the axis of the winding spaced apart to form ventilating passages.

5. An electrical winding comprising a plurality of solid disk coils stationary with respect to each other having faces inclined to the axis of the winding spaced apart to form ventilating passages in the winding.

[Claim 6 not printed in the Gazette.]

1,173,005. ELECTRODE. CARL R. KRUEGER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 3, 1915. Serial No. 19,064. (Cl. 176—136.)

1. A luminous arc light electrode containing magnetite, a light giving component comprising an anti-puddling titanium compound, and a complementary quantity of anti-puddling chromium compound.

2. A luminous arc light electrode containing magnetite, a light giving component comprising an anti-puddling titanium compound, a complementary quantity of anti-puddling chromium compound, and a flux.

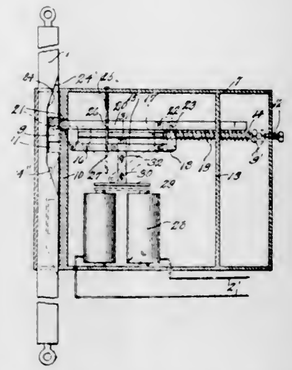
3. A luminous arc light electrode containing magnetite, rutile, a restraining titanium compound, a complementary quantity of restraining chromium compound, and a flux.

4. A luminous arc light electrode containing magnetite, rutile, an anti-puddling titanium compound, a complementary quantity of anti-puddling chromium compound, and a flux.

5. A luminous arc light electrode containing magnetite, low and high refractory titanium compounds, a chromium compound, and a flux, the parts being so proportioned that every increment of high refractory titanium compound is balanced by a decrement of chromite.

[Claims 6 and 7 not printed in the record.]

1,173,006. CONTROL-LOCKING MECHANISM. OSCAR LECY and WALTER F. FOOTE, Port Edwards, Wis. Filed Apr. 14, 1915. Serial No. 21,366. (Cl. 70—50.)



1. In a device of the class described, the combination with a movable operating member, of a locking member disposed to normally engage the operating member, means for maintaining the locking member in engaging position, releasing means for disengaging said locking member, and restoring means coöperating with the releasing means and operable upon disengaging movement of the locking member for establishing coöperation between the restoring means and the operating member, said restoring means being adapted for operation by the operating member incident to movement thereof whereby to normalize the means maintaining the locking member in engaging position.

2. In a device of the class described, the combination with an operating member, of a locking member normally projecting into engagement with the operating member, means for actuating the locking member in one direction to cause engaging action, other means for actuating the locking member in the other direction to disengage the same, restoring means operable by the first mentioned actuating means upon actuation of the locking member by the second mentioned actuating means to cause cooperation of the restoring means with the operating member aforesaid, said restoring means being operable incident to movement of the operating member whereby to cause reëngagement of the locking member, trip means for releasing the first mentioned actuating means, and a connection intermediate the trip means and the restoring means.

3. In a device of the class described, the combination with an operating member, of a locking member normally engaged therewith and preventing operation of said operating member, releasing means for disengaging said locking member, and means for restoring the locking member to engaging position, and operable by said locking member as the latter is moved into release position, said operating member holding the locking member in the operative position aforesaid until the operating member is moved to normal position.

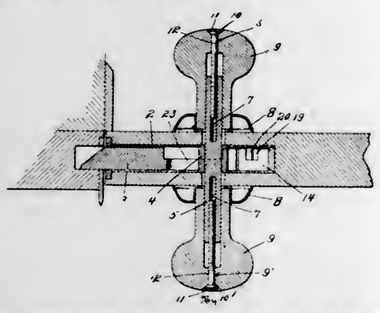
4. In a device of the class described, the combination with an operating member including a movable part con-

sisting of a notched bar formed with a cam, of a locking member normally engaged therewith and preventing operation of said operating member, a trip member for disengaging the locking member and permitting movement of the movable part, and restoring means for actuating the locking member when moved into disengaged position and tending to reëngage the movable part, said restoring means being operable by the cam aforesaid.

5. In a device of the class described, the combination with an operating member, of a locking member normally engaged therewith and preventing operation of said operating member, toggle means for holding the locking member in engaged position, trip means for releasing the toggle means to permit disengagement of the locking member from the operating member, and a transversely arranged tension means for restoring the toggle means to operative position with respect to the locking member.

[Claims 6 to 14 not printed in the Gazette.]

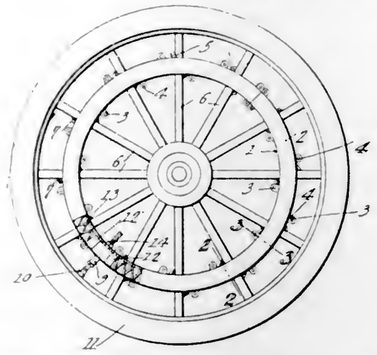
1,173,007. LOCK. EDWIN LEUSLEY, Huntsville, Mo., assignor of one-half to Porter B. Eubank, Huntsville, Mo. Filed Aug. 7, 1915. Serial No. 44,281. (Cl. 70—29.)



The combination with a lock casing having a slidable latch bolt and an actuating spring for the latch bolt, of a vertically movable loosely positioned locking member in the casing disposed normally below the tail pieces of the latch bolt, said locking member having one of its sides provided with a longitudinal channel, the inner wall of which being formed with two spaced depressions and the lower corner of the said member below the said channel having a rectangular cut-away portion, spaced pins connected with the latch casing, and disposed within the said cut-away portion of the locking member, one of said members bearing against the vertical wall provided by the cut-away portion of said locking member, a spring member having one of its ends bent and disposed between the pins and having its free end provided with a lip which is adapted to contact with the rear wall of the channel and to be received in one of the depressions therein, the said latch member having its outer face adjacent its lower corner provided with a lip and being curved inwardly from the said lip, the lip being arranged adjacent the upper wall of the key hole openings of the casing and adapted to be contacted by the bit of the key to move the same to locking position when the said bit, is rotated in one direction to arrange the corner of the curved wall into a position to be contacted by the said bit of the key when the said key is rotated in an opposite direction.

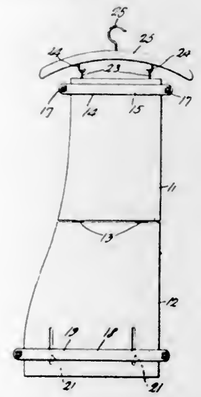
1,173,008. PRESSURE REGULATOR FOR PNEUMATIC TIRES. GEORGE D. LEWIS, Genesee, Pa. Filed Mar. 5, 1915. Serial No. 12,435. (Cl. 152—22.)

A pressure regulator for pneumatic tires embodying an annular casing, means for attaching the casing to the spokes of a wheel, a coiled wire expansion spring disposed within the casing, a pair of pistons working circumferentially within the casing and coöperating with the ends of the spring, the casing having a nipple between the pistons for attachment to the valve stem of a pneumatic tire, and the casing having a valve stem between



the pistons for injecting air through the casing and into the tire.

1,173,009. TROUSERS-STRETCHER. FRANK F. LINDSTAEDT, New Orleans, La. Filed Feb. 15, 1915. Serial No. 8,371. (Cl. 223—19.)



1. A garment support, including a relatively flat member made in two sections connected together for flexing, clamps carried by said member for connecting the article to be pressed and stretched to the flat member, and resilient means for flexing and holding flexed the flat member.

2. A garment support, including a flexing member, clamps carried thereby for holding the article to be stretched and pressed upon the flexing member, and resilient means for flexing and holding flexed the flexing member.

3. A garment support, including two flat members connected together and capable of being flexed, a trouser clamp carried by each member, one being longitudinally adjusted thereon, and resilient means for flexing and holding flexed the two members.

4. A garment support including a flexing member, clamps carried thereby for holding the article to be stretched and pressed upon a flexing member, and a longitudinally disposed yieldable connection attached to the ends of the flexing member, and substantially centrally of one end thereof, for flexing and holding flexed the flexing member.

5. A garment support, including a two sectioned collapsible holding member, a fixed trousers clamp carried thereby at one end, a longitudinally adjustable clamp also carried by the member adjacent the other end, and a resilient means attached to one end and for engagement with the other end of the holding member for flexing and holding flexed the member.

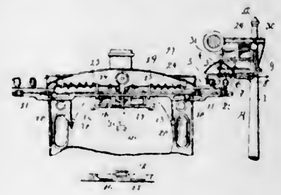
1,173,010. SPOON. ALBERT E. LYCAN, Kooskia, Idaho. Filed June 3, 1915. Serial No. 31,849. (Cl. 30—22.)



1. As an article of manufacture, a spoon provided with a handle having its opposite side edges curved downward and each edge formed with a series of teeth adapted to engage the edge of the bowl or other receptacle and thus support the spoon at different heights in a bowl or other receptacle in which it may be used.

2. The improved article of manufacture consisting of a spoon provided with a handle having its side edges curved downward and each edge having a series of hook-shaped teeth that project toward the bowl of the spoon as and for the purpose specified.

1,173,011. RAILWAY SIGNALING SYSTEM. MATHIAS MARTIN, Luxemburg, Luxemburg. Filed May 16, 1914. Serial No. 839,178. (Cl. 246—14.)



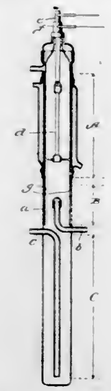
1. A signaling system for use in railway trains, comprising in combination a slidable member carried by the train, means for operating said member, a cam member mounted alongside the rail and adapted to engage said slidable member, means for varying the angle of engagement of the cam member, and means carried by said slidable member adapted to engage the cam member at any angle thereof.

2. A signaling system for use in railway trains, comprising in combination a slidable member mounted on the train, means for operating said member in either direction, a cam bar mounted alongside the rail, means for causing the bar to present a concave or convex surface to the rail, a plurality of rollers carried by the slidable member, one of said rollers being adapted to engage the bar in concave position, the other of said rollers being adapted to engage the bar in convex position, and means for causing the rollers to engage said bar.

3. Signaling system for use in railway trains comprising a slidable member on the train operable laterally in one or other direction from a central position, a movable cam mounted alongside the rail and having a convexity thereon, means for causing said convexity to face the rail or be reversed to the rail, two rollers on said sliding member each operating the slide bar in a different direction from its central position and located to engage the cam bar in different positions of same.

4. In a signaling system for railway trains, means for operating the signaling mechanism on the train comprising a rigid bar, end supporting members carrying said bar and adapted to hold the same toward the rail and means for moving said end supporting members to withdraw said cam bar from the rail in a direction lateral to the line of the rail.

1,173,012. REDUCTION OF CHLORIDS. FRIEDRICH MEYER and HANS KERSTEIN, Berlin, Germany. Filed Apr. 29, 1914. Serial No. 835,257. (Cl. 204—63.)

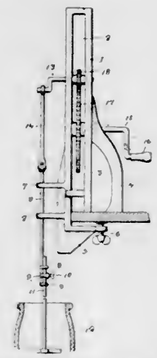


1. The process for the reduction by means of reducing gases of anhydrous chlorids yielding volatile intermediate products during the reduction, which consists in performing the reduction by using the principle of reverse currents, in such a manner, that in case there exist several stages of reduction, the products of the reduction are caused to move toward the pure reducing material, free from the starting material, substantially as described.

2. The process for reducing anhydrous volatile chlorids by means of reducing gases, which consists in effecting the reduction by using the principle of reverse currents in such a manner, that the products of the reduction travel toward the pure reducing material free from starting material, substantially as described.

3. The process of manufacturing tin, consisting in reducing dichlorid of tin in such manner that the product of reduction is caused to move toward the reducing material, the dichlorid, which, owing to the equilibrium has not been reduced, flowing back by gravity, substantially as described.

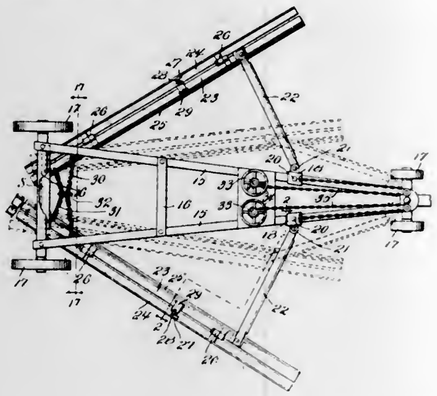
1,173,013. MECHANISM FOR CHURNS. WILLIAM JOSEPH MIMS, Ashville, Ala. Filed Jan. 28, 1914. Serial No. 815,068. (Cl. 74—14.)



A churn mechanism comprising a standard provided with an opening and having at its lower end and at one side spaced legs, said standard further having at its lower end a laterally disposed brace which is positioned opposite the space between the legs, the lower ends of the legs and the brace lying in the same plane, the standard further having at its lower end and at its other side an arm extending below the lower end of the legs and brace,

a clamping screw carried by the arm and positioned between the lower ends of the legs and brace, said standard having at its last mentioned side spaced guides, a rod slidably mounted in the guides, means carried by the rod for connecting the same with a dasher rod, a crank shaft journaled upon the standard and operatively connected with the first mentioned rod, a second crank shaft also journaled upon the standard, an intermeshing gear wheel mounted upon said shafts and located in the opening between the opposite sides of the standard, there being connections between the legs and side of the standard having the guide, said connections being located below the gear wheels and connecting the legs with the opposite side of the standard at points between the guides.

1,173,014. ROAD-WORKING MACHINE. NATHANIEL S. MONROE, Arthur, Ill. Filed Dec. 19, 1913. Serial No. 807,650. (Cl. 37—7.)



1. In a device of the class described, a scraper element comprising a scraper bar and a heel bar hingedly connected together, supporting means whereby the scraper bar is carried and supported against tilting, and means for tilting the heel bar with respect to the scraper bar to lift the latter clear of the ground and for supporting it in a raised position; said heel bar being rigid throughout so as to present an inclined plane with respect to the ground when tilted to support the scraper bar in a raised position.

2. In a device of the class described, a scraper element comprising a scraper bar and a heel bar hingedly connected together, said scraper bar and heel bar being practically coextensive, said heel bar having a flat ground engaging face constituting a trowel member, supporting means whereby the scraper bar is supported against tilting, and means for tilting the heel bar with respect to the scraper bar to lift the latter clear of the ground and for supporting it in a raised position.

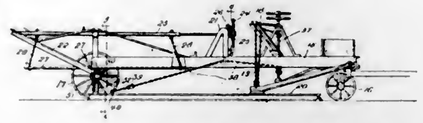
3. In a device of the class described, a scraper element comprising a scraper bar and a heel bar, substantially coextensive, said bars being hingedly connected together, and said heel bar having a flat ground engaging face constituting a trowel member, in combination with a supporting member with which the scraper bar is rigidly connected, and means for varying the angular relation between the heel bar and the scraper bar and for sustaining said bars rigidly at various adjustments whereby the scraper bar may be supported by the heel bar clear of the ground.

4. In a device of the class described, a scraper element comprising a scraper bar and a heel bar, substantially coextensive, said bars being hingedly connected together, and said heel bar having a flat ground engaging face constituting a trowel member, a supporting member with which the scraper bar is rigidly connected, and means whereby the heel bar may be rocked or tailed to lift the scraper bar clear of the ground and for sustaining the bars in such relative positions.

5. In a device of the class described, a scraper element comprising a scraper bar and a heel bar of substantially equal length hingedly connected together, said scraper bar having a ground engaging cutting blade, a tilting lever associated with the heel bar, and a dog associated with the scraper bar and adapted to engage the tilting lever to maintain the parts at various adjustments.

[Claims 6 to 9 not printed in the Gazette.]

1,173,015. ROAD-MACHINE. NATHANIEL S. MONROE, Arthur, Ill. Filed May 14, 1914. Serial No. 838,491. (Cl. 37—7.)



1. In a machine of the class described, a carrying frame, scraper bars swingingly supported adjacent to one end, a track bar, means for supporting and for effecting vertical adjustment of the track bar, and a carrier connected with the scraper bars and traveling on the tracker bar.

2. A wheel supported carrying frame, scraper bars swingingly supported adjacent to one end, a track bar, means including a drum shaft for supporting and effecting vertical adjustment of the track bar, and a carrier connected with the scraper bars and traveling on the track bar.

3. A machine of the class described including a wheel supported carrying frame, a pair of scraper bars, means for independently supporting and effecting vertical adjustment of the forward ends of the scraper bars, and means including a vertically adjustable track bar, a carrier traveling thereon and connecting means between the carrier and the scraper bars for effecting vertical adjustment of the rearward ends of the scraper bars.

4. In a machine of the class described, a wheel supported carrying frame, a pair of scraper bars, means for independently and adjustably supporting the forward ends of the scraper bars, a track bar, means including a drum shaft for supporting and effecting vertical adjustment of the track bar, and means including a carrier traveling on the track bar for supporting the rearward ends of the scraper bars.

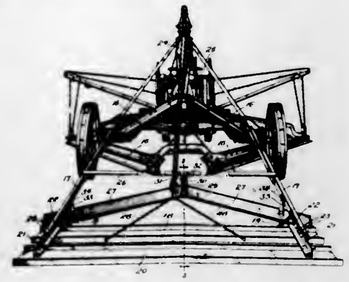
5. In a machine of the class described, a wheel supported carrying frame, a pair of scraper bars, means for independently and adjustably supporting the forward ends of the scraper bars, means including a vertically adjustable track bar, a carrier traveling thereon and connecting means between the carrier and the scraper bars for supporting the rearward ends of the scraper bars, links connecting the forward ends of the scraper bars with the carrying frame, and means for positively moving the supported scraper bars in a forward direction when raised from the ground.

[Claim 6 not printed in the Gazette.]

1,173,016. ROAD-WORKING MACHINE. NATHANIEL S. MONROE, ANDREW J. MONROE, and GEORGE W. MONROE, Arthur, Ill. Filed June 16, 1915. Serial No. 34,379. (Cl. 37—5.)

1. In a road machine, a wheel supported frame, rearwardly convergent scrapers supported thereby, said scrapers being connected and spaced apart for the passage of dirt therebetween, a troweling device comprising rigid side bars pivotally connected with the sides of the frame and extending therefrom and a troweling bar rigidly mounted on said side bars, and a spreader flexibly connected with the troweling device and supported in the path of dirt issuing between the scrapers to redistribute the same over the surface of the road.

2. In a road machine, a wheel supported frame, rearwardly convergent scrapers supported thereby, said scrapers being connected and spaced apart for the passage of dirt therebetween, a troweling device comprising rigid side bars pivotally connected with the sides of the frame and extending therefrom and a troweling bar rigidly mounted on said side bars, and a V-shaped spreader flexibly connected with the troweling device and supported in the path of dirt issuing between the scrapers to redistribute the same over the surface of the road.



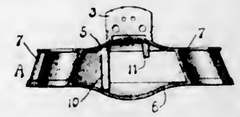
3. The combination with a road machine having rearwardly convergent scrapers and a wheeled carrying frame, of a troweling device comprising rigid side bars pivotally connected with the sides of the frame, and a troweling bar fixedly secured on said side bars, a cross bar connecting said side bars, and a V-shaped spreader connected with said cross bar.

4. The combination with a road machine having rearwardly convergent scrapers and a wheeled carrying frame, of a troweling device comprising rigid side bars pivotally connected with the sides of the frame, and a troweling bar fixedly secured on said side bars, a cross bar connecting said side bars, and a V-shaped spreader having its nose connected with said cross bar for vertical adjustment with respect thereto.

5. The combination with a road machine having rearwardly converging scrapers and a wheeled carrying frame, of a troweling device comprising rigid side bars pivotally connected with the sides of the frame, and a troweling bar fixedly secured on said side bars, a cross bar connecting said side bars, and a V-shaped spreader having its nose connected with said cross bar for vertical adjustment with respect thereto, the wings of said spreader being pivotally connected with the side bars of the troweling device.

[Claims 6 to 9 not printed in the Gazette.]

1,173,017. STRINGED MUSICAL INSTRUMENT. ABRAHAM MORRIS, St. Louis, Mo. Filed Aug. 30, 1915. Serial No. 47,972. (Cl. 84—44.)

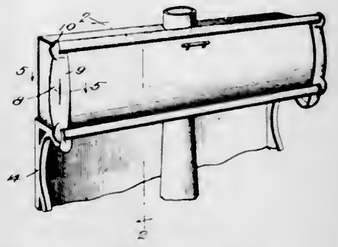


1. In a stringed musical instrument, a hollow body having a belly, a back of larger area than said belly, and side walls uniting said back and belly.

2. A stringed musical instrument comprising a hollow body having a belly, a back of larger area than said belly, the marginal portions of said back being extended beyond the marginal edge of said belly, and side walls sloping outwardly from the marginal edge of said belly to the marginal edge of said back, and strings and string holders secured to said belly.

3. A stringed musical instrument of the character described comprising a belly member, a neck extending from said belly member, strings secured over said neck and belly member, a back member conforming approximately to the shape of said belly member, said back member being larger in area than the belly member, and side walls sloping outwardly from the outer edge of said belly member to the outer edge of said back member.

1,173,018. CLOSET-DOOR FOR STOVES. ANTON OHNEMUS, Quincy, Ill., assignor to Excelsior Stove & Mfg. Co., Quincy, Ill., a Corporation of Illinois. Filed May 11, 1915. Serial No. 27,352. (Cl. 126—190.)



1. A stove closet door comprising a substantially flat base plate having its upper and lower edges outwardly rolled, a front plate of concavo-convex formation transversely, said front plate adapted to be engaged at its upper and lower edges between said base plate and the rolled edges thereof, and end caps adapted to overhang the ends of the base plate and being provided each with a flange overhanging one end of the front plate, said caps being further provided with ears overhanging the ends of the rolled edges of the base plate, one ear of each cap being provided with a recess for receiving a pivot pin upon which the door is adapted to be swung.

2. A stove closet door including a base plate having rolled edges, and a front plate of substantially concavo-convex formation transversely, said front plate having plain edges engaged between said base plate and the rolled edges thereof.

1,173,019. METHOD OF EXTERMINATING GRASSES, WEEDS, OR PLANTS. INGOMAR F. ORTON, Galveston, Tex. Filed Dec. 27, 1913. Serial No. 809,101. (Cl. 167—6.)

The herein described process of destroying vegetation, which comprises applying to said vegetation, arsenic pentoxid in the form of a concentrated solution.

1,173,020. CHECK-PROTECTOR. MARSHALL H. PAGE, San Francisco, Cal., assignor to Page Check Protector Company, San Francisco, Cal., a Corporation of California. Filed Dec. 12, 1912, Serial No. 736,349. Renewed Nov. 4, 1915. Serial No. 59,697. (Cl. 101—57.)



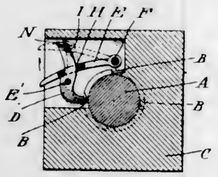
1. In a check protector, a plate carrying an inking pad, a plate thereover with openings therein to form a series of characters, a plate having radiating spring arms and pins to correspond with said openings, and a spring stripper plate having a continuous flange surrounding all of the pin arms, and permitting any one of said arms to be moved out of alinement with the remaining arms, substantially as described.

2. In a check protector, a plate carrying an inking pad, a die plate thereover having openings to form characters, a spring stripper plate having a plurality of arms,

an integral flange connecting said arms with each other, while permitting any one of said arms to be moved out of alinement with the remaining arms, and a plate having a plurality of radiating spring arms and carrying pins to correspond with the openings in the stripper plate and die plate, substantially as described.

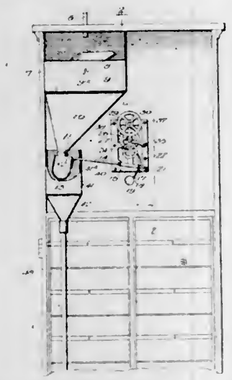
3. In a check protector, a flanged plate carrying an inking pad, a die plate over said inking pad and provided with a peripheral flange extending into the ink pad plate and surrounding the ink pad to form a support and maintain the plate in flat condition, a spring stripper plate having a plurality of arms with holes therein to correspond with the holes in the die plate, and a plate having a plurality of radiating spring arms with pins projecting therefrom to correspond with the openings in the stripper plate, substantially as described.

1,173,021. NUT-LOCK. ALFRED MILTON PARKS, Mapleton Depot, Pa. Filed Apr. 30, 1915. Serial No. 25,038. (Cl. 151—12.)



A nut lock comprising, in combination with a bolt with threads and having transverse grooves therein and a chamber nut fitted to the bolt, a pawl pivoted within the chamber of the nut and adapted to engage the grooves and provided with a curved shank portion terminating at its outer end at an angle, slightly inclined to the length of the pawl, a lever pivoted within said chamber and having a slot therein for the reception of the curved portion of the pawl, the ends of the slot adapted to actuate the pawl as the lever is swung upon its pivot, the end of the lever projecting outside the chamber of the nut, said angled end of the pawl limiting the movement of the lever in one direction.

1,173,022. RAIN-GAGE. BENJAMIN G. PATTERSON, Oklahoma, Okla. Filed June 7, 1915. Serial No. 32,549. (Cl. 73—178.)



1. In an automatic measuring device of the character described, the combination of an oscillatory receiving and measuring vessel freely mounted to tilt under the weight of fluid received thereby, a registering device independent of said vessel, a funnel in which said vessel is mounted, a lever for actuating the said registering device having an apertured cup disposed beneath the said funnel, and a waste funnel in which the said cup is housed and into which the lower portion of the first named funnel extends, said waste funnel having a slot in which the said lever works.

2. In an automatic measuring device of the character described, the combination of an oscillatory measuring vessel freely mounted to tilt under the weight of fluid received thereby, a registering device independent of said vessel, and an actuating member for the registering device including a swinging arm having a counterweight at one end and a fluid receiving cup at its opposite end, located beneath the said measuring vessel to receive fluid discharged therefrom, and having a relativaly small opening constituting a leak port for the gradual outflow of the fluid so received.

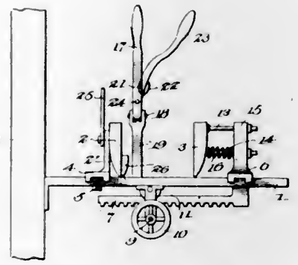
3. In an automatic measuring device of the character described, the combination of an oscillatory receiving and measuring vessel freely mounted to tilt under the weight of fluid received thereby, a registering device independent of said vessel, and a member operatively connected to the said registering device and actuated by each fluid discharge from the said measuring vessel, said member including an apertured cup disposed beneath said vessel to receive the discharge of fluid therefrom.

4. In an automatic measuring device of the character described, the combination of an oscillatory measuring vessel freely mounted to tilt under the weight of fluid received thereby, a registering device independent of said vessel, and a member operatively connected to the said registering device and actuated by each fluid discharge from the said measuring vessel.

5. An automatic measuring device of the character described, including external supply and waste pipes, the former being adapted to lead through the roof of a building in which the said device is mounted, a plate to which the upper end of the said supply pipe is connected, and a rain receiving receptacle supported by the said plate.

[Claim 6 not printed in the Gazette.]

1,173,023. OYSTER-OPENER. JOHN B. PAYNE, Denver, Colo. Filed Feb. 10, 1915. Serial No. 7,403. (Cl. 17—31.)

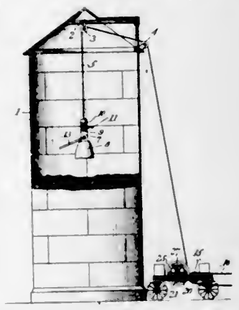


1. In a device of the class specified, the combination of a stand, a substantially horizontal arm having a fixed relation thereto and projecting therefrom, a pair of clamping jaws mounted on said arm, one of said jaws being stationary, a runner slidable lengthwise of said arm and having the other jaw attached thereto, means for sliding said runner and the jaw carried thereby, a post extending upward from said arm, a hand lever having a pivotal mounting on said post, an opening blade carried by said lever, a spreading hand lever pivotally attached to and carried by the first named hand lever, and a second blade on the spreading lever.

2. In a device of the class specified, the combination of a stand, a substantially horizontal arm having a fixed relation thereto and projecting therefrom, a pair of clamping jaws mounted on said arm, one of said jaws being stationary, a runner slidable lengthwise of said arm and having the other jaw attached thereto, means for sliding said runner and the jaw carried thereby, a post extending upward from said arm and having a pivotal connection with said arm, a hand lever having a pivotal mounting on said post, an opening blade carried by said lever, a spreading hand lever pivotally attached to and carried by the first named hand lever, a second blade on the spreading lever, and a backing spring arranged behind the movable jaw to permit the latter to yield as the shell is forced open.

3. In a device of the class specified, the combination of an oyster support, a pivotally mounted hand lever, an oyster opening blade carried by and having a fixed relation to said lever, a spreading hand lever pivotally attached to and carried by the first named lever, and a second blade having a fixed relation to said spreading lever, the spreading lever being arranged to swing in a plane parallel to the first named lever.

1,173,024. APPARATUS FOR PACKING ENSILAGE IN SILOS. ROSCO PAYNE, Macedonia, Ill. Filed June 22, 1915. Serial No. 35,654. (Cl. 100—57.)



1. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a hook pivoted upon said oscillating wheel and in the path of said roller, fixed means for throwing said hook out of the path of said roller, and means for applying the brake to said oscillating wheel.

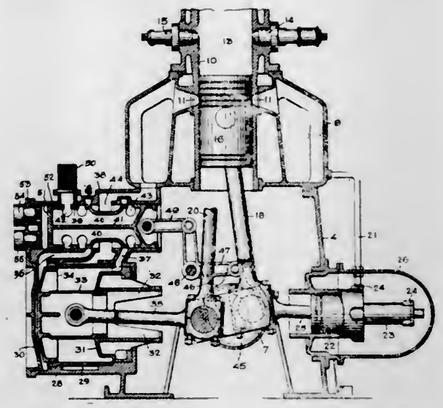
2. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, a fixed cam in the path of said hook and adapted to throw the same out of the path of said roller, and brake mechanism for limiting the movement of the oscillating wheel in one direction.

3. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, and brake mechanism for limiting the movement of the oscillating wheel in one direction.

4. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, inclined lugs projecting from the opposite edges of the rim of the oscillating wheel, spring-pressed brake members mounted upon the frame and against which said inclined lugs are adapted to contact.

5. An apparatus for packing ensilage in silos, comprising a frame, pulleys thereon, a tamping member, a rope secured thereto and passing about said pulleys, a driven shaft, a wheel fixed thereto, a roller pivotally mounted upon said wheel, an oscillating wheel upon said shaft and about which said rope is adapted to wind, a brake, a spring-pressed hook pivotally mounted upon the oscillating wheel and normally in the path of said roller, an anti-friction wheel mounted upon the free end of the hook, a fixed cam in the path of the anti-friction wheel, adapted to throw the hook out of the path of said roller, inclined lugs projecting from the opposite edges of the rim of the oscillating wheel, two members pivotally mounted upon the frame, having recesses in their inner edges, a bolt passing through said member, a spring upon the bolt adapted to normally hold the members in the paths of said inclined lugs.

1,173,025. INTERNAL-COMBUSTION ENGINE AND COMPRESSOR THEREFOR. OTTO F. PERSSON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Aug. 4, 1913. Serial No. 782,776. (Cl. 123—51.)



1. In an engine, the combination of a working cylinder, piston means therefor, a main crank shaft, separate and horizontally disposed air compressing means located on opposite sides of the shaft and in the same plane, one of said means supplying high pressure air for injecting fuel and the other low pressure air for scavenging the cylinder, driving connections between said means and the crank shaft, a valve for one of said compressing means, and a means driven by the shaft for actuating the valve.

2. In an engine, the combination of a working cylinder, oppositely moving pistons therefor, a horizontally disposed air compressing means for injecting fuel into the cylinder, a horizontally disposed air compressing means in alinement with the first below the cylinder and on the opposite side of the engine for supplying air to scavenge the cylinder, a main crank shaft, one of said cranks being connected to the inner piston and to one of the compressing means, another being connected to the outer piston and to the other compressing means, and valves for said compressing means.

3. In an engine, the combination of a working cylinder, oppositely moving pistons therefor, a horizontally disposed air compressing means for injecting fuel into the

cylinder, a horizontally disposed air compressing means in alinement with the first below the cylinder and on the opposite side of the engine for supplying air to scavenge the cylinder, a main crank shaft, one of said cranks being connected to the inner piston and to one of the compressing means, another being connected to the outer piston and to the other compressing means, valves for controlling the compressing means, and a driving connection between one of the valves and shaft for actuating it.

4. In an engine, the combination of a working cylinder, a piston therefor, a pair of air compressing means located on opposite sides of the engine and below the cylinder, a main shaft having three cranks, two of which are in line, a rod connecting the piston with one of the cranks, a rod connecting the same crank with one of the compressing means, and a forked rod for connecting the other compressing means with the remaining cranks.

5. In an engine, the combination of a working cylinder, a piston therefor, a pair of air compressing means located on opposite sides of the engine and below the cylinder, a main shaft having three cranks, two of which are in line, a rod connecting the piston with one of the cranks, a rod connecting the same crank with one of the compressing means, a forked rod for connecting the other compressing means with the remaining cranks, a valve for one of the compressing means, and a means driven by the crank shaft for actuating the valve.

[Claims 6 to 14 not printed in the Gazette.]

1,173,026. BOX-STRAP TIGHTENER. CHARLES H. PETERMANN, Natalbany, La. Filed Oct. 21, 1915. Serial No. 57,124. (Cl. 81—3.)



1. A strap tightener consisting of a handle bar and an arm at the end thereof and at right angles thereto, the extremity of the said arm being provided with longitudinal diametrical slots lying in planes at right angles to each other, one of the said slots lying in substantially the same plane as the handle bar and being of a width adapted to receive a box strap, and the other slot being adapted to receive a holding nail and of approximately one half the length of the first mentioned slot whereby the base of the second slot will operate as a gage to center the holding nail between the edges of the strap to be secured.

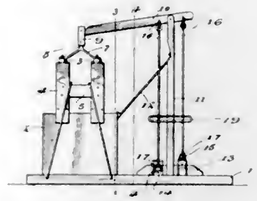
2. A strap tightener consisting of a handle bar and an arm at the end thereof and at right angles thereto, the extremity of the said arm being provided with means for engaging a box strap in such a manner that a revolution of the same will overlap portions of the strap, the said arm being also adapted to receive a fastening device to be driven through the said overlapped portions.

3. A device of the character specified comprising a bar provided at its extremity with longitudinal diametrical slots lying in planes at right angles to each other, one of the said slots being of a width adapted to receive a box strap, and the other slot being adapted to receive a holding nail and of approximately one half the length of the first mentioned slot whereby the base of the second slot will operate as a gage to center the holding nail between the edges of the strap to be secured.

4. A device of the character specified comprising a bar provided with means for engaging a box strap in such a manner that a revolution of the same will overlap portions of the strap, the said arm being also adapted to receive a fastening device to be driven through the said overlapped portions.

5. A device of the character specified comprising a bar having slots in the end thereof at right angles to each other, the said slots being adapted to receive a box strap and a fastening nail respectively as and for the purpose specified.

1,173,027. WASHING-MACHINE. MARSHALL PHILLIPS, Silver Creek, Ga. Filed Nov. 17, 1914. Serial No. 872,610. (Cl. 68—19.)



In a washing machine, a base, a tank mounted on said base, inverted U-shaped brackets having the extremities thereof secured to the upper edge of said tank, bridge pieces connecting said brackets, plungers extending through each of said brackets and disposed within said tank, suction cups mounted on the lower end of said plunger, a spider like head connected to the upper end of said plungers, a stud formed on said head, a link having one end thereof pivotally connected to said stud, a standard upstanding from said base, a lever fulcrumed on the upper end of said standard and having one end thereof pivotally connected to said link, and means for rocking said lever whereby the cups will be reciprocated within said tank.

1,173,028. METALLIC STRENGTHENING AND FINISHING BINDING. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Jan. 27, 1912. Serial No. 673,882. (Cl. 89—88.)



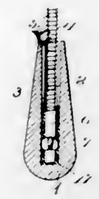
1. The combination with a sheet of metal having a bent edge arranged at an obtuse angle thereto, of a binding having a body portion engaging the face of the sheet and having an overlapping doubled portion at right angles to the body portion, and the space between the overlapping portion being considerably greater than the thickness of the bent edge of the binding, whereby the bent edge of the sheet frictionally engages the inner faces of the doubled portion of the binding and frictionally holds the binding to the sheet.

2. The combination with a sheet of metal having a margin arranged at an angle thereto, of a binding having a body portion engaging the face of said sheet and having a doubled portion overlapping said margin, said doubled portion arranged at an angle to the body portion less than the angle between the said sheet, and said margin, whereby the margin of the sheet frictionally engages the inner face of the doubled portion of the binding, and frictionally holds the binding to the sheet.

1,173,029. METHOD OF MAKING HANDLES. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 11, 1914. Serial No. 844,543. (Cl. 22—202.)

1. The herein described method of forming a handle consisting in first placing a soft metal in a recess in the body portion of the handle, second heating the handle to melt the soft metal and forcing an attaching member into the molten metal and holding it therein until the metal hardens.

2. The herein described method of forming a handle consisting in first placing a soft metal billet in the lower end of a recess in the body portion of the handle, heating the handle to melt the billet, forcing an attaching member having outwardly extending enlargements into the molten metal and holding it therein until the metal hardens.



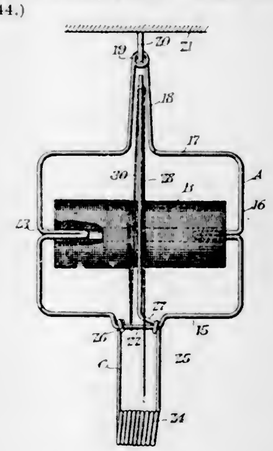
3. The herein described method of forming a handle consisting in placing a soft metal billet in an elongated recess in the end of the body portion of the handle, heating the handle and melting the billet, forcing an attaching member in the recess into the molten metal and forcing the metal upwardly around the attaching member and holding it therein until the metal hardens.

4. The herein described method of forming a handle, consisting in first placing a soft metal billet in the lower end of a recess in the body-portion of the handle, placing the attaching member in the handle and resting upon the billet, heating the handle to melt the billet and forcing the attaching member into the soft metal and holding it therein until the metal hardens.

5. The herein described method of forming a handle, consisting in placing a soft metal billet in an elongated recess in the end of the body-portion of the handle, placing an attaching member in the recess and resting it upon the billet, heating the handle and melting the billet and forcing the attaching member down into the molten metal and forcing the molten metal upwardly around the attaching member, and the size of the billet being such as to cause the molten metal to rise to a predetermined point.

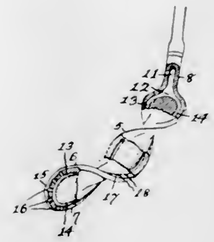
[Claims 6 to 8 not printed in the Gazette.]

1,173,030. TWINE-HOLDER. GIFFORD L. POTTS, Elkton, Md. Filed May 5, 1915. Serial No. 26,112. (Cl. 242—144.)



In a twine holding device, a substantially rectangular frame formed of wire and having a bottom member provided with a downwardly offset portion, in combination with a twine guide pivoted on said offset portion, said guide comprising an approximately U-shaped yoke having a bridge piece formed of a spiral coil, limbs provided with eyes engaging the offset portion of the frame, and an arm extending from one of the limbs and having a terminal eye.

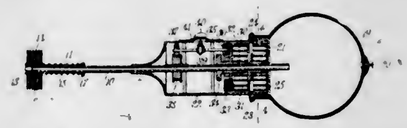
1,173,031. SYRINGE. JAMES H. PRUITT, Fort Myers, Fla. Filed Nov. 27, 1915. Serial No. 63,748. (Cl. 128—25.)



1. A syringe of the class described, comprising a ribbon like body member spirally formed around a longitudinal axis and a tubular member at the inner end, said tubular member being provided with a bore branched within said body member to provide passages along the edges of said body member joined at the outer end thereof, said body member being provided with perforations at the outer end tapping said passages.

2. A syringe of the class described, comprising a ribbon like body member spirally formed around a longitudinal axis and a tubular member at its inner end provided with a bore branched within said body member to provide passages along the edges of said body member and joined at the outer end thereof, said body member edges having a lip formed on each side thereof, and said body member being provided with perforations at the outer end thereof and with perforations along the edges thereof beneath each lip tapping the respective passages.

1,173,032. TOOTH-BRUSH. HERMANN REICHE, Millstone, N. J. Filed July 28, 1910. Serial No. 574,269. (Cl. 15—39.)



1. A tooth brush formed of a plurality of indented elastic layers, and layers composed of a dentifrice adapted to be applied by said elastic layers.

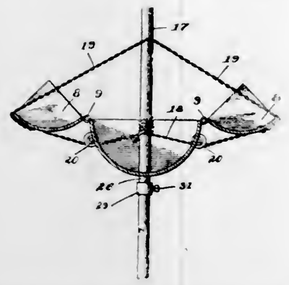
2. A tooth brush formed of a plurality of layers, alternate layers consisting of a dentifrice and the remaining layers consisting of elastic material and indented to form the brush proper.

3. A tooth brush comprising a plurality of resilient, disk-like members; a plurality of layers of dentifrice disposed between said members; and means for clamping said members upon said dentifrice for retaining the same.

1,173,033. MUD AND SCALE COLLECTOR. IRVIN M. RHOADES, Racine, Ohio. Filed Sept. 24, 1915. Serial No. 52,523. (Cl. 122—381.)

1. A collector of the class described for use in a boiler and comprising a body and a skimming element pivotally connected thereto at one side and adapted to be extended from the body or to be closed over the same and used as a cover therefor, and means to arrange said skimming element in open or closed position.

2. A collector of the class described, for use in a boiler, and comprising a body open at its upper side and a skimming element extending from one side of the body.



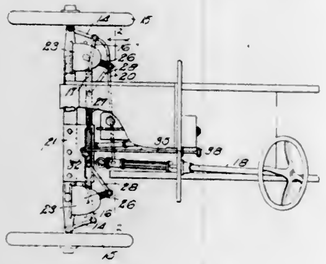
3. A collector of the class described for use in a boiler, and comprising a body and a skimming element pivotally connected thereto at one side and adapted to be extended from the body, or to be closed over the same and used as a cover therefor.

4. A boiler, a collector therein, a pipe leading to the collector, a feed water pipe, an exhaust pipe, both coupled to the first named pipe, and a valve to put the first named pipe in communication with either the feed water pipe or the exhaust pipe.

5. A boiler, a plurality of collectors therein and each comprising a body and covering means therefor adapted to be arranged in open or closed position, and common operating means for the covering means of the collector.

[Claim 6 not printed in the Gazette.]

1,173,034. MOTOR-VEHICLE STEERING MECHANISM. GEORGE WASHINGTON RICE, Manistique, Mich., assignor of one-half to Edward W. Miller, Manistique, Mich. Filed Nov. 18, 1915. Serial No. 62,127. (Cl. 240—62.)



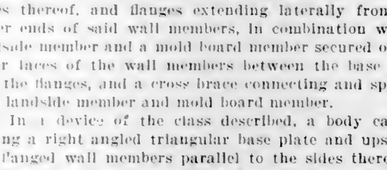
1. A mechanism as characterized, comprising a plurality of tie rods, one operatively connected with a wheel-steering mechanism, and the other operatively connected with a lamp-steering mechanism, said rods being held in superposed relation; means for operatively engaging and disengaging said rods; and a guide plate fixedly mounted on the vehicle structure and providing a guide slot for said rods.

2. A mechanism as characterized, comprising a plurality of tie rods, one operatively connected with a wheel-steering mechanism, and the other operatively connected with a lamp-steering mechanism, said rods being held in superposed relation; a guide plate fixedly mounted on the vehicle structure and providing a guide slot for said rods; means for operatively engaging and disengaging said rods; and a latch arm mounted on the rod connected with the lamp-steering mechanism adapted to engage said plate to be held in fixed relation thereby.

3. A mechanism as characterized, comprising a plurality of superposed connecting rods, one of said rods being incorporated in the wheel-steering mechanism of a vehicle, and the other of said rods being incorporated in the lamp-steering mechanism of the vehicle, both of said rods being provided with edge-opening slots, said slots being disposed to register; a supporting guide plate for said rods, said plate being fixedly mounted on the frame of the vehicle and having a slot therein arranged to register with the slots in said rods when said wheels and lamps are in parallel relation with the center of said vehicle; a latch arm pivotally mounted on the rod incorporated in the lamp-steering mechanism having a pin for engaging all of said slots; and means for selectively disposing said arm for engaging certain of said slots.

4. A mechanism as characterized, comprising a plurality of superposed connecting rods, one of said rods being incorporated in the wheel-steering mechanism of a vehicle, and the other of said rods being incorporated in the lamp-steering mechanism of the vehicle, both of said rods being provided with edge-opening slots, said slots being disposed to register; a supporting guide plate for said rods, said plate being fixedly mounted on the frame of the vehicle and having a slot therein arranged to register with the slots in said rods when said wheels and lamps are in parallel relation with the center of said vehicle; a latch arm pivotally mounted on the rod incorporated in the lamp-steering mechanism having a pin for engaging all of said slots; and a manually operable thrust bar for shifting said latch arm, said bar having a handle adjacent the driving station in said vehicle.

1,173,035. DIGGING AND DITCH-CLEANING DEVICE. EDWIN N. RICH, Santa Fe, N. Mex. Filed May 21, 1915. Serial No. 29,607. (Cl. 97—32.)



1. A device of the class described comprising a body casting including a triangular base plate, convergent wall members rising therefrom in spaced relation to the side edges thereof, and flanges extending laterally from the upper ends of said wall members, in combination with a landside member and a mold board member secured on the outer faces of the wall members between the base plate and the flanges, and a cross brace connecting and spacing said landside member and mold board member.

2. In a device of the class described, a body casting having a right angled triangular base plate and upstanding flanged wall members parallel to the sides thereof, a landside member and a mold board member secured to the wall members between the base plate and the flanges, a cross brace spacing and connecting the landside member and the mold board member, and obliquely disposed foot boards mounted on the inner face of the landside member adjacent to the upper edge thereof, said foot boards being adapted to lie in an approximately horizontal plane when the implement is tilted to operative position.

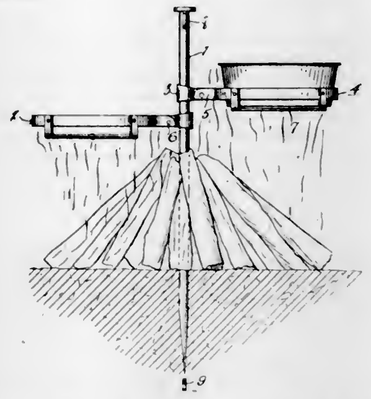
3. In an implement of the class described, a body casting having forwardly convergent wall members and a forwardly extending bracket, a landside member and a mold board member secured to the wall members, and an obliquely disposed wing depending from the bracket of the body casting and lying adjacent to the outer face of the mold board member.

4. A ditching plow embodying a landside member and a mold board member, a cross brace spacing and connecting said members, a casting constituting a brace connecting the cross brace with the mold board, obliquely disposed foot boards mounted on the inner face of the landside member adjacent to the upper edge thereof, said foot boards being adapted to lie in an approximately horizontal plane when the implement is tilted to operative position, and a gage wheel carried by the casting to engage one side of a ditch when the implement is thus tilted.

5. In a device of the class described, a body casting having rearwardly divergent wall members, a base plate from which said wall members rise, flanges extending laterally from the upper ends of the wall members, and a forwardly extending bracket, a landside member and a mold board member secured to the outer faces of the wall members intermediate the base plate and the flanges, a lug depending from the forwardly extending bracket and engaging the outer face of the mold board member, and means for connecting and bracing the landside and mold board members.

[Claim 6 not printed in the Gazette.]

1,173,036. CAMP-STOVE. VENCENT B. ROBIDOUX, Slater, Colo. Filed Jan. 22, 1915. Serial No. 3,811. (Cl. 126—30.)

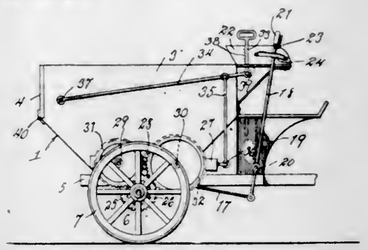


1. In a camp stove, the combination with a standard, of a plurality of independent slides arranged thereon, each of said slides being formed of a continuous strip, said strip extending around said standard and forming an outstanding ear, said strip being enlarged intermediate the ends thereof, pan receiving means, said pan holding means comprising a circular strip bent to form relatively parallel ears, a portion of said second mentioned ears being rounded, to allow said pan receiving means to be folded to assume a position relatively parallel to said standard, substantially as described.

2. In a camp stove, the combination with a standard, provided with stationary arms adjacent its upper end, of a plurality of independent slide structures arranged thereon, each of said slide structures being formed of a single strip of material, said strip extending about the standard, its end portions forming an outstanding ear, said strip being enlarged intermediate its ends relative to its horizontal axis, pan receiving means, said pan receiving means comprising a circular strip bent to form relatively parallel spaced apart ears, said second mentioned ears being pivotally connected to said first mentioned ear, one corner of said second mentioned ears being rounded to allow said pan receiving means to be folded upwardly to assume a position in parallelism with said standard, the inner ends of said second mentioned ears engaging said slide for supporting said pan receiving means in a horizontal position, and transverse supporting members secured to said pan receiving means for the purpose specified.

1,173,037. MANURE-SPREADER. CLAUDE E. ROOT, Cambridge Springs, Pa. Filed July 29, 1914. Serial No. 853,836. (Cl. 111—34.)

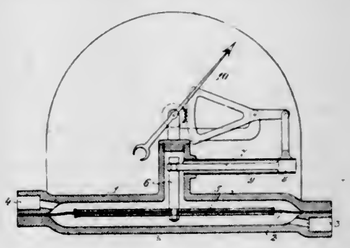
1. A device of the class described comprising a body, a frame for supporting said body, an axle beneath said frame, ground wheels carried by said axle, a gear carried by one of said ground wheels, a gear carried by said axle, a distributing member carried by said axle and adapted for rotation with the latter, said body being provided with an opening above the distributing member, and means for transmitting rotary motion from the gear carried by one of the ground wheels to the gear carried by the axle.



2. A device of the class described comprising a frame, a body carried by said frame and having an open portion, an axle beneath said frame, a distributing member carried by said axle and projecting into the open portion of the body, a gear wheel carried by said axle, ground wheels loosely mounted upon said axle, a gear wheel carried by one of said ground wheels, a rock arm, means for pivotally mounting said rock arm upon said body, spaced transmission gears carried by said rock arm on opposite sides of the pivot point of said rock arm, and means for operating the rock arm to bring the transmission gears thereof into engagement with the gears carried by the axle and ground wheel to cause rotation of said axle and distributing member.

3. A device of the class described comprising a body, a frame beneath said body, an axle mounted beneath said frame, ground wheels loosely mounted upon said axle, a runner secured beneath one of said ground wheels, a second runner secured beneath the body, said second runner being spaced from the second ground wheel, a distributing member carried by said axle, said body having an outlet opening above said distributing member, means for rotating the second ground wheel, and operative connections between the second ground wheel and the axle, whereby said axle and distributing member will be rotated upon rotation of the second ground wheel.

1,173,038. APPARATUS FOR MEASURING, INDICATING, AND REGISTERING DIFFERENCES OF PRESSURE. OTTO ROSCHANEK, Vienna, Austria-Hungary. Filed Apr. 17, 1914. Serial No. 832,614. (Cl. 73—110.)



1. A pressure indicating device comprising a casing, a diaphragm within the casing and having its edges rigidly mounted in the side walls of the casing, the said casing having inlets communicating with opposite sides of the diaphragm, a flexible member, an indicating device connected to the flexible member, a lever connecting the flexible member and the diaphragm, the said flexible member arranged to flex at an angle to its connection with the lever.

2. A pressure indicating device comprising a casing, a diaphragm within the casing and having its edges rigidly mounted in the side walls of the casing, the casing having inlets communicating with opposite sides of the diaphragm, a rod carried by the center of the diaphragm, an indicating device, a flexible tube mounted in the cas-

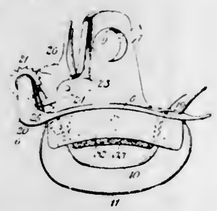
ing, a lever within the tube and connected to the said rod, the said lever within the tube having its outer end connected to the indicating device.

3. A pressure indicating device comprising a casing, a diaphragm within the casing and having its edges rigidly mounted in the side walls of the casing, the casing having inlets communicating with opposite sides of the diaphragm, a rod carried by the diaphragm, an indicating device, a flexible tube mounted in the casing, a lever within the tube and connected to the said rod, the said lever within the tube having its outer end connected to the indicating device.

4. A pressure indicating device comprising a casing, a diaphragm within the casing, the said casing having inlets on opposite sides of the diaphragm, a flexible tube mounted in the casing, members connecting the diaphragm and the flexible tube, whereby the movement of the diaphragm bends the tube, an indicating device, and means connecting the outer end of the flexible tube and the indicating device.

5. A pressure indicating device comprising a casing, a diaphragm within the casing and having its edges rigidly mounted in the side walls of the casing, the said casing having inlets communicating with opposite sides of the diaphragm, a flexible member, an indicating device connected to the flexible member, a lever connecting the flexible member and the diaphragm, the said flexible member and the diaphragm arranged parallel to each other, and the connecting lever arranged at right angles to both diaphragm and flexible member.

1,173,039. MASSAGE APPARATUS. JOHN SABATINO, New York, N. Y. Filed Dec. 31, 1913. Serial No. 809,669. (Cl. 128—16.)



1. In an apparatus of the character described, a base, a bracket projecting from said base for connecting the base with a vibrator, said base being formed with pairs of spaced apertures, each pair of said apertures being on opposite sides thereof, and directly opposite each other, said base being also provided with ears adjacent certain of said apertures for acting as fulcrums, a tape extending through each pair of apertures for clamping a hand to said base, means for connecting one end of each of said tapes to said base, said means overlapping said fulcrumed extensions, whereby the tapes may be properly pulled for fitting the hand, and adjustable means for adjustably connecting the ends of said tapes to said base.

2. In an apparatus of the character described, a holding device for a vibrator comprising a base, means for connecting said base with the vibrator, a pair of straps or tapes independently and adjustably connected with said base from one side, a rotatable shaft connecting said straps on the opposite side of said base, a ratchet wheel connected with said shaft, a spring pressed pawl acting on said ratchet wheel for preventing a reverse rotation thereof, whereby said straps may be independently adjusted on one side of said base, and simultaneously adjusted on the opposite side of said base, and a brake associated with said pawl adapted to engage said ratchet wheel for breaking the motion thereof when the pawl releases said rachet wheel.

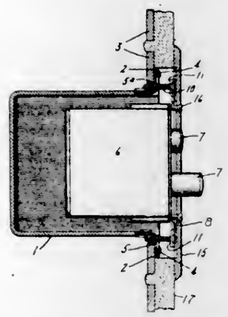
3. In an apparatus of the character described, a base, a bracket projecting from said base for connecting said base with a vibrator, said base being formed with a pair of apertures on opposite sides thereof, said apertures being in alinement, a tape extending through each pair of apertures for clamping a hand to said base, means for connecting one end of each of said tapes to said base, and adjustable means for adjustably connecting the opposite ends of said tapes to said base.

4. In an apparatus of the character described, a holding device for a vibrator comprising a base, means for connecting said base with a vibrator, cushioning means arranged on one side of said base, a pair of straps for clamping a hand against said cushioning means, means arranged on one side of said base engaging said straps for connecting the straps to said base, and a rotatable shaft connected with said straps at the opposite side of said base for simultaneously moving said straps so as to clamp said hand to said base.

5. In an apparatus of the character described, a holding device for a vibrator comprising a base, means for connecting said base with a vibrator, a pair of straps independently connected with said base on one side, a rotating shaft connecting said straps on the opposite side of said base, a ratchet wheel connected with said shaft, and a pawl for normally preventing a reverse rotation of said ratchet wheel, whereby said straps may be independently connected to said base and simultaneously adjusted on the opposite side of said base.

[Claims 6 to 10 not printed in the Gazette.]

1,173,040. SWITCH-MOUNTING AND THE LIKE. HOWARD R. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 6, 1913. Serial No. 765,756. (Cl. 247—6.)



1. In a switch mounting, the combination of a base support having a tapped opening, a switch support including a part with a tapped opening so secured as to be prevented from turning, and a screw having its threads engaged in said tapped openings in the switch support and the base support.

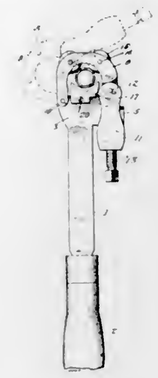
2. In a switch mounting, the combination of a base support having a tapped opening, a switch support comprising a plate with an opening, a member having a tapped opening seated against said plate and engaged therewith so that it cannot turn with reference thereto, and a screw adapted to engage in said tapped openings in said base support and said member and to extend loosely through said opening in said plate.

3. In a switch mounting, the combination of a base support having a tapped opening, a switch support comprising a plate with one or more elongated openings, a member having a tapped opening seated against said plate, there being means for preventing rotation of said member with reference to said switch support, and a screw adapted to engage in the openings of said base support and said member and to pass through the opening of said plate.

4. In a switch mounting, the combination of a base support having a tapped opening, a switch support comprising a plate having an elongated transversely extending opening, a member having a tapped opening secured to said plate so that it may be adjusted along the elongated opening therein, and a screw adapted to engage in said tapped openings in said base support and said member and to pass through the elongated opening of the plate.

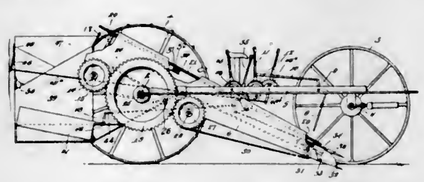
5. In a switch mounting, the combination of a base support having a tapped opening, a switch support comprising a plate having an elongated transversely extending opening, a member having a tapped opening registering with said plate opening and also having a lug engaged in an opening in the plate and forming a pivot for said member, and a screw adapted to engage in said tapped openings in said base support and said member and to pass through said plate opening so that said switch support may be adjusted with respect to said base support both lengthwise and transversely of said screw.

1,173,041. COMBINATION PIPE WRENCH AND CUTTER. CHARLES R. SAYLOR, Charleston, S. C. Filed Oct. 13, 1915. Serial No. 55,705. (Cl. 81—182.)



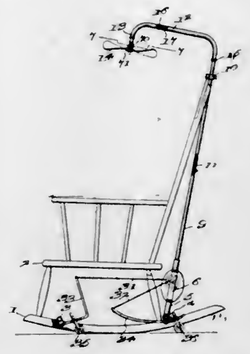
A device of the class described comprising a shank having one end widened and formed with a flat edge arranged at right angles to the plane of the shank to form a stationary jaw, a movable jaw of substantially U-form having one end pivoted to said stationary jaw at one extremity thereof, a lug formed on said shank and projecting outwardly therefrom, a U-shaped yoke pivoted to the other end of said movable jaw and adapted to straddle said lug to hold the movable jaw in proper position relatively to the fixed jaw, and a set screw threaded through the central portion of said yoke and adapted to engage said lug to hold the yoke upon the lug.

1,173,042. BEET-HARVESTER. EDWARD J. SCHEETZ, Montrose, Colo. Filed Sept. 11, 1912. Serial No. 719,704. (Cl. 55—108.)



In a beet harvester, extracting mechanism including a plow structure comprising a base plate adapted for penetrating engagement with the soil, diverging sides integral with the base plate and forming guides for the beets extracted during advancement of the plow, opposed guide members arranged in superimposed relation to the base plate for directing the beet tops in a defined path, a support for the plow structure, means to adjust the plow structure relatively to the support, and means to adjust the support and the plow structure therewith.

1,173,043. FAN ATTACHMENT FOR ROCKING-CHAIRS. ANTHONY JULIEUS SCHROEDER, Donaldsonville, La. Filed Dec. 21, 1914. Serial No. 878,360. (Cl. 230—7.)



1. The combination with a rocking chair, of a fan attachment therefor comprising a cross bar mounted on the chair, a stub post supported on said cross bar, a yoke formed at the upper end of said stub post, a tubular standard erected in said yoke and extending upwardly beyond the chair back, means for securing said standard to the chair back, a substantially horizontal arm extending forwardly from the upper end of said standard, a fan journaled to rotate on the outer end of said arm above the chair seat, a flexible shaft journaled in said tubular standard and arm, connections between said flexible shaft and fan, a motor mounted in said yoke and connected to rotate said flexible shaft, and means for operating said motor from the motion of the chair, substantially as described.

2. The combination with a rocking chair, of a fan attachment therefor comprising a cross bar mounted on said chair, a stub post supported on said cross bar, a yoke formed at the upper end of said stub post, a motor mounted in said yoke, levers arranged to be actuated by the motion of the chair, connections between said levers and the motor for operating the latter, a tubular standard erected in said yoke, a clamp for securing said tubular standard to the chair back, a horizontal tubular arm extending forwardly from the upper end of said standard and terminating in a downwardly turned end, a fan journaled to rotate in the downwardly turned end of said hollow arm, a flexible shaft journaled in said tubular standard and arm, connections between said flexible shaft and motor, pawls on the upper end of said shaft, and a rubber ring on said fan for engagement by said pawls to rotate the fan, substantially as described.

3. The combination with a rocking chair, of a fan attachment therefor comprising a stub post supported on said chair, a yoke formed at the upper end of said stub post, a shaft journaled in said yoke, a gear wheel mounted on said shaft, means connected to continuously rotate said gear wheel from the motion of the chair, a tubular standard composed of telescopic sections erected in said yoke, a clamp for securing said standard to the chair back, a tubular horizontal arm extending forwardly from the upper end of said standard, a downwardly turned end on said horizontal arm, slip joints included in said standard and downwardly turned end for permitting the parts to be swung to either side of the chair seat, a flexible shaft journaled in said standard and arm, a pinion on the lower end of said shaft and arranged in mesh with said gear wheel, pawls mounted on the upper end of said shaft, a fan journaled to rotate on the free end of said horizontal arm, and a rubber ring on said fan for engagement by said pawls whereby the fan may be rotated, substantially as described.

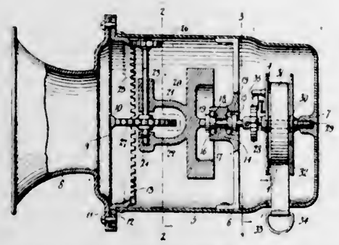
4. The combination with a rocking chair, of a fan attachment therefor comprising a pair of hollow posts erected on said chair, a yoke formed at the upper ends

of said posts, a shaft journaled in said yoke, a pair of sprockets provided with inclined teeth on said shaft, a chain trained over each of said sprockets, a counterweight hung on the inner ends of said chains and operating in said hollow posts, means connected to the outer ends of said chains for actuating the same to rotate said sprocket wheels against the influence of said counterweights from the motion of the chair, a tubular standard erected on said yoke, a forwardly extending hollow arm on the upper end of said standard, a fan journaled to rotate in the free end of said horizontal arm, a flexible shaft journaled in said standard and arm and connected to be rotated continuously in one direction from said sprockets, and connections between said flexible shaft and fan, substantially as described.

5. The combination with a rocking chair, of a fan attachment therefor comprising a cross bar secured to said chair, a pair of hollow stub posts supported on said cross bar, a yoke formed at the upper ends of said hollow posts, a tubular standard composed of telescopic sections, mounted in said yoke, a clamp for securing said standard to the chair back, a slip joint included in said standard, a hollow arm extending forwardly from the upper end of said tubular standard and formed with a downwardly turned free end, slip joints included in said horizontal arm and downwardly turned end, a flexible shaft journaled in said tubular standard and arm, pawls on the upper end of said flexible shaft, a fan journaled to rotate in the downwardly turned end of said hollow arm, a rubber ring in said fan adapted to be engaged by said pawls, a pinion on the lower end of said shaft, a gear wheel in said yoke in mesh with said pinion, a shaft journaled in said yoke and supporting said gear wheel, a pair of sprockets with inclined teeth on said shaft, chains trained over said sprockets, counterweights connected to the inner ends of said chains and operating in said hollow stub posts for returning the chains to initial position, and means connected to the outer ends of said chains for alternately actuating the same to revolve said sprockets, substantially as described.

[Claim 6 not printed in the Gazette.]

1,173,044. WARNING-SIGNAL FOR AUTOMOBILES AND THE LIKE. SALVATORE SCOGNAMILLO, New York, N. Y. Filed Sept. 5, 1913. Serial No. 788,334. (Cl. 116—1.)



1. A signaling device embodying a diaphragm and an actuating member for the diaphragm having a rotary movement about an axis parallel to the diaphragm and contacting constantly with the same portion of the diaphragm and another rotary movement about an axis at right angles to the diaphragm.

2. A signaling apparatus embodying a diaphragm, an actuating mechanism having rotary toothed contacting means constantly engaging the same portion of the diaphragm and also provided with means for automatically varying the position of the plane of rotation of the contacting means.

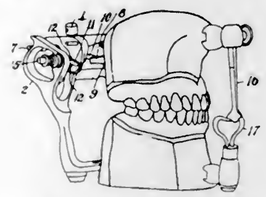
3. A signaling apparatus embodying a diaphragm and actuating mechanism for the diaphragm comprising a toothed contacting device having a rotary movement about an axis parallel to the diaphragm and maintained in constant engagement with the same portion of the diaphragm, the said mechanism being provided with means for rotating the toothed contacting device and its axis about an axis at right angles to the diaphragm.

4. A signaling apparatus embodying a diaphragm, an actuating mechanism for the diaphragm comprising a toothed device with a shaft, the said device having a rotary movement about an axis parallel to the diaphragm and held in constant engagement with the same portion of the latter, the shaft of the said rotary device being positively rotated and the device and its shaft also unitedly rotated in a direction at right angles to the path of rotation of the said device on its shaft.

5. A signaling apparatus embodying a diaphragm having a projection and an actuating mechanism comprising a portion constantly contacting with the projection of the diaphragm and rotating about an axis parallel to the diaphragm, the axis being positively driven and the said portion and axis also being unitedly rotatable at right angles to the path of rotation of the device on its axis while the said actuating mechanism as a whole is in motion.

[Claims 6 to 13 not printed in the Gazette.]

1,173,045. DENTAL ARTICULATOR. DAVID MACKINTOSH SHAW, Eltham, England, assignor to Dental Manufacturing Company Limited, London, England. Filed Apr. 15, 1914. Serial No. 831,977. (Cl. 32—1.)



1. In a dental articulator, the combination of an upper jaw member, a lower jaw member, ogee-cam condyle members on said upper jaw members, pairs of guiding pins on said lower jaw member respectively adapted to receive said condyle members, controlling pins on said upper jaw member and cam surfaces on said lower jaw member adapted to be engaged by said controlling pins and giving said condyl members a variable velocity in their guideways during the movement of the pin members.

2. In a dental articulator, the combination of an upper jaw member, a lower jaw member, pivots in said upper jaw member, condyle members mounted on said pivots and each provided with double curved cam surface, locking pins adapted to hold the pivots of said condyle members at the angle in which they are set, pairs of guiding pins on said jaw members respectively adapted to receive said condyle members, controlling pins on said upper jaw member and cam surfaces on said lower jaw member engaged by said controlling pins and giving said condyle members a variable velocity in their guides during the movement of the jaws.

3. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyles connecting said jaw members adapted to be moved in ogee-shaped paths during the opening or shutting movements of said jaw members, controlling pins on said upper jaw members, cam members on said lower jaw member engaged by said controlling pins and giving said condyles a variable velocity in their ogee-shaped paths, and a mounting platform supported on said lower jaw member in such a position that its surface represents the horizontal level and average relative position of the occlusal plane.

4. In a dental articulator, the combination of an upper jaw member, a lower jaw member, pivots in said upper jaw member, ogee-cam condyle members mounted on said pivots, locking pins adapted to hold the pivots of said condyle members at the angle in which they are set, pairs of guiding pins on said lower jaw member respectively adapted to receive said condyle members, controlling pins on said upper jaw member, cam surfaces on said lower jaw member adapted to be engaged by said controlling pins and giving said condyl pins a variable velocity in their guides during the movement of the jaws, and a mounting platform supported on said lower jaw member in such a position that its surface represents the horizontal level and average relative position of the occlusal plane.

1,173,046. DENTAL ARTICULATOR. DAVID M. SHAW, Eltham, England, assignor to The Dental Manufacturing Company Limited, London, England. Original application filed Apr. 15, 1914, Serial No. 831,977. Divided and this application filed Sept. 2, 1915. Serial No. 48,661. (Cl. 32—1.)



1. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyles and undulated guides therefor connecting said jaw members, and means including coöperating cams and pins on said jaw members all constructed to give said condyles a variable velocity in the undulated guides during the opening or shutting movement of said jaw members.

2. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyles and undulated guides therefor, connecting said jaw members, pins on said upper jaw member and cam members on said lower jaw member engaging with said pins, said cam members being constructed to give said condyles during the opening or shutting movement of said jaw members, a variable velocity in their guides, which is slow at the beginning, quicker in the middle and slower again at the end of travel in said guides.

3. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyles mounted in one of said jaw members, two open guideways for said condyles, mounted in the other of said jaw members, locking pins adapted to hold said condyles in the angle at which they are set, and cams adapted to control the condyles so that the latter move with the variable velocity during the movement of said jaw members.

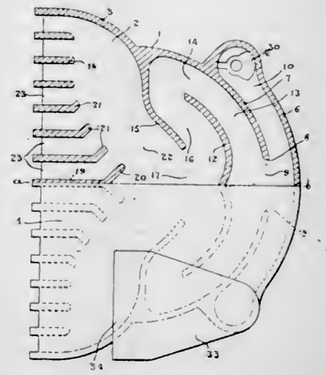
4. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyles and members having cam shaped guideways for said condyles connecting said jaw members, said guideways members being mounted on pivots in one of said jaw members, locking pins adapted to hold said guideway members at the angle at which they are set, and means on said jaw members to control the condyles so that the latter travel in the undulated guideways during the occlusal movement of said jaw members.

5. In a dental articulator, the combination of an upper jaw member, a lower jaw member, condyle pins on said lower jaw member, a pair of cam shaped guideway members on said upper jaw member adapted to receive said condyle pins, controlling means on said jaw members constructed to give said condyle pins a variable velocity in the cam shaped guideway members which velocity is slow at the beginning, quicker at the middle and slower again at the end.

[Claims 6 and 7 not printed in the Gazette.]

1,173,047. DEVICE FOR IMPROVING FUEL COMBUSTION IN STOVES. WILLIAM E. SHORE, New York, N. Y., assignor to Combusto Devices Corporation, a Corporation of New York. Filed Nov. 3, 1913. Serial No. 799,002. (Cl. 126—15.)

1. In a device of the class described, the combination with the oven and the combustion chamber extending thereover, of a broad flat casing arranged within the combustion chamber over the oven inclosing an air superheating chamber and having an inlet opening at the rear end communicating with the oven and a discharge in the front end adjacent to the fire box, the discharge end being of considerably greater width than the inlet end, perpendicular division walls arranged within the interior of said casing and dividing same into a plurality of intercommunicating passages increasing in cross-sectional area from the inlet, and a plurality of vertical division walls extending inwardly from the front of the casing and forming a plurality of narrow passages communicating with the foremost heating chamber, said walls being parallelly arranged and of gradually increasing length from the outer sides to the center.



2. In a device of the class described, the combination with the oven and the combustion chamber extending thereover, of a casing arranged within the combustion chamber over the oven inclosing an air superheating chamber and having a discharge opening in the front and an inlet opening in the bottom side at the rear, a conduit projecting downwardly from said inlet opening and extending into the oven, and an air collecting chamber connected to said conduit within the oven.

3. In a device of the class described, the combination with the oven and the combustion chamber extending thereover, of a casing arranged within the combustion chamber over the oven inclosing an air superheating chamber and having a discharge opening in the front and an inlet opening in the bottom side at the rear, a conduit projecting downwardly from said inlet opening and extending into the oven, and a flat air collecting casing secured to the end of said conduit within the oven and flaring outwardly therefrom and having its broad end open to receive a supply of air.

4. An attachment for stoves, comprising, a broad flat casing adapted to be secured to the top of the oven plate and having an opening in the bottom side at the end farthest from the firebox and communicating with an opening in the top plate of the oven, said casing having a plurality of passages in its front side arranged in a plane above the inlet from the oven, said passages diminishing in length from the center to the sides of the casing and adapted to direct the expanded and superheated air into the combustion chamber of the stove.

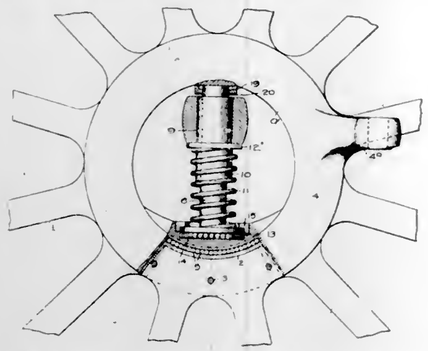
5. A device for promoting combustion in stoves and the like, comprising a casing having an air inlet opening and baffle plates having spaced ends forming passages whereby the spaces between the baffle plates are placed in intercommunication and a plurality of outlet passages at the front side of the casing, said passages diminishing in length from the center to the sides of the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,173,048. SPRING-HUB CONSTRUCTION FOR VEHICLE-WHEELS. SHERIDAN DANA SIMMONS and HENRY AMLING, New York, N. Y.; said Simmons assignor to said Amling. Filed May 5, 1915. Serial No. 25,923. (Cl. 21—142.)

1. A wheel construction comprising an annular spoke section, an annular hub section in which the spoke sec-

tion rotates, the bottom portion of the hub section having a socket open at its top, a vertically disposed pivot having its lower end disposed in the socket, an axle having an opening through which the pivot extends, a spring surrounding the pivot and forming a cushion for the axle, and a socket at the top portion of the hub section for receiving the upper end of the pivot, said last-mentioned socket being made in detachable parts for permitting the detachment of the wheel from the axle while the hub and spoke sections remain assembled.



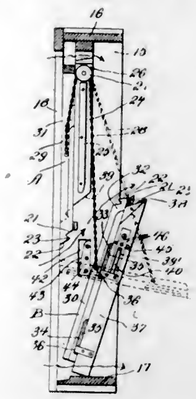
2. In a wheel construction, the combination of an axle having a vertical opening in its end, a vertical pivot disposed in the opening, a wheel hub section in the form of a ring, a socket in the bottom portion of the ring and open upwardly to receive the lower end of the pivot, a socket on the upper part of the ring for receiving the upper portion of the pivot, said last mentioned socket having a half section assembled to permit the pivot to be disengaged laterally, a wheel spoke section of annular form rotatably mounted on the hub section, and a spring surrounding the pivot and disposed under the axle to cushion the same.

3. A vehicle wheel comprising a channeled hub ring, a spoke-carrying ring rotatably mounted therein, the lower portion of the hub ring having a chamber, a vertical pivot extending diametrically of the hub ring and having a base plate disposed in the chamber, a layer of anti-friction devices interposed between the bottom of the chamber and the said base plate of the pivot, an axle extending into the hub ring and having an opening through which the pivot extends, and a helical compression spring interposed between the base plate and the axle, said pivot being removable laterally from the hub ring while the spoke-carrying ring remains in position on the latter.

4. A vehicle wheel comprising a channeled hub ring, a spoke-carrying ring rotatably mounted therein, the bottom of the ring having a chamber, a vertical pivot extending diametrically of the hub ring and having a base plate disposed in the chamber, a layer of anti-friction devices interposed between the bottom of the chamber and the said base plate of the pivot, an axle extending into the hub ring and having an opening through which the pivot extends, a helical compression spring interposed between the base plate and the axle, and means for detachably connecting the upper end of the pivot with the top portion of the hub ring, said pivot being removable laterally from the hub ring while the spoke-carrying ring remains in position on the latter.

1,173,049. WINDOW. METHOD F. SITTA, Chicago, Ill. Filed Apr. 19, 1915. Serial No. 22,435. (Cl. 20—42.)

1. In a window, a casing, and pulleys arranged at the upper portion of said casing, in combination with a top and a bottom sash, flexible elements guided over the pulleys and secured to the sashes at intermediate points of their heights, bead members slidably connected with the stiles of the lower sash, and means for holding said members at various adjustments with relation to the window casing whereby at some adjustments of the bead members the bottom sash may be slidably guided thereon to produce a reverse movement of the top sash.



2. In a window, a casing having pulleys, top and bottom sashes, flexible elements guided over the pulleys and terminally connected with the top and bottom sashes, bead members slidably connected with the stiles of the bottom sash, and means for securing said bead members at various adjustments with respect to the window casing.

3. In a window, a casing and a sash, in combination with a bead slidably connected with a stile of said sash, a locking lever mounted on said bead, and a cam mounted on the window casing in the path of said locking lever and adapted to coöperate therewith.

4. In a window, a casing having a cam member, and a sash having guide grooves, in combination with a tightening bead having guide tongues to engage the grooves, and a locking lever fulcrumed on the bead for engagement with the cam member of the sash.

5. In a window, top and bottom sashes, suitably guided flexible elements connected with said sashes, the stiles of the bottom sash being provided with longitudinal guide slots, in combination with guide beads having tongues slidably engaging the guide slots, and means for securing the beads at various adjustments relative to the side members of the casing.

1,173,050. PENCIL-HOLDER. EDWARD SLADEK, Chicago, Ill. Filed Jan. 3, 1914. Serial No. 810,259. (Cl. 24—11.)



1. An article of manufacture including a strap formed into substantially rectangular configuration, and having portions extending from the opposite marginal edges of said strap.

2. A device of the character described including a strap formed into substantially rectangular configuration, the marginal edges thereof having portions projecting therefrom to provide a clasp element and a pencil retainer.

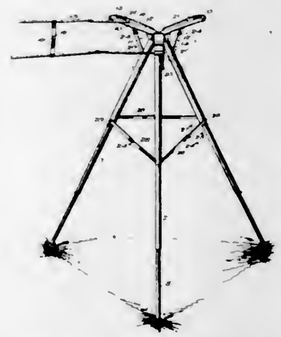
3. An article of manufacture including a metallic strap rolled into a configuration whereby to provide a collar, a portion of the upper marginal edge thereof being extended and reversely folded upon itself and a portion of the marginal edge opposite to said first mentioned portion being extended in parallelism with said first mentioned portion.

4. An article of manufacture including a metallic strap rolled to provide a collar and having a portion extending from the upper marginal edge thereof and reversely folded upon the collar, a portion extending from the lower marginal edge of said collar in parallelism with said first mentioned portion having semicircular ears formed on the free terminal end thereof, the proximate ends of said collar being engaged to provide a sleeve.

5. A device of the character described including a metallic strap stamped from a single sheet of metal rolled into substantially elliptical configuration to provide a collar, a portion of the upper marginal edge thereof being extended and reversely folded upon the collar to provide a clasp and a portion of the lower marginal edge being extended and provided with semicircular lugs, the ends of said semicircular lugs being overlapped for engagement with an object.

[Claim 6 not printed in the Gazette.]

1,173,051. FOLDING STAND. CARLETON W. SMITH, New York, N. Y., assignor to Collapso Products Company, Inc., New York, N. Y., a Corporation of New York. Filed Oct. 13, 1914. Serial No. 866,446. (Cl. 248—43.)



1. In a folding stand, the combination of a plurality of legs, a head or center member having parts entering or overlapping the legs, a foldable top comprising independent foldable arms adapted to fold alongside the legs, and pivots constituting a common means for connecting the arms, center member and legs together.

2. In a folding stand, the combination of a plurality of tubular legs, a head or center member having parts entering the open upper ends of the legs and pivoted thereto, and a foldable top comprising independent foldable arms which are pivotally connected to the pivots aforesaid and are adapted to fold downwardly outside and alongside the legs.

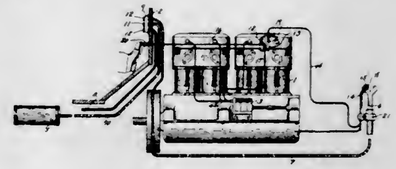
3. In a folding stand, the combination of a plurality of tubular legs, foldable braces connecting the legs together, a head or center member having parts entering or overlapping the open upper ends of the legs and pivoted thereto, a foldable top comprising independent foldable arms which are pivotally connected to the pivots aforesaid and are adapted to fold downwardly outside and alongside the legs, and foldable braces connecting the arms to the legs and adapted to fold alongside of them.

4. In a folding stand, the combination of legs, a head or center member having ears which are pivoted to the legs, a folding top comprising independent foldable arms having ears pivoted to the legs, and foldable braces for supporting the arms from the legs.

5. In a folding stand, the combination with a head or center member having ears, of foldable legs pivoted to the ears, a top comprising independent foldable arms provided with ears pivoted to the legs and adapted to fold down alongside of them or to be extended in general lateral arrangement, and jointed foldable braces connecting the respective arms to the legs to which they are pivoted.

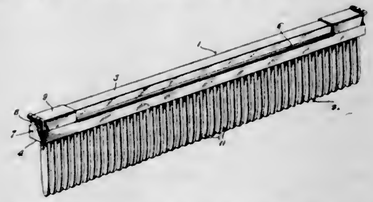
[Claims 6 to 15 not printed in the Gazette.]

1,173,052. IGNITION MEANS FOR GAS-BURNERS. CHARLES ERNEST SMITH, Vernon, British Columbia, Canada, assignor of one-half to Hamilton Lang, Vernon, British Columbia, Canada. Filed Apr. 30, 1914. Serial No. 835,578. (Cl. 175—115.)



In igniting apparatus of the class described, the combination with engine cylinders adapted for use on an automobile, and an automobile dash adjacent the cylinders, the cylinders having spark plugs and electric circuits therefor, of an insulating block fixed adjacent one of the spark plugs, a switch pivotally connected at one end to the block and arranged in the circuit of the last named spark plug, an ignition circuit including a portion of the last named spark plug circuit and having the conductor connected with the insulating block adjacent the conductor of the last named spark plug circuit, the switch being adapted to be moved on its pivot for breaking the spark plug circuit and into contact with said conductor for making the ignition circuit, a rod pivoted to the switch at an intermediate point and extending through the dash, and elastic means pressing the rod in a direction for maintaining the switch on closed circuit in the last named spark plug circuit and for returning the switch thereto after being shifted to the ignition circuit closing position by longitudinal thrust of said rod.

1,173,053. COMB. LOUIS C. SOMMER, Jersey City, N. J. Filed Mar. 9, 1915. Serial No. 13,194. (Cl. 132—8.)



1. A comb comprising a back consisting of interengaged channel members, and teeth carried by one of the channel members and projecting through openings in the other channel member.

2. A comb comprising a back consisting of interengaged channel members, teeth removably carried in one of the channel members and projecting through openings in the other channel member, and means for holding the channel members in interengaged position.

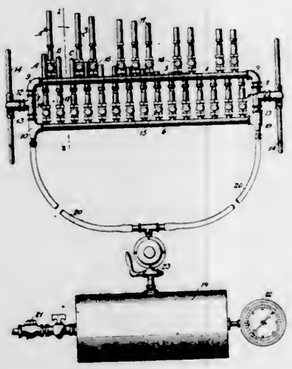
3. A comb comprising a channel member having a plurality of teeth receiving apertures, a second channel member arranged to fit within the first channel member, teeth removably fitted in said second channel member and arranged to pass through the openings in the first channel member, and means for holding the second channel member within the first channel member.

4. A comb comprising a tooth holding member, teeth removably arranged therein, an apertured member for receiving the first member and permitting the passage of the teeth therethrough, said teeth closely fitting the walls of the apertures, and means for holding the first member within the second member.

5. A comb comprising a tooth holding member, teeth removably arranged therein, an apertured member for receiving the first member and permitting the passage of the teeth therethrough, said teeth closely fitting the walls of the apertures, means for holding the first member within the second member, and means for limiting the movement of the first member within the second member.

[Claim 6 not printed in the Gazette.]

1,173,054. WHISTLING MUSICAL INSTRUMENT. JOHN JAMES STANTON, New York, N. Y. Filed July 18, 1914. Serial No. 851,730. (Cl. 84—32.)



1. In a musical instrument, the combination of an air chamber, whistles connected to said chamber, a valve between the chamber and each whistle having a controlling button for operating the same, said buttons being so arranged as to form the equivalent of a keyboard, a tank for compressed air, and pressure-reducing means controlling the supply of air from the tank to the chamber.

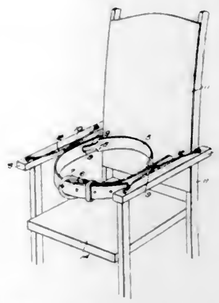
2. In a musical instrument, a rectangular tubular frame, valve-controlled whistles connected to the tubes forming the sides of the frame, a tank for compressed air, and pressure reducing means for controlling the supply of air from the tank to the tubular frame.

3. In a musical instrument, the combination of a tubular frame rectangular in shape, valve-controlled whistles connected to the tubular frame, a support for the frame, a tank for compressed air, and a reducing valve controlling the supply of air from the tank to the tubular frame.

4. In a musical instrument, the combination of a tubular frame rectangular in shape, valve controlled whistles connected to the tubular frame, T-shaped members rotatably mounted on the smaller sides of the frame, a stem carried by each of said T-shaped members, supporting means adapted to engage the stems, a tank for compressed air, and a reducing valve controlling the supply of air to the tubular frame.

1,173,055. PROTECTING-BELT FOR BABIES. MORRIS B. STERN, New York, N. Y. Filed July 21, 1915. Serial No. 41,079. (Cl. 155—12.)

1. In combination, a baby-protecting belt comprising a section having reduced ends, an adjustable section having openings engaged by the reduced ends and whereon said adjustable section is adapted to move relative to the other section, and trolleys engaging each of the reduced ends, substantially as and for the purpose set forth.

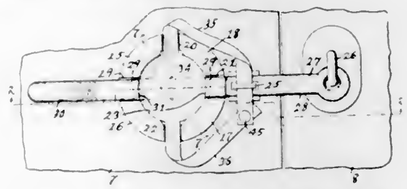


2. In combination, a baby-protecting belt having a reduced end, the adjacent end of the belt having an opening through which the reduced end projects, the end having the opening adapted to move on the reduced end; and a ring secured to the extremity of the reduced end.

3. In combination, a baby-protecting belt comprising a section having reduced ends, a section having openings at each end through which the reduced end of the first section projects, a ring on the extremity of each reduced end, and a trolley for each ring.

4. In combination, a seat; trolleys associated therewith; and a baby-protecting belt comprising a section having reduced ends, an adjustable section having openings engaged by the reduced ends on which said adjustable section is adapted to move relative to the first section, and a ring on the extremity of the reduced ends engaging the trolleys, substantially as and for the purpose set forth.

1,173,056. SEAL-LOCK. PAUL STOREY, Taft, British Columbia, Canada. Filed Oct. 14, 1915. Serial No. 55,838. (Cl. 70—23.)



1. A seal lock, comprising a base block having a circular recess the wall of which is peripherally grooved, a hasp resting in said recess, and a sealing element in said recess above said hasp having a flange crimped into said groove.

2. A seal lock, comprising a base block having a circular recess the wall of which is peripherally grooved, a hasp resting in said recess, means for preventing movement of said hasp laterally of said block, and a sealing element in said recess for preventing removal of said hasp from said prevention means provided with a flange crimped into said groove.

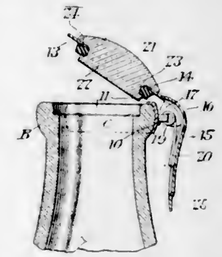
3. A seal lock, comprising a base block having a circular recess formed by flange members spaced to form passages therebetween, and peripherally grooved on their inner surfaces, a hasp resting in said recess and in the respective passages, and a sealing element in said recess above said hasp provided with a flange crimped into said grooves.

4. A seal lock, comprising a base block having a circular recess formed by flange members spaced to form passages therebetween and peripherally grooved on their inner surfaces, a hasp resting in said recess and in the respective passages provided with raised portions grooved in their inner surfaces to form a continuous groove with those of the adjacent flange members, and a sealing element in both said recess and between said raised members provided with a flange crimped into said grooves.

5. A seal-lock, comprising a base block having a circular recess formed by flange members spaced apart to form passages therebetween and peripherally grooved on their inner surfaces, a hasp resting in said recess and in the respective passages, provided with raised portions grooved in their inner surfaces to form a continuous groove with those of said flange members, and a sealing element provided with a flange crimped into said grooves, said element being provided with ribbon members resting in the respective ones of said passages.

[Claims 6 and 7 not printed in the Gazette.]

1,173,057. BOTTLE-CLOSURE. HARRY F. SUIT, Washington, D. C. Filed June 24, 1915. Serial No. 36,055. (Cl. 215—34.)



1. A bottle closure of the class described comprising a resilient clip for the detachable connection thereof with the mouth of the bottle, a ring-like body having a lever swingingly connected to the clip, a stopper removably fitted in the ring-like member, and a resilient member engageable with the stopper for fastening the same in the body and also forming a seal for the stopper when engaged in the mouth of the bottle.

2. A bottle closure of the class described comprising a resilient clip for the detachable connection thereof with the mouth of the bottle, a ring-like body having a lever swingingly connected to the clip, a stopper removably fitted in the ring-like member, a resilient member engageable with the stopper for fastening the same in the body and also forming a seal for the stopper when engaged in the mouth of the bottle, and means acting upon the lever to normally hold the stopper and body in closing relation to the mouth of the bottle.

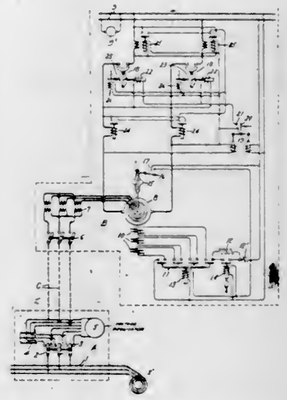
3. A removable cap for bottles comprising a resilient member for detachable engagement with the neck of the bottle, a ring-like body swingingly connected with the clip, a stopper detachably mounted in the ring-like body, and a resilient sealing ring detachably engaged with the stopper for sealing the mouth of the bottle when the stopper is in closed position relative thereto.

4. A removable cap for bottles comprising a resilient member for detachable engagement with the neck of the bottle, a ring-like body swingingly connected with the clip, a stopper detachably mounted in the ring-like body, a resilient sealing ring detachably engaged with the stopper for sealing the mouth of the bottle when the stopper is in closed position relative thereto, and means acting upon the body to bring the same and the stopper into closed position relative to the mouth of the bottle.

5. A removable cap for bottles comprising a resilient member for detachable engagement with the neck of the bottle, a ring-like body swingingly connected with the clip, a stopper detachably mounted in the ring-like body, a resilient sealing ring detachably engaged with the stopper for sealing the mouth of the bottle when the stopper is in closed position relative thereto, means acting upon the body to bring the same and the stopper into closed position relative to the mouth of the bottle, and means on the body for permitting the opening thereof.

[Claim 6 not printed in the Gazette.]

1,173,058. REMOTE CONTROL OF DYNAMO-ELECTRIC MACHINES. HENRY R. SUMMERHAYES, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 29, 1914. Serial No. 835,127. (Cl. 171—118.)



1. In combination, a synchronous converter, field windings therefor normally disconnected, an alternating current source of supply, a direct current system, means for starting said converter from the alternating current source, a relay for connecting the field windings to the system, and resistance in series with them, a time limit relay for short-circuiting said resistance, means dependent upon the speed of the converter for energizing said relays, and means for connecting the direct current side of the converter to the system.

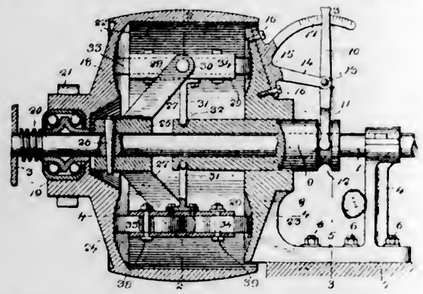
2. In combination, a synchronous converter, field windings therefor normally disconnected, an alternating current source of supply, a direct current system, means for starting said converter from the alternating current source, a relay for connecting the field windings to the system, and resistance in series with them, a time limit relay for short-circuiting said resistance, means dependent upon the speed of the converter for energizing said relays, means for connecting the direct side of the converter to the system, and a differential relay in operative relation with said means.

1,173,059. TRANSMISSION-GEARING. ALFRED D. SUNDEEN, Philadelphia, Pa., assignor of one-third to Emanuel Sundeen, Philadelphia, Pa. Filed May 25, 1915. Serial No. 30,412. (Cl. 74—26.)

1. In transmission gearing, the combination of a driving shaft, a stationary member having an annular working face, a rotary driven member also having an annular working face opposed to the working face of the stationary member, and a pair of transmission wheels the working faces of which contact with each other and with the working faces of the stationary and driven members, said wheels being carried by the driving shaft.

2. In transmission gearing, the combination of a driving shaft, a stationary member having an annular working face concaved in cross section, a rotary driven member also having an annular working face concaved in cross section and opposed to the working face of the stationary member, and a pair of transmission wheels the working faces of which contact with each other and with the working faces of the stationary and driven members, said wheels being carried by the driving shaft.

3. In transmission gearing, the combination of a driving shaft, a stationary member having an annular working face, a rotary driven member also having an annular working face opposed to the working face of the stationary member, a pair of transmission wheels the working faces of which contact with each other and with the working faces of the stationary and driven members, and a carrier for said wheels carried by the driving shaft.

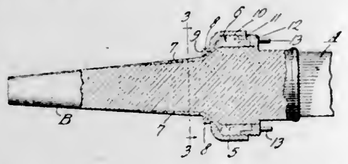


4. In transmission gearing, the combination of a driving shaft, a stationary member having an annular working face, a rotary driven member also having an annular working face opposed to the working face of the stationary member, a pair of transmission wheels the working faces of which contact with each other and with the working faces of the stationary and driven members, a carrier for said wheels carried by the driving shaft, and means for tilting said carrier.

5. In transmission gearing, the combination of a driving shaft, a stationary member having an annular working face, a rotary driven member also having an annular working face opposed to the working face of the stationary member, a pair of transmission wheels the working faces of which contact with each other and with the working faces of the stationary and driven members, a yoke fast on said driving shaft, a tilting wheel carrier pivotally supported and carried by said yoke, and means for tilting said carrier.

[Claims 6 to 8 not printed in the Gazette.]

1,173,060. SELF-LUBRICATING AXLE. LEE N. TALBOTT, Dundas, Minn. Filed Oct. 16, 1915. Serial No. 56,180. (Cl. 64—27.)

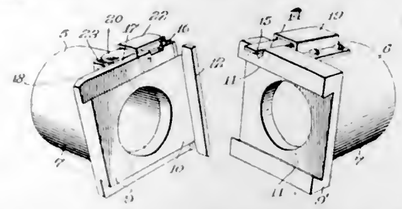


1. In an axle spindle, a grease cup formed at the inner end concentrically thereof and having an open inner side, said spindle having longitudinally disposed grooves communicating with the cup, and a cap detachably engaged in the open side of the cup.

2. In an axle spindle, a grease cup formed concentrically thereof at the inner end of the same, said spindle having longitudinally disposed grooves co-extensive with the latter for substantially the length of the same, in communication with the cup, a cap removably fitted upon said cup, and lugs on the cap.

1,173,061. FIRE-HOSE COUPLING. NORMAN TREGLOUNE, Hancock, Mich. Filed Feb. 13, 1915. Serial No. 8,034. (Cl. 137—28.)

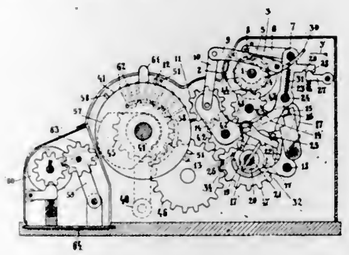
1. A hose coupling comprising two members having their meeting faces detachably connected together, a resilient element carried by one of said members for engagement with the other of said members, means secured to said second mentioned member for releasing said element, and a housing inclosing said element and said means.



2. A hose coupling comprising two members having their meeting faces slidably connected together, a resilient locking element secured to one of said members and having its free end adapted to slidably engage the other of said members for locking engagement therewith on a predetermined position of said members, a lever pivoted on the second mentioned member to effect a release of said element, and a casing housing said lever and having a portion covering the free end of said element when the parts are operatively associated.

3. A hose coupling comprising two members having their meeting faces slidably interfitted, a resilient element carried by one of said members for locking engagement with the other of said members, a lever pivoted upon said second member to effect a release of said element, and said lever being disposed in the path of movement of said element to be moved thereby into operative position during the association of said members.

1,173,062. CALCULATING-MACHINE. FRANZ TRINKS, Brunswick, Germany. Filed Apr. 23, 1914. Serial No. 833,986. (Cl. 235—79.)



1. In a calculating machine, the combination with a revolutions counting mechanism comprising numeral wheels having two series of alternately arranged numbers, and normally inoperative means to rock all the numeral wheels, of normally locked movable members adapted to be released when all the numeral wheels are in corresponding positions and when released to throw said rocking means into operation, and means to return the movable members into locked position.

2. In a calculating machine, the combination with a revolutions counting mechanism comprising notched numeral wheels having two series of alternately arranged numbers, and normally inoperative means to rock all the numeral wheels, of pawls adapted to engage in the notches of the numeral wheels when the latter are in corresponding positions, means controlled by said pawls to throw said rocking means into operation, and means to return the pawls into locked position.

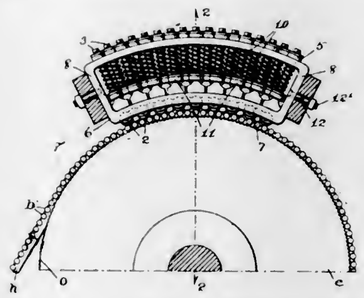
3. In a calculating machine, the combination with a revolutions counting mechanism comprising numeral wheels having two series of alternately arranged numbers, and normally inoperative means to rock all the numeral wheels, of normally locked movable members adapted to be released when all the numeral wheels are in corresponding positions and when released to throw said rocking means into operation, means to return the movable members into locked position, means to lock the rocking means in operative position, and means operative after the operation of the rocking means to throw said locking means for the rocking means out of operation.

4. In a calculating machine, the combination with the registering mechanism, the setting mechanism, and operating means therefor, of a revolutions counting mechanism comprising numeral wheels having two series of alternately arranged numbers, means to display the numbers of either one of the series of numbers on the numeral wheels, and means controlled by said operating means when changing the direction of operation of the same to shift the displaying means from displaying position relatively to one series of numbers into displaying position relatively to the other series of numbers.

5. In a calculating machine, the combination with the registering mechanism, the setting mechanism, and operating means therefor, of revolutions counting mechanism comprising numeral wheels having two series of alternately arranged numbers, a normally locked movable member adapted to be released when all the numeral wheels are in corresponding positions, means to display the numbers of either one of the series of numbers on the numeral wheels, normally inoperative means controlled by said operaitng means when changing the direction of operation of the same to shift the displaying means from displaying position relatively to one series of numbers into displaying position relatively to the other series of numbers, and means controlled by said movable member when being released to throw said normally inoperative means into operation.

[Claims 6 to 10 not printed in the Gazette.]

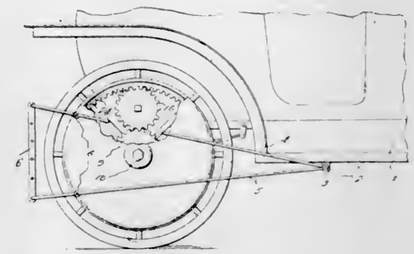
1,173,063. MACHINE FOR FINISHING SKEWER-BLANKS AND THE LIKE. AMOS T. TRUE, Allens Mills, Me. Filed July 3, 1915. Serial No. 37,999. (Cl. 144—30.)



1. In a machine for finishing skewer blanks and the like, a carrying belt for the blanks, a member coöperating with the blanks and against which the lower surfaces of the blanks bear, a frame located above said member, a series of spring-pressed radial carrying arms in said frame, said arms being in contact with each other at their edges and in contact with said frame at their outer sides, and a series of rollers carried by and located at the inner side of the planes of said arms, said rollers being in contact with each other at their inner sides.

2. In a machine for finishing skewer blanks and the like, a carrying belt for the blanks, lateral wheels having roughened peripheral surfaces against which the blanks have bearing, a frame located above each of said lateral wheels, duplicate series of spring-pressed radial carrying arms in each frame, said arms being in contact with each other at their edges and in contact with said frame at their outer sides, and duplicate series of rollers carried by and located at the inner sides of the planes of said arms, said rollers being spaced apart from each other at their circumferential edges and in contact with each other at their inner sides.

1,173,064. TRACTOR ATTACHMENT FOR MOTOR-VEHICLES. JOHN T. TWIFORD, Oshkosh, Nebr. Filed May 24, 1915. Serial No. 30,173. (Cl. 21—90.)



1. A device of the character described including the combination with a drive shaft on a motor vehicle, a sleeve mounted thereon, a drive gear at the outer end of the sleeve, a fulcrum wheel mounted on the outer end of the sleeve exteriorly of the drive gear, said fulcrum wheel being provided with an inturned peripheral flange, teeth on the flange, a drive wheel rotatable on the sleeve, studs carried by said wheel, planetary gears mounted on the studs said gears meshing with a drive gear and with the teeth on the fulcrum wheel and means to hold the fulcrum wheel against rotation.

2. In combination with a motor vehicle having a drive shaft, a sleeve mounted thereon and rotatable therewith, a drive wheel independently rotatable on the sleeve, a fulcrum wheel independently mounted at the outer end of the sleeve and provided with an inturned flange having a series of teeth on the inner side thereof, a drive gear integral with the sleeve, planetary gears meshing with the drive gear and with the gear teeth on the flange, means connecting the planetary gears to the drive wheel, bars connected to the fulcrum wheel and secured at the forward end to the body of the vehicle on which the device is used to hold said fulcrum wheel against rotation.

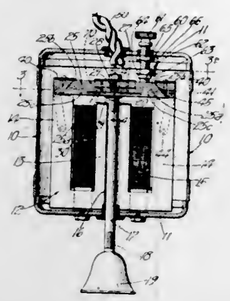
3. In a device of the class described, the combination with a motor vehicle having a body and a drive shaft, a sleeve secured to said drive shaft, a drive wheel independently rotatable on the sleeve, a gear at the outer end of the sleeve formed integral therewith, a fulcrum wheel rotatably mounted at the outer end of the sleeve, planetary gears meshing with the drive gear and secured to the drive wheel, a ring gear carried by the fulcrum wheel and meshing with the planetary gears, bars secured to the body of the vehicle and attached to the fulcrum wheel, extensions at the rear ends of the bars and a connecting rod adapted to hold the bars in adjusted position.

4. A traction attachment for motor vehicles including a fulcrum wheel, a drive wheel, a planetary gear carried by the drive wheel, a ring gear carried by said fulcrum wheel and meshing with the planetary gear, and a drive gear meshing with the planetary gear whereby when the drive gear is rotated, the planetary gear will revolve around the fulcrum wheel and thereby cause the drive wheel to be driven.

1,173,065. VIBRATOR. GERARD VANDE, Los Angeles, Cal. Filed Mar. 25, 1914. Serial No. 827,078. (Cl. 172—126.)

1. A vibrator, comprising a double-U-shaped magnet with a central core and lateral pole extensions, an energizing coil for the magnet and a spring armature attached to both polar extensions and extending medially over the core, the ends of the armature pivotally resting on the lateral pole extensions, and means for holding each armature end down on the pole pieces including a clip attached to the armature end, a link pivoted to the pole piece, and pivotal connection between the clip and link approximately co-axial with the pivotal bearing of the armature on the pole piece.

2. A vibrator, comprising a double-U-shaped magnet with a central core and lateral pole extensions on opposite sides thereof, an energizing coil for the core, and a spring armature pivotally attached to both polar extensions and extending medially over the core, the ends of the armature pivotally resting on the lateral pole extensions, and means for holding each armature end down on the pole pieces including a clip attached to the armature end, a link pivoted to the pole piece, and pivotal connection between the clip and link approximately coaxial with the pivotal bearing of the armature on the pole piece.



3. A vibrator, comprising a double-U-shaped magnet with a central core and lateral pole extensions on opposite sides thereof, an energizing coil for the core, and a spring armature attached to both polar extensions and extending medially over the core, said armature comprising a body of soft iron lamina and a flat strip of spring steel, the ends of the armature pivotally resting on the lateral pole extensions, and means for holding each armature end down on the pole pieces including a clip attached to the armature end, a link pivoted to the pole piece, and pivotal connection between the clip and link approximately co-axial with the pivotal bearing of the armature on the pole piece.

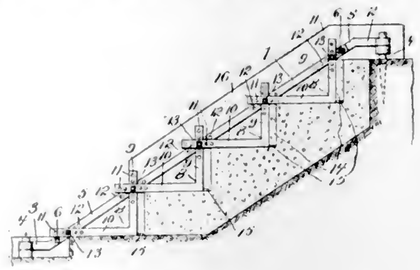
4. A vibrator, comprising a double-U-shaped magnet with a central core and lateral pole extensions, and energizing coil for the magnet, an armature connected to both polar extensions and extending medially over the core, and spring means for rendering resilient the motion of the armature to and from the central core, the ends of the armature pivotally resting on the lateral pole extensions, and means for holding each armature end down on the pole pieces including a clip attached to the armature end, a link pivoted to the pole piece, and pivotal connection between the clip and link approximately co-axial with the pivotal bearing of the armature on the pole piece.

5. In a device of the class described, a spring armature supported by mountings at each end and medially free to vibrate, said mountings for the armature ends including supporting members upon which the armature ends pivotally rest, and links pivotally connected to said supporting members and pivotally connected with the armature ends at points approximately co-axial with the pivotal bearings of the armature ends on said members.

[Claims 6 to 12 not printed in the Gazette.]

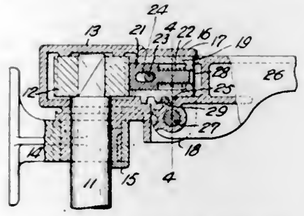
1,173,066. MOLD FOR MOLDING CONCRETE STAIRS. HARRY H. VANDEGRIFT, Clarksburg, W. Va. Filed Feb. 9, 1915. Serial No. 7,043. (Cl. 25—118.)

A stair mold comprising flat carriage bars disposed edgewise and provided with a plurality of openings, the opposite ends of said bars being extended to provide parallel arms, the latter terminating to provide loops, gage members each comprising a vertical arm and a horizontal arm, said arms having openings to register with the said openings of the bars, fastening elements passed through the alined openings for holding said parts in adjusted position, and a right angularly disposed flange projecting from each of the said vertical



and horizontal arms of the gage member for the purpose described.

1,173,067. BRAKE-LEVER. ERNEST R. VIBERG, Montreal, Quebec, Canada. Filed Apr. 30, 1915. Serial No. 24,971. (Cl. 74—16.)



1. In a device of the character described, the combination with a spindle and a ratchet thereon, of a housing revoluble on the spindle inclosing said ratchet, a lever pivoted to said housing, a pawl within the housing, a carrier therefor, and a constantly engaging connection between the lever and carrier arranged to disconnect the pawl and ratchet on downward movement of the lever.

2. In a device of the character described, the combination with a spindle and ratchet thereon, of a housing revolubly mounted on the spindle and inclosing the ratchet, a lever pivoted to said housing, a pawl carrier slidable in the housing, a pawl slidable in the carrier independent of the position thereof sufficiently to clear the ratchet teeth, and rack and pinion connection between the lever and carrier.

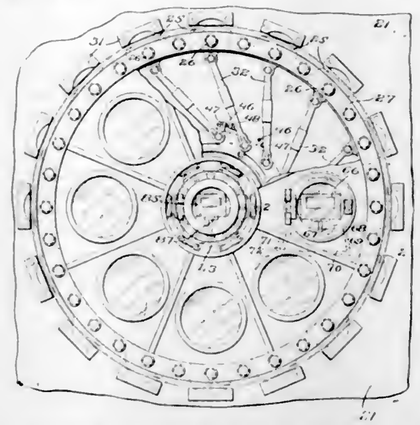
3. In a device of the character described, the combination with a spindle and ratchet thereon, of a housing inclosing the ratchet revoluble on the spindle, a pawl carrier radially slidable in the housing, a slotted spring pressed pawl in said carrier, a pin on the carrier traversing the pawl slot, straight pitched teeth on the under side of said carrier, a lever pivotally mounted in the housing for movement in the same vertical plane as the carrier, circularly pitched teeth surrounding the pivotal point of said lever and meshing with the carrier teeth.

4. In a device of the character described, the combination with a spindle and ratchet thereon, of a housing inclosing the ratchet and revoluble on the spindle, a pawl engaging the ratchet, carrier therefor, a lever pivoted to the housing, and rack and pinion connection between the lever and carrier.

5. In a device of the character described, the combination with a spindle and ratchet thereon, of a housing inclosing the ratchet and revoluble on the spindle, a pawl in said housing engageable with the ratchet, a carrier therefor, a lever pivoted to the housing under said carrier and movable vertically, and constantly engaging connecting means between the lever and carrier arranged to retract the carrier and disconnect the pawl and ratchet on downward movement of the lever.

[Claim 6 not printed in the Gazette.]

1,173,068. LOCKING MECHANISM FOR SAFE OR VAULT DOORS. HJALMAR CASIMIR VON PHILP, Bethlehem, Pa. Filed Sept. 23, 1915. Serial No. 52,276. (Cl. 109—3.)



1. A locking mechanism for circular safe doors, comprising a plurality of cam-wedges revolubly mounted near the edge on the door; correspondingly shaped cams on the door jamb for engaging with said cam-wedges for locking the door, a member revolubly mounted on the door; and coaxial therewith a link for each cam-wedge connecting said member with each of said cam-wedges, means for rotating said member, joints on the cam-wedge and on said member for each link and means in one of said parts for adjusting the relative position of said joints.

2. A locking mechanism for circular safe doors, comprising a plurality of cam-wedges disposed in a circle near the edge of the door; a bearing ring bolted to the door and a journal for each cam-wedge secured to the door and the ring; correspondingly shaped cams on the door jamb for engaging with said cam-wedges for locking the door, a member revolubly mounted on the door and coaxial therewith; a link for each cam-wedge connecting said member with each of said cam-wedges, means for rotating said member, joints on the cam-wedge and on said member for each link, one of said joints having an eccentric adjusting means whereby the distance between said joints may be accurately adjusted.

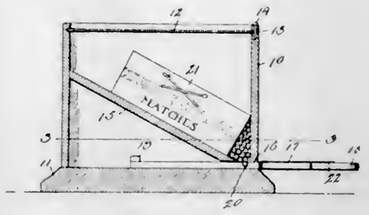
3. A locking mechanism for circular safe doors, comprising a cam-wedge revolubly mounted on an antifriction bearing near the edge of the door; a cam on the door jamb engaging with said cam-wedge for locking the door, said cam-wedge being approximately rectangular in shape and provided with an ear on one of the long sides and symmetrically disposed with regard to a center line of said antifriction bearing so as to be perfectly balanced, a member revolubly mounted on the door and coaxially therewith; a link hinged to said member and the ear of said cam-wedge, means for rotating said member; the centers of said bearing and said hinge on the ear being in radial alinement with the center of said member, when the parts stand in open position.

4. A locking mechanism for circular safe doors, comprising a cam-wedge revolubly mounted on an antifriction bearing near the edge on the door; a cam on the door jamb engaging with said cam-wedge for locking the door, a member revolubly mounted on the door; link connection between said member and said cam-wedge and means for rotating said member, a latching device for said revoluble member and a safe-lock controlling the same, whereby said cam-wedges will be positively secured in the locking position; said device comprising a dog for engaging a corresponding notch provided in the edge of said revoluble member.

5. A locking mechanism for circular safe doors, comprising a cam-wedge revolubly mounted on an antifriction bearing near the edge on the door; a cam on the door jamb engaging with said cam-wedge for locking the door, a member revolubly mounted on the door; link connection between said member and said cam-wedge and means for rotating said member, a sliding bolt constructed to enter a notch in said rotating means and a safe-lock controlling said bolt, whereby said cam-wedges will be positively held in their locking position.

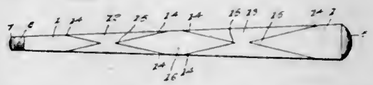
[Claim 6 not printed in the Gazette.]

1,173,069. MATCH-DELIVERING MACHINE. HORACE C. WALKER, Kingsville, Tex., assignor of one-half to W. W. Sands, Kingsville, Tex. Filed Dec. 20, 1913. Serial No. 808,027. (Cl. 206—24.)



In a match delivering machine, the combination of a base, a casing thereon and provided with a horizontal opening in its lower front end and an inclined board rigidly secured in the casing and projecting rearwardly and upwardly from the opening in the lower front end of said casing, said board supporting the matches passed into the casing, a flat delivering element provided with a transverse groove and mounted to slide on said casing, with a handle portion normally projecting exteriorly of the casing through the slot in the lower front end thereof, the transverse groove of the element being adapted to receive a match from the inclined board, and a stop lug extending transversely across the inner end of said element and adapted to abut against the under side of said inclined board to limit the outward sliding movement of said element relatively to the casing, and an igniting surface on said element on the handle portion thereof, said igniting surface engaging the wall of said casing and being adapted to limit the inward sliding movement of the element.

1,173,070. ALUMINUM BILLIARD-CUE. MAX C. WALTER, Talmage, Nebr. Filed Dec. 23, 1914. Serial No. 878,778. (Cl. 46—9.)



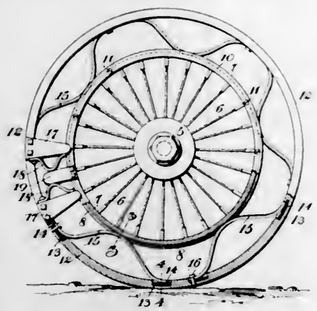
1. A billiard cue made of aluminum and provided with a reinforcing bar embedded therein, and a hollow handle portion having a plug fitted in the butt end thereof.

2. A billiard cue made of aluminum and provided with a reinforcing bar twisted longitudinally and embedded therein, said cue having ferrules extending around the same and lying flush with the outer surface thereof.

1,173,071. RESILIENT WHEEL. GEORGE WILBER WATTS, Hot Springs, Ark. Filed Oct. 1, 1915. Serial No. 53,546. (Cl. 152—32.)

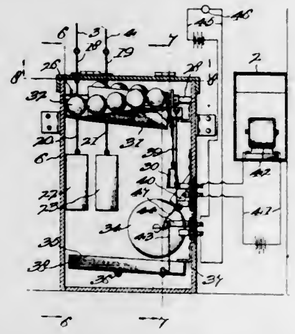
1. A vehicle wheel comprising an outer rim member, an inner hub member including a continuous rim arranged concentrically to said outer rim member, inwardly extending flange members secured to said outer rim member, bowed springs each having one end secured to an edge of one of the flange members and also having its free end contacting said edge, and a contact plate secured to the rim of the inner hub member and interposed between said inwardly extending members whereby to contact the intermediate portions of said bowed springs and cushioning means between said outer rim and inner hub members.

2. A vehicle wheel comprising an inner hub member, an outer rim member having recesses therein, flat resilient cushions in said recesses, and bowed springs each having one end thereof secured in one of said recesses and bearing



against said cushion and its other end freely engaging the cushion in the next adjacent recess whereby the latter end is movable longitudinally of said recess, the intermediate portions of each spring engaging said inner hub member.

1,173,072. AUTOMATIC FIRE-ALARM SYSTEM. WILLIAM ZACH WILKINSON, Baton Rouge, La. Filed July 1, 1915. Serial No. 37,617. (Cl. 177—355.)



1. In an automatic fire alarm system for buildings, the combination of an audible alarm, means for controlling the sounding of said audible alarm, means associated with said audible alarm for actuating a general alarm, a signal for indicating the building, and means for simultaneously disconnecting said general alarm means and operating said signal, substantially as described.

2. In an automatic fire alarm system for buildings, the combination of an audible alarm, means for actuating said audible alarm, means for turning in the general alarm from said audible alarm means, a visual signal for indicating the building, and means for closing circuit through said visual signal and simultaneously disconnecting the general alarm means, substantially as described.

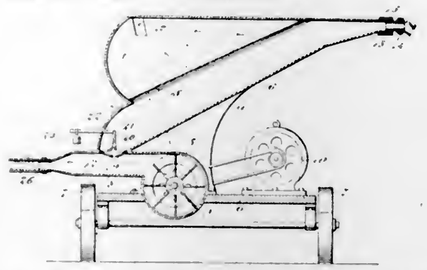
3. In an automatic fire alarm system for buildings, the combination of an audible alarm, means for sounding said audible alarm, a general alarm actuating means, a switch for closing circuit through said general alarm means, a connection for actuating said switch from the audible alarm sounding means, a visual signal for indicating the building, a switch for closing circuit through said visual signal, means for actuating said switch, and a connection between said switches for simultaneously interrupting the circuit through said general alarm means and closing the circuit through said visual signal, substantially as described.

4. In an automatic fire alarm system, the combination of an audible signal, a series of balls for sounding said audible signal, thermal-controlled means for releasing said balls, a signal for indicating the building, and means operated by said balls for closing circuit through said signal, substantially as described.

5. In an automatic fire alarm system, the combination of an audible signal, a series of balls for sounding said audible signal, thermal-controlled means for releasing said balls, means associated with said thermal-controlled means for turning in the general alarm, a signal for indicating the building, and means operated by said balls for closing the circuit through said signal, substantially as described.

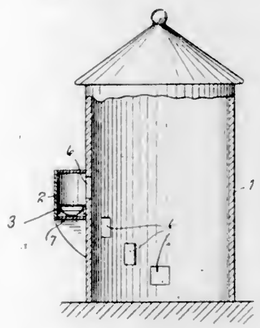
[Claims 6 to 13 not printed in the Gazette.]

1,173,073. PNEUMATIC CONVEYER. BENJAMIN L. WILLIAMS, Corning, Mo., assignor of one-fourth to Jacob A. Schmutte, Corning, Mo. Filed Apr. 19, 1913. Serial No. 762,278. (Cl. 193—10.)



In a device of the class described, a hopper-shaped main casing having an inclined bottom and provided with intake and outlet ports adjacent to the upper and lower ends, respectively, of the inclined bottom member, an inclined foraminous deflector within the casing spaced from the bottom member and from the ports adjacent thereto, a blower casing having a tangential outlet duct extending below the main casing and communicating therewith through the port adjacent to the lower end of the bottom member, a valve to obstruct said port, said valve being operable by an air current rushing through the outlet duct of the blower casing, means for regulating the resistance of the valve, a driven fan in the blower casing, and a duct connecting an inlet of the blower casing with that part of the main casing which is above the inclined foraminous deflector.

1,173,074. SILO CONSTRUCTION. FREDRICK W. WILLIAMS, Summit, S. D. Filed May 1, 1914. Serial No. 835,660. (Cl. 20—1.42.)



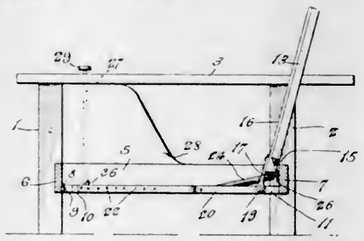
1. In a silo construction, the combination, of a cylindrical ensilage retainer provided with a plurality of openings cut therein, said openings being arranged at different elevations within said ensilage retainer and spirally about the circumference of the same, a stairway secured to the outer surface of said ensilage retainer and positioned a short distance below said openings for permitting convenient access to said openings, a protecting

casing disposed about said stairway, a chute secured to said stairway and positioned beneath the same, and trap doors formed in said stairway adjacent said openings, for permitting of the passage of ensilage through said stairway into said chute.

2. In a silo construction, the combination, of a cylindrical ensilage retainer having a plurality of openings cut therein, said openings being arranged spirally about the circumference of said retainer, means secured to the outer surface of said retainer for permitting of access to said openings for entrance into said retainer, a chute secured to the under surface of said last named means, and trap doors formed in said means adjacent said openings for permitting of the passage of ensilage through said means into said chute.

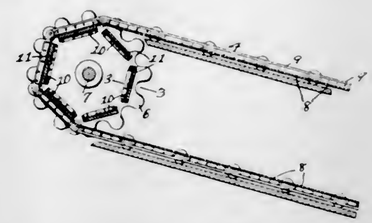
3. In a silo construction, the combination, of an ensilage retainer having a plurality of openings cut therein and arranged spirally about the circumference of the retainer, a casing secured to the outer surface of said retainer and winding spirally about the same, said openings communicating with the interior of said casing, a stairway positioned within said casing, a chute positioned within said casing beneath said stairway, certain of the tread portions of said stairway being hingedly connected to the corresponding flight sections of the same for forming trap doors for permitting access to said chute.

1,173,075. ADJUSTABLE CHAIR. ELWEARD T. WILLIAMSON, Pittsburg, Kans. Filed Oct. 2, 1914. Serial No. 864,602. (Cl. 155—27.)



In a chair, the combination, with the frame, a hinged back and a sliding spring bolt, of a sliding bar having bolt-receiving perforations, spring members for holding said sliding bar against the under side of the chair frame, and a guide frame rigidly secured to the front and back bars of the chair frame.

1,173,076. CONVEYER ATTACHMENT. ANTON WINSKI, Kool, Wyo., assignor of one-half to Henry D. Scott, Kool, Wyo. Filed Aug. 2, 1915. Serial No. 43,114. (Cl. 193—2.)



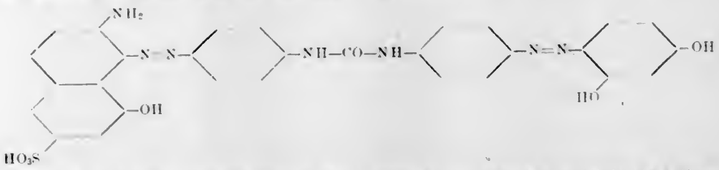
1. The combination with a conveyer consisting of endless chains passed around sprocket-wheels and the respective links of which chains are joined by transverse plates forming the conveyer bed, of means for returning said plates to normal condition when bent or distorted by loads.

2. The combination with a conveyer consisting of endless chains passed around sprocket-wheels and the respective links of which chains are joined by transverse plates forming the conveyer bed, of means carried by said sprocket-wheels for returning said plates to normal condition if bent therefrom by loads.

3. The combination with a conveyer consisting of endless chains passed around sprocket-wheels and the respective links of which chains are joined by transverse plates forming the conveyer bed, of plates carried by the sprocket-wheels at one end of said conveyer adapted to bear upon said conveyer plates and straighten the same if bent by loads or shocks.

1,173,077. DISAZO DYE. FRITZ ACKERMANN, Berlin-Friedenau, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Mar. 22, 1915. Serial No. 16,227. (Cl. 8—1.)

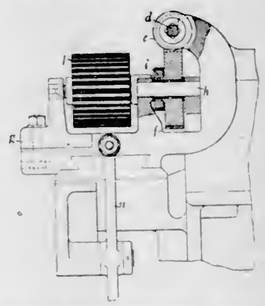
The herein-described disazo dye having most probably the formula:



which is in the state of dried and pulverized sodium salt a black-brown powder soluble in water with a red-brown color, turning to more reddish on addition of sodium hydroxid, and separating the dye in flocks when acidified; being dissolved by concentrated sulfuric acid to a brownish red solution, the dye being precipitated again by adding ice; yielding upon reduction 4.4'-diaminodiphenylurea, 1.2-diamino-S-naphthol-6-sulfonic acid and aminoresorcinol; dyeing cotton reddish brown shades, which becomes fast to washing when treated with an aldehyde, such as formaldehyde.

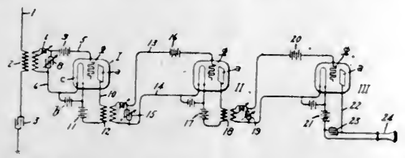
1,173,078. MACHINE AND APPLIANCE FOR CUTTING OR FORMING SCREW-THREADS. GEORGE HENRY ALEXANDER, Birmingham, England. Filed May 2, 1914. Serial No. 835,914. (Cl. 10—154.)

In screw cutting appliances of the type in which is employed a screw threaded mill like rotating tool adapted to cut or form the required screw threads around the rotating work piece when advanced on to the same by a movement at right angles to the axes of the tool and work piece, a tool having a multiple start thread of the same pitch as that to be cut and rotating relatively to the work



piece at a speed which is inversely proportional to the number of starts on the mill.

1,173,079. SELECTIVE TUNING SYSTEM. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 29, 1913. Serial No. 797,998. (Cl. 250—20.)



1. The method of selecting sustained oscillations of a given frequency from disturbing oscillations differing therefrom in frequency which consists in impressing all the oscillations upon a circuit, resonant to the frequency of the oscillations to be selected, thereby reducing the effect of disturbing oscillations in accordance with the degree of tuning of the resonant circuit, and controlling by means of the oscillations in said circuit an independent source of energy to initiate oscillations in step therewith and impressing the second set of oscillations upon a second circuit resonant to the frequency of the oscillations to be selected.

2. A receiving apparatus for electromagnetic waves comprising a plurality of tuned circuits largely opaque to oscillations of other than a given frequency, means linking adjoining circuits, said means comprising a source of energy and an energy transmitting apparatus varying in conductivity with impressed oscillations for initiating oscillations in step with received oscillations and means associated with the last circuit of the series for detecting the oscillations.

3. A tuned receiving system for detecting sustained oscillations of a given frequency comprising a plurality of circuits resonant to the frequency of the oscillations to be detected and arranged in cascade, relay devices joining each of said circuits to another comprising an evacuated envelop, an electron-emitting cathode, a coöperating anode, and a grid, said device being connected to one of said circuits at the cathode and grid and to another circuit at the cathode and anode and a local source of energy in the second circuit.

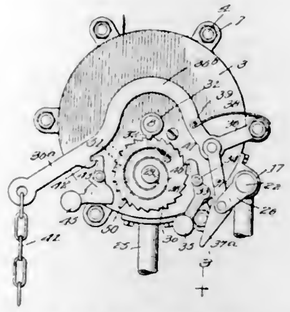
4. The combination of an energy controlling device comprising an evacuated envelop, an incandescent cathode, an anode, and a grid for statically controlling the transfer of energy between said electrodes, a resonant circuit connected to the cathode and grid of said device, a second circuit resonant to the same frequency as the first circuit connected to the cathode and anode of said device and a local source of energy in the latter circuit.

5. The combination of an electron discharge device comprising a highly evacuated envelop, an incandescent cathode, an anode, means for statically controlling the energy transfer between cathode and anode, a resonant circuit connected to the cathode and said static controlling means, a source of potential in said circuit, a second circuit, resonant with respect to the same frequency as the first circuit, connected to the cathode and anode of said device and a local source of energy in said circuit.

[Claims 6 to 14 not printed in the Gazette.]

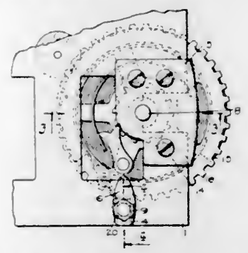
1,173,080. METER-ACTUATED CUT-OFF DEVICE. NORMAN ANDERSON, Duluth, Minn. Filed Jan. 22, 1915. Serial No. 3,709. (Cl. 221—101.)

1. A device of the character specified, comprising in combination with a rotating water meter having an inlet and an outlet, and a valve for controlling the inlet, said valve being rotatable, an arm connected with the valve for operating the same, a lever pivoted to the meter casing and connected with the arm for opening the valve when the lever is depressed, a normally operative pawl for holding the lever in depressed position, a toothed wheel connected with the meter and rotated thereby, a ratchet wheel engaged by the toothed wheel for moving the ratchet wheel a distance of one tooth for every complete rotation of the meter, a spring for returning the ratchet wheel to original position, a normally operative pawl for holding the wheel from reverse movement when it is moved by the meter, means operated by the lever when it is lifted for releasing the last named pawl, said ratchet wheel having a series of radial openings, and a pin for engaging one of the openings and extending beyond the periphery of the ratchet wheel to engage the first named pawl to release the same when the pin passes the said pawl, and a spring for returning the lever to normal position.



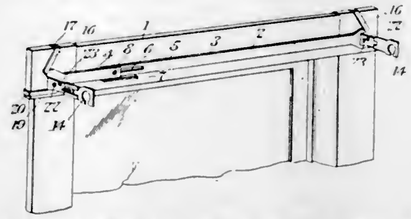
2. A device of the character specified, comprising in combination with a rotating water meter having an inlet and an outlet, a valve controlling the inlet, said valve being rotatable, an arm secured to the valve for operating the same, a ratchet wheel, a connection between the said wheel and the meter for moving the wheel a distance of one tooth for each complete rotation of the wheel, a normally operative pawl for holding the wheel from reverse rotation during its movement by the meter, a common means for opening and closing the valve and for releasing the said pawl when the valve is closed, releasable means for holding the said valve operating means with the valve open, means adjustable with respect to the ratchet wheel for releasing said pawl, and a spring in connection with the said valve opening means for closing the valve when the said means is released from the pawl.

1,173,081. DETACHABLE MAINSPRING FOR CLOCKS. ALBERT ASLESON, Redwood Falls, Minn. Filed May 12, 1915. Serial No. 27,605. (Cl. 58—52.)



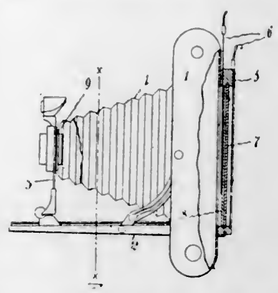
In a device of the character described, the combination with a clock provided with a frame, a standard, and works mounted in said frame, said frame being formed of a pair of plates, one of said plates being provided with a notch adapted to receive one end of said standard, said standard being adapted to be connected with one end of the spring of said clock, a hook member having a pair of depending hook portions, said hook member being arranged on said standard with one hook portion fitting into said notch and the other hook portion overlapping part of said frame, and a clamping member engaging said standard and pressing against said hook member for preventing the same from becoming disengaged from said frame.

1,173,082. WINDOW SHADE AND CURTAIN SUPPORT. VAL C. AYERS, Altoona, Pa. Filed June 18, 1915. Serial No. 34,937. (Cl. 156—23.)



A window shade and curtain support formed from sheet metal stamped to provide a longitudinal bar, arms integral with the ends of said bar respectively and projecting outwardly therefrom at right angles thereto and formed with companion apertures and slots respectively designed to receive the trunnions of the window shade, curtain rod supporting plates slidably mounted upon said arms respectively and each having the longitudinal edges thereof at the rear end portion bent upon themselves to embrace the longitudinal edges of the adjacent arm and the forward end portion formed with an opening alining with the openiug in the other plate to receive the curtain pole and with a slot contiguous to the bottom of the opening through which the curtain may pass, straps formed on the ends of said bar respectively above said arms and disposed at acute angles to the bar and having the upper ends thereof bent backwardly and then downwardly to embrace the upper edge of the window frame, and straps formed on the ends of said bar respectively below said arms and projecting outwardly from the bar in a horizontal plane and having the outer ends thereof bent rearwardly and then inwardly to embrace the side edges of the window frame.

1,173,083. CAMERA. ERNEST V. BANKS, Toronto, Ontario, Canada. Filed May 3, 1913. Serial No. 765,340. (Cl. 95—11.)



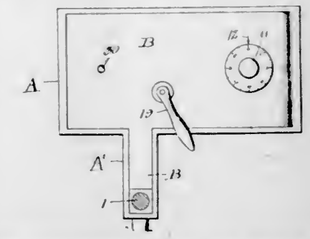
1. A camera provided with means for supporting a sensitive film and its transparent support, and having a forwardly facing solid mirror supported therein behind the position occupied by the sensitive surface and in position to be in close contact with the back of said support, so that the support lies between the mirror and the sensitive surface.

2. A camera provided with means for supporting a sensitive film and its transparent support, and having a forwardly facing solid mirror supported therein behind the position occupied by the sensitive surface and in position to be in close contact with the back of said support, and a second mirror supported at the front of the camera about the lens and facing rearwardly.

3. A camera provided with means for supporting a sensitive surface and means for supporting a solid mirror behind and close to the support of the sensitive surface, so that the support lies between the mirror and the sensitive surface.

4. For use in a camera, means for supporting a sensitive film and the transparent support carrying said film, and a solid mirror surface carried by the supporting means close behind the position of the said transparent support for the film.

1,173,084. MOTOR-CAR PROTECTOR. HENRY W. BEECHER, Makanda, Ill. Filed June 22, 1915. Serial No. 35,600. (Cl. 21—90.)

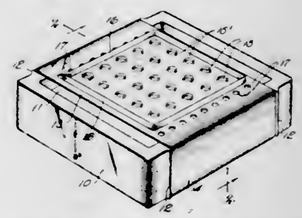


1. The combination of a casing, a steering gear latch bar, a locking bolt, manually operable means for simultaneously actuating said latch bar and bolt, an electric ignition switch opened and closed by the sliding of said bolt, one of the switch members being actuated by said bolt, lock mechanism for permitting and preventing the movement of said locking bolt, a second electric switch embodying a key hole and an insertible key, and means on said bolt forming a shiftable closure for said key hole.

2. The combination of a casing, a switch board forming one face of said casing, a locking bolt, manually operable means for sliding said bolt, an electric switch opened and closed by the sliding of said bolt, one of the switch members being actuated by said bolt, lock mechanism for permitting and preventing the movement of said slidable locking bolt, a second electric switch embodying a key hole and an insertible key, and a shutter for said key hole shiftable simultaneously with said locking bolt.

3. The combination of an ignition circuit switch, an electric starter switch embodying a key hole and a key insertible therein, a steering shaft latch bar, and manually controlled means for opening the ignition switch, barring the key hole of the starter switch and forcing the latch bar into engagement with the steering shaft.

1,173,085. MOISTENING DEVICE. DAVID G. BEECHING, New York, N. Y. Filed Dec. 7, 1915. Serial No. 65,527. (Cl. 91—54.4.)



1. In a moistening device, the combination of a reservoir for holding a supply of water, a flexible apron extending across the open top of the reservoir, means to hold the apron in substantially horizontal form spaced above the body of water but permitting a portion of the apron to be depressed into the water, said apron being provided with one or more holes therethrough through which water may pass upwardly to the upper surface of the apron, and means to retain a film of water upon the upper surface of the apron.

2. In a moistening device, the combination of a reservoir for holding a body of water and having on open

top, a flexible apron extending across the open top of the reservoir and having a hole therethrough through which a quantity of water may pass upwardly when the apron is depressed into the water, means surrounding the hole serving to retain a certain portion of the water above the apron in a film, and means connected to the ends of the apron to hold the same in place, substantially as set forth.

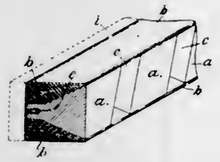
3. In a moistening device, the combination of a reservoir to hold a body of water, an apron extending across the open top of the reservoir and depressible into the body of water, said apron having a hole formed therethrough to permit a small quantity of water to pass upwardly to the upper surface thereof, said apron including means surrounding said opening to retain a film of water on the upper surface of the apron when the apron returns to normal position, and means serving to hold the apron in place upon the reservoir.

4. In a moistening device, the combination of a reservoir to hold a supply of water and having an open top, an endless belt surrounding the reservoir and extending across the top of the same, said belt being depressible from the top into the water to receive thereon a film of water, and means carried upon the upper surface of the belt to retain said film of water thereon to be held by the belt in spaced relation to the supply.

5. In a moistening device, the combination of a reservoir to hold a supply of water, an endless belt surrounding the body and extending across the open top thereof, the part of the belt extending across the reservoir being flexible and resilient and depressible into the water but normally held by its resiliency spaced above the water, said flexible part being adapted to receive upon its upper surface a film of water when depressed into the supply, and a continuous curb extending around that portion of the belt adapted to be depressed into the water and serving to retain a supply of water in the film upon the upper surface thereof.

[Claim 6 not printed in the Gazette.]

1,173,086. ENGINE OR MACHINE PACKING. GEORGE WILLIAM BELDAM, Ealing, England. Filed Oct. 19, 1914. Serial No. 867,470. (Cl. 137—115.)

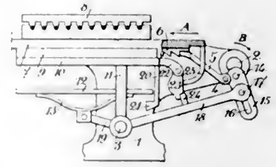


1. A rod packing comprising in combination a trough-shaped carrier provided at its bottom with an inwardly extending rib formed by crimping the material from which the trough-shaped member is formed, a wire disposed within the recess formed by crimping the rib, a plurality of blocks spaced apart from each other and disposed within the carrier, said blocks being provided with bifurcated ends which are adapted to engage the rib.

2. A rod packing comprising in combination a trough-shaped carrier provided with an inwardly extending rib, a wire disposed in the said rib, and a plurality of spaced blocks provided with bifurcated ends and disposed in the said carrier with the rib and wire in the bifurcated ends.

3. A rod packing comprising in combination a trough-shaped carrier provided at its bottom with a plurality of inwardly extending ribs, a plurality of wires disposed within the ribs, and a plurality of rows of separate blocks disposed within the said carrier, the blocks of each row being provided with bifurcated ends and being engaged by one of the ribs and wires.

1,173,087. CIGAR-DUMMY MACHINE. EMILE BELOT, Paris, France. Filed July 23, 1914. Serial No. 852,681. (Cl. 131—9.)



1. In a machine for making cigar dummies, a device for pressing dummy molds comprising a fixed plate, a movable plate, a swinging lever, a spring interposed between such lever and the said movable plate, a pawl adapted to engage the said lever, means whereby to move such lever and means whereby to disengage the pawl of the said lever.

2. In a machine for making cigar dummies, a device for pressing the dummy molds comprising a fixed plate, a movable plate, a lever adapted to press the movable plate toward the fixed plate, a pawl for engaging such lever, a slidable plate carrying a mold, and an abutment member on the said slidable plate adapted to actuate the said pawl.

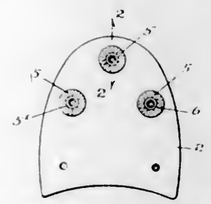
3. In a machine for making cigar dummies, a device for pressing the dummy molds, comprising a fixed plate, a movable plate, a lever adapted to press the movable plate toward the fixed plate, a pawl adapted to engage such lever, a shaft having a crank pin, a connecting-rod having a groove adapted to move the said lever, a slidable plate carrying a mold, and having an abutment projection, and means moved by such shaft for advancing such mold carrying plate, the said abutment projection being adapted to actuate the said pawl.

4. In a machine for making cigar dummies, a device for pressing the dummy molds, comprising a fixed plate, a movable plate, a lever adapted to press the movable plate toward the fixed plate, a pawl adapted to engage such lever, a slidable mold carrying plate, and means moved by such mold carrying plate whereby to actuate the said pawl.

5. In a machine for making cigar dummies, the combination of a shaft of the said machine, a press for the dummy molds, means moved by such shaft to pinch the press, a pawl adapted to maintain the press pinched, a slidable mold carrying plate, and means moved by such mold carrying plate whereby to actuate the said pawl.

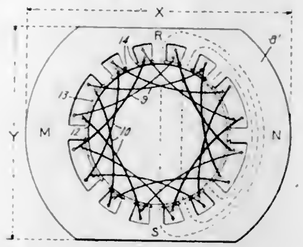
[Claim 6 not printed in the Gazette.]

1,173,088. FRICTION-PLUG RUBBER HEEL. FRANK BERENSTEIN, Chelsea, Mass. Filed Nov. 11, 1915. Serial No. 60,951. (Cl. 36—59.)



In a rubber heel having a recess, a hollow cylindrical plug of rubber-coated fabric material located within and cemented to the side wall of said recess, a metal back plate extending across and having bracing engagement with the top of said plug, and a central hollow post fitting within the perforation of said plug and separate from said back plate, said post being of a non-metallic material comparatively soft with relation to said back plate and to which the rubber-coated material of the plug proper will closely adhere, the interior diameter of said post being comparatively large to receive the head of a fastening device, and said back plate having a central perforation of small size to receive the shank of said device, the marginal portion of said back plate surrounding the central perforation thereof extending across the perforation of the post and acting as a backing for the head of said device.

1,173,089. DYNAMO-ELECTRIC MACHINE. SVEN R. BERGMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Continuation in part of application Serial No. 501,050, filed June 9, 1909. This application filed Aug. 17, 1914. Serial No. 857,083. (Cl. 171—252.)



1. In direct current dynamo-electric machine, a field magnet having an approximately polygonal outer periphery and a slotted circular inner periphery, and a distributed exciting winding carried in the slots of said field magnet and producing magnetic poles at points on the inner periphery of the field magnet opposite the centers of the sides of the polygon formed by the outer periphery, said exciting winding being composed of uniform coils arranged to form a lap winding.

2. In a direct current dynamo-electric machine, a field magnet having an approximately polygonal outer periphery and a slotted circular inner periphery, and a distributed exciting winding carried in the slots of said field magnet and producing magnetic poles on the inner periphery of the field magnet at points where the cross sectional area of the magnetic material of the field magnet is substantially a minimum, said exciting winding being so arranged that it produces a flux having substantially a sine wave form.

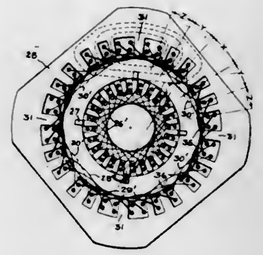
3. In a direct current dynamo-electric machine, a field magnet having a slotted circular inner periphery, and a distributed exciting winding composed of uniform coils carried in the slots of said field magnet and arranged as a lap winding, the magnetic material of the field magnet being of such configuration and so proportioned that the maximum flux flows through those portions of the field magnet of maximum cross sectional area and the minimum flux flows through those portions of the field magnet of minimum cross sectional area.

4. In a direct current dynamo-electric machine, a field magnet having a slotted circular inner periphery, and a distributed exciting winding carried in the slots of said field magnet and arranged to produce magnetic poles on the inner periphery of the field magnet, said exciting winding being composed of uniform coils arranged to form a lap winding which produces a flux having substantially a sine wave form, said field magnet having an approximately polygonal outer periphery of such configuration and proportions that the portions of the field magnet of minimum cross sectional area substantially coincide with the centers of the magnetic poles produced by said exciting winding on the inner periphery of the field magnet.

5. In a direct current dynamo-electric machine, a field magnet having an approximately polygonal outer periphery and a slotted circular inner periphery, and an exciting winding carried in said slots and arranged to produce magnetic poles on the inner periphery of the field magnet, the exciting winding being a distributed uniform lap winding so arranged that the flux density of each pole varies generally as a sine curve from a maximum at the center of the pole to zero intermediate two poles, and the field magnet being of such configuration and so proportioned that the portions of the field magnet of minimum cross sectional area substantially coincide with the portions of the poles of maximum flux density, and the portions of the field magnet of maximum cross sectional area occur between adjacent poles.

[Claim 6 not printed in the Gazette.]

1,173,090. DYNAMO-ELECTRIC MACHINE. SVEN R. BERGMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 21, 1914. Serial No. 857,851. (Cl. 171—228.)



1. In a direct current dynamo-electric machine, a substantially full-pitch commuted armature winding, a field magnet having its magnetic material distributed around the armature winding to form a substantially uniform air-gap and slotted on its inner periphery and an exciting winding and a compensating winding carried in the field magnet slots, the exciting winding and the compensating winding each being a substantially fifty per cent. pitch two-layer lap-winding completely distributed over the inner periphery of the field magnet.

2. A direct current dynamo-electric machine comprising in combination a substantially full pitch commuted armature winding, a field magnet having a plurality of distributed slots per pole, and a two-layer exciting winding and a two-layer compensating winding each composed of uniform coils of substantially fifty per cent. pitch carried in the slots in said field-magnet.

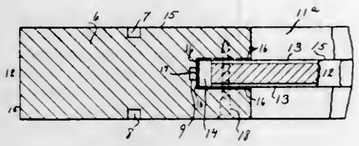
3. A direct current dynamo-electric machine comprising in combination a substantially full pitch commuted armature winding, a field magnet having a plurality of distributed slots per pole, and a two-layer exciting winding and a two-layer compensating winding each composed of uniform coils of substantially fifty per cent. pitch carried in the slots in said field magnet and interleaved to form mechanically a single winding.

4. In a direct current dynamo-electric machine, a substantially full-pitch commuted armature winding, a field magnet having its magnetic material distributed around the armature winding to form a substantially uniform air-gap and slotted on its inner periphery, and a completely distributed exciting winding and a completely distributed compensating winding each of substantially fifty per cent. pitch carried in the field magnet slots, said exciting winding and said compensating winding being each a two-layer winding composed of uniform overlapping coils interleaved so that the two windings form mechanically a single two-layer winding.

5. A direct current dynamo-electric machine comprising in combination a commuted armature winding, a field magnet having a plurality of distributed slots and definite commutating teeth, a winding carried in the field magnet slots, non-magnetic material closing the adjacent slots on each side of each commutating tooth, and magnetic material closing the other slots in said field magnet.

[Claims 6 to 13 not printed in the Gazette.]

1,173,091. METAL-COVERED DOOR. ANDREW BEYRLE, Los Angeles, Cal. Filed July 11, 1914. Serial No. 850,394. (Cl. 20—35.)

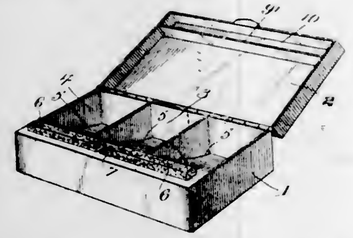


1. In a sheet metal covered door a stile member having a groove therein and provided with one piece of sheet metal covering the stile on the ends, faces and outer edges thereof and another piece of sheet metal covering the faces of said groove in the edge of the stile, said two pieces of sheet metal being lock seamed together within the said grooves.

2. In a sheet metal covered door the combination of a marginal frame comprising side stiles having grooves therein and upper and lower rail members, each of the members comprising said frame having a piece of sheet metal covering the exterior surface when positioned; and a second piece of sheet metal covering the faces of said grooves therein, said pieces of metal as to each member being lock seamed together within said grooves.

3. A sheet metal covered door comprising wooden stiles, cross rails and panels, each of the stiles and cross rails being covered by pieces of metal, said metal covering all the exterior surfaces when positioned and the surfaces of the grooves in said members, the metal pieces of each member being lock seamed together said seams being within the grooves and the several members being united by screws passing through and into the overlapping portions of the various members.

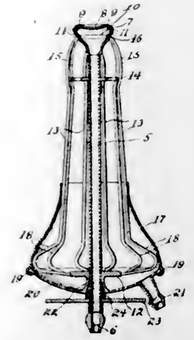
1,173,092. STAMP-RECEPTACLE. SPENCER BICKERTON, Honolulu, Hawaii. Filed Apr. 26, 1915. Serial No. 23,992. (Cl. 91—54.4.)



1. In a device for the purpose set forth, a box like structure including a hinged closure, said box having a curved partition dividing the same into a stamp compartment and a water receptacle, the water receptacle having a closed top, an absorbent member projecting through the top and entering the water receptacle, and a valve inlet for the said water receptacle.

2. In a device for the purpose set forth a flanged member having an open top, a curved partition in the member dividing the same into a stamp compartment and into a water receptacle arranged forward of the stamp compartment, said water receptacle having a closed top arranged in a line with the tip of the member, and an absorbent element projecting above the top and passing through an opening in the said top of the water receptacle, a valve inlet for the top, a flanged closure for the member, and said closure comprising two compartments, one of which overlying the stamp compartment and the other inclosing the projected end of the absorbent element and the valve closure.

1,173,093. SYRINGE. TALBERT W. BLAKESLEE, Erie, Pa. Filed Jan. 16, 1915. Serial No. 2,726. (Cl. 128—45.)



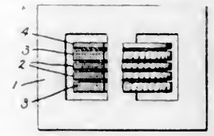
1. A syringe of the class described comprising a stem having a nipple at one end, a flared nozzle at the opposite end of the stem and having a concaved outer concentrically perforated surface, a perforated rounded peripheral edge, and a reduced annular portion forming a shoulder rearwardly of the rounded edge, a discharge cup loosely fitted on the stem to permit sliding movement of the latter therethrough and having a central forwardly tapering hollow boss, a handle fixed to the stem, a packing ring surrounding the stem and working against the handle for engagement in the hollow boss to form a sealed joint between the cup and the said stem, a cage fixed to the cup and concentrically disposed about the stem and having resilient spreader fingers, means on the stem for spreading the said fingers on the sliding of the stem, and a resilient sleeve surrounding the cage and detachably engaged with the periphery of the cup, the said resilient fingers being formed with slightly outwardly bowed free ends to engage and become seated against the shoulder on the nozzle rearwardly of the rounded edge thereof.

2. A syringe of the class described comprising a stem having a nipple at one end a flared nozzle at the oposite end of the stem and having a concaved outer concentrically perforated surface, a perforated rounded peripheral edge, and a reduced annular portion forming a shoulder rearwardly of the rounded edge, a discharge cup loosely fitted on the stem to permit sliding movement of the latter therethrough and having a central forwardly tapering hollow boss, a handle fixed to the stem, a packing ring surrounding the stem and working against the handle for engagement in the hollow boss to form a sealed joint between the cup and the said stem, a cage fixed to the cup and concentrically disposed about the stem and having resilient spreader fingers, means on the stem for spreading the said fingers on the sliding of the stem, a resilient sleeve surrounding the cage and detachably engaged with the periphery of the cup, the said resilient fingers being formed with slightly outwardly bowed free ends to engage and become seated against the shoulder on the nozzle rearwardly of the rounded edge thereof, and a nipple integral with and protruding from the cup.

1,173,094. TERTIARY WINDING. LOUIS F. BLUME, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 11, 1913. Serial No. 778,515. (Cl. 175—356.)

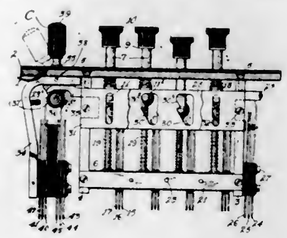
1. In a system of distribution, the combination with Y-connected primary transformer coils and Y-connected secondary transformer coils, of delta connected auxiliary secondary transformer coils in poor inductive relation to said primary and secondary coils.

2. In a system of distribution, the combination with Y-connected primary transformer coils and Y-connected secondary transformer coils, of delta connected auxiliary secondary transformer coils respectively linked by the same magnetic circuits as the primary and secondary coils and located at one end only of the winding spaces



in poor inductive relation to said primary and secondary coils.

1,173,095. PARTY-LINE KEY. ALVA J. CARTER, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 8, 1914. Serial No. 830,334. (Cl. 179—177.)



1. A party line key comprising a rocking actuating member having locking and non-locking operating positions, reciprocating ringing members, having normal and locked operating positions, and means whereby the actuation of said rocking member to a non-locking position will restore a previously actuated ringing member and the actuation of a ringing member will restore the rocking member if in a locked position.

2. A party line key comprising a two-way rocking actuating member, reciprocating actuating members having normal and locked operating positions, and means whereby when a reciprocating member is in a locked position the subsequent operation of said rocking member one way will effect the restoration thereof, and when said rocking member has been actuated the other way a subsequent actuation of a reciprocating member will restore said rocking member.

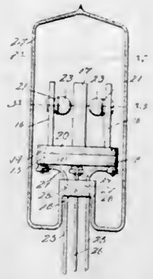
3. An operator's listening and ringing key comprising a plurality of actuating buttons each having a normal, an indicating and a ringing position, a rocking actuating member having a normal and a plurality of operating positions, and means whereby the actuation of one of said actuating buttons restores the said actuating member from one of its operating positions and the operation of said actuating member to another of its operating positions restores an actuating button.

4. A party line ringing key comprising a rocking actuating member having a normal and two actuated positions, reciprocating actuating members having normal and off-normal positions, interconnecting mechanism extending between said rocking member and said reciprocating members whereby when a reciprocating member is actuated it will restore the said rocking member from one of its positions and whereby when said rocking member is operated to its opposite actuated position it will restore a previously operated reciprocating member.

5. A party line key comprising a rocking actuating member having a locking and a non-locking operating position, reciprocating actuating members having normal, indicating and operating positions, and means whereby the actuation of the rocking member to its non-locking position restores a reciprocating member from its indicating position and the actuation of a reciprocating member from indicating to operating position restores the locking member from its locked position.

[Claims 6 and 7 not printed in the Gazette.]

1,173,096. LIGHTNING-ARRESTER. FRANK S. CHAPMAN, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed May 20, 1910. Serial No. 562,416. (Cl. 175—30.)



1. A lightning arrester comprising a pair of electrodes spaced so as to form a gap and a contact element secured to and in electrical contact with one of said electrodes and out of contact with the other which is moved into contact with the other of said electrodes by the heat generated at the gap due to an abnormal discharge across said gap.

2. A lightning arrester comprising a pair of electrodes arranged so that an open space intervenes between the same which can be traversed by a discharge without injury to said electrodes, a contact element and a fusible material which is melted by a continued discharge of abnormal voltage and by releasing said contact element allows the same to close the space between said electrodes.

3. A lightning arrester comprising a pair of electrodes spaced so as to form a gap, a contact element, and a fusible material which secures the contact element to and in electrical contact with one of said electrodes and out of contact with the other, said contact element when released adapted to come into contact with said other electrode and close said gap.

4. A lightning arrester comprising a pair of carbon plates spaced apart, a metal ball, and a fusible material which secures said ball to and in electrical contact with one of said carbon plates and out of contact with the other; said ball being adapted when released by the melting of the fusible material to come into contact with said other plate and close the gap between said plates.

5. A lightning arrester comprising a pair of carbon plates, a cup secured to one of said plates, a body of solder in said cup, and a ball secured to said cup by said solder; said ball being adapted when released by the melting of the solder to close the gap between said plates.

[Claims 6 to 17 not printed in the Gazette.]

1,173,097. TURBINE-BLADE. PAUL CHRISTLEIN, Baden, and ERIC BROWN, Bahnhofweg, Switzerland, assignors to Aktiengesellschaft Brown Boveri & Cie, Baden, Switzerland. Filed Mar. 5, 1915. Serial No. 12,404. (Cl. 253—77.)

1. As a new article of manufacture a conical turbine blade having its concave side formed with the place of greatest curvature situated on the entrance side to produce a blade of substantially constant strength throughout its length.

2. As a new article of manufacture a conical turbine blade having its concave side formed with the place of greatest curvature situated on the entrance side to produce a blade of substantially constant strength and having a flat surface of tapering form formed at the rear of the blade to produce the proper entrance angle.

3. As a new article of manufacture a conical turbine blade having its concave side formed with varying curvature throughout its length, and being provided with a flattened surface at the rear of the blade on the entrance side to provide the proper entrance angle.

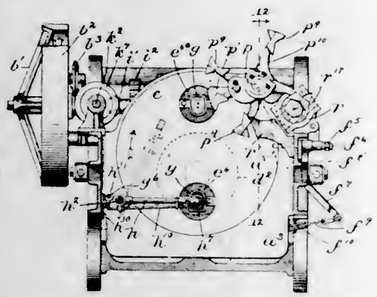
4. As a new article of manufacture a conical turbine blade having its side formed with the place of greatest curvature situated on the entrance side to provide a blade of substantially constant strength and being further provided at its rear side with a flattened surface on the entrance side presenting a tapering surface, wider at the base than at the tip of the blade, to provide the proper entrance angle.



5. As a new article of manufacture two conical turbine blades having entrance and exit angles, such that the back of one blade is parallel with the face of the adjacent blade for a short distance at the exit end.

[Claim 6 not printed in the Gazette.]

1,173,098. HEEL-MACHINE. FREDERICK W. COTTON, Boston, Mass.; Waterman L. Williams, Holden, Mass., executor of said Cotton, deceased. Filed July 28, 1913, Serial No. 781,491. Renewed May 20, 1915. Serial No. 29,450. (Cl. 12—42.)



1. A machine of the character specified comprising in one organized machine, means for cutting heel lifts, means for pasting each lift after it is cut, means for assembling a predetermined number of the lifts, and means for throwing the pasting mechanism out of operation in connection with the top lift of the series.

2. A machine for automatically making heels from a sheet of leather, comprising means for cutting lifts from the sheet, means for pasting and assembling a predetermined number of the lifts, means for throwing the pasting mechanism out of operation upon the uppermost lift of the series, means for pegging the assembled lifts, and means for pressing the assembled series.

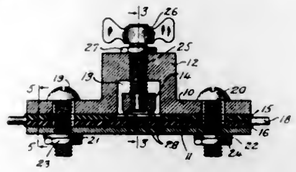
3. In a machine of the character specified, the combination with the rotary table and the die carried thereby and provided with an ejector, of an oscillatory conveyer-arm or sweep, means for actuating the same, and a frictionally restrained member adapted to coöperate with said arm in gripping the heel-blank and conveying it from the die to one side of the table.

4. In a machine of the character specified, the conveyer device comprising an oscillatory arm having a gripping jaw or head, means for actuating said arm, and a friction-journaled rotary spider having gripping jaws or heads on its arms, adapted to coöperate with the arm-jaw in gripping and transporting the heel-blank.

5. In a machine of the character specified, the conveyer device comprising a friction-journaled rotary spider having gripping jaws or heads on its arms, an oscillatory arm having a jaw or head normally in the same plane with said jaws or heads, and means for displacing said oscillatory arm on its reverse stroke to allow the jaw thereon to pass a spider-jaw.

[Claim 6 not printed in the Gazette.]

1,173,099. TEST-CONNECTOR. JOHN DAVIS, Bloomington, Ill. Filed Jan. 16, 1915. Serial No. 2,516. (Cl. 173—273.)



1. A test connector comprising an inclosing casing separable for the insertion of wires and having relatively large flat opposing faces for bearing on opposite sides of a plurality of wires spaced from each other and extended lengthwise of said casing, flat sheets of relatively soft insulating material covering said faces and embracing said wires upon opposite sides so as to embed them and thereby insulate them from each other and from said casing and said sheets engaging each other and said faces so as to provide a waterproof closure to protect the interior of said casing from the weather, and a contact within said casing operable from without said casing to electrically connect and disconnect said wires.

2. A test connector comprising two plates or blocks having opposing faces, a piece of relatively soft insulation resting upon each of said opposing faces, one of said pieces having a hole through it, means for clamping said plates and the intervening insulating pieces together, a contact movable in a cavity in one of said plates or blocks and in said hole in said piece of insulation, and means for controlling the movement of said contact from the outside of the connector to make and break contact with wires passing through said connector.

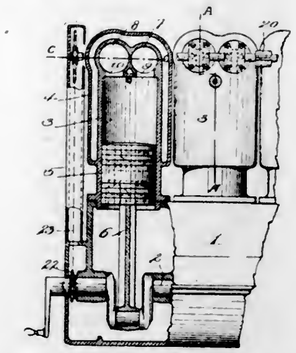
3. A test connector comprising two plates or blocks having opposing faces, each of said faces having two grooves registering with the grooves in the opposing faces, a piece of relatively soft insulation resting upon each of said opposing faces, one of said pieces having an opening through it, means for clamping said plates and the intervening insulating pieces together, a metal contact member located in a cavity in one of said plates, and means for moving said contact member in the opening in said piece of insulation to make and break contact with wires held by the connector.

4. A test connector comprising two plates or blocks having opposing faces, each of said faces having two grooves registering with the grooves in the opposing faces, a piece of relatively soft insulation resting upon each of said opposing faces, one of said pieces having an opening through it, means for clamping said plates and the intervening insulating pieces together, a movable stem passing through one of said plates or blocks into a cavity formed on its inner side, a bridging contact loosely pivoted to the inner end of said stem, and means at the outer end of said stem for moving said contact into and out of engagement with the wires held by the connector.

5. A test connector comprising two plates or blocks having opposing faces, a piece of relatively soft insulation resting upon each of said opposing faces, means for clamping said plates and the intervening insulating pieces together, a contact movable in a cavity in one of said plates or blocks, and means for controlling the movement of said contact from the outside of the connector to make and break contact with wires passing through said connector.

[Claim 6 not printed in the Gazette.]

1,173,100. INTERNAL-COMBUSTION ENGINE. CHARLES DE LUKACSEVICS, West Nutley, N. J., assignor to George W. Morgan, New York, N. Y. Filed Sept. 13, 1911. Serial No. 649,100. (Cl. 121—24.)



1. In an internal combustion engine, the combination of a casing forming a cylinder, a piston operative therein, the casing being provided with a pair of cylindrical valve chambers, each having a port in one side thereof which communicates with the combustion chamber of the cylinder and having intake and exhaust passages leading to and from the respective valve chambers, the intake passage leading axially into one end of its respective valve chamber, and separate and solid intake and exhaust piston valves independently reciprocable in the respective valve chambers and movable transversely across the ports in the sides thereof.

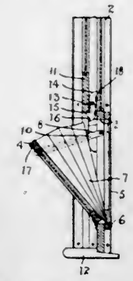
2. In an internal combustion engine, the combination of a casing forming a cylinder, a piston operative therein, the casing being provided with a pair of cylindrical valve chambers, each having a port in one side thereof which communicates with the combustion chamber of the cylinder and having intake and exhaust passages leading to and from the respective valve chambers, the exhaust passage leading axially from one end of its respective valve chamber, and separate and solid intake and exhaust piston valves independently reciprocable in the respective valve chambers and controlling the ports in the sides thereof.

3. In an internal combustion engine, the combination of a casing forming a cylinder, a piston operative therein, the head of the cylinder casing having a pair of cylindrical valve chambers arranged with their axes parallel and each having a port in one side thereof which communicates with the combustion chamber of the cylinder, the cylinder casing having an intake passage leading to one end of one of said valve chambers and having an exhaust passage leading from one end of the other valve chamber, and separate and solid intake and exhaust piston valves independently reciprocable in the respective valve chambers and having their ends controlling the respective ports in the sides of their valve chambers.

1,173,101. WINDOW-VENTILATOR. ROBERT G. DICKSON, Toronto, Ontario, Canada. Filed Feb. 15, 1915. Serial No. 8,145. (Cl. 98—31.)

1. In a window ventilator, the combination with the outer sash having a ventilator member adapted to extend inwardly therefrom, of an obstructing member adapted to extend into the path of movement of the inner sash to guard said ventilator member when in its open position from the inner sash being lowered thereon.

2. In a window ventilator, the combination with a window sash having a swinging ventilator sash therein and an inner sash, of an obstructing member arranged between the inner and outer sash adapted to extend into the path of movement of the inner sash upon the opening of the ventilator to prevent the downward movement of the inner sash, and means adapted to move said obstructing member on the closing of the ventilator.



3. In a window ventilator, the combination with an outer sash having an inwardly extending ventilator, and an inner sash, of an obstructing member arranged between the inner and outer sash above the ventilator sash and adapted to extend beneath the inner sash when raised upon the opening of the ventilator, and a lug projecting from the ventilator adapted to engage said obstructing member to withdraw it from the path of downward movement of the inner sash upon the closing of said ventilator.

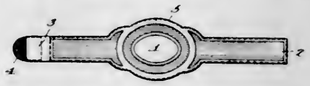
4. In a window ventilator, the combination with an outer sash having an inwardly extending ventilator and an inner sash, of a pivotal obstructing member arranged between said sash and adapted to swing beneath the inner sash when raised and upon the opening of the ventilator, and a lug projection on the ventilator adapted to engage said pivotal member to swing it back out of the path of the inner sash.

1,173,102. TATTING-SHUTTLE. CHARLES F. DILL, Glenarm, Ill. Filed Sept. 14, 1914. Serial No. 861,732. (Cl. 66—10.)



In a tatting shuttle, a main body having side walls tapering together at each end and united adjacent the ends, a thread reel provided with a centering depression on the outer faces of said reel, said main body having inwardly extending pivoting lugs on the inner faces of the side walls positioned to enter the centering depressions on the reel, and each of said side walls provided with a cut-away portion in one of the edges thereof whereby the thumb of an operator may revolve the reel in said body, substantially as described.

1,173,103. CIGAR-BAND. CHARLES E. EDWARDS, New York, N. Y. Filed Dec. 9, 1912, Serial No. 735,873. Renewed May 4, 1915. Serial No. 25,841. (Cl. 40—21.)

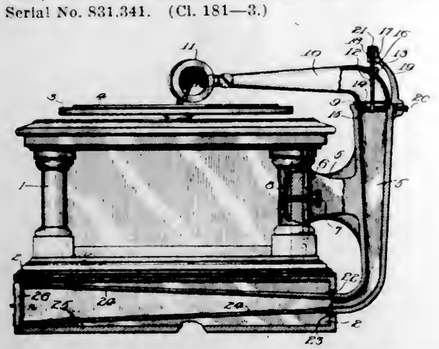


1. A cigar band provided with ends, one of which is provided with paste on the bottom side thereof and the other with paste on the top whereof whereby said ends are adapted to be secured together, and a strip of material having one end secured to the paste of one end in a manner whereby when said ends are secured together said strip will have one end between said pasted ends and the other end free, for the purpose set forth.

2. A cigar band having ends constructed to be secured together around a cigar and having an edge adapted to

engage the cigar in a manner whereby sliding is prevented, and means to rupture the connection between said ends when secured together around a cigar, as and for the purpose set forth.

1,173,104. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed July 31, 1907, Serial No. 386,381. Renewed Apr. 11, 1914. Serial No. 831,341. (Cl. 181—3.)



1. In a talking machine, the combination with a cabinet of a non-vibratory bracket secured to said cabinet, and provided with a sound conducting passage extending substantially from the top plane of the cabinet to the base thereof, a hollow sound box arm over said cabinet and an amplifier within said cabinet and out of contact therewith carried by said bracket.

2. In a talking machine, the combination with a cabinet of a bracket secured to the exterior of said cabinet, and provided with a sound conducting passage extending substantially from the top plane of the cabinet to the base thereof, a hollow sound box arm carried by said bracket, and an amplifier within the base of said cabinet and out of contact therewith and supported by said bracket.

3. In a talking machine, a hollow bracket provided with a circular socket at its upper end, a hollow sound box arm terminating in a quarter turn downwardly and seated in said socket, a bridge across the open end of said bracket, a rigid arm projecting upwardly from said bracket and provided with a socket, and a jointed separable spindle for said sound box arm carried by said bridge and slidably resting in the socket of said rigid arm.

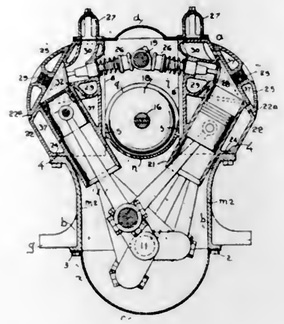
4. In a talking machine, a hollow bracket provided with a circular socket at its upper end, a hollow sound box arm terminating in a quarter turn downwardly and seated in said socket, a bridge across the open end of said bracket, a rigid arm projecting upwardly from said bracket and provided with a socket, a jointed separable spindle for said sound box arm carried by said bridge and slidably resting in the socket of said rigid arm, and a spiral spring in the socket of said rigid arm to hold said spindle in engagement with said bridge.

5. In a talking machine, a cabinet provided with a base portion forming a compartment, a substantially flat amplifier inclosed within said compartment and out of contact therewith and substantially filling the same, and a sound conveying bracket secured to said cabinet and supporting said amplifier.

[Claims 6 to 30 not printed in the Gazette.]

1,173,105. INTERNAL-COMBUSTION ENGINE. STEPHEN I. FEKETE, Detroit, Mich., assignor to Hudson Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 21, 1915. Serial No. 3,434. (Cl. 123—55.)

1. The combination of a frame, a cylinder casting secured at its side to the side of said frame and provided with a valve port, a valve upon said port having a stem, a cam shaft carried by said frame, said valve stem extending into position to be actuated by a cam on said shaft, said cylinder casting being provided with a surface extending outward and downward at an angle to the axial line of said port and the cylinder of said casting, said cylinder opening through said surface adjacent to said port, said casting being provided with a second surface above the first named surface and with an exhaust passage leading from said cylinder and opening through said second surface, a manifold secured on said second surface and a cover secured on said first mentioned surface.



2. In an engine, the combination of a frame having an upright, a cylinder casting adapted to be secured at its side to one side of said upright, a cylinder casting adapted to be secured at its side to the other side of said upright, cylinders formed in said castings and having their axes converging toward a point below said cylinders, valves in said cylinders extending therefrom, and a cam shaft located upon said upright between said cylinders, said valves extending into a position to be actuated by said cam shaft.

3. In an engine, the combination of a frame having an upright, a cylinder casting adapted to be secured to one side of said upright, a cylinder casting adapted to be secured to the other side of said upright, cylinders formed in said castings and having their axes converging toward a point below said cylinders, valves in said cylinders, and a cam shaft located upon said upright between said cylinders and adapted to actuate said valves, said castings being provided with surfaces extending at an angle to the axes of said cylinders and said valves, said cylinders opening through said surfaces adjacent to said valves, said valves extending into position to be actuated by said cam shaft.

4. In an engine, the combination of a frame having an upright, a cylinder casting adapted to be secured to one side of said upright, a cylinder casting adapted to be secured to the other side of said upright, cylinders formed in said castings and having their axes converging toward a point below said cylinders, valves in said cylinders, and a cam shaft located upon said upright between said cylinders and adapted to actuate said valves, said castings being provided with surfaces extending at an angle to the axes of said cylinders and said valves, said cylinders opening through said surfaces adjacent to said valves, each of said castings being provided with a second surface above the first named surface and with exhaust passages opening through said second surface, manifolds secured upon said second surface so that said exhaust passages shall open into said manifolds and covers for closing the openings in said first mentioned surfaces, said valves extending into position to be actuated by said cam shaft.

5. In an engine, the combination of a frame consisting of uprights having vertical edges, said frame also having horizontal edges extending from the lower ends of the edges of said uprights, cylinder castings adapted to fit against said upright and horizontal edges and be secured thereto, the cylinders extending slantingly through said castings.

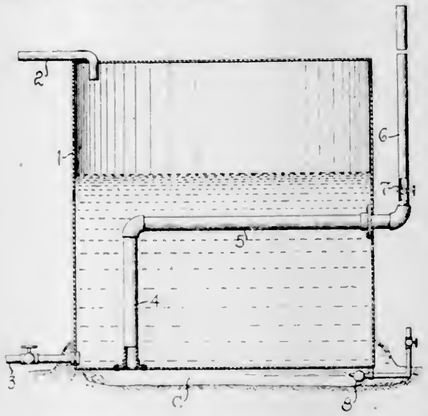
[Claims 6 to 17 not printed in the Gazette.]

1,173,106. READY-MADE ADAPTABLE BACKING FOR TEETH. GUSTAV E. FRITZ, Chicago, Ill. assignor to The Universal Interchangeable Tooth Co., Peoria, Ill., a Corporation of Illinois. Filed June 8, 1914. Serial No. 843,683. (Cl. 32—9.)



An article of manufacture, comprising a metallic backing for a tooth or facing, said backing being bent into form from a single sheet of metal and having a portion adapted to lie against the posterior face of a tooth; opposite side portions of approximately triangular shape, adapted to lie against the approximal surfaces of the tooth; a bent over portions at one end of the backing merging smoothly into said opposite side portions, adapted to lie against the gingival margin of the tooth, and a similar bent over portion at the other end of the backing merging smoothly into said opposite side portions, adapted to lie against the occlusal surface of the tooth and a post or pin attached to said backing.

1,173,107. HEATING MEANS FOR MINERAL OILS. CLARENCE E. GRAVES, Wellsville, N. Y., assignor of one-half to Edgar Emerson, Wellsville, N. Y. Filed Apr. 21, 1915. Serial No. 22,913. (Cl. 137—78.)



1. A storage tank for crude petroleum or the like, having a combustion chamber associated therewith, and a delivery flue from said combustion chamber leading in a circuitous path through the lower portion only of the interior of said tank, and with a delivery connection to a relatively remote point without the tank, all portions of said flue within the tank being below the normal level of the oil therein to be heated thereby.

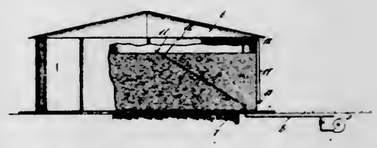
2. A storage tank for crude petroleum and the like, having a combustion chamber thereunder arranged for the products of combustion to impinge on the bottom of the tank, and a flue leading upward from said chamber within the tank and passing in a circuitous path through the lower portion only of said tank, and discharging therefrom laterally at a relatively low point therein with a delivery connection to a remote point, said combustion chamber and flue being so arranged that exposure of the products of combustion or of any heated flue portion in the danger zone above the normal surface of the oil in said tank is prevented.

3. A storage tank for crude petroleum or the like, having an inlet pipe at its top and a discharge pipe at its bottom, a combustion chamber associated with the lower portion of said tank and having a combustion burner arranged to direct porducts of combustion against an area of the outer surface of said tank, a flue leading in a circuitous path from said combustion chamber upward into said tank and outward laterally therefrom and continued entirely in the lower portion of said tank, and an outer stack extension of said flue leading upward to a relatively remote point.

4. A storage tank for crude petroleum or the like, having an inlet pipe at its top and a discharge pipe at its bottom, a combustion chamber associated with the lower portion of said tank and having a combustion burner arranged to direct products of combustion against an area of the outer surface of said tank, a flue leading in a circuitous path from said combustion chamber upward into said tank and outward laterally therefrom and contained entirely in the lower portion of said tank, an outer stack extension of said flue leading upward to a relatively remote point, and a damper for controlling the draft created by said stack extension.

5. A storage tank for crude perteleum or the like, having an inlet pipe at its top and a discharge pipe at its bottom, a relatively shallow combustion chamber formed underneath the major portion of said tank, a combustion burner at one end of said chamber and adjacent one side of said tank, a flue extending upward within the tank from said combustion chamber adjacent the other end thereof and at the other side of said tank, a horizontally extending continuation of said flue leading laterally outward of said tank and contained entirely in the lower portion thereof, and an upward stack extension of said flue at the outside of the tank for delivering the products of combustion at a relatively remote point.

1,173,108. GAS-EXHAUSTER FOR OIL-TANKS. OSCAR J. HOLMES, St. Louis, Mo. Filed Nov. 10, 1913. Serial No. 800,173. (Cl. 220—120.)



1. In a gas exhauster for oil tanks, a pipe mounted for movement in an oil tank, a flexible element secured to the pipe for its movement, a winding mechanism for said flexible element and a suction creating means connected with the pipe.

2. In combination with an oil tank, a gas exhauster therefor, comprising a pipe, pivotally mounted within the tank so that its free end may be swung within the range of ordinary oil levels, means for swinging said pipe, and a suction creating means connected with said pipe.

1,173,109. REINFORCED CONCRETE CONSTRUCTION. WILLIAM B. HOUGH, Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me., a Corporation of Maine. Filed Nov. 16, 1911. Serial No. 660,601. (Cl. 72—122.)

1. A gage member for reinforced-concrete construction consisting of a metallic band having bar-supporting chairs attached to the band at intervals, each chair comprising a leg or gage extending downwardly to the plane of the band and adapted to space a reinforcing bar from a form-work and two side portions at opposite sides

of the gage, extending downwardly from the top of the gage to the plane of the band.



2. A gage member for reinforced-concrete construction consisting of a metallic band having bar-supporting chairs attached to the band at intervals, each chair comprising a leg or gage extending downwardly to the plane of the band and adapted to space a reinforcing bar from a form-work, and two side portions at opposite sides of the gage, extending downwardly from the top of the gage to the plane of the band, and bar-engaging means attached to the upper part of the chair and adapted to strengthen the chair and prevent its sides from spreading apart.

3. A gage member for reinforced concrete construction, consisting of a metallic band forming a longitudinal connecting member and a series of reinforcing-bar-supporting chairs each connected to said member, each of said chairs consisting of a folded leg or gage adapted to underlie and support a reinforcing-bar and to bear at its lower end upon a part so as to space the reinforcing-bar therefrom, and a pair of side portions at opposite sides of the gage, said side portions extending downwardly away from the upper portion of the gage and being connected to said longitudinal member.

1,173,110. UTILIZING THE LUMINOUS POWER OF RADIOACTIVE COMPOUNDS. ARTHUR JUNGHANS, Schramberg, Germany, assignor to The American Radium Company, a Corporation of New York. Filed Mar. 1, 1912. Serial No. 680,891. (Cl. 240—1.)



1. A device for utilizing the luminous power of radioactive compounds, comprising a body having recesses therein a bottom layer of radio-responsive or slightly radio-active material pressed in said recesses, which substantially fills up the said recesses, an adhesive substance or the like on said layer, and a thin layer of radio-active luminous compound in a finely divided state on this adhering intermediate layer, so that the layer of luminous substance thus formed is adapted in spite of its slight thickness to illuminate outwardly like a full layer and also to act inwardly upon the responsive supporting layer and to cause the latter to also illuminate, substantially as described and for the purpose set forth.

2. A device for utilizing the luminous power of radioactive compounds, comprising a body having recesses therein a bottom layer of radio-responsive or slightly radio-active material pressed in said recesses, which substantially fills up the said recesses, a thin layer of radioactive material in a finely divided state on said layer of radio-responsive material, and means for securing the layers of radio-responsive and radio-active material in position, substantially as described and for the purpose set forth.

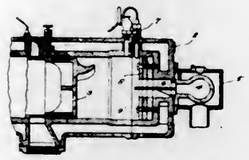
3. A device for utilizing the luminous power of radioactive compounds in producing luminous effects, comprising a thin layer of radio-active material and a base of radio-responsive material beneath said layer of radioactive material, and a layer of adhesive between said layers of radio-active and radio-responsive material.

4. A device for utilizing the luminous power of radioactive compounds in producing luminous effects, comprising a base-layer of radio-responsive material in an inclosure having an opening therein, a thin layer of radioactive material on said base layer, and a light-transmitting material for securing said layers in place.

5. A device for utilizing the luminous power of radioactive compounds in producing luminous effects, comprising a base-layer of radio-responsive material in an inclosure having an opening therein, a thin layer of radioactive material on said base layer, and an adhesive between said radio-active and radio-responsive material.

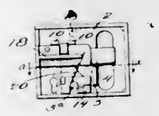
[Claims 6 to 10 not printed in the Gazette.]

1,173,111. INTERNAL-COMBUSTION ENGINE. CHARLES HENRY KELLY, Muncie, Ind., assignor to Muncie Oil Engine Company, Muncie, Ind., a Corporation of Illinois. Filed July 5, 1913. Serial No. 777,401. (Cl. 123—48.)



In an internal combustion engine, in combination with a cylinder, an igniter head on one end thereof, an igniter spoon connected to said igniter head and extending into said cylinder, a fuel nozzle entering said cylinder above said igniter spoon, a plurality of plates adapted to be attached to said end of the cylinder to reduce the compression space thereof, said plates each having a central aperture to permit them to be passed over said igniter spoon, and means for detachably connecting them to said cylinder end.

1,173,112. LOCK. FRANK H. KNIGHT, Lancaster, Pa., assignor of one-half to W. B. Rush, Lancaster, Pa. Filed Oct. 8, 1915. Serial No. 54,723. (Cl. 70—5.)



1. In locks, a casing consisting of two elements and a rivet holding said elements together, in combination with a tumbler reciprocally mounted in said casing and guided by said rivet, a lug carried by said tumbler, a bolt reciprocally mounted in said casing and adapted to reciprocate through one end thereof and provided with a recess, a projection on said bolt, a projection on said tumbler and a spiral spring mounted on said rivet and bearing with its respective arms on said projections to force said tumbler into position to hold its lug in said recess when the bolt is in locking position, and to force said bolt outward when the tumbler is in such position that its lug is out of said recess.

2. In locks, a reciprocating bolt provided with a recess and a tumbler adapted to reciprocate transversely thereto and having a lug adapted to fit into said recess, in combination with a spring operating on said bolt and tumbler to force said bolt outward when the lug of said tumbler is out of said recess and to force said tumbler transversely to said bolt, carrying said lug into said recess, when the bolt is in its locking position.

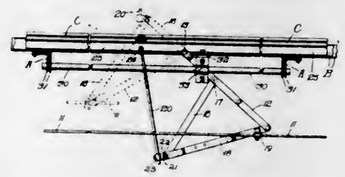
3. In locks, a reciprocating bolt provided with a recess and a sliding tumbler having a lug adapted to fit in said recess, in combination with a spring operating on said bolt and tumbler to force said bolt outward when the lug of said tumbler is out of said recess and to move said tumbler relatively to said bolt, carrying said lug into said recess, when the bolt is in its locking position.

4. In locks, a reciprocating bolt provided with a recess and a tumbler adapted to reciprocate transversely thereto and having a lug adapted to fit in said recess, in combination with a spring operating on said bolt and tumbler to force said bolt outward when the lug of said tumbler is out of said recess, and to force said tumbler downward, carrying said lug into said recess, when the bolt is in its locking position, and means carried by said bolt limiting its outward movement.

5. In locks, a reciprocating bolt having a recess and provided with a projection having an overlapping lip, and a tumbler adapted to reciprocate transversely to said bolt, provided with a shoulder which guides the latter and a lug which is adapted to fit into said recess and having a fixed pin, in combination with a spring fitting under said lip and against said spring to force said bolt outward when said lug is out of said recess and to force said tumbler downward, carrying said lug into said recess when the bolt is in locking position.

[Claims 6 and 7 not printed in the Gazette.]

1,173,113. SASH-OPERATING MECHANISM. ROBERT A. LACKEY, Oak Park, Ill., assignor to The Payson Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 15, 1914. Serial No. 856,889. (Cl. 16—18.)



1. Sash-operating mechanism comprising a device having two arms pivoted at their rear ends at spaced points lying in a plane oblique to the sash, and having a brace connecting said two arms, means for swinging the device, and means for connecting the device to the sash.

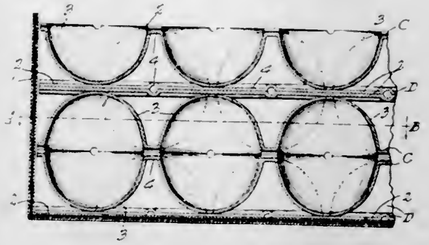
2. Sash-operating mechanism comprising a device having two arms pivoted at their rear ends at spaced points lying in a plane oblique to the sash, and having a brace connecting the extreme free ends of the two arms, operating means connected to the device adjacent to one end of said brace, and means connected to the sash and to the device near the opposite end of said brace.

3. Sash-operating mechanism comprising a longitudinally-movable operating member, a plurality of swinging devices each comprising two arms pivoted at their rear ends on the building framework at spaced points lying in a plane oblique to the sash, and a brace connecting the free ends of said arms, the device being connected to said operating member adjacent to one end of said brace, and links each connected to the sash and to one of said devices near the opposite end of said brace.

4. In sash-operating mechanism, a U-shaped supporting bracket mounted on the building framework, a swinging device comprising two arms each composed of an upper and a lower section pivoted to the upper and lower ends of said U-shaped bracket, the pivot points of said arms being spaced apart and lying in a plane oblique to the plane of the sash, and a brace connecting the free ends of said arms, a longitudinally movable operating member connected to swing said device, and a thrust link arranged to transmit the swinging movement thereof to the sash.

5. The combination with a building framework and a sash hinged thereon at its upper edge, of longitudinally-movable operating means extending substantially parallel to the sash, swinging devices each comprising a pair of arms pivoted to the building framework and a brace connecting the free ends of said arms, the pivot points of said arms being spaced apart and lying in a plane oblique to the sash, said devices being connected to the operating means, and thrust links connecting the sash with said devices, the latter being arranged to provide an increasing leverage to compensate for the increasing load of the sash in opening.

1,173,114. SHIPPING-CASE. CHARLES E. LANE, New York, N. Y., assignor to Harry J. Thompson, New York, N. Y. Filed July 11, 1914. Serial No. 850,401. (Cl. 217—26.)



1. A shipping case having superposed trays formed with cells and disposed in pairs, the trays of each pair being oppositely disposed with their cells registering, and the cells of one tray of each pair being extended between and bearing laterally against the cells of one of the trays of an adjoining pair.

2. A shipping case having superposed trays formed with cells and disposed in pairs, the trays of each pair being oppositely disposed and having their cells registering, and the cells on one tray of each pair being extended between and bearing laterally against the cells on a tray of the next adjoining pair and bearing against said tray at points between its cells.

3. A shipping case having superposed pairs of trays formed with cells and with radial channels opening into and constituting connections between the cells, the trays of each pair being oppositely disposed and having their cells and channels registering, the cells on one tray of each pair being extended between and bearing laterally against the cells on a tray of the next adjoining pair and bearing against said tray at points between its cells.

4. A shipping case having superposed pairs of trays formed with cells, and with radial channels constituting connections between the cells, said channels being extended downwardly within the cells, the trays of each pair being oppositely disposed and having their cells and channels registering, the cells on one tray of each pair being extended between and bearing laterally against the cells of a tray of the next adjoining pair and bearing against said tray at points between the cells.

1,173,115. STACKING DEVICE. ELMER E. LANE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 7, 1913. Serial No. 799,675. (Cl. 12—66.)



1. A stacking device for alining blanks or other articles, having, in combination, means for supporting the series of blanks, a guide engaging one edge of each blank to aline the series, and means adjustable by the operator for positioning the blanks obliquely to the alined edge

whereby the width of a stack of blanks is made less than the width of a single blank, substantially as described.

2. A stacking device for alining blanks or other articles, having, in combination, means for engaging the edge of each blank at a plurality of points to aline the blanks, and means normally held in fixed position engaging the face of a blank for positioning the blanks obliquely to the alining means, whereby the width of the stack of blanks is made less than the width of a single blank, substantially as described.

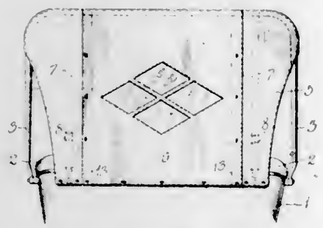
3. A stacking device for alining blanks or other articles, having, in combination, a base with a concave upper face to support one edge of the blanks, and an overhanging abutment along the side of the base to engage another edge of the blanks, and an end plate arranged to engage the face of a blank to position the blanks obliquely to the abutment, whereby the width of the stack of blanks is made less than the width of a single blank, substantially as described.

4. A stacking device for alining blanks or other articles, having, in combination, a base and a pair of gages having their guiding faces obliquely disposed with relation to one another and carried by the base, one of said gages contacting with a single blank, and the other contacting with the series of blanks whereby the width of the stack of blanks is made less than the width of a single blank, substantially as described.

5. A stacking device for alining blanks or other articles, having, in combination, a base for supporting the series of blanks along one edge, said base being provided on one side only with a guide for engaging another edge of the blanks adjacent the base, and means carried by the base in normally fixed position and obliquely disposed with relation to the guide for engaging the face of a blank whereby the width of the stack of blanks is made less than the width of a single blank, substantially as described.

[Claim 6 not printed in the Gazette.]

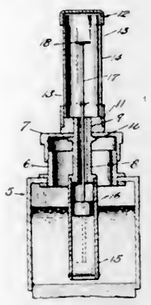
1,173,116. BACKSTAY-FASTENER. HUGH J. McGRAIL, Flint, Mich. Filed Mar. 8, 1915. Serial No. 12,800. (Cl. 21—62.)



In a back stay fastener, the combination with an automobile body, and back stay straps, of bolts carried by said automobile body, plates having a series of apertures adapted to receive said bolts, and tongues struck out of said plate to provide slots adapted to receive said back stay straps.

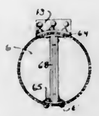
1,173,117. GAGE. FREDERICK H. OBERMANN, Redlands, Cal. Filed Jan. 4, 1915. Serial No. 336. (Cl. 73—82.)

The combination with a radiator closure cap provided with an aperture, of a float indicating mechanism attached to said cap, comprising a tubular member provided with a threaded end disposed in said aperture and a shoulder abutting the underside of said cap, said tubular member extending downwardly from said cap, and a slidable rod mounted in said tubular member having a headed stem attached thereto extending upwardly through said tubular member and a buoyant member secured to the lower end thereof, and an indicating gage glass attached to the upper threaded end of said tubular member,



being open and having a stop means thereon to limit the downward movement of said buoyant member.

1,173,118. RAILWAY-CAR. RICHARD J. O'NEILL and HARRY F. BETHUNE, Denver, Colo. Filed July 31, 1913. Serial No. 782,345. (Cl. 105—76.)



1. In a car, the combination of a center sill for said car, said center sill being hollow, longitudinal members arranged on the interior of said center sill opposite to each other, and braces arranged on the interior of said center sill in staggered relation to each other and connected at their extremities with said longitudinal members.

2. A center sill for railway cars, comprising a tubular member, braces arranged on the interior of said tubular member in staggered relation to each other, and members secured to said tubular member on the interior of the latter and with which the extremities of said braces are connected.

3. In a railway car, the combination of a center sill for said car, said center sill being hollow, T-irons arranged opposite to each other on the interior of said sill, a central member located in said sill and connected with said T-irons, and transverse braces arranged in said sill at opposite ends of said central member and connected with said T-irons.

4. In a railway car, the combination with the truck bolsters thereof, of a center sill supported by said bolsters, transverse beams supported by said center sill, and T-irons connecting said bolsters and resting upon said beams, said T-irons forming the bases for the sides of said car.

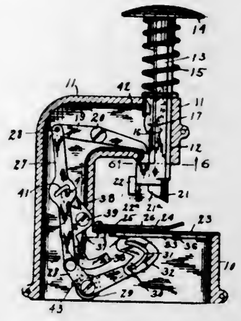
5. In a railway car, the combination of a center sill for said car, said center sill being hollow, T-irons arranged on the interior of said sill, a central plate located on the interior of said sill and connected with said T-irons, and transverse braces arranged on the interior of said sill at angles to each other on opposite sides of said central plate, said braces being connected at their extremities with said T-irons.

[Claims 6 to 12 not printed in the Gazette.]

1,173,119. PAPER-FASTENING DEVICE. FREDERICK V. PEPPER and EDWARD A. BRANDENBURG, Los Angeles, Cal. Filed Dec. 19, 1911. Serial No. 666,674. (Cl. 93—1.)

1. A paper fastening device comprising a frame; a spring retracted reciprocating plunger mounted in said frame; a tongue cutter and a slot cutter on the lower

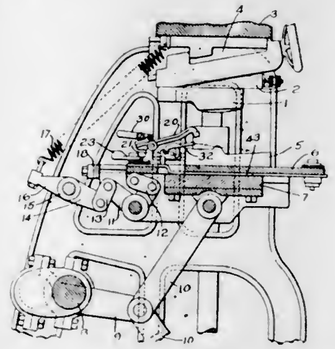
end of said plunger; a spring actuated dog carried by said plunger; a die plate and a holding plate secured to said frame, said plates having apertures therein; a tongue turning plate slidably mounted on the underside of the die plate; a tongue placing lever pivoted to said frame; and means to first operate the tongue turning plate and then the tongue placing lever and then to return the parts to their inoperative position.



2. In a paper fastening device, mechanism to form a tongue having a head thereon from the paper, and to cut a single aperture in the paper at the rear of the tongue, said aperture being narrower than the width of the head of the tongue; and mechanism to pass the head of the tongue through the aperture at the rear of the tongue.

3. A paper fastening punch having a pair of punch knives one of which is substantially U-shaped in cross section and has its bent portion wider than its other portion so as to cut a tongue with an enlarged free end from the paper and the other of the punch knives being narrower than the bent portion of the first mentioned punch knife and adapted to cut an opening in the paper adjacent to the tongue and narrower than the width of the enlarged free end of the tongue, and a locking finger operated by the movement of the punch knives for forcing the enlarged end of the tongue cut by the first mentioned punch knife through the narrower opening cut by the other punch knife.

1,173,120. SOLE-PRESSING MACHINE. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 18, 1910. Serial No. 567,558. (Cl. 12—21.)



1. A sole pressing machine, having, in combination, upper and lower sole molding forms, means for clamping the sole to one of the forms, and a gage for the heel end of the sole constructed and arranged to move with the edge of the sole as the sole is clamped to the lower form preliminary to the movement of the form into pressing position whereby the sole is accurately positioned upon the form, substantially as described.

2. A sole pressing machine, having, in combination, upper and lower sole molding forms, means for clamping the sole to one of the forms, a heel gage positioned adjacent to one of the forms, and means for moving the gage toward the surface of the form as the sole is clamped thereto preliminary to the movement of the form into pressing position.

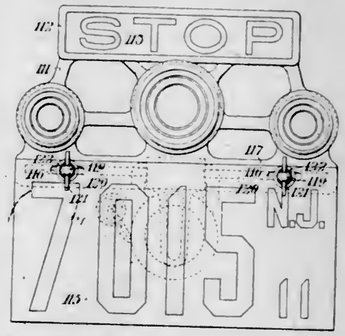
3. A sole pressing machine, having, in combination, coöperating sole molding forms, a gage mounted independently of the forms and normally spaced away from the surface of one of the forms to position the sole preliminary to the pressing operation, and means for moving the gage toward said form in a direction substantially normal to the surface of the form as the forms are moved toward one another, substantially as described.

4. A sole pressing machine, having, in combination, upper and lower sole molding forms, a movable gripping jaw arranged to engage the sole and clamp it to one of the forms, and a gage for the heel end of the sole movable simultaneously with the gripping jaw and adapted to properly guide the sole before it is clamped in position, substantially as described.

5. A sole pressing machine, having, in combination, upper and lower sole molding forms, a movable gripping jaw adapted to engage the sole and clamp it to one of the forms, and a gage for the heel end of the sole, actuated by the gripping jaw as the latter is moved into a clamping position, whereby spring heel soles may be properly positioned relatively to the molding forms, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,173,121. VEHICLE SIGNALING DEVICE. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Feb. 28, 1911. Serial No. 611,410. (Cl. 177—337.)



1. In a signaling device, the combination with a frame having means for detachably connecting it with a support on a vehicle, including a socket member having an elongated slot with a central enlargement and a set screw adapted to be adjusted across said enlargement, a holder for a license number plate, holders for a group of lamps, and a holder for an audible alarm; of a group of lamp casings fitted in said frame, including one casing centrally disposed above said number plate holder and having a glazed opening whereby the light may be transmitted upon a number plate attached to said holder, two lamp casings respectively upon opposite sides of said central casing, and, a fourth casing above said central casing, including means to manifest a word stop signal; lamp sockets respectively detachably connected with said lamp casings; electric incandescent lamps detachably fitted in said sockets; an audible alarm fitted in said frame, including a vibratory diaphragm an electric motor operatively connected with said diaphragm; an electric switch, including a casing having three push buttons, and, electric circuits including a source of current, said lamps,

audible alarm and switch, in such relation that said central lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said buttons, and said audible alarm may be operated contemporaneously with the operation of each of said other three lamps including conductors respectively leading from said source of current to each of said lamps individually and said alarm, except the central lamp, by way of said switch, and a common conductor connected to each of said lamps and audible alarm leading to said source of current independently of said switch.

2. In a signaling device, the combination with a frame having means for detachably connecting it with a vehicle, including a holder for a license number plate, holders for a group of lamps, and a holder for an audible alarm; of a group of lamp casings fitted in said frame, including one casing centrally disposed above said number plate holder and having an opening whereby light may be transmitted upon a number plate attached to said holder, two lamp casings respectively upon opposite sides of said central casing, and, a fourth casing above said central casing, including means to manifest a stop signal; lamp sockets respectively connected with said lamp casings; electric incandescent lamps detachably fitted in said sockets: an audible alarm fitted in said frame, including a vibratory diaphragm an electric motor operatively connected with said diaphragm; an electric switch, including a casing having three push buttons, and, electric circuits including a source of current, said lamps, audible alarm and switch, in such relation that said central lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said buttons, and, said audible alarm may be operated contemporaneously with the operation of each of said other three lamps including conductors respectively leading from said source of current to each of said lamps individually and said alarm, except the central lamp, by way of said switch, and a common conductor connected to each of said lamps and audible alarm leading to said source of current independently of said switch.

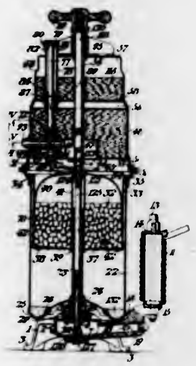
3. In a signaling device, the combination with a frame having means for connecting it with a vehicle, including a holder for a license number plate, holders for a group of lamps, and a holder for an audible alarm; of a group of lamp casings fitted in said frame, including one casing centrally disposed above said number plate holder and having an opening whereby light may be transmitted upon a number plate attached to said holder, two lamp casings respectively upon opposite sides of said central casing, and, a fourth casing above said central casing, including means to manifest a stop signal; electric lamps detachably fitted in said casings; an audible alarm fitted in said frame, including a vibratory diaphragm an electric motor operatively connected with said diaphragm; an electric switch, including a casing having three push buttons; and, electric circuits including a source of current, said lamps, audible alarm and switch, in such relation that said central lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said buttons, and, said audible alarm may be operated contemporaneously with the operation of each of said other three lamps including conductors respectively leading from said source of current to each of said lamps individually and said alarm, except the central lamp, by way of said switch, and a common conductor connected to each of said lamps and audible alarm leading to said source of current independently of said switch.

4. In a signaling device, the combination with a frame having means for connecting it with a vehicle, including a holder for a license number plate, holders for a group of lamps, and a holder for an audible alarm; of a group of lamp casings fitted in said frame, including one casing centrally disposed above said number plate holder whereby light may be transmitted upon a number plate attached to said holder, two lamp casings respectively upon opposite sides of said central casing, and, a fourth casing above said central casing; electric lamps in said casings; an audible alarm fitted in said frame, including a vibratory diaphragm an electric motor operatively connected with said diaphragm; an electric switch, including a casing having three push buttons; and, electric circuits including a source of current, said lamps, audible alarm and switch, in such relation that said central lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said buttons, and, said audible alarm may be operated contemporaneously with the operation of each of said other three lamps including conductors respectively leading from said source of current to each of said lamps individually and said alarm, except the central lamp, by way of said switch, and a common conductor connected to each of said lamps and audible alarm leading to said source of current independently of said switch.

5. In a signaling device, the combination with a frame having means for detachably connecting it with a support on a vehicle, including a socket member having an elongated slot with a central enlargement and a set screw adapted to be adjusted across said enlargement, a holder for a license number plate, holders for a group of lamps, and a holder for an audible alarm; of a group of lamp casings fitted in said frame, including one casing centrally disposed above said number plate holder and having a glazed opening whereby light may be transmitted upon a number plate attached to said holder, two lamp casings respectively upon opposite sides of said central casing, and, a fourth casing above said central casing, including means to manifest a word stop signal; lamps detachably fitted in said casings; an audible alarm fitted in said frame, including a vibratory diaphragm an electric motor operatively connected with said diaphragm; an electric switch, including casing having three push buttons; and, electric circuits including a source of current, said lamps, audible alarm and switch; whereby, said central lamp may be maintained continously lighted, the other three lamps may be respectively lighted and extinguished by manipulation of said buttons, and, said audible alarm may be operated contemporaneously with the operation of each of said other three lamps including conductors respectively leading from said source of current to each of said lamps individually and said alarm, except the central lamp, by way of said switch, and a common conductor connected to each of said lamps and audible alarm leading to said source of current independently of said switch.

[Claims 6 to 24 not printed in the Gazette.]

1,173,122. ACETYLENE-GAS GENERATOR. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Sept. 18, 1913. Serial No. 790,395. (Cl. 48—4.)



1. In an acetylene gas generator, the combination with a base, of a carbid casing, having a central tubular column and a gas outlet at the bottom thereof, detachably fitted to said base; a water receptacle having a central tubular column and arranged to detachably fit upon said carbid casing with said columns in registry, above said carbid casing, including a main compartment adjacent said carbid casing, an auxiliary compartment above said main compartment, and a hollow cap above said auxiliary compartment; a water passageway from said main compartment to said carbid casing; a water passageway from said auxiliary compartment to said main compartment; a passageway from said auxiliary compartment to said cap; a passageway from said main compartment to said cap; a vent opening from said cap to the atmosphere; a gas passageway from said carbid casing to the atmosphere; and a rotary valve controlling said gas passageway and both of said water passageways, so constructed and arranged that when the gas passageways is opened the water passageway between said compartments is opened and the water passageway from said main compartment to said carbid casing is closed and vice versa; and means arranged to detachably rigidly connect said casing and receptacle with said base, including a screw threaded rod depending in said water receptacle column from the top thereof, and a screw threaded stem extending in said carbid casing column from said base, in screw threaded engagement with said rod; said stem extending through said trap in said base and carrying at its lower end a closure for said condensate outlet; a handle on said rod above said water receptacle; and resilient means arranged to automatically open said closure whenever said stem is released by rotation of said rod.

2. In an acetylene gas generator, the combination with a base, of a carbid casing, having a central tubular column and a gas outlet at the bottom thereof, detachably fitted to said base; a water receptacle having a central tubular column and arranged to detachably fit upon said carbid casing with said columns in registry, above said carbid casing, including a main compartment adjacent said carbid casing, an auxiliary compartment above said main compartment, and a hollow cap above said auxiliary compartment; a water passageway from said main compartment to said carbid casing; a water passageway from said auxiliary compartment to said main compartment; a passageway from said auxiliary compartment to said cap; a passageway from said main compartment to said cap; a vent opening from said cap to the atmosphere; a gas passageway from said carbid casing to the atmosphere; valve means controlling said gas passageway and both of said water passageways, so constructed and arranged that when the gas passageway is opened the water passageway between said compartments is opened and the water passageway from said main compartment to said carbid casing is closed and vice versa; and means arranged to detachably rigidly connect said casing and receptacle with said base, including a screw threaded rod depending in said water receptacle column from the top thereof, and a screw threaded stem extending in said carbid casing column from said base, in screw threaded engagement with said rod; said stem extending through said trap in said base and carrying at its lower end a closure for said condensate outlet; a handle on said rod above said water receptacle; and resilient means arranged to automatically open said closure whenever said stem is released by rotation of said rod.

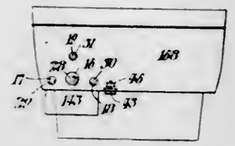
3. In an acteylene gas generator, the combination with a carbid casing, having a central tubular column and a gas outlet at the bottom thereof; a water receptacle having a central tubular column and arranged to detachably fit upon said carbid casing with said columns in registry, including a main compartment adjacent said carbid casing, an auxiliary compartment above said main compartment, and a hollow cap above said auxiliary compartment; a water passageway from said main compartment to said carbid casing; a water passageway from said auxiliary compartment to said main compartment; a passageway from said auxiliary compartment to said cap; a passageway from said main compartment to said cap; a vent opening from said cap to the atmosphere; a gas passageway from said carbid casing to the atmosphere; and a rotary valve controlling said gas passageway and both of said water passageways, so constructed and arranged that when the gas passageway is opened the water passageway between said compartments is opened and the water passageway from said main compartment to said carbid casing is closed and vice versa; and means arranged to detachably rigidly connect said casing and receptacle.

4. In an acetylene gas generator, the combination with a carbid casing, having a gas outlet at the bottom thereof; a water receptacle above said carbid casing including a main compartment adjacent said carbid casing, an auxiliary compartment above said main compartment, and a hollow cap above said auxiliary compartment; a water passageway from said main compartment to said carbid casing; a water passageway from said auxiliary compartment to said main compartment; a passageway from said auxiliary compartment to said cap; a passageway from said main compartment to said cap; a vent opening from said cap to the atmosphere; a gas passageway from said carbid casing to the atmosphere; a rotary valve controlling said gas passageway and both of said water passageways, so constructed and arranged that when the gas passageway is opened the water passageway between said compartments is opened and the water passageway from said main compartment to said carbid casing is closed and vice versa; and means arranged to detachably rigidly connect said casing and receptacle.

5. In an acteylene gas generator, the combination with a carbid casing having a gas outlet; of a water receptacle above said carbid casing, including a main compartment adjacent said carbid casing, an auxiliary compartment above said main compartment, and a hollow cap above said auxiliary compartment; a water passageway from said main compartment to said carbid casing; a water passageway from said auxiliary compartment to said main compartment; a passageway from said auxiliary compartment to said cap; a passageway from said main compartment to said cap; a vent opening from said cap to the atmosphere; valve means controlling both of said water passageways, so constructed and arranged that when the water passageway between said compartments is opened the water passageway from said main compartment to said carbid casing is closed and vice versa; and means arranged to detachably connect said casing and receptacle.

[Claims 6 to 21 not printed in the Gazette.]

1,173,123. AUTOMOBILE. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Original application filed Feb. 28, 1911, Serial No. 611,410. Divided and this application filed Apr. 2, 1915. Serial No. 18,665. (Cl. 177—337.)



1. The combination with a vehicle; of a signaling device inclosed by the vehicle body, including a holder for a license number plate, holders for a group of lamps and a holder for an audible alarm; a group of electric lamps including one whereby light may be transmitted upon a number plate attached to said holder, two upon opposite sides of said first lamp, and, a fourth lamp having means to manifest a stop signal; an audible alarm operatively connected with an electric motor; an electric switch; and, electric circuits including a source of current, said lamps, audible alarm and switch, in such relation that said first lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said switch, and, said audible alarm may be operated contemporaneously with the operation of each of said other three lamps.

2. The combination with a vehicle; of a signaling device inclosed by the vehicle body, including a holder for

a license number plate, and holders for a group of lamps and a holder for an audible alarm; a group of electric lamps including one whereby light may be transmitted upon a number plate attached to said holder, two upon opposite sides of said first lamp, and, a fourth lamp having means to manifest a stop signal; an audible alarm operatively connected with an electric motor; an electric switch; and, electric circuits including a source of current, said lamps, audible alarm and switch, in such relation that said first lamp may be maintained continuously lighted, the other three lamps may be respectively lighted by manipulation of said switch, and, said audible alarm may be operated.

3. The combination with a vehicle; of a signaling device inclosed by the vehicle body, including a holder for a license number plate, and holders for a group of lamps; a group of electric lamps including one whereby light may be transmitted upon a number plate attached to said holder, two upon opposite sides of said first lamp, and, a fourth lamp having means to manifest a stop signal; an electric switch; and, electric circuits including a source of current, said lamps, and switch, in such relation that said first lamp may be maintained continuously lighted, and the other lamps may be respectively lighted by manipulation of said switch.

4. The combination with a vehicle; of a signaling device inclosed by the vehicle body, including a holder for a license number plate, and holders for a group of lamps; a group of electric lamps including one whereby light may be transmitted upon a number plate attached to said holder, and two upon opposite sides of said first lamp; an electric switch; and, electric circuits including a source of current, said lamps, and switch, in such relation that said first lamp may be maintained continuously lighted, and the other lamps may be respectively lighted by manipulation of said switch.

5. The combination with a vehicle body; of a signaling device mounted within said body, including a group of electric lamps in registry with openings in said body; one of said lamps being intermediate of said group and having two lamps respectively upon opposite sides thereof, in spaced relation therewith, and one lamp above said intermediate lamp in spaced relation therewith; and an electric circuit including a source of current, said lamps and a switch, in such relation that said intermediate lamp may be maintained continuously lighted and the other lamps may be respectively lighted and extinguished by manipulation of said switch and respectively indicate that the vehicle is about to move to the right, to the left, or stop.

[Claim 6 not printed in the Gazette.]

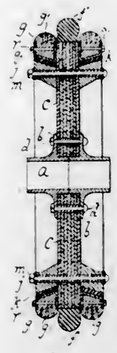
1,173,124. VEHICLE-WHEEL. EDWARD G. SCHLEICHER, Stamford, Conn. Filed Nov. 11, 1914. Serial No. 871,461. (Cl. 152—9.)

1. In a vehicle wheel the combination with a rim, of a tire arranged on the rim, auxiliary tread members having inclined inner portions mounted on each side of the rim to coact with the sides of the tire, and supplemental rim members having corresponding inclined portions to engage the inclined portions of the auxiliary treads.

2. In a vehicle wheel the combination with a rim, of a yielding detachable tire centrally arranged on the rim, auxiliary tread members having inclined inner portions mounted on each side of the rim to coact with each side of the tire, and detachable rim supplemental members having corresponding inclined portions to engage the inclined portions of the auxiliary treads.

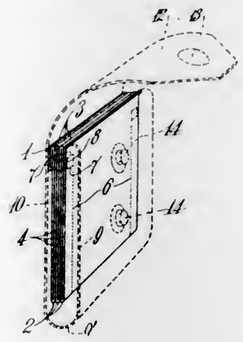
3. In a vehicle wheel the combination with a rim, of a yielding detachable tire centrally arranged on the rim, auxiliary segmental tread members having inclined inner portions mounted on each side of the rim to coact with the side portions of the tire, said auxiliary treads being of smaller diameter than the tire, and detachable supplemental rim members having corresponding inclined portions to engage the inclined portions of the auxiliary treads.

4. A vehicle wheel comprising a rim or web, a yielding tire centrally arranged on the web, annular tread members having scalloped inner portions arranged on each side of the web, detachable means including rim members mounted on each side of the web coacting with the scalloped portions of the tread, and elastic devices located between the tread members and the detachable means.



5. A vehicle wheel comprising a rim or web, a yielding tire centrally arranged on the web, annular tread members having scalloped wedge shaped inner portions arranged on each side of the web, detachable means including rim members mounted on each side of the web having corresponding scallops and wedge portions coacting with the scalloped portions of the tread members, and elastice devices interposed between the scallops.

1,173,125. CARTRIDGE-CARRIER. GOTTHELF MARTIN SEIDEL, Easthampton, Mass., assignor to Glendale Elastic Fabrics Company, Easthampton, Mass., a Corporation of Massachusetts. Filed Sept. 27, 1915. Serial No. 52,887. (Cl. 224—23.)

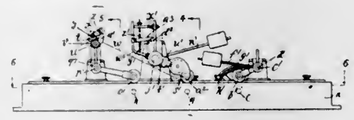


1. A cartridge carrier adapted for detachable engagement with a suitable belt, comprising, a series of cartridge holding pockets formed by successively folding a strip of material back and forth upon itself and thereafter stitching alternate folded portions along the side edges thereof, an integral portion of said strip extending from the outer edge of one pocket around all of the pockets and secured to the end of the pocket forming strips and arranged to envelop and support the pockets, an integral flap extension of said strip arranged to extend over the tops of all the pockets and detachable means to secure the flap to the pockets, said portion and pockets constructed and arranged to permit the free insertion of a belt therebetween.

2. A cartridge carrier adapted to be detachably mounted on a suitable belt or the like, formed from a single continuous strip of material folded successively back and forth upon itself and having alternate adjacent folded portions stitched together, along each edge, whereby a plurality of pockets open at the top are formed, the remainder of said strip being carried from the last pocket downwardly around the group of pockets and brought upwardly to the first formed pocket and secured thereto, the portion of the strip then remaining arranged to be carried over the tops of the pockets to form a flap cover for the carrier, and means to detachably secure said cover to the carrier in various positions of adjustment, all constructed and arranged so that a belt or the like may be freely inserted between either side of the group of pockets and the portion of the strip surrounding said group of pockets.

3. A cartridge carrier, comprising a plurality of pockets each formed by folding a portion of a strip of material backwardly upon itself so that the length of the fold determines the depth of the pocket and in thereafter stitching said folded portions, on each side at a distance from the edges, from the bottom of the folded portion to a point adjacent the top, the succeeding pockets being formed from the same strip in a like manner, whereby a connected series of pockets are formed each adapted to receive a group of cartridges, an envelop for the group of pockets formed by bringing the remainder of the strip from the last pocket formed downwardly to embrace the group of pockets, then upwardly and securing it to the first formed pocket, said embracing strip arranged to loosely engage the group of pockets, whereby a belt may be freely inserted between the strip and either side of the group of pockets, a flap cover for the pockets formed by the remainder of the strip and extending over the top of the pockets and partially down the front thereof, and means to detachably secure the flap to the carrier.

1,173,126. MACHINE FOR DEPOSITING GOLD-LEAF UPON BOOK-COVERS OR THE LIKE. CHARLES E. SMITH, Oak Lawn, R. I. Filed Mar. 1, 1912. Serial No. 680,961. (Cl. 41—7.)

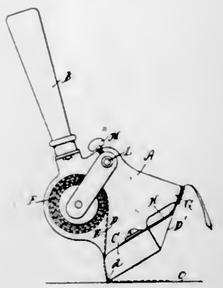


1. In a machine of the character described, the combination of a driven feed roll and a conjoint pressure roll for passing the article to be ornamented forward, means for supporting a package roll of metallic leaf for unwinding movement, and a pivotally supported gravitating frictionally rotated delivering roller adapted to engage with the surface of the article to be ornamented, and thereby cause the unwinding movement of the said package roll, and the delivery of the metallic leaf to the said surface.

2. In a machine of the character described, the combination of a feed-roll, and a pressure roller for drawing the article to be ornamented forward, a package roll holder, and delivering roller for depositing a fillet of metallic leaf upon the said article, and an oiling pad for oiling the surface of said article preparatory to depositing the metallic leaf thereon.

3. In a machine of the character described, the combination of a feed roll and a pressure roller for drawing the article forward, a package roll holder and delivering roller for depositing a fillet of metallic leaf upon the said article, an oiling pad for oiling the surface of said article, and a reservoir for supplying oil to the oiling pad.

1,173,127. METHOD OF DIVIDING METALLIC LEAF ATTACHED TO A SUPPORTING-STRIP. CHARLES E. SMITH, Oak Lawn, R. I. Filed Dec. 9, 1912. Serial No. 735,618. (Cl. 41—8.)



The method of separating the undeposited portion of metallic leaf remaining upon the supporting strip from the deposited portion of said metallic leaf, which consists in simultaneously pressing and moving a separating edge upon the back of the supporting strip.

1,173,128. WHEEL-STRENGTHENER. JOSHUA W. SPLAWN, Temple, Okla. Filed Mar. 11, 1915. Serial No. 13,705. (Cl. 21—69.)

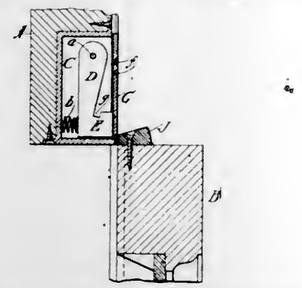


As a new article of manufacture, a wheel strengthener comprising a bracing ring, a circular band adapted to fit around one end of the hub of a wheel, a plurality of radiating rods, one end of each rod being provided with a hooked portion fitting around said circular band for permitting said retaining rods to be swung to a desired angle for engagement with said bracing ring, each radiating rod provided with an angularly extending end extending through said bracing ring, said bracing ring provided with apertures extending at right angles to the transverse axis of said bracing ring, said angularly extending ends of said rods passing through said apertures, nuts threaded upon said rods for holding said bracing ring, means for holding said bracing ring in engagement with the spokes of a wheel, and said hub provided with notches for receiving the inner ends of said bracing rods and adapted to hold the same against circumferential movement upon said hub.

1,173,129. SASH-LOCK. ERNEST C. TALIAFERRO, Springfield, Mass. Filed Aug. 14, 1915. Serial No. 45,513. (Cl. 16—146.)

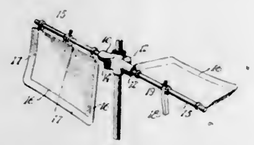
In a window lock, a box-like casing, made with an open front, a bar pivoted at its upper end portion in said casing to swing in a vertical plane, having a forwardly projecting locking extension, and provided with an upwardly open socket at the junction of the forward face of the bar and the upper face of the extension, which socket has opposite parallel separated walls, a spring in compression between the lower portion of the bar and the rear wall of the casing for forwardly forcing the bar, and a plate slidably engaged in the open front of the frame, and adapted when but partially raised to have an engagement in said socket

to lock the bar in its forwardly projected sash-engaging position, and at pleasure, when lowered to confine the



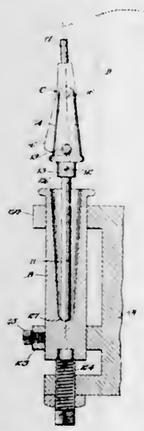
locking bar and its extension entirely within the box-like casing.

1,173,130. WAVE-POWER MECHANISM. CARL THROCKMORTON, Montebello, and RAY THROCKMORTON, El Monte, Cal. Filed Feb. 18, 1914. Serial No. 819,405. (Cl. 170—121.)



A current propelled rotor, comprising a rotor shaft, a plurality of horizontal radial arms mounted on said shaft, a blade pivoted on each arm, said blades curving diagonally from their inner upper ends to their outer lower ends, and having flanges on their sides and bottom edges, and adjustable stops on said arms for engaging the blades to limit their pivotal movement.

1,173,131. JACK FOR SHOE-MACHINES. FELIX E. VALOIS, Haverhill, Mass., assignor to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Feb. 12, 1915. Serial No. 7,879. (Cl. 12—126.)



1. The improved last support for slugging machines and the like which comprises a jack having its center of gravity at one side of its vertical axis, said jack being mounted to be automatically rotatable by its own weight about a vertical axis on its point of contact with the member on which it rests.

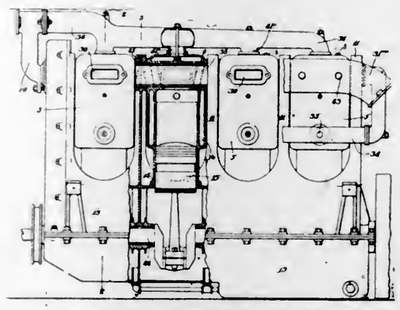
2. The improved last support for slugging machines and the like which comprises a jack composed of two parts hinged together about a substantially horizontal axis, and means for securing them in a position of adjustment with the axes of the two members at an angle to each other whereby the center of gravity is at one side of the median line of the jack, said jack being free to rotate about a vertical axis on its point of contact with the member on which it rests until said center of gravity is in its lowest possible position.

3. In combination, the jack support having a conical bore, and a jack, said jack resting on the bottom of said conical bore and being free to rotate about a vertical axis relatively to the shoe to be operated upon and the jack support, the center of gravity of the said jack being at one side of the said vertical axis whereby the relative rotation will take place whenever the center of gravity is above its lowest possible position.

4. In combination a jack support, having a conical bore with a rounded lower end, a last having a hole therein and a jack, said jack having a rounded lower member to engage the conical bore of the last support and a pin to engage the hole in the last and being formed in two parts hinged together and capable of adjustment relatively to each other and being secured in a position of adjustment, whereby the center of gravity of said jack is thrown to one side of the axis of the jack and the said jack is caused to rotate about its vertical axis.

5. The improved last support for slugging machines and the like which comprises a jack made in two parts hinged together, one of said parts being provided with a fork and the other with a segment extending from the pivot of the hinge to a point within the fork, and means for clamping the fork and segment in different positions of adjustment, the center of gravity of the jack being at one side of its vertical axis, said jack being free to rotate in the last, and at its point of contact with the member on which it rests.

1,173,132. ENGINE. HENRY P. T. VAN KEUREN, Lansing, Mich. Filed Jan. 23, 1913. Serial No. 743,705. (Cl. 123—177.)



1. In an engine, the combination of a valve shaft and a cylinder supported thereby and capable of a slight relative movement at an angle thereto.

2. In an engine, the combination of a valve shaft, a crank case, and a cylinder between the valve shaft and the crank case, said cylinder having a close ground joint fit with the crank case to permit a slight relative movement between cylinder and crank case.

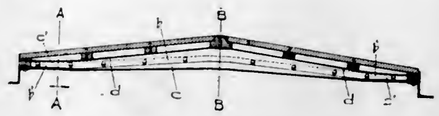
3. In an engine, the combination of a rotating valve, said valve having a fixed longitudinal axis relatively to the axis of the crank shaft, a cylinder suspended on the valve and a piston within the cylinder, the cylinder being capable of a slight movement in line with the movement of the piston.

4. The combination with a plurality of engine cylinders of supporting means therefor comprising a rotating valve member and brackets between the valve member and the crank case of the engine.

5. In an engine, the combination of a rotating valve member, a plurality of cylinders suspended thereon and brackets between the valve member and the crank case of the engine, said brackets forming journal bearings for the valve member at a fixed distance from the crank case.

[Claims 6 to 20 not printed in the Gazette.]

1,173,133. CARLINE. HENRY H. VAUGHAN, Westmount, and RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed Jan. 17, 1914. Serial No. 812,731. (Cl. 108—5.6.)

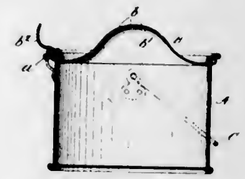


1. A carline of channel cross-section consisting of a pair of overlapping rigidly connected angle-iron members both arched, the upper to a greater extent than the lower, the end portions of the free edges of the vertical flanges of the said members being tapered.

2. A carline of channel cross-section consisting of a pair of overlapping rigidly connected angle-iron members both arched, the upper to a greater extent than the lower, the upper member being depressed between its middle and ends, the end portions of the free edges of the vertical flanges of the said members being tapered.

3. A carline of channel cross-section consisting of a pair of overlapping rigidly connected angle-iron members both arched, the upper to a greater extent than the lower, the upper member being depressed between its middle and ends, the end portions of the free edges of the vertical flanges of the said members being tapered, and the said members being disposed with the edge of the vertical flange of one member in bearing relation with the horizontal flange of the other member.

1,173,134. SINK-PAIL. HORACE E. WHITNEY, Cambridge, Mass., assignor to Dover Stamping and Manufacturing Company, Portland, Me., a Corporation of Maine. Filed Dec. 15, 1911. Serial No. 665,980. (Cl. 220—47.)

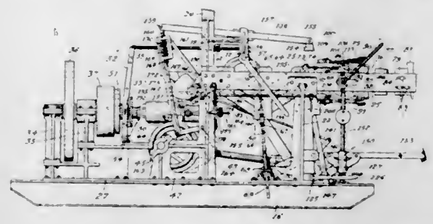


1. A sink pail having a perforated cover dish-formed to provide a receptacle when in open position, combined with means to support said cover in open position outside of said pail; whereby refuse placed in said dish-formed cover when in open position is drained outside of said pail.

2. A sink pail having a single dish-formed cover to completely close the same and to provide a receptacle when in open position, and which cover is perforated at its central portion to afford drainage for the sloping walls of such receptacle, combined with means to support said cover in open position outside of said pail; whereby refuse placed in said cover, when the latter is in open position, will be drained outside of said pail.

3. A sink pail having a hinged dish-formed cover to provide a receptacle when in open position, and which cover is perforated to afford drainage for the sloping walls of such receptacle, said hinged cover being provided with a lug or arm which projects upward when the cover is closed, so as to serve as a means for lifting the cover, but which extends downward when the cover is open so as to serve as a stop to bear against said pail to support said cover horizontally in open position outside of said pail; whereby refuse placed in said cover, when the latter is in open position, will be drained outside of said pail.

1,173,135. MACHINE FOR FORMING CONCRETE BLOCKS. HEMAN A. WILCOX, Minneapolis, Minn. Filed Apr. 8, 1913. Serial No. 759,681. (Cl. 25—45.)



1. A concrete machine comprising a mold box and means for compressing concrete blocks therein, a platform for receiving the blocks, manually controlled means for moving the box into discharging position, and means set in operation by said movement of the box for positioning the platform to receive the block.

2. A concrete machine comprising a mold box and means for compressing concrete blocks therein, a platform for receiving the blocks, manually controlled means for moving the box into discharging position, and means set in operation by the movement of the box for positively ejecting the block from the box.

3. A concrete machine comprising a mold box and means for compressing concrete blocks therein, a platform for receiving the blocks, intermittently operative mechanism for moving the platform into position to receive the block, means for moving the box by hand into discharging position, and means rendered operative by the moving of the box to cause the operation of the platform-positioning means.

4. A concrete machine comprising a mold box and means for compressing concrete blocks therein, a platform for receiving the blocks, means for positively ejecting the block upon the platform, intermittently operative mechanisms for simultaneously actuating the ejecting means and moving the platform into position to receive the block, means for moving the box into discharging position by hand, and means rendered operative by moving of the box to cause the operation of the platform-positioning and block-ejecting mechanisms.

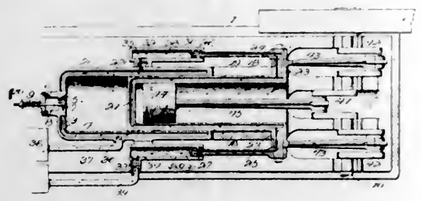
5. A concrete machine comprising a mold box and means for compressing concrete blocks therein, a platform below the box and spaced therefrom for receiving the blocks, manually controlled means for turning the box into inverted position for discharge upon the platform, and means set in operation by said movement of the box for causing the platform to rise into position to receive the block and thereafter to descend.

[Claims 6 to 35 not printed in the Gazette.]

1,173,136. INTERNAL-COMBUSTION ENGINE. WILEY J. WILLIAMS, Rockwall, Tex. Filed Feb. 25, 1915. Serial No. 10,595. (Cl. 123—176.)

1. An internal combustion engine comprising a stationary cylinder formed with an inlet and an exhaust port, the wall of said cylinder having a by-pass formed with inlet and outlet openings which communicate with said cylinder, a water jacket formed in the cylinder, a hollow outer piston operating in the cylinder, said piston having inlet and exhaust ports, a water jacket in said outer piston, hollow trunnions extending from the outer piston and communicating with the water jacket in same, movable hollow connections between the trunnions and the water jacket in the cylinder, valves in the hollow movable

connections for causing water to circulate through the water jackets when the outer piston is reciprocated, a crank shaft, connecting rods between the trunnions and the crank shaft, an inner piston operating in the hollow outer piston, and a connecting rod between the inner piston and the crank shaft.

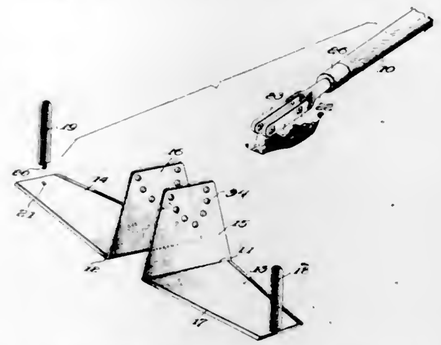


2. An internal combustion engine comprising a stationary cylinder formed with an inlet and an exhaust port, the wall of said cylinder having a by-pass formed with inlet and outlet openings which communicate with said cylinder, a water jacket formed in the cylinder, a hollow outer piston operating in the cylinder, said piston having inlet and exhaust ports, a water jacket in said outer piston, hollow trunnions extending from the outer piston and communicating with the water jacket in same, hollow plungers extending from and communicating with the hollow trunnions, oppositely opening valves in the hollow plungers, pump cylinders mounted on the stationary cylinder, one of said pump cylinders having an opening which communicates with the water jacket in said stationary cylinder, the other said pump cylinder having an opening, valves in the openings in the pump cylinders to admit water thereto to one of said pump cylinders and to permit water to escape from the other said cylinder, whereby upon each reciprocation of the outer piston water is caused to circulate through the water jackets, a crank shaft, connecting rods between the trunnions and the crank shaft, an inner piston operating in the hollow piston, and a connecting rod between the inner piston and the crank shaft.

3. An internal combustion chamber including a cylinder having a water jacket provided with an outlet opening, a piston having a water jacket, a crank shaft, a connection between the crank shaft and the piston, two pump cylinders, one of said pump cylinders having an opening which communicates with the engine cylinder, the other pump cylinder having an inlet opening, hollow connections communicating with the water jacket on the piston and the two pump cylinders, plungers on said connections which operate in the pump cylinders, and a series of valves which operate when the piston moves in one direction to admit water in one pump cylinder and exhaust the water from the other pump cylinder to cause circulation of water in the water jackets in the engine cylinder and the piston.

4. An internal combustion engine comprising a cylinder having a water jacket provided with an inlet opening and an outlet opening, a pump cylinder communicating with the inlet opening, a valve in said opening closed by suction in said pump cylinder, a second pump cylinder adjacent the engine cylinder and provided with an inlet opening, a valve in the latter opening opened by suction in said second mentioned pump cylinder, a hollow piston having a water jacket and formed with hollow trunnions providing an inlet and an outlet to the water jacket in the piston, hollow rods mounted on the trunnions and extending into the two pump cylinders and forming communication between same, plungers on said hollow rods, a valve in the plunger operating in the first mentioned pump cylinder, said valve being opened by suction to allow water to enter the pump cylinder when the piston moves outwardly, the other said plunger operating in the second mentioned pump cylinder having a valve which closes when the piston moves outwardly to draw water into said pump cylinder, said valves and plungers causing a circulation of water through the water jackets in the engine cylinder and piston, a second piston operating in the first mentioned piston, a crank shaft, connections between the trunnions and the crank shaft, and a connection between the second mentioned piston and the crank shaft.

1,173,137. HAND-WEEDER. ALBERT J. WOOD, Clarkston, Wash. Filed Sept. 10, 1914. Serial No. 861,052. (Cl. 55—41.)



1. A device of the character described including a pair of substantially L-shaped plate members, a handle member, an attaching shank connected to the handle and having a terminal bifurcation, the corresponding portions of the plate members being engaged with each other and disposed within the bifurcation, and bolts passing through the attaching shank and portions of the plates disposed therein, the said portions of the plates being formed to receive the bolts at a plurality of spaced points whereby the attaching shank may be adjusted relative thereto.

2. A device of the character described including a pair of substantially L-shaped plates, the corresponding portions of said plates being flatly engaged with each other and forming a body portion, the other portions of the plates being sharpened on their edges providing cutting blades, the portions of the plates constituting the body member being provided with registering series of apertures, a handle, a shank having a ferrule receiving the handle and having one terminal bifurcated, producing parallel spaced arms, said arms being disposed to embrace the said body member, and bolts passing through the arms and through the apertures of the body member for adjustably and detachably securing the shank thereto.

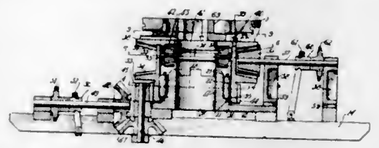
3. A device of the character described including a pair of substantially L-shaped plate members having their corresponding portions engaged and forming a body member, an attaching shank receiving the said body member, bolts passing through the attaching shank and the body member for detachably and adjustably securing the shank thereto, a handle, a ferrule formed on the shank to receive the handle, and a pair of guide strips secured to the outer terminals of the plate members and extending at right angles thereto and to the adjacent portions of the plates and in parallel relation to the said body member.

4. A device of the character described including a body portion provided with a laterally projecting blade, a handle shank connected to the body portion, and an upstanding guide detachably connected to the blade.

5. A device of the character described including a body portion having a blade extending laterally upon each side thereof, a handle shank carried by the body portion, and an upstanding guide carried by one of said blades at its outer extremity, one face of said guide being arranged substantially parallel with the adjacent end edge of the blade.

[Claims 6 to 9 not printed in the Gazette.]

1,173,138. ROTARY DRILLING-MACHINE. AUGUSTUS C. ZIERATH, Los Angeles, Cal. Filed Jan. 26, 1914. Serial No. 814,560. (Cl. 255—23.)



1. In a well drilling machine, the combination of a stationary cylinder, a rotary cylinder provided with means for engaging a drill pipe disposed about said first cylinder, a series of anti-friction rollers interposed between said cylinders to form a lateral bearing, and a series of connected floating rollers mounted between the upper surface of the stationary cylinder and an inwardly extending portion on said rotary cylinder to form a vertical bearing.

2. In a well drilling mechanism having a rotary cylinder carrying drill-pipe engaging means, a stationary cylinder extending into said rotary cylinder, a series of anti-friction rollers interposed between said cylinders to form a lateral bearing, a circular toothed rack carried by the stationary cylinder, a series of connected floating pinions on said circular rack, and a complementary circular rack carried by the rotary cylinder engaging and supported upon said pinions.

3. In a well drilling machine having a rotary cylinder and drill-pipe engaging means thereon, a stationary cylinder extending into said rotary cylinder, a detachable ring secured to the stationary cylinder, a series of anti-friction rollers interposed between said cylinders and carried by the stationary cylinder and said ring, an annular toothed rack on said ring, a pair of concentric floating rings, a series of pinions revolubly mounted between said rings and supported upon the annular toothed rack, a circular toothed rack carried by the rotary cylinder meshing with said pinions through which the rotary cylinder is supported on the pinions, and means for rotating the rotary cylinder.

4. In a well drilling machine the construction comprising a rotary cylinder, toothed rollers forming a horizontal bearing for said cylinder, vertical anti-friction rollers forming lateral bearings for said cylinder, spur teeth on the lower end of said cylinder, a driving pinion meshing therewith, spur teeth on the upper portion of said cylinder, a pinion meshing with said last named spur teeth arranged diametrically opposite the first named pinion, and means for rotating said pinions in unison to effect the rotation of said cylinder on the toothed rollers.

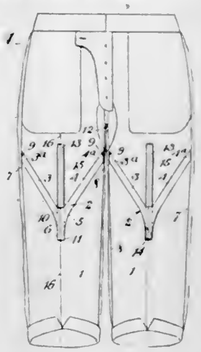
5. In a well drilling machine, the combination with a rotary member, of a drill pipe engaging means comprising a plurality of jaw members, radial guide rails mounted on said rotary member on which said jaw members are slidably mounted, a disk carried by said rotary member having a central opening, the walls of which form a cam and are engaged with the jaw members, and means for manually rotating said disk to advance or retract the jaw members in relation to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,173,139. TROUSERS-KNEE-LIFTING DEVICE. SOLOMON ABRAMSON, New York, N. Y. Filed June 18, 1914. Serial No. 845,819. (Cl. 2—126.)

1. A pair of trousers and leg-fitting devices fastened in the legs thereof, each device comprising a pair of members extending upwardly and outwardly in opposite directions from the knee portion of the trousers leg to the inner and outer lateral portions, the upper and lower extremities of the members being secured to the trousers while the intermediate portions of the members are free.

2. A pair of trousers having a lifting device in each leg, whereby the portion of a leg from the knee down is automatically lifted when the wearer's leg is bent at the knee, the lifting device comprising a pair of members having their lower ends fastened to the knee portion of the trousers leg and extending divergently upwardly and having their upper ends attached to the trousers leg adjacent the inner and outer seams and at points between the knee and crotch of the trousers.



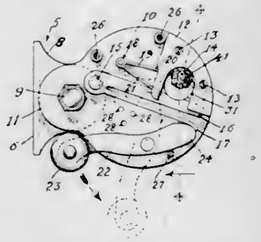
3. A pair of trousers, a leg lifting device fastened to the front piece of each leg of the trousers and embodying a flexible V-shaped structure fastened at its vertex to the knee portion of a trousers leg and having its members extending upwardly, with the extremities of the members fastened to the inner and outer lateral portions of the trousers leg.

4. A pair of trousers, a lifting device arranged in each leg and extending from the knee upwardly, said device being attached to the front piece of the trousers leg and consisting of a pair of upwardly-divergent tape-like members fastened at their lower ends to the knee portion of the trousers leg and extending therefrom to the inner and outer lateral portions of the trousers leg and attached thereto.

5. A trousers leg lifting attachment comprising a pair of tape-like members having their lower ends united in the form of a V and made of flexible material, said members being flat in a common plane.

[Claim 6 not printed in the Gazette.]

1,173,140. ELEVATOR CABLE AND ROPE LOCK. SCOTT W. ALEXANDER, Long Beach, Cal. Filed Aug. 1, 1914. Serial No. 854,592. (Cl. 187—46.)

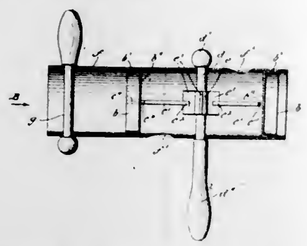


1. A lock for elevator cables or ropes, comprising spaced disks disposed transverse to the cable having alined apertures therethrough for the passage of the cable, a compression member provided with a spring pivotally mounted between said disks for movement transverse to and into engagement with the cable, an operating lever pivotally mounted between said disks with one arm in engagement with the compression member, said arm being of greater length than the normal between the pivot point and compression member, and a stop disposed to limit movement of the lever when in locking position.

2. A lock for elevator cables or ropes, comprising disks disposed transverse to the cable, a spacing plate secured between said disks and having an opening with edges set

back from the edges of the disk apertures, a compression member pivotally mounted between said disks for movement transverse to and into engagement with the cable, a spring disposed to press said compression member out of engagement with the cable, another spring oppositely disposed to the first spring and in engagement with the compression member, an operating lever pivotally mounted between said disks with an end engaging said spring.

1,173,141. SOUNDING TOY. WILLIAM BARTHOLOMAE, New York, N. Y., assignor of one-half to Harry Zimmerman, New York, N. Y. Filed Dec. 8, 1915. Serial No. 65,660. (Cl. 46—46.)



1. A sounding toy including a hollow body-portion having two open ends; a sounder mounted within said body portion and intermediate said ends; a yielding striker arranged to hit said sounder and having one of its ends free; and means for displacing the free end of said striker and setting the same in vibration.

2. A sounding toy including a hollow body-portion having two open ends; a sounder held within said body portion and intermediate said ends by a snug fit; a yielding striker arranged to hit said sounder and having one of its ends free and its other end held between said sounder and body-portion; and means for displacing the free end of said striker and setting the same in vibration.

3. A sounding toy including a tubular body-portion having two open ends; a sounder held within said body portion and intermediate said ends by a snug fit; an L-shaped yielding striker the base of which overlies and is arranged to hit said sounder and the leg of which extends lengthwise of said tubular body-portion and has one of its ends free; and means for displacing the free end of said leg and setting said striker in vibration.

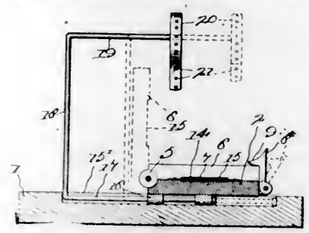
4. A sounding toy including a hollow body-portion; a pair of sounders mounted therein; a striker for each of said sounders; and means common to both said strikers for setting the same in vibration.

5. A sounding toy including a hollow body-portion having two open ends; a pair of sounders mounted within said body portion, the distance of one of said sounders from the open end which is nearer the same being different from the distance of the other sounder from the open end nearer the latter; a striker for each of said sounders; and means common to both said strikers for setting the same in vibration.

[Claims 6 to 8 not printed in the Gazette.]

1,173,142. FILM-MENDER. ANDREW J. BERNARD, New Orleans, La., assignor of four-tenths to ERNEST M. LOEB, New Orleans, La. Filed June 26, 1915. Serial No. 36,498. (Cl. 154—42.)

1. In an improved film mender of the character described, the combination with a supporting structure, of a base removably secured thereon and traversed by a longitudinal central channel, series of equidistantly spaced pins on both sides of said channel for receiving the perforations in the film margins, a series of independently hinged clamps disposed contiguous and arranged to swing down to engage the base and bind the film and ribbon together during the mending operation, said clamps being provided with sockets for receiving said pins and with registering recesses adapted to aline with the channel in said base when the clamps are moved to engage the same, and catches pivoted to said base and provided with cam heads for engaging the free ends of said clamps and binding the same in tight engagement with the base, substantially as described.



2. In a film mender, the combination of a base constructed to receive the film, means for clamping said film during the mending operation, and a ribbon holder slidably connected with said mender for bringing the ribbon over either marginal edge of said film, substantially as described.

3. A film mender including a base for receiving the film, clamp means associated with said base for securing the film during the mending operation, bearings associated with said base, a holder including a member slidable through said bearings, said holder being adapted to support a perforated ribbon mounted on the same and movable thereby to bring the ribbon over either marginal edge of the film as the same lies on said base, substantially as described.

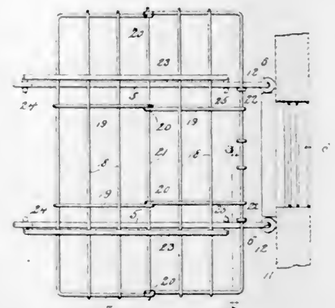
4. In a film mender, the combination of a base adapted to receive the film, clamp means associated with said base for binding the film during the mending operation, bearings associated with said base, a U-shaped holder having a lower horizontal member slidably mounted through said bearings and an upper horizontal member extending above the base and clamping means, said upper member adapted to support a perforated ribbon roll movable above either marginal edge of the film on said base, substantially as described.

5. In a film mender, the combination of a supporting structure having a groove therein, a base mounted on said supporting structure and provided with a longitudinal channel, a series of teeth on said base to either side of said channel, a series of clamps hinged to swing independently on said base and provided with channels and sockets for receiving said teeth, means for securing said clamps in engagement with said base, a ribbon holder slidable in the groove in said supporting structure, and having a perforated ribbon roll mounted thereon and arranged to be shifted from above one margin of the film on said base to a position above the other margin, substantially as described.

1,173,143. SUPPORT. NORRIS C. COVINGTON and JOHN ALLRED, Rockingham, N. C.; said Allred assignor to said Covington. Filed Oct. 1, 1915. Serial No. 53,489. (Cl. 248—18.)

1. A support comprising a horizontal arm and a downwardly and inwardly extending arm at the outer end thereof, the inner ends of the arms having alined pivots, one of which pivots has a portion which is non-circular in cross-section, and bearings in which the pivots are slidably mounted, the bearing of the last-mentioned pivot conforming to the non-circular portion thereof, and said last-mentioned pivot having a retaining part extending beneath its bearing.

2. A support comprising a horizontal arm and a downwardly and inwardly extending arm at the outer end thereof, the inner ends of the arms having alined pivots, one of which pivots has a portion which is non-circular in cross-section, and bearings in which the pivots are slidably mounted, the bearing of the last-mentioned pivot conforming to the non-circular portion thereof, and said last-mentioned pivot having a shoulder, its bearing having a top recess in which the shoulder is adapted to seat.

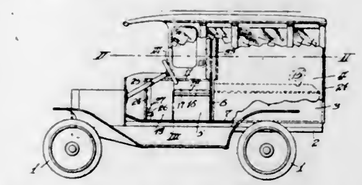


3. A support comprising a pair of laterally spaced bracket arms, attaching means for said arms, an article-supporting shelf mounted on the bracket arms, article-holding members extending above the shelf and having depending hooks engageable with the bracket arms, and clips fastening the shelf to the bracket arms.

4. A support comprising a pair of laterally spaced bracket arms, attaching means for said arms, an article-supporting shelf mounted on the bracket arms, and article-holding members extending above the shelf and having depending hooks engageable with the bracket arms.

5. A support comprising a pair of laterally spaced bracket arms, attaching means for said arms, an article-supporting shelf mounted on the bracket arms, and article-holding members extending above the shelf and having depending hooks engageable with the bracket arms, the outer ends of the bracket arms having upstanding loops engageable by corresponding hooks of the holding members.

1,173,144. VEHICLE-BODY. JAMES H. MCCABE and WILLIAM C. BERRY, St. Louis, Mo. Filed Apr. 3, 1915. Serial No. 18,872. (Cl. 21—26.)



1. In a vehicle body, a foldable seat, and a foldable closure, said closure adapted to occupy the position of said seat when said seat is folded.

2. In a vehicle body, a removable seat, and a removable closure, said closure adapted to be moved into the seating position of said seat when said seat is removed.

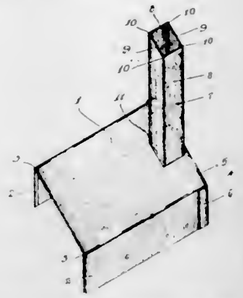
3. A vehicle body comprising a pair of compartments, a partition dividing said compartments, a pocket formed in said partition, an opening formed in said partition, and a closure adapted to abut said partition adjacent said opening said closure adapted to be conveyed to a seating position in said pocket.

4. A vehicle body comprising a pair of compartments, a partition dividing said compartments, an opening formed in said partition, a removable closure adapted to aline with said opening, and a removable seat adapted to occupy the position of said closure when said closure is removed.

5. A vehicle body comprising a pair of compartments, a partition dividing said compartments, a pocket formed in said partition, an opening formed in said partition, and a foldable closure adapted to aline with said opening, said closure when folded adapted to be seated in said pocket.

[Claims 6 to 9 not printed in the Gazette.]

1,173,145. CAMPER'S STOVE. ALBERT J. KLUNK, Orange, Cal. Filed Aug. 17, 1914. Serial No. 857,034. (Cl. 126—9.)



1. A camper's stove comprising a top plate, two side plates hinged at their upper edges to the top plate, a back plate hinged at its upper edge to the back edge of the top plate, a chimney comprising a plurality of plates hinged together, one of said plates being hinged at the bottom to said top plate, said top plate having an aperture to communicate with said chimney, a bolt slidable on one of the plates of said chimney, and a socket on the back plate adapted to receive the end of said bolt to lock the chimney in erect position.

2. A collapsible stove comprising a top plate having side plates and an end plate secured thereto, all foldable thereon to a flat form and a collapsible chimney pivoted to said top plate and both foldable and collapsible thereon to a flat form.

3. In an article of the character described, the combination with a top plate of a stove, of a smoke pipe collapsible to flat form and pivoted to said top plate, said stove pipe comprising a plurality of side plates all permanently hinged together longitudinally thereof, said pipe being foldable upon said stove and collapsible without detchment of the pipe from the stove and without detachment of any of the pipe sections from each other.

4. In an article of the character described, the combination with a top plate of a stove, of a smoke pipe collapsible to flat form and pivoted to said top plate, said stove comprising a plurality of side plates all permanently hinged together longitudinally thereof, said pipe being foldable upon said stove and collapsible without detachment of the pipe from the stove and without detachment of any of the pipe sections from each other and means for locking said pipe in upright position.

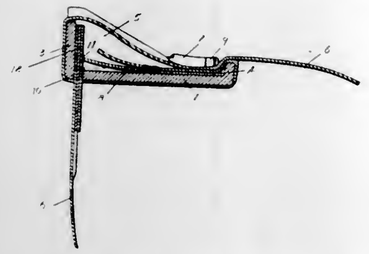
5. In an article of the character described, the combination with a top plate of a stove, of a smoke pipe collapsible to flat form and pivoted to said top plate, said stove pipe comprising a plurality of side plates all permanently hinged together longitudinally thereof, said pipe being foldable upon said stove and collapsible without detachment of the pipe from the stove and without detachment of any of the pipe sections from each other and means for locking said pipe in expanded and upright position.

[Claims 6 to 9 not printed in the Gazette.]

1,173,146. SEAL. FREDERICK A. RUTHERFORD, Battle Creek, Mich., assignor of one-half to U. E. Gillen, Chicago, Ill. Filed Jan. 11, 1916. Serial No. 71,440. (Cl. 70—99.)

1. In a seal, the combination of a casing member comprising integral front, side, and end walls, the side walls being wider than the end walls, the inner end wall being

relatively narrow and the front wall having a rectangular opening therein adjacent the outer end wall, a spring clutch member having a rectangular notch in its outer end disposed within said casing with its inner end against the inner end wall and its notch in alinement with said opening in said front wall, and a strap wrapped around said casing member over the end walls thereof and between its side walls and constituting a rear casing wall, the inner end of the strap being disposed within said casing, portions of said casing side walls being folded upon said strap clamping it upon the inner end of said clutch member and over the inner end wall, the strap being provided with an opening registering with the opening of said casing, the outer end of the strap being folded longitudinally upon itself into a rectangular tongue adapted to be inserted through the opening in said casing and clutched between said clutch member and said outer end wall.



2. In a seal, the combination of a casing member comprising integral front, side, and end walls, the side walls being wider than the end walls, the inner end wall being relatively narrow and the front wall having an opening therein adjacent the outer end wall, a spring clutch member disposed within said casing with its inner end against the inner end wall, and a strap wrapped around said casing member over the end walls thereof and between its side walls and constituting a rear casing wall, the inner end of the strap being disposed within said casing portions of said casing side walls being folded upon said strap clamping it upon the inner end of said clutch member and over the inner end wall, the ends of such clamping portions being welded together, the strap being provided with an opening registering with the opening of said casing, the outer end of the strap being adapted to be inserted through the opening in said casing and clutched between said clutch member and said outer end wall.

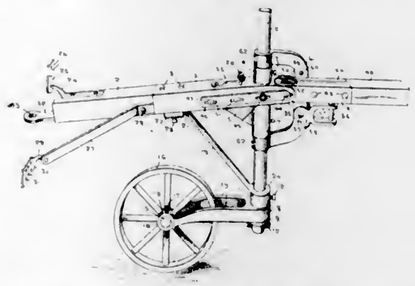
3. In a seal, the combination of a casing member comprising integral front, side, and end walls, the side walls being wider than the end walls, the front wall having an opening therein adjacent the outer end wall, a spring clutch member disposed within said casing with its inner end against the inner end wall, and a strap wrapped around said casing member over the end walls thereof and between its side walls and constituting a rear casing wall, the inner end of the strap being disposed within said casing, portions of said casing side walls being folded upon said strap clamping it upon the inner end of said clutch member and over the inner end wall, the strap being provided with an opening registering with the opening of said casing, the outer end of the strap being adapted to be inserted through the opening in said casing and clutched between said clutch member and said outer end wall.

4. In a seal, the combination of a casing member comprising integral front, side and end walls, the front wall having a rectangular opening therein adjacent the outer end wall, a spring clutch member having a rectangular notch in its outer end disposed within said casing with its notch in alinement with said opening in said front wall, and a strap wrapped around and secured to said casing member and constituting a rear casing wall, the inner end of the strap being disposed within said casing, the strap being provided with an opening registering with the opening of said casing, the outer end of the strap being folded longitudinally upon itself into a rectangular tongue adapted to be inserted through the opening in said casing and clutched between said clutch member and said outer end wall.

5. In a seal, the combination of a casing comprising integral front, side and end walls, the front wall having an opening therein adjacent the outer end wall, a spring clutch member disposed within said casing, and a strap wrapped around and secured to said casing member and constituting a rear casing wall, the inner end of the strap being disposed within said casing, the strap being provided with an opening registering with the opening of said casing, the outer end of the strap being adapted to be inserted through the opening in said casing and clutched between said clutch member and said outer end wall.

[Claims 6 and 7 not printed in the Gazette.]

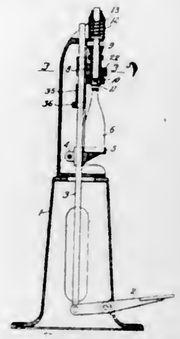
1,173,147. TONGUE-TRUCK. HENRY J. SCHWARTZ, Plainville, Ill., assignor of one-half to William T. Schwartz, Plainville, Ill. Filed Nov. 30, 1914. Serial No. 874,737. (Cl. 21—205.)



1. A tongue truck, comprising; a stub tongue consisting of a front channel block, and a rear channel block secured within the rear end of said front channel block, means for supporting said stub tongue upon a caster wheel, ears at the forward end of said front channel block, one of said ears being provided with a circular aperture, the other of said ears being provided with an elongated longitudinally extending slot, a main tongue for said stub tongue, plates secured upon the rear end of said main tongue provided with apertured ears embraced by the ears of said front channel block, a plate mounted upon said front channel block and longitudinally adjustable thereon, said plate provided with an aperture in its forward end for registering with the slot in one of the ears of said front channel block, a rod projecting through the apertures and the slot of the respective ears and plates for pivotally connecting said main tongue to said stub shaft, means for retaining said rod in operative position, and means for securing said plate in its adjusted positions upon said front channel block, whereby said plate is capable of longitudinal adjustment upon said front channel block to maintain said main tongue in the true line of draft, or to deflect said main tongue at either side of the true line of draft to compensate for side draft in either direction.

2. A tongue truck, comprising; a stub tongue consisting of a front channel block, and a rear channel block secured within the rear end of said front channel block, means upon said rear channel block for securing said stub tongue to a vehicle or machine, a sleeve within the forward end of said front channel block, a vertical shaft slidably projecting through said sleeve, a caster swivel pivotally mounted upon the lower end of said shaft, a caster wheel mounted in said swivel, set screws carried by said sleeve adapted to engage said shaft for retaining said sleeve in either raised or lowered position upon said shaft for varying the height of said truck, a main tongue pivotally connected to said stub tongue means upon said front channel block for laterally deflecting said main tongue at either side of the true line of draft for compensating for minimum side draft, and a yoke having its ends loosely embracing said shaft at points above and below said shaft to provide means for attaching draft appliances to said truck, said yoke being adapted to be swung upon said vertical shaft for positioning the same at either side of said main tongue to compensate for excessive side draft in either direction.

1,173,148. MACHINE FOR PACKAGING LIQUIDS. WILLIAM F. STONE, Woodbury, N. J., assignor to Star Seal Company, New York, N. Y., a Corporation of New York. Filed Jan. 17, 1913. Serial No. 742,721. (Cl. 226—28.)



1. In a bottle filling machine, a movable filling head including a syrup pump, a control for charged water, and a gas exhausting device, and a multi-phase operating mechanism for said filling head including means effective upon movement of said mechanism in one direction to first actuate said pump, means subsequently effective to actuate said charged water control, and means finally effective upon a movement of the operating mechanism in the opposite direction to actuate said gas exhausting device.

2. In a filling machine, a syrup controlling valve, a charged water controlling valve, and a "sniffer" or gas exhausting valve, and a member arranged for successive contact with said charged water and "sniffer" valves, and means to bring to operative position said contact member subsequent to the operation of the syrup control valve whereby said charged water valve will be first operated and the reverse movement of said contact member will operate the "sniffer" valve.

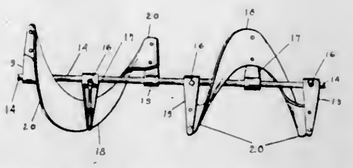
3. In a bottle filling machine, a movable filling head including a plural liquid supply and a gas exhausting device operatively associated therewith, and an operating mechanism for said filling head including means effective upon a movement of the operating mechanism in one direction to actuate one element of said plural liquid supply, means effective upon a further movement of said mechanism to actuate another element of said plural liquid supply, and means effective upon a movement of said mechanism in the opposite direction to actuate said gas exhausting device.

4. In a machine of the class described, a syrup pump, a charged water valve, and a "sniffer" or gas exhausting valve opposite said charged water valve, a rotatable spindle, a pair of cams thereon, a valve actuating device on one of said cams, means operated by the rotation of the spindle effective to operate said syrup pump, and a pair of members on said valve actuating device to successively operate said charged water and "sniffer" valves subsequent to the operation of the syrup pump.

5. In a machine of the class described, a syrup pump, a charged water valve, and a "sniffer" valve, a rotatable spindle, a pair of cams fastened to each other and mounted on the spindle, a valve actuating device mounted on one of said cams, a clamp operating lever pivotally mounted and positioned for movement by the other of said cams, a movable collar operatively disposed relative to said clamp operating lever, a clamping collar adapted for engagement with a bottle neck and operatively connected with said movable collar, and a pair of projections on the valve actuating device to successively operate the charged water and "sniffer" valves, the movement of said spindle being effective through operative connections to first operate the syrup pump.

[Claims 6 to 27 not printed in the Gazette.]

1,173,149. SPREADER. JOHN HARKER, Kendallville, Ind., assignor of one-third to Alonzo R. Cole, Kendallville, Ind. Filed Nov. 12, 1914. Serial No. 871,655. (Cl. 111—40.)



1. A spreader device embodying supporting means, and carried thereby a plurality of rotatable spiral shovels formed of pliable material and having their extremities adjustable and capable of movement axially one relatively to the other.

2. A spreader device embodying a shaft, a plurality of spiral shovels disposed around the shaft, and means for connecting the extremities of such shovels to the shaft, such connecting means being capable of movement lengthwise of the shaft.

3. A rotatable spreader shaft, a plurality of spiral shovels formed of pliable material and having their extremities adjustably connected with the shaft and capable of movement one relative to the other, and additional means for adjustably connecting the central portion of the shovels to the shaft, the intermediate portions of the shovels being free of the shaft.

4. A device of the character described including a shaft and a spiral shovel formed of pliable material having its extremities adjustably connected with such shaft and capable of movement one relative to the other.

5. Mechanism for scattering particles of freely thrown material embodying a lateral particle receiving rotary spreader including a pair of spaced, axially alined, oppositely pitched, radial delivery scrolls, each comprising a single spiral element, a rotatable support for the elements, and means for mounting the elements in spaced relation as to the support to assist in a uniform long range distribution of the delivered particles.

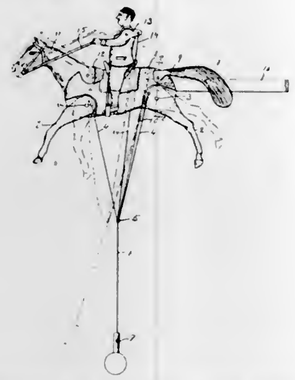
[Claim 6 not printed in the Gazette.]

1,173,150. TOY. GEORGE C. HUBBARD, Los Angeles, Cal. Filed Aug. 17, 1914. Serial No. 857,278. (Cl. 46—40.)

1. A mechanical toy comprising a body member, four leg members pivotally secured near their upper ends to the lower corners of said body members at each side thereof; a head member and a tail member pivotally secured to the upper corners of said body member at the front and rear thereof respectively; cords attached to said front legs at the rear of and above their connection to the body member; other cords attached to said rear legs and tail member above and in front of their connection to the body and extending downwardly therefrom; a counterweight secured to the other ends of said cords whereby a swinging motion imparted to said weight will cause said leg and tail members to perform lifelike movements; and a holding member secured to said body member.

2. A mechanical toy comprising a body member; leg members pivotally secured near their upper ends to the lower corners of said body member at each side thereof; a head member and a tail member pivotally secured near

one end to the upper corners of the body member at the front and rear thereof; another body member secured upon the top of said first mentioned body member; arm members pivotally secured to said second body member; cords extending from the arms of the last mentioned body member to the outer end of the head of the first mentioned body member; operating cords connected at one end to said leg, tail and arm members and extending downwardly therefrom; a counterweight connected to the other ends of said operating cords.



3. A mechanical toy comprising a body member; movable members pivotally secured to said body member at each side thereof; cords secured to said movable members, one cord for each member, at points eccentric to their connection with the body member; and a weight connected to all of said cords, said cords being so connected to said movable members that the weight will hold said movable members in a natural normal position and when said weight is swung in different directions different motions are produced by said movable members.

4. A mechanical toy comprising a body member; leg members pivotally secured near their upper ends to said body member at each side of the lower portion of the front and rear ends thereof; a head member and a tail member pivotally secured near one end to said body member centrally of the upper portion of the front and rear ends thereof respectively; cords connected to said movable members at points eccentric to their connection with the body member, there being one cord for each of said movable members; a weight connecting the other ends of all of said cords; and holding means for said body member.

5. A mechanical toy comprising a body member; leg members pivotally secured near their upper ends to said body member at each side of the lower portion of the front and rear ends thereof; cords connected to said movable members at points eccentric to their connection with the body member, there being one cord for each of said movable members; a weight connecting the other ends of all of said cords; and holding means for said body member.

[Claim 6 not printed in the Gazette.]

1,173,151. EYEGLASS AND SPECTACLE MOUNTING. EDGAR R. DURGIN and WAYNE S. SEARLES, Newark, N. J., assignors to New Jersey Optical Co., Newark, N. J., a Corporation of New Jersey. Filed Dec. 28, 1915. Serial No. 68,989. (Cl. 88—47.)

1. In an eyeglass mounting, the combination of a part bent so as to conform to a portion of an eyeglass or spectacle rim, the inner edge of said part being provided with notches and a strip situated between the edges of said part and having projecting tongues in engagement with the said notches.

2. In an eyeglass mounting, the combination of a part bent transversely and longitudinally to embrace a portion of an eyeglass rim the inner edges of said part being provided with notches, and a strip situated intermediate the inner edges of said part, said strip having tongues projecting from its side edges and being in interlocked engagement with the said notches, said strip being also bent transversely and longitudinally.



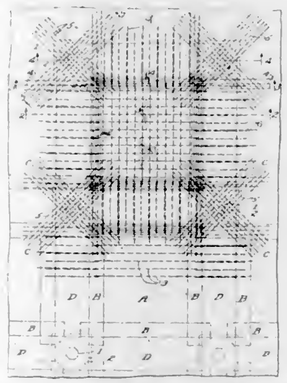
3. In an eyeglass mounting, the combination of a part consisting of sheet metal bent longitudinally and transversely so as to conform to a portion of an eyeglass or spectacle rim embraced thereby, the inner edges of said part being bent over the inner edges of the portion of the rim embraced thereby, the said inner edges of the said part being provided with undercut notches and a strip situated intermediate the inner edges of said part and being bent transversely and seated in a groove in the inner periphery of said rim, said strip having tongues projecting from its side edges which are in interlocked engagement with said notches.

4. In combination, an eyeglass rim, a part partially embracing a portion of said rim said part being bent transversely and longitudinally and being provided with undercut notches in its inner edges, and a member situated intermediate the said inner edges and being also bent transversely and longitudinally, said member having projecting tongues in interlocked engagement with said notches, the edge portions of said part upon opposite sides of said notches being bent inwardly over the inner edges of the said rim, and the said tongues extending outwardly into the said notches, the said part and member being clamped against said rim.

5. A fitting having a lens frame comprising a portion embracing the outer surface of a portion of said frame and a portion contacting with the inner surface thereof the said portions being interlocked with each other and being clamped against said frame.

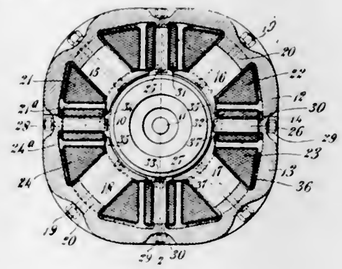
[Claims 6 to 8 not printed in the Gazette.]

1,173,152. REINFORCED CONCRETE CONSTRUCTION. HIPOLIT M. HINCZ, Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me., a Corporation of Maine. Filed Jan. 27, 1912. Serial No. 673,794. (Cl. 72—15.)



A girderless monolithic reinforced-concrete structure consisting of a plurality of columns and a plurality of concrete slabs over the columns, said columns being located at the angles of the slabs, each slab comprising a central portion, reinforcement for the central portion, reinforcement forming a plurality of beams surrounding and carrying the central portion, said beams having intersecting ends and being arranged in the form of a polygon, reinforcing means over the columns extending diagonally of the slab and forming cantalivers that directly support the ends of the beams at the angles of the polygon, slabs extending directly between columns, the last mentioned slabs being inclosed and supported by said beams, the reinforcement of the central portion extending transversely through the last mentioned slabs, and transverse reinforcement in the tension regions of said last mentioned slabs.

1,173,153. DYNAMO-ELECTRIC MACHINE. EMMETT W. STULL, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Aug. 22, 1908. Serial No. 449,869. (Cl. 171—252.)



1. In a dynamo-electric machine, a field structure comprising a yoke, main field poles extending therefrom and equally spaced about said yoke, said main field poles being provided with pole tips, commutating poles arranged alternately with respect to said main poles, windings on said poles, and means mounted on said pole tips and bearing against the windings of both sets of poles to hold said windings in place.

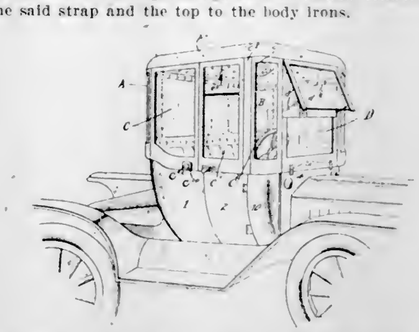
2. In a dynamo-electric machine, a field frame formed in two relatively separable parts, main field poles mounted on each of said parts, and commutating poles mounted on said parts, one pair of diametrically oppositely disposed commutating poles being mounted upon the same frame part.

3. In a dynamo-electric machine, a field frame formed in two relatively separable parts, a series of field poles mounted on said frame, the same number of poles of said series being mounted on each of said frame parts, a second series of field poles mounted on said frame, each pole of said latter series being located between and spaced from two adjacent poles of said first series, and one pair of diametrically oppositely disposed poles of said second series being mounted upon the same frame part.

4. In a dynamo-electric machine of the horizontal shaft type, a field frame formed in two parts, one of which is separable from the other by movement in an upward direction, a series of field poles mounted on said frame, the same number of poles of said series being mounted on each frame part, and a second series of field poles mounted on said frame and comprising a pair of diametrically oppositely disposed poles located between and spaced from two adjacent poles of said first series, said pair of diametrically opposite poles of said second series being mounted on the lower one of said frame parts with their axes extending in a substantially horizontal direction.

1,173,154. VEHICLE-TOP. THOMAS SWAN, Cleveland, Ohio, assignor to Fisher Closed Body Company, Detroit, Mich., a Corporation of Michigan. Filed May 12, 1913. Serial No. 766,973. (Cl. 21—62.)

1. The combination of a vehicle body, body irons carried thereby, a demountable top the rear end whereof is adapted to telescope over the end of the body and having therebeneath a metallic strap having slots therein, and means extending through said slots and connecting the said strap and the top to the body irons.



2. The combination of a vehicle body, body irons carried thereby, a demountable top comprising a rear panel or section and side panels or sections, said sections being provided with rigid straps therebeneath, and adjustable connections between said straps and said irons.

3. The combination of a vehicle body, body irons carried by the rear portion of said body, a top comprising a rear and side panels or sections, the said sections having reinforcing straps at their bottoms and the adjacent ends of the straps of the rear and side sections or panels being slotted, and means extending through such slots and connecting the straps and the sections supported thereby with the said irons.

4. The combination, with a vehicle body iron, of a demountable top comprising an end and a side section, the end section being provided with a reinforcing strap at its bottom having a slot in the end which is adjacent to the side section and the side section being provided with a reinforcing strap having a slot in the end which is presented toward the rear section, one of said straps terminating short of its section and the other strap projecting beyond its section, the section having the former strap being adapted to receive therebeneath the projecting end of the strap carried by the other section and having a pocket above the end of its strap for the reception of the body iron, means extending through the slotted portions of said straps and connecting the same to the body iron, and a cover for said packet.

5. The combination, with a vehicle body iron, of a demountable top comprising an end and a side section, the end section being provided with a reinforcing strap at its bottom having an aperture in the end which is adjacent to the said section and the side section being provided with a reinforcing strap having an aperture in the end which is presented toward the rear section, one of said straps terminating short of its section and the other strap projecting beyond its section, the section having the former strap being adapted to receive therebeneath the projecting end of the strap carried by the other section and having a pocket above the end of its strap for the reception of the body iron, and means extending through the apertures of said straps and connecting the same to the body iron.

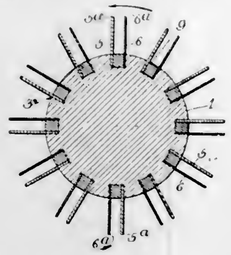
[Claims 6 to 25 not printed in the Gazette.]

1,173,155. HELICAL TOOL. ROBERT F. WHITNEY, Winchester, Mass. Filed Oct. 26, 1914. Serial No. 868,603. (Cl. 149—16.)

1. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade and a front blade adapted to act as a guard therefor; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

2. A helical tool comprising a cylinder furnished with a series of blades disposed helically thereon in pairs, each pair comprising a rear blade and a front blade adapted to act as a guard therefor; and each pair being separated

from the adjacent pairs by a space wider than that between its blades.



3. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a comparatively hard and sharp forward edge and a front blade furnished with a comparatively soft and blunt forward edge and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

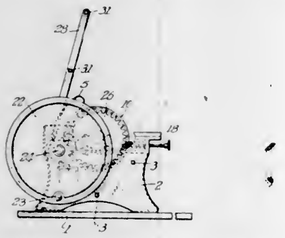
4. A helical tool comprising a cylinder furnished with a series of blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a comparatively hard and sharp forward edge and a front blade furnished with a comparatively soft and blunt forward edge and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pair by a space wider than that between its blades.

5. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a forward edge forming an acute angle and a front blade furnished with a forward edge forming an obtuse angle and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

14,074. IRONING-MACHINE. AXEL R. GUSTAFSON, Chicago, Ill., assignor to Horton Manufacturing Company, Fort Wayne, Ind., a Corporation of Indiana. Filed Jan. 3, 1916. Serial No. 70,054. Original No. 1,097,016, dated May 19, 1914, Serial No. 771,409. (Cl. 68—9.)



1. The combination in an ironing machine with a stationary hollow heated iron and a supporting frame, of a padded roll, a horizontal, flanged head on the frame at each end of the roll, a wheeled carriage adapted to travel on each flanged head and said carriages supporting the roll, screw-threaded bars threaded into the frame and loosely engaging the carriages, springs surrounding the bars and located between the frame and the carriages to force the roll toward the iron, and means for moving the carriages against the tension of the springs.

2. In an ironing machine, the combination with wheeled carriages supporting a padded roll, a supporting frame having horizontal tracks for said carriages, springs between said frame and carriages, each carriage formed with an inclined edge terminating in a recess, and pivoted levers having rollers normally in contact with said inclined edges, and said rollers adapted to fit and engage in the recesses of the inclined edges to hold the carriages out of operative position.

3. In apparatus of the class described, a shoe, a carriage having a roll thereon, resilient means acting on the carriage and tending to force the same toward the shoe, a lever acting independently of the resilient means and having a part acting directly upon said carriage to force the same against the resilient means whereby the roll floats between the pressure of the spring and the lever and is readily controllable by the operator.

4. In a mangle, a stationary ironing element, a movable carriage having a second ironing element thereon, a resilient means for forcing said carriage toward said stationary ironing element, a lever means independent of said resilient means for forcing said carriage away from said stationary element, including means for locking said carriage away from said stationary element, all so constructed and arranged that the carriage floats between the resilient means and the lever and may be instantly shifted and readily controlled by the operator.

14,075. NAIL. GUSTAV A. NOETZEL and WILLIAM PAUL FERRIS, Waukesha, Wis., assignors to Precision Metal Workers, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,480. Original application filed Oct. 28, 1912, Serial No. 728,248. Renewed July 13, 1914, Serial No. 850,802. Original No. 1,117,429, dated Nov. 17, 1914. (Cl. 85—28.)



1. The combination of a nail and a washer thereon having a lateral extension constituting a lip normally on the plane of the inner end of said washer adapted to be bent outward at an acute angle to the same.

2. The combination of a nail and a washer thereon having a lateral extension of diminished width aproximately midway of its length.

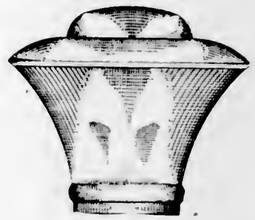
3. The combination of a nail and a washer thereon provided with an outer sleeve-extension in opposition to the nailhead and having a laterally extending lip normally on the plane of its inner end.

4. The combination of a nail and a washer thereon provided with an outer sleeve-extension in opposition to the nail-head and with a lateral extension of diminished width approximately midway of its length.

5. The combination of a nail, and a nail-head spacer thereon, comprising a small, thin washer and a relatively high tapering sleeve of relatively small diameter formed integrally with the inner margin of said washer and having its small outer end opposed to the nail-head.

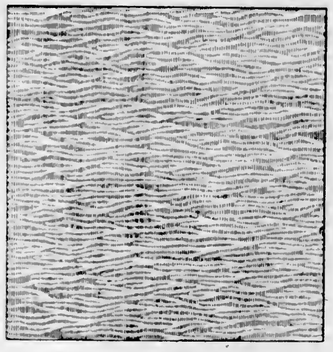
DESIGNS.

48,577. CAP OR VASE FOR METAL BED-FRAMES. JOHN ABEL, Jersey City, N. J., assignor to Mersereau Metal Bed Company, a Corporation of New Jersey. Filed Sept. 1, 1915. Serial No. 48,555. Term of patent 7 years.



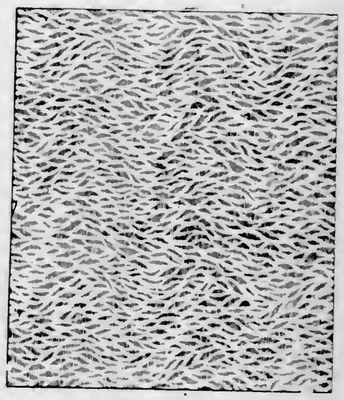
The ornamental design for a cap or vase for metal bed frames, as shown.

48,578. CUT PILE FABRIC. NICHOLAS ALBRECHT, Philadelphia, Pa., assignor to Fred Pearson & Co., Philadelphia, Pa. Filed Dec. 27, 1915. Serial No. 68,964. Term of patent 3½ years.



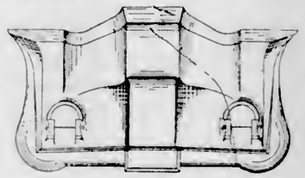
The ornamental design for a cut pile fabric, as shown.

48,579. CUT PILE FABRIC. NICHOLAS ALBRECHT, Philadelphia, Pa., assignor to Fred Pearson & Co., Philadelphia, Pa. Filed Dec. 27, 1915. Serial No. 68,965. Term of patent 3½ years.



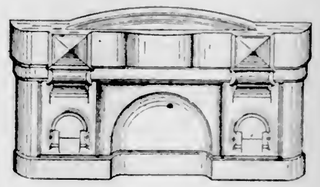
The ornamental design for a cut pile fabric, as shown.

48,580. BURIAL-CASKET PLATE. CHARLES BLESCH, Newport, Ky., assignor to the Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,681. Term of patent 14 years.



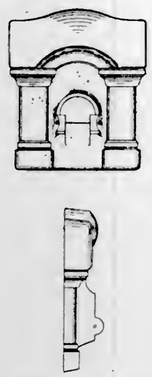
The ornamental design for a burial-casket plate, substantially as shown.

48,581. BURIAL-CASKET PLATE. CHARLES BLESCH, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,682. Term of patent 14 years.



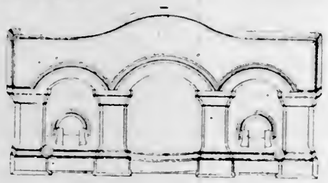
The ornamental design for a burial-casket plate, substantially as shown.

48,582. BURIAL-CASKET PLATE. CHARLES BLESCH, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,683. Term of patent 14 years.



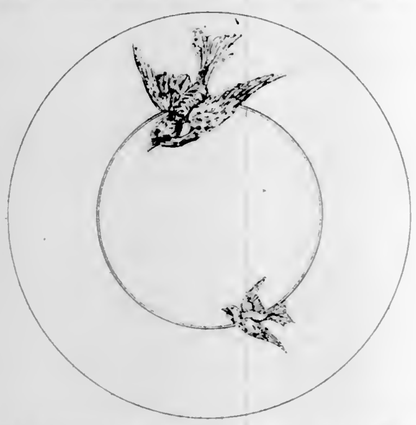
The ornamental design for a burial-casket plate, substantially as shown.

48,583. BURIAL-CASKET PLATE. CHARLES BLESCH, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,684. Term of patent 14 years.



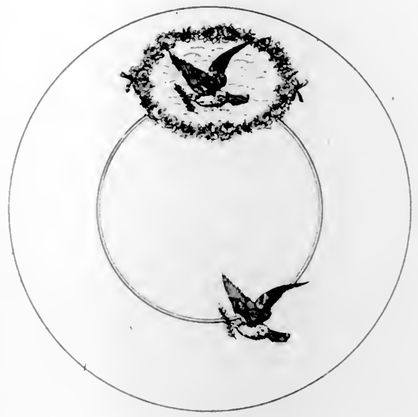
The ornamental design for a burial-casket plate, substantially as shown.

48,584. ARTICLE OF MANUFACTURE. WALTER DE VILLE, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Filed Dec. 18, 1915. Serial No. 67,674. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown.

48,585. ARTICLE OF MANUFACTURE. WALTER DE VILLE, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Filed Dec. 21, 1915. Serial No. 68,095. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown.

48,586. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed Dec. 14, 1915. Serial No. 66,860. Term of patent 14 years.



The ornamental design for a rubber brush, as shown.

48,587. CHAIR. JOHN A. FENTON, Oakland, Cal. Filed Nov. 15, 1915. Serial No. 61,696. Term of patent 3½ years.



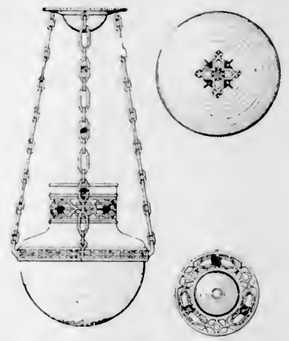
The ornamental design for a chair, as shown.

48,588. HOLDER FOR ELECTRIC LAMPS. OTTO ALFRED TRAEGER, West Hoboken, N. J. Filed Nov. 10, 1915. Serial No. 60,792. Term of patent 7 years.



The ornamental design for a holder for electric lamps as shown.

48,589. LIGHTING-FIXTURE. IHNA T. FRARY, Hudson, Ohio, assignor to The Hocking Glass Company, Lancaster, Ohio, a Corporation of Ohio. Filed Sept. 8, 1915. Serial No. 49,641. Term of patent 7 years.



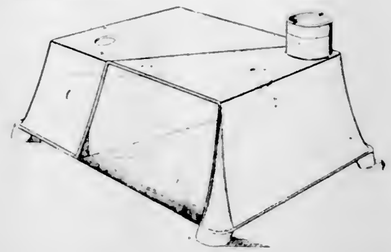
The ornamental design for a lighting fixture, as shown.

48,590. TELEPHONE OR TELEGRAPH CUP. GEORGE W. GRAHAM, Edmore, N. D. Filed Jan. 27, 1915. Serial No. 4,802. Term of patent 14 years.



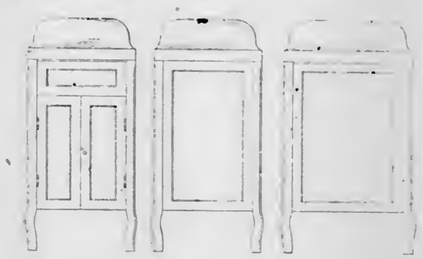
The ornamental design for a telephone or telegraph cup, as shown.

48,591. CASING FOR PHONOGRAPHS OR TALKING-MACHINES. WILLIAM F. GRUPE, Jersey City, N. J., assignor, by mesne assignments, to Van-O-Phone Company, New York, N. Y., a Corporation of New York. Filed Feb. 26, 1915. Serial No. 11,368. Term of patent 14 years.



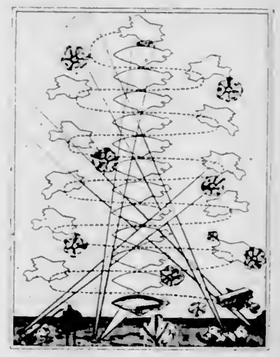
The ornamental design for a casing for phonographs or talking machines, as shown.

48,592. TOY OR MINIATURE TALKING-MACHINE. PERCY A. HORSWELL, Cleveland, and WILLIAM H. MILLIKAN, Lakewood, Ohio, assignors to The American Wonderland Co., Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 9, 1915. Serial No. 66,017. Term of patent 7 years.



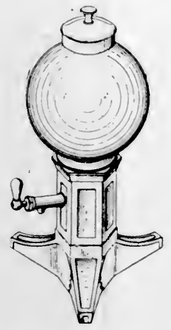
The ornamental design for a toy or miniature talking machine, substantially as shown.

48,593. BOARD FOR PLAYING A GAME. ALBERT HUNT, London, England. Filed Oct. 22, 1915. Serial No. 57,374. Term of patent 3½ years.



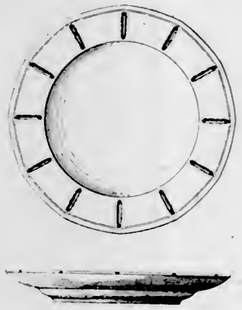
The ornamental design for a board for playing a game, as shown.

48,594. DISPENSING-URN. LEE S. LINES, Cleveland, Ohio, assignor to The Russ Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 13, 1915. Serial No. 50,520. Term of patent 7 years.



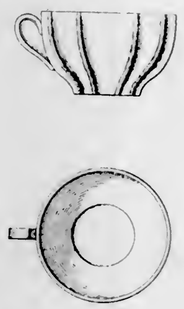
The ornamental design for a dispensing urn, as shown.

48,595. PLATE. FRANK LOCKETT, East Liverpool, Ohio, assignor to The Limoges China Company, Sebring, Ohio, a Corporation of Ohio. Filed Dec. 14, 1915. Serial No. 66,854. Term of patent 3½ years.



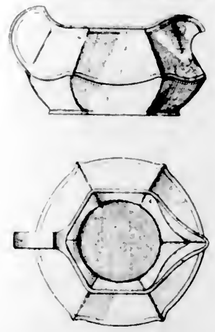
The ornamental design of a plate, substantially as shown.

48,596. CUP. FRANK LOCKETT, East Liverpool, Ohio, assignor to The Limoges China Company, Sebring, Ohio, a Corporation of Ohio. Filed Dec. 14, 1915. Serial No. 66,855. Term of patent 3½ years.



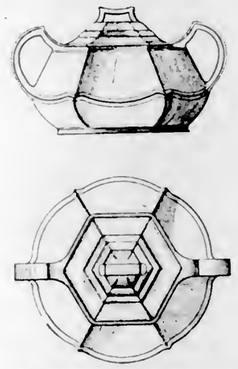
The ornamental design of a cup, substantially as shown.

48,597. PITCHER. FRANK LOCKETT, East Liverpool, Ohio, assignor to The Limoges China Company, Sebring, Ohio, a Corporation of Ohio. Filed Dec. 14, 1915. Serial No. 66,856. Term of patent 3½ years.



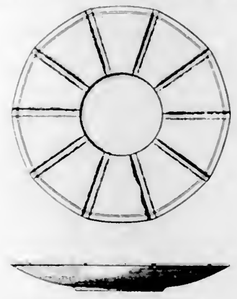
The ornamental design for a pitcher, substantially as shown.

48,598. SUGAR-BOWL OR SIMILAR ARTICLE. FRANK LOCKETT, East Liverpool, Ohio, assignor to The Limoges China Company, Sebring, Ohio, a Corporation of Ohio. Filed Dec. 14, 1915. Serial No. 66,857. Term of patent 3½ years.



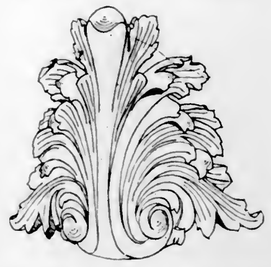
The ornamental design for a sugar bowl or similar article, substantially as shown.

48,599. SAUCER. FRANK LOCKETT, East Liverpool, Ohio, assignor to The Limoges China Company, Sebring, Ohio, a Corporation of Ohio. Filed Dec. 14, 1915. Serial No. 66,858. Term of patent 3½ years.



The ornamental design for a saucer, substantially as shown.

48,600. CORNER-PIECE FOR BURIAL-CASKETS. HENRY FREDERICK LUEDERS, Cincinnati, Ohio, assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,685. Term of patent 14 years.



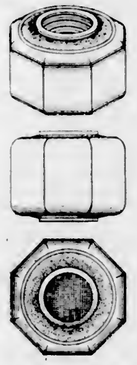
The ornamental design for a corner-piece for burial-caskets, substantially as shown.

48,601. CORNER-PIECE FOR BURIAL-CASKETS. HENRY FREDERICK LUEDERS, Cincinnati, Ohio, assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 4, 1915. Serial No. 59,686. Term of patent 14 years.



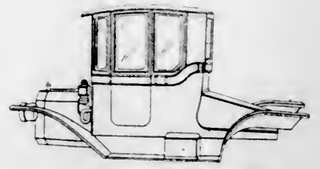
The ornamental design for a corner-piece for burial-caskets, substantially as shown.

48,602. INSULATING-JOINT. LOUIS MCCARTHY, Boston, Mass. Filed Apr. 12, 1915. Serial No. 20,972. Term of patent 14 years.



The ornamental design for an insulating joint, as shown.

48,603. AUTOMOBILE-BODY. JAMES MORRISON, Cincinnati, Ohio, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio, a Corporation of Ohio. Filed Nov. 27, 1914. Serial No. 874,349. Term of patent 3½ years.



The ornamental design for an automobile body as shown.

48,604. LOCK. CHARLES D. OBERHOLTZER, Marseilles, Ill. Filed Aug. 27, 1915. Serial No. 47,670. Term of patent 7 years.



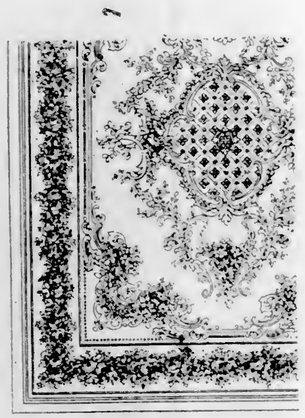
The ornamental design for a lock as shown.

48,605. SHIELD. LOUIS CARL PEDLAR, New York, N. Y., assignor to American Optical Company, Southbridge, Mass. Filed Jan. 9, 1915. Serial No. 1,470. Term of patent 14 years.



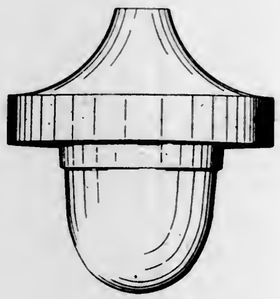
The ornamental design for an ornamental shield substantially as illustrated.

48,606. CARPET OR RUG. JULIUS G. PEGEL, Thompsonville, Conn., assignor to The Bigelow-Hartford Carpet Co., Thompsonville, Conn., a Corporation of Massachusetts. Filed Dec. 21, 1915. Serial No. 68,094. Term of patent 3½ years.



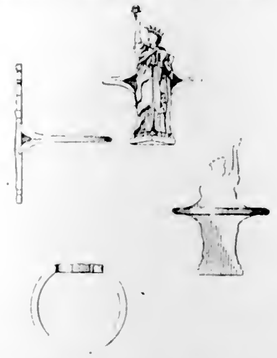
The ornamental design for a carpet or rug as shown.

48,607. CHANDELIER-BODY. REUBIN MILTON RETHERFORD, Muncie, Ind., assignor to Retherford Bros. Co., Muncie, Ind., a Corporation. Filed Feb. 23, 1915. Serial No. 10,150. Term of patent 3½ years.



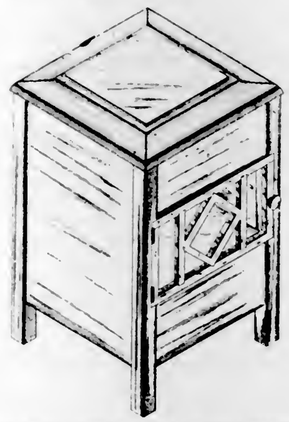
The ornamental design for a chandelier body, as shown.

48,608. RING. CARL ROSENBERGER, New York, N. Y., assignor to Cohn & Rosenberger, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 11, 1915. Serial No. 66,382. Term of patent 7 years.



The ornamental design for a ring, as shown.

48,609. TALKING-MACHINE CABINET. WILLIAM ROTTER, New York, N. Y. Filed Dec. 17, 1915. Serial No. 67,479. Term of patent 7 years.



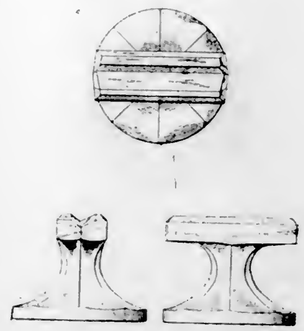
The ornamental design for a talking machine cabinet, as shown.

48,610. KEY-RING HOLDER. WILLIAM C. ROURK, Goldsboro, N. C. Filed July 3, 1914. Serial No. 848,964. Term of patent 7 years.



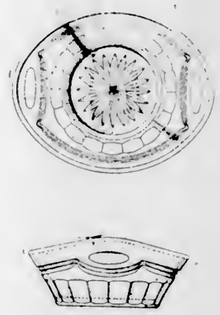
The ornamental design for a key ring holder, as shown.

48,611. DISPLAY-RACK FOR SHOES, &c. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Nov. 3, 1915. Serial No. 59,481. Term of patent 14 years.



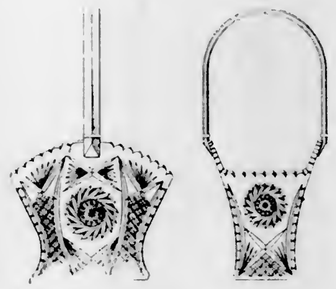
The design for a display rack for shoes, etc., substantially as shown.

48,612. DISH. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Nov. 3, 1915. Serial No. 59,482. Term of patent 14 years.



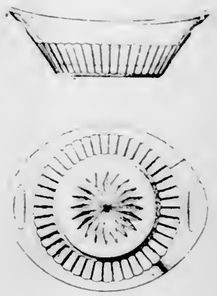
The design for a dish, substantially as shown.

48,613. VASE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Nov. 3, 1915. Serial No. 59,483. Term of patent 14 years.



The design for a vase, substantially as shown.

48,614. DISH. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio. Filed Nov. 19, 1915. Serial No. 62,430. Term of patent 14 years.



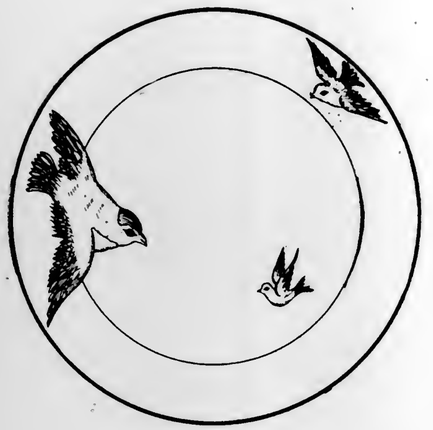
The design for a dish, substantially as shown.

48,615. PLATE OR SIMILAR ARTICLE. FRANK A. SEBRING, Sebring, Ohio. Filed Jan. 14, 1916. Serial No. 72,175. Term of patent 3½ years.



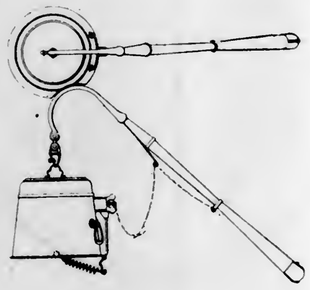
The ornamental design of a plate or similar article, substantially as shown.

48,616. PLATE OR SIMILAR ARTICLE. FRANK A. SEBRING, Sebring, Ohio. Filed Jan. 17, 1916. Serial No. 72,636. Term of patent 3½ years.



The ornamental design for a plate or similar article, substantially as shown.

48,617. HAND-SPRINKLER. MICHAEL Z. SOCHA, Joliet, Ill. Filed Feb. 23, 1915. Serial No. 10,144. Term of patent 7 years.



The ornamental design for a hand sprinkler, as shown.

48,618. GROMET. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed Oct. 30, 1914. Serial No. 869,493. Term of patent 3½ years.



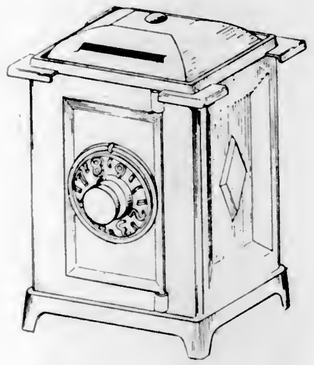
The ornamental design for a gromet, as shown.

48,619. GROMET. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed Oct. 30, 1914. Serial No. 869,494. Term of patent 3½ years.



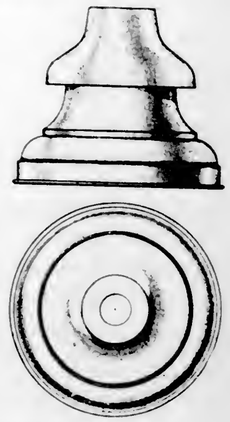
The ornamental design for a gromet, as shown.

48,620. TOY BANK. HENRY G. THOMPSON, Cleveland, Ohio, assignor of one-half to The A. C. Williams Company, Ravenna, Ohio, a Corporation of Ohio. Filed Dec. 11, 1915. Serial No. 66,380. Term of patent 14 years.



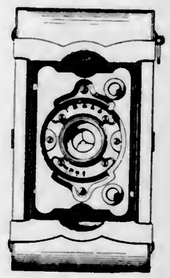
The ornamental design for a toy bank, as shown.

48,621. LIGHTING-FIXTURE. DANIEL WOODHEAD, Chicago, Ill. Filed Nov. 23, 1914. Serial No. 873,649. Term of patent 3½ years.



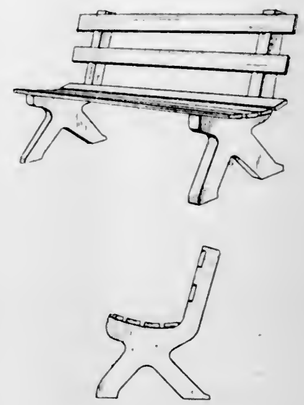
The ornamental design for a lighting fixture, as shown.

48,622. FOLDING CAMERA. JOSEPH GODDARD, Rochester, N. Y., assignor to Seneca Camera Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 16, 1915. Serial No. 51,101. Term of patent 7 years.



The ornamental design for a folding camera as shown.

48,623. BENCH. LEO G. HAASE, Pasadena, Cal. Filed Aug. 25, 1915. Serial No. 47,339. Term of patent 14 years.



The ornamental design for a bench as shown.

48,624. BLADE FOR A HUNTING-KNIFE. WEBSTER L MARBLE, Gladstone, Mich. Filed May 22, 1915. Serial No. 29,924. Term of patent 14 years.



The ornamental design for the blade of a hunting knife, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 22, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 82,376. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FREDERIC IVER JOHNSON, Fitchburg, Mass., assignor to John Pneu-metal Tire Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Nov. 3, 1914.

PNEUMETAL

Particular description of goods.—Metallic Tires.
Claims use since Oct. 2, 1914.

Ser. No. 82,528. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALLEY FRUIT & PRODUCE ASS'N, Walla Walla, Wash. Filed Nov. 11, 1914.



The picture being fanciful.
Particular description of goods.—Fresh Apples.
Claims use since Oct. 1, 1914.

Ser. No. 83,203. (CLASS 10. FERTILIZERS.) NATURAL FERTILIZER COMPANY, Los Angeles, Cal. Filed Dec. 10, 1914.

"Soil-Tone"

Particular description of goods.—Fertilizers.
Claims use since Aug. 31, 1914.

Ser. No. 83,366. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Dec. 18, 1914.

Chrysanthemum



Particular description of goods.—Canned Salmon.
Claims use since Nov. 1, 1914.

Ser. No. 83,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Dec. 18, 1914.

Bofisco

Particular description of goods.—Canned Salmon.
Claims use since Nov. 1, 1914.

Ser. No. 83,368. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Dec. 18, 1914.

WIDE AWAKE



Particular description of goods.—Canned Salmon.
Claims use since Nov. 1, 1914.

Ser. No. 83,370. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Dec. 18, 1914.



Particular description of goods.—Canned Salmon.
Claims use since Nov. 1, 1914.

Ser. No. 83,371. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Dec. 18, 1914.



Particular description of goods.—Canned Salmon.
Claims use since Nov. 1, 1914.

Ser. No. 84,001. (CLASS 39. CLOTHING.) THE B. F. GOODRICH COMPANY, New York, N. Y. Filed Jan. 21, 1915.



Particular description of goods.—Rain-Coats, and Rubber Boots and Shoes.
Claims use on rubber boots and shoes since about Feb. 1, 1914, and on rain-coats since about Jan. 8, 1914.

Ser. No. 84,445. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE BRAZILLA COMPANY, Minneapolis, Minn. Filed Feb. 11, 1915.



Particular description of goods.—Non-Alcoholic Beverages Made From a Combination of Fruit-Juices and From Fruit Extracts and Containing Such Combination of Juices and Extracts.
Claims use since about Feb. 4, 1915.

Ser. No. 84,734. (CLASS 38. PRINTS AND PUBLICATIONS.) CASSELLA COLOR COMPANY, New York, N. Y. Filed Feb. 24, 1915.



Particular description of goods.—Booklets, Hand-Bills, Bill-Posters, Instruction-Books, Folders, Pamphlets, and Sample-Cards Relating to Dyestuffs, Chemicals, Pharmaceutical Products, and Financial Matters.
Claims use since April, 1906.

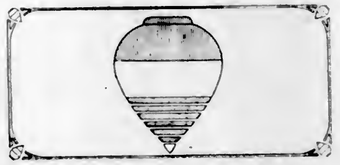
Ser. No. 85,632. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HABICHT, BRAUN & CO., New York, N. Y. Filed Apr. 2, 1915.



HY-GRADE

No claim being made to the word "Hy-Grade" except in association with the mark as shown.
Particular description of goods.—Raisins, Fruit-Peels, Salted Pistachios, Shelled Pistachios, Nuts, Shelled Nuts, Glacé Fruit, Peanut-Butter, Maple-Sugar, Gelatin, Egg-Albumen, Crystallized Ginger, Dried Peas, Seeds for Food, Dried Fruits, Evaporated Apples, Dried Vegetables, Honey, Figs, Cocoanut, Prune Jam, and Dried Currants.
Claims use since March, 1915.

Ser. No. 85,775. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE S. DEFORE, New York, N. Y. Filed Apr. 8, 1915.



The upper part of the top shown in the drawing is red, and the lower part of the top is blue.
Particular description of goods.—Oleomargarin.
Claims use since Feb. 1, 1915.

Ser. No. 86,601. (CLASS 39. CLOTHING.) OSHINSKY & VALENTINE, New York, N. Y. Filed May 13, 1915 Under ten-year proviso.

CUMBERLAND SHIRT CO.

Consists of the words "Cumberland Shirt Co."
Particular description of goods.—Dress, Negligée, and Work Shirts and Pajamas.
Claims use since Jan. 1, 1894.

Ser. No. 86,676. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ORBON STOVE AND RANGE COMPANY, Belleville, Ill. Filed May 17, 1915.

FIREFLY

Particular description of goods.—Wood and Coal Stoves, Heaters.
Claims use since on or about Mar. 21, 1914.

Ser. No. 86,859. (CLASS 39. CLOTHING.) KERNER-FREEDMAN MFG. CO., INC., Newark, N. J. Filed May 24, 1915.



Particular description of goods.—Brassières and Corsets.
Claims use since Feb. 11, 1914.

Ser. No. 87,317. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHERN CHEMICAL CO., Petersburg, Va. Filed June 15, 1915.



Particular description of goods.—Flavoring Extracts for Use in Foods.
Claims use since Mar. 1, 1913.

Ser. No. 88,069. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PHANTZ CANDIES, INC., Lancaster, Pa. Filed July 21, 1915.



Particular description of goods.—Candy.
Claims use since about May 1, 1915.

Ser. No. 88,360. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GIBSON-HOLLISTER MFG. CO., Boston, Mass. Filed Aug. 2, 1915.



Particular description of goods.—Spark-Plugs.
Claims use since Jan. 5, 1915.

Ser. No. 88,457. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BIG FOUR MILLING COMPANY, Cleveland Ohio. Filed Aug. 6, 1915.



No claim is made to the use of the words "Dairy Feed" as part of the mark.
Particular description of goods.—Dairy Feed—Namely, Malt-Sprouts, Brewers' Grains, Gluten Meal, Corn or Hominy Meal, Alfalfa-Meal, Oil-Meal, Oat-Clips, Ground Screenings, Salt, and Cane-Molasses.
Claims use since May 1, 1915.

Ser. No. 88,562. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE FOTENOPOULOS, Muskogee, Okla. Filed Aug. 12, 1915.

GEORGE'S FAMOUS CHILLI

The words "Famous Chilli" being disclaimed.
Particular description of goods.—Chilli.
Claims use since Aug. 10, 1912.

Ser. No. 88,571. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALAK WATER COMPANY OF NEW YORK, INC., Brooklyn, N. Y. Filed Aug. 12, 1915.

Kalak

Particular description of goods.—Artificially-Prepared Alkaline Water for Neutralizing Acidity of the Urine. The Medicinal Water upon Which the Trade-Mark is Used is a Corrective for Various Phases of Acid Intoxication Appearing in Acute Infectious Diseases, Edema, Nephritis, Toxemia of Pregnancy and Eclampsia, Diabetes, Hay-Fever, Bronchial Asthma, Cyclic Vomiting, Urticaria, Alcoholism, Arteriosclerosis, Gastric Hyperacidity and Hypersecretion, Genito-Urinary Infections, Preparation Cases, and Past-Operative Cases.
Claims use since June 26, 1915.

Ser. No. 88,982. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GALBAN & CO., INC., New York, N. Y., and Habana, Cuba. Filed Sept. 2, 1915.

SOL

Particular description of goods.—Dry Salted Meats and Lard.
Claims use since prior to 1880.

Ser. No. 89,036. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OVERSEA SALES ORGANIZATION, Chicago, Ill. Filed Sept. 4, 1915.

O-SO-HANDY

Particular description of goods.—Shelled Nuts and Particularly Salted Peanuts.
Claims use since May 20, 1915.

Ser. No. 89,091. (CLASS 39. CLOTHING.) ROSS W. BAKER, Boston, Mass. Filed Sept. 8, 1915.

La Como

Particular description of goods.—Balbriggan and Lisle Underwear.
Claims use since Aug. 20, 1915.

Ser. No. 89,138. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSEPH TETLEY & CO. INC., New York, N. Y. Filed Sept. 10, 1915.

"SUNFLOWER"

Particular description of goods.—Teas.
Claims use since on or about the 14th day of February, 1889.

Ser. No. 89,292. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES HERENDEEN MILLING COMPANY, Chicago, Ill. Filed Sept. 18, 1915.

HERENDEEN'S FRESH-LOAF

No claim being made for the words "Herendeen's" or "Fresh-Loaf" except in connection with the mark as shown.
Particular description of goods.—Bread.
Claims use since Sept. 11, 1915.

Ser. No. 89,332. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) STANDARD SCREW COMPANY, Chicago, Ill.; New York, N. Y.; Detroit, Mich.; Elyria, Ohio; Hartford, Conn.; Worcester, Mass. Filed Sept. 20, 1915.

Particular description of goods.—Projectiles.
Claims use since on or about July 10, 1915.

Ser. No. 89,525. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUNSET PACKING CO., New York, N. Y. Filed Sept. 28, 1915.

DrummerBoy

Particular description of goods.—Canned Sardines.
Claims use since August, 1907.

Ser. No. 89,620. (CLASS 38. PRINTS AND PUBLICATIONS.) THE AMERICAN MULTIGRAPH SALES COMPANY, Cleveland, Ohio. Filed Oct. 4, 1915.

LAYMAN PRINTER

Particular description of goods.—Magazines Issuing Monthly or on Alternate Months.
Claims use since about August, 1909.

Ser. No. 89,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Oct. 9, 1915. Under ten-year proviso.

UNION

Particular description of goods.—Oleomargarin.
Claims use since July 1, 1893.

Ser. No. 89,777. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TROPICAL PHARMACAL CO., New York, N. Y. Filed Oct. 9, 1915.

REUMINE

Comprising the word "Reumine."
Particular description of goods.—A Preparation for the Treatment of Rheumatism.
Claims use since July, 1910.

Ser. No. 89,816. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DANVILLE WHOLESALE GROCERY CO., Danville, Ill. Filed Oct. 12, 1915.

NUN-BETTER DW Co.

No claim being made to the words "Nun Better" except in association with the mark as shown, the picture of the young lady being fanciful.
Particular description of goods.—Canned Fruits, Canned Vegetables, Coffee, Spices, Catsup, Olives, Pickles, Prepared Mustard, Currants, Raisins, Rolled Oats, Macaroni, Spaghetti, Peanut-Butter, Vinegar, Canned Pork and Beans, Canned Oysters, Canned Salmon, Canned Hominy, and Canned Sauer-Kraut.
Claims use since Sept. 1, 1912.

Ser. No. 89,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. W. HOEGG CO., Portland, Me. Filed Oct. 19, 1915. Under ten-year proviso.

STERLING BRAND TRADE MARK

Particular description of goods.—Canned Lobster and Canned Salmon.
Claims use since Jan. 1, 1885.

Ser. No. 90,020. (CLASS 39. CLOTHING.) BATTREAL SHOE CO., St. Joseph, Mo. Filed Oct, 22, 1915.

GLADFUT

Particular description of goods.—Men's, Boys', Youths', Women's, Misses', and Children's Leather Shoes and Oxfords.
Claims use since on or about the 15th of August, 1915.

Ser. No. 90,124. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAKAE ITO, Tokyo, Japan. Filed Oct. 26, 1915.

御園

Particular description of goods.—Perfumed Waters, Perfumed Oils, Face-Powders, Hair-Ointments, Scent-Bags, Incenses, and Face-Lotions.
Claims use since May 1, 1901.

Ser. No. 90,153. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY ROSE COSMETIC COMPANY, San Francisco, Cal. Filed Oct. 27, 1915.

Mary Rose

Particular description of goods.—Hair-Tonic, Face-Powder, Talcum Powder, Face-Cream, Toilet Waters, Perfumes, and Complexion-Cream.
Claims use since Apr. 1, 1914.

Ser. No. 90,199. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BRANDT CASHIER COMPANY, Chicago, Ill. Filed Oct. 29, 1915.

CASHIER

Particular description of goods.—Mechanical Change-Maker.
Claims use since before Feb. 20, 1895.

Ser. No. 90,323. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLIVER O. FLETCHER, Portland, Oreg. Filed Nov. 2, 1915.

Ros-Ch

Particular description of goods.—Antiseptic Preparations.
Claims use since Oct. 1, 1915.

Ser. No. 90,334. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo. Filed Nov. 2, 1915.



Particular description of goods.—Roasted Coffee.
Claims use since July 8, 1915.

Ser. No. 90,337. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT A. JOHNSTON CO., Milwaukee, Wis. Filed Nov. 2, 1915.

TREASURE BOX

No claim being made to the exclusive use of the word "Box" except in association with the word "Treasure."
Particular description of goods.—Chocolates.
Claims use since Aug. 2, 1915.

Ser. No. 90,376. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE E. R. WEBSTER CO., Cincinnati, Ohio. Filed Nov. 2, 1915.

HELMET



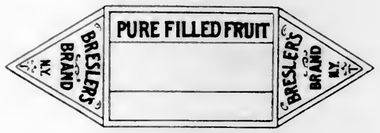
Particular description of goods.—Roasted Coffee.
Claims use since Aug. 25, 1915.

Ser. No. 90,391. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. ROMEO & CO., INC., New York, N. Y. Filed Nov. 3, 1915.

IL SOLE

Particular description of goods.—Macaroni.
Claims use since about Jan. 1, 1905.

Ser. No. 90,403. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. BRESSLER, New York, N. Y. Filed Nov. 4, 1915.



Applicant disclaims any desire to register or right to the exclusive use of the expressions "Pure Filled Fruit," "Brand," and "N. Y."
Particular description of goods.—Fruit Candies.
Claims use since Oct. 1, 1906.

Ser. No. 90,428. (CLASS 25. LOCKS AND SAFES.) WILLIAM T. BENHAM, Norwood, Ohio, assignor to The Nydia Bank Lock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 5, 1915.



The letters being raised.
Particular description of goods.—Locks and Lock-Dials.
Claims use since Oct. 15, 1915.

Ser. No. 90,496. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK BRIGGS, Washington, D. C. Filed Nov. 8, 1915.

"Snowkist"

Particular description of goods.—Hominy, Ice-Cream, Water-Ices, Rice, Wheat and Rye Flour, Cocoanut, Cornmeal, Oatmeal, Corn Flakes, Grits and Crushed Cereal for Breakfast Foods, Horseradish, Mince-Meat, Lard and Lard Compound, Cheese, Candy, Syrup for Table Use and Cooking Purposes, Cake, Celery, Kraut in Cans and in Bulk, Sugar, Buttermilk, Charlotte Russe.
Claims use since Oct. 16, 1915.

Ser. No. 90,590. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) UNITED CIGAR STORES CO., Jersey City, N. J. Filed Nov. 11, 1915.

CIGARS UNITED

Particular description of goods.—Pipes, Cigar-Holders, Cigarette-Holders, Tobacco-Jars Made of Composition, Pouches, Cigar-Cases, Humidors.
Claims use since Oct. 15, 1915.

Ser. No. 90,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FEDERAL MILLING COMPANY, Lockport, N. Y. Filed Nov. 16, 1915.

BAKEMORE

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 28, 1915.

Ser. No. 90,681. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) T. W. S. PHILLIPS, New York, N. Y. Filed Nov. 16, 1915.

NARA

Particular description of goods.—Powder-Puffs, Hair-Brushes, Nail-Brushes, Face-Brushes, Hand-Brushes, Tooth-Brushes, and Eyebrow-Brushes.
Claims use since July, 1914.

Ser. No. 90,685. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNITED & GLOBE RUBBER M'F'G COMPANIES, Trenton, N. J. Filed Nov. 16, 1915.



No claim being made to the word "Oylproof" apart from the mark shown in the drawing.
Particular description of goods.—Rubber Hose, Cotton Rubber-Lined Hose, Rubber Belting, Rubber Packings, Plain and Corrugated Tubing Made of Rubber and of Fiber and Rubber, Rubber Valves, Rubber Springs, Rubber Dredging-Sleeves, Packers Made of Rubber and of Fiber and Rubber, and Rubber Wheels for Keg-Washing Machines.
Claims use since Oct. 15, 1915.

Ser. No. 90,712. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE UPHAM-MILLER CO., New York, N. Y. Filed Nov. 17, 1915.



Particular description of goods.—Cocoanut, Potato-Flour, Fine Barley, Pearl-Barley, Hasty Tapioca, Pearl-Tapioca, Rice, and Farina.
Claims use since May, 1915.

Ser. No. 90,730. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NASHAWENA MILLS, New Bedford, Mass. Filed Nov. 18, 1915.



Particular description of goods.—Cotton, Linen, Silk, and Woolen Piece Goods.
Claims use since Oct. 20, 1915.

Ser. No. 90,734. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROSE PATCH & LABEL CO., Grand Rapids, Mich. Filed Nov. 18, 1915.

ROSE
PATENTED PROCESS
PATCH



No claim being made to the exclusive use of the words "Patented Process" and "Patch" apart from the mark shown in the drawing.
Particular description of goods.—Strips for Reinforcing That Part of the Garment on Which Buttons are Sewed and Buttonholes are Made.
Claims use since Oct. 20, 1915.

Ser. No. 90,758. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES FRANK WALLIS, Pleasantville, N. J. Filed Nov. 18, 1915.



Particular description of goods.—Ointment for Treatment of Skin Diseases, Face-Cream.
Claims use since November, 1914.

Ser. No. 90,782. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUTOMATIC SELLING & ADVERTISING CO., New York, N. Y. Filed Nov. 20, 1915.



That portion of the field of the diamond containing the letters is printed in red and the remainder of the diamond in blue. The use of the word "Gum" is hereby disclaimed as forming no part of the mark.
Particular description of goods.—Chewing-Gum.
Claims use since Sept. 27, 1915.

Ser. No. 90,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUTOMATIC SELLING & ADVERTISING CO., New York, N. Y. Filed Nov. 20, 1915.



That portion of the field of the diamond containing the letters is printed in red and the remainder of the diamond in blue.
Particular description of goods.—Peanuts.
Claims use since Sept. 27, 1915.

Ser. No. 90,788. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DEUTSCHE CONSERVIERUNGSGESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin-Marienfelde, Germany. Filed Nov. 20, 1915.

Enverbin

Particular description of goods.—Pitch for Use in Breweries, Artificial Pitch and Pitch Substitute, and Additional Ingredients for the Same Purpose.
Claims use since the year 1913.

Ser. No. 90,790. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) S. R. FRALICK & COMPANY, Chicago, Ill. Filed Nov. 20, 1915.



No claim being made to the words "Quick On" and "Kwikon" apart from the mark as shown in the drawing.
Particular description of goods.—Lock-Nuts and Bushings, Fixture-Studs, Pipe-Straps, Pipe-Hangers, Friction and Rubber Tapes, and Box-Connectors, (all said articles being adapted for use solely with electrical apparatus, particularly electrical wiring.)
Claims use since June, 1912.

Ser. No. 90,818. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN CATSIGIANIS, St. Louis, Mo. Filed Nov. 22, 1915.



No claim being made for the word "Peanut" or the representation of a peanut apart from the mark shown in the drawing.
Particular description of goods.—A Peanut and Popcorn Confection.
Claims use since Nov. 1, 1915.

Ser. No. 90,840. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAVE-MCCORD MERCANTILE COMPANY, St. Joseph, Mo. Filed Nov. 22, 1915.

ACROPOLIS

Particular description of goods.—Cereal Breakfast Food.
Claims use since Mar. 12, 1906.

Ser. No. 90,900. (CLASS 5. ADHESIVES.) JOHN P. GORMAN, New York N. Y. Filed Nov. 24, 1915.



All the matter appearing on the drawing except the word "Fixit" being disclaimed.
Particular description of goods.—Plastic Compounds, Which I Also Call Rubber Putty, for Mending Rubber Articles, &c.
Claims use since March, 1915.

Ser. No. 90,924. (CLASS 38. PRINTS AND PUBLICATIONS.) LOUIS FABIAN BACHRACH, INC., Boston, Mass. Filed Nov. 26, 1915.



Particular description of goods.—Photographs.
Claims use since Apr. 15, 1915.

Ser. No. 90,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LINDALE CANNING CO., Lindale, Tex. Filed Nov. 26, 1915.



Particular description of goods.—Canned Blackberries.
Claims use since June 1, 1912.

Ser. No. 90,998. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND FRUIT JUICE COMPANY, Cleveland, Ohio. Filed Nov. 29, 1915.

Goldenmoon



Particular description of goods.—Canned, Bottled, and Preserved Fruits, and Candy.
Claims use since Sept. 1, 1915.

Ser. No. 91,037. (CLASS 37. PAPER AND STATIONERY.) CLARENCE J. MCKENZIE, Boston, Mass. Filed Nov. 30, 1915.

INTAGLIO BOND

No claim is herein made for the word "Bond" apart from the mark shown in the drawing.

Particular description of goods.—Writing-Paper, Printing-Paper, Tracing-Paper, and Envelops.

Claims use since Sept. 7, 1915.

Ser. No. 91,070. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. HEMBY, Greenville, N. C. Filed Dec. 1, 1915.

FENNELKO



Particular description of goods.—Preparation for the Treatment of Consumption, Indigestion, and Rheumatism.

Claims use since Jan. 1, 1915.

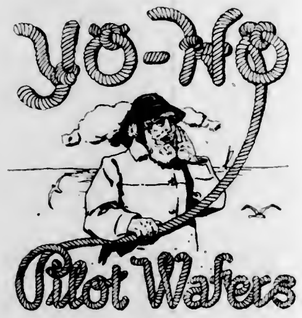
Ser. No. 91,140. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) ROBERT H. ROLFS, West Bend, Wis. Filed Dec. 3, 1915.

AMITY

Particular description of goods.—Leather Goods—Namely, Pocket-Books, Card-Cases, Bill-Books, Wallets, Music-Rolls, Music-Bags, Pass-Cases, and Bill-Folders.

Claims use since Nov. 1, 1915.

Ser. No. 91,227. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo. Filed Dec. 6, 1915.



Exclusive right to use of the words "Pilot Wafers" is not claimed except in the form shown in the drawing.

Particular description of goods.—Cakes, of the Kind Known as Pilot-Wafers.

Claims use since November, 1915.

Ser. No. 91,247. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) UNIT GAS HEATING COMPANY, Los Angeles, Cal. Filed Dec. 6, 1915.

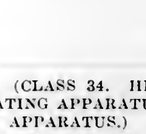


Particular description of goods.—Furnaces.

Claims use since Sept. 28, 1914.

Ser. No. 91,269. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. B. CARBERRY & CO., New York, N. Y. Filed Dec. 7, 1915.

BACALAO
SUPERIOR
MARCA



KAISER

No claim being made to the words "Bacalas," "Superior," "Marca" independent of the mark shown in the drawing.

Particular description of goods.—Salted Fish.

Claims use since July 1, 1915.

Ser. No. 91,282. (CLASS 10. FERTILIZERS.) THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Filed Dec. 8, 1915.

MOHAWK

Particular description of goods.—Fertilizers.

Claims use since 1889.

Ser. No. 91,288. (CLASS 10. FERTILIZERS.) THE COE-MORTIMER COMPANY, New York, N. Y. Filed Dec. 8, 1915.



The bands being printed in green.

Particular description of goods.—Fertilizers.

Claims use since Sept. 1, 1912.

Ser. No. 91,328. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. M. RAMER CO., Winona, Minn. Filed Dec. 8, 1915.

No claim being made to the use of the words "Made in Winona, Minn.," except in connection with the remainder of the drawing.

Particular description of goods.—Candy.

Claims use since the year of 1909.

Ser. No. 91,355. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAM NELSON JR. COMPANY, Grinnell, Iowa. Filed Dec. 9, 1915.

Particular description of goods.—Corn-Kernels for Popping.

Claims use since Sept. 16, 1915.

Ser. No. 91,356. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PEPSODENT COMPANY, Chicago, Ill. Filed Dec. 9, 1915.

Pepsodent

Particular description of goods.—Dentifrices.

Claims use since May 6, 1915.

Ser. No. 91,403. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWIN A. ROGERS, Boston, Mass. Filed Dec. 11, 1915.

KNU-KOL

The background in label is red.

Particular description of goods.—A Dye and Varnish for Hats and Millinery.

Claims use since Nov. 29, 1915.

Ser. No. 91,487. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS DUGAN, Los Angeles, Cal. Filed Dec. 15, 1915.



Particular description of goods.—A Preparation for the Treatment of Tuberculosis and All Chronic Affections of the Throat and Lungs, Catarrh, Asthma, Hay-Fever, and Stomach Disorders.

Claims use since Dec. 3, 1915.

Ser. No. 91,515. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES GUSTAVE DUREL, New Orleans, La. Filed Dec. 16, 1915.

No claim being made to the word "Arabian" apart from the word "Nights."

Particular description of goods.—Coffee.

Claims use since June 25, 1914.

Ser. No. 91,541. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAHNKE-WALKER MILLING CO., Union City, Tenn. Filed Dec. 17, 1915.

BRAG

Particular description of goods.—Corn Products—Namely, Granular and Soft-Ground Cornmeal, Grits, and Wheat-Flour.
Claims use since Oct. 1, 1912.

Ser. No. 91,545. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES H. LORD, Methuen, Mass. Filed Dec. 17, 1915.

LAYMORE

The word "Laymore."
Particular description of goods.—Live and Dressed Poultry and Poultry for Breeding Purposes and Eggs.
Claims use since Nov. 15, 1915.

Ser. No. 91,552. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) O-W PAINT & CHEMICAL CO., Portland, Oreg. Filed Dec. 11, 1915.

WALWARE

Particular description of goods.—Ready-Mixed Paints.
Claims use since Jan. 1, 1915.

Ser. No. 91,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLLAND FOOD CORPORATION, New York, N. Y. Filed Dec. 18, 1915.



No claim being made to the words "The, Brand, Sweetened Condensed Skimmed Milk, Trade Mark, From Holland."
Particular description of goods.—Condensed Skimmed Milk.
Claims use since on or about Jan. 15, 1914.

Ser. No. 91,587. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed Dec. 17, 1915.

ANNIE LAURIE

Particular description of goods.—Wheat-Flour.
Claims use since September, 1894.

Ser. No. 91,606. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GASSOSINE MINERAL CARBONATED WATER CO., New York, N. Y. Filed Dec. 20, 1915.

Gassosina - Gazzosina

Particular description of goods.—Carbonated Soft Drinks.
Claims use since about May 15, 1915.

Ser. No. 91,612. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. HAAS & SONS, San Francisco, Cal. Filed Dec. 20, 1915.



Particular description of goods.—Candies.
Claims use since Apr. 10, 1915.

Ser. No. 91,616. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GERHARD MENNEN CHEMICAL CO., Newark, N. J. Filed Dec. 20, 1915.



Particular description of goods.—Talcum Powder.
Claims use since Nov. 15, 1915.

Ser. No. 91,630. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION FISH CO., San Francisco, Cal. Filed Dec. 20, 1915.

OCCIDENTAL

Particular description of goods.—Dried Fish and Particularly Codfish.
Claims use since about June 1, 1899.

Ser. No. 91,633. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEATRICE CREAMERY COMPANY, Chicago, Ill. Filed Dec. 21, 1915.

Meadow-Gold

Particular description of goods.—Butter.
Claims use since Sept. 1, 1901.

Ser. No. 91,635. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. MILO CULP, Fort Wayne, Ind. Filed Dec. 21, 1915.



No claim being made to the exclusive use of the word "Remember" except in conjunction with the other features shown on the drawing, the picture being fanciful.
Particular description of goods.—Rice Cereal.
Claims use since Dec. 7, 1915.

Ser. No. 91,642. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HUSLER MILLING & ELEVATOR CO., Salt Lake City, Utah. Filed Dec. 21, 1915.

PEERAGE

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Oct. 7, 1915.

Ser. No. 91,648. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LOVELAND MILLING & ELEVATOR COMPANY, Loveland, Colo. Filed Dec. 21, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since July 9, 1915.

Ser. No. 91,649. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LOVELAND MILLING & ELEVATOR COMPANY, Loveland, Colo. Filed Dec. 21, 1915.

LOV-ME

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 6, 1915.

Ser. No. 91,654. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANGE CANNING CO., INC., Eau Claire, Wis. Filed Dec. 21, 1915. Under ten-year proviso.

EAU CLAIRE

Particular description of goods.—Canned Fruits. Canned Vegetables, and Canned Kraut.
Claims use since July 14, 1891.

Ser. No. 91,656. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. G. MCDONALD CHOCOLATE CO., Salt Lake City, Utah. Filed Dec. 21, 1915.

LEADING LADY

Particular description of goods.—Candy and Chocolates.
Claims use since Nov. 19, 1915.

Ser. No. 91,659. (CLASS 10. FERTILIZERS.) POCAHONTAS GUANO CO., INC., Lynchburg, Va. Filed Dec. 21, 1915.

POCAHONTAS



Particular description of goods.—A Fertilizer.
Claims use since 1889.

Ser. No. 91,676. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AUTOMATIC FIRE DETECTOR COMPANY, New York, N. Y. Filed Dec. 22, 1915.



No claim being made to the exclusive use of the words "Fire Prevention Devices," nor to the pictorial reproduction of the goods except as shown in the drawing.
Particular description of goods.—Electric Fire-Alarm Devices.
Claims use since Nov. 6, 1915.

Ser. No. 91,680. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN LICORICE COMPANY, Chicago, Ill. Filed Dec. 22, 1915.

PERFECTO

Particular description of goods.—Licorice Confection.
Claims use since the first part of October, 1915.

Ser. No. 91,699. (CLASS 39. CLOTHING.) SCHILLER BROS., New York, N. Y. Filed Dec. 22, 1915.

Estella

Particular description of goods.—Ladies' Muslin Underwear—Namely, Corset-Covers, Skirts, Gowns, Drawers.
Claims use since Dec. 1, 1915.

Ser. No. 91,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SUTCLIFFE & BINGHAM, LIMITED, Manchester, England. Filed Dec. 22, 1915.

KKOVAH

Particular description of goods.—Custard-Powder, Blanc-Mange Powder, Lemon Cheese or Conserve, and Table-Jelly.
Claims use since Jan. 20, 1891.

Ser. No. 91,719. (CLASS 38. PRINTS AND PUBLICATIONS.) EXHIBITORS HERALD COMPANY, Chicago, Ill. Filed Dec. 23, 1915.

EXHIBITORS HERALD

Particular description of goods.—A Periodical Issued Weekly.
Claims use since Nov. 13, 1915.

Ser. No. 91,773. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo. Filed Dec. 27, 1915.

HAPPY CHILD

Consisting of the words "Happy Child."
Particular description of goods.—Cakes, (Commonly Called Cookies.)
Claims use since May 29, 1915.

Ser. No. 91,779. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & COMPANY, Chicago, Ill. Filed Dec. 27, 1915.

STELLAR

Particular description of goods.—Coffee.
Claims use since about Nov. 20, 1915.

Ser. No. 91,799. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM GROSSMAN, Milwaukee, Wis. Filed Dec. 28, 1915.

ARENA

Particular description of goods.—Tea, Coffee, and Spices.
Claims use since 1896.

Ser. No. 91,815. (CLASS 38. PRINTS AND PUBLICATIONS.) THE GEORGIAN COMPANY, Atlanta, Ga. Filed Dec. 29, 1915.

THE GEORGIAN

Particular description of goods.—A Newspaper.
Claims use since Apr. 25, 1906.

Ser. No. 91,816. (CLASS 41. CANES, PARASOLS, AND UMBRELLAS.) FRANK W. HOWARD, New York, N. Y. Filed Dec. 29, 1915.



No claim being made to the representation of the umbrella apart from the mark shown in the drawing.
Particular description of goods.—Umbrellas.
Claims use since the 20th day of December, 1915.

Ser. No. 91,821. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITEN BISCUIT CO., Omaha, Nebr. Filed Dec. 29, 1915.

BUSTER BROWN

Particular description of goods.—Cakes and Cookies.
Claims use since June, 1912.

Ser. No. 91,822. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ITEN BISCUIT CO., Omaha, Nebr. Filed Dec. 29, 1915.

BROWNIES

Particular description of goods.—Cakes and Cookies.
Claims use since December, 1914.

Ser. No. 91,832. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FAIRCHILD BROS. & FOSTER, New York, N. Y. Filed Dec. 30, 1915.

DIPANCRASE

Particular description of goods.—A Product of the Pancreas-Gland.
Claims use since Oct. 1, 1913.

Ser. No. 91,841. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FREDERICK HIRAM LEWIS, New York, N. Y. Filed Dec. 30, 1915.

CYCLONE

Particular description of goods.—Tools for Facing Valve-Seats.
Claims use since Oct. 1, 1915.

Ser. No. 91,916. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PERIN INC., New York, N. Y. Filed Jan. 4, 1916.

Flora

Particular description of goods.—Toilet Preparations—Viz., Toilet Powders and Toilet Creams.
Claims use since Dec. 9, 1915.

Ser. No. 91,918. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo Filed Jan. 4, 1916.

HOME CIRCLE

Consisting of the words "Home Circle."
Particular description of goods.—Roasted Coffee.
Claims use since about Oct. 14, 1915.

Ser. No. 91,923. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GEORGE J. WINTER, Buffalo, N. Y. Filed Jan. 4, 1916.



Particular description of goods.—Metallic Hose-Couplings.
Claims use since Aug. 1, 1915.

Ser. No. 91,940. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LAURA MANCHE MYERS, Chicago, Ill. Filed Jan. 5, 1916.



Particular description of goods.—Pins, Sewing-Pins, Fancy-Work Frames, Bead-Trays.
Claims use since Dec. 20, 1915.

Ser. No. 91,942. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARION PHARMACAL CO., Chicago, Ill. Filed Jan. 5, 1916.

GOGOQ

Particular description of goods.—Shampoo and Hair-Tonic.
Claims use since January, 1908.

Ser. No. 91,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 5, 1916.

IRIS

Particular description of goods.—Biscuit.
Claims use since at least Dec. 17, 1915.

Ser. No. 91,956. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) T. JOSEPH DELAHANTY, Wayne, Ill. Filed Jan. 6, 1916.

DELAHANT-A

Particular description of goods.—Face-Powders, Cold-Creams, and Vanishing Creams.
Claims use since Nov. 1, 1915.

Ser. No. 91,959. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GARTER PLATE COMPANY, INC., New York, N. Y. Filed Jan. 6, 1916.



No claim being made to the representation of the garter apart from the mark shown in the drawing.
Particular description of goods.—Garters.
Claims use since the 29th of December, 1915.

Ser. No. 91,969. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MOTOR-AIDS CO., Washington, D. C. Filed Jan. 6, 1916

DUK-HARE

Particular description of goods.—A Chemical Preparation for the Preservation of Clear Vision in Wind-Shields and Windows.
Claims use since Mar. 1, 1915.

Ser. No. 92,001. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ELI LILLY AND COMPANY, Indianapolis, Ind. Filed Jan. 7, 1916.

IPUANINE

Particular description of goods.—A Derivative of Cephaelin. Which is Marketed in the Following Forms: (1) As a Salt Appearing as a White Crystalline Powder, or Mass Packed in Vials; (2) in Tablet Form Packed in Bottles or Boxes; (3) in Solution, in Ampuls for Hypodermatic Use.
Claims use since Dec. 23, 1915.

Ser. No. 92,002. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANOR HOME REMEDY CO., Millersville, Pa. Filed Jan. 7, 1916.

Samwaw

Particular description of goods.—A Remedy for the Treatment of Constipation, Dizziness, Dyspepsia, Indigestion, Biliousness, Headache, Bad Breath, Liver Complaint, Boils, and Pimples.
Claims use since about Dec. 9, 1915.

Ser. No. 92,003. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. MARGARET RUPPERT, Philadelphia, Pa. Filed Jan. 7, 1916.



Particular description of goods.—A Preparation for External Use for Removing Superfluous Hair From the Face and Body.
Claims use since Jan. 1, 1913.

Ser. No. 92,005. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHULZE BAKING COMPANY, Chicago, Ill. Filed Jan. 7, 1916.

Bran Nutrine

The word "Bran" is disclaimed except in association with the pseudo word "Nutrine."
Particular description of goods.—Bread.
Claims use since Dec. 30, 1915.

Ser. No. 92,012. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BARTLETT ALL STEEL SCYTHE CO., Geneva, N. Y. Filed Jan. 8, 1916.

ALL STEEL BARTLETT SCYTHE

Particular description of goods.—Grass, Grain, Bush, Weed, and Lawn Scythes, Mower-Knives, Shears, All-Steel Pocket and Table Knives, Razors, Carpenters' Chisels and Gouges, Draw-Knives, and Planing-Tools.
Claims use since May 12, 1915.

Ser. No. 92,057. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNITED VACUUM SWEEPER COMPANY, Wilmington, Del., and Chicago, Ill. Filed Jan. 10, 1916.

GOLD COIN

Particular description of goods.—Vacuum-Sweepers.
Claims use since January, 1914.

Ser. No. 92,058. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNITED VACUUM SWEEPER COMPANY, Wilmington, Del., and Chicago, Ill. Filed Jan. 10, 1916.

GIANT

Particular description of goods.—Vacuum-Sweepers.
Claims use since January, 1914.

Ser. No. 92,078. (CLASS 10. FERTILIZERS.) THE HUBBARD FERTILIZER CO. OF BALTIMORE CITY, Baltimore, Md. Filed Jan. 12, 1916.

ROYAL SEAL

Particular description of goods.—Fertilizer.
Claims use since the year 1889.

Ser. No. 92,098. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BENFORD MFG. CO., Mount Vernon, N. Y. Filed Jan. 13, 1916.

MONARCH

Particular description of goods.—Spark-Plugs and Spark-Plug Cores and Parts Thereof, Timers, and Parts Thereof.
Claims use since 1905.

Ser. No. 92,123. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HAYDEN R. LATHROP, Hartford, Conn. Filed Jan. 14, 1916.

DEL-VALE



Particular description of goods.—Spring-Water and Ginger-Ale.
Claims use since Sept. 15, 1915.

Ser. No. 92,144. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GEORGE C. VAUGHAN, Peabody, Mass. Filed Jan. 14, 1916.

ARCTIC

Particular description of goods.—Sole-Leather.
Claims use since Oct. 1, 1915.

Ser. No. 92,187. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) C. W. DANNENHAUER, INC., Philadelphia, Pa. Filed Jan. 17, 1916.

Elite

The word "Elite."
Particular description of goods.—Patent and Enameled Leathers.
Claims use since Nov. 4, 1915.

Ser. No. 92,203. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SCHEIDEL-WESTERN X-RAY COMPANY, Chicago, Ill. Filed Jan. 17, 1916.



Particular description of goods.—Auto-Transformers, Interrupter-Transformers, Portable Coils, Induction-Coils, Foot-Switches, High-Tension Switches, Time-Switches, Interrupters, Rectifiers, Rotary Converters, Rheostats Resonators, Diaphragms, Plate-Changer Cases, Plate-Protectors, Auto-Plate Changers, Rapid Plate-Changers, Electric Lamps, Lead-Lined Boxes, Penetrameters, Tube-Stands, Valve-Tube Clamps, X-Ray-Tube Cases, Lamp-Cases, Rocker-Trays, Tube-Racks, Intensifying-Screen Holders, Screen-Frames and Fluoroscopes, Protection-Screens and Fluoroscopes.
Claims use since Sept. 3, 1915.

Ser. No. 92,250. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE CHRISTIAN MOERLEIN BREWING COMPANY, Cincinnati, Ohio. Filed Jan. 19, 1916.

Its

Particular description of goods.—Beer.
Claims use since about Aug. 26, 1908.

Ser. No. 92,264. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN COWAN, Baltimore, Md. Filed Jan. 20, 1916.

BI-BO
TRADE MARK REG.

No claim being made for the words "Trade Mark Reg." as forming a part of the mark.
Particular description of goods.—A Beverage Made From Sugar, Ginger, Water, Extract of Lemon, and Caramel Coloring.
Claims use since Jan. 2, 1916.

Ser. No. 92,297. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE NATIONAL FIREWORKS DISTRIBUTING COMPANY, Boston, Mass. Filed Jan. 21, 1916.



SUBMARINE

Particular description of goods.—Hand-Delivered Torpedoes.
Claims use since Aug. 1, 1915.

Ser. No. 92,310. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) TRIPURE WATER SYSTEMS COMPANY, Washington, D. C. Filed Jan. 21, 1916.

Tripure

Particular description of goods.—Water and Soft Drinks.
Claims use since July 6, 1915.

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TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 22, 1916.

108,627. CANNED SALMON. ADMIRALTY TRADING CO., Seattle, Wash.
Filed February 7, 1913. Serial No. 68,380. PUBLISHED MARCH 17, 1914.

108,628. BITUMEN AND ASPHALT. ANGLO MEXICAN PETROLEUM PRODUCTS COMPANY, LIMITED, London, England, and New York, N. Y.
Filed August 15, 1914. Serial No. 80,578. PUBLISHED MARCH 2, 1915.

108,629. POULTRY FOOD. THE ANSTED & BURK CO., Springfield, Ohio.
Filed September 28, 1915. Serial No. 89,500. PUBLISHED DECEMBER 7, 1915.

108,630. WHEAT-FLOUR. WILLIAM M. ATKINSON, Minneapolis, Minn.
Filed October 1, 1915. Serial No. 89,565. PUBLISHED DECEMBER 7, 1915.

108,631. TOILET POWDER. A. BOURJOIS & CO., INC., New York, N. Y.
Filed September 1, 1915. Serial No. 88,950. PUBLISHED DECEMBER 7, 1915.

108,632. VEGETABLE ALTERATIVE AND TONIC. A. W. BOYD, Chattanooga, Tenn.
Filed July 8, 1914. Serial No. 79,625. PUBLISHED DECEMBER 14, 1915.

108,633. CERTAIN NAMED FOODS. GEO. BUBB & SONS, Williamsport, Pa.
Filed August 21, 1915. Serial No. 88,726. PUBLISHED SEPTMEBER 28, 1915.

108,634. TIRE FLUID. BUFFALO SPECIALTY COMPANY, Buffalo, N. Y.
Filed June 24, 1914. Serial No. 79,319. PUBLISHED DECEMBER 8, 1914.

108,635. CERTAIN NAMED HARDWARE AND PLUMBING SUPPLIES. THE BY-LO STORES COMPANY, Chicago, Ill.
Filed October 1, 1915. Serial No. 89,568. PUBLISHED DECEMBER 7, 1915.

108,636. MIXED FEEDS FOR HORSES, CATTLE, AND FARM STOCK. CHAPIN & COMPANY, INCORPORATED, Hammond, Ind.
Filed September 21, 1915. Serial No. 89,346. PUBLISHED DECEMBER 7, 1915.

108,637. LARD COMPOUND. FLORIDA COTTON OIL COMPANY, Jacksonville, Fla.
Filed April 28, 1915. Serial No. 86,245. PUBLISHED DECEMBER 14, 1915.

108,638. SKIN TOILET LOTION. FOLEY & TUCKER COMPANY, Mohawk, Mich.
Filed September 24, 1914. Serial No. 81,446. PUBLISHED DECEMBER 14, 1915.

108,639. DRESSES. PHIL S. GILL, New York, N. Y.
Filed August 12, 1915. Serial No. 88,569. PUBLISHED NOVEMBER 9, 1915.

108,640. PEPPER. GILPIN, LANGDON & COMPANY INCORPORATED, Baltimore, Md.
Filed August 13, 1915. Serial No. 88,592. PUBLISHED DECEMBER 14, 1915.

108,641. BLACK PEPPER. GILPIN, LANGDON & COMPANY INCORPORATED, Baltimore, Md.
Filed August 13, 1915. Serial No. 88,593. PUBLISHED DECEMBER 14, 1915.

108,642. WHEAT-FLOUR. GOODE & DUNKIE, Covington, Ky.
Filed April 20, 1915. Serial No. 86,069. PUBLISHED AUGUST 3, 1915.

108,643. LIME. HANNIBAL LIME COMPANY, Hannibal, Mo.
Filed May 28, 1915. Serial No. 86,960. PUBLISHED DECEMBER 7, 1915.

108,644. SOAP IN PASTE FORM. HARRAH & STEWART MANUFACTURING COMPANY, Des Moines, Iowa.
Filed August 24, 1915. Serial No. 88,784. PUBLISHED DECEMBER 7, 1915.

108,645. KIDNEY AND BLADDER REMEDY. ELLEN HICKEY, Los Angeles, Cal.
Filed November 11, 1915. Serial No. 90,579. PUBLISHED DECEMBER 14, 1915.

108,646. DOLLS. INDESTRUCTO SPECIALTIES CO., New York, N. Y.
Filed April 23, 1915. Serial No. 86,140. PUBLISHED AUGUST 3, 1915.

108,647. LEATHER, CANVAS, AND OTHER FABRIC SHOES. INTERNATIONAL SHOE COMPANY, St. Louis, Mo.
Filed August 28, 1915. Serial No. 88,858. PUBLISHED NOVEMBER 9, 1915.

108,648. CONCENTRATED FLAVORING EXTRACTS FOR FOODS. WILLIAM ATHERTON KITTREDGE, Tunkhannock, Pa.
Filed October 2, 1915. Serial No. 89,603. PUBLISHED DECEMBER 14, 1915.

108,649. CERTAIN NAMED CLOTHING FOR MEN. THE KNORR-SCHLAUDT NOTION CO., Hutchinson, Kans.
Filed August 31, 1915. Serial No. 88,926. PUBLISHED NOVEMBER 30, 1915.

108,650. WORSTED AND WOOLEN YARN. JAMES LEES AND SONS COMPANY, Bridgeport, Pa.
Filed September 20, 1915. Serial No. 89,318. PUBLISHED DECEMBER 14, 1915.

108,651. LIQUID PRESERVATIVE PREPARATION IN THE NATURE OF A VARNISH. LINOIDE COMPANY, Saco, Me., and Everett and Boston, Mass.
Filed December 1, 1911. Serial No. 60,028. PUBLISHED DECEMBER 7, 1915.

108,652. READY-MADE PASTE PAINTS IN WHITE AND COLORS. JOHN W. MASURY & SON, New York, N. Y.
Filed October 18, 1915. Serial No. 89,923. PUBLISHED DECEMBER 7, 1915.

108,653. SELF-RISING WHEAT-FLOUR. MCCORD-STEWART COMPANY, Atlanta, Ga.
Filed August 20, 1914. Serial No. 80,703. PUBLISHED JANUARY 5, 1915.

108,654. COMPOSITION OF MATTER FOR PREVENTING AND SEALING PUNCTURES IN PNEUMATIC TIRES. CHAS. MILTON, Los Angeles, Cal.
Filed April 21, 1915. Serial No. 86,091. PUBLISHED DECEMBER 14, 1915.

108,655. WHEAT-FLOUR. MODEL MILL COMPANY, Johnson City, Tenn.
Filed October 6, 1915. Serial No. 89,687. PUBLISHED DECEMBER 14, 1915.

108,656. BUTTER, CHEESE, AND EGGS. NORTHERN WISCONSIN PRODUCE CO., Manitowoc, Wis.
Filed October 22, 1915. Serial No. 90,033. PUBLISHED DECEMBER 7, 1915.

108,657. WATERPROOF AND WEATHERPROOF BUILDING AND ROOFING MATERIAL MADE OF PAPER OR FELT. THE PARAFFINE PAINT COMPANY, San Francisco, Cal.
Filed September 11, 1915. Serial No. 89,158. PUBLISHED DECEMBER 7, 1915.

108,658. CERTAIN NAMED FOODS. LOUIS PFAELZER & SONS, Chicago, Ill.
Filed March 27, 1915. Serial No. 85,489. PUBLISHED DECEMBER 14, 1915.

108,659. REMEDY FOR PYORRHEA OR RIGG'S DISEASE. THE PYOFERIO PHARMACAL CO., Chicago, Ill.
Filed November 16, 1915. Serial No. 90,680. PUBLISHED DECEMBER 14, 1915.

108,660. WHEAT-FLOUR. RANDOLPH MILLING CO., Baldwin, Ill.
Filed September 25, 1915. Serial No. 89,470. PUBLISHED DECEMBER 7, 1915.

108,661. FURNITURE. M. REISCHMANN & SONS, INC., New York, N. Y.
Filed June 25, 1915. Serial No. 87,602. PUBLISHED SEPTEMBER 7, 1915.

108,662. SHOVELS, FOOD-CHOPPERS, AND CHURNS. RICHMOND HARDWARE CO., Richmond, Va.
Filed September 22, 1915. Serial No. 89,388. PUBLISHED DECEMBER 14, 1915.

108,663. GAS, GASOLENE, OIL, AND STEAM TRACTORS, NOT INCLUDING THE ENGINES. SAMSON IRON WORKS, Stockton, Cal.
Filed June 23, 1915. Serial No. 87,542. PUBLISHED DECEMBER 7, 1915.

108,664. MECHANICAL STARTING DEVICES FOR AUTOMOBILE AND TRUCK ENGINES. SANDBO STARTER COMPANY, Rock Island, Ill.
Filed October 1, 1915. Serial No. 89,588. PUBLISHED NOVEMBER 23, 1915.

108,665. BUTTER AND EGGS. SCHLOSSER BROTHERS, Plymouth, Ind., and Chicago, Ill.
Filed October 20, 1915. Serial No. 89,971. PUBLISHED DECEMBER 7, 1915.

108,666. CANDIES. HOMER M. SHERMAN, Council Bluffs, Iowa.
Filed February 12, 1915. Serial No. 84,499. PUBLISHED NOVEMBER 9, 1915.

108,667. DOLLS. BESSIE A. SIMMONS, Oklahoma, Okla.
Filed September 27, 1915. Serial No. 89,493. PUBLISHED DECEMBER 7, 1915.

108,668. ELECTRIC-LIGHT FIXTURES. PHILIP SIMPSON, New York, N. Y.
Filed September 27, 1915. Serial No. 89,491. PUBLISHED DECEMBER 14, 1915.

108,669. PORTLAND CEMENT. STANDARD PORTLAND CEMENT CORPORATION, San Francisco, Cal.
Filed September 11, 1915. Serial No. 89,160. PUBLISHED NOVEMBER 30, 1915.

108,670. LINIMENT FOR RHEUMATISM. GIUSEPPE TALIANI, West Everett, Mass.
Filed November 8, 1915. Serial No. 90,531. PUBLISHED DECEMBER 14, 1915.

108,671. OIL-BURNING, ESPECIALLY CHEMICALLY-TREATED, CHEMICALLY-TREATED SINGED, AND CHEMICALLY-TREATED DISK WICKS. HENRY E. TURPIN, Oakland, Cal.
Filed September 21, 1915. Serial No. 89,363. PUBLISHED DECEMBER 7, 1915.

108,672. CERTAIN NAMED FURNITURE AND UPHOLSTERY. THE UNITED STATES BEDDING CO., St. Paul, Minn.
Filed August 19, 1915. Serial No. 88,699. PUBLISHED DECEMBER 7, 1915.

108,673. FRESH AND GREEN FRUITS. WENATCHEE NORTH CENTRAL FRUIT DISTRIBUTORS, Wenatchee, Wash.
Filed October 2, 1915. Serial No. 89,618. PUBLISHED DECEMBER 7, 1915.

108,674. PREPARED ANIMAL FOODS. RUDOLPH A. WITTEMANN, Buffalo, N. Y.
Filed October 8, 1915. Serial No. 89,745. PUBLISHED DECEMBER 7, 1915.

108,675. CERTAIN NAMED ARTICLES OF CLOTHING. WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass.
Filed June 7, 1915. Serial No. 87,177. PUBLISHED DECEMBER 14, 1915.

108,676. CAKE AND PASTRY WHEAT-FLOUR. GEORGE W. ZIEBOLD, Waterloo, Ill.
Filed October 21, 1915. Serial No. 90,009. PUBLISHED DECEMBER 7, 1915.

108,677. WHEAT-FLOUR. GEORGE W. ZIEBOLD, Waterloo, Ill.
Filed October 21, 1915. Serial No. 90,010. PUBLISHED DECEMBER 7, 1915.

108,678. TEA, COFFEE, PEPPER, AND FLAVORING EXTRACTS FOR FOODS. ARBUCKLE BROTHERS, New York, N. Y., and Chicago, Ill.
Filed July 5, 1913. Serial No. 71,524. PUBLISHED DECEMBER 14, 1915.

108,679. CERTAIN NAMED CLOTHING. THE BABY OUTFITTERS, New York, N. Y.
Filed September 8, 1915. Serial No. 89,089. PUBLISHED DECEMBER 14, 1915.

108,680. SHOOTING-TARGET. JOHN W. BAKER, Stamford, Conn.
Filed May 29, 1915. Serial No. 86,985. PUBLISHED DECEMBER 7, 1915.

108,681. CERTAIN NAMED FOODS. OSCAR C. BEARD, Los Angeles, Cal.
Filed January 26, 1915. Serial No. 84,109. PUBLISHED NOVEMBER 16, 1915.

108,682. CANDY MINTS TO SWEETEN THE BREATH AND AID DIGESTION. BORO SALICINE CO., Philadelphia, Pa.
Filed August 13, 1913. Serial No. 72,312. PUBLISHED DECEMBER 7, 1915.

108,683. SOFT DRINKS. BOWERS'-SELTZER MEAD CO., Philadelphia, Pa.
Filed November 15, 1915. Serial No. 90,646. PUBLISHED DECEMBER 14, 1915.

108,684. GAS-LAMPS, VAPOR-LAMPS, AND OIL-LAMPS. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,699. PUBLISHED DECEMBER 14, 1915.

108,685. CLOTHES-WRINGERS AND WASHING-MACHINES. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed July 29, 1915. Serial No. 88,270. PUBLISHED OCTOBER 26, 1915.

108,686. SHOCK-ABSORBERS. ALBERT R. CHRISTMAN, Philadelphia, Pa.
Filed October 13, 1915. Serial No. 89,831. PUBLISHED DECEMBER 14, 1915.

108,687. FACE-POWDER. DAGGETT & RAMSDELL, New York, N. Y.
Filed November 6, 1915. Serial No. 90,469. PUBLISHED DECEMBER 14, 1915.

108,688. WINES. JAMES HENRY DALTON, New York, N. Y.
Filed September 22, 1915. Serial No. 89,373. PUBLISHED DECEMBER 14, 1915.

108,689. CERTAIN NAMED PIPES AND PARTS OF PIPES. WILLIAM DEMUTH & COMPANY, New York, N. Y.
Filed September 21, 1915. Serial No. 89,347. PUBLISHED DECEMBER 14, 1915.

108,690. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. HENRY DISSTON & SONS INCORPORATED, Philadelphia, Pa.
Filed October 30, 1915. Serial No. 90,227. PUBLISHED DECEMBER 14, 1915.

108,691. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES. HENRY DISSTON & SONS INCORPORATED, Philadelphia, Pa.
Filed October 30, 1915. Serial No. 90,228. PUBLISHED DECEMBER 14, 1915.

108,692. NON-ALCOHOLIC CARBONATED BEVERAGES SOLD AS SOFT DRINKS. WILLIAM M. DRAPER, Sullivan, Ind.
Filed October 9, 1915. Serial No. 89,753. PUBLISHED DECEMBER 14, 1915.

108,693. DICTIONARY. FUNK & WAGNALLS COMPANY, New York, N. Y.
Filed December 8, 1913. Serial No. 74,442. PUBLISHED DECEMBER 7, 1915.

108,694. CERTAIN NAMED CLOTHING FOR MEN, WOMEN, AND CHILDREN. SOL GLASER & CO., Philadelphia, Pa.
Filed October 22, 1915. Serial No. 90,027. PUBLISHED DECEMBER 14, 1915.

108,695. SUSPENDERS. GLENDALE ELASTIC FABRICS CO., Easthampton, Mass.
Filed October 25, 1915. Serial No. 90,083. PUBLISHED DECEMBER 14, 1915.

108,696. MASSAGE-MITTS. THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed July 7, 1915. Serial No. 87,804. PUBLISHED NOVEMBER 2, 1915.

108,697. THREADS AND YARNS. GÜTERMANN & CO., Gutach-Breisgau, Germany.
Filed November 14, 1914. Serial No. 82,593. PUBLISHED DECEMBER 14, 1915.

108,698. TOY BUILDING-BLOCKS. THE H-K TOY AND NOVELTY CO., Indianapolis, Ind.
Filed April 2, 1915. Serial No. 85,640. PUBLISHED DECEMBER 14, 1915.

108,699. CERTAIN NAMED FURNITURE AND UPHOLSTERY. HARLEM FURNITURE COMPANY, New York, N. Y.
Filed August 25, 1915. Serial No. 88,802. PUBLISHED DECEMBER 7, 1915.

108,700. INSECT-EXTERMINATORS. INTERNATIONAL COLOR & CHEMICAL CO., INC., Detroit, Mich.
Filed November 15, 1915. Serial No. 90,651. PUBLISHED DECEMBER 14, 1915.

108,701. SEASONING PREPARATIONS. RISAKU ISHIYAMA, Seattle, Wash.
Filed August 18, 1915. Serial No. 88,674. PUBLISHED NOVEMBER 30, 1915.

108,702. NON-ALCOHOLIC BEVERAGES AS A SOFT DRINK. THE JACOBS PHARMACY COMPANY, Atlanta, Ga.
Filed November 23, 1915. Serial No. 90,874. PUBLISHED DECEMBER 21, 1915.

108,703. BABBITT METAL. I. M. JACOBSON & SONS CO., Detroit, Mich.
Filed November 12, 1915. Serial No. 90,599. PUBLISHED DECEMBER 14, 1915.

108,704. LOTION FOR CLEANSING, SOFTENING, AND PROTECTING THE SKIN AND SCALP. LAUGHLIN FRUIT REFINING CO., Los Angeles, Cal.
Filed July 15, 1914. Serial No. 79,805. PUBLISHED NOVEMBER 30, 1915.

108,705. MONTHLY PUBLICATION. LES BOULEVARDS PUBLISHING CO., INC., New York, N. Y.
Filed August 27, 1915. Serial No. 88,840. PUBLISHED NOVEMBER 9, 1915

108,706. SMOKING AND CHEWING TOBACCO, AND PARTICULARLY TOBACCO CARTRIDGES. LIGGETT & MYERS TOBACCO COMPANY, New York, N. Y.
Filed November 19, 1915. Serial No. 90,765. PUBLISHED DECEMBER 7, 1915.

108,707. PERFUME, TOILET WATER, FACE-POWDER, AND TALCUM POWDER. HERMAN C. G. LUYTIES, St. Louis, Mo.
Filed November 3, 1915. Serial No. 90,387. PUBLISHED DECEMBER 14, 1915.

108,708. BUST-SUPPORTERS AND BRASSIÈRES. MADAME IRÈNE, New York, N. Y.
Filed October 8, 1915. Serial No. 89,735. PUBLISHED DECEMBER 7, 1915.

108,709. MAGNESITE STUCCO, MAGNESITE FLOORING, MAGNESITE PLASTER. MAGNESITE PRODUCTS COMPANY, San Francisco, Cal.
Filed September 21, 1915. Serial No. 89,353. PUBLISHED DECEMBER 7, 1915.

108,710. NON-ALCOHOLIC CARBONATED TONIC BEVERAGES SOLD AS SOFT DRINKS. G. L. MAYER, Rosebud, Tex.
Filed October 14, 1915. Serial No. 89,847. PUBLISHED DECEMBER 14, 1915.

108,711. FOOD-FLAVORING EXTRACTS. FREDERICK J. MCMURTRIE, Detroit, Mich.
Filed October 18, 1915. Serial No. 89,921. PUBLISHED DECEMBER 14, 1915.

108,712. TEA. J. MEDVENE & BRO., Philadelphia, Pa.
Filed August 31, 1915. Serial No. 88,928. PUBLISHED DECEMBER 14, 1915.

108,713. CREAM DEODORANT. GERHARD MENNEN CHEMICAL CO., Newark, N. J.
Filed November 12, 1915. Serial No. 90,605. PUBLISHED DECEMBER 14, 1915.

108,714. AUTOMOBILES. MOON MOTOR CAR COMPANY, St. Louis, Mo.
Filed October 4, 1915. Serial No. 89,637. PUBLISHED DECEMBER 14, 1915.

108,715. CAVIAR. ISODORE MOOS, New York, N. Y.
Filed October 9, 1915. Serial No. 89,765. PUBLISHED DECEMBER 14, 1915.

107,716. ORGANIC AND INORGANIC PAINTS, LACQUERS, AND VARNISHES. NAAMLOOZE VENNOOTSCHAP: LAK-EN VERFFABRIEK "PREMIER," Dordrecht, Netherlands.
Filed February 20, 1915. Serial No. 84,666. PUBLISHED DECEMBER 14, 1915.

108,717. COLLAPSIBLE WARDROBES. JOE NIELSEN, Leesburg, Va.
Filed October 27, 1914. Serial No. 82,220. PUBLISHED DECEMBER 14, 1915.

108,718. CERTAIN NAMED KNIT ARTICLES OF WEARING-APPAREL. RICHARD T. PECKHAM, New York, N. Y.
Filed March 15, 1915. Serial No. 85,157. PUBLISHED DECEMBER 14, 1915.

108,719. CIGARETTES AND PIPE-TOBACCO. CHARLES B. PERKINS COMPANY, Boston, Mass.
Filed October 19, 1915. Serial No. 89,951. PUBLISHED DECEMBER 7, 1915.

108,720. CANDY. REYMER & BROTHERS, INCORPORATED, Pittsburgh, Pa.
Filed September 9, 1915. Serial No. 89,118. PUBLISHED DECEMBER 14, 1915.

108,721. CIGARETTES. ROSEDOR CIGARETTE CO., New York, N. Y.
Filed October 21, 1915. Serial No. 89,999. PUBLISHED DECEMBER 7, 1915.

108,722. FURNITURE, FLOOR, AND AUTOMOBILE POLISH. KARL A. SANDHOP, New York, N. Y., assignor to Mirrolike Mfg. Co., New York, N. Y., a Firm composed of Karl A. Sandhop and Hugo Kiel.
Filed June 18, 1915. Serial No. 87,398. PUBLISHED DECEMBER 14, 1915.

108,723. WHEAT-FLOUR. THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo.
Filed July 22, 1915. Serial No. 88,125. PUBLISHED AUGUST 24, 1915.

108,724. WHEAT-FLOUR. THE SCOTT COUNTY MILLING COMPANY, Sikeston, Mo.
Filed October 18, 1915. Serial No. 89,932. PUBLISHED NOVEMBER 30, 1915.

108,725. PORT AND OTHER WINES. ALEX D. SHAW & Co., New York, N. Y.
Filed November 15, 1915. Serial No. 90,668. PUBLISHED DECEMBER 14, 1915.

108,726. FIXTURES FOR ELECTRIC LIGHTS. ST. LOUIS BRASS MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 8, 1915. Serial No. 90,529. PUBLISHED DECEMBER 14, 1915.

108,727. FACE-POWDER. HENRY TETLOW Co., Philadelphia, Pa.
Filed November 2, 1915. Serial No. 90,370. PUBLISHED DECEMBER 14, 1915.

108,728. TRUNKS, SUITCASES, TRAVELING-BAGS, PORTFOLIOS, POCKET-BOOKS, AND BRIEF-CASES. WILLIAM A. TUERKE, Baltimore, Md.
Filed April 28, 1915. Serial No. 86,255. PUBLISHED DECEMBER 14, 1915.

108,729. VEGETABLE FIBERS USED IN THE MANUFACTURE OF ARTIFICIAL HAIR FOR UPHOLSTERING AND MATTRESS-MAKING. J. H. VAVASSEUR & Co. LD., London, England.
Filed September 15, 1914. Serial No. 81,276. PUBLISHED DECEMBER 14, 1915.

108,730. TOILET-COMBS MADE OF RUBBER OR COMPOSITION. THE VULCANIZED RUBBER CO. OF NEW YORK, New York, N. Y.
Filed November 1, 1915. Serial No. 90,296. PUBLISHED DECEMBER 14, 1915.

108,731. SILOS. E. F. WIEDERHOLDT, St. Louis, Mo.
Filed July 12, 1915. Serial No. 87,903. PUBLISHED DECEMBER 14, 1915.

108,732. SALVES. WILSON-RANDLES CHEMICAL CO., West Lafayette, Ohio.
Filed November 3, 1915. Serial No. 90,398. PUBLISHED DECEMBER 14, 1915.

108,733. AMMONIA CARBONATE. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed November 2, 1915. Serial No. 90,304. PUBLISHED DECEMBER 14, 1915.

108,734. PLASTIC COMPOUND FOR WATERPROOFING SURFACES. THE ARCO COMPANY, Cleveland, Ohio.
Filed October 9, 1915. Serial No. 89,746. PUBLISHED DECEMBER 14, 1915.

108,735. CERTAIN NAMED SAWS AND SAW-FITTING TOOLS. E. C. ATKINS AND COMPANY, Indianapolis, Ind.
Filed August 14, 1915. Serial No. 88,604. PUBLISHED DECEMBER 21, 1915.

108,736. TAPESTRY RUGS. BEATTIE MANUFACTURING CO., Little Falls, N. J., and New York, N. Y.
Filed November 22, 1915. Serial No. 90,812. PUBLISHED DECEMBER 21, 1915.

108,737. COAL. BICKETT COAL AND COKE COMPANY, Chicago, Ill.
Filed August 20, 1915. Serial No. 88,702. PUBLISHED DECEMBER 7, 1915.

108,738. FRUIT AND HERB ELIXIR AND SYRUP AND CARBONATED BEVERAGE MADE THEREFROM. BLUDWINE COMPANY, Athens, Ga.
Filed November 19, 1915. Serial No. 90,761. PUBLISHED DECEMBER 21, 1915.

108,739. HOSIERY. BROWN DURRELL CO., Boston, Mass.
Filed May 27, 1911. Serial No. 56,660. PUBLISHED DECEMBER 7, 1915.

108,740. COAL. PEARL A. COEN, Columbus, Ohio.
Filed November 6, 1915. Serial No. 90,452. PUBLISHED DECEMBER 14, 1915.

108,741. WOOL AND SILK PIECE GOODS. COUDURIER, FRUCTUS & DESCHER, Lyon, France, and New York, N. Y.
Filed November 13, 1915. Serial No. 90,630. PUBLISHED DECEMBER 21, 1915.

108,742. RUBBER HEELS. FOSTER RUBBER COMPANY, Kennebunk, Me., and Boston, Mass.
Filed September 1, 1915. Serial No. 88,953. PUBLISHED DECEMBER 21, 1915.

108,743. RUBBER HEELS. FOSTER RUBBER COMPANY, Kennebunk, Me., and Boston, Mass.
Filed September 1, 1915. Serial No. 88,954. PUBLISHED DECEMBER 21, 1915.

108,744. RUBBER HEELS. FOSTER RUBBER COMPANY, Kennebunk, Me., and Boston, Mass.
Filed September 1, 1915. Serial No. 88,955. PUBLISHED DECEMBER 21, 1915.

108,745. BEER. FRANKLIN BREWING COMPANY, Brooklyn, N. Y.
Filed October 2, 1915. Serial No. 89,598. PUBLISHED DECEMBER 14, 1915.

108,746. SAUSAGES. JUAN RODRIGUEZ GARCIA, Pola de Siero, Spain.
Filed September 17, 1914. Serial No. 81,298. PUBLISHED DECEMBER 7, 1915.

108,747. GAMING SETS. THE HALMA COMPANY, Portland, Me.
Filed September 24, 1915. Serial No. 89,435. PUBLISHED DECEMBER 14, 1915.

108,748. EXTRACT PERFUME, TOILET CREAM, TOILET WATER, TALCUM POWDER, ROUGE, FACE-POWDER, AND SACHET-POWDER. FRED HARVEY, INC., Kansas City, Mo.
Filed November 2, 1915. Serial No. 90,325. PUBLISHED DECEMBER 14, 1915.

108,749. TOOTH-POWDER, MOUTH WASHES AND LOTIONS. MONTGOMERY LA ROCHE, New York, N. Y.
Filed October 11, 1915. Serial No. 89,800. PUBLISHED DECEMBER 14, 1915.

108,750. POULTRY FEED. LAWTHER GRAIN COMPANY, Dallas, Tex.
Filed October 21, 1915. Serial No. 89,984. PUBLISHED DECEMBER 7, 1915.

108,751. TRUNKS. NATIONAL TRUNK COMPANY, Kansas City, Mo.
Filed June 7, 1915. Serial No. 87,172. PUBLISHED DECEMBER 7, 1915.

108,752. CERTAIN NAMED LADIES' GARMENTS. JACOB D. POSNER, New York, N. Y.
Filed November 8, 1915. Serial No. 90,520. PUBLISHED DECEMBER 21, 1915.

108,753. ELECTRIC-LIGHT FIXTURES. JOHN D. RAYMOND, Chicago, Ill.
Filed November 6, 1915. Serial No. 90,490. PUBLISHED DECEMBER 14, 1915.

108,754. PETROLEUM, KEROSENE, GASOLENE, BENZIN, AND NAPHTHA. RIVERSIDE OIL COMPANY, Pittsburgh, Pa.
Filed November 23, 1915. Serial No. 90,883. PUBLISHED DECEMBER 21, 1915.

108,755. ELASTIC VEHICLE-TIRES. THE RUBBER PRODUCTS COMPANY, Barberton, Ohio.
Filed September 20, 1915. Serial No. 89,324. PUBLISHED DECEMBER 7, 1915.

108,756. CANNED SALMON AND CANNED EVAPORATED MILK. THE SEARS & NICHOLS CO., Chillicothe, Ohio.
Filed April 10, 1915. Serial No. 85,876. PUBLISHED DECEMBER 14, 1915.

108,757. SILK PIECE GOODS. THE VALENTINE & BENTLEY SILK CO., Newton, N. J., and New York, N. Y.
Filed November 24, 1915. Serial No. 90,916. PUBLISHED DECEMBER 21, 1915.

108,758. EXTERNAL-TREATMENT SALVE FOR ALL CONGESTION AND INFLAMMATION OF CERTAIN NAMED ORGANS. THE VICK CHEMICAL CO., Greensboro, N. C.
Filed November 2, 1915. Serial No. 90,375. PUBLISHED DECEMBER 14, 1915.

108,759. CERTAIN NAMED FOODS. EMILE A. ZATARAIN, New Orleans, La.
Filed August 28, 1915. Serial No. 88,867. PUBLISHED NOVEMBER 30, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

13,039. DIGESTIVE LOZENGES OR TROCHES. JOSEPH A. NEWHALL, Saugus, Mass.; Brent W. W. Newhall, administrator.
Registered February 16, 1886. Renewed February 16, 1916.

13,054. CONDENSED MILK. NEW YORK CONDENSED MILK COMPANY, New York, N. Y.; Borden's Condensed Milk Company, a Corporation of New Jersey, assignee.
Registered February 23, 1886. Renewed February 23, 1916.

13,548. MEDICINAL PREPARATION FOR PURIFYING THE BLOOD. ANDREW GROSS, New York, N. Y.
Registered August 10, 1886. Renewed August 10, 1916.

LABELS

REGISTERED FEBRUARY 22, 1916.

19,052.—*Title:* "PIMENTO." (For Cottage-Cheese.) C. E. BECKETT, Los Angeles, Cal. Filed December 30, 1915.

19,053.—*Title:* "THE AMERICAN BOY'S SUIT." (For Boys' Clothing.) COHEN & LANG, New York, N. Y. Filed November 17, 1915.

19,054.—*Title:* "AMERICAN CANDLES." (For Candles.) GRENNARO COLOMBO, Brooklyn, N. Y. Filed December 13, 1915.

19,055.—*Title:* "LIFE." (For Coffee.) EARL COWAN COMPANY, Los Angeles, Cal. Filed January 27, 1916.

19,056.—*Title:* "SUNBONNET." (For Eggs.) GEO. R. ELDRIDGE Co., Detroit, Mich. Filed December 8, 1915.

19,057.—*Title:* "FREDERICK & NELSON FURNITURE POLISH." (For Furniture-Polish.) FREDERICK & NELSON, INC., Seattle, Wash. Filed January 22, 1916.

19,058.—*Title:* "HARMS BROS. EAGLE BRAND CHEWING GUM." (For Chewing-Gum.) HARMS BROS. MFG. Co., Baltimore, Md. Filed January 11, 1916.

19,059.—*Title:* DRY CLIMATE." (For Coffee.) THE INDEPENDENCE COFFEE & SPICE Co., Denver, Colo. Filed December 8, 1915.

19,060.—*Title:* "J-M SERVICE ROOFING." (For Prepared Roofing.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed January 29, 1916.

19,061.—*Title:* "J-M SLATEKOTE ROOFING." (For Prepared Roofing.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed January 29, 1916.

19,062.—*Title:* "J-M GILSONITE PAVING CEMENT." (For Paving-Cement.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed January 29, 1916.

19,063.—*Title:* "SUM GOOD." (For Coffee and Chicory.) THE HENRY LOCHTE CO., LTD., New Orleans, La. Filed December 20, 1915.

19,064.—*Title:* "SURE-GOOD." (For Coffee and Chicory.) THE HENRY LOCHTE CO., LTD., New Orleans, La. Filed December 20, 1915.

19,065.—*Title:* "BON CAFÉ." (For Coffee and Chicory.) THE HENRY LOCHTE CO., LTD., New Orleans, La. Filed December 20, 1915.

19,066.—*Title:* "SHINEOIL." (For Oil Polish.) DELLA O. MOORE, Atlanta, Ga. Filed December 21, 1915.

19,067.—*Title:* "OLD SCOUT." (For Canned Salmon.) NATIONAL INDEPENDENT FISHERIES CO., Seattle, Wash. Filed December 13, 1915.

19,068.—*Title:* "RYE-LAX." (For Rye Cereal Food.) POTTER & WRIGHTINGTON, Boston, Mass. Filed January 15, 1916.

19,069.—*Title:* "SQUARE DEAL." (For Fresh Apples.) PETER M. RESETAR, Watsonville, Cal. Filed January 12, 1916.

19,070.—*Title:* "MILK BREAD." (For Bread.) ROBERTSON PAPER COMPANY, Bellows Falls, Vt. Filed January 28, 1916.

19,071.—*Title:* "SUCCESS." (For Whisky.) R. M. ROSE COMPANY, Chattanooga, Tenn. Filed January 13, 1916.

19,072.—*Title:* "DON-EDUARDO PURE LEMON JUICE." (For Lemon-Juice.) EDWARD J. ROTHER, San Diego, Cal. Filed November 29, 1915.

19,073.—*Title:* "BELMONT LAGER." (For Beer.) SMITH BROS. INC., New Bedford, Mass. Filed January 12, 1916.

19,074.—*Title:* "JEWEL CITY." (For Coffee.) FRANK H. TYLER, San Francisco, Cal. Filed January 28, 1916.

PRINTS

REGISTERED FEBRUARY 22, 1916.

4,220.—*Title:* "RICHMOND." (For Union Undergarments.) THE ATLAS UNDERWEAR CO., Piqua, Ohio. Filed November 23, 1915.

4,221.—*Title:* "WATCH US GROW." (For Chick Feed.) F. B. CHAMBERLAIN CO., St. Louis, Mo. Filed January 15, 1916.

4,222.—*Title:* "ALKALINE DENTIFRICES BLAMED FOR INCREASE IN DENTAL CARIES AND ORAL SEPSIS." (For Dental Preparations.) THE PEPSODENT COMPANY, Chicago, Ill. Filed January 10, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BURLINGAME *v.* MANCHESTER.

Decided March 1, 1915.

EQUITY—INJUNCTION—COURTS—PATENTS.

The Supreme Court of the District of Columbia, sitting as an equity court, has no jurisdiction to entertain a suit against former employees of the plaintiff to enjoin them from divulging the secrets of the plaintiff's invention acquired by them while in his employ, and for which he has filed an application for a patent, and from prosecuting an application which they have filed for a patent for the same invention, as the Commissioner of Patents is vested with full jurisdiction under the patent law to determine in an interference proceeding the questions involved—namely, who were the real inventors of the invention in question and whether the defendants were the employees of the plaintiff for the purpose of carrying out his instructions in regard to the construction of the devices embodying the invention—and as an appeal will lie to this court from the decision of the Commissioner in such an interference. (Citing *re Frasch*, 20 App. D. C., 298; *Moore* v. *Heany*, 34 App. D. C., 31, and *Billings* v. *Field*, 36 App. D. C., 16.)

STATEMENT OF THE CASE.

The court in the opinion stated the facts as follows:

This is a suit in equity begun by Charles I. Burlingame, H. Oscar Huot, and George S. Engle, appellants, who are hereinafter called plaintiffs; against Arthur Manchester and Harry N. Spooner, appellees, hereinafter called defendants.

The suit is to restrain the defendants from filing or prosecuting applications in the Patent Office for certain claims, and divulging secrets obtained by them from the plaintiffs, and also to prevent them from doing any acts to embarrass or hinder plaintiffs in the prosecution of their claims in the Patent Office.

The bill alleges that the said Engle for many years has been engaged in the making and perfecting of a certain invention for a primary electrical battery, which invention involves electro-chemistry, analytical chemistry, and chemical metallurgy, and that for seven years past has prosecuted his said inventions in the city of Cranston in the State of Rhode Island, and has expended thereon large sums of money, to wit, the sum of $32,000 in experimental work, the maintenance of a shop, hiring of mechanics, purchasing of materials, etc., incident to the prosecution and development of his said inventions.

That during five or more years past, defendant Spooner has been employed by Engle to assist the said Engle as a general assistant in the development of his said inventions, and that during the period that the said Spooner has been in the employ of Engle he has been fully paid and recompensed by the said Engle for the work done by him, and that the said Spooner has been taught by the said Engle some electrical knowledge, so as to enable him to set up and demonstrate parts of the said primary battery; and that all work and services performed by the said Spooner for the said Engle have been entirely under the direction of the said Engle as an assistant to the said Engle, and of an auxiliary and ancillary character, and have been a mere aid in the development of the original ideas of the said Engle; and that the defendant Manchester, who has some chemical knowledge, has been employed for the three months past to assist the said Engle in the thickening of a certain fluid used in his said inventions; and that all the materials used by either of the said defendants were provided by the said Engle; and that the said work performed by defendant Manchester was fully paid for by said Engle, and was wholly confined to the developing of the original ideas of the said Engle.

That in, to wit, the month of June, 1912, the said Spooner and the said Manchester, while in the employment of the said Engle, respectively represented to Huot and to Burlingame that the said Engle was the sole owner of the primary battery and of ideas and inventions embodied in the same, and that the same were of great value and approaching a state of completion, and urged and persuaded the said Huot and the said Burlingame to advance large sums of money for the further carrying on of the work and for the perfecting of the necessary patents upon the said inventions, and they further represented that the said Engle was a man of honesty of purpose and reliable, and that they, the said Huot and Burlingame, would be perfectly safe in investing their money, and that the said Engle had applied for and been granted other patents and was about to make further applications for further patents upon the same inventions; and that the said Huot and the said Burlingame, relying upon the statements aforesaid, that the said inventions were the sole property of the said Engle, did in fact invest large sums of money, to wit, the sum of $8,000, in the said inventions; and further the said Spooner witnessed a contract between the said Engle and the said Huot and Burlingame in the month of June, 1912, for the payment of $2,000 by the said Huot and the said Burlingame to said Engle on account of the said inventions; and that in the first week of the month of October last past, the said Engle, who had already applied for patents upon certain parts of the said battery, came to the city of Washington accompanied by the said Manchester, the expenses of the said Manchester being

fully paid by the said Engle, and that the said Engle made three applications for further patents in connection with his said inventions, and that the said Manchester was present when the said Engle swore to the three applications in the presence of one Hyer, and nodded assent to the statement of Engle that he, the said Engle, was the sole owner of the said primary battery and all its parts, for the patents upon which the said three last named applications were made. The applications are numbered serially,—Serial No. 724,605, filed October 8, 1912, for primary batteries; Serial No. 724,606, filed October 8, 1912, for double copper-oxid plate and process of producing same; and Serial No. 724,607, filed October 8, 1912, for process of making alkaline gelatinous electrolyte.

The plaintiffs further say that recently, to wit, in the present month, notwithstanding the facts hereinbefore set forth, all of which were well known to the said defendants and to each of them, they, the said defendants, corruptly and fraudulently conspired and agreed together to rob the said Engle of his inventions and to claim the same for themselves; and they, the said defendants, corruptly and fraudulently conspired and agreed to defraud the said Huot and the said Burlingame of the money invested by them, the said Huot and Burlingame, in reliance upon the statements of the said defendants; and that, in pursuance of the said fraudulent and corrupt conspiracy, the said Manchester threatened the said Engle, in substance, that he, the said Manchester, would smash the said Engle's business and prevent his ever doing anything with it, and the said Manchester further stated in the presence of the said Engle that in "smashing his business," he, the said Manchester, would make public the secret of the said Engle's inventions and would apply for patents for Spooner and himself thereon if he could obtain the necessary money, and that he, the said Manchester, would thus cause delay and litigation in the allowance of the applications of the said Engle above referred to; and the said Manchester demanded for himself an interest in the said patents and an interest in the said patents for Spooner, and in further pursuance of the corrupt conspiracy the said Manchester and the said Spooner called upon the said Huot and the said Burlingame together in Burlingame's office in the city of Providence and demanded of them the sum of $1,000 for the purpose of obtaining patents in their own names upon the inventions of the said Engle, and the said defendants further threatened that if the said Huot and Burlingame refused the defendants the sum of $1,000, they, the said defendants, would cause the said Huot and Burlingame to lose the sum of $8,000 which they had invested in the said inventions upon the said representations of the defendants; and they further threatened that if they did not obtain the sum of $1,000 from them, the said Huot and Burlingame, they, the said defendants, would procure the sum elsewhere, and that they would proceed to Washington and file applications in their own names for patents upon the inventions of the said Engle, as hereinbefore set forth; and that in further pursuance of the said corrupt and fraudulent conspiracy, the said defendants have in fact come to Washington and are now in the city and District, for the purpose of filing in their own names applications for patents covering the inventions of the said Engle, and thereby to harass, annoy, and defeat the development of the said inventions of the said Engle, Huot, and Burlingame.

Plaintiffs further show that the said inventions of the said Engle of the primary battery are of very great value, and that the said battery is nearing a state of completion, and that the filing of the false and fraudulent applications of the defendants will prevent the plaintiffs from obtaining the necessary money to develop and complete the said inventions, and will cause a multiplicity of suits to determine the title to the said inventions, and will work irreparable injury to each of the three plaintiffs, and will destroy the value of the investments of the said Huot and Burlingame, made in the manner aforesaid; and that the defendants are wholly without means, and are financially irresponsible, and that the said plaintiffs are without remedy at law, and that the said plaintiffs Huot and Burlingame would have no status in the Patent Office to defend and prosecute their interests in the said inventions, and that all of the said plaintiffs, being advised of the corrupt and fraudulent conspiracy, are compelled to seek the relief of the equity court.

They pray for a temporary restraining order to issue enjoining each of the defendants from filing and prosecuting applications in the Patent Office for any claims to inventions set forth in the applications numbered 724,605, 724,606 and 724,607, filed on October 8, 1912, and further enjoining them and each of them from divulging any secrets obtained from the plaintiffs, and further enjoining and restraining the said defendants, their agents, assigns, and attorneys, from doing acts to embarrass or hinder the said plaintiffs in the prosecution of their said claims numbered as aforesaid, until further order of this honorable court; and that upon final hearing the said temporary restraining order be made permanent. And also a prayer for general relief.

On the same day the restraining order was issued as prayed and an injunction undertaking approved and filed.

Subpœnas for the defendants were returned not found.

January 20, 1913, counsel for defendants entered a special appearance for the purpose of moving to quash the subpœna, and to vacate and set aside the order directing the restraining order to issue.

On the same day, specially appearing by attorneys, they moved that the subpœna issued against the defendants be quashed, and, second, that the order directing the restraining order against them be vacated and set aside.

The court denied this motion January 31, 1913, and held that the motions therein are equivalent to a general appearance by the defendants; wherefore they were given ten days within which to plead.

Defendants answered denying the specific allegations of the bill, and specially denying that Engle had invented said battery, or that defendants had been employed by him to assist as general assistants, or had been paid by him, or had been taught any electrical knowledge by him, or that any work had been performed under the direction of said Engle, or that they had been engaged in the development of any original ideas of the said Engle.

They deny that they advised the said Huot and Burlingame to advance any sums of money for the further carrying on of the work, and for the perfecting of the necessary patents upon said inventions; and they deny that by any representations of theirs the said Huot and Burlingame made any advances to said Engle.

They admit that defendant Spooner witnessed a contract between the said Engle and the said Huot and Burlingame in the month of June, 1912, for the payment of $2,000 by said Huot and Burlingame to said Engle, but deny that the said contract had relation to any invention of said Engle.

They admit that in or about the first week of October, 1912, the said Engle and the said Manchester went to the city of Washington, as in said bill of complaint alleged, but deny that the expenses of said Manchester on that occasion were fully paid for and borne by said Engle. They admit that on the occasion of the trip to Washington, said Engle made three applications for patents through James L. Norris, a patent attorney of the said city, and that in the presence of said Manchester said Engle swore to said three applications, same being those mentioned in the bill of complaint. They deny said Manchester ever assented to any statement of the said Engle that he, the said Engle, was the sole owner of the said primary battery or of any of its parts covered by the said three applications, or any one of them; and they particularly deny that in the office of Mr. Norris, where said three applications were prepared, the said Manchester, in the presence of one Hyer, nodded assent to the statement of said Engle that he, the said Engle, was the sole owner of the primary battery and all of its parts, set forth in said three applications; and they deny that at any time the said Manchester declared or admitted that the said Engle was the inventor of anything embodied in any of said applications.

They deny any disclosure of the subject-matter of either of the said three applications by the said Engle to them, or either of them.

They deny the charge of conspiracy to attempt to rob Engle of any of his inventions, or to defraud the said Huot and the said Burlingame of the money invested by them. They deny that they threatened to smash the said Engle's business, or that the said Manchester would make public the secrets of the inventions of said Engle, or would apply for patents in the name of defendant Spooner and himself thereon, or that he would cause delay and litigation in the allowance of the patent to said Engle. They deny that defendant Manchester demanded from said Engle for himself and Spooner an interest in any patents to be secured by said Engle.

They say that they have jointly and severally been associated with the said Engle in the development of certain inventions of their own in which the said Engle has taken no inventive part, and because of the association of these defendants with said Engle in the development of the said inventions of these defendants, the said Engle has presumed not only to be the sole owner of said inventions, but the sole inventor of them, and has filed in the United States Patent Office, in his own name, the three applications covering the said inventions set forth in the bill of complaint. They further say that while it was known to them, the said defendants, that the said Engle was to apply for patents for the said inventions, they thought, being then ignorant of the patent laws and of the rights and duties of inventors thereunder, that such procedure was proper in view of the community of interests that they and the said Engle had in said inventions; and it was not until after the said applications had been thus filed by said Engle in his own name that they discovered that valid patents could not be granted upon said inventions except upon applications made in the names of the true inventors; whereupon, and before the filing of the bill of complaint in this cause, they caused to be prepared and filed in their own names an application for patent covering the said inventions included in the said three applications filed by said Engle, the said application filed by these defendants being known and designated as Serial No. 736,969, and filed in the Patent Office of the United States on the 16th day of December, 1912, and being entitled "An improvement in batteries."

Testimony was taken in the case, and on final hearing, November 7, 1913, a decree was rendered dismissing the bill at plaintiff's cost. It was also ordered that during the pendency of the appeal, and until the determination of the questions presented thereby, the defendants be and are hereby restrained from divulging otherwise than in the prosecution of the claims for Letters Patent, any secrets obtained from the plaintiffs herein, and the defendants are further restrained from doing any act to embarrass or hinder the plaintiffs otherwise than aforesaid.

This appeal is taken by plaintiffs from that decree.

Mr. Henry E. Davis, *Mr. F. Edward Mutchell*, and *Mr. John Ridout* for the appellants.

Mr. Melville Church and *Mr. W. C. Sullivan* for the appellees.

SHEPARD, *C. J.*:

Evidence taken by plaintiffs tends to show that defendants Manchester and Spooner were employees of Engle to carry out and develop his inventive ideas. This is contradicted by them, and their claim is that they were partners of Engle in developing a new battery, and that the means were not disclosed by him, but discovered by them.

Engle refused to disclose the particular invention claimed by him, and directed his witnesses to refrain from disclosing the same when their depositions were taken. It is unimportant to analyze or review this evidence as the case turns upon the question of jurisdiction of the equity court. The Patent Office is a special and important department of the United States Government, established by act of Congress under the Constitution, and the functions of the Commissioner are in great measure judicial.

At the time this bill was filed there were applications of the respective parties pending in that Office. If these disclose patentable inventions, the Commissioner is vested with full jurisdiction in an interference proceeding to determine the very question here involved.

The jurisdiction of this court over the Patent Office is appellate, and is confined to two classes of cases; first, where an application for a patent has been finally denied; second, when, in an interference case, priority of invention has been finally awarded. (*Re Frasch*, 20 App. D. C., 298, 301.)

The courts are invested with no power to interfere with or supervise the operation of the Office. (*Moore* v. *Heany*, 34 App. D. C., 31.)

It is true that section 4915, Revised Statutes, (Comp. Stat. 1913, sec. 9460,) confers jurisdiction in equity to entertain a bill after a final decision of the Commissioner to compel him to issue a patent, but this jurisdiction is limited to the case specified.

As said by Mr. Justice Robb in *Billings* v. *Field*, (36 App. D. C., 16, 24, 25:)

> This situation demonstrates the futility of interference by a court having no general jurisdiction or control over the affairs of the Patent Office, with the regular and orderly trial of cases in that Office, when the very questions raised in that court may be quite as expeditiously raised by appeal. Such a practice, if established, would still further complicate rather than simplify patent practice, and, we feel sure, add to the burdens of applicants, and delay instead of expedite final action. • • • The statute has conferred jurisdiction upon this court to hear and determine appeals from the Patent Office. The only excuse, therefore, for invoking this common-law remedy, is that relief by appeal will be less efficient. We are fully convinced that an appeal will afford fully as speedy and adequate redress as will be accomplished by certiorari. If proceedings in the Patent Office are to be interrupted by certiorari when there is

an equally adequate remedy by appeal, it is clear that an additional tribunal not contemplated by the statute, namely, the Supreme Court of the District, will be interposed between the tribunals of the Patent Office and this court. See also *Moore* v. *Heany*, 34 App. D. C. 31.

It is clear, therefore, that the procedure of the Patent Office is ample and effective for the purpose of determining every issue raised in this case. It is the duty of the Patent Commissioner to determine from the evidence whether or not Engle was the real inventor of the battery in controversy, and that Manchester and Spooner were simply his employees for the purpose of carrying out his instructions in regard to the construction of the same.

From the decision an appeal lies directly to this court. There is nothing, therefore, to justify our interference with the proceedings in the Patent Office, which already has jurisdiction of the case.

This conclusion was arrived at by the appellate division of the Supreme Court of New York in a case where the bill sought to restrain a party from filing an application in the Patent Office for a patent for the same invention for which the plaintiff had filed a previous application. It was held that the court had no jurisdiction because the matter was within the exclusive jurisdiction of the Patent Office, and dismissed the bill. (*Griffith* v. *Dodgson*, 103 App. Div., 542, 546; 93 N. Y. Supp., 155.)

The court did not err in dismissing the bill, and the decree is affirmed with costs.

Affirmed.

An application for the allowance of an appeal to the Supreme Court of the United States was denied March 8, 1915.

Court of Appeals of the District of Columbia.

IN RE SCHUTTE.

Decided January 3, 1916.

PATENTABILITY—PAVEMENT.

Claims for a pavement composed of concrete with a bituminous coating found to cover the same alleged invention as in the Groves case (41 App. D. C., 316) and to be devoid of patentability for like reasons.

Mr. T. D. Merwin and *Mr. W. B. Morton* for the appellant.

Mr. M. E. Porter for the Commissioner of Patents.

ROBB, *J.*:

This is an appeal from a decision of the Commissioner of Patents rejecting appellant's application for a patent. We reproduce counts 1 and 2 of the three counts of the application:

1. A pavement composed of two elements, to wit: a relatively thick supporting layer of hydraulic concrete forming the body of the pavement, and a thin adhesive cushioning and sealing layer of bituminous cement applied to the upper surface of the said body.

2. A pavement composed of a relatively thick layer of hydraulic concrete which forms the body of the pavement, said layer having applied directly to its upper surface a relatively thin adhesive cushioning and sealing layer of bituminous cement with mineral matter embedded therein.

This alleged invention, expressed in substantially the same claims, was before us on the appeal of Groves, (*in re Groves*, 41 App. D. C., 316,) and we then affirmed the decision of the Patent Office that nothing patentably novel was shown. The application in the present case was filed about a year prior to that in the Groves case, but this fact in no way affects the situation. We agree with the Patent Office that no reason has been shown why the same conclusion should not be reached in this case as in that of Groves. We therefore affirm the decision.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Ditchfield patent, No. 890,224, for a dump-car, *Held* not anticipated, valid, and infringed. *National Dump Car Co.* v. *Pullman Co.*, 228 Fed. Rep., 122.

(U. S. D. C.) The Knorr patent, No. 1,111,963, for a spark-gap, *Held* infringed. *Daniel O'Donnell* v. *Riscal Mfg. Co.*, 228 Fed. Rep., 127.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1916.

Ed. Crager & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selig Lasher, 103 Bleecker street, New York, N. Y., for registration of a trade-mark and trade-mark registered September 1, 1891, No. 20,089, to Ed. Crager & Co., 6 Great Jones street, New York, N. Y., and a notice of such declaration sent by registered mail to said Ed. Crager & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Ed. Crager & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

No. 4.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Patents	877—No.	1,173,156 to No.	1,174,032, inclusive.
Designs	41—No.	48,625 to No.	48,665, inclusive.
Trade-Marks	120—No.	108,760 to No.	108,879, inclusive.
Labels	10—No.	19,075 to No.	19,084, inclusive.
Prints	5—No.	4,223 to No.	4,227, inclusive.
Reissues	3—No.	14,076 to No.	14,078, inclusive.
Total	1056		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	3	.....
Arizona	.....	.....	North Dakota	5	.....
Arkansas	1	.....	Ohio	64	7
California	46	5	Oklahoma	5	1
Colorado	4	.....	Oregon	4	.....
Connecticut	23	.....	Pennsylvania	61	8
Delaware	1	.....	Rhode Island	3	2
Florida	1	.....	South Carolina	2	1
Georgia	8	.....	South Dakota	3	.....
Idaho	2	.....	Tennessee	1	2
Illinois	84	21	Texas	13	1
Indiana	14	3	Utah	2	.....
Iowa	19	.....	Vermont	3	.....
Kansas	16	.....	Virginia	4	.....
Kentucky	7	.....	Washington	16	1
Louisiana	3	.....	West Virginia	7	1
Maine	4	1	Wisconsin	15	4
Maryland	12	13	Wyoming	2	.....
Massachusetts	60	16			
Michigan	34	3	Alaska, District of	.....	.....
Minnesota	9	2	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	8	1
Missouri	24	1	Hawaii Territory	.....	.....
Montana	5	.....	Philippine Islands	.....	.....
Nebraska	5	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	1	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	59	8			
New Mexico	.....	.....	Total to residents of the United States	811	131
New York	141	27			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	5	.....	Netherlands	.....	.....
Belgium	1	.....	New South Wales	2	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	11	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	1	.....	Scotland	1	.....
Denmark	1	.....	South Australia	.....	.....
England	31	2	Spain	.....	.....
Finland	.....	.....	Sweden	5	.....
France	9	2	Switzerland	3	.....
Germany	30	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	1	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to residents of foreign countries	107	4
Luxemburg	.....	.....			
Mexico	.....	.....			

Disclaimer.

1,135,480.—*James Wright*, Hamilton, Ontario, Canada. SAFETY-GUARD FOR POWER-PRESSES. Patent dated April 13, 1915. Disclaimer filed February 14, 1916, by the patentee.

Enters this disclaimer—

"To claim 23 of the aforesaid Patent 1,135,480, which claim reads as follows:

"23. In a device of the character described, the combination with the press plunger, of a tiltable element mounted upon said plunger and traveling therewith, a guard element carried by said tiltable element, a brake mechanism, and means controllable by the tilting of said element from normal position for throwing said brake mechanism into action, to arrest the movement of said plunger."

Adverse Decisions in Interference.

PATENT No. 1,118,802.

On January 27, 1916, a decision was rendered that Joseph H. Renney was not the first inventor of the subject-matter covered by claims 1, 2, 3, and 4 of his Patent No. 1,118,802, subject, "Knit undergarment," and no appeal having been taken within the time allowed such decision has become final.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 26, 1916.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 28	Jan. 17	289
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 17	Dec. 17	818
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working	Feb. 12	Feb. 14	101
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading, Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Nov. 27	Feb. 11	338
167	5. Bookbinding; Harvesters; Jewelry; Music.	Nov. 4	Jan. 11	278
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	June 16	Dec. 10	468
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Nov. 30	Jan. 19	460
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Nov. 1	Jan. 18	1051
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Aug. 9	Dec. 29	525
235	10. Carriages and Wagons	Oct. 15	Feb. 2	715
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button; Eyelet, and Rivet Setting; Harness; Leather Manufacturrs; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 30	Feb. 12	138
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 22	Feb. 9	437
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planning; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 29	Jan. 26	438
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Oct. 22	Feb. 5	180
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass, Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Dec. 10	Feb. 11	322
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Oct. 12	Jan. 26	460
803	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making	Nov. 13	Feb. 4	194
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves	Jan. 22	Jan. 21	194
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 2	Jan. 8	190
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 11	Feb. 4	140

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Oct. 7	Jan. 6	292
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 8	Jan. 25	325
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Aug. 5	Feb. 3	418
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Sept. 8	Jan. 24	391
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Jan. 26	Feb. 5	123
106	26. Electricity, Generation; Motive Power.	June 24	Jan. 4	542
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Jan. 17	Jan. 20	207
65	28. Internal-Combustion Engines	Nov. 6	Jan. 12	401
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools	Dec. 6	Dec. 22	303
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel tion; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 17	Feb. 12	291
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Oct. 19	Jan. 10	265
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Aug. 3	Feb. 2	710
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 15	Jan. 3	403
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners	Nov. 24	Feb. 5	206
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Oct. 1	Feb. 18	514
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	Nov. 8	Feb. 9	691
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Aug. 6	Jan. 13	592
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Dec. 14	Jan. 31	227
321	39. Water Distribution	Oct. 25	Jan. 15	356
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	July 17	Feb. 16	842
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 18	Jan. 24	321
244	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	July 2	Nov. 11	831
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 14	Dec. 15	186

Oldest new case, June 16; oldest amended, Nov. 11.
Total number of applications awaiting action..... 17,176

161	TRADE MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 8	Jan. 26	764
	Designs	Nov. 8	Jan. 15	439
	Labels and Prints	Feb. 17	Feb. 17	90

PATENTS

GRANTED FEBRUARY 29, 1916.

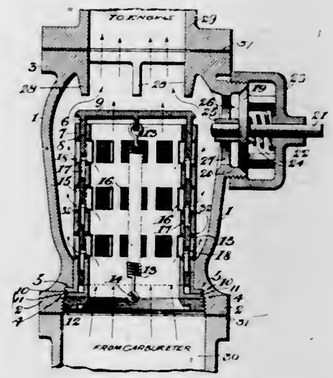
1,173,156. PNEUMATIC WHEEL. FRANK W. ADDINGTON, Richmond, Ind. Filed Jan. 18, 1915. Serial No. 2,783. (Cl. 152—29.)



A pneumatic wheel comprising a hub, a plurality of segmental plungers each being substantially Y-shaped in cross section, the outer and inner ends of the plungers each being channeled, the tread of the wheel adapted to rest within the outer channeled portions of the plungers, a pneumatic member arranged between the inner channeled portions of the plungers and the hub of the wheel, the medial portions of the plungers having elongated slots therein, plates rigidly secured to the hub of the wheel and extending radially therefrom, the medial portions of the plates adapted to inclose the pneumatic member and the inner ends of the plungers, the outer ends of the plates adapted to lie on each side of the medial portions of the plungers, bolts extending through said slots and plates for slidably connecting the plates to the sections, and a spacer encircling the bolts and arranged between the plates for the purpose set forth.

1,173,157. MIXING DEVICE FOR USE WITH EXPLOSION-ENGINES. HERBERT W. ALLEN, Coalinga, Cal. Filed May 25, 1915. Serial No. 30,275. (Cl. 48—180.)

1. A device of the character specified, comprising a casing having open ends and being internally enlarged intermediate its ends, said casing being counterbored at one end and having an annular shoulder between the counterbored portion and the interior of the casing, a pair of concentric sleeves arranged within the casing at the said counterbored end, said sleeves being spaced apart from each other, and each having an outwardly extending flange fitting the counterbored portion of the casing, a holding ring threaded into the said counterbored portion and clamping the flanges against the shoulder, a third sleeve arranged between the pair and having its inner end closed, the first-named sleeves having annular series of registering ports or openings, and the last-named sleeve having ports or openings adapted to register with the first-named ports when said last-named sleeve is moved away from the counterbored end of the casing, a spring arranged between the said sleeve and the counterbored end of the casing and normally holding the ports of the said last-named sleeve out of register with the ports of the other sleeves, said casing being adapted to be arranged between an engine and its carbureter and with the counterbored end adjacent to the carbureter, a screen for each port of each sleeve, said casing having a relief port near the opposite end from the counterbored portion, and a spring controlled valve normally closing the said port.



2. A device of the character specified, comprising an approximately cylindrical casing adapted to be arranged between an explosion engine and a carbureter for conducting the charge from the carbureter to the engine, a pair of sleeves arranged within the casing and detachably connected to the casing at the end adjacent to the carbureter, the casing being spaced apart from the sleeves beyond the said end, and the said sleeves being spaced apart from each other and having annular series of ports, the ports of one sleeve registering with the ports of the other sleeve, a valve sleeve mounted to slide between the sleeves and having its inner end closed, means at the end of the casing adjacent to the engine for limiting the movement of the said sleeve toward the engine, the valve sleeve having annular series of ports adapted to register with the ports of the first-named sleeves when the last-named sleeve is at the end of its movement toward the engine and to be out of register with the ports when the said last-named sleeve is at the other end of its movement, a spring pressing the last-named sleeve toward the carbureter, said casing having a relief port, and a spring controlled valve for the port.

3. A device of the character specified, comprising a casing having open ends and adapted to be arranged between an explosion engine and a carbureter for conducting the charge from the carbureter to the engine, a pair of guide sleeves detachably connected with the casing at the end adjacent to the carbureter, the guide sleeves being spaced apart from each other, a valve sleeve slidable between the guide sleeves, and having its inner end closed, a spring normally pressing the valve sleeve toward the carbureter, and a stop for limiting the movement of the valve sleeve toward the engine, said guide sleeves having registering ports and the valve sleeve having ports adapted to register therewith when at the end of its movement toward the engine and to be out of register therewith when at the end of its movement toward the carbureter.

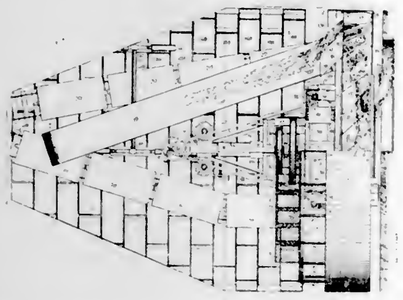
4. A device of the character specified, comprising a casing having open ends and adapted to be arranged

between an explosion engine and its carbureter, a guide sleeve connected to the casing at the end adjacent to the carbureter, a valve sleeve slidable on the guide sleeve and having its inner end closed, stops for limiting the movement of the valve sleeve toward the engine, a spring pressing the said sleeve in the opposite direction, said sleeves having ports adapted to register when the valve sleeve is at the end of its movement toward the engine and to be out of register when the valve sleeve is at the end of its movement toward the carbureter, screens at the ports, said casing having a relief port, and a spring controlled valve for the port.

5. A device of the character specified, comprising a casing having open ends and adapted to be arranged between an explosion engine and its carbureter, a guide sleeve connected to the casing at the end adjacent to the carbureter, a valve sleeve slidable on the guide sleeve and having its inner end closed, stops for limiting the movement of the valve sleeve toward the engine, a spring pressing the said sleeve in the opposite direction, said sleeves having ports adapted to register when the valve sleeve is at the end of its movement toward the engine and to be out of register when the valve seat is at the end of its movement toward the carbureter, and screens at the ports.

[Claim 6 not printed in the Gazette.]

1,173,158. TUNNEL-BORING MACHINE FOR EARTH. HARRY B. ARDEN, New York, N. Y. Filed May 8, 1908. Serial No. 431,711. (Cl. 61—44.)



1. In a tunnel boring apparatus, means for excavating earth, means for loading the excavated material, and means for hoisting and supporting while setting, segments of a lining ring.

2. In a tunnel boring apparatus, means for excavating, means for loading, a shield to protect said excavating and loading means and partitions with air locks adjacent to said excavating and loading means, so that the same may be operated under pneumatic pressure.

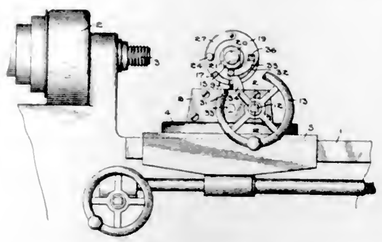
3. In a tunnel boring apparatus, means for excavating, means for loading, a shield to protect said excavating and loading means, and means for moving said shield, excavator and loader vertically, horizontally and radially.

4. In a tunnel boring apparatus, a shield and means for supporting the same, an excavator mounted so as to operate in a spiral path adjacent to the front of said shield, and a rotary loader with diagonally disposed vanes mounted to operate within said shield and adjacent to said excavator.

5. In a tunnel boring apparatus, a shield and means for supporting the same, an excavator mounted so as to operate in a spiral path adjacent to the front of said shield, a loader mounted to operate within said shield and adjacent to said excavator and diagonally disposed and fixed means on said loader for forcing said excavated material toward the rear of the machine.

[Claims 6 to 30 not printed in the Gazette.]

1,173,159. LATHE-CHUCK. JOHN D. BANKS, Philadelphia, Pa. Filed Apr. 26, 1915. Serial No. 23,919. (Cl. 29—107.5.)



1. A chuck of the character described, comprising a support, rotary jaws mounted in the support, a pair of parallel shafts located below the jaws, means operated by one of said shafts for moving the jaws toward and away from each other, and means operated by the other shaft for turning the jaws, substantially as described.

2. A chuck of the character described, comprising a support, rotary jaws mounted in the support, a pair of parallel shafts located below the jaws, means operated by one of said shafts for moving the jaws toward and away from each other, means operated by the other shaft for turning the jaws, and means locking the jaws against turning movement, substantially as described.

3. A chuck of the character described, comprising a support, rotary jaws mounted in the support, a pair of parallel shafts located below the jaws, means operated by one of said shafts for moving the jaws toward and away from each other, disks fixed to turn with the jaws, oscillating disks adjacent the first-mentioned disks, pawls on the oscillating disks engaging the first-mentioned disks, crank arms on the other of said shafts, and links connecting the crank arms and oscillating disks, substantially as described.

4. A chuck of the character described, comprising a support, rotary jaws mounted in the support, a pair of parallel shafts located below the jaws, means operated by one of said shafts for moving the jaws toward and away from each other, disks fixed to turn with the jaws, oscillating disks adjacent the first-mentioned disks, pawls on the oscillating disks engaging the first-mentioned disks, crank arms on the other of said shafts, and links connecting the crank arms and oscillating disks, said arms splined to slide on the shaft, substantially as described.

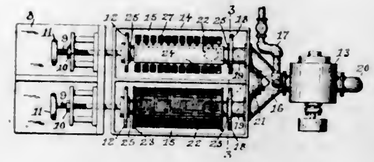
5. A chuck of the character described, comprising a support, rotary jaws mounted in the support, a pair of parallel shafts located below the jaws, means operated by one of said shafts for moving the jaws toward and away from each other, disks fixed to turn with the jaws, oscillating disks adjacent the first-mentioned disks, pawls on the oscillating disks engaging the first-mentioned disks, crank arms on the other of said shafts, links connecting the crank arms and oscillating disks, means normally holding the jaws against movement, said last-mentioned means released by the movement of the oscillating disks, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,173,160. BLEACHING-MACHINE. SAMUEL BARKER, Providence, R. I. Filed Nov. 10, 1914. Serial No. 871,383. (Cl. 8—19.)

1. A valveless bleaching machine comprising a frame, a reversible rotary pump, an open top tank intermediate the frame and the pump, a lower pipe connecting the pump with the tank, an upper pipe connecting the pump with the tank and means for clamping the end of a hollow perforated beam in the tank to the upper pipe whereby bleaching liquor may be forced through the beam in opposite directions without the use of valves.

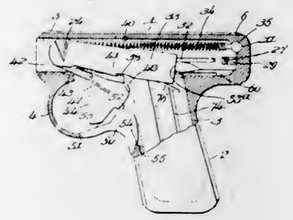
2. A valveless bleaching machine comprising an end frame, a reversible rotary pump at the opposite end, an open top tank intermediate the end frame and the pump, a pipe connecting the pump with the bottom of the tank, a pipe connecting the pump with the end of the tank, and means for clamping the end of a hollow perforated beam in the tank to the end of the pipe in the end of the tank whereby bleaching liquor may be forced through the beam from the center or from the outside of the beam without the use of valves.



3. A valveless bleaching machine comprising an end frame, a horizontal clamping mechanism on the end frame and having a clamping head in the face of which is a packing ring, a reversible rotary pump at the opposite end, an open tank intermediate the end frame and the pump, a pipe connecting the pump with the bottom of the tank, a pipe connecting the pump with the end of the tank, a pipe connection in the end of the tank and having a flanged end in the face of which is a packing ring, and a pipe connecting with the pipe leading into the end of the tank whereby the flow of bleaching liquor through a hollow perforated beam in the tank may be reversed and all valves heretofore used for this purpose eliminated.

4. In a valveless bleaching machine, an open top tank, a reversible rotary pump, a pipe connecting the pump with the bottom of the tank, a pipe connecting the pump with the end of the tank and means for clamping the open end of a hollow perforated beam to the pipe in the end of the tank, whereby said tank, beam, rotary pump and pipes form a complete reversible circulating system through which a bleaching liquor may be forced in either direction, without the use of valves.

1,173,161. AUTOMATIC PISTOL. WILLIAM O. BARNES, Fitchburg, Mass., assignor to Mary E. Johnson, trustee, Fitchburg, Mass. Filed Feb. 2, 1912. Serial No. 675,041. (Cl. 42—4.)



1. A fire arm comprising a hammer, means for giving a firing movement to the hammer, hammer releasing mechanism including a trigger adapted to assume rearward, forward and intermediate positions and including means operative to release the hammer by movement of the trigger forward from its rearward position directly to the intermediate position followed by a rearward movement.

2. A fire arm comprising a hammer, means for giving a firing movement to the hammer, hammer releasing mechanism including a trigger adapted to assume rearward, forward and intermediate positions and including means operative to release the hammer by movement of the trigger forward from its rearward position to an intermediate position followed by a rearward movement, and rendered inoperative by a movement forward of said intermediate position.

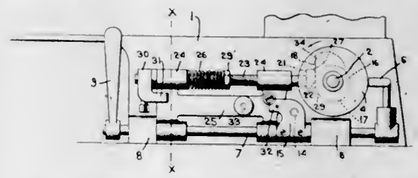
3. A firearm comprising a hammer, means for giving a firing movement to the hammer, hammer releasing mechanism including a trigger adapted to assume rearward, forward and intermediate positions and including means operative to release the hammer by movement of the trigger forward from its rearward position to an intermediate position followed by a rearward movement, and rendered inoperative by a movement forward of said intermediate position, and means for holding the trigger in the said intermediate position.

4. A firearm comprising a hammer, means for giving a firing movement to the hammer, hammer releasing mechanism including a trigger adapted to assume rearward, forward and intermediate positions and including means operative to release the hammer by movement of the trigger forward from its rearward position to an intermediate position followed by a rearward movement, and rendered inoperative by a movement forward of said intermediate position, and means for preventing movement of the trigger forward of said intermediate position.

5. A firearm comprising a normally cocked hammer, a movable barrel receiving its forward movement upon or through the explosion of the cartridge and engaging the hammer to cock it upon said forward movement, hammer releasing mechanism including a trigger adapted to assume rearward, forward and intermediate positions and including means operative to release the hammer by movement of the trigger forward from its rearward position directly to the intermediate position followed by a rearward movement.

[Claims 6 to 27 not printed in the Gazette.]

1,173,162. STOP-MOTION. ELMER C. BASSETT, Milton, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed July 8, 1915. Serial No. 38,773. (Cl. 74—46.)



1. In a stop motion, the combination with a driving shaft having fast and loose pulleys thereon, of a belt shifter for shifting the belt from one pulley to the other, means for actuating said shifter, a stop cam fast on the shaft and provided with an eccentric surface, and a spring-pressed stop member adapted to engage said surface and thereby bring the shaft to rest, a support for said stop member, said stop cam having associated therewith means controlling the movement of said support whereby the stop member is prevented from coming into operative engagement with the stop cam until after the belt shifter has been shifted into position to bring the belt onto the loose pulley.

2. In a stop motion, the combination with a driving shaft, of a driving element therefor, means to establish an operative or non-operative connection between said driving element and driving shaft, a stop cam fast on the driving shaft, said stop cam being provided with an eccentric surface which merges into a straight surface, a stop member, means supporting said stop member for movement in a direction at right angles to the axis of said shaft, said stop member having a substantially flat face extending in a plane at right angles to its direction of movement, a spring acting on the stop member, and means to move said stop member into engagement with the eccentric face of the stop cam when the driving element is disconnected from the driving shaft, the flat

face of the stop member coöperating with the flat face of the stop cam to bring the driving shaft to rest with a cushioned movement.

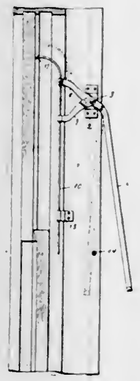
3. In a stop motion, the combination with a driving shaft having a fast and a loose pulley thereon, of a rock-shaft, a belt shifter fast on the rock-shaft, a stop cam fast on the driving shaft, a frame loosely pivoted on the rock-shaft, and a spring-pressed stop member carried by said frame, said stop cam having associated therewith means to hold the stop member from operative engagement therewith for a time interval after the belt shifter is operated to throw the belt onto the loose pulley.

4. In a stop motion, the combination with a driving shaft, of a fast and a loose pulley thereon, a belt shifter for transferring the driving belt from one pulley to the other, means to actuate the belt shifter, a stop cam fast on the shaft and having an eccentric surface, a spring-pressed stop member adapted to engage said surface to bring the shaft to rest, and means supporting said stop member for movement into and out of operative position independently of the belt shifter, said stop cam having provision for holding the stop member out of operative position while the driving shaft makes a partial revolution after the belt shifter has been operated.

5. In a stop motion, the combination with a driving shaft having a fast and loose pulley thereon, of a rock shaft, a belt shifter rigid with the rock shaft for shifting a belt from one pulley to the other, a stop cam fast on the driving shaft, a frame mounted on the rock shaft and capable of a limited turning movement relative thereto, a spring-pressed stop member carried by said frame and movable therein in a direction at right angles to said shaft, movement of the frame on the rock-shaft operating to carry said stop member into and out of engagement with said stop cam, said stop cam having means associated therewith to prevent the frame from turning on the rock shaft into a position to carry the stop member into operative engagement with the stop cam for a time interval after the belt has been shifted by the belt shifter.

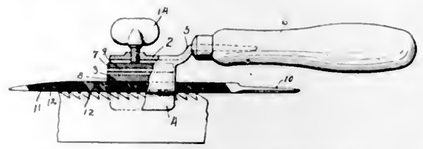
[Claim 6 not printed in the Gazette.]

1,173,163. SASH-HOLDER. GUSTAV A. BEHRMANN, New York, N. Y. Filed Jan. 5, 1916. Serial No. 70,349. (Cl. 16—18.)



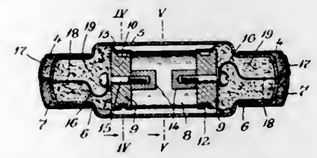
A sash holder comprising a resilient bar having an outwardly extending upper end, a ball carried by said end, a socket on the upper window sash adapted to be engaged by the ball, a bracket secured to the window frame, a lever pivoted to the bracket, an arm likewise pivoted to the bracket and diverging from the upper end of the lever, said lever and arm engaging the rod near its upper end and a holder that engages the lower end of said rod.

1,173,164. FILE-HOLDER. WILLIAM BERKMAN, Cleveland, Ohio. Filed Feb. 8, 1915. Serial No. 6,693. (Cl. 29—80.)



A file holder comprising a hollow head having a bottom slot longitudinally thereof with shoulders laterally at the top thereof, a pair of clamping jaws in superposed relations therein having opposed channels in their meeting faces and the bottom jaw having a groove in its bottom face opposite said slot and adapted to rest on said shoulders, and means to press said jaws into clamping relations within the head.

1,173,165. LIGHTNING-ARRESTER. LEON S. BRACH, New York, N. Y. Filed Apr. 9, 1913. Serial No. 759,966. (Cl. 175—30.)



1. A lightning arrester comprising a container, a second container movable in all directions within the first container, electrodes within the inner container, resilient means engaging between said containers for cushioning relative movement between said containers, and leading-in wires for the electrodes extending through said cushioning means.

2. A lightning arrester comprising a container, an electrode within said container movable in all directions relatively thereto, cushioning means for cushioning said movements, a leading in wire for said electrode extending through said cushioning means, a second electrode, and means for making electrical connection with said second electrode.

3. A lightning arrester comprising a vacuous container, an electrode within said container, a support for the electrode movable relatively to the walls of the vacuous container, spring fingers extending between said support and the walls of the vacuous container for cushioning the relative movements, a second electrode, and means for making electrical connections with said electrodes.

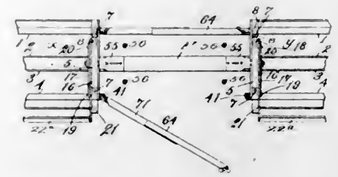
4. A lightning arrester comprising a vacuous tubular container, an electrode within said tubular container and laterally movable toward the side walls thereof, cushioning means between said electrode and the side walls of said container, a second electrode, and means for making electrical connections with said electrodes.

5. A lightning arrester comprising a vacuous container having an end wall, an electrode within said container spaced from said end wall and movable relatively thereto, cushioning means extending between said electrode and means for making electrical connections with said electrodes.

[Claims 6 to 38 not printed in the Gazette.]

1,173,166. MOLD. WILLIS N. BRITTON, Rochester, N. Y. Filed Mar. 5, 1913. Serial No. 752,130. (Cl. 25—131.)

1. In combination in a concrete mold, a pair of outer walls, a pair of inner walls adapted to form an air space between the outer walls, connecting means between the inner and outer walls, arranged above said walls, extensions carried by the outer walls and projecting beyond said connecting means and beyond the inner walls, to form a space at one end of the mold beyond the inner walls and said connection, and a core extending parallel with the inner walls within the space between the extensions.



2. In combination in a concrete mold, a pair of outer walls, a pair of inner walls adapted to form an air space between the outer walls, connecting means between the inner and outer walls arranged above said walls, extensions carried by the outer walls and projecting beyond said connecting means and beyond the inner walls, to form a space at one end of the mold beyond the inner walls and said connection, and a core extending parallel with the inner walls within the space between the extensions, one at least of said extensions being hinged to swing relatively to the outer wall which carries it.

3. In combination in a concrete mold, a pair of outer walls, a pair of inner walls adapted to form an air space between the outer walls, connecting means between the inner and outer walls arranged above said walls, extensions carried by the outer walls and projecting beyond said connecting means and beyond the inner walls, to form a space at one end of the mold beyond the inner walls and said connection, and a core extending parallel with the inner walls within the space between the extensions, said extensions being detachably secured to the outer walls.

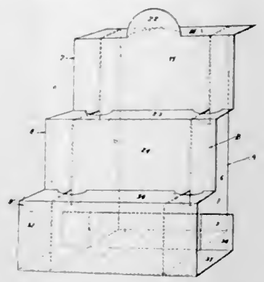
4. A concrete mold comprising a plurality of pairs of mold boards spaced apart from each other to provide an air space between the walls to be formed, the boards of each pair being spaced apart to receive concrete between them, a frame for supporting said mold boards, extensions carried by said outer mold boards projecting, at one end of the mold beyond the ends of the inner mold boards for the purpose of forming a rectangular space at one end of the mold, and a solid block detachably connected to said mold to extend longitudinally of said mold between and parallel with the extension on the outer mold boards, and acting to form a continuation of the inner mold boards.

5. In combination in a concrete mold, a pair of outer walls of equal lengths, a pair of inner walls of equal lengths arranged to form an air space between the outer walls, connecting frames between said walls, means detachably secured to said outer walls for forming a mold chamber beyond the ends of the inner walls, and beyond the connecting frames, and a removable core member for coöperating at one end with the inner walls to form an air space in continuation of the air space formed by the inner walls.

[Claims 6 to 16 not printed in the Gazette.]

1,173,167. DISPLAY-STAND. WILLIAM E. BRUCHHAUSER, New York, N. Y. Filed Nov. 20, 1914. Serial No. 873,106. (Cl. 211—24.)

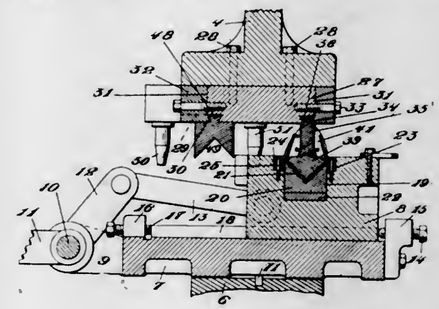
1. A display stand composed of a single piece of cardboard having a rear supporting member embracing a rear wall, and extending laterally therefrom two staircase shaped portions, a stair forming member extending from the upper end of said rear wall and folded down therefrom to rest on said staircase shaped portions, a plurality of sair supporting members on each staircase shaped portion, there being notches between the several stair supporting members, and tongues on said stair forming member engaging said notches and thereby locking said stair forming member in place on said stair supporting members, and a locking member extending from said stair forming member and folding under said staircase shaped members, there being notches in the lower sides of said staircase shaped portions into which the locking member engages to lock the device together.



2. A display stand composed of a single piece of cardboard having a rear supporting member embracing a rear wall, and extending laterally therefrom two staircase shaped portions, a stair forming member extending from the upper end of said rear wall and folded down therefrom to rest on said staircase shaped portions, a plurality of stair supporting members on each staircase shaped portion, there being notches between the several stair supporting members, and tongues on said stair forming member engaging said notches and thereby locking said stair forming member in place on said stair supporting members, and a locking member extending from said stair forming member and folding under said staircase shaped members, there being notches in the lower sides of said staircase shaped portions, and a portion extending upwardly from said locking member, there being notches in said upwardly extending portion to engage into the notches of said staircase shaped members to lock the device together.

3. A display stand composed of a single piece of cardboard having a rear supporting member embracing a rear wall, and extending laterally therefrom two staircase shaped portions, a stair forming member extending from the upper end of said rear wall and folded down therefrom to rest on said staircase shaped portions, and a locking member extending from said stair forming member and folding under said staircase shaped members, there being notches in the lower sides of said staircase shaped portions into which the locking member engages to lock the device together.

1,173,168. APPARATUS FOR MAKING SQUARE TUBING. WILLIAM F. BURDITT, Jr., Lyons Farms, N. J., assignor to Loy and Nawrath Company, a Corporation of New Jersey. Filed July 19, 1912. Serial No. 710,331. (Cl. 153—22.)



1. In an apparatus of the character described, a laterally slidable carriage having a channel therein, a die with a V-shaped groove movably mounted in said channel

a mandler fitting said V-shaped groove and having V-shaped lateral edges, a mandrel carrier adapted to be separably connected to said mandrel, a closing die for closing the sheet metal over the upper part of the mandrel, an upper die holder carrying said closing die and mandrel carrier, means for raising and lowering the said upper die holder, and means for shifting said carriage.

2. In an apparatus of the character described, a laterally slidable carriage having a channel therein, a die with a V-shaped groove movably mounted in said channel, a mandrel fitting said V-shaped groove and having V-shaped lateral edges, a mandrel carrier adapted to be separably connected to said mandrel, a V-shaped closing die adapted to fit the upper sides of said V-shaped edges, an upper die holder carrying said closing die and mandrel carrier, means for raising and lowering the said upper die holder, and means for shifting said carriage.

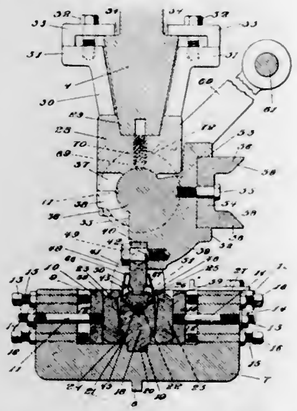
3. In an apparatus of the character described, a laterally slidable carriage, a grooved die on said carriage, a mandrel for said groove of the die, a mandrel carrier, means for connecting said mandrel carrier and mandrel when the latter is idle and automatically disconnecting them when the mandrel is seated in the grooved die upon a piece of sheet metal, a closing die, and upper die holder carrying said closing die and mandrel carrier, means for raising and lowering said upper die holder, and means for shifting said carriage.

4. In an apparatus of the character described, the combination with a grooved die, a mandrel for said groove of said die, a mandrel carrier adapted to engage said mandrel to force the same into the grooved die, latches on said mandrel carrier adapted to hold the mandrel when idle and automatically release the mandrel when it is seated in the grooved die holder upon a piece of sheet metal, and upper die holder carrying said mandrel carrier, and means for raising and lowering said upper die holder.

5. In an apparatus of the character described, the combination with a lower die, of a mandrel adapted to cooperate with said die and having end extensions, a mandrel carrier adapted to engage the top of said mandrel, latches arranged in pairs one at each end of said carrier adapted to engage the said end extensions of the mandrel, and an upper die holder carrying said mandrel carrier.

[Claims 6 to 11 not printed in the Gazette.]

1,173,169. APPARATUS FOR MAKING SQUARE TUBING. WILLIAM F. BURDITT, Jr., Lyons Farms, N. J., assignor to Loy and Nawrath Company, a Corporation of New Jersey. Filed Dec. 20, 1912. Serial No. 737,786. (Cl. 153—22.)



1. In an apparatus of the character described, a lower die holder having a longitudinal channel, side walls in said channel adjustable toward and away from each other, means for adjusting said side walls, a middle die member and side members between said middle member and the side walls, said side members adapted to swing at their upper edges to overlie the middle member or to clear the same, a mandrel, and means for forcing said mandrel into engagement with the lower die.

2. In an apparatus of the character described, a lower die comprising a middle member and opposite side members extending above said middle member and adapted to swing at their upper edges to overlie the middle member, side walls outside said side members for holding them always in position to coöperate with the middle member in shaping the metal, means for moving said side walls toward or away from each other and holding them fixed when adjusted, a mandrel, and means for forcing said mandrel downwardly to simultaneously shape the metal upon said middle member and side members.

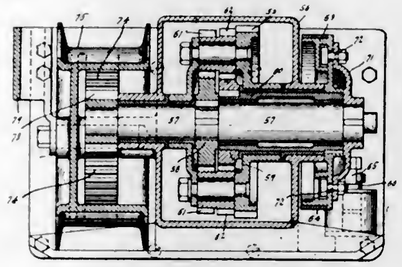
3. In an apparatus of the character described, a lower die holder having a longitudinal channel, side walls in said channel, screws working through the sides of the die holder into engagement with said side walls to adjust the same, a middle die member in said channel, movable side members between said middle member and the side walls, a mandrel, means for forcing said mandrel into engagement with the middle member, and means for moving said movable side members.

4. In an apparatus of the character described, the combination with a lower die having members adapted to be closed, an upper die carrier having a grooved seat, a swinging head having a longitudinal portion of itself adapted to turn in said grooved seat and bear against the same, a mandrel engaging member and a die closer carried by said head in angularly separated positions, means for swinging said head, and means for raising and lowering said die holder.

5. In an apparatus of the character described, the combination with a lower die having members adapted to be closed, of an upper die holder providing at its lower part a series of journal bearings, a swinging head having a shaft portion mounted in said bearings and a series of alined lateral extensions projecting from said shaft portion, a mandrel engaging member and a die closer mounted on said lateral extensions at an angular distance apart, means for swinging said head, and means for raising and lowering said die holder.

[Claims 6 to 15 not printed in the Gazette.]

1,173,170. MINING-MACHINE. FRANK CARTLIDGE Terre Haute, Ind. Filed Oct. 21, 1913. Serial No. 796,410. (Cl. 125—14.)

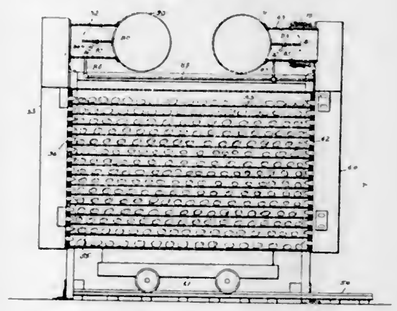


1. In a mining machine, the combination of feeding mechanism, a motor, a gearing through which said motor and said feeding mechanism are connected, said gearing including a planetary gear embodying two gears of different size interconnected by planet gears, and releasable means for holding one of said two gears of different size stationary.

2. In a mining machine, the combination of feeding mechanism, a motor, a gearing through which said motor and said feeding mechanism are connected, said gearing including a planetary gear embodying two gears of different size interconnected by planet gears, and means for holding one of said two gears of different size stationary.

3. In a mining machine, the combination of feeding mechanism, a motor, a gearing through which said motor and said feeding mechanism are connected, said gearing including a planetary gear embodying two gears of different size interconnected by planet gears, and releasable means for holding one of said two gears of different size stationary and for locking said two gears of different size together.

1,173,171. DRYING APPARATUS. THOMAS I. CASEY and THOMAS COX, Oakland, Cal. Filed Apr. 26, 1915. Serial No. 23,794. (Cl. 34—39.)



1. In a drying apparatus, a compartment for containing articles to be dried, two nozzles projecting respectively into opposite ends of said compartment, means for forcing air through one of said nozzles and through said compartment and means communicating with said other nozzle for conducting the air from said compartment through said other nozzle.

2. In a drying apparatus, a compartment for containing the articles to be dried, two nozzles adapted to be projected into the ends of said compartment, means for forcing air through one of said nozzles and through said compartment and means for conducting the air from the compartment out through said other nozzle, and means for reversing the direction of the air through the nozzles and compartment.

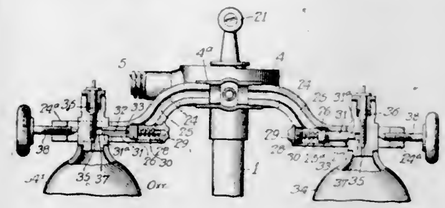
3. In a drying apparatus, a plurality of drying compartments, a pair of registers arranged adjacent the ends of said compartments, said registers communicating with each of said compartments, for introducing hot air into said compartments, and means for placing said compartments in operative relation to said registers and for removing said compartments from said registers.

4. In a drying apparatus, a plurality of drying compartments having open ends, a pair of registers arranged adjacent the open ends of said compartments, a plurality of nozzles on each register, each of said nozzles being adapted to project into one open end of a compartment, means for forcing hot air through said registers, nozzles and compartments, means for placing said compartments in operative relation to said registers and nozzles and for removing said compartments from said nozzles and registers.

5. In a drying apparatus, a plurality of drying compartments having open ends, a pair of hot air registers arranged adjacent the open ends of said compartments, a plurality of nozzles on each register, adapted to project respectively into the open adjacent ends of said compartments, means for forcing hot air through one of said registers and its nozzles and through said compartments, and then out through the nozzles and register at the other open end of said compartments, means for reversing the direction of the air flowing through the drying system, means for placing said compartments in operative relation to said registers and nozzles and for removing said compartments from said nozzles and registers.

[Claims 6 to 19 not printed in the Gazette.]

1,173,172. ANESTHETIC APPARATUS. ALBERT CHARLES CLARK, Chicago, Ill. Original application filed Mar. 26, 1912, Serial No. 686,252. Divided and this application filed Nov. 15, 1915. Serial No. 61,506. (Cl. 128—13.)



1. In an apparatus of the class described, the combination of an arm having means for holding a gas cylinder and also having a gas passage, a normally closed valve located in said arm for governing said passage and arranged to be automatically opened by the act of attaching a cylinder to the arm.

2. In an apparatus of the class described, the combination of a valve casing having a gas inlet port and an outlet port, a valve governing said ports, an arm connected at its middle portion with said casing and having passages communicating with said inlet port, said arm having at its opposite ends means for the attachment of gas cylinders, and normally closed valves located in said arms for governing said passages and arranged to be automatically opened as an incident to the attachment of the gas cylinders.

3. In an apparatus of the class described, the combination of an arm having means for attachment of a gas cylinder and having a gas passage, and a normally closed valve located in said passage for governing the same and having a stem provided with a passage and extending extraneous of the arm, said stem being arranged to connect with the gas cylinder and to be moved to open the valve as an incident to the attachment of the cylinder to the arm.

4. In an apparatus of the class described, the combination of an arm terminating in a yoke arranged to receive a gas cylinder and having a gas passage emerging therefrom as a port at the inner end of the yoke, and a valve located in the arm and normally closing the passage therein, said valve having a stem projecting through said port and having a passage adapted to connect with the gas cylinder.

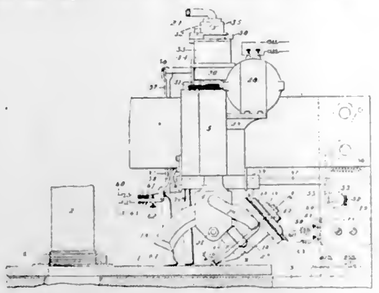
5. In an apparatus of the class described, the combination of an arm terminating in a yoke arranged to receive a gas cylinder and having a gas passage emerging therefrom as a port at the inner end of the yoke, a valve located in the arm and normally closing the passage therein, said valve having a stem, and means arranged at the outer end of the yoke to force the cylinder and valve stem inwardly of the arm to thereby open the valve as an incident to the attachment of the cylinder.

1,173,173. GEM-POLISHING MACHINE. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Nov. 25, 1912. Serial No. 733,417. (Cl. 51—11.)

1. A gem-polishing machine having in combination a polishing lap, means for holding a gem on the lap to be polished and means for starting the reciprocation of the gem over the lap transversely of the movement of the lap after the gem has been polished to a predetermined extent.

2. A gem-polishing machine having in combination a polishing lap, means for holding a gem on the lap to be polished, means for starting the reciprocation of the gem over the lap transversely of the movement of the lap after the gem has been polished to a predetermined extent and means for controlling the starting of said recip-

rocation dependent upon the movement of the gem-holder toward the lap.



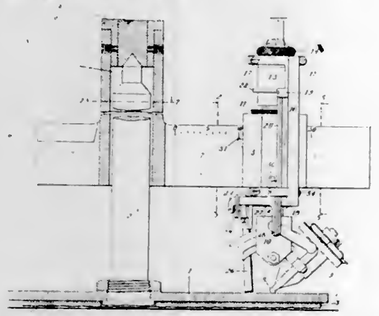
3. A gem-polishing machine having in combination a polishing lap, means for holding a gem on the lap to be polished, means for starting the reciprocation of the gem over the lap transversely of the movement of the lap after the gem has been polished to a predetermined extent and means for controlling the starting of said reciprocation dependent upon the movement of the gem-holder toward the lap, said last-mentioned means comprising a member movable with the gem toward the lap and adapted to engage the lap to start the reciprocation.

4. A gem-polishing machine having in combination a polishing lap, means for holding a gem on the lap to be polished, means for starting the reciprocation of the gem over the lap transversely of the movement of the lap after the gem has been polished to a predetermined extent and means for controlling the starting of said reciprocation dependent upon the movement of the gem-holder toward the lap, said last-mentioned means comprising a member movable with the gem toward the lap and adapted to engage the lap in the path of the gem to start the reciprocation.

5. A gem-polishing machine having in combination a polishing lap, means for holding a gem on the lap to be polished, means for starting the reciprocation of the gem over the lap transversely of the movement of the lap after the gem has been polished to a predetermined extent and means for adjusting the position of the gem transversely of the movement of the lap independently of the reciprocating means.

[Claims 6 to 19 not printed in the Gazette.]

1,173,174. GEM-POLISHING MACHINE. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Nov. 25, 1912. Serial No. 733,418. Renewed July 22, 1915. Serial No. 41,395. (Cl. 51—11.)



1. A gem polishing machine comprising a relatively movable lap member, a gem holder arranged to hold a gem in contact with the lap and to approach the lap as the gem is polished, and a depth gage movable toward and from the lap with the gem holder and including an operating member arranged to engage the lap in the path of the gem at a predetermined stage of the polishing operation and to be operated thereby to operate the depth gage.

2. A gem polishing machine comprising a relatively movable lap member, a gem holder arranged to hold a gem in contact with the lap and to approach the lap as the gem is polished and shiftable to apply the gem to different paths on the lap, and a depth gage mechanism movable toward and from the lap with the gem holder and operative to move the gem holder away from the lap and including an operating tripping member arranged at a predetermined stage of the polishing operation to be operated and thereby operate the depth gage to move the gem holder away from the lap.

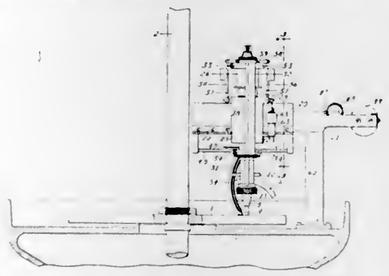
3. A gem polishing machine comprising a relatively movable lap member, a gem holder arranged to hold a gem in contact with the lap and to approach the lap as the gem is polished, normally inoperative disengaging means arranged when operated to disengage the gem holder away from the lap, and a trigger carried by the gem holder and arranged in control of the disengaging means and adapted to engage the lap at a predetermined stage of the polishing operation and to be operated thereby to operate the disengaging means.

4. A gem polishing machine comprising a relatively movable lap member, a gem holder arranged to hold a gem in contact with the lap and to approach the lap as the gem is polished and shiftable to apply the gem in different paths on the lap, normally inoperative disengaging means arranged when operated to disengage the gem holder away from the lap, and a trigger carried by the gem holder and arranged in control of the disengaging means and adapted to engage the lap in the path of the gem upon the lap at a predetermined stage of the polishing operation and to be operated thereby to operate the disengaging means.

5. A gem polishing machine comprising a relatively movable lap member, a spindle arranged perpendicular to the lap and mounted for free axial movement and normally held at its closest approach to the lap, a polishing head carried by the spindle and arranged to hold the gem in contact with the lap, normally inoperative disengaging means arranged when operated to lift the spindle axially from the lap, and a trigger carried by the spindle and arranged in control of the lifting means and adapted to engage the lap at a predetermined stage of the polishing operation and to be operated thereby to operate the disengaging means.

[Claims 6 to 27 not printed in the Gazette.]

1,173,175. GEM-POLISHING MACHINE. CLYDE J. COLEMAN, New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc., a Corporation of New York. Filed Nov. 25, 1912. Serial No. 733,422. (Cl. 51—11.)



1. A gem polishing machine comprising a polishing lap, a dop-holding head arranged to hold a gem in engagement with the lap, and variable pressure-applying means arranged to press the gem against the lap with progressively increasing pressure as a facet is polished.

2. A gem polishing machine comprising a polishing lap, a dop-holding head arranged to hold a gem in engagement with the lap, a spindle carrying the dop-holding head and arranged for free axial movement toward and from the lap, and variable pressure-applying means engaging the spindle and arranged to press the spindle axially toward the lap with progressively increasing pressure as a facet is polished.

3. A gem polishing machine comprising a polishing lap, a dop-holding head arranged to hold a gem in engagement with the lap, a spindle-supporting member, a spindle carrying the dop-holding head and mounted in the spindle-supporting member for free axial movement toward and from the lap, and a weighted lever operatively connected to the spindle and spindle-supporting member and arranged to gravitate from a vertical toward a horizontal position as a facet is polished and thereby press the spindle axially toward the lap with progressively increasing pressure.

4. A gem polishing machine comprising a polishing lap, a dop-holding head arranged to hold a gem in engagement with the lap, a spindle-supporting member, a spindle carrying the dop-holding head and mounted in the spindle-supporting member for free axial movement toward and from the lap, and a weighted lever stationarily pivoted on the spindle-supporting member, a link coupling the lever to the spindle, the lever being arranged to rotate about its pivot from a vertical position and draw the spindle through its supporting member toward the lap, thereby applying progressively increasing pressure upon the gem as a facet is polished.

5. A gem polishing machine comprising a polishing lap, a dop-holding head arranged to hold a gem in engagement with the lap, varinble pressure-applying means arranged to press the gem against the lap with progressively increasing pressure as a facet is polished, and a check device operative to control the rapidity of the movement of the gem toward the lap.

[Claims 6 to 40 not printed in the Gazette.]

1,173,176. NURSING-BOTTLE. MILTON C. COOMBS, New York, N. Y. Filed Feb. 10, 1915. Serial No. 7,257. (Cl. 215—117.)



1. A nursing bottle provided with an externally located air channel having its one end located in the end face of the bottle neck, and a nipple normally extending in contact with said end face to seal said end of the channel, said nipple in the act of sucking being withdrawn from said end face whereby said channel is unsealed.

2. A nursing bottle having a neck provided with an air inlet channel extending circumferentially thereof and terminating in the end face of the bottle neck and a nipple arranged to seal and unseal the terminating end of said channel to arrest or establish communication between the interior of the bottle and the atmosphere.

3. A nursing bottle having a neck provided with an air inlet channel extending circumferentially and spirally thereof and terminating in the end face of the bottle neck and a nipple arranged to seal and unseal the terminating end of said channel to arrest and establish communication between the interior of said bottle and the atmosphere.

4. A nursing bottle having a neck provided with an air inlet channel extending circumferentially and spirally thereof and terminating in the end face of the bottle neck and a nipple arranged to seal and unseal the terminating end of said channel to arrest and establish communication between the interior of said bottle and the atmosphere, said bottle being provided with an inlet groove extending below said nipple and communicating with said channel.

5. A nursing bottle having a neck and a nipple detachably fitted upon said neck, the latter being provided with an externally located air channel extending circumferentially and spirally about said neck and establishing communication between the interior of the bottle and the atmosphere, said channel being arranged to continuously contain a supply of air sufficient to overcome any back pressure of the contents of the bottle through said channel.

[Claims 6 to 12 not printed in the Gazette.]

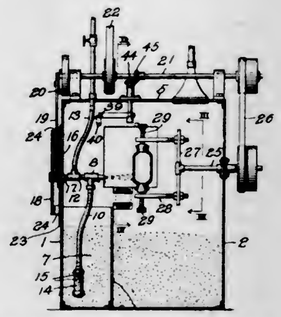
1,173,177. NURSING-BOTTLE. MILTON C. COOMBS, New York, N. Y. Original application filed Feb. 10, 1915, Serial No. 7,257. Divided and this application filed Aug. 17, 1915. Serial No. 45,908. (Cl. 128—18.)



1. A nipple for nursing bottles comprising a teat, a continuing sleeve, a circumferential bead on said sleeve at a distance from its free end and a rib extending lengthwise of said sleeve from said bead toward its free end.

2. A nipple for nursing bottles comprising a teat, a continuing sleeve, an annular bead on said sleeve at a distance from its free end, a second annular bead on said sleeve substantially at its free end and a rib etxending lengthwise of said sleeve between said beads.

1,173,178. SAND-BLAST MACHINE. JOHN L. DAWES, Pittsburgh, Pa. Filed June 16, 1915. Serial No. 34,463. (Cl. 51—11.)

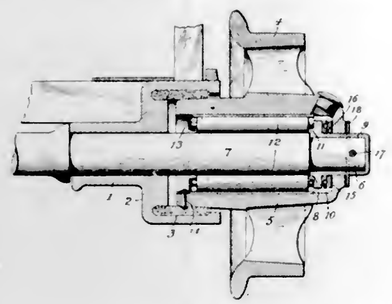


1. In a sand blast machine, the combination of a closed casing, a sand blast nozzle within said casing mounted for rectilinear reciprocation, a rotatable member, a pitman connected to said nozzle and eccentrically to said member, a blank holder rotatable upon an axis substantially coincident with the axis of said nozzle when in its intermediate position and coördinated means for rotating said member and blank holder.

2. In a sand blast machine, the combination of a closed casing, a sand blast nozzle within the casing, mounted for

rectilinear reciprocation, a rotatable member, a pitman connected to said nozzle and eccentrically to said member, a blank holder comprising a rotatable shaft having its axis substantially coincident with that of the nozzle at its intermediate position, rods extending transversely of and attached to said shaft, arms secured to said rods and adjustable radially with relation to said shaft, and adjustable blank-engaging members secured to such arms.

1,173,179. MINING-CAR WHEEL. ALFRED BRYANT DAY, Knoxville, Tenn. Filed Nov. 18, 1915. Serial No. 62,178. (Cl. 105—67.)



1. In a wheel construction, the combination of a pedestal member, a wheel having a hub, an axle projecting from the pedestal through the hub, a tubular member interposed between the axle and hub and projecting through the latter, said tubular member having an abutment at its outer end engaging over the end of the axle.

2. In a wheel construction, the combination of a pedestal member, a wheel having a hub, an axle projecting from the pedestal through the hub, a tubular member interposed between the axle and hub and projecting through the latter, said tubular member having an abutment at its outer end engaging over the end of the axle, and means for securing the tubular member to the axle.

3. In a wheel constuction, the combination of an axle, a wheel having a hub mounted on the axle, the hub having an opening in the cap part thereof through which the axle projects, a tubular member interposed between the axle and the wall surrounding the hub cap opening, said tubular member having a closed end overlying the end of the axle, and constituting an abutment therefor, and means for securing the tubular member to the axle.

4. In a wheel construction, the combination of a wheel having a hub with an opening in the cap portion thereof, an axle projecting through the hub and through said cap opening, a tubular member interposed between the axle and the wall surrounding the hub cap opening, said tubular member having an abutment part overlying the inner surface of the hub cap and an abutment part overlying the outer end of the axle.

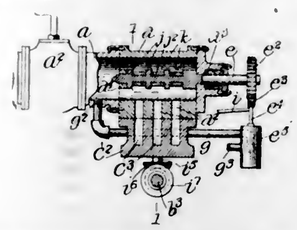
5. In a wheel construction, the combination of a wheel having a hub with an opening in the cap portion thereof, an axle projecting through the hub and through said cap opening, a tubular member interposed between the axle and the wall surrounding the hub cap opening, said tubular member having an abutment part overlying the inner surface of the hub cap and an abutment part overlying the outer end of the axle, and connecting means between the axle and tubular member.

[Claims 6 to 10 not printed in the Gazette.]

1,173,180. CONTROLLING-VALVE FOR STEAM-TURBINES. RICHARD R. DEFFERT, Manville, N. J. Filed May 15, 1915. Serial No. 28,262. (Cl. 137—26.)

1. A valve controlling device for steam turbine engines, comprising a cylindrical casing one side of which is provided with a plurality of longitudinally arranged ports or passages, and a valve shaft mounted in said casing and provided with radially arranged and radially movable valve devices adapted to control said ports or passages.

2. A valve controlling device for steam turbine engines, comprising a cylindrical casing one side of which is provided with a plurality of longitudinally arranged ports or passages, and a valve shaft mounted in said casing and provided with radially arranged and radially movable valve devices adapted to control said ports or passages and the bearing surfaces of which are of different circumferential dimensions.

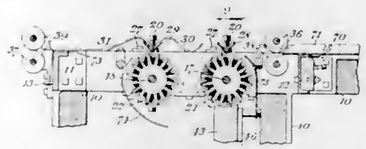


3. A valve controlling device for steam turbine engines, comprising a cylindrical casing provided with a plurality of ports or passages, and a valve shaft mounted in said casing and provided with a plurality of valve devices controlling said ports or passages and whereby said ports or passages may be gradually opened or gradually closed, said valve devices being radially movable and being operated in one direction by springs.

4. A valve controlling device for steam turbines, comprising a cylindrical casing provided with a plurality of ports or passages, a valve shaft mounted in said casing, automatic means for giving said shaft a rotary oscillating movement, said shaft being reduced at intervals to form webs, and valve devices mounted on and radially movable on said webs and adapted to control said ports or passages.

5. A valve controlling device for steam turbines, comprising a cylindrical casing provided with a plurality of ports or passages, a valve shaft mounted in said casing, automatic means for giving said shaft a rotary oscillating movement, said shaft being reduced at intervals to form webs, valve devices mounted on and radially movable on said webs and adapted to control said ports or passages, and springs placed in said valve devices and said webs.

1,173,181. TIN-SHEET-PARAFFINING MACHINE. JOHN M. DE VOE, Chicago, Ill., assignor to Weyman-Bruton Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 24, 1913. Serial No. 743,946. (Cl. 91—36.)



1. In a coating machine, in combination, a rotary brush, means for advancing a sheet past said brush in a tangential direction, backing means presenting a line of support for backing up said sheet on the side thereof opposite said brush extending along the line of tangency with said brush, and means for feeding the coating material to the brush.

2. In a coating machine in combination, a rotary brush, means for advancing a sheet past said brush in a tangential direction, backing means presenting an edge toward the sheet for backing up said sheet on the side thereof opposite to said brush extending along the line of tangency, and means for yieldingly backing up the sheet immediately adjacent to said backing means and the brush.

3. In a coating machine in combination, a rotary brush, means for advancing a sheet past said brush in a tangential direction, backing means presenting an edge toward the sheet for backing up said sheet on the side thereof opposite to said brush in a narrow zone extending along the line of tangency, and means for yieldingly backing up the sheet on each side of the brush.

4. In a coating machine in combination, a rotary brush, means for feeding a coating material thereto, means for advancing a sheet past said brush in a tangential direction, a bar substantially parallel with the axis of said brush and having a dihedral angle presented toward the brush for backing up said sheet on the side thereof opposite to said brush in a narrow zone extending along the line of tangency.

5. In a coating machine in combination, a rotary brush having bristles, means for advancing a sheet past said brush in a tangential direction, backing means having an edge for backing up said sheets on the side thereof opposite said brush in a narrow zone extending along the line of tangency with said brush, means for feeding the coating material to the brush, and filamentary guiding means extending past the brush in the direction of advance of the sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,173,182. METHOD FOR THE TANNING OF HIDES AND SKINS. GIACOMO DURIO, Turin, Italy. Filed Feb. 24, 1913. Serial No. 750,271. (Cl. 149—4.)

The process of rapidly tanning hides, which consists in subjecting both surfaces of the hides, after the latter have been washed and freed from all extraneous substances and from the washing water, and while they are kept stationary in vats, to the action of commercially-pure, undiluted liquid tanning extract; and continuously drawing off the excess extract as fast as it flows over the hides.

1,173,183. FLATTING FINISH COMPOSITION AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J. Filed Dec. 26, 1914. Serial No. 879,214. (Cl. 134—39.)

1. The process of making a flat paint comprising essentially linseed oil and white lead, which comprises adding thereto and thoroughly incorporating a modicum of hydrogenated vegetable oil.

2. A paint capable of drying to a flat surface comprising hydrogenated oil.

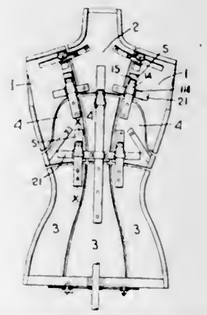
3. A paint capable of drying to a flat surface comprising hydrogenated vegetable oil.

4. A paint capable of drying to a substantially flat surface, which comprises hydrogenated linseed oil.

5. A paint capable of a substantially dull surface, which comprises white lead, linseed oil and hydrogenated oil.

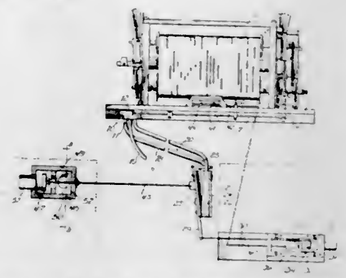
[Claims 6 to 9 not printed in the Gazette.]

1,173,184. SECTIONAL DRESS-FORM. FRANK B. GRANGER, New York, N. Y., assignor to Hall-Borchert Dress Form Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 8, 1913. Serial No. 783,677. (Cl. 223—18.)



In a sectional dress form, the combination with two sections adjustable relative to each other, of a flexible strap member secured to one section, and a clamping device secured to the other section, said clamping device presenting a body portion formed from a piece of metal having its ends bent to form ears, and a plate situated between said ears and extending transversely of the body portion and having its ends upturned to form separated bearing surfaces against which the strap member rests, and a cam pivoted between said ears and adapted to clamp the strap member against the bearing surfaces.

1,173,185. REWIND MECHANISM. ADOLPH P. GUSTAFSON, Chicago, Ill., assignor to M. Schulz Co., Chicago, Ill. Filed Oct. 31, 1913. Serial No. 798,424. (Cl. 84—166.)



1. Apparatus of the class specified, comprising in combination rewind mechanism, a slide rod for controlling the same, a pair of connected pneumatics a valve controlled by said rod and in turn controlling said pneumatics and means whereby said valve may cause the actuation of either one or the other of said pneumatics, a valve controlling communication to the action connected with said pneumatics, and a second valve controlling communication to the motor also connected with said pneumatics.

2. Apparatus of the class specified, comprising in combination a rewind mechanism, a slide rod controlling said mechanism, a valve controlled by said rod, pneumatic tubes running from the valve seat for said valves, pneumatics to which said tubes are extended, said pneumatics being controlled by said valve and being connected for joint operation, a valve controlling communication to the action, said valve being connected with said pneumatics, and a second valve also connected with said pneumatics for controlling communication to the motor.

3. Apparatus of the class specified, comprising in combination a slide rod, a valve controlled by said rod, pneumatic tubes running from the valve seat for said valve, pneumatics to which said tubes are extended, said pneumatics being controlled by said valve and being connected for joint operation, a valve controlling communication to the action, said valve being connected with said pneumatics, and a second valve also connected with said pneumatics for controlling communication to the motor.

4. The combination of a slide rod, a valve operated thereby, pneumatics connected together and controlled by said valve, and a valve box containing a valve connected with said pneumatics, said valve being arranged to control communication between the motor and a wind inducing apparatus, and a second valve in said box also controlling communication to said motor.

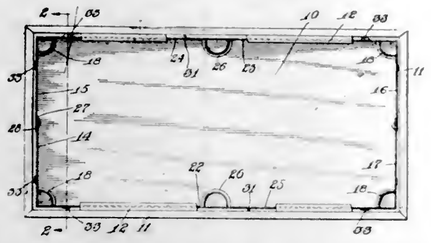
5. The combination with a pair of connected pneumatics of a valve controlling wind connection with the action and a second valve controlling wind communication to the motor, said valves being connected for simultaneous operation by said pneumatics.

[Claims 6 to 8 not printed in the Gazette.]

1,173,186. POOL-GAME ATTACHMENT FOR BILLIARD-TABLES. MOSES L. HAWKS, New York, N. Y. Filed July 23, 1915. Serial No. 41,454. (Cl. 46—12.)

1. A pool game attachment for billiard tables comprising supporting members adapted to pass under the in-

cined faces of a billiard cushion, and segments secured to the supporting members adapted to rest on the table at the corners to serve as corner pockets.



2. A pool game attachment for billiard tables comprising bars bent at right angles adapted to pass under the inclined face of the cushions of a billiard table, and segments attached to the bars at the bend, said segments serving as pockets.

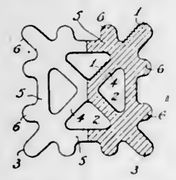
3. A pool game attachment for billiard tables comprising bars bent to pass under the inclined face of the cushion of a billiard table at the corner of the table, and a segment secured to the bar at the bend, said segment having a gradually inclined exterior face up which a ball may roll and an abrupt interior shoulder to prevent egress of the ball.

4. A pool game attachment for billiard tables comprising a plurality of bars having segments attached thereto to constitute corner pockets, and means for jointing the adjacent bars to force the segments into the corners of the table.

5. A pool game attachment for billiard tables comprising two bars each bent at right angles to conform to the corners of a table, pockets secured at the angles of the bars, and means for jointing the adjacent bars to force the segments into the corners of the table.

[Claims 6 to 15 not printed in the Gazette.]

1,173,187. PACKING-BLOCK FOR ABSORPTION-TOWERS. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 23, 1914. Serial No. 873,569. (Cl. 23—1.)



1. A packing block for concentrating towers having a plurality of side walls disposed about and substantially parallel with a central axis, said block having end faces substantially at right angles to said axis, and having a plurality of projections extending on the faces of said side walls substantially longitudinally with said axis, said projections increasing the superficial area of said block.

2. A packing block for concentrating towers having a plurality of side walls disposed about and substantially parallel with a central axis, said block having end faces substantially at right angles to said axis, and having a plurality of projections extending on the faces of said side walls substantially longitudinally with said axis, said projections increasing the superficial area of said block, said block having a plurality of passages therethrough passing from one of the said end faces to the other.

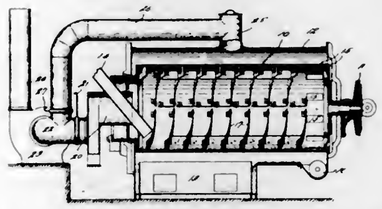
3. A packing block for concentrating towers having a plurality of side walls disposed about and substantially parallel with a central axis, said block having end faces substantially at right angles to said axis, and having a plurality of projections extending on the faces of said side walls substantially longitudinally with said axis, said projections increasing the superficial area of said block, said block having a plurality of webs extending across the interior thereof, connecting said side walls and forming passages through the block from one of said end faces to the other.

4. A packing block for concentrating towers having a plurality of side walls disposed about and substantially parallel with a central axis, said block having end faces substantially at right angles to said axis, and having a plurality of projections extending on the faces of said walls substantially longitudinally with said axis, said projections increasing the superficial area of said block, said block having a plurality of webs extending across the interior thereof, connecting said side walls and forming passages through the block from one of said end faces to the other, said block having corrugations on the faces thereof further increasing the superficial area of the block.

5. A packing block for concentrating towers having four side faces disposed substantially parallel about a central axis, and having projections extending outwardly therefrom giving said block an increased superficial area, said projections including projections at the corners of said block extending substantially parallel with the axis of said block, the outline of said block taken over said corner projections being of substantially rectangular form.

[Claims 6 to 8 not printed in the Gazette.]

1,173,188. DRIER. FREDERICK A. HETHERINGTON, Indianapolis, Ind. Filed Apr. 28, 1915. Serial No. 24,408. (Cl. 34—5.)



1. A drier, comprising the combination of a rotatable drum having an opening at one end for the discharge of material from it and a feed chute discharging into its other end, a draft outlet from said drum at the opposite end from such opening, a casing surrounding the drum, a furnace discharging its products of combustion into such casing, a draft outlet from such casing, a centrifugal fan to the inlet side of which both of said draft outlets are connected, and a separate damper in the connection between each of said draft outlets and said fan.

2. A drier, comprising the combination of a rotatable drum having an opening at one end for the discharge of material from it and a feed chute discharging into its other end, a draft outlet from said drum at the opposite end from such opening, a casing surrounding the drum, a furnace discharging its products of combustion into such casing, a draft outlet from such casing, and means for closing each of said draft outlets.

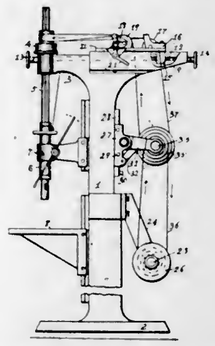
3. A drier, comprising the combination of a drum having an opening at one end, a draft outlet from said drum at the opposite end from such opening, a casing surrounding the drum, a furnace discharging its products of combustion into such casing, a draft outlet from such casing, a centrifugal fan to the inlet side of which both of said draft outlets are connected, and a separate damper in the connection between each of said draft outlets and said fan.

4. A drier, comprising the combination of a drum having an opening at one end, a draft outlet from said drum at the opposite end from such opening, a casing surrounding the drum, a furnace discharging its products of combustion into said casing, a draft outlet from such casing, and means for closing each of said draft outlets.

5. A drier, comprising the combination of a drum, a furnace, and means for directing the draft from the furnace either through such drum or around such drum without passing through it as desired and in each case closing the other of such passages for such draft.

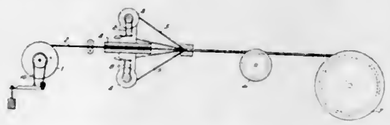
[Claims 6 to 9 not printed in the Gazette.]

1,173,189. BELT-GEARING. JOHN G. HEY, Cincinnati, Ohio, assignor to The Cincinnati Pulley Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 12, 1912. Serial No. 709,039. (Cl. 74—21.)



In a change speed belt gearing, the combination of a driving stepped pulley, a driven pulley, a vertically swinging bearing, an intermediate stepped and a plain pulley journaled to turn loose in unison therein and with their common axis above, and substantially in, a vertical plane extended through the axis of the driving pulley, a belt connecting the plain with the driven pulley, a slack driving belt depending from the intermediate stepped pulley around the driving pulley, and tighteners for both flights of the former belt, whereby the intermediate pulleys may be raised with the latter belt into operative engagement with the driving pulley.

1,173,190. COMPOSITE CONDUCTOR-CABLE AND METHOD OF MAKING THE SAME. WILLIAM HOOPES, Pittsburgh, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 10, 1914. Serial No. 866,098. (Cl. 173—13.)



1. A composite cable, comprising a core and envelop formed of different metals, one thereof being under a greater initial tensile stress than the other.

2. A composite cable, comprising a core and an envelop composed of different metals, the core being under an initial tensile stress greater than the stress in the envelop.

3. A composite cable, comprising a steel core and an envelop of weaker metal, the steel core being under an initial tensile stress greater than that in the envelop.

4. A composite cable, comprising a steel core and an aluminum envelop, the steel core being under an initial tensile stress greater than that in the envelop.

5. The method of making cables, consisting in winding strands around a core to form an envelop therefor, and subjecting one thereof to a greater initial tensile stress than the other during the winding of the cable.

[Claims 6 to 9 not printed in the Gazette.]

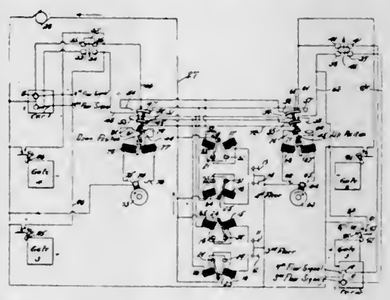
1,173,191. AEROPLANE. HOWARD HUNTINGTON, Princeton, N. J., assignor to Huntington Aircraft Company, Inc., Garden City, N. Y., a Corporation of New York. Filed May 9, 1913. Serial No. 766,556. (Cl. 244—14.)



1. An aeroplane having a stream-line fuselage constituting an upright stabilizing member extended flightwise with a multiplicity of laterally extended wings in twin sets separated from each other by lateral spaces and each provided with means to change the angular position of said wings relatively to said fuselage; said wings respectively presenting downwardly a concavely arched under surface on each side of said fuselage, with relatively flatter margins; and propelling means for said aeroplane.

2. An aeroplane comprising a fuselage formed as a hull to float upon water, and having a series of sets of wings springing laterally therefrom above the water-line, being arched respectively adjacent to said hull, and having relatively flatter margins.

1,173,192. ELEVATOR SIGNALING APPARATUS. PAUL T. KENNY, New York, N. Y., assignor to Elevator Supply & Repair Company, a Corporation of Illinois. Filed Oct. 3, 1907. Serial No. 395,696. (Cl. 177—336.)



1. In an elevator signaling apparatus in combination, a car, a series of electrically-operated signals, one for each floor, carried by the car, means for operating the same comprising an up and down passenger's button at each floor, mechanism corresponding to each button set by its button, and a commutator, connections whereby said signals are operable only by the joint action of said commutator and a passenger's-button-set mechanism corresponding to the signal, said commutator comprising a part moved correspondingly with the car and adapted to coöperate with said button-set-mechanisms in succession in each direction of its movement to operate said signals, and directional means operated by the movement of the car and rendering the "up" passenger's-button-set mechanisms incapable of coöperating with the commutator to operate the signals when the car is moving down, and vice versa.

2. In an elevator signaling apparatus in combination, a car, a series of electrically-operated signals, one for each floor, carried by the car, means for operating the

same comprising an up and a down passenger's button at each floor, mechanism corresponding to each button set by its button, and a commutator, connections whereby said signals are operable only by the joint action of said commutator and a passenger's-button-set mechanism corresponding to the signal, said commutator comprising a part moved correspondingly with the car and adapted to coöperate with said button-set-mechanisms in succession in each direction of its movement to operate said signals, directional means operated by the movement of the car and rendering the "up" passenger's-button-set mechanisms incapable of coöperating with the commutator to operate the signals when the car is moving down, and vice versa, and restoring mechanism to automatically restore said passenger's-button-set mechanisms to normal condition.

3. In an elevator signaling apparatus in combination, a plurality of cars, a series of electrically-operated signals, one for each floor, carried by each car, means for operating the same comprising an up and a down passenger's-button at each floor, mechanism corresponding to each button set by its button, and a commutator for each elevator, connections whereby said signals are operable only by the joint action of a commutator and a passenger's-button-set mechanism corresponding to the signal, each of said commutators comprising a part moved correspondingly with its car and adapted to coöperate with said button-set-mechanisms in succession in each direction of its movement to operate said signals, and directional means for each car operated by the movement of its car and rendering the "up" passenger's-button-set mechanisms incapable of coöperating with the commutators to operate the signals when the cars are moving down, and vice versa.

4. In an elevator signaling apparatus in combination, a plurality of cars, a series of electrically-operated signals, one for each floor, carried by each car, means for operating the same comprising an up and a down passenger's button at each floor, mechanism corresponding to each button set by its button, and a commutator for each elevator, connections whereby said signals are operable only by the joint action of a commutator and a passenger's-button-set mechanism corresponding to the signal, each of said commutators comprising a part moved correspondingly with its car and adapted to coöperate with said button-set-mechanisms in succession in each direction of its movement to operate said signals, directional means for each car operated by the movement of its car and rendering the "up" passenger's-button-set mechanisms incapable of coöperating with the commutators to operate the signals when the cars are moving down, and vice versa, and restoring mechanism to automatically restore said passenger's-button-set mechanism to normal condition.

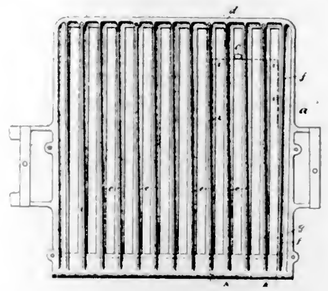
5. In an elevator signaling apparatus in combination, an electric signal comprising an ohmic resistance, means for setting the signal comprising a passenger's button at a floor and mechanism set by said passenger's button, restoring mechanism for restoring said passenger's-button-set mechanism to normal condition and comprising a magnet in series with said signal, mechanism operated by said magnet when fully energized to restore the button-set mechanism to normal condition, a normally-open shunt circuit around said resistance, and means for closing said shunt circuit to fully energize said magnet.

[Claims 6 to 24 not printed in the Gazette.]

1,173,193. FOLDING-PLATE FOR PAPER-FOLDING MACHINES. ROBERT E. KIMBALL, Cleveland, Ohio, assignor to The Cleveland Folding Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 22,1914. Serial No. 846,465. (Cl. 101—43.)

1. In a folding plate for paper-folding machines, the combination of spaced upper and lower members; one of which comprises a grid having its ribs or bars diagonally positioned with respect to the normal line of travel of the paper within the folding plate, substantially as set forth.

2. In a folding plate for folding machines, the combination of spaced upper and lower grids; the said grids having longitudinally positioned ribs or bars disposed angularly with respect to the normal line of travel of the paper within the folding plate, substantially as set forth.



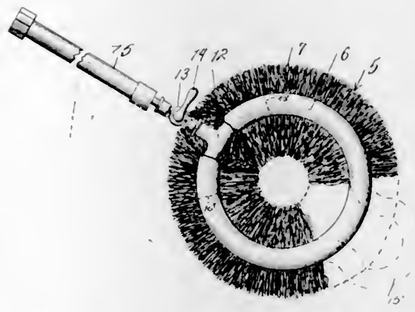
3. In a folding plate for paper-folding machines, the combination of spaced upper and lower members; one of said members comprising a grid having ribs positioned diagonally with respect to the normal line of travel of the paper within the folding plate, and a guiding edge divergently positioned with respect to said ribs, substantially as set forth.

4. In a folding plate for paper-folding machines, the combination of upper and lower grids; the said grids being equipped with a guiding-edge, and having ribs or bars diagonally positioned with respect to the normal line of travel of the paper within the folding plate, and divergent from the guiding edge of said folding plate, substantially as set forth.

5. In a folding plate for paper-folding machines, the combination of spaced upper and lower members of said plate; one of said members comprising a grid having ribs or bearing-surfaces approximately T-shaped in cross-section and positioned diagonally with respect to the normal line of travel of the paper within the folding plate, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,173,194. FOUNTAIN-MOP. FERDINAND KOHL and WILLIAM SEVERNS, Chicago, Ill. Filed Nov. 27, 1914. Serial No. 874,242. (Cl. 15—51.)



A mop of the character described, comprising longitudinally curved tubular arms having their forward ends closed and spaced and their opposite ends screw-threaded and provided with apertures between such ends, a T-coupling receiving the screw threaded ends of the tubular arms, a valve structure connected with the T-coupling, a tubular handle connected with the valve structure, and a mop-head embodying a tubular body portion adapted to be removably mounted upon the curved arms.

1,173,195. LOADED SILK AND PROCESS OF LOADING THE SILK. IGNATZ KREIDL, Vienna, Austria-Hungary. Filed May 26, 1910. Serial No. 563,638. (Cl. 8—13.)

1. In the process of loading silk, treating the silk with a solution containing a salt of zirconium.

2. As a new article of manufacture, silk loaded with a compound of zirconium.

3. A process of loading silk consisting in dipping silk into a solution of a salt of zirconium, and subjecting said treated silk to a fixing bath.

4. The process of loading silk comprising dipping silk in a solution containing a salt of a metal of the positive series of group IV of the periodic arrangement.

5. As a new article of manufacture silk loaded with a compound of a metal of the positive series of group IV of the periodic arrangement.

[Claims 6 to 9 not printed in the Gazette.]

1,173,196. LOADED SILK AND PROCESS OF LOADING THE SILK. IGNATZ KREIDL, Vienna, Austria-Hungary. Filed May 27, 1910. Serial No. 563,776. (Cl. 8—13.)

1. In the loading of silk, the process which consists in saturating the silk with a coloidal metallic hydrate solution, the hydrate being one which is readily absorbed by the silk, and which does not readily attack the silk, and the metal constituent having a high atomic weight.

2. In the loading of silk, the process which consists in saturating the silk with a solution of mixed colloidal metallic hydrates, the hydrates being those which are readily absorbed by the silk, and which do not readily attack the silk, and the metallic constituent having a high atomic weight.

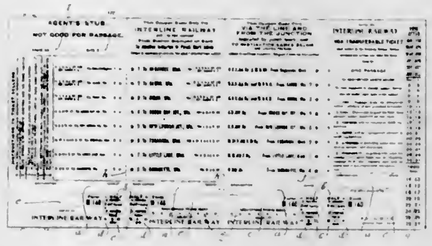
3. In the loading of silk, the process which consists in saturating the silk with a colloidal hydrate solution of a rare earth metal, the hydrate being one which is readily absorbed by the silk, and which does not readily attack the silk and the metal constituent having a high atomic weight.

4. In the loading of silk, the process which consists in saturating the silk with a solution of mixed colloidal hydrates of the rare earth metals, the hydrates being those which are readily absorbed by the silk, and which do not readily attack the silk, and the metal constituent having a high atomic weight.

5. In the loading of silk, the process which consists in saturating the silk with a colloidal solution of zirconium hydrate.

[Claims 6 to 16 not printed in the Gazette.]

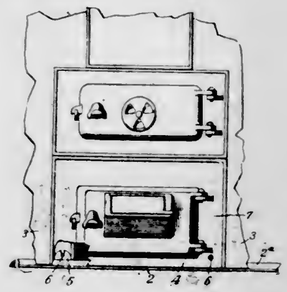
1,173,197. MULTIROUTE RAILWAY-TICKET. JUDSON LA BARRE, Chicago, Ill. Filed Sept. 9, 1913. Serial No. 788,803. (Cl. 11—15.)



1. A multi-route ticket for transportation over an initial line and a number of connecting lines comprising an agent's stub and two passage coupons connected in horizontal alinement from left to right lengthwise of the ticket and in geographical order of use, the said stub and each of said passage coupons having a list of junctions along the initial line, the name of each junction being associated with the name of the line connecting therewith, the list of junctions and the list of connecting lines being arranged in separate vertical columns and alternately disposed on said passage coupons adjacent the left and right hand margins thereof, said agent's stub and said coupons having corresponding vertical columns of consecutive numbers designating the separate junctions of the list and an associated vertical column of punch indications, said column of numbers and punch indications being alternately arranged at the right and left hand margins of the coupons and adapted to register along one margin when the ticket is folded, and said coupons having separate captions arranged in separate columns across the top of the ticket and indicating, by reference to the lists thereon, the portions of the journey for which the respective coupons are valid and said agent's stub and said passage coupons bearing the same form number and a suitably designated space for the name of the destination, substantially as described.

2. A multi-route ticket for transportation over an initial line and a number of connecting lines, comprising an agent's stub, and two coupons good for passage to and from a number of junctions along the initial line, said passage coupons being connected together in geographical order of use, said agent's stub and each of said passage coupons bearing a list of the junctions along the initial line and the name of each junction being associated with the name of the line connecting therewith, said lists of junctions and of connecting lines being arranged in separate vertical columns on said agent's stub and said passage coupons and being associated with vertical columns of punch indications and of consecutive numbers for designating the separate junctions of the list, said vertical columns of punch indications being arranged to register along one margin of said agent's stub when the ticket is folded beneath the same, said agent's stub and each of said coupons bearing the same form number and the name of the issuing line and a suitably designated space for the name of the destination, and each of said coupons having a different caption indicating by reference to the list of junctions and lines thereon the portion of the journey for which the particular coupon is valid, substantially as described.

1,173,198. FURNACE. AUGUST H. LANDWEHR, Holland, Mich., assignor to Holland Furnace Company, Holland, Mich., a Corporation of Michigan. Filed Mar. 23, 1914. Serial No. 826,754. (Cl. 126—99.)



In a furnace, a base ring formed of wrought metal angle bar and having an outwardly projecting horizontal flange and an upwardly projecting inner flange, an ash pit bottom of cast metal having a front extension engaging the inner surface of the ring, upstanding lugs on the extension extending above the ring and adjacent thereto, an ash pit door frame resting on the horizontal flange of the base ring, and bolts extending through the door frame above the ring and through the upstanding lugs of the ash pit bottom, thereby clamping the upwardly projecting flange of the said base ring between the ash pit extension and the ash pit door frame.

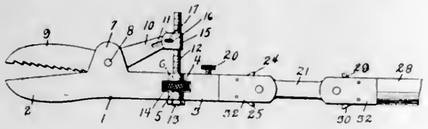
1,173,199. FENCE-WIRE CLAMP. SYLVESTER P. LEVERICH, Marion, Iowa. Filed July 26, 1915. Serial No. 41,863. (Cl. 254—83.)



1. A fence-wire stretching clamp, comprising a concave plate perforated along the concave side to admit the fence-wires, with intermediate loops, and a holding-rod of greater diameter than the space between said wires when seated and the inner faces of the loops, and adapted to be thrust endwise between the wires and loops and thereby crimp said wires between the edges of the perforations in said plate.

2. A fence-wire stretching clamp, comprising a concave plate with a series of openings and intermediate loops along the concave side, said openings admitting the fence web, with the loops projecting outside it, and a pointed rod of larger diameter than the space between the loops and the fence-wires when in straight position, said rod being adapted to crimp the fence-wires when thrust endwise to holding position.

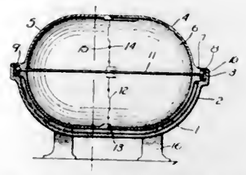
1,173,200. WRENCH OF THE ALLIGATOR TYPE. BENJAMIN F. MCCRAITH, Lark, N. D. Filed Mar. 17, 1915. Serial No. 14,996. (Cl. 81—118.)



1. An alligator wrench comprising a body portion having a jaw thereon, a jaw pivoted to the said body portion, means for positively adjusting said jaws with relation to each other, a tongue detachably secured to the body portion, a casting having a ratchet wheel on each end pivotally mounted on said tongue, pawls on the tongue for engaging the opposite sides of one of the ratchets, a spring for maintaining said pawls in engagement with the ratchets, a handle pivotally mounted on the other end of the casting, pawls on the handle for engaging the opposite sides of the adjacent ratchet, and a spring for maintaining said pawls in engagement with said ratchet.

2. An alligator wrench comprising a body portion having a jaw thereon and an extending portion with a longitudinally extending slot therein, a jaw pivotally mounted on the body portion and having an arm thereon, a screw rotatably mounted on the extension, a thumb nut fixedly mounted on said screw, a collar adjustably mounted on the screw, said collar and said arm on the movable jaw having slots therein, a pin extending through said slots and an articulate handle secured to the extension of the body portion and arranged to have the component parts thereof adjusted to various angles with relation to each other.

1,173,201. HOG-OILER. FRANK R. MCDERMAND, Kansas City, Mo. Filed June 22, 1915. Serial No. 35,550. (Cl. 119—157.)

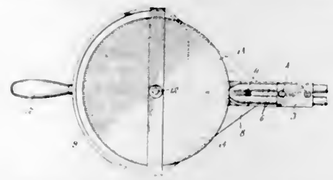


1. A hog oiler comprising a trough having trunnion bearings, a drum rotatable partly within the trough and comprising separate cupped parts having end trunnions provided with sockets, and a bolt extending through the drum and having a head and nut each seated in a trunnion socket.

2. A hog oiler comprising a trough having trunnion bearings, a drum comprising separate cup members having mating, staggered edges and guide flanges, and means for tying the cup members together, and trunnions on the cup members and seated in said bearings to rotatably support the drum partly within the trough.

3. A hog oiler comprising a trough, a drum rotatable in the trough and comprising separate cup members having mating staggered edges provided with mating openings to form apertures, and a bolt extending longitudinally through the drum and tying the cup members together.

1,173,202. METHOD AND MACHINE FOR WELDING PIPE-BENDS. NEAL TRIMBLE MCKEE, Dobbs Ferry, N. Y., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed July 15, 1914. Serial No. 851,055. (Cl. 78—82.)



1. The method of welding together contiguous edges of metal which comprises heating said edges by the friction of a relatively rapidly moving metal member and simultaneously pressing said member and said edges together.

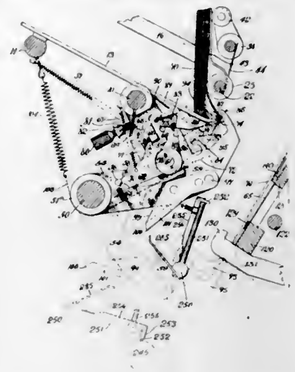
2. Apparatus for welding together contiguous edges of metal comprising a metal member, means for rapidly moving said member in contact with said edges, and means for pressing said member and edges together.

3. Apparatus for welding together contiguous edges of metal comprising a metal disk, means for rapidly revolving said disk in contact with said edges and means for pressing said disk and edges together.

4. Apparatus for removing the flash and welding contiguous edges of an incomplete pipe bend of the type described comprising an operating frame, a rotatable disk carried by said frame, means for rotating said disk, a support for the pipe bend, and means for moving said frame about a center fixed as to said support but movable as to said operating frame.

1,173,203. SHEET-GATHERING MACHINE. WILLIAM F. MARRESFORD, Brooklyn, N. Y. Filed Dec. 14, 1904. Serial No. 236,797. (Cl. 11—2.)

1. The combination with means for supporting a pile of vertically disposed sheets, of means for frictionally engaging the edge of the outer sheet and bending one edge away from the pile, means for gripping said separated edge and pulling the sheet from the pile, means for stripping the sheet from the grippers, and a conveyer for engaging and moving said separated sheet away from said stripping means in a path transverse to the path of said grippers.



2. The combination with means for partially separating a sheet from a pile, of oscillating sheet-carrying grippers, a sheet stripping and supporting device permitting passage of the grippers and stripping the sheet, and means for automatically relaxing the tension of the grippers before the sheet engages said stripping device.

3. The combination with a plurality of chutes arranged side by side to contain sheets, of a plurality of means for frictionally engaging the edge of a sheet in each chute and bending it outwardly from the next sheet, a plurality of gripping devices for directly engaging the separated edges of said sheets and pulling them edgewise from the chute, slotted plates permitting passage of the gripping devices but stripping the sheets, and a horizontally moving conveyer for receiving and moving the stripped sheets from below one chute to below the next chute.

4. The combination with a chute arranged to contain sheets, of frictional edge engaging devices for partially separating one sheet at a time, grippers for engaging the separated portion of the sheet and completely separating the sheet from the chute, stationary means for stripping the separated sheet from the grippers, and a conveyer for receiving and moving the sheet laterally with respect to the motion of the grippers.

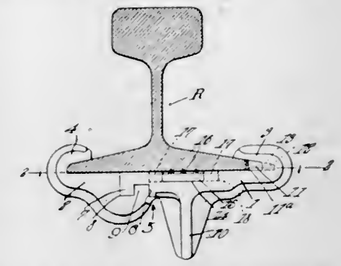
5. The combination with a plurality of inclined chutes for supporting sheets on their edges, of means for frictionally engaging the edge of the outside sheet in one chute and bending it outwardly, means for then gripping and pulling the sheet away from the chute, a stationary device for stripping the sheet from the gripping means, means for moving said sheet horizontally to beneath a second chute, means for separating a sheet from said second chute, and means for securing said sheets together.

[Claims 6 to 41 not printed in the Gazette.]

1,173,204. RAIL CLAMP AND HOLDER. PAUL MAYDA, Ranchester, Wyo. Filed Dec. 5, 1914. Serial No. 875,685. (Cl. 238—4.)

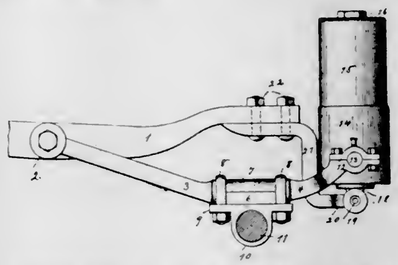
1. A rail clamp and holder comprising two sections to fit below the rail base having hooks at their remote portions for engaging over the edges of the rail base, and having interengageable portions adapted to interlock by a relative longitudinal movement of the sections for holding the sections against lateral separation, and a bar fitting snugly in one of said hooks and co-extensive in length with the respective section, one edge of the bar having teeth to engage the respective edge of the rail base, and the opposite edge of the bar having rounded lugs projecting therefrom, the bend of the respective hook having rounded recesses receiving said lugs, and said recesses being spaced from the outer surface of said hook.

2. A rail clamp and holder comprising relatively wide and narrow sections arranged to fit below the rail base and having hooks at their remote portions for engaging over the edges of the rail base, said sections having interengageable portions adapted to interlock by a relative longitudinal movement of the sections for holding the sections against lateral separation, the relatively wide section having an upper longitudinal channel extending



from end to end, said channel being relatively wide and shallow, and a strip seated in said channel and co-extensive in length with said section, the strip having upstanding teeth to bite the bottom of the rail, the side edges of the strip having rounded lugs projecting therefrom, and said section having rounded recesses along the sides of the channel receiving said lugs.

1,173,205. SHOCK-ABSORBER. FREDERICK MESINGER, New York, N. Y. Filed July 17, 1915. Serial No. 40,372. (Cl. 267—8.)



1. A shock absorber comprising a frame, a forked arm pivoted thereto, an axle bearing carried by the arm, a casing straddled by the arm and having a pair of protruding pivots that are mounted in said arm, a plunger within the casing, said plunger having a lower protruding end that is pivoted to the frame, and a spring within the casing that is engaged by the plunger.

2. A shock absorber comprising a frame, a forked arm pivoted thereto, and provided with a cylindrical section, a pillow engaged by said section, an axle bearing supporting the pillow and adapted to tilt on the cylindrical section at right angles thereto, a casing pivotally secured to the arm, an inclosed plunger that is pivoted to the frame, and a spring housed within the casing and engaged by the plunger.

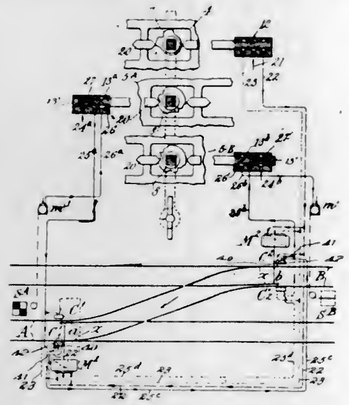
3. A shock absorber comprising a forked frame, a forked arm pivoted thereto and straddling the forked frame, an axle bearing carried by the arm, a casing straddled by the arm and having a pair of protruding pivots that are mounted in said arm, a plunger within the casing, said plunger having a lower protruding end that is pivoted to the forked frame, and a spring within the casing that is engaged by the plunger.

4. A shock absorber comprising a casing, a plunger extending axially therethrough, a spiral spring housed within the casing and engaged by the plunger, a cup beneath the spring, a packing within the cup, a support, pivots carried by said support and extending into the casing, and concaved shoes on the inner ends of the pivots that engage the cup.

5. A shock absorber comprising a casing, a plunger extending axially therethrough, a spiral spring housed within the casing and engaged by the plunger, a cup beneath the spring, a packing within the cup, a flanged reinforcing member surrounding the cup, a support, pivots carried by the support and extending through the casing and reinforcing member, and concaved shoes on the inner ends of the pivots that engage the cup.

[Claim 6 not printed in the Gazette.]

1,173,206. SYSTEM OF CONTROLLING RAILWAY POINTS AND SIGNALS. ALFRED MONARD, ERNEST ALBERT MOUTIER, and HORACE DUMARTIN, Paris, France. Filed June 22, 1910. Serial No. 568,412. (Cl. 246—38.)



1. In a signal and points controlling system for railways, the combination of signals and points, and means for actuating said signals and points, said means comprising a central selector having a plurality of movable points controlling frames therein, and a plurality of movable signal controlling frames therein, said frames having openings therein arranged in vertical and horizontal rows, and route keys provided with cams adapted to pass through the openings in said frames, to engage said frames to move appropriate points controlling and signal controlling frames to effect a desired routing, and to simultaneously lock all other frames which set up an incompatible route.

2. A central selector for controlling points and signals of railways, comprising a plurality of movable parallel frames provided with openings therein, said frames corresponding in number to the points and signals, and cams passing through the openings in said frames for displacing said frames.

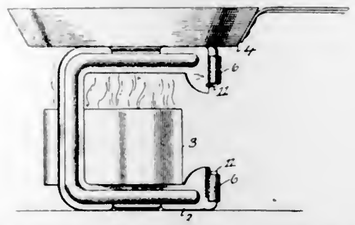
3. A central selector for controlling points and signals of railways, comprising a plurality of movable parallel frames provided with openings therein and mounted upon rollers, said frames corresponding in number to the points and signals, and cams passing through the openings in said frames for displacing said frames.

4. In a signal and points controlling system for railways, the combination of signals and points, and fluid pressure means for actuating said signals and points, said means comprising a central selector having a plurality of movable points controlling frames therein and a plurality of movable signal controlling frames therein, said frames having valves connected thereto, and means adapted to move appropriate points controlling and signal controlling frames to effect a desired routing and to lock all other frames which set up an incompatible route.

5. In a signal and points controlling system for railways, the combination of signals and points and points controllers, and fluid pressure means for actuating said signals and points, said means comprising a central selector having a plurality of movable points controlling frames therein and a plurality of movable signal controlling frames therein, said frames having valves connected thereto, and means adapted to move appropriate points controlling and signal controlling frames to effect a desired routing and to lock all other frames which set up an incompatible route, said points controllers controlling the flow of pressure to control the operation of said signals.

[Claims 6 to 8 not printed in the Gazette.]

1,173,207. FOLDING STAND FOR PORTABLE HEATERS. JOSEPH B. MURRAY, Brooklyn, N. Y. Filed July 14, 1915. Serial No. 39,771. (Cl. 126—43.)



1. A portable heater formed of two U-shaped members hinged together at the ends of their arms, the ends of the arms of each member being hinged to the corresponding ends of the arms of the other member, and means for limiting the angle of separation of said members.

2. A portable heater stand formed of two U-shaped members hinged together at the ends of their arms, the ends of the arms of each member being hinged to the corresponding ends of the arms of the other member, means for limiting the angle of separation of said members, and means for locking said members when separated at said limited angle.

3. A portable heater stand, comprising two U-shaped members hinged together at the ends of their arms, means for limiting the angle of separation of said members, and a circular member adapted to enter between said hinged arms and rest upon the lower arms of said U-shaped members and to retain said members in open position when separated at said limited angle.

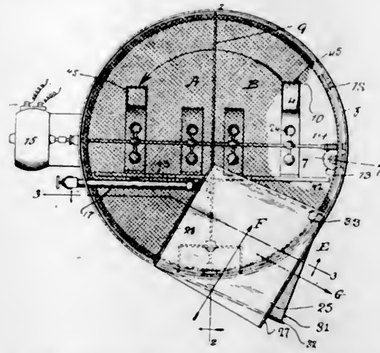
4. A portable heater stand, comprising two U-shaped members hinged together at the ends of their arms, the ends of the arms of each member being hinged to the corresponding ends of the arms of the other member, means for limiting the angle of separation of said members, and a cylindrical fuel can adapted to enter between said hinged arms and rest upon the lower arms of said U-shaped members when separated at said limited angle.

5. A portable heater stand, comprising two U-shaped members, each member having integrally formed at the ends of its arms respectively a hinge pin and a tubular portion adapted to receive said pin, the pin of one member being inserted in the tubular portion of the other member, and means on said tubular portion for limiting the angle of separation of said members.

1,173,208. DISH-WASHING MACHINE. THOMAS E. MURRAY, New York, N. Y. Filed May 28, 1915. Serial No. 30,933. (Cl. 141—9.)

1. A dish-washing machine, comprising a tank having a cylindrical wall, a rotary horizontal table therein, the said tank having a dish-receiving opening and a dish-delivery opening in said cylindrical wall and above said table, the said receiving opening being above said delivery opening and separate therefrom, means for receiving and guiding the dishes from said receiving opening downwardly and directly to said table, and means for delivering liquid against said table.

2. A dish-washing machine, comprising a tank having a cylindrical wall, there being an upper dish-receiving opening and a lower dish-delivery opening in said wall, the said openings being separate, a rotary horizontal table in said tank below said delivery opening, an inclined chute in said tank extending from said receiving opening downwardly and directly to said table, and means for delivering liquid against said table.



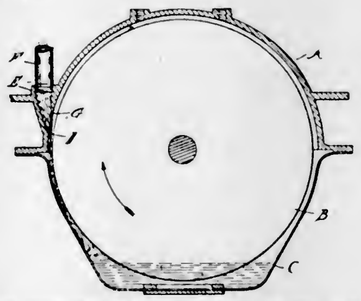
3. A dish-washing machine, comprising a tank having in its wall an upper dish-receiving opening and a lower dish-delivery opening, a rotary horizontal table in said tank below said delivery opening, an inclined chute in said tank extending from said receiving opening to said table, and means for delivering liquid against said table, and the said delivery opening being disposed beneath said chute.

4. A dish-washing machine, comprising a tank having a cylindrical wall, there being an upper dish-receiving opening and a lower dish-delivery opening in said wall, a rotary horizontal table in said tank below said delivery opening, an inclined chute in said tank extending from said receiving opening downwardly and directly to said table, means for guiding said dishes outwardly through said delivery opening, and means for delivering liquid against said table.

5. A dish-washing machine, comprising a cylindrical tank, a rotary horizontal table therein, the said tank having a dish-receiving opening and a dish-delivery opening disposed above said table, and the said receiving opening being above said delivery opening, means for receiving and guiding the dishes from said receiving opening to said table, means within said tank for intercepting said dishes on reaching said delivery opening and for guiding them outwardly through said opening, and means for delivering liquid against said table.

[Claims 6 to 16 not printed in the Gazette.]

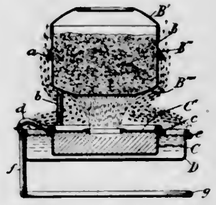
1,173,209. ENGINE-LUBRICATOR. EMIL A. NELSON, Detroit, Mich., assignor, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va., a Corporation of Virginia. Filed Feb. 19, 1912. Serial No. 678,673. (Cl. 184—1.1.)



1. The combination with an engine fly-wheel, of a housing for said wheel having a lubricant receptacle in the lower portion thereof, said housing being provided with a pocket having a substantially wedge-shaped opening thereto, the inclined edges of said opening being in close proximity to the wheel periphery to deflect the lubricant therefrom and converging in the general direction of rotation of said wheel, and an oil distribution conduit communicating with the contracted end of said pocket.

2. The combination with an engine fly-wheel, of a housing for said wheel having a lubricant receptacle in the lower portion thereof, said housing having a portion at the side extending in proximity to the periphery of the fly-wheel, said last-mentioned portion being provided with a substantially vertically-extending pocket of tapering form, the pocket being at its lower end of substantially the same width as the fly-wheel and contracted at its upper end with the opening at the contracted end, whereby the inclined edges between the ends deflect from the fly-wheel and discharge said lubricant upwardly in substantially the same direction of travel.

1,173,210. FUMIGATOR OR DISINFECTING-LAMP. HENRY R. OCHS, Westport, Conn., assignor to C. B. Dolge Company, Westport, Conn., a Corporation of Connecticut. Filed Mar. 17, 1915. Serial No. 15,102. (Cl. 167—3.)



1. A stand for a fumigating candle comprising a single piece having a base, a supporting portion for a separable solidified fuel box adapted to hold said box a fixed distance above the base, a second supporting portion of the frame adapted to hold a metallic disinfecting can removably a predetermined distance above the fuel box, and means for holding a water pan around the fuel box.

2. A fumigating candle comprising separable parts readily attachable and detachable from a common frame, including a metallic can with formaldehyde supported in the upper portion of said frame, a solidified alcohol box and burner spaced centrally by said frame under the can, and a water pan surrounding said box supported substantially in the plane thereof and of greater extent laterally, said frame providing a separate ring support for each of said separable members, and a supporting base.

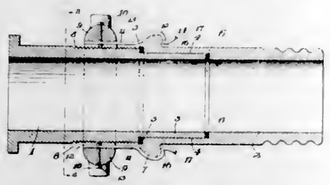
3. A fumigating candle comprising a metallic container can for formaldehyde, having a cap and adapted when open to constitute a generator for formaldehyde gas, a fuel box adapted to contain solidified alcohol, and having a cap and adapted when open to constitute a burner for heating said can, a suitable stand to support said generator and burner in proper relation, and into which stand said generator can and burner box may be independently and readily inserted and removed, and means for removing any excess heat from said burner box.

4. In a fumigating candle, a formaldehyde can and generator, a solidified fuel box and burner, a stand to support said burner above the base and having a member to support the formaldehyde can above the burner, and provided with means to support a water-pan around said fuel box.

5. In a fumigator candle, a formaldehyde can and generator, a solidified fuel box having an aperture constituting a burner, a stand to support said burner above the base and a member on said stand to support the can above the burner and means for maintaining the constant rate of evaporation of said alcohol.

[Claim 6 not printed in the Gazette.]

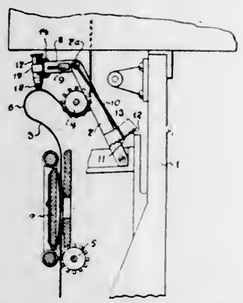
1,173,211. SPRING HOSE-COUPLING. WILLIAM F. O'DONNELL, Trenton, N. J. Filed Oct. 5, 1915. Serial No. 54,126. (Cl. 137—28.)



1. A coupling of the character described, comprising two members, one fitting within the other, one member having an annular enlargement thereon, the other member externally screw-threaded, a ring internally screw-threaded and engaging the first-mentioned threads, and a plurality of spring gripping tongues secured directly to said ring and engaging the annular enlargement, said enlargement and gripping tongues having curved engaging faces permitting under undue strains the separation of the members, substantially as described.

2. A coupling of the character described, comprising two members, one fitting within the other, one member having an annular enlargement thereon, the other member externally screw-threaded, a ring internally screw-threaded and engaging the first-mentioned threads, said ring having internal recesses, a plurality of longitudinally positioned spring gripping tongues secured in the recesses of the ring and turning with the ring, said tongues having engaging faces corresponding to the shape of the annular enlargement and holding the members together, substantially as described.

1,173,212. ATTACHMENT FOR MOVING-PICTURE MACHINES. ISAAC B. PARKER, Dallas, Tex. Filed June 12, 1915. Serial No. 33,661. (Cl. 88—17.)



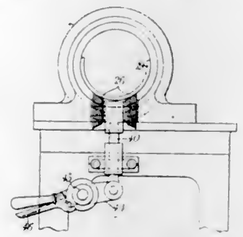
1. In a moving picture machine provided with a gate and a film having perforated edges, a means under spring tension adapted to bear upon the body and perforated edges of said film to remove obstructions collecting thereon prior to the passage of the film through the gate.

2. In a moving picture machine provided with a gate and a film having perforated edges, two fingers each adapted to rest upon an edge of the film prior to the passage of the film through the gate, and means for supporting said fingers operatively with relation to the film.

3. In a moving picture machine, provided with a gate and a film having perforated edges, two hollow fingers, each having filamentous material protruding from the lower end to rest upon the edge of the film prior to its passage through the gate and means for supporting said fingers in operative position on the film.

4. In a moving picture machine provided with a gate and a film having perforated edges, two fingers adapted to rest under spring tension upon the edges of the film prior to the passage of the film through the gate, and means for adjustably supporting said fingers above said gate.

1,173,213. MACHINE FOR BORING AND TRIMMING TUBULAR STEREOTYPE-PLATES. THOMAS ROBERT GILLETT PARKER and WILLIAM EDWARD BENNISON, Broadheath, England, assignors to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Mar. 5, 1913. Serial No. 752,246. (Cl. 29—21.)



1. In a machine for boring and trimming tubular stereotype plates, devices adapted to support the plates during their longitudinal movement into and out of their boring position, and means whereby the said devices can be moved into or out of plate-supporting position.

2. In a machine for boring and trimming tubular stereotype plates, rollers adapted to support the plates during their longitudinal movement into and out of their boring position, and means whereby the said rollers can be moved into and out of plate-supporting position.

3. In a machine for boring and trimming tubular stereotype plates, the combination with rollers adapted to support the plates during their longitudinal movement into and out of their boring position, and means whereby the said rollers can be moved into or out of plate-supporting position; with means whereby the rollers are rotated when out of plate-supporting position.

4. In a machine for boring and trimming tubular stereotype plates, the combination with rollers adapted to support the plates during their longitudinal movement into and out of their boring position, of means whereby the said rollers can be raised up to and lowered out of their plate-supporting position.

5. In a machine for boring and trimming tubular stereotype plates, the combination with rollers adapted to support the plates during their longitudinal movement into and out of their boring position, and means whereby the said rollers can be raised up to and lowered out of their plate-supporting position, of means whereby when those rollers are in their lower position they will be rotated.

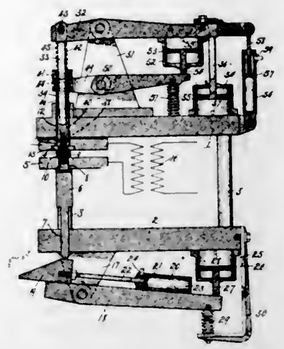
[Claims 6 and 7 not printed in the Gazette.]

1,173,214. SPARK-PLUG-ASSEMBLING MACHINE. CARL H. POSTEL, Toledo, Ohio, assignor to Champion Spark Plug Company, Toledo, Ohio, a Corporation of Massachusetts. Filed Apr. 29, 1915. Serial No. 24,793. (Cl. 29—1.)

1. In a machine of the class described, the combination with means for applying a crimping pressure to a spark plug shell, of means for applying a simultaneous opposing pressure on the insulating member of the plug to force it to a close seat in the shell.

2. In a machine of the class described, the combination with means for applying a crimping pressure to a spark plug shell, of fluid pressure operated means for simultaneously applying a counteracting pressure to the insulating member of a spark plug to force it to a close seat in the shell.

3. In a machine of the class described, means for applying an edge crimping pressure to the shell of a spark plug, of a plunger disposed to act against the outer end of a porcelain seated in the shell, and means operable to apply a predetermined pressure to said plunger to partially counteract the shell pressure.

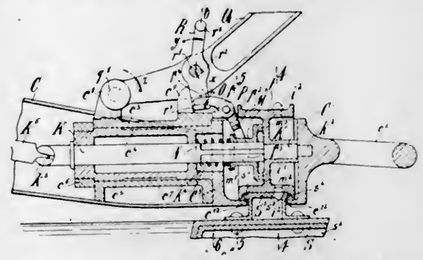


4. In a machine of the class described, means for applying a crimping pressure in one direction to a spark plug shell, a plunger disposed to act against the outer end of a porcelain seated in the shell, and fluid pressure operated means for applying a predetermined pressure through said plunger to the porcelain to partially counteract the opposing pressure applied to the shell.

5. In a machine of the class described, means for applying a crimping pressure in one direction to a spark plug shell, a plunger disposed to act against the outer end of a porcelain seated in said shell, a lever, and means for actuating said lever to apply a predetermined pressure through said plunger to the porcelain to partially counteract the opposing pressure on the shell.

[Claims 6 to 19 not printed in the Gazette.]

1,173,215. TRAINING-GEAR FOR MOBILE ARTILLERY. FRITZ RAUSENBERGER, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed May 22, 1913. Serial No. 769,319. (Cl. 89—41.)



1. Training gear for gun mounts, having a bed-plate, a slide on the trail end in engagement with said bed-plate, connections between said slide and the trail end permitting oscillation of said slide around an axis situated in the length direction of the trail; means for giving lateral displacement of the trail relative to the bed-plate around a vertical axis through the wheel axle, said means comprising a roller, mounted to revolve around said axis of oscillation, said roller engaging with said bed plate.

2. Training gear for gun mounts, having a bed-plate, a carrier on the trail end for said bed-plate, connections between said carrier and the trail end permitting oscillation of said carrier around an axis situated in the length direction of the trail; means for giving lateral displacement of the trail relative to the bed-plate around a vertical axis through the wheel axle, said means comprising a roller having radial studs and corresponding apertures in the bed-plate, a shaft in the carrier coaxial with said axis of oscillation of the carrier, said roller being loosely mounted on said shaft.

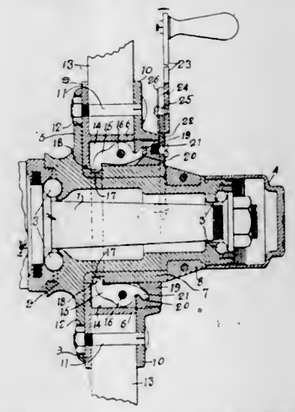
3. Training gear for gun mounts, having a bed-plate, a carrier on the trail end for said bed-plate, connections between said carrier and the trail end permitting oscillation of said carrier around an axis situated in the length direction of the trail; means for giving lateral displacement of the trail relative to the bed-plate around a vertical axis through the wheel axle, said means comprising a roller having radial studs and corresponding apertures in the bed-plate, a shaft in the carrier coaxial with said axis of oscillation of the carrier, said roller being loosely mounted on said shaft, a hand wheel on the trail for turning said shaft and a clutch for throwing said roller in and out of engagement with said shaft.

4. Training gear for gun mounts, having a bed-plate, a carrier on the trail end for said bed-plate, connections between said carrier and the trail end permitting oscillation of said carrier around an axis situated in the length direction of the trail; means for giving lateral displacement of the trail relative to the bed-plate around a vertical axis through the wheel axle, said means comprising a roller having radial studs and corresponding apertures in the bed-plate, a shaft in the carrier coaxial with said axis of oscillation of the carrier, said roller being loosely mounted on said shaft, a hand wheel on the trail for turning said shaft, and a clutch for throwing said roller in and out of engagement with said shaft, said clutch being actuated by the hand spike for disconnecting the clutch.

5. Training gear for gun mounts, having a bed-plate, a carrier on the trail end of said bed-plate, connections between said carrier and the trail end permitting oscillation of said carrier around an axis situated in the length direction of the trail; means for giving lateral displacement of the trail relative to the bed-plate around a vertical axis through the wheel axle, said means comprising a roller having radial studs and corresponding apertures in the bed-plate, a shaft in the carrier coaxial with said axis of oscillation of the carrier, said roller being loosely mounted on said shaft, a hand wheel on the trail for turning said shaft, and a clutch for throwing said roller in and out of engagement with said shaft, said clutch comprising a muff slidably but non-revolubly mounted on said shaft, opposing teeth on the muff and on the roller, and a spring tending to keep said teeth in engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,173,216. DEMOUNTABLE WHEEL. CHARLES T. RIDGELY, Springfield, Ohio. Filed June 7, 1915. Serial No. 32,524. (Cl. 21—31.)



1. In a wheel, a main hub, a supplemental hub, a locking device carried by one of said hubs and movable into and out of locking engagement with the other hub, and an axially movable actuating device comprising means to

positively move said locking device into and out of its locking position.

2. In a wheel, a main hub, a supplemental hub, a locking device carried by one of said hubs and movable into and out of locking engagement with the other hub, and an axially movable actuating device comprising means to engage opposite portions of said locking device to positively move the same into and out of its locking position.

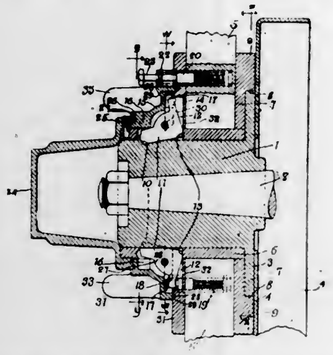
3. In a wheel, a main hub, a supplemental hub, one of said hubs having a shoulder, locking devices pivotally mounted on the other of said hubs and having parts movable into and out of engagement with said shoulder, and an actuating device having cam surfaces to move said locking devices into and out of their locking positions.

4. In a wheel, a main hub, a supplemental hub, one of said hubs having a shoulder, locking devices pivotally mounted on the other of said hubs and having parts movable into and out of engagement with said shoulder, and a rotary actuating device having cam surfaces to move said locking devices into and out of their locking positions.

5. In a wheel, a main hub, a supplemental hub, one of said hubs having a shoulder, locking devices pivotally mounted on the other of said hubs and having parts movable into and out of engagement with said shoulder, and a longitudinally movable actuating device having cam surfaces to move said locking devices into and out of their locking positions.

[Claims 6 to 18 not printed in the Gazette.]

1,173,217. DEMOUNTABLE HUB. CHARLES T. RIDGELY, Springfield, Ohio. Filed Sept. 13, 1915. Serial No. 50,327. (Cl. 21—31.)



1. In a wheel, a main hub and a supplemental hub, one of said hubs having a shoulder, a locking device mounted on the other of said hubs, an actuating device mounted on one of said hubs and having means thereon adapted to be moved into and out of engagement with said locking device when rotated, and means to prevent axial movement of said actuating device during the rotation thereof.

2. In a wheel, a main hub, and a supplemental hub, one of said hubs having a shoulder, a locking device mounted on the other of said hubs, an actuating device rotatably mounted on one of said hubs and having a cam surface arranged to be moved into and out of engagement with said locking device, and a yieldable stop mounted on one of said hubs and extending into the path of said cam surface.

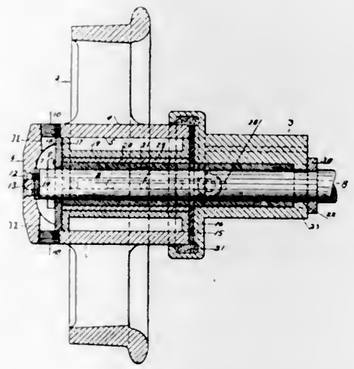
3. In a wheel, a main hub having a shoulder, a supplemental hub removably mounted on said main hub, a locking device pivotally mounted on said supplemental hub, having a part movable into and out of locking position with relation to said shoulder and having a part extending at an angle to the first-mentioned part, and a rotatable actuating device having two circumferential parts each provided with a cam surface, said cam surfaces being so arranged that when said actuating device is rotated in one direction, the cam surface of one of said parts will engage the body portion of said locking device and move the latter about its axis and when said actuating device is rotated in the other direction the cam surface of the other part thereof will engage the projection of said locking device and move the latter in the other direction about its axis.

4. In a wheel, a main hub having a shoulder, a supplemental hub removably mounted on said main hub, a locking device pivotally mounted on said supplemental hub, having a part movable into and out of locking position with relation to said shoulder and having a part extending at an angle to the first-mentioned part, and a rotatable actuating device having two circumferential parts each provided with a cam surface, said cam surfaces being so arranged that when said actuating device is rotated in one direction, the cam surface of one of parts will engage the body portion of said locking device and move the latter about its axis and when said actuating device is rotated in the other direction the cam surface of the other part thereof will engage the projection of said locking device and move the latter in the other direction about its axis, and a yieldable detent arranged between the cam surface of the last-mentioned part of said actuating device and the projection of said locking device.

5. In a wheel, a main hub having a circumferential shoulder, a supplemental hub removably mounted on said main hub, a plurality of locking devices pivotally mounted on said supplemental hub and adapted to be moved into locking positions relatively to said shoulder, each of said locking devices having a projection extending at an angle to the body portion thereof, an actuating device rotatably mounted on said supplemental hub and having a series of cams arranged adjacent to the respective locking devices, said actuating device also having a second series of cams arranged adjacent to the projections of the respective locking devices, the last-mentioned series of cams being so arranged with relation to the cams of the first-mentioned series that they will engage said locking device after the cams of the first-mentioned series have been moved out of engagement therewith.

[Claims 6 to 26 not printed in the Gazette.]

1,173,218. MINE-CAR WHEEL AND BEARING. JAMES J. ROBY, Cleveland, Ohio. Filed Mar. 9, 1914. Serial No. 823,285. (Cl. 105—67.)



1. A car wheel having a chambered hub with a closed end and an internal shoulder adjacent thereto, a bearing washer removably seated within said hub against said shoulder and a bushing removably seated within said hub and bearing against said washer.

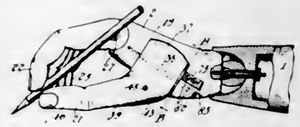
2. A car wheel having a hub with a closed chamber at its end and a removable bushing, in combination with a box having a tubular extension removably mounted thereon and projecting into said bushing, a shaft projected through said extension, and means within said end chamber to secure said wheel against outward movement on the shaft.

3. A car wheel having a hollow hub with a closed end, a thrust plate detachably secured upon the inside of said end, and a removable bushing within said hub, in combination with a box having a removable bearing extension adapted to enter said bushing, a shaft projected through said extension into bearing relations with said thrust plate, and locking means to secure said wheel upon said shaft.

4. A wheel driving a hollow hub, an apertured washer within one end of said hub, a removable bushing having a ribbed surface in seating engagement with the hub and clamping said washer in place, and an inner lining for said bushing having an internal diameter exceeding the aperture in said washer.

5. A car wheel having a removable bushing, in combination with a box having a bore provided with radial lugs, and a tubular extension having a slotted end removably seated within said bore and engaged with said lugs.

1,173,219. ARTIFICIAL HAND. JAMES F. ROWLEY, Chicago, Ill. Filed Dec. 27, 1915. Serial No. 68,882. (Cl. 3—12.)



1. An artificial hand, comprising a metacarpus or body part in combination with a thumb member hinged thereto on an axis disposed lengthwise of the hand.

2. An artificial hand in which the forefinger and thumb are hinged on nonparallel axes to the metacarpus, the middle finger being rigid thereon, resilient means urging said index finger forward, and means for urging said thumb forward into prehensile relation with said fingers.

3. An artificial hand in which the forefinger and thumb are hinged on nonparallel axes to the metacarpus, the middle finger being rigid thereon, resilient means urging said index finger forward, means for urging said thumb forward into prehensile relation with said fingers, and means for locking said thumb in its forward position.

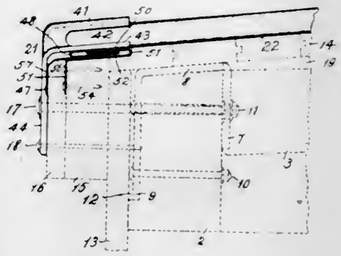
4. An artificial hand, comprising a metacarpus or body part and one or more finger members thereon, in combination with a bent thumb member hinged thereto on an axis disposed lengthwise of the hand, and means for swinging said thumb member forward against said finger member or members.

5. An artificial hand in which the forefinger and thumb are hinged on nonparallel axes to the metacarpus, the middle finger being substantially rigid thereon and said fingers being normally in a partly closed position, said index finger being held forward yieldingly in said position and said thumb when swung forward coacting slidably with said index finger crosswise thereof and bearing against said middle finger, whereby said hand is prehensile.

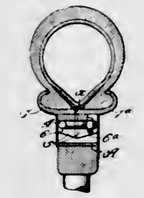
[Claims 6 to 16 not printed in the Gazette.]

1,173,220. CAR-ROOF. THOMAS NATHAN RUSSELL, Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company, a Corporation of Illinois. Filed Feb. 24, 1913. Serial No. 750,072. (Cl. 108—5.8.)

In an outside metal car-roof, in combination: a roof-sheet having its eaves-end rebent within the outer eaves-line of the roof; hook-stripping engaging such rebent sheet-end and having a depending member secured within such eaves-line, and adapted to have a fascia applied outside of said depending member and secured to the underlying structure; and a flashing for inclosing the upper part of the fascia and freely entered between said rebent sheet-end and the said depending member and extending inward and projecting the joint between such fascia and said depending member of the hook-stripping.



1,173,221. SPLIT RIM FOR VEHICLE-WHEELS. NICHOLAS SCHENK, St. Louis, Mo. Filed May 10, 1915. Serial No. 27,085. (Cl. 152—21.)



1. A demountable rim composed of two laterally separable portions provided on their inner sides with coöperating projections arranged in pairs, and transversely-disposed adjustable fastening members arranged in open alining slots in said coöperating projections.

2. A demountable rim consisting of a longitudinally split member, transversely-disposed fastening devices that connect the two portions of said member together, each of said fastening devices being provided with a head at one end that is arranged at a right angle to the axis of said device, one of said portions being provided with lugs that lap over said head, and a plate on said portion that coöperates with the heads on all of said fastening devices to prevent transverse movement thereof in one direction.

3. A demountable rim, comprising a member that is split longitudinally at approximately the center thereof and provided on its inner side with a plurality of projections having transversely disposed slots therein whose outer ends are enlarged, and fastening members arranged in said slots and provided at one end with heads and at their opposite ends with adjustable elements, said heads and adjustable elements being seated in the enlarged portions of said slots.

4. A demountable rim, comprising a longitudinally split member whose portions are provided on their inner sides with coöperating parts that form a plurality of spaced projections on the inner side of the rim, transversely-disposed fastening members arranged in slots formed in said coöperating parts, said members being contained wholly within said projections, and means for hinging or pivotally connecting said fastening members to one portion of the rim.

5. A demountable rim, comprising a longitudinally split member whose portions are provided on their inner sides with coöperating parts that form a plurality of spaced projections on the inner side of the rim, transversely-disposed fastening members arranged in slots formed in said coöperating parts, heads on said fastening members

seated in recesses at one end of said slots, and a plate on one of the rim portions that coöperates with the heads on all of said fastening devices to prevent said devices from becoming completely disconnected from that portion of the rim.

[Claims 6 and 7 not printed in the Gazette.]

1,173,222. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. NICHOLAS SCHENK, St. Louis, Mo. Filed May 10, 1915. Serial No. 27,086. (Cl. 152—21.)



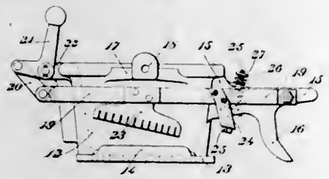
A wheel, comprising a fixed rim, a demountable rim surrounding said fixed rim, coöperating means on said rim that hold the demountable rim centered and limit the circumferential movement of same in one direction, a substantially wedge-shaped removable locking member arranged between said rims in engagement with oppositely-inclined surfaces thereon, a cover plate rigidly secured to each of said rims and extending entirely around the same that prevents dirt from accumulating in the open space between said rims, one of said cover plates having a laterally movable portion, and a spring interposed between said movable portion and said locking member.

1,173,223. FLOOR-MOP. WILLIAM SEVERNS, Chicago, Ill. Filed Dec. 14, 1914. Serial No. 877,144. (Cl. 15—28.)



A mop of the character described, comprising a mop head carrying frame formed of longitudinally twisted sections of wire having their ends converging rearwardly and bent upwardly and forwardly upon themselves providing upstanding loops, a handle socket carrying spaced apertured side plates to receive therebetween the upstanding loops and provided at their tops with inwardly projecting flanges to contact with the upper ends of the upstanding loops, an adjustable clamping pivot element passing through the apertured side plates and the upstanding loops, and a fibrous mop head carried by the frame.

1,173,224. BAG-HOLDER. THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignor to Sturtevant Mill Company, a Corporation of Maine. Filed Dec. 22, 1915. Serial No. 68,182. (Cl. 83—26.)



1. A bag holder comprising fixed and movable jaws between which a bag is to be held, a pivoted device by which said movable jaws are carried, a link jointed to said pivoted device, and a bell-crank lever one arm of which is jointed to said link to form a toggle, and the other arm of which serves as an operating handle.

2. A bag holder comprising fixed and movable jaws between which a bag is to be held, a pivoted device by which said movable jaws are carried, and a toggle device, comprising two members adapted to be brought into alinement in closing the holder, said toggle device thus maintaining the gripping jaws in gripping position.

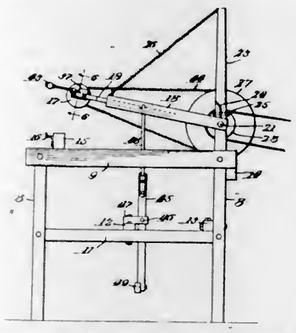
3. A bag holder comprising the combination with a suitable support provided with fixed holding means, of a device pivotally attached to said support and provided with movable holding means, and a toggle device, comprising two members adapted to be brought into alinement in closing said movable holding means against said fixed holding means, said toggle device thus maintaining the holder closed.

4. A bag holder comprising the combination with a suitable support provided with fixed holding means, of a device pivotally attached to said support and provided with movable holding means, a toggle device, comprising two members adapted to be brought into alinement in closing said movable holding means against said fixed holding means, said toggle device thus maintaining the holder closed, and spring-operated means for raising said movable holding means when released.

5. A bag holder consisting of the combination with a hopper provided at its bottom with a horizontal flange having upwardly extending lips on opposite sides of said hopper, of a movable device pivoted to said hopper and provided with gripping jaws coöperating with said flange and lips, a toggle device, comprising two members adapted to be brought into alinement in closing the movable jaws, and a spring operatively connected with said pivoted device to lift the same when the gripping jaws are released.

[Claims 6 to 8 not printed in the Gazette.]

1,173,225. GRINDING-MACHINE. BYRON SWEET, Poplar Grove, Ill. Filed Oct. 23, 1915. Serial No. 57,429. (Cl. 51—8.)



1. In a grinding machine, the combination of a drive pulley, a swinging frame co-axially mounted with the drive pulley, a grinding wheel, means slidably mounted upon and movable longitudinally of said frame and supporting the grinding wheel adjacent to the outer end of the frame, and a contractile spring belt connecting the drive pulley and grinding wheel.

2. In a grinding machine, the combination of a supporting frame provided at its front end with a work support, a swinging frame pivoted on a horizontal axis to the rear portion of the supporting frame and extending forwardly toward said work support, a grinding wheel, means so slidably supporting the grinding wheel on the pivoted frame that the grinding wheel may be reciprocably moved longitudinally thereon so as to be capable of back and forth feed movement relative to the work support, hand operable means in connection with the grinding wheel whereby the same may be swung by hand on the pivot axis of said swinging frame toward and away from the work support, means for rotating the grinding wheel, and means for reciprocating said grinding wheel supporting means on said swinging frame.

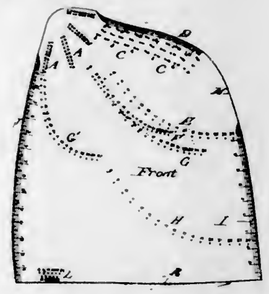
3. In a grinding machine, the combination of means for supporting a sickle, a grinding wheel, a frame pivoted at one end and supporting the grinding wheel at its outer end over the sickle and so that the grinding wheel may be oscillated laterally and moved back and forth over the work support relatively to the pivot axis of said supporting frame and swung toward and away from said support on the said pivot axis as a fulcrum, a pulley concentric with the pivot axis of said supporting frame, and a contractile spring belt driving connection between the grinding wheel and said pulley whereby the grinding wheel will be constantly urged toward the said pivot axis and capable of said lateral oscillation and back and forth movement.

4. In a grinding machine, the combination of a work support, a grinding wheel, a driving pulley mounted on a relatively fixed axis, a contractile spring belt connection between the pulley and the grinding wheel, means supporting the grinding wheel in such manner that it may be moved back and forth between and with respect to its driving pulley and the work support and oscillated on an axis substantially intersecting that of the grinding wheel at right angles, said spring belt constantly urging the grinding wheel toward said driving pulley and handle means connected with the grinding wheel whereby an operator may by direct manual control of the grinding wheel position it at an angle with respect to work on the work support and move the wheel back and forth in the grinding operation, in which latter movement the grinding wheel is moved away from the said driving pulley against the tension of said spring belt.

5. In a grinding machine, the combination of a work support and a driving pulley spaced apart in fixed relation, a grinding wheel, a holder therefor carrying the grinding wheel normally disposed intermediate the work support and pulley, and a contractile spring belt connection between the pulley and grinding wheel for rotating the latter, said grinding wheel holder being so constructed that the grinding wheel may be moved back and forth over the work support and oscillated on an axis substantially intersecting that of the wheel at right angles, the said holder being movable over the work support away from the driving pulley against the tension of said spring and consequently, being constantly urged toward the driving wheel by said spring.

[Claims 6 to 9 not printed in the Gazette.]

1,173,226. PATTERN-DRAFTING DEVICE. HIRAM H. TAYLOR, Worcester, Mass. Filed Nov. 7, 1913. Serial No. 799,666. (Cl. 33—13.)



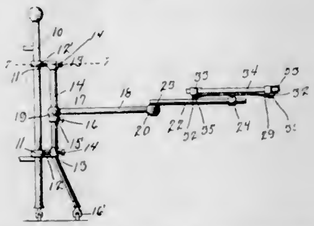
1. The drafting device for apparel patterns having the diverging rows of perforations, A A at the neck, the rows of perforations lying on compound curves, C C at the shoulder, the graduated scale, D at the shoulder on a compound curve, the rows of perforations lying on portions of elliptic curves, E, F, G, G′, and H for drafting the bust and armscye, for locating the joining-point under the arm and in connection with the dart chart for locating the tops of the darts, the graduated scales set on portions of elliptic curves, I and J, a compound curved edge, K for shaping the waistline, the double row of perforations L, and the curved edge, M all substantially as indicated.

2. The drafting device for apparel patterns having the row of perforations, A′ and the curved edge A² for the back of the neck, the row of perforations set on a compound curve, C′, the graduated scale also set on a compound curve, D′ for the back shoulder, the rows of perforations lying on portions of elliptic curves, E′ and H′, the graduated scale, I′, said rows of perforations E′ and H′ curving upward toward the top of the chart from said scale I′, the curved edge, M′, the scales of inches, N and O, all substantially as and for the purpose set forth.

3. The drafting device for the darts having rows of perforations P, P″, Q and Q′, said row of perforations P arranged out of alinement with and below said row of perforations P′, said row P passing diagonally through said rows of perforations Q, the rows of perforations Q′ arranged parallel above said rows Q, the single perforation R, the further row of perforations R′ arranged parallel to said rows Q′, and also parallel to the scale edge S², the curved edge S, the scale thereon S′ and the scale of inches S², all substantially as specified.

4. The drafting device for sleeve patterns having the series of rows of perforations U, U′, U² and U³ at one end converging toward the elbow, the series of double rows of perforations U⁴, U⁵ and U⁶ across the same at the elbow, the series of rows of perforations U⁷, U¹⁰, U⁸ and U⁹ at the opposite end also converging toward the elbow, the series of rows of perforations X, X′ and X², two above running nearly parallel with and one below running obliquely to the rows at the elbow and converging toward the outside edge of the sleeve chart, the scales V and V′ arranged on compound curved edges, the curved edge W at the top and the straight edge W′ at the bottom all substantially as set forth.

1,173,227. TABLE ATTACHMENT FOR BEDS. CLARENCE W. THORNILEY, Electra, Tex. Filed Aug. 3, 1914. Serial No. 854,856. (Cl. 45—82.)



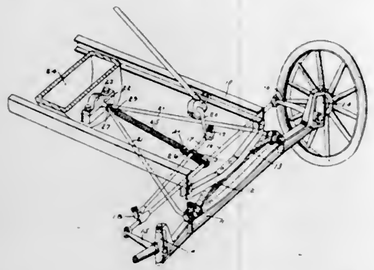
In a table attachment for beds the combination of a pivoted rod adapted for swinging movement in a horizontal plane, means for locking said rod against swinging movement, a sleeve slidably and rotatably adjustable on the rod, a casting rotatably adjustable on the sleeve, arms radiating from said casting, each of said arms having their outer ends offset, L-shaped members engaged on the offset ends of the arms respectively, lateral extensions on one arm of each L-shaped member, said extensions being bent inwardly to form sockets, a table slab having its corners engaged in said sockets, and means for locking the L-shaped members against disengagement from the arm.

1,173,228. ATTACHMENT FOR AUTOMOBILES FOR PREVENTING RATTLE AND WEAR. HENRY M. UNDERWOOD, Waukegan, Ill., assignor of one-half to Charles H. Fox, Waukegan, Ill. Filed July 15, 1915. Serial No. 40,038. (Cl. 21—197.)

1. In combination with the steering gear of a motor driven vehicle comprising connecting rods, a resilient

device for preventing rattle and wear which is anchored to the car and has a slidable engagement with said connecting rods so as to exert stresses transversely thereof.

2. The combination with the steering gear of a motor driven vehicle comprising the usual tie bar and drag link, a resilient device for preventing rattle and wear which is anchored to the car and has a slidable engagement with said drag link and tie bar so as to exert stresses transversely of the same which are greater against the tie bar than against the drag link.



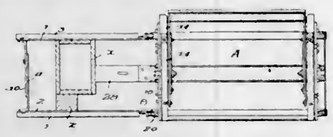
3. In combination with the steering gear of a motor driven vehicle comprising connecting rods, a device for preventing rattle and wear comprising a spring anchored to the car, and a flexible band having a slidable engagement with said connecting rods so that the device exerts stresses transversely thereof.

4. In combination with the front axle, radius rods and steering gear connecting rods of a motor driven vehicle, a resilient device for preventing rattle and wear which is anchored to the radius rods and has a slidable engagement, under tension, with said connecting rods.

5. In combination with the front axle, radius rods and the steering gear connecting rods of a motor driven vehicle, a resilient device for preventing rattle and wear which consists of a spring anchored to the radius rods, and a flexible band attached to the spring and having a slidable engagement with the connecting rods so as to exert transverse stresses against the same.

[Claims 6 to 14 not printed in the Gazette.]

1,173,229. MOLDING-MACHINE. WILL H. VAN GUILDER, New Rochelle, N. Y. Filed Sept. 9, 1913. Serial No. 789,007. (Cl. 25—131.)



1. In a molding machine, the combination with a supporting member, of a pair of opposed walls each pivoted to said supporting member at one end to swing about a vertical axis, and means for tying the swinging portions of the walls together at different points in the lengths of said walls.

2. In a molding machine, the combination with a supporting member of inverted U-shape, of two opposed walls each hinged to one arm of said supporting member to turn about a vertical axis, and means for tying the walls together.

3. In a molding machine, the combination with a supporting member of inverted U-shape, having its arms adjustable toward and from each other, of two opposed walls each hinged at one end to one of the arms of the supporting member to turn about a vertical axis, and means for tying the walls together.

4. In a molding machine, the combination with a supporting member, of two opposed walls each hinged at one end to the supporting member to turn about a vertical axis, and a tie piece removably secured to the walls to hold them against movement toward and from each other.

5. In a molding machine, the combination with a supporting member, of two opposed walls each hinged at one end to the supporting member to turn about a vertical axis and each provided with a horizontal series of bayonet slots, and a tie piece having headed projections at its ends to be received within the bayonet slots for the purpose of holding the opposed walls against relative movement.

[Claims 6 to 13 not printed in the Gazette.]

1,173,230. APPARATUS FOR TREATING THIN-SKINNED PRODUCTS FOR CANNING. EDWARD J. VAUDREUIL, Eau Claire, Wis. Filed May 13, 1915. Serial No. 27,925. (Cl. 146—14.)



1. An apparatus for treating thin-skinned products for canning comprising a trough having one of its sides open, a conveyer for delivering products to the trough, means associated with the conveyer for subjecting the products to a temperature whereby the skins are loosened, a shiftable porous member arranged to form a closure for the open side of the trough, and means for causing currents of air to travel through the porous member, whereby the loosened skins of the product are separated from the body portions thereof.

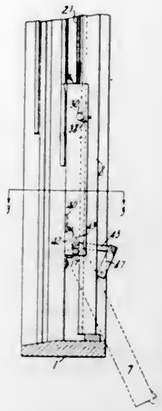
2. An apparatus for treating thin-skinned products for canning comprising a trough having one of its sides open, a conveyer for delivering products to the trough, means associated with the conveyer for subjecting the products to a temperature whereby the skins are loosened, a rotary drum having perforated spiral grooves therein arranged to travel past the open side of the trough, a series of separate air channels associated with the spiral perforated surface of the drum, and means for causing successive currents of air to pass through the channels as said channels are brought into the field of the trough.

3. An apparatus for treating thin-skinned products for canning comprising a trough having an open side, a conveyer for delivering products to the trough, means associated with the conveyer for subjecting the products to a temperature whereby the skins are loosened, a vacuum chamber having a perforated wall juxtaposing the open side of the trough, and means for causing currents of air to travel through the vacuum chamber whereby the products are stripped of their skins.

4. An apparatus for treating thin-skinned products for canning comprising a trough having one of its sides open, a conveyer for delivering products to the trough, means associated with the conveyer for subjecting the products to a temperature whereby the skins are loosened, a shiftable porous member arranged to form a closure for the open side of the trough, and means for causing fluid to travel through the porous member, whereby the loosened skins of the product are separated from the body portions thereof.

5. An apparatus for treating thin-skinned products for canning, comprising means for subjecting the units of the products to heat, whereby their skins are loosened, a trough having one of its sides open, the said trough being arranged to receive the loosened skin products, a rotatable drum having its surface spirally grooved and perforated, adapted to form a closure for the open side of said trough, whereby the units of the product are caused to travel from end to end of said trough, and fluid suction means associated with the drum for subjecting the traveling units of the product to currents of air, whereby the loosened skins of the same are removed.

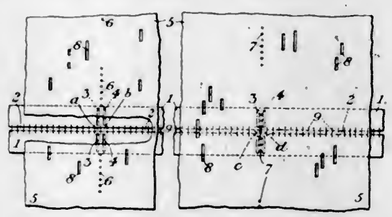
1,173,231. REVERSIBLE WINDOW-SASH. STEPHEN VIRAGH, Swissvale, Pa. Filed Feb. 24, 1912. Serial No. 679,743. (Cl. 20—43.)



1. In a construction of the character described, the combination of a frame having side stiles provided with grooves, a sash slidable between said stiles and having pivots traveling along said grooves, and abutments for coöperation with said pivots and comprising a base secured to the frame and provided with a plate, one edge of which is arranged to coöperate with said pivot, an abutment member pivoted to said base, and means for moving said abutment member into the path of movement of the pivot.

2. In a construction of the character described, the combination of a frame having side stiles provided with stops and inwardly extending shoulders forming grooves, a sash slidable between said stiles and having pivots traveling in said grooves, means movable into the paths of movement of said pivots to form abutments therefor, said stops being provided with ribs, and adjustable locking bolts on said sash having cutaway portions embracing said ribs and adapted to be withdrawn from said grooves through notches in said ribs.

1,173,232. TUNE-SHEET FOR AUTOMATIC MUSICAL INSTRUMENTS. JAMES JOHN WALKER, London, England. Original application filed July 10, 1911, Serial No. 637,761. Divided and this application filed July 16, 1912. Serial No. 709,639. (Cl. 84—161.)



1. A tune sheet having groups of register control perforations controlling the proper registration of the note perforations in the sheet with the note ducts in the tracker board, each control perforation being too small to have individually any operative effect and the groups being spaced from one another and alined in the direction of travel of the sheet substantially as set forth.

2. A tune sheet having a plurality of rows of groups of register control perforations controlling the proper registration of the note perforations in the sheet with the note ducts in the tracker board, each control perforation being too small to have individually any operative effect and the groups being spaced from one another in the several rows and so arranged that the spaces between groups in one row are opposite the spaced groups in another row.

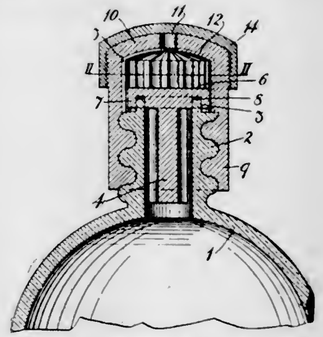
3. A tune sheet having register control perforations controlling the proper registration of the note perforations in the sheet with the note ducts in the tracker board, and of such small size as individually to have no operative effect and arranged a little out of longitudinal alinement with normal slots in the sheet.

4. A tune sheet having a line of register control perforations controlling the proper registration of the note perforations in the sheet with the note ducts in the tracker board, and of such small size as individually to have no operative effect and arranged slightly to one side of a longitudinal line passing through normal slots in the sheet.

5. A tune sheet having a line of register control perforations controlling the proper registration of the note perforations in the sheet with the note ducts in the tracker board, and of such small size as individually to have no operative effect and arranged in parallel relation with the normal perforations.

[Claim 6 not printed in the Gazette.]

1,173,233. NON-REFILLABLE BOTTLE. MICHAEL H. WHALEN, New York, N. Y. Filed Apr. 14, 1915. Serial No. 21,262. (Cl. 215—69.)

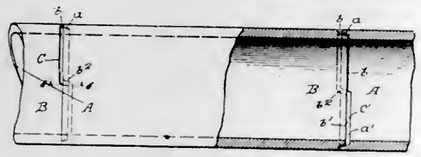


1. The combination with a bottle neck having a reduced end of constant diameter, of a valve having a stem extending into the bore of the bottle neck, and a head having a groove to fit said reduced end portion of the neck, there being a short flange on the head of the valve around the groove, and a permanent cap on the bottle neck having a chamber extending well above the head of the valve when the latter is in closed position, the distance between the head of the valve and the top of the permanent cap, in this position, being greater than the length of the depending flange around the groove in said head, whereby said flange will be entirely removed from and spaced well away from the reduced end portion of the neck when the bottle neck is inverted and the valve is in open position, said cap having a discharge opening in the center of its top and grooves extending up the inner wall of said chamber and radially across the roof thereof to the discharge opening.

2. The combination with a bottle neck having a reduced end, of a valve having a stem extending into the bore of the bottle neck and having longitudinal grooves therein, and a head having a groove to fit said reduced end portion of the neck, and a permanent cap on the bottle neck having a chamber extending well above the head of the valve when the latter is in closed position, said cap having a dome-shaped top with a discharge opening in the center thereof and grooves extending up the inner wall of said chamber and radially across the roof thereof to the discharge opening.

3. The combination with a bottle neck having a reduced end, of a valve having a stem extending into the bore of the bottle neck, and a head having a groove to fit said reduced end portion of the neck, a gasket in said groove to engage the reduced end of the bottle neck, a permanent cap on the bottle neck having a chamber extending well above the head of the valve when the latter is in closed position, said cap having a dome-shaped top with a discharge opening in the center thereof and grooves extending up the inner wall of said chamber and radially across the roof thereof to the discharge opening, and a removable cap also having a dome-shaped top to fit over said discharge opening and compress air in the chamber of the permanent cap above the valve head for forcing said valve head firmly down with the gasket making close connection with the reduced end of the bottle neck.

1,173,234. SECTIONAL CONDUIT. NATHAN D. WHITMAN, Chicago, Ill., assignor to Chicago Reinforced Concrete Pipe Company, Chicago, Ill., a Corporation of South Dakota. Filed Aug. 14, 1915. Serial No. 45,575. (Cl. 72—53.)



1. A pipe section having a bell at one end and a spigot at the other, the spigot at its top portion being wider than the bell and at its bottom portion being narrower than the bell.

2. A pipe section having a bell at one end and a spigot at the other, the spigot at its top portion being wider than the top portion of the bell and provided at the ends of its top portion with angular channels, and the bell at its bottom portion being wider than the bottom portion of the spigot.

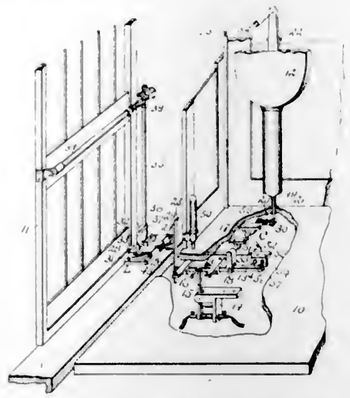
3. A pipe section having a bell at one end and a spigot at its other end, the bell at its top portion being narrower than the upper portion of the spigot and at its bottom portion being cut-back to a width greater than the bottom portion of the spigot to provide a seat for the lower portion of the spigot and a lower groove between assembled sections.

4. A pipe formed in sections, each section having a bell at one end and a spigot at its other end, the bell at its top portion being narrower than the top portion of the spigot to provide a top outer groove and at its lower portion being wider than the lower portion of the spigot to provide an inner groove between the lower portions of the sections.

5. A pipe formed in sections, each section having a bell at one end and a spigot at its other end, the spigot at its top portion being wider than the bell to provide a top outer groove, angular channels in the spigot at the ends of such groove, and the spigot at its lower portion being narrower than the bell to provide an inner groove between the lower portions of the sections and communicating at its ends with the angular channels in the spigot.

1,173,235. ELEVATOR SAFETY SYSTEM. GLENN S. WILLIAMSON, New York, N. Y., assignor to Shurloc Elevator Safety Co., Inc., a Corporation of New York. Filed Mar. 12, 1914. Serial No. 824,121. (Cl. 177—336.)

1. In a safety illuminating system for elevators, the combination with an elevator shaft door and a lock therefor, of a floor-light in the elevator car, a circuit for said floor-light including a circuit closer on the car, and a train of mechanical connections between said lock for the shaft door and the circuit closer, which connections are partly on the car and partly at the landing, whereby said circuit closer is operated simultaneously with the unlocking of the door and the light remains lighted until the shaft door is relocked.



2. In a safety illuminating system for elevators, the combination with an elevator shaft door, and a lock therefor, of a lighting circuit including a floor light and a circuit closer both on the car, means for unlocking the elevator shaft door, and mechanical connections whereby said means also operates said circuit closer.

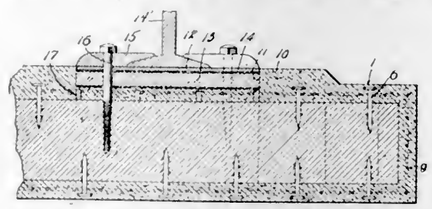
3. In a safety illuminating system for elevators, the combination with an elevator shaft having a landing, of an elevator car having a controller, a lock for said controller, a lighting circuit including a floor-light and a circuit closer both on the car, and a train of mechanical connections mounted in part at the landing and in part on the car and connected both with the controller lock and said circuit closer.

4. In a safety illuminating system for elevators, the combination of an elevator car having a controller, a lock for said controller, a lighting circuit including a floor-light and a circuit closer both on the car, and operating connections including a shoe carried by the car and links connecting said shoe with the controller lock and circuit closer.

5. In a safety illuminating system for elevators, the combination with an elevator car and a shaft door, of a lighting circuit including a floor-light in said car, a lock for said door, a manual member on said door for unlocking said lock, and connections located in part at the landing and in part on the car for closing said circuit to cause the said light to illuminate the floor by means of the operation of said manual operating member.

[Claims 6 to 10 not printed in the Gazette.]

1,173,236. RAILWAY-TIE. SAMUEL T. WILSON, Charleston, W. Va., assignor of one-half to A. V. Pollock, W. E. Smith, E. E. Fullerton, and N. W. Klein, Greenup, Ky. Filed Dec. 30, 1914. Serial No. 879,758. (Cl. 238—3.)



1. In a rail tie, a frame, a plastic body inclosing the frame, and a plurality of barbed spikes driven into the frame to extend outwardly therefrom, the extended portion of each spike being embedded in the plastic body to serve as a retaining means therefor.

2. In a rail tie, a core, a plastic body inclosing said core, a yielding reinforcing element embedded in said body above and below said core, and a further reinforcing element projecting from said core and engaging said first mentioned element, substantially as described.

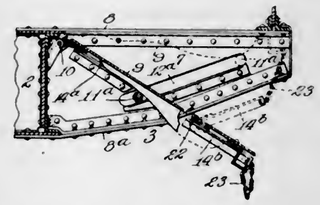
3. In a rail tie, a frame comprising a plurality of longitudinal truss beams, a dove-tailed extension formed at the respective terminals of each beam, means maintaining the beams in spaced parallel relation, a plastic body inclosing the frame, and a reinforcing element embedded in said plastic body and inclosing the frame.

4. In a railway tie, a plastic body, a frame inclosed within said body, a plurality of barbed spikes driven into the frame to extend outwardly therefrom, the extended portions of each spike being embedded in the plastic body to serve as a retaining means therefor a reinforcing plate embedded in the body directly adjacent the rail engaging portion thereof, and support means for the rail fastened to the tie directly over the reinforcing plate, as and for the purpose set forth.

5. In a railway tie, a wooden frame, a plastic body inclosing the frame, means driven into the frame and embedded in the plastic body to serve as a retaining means for the latter, a reinforcing plate mounted on the frame and embedded in the body, rail support means mounted on the tie directly over said reinforcing plate, said support means comprising a metal plate directly engageable with the rail, a wooden filler between the plate and the tie and a plurality of felt strips interposed respectively between the plate and the filler and the filler and the tie and means to lock the fastening means against movement relatively to the tie.

[Claim 6 not printed in the Gazette.]

1,173,237. DUMP-CAR. WINFIELD HANCOCK YOST, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Dec. 22, 1913. Serial No. 808,178. (Cl. 105—14.)



1. In a car, dump doors and an apron supported independently of and adapted to extend between the doors when the latter are open.

2. In a car, dump doors and an apron supported independently of the doors extending between and located just beneath the latter when they are open.

3. In a car, the combination with a cross-bearer, of a door at each side of the cross-bearer and an apron secured to the cross-bearer and adapted to extend between the doors when open.

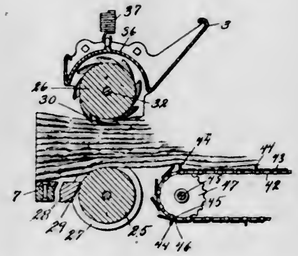
4. In a car, the combination with a cross-bearer and a door hinged at each side of the cross-bearer, of a downwardly inclined apron projecting on opposite sides of the cross-bearer underneath the doors, a portion of such apron extending out from the bottom edge of the cross-bearer.

5. In a car, the combination with a cross-bearer, of a door at each side of the cross-bearer and an apron secured to such cross-bearer, adapted to extend between the doors and projecting out from the bottom edge of the cross-bearer.

[Claims 6 to 12 not printed in the Gazette.]

1,173,238. ROTARY CUTTER. GEORGE P. YOUMANS, Galesburg, Mich. Filed Mar. 30, 1912. Serial No. 687,500. (Cl. 146—26.)

1. In a structure of the class described, the combination with the frame, of a bottom feed roll, a coacting top feed roll bearings for said top feed roll, said frame being provided with vertically slotted supports for said bearings permitting vertical movement of said top roll and with rests for supporting said top roll in its normal position, a hopper comprising side walls, a hood for the top roll mounted on the said bearings thereof and having an upwardly and rearwardly projecting top wall for said hopper moving with said feed roller and its hood vertically between the side walls of said hopper, and a coiled spring connected to said hood to carry a part of the weight of said top roll and its connected parts when in their normal position on said rests, the lift of the spring being insufficient to raise the parts from the rests, the spring being supported so that as the roll is raised by the material passing between the rolls the lifting pull of the springs decreases, whereby the pressure of the top roll upon the material increases as the depth of the material passing between the rolls increases.



2. In a structure of the class described, the combination with the frame, of a bottom feed roll, a coacting top feed roll, bearings for said top feed roll, said frame being provided with vertically slotted supports for said bearing permitting vertical movement of said top roll and with rests for supporting said top roll in its normal position, a hopper comprising side walls, a top wall for said hopper moving with said feed roller, and a coiled spring connected to said hood to carry a part of the weight of said top roll and its connected parts when in their normal position on said rests, the lift of the spring being insufficient to raise the parts from the rests, the spring being supported so that as the roll is raised by the material passing between the rolls the lifting pull of the spring decreases, whereby the pressure of the top roll upon the material increases as the depth of the material passing between the rolls increases.

3. In a structure of the class described, the combination with the frame, of a bottom feed roll, a coacting top feed roll supported for vertical movement, and a coiled spring connected to said hood to carry a part of the weight of said top roll and its connected parts when in their normal position on said rests, the lift of the spring being insufficient to raise the parts from the rests, the spring being supported so that as the roll is raised by the material passing between the rolls the lifting pull of the spring decreases, whereby the pressure of the top roll upon the material increases as the depth of the material passing between the rolls increases.

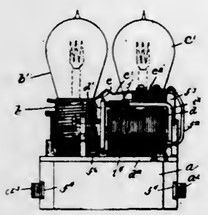
4. In a structure of the class described, comprising a cutter bar and a coacting cutter, in combination with a bottom feed roll arranged in front of and in close proximity to the cutter bar, said feed roll being provided with a plurality of annular A-shaped flanges disposed at right angles to the plane of the cutter bar, said flanges being of substantial depth and substantially spaced whereby they are adapted to receive the material to be cut between them and support it against lateral sliding movement on the cutter bar as it is acted upon by the knives, and a top feed roll coacting to press the material to be cut between the flanges of the bottom feed roll.

5. In a rotary cutter, the combination with the frame, of a cutter bar; a rotary head having knives arranged to coact with said cutter bar; a shaft therefor; a bearing for said shaft; a pulley arranged on the outer end of said shaft and longitudinally movable thereon, the inner

end of the hub of the pulley being in bearing engagement with the end of said bearing; an adjusting screw at the outer end of said shaft; a collar arranged thereon between the outer end of the hub of the pulley and said nut; and means for adjusting said cutter bar relative to said cutter head.

[Claim 6 not printed in the Gazette.]

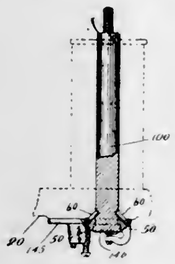
1,173,239. RAILWAY SIGNAL-LANTERN. ALFRED A. ZIEGLER, Boston, Mass. Filed June 6, 1912. Serial No. 701,978. (Cl. 175—279.)



1. In an automatic circuit controller for electric lamps, a base plate, two incandescent electric lamps arranged thereon, an electro-magnet supported on the base plate, an armature for the electro-magnet, a switch including a spring element and an element carried by the armature, a circuit for one lamp including a conductor leading from the lamp to the electro-magnet, a conductor leading from the electro-magnet to the spring element of the switch, and a conductor leading from the spring element to a terminal, a circuit for the other lamp including a conductor leading from the lamp to the armature, and a common conducting plate electrically connecting both lamps and forming a terminal therefor.

2. An automatic circuit controller for electric lamps, a base plate, two incandescent electric lamps arranged thereon, an electro-magnet, an armature therefor forming a switch element, an independent switch element, the independent switch element forming a portion of a circuit conductor for one of the lamps beyond the electro-magnet, said electro-magnet being in series circuit with the other element and with the independent switch element, the position of the armature controlling the use of the independent switch element as a circuit conductor.

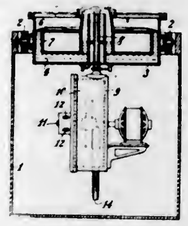
1,173,240. ELECTROMAGNET. ALFRED A. ZIEGLER, Boston, Mass. Filed Jan. 20, 1913. Serial No. 742,989. (Cl. 175—281.)



1. In an electro-magnet, a magnet-core having an enlarged pole-piece, and having seats formed in its sides above said pole-piece, a carrying-plate forming the top wall of a housing, having a hole through it for said core and having ribs on its underside arranged adjacent said hole and spaced apart to receive said pole-piece between them, said ribs being of no greater height than the thickness of the pole-piece, and attaching-screws for stationarily holding said core, which extends diagonally upward through threaded holes in said ribs and engage the seats on the sides of the core, substantially as described.

2. In an electro-magnet, a carrying-plate forming the top wall of a housing comprising an upper and an under plate secured together, both of said plates having alined holes through them, the upper plate having recesses in its underside adjacent the holes therethrough, and the under plate having ribs on its underside arranged adjacent the holes therethrough, which ribs are spaced apart, magnet-cores extended through said holes having enlarged pole-pieces arranged between said ribs and in engagement therewith and with the under plate, and having seats in its sides above said pole-pieces, which seats are disposed in the recesses in the upper plate, and attaching-screws for stationarily securing the magnet-cores to the under plate which extends diagonally upward through threaded holes in said ribs and engage the seats on the cores, substantially as described.

1,173,241. GYROSCOPIC APPARATUS. HERMANN ANSCHÜTZ-KAEMPFE, Kiel, Germany. Filed Nov. 9, 1909. Serial No. 527,099. (Cl. 74—78.)



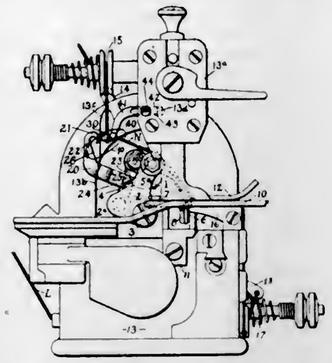
1. In a gyroscopic apparatus of the kind described, the combination, with the gyroscope being suspended in such a way that its axis of spin is normally horizontal, of means for producing an angular torque on the suspended mass participating in any inclination of the axis of spin, means for producing a second angular torque on the suspended mass, acting always in a vertical plane, the latter torque being equal, but opposite to the former in the normal position of the gyroscope, and means for suspending the gyroscope.

2. In gyroscopic apparatus of the kind described the combination with a float, a casing suspended therefrom and rigidly attached thereto and provided with an inlet and an outlet, and a rotary mass having a normally horizontal axis of spin in said casing, of a nozzle attached to said outlet for producing an air-jet, the reaction of said air-jet forming a constant angular torque participating in each inclination of the axis of the gyroscope, and means for producing a second angular torque, acting always in a vertical plane, the latter torque being equal but opposite to the former in the position of rest of the gyroscope.

3. In gyroscopic apparatus of the kind described, the combination with a floating gyroscopic body suspended in such a way that its axis of spin is usually retained in a horizontal plane, of means for producing an angular torque participating in the inclination of the gyroscope, and a weight arranged on said float for producing a second angular torque acting in a vertical plane, the latter torque being equal but opposite to the former in the normal position of rest of the gyroscope.

4. In gyroscopic apparatus of the kind described, the combination with a float, a casing suspended therefrom and rigidly attached thereto and provided with an inlet and an outlet, and a rotating mass having a normally horizontal axis of spin in said casing, of a nozzle attached to said outlet for producing an air-jet, the reaction of said air-jet constituting a constant regular torque participating in the inclinations of the axis of spin of the gyroscope, and a weight arranged on said float for forming a second angular torque always acting in a vertical plane, the latter torque being equal but opposite to the former in the position of rest of the gyroscope.

1,173,242. SELF-THREADING TAKE-UP. SAMUEL WALTER AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 30, 1914. Serial No. 815,475. (Cl. 112—26.)



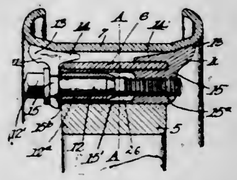
1. In a sewing machine including a tension and an eye pointed needle, a take up of the class described comprising a pair of stationary thread guiding and supporting elements and an implement having a hooked throated portion traveling in an ovate path and adapted to operate upon the thread extending between the said thread guiding and supporting elements said elements being mounted on a stationary portion of the machine between the tension and the needle eye and being so disposed with relation to the path of travel of the implement, that the implement in its operation will be automatically threaded during any complete traverse of its path.

2. In a sewing machine and in combination with the stitch forming mechanism thereof, two stationary thread supporting and guiding elements, a thread controlling implement having a hook provided with a throat and a thread engaging edge, and means for actuating the implement in an ovate path, a portion of which is between the thread supporting and guiding elements, whereby the point of the hook will pass over and grasp the thread and whereby the thread will be pulled off and taken up, and let out and controlled, by the throat, the hook and the thread engaging edge; in the manner herein shown and described.

3. In a sewing machine, including a tension and an eye pointed needle, a thread controlling device interposed between the tension and the needle eye and including in combination; a pair of thread guiding and supporting elements, an implement provided with a pointed hook comprehending a throat, a thread engaging edge into which a wall of the said throat merges, the said thread engaging edge extending past and beyond the point of the hook, and means for carrying and actuating the implement whereby the throat thereof is caused to travel in an endless curvilinear path that crosses and circumscribes a straight line extending between the thread guiding and supporting elements, and the thread engaging edge is caused to sweep across the said path, the thread between the said guiding and supporting elements, when extending in a normal course therebetween, being engaged by the thread engaging edge during the advance stroke thereof, and, as the said edge slides across the thread in engagement therewith on the return stroke, the said thread will be led into operative engagement with the throat and the hook, substantially as and for the purposes herein set forth.

4. In a device of the class described, the combination of a moving thread engaging implement comprising a shank portion secured to the pitman link of the needle actuating mechanism of a sewing machine, and a thread engaging portion forming an inclined extension of the said shank and terminating at the free end thereof in a pointed curviform hook comprehending a substantially circular and open throat, a thread engaging edge extending from the said throat past the point of the hook to the forward edge of the shank and forming an internal angle therewith, an edge extending from the back of the hook to the rear edge of the shank and forming an external edge therewith, the throat of the thread engaging portion being adapted to operate in an endless curvilinear path and the said thread engaging edge being adapted to operate over the field included within the said path, with a combined vibratory and reciprocatory motion, and two stationary thread guiding eyes mounted one on either side of the plane in which the said path lies, the normal course of the thread between the said eyes being in the direction of a line passing through the said plane and within the limits of the said path, whereby the said thread engaging implement will be automatically threaded during a complete cycle thereof, and whereby the improper functioning thereof is provided against, substantially as here in set forth.

1,173,243. VEHICLE-WHEEL. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1912. Serial No. 685,103. (Cl. 152—21.)



1. An automobile wheel having a flangeless felly band in combination with a demountable rim thereon, a driving connection between said band and rim to prevent relative rotation thereof and a plurality of sets of clamping wedge lugs spaced around the wheel felly and adapted to secure the rim on the wheel by tensioning and circumferentially distorting the rim thereon, each said set comprising two opposed non-contacting lugs presenting clamping wedge portions between the felly band and rim and a single felly bolt for clamping the same against the rim.

2. An automobile wheel having a felly band, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedges, both normally positioned between and contacting both said rim and band and having shanks paralleling the sides of the wheel felly, and a headed clamping bolt passing through said shanks and through the wheel felly beneath said band for closing said wedges against the rim to tension and circumferentially distort the same and thus secure it upon the wheel.

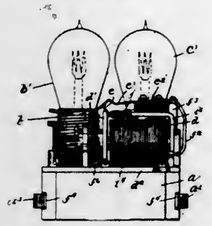
3. An automobile wheel having a felly band of symmetrical cross section and cylindrical inner periphery, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedge lugs presenting pointed wedges between said rim and band, and a straight clamping bolt passing through said lugs for closing said wedges upon said band and against said rim to secure it upon said wheel.

4. An automobile wheel having a felly band, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedge lugs having clamping wedge portions normally positioned between said rim and band and also having shanks paralleling the sides of the wheel felly, one said lug being fixed against the inner side of the wheel felly and the other being movable toward and from the front or outer side of said felly, and a headed clamping bolt passing through said shanks and through the wheel felly beneath said band, for closing said wedges against

end of the hub of the pulley being in bearing engagement with the end of said bearing; an adjusting screw at the outer end of said shaft; a collar arranged thereon between the outer end of the hub of the pulley and said nut; and means for adjusting said cutter bar relative to said cutter head.

[Claim 6 not printed in the Gazette.]

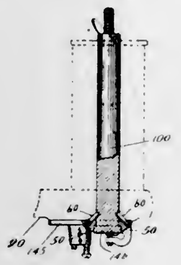
1,173,239. RAILWAY SIGNAL-LANTERN. ALFRED A. ZIEGLER, Boston, Mass. Filed June 6, 1912. Serial No. 701,978. (Cl. 175—279.)



1. In an automatic circuit controller for electric lamps, a base plate, two incandescent electric lamps arranged thereon, an electro-magnet supported on the base plate, an armature for the electro-magnet, a switch including a spring element and an element carried by the armature, a circuit for one lamp including a conductor leading from the lamp to the electro-magnet, a conductor leading from the electro-magnet to the spring element of the switch, and a conductor leading from the spring element to a terminal, a circuit for the other lamp including a conductor leading from the lamp to the armature, and a common conducting plate electrically connecting both lamps and forming a terminal therefor.

2. An automatic circuit controller for electric lamps, a base plate, two incandescent electric lamps arranged thereon, an electro-magnet, an armature therefor forming a switch element, an independent switch element, the independent switch element forming a portion of a circuit conductor for one of the lamps beyond the electro-magnet, said electro-magnet being in series circuit with the other element and with the independent switch element, the position of the armature controlling the use of the independent switch element as a circuit conductor.

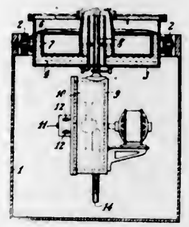
1,173,240. ELECTROMAGNET. ALFRED A. ZIEGLER, Boston, Mass. Filed Jan. 20, 1913. Serial No. 742,989. (Cl. 175—281.)



1. In an electro-magnet, a magnet-core having an enlarged pole-piece, and having seats formed in its sides above said pole-piece, a carrying-plate forming the top wall of a housing, having a hole through it for said core and having ribs on its underside arranged adjacent said hole and spaced apart to receive said pole-piece between them, said ribs being of no greater height than the thickness of the pole-piece, and attaching-screws for stationarily holding said core, which extends diagonally upward through threaded holes in said ribs and engage the seats on the sides of the core, substantially as described.

2. In an electro-magnet, a carrying-plate forming the top wall of a housing comprising an upper and an under plate secured together, both of said plates having alined holes through them, the upper plate having recesses in its underside adjacent the holes therethrough, and the under plate having ribs on its underside arranged adjacent the holes therethrough, which ribs are spaced apart, magnet-cores extended through said holes having enlarged pole-pieces arranged between said ribs and in engagement therewith and with the under plate, and having seats in its sides above said pole-pieces, which seats are disposed in the recesses in the upper plate, and attaching-screws for stationarily securing the magnet-cores to the under plate which extends diagonally upward through threaded holes in said ribs and engage the seats on the cores, substantially as described.

1,173,241. GYROSCOPIC APPARATUS. HERMANN ANSCHÜTZ-KAEMPFE, Kiel, Germany. Filed Nov. 9, 1909. Serial No. 527,099. (Cl. 74—78.)



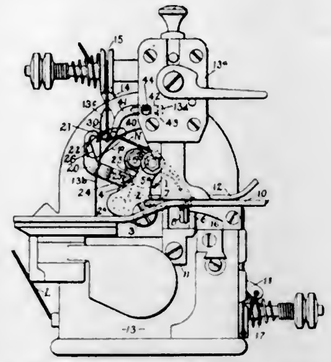
1. In a gyroscopic apparatus of the kind described, the combination, with the gyroscope being suspended in such a way that its axis of spin is normally horizontal, of means for producing an angular torque on the suspended mass participating in any inclination of the axis of spin, means for producing a second angular torque on the suspended mass, acting always in a vertical plane, the latter torque being equal, but opposite to the former in the normal position of the gyroscope, and means for suspending the gyroscope.

2. In gyroscopic apparatus of the kind described the combination with a float, a casing suspended therefrom and rigidly attached thereto and provided with an inlet and an outlet, and a rotary mass having a normally horizontal axis of spin in said casing, of a nozzle attached to said outlet for producing an air-jet, the reaction of said air-jet forming a constant angular torque participating in each inclination of the axis of the gyroscope, and means for producing a second angular torque, acting always in a vertical plane, the latter torque being equal but opposite to the former in the position of rest of the gyroscope.

3. In gyroscopic apparatus of the kind described, the combination with a floating gyroscopic body suspended in such a way that its axis of spin is usually retained in a horizontal plane, of means for producing an angular torque participating in the inclination of the gyroscope, and a weight arranged on said float for producing a second angular torque acting in a vertical plane, the latter torque being equal but opposite to the former in the normal position of rest of the gyroscope.

4. In gyroscopic apparatus of the kind described, the combination with a float, a casing suspended therefrom and rigidly attached thereto and provided with an inlet and an outlet, and a rotating mass having a normally horizontal axis of spin in said casing, of a nozzle attached to said outlet for producing an air-jet, the reaction of said air-jet constituting a constant regular torque participating in the inclinations of the axis of spin of the gyroscope, and a weight arranged on said float for forming a second angular torque always acting in a vertical plane, the latter torque being equal but opposite to the former in the position of rest of the gyroscope.

1,173,242. SELF-THREADING TAKE-UP. SAMUEL WALTER AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 30, 1914. Serial No. 815,475. (Cl. 112—26.)



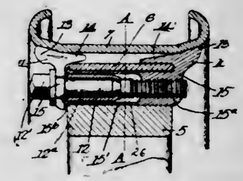
1. In a sewing machine including a tension and an eye pointed needle, a take up of the class described comprising a pair of stationary thread guiding and supporting elements and an implement having a hooked throated portion traveling in an ovate path and adapted to operate upon the thread extending between the said thread guiding and supporting elements said elements being mounted on a stationary portion of the machine between the tension and the needle eye and being so disposed with relation to the path of travel of the implement, that the implement in its operation will be automatically threaded during any complete traverse of its path.

2. In a sewing machine and in combination with the stitch forming mechanism thereof, two stationary thread supporting and guiding elements, a thread controlling implement having a hook provided with a throat and a thread engaging edge, and means for actuating the implement in an ovate path, a portion of which is between the thread supporting and guiding elements, whereby the point of the hook will pass over and grasp the thread and whereby the thread will be pulled off and taken up, and let out and controlled, by the throat, the hook and the thread engaging edge; in the manner herein shown and described.

3. In a sewing machine, including a tension and an eye pointed needle, a thread controlling device interposed between the tension and the needle eye and including in combination; a pair of thread guiding and supporting elements, an implement provided with a pointed hook comprehending a throat, a thread engaging edge into which a wall of the said throat merges, the said thread engaging edge extending past and beyond the point of the hook, and means for carrying and actuating the implement whereby the throat thereof is caused to travel in an endless curvilinear path that crosses and circumscribes a straight line extending between the thread guiding and supporting elements, and the thread engaging edge is caused to sweep across the said path, the thread between the said guiding and supporting elements, when extending in a normal course therebetween, being engaged by the thread engaging edge during the advance stroke thereof, and, as the said edge slides across the thread in engagement therewith on the return stroke, the said thread will be led into operative engagement with the throat and the hook, substantially as and for the purposes herein set forth.

4. In a device of the class described, the combination of a moving thread engaging implement comprising a shank portion secured to the pitman link of the needle actuating mechanism of a sewing machine, and a thread engaging portion forming an inclined extension of the said shank and terminating at the free end thereof in a pointed curviform hook comprehending a substantially circular and open throat, a thread engaging edge extending from the said throat past the point of the hook to the forward edge of the shank and forming an internal angle therewith, an edge extending from the back of the hook to the rear edge of the shank and forming an external edge therewith, the throat of the thread engaging portion being adapted to operate in an endless curvilinear path and the said thread engaging edge being adapted to operate over the field included within the said path, with a combined vibratory and reciprocatory motion, and two stationary thread guiding eyes mounted one on either side of the plane in which the said path lies, the normal course of the thread between the said eyes being in the direction of a line passing through the said plane and within the limits of the said path, whereby the said thread engaging implement will be automatically threaded during a complete cycle thereof, and whereby the improper functioning thereof is provided against, substantially as here in set forth.

1,173,243. VEHICLE-WHEEL. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1912. Serial No. 685,103. (Cl. 152—21.)



1. An automobile wheel having a flangeless felly band in combination with a demountable rim thereon, a driving connection between said band and rim to prevent relative rotation thereof and a plurality of sets of clamping wedge lugs spaced around the wheel felly and adapted to secure the rim on the wheel by tensioning and circumferentially distorting the rim thereon, each said set comprising two opposed non-contacting lugs presenting clamping wedge portions between the felly band and rim and a single felly bolt for clamping the same against the rim.

2. An automobile wheel having a felly band, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedges, both normally positioned between and contacting both said rim and band and having shanks paralleling the sides of the wheel felly, and a headed clamping bolt passing through said shanks and through the wheel felly beneath said band for closing said wedges against the rim to tension and circumferentially distort the same and thus secure it upon the wheel.

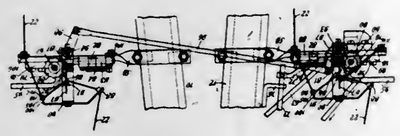
3. An automobile wheel having a felly band of symmetrical cross section and cylindrical inner periphery, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedge lugs presenting pointed wedges between said rim and band, and a straight clamping bolt passing through said lugs for closing said wedges upon said band and against said rim to secure it upon said wheel.

4. An automobile wheel having a felly band, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedge lugs having clamping wedge portions normally positioned between said rim and band and also having shanks paralleling the sides of the wheel felly, one said lug being fixed against the inner side of the wheel felly and the other being movable toward and from the front or outer side of said felly, and a headed clamping bolt passing through said shanks and through the wheel felly beneath said band, for closing said wedges against

the rim to tension and circumferentially distort the same and thus secure it upon the wheel.

5. An automobile wheel having a felly band, in combination with a demountable rim thereon, and a plurality of rim clamping devices upon and spaced about the wheel felly, each thereof comprising two opposed non-contacting wedge lugs having clamping wedge portions presented between said rim and band and also having shanks at the sides of the wheel felly, the wedge lug on the outer side of the felly being movable toward and from the same, and a headed felly bolt passing through said shanks adapted to move the outer lug in both directions, whereby the wedge lugs may be closed against the rim to tension and circumferentially distort the same and thus secure it upon the wheel.

1,173,244. STOP-MOTION MECHANISM. WILLIAM T. BARRATT, Bennington, Vt. Filed Mar. 16, 1915. Serial No. 14,744. (Cl. 66—7.)



1. A stop motion mechanism for knitting machines having, in combination, a driving shaft, a plurality of rotary stop members. a normally stationary stop member adjacent thereto common to all of said rotary stop members and movable toward and away from said rotary stop members, a plurality of drop devices each constituting a guide for a strand of yarn and normally held out of engagement with said stop members by said strands of yarn when under tension during the operation of said knitting machine and means movable with said normally stationary stop member and constructed and arranged to guide said drop devices between and into interlocking engagement with said stops when said drop devices are allowed to drop by said strands of yarn, whereby the rotation of said rotary stop members may be stopped while said normally stationary stop member is stationary and mechanism actuated by the stopping of said rotary stop members constructed and arranged to stop the rotation of said driving shaft.

2. A stop motion mechanism for a knitting machine having, in combination, a rotary stop member, a normally stationary stop member adjacent to said rotary stop member and movable toward and away from said rotary stop member, a drop device constituting a guide for a strand of yarn and normally held out of engagement with said stops by said yarn when under tension during the operation of said knitting machine and means movable with said normally stationary stop member and constructed and arranged to guide said drop device between and into interlocking engagement with said stops when said drop device is allowed to drop by said yarn, whereby while said normally stationary stop member is stationary the rotation of said rotary stop member may be stopped.

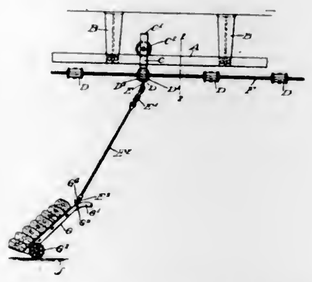
3. A stop motion mechanism for knitting machines having, in combination, a driving shaft, a rotary stop member, a normally stationary stop member adjacent thereto, means constructed and arranged to move said normally stationary stop member away from said rotary stop member, a drop device constituting a guide for a strand of yarn and normally held out of engagement with said stops by said yarn when under tension during the operation of said knitting machine, means movable with said normally stationary stop member constructed and arranged to guide said drop device between and into interlocking engagement with said stops when said drop device is allowed to drop by said yarn, whereby while said normally stationary stop member is stationary the rotation of said rotary stop member, may be stopped and mechanism actuated by the stopping of said rotary stop member constructed and arranged to stop the rotation of said driving shaft.

4. A stop motion mechanism for knitting machines having, in combination, a driving shaft, a rotary stop member, a normally stationary stop member adjacent thereto movable toward and away from said rotary stop member and having a slot therein into which said rotary stop member is arranged to project, a drop device constituting a guide for a strand of yarn and normally held out of engagement with said stops by said yarn when under tension during the operation of said knitting machine, means constructed and arranged to guide said drop device between and into interlocking engagement with said stops when said drop device is allowed to drop by said yarn whereby while said normally stationary stop member is stationary the rotation of said rotary member may be stopped and mechanism actuated by the stopping of said rotary member constructed and arranged to stop the rotation of said driving shaft.

5. A stop motion mechanism for knitting machines having, in combination, a driving shaft, a rotary stop member comprising a disk with teeth on its periphery, a normally stationary stop member movable toward and away from said rotary stop member, said normally stationary stop member being provided with a slot into which said disk is arranged to project, a ring constituting a guide for a strand of yarn and normally held out of engagement with said stops by said yarn when under tension during the operation of said knitting machine, means constructed and arranged to guide said ring into interlocking engagement with said stops when said ring is allowed to drop by said yarn, whereby while said stationary stop member is stationary the rotation of said rotary stop member may be stopped, a stop constructed and arranged to position said ring relatively to said rotary and normally stationary stop members while said yarn is under tension and mechanism actuated by the stopping of said rotary member constructed and arranged to stop the rotation of said driving shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,173,245. TRANSPORTATION SYSTEM. ADELMER M. BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Oct. 30, 1914. Serial No. 869,471. (Cl. 104—18.)



1. A transportation system comprising an overhead supported traveling power pull, a lower supporting surface, a vehicle having at one end a pivotal traveling support on the surface and a detachable coupler from the unsupported end of the vehicle to the power pull whereby such end of the vehicle is supported and the vehicle is carried forward over the surface by the pull.

2. A transportation system comprising an overhead traveling support, a traveling power pull, a lower supporting surface, a vehicle having at one end a pivotal traveling support on the surface and a detachable coupler from the unsupported end of the vehicle to the overhead traveling support and the power pull whereby such end of the vehicle is supported and the vehicle is carried forward over the surface by the pull.

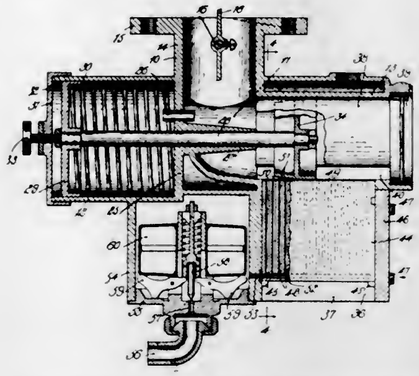
3. A transportation system comprising an overhead rail with a traveler thereon, a traveling power pull, a lower supporting surface, a vehicle having at one end a pivotal traveling support on the surface and a detachable coupler from the unsupported end of the vehicle to the traveler and the power pull whereby such end of the vehicle is supported and the vehicle is carried forward over the surface by the pull.

4. A transportation system comprising an overhead rail with a traveling pulley thereon, a power pull connected with an supported by such pulley, a lower supporting surface, a vehicle having at one end a pivotal traveling support on the surface, and a detachable coupler from the unsupported end of the vehicle to the pulley and the power pull whereby such end of the vehicle is supported and the vehicle is carried forward over the surface by the pull.

5. A transportation system comprising an overhead supported traveling power pull, a lower supporting surface, a vehicle having at one end a pivotal traveling support on the surface and a detachable laterally swinging coupler from the unsupported end of the vehicle to the power pull whereby such end of the vehicle is supported and the vehicle is carried forward over the surface by the pull.

[Claims 6 to 8 not printed in the Gazette.]

1,173,246. CARBURETER. ARTHUR H. BOETTCHER, Chicago, Ill., assignor to Stromberg Motor Devices Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1912. Serial No. 673,983. (Cl. 150—3.)



1. In a carbureter, a carbureting chamber, an air inlet therefor, a plurality of fuel inlets therefor and a single tapered valve for simultaneously determining the size of said air inlet and progressively increasingly restricting a series of said fuel inlets and positively closing others.

2. In a carbureter, a carbureting chamber, an air inlet therefor, a plurality of fuel inlets therefor and a single tapered valve responsive to the suction of the engine for simultaneously determining the size of said air inlet and progressively increasingly restricting a series of said fuel inlets and positively closing others.

3. In a carbureter, a carbureting chamber, an air inlet therefor, a plurality of fuel nozzles therefor, a single tapered valve for simultaneously determining the size of said air inlet and progressively restricting some of said fuel nozzles and positively closing others, and a piston responsive to the suction of the engine mechanically connected with said valve.

4. In a cerbureter, a carbureting chamber, an air inlet therefor, a row of fuel nozzles terminating in a single plane, and a single tapered valve sliding upon said fuel nozzles for progressively positively closing some of said nozzles and restricting others and determining the size of the air inlet.

5. In a carbureter, a carbureting chamber, an air inlet therefor, a row of fuel nozzles terminating in a single plane, and a single tapered valve sliding upon said fuel nozzles for progressively positively closing some of said nozzles and determining the size of the air inlet, said valve having a part restricting other fuel nozzles.

[Claims 6 to 8 not printed in the Gazette.]

1,173,247. PNEUMATIC HAMMER OR LIKE PERCUSSION-TOOL. HARRY SAMUEL BICKERTON BRINDLEY, Westminster, London, England, assignor to Boiler Scalers Limited, Westminster, London, England. Filed Feb. 17, 1913. Serial No. 748,986. (Cl. 121—21.)



1. A pneumatic tool comprising a casing having two bores of different diameters, a central member fixed to the rear end of said casing and extending to the forward end thereof, a cutting element loosely mounted upon the forward end of said fixed member, an annular piston surrounding said member and having two heads of different diameters each of which has a rear face and a front face and means for putting a supply of working fluid into communication with the rear faces of said heads on the power stroke and with the front faces on the exhaust or rearward stroke of the hammer.

2. A pneumatic tool comprising a casing having two bores of different diameters, a central member secured to the rear end of the casing and extending to the forward end thereof, said central member having a longitudinal passage communicating with the source of supply of working fluid and radial passages therefrom, and a second separate longitudinal passage at the forward end thereof and radial passages communicating therewith, an annular piston having ports therein surrounding said central member and having its rear end contacting therewith in such a manner as to form an annular chamber between the hammer and the central member, said hammer having two heads of different diameters working within the two parts of the casing and each of which has a rear face and a front face, the arrangement being such that the rear faces of the heads are in communication with the pressure fluid during the working stroke and the forward faces during the exhaust or rearward stroke of the hammer.

1,173,248. BREECHING. OSCAR BROCKMAN, Louisville, Ky. Filed June 1, 1915. Serial No. 31,584. (Cl. 54—5.)



1. The herein-described breeching including a pair of anchors each having an upright shank with heads at both

ends; and a single piece of rope bent into a plurality of stretches connected with each other side by side and all connected with the holdback straps, the shank of each anchor passing through all said stretches excepting the uppermost, and the latter leading under the upper head of each anchor, diverted upward into a hip strap, and leading thence downward and to the nearest holdback.

2. The herein-described breeching made up of a plurality of stretches of a single piece of rope, metal fittings with which said stretches engage, means for attaching the fittings to the holdbacks, the uppermost stretch of rope being diverted from the other stretches and formed into hip straps, and a back strap having buckles at its ends for engaging said hip straps.

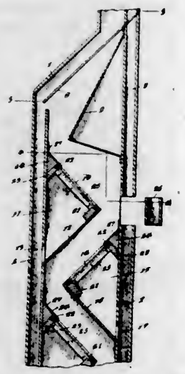
3. The herein-described breeching including two metal clasps each having an eye at its front end, a loop at its rear end, and cross bars between such parts; and a breeching strap composed of a single piece of rope bent into a plurality of stretches connected with each other side by side and all passed through the loop and rove around the cross bars of each clasp.

4. The herein-described breeching including two metal clasps each having an eye at its front end, a loop at its rear end, and cross bars between such parts; and a breeching strap composed of a single piece of rope bent into a plurality of stretches connected with each other side by side and all passed through the loop and rove around the cross bars of each clasp; combined with a pair of anchors each having a straight upright shank engaging said stretches of rope, the uppermost stretch leading from the anchor upward and then bent and carried downward to the nearest clasp to constitute a hip strap.

5. The herein-described breeching including a pair of metal clasps each having cross bars and a loop, a pair of anchors each having an upright shank with heads at both ends; and a single piece of rope bent into a plurality of stretches connected with each other side by side and all passed through the loop and rove around the cross bars of each clasp, the shank of each anchor passing between the strands of all said stretches excepting the uppermost, and the latter leading under the upper head of each anchor, diverted upward into a hip strap, and leading thence downward and into the loop of the nearest clasp.

[Claims 6 and 7 not printed in the Gazette.]

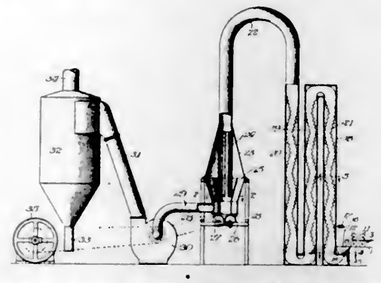
1,173,249. GRAIN-SEPARATOR. OTTO A. BURGESON, Cantaur, Saskatchewan, Canada, assignor to Burgeson Powerless Grain Cleaner Company, Nanson, N. D., a Corporation of South Dakota. Filed June 16, 1914. Serial No. 845,449. (Cl. 130—15.)



1. In a grain separator, a casing divided longitudinally to provide two discharge chutes, one at each side of the casing; one of said discharge chutes comprising a plurality of removable chute sections, a plurality of screens, each chute section being movable to provide for access to the screens in pairs, and support means for the screens conjunctively utilizable as an abutment for the casing sections whereby the latter may be held in alined relation with the chute, substantially as described.

2. In a grain separator, an upright casing, a discharge chute formed on two sides of the casing, a plurality of individually removable screens arranged at an inclination within said casing and in zig-zag relation, an individual support for each screen, a plurality of individually removable casing sections, each section constituting a part of one of said chutes, the several sections being so arranged that access may be gained to the screen in pairs and to the chute of which said section is a part, a plate conjunctively utilizable as an abutment for the several sections and as retaining devices for the removable screens, a means for directing the sifted grain to a common receptacle, and a means for directing the material separated first to the chute and finally to a common receptacle therefor, substantially as described.

1,173,250. SACK-CLEANING DEVICE. ADOLPH G. CARLSON, Chicago, Ill. Filed Oct. 21, 1915. Serial No. 57,096. (Cl. 15—8.)



1. In a sack cleaning device, the combination of a casing providing a tortuous passage, means for feeding a sack into one end of said passage, means for inducing a current of air through said passage, whereby said sack is drawn bodily through the casing, and means for separating the sack from the current of air, substantially as described.

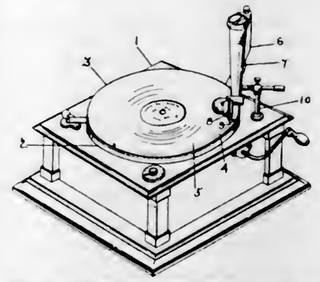
2. In a device of the class described, the combination of a casing providing a passage of angular outline, a plurality of rounded projections into said passage, means for inducing a current of air through said passage, and means for separating the device to be cleaned from the air and the material removed from the device, substantially as described.

3. In a sack cleaning device, the combination of a casing providing a tortuous passage, the material composing the casing being corrugated, thereby providing a multitude of rounded projections against which the sack is forced in its passage through the casing, and means for separating the sacks and the dust, said means including mechanism whereby the sack is caused to travel forward in a straight line, while the dust and air are deflected at an angle, and means for inducing a current of air through said casing, substantially as described.

4. In a sack cleaning device, the combination of a plurality of vertical conduits joined at their ends, said casing being lined with a corrugated material and shaped to provide a tortuous passage, means for inducing a current of air through said passage, and means for separating a sack from the current of air and the dust carried thereby, said means including a casing which is flared at one point and a series of rods in the flared portion of said casing, said rods serving to guide said sack in a straight line, the air and dust being taken off at an angle to the line of travel of the sack, and feeding-out rolls by means of which the separating device is sealed and the sack fed out therefrom, substantially as described.

5. In a sack cleaning device, the combination of a casing, a plurality of lateral projections into said casing, means for generating a current of air through said casing, whereby a sack is carried therethrough, and separating means whereby the sack and the dust removed therefrom are separated, said separating means including a casing having an axial inlet and outlet and an angularly disposed outlet, and sack guiding means located in the line of the axial inlet and outlet, substantially as described.

1,173,251. NEEDLE-SETTER. FREDERICK A. CHAPIN, Toledo, Ohio. Filed Sept. 4, 1914. Serial No. 860,127. (Cl. 181—3.)

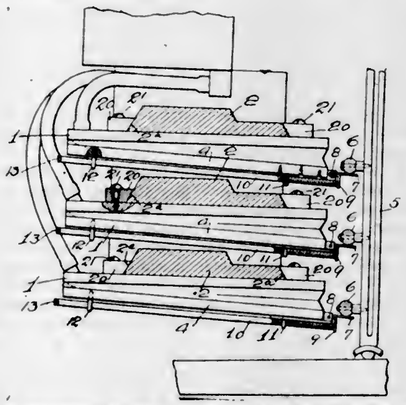


1. A setting device for sound reproducers including a relatively fixed element, a member slidably mounted therein, a head mounted on and for independent sliding movement relatively to the member, and a spring arranged within the member and resisting sliding movement of the head.

2. A setting device for sound reproducers including a fixed upright, a tube slidably mounted in the upright, a head slidably mounted on the tube, a spring arranged within the tube and resisting sliding movement of the head in one direction, and means carried by the tube to limit its sliding adjustment in the upright.

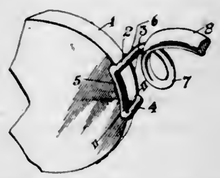
3. A setting device for sound reproducers including a fixed upright, a tube slidably mounted in the upright, a head slidably mounted on the tube, a spring arranged within the tube and resisting sliding movement of the head in one direction, a fixed stop carried by the tube to limit movement of the tube in the upright in one direction, and a second stop adjustably carried by the tube to limit movement of the tube in the upright in the opposite direction.

1,173,252. SECURING MEANS FOR STRIKER-PNEUMATICS. MELVILLE CLARK, Chicago, Ill., assignor to Melville Clark Piano Company, Chicago, Ill., a Corporation of Illinois. Filed July 15, 1914. Serial No. 851,051. (Cl. 84—233.)



In a pneumatic action, in combination with horizontal shelves for supporting motor pneumatics, motor pneumatics mounted on said shelves extending crosswise thereof and protruding beyond the lateral edges of the shelves, said edges being beveled, and clamping blocks secured to the protruding ends of the motor pneumatics having their edges toward the shelves beveled reciprocally thereto, and screws for clamping the blocks to the motor pneumatics.

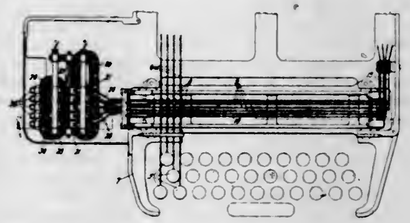
1,173,253. LENS-CLIP. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass. Filed Mar. 27, 1915. Serial No. 17,429. (Cl. 88—47.)



1. The combination with a regularly shaped lens, of a clip for application thereto formed from a single piece of material and comprising portions lying in engagement with the faces of the lens, but curved to correspond with the curvature of the edge of the lens, and cross connecting portions offset to fit around the edge of the lens and connect the ends of the side portions, said parts being all formed from a single piece of material and a cementitious uniting medium intermediate the inner faces of the clip portion and the edge and faces of the lens for securing the clip in position.

2. A cement attached lens clip for an ophthalmic mounting, comprising a pair of spaced curved members adapted to conform to the curvature of the edge of the lens, said members terminating at each end in outwardly extending portions adapted to project beyond the edge of the lens, and terminating in a cross piece connecting the curved members on opposite sides of the lens, the several parts just described being formed from a single piece of material, a bridging member integral with said piece of material, and a cementitious medium adhering to the inner face of the curved and connecting members for securing a lens within the clip.

1,173,254. SWITCH-SELECTOR. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,844. (Cl. 178—75.)



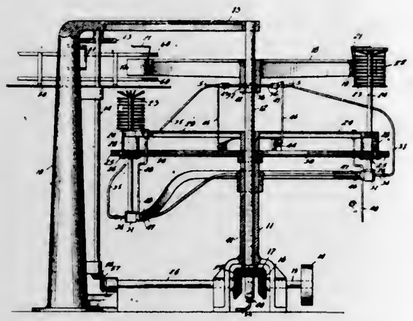
1. A switch selector comprising a plurality of movable switch members, an armature individual to each of said members, an actuating arm coöperating with each of said armatures to move the member individual thereto, manual means for selectively operating said actuating arm, an electromagnet for locking said members in their selected positions, and a circuit-closing device actuated by said manual means for energizing said electromagnet.

2. A switch selector comprising a plurality of movable switch members, means for holding said members in a normal position, an armature individual to each of said

members, an actuating arm coöperating with each of said armatures to move the said member individual thereto, a plurality of key levers for selectively operating said actuating arms, an electromagnet for holding said switch members in their selected positions and locking the unselected members in their normal positions, and a circuit-closing device actuated by said key levers for energizing said electromagnet.

3. A switch selector comprising a plurality of movable switch members, an armature individual to each of said members, an actuating arm coöperating with each of said armatures to move the members individual thereto, means for selectively operating said actuating arms, an electromagnet for locking said selected members in their selected positions and locking the unselected members against selection, and a circuit-closing device actuated simultaneously with said switch selection for energizing said electromagnet.

1,173,255. CONTAINER-WASHING MACHINE. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 4, 1912. Serial No. 729,249. (Cl. 141—7.)



1. A machine for washing articles of the character described including, in combination: a continuously rotatable carrier having a plurality of spring grasping holders fixed thereto which extend more than half way around the articles, said holders being adapted to hold the articles from rotation relatively to the carrier while being cleansed; and devices for cleansing the articles while so held in said holders, each of said devices including a rotatable brush adapted to enter the articles.

2. A machine for washing articles of the character described including, in combination: a rotatable carrier having a plurality of U-shaped yielding and grasping holders fixed thereto, each of said holders being adapted to prevent the articles from rotation while held therein; means for pressing the articles laterally and successively into the said holders; means for cleansing the articles while held by said holders, said means including a plurality of brushes adapted to enter the articles and rotatable while therein, substantially as specified.

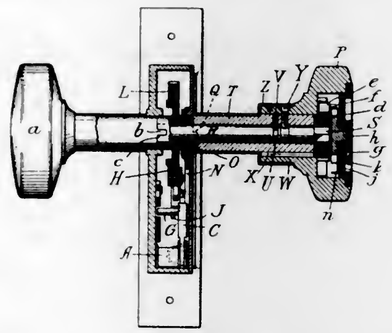
3. A machine for washing articles of the character described including, in combination: a carrier continuously rotatable about a vertical axis and having a plurality of laterally yielding grasping holders thereon adapted to frictionally hold the articles while being cleansed and to prevent the same from rotating; means for pressing the articles laterally and successively into said holders; and a plurality of devices, corresponding in number to the number of said holders, for cleansing the containers while held by said holders, each device including a rotatable brush adapted to enter the article being cleansed; substantially as specified.

4. A machine for washing articles of the character described including, in combination: a carrier continuously rotatable about a vertical axis and having a plurality of laterally yielding grasping holders thereon adapted to frictionally hold the articles while being cleansed and to prevent the same from rotating; a plurality of devices, corresponding in number to the number of said holders, for cleansing the containers while held by said holders, each device including a rotatable brush adapted to enter the articles being cleansed; and automatically operable means for overcoming the grasping action of the holders and feeding articles one by one laterally into said holders; substantially as specified.

5. A machine for washing articles of the character described including, in combination: a rotatable carrier having a plurality of U-shaped grasping holders fixed thereto, each of said holders being adapted to prevent the articles from rotating while held therein; means for cleansing the articles while held by said holders, said means including a plurality of brushes adapted to enter the articles and rotatable while therein; and means for automatically feeding articles one by one laterally into the grasping members of the said U-shaped holders comprising a table on which the articles slide on their open ends, and a feeding arm; substantially as specified.

[Claims 6 to 12 not printed in the Gazette.]

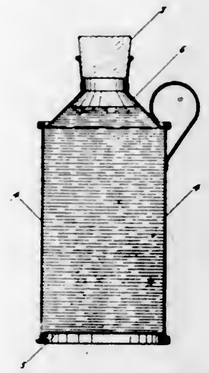
1,173,256. KEYLESS LOCK. OLIVER M. FARRAND, New York, N. Y. Filed Sept. 8, 1914. Serial No. 860,710. (Cl. 70—18.)



1. A lock including an outer knob, a bolt, combination mechanism adapted to cause the drawing of the bolt by the turning of the outer knob in a determined manner, an inner knob adapted by a single turning movement to withdraw the bolt, said inner knob having a hollow spindle, said outer knob having a spindle passing through that of the inner knob, a ratchet and pawl connection between said spindles adapted to transmit a turning movement of the outer knob in the unlocking direction to the inner knob so as to draw the bolt by a simple turning movement of either knob, and means for disengaging said ratchet and pawl.

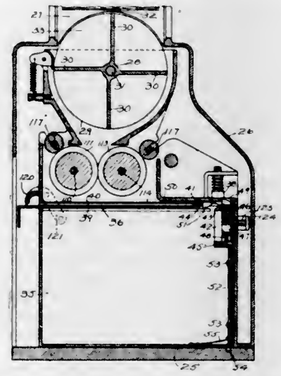
2. A lock including an outer knob, a bolt, combination mechanism adapted to cause the drawing of the bolt by the turning of the outer knob in a determined manner, an inner knob adapted by a simple turning movement to withdraw the bolt, said inner knob having a hollow spindle, said outer knob having a spindle passing through that of the inner knob, a ratchet and pawl connection between said spindles adapted to transmit a turning movement of the outer knob in the unlocking direction to the inner knob so as to draw the bolt by a simple turning movement of either knob, a cam carried by the inner knob and adapted to disconnect said ratchet and pawl and means on the exposed face of the inner knob for operating said cam.

1,173,257. SHELLAC-PACKAGE. BEN K. FORD, Oak Park, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 14, 1914. Serial No. 861,555. (Cl. 99—8.)



A commercial package comprising liquid orange shellac or the like inclosed in a sheet metal vessel provided with a copper surface where the shellac comes in contact with the vessel.

1,173,258. FARE-BOX. HENRY GEBHART, Dayton, Ohio. Filed July 27, 1912. Serial No. 711,807. (Cl. 232—61.)



1. A fare box having a fare compartment, a removable till therein, a fare displayer to receive and afford inspection of fares before they are deposited in the till, a lid for but normally not on the till, means for placing the lid on the till while it is in the compartment, means for transferring fares from the displayer to the till, and means which disables the last mentioned means and prevents its operation while the till is in the compartment with the lid on.

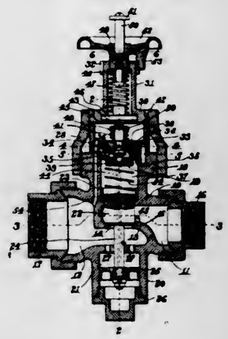
2. In a fare box, the combination of a series of fare-receiving plates rotatable upon a common axis, a spring motor adapted to intermittently rotate said plates, means for storing energy in said spring motor for such operation, means for holding the plates stationary while energy is being stored in the motor, and means for releasing said plates when as much new energy is stored in the motor as was expended in the last preceding rotation of the plates.

3. In a fare box, a series of rotating fare-receiving plates revolving upon a common axis, a series of stops arranged to control the positions of said plates, a spring one end of which is operatively connected with said series of plates, said spring imparting intermittent movement to the plates, means for winding the spring preparatory to actuating the plates, and means actuated by said winding means and engaging said stops to release the plates after the spring is wound.

4. In a fare box, a series of fare-receiving plates mounted upon a common axis of rotation, a spring motor adapted to intermittently actuate said plates, means for winding said spring to store the motive force therein, and means actuated by the spring-winding means for holding the plates stationary while the spring is being wound, and for releasing said plates when the winding of said spring is completed.

5. In a fare box, a series of rotary fare-receiving plates mounted upon a common axis, stops arranged at different points to arrest the movement of said plates, a spring motor adapted to actuate said plates, means for winding said spring to store energy therein, a series of cams actuated by said spring-winding means, and a reciprocating member actuated by said cams and engaging said stops after each intermittent movement of said plates.

1,173,259. REDUCTION-VALVE. WARREN A. GREENLAW, Melrose Highlands, and CHARLES F. RYAN, Beachmont, Mass., assignors to The Greenlaw Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Dec. 3, 1914. Serial No. 876,163. (Cl. 50—11.)



1. In a device of the class described, the combination of a casing provided with inlet and outlet openings separated by a partition with conically sealed port and having cylindrical chambers on opposite sides of said port and in axial alinement therewith connected by an intercommunicating passage terminating at the outer ends of said chambers; a spring pressed valve normally closing said port and provided with a piston member loosely fitting one of said chambers; a reciprocating member fitted to the other chamber and secured to and movable with said valve; a smaller spring pressed valve normally closing the passage between said chambers; and adjustable means for controlling the opening of said smaller valve adapted to be influenced by the fluid pressure in said outlet opening.

2. In a device of the class described, the combination of a casing provided with inlet and outlet openings separated by a partition with a conically seated port and having cylindrical chambers on opposite sides of said port and in axial alinement therewith connected by an intercommunicating passage terminating at the outer ends of said chambers; a spring pressed valve normally closing said port and provided with a piston member loosely fitting one of said chambers; a reciprocating member fitted to the other chamber and secured to and movable with said valve; a removable member for closing the end of the first mentioned chamber and provided with a port communicating with said intercommunicating passage; a

small valve carried by said member for normally closing said port; and adjustable means for controlling the opening of said small valve adapted to be influenced by the fluid pressure in said outlet opening.

3. In a device of the class described, the combination of a casing provided with inlet and outlet openings separated by a partition with a conically seated port and having cylindrical chambers on opposite sides of said port and in axial alinement therewith connected by an intercommunicating passage terminating at the outer ends of said chambers; a spring pressed valve normally closing said port and provided with a piston member loosely fitting one of said chambers; a reciprocating member fitted to the other chamber and secured to and movable with said valve; a removable member for closing the end of the first mentioned chamber and provided with a port communicating with said intercommunicating passage; a small valve carried by said member; a spring also carried by said member for normally closing said small valve; a cap secured to said casing and surrounding said removable member; and adjustable means carried by said cap for controlling the opening of said small valve adapted to be influenced by the fluid pressure in said outlet opening.

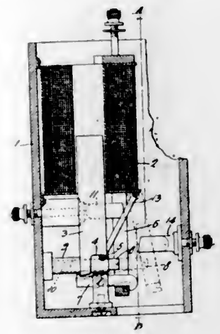
4. In a device of the class described, the combination of a casing provided with inlet and outlet openings separated by a partition with a conically seated port and having cylindrical chambers on opposite sides of said port and in axial alinement therewith connected by an intercommunicating passage terminating at the outer ends of said chambers; a spring pressed valve normally closing said port and provided with a piston member loosely fitting one of said chambers; a reciprocating member fitted to the other chamber and secured to and movable with said valve; a removable member for closing the end of the first mentioned chamber and provided with a port communicating with said intercommunicating passage; a small valve carried by said member; a spring also carried by said member for normally closing said small valve; a diaphragm superimposed upon said removable member; an annular flanged head superimposed upon said diaphragm; an annular retaining member surrounding the flange of said head and threaded to said casing; and adjustable means carried by said head for controlling the opening of said valve and adapted to be influenced by the fluid pressure in said outlet opening.

5. In a device of the class described, the combination of a casing provided with inlet and outlet openings separated by a partition with a conically seated port and having cylindrical chambers on opposite sides of said port and in axial alinement therewith connected by an intercommunicating passage terminating at the outer ends of said chambers; a spring pressed valve normally closing said port and provided with a piston member loosely fitting one of said chambers; a reciprocating member fitted to the other chamber and secured to and movable with said valve; a removable member for closing the end of the first mentioned chamber and provided with a port communicating with said intercommunicating passage; a small valve carried by said member; a spring also carried by said member for normally closing said small valve; a diaphragm superimposed upon said removable member and under the influence of the fluid pressure in said outlet opening; a member threaded to said casing inclosing said removable member and diaphragm and having a cylindrical hub; a button resting on said diaphragm; a plug threaded to said hub; a revoluble supporting plate carried by said plug; and a spring interposed between said plate and button.

[Claims 6 to 13 not printed in the Gazette.]

1,173,260. ELECTRIC SWITCH. GEORGE GRIFFITH, Parsons, Kans. Filed Aug. 9, 1915. Serial No. 44,530. (Cl. 175—115.)

1. A device of the class described, including a solenoid, means for holding the core of the solenoid slightly removed from the outer limit of its movement, said means being movable away from the core when the solenoid is energized, a double knife switch, means for connecting the knife switch to a source of energy, opposed contacts adapted to be successfully engaged by the knife switch, electrical connections between the solenoid and one pair of contacts, means for holding the knife switch in engagement with said pair of contacts, said core when released by its deënergized solenoid and from its holding means, being movable against the switch supporting means to release the switch, and means for automatically shifting the released switch from one pair of contacts to the other pair of contacts.

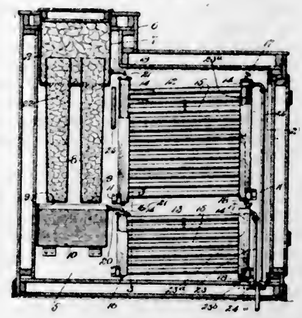


2. A device of the class described, including a solenoid having a downwardly extending core, means for holding the core partly elevated, said means being movable away from the core when the solenoid is energized, a double knife switch, means, including a master switch, for connecting said knife switch to a source of energy, opposed pairs of contacts adapted to be successfully engaged by said knife switch, electrical connections between the solenoid and one pair of contacts, means for holding the knife switch in engagement with said pair of contacts, said core, when released by its deënergized solenoid and from its holding means, being movable against the switch holding means to release the switch, and means for automatically shifting the released switch from one pair of contacts to the other pair of contacts.

3. The combination with a solenoid having a downwardly extending core, and pivoted means for engaging the core to hold the same partly elevated, said means when in engaging position being extended out of normal position, of a double knife switch, means for connecting said switch to a source of electrical energy, said means including a master switch, a latch adapted to engage the knife switch, said latch being supported in the path of the core, opposed pairs of contacts in the path of the double knife switch, electrical connections between the contacts of one pair and the solenoids, said last mentioned contacts being engaged by the knife switch when said knife switch is held by the latch, the solenoid, when energized, constituting means for shifting the core out of engagement with its supporting means and away from the latch and, when deënergized constituting means for releasing the core into engagement with the latch to disengage the double knife switch, and means for automatically shifting the disengaged knife switch into engagement with the other pair of contacts.

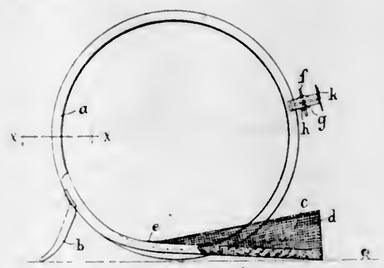
1,173,261. REFRIGERATOR. GUSTAV J. GRUENDLER, St. Louis, Mo. Filed Jan. 11, 1915. Serial No. 1,583. (Cl. 62—54.)

In combination with a salt and ice container and a brine receptacle each having an overflow pipe, a battery comprising at least two sections, each comprising manifolds with connecting pipes therebetween, one section arranged to receive brine from the salt and ice container



and the other brine from the brine receptacle, and means for trapping and overflowing each section.

1,173,262. APPARATUS FOR USE IN PRACTISING THE GAME OF GOLF. ROBERT GUNZBURG, Kensington, England. Filed Sept. 18, 1915. Serial No. 51,370. (Cl. 46—4.)



1. Apparatus for use in practising the game of golf comprising a race and a funnel adapted to guide a ball into the race.

2. Apparatus for use in practising the game of golf comprising a race, a funnel adapted to guide a ball into a race, and means for indicating the travel of the ball.

3. Apparatus for use in practising the game of golf comprising a race, a funnel adapted to guide a ball into the race and means actuated by the ball for indicating the travel thereof.

4. Apparatus for use in practising the game of golf comprising a race and means adapted to guide a ball into the race.

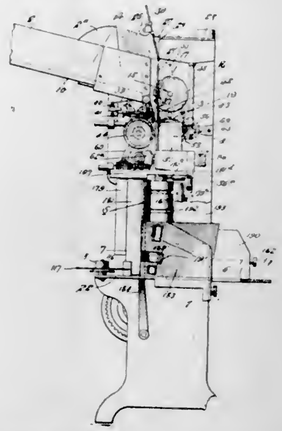
5. Apparatus for use in practising the game of golf comprising a race, means adapted to guide a ball into the race, and means for indicating the travel of the ball.

[Claims 6 to 11 not printed in the Gazette.]

1,173,263. MACHINE FOR SEALING AND STAMPING MAIL-MATTER. LOUIS J. HALL, Freeport, N. Y., assignor to Morris-Hall Mail Closer Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 11, 1910. Serial No. 543,346. (Cl. 216—3.)

1. An envelop feeding means for a sealing and stamping machine comprising a magazine to hold a pile of envelops, means for moving the envelops through said magazine to the exit end thereof, feed rolls to receive the envelop from the magazine, a rotatable envelop holding device above the magazine and adapted to engage the upper edge of the foremost envelop to hold the envelops rearwardly inclined with respect to the exit end of the magazine, and means for adjusting the envelop holding device to adapt it for different sizes of envelops.

2. An envelop feeding means comprising a magazine to hold a stack of envelops, a separator roll adjacent the delivery end of said magazine, an escapement below the magazine and on the opposite side of the envelop path from the separator roll, a retaining roll adjacent the escapement and on the opposite side of the envelop path from the separator roll, and means for rotating the retaining roll in a direction to return the envelops toward the magazine.



3. An envelop feeding means comprising a magazine to hold a stack of envelops, feeding devices adjacent the delivery end of the magazine, a retaining means on the opposite side of the envelop path from the feeding devices, said retaining means tending to return the envelops to the magazine, and a reciprocating escapement to intermittently arrest the movement of the envelops and to permit the forwardmost envelop to pass.

4. An envelop feeding means comprising a magazine to hold a stack of envelops, a separator roll adjacent the delivery end of said magazine, yielding means for pressing the envelops against the separator roll, a retaining roll below the magazine and on the opposite side of the envelop path from the separator roll and adapted to rotate in the same direction as the separator roll, means for yieldingly supporting said retaining roll, a reciprocating escapement on the opposite side of the envelop path from the separator roll and adapted to extend across said path and to temporarily limit the movement of the envelops and to permit the forwardmost one to be moved by the separator roll.

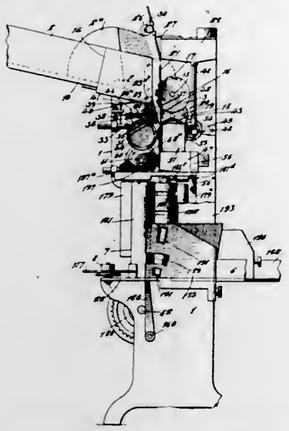
5. An envelop sealing machine comprising means to hold a pile of envelops to be sealed, a feeding means, means for moistening the envelop flaps, means for accelerating the movement of the envelops after the flaps have been moistened, means for arresting the movement of the envelop after said acceleration, means for affixing a stamp thereto during said period of rest and means for sealing the flaps after the stamps are affixed.

[Claims 6 to 61 not printed in the Gazette.]

1,173,264. MACHINE FOR SEALING MAIL-MATTER. LOUIS J. HALL, Freeport, N. Y., assignor to The Morris-Hall Mail Closer Company, Rochester, N. Y., a Corporation of Delaware. Original application filed Feb. 11, 1910, Serial No. 543,346. Divided and this application filed May 20, 1911. Serial No. 628,439. (Cl. 120—6.)

1. An envelop sealing means comprising a feeding means, a flap moistening means, a compressing device engaging the envelop under the flap, and means for pressing the flap to the envelop, said means drawing the envelop flap edge foremost from the compressing device.

2. An envelop sealing means comprising a feeding means, a flap moistening means, compressing means engaging the envelop under the flap and a rolling sealing means adapted to engage the envelop and withdraw it from the compressing means, said sealing means moving the envelop edgewise perpendicular to the line of its first movement and rolling the flap on the envelop.



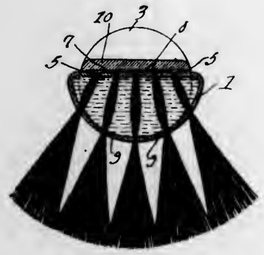
3. The combination of a flap moistening means, an envelop compressing means adapted to engage the envelop under the flap and a sealing means adapted to engage the envelop at its flap edge and draw it flap edge foremost from the compressing means and press the flap against the compressed envelop.

4. The combination of a flap moistening means, an envelop compressing means adapted to engage the envelop under the flap, a sealing means adapted to engage the flap edge of the envelop and draw it from the compressing means and a stacker device to receive the envelop from the sealing means.

5. A sealing machine comprising means for feeding an envelop downwardly, means for moistening the flap during said downward movement, means for arresting the downward movement of the envelop, means for compressing the envelop under the flap, means for engaging the flap edge of the envelop and drawing the envelop horizontally away from the compressing means to seal the same, a stacker device adapted to receive the envelop from the sealing means and stack it rearwardly into a suitable magazine or holder.

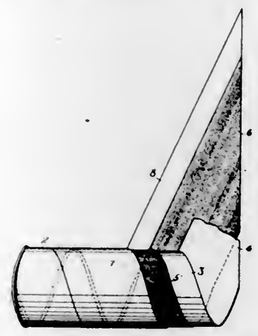
[Claims 6 to 15 not printed in the Gazette.]

1,173,265. BRUSH. CARL S. HALLSTROM, Mankato, Minn. Filed Mar. 23, 1914. Serial No. 826,695. (Cl. 15—51.)



A fountain brush including a substantially semi-cylindrical back constituting a liquid container for receiving liquid under pressure, a handle extending from and opening into the back and constituting an inlet therefor, there being openings within the rounded wall of the back, looped bristles extending through said openings and terminating between the walls of the back, there being openings in the top of the back, wires bearing upon said top and having loops extending through the openings therein and engaging the tufts of bristles to hold said bristles within their openings, there being additional openings in the rounded wall of the back and between the tufts of bristles for the escape of liquid from the back, and a cover plate secured upon the top of the back and bearing downwardly on and concealing the fastening wires.

1,173,266. PROCESS OF MANUFACTURING PROOFED PAPER TUBES. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 23, 1911. Serial No. 604,144. (Cl. 93—80.)



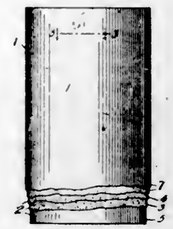
1. The herein described process for making paper container bodies, which consists in applying to a layer of thin porous paper a thin film of fused cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and then uniting such compound proofing sheet adhesively and by a winding process to a sheet of paper tube material, to form a proofed and impervious container body.

2. The herein described process for making paper container bodies, which consists in uniting two layers of thin porous paper with a thin interposed film of a fused cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and then uniting such compound proofing sheet adhesively and by a winding process to a sheet of paper tube material, to form a proofed and impervious container body.

3. The herein described process for manufacturing wound and proofed paper container bodies, consisting of a plurality of successive coils, which consists in first preparing a proofing member or film by inclosing a thin flexible and continuous film of fused proofing compound between two layers of thin porous paper which are firmly united thereto and secured together thereby, the thin paper exterior coating of the proofing film adapting it to be adhesively united on both faces thereof to the coils or layers of tube material with which it is to contact; and then introducing the said thin proofing member between successive layers or coils of paper tube material, and adhesively uniting the said proofing member to the layers of the tube material between which it is interposed.

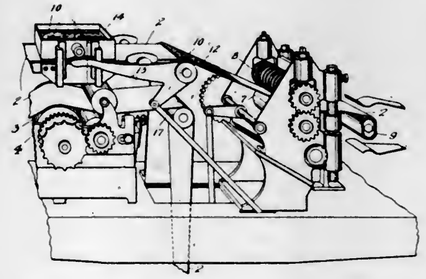
1,173,267. WATERPROOFED PAPER TUBE OR CANBODY. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of New Jersey. Filed Jan. 23, 1911. Serial No. 604,145. (Cl. 93—94.)

1. A moisture-proofed and impervious container body the walls of which consist of a layer of porous thin paper united with a film of fused cement to form a compound proofing member, and a layer of paper tube material coiled upon itself and having the compound proofing member interposed between and adhesively united to the coils thereof.



2. A moisture-proofed and impervious container body the walls of which consist of two layers of porous thin paper united with an interposed film of fused cement to form a compound proofing member, and a layer of paper tube material coiled upon itself and having the compound proofing member interposed between and adhesively united to the coils thereof.

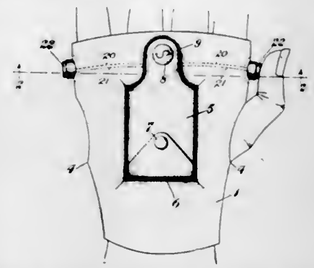
1,173,268. METHOD OF MANUFACTURING PROOFED PAPER BODIES. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 23, 1911. Serial No. 604,146. (Cl. 93—81.)



1. The herein described process for making impervious paper container bodies, which consists in combining with thin porous paper a thin film of fused impervious cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and providing a number of such proofing sheets separate from each other; then intermittently winding a layer or sheet of tube material to form successive tubes, an adhesive being applied to a surface of the same; during said winding process intermittently applying said proofing sheets at separate intervals along the adhesive surface of the unwound portion of said sheet of tube material; and severing the sheet of tube material successively at the intervals between the separate proofing sheets.

2. The herein described process for making impervious paper container bodies, which consists in applying between two layers of thin porous paper, a thin film of fused impervious cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and providing a number of such proofing sheets separate from each other; then intermittently winding a layer or sheet of tube material to form successive tubes, an adhesive being applied to a surface of the same; during said winding process intermittently applying said proofing sheets at separate intervals along the adhesive surface of the unwound portion of said sheet of tube material; and severing the sheet of tube material successively at the intervals between the separate proofing sheets.

1,173,269. SIGNALING DEVICE. CHRISTIAN HEIDEMANN, St. Louis, Mo. Filed Oct. 7, 1914. Serial No. 865,414. (Cl. 240—8.4.)



1. A signal device, comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, an electric lamp supported by the back wall of said support intermediate of the thumb spaces, a normally open electric circuit for energizing said lamp, and means for closing said circuit.

2. A signal device, comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, means for binding the support upon either hand, an electric lamp secured to the back part of said support intermediate of the thumb spaces, a normally open electric circuit for energizing said lamp, a source of electrical energy communicating with said circuit, and means for closing said circuit.

3. A signal device comprising a support adapted to be secured upon the hand, a pocket on the back part of said support, a releasable closure for said pocket, a case removably carried within said pocket, a socket supported by said case, a lamp in said socket, a battery carried within said pocket, a normally open electric circuit communicating with said battery and with said lamp, and means carried by said support in position to be actuated by the thumb of the wearer for closing said circuit.

4. A signal device comprising a support adapted to be secured upon the hand, a pocket on the back part of said support, a case carried within said pocket, a socket supported by said case, an electric lamp in said socket, a battery within said pocket, means for holding said case and said battery in said pocket, a normally open electric circuit for energizing said lamp from said battery and comprising wires extending adjacent to the thumb of the wearer of said support, and means carried by said support in position to be actuated by the thumb of the wearer into communication with said wires for closing said circuit.

5. A signal device comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, an electric lamp supported by the back wall of said support intermediate of the thumb spaces, a battery, means for supporting said battery by said support, a normally open electric circuit for energizing said lamp from said battery, and means for closing said circuit.

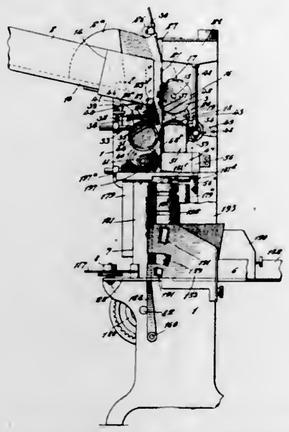
[Claim 6 not printed in the Gazette.]

1,173,270. MECHANICAL STOKING APPARATUS. RALEIGH J. HIMMELRIGHT, Indianapolis, Ind. Filed Dec. 5, 1913. Serial No. 804,881. (Cl. 110—107.)

1. In mechanical stoking apparatus, in combination with a locomotive fire box, coal containing means, mechanical apparatus for conveying the coal from said containing means to a point at the front end of the fire box, means for receiving the coal thereat, and blasting means discharging at said receiving point for distributing the coal throughout the fire box, substantially as described.

2. In mechanical stoking apparatus for locomotives, in combination with a fire box, coal containing means, mechanical apparatus for conveying the coal from said containing means to a point on one side and at the front end

2. An envelop sealing means comprising a feeding means, a flap moistening means, compressing means engaging the envelop under the flap and a rolling sealing means adapted to engage the envelop and withdraw it from the compressing means, said sealing means moving the envelop edgewise perpendicular to the line of its first movement and rolling the flap on the envelop.



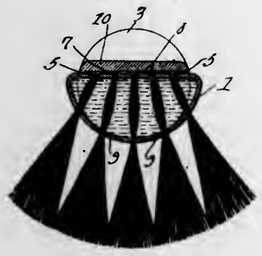
3. The combination of a flap moistening means, an envelop compressing means adapted to engage the envelop under the flap and a sealing means adapted to engage the envelop at its flap edge and draw it flap edge foremost from the compressing means and press the flap against the compressed envelop.

4. The combination of a flap moistening means, an envelop compressing means adapted to engage the envelop under the flap, a sealing means adapted to engage the flap edge of the envelop and draw it from the compressing means and a stacker device to receive the envelop from the sealing means.

5. A sealing machine comprising means for feeding an envelop downwardly, means for moistening the flap during said downward movement, means for arresting the downward movement of the envelop, means for compressing the envelop under the flap, means for engaging the flap edge of the envelop and drawing the envelop horizontally away from the compressing means to seal the same, a stacker device adapted to receive the envelop from the sealing means and stack it rearwardly into a suitable magazine or holder.

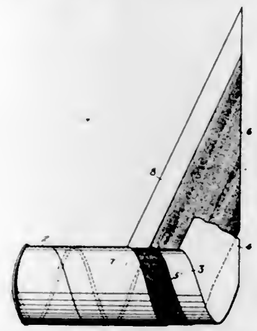
[Claims 6 to 15 not printed in the Gazette.]

1,173,265. BRUSH. CARL S. HALLSTROM, Mankato, Minn. Filed Mar. 23, 1914. Serial No. 826,695. (Cl. 15—51.)



A fountain brush including a substantially semi-cylindrical back constituting a liquid container for receiving liquid under pressure, a handle extending from and opening into the back and constituting an inlet therefor, there being openings within the rounded wall of the back, looped bristles extending through said openings and terminating between the walls of the back, there being openings in the top of the back, wires bearing upon said top and having loops extending through the openings therein and engaging the tufts of bristles to hold said bristles within their openings, there being additional openings in the rounded wall of the back and between the tufts of bristles for the escape of liquid from the back, and a cover plate secured upon the top of the back and bearing downwardly on and concealing the fastening wires.

1,173,266. PROCESS OF MANUFACTURING PROOFED PAPER TUBES. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 23, 1911. Serial No. 604,144. (Cl. 93—80.)



1. The herein described process for making paper container bodies, which consists in applying to a layer of thin porous paper a thin film of fused cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and then uniting such compound proofing sheet adhesively and by a winding process to a sheet of paper tube material, to form a proofed and impervious container body.

2. The herein described process for making paper container bodies, which consists in uniting two layers of thin porous paper with a thin interposed film of a fused cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and then uniting such compound proofing sheet adhesively and by a winding process to a sheet of paper tube material, to form a proofed and impervious container body.

3. The herein described process for manufacturing wound and proofed paper container bodies, consisting of a plurality of successive coils, which consists in first preparing a proofing member or film by inclosing a thin flexible and continuous film of fused proofing compound between two layers of thin porous paper which are firmly united thereto and secured together thereby, the thin paper exterior coating of the proofing film adapting it to be adhesively united on both faces thereof to the coils or layers of tube material with which it is to contact; and then introducing the said thin proofing member between successive layers or coils of paper tube material, and adhesively uniting the said proofing member to the layers of the tube material between which it is interposed.

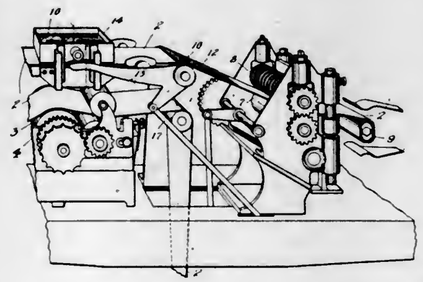
1,173,267. WATERPROOFED PAPER TUBE OR CANBODY. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of New Jersey. Filed Jan. 23, 1911. Serial No. 604,145. (Cl. 93—94.)

1. A moisture-proofed and impervious container body the walls of which consist of a layer of porous thin paper united with a film of fused cement to form a compound proofing member, and a layer of paper tube material coiled upon itself and having the compound proofing member interposed between and adhesively united to the coils thereof.



2. A moisture-proofed and impervious container body the walls of which consist of two layers of porous thin paper united with an interposed film of fused cement to form a compound proofing member, and a layer of paper tube material coiled upon itself and having the compound proofing member interposed between and adhesively united to the coils thereof.

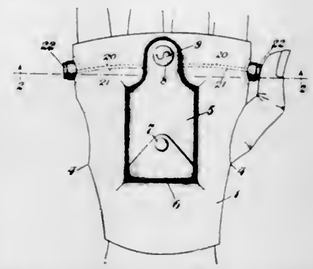
1,173,268. METHOD OF MANUFACTURING PROOFED PAPER BODIES. JERVIS R. HARBECK, Detroit, Mich., assignor to Detroit Can Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 23, 1911. Serial No. 604,146. (Cl. 93—81.)



1. The herein described process for making impervious paper container bodies, which consists in combining with thin porous paper a thin film of fused impervious cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and providing a number of such proofing sheets separate from each other; then intermittently winding a layer or sheet of tube material to form successive tubes, an adhesive being applied to a surface of the same; during said winding process intermittently applying said proofing sheets at separate intervals along the adhesive surface of the unwound portion of said sheet of tube material; and severing the sheet of tube material successively at the intervals between the separate proofing sheets.

2. The herein described process for making impervious paper container bodies, which consists in applying between two layers of thin porous paper, a thin film of fused impervious cement to form a thin compound proofing sheet adapted to be glued or adhesively united to a layer of tube material, and providing a number of such proofing sheets separate from each other; then intermittently winding a layer or sheet of tube material to form successive tubes, an adhesive being applied to a surface of the same; during said winding process intermittently applying said proofing sheets at separate intervals along the adhesive surface of the unwound portion of said sheet of tube material; and severing the sheet of tube material successively at the intervals between the separate proofing sheets.

1,173,269. SIGNALING DEVICE. CHRISTIAN HEIDEMANN, St. Louis, Mo. Filed Oct. 7, 1914. Serial No. 865,414. (Cl. 240—8.4.)



1. A signal device, comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, an electric lamp supported by the back wall of said support intermediate of the thumb spaces, a normally open electric circuit for energizing said lamp, and means for closing said circuit.

2. A signal device, comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, means for binding the support upon either hand, an electric lamp secured to the back part of said support intermediate of the thumb spaces, a normally open electric circuit for energizing said lamp, a source of electrical energy communicating with said circuit, and means for closing said circuit.

3. A signal device comprising a support adapted to be secured upon the hand, a pocket on the back part of said support, a releasable closure for said pocket, a case removably carried within said pocket, a socket supported by said case, a lamp in said socket, a battery carried within said pocket, a normally open electric circuit communicating with said battery and with said lamp, and means carried by said support in position to be actuated by the thumb of the wearer for closing said circuit.

4. A signal device comprising a support adapted to be secured upon the hand, a pocket on the back part of said support, a case carried within said pocket, a socket supported by said case, an electric lamp in said socket, a battery within said pocket, means for holding said case and said battery in said pocket, a normally open electric circuit for energizing said lamp from said battery and comprising wires extending adjacent to the thumb of the wearer of said support, and means carried by said support in position to be actuated by the thumb of the wearer into communication with said wires for closing said circuit.

5. A signal device comprising a support adapted to be secured upon either hand and having oppositely disposed thumb spaces, an electric lamp supported by the back wall of said support intermediate of the thumb spaces, a battery, means for supporting said battery by said support, a normally open electric circuit for energizing said lamp from said battery, and means for closing said circuit.

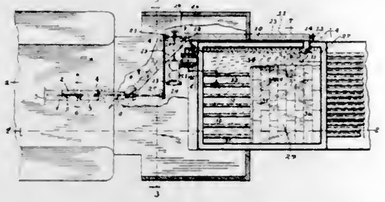
[Claim 6 not printed in the Gazette.]

1,173,270. MECHANICAL STOKING APPARATUS. RALEIGH J. HIMMELRIGHT, Indianapolis, Ind. Filed Dec. 5, 1913. Serial No. 804,881. (Cl. 110—107.)

1. In mechanical stoking apparatus, in combination with a locomotive fire box, coal containing means, mechanical apparatus for conveying the coal from said containing means to a point at the front end of the fire box, means for receiving the coal thereat, and blasting means discharging at said receiving point for distributing the coal throughout the fire box, substantially as described.

2. In mechanical stoking apparatus for locomotives, in combination with a fire box, coal containing means, mechanical apparatus for conveying the coal from said containing means to a point on one side and at the front end

of the fire box, means for receiving the coal thereat, and a plurality of jets operable to discharge blasts in different directions from said receiving point for distributing the coal throughout the fire box, substantially as described.
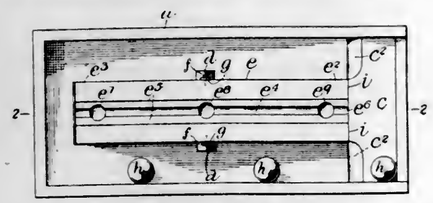


3. In mechanical stoking apparatus for locomotives, in combination with a fire box, coal containing means, mechanical coal conveying means leading from said containing means to the front end of the fire box, a baffle arch leading into the furnace rearwardly from the front end of the fire box above the grate, means for receiving the coal beneath and adjacent the base of said arch, devices for directing blasts in different directions for distributing the coal throughout the fire box, and controlling means for said blasts located at the rear end of the fire box, substantially as described.

4. In a mechanical stoking apparatus, in combination with a fire box, means for feeding fuel thereto, a series of jet nozzles for distributing the fuel into the fire box, controlling valves for said nozzles, a source of gaseous fuel for said jet nozzles, a rotary drum, a series of cams on said rotary drum operable to actuate said valves, said cams being staggered whereby said valves are adapted to be operated successively, and means for adjusting said cams, substantially as described.

5. In mechanical stoking apparatus for locomotives, in combination with a fire box, coal containing means, coal conveying means leading from said containing means to the front end of the fire box, a baffle arch leading into the furnace rearwardly from the front end of the fire box above the grate, means for receiving the coal mounted below said arch adjacent the base thereof, separate mechanisms for distributing the fuel throughout the fire box in different directions and means for successively and intermittently operating said mechanisms, substantially as described.

1,173,271. PUZZLE. MARTIN HINES, Brooklyn, N. Y. Filed Dec. 7, 1915. Serial No. 65,494. (Cl. 46—41.)



1. A puzzle, comprising a box, the bottom of which at one end thereof is raised, a board pivoted between the raised portion of the bottom and the opposite end portion of the box, and the end of which adjacent to the raised portion of the bottom of the box is slightly heavier than the opposite end portion, said board being provided with a central longitudinal groove in the bottom of which are a plurality of recesses adapted to receive a corresponding number of balls placed in said box.

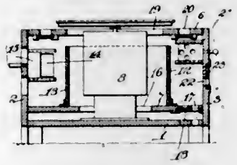
2. A puzzle device of the class described, comprising an oblong rectangular box one end portion of the bottom of which is raised, and a board pivoted transversely of said box between the raised end of the bottom and the opposite end portion of the box, the end portion of said board adjacent to the raised bottom of the box being slightly heavier than the opposite end portion, and said board being provided in the top surface thereof with a longitudinal groove in the bottom of which are equally spaced recesses, one of which is in transverse line with the pivotal supports of said board.

3. A puzzle device of the class described, comprising an oblong rectangular box one end portion of the bottom of which is raised, a board pivoted transversely of said box between the raised end of the bottom and the opposite end portion of the box, the end portion of said board adjacent to the raised bottom of the box being slightly heavier than the opposite end portion, and said board being provided in the top surface thereof with a longitudinal groove in the bottom of which are equally spaced recesses, one of which is in transverse line with the pivotal supports of said board, and a plurality of balls placed in said box.

4. A puzzle, comprising a box, the bottom of which is provided with a raised portion, a member pivoted in said box and adapted to operate in connection with said raised portion, and said member being provided in the top face thereof with a groove and recesses in connection with which a plurality of spherical members are adapted to operate.

5. A puzzle comprising a box the bottom of which is provided with a raised portion, a member pivoted in said box and adapted to operate in connection with said raised portion, said member being provided in the top face thereof with a groove in which is formed a plurality of recesses adapted to receive a corresponding number of balls placed in said box.

1,173,272. RESONATOR FOR SOUND-REPRODUCING DEVICES. WILLIAM B. HOLLINGSHEAD, Mount Vernon, N. Y., assignor of one-half to Waldo G. Morse, Yonkers, N. Y. Filed Nov. 17, 1913. Serial No. 801,471. (Cl. 181—3.)



1. In a talking machine the combination with a sound box, of a resonant casing in communication with the sound box, a plurality of vibratory bodies within the casing and valved openings in the bodies.

2. In a talking machine the combination with a sound box, of a resonant casing in communication with the sound box, vibratory bodies within the casing, and a diaphragm, to which the bodies are attached by one edge only within the casing.

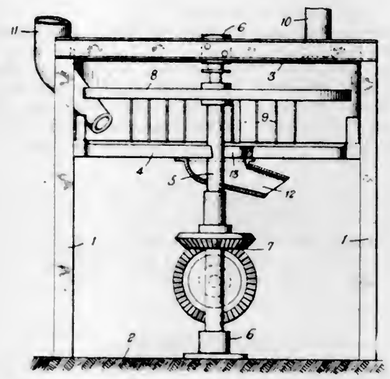
3. In a talking machine the combination with a sound box, of a resonant casing in communication with the sound box, a bottom for the casing, openings in the bottom, a diaphragm in the casing above the bottom and an opening in the diaphragm.

4. In a talking machine the combination with a sound box, of a resonant casing in communication with the sound box, a bottom for the casing, openings in the bottom, and a diaphragm in the casing above the bottom, said diaphragm carrying vibratory bodies, and openings in the diaphragm.

5. In a talking machine the combination with a sound box, of a resonant casing in communication with the sound box, a bottom for the casing, openings in the bottom, a diaphragm carrying vibratory bodies, and openings in the bodies.

[Claims 6 to 10 not printed in the Gazette.]

1,173,273. COOLING ORES. WILLIAM H. HUBBARD, Jr., Newark, N. J., assignor to The Ohio & Colorado Smelting & Refining Co., Denver, Colo., a Corporation of Colorado. Original application filed Nov. 30, 1912, Serial No. 734,315. Divided and this application filed Dec. 30, 1914. Serial No. 879,664. (Cl. 75—143.)



1. In apparatus for cooling hot ore, or the like, the combination with a flat circular cooling table for supporting the ore in a comparatively thin layer, means for charging the ore onto the table, near its outer edge, means for discharging the ore from the table near its center, a rotatable shaft provided with rabbles for rabbling the ore on the table and for effecting movement of the ore from the place of charge to the place of discharge, means for rotating said shaft; and means for progressively cooling the ore on the table during its movement from the place of charge to the place of discharge; substantially as described.

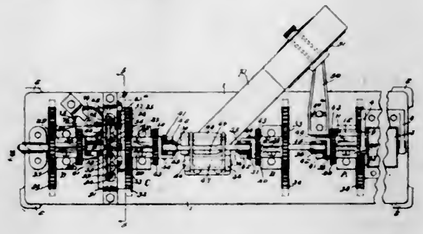
2. In apparatus for cooling hot ore, or the like, the combination with a flat circular cooling table for supporting the ore in a comparatively thin layer, means for charging the ore on to the table at its outer edge, a rotating shaft passing through the center of said table, rabbles carried by said shaft and arranged for rabbling the ore on the table and for effecting movement of the ore spirally around said shaft from the place of charge to the place of discharge, means for rotating said shaft and means for progressively cooling the ore on the table during its movement from the place of charge to the place of discharge; substantially as described.

3. In apparatus for cooling hot ore, or the like, the combination with a flat circular cooling table for supporting the ore in a comparatively thin layer, means for charging the ore on to the table near the outer edge thereof, a rotatable member projecting through said table near its center and provided with rabbles for rabbling the ore on the table and for effecting movement of the ore along said table in a spiral course to the place of discharge, means for cooling said ore during said movement, said table having an opening through the center into which the progressively cooled ore may be pushed by the innermost rabble, and means for circulating a cooling fluid over said ore during its progressive movement; substantially as described.

4. In apparatus for cooling hot ore, or the like, the combination with a flat circular cooling table for supporting the ore in a comparatively thin layer, means for charging the ore on to the table near the periphery thereof, a rotatable member provided with rabbles set at an angle for effecting spiral movement of the ore from the place of charge toward the center of the table, means for rotating said member and means for drawing cooling air around the edge of said table for progressively cooling the ore on the table during its movement from the place of charge toward the center of the table, said table having an opening near its center into which the cooled ore is ultimately pushed; substantially as described.

5. In apparatus for cooling hot ore, or the like, the combination with a stationary cooling table for supporting the ore in a comparatively thin layer, said table having a discharge opening at its center; of means for charging the ore on to the table, a rotatable member projecting through said table and provided with rabbles for rabbling the ore on the table and for effecting movement of the ore along the table in a spiral path from the place of charge to a place of discharge, means for water cooling said member, means for rotating said member, and means for progressively cooling the ore on the table during its movement from the place of charge to the place of discharge; substantially as described.

1,173,274. WRAPPING-MACHINE. DENNIS T. IGOU and DALE C. IGOU, Springfield, Ohio, assignors to The Igou Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 21, 1912. Serial No. 726,946. (Cl. 93—5.)



1. In a wrapping machine, means for advancing the articles to be wrapped, means for applying in a spiral manner a continuous wrapper thereto, means for twisting the wrapper between adjacent articles, and means for severing the twisted part of the wrapper.

2. In a wrapping machine, means for advancing the articles to be wrapped, means for rotating said articles to cause the wrapper to be wound thereon, the speed of the rotation of each article at one point in its advancement being increased to cause the wrapper to be twisted, and means for severing the twisted part of said wrapper.

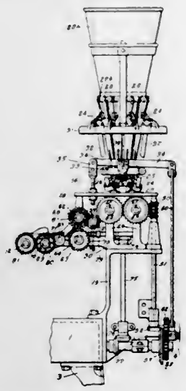
3. In a wrapping machine, a series of feeding and rotating devices for advancing and rotating the articles to be wrapped to cause a wrapper to be wound about the same, the rotary speed of certain of said devices being greater than the others to cause the wrapper between adjacent articles to be twisted, and means for severing the twisted part of said wrapper.

4. In a wrapping machine, a series of feeding and rotating devices for feeding and rotating the articles to be wrapped to cause a continuous wrapper to be wound about the same, the speed of certain of said devices being greater than that of the others to cause a separation between the articles and to form a twist in the wrapper between adjacent articles, and means for severing the twisted part of said wrapper.

5. In a wrapping machine, a series of feeding and rotating devices to advance and rotate the articles to be wrapped to cause a continuous wrapper to be wound about the same, the speed of certain of said devices being greater than the others to cause a separation between adjacent articles and also a twist in the wrapper between said articles, the feeding speed of the last device in the series being decreased over that of the adjacent device to cause the wrapped articles to approach each other at that point in the advancement of the same, and means for severing the twisted part of the wrappers.

[Claims 6 to 25 not printed in the Gazette.]

1,173,275. CANDY-MACHINE. DENNIS T. IGOU and DALE C. IGOU, Springfield, Ohio, assignors to The Igou Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Original application filed Sept. 19, 1910, Serial No. 582,671. Divided and this application filed May 4, 1915. Serial No. 25,697. (Cl. 107—4.)



1. In a machine of the character described, the combination, with a support for a batch of candy, reducing and feeding devices for drawing the candy from said support and forming the same into a bar, and a tube through which said bar of candy is discharged, of a bearing, a shaft journaled in said bearing, a housing surrounding said shaft and held against movement, a block mounted in said housing and rigidly secured to said shaft, a secondary shaft journaled in said block, a pinion carried by said secondary shaft, a rack secured to the inner wall of said housing and meshing with said pinion, and a disk cutter secured to the upper end of said secondary shaft.

2. In a machine of the character described, the combination, with a support for a batch of candy, reducing and feeding devices for drawing the candy from said support and forming the same into a bar, and a tube through which said bar of candy is discharged, of a vertical bearing having an enlarged upper portion constituting a housing, an annular rack secured to the inner wall of said housing, a block mounted in said housing having an annular reduced portion to receive said rack and rigidly secured to said shaft, a secondary shaft rotatably mounted in said block, a pinion rigidly secured to said secondary shaft and meshing with said rack, and a cutter carried by the upper end of said secondary shaft.

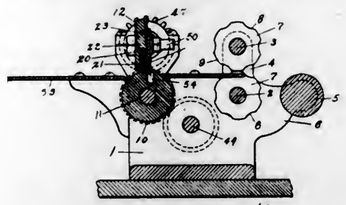
3. In a machine of the character described, a batch support comprising a funnel-shaped receptacle open at its upper and lower ends and comprising a series of slightly separated longitudinal sections, strips of resilient material arranged in grooves between the adjacent edges of said longitudinal sections, and means for moving said sections toward and from the longitudinal center of said receptacle.

4. In a machine of the character described, a batch support comprising a conical receptacle open at its upper and lower ends and comprising a series of longitudinal sections, a frame extending about said receptacle, a ring extending about said receptacle and held against vertical movement relative thereto, means for imparting vertical movement to said ring and thereby to the sections of said receptacle, and links connecting said sections to said frame, whereby the vertical movement of said sections will cause the same to move toward or away from the longitudinal center of said receptacle.

5. In a machine of the character described, a batch support comprising a conical receptacle open at its upper and lower ends and comprising a series of longitudinal sections, a ring surrounding said receptacle, means for limiting the movement of said ring relative to said sections, a lever pivotally mounted on a fixed part of said machine and having an annular portion extending about said receptacle, bearings carried by said annular portion, trunnions secured to said ring and mounted in said bearings, means for actuating the free end of said lever, a frame extending about said receptacle, and links connecting said sections to said frame.

[Claims 6 to 12 not printed in the Gazette.]

1,173,276. PAPER-FEEDING DEVICE FOR WRAPPING-MACHINES. DENNIS T. IGOU and DALE C. IGOU, Springfield, Ohio, assignors to The Igou Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Original application filed Sept. 19, 1910, Serial No. 582,671. Divided and this application filed May 4, 1915. Serial No. 25,698. (Cl. 164—68.)



1. In a machine of the character described, a wrapper-forming device comprising paper feeding rollers, gripping devices arranged beyond said paper feeding rollers, means for actuating said paper gripping devices, while they are in engagement with said paper being fed by said feeding rollers, at a greater rate of speed than said feeding rollers are actuated, and a cutter arranged to engage the paper between said paper feeding rollers and said gripping devices.

2. In a machine of the character described, a wrapper-forming device comprising a pair of feeding rollers, each having a series of disks spaced apart thereon and arranged in sets, the corresponding disks on the two rollers being arranged to cooperate one with the other, said disks having paper-engaging surfaces spaced about the periphery thereof, one set of disks alternating with the other set in gripping and releasing the paper, paper gripping devices arranged beyond said feeding rollers and comprising a roller, and a rotatable bar having a friction member arranged at one edge thereof and adapted to engage the paper while it is in engagement with said roller, and means for accelerating the speed of said gripping devices.

3. In a machine of the character described, a wrapper-forming device comprising a pair of feeding rollers, each consisting of a shaft having a series of disks spaced apart thereon and arranged in sets the corresponding disks of the two rollers being arranged to coöperate one with the other, said disks having paper-engaging surfaces spaced about the periphery thereof, one set of disks alternating with the other set in gripping and releasing the paper, paper gripping devices arranged beyond said feeding rollers and comprising a roller, a rotatable bar having a friction member arranged at one edge thereof and adapted to engage the paper while it is in engagement with said roller, means for accelerating the speed of said gripping devices, and a cutter carried by said bar and adapted to engage the paper in the rear of the friction member.

4. In a machine of the character described, a wrapper-forming device comprising a pair of feed rollers, each of said rollers consisting of a plurality of disks arranged in sets, each disk having a series of projections spaced about the periphery thereof, one set of disks on each roller coöperating with the corresponding set of disks on the other roller and alternating with the other corresponding sets of disks on said rollers in gripping and releasing the wrappers.

5. In a machine of the character described, a wrapper-forming device comprising a pair of feed rollers, each of said rollers consisting of a plurality of disks arranged in sets, each disk having a series of projections spaced about the periphery thereof, one set of disks alternating with the other set in gripping and releasing the wrappers, gripping devices arranged beyond said feeding rollers and comprising a roller, a rotatable bar arranged parallel with said roller and having a fixed member secured to one edge thereof, and eccentrically mounted gears for rotating said roller and said rotatable bar.

[Claims 6 to 15 not printed in the Gazette.]

1,173,277. CLAMPING MEANS FOR VEHICLE-TOPS. THOMAS J. KEHOE, Toledo, Ohio. Filed Jan. 2, 1915. Serial No. 220. (Cl. 21—61.)



1. In a device of the class described, a top supporting arm, a screw horizontally threaded into a part of said arm, an inverted U-shaped top supporting member carried by said screw with a leg fixed thereto and means for locking the screw in adjusted position relative to the arm.

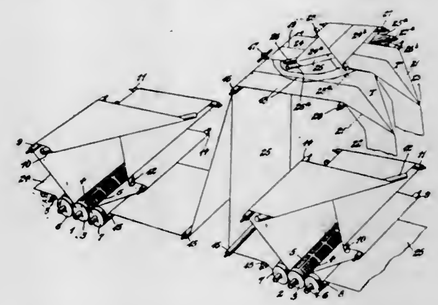
2. In a device of the class described, a rod having a laterally projecting part, a screw threaded into the outer end of said part, an inverted U-shape top support having one leg carried by the outer end of said screw and its other leg loosely embracing said part, and means for securing the screw in adjusted relation to said part.

3. In a device of the class described, a top supporting arm having a horizontally projecting part, a top supporting member adjustable lengthwise of said part and resting in part on said arm, and a member in threaded engagement with said part for threading movements lengthwise thereof and connected to said supporting member whereby lengthwise movements of said threaded member relative to the part will communicate adjusting movements to said supporting member lengthwise of said part.

4. In a vehicle, the combination of a bracket-arm projecting from the body thereof and having a vertical opening therethrough, a top supporting member depending from said arm and having its upper end projected through the arm opening, a plate projecting from said member above the bracket-arm and having a vertically disposed threaded opening in its outer end, means for securing said member and plate in rigid relation to said arm, a screw threaded through said plate opening, and a clamping finger carried by said screw and having its inner end in pivotal forked engagement with the screw above and below said plate whereby the clamping finger may have swivel movements relative to the screw and is prevented from movements relative to the screw lengthwise thereof.

5. In a vehicle, the combination with a bracket arm projecting from the body thereof and having a tapered vertically disposed opening therethrough, a split conical bushing disposed in said opening, a rod having its upper end reduced and fitted into said bushing with the free end of said reduced portion threaded and projecting without the bracket arm opening, a plate resting on the top of the bracket arm and having an opening through which the threaded portion of said rod projects, a nut threaded to the end of said rod and bearing down on said plate, said rod having its lower end projecting laterally therefrom, a supporting chair adjustably carried by the laterally projecting end of said rod, a screw threaded vertically through said plate without said bracket arm and a clamping finger carried by said screw for longitudinal movements therewith and for rotary movements relative thereto, said finger being disposed to coöperate with said supporting chair to clamp the arms of a lowered top therebetween when the finger carrying screw is turned in one direction.

1,173,278. WEB-PRINTING MACHINE. CARL A. KELLOGG, Battle Creek, Mich. Filed Apr. 21, 1911. Serial No. 622,442. (Cl. 101—124.)



1. A web printing machine having printing means including forms in two complemental groups and operable to print one surface of the web upon said forms and then to turn said web and print its opposite surface upon the same forms, said respective groups of forms being adapted, during the work and turn operation, to produce a succession of complemental page impressions in reverse arrangement along the opposite lateral halves of the web, web guiding means adapted to receive and guide the perfected web, folding means to which the perfected web is directed by said guiding means, operable to produce a longitudinal fold in each lateral half of said web, and cutting means operable to sever the folded web into sheets.

2. A printing machine having two complemental groups of forms and means operable first to print one surface of a web upon said two groups of forms, and then to turn said web and print its opposite surface upon said respective groups of forms, said respective groups of forms being adapted, during the work and turn operation, to produce a succession of complemental page impressions in reverse arrangement along the opposite lateral halves of the web, cutting and folding means including two V-shaped formers, and web guiding means operable to direct two streams of web to said respective formers, each stream of web so directed by the guiding means including one lateral half of the web perfected upon said two groups of forms and comprised of successive complemental page impressions.

3. A printing machine having printing means including four forms arranged side by side transversely to the path of the web, and means operable first to print one surface of a web upon said forms, and then to turn said web and print its opposite surface upon the same four forms, said forms being adapted, during the work and turn operation, to produce a succession of complemental page impressions in reverse arrangement along the opposite lateral halves of the web, cutting and folding means including two V-shaped formers, and web guiding means operable to direct two streams of web over the respective formers of the cutting and folding means, each stream of the web so directed by the guiding means including one lateral half of the web perfected upon said forms during

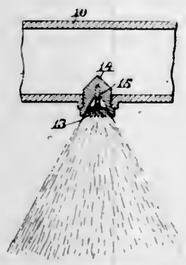
the work and turn operation and comprised of successive complemental page impressions.

4. A printing machine having two printing devices each including forms in two complemental groups, and means operable first to print one surface of a web upon both of said groups of forms and then to turn said web and print its opposite surface upon said respective groups of forms, each of said printing devices being adapted, during the work and turn operation, to produce a succession of complemental page impressions in reverse arrangement along the opposite lateral halves of the web perfected by such printing device, cutting and folding means including two V-shaped formers, and web guiding means operable to associate the lateral halves of the web perfected at one printing device with the respective lateral halves of the web perfected at the other printing device, and to direct two streams of web to said respective formers of the cutting and folding mechanism, each stream of web so directed by the guiding means including one lateral half of the web perfected by each of said two printing devices and comprised of successive complemental page impressions.

5. A printing machine having two printing devices each including forms in two complemental groups, and means operable first to print one surface of a web upon both said groups of forms and then to turn said web and print its opposite surface upon said respective groups of forms, each of said printing devices being adapted, during the work and turn operation, to produce a succession of complemental page impressions in reverse arrangement along the opposite lateral halves of the web perfected by such printing device, cutting and folding means including two V-shaped formers, and web guiding means including turning devices operable to turn one half of the web from one printing device with respect to the other half of the web from such printing device, said web guiding means being operable to associate the lateral halves of the web perfected at one printing device with the respective lateral halves of the web perfected at the other printing device, and to direct two streams of web to said respective formers of the cutting and folding mechanism, each stream of web so directed by the guiding means including one lateral half of the web perfected by each of said two printing devices and comprised of successive complemental page impressions.

[Claims 6 to 10 not printed in the Gazette.]

1,173,279. SPRINKLER-NOZZLE. JUSTUS R. KINNEY, Dorchester, Mass., assignor to The Kinney Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 9, 1912. Serial No. 736,202. (Cl. 137—80.)

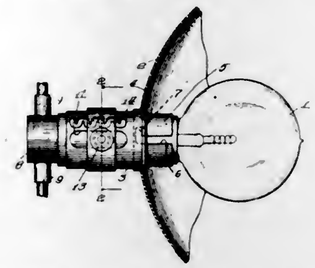


1. A nozzle having an elongated cylindrical body portion terminating at one end in a conical projection with a base conforming to and registering with the periphery of said body portion, and provided at its opposite end with a conical recess with an unbroken wall, said body portion having two diametrically disposed steeply inclined passages extending from the inner end of said conical recess to the face of said conical projection at points above the base thereof.

2. A nozzle having a cylindrical body portion terminating in a cone shaped end the base of which is the same diameter as said body portion and provided with a conical recess at the opposite end, the wall of which is unbroken and more steeply inclined than the wall of said cone shaped end, the face of the latter having extending therefrom elongated restricted passages diametrically disposed parallel to opposed lines of the wall of said recess with which the opposite ends of said passages communicate.

3. A nozzle having an elongated cylindrical body portion terminating at one end in a conical projection with a base conforming to and registering with the periphery of said body portion, and provided at its opposite end with a conical recess with an unbroken steeply inclined wall, said body portion having two diametrically disposed steeply inclined passages extending from the inner end of said conical recess to the face of said conical projection at points above the base thereof.

1,173,280. FOCUSING LAMP-SOCKET. GEORGE C. KNAUFF, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,752. (Cl. 240—44.)



1. A focusing socket for a lamp, including as one member a casing, as another member a body carrying said lamp and slidable in said casing: and interfitting means carried respectively by the said members, the portion of said means carried by one of said members affording a series of stops spaced longitudinally of the casing for limiting the relative movement of the said members in a direction longitudinal of the casing member, the said means being releasable from each of their said stops upon a partial rotation of the body with respect to the casing.

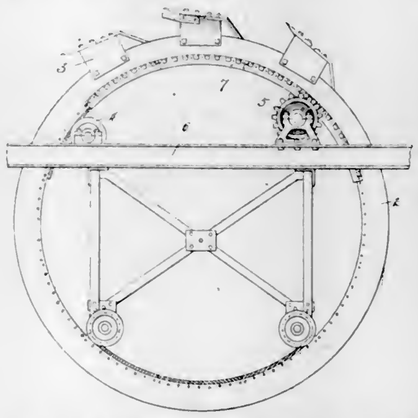
2. A focusing socket for a lamp, including as one member a casing, as another member a body carrying said lamp and slidable in said casing; clamping means frictionally connecting said members to hold the two interengaged at any point within their said sliding relation: and zigzag means associated with said members for compelling the body to be oscillated about its axis with respect to the casing to afford a longitudinal movement of said body with respect to the casing.

3. A focusing socket for a lamp, including a casing, a body member carrying said lamp and slidable in the casing, the casing being equipped with a slot having a plurality of zigzag portions extending substantially longitudinally of the casing: and a projection carried by said body member and extending into said slot, the width of said slot being so proportioned with respect to the size of the projection that the said slot will compel the body member to be oscillated about its axis with respect to the casing in affording a movement of the said body member in a direction substantially longitudinally of the casing.

4. A focusing socket for a lamp, including a casing, a body member carrying the lamp and slidable in the casing, means associated with said members for maintaining the same interlocked at any point of their said relative sliding relation, and auxiliary means associated with said members and including interengaging means carried respectively by said members and affording a series of positive stops for interlocking said body member and casing in a number of relative positions spaced substantially longitudinally of the said casing, the said auxiliary means being releasable from each of the said stops upon a partial rotation of the body member with respect to the casing.

5. A focusing socket for a lamp, including a casing having a zigzag slot extending substantially longitudinally thereof, a body member slidable in the casing and carrying the lamp, a spring-pressed clamp carried by the body member and engaging the casing to interlock the said body member and casing in an indefinite number of relative positions: and a projection carried by the clamp and disposed in said slot, the zigzag formation of the slot providing a series of wall portions disposed substantially circumferentially of the casing, and said wall portions affording stops spaced longitudinally of the casing to limit the movement of the body member with respect to the casing by pressure longitudinally of the casing.

1,173,281. GEAR-SEGMENT FOR CUTTING-WHEELS. LEO A. KRUPP, Findlay, Ohio, assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio, a Corporation of Ohio. Filed May 14, 1915. Serial No. 28,005. (Cl. 37—17.)



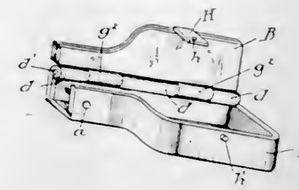
1. A cutting-wheel of the class described comprising spaced rims and having segmental internal gears secured thereto adjacent to their inner edges and embracing the inner edges of the rims to provide broadened roller bearing surfaces therefor.

2. The combination with a side rim of a cutting-wheel of the class described, and bearing and guide rolls for said rim, of a segmental internal gear secured to a side of said rim with its teeth projecting outwardly therefrom, the segments of said gears having their inner edges inwardly flanged and extending across the inner edge of the rim to form a broadened guide roll bearing surface.

3. In a machine of the class described, the combination with a cutting-wheel having annular side rims, and an internal guiding and supporting means for said rims, of an internal gear secured to the inner edge portion of each rim at the outer side thereof and comprising a plurality of segments each of which has a body portion which is secured to the outer side of the rim and has its inner edge flanged over the inner edge of the rim to form a broadened bearing surface for said guide means and to protect the rim from wear, and teeth projecting outwardly from said body portion in spaced relation to the inner edge thereof.

1,173,282. CELLULOID RECEPTACLE. ROBERT D. LEARY, Worcester, Mass. Filed Jan. 12, 1915. Serial No. 1,743. (Cl. 229—44.)

1. A closure embodying a sheet of celluloid provided intermediate its lateral edges with an aperture, a portion of which sheet is folded upon itself, the line of folding passing through said aperture whereby laterally projecting hinge members are formed at either end of said aperture, through which hinge members a pin may be passed for the purpose of securing the closure to a hinge member adapted to be inserted into the opening between the hinge members of the closure.



2. As a new article of manufacture, a celluloid receptacle one of the sides of which embodies a double ply of material, a cover also embodying a double ply of material, and a pivotal connection between the cover and said side of the receptacle, the pivot pin of which connection is positioned between the plies of the material.

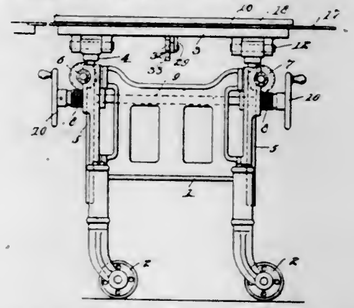
3. As a new article of manufacture, a celluloid receptacle having a body member, a cover for said body member embodying a plurality of plies of material, a pivot pin positioned between the plies of the cover, portions of which cover are cut away to expose the pivot pin, and means positioned on the body member and extending through the cut-away portions of the cover into engagement with the pivot pin whereby the cover is pivotally secured to the body of the receptacle.

4. As a new article of manufacture, a receptacle comprising a container and a closure pivoted thereto, the closure embodying a plurality of plies and that portion of the container to which said closure is pivoted also embodying a plurality of plies, and a pivot pin positioned intermediate the plies of both the closure and the multiply portion of the container for the purpose of pivotally securing said closure to the container.

5. As a new article of manufacture, a receptacle comprising a container and a closure pivoted thereto, the closure embodying a plurality of integral plies and that portion of the container to which said closure is pivoted also embodying a plurality of integral plies, and a pivot pin positioned intermediate the plies of both the closure and the mutiply portion of the container for the purpose of pivotally securing said closure to the container.

[Claims 6 to 10 not printed in the Gazette.]

1,173,283. FORM-TRUCK. FRANK C. LEETHEM, Middletown, N. Y., assignor to Latham Automatic Registering Company, a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,242. (Cl. 254—6.)



1. A truck for press-rooms comprising a frame, a table, means for supporting and adjusting said table upon said frame, a cover-plate normally lying flat upon said table, and means for elevating and supporting said cover-plate

at a single point on the table to permit the plate to rock at said point.

2. A truck for press-rooms comprising a frame, a table, means for supporting and adjusting the height of said table upon said frame, a cover-plate pivotally mounted on said table and adapted to swing into different positions, and means for raising said cover-plate above said table.

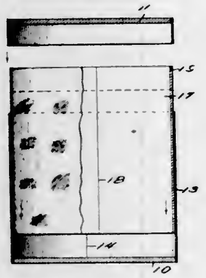
3. A truck for press-rooms comprising a frame, a table, means for supporting and adjusting the height of said table upon said frame, and a cover-plate pivotally mounted on said table and adapted to swing into different positions, the connection between said cover-plate and said table comprising a substantially vertical pivot pin, and means for raising said pivot pin to raise said cover-plate above said table.

4. A truck for press-rooms comprising a frame, a table, means for supporting and adjusting the height of said table upon said frame, and a cover-plate pivotally mounted on said table and adapted to swing into different positions, the connection between said cover-plate and said table comprising a substantially vertical pivot pin, and means for raising said pivot pin to raise said cover-plate above said table, said pin and said cover-plate being arranged so as to permit a limited lateral movement of said cover-plate when said pivot pin is held raised.

5. A press-room truck comprising a frame, a table, means for adjustably supporting said table on said frame, a cover-plate mounted on said table and having an overhanging edge beyond said table, said cover-plate being of resilient material and permitting a limited movement at said over-hanging edge.

[Claims 6 to 8 not printed in the Gazette.]

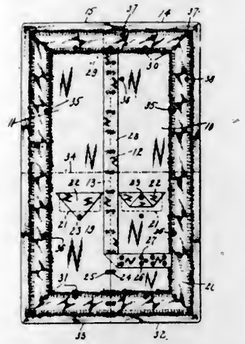
1,173,284. BOX. HENRY LEIMAN, Tampa, Fla. Filed Apr. 17, 1915. Serial No. 22,121. (Cl. 229—12.)



As an article of manufacture, a cigar box comprising a bottom composed of a solid block of wood having a rabbet around its edge; a body composed of a paper sheet bent into tubular form with its edges lapped and connected with each other and its lower end seated in said rabbet, and a wood veneer lining disposed within said sheet with its edges abutting each other, its lower end resting on its bottom, and its upper end rising above that of the paper sheet; a cover composed of a solid block of wood having a rabbet around its edge and a paper skirt whose upper end is secured in such rabbet and whose edges are lapped and connected with each other, the skirt being of a size to pass over the upper end of the lining; and a wrapping sheet on the outer face of the body and skirt and extending across the line between them.

1,173,285. COMBINATION MUFF AND SCARF. MAX LEVY, New York, N. Y. Filed Feb. 24, 1915. Serial No. 10,166. (Cl. 2—66.)

1. In a combination muff and scarf, the combination with two oblong sheets placed side by side and permanently joined along a portion of their meeting longitudinal edges, of means for separably fastening together the said two sheets along the remainder of said meeting edges, the single sheet so formed being adapted to be folded along its transverse center line, coacting separable fastening means for securing together the edges of the folded sheet, but leaving hand-openings, separable fastening means upon the outer faces of said sheets below said permanently joined portions for attaching said two sheets to each other so that their respective longitudinal edges form continuations of each other, and means for keeping the joined portions of the two sheets upon the inner face of one of said sheets.

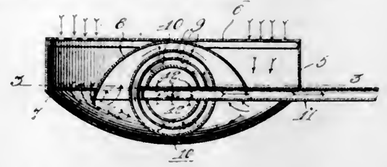


2. In a combination muff and scarf, the combination with two oblong sheets placed side by side and permanently joined along a portion of their meeting longitudinal edges, of means for separably fastening together the said two sheets along the remainder of said meeting longitudinal edges, the single sheet so formed being adapted to be folded along its transverse center line, coacting means upon said sheets for separably fastening together said single sheet, when folded, along its meeting transverse edges, coacting fastening means placed equidistantly from said center line on both sides thereof near the outer longitudinal edges of said two sheets to form when engaged with each other the hand-openings of the muff, fastening means upon the outer faces of said sheets below said joined portions adapted to engage with each other when said two sheets are folded onto each other, and fastening means for keeping the joined portions of the two sheets upon the inner face of one of said sheets.

3. In a combination muff and scarf, the combination with two oblong sheets placed side by side and permanently joined along a portion of their meeting longitudinal edges, of fastening means arranged below the remainder of said meeting edges, a strip secured to both sheets carrying fastening means adapted to coöperate with said first named fastening means, the single sheet so formed being adapted to be folded along its transverse center line, coacting separable fastening means disposed along both transverse edges of said single sheet, coacting fastening means placed equidistantly from said center line on both sides thereof near the outer longitudinal edges of said two sheets to form when engaged with each other the hand-openings of the muff, coacting fastening means arranged in a line parallel to the transverse edges of the sheets upon the outer faces thereof, said line being disposed below the joined portions of said two sheets, whereby said last named fastening means are adapted to engage with each other when said two sheets are folded onto each other, and fastening means for keeping the joined portions of said two sheets upon the inner face of one of said sheets.

1,173,286. AURIPHONE. AMAND LEYER, Dutch Flat, Cal. Filed Oct. 6, 1914. Serial No. 865,333. (Cl. 181—25.)

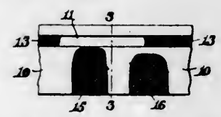
1. An auriphone including a housing having a perforated closure, a plurality of reverberant spheroids concentrically mounted in the housing and arranged one within the other, said spheroids being provided with non-alining openings through which the sound passes whereby an evolution of the sound in each spheroid is necessitated to increase its intensity, and a conducting tube extending from one of said spheroids and adapted to engage the auditory canal for conveying sound thereinto.



2. An auriphone including a housing, a perforate cap detachably associated with said housing through which the sound passes to the interior of the latter, a resonant crown mounted in said housing with which the sound contacts subsequent to passing through said perforate cap, a plurality of reverberant spheroids mounted in the housing, said spheroids being of variant sizes and adapted to be placed one within the other, each being provided with openings through which the sound passes, and a conducting tube engaged through the innermost of said spheroids for conveying sound from the housing after having passed through the spheroids.

3. An auriphone including a housing, a perforate cap detachably mounted on said housing, a foraminated disk carried in said housing, a resonant crown mounted on the disk, a plurality of reverberant spheroids arranged one within the other and provided with openings through which the sound passes, said openings being non-alined permitting a complete circulation of sound in each of said spheroids prior to passing therefrom, and a tube engaged through said housing and with the innermost of said spheroids for conveying sound therefrom.

1,173,287. RUBBER WELT FOR SHOES. JOHN E. LUCAS, Brockton, Mass., assignor to Frederick R. Woodward, Waban, Mass. Filed Apr. 24, 1914. Serial No. 834,527. (Cl. 36—78.)



1. A new article of manufacture consisting of a welt for boots and shoes molded from rubber with a groove in one face thereof.

2. A new article of manufacture consisting of a welt for boots and shoes molded from rubber with a groove in one face thereof, and a reinforcing material positioned in said groove.

3. A new article of manufacture consisting of a welt for boots and shoes molded from rubber with a groove in one face thereof and a beveled edge on its opposite face, and a reinforcing material secured to said beveled edge.

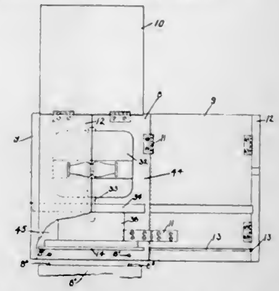
4. A new article of manufacture consisting of a welt for boots and shoes molded from rubber with a groove in one face and a beveled edge on its opposite face, the surfaces of said groove and beveled edge having reinforcing material secured thereto.

5. A new article of manufacture consisting of a welt for boots and shoes molded from rubber with a groove in one face thereof near one edge and reinforcing material embedded in said rubber near its opposite edge.

[Claims 6 to 12 not printed in the Gazette.]

1,173,288. MACHINE FOR POLISHING PLUGS. DONALD MCDERMID, Irvington, N. J., assignor to Connecticut Dynamo & Motor Co., Irvington, N. J., a Corporation of New York. Filed Apr. 16, 1914. Serial No. 832,290. (Cl. 51—4.)

1. In a machine for polishing plugs, the combination of a casing, a motor and a buffing wheel mounted within said casing, a partition located within said casing and disposed between said motor and said buffing wheel so that said buffing wheel is thus located within a lint chamber, a diaphragm carried by said partition and surrounding the motor shaft, a stationary guiding plate mounted within said casing and partially bounding said lint chamber, a revoluble guiding disk journaled upon said stationary guiding plate, and a plug holder carried by said revoluble guiding disk and having a portion extending into proximity to said buffing wheel.



2. In a machine for polishing plugs, the combination of a casing providing a lint chamber, a buffing wheel in said chamber, a guiding plate mounted within said casing and partially bounding said lint chamber, a revoluble guiding disk journaled upon said guiding plate, and a plug holder carried by said revoluble guiding disk and having a portion extending into proximity to said buffing wheel.

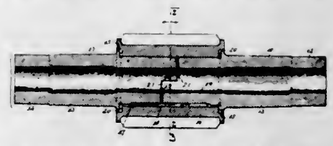
3. In a machine for polishing plugs, the combination of a casing providing a lint chamber, a buffing wheel in said chamber, a revoluble guiding disk partially bounding said lint chamber, and a plug holder carried by said revoluble guiding disk and having a portion extending into proximity to said buffing wheel.

4. A device of the character described, comprising a buffing wheel, a revoluble guiding plate provided with a plurality of slots extending in different directions from the center of said revoluble guiding plate, and plug holders carried by said plate and extending through said slots, said plug holders balancing each other.

5. In a device of the character described comprising a buffing wheel, a stationary plate disposed adjacent said buffing wheel and provided with a bearing of substantially annular form, a revoluble guiding plate engaging said bearing and provided with a plurality of slots extending in opposite directions from the center of said revoluble guiding plate, and a pair of plug holders carried by said plate and extending through said slots, said plug holders balancing each other.

[Claims 6 to 14 not printed in the Gazette.]

1,173,289. MILL-PINION. WALTER S. MCKEE, Chicago, and WESLEY G. NICHOLS and ALFRED H. EXTON, Chicago Heights, Ill., assignors to American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Jan. 4, 1916. Serial No. 70,206. (Cl. 74—28.)



1. An article of the class described comprising alined half-shafts, a toothed shell carried thereby, and means at the adjoining ends of said half-shafts providing for the transmission of power therebetween.

2. An article of the class described comprising two alined half-shafts, a toothed shell secured to and spanning the juncture between said half-shafts, and interlocking means at the ends of said half-shafts providing for the transmission of power therebetween.

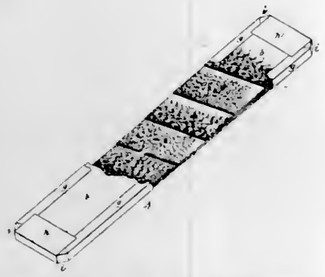
3. An article of the class described comprising alined half-shafts, a toothed shell carried thereby, said half-

shafts formed for the direct transmission of power therebetween.

4. A mill pinion or roll comprising hollow alined half-shafts, a toothed shell carried thereby, said half-shafts provided at their confronting ends with interlocking means providing for the transmission of power therebetween.

5. An article of the class described comprising two hollow alined half-shafts, a toothed shell carried thereby, the confronting ends of said half-shafts provided with interengaging members providing for the direct transmission of power therebetween.

1,173,290. CLOTH-BOARD. EDWARD A. MCMILLIN, North Adams, Mass., assignor to the E. A. McMillin Company, Philmont, N. Y., a Corporation of New York. Filed June 27, 1910. Serial No. 569,044. (Cl. 206—50.)

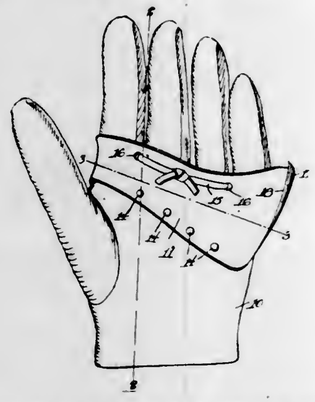


1. A cloth board of the character described, composed of a plurality of sheets of pulp board laid up with adhesive cement under pressure, and having its lateral edges bound with a smooth, tough fabric to protect against abrasion and separation of the sheets, substantially as specified.

2. A cloth board of the character described, composed of a plurality of sheets of pulp board laid up with adhesive cement under pressure, with the grain of contiguous layers of said sheets crossed, and having its lateral edges bound with a smooth, tough fabric to protect against abrasion, substantially as specified.

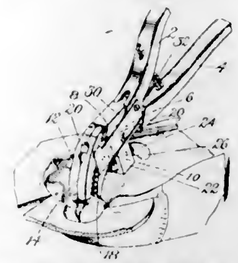
3. A cloth board of the character described, composed of a plurality of sheets of pulp board laid up with adhesive cement under pressure, and having its lateral and terminal edges bound with a tough, smooth fabric to protect against abrasion, substantially as specified.

1,173,291. CORN-CUTTER. JOSEPH E. MCWILLIAMS, Hitchcock, Okla. Filed Oct. 31, 1913. Serial No. 798,556. (Cl. 30—9.)



A cutting device of the character described formed from a sheet metal blank having a rear edge and a forward edge of greater length than the rear edge to provide a forwardly and outwardly extending portion having a cutting edge, the extended portion being gradually curled from the rear edge portion of the blank to the forward edge thereof to provide a pronounced lateral extension on the forward portion.

1,173,292. LASTING APPARATUS. ALBERT A. MACLEOD, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 4, 1912. Serial No. 701,592. (Cl. 12—110.)



1. A device for use in lasting shoes comprising jaws for seizing the upper upon each side of and closely adjacent to a wrinkled portion of upper, and means for moving the jaws apart transversely of the wrinkled portion to remove the wrinkle, said transverse movement taking place automatically as an incident to the operation of the device in tensioning the stock.

2. A device for use in lasting shoes, comprising jaws for seizing the upper upon each side of a wrinkled portion of upper, and means arranged to contact with the work and to be pressed against it as the upper is tensioned, said means acting to separate the jaws with a force proportional to the upper tensioning force.

3. A hand lasting tool having crossed hand levers carrying pincer jaws, the jaws being divided in a plane perpendicular to the gripping faces thereof into lateral sections, each section being pivotally connected to its handle member, and means to separate the lateral sections of the pincers automatically to spread the gripped portion of upper while it is being tensioned in the normal use of the tool.

4. A hand tool for lasting comprising jaws, means whereby they may be operated to grip the stock, said jaws being formed in separate parts movable laterally, and means rendered effective by movement of the said operating means to produce separation of the jaws while the stock is gripped by the jaws.

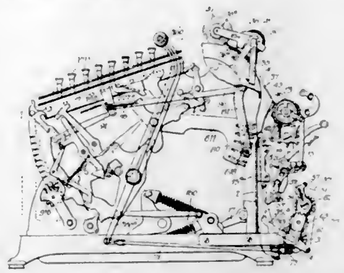
5. A lasting device comprising two pairs of coöperating jaw sections, means whereby the jaws may be operated to grip the stock and means by which the jaw sections may be separated substantially in the plane of the gripped portion of stock to spread the stock laterally.

[Claims 6 to 17 not printed in the Gazette.]

1,173,293. ADDING AND LISTING MACHINE. FRED F. MAIN, Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 18, 1914. Serial No. 862,294. (Cl. 235—58.)

1. In a machine of the class described the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; and a latch restraining said spring.

2. In a machine of the class described the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; a latch restraining said spring; a prime mover; and connections from the same to said supplemental holder for moving the latter out of printing position in opposition to the aforesaid spring.



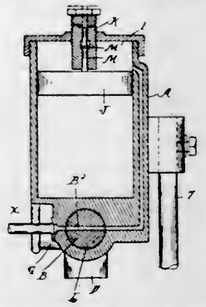
3. In a machine of the class described the combination with a printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; a latch restraining said spring; and a key and connections for tripping the latch.

4. In a machine of the class described the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; a spring-held latch for restraining the said spring; and a settable device for displacing the latch.

5. In a machine of the class described the combination with printing mechanism and a paper holder; of a supplemental paper holder shiftable relative to the main paper holder between pre-defined positions in and out of juxta-relation to the printing mechanism; a spring for moving said supplemental holder into printing position; a spring-held latch for restraining the said spring; a settable device for displacing the latch; and a key and connections for tripping the latch independently of said device.

[Claims 6 to 9 not printed in the Gazette.]

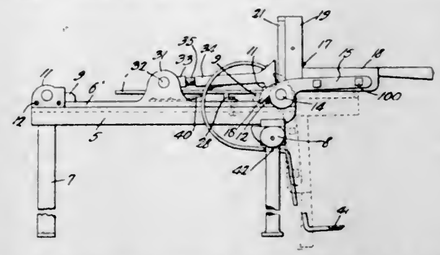
1,173,294. APPARATUS FOR FILLING LARD IN PAILS OR CARTONS. FRANK P. MALONEY, Detroit, Mich. Filed Nov. 2, 1914. Serial No. 869,995. (Cl. 226—18.)



1. The combination with a cylinder and a member longitudinally displaceable therein, of a stop adjustably mounted in an extremity of the cylinder, and an indicator rod slidably carried by the stop, normally projecting beyond the same within the cylinder and having a portion projecting beyond the stop exterior to the cylinder.

2. The combination with a cylinder and a member longitudinally displaceable therein, of a stop mounted in an extremity of the cylinder formed with a bore longitudinal of the cylinder and having an indicator rod slidable in said bore, a projection upon the rod engaging shoulders on the stop to limit motion of the rod, said rod having a portion normally projecting inwardly beyond the stop, and a portion displaceable outwardly beyond the stop.

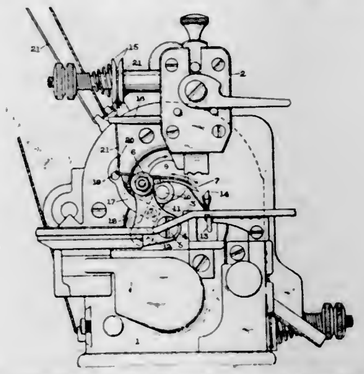
1,173,295. METAL-WORKING MACHINE. HENRY W. E. MARKUSSEN, Flemington, N. J., assignor of one-third to Edwin R. Bancroft, Hadley, N. Y., and one-third to Frank E. Reasoner, Flemington, N. J. Filed May 26, 1915. Serial No. 30,582. (Cl. 59—65.)



1. In a device for bending and shaping metal, a base and a lever mounted to swing with respect to the base to effect a bending of the metal, the lever being cut away adjacent the base to permit a lateral expansion of the metal adjacent its point of bending.

2. In a device for bending and shaping metal, a base; a lever mounted to swing with respect to the base to effect a bending of the metal, the lever being cut away adjacent the base to permit a lateral expansion of the metal adjacent its point of bending; a compression member comprising parts which are threaded together, whereby one of said parts may be adjusted toward and away from the lever, the other of said parts being pivotally connected with the base; a spring coacting with the first specified part of the compression member to elevate the compression member; and a movable element under the control of an operator and bearing upon the first specified part of the compression member to depress the compression member, the spring and the movable element coacting with the first specified part of the compression member to prevent relative rotation between the parts of the compression member.

1,173,296. THREAD-CONTROLLING DEVICE FOR SEWING-MACHINES. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 16, 1911. Serial No. 644,346. (Cl. 112—26.)



1. In combination, in a sewing machine, a fixed thread guide, a thread controller having a passage for continuous engagement of the thread, a thread engaging horn integral with the controller and means for operating the

controller whereby in a cycle of its motion the horn is caused to engage the thread between the said thread passage and the fixed thread guide and also to become disengaged from the thread.

2. In an overseaming machine, in combination with the stitch forming mechanism and thread guiding means thereof, a moving thread controlling implement having a thread passage near the extremity of the free end thereof and a coöperating thread engaging horn at the extremity of the said implement, the said horn inclining at an angle to the direction of length of the portion of the said thread controlling implement through which the thread passage passes, and means for carrying and actuating the controller whereby the horn is alternately moved into and out of engagement with the thread, substantially as and for the purposes described.

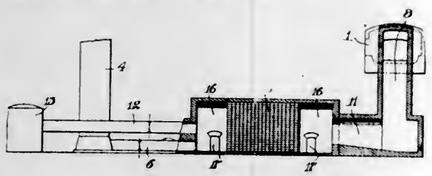
3. In an overseaming sewing machine and in combination; a stationary thread guide, a needle carrier and a thread controlling implement operating on the thread between the said thread guide and needle carrier, the said implement being provided with a thread carrying eye and a tapering horn, the said eye and horn each traveling in a continuous ovate path, the orbit of movement of the tapering portion of the horn being of greater peripheral length than the orbit of movement of the eye, and eccentric thereto; whereby the horn may be carried into and out of engagement with the thread upon which the eye is operating, substantially as and for the purpose herein shown and described.

4. In a sewing machine; stitch forming mechanism embodying a needle, a needle carrier pivoted on a fixed center, a driving crank and a link connecting the driving crank and the needle carrier; a thread controller projecting from the link and having two thread engaging elements around which the thread is caused to intermittently make a double bend.

5. In a sewing machine; a thread guide, a thread controlling implement having two thread engaging elements located thereon and at the same side of the controller's support, a carrier supporting the controller and means for actuating the carrier whereby one of the said elements is carried into and out of engagement with the thread between the other element and the thread guide at each cycle of the controller's travel.

[Claims 6 to 9 not printed in the Gazette.]

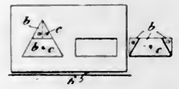
1,173,297. REGENERATOR-CHAMBER. HERBERT F. MILLER, Jr., Williamsport, Pa. Filed Oct. 28, 1913. Serial No. 797,727. (Cl. 263—19.)



1. In combination with a furnace, an upright flue communicating with the same, a horizontal flue leading from the lower end of the upright flue, a regenerator chamber of relatively greater cross sectional area than that of the flue, said regenerator chamber being connected with the flue and forming a horizontal enlarged continuation of the same, whereby the gaseous currents will be slowed up as they enter the enlarged regenerator chamber, and the dust and dirt held in suspension will be deposited on the floor of said chamber, a horizontal flue leading from the opposite end of the regenerator chamber, and a checkerwork in said regenerator chamber extending throughout the cross sectional area of the same, said checkerwork terminating at its ends inward of the ends of the chamber, thereby leaving cleaning spaces in the chamber at opposite ends of the checkerwork in which cleaning spaces the entire transverse area of the ends of the checkerwork are respectively exposed.

2. In combination with a furnace, an upright flue communicating with the same, a horizontal flue leading from the lower end of the upright flue, a regenerator chamber of relatively greater cross sectional area than that of the flue, said regenerator chamber being connected with the flue and forming a horizontal enlarged continuation of the same, whereby the gaseous currents will be slowed up as they enter the enlarged regenerator chamber, and the dust and dirt held in suspension will be deposited on the floor of said chamber, a horizontal flue leading from the opposite end of the regenerator chamber, and a checkerwork in said regenerator chamber extending throughout the cross sectional area of the same, said checkerwork terminating at its ends inward of the ends of the chamber, thereby leaving cleaning spaces in the chamber at opposite ends of the checkerwork in which cleaning spaces the entire transverse area of the ends of the checkerwork are respectively exposed, the side walls of said cleaning spaces sloping inwardly toward the respective flues.

1,173,298. CUT-OUT GEOMETRICAL FIGURE FOR DIDACTICAL PURPOSES. MARIA MONTESSORI, Rome, Italy. Filed Mar. 18, 1913. Serial No. 755,148. (Cl. 35—12.)



1. In an educational device, in combination, a plate provided with a plurality of geometrically related cavities of different shapes and a plurality of insets adapted to be grouped together to fill exactly any one of said related cavities.

2. In an educational device, in combination, a plate provided with a plurality of geometrically related cavities of different shapes of geometrical form and a plurality of insets adapted to be grouped together to fill exactly any one of said related cavities.

3. In an educational device, in combination, a plate provided with a plurality of cavities of different shapes but of the same area and a plurality of insets adapted to be grouped together in different ways to fill exactly any one of said plurality of cavities.

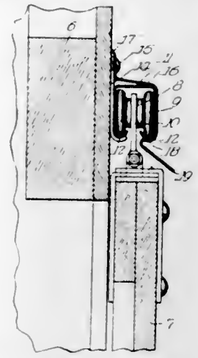
4. In an educational device, in combination, a plate provided with a plurality of geometrically related cavities of different shapes and a plurality of insets adapted to be grouped together to fill exactly any one of said related cavities, each of said insets being provided with a handle.

5. In an educational device, in combination, a plate provided with a plurality of recesses of different shapes, said recesses being geometrically related in both volume and area, and a plurality of insets adapted to be grouped together to fill exactly any one of said related recesses.

[Claims 6 and 7 not printed in the Gazette.]

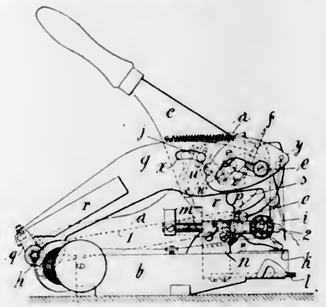
1,173,299. DOOR-HANGER TRACK. JESSE E. MOYER, Danville, Ill., assignor to Allith-Prouty Company, Danville, Ill., a Corporation of Illinois. Filed Feb. 14, 1914. Serial No. 818,643. (Cl. 16—7.)

1. A door hanger track, comprising in combination a track member composed of a single, longitudinally-extending sheet of metal bent into generally rectangular form with the margins of the sheet curved upwardly to provide parallel tracks separated by a slot for the passage of the door support, and supporting members for said track member, one of which is adapted to be fastened to and lie alongside the wall of a structure and provided with a projection adapted to engage the inner portion of the track member, and the other supporting member having an attaching flange and being bent to provide a body portion extending outwardly over the track member, the integral terminal portion thereof being outwardly inclined to afford a storm shield, an intermediate portion being deflected to provide a support for the outer side of the track member, substantially as described.



2. A door hanger track, comprising in combination a track member composed of a single, longitudinally extending sheet of metal bent into generally rectangular form with the margins of the sheet curved upwardly to provide parallel tracks separated by a slot for the passage of the door support and inner and outer supporting members for said track member, said inner supporting member being in the form of a short bracket having a portion adapted to engage the inner portion of the track member, said outer supporting member being coextensive in length with said track member and having an attaching flange and being bent to provide a portion underlying the outer portion of the track, the integral terminal portion of said outer supporting member being outwardly inclined to afford a storm shield, substantially as described.

1,173,300. SOLE-SEWING MACHINE. JOHANNES ANTON MÜLLER, Hamburg, Germany. Filed July 23, 1914. Serial No. 852,646. (Cl. 112—20.)



1. In a sole-sewing machine, in combination a hand lever and an oscillating needle lever operated by the hand lever, a cam on the hand lever and a cam follower on the needle lever adapted to be engaged by the cam on the hand lever to move the needle lever transversely.

2. In a sole-sewing machine, in combination an oscillating needle, a needle lever provided with a cam slot, a hand lever, a pin on the hand lever adapted to enter said cam slot to operate the needle lever, a cam on the hand lever and a cam follower on the needle lever adapted to be engaged by the cam on the hand lever to move the needle lever transversely.

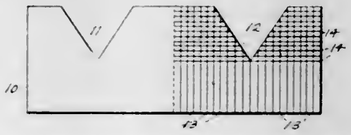
3. In a sole-sewing machine, in combination an oscillating needle, a needle lever provided with a cam slot, a hand lever provided with a pin adapted to enter said cam slot to operate the needle lever, a cam on the hand lever, a cam follower on the needle lever adapted to be engaged by the cam on the hand lever to move the needle lever transversely, and an oscillatory boss to which the needle lever is so connected that it can oscillate transversely to the sewing movements of the needle.

4. In a sole-sewing machine, in combination an oscillating needle, a needle lever provided with a cam slot, a hand lever provided with a pin adapted to enter said cam slot to operate the needle lever, a cam on the hand lever and a cam follower on the needle lever adapted to be engaged by the cam on the hand lever to move the needle lever transversely, the cam follower consisting of a stud attached to the needle lever.

5. In a sole-sewing machine, in combination an oscillating needle, a needle lever provided with a cam slot, a hand lever provided with a pin adapted to enter said cam slot to operate the needle lever, a cam on the hand lever, a cam follower on the needle lever adapted to be engaged by the cam on the hand lever to move the needle lever transversely, the cam follower consisting of a stud attached to the needle lever, and a guide plate for the stud.

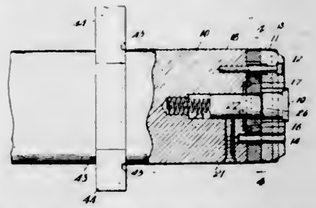
[Claims 6 to 8 not printed in the Gazette.]

1,173,301. CHART FOR USE IN CUTTING GARMENTS. MARY CAROLINE MURPHY and MARY CAROLINE MURPHY, Jr., Haverhill, Mass. Filed Feb. 27, 1915. Serial No. 11,053. (Cl. 33—12.)



A chart of the class referred to having arm-scye notches of predetermined size for garments of a plurality of sizes, vertical lines spaced equal distances and numbered to indicate the place to cut for persons of certain ages or bust measures for indicating the girth of a garment, and suitably proportioned horizontal lines starting from the apex and having likewise indicating marks or numbers to show the place to cut for persons of certain ages or bust measure to indicate the length of the garment.

1,173,302. MECHANISM FOR OPERATING ON CAN-BODIES. CHARLES J. NELSON, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 12, 1913. Serial No. 767,098. (Cl. 113—7.)



1. In a machine of the class described, in combination, a horn or mandrel and die coöperating therewith and relatively movable to and from each other and adapted to neck-in can bodies, said die comprising a head having a plurality of sections, movably mounted thereon and adapted to be contracted, and springs acting at right angles to the sections and between the contiguous sides of the sections for yieldingly holding them directly apart from each other.

2. In a machine of the class described, in combination, a horn or mandrel and a die coöperating therewith, said horn and die being relatively movable to and from each other and adapted to neck-in can bodies, said horn having a plurality of movable expansible sections thereon, means for yieldingly holding the said sections in con-

tracted position, and a radially immovable end plate fixed on the said horn in advance of the said sections.

3. In a machine of the class described, in combination, a horn or mandrel provided with an internal necking-in die at the end thereof, and an external necking-in die coöperating therewith, said horn and die being movable relatively to and from each other, said external necking-in die comprising a head having a plurality of die sections movably mounted thereon and adapted to be contracted, and said horn being provided with a plurality of expansible members thereon and a radially immovable end plate in advance of the said expansible members.

4. In a machine of the class described, in combination, a horn or mandrel and a die coöperating therewith and relatively movable to and from each other and adapted to neck-in can bodies, said die comprising a head having a plurality of sections movably mounted thereon and adapted to be contracted, and springs 31 arranged and acting between contiguous sections for normally retaining said movable sections in an expanded position.

5. In a machine of the class described, in combination, a horn or mandrel provided with an internal necking-in die at the end thereof, and an external necking-in die coöperating therewith, said horn and die being movable relatively to and from each other, said external necking-in die comprising a head having a plurality of die sections movably mounted thereon and adapted to be contracted, and said horn being provided with a plurality of expansible members thereon and a radially immovable end plate fixed on the said horn in advance of the said expansible members, means for normally maintaining said movable die sections in an expanded position, and means for normally maintaining said movable sections of the horn in a contracted position.

[Claims 6 to 15 not printed in the Gazette.]

1,173,303. PROCESS OF MAKING FERTILIZERS. SPENCER B. NEWBERRY and HARVEY N. BARRETT, Baybridge, Ohio. Filed Mar. 15, 1912. Serial No. 684,013. (Cl. 71—7.)

1. The process of making fertilizer by heating an intimate pulverized mixture of natural phosphate with from five to twenty-four per cent. of alkali metal bisulfate, in an oxidizing atmosphere, at a temperature of 2500° F. to 2800° F., until the alkali metal bisulfate is substantially decomposed with liberation of sulfur dioxid and oxygen, and the natural phosphate is rendered substantially citrate-soluble.

2. The process of producing a citrate soluble fertilizer which consists in mixing natural phosphate with not to exceed approximately 25% of an alkali-metal bisulfate, heating the mixture until the bisulfate is substantially decomposed, and continuing the heating until approximately all the sulfur dioxid is driven off and the residuum rendered citrate soluble but non-soluble in water.

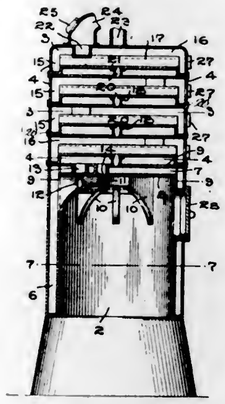
3. The process of producing a citrate soluble fertilizer which consists in mixing natural phosphate with alkali-metal bisulfate, heating the mixture until the sulfate is substantially decomposed and continuing the heating for from 20 minutes to an hour and ten minutes, until approximately all the sulfur dioxid is driven off and the residuum rendered citrate-soluble but non-soluble in water.

4. The process of producing a citrate soluble fertilizer which consists in mixing natural phosphate with not more than approximately 25% of alkali-metal bisulfate, heating the mixture to from 2500° to 2800° Fahrenheit until the bisulfate is substantially decomposed, continuing the heating until approximately all the sulfur dioxid is driven off and the residuum rendered citrate soluble but non-soluble in water.

5. The process of producing a citrate soluble fertilizer, which consists in mixing natural phosphate with less than 25% of alkali-metal bisulfate, heating the mixture to approximately 2500° to 2800° Fahrenheit until the bisulfate is substantially decomposed and continuing the heating for from 20 minutes to an hour and ten minutes or until approximately all the sulfur dioxid is driven off and the residuum rendered citrate soluble but non-soluble in water.

[Claims 6 to 12 not printed in the Gazette.]

1,173,304. WATER-HEATER. JOSEPH S. PEDRICK, Westmont, N. J. Filed Mar. 29, 1915. Serial No. 17,837. (Cl. 122—217.)



1. In a water heater, the combination with a fire pot section having communicating annular and top water spaces, with flues extending through the latter, of a concentric depending water rib traversing said flues and said rib being in open communication with the top water space except where traversing said flues, substantially as described.

2. In a water heater, the combination with a fire pot section having communicating annular and top water spaces, of a plurality of concentric water containing depending ribs in open communication with the top water space, and radial ribs connecting both of said first-mentioned ribs and communicating with both of said first-mentioned water spaces, substantially as described.

3. In a water heater, the combination with a fire pot section having an annular water space and a top water space, with flues through the latter, of a series of radially positioned water containing ribs, communicating with both of said water spaces, and other water containing ribs connecting the first-mentioned ribs, said last-mentioned ribs extending across the flues, substantially as described.

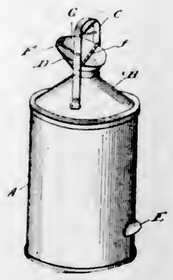
4. In a water heater, the combination with a fire pot section having an annular water space and a top water space, with flues through the latter, of a series of radially positioned water containing ribs, communicating with both of said water spaces, and other water containing ribs connecting the first-mentioned ribs, said last-mentioned ribs curved concentrically, substantially as described.

5. In a water heater, the combination with a fire pot section having an annular water space and a top water space, with flues through the latter, of a series of radially positioned water containing ribs, communicating with both of said water spaces, and other water containing ribs connecting the first-mentioned ribs, said last-mentioned ribs curved concentrically and extending across the flues, substantially as described.

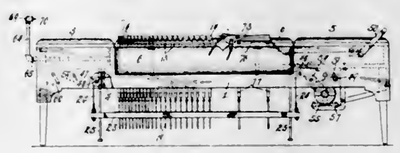
[Claims 6 to 15 not printed in the Gazette.]

1,173,305. DISPENSING-CAN. WILLIAM A. PHELAN, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 5, 1911. Serial No. 642,566. (Cl. 221—11.)

In a dispensing can, in combination: a can body having a conical breast, and an upwardly extending spout having an inclined lip and pouring opening; a fixed cover over the rear part of said spout; an opening and closing cover over the front and higher part of the spout and hinged to the front edge of said fixed cover; a handle bail hinged to said conical breast and having its legs near to the sides of said spout; and a link connection in the form of a bail having the extremities of its legs pivotally connected with the two legs of the handle bail below the top of the latter, extending thence horizontally to the hinged cover and having its middle portion pivotally connected with the hinged cover; the said parts being arranged to hold the hinged cover closed when the handle bail is vertical, and to open said cover upon any tipping of the can.



1,173,306. SPINAL ADJUSTING AND STRETCHING APPARATUS. ARNOLD A. POOL, Toledo, Ohio, assignor of one-half to Joseph W. Konz, Toledo, Ohio. Filed Sept. 7, 1915. Serial No. 49,267. (Cl. 128—16.)



1. In an apparatus of the class described, a frame, a horizontally disposed member carried by said frame for rocking movements in a plane lengthwise thereof, a standard rising from said member for yielding longitudinal movements relative thereto, and means carried by said standard at its upper end for engaging a single vertebra at opposite sides of its longitudinal center and serving as a support therefor.

2. In an apparatus of the class described, a vertebra supporting member having transversely spaced vertebra supporting parts for simultaneously acting on a vertebra, and means supporting said member for swinging movements lengthwise of the axis of the vertebra which it supports.

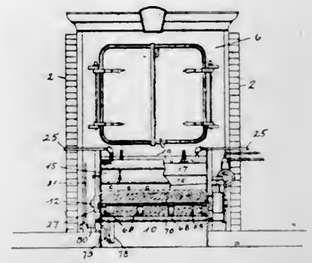
3. In an apparatus of the class described, a vertebra supporting member having pivotally movable vertebra coacting parts which are spaced to engage and simultaneously support opposite side portions of a vertebra.

4. In an apparatus of the class described, a vertebra supporting member having transversely spaced vertebra supporting parts for simultaneously acting on a vertebra, and means supporting said member for movements lengthwise of the vertebra axis which it supports.

5. In an apparatus of the class described, a vertebra supporting member having spaced vertebra supporting parts, and means supporting said member for yielding vertical movements.

[Claims 6 to 61 not printed in the Gazette.]

1,173,307. CHAIN-GRATE STOKER. WILLIAM P. REIBOLDT, Newark, and EDWARD C. CLARK, Nutley, N. J., assignors to Oscar Barnett Foundry Company, a Corporation of New Jersey. Filed Sept. 20, 1911. Serial No. 650,459. (Cl. 110—40.)



1. In a chain grate stoker, the combination of a traveling grate, a drive shaft for said grate, adjustable blocks having bearings for said shaft, an engine or motor on one of said blocks, and means for connecting said engine or motor to said shaft to drive the same, whereby said blocks may be adjusted without affecting the connection of the engine or motor to the shaft.

2. In a chain grate stoker, the combination of a traveling grate, a drive shaft for said grate, an adjustable bearing block for said shaft, a worm wheel on said shaft, a worm engaging said worm wheel, a shaft for said worm having bearings in said block, a worm wheel on said worm shaft, a second worm meshing with said last-mentioned worm wheel, an engine or motor mounted on said block, a flexible coupling connecting the shaft with said engine or motor to said second worm, and means for adjusting said bearing block.

3. In a chain grate stoker, the combination of a traveling grate, a drive shaft for said grate, an adjustable bearing block for said shaft, a worm wheel for said shaft, a worm engaging said worm wheel, a shaft for said worm having bearings on said block, and having a wrench-receiving portion, a releasable clutch member on said shaft, a worm wheel loose on said worm shaft, a clutch member fixed on said worm wheel and adapted to engage the clutch member on the worm shaft, a second worm engaging said second worm wheel, an engine or motor on the bearing block adapted to drive said second worm, and means for adjusting said bearing block.

4. In a chain grate stoker, the combination of a traveling grate, a drive shaft for said grate, adjustable blocks having bearings for said shaft, an engine or motor movably mounted on one of said blocks, and means for connecting said engine or motor to said shaft to drive the same.

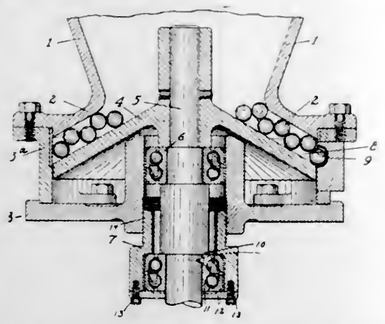
5. In a chain grate stoker, the combination of a traveling grate, a drive shaft for said grate, adjustable blocks having bearings for said shaft, one of said blocks providing a gear case having at its top a bed or seat, an engine or motor secured on said bed or seat, and means for connecting said engine or motor to said shaft to drive the same.

[Claims 6 to 20 not printed in the Gazette.]

1,173,308. HOPPER. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Oct. 2, 1911. Serial No. 652,408. (Cl. 83—44.)

1. In a feeding hopper for individually feeding the elements of a batch of like-diametered articles, in combination, a receptacle having sides forming a flare, and a traveling bottom adjacent, coöperating with and arranged at a distance from said flare to provide a passage, there being an outlet adjacent said bottom of a diameter having a length less than twice the diameter of the article to be

fed thereby to maintain a single file arrangement of said articles; substantially as described.



2. In a feeding hopper for individually feeding the elements of a batch of like diametered articles, in combination, a receptacle having flaring walls, a rotatable bottom adjacent, coöperating with and spaced from the flare to provide a passage, and a wall for closing said passage, there being an outlet in said wall from said passage and adjacent the periphery of said bottom in a line substantially at a tangent thereto and of a diameter having a length less than twice the diameter of the articles to be fed thereby to maintain a single file arrangement of said articles; substantially as described.

3. In a feeding hopper for individually feeding the elements of a batch of like-diametered articles, in combination, a receptacle having sides forming a conical flare, and an inclined traveling bottom projecting into said flare and arranged at a distance from said sides to provide a passage, there being an outlet adjacent said bottom of a diameter having a length less than twice the diameter of the articles to be fed thereby to maintain a single file arrangement of said articles; substantially as described.

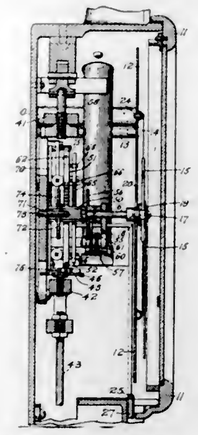
4. In a feeding hopper for individually feeding the elements of a batch of like-diametered articles, in combination, a receptacle having flaring walls, a rotatable conical bottom projecting within the flare and spaced from said walls to provide a passage, and a wall for closing said passage, there being an outlet in said wall from said passage and adjacent the periphery of said bottom in a line substantially at a tangent thereto and having a diameter of a length less than twice the diameter of the articles to be fed thereby to maintain a single file arrangement of said articles; substantially as described.

5. In a feeding hopper for individually feeding the elements of a batch of like-diametered articles, in combination, a receptacle having flaring walls with substantially smooth surfaces, a rotatable conical bottom having substantially smooth surfaces and projecting within the flare and spaced from said walls to provide a passage having substantially smooth walls, and a wall for closing said passage, there being an outlet in said wall from said passage and adjacent the periphery of said bottom in a line substantially at a tangent thereto and of a diameter having a length less than twice the diameter of the articles to be fed thereby to maintain a single file arrangement of said articles; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,173,309. WEIGHING-MACHINE. WILLIAM W. ROSENFIELD, New York, N. Y., assignor to Rosenfield Manufacturing Company, a Corporation of New York. Original application filed Jan. 9, 1907, Serial No. 351,420. Divided and this application filed Nov. 9, 1909. Serial No. 526,984. (Cl. 73—46.)

1. In a weighing machine, the combination of spring weighing mechanism comprising weighing springs normally under tension, a member suspended by the weighing springs, and stops for said member against which said member is held by the weighing springs when in normal position, and an indicating mechanism comprising a movable member normally locked against movement and adapted when released to be limited in its movement by the position of said member of the weighing mechanism, and means for normally locking the movable member against movement.



2. In a weighing machine, the combination of spring weighing mechanism comprising weighing springs normally under tension, a member suspended by the weighing springs, and stops for said member against which said member is held by the weighing springs when in normal position, and an indicating mechanism comprising a movable member normally locked against movement and adapted when released to be limited in its movement by the position of said member of the weighing mechanism and means for normally locking the movable member against movement; and an adjustable member interposed between said movable member and said member of the weighing mechanism.

3. The combination of indicating means, a pinion connected therewith, a sliding rack bar for engaging the pinion to control the movement of the indicating means, and a second sliding rack bar for engaging the pinion and constantly bearing thereon in one direction to take up lost motion between the pinion and the first rack bar, said rack bars being removable and one of said rack bars being provided with a pin extending into an opening in the other of said rack bars, said pin and opening being of such relative size that the pin will not be in engagement with the walls of the opening when the rack bars are both in engagement with the pinion but will hold the bars in such relation when not in engagement with the pinion that when brought into engagement with the pinion they will have a proper relative position.

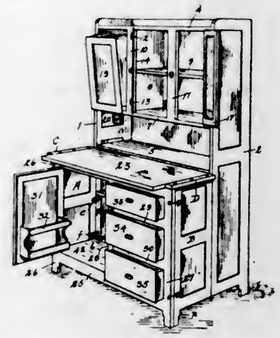
4. An indicating means comprising a dial plate, a spindle extending through an opening in the dial plate, and an index or pointer carried by the spindle and formed of two parts pivotally connected to the spindle and adapted to be turned outwardly to permit of the removal of the dial plate.

5. An indicating means comprising a dial plate, a spindle extending through an opening in the dial plate, and an index or pointer carried by the spindle and formed of two parts pivotally connected to the spindle and adapted to be turned outwardly to permit of the removal of the dail plate, said parts of the index being normally spring held in position.

[Claim 6 not printed in the Gazette.]

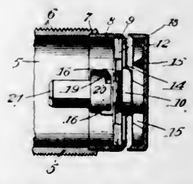
1,173,310. FOLDING CABINET. ROBERT C. RUSSELL, Richmond, Ind., assignor to The K. D. Cabinet Company, Richmond, Ind., a Corporation of Indiana. Filed Nov. 20, 1913. Serial No. 802,067. (Cl. 45—16.)

A folding cabinet consisting of permanently connected sides 1 and 2 and a back extending from the top to the bottom of the cabinet, panels hinged to forward edges of the sides 1 and 2 and extending from the lower ends of the respective sides upward less than half the lengths of the sides, guide strips connected to the upper edges of the panels, a removable front frame having drawer openings and a door opening formed therein, said frame being adapted to be removably secured to and extending across between the forward edges of the panels when the panels are opened out in alinement with the sides and extending from the lower edges of the panels upward even with



the upper edges thereof, feet for supporting the front frame, a door for the door opening, drawers adapted to slide in the drawer openings of said frame and without contact with the panels, a strip H extending across between the slides 1 and 2, and a work top unsupported by the panels and slidably supported on said strip H and on the upper edge of the front frame and with its ends slidably engaged with the guide strips and closing the top of the compartment formed by the panels and the front frame, all substantially as shown and described.

1,173,311. BARREL-TAPPING DEVICE. FERDINAND A. SCHAEFER, Washington, D. C., assignor to George G. Schroeder, Washington, D. C. Filed Dec. 5, 1912. Serial No. 735,150. Renewed Apr. 24, 1915. Serial No. 23,765. (Cl. 137—27.)



1. A barrel tap including a valve seat, a rotary valve cap for the valve seat, an axial stem rigid with the valve cap and projecting therefrom, means for moving the valve cap toward and away from the valve seat when it is rotated through the medium of the valve stem, a collar loose upon the valve stem, means for holding the collar against rotation, means limiting the sliding movement of the collar upon the valve stem in one direction, spring means coöperating with the collar for tending to hold the valve cap yieldably against the valve seat, and cam means actuated by the rotation of the valve stem when closing the valve to move the collar longitudinally upon the valve stem and vary the tension of the spring means.

2. A barrel tap including a valve seat, a rotary valve cap for the valve seat, an axial stem rigid with the valve cap and projecting therefrom, cam means for opening the valve upon the stem, spring means coöperating with the collar for tending to hold the valve cap yieldably upon its seat, and cam means actuated by the rotation of the valve when closing the valve to move the collar longitudinally upon the valve stem and increase the tension of the spring means.

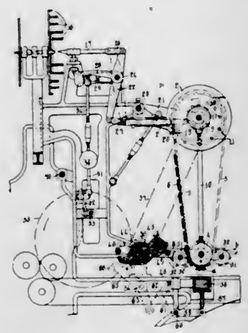
3. A barrel tap including a valve seat, a rotatably mounted valve for the valve seat, an axial stem projecting from the valve, cam means for opening the valve when rotated, a collar loose upon the valve stem and provided with a cam shoulder, a spring for holding the valve upon its seat, said spring being adapted to be placed under tension by the movement of the collar upon the valve stem, and a projection upon the valve stem adapted to engage the cam shoulder of the collar to move the collar and place the spring under tension when the valve is rotated to close the same.

4. A barrel tap including a valve stem, a rotatably mounted valve for the valve seat, an axial stem projecting from the valve, cam means for opening the valve when rotated, a collar loose upon the valve stem and formed with a cam shoulder, spring arms projecting from the collar and adapted to be placed under tension by the movement of the collar upon the valve stem, and a lateral projection upon the valve stem adapted to engage the cam shoulder to move the same when the valve is rotated to close the valve, the tension produced in the spring arms by the movement of the collar serving to hold the valve upon the valve seat.

5. A barrel tap including a valve seat, a rotatably mounted valve for the valve seat, an axial stem projecting from the valve, cam means for opening the valve when rotated, a collar loose upon the valve stem and provided with a cam shoulder, spring arms projecting from the collar, an abutment engaging the spring arms so as to produce tension therein when the collar is moved inwardly upon the valve stem, and a lateral projection upon the valve stem adapted to engage the cam shoulder to move the collar when the valve is rotated to close the same, the tension in the spring arms produced by the said movement of the collar serving to hold the valve against the valve seat.

[Claims 6 to 10 not printed in the Gazette.]

1,173,312. MACHINE FOR MARKING THE SUPERFICIAL AREA OF LEATHER AND LIKE MATERIALS. GUSTAV ADOLF SCHETTLER, Leicester, England. Filed Oct. 5, 1912. Serial No. 724,177. (Cl. 101—83.)



1. For an area measuring machine of the kind herein described, and for use in mechanism for marking the indicated measurement upon the material, type setting mechanism comprising the combination with a series of slide rods and rotatable means whereby said slide rods are—when required—set to correspond with the measurement indicated, of a series of type traversing members, graduated stops thereon, and means interposed between the said slide rods and the type traversing members adapted by engagement with the graduated stops to arrest the movement of the said members as each assumes a position in accordance with its corresponding slide rod

and bring the types corresponding in value to the indicated measurement into the marking position, and a bed located in the plane of the type traversing members and coöperating with the type which have been moved into printing position.

2. In a marking mechanism of the kind described, a movable type-carrier, power-operated means for moving it, power-operated means for arresting said type-carrier in a selected position, a selecting device coöperating with said arresting means and movable with the latter by power, and power-operated means for moving said selecting device and said arresting means into inoperative position.

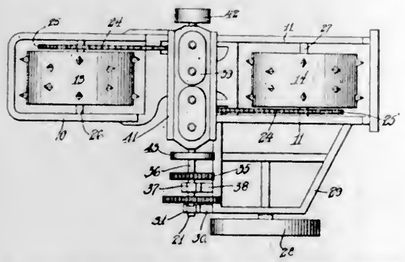
3. For an area measuring machine of the kind herein described, and for use in mechanism for marking the indicated measurement upon the material, type setting mechanism comprising the combination with a series of slide rods and means whereby said slide rods are—when required—set to correspond with the measurement indicated, of a series of slide bars, rock levers and connecting links forming an operative connection between the slide bars and slide rods, a series of wheels, a shaft upon which said wheels are mounted and from which they are frictionally rotated independently of each other, means to reversibly drive said shaft, a cam to control said driving means, a series of projecting stops disposed in a graduated manner on the wheels and adapted to make contact with the slide bars, flexible means supported by the wheels, types on said means, carrier wheels located in the vicinity of the traveling support for the material and around which the type carrying means are arranged, a movable rod to return the rock levers and connected slide bars and slide rods to the normal position, and a cam and intermediate mechanism to actuate said movable rod, substantially as described.

4. In marking mechanism of the kind herein described, in combination, a traveling support for the material to be marked, a movable bed located underneath the traveling support for the material, levers and rock shafts adapted when actuated to move said bed upward to bring the material into contact with the type, a rotatable device provided with means to actuate said levers and rock shafts, and springs to impart downward movement to the bed, substantially as described.

5. For marking mechanism of the kind herein described, in combination, type traversing means, an actuated mechanism therefor, inking mechanism comprising an ink applying member, a lost motion device in connection with the said actuating mechanism of the type traversing means, whereby said ink applying member is actuated to ink the type subsequently to the setting of the latter and is again actuated to return to the normal position subsequently to the return of the type to zero.

[Claims 6 to 11 not printed in the Gazette.]

1,173,313. TRACTOR. JOHN P. SCHMIT, Lewistown, Mont. Filed Apr. 19, 1915. Serial No. 22,401. (Cl. 21—114.)



1. A tractor including a pair of articulated frames, a drive wheel journaled in each frame, an outrigger frame connected to one of said first-frames, and a prime mover for said tractor supported over the point of articulation transversely of the tractor.

2. A tractor including articulated frames, a drive wheel journaled in each frame, an outrigger frame connected to one of first said frames, and a prime mover for said tractor supported over the point of articulation transversely of the tractor.

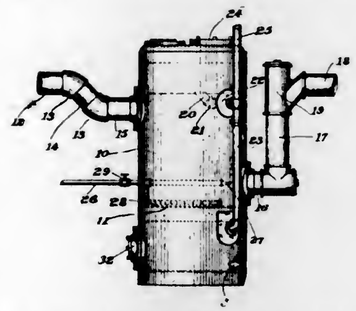
3. In a tractor, forward and rear chassis frames, a drive wheel journaled in each frame, an outrigger frame connected to said rear frame, a following wheel mounted in said outrigger frame, universal joint connections between first said frames, and a prime mover over said universal joint connections.

4. A tractor including forward and rear chassis frames, a drive wheel journaled in each frame, an outrigger frame connected to said rear chassis frame, a following wheel mounted by said outrigger frame, U-shaped castings upon the meeting ends of said chassis frames, pivotal connections between said castings, and a prime mover mounted upon said castings.

5. A tractor including forward and rear chassis frames, a drive wheel journaled in each frame, an outrigger frame connected to said rear chassis frame, a following wheel mounted by said outrigger frame, U-shaped castings upon the meeting ends of said chassis frames, pivotal connections between said castings, a prime mover mounted above said pivotal connections, and a drive shaft operated directly by said prime mover and transversely positioned upon said tractor.

[Claims 6 to 12 not printed in the Gazette.]

1,173,314. OIL-SEPARATOR. FLOYD W. SCHOCH, Jersey City, N. J. Filed Feb. 24, 1914. Serial No. 820,393. (Cl. 210—5.)



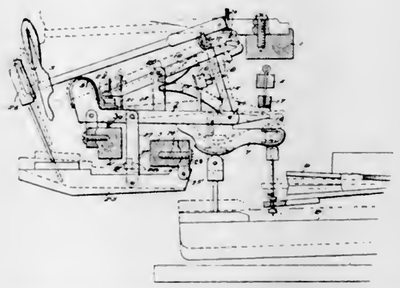
1. An oil separator comprising a unitary tank, a horizontal partition therein dividing the interior of the tank into an upper and lower compartment, a substantially horizontal inlet leading unobstructedly into the upper compartment slightly below the water level therein, and an outlet leading from the upper compartment adjacent the bottom thereof on the side opposite from the inlet, said outlet comprising a vertical pipe section and a horizontal pipe section extending therefrom, said horizontal section being disposed substantially on a level with the water level in the inlet pipe, and an overflow pipe for the oil connecting the upper and lower compartments, said overflow pipe comprising a mouth opening adjacent to the water level in the upper compartment, and a communicating pipe section leading therefrom into the lower compartment to discharge the oil into said lower compartment.

2. An oil separator comprising a unitary tank, a horizontal partition therein dividing the interior of the tank into an upper and lower compartment, an inlet pipe leading substantially horizontally into the upper compartment below the water level therein, said inlet pipe comprising an offset portion located adjacent to the tank, and an outlet leading from the upper compartment adjacent the bottom thereof comprising a vertical pipe section, and a horizontal pipe section extending therefrom, said horizontal section being disposed substantially on a level with the water level in the inlet pipe, and an overflow pipe for the oil connecting the upper and lower compartments, said overflow pipe comprising a mouth opening adjacent to the water level in the upper compartment, and a communicating pipe section leading therefrom into the lower compartment to discharge the oil into said lower compartment.

3. In an oil separator, a tank comprising a separating chamber, an inlet pipe leading thereto at a point adjacent the top thereof, an outlet pipe opening from the bottom of the separating chamber, a vertical pipe leading from the outlet, means for receiving the overflow oil above the water level in the separating chamber, and means for cleansing the separating chamber from sand and sediment comprising a water pipe opening into the separating chamber, and a spray pipe leading from said water pipe and disposed at the bottom of the separating chamber adjacent the outlet.

4. In an oil separator, a tank comprising a separating chamber, an inlet pipe leading thereto at a point adjacent the top thereof, an outlet pipe opening from the bottom of the separating chamber, a vertical pipe leading from the outlet, means for receiving the overflow oil above the water level in the separating chamber, means for cleansing the separating chamber from sand and sediment comprising a water pipe opening into the separating chamber, a nozzle connected to the water pipe disposed in alinement with the outlet, and a spray pipe connected to the water pipe and disposed at the bottom of the separating chamber.

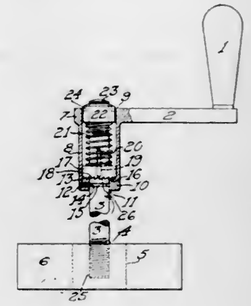
1,173,315. GRAND-PIANO ACTION. JUSTIN O. SCHWARZ, New York, N. Y., assignor to Hardman, Peck & Co., New York, N. Y., a Corporation of New York. Filed Aug. 27, 1914. Serial No. 858,929. (Cl. 84—26.)



In a piano action, the combination with a hammer, a support pivoted near its rear end and carrying a jack near its front end, and a fixed rail beneath the support; of a block, a screw detachably connecting it with said rail, a check lever pivoted at its front end to said block and carrying the back check near its rear end, a link in two parts whose outer ends are pivoted to the support and lever respectively and whose inner ends are lapped, and a screw detachably connecting said lapping ends.

1,173,316. HANDLE FOR WINDING PHONOGRAPH SPRING-MOTORS. SAMUEL SEGAL, New York, N. Y. Filed June 28, 1915. Serial No. 36,660. (Cl. 185—43.)

1. The combination with a motor-spring, of a winding stem therefor, a casing mounted to rotate about said stem and held against longitudinal movement therealong, said casing having a clutch member rotatable therewith, a coöperating clutch member within said casing mounted to slide longitudinally along said stem and held against lateral movement, a spring around said stem pressing said latter clutch member against said former, and means to regulate the pressure of said spring, said rotatable clutch member engaging its coöperating member to rotate said stem for winding the motor spring and passing by said member without affecting said stem at the termination of the winding.



2. The combination with a motor spring, of a winding stem therefor, a casing mounted to rotate about said stem and held against longitudinal movement therealong, said casing having a clutch member rotatable therewith, a coöperating clutch member within said casing mounted to slide longitudinally along said stem and held against lateral movement, a spring pressing said latter clutch member against said former, and means to regulate the pressure of said spring, said rotatable clutch member engaging its coöperating member to rotate said stem for winding the motor spring and passing by said coöperating member without affecting said stem at the termination of winding.

3. The combination with a motor spring, of a winding stem therefor, a casing mounted to rotate about said stem, said casing having a clutch member rotatable therewith, a coöperating clutch member mounted on said stem within said casing, and a spring pressing said clutching members toward each other, said rotatable clutch member engaging its coöperating member to rotate said stem for winding the motor spring and passing by said coöperating member without affecting said stem at the termination of winding.

4. The combination with a motor spring, of a winding stem therefor, a casing mounted to rotate about said stem and held against longitudinal movement therealong, said casing having a clutch member rotatable therewith, a coöperating clutch member within said casing mounted to slide longitudinally along said stem and held against lateral movement, and a spring pressing said latter clutch member against said former, said rotatable clutch member engaging its coöperating member to rotate said stem for winding the motor spring and passing by said coöperating member without affecting said stem at the termination of winding.

5. The combination with a motor spring, of a winding stem therefor, a clutch member mounted to rotate about said stem and held against longitudinal movement therealong, a coöperating clutch member mounted to slide longitudinally along said stem and held against lateral movement, a spring around said stem pressing said latter clutch member against said former, a nut threading along said stem for adjusting the pressure of said spring, and an operating lever extending from said rotatable clutch member for rotating it, said rotatable clutch member engaging its coöperating member to rotate said stem for winding the motor spring and passing by said member without affecting said stem at the termination of the winding.

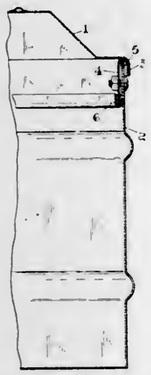
[Claims 6 and 7 not printed in the Gazette.]

1,173,317. SOLID COMBINATION OF VITAMINS AND PROCESS OF MAKING SAME. ATHERTON SEIDELL, Washington, D. C. Filed Jan. 13, 1916. Serial No. 71,885. (Dedicated to the public.) (Cl. 167—7.)

1. A process for separating vitamin from complex mixtures by the use of an inorganic physiologically inert adsorptive agent.

2. A solid product consisting of a combination of vitamin and an inorganic physiologically inert solid.

1,173,318. BURIAL-RECEPTACLE. JAMES SHARMAN, Stratford, Ontario, Canada. Filed July 1, 1915. Serial No. 37,615. (Cl. 27—7.)

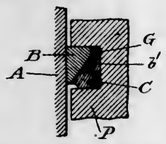


1. A metal receptacle for burial purposes formed in two separable parts each having its edges shaped to form a doubled rim and a groove within the rim having an inner side of single material, the rim of one part and the inner side of the groove of the other part being adapted to fit into the respective grooves.

2. A metal receptacle for burial purposes formed in two separable parts each having its edges shaped to form a doubled rim and a groove within the rim having an inner side of single material, the rim of one part and the inner side of the groove of the other part being adapted to fit into the respective grooves, the said parts entering the grooves being of greater depth than the other groove sides whereby fastening means may be passed through them without passing through the said outer sides of the grooves.

3. A metal receptacle for burial purposes formed in two separable parts, one part having its edges folded to form a groove of which the outer side is doubled and the inner single, the other part having a separate piece secured thereto bent to form a groove to receive the single edge of the other part and a flange to lie in the groove of said other part in contact with the doubled edge.

1,173,319. PISTON-PACKING. FREDERICK E. SMALL, Needham, Mass. Filed Feb. 26, 1915. Serial No. 10,852. (Cl. 121—108.)



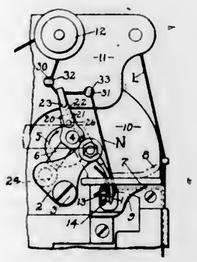
1. In combination, a piston having an annular groove therein, and a packing in said groove comprising a continuous resilient packing ring divided at a single point and having a beveled surface at its inner side, said packing being substantially less in width than the width of said groove, whereby a clearance is provided between one side of said packing and one side of said groove, and a spring follower ring engaging the beveled surface of the packing and one wall of the groove, adapted to urge said packing in both a radial direction and an endwise direction on the piston against the opposite wall of the groove.

2. In combination a cylinder, a piston loose within the cylinder and having an annular groove, and a packing in said groove comprising a continuous resilient packing ring divided at a single point and having a beveled surface at its inner side, the normal outer circumference of said ring being substantially the same as that of the cylinder bore, said packing ring being substantially less in width than the width of said groove, whereby a clearance is provided between one side of said packing and one side of said groove, and a spring follower ring engaging the beveled surface of the packing and one wall of the groove, adapted to urge said packing in both a radial direction and an endwise direction on the piston against the opposite wall of the groove.

3. In combination, a piston having an annular groove therein, and a packing in said groove comprising a continuous resilient packing ring L-shaped in cross section and divided at a single point, said ring having a beveled surface at its inner side, a second continuous resilient packing ring divided at a single point, filling the inner angle of said L-shaped ring and arranged to break joint therewith, the laterally extending flange of the L-shaped ring, which forms one side of said inner angle, being undercut to overlap the second ring and prevent the expansion of said second ring out of said inner angle, and a spring follower ring engaging the beveled surface of said L-shaped packing ring and one wall of said groove, adapted to urge said two packing rings in both a radial direction and an endwise direction on the piston against the opposite wall of said groove.

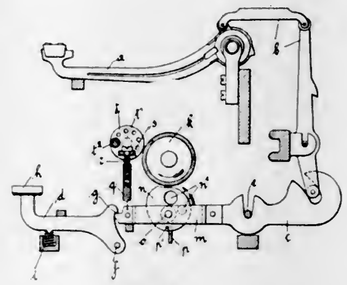
4. In combination, a piston having an annular groove therein, and a packing in said groove comprising a continuous resilient packing ring L-shaped in cross section and divided at a single point, said ring having a beveled surface at its inner side, a second continuous resilient packing ring divided at a single point, filling the inner angle of said L-shaped ring and arranged to break joint therewith, the laterally extending flange of the L-shaped ring, which forms one side of said inner angle, being undercut to overlap the second ring and prevent the expansion of said second ring out of said inner angle, the combined width of said rings being substantially less than the width of said groove, whereby a clearance is provided between one side of said packing rings and one side of said groove, and a spring follower ring engaging the beveled surface of said L-shaped packing ring and one wall of said groove, adapted to urge said two packing rings in both a radial direction and an endwise direction on the piston against the opposite wall of said groove.

1,173,320. TAKE-UP. WILLIAM H. STEDMAN, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 12, 1914. Serial No. 824,213. (Cl. 112—26.)



In combination in a sewing machine mechanism including a curved eye pointed needle, an oscillating needle carrier and a rotating eccentric element: a pitman link connecting the said rotating element with the said needle carrier, a lug projecting from that end of the said link which embraces the said rotating eccentric element, a moving take up implement fixedly mounted on the said lug and projecting outwardly therefrom in the direction of length of the said lug, whereby the thread engaging portion of the said take up implement is carried and actuated in an ovate path; and stationary means for holding and supporting the thread to be operated upon by the take up implement, on two sides of a point in the said ovate path and in a straight line substantially parallel to the plane in which the said path lies, whereby the thread engaging portion of the take up implement is adapted to move along the length of the thread engaged thereby, during the operative movements of the said implement.

1,173,321. POWER-OPERATED TYPE-WRITER. ADOLF STEINER, Berlin, Germany, assignor to Titania Schreibmaschinen Ges. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 22, 1914. Serial No. 852,426. (Cl. 197—17.)



1. In a power operated typewriter in combination, type levers, a key for each type lever, a separate driving lever for each of the type levers, means controlled by the keys for locking the driving levers in the position of rest, a separate source of power for each of the driving levers operating it when the said means are released, and automatic means for restoring the said sources of power into their working position after the operation of the driving levers, substantially as described.

2. In a power operated typewriter in combination type levers, a key for each of the type levers, a separate driving lever for each of the type levers, means controlled by the keys for locking the driving levers in the position of rest, a separate source of power for each of the driving levers, operating it when the said means are released, cam disks mounted on said driving levers and continuously rotating rollers coöperating with the said cam disks.

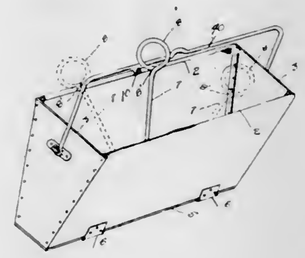
3. In a power operated typewriter in combination type levers, a key for each of the type levers, a separate driving lever for each of the type levers, means controlled by the keys for locking the driving levers in the position of rest, a separate source of power for each of the driving levers operating it when the said means are released, cam disks mounted on said driving levers and continuously rotating rollers coöperating with the said cam disks, each of the said sources of power coöperating with the corresponding cam disk and moving the driving lever so that it first makes the rotation required for striking the types and is then brought back to its original position.

4. In a power operated typewriter in combination, type levers, a key for each of the type levers, a separate driving lever for each of said type levers, means controlled by the keys for locking the driving levers in the position of rest, a separate source of power for each of the driving levers operating it when the said means are released, cam disks mounted on said driving levers and continuously rotating rollers coöperating with said cam disks, said cam disks having different shapes for the purpose of adjusting the effect of said sources of power to suit the size of the printing surface of the corresponding types.

5. In a power operated typewriter in combination type levers, a key for each of the type levers, a separate driving lever for each of the type levers, a separate source of power for each of the driving levers, cam disks mounted on said driving levers and continuously rotating rollers coöperating with the said cam disks, said cam disks being staggered relatively to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,173,322. BUCKET FOR HANDLING PLASTIC MATERIAL. ALEXANDER J. STOESER, Chicago, Ill. Original application filed Dec. 22, 1911, Serial No. 667,345. Divided and this application filed Jan. 10, 1913. Serial No. 741,237. (Cl. 57—13.)



1. A bucket of the class described having a hinged door closing the bottom thereof and a hand rod secured to the bucket door within the bucket and extending upwardly therefrom, as and for the purpose specified.

2. In a bucket of the class described, a body portion open at the top and closed at the bottom by a door hinged to the body portion, a rod secured to the door within the bucket and extending upwardly therefrom, the upper end of the rod being formed and adapted to engage the upper edge of the bucket to hold the door in closed position.

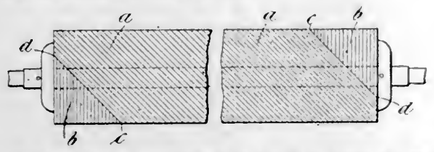
3. A bucket of the class described open at the top, an outwardly swingable hinged door closing the bottom of the bucket, a rod secured to the door and extending upwardly therefrom, a hand ring at the upper end of the rod, and a notch in the bucket side adapted to accommodate the lower side of the hand ring for the purpose of holding the door in locked position against the bottom of the bucket.

4. A bucket for concrete and the like comprising a body portion open at the top, a door arranged at the bottom and closing the same, hinges securing the door to the bucket body, a hand rod swingably secured to the door bottom in manner to permit movement in substantially all directions with the point of attachment as a pivot, the upper end of the hand rod being formed and adapted to engage the bucket body to lock the door in closed position.

5. A bucket for handling concrete and the like smaller at the bottom than at the top, a hinged door closing the bottom, a hand rod swingably attached to the door bottom and normally upstanding therefrom with the upper end in engagement with the bucket side, the said rod being movable from engagement with the side to permit opening of the door and swingable to assist in moving concrete through the bottom.

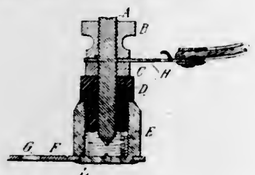
[Claims 6 to 8 not printed in the Gazette.]

1,173,323. COTTON-GIN ROLLER. FREDERIC BIDMEAD STRATTON, Bombay, India. Filed Nov. 16, 1914. Serial No. 872,326. (Cl. 13—20.)



In a cotton gin roller made of elliptical disks set diagonally on a shaft, the combination of an angular section shaft passing through angular holes in the disks and wedge shaped end blocks built up of disks cemented together and cut to shape.

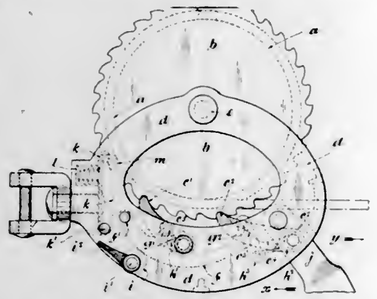
1,173,324. SPARK-GAP MECHANISM. DANIEL M. SWEENEY, San Francisco, Cal. Filed July 19, 1915. Serial No. 40,753. (Cl. 175—183.)



1. In a spark mechanism a vertical conducting screw, adjustably secured in an insulating nut and pointed at the inner end, in combination with a conducting cylindrical chamber and a conducting arm substantially at right angles to the axis of said chamber, substantially as herein set forth.

2. In a spark mechanism a vertical conducting screw adjustably secured in an insulating nut co-axially with a conducting cylindrical chamber, the screw and bottom of the chamber being provided with points for the transmission of an electric discharge, substantially as set forth.

1,173,325. PAWL-AND-RATCHET MECHANISM. WALTER SYLVESTER, Tunstall, Stoke-upon-Trent, England. Filed Oct. 30, 1913. Serial No. 798,318. (Cl. 74—16.)



1. In pawl and ratchet mechanism, a frame, a ratchet wheel axially mounted in said frame, a retaining pawl and an actuating lever pivotally mounted in said frame, an advancing pawl pivotally connected to the operating lever, means for urging the pawls into engagement with the ratchet wheels, and means for retracting the advancing pawl, said means being controlled by the advancing pawl so as to retract the retaining pawl when said advancing pawl is in engagement with the ratchet wheel.

2. In pawl and ratchet mechanism, a frame, a ratchet drum axially mounted in said frame, a pawl pivotted on a stationary pivot, a second pawl pivoted on a movable pivot, means for advancing and retracting said movable pivot, means for urging the pawls into engagement with the ratchet drum, spring actuated means for retracting the second pawl at one end of its stroke, controlled by said pawl at the end of its stroke to retract the first pawl substantially as herein set forth.

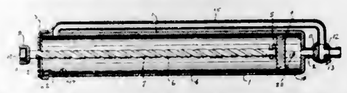
3. In pawl and ratchet mechanism, a frame consisting of two flat plates lying parallel to each other and at a slight distance apart, cross-stays holding the plates securely to each other and at the required distance apart, a spindle extending from plate to plate, a ratchet drum rotatably mounted on said spindle, a lever handle pivotally mounted between the plates of the frame, a pawl also pivotally mounted between the plates of the frame, a second pawl pivotally mounted on the lever handle, and means for urging both pawls into engagement with the ratchet drum, a spring actuated lever arm pivotally connected to the frame and interconnected with the pawls for alternately retracting said pawls, substantially as herein set forth.

4. Pawl and ratchet mechanism comprising a frame, a ratchet drum axially mounted in said frame, a pair of pawls adapted to engage the teeth of the ratchet drum, a lever handle pivotally secured to the said frame, one of the said pawls being pivotally mounted in the said handle and the other of said pawls being pivotally mounted in said frame, a lever arm pivotally mounted in the frame and having lateral studs near its free end engaging one pawl, and further lateral studs near its pivoted end which engage the other pawl, a coiled wire spring encircling the pivot of each pawl, a link pivotally connecting the end of the said lever arm to one end of the spring around the pivot of the lever handle pawl, the other end of the same spring urging the pawl into engagement with the ratchet drum and the ends of the spring around the pivot of the other pawl respectively pressing against said pawl and the lever arm, recesses in the before mentioned pawls to receive the lateral studs on the pivoted lever, the recess in the pawl pivoted to the operating handle being shaped to govern the action of the before mentioned pivoted lever upon the other pawl, substantially as herein set forth.

5. In pawl and ratchet mechanism, a frame consisting of two flat plates lying parallel to each other and at a slight distance apart, cross-stays holding the plates securely to each other and at the required distance apart, a spindle extending from plate to plate, a ratchet drum rotatably mounted on said spindle, a lever handle pivotally mounted between the plates of the frame, a pawl also pivotally mounted between the plates of the frame, a second pawl pivotally mounted on the lever handle, and means for urging both pawls into engagement with the ratchet drum, a spring actuated lever arm pivotally connected to the frame and provided with lateral projections to contact with recesses in the inner face of the pawls to alternately retract the same, a spindle and cam revolubly mounted in the said frame, an operating handle for said spindle whereby the cam may be turned in one direction to move the lever toward the ratchet drum, with its studs clear of the pawls to allow said pawls to act independently, or in the opposite direction to allow the lever arm to recede from the ratchet wheel and the studs approach the pawls to insure inter-action substantially as herein set forth.

[Claim 6 not printed in the Gazette.]

1,173,326. AIR-OPERATED TOOL. GEORGE T. TAYLOR and JOHN LESLIE TAYLOR, Sterling, Ill., assignors to Angie L. Benner, Sterling, Ill. Filed Feb. 18, 1915. Serial No. 9,216. (Cl. 121—45.)

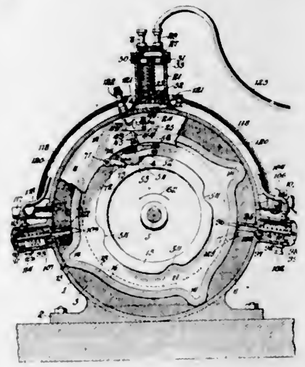


1. A device of the class described, comprising a cylinder; a piston movable therein and provided on one of its faces with a circular boxing; a shank reciprocably mounted in said cylinder, having at its inner end a head rotatably engaged by said boxing and provided with spiral channels; a tool-holding device on the outer end of said shank; and means in the end of said cylinder for engaging the channels in said shank to cause a rotation thereof when the same is reciprocated.

2. A device of the class described, comprising a cylinder; a piston movable therein and provided on one of its faces with a circular boxing; a shank reciprocably mounted in said cylinder, having at its inner end a head rotatably engaged by said boxing and provided with spiral channels; means in the end of said cylinder for engaging the channels in said shank to cause the rotation thereof when the same is reciprocated; means for admitting a fluid supply under pressure alternately to opposite ends of said cylinder; and means for shutting off said supply.

3. A device of the class described, comprising a cylinder; a piston movable therein; a shank rotatably connected with said piston and reciprocable therewith, said shank being provided with spiral channels; means in one end of said cylinder for engaging said spirals to cause a rotation of said shank on the longitudinal movement thereof; means for admitting a supply of fluid under pressure to opposite ends of said cylinder; escape ports in opposite ends of said cylinder and a slide-bar in the inner wall of said cylinder, adapted to be operated by said piston to alternately open and close said ports.

1,173,327. ROTARY ENGINE. HOSEA ROY THURMOND, Atlanta, Ga., assignor of three-eighths to Neil Mangan, Atlanta, Ga. Filed Mar. 24, 1914. Serial No. 826,869. Renewed July 10, 1915. Serial No. 39,174. (Cl. 123—14.)



1. A rotary explosion engine comprising a casing with a plurality of abutments and a rotor with a plurality of abutments coacting with those of the casing, the engine having a single intake passage and a single exhaust passage, the intake and exhaust passages being separated one from the other by two adjacent casing abutments defining a chamber between them always separated from both the intake and the exhaust by said abutments, whereby the said chamber is adapted to contain lubricant, the abutments on the casing and rotor defining intake and expansion chambers in that part of the casing other than the lubricant chamber.

2. A rotary explosion engine comprising a casing with three interior circumferentially spaced abutments, and a rotor with four peripheral circumferentially spaced abutments coacting with those of the casing, and the engine having a single intake passage and a single exhaust passage both on the side of a respective casing abutment toward the third casing abutment, and the abutments adjacent to which the intake and exhaust passages are located defining between them a lubricant chamber separated from said intake and exhaust passages by the abutments and the abutments of the rotor and casing defining an intake chamber, an explosion chamber and an exhaust chamber within that portion of the casing other than the lubricant chamber.

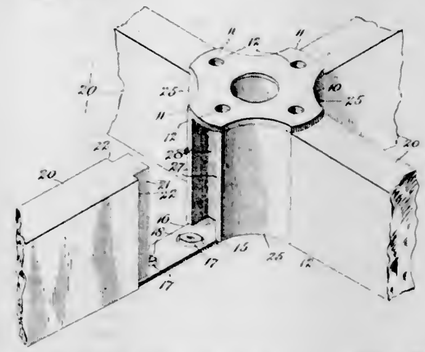
3. A rotary explosion engine comprising a casing with three interior abutments of which one is located at the top portion of the casing and the other two below the center of the casing, and a rotor with four equally spaced peripheral abutments coacting with those of the casing, the engine having an intake passage adjacent to one of the lower casing abutments on the side of the said abutment toward the top casing abutment, and an exhaust passage adjacent to the other-lower casing abutment on the side thereof toward the top casing abutment, whereby the two lower abutments define a lubricant-receiving chamber between them in the lowermost part of the casing and separate said chamber from the intake and exhaust passages, and the abutments of the rotor and casing defining an intake chamber, an explosion chamber and an exhaust chamber within the casing above the lower abutments thereof.

4. A rotary explosion engine comprising a casing and a rotor therein mounted upon a horizontal axis, the casing and rotor having coacting abutments defining an intake chamber, an explosion chamber, an exhaust chamber, and a lubricant chamber in the order named in the direction of rotation, the lubricant chamber being at the lowermost portion of the casing, and the latter having one of its abutments at a high point in the casing, and the intake chamber having a conduit connected with the explosion chamber about the high abutment in the casing.

5. A rotary explosion engine comprising a casing and a rotor therein mounted upon a horizontal axis, the casing and rotor having coacting abutments defining an intake chamber, an explosion chamber, an exhaust chamber and a lubricant chamber in the order named in the direction of rotation, the lubricant chamber being at the lower-most portion of the casing and the latter having one of its abutments at a high point in the casing and the intake chamber having a conduit connected with the explosion chamber about the high abutment in the casing, said conduit being provided with a check valve opening toward the explosion chamber.

[Claims 6 to 16 not printed in the Gazette.]

1,173,328. REVOLVING CHAIR. CHARLES J. TRAVERS, Oak Park, Ill. Filed Dec. 30, 1914. Serial No. 879,668. (Cl. 155—40.)



1. In a base for revolving chairs, the combination with a metal hub having top and bottom plates permanently connected thereto, the latter plate having radiating extensions projecting beyond the upper plate sufficiently to permit of the endwise insertion therebetween of the inner ends of the chair-legs when the same are slightly inclined, and provided with upwardly disposed shallow perforated bosses, of legs arranged between the plates and upon the extensions and capable of being tilted and withdrawn endwise from the same as well as entered therebetween, said legs having shallow recesses on their

undersides to receive the said perforated bosses, and screws passed upwardly through the perforations in the bosses and into the undersides of the legs.

2. In a chair-base for revolving-chairs, the combination with a metal hub, provided with top and bottom-plates, of legs reduced to form tenons at their inner ends and abutting against the hub, said reduced ends, at each side of their tenons, forming vertical shoulders, means for securing the legs between the plates, and filler-blocks interposed between the tenons of the legs and having shoulders at their outer vertical side-edges engaged by the shoulders formed by the tenons, whereby said filler-blocks are locked against withdrawal from the hub.

3. In a chair-base for revolving-chairs, the combination with a metal hub having integral top and bottom-plates, of legs having their inner ends reduced to form tenons abutting at their ends against the hub, such reductions also forming opposite shoulders, means for securing the legs between the plates, and intermediate filler-blocks fitted around the hub between the plates and the legs and at their opposite vertical edges interlocked or overlapped by the shoulders of the tenons of the legs.

4. In a chair-base for revolving-chairs, the combination with a metal hub, having top and bottom-plates, said hub being angular in cross-section to form flat abutting-surfaces, and the plates having perforated extensions aliing with each other and located between the angles and in line with the abutting-surfaces of the hub, of legs fitting between the plates and their extensions and having their inner ends squared to abut against the abutting-surfaces of the hub and reduced to form tenons and rear contiguous vertical shoulders, screws passed through the extensions of the plates into the legs, and filler-blocks interposed between the legs and plates and having their inner faces provided with angular recesses to fit the angles of the hub and their outer side vertical edges forming shoulders and engaged by the shoulders of the tenons, whereby the filler-blocks are locked in position.

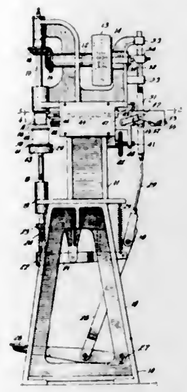
5. In a chair-base for revolving-chairs, the combination with a metal hub, angular in cross-section and having integral upper and lower-plates provided with perforated extensions, the lower extension having upwardly disposed shallow bosses in which said perforations are formed, of legs located between the extensions and provided on their undersides with shallow annular cavities fitting and receiving the said bosses and locking the legs against lateral withdrawal, the front or inner ends of the legs being reduced to form tenons and opposite vertical contiguous shoulders, screws passed through the perforations into the legs, and filler-blocks recessed on their inner sides to conform to and substantially fit the angles of the hub, said blocks having opposite side-shoulders engaged by the shoulders of the tenons.

1,173,329. CAN-CRIMPING MACHINE. LOUIS N. TRUDEAU, Detroit, Mich., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 24, 1913. Serial No. 802,611. (Cl. 113—20.)

1. A can machine of the character described comprising, in combination: means for clamping and rotating an irregularly shaped can, said means including a combined chuck and rotary surface cam both corresponding in cross sectional shape to the cross sectional shape of the can being operated upon; and mechanism for uniting a can cover and can body together, said mechanism including a roll mounted on a carrying member, the latter being governed in its movements by said cam, substantially as specified.

2. A can machine of the character described comprising, in combination: means for clamping and rotating a can, said means including a pair of chucks movable axially relatively toward each other and one of which is provided with an integral rotary surface cam; and crimping mechanism for uniting a can cover and can body, said mechanism including a crimping roll mounted on a slidable carrying member, the latter being governed in its movements by said surface cam, substantially as specified.

3. A can machine of the character described comprising, in combination: rotatable and axially relatively movable chucks, one of which is provided with an integral rotary surface cam; a slide normally pressed into engagement with said cam and governed in its movements thereby, said slide having a crimping roller carried thereby and independently movable thereon; and means for moving said crimping roller into operative position after a can has been clamped between said chucks, substantially as specified.



4. A can machine of the character described comprising, in combination: upper and lower rotatable chucks, the lower chuck being axially movable relatively to the upper chuck and the latter having a rotary surface cam formed integrally therewith; a spring-pressed slide in engagement with and governed in its movements by said cam; and a crimping roll carried by said slide and movable in unison therewith in accordance with the movements imparted by said cam, substantially as specified.

5. A can machine of the character described comprising, in combination: means for clamping and rotating a can; crimping mechanism for operating on cans held by said means, said crimping mechanism including a reciprocating slide; a cam for governing the movements of said slide; and means for adjusting the path of reciprocation of said slide to thereby adapt the machine for operating on cans of different diameter, substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

1,173,330. FAST LIGHT-PROOF COLORING MATTERS OR DYES AND PROCESS OF MAKING SAME. NICOLAI WASILIEVITCH TURKIN, Moscow, Russia. Filed Jan. 9, 1914. Serial No. 811,173. (Cl. 134—39.)

1. The herein described method of manufacturing fast light-proof coloring matters, which consists in heating a color pigment with a mixture of alizarin oil and a metallic salt, said mixture being insoluble in water, to form a colloidal solution which will solidify on cooling.

2. The herein described method of manufacturing fast light-proof coloring matters, which consists in heating a color pigment with a mixture of alizarin oil and metallic salts, said mixture being insoluble in water, to form a colloidal solution which will solidify on cooling.

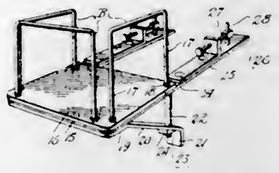
3. The herein described method of manufacturing fast light-proof coloring matters, which consists in heating a color pigment with a mixture of alizarin oil and salts of metals of the alkali earths, said mixture being insoluble in water, to form a colloidal solution which will solidify on cooling.

4. The herein described method of manufacturing fast light-proof coloring matters, which consists in heating a color pigment with a mixture of alizarin oil, basic aluminum acetate, and salts of metals of the alkali earths, and also a filling material, to form a colloidal solution which will solidify on cooling.

5. The herein described method of manufacturing fast light-proof coloring matters, which consists in heating a color pigment with a mixture of alizarin oil and metallic salts, and also a filling material, to form a colloidal solution which will solidify on cooling.

[Claims 6 to 24 not printed in the Gazette.]

1,173,331. WINDOW-PLATFORM. HARRY F. WANAMAKER, Philadelphia, Pa. Filed May 5, 1915. Serial No. 26,095. (Cl. 20—87.)

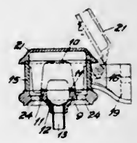


1. A device of the class described comprising a U-shaped frame, a platform supported on the upper face thereof, a brace member abutting on the lower face thereof, said brace member having a bridge portion and obliquely disposed limbs or brace members, and assembling means comprising a plurality of railings having limbs extending through the platform, the frame and the brace member, said limbs having collars abutting on the upper face of the platform, and tightening means applied to the lower extremities of the limbs of said railings.

2. A device of the class described comprising a U-shaped frame, a platform supported on the upper face thereof, a brace member abutting on the under face thereof, said brace member having a bridge portion and obliquely disposed limbs or brace members, and assembling means comprising a plurality of railings having limbs extending through the platform, the frame and the brace member, said limbs having collars abutting on the upper face of the platform, and tightening means applied to the lower extremities of the limbs extending through the inclined brace members being provided with spacing sleeves interposed between said brace members and the frame.

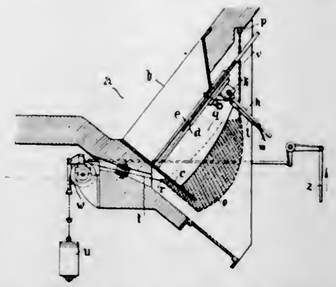
3. In a device of the class described, a U-shaped frame, a brace member engaging the underside thereof and including a bridge portion and obliquely disposed limbs having terminal-lugs, a platform mounted on the frame, brackets extending upwardly from the limbs of the frame, adjusting screws threaded through said brackets, and a follower engaged by said screws.

1,173,332. TELEPHONE-CABLE BOX. KARL FREDRIK WINCRANTZ, CARL ERIK JEAN NILSON, and CARL FILIP PETTERSSON, Stockholm, Sweden, assignors to Aktiebolaget Stockholm-Stelefon, Stockholm, Sweden, a Corporation. Filed July 19, 1911. Serial No. 639,378. (Cl. 247—12.)



In combination, a box, a bottom removable from said box, a terminal block secured to said bottom, the said box being provided with lugs for securing the box to a support and a cover hinged to said lugs in position to close the top of the box.

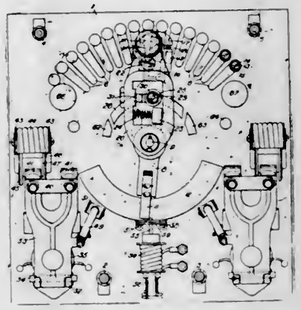
1,173,333. CLOSING ARRANGEMENT FOR DISCHARGING THE EXIT-ORIFICES OF SILOS AND THE LIKE WHICH ARE CLOSED BY MEANS OF A CURTAIN. EDUARD ZÜRLIN, Strassburg, Germany. Filed July 3, 1914. Serial No. 848,981. (Cl. 193—45.)



1. A closure for silos comprising in combination with the funnel constituting an outlet, a sliding plate adapted to regulate the size of said outlet in accordance with the size of the material to be discharged, means for adjusting said plate, a curtain provided in spaced relation to and in front of said funnel, means for raising said curtain and for regulating the size of the opening formed by said raising action, substantially as described.

2. A closure for silos comprising in combination with the funnel constituting an outlet, a sliding plate adapted to regulate the size of said outlet in accordance with the size of the material to be discharged, means for locking it in its adjusted position, a curtain suspended from a point above the funnel opening, weighted chains for operating said curtain, means for operating said chains for raising said curtain comprising a clutch mechanism, and a shaft, and means for regulating the size of the opening of the curtain in harmony with the size of the material to be discharged, substantially as described.

1,173,334. ELECTRICAL CONTROL APPARATUS. RICHARD AMBERTON, London, England. Filed June 19, 1914. Serial No. 846,075. (Cl. 172—179.)



1. In apparatus for controlling electrical circuits, the combination with a plain rheostat having multiple contacts and a movable contact arm, of an operating lever movable laterally and independently thereof for controlling said contact arm, an automatic line switch, and an electrical interlock between said operating lever and said line switch.

2. In apparatus for controlling electrical circuits, the combination with a plain rheostat having multiple contacts and a movable contact arm, of an operating lever movable relatively to said contact arm, an automatic line switch an interlock between said operating lever and said automatic line switch, and means for disestab-

lishing the interlock when the operator releases handle 21, to open said automatic line switch.

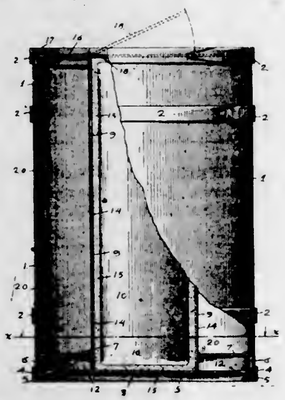
3. In apparatus for controlling electrical circuits, the combination with a plain rheostat having multiple contacts and a movable lever contact arm, of an operating lever movable relatively to said contact arm, means carried by said operating lever engaging said contact arm, an automatic line switch, an electrical interlock between said line switch and operating lever, and means for disestablishing said interlock when the operator releases handle 21 to open said automatic switch.

4. In apparatus for controlling electrical circuits, the combination with an automatic line switch, of a plain rheostat, a movable contact arm therefor, an operating lever controlling the motion of said contact arm, means permitting of a limited relative displacement between said contact arm and operating lever, and an electrical interlock between said operating lever and automatic line switch.

5. In apparatus for controlling electrical circuits, the combination with a plain rheostat having multiple contacts and a movable contact arm, of an operating lever movable relatively to said contact arm, an automatic line switch, independent no-volt and overload releasing devices connected with said line switch, and an electrical interlock between said operating lever and automatic line switch.

[Claims 6 to 11 not printed in the Gazette.]

1,173,335. SHIPPING-CONTAINER. WALLACE P. ANGELO and A HEATH ANGELO, Alameda, and FRANCIS B. RUSSI, San Francisco, Cal. Filed Aug. 3, 1914. Serial No. 856,309. (Cl. 217—1.)



1. A shipping container comprising an outer cylindrical container of comparatively thin wood veneer; a circular bottom of similar material having slots arranged in the periphery thereof; a false circular bottom of similar material having a concentric circular aperture therein; means arranged to retain a space between the bottom and the false bottom; an inner cylindrical container composed of comparatively thin wood veneer projecting through the aperture in the false bottom and to the bottom of the outer container so as to provide an annular space above and below the false bottom; and a suitable cover secured to the top of the outer container and arranged to retain the inner container in position.

2. A shipping container comprising an outer cylindrical container of comparatively thin wood veneer; a circular bottom of similar material having slots arranged in the periphery thereof; a false circular bottom of similar material having a concentric circular aperture therein; means arranged to retain a space between the bottom and the false bottom; an inner cylindrical container composed of comparatively thin wood veneer projecting through the aperture in the false bottom and to the bottom of the outer container so as to provide an annular space above and below the false bottom; a suitable cover secured to the top of the outer container and arranged to retain the inner container in position; and a suitable water-proof material surrounding the inner container.

3. A shipping container comprising an outer cylindrical container of comparatively thin wood veneer; a bottom of similar material having slots arranged in the periphery thereof; a circular false bottom of similar material having a concentric circular aperture therein; means arranged to retain a space between the bottom and the false bottom; an inner cylindrical container composed of comparatively thin wood veneer projecting through the aperture in the false bottom and to the bottom of the outer container so as to provide an annular space above and below the false bottom; and a suitable cover secured to the outer container and having a door therein by means of which the inner container may be re-iced.

1,173,336. PLASTICS AND METHODS OF MAKING SAME. WILLIAM T. BONNER, Washington, N. C., assignor of one-half to K. P. McElroy and Roy F. Steward, Washington, D. C., and Mitford C. Massie, New York, N. Y. Filed May 20, 1908. Serial No. 433,872. (Cl. 106—40.)

1. As a new composition of matter, a water solution of a compound of carbon disulfid with a product resulting from the treatment of a carbohydrate with an anhydrous nitrogen compound of the NH_3 type, said solution being neutral, coagulable and free of fixed mineral matter.

2. As a new composition of matter, a water solution of a compound of carbon disulfid with a product resulting from the treatment of cellulose with NH_3, said solution being neutral, coagulable and free of fixed mineral matter.

3. In the manufacture of plastic compositions, the process which comprises treating dry cellulose with an anhydrous nitrogen compound of the NH_3 type.

4. In the manufacture of plastic compositions, the process which comprises treating a dry carbohydrate with an anhydrous nitrogen compound of the NH_3 type.

5. In the manufacture of plastic compositions, the process which comprises treating a dry carbohydrate with NH_3.

[Claims 6 to 16 not printed in the Gazette.]

1,173,337. PLASTICS AND PROCESSES OF PRODUCING SAME. WILLIAM T. BONNER, Trenton, N. J., assignor of one-half to K. P. McElroy and Roy F. Steward, Washington, D. C., and Mitford C. Massie, New York, N. Y. Filed May 6, 1911. Serial No. 625,437. (Cl. 106—22.)

1. In the manufacture of plastics the process which comprises producing a fluent reaction product of formaldehyde and a phenol and dissolving therein while still in a fluent condition an ester of cellulose with an organic acid.

2. In the manufacture of plastics the process which comprises producing a fluent reaction product of formaldehyde and a phenol and dissolving cellulose acetate therein while such product is still in a fluent condition.

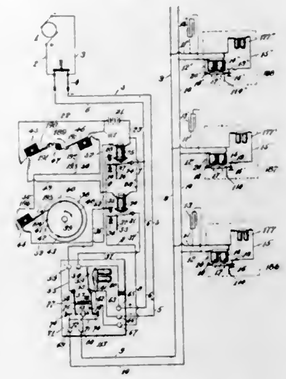
3. The process of producing plastics which comprises dissolving an organic acid ester of cellulose in a reaction product of formaldehyde and a phenol while such product is still in a fluent condition.

4. The process of producing plastics which comprises incorporating cellulose acetate with a fluent reaction product of formaldehyde and a phenol while such product is still in a fluent condition.

5. The process of producing plastic articles which comprises producing a fluent reaction product of formaldehyde and a phenol, dissolving in such reaction product an ester of cellulose with an organic acid in amount sufficient to produce a fluent composition, shaping said composition and hardening.

[Claims 6 to 11 not printed in the Gazette.]

1,173,338. SYSTEM FOR OPERATING TIME-RECORDERS OR TIME-INDICATORS. JAMES W. BRYCE, Brooklyn, N. Y., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed June 18, 1909. Serial No. 502,894. (Cl. 161—21.)



1. The combination with a time indicating device comprising, a time of day indicating mechanism and an elapsed time indicating mechanism, of magnetically actuated means for controlling the operation of both mechanisms, a circuit including said means, and a current reverser therein, the magnetic actuating means being adapted to be disconnected from the control of the elapsed time mechanism by a current in one direction, but to operate the time of day mechanism by currents in either direction.

2. The combination with a time indicating device, comprising a time of day indicating mechanism and an elapsed time indicating mechanism, of means for controlling the operation of both mechanisms, a magnet for actuating the same, a source of current, a circuit including the magnet, and a current reverser adapted to be actuated at predetermined intervals of time for sending currents from either pole of the source through the circuit, the said magnetically actuated controlling means being adapted to be disconnected from the control of the elapsed time mechanism by currents in one direction, but to operate the time of day mechanism by currents in either direction.

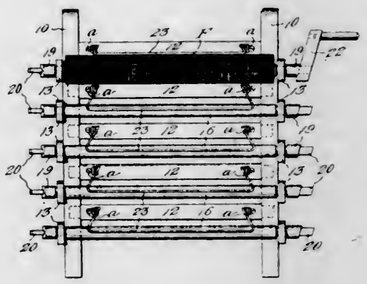
3. In a time indicating machine, the combination of time mechanism and magnetic means for operating the same, a cut-out device for operatively disconnecting or connecting the operating magnetic means, and a part of the time mechanism normally driven by it, a circuit for controlling said magnetic means, and reversing means for sending the current through said circuit in one direction or the other, the magnetic means and cut-out being so constructed and arranged that the magnetic means will operate all of the time mechanism, when the flow of current is in one direction, but will be disconnected by the cut-out device from a part of the time mechanism, when the flow is in the opposite direction, and will then operate only the other part of the time mechanism.

4. In a time indicating machine, the combination of a time mechanism, a magnet, an armature therefor for controlling the operation of the time mechanism, said magnet being adapted to be attracted at each energization of the magnet, a cut-out device for operatively disconnecting or connecting the said armature and part of the time mechanism normally controlled by it, a second and polarized armature adapted to be attracted by the magnet when the flow of current through the same is in one direction, but not to be attracted when the flow is in the other direction, and adapted in one of its positions to actuate the cut-out device to cause it to operatively disconnect the first armature and the said part of the time mechanism, a circuit through the magnet, and reversing means for sending the current through said circuit in one direction or the other, whereby all the time mechanism will be operated when the current flow is in one direction and only a part will be operated when the flow is in the opposite direction.

5. In a time indicating machine, the combination of a time mechanism, a magnet, an armature therefor for controlling the operation of the time mechanism, the said magnet being adapted to be attracted at each energization of the magnet, a cut-out device for operatively disconnecting or connecting the said armature and a part of the time mechanism normally controlled by it, a magnet for controlling the cut-out device, a second and polarized armature for the magnet adapted to be attracted by it when the current flow through the magnet is in one direction, but not to be attracted when the flow is in the other direction, and adapted in one of its positions to energize the cut-out control magnet, a circuit through the time mechanism controlling magnet, and reversing means for sending the current through said circuit in one direction or the other, whereby all the time mechanism will be operated when the current flow is in one direction, but only a part will be operated when the flow is in the opposite direction.

[Claims 6 to 12 not printed in the Gazette.]

1,173,339. WIRE-SCREEN RACK. OKEY J. CONNER and CLEMENT L. CONNER, Covington, Okla. Filed Aug. 3, 1912. Serial No. 713,172. (Cl. 211—18.)

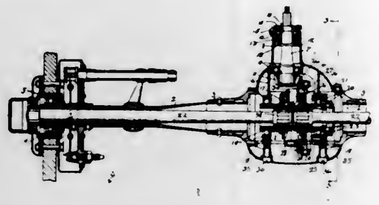


In combination, two similar standards, a cross bar securing said standards in parallel spaced relation, a forwardly extending supporting bar secured to each standard at a point below said cross bar, a shaft revolubly held by said supporting bars, a presser rod having converging arms each ending in a spiral spring having their axes parallel to said presser rod, each spring terminating in a securing eye, and a screw within each eye to hold said springs to said cross bar said presser rod adapted to lie upon said shaft, all arranged as and in the manner set forth.

1,173,340. DRIVING MECHANISM FOR MOTOR-VEHICLES. DE WITT C. COOKINGHAM and JOHN H. HERTNER, Cleveland, Ohio, assignors to The Baker R & L Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 11, 1912. Serial No. 670,597. (Cl. 74—34.)

1. In mechanism of the character described, the combination of a casing open on opposite sides and having two laterally extending tubes; detachable members for closing such openings in said casing, respectively; a driving pinion and differential mechanism carried by one of said members and removable from said casing along with said member; and two axle-sections disposed in said tubes and detachably connected at their inner ends with said differential mechanism.

2. In mechanism of the character described, the combination of a casing open on opposite sides and having two laterally extending tubes; detachable members for closing such openings in said casing, respectively; a driving pinion and differential mechanism carried by one of said members, said driving pinion and differential mechanism being independently adjustable longitudinally of their respective axes and being removable from said casing along with said member; and two axle-sections disposed in said tubes and detachably connected at their inner ends with said differential mechanism.



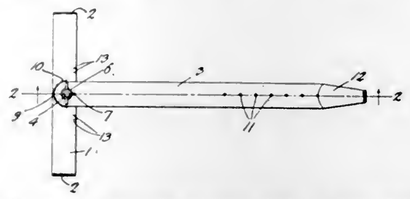
3. In mechanism of the character described, the combination of a casing open on opposite sides and having two laterally extending tubes; detachable members for closing such openings in said casing, respectively; a driving spindle journaled in one of said members at right-angles to the line of said tubes, said spindle being adjustable longitudinally of its axis; a bevel pinion on the inner end of said spindle; a drum secured to the same member in which said driving spindle is journaled so as to be rotatable about an axis alined with said tubes, said drum being adjustable longitudinally of its axis; differential mecahnism carried by said drum, said mechanism including a bevel gear adapted to mesh with said bevel pinion; and two axle-sections disposed in said tubes and detachably connected at their inner ends with said differential mechanism.

4. In mechanism of the character described, the combination of a casing open on opposite sides and having two laterally extending tubes; detachable members for closing such openings in said casing, respectively; a driving spindle journaled in one of said members at right-angles to the line of said tubes, said spindle being adjustable longitudinally of its axis; means at the outer end of said spindle adapted thus to adjust the same; a beveled pinion on the inner end of said spindle; a drum secured to the same member in which said driving spindle is journaled so as to be rotatable about an axis alined with said tubes, said drum being adjustable longitudinally of its axis; differential mechanism carried by said drum, said mechanism including a bevel gear adapted to mesh with said bevel pinion; means at one end of said drum adapted to adjust the same; and two axle-sections disposed in said tubes and detachably connected at their inner ends with said differential mechanism.

5. In mechanism of the character described, the combination of a casing open on opposite sides and having two laterally extending tubes; detachable members for closing such openings in said casing, respectively; a driving spindle journaled in one of said members at right-angles to the line of said tubes; a bevel pinion on the inner end of said spindle; ball-bearings at the inner and outer ends of said spindle; an adjusting nut in said member carrying the bearing at the outer end of said spindle, the bearing at the inner end of the spindle being carried along with the latter; a drum rotatably secured to the same member about an axis alined with said tubes, said drum being adapted to be driven by said bevel pinion; differential mechanism carried by said drum; and two axle-sections disposed in said tubes and detachably connected at their inner ends with said differential mechanism.

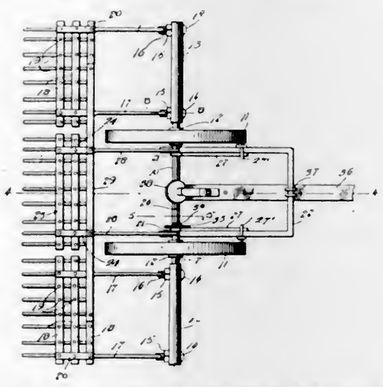
[Claims 6 to 15 not printed in the Gazette.]

1,173,341. T-SQUARE. WILLIAM F. COTTOM, De Ridder, La., assignor of one-half to Willie E. Cannon, De Ridder, La. Filed Mar. 24, 1915. Serial No. 16,650. (Cl. 33—100.)



A T-square embodying a stock, and a flexible sheet metal blade carried thereby, the blade having depressed spurs and the portions of the blade adjacent the respective spurs being yieldable.

1,173,342. SECTIONAL WEEDER. GEORGE C. DARNELL, Medford, N. J. Filed May 28, 1914. Serial No. 841,548. (Cl. 55—89.)

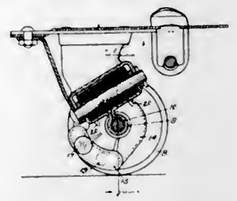


1. In a device of the class described, a wheeled frame including an axle, wheels mounted on said axle at points inwardly of its ends, a harrow section hingedly supported at each end of the axle, an intermediate harrow section, hingedly supported from the axle between said wheels, a bar connecting said sections, and means for moving said sections simultaneously into and out of operative position.

2. In a device of the class described, a wheeled frame including an axle, a substantially U-shaped frame member having its legs engaged through openings formed transversely of the axle, and terminating in eyes, a ground working member hingedly supported in said eyes, and means for moving said member into and out of operative position.

1,173,343. ROLLER-SKATE ATTACHMENT. GEORGE B. DEACON, Battle Creek, Mich., assignor to Frederick A. Rutherford, Battle Creek, Mich. Filed July 15, 1915. Serial No. 40,032. (Cl. 46—51.)

1. In an attachment for roller skates, the combination with the body portion of a skate supporting a fixed axle with wheels mounted thereon, of a dust-cap portion mounted on said axle between said body portion and the side of the skate wheel, lugs on said dust-cap portion to engage the body portion to prevent rotation thereof, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to engage the side of the wheel to arrest the backward rotation thereof by means of frictional contact, a spring actuated reciprocating-pin inserted within said casing and projecting normally into said ball-race to retain said ball out of commission to permit the rotation of the wheel in either direction.



2. In an attachment for roller skates, the combination with the body portion of a skate supporting an axle with wheels mounted thereon, of a dust-cap portion mounted on said axle between said body portion and the side of the skate wheel and provided with means to prevent rotation thereof, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to arrest the backward rotation thereof by means of frictional contact, a reciprocating-member normally projecting into said ball-race to retain said ball out of commission when desired.

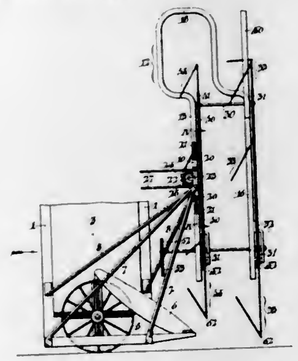
3. In an attachment for roller skates, the combination with the body portion of a skate supporting wheels mounted thereon, of a dust-cap portion secured between said body portion and the side of the wheel, a casing provided with a tapering ball-race secured to said dust-cap portion, a ball within said ball-race to engage the side of the wheel to arrest the backward rotation thereof, and means within said ball-race to retain said ball out of commission.

4. An attachment for roller skates comprising a dust-cap portion provided with a hole to permit of attaching to a skate, a casing formed integral with said dust-cap portion and provided with a tapering ball-race, a ball within said ball-race to engage the side of the wheel to arrest its backward rotation, and means to retain said ball out of commission.

5. An attachment for roller skates consisting of a member adapted to be attached to a fixed part of a skate and provided with a tapering-groove adjacent to and facing the side of the wheel, a gravity-actuated member within said groove to engage said wheel to arrest its backward rotation, and means within said groove to retain said member out of commission.

[Claim 6 not printed in the Gazette.]

1,173,344. GRAIN-ELEVATOR. MATHIAS DORNBACH, Philadelphia, Pa. Filed Mar. 27, 1914. Serial No. 827,526. (Cl. 56—129.)



1. In a harvesting machine, the combination of a horizontal conveyer, cutting knives moving in close proximity to the ground and adapted to coöperate with the said conveyer together with means located in advance of the said cutting knives and movable in a linear path continuously in a direction transversely to the direction of movement of the said machine for simultaneously elevating prostrate grain and deflecting the same toward the cutting knives and onto the horizontal conveyer.

2. In a harvesting machine, the combination of a horizontal conveyer, cutting knives moving in close proximity to the ground and adapted to coöperate with the said conveyer, means for elevating prostrate grain and deflecting the same toward the cutting knives and onto the horizontal conveyer, said means comprising an endless driving and supporting chain, a series of elevating and deflecting elements supported by the said chain, and movable in a linear path continuously in a direction at right angles to the direction of travel of the machine substantially as shown and for the purpose set forth.

3. In a harvesting machine, the combination of a horizontal conveyer, cutting knives moving in close proximity to the ground and adapted to coöperate with the said conveyer, supporting brackets rigidly attached to the framework of the machine, a vertically adjustable frame supported by the said brackets, an endless driving and supporting chain carried by the said frame, a series of grain elevating and deflecting elements carried by the said chain and adapted to move in a direction at right angles to the direction of travel of the machine, substantially as shown and for the purpose set forth.

4. In a harvesting machine, the combination of a horizontal conveyer, cutting knives moving in close proximity to the ground and coöperating with the said conveyer, supporting brackets rigidly attached to the frame work of the machine, a vertically adjustable frame supported by said brackets, a plurality of spaced parallel driving chains carried by the said frame and adapted to be simultaneously driven, a series of grain elevating and deflecting devices carried by each of the said chains, the grain elevating and deflecting elements on one chain being longer than those of the other chain, substantially as shown and for the purpose set forth.

5. A grain elevating and deflecting device for harvesting machines comprising an endless driving chain, a series of grain elevating elements mounted on the said chain, each element consisting of a shank terminating in a raising prong inclined to the horizontal, both the shank and raising prong lying in the plane of movement of the said elements, a deflecting prong lying in the same angular plane with the raising prong and inclined rearwardly from the junction of the said shank and the raising prong at an angle to the plane of movement of the said elevating elements substantially as shown and for the purpose set forth.

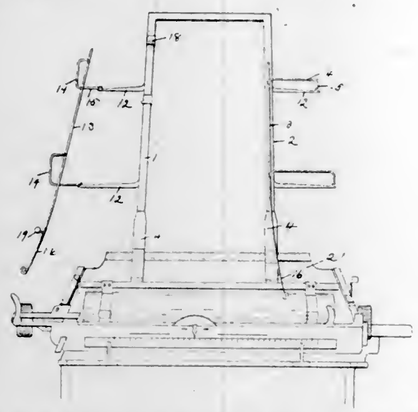
1,173,345. CARBON-GRIPPER AND MARGIN-INDICATOR FOR WRITING-MACHINES. CHARLES I. EVANS, Jr., Dallas, Tex. Filed Oct. 15, 1915. Serial No. 56,061. (Cl. 197—127.)

1. In a writing machine provided with a paper table; a gripper and indicator mounted on said table and consisting of a flat paper-supporting frame and guide members hingedly connected to the sides of said frame and adapted to swing over the edges of and to stand out of the plane of said frame in close proximity thereto.

2. In a writing machine provided with a paper table; a gripper and indicator mounted on said table and consisting of a flat paper-supporting frame provided with lateral arms and guide members provided with arms hingedly connected to said first mentioned arms and adapted to swing over the edges of and to stand out of the plane of said frame in close proximity thereto.

3. In a writing machine provided with a paper table; a gripper and indicator consisting of a flat paper-supporting frame, clamping members for attaching said frame to said table, and guide members hingedly connected to said frame and adapted to swing over the lateral edges of said frame and stand out of the plane of said frame in close proximity thereto and easily movable

by the sheet or sheets of paper when being removed from said frame.

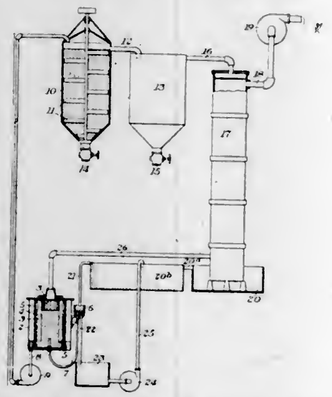


4. In a writing machine provided with a paper table; a gripper and indicator comprising a flat frame provided with lateral arms, clamping members for mounting said frame on said table, guide members hingedly connected to said arms and adapted to swing over the sides of said frame and stand in close proximity thereto, and arms rigidly connected with said guide members having bent shanks hingedly connected to the arms of said frame.

5. In a writing machine provided with a paper table; a gripper and indicator comprising a flat frame provided with lateral arms, clamping members for mounting said frame on said table, guide members, lateral arms rigid with said guide members and having bent shanks and hinges connecting said shanks to the arms of said frame and having shoulders to hold said guide members out of the plane of said frame.

[Sections 6 and 7 not printed in the Gazette.]

1,173,346. METHOD FOR THE MANUFACTURE OF CHLORATES AND PERCHLORATES OF ALKALI METALS. ARTHUR E. GIBBS, Wayne, Pa. Filed May 5, 1915. Serial No. 25,971. (Cl. 204—60.)



1. The herein described method of making a chlorate, which consists in electrolyzing a chlorid solution to produce chlorin and an alkali, uniting the chlorin and the alkali outside of the anode and cathode compartments of the electrolyzing apparatus, and diminishing the quantity of the produced alkali passing to the combining chamber relatively to the amount of chlorin, to thereby maintain an excess of chlorin in the combining chamber.

2. The herein described method of making a chlorate, which consists in electrolyzing a chlorid solution to produce chlorin and an alkali, uniting the chlorin and the alkali outside of the anode and cathode compartments of the electrolyzing apparatus, maintaining an excess of chlorin in the combining chamber, and returning the chlorate liquor resulting from the combination to the electrolyzing apparatus and repeating the described operations.

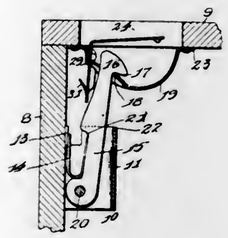
3. The herein described method of making a chlorate, which consists in electrolyzing a chlorid solution to produce chlorin and an alkali, uniting the chlorin and the alkali outside of the anode and cathode compartments of the electrolyzing apparatus, maintaining an excess of chlorin in the combining chamber, and returning the chlorate liquor resulting from the combination to the anode compartment of the electrolyzing apparatus.

4. The herein described method of making a chlorate salt, which consists in electrolyzing a chlorid solution to produce chlorin and an alkali, discharging the alkali solution from the cathode compartment of the electrolyzing apparatus and the chlorin from the anode compartment of the electrolyzing apparatus, adding fresh chlorid to the alkali solution, and then bringing the solution into contact with the chlorin to produce a chlorate liquor.

5. The herein described method of making a chlorate salt, which consists in electrolyzing a chlorid solution to produce chlorin and an alkali, discharging the alkali solution from the cathode compartment of the electrolyzing apparatus and the chlorin from the anode compartment of the electrolyzing apparatus, adding fresh chlorid to the alkali solution, then bringing the solution into contact with the chlorin to produce a chlorate liquor, returning said liquor to the anode compartment of the electrolyzing apparatus, and repeating the cycle of operations, and removing chlorate from the alkaline liquor at a point in the system intermediate the electrolyzing apparatus and the absorption chamber where the chlorin and alkali are combined.

[Claims 6 to 10 not printed in the Gazette.]

1,173,347. SEAL-LOCK FOR BOXES. FREDERICK W. GOESSLING, St. Louis, Mo. Filed Mar. 5, 1915. Serial No. 12,335. (Cl. 70—80.)

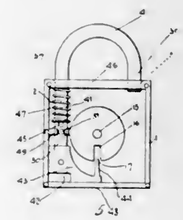


1. A seal lock for boxes comprising a slotted cap, a locking arm pivotally secured to the stationary portion of the shipping case and a pronged seal inserted through the slot of the cap and communicating with one edge of the locking arm to prevent the arm from being released except through mutilating the seal, substantially as specified.

2. A seal lock for shipping cases comprising a depressed cap attached to the lid of the case, said cap having a T-shaped slot formed therein, the portion of the cap in which the slot is formed being suitably bent to form a guide way; a locking arm pivotally connected to the stationary portion of the shipping case and so positioned that the locking arm will engage the cap and enter the slot; and a pronged seal having bulges inserted in the slot and preventing the releasing of the lock except by the mutilation of the seal, substantially as specified.

3. A lock of the class described comprising a spring controlled locking arm, a housing in which said arm is pivotally mounted and supported, said housing being firmly fixed to the stationary portion of a shipping case; a cap having a depressed portion in which is formed a T-shaped slot and which slot is arranged at an angle by the bending of the hook end of the locking arm, said cap being secured in proper relation with an opening formed in the cover, and a metal seal divided with prongs and stiffening bulges adapted to be inserted in the slot contacting with the locking arm and preventing the release of the locking arm except by the mutilation of the seal substantially as specified.

1,173,348. COMBINATION-LOCK. EMIL GORNICEC, Youngstown, Ohio. Filed Oct. 28, 1915. Serial No. 58,358. (Cl. 70—113.)

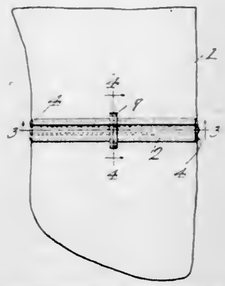


1. A combination lock comprising a casing having means to provide a pocket, an operating shaft rotatably mounted in said pocket and carrying a disk provided with graduations, washers mounted upon said shaft and arranged within said pocket, means to prevent rotative movement of said washers, locking disks interposed between said washers and surrounding said shaft and each having means capable of being engaged with the shaft for shifting the disks, said means of said locking disks being differently positioned with respect to each other, said locking disks, washers and means to provide a pocket being slotted, a shackle extending into said casing and provided with a locking arm having a protuberance and capable of being shifted in said slots when alined to permit of the release of the shackle.

2. A combination lock comprising a casing, a series of slotted locking disks arranged therein and having means capable of being engaged by an operating shaft for shifting said disks to bring the slots thereof to register, the means of said disks being arranged at different points with respect to each other, an operating shaft having means engaging with said disks for shifting them to bring the slots of the disks to register, a spring controlled shackle extending into said casing and provided with a locking arm positioned within the casing and having a protuberance capable of entering said registering slots to permit of the release of the shackle, and a guide for the shackle.

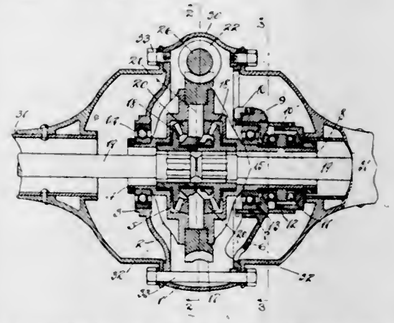
3. A combination lock comprising a casing, a series of slotted locking disks arranged therein and having means capable of being engaged by an operating shaft for shifting said disks to bring the slots thereof to register, the means of said disks being arranged at different points with respect to each other, an operating shaft having means engaging with said disks for shifting them to bring the slots of the disks to register, a spring controlled shackle extending into said casing and provided with a locking arm positioned within the casing and having a protuberance capable of entering said registering slots to permit of the release of the shackle, and a guide for the shackle, and a series of slotted washers interposed between said disks and having means engaging with the casing to prevent rotation of the washers.

1,173,349. POCKET-CLASP. JOHN W. HAWKINS, Munfordville, Ky. Filed Nov. 11, 1914. Serial No. 871,530. (Cl. 2—151.)



A pocket clasp comprising a tubular strip; an endless elastic band constituting a grip extended through said tubular strip; spaced reinforcing elements in the strip and located on opposite sides of the grip, the ends of the reinforcing elements protruding beyond the ends of the strip and being bent to form pocket engaging prongs, the prongs constituting means for maintaining the grip on the ends of the strip.

1,173,350. DRIVING MECHANISM FOR AUTOMOBILES. JOHN H. HERTNER, Cleveland, Ohio, assignor to The Baker R & L Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 20, 1913. Serial No. 755,627. (Cl. 74—56.)



1. In mechanism of the character described, the combination of a casing, made up of a hollow substantially cylindrical member formed centrally on one side with an annular bearing support, and a separable complementary member closing the other side of said first member and formed with an alined bearing support; a differential drum having oppositely projecting hubs supported in said bearings, respectively; a worm gear carried by said drum; and a worm for driving said gear, journaled in said first casing-member transversely of the axis of said drum.

2. In mechanism of the character described, the combination of a casing made up of a hollow substantially cylindrical member formed centrally on one side with an annular bearing support, and a separable complementary member closing the other side of said first member and formed with an alined bearing support; radial bearings carried in each of said supports and a thrust bearing carried in the support in said separable member; a differential drum having oppositely projecting hubs supported in said radial bearings, respectively, one such hub being also held in said thrust bearing; a worm gear carried by said drum; and a worm for driving said gear, journaled in said first casing-member transversely of the axis of said drum.

3. In mechanism of the character described, the combination of a casing made up of a hollow substantially

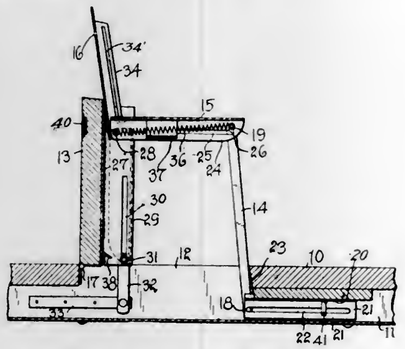
cylindrical member formed centrally on one side with an annular bearing support, and a separable complementary member closing the other side of said first member and formed with an alined bearing support; radial bearings carried in each of said supports and a thrust bearing carried in the support in said separable member; means adapted to axially adjust said thrust bearing; a differential drum having oppositely projecting hubs supported in said radial bearings, respectively, one such hub being also held in said thrust bearing; a worm gear carried by said drum; and a worm for driving said gear, journaled in said first casing-member transversely of the axis of said drum.

4. In mechanism of the character described, the combination of a casing made up of a substantially cylindrical member formed centrally on one side with an annular bearing support, and a complementary member closing the other side of said first member and formed with an alined bearing support; a sleeve longitudinally adjustably secured in such last-named bearing support; a differential drum having oppositely projecting hubs, one such hub being slidably journaled in the central bearing support of said first casing-member, the other such hub being non-slidably journaled in said sleeve; a worm gear carried by said drum; and a worm for driving said gear, journaled in said first casing-member transversely of the axis of said drum.

5. In mechanism of the character described, the combination of a casing made up of a substantially cylindrical member formed centrally on one side with an annular bearing support, and a complementary member closing the other side of said first member and formed with a semi-annular bearing support alined with such first-named support, such last-named support being internally threaded; a cap completing such last-named bearing support; a sleeve secured in and having threaded engagement with said last-named support; a differential drum having oppositely projecting hubs, one such hub being slidably journaled in the central bearing support of said first casing-member, the other such hub being non-slidably journaled in said sleeve; a worm gear carried by said drum; and a worm for driving said gear, journaled in said first casing-member transversely of the axis of said drum.

[Claims 6 to 13 not printed in the Gazette.]

1,173,351. CHAIR. THOMAS E. HERINGTON, Mallard, Iowa. Filed Apr. 16, 1915. Serial No. 21,761. (Cl. 155—13.)

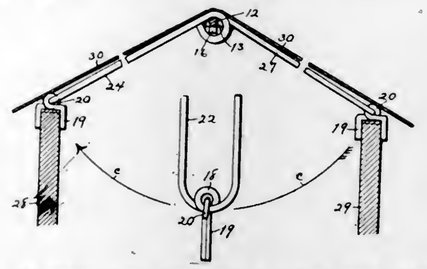


1. A folding chair including a base board provided with an opening, a back leg hinged to the base board and constituting a closure for the opening therein, when the chair is folded, a pair of front legs slidably and pivotally connected to the base board, a seat pivotally connected to the back leg and pivotally and slidably connected to the front legs, and a back member slidably connected to the back leg, said seat and back being foldable to position against the lower face of the back leg when the chair is folded.

2. A folding chair including a back leg mounted for swinging movement, a seat pivotally connected to the back leg, a pair of front legs, means pivotally and slidably connecting the front legs to the seat, yieldable means normally holding the seat in position against the back leg, and a back piece movable to extended position above the back leg or to position against the lower face thereof when the chair is folded.

3. A folding chair including a supporting base having an opening leading through the upper face thereof, a back leg hinged to the supporting base and constituting a closure for the opening thereof when the chair is folded, a slide plate secured within the supporting base, a pair of front legs pivotally and slidably connected to the slide plate, a seat pivoted to the back leg, means pivotally and slidably connecting the front legs to the seat, and a movable back connected to the back leg, said back piece being adapted for disposal in extended position above the back leg for disposal in folded position against the lower face of the back leg.

1,173,352. WAGON-COVER. ANDY HIGDON, Nevada, Iowa. Filed Dec. 24, 1914. Serial No. 878,881. (Cl. 21—62.)

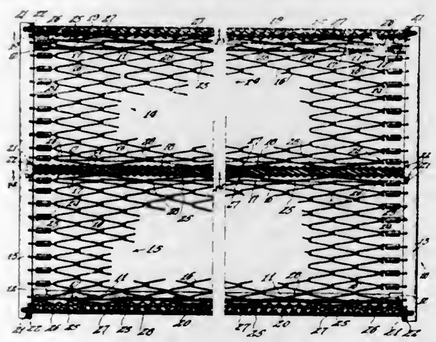


1. A wagon cover, comprising a jointed metal ridge-pole, bow members pivoted to said ridge-pole, resilient forks for securing ends of the ridge-pole and box-members to a wagon-box, and a flexible roof mounted thereon.

2. A wagon cover, comprising a jointed ridge-pole including end-props, bow members pivoted to said ridge-pole, forks on the end-props and bow-members adapted to engage a wagon-box, and a flexible cover or roof mounted on said ridge-pole and bow-members.

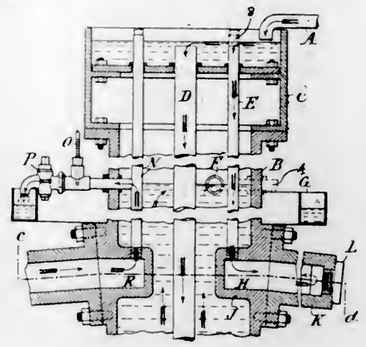
3. A ridge-pole formed in sections having eyes on their ends, hooks inter-engaging said eyes, end props engaging extreme eyes of the series of sections, and forks pivoted to outer ends of said props, the whole being jointed, pivotally connected, and foldable.

1,173,353. TWIN BED. FRANCIS S. INCO, Los Angeles, Cal. Filed Oct. 22, 1914. Serial No. 868,134. (Cl. 5—40.)



A twin bed spring comprising a frame having cross bars extending across each end of the bed, a partially elastic center strip secured at each end to the center of one of said cross bars, an edging strip of partially elastic construction secured between said cross bars at each edge of the spring, right and left inelastic net works each located between said center strip and one of said edging strips, means for elastically securing the end of each net work to said cross bars, and means for slidably securing said net work to said center and edging strips.

1,173,354. WATER-COOLED HOLLOW SHAFT FOR ORE-ROASTING FURNACES. ERNST JENSEN-VALDAL, Copenhagen, Denmark, assignor to Aktieselskabet Dansk Svovlsyre- & Superphosphat-Fabrik, Copenhagen, Denmark. Filed Jan. 3, 1912. Serial No. 669,282. (Cl. 257—119.)



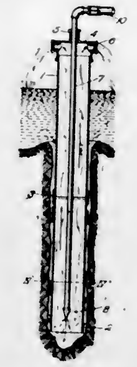
1. In a roasting furnace in combination, a hollow shaft, hollow stirring arms projecting from said shaft, individual water supplying pipes for each of said arms adapted to be closed independently of the remainder of said pipes, a water tank secured to said shaft, individual discharge pipes for each of said arms, means for regulating the flow of the water through each of said discharge pipes, and a water vessel adapted to receive the discharge from said discharge pipes, substantially as described.

2. In a roasting furnace, in combination, a hollow shaft, hollow stirring arms projecting from said shaft, a water tank secured to said shaft, individual water supplying pipes for said hollow shafts and for each of said arms, the pipes for each of said arms being adapted to be closed independently of the remainder of said pipes, individual discharge pipes from each of said arms and from said hollow shaft, means for regulating the flow of water through each of said discharge pipes, and a water vessel adapted to receive the discharge from said discharge pipes, substantially as described.

3. In a roasting furnace, in combination, a hollow shaft, a tank secured to said shaft, inwardly projecting boxes within said shaft, hollow stirring arms mounted in connection with said boxes, individual water supplying pipes and water discharging pipes connected to said boxes, means for regulating the flow of water through each of said discharge pipes, and means for cutting off the supply of water to each of said individual water supply pipes, and a water vessel adapted to receive the discharge from said discharge pipes, substantially as described.

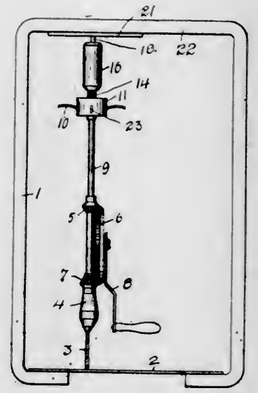
1,173,355. METHOD OF SINKING PILES. HARRY T. JONES, Seward, Nebr., assignor, by mesne assignments, to Concrete Piling Company, a Corporation of Nebraska. Filed Sept. 2, 1913. Serial No. 787,705. (Cl. 61—41.)

1. The method of sinking a pile, consisting of sinking a casing having a jet pipe located therein, removing the jet pipe when the casing has reached the required depth, lowering a pile through the casing, discharging water within the casing about the pile, and withdrawing the casing.



2. The method of sinking a pile consisting of sinking a casing having a fitting at its upper end, by means of a jet pipe that is projected through the fitting, removing the fitting and pipe when the casing has reached a required depth, lowering a pile within the casing, applying a fitting to the casing, discharging water under pressure through said fitting into the casing, and withdrawing the casing.

1,173,356. FEEDING DEVICE FOR BREAST-DRILLS. THOMAS A. KELLEY, Pittsburgh, Pa. Filed July 29, 1914. Serial No. 853,998. (Cl. 77—32.)



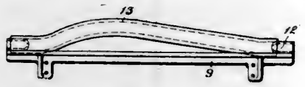
1. A feeding device for hand drills, comprising a body portion provided with means for engaging the breast piece or the brace head of a hand drill, a threaded extension from the body portion, and a sleeve adapted to engage an abutment and threaded upon said extension.

2. A feeding device for hand drills, comprising a body portion comprising an inverted cup-shaped portion provided with notches adapted to engage the breast plate of a breast drill and also with clamping screws, a threaded extension from the body portion, and a sleeve adapted to engage an abutment and threaded upon said extension.

1,173,357. ARM-REST. WILLIAM J. KNOX and FREDERICK J. HARRISON, Dubois, Pa. Filed Oct. 29, 1912. Serial No. 728,490. (Cl. 155—3.)

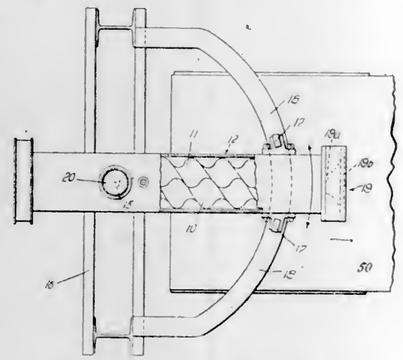
In combination in an arm rest, a substantially straight base member, a tube having resilient walls of sufficient stiffness to maintain its shape and yieldingly resist col-

lapse extending along the top of the base member, and upstanding brackets in telescopic relation with the ends of the tube and releasable therefrom by bending the tube,



the air pressure in the tube being substantially as that outside the tube.

1,173,358. MIXING-MACHINE. HENRY LA CASSE, Los Angeles, Cal., assignor to Buttonlath Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed May 27, 1915. Serial No. 30,832. (Cl. 83—73.)



1. A mixing machine, embodying a pair of parallel intermeshing screws pitched in the same direction, the thread of each screw being of such section that the peripheral portions of the other screw fit closely into it to make a line of tight contact between the two screws, means for supplying material to the screws at one end, and means to rotate the screws in unison in one direction.

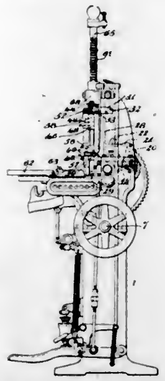
2. A mixing machine, embodying a pair of parallel intermeshing screws, the thread of each screw being of such section that the peripheral portions of the other screw fit closely into it to make a line of tight contact between the two screws, a casing surrounding the screws, and means to rotate the two screws in constant intermesh with each other.

1,173,359. LEATHER-SKIVING MACHINE. ELMER E. LANE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 21, 1912. Serial No. 685,177. (Cl. 12—63.)

1. Pressure mechanism for leather skiving machines, comprising a plurality of pressure devices having differently shaped work-engaging faces to penetrate the work with different degrees of facility and thereby to exert different pressures upon different portions of the work, substantially as described.

2. A skiving machine, having, in combination, a die roll provided with a die cavity, and a plurality of pressure devices, the devices opposite the deeper portions of the die cavity having their work-engaging faces shaped to exert a greater pressure upon the work than the pressure devices opposite the shallower portions of the die cavity, substantially as described.

3. Pressure mechanism for leather skiving machines comprising a plurality of pressure disks having differently shaped work-engaging faces constructed and arranged to penetrate the work with different degrees of facility and thereby to exert different pressures upon the work, substantially as described.

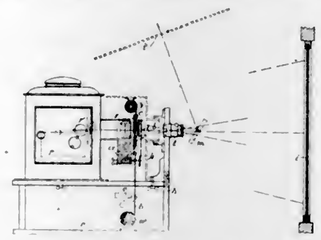


4. Pressure mechanism for leather skiving machines comprising a plurality of pressure disks provided on their periphery with teeth, a portion of the disks having a greater number of teeth than the remainder, substantially as described.

5. Pressure mechanism for leather skiving machines, comprising a plurality of toothed pressure disks of equal diameter, the teeth on certain of the disks being larger than the teeth on others of the disks, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,173,360. APPARATUS FOR DISPLAYING ANNOUNCEMENTS, ADVERTISEMENTS, AND THE LIKE. AUGUSTUS BERNARD DASHWOOD LANG, Gerrard's Cross, Buckingham, and JOHN ANTHONY POWELL, London, England, assignors to Telenews (1914) Limited, London, England, a Joint-Stock Company. Filed Oct. 10, 1914. Serial No. 866,095. (Cl. 88—28.)



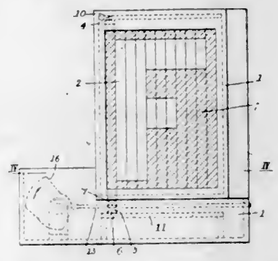
1. The combination, in apparatus for displaying announcements, advertisements, drawings, and the like, of an optical light-projecting system, a strip of translucent material, means for guiding and intermittently traversing the said strip between condensing and objective lenses of the said optical system, means for directly writing, printing, or drawing on the portion of said strip within the field of the light rays, and a screen receiving the projection of the said writing, printing, or drawing.

2. The combination, in apparatus for displaying announcements, drawings, and the like, of an optical light-projecting system, the receiving plate and tracing arm of a tele-writer or tel-autograph machine arranged between the condensing and objective lenses of the said system, a strip of translucent material guided across the said receiving plate, a magnetic paper shifter of known form operated by the tele-writer to shift the strip forward intermittently as required, tele-writer transmitting means of known form for causing the tracing arm to write, print, or draw, on the strip on the said receiving plate, and a screen receiving the projection of the said writing, printing, or drawing, all substantially as set forth.

3. In apparatus for displaying announcements, drawings, and the like, the combination of a lantern containing a strong source of light, condensing lenses attached thereto, objective lenses on the same principal axis as the condensing lenses, a tele-writer receiving mechanism and magnetic paper shifter, a framework having an adjustable support for the objective lenses and carrying the lantern the said tele-writer mechanism and the paper shifter so that the tele-writer mechanism is located between the condensing and objective lenses of the optical system, a strip of translucent material passing over the tele-writer receiving plate, and rollers supported by the said framework, one releasing and one automatically receiving the translucent strip carried thereby, substantially as described.

4. In apparatus for displaying announcements, drawings, and the like, the combination of a lantern containing a strong source of light, condensing lenses attached thereto, objective lenses on the same principal axis as the condensing lenses, a tele-writer receiving mechanism and magnetic paper shifter, a framework having an adjustable support for the objective lenses and carrying the lantern the said tele-writer mechanism and the paper shifter so that the tele-writer mechanism is located between the condensing and objective lenses of the optical system, a strip of translucent material passing over the tele-writer receiving plate, rollers supported by the said framework, one releasing and one automatically receiving the translucent strip carried thereby, an adjustable reflector transmitting an enlarged image of the writing or drawing in any desired direction, and a receiving screen coacting with the said reflector to receive the said image.

1,173,361. PUBLICITY DEVICE. CLEMENT LEAN, London, England. Filed May 10, 1912. Serial No. 696,445. (Cl. 40—33.)



1. In a publicity device, a plurality of revoluble spring-influenced glass tubes silvered internally, a plurality of tension members each connected at one end to a tube, a bar connected to the other ends of each tension member, and means for reciprocating said bar.

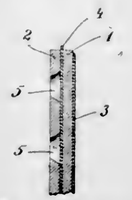
2. In a publicity device, a plurality of metal tubes and a plurality of glass tubes silvered internally surrounding said metal tubes.

3. A publicity device comprising a plurality of revoluble straight cylindrical glass tubes silvered internally and placed parallel to one another, and opaque material situated on the tubes and so located that when the tubes are in certain positions parts unprovided with such material form a device to be exhibited.

4. A publicity device comprising a plurality of oscillatory straight cylindrical glass tubes silvered internally and placed parallel to one another, and opaque material situated on the tubes and so located that when the tubes are in certain positions parts unprovided with such material form a device to be exhibited.

5. A publicity device comprising a plurality of revoluble straight cylindrical glass tubes silvered internally and placed parallel to one another, means for turning the tubes intermittently in one direction, and means for giving them a continuous return motion in the other direction.

1,173,362. COMPOSITE BOARD. ROBERT LINKLETTER, Jersey City, N. J., assignor of one-third to himself and one-third to George W. Muttart, Jersey City, N. J., and one-third to Alder C. Muttart, New York, N. Y. Filed Dec. 26, 1914. Serial No. 879,108. (Cl. 72—124.)



1. A composite board, comprising a layer of plastic material having the general form of a plate and provided with anchor holes extending entirely through it, and a member of sheet material adhering to one side of said plate and closing said holes.

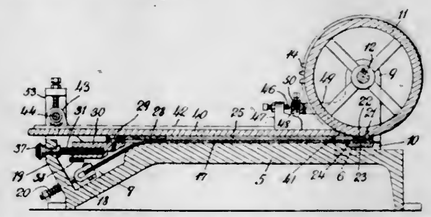
2. A composite board, comprising a layer of plaster of Paris provided with anchor holes extending entirely through it and each having a frusto-conical form, and a member of pasteboard covering one face of said layer and thus closing said holes.

3. A composite board, comprising a layer of plastic material provided with anchor holes extending through it, said holes each having the form of a cone frustom with its base flush with one face of said layer, and a member of sheet material adhering to said layer at the bases thereof.

4. A composite board, comprising a plurality of separate layers of plastic material, and a sheet of pasteboard located between said layers and adhering thereto, one of said layers being provided with anchor holes extending entirely through it and terminating flush with the adjacent surface of said sheet of pasteboard.

5. A composite board comprising a layer of plaster of Paris provided with anchor holes extending entirely through it and each having a frusto-conical form, a member of pasteboard adhering to one face of said layer and closing said holes at the ends thereof having the greatest cross diameter and a layer of material adhering to said member of pasteboard.

1,173,363. CURVING-MACHINE. WALKER W. MCCARROLL, Arlington, N. J. Filed Dec. 19, 1911. Serial No. 666,785. (Cl. 153—43.)



1. In a machine of the character described the combination of a cylinder, a sheet, means for positioning a plate to be curved on the said sheet, said means comprising a front stop carried by the cylinder, a rear stop, means for operating the latter, means for operating the said cylinder and sheet to curve the said plate and a cover plate for preventing bending of the uncurved portion of the said plate while the latter is being curved.

2. In a machine of the character described the combination of a cylinder, a sheet attached to the same,

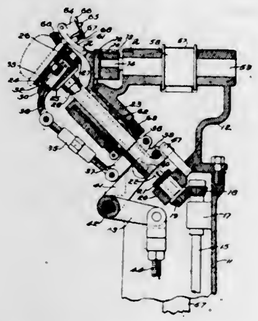
means for positioning a plate to be curved on the said sheet, said means comprising a front plate stop carried by the said cylinder, a rear stop, means for operating the latter, means for operating the said cylinder and sheet to curve the said plate and a cover plate for preventing bending of the uncurved portion of the plate while the latter is being curved and means for operating the said cover plate away from and toward the cylinder.

3. Plate curving means of the character described comprising in combination a support, a cylinder mounted to rotate upon said support, a sheet secured to the latter and the said cylinder for curving the plate around the latter, a front plate stop secured to said cylinder between the same and the said sheet, a rear plate stop secured to the said support on top of the said sheet and means for operating the said cylinder.

4. Plate curving means of the character described comprising in combination a support, a cylinder mounted to rotate upon said support, a sheet secured to the latter and the said cylinder for curving the plate around the latter, tension members interposed between the said sheet and the said support, a front plate stop secured to said cylinder between the same and the said sheet, a rear plate stop secured to the said support on top of the said sheet and means for operating the said cylinder.

5. Plate curving means of the character described comprising in combination a support, a cylinder mounted to rotate thereon, a sheet secured with its one end to the said cylinder and with its other end to the said support and adapted to lie flat on the latter, tension members interposed between said sheet and the said support, a front plate stop secured to said cylinder and interposed between the latter and the said sheet, a rear plate stop mounted on said support and resting on top of said sheet, means for adjusting said rear stop and means for operating said cylinder.

1,173,364. WELT-INDENTING MACHINE. HARRY T. MCCLURE, Boston, and JOHN J. HEYS, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 5, 1911. Serial No. 631,395. (Cl. 12—41.)



1. A welt indenting machine, having, in combination, a work table mounted with its work supporting surface arranged at an angle to the horizontal to support the shoe in a position where the welt may readily be seen by the operator, a horizontal, rotary driving shaft, a welt indenting tool above the table, a tool carrier mounted to swing about a pivot having its axis at an acute angle to the axis of said shaft, and connections between said shaft and tool carrier for oscillating said carrier with its tool freely about its pivot, by the rotation of said shaft, substantially as described.

2. A welt indenting machine, having, in combination, a work table mounted with its work supporting surface arranged at an angle to the horizontal to support the shoe in a position where the welt may readily be seen by tht operator, a horizontal, rotary driving shaft, a welt indenting tool above the table, a tool carrier mounted to swing about a pivot having its axis at an acute angle to the axis of said shaft, a circular guide sleev at the rear of said carrier, a cylindrical block carried by said sleeve and mounted for relative angular movement only to the guide, a slide block vertically movable in said cylindrical block and a crank pin on the end of said shaft projecting through an opening in the guide sleeve and into the side block, by virtue of which connection the carrier with its tool may be oscillated freely about its pivot by the rotation of said shaft, substantially as described.

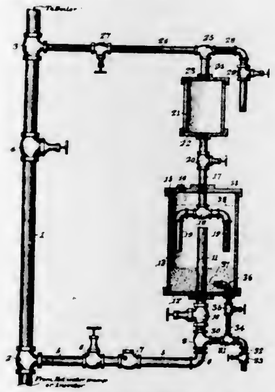
3. A welt indenting machine, having in combination, a work table, a welt indenting tool above the table, a rotary operating shaft, a tool carrier pivoted on an axis at an acute angle to the axis of said shaft, a crank pin in the end of said shaft and a duplex joint connecting said pin and carrier permitting said shaft to impart free oscillation to the carrier with its tool about its pivot, substantially as described.

4. A welt indenting machine, having, in combination, a work table, an oscillating welt indenting tool above the table, a rotary shaft having a crank pin on its end, and operative connections between said pin and tool for freely oscillating the work engaging face of the tool in a curved path in a plane at an acute angle to the axis of the shaft, substantially as described.

5. A welt indenting machine, having, in combination, a work table mounted with its work supporting surface arranged at an angle to the horizontal to support the shoe in a position where the welt may readily be seen by the operator, a horizontal, rotary driving shaft, a welt indenting tool above the table, a spindle for said table extending downwardly at an acute angle to the line of said shaft, means to move the spindle in the line of its axis to raise and lower the work table, and means controlled by said shaft for freely oscillating said tool about the axis of the table spindle as a center, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,173,365. MEANS FOR DISSOLVING AND SUPPLYING BOILER COMPOUNDS TO BOILERS. WILLIAM E. MCCOMB, Cameron, Mo. Filed Nov. 24, 1914. Serial No. 873,843. (Cl. 210—19.)



1. A means for injecting compounds into boilers, comprising a main pipe for feeding water, a valve therein, and a pipe line branched around the valve in the main pipe and including an upright chamber or receptacle for the compound, with a part of the branch pipe entering the receptacle and opening upwardly therein at a relatively high point, and that portion of the branch pipe leaving the receptacle opening downwardly therein at a lower point sufficiently above the bottom of the receptacle to provide room for the compound below said outlet pipe, and said branch pipe line being provided with valves for the regulation of the flow therethrough.

2. A means for injecting compounds into boilers, comprising a pipe leading to the boiler and including a valve, a pipe branched off from the first-named pipe to one side of the valve, a chamber into which the branch pipe rises and in which it terminates, another pipe leading from the chamber from a lower level than the top of the first-named pipe, another chamber into which the second-named pipe leads, and a third pipe leading from the second chamber to the first-named pipe at the other side of the valve in the first-named pipe.

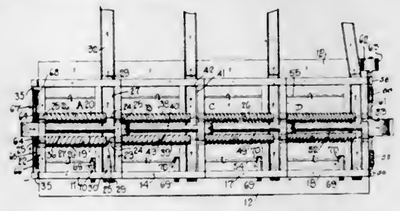
3. A means for injecting compounds into boilers, comprising a pipe leading to the boiler and including a valve, a pipe branched off from the first-named pipe on one side of the valve, a chamber into which the branch pipe leads and in which it terminates, another pipe leading from the chamber from a lower level than the discharge end of the first-named pipe, another chamber in which the second-named pipe leads, and a third pipe leading from the second chamber to the first-named pipe at the other side of the valve in the first-named pipe, the branch pipes including valves for the control of flow therethrough.

4. A means for feeding compounds to boilers comprising a main feed pipe having a valve therein, a branch pipe leading therefrom and including spaced valves and a check valve between them, a cylinder into which the branch pipe discharges at a high point therein, means for permitting access to the cylinder for the introduction of boiler compound thereinto, a valved pipe leading from the second-named pipe between the valves therein and entering the bottom portion of the cylinder, another pipe leading from the cylinder from a low point therein and containing a valve, another cylinder into which the last-named pipe enters, and still another pipe leading from the second-named cylinder to the first-named pipe on the other side of the valve therein and also containing a flow controlling valve.

5. A means for feeding compounds to boilers comprising a main feed pipe having a valve therein, a branch pipe leading therefrom and including spaced valves and a check valve between them, a cylinder into which the branch pipe discharges at a high point therein, means for permitting access to the cylinder for the introduction of boiler compound thereinto, a valved pipe leading from the second-named pipe between the valves therein and entering the bottom portion of the cylinder, another pipe leading from the cylinder from a low point therein and containing a valve, another cylinder into which the last-named pipe enters, and still another pipe leading from the second-named cylinder to the first-named pipe on the other side of the valve therein and also containing a flow controlling valve, the last-named pipe having a valved outlet on the side of the valve in said last-named pipe remote from the first-named pipe.

[Claims 6 to 11 not printed in the Gazette.]

1,173,366. GRADING OR SEPARATING MACHINE. WILLIAM D. MACKRILL, Fresno, Cal. Filed June 9, 1915. Serial No. 33,118. (Cl. 130—32.)



1. A grader including a plurality of grading sections, each adapted to remove from a mixture of material one constituent thereof, each of said grading sections including a cylinder, and a pair of worm rollers journaled on opposite sides of the cylinder and disposed with their axes about the axis of the cylinder whereby to constitute a trough within which the material may be carried.

2. In a grader, a cylinder, a pair of oppositely rotatable rollers journaled on opposite sides of the cylinder and disposed with their axes above the axis of the cylinder whereby to constitute a trough, and means for causing the material disposed in said trough to be fed longitudinally along said trough.

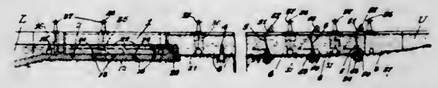
3. A grader including a plurality of grading sections, each adapted to remove from a mixture of material one constituent thereof, each of said grading sections including a cylinder, a pair of worm rollers journaled on opposite sides of the cylinder, means for conveying the material which drops through the spaces between the rollers and cylinder on to the rollers and cylinder of the next adjacent grading section, and means for conveying from the machine that constituent of the mixture which is removed by each grading element.

4. A fruit grader including a plurality of grading sections arranged in stepped relation to each other, the first of said sections being at the greatest elevation and the last of said sections being at the lowest elevation, each of said sections being adapted to remove from the mixture of fruit one grade of fruit, and a continuous conveyer belt having its upper flight disposed in stepped planes, each extending beneath and extending along the entire length of one of said grading sections and at its discharge end extending over the next grading section below.

5. A fruit grader including a plurality of grading sections arranged in stepped relation to each other, the first of said sections being at the greatest elevation and the last of said sections being at the lowest elevation, each of said sections being adapted to remove from the mixture of fruit one grade thereof, and means for conveying fruit from one section to the other comprising a continuous belt, a belt wheel disposed at the entrance end of all of said grading sections except the first one, and over which the conveyer successively passes, and a plurality of belt wheels each disposed rearward of a corresponding first named belt wheel and on a lower level than the corresponding first named belt wheel and over which said conveyer passes whereby to cause the upper flight of the conveyer belt to be arranged in downwardly stepped planes, each plane of the belt discharging upon the entrance end of one of the grading sections, the conveyer then extending rearward and downward over the second named belt wheel and then extending below the next successive grading section and along its entire length.

[Claims 6 to 8 not printed in the Gazette.]

1,173,367. APPARATUS FOR PREVENTING SALT WATER FROM WORKING UP STREAMS. WILLIAM M. MEACHAM, Seattle, Wash. Filed Feb. 16, 1915. Serial No. 8,477. (Cl. 61—4.)



1. The combination with a canal lock and means for filling the lock chamber, of a sump located in the flow channel upstream from the said lock and consisting of an area whose bottom is extended well below the normal level of the canal bed above the lock, and a waste channel, having its intake located to separate and discharge from said sump the waters of higher specific gravity.

2. The combination, in a canal, of a canal lock, a lock filling conduit or channel, adapted to take its supply upstream from said lock, supply connections from said channel to the lock chamber, and means for separating and discharging, around the lock, the canal waters of highest relative specific gravity.

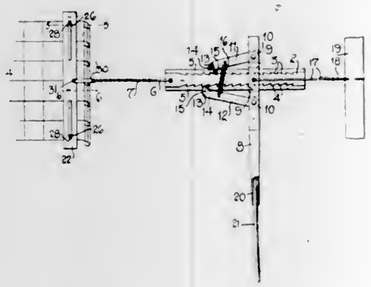
3. The combination with a canal lock of a sump located in the channel upstream from and adjacent the lock, a waste conduit or channel drawing water from the lower levels of the sump, and a lock filling conduit or channel independent of said waste channel and extending to and having its supply connection with the upper levels of the canal, upstream from the sump.

4. The combination with a canal lock of a sump located above the lock chamber and having a bottom level materially lower than the upstream lock sill, means for drawing off water from the bottom strata of said sump, said means terminating at its discharge end in a weir which extends to near the water level and means for filling the lock chamber with water taken from the upper levels of the canal above the lock.

5. The combination with a canal lock of a series of sumps placed in succession in the canal bed above the lock, means for drawing waste water from whatever sump or combination of sumps may be desired, and means for filling the lock chamber with water drawn from the upper levels of the canal upstream from the lock.

[Claims 6 to 19 not printed in the Gazette.]

1,173,368. WIRE-STRETCHER. ANDREW JACKSON MILLER, Jr., Broxton, Ga. Filed May 29, 1915. Serial No. 31,216. (Cl. 254—72.)



1. In a wire tightening device of the character described, a rack bar having ratchet teeth on opposed faces, a lever embracing the rack bar, an anchoring device pivotally connected to the lever in line with the middle of the rack bar, and upper and lower spring actuated pawls mounted upon the lever respectively above and below the rack bar, each of said pawls and the rack bar having one a flange and the other a recess in which said flange projects to prevent lateral movement of the pawls with relation to the rack bar.

2. In a device of the character described, a rack bar having ratchet teeth on opposite faces and having medially disposed projecting webs intersecting said teeth, a lever embracing the rack bar, pawls pivotally mounted upon the lever, the ends of said pawls being cleft to receive said webs.

3. In a device of the character described, a rack bar having oppositely disposed ratchet teeth on opposite faces, each of the toothed faces of the bar being provided with a medially disposed web intersecting said teeth and projectiug beyond the teeth, a lever having a slot through which the rack bar passes, oppositely disposed pawls pivoted to the lever, the pawls and reëntrant teeth adapted to engage the corresponding teeth of the rack bar, each of said pawls being cleft to accommodate the outwardly projecting web, a spring urging the free ends of the pawls toward each other, a bail pivotally connected to the lever midway of said slot and adapted to be connected to an anchor, the rack bar being provided with a connection adapted to be operatively engaged with the article to be strained.

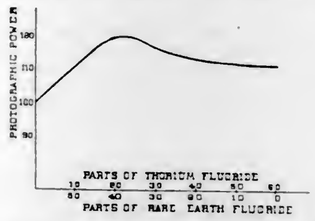
1,173,369. THRUST-BEARING. WILLIAM E. MOORE, Pittsburgh, Pa. Filed Apr. 25, 1913. Serial No. 763,624. (Cl. 64—25.)

1. A thrust bearing, comprising two relatively rotatable members, and an integral washer inserted between said members and comprising a plurality of segments flexibly connected together to tilt between said members on radial axes.

2. A thrust bearing, comprising a rotatable bearing member, an adjustable stationary bearing member, and a washer inserted between said members and comprising a plurality of one piece segments located in a common horizontal plane and overlapping each other, and means flexibly connecting said segments together to tilt with respect to the bearing surface of each of said members.

3. A thrust bearing, comprising two relatively rotatable bearing members, and a washer inserted between said members and comprising a plurality of segments having overlapping edges separated by oil spaces, and means to flexibly connect said segments together to permit the same to rock on radial axes, to allow the oil from said spaces to enter between the bearing surface of said segments and the friction surface of its adjacent bearing member.

1,173,370. ARC-LIGHT ELECTRODE. WILLIAM R. MOTT, Lakewood, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Filed June 13, 1914. Serial No. 844,863. (Cl. 176—134.)



1. An arc lamp electrode containing rare earth fluorids, a less quantity of thorium material and a conducting body.

2. An arc lamp electrode containing 6 parts of rare earth fluorids, 4 parts or less thorium material and a conducting body.

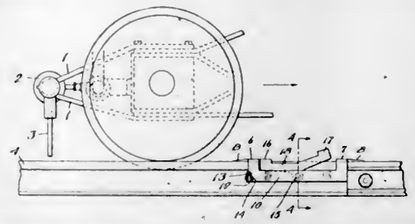
3. An arc lamp electrode containing 6 parts rare earth fluorids, 4 parts or less of thorium fluorid and the conducting body mixed therewith.

4. An arc lamp electrode containing 6 to 9½ parts rare-earth fluorids, 4 to ½ parts thorium material and a conducting body.

1,173,371. TRAIN-STOP DEVICE. HERBERT RUSSELL NEVENS, Hartford, Conn., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed Sept. 2, 1913, Serial No. 787,623. Renewed July 20, 1915. Serial No. 41,019. (Cl. 246—59.)

1. A tripping device comprising a pair of spaced contact elements, a support for movably mounting said contacts in the path of the wheels on a rail and an operative connection between said movable contact members effective upon actuation of one contact element to impart to the other element an actuation in the opposite direction.

2. A tripping device comprising a rail engaging support, a pair of spaced contact elements movably mounted thereon and disposed across the rail tread and an operative connection between said movable contact members effective upon actuation of one contact element to impart to the other element an actuation in the opposite direction.



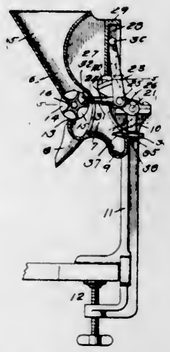
3. A tripping device comprising a rail engaging support, spaced contact members movably mounted thereon and disposed across the rail tread and having opposite directions of travel, and an operative connection between said members effective to provide equal opposite motion thereof relative to the plane of the rail tread.

4. In a tripping device a support comprising a tread member and side members, said tread member being cut away between its ends to expose the rail tread, a tripper comprising a pair of lateral members disposed one on each side of the rail tread and having a pair of spaced contact members disposed therebetween and pivoted intermediate of said contact members to the side members of said support.

5. In a tripping device a support comprising a tread member and side members, said tread member being cut away between its ends to expose the rail tread, a tripper comprising a pair of lateral members disposed one on each side of the rail tread and having a pair of spaced contact members disposed therebetween and having bearing on said side members intermediate of said contact members.

[Claims 6 to 11 not printed in the Gazette.]

1,173,372. CHERRY-SEEDING MACHINE. HENRY NICOLAI, Milwaukee, Wis. Filed May 28, 1915. Serial No. 31,020. (Cl. 146—5.)



1. A machine of the class described comprising a casing enlarged at its upper end to form a hopper, a drum rotatably mounted in the casing and provided with fruit holding pockets, said casing terminating below the drum in a fruit discharge chute, the casing being provided adjacent the drum with a slot, a pitting member movable through the slot to engage a seed of a fruit within a pocket of the drum to draw said seed through the slot, means for causing said pitting member to release the seed on the side of the slot opposite the drum and a chute extending from said side of the slot.

2. A machine of the class described comprising a casing including a passage, a drum rotatably mounted in the passage, gear teeth formed on one end of the drum, a shaft journally carried by the casing, a crank on said shaft, an angular member journaled at its angle on the crank, seed engaging tines carried by one arm of said member, guide means slidably holding the other arm of the member and a laterally off-set arm carried by the said other arm of the member and engageable with the teeth on said drum to rotate it in successive steps upon rotation of the crank.

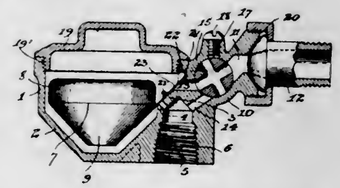
3. A machine of the class described comprising a casing including a passage, a cylindrical member mounted under the passage and provided with a plurality of pockets for individually receiving the fruit from the passage, a pitting member movable in a curved path toward and away from said cylindrical member to engage a fruit in one of the pockets and means operated by the pitting member for moving the cylinder in successive steps, such movement occurring simultaneously with movement of the pitting member in and adjacent said pockets.

4. A machine of the class described comprising a fruit holding member, a member including spring tines movable toward and away therefrom in a curved path to remove a seed, and a substantially wedge shaped member adapted to be engaged by said tines to force them apart.

5. A machine of the class described comprising a casing including a passage, a fruit holding member associated with said passage, a shaft journaled on the casing, a crank on said shaft, an angular member journaled on the crank, seed engaging tines carried by one arm of said member and guide means slidably holding the other arm of said member.

[Claims 6 to 8 not printed in the Gazette.]

1,173,373. TRAP. GEORGE W. NISTLE, Muskegon, Mich.; Windsor C. Nistle, Muskegon, Mich., administrator of said George W. Nistle, deceased. Filed Mar. 11, 1911. Serial No. 613,685. (Cl. 137—113.)



1. In a trap for vacuum or differential steam systems, the combination with a casing sealed from the atmosphere having an inlet port adapted to communicate with a steam fixture and an outlet port adapted to be connected to a vacuum return pipe, both of said ports being located above the normal water level of said trap, a float in said casing, a valve member extending over both of said ports and actuated by said float so that a vacuum pull through either of said ports tends to seek the valve member.

2. In a trap for vacuum or differential steam systems, the combination with a casing sealed from the atmosphere having an inlet port adapted to be connected to a steam fixture and an outlet port adapted to be connected to a vacuum return pipe, both of said ports being located above the normal water level of said trap, a float in said casing and a valve member connected to the float and extending over said ports, said valve member closing but not sealing said outlet port so as to permit a leakage opening through said port and means for adjusting said valve member to vary said leakage opening.

3. In a trap for differential steam systems, the combination with a casing having an inlet and an outlet port both located above the normal water level in said casing, a float in said casing partially submerged and extending below said ports and means associated with said ports and float for preventing chattering of the latter.

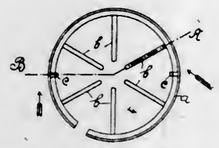
4. A trap for differential steam systems comprising a casing having a float chamber, the lower portion of which is inclined relative to the vertical, a float in said chamber and having its lower portion similarly inclined, said float chamber having inlet and discharge ports situated

above the normal water level of said chamber and a valve member connected to and lifted by said float and extending over said ports.

5. A trap comprising a casing having a float chamber, a float in said chamber and normally partly submerged in water, said casing having inlet and discharge ports above the normal water level, said float being closed at its upper end and open at its lower end, the lower end of said float being of less cross-sectional area than that portion of the float adjacent the normal water level, and a valve member connected to said float and controlling said discharge port.

[Claims 6 to 13 not printed in the Gazette.]

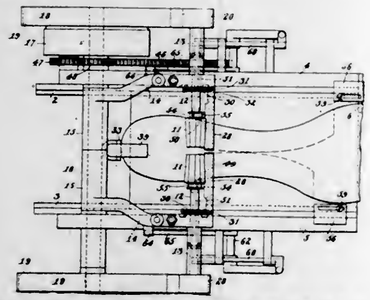
1,173,374. STRAINER FOR DRINKING VESSELS. AUGUST NOLDA, Berlin, Germany. Original application filed Dec. 31, 1914, Serial No. 879,949. Divided and this application filed Sept. 30, 1915. Serial No. 53,393. (Cl. 210—16.)



1. In a strainer for drinking vessels, a slitted ring encircling the strainer and having a conically shaped outer surface, adapted to accommodate itself snugly and automatically to the shape of the vessel, and lugs on said ring adapted to be engaged by a tool for inserting and removing the ring from said drinking vessel.

2. In a strainer for drinking vessels, the combination of a slitted ring with a plurality of prongs forming a strainer, said slitted ring snugly fitting said strainer, and means on said ring adapted to be engaged by a tool for inserting and removing said ring from said drinking vessel.

1.173,375. MACHINE FOR OPERATING UPON SOLES. CARL S. NORDEN, Wakefield, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 10, 1912. Serial No. 689,781. (Cl. 12—17.)



1. A machine for operating upon soles, having in combination, a sole support, a pair of rotary skiving cutters for operating upon opposite sides of the sole simultaneously, a pivoted arm supporting each cutter upon its free end, means for securing a relative movement of the sole support and cutters lengthwise of the sole, and means for automatically moving the cutters from engagement with the sole, substantially as described.

2. A machine for operating upon soles, having in combination, a sole support, a frusto conical cutter, means for supporting the cutter with its axis substantially parallel to the surface of the sole, means for rotating the cutter, means for positioning the sole to cause the cutter to skive the margin of the sole, and means for removing the cutter from contact with the work, substantially as described.

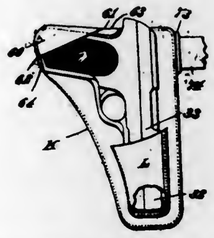
3. A machine for operating upon soles, having in combination, a horizontal sole support, a frusto-conical skiving cutter, means for supporting the cutter to rotate about an axis substantially parallel to the surface of the sole, means for imparting a relative lengthwise movement to the sole support and cutter, means for operating the cutter to skive the sole by a rapid succession of straight line cuts and means for actuating the cutter to enter and leave the sole in a substantially vertical plane, substantially as described.

4. A machine for operating upon soles having, in combination, a pair of skiving cutters, means for actuating the cutters to enter the work, a single means for varying the points of entry of the cutters for various lengths of soles, and a plural means for actuating the cutters to leave the work having provision for adjustment to vary the points of departure of the cutters, substantially as described.

5. A machine for operating upon soles having, in combination, a pair of skiving cutters, means for actuating the cutters to enter the work, a gage for determining the points of entry of the cutters, and cams for actuating the cutters to leave the work having provision for adjustment to vary the points of departure of the cutters, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,173,376. AUTOMATIC-GUN HOLSTER. JOSEPH V. M. NOYE, Lowell, Mass. Filed July 20, 1915. Serial No. 50,877. (Cl. 224—2.)



1. An automatic gun holster having a relatively stiff rear wall, a flexible cap attached thereto in a substantially horizontal direction and adapted to slip from the rear over the heel of the butt of the stock of the gun.

2. An automatic gun holster having a relatively stiff rear wall, a front wall so attached thereto as to form a holster pocket for the muzzle of the gun, and a relatively flexible cap attached to the rear wall in a position diagonally opposite from the bottom of the holster pocket and adapted to slip from the rear over the heel of the butt of the stock of the gun.

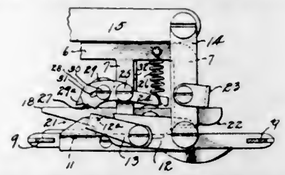
3. An automatic gun holster having a relatively stiff rear wall, a front wall forming a holster pocket for the gun attached to the front thereof and cut away to allow the stock of the gun to project, and a relatively flexible cap attached in a substantially horizontal direction to the top of the rear wall and adapted to slip from the rear over the heel of the butt of the stock of the gun.

4. An automatic gun holster having a relatively stiff rear wall, a front wall so attached as to form at the lower right hand part thereof a holster pocket for the muzzle of the gun, and a relatively flexible cup so attached to the upper left hand corner of the rear wall that it can be slipped over the heel of the butt of the stock of the gun.

5. An automatic gun holster having a relatively stiff rear wall, a front wall so attached as to form at the lower right hand part thereof a holster pocket for the muzzle of the gun, and a relatively flexible cap so attached to the upper left hand corner of the rear wall that it can be slipped over the heel of the butt of the stock of the gun, together with means on the front wall of the holster for readily attaching the holster to a pocket.

[Claims 6 to 9 not printed in the Gazette.]

1,173,377. SPLICING-YARN CLAMP AND CUTTER DEVICE. CHARLES E. PAQUIN, Taunton, Mass. Filed Feb. 20, 1915. Serial No. 9,685. (Cl. 66—12.)



1. A circular knitting machine including, in combination with the knitting mechanism and the main yarn cut-off, a splicing thread cutter, and a splicing-thread clamp partly formed by the main yarn cut-off.

2. A circular knitting machine including, in combination with the knitting mechanism and a shear blade of the main yarn cut-off, a stationary splicing thread cutter, and an automatically operated clamping member cooperating with said blade to form a clamp for the splicing thread.

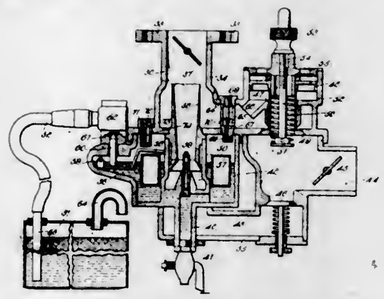
3. A circular knitting machine including, in combination with the knitting mechanism and a shear blade of the main yarn cut off, a stationary splicing thread cutter, a clamping member coöperating with said blade to form a clamp for the splicing thread, and means for automatically operating the said clamping member intermittently.

4. A circular knitting machine including, in combination with the knitting mechanism and a shear blade of the main yarn cut off, a stationary splicing thread cutter, a spring retracted clamping member coöperating with said shear blade to form a clamp for the splicing thread, and means for automatically lifting said clamping member intermittently from the shear blade.

5. A circular knitting machine including, in combination with the knitting mechanism and shear blade of the main yarn cut off, a stationary splicing thread cutter, and an automatically operated clamping member having a guard nose and coöperating with said blade to form a clamp for the splicing thread.

[Claims 6 to 8 not printed in the Gazette.]

1,173,378. CARBURETER. ARTHUR L. PAYTON, Chicago, Ill. Filed Apr. 14, 1915. Serial No. 21,182. (Cl. 48—155.1.)



1. A carbureter comprising an atomizing chamber, a fuel chamber provided with two passage-ways directly communicating with the atomizing chamber, one above and the other below the fuel level in the fuel chamber, a throttle posterior and an automatic pressure reducing valve anterior of said atomizing chamber, a supply reservoir, piping for connecting said reservoir with the fuel chamber and opening into the fuel chamber at a point above the fuel level therein, and means for maintaining a substantially uniform reduced pressure within the fuel chamber during wide variation of pressure reduction in the atomizing chamber.

2. A carbureter comprising a suction chamber, a float chamber provided with an inlet port and with a fuel passage way communicating with the suction chamber, a float for controlling said port, a supply reservoir, piping for connecting said reservoir with the inlet port, and a pair of pressure reducing valves, one communicating with the atmosphere and the other with the upper part of the float chamber for maintaining a substantially uniform constant vacuum within the float chamber during large decreases in pressure in the suction chamber.

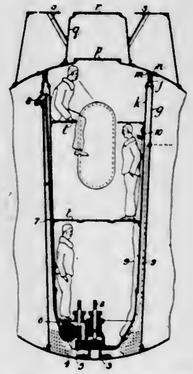
3. A carbureter comprising a suction chamber, a fuel chamber provided with a fuel passage way communicating with the suction chamber, a supply reservoir, piping for connecting said reservoir with the fuel chamber, and means for maintaining a substantially uniform pressure reduction within the fuel chamber during operation, said means comprising a restricted passage way connecting the top of the fuel chamber with the atmosphere, and a second restricted passage way connecting the suction chamber with the top of the fuel chamber.

4. A carbureter comprising a suction chamber, a fuel float chamber provided with an inlet port and with a passage way communicating with the suction chamber, a float for controlling said port, a supply reservoir, piping for connecting said reservoir with the inlet port, and means for maintaining a substantially uniform pressure reduction within the float chamber during operation, said means comprising a pair of pressure reducing valves, one communicating with the atmosphere and the other with the upper part of the float chamber.

5. A carbureter comprising a suction chamber, a posterior throttle therefor, a fuel chamber provided with a passage-way above its fuel level communicating with the suction chamber, valve mechanism within said passage-way seated against pressure in the fuel chamber, a supply reservoir, piping for connecting said reservoir with the fuel chamber, and means for preserving a predetermined pressure reduction with reference to atmospheric pressure within the fuel chamber throughout wide variation of pressure reduction in the suction chamber.

[Claims 6 to 17 not printed in the Gazette.]

1,173,379. ESCAPE FOR SUBMARINES. EDWARD LASIUS PEACOCK, Wallsend-on-Tyne, England. Filed Jan. 23, 1915. Serial No. 4,021. (Cl. 114—16.7.)



1. A submarine ship having an upright tubular watertight casing combined with a buoy in said casing, said casing and buoy having communicating doors, means for fastening the buoy in said casing, and means operable from within the buoy and engaging the casing for forcing the buoy out of the casing, said means being self-detachable whereby the buoy may float free from the submarine.

2. A submarine ship having an upright tubular watertight casing combined with a buoy in said casing, said casing and buoy having communicating doors, means for

fastening the buoy in said casing, and means operable from within the buoy and engaging the casing for forcing the buoy out of the casing comprising a windlass and rope and a self-detachable engagement between said rope and casing.

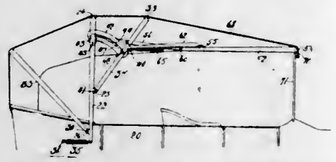
3. A submarine ship having an upright tubular watertight casing combined with a buoy in said casing, said casing and buoy having communicating doors, means for fastening the buoy in said casing, and means operable from within the buoy and engaging the casing for forcing the buoy out of the casing comprising a windlass and rope and a detachable pin engaged by the rope, the casing having an oblique pocket normally retaining said pin.

4. A submarine ship having a fairwater and having a vertical casing combined with a buoy within said casing, the buoy and casing having communicating watertight doors and the top of said buoy normally located within and protected by said fairwater.

5. A submarine ship having a fairwater and having a vertical casing combined with a buoy within said casing, the buoy and casing having communicating watertight doors, and said buoy having a dome at its top projecting within and normally protected by said fairwater.

[Claims 6 to 8 not printed in the Gazette.]

1,173,380. VEHICLE-TOP. ORVILLE E. PEASE, Baldwin, N. Y., assignor to Carl Joseph, Bayonne, N. J. Filed Apr. 27, 1915. Serial No. 24,191. (Cl. 21—62.)



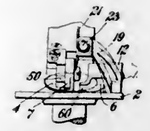
1. In a vehicle top of the character described the combination of a main bow, an intermediate bow with the lower ends thereof pivoted to the side members of the main bow, guide brackets each having a slot pivoted to the side members of the main bow, pins on the intermediate bow engaging said slot, braces with one of their ends fastened to the said guide brackets, an out-rigger bow pivoted to the other ends of said braces, and links connecting the out-rigger bow and the intermediate bow.

2. In a vehicle top of the character described the combination of a main bow, an intermediate bow with the lower ends thereof pivoted to the side members of the main bow, guide brackets each having a slot pivoted to the side members of the main bow, pins on the intermediate bow engaging said slot, braces with one of their ends fastened to the said guide brackets, an out-rigger bow pivoted to the other ends of said braces, links connecting the out-rigger bow and the intermediate bow, a rear bow pivoted to the main bow, and a cover for all the bows.

3. In a vehicle top of the character described the combination of a main bow, springs connecting the lower ends of the side members of the main bow with the body of a vehicle, an intermediate bow with the lower ends thereof pivoted to the side members of the main bow, guide brackets each having a slot pivoted to the side members of the main bow, pins on the intermediate bow engaging said slot, braces with one of their ends fastened to the said guide brackets, an out-rigger bow pivoted to the other ends of said braces, links connecting the out-rigger bows and the intermediate bows and springs connecting said links and braces.

1,173,381. LIP-TURNING MACHINE. FREDERICK H. PERRY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 3, 1911, Serial No. 612,049. Renewed June 29, 1915. Serial No. 37,123. (Cl. 12—30.)

1. A lip turning machine, having, in combination, work feeding means, lip turning and setting means, a lip slashing knife, means for actuating the knife to cut a slash completely through the lip, and means to throw the knife into and out of operation during the continued operation of the feeding means, substantially as described.



2. A lip turning machine, having, in combination, lip turning means, a lip setting tool, means to actuate the lip setting tool to set the lip, a lip slashing knife, means to actuate the knife to cut a slash completely through the lip, and means to throw the knife into and out of operation during the continued operation of the lip setting tool, substantially as described.

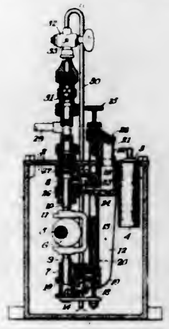
3. A lip turning machine, having in combination, lip turning means, a lip setting tool, means for actuating the tool to set the lip, a lip slashing knife, means independent of the lip setting tool for supporting and actuating the knife, and means to throw the knife into and out of operation during the continued operation of the lip setting tool, substantially as described.

4. A lip turning machine, having, in combination, lip turning and setting means acting continuously during the operation of the machine, a normally inactive lip slashing knife, and means for actuating the knife to cut a slash through the lip at any desired point in the lip, substantially as described.

5. A lip turning machine having, in combination, feeding means, a work support, lip turning means, a slashing knife positioned above said work support, a pivoted lever on which said knife is mounted, means to operate said lever, and means under the control of the operator to throw said lever operating means into and out of operative position with respect to said lever during the continued operation of the machine, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,173,382. LUBRICATOR. JAMES P. QUAM, Milwaukee, Wis., assignor to The Richardson-Phenix Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 23, 1915. Serial No. 52,136. (Cl. 184—27.)



1. In a lubricator the combination of a lubricant reservoir and means for delivering a gas such as air in successive puffs into a fluid lubricant contained in the reservoir.

2. In a lubricator the combination with a lubricant reservoir and means for feeding lubricant therefrom to a bearing, of means for introducing a gas in successive puffs into a fluid lubricant contained in the reservoir.

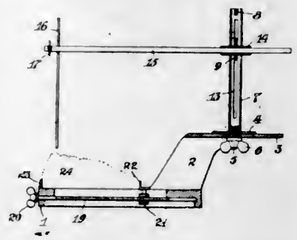
3. In a lubricator the combination of a lubricant reservoir, a compressed air conduit leading into said reservoir below the normal level of the lubricant therein, a weighted valve normally closing said conduit, and means for intermittently opening said valve.

4. In a lubricator the combination of a lubricant reservoir, a compressed air conduit leading into said reservoir, a compressor having a reciprocating plunger for forcing air through said conduit into lubricant contained in the reservoir, and a weighted valve in said conduit opening toward the reservoir.

5. In a lubricator the combination of a lubricant reservoir, a compressed air conduit opening into the lower part of the reservoir, a compressor having a reciprocating plunger for compressing and forcing air in successive puffs into lubricant contained in the reservoir, a weighted valve in said conduit opening toward the reservoir, and a pump connected with the compressor for supplying a limited quantity of lubricant thereto for lubricating and sealing its plunger.

[Claim 6 not printed in the Gazette.]

1,173,383. DENTAL GAGE FOR BRIDGEWORK. HARVEY RAYMOND, New York, N. Y. Filed Jan. 18, 1916. Serial No. 72,711. (Cl 32—1.)



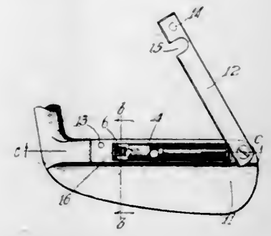
1. In a dental gage for bridge work, the combination with a base provided with means for holding a plaster cast of the teeth and gums of an upper or lower jaw, of a platform formed on the base, a turn table mounted on the platform, means for locking the turn table in place after adjustment, standards on the turn table, a plate mounted to slide on said standards, means for locking the plate in place after adjustment, a rod passed through said plate, a gage pin secured on said rod and means for locking said gage pin in higher or lower position, which gage pin extends at right angles to the rod, substantially as set forth.

2. In a dental gage for bridge work, the combination with a base having an abutment, of a screw mounted in the base, a nut on the screw, a clamping piece extending over the top of the base and connected with the nut on the screw, standards on the rear of the base, a platform on the same, a turn table mounted on the platform, standards on the turn table, a plate mounted to slide on the standards, a rod passed through said plate, a gage pin held in the front end of said rod, means for holding said rod exactly at right angles to the standards and means for holding the gage pin exactly at right angles to the rod, substantially as set forth.

3. In a dental gage, the combination with a base for holding a plaster cast of the teeth and gums of an upper or lower jaw, of a standard at right angles to the top of the base, which standard is mounted to turn axially in either direction, a vertical adjustable support mounted on said standard and means for locking it in place, a rod extending through said support exactly parallel with the base, and adjustable in said support, means for locking the rod in place, a gage pin held vertically in the end of said rod and movable up and down while remaining in vertical position and means for locking said gage pin in place after adjustment, substantially as set forth.

1,173,384. PUTTER. GEORGE A. REES, Chicago, Ill. Filed Oct. 26, 1914. Serial No. 868,619. (Cl. 46—4.)

1. A putter having a stick and a head portion, said head portion having a striking face, a collapsible indicator adapted to project when in an operative position from the opposite face of said head portion and means for normally holding said indicator in its collapsed position, and means for automatically moving said indicator to its operative position when released.



2. A putter having a stick and a head portion, said head portion having a striking face, a collapsible indicator adapted to project when in an operative position on the opposite face of said head portion, a spring tending to move said indicator to its operative position, and means normally to hold said indicator in its collapsed position in opposition to said spring, said head portion having a groove to accommodate said indicator when in its collapsed position.

3. A putter having a stick and a head portion, said head portion having a striking face, a collapsible indicator adapted to project when in an operative position from the opposite face of said head portion, a spring tending to move said indicator to its operative position, and said head portion having a groove to accommodate said indicator when in its collapsed position, and a cover plate for said groove adapted to hold said indicator in its operative position against the action of said spring.

4. A putter having a stick and a head portion, said head portion having a striking face, and a collapsible indicator adapted to project when in an operative position from the opposite face of said head portion, said head portion having a groove to accommodate said indicator when in its collapsed position, and a cover plate for said groove having means to accommodate the protruding indicator when in its operative position.

5. A putter having a stick and a head portion, said head portion having a striking face, and a collapsible telescopic indicator adapted to project when in an operative position from the opposite face of said head portion.

[Claims 6 to 8 not printed in the Gazette.]

1,173,385. PROCESS FOR BLEACHING SAND. JOHN GUSTAF ADOLF RHODIN, London, England. Filed Mar. 29, 1915. Serial No. 17,843. (Cl. 252.)

1. In a process for bleaching discolored sand containing iron, the use of fixed-alkali-chlorids for producing and removing soluble compounds from the bodies with which the sand is discolored.

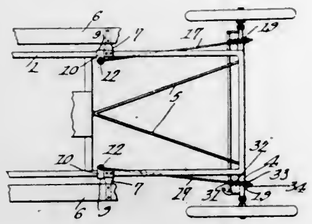
2. In a process for bleaching discolored sand containing iron, the use of fixed-alkali-chlorids for producing and removing volatile compounds from the bodies with which the sand is discolored.

3. In a process for bleaching discolored sand containing iron, the use of fixed-alkali-chlorids for producing and removing volatile and soluble compounds from the bodies with which the sand is discolored.

4. The particular process described for bleaching discolored sand in which the material to be bleached is mixed with a small quantity of a fixed alkali chlorid roasted in a furnace and lixiviated.

5. A process of bleaching discolored sand consisting in mixing the sand with a common salt solution, drying and roasting the mixture, cooling the mass and finally lixiviating the same.

1,173,386. AUTO-BRACE. LAWRENCE E. ROBINSON, Coffeyville, Kans. Filed Feb. 19, 1915. Serial No. 9,327. (Cl. 21—182.)



1. In a radius rod reinforcement for motor vehicles, a frame; an axle carried thereby; radius rods attached to the frame; standards carried by the axle and upstanding above the axle; longitudinally inextensible tie members attached at their rear ends to the frame; means for securing the forward ends of the radius rods to the axle above the longitudinal center of the axle; and means for securing the forward ends of the tie members to the standards at points above the axle whereby when the axle swings rearwardly, the tie members will act under tension to reinforce the radius rods and to prevent a buckling thereof.

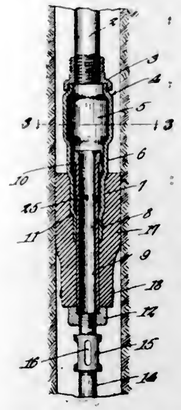
2. In a radius rod reinforcement for motor vehicles, the combination with a frame, a tapered axle, and radius rods connecting the frame and the axle of standards embodying tapered sockets receiving the tapered axle, the standards upstanding above the axle; tie members; means for securing the tie members to the frame; and means for attaching the forward ends of the tie members to the standards above the axle, whereby when the axle swings rearwardly, the tie members will act under tension to reinforce the radius rods, the tie members constituting means for wedging the tapered sockets upon the tapered axle.

3. In a radius rod reinforcement for motor vehicles, a frame; an axle; radius rods connecting the frame and the axle; tie members; means for securing the tie members to the frame; standards secured to the axle and upstanding above the axle, the standards receiving the forward ends of the tie members slidably; abutments on the tie members and coacting with the forward faces of the standards to render the tie members effective under tension as a means for reinforcing the radius rods; springs exerting a thrust against the rear faces of the standards; and abutments on the tie members, the said abutments coacting with the springs.

4. In a radius rod reinforcement for motor vehicles, a frame; an axle; standards abutting against the forward edge of the axle and provided at their lower ends with hook-shaped elements engaged around the lower edge of the axle, each standard being provided with a rearwardly extended lug engaging the upper edge of the axle; a hook-bolt extended through the standard and engaging the upper edge of the axle; rods mounted to slide in the standards above the axle; an abutment on each rod and coacting with the forward face of the standard; an abutment on each rod to the rear of the standard; compression springs interposed between the last specified abutments and the rear faces of the standards; and means for securing the rear ends of the rods to the frame.

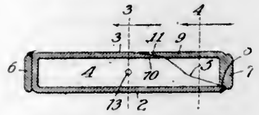
1,173,387. PACKER. LAWRENCE E. ROBINSON, Coffeyville, Kans. Filed Oct. 15, 1915. Serial No. 56,083. (Cl. 166—10.)

In a device of the class described, a lower pipe section; an abutment thereon; an expansible packing element surrounding the lower pipe section and engaged with the abutment; an upper pipe section; and an expander carried by the upper pipe section, the packing element surrounding the expander, and the expander surrounding the lower pipe section, the expander comprising



a plurality of superposed cylindrical parts each of which is of smaller diameter than the part thereabove.

1,173,388. CARD AND OTHER CASE. WILLIAM ROSENBERG, Chicago, Ill. Filed Mar. 27, 1915. Serial No. 17,408. (Cl. 206—39.)



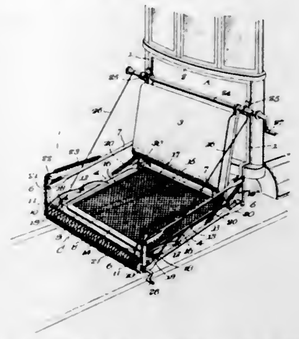
1. A container of the class described, comprising, in combination, a receptacle open at the top and the upper part of the front, a closure therefor consisting of counterpart portions formed to close the top and front opening, the lower edge of the front portion of said closure being arranged to contact with the front wall of the receptacle to limit the extent of the opening, while a portion of the outer face of said wall is formed to abut against a counterpart portion of the inner face of the front of said closure to form a stop to prevent the front of the closure from being moved rearwardly past the front of said receptacle and end portions integral with said closure, said end portions being trunnioned upon the end walls of the receptacle substantially midway between the top and bottom thereof.

2. A container of the class described, comprising, in combination, a receptacle open at the top and the upper part of the front, a closure therefor consisting of a counterpart member adapted to close the opening at the top and front, the lower edge of said counterpart member being arranged to contact with the front wall of the receptacle to limit the extent of movement of said member in one direction, a portion of the upper outer face of said wall being beveled to fit against a counterpart beveled portion upon the inner face of the lower edge of the front wall of said closure and end portions rigidly connected with said closure, said end portions being trunnioned upon the end portions of said receptacle substantially midway between the top and bottom thereof and forming a part of a band adapted to extend beneath said bottom when the receptacle is closed.

3. A device of the class described, comprising, in combination, a subtsantially flat four walled receptacle open at the top and the upper part of the front, and a closure therefor consisting of a counterpart front portion and an integral endless band portion, the latter being arranged

to extend around the top, bottom and side edges of said receptacle, to the latter of which it is pivoted between the top and bottom, said closure being provided with means for preventing it from being opened except by a movement in one direction.

1,173,389. STREET-CAR FENDER. THOMAS CLYDE ROSS, Crooksville, Ohio. Filed Feb. 20, 1915. Serial No. 9,643. (Cl. 105—127.)



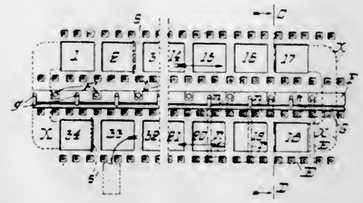
1. In a car fender, the combination of a scoop, upright posts at the forward corners of said scoop, means for supporting said scoop in catching position, a roller extending along the forward edge of the scoop and substantially coextensive in length therewith, a flexible safety net wound upon said roller, and means tripped by impact of an object against the scoop operating to draw said net upwardly toward the tops of said posts so as to assume a substantially vertical position.

2. In a car fender, the combination of a scoop, upright posts at the forward corners of said scoop, means for supporting said scoop in catching position, a roller extending along the forward edge of the scoop and substantially coextensive in length therewith, a flexible safety net wound upon said roller, means tripped by impact of an object against the scoop operating to draw said net upwardly toward the tops of said posts so as to assume a substantially vertical position, said means embodying spring tensioned flexible members attached to said net and guided over the tops of said posts, and pawl and ratchet elements for holding said roller from turning until it is tripped.

3. In a car fender, the combination of a scoop, upright posts at the forward corners of said scoop, means for supporting said scoop in catching position, a roller extending along the forward edge of the scoop and substantially coextensive in length therewith, a flexible safety net wound upon said roller, means tripped by impact of an object against the scoop operating to draw said net upwardly toward the tops of said posts so as to assume a substantially vertical position, said means embodying spring tensioned flexible members attached to said net and guided over the tops of said posts, and pawl and ratchet elements for holding said roller from turning until it is tripped, said pawl being pivotally mounted on the fender frame and actuated by the depression of the scoop with which it is connected.

4. In a car fender, the combination with upright supporting means of a scoop embodying side bars hinged to said supporting means, upright posts pivotally connected to and extending upwardly from the forward extremities of said side bars, guard rails substantially parallel to said side bars and pivotally connected to said supporting means and said posts, a winding shaft supported by said back frame, flexible elements extending from the scoop frame to said winding shaft, a roller extending along the forward edge of the scoop and substantially coextensive in length therewith, a flexible safety net wound upon said roller, and means tripped by impact of an object against the scoop operating to draw said net upwardly toward the tops of said posts so as to assume a substantially vertical position.

1,173,390. METHOD OF EFFECTING CHEMICAL REACTIONS BETWEEN SOLID MATTERS AND GASES OR GAS MIXTURES. JOHN RUDOLPH CHRISTIAN RUDOLPHS, Nacka, and ANDERS GUSTAF THISELL, Stockholm, Sweden. Filed June 27, 1911. Serial No. 635,625. (Cl. 75—75.)



1. The method of effecting chemical reactions between solid matter and gaseous material at an increased temperature, consisting in subjecting the solid matter, while held in parcels adapted to be successively heated from the outside, to the action of the gaseous material by forcing the latter under pressure through the said parcels of solid matter without bringing the reaction gas in contact with the heating gas and preheating the said parcels of solid matter by the products of combustion of the heating gas in advance of the introduction of the gaseous reaction material.

2. The method of effecting chemical reactions between solid matter and gaseous material at an increased temperature, consisting in subjecting the solid matter, while held in parcels adapted to be successively heated from the outside, to the action of the gaseous material by forcing the latter under pressure through the said parcels of solid matter without bringing the reaction gas in contact with the heating gas and preheating the said parcels of solid matter by the products of combustion of the heating gas and the products of reaction of the gaseous material in advance of the introduction of the gaseous reaction material.

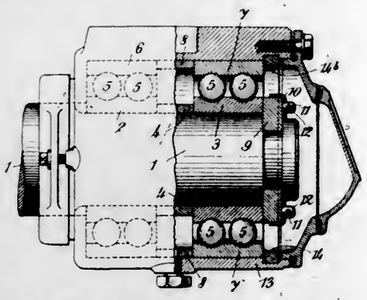
3. The method of effecting chemical reactions between solid matter and gaseous material at an increased temperature, consisting in subjecting the solid matter, while held in parcels adapted to be successively heated from the outside, to the action of a plurality of reaction gases by forcing the said reaction gases under pressure successively through the said parcels of solid matter without bringing the reaction gases in contact with the heating gas, and preheating the said parcels by the products of combustion of the heating gas and the products of reaction of the reaction gas in advance of the introduction of the reaction gas.

4. The method of effecting chemical reactions between solid matter and gaseous material at an increased temperature, consisting in subjecting the solid matter, while held in parcels adapted to be successively heated from the outside, to the action of reaction gas by introducing a restraining mass of porous material between the matter to be treated and the reaction gas, forcing the reaction gas under pressure through the said porous material and parcels of solid matter without bringing the reaction gas in contact with the heating gas and preheating the said parcels by the products of combustion of the heating gas and the products of reaction of the reaction gas in advance of the introduction of the reaction gas.

1,173,391. BALL-BEARING FOR CAR-AXLES. JAKOB SCHMID-ROOST, Oerlikon, Switzerland. Filed Oct. 9, 1912. Serial No. 724,760. (Cl. 64—36.)

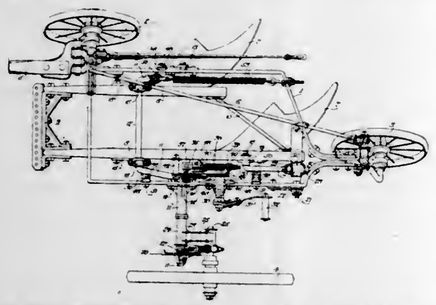
1. In a ball-bearing for car axles, a box surrounding the axle, an inner and an outer race-ring interposed between the box and axle, balls between the rings, a sectional thrust ring mounted in an annular groove formed in the box at the end of and abutting the outer race ring, a screw projecting through the box and between beveled ends of adjacent sections of the ring mounted in said annular groove, and a segmental ring mounted in a

groove in the axle at the end of and abutting the inner race ring.



2. In a ball-bearing for car axles, a box surrounding the axle, an inner and an outer race ring interposed between the box and axle, antifriction members interposed between said rings, a sectional, non-yielding thrust ring less than a full circle mounted in a groove formed in the box at the end of and abutting the outer race ring, means on the box inserted between adjacent section ends of said thrust ring to hold the ring in place, a segmental ring mounted in a groove in the axle at the end of and abutting the inner race ring to hold the latter in place, and a cap on the segmental ring to hold the latter in the groove of the axle.

1,173,392. WHEELED PLOW. WILLIAM SOBEY, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Original application filed Apr. 23, 1909, Serial No. 491,833. Divided and this application filed Sept. 12, 1914. Serial No. 861,420. (Cl. 97—36.)



1. In a wheeled plow, the combination with a wheel of front and rear bails journaled on a frame, a plow hung on said bails, means for raising and lowering the plow and means for adjusting the effective length of one of said bails, substantially as described.

2. In a wheeled plow the combination with a frame of front and rear bails journaled on the frame, a plow hung on said bails, and means for adjusting the effective length of said rear bail, substantially as described.

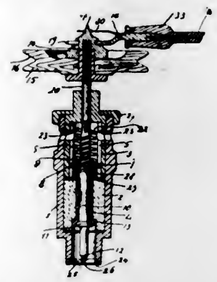
3. In a wheeled plow, the combination with the frame, of a front bail and a rear half-bail or arm, journaled on the frame, a plow hung on said bail and said arm, and means for raising and lowering the plow connected thereto adjacent said front bail, substantially as described.

4. In a wheeled plow, the combination with a frame of a front bail and a rear half-bail or arm journaled on the frame, a plow hung on said bail and on said arm, means for adjusting the effective length of said arm, and means for raising and lowering said plow, substantially as described.

5. In a wheeled plow, the combination with a frame, of a front bail journaled at its rear end on said frame, a plow hung on the forward part of said bail, a guiding arm pivotally connected at its forward end to the rear end of the plow beam and pivotally connected at its rear end to said frame, said arm being longer than the crank arms of said bail, and raising and lowering means interposed between said frame and the plow and being connected to the plow at a point adjacent said front bail.

[Claims 6 to 8 not printed in the Gazette.]

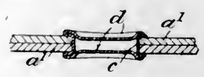
1,173,393. SPARKING PLUG FOR INTERNAL-COMBUSTION ENGINES. CARLO SPADA, Milan, Italy. Filed Feb. 19, 1914. Serial No. 819,763. (Cl. 123—169.)



1. A sparking plug for an interanl combustion engine comprising an electrode constituted by a partially screw threaded spindle having a pointed end, said spindle engaging a screw-threaded member slidably disposed within a chamber in the plug body, a second electrode constituted by a plurality of radially disposed points chamfered on their inner faces in a manner exactly corresponding to that of the point of the first-mentioned electrode, means for depressing and rotating the first-mentioned electrode, a spring for returning the said electrode to its initial position, a valve on the said spindle and a valve seat within the body of the said plug.

2. A sparking plug for an internal combustion engine comprising an electrode constituted by a partially screw threaded spindle having a pointed end, said spindle engaging a screw threaded member slidably disposed within a chamber in the plug body, a second electrode constituted by a plurality of radially disposed points correspondingly chamfered on their inner faces to that of the point of the first mentioned electrode, means for depressing and rotating the first mentioned electrode, a spring for returning the said electrode to its initial position, a valve on the said spindle and a valve seat within the body of the said plug.

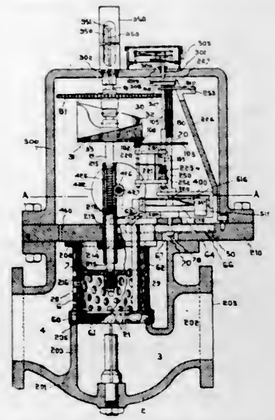
1,173,394. JOINING OR BONDING THE JUNCTIONS OF METALLIC SHEATHING OR ARMORING OF ELECTRIC CONDUCTORS. LEO SUNDERLAND, Westminster, London, England. Filed Oct. 16, 1913. Serial No. 795,539. (Cl. 247—12.)



A joint for electric conductor casings comprising conductor sheathing members having overlapping connector plates provided with a fastening receiving opening, and a fastening eyelet engaging said opening and provided with a cap member to cover and close the opening.

1,173,395. METER. CHARLES HAVELOCK TAYLOR, Montreal, Quebec, Canada. Filed Aug. 30, 1912. Serial No. 717,918. (Cl. 73—167.)

1. In a fluid meter the combination with a registering device, a displaceable rotary member, means operatively connecting the member to the registering device, means whereby the fluid being measured imparts continuous rotation to the member, means whereby the fluid displaces the rotary member for the purpose of operating the registering device, means whereby the displacement of the said member alters the extent to which it drives the registering device, and means automatically controlling the displacement for the purpose of preventing vibration of the said members.



2. In a fluid meter the combination with a registering device, a displaceable member, means operatively connecting the member to the registering device, means whereby the fluid being measured imparts continuous rotation to the member, means whereby the fluid displaces the rotary member for the purpose of operating the registering device, means whereby the displacement of the said member alters the extent to which it drives the registering device, and means automatically controlling the displacement for the purpose of preventing vibration of the said member, the said last mentioned means comprising a part in operative relation and moving in unison with the said member, a balance-wheel, and means operatively connecting the last mentioned part to the balance-wheel.

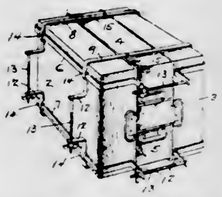
3. In a fluid meter the combination with a registering device, a displaceable rotary member, means operatively connecting the member to the registering device, means whereby the fluid being measured imparts continuous rotation to the member, means whereby the fluid displaces the rotary member for the purpose of operating the registering device, means whereby the displacement of the said member alters the extent to which it drives the registering device, and means automatically controlling the displacement, the said last mentioned means comprising a part in operative relation and moving in unison with the said member, a balance-wheel and yielding means operatively connecting the last mentioned part to the balance-wheel.

4. In a fluid meter the combination with a registering device, a displaceable rotary member, means operatively connecting the member to the registering device, means whereby the fluid being measured imparts continuous rotation to the member, means whereby the fluid displaces the rotary member for the purpose of operating the registering device, means whereby the displacement of the said member alters the extent to which it drives the registering device means automatically controlling the displacement for the purpose of preventing vibration of said member, the said last mentioned means comprising a worm wheel intermeshing with the worm and mounted rigidly upon the shaft, a balance-wheel mounted upon the shaft, and means rotatively connecting the shaft to the balance-wheel.

5. In a fluid meter the combination with a registering device, a displaceable rotary member, means operatively connecting the member to the registering device, means whereby the fluid being measured imparts continuous rotation to the member, means whereby the fluid displaces the rotary member for the purpose of operating the registering device, means whereby the displacement of the said member alters the extent to which it drives the registering device, means automatically controlling the displacement for the purpose of preventing vibration of said member, the said last mentioned means comprising a worm formed in one piece with the member shaft, a worm wheel intermeshing with the worm and mounted rigidly upon the shaft, a balance-wheel mounted upon the shaft, and yielding means rotatively connecting the shaft to the balance-wheel.

[Claim 6 not printed in the Gazette.]

1,173,396. FIELD COOKING OUTFIT. CHARLES O. THOMAS, Jr., U. S. Army, assignor to Holbrook, Merrill and Stetson, a Corporation of California. Filed Sept. 28, 1914. Serial No. 863,914. (Cl. 126—29.)

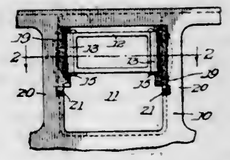


1. In a portable field cooking outfit, a plurality of cooking utensils adapted to be nested, metallic straps adapted to encircle and bind said nested utensils together, said straps encircling said nested utensils in non-parallel planes, one of the said straps having offset portions where it overlies the other strap, outstanding lugs on said straps, and bolts engaging said lugs for the purpose of tightening the straps around the utensils.

2. In a portable field cooking outfit, a plurality of cooking utensils, pans surrounding and inclosing the cooking utensils, two-part metallic straps encircling said pans tranversely and longitudinally, said straps being adapted to be assembled into a grid for said pans when removed therefrom and an arm pivoted to one of said straps adapted to engage another of said straps when the straps are so assembled.

3. In a portable field cooking outfit, two metallic strap portions having horizontal and vertical portions, the vertical portions having offset portions, an adjustable metallic frame adapted to encircle said strap portions and rest on said offset portions, and arms pivoted to the horizontal portions of said strap portions adapted to removably engage said frame.

1,173,397. SPRING-DAMPENER AND WEAR-PLATE FOR CAR-TRUCKS. WILLIAM S. TROWBRIDGE, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 29, 1915. Serial No. 58,526. (Cl. 105—103.)



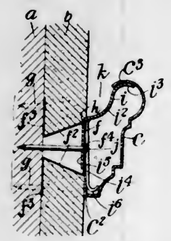
1. In car truck construction, the combination of car truck columns, a bolster mounted between said columns, wear plates carried by said bolster and columns, said wear plates carried by said columns being mounted for lateral movement toward and away from said columns, and springs acting upon said wear plates and carried by

said columns and adapted to develop frictional resistance to the vertical reciprocation of the bolster, substantially as described.

2. In car truck construction, the combination of a side frame having columns provided with recesses near the upper ends thereof, a bolster having side guides and mounted between said columns, a guide plate mounted on each of said columns and held against vertical movement, and a spring mounted in the recesses in said columns and acting to force said guide plate into engagement with said bolster, substantially as described.

3. In car truck construction, the combination of a side frame having columns, a bolster mounted between said columns, said bolster being provided with side guides, a liner for the space inclosed by said side guides, a guide plate carried by each of said columns and a spring acting upon each of said guide plates and tending to develop frictional resistance to the vertical reciprocation of the bolster, substantially as described.

1,173,398. MEANS FOR ATTACHING DEVICES TO WALLS. HOWARD E. VAN ORDEN, East Orange, N. J., assignor of one-half to Joseph W. Sinnott, New York, N. Y. Filed Dec. 26, 1914. Serial No. 879,235. (Cl. 72—125.)



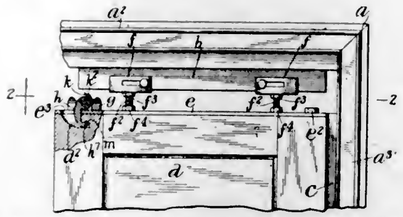
1. The herein described means for securing articles to flat plastered walls, comprising a plain strip of sheet metal having a flat surface adapted to be flush with the exposed surface of the wall and having rearwardly directed converging edge members provided with oppositely directed flanges, said flanges being parallel with said strip for snugly engaging the wall construction and said device being adapted to be secured to the wall construction with the strip thereof presenting an unbroken surface and slots provided in one of said converging edge members for securing articles to the same.

2. The herein described means for securing articles to plastered walls, comprising a strip of sheet material having converging side edge members provided with oppositely directed flanges, the said strip of sheet material being adapted to be secured to a wall in a horizontal position and the top side edge member being provided adjacent to said strip with longitudinal slots, and bracket attaching devices having back tongue members adapted to be passed downwardly through said slots and front tongue members adapted to pass downwardly in front of said strip.

3. The herein described means for securing various articles to plastered walls, comprising a strip of sheet material provided with converging side edge members having oppositely directed flanges, said strip of sheet material being adapted to be secured to a wall in a horizontal position and the top side edge member being provided adjacent to said strip with longitudinal slots, bracket attaching devices composed of spring material and provided with backwardly and downwardly directed tongue members adapted to be passed backwardly and downwardly through said slots and other tongue members adapted to pass downwardly in front of said strip, said bracket attaching devices being also provided at the top thereof with forwardly directed flange members and said last named tongue members being also provided with forwardly directed flange members and molding strips composed of spring material and adapted to engage said flange members.

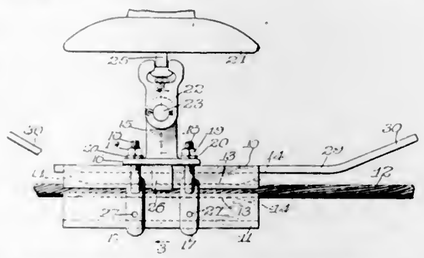
4. The herein described means for securing articles to plastered walls consisting of strips of sheet material having backwardly directed and converging side edge members, said strips of sheet material being adapted to be secured to a wall in a horizontal position and the top converging side member being provided adjacent to said strips with longitudinal slots and bracket attaching devices for securing articles to said walls, said bracket attaching devices being adapted to be connected with said strip, substantially as shown and described.

1,173,399. SLIDING DOOR. HOWARD E. VAN ORDEN, East Orange, N. J., assignor of one-half to Joseph W. Sinnott, Brooklyn, N. Y. Filed Dec. 31, 1914. Serial No. 879,873. (Cl. 20—16.)



A fastening means comprising a plate provided with a slot, bearings provided on said plate, a pawl having trunnions which are mounted in said bearings, said pawl being provided with a plurality of recesses and being adapted to work in said slot, a key engaging portion provided on one of said trunnions and adapted to be engaged by a key for operating said pawl, a spring mounted on said plate and provided with a pin for engaging said recesses for maintaining said pawl in locked or unlocked position, and an angular nose which is adapted to be engaged and disengaged by said pawl.

1,173,400. SUSPENSION-CLAMP. RUSSELL A. WILLSON, Spokane, Wash. Filed Apr. 15, 1911. Serial No. 621,274. (Cl. 173—251.)



1. In a suspension clamp, the combination with a conductor, of a pair of insulating clamping members having grooves in adjacent faces flared at the ends, arcing members separable from the clamping members, means for suspending the clamping and arcing members, and means for electrically connecting the conductor and arcing members around the clamping members.

2. In a suspension clamp, the combination with a conductor, of a pair of insulating clamping members having grooves in adjacent faces flared at the ends, arcing members adjacent the clamping members and spaced from the conductor, means for suspending the clamping members and the arcing members, and conducting means forming an electrical connection between the conductor and the arcing members.

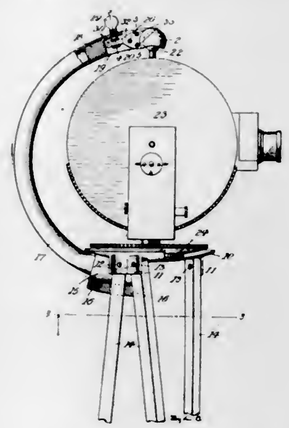
3. In a suspension clamp, the combination with a conductor, of separate insulating clamping members having grooves in adjacent faces for engaging the conductor and having grooves in opposite faces, a pair of arcing rods removably disposed in the said opposite grooves at a distance from the conductor, a common clamping device for holding the members together and the rods in connection therewith, and means forming an electrical connection between the conductor and the rods.

4. In a suspension clamp, the combination with a conductor, of insulating clamping members engaging the conductor, a pair of arcing rods supported by the members on opposite sides of and at a distance from the conductor with the ends of the rods deflected away from each other and from the conductor, clamping means for forcing the members together and for holding the rods in place, a suspension device for supporting the clamping means, and a metallic sheathing on said clamping members forming an electrical connection between the conductor and the suspension device and the rods.

5. In a wire suspension clamp, the combination with superposed blocks of insulating material having grooves in their opposed faces for holding the wire to be suspended and having grooves in their outer faces, arcing rods disposed in the outer grooves, a metallic sheathing extending from the opposed grooves where it contacts with the conductor in the groove to the other grooves where it contacts with the arcing rods, and means for binding the clamping blocks, the rods and the sheathing together for holding the wire to be suspended.

[Claims 6 to 8 not printed in the Gazette.]

1,173,401. CAMERA-STAND. CARL E. AKELEY, New York, N. Y., assignor to Akeley Camera, Inc., New York, N. Y., a corporation of New York. Filed Aug. 3, 1914, Serial No. 854,775. Renewed June 15, 1915. Serial No. 34,302. (Cl. 248—47.)



1. A camera stand comprising a base plate, an arm extending upwardly therefrom, means for suspending a camera from said arm, and means for operating said suspending means to clamp said camera to the base plate.

2. A camera stand comprising a dished base plate, an arm extending upwardly therefrom, and a socket adjustably secured to said arm.

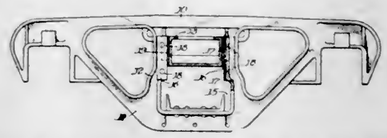
3. A camera stand comprising a dished base plate, a arm clamped to the lower face of said plate, and a socket adjustably secured to said arm.

4. A camera stand comprising a dished base plate, an arm extending upwardly therefrom, a socket pivoted to said arm, and means for setting said socket.

5. A camera stand comprising a dished base plate, an arm extending upwardly therefrom, a socket pivoted to said arm, and a screw on the arm for adjusting said socket.

[Claims 6 to 10 not printed in the Gazette.]

1,173,402. CAR-TRUCK. HARRY L. ALLEN, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Dec. 13, 1915. Serial No. 66,564. (Cl. 105—243.)



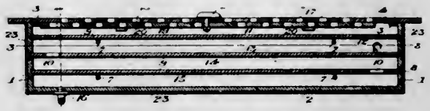
1. In a car truck, the combination of a cast bolster and sideframe adapted for relative vertical reciprocation, the engaging portions of said bolster and sideframe being reinforced, the reinforcing means including hardened steel plates cast in the desired location, substantially as described.

2. In a car truck, the combination of a cast metal side frame and bolster, said bolster engaging the sideframe and being adapted for vertical reciprocation therein, and hardened steel wear plates cast in place in the guiding columns of the sideframe at the point of engagement with said bolster, substantially as described.

3. In a sideframe, the combination of compression member, tension member and strut, all formed in a single casting, and a hard metal wearing plate bounding the edges of the struts at their upper portions and rigidly held in place by being cast in position, substantially as described.

4. In a sideframe, the combination of compression member, tension member and struts forming columns, and a hard metal wear plate of channel shape in cross section applied to the upper portions of said columns, said wear plates being provided with countersunk apertures and being adapted to be located in the mold, and the metal of the sideframe allowed to flow into said countersunk openings, thereby, in effect, riveting said wear plate to said columns, substantially as described.

1,173,403. HEATER AND MUFFLER. JOSEPH L. ANDERSON, Texas, Md. Filed Nov. 13, 1914. Serial No. 871,941. (Cl. 257—16.)



1. A combined heater and muffler for automobiles comprising, as a unitary structure adapted to be bodily inserted in the floor of an automobile, a shell or casing having means in the lower portion for admitting and discharging exhaust gases and for causing them to travel in a circuitous path therein, and a heat distributing compartment in its upper portion whose walls are attached to and self-contained with said shell or casing, said compartment being subject to the heating effect of the exhaust gases but out of communication therewith and having an outer wall or plate provided with openings, and a damper controlling said openings, whereby said heat distributing compartment may be completely closed, or opened, at will, said compartment being otherwise closed.

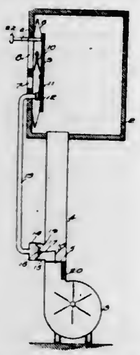
2. In a combined heater and muffler for automobiles, a shell or casing having removable walls, a plurality of removable partitions within said shell or casing and subdividing it into gas compartments and a heat distributing compartment, the partition intermediate the gas compartments having an opening which places said compartments in communication, the partition which defines the heat distributing compartment being imperforate, and an inlet and offtake for the respective gas compartments.

3. In a combined heater and muffler for automobiles, a shell or casing having removable walls, a plurality of removable partitions within said shell or casing and subdividing it into gas compartments and a heat distributing

compartment, the partition intermediate the gas compartments having an opening which places said compartments in communication, the partition which defines the heat distributing compartment being imperforate, an outer wall or plate for said heat distributing compartment, and a damper for controlling said outer wall or plate.

4. In a combined heater and muffler for automobiles, a shell or casing having separable walls provided with channels, partitions slidably received in said channels and subdividing the shell or casing into compartments, said partitions having openings whereby the compartments are placed in communication, an inlet for the first compartment and an outlet for the final compartment, another removable partition similarly slidably seated, said partition being imperforate and serving as a wall of one of the compartments aforesaid, and a damper controlled outer wall or plate for the shell or casing which defines, in connection with the last-named partition, a heat distributing compartment.

1,173,404. AIR-CHEST. JOHN T. AUSTIN and BASIL G. AUSTIN, Hartford, Conn., assignors to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed May 3, 1915. Serial No. 25,370. (Cl. 230—24.)



1. The combination of an air chest, a pump for supplying air to the air chest, a device normally exposed to atmosphere on one side and exposed to pressure from the pump on the other side, a member operable by the pressure of the pump, means governed by said member, for cutting off communication of said device with the atmosphere, and means controlled by said device when cut off from the atmosphere for stopping the supply of compressed air to the air chest.

2. The combination of an air-chest, a pump for supplying air to the air-chest, a device normally exposed to atmosphere on one side and exposed to pressure from the pump on the other side, a member in the air-chest operable by the pressure therein, means governed by said member for cutting off communication of said device with the atmosphere, and means controlled by said device when cut off from the atmosphere for stopping the supply of compressed air to the air-chest.

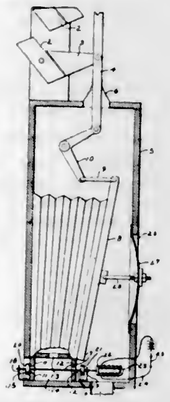
3. The combination of an air-chest, a pump for supplying compressed air to the air chest, a device normally exposed to atmosphere on one side and exposed to pressure from the pump on the other side, a member in the air-chest operable by the pressure therein, means governed by said member for cutting off communication of said device with the atmosphere, a valve, and means controlled by said device when the latter is cut off from the atmosphere for shutting the valve to thereby stop the supply of air from the pump to the air chest.

4. The combination of an air-chest, a pump for supplying air to the air-chest, a device normally exposed to atmosphere on one side and exposed to pressure from the pump on the other side, means for shutting off communication between said device and the atmosphere at a predetermined point, and means controlled by said device when cut off from the atmosphere for stopping the supply of air to the air-chest.

5. The combination of an air chest, a pump for supplying air to the air chest, a device exposed to atmosphere on one side and to pressure from the pump on the other side, a member operable in one direction by the pressure of the pump, means for operating said member in opposition to the pressure of the pump, means governed by said member for cutting off communication of said device with the atmosphere when said member is operated by pressure, and means controlled by said device when cut off from the atmosphere for stopping the supply of compressed air to the air chest.

[Claims 6 to 8 not printed in the Gazette.]

1,173,405. ORGAN-SHUTTER-OPERATING MECHANISM. JOHN T. AUSTIN, Hartford, Conn., assignor to Austin Organ Company, Hartford, Conn., a Corporation of Maine. Filed July 8, 1915. Serial No. 38,674. (Cl. 84—23.)



1. The combination of a shutter, an air-box, a bellows, means for putting said bellows into communication with the air box or with the atmosphere, the air box having an opening, and a diaphragm covering said opening and operatively connected with the bellows, the superficial area of the diaphragm being less than that of the bellows and the latter being operatively connected with said shutter.

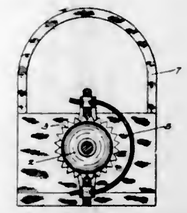
2. The combination of a shutter, an air-box, a bellows in said air-box, means for putting said bellows into communication with the air-box or with the atmosphere, the air-box having an opening, and a diaphragm covering said opening and operatively connected with the bellows, the superficial area of the diaphragm being less than that of the bellows and the latter being operatively connected with said shutter.

3. The combination of a shutter, two pneumatically operative devices operatively connected with each other and with the shutter and of different superficial areas, and means for causing the action pneumatically of said devices in alternation to thereby cause the opening and closing of the shutter in alternation.

4. The combination of a shutter, an air box, a bellows in said air box, means for putting said bellows in communication with the air box or with the atmosphere, the air box having an opening, a diaphragm covering said opening, the superficial area of the diaphragm being less than that of the movable member of the bellows, a connection between the movable member of the bellows and the diaphragm, and an operative connection between said movable bellows and said shutter.

5. Shutter-operating mechanism comprising an air box, a bellows in said air box, means for putting said bellows in communication with the air box or with the atmosphere, the air box having an opening, a diaphragm covering said opening, the superficial area of the diaphragm being less than that of the movable member of the bellows, and an operative connection between the movable member of the bellows and the diaphragm.

1,173,406. MAGNETO-COUPLING. CHARLES BALOUGH, Springfield, Ohio, assignor to The Kelly-Springfield Motor Truck Company, Springfield, Ohio, a Corporation of Ohio. Filed Nov. 7, 1913. Serial No. 799,796. (Cl. 64—13.)



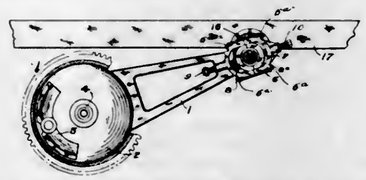
1. In a coupling of the character described, a driving shaft member, a driven shaft member substantially in alinement therewith, a circular member secured to one of said shaft members having serrated teeth, pins slidably connected with the other shaft member and having curved inner surfaces at the extremities thereof, and means for securing said pins against vertical movement for the purpose specified.

2. In a coupling of the character described, a driving shaft, a driven shaft in substantial alinement therewith, a circular member on one of said shafts, a yoke-shaped member on the other shaft, pins slidably mounted in said yoke-shaped member adapted to engage said circular member, and a slidable member for holding said pins within said yoke member, for the purpose specified.

3. In a coupling of the character described, a driving shaft, a driven shaft in substantial alinement therewith, a disk secured to one of said shafts, a yoke-shaped member connected with the other of said shafts, pins slidably mounted in said yoke-shaped member, and a flexible fastening device for a plurality of said pins, substantially as specified.

4. In a coupling of the character described, a driving shaft, a driven shaft in alinement therewith, a disk secured to one of said shafts, a yoke-shaped member secured to the other shaft and embracing said disk, pins in the respective arms of said yoke-shaped member in line with said disk, and movable radially relatively to the center of said disk, said disk having radially arranged teeth for engagement with said pins, and a U-shaped spring wire extending through perforations in the yoke member and pins, respectively, to hold said pins in position.

1,173,407. RADIUS-ROD FOR MOTOR-VEHICLES. CHARLES BALOUGH, Springfield, Ohio, assignor to The Kelly-Springfield Motor Truck Company, Springfield, Ohio, a Corporation of Ohio. Filed Feb. 27, 1914. Serial No. 821,411. (Cl. 21—90.)



1. In a device of the character described, a rear axle, a jack-shaft, a radius rod, a connection between said rod and axle, a bearing-block carried by said rod having rounded bearing faces fitted to rounded bearing faces associated with said shaft, and means for adjusting said block and rod in a straight line relatively each other to vary the relation between said shaft and axle.

2. In a device of the character described, a main frame, an axle and jack-shaft associated with said frame, a radius rod, a connection between said rod and axle, a bearing block carried by said rod having rounded bearing faces fitted to rounded bearing faces associated with said shaft together with means for adjusting said block and rod relatively each other to vary the relation between said shaft and axle, and rounded bearing faces between said frame and shaft.

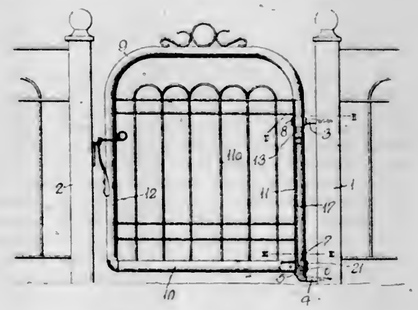
3. In a device of the character described, a rear axle, a radius rod pivotally connected with said axle to allow the parts a lateral movement with respect to each other, a jack-shaft, a bearing block carried by said rod having rounded bearing faces fitted to rounded bearing faces associated with said shaft, and means for adjusting said block and said rod relatively each other to vary the relation between said shaft and axle.

4. In a device of the character described, a rear axle, a jack-shaft, a bearing for said jack-shaft, a radius rod connected with said axle, a block supported by said radius rod and embracing said bearing, means for adjusting said rod and block relatively each other and rounded bearing faces between said block and bearing.

5. In a device of the character described, a main frame, an axle and jack shaft associated with said frame, a radius rod vertically hinged at one end to said axle and a universal joint between the other end of said radius rod and the jack shaft, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,173,408. CLOSING MEANS FOR FENCE-GATES. JOHN S. BARNES, Detroit, Mich. Filed Oct. 23, 1915. Serial No. 57,609. (Cl. 16—101.)



1. The combination with bearings, of a gate having a pivot rail supported by said bearings, and closing means for said gate concealed in the rail thereof.

2. The combination with bearings, of a gate having a pivot rail supported by said bearings, and a spring held by one of said bearings within said rail adapted to maintain said gate normally closed.

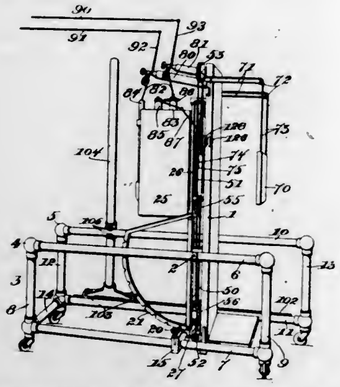
3. The combination with bearings, of a gate having a pivot rail supported by said bearings, and closing means fixed relative to said rail and anchored relative to one of said bearings adapted to maintain said gate normally closed.

4. The combination with bearings, of a gate having a pivot rail rotatable relative to said bearings, a block mounted in the rail of said gate adjacent to one bearing, and closing means held by said block and engaging the other bearings to maintain said gate normally closed.

5. A gate adapted to be hung to swing in either direction, comprising a tubular frame, and means concealed in said frame adapted to maintain said gate normally closed.

[Claims 6 and 7 not printed in the Gazette.]

1,173,409. X-RAY APPARATUS. CHARLES E. CAMPBELL, Lynn, Mass. Filed Aug. 7, 1915. Serial No. 44,337. (Cl. 250—34.)



1. X-ray apparatus having, in combination, a stand, a table tiltably mounted on the stand, and arranged to be turned to different angular positions, and an X-ray tube mounted to be carried with the table when it is tilted.

2. X-ray apparatus having, in combination, a stand, a table tiltably mounted on the stand to be turned to different angular positions, and an X-ray tube carried by the table to follow its movement when it is angularly moved, said X-ray tube being universally movable in a plane parallel to the table irrespective of the angular adjustment of the table.

3. X-ray apparatus having, in combination, a stand, a table tiltably mounted on the stand, means for locking the table in different angular positions, a tube box slidably mounted on the table, a counterweight connected to the tube box for counterbalancing it in its different positions when the table is inclined.

4. X-ray apparatus having, in combination, a stand, a table tiltably mounted on the stand, a tube box, a counterweight, a cable connecting the tube box with the counterweight having a stop upon which the counterweight is supported when the table is vertical or inclined, but which is free of the counterweight when the table is horizontal.

5. X-ray apparatus having, in combination, a stand, a table tiltably mounted upon the stand, a tube box carried by the table, a counterweight, and connections between the box and the counterweight for counterbalancing the box when the table is in an upright or oblique position but permitting movement of the box independently of the counterweight when the table is horizontal.

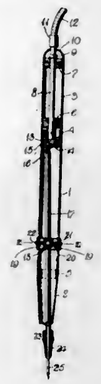
[Claims 6 to 21 not printed in the Gazette.]

1,173,410. RETOUCHING-MACHINE. GEORGE CHARLTON, Detroit, Mich. Filed Sept. 13, 1915. Serial No. 50,339. (Cl. 95—101.)

1. A retouching instrument comprising a casing, a driven shaft extending in one end thereof, a wobbler head on the inner end of said shaft, a wobbler shaft connected to said wobbler head, a holder on the outer end of said wobbler shaft, and means shiftable lognitudinally of said casing, as a bearing for said wobbler shaft adapted to regulate the movement of the outer end of said wobbler shaft.

2. A retouching instrument comprising a casing, a driven shaft extending into one end of said casing, a wobbler head on the inner end of said shaft, a wobbler shaft connected to said wobbler head and extending out of said casing, a pencil holder on the outer end of said wobbler shaft, and a socket member adjustable longitudinally of the shaft in said casing and providing a bearing for said wobbler shaft intermediate the ends thereof.

3. A retouching instrument comprising a handle section, a tip section and a point section, a driven shaft in said tip section and extending into said handle section, a wobbler head on the inner end of said shaft, a wobbler shaft longitudinally of said handle and point sections connected to said wobbler head, a pencil holder on the outer end of said wobbler shaft, and means shiftable longitudinally of said handle section as a bearing for said wobbler shaft adapted to regulate the movement of the outer end of said wobbler shaft.



4. In a retouching instrument, a casing, a socket member slidable in said casing, a ball in said socket member, a wobbler shaft slidable in said ball, a pencil holder on the outer end of said shaft, and means in said casing adapted to impart a wobbling movement to said shaft.

1,173,411. PROCESS FOR CURING SMOKED OR DRIED BEEF. MATHIAS CHRISTMAN, St. Paul, Minn. Filed July 23, 1915. Serial No. 41,516. (Cl. 99—1.)

1. The process of curing meat which consists in first pounding into the meat a dry mixture of salt, sugar and saltpeter, then corning the meat in a solution of water, salt, sugar and saltpeter and finally, after washing and drying the meat, smoking it in the usual manner.

2. The process of curing meat wherein the pieces are rubbed with a dry mixture of salt, sugar and saltpeter, or the like, then pounded to cause the mixture to penetrate the meat, then corned in a solution of salt, sugar and saltpeter or the like, then washed and dried and finally smoked in the usual manner.

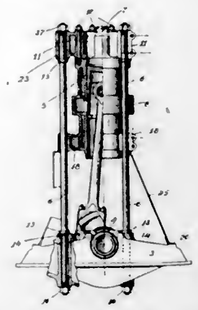
3. The process of curing meat wherein the pieces are rubbed with a dry mixture of salt, sugar and saltpeter, or the like, then pounded to cause the mixture to penetrate the meat and to make the same flexible, then corned in a solution of salt, sugar and saltpeter or the like, then washed, incased in bladders and dried and finally smoked in said bladders.

4. The process of curing meat which consists in first pounding into the meat a dry preserving mixture, then corning the meat in a pickling solution and finally, after washing, incasing and smoking the pieces of meat in bladders.

1,173,412. ENGINE CONSTRUCTION. JULES COCHAND, Zurich, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 5, 1911. Serial No. 642,434. (Cl 123—195.)

1. In an internal combustion engine, a bed-plate, an upright water-jacketed cylinder having a head and mounted above and spaced from the bed-plate and upstanding means on the bed-plate secured to the upper end of the said cylinder for holding the same in place, the said means being outside the cylinder water-jacket and the lower end of said cylinder being free to expand toward the bed-plate.

2. In an engine the combination with the bed plate, cylinder and cylinder-head, of upstanding means for supporting the cylinder-head on the bed-plate independently of the support of the cylinder and separate means for securing the cylinder to its head.



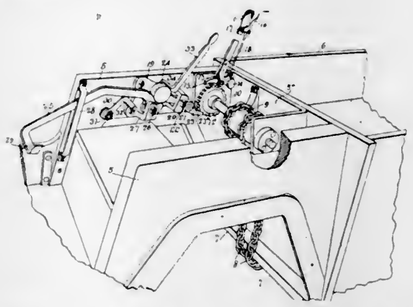
3. An upright combustion engine comprising a frame or bed-plate supporting a set of rods or columns, a combustion cylinder having a head and also provided with a water-jacket between said rods, and being secured by its head end to the set of rods and having its crankshaft end free for endwise expansion and contraction.

4. A combustion engine comprising a frame supporting a set of rods or columns, a combustion cylinder having a water-jacket between said rods, the cylinder being secured to the set of rods by its combustion end, and having its crankshaft end laterally steadied by engagement with the rods and free for endwise movement relatively thereto.

5. A combustion engine comprising a bed-plate supporting a set of rods or columns, a crank-casing on the bed-plate surrounding the columns, and a combustion cylinder having a head and secured by its combustion end to the set of rods above the casing and having its crank-shaft end free to expand and contract endwise within the casing, the cylinder having a water-jacket between the rods.

[Claims 6 to 11 not printed in the Gazette.]

1,173,413. DUMPING-WAGON. WILLIAM J. COLEBOURN, Louisville, Ky., assignor to Kentucky Wagon Manufacturing Company, Louisville, Ky., a Corporation of Kentucky. Filed Dec. 20, 1912. Serial No. 737,795. (Cl. 21—20.)

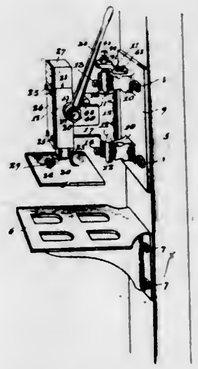


1. In a dumping wagon, a door-operating mechanism comprising a winding drum, a ratchet connected with said drum, an operating lever for rotating the drum in one direction, a detent pivoted intermediate its ends having its tail weighted to cause the nose to normally engage the ratchet, a tripping lever separate from the detent and adapted to engage said detent to move the latter into an inoperative position, a locking lever for the detent adapted to engage the detent when the tripping lever is in its inoperative position, said locking lever engaging the said detent above said weighted portion and said tripping lever engaging the said detent below the same, and a bracket forming a bearing for said tripping lever and said locking lever.

2. In a dumping wagon, a door operating mechanism comprising a winding drum, a ratchet connected with said drum, an operating lever for rotating said drum in one direction, a detent pivoted between its ends and having its tail weighted to cause its nose to normally engage said ratchet, a tripping lever separate from the detent and adapted to engage the weighted end thereof to move the detent out of engagement with said ratchet, means to retain said tripping lever in its inoperative position, and a locking lever for the detent adapted to engage the detent when the tripping lever is in its inoperative position.

3. In a dumping wagon, a door operating mechanism comprising a winding drum, a ratchet connected with said drum, an operating lever for rotating the drum in one direction, a detent pivoted intermediate its ends and having its tail weighted to cause the nose to normally engage the ratchet, a tripping lever separate from the detent and adapted to engage said detent to move the latter into an inoperative position, a locking lever for the detent adapted to engage the same when the tripping lever is in its inoperative position, a plate rigidly secured to said wagon and having a bracket forming a bearing for said detent and also having a second bracket forming a bearing for said tripping lever and said locking lever.

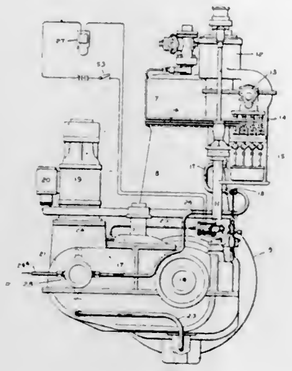
1,173,414. MOLDING-MACHINE. JOHN J. CREEDON and JOHN T. MILES, Moline, Ill., assignors of one-half to H. W. Cooper Saddlery Hardware Mfg. Company, Moline, Ill., a Corporation of Illinois. Filed Dec. 11, 1913. Serial No. 805,884. (Cl. 22—43.)



1. In a molding machine, the combination of a relatively stationary bracket provided with vertically separated bearing lugs, a hinge pintle rotatably mounted in each of said lugs and having its end toward the other lug tapered, one of the pintles being adjustable in the direction of its length, and a presser head having tapered sockets receiving the tapered ends of the pintles, substantially as and for the purpose described.

2. In a molding machine, the combination of a relatively stationary bracket provided with vertically separated bearing lugs, a pair of hinged pintles slidably mounted in each of said lugs and having its end toward the other lug tapered, a presser head having tapered sockets receiving the tapered ends of the pintles, a member projecting laterally across the outer end of one of the pintles, and an adjusting screw mounted in said member and engaging the outer end of said pintle, substantially as and for the purpose described.

1,173,415. ENGINE. CHARLES DAY and GEORGE EDWARD WINDELER, Hazel Grove, near Stockport, England, assignors to General Electric Company, a Corporation of New York. Filed Dec. 19, 1914. Serial No. 878,052. (Cl. 184—6.)



1. In combination with an engine having a system of forced lubrication, of a means movable in response to changes of pressure in the system, a signal device which is started into operation by said means upon a predetermined change of pressure in said system, and means responsive to the action of said pressure-responsive means for shutting off the supply of motive fluid to the engine upon a further and predetermined change of pressure in said system.

2. In combination with an engine having a system of forced lubrication, of a cylinder and piston, the former communicating with said system and the latter moving in response to changes of pressure in said system, a signal device which is set into operation by a certain movement of the piston, and a valve which is set into operation by the piston when it has moved a predetermined distance for shutting off the supply of motive fluid to the engine.

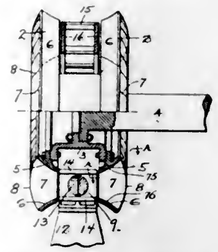
3. In combination with an engine having a system of forced lubrication, of a member movable in response to changes of pressure in the system, a cam which is moved by the member, a signal controlling device that is actuated by the cam when it has moved a predetermined distance, a valve in the motive fluid supply system of the engine, and a means actuated by the cam after it has caused the signal to operate for causing the valve to shut off the supply of motive fluid to the engine.

4. In combination with an engine having a system of forced lubrication, of a member movable in response to changes of pressure in the system, a cam which is moved by the member, a signal device, a lever moved by the cam for causing the signal device to act, a valve in the motive fluid supply system of the engine, and a lever also moved by the cam for causing the valve to shut off the supply of motive fluid to the engine.

5. In combination with an engine having a system of forced lubrication, of a valve which controls the supply of motive fluid to the engine, a motor means which when released causes the valve to shut off the supply, a latch for preventing the motor from acting during the starting period of the engine, a device which acts to prevent the motor from acting during normal operation of the engine, and a device responsive to changes of pressure in the lubricating system which renders the latch inactive and the device active as the lubricant pressure builds up and which releases the device and permits the motor to operate when said pressure falls below a predetermined value.

[Claims 6 to 14 not printed in the Gazette.]

1,173,416. HYDRAULIC MOTOR. WILLIAM A. DOBLE and LEOPOLD M. KARNASCH, San Francisco, Cal., assignors to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Apr. 4, 1913. Serial No. 758,764. (Cl. 253—149.)



1. In a hydraulic motor, a rotatable element having an annular series of vanes thereon increasing in height outwardly, a nozzle from which a jet of water issues, and means arranged adjacent the inner edge of the vanes for directing the water onto the vanes.

2. In a hydraulic motor, a pair of axially alined rotatable elements, each having an annular series of vanes thereon, increasing in height outwardly, a stationary splitter arranged between said elements adapted to divide a jet of water and direct it against the vanes, a nozzle from which the jet of water discharges, and means in the nozzle for varying the size of the jet.

3. In a hydraulic motor, a pair of axially alined rotatable elements, each having an annular series of vanes thereon, a stationary splitter arranged between said elements adapted to divide a jet of water and direct it against the vanes, and a nozzle from which the jet of water discharges, said vanes increasing in height outwardly from that side of the elements adjacent the splitter.

4. In a hydraulic motor, a pair of axially alined rotatable elements each having annular chambers therein increasing in width outwardly, a plurality of vanes arranged in each chamber and a stationary splitter for a jet of water arranged between said chambers.

5. In a jet operated hydraulic motor, a pair of axially alined rotatable elements, each provided with a plurality of vanes, flaring outwardly to greater width in a plane of the axis of rotation of said motor, a normally stationary splitter for a jet of water arranged between said elements and having overhanging top and bottom edges, a nozzle spaced apart from said splitter, and means in the nozzle for controlling the size of the jet.

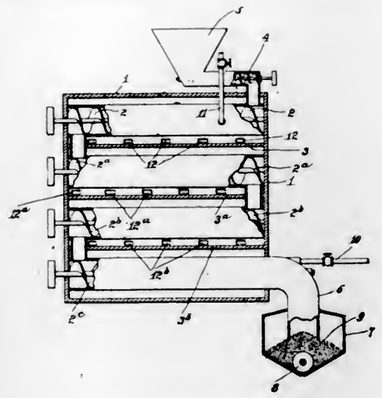
[Claims 6 to 16 not printed in the Gazette.]

1,173,417. HYDROGEN GENERATION. CARLETON ELLIS, Montclair, N. J. Filed June 6, 1913. Serial No. 772,049. (Cl. 48—198.)

1. The herein described process of producing hydrogen-containing gases which comprises passing a mixture comprising a carbon-containing gas and steam, in proportions equivalent to about four to five times as much steam as would correspond to the production of CO_2 and hydrogen into contact with a material comprising lime and about 5% of a catalytically active metal oxid, while maintained at a temperature of about 500 to 550° C.

2. The process of making hydrogen which comprises passing a mixture of 1 volume of carbon monoxid with at least 4 volumes of water vapor as a counter current in contact with an oppositely traveling mass of quick lime admixed with about 5% of a catalyst and heated to a temperature of about 500° C.

3. The process of making hydrogen which comprises mixing a carbon monoxid-containing gas with water vapor so as to give a proportion of said monoxid to said water vapor of between 1 : 4 and 1 : 5, in passing said mixture as a counter current and in intimate contact with a traveling stream of quick lime material in a finely divided condition and admixed with catalytic material comprising a metallic oxid, and in maintaining the temperature of the reacting materials at approximately 500° C.; whereby said carbon monoxid is substantially converted into carbon dioxid and unites with the quick lime material to form carbonate of lime.

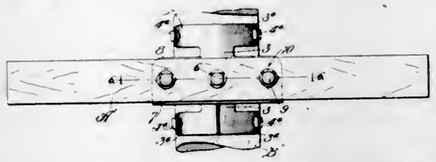


4. The process of making hydrogen which comprises passing a carbon monoxid-containing gas substantially free from nitrogen in the presence of water vapor into contact with a nearly horizontal moving body of a carbon dioxid absorbent and catalytic material maintained at a reacting temperature; in collecting the hydrogen formed, and in substantially freeing the same from water vapor.

5. The process of making hydrogen which comprises passing a carbon monoxid-containing gas in the presence of water vapor into contact with a moving body of a carbon dioxid absorbent and precipitated catalytic material maintained at a reacting temperature; in collecting the hydrogen formed, and in substantially freeing the same from water vapor.

[Claims 6 to 9 not printed in the Gazette.]

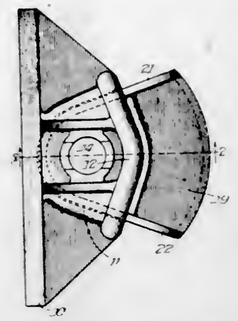
1,173,418. POLE CROSS-ARM. CHARLES G. ETTE, St. Louis, Mo., assignor to St. Louis Malleable Casting Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 1, 1915. Serial No. 11,318. (Cl. 189—33.)



The combination of a pole, a cross arm provided with a vertically-disposed portion that has curved wings projecting laterally therefrom in a different horizontal plane than the plane in which the cross arm lies, a fastening device projecting into the pole through an opening at the center of the cross arm, and fastening devices projecting into the pole through openings in the ends of said wings and arranged at an angle with relation to each other.

1,173,419. COUPLING-POCKET. GEORGE G. FLOYD, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Aug. 11, 1915. Serial No. 44,851. (Cl. 213—42.)

1. In a device of the class described, the combination of a coupler pocket, a supporting member projecting forwardly from and acting as an extension of said pocket and adapted for interlocking engagement therewith, and a pin adapted to be passed through said pocket, a coupler shank and said supporting member, whereby the supporting member is held against displacement, substantially as described.



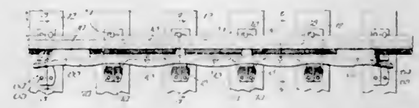
2. In a device of the class described, the combination of a coupler pocket formed as a casting and having a recess at the rear of the coupler-shank-receiving cavity, a shelf, the inner end of which is adapted to be accommodated within said recess, and a pin passing through said pocket and said shelf, substantially as described.

3. In a device of the class described, the combination of a coupler pocket, a coupler supporting shelf fitted into and interlocking with said pocket, and a coupler pivot pin engaging said shelf and preventing removal thereof through the mouth of the pocket, substantially as described.

4. In a device of the class described, the combination of a coupler pocket having recesses, a shelf having a flat bearing portion and provided with side walls and adapted to be inserted in said pocket and to engage one of said recesses, substantially as described.

5. In a device of the class described, the combination of a coupler pocket and a shelf member, said shelf having a flat bearing portion, and laterally diverging side-walls or ribs, and a shoulder adapted to bear against said pocket, said pocket being provided with means whereby said shelf is held against vertical movement, substantially as described.

1,173,420. GUARD-RAIL. BENEDICT T. GIBBS, Jr., Chicago Heights, Ill., assignor to Morden Frog & Crossing Works, Chicago, Ill., a Corporation of Illinois. Filed Dec. 20, 1915. Serial No. 67,705. (Cl. 239—17.)



1. In combination with the main rail, a plurality of brace blocks secured adjacent thereto, and a guard rail having oppositely projecting members entering respectively the brace blocks and the space below the head of the main rail, for the purposes set forth.

2. The combination with the main rail, a plurality of brace blocks secured thereto, a guard rail supported by the brace blocks having oppositely projecting members entering respectively the brace blocks and the space below the head of the main rail, and means for rigidly securing the guard rail in said position.

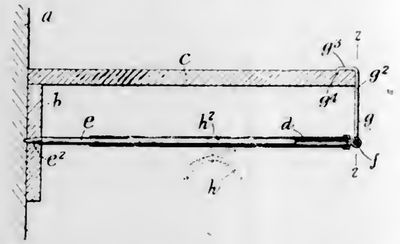
3. The combination with the main rail, a plurality of brace blocks secured thereto, a guard rail supported by the brace blocks having oppositely projecting members entering respectively the brace blocks and the space below the head of the main rail, and wedge devices tightly securing the parts in said position.

4. The combination with the main rail, a plurality of brace blocks secured adjacent thereto, a guard rail supported by the brace blocks having oppositely projecting members entering respectively the brace blocks and the space below the head of the main rail, and wedge devices formed on the guard rail and the brace blocks for tightly securing the parts in position.

5. The combination with the main rail, a plurality of brace blocks secured adjacent thereto, a guard rail supported by the brace blocks having oppositely projecting members entering respectively the brace blocks and the space below the head of the main rail, and wedge devices formed on the tops of the brace blocks and on adjacent parts of the guard rail for tightly securing the parts in position.

[Claims 6 to 11 not printed in the Gazette.]

1,173,421. GARMENT-HANGER. GEORGE F. GOELZ, West New York, N. J. Filed Dec. 9, 1914. Serial No. 876,281. (Cl. 45—37.)



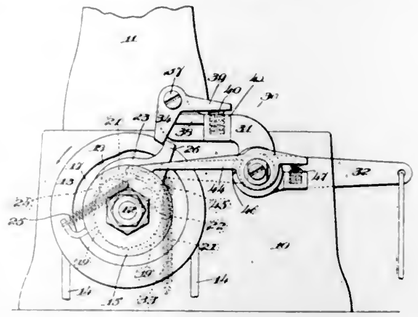
A garment hanger designed for use in a closet or wardrobe having a top shelf, said hanger being composed of telescopic members one of which is pointed at its outer end and adapted to be forced into the back wall of the closet and the other being provided at its outer end with a hinged hook-shaped device adapted to be swung over and engage the top of the shelf near the front edge thereof.

1,173,422. MILK-CAN BODY AND REMOVABLE TOP. WILLIAM GRANNIS, Kewaunee, Wis. Filed Jan. 12, 1914. Serial No. 811,714. (Cl. 220—78.)



The combination with a can having a contracted neck portion provided with an exterior annular groove, a rubber ring, the inner face of which is rounded to conform to the transverse contour of said groove, and the outer face of which is a plane surface, said surface being arranged at a slight angle with respect to the vertical axis of the can and a cover having a flange adapted to fit over said ring, the said flange having an inclination with respect to the vertical axis of the can similar to that of the plane surface of said ring, as and for the purpose set forth.

1,173,423. SEWING-MACHINE DRIVING MECHANISM. CHRISTIAN H. T. HAGELSTEIN, Boston, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Aug. 30, 1913. Serial No. 787,434. (Cl. 74—46.)



1. A driving and stopping mechanism, including in combination with the shaft to be rotated and stopped, a stop dog movably supported on, to rotate with, said shaft, and having connections for unclutching the shaft, and a stop device adapted to coöperate with said rotating stop dog to unclutch and stop the shaft at a suitable point: said device comprising a swinging carrier having a fixed pivot, a non-sliding stop lug swinging about a relatively fixed pivot on said carrier and adapted to shift with the carrier toward and from said shaft, said lug projecting from its pivot toward said shaft, a powerful spring tending to cushion said lug against the impact of said stop dog with a minute yield, and an abutment normally opposing said spring, said parts so constructed and arranged that a line from said shaft to said lug's pivot stands substantially at right angles to a line from said carrier pivot to said lug.

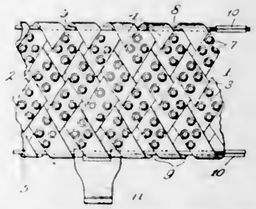
2. A driving and stopping mechanism including in combination, a driver, as pulley 13, a rotatable shaft-part as hub 21, adapted to be clutched to or released from said driver for the purposes of driving and stopping, a stop dog movably supported on said shaft-part and having connection for unclutching the latter and having a stop projection, and a stop device adapted to coöperate with said stop dog to unclutch and stop the shaft-part at a suitable point; said device comprising a shiftable carrier, a stop lug pivoted on said carrier adapted to shift with the carrier toward and from said shaft-part, said lug projecting from its pivot toward said shaft-part, a lug extension beyond its pivot at an angle to the lug, a powerful spring acting on said extension tending to cushion said lug against the impact of said stop dog projection with a minute yield, and an abutment normally opposing said spring.

3. A driving and stopping mechanism including in combination, a driver as pulley 13, a rotatable shaft-part as hub 21, adapted to be clutched to or released from said driver for the purposes of driving and stopping, a stop dog movably supported on said shaft-part and having connection for unclutching the latter and having a stop projection, and a stop device adapted to coöperate with said stop dog to unclutch and stop the shaft-part at a suitable point; said device comprising a swinging carrier adjacent the shaft-part periphery, a stop-lug pivoted at the free end of said carrier, the lug body projecting from its pivot toward said shaft-part and substantially at right angles to the length of the carrier, said lug having also an extension beyond its pivot and substantially parallel to the carrier's length, a barrel-and-spring device on the carrier opposite the free end of the lug extension adapted to afford a powerful cushion and abutment for the lug movements when struck by said projection, and an abutment on said carrier coöperating with the lug body to normally oppose said spring.

4. A sewing machine driving mechanism including in combination, a constantly rotating member, a rotatable support adapted to be clutched to or released from said member, a projection rotatable with the support and adapted to effect unclutching of the support, and a stopping device having a lug adapted to be shifted into the path of said projection for shifting the projection to release position and bringing the support to rest, and from the path thereof to permit the start of said support into rotation; said stopping device comprising a shiftable carrier, a pivoted lever on said carrier, one arm of which constitutes said lug, the second arm of said lever standing at an angle to lug, stops arranged to permit a limited movement of the lever when struck by said projection, and a spring under powerful initial compression, acting on said second lever arm, arranged to hold the lever against one of its stops and to yieldingly resist displacement thereof when the lug and projection meet.

5. A sewing machine driving mechanism including in combination, a constantly rotating member, a rotatable support adapted to be clutched to or released from said member, a projection rotatable with the support and adapted to effect unclutching the support, and a stopping device having a lug adapted to be shifted into the path of said projection for shifting the projection to release position and bringing the support to rest, and from the path thereof to permit the start of said support into rotation; said stopping device comprising a shiftable carrier, a pivoted lever on said carrier, one arm of which constitutes said lug, the second arm of said lever standing at an angle to lug, and substantially parallel to the carrier, stops on the carrier arranged to permit a limited movement of the lever when struck by said projection, and a spring under powerful initial compression, between said carrier and said second lever arm, arranged to hold the lever against one of its stops and to yieldingly resist displacement thereof when the lug and projection meet.

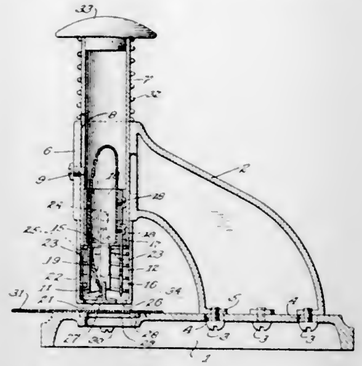
1,173,424. DETACHABLE TIRE-TREAD. GUSTAF A. HAGSTROM, Kansas City, Mo., and EMANUEL HAGSTROM, Chicago, Ill.; said Emanuel Hagstrom assignor to said Gustaf A. Hagstrom. Filed Oct. 5, 1914. Serial No. 865,052. (Cl. 152—16.)



In a tire tread, side rings, flexible strips wound over and under the rings, and attaching clips each having a pair of hooks engaged with the rings, said hooks being spaced apart a distance slightly greater than the width of the strips so as to receive one of the latter in said space and said strips being engaged over and under the side edge and end portions of the hooks, each of said clips being adapted to receive any one of the strips in the space between its hooks so as to allow the clips to be applied at any and as many points as desired throughout the entire circumference of the tread.

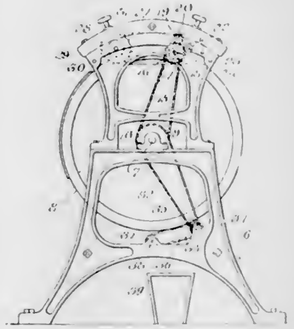
1,173,425. PAPER-FASTENING DEVICE. J C HAWKINS, Newton, Iowa. Filed Nov. 3, 1911. Serial No. 658,330. (Cl. 93—1.)

1. In a paper fastening device, the combination of a stationary support, a spring actuated tubular section slidably mounted within said support, a tubular lower section mounted upon the lower end of the first mentioned tubular section, a coil spring housed within said lower section, the upper end of the lower section adapted to rest normally against the said support, a die-plate, and means carried by the tubular upper section and coöperating with said die-plate for the purpose specified.



2. In a paper fastening device, the combination with a base, of a support carried thereby, a plunger slidably mounted upon said support, a coiled spring encircling said plunger and interposed between the standard and the upper end of the plunger, a cylindrical member carried by the lower end of the plunger, a folder, a slitting knife adapted to rest within a vertical peripheral recess formed within the cylindrical member, means for detachably connecting the slitting knife and folder to the cylindrical member, a cutting knife detachably secured to said cylindrical member, and a die-plate formed within the base, substantially as and for the purpose specified.

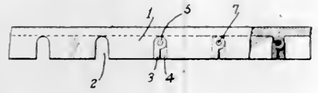
1,173,426. RUBBER-WORKING MACHINE. EDWARD B. HERMAN, East Watertown, Mass. Filed Nov. 27, 1914. Serial No. 874,139. (Cl. 154—1.)



1. A rubber working machine comprising a carrier member, a form carried thereby and having a raised edge to receive within it a backing, means coöperating with said form to press a sheet of rubber into adhesive contact with a backing in said form, and pressure means coöperating with said raised pattern to effect the severing of said rubber.

2. A rubber working machine comprising a rotary carrier, a form on said carrier having a depression adapted to receive a fabric, a roller positioned to press a sheet of rubber into firm adhesive contact with a fabric contained in the depression of said form, and a second roller adapted to operate on the rubber sustained by the raised portions of said form to effect the severing of said rubber along the outline of such raised portions.

1,173,427. JOINTED JEWELRY AND PROCESS OF MAKING SAME. OSCAR HEYMAN, New York, N. Y. Filed June 25, 1915. Serial No. 36,194. (Cl. 59—35.)



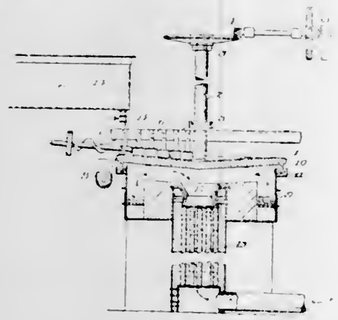
1. The method of producing from an integral bar a plurality of bar sections hinged together for jewelry and the like, which consists in forming a series of spaced hinge-receiving recesses in and extending partially through the bar, securing in the recesses pairs of hinge plates carrying coöperating knuckle members, and cutting through the bar at the hinges to divide it into sections; substantially as described.

2. The method of producing from an integral bar a plurality of bar sections hinged together for jewelry and the like, which consists in forming a series of spaced hinge-receiving recesses in and extending partially through the bar, placing in the recesses pairs of hinge plates carrying coöperating knuckle members, welding the plates of each pair to the adjacent surfaces of the recess, and cutting through the bar at the hinges to divide it into sections; substantially as described.

3. An article for the manufacture of jewelry or the like, comprising hinged bar sections arranged end to end, each member being recessed at opposite ends so that an overhang is provided atop each of said recesses, and a knuckle-carrying hinge plate secured in each of said recesses so that the outer surface of each hinge plate forms a flush continuation of the end face of the overhang thereabove.

4. An article for use in the manufacture of jewelry and the like, comprising an integral bar containing a series of hinge-receiving recesses, pairs of hinge plates in said recesses and united with the adjacent walls thereof, and coöperating knuckle members carried by said hinge plates, substantially as described.

1,173,428. PROCESS AND APPARATUS FOR CALCINING CHEMICAL PRODUCTS. HENRY HOWARD, Brookline, Mass. Filed Apr. 30, 1915. Serial No. 25,055. (Cl. 23—3.)



1. In a calcining furnace, the combination of a rotary plate having a concave upper face, means for heating said plate, means for supplying a fluid charge thereto, and discharging means acting to move the calcined charge from the inner portion of the plate toward its periphery.

2. In a calcining furnace, the combination of a rotary plate having a concave upper face, means for heating said plate, means for supplying a fluid charge thereto, and discharging means comprising scraper and conveyer elements acting to detach the calcined charge from the plate and to move it from the inner portion of the plate toward the periphery thereof.

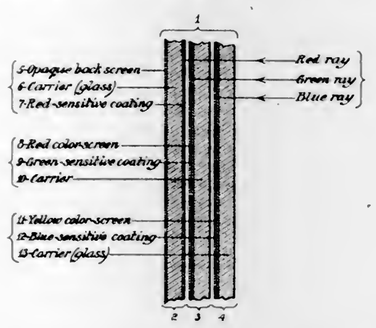
3. In a calcining furnace, the combination of a rotary plate having a concave upper face, means for heating said plate, means for supplying a fluid charge to the peripheral portion of the plate, and discharging means acting to move the calcined charge from the inner portion of the plate toward its periphery.

4. In a calcining furnace, the combination of a rotary plate having a concave upper face in the form of a shallow cone, means for heating said plate, means for supplying a fluid charge to the peripheral portion of the plate, and discharging means acting to move the calcined charge from the inner portion of the plate toward its periphery.

5. In a calcining furnace, the combination of a rotary plate having a concave upper face, means for heating said plate, means for supplying a fluid charge to the peripheral portion of the plate, and means for removing the calcined charge.

[Claims 6 to 8 not printed in the Gazette.]

1,173,429. COLOR PHOTOGRAPHY. FREDERIC E. IVES, Woodcliffe-on-Hudson, N. J. Filed Dec. 5, 1912. Serial No. 735,064. (Cl. 95—2.)



1. In the art of color photography the process of producing a set of color selection negatives which comprises the following steps: treating one of a batch of photographic plates which have been previously sensitized for a certain color to convert it to sensitiveness for a different color, and simultaneously exposing such converted plate and an unconverted plate from the same batch to the same light image.

2. In the art of color photography the process of producing a set of color selection negatives which comprises the following steps: treating one of a batch of photographic plates which have been previously sensitized for a certain color to convert it to sensitiveness for a different color, placing such converted plate face to face with an unconverted plate from the same batch, and simultaneously exposing said plates to the same light image.

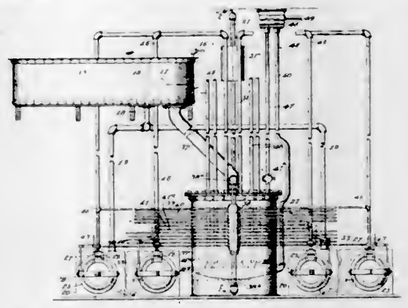
3. In the art of color photography the process of producing a set of color selection negatives which comprises the following steps: treating one of a batch of photographic plates which have been previously sensitized for a certain color to convert it to sensitiveness for a different color, securing together in face to face contact such converted plate with an unconverted plate from the same batch, and simultaneously exposing the two plates through the support of one of them.

4. In the art of color photography the process of producing a set of color selection negatives which comprises the following steps: treating one of a batch of photographic plates which have been previously sensitized for a certain color to convert it to sensitiveness for a different color prior to combining it with an unconverted plate from the same batch, applying a temporary superficial color screen upon the sensitive coating of one of said two plates, subsequently combining said two plates in face to face contact, and thereafter simultaneously exposing the combined plates to the same light image.

5. In the art of color photography the process of producing a set of color selection negatives which comprises the following steps: treating one of a batch of green sensitized photographic plates to convert it to red sensitiveness, and simultaneously exposing such converted plate and an unconverted plate from the same batch to the same light image.

[Claims 6 to 24 not printed in the Gazette.]

1,173,430. ACETYLENE-GENERATING APPARATUS. HENRY W. JACOBS and HOWARD H. LANNING, Topeka, Kans. Filed Nov. 28, 1911. Serial No. 662,907. (Cl. 48—31.)



1. An apparatus of the class described, comprising one or more calcium carbid-receiving cells, a gas-receiving chamber provided with a gravity controlled water supply, a manifold having connection with said chamber, means intermediate of said manifold and the cells, whereby water is conveyed from said chamber to the cells, the relation between said means and the manifold being such that the level of the water in said chamber will determine the quantity of water conveyed to said cells, and means intermediate of the cells and said chamber whereby the generated gas in conveyed to said chamber.

2. An apparatus of the class described, comprising one or more calcium carbid-receiving cells, a gasometer provided with a water supply, a manifold having connection with the gasometer and adapted to receive water therefrom, the relation between the manifold and the gasometer being such that the level of the water in both the gasometer and the manifold will be equal, means intermediate of the manifold and said cells whereby water is conveyed from the manifold to the cells, said means being so arranged that the height of the water will determine the quantity of water conveyed to the cells, and means for conveying the generated gas from the cells to said gasometer.

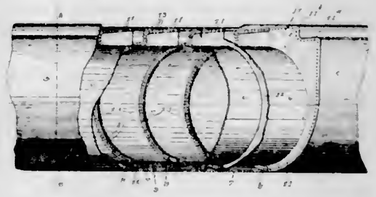
3. An apparatus of the class described, comprising one or more calcium carbid-receiving cells, a gasometer, a manifold connected with the upper and lower part of the gasometer, a water tank having connection with a water supply, said tank having connection with the gasometer and arranged to deliver water to the bottom of the gasometer through the action of gravity, a series of pipes leading from the manifold to each of said cells and communicating with the cells at different points, the connection between the pipes and the manifold being arranged in different horizontal planes so that generation in the cells may be successively induced at different points, and means whereby the generated gas is conveyed from the cells to the gasometer and delivered at a point beneath the normal water lever therein, an intermediate point in said means being arranged above the maximum level of the water in said tank whereby the return flow of gas through said means is prevented.

4. An apparatus of the class described, comprising one or more calcium carbid-receiving cells provided with compartments having communications with each other at their upper parts, a gasometer provided with a water supply, a manifold connected with said gasometer and so arranged that the water level in the manifold will be equal to the water level in the gasometer, a series of pipes intermediate of the manifold and the cells for conveying water from the former to the latter, said pipes being arranged in pairs with one pipe leading to the front end of a cell and the other pipe leading to the rear part of the cell, the relation between the pipes of each pair and the manifold being such that water will flow through one pipe in advance of the other whereby generation is induced in one compartment of a cell in advance of the other compartment or compartments, and means whereby the generated gas is conveyed from the cells to the gasometer.

5. An apparatus of the class described, comprising one or more calcium carbid-receiving cells, a gas-receiving chamber provided with a water supply, a manifold connected with said chamber so that the water level in the manifold will be equal to the water level in said chamber, a series of pipes intermediate of said cells and said manifold whereby water is conveyed from the latter to the former, the pipes being arranged in pairs with one pipe leading to each end of a cell, while the relation between the pipes of a pair and the manifold is such that water will be conveyed to one end of a cell in advance of the flow of water to the other end of said cell, and means whereby the generated gas is conveyed from the cells to the gas-receiving chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,173,431. BOAT. HENRY W. JACOBS, Topeka, Kans. Filed Apr. 14, 1915. Serial No. 21,206. (Cl. 114—16.)



1. A boat provided with an inner and an outer wall composed of series of sheet metal channel sections disposed circumferentially, the flanges of the channel sections being disposed inwardly so as to provide inwardly presented ribs, and a single piece stay-sheet having the portion within in the inner wall cut out and arranged between and secured to the flanges of adjacent sections so as to extend transversely of the boat intermediate of the walls and thereby maintain a spaced relation between the walls and provide a series of circumferentially disposed chambers.

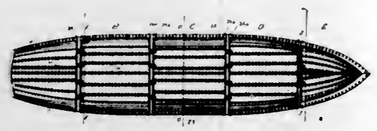
2. A submarine including a series of outer channel sections and series of inner channel sections inclosed thereby, both the outer and the inner channel sections being disposed circumferentially about the boat, a stay-sheet between the adjacent sections of both series, and means to fasten the stay-sheet to the adjacent flanges of the channel sections.

3. A boat provided with an inner and an outer wall composed of sheet metal sections arranged transversely and continuously about the boat, the sides of the sections being disposed inwardly so as to provide circumferential ribs, stay-sheets arranged between and secured to the inwardly disposed sides of adjacent sections of both walls so as to maintain the walls in spaced relation, and means whereby the sides of adjacent sections and the intermediate stay-sheets are secured together.

1,173,432. BOAT. HENRY W. JACOBS, Topeka, Kans. Filed May 19, 1915. Serial No. 29,086. (Cl. 114—79.)

1. A boat provided with an inner and an outer wall composed of sheet metal flanged sections, the flanges of adjacent sections being secured together with intervening stay-sheet members whereby longitudinally disposed ribs

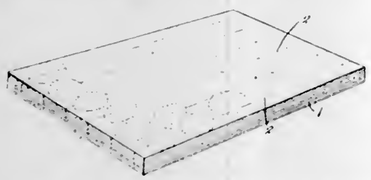
are provided and the walls maintained in proper spaced relation to each other, some of the intervening stay-sheet members along the bottom of the boat being of greater width so as to extend to the outside of the outer wall, and flanged sections secured together and extending transversely of the boat so as to provide bulkheads.



2. A boat provided with an inner and an outer wall composed of metal flanged sections, the flanges of adjacent sections being secured together with intervening stay-sheet members whereby longitudinally disposed reinforcing ribs are provided and the walls maintained in proper spaced relation, and means secured intermediate of the walls and arranged transversely of the boat whereby the hull is divided into a series of fluid-tight cells or chambers.

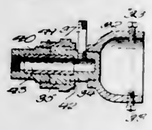
3. A boat provided with an inner and an outer wall composed of series of sheet metal flanged sections whose flanges are presented inwardly, stay-sheets arranged lengthwise of the boat intermediate of the flanged sides of the sections of both walls and secured thereto so as to provide longitudinally disposed ribs whereby the walls are maintained in proper spaced relation, and a bulkhead composed of a double wall, each formed of series of transversely disposed flanged sections, the sections of the two bulkhead-walls being maintained in spaced relation by stay-sheets whereby a cellular bulkhead is produced.

1,173,433. PROCESS OF MAKING GEAR-BLANKS AND THE LIKE. HERBERT L. JOHNSTON, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed Jan. 7, 1915. Serial No. 915. (Cl. 154—2.)



The process of making gear blanks from textile and felted fabrics, which consists in superimposing strips of convenient length and width in piles, then binding the layers together with lines of stitching spaced apart less than the diameter of the gear blank, and cutting out the blank of a plurality of layers in one operation, then superimposing a plurality of blanks and compressing them into a single gear blank.

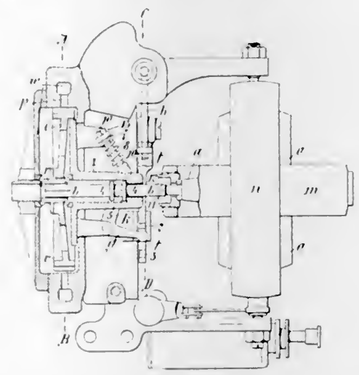
1,173,434. MOTOR-DRIVEN TIRE-PUMP. JOHN G. JOHNSON, Tacoma, Wash. Filed Feb. 15, 1915. Serial No. 8,341. (Cl. 152—11.)



1. In a device of the class described, a hollow inner body adapted to be coupled to a wheel hub and having a lateral discharge an external annular bearing and an internal socket terminating in a stop shoulder, an outer tubular body adapted to receive an air supply externally threaded and provided with an internal socket terminating in a stop shoulder, a tubular supporting member seated in said sockets and against said stop shoulders, and a sleeve bearing around the confronting ends of said bodies and internally threaded to engage the threads of the outer body and provided with an inwardly directed flange to engage the bearing of the inner body.

2. In a device of the class described, a hollow inner body adapted to be coupled to a wheel hub and having a lateral discharge an external annular bearing and an internal socket terminating in a stop shoulder, an outer tubular body adapted to receive an air supply and provided with an external bearing, said outer tubular body being externally threaded and provided with an internal socket terminating in a stop shoulder, a tubular supporting member seated in said sockets and against said stop shoulder, a sleeve bearing around the confronting ends of said bodies and internally threaded to engage the threads of the outer body and provided with an inwardly directed flange to engage the bearing of the inner body, and a brace having clamping means for coupling the same at one end to the bearing of the outer tubular body and adapted to be connected at the other end to the stationary portion of a vehicle.

1,173,435. GYROSCOPIC STEERING DEVICE FOR TORPEDOES. ALBERT EDWARD JONES, Fiume, Austria-Hungary. Filed Aug. 19, 1913. Serial No. 785,456. (Cl. 74—78.)



1. In a gyroscope steering device for torpedoes, the combination with a main shaft, of a fly-wheel keyed on said main shaft, a clutch-member carried at one end of said main shaft, a turbine, a turbine shaft alining with said main shaft, a movable clutch-member carried on said turbine shaft and adapted to engage the clutch-member on said main shaft, and a differential control mechanism for clutching and unclutching said turbine shaft from said main shaft.

2. In a gyroscope steering device for torpedoes, the combination with a main shaft, of a fly-wheel keyed on said main shaft, a clutch-member carried at one end of said main shaft, a turbine, a turbine shaft alining with said main shaft, a movable clutch-member carried on said turbine shaft and adapted to engage the clutch-member on said main shaft, and a control mechanism comprising a pivotally supported bell-crank lever, a rod pivotally connected to the long arm of said bell-crank lever, a spring carried by said rod and acting to oppose the movement of said bell-crank lever in one direction, a pivoted bolt depending from said bell-crank lever, tappets arranged on one side of said bolt and adjacent the lower end thereof, a trip-lever fulcrumed below said turbine shaft and having one of its arms connected to said movable clutch-member and the other of its arms operating between said tappets of said bolt, and a differential piston for actuating said bell-crank lever in one direction, and against the tension of said spring, whereby the turbine shaft may be alternately clutched to or unclutched from said main shaft.

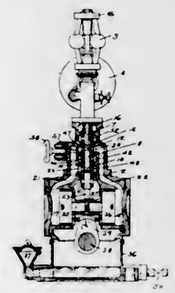
1,173,436. HAIR-WAVING IMPLEMENT. PETER JÜLICHER, Flushing, N. Y. Filed Dec. 27, 1915. Serial No. 68,750. (Cl. 132—18.)



1. A hair waving implement comprising a bar having two spaced rows of protuberances, each of said protuberances having convex outer sides, and corners at the ends of said outer sides, the protuberances of one row overlapping those of the other row.

2. A hair waving implement comprising a bar, two rows of overlapping convex protuberances projecting from one of its faces, a channel between said rows of protuberances, and a plug adapted to be fitted into said channel.

1,173,437. GOVERNOR. LEOPOLD M. KARNASCH, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed May 6, 1915. Serial No. 26,293. (Cl. 121—111.)



1. In a governor, a piston adapted to be moved by fluid under pressure, a valve controlling the flow of such fluid to the piston, means independent of the piston for opening said valve and means on the piston for closing said valve.

2. In a governor, a piston adapted to be moved by fluid under pressure, a valve controlling the flow of such fluid to the piston, means operative by variations in speed of the apparatus being governed to open said valve whereby the piston is moved and means on the piston engaging said valve whereby the movement of the piston closes the valve.

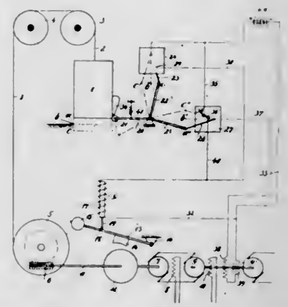
3. In a governor, a piston adapted to be moved by fluid under pressure, a valve controlling the flow of such fluid to the piston, means operative by variations in speed of the apparatus being governed for opening said valve whereby the piston is moved and a surface on the piston inclined to the axis of the piston engaging said valve whereby the movement of the piston closes the valve.

4. In a governor, a piston adapted to be moved by fluid under pressure, a two part valve controlling the flow of such fluid to the piston, means for moving one of said valve parts to open the valve whereby the piston is moved, and means integral with the piston engaging the other valve part whereby the movement of the piston closes the valve.

5. In a governor, a piston adapted to be moved by fluid under pressure, a two part valve controlling the flow of such fluid to the piston, means for moving one of said valve parts to open the valve whereby the piston is moved and means on the piston comprising a surface inclined to the axis of the piston engaging the other valve part, whereby a movement of the piston closes the valve.

[Claims 6 to 20 not printed in the Gazette.]

1,173,438. AUTOMATIC BRAKE FOR ELEVATORS. PAUL KESTEN, Nuremberg, and HEINRICH OSBORNE, Charlottenburg, Germany, assignors to Siemens-Schuckert-Werke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed May 6, 1913. Serial No. 765,839. (Cl. 172—152.)



1. The combination with a controlling generator, and a motor driven thereby on the Leonard system, of an auxiliary field-winding on said generator for reversing the field thereof, a cage of an elevator and means controlled by said cage for energizing said field winding when the cage has passed a predetermined point and deënergizing the same when the cage has returned to said point.

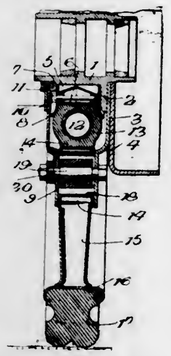
2. The combination with a controlling generator, a motor driven thereby on the Leonard system and an electromagnetic brake for the motor, of a normally closed circuit including the winding of said electromagnetic brake, a normally open second circuit including an auxiliary field-winding on said generator for reversing the field thereof, a cage of an elevator and means controlled by said cage for first opening the first circuit when the cage passes a predetermined point, then closing both this circuit and the second circuit when the cage has run beyond this point, and finally reopening both circuits when the cage has returned thereto.

3. The combination with a controlling generator, a motor driven thereby on the Leonard system and an electromagnetic brake for the motor, of a normally closed circuit including the winding of said electromagnetic brake, a normally open second circuit in parallel with said winding and including an auxiliary field-winding on said generator for reversing the field thereof, a cage of an elevator and means controlled by said cage for first opening the first circuit when the cage passes a predetermined point, then closing both this circuit and the second circuit when the cage has run beyond this point, and finally reopening both of said circuits when the cage has returned thereto.

4. The combination with a controlling generator, and a motor driven thereby on the Leonard system, of an auxiliary field-winding on said generator for reversing the

field thereof, a resistance in series with said field-winding, a cage of an elevator and means controlled by said cage for energizing said field-winding and resistance when the cage has passed a predetermined point and deënergizing the same when the cage has returned to said point.

1,173,439. VEHICLE-WHEEL BUFFER. MARTIN F. KETTLER, Houston, Tex., assignor to Downing Pneumatic Wheel Company, Houston, Tex. Original application filed Feb. 25, 1915, Serial No. 10,500. Divided and this application filed Aug. 20, 1915. Serial No. 46,553. (Cl. 152—42.)



1. In a wheel of the class described, a hub section and a rim section, a cushion interposed between the sections, a buffer carried by one section and including a rotatable sleeve, a corrugated sleeve fitted thereon, a yieldable sleeve surrounding the corrugated sleeve, and an abutment carried by the other section for coöperation with the buffer.

2. In a wheel of the class described, a hub section and a rim section, a cushion interposed between the sections, a buffer carried by one section and including a rotatable sleeve of anti-friction material, a corrugated sleeve removably fitted thereon and formed with perforations, a sleeve of yieldable material surrounding the corrugated sleeve and the said material of the yieldable sleeve entering the said perforations in the corrugated sleeve, and an abutment carried by the other section for cooperation with the buffer.

3. In a wheel of the class described, a hub section and a rim section, a cushion interposed between the sections, a buffer carried by one section and including a rotatable sleeve, a corrugated sleeve removably fitted thereon, a yieldable sleeve surrounding the corrugated sleeve, and an abutment carried by the other section for coöperation with the buffer the corrugations of the second mentioned sleeve extending longitudinally of the said sleeve.

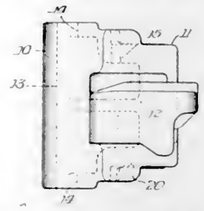
4. In a wheel of the class described, a hub section and a rim section, a cushion interposed between the sections, a buffer carried by one section and including a rotatable sleeve, a sleeve fitted thereon and having an irregular exterior surface, a yieldable sleeve surrounding the second mentioned sleeve and interiorly conforming to the outer surface, and an abutment carried by the outer section for coöperation with the buffer.

5. A wheel buffer of the class described, comprising a sleeve interiorly cylindrical, a corrugated sleeve fitted thereon, and a yieldable sleeve surrounding the corrugated sleeve.

[Claim 6 not printed in the Gazette.]

1,173,440. COUPLING KNUCKLE AND LUG. EDMUND P. KINNE, Alliance, Ohio., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Aug. 11, 1915. Serial No. 44,858. (Cl. 213—65.)

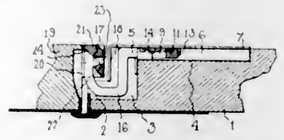
1. In a car coupler, the combination of a knuckle and attaching lugs, said parts having coöperating reinforcements providing vertical abutments, the abutments on the knuckle and lug being in engagement in an extreme position of the knuckle, said knuckle and one of said lugs being provided with openings adjacent to the abutments whereby to permit the escape of accumulated dirt.



2. A car coupler knuckle having a pivot pin opening and a pivot pin reinforcement, and also provided with an opening extending through the knuckle with an upper portion of said opening adjacent an end of the reinforcement to permit the escape of foreign matter downwardly through said opening.

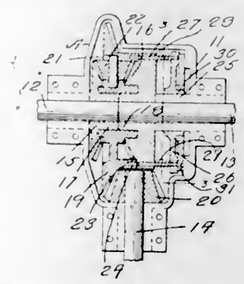
3. A car coupler head having an attaching lug provided with a knuckle pin opening and a reinforcement, there being an opening extending through the lug adjacent one end of the reinforcement.

1,173,441. AUTOMOBILE DOOR-LOCK. OSCAR KNOPF, Flint, Mich. Filed Oct. 30, 1915. Serial No. 58,747. (Cl. 70—42.)



A latch mechanism comprising a face plate adapted for attachment to a door, a casing carried by said face plate, a laterally disposed latch member shiftable in said casing, a pivoted lever carried by said face plate and loosely engaging in the upper edge of said latch member to facilitate shifting said latch member, a hook carried by said latch member and terminating in a beveled bill, a keeper adapted to receive the bill of said hook and allow lateral movement of said hook without said bill becoming disengaged from said keeper, and means carried by said face plate and engaging in the lower edge thereof adapted to hold said latch member normally retracted.

1,173,442. LOCKING DEVICE FOR DIFFERENTIAL GEARS. WILLIAM O. KUHN, Weber, Wash. Filed June 30, 1915. Serial No. 37,357. (Cl. 74—34.)

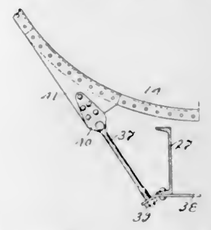


1. The combination with the sectional axle of a vehicle, and a differential gearing for driving the axle section, of locking pins slidably mounted in one of the members of the gearing and engageable with another member to lock said members together, means normally

holding said locking pins out of locking engagement with the second named member, a rotatable shaft, and means interposed between said shaft and pins and operable by the rotation of the shaft to move the pins into engagement with the second member.

2. The combination with the sectional axle of a vehicle, and a differential-gearing including an inclosing casing, of locking pins slidably mounted in one of the members of the gearing and engageable with another member to lock said members together, a disk rotatably and slidably mounted within the casing and fixedly secured to said locking pins, a second disk mounted to rotate independently of the first disk and to slide in unison with the latter, means normally holding said disks in position to dispose the locking pin out of engagement with the second named member, lugs on the second disk normally engaged in recesses in the wall of the casing, and means for rotating the second disk whereby the coaction of said lugs with the wall of the casing will move both of the disks bodily in a direction to engage the locking pins with the second named member of the gearing.

1,173,443. TANK-CAR. EDWARD D. LEVY, Springfield, Mo., and HENRY W. JACONS, Topeka, Kans. Filed July 12, 1915. Serial No. 39,311. (Cl. 105—264.)



1. A tank car composed of a series of cylindrical sections, the sides whereof are flanged outwardly, sealing or calking means arranged between the flanged sides of adjacent sections, a portion of said sealing or calking means being extended outwardly beyond the outer periphery of said flanged sides, and means secured to said extended portion whereby the tank car is anchored to the car underframe against sidewise movement.

2. In combination with the center sills of the underframe of a car, a tank car composed of a series of cylindrical sections composed of sheet metal, the sides whereof are flanged outwardly so as to provide circumferentially extending ribs, sealing or calking means intermediate of the flanged portions of adjacent sections, a portion of said calking or sealing means being extended outwardly beyond the periphery of the flanged sides of the sections, and anchoring means secured to said extended portions of the sealing or calking means and to the center sills of the car underframe.

3. In combination with the center sills of the underframe of a car, a tank car composed of a series of cylindrical sections formed of sheet metal, the sides whereof are flanged so as to present outwardly extending circumferential ribs, a segment of one of said sections being formed by an anchor casting and secured thereto, said casting being adapted to extend intermediate of the longitudinal center sills of the car underframe and prevent movement of the tank lengthwise of the car underframe.

4. In combination with the center sills of a car underframe, a tank composed of a series of cylindrical sheet metal sections, the adjacent sides whereof are flanged outwardly so as to present circumferential ribs externally of the tank whereby the respective sections are secured together, one of said sections being provided with an anchor-casting forming a segment of the cylindrical drum or section and provided with outwardly presented flanged portions adapted to be secured to the outwardly presented bent ends of said section, said anchor casting being arranged to extend between the longitudinal center sills of the car, and means arranged intermediate of the ends of said casting and the center sills whereby longitudinal movement of the tank will be prevented.

5. In combination with the longitudinal center sills of a car underframe, a tank composed of a series of cylindrical sections, the sides whereof are flanged outwardly, means whereby the adjacent flanged sides of the respective sections are secured together externally of the tank, an anchor casting adapted to constitute a portion of the bottom of one of said sections, the sides and ends of said casting being flanged outwardly and adapted to be secured to the outwardly presented ends and sides of the sections, said casting being adapted to extend intermediate of the longitudinal center sills of the underframe so as to prevent movement of the tank lengthwise of the underframe, said anchor casting being provided with a valve-seat terminating in a discharge port, and a discharge spout removably secured to said discharge port.

[Claims 6 to 11 not printed in the Gazette.]

1,173,444. HANDLING DEVICE. JAMES MARTIN LOHR, Ithaca, N. Y. Filed Aug. 27, 1915. Serial No. 47,716. (Dedicated to the public.) (Cl. 57—9.)



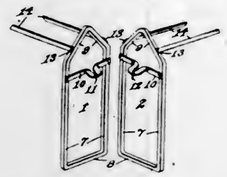
1. A handling device comprising suspension means, a pair of crucible loops flexibly connected therewith, having side portions conforming to the shape of the crucible, upper portions of inverted V-shape and inclined to the general plane of the loops, and unitary operating means pivotally connected with each of the loops between the point of suspension of said loops and the top of the crucible for adjusting and latching said loops and moving the device as a whole.

2. A handling device comprising suspension means, a pair of crucible loops, flexibly connected therewith, having side portions conforming to the shape of the crucible, upper portions of inverted V-shape and inclined to the general plane of the loops, and operating elements pivotally connected with each of the loops and having pivotal and interlocking engagement with each other.

3. A handling device comprising a pair of crucible loops having bottom, side and top portions, suspension means therefor, brace bars extending across each of the engaging members and having their ends attached to the opposite side portions thereof, coöperating interlocking elements pivoted on each of said brace bars, one of said elements terminating in a handle bar.

4. A handling device comprising a pair of open object-engaging members, suspension means pivotally engaging the central top portions of said members, brace bars extending across each of the engaging members near the upper central portions thereof, an operating link pivoted centrally upon one of said brace bars and an operating lever pivoted centrally upon the other brace bar, a pivot pin connecting the said link and lever, a notched segment on said link, and a spring-pressed locking bar on said lever for coöperation with said notched segment to latch the engaging members in open or closed position.

1,173,445. HANDLING DEVICE. JAMES MARTIN LOHR, Ithaca, N. Y. Filed Aug. 27, 1915. Serial No. 47,717. (Dedicated to the public.) (Cl. 57—9.)



1. Crucible tongs consisting essentially of two loops of heat-resisting material suspended on a suitable bar of heat-resisting material for lifting a cylindrical crucible from the bottom, substantially as described.

2. Crucible tongs consisting essentially of two loops, suspended on a suitable bar and having a locking device for lifting a cylindrical crucible from the bottom, all of heat-resisting material, substantially as described.

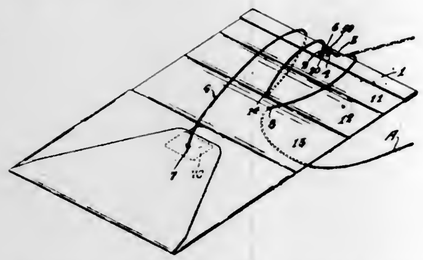
3. Crucible tongs consisting essentially of two loops, suspended on a suitable bar, with suitable locking device, all of heat-resisting material, and handles of low heat conductivity, for lifting a cylindrical crucible from the bottom, substantially as described.

4. Crucible tongs for use on a cylindrical or tapered crucible, consisting essentially of two loops pivoted together and having a locking device of heat-resisting material, with heat insulated handle, for lifting the crucible from the bottom, substantially as described.

5. A handling device comprising a pair of object-engaging members having bottom, side, and top portions, suspension means flexibly engaging said top portions, and interlocking means near the upper parts of said side portions for maintaining said members in gripping position.

[Claims 6 to 16 not printed in the Gazette.]

1,173,446. SAFETY-ENVELOP. CARL N. LOVEN, Aberdeen, Wash. Filed Apr. 7, 1915. Serial No. 19,646. (Cl. 229—77.)



1. A safety envelop comprising a body and a flap secured thereto, and having a string secured in the body of the back and passing thence to and a plurality of times through the outer margin of the flap to form a loop therein and then between said loop and the adjacent surface of the flap.

2. A safety envelop comprising a body and a flap secured thereto, and having a reinforcement at its outer margin provided with three holes therethrough, a string secured to the body of the back and passing thence successively through two of the holes of the said reinforcement to form a loop and then through the third hole and between the loop therein and the adjacent surface of the flap.

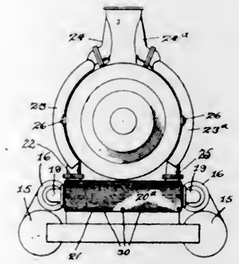
3. A safety envelop comprising a body and a flap secured thereto, and having a string secured in the body of the back and passing thence to and a plurality of times through the outer margin of the flap to form a loop therein, and then between the said loop and the adjacent surface of the flap and finally through the flap from its inner to its outer side.

4. A safety envelop comprising a body and a flap secured thereto, and having a string secured in the body of the back and passing thence to and a plurality of times through the outer margin of the sealing flap to form a loop and then between said loop and the flap, the flap being then folded to hide said loop, and a seal retaining said parts in folded position.

5. A safety envelop comprising a body and a flap secured thereto, and having a string secured in the body of the back and passing thence to and a plurality of times through the outer margin of the sealing flap to form a loop and then under said loop, the flap being folded to hide the loop and the end of the string passed outside the folds.

[Claims 6 to 11 not printed in the Gazette.]

1,173,447. MUFFLER FOR LOCOMOTIVES AND THE LIKE. HELON B. MACFARLAND, Chicago, Ill. Filed July 15, 1914. Serial No. 851,025. (Cl. 121—116.)



1. In a locomotive provided with means for inducing draft and having steam-chests with enlarged exhaust ports, the combination of means having passages extending lengthwise thereof, the ends of said means being connected with the exhaust ports of oppositely disposed steam-chests, foraminated partitions arranged transversely of the passages at spaced intervals apart, and means connected with the outlet ends of said passages for discharging the exhaust steam at a point above the locomotive.

2. In a locomotive provided with means for inducing draft and having steam-chests with enlarged exhaust ports, the combination of means arranged transversely of the locomotive and having passages extending lengthwise thereof, means for effecting communication between the steam-chests and the adjacent ends of said passages whereby the steam will be conveyed to the opposite side of the locomotive from which it exhausts, foraminated partitions arranged at spaced intervals in said passages, the ends of the passages opposite to those receiving the exhaust steam being provided with discharge openings, and means for discharging the exhaust steam at a central point above the locomotive.

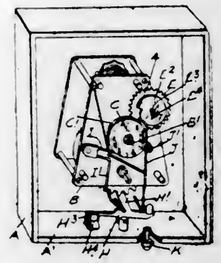
3. In combination with the steam-chests of a locomotive, means provided with elongated passages provided with foraminated partitions, one end of each passage being arranged in communication with the exhaust port of the adjacent steam chests while the other end of each passage is provided with a discharge opening, and means for conveying the steam from the discharge openings of said passages to a point located above the locomotive.

4. In combination with the steam-chests of a locomotive, means arranged transversely of the locomotive and provided with a pair of passages extending lengthwise thereof, one end of each passage being arranged in communication with the exhaust port of the adjacent steam-chest while the other end of each passage is provided with a discharge opening foraminated partitions arranged at spaced intervals in each of said passages, and means connected with the discharge opening of each passage and extending upwardly so as to discharge the steam at a point above the locomotive.

5. In combination with the steam-chests of a locomotive, means having passages extending lengthwise thereof, means for effecting communication between the exhaust ports of the steam-chests and the adjacent end of said passages, foraminated partitions arranged transversely of the passages at spaced intervals apart, one wall of said means being removably secured in place so as to permit access throughout the length of said passages, and means connected with the discharge ends of said passages for conveying the steam to a point above the locomotive.

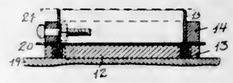
[Claim 6 not printed in the Gazette.]

1,173,448. TIME-CONTROLLED AUTOMATIC SWITCH. ROBERT MCKNIGHT, Sarnia, Ontario, Canada. Filed June 19, 1913. Serial No. 774,692. (Cl. 161—27.)



In a time controlled automatic switch, clock mechanism having the usual minute hand shaft and hour hand shaft, a switch provided with an operating arm, a pair of switch-operating spring held levers spring-held normally toward the operating arm of the switch and located at each side of such arm, a stud shaft carried by the clock mechanism, a gear mounted thereon, a train of gears connecting the minute shaft with the gear carried by the stud shaft, a sleeve carried by the minute shaft, a pointer carried by the sleeve, a cam and dial frictionally held upon said sleeve, and with which one of the levers coacts, there being gear connection between the sleeve and the train of gears leading to the stud shaft, a cam frictionally mounted upon the hub of the gear mounted on the stud shaft and with which the upper end of the other of the aforesaid lever members co-acts, a pointer mounted on the hub of the gear mounted on the stud shaft and a stationary dial co-acting with the pointer, as and for the purpose specified.

1,173,449. MOLD FOR MAKING INNERSOLES. CONRAD B. MANSBACH, Brockton, Mass., assignor of one-half to Frank L. Price, Brockton, Mass. Filed May 21, 1915. Serial No. 29,503. (Cl. 12—21.)

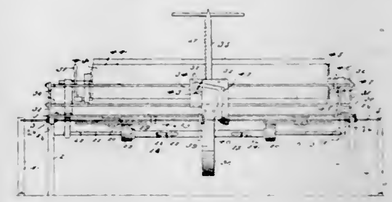


1. A right and left inner sole mold, comprising a female mold and templet member composed of a reversible flat-sided sole-shaped bed-plate having a slot extending through it from side to side and continuously from a point at the heel portion near one edge to a point at the heel portion near the opposite edge, said slot constituting a mold cavity, the margin of said plate constituting a templet, and a male member composed of a holder formed as an open, sole-shaped frame, and narrow elongated flanges projecting from opposite sides thereof, the flange being formed to enter said cavity, one edge of the flange constituting the acting portion and the opposite edge the pressure-receiving portion of the male mold, said bed-plate and holder being reversible to adapt the mold to either right or left soles.

2. In an inner sole mold, a male member composed of a holder formed as an open sole-shaped frame, and an elongated metal strip bearing on the inner margin of the frame and projecting from both sides thereof, the frame being provided with an adjustable connection, between its side portions, whereby its width may be varied.

3. An inner sole mold, comprising a female member composed of a flat-sided plate having a slot extending through it from side to side and constituting a mold cavity adapted to form ribs on both right and left soles, and a male member composed of an open sole-shaped frame having narrow elongated flanges formed to enter said slot, said male member being provided with duplicate embossing dies projecting from its opposite sides, and the female member being provided with means permitting bosses formed on either a right or a left sole to project into said female member.

1,173,450. COPY-HOLDING POINTOGRAPH. LOUIS T. MATHEWS, San Antonio, Tex. Filed Nov. 26, 1912. Serial No. 733,676. (Cl. 120—32.)



1. In a writing machine provided with a movable carriage, the combination of a platform rigid with said machine, copy-holding members stationary on said platform, a movable indicator operatively connected to and actuated by said movable carriage to move from word to word, means for causing said indicator to travel a greater or less distance during each movement thereof, and means for moving said indicator from line to line.

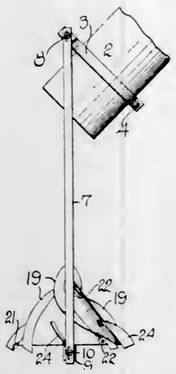
2. In a writing machine provided with a movable carriage, the combination of a platform rigid with said machine, copy-holding members stationary on said platform, a movable indicator operatively connected to and actuated by said movable carriage to move from word to word, and means for varying the speed of the indicator.

3. In a writing machine provided with a movable carriage, the combination of a platform rigid with said machine, copy-holding members stationary on said platform, a movable indicator operatively connected to and actuated by said carriage to move the indicator from word to word, and gearing mounted on the underside of said platform for varying the speed of the movement of said indicator.

4. In a writing machine provided with a movable carriage, the combination of a platform rigid with said machine, copy-holding members mounted on said platform, a movable indicator mounted on said platform, pulley wheels mounted on the underside of said platform and a belt attached to both ends to said movable carriage and running on said pulley wheels for driving the same, a pair of friction disks and shafts therefor, one of said disks being driven by said pulley gearing, friction pulleys driven by said driven disk for driving the other disk, pulley gearing driven by the last mentioned disk and operatively connected to said indicator for moving the indicator, and means for shifting said friction pulleys to different parts of said disks to vary the speed of movement of said indicator.

5. In a writing machine provided with a movable carriage, the combination of a platform rigid with said machine, a copy-holding member stationary on said platform, a movable indicator operatively connected to and actuated by said movable carriage to move from word to word, and means for moving said indicator from line to line.

1,173,451. DISTRIBUTER FOR FEED-SPOUTS. FRED C. MATTHEWS, Orangeville, Ohio. Filed May 3, 1915. Serial No. 25,573. (Cl. 193—19.)

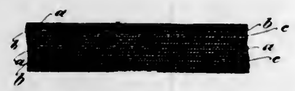


1. A distributing device for elevator discharge pipes comprising a supporting frame including a clamp adapted to detachably engage a discharge pipe, and members depending from and adjustable with relation to the clamp, a cross bar carried by said members and adjustable with relation thereto, and a rotatable distributer mounted upon the cross bar.

2. A distributing device for elevator discharge pipes comprising pipe engaging sections, oppositely disposed rods depending from said sections and angularly adjustable with relation thereto, a cross bar carried by said rods and angularly adjustable with relation thereto, and a distributing member carried by said cross bar and including a conical body having exterior helically arranged blades.

3. A distributing device for discharge pipes, comprising a supporting frame including a sectional clamp adapted to detachably engage the discharge pipe, side bars pivotally connected at one end to said clamp, a cross bar having an angularly adjustable connection with the other ends of the side bars, and a distributer rotatably mounted upon said cross bar.

1,173,452. ELECTRIC CONDENSER AND PROCESS OF MAKING THE SAME. MAX MEIROWSKY, Porz-on-the-Rhine, Germany. Filed Nov. 30, 1914. Serial No. 874,893. (Cl. 250—41.)

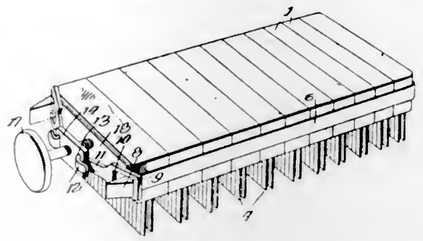


1. An electric plate condenser characterized by the dielectric consisting of layers of paper and synthetic resin arranged alternately and consolidated together.

2. A process for making an electrical plate condenser consisting in coating glazed paper with synthetic resin, drying said coating of resin, applying plates of metal alternately with the sheets of resin coated glazed paper and consolidating said glazed paper and resin, with said metallic plates by subjecting the same to the action of pressure and heat.

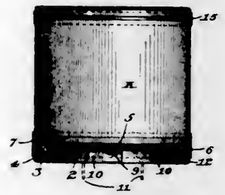
1,173,453. BRUSH. ENOCH MILLER, Export, Pa. Filed Aug. 2, 1915. Serial No. 43,207. (Cl. 15—32.)

1. A brush of the class described including a frame open at one end, a back comprising a plurality of sections assembled within the frame, abrading elements carried by the sections, a plate located at the open end of the frame, connection between the plate and the sides of the frame at the said open end thereof, and a binding screw threaded through the said plate and adjustable to bind the sections together within the frame.



2. A brush of the class described including a frame open at one end, a plurality of back sections removably fitted within the frame and abutting against each other, the said sections being provided in their ends with recesses receiving the sides of the said frame, a plate arranged at the open end of the frame, connection between the plate and the sides of the frame at the open end thereof, a bearing plate arranged at the open end of the frame, and a binding screw threaded through the first mentioned plate and bearing against the said bearing plate and adjustable to bind the sections together within the frame.

1,173,454. CONTAINER AND HEATING CAN. MEIJI NAKAMIZO, Los Angeles, Cal. Filed Nov. 1, 1915. Serial No. 59,032. (Cl. 126—262.)



1. The combination with a can of the character described, of a plate secured to the bottom of the can having an annular channel formed in its outer edge which is spaced from the can bottom to form an annular opening between the bottom of the can and the channel.

2. The combination with a can of the character described, of a plate secured to the bottom of the can having an annular channel formed in its outer edge which is spaced from the can bottom to form an annular opening between the bottom of the can and the channel, and a removable sealing member inclosing said annular opening.

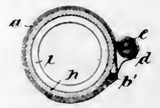
3. In combination with a can, a plate having an integral central upraised part secured to the can bottom and having its outer portion extending upwardly toward the can to form a channel in conjunction with said central part.

4. In combination with a can, a plate having a central upraised part the top of which is secured to the can bottom and having its outer portion extending upwardly toward the can to form a channel in conjunction with said central part, said upwardly extending portion of the can being substantially alined with the can sides and having a free edge spaced from the can bottom, and a seal secured to said upwardly extending portion and to the can and extending over the said space between the can bottom and said plate portion.

5. In combination with a can, a member having a central struck-up part secured to the can bottom and having its outer part bent up toward the can bottom and spaced from the latter to form a channel.

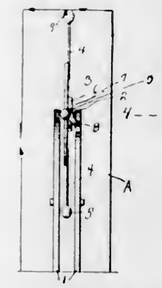
[Claims 6 to 8 not printed in the Gazette.]

1,173,455. CLAMP. FRITZ NEPPACH, Stuttgart-Cannstatt, Germany. Filed Feb. 12, 1915. Serial No. 7,854. (Cl. 137—28.)



A clamp comprising a U-shaped member, having eyed shanks, a strap doubled at one of its ends over the cross bar of said member, a screw bolt engaging the eyed shanks, and having a longitudinal slot adapted to be engaged by the other end of said strap, and a locking nut fitted upon the bolt.

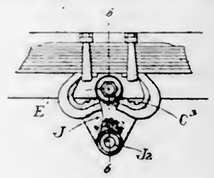
1,173,456. TARGET. JOHN F. NEUMANN, Anamosa, Iowa. Filed Sept. 4, 1913, Serial No. 788,138. Renewed Dec. 7, 1915. Serial No. 65,637. (Cl. 124—15.)



1. In a target, the combination with a front leg and a rear leg constituting a support, a shaft journaled in said legs, a revolving wheel mounted upon the shaft, a series of arms radiating from the wheel, a disk located at the back of the wheel, a series of notches being formed in the periphery of the disk, a spring pawl fastened to the rear leg and adapted to catch at its free end in said notches, and an object constituting the shooting mark carried at the free end of each arm.

2. In a target, the combination with a support, of a revolving wheel carried thereby, a series of arms radiating from the wheel, an object constituting a mark to be shot at carried at the free end of each arm, a disk arranged concentric with and at the side of the wheel and having a series of notches therein, and a spring pawl adapted to engage with the notches in the disk to stop the wheel at every quarter revolution of the latter.

1,173,457. SPRING FOR USE ON VEHICLES. OLIVER DANSON NORTH, Chelsea, London, England. Filed Oct. 10, 1914. Serial No. 866,017. (Cl. 267—27.)

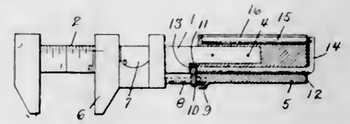


1. The combination of a vehicle frame, an axle, a cantaliver spring having its one end attached to the said frame and its other end to said axle, a fulcrum pin for said spring intermediate its ends, a curved part carried by said spring, a movable part mounted on said fulcrum pin and adapted to move on said curved part, and a swinging link pivoted to said frame and carrying said fulcrum pin.

2. The combination of a vehicle frame, an axle, a cantaliver spring having its one end attached to said frame and its other end to said axle, a fulcrum pin for said spring intermediate its ends, a curved rack carried by said spring, a rotatable toothed wheel on said fulcrum pin bearing on said rack, and swinging links pivoted to said frame and carrying said fulcrum pin.

3. The combination of a vehicle frame, an axle, a cantaliver spring having its one end attached to said frame and its other end to said axle, a fulcrum pin for said spring intermediate its ends, a curved rack carried by said spring, a rotatable toothed wheel on said fulcrum pin bearing on said rack, a bracket attached to said frame, a pin mounted in said bracket and swinging links carrying said fulcrum pin and adapted to turn about said pin.

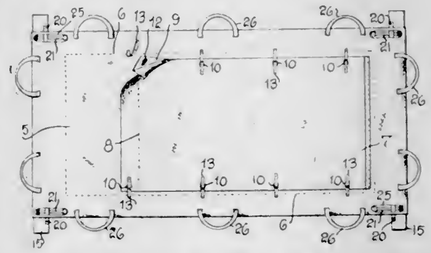
1,173,458. WRENCH. BUNNOSUKE OMOTO, Granger, Wyo. Filed Nov. 15, 1915. Serial No. 61,564. (Cl. 81—171.)



1. In a wrench of the class described, the combination with a shank having a jaw on one end thereof, and a handle on the other end, of a movable jaw on said shank, a screw rotatably mounted in said handle and in screw threaded engagement with the jaw, a shaft rotatably mounted in the handle, intermeshing gears on the said shaft and screw, and a locking handle hinged to the end of the said shaft, the first mentioned handle having a chamber therein for the reception of the locking handle.

2. In a wrench of the class described, the combination with a shank having a jaw on one end thereof, of a movable jaw on the shank, means including a shaft for moving said jaw and a locking handle hinged to the end of the shaft, the said wrench including also a chamber for receiving the locking handle.

1,173,459. STRETCHER. LOTTIE M. PALMER, Wyoming, Del. Filed Oct. 4, 1915. Serial No. 54,012. (Cl. 21—80.)



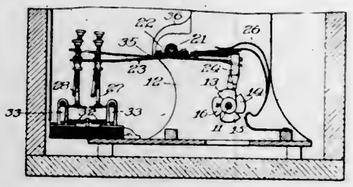
1. In a stretcher, a body sheet, a cover sheet consisting of a single length of material permanently secured along one of its end edges to the body sheet, the longitudinal edges of said cover sheet being provided with two sets of fastening elements, and a series of fasteners secured to the body sheet adjacent each of its longitudinal edges for connection to either series of fastening elements along the longitudinal edges of the cover sheet.

2. In a stretcher, a body sheet, a cover sheet consisting of a single length of material permanently secured along one of its end edges to the body sheet, the longitudinal edges of the cover sheet being folded to provide unattached flaps, and means whereby the flaps may be detachably secured to the body sheet, or said cover detachably secured to the body sheet at points inwardly of said flaps.

3. In a stretcher, a body sheet, a cover sheet permanently secured at one of its ends to the body sheet, the longitudinal edges of said cover sheet being folded to provide unattached flaps, fastening elements secured upon said flaps, a second series of fastening elements secured upon the cover sheet, and means secured to the longitudinal edges of the body sheet for connection to either series of the fastening elements.

4. In a stretcher, a body sheet provided along its longitudinal and end edges with spaced hand loops, a cover sheet permanently fixed at one of its ends to the body sheet and provided along each of its longitudinal edges with two series of spaced fastening elements, and complementary fastening elements secured to the body sheet along each of its longitudinal edges for connection to either series of fastening elements on the cover sheet.

1,173,460. ELECTRIC SWITCH. CARL A. PALMGREN, Chicago, Ill. Filed July 2, 1915. Serial No. 37,643. (Cl. 161—27.)



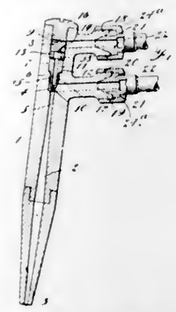
1. In a device of the class described, the combination of a plurality of pairs of pivoted contact pieces, each pair of which is adapted to be connected to a heat measuring device, a single pair of pivoted contact pieces adapted to be connected to a recording device, and means for moving said first-mentioned pairs of contact pieces into engagement with said second contact pieces, said means including a time-controlled shaft and spaced cams on said shaft so arranged as to bring said pairs of contact pieces into action in sequence, substantially as described.

2. In a device of the class described, the combination of a plurality of pairs of pivoted contact pieces, each pair of which is adapted to be connected to a heat measuring device, a single pair of pivoted contact pieces adapted to be connected to a recording device, a time-controlled shaft adapted for one complete rotation during each hour, a cam on said shaft for each of said plurality of pairs of contact pieces, the total effective area of said cams being 360°, said cams being spaced on said shaft and angularly spaced, whereby each of said plurality of pairs of contact pieces is actuated once during each hour, the length of actuation being controlled by the number of these measuring devices which are served, substantially as described.

1,173,461. WELDING-TORCH. MARION STUART PLUMLEY, Pittsburgh, Pa., assignor to Superior Oxygen Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 24, 1914. Serial No. 878,841. (Cl. 158—109.)

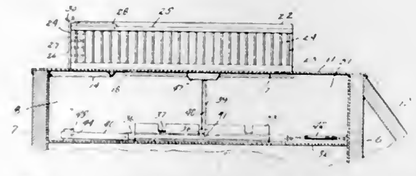
1. A welding torch head having a longitudinal mixing chamber, an outlet from the mixing chamber at one end of the head, an intermediate chamber at and opening into the inner end of the mixing chamber, a shoulder surrounding said intermediate chamber, an injector seated on said shoulder and extending through said chamber and delivering into the mixing chamber, said body having a threaded socket in rear of the injector, a perforated plug threaded into said socket and engaging the rear of the injector, and a closure for the socket, said body having inlets leading respectively to said intermediate chamber and said socket.

2. A welding torch head having a longitudinal mixing chamber, the walls of said chamber being constricted toward each end thereof, an outlet from the mixing chamber at one end of the head, an intermediate chamber at and opening into the inner end of the mixing chamber, an injector seated in said intermediate chamber and having its nozzle delivering into the mixing chamber, a threaded socket in rear of the injector, a closure plug threaded



into the socket and spaced from the injector, and inlets leading respectively to said intermediate chamber and said socket.

1,173,462. SELF-SETTING RAT-TRAP. CHARLES W. RAYNER, Aurora, Ill. Filed Mar. 17, 1915. Serial No. 14,993. (Cl. 43—24.)



1. In a trap, the combination with a casing, of a main trap door pivoted thereto and urged to closing position, a rod pivoted to the trap door, a guide way for the free end of the rod, a releasing member pivoted adjacent the trap door, a bar slidable across the guideway for holding the rod against movement to release the trap door and resiliently urged to such holding position, and means connecting the releasing member and the bar for retracting the same to release the trap door.

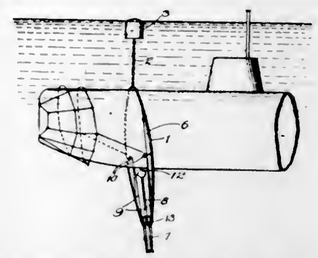
2. A trap of the class described comprising a main casing, a trap door pivoted at the top of the casing, a releasing platform pivoted at the end of said trap door, a partition disposed longitudinally in the casing adjacent the pivotal connection of the trap door, and provided with a vertical slot, a rod pivoted to the trap door and slidable through said slot, a horizontal partition in the casing, a guide way on said partition, a bar slidable in said guide way, and adapted to be engaged by the rod, the said bar being provided with a cutaway portion for releasing said rod, a rod secured to the releasing platform and pivotally connected with the bar for retracting the same, and a spring secured to the bar and normally urging it to holding position.

1,173,463. SUBMARINE DESTROYER. JESSE W. RENO, New York, N. Y. Filed July 26, 1915. Serial No. 41,816. (Cl. 102—3.)

1. In a submarine destroyer the combination with a ring and means for supporting said ring in the water, of an explosive bomb secured to said ring and means connected with said bomb and said ring adapted to explode said bomb when a body enters said ring, said means being inoperative by contact with bodies external to said ring.

2. In a submarine destroyer the combination with a ring and a float attached thereto, of movable members attached to said ring and adapted to be engaged by a body entering said ring, a bomb carried by said ring and connections between said bomb and said movable members

by means of which said bomb is exploded when a body enters said ring.



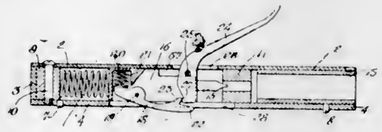
3. In a submarine destroyer the combination with a ring and a float attached thereto, of a net secured across the face of said ring, an inwardly movable bomb holder carried by said ring and connection between said holder and said net adapted to move said holder toward the center of said ring.

4. In a submarine destroyer the combination with a ring and a float attached thereto, a net secured to said ring by means of releasable connections, a vertically movable bomb holder attached to said ring and flexible connections between said bomb holder and said net adapted to raise said bomb holder when said net is moved away from the plane of said ring.

5. In a submarine destroyer the combination with a ring provided with vanes adapted to retard its movement in water, of a movable member adapted to be engaged by a body entering said ring, a movable bomb holder mounted on said ring and connections between said movable member and said movable bomb holder.

[Claim 6 not printed in the Gazette.]

1,173,464. POCKET-FIREARM. LEO LOUIS ROGERS, Boston, Mass., assignor to Edmund C. Moore, New York, N. Y. Filed Sept. 23, 1914. Serial No. 863,189. (Cl. 42—53.)



1. A device of the class described, having in combination, a pocket knife handle with an intermediate partition, a knife blade in one side of said partition and a cartridge receiving barrel pivoted at the other side of said partition within the knife handle, a spring actuated firing pin carried by said knife handle, and a combined trigger and firing lever constructed and arranged to set and release the firing pin by continuous movement in the same direction, caused by the compressive action of the hand of the user.

2. A combined pocket knife and fire-arm, comprising a pocket knife casing, knife blades in one side thereof, a barrel pivoted between the casing sides, said barrel being adapted to receive a cartridge and to be locked in its longitudinal firing position between the sides to which it is pivoted, a spring actuated firing pin to discharge said cartridge, and a lever pivotally mounted in the casing and having its shorter arm extending inwardly to engage said firing pin and to operate the same to fire the cartridge when the outwardly projecting longer arm of the lever is moved downwardly against that side of the casing in which it is pivoted by a compressive action of the operator's hand.

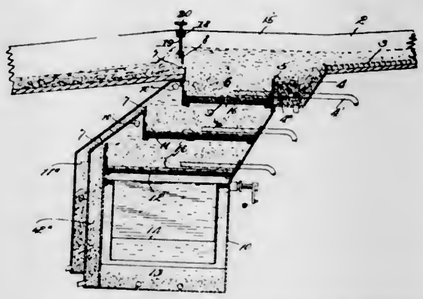
3. A device of the kind described, comprising a pocket knife handle, a barrel to receive a cartridge pivoted between the sides of said handle, a firing pin therefor carried by a sliding block moving in contact with the sides of the handle, a spring to actuate said sliding block, and a pin to fire the cartridge carried by said block, a lever pivoted in the sides of the handle, having one arm extending beyond the handle, and the other arm extended in position to engage said block when the lever is compressed toward the handle, and spring actuated means on said block, to permit the lever to be raised without engaging the block, and to catch said lever and slide the block when the lever is pressed toward the handle, and means to release the block and firing pin to discharge a cartridge when the lever is pressed against the side of the handle in which it is pivoted.

4. In a pocket knife of the character described having a handle, a barrel to receive a cartridge transversely pivoted between the sides of said handle, a firing pin therefor carried by a sliding block movable within said handle, a spring to actuate said block and pin to fire the cartridge, a lever pivoted in the handle, a spring pressed trigger carried by said block and pivotally held therein, and means on said trigger to be released from the lever when said block is moved against the tension of the spring and adapted to be released when it reaches the limit of its rearward movement, whereby the block carrying the trigger and firing pin is moved by said spring to discharge the cartridge.

5. A device of the class described, comprising a handle, a barrel to receive a cartridge pivoted therein, a firing pin therefor carried by a sliding block movable within said handle, a spring to actuate said block and pin to fire the cartridge, a lever pivoted in the handle and normally in horizontal contact therewith having a catch on its inner end, spring actuated means on the sliding block permitting said lever to be swung one way of the block and to engage therewith when returned to normal position and force the block backwardly, said means automatically releasing from the lever when the limit of rearward movement is reached, whereby the spring will act to slide the block within said handle and force the pin to fire a cartridge.

[Claims 6 to 8 not printed in the Gazette.]

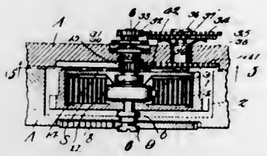
1,173,465. DREDGE SLUICE-JIG. DONALD STEEL, Palo Alto, Cal. Filed Dec. 24, 1914. Serial No. 878,865. (Cl. 83—58.)



1. In combination, a sluice, a concentrating apparatus interposed therein for segregating the solids and values from the feed material, a trap to check the flow of material thereto and having means for supplying a rising stream of water for gently feeding part of the solids to said apparatus, an adjustable gate on the discharge side of said apparatus above the over-flow level of the trap for regulating the flow and depth of quiet water above said apparatus, and a dam below said gate to regulate the depth of solids held in the apparatus.

2. In a jigging apparatus, a screen, means for feeding material to said screen, a trap located in said feeding means below the level thereof at one side of said screen for checking the flow of material to said screen, and an adjustable gate for regulating the discharge from the screen, said gate extending above the overflow level of said trap.

1,173,466. WINDING-INDEX FOR INDICATOR MECHANISM FOR TIMEPIECES, MUSICAL AND OTHER MECHANISMS. CHARLES TESKE, Wildrose, N. D. Filed Apr. 18, 1914. Serial No. 832,934. (Cl. 58—85.)



1. The combination with a spring motor, and means for winding the spring thereof, of an indicator mechanism for the condition of the spring connected for movement in one direction during the winding of the spring and for movement in the other direction during the unwinding of the spring, such indicating mechanism, including a gear connected to the driving portion of the spring, a clutch connected to the winding portion of the spring, a shaft, a gear connected to one end thereof and in mesh with the first menfioned gear, two gears mounted freely on the other end of said shaft, a resilient means for connecting the last two gears to the shaft, whereby the gears are permitted to rotate with the shaft when the gear is operated by the spring, a gear controlled by the clutch for operating the two gears, and a hand carrying gear operated by one of the last two gears, whereby when the spring is being wound, the latter gear is moved in one direction and is moved in the opposite direction when the spring is unwinding.

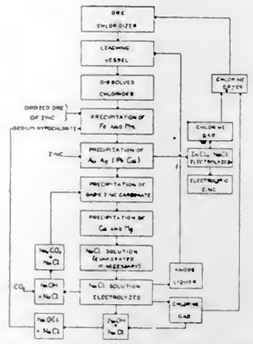
2. The combination with a main spring and barrel, and means for winding the same, of an indicator for the main spring, including a normally open clutch, means connected to the winding arbor for closing the clutch as the spring is being wound, a shaft, coöperable means carried by the barrel and shaft, whereby the shaft is rotated as the spring is unwinding, a hand carrying arbor, means carried by the shaft and connected to the clutch, whereby motion in two directions is imparted to the hand carrying arbor, said last means including two gears freely rotatable upon thte shaft, one of said gears being engageable with the clutch, and the other with the hand carrying arbor, and a spring interposed between the gears and shaft for holding the gears fixed to the shaft when the arbor is being operated by the winding barrel.

3. The combination with a spindle, and a barrel rotatable thereon, of a pointer operating gear, a second gear meshing with the said gear and journaled for rotation upon said spindle, the second gear having a clutch member, a second clutch member feathered upon the spindle and coöperating with the first mentioned clutch member, spring means for separating said clutch members, cam means for moving the second clutch member into engagement with the first mentioned clutch member when the spindle is rotated, a shaft operatively connected to the barrel, the first mentioned gear being mounted for rotation upon said shaft, and friction means between said shaft and first mentioned gear tending to cause them to rotate together.

4. In a mechanism of the character described, a spring winding member, a spring actuated member, a pointer, an operative connection between the pointer and one of said members including a normally open clutch, and means for closing said clutch when said member is rotated, and means operated by the other member for actuating the pointer when the clutch is open.

5. In a mechanism of the character described, a spring winding member, a spring actuated member, a pointer, an operative connection between the pointer and one of said members including a normally open clutch, and means for closing the clutch when said member is rotated, and an operative connection between the pointer and other member including friction means permitting of slippage when the clutch is closed.

1,173,467. PROCESS OF TREATING ZINC ORES. COURT C. TITUS and WILLIAM J. BARENSCHEER, Helena, Mont., assignors to New England Electro-Chemical Metals Company, Boston, Mass., a Corporation of Maine. Filed Aug. 31, 1914. Serial No. 859,307. (Cl. 204—15.)



1. In a cyclical process of treating complex ores containing zinc, the steps which consist in chloridizing the ore, extracting the soluble chlorids, precipitating the metal contents of the solution with ultimate replacement of their chlorids by sodium chlorid, electrolyzing the resulting sodium chlorid solution, and applying the evolved chlorin to the treatment of fresh batches of ore entering the cycle.

2. In a cyclical process of treating complex ores containing zinc, the steps which consist in chloridizing the dry ore in presence of sodium chlorid, extracting the soluble chlorids, precipitating the metal contents of the solution with ultimate replacement of their chlorids by sodium chlorid, electrolyzing the resulting sodium chlorid solution, and applying the evolved chlorin to the treatment of fresh batches of ore entering the cycle.

3. In a cyclical process of treating complex ores containing zinc, the steps which consist in chloridizing the ore, extracting the soluble chlorids by means of a solution containing sodium chlorid, precipitating the metal contents of the solution with ultimate replacement of their chlorids by sodium chlorid, electrolyzing the resulting sodium chlorid solution, and applying the evolved chlorin to the treatment of fresh batches of ore entering the cycle.

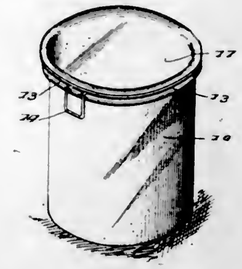
4. In a cyclical process of treating complex ores containing zinc, the steps which consist in chloridizing the ore, extracting the soluble chlorids, precipitating the metal contents of the solution with ultimate replacement of their chlorids by sodium chlorid, electrolyzing the resulting sodium chlorid solution, applying the evolved chlorin to the treatment of fresh batches of ore entering the cycle, and applying the chlorinated anode liquor as a solvent for the chlorids derived from said ore.

5. In a cyclical process of treating complex ores containing zinc, the steps which consist in chloridizing the dry ore in presence of sodium chlorid, extracting the soluble chlorids, precipitating the metal contents of the solution with ultimate replacement of their chlorids by sodium chlorid, electrolyzing the resulting sodium chlorid solution, applying the evolved chlorin to the treatment of ore entering the cycle, and applying the chlorinated anode-liquor as a solvent for the chlorids derived from said ore.

[Claims 6 to 10 not printed in the Gazette.]

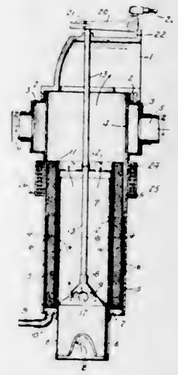
1,173,468. SLOP-JAR ATTACHMENT. FRANK J. TRAFTON, Jefferson, Iowa. Filed Aug. 18, 1914. Serial No. 857,402. (Cl. 220—98.)

1. A device of the class described comprising a rigid body, a supporting member of foraminous material fitting within the rigid body and having handles extending above and depending externally of the rigid body, and a receiver of flexible material within said supporting member and removable therewith from the rigid body.



2. In a device of the class described, a rigid outer body having an outturned rim, a body of foraminous material within the outer body and having an outturned rim engaging over the outturned rim of the rigid body, combined lifting and holding members swinging from the rim of said foraminous body and engaging over the rim of the outer rigid body, and a receptacle of flexible material engaging within the foraminous body.

1,173,469. CARBURETER. CHARLES E. WHITE, San Francisco, Cal. Filed Apr. 1, 1915. Serial No. 18,491. (Cl. 48—148.)



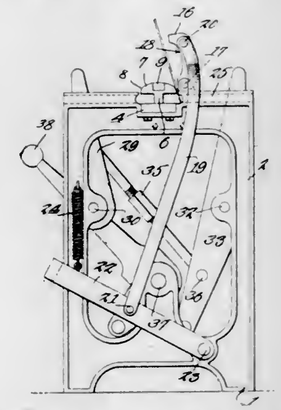
1. In a carbureter, the combination of a heating chamber, a receptacle located below and providing a passage to a wall of said heating chamber, a wick movably mounted within said receptacle and adapted to convey oil into direct contact with the outer surface of a wall of said heating chamber, means for supplying air to the oil vapors, as generated, by said heating chamber, to obtain a highly explosive mixture, means for continually heating said chamber, and means to supply oil to the wick.

2. In a carbureter, the combination of a tube, heating means surrounding a portion of said tube, an annular wick movably mounted within said tube and adapted to convey oil into direct contact with the heated portion of said tube, and means to supply oil to said wick.

3. In a carbureter, the combination of a tube, heating means surrounding a portion of said tube, an annular wick movably mounted within said tube and adapted to convey oil into direct contact with the heated portion of said tube, said wick forming a cylindrical passage, means for supplying oil to said wick, an inner tube forming with the first named tube, an oil receptacle and provided with air inlets at its lower end, whereby air is supplied to said passage, and a valve regulating the supply of said air.

4. A carbureter comprising a cylindrical receptacle, a chamber surrounding the cylindrical receptacle at the upper end thereof, means for heating said chamber, a wick movably mounted within the cylindrical receptacle for bringing oil in direct contact with said chamber, a cylindrical air supply tube extending within said cylindrical receptacle, and having openings therein at its lower end, below the oil chamber, a valve in the cylindrical air supply tube and a rod connecting the valve with a carrier by which the valve may be opened and the wick raised simultaneously.

1,173,470. MACHINE FOR MAKING ROOFING-STRIP. CHARLES A. WIANT, Wellington, Kans. Filed Mar. 4, 1915. Serial No. 12,160. (Cl. 153—3.)



1. In a device for bending material, a support; an anvil carried thereby; opposed jaws movable on the support toward and away from the sides of the anvil; a compression member pivoted to the support and adapted to be swung down upon the anvil and to be swung back from the anvil to define a material receiving opening at one side of the anvil; and a member comprising a substantially horizontal face acting as a stop for the material when the same is inserted into the opening, the said member having a substantially vertical face located to one side of the opening and adapted to direct the material against the stop-face when the material is inserted into the opening.

2. In a device of the class described, a support; a rock shaft journaled on the support; a crank arm carried by the rock shaft; levers fulcrumed on the support; a connection between the crank arm and one lever; an adjustable connection between the levers; jaws slidably mounted on the support and operatively connected with the levers; and an anvil located between the jaws.

3. In a device of the class described, a support; a rock shaft journaled in the support; a crank arm carried by the rock shaft; a pair of levers fulcrumed on the support; an adjustable connection between the levers; an adjustable connection between one lever and the crank arm; a pair of jaws slidably mounted on the support and operatively connected with the levers; and an anvil located between the jaws.

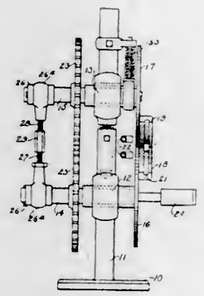
4. In a device of the class described, a support; an anvil carried by the support; jaws slidably mounted on the support and located upon opposite sides of the anvil; means for moving the jaws toward and away from the anvil; a compression member pivoted to the support and adapted to coöperate with the anvil; an actuating member movably mounted on the support; and a link forming an operative connection between the actuating member and the compression member, to move the latter toward and away from the anvil.

5. In a device of the class described, a support embodying side plates; a rock shaft journaled in the side

plates and provided with a handle located between the side plates; a U-shaped lever fulcrumed on the side plates and including an intermediate portion passing beneath the handle; an anvil on the support; opposed jaws coöperating with the anvil; means for operatively connecting the jaws with the rock shaft; a compression member movable with respect to the anvil; and means for operatively connecting the compression member with the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,173,471. COIL-PRESS. NATHAN WILKINSON, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 23, 1910. Serial No. 562,917. (Cl. 153—10.)



1. A coil press comprising a plurality of rotatable members provided with coöperative segmental elements, and means for rotating said members, said segmental elements being provided with recesses that coöperate during rotation of said members to form a recess for the reception of a coil side, whereby said coil side may be given a definite shape during the operation of said press.

2. A coil press comprising a support, shafts mounted in said support, detachable segmental coöperating members mounted on said shafts, the peripheral surfaces of said segmental members being provided with opposed shaping recesses, and means for transmitting power from one shaft to the other to cause a relative movement between said shaping members.

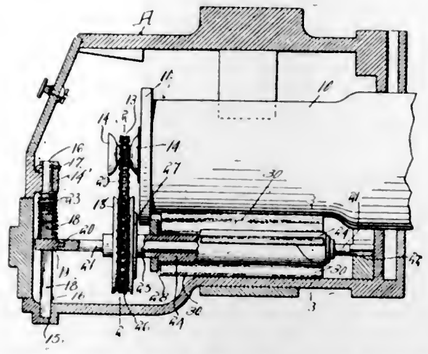
3. A coil press comprising a support, shafts mounted on said support, rotary disks mounted on said shafts, detachable segmental members mounted on said disks, the peripheral surfaces of said segmental members being recessed throughout for the reception of a side of a coil to be shaped, a driving connection between said shafts, and means acting to retain said shafts in proper operative relation one to another, said means comprising bearing elements associated with said shafts, one of said elements being adjustable relatively to another element.

4. A coil press comprising a support, shafts mounted on said support, detachable segmental members given movement by said shafts, at least one of said segmental members being recessed peripherally whereby a shaping recess is formed between said segmental members when the same are in operative relation, and means comprising a spring holding said shaping members in engagement with each other, one of said shafts being loosely mounted in said support to permit bodily movement toward or away from the other shaft.

5. A coil press comprising a supporting frame, driving and driven shafts journaled in said frame, disks mounted on adjacent ends of said shafts and provided with shaping members adapted to coöperate in shaping a coil passed between said members, means engaging one of said shafts adjacent the disk mounted thereon for resiliently urging said shaft toward the other one of said shafts, and adjustable means engaging the other end of each shaft for holding said shafts in spaced relation.

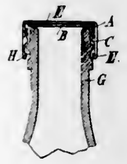
[Claims 6 and 7 not printed in the Gazette.]

1,173,472. JOURNAL-BOX. ALBERT WILLIAMS and SAMUEL M. KILBRIDE, Logan, Mont. Filed Apr. 24, 1915. Serial No. 23,657. (Cl. 64—34.)



The combination with a journal box and an axle journal operatively associated therewith, of a vertical member mounted in the journal box and having a longitudinal slot therein, a non-rotatable shaft having one end slidably engaged in said slot and its other end engaged in the wall of the journal box, a spring encircling the vertical member and constantly tending to move the adjacent end of the shaft away from the journal, a cylinder rotatably mounted on said shaft, wipers carried by said cylinder and adapted to engage the periphery of the journal during rotation of the cylinder, a sprocket wheel fixed on the cylinder, a sprocket wheel fixed on the journal, and a sprocket chain traveling on said sprocket wheel.

1,173,473. BOTTLE-CAP. ROBERT MOISE BENOIT AARONSON, Paris, France. Filed May 26, 1913. Serial No. 770,008. (Cl. 215—13.)

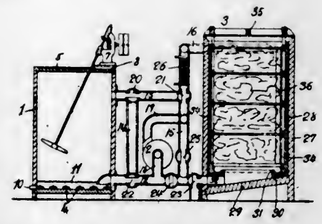


An improved stopper for bottles, jars and the like comprising in combination, a screw threaded cap containing a washer, a sealing band of metal provided with two notches on each border passing beyond the longitudinal axis of the band, and adapted to be automatically torn when the cap is unscrewed for unstoppering the receptacle, substantially as described.

1,173,474. APPARATUS FOR BLEACHING. HANNS R. ANDERS and MAXIMILIAN E. U. SCHOEDLER, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 30, 1912, Serial No. 687,426. Divided and this application filed Apr. 4, 1913. Serial No. 758,826. (Cl. 8—18.)

1. In an apparatus for bleaching and the like a mixing vat, a bleaching vat, a pump and a pipe system consisting substantially of a pipe connecting the lower parts of both the mixing and the bleaching vats, a pipe extending from the upper part of the mixing vat and terminating a short distance from the bleaching vat, a pipe communicating with both the aforesaid pipes adjacent the mixing vat, a pipe communicating with both the first mentioned pipes and the bleaching vat, and pipes between the pump and the pipe system.

2. In an apparatus for bleaching and the like a mixing vat, a bleaching vat, a pump, a pipe system, a three-way cock at each of the two upper pipe joints and at the lower pipe joint adjacent the mixing vat, a three-way cock in the lower horizontal pipe adjacent the bleaching vat, a plain cock in the upper arm and one in the left arm of and adjacent the joint of the lower horizontal pipe and the vertical one extending from the same adjacent the bleaching vat and finally connecting with the bleaching vat at its upper end, and pipes to connect the pump with the pipe-system.



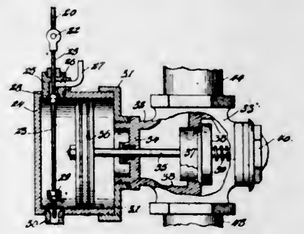
3. In an apparatus for bleaching and the like a mixing vat, a bleaching vat, a pipe system connecting said mixing and said bleaching vats, a pump with connection-pipes to join said pipe system, and means for heating the liquors in the upper part of the pipe connecting by its branches with the upper part of the bleaching vat.

4. In an apparatus for bleaching and the like the combination of a mixing vat, a bleaching vat, a pipe system connecting said mixing and said bleaching vats, a pump with connections to said pipe system, and passage-ways for the liquors through both the front and rear walls of the bleaching vat near the brim of the bleaching vat.

5. In an apparatus for bleaching and the like the combination of a mixing vat, a bleaching vat, a pipe system connecting said mixing and said bleaching vats and a pump with connections to said pipe system, said bleaching vat having its bottom sloping toward the pump and passageways for the liquors through both the front and rear walls of the bleaching vat near the brim of said bleaching vat.

[Claims 6 to 11 not printed in the Gazette.]

1,173,475. MEANS FOR REGULATING THE WATER-SUPPLY OF BOILERS. LEWIS C. ANDERSON, Ehrlich, Wash. Filed Apr. 19, 1913. Serial No. 762,405. (Cl. 137—101.)

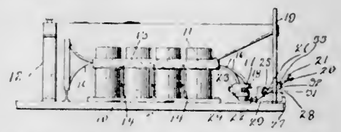


1. In a means for automatically regulating the water supply of boilers, a boiler supply pipe through which water is forced under pressure, a valve casing open to said pipe, a valve seat within said casing, a spring actuated valve normally engaging said seat, a valve stem projecting exteriorly of the casing, a cylinder detachably secured to the valve casing, the valve stem extending into said cylinder, a piston rigid with the valve stem, said piston being movable within the cylinder to actuate said valve against tension of its associated spring, valve seats formed at diametrically opposite points relatively to the cylinder, a steam supply pipe open to said cylinder, valves movable into and out of engagement with the respective valve seats, a valve rod supporting the mentioned valves, one of said valves controlling the steam supply to the mentioned cylinder and the other of the said valves controlling the steam exhaust from said cylinder, and means actuatable by the rise and fall of the water within said boiler to control movement of the mentioned rod.

2. In a means for automatically regulating the water supply of boilers, a boiler supply pipe through which water is forced under pressure, a valve means operable within said supply pipe, a piston for operating said valve means, a cylinder within which the piston is arranged, a valve operating rod extending into said cylinder, a steam supply pipe open to the cylinder, a valve carried by said rod and normally closing communication between the steam supply pipe and the cylinder, a valve seat for the valve, a second valve seat within the cylinder at a point diametrically opposite to the valve seat aforesaid, a second valve mounted on said operating rod, said second valve being normally out of engagement with said second seat, and means actuatable according to the rise and fall of the water within the boiler to control movement of said valve operating rod and move said first valve member out of engagement with its seat, to provide for actuation of the piston by steam pressure exerted thereon, and movement of the second valve into engagement with its seat to prevent the escape of steam admitted to the cylinder, as and for the purpose set forth.

3. In a means for automatically regulating the water supply of boilers, a boiler supply pipe through which water is forced under pressure, a bodily movable reservoir open to the boiler interior, movement of said reservoir being controlled by the rise and fall of water in the boiler, a balance arm affixed to the reservoir, a weight adjustable on the arm, a cylinder, a sectional valve operating rod adjustable longitudinally relatively to the arm, said rod extending into said cylinder, a steam supply pipe leading into the boiler and to the cylinder, a valve on said operating rod normally closing communication between the said steam pipe and the said cylinder, a seat for said valve member, a second valve seat within the cylinder, a valve upon said rod movable into and out of engagement with said second seat, said second mentioned valve being adapted to move into engagement with the seat simultaneously with the movement of the said first mentioned valve out of engagement with the seat, a piston operable within the cylinder upon the admission of steam thereto, and valve means actuatable through movement of the piston to control the boiler water supply.

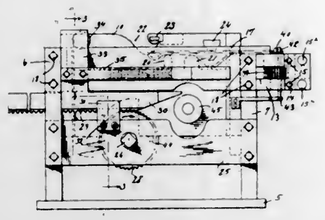
1,173,476. AUTOMOBILE-RADIATOR HEATER. MATTHEW A. ANDERSON, Dallas, Wis. Filed Dec. 2, 1914. Serial No. 875,200. (Cl. 123—170.)



1. In a heating system, the combination with an automobile engine, and the radiator thereof of a burner, longitudinally extending perforated pipes arranged along the sides of the engine, hot air conducting pipes extending from the burner through the perforated pipes, and a radiator mounted adjacent the automobile radiator, and connected with the said heat conducting pipes.

2. In a heating system, the combination with an automobile engine, and the radiator thereof, of a burner, a hood adjustably supported above the burner for concentrating the heat therefrom, heat conveying pipes leading from the hood forwardly along the side of the cylinders of the engine, and a radiator carried by the forward ends of said heat conducting pipes for discharging heated air against the radiator of the automobile.

1,173,477. WIRE-FORMING MACHINE. CHARLES F. BAXTER, Los Angeles, Cal., assignor, by mesne assignments, of two-thirds to W. H. Starkey and one-third to Daniel C. Beard. Filed Feb. 9, 1915. Serial No. 7,203. (Cl. 140—71.)

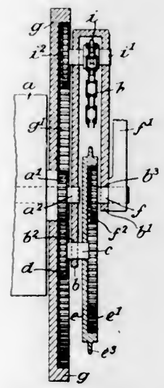


1. A wire bending machine comprising a base member; a pair of standards secured thereto; a work support mounted on said standards provided with a longitudinally extending recess; a pair of spaced supporting lugs secured to said work support within said recess; a forming member slidably mounted at its ends in said standards to slide vertically; a roller mounted upon one side of said forming member near the lower edge thereof; a pair of bending lugs secured to said forming member to project into the recess of the work support at the outer sides of the supporting lugs adapted to bend a portion of the wire downwardly; a centering block mounted in the outer edge of one of said standards to slide transversely thereof; a toothed eyelet-bending member revolubly mounted in said centering block centrally thereof; a stud extending upwardly from said last bending member centrally thereof; another stud mounted in the eyelet-bending member adapted to engage the free ends of the wire and bend the same around said first-mentioned stud to form eyelets when the machine is operated; a toothed cam bar slidably mounted in said standards to slide horizontally adapted to engage the roller of the forming member to draw the same downwardly; an arm extending upwardly from said cam bar centrally of the upper edge thereof; a bending roller mounted upon the inner side of said arm at the top thereof in alinement with the lugs of the work support and forming member adapted to bend the inner portion of the wire around the rear end of the inner lug of the forming member to form a loop therein and to bring the free ends of the wire into register; a shaft revolubly mounted in bearings secured to said standards; a gear secured to said shaft in engagement with said cam-bar; a rack-bar secured at one end to the upwardly extending arm of the cam bar adapted to operate the centering block and to rotate the eyelet-bending member; means operated by the forming plate on its upward movement to eject the eyelets from the stud; and means to operate said shaft.

2. A wire bending machine comprising a base member; a pair of oppositely disposed standards secured thereto; a work support mounted at the upper ends of said standards provided with a longitudinally extending recess therein; a pair of spaced work-supporting lugs secured to said support within the recess; a forming member slidably mounted at its ends in said standards to slide vertically; a pair of bending lugs secured to said forming member to extend within the recess of the work support at opposite sides of the lugs therein adapted to bend predetermined portions of the wire downwardly to form loops; a centering block mounted in the upper portion of one of said standards to slide transversely thereof; an eyelet-bending member revolubly mounted in said centering block; means to oscillate said forming member; means connected to said oscillating means to bend said wire upon itself whereby the free ends thereof are brought into register to engage the eyelet bending member; and means operated by said last means to operate the eyelet bending means.

3. A wire bending machine comprising a base member; a pair of standards extending upwardly therefrom; a work support secured to the top of said standards provided with vertically extending recesses therein; a forming member mounted at its ends in said standards to slide vertically; a pair of bending lugs secured to said forming member to extend within the recesses in the supporting member adapted to bend portions of the wire downwardly to form loops; an eyelet-bending member revolubly mounted upon the top of one of said standards; means to operate said forming member; means connected to said last means to bend the wire upon itself around the innermost one of said bending lugs whereby the free ends of said wire are brought into register and into position for engagement with said eyelet bending means; and means operated by said last means to operate the eyelet bending means.

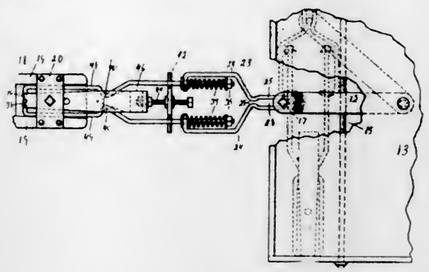
1,173,478. EPICYCLIC GEARING. JOSEPH HERBERT BEARDSHAW, Sheffield, England. Filed Sept. 3, 1915. Serial No. 48,861. (Cl. 74—34.)



1. In epicyclic gearing, the combination of a fixed base, a fixed toothed pinion on said base, a carrier adapted to rotate upon a fixed stud concentric with the fixed pinion, a short axle mounted in a bearing on said carrier, a toothed wheel on one end of said axle meshing with the fixed pinion, a dished wheel having internal teeth on the other end of said axle, a crank axle mounted in another bearing in said carrier, which bearing is concentric with the fixed pinion, a crank on one end of said crank axle and a pinion on the other end thereof meshing with the internal teeth on the said dished wheel, an outer flanged wheel having internal teeth and means whereby the dished wheel gives motion to the internal teeth on the outer flanged wheel, substantially as set forth.

2. In epicyclic gearing, the combination of a fixed base, a fixed toothed pinion on said base, a carrier adapted to rotate upon a fixed stud concentric with the fixed pinion, a short axle mounted in a bearing on said carrier, a toothed wheel on one end of said axle meshing with the fixed pinion, a dished wheel having internal teeth on the other end of said axle, a crank axle mounted in another bearing in said carrier, which bearing is concentric with the fixed pinion, a crank on one end of said crank axle and a pinion on the other end thereof meshing with the internal teeth on said dished wheel, a second dished wheel having internal teeth which are driven by the said toothed wheel on the short axle, sprocket teeth on the second dished wheel, a chain driven by the sprocket teeth, a small chain wheel driven by said chain, an axle on which the small chain wheel is fixed, a second carrier mounted on the fixed stud and having a bearing in which the last-mentioned axle is located, a gear wheel on this last-mentioned axle, and a flanged wheel having internal teeth driven by the last-mentioned gear wheel, substantially as shown and described.

1,173,479. COUPLING. CHARLES R. BUCKMAN, Louisville, Ky. Filed Apr. 2, 1915. Serial No. 18,636. (Cl. 21—137.)



1. In a coupler, a yoke, arms extended longitudinally therefrom, a coupling member disposed between said arms and connected therewith, and means for moving said member relative to said arms to spread the same apart.

2. In a coupler, a yoke, arms yieldingly connected therewith and extended therefrom in substantial parallelism, a coupling member disposed between and connected with said arms, and means for moving said member relative to said arms to spread the same apart.

3. A coupler comprising a yoke, having an elongated contracted portion at the bow end thereof forming a passage for a coupling pin, lateral projections on the free ends of said yoke having perforations therethrough, spreader arms with reduced portions extended through said perforations disposed in substantial parallelism and extending longitudinally from said yoke, springs adapted to oppose the retraction of said portions, and a coupling member connected with said arms.

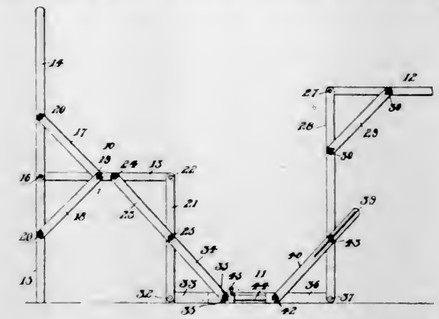
4. A coupler comprising a yoke, having an elongated contracted portion at the bow end thereof forming a passage for a coupling pin, lateral projections on the free ends of said arms having perforations therethrough, spreader arms with reduced portions extended through said perforations disposed in substantial parallelism and extending longitudinally from said yoke, springs adapted to oppose the retraction of said portions, and a coupling member connected with said arms and adapted to be adjusted longitudinally thereof to spread said arms apart.

5. A yoke, arms associated with said yoke and extending therefrom, a coupling member arranged between said arms, a bar disposed transversely of said arms and means operatively mounted in said bar and connected with said coupling member whereby the same may be moved relative to said arms to spread same apart.

[Claim 6 not printed in the Gazette.]

1,173,480. COMBINED CAMP CHAIR AND TABLE. MICHAEL BULIK, Conemaugh, Pa., assignor of one-third to Samuel Trohanovsky and one-third to Thomas Medveczky, Conemaugh, Pa. Filed Aug. 28, 1915. Serial No. 47,802. (Cl. 45—31.)

A combined camp chair and table comprising a table section including a table top and supporting legs, link braces between the top and legs, a foot rest hingedly connected to the lower ends of said legs, the forward side edges of the foot rest being reduced to form tongues, link braces between the foot rest and table legs, said link connections being adjustable to permit the foot rest and table to assume angular positions, a chair section, a U-shaped frame hingedly connected to the front legs of the chair, the inner faces of the side legs of the U-shaped frame being grooved to provide channels for the sliding



reception of the tongues on the foot rest, and means for holding the U-shaped frame and foot rest in adjusted positions.

1,173,481. DISPENSER FOR LIQUID SOAP AND THE LIKE. EVERETT E. BUSSEY, Malden, Mass., assignor to Alexander P. Browne, trustee, Cambridge, Mass. Filed Jan. 31, 1914. Serial No. 815,662. (Cl. 221—104.)

1. A dispenser for liquids comprising in combination a reservoir, a one-piece neck and delivery chamber connected therewith, a plunger provided with a lateral pocket, means whereby said pocket may be brought into communication with said reservoir and chamber successively, a standard secured to said neck, and a spiral spring interposed between said standard and the upper end of said plunger, the spires of said spring being of progressively descreasing diameter, whereby when compressed to its full extent said spires will be nested together.

2. A dispenser for liquids comprising in combination a reservoir, a neck integral with and terminating in a discharge chamber connected with said reservoir, a plunger slidable in said neck, said plunger being provided with three or more recesses, whereby the recessed portion of said plunger will have three or more points of support on the interior wall of said neck, said chamber having a squared valve seat cut into the lower portion of the same and a valve on said plunger arranged to cooperate with said valve seat.

3. A dispenser for liquids comprising, in combination, a reservoir, a one-piece neck and delivery chamber connected therewith, a plunger provided with a lateral pocket, means whereby said pocket may be brought into

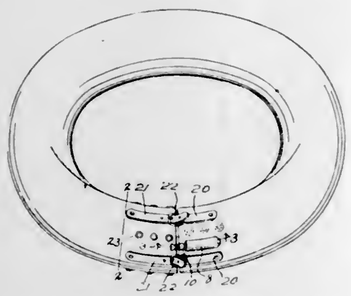
communication with said reservoir and chamber successively, spaced members secured to said neck and extending into said reservoir for guiding said plunger during its reciprocal movements, and a spring disposed within said neck for normally retaining said plunger in said delivery chamber.

4. A dispenser for liquids comprising, in combination, a reservoir, a one-piece neck and delivery chamber connected therewith, said chamber having a valve seat cut in its lower portion, a plunger provided with a series of pockets and adapted to coöperate with said valve seat, means whereby said pockets may be brought into communication with said reservoir and chamber successively, spaced members integral with said neck and extending into said reservoir for guiding said plunger during its reciprocal movements, and a spring for normally retaining said plunger in contact with said valve seat.

5. A dispenser for liquids comprising, in combination, a reservoir, a one-piece neck and delivery chamber connected therewith, said chamber having a valve seat therein, a plunger provided with a lateral pocket and adapted to coöperate with said valve seat, means whereby said pocket may be brought into communication with said reservoir and chamber successively, spaced members secured to said neck and extending into said reservoir for guiding said plunger during its reciprocal movements, a cap secured to the free ends of said spaced members, and a spring disposed between said members, the upper end of said plunger and said cap for normally retaining said plunger in its valve seat.

[Claims 6 to 19 not printed in the Gazette.]

1,173,482. LIFE-PRESERVER. CARL O. CARLSON, Manor, Tex. Filed July 21, 1915. Serial No. 41,156. (Cl. 9—17.)



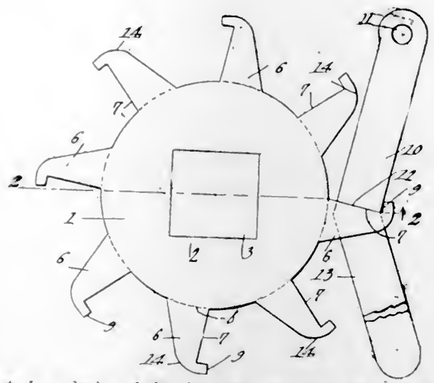
In a life preserver, an inflatable tube having a cover, a pocket on said cover, a compressed air tank in the said pocket, a coupling in communication with the air tank, a puncturable plate for controlling the escape of air from the tank to the coupling, a plate puncturing device extending through the coupling and adapted to operate on the said plate, means of communication between the said coupling and the said inflatable tube, and a check valve in the said means of communication.

1,173,483. PAWL-AND-RATCHET DEVICE. WILBUR JOHN CARROLL, Youngwood, Pa. Filed Mar. 24, 1915. Serial No. 16,646. (Cl. 74—16.)

1. A ratchet wheel having teeth provided with faces for the abutment thereagainst of a pawl, said teeth having portions at their free ends projecting angularly from said faces to engage and hold the pawl in place.

2. A ratchet wheel having teeth provided with faces for the abutment thereagainst of a pawl, said teeth having lips at their free ends projecting at approximately right angles from the said faces, and parallel with the axis of the wheel.

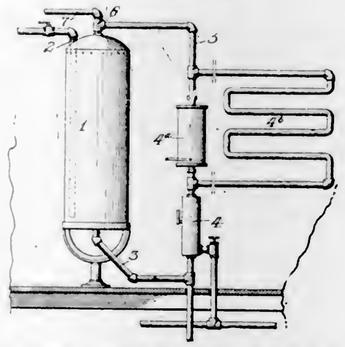
3. In a device of the character described, the combination with a ratchet wheel having teeth projecting from its periphery and a boss at one side to bear against a support and space the teeth therefrom, of a pawl adapted to be pivoted to the support and having its free end coöperable with the said teeth, the free end of the pawl having a handle arranged to lie between the teeth and support.



4. In a device of the character described, the combination with a ratchet wheel having teeth projecting from its periphery and a boss at one side to bear against a support and space the teeth therefrom, said teeth having portions at their free ends projecting angularly relative to the teeth, of a pawl adapted to be pivoted to the support and having its free end coöperable with the teeth and arranged to be held in engagement with the teeth by said portions, the free end of the pawl having a handle extending therefrom and arranged to lie between said teeth and support.

5. In a device of the character described, the combination with a ratchet wheel having teeth projecting from its periphery and provided with active faces, said wheel having a boss at one side to bear against a support and space the teeth therefrom, said teeth having lips at their free ends projecting angularly from said faces and lying parallel with the axis of the wheel, of a pawl adapted to be pivoted to said support and having a free end adapted to abut against said faces and to be held in place by said lips, the free end of the pawl having a handle extending therefrom and adapted to lie between said teeth and support.

1,173,484. HOT-WATER-SERVICE APPARATUS. ALBERT B. CLAY, Scranton, Pa. Filed June 19, 1915. Serial No. 35,137. (Cl. 126—362.)



1. In a water heating system comprising a container, a service pipe and circulating connections including a return pipe communicating with the container near the service pipe; means for preventing flow from the return pipe directly to the service pipe, comprising a valve adapted to obstruct return flow in the return pipe; said valve being automatically movable to obstructing position, under the pressure of water flowing through the service pipe.

2. In a water heating system comprising a container, a service pipe and circulating connections including a return pipe communicating with the container near the service pipe; means for preventing flow from the return pipe directly to the service pipe, comprising a connection serving in common for the return pipe and the service pipe, and a valve constructed with a portion adapted to assume a position obstructing the return pipe, and a portion lying in the path of and automatically movable to obstructing position by water flowing into the service pipe.

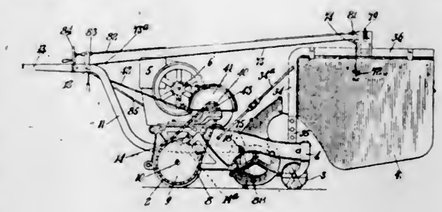
3. In a water heating system comprising a container, a service pipe and circulating connections including a return pipe communicating with the container near the service pipe; means for preventing flow from the return pipe directly to the service pipe, comprising a T-connection having three openings connected, respectively, to the container, the return pipe, and the service pipe, and a plate valve located at the intersection of said openings and normally assuming a position with one end projecting longitudinally into the return pipe opening, and its other end extending transversely of the service pipe opening; said valve being adapted to swing automatically under pressure of water flowing out through the service pipe to a position which presents one end across the return pipe opening and the other end approximating longitudinal position in the service pipe opening.

4. In a water heating system comprising a container, a service pipe and circulating connections including a return pipe communicating with the container near the service pipe; means for preventing flow from the return pipe directly to the service pipe, comprising a T-connection having three openings connected, respectively, to the container, the return pipe, and the service pipe, and a plate valve located at the intersection of said openings and normally assuming a position with one end projecting longitudinally into the return pipe opening, and its other end extending transversely of the service pipe opening; said valve being adapted to swing automatically under pressure of water flowing out through the service pipe to a position which presents one end across the return pipe opening and the other end approximating longitudinal position in the service pipe opening; said valve being trunnioned in said T-connection.

5. In a water heating system comprising a container, a service pipe and circulating connections including a return pipe communicating with the container near the service pipe; means for preventing flow from the return pipe directly to the service pipe, comprising a T-connection having three openings connected, respectively, to the container, the return pipe, and the service pipe, and a plate valve located at the intersection of said openings and normally assuming a position with one end projecting longitudinally into the return pipe opening, and its other end extending transversely of the service pipe opening; said valve being adapted to swing automatically under pressure of water flowing out through the service pipe to a position which presents one end across the return pipe opening and the other end approximating longitudinal position in the service pipe opening; said valve being trunnioned in said T-connection and having a spring yieldingly holding it in its first-named position.

1,173,485. LAWN MOWING AND SWEEPING MACHINE, &c. WILLIAM H. COLDWELL, Newburgh, N. Y. Filed Feb. 1, 1915. Serial No. 5,393. (Cl. 55—145.)

1. The combination with a main frame and rotary supporting devices therefor, of a rotary lawn raking and sweeping device carried by the main frame, and comprising a rotary part, a plurality of fan blades secured thereto and extending transversely of the main frame and a plurality of rows of raking and sweeping devices, each row being connected to said rotary device in rear of one of said fan blades and at points nearer to the access of said rotary part than the outer edge of the fan blade, said raking and sweeping devices having their outer ends extending beyond the outer edges of the fan blades, whereby said raking and sweeping devices are effectively protected from injury, and may be made of sufficient length to provide a high degree of resilience, and driving mechanism connected with the main frame and operatively connected with said rotary part.



2. The combination with a main frame and rotary supporting devices therefor, of a rotary lawn raking and sweeping device carried by said main frame, and comprising a rotary shaft extending transversely of the main frame, a plurality of transversely disposed bars operatively connected with said shaft and supported thereby, fan blades secured to said bars projecting outwardly therefrom, and extending transversely from one side of the machine to the other, and flexible lawn raking and sweeping members secured to said bars in rear of the fan blades and having their outer ends extending beyond the outer edges of said blades, whereby said raking and sweeping members will be protected by the fan blades throughout the entire width of the machine, and the raking and sweeping members may be made of sufficient length to provide a high degree of resilience, driving mechanism connected with the main frame and operatively connected with said rotary shaft.

3. The combination with a main frame provided with rotary supporting devices, of a rotary lawn raking and sweeping device carried by the main frame, comprising a rotary shaft, a plurality of substantially parallel bars, each of said bars being provided with transverse apertures, raking and sweeping members extending through said apertures of said bars, and provided at their inner ends with means for preventing them from being drawn out of the bars, retaining means secured to said bars and adapted to engage the inner ends of said raking and sweeping members to prevent their inward movement with respect to the bar by which they are carried, and fan blades secured to each of said bars and extending longitudinally of the bar from one end of the rotary device to the other and projecting outwardly therefrom, each blade lying in front of the bar and the portions of the raking and sweeping members connected therewith, said raking and sweeping members extending outwardly beyond the outer edge and substantially parallel to said blade, and an inclosing casing provided with a delivery chute.

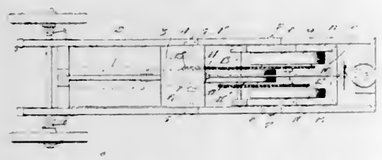
4. The combination with a main frame provided with rotary supporting devices, of a rotary lawn raking and sweeping device carried by the main frame, comprising a rotary shaft, a plurality of substantially parallel bars carried thereby, and provided with transverse apertures, raking and sweeping members extending through said apertures and being provided at their inner ends with means for preventing them from being drawn outwardly with respect to said bars, a fan blade secured to each of said bars, and having a blade portion extending outwardly therefrom, and a retaining portion disposed angularly to the blade portion adapted to engage the inner ends of said raking and sweeping members, to prevent them from being moved inwardly with respect to said bars, and inclosing casing provided with a delivery chute.

5. The combination with a main frame provided with rotary supporting devices, of a rotary lawn raking and sweeping device carried by the main frame, comprising a

rotary shaft, a plurality of substantially parallel bars carried thereby, each of said bars being provided with transverse radially disposed apertures, and with a longitudinal groove at its inner face, a plurality of raking and sweeping members engaging said apertures and having loop portions lying in said groove, a longitudinal securing rod lying in said groove and extending through the loop portions of said raking and sweeping members, a fan blade secured to each of said bars and having a blade portion extending outwardly therefrom substantially parallel to said raking and sweeping members, and an angular portion engaging the inner face of the bar over said groove to close the same and prevent the inward movement of the raking and sweeping members, and an inclosing casing provided with a delivery chute.

[Claims 6 to 16 not printed in the Gazette.]

1,173,486. TRACTION-ENGINE DRIVE. GEORGE K. COLE, Hollister, Cal. Filed Aug. 25, 1914. Serial No. 858,430. (Cl. 21—114.)

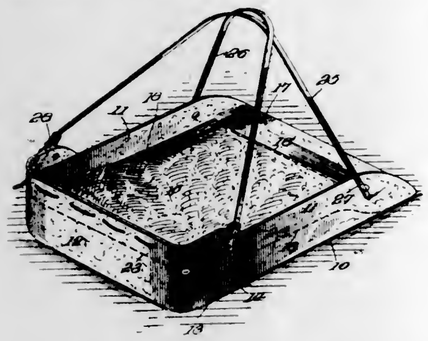


1. In a traction engine, a main supporting frame, a secondary frame pivotally mounted on said frame, a pair of shafts journaled in said frame, a pair of traction wheels secured to the rearmost of said shafts, a single traction wheel secured to the foremost of said shafts, a motor mounted on the main frame, means for transmitting power from said motor to the rearmost shaft in the secondary frame, and means for transmitting power from said shaft to the foremost shaft.

2. In a traction engine, a main supporting frame, a secondary frame pivotally mounted in the main frame, a plurality of wheels journaled in the secondary frame to support and drive the tractor, and means for transmitting power to said wheels.

3. In a traction engine, a main supporting frame, a secondary frame pivotally mounted in the main frame, a three wheel unit journaled in the secondary frame to support and drive the tractor, and means for transmitting power to each wheel in said unit.

1,173,487. PNEUMATIC KNEE-PAD. HENRY PURL COMPTON, Florence, Tex. Filed Feb. 15, 1915. Serial No. 8,436 (Cl. 2—130.)



1. An article of the character described including a shoe having a bottom wall, a pneumatic element arranged within the shoe, side walls and one end wall, a closure member secured adjacent its side margins to said side walls and at one end to the bottom wall to overlie said closure member, the opposite end of said closure member being free and adapted to coact with said end wall in inclosing the element, and a closure flap carried by the end wall and extending longitudinally of the shoe beneath the free end of the closure member.

2. An article of the character described including a shoe having a bottom wall, a pneumatic element arranged within the shoe, side walls and one end wall, a closure member having its side margins and one end thereof secured to said side and bottom walls respectively to overlie said closure member, the opposite end of the closure member being free and adapted to coact with the end wall in inclosing the said element, a closure flap carried by said end wall and projecting longitudinally of the shoe beneath the free end of the closure member, a lacing detachably connecting the free end of the closure member with said end wall, and coacting attaching straps carried by the shoe.

3. A device of the character described including a shoe having a bottom wall, side walls, and one end wall, a closure member permanently connected to the side walls and at one end thereof to the bottom wall, the opposite end of the closure-member being free and confronting the end wall of the shoe, a pneumatic element arranged within the shoe beneath said closure member, a flap permanently connected to the end wall of the shoe and extending freely beneath the free end of the said closure member to coact therewith in retaining said element, and means detachably connecting the free end of the closure with the said end wall.

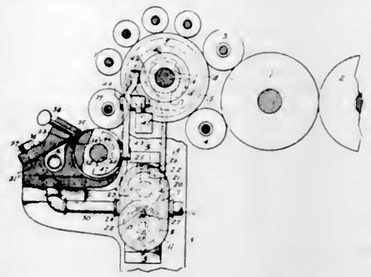
4. A device of the character described including a shoe having a bottom wall, upstanding side walls, and an upstanding end wall closing one extremity of the shoe and provided with flaps overlying the adjacent extremities of the side walls and fixed thereto, the opposite extremity of the shoe being open, a closure member extending longitudinally within the shoe and secured at its sides by a single line of stitching to the side walls of the shoe and at one end thereof to the bottom wall of the shoe adjacent its open end, the opposite end of the closure member being free and confronting the said end wall of the shoe, a fabric facing carried by the said closure member, a pneumatic element arranged within the shoe beneath the closure member to confront the fabric facing thereof, a flap connected to the said end wall of the shoe and projecting laterally therefrom beneath the free extremity of said closure member to coact therewith in retaining said element, and means connecting the free end of the closure member with the said end wall of the shoe.

5. A device of the character described including a shoe having side walls and one end wall, a closure member arranged to coact with the shoe and free at one end, a fabric facing carried by the closure member, a pneumatic element arranged within the shoe beneath the closure member to confront the fabric facing thereof, a flap carried by the shoe and projecting beneath the free end of the closure member to coact therewith in retaining said element, and means for connecting the free end of the closure member with the shoe.

1,173,488. INKING MECHANISM. ELLIS W. COOPER, Bloomfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed June 14, 1913. Serial No. 773,686. (Cl. 101—71.)

1. In an inking mechanism, the combination with a printing couple, of an ink receiving cylinder from which ink is delivered to the form member of the couple, a reservoir from which ink is delivered to the ink receiving cylinder, the cross-sectional area of said reservoir diminishing from the inlet end, and means whereby a predetermined quantity of ink is delivered under pressure to the reservoir at each printing operation of the couple.

2. In an inking mechanism for printing machines, the combination of a printing couple, a pump, means for supplying ink to the pump, means for operating the pump from a moving part of the machine, and connections for delivering ink from the pump to the form carrying member of the couple.



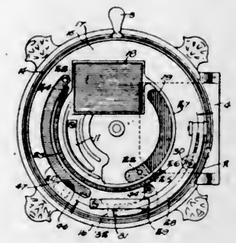
3. In an inking mechanism for printing machines, the combination of a printing couple, a pump, means for supplying ink to the pump, means for varying the delivery stroke of the pump, whereby varying quantities of ink may be delivered, and connections for delivering the ink from the pump to the form carrying member of the couple.

4. In an inking mechanism for printing machines, the combination of a printing couple, a pump, means for supplying ink to the pump, a reservoir to which the ink is delivered from the pump, a delivery orifice from the reservoir, one wall of which is a single flexible plate extending the length of the orifice, and means along the plate whereby the width of the delivery orifice may be increased or decreased to permit varying quantities of ink to be fed through the orifice at different points.

5. In an inking mechanism, the combination with a rotary printing couple, of a distributing cylinder, a pair of gears for measuring ink from a suitable ink supply, and connections operated from the distributing cylinder for actuating the gears to measure out a predetermined amount of ink from the supply at each operation of the distributing cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,173,489. VENDING-MACHINE. BETHUEL M. DAVIS, Chicago, Ill., assignor to Clarence C. Travis, Chicago, Ill. Filed Mar. 27, 1911. Serial No. 617,068. (Cl. 211—8.)



1. A commodity holding device having a rotatable rack, boxes adapted to fit in said rack, a reciprocating latch controlled mechanism for rotating said rack in one direction, a ratchet mechanism for preventing rotation in an opposite direction, in which mechanism the boxes act as the pawl and the machine frame as a detent.

2. A commodity holding device having a vertically disposed rotatable rack, boxes adapted to fit in said rack, a reciprocating mechanism for rotating said rack in one direction, a ratchet mechanism for preventing rotation in an opposite direction, in which mechanism the boxes act as the pawl and the machine frame as a detent.

3. A commodity holding device having a step-by-step vertically disposed rotatable rack, boxes adapted to be carried by said rack, a mechanism for rotating said rack, a ratchet device for preventing rotation in the same direction, in which device the boxes act as the pawl and the frame of the machine as a detent.

1,173,490. VEHICLE-WHEEL. OTTO P. DOWNING, Pecos, Tex., assignor to Downing Pneumatic Wheel Company, a Corporation of Arizona. Filed Dec. 4, 1911. Serial No. 663,845. (Cl. 152—42.)



1. In a vehicle wheel, a relatively fixed hub exteriorly of substantially frusto-conical form, the smaller end of the hub being formed with a shoulder, a tapered ring fitted thereon inward of the shoulder, a floating hub including an interiorly tapered annular body disposed to surround the relatively fixed hub, a tapered ring fitted within said body, a cushion confined between the rings, and spaced heads, one formed upon the hub and the other detachably engaging therewith and bearing against the said shoulder, said heads being dished to conform to and bear against the sides of the cushion.

2. In a vehicle wheel, a relatively fixed hub having an exteriorly tapered body portion, a floating hub having an annular body interiorly tapered and disposed to surround the said body of the fixed hub, the said fixed hub further including a stationary head and a rim fixed with respect to and spaced therefrom, an interiorly tapered ring fitted upon the tapered body by the fixed hub, an exteriorly tapered ring fitted within the tapered body of the floating hub, a pneumatic cushion arranged between the rings, and a head member threaded onto the body of the fixed hub and into the rim of the said fixed hub.

3. In a vehicle wheel, a relatively fixed hub exteriorly of substantially frusto-conical form, an interiorly tapered ring fitted upon said hub and having its outer face substantially cylindrical and formed with a circumscribing transversely curved, concave cushion seat in its outer face, a floating hub including an annular body disposed to surround the relatively fixed hub, an exteriorly tapered ring fitted within the said body and having a transversely convex inner face, and a cushion interposed between the said rings, the inner periphery of the cushion resting in said seat and the convex face of the outer ring bearing against the cushion.

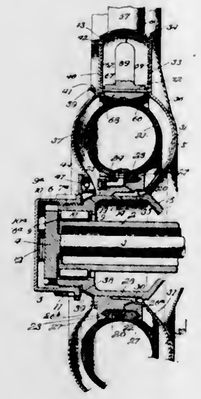
4. In a vehicle wheel, a relatively fixed hub, exteriorly of substantially frusto conical form, an interiorly tapered ring fitted upon the said hub and having its outer surface substantially cylindrical and formed with a circumscribing concave seat, a floating hub including an annular body disposed to surround the relatively fixed hub, an exteriorly tapered ring fitted within the said body and having a transversely curved convex face, a cushion interposed between the rings and resting in said seat and spaced heads carried by the fixed hub and holding the said rings and cushion against lateral displacement.

5. In a vehicle wheel, a relatively fixed hub, exteriorly of substantially frusto-conical form, and threaded at its

minor end, an exteriorly tapered ring fitted upon the said hub, a floating hub including an annular body disposed to surround the relatively fixed hub, a ring fitted within the said body, a head carried by the fixed hub and fixed with relation thereto, a rim member fixed with relation to the head and spaced with respect thereto, the rim member being of annular form and having its inner periphery threaded, an annular head having its inner and outer periphery threaded respectively onto the threaded portion of the hub and into the threaded inner periphery of the rim member, and a cushion disposed between the said rings and confined between the said heads.

[Claims 6 to 9 not printed in the Gazette.]

1,173,491. VEHICLE-WHEEL. OTTO P. DOWNING, Houston, Tex., assignor to Downing Pneumatic Wheel Company, a Corporation of Arizona. Filed Mar. 24, 1913. Serial No. 756,503. (Cl. 152—42.)



1. A resilient wheel including a wheel hub having forward and rear axle engaging portions, an outer rim section, an intermediate cushion section disposed between the hub section and the outer section, a bearing ring disposed between the cushion and the hub, the interior face of the bearing ring being cut away to form a series of steps, the rear portion of the bearing ring being spaced from the adjacent portion of the hub, an annular casing plate surrounding the hub section at the rear end thereof and extending radially beyond the cushion, the central margin of said casing plate being inwardly bent and resting upon the rear end of the hub section and supporting the rear spaced end of the bearing ring, a front face plate surrounding the hub and bearing thereon and extending beyond the cushion and parallel to the first named plate, spokes carried by the outer section and having their inner ends disposed between the outer margins of the said face plates and resting upon the said cushion, and operative connections between said facing plates and the inner ends of the spokes permitting the outer section to have radial movement relative to the said plates and to the hub section.

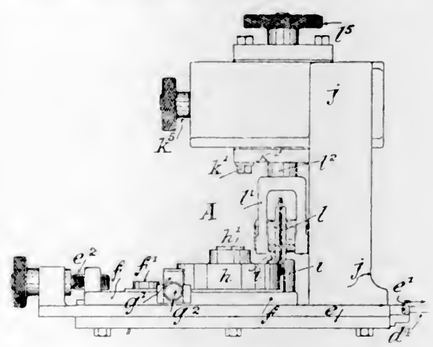
2. A resilient wheel including a hub, an outer rim, a casing plate detachably mounted on the hub, a member having screw-threaded engagement with the hub and holding the casing plate in place, and detachable locking means carried by the casing plate and engaging said screw-threaded member to prevent its rotation.

3. A resilient wheel including a hub, an outer rim, a casing plate detachably mounted on the hub, a member having screw-threaded engagement with the hub and holding the casing plate in place, a projecting annular member on the casing plate, an annular cap fitting into said member and having a locking engagement with the casing plate holding member to prevent its rotation, and a spring actuated detent on the cap engaging the annular member on the casing.

4. A resilient wheel including a hollow hub, a floating ring mounted upon the hub, a cushion carried by the floating ring, outer and inner casing plates detachably mounted upon the hub and inclosing said cushion, said plates being formed of sheet-metal, the margins of the sheet metal being flanged and beaded, a rim section, spokes extending inward from the rim section, a spoke-ring to which the inner ends of the spokes are connected and disposed between said casing plates and resting upon the annular cushion, a plurality of abutment members disposed within and mounted on the spoke-ring and including each a pair of spaced abutments, the sides of the spoke-ring being apertured opposite said abutments, and transverse bolts mounted upon the casing plates and extending through said openings and each between a pair of said abutments.

5. A resilient wheel including a hub, an annular cushion surrounding the hub and mounted thereon, a rim section having inwardly directed spokes, a spoke-ring carried by the spokes and resting upon the cushion, an outer sectional plate detachably mounted upon the hub and covering the cushion and the hub ring, an inner plate mounted upon the hub and covering the cushion and the hub-ring, said inner plate being outwardly bowed adjacent its central portion, the inner edge of the plate being formed with a bead and the outer edge of the plate being formed with an open bead, and an annular strengthening web mounted upon the hub extending in a diagonal plane outward and toward the front of the wheel and bearing against the said inner plate, the margin of the said strengthening web being inserted in the open bead upon the margin of the first-named plate.

1,173,492. MACHINE FOR WIRING GROOVED ROLLERS. JAMES DRONSFIELD, Oldham, England. Filed July 16, 1915. Serial No. 40,214. (Cl. 140—97.)



1. Mechanism for wiring or re-wiring "licker-in" and like grooved rollers, comprising supports for the roller, driving means attachable to the roller shaft, a bed, and a traversing device movable along the bed, means for traversing said device along the bed, and means to guide and insert the wire as the roller is rotated and the traversing device moved on the bed, as set forth.

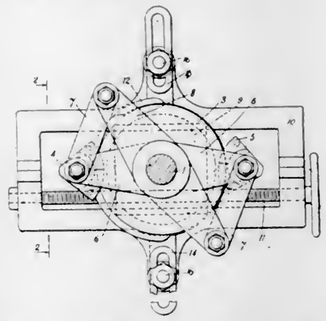
2. Mechanism for wiring or re-wiring "licker-in" and like rollers, consisting of bearings for the roller shaft, brackets to carry said bearings, attachable and detachable means for driving the roller shaft, a bed adjacent to the brackets, and a traversing device slidable along the bed and having wire guiding means, wire straightening devices, and mechanism to move the traversing device, and a rolling-in appliance on the traversing device, whereby, as the roller is rotated, the rolling-in mechanism can act in unison to insert the wire, as set forth.

3. In apparatus for the indicated purpose, a readily attachable and detachable driving gear, means for securing the same to the "licker-in" or like roller shaft, gear combined to rotate the shaft, and gear combined to move mechanism to be traversed in connection with the roller, as described.

4. In apparatus for the indicated purpose, a traversing slide adapted to move on a bed, adjustable parts carried thereby, wire guiding means thereon, a rolling-in wheel, means to set and adjust the same, said traversing slide having a chain by which it can be actuated from a gear, whereby wire of the indicated kind can be forced into a grooved roller as said roller is rotated, as herein described.

5. A machine for wiring or re-wiring "licker-in" and like grooved rollers, consisting of end standards, a bed carried thereby, bearing brackets for the "licker-in" roller shaft, gear for driving the roller shaft, a traversing device slidable along the bed, means to actuate such traversing device, wire guiding and straightening means on the traversing device, a wire straightening die, a rolling-in wheel, and means for adjusting and setting the same, as described.

1,173,493. SPEED-CHANGING MECHANISM. JOHN DRURY and FRANK JAMES GRAY, London, England. Filed Aug. 5, 1914. Serial No. 855,160. (Cl. 74—53.)



1. Speed changing mechanism comprising a driving element, a driven element, a rotary surface on the driven element, extensible members attached to the driving element, engaging devices pivotally attached to said extensible members for engaging said rotary surface, means for moving the driving and driven elements relatively to each other whereby said members become eccentrically disposed with respect to each other, and variable means for causing the engaging devices to co-act with the rotary surface for varying periods whereby the driven element is driven at variable reduced speeds below the speed of the driving member.

2. Speed changing mechanism comprising a driving member, a driven member, a rotary surface on the driven member, extensible members attached to the driving member, engaging devices attached to said extensible members for engaging said surface, means for producing eccentricity between the driving and driven members, two cam plates mounted on the driven member, arranged one behind the other, a slotted arm on each cam plate, fixed pins engaging said slots.

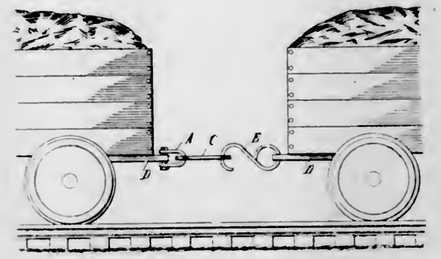
3. Speed changing mechanism comprising a driving member, a driven member, a grooved member on the driven member, extensible members attached to the driving member, double acting engaging members carried by said extensible members for engaging said grooved member, means for producing eccentricity between the driving and driven members, two cam plates mounted on the driven member, arranged one behind the other, a slotted arm on each cam plate, and fixed pins engaging said slots, whereby the speed of the driven member is reduced when the driving and driven members are eccentrically disposed to each other.

4. Speed changing mechanism comprising a driving member, a driven member, a rotary surface on the driven member, extensible members attached to the driving member, engaging devices attached to said extensible members for engaging said surface, a compound edge cam on the driven member, means for producing eccentricity between the driving and driven members and for simultaneously and automatically varying the effective length of the cam as the relative position of the driving and driven members is varied, whereby certain of the devices engaging the rotary surface on the driven member are lifted by the variable cam out of contact therewith to reduce the speed of said driven member.

5. Speed changing mechanism comprising a driving member, a driven member, a grooved member on the driven member, pivoted links attached to the driving member and loosely mounted on the driven member, friction pawls carried by said links adapted to engage with said grooved member, a cam composed of two plates arranged one behind the other mounted on the driven member, means for moving the driving member eccentric to the driven member and for automatically moving one of said plates relatively to the other plate whereby the effective length of said cam is varied simultaneously with the change in position of the driving and driven members whereby the faster moving pawls are lifted out of contact with the grooved member for a period varying with the different eccentric positions of the driving and driven members to produce various reduced speeds of the latter member.

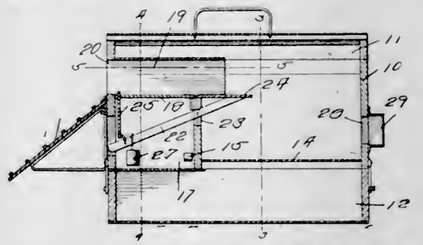
[Claims 6 and 7 not printed in the Gazette.]

1,173,494. COUPLING FOR MINING-CARS. EDWARD S. EARLS, Danville, Ill. Filed Apr. 24, 1914, Serial No. 834,107. Renewed Jan. 3, 1916. Serial No. 70,082. (Cl. 213—45.)



The combination, in a car coupler, of a clevis A, which is to be attached by a pin to the drawbar of a car, of the link E, in the form of a letter S, which is to be fastened to the drawbar of a car, by the closing of one of its ends and having its other end open and recurved, and of the flat connecting link or bar C, having a perforation in each end, which is to connect with the clevis A, and also to receive, in the perforation of its disconnected end, the open, recurved end of the S link E, all substantially as set forth and for the purpose specified.

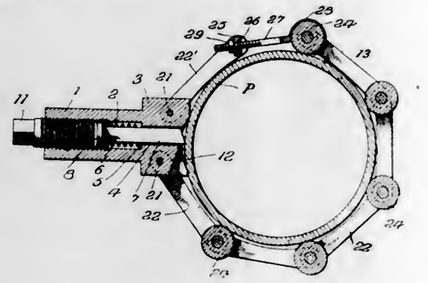
1,173,495. ANIMAL-TRAP. WILLIAM DONALD EDGAR, Trenton, N. D. Filed Feb. 2, 1915. Serial No. 5,676. (Cl. 43—26.)



In an animal trap, a vertically slidable entrance door, a depressible platform inwardly of the door, a pivoted lever

connected to the door and to the platform, a water chamber in the lower portion of the trap, a rock shaft extending longitudinally of the trap, a platform disposed above the water chamber and below the depressible platform, and having one edge fixed to the shaft a spring operated detent mounted below the said entrance door in position to engage the lever to hold the door in closed position upon depression of the second named platform, a pin carried by the shaft adapted to engage the detent to disengage the same from the lever simultaneous with the tilting of the second named platform by the weight of an animal and means for positively locking the lever to open said door.

1,173,496. PIPE-CUTTER. EARL N. ELZAY, Findlay, Ohio. Filed June 10, 1915. Serial No. 33,320. (Cl. 81—191.)



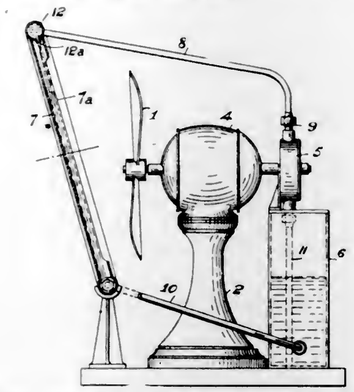
1. In a pipe cutter, the combination of a tubular stock having a head at one end with an angular socket communicating with the bore of said stock, a shoulder formed in said bore at the junction with said socket, a cutting die mounted in said socket and having one end projecting into said bore, said end being provided with a lateral shoulder, a coiled spring mounted on said die between said shoulder and the shoulder in said bore, an adjusting screw having threaded engagement with said bore at the rear of said die for controlling the projection and retraction of said die, and a flexible element connected with the head of said stock adapted to encircle the pipe to be cut, the head of said stock being provided with angular seats, and pipe guides having angular stems mounted in said seats.

2. In a pipe cutter, the combination of a tubular stock having a head at one end with an angular socket communicating with the bore of said stock, a shoulder formed in said bore at the junction with said socket, a cutting die mounted in said socket and having one end projecting into said bore, said end being provided with a lateral shoulder, a coiled spring mounted on said die between said shoulder and the shoulder in said bore, an adjusting screw having threaded engagement with said bore at the rear of said die for controlling the projection and retraction of said die, a flexible element connected with the head of said stock adapted to encircle the pipe to be cut, the head of said stock being provided with seats, and U-shaped pipe guides having angular shanks mounted in said seats and detachably connected with said head.

1,173,497. AIR COOLING, FILTERING, PURIFYING, AROMATIZING, OR THE LIKE APPARATUS. JOHN FARLEY, Liscard, England. Filed Dec. 21, 1914. Serial No. 878,384. (Cl. 98—42.)

1. Apparatus for cooling, purifying, aromatizing, or otherwise treating the air of rooms or the like, comprising, in combination, an air fan, a tubular grid in front of the fan having one of its sides open, a storage tank for liquid, and a centrifugal pump on the fan spindle adapted to circulate liquid from the tank through the tubes of the grid.

2. Apparatus for cooling, purifying, aromatizing, or otherwise treating the air of rooms or the like, comprising, in combination, an air fan, a tubular grid in front of the fan having one of its sides open, the tubes being open on their sides nearest the fan, a series of wires mounted in the tubes, a storage tank for liquid, and a pump adapted to circulate the liquid from the storage tank through the tubes of the grid.

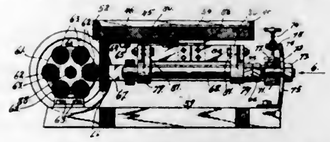


3. The combination with a fan, a device for treating air comprising a fluid tank, a tubular grid positioned in front of the fan, said grid having one of its side faces open, a supply pipe connecting the fluid tank and grid, a return pipe for connecting the grid with the fluid tank, and means for forcing fluid through the supply pipe, grid and return pipe.

4. In combination with a fan, a device for treating air comprising a fluid tank, a tubular grid having one of its side faces open supported in front of the fan, said grid being supported at an angle with relation to the fan, means for connecting the grid with the fluid tank, and means for forcing fluid from the fluid tank through the grid.

5. In combination with a fan, an air treating device comprising a fluid tank, a tubular grid including an upper and lower pipe, said grid having one of its side faces open, means for supplying the upper pipe with fluid, said upper pipe adapted to distribute the fluid through the tubes of the grid, said lower pipe adapted to receive fluid after the same has passed through the tubes, and means for returning the fluid to the fluid tank.

1,173,498. ORE-SEPARATING APPARATUS. RILEY D. FASSETT, Denver, Colo., assignor, by direct and mesne assignments, to The Gold-Dust Concentration Company, Denver, Colo., a Corporation of Colorado. Filed Nov. 9, 1914. Serial No. 871,083. (Cl. 83—88.)



1. A concentrating table or washer comprising a table member and means for reciprocating the same, said means including two U-shaped springs, a stationary support to which the central portion of said springs are secured, the extremities of both springs being secured to the table on opposite sides of their centers, and means acting on the central part of the table for intermittently imparting movement thereto in one direction, whereby the springs are placed under tension and alone serve to intermittently impart reverse movement.

2. The combination with a table, of a stationary member arranged therebeneath, leaf springs having their central portions secured to said stationary member and extending underneath the table and on opposite sides of said member, the opposite ends of the springs being secured to the table and constituting its support, an actuator arranged to engage the table centrally between the extremities of the springs for imparting intermittent movement thereto in one direction, the recoil of the springs serving to impart intermittent reverse movement and means independent of the actuator for regulating the tension under which the springs may be placed, for the purpose set forth.

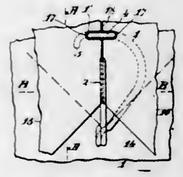
3. The combination with a table, of a stationary shaft extending underneath the table and transversely thereof, leaf springs mounted on said shaft and extending at right angles thereto, their extremities being secured to the table at suitable points on opposite sides of the shaft, said springs forming the support for the table, means for imparting movement to the table intermittently in one direcion, whereby the springs are placed under tension and serve to impart the return reciprocating strokes, and means also mounted upon the shaft for compressing the springs to regulate said tension.

4. The combination with a frame work and a table, of a yoke, an operating shaft journaled in the yoke at one extremity, the opposite extremity of the yoke being vertically adjustable, springs mounted on the yoke, connected with the table and forming the support for the latter, an actuator arranged to engage the table for imparting intermittent movement thereto in one direction, whereby the springs are placed under tension and serve to impart return intermittent movement and means for regulating said tension, for the purpose set forth.

5. The combination with a table, a yoke extending underneath the table and transversely thereof, leaf springs whose central portions are secured to the yoke and whose extremities are attached to the table on opposite sides of the yoke, means for imparting intermittent movement to the table in a direction parallel with the yoke, whereby the springs are placed under tension and serve to impart the reverse intermittent movement and means for compressing the springs to regulate the tension under which they are adapted to be placed by the first named means.

[Claim 6 not printed in the Gazette.]

1,173,499. TEMPORARY CLAMP FOR ARTIFICIAL SLATES OR TILES. FRANZ FLEISCHMANN, Klagenfurt, Austria-Hungary. Filed Aug. 17, 1915. Serial No. 45,874. (Cl. 108—9.)



1. A clamp, for temporarily pressing upon the lower portions of two substantially abutting artificial tiles which have their top edges secured to the framing of the roof and the adjacent edges of which are covered by the lower part of another tile also having its top edge secured to the framing of the roof, comprising a springy pincer-shaped member having a flat lower leg shaped to extend below both of the substantially abutting tiles and adapted to be suspended from at least one of the tiles.

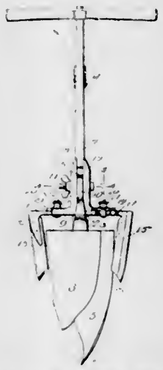
2. A clamp, for temporarily pressing upon the lower portions of two substantially abutting artificial tiles which have their top edges secured to the framing of the roof and which are covered by the lower part of another tile also having its top edge secured to the framing of the roof, comprising a springy pincer-shaped member having a flat lower leg shaped to extend below both of the substantially abutting tiles and provided with a projection in a position where it is caused, by the action of gravity, to bear against the top edges of at least one of the tiles.

3. A clamp, for temporarily pressing upon the lower portions of two substantially abutting artificial tiles which have their top edges secured to the framing of the roof and the adjacent edges of which are covered by the lower part of another tile also having its top edge secured to the framing of the roof, comprising a springy pincer-shaped member having a flat lower leg shaped to extend below both of the substantially abutting tiles and provided with a projection in a position to engage a recess in at least one of the tiles.

4. A clamp, for temporarily pressing upon the lower portions of two substantially abutting artificial tiles which have their top edges secured to the framing of the roof and the adjacent edges of which are covered by the lower part of another tile also having its top edge secured to the framing of the roof, comprising a springy, pincer-shaped member, formed of wire, having a flat lower leg shaped to extend below both of the substantially abutting tiles and provided with at least one projection to engage a corresponding recess in the tiles.

5. A clamp for temporarily pressing together the lower portions of two superposed layers of artificial roof tiles the top portions of which are secured to the roof, comprising a springy hinge-joint, a fingerlike upper jaw, a flat lower jaw and means for suspending the clamp from at least one tile.

1,173,500. EARTH-AUGER. GEORGE FRANK, Titonka, Iowa. Filed Oct. 8, 1915. Serial No. 54,852. (Cl. 255—65.)



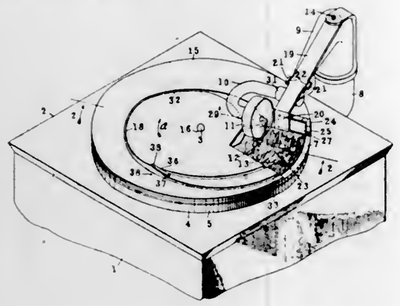
1. An earth auger comprising main blades, a shank carrying one of the blades, to which shank the other blade is pivotally connected, an auxiliary blade adjustable to work outside the circle described by the main blades, and a shank carrying the auxiliary blade, said shank comprising adjustably connected sections, one of said sections being connected to the aforesaid main blade shank and the other section carrying the auxiliary blade.

2. An earth auger comprising main blades, a shank carrying one of the blades, to which shank the other blade is pivotally connected, an auxiliary blade adjustable to work outside the circle described by the main blades, a shank carrying the auxiliary blade, said shank comprising a section which is secured to the aforesaid main blade shank and has a lateral bottom extension, the other shank section carrying the auxiliary blade and having a lateral top extension lapping the first-mentioned extension, and securing means passing through the lapping extensions, one of said extensions having a longitudinal slot through which the securing means passes.

1,173,501. SOUND-REPRODUCER. EDMUND S. GEER, New York, N. Y. Filed Mar. 25, 1914. Serial No. 827,239. (Cl. 181—3.)

1. In a repeating device for phonographs, or the like, in combination, a rotatable table adapted to support a

record, a transportable reproducer needle adapted to engage a record on said table, and a cam frictionally connected so as to rotate with said table and adapted to automatically disengage said needle and record, move said needle toward the preceding part of said record and permit reëngagement of said needle and record at a preceding part of said record.



2. In a repeating device for phonographs, or the like, in combination, a rotatable table adapted to support a record, a transportable reproducer needle adapted to engage a record on said table, and a cam frictionally connected so as to rotate with said table and adapted to automatically disengage said needle and record and move said needle toward the preceding part of said record, said cam having an incline adapted to permit said needle to reëngage the record at a preceding part of said record.

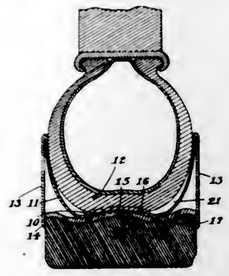
3. In a repeating device for phonographs, or the like, in combination, a rotatable table adapted to support a record, a transportable reproducer needle adapted to engage a record on said table, and a cam rotatable with said table adapted to automatically disengage said needle end record, move said needle toward the preceding part of said record and permit reëngagement of said needle and record at a preceding part of said record, and manual means adapted to vary the path of movement of said needle under the influence of said cam.

4. In an apparatus of the character described, in combination, a record member, a needle adapted to engage the record of said member, means adapted to cause relative rotatable movement between said record member and said needle to play the record comprising a rotatable table on which the record member is mounted, means adapted to automatically disengage said needle and record, cause relative returning movement therebetween after said disengagement, and reëngagement of said needle and record at a preceding part of the record, said last mentioned means comprising a cam adapted to rotate with said table, and means adapted alternately to prevent and permit rotatable movement of said cam with said table.

5. In an apparatus of the character described, in combination, a record member, a needle adapted to engage the record of said member, means adapted to cause relative rotatable movement between said record member and said needle to play the record comprising a rotatable table on which the record member is mounted, means adapted to automatically disengage said needle and record, cause relative returning movement therebetween after said disengagement, and reëngagement of said needle and record at a preceding part of the record, said last mentioned means comprising a cam adapted to rotate with said table, and means adapted alternately to prevent and permit rotatable movement of said cam with said table comprising an escapement, one member of which is connected to said needle and the other adapted to rotate with said table.

[Claims 6 to 42 not printed in the Gazette.]

1,173,502. ARMOR FOR AUTOMOBILE-TIRES. JOHN F. GEISENDORFER, Welmar, Cal. Filed June 26, 1915. Serial No. 36,562. (Cl. 152—33.)



1. In combination, a pneumatic tire and a protector therefor, said protector comprising a substantial, channel-shaped, metallic casing to receive the tire, a centrally arranged, inwardly projecting rib, formed by the base of the channel, engaging circumferentially with the tread of the tire to provide a convex support for the latter, and transverse corrugations formed on said base to prevent creeping of the protector on the tire.

2. A protector for automobile tires comprising a metallic, channel-shaped casing having its base curved inwardly to form a centrally arranged circumferential rib, the formation of said rib providing an exterior and peripheral concaved seat in the casing, supports at the sides of said casing projecting beyond the base thereof, a rim on the base of said casing forming with the projecting ends of said supports an annular shell, said supports being formed integrally with the adjacent part at one end and welded to the adjacent part at the other end, said rim being curved inwardly circumferentially to provide a rib to engage in the peripheral concaved seat in the base of the casing, and a shoe mounted on the rim in said shell.

3. A tire protector comprising a metallic casing of channel formation, the periphery of which is provided with inwardly extending transverse corrugations, a rim seating on the periphery of the casing and provided with a plurality of openings extending over the corrugations of the casing, and a rubber shoe vulcanized to the rim, the rubber entering the openings provided in the latter.

1,173,503. CONTAINER-TOP. OTTO GOETZKE, Jersey City, N. J., assignor to Excellall Products Company, New York, N. Y., a Corporation of New York. Filed May 8, 1915. Serial No. 26,719. (Cl. 221—62.)



1. In a container or receptacle top, the combination with a perforated head, of a perforated permanently attached sliding cap having rectilinear depending side flanges guided upon the head and joined at both ends in end flanges completing the contour of the top, said side flanges being longer than the head and said end flanges joining them coöperating with the head as stops for limiting the movement of the cap in both directions and determining by the action of one stop the extent of movement which will bring the holes of the cap and head into registry and by the action of the other stop limiting the reverse movement in closing the receptacle.

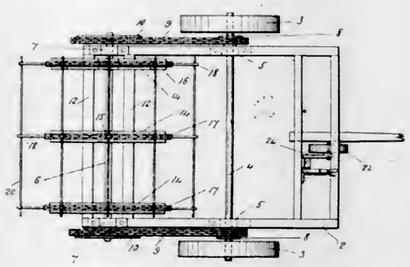
2. In a container or receptacle top, the combination with the perforated head, of a perforated permanently attached sliding cap moving in a rectilinear path thereon, said cap having side flanges crimped upon and guided by rectilinear guides on the head and being stiffened to prevent their disengagement from the head by end flanges at both ends coöperating with the head to form means for limiting the movement of the cap in both directions as and for the purpose described.

3. A can top having a perforated projecting head of less size than the top proper, a perforated sliding cap having rectilinear skirts or flanges crimped into the neck and guided in a rectilinear direction by the neck, said side flanges being extended beyond the longitudinal dimensions of the head and being joined as described to form pockets and likewise to limit the movement of the cap in both directions and so as to seal the can when one end flange engages the end of a head and to stop the movement by the other end flange when it is moved in the opposite direction and when the perforations in the top and cap coincide.

4. In a container or receptacle top, the combination with a sliding cap crimped upon and guided by the sides of the head by its side flanges, said side flanges at their ends being joined to form a pocket between the end of the cap and the end of the head and a spring located in said pocket and held in place by the turned under bottom of the flange as and for the purpose described.

5. In a can or receptacle top, the combination with a perforated head, of a sliding cap having rectilinear movement thereon and engaged with the head at its top and on the sides of its neck by the side flanges of the cap, said side flanges being formed to leave a space between them and the sides of the head after it is crimped or compressed into the guides on the head whereby the cap will be held down by spring pressure to insure a continuous engagement of the cap and head along the line of the perforations in them.

1,173,504. WEED-DESTROYER. HENRY NAGEL, Ritzville, Wash. Filed May 20, 1915. Serial No. 29,320. (Cl. 97—25.)



1. In a weed destroyer, a wheeled main frame, endless conveyers arranged longitudinally of the main frame and provided with projecting arms, rods secured to and connecting the said arms and arranged crosswise of the main frame, and driving mechanism for operating the conveyers as the machine is drawn along.

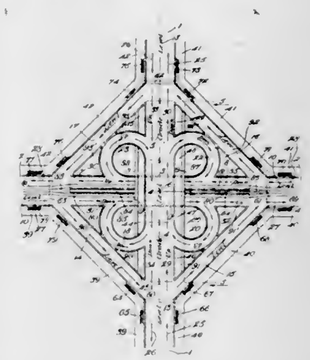
2. In a weed destroyer, a wheeled frame, conveyer frames arranged longitudinally of the main frame, wheels journaled in the conveyer frames and arranged in triangular form, endless conveyors working over the said wheels, the lower stretch of each conveyer being arranged substantially horizontal, arms projecting from the said conveyers, rods secured to and connecting the said arms and arranged crosswise of the main frame, and driving mechanism for operating the conveyers as the machine is drawn along.

3. In a weed destroyer, a main frame having ground wheels at its middle part endless conveyers arranged longitudinally of the main frame, at its rear part, and provided with projecting arms, rods secured to and connecting the said arms and arranged crosswise of the main frame, driving mechanism for operating the conveyers as the machine is drawn along, and an adjustable ground wheel at the front end of the said frame for regulating the engagement of the said rods with the ground.

4. In a weed destroyer, a wheeled main frame, endless conveyers arranged longitudinally of the main frame and provided with projecting arms, rods secured to and connecting the said arms and arranged crosswise of the main frame, and driving mechanism operating to move the lower stretches of the conveyers rearwardly as the machine is moved forwardly whereby the weeds are discharged at the rear of the machine.

5. In a weed destroyer, a wheeled main frame provided with two crossbars at its rear part, triangular conveyer frames having openings at their middle parts for the passage of the crossbars and having the crossbars secured to their inclined sides and having substantially horizontal lower sides, a reel shaft journaled in the main frame and arranged at the apices of the conveyer frames, driving wheels secured on the reel shaft, guide wheels arranged at the lower angles of the conveyer frames, drive chains passing over the said wheels and provided with projecting arms, rods secured to and connecting the said arms and arranged crosswise of the main frame, and driving mechanism for revolving the reel shaft as the machine is drawn along.

1,173,505. STREET-CROSSING. ARTHUR HALE, Rowlandsville, Md. Filed May 24, 1915. Serial No. 30,152. (Cl. 94—10.)



1. In a street crossing the combination of a viaduct on one street; a raised grade leading from the normal level of said street to said viaduct on each side of the latter; a depressed grade leading from the normal level of the other street toward said viaduct on each side of the latter; and four ways for vehicles connecting said raised and depressed grades near the ends of said viaduct, substantially as described.

2. In a street crossing the combination of a viaduct on one street; a raised grade leading from the normal level of said street to said viaduct on each side of the latter; a depressed grade leading from the normal level of the other street toward said viaduct on each side of the latter; four ways for vehicles connecting said raised and depressed grades near the ends of said viaduct; and four ways connecting said normal levels of said streets outside of said first named four ways, substantially as described.

3. In a street crossing the combination of a viaduct on one street; a raised grade leading from the normal level of said street to said viaduct on each side of the latter; a depressed grade leading from the normal level of the other street toward said viaduct on each side of the latter; and four curved inclined ways for vehicles connecting said raised and depressed grades near the ends of said viaduct, substantially as described.

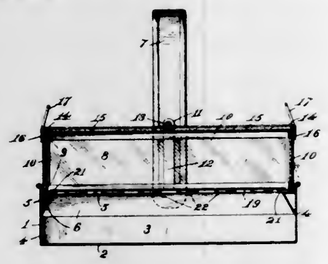
4. In a street crossing the combination of a viaduct on one street; a raised grade leading from the normal level

of said street to said viaduct on each side of the latter; a depressed grade leading from the normal level of the other street toward said viaduct on each side of the latter, four curvel inclined ways for vehicles connecting said raised and depressed grades near the ends of said viaduct; and four level ways connecting said normal levels of said streets located outside of said first named four ways, substantially as described.

5. In a street crossing the combination of a viaduct on one street; a raised grade between the normal level of said street to said viaduct on each side of the latter; a depressed grade extending from the normal level of said second street toward said viaduct on each side of the latter; four ways connecting said raised and depressed grades on each side of said first named street leading from near the ends of said viaduct; four additional ways connecting the said normal levels of said streets located outside of said first named four ways; and a subway under one of said streets near the ends of a pair of said additional ways, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,173,506. VENDING-TRAY. WILBER J. HALL, Philadelphia, Pa. Filed June 11, 1915. Serial No. 33,427. (Cl. 224—48.)



1. A vending tray comprising a shallow lower member provided with an upwardly projecting handle, a housing open at the bottom and having its open lower portion fitting within the upper part of said lower member, a hinged closure for the top of said housing, a handle on said closure, said handle when said closure is in raised position, being in proximity to the first said handle whereby both of said handles may be grasped simultaneously with one hand, substantially as described.

2. A vending tray comprising a shallow lower member open at the top, a horizontally disposed flange arranged upon the inner faces of the walls of said lower member adjacent the upper edge thereof and provided with a downwardly inclined reinforcing portion extending from the free edge of the flange and having its lower end secured to the walls of said bottom member beneath said flange and a housing resting upon said flange, substantially as described.

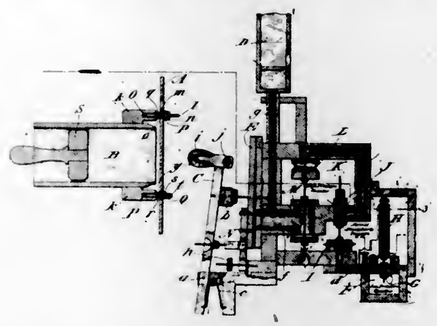
3. A vending tray comprising a shallow lower member open at the top, supporting members within said lower member, a housing resting upon said supporting members and comprising a skeleton frame and transparent panels, the top of said housing comprising a pair of transparent hinged closures, substantially as described.

4. A vending tray comprising a bottom member open at the top and a handle arranged centrally thereof and spanning the same, a housing open at the bottom and having its lower portion resting within said bottom member, said housing being open at the top, a pair of closures for the open upper end of said housing, said closures being hinged adjacent said handle, and a handle on each of said closures adapted to swing into position adjacent the first said handle when said closures are raised, substantially as described.

5. A vending tray comprising a bottom member open at the top and a handle arranged centrally thereof and spanning the same, a housing open at the bottom and having its lower portion resting within said bottom member, said housing being open at the top, a pair of closures for the open upper end of said housing, said closures being hinged adjacent said handle, a handle on each of said closures adapted to swing into position adjacent the first said handle when said closures are raised, and means on the first said handle for engaging the handles on the closures, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,173,507. HARP-STOP FOR PIPE-ORGANS. WILLIAM E. HASKELL, Brattleboro, Vt., assignor to Estey Organ Company, Brattleboro, Vt., a Corporation of Vermont. Filed Apr. 29, 1912. Serial No. 693,785. (Cl. 84—31.)



1. A harp stop for pipe organs comprising, in combination, vertically hanging glass sounding bars, each suspended at a nodal point; pneumatically actuated hammers, each of which is located to strike the middle of one of the glass bars; a resonator rectangular in cross section for each glass bar, each resonator being horizontally disposed with its open mouth opposite its glass bar, with an adjustable stopper at its opposite end, the mouth of the resonator being wider than the corresponding glass bar and spaced therefrom a distance at least equal to the thickness of said bar, and the four walls of the resonator being externally beveled at its mouth; an open labial corroborating pipe for each glass bar; and key-controlled instrumentalities for concurrently actuating said hammers and causing the corresponding corroborating pipes to speak.

2. A harp stop for pipe organs comprising, in combination, vertically hanging glass sounding bars, each suspended at a nodal point; pneumatically actuated hammers, each of which is located to strike the middle of one of the glass bars; a resonator rectangular in cross section for each glass bar, each resonator being horizontally disposed with its open mouth opposite its glass bar, with a stopper at its opposite end, the mouth of the resonator being wider than the corresponding glass bar and spaced therefrom, and the four walls of the resonator being externally beveled at its mouth; a corroborating pipe for each glass bar; and key-controlled instrumentalities for concurrently actuating said hammers and causing the corresponding corroborating pipes to speak.

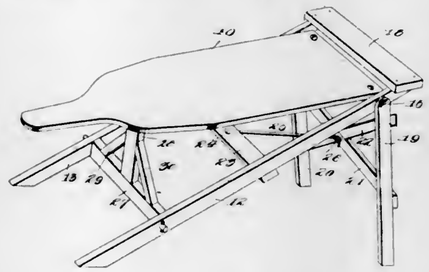
3. A harp stop for pipe organs comprising, in combination glass sounding bars; pneumatically actuated hammers, each of which is located to strike one of the glass bars; a resonator for each glass bar having its open mouth opposite its glass bar, the mouth of the resonator being wider than the corresponding glass bar and spaced therefrom; a corroborating pipe for each glass bar; and key-controlled instrumentalities for concurrently actuating said hammers and causing the corresponding corroborating pipes to speak.

4. A harp stop for pipe organs comprising, in combination, vertically hanging glass sounding bars, each suspended at a nodal point; pneumatically actuated hammers, each of which is located to strike the middle of one of the glass bars; and a resonator rectangular in cross section for each glass bar, each resonator being horizontally disposed with its open mouth opposite its glass bar, with an adjustable stopper at its opposite end, the mouth of the resonator being wider than the corresponding glass bar and spaced therefrom, and the four walls of the resonator being externally beveled at its mouth.

5. A harp stop for pipe organs comprising, in combination, vertically extending glass sounding bars; a hammer for each bar; and a resonator rectangular in cross section for each glass bar, each resonator being horizontally disposed with its open mouth opposite its glass bar, the mouth of the resonator being wider than the corresponding glass bar and spaced therefrom, and the four walls of the resonator being externally beveled at its mouth.

[Claims 6 to 19 not printed in the Gazette.]

1,173,508. IRONING-BOARD. OSCAR F. HEARTWELL, Jr., Hastings, Nebr. Filed Oct. 27, 1913. Serial No. 797,653. (Cl. 68—10.)

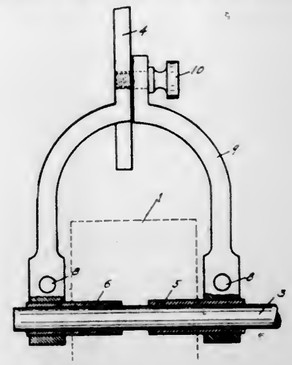


In an apparatus of the class described, an ironing board, a cleat extending transversely of said board near one end and with trunnions at its ends, a reinforcing member attached to the lower face of the board and provided with a longitudinal series of sockets extending entirely through the said member, main supporting legs having bearing apertures spaced from their outer ends and mounted to swing thereby upon the trunnions in close contact with the side edges of the board and foldable against the same; supplemental legs pivoted upon said trunnions externally of the main legs and foldable alongside the same, transverse braces connecting the supplemental legs, a brace member pivoted to said main legs and with a reduced outer end adapted to engage consecutively in the sockets of the reinforcing member and bear against the lower face of the board and fold between the legs and the board, a transverse brace rigidly connected to said main legs intermediate their ends, a tie member swinging from said rigid brace and adapted to be coupled to the transverse braces of the supplemental legs, and a retainer on the under side of the board adapted to engage over the braces to hold the parts in folded relation.

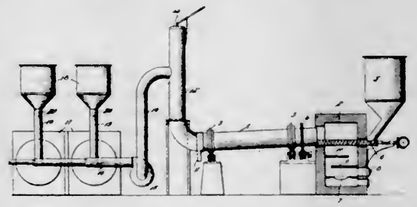
1,173,509. SWAGE. JOHN P. HEDSTROM, Big Rapids, Mich., assignor to Hanchett Swage Works, Big Rapids, Mich., a Corporation of Michigan. Filed July 14, 1914. Serial No. 850,897. (Cl. 76—54.)

1. In a swage, the combination of a swage head, an anvil, a pair of oppositely disposed bushings removably inserted in said swage head, a bifurcated swaging lever having one leg removable, the legs of said lever being respectively secured to the projecting ends of said bushings; and a die received in said bushings.

2. In a swage, the combination of a swage head, an anvil, a pair of oppositely disposed bushings removably inserted in said swage head, a die of substantially elliptical cross section slidably received and removably mounted in said bushings, and means adapted to oscillate said bushings and die.



1,173,510. APPARATUS FOR DRYING FUEL. HERMAN HERMANSEN, Baybridge, Ohio, assignor to Sandusky Portland Cement Company, Baybridge, Ohio, a Corporation of Ohio. Filed Sept. 25, 1913. Serial No. 791,795. (Cl. 34—6.)



1. A fuel drier consisting of an internally heated revolving cylinder, an exit pipe, exhaust fan and delivery pipe for conveying dust-laden gases from drier to furnaces, and means for supplying pulverized fuel to the gases as they enter the furnaces, all substantially as shown and described.

2. A fuel drier consisting of an internally heated revolving cylinder, means for feeding raw fuel to drier, an exit pipe, exhaust fan and delivery pipe for conveying dust-laden gases from drier to furnaces, and means for supplying pulverized fuel to the gases as they enter the furnaces, all substantially as shown and described.

3. A fuel drier consisting of an internally heated revolving cylinder, means for feeding raw fuel to drier, a fire-place for heating drier, an exit pipe, exhaust fan and delivery pipe for conveying dust-laden gases from drier to furnaces, and means for supplying pulverized fuel to the gases as they enter the furnaces, all substantially as shown and described.

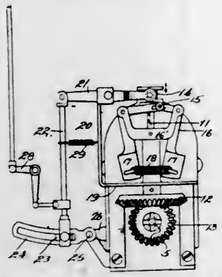
4. A fuel drier consisting of an internally heated revolving cylinder, means for feeding raw fuel to drier, a fire-place for heating drier, arches in fire-place to cause products of combustion to traverse an elongated path, an exit pipe, exhaust fan and delivery pipe for conveying dust-laden gases from drier to furnaces, and means for supplying pulverized fuel to the gases as they enter the furnaces, all substantially as shown and described.

5. A fuel drier consisting of an internally heated revolving cylinder, means for feeding raw fuel to drier, a fire-place for heating drier, arches in fire-place to cause products of combustion to traverse an elongated path, openings in fire-place to admit additional air to the prod-

ucts of combustion, an exit pipe, exhaust fan and delivery pipe for conveying dust-laden gases from drier to furnaces, and means for supplying pulverized fuel to the gases as they enter the furnaces, all substantially as shown and described.

[Claim 6 not printed in the Gazette.]

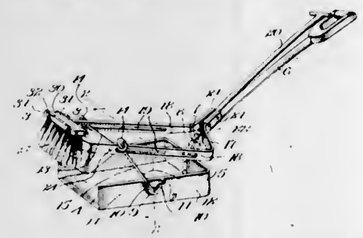
1,173,511. AUTOMATIC SPARK-CONTROLLER FOR ENGINES. CHARLES V. HESS, Sonora, Cal. Filed Nov. 24, 1914. Serial No. 873,732. (Cl. 123—117.)



1. In combination with the electric sparking timer of an internal combustion engine, a governor for the engine, a pivotally mounted lever operable by the governor, a link pivoted at one end to the lever, a second pivotally mounted lever pivotally connected to the timer and having one end portion formed with a slot curved concentrically with the pivot of the link, a block pivotally connected to the opposite end of the link and slidable in the lever slot, and manually operable means for sliding the block in the lever slot adapted for operation during movement of the engine.

2. In combination with the electric sparking timer of an internal combustion engine, of a governor, a lever movable by the governor, a second lever pivoted between its ends and having one end connected to the timer and its opposite end formed with a curved slot, a link pivoted to the first lever at a point concentric to the curvature of the slot of the second lever and having its opposite end slidably secured in said lever slot, a spring connected to the link for holding it at the inner end of the lever slot, and means for moving the link in the lever slot against the action of the spring.

1,173,512. SHOVEL AND BRUSH SCRAPER ATTACHMENT. MORTIMER F. HILL, East St. Louis, Ill. Filed Feb. 10, 1915. Serial No. 7,452. (Cl. 65—62.)

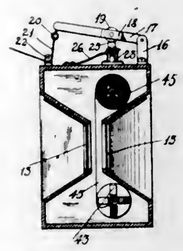


1. In combination with a receiving pan, loading mechanism therefor, movable means to connect said loading mechanism to the pan, said loading mechanism being slidable along and fulcrumed directly on said means, and means to brace the said means while the said mechanism fulcrums and slides thereon.

2. In combination with a receiving pan, loading mechanism having a frame, said frame being provided with a side member having an elongated slot therein, a supporting structure for said frame pivotally connected to the pan and said supporting structure extending into said elongated slot and said frame fulcruming on and being slidable along said supporting structure.

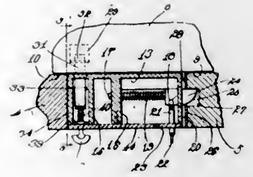
3. In combination with a receiving pan, a supporting structure having a side arm and a fulcrum portion, a bearing on said pan in which said side arm is pivotally mounted, lugs carried by said bearing to limit the movement of said arm in opposite directions, a frame, said frame being provided with an elongated slot through which the fulcrum portion extends to mount the frame for sliding movement and pivotal movement, loading means carried by the frame and a handle carried by said frame.

1,173,513. STATION-SIGNALING APPARATUS. AUGUST HOECKER, New York, N. Y. Filed Jan. 9, 1915. Serial No. 1,339. (Cl. 40—95.)



In a station indicator, the combination with a pair of shafts mounted on spaced centers and an intermittent driving means therefor, of a plurality of flat elliptic springs secured to said shafts longitudinally thereof, and a band secured at its ends to said shafts and wound over said springs whereby they are caused to expand or retract in degree according to the amount of band material wound thereon.

1,173,514. CABINET-LOCK. NEWTON HOLROYD, Spokane, Wash., assignor of one-half to Henry Nicholls Metzger, Spokane, Wash. Filed Sept. 21, 1915. Serial No. 51,846. (Cl. 16—61.)



1. In a locking mechanism for cabinet like structures, independently openable closures, a stationary part interiorly disposed with respect to said closures, and a unitary lock mechanism carried by one of said closures for coaction with the other closure and said stationary part to independently lock said closures in a closed position and lock both closures to said stationary part, substantially as described.

2. In combination, a cabinet like structure provided with swinging doors and a fixed part disposed interiorly of said doors, and a unitary lock mechanism carried by one of said doors for coaction with the other door and said stationary part to independently lock said closures in a closed position and lock both of said closures to said fixed part, substantially as described.

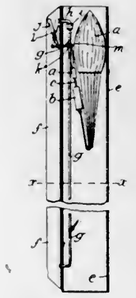
3. In combination, a cabinet like structure provided with swinging doors and a fixed part disposed interiorly of said doors, a lock mechanism mounted on one of said doors and provided with a latch bolt, a keeper on the other door for coaction with said latch bolt, a keeper on said fixed part, and a latch bolt for said locking mechanism for coaction with the keeper on said fixed part to lock said doors in a closed position, substantially as described.

4. In combination, a cabinet like structure provided with doors, a fixed part disposed interiorly of said doors, a lock mechanism on one of said doors provided with a reciprocating bolt and a swinging bolt, a keeper on the remaining door for coaction with the reciprocating bolt, and a keeper on said fixed part for coaction with said swinging bolt, substantially as described.

5. In combination, a cabinet like structure provided with swinging doors, a shelf fixed in said structure, a lock mechanism on one of said doors provided with a reciprocating latch bolt and a swinging latch bolt, the remaining door being provided with a keeper for coaction with said reciprocating bolt, and a keeper on said shelf for coaction with said swinging bolt, substantially as described.

[Claim 6 not printed in the Gazette.]

1,173,515. AERIAL ILLUMINATING DEVICE FOR USE IN CONNECTION WITH AIRCRAFT. HAROLD EDWARD SHERWIN HOLT, Farnborough, county of Hants, England. Filed Aug. 31, 1914. Serial No. 859,568. (Cl. 102—20.)



1. An aerial illuminating device having means for discharging the same from an air craft comprising a tube, an illuminating body provided with a time fuse, weight and flare and disposed in said tube, an igniter attached to the fuse and adapted to be operated by a direct pull thereon, and coöperating means connected with said tube and igniter for imparting a direct pull to the igniter when the weight and other parts are discharged from the tube.

2. An aerial illuminating device comprising a vertically arranged tube, an illuminating body provided with a time fuse, weight and parachute reflector normally housed in said tube, a stop disposed within said tube with which the time fuse, weight and illuminating body are engaged, an igniter attached to the fuse and adapted to be operated by a direct pull thereon, and means for imparting a direct pull to the igniter when the weight and other parts are discharged from the tube.

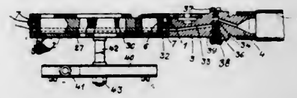
3. An aerial illuminating device comprising a vertically arranged tube, an illuminating body provided with a time fuse, weight and parachute reflector normally housed in said tube, a rod disposed within said tube and connected with the time fuse, weight and illuminating body, an igniter attached to the fuse, a ring attached to the igniter and slidably connected with said rod, means for imparting a direct pull on said igniter when the weight and other parts are discharged from the tube whereby said igniter is actuated.

4. An aerial illuminating device having means for discharging the same from an air craft comprising a tube, an illuminating body provided with a time fuse, weight and flare and supported in said tube, an igniter attached to the fuse and adapted to be operated by a direct pull thereon, means for imparting a direct pull to the igniter when the weight and other parts are discharged from the tube, and means for releasing said supporting means under the control of the operator.

5. An aerial illuminating device having means for discharging the same from an air craft comprising a tube, an illuminating body provided with a time fuse, weight and flare and disposed in said tube, an igniter attached to the fuse and adapted to be operated by a direct pull thereon, and means for imparting a direct pull to the igniter when the weight and other parts are discharged from the tube, said weight being formed of materials which are capable of being readily dispersed, said weight being so combined with the illuminating body that it is readily released by the burning of the flare.

[Claims 6 and 7 not printed in the Gazette.]

1,173,516. SCREW-STOCK AND OTHER CUTTING-TOOL PROVIDED WITH LUBRICATING MEANS. JOHANN FRIEDRICH HOLZSCHEITER, Zurich, Switzerland. Original application filed Dec. 14, 1912, Serial No. 736,775. Divided and this application filed Nov. 24, 1913. Serial No. 802,804. (Cl. 10—126.)

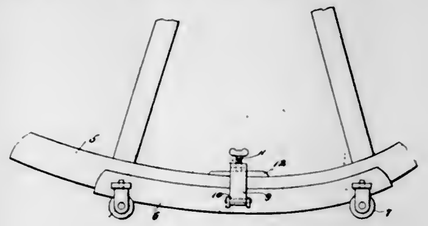


1. In a screw-stock the combination of a holder for the cutting dies, an annular disk covering the cutting dies, a conical seat provided in said disk, a disk arranged in the conical seat, the mentioned disks being traversed by lubricating passages emanating from an annular groove and extending toward the work-piece.

2. In a screw-stock the combination of a holder for the cutting dies, an annular disk covering the cutting dies, a conical seat provided in said disk, a disk arranged in the conical seat, the mentioned disks being provided with lubricating passages emanating from an annular groove and extending toward the work-piece, handles secured to the holder of which one is made hollow and serves for storing oil, and a passage extending from the cavity of the handle to the annular groove.

3. In a screw stock the combination of a holder for the cutting dies, handles secured to the holder, one of the handles having a part which is made hollow and serves for storing oil and another part forming the rectilinear continuation of the hollow part and being revolubly mounted in the latter, an annular groove in said screw stock and a passage emanating from the cavity of the hollow part of the handle to the annular groove.

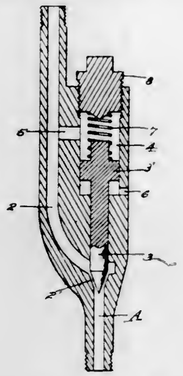
1,173,517. CHAIR ATTACHMENT. JENNIE MORRIS HOSICK, Louisville, Ky. Filed Sept. 4, 1915. Serial No. 48,946. (Cl. 21—65.)



1. An attachment for rocking chairs, comprising laterally spaced side rails having seats for supporting the rockers of the chair, and provided with rollers, pivoted yokes carried by the side rails, clamping screws carried by the yokes and adapted to engage the top edges of the rockers for holding the same in the seats, and a foldable connection between the side rails.

2. An attachment for rocking chairs, comprising laterally spaced side rails having means for attachment to the rockers of the chair, and provided with rollers, a lazy-tongs connection between the side rails, and means for locking the lazy-tongs bars in fixed relation.

1,173,518. AUTOMATIC PRESSURE-REDUCING VALVE. BEN I. HOXSIE, Nevada City, Cal. Filed Nov. 10, 1914. Serial No. 871,286. (Cl. 50—13.)



1. In a pressure reducing valve, a body having an inlet at one end with a discharge passage leading from said inlet, a valve seat at the juncture of the inlet and passage, said body having a chamber arranged at one side of the passage and having a duct extending from the passage into the chamber at a point central of the length of the latter, a differential piston having one end engageable with the valve seat and having an enlargement operable in said chamber and located in spaced relation to the opposite end of the piston, a coil spring extending across said duct and surrounding said opposite end of the piston and seating at one end on the piston enlargement, and a nut above the upper end of the piston in spaced relation thereto and threaded into the outer end of the chamber and engaging the opposite end of the spring, said discharge passage extending beyond the chamber to one side of and spaced from the chamber.

2. In a pressure reducing valve, a body having an inlet at one end with a discharge passage leading from said inlet, a valve seat at the juncture of the inlet and passage, said body having a chamber arranged at one side of the passage and having a duct extending from the passage into the chamber at a point central of the length of the latter, a differential piston having one end engageable with the valve seat and having an enlargment operable in said chamber, said discharge passage extending beyond the outer end of the chamber in spaced relation to and independent of the chamber, and means for closing the outer end of the chamber whereby to have access to the chamber independent of the discharge passage.

1,173,519. DENTAL-AMALGAM MIXER. WILLIAM G. HUGHES, Pittsburgh, Pa. Filed May 18, 1915. Serial No. 28,901. (Cl. 83—10.)

1. A spherical head for rotary pestles having on its under mortar-engaging surface a plurality of arcuate grooves having their centers eccentric in plan to the vertical axis of the pestle and meeting centrally of the bottom plan of the head.

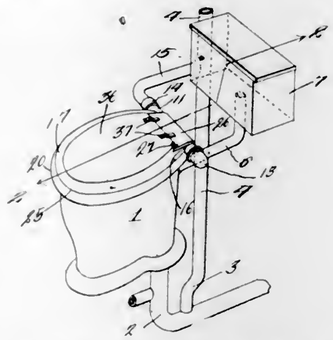
2. A spherical head for rotary pestles having on its under mortar-engaging surface a plurality of arcuate grooves having their centers eccentric in plan to the vertical axis of the pestle and meeting centrally of the bottom plan of the head, said grooves broadening from their outer extremities to their meeting plane.

3. The combination with a mortar having a materia receiving recess of inverted frusto-conoidal form and having a hemispherical extension forming its bottom, and a grinding sphere having its lower hemisphere located in the hemispherical extension and provided with a mill dress.



4. The combination with a mortar having a material receiving recess of inverted frusto-conoidal form and having a hemispherical extension forming its bottom, and a grinding sphere having its lower hemisphere located in the hemispherical extension and provided with a mill dress, the outer portions of the mill dress terminating just below the upper part of the hemisphere and the center of the dress forming a gathering chamber.

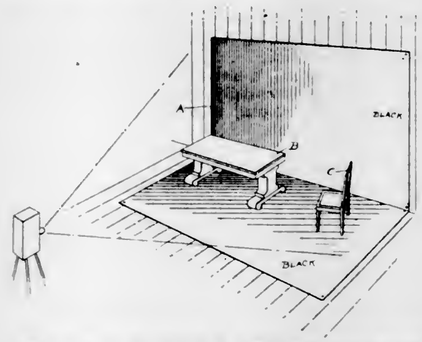
1,173,520. VENTILATOR FOR TOILET BOWLS OR HOPPERS. DAVID J. HUNTER, Saegertown, Pa. Filed Aug. 30, 1915. Serial No. 48,049. (Cl. 1—21.)



1. In combination with a hopper having a flange at its rear adjacent the upper part, said flange having an upwardly extending portion, a pipe secured to said upwardly extending portion constituting a hinge part and having one end closed, and its other end connected to a vent pipe, a hopper seat having a groove in its rear edge to annularly and slidably engage said pipe, a U-shaped plate arching the pipe and having its upper and lower portions secured to the seat, thereby hingedly connecting the seat to the pipe, said U-shaped plate having an opening adjacent its arch part, through which said opening the upwardly extending part of the flange extends, to prevent lateral movement of the seat, said pipe having an opening in its wall adjacent the edge of the seat, the rear part of the seat having an opening in its wall registering with the opening in the pipe, to carry off the odorous gases through the pipe.

2. In combination with a hopper having a flange at its rear adjacent the upper part, said flange having an upwardly extending portion, a pipe secured to said upwardly extending portion, constituting a hinge part and having one end closed, and its other end connected to a vent pipe, a hopper seat having a groove in its rear edge to annularly and slidably engage said pipe, a U-shaped plate arching the pipe and having its upper and lower portions secured to the seat, thereby hingedly connecting the seat to the pipe, said U-shaped plate having an opening adjacent its arch part, through which said opening the upwardly extending part of the flange extends, to prevent lateral movement of the seat, said pipe having an opening in its wall adjacent the edge of the seat, the rear part of the seat having an opening in its wall registering with the opening in the pipe, to carry off the odorous gases through the pipe, one edge of the opening in said U-shaped plate constituting an abutment to contact with the up-standing portion of the flange to limit the seat in its open position.

1,173,521. METHOD OF PRODUCING MOTION-PICTURES. THOMAS HAYES HUNTER, New York, N. Y. Filed Oct. 18, 1915. Serial No. 56,538. (Cl. 88—16.)



1. The method of producing a projected motion picture of a dramatic story which consists in producing a negative by exposing successive portions of a film in a camera having a field whose entire background in the range of the lens is black, a portion of said field including a substantially horizontal base on which the dramatic incidents of the story are acted during the exposure of the film, then producing a positive reproduction of such original film and projecting the pictures of such positive reproduction on a screen which is otherwise not illuminated.

2. The method of producing a projected motion picture of a dramatic story which consists in producing a negative by exposing successive portions of a film in a camera having a field whose entire background in the range of the lens has a black covering, a portion of said field including a substantially horizontal base on which the dramatic incidents of the story are acted during the exposure of the film and on which there are placed suggestive theatrical "properties" to indicate the locality of the individual scenes, then producing a positive reproduction of such original film and projecting the pictures of such positive reproduction on a screen which is otherwise not illuminated.

1,173,522. DEVICE FOR AERIAL WARFARE. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Mar. 22, 1915. Serial No. 16,278. (Cl. 244—1.)

1 In a device of the class described, an aerial supporting means, held captive to the earth by a tethering member, a bomb detachably suspended from said supporting means and arranged to move freely along the tethering member when released from said supporting means.

2. In a device of the class described, an aerial supporting means, held captive to the earth by a tethering member, a bomb detachably suspended from said supporting means, and arranged to move freely along the tethering member when released from said supporting means, and means for releasing said bomb whenever a flying machine contacts with the tethering member.

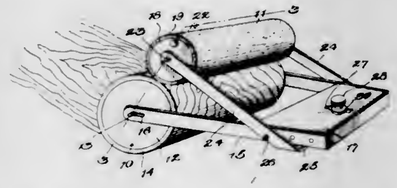


3. In a device of the class described, an aerial supporting means, held captive to the earth by a tethering member, a bomb detachably suspended from said supporting means and arranged to move freely along the tethering member when released from said supporting means, and means for making said bomb harmless before it reaches the earth whenever it becomes accidentally disengaged from the supporting means.

4. In a device of the class described, an aerial supporting means, a wire depending therefrom and armed with grappling hooks, a bomb detachably fixed thereon and arranged to be released and move along said wire when the hooks engage the object of attack.

5. In a device of the class described, a primary aerial supporting means, a secondary supporting means, a wire attached to both said supporting means grappling hooks on said wire, a bomb detachably fixed on, and arranged to move along said wire when said hooks engage the object of attack, and means for releasing the wire from the primary supporting means.

1,173,523. APPARATUS FOR GRAINING AND THE LIKE. FREDERICH W. KUEHN, St. Louis, Mo. Filed May 19, 1915. Serial No. 29,167. (Cl. 101—74.)



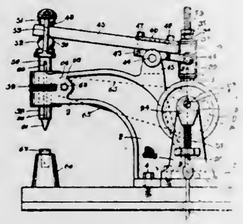
1. In a device as specified, a paint-carrying roll comprising a hollow cylinder having upon its periphery a winding groove provided with apertures and an absorbent cover for said cylinder.

2. In a device as specified, a paint-carrying roll comprising a cylinder, and a covering for said cylinder, said cylinder having its perimeter corrugated to provide spaces beneath the inner surface of said covering, said cylinder also having perforations in the grooves formed by said corrugations whereby the paint within the cylinder may readily flow into the spaces beneath said covering, the corrugations of said perimeter being in the form of a screw-thread to permit the ready adjustment and removal of said covering.

1,173,524. METHOD OF MAKING SULFURIC ACID. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to Frank S. Washburn, Nashville, Tenn. Filed Feb. 20, 1915. Serial No. 9,597. (Cl. 23—1.)

The process of manufacturing sulfuric acid which consists in suitably producing sulfur dioxid in a furnace; making a mixture of ammonia and air and producing a concentration above six per cent. of nitrose gases in said mixture; and feeding said concentrated nitrose gases to said sulfur dioxid in excess; substantially as described.

1,173,525. RIVETING-HAMMER. PHILIP H. LECKINGER, Rochester, N. Y. Filed July 5, 1913. Serial No. 777,504. (Cl. 78—53.)



1. A riveting machine comprising a frame, a helve pivoted to the frame, a hammer guided on the frame and having its upper end rotatably connected to the helve, a rotary member journaled on the frame and through which the hammer is guided at a point below its connection with the helve, a drive shaft, driving connection between the drive shaft and the helve, and driving connection between the rotary member and the drive shaft.

2. A riveting machine comprising an overhanging arm having a guide at its free end, a hammer movable axially in engagement with said guide, a rotary member mounted on the arm and through which the hammer extends, a slot and key connection between the rotary member and the hammer permitting the hammer to move axially in said member but causing the hammer to rotate with said member, means for rotating the rotary member, a helve pivotally mounted between its ends on the arm, means for operating the helve simultaneously with the rotation of the rotary member, and a resilient connection between the upper end of the hammer and the helve, said connection being located entirely above the rotary member and having provision permitting the rotation of the hammer relatively to the helve.

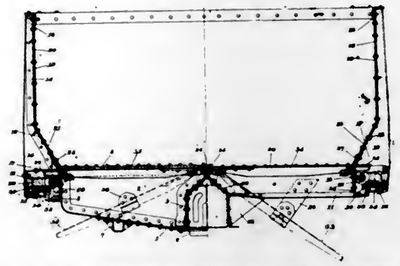
3. A riveting machine comprising a hammer, a helve pivoted between its ends and having the hammer connected to one end thereof, a reciprocating rod, a member guided on said rod and pivotally connected to the other end of the helve, and elastic buffers arranged on said rod on opposite sides of the said member.

4. A riveting machine comprising a hammer, a helve, mechanism for rotating the hammer, and a connection between the hammer and the helve embodying a yoke in which the hammer is rotatable and a cushion interposed between the upper end of the hammer and the helve.

5. A riveting machine comprising a hammer, mechanism for rotating the hammer connected to the latter at a point between the ends of the hammer, a pivoted helve, and a resilient connection between said helve and the hammer on one side of the point where the rotating means connects with the hammer, said connection having provision permitting the hammer to rotate relatively to the helve.

[Claims 6 to 14 not printed in the Gazette.]

1,173,526. CAR CONSTRUCTION. CHARLES A. LINDSTRÖM, Pittsburgh, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 25, 1912. Serial No. 727,737. (Cl. 105—14.)



1. In a railway car, a metallic side stake having a substantially vertical upper portion, an enlarged inwardly sloping intermediate portion and an enlarged lower portion.

2. In a railway car, a metallic side stake having a substantially vertical upper portion and an enlarged inwardly and downwardly sloping intermediate portion and an enlarged lower portion.

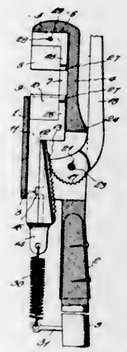
3. In a railway car, a metallic side stake made of one piece having a substantially vertical upper portion, an enlarged inwardly sloping intermediate portion and an enlarged lower portion.

4. In a railway car, a metallic side stake made of one piece having a substantially vertical upper portion, an enlarged inwardly and downwardly sloping intermediate portion and an enlarged lower portion.

5. In a railway car, a metallic side stake having a substantially vertical outer surface, a substantially vertical upper inner surface, an intermediate inwardly sloping inner surface and a substantially vertical lower inner surface.

[Claims 6 to 48 not printed in the Gazette.]

1,173,527. PRUNING-SHEARS. EMERSON MCKENNEY, Bangor, Me. Filed Sept. 23, 1915. Serial No. 52,207. (Cl. 30—11.)



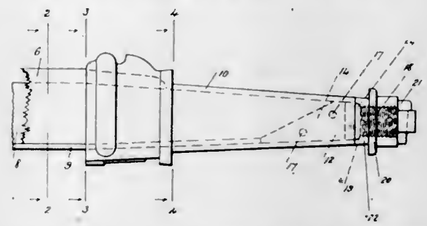
1. In a pruning device, a housing having a longitudinal guide passage, a handle at one end of said housing, a shank extending from the other end, a stationary blade carried by said shank, a movable blade carrying member slidable in said guide passage, a blade on said member for coaction with the stationary blade, a rack bar contacting with said member, means for preventing longitudinal shifting of said rack relative to said member, a gear sector for coaction with the rack, said sector holding said rack bar and said member in coöperative engagement, whereby the latter is raised or lowered upon movement of the former, and means for operating said gear sector.

2. In a pruning device, a housing having a longitudinal guide passage, a handle at one end of said housing, a shank extending from the other end, a stationary blade carried by said shank, a movable blade slidable in said guide passage, and coacting with the stationary blade, a shank extending from said movable blade within the guide passage, a rack bar having a groove in one of its longitudinal edges receiving one longitudinal edge of the shank, means for preventing longitudinal shifting of said rack relative to said member, a gear sector for coaction with the rack, said sector holding said rack bar and said shank in cooperative engagement, whereby the latter with its blade is raised or lowered upon movement of the former, and means for operating said gear sector.

3. In a pruning device, a housing having a longitudinal guide passage, a handle at one end of said housing, a shank extending from the other end, a stationary blade carried by said shank, a movable blade carrying member slidable in said guide passage, and having a notch in one of its edges, a blade on said member for coaction with the stationary member, a rack bar contacting with said member, a stop carried by the bar for engagement with said notch to prevent longitudinal shifting of the parts, a gear sector for coaction with the rack, said sector holding said rack and said member against lateral movement, whereby the latter is raised or lowered upon movement of the former, and means for operating said sector.

4. In a pruning device, a housing having a longitudinal guide passage, a handle at one end of said housing, a shank extending from the other end, a stationary blade carried by said shank, a movable blade slidable in said guide passage and coacting with the stationary blade, a shank extending therefrom within the guide passage and having a notch in one of its edges, a rack bar having a groove in one of its longitudinal edges receiving one longitudinal edge of the shank, a stop within said groove engaging said notch to prevent longitudinal shifting of the members, a gear sector for coaction with the rack, said sector holding said rack bar and shank against lateral shifting, whereby the latter with its blade is raised or lowered upon movement of the former, and means for operating said sector.

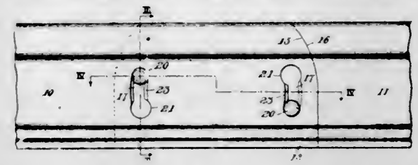
1,173,528. AXLE. HORACE E. MARTIN, Athens, Ga. Filed June 26, 1915. Serial No. 36,468. (Cl. 21—5.)



1. In an axle, a body portion having a longitudinal groove, a re-inforcing bar T-shaped in cross-section and having its web secured in the said groove and projecting beyond the end of its base flanges and the said body portion, a skein arranged over the end portions of said body portion and bar, a forked block which fits in the outer end portion of the skein and which is secured over the projecting end portion of the said web, said block having a spindle which projects from the skein, and fastening devices engaging with the said spindle and securing the skein in place.

2. In an axle, a body portion having a longitudinal groove, a re-inforcing bar T-shaped in cross-section and having its web secured in the said groove and projecting beyond the end of its base flanges and the said body portion, a skein arranged over the end portions of the said body portion and bar, a forked block which fits in the outer end portion of the skein and which is secured over the projecting end portion of the said web, said block having a shoulder and a screwthreaded spindle which projects from the skein, a collar screwed on the said spindle and having a countersunk portion which engages with the said shoulder, said collar forming an extension of the skein and bearing against it, and a flanged nut screwed on the said spindle and bearing against the said collar.

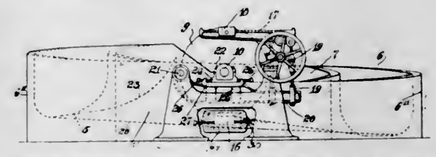
1,173,529. RAIL-JOINT. MIKE MARTIN, Rankin, Pa. Filed Dec. 23, 1915. Serial No. 68,380. (Cl. 239—8.)



1. A device of the class described comprising in combination with the adjacent overlapped ends of railway rails having one-half of their width cut-away upon opposite sides forming curved faces upon the reduced rail ends in abutting contact with curved shoulders at the inner ends of the cut-away portions, spaced projecting bolts having enlarged heads arranged upon the inner face upon one of said reduced ends, the coöperating end portion of the companion rail having opposite curved slots for the said bolts, each of the said slots having an enlarged circular receiving end, and a reduced circular seating end for the said bolts, the sides of the said slots being of inclined wedging formation intermediate the said circular ends thereof.

2. An article of manufacture comprising a railway rail having the ends thereof cut-away upon opposite sides forming reduced end portions, the terminal face of each end portion being curved, the rails being provided with curved shoulders at the inner ends of the said cut-away portions, inwardly projecting spaced-apart headed bolts carried by one reduced end and the other reduced end being provided with spaced inwardly curved retaining slots, each of the said slots having a receiving end of greater diameter than the heads of the said bolts and also having an opposite seating end of substantially the same diameter as the said bolts, the sides of the said slots being provided with inclined wedging faces intermediate the said ends thereof.

1,173,530. PULP-BEATING APPARATUS. ROBERT J. MARX, London, England. Filed Jan. 12, 1914. Serial No. 811,605. (Cl. 92—24.)



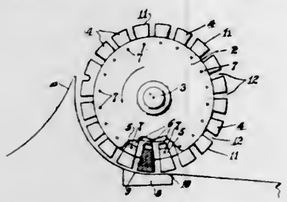
1. In a beating engine the combination of a trough a midfeather and a backfall with a bedplate, a beater roll, lighter bars for supporting said roll, bearings for the said roll, and adjustable means for moving said roll and said bedplate horizontally in the direction of the diameter of the roll, for maintaining said roll at a predetermined lateral distance from said backfall, and for maintaining said roll in its original working position relative to the bedplate independent of the wear and tear of the said roll or of the said bedplate.

2. In a beating engine the combination of a trough, a midfeather and a backfall with a bedplate, a beater roll lighter bars for supporting said roll, bearing for the said roll, and independent means for maintaining said roll at a predetermined lateral distance from the said backfall, and also maintaining the relative working position of said roll to said bedplate.

3. In a beating engine the combination of a bedplate, a backfall, a beater roll adjacent to said backfall, and independent means for compensating the wear of the said roll and bedplate, whereby said roll is maintained at a predetermined lateral distance from said backfall and said bedplate is operated under predetermined conditions relative to the said backfall and the said roll.

4. In a beating engine the combination of a trough, a midfeather, a bedplate a revolving roll with a backfall, the apex of which lies in the same level as the height of the stuff in the beater when working, said roll being so located in relation to the backfall, that the space between said backfall and said roll is sickle shaped below the center line of said roll, and bounded above the center line by the curvature of the roll on the one side, and by a perpendicular continuation of the backfall to its apex on the other side, the clearance between said roll and said backfall measured horizontally at the center line of the roll being less than double the clearance measured horizontally at the point where said roll leaves said bedplate, and the distance measured horizontally at the summit of the backfall being approximately twice the distance measured horizontally on the center line of said roll from said backfall.

1,173,531. BEATING-ENGINE. ROBERT J. MARX, London, England. Filed Jan. 12, 1914. Serial No. 811,606. (Cl. 92—22.)



1. In a device of the character described, a beater roll, a front rise and a backfall, a bedplate having a flattened out inlet lip adjoining the front rise, such flattened out portion of the bedplate merging first into a concave portion of the bedplate conforming to the circumference of the beater roll and then into the curvature of the backfall rising to a height of about the center line of the beater roll.

2. In a device of the character described, a beater roll, a backfall, with its apex at about the level of the center line of the beater roll, a front rise, a bedplate arranged below the center of the beater roll, and extending over an arc not exceeding 40°, such bedplate having a concave form adjacent to the backfall approximately conforming to the curvature of the roll, and a flattened out entrance lip adjacent to the front rise of the beater trough.

3. In a device of the character described, a beater roll, a front rise, a backfall, a bedplate having the major portion of its surface concave to conform to the curvature of the roll, while that portion of the surface of the bedplate which is adjacent to the front rise is flattened out whereby the inflow of the stuff between the revolving roll and the stationary bedplate is facilitated and lodgments of stuff between the front rise and the bedplate are avoided.

4. In a device of the character described, a beater roll, a front rise, a backfall, and a bedplate having its curved surface conforming to the curvature of the roll adjoining to the backfall, and its flattened out surface in a substantially horizontal plane adjoining the front rise in a flush line, whereby access of the stuff to the roll is facilitated and lodgments of the stuff on its pasage to the roll are avoided.

5. In a device of the character described, a beater roll, with segments separated by transporting grooves, a backfall of a height not less than the center line of the beater roll, a bedplate in which a concave portion is combined with a flattened out inlet portion merging into each other.

1,173,532. CATALYTIC AGENTS AND PROCESS OF MAKING THEM. ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed July 10, 1913. Serial No. 778,242. (Cl. 23—28.)

1. The process of producing a catalytic agent free from halogen by applying to a carrier a solution containing a compound of an acid oxid of ruthenium with a strong base and treating with a reducing agent.

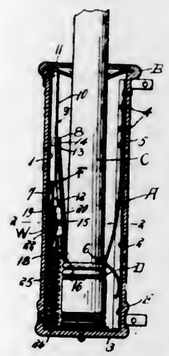
2. The process of producing a catalytic agent free from halogen by applying a solution of alkali metal ruthenate to a carrier and treating with a reducing agent.

3. The process of producing a catalytic agent free from halogen by applying a solution of alkali metal ruthenate to asbestos and treating with a reducing agent.

4. A catalytic agent containing a carrier, ruthenium and a strong base and being free from halogen.

5. A catalytic agent containing a carrier, ruthenium and a basic oxygen-containing compound of an alkali metal and being free from halogen.

1,173,533. WHIP-HOLDER. ADAM L. L. NEUMANN, Occidental, Cal. Filed Feb. 24, 1915. Serial No. 10,374. (Cl. 21—130.)

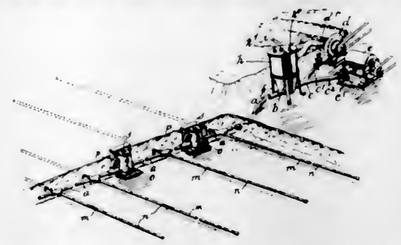


The combination with a whip socket, of a frame located therein, a leaf spring fastened at one end to one side of the frame, a clamping jaw hinged to the opposite side of the frame, a wedge slidingly engaging the clamping jaw and the side of the frame to which it is hinged, said wedge normally tending to move the clamping jaw into whip engaging position, a spring acting to move the wedge to force the clamping jaw into wedge engaging position, and a keyway adapted to permit the insertion of the key to move the wedge against the action of the spring and cause said wedge to withdraw the clamping jaw from whip engaging position.

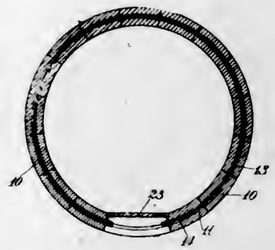
1,173,534. APPARATUS FOR IRRIGATING AND FERTILIZING SOIL. BARTLE RYAN, Northcote, Victoria, Australia. Filed Dec. 7, 1915. Serial No. 65,579. (Cl. 137—66.)

1. An apparatus for aerating, irrigating and fertilizing soil, comprising in combination, a mixing chamber, a pump and a blower, pipes connecting the pump and blower to the mixing chamber, a chamber for containing a fertilizer located adjacent to the said mixing chamber, a valve controlling an opening between the said chambers, perforated pipes located beneath the surface of the soil, and a pipe passing from the mixing chamber to said perforated pipes.

2. An apparatus for aerating, irrigating and fertilizing soil, comprising in combination, a mixing chamber, a pump and a blower, pipes connecting the pump and blower to the mixing chamber, a series of superposed perforated plates in the mixing chamber, a chamber for containing a fertilizer located above the said mixing chamber, an opening between said chambers, an externally operatable valve to govern the flow of fertilizer through the said opening, perforated distributing pipes located beneath the surface of the soil, and a pipe leading from the mixing chamber to said perforated distributing pipes.



1,173,535. STORAGE STRUCTURE. CHARLES A. PERFECT, Sunbury, Ohio. Filed Apr. 24, 1911. Serial No. 622,919. (Cl. 72—6.)

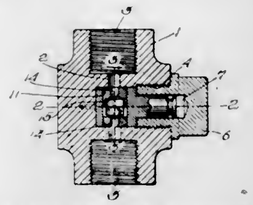


1. A circular storage structure wall having a vertical opening from top to bottom made up of blocks having their upper sides provided longitudinally with deep wire or cable-receiving grooves said grooves being inclined toward the vertical axis of the storage structure and having their bottoms lying in a line approximately midway between the inner and outer sides of the blocks, combined with continuous wires or cables in such grooves and means in the doorway connecting the ends of said wires or cables to independently hold them in a state of tension substantially as described.

2. A circular storage structure wall made up of blocks, said structure having a vertical doorway in its side, said blocks having their upper sides provided longitudinally with wire or cable-receiving grooves, combined with continuous wires or cables in such grooves, and a ladder erected in said vertical doorway comprising vertical side pieces of pipe and rungs having cross saddles at their ends to fit against said side pieces, bolts and nuts connecting said saddles to said pipes, threaded eye bolts provided with adjustable nuts thereon connecting the opposite ends of said wires or cables to said pipes and saddles whereby each of the cables may be independently tightened, and doorway closing members set in said doorway beyond said rungs to permit the use of said rungs when the doorway is closed.

1,173,536. CHECK-VALVE. ARTHUR P. PHILLIPS, Haverhill, Mass., assignor to Crosby Steam Gage & Valve Company, a Corporation of Massachusetts. Filed Mar. 9, 1914. Serial No. 823,286. (Cl. 137—32.)

1. A check valve comprising, in combination, a tubular casing interiorly enlarged and threaded at both ends and furnished laterally with a threaded bore leading from the exterior thereof and intersecting the passage therethrough; a nut exteriorly threaded for engagement with said lateral bore of the casing and furnished with a longitudinal bore; a tubular plug adapted to fit into the lateral bore in the casing and into the bore in the nut; two cup shaped members disposed in said plug, forming a chamber therein, and furnished with tubular seats; and a ball valve loosely confined in said chamber; said plug and said ball valve being so disposed as to restrict, without entirely obstructing, the passage through the valve casing; and means affording a passage past said ball valve when seated.



2. A check valve comprising, in combination, a tubular casing interiorly enlarged and threaded at both ends and furnished laterally with a threaded bore leading from the exterior thereof and intersecting the passage therethrough; a nut exteriorly threaded for engagement with said lateral bore of the casing and furnished with a longitudinal bore; a tubular plug adapted to fit into the lateral bore in the casing and into the bore in the nut; two cup shaped members disposed in said plug, forming a chamber therein, and furnished with tubular seats; and a ball valve loosely confined in said chamber; said plug and said ball valve being so disposed as to restrict, without entirely obstructing, the passage through the valve casing; and means affording a passage past said ball valve when seated; together with locking means for preventing the rotation of said plug.

3. A check valve comprising, in combination, a tubular casing interiorly enlarged and threaded at both ends and furnished laterally with a threaded bore leading from the exterior thereof and intersecting the passage therethrough; a nut engaging said passage and having a longitudinal bore; a tubular plug adapted to fit into the lateral bore in the casing and into the bore in the nut, and a ball valve loosely confined in said plug; said plug and said ball valve being so disposed as to restrict, without entirely obstructing, the passage through the valve casing.

4. A check valve comprising, in combination, a tubular casing interiorly enlarged and threaded at both ends and furnished laterally with a threaded bore leading from the exterior thereof and intersecting the passage therethrough; a nut engaging said passage and having a longitudinal bore; a tubular plug adapted to fit into the lateral bore in the casing and into the bore in the nut; and a ball valve loosely confined in said plug; said plug and said ball valve being so disposed as to restrict, without entirely obstructing, the passage through the valve casing, with locking means for preventing the rotation of said plug.

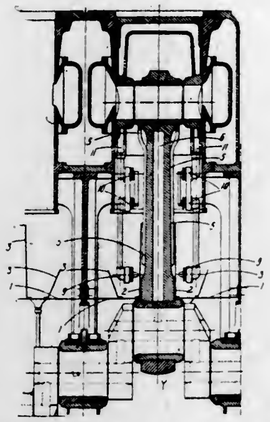
5. In a check valve of the character described, in combination, a tubular casing furnished laterally with a bore leading from the exterior thereof and intersecting the passage therethrough; a tubular plug disposed in said lateral bore in the casing; and a valve loosely confined in said tubular plug; with means for confining the tubular plug in the lateral bore; said valve and said plug being so disposed as to restrict, without entirely obstructing, the passage through the valve casing.

[Claim 6 not printed in the Gazette.]

1,173,537. COMBINED LUBRICATING AND COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed May 4, 1915. Serial No. 25,863. (Cl. 123—176.)

1. The combination with an internal combustion engine having a cooling system for cooling the piston, and a lubricating system in which some of the lubricant is retained in the crank case, of a horizontal partition above the bottom of the crank case to prevent the leakage from the cooling system and the lubricant in the crank case from mixing.

2. The combination with an internal combustion engine having a cooling system for cooling the piston, and a lubricating system in which some of the lubricant is retained in the crank case, of a horizontal partition above the bottom of the crank case, said partition having an upwardly directed sleeve-like portion surrounding the connecting rod to prevent the leakage from said cooling system and the lubricant in the crank case from mixing.



3. The combination with an internal combustion engine having a cooling system for cooling the piston, and a lubricating system in which some of the lubricant is retained in the crank case, of a horizontal partition above the bottom of the crank case, to prevent the leakage from the cooling system and the lubricant in the crank case from mixing, said partition having an upwardly directed sleeve-like portion tapering toward the piston and so disposed that the leakage from said cooling system will fall upon the upper surface of said sleeve-like portion and so disposed that the lubricant below said partition will be thrown against the under surface of said sleeve-like portion and thereby prevented from mixing with said leakage from the cooling system.

4. The combination with an internal combustion engine having a cooling system for cooling the piston, and a lubricating system in which a portion of the lubricant is retained in the crank case, of means for collecting the leakage from the cooling system and also the lubricant from the cylinder, said means being adapted to prevent such collected leakage and lubricant from mixing with the lubricant in the crank case.

5. The combination with an internal combustion engine, of a horizontal partition disposed above the crank shaft and capable of collecting the used lubricant from the cylinder, means to conduct lubricant to the wrist pin of the piston, and means to return the lubricant conducted to the wrist pin to the lower portion of the crank case beneath said partition.

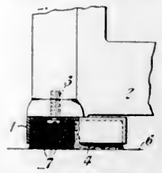
[Claim 6 not printed in the Gazette.]

1,173,538. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 30, 1914. Serial No. 815,387. (Cl. 155—33.)

1. A typewriter pad of cellular or spongy rubber, said rubber being under strong lateral compression, and having an exposed or bottom surface of the pad formed of said spongy rubber.

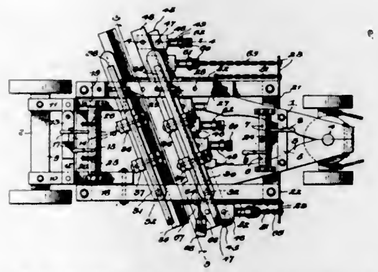
2. A typewriter pad composed of cellular spongy soft rubber, some of the said cells being closed and elongated under later compression, and some of said cells being open transversely at the bottom of said pad, where they form suction cups to hold the machine to the surface on which it rests and thereby prevent it from "walking."

3. A foot for typewriting machines comprising a cup, means for securing said cup to the bottom of a machine in combination with a pad of spongy rubber, normally larger and deeper than said cup, compressed laterally into



said cup, whereby the cells within the area of the cup walls are laterally compressed, and the part beyond the areas of said walls is not compressed.

1,173,539. ROAD-MACHINE. THOMAS S. ROGERS, Lagrange, Ind. Filed Nov. 12, 1914. Serial No. 871,716. (Cl. 55—23.)



1. In a road machine, a shoe beam, a plurality of longitudinally spaced U-shaped clips straddling said beam with the arms thereof pivotally connected with said beam and having their free ends projecting beyond the rear face of the beam, shoes mounted on the cross bars of said clips, and an adjusting bar connected with the projecting ends of said clip arms.

2. In a road machine, a shoe beam, a plurality of longitudinally spaced U-shaped clips straddling said beam with the arms thereof pivotally connected with said beam and having their free ends projecting beyond the rear face of the beam, shoes mounted on the cross bars of said clips, and an adjusting bar connected with the projecting ends of said clip arms, a link secured at one end to said beam and having means for engaging said adjusting bar to lock the bar in adjusted position.

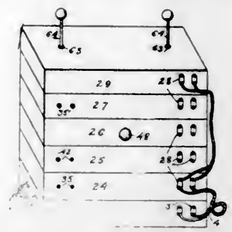
3. In a road machine, a shoe beam, a plurality of longitudinally spaced U-shaped clips straddling said beam with the arms thereof pivotally connected with said beam and having their free ends projecting beyond the rear face of the beam, shoes mounted on the cross bars of said clips, an adjusting bar connected with the projecting ends of said clip arms, and coöperating means on said beam and bar for locking the latter in adjusted position.

1,173,540. PORTABLE ELECTROTHERAPEUTIC APPARATUS. JAMES E. SEELEY, Los Angeles, Cal., assignor to Vulcan Coil Company, Los Angeles, Cal., a Corporation of California. Filed Aug. 20, 1914. Serial No. 857,654. (Cl. 250—37.)

1. A portable electrotherapeutic apparatus comprising a plurality of sections, each formed with an inclosing case and with means for detachable attachment thereof to adjacent sections, one of said sections being provided with means for receiving current and for producing oscillatory current therefrom, and the other sections being provided with means for receiving such oscillatory current, with means for modifying the same, and with outlet means for delivering the modified current.

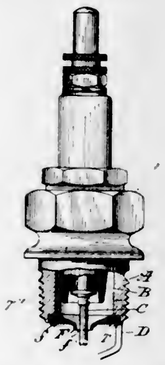
2. A portable electrotherapeutic apparatus, comprising an energizing element provided with means for receiving current and for producing oscillatory current therefrom, and with outlet terminals, and a plurality of modifying

elements, detachably attached to one another and to said energizing element, and provided with means for variantly modifying the oscillatory current supplied thereto,



and detachable electric connecting means adapted to connect the outlet terminals of said energizing element interchangeably with the different modifying elements.

1,173,541. SPARK-PLUG. WILLIAM E. SHERBONDY, Cleveland, Ohio, assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 7, 1913. Serial No. 759,329. (Cl. 123—169.)



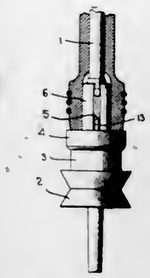
1. The combination with the shell and electrodes of a spark plug, of an insulating refractory disk forming a closure for the extremity of said shell, said disk provided with a thin annular outwardly projecting lip or flange providing an easily heated member encircling one of said electrodes.

2. In a spark plug, the combination with the shell having a recess, the central insulation, the central electrode and the outer electrode, of a disk of refractory and insulating material sented in the extremity of said shell, said disk provided with a thin annular lip or flange, encircling said central electrode, and projecting beyond said shell of said spark plug.

3. In a spark plug for the cylinder of an explosion engine, the combination with the shell having a recess in its outer end, and central and exterior electrodes, of a closure for said recess, and an annular insulating and refractory member forming a portion of said closure, and encircling said central electrodes, said member projecting longitudinally of said plug into said cylinder and exposed to the heated gases in said cylinder, and providing a zone of higher temperature than the body of the closure.

4. The combination with the recessed extremity of the shell of a spark plug for the cylinder of an explosion engine, and the central and outer electrodes therefor, of a closure for the recessed extremity of said plug through which said central electrodes projects, an annular refractory member at the inner edge thereof, projecting into said cylinder beyond the walls of said spark plug, and forming a rim extending at an angle to said closure, and encircling said central electrode.

1,173,542. BOBBIN-DRIVING MEANS FOR ROTATABLE SPINDLES. CHARLES A. SMITH, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 6, 1915. Serial No. 19,539. (Cl. 242—46.6.)



1. Bobbin driving means for rotatable spindles comprising a rotatable spindle; a support surrounding said spindle and provided with concentric seats; a plurality of bobbin clutching members each having a long arm extending up alongside the spindle, a short arm extending radially outward, and fulcruming on the inner seat; a flat annular spring over the outer seat provided with radially inwardly projecting and downwardly bent fingers resting on said short arms; and an annular cap extending over and contacting with said spring and adjustably secured to said support whereby the pressure of the spring on, and acting to expand, the clutch members may be varied.

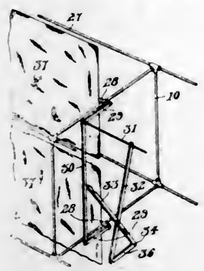
2. Bobbin driving means for rotatable spindles comprising a rotatable spindle; a support surrounding said spindle and provided with concentric seats; a plurality of bobbin clutching members each having a long arm extending up alongside the spindle, a short arm extending radially outward, and fulcruming on the inner seat; a flat annular spring over the outer seat provided with radially inwardly projecting fingers resting on said short arms; an anular cap extending over and contacting with said spring and adjustably secured to said support whereby the pressure of the spring on, and acting to expand, the clutch members may be varied; and means for limiting the outward movement of the upper ends of said clutching members.

3. Bobbin clutching means for rotatable spindles comprising a rotatable spindle; a support surrounding said spindle; a plurality of bobbin clutching members each having a long arm extending up alongside the spindle, a short arm extending radially outward and fulcruming on said support; an annular spring over the support provided with radially inwardly projecting fingers resting on said short arms; and an annular cap extending over and contacting with said spring and adjustably secured to said support whereby the pressure of the spring on, and acting to expand, the clutch members may be varied.

4. Bobbin driving means for rotatable spindles comprising a rotatable spindle; a support surrounding said spindle; a plurality of bobbin clutching members surrounding said spindle and fulcrumed on said support; resilient means engaging said members exteriorly and acting to rock said members about their fulcrums to throw their upper ends outwardly; means for limiting the outward movement of said members; and means for adjusting the pressure applied by said resilient means to said members.

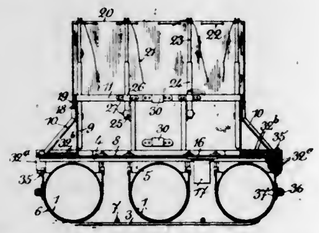
5. Bobbin driving means for rotatable spindles comprising a rotatable spindle; a plurality of elongated bobbin clutching members surrounding said spindle and fulcrumed with respect thereto; resilient means engaging said members exteriorly and acting to rock said members about their fulcrums to throw the upper ends outwardly, and means for adjusting the pressure applied by said resilient means to said members.

1,173,543. AEROPLANE. JAN TECZO, Passaic, N. J. Filed Sept. 28, 1915. Serial No. 53,054. (Cl. 244—12.)



An aeroplane comprising a centrally arranged frame, side brackets oppositely carried by the said frame, pairs of parallel shafts journaled centrally of the top and bottom of each of the said brackets, the said shafts of the separate brackets being in axial alinement with each other, each of the said shafts having an operating arm, connecting links pivoted between the free ends of the said arms of each bracket, a rod extending between the brackets and connected at its ends to the joint of the upper arms and the upper ends of the links, a toothed rack within the said frame, an angular hand lever pivoted to the said rack, a pivoted lever connecting the lower short arm of the said hand lever with the said connecting rod, and an engaging catch for the teeth of the said rack carried by the said hand lever.

1,173,544. RAFT LIFE-BOAT. LUCIEN VIALET-CHABRAND, La Ciotat, France. Filed July 6, 1914. Serial No. 849,222. (Cl. 9—11.)



1. A life raft-boat comprising a casing open at the top, hollow cylinders under such casing, cross bars placed above and below such cylinders, blocks of wood between the cylinders and the upper cross bars, collars which pass underneath the cylinders and the ends of which are secured to the bottom of the casing, the said lower cross bars being secured to the bottom of the said collars, and longitudinal tubes secured to the said lower cross bars in the intervals between the said collars, the bottom of the casing being secured on the upper cross bars.

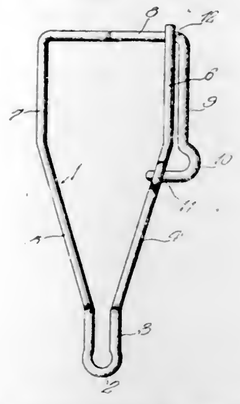
2. A life raft-boat comprising a casing open at the top, transverse benches in such casing, tubes placed between the benches at a supporting height for the passengers seated, the ends of such tubes being secured to the lateral walls of the casing, hollow cylinders secured underneath the casing, parallel to one another, and tubes of support between such sylinders, spaces large enough to house the legs of the passengers being provided between the said sylinders.

3. A life raft-boat comprising a casing open at the top, hollow cylinders underneath such casing, telescopic standards secured to the walls of the casing, a cable secured around the casing, a curtain attached to the said cable, and cords passing over the top of the said standards and attached to the top of the said curtain.

4. A life raft-boat comprising a casing the top of which is open and the bottom of which extends laterally and outwardly, hollow cylinders underneath the bottom of the casing, and floating bodies attached to the edges of the bottom of the casing, such bodies comprising, at each side, block of cork secured underneath the said bottom and wood panels secured above the floor.

5. In a life raft-boat a casing, collars secured to the walls of such casing, vertical tubes guided in such collars, pins for securing the said tubes in the said collars, rods in such tubes, and guides secured at the bottom of the walls of the casing and adapted to hold the said tubes when they are lowered.

1,173,545. CLOTH-HOLDER. JAMES EDWIN AUSTIN, Portland, Oreg. Filed Nov. 30, 1914. Serial No. 874,772. (Cl. 24—261.)



1. A cloth holder comprising resiliently connected diverging arms provided at their free ends with parallel fingers, one of said fingers having a laterally extending member projecting from the end thereof and spanning the space between said fingers, the free end of said lateral member having a clamping rod extending inwardly at right angles to said lateral member, and coöperating locking means on the free end of said clamping rod and on the adjacent arm of said holder for locking said members in operative position.

2. A cloth holder comprising resiliently connected diverging arms provided at their free ends with parallel fingers, one of said fingers having a cross rod laterally projecting from the free end thereof and spanning the space between said fingers, the free end of said lateral member having a clamping rod extending inwardly at right angles to said cross rod, coöperating locking means on the free end of said clamping rod and on the adjacent arm of said holder for locking said members in operative position, and a loop formed in said cross rod to receive the free end of the other finger.

3. A cloth holder comprising a handle, forwardly extending diverging springs carried by said handle, parallel fingers carried by said springs, a spacing member carried by one of said fingers having means for interlocking engagement with the other finger, said means comprising a clamping arm extending laterally inward from the free end of said spacing member, said arm having an inturned hook at its terminal, and a loop formed in one of said springs in position to receive the bill of said hook.

4. A cloth holder comprising a handle, forwardly extending diverging springs carried by said handle, parallel fingers carried by said springs, a spacing member carried by one of said fingers having means for interlocking engagement with the other finger, said means comprising a clamping arm extending laterally inward from the free end of said spacing member said arm having an inturned hook at its terminal, and a loop formed in one of said springs in position to receive the bill of said hook, said spacing member having a loop adjacent its connection with its inwardly extending arm adapted to receive the free end of the other finger.

1,173,546. SANITARY PITCHER OR THE LIKE. CHARLES S. BARON, Tiffin, Ohio. Filed May 2, 1914. Serial No. 835,885. (Cl. 65—31.)



1. The combination with a receptacle provided near its open end with a circumferential shoulder, having a depressed portion to accommodate and limit the tilt of the lid, of a lid fitting when closed within said open end of the receptacle against said shoulder, and a pivotal connection between the receptacle and lid.

2. The combination with a receptacle provided within its open end with a circumferential shoulder having a depressed portion forming with it an angle of depression, of a lid fitting when closed within said open end of the receptacle against said shoulder and pivotally united, by a medially disposed connection, to said shoulder substantially at the said angle of depression, whereby the said depressed portion of the shoulder acts as a stop to the opening of the lid and the remainder of it to the closing thereof.

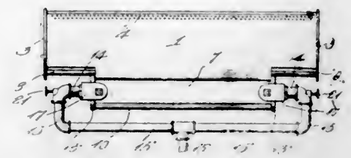
3. The combination with a receptacle provided with a shoulder adjacent the open end thereof, of a lid fitting within said receptacle and being seated upon said shoulder, pivot members upon said lid adapted to cooperate with said receptacle, said shoulder being provided with a depressed portion forming a stop to limit the opening movement of said lid, and a thumb piece secured to said lid and located relative to said pivot and said stop so that pressure on said thumb piece is sustained by said pivot and said stop.

4. The combination of a pitcher provided at its open upper end with a shoulder, a lid fitting within said open upper end of said pitcher and resting upon a portion of said shoulder, a separable pivotal connection between said lid and said receptacle, a handle upon said receptacle, said shoulder between said handle and said pivotal connection being inclined from said pivotal connection toward said handle to provide a stop to limit the opening movement of said lid, and a thumb piece mounted upon said lid to securely hold said lid against the inclined portion of said shoulder when pressure is applied to said thumb piece to open the lid.

5. As a new article of manufacture, a receptacle provided at its open upper end with a circumferential shoulder, a portion of said circumferential shoulder being substantially at right angles to the axis of said receptacle, another portion of said shoulder lying in a plane inclined to the first mentioned portion of said shoulder, and a pivotal member mounted on said receptacle adjacent the angles of depression of said shoulder, said pivotal member adapted to contact with the different portions of said shoulder when in open and closed positions.

[Claims 6 to 8 not printed in the Gazette.]

1,173,547. BURNER. BENJAMIN C. BARTLEBAUGH, Wheeling, W. Va. Filed Nov. 15, 1915. Serial No. 61,612. (Cl. 158—106.)



1. A gas burner comprising a closed casing having an inlet opening in one side wall thereof, a mixing chamber mounted on said casing and communicating with said inlet opening, said mixing chamber being open at its oppopsite ends and having truncated cone shaped inlets arranged therein with their smaller ends extending into said chamber and discharging thereinto in opposite directions, and means for injecting air and gas into the mouths of said cone-shaped inlets.

2. A gas burner comprising a closed cylindrical casing having a plurality of longitudinally extending laterally spaced series of rows of perforations formed in one side wall thereof and having an opening therein in its opposed side wall, a horizontal partition arranged in said casing between said opening and said perforations, a tubular mixing chamber mounted on said casing around said opening, said mixing chamber being open at its opposite ends, truncated cone shaped inlets disposed in said ends with their larger outer ends arranged at the ends of said chamber and their smaller ends extending inwardly thereinto and arranged opposite each other to discharge in opposite directions, U-shaped brackets spanning the outer ends of said mixing chamber with the free ends of the legs thereof secured thereto, gas discharge spuds mounted in the cross bars of said brackets and disposed at the larger outer ends of said truncated cone shaped members, U-shaped pipes having said spuds carried in one end thereof and extensions at their other ends extending laterally toward each other and arranged in longitudinal alinement and in a plane parallel with said mixing chamber, and a main gas supply pipe communicating with the inner ends of said extensions.

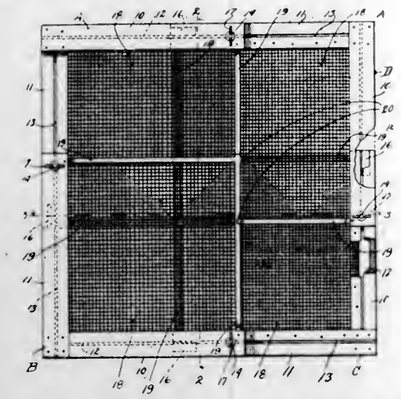
3. A gas burner comprising a closed cylindrical casing having a plurality of discharge openings in one side wall thereof, the opposed side wall being slit longitudinally and transversely to form flaps, said flaps being bent outwardly and shaped to form the opposed side walls of a mixing chamber, a connecting strip inserted between the free edges of said flaps and secured thereto, said flaps extending a portion of the length of said casing and spaced at their opposite ends from the opposite ends of said casing, truncated cone shaped inlet pipes mounted in the ends of said mixing chamber with their smaller ends extending into the chamber and their larger ends provided with flanges crimped around the outer ends of the mixing chamber, and means for injecting air and gas to the mouths of said cones.

4. The combination with a gas burner, of a mixing chamber therefor having oppositely disposed inlets, truncated cone shaped members arranged in said inlets with their smaller ends extending into said chamber and arranged opposite each other to discharge in opposite directions into said chamber, and means for injecting air and gas into said cones through the larger ends thereof.

5. A gas burner comprising a cylindrical casing closed at its ends and having perforations in one side wall thereof, semi-cylindrical shells arranged in said casing said shells being spaced apart at their inner ends to form an inlet for said casing, a horizontal partition disposed in said casing and supported by said shells, and means for supplying fuel to said casing through said inlet.

[Claims 6 and 7 not printed in the Gazette.]

1,173,548. WINDOW-SCREEN. JOHN BEAHAN, Clearfield, Pa. Filed Apr. 5, 1915. Serial No. 19,274. (Cl. 156—38.)



A window screen comprising corner sections, each including a pair of grooved strips joined together and a section of screen attached thereto, the strips of each section sliding on the adjacent strips of the adjacent sections, metal U-shaped members disposed in the grooves of the abutting faces of the strips, bolt members carried by the second of the strips and provided with L-shaped heads engaged in the grooves of the abutting strips, clamping nuts carried by the bolts, the exposed edges of the screen sections being provided with suitable metal bindings, and hook members formed on the bindings for engagement with the binding strips of the adjacent screen sections to insure proper insect-proof joints where the screen sections pass each other.

1,173,549. SHARPENING DEVICE. ROBERT S. BLAIR, New Rochelle, N. Y. Filed July 13, 1907. Serial No. 383,692. (Cl. 51—7.)



1. In a device of the class described, in combination, a sheath comprising means adapted to protect a blade, and abrasive means mounted upon said protecting means adapted to sharpen said blade.

2. In a device of the class described, in combination, a sheath comprising means adapted to protect a blade, and abrasive means mounted upon said protecting means adapted to sharpen said blade, said abrasive means being mounted longitudinally of said sheath and being adapted to stiffen the same.

3. In a device of the class described, in combination, a sheath, and abrasive means mounted upon said sheath adapted upon a blade being drawn lengthwise thereof to sharpen the same.

4. In a device of the class described, in combination, a sheath, and abrasive means mounted upon said sheath adapted upon a blade being drawn therefrom to sharpen the same, said abrasive means being formed and mounted to embrace the edge of the blade.

5. In a device of the class described, in combination, means extending entirely about a blade and adapted to protect the edge thereof, and abrasive means mounted within the same and adapted to sharpen said edge upon the blade being drawn lengthwise of said first mentioned means.

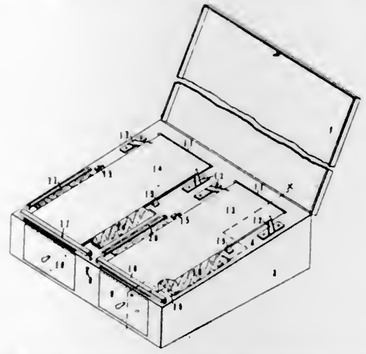
[Claims 6 to 14 not printed in the Gazette.]

1,173,550. MANUFACTURE OF UREA. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Jan. 23, 1915. Serial No. 4,038. (Cl. 23—24.)

1. In the manufacture of urea by heating carbon dioxid compounds of ammonia in a closed vessel the process of isolation of urea and of recovering the unconverted ammonium salts in a form suitable for direct further use in the process, by distilling at a temperature not exceeding 80 degrees C.

2. In the manufacture of urea by heating carbon dioxid compounds of ammonia in a closed vessel the process of isolation of urea and of recovering the unconverted ammonium salts in a form suitable for direct further use in the process, by distilling at a temperature not exceeding 80 degrees C. and then distilling further until the urea is dry.

1,173,551. MANIFOLDING DEVICE. ARCHIE M. BOVIER, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Canada. Filed May 27, 1912. Serial No. 699,901. (Cl. 11—36.)



1. In a manifolding device, in combination a receptacle containing a plurality of webs, the upper surface of which is inclined downwardly toward the front, each web being folded back and forth upon itself longitudinally, means for cutting the web into separate strips, guides for maintaining the lateral edges of said strips in alinement, manifolding sheets interposed between the strips, whereby a plurality of records of a transaction may be obtained, and means for holding the free edges of said strips in position.

2. In a manifolding device, in combination, a receptacle containing a plurality of webs, the upper surface of which is inclined downwardly toward the front, means for cutting each web into separate strips, guides for maintaining the lateral edges of said strips in alinement, a plurality of carbon sheets interposed between the strips, capable of being moved transversely to the movement of the strips, and means for holding the free edges of the strips and carbon sheets in place.

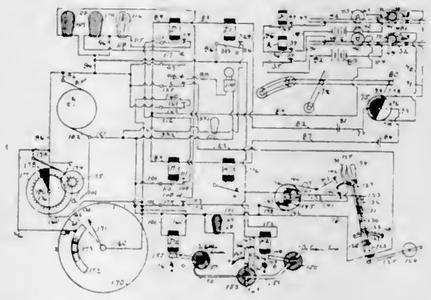
3. In a manifolding device, in combination, a receptacle containing a plurality of webs arranged side by side, the upper surface of which is inclined downwardly toward the front, each web being folded back and forth upon itself longitudinally, means for cutting each web into separate strips, guides for maintaining the lateral edges of said strips in alinement, a plurality of carbon sheets interposed between the strips capable of being moved transversely to the movement of the strips, and separate cutting edges for holding the free ends of the strips and carbon sheets in place.

4. In a manifolding device, in combination, a receptacle having an upper surface and containing a plurality of longitudinally folded webs, the upper surface of said receptacle being inclined downwardly toward the front adapted to be used as a writing table, means for cutting the webs along their longitudinal folds when withdrawn from the receptacle and laid over the upper surface thereof, said receptacle having recesses at the sides, and rolls of carbon paper in said recesses, the carbon paper arranged to be drawn across the upper surface of the lower strips into which the webs are divided, whereby a plurality of records of a transaction may be obtained.

5. In a manifolding device, in combination, a receptacle having an upper surface and containing a plurality of longitudinally folded webs, the upper surface of said receptacle being adapted to be used as a writing table, means for cutting the webs along their longitudinal folds when withdrawn from the receptacle and laid over the upper surface thereof, said receptacle having recesses at the sides, rolls of carbon paper in said recesses, the carbon paper arranged to be drawn across the upper surface of the lower strips into which the webs are divided, whereby a plurality of records of a transaction may be obtained, and means pivotally supporting said receptacle whereby the same may be conveniently turned around.

[Claims 6 to 12 not printed in the Gazette.]

1,173,552. TRAIN-CONTROLLING DEVICE. ABRAM L. BOWER, Boyertown, Pa. Filed Jan. 25, 1909. Serial No. 474,182. (Cl. 246—58.)

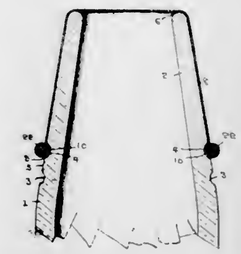


1. In a train stop device, the combination of the equalizing reservoir of an air brake system, a valve connecting said reservoir with the atmosphere, a magnet normally holding the valve closed, a second valve connecting the train line with the atmosphere, a second magnet normally holding the second valve closed, and individual circuits controlling said magnets, each of said circuits including train carried terminals and track contacts coöperating therewith.

2. In a train stop device, the combination of the equalizing reservoir of an air brake system, a valve controlling the venting of said reservoir, a magnet for actuating said valve, a circuit controlling said magnet, means on the track for controlling said circuit, an air gage connected with the train line, a circuit including said magnet and contacts operated by the air gage and included in the last mentioned circuit.

3. The combination of a brake valve, a magnet for actuating the valve, two circuits controlling the magnet, means on the track for controlling one of the circuits, and means on the train for making and breaking the other circuit at predetermined intervals.

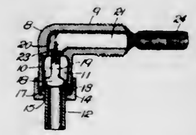
1,173,553. SANITARY MILK-BOTTLE CLOSURE. AUSTIN F. BURDICK and WILLIAM EARL MILLER, Lansing, Mich. Filed Oct. 24, 1914. Serial No. 868,433. (Cl. 215—9.)



1. The combination with a fluid receptacle, an upwardly and inwardly tapered neck therefor, spaced parallel annular grooves formed in the lower exterior surfaces of said neck, of a combined closure and cup formed of impervious material and tapered to conform to said neck for snugly embracing the same, an annular groove formed adjacent the edge of said closure and cup for seating in the uppermost of said grooves of said neck, and a resilient ring for encircling said neck for seating within the groove of said closure and cup within the uppermost groove of said neck for retaining said closure and cup upon the neck of said receptacle, said resilient ring adapted to be seated in the lowermost of said grooves of said neck when removing said closure and cup from said neck.

2. The combination with a fluid receptacle having a tapered neck provided with spaced annular grooves, of a combined closure and cup therefor, said closure and cup formed of a flat blank of impervious material provided with a centrally disposed circularly creased portion to provide a bottom therefor, creased lines extending radially from the circular creased portion, and obliquely disposed creased lines intersecting the circular creased portion at the point of the intersection of the radially disposed creased lines whereby to provide overlapping segments to form the side walls of the said closure and cup, said blank being also provided with marginal indentations to provide an annular groove adjacent the edge of said closure and cup when said blank has been bent to form the same, the annular groove of said closure adapted to be seated in one of the grooves of said neck, and a resilient ring adapted to be seated in said annular groove of said closure for retaining said closure upon the neck of the receptacle.

1,173,554. AUTOMATIC VALVE. MORTIMER CAHILL, Kansas City, Mo. Filed July 10, 1914. Serial No. 850,128. (Cl. 137—32.)

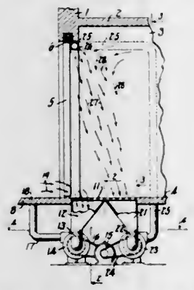


1. In a valve, a housing comprising a channel and a tapered valve chamber having a contracted neck at its larger end leading to the channel, an intake portion adapted for delivering to the smaller end of the chamber and provided with a seat, a valve freely movable within the chamber and having a head at one end adapted to seat in the intake portion, and a shank on said head adapted for sliding in said neck to guide the valve.

2. In a valve, a housing comprising a channel and a tapered valve chamber having a contracted neck at its larger end leading to the channel, an intake portion adapted for delivering to the smaller end of the chamber and provided with a seat, a valve freely movable within the chamber and having a head at one end adapted to seat in the intake portion, a shank on said head adapted for sliding in said neck to guide the valve, and a spring for yieldingly urging the valve to its seat.

3. The combination with a right angle valve housing having a delivery arm provided with a channel, and an arm having a tapered valve chamber and a restricted neck connecting the larger end of the chamber with said channel, an intake tube located in the smaller end of the valve chamber and provided with a valve seat, a valve having a head adapted to seat in said intake tube and a socketed shank projected into the said restricted neck, and a spring seated in said socket and bearing against the inner face of the channel in the first named arm.

1,173,555. DRAFT-PREVENTING DEVICE. WILFRED F. CALDWELL, Detroit, Mich. Filed Sept. 30, 1914. Serial No. 864,219. (Cl. 98—27.)



1. In combination, a building having an opening in one of its walls, means for directing a current of air downwardly across the opening, suction means comprising an intake located nead the lower side of the opening for receiving said current of air, and a second suction means also comprising an intake located near the lower side of the opening for intercepting the current of air that tends to pass into the building through the lower portion of the opening, said last mentioned suction means being arranged to discharge the intercepted air exterior to the building.

2. In combination, a building having an opening in one of its walls, means for directing a current of air downwardly across the opening, suction means comprising an intake located near the lower side of the opening for receiving said current of air, said suction means being arranged to discharge the air within the building, and suction means also comprising an intake located near the lower side of the opening for intercepting the current of air that tends to pass into the building through the lower portion of the opening, said last mentioned suction means being arranged to discharge the intercepted air exterior to the building.

3. In combination, a building having an opening in one of its walls, means for directing a current of air from above downwardly across the opening, and suction means comprising an intake located near the lower side of the opening for receiving the current of air, said suction means being arranged to discharge the air in the interior of the building.

4. In combination, a building having an opening in one of its walls, a door normally closing said opening, means for directing a current of air downwardly across the opening, means for supplying air under pressure to the directing means, and means controlled by the door as it approaches the limit of its movement toward open position for throwing the air supplying means into operation.

5. In combination, a building having an opening in one of its walls, a door normally closing said opening, means for directing a current of air downwardly across the opening, motor-operated means for supplying air under pressure to the directing means, and electric circuits, controlled by the door as it approaches the limit of its movement toward open position, for conducting current to the motor of the motor-operated air supplying means.

[Claim 6 not printed in the Gazette.]

1,173,556. HEAT DISTRIBUTER AND EQUALIZER FOR COOKING-STOVES. JOHN L. CARTER, Brooklyn, N. Y. Filed Jan. 13, 1916. Serial No. 71,841. (Cl. 126—215.)



1. A heat distributer and equalizer for cooking stoves, comprising a folded plate of sheet metal affording base members, vertical supporting members extending upwardly between said base members, horizontal connecting members at the sides of said vertical members and spaced therefrom to form heat passages, and return members between said base members and connecting members and spaced therefrom to form heat channels at the sides thereof, flame or heat openings being formed in some of said members below said connecting members.

2. A heat distributer and equalizer for cooking stoves, comprising a folded plate of sheet metal affording base members, vertical supporting members extending upwardly between said base members, horizontal connecting members at the sides of said vertical members and spaced therefrom to form heat passages, and return members between said base members and connecting members and spaced therefrom to form heat channels at the sides thereof, flame or heat openings being provided in said base members below said return members and out of the vertical planes of said heat passages.

3. A heat distributer and equalizer for cooking stoves, comprising a folded plate of sheet metal affording base-members, utensil supporting members, and horizontal members above said base members and spaced therefrom to form heat channels and also spaced from said supporting members to form heat passages, said base-members having openings therein.

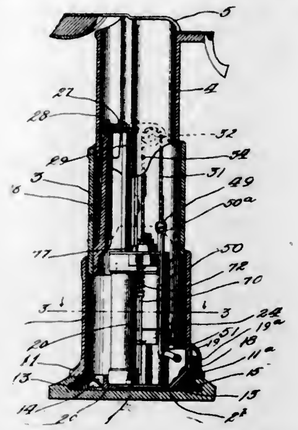
4. A heat distributer and equalizer for cooking stoves, comprising a folded plate of sheet metal affording base-members, utensil supporting members, and horizontal members above said base members and spaced therefrom to form heat channels and also spaced from said supporting members to form heat passages, said base-members having openings therein below said horizontal members and out of the vertical planes of said heat passages.

1,173,557. DENTAL CHAIR. FRANK E. CASE, Canton, Ohio, assignor to The Harvard Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 16, 1912. Serial No. 715,323. (Cl. 138—9.)

1. In a chair, an extensible pedestal including a plurality of telescoping standards having open upper ends, a seat frame on the top standard having an opening therein corresponding to the open end of the standard, and a jack removably seated in the base standard adapted to be entered and removed through the seat frame opening.

2. In a chair, an extensible pedestal including a plurality of telescoping standards having open upper ends, a seat frame on the top standard having an opening therein corresponding to the open end of the standard, a jack adapted to be entered and removed through said opening, a seat in the base standard for the jack, an upright post in the base standard, and a lateral lug on the jack adapted to engage the post when seated in the base standard.

3. In a chair, an extensible pedestal including three telescoping standards having open upper ends, a seat frame on the top standard having an opening therein corresponding to the open end of the standard, a jack removably seated in the base standard having an upright piston rod therein, a lifting bracket connected to the lower end of the middle standard and extending upward inside the top standard, and a detachable lifting arm on the bracket abutting the upper end of the piston rod.

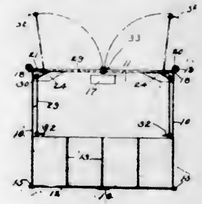


4. In a chair, an extensible pedestal including a plurality of telescoping standards, a jack seated in the base standard having a piston therein with an upright rod, a lifting arm secured to one of the standards abutting the upper end of the piston rod, a release valve in the jack, and an actuating rod having a lateral ledge in the path of the piston and extending under the release valve to operate the same.

5. In a chair, an extensible pedestal including a plurality of telescoping standards, a jack seated in the base standard having a piston cylinder with an upright piston rod, a lifting arm secured to one of the standards abutting the upper end of the piston rod, a release valve in the jack, an actuating rod having a lateral ledge thereon extending under the release valve and having one edge extending into the piston cylinder above the piston head, and a pin on the ledge for opening the valve.

[Claims 6 to 10 not printed in the Gazette.]

1,173,558. PACKING-CASE. LEWIS C. COSMEN, Niles, and WILLIAM J. DAUM, Norwood Park, Ill. Filed Mar. 27, 1915. Serial No. 17,512. (Cl. 220—11.)



1. A packing case comprising a box formed adjacent its upper edge with an inturned flange, a cover plate and means on the cover plate and in the box under said flange providing pivotal and sliding connections between the cover plate and box whereby the plate will fold down beneath said flange.

2. A packing case comprising a box formed with an inturned flange adjacent its upper edge and having means disposed within the upper corners under said flange which provides diagonal downwardly and outwardly disposed guide slots and cover plates having pintles which project into said guide slots.

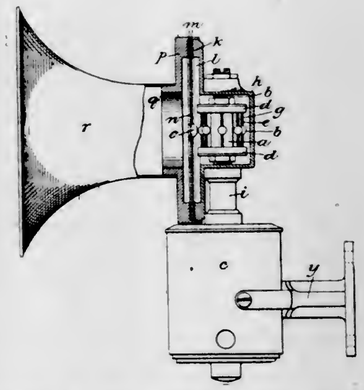
3. A packing case comprising a box having an inturned flange adjacent its upper edge, a cover plate and means on the cover plate and box under said said flange providing pivotal and sliding connections between the cover plate and box permitting the plate to be folded down under said flange or diagonally outwardly above the flange, or in horizontal position substantially flush with the flange.

4. A packing case comprising a box, corner pieces arranged in the upper corners of the box formed with diagonal downwardly and outwardly extending slots, and a cover plate having pintles extending into said slots.

5. A packing case comprising a sheet metal box formed with an inturned flange adjacent its upper edge and with partitions in the bottom dividing the same into bottle compartments, cover plates of sheet metal and means on the cover plates and on opposite sides of the box beneath said flanges providing pivotal and sliding connections between the cover plates and box whereby the plates will fold down under said flange.

[Claims 6 to 9 not printed in the Gazette.]

1,173,559. DIAPHRAGM-HORN. LOUIS CHOLLET, Paris, France, assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed July 9, 1912. Serial No. 708,405. (Cl. 116—1.)



1. A horn or signal including a diaphragm having a wear piece, a rotor having its axis substantially parallel to said diaphragm, including a plurality of impact members independently movable axially of said rotor, said members and said wear piece having surfaces inclined in the direction of the length of the axis of said rotor, and yielding means tending to hold said impact members against axial movement.

2. A horn or signal having a diaphragm, and a rotor rotatable about an axis substantially parallel to said diaphragm, said rotor including two heads or disks and a series of relatively-movable impact members supported therebetween, together with yielding means tending to hold said impact members against axial movement.

3. A rotor for horns or signals, including two substantially parallel disks or heads, spaced apart at a fixed distance from each other, and a series of impact members carried thereby and supported therebetween, and movable toward and from said disks.

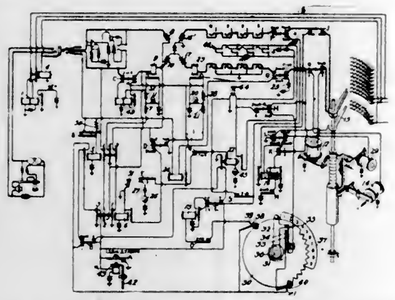
4. A rotor for horns or signals, including two substantially parallel disks or heads, and a series of impact members carried thereby and supported therebetween and movable toward and from said disks, at fixed distances radially from the axis of said motor.

5. A rotor for horns or signals, including two substantially parallel disks or heads, a series of impact members carried thereby and means for resiliently supporting them

therebetween at fixed distances radially from the axis of said rotor and tending to hold said impact members in a predetermined intermediate position.

[Claims 6 to 11 not printed in the Gazette.]

1,173,560. SEMI-AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. HENRY PETER CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 6, 1914. Serial No. 849,219. (Cl. 179—27.)



1. In a telephone exchange system, the combination with a party telephone line having multiple terminals, of a connecting circuit adapted to be united therewith, means to place a busy potential on all of the multiple test contacts of the telephone line whenever a connection is made therewith and to continuously maintain this condition to prevent automatic connection with other lines until the line is released, and means under the control of the operator to automatically connect with said busy contacts irrespective of the existing busy condition when connection with a party on the same line is desired by the calling subscriber.

2. In a telephone exchange system, the combination with telephone lines having multiple terminals, of connecting circuits of a single type common to all of said lines adapted to be connected with and interconnect said lines, means to render telephone lines busy whenever a connection is made therewith and to continuously maintain this condition to prevent automatic connection therewith until the lines are released, and means under the control of an operator to automatically connect with any busy line irrespective of the existing busy condition.

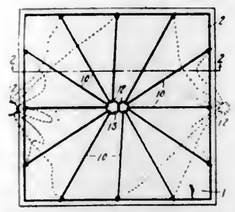
3. In a telephone exchange system, the combination with a party telephone line having multiple terminals, of a connecting circuit adapted to be united therewith having an answering and a calling end, means under the control of an operator to automatically interrupt the answering end of said connecting circuit, and means to automatically connect two subscribers of the party line over the calling end of said connecting circuit.

4. In a telephone exchange system, the combination with a party telephone line having multiple terminals, of a connecting circuit adapted to be united therewith, means to place a busy test condition upon said terminals when the telephone line is connected to said connecting circuit, means under the control of an operator to automatically connect the calling end of said connecting circuit to the subscriber's line irrespective of the existing busy test, and means to automatically interrupt the answering end of said connecting circuit.

5. In a semi-automatic telephone system, the combination with a party telephone line having multiple terminals, of a connecting circuit adapted to be united therewith, buitiple test terminals rendered busy whenever a connection is established with said line, a signal device associated with the connecting circuit to indicate when the connecting circuit is in contact at both ends with multiple terminals of the same line, automatic means under the control of the operator to disconnect the answering end of the connecting circuit and to connect the party line subscribers over the calling end of the connecting circuit.

[Claims 6 to 20 not printed in the Gazette.]

1,173,561. BATH-MAT. EDWIN R. CROOKER, Los Angeles, Cal. Filed July 14, 1915. Serial No. 39,864. (Cl. 4—27.)



1. A bath mat, comprising a flexible flat sheet provided with an upwardly extending wall around its periphery and having an extension beyond said wall in the plane of said sheet to reinforce and strengthen the same.

2. A bath mat, comprising a flexible flat sheet provided with an upwardly extending wall around its periphery and having an extension beyond said wall in the plane of said sheet to reinforce and strengthen the same, the peripheral portions of said sheet beneath and adjacent said wall being composed of a plurality of plies.

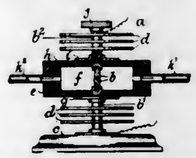
3. A bath mat, comprising a flexible flat sheet provided with an upwardly extending wall around its periphery and having an extension beyond said wall in the plane of said sheet to reinforce and strengthen the same, said sheet and wall being provided with a continuous coating of waterproof material.

4. A bath mat, comprising a flexible flat sheet provided with an upwardly extending wall around its periphery and having an extension beyond said wall in the plane of said sheet to reinforce and strengthen the same, the peripheral portions of said sheet beneath and adjacent said wall being composed of a plurality of plies, said sheet and wall being provided with a continuous coating of waterproof material.

5. A bath mat, comprising a flat sheet having near its edges two superposed plies to form an upstanding wall or rim, the outer ply extending outwardly beyond said wall and in the same plane as the body of the sheet, to form a reinforcing base for said wall.

[Claims 6 to 11 not printed in the Gazette.]

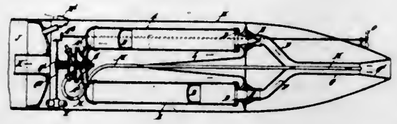
1,173,562. RADIOTELEPHONE TRANSMITTING SYSTEM. WILLIAM THEODORE DITCHAM, Twickenham, England. Filed June 20, 1914. Serial No. 846,298. (Cl. 250—38.)



1. In a spark gap discharger for wireless telephony, a base, an electrode mounted on said base, radial cooling flanges on said electrode, a flange near the upper end of said electrode, a centrally recessed block of insulating material supported on said flange, inlet and outlet pipes in said block, a cover of insulating material on said block, an internally screw-threaded flange plate on said cover above said electrode, an electrode screwed into said flange plate, radial cooling flanges on said second electrode and a head of insulating material on said second electrode.

2. In a spark gap discharger for wireless telephony, a base, an electrode mounted on said base, radial cooling flanges on said electrode, a flange near the upper end of said electrode, a centrally recessed block of insulating material supported on said flange, inlet and outlet pipes in said block, a cover of insulating material on said block, an internally screw-threaded flange plate on said cover above said electrode, an electrode screwed into said flange plate, radial cooling flanges on said second electrode, a head of insulating material on said second electrode and small terminal blocks fitted in recesses in the adjacent ends of said electrodes.

1,173,563. AUTOMOBILE TORPEDO. FRANK W. DODD, Blackheath Park, England. Filed July 21, 1914. Serial No. 852,243. (Cl. 115—15.)



1. A torpedo comprising a longitudinally disposed power cylinder, means for admitting water to the said cylinder, a source of compressed power fluid, means for periodically admitting power fluid to one closed horizontally disposed end of said cylinder so that the same cylinder acts alternately as a water cylinder and a cylinder for developing power from the compressed fluid by its expansion within the cylinder, a rearwardly directed ejection nozzle and means whereby the water discharged from the cylinder is directly conducted from the rear end of the cylinder to the ejection nozzle to serve as a torpedo propelling agent.

2. In a torpedo, a water chamber, means for maintaining said chamber flooded, a cylinder located within said water chamber, a rearwardly directed ejection nozzle communicating at its forward end with said cylinder and at its rear end with the outside shell of the torpedo, means tending to maintain said cylinder flooded and means for admitting compressed air to said cylinder so as to discharge intermittently the water from the rear end of the cylinder to the ejection nozzle to serve as the torpedo propelling agent.

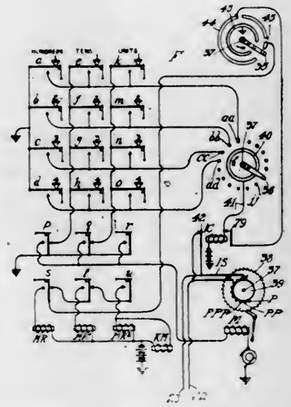
3. A torpedo comprising a water chamber, a compressed air reservoir, a cylinder disposed longitudinally within said water chamber, a rearwardly directed ejection nozzle communicating at its forward end with said cylinder and at its rear end with the outside shell of the torpedo, means for maintaining said water chamber flooded, means tending to maintain said cylinder flooded with water from the water chamber and means for periodically admitting compressed air to said cylinder so as to discharge intermittently the water from the rear end of the cylinder to the ejection nozzle to serve as the torpedo propelling agent.

4. A torpedo having a water chamber located rearwardly of the torpedo body, a compressed air chamber disposed forwardly of said water chamber, a cylinder disposed longitudinally within said water chamber, a rearwardly directed ejection nozzle communicating at its forward end with said cylinder and at its rear end with the outside shell of the torpedo, means for maintaining said water chamber flooded with water, means for admitting water to said cylinder, and means for periodically admitting compressed air to said cylinder from said compressed air chamber so as to discharge the water from the rear end of the cylinder to the ejection nozzle to serve as the torpedo propelling agents.

5. A torpedo having a water chamber located rearwardly of the torpedo body, a cylinder disposed longitudinally of said water chamber, a compressed air reservoir disposed forwardly of said water chamber, a rearwardly directed axially disposed ejection nozzle communicating at its forward end with said cylinder and at its rear end with the outside of the shell of the torpedo, means for maintaining said water chamber flooded, means for periodically placing the interior of said cylinder in communication with said water chamber and means for periodically admitting compressed air to said cylinder from said compressed air chamber so as to discharge the water from the rear end of the cylinder to the ejection nozzle to serve as the torpedo propelling agent.

[Claims 6 to 19 not printed in the Gazette.]

1,173,564. OPERATOR'S CALLING DEVICE. ALFRED H. DYSON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1911. Serial No. 610,420. (Cl. 179—90.)



1. A calling device comprising impulse keys and an electromagnetically driven automatic switch for transmitting variable series of impulses, said series corresponding in number to the number of keys actuated.

2. A calling device comprising impulse keys of different digit values, an electromagnetically driven automatic switch for transmitting impulses corresponding in value to said keys, and means for operating said switch to transmit variable series of impulses, said series corresponding in number to the number of keys actuated.

3. A calling device comprising impulse keys, and an automatic switch controlled by said keys for transmitting variable series of impulses, said series corresponding in number to the number of keys actuated.

4. A calling device comprising sets of impulse keys of different digit values, one for each digit in each set, and an automatic switch controlled by said keys for transmitting variable series of impulses, said series corresponding in number to the number of keys actuated.

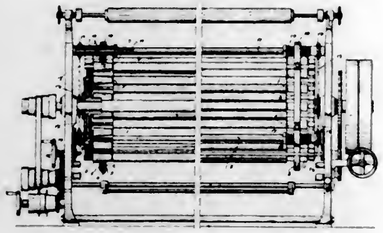
5. A calling device comprising a keyboard including a plurality of sets of impulse keys, an automatic switch controlled from said keyboard and having a set of contacts common to said sets of keys, a wiper for said switch adapted to coöperate with said contact set for each key actuated, and connections extending from said keys to said switch to cause such actuation of said wiper.

[Claims 6 to 34 not printed in the Gazette.]

1,173,565. DEVICE FOR DRIVING THE TEAZELING-ROLLS OF CYLINDER TEAZELING-MACHINES. JACOB H. ERMBTER, Neuss-on-the-Rhine, Germany, assignor to the Firm of Paul Klug, Special Manufacture of Finishing Machines, Crimmitschau, Germany. Filed May 22, 1915. Serial No. 29,759. (Cl. 26—19.)

1. A cylindrical teazeling machine comprising a plurality of teazeling rolls, a plurality of continuously

tapered driving cones mounted thereon, and an expansible ring-shaped member surrounding the cones, one of said parts being axially slidable relatively to the other part.



2. A cylindrical teazeling machine comprising a plurality of teazeling rolls, a plurality of continuously tapered driving cones mounted thereon, an annular member encompassing the cones, and a plurality of expansible segments encompassed thereby, said member being axially slidable relatively to the cones.

3. A cylindrical teazeling machine comprising a plurality of teazeling rolls, a plurality of continuously tapered driving cones mounted thereon, an annular member encompassing the cones, pins extending radially inward from said member, a plurality of expansible segments carried by the pins, springs mounted on the pins and engaging said segments, the annular member being axially slidable relatively to the cones.

4. In cylinder teazeling machines a friction ring composed of a rigid ring-flange and a plurality of radially adjustable segments carried thereby, the said segments engaging with each other by tongues and grooves at their respective ends, said ring adapted to act on the driving pulleys of the teazeling rolls and, in coöperation with the rotation of the cylinder drive the said teazeling rolls at various speeds.

1,173,566. UTILIZATION OF SULFUR DIOXID. JAMES B. GARNER and HOWARD D. CLAYTON, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y., a Corporation of Maine. Filed Mar. 4, 1915. Serial No. 12,134. (Cl. 23—10.)

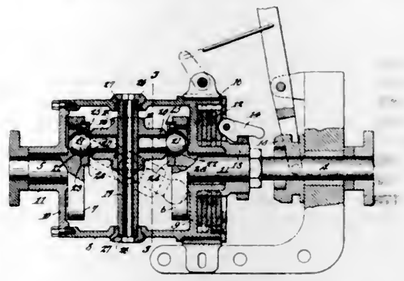
1. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel containing carbon monoxid and hydrogen in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture; substantially as described.

2. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel capable of reducing sulfur dioxid in the presence of wood charcoal at a temperature of about 500 to 600° C.; substantially as described.

3. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel containing hydrogen in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture, the gaseous fuel being employed in excess of that necessary for converting the sulfur dioxid into sulfur, whereby the hydrogen of the excess will react with the sulfur produced to form hydrogen sulfid; substantially as described.

4. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture, the gaseous fuel being employed in excess of that necessary for converting the carbon monoxid into carbon dioxid whereby the hydrogen of the excess will react with the sulfur produced to form hydrogen sulfid; substantially as described.

1,173,567. POWER-TRANSMISSION MECHANISM. RALPH GERBER, Raymond, Wash. Filed June 1, 1915. Serial No. 31,432. (Cl. 74—14.)



1. In a power transmission mechanism, axially alined shafts spaced at their adjacent ends and having cranks thereat, a loose housing inclosing the crank ends of the shafts, a transverse spindle carried by the housing between the crank ends of the shafts and intersecting the axis of the shafts, a sleeve loose on the spindle and free to slide and rock thereon, diametrically opposite hollow arms extending sidewise from the sleeve, stems slidably mounted in the hollow of the arms, ball-and-socket connections between the stems and the respective cranks, the cranks having sockets, and the stems having spherical outer ends seating partly in said sockets, and retaining rings carried by the cranks and engaging the spherical ends of the stems outside the sockets.

2. In a power transmission mechanism, axially alined shafts spaced at their adjacent ends and having cranks thereat, a transverse spindle between the crank ends of the shafts and intersecting the axis of the shafts, a support for the spindles, means for holding the support stationary relative to the spindle, means for coupling the support to one of the shafts, a sleeve loose on the spindle and free to slide and rock thereon, diametrically opposite hollow arms extending sidewise from the sleeve, stems slidably mounted in the hollow of the arms, ball-and-socket connections between the stems and the respective cranks, the cranks having sockets, and the stems having spherical outer ends seating partly in said sockets, and retaining rings carried by the cranks and engaging the spherical ends of the stems outside the sockets.

1,173,568. FAN. GEORGE B. GRIFFIN, Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 21, 1910. Serial No. 556,873. (Cl. 230—1.)

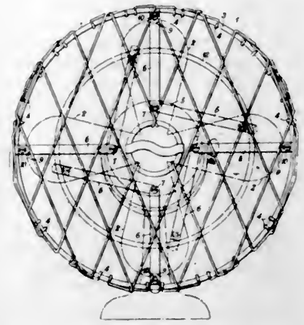
1. A guard for the blades of a fan comprising a ring and an expanded metal body portion, the free ends of which are bent around said ring, in combination with angularly adjustable supporting arms the outer ends of which are detachably clamped to said ring.

2. In a fan motor, the combination with a fan blade guard comprising a ring and an expanded metal body portion having its free ends bent around said ring, of angularly adjustable supporting bracket arms the outer ends of which are attached to said ring.

3. In a fan motor, a plurality of angularly adjustable guard-supporting bracket arms the inner ends of which are pivotally attached to the motor frame and the outer ends of which are provided with means for clamping them to guard rings of different diameters.

4. A fan motor provided with a plurality of angularly adjustable guard-supporting bracket arms the inner ends of which are pivotally supported upon the motor frame and the outer ends of which are provided with means for attachment to a guard ring at any angle to which said bracket arms may be adjusted.

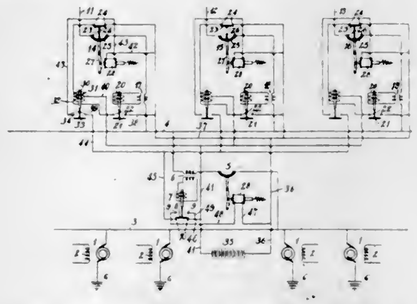
5. In a fan motor, the combination with the motor frame, of a plurality of guard-supporting bracket arms



pivotally mounted on said frame, said arms comprising adjustable members upon the outer ends of the same.

[Claim 6 not printed in the Gazette.]

1,173,569. SYSTEM OF DISTRIBUTION. FORD W. HARRIS, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 13, 1911. Serial No. 614,252. (Cl. 175—294.)



1. The combination with a source of energy, a plurality of feeder circuits, a circuit interrupter in each feeder circuit, and a circuit interrupter of relatively large capacity between said source and said feeder interrupters, of means for opening said large capacity interrupter under excessive overloads and subsequently selectively opening the overloaded feeder circuit interrupters and for opening the overloaded feeder circuit interrupters under relatively small overloads.

2. The combination with a source of energy, a distributing bus-bar, a plurality of feeder circuits connected thereto, a circuit breaker for each feeder circuit, and a relatively large-capacity circuit breaker in the circuit between said source and said bus-bar, of relays associated with the respective feeder circuits and with said circuit between said source and said bus-bar for opening said large-capacity breaker under total overloads in excess of a predetermined amount and for subsequently opening the circuit breakers associated with the overloaded feeders, and for selectively opening the breakers associated with the overloaded feeders when the total overload is less than a predetermined amount.

3. The combination with a source of energy, a plurality of feeder circuits, a circuit breaker for each feeder circuit, and a relatively large-capacity circuit breaker connected in series between said source and said feeder breakers, of electro-responsive means for opening said large capacity breaker under predetermined overload conditions and for subsequently selectively opening the overloaded feeder breakers.

4. A distributing system comprising a source of energy, and a plurality of feeder circuits, a plurality of feeder circuit breakers, an auxiliary circuit breaker in series between said source and said feeder breakers, a main relay dependent upon the current through said auxiliary breaker for tripping said breaker, a primary relay associated with each feeder circuit and dependent upon the current therein, and a secondary relay for each feeder circuit and dependent upon the operation of said main relay and said associated primary relay for tripping said feeder breaker.

5. A distributing system comprising a source of energy, a plurality of feeders, a circuit breaker for each feeder, an auxiliary circuit breaker in series between said circuit breaker and said source, two coöperating relays associated with each feeder breaker for tripping said feeder breaker, a holding coil and a closing coil for one of said relays, said holding coil being normally energized, and a single relay associated with said auxiliary circuit breaker for tripping said breaker under predetermined load conditions, said relay being interlocked with the trip coil of each feeder circuit breaker.

[Claim 6 not printed in the Gazette.]

1,173,570. ELECTROLYTIC MEASURING INSTRUMENT. HENRY STAFFORD HATFIELD, Brunswick, Germany. Filed June 22, 1914. Serial No. 846,545. (Cl. 171—266.)



1. An electrolytic measuring instrument having a liquid electrolyte and a rhodium electrode substantially as described.

2. An electrolytic measuring instrument having a liquid electrolyte and a rhodium cathode at which gas is liberated substantially as described.

3. An electrolytic measuring instrument having a liquid electrolyte and an electrode of rhodium on a gold base substantially as described.

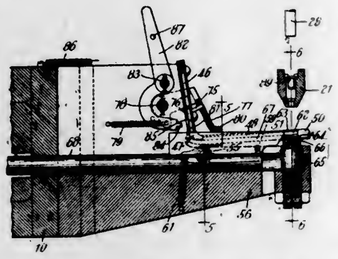
4. An electrolytic measuring instrument having a liquid electrolyte and a rhodium electrode whose active part is line shape and is situated on the boundary between the liquid and the gas space substantially as described.

1,173,571. RIVET AND CAP SETTING MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g Co., a Corporation of Massachusetts. Filed Jan. 6, 1915. Serial No. 863. (Cl. 218—2.)

1. A machine for driving a rivet in a piece of sheet material and clenching the same within a rivet cap having, in combination an anvil, a work-support constituting a raceway constructed to support and guide said rivet cap into alinement with said anvil and arranged to contact with said sheet material, said work-support being constructed in two parts movable toward and away from each other, a driver oppositely disposed to said work-support and anvil, mechanism constructed and arranged to move said driver toward and away from said anvil, means constructed and arranged to feed a rivet cap onto said work-support and mechanism constructed and arranged to feed said rivet cap along said work-support and into alinement with said anvil while said rivet cap is still supported by said work-support.

2. A machine for driving a rivet through a piece of sheet material and clenching the same within a rivet cap

having, in combination, an anvil, a yielding work-support constituting a raceway constructed and arranged to support and guide said rivet cap into alinement with said anvil and arranged to contact with said sheet material, a driver oppositely disposed to said work-support, mechanism constructed and arranged to move said driver toward and away from said anvil, means constructed and arranged to feed said rivet cap onto said work-support and mechanism constructed and arranged to feed said rivet cap along said work-support and into alinement with said anvil while said rivet cap is still supported by said work-support.



3. A riveting machine having in combination, an anvil, a work-support constituting a raceway constructed to support and guide said rivet cap into alinement with said anvil, said work-support being constructed in two independently movable parts, means constructed and arranged to move said parts simultaneously in a vertical direction, a driver oppositely disposed to said work-support, mechanism constructed and arranged to move said rivet toward and away from said anvil, means constructed and arranged to feed said rivet cap onto said work-support and mechanism constructed and arranged to feed said rivet cap along said work-support and into alinement with said anvil while said rivet cap is still supported by said work-support.

4. A riveting machine having, in combination, an anvil, a work-support constructed in two independently movable parts arranged to be moved simultaneously in a vertical direction and also to be moved transversely relatively to each other, a driver oppositely disposed to said work-support, mechanism constructed and arranged to move said driver toward and away from said anvil, means constructed and arranged to feed said rivet cap onto said work-support and mechanism constructed and arranged to feed said rivet cap along said work-support and into alinement with said anvil.

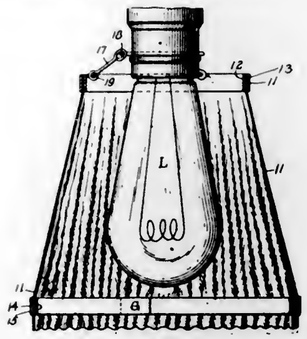
5. A riveting machine having, in combination, a rivet carrier, a driver, an anvil, a yielding work-support constituting a raceway constructed to support and guide said rivet cap into alinement with said anvil, said work-support being adjacent to said anvil, said anvil and work-support being oppositely disposed to said rivet carrier and driver and means to move said driver toward said anvil and work-support, mechanism to move said carrier longitudinally of said driver and toward said anvil and work-support, means constructed and arranged to feed said rivet cap to said work-support and mechanism constructed and arranged to move said rivet cap along said work-support and into alinement with said anvil while said rivet cap is still supported by said work-support.

[Claims 6 to 31 not printed in the Gazette.]

1,173,572. LAMP-SHADE. WILLIAM FRANK M. HAWE, Pittsburgh, Pa. Filed Dec. 2, 1915. Serial No. 64,655. (Cl. 240—109.)

1. A collapsible lamp shade comprising several pairs of independent telescoping rings, a removable flexible fabric clamped between the rings of each pair, and a detachable suspending device on one of the pairs of rings.

2. A lamp shade consisting of a plurality of sets of independent telescoping rings and a removable fabric retained between and shaped by the rings.



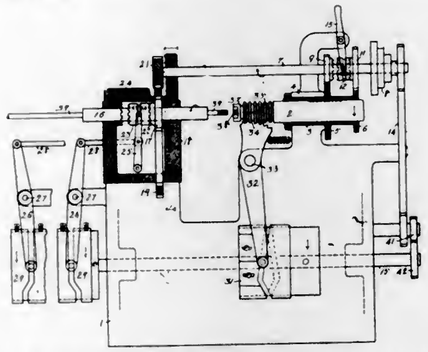
3. A lamp shade consisting of a pair of separate rings, one ring fitting within the other, a larger pair of separate rings, one ring fitting within the other, and a removable flexible fabric retained by the pairs of interfitting rings.

4. In a lamp shade the combination of a pair of separate telescoping rings, means to support one of said rings, a translucent fabric removably retained between the rings and depending therefrom, and a second pair of separate telescoping rings retaining the flexible material below the first and forming the bottom of the shade.

5. A collapsible lamp shade consisting of a pair of telescoping rings, a flexible material removably retained between the rings, a larger set of telescoping rings also removably retaining the flexible material, and supporting means for the upper set of rings.

[Claim 6 not printed in the Gazette.]

1,173,573. MACHINE-TOOL. GEORGE D. HAYDEN, Oakley, Ohio. Filed Apr. 14, 1915. Serial No. 21,443. (Cl. 29—37.)



1. In a machine tool, the combination of a work spindle, a tool spindle, means for driving them at different relative speeds, a driven cam, mechanism including a clutch actuated thereby for maintaining the former spindle alternately in and out of action, a second driven cam, and mechanism actuated thereby for moving the latter spindle alternately in opposite longitudinal directions and simultaneously with the respective action or inaction of the former spindle.

2. A machine tool having in combination, a driven work spindle, a driven cam, clutch mechanism actuated thereby for positively maintaining said spindle in and out of action alternately during respective unequal intervals of time, a tool spindle driven at a different relative speed, and automatic mechanism for moving it alternately in opposite longitudinal directions and at respective different speeds and in intervals of time corresponding to the action and inaction of the former spindle.

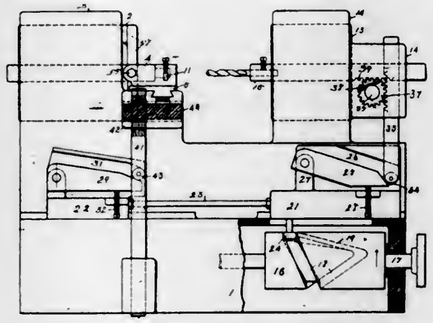
3. A machine tool having in combination, two oppositely disposed spindles, means for driving them at respective different speeds and in the same direction, automatic mechanism for moving the one alternately in opposite longitudinal directions at respective different speeds, a driven cam, and mechanism including a clutch actuated thereby for maintaining the other spindle in and out of action during the respective said longitudinal movements.

4. A machine tool having in combination, a tool spindle, a work spindle movable into or out of alinement therewith and driven at a predetermined speed, a driven cam, clutch mechanism actuated thereby for maintaining work spindle alternately in or out of action during respective unequal periods of time, automatic mechanism for moving the former spindle alternately in respective opposite longitudinal directions during the action and inaction of the work spindle, and change speed connections for driving the tool spindle at predetermined different slower speeds than the speed of the work spindle.

5. A machine tool having in combination, a driven shaft, a cam shaft, change speed gear connections from the driven shaft therewith, two oppositely disposed spindles driven at different respective speeds from the driven shaft, a cam on the cam shaft with connections with one spindle for moving it alternately in opposite longitudinal directions during respective different intervals of time, and a cam on the cam shaft with connections arranged to maintain the other spindle alternately in or out of action during the respective longitudinal movements of the said other spindle.

[Claims 6 to 13 not printed in the Gazette.]

1,173,574. AUTOMATIC SCREW-MACHINE. GEORGE D. HAYDEN, Oakley, Ohio, assignor to The Cincinnati Planer Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Apr. 21, 1915. Serial No. 22,934. (Cl. 29—37.)



1. In an automatic screw machine, the combination of a tool spindle, a drum cam, an adjustable cam arranged to be reciprocated thereby, and connections therefrom for reciprocating the said spindle longitudinally.

2. In an automatic screw machine, the combination of a tool spindle, a driven drum cam, a slide reciprocated longitudinally, an adjustable cam on the slide, and rack and pinion connections therewith for reciprocating the spindle.

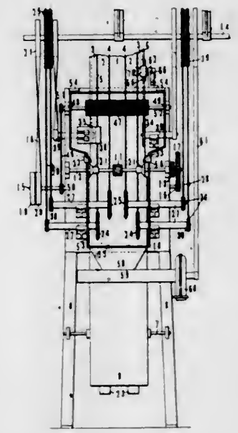
3. In an automatic screw machine the combination of a tool spindle, a driven cam, an adjustable cam reciprocated thereby in different predetermined respective intervals of time, and connections actuated by the latter cam for slowly advancing and quickly returning the spindle.

4. In an automatic screw machine the combination of a tool spindle, an adjustable cam, a drum cam arranged to move said cam in opposite directions at respective different speeds, and mechanism actuated by the adjustable cam for moving the spindle longitudinally different predetermined distances and in opposite directions at respective different speeds.

5. In an automatic screw machine the combination of a tool spindle, a driven cam, and connections including an adjustable cam actuated thereby for slowly advancing the spindle different predetermined distances and quickly returning it.

[Claims 6 to 13 not printed in the Gazette.]

1,173,575. APPARATUS FOR TREATING WEBS. CARLOS HOLLY, Lockport, N. Y., assignor to The F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Ontario, Canada. Filed Feb. 25, 1911. Serial No. 610,766. (Cl. 93—58.)



1. In apparatus for treating a web, in combination, a web support, means adapted to propel a web on said support, a plurality of transversely spaced rotary abrading elements disposed opposite said support so as to scarf the edge of the web, supporting bearings for said elements, means adapted to adjust said elements toward and from said support, and means adapted to adjust said elements longitudinally of said support.

2. In apparatus for treating a web, in combination, means for propelling the web, an abrading device adapted to engage the edge of the web and scarf the same, and means for carrying away the particles of the web removed by the scarfing device.

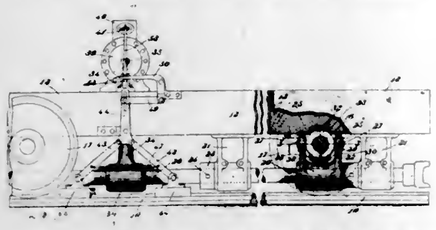
3. In apparatus for treating a web, in combination, means for propelling the web, a plurality of abrading wheels engaging said web between its edges and adapted to produce longitudinal scores or grooves in the same, abrading wheels engaging with opposite sides of the web at opposite edges thereof and adapted to scarf the same, a hood extending over all of said abrading devices, and exhaust means connected to said hood.

4. In apparatus for treating a web, in combination, means for propelling the web, means for scoring and scarfing said web, and means for clearing the particles of the web which have been removed by said scoring and scarfing means.

5. In apparatus for treating a web, in combination, means for propelling the web, abrading means for scoring and scarfing said web, and means for clearing the particles of the web which have been removed by said scoring and scarfing means comprising a brush engaging with the web.

[Claims 6 to 25 not printed in the Gazette.]

1,173,576. SHIFTING MECHANISM. CHARLES R. HOPKINS, Dobbin, W. Va., assignor to Burton Wilson, Mill Creek, W. Va. Original application filed Apr. 8, 1914, Serial No. 830,426. Divided and this application filed Nov. 11, 1914. Serial No. 871,466. (Cl. 74—39.)



1. The combination with a shaft and a bearing in which said shaft is rotatably mounted, said shaft and bearing being relatively movable longitudinally of said shaft, of a rock-shaft arranged transverse to said first-named shaft, yokes fixed to said rock-shaft, a collar of greater interior diameter than said first named shaft so as to be capable of relative movement transverse to its shaft, said collar being formed in two detachable parts and being provided with trunnions held in the arms of said yoke, and means for holding said collar against longitudinal movement on its shaft.

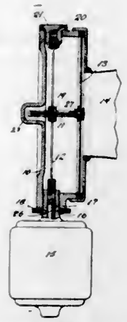
2. The combination with a shaft and a bearing in which said shaft is rotatably mounted, said shaft and bearing being relatively movable longitudinally of said shaft, of a rock-shaft arranged transverse to said first named shaft, a yoke fixed to said rock-shaft, a collar of greater interior diameter than said first-named shaft so as to be capable of relative movement transverse to its shaft, said collar being formed in two detachable parts and being provided with trunnions held in the arms of said yoke, and fixed collars on said first-named shaft on opposite sides of said first-named collar.

3. The combination with a shaft and a bearing in which said shaft is rotatably mounted, said bearing and shaft being relatively movable longitudinally of said shaft, of a rock-shaft arranged transverse to said first-named shaft, a yoke fixed to said rock-shaft, a collar of greater interior diameter than said first-named shaft so as to be capable of relative movement transverse to its shaft, said collar being formed in two detachable parts and being provided with trunnions, means for holding said collar against longitudinal movement on its shaft, bushings in which said trunnions are journaled, and caps detachably secured to the arms of said yoke for clamping said bushings to said arms.

4. The combination with a shaft and a bearing in which said shaft is rotatably mounted, said shaft and bearing being relatively movable longitudinally of said shaft, of a rock-shaft arranged transverse to said first-named shaft, a yoke fixed to said rock-shaft, a collar of greater interior diameter than said first-named shaft so as to be capable of relative movement transverse to its shaft, said collar being formed in two detachable parts and being provided with trunnions, fixed collars on said first-named shaft on opposite sides of said first-named collar, each of said fixed collars being also formed in two detachable parts, bushings in which said trunnions are journaled, and caps detachably secured to the arms of said yoke for clamping said bushings to said arms.

1,173,577. ALARM AND SIGNALING DEVICE. MILLER REESE HUTCHISON, Deal Beach, N. J., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Dec. 29, 1910. Serial No. 599,926. (Cl. 116—1.)

1. A signal, comprising a diaphragm, a rotor adapted to set up diaphragm-vibrations, a flexible shaft carrying the rotor, being adapted for resilient lateral movement toward and from the diaphragm and having an unyielding cylindrical bearing, means for maintaining a length of the shaft including the region encircled by the rotor in parallelism with said bearing, and power means for driving said shaft.



2. A signal, comprising a diaphragm, a rotor adapted to set up diaphragm-vibrations, a flexible shaft carrying the rotor and adapted for resilient lateral movement toward and from the diaphragm, said rotor being formed or provided with a plurality of actuator elements approximately equidistant radially from the axis of rotation of said shaft, a rigid cylindrical journal rigidly receiving and holding a length of said shaft, an unyielding cylindrical bearing receiving said journal, and a motor having driving connection with said shaft.

3. A signal, comprising a diaphragm, a rotor adapted to set up diaphragm-vibrations, a flexible shaft carrying the rotor and adapted for resilient lateral movement toward and from the diaphragm, rigid cylindrical journals of greater diameter than said shaft rigidly receiving and holding lengths of said shaft, the rotor being mounted intermediate said journals, unyielding cylindrical bearings receiving said journals, and a motor having driving connection with said shaft.

4. A signal, comprising a diaphragm, a shaft consisting of an elastic rod free to flex toward and from said diaphragm, rigid journals of greater diameter than said rod rigidly receiving and holding lengths of said shaft in alinement, a rotor adapted to set up diaphragm-vibrations carried by said shaft intermediate said journals, unyielding bearings receiving said journals, and power means for driving said shaft.

5. A signal, comprising a diaphragm, a rotor adapted to set up diaphragm-vibrations, a shaft carrying the rotor, consisting of an elastic rod free to flex with reference to the diaphragm, a solid cylindrical journal of greater diameter than said rod rigidly receiving a length of said shaft, and power means for driving the shaft, said rod and rotor being approximately balanced.

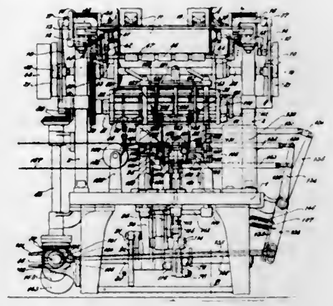
[Claims 6 to 12 not printed in the Gazette.]

1,173,578. LABELING-MACHINE. EMIL JAGENBERG, Dusseldorf, Germany. Filed Apr. 16, 1915. Serial No. 21,646. (Cl. 216—54.)

1. A labeling machine, consisting of a reciprocating pile of labels, a revolving segment roller, which draws by means of gum the label from the pile, a second revolving segment roller, having one segment and several rotatable rollers and adapted to draw the label from the first roller, so that it lies with the gummed side outside on the second segment roller and the rollers, means for intermittently advancing the articles to be labeled past this second segment roller, whereby the labels are pasted to the said articles and smoothed down by the said rollers.

2. A labeling machine consisting of a reciprocating slide, a label container on said slide, tongues, fitted to levers and engaging beneath said label container, means for rocking the levers with the tongues, a rack on the label container, revoluble rollers, on which the pile of labels rests, gears, attached to said rollers and engaging in said rack, and means for drawing the label from the pile and applying it to the article to be labeled.

3. A labeling machine consisting of a reciprocating label container, rockably fitted tongues, rising and falling cam rails adapted to remove said tongues from the pile of labels, supporting rollers for the pile of labels, said rollers adapted to revolve forward and backward at the reciprocation of the label container, and means for drawing the label from the pile and for applying it to the article to be labeled.

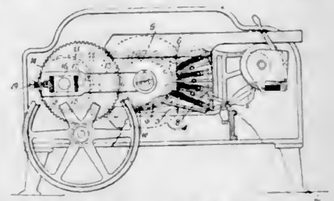


4. A labeling machine consisting of a reciprocating label container, means for supporting the labels in said container, means for drawing the label from the pile by aid of gum, means for applying the label to the articles to be labeled, a table, onto which the said articles are placed, rising and falling side guides, in said guides a reciprocating slide, dogs on said slide, said dogs, when in raised position of the slide, projecting through slots in said table in an upward direction.

5. A labeling machine consisting of a reciprocating label container, tongues adapted to be rocked aside, for supporting the pile of labels, rising and falling cam rails for operating said tongues, a rack on said label container, rollers, on which the said label container rides during its reciprocation, gears attached to said rollers, a revoluble segment roller adapted to draw the label from the pile, means for applying gum to said roller on its segment, a second revolving roller, having one segment and behind the same several revoluble rollers, and adapted to draw the label from the first segment roller, grippers at the second roller, adapted to seize the front edge of the label in drawing it from the first roller, a table with longitudinal slots onto which the articles to be labeled are placed, rising and falling guides, in said guides a reciprocating slide, dogs on said slide, said dogs projecting at a raised position of said slide through the slots in said table, brushes adapted to be moved up and down and to fold wide labels over and against the sides of the articles to be labeled and to smooth them down there, a heavy stamp, adapted to be lowered onto the said articles and hold them tight, a displaceable roller and several stationary rollers onto which the said articles pass, a brush adapted to fold over wide labels also against the bottom of said articles, means for simultaneously operating the brush and the displaceable roller, a slide adapted to push the said articles from the stationary rollers, said stationary rollers adapted to thereby fold over the label against the bottom of the article.

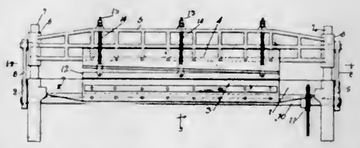
1,173,579. PRINTING-PRESS. EMERSON P. JENNINGS, Jr., Lehighton, Pa. Filed Jan. 26, 1914. Serial No. 814,299. (Cl. 101—15.)

In a printing press, the combination, with a shaft, means for rotating said shaft, a sprocket wheel eccentrically mounted on said shaft, a form-bed movable toward and away from said shaft, a roller carriage mounted for rotation about said form-bed, a sprocket wheel connected with said roller carriage, a sprocket chain connecting the sprocket wheel on said roller carriage with the sprocket wheel on said shaft, and a crank wheel mounted on said shaft and having a wrist pin, of a pitman connecting said crank wheel with said form-bed and provided at that end adjacent to said crank wheel with an elongated guideway, a bearing block mounted in said guideway to receive said wrist pin, and interchangeable plates interposed between the ends of said bearing block and the respective ends of said guideway, whereby



the shifting of one or more of said plates from one end of said bearing block to the other end thereof will alter the distance between the axes of said sprocket wheels and tighten or loosen said sprocket chain, and means for securing said plates and said bearing block in their adjusted positions.

1,173,580. PAPER-CUTTING DEVICE. EMERSON P. JENNINGS, Jr., Lehighton, Pa. Filed Mar. 27, 1914. Serial No. 827,555. (Cl. 164—47.)



1. In a cutting device of the character described, a blade having bodily movement and a shearer bar coöperating with said blade, one of said members comprising an elongated plate of resilient metal rigidly mounted at one of its longitudinal edges and having that edge adjacent to the other member free to move relatively to the rigidly mounted edge thereof, the movable edge of said member being arranged to engage the edge of the other member when bodily movement is imparted to said blade and to yield under the pressure exerted thereon.

2. In a cutting device of the character described, a blade having bodily movement, a shearer bar comprising a plate of resilient metal rigidly mounted at one edge and having that edge adjacent to said plate free to move, the free edge of said shearer bar being arranged to be engaged by said blade and to yield under the pressure exerted thereon, and adjustable means to limit the movement of said free edge of said shearer bar toward the path of said blade but to permit it to have free movement away from said blade, whereby said pressure may be regulated.

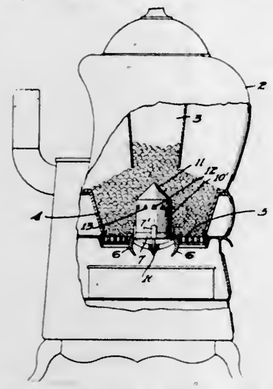
3. In a cutting device of the character described, a blade having bodily movement, a shearer bar comprising a plate of resilient metal rigidly mounted at one edge and having its body portion free to move, the movable portion of said shearer bar being arranged to be engaged by said blade and to yield under the pressure exerted thereon, and adjustable means to limit the movement of the body portion of said shearer bar toward the path of said blade and to permit it to have free movement away from said path, whereby the pressure exerted on said shearer bar by said blade may be regulated.

4. In a cutting device of the character described, a frame, an elongated blade mounted for vertical reciprocatory movement on said frame, a shearer bar comprising a plate of resilient metal rigidly mounted at one edge on said frame in a plane oblique to the vertical plane of said blade and having that portion adjacent to said blade free to move, and means to adjust said movable portion of said shearer bar relative to said blade.

5. In a cutting device, a frame comprising a bed plate having a shoulder arranged on one end thereof, substantially parallel with and spaced away from the upper sur-

face of said bed plate, a shearer bar comprising a plate of resilient metal rigidly secured at one edge to said shoulder and having its upper edge spaced away from and movable relatively to the end of said bed plate, a blade mounted for vertical reciprocatory movement on said frame and arranged in a plane slightly oblique to the vertical plane of the shearer bar, and set screws extending through said shearer bar into said bed plate to adjust the upper edge of said shearer bar relatively to said blade.

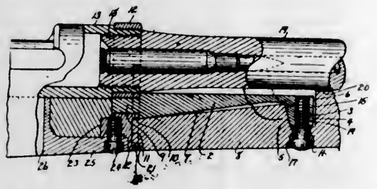
1,173,581. ATTACHMENT FOR BASE-BURNING COAL-STOVES. CARL A. JOHNSON, Escanaba, Mich. Filed Sept. 1, 1915. Serial No. 48,432. (Cl. 126—163.)



1. The combination, with a fire-pot and grate having a central opening therein, of a hollow member composed of refractory material supported over said opening and projecting upwardly therefrom into said fire-pot and surrounded by the fuel upon said grate, said member becoming heated through contact with the burning fuel and radiating heat downwardly through said opening into the space beneath said grate, a base ring seated on said grate over said opening and whereon said member is mounted, said ring having a cross bar and a bolt passing therethrough for securing it and said grate together.

2. The combination, with a fire-pot and grate, of a base ring centrally mounted on said grate and having upwardly projecting guard fingers, a hollow, substantially cone-shaped member composed of refractory material seated on said ring and open at the bottom and projecting upwardly into the fuel in said fire-pot, the walls of said member becoming heated by contact with the burning fuel, and means for removably clamping said base ring upon the grate.

1,173,582. MILITARY SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Dec. 6, 1915. Serial No. 65,238. (Cl. 42—75.)

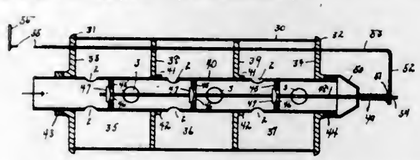


1. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed in the upper face of its rear end with a longitudinal clearance groove having a vertical locking-recess leading downward from its forward end, a forestock tie-piece located in the said longitudinal groove and formed at its forward end with a locking-lug entering the said recess and connected at its rear end with the receiver, and a screw passing upward through the forestock and into the said lug for seating the same firmly in the said recess.

2. In a military shoulder-arm, the combination with the receiver thereof, of a receiver-extension, a forestock formed in the upper face of its rear end with a longitudinal groove and with a vertical locking-recess leading downward from the forward end of the said groove, a forestock tie-piece located in the said groove and formed at its forward end with a locking-lug entering the said locking-recess and provided at its rear end with a threaded shank entering the said receiver-extension, and a screw passing upward through the forestock and into the said lug for seating the same firmly in the said recess.

3. In a military shoulder-arm, the combination with the receiver thereof, of a forestock formed in the upper face of its rear end with a longitudinal groove and with a vertical locking-recess extending downward from the forward end of the said groove, a forestock tie-piece located in the said groove, connected at its rear end with the receiver and provided at its forward end with a lug entering the said locking-recess, the forward end of the said tie-piece being reduced in thickness over its rear end, and a vertically arranged screw passing through the forestock and entering the said lug for holding the same in the said locking-recess.

1,173,583. MUFFLER. JAMES S. JOHNSTON and MILLARD L. JOHNSTON, Utica, N. Y., assignors to Charles O. Jones, New Hartford, N. Y. Filed Oct. 4, 1913. Serial No. 793,362. (Cl. 121—116.)



1. In a muffler, the combination of a tube, chambers formed about said tube, apertures disposed opposite each other in pairs in said tube, whereby the exhaust from an engine may progress from one chamber to the other, and means for permitting said exhaust to progress directly through said tube.

2. In a muffler, the combination of a tube, apertures disposed opposite each other in pairs in said tube, partition walls in said tube, ports in said walls, chambers formed about said tube, and valves for closing said ports in the partition walls of said tube.

3. In a muffler, the combination of a tube, apertures disposed opposite each other in pairs in said tube, partition walls in said tube, ports in said walls, valves for closing said ports, means for operating said valves, and chambers about said tube.

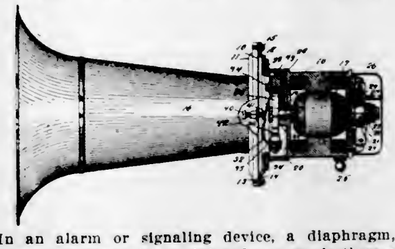
4. In a muffler, the combination of a tube, partition walls in said tube, ports in said partition walls, valves for closing said ports, a rod connecting said valves, and a spring for holding said rod normally in such position as to close the valves.

5. In a muffler, the combination of a tube, apertures disposed opposite each other in pairs, in said tube, partition walls in said tube, ports in said partition walls, valves for closing said ports, a spring for automatically closing said valves, and chambers about said tube.

[Claims 6 to 9 not printed in the Gazette.]

1,173,584. MECHANICALLY-ACTUATED DIAPHRAGM-HORN. JOSEPH WILLIAM JONES, New York, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed June 23, 1911. Serial No. 634,913. (Cl. 177—7.)

1. In an alarm or signaling device, a diaphragm, a rotary cam provided with peripherally disposed cam projections and disposed with its axis presented endwise to the diaphragm, an independently mounted stiff spring secured to a suitable support at one end, extending across to the more remote face of the cam and having its free end disposed opposite the cam and its intermediate portion arranged in operative relation to the diaphragm.



2. In an alarm or signaling device, a diaphragm, a rotary cam provided with peripheral cam projections and disposed with its axis at a high angle to the diaphragm, and an independently mounted broad spring tongue disposed with its body portion in front of said cam and opposite the diaphragm in actuating relation to the latter and having a thrust-receiving portion offset at its rear side in position to be engaged by said peripheral projections.

3. In an alarm or signaling device, a diaphragm, a power-driven rotary cam provided with peripheral cam teeth and having its axis approximately at right angles to the diaphragm, a spring tongue having its body or central portion disposed opposite the diaphragm, being clamped to a stationary support at one end and provided with an offset thrust-receiving portion at the other end opposite the periphery of said cam, and a contact piece on said diaphragm adjustable toward and from the body or central part of said tongue.

4. In a mechanical horn, a flexible diaphragm, a vibratory impact member normally spaced away from and adapted to be forced into engagement with said diaphragm, an actuating member operating in a constant plane and adapted to engage said impact member and force it into engagement with said diaphragm, said impact member being adapted to automatically return to its normal position within the operative plane of said actuating member and the portion thereof engaging the diaphragm being adapted to pass said normal position under control of said diaphragm irrespective of the position of said actuating member, and means actuating said actuating member.

5. In a mechanical horn, a flexible diaphragm, a flexible vibratory impact member normally spaced away from and adapted to be forced into engagement with said diaphragm, and actuating member operating in a constant plane and adapted to engage said impact member at a point removed from its point of engagement with the diaphragm and force it into engagement with said diaphragm, whereby the resiliency inherent to said impact member will cause it to automatically assume and return to its normal position and the portion thereof engaging the diaphragm to yield upon the reflex action of the diaphragm so as to pass this normal position independently of the engagement of said actuating member therewith, and means actuating said actuating member.

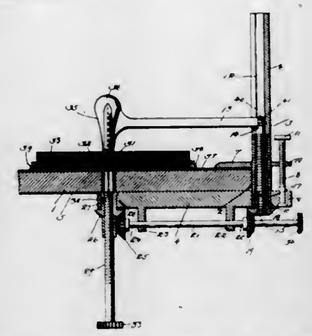
[Claims 6 to 9 not printed in the Gazette.]

1,173,585. REMINDING DEVICE. GEORGE F. KINNEY, New York, N. Y. Filed Mar. 6, 1913. Serial No. 752,460. (Cl. 116—49.)



As an article of manufacture, a plate having a depressed central portion and a flared rim portion, said rim portion having an annular series of names of articles and a corresponding series of holes at the inner edge of the rim portion, a centrally arranged pin uprising from and within the depressed central portion of the plate and a plurality of spring-pressed pointers pivoted and free to be rotated on said pin and having inwardly turned points adapted to enter said holes to hold the pointers in their adjusted positions below the plane of the peripheral line of the plate against unintentional displacement.

1,173,586. CLOTH-PILER. WALLACE B. KULP, Philadelphia, Pa. Filed Mar. 30, 1914. Serial No. 828,312. (Cl. 223—3.)



1. The described device consisting of a base having vertically movable needles and vertically movable screw operated shields therefor.

2. The described device consisting of a base having vertically movable needles and vertically movable screw operated shields therefor, the movement of said needles and shields being simultaneous.

3. A cloth piler consisting of a base, a series of clamps fixed thereto and means carried by said clamps for causing a perfect alinement of goods stacked thereon, said means consisting of adjustable gages and vertically movable needles, guards for said needles, said guards and needles being simultaneously movable.

4. A cloth piler consisting of a base, a series of clamps fixed thereto, means carried by said clamps for causing a perfect alinement of goods stacked thereon, said means consisting of adjustable gages and vertically movable needles, guards for said needles, said guards and needles being simultaneously movable, and screws upon which said needles are carried.

5. A cloth piler consisting of a base, a series of clamps fixed thereto, means carried by said clamps for causing a perfect alinement of goods stacked thereon, said means consisting of adjustable gages and vertically movable needles, screws upon which said needles are carried, and shields for said needles.

[Claims 6 to 37 not printed in the Gazette.]

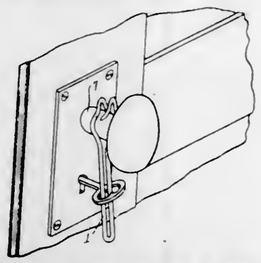
1,173,587. KEY-RETAINER. JOSEPH G. LANNOYE, Detroit, Mich. Filed June 18, 1915. Serial No. 34,769. (Cl. 70—65.)

1. As an article of manufacture, a key retainer consisting of a single piece of spring material provided with a shank adapted for insertion through the eye of a key, the two ends being bent and spaced apart providing a loop that may be spread by engagement with the spindle of a door-knob.

2. As an article of manufacture, a key-retainer consisting of a single piece of wire bent double substantially at the center forming a shank with two spaced, parallel legs for insertion through the eye of the key, the two ends being similarly bent to form a loop for engagement over the spindle of a knob.

3. As an article of manufacture, a key-retainer consisting of a single piece of spring wire bent double

substantially at the center forming a shank with two spaced, parallel legs for insertion through the eye of a key, the two ends being similarly bent in substantially semi-circular form with the ends overlapping forming a closed loop, the two ends being in angular relation whereby the said loop end may be readily sprung over the spindle of a door knob.

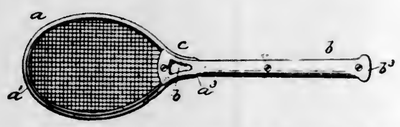


4. As an article of manufacture, a key-retainer consisting of a single piece of spring wire bent double substantially at the center forming a shank, with two parallel legs adapted for insertion through the eye of a key, the two ends being similarly bent in substantially semi-circular form with the ends overlapping forming a closed loop, each overlapping part being formed with an upwardly extending loop portion in angular relation whereby the loop may be readily sprung over the spindle of a door-knob and providing means for readily spreading the loop for removal of the device from the knob.

5. As an article of manufacture, a key retainer consisting of a single piece of spring wire bent double substantially at the center, forming a shank of two spaced parallel legs for insertion through the eye of a key, the two ends being similarly bent in substantially semi-circular form with the ends overlapping forming a closed loop, the two ends being in angular relation whereby the loop may be readily sprung over the spindle of a door knob and the loop being greater in length than the diameter of the spindle, whereby the shank may lie at an angle to the perpendicular when in position in use substantially as described.

[Claim 6 not printed in the Gazette.]

1,173,588. TENNIS-RACKET. ELI E. LAROCQUE, Attleboro, Mass. Filed Aug. 7, 1915. Serial No. 44,137. (Cl. 46—24.)

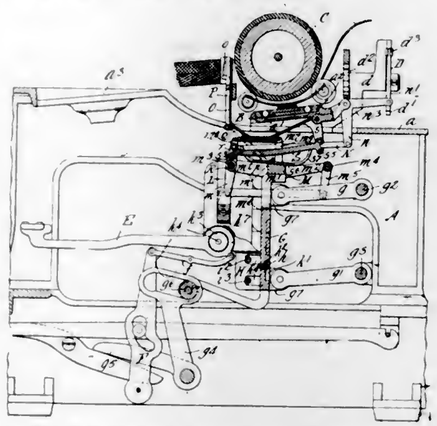


1. A tennis racket consisting of a frame, a bridge-piece, and both said parts T-shaped in cross-section, holes formed through the cross flange of both said parts and arranged in staggered pairs at each side of the central web of the same, said frame having free portions extending from the bridge-piece in parallel separated relation, to form a throat portion of the racket, a hollow handle made in like halves and having opposed struck up heads, forming the other portion of the throat, to close over upon the outer face of the cross flanges of said frame and said bridge-piece, and means for securing together the halves of the handle.

2. A tennis racket consisting of a frame and bridge-piece, and both said members having equi-spaced holes formed through their cross flanges and arranged in staggered pairs at each side of the central web of each member, to permit threading the said members in the manner described, and the free portions of said frame in parallel separated relation, a hollow handle divided longitudinally into like halves having heads designed to close over upon the outer face of the cross flanges of the free portions of said frame and cross flange of said bridge-piece, and means for securing together the halves of the handle.

3. A tennis racket consisting of a frame and bridge-piece, each T-shaped in cross-section, and both said members having equi-spaced holes formed through their cross flanges and arranged in staggered pairs at each side of the central web of the latter, in order that each string of the net may form a separate loop, at the points of each pair of holes, and thereby equalize the strain of the net upon each side face of the frame.

1,173,589. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y. Filed Apr. 12, 1912. Serial No. 690,355. (Cl. 197—41.)



1. In a typewriting machine, the combination of a series of radially arranged type-bars, and a series of adjustable parallel bearing hangers pivotally supporting the type-bars, substantially as set forth.

2. In a typewriting machine, the combination of a series of radially arranged type-bars, and a series of parallel bearing hangers supporting the type-bars, said hangers being independently adjustable in the direction of their length, substantially as set forth.

3. In a typewriting machine, the combination with a traveling platen, and a series of radially arranged type-bars, of bearing hangers to which the type-bars are pivoted arranged in parallel planes perpendicular to the line of travel of the platen, substantially as set forth.

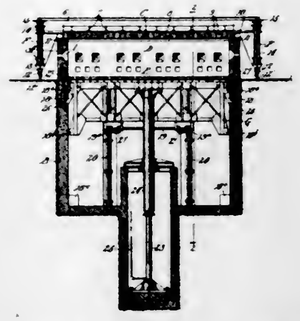
4. In a typewriting machine, the combination of a series of radially arranged type-bars, a series of parallel hangers supporting the type-bars, and means for clamping the hangers together laterally, substantially as set forth.

5. In a typewriting machine, the combination of a series of radially arranged type-bars, a series of parallel hangers to which the type-bars are pivoted, a common support for the hangers, and means for independently and adjustably connecting the hangers to said support, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,173,590. HEAT-TREATING APPARATUS. JOHN J. LICHTER, St. Louis, Mo., assignor to St. Louis Frog & Switch Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 13, 1915. Serial No. 50,485. (Cl. 266—4.)

1. A heat-treating apparatus, comprising a heating furnace provided with a removable top, a movable floor or bottom for the chamber of the furnace that supports the material being treated and which is adapted to be moved upwardly through the furnace chamber into position to be loaded and unloaded when the top of the furnace is removed, and a dipping tank completely cut off from the atmosphere when the furnace is in operation and containing a quenching bath which acts as a liquid seal for the furnace chamber.



2. A heat treating apparatus comprising a dipping tank that is adapted to contain a quenching bath, a heating furnace whose vertical walls form continuations of the vertical walls of said dipping tank, a removable roof or top for said furnace, and means for supporting the material that is to be treated, said means being adapted to be immersed in the quenching bath in said tank.

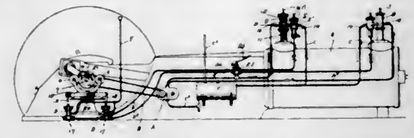
3. A heat treating apparatus comprising a heating furnace, a dipping tank arranged under said furnace for holding a quenching bath that is completely cut off from the atmosphere when the furnace is in operation, a removable top or roof for said furnace, a traveling structure that carries said roof, a floor for said furnace that holds the material being treated, and means for lowering and raising said floor so as to immerse the material thereon in the quenching bath and thereafter move the floor upwardly through the chamber of the furnace into such a position that the material on said floor can be taken out of the furnace through the opening that the top or roof closes.

4. A heat treating apparatus comprising a heating furnace, a dipping tank arranged under said furnace for holding a quenching bath, a flat roof for said furnace, a traveling structure that carries said roof, means for raising and lowering said roof so that it will clear the vertical walls of the furnace when the roof is being moved into and out of operative position, and a vertically movable floor for said furnace that holds the material being treated, said floor being adapted to be moved downwardly into the quenching bath and thereafter upwardly through the furnace chamber into such a position that the material on the floor can be removed therefrom through the opening at the upper end of the furnace chamber that the roof closes when said roof is in operative position.

5. A heat treating apparatus comprising a heating furnace provided with a removable flat roof, a dipping tank arranged under said furnace and adapted to contain a quenching bath, waste flues at one side of the furnace that extends throughout the entire length of same, means arranged at the opposite side of the furnace for causing fire gases to pass transversely across the furnace chamber, and a vertically movable structure in said dipping tank that carries a refractory floor for said furnace chamber.

1,173,591. VALVE-OPERATING MECHANISM. EDWIN H. LUDEMAN, New York, N. Y. Filed Sept. 23, 1915. Serial No. 52,227. (Cl. 121—97.)

1. In a valve operating mechanism for reciprocating engines, the combination of an inlet valve, a fluid pressure device for operating it, a pump circulating fluid through said device and adapted to operate the same to open the valve when the circulation is arrested, a controlling valve adapted to periodically arrest said circulation according to the stroke of the engine, and means intermittently actuated by the engine according to the stroke thereof to operate said controlling valve.



2. In a valve operating mechanism for reciprocating engines, the combination of an inlet valve, a fluid pressure device for operating it, a pump circulating fluid through said device and adapted to operate the same to open the valve when the circulation is arrested, a controlling valve adapted to periodically arrest said circulation according to the stroke of the engine, and speed-responsive means actuated by the engine to operate said controlling valve according to the stroke of the engine.

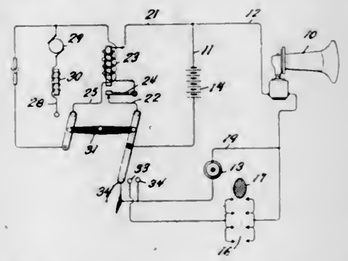
3. In a valve operating mechanism for reciprocating engines, the combination of an inlet valve, a fluid pressure device for operating it, a pump circulating fluid through said device and adapted to operate the same to open the valve when the circulation is arrested, a controlling valve adapted to periodically arrest said circulation according to the stroke of the engine, and fluid-pressure means actuated by the engine to operate said controlling valve.

4. In a valve-operating mechanism for reciprocating engines, the combination of an inlet valve, a fluid pressure device for periodically opening the same, a valve controlling the action of the device on the valve, and fluid-pressure means periodically actuated by the engine, according to the stroke thereof, for operating said controlling valve.

5. In a valve-operating mechanism for reciprocating engines, the combination of an inlet valve, a fluid pressure device for periodically opening the same, a valve controlling the action of the device on the valve, and fluid-pressure means periodically actuated by the engine, according to the stroke thereof for operating said controlling valve, and a governor operated by the engine and controlling the operation of said fluid pressure means.

[Claims 5 to 10 not printed in the Gazette.]

1,173,592. HORN CUT-OUT AND MOTOR-CONTROL ALARM FOR MOTOR-VEHICLES. DUNCAN A. MCCONNELL, Arlington, N. J. Filed Jan. 14, 1911. Serial No. 602,673. (Cl. 177—339.)



1. In a signal and control system for motor vehicles and the like, the combination of an electrically operated warning signal, a source of electrical energy, and two circuit controllers arranged in parallel for controlling the delivery of current to said signal, one of said controllers comprising a push button normally preventing the delivery of current, and the other of said controllers comprising a vehicle controlling lever adapted to be retained in open or closed position at will.

2. In a control system for motor vehicles and the like, the combination of an electrically operated warning signal, a source of electrical energy, an electric circuit including two branches arranged in parallel and each in-

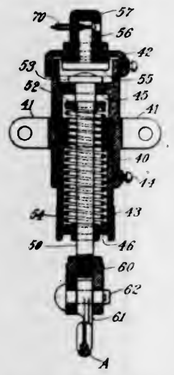
cluding a circuit controller, one of said circuit controllers comprising a push button and the other of said controllers comprising a vehicle controlling lever, and a switch for connecting either of said branches with said source of electrical energy.

3. In a signal and alarm system for motor vehicles and the like, the combination of a warning signal, an operating circuit therefor including an operating circuit closer, an alarm circuit also adapted to actuate said signal and having a break, a gear-shift lever adapted to open said break when in neutral position and to close the same when in running position, and an operating part adapted in one position to open said alarm circuit at another point and to close said operating circuit and in another position to open said operating circuit and close the second break in said alarm circuit.

4. In a signal and alarm system for motor vehicles and the like, the combination of a warning signal, an operating circuit therefor including an operating circuit closer, an alarm circuit also adapted to actuate said signal, and having a break, a controlling part which is customarily in one position when the vehicle is at rest and in another position when the vehicle is running, said part being adapted to open said break in the rest position and to close the same in running position, and an operating part adapted in one position to open said alarm circuit at another point and to close said operating circuit and in another position to open said operating circuit and close the second break in said alarm circuit.

5. In a signal and alarm system for motor vehicles and the like, the combination of a traffic-warning signal, an operating circuit therefor including an operating circuit closer, an alarm circuit also adapted to actuate said signal and having a break, a gear shift lever adapted to open said break when in neutral position and to close the same when in running position, an ignition circuit, and a controlling part adapted in one position to close said ignition and signal-operating circuits and to open said alarm circuit at another point and in another position to open said ignition and signal-operating circuits and to close the second break in said alarm circuit.

1,173,593. TROLLEY-OPERATED CONTACT. JAMES F. MCELROY, Albany, N. Y.; Susie H. McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Apr. 29, 1912. Serial No. 693,914. (Cl. 246—54.)



1. A combined trolley wire switch and suspension comprising a main supporting member, a rod supported in slidable relation with said supporting member, and provided with a contact, a complemental contact carried by said supporting member, means for connecting said rod with a trolley wire, and means within said main supporting member coöperating with said rod to sustain the weight of said trolley wire.

2. A combined trolley wire switch and suspension comprising a main supporting member, insulated suspension means for said supporting member, a rod supported in slidable relation with said supporting member and provided with a contact, a complemental contact carried by said supporting member, means for connecting said rod with a trolley wire, and means within said main supporting member coöperating with said rod to sustain the weight of said trolley wire.

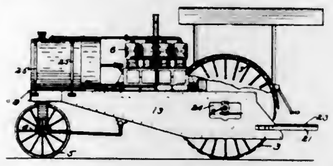
3. A combined trolley wire switch and suspension comprising a main supporting member, a rod supported in slidable relation with said supporting member and provided with a contact, a complemental contact carried by said supporting member, means for connecting said rod with a trolley wire, means within said main supporting member coöperating with said rod to sustain the weight of said trolley wire, said means including a spring encircling said rod and engaging said supporting member.

4. A combined trolley wire switch and suspension comprising a main supporting member, a rod supported in slidable relation with said supporting member and provided with a contact, a complemental contact carried by said supporting member, means for connecting said rod with a trolley wire, means within said main supporting member coöperating with said rod to sustain the weight of said trolley wire, said means including a spring encircling said rod and engaging said supporting member, and means for adjusting the tension of said spring.

5. A combined trolley wire switch and suspension comprising a main supporting member formed of telescoping sections, a rod supported in slidable relation with said supporting member and provided with a contact, a complemental contact carried by said supporting member, means for connecting said rod with a trolley wire, and means within said main supporting member coöperating with said rod to sustain the weight of said trolley wire.

[Claims 6 to 18 not printed in the Gazette.]

1,173,594. FRAME FOR TRACTION-ENGINES. WALTER J. MCVICKER, Minneapolis, Minn., assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn., a Corporation. Filed Sept. 24, 1912. Serial No. 722,034. (Cl. 21—114.)



1. A traction engine frame comprising upper parallel side rails, lower parallel side rails having upwardly turned forward portions secured to said upper rails, upright braces interposed between the rear portions of said upper and lower side rails, girder plates secured to said side rails and said braces, cross bars interposed between the opposite side rails and between said girder plates, a rocker provided at the forward end of said side rails, and forward and rear axles having carrying wheels supporting said rocker and the rear portion of said frame.

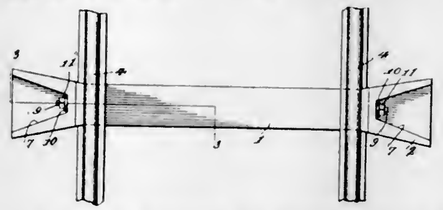
2. In a traction engine, a girder-built frame comprising upper and lower members, the forward portion of said lower member being upwardly turned and conencted to said upper member, the rear portions of said members being substantially parallel with one another, girder plates having their upper and lower portions secured respectively to said members, and suitable braces for said members and girder plates.

3. A built-up girder frame comprising an upper member, a lower member having its forward portion upwardly turned and secured to said upper member, girder plates having their upper and lower portions secured respectively to said upper and lower members, braces between said girder plates, a bolster arranged beneath the forward portion of said members, a forward axle whereon said bolster is mounted, and a rear axle projecting through openings provided in the rear portion of said girder plates.

4. In a traction engine, a girder-built frame having a substantially flat top forming an engine bed, a bolster arranged beneath the forward portion of said frame, the rear portion of said girder-built frame having openings therein, and a rear axle projecting through said openings.

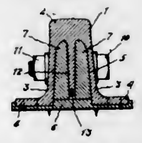
5. A traction engine frame comprising upper parallel channel bar rails, lower parallel angle bar rails having their rear portions parallel substantially with said channel rails and their forward portions upwardly turned and secured to said channel rails, girder plates extending from end to end of said upper and lower rails and secured thereto, the rear portions of said girder plates having bearings for the rear axle therein and the forward portion of said channel bar rails having a rocker depending therefrom, and suitable braces interposed between the opposite rails and girder plates.

1,173,595. DEVICE FOR PREVENTING THE SPREADING OF RAILS. PAUL MACKEY, Minor, Kans. Filed May 28, 1914. Serial No. 841,599. (Cl. 238—5.)



In a device for preventing the spreading of rails including in combination with a pair of rails, an elongated integrally formed body disposed transversely of the rails and arranged to support the rails, diverging rail receiving heads formed by enlarging the respective ends of the body, the inner faces of the heads being provided with transverse recesses adjacent the upper ends thereof each adapted for receiving a portion of the head of one of the rails and further provided adjacent the lower ends thereof with transverse grooves for receiving a portion of the base of each rail, the upper surfaces of the heads being cut diagonally toward the outer ends and provided at the ends with inwardly extending tapering recesses, said heads being provided with longitudinally extending openings terminating at the inner ends of the recesses, fastening bolts passing through said rails and openings and positioned within said recesses, and adjusting nuts removably mounted on said bolts and positioned within the recess for causing the rails to snugly engage the recesses, when the nuts are adjusted for preventing vertical and lateral movement of the rails, and the walls of the recesses constituting guards for the nuts.

1,173,596. TRACK CONSTRUCTION. GEORGE B. MALTBY, Cleveland, Ohio. Filed Oct. 5, 1915. Serial No. 54,132. (Cl. 239—14.)



1. As a new article of manufacture, a rail having a double U-section, and comprising an integral head or tread-portion, two lateral and substantially parallel side webs, the lower end of each such side web being formed with an integral laterally extending flange having a lower flat contact surface, together with a central integral and downwardly extending web portion.

2. The combination with two abutting rails forming an interior space, each rail provided with an interior web intersecting such space; of splice-bars in said space upon opposite sides of said web and secured to said rails.

3. The combination of two abutting rails forming an interior space, each formed with an interior web intersecting the latter; a tie-plate on which the abutting rail end portions are supported; splice bars withhn said space, upon opposite sides of said web and secured to said rails.

4. The combination of two abutting rails forming an interior space and with an interior web intersecting said space; a tie-plate on which the abutting rail end portions are supported; and splice bars in said space upon opposite sides of said web, and bars being integral with said tie-plate and secured to said rails.

1,173,597. APPARATUS FOR THE SIMULTANEOUS CONVEYING AND GRADING OF MATERIALS. HERMANN MARCUS, Cologne, Germany. Filed Nov. 25, 1911. Serial No. 662,343. (Cl. 83—56.)



1. An apparatus for the simultaneous conveying and grading of materials comprising a horizontally disposed reciprocable trough having a bottom portion provided with openings therein of progressively increasing sizes from the receiving to the discharge direction of the trough, said openings having downwardly inclined walls beneath the same and open at the rear whereby particles passing through said openings will be discharged in a direction opposite to the conveying direction of the materials upon the bottom of the trough during the reciprocation thereof, the rear ends of said walls terminating in close proximity and substantially beneath the forward ends of the preceding walls.

2. An apparatus for the simultaneous conveying and grading of materials comprising a horizontally disposed reciprocable trough having a bottom portion provided with openings therein of progressively increasing sizes from the receiving to the discharge direction of the trough, said openings having downwardly inclined walls beneath the same and open at the rear whereby particles passing through said openings will be discharged in a direction opposite to the conveying direction of the materials upon the bottom of the trough during the reciprocation thereof, the bottom portions of the trough between said openings being substantially horizontally disposed and overlying the succeeding bottom portions of succeeding openings with respect to the direction of conveyance.

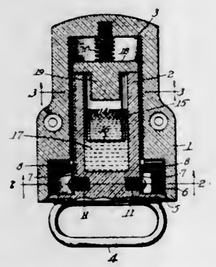
3. An apparatus for the simultaneous conveying and grading of materials comprising a horizontally disposed reciprocable trough having a bottom portion provided with openings therein of progressively increasing sizes from the receiving to the discharge direction of the trough, said openings having downwardly inclined walls beneath the same with their rear ends lying substantially beneath the adjacent ends of the preceding openings and open at the rear whereby particles passing through said openings will be discharged in a direction opposite to the conveying direction of the materials upon the bottom of the trough during the reciprocation thereof, the bottom portions of said openings tapering toward their discharge ends and having inclined side walls diverging upwardly and of uniform outward dimension whereby the sides of the openings are parallel.

4. An apparatus for the simultaneous conveying and grading of materials comprising a horizontally disposed reciprocable trough having a bottom portion provided with openings therein of progressively increasing sizes from the receiving to the discharge direction of the trough, said openings having downwardly inclined walls beneath the same and open at the rear whereby particles passing through said openings will be discharged in a

direction opposite to the conveying direction of the materials upon the bottom of the trough during the reciprocation thereof, the bottom portions of said openings tapering toward their discharge ends and having inclined side walls diverging upwardly and of uniform outward dimension whereby the sides of the openings are parallel, said bottom portions having a slight upward bend producing convexity of their operative surfaces throughout their lengths to facilitate the conveying operation and overlying the next succeeding bottom portions.

5. An apparatus for simultaneously conveying and grading materials comprising a reciprocable horizontal support, said support being provided with openings in its bottom of progressively increasing sizes and arranged in transverse rows across the support, downwardly inclined surfaces positioned beneath said openings and inclining to progressively increasing depth correspondingly to the progressive increasing sizes of the openings whereby materials of gradually increasing sizes will be progressively discharged through said openings for grading the same during the reciprocation of the support, each of said surfaces extending throughout the entire length of its associated opening to prevent the materials from dropping directly through the openings and inclining in a direction opposite to the direction of travel of the material upon the support whereby the sorted out material will travel in a direction opposite to that of the conveyed material upon reciprocation of the support, and means operating in each opening to eject material therefrom which has become clogged.

1,173,598. FUSE DEVICE. LESTER O. MELLOR, Evanston, Ill. Filed Mar. 3, 1913. Serial No. 751,686. (Cl. 175—277.)



1. A fuse device comprising plug and socket members, the socket member being open at its lower end and the plug being insertible into the socket member from below, said plug being provided with a centrally arranged chamber and carrying a fuse which is connected to the outer walls of the plug and extends thence upwardly and then inwardly and downwardly in said chamber, arc extinguishing liquid in said chamber submerging a portion of said fuse, a closure IS mounted upon the upper end of the plug and closing the chamber thereof, and spring means interposed between said closure and the top of the socket member.

2. A fuse device comprising plug and socket members, whereof the sock member is provided with an opening whose mouth is at its lower end and the plug member being arranged to be inserted upwardly into said opening, said plug member being provided with a chamber open at its top, a fuse having its terminals secured to the sides of said plug member and extended downwardly into said chamber, and arc extinguishing liquid in said chamber submerging the lower portion of said fuse therein.

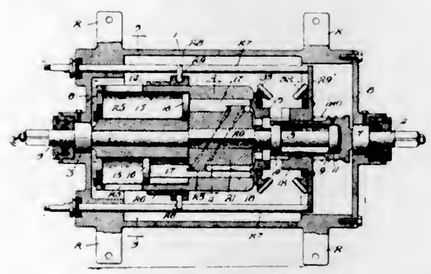
3. A fuse device comprising plug and socket members, whereof the socket member is provided with an opening whose mouth is at its lower end and the plug member being arranged to be inserted upwardly into said opening, said plug member being provided with a chamber open at its top, a fuse having its terminals secured to the sides of said plug member and extended downwardly into said chamber, arc extinguishing liquid in said chamber submerging the lower portion of said fuse therein, and a closure for the upper end of said chamber in said plug.

4. A fuse device comprising plug and socket members, whereof the socket member is provided with an opening whose mouth is at its lower end and the plug member being arranged to be inserted upwardly into said opening, said plug member being provided with a chamber open at its top, a fuse having its terminals secured to the sides of said plug member and extended downwardly into said chamber, arc extinguishing liquid in said chamber submerging the lower portion of said fuse therein, and a closure for the upper end of said chamber in said plug, said closure having a projection extending down into said chamber and interposed between downwardly extending portions of said fuse above said liquid.

5. A fuse device having an internally arranged chamber containing arc extinguishing liquid, a fuse led into the top of said chamber and extended downwardly along the opposite sides thereof and across the same below the top thereof, and a removable closure for said chamber resting upon the top of the walls of said chamber, and having a projection extending downwardly into said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,173,599. FLUID-CLUTCH. DORR MILLER, Chicago, Ill., assignor to Miller Transmission Company, a Corporation of Maine. Filed Apr. 15, 1912. Serial No. 690,782. (Cl. 192—18.)



1. In combination, a casing, a driving shaft projecting through and journaled in one end of the casing, a driven shaft projecting through and journaled in the other end of the casing, the inner end of said driven shaft being hollow, bearings in said driven shaft for supporting the inner end of the driving shaft, a hydraulic transmission device carried by said driving shaft, and a clutch between said transmission device and the driven shaft.

2. In combination, a casing, a driving shaft projecting through and journaled in one end of the casing, a driven shaft projecting through and journaled in the other end of the casing, the inner end of said driven shaft being in the form of a cup, bearings in said cup for supporting the inner end of the driving shaft, a hydraulic transmission device carried by said driving shaft, and a clutch between said transmission device and the driven shaft.

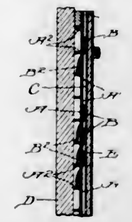
3. In combination, a driving shaft, a driven shaft, and a hydraulic transmission mechanism between said shafts; said transmission mechanism comprising a cylindrical member revoluble on the driving shaft and having a plurality of chambers distributed about the axis thereof, there being a port leading from each of said chambers to the exterior of said member, a liquid container surrounding said member, a rim-like valve fitting about said member and movable lengthwise thereof to control said ports, pistons in said chambers, and means on the driving shaft for reciprocating said pistons.

4. In combination, a driving shaft, a driven shaft, and a hydraulic transmission mechanism between said shafts; said transmission mechanism comprising a cylindrical member revoluble on the driving shaft and having a plurality of chambers distributed about the axis thereof, there being a port leading from each of said chambers to the exterior of said member, a liquid container surrounding said member, a rim-like valve fitting about said member and movable lengthwise thereof to control said ports, pistons in said chambers, and means on the driving shaft for reciprocating said pistons, the parts being so arranged that the pistons are displaced relative to each other with reference to their strokes.

5. In combination, a driving shaft, a driven shaft, and hydraulic transmission mechanism between said shafts; said transmission mechanism including a hydraulic device mounted on the driving shaft, a clutch between the driven shaft and said device, a controller for said device, and means associated with the controller for actuating the clutch.

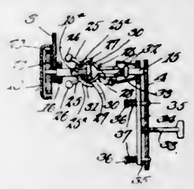
[Claims 6 to 8 not printed in the Gazette.]

1,173,600. INDEX. JOSEPH MILLER, Cleveland, Ohio, assignor to The Champion Register Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 3, 1912. Serial No. 688,293. (Cl. 40—63.)



An index comprising a slotted plate or sheet the slots of said plate being arranged in definite rows, the portion of the plate or sheet punched therefrom to form each slot being projected rearwardly, thereby providing a rest or support for a card or slip projected into the next slot above, and flanged strips attached to the face of the plate or sheet at the ends of the slots.

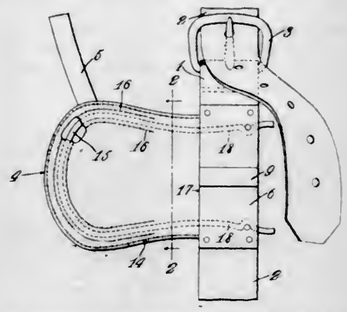
1,173,601. CENTRIFUGAL BRAKE FOR SPRING-MOTORS. ED MILLSAPS, La Fayette, Ga., assignor of one-half to William D. Aters, Rock Spring, Ga. Filed July 15, 1915. Serial No. 40,052. (Cl. 74—45.)



In a device of the character described, a shaft, a tapered sleeve movable upon said shaft, means for adjusting said sleeve, a pair of levers pivoted to said shaft and having long arms projecting into said sleeve and providing brake shoes to contact with the interior thereof, said levers having relatively short diverging arms, an expansion spring between said short arms, and a pair of L-shaped levers having their elbows fulcrumed to said shaft and having arms to bear against said short arms, and other arms provided with weights adapted to separate by centrifugal action.

1,173,602. BLINDER. RISDON DENT MOORE, Ardmore, Okla. Filed June 28, 1915. Serial No. 36,807. (Cl. 54—10.)

1. In a device of the class described, a blinder; a pair of spring arms carried by the blinder and projecting in approximate parallelism beyond one edge of the blinder, the arms being located in a plane approximately parallel to the plane defined by the blinder, the arms being yieldable toward and away from each other, in a plane approximately parallel to the plane defined by the blinder; and head stall carried means wherewith the projecting portions of the arms are detachably interlocked.

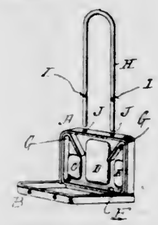


2. In a device of the class described, a head stall having projections; a blinder; and compressible spring arms on the blinder, the spring arms being detachably interengaged with the projections and being extended to the rear of the head stall to form finger pieces.

3. In a device of the class described, a head stall having projections; a blinder; and compressible spring arms on the blinder, the arms having seats receiving the projections, the arms being extended beyond the projections to form finger pieces whereby the arms may be compressed.

4. In a device of the class described, a blinder; a U-shaped resilient member assembled with the blinder and comprising arms, the arms adjacent their ends being mounted to move toward and away from each other, within the contour of the blinder; a head stall; and means on the head stall wherewith the arms interengage detachably.

1,173,603. SEAL-FASTENING. THOMAS E. MURRAY and GEORGE K. JESSUP, New York, N. Y.; said Jessup assignor to said Murray. Filed Nov. 17, 1915. Serial No. 61,880. (Cl. 70—99.)



1. A seal fastening, comprising a shell having on one of its walls three inward projections, a shackle entering said shell and having in each of its arms a circumferential groove, the said arms being received in the spaces between said projections, and a leaf spring extending around said projections and having hooks at its ends engaging in said grooves.

2. A seal fastening, comprising a shell having three internal guide projections, a shackle having arms entering the space between the middle and side projections and having notches in said arms, and a spring extending across said shell and on each side thereof and lying between said projections and the walls of said shell, and having its ends bent to engage said shackle notches.

3. A seal fastening, comprising a shell having on one of its walls a central projection and a smaller projection on each side of said central projection, a shackle entering said shell and having its arms entering the spaces between said projections, and a leaf spring extending

around the corresponding ends of said projections and having inwardly turned hooks disposed in the space beyond said side projections and engaging said shackle.

4. A seal fastening, comprising a rectangular shell having three internal guide projections, a shackle having arms entering the space between the middle and side projections and having notches in said arms, and a spring lying against the inner surface of three walls of said shell and inclosing said projections, and having its ends bent inwardly to engage in said shackle notches, the loops formed by bending over said ends being disposed in corners of said shell.

1,173,604. SLED. CHARLES D. ORCUTT, North Tonawanda, N. Y., assignor to The Buffalo Sled Company, North Tonawanda, N. Y., a Corporation of New York. Filed May 20, 1915. Serial No 29,332. (Cl. 21—94.)



1. A sled comprising a body, steering runners pivotally connected with said body, a yoke connecting said runners, and a steering bar having a changeable fulcrum and provided with a longitudinal arm which is connected with said yoke.

2. A sled comprising a body, steering runners movable horizontally thereon, a transverse yoke pivotally connected with the front parts of said runners, a steering bar having two fulcrum pins and provided with a longitudinal arm which has a pin and slot connection with the yoke, and a pivoting plate or member secured to said body and adapted to be engaged at one part or another by said fulcrum pins.

3. A sled comprising a body, steering runners movable horizontally thereon, a transverse yoke pivotally connected with the front parts of said runners, a steering bar having two fulcrum pins and provided with a longitudinal arm which has a pin and slot connection with the yoke, an elastic element attached to the central portion of said steering bar tending to move the same rearwardly relatively to the body.

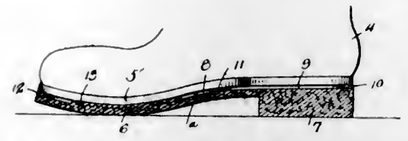
4. A sled comprising a body, steering runners pivoted at their rear ends to said body, a transverse yoke pivotally connecting the front ends of said runners, a steering bar provided with a longitudinal arm which has a pin and slot connection with said transverse yoke, a fulcrum bar attached to said steering bar and provided with a plurality of pins, and a pivot plate arranged on the body and having notches or recesses adapted to receive corresponding pins of the fulcrum bar.

5. A sled comprising a body, steering runners pivoted at their rear ends to said body, a transverse yoke pivotally connecting the front ends of said runners, a steering bar provided with a longitudinal arm which has a pin and slot connection with said transverse yoke, a fulcrum bar attached to said steering bar and provided with a plurality of pins, a pivot plate having notches or recesses mating with corresponding pins of the fulcrum bar, and an elastic element attached to the central portion of said steering bar tending to move the same rearwardly.

[Claim 6 not printed in the Gazette.]

1,173,605. SHOE. JAMES F. PETERS, Latrobe, and JAMES W. DUNGEON, Pittsburgh, Pa. Filed Nov. 13, 1914. Serial No. 871,973. (Cl. 36—73.)

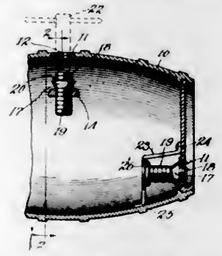
1. In a shoe, the combination with an upper and a sole, of an auxiliary sole composed of fire resisting and acid proof material secured to the first named sole and including a heel, the auxiliary sole having spaced ribs along the edges of its inner face to form a depression to provide an air cushion between the soles, the air passing through the spaces between the ribs back and forth between the depression of the auxiliary sole and the space surrounding the main sole, and a longitudinally extending rib formed on the inner face of the auxiliary sole in spaced relation to the aforesaid ribs.



2. In a shoe, the combination with an upper and a sole, of a relatively stiff auxiliary sole composed of fire resisting and acid proof material secured to the aforesaid sole, the auxiliary sole having spaced ribs along the edges of its upper face to form a depression and provide an air cushion between the soles, the spaces between the ribs being arranged at the toe and heel portions of the auxiliary sole and at the instep portion thereof whereby air passes back and forth through said passages into and out of the depression formed between the main and auxiliary soles.

3. A fire resisting and acid proof shoe sole having its inner face provided with ribs along its edges to form a depression on the inner face of the sole, the ribs having their ends spaced from one another to provide passages at the toe and heel portions and at the instep portion of the sole, the latter passages permitting a slight transverse bending of the sole under the walking action of the wearer.

1,173,606. BUNG-HOLE CLOSURE FOR BARRELS AND THE LIKE. ELWOOD C. PHILLIPS, Chicago, Ill., assignor of one-half to Charles F. Gabriel, Chicago, Ill. Filed Dec. 12, 1914. Serial No. 876,785. (Cl. 217—107.)



1. The combination of a container having an opening in the wall thereof, a closure for the opening, said closure disposed inside of the container, a support for the closure adjacent the opening and spaced from the wall of the container, means for manipulating the closure, and interengaging means on the wall of the opening and the portion of the closure which enters the opening to secure the parts together, the said means on the wall of the opening being fixed with respect to the wall of the container.

2. The combination of a container having a threaded opening in the wall thereof, a closure for the opening disposed within the container, a support for the closure and with which support the closure has adjustable engagement, a portion of the closure adapted to enter the said opening from the inside thereof, threads on said portion adapted to engage and disengage the threads in said opening, and means for manipulating the closure.

3. The combination of a container having a threaded opening in the wall thereof, a closure for the opening disposed within the container, a support for the closure and with which support the closure has adjustable engagement, a portion of the closure adapted to enter the said opening from the inside thereof, threads on said portion adapted to engage and disengage the threads in said opening, means for manipulating the closure, said support being spaced from the wall of the container, and an enlarged portion on the closure, said enlarged portion disposed between the support and the adjacent wall of the container.

4. The combination of a container having a threaded opening in the wall thereof, a closure for the opening, said closure disposed within the container, a support for the closure adjacent but spaced from the apertured wall of the container, a threaded connection between the closure and the support, a portion of the closure adapted to enter the said opening, threads on said portion adapted to engage and disengage the threads in said opening, an enlargement on the closure adjacent the said portion, said enlargement being of a size greater than the opening, and means for moving the said portion of the closure into and out of the said opening.

5. The combination of a container having a threaded opening in the wall thereof, a closure for the opening, said closure disposed within the container, a support for the closure adjacent but spaced from the apertured wall of the container, a threaded connection between the closure and the support, a portion of the closure adapted to enter the said opening, threads on said portion adapted to engage and disengage the threads in said opening, an enlargement on the closure adjacent the said portion, said enlargement being a size greater than the opening, and means for moving the said portion of the closure into and out of the said opening, the said enlarged portion adapted to engage the said support for limiting the adjustment of the closure in one direction.

[Claim 6 not printed in the Gazette.]

1,173,607. ATTACHMENT FOR THE PROMOTION OF EASE AND SPEED IN WRITING. MATTHEW A. RAFTERY and OSCAR FREY, New York, N. Y. Filed Mar. 15, 1912. Serial No. 683,959. (Cl. 120—54.)



1. An attachment for promoting speed in writing comprising supporting means for the hand adapted to be attached to one of the fingers, and provided with a support for the next adjacent finger, said supporting means contacting with the writing surface when in use.

2. A device of the character described provided with a member adapted to encircle the finger, a member projecting outward therefrom and adapted to act as a support for the next adjacent finger, means contacting with the writing surface when in use, said means being arranged opposite the projecting member.

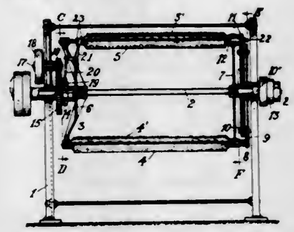
3. A device of the character described provided with parallel bands adapted to encircle one of the fingers, a member connecting said bands, a member projecting outward therefrom adapted to engage with the next adjacent finger, said member being in a plane substantially horizontal to said connecting member, and means contacting with the writing surface when the device is in use.

4. A device of the character described provided with parallel bands adapted to encircle one of the fingers, a member connecting said bands, a member projecting outward therefrom adapted to engage with the next adjacent finger, said member being in a plane substantially horizontal to said connecting member, and means mounted on one of said parallel bands opposite the said projecting member, said means contacting with the writing surface when the device is in use.

5. A device of the character described provided with parallel bands adapted to encircle one of the fingers, a member connecting said bands, a member projecting outward therefrom adapted to engage with the next adjacent finger, said member being in a plane substantially horizontal to said connecting member, and a ball bearing mounted on one of said parallel bands opposite the said projecting member, said ball bearing contacting with the writing surface when the device is in use.

[Claim 6 not printed in the Gazette.]

1,173,608. RAISING-GIG FOR LONGITUDINAL AND TRANSVERSE TEAZELING. HEINRICH REPENNING, Aix-la-Chapelle, Germany. Filed Feb. 24, 1915. Serial No. 10,262. (Cl. 26—19.)



1. A raising-gig of the character described, comprising a drum, a plurality of first teazels journaled therein, means for imparting a rotary motion only, to said first teazels, a plurality of second teazels likewise journaled in the drum and interposed between the first teazels, and means for imparting a combined reciprocative and rotary movement to the second teazels.

2. A raising-gig of the character described, comprising, in combination, a teazel-drum containing rotary teazels adapted for longitudinal teazeling and stationarily journaled in said drum, and teazel-devices adapted for transverse teazeling and reciprocatingly mounted in said drum; means for rotating said rotary teazel, independent of the rotation of said teazel-drum, and means for reciprocating said teazel-devices with variable speed.

3. A raising-gig of the character described, comprising, in combination, a teazel-drum composed of a plurality of reciprocating teazel-means having teeth adapted to gather fibrous elements from the warp-threads and range them crosswise to said threads in the direction of the working-stroke of said reciprocating teazel-means, and of a plurality of fixed rotary teazel-means provided with teeth adapted to pick the weft-threads and to subject said fibrous elements of the wrap-threads to renewed teazeling actions; means for imparting the said reciprocating action to the first-named teazel-means while said teazel-drum is being rotated, and means to impart variable rotary motion to said rotary teazel-means independent of the rotation of said teazel-drum.

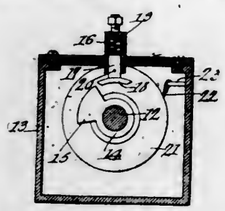
4. A raising-gig of the character described, comprising, in combination, a teazel-drum containing rotary teazels adapted to subject the weft-threads to a teazeling-action, and rotatable reciprocating teazel-devices alternately arranged with said rotary teazels in said teazel-drum and adapted to subject the warp-threads to a teazeling-action; means for simultaneously rotating said rotary teazels and said rotatable reciprocating teazel-devices around their own axis independent of the rotation of said teazel-drum, and means for imparting to said rotatable reciprocating teazel-devices a reciprocating motion while being rotated around their own axis and that of said teazel-drum.

5. A raising-gig of the character described, comprising, in combination, a teazel-drum containing fixed rotary teazels for longitudinal teazeling having teeth operating in planes crossing the axis of rotation of said rotary teazels and of said teazel-drum, and rotatable reciprocating teazel-devices for transverse teazeling provided with teeth moving on helical paths lengthwise to the axis of rotation of the teazel-devices carrying them; means for rotating said rotary teazels and said rotatable reciprocating teazel-devices around their own axis with different circumferential velocities independent of the rotation

of said teazel-drum, and means for imparting to the rotatable reciprocating teazel-devices a reciprocating motion in addition to their rotary motion.

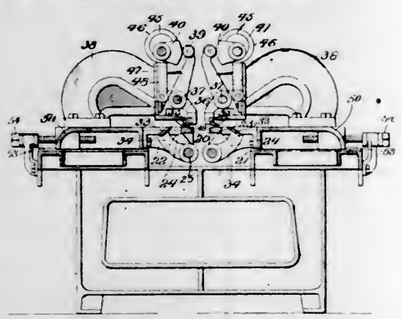
[Claims 6 and 7 not printed in the Gazette.]

1,173,609. ELECTRIC SWITCH FOR AUTOMATIC PASSENGER-FARE-REGISTERING MECHANISM. HARRY SAVAGE and WILLARD L. BAKER, San Antonio, Tex. Original application filed June 10, 1913, Serial No. 772,867. Divided and this application filed Sept. 8, 1914. Serial No. 860,732. (Cl. 175—282.)



A switch, including a casing having an insulating cover, a shaft journaled through the casing, a pair of sector-shaped contacts carried by the shaft within the casing, a pair of socket members engaged through said cover with their open ends disposed inwardly, plungers slidable in said socket members and having curved shoes to be engaged by the curved edges of said contacts, springs between said plungers and closed ends of said socket members, the socket members and plungers having coöperating means for limiting the movement of said plungers, a spool secured upon said shaft within the casing, and a spiral spring having its outer end attached to the casing and its inner end attached to said spool.

1,173,610. MACHINE FOR PLAITING PAPER. EDWARD D. SCHMITT, Baltimore, Md. Filed Feb. 13, 1914. Serial No. 818,459. (Cl. 93—58.)



1. In a machine for manufacturing plaited box blanks of heavy paper board or the like, the plaits serving as reinforcing means at the top and bottom edges of the box, means for holding the material, means for bending the paper to form two parallel plaits having their outer edges spaced apart by a distance equal to half the box and means for pressing the plaits to make them permanent and form them into reinforcing members at the top and bottom edges of the box.

2. In a machine for manufacturing plaited box blanks of heavy paper board or the like, the plaits serving as reinforcing means at the top and bottom edges of the box, means for holding the material along two parallel lines, said means being spaced by a distance corresponding to the height of the box, means for bending the paper to form two parallel plaits having their outer edges spaced apart by a distance equal to the height of the box, and means for pressing the plaits to make them permanent and form them into reinforcing members at the top and bottom edges of the box.

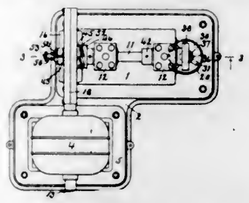
3. In a machine for manufacturing plaited box blanks of heavy paper board or the like, the plaits serving as reinforcing means at the top and bottom edges of the box, means for holding the material along two parallel lines, said means being spaced by a distance corresponding to the height of the box, means for bending the paper to form two parallel plaits having their outer edges spaced apart by a distance equal to the height of the box, means for pressing the plaits and means for fastening them to make them permanent and form them into reinforcing members at the top and bottom edges of the box.

4. In a machine for plaiting paper or the like, means for gripping the material, means for folding the paper about the gripping means, means for forming a second fold about said second mentioned means thus forming a Z fold and pressing the Z fold thus formed flat.

5. In a machine for plaiting paper, means for gripping the paper on two parallel lines, means for folding the paper inward about both said means, means for bending the paper about said folding means, and pressing both said folds.

[Claims 6 to 14 not printed in the Gazette.]

1,173,611. TENSILE-STRENGTH TESTER. SAMUEL N. SENNA, Holyoke, Mass., assignor of one-half to Charles E. Torrance, Holyoke, Mass. Filed Dec. 5, 1914. Serial No. 875,718. (Cl. 73—51.)



1. In a tensile strength tester, a fluid cylinder, resilient means for supporting and holding a sample over said cylinder, sample-puncturing means operated by said resilient means, and means to operate said resilient means.

2. In a tensile strength tester, a fluid cylinder, resilient means for supporting and holding a sample over said cylinder, sample-puncturing means operated by said resilient means, and power-driven means to operate said resilient means.

3. In a tensile strength tester, a fluid cylinder, resilient means for supporting and holding a sample over said cylinder, sample-puncturing means operated by said resilient means, and means for operating said resilient means to produce a uniformly-increasing pressure on said sample.

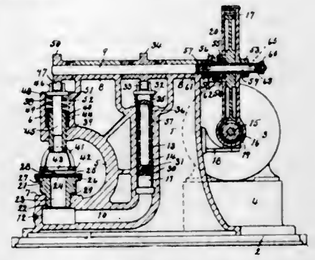
4. In a tensile strength tester, a fluid cylinder, resilient means for supporting and holding a sample over said cylinder, sample-puncturing means operated by said resilient means, and means to operate said resilient means.

5. In a tensile strength tester, a fluid cylinder, resilient means for supporting and holding a sample over said cylinder, sample-puncturing means operated by said resilient means, and means adapted first to operate said resilient means and therefore to cause said sample-puncturing means to operate.

[Claims 6 to 27 not printed in the Gazette.]

1,173,612. TENSILE-STRENGTH TESTER. SAMUEL N. SENNA, Holyoke, Mass., assignor of one-half to Charles E. Torrance, Holyoke, Mass. Filed Dec. 5, 1914. Serial No. 875,719. (Cl. 73—51.)

1. A tensile strength tester comprising direct-acting resilient clamping means, means to overcome the resistance offered by said first-mentioned means and to actuate the latter into clamping position, hydraulic pressure-producing means consisting in part of a reciprocable member in parallel relation with said first-mentioned means, a rupturing element in line with the axial center of said clamping means, said rupturing element being operated by said hydraulic pressure-producing means, and means to operate said hydraulic pressure-producing means.



2. A tensile strength tester comprising direct-acting cam-actuated pressure-producing means adapted to produce, under the action of the cam, a clamping effect, cam-actuated hydraulic pressure-producing means consisting in part of a reciprocable member in parallel relation with said first-mentioned means, and a rupturing element operated by said hydraulic pressure-producing means.

3. A tensile strength tester comprising direct-acting resilient clamping means, means to overcome the resistance offered by said first-mentioned means and to actuate the latter into clamping position, hydraulic pressure-producing means consisting in part of a reciprocable member in parallel relation with said first-mentioned means, a rupturing element in line with the axial center of said clamping means, said rupturing element being operated by said hydraulic pressure-producing means, and cam mechanism to operate said hydraulic pressure-producing means.

4. A tensile strength tester comprising direct-acting resilient clamping means, cam-mechanism adapted to overcome the resistance offered by said first-mentioned means and to actuate the latter into clamping position, hydraulic pressure-producing means consisting in part of a reciprocable member in parallel relation with said first-mentioned means, a rupturing element in line with the axial center of said clamping means, said rupturing element being operated by said hydraulic pressure-producing means, and cam-mechanism for operating said hydraulic pressure-producing means.

5. A tensile strength tester comprising direct-acting cam-actuated resilient means adapted to produce, under the action of the cam, a clamping effect, such means consisting in part of spring-pressed telescoping plungers, and cam-actuated hydraulic pressure-producing rupturing means.

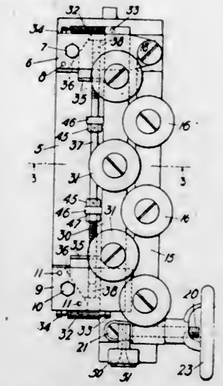
[Claims 6 to 25 not printed in the Gazette.]

1,173,613. WIRE-STRAIGHTENER. WILLIAM F. SMITH, Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 20, 1914. Serial No. 833,166. (Cl. 140—148.)

1. A wire straightener comprising a base, a fixed and a movable set of rollers supported on said base, wedge blocks, and a threaded rod engaging said blocks for adjusting the position of said movable set of rollers with respect to said fixed set.

2. A wire straightener comprising a base, a fixed and a movable plate supported thereon, a set of rollers mounted on each of said plates, slidable members, and unitary means coöperating with said slidable members for imparting a parallel movement to said movable plate for adjusting the relative position of said rollers.

3. A wire straightener comprising a base, guides mounted on said base, a fixed plate carrying a set of grooved rollers mounted on said base, a second plate carrying a set of grooved rollers slidably mounted in said guides, tensioning means normally tending to separate the two sets of rollers, wedge blocks slidably mounted in said guides, and a connecting link engaging said blocks for adjusting the position of said movable set of rollers with respect to said fixed set.

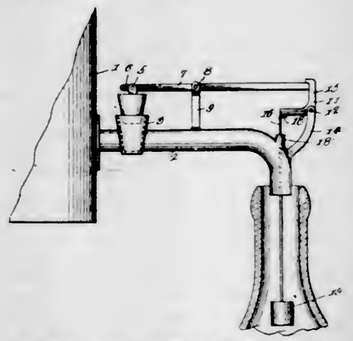


4. A wire straightener comprising a base, two plates supported by said base, a set of grooved rollers mounted on each of said plates, bifurcated guides mounted on said base, one of said plates being pivoted at one end and adapted to be held rigid at the other or to be moved about its pivot point to admit a wire between said sets of rollers without changing the operating adjustment thereof, the other of said plates being slidably mounted in said bifurcated guides, tensioning means normally tending to separate said plates, wedge blocks slidably mounted in said bifurcated guides, and means for moving said blocks to adjust the relative positions of said plates to accommodate different sizes of wires between said grooved rollers.

5. A wire straightener comprising a base, a fixed and a movable set of rollers supported on said base, tensioning means normally tending to separate said sets of rollers, wedge blocks, and a threaded rod engaging said blocks for adjusting the position of said movable set of rollers with respect to said fixed set.

[Claim 6 not printed in the Gazette.]

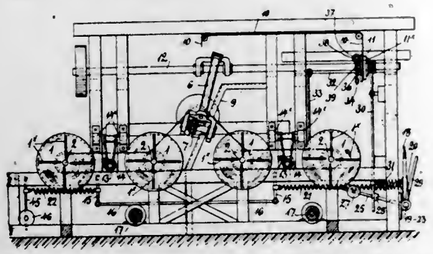
1,173,614. AUTOMATIC CUT-OFF DEVICE. IRA M. SPONSEL, Goodland, Kans. Filed Aug. 31, 1914. Serial No. 859,539. (Cl. 226—13.)



A cut-off device for the discharge spout of a container comprising a float, a float rod to which the float is attached, an extension formed on said rod to engage with the spout and support said float, an arm integral with said spout, a substantially bell crank lever carried by said

arm in a plane directly above and in vertical alinement with said float rod to be engaged thereby upon movement of said float, an extension formed on one end of said lever, a pivoted operating lever mounted to engage said said last mentioned extension, said operating lever and said bell crank lever being disposed exteriorly of said spout, and a weighted valve member pivoted to depend from the opposite end of said operating lever from that engaging said extension, said weighted valve member being adapted to gravitate into an opening therefor in said spout to afford a cut-off for the liquid discharged therethrough upon movement of the bell crank out of engagement with said operating lever.

1,173,615. MACHINE FOR REMOVING THE BARK FROM LOGS. KARL ARTHUR STÅHLNACKE, Österås, Bergvik, Sweden. Filed Feb. 6, 1915. Serial No. 6,529. (Cl. 144—208.)



1. In a barking machine, the combination of an arm capable of swinging longitudinally of the log, a toothed roller carried by the said arm and forced against the log for rotating and feeding the same, means for rotating the said roller, and means for bringing the said arm into different oblique positions with relation to the log, substantially as described and for the purpose set forth.

2. In a barking machine, the combination of an arm capable of swinging longitudinally and transversely of the log, a toothed roller carried by the said arm and forced against the log for rotating and feeding the same, means for rotating the said roller, and an oblique guide for the said arm for changing the oblique position of the arm and the roller with relation to the log and thus the feed velocity in accordance with the diameter of the log, substantially as described.

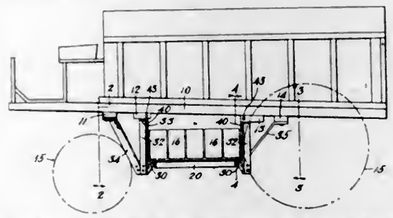
3. In a barking machine, the combination of an arm capable of swinging longitudinally and transversely of the log, a toothed roller carried by the said arm and forced against the log for rotating and feeding the same, means for rotating the said roller, means for bringing the said arm and the roller into different oblique positions with relation to the log so that the feed velocity is changed in accordance with the diameter of the log, a rope connected with the said arm, a driving shaft, a friction clutch coöperating with the said shaft, one of the members of the said clutch consisting of a drum around which the said rope is wound for raising the arm, a catching device keeping the arm in raised position, even if, after the raising of the arm, the said clutch is disengaged, and means acted upon by the log when brought into the position to be barked for disengaging the said catching device.

4. In a barking machine, the combination of an arm capable of swinging longitudinally and transversely of the log, a toothed roller carried by the said arm and forced against the log for rotating the said roller, means for rotating the said roller, means for bringing the said arm and the roller into different oblique positions with relation to the log so that the feed velocity is changed in accordance with the diameter of the log, a rope connected with the said arm, a driving shaft, a friction clutch coöperating with the said shaft, one of the members of the said clutch consisting of a drum around which the said rope is wound for raising the arm, means for bringing the clutch into operative position, a lever arm acted upon by a weight and normally keeping the clutch in disengaged position, and an arm which is located in the path of the log and when acted upon by the same, brings the said lever arm into inoperative position so that the clutch is engaged and the arm carrying the feed roller is raised.

5. In a barking machine, the combination of an arm capable of swinging longitudinally and transversely of the log, a toothed roller carried by the said arm and forced against the log for rotating and feeding the same, means for rotating the said roller, means for bringing the said arm and the roller into different oblique positions with relation to the log so that the feed velocity is changed in accordance with the diameter of the log, supports for the log capable of swinging, means locking the said supports in operative position, means acted upon by the barked log and disengaging the said locking means, and means returning the said supports and the locking means into their operative positions after the log has left the said supports.

[Claim 6 not printed in the Gazette.]

1,173,616. STORAGE-BATTERY CARRIER. MARSHALL I. STONE, Newton, Mass., assignor to William P. Stone, Boston, Mass. Filed Sept. 21, 1915. Serial No. 51,797. (Cl. 105—267.)



1. The combination with a vehicle, of a storage-battery carrier comprising a battery box, and means suspended from said vehicle for sustaining said box, said means including two shelves arranged apart from each other to enable a truck to pass between them and to underlie two opposite marginal portions of the bottom of said bax to sustain said bottom, two opposite upright walls of said box being fixed to said sustaining means to brace the latter against stresses lengthwise of said shelves, said bottom being removable edgewise from said walls and sustaining means.

2. The combination with a vehicle, of a storage-battery carrier comprising a battery-supporting platform, means suspended from said vehicle for sustaining said platform, said means including coöperative shelves arranged to underlie and sustain opposite marginal portions of said platform, said platform being removable edgewise from said sustaining means, and disconnectible means arranged to connect said marginal portions with said shelves so that horizontal stresses in lines from one shelf to the other will be sustained by both said shelves and said platform conjointly.

3. The combination with a vehicle, of a storage battery carrier comprising coöperative hangers suspended from said vehicle and arranged apart from each other, coöperative shelves carried by said hangers and arranged to extend toward each other from said hangers, and a detachable battery-supporting platform adapted to rest upon said shelves and bridge the space between the latter, said platform being movable edgewise to and from the space between said hangers, said platform and shelves having coöperative dowels and sockets arranged to be disconnected from each other by upward movement of said platform relatively to said shelves.

4. The combination with a vehicle, of a storage-battery carrier comprising a structure permanently fastened to the vehicle and having coöperative shelves extending toward each other and arranged to enable a truck to pass between them, a detachable battery-supporting platform movable edgewise to and from said structure and adapted to rest upon said shelves and bridge the space between the latter, upstanding walls adapted to coöperate with said platform to form a box, and means other than said platform arranged to sustain said upstanding walls in coöperative box-forming relation to said platform, said means being adapted to permit detachment of one or more of the said upstanding walls.

1,173,617. AUTOMOBILE-CONTROLLING MECHANISM. ROBERT SYMMONDS, Jr., Kenosha, Wis., assignor to Thomas B. Jeffery, Kenosha, Wis. Filed Apr. 29, 1909. Serial No. 492,901. (Cl. 74—79.)



1. In combination, a casing, a hollow steering shaft projecting into the casing, means for supporting the shaft at its upper end upon the casing so as to permit the lower end of the shaft to oscillate transversely to its axis, a lever, a connection between the lower end of the shaft and said lever for actuating the lever, a second shaft extending through the hollow steering shaft, and a bearing for said second shaft at the lower end of the casing.

2. In combination, a casing, a hollow steering shaft projecting into the casing, means for supporting the shaft at its upper end upon the casing so as to permit the lower end of the shaft to oscillate transversely to its axis, a lever, a connection between the lower end of the shaft and said lever for actuating the lever, a second shaft extending through the hollow steering shaft, a bearing for said second shaft at the upper end of the steering shaft, and a bearing for said second shaft at the lower end of the casing.

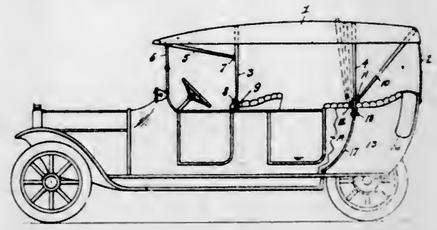
3. In combination, a casing, a hollow steering shaft projecting into the casing, means for supporting said shaft at the upper end of the casing so as to permit the lower end of the shaft to oscillate transversely to the axis of the shaft, a lever mounted on the casing adjacent to the lower end of said shaft, a nut connected to said lever, a hollow screw-threaded member connected to the lower end of said shaft and extending into said nut, a revoluble shaft extending through said steering shaft, and a bearing on said casing for the lower end of said revoluble shaft.

4. In combination, a casing, a hollow steering shaft projecting into the casing, means for supporting said shaft at the upper end of the casing so as to permit the lower end of the shaft to oscillate transversely of the axis of the shaft, a lever mounted on the casing adjacent to the lower end of said shaft, a nut connected to said lever, a hollow screw-threaded member connected to the lower end of said shaft and extending into said nut, a revoluble shaft extending through said steering shaft, a bearing for said revoluble shaft at the upper end of said steering shaft, and a bearing on said casing for the lower end of said revoluble shaft.

5. In combination, a casing, a hollow steering shaft extending into said casing, means for supporting said shaft at its upper end so as to permit the lower end to oscillate, a stationary tube extending through said steering shaft and connected at its lower end to said casing, a revoluble shaft extending through said tube, and a bearing for said revoluble shaft at the lower end of said tube.

[Claims 6 to 8 not printed in the Gazette.]

1,173,618. AUTOMOBILE-TOP. JOHN E. TABER, South Bend, Ind. Filed Dec. 21, 1914. Serial No. 878,272. (Cl. 21—62.)



1. A vehicle having a body formed in part of spaced walls to provide a receiving chamber, the rear portion of said chamber being of less depth than the front portion, a vehicle top including a cover and supporting bows, guide rods arranged in the front portion of said receiving chamber, means for slidably connecting the bows to said guide rods, the lower ends of the guide rods terminating adjacent the bottom of the front portion of the receiving member, the rear portion of said chamber receiving the cover and connected parts of the bows, whereby the bows are held within the receiving chamber at a downward and forward inclination.

2. A vehicle having a body formed in part of spaced walls to provide a receiving chamber, a vehicle top including a cover and supporting bows, the cover receiving portion of the chamber being of less depth than the remaining portion, and guide rods arranged in the chamber in advance of the cover receiving portion thereof, said bows being slidably connected to the guide rods, the guide rods curving downwardly and forwardly and terminating at a point materially below the cover receiving portion of the chamber to maintain the bows at a forward and downward inclination.

3. A vehicle having a body formed in part of spaced walls to provide a receiving chamber, a vehicle top including a cover and supporting bows, the cover receiving portion of the chamber being of less depth than the remaining portion, and guide rods arranged in the chamber in advance of the cover receiving portion thereof, said bows being slidably connected to the guide rods, the guide rods curving downwardly and forwardly and terminating at a point materially below the cover receiving portion of the chamber to maintain the bows at a forward and downward inclination, the minimum distance between the guide rods and cover receiving portion of the chamber being less than the maximum length of the bows.

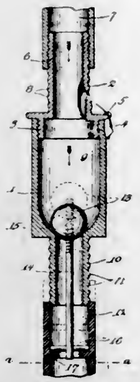
1,173,619. COMPOSITION OF MATTER TO BE USED AS A CONFECTION. CHARLES TEAGUE, Fresno, Cal. Filed June 1, 1915. Serial No. 31,364. (Cl. 127—4.)

The herein described confection consisting of cleaned figs approximately 20 pounds, sugar approximately one pound and syrup of ginger, approximately one pound, heated together until the ginger and sugar thoroughly permeates such figs, all substantially as described.

1,173,620. VALVE DEVICE. NATHAN R. THOMPSON, Davenport, Iowa. Filed Oct. 4, 1912. Serial No. 723,961. (Cl. 137—30.)

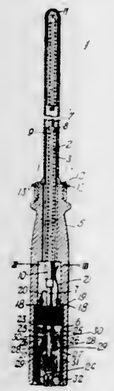
1. A device as specified including a valve chamber, a pipe adjustably associated with said chamber and provided with an annular flange on its inner periphery, a floating valve mounted for movement in said chamber having a stem extending therefrom into said pipe, a pin

mounted in said stem in the path of said annular flange, whereby the valve is operated upon the actuation of said pipe, to open communication through the valve chamber.



2. A device of the character described including a valve chamber, one end of which is formed to provide a valve seat, a floating valve in said chamber adapted to normally lie on said seat, a stem detachably carried by said valve, said chamber provided with a screw-threaded tubular extension beyond said valve seat, a pipe adjustably mounted on said extension and provided with an annular flange on its inner periphery adjacent its jointure with said extension, and being in connection with said valve stem to raise the valve from its seat upon the actuation of said pipe to open communication through said chamber.

1,173,621. TERMINAL CONNECTOR FOR CURLING-IRONS AND THE LIKE. FRANK THORNTON, Jr., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 1, 1913. Serial No. 764,819. (Cl. 173—332.)



1. A switching device embodying coöperating stationary and movable contact members and additional automatic and resiliently actuated means for clamping said contact members in position.

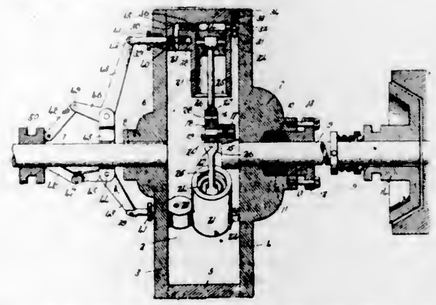
2. A switching device embodying coöperating stationary and movable contact members, and automatic resiliently actuated means disposed at right angles to their plane of contact for clamping said contact members in position.

3. A switching device embodying coöperating stationary and movable contact members, an insulating casing therefor, a plurality of resilient members attached to said casing, and a plurality of movable members associated with said resilient members for clamping said contact members in position.

4. A switching device embodying coöperating stationary and movable contact members, an insulating casing therefor, a plurality of resilient members attached to said casing and a plurality of movable pins actuated by said resilient members for clamping said contact members in position.

5. A switching device embodying a plurality of stationary contact members, a plurality of coöperating movable contact members each provided with an additional loosely attached contact member, an insulating casing for said contact members provided with a plurality of transverse openings, a plurality of flat springs attached to said casing, and a plurality of pins disposed at right angles to the plane of contact and adapted to move through said openings and actuated by said springs for clamping said loosely attached contact members against said other contact members.

1,173,622. TRANSMISSION MECHANISM. WILLIS M. TOMPKINS, Lonoak, Cal. Filed Nov. 14, 1913. Serial No. 801,079. (Cl. 192—18.)

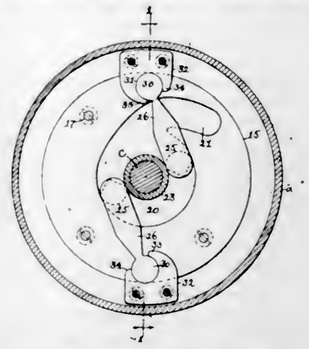


In transmission mechanism for motor vehicles, a power shaft, a rotatable liquid-containing casing into which said power shaft extends, radially arranged cylinders interiorly of said casing for movement therewith, a crank extension formed upon said power shaft, a piston for each cylinder, a connection between each piston and said crank extension, enlargements formed upon the outside of each cylinder at substantially diametrically opposite points, one of said enlargements being provided with an outlet passage way open to said casing and to said cylinder and the other of said enlargements being provided with an inlet passage way open to said casing and to said cylinder, a spring pressed valve operable in each passage way for the purpose specified, a driven shaft rotatable with said casing, and a means to vary the size of said outlet passage way to increase or decrease the rotating speed of said casing by regulating the flow of the liquid through said passage ways under action of the reciprocating piston.

1,173,623. TROLLEY-TENDER. HARRY W. TUFTS, North Attleboro, Mass., assignor to Charles N. Wood, Quincy, Mass. Filed Aug. 11, 1915. Serial No. 45,042. (Cl. 191—95.)

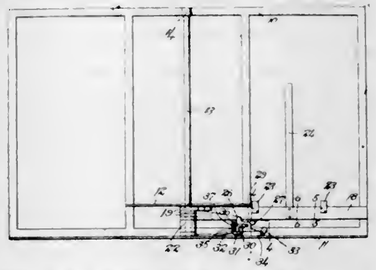
1. In an apparatus of the character described, in combination, a casing, a drum or reel rotatably mounted in said casing, a disk within said casing having a substantially circular opening and a slot leading from said opening, and a lever pivoted to said reel or drum and having a projection extended into said circular opening and normally movable therein and capable of being moved into said slot to arrest rotation of said drum or reel under abnormal conditions.

2. In an apparatus of the character described, in combination, a casing, a drum or reel rotatably mounted in said casing, a disk within said casing having a substantially circular opening and a slot leading from said opening, a socketed jaw attached to said reel, a lever having a substantially circular head capable of being inserted into the socket of said jaw and provided at its free end with a projection extended into said circular opening and capable of being moved into said slot to arrest rotation of said drum or reel under abnormal conditions.



3. In an apparatus of the character described, in combination, a casing, a reel or drum rotatable in said casing, means within said casing for forming a substantially circular opening and a slot extended from said opening and communicating therewith, and a locking dog or lever pivotally connected with said drum or reel and provided with a projection normally extended into said substantially circular opening and movable therein under normal conditions of use and capable of being moved into said slot by an increased rate of rotation of said drum or reel in one direction under abnormal conditions of use.

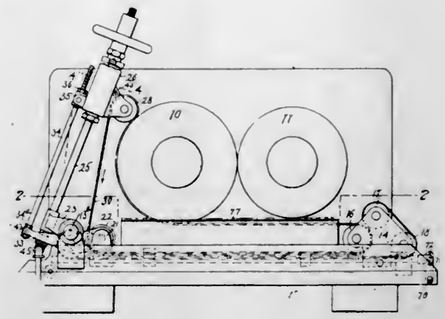
1,173,624. MUSIC-LEAF TURNER. GEORGE C. WEISS, Oakland, Cal. Filed July 20, 1914. Serial No. 852,065. (Cl. 84—135.)



A music leaf turner comprising a supporting frame, pivotally mounted leaf engaging arms yieldably held in a set position, a pivotally mounted catch provided with arms engaging fingers positioned out of alinement, means for yieldably holding said catch with one of said fingers engaging one of said arms and with the second finger positioned upon the opposite side of the arm and in front of an adjacent arm, and means for moving said catch to bring the second finger into a position to hold the second mentioned arm in a set position and the first finger in a position to release the first mentioned arm, said catch when returning to its normal position permitting the second arm to move into engagement with the first mentioned finger.

1,173,625. FEED MECHANISM FOR MIXING-MILLS. PARK E. WELTON, Cuyahoga Falls, Ohio, assignor to Katharine B. Welton, Cuyahoga Falls, Ohio. Filed Nov. 4, 1914. Serial No. 870,293. (Cl. 18—2.)

1. In combination with the mixing rolls of a mixing mill, of an endless feed apron, three rolls over which said apron runs,—two of said rolls being located in planes below the mixing rolls, two arms which are pivoted at their lower ends and which, when in operative positions, extend therefrom upward adjacent to one of the mixing rolls, a member mounted on each of said arms and slidable up and down thereon, there being an inclosed space between a part of each arm and said slidable member thereon, and means for delivering an elastic pressure fluid into said space,—the third apron roll being extended between and mounted in bearings carried by the two slidable members.



2. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three rolls over which said apron runs,—two of said rolls being located in planes below the mixing rolls, two arms pivoted at their lower ends and extending upward alongside of one of the mixing rolls, each of said arms being provided with a piston, a cylinder slidably mounted upon each piston and carrying bearings for the ends of the third apron roll, and means for delivering an elastic pressure fluid under pressure into each cylinder above the piston therein.

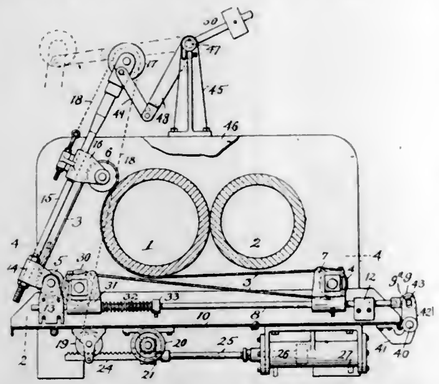
3. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three rolls over which said apron runs,—two of said rolls being located in planes below the mixing rolls, two arms pivoted at their lower ends and extending upward alongside of one of the mixing rolls, each of said arms being provided with a piston, a cylinder slidably mounted upon each piston and carrying bearings for the ends of the third apron roll, each of said arms having a longitudinal duct which at its upper end communicates with the space within the cylinder and above the piston, and feed pipes in communication with the lower ends of said ducts.

4. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three rolls over which said apron runs,—two of said rolls being located in planes below the mixing rolls,—two arms pivoted at their lower ends and extending upward adjacent to one of the mixing rolls, bearing brackets carried by said two arms,—the third apron roll being extended between and mounted in said bearing brackets, an auxiliary endless apron, and rolls over which said apron runs, said rolls being so located that the upper leg of said supplemental apron is held in contact with the lower face of the lower leg of the feed apron.

5. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three rolls over which said apron runs, two of said rolls being located in planes below the mixing rolls, two arms pivoted at their lower ends and extending upward alongside of one of the mixing rolls, bearing brackets carried by said two arms,—the third apron roll being extended between and mounted in said bearing brackets, an auxiliary endless feed apron located below the feed apron first mentioned with its upper leg in contact with the lower leg of the first mentioned apron, and etxended at both ends beyond the lower leg of said first mentioned feed apron, and rolls over which said auxiliary apron runs.

[Claims 6 to 21 not printed in the Gazette.]

1,173,626. FEED MECHANISM FOR MIXING-MILLS. PARK E. WELTON, Cuyahoga Falls, Ohio, assignor to Katharine B. Welton, Cuyahoga Falls, Ohio. Filed Mar. 8, 1915. Serial No. 12,794. (Cl. 18—2.)



1. In combination with the mixing rolls of a mixing mill, three apron rolls, viz., two rolls which are located in planes below the mixing rolls, and one roll which is located in a higher plane adjacent to one side of the apron driving mixing roll, fixed bearings for that one of the low apron rolls which is adjacent to the elevated mixing roll, movable bearings for the other two apron rolls, a pressure roll mounted in movable bearings adjacent to the fixed apron roll, an endless feed apron which goes around and contacts with the three apron rolls and passes between the fixed apron roll and said pressure roll, and means for yieldingly acting to move both of the movable apron rolls in the apron tightening direction, and to move the pressure roll toward the fixed apron roll for the purpose of clamping the apron between them.

2. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three apron rolls over which said apron runs, viz., two rolls which are located in planes below the mixing roll and one roll which is mounted in a higher plane and adjacent to the side of the apron driving mixing roll, two pivoted arms which extend upward at an angle toward the apron-driving mixing roll, bearing brackets for the elevated apron roll which are slidably mounted upon said pivoted arms, means for applying yielding pressure to said bearing brackets to move them upward on said arms, and means which, when either of said swinging arms is caused to turn about its pivotal axis, will compel the other of said swinging arms to swing about its pivotal axis at the same time in the same direction and at an equal distance.

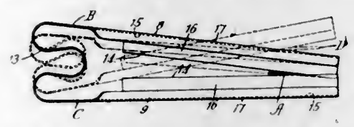
3. In combination with the mixing rolls of a mixing mill, three apron rolls over which said apron runs, viz., two rolls which are located in planes below the mixing roll and one roll which is mounted in a higher plane and adjacent to the side of the apron driving mixing roll, two pivoted arms which extend upward at an angle toward the apron driving mixing roll, bearing brackets for the elevated apron roll which are slidably mounted upon said pivoted arm, means for applying yielding pressure to said bearing brackets to move them upward on said arms, a rock shaft, two arms fixed thereto, and two links which respectively connect said arms and said swinging arms.

4. In combination with the mixing rolls of a mixing mill, an endless feed apron therefor, three apron rolls over which said apron runs, viz., two rolls which are located in planes below the mixing roll and one roll which is mounted in a higher plane and adjacent to the side of the apron driving mixing roll, two pivoted arms which extend upward at an angle toward the apron driving mixing roll, bearing brackets for the elevated apron roll which are slidably mounted upon said pivoted arm, means for applying yielding pressure to said bearing brackets to move them upward on said arms, a rock shaft, two arms fixed thereto, and two links which respectively connect said arms and said swinging arms, and a weighted arm fixed to said rock shaft and acting to turn the same in the direction which will cause the swinging arms to swing away from the mixing rolls.

5. In combination with the mixing rolls of a mixing mill, three apron rolls, viz., two rolls which are located in planes below the mixing roll, and one roll which is mounted in a higher plane and adjacent to the side of the apron-driving mixing rolls, a pressure roll located adjacent and close to that one of the low mixing rolls which is substantially below the elevated apron roll, movable bearings in which said pressure roll is mounted, springs acting on said bearings to move them toward the adjacent apron roll, and an endless feed apron which passes over the three apron rolls and between the pressure roll and the adjacent apron roll and is adapted to be clamped between these two rolls as the pressure roll is moved by said springs.

[Claims 6 to 8 not printed in the Gazette.]

1,173,627. SHARPENING DEVICE FOR KNIVES AND THE LIKE. WILLIAM H. WHITCOMB, Newton, Mass. Filed Nov. 13, 1914. Serial No. 872,028. (Cl. 51—7.)



1. A knife sharpener comprising coöperating sharpening members, the adjacent faces of said members being roughened, and resilient means arranged to connect said members together and adapted to permit said members to be moved in parallel relation toward and from each other.

2. A knife sharpener comprising coöperating sharpening members, and means connecting said members together adapted to permit the connected portions of said members to be moved toward and from each other, said means also being adapted to permit a pivotal movement between said members.

3. A knife sharpener comprising a plurality of sets of parallelly disposed members having roughened adjacent surfaces, resilient means connecting said sets of members together and adapted to permit said sets to be yieldingly moved toward and from each other, said resilient means also being adapted to permit said sets to occupy varying angular positions relatively to each other.

4. A knife sharpener comprising parallelly disposed members, a sinuously formed spring interposed between and connecting said members together, and sections of sharpening material secured to the adjacent faces of said parallel members.

5. A knife sharpener comprising parallelly disposed members formed from sheet metal, a sinuously formed spring integral with and connecting said members together and adapted to permit said members to be yieldingly moved in parallel relation toward and from each other, said spring also permitting said members to occupy varying angular positions relatively to each other, and means on said members adapted to sharpen a knife.

[Claims 6 to 8 not printed in the Gazette.]

1,173,628. PAINT AND VARNISH REMOVER. JOHN M. WILSON, Montclair, N. J., and CHARLES N. FORREST, Brooklyn, N. Y., assignors, by mesne assignments, to Wilson Remover Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 20, 1906. Serial No. 348,808. (Cl. 87—5.)

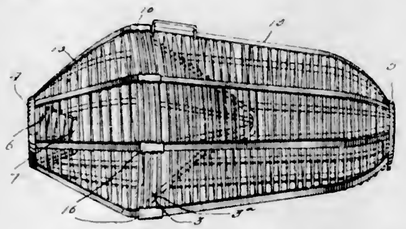
1. A liquid paint and varnish remover, containing a solvent of wax, other than carbon-tetrachlorid, an active solvent of dried films of paint and varnish, a thickening agent comprising a compound of cellulose, wax, and sufficient carbon-tetrachlorid to render the vapors evolved from the said mixture, non-combustible, said mixture being capable of yielding a soft, yet tenacious, impervious and substantially non-adhesive film, upon the superficial evaporation of the solvent therefrom, substantially as described.

2. A liquid paint and varnish remover, containing turpentine, substantially free from rosin, acetone, wax, and sufficient carbon-tetrachlorid to render the vapors evolved from said mixture, non-combustible, substantially as described.

3. A liquid paint and varnish remover, comprising a clear solution of collodion and wax in a mixture of a wax-solvent and a solvent of dried films of paint and varnish which is not a solvent of wax, substantially as described.

4. A liquid paint and varnish remover, comprising a clear solution of two and one-half ounces of wax, two and one-half ounces of collodion solution, one quart of carbon-tetrachlorid, one quart of an active solvent of dried films of paint and varnish which is not a solvent of wax, and two quarts of a wax-solvent other than carbon-tetrachlorid, substantially as described.

1,173,629. RAT-TRAP. WILLIAM W. WORCESTER, Canton, Ohio. Filed Sept. 5, 1912. Serial No. 718,617. (Cl. 43—24.)



1. A rat trap composed of two tapered cage-sections and a conical partition-section having the corresponding rim portions of their larger ends joined together.

2. A rat trap composed of two tapered cage-sections and a conical partition-section, the several sections having tongues on their larger end rims joining them together.

3. A rat trap composed of two tapered cage-sections and a conical partition-section having the corresponding rim portions of their larger end joined together, one of the cage-sections having a conical vestibule therein.

4. A rat trap composed of two tapered cage-sections and a conical partition-section, there being tongues on the rim of the partition-section engaging the rim portion of one cage-section, and there being coinciding tongues on the rims of the cage-sections joined together.

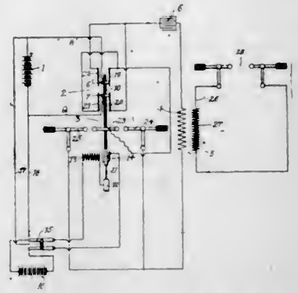
5. A rat trap composed of two tapered cage-sections and a conical partition section, there being tongues on the rim of the partition-section engaging the rim portion of one cage-section, and there being coinciding tongues on the cage-sections, with means for securing the coinciding tongues together.

[Claims 6 to 9 not printed in the Gazette.]

1,173,630. METHOD AND MEANS FOR THE PRODUCTION AND CONTROL OF CURRENT IMPULSES. CLARENCE I. ZIMMERMAN, deceased, Madison, Wis., by James G. Zimmerman, special administrator, Milwaukee, Wis. Filed May 17, 1915. Serial No. 28,554. (Cl. 250—36.)

1. The method of causing a flow of current through a load device which consists in connecting a source of current to a condenser through said load device, then breaking said closed circuit connection, then reconnecting said circuit, such that the condenser will be discharged and recharged in sequence by a single impulse of current flow.

2. The method of causing a flow of current through a load device which consists in connecting a source of current to a condenser through said load device, then breaking said connection and reëstablishing the connection in such manner that the condenser will be discharged and recharged through said load device by a single impulse of current flow without further interruption of said circuit.



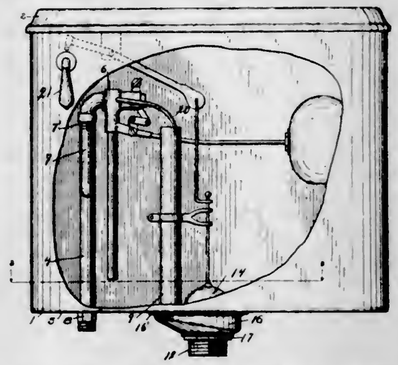
3. The method of causing a flow of current through a load device which consists in connecting a source of current to a condenser through said load device, then breaking said connection and reëstablishing the connection in such manner that the condenser will be discharged and recharged through said load device by a single impulse of current flow without further interruption of the circuit, and then breaking said circuit.

4. The method of causing a flow of current through a load device which consists in connecting a source of current to a condenser through said load device, then breaking said connection and reëstablishing the connection in such manner that the polarity of the condenser will be reversed at the moment of connection with respect to said source of current, whereby the condenser will be discharged and recharged through said load device.

5. The method of causing a flow of current through a load device which consists in connecting a source of current to a condenser through said load device, then breaking said connection and reëstablishing the connection in such manner that the polarity of the source of current with respect to the condenser will be reversed at the moment of connection, such that the condenser will be discharged and recharged through said load device.

[Claims 6 to 32 not printed in the Gazette.]

1,173,631. CLOSET-TANK AND CONNECTIONS. CARL H. ZWERMANN, Kalamazoo, Mich. Filed Aug. 31, 1911. Serial No. 646,972. (Cl. 4—5.)

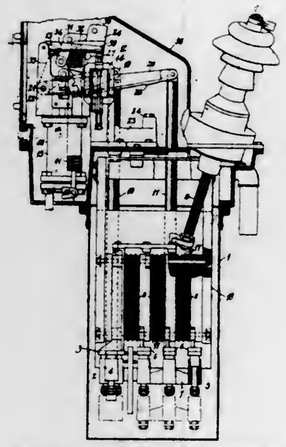


1. In a closet tank and connections, the combination of a tank of metal with an integral bottom, a down-

wardly struck flange from the bottom of said tank, an integral overflow pipe secured by welded joint to the bottom portion of said flange, extending up within the tank, an open bottomed cup portion embracing the said downwardly projecting flange portion and secured to the bottom by spot weld, an outlet coupling flanged at its upper end with a valve seat in its upper end and with apertures below the bottom of the tank within the cup, and suitable screw connections and gasket for securing the said coupling to the tank, coacting substantially as described and for the purpose specified.

2. In a closet tank and connections, the combination of a tank of sheet metal, a downwardly struck flange at the bottom of said tank, an overflow pipe secured to the bottom of said flange disposed within the tank, an open bottomed cup embracing the said downwardly-projecting flange portion and suitably welded thereto, and an outlet coupling with a valve seat in its upper end with threaded nut beneath the cup, for the purpose specified.

1,173,632. CIRCUIT-INTERRUPTER. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 28, 1911. Serial No. 635,910. (Cl. 175—282.)



1. In a circuit interrupter, the combination with a plurality of stationary contact terminals and a plurality of coöperating switch members adapted to make engagement therewith, of a bell-crank lever having arms respectively disposed in substantially horizontal and vertical planes, and means for connecting the arms to the switch members.

2. In a circuit interrupter, the combination with a main and an auxiliary interrupting means, of a pivotally mounted bell-crank lever having arms respectively disposed in substantially horizontal and vertical planes, and means for connecting the said arms to the interrupting means whereby the movement of the bell-crank lever causes the sequential operation of the interrupting means.

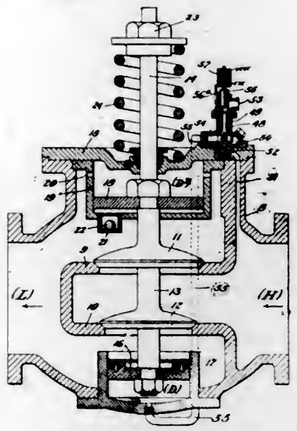
3. In a circuit interrupter, the combination with a main and an auxiliary interrupting means, of a pivotally mounted bell-crank lever having arms respectively disposed in substantially horizontal and vertical planes, and links for connecting the said arms to the interrupting means whereby movement of the bell-crank lever causes sequential operation of the interrupting means.

4. In a circuit interrupter, the combination with a main and an auxiliary interrupting means, of a bell-crank lever having two arms disposed substantially at right angles, means for operatively connecting the main and the auxiliary interrupting means respective to the arms whereby movement of the bell-crank lever causes the interrupting means to operate in sequence.

5. In a circuit interrupter, the combination with a plurality of main stationary contact terminals, a switch member to coöperate therewith, a plurality of auxiliary contact terminals, a switch member to coöperate therewith, and sections of resistance connected in series circuit with said auxiliary terminals and switch member and in multiple to said main terminals and switch member, of a bell-crank lever having two arms disposed substantially at right angles to each other, said arms being positively connected to said switch members for actuating the auxiliary switch member subsequent to the main switch member.

[Claims 6 to 12 not printed in the Gazette.]

1,173,633. PRESSURE-REGULATING VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed Feb. 1, 1911. Serial No. 606,057. (Cl. 50—10.)



1. A pressure regulating valve comprising a casing, a valve therein, the valve stem carrying the piston of a dashpot, connections to balance the valve and dashpot under line pressure in an open condition, including a connection to the line pressure adapted to depress the piston and close the valve upon raising the line pressure, and a check valve in said dashpot whereby to allow the piston to rise more freely than it falls by entrapping fluid in falling, substantially as described.

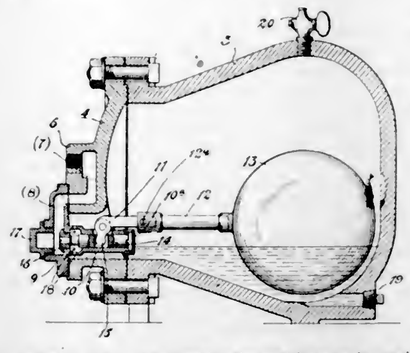
2. A fluid pressure regulator comprising a valve casing having a valve seat and two cylinders formed therein, a reducing valve coöperating with said seat and having a stem, two pistons mounted on said stem and working in said cylinders to cushion the opening and closing movements of the valve, and means coöperating with one of said pistons to confine its cushioning effect to the closing movement of the valve.

3. A pressure regulating valve comprising a main valve having two seats of different size, a dashpot including a piston on the valve stem and provided with a check valve therein, means to regulate the throttling pressure and means operated from without the valve to prevent the automatic throttling operation in emergency.

4. A pressure regulating valve having a retarding device to prevent sudden closing and means to interrupt the normal operation of said device including electrical devices operable from a distance, substantially as described.

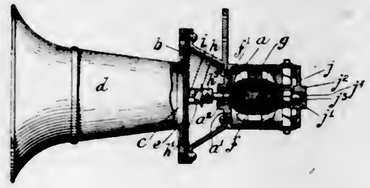
5. A pressure regulating valve having a dash-pot to prevent sudden closing, an auxiliary piston to operate the valve by manipulating the pressure underneath the same, and an electrically operated pilot valve to introduce pressure from the high pressure side under said piston, substantially as described.

1,173,634. STEAM-TRAP. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed Sept. 16, 1914. Serial No. 862,008. (Cl. 137—103.)



In a steam trap, the combination with a main casing, and a cap therefor having an opening, and a separate water outlet, of a supplementary cap closing said opening and provided with a passage connecting said opening with the separate water outlet, a perforated screw plug interposed in said passage and forming a valve seat, an inwardly projecting casing integral with said supplementary cap and having ports communicating with the main casing, a slide valve in said integral cylinder, and a float in the main casing operating said slide valve, substantially as described.

1,173,635. MECHANICAL HORN. OSCAR C. ARLITZ, New York, N. Y., assignor to Lovell-McConnell Manufacturing Company, a Corporation of Delaware. Filed Mar. 3, 1911. Serial No. 611,963. (Cl. 116—1.)



1. A mechanical horn embodying therein a diaphragm, an impact member carried thereby, a motor, the shaft of which is at an angle to the diaphragm and adapted to have axial movement toward and from the diaphragm, a striker member carried by said shaft and adapted to engage said impact member, means normally imparting a thrust to said shaft toward said diaphragm comprising a movable thrust bearing acting upon said shaft, a housing inclosing said bearing, an adjustment member movable in said housing and accessible exteriorly of the horn, and a spring interposed between said bearing and said adjustment member whereby the force of impact may be regulated and the effective displacement of said striker member upon the reflex action of said diaphragm may be controlled while the horn is running.

2. A mechanical horn, embodying therein a diaphragm, an electrical motor, and means for applying the power of said motor to vibrate said diaphragm, comprising an armature shaft element for said motor perpendicular to said diaphragm at its center, a diaphragm actuating element carried by said shaft, and a resilient member acting upon said shaft to normally thrust it toward said diaphragm, whereby said diaphragm actuating element is always held in engagement with said diaphragm, while being capable of yielding under the reflex action thereof.

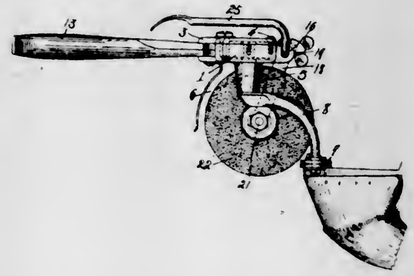
3. A mechanical horn, embodying therein a diaphragm, and mechanical impact means for agitating the same, including a high speed driving shaft, disposed at an angle to the diaphragm, an impact member carried by said shaft, and a resilient member acting upon said shaft to normally thrust it toward said diaphragm whereby said impact member is always held in engagement with said diaphragm, while being capable of yielding under the reflex action thereof.

4. A mechanical horn, embodying therein a diaphragm, and mechanical impact means for agitating the same, including a high speed driving shaft disposed in alinement with the axis of the diaphragm, an impact member carried by said shaft, and a resilient member acting upon said shaft to normally thrust it toward said diaphragm whereby said impact member is always held in engagement with said diaphragm, while being capable of yielding under the reflex action thereof.

5. A mechanical horn, embodying therein a diaphragm, and mechanical impact means for agitating the same, including a rigid high speed rotary driving shaft, an impact member carried thereby, and a resilient member acting upon said shaft to normally thrust it toward said diaphragm whereby said impact member is always held in engagement with said diaphragm, while being capable of yielding under the reflex action thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,173,636. HORSESHOE-CALK-SHARPENING MACHINE. GEORGE ARNOLD, Jr., Cleveland, Ohio, assignor to Alexander Arnold, Toledo, Ohio. Filed May 21, 1915. Serial No. 29,679. (Cl. 51—12.)



1. In a machine of the class described, a frame, work clamping means and a grinding wheel each carried by said frame, and means operable both to impart work clamping movements to said clamping means and to move the grinding wheel relative to the clamped work.

2. In a machine of the class described, a frame, work clamping means and a grinding wheel each carried by said frame, and means connected to said frame and operable to impart work clamping movements to said clamping means and to move the clamping means as a unit relative to the frame and grinding wheel.

3. In a machine of the class described, a frame, work clamping means and a grinding wheel carried by said frame, means connected to said frame and to said clamping means and operable to relatively move the clamping parts of said means to grip or release a work piece and also to impart relative movements to the work clamping means and frame when the former is in clamping engagement with a work piece.

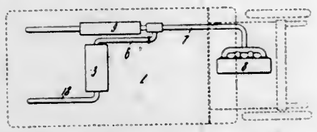
4. In a machine of the class described, a frame, work clamping means and a grinding wheel carried by said frame, said clamping means having relatively movable work clamping parts, and control means operable both to impart work clamping and releasing movements to said work clamping means parts and to swing the clamping means as a unit relative to the frame and grinding wheel.

5. In a machine of the class described, a frame, a work clamping means and a grinding wheel carried by said frame for swinging movements in intersecting planes, and means operable to control both the work clamping

and releasing movements of said clamping means and the swinging movements thereof as a unit relative to the frame.

[Claims 6 to 40 not printed in the Gazette.]

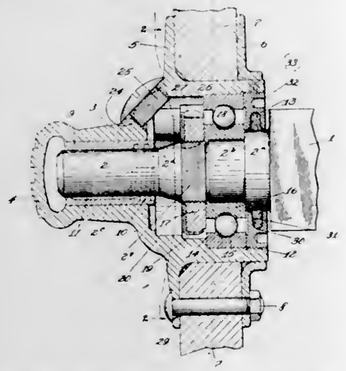
1,173,637. AUTOMOBILE-HEATER. REGINALD A. BAILEY, New Castle, Pa. Filed Nov. 26, 1913. Serial No. 803,216. (Cl. 237—21.)



1. An automobile heater comprising a hollow gas chamber, an air chamber surrounding the gas chamber having an open top side, a hinged cover plate for said open top side having perforations therein opening into the interior of the automobile, a transversely extending slot in said cover plate, means for conducting heated waste gases from the automobile engine through the gas chamber, a valve for controlling the flow of heated gases into the gas chamber having a slotted operating lever, and a pin slidingly fastened in the slot of the cover plate and projecting into the slot in said valve lever to operatively connect the valve with the exterior of the air chamber.

2. An automobile heater comprising a hollow gas chamber, an air chamber surrounding the gas chamber having an open end in the plane of the floor of the automobile, a hinged cover plate closing the open upper end of the air chamber having a series of perforations therein, a cleaning opening in the bottom of said air chamber, a sliding cover normally closing said cleaning opening, straps extending upwardly within the air chamber having hooked upper ends, for opening and closing the cleaning opening from the interior of the automobile when the hinged cover plate is open.

1,173,638. HUB FOR VEHICLE-WHEELS. JOHN H. BANINGER, Detroit, Mich. Filed June 15, 1914. Serial No. 845,065. (Cl. 64—36.)



1. A hub for vehicle wheels comprising, in combination, a hollow casing that is closed at its outer end and having a flange intermediate its ends to which the spokes of a wheel may be attached, a bushing within the outer end of the casing, a ball bearing within the casing adjacent its inner end, a nut intermediate the bushing and the bearing, and a spindle having a portion for insertion into the aforesaid bushing, a portion whereon the ball bearing mounted and a threaded portion for the reception of the aforesaid nut.

2. A hub for vehicle wheels comprising, in combination, a hollow casing that is closed at its outer end and having a flange intermediate its ends to which the spokes of a wheel may be attached, a bushing within the outer end of the casing, a ball bearing within the casing adjacent its inner end, a nut intermediate the bushing and the bearing, a spindle having a portion for insertion into the aforesaid bushing, a portion whereon the ball bearing is mounted, and a threaded portion for the reception of the aforesaid nut, and means for locking said nut against rotation with respect to the spindle.

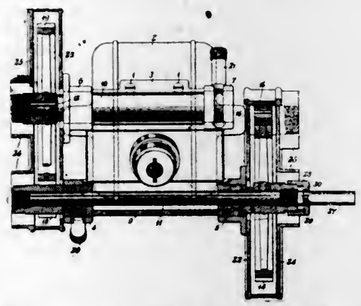
3. A hub for vehicle wheels comprising, in combination, a hollow casing that is closed at its outer end and open at its inner end, and having a flange intermediate said ends to which may be attached the spokes of a wheel, a bushing within the outer end of the casing, a ball bearing within the casing adjacent its inner end, a spindle having a portion for insertion into said bushing and a portion whereon the ball bearing is mounted, the spindle being threaded intermediate said portions, a nut for application to the threaded portion, and means whereby the nut and the casing may be temporarily locked together so that the turning of the casing will rotate the nut.

4. A hub for vehicle wheels comprising, in combination, a hollow casing that is closed at its outer end and open at its inner end and having a flange intermediate said ends to which may be attached the spokes of a wheel, a bushing within the outer end of the casing, a ball bearing within the casing adjacent its inner end, means for retaining the outer raceway of the ball bearing in position, a spindle having a portion for insertion into said bushing and a portion whereon the ball bearing is mounted, the spindle being threaded intermediate said portions, a nut for application to the threaded portion, the nut and the casing having recesses that are adapted to be brought into register for the reception of a locking pin, whereby the turning of the casing may effect the screwing of the nut upon the threaded portion, and means for locking the nut against rotation with respect to the spindle after the same has been threaded thereon.

5. A hub for vehicle wheels comprising, in combination, a hollow casing that is closed at its outer end and open at its inner end, and having an internal shoulder that is spaced from its open end, a bushing within the outer end of the hub, a ball bearing within the hub adjacent its inner end, means for clamping the outer raceway of the ball bearing against the aforesaid shoulder, a spindle that projects into the hub and having a smooth portion that has a bearing in the aforesaid bushing and a portion whereon the ball bearing is mounted, the spindle being threaded adjacent the last mentioned portion and tapered between the threaded portion and the first mentioned portion, and a nut for application to the threaded portion of the spindle.

[Claims 6 to 14 not printed in the Gazette.]

1,173,639. SPEED-CHANGING GEARING. WILFRED BARNES, Jr., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 21, 1911. Serial No. 609,950. (Cl. 74—7.)



1. The combination with a shaft and gear member thereon, of a gear casing having a guard sleeve for the hub of said gear member, and a detachable shaft extension that projects through and beyond the guard sleeve.

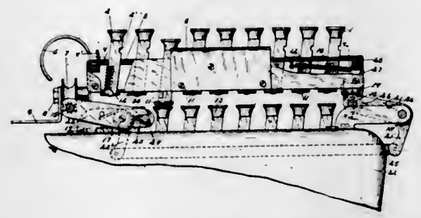
2. The combination with a shaft and a gear member thereon, of a gear casing having a guard sleeve for the shaft end, and a detachable shaft extension that projects through and beyond the guard sleeve.

3. The combination with a shaft, and a gear mounted thereon the hub of which extends beyond the end of the shaft and is externally and internally threaded in opposite directions, of a shaft extension having an intermediate collar and one end screwed into the said sleeve as far as the collar, and a nut screwed upon the sleeve and engaging the outer end faces of the collar on the shaft extension.

4. The combination with a shaft, and a gear mounted thereon the hub of which extends beyond the end of the shaft and is externally and internally threaded, of a shaft extension having an intermediate collar and one end screwed into the said sleeve as far as the collar, and a nut screwed upon the sleeve and engaging the outer end faces of the collar on the shaft extension.

5. The combination with a plurality of parallel shafts and separable gear connections between them, of gear casings having guard sleeves for the ends of said shafts, and a detachable shaft extension adapted to be attached to any one of the guarded shaft ends.

1,173,640. AUXILIARY KEYBOARD FOR CALCULATING-MACHINES. GLENN J. BARRETT, Grand Rapids, Mich., assignor to Barrett Adding Machine Co., Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 14, 1912. Serial No. 725,593. (Cl. 235—60.)



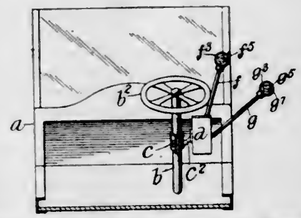
1. In an auxiliary keyboard for calculating machines the combination of depressible latchable key-stems; springs for returning same to normal position; a releasing slide adapted to abut said keystems and unlatch same; a spring for returning said releasing slide to normal position; contact plates carried by said keystems; a suitable tiltable frame comprising stayrod and guide plates for carrying said keystems; suitable mounting for said tiltable frame comprising two flanged wheels at one end and a single wheel at the other; a pointer carried by said tiltable frame; lifting handles attached to said tiltable frame; suitable depressible ways for said mounting wheels comprising two swinging frames, each consisting of a bearing rod and end pieces, one of said rods having positioning notches or grooves; suitable supports for said swinging frames; pivoted parallel ruler connection between said swinging frames and means for maintaining said swinging frames in normal position, substantially as described.

2. In an auxiliary keyboard for calculating machines, the combination of depressible latchable keystems; springs for returning same to normal position; a releasing slide adapted to release said keystems when in latched position; a suitable tiltable frame for carrying said keystems; suitable mountings for said tiltable frame, comprising flanged rollers; a pointer carried by said tiltable frame; suitable depressible ways for said mountings for said tiltable frame, consisting of swinging frames having a synchronous movement; means on one of said swinging frames for laterally positioning said flanged rollers; and a spring for maintaining said swinging frames in normal position, substantially as described.

3. In an auxiliary keyboard for calculating machines, the combination of depressible latchable keystems; means for unlatching said keystems; a tiltable frame for carrying said keystems; a pointer mounted on said tiltable frame; suitable bearings carried by each end of said tiltable frame; depressible ways for said bearings, adapted to move in synchrony; means for pivotally engaging the rear end of said tiltable frame with one of said depressible ways; means for laterally positioning said bearings in said ways; a spring for holding said depressible ways in normal position; and a lift for elevating the forward portion of said tiltable frame, substantially as described.

4. In an auxiliary keyboard for an adding machine, the combination of depressible, latchable keystems; means for unlatching said keystems; a tiltable frame for carrying said keystems; suitable bearings at each end of said tiltable frame; depressible ways for said bearings; pivotal connection between one end of said tiltable frame and one of said depressible ways; a spring for maintaining said depressible ways in normal position; and means for positioning said bearings for said tiltable frame on said ways, substantially as described.

1,173,641. TURNING-SIGNAL FOR AUTOMOBILES. JOHN J. BARRETT, Maspeth, N. Y. Filed Feb. 18, 1915. Serial No. 9,172. (Cl. 177—337.)



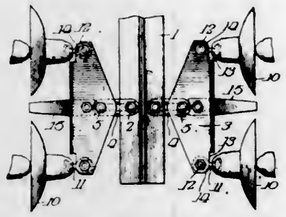
1. A turning signal device for power driven vehicles comprising two arms pivoted in a box or casing supported adjacent to one side of the vehicle, said box or casing being adapted to support two batteries and being provided with two contact devices, said arms being adapted to swing into approximately vertical and horizontal positions and into engagement with said contact devices, said arms being tubular in form and provided at their outer ends with differently colored hollow balls having similarly colored transparent or translucent panels in one side thereof and in which are placed light bulbs which are secured in the ends of said tubular arms, circuit wires connected with the batteries and passing through said tubular arms to said bulbs and back to said contact devices, and from the batteries to the pivot of said arms whereby when said arms are in engagement with said contact devices said bulbs will be illuminated.

2. A turning signal device for vehicles comprising two arms pivotally supported adjacent to one side of the vehicle and adapted to be swung in a transverse vertical plane into different positions, said arms being provided at their outer ends with differently colored hollow members having similarly colored transparent or translucent panels in one side thereof and within which are placed light bulbs, means whereby in the horizontal position of said arms said bulbs will be illuminated, and means for supporting said arms at an angle of approximately thirty to forty degrees from a horizontal position.

1,173,642. EQUALIZER-YOKE. WALLACE E. BELCHER, Washington, D. C. Filed Mar. 13, 1915. Serial No. 14,146. (Cl. 173—318.)

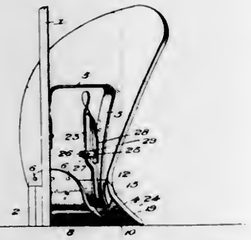
1. An equalizer yoke for insulators, comprising a single steel plate bent upon itself along a median line to form a truss, the bent portion of said plate forming the compression member of said truss, means for pivotally supporting said truss adjacent its center, means for connecting insulators thereto adjacent its ends, and a discharge horn secured to said plate.

2. A strain insulator system comprising a supporting arm, a plurality of yokes, each comprising a single plate of ductile ferrous metal bent upon itself, means for pivotally supporting said yokes on said arm, a transmission line, a plurality of yokes of similar construction, means for pivotally connecting said last-mentioned yokes to said transmission line, and strings of insulators supported between the oppositely disposed ends of said first and last-mentioned yokes, said pivotal connections permitting freedom of rotative movement of the relative parts of said system.



3. A strain insulator system comprising a supporting arm, a pair of yokes, each couprising a single steel plate bent upon itself to form a truss, means for pivotally supporting said yokes on said arm, a transmission line, a pair of yokes of similar construction, means for pivotally connecting said last-mentioned yokes to said transmission line, and strings of strain insulators supported between the oppositely disposed ends of said first and last-mentioned yokes, said pivotal connections permitting freedom of rotative movement of the relative parts of said system.

1,173,643. PLOW. EDGAR W. BENSON, Richmond, Cal., assignor of one-half to George X. Fleming, Sacramento, Cal. Filed Sept. 18, 1915. Serial No. 51,393. (Cl. 97—22.)



1. In a plow, the combination with a mold-board and an extension thereon, said extension and the lower edge of the mold-board having over-hanging portions which, with the extension, define a channel whose walls converge, of a detachable point or share having a rib of wedge form adapted to enter said channel, and means for locking the detachable point or share in position.

2. In a plow, the combination with a mold-board and an extension thereon, said extension and the lower edge of the mold-board having over-hanging portions which, with the extension, define a channel whose walls converge, of a detachable point or share having a rib of wedge form adapted to enter said channel, said point or share having an under-cut portion extending in a general up and down direction and adapted to engage a corresponding portion on the land side of the plow.

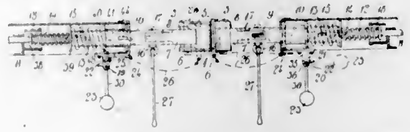
3. In a plow, the combination with the mold-board and land side thereof, of an extension connected to the mold-board, said land side having an under-cut portion extending in a general up and down direction, a detachable point or share having a land side portion provided with a part adapted to overlap and engage the up and down portion of the land slide, said share being detachably engaged with the extension, and means for locking the share in position.

4. In a plow, the combination with a mold-board and a land side, of an extension from the lower part of the mold-board downwardly, said extension having a channel provided with under-cut walls which converge from the point end of the plow rearwardly, said land side being provided with a vertically extending beveled portion, a detachable point or share provided with a vertically extending beveled portion adapted to overlap the corresponding portion on the land side, and also having a longitudinally extending tapered rib provided with walls adapted to fit the under-cut walls of the channel, and means for locking the point in position.

5. In a plow, the combination with a mold-board and a land slide, of an extension from the lower part of the mold-board downwardly, said extension having a channel provided with under-cut walls which converge from the point end of the plow rearwardly, said land side being provided with a vertically extending beveled portion, a detachable point or share provided with a vertically extending beveled portion adapted to overlap the corresponding portion on the land side, and also having a longitudinally extending tapered rib provided with walls adapted to fit the under-cut walls of the channel, a brace secured to the bold-board, and a pivoted lever provided with a locking part adapted to extend through an opening in the brace to engage the detachable point.

[Claims 6 and 7 not printed in the Gazette.]

1,173,644. AUTOMATIC CAR-COUPLING. GUSTAF HENRIK FABIAN BERGLUND, Stockholm, Sweden, and HALDAN A. H. LINDENCRONA, deceased, by Mrs. Hulda Maria Ulrika Lindencrona, widow and heiress of said Haldan A. H. Lindencrona, deceased. Filed June 16, 1910. Serial No. 567,277. (Cl. 213—66.)



1. In an automatic car-coupling, the combination of a supporting member provided with cam surfaces, a coupling hook rotatable around a vertical axis with respect to the car frame and provided with cam surfaces coacting with the cam surfaces on said supporting member to lift the hook when rotated from its normal position, a locking piece carried by said coupling hook and rotatable around a vertical axis with respect thereto, said hook having surfaces to lift said locking piece when rotated in a certain direction, and means for rotating the said locking piece, the coupling hook being provided with oblique surfaces for engaging corresponding surfaces of another coupling hook and with other surfaces to be engaged by the locking piece so as to permit the disengaging of two coupling hooks by rotating only one of the locking pieces.

2. In an automatic car-coupling, the combination of a supporting member provided with cam surfaces, a coupling hook rotatable around a vertical axis with respect to the car frame and provided with cam surfaces coacting with the cam surfaces on said supporting member to lift the hook when rotated from its normal position, a locking piece carried by said coupling hook and rotatable around a vertical axis with respect thereto, said hook having surfaces to lift said locking piece when rotated in a certain direction, and means for rotating said locking piece, said coupling hook having an abutting surface serving to check the relative movement of the said locking-piece with respect thereto so as to move both these parts together, after the coupling hook has been disengaged.

3. In an automatic car-coupling, the combination of a supporting member provided with cam surfaces, a coupling hook rotatable around a vertical axis with respect to the car frame and provided with cam surfaces coacting with the cam surfaces on said supporting member to lift the hook when rotated from its normal position, a locking piece carried by said coupling hook and rotatable around a vertical axis with respect thereto, said hook having surfaces to lift said locking piece when rotated in a certain direction, lever mechanism carried by the car, means for rotating said locking-piece comprising a flexible member connecting said piece to said lever mechanism, means for rotating said lever mechanism less than one revolution and thereby tightening said flexible member and means, operated by gravity, for completing the revolution when the coupling yields to the tension of said flexible member.

1,173,645. STOCKING-HOLDER. NELSON BLOUNT, New York, N. Y. Filed July 17, 1914. Serial No. 851,552. (Cl. 229—7.)



1. A container for stockings comprising a tubular body member made up of a plurality of sections secured together to permit folding of the same to a collapsed position, and a part of one of said sections formed to be received within the tubular cross section of said container to hold the sections distended to an open position.

2. A container for stockings comprising a tubular body member made up of a plurality of sections hinged and connected together to permit folding to a collapsed position, and a tongue cut from one of said sections to be bent inwardly to wedge within the tubular cross section of said container to hold the sections thereof distended in the open relation and to provide an outlet opening above the bottom thus formed for the container.

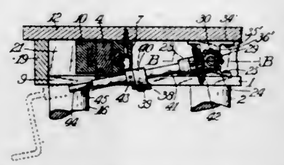
3. A container for stockings comprising a tubular body member made up of a plurality of sections hinged and connected together to be collapsed to a flat relation to rest one against the other, and a tongue cut from one of said sections to be of a configuration corresponding to the cross section of the tubular body member and to be folded from said section to wedge across and between the sections to hold the body members distended and to provide an outlet opening above the bottom thus provided for the container.

4. A container for stockings comprising four side members hingedly connected together at their edges to permit folding of the same to a collapsed and flat relation, and a tongue cut from one of the sides to be of a configuration corresponding to the cross section of the tubular body portion and said tongue arranged to be folded inwardly between the sides and hold the container in a distended relation and at the same time to form a bottom therefor.

5. A container for stockings comprising four rectangular side members connected hingedly at their edges to form a body portion which in the distended relation is rectangular in cross section, a rectangular tongue approximating the cross section of said tubular body portion cut from one of said sides to be bent inwardly between the sides to hold the same distended, and all of said parts so formed and arranged that as the tongue is bent inwardly a bottom is provided for the container and an outlet opening is formed thereabove.

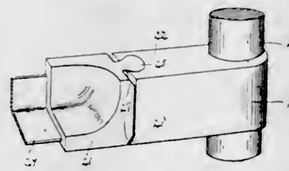
[Claim 6 not printed in the Gazette.]

1,173,646. EXTENSION-TABLE. WILBERT F. BLUE, Montezuma, Ind. Filed June 27, 1913. Serial No. 776,165. (Cl. 45—9.)



The herein-described improved appliance for an extension table of the character described, the appliance comprising a base plate adapted to be secured to the top of a central member of the table frame, said plate having a main journal box on its normal top portion and also an arm extending beyond the plane of one end of said box, the arm having a relatively angled journal box thereon that is inclined to the plane of the base of said plate and being at right angle to said main box, an operating-shaft rotatably mounted between its ends in the main journal box and having oppositely-pitched screw threads extending from its opposite ends respectively, two screw-threaded bosses on said oppositely-pitched screw threads respectively, the bosses having each a base adapted to be secured to the under side of the main top parts respectively of the table, a bevel pinion secured to the operating-shaft adjacent to said arm and said journal boxes, a driving-shaft rotatably mounted in said angled box, a bevel gear wheel secured to said driving-shaft in mesh with said pinion, and a journal box adjustably arranged on said driving-shaft and having a base adapted to be secured to said central table member.

1,173,647. BED-CORNER. HENRY J. CARMODY, Rome, N. Y. Filed June 22, 1914. Serial No. 846,504. (Cl. 5—55.)



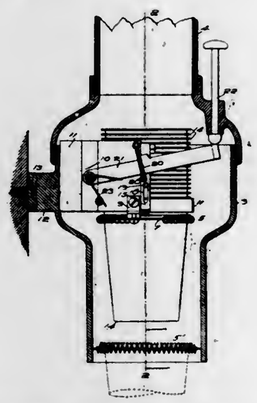
1. In a bed corner, a member secured to the corner post of a bed, a cylindrical recess having a constant diameter throughout its length in said member, a locking piece having beveled portions secured to the end of a side rail, a cylindrical shaped member integral with said locking piece, beveled supporting means on said first named member, said beveled portions on said locking piece adapted to abut against said means on said first named member, whereby to hold said locking piece in elevated position and the member and locking piece in close contact throughout their end areas.

2. In a bed corner, a frenching secured to the corner post of a bed, a cylindrical shaped recess in said frenching, said recess having a constant diameter throughout its length, a locking piece fastened to the end of a side rail, a cylindrical shaped tongue integral with said locking piece, beveled portions on said locking piece, and shoulders formed on said frenching, outside of and adjacent the lower end of said recess, said beveled portions adapted to about against said shoulders, whereby said locking piece may be held in elevated position.

3. In a bed corner, a frenching secured to the corner post of a bed, a cylindrical shaped recess having a given diameter throughout formed in said frenching, an opening from said recess, a locking piece fastened to the end of a side rail, a cylindrical shaped tongue formed upon said locking piece, beveled portions in said locking piece, and shoulders disposed outside of said recess and adjacent the lower end thereof, said beveled portions adapted to abut against said shoulders, whereby to hold said side rail in elevated position.

4. In a bed corner, a frenching secured to the corner post of a bed, a cylindrical shaped recess having a given diameter throughout its length formed in said frenching, an opening leading from said recess, a locking piece fastened to the end of a side rail, a cylindrical shaped tongue having a given diameter throughout its length formed integral with said locking piece, shoulders formed on said frenching, outside of said recess and adjacent the lower end thereof, and beveled portions formed in said locking piece adjacent the upper and lower ends of said tongue, said beveled portions adapted to abut against said shoulders, whereby to hold said side rail in elevated position.

1,173,648. DISPENSING-MACHINE. HENRY B. COOLEY, Kensington, Conn., assignor to The American Paper Goods Company, Kensington, Conn., a Corporation of New Jersey. Filed Mar. 2, 1915. Serial No. 11,552. (Cl. 211—8.)



1. A holder of the class described comprising two bowed members, and coiled springs surrounding the bowed members, the outer sides of the spring engaging the bowed members.

2. A holder of the class described comprising two bowed members, and coiled springs surrounding the bowed members, the outer sides of the spring engaging the bowed members, said springs being held against movement bodily.

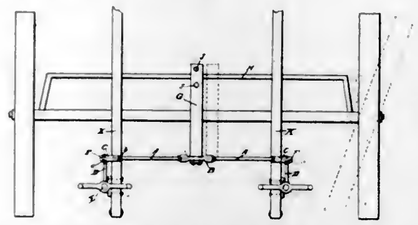
3. A holder of the class described comprising bowed members and outwardly extending lugs to which the bowed members are connected, and coiled springs surrounding the bowed members between the respective lugs.

4. A holder of the class described comprising bowed members and outwardly extending lugs to which the bowed members are connected, and coiled springs surrounding the bowed members between the respective lugs, the lugs being notched on their inner sides.

5. A dispensing machine comprising a holder for a stack of nested drinking cups, said holder having coiled spring means of approximately annular form to receive and hold the lowermost cup of the stack, and means for freeing the first cup from the said spring means, the latter when said first cup is free of said spring means automatically engaging the second cup of the stack to thereby hold the same.

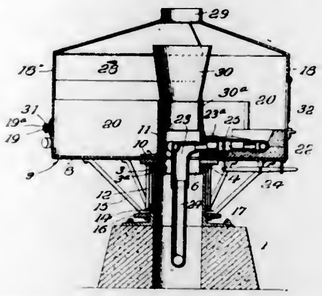
[Claims 6 to 12 not printed in the Gazette.]

1,173,649. DIRIGIBLE HEADLIGHTS. JOHN L. CROOKER, Boise, Idaho. Filed Apr. 13, 1914. Serial No. 831,558. (Cl. 240—62.)



In combination with the frame and steering rod of an automobile, a connecting rod having one end thereof secured to the steering rod, a center piece supported by the opposite end of the connecting rod, said center piece having a socket in each end thereof, main rods, one end of each main rod having an integral ball, said balls being positioned in the sockets of the center piece, end pieces connected to the main rods, lamp brackets supported on the frame, and means for connecting the end pieces to the lamp bracket, whereby movement of the steering rod produces a relative movement of the bracket.

1,173,650. FORGE. HENRY ARCH CROSS, Bicknell, Ind. Filed May 24, 1915. Serial No. 30,073. (Cl. 263—35.)



1. In combination, a hollow rigid post capable of serving as a smoke flue, a pan member rotatably supported thereby and including a plurality of fire boxes, an upright rigid blast pipe in the post, an additional and rotatable blast pipe rising from the rigid pipe, and branch pipes leading from the additional blast pipe into the several fire boxes.

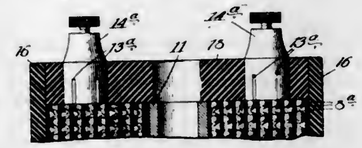
2. In combination, an upright hollow post, a pan member rotatably supported thereby and having an opening at its center, a tubular flue rising from the pan member and surrounding the opening therein, an upright rigid blast pipe disposed concentrically in the hollow post, an additional and rotatable blast pipe rising from the aforesaid pipe, branch pipes radiating from the upper end of the additional blast pipe, blow pipes confined in the pan member and into which the branch pipes discharge, and partitions radiating from the flue and dividing the pan member into a plurality of fire boxes, one blow pipe being disposed in each fire box.

3. In combination, an upright hollow post in which suction is to be created, a pan member supported by said post and having a central aperture opening into the same, an upright flue rising from the pan member and surrounding the aperture therein, a funnel-shaped entrance member disposed at the upper end of said flue, and a hood rising from the pan member and confining the flue and the entrance member therein.

4. In combination, a rotatable pan member, an upright flue member rising from the center thereof and in which suction is to be created, partitions radiating from the flue member and dividing the pan member into a plurality of fire boxes, and a hood rising from the pan member and disposed above the partitions and flue member.

5. In combination, an upright hollow post in which suction is to be created, a pan member rotatably supported thereby and having an aperture opening into the same, an upright flue rising from the pan member and surrounding the aperture therein, and a plurality of fire boxes disposed within the pan member and spaced around the flue therein.

1,173,651. STORAGE BATTERY. WALTER A. CROWDUS, Chicago, Ill., assignor to John P. Mentzer, Chicago, Ill. Filed Apr. 22, 1915. Serial No. 23,061. (Cl. 204—29.)



1. A storage-battery couple comprising metallic sheets and interposed separator-sheets of flexible, porous material, closely contacting with the active material, or material to be rendered active throughout the surfaces of the latter, the whole being wound into a spiral.

2. A storage-battery couple, comprising metallic sheets provided with active material, or material to be rendered active, porous absorbent separators interposed between said metallic sheets and closely contacting with said material throughout its surfaces, and a hollow core in the couple, communicating with said separators for supplying liquid to the battery and adapted, when the cell is being charged, to receive expelled electrolyte.

3. A storage-battery couple, comprising metallic sheets provided with active material, or material to be rendered active, porous absorbent separators interposed between said metallic sheets and closely contacting with said material throughout its surfaces, said metallic sheets and the porous absorbent separators interposed between the same being wound into a spiral, and a hollow core in the couple, communicating with said separators for supplying liquid to the battery and adapted, when the cell is being charged, to receive expelled electrolyte.

4. A storage-battery couple comprising metallic sheets each having an upper blank section with leads or terminals integral with and projecting at intervals from its edge, and interposed separator-sheets of flexible, porous material, said sheets being wound into a spiral and said leads being disposed on each metallic sheet to extend in paired radial alinement in the spiral.

5. A storage-battery couple comprising longitudinally corrugated metallic sheets, the corrugations forming pockets for the active material, or material to be rendered active, and interposed separator-sheets of flexible, porous material, the whole being wound into a spiral.

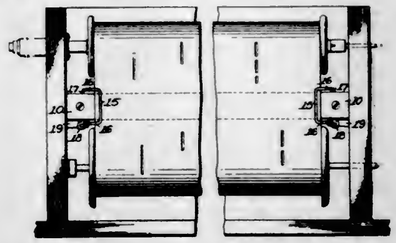
[Claims 6 to 10 not printed in the Gazette.]

1,173,652. ATTACHMENT FOR TRACKER-BARS. THOMAS DANQUARD, New York, N. Y., assignor to Auto Pneumatic Action Company, New York, N. Y., a Corporation of New York. Filed May 20, 1915. Serial No. 29,348. (Cl. 84—161.)

1. The combination with a tracker-bar, of means located at the end of the tracker-bar and mounted thereon for holding the edge of a note sheet closely against the tracker-bar while the note sheet passes over the same.

2. The combination with a tracker-bar having openings in position to come under the edge of the music sheet, of a clip mounted near the end thereof for holding the edge of the music sheet in close contact with the tracker-bar so as to prevent the accidental uncovering of said openings.

3. The combination with a tracker-bar, of yielding means transversely pivoted thereon for holding a music sheet against the surface of the tracker-bar.

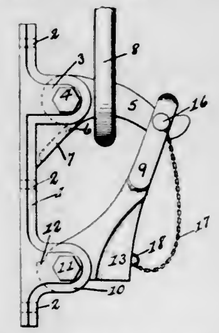


4. As an article of the class described, an attachment for a tracker-bar comprising a clip made of bent wire shaped substantially to fit the front of the tracker-bar and having two ends pivoted to the opposite sides of the tracker-bar, and a spring adapted to engage the clip and hold the clip either in operative or inoperative position with yielding pressure.

5. The combination with a tracker-bar, of a clip formed of a single piece of wire and having a pair of opposite ends pivoted in the sides of the tracker-bar, the main portion of the clip constituting a bar adapted to lie on the surface of a music sheet on the tracker-bar to hold the music sheet in position, said clip having an integral offset portion adjacent to one of the pivotal ends and extending beyond the same, and a spring in position to engage said offset portion when located on either side of its pivot for holding the clip in operative or inoperative position with a yielding pressure.

[Claim 6 not printed in the Gazette.]

1,173,653. AUTOMATIC RELEASING-HOOK. HENRY M. DAVIS, Portsmouth, Va. Filed Nov. 11, 1913. Serial No. 800,315. (Cl. 9—23.)



An automatic releasing hook consisting of a plate member adapted to be mounted in a substantially vertical position upon the end of a bolt, said plate member being formed with a cam groove thereon, a tongue pivotally mounted up the upper portion of said plate, means to regulate the downward movement of said tongue, said tongue being provided with a perforation transversely therethrough near the free end thereof, a keeper pivotally mounted in spaced apart relation beneath said tongue, said keeper formed with a ring member upon the free end thereof, said ring member provided with a perforation transversely therethrough, said ring member being adapted to engage with the free end of said tongue in locked position and the perforation through said ring member being adapted to register with the perforation through said tongue, a pin adapted to be inserted through said perforations, a cam formed upon the pivoted end of said keeper adapted to engage with the cam groove upon

said plate to regulate the upward movement of said keeper, and a weighted butt formed upon said keeper diametrically opposite the pivotal mounting thereof.

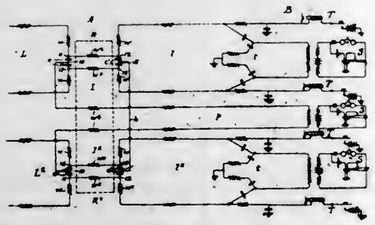
1,173,654. COMBINED CHAIR-SWING AND HAMMOCK. CHARLES B. EATON, Belfast, Me. Filed Feb. 13, 1915. Serial No. 8,026. (Cl. 155—35.)



1. The herein described combined swing chair and hammock comprising a frame, suspending and adjusting devices for said frame, an extension frame slidably connected to one end of the suspended frame and a bottom of flexible material attached at its ends to end members of said frames.

2. The herein described combined swing chair and hammock comprising a frame, suspending and adjusting devices for said frame, an extension frame slidably connected to one end of the suspended frame and a bottom of flexible material attached at its ends to end members of said frames, the first named frame also having a rung at its inner or lower end and said bottom having means to detachably secure the same to said rung.

1,173,655. PHANTOM CIRCUIT. FRANK H. FAY, Brooklyn, N. Y., THOMAS SHAW, Hackensack, N. J., and JAMES J. PILLIOD, Chicago, Ill., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed Oct. 7, 1914. Serial No. 865,442. (Cl. 179—15.)



1. In a telephone circuit comprising side circuits together furnishing a phantom circuit and physical extensions of said side circuits and phantom circuit, a phantom-forming device connecting each side circuit and its extension and from which the phantom extension is led, and reflection-reducing means furnishing direct current paths through the phantom-forming devices to connect the respective sections of the conductors of the side circuits.

2. In a telephone circuit comprising side circuits together furnishing a phantom circuit and physical extensions of said side circuits and phantom circuit, a phantom-forming device connecting each side circuit and its extension and from which the phantom extension is led, and an autotransformer furnishing direct current paths through the phantom-forming device to connect the respective sections of the conductors of the side circuits.

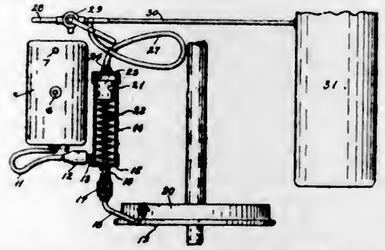
3. In a telephone circuit comprising side circuits together furnishing a phantom circuit and physical extensions of said side circuits and phantom circuit, a phantom-forming device connecting each side circuit and its extension and from which the phantom extension is led, and an autotransformer having windings in series with the side circuits and the extensions.

4. A phantom circuit comprising side circuits and extensions thereof, phantom-forming devices inductively associating the side circuits and their extensions, conductive connections between said side circuits and their extensions, and means associated with said conductive connections to prevent the transfer of crosstalk and noise currents between the phantom circuit and side circuit extensions.

5. In a telephone circuit comprising side circuits together furnishing a phantom circuit and physical extensions of said side circuits and phantom circuit, a phantom-forming device connecting each side circuit and its extension and from which the phantom extension is led, means furnishing direct current paths through the phantom-forming device to connect the respective sections of the conductors of the side circuits, and means associated with said connecting means for preventing disturbances in the circuit extensions resulting from the establishment of the direct current paths.

[Claims 6 to 21 not printed in the Gazette.]

1,173,656. LUBRICATING APPARATUS. ARCHIBALD FLANIGAN, Seattle, Wash. Filed Apr. 5, 1915. Serial No. 19,249. (Cl. 184—3.)

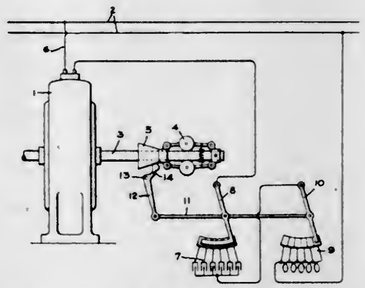


1. In a structure of the class described, the combination with a railway car, of a receptacle having an inlet passageway for air in one of its end portions and an inlet and a delivery outlet passageway for lubricants both at its other end portion and disposed on a truck frame of said railway car; a piston disposed within said receptacle and adapted to be movable between opposite end portions thereof; a helical compression spring disposed within said receptacle to extend between said piston and the delivery outlet end of said receptacle; an outlet check-valve connected to said delivery outlet passageway; a delivery nozzle connected with said outlet check-valve and disposed to adapt it to deposit a lubricant on to a desired part of said railway car; an inlet check-valve connected to said inlet passageway for lubricants; a container for lubricants; a conduit for lubricants connecting said container with said inlet check-valve; a valve-controlled conduit for compressed air connected with said inlet passageway of said receptacle, and a source of compressed air connected with said conduit.

2. In a structure of the class described, the combination with a railway car, of a receptacle having an inlet passageway for air in one of its end portions and an inlet and a delivery outlet passageway for lubricants both at its other end portion and disposed on a truck frame of said railway car; a piston disposed within said receptacle and adapted to be movable between opposite end portions thereof; a helical compression spring disposed within said receptacle to extend between said piston and the delivery

outlet end of said receptacle; an outlet check-valve connected to said delivery outlet passageway; a delivery nozzle connected with said outlet check-valve and disposed to adapt it to deposit a lubricant on to a desired part of said railway car; an inlet check-valve connected to said inlet passageway for lubricants; a container for lubricants; a conduit for lubricants connecting said container with said inlet check-valve; a tank adapted to be charged with compressed air and attached to the body of said railway car; a three-way valve provided with a hand lever and disposed to be readily accessible to the operator of said car; a conduit pipe disposed to connect said tank with said three-way valve; and a conduit for compressed air disposed to connect said three-way valve with said air inlet passageway of said receptacle.

1,173,657. ALTERNATING-CURRENT SYSTEM. LIONEL FLEISCHMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 29, 1913. Serial No. 764,333. (Cl. 171—119.)



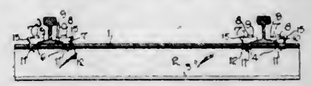
1. The combination with a high frequency alternating current generator adapted to be driven at substantially constant speed, of a resonant electric circuit operatively related thereto, compensating means including an adjustable electric circuit tuning instrumentality for varying a suitable electrical constant of said circuit, and means responsive to the speed of said generator for automatically adjusting said compensating means to maintain said circuit in resonance regardless of any vibrations in the frequency of the alternating current supplied to the circuit by said generator resulting from fluctuations in the speed of the generator.

2. The combination with a high frequency alternating current generator adapted to be driven at substantially constant speed, of a resonant electric circuit associated therewith, adjustable inductance and adjustable capacity electrically associated with said circuit, and means responsive to the speed of said generator for automatically adjusting said inductance and said capacity to maintain said circuit in resonance regardless of any variations in the frequency of the alternating current supplied to the circuit by said generator resulting from fluctuations in the speed of the generator.

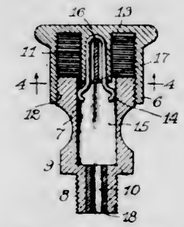
3. The combination with a high frequency alternating current generator adapted to be driven at substantially constant speed, of a resonant electric circuit associated therewith, compensating means including an adjustable electric circuit tuning instrumentality electrically associated with said circuit, and means for automatically adjusting said compensating means to maintain said circuit in resonance regardless of any variations in the frequency of the alternating current supplied to the circuit by said generator resulting from fluctuations in the speed of the generator.

1,173,658. METALLIC RAILWAY-TIE AND FASTENER. RODNEY S. GANDY, Vineland, N. J. Filed Sept. 4, 1915. Serial No. 49,068. (Cl. 238—4.)

The combination with a tie formed with slots for the reception of rail holding devices, each slot including a widened portion and a reduced end, of a rail holding key provided with a head adapted to engage the base flange of a rail, with a round neck receivable in the widened portion of the slot and with shoulders below the neck adapted to extend through the slot for the purpose specified, the head being formed on its rear side with a vertically disposed recess and the neck at its rear being formed with a flattened portion forming a continuation of the recess, and a pin adapted to be slipped into one end of the slot back of the key and receivable in said recess and lying against the flattened portion of the neck whereby to secure an increased bearing surface against the key, as set forth.



1,173,659. GREASE-CUP. JOHN S. GOLDBERG, Chicago, Ill., assignor to Alemite Metals Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1914. Serial No. 832,255. (Cl. 184—48.)



1. In a grease-cup, a threaded stem, a threaded cap cooperating with said stem, said stem having a symmetrical non-circular bore, said cap having an axial projection provided with two recesses of rectangular outline and at right angles to each other, a U-shaped spring mounted in one of said recesses, and a key mounted in the other of said recesses for retaining said spring in position.

2. In a grease-cup, a threaded stem, a threaded cap cooperating with said stem, said stem having a symmetrical non-circular bore, said cap having an axial integral projection, said projection being provided with two recesses of rectangular outline and at right angles to each other, a U-shaped spring mounted in one of said recesses and having its free ends engaging the sides of said non-circular bore, and a key fitted into the other of said recesses for holding said spring.

3. In a grease-cup, a threaded stem having a bore of polygonal outline, a cap having screw-threads to engage said screw-threaded stem and provided with an axial integral projection, said projection being slotted, a U-shaped wire spring having free ends adapted to engage said polygonal bore, said spring being mounted in said slot, and a key fitted into said slot for holding said spring.

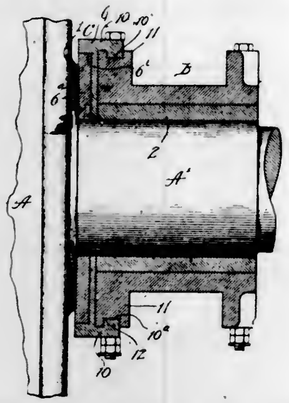
4. In a grease-cup, a threaded stem, a threaded cap cooperating with said stem, said stem having a bore of rectangular outline, said cap having an axial projection, said projection having two flat axial recesses disposed at right angles to each other, a U-shaped spring in one of said recesses, and a key in the other of said recesses for holding said spring.

5. In a grease cup, a stem of crystalline metal having a threaded nipple and a bore through said nipple, and a sleeve of a metal of high tensile strength positioned in said bore and intimately united therewith.

1,173,660. JOURNAL-BOX WEAR-PLATE. DANIEL F. GONWARE, Chicago, Ill. Filed Aug. 3, 1914. Serial No. 854,674. (Cl. 64—25.)

1. A device of the character set forth, comprising a "holder-plate" having its lower edge recessed centrally

to accommodate an axle, said plate having extensions depending below the axle and said plate being provided with guides adapted to engage guides with which the outer end-portion of the journal-box is provided, and an annular wear-member detachably secured to the outer face of said holder-plate, the lower portion of said wear-member being recessed to accommodate the axle, thus affording portions flanking the axle.



2. A device for the purpose set forth, comprising a holder-plate having its outer surface provided with a socket, a wear-member secured in said socket, the lower portion of the plate and wear-member being recessed centrally from the lower edge of the plate to accommodate an axle, said plate thus having extensions depending below the axle and said plate being provided with lateral flanges equipped on their inner surfaces with guide-tenons adapted to slide in lateral grooves at the outer end-portion of the journal-box.

3. A device for the purpose set forth, comprising a holder-plate having lateral flanges projecting from its inner surface and equipped with guide-tenons adapted to slide in lateral grooves at the outer end-portion of a journal-box, said plate having its outer surface provided with an annular recess, and an annular wear-member secured in said recess, said annular wear-member and said plate being recessed vertically at the lower edge of the plate to accommodate the axle and affording extensions depending below the axle.

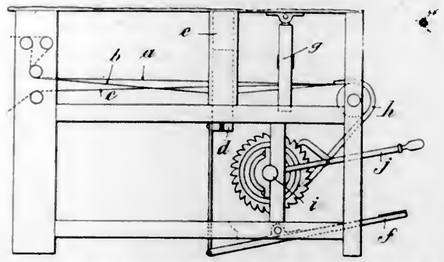
4. The combination with a journal-box, of a vertically slidable holder-plate connected with the outer end thereof and recessed vertically from its lower edge to accommodate the axle, said holder-plate having its outer surface provided with an annular socket, an annular wear-member in said socket having its outer peripheral portion riveted to said holder-plate, said wear-member also recessed vertically in its lower portion to accommodate the axle, the furcations of said holder-plate depending beneath the axle, and a connecting member joining the lower ends of said furcations beneath the axle.

5. A device for the purpose set forth, comprising a holder-plate provided on its inner side with lateral flanges having guide-tenons adapted to engage grooves in the lateral vertical surfaces of the outer end-portion of a journal-box, and a top flange at the upper portion of said plate adapted to overlie a portion of the journal-box and having a downturned flange adapted to engage the rear side of an upstanding flange on the upper portion of the journal-box.

[Claim 6 not printed in the Gazette.]

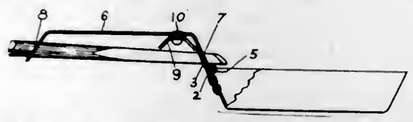
1,173,661. MACHINE FOR THE MANUFACTURE OF MATS AND THE LIKE. GEORGE THOMAS GREEN, Hailsham, England. Filed Apr. 15, 1914. Serial No. 832,000. (Cl. 139—32.)

1. In a machine as set forth; a shedder comprising a reciprocating heddle frame; a plurality of needles, each being provided with an eye, and having an elongated slot with one of its ends adjacent to and spaced from the eye; said needles being mounted in said heddle frame in alined parallelism, whereby three sets of warps or threads respectively pass through the needles, one of which warps being stationary and passing between the needles, the other two being movable, the eye and slot being so arranged and designed to respectively receive the movable warps or threads, which are crossed through the operation of the eye and slot; and means to reciprocate said heddle frame to cause the eye and slot to so operate, as to cross the movable warps with relation to the stationary warp in weaving mats.



2. In a machine as set forth; a shedder comprising a reciprocating heddle frame; a plurality of needles, each of which having a substantially central flat portion, provided with an eye at one end, and having an elongated slot shorter than the flat portion with one of its ends adjacent to and spaced from the eye; said needles being alined in parallelism and mounted in said heddle frame, whereby three sets of warps or threads respectively pass through the needles, one of which warps being stationary and passing between the needles, the eye and slot designed to respectively receive the other two warps, which are crossed through the operation of the eye and slot.

1,173,662. FRYING-PAN. MELVILLE P. HAYWARD, Quincy, Mass. Filed June 27, 1914. Serial No. 847,606. (Cl. 53—7.)



1. A frying pan consisting of a body portion, a handle, a hinge by which the handle is pivotally secured to the body portion, and a swivel device pivotally mounted on the handle independent of the hinge adapted to lock the handle in open position against the pan.

2. A pan consisting of a body-portion provided with a stay and a handle with bent ends hinged thereto, a double-ended swivel carried by the handle the ends of the swivel being parallel with the ends of the handle when the swivel lies longitudinally of the handle and adapted to be forced into position against the stay to lock the handle in operative position.

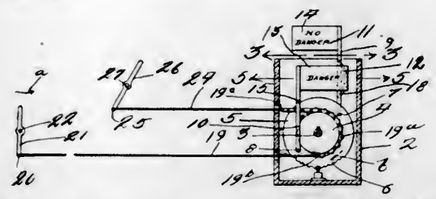
3. A pan consisting of a body-portion provided with a stay projecting upwardly therefrom, and having a rectangular shaped hole in the upper portion thereof, and a handle secured to the stay and having a rectangular hole registering with the stay and means for locking the handle against the stay.

4. A pan comprising a body-portion provided with a stay projecting upwardly therefrom and having a rectangular hole in the upper portion thereof, a handle hinged to the stay, the handle being provided with a hole at both ends so that when said handle lies against the stay all the holes are in alinement.

5. A frying pan comprising a body-portion provided with a stay projecting upwardly therefrom, a hole in the upper part of the stay, a handle pivotally secured to the front of and at the lower edge of the hole, the handle having two bent ends so that when the handle is in a closed position, it is adapted to lie within the body-portion of the pan.

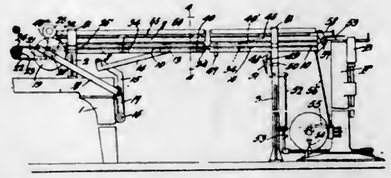
[Claims 6 to 10 not printed in the Gazette.]

1,173,663. SIGNAL APPARATUS. JOHN F. HILL, Griffin, Ga. Filed July 20, 1915. Serial No. 40,872. (Cl. 246—48.)



A signal apparatus comprising a housing, a shaft mounted in bearings thereof, a disk wheel on said shaft, a staff having its lower end pivoted to the disk wheel and having a signal flag at its upper end, said housing having in its side a segmental curved slot, the curvature of which being formed on a radius corresponding to the distance between the pivot of the staff and said shaft, said staff having a lateral pin extending into said slot to maintain the staff constantly in a vertical position as the disk is rocked in one direction or the other, means having connections with said shaft for rocking the shaft and disk in one direction or the other, said disk having teeth, and means coöperating with the teeth to hold the disk positive to the position to which it has been moved.

1,173,664. BOX-BLANK-CONVEYER MECHANISM. HARRY A. INMAN, Amsterdam, N. Y. Filed Feb. 10, 1914. Serial No. 817,852. (Cl. 193—11.)



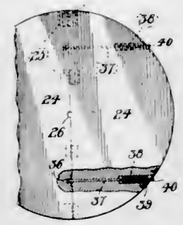
1. In a blank conveyer, a blank guide, a movably mounted blank support at the delivery end thereof to receive the blanks thereon, a reciprocatory device having means operable to engage and release the blanks when said device approaches and leaves said support, respectively, and means for automatically moving said support out of the way when said device leaves said support.

2. In a blank conveyer, a blank guide, a blank support swingably mounted at the delivery end thereof to receive the blanks thereon, a reciprocatory device having means operable to engage and release the blanks when the device approaches and leaves the support, respectively, and means for automatically swinging said support downwardly out of the way when said device leaves said support.

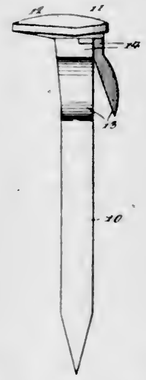
3. In a blank conveyer, a blank guide, a reciprocatory member, blank engaging elements pivoted to said member to swing into and out of blank engaging position, and movable retarding means associated with said member, said elements being pivotally engaged to said means.

1,173,665. COLLAPSIBLE STAND. JOHAN JAKAB, Aurora, Ill. Filed Feb. 10, 1915. Serial No. 7,289. (Cl. 45—116.)

The combination with a central supporting rod, of a pair of table leaves each of semi-circular form and having their chordal sides provided with recesses embracing and slidable upon said rod, hinges arranged beneath said leaves to permit the same to fold downward upon said rod, braces extending from the rod beneath the said leaves diagonally toward the outer end thereof and slidably mounted on the rod, means to hold the braces in extended position, and means to hold said leaves in locked alinement comprising sockets formed in the edge of one leaf adjacent the edge of the other leaf, the remaining leaf having bores extending through the same from the edge adjacent the first leaf to the outer edge of the second leaf, said bores having their outer ends enlarged, plates covering the outer ends of the bores, pins slidable through the plates and bores and engageable at their inner ends in the sockets, collars on said pins in spaced relation to the plates, expansion springs between the collars and the plates, a head on the ends of the pins which project outwardly from the plates.



1,173,666. RAILROAD-SPIKE. LUTHER S. JONES, Utica, N. Y. Filed July 10, 1914. Serial No. 850,221. (Cl. 85—23.)

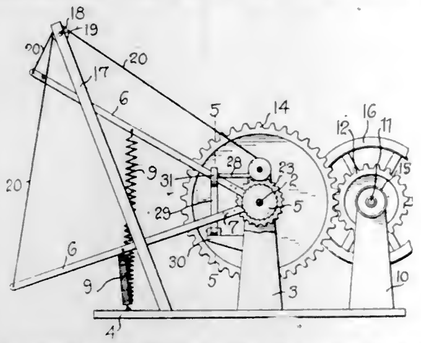


A spike comprising a shank, a head for said shank, and locking spurs extending from said shank beneath said head and having their inner faces extending outwardly at an incline to said shank and having their outer faces curved longitudinally to provide cam faces causing the free end portions of the spurs to be bent inwardly when the spike is driven into place.

1,173,667. POWER DEVICE. LESTER O. KURTZHALS, Colgate, Wis. Filed Oct. 24, 1914. Serial No. 868,443. (Cl. 74—54.)

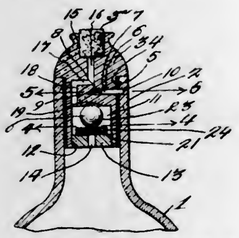
A device of the character described comprising a shaft provided with toothed wheels, elongated members pivotally supported by said shaft and provided with means to engage the toothed wheels, a second shaft, an operative connection between both of said shafts whereby the same may be caused to rotate simultaneously, drums loosely mounted on the shafts, flexible connections between the upper extremities of the elongated members and the

drums, a clutch slidably supported upon the second shaft intermediate the drums, and means under control of



the elongated members for causing said clutch to alternately engage the drums.

1,173,668. NON-REFILLABLE BOTTLE. SAMUEL F. LEAGER, Spotswood, N. J. Filed May 15, 1915. Serial No. 28,394. (Cl. 215—62.)

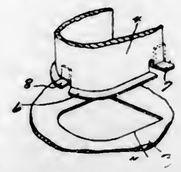


1. In combination with a bottle neck, a glass stopper having holding means to secure the stopper in the neck, said stopper adjacent one of its ends having a cylindrical chamber, the bottom of which has a flat glass valve seat, an opening concentric with said seat, a flat glass disk valve having a cork float attached to its upper surface and adapted to have a sealing contact with the seat, a glass ball weight on the cork float interposed between the upper wall of the chamber and the cork float, the upper wall of the chamber having a wide and shallow conical depression, such that the ball weight is capable of but slight movement when the bottle is completely inverted and will hold the flat disk glass valve in sealing contact with its seat when inverting the bottle, and an outlet passage leading from the chamber at one side of the center of the upper wall of the chamber.

2. In combination with a bottle neck, a glass stopper having holding means to secure the stopper in the neck, said stopper adjacent one of its ends having a cylindrical chamber, the bottom of which has a flat glass valve seat, an opening concentric with said seat, a flat disk valve having buoyant means carried thereby and having a sealing contact with said seat, a ball weight interposed between the buoyant means of the disk valve and the upper wall of the chamber, the upper wall of the chamber having a wide and shallow conical depression such that the ball weight is capable of but slight movement when the bottle is completely inverted and will hold the flat disk valve in sealing contact with its seat when inverting the bottle, and an outlet passage leading from the chamber at one side of the center of the upper wall of the chamber.

1,173,669. ANIMAL-TRAP. GEORGE M. LONGENBAUGH, Cortez, Colo. Filed May 27, 1913. Serial No. 770,239. (Cl. 43—24.)

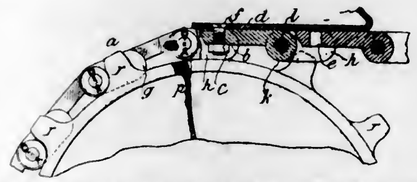
1. A D-shaped trap hood, a pivot member mounted in the sides thereof, an oscillatory trapping element provided with side ears pivotally mounted on the pivot member, one end of the trapping member corresponding to and fitting the hood, said hood having lateral flanges at its lower edge engaging under the top of a trap receptacle, said hood being insertible upwardly through the correspondingly shaped opening of the top of the trap receptacle and having lugs engaging upon the top surface of the top, the ears acting to hold the sides of the hood spread apart to hold the hood in its opening.



2. In combination, a trap hood insertible upwardly through the correspondingly shaped opening in the top of a trap receptacle, and provided at its lower edge with flanges and lugs engageable below and above the top of the receptacle, and a trapping element pivoted in the hood and having pivot ears to spread the sides of the hood against the opposite sides of the opening in the top.

3. In combination, a trap receptacle having a D-shaped opening in its top, a D-shaped trap hood insertible upwardly through said opening and having flanges and lugs engaging upper and lower surfaces of the top of the receptacle, and a trapping element pivoted in said hood and having pivot ears to spread the sides of the hood against the opposite sides of said opening.

1,173,670. DRIVE-CHAIN. CHARLES J. LUTHER, Elizabeth, N. J., assignor of one-half to Francis E. Knowles, South Orange, N. J. Original application filed Sept. 21, 1910, Serial No. 582,972. Divided and this application filed July 17, 1911. Serial No. 638,899. (Cl. 193—8.)



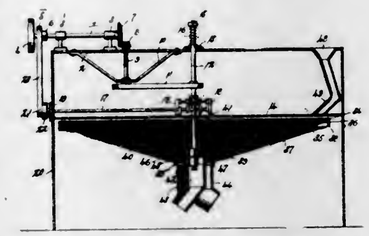
1. A side drive chain link having a central web portion or shank constituting the tension member of the link, lateral portions extending from each side of said central web portion and projecting lengthwise beyond said web portion at one end, said side portions being of greater thickness or depth than said web portion, the space between said side portions and under the web constituting a recess for a nut or other fastening means used in fastening buckets or the like to said link.

2. A side drive chain link having a central web portion or shank constituting the tension member of the link, lateral portions extending from each side of said central web portion and projecting lengthwise beyond said web portion at one end, said side portions being of greater thickness or depth than said web portion, the space between said side portions and under the web constituting a recess for a nut or other fastening means used in fastening buckets or the like to said link, said side portions having shoulders thereon adapted to contact with the teeth of a drive wheel.

3. A side drive chain link having a central web portion or shank constituting the tension member of the link, lateral portions extending from each side of said central web portion and projecting lengthwise beyond said web portion at one end, said side portions being of greater thickness or depth than said web portion, the space between said side portions and under the web constituting a recess for a nut or other fastening means used in fastening buckets or the like to said link, said side portions having laterally projecting shoulders thereon adapted to contact with the teeth of a drive wheel.

4. A side drive chain link having a central web portion or shank *j*, constituting the tension member of the link, lateral portions *g* and *h* extending from each side of said central web portion and projecting lengthwise beyond said web portion at one end, said side portions being of greater thickness or depth than said web portion, the space between said side portions and under the web constituting a recess *b* for a nut or other fastening means used in fastening buckets or the like to said link, said side portions having shoulders thereon adapted to contact with the teeth of a drive wheel, said shank also having an end connection portion *k*, the end portion *k* and the side portions *g* and *h* being of substantially the same thickness.

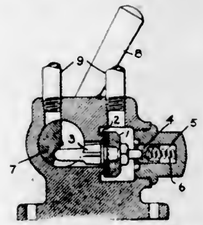
1,173,671. ROTARY SEPARATOR. JOHN A. MCKINLAY, Newaygo, Mich. Filed Mar. 29, 1913. Serial No. 757,665. (Cl. 83—56.)



1. In combination with a rotatable screen, a shaft support therefor, and means to rotate said shaft, of a flange upon said shaft, a collar mounted to engage said flange and support said shaft, a movable support for said collar, arms independently movable and engaging said collar support, a second shaft, and a plurality of cam devices mounted on said second shaft to engage with said arms for the purpose specified.

2. In combination with a rotatable screen, a shaft support therefor, and means to rotate the shaft, of a flange upon said shaft, a collar mounted to engage the flange and support the shaft, a movable support for the collar, arms independently movable and engaging said collar-support, and means to alternately and sequentially move said arms.

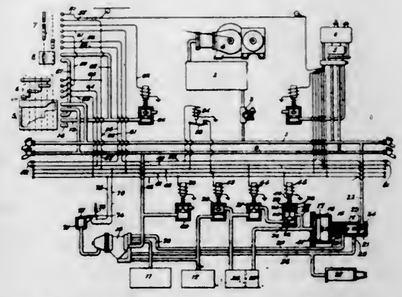
1,173,672. VALVE. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 20, 1912. Serial No. 721,430. (Cl. 137—4.)



1. The combination of a valve seat, a puppet valve to seat thereon, a stem carrying the valve, and means for carrying the stem consisting of an abutment spring pressed against a portion of the stem and tending to move it in one direction generally parallel to the line of movement thereof and another abutment engaging another portion of the stem adapted to move it in the opposite direction and movable at an angle to the general line of movement of the valve for controlling the seating thereof.

2. The combination of a valve seat, a valve to seat thereon, a stem carrying the valve, and means for carrying the stem consisting of an abutment spring pressed against and having a ball and socket engagement with one end of the stem and another abutment having a ball and socket engagement with the opposite end of the stem and revoluble about a center for controlling the position of the valve.

1,173,673. ELECTROPNEUMATIC AIR-BRAKE SYSTEM. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 31, 1913. Serial No. 782,252. (Cl. 188—4.)



1. In an electro-pneumatic air brake system, an engineer's valve for pneumatically controlling the operation of the brakes having a lap position, means for electrically controlling the brakes, and means for pneumatically applying the brakes on a failure of the electrical energy supplying the electrical portion of the system when the engineer's valve is in lap position.

2. In an electro-pneumatic air brake system, an engineer's valve for pneumatically controlling the operation of the brakes, means for electrically controlling the brakes, and means for pneumatically applying the brakes on a failure of the electrical energy supplying the electrical portion of the system when the engineer's valve is in another position than an application position.

3. In an electro-pneumatic air brake system, an engineer's valve for pneumatically controlling the operation of the brakes, a controller for electrically controlling the brakes connected to and operating with the engineer's valve, and means allowing the pneumatic application of the brakes on the failure of the electrical energy when the engineer's valve is in other than an application position.

4. In an electro-pneumatic air brake system, an engineer's valve for pneumatically controlling the operation of the brakes, a controller for electrically controlling the brakes connected to and operating with the engineer's valve, and means allowing the pneumatic application of the brakes on the failure of the electrical energy when the engineer's valve is in lap position.

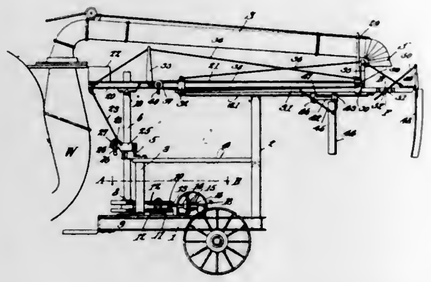
5. In an electro-pneumatic air brake system, an engineer's valve for pneumatically controlling the operation of the brakes having the usual exhaust port and a second exhaust port connected to the brake pipe port in lap position of the valve, a second valve controlled from the source of electrical supply for closing said second exhaust port, and a controller for electrically controlling the brakes.

[Claims 6 to 39 not printed in the Gazette.]

1,173,674. STACK-SHAPING MACHINE. CHARLES H. MATLOCK, Emden, Ill. Filed June 9, 1915. Serial No. 33,119. (Cl. 193—21.)

1. The combination with spaced shields, and means for separately adjusting the shields relative to each other,

means for bodily moving the shields upwardly or downwardly together, means for bodily oscillating the shields laterally together, and means movable with the shields for holding the flue of a wind stacker to direct the contents of the stacker over one of the shields and downwardly into the space between the shields.

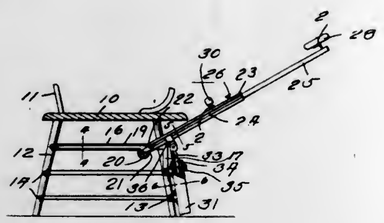


2. The combination with an extensible structure, a shield mounted for angular adjustment relative to said structure, and a second opposed shield mounted for slidable and angular adjustment relative to the first named shield, of means movable with the extensible structure for holding the flue of a wind stacker in position to direct its contents over one of the shields and downwardly into position between both shields.

3. A machine of the class described including a shield mounted for angular adjustment, a second shield mounted for sliding and angular adjustment, said shields being oppositely disposed and being bowed to shape a stack, and means for holding the flue of a wind stacker in position over one of the shields for directing its contents downwardly into the space between the shields.

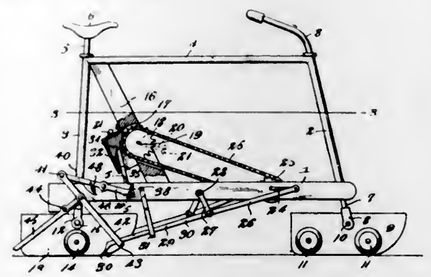
4. The combination with an extensible structure, means for oscillating the same laterally, means for adjusting said structure angularly upwardly and downwardly irrespective of such oscillation, and means for extending and retracting the structure, of an outer shield hingedly connected to said structure, an inner shield hingedly and slidably connected to said structure, and means movable with the shields for holding the flue of a wind stacker in position to direct its contents into the space between the shields.

1,173,675. FOOT-REST. TASHIRO MATSUI, Wenatchee, Wash. Filed Apr. 21, 1915. Serial No. 22,865. (Cl. 155—9.)



The combination with a chair of spaced guide rails secured to the front and rear rungs thereof, a bar having its terminals slidably engaged with said guide rails, a beam secured to said bar, a foot rest mounted on said beam, a tubular member mounted on the front rungs of the chair, a rack bar slidably mounted in the tubular member, a pawl carried by the tubular member and coöperating with the rack bar, and a bracket pivoted to the upper end of said rack bar and slidably engaged with said beam.

1,173,676. SLEIGH-CYCLE. WILLIAM S. MOTSAGO, Broad Mountain, Pa. Filed Feb. 2, 1915. Serial No. 5,648. (Cl. 208—159.)



1. In a sleigh cycle, the combination with sprocket operated ground engaging elements for propelling said cycle; of a brake mechanism comprising a ground engaging brake element adapted to be moved into and out of contact with the ground, means for normally holding said brake element out of contact with the ground, and means connecting said brake element and said ground engaging propelling elements governed by the movement of said sprocket in a reverse direction for engaging and disengaging the brake and propelling elements respectively with the ground.

2. A sleigh cycle comprising a frame having a sprocket operated ground engaging propelling element secured thereto; in combination with a brake mechanism comprising a ground engaging brake element pivoted to said frame, a lever pivoted intermediate its ends to one end of said brake element and provided at one end with a hook for engaging said propelling element, a rock arm pivoted intermediate its ends to said frame and connected at one end to the opposite end of said lever, means for normally holding the latter end of said rock arm depressed to lift said brake element out of engagement with the ground, and a pawl connected at one end with the opposite end of said rock arm and engaging said sprocket at its opposite end, whereby movement of said sprocket in a reversed direction will move said rock arm against the tension of said rock arm depressing means.

3. A cycle sleigh comprising a frame having a sprocket operated propelling mechanism; in combination with a brake mechanism, said brake mechanism comprising a brake element pivoted to said frame and adapted to be moved to engage or disengage the ground at one end, a lever pivoted to the opposite end of said element, a rock arm pivoted intermediate its ends to said frame and connected at one end to the adjacent end of said lever, means for normally holding said rock arm and lever end in the depressed position, and a pawl pivoted to the opposite end of said rock arm and in engagement with said sprocket to slide over the teeth thereof when the latter is rotating in propelling direction.

1,173,677. LOCK. CARL AUGUST MÜLLER, Witzenhausen, Germany. Filed Jan. 30, 1912. Serial No. 674,256. (Cl. 70—47.)



1. In a tumbler lock, a cylindrical casing having a plurality of recesses in the inner face thereof, a cylinder rotatably mounted in said casing and having a key-hole, intermediate elements operable by a key and disposed in parallel recesses, tumblers disposed in recesses arranged in a plane laterally displaced from and parallel to the plane of the said intermediate elements, lateral projections on said tumblers which extend at right angles to said tumblers into the path of the intermediate elements, and operate to retain the tumblers in locking position when the intermediate elements are withdrawn or destroyed.

2. In a tumbler lock, a cylindrical casing having a plurality of recesses in the inner face thereof, a cylinder rotatably mounted in said casing and having a key-hole, intermediate elements operable by a key and disposed in parallel recesses, tumblers disposed in recesses arranged in a plane laterally displaced from and parallel to the plane of the said intermediate elements, lateral projections on said tumblers extending at right angles to said tumblers into the path of the intermediate elements, projections on said tumblers adapted to engage shoulders in the recesses of the casing and to retain said tumblers in the recesses.

3. In a tumbler lock, a cylindrical casing having a plurality of recesses in the inner face thereof, a cylinder rotatably mounted in said casing, and having a key-hole, intermediate elements operable by a key and disposed in parallel recesses, tumblers disposed in recesses arranged in a plane laterally displaced from and parallel to the plane of the said intermediate elements, lateral projections on said tumblers extending at right angles to said tumblers into the path of the intermediate elements, extensions on said lateral projections, and secondary tumblers adapted to be adjusted thereby, whereby the tumblers continue to lock when the intermediate elements are withdrawn or destroyed.

4. In a tumbler lock, a cylindrical casing having a plurality of recesses in the inner face thereof, a cylinder rotatably mounted in said casing and having a key-hole, intermediate elements operable by a key, and disposed in parallel recesses, tumblers disposed in recesses arranged in a plane laterally displaced from and parallel to the plane of the said intermediate elements, lateral projections on said tumblers extending at right angles to said tumblers into the path of the intermediate elements, extensions on said lateral projections adapted to act as locking parts, and secondary tumblers adapted to be adjusted thereby, whereby the tumblers continue to lock when the intermediate elements are withdrawn or destroyed.

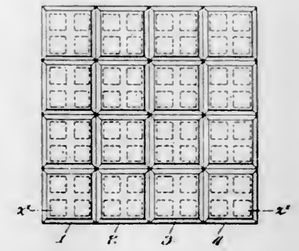
5. In a tumbler lock, a cylindrical casing having a plurality of recesses in the inner face thereof, a cylinder rotatably mounted in said casing and having a key-hole, intermediate elements operable by a key and disposed in parallel recesses, tumblers disposed in recesses arranged in a plane laterally displaced from and parallel to the plane of the said intermediate elements, lateral projections on said tumblers extending at right angles to said tumblers into the path of the intermediate elements, extra tumblers arranged in secondary recesses in the casing and adapted to lock in case of an attempt to force the lock, and means comprising lateral projections whereby the tumblers continue to lock when the intermediate elements are withdrawn or destroyed.

[Claims 6 and 7 not printed in the Gazette.]

1,173,678. COVERING. JAMES H. MUNRO, Newark, N. J. Filed Nov. 12, 1910. Serial No. 592,090. (Cl. 72—22.)

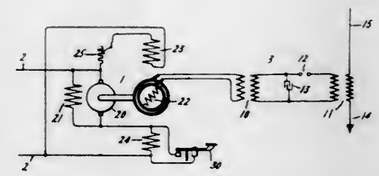
1. A cement covering for floors, walls, roofs, pavements and similar surfaces; said covering comprising a sheet of refractory cement molded and cured as a unitary structure upon both sides of a flexible vehicle, and laid in a plastic bedding, said covering being molded superficially to form a wear-resisting surface presenting the effect of a multiplicity of tesselæ, and said tesselæ having their lower margins beneath said vehicle beveled away from their proximate edges to form cross channels to receive the bedding material and distribute it to said edge junctures, the lines of fracture, both lateral and transverse, being predetermined by said molding.

2. The novel method of forming a cement covering for floors, walls, roofs, pavements and similar surfaces; said method comprising the steps of molding a sheet of refractory cement superficially upon a flexible vehicle to form a wear resisting surface presenting the effect of a multiplicity of tesselæ, with the lower margins beneath said vehicle beveled away from their proximate edges



to form cross channels; curing said sheet; and laying said sheet in a plastic bedding; said cross channels serving to receive the bedding material and distribute it to the edge junctures of said tesselæ, the lines of fracture of said sheet both radial and transverse being predetermined by said molding.

1,173,679. SYSTEM FOR PRODUCING HIGH-FREQUENCY OSCILLATIONS. MENDEL OSNOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 3, 1914. Serial No. 816,191. (Cl. 250—19.)



1. A wireless signaling system including an antenna, means operatively related to said antenna for producing high frequency oscillations, said means comprising an alternating current generator, a direct current motor for driving the same, said generator having a field winding in series with its motor, and means for varying the voltage delivered by said generator to induce electrical oscillations in said antenna in accordance with the signals to be transmitted, comprising means for opening and closing a short circuit around said series field winding.

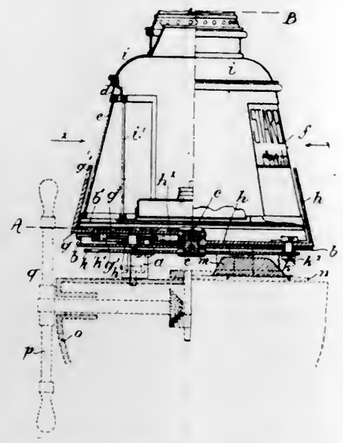
2. A wireless signaling system including an antenna, means operatively related to said antenna for producing high frequency oscillations, said means comprising an alternating current generator and a direct current motor for driving the same, the generator being provided with two field windings, one of said field windings being connected in series with said motor, and the other field winding being excited from a constant potential source, and means for quickly varying the flux produced by said series field winding to thereby vary the voltage of said machine and induce an electrical oscillation in said antenna.

3. A system for producing high frequency oscillations, including a transmitting mechanism, said mechanism comprising an alternating current generator, a direct current motor for driving the same, the generator having a field winding connected in shunt relation to said motor and another field winding connected in series with said motor, and means for quickly varying the flux produced by said series field winding.

4. A system for producing high frequency oscillations, including a transmitting mechanism, said mechanism

comprising an alternating current generator, a direct current motor for driving the same, the generator having a field winding connected in shunt relation to said motor and another field winding connected in series with said motor, and means for short circuiting said series field winding.

1,173,680. HELM-SIGNAL. PAUL PETERS, JAKOB HINRICH PETERS, and PETER ALBERT BEY, Hamburg, Germany. Filed June 13, 1912. Serial No. 703,575. (Cl. 116—49.)

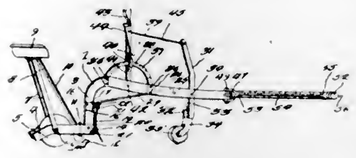


1. A helm signal comprising a conical casing adapted to be mounted on the helm stanchion, two transparent plates fitted in diametrically opposed positions on said casing so as to allow of being exchanged and provided with graduated scales and inscriptions being at each side of a plane intersecting the center of the casing longitudinally of the ship, a lantern supported in said casing and adapted to illuminate said plates, upright pointers arranged so as to move along the scales of said plates and coupled so as to be deflected to the same side of the ship, and means for coupling said pointers to the existing helm pointer so as to cause the former to move with the steering gear and indicate the position of the rudder, substantially as set forth.

2. In a helm signal the combination a conical casing adapted to be mounted on the helm stanchion of two transparent plates exchangeably fitted in diametrically opposed positions on said casing and provided with graduated scales and suitable inscriptions being at each side of a plane intersecting the center of the casing longitudinally of the ship, of means arranged in said casing and adapted to illuminate said plates, of upright pointers rotatably mounted on a central pivot of said casing and adapted to move along the scales of said casing, and of means for exchangeably coupling said pointers to the helm pointer so as to indicate identically the position of the rudder, substantially as set forth.

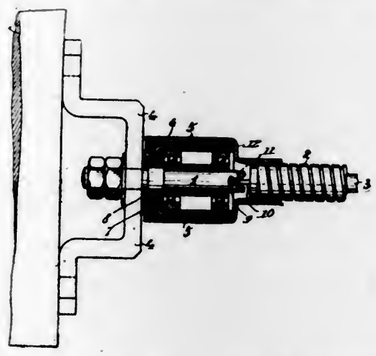
1,173,681. ROAD GRADING AND DITCHING MACHINE. JOHN R. PILE, Owensboro, Ky. Filed Oct. 26, 1915. Serial No. 57,984. (Cl. 37—5.)

1. In a road grading and ditching machine, the combination of a pair of plow beams, each having at its rear an angular portion comprising two parts one extending downwardly, and the other rearwardly, said beams being arranged in parallelism in plan view, a scraper element having its rear portion adjacent its ends pivoted to the downwardly extending parts of the angular portions of the plow beam, a transverse member having its ends pivotally connected to the forward ends of the plow beams, drafting means connected to the pivots of the transverse member and the plow beams, said scraper element having an angular plate upon its rear face provided with a series of apertures, and link rods, the forward end of each being pivotally connected to the inner face of one of the plow beams, said link rods having their rear extremities terminating in angular ends adjustable in the apertures of the angular plate of the scraper element, whereby the scraper element may be adjusted to different angles to the plow beams in plan view.



2. In a road grading and ditching machine, the combination of a pair of plow beams, each having at its rear an angular portion comprising two parts, one extending downwardly, and the other rearwardly, said beams being arranged in parallelism in plan view, a scraper element having upon its rear surface a pair of U-shaped brackets, one arranged vertically adjacent each end of the scraper element, said downwardly extending parts of the angular portions of the plow beams having upper and lower angular extensions extending downwardly through the upper and lower parts of the U-shaped brackets, thereby pivotally uniting the end portions of the scraper element to said plow beams, a transverse member having its ends pivotally connected to the forward ends of the plow beams, drafting means connected to the pivots of the transverse member and the plow beams, adjustable supporting means for the forward parts of the plow beams, supporting wheels for the rearwardly extending portions of the angular parts of the plow beam, and means connected to the inner faces of the plow beams and having adjustable connections with the scraper element, whereby the scraper element may be adjusted to different angles to the plow beams in plan view.

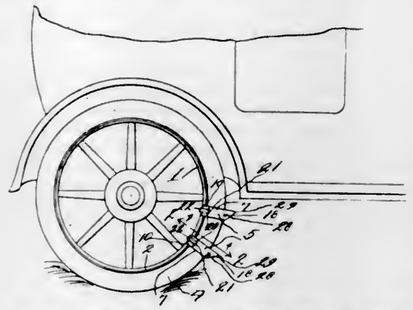
1,173,682. COUPLING DEVICE FOR FLEXIBLE SHAFTS. GEORG RENSCH, Berlin, Germany. Filed May 31, 1912. Serial No. 700,905. (Cl. 64—30.)



1. A direct connection for coupling tachometers to locomotive axles, comprising in combination with an axle-end, a bridge-piece carried by the axle-end, a rotary extension rigidly mounted on said bridge-piece in axial alinement with the axle-end, a flexible shaft directly connected to said extension, a dust-proof covering for said shaft, and an enlarged housing fixed to said shaft covering and having a rotative connection with said extension of the axle to permit rotation of said bridge-piece and the extension relative thereto, said housing substantially completely covering said extension to exclude dust from the connection.

2. A direct connection for coupling tachometers to locomotive axles, comprising in combination with an axle-end, a bridge-piece rotative with the axle-end, an extension projecting rigidly from said bridge-piece in axial alinement with said axle-end, a flexible shaft directly connected to said extension, a fixed housing covering said extension and having a journaled connection therewith to permit rotation of said bridge-piece and the extension relative thereto, a dust-proof covering for said shaft connected to one end of said housing, and a dust-proof closure associated with the opposite end of said housing, and carried by said bridge-piece.

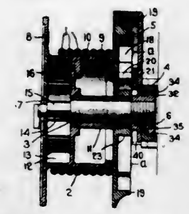
1,173,683. MUD TREAD OR SHOE. JOSEPH L. RICHARDSON, Blackshear, Ga. Filed Oct. 26, 1915. Serial No. 57,946. (Cl. 21—215.)



1. A mud tread or shoe for attachment to a vehicle wheel having a pneumatic tire, said shoe being substantially triangular in cross section and having its end beveled in the direction of the rotation of the wheel thereby providing surfaces coming in contact with the sand or mud to raise or lift the wheel gradually as the wheel rotates, said shoe consisting of two sections, a portion of the inner face of each section being curved to engage one side of the tire, the other portion of the inner face of each section having a flat surface to engage the corresponding flat surface of the other section, means for holding the sections together to assist in securing the tread or shoe to the tire, each section adjacent one end of the inner curved surface abutting against the clench flanges of the clench rim constituting limiting means, to prevent the tread or shoe from depressing the tire, and a strap arching the wheel rim to additionally secure the tread to the tire and rim.

2. A mud tread or shoe for attachment to a vehicle wheel having a pneumatic tire, said shoe being substantially triangular in cross section and having its end beveled in the direction of the rotation of the wheel, thereby providing a surface coming in contact with the sand or mud to raise or lift the wheel gradually as the wheel rotates, said shoe consisting of two sections, a portion of the inner face of each section being curved to engage the side of the tire, the other portion of the inner face of which section having a flat surface to engage the corresponding flat surface of the other section, one of the sections adjacent its inner flat surface having a socket member embedded therein, a thumb screw threaded transversely through the other section and having threaded connections with the socket member to draw the two sections together, so that the curved surfaces of the sections will fit tight against the opposite sides of the tire, each section adjacent one end of the inner curved surface abutting against the clench flange of the clench rim constituting limiting means to prevent the shoe from depressing the tire, and a strap arching the wheel rim to additionally secure the shoe to the tire and rim.

1,173,684. TROLLEY-CATCHER. FRANCIS J. ROCHE, Somerville, Mass. Filed June 4, 1914. Serial No. 843,070. (Cl. 191—95.)



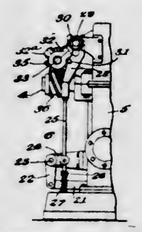
1. In a trolley catcher, the combination with a reel-supporting member, of a spring-actuated reel mounted thereon, a cam member rigid with the reel, said reel having a laterally-projecting flange encircling the cam member, and stop shoulders extending inwardly from the flange, a stop member pivotally mounted on the reel-supporting member and normally resting on said cam, the space between said cam and stop shoulder being sufficient to receive the stop member so long as the latter has engagement with the cam, said cam member throwing the stop member into the path of the shoulder when the reel rotates rapidly.

2. In a trolley catcher, the combination with a reel-supporting member, of a spring-actuated reel mounted thereon and having a stop shoulder associated therewith, a stop member pivotally mounted on the reel-supporting member and movable into and out of the path of movement of the shoulder, and a cam rigid with the reel and engaging the stop member, said cam operating to throw the stop member outwardly into the path of movement of the shoulder when the reel rotates rapidly.

3. In a trolley catcher, the combination with a reel-supporting member, of a spring-actuated reel mounted thereon and having a stop shoulder, a swinging stop member sustained by the reel-supporting member and normally occupying a position out of the path of movement of the shoulder, and a cam carried by the reel and adapted to throw the stop member into the path of movement of the shoulder when the reel rotates rapidly.

4. In a trolley catcher, the combination with a reel-supporting member, of a spring-actuated reel sustained thereby and provided with a plurality of stop shoulders, a stop member pivotally mounted on the reel-supporting member, a cam member rigid with the reel and provided with a rise or point for each stop shoulder, said points being situated between the stop shoulders whereby when the reel rotates rapidly the stop member will be thrown outwardly by the points into the path of movement of the shoulders.

1,173,685. BRAKE. OSCAR F. SHEPARD, Jr., Cincinnati, Ohio. Filed May 5, 1906. Serial No. 315,395. (Cl. 74—13.)



1. A brake mechanism comprising a driven part, a plurality of pivotally-jointed brake members whose outer surfaces are adapted for braking contact within said driven part, an additional brake shoe mounted on one of the brake members adjacent to the pivotal connection of the brake members and, also, adapted for braking contact within said driven part, a rock bar or eccentric

lying intermediate the lower free ends of said pivotally-jointed brake members and adapted to move said brake members into and out of contact with the said driven part, lugs on said brake members, and a stop device comprising an inverted U-shape frame having lugs disposed in the path of said lugs on the pivotally-jointed brake members, one of said brake members being adapted, when moved into contact with said driven part, to be moved in unison therewith and into or out of engagement with said stop device to suit the direction of movement of said driven part.

2. A brake-mechanism comprising a driven-part, a brake-member having a surface adapted for inner peripheral rim braking-contact with said driven-part, and actuating means for moving said brake-member into and out of said inner peripheral rim contact with the driven-part and comprising a movable or pivotal member contacting with and adapted to exert a radially spreading or wedging action on said brake-member to outwardly force the latter into said inner peripheral rim contact with the driven-part, said brake-member being adapted, when moved into said inner peripheral rim contact with the driven-part for movement in unison therewith to increase or diminish the said spreading or wedging action exerted by said movable or pivotal member of the actuating means according to the direction of reciprocal movement of the driven-part.

3. A brake-mechanism comprising a driven-part, a brake-member having a surface adapted for inner peripheral rim braking-contact with said driven-part, actuating means for moving said breake-member into and out of said inner peripheral rim contact with the driven-part and comprising a movable or pivotal member contacting with and adapted to exert a radially spreading or wedging action on said brake-member to outwardly force the latter into said inner peripheral rim contact with the driven-part, said brake-member being adapted, when moved into said inner peripheral rim contact with the driven-part for movement in unison therewith to increase or diminish the said spreading or wedging action exerted by said movable or pivotal member of the actuating means according to the direction of reciprocal movement of the driven-part, and means to limit the reciprocal movement of the brake-member in unison with said moving part.

4. The improved brake-mechanism comprising a rotating shell, stops or rests at opposite sides of the axis of rotation thereof, connected brake-members adapted for independent movement on said stops or rests into and out of contact with the shell, whereby, when one member is operatively engaged with its stop or rest and with said shell, the other member is drawn away from its stop or rest, and means to operate said members.

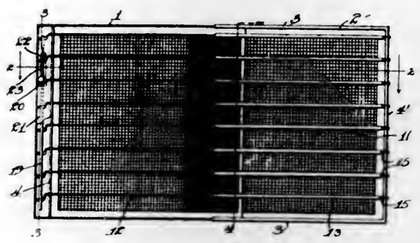
5. A brake mechanism comprising a driven part, a plurality of brake members having surfaces adapted for braking contact upon said driven part, and actuating means for moving said brake members into and out of contact with the driven part, and comprising a movable member contacting with and adapted to exert a wedging action on each brake member to force the same into contact with the driven part, each brake member being adapted, when moved into contact with the driven part, for movement in unison therewith to increase or diminish the wedging action exerted by the movable member of the actuating means, according to the direction of movement of the driven part.

[Claims 6 to 9 not printed in the Gazette.]

1,173,686. WINDOW-SCREEN. HARMON H. SORTORE, Friendship, N. Y. Filed Mar. 27, 1915. Serial No. 17,445. (Cl. 156—38.)

1. The combination with telescopic frame and pivoted telescopic blinds mounted therein, of a telescopic screen mounted in the frame.

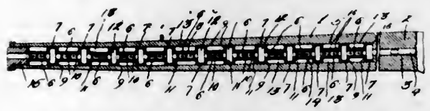
2. The combination with a frame composed of telescopic sections, a compartment formed in one of said sections and a plurality of telescopic blinds pivotally mounted in said frame, of a telescopic screen member carried by the frame and means positioned in the compartments for adjusting the blinds.



3. The combination with a frame composed of telescopic sections, a compartment formed in one of said sections, a plurality of superposed telescopic blinds pivotally mounted in said frame, a hook member formed on one end of each blind and a crank formed on the other end and positioned in the compartment, and means for adjusting the blinds, of a telescopic screen frame mounted in the said section.

4. The combination with telescopic frame sections, a compartment formed in one of said sections, a plurality of telescopic blinds pivotally mounted in said frame, the inner partition of said compartment serving as a bearing for said blinds, cranks formed on the blinds and positioned in the compartment, means for connecting the cranks for simultaneous movement, a closure for said compartment having a slot with one edge serrated, and means secured to said crank connecting means and operating in the slot for adjusting the blinds, of a telescopic screen member mounted in said frame.

1,173,687. FIREARM. EUGENE W. THOMPSON, New London, Conn. Filed June 15, 1915. Serial No. 34,188. (Cl. 89—31.)



1. In combination with a gun barrel having a bore therein with a shoulder at one end and a plug secured therein at the other end, a plurality of spool shaped members and rings arranged in the gun barrel, each alternately with the other between the shoulder and the plug.

2. In combination with a fire arm barrel having a bore therein, a plurality of spool shaped members and rings, each disposed alternately with the other and clamped in the bore, thereby forming chambers a part of the length of the barrel.

3. In combination with a fire arm barrel having a bore therein, a plurality of spool shaped members and rings, each disposed alternately with the other and clamped in the bore, thereby forming chambers a part of the length of the barrel, the spool shaped members having annular perforated flanges at each end, thereby permitting the gases to pass in and out of the chambers.

4. In combination with a fire arm barrel having a bore therein, a plurality of spool shaped members and rings, each disposed alternately with the other and clamped in the bore, thereby forming chambers a part of the length of the barrel, the spool shaped members being entirely perforated and having annular flanges at each end, thereby permitting the gases to pass in and out of the chambers.

5. A fire arm barrel, a plurality of spool shaped cylindrical members and rings disposed therein alternately with each other substantially the full length of the bore of the barrel, and being clamped at each end of said bore.

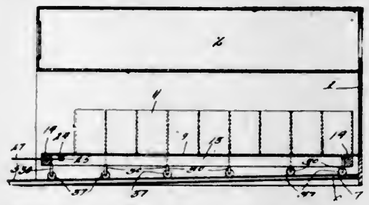
1,173,688. METHOD OF MAKING A VITREOUS BODY OF VARIABLE COMPOSITION. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 1, 1915. Serial No. 48,474. (Cl. 49—77.)



1. The process of making an extended body consisting of a mixture of two ingredients varying gradually in relative proportion from one end of the body to the other which consists in placing said ingredients side by side in a finely divided state, the cross-sectional proportion of said ingredients varying in desired manner, stirring said ingredients transversely to mix the same, and finally consolidating the particles to form a coherent mass.

2. The process of making an extended body consisting of a mixture of quartz and glass varying gradually in relative proportion from one end of the body to the other which consists in placing said ingredients side by side in a finely divided state, the cross-sectional proportion of said ingredients varying in desired manner, stirring said ingredients transversely until a homogeneous mixture is secured while preserving the predetermined longitudinal variation intact and finally heating said mixture to consolidate the particles into a coherent mass.

1,173,689. PORTABLE OR REMOVABLE STALL FOR BARNS, STABLES, AND THE LIKE. JAMES C. VAN MATRE, Iowa Falls, Iowa. Filed Apr. 8, 1915. Serial No. 19,956. (Cl. 119—110.)



1. In combination with a barn having a series of inclined rails arranged on its foundation, a portable flooring including stalls having suitable caster wheels engaging said rails, and means for detachably holding said flooring in the barn against gravitation, and means designed to be overcome by the force exerted upon the first means to permit the flooring to gravitate after it is released.

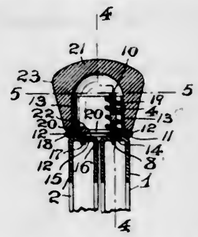
2. In combination with a barn having a series of inclined rails arranged on its foundation, a portable flooring including stalls having suitable caster wheels engaging said rails, racks upon the interior faces of the opposite sides of the barn, spring tensioned pins mounted in bearings of the flooring to engage said racks for detachably holding the flooring in the barn against gravitation, means connected to the pins for synchronously operating the same to disengage them from the racks to release the flooring, and means designed to be overcome by the exerted force on the first means to permit the flooring to gravitate.

1,173,690. DIE-STOCK. GEORGE VOETSCH and CHARLES VOETSCH, Turners Falls, Mass. Filed Mar. 1, 1915. Serial No. 11,424. (Cl. 10—123.)

A die stock comprising a body having a transversely extending recess, the walls of which are undercut, a die having beveled end walls slidably insertible into said recess, a guide having beveled end walls slidably insertible into the recess above the die, means for operatively connecting the guide and die and positively holding the guide and die so that the openings therethrough shall be in alinement, and means for holding the die from movement in said recess.



1,173,691. BAG-FRAME FASTENER. BENNO VOM EIGEN, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Aug. 14, 1915. Serial No. 45,528. (Cl. 70—116.)



1. A bag-frame fastener comprising a hollow knob, a post rigidly secured to and extending upwardly from one of the frame-sections of a bag-frame into said hollow knob, a spring encircling said post, and a loop-shaped elongated coil connected with and extending from a portion of said spring in engagement with said knob for retaining said knob in its pivotal relation upon said frame-section.

2. A bag-frame fastener comprising a hollow knob, a post rigidly secured to and extending upwardly from one of the frame-sections of a bag-frame into said hollow knob, said post comprising a lower foot and fingers extending upwardly from said foot, said fingers with portions of the post providing receiving spaces, a spring encircling said post, said spring having its lower end-portion resting in said receiving spaces and upon said foot, and means connected with and extending from said lower portion of said spring in engagement with said knob for retaining said knob in its pivotal relation upon said frame-section.

3. A bag-frame fastener comprising a hollow knob, a post rigidly secured to and extending upwardly from one of the frame-sections of a bag-frame into said hollow knob, said post comprising a lower foot and fingers extending upwardly from said foot, said fingers with portions of the post providing receiving spaces, a spring encircling said post, said spring having its lower end-portion resting in said receiving spaces and upon said foot, and a loop-shaped elongated coil connected with and extending from said lower portion of said spring in engagement with said knob for retaining said knob in its pivotal relation upon said frame-section.

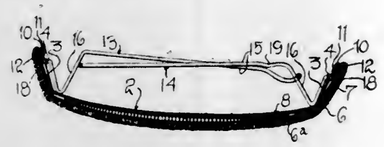
4. A bag-frame fastener comprising a hollow knob, a post rigidly secured to and extending upwardly from one of the frame-sections of a bag-frame into said hollow knob, a cylindrical box-like element connected with said knob, said element comprising a base having an opening through which said post projects, a spring encircling said post, and means connected with and extending from a portion of said spring and in bearing contact with the base of said box-like element for retaining said element and said knob in pivotal relation upon said frame-section.

5. A bag-frame fastener comprising a hollow knob, a post rigidly secured to and extending upwardly from one of the frame-sections of a bag-frame into said hol-

low knob, a cylindrical box-like element connected with said knob, said element comprising a base having an opening through which said post projects, a spring encircling said post, and a loop-shaped elongated coil connected with and extending from a portion of said spring and in bearing contact with the base of said box-like element for retaining said element and said knob in pivotal relation upon said frame-section.

[Claims 6 and 7 not printed in the Gazette.]

1,173,692. SHOE-POLISHER. CHARLES D. WATKINS, New York, N. Y. Filed Apr. 14, 1915. Serial No. 21,362. (Cl. 15—16.)



1. A shoe polisher including a supporting plate having upturned ends, a polishing pad having clips at its extremities detachably engaging the ends of the plate, and means for straining the ends of the plate toward each other to thereby tighten the pad upon the plate.

2. In a shoe polisher, a resilient supporting plate having upturned ends, a pad therefor, and flexing levers coacting one with each end of the plate, each lever at its end having oppositely disposed plate embracing portions, the intermediate portion of the lever having an extension forming a fulcrum and bearing against the inside face of the plate adjacent its end, the plate upon its outside face being formed with a seating bead in which said plate embracing portion of the lever rests.

3. A shoe polisher comprising a resilient supporting plate having upturned ends, a polishing pad adapted to be disposed against the outer face of the plate and having clips attached to the ends thereof, said clips each having a recess or seat adapted to slip over the adjacent upturned end of the plate, and means for straining the ends of the plate toward each other to thereby tighten the pad upon the plate.

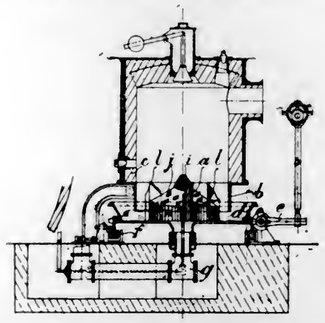
4. In a shoe polisher, a resilient supporting plate having upturned ends, said ends each being formed with a transversely extending inwardly bent bead and with notches in the ends of the bead, a pad having clips at its ends adapted to be detachably engaged with the extremities of the supporting plate, and straining levers, each lever being formed of a length of wire bent at its middle to provide two approximately parallel legs, then angularly offset to provide a fulcrum adapted to engage with the inner face of the plate, then upwardly and outwardly bent and then inwardly bent to provide a plate embracing portion adapted to be inserted in said notches and the bead.

5. In a shoe polisher of the character described, a supporting member and a pad mounted upon the supporting member, said pad comprising an inner ply, an outer ply of polishing material, and a cushioning layer disposed between inner and outer plies, said layer comprising spaced sheets of pasteboard and a corrugated sheet disposed between the spaced sheets.

1,173,693. GRATE FOR GAS-PRODUCERS. JEAN WINGEN, Liege, Belgium. Filed Jan. 31, 1913. Serial No. 745,498. (Cl. 126—182.)

1. A revoluble grate for a gas producer comprising a body of conical form having a plurality of peripherally arranged, upwardly projecting, members, elongated in the direction of rotation of the grate and each adapted to break up the mass of fuel through which it passes and to force the separated parts toward both the center and periphery of the grate.

2. A revoluble grate for a gas producer comprising a body of conical form having a plurality of peripherally arranged, upwardly projecting, members, elongated in the direction of rotation of the grate and extending different distances from the axis of the grate, each of said members being adapted to break up the mass of fuel through which it passes and to force the separated parts toward both the center and periphery of the grate.

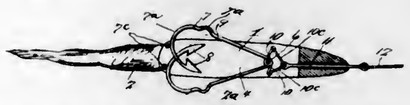


3. A revoluble grate for a gas producer comprising a body of conical form having a plurality of peripherally arranged, upwardly projecting, hollow members, elongated in the direction of the rotation of the grate and each adapted to break up the masses of fuel through which it passes and to force the separated parts toward both the center and periphery of the grate, each of said members being formed with passages to permit air to pass outwardly from the interior thereof.

4. A revoluble grate for a gas producer comprising a body of conical form having thereon a series of relatively short projections *j* each provided with an air passage that opens through a side wall above the main surface of the grate, and a plurality of peripherally arranged members of greater height, each of substantially triangular form in horizontal cross section, with the apex pointing in the direction of rotation of the grate, adapted to deflect the mass of fuel through which they pass toward the center and periphery of the grate.

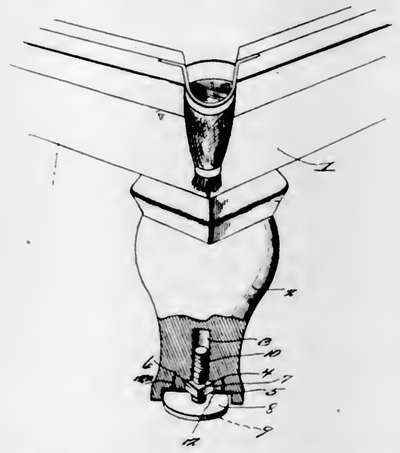
5. A revoluble grate for a gas producer comprising a body of conical form having thereon a series of relatively short projections *j*, each provided with an air passage that opens through a side wall above the main surface of the grate, and a plurality of peripherally arranged members of greater height each of substantially triangular form in horizontal cross section, with the apex pointing in the direction of rotation of the grate, the top surface of each peripheral member being inclined downward from said apex and also in opposite direction from a longitudinal central line, whereby the fuel through which it passes will be deflected toward both the center and periphery of the grate.

1,173,694. ARTIFICIAL BAIT. JOHN A. WITTY, Whitehall, Mich. Filed Sept. 19, 1912. Serial No. 721,192. (Cl. 43—30.)



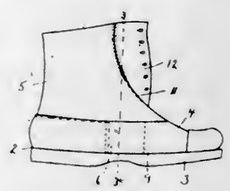
An artificial bait comprising a body member provided with an elongated slot, a pivot pin extending transversely through said body member, and transversely across said elongated slot, a fish hook pivoted upon said pin and having its substantially curved back portion protruding from the slot when in inoperative position, a second pin extending transversely through the slot at its other end, and with which the curved yieldable portion of the fish hook adjacent the hook proper engages, so as to yieldably hold the spear of the hook normally within the slot, the pivoted end of the hook having a lateral extension, a member slidably mounted in the body longitudinally and having a connection with the extension, the back portion of the hook to be depressed by the jaws of the fish to throw the hooked end of the hook outwardly, and upon a pulling action upon said member the hooked end is actually further to pierce the fish.

1,173,695. LEVELING DEVICE FOR POOL AND BILLIARD TABLES. JOHN W. WOOLEY, Spokane, Wash. Filed July 20, 1915. Serial No. 40,881. (Cl. 46—13.)



In combination, a table leg having a bore formed concentrically and vertically in the lower portion of the leg and provided with a pair of countersinks adjoining the lower portion of the bore, a plate permanently carried by but capable of being removed from the leg received in one of the countersinks, a threaded member threaded through said plate and passing up through the bore and provided with a disk pate at its lower end adapted to enter the other countersink, one of the countersinks and the first plate being correspondingly rectangular in contour, to prevent rotation of the first plate, the second plate and the other countersink being circular so that one may be received by the other thereby embedding the circular plate in the leg obscured from view, the second plate having its under surface convexed, so that it may have a single contact with the flooring and may be easily rotated.

1,173,696. HEALTH-SHOE. LALLIE ZERGA, Philadelphia, Pa., assignor of one-half to H. J. Rosegrant, Philadelphia, Pa. Filed Apr. 8, 1915. Serial No. 19,853. (Cl. 36—71.)



1. As an article of manufacture a shoe, and an arch support forming a part thereof, said arch support consisting of an elastic band secured under tension at its upper and lower ends to portions of the shoe in the region of the arch.

2. As an article of manufacture a shoe, and an arch support forming a part thereof, said arch support consisting of an elastic band secured under tension at its upper and lower ends to portions of the shoe in the region of the arch and on the inside portion thereof, considered relatively to a pair of shoes.

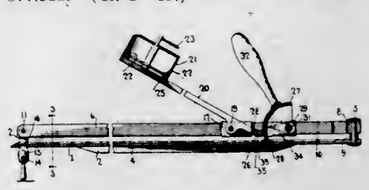
3. A health shoe comprising a sole, a vamp, an upper, and a strip of elastic material adapted to act as an arch support secured under tension to the points of connection of the sole with the vamp and the vamp with the upper.

4. A health shoe comprising a sole, a vamp, an upper, and a strip of elastic material adapted to act as an arch support secured under tension at its lower and upper edges at the points of the connection of the sole with the vamp and the vamp with the upper, in the region of the arch.

5. A health shoe comprising a sole, a vamp, an upper, and a strip of elastic material adapted to act as an arch support secured under tension at its lower and upper edges at the points of the connection of the sole with the vamp and the vamp with the upper, in the region of the arch, the two opposite remaining edges being free.

[Claims 6 to 8 not printed in the Gazette.]

1,173,697. STAPLING-MACHINE. EDWARD THOMAS ALLAN, Cincinnati, Ohio. Filed Dec. 16, 1914. Serial No. 877,523. (Cl. 1—49.)



1. A stapling machine of the character described comprising an anvil having one end pointed, a staple driving mechanism pivotally mounted on the opposite end of the anvil and adapted to be swung around out of alinement therewith, and means for clamping the anvil in alinement with the staple driving mechanism.

2. A stapling machine of the character described comprising an anvil having a pointed end, a vertically disposed bolt carried by the opposite end, a staple driving mechanism pivotally mounted upon said bolt and adapted to be swung out of alinement with the anvil, and means for clamping the anvil to the staple driving mechanism in alinement therewith.

3. A stapling machine of the character described comprising an anvil having a vertically disposed bolt at one end, side rails pivotally mounted upon said bolt, means for clamping the side rails to the opposite end of the anvil, a staple feeding mechanism carried by the side rails and movable thereon, and a hammer carried by the side rails and movable thereon, substantially as shown and described.

4. A stapling machine of the character described comprising an anvil, a bolt carried by one end of the anvil, side rails pivotally mounted upon the said bolt, a mechanism slidably carried by the side rails and having means for automatically feeding the staples to a point between the side rails, and a hammer movable on the side rails adjacent the staple feeding means and adapted to drive the staples downwardly, substantially as shown and described.

5. A stapling machine comprising an anvil, a bolt carried by one end of the anvil, side rails pivotally mounted upon the bolt, links carried by the opposite ends of the side rails and having a cam adapted to engage the lower face of the anvil for clamping the anvil and side rails together, a movable member carried by the side rails and having an upwardly inclined run-way carrying a staple receptacle at its upper end, to guide the staples down

between the side rails, and a hammer carried by said movable member and adapted to force the staples downwardly as they leave the run-way.

[Claims 6 to 8 not printed in the Gazette.]

1,173,698. COAGULANT FOR FILTERING. JOHN W. BLOCK, Joliet, Ill. Filed June 27, 1914. Serial No. 847,788. (Cl. 210—1.)

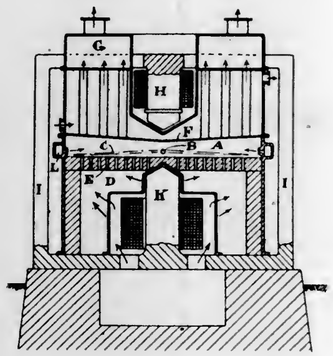
1. In a process of the kind described, the addition of a coagulant to the water and the addition thereto of a soluble compound of titanium.

2. In a process of the kind described, the addition of a coagulant to the water, and the addition thereto of titanium sulfate.

3. In a process of the kind described, the addition of aluminum sulfate to the water, and the addition thereto of a soluble compound of titanium.

4. In a process of the kind described, the addition of aluminum sulfate to the water, and the addition thereto of titanium sulfate.

1,173,699. ELECTRICAL FLAME-ARC FURNACE FOR OXIDIZING THE NITROGEN OF THE AIR. HARALD BONNEVIE, Rjukan, Norway, assignor to Norsk Hydro-Elektrisk Kvælstofaktieselskab, Christiania, Norway. Filed Nov. 30, 1914. Serial No. 874,900. (Cl. 204—31.)



1. In an electric furnace, an extended narrow furnace chamber, a cooler forming one wall of said chamber, means to produce a magnetically dispersed arc in said chamber and means to direct reacting gas through said narrow chamber and arc to said cooler.

2. In an electric furnace, a horizontal narrow extended furnace chamber, a fire tube boiler forming the upper wall of said chamber, means to produce a dispersed arc within said chamber, a portion of said means surrounded by said boiler, and means to supply reacting gases through the bottom wall of said chamber for passage through said arc to said boiler.

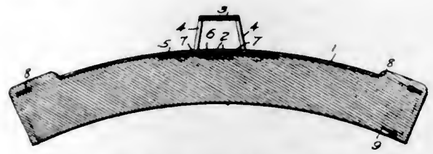
3. In an electric furnace, means to produce a dispersed arc, means to direct reaction gases through the arc, and means to direct cooling gas along the rear surface of said arc for mixture with the reaction gases as soon as they emerge from said arc.

4. In an electric furnace, a narrow furnace chamber, a fire tube boiler forming one wall of said chamber, means to produce a magnetically dispersed arc in said chamber, means to pass reaction gases through said arc to said boiler, and means to supply cooling air between said arc and boiler.

5. In an electric furnace, a narrow furnace chamber, a fire tube boiler forming the upper wall of said chamber, means in said chamber to produce an arc, magnets to disperse said arc into umbrella form, means to direct radial currents of air over the convex surface of the arc, and means to supply reaction gases through the bottom wall of said furnace, one of said magnets being surrounded by said boiler.

[Claim 6 not printed in the Gazette.]

1,173,700. BRAKE-SHOE. JUDSON COOK, Leominster, Mass. Filed Jan. 14, 1916. Serial No. 72,103. (Cl. 188—82.)

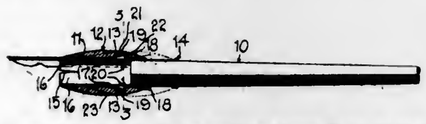


1. A brake shoe having embeded therein a longitudinally extending reinforcing member, the middle portion of said reinforcing member being struck up to form an attaching lug, tongues formed from the attaching lug portion, and means for locking said tongues together.

2. A brake shoe comprising a reinforcing back provided with overlapping circular openings in each end thereof, tongues cut from the back near the center thereof, an attaching lug struck up from the material surrounding said tongues, means for locking said tongues together, and a body portion cast upon the back.

3. A brake shoe comprising a reinforcing back, tongues cut from the back near the center thereof, an attaching lug struck up from the material surrounding the tongues, a plate provided with an opening for the reception of the ends of the tongues secured to the bottom of the back, and a shoe body cast upon the back.

1,173,701. PENHOLDER. RAFAEL M. ANDREU, Habana, Cuba. Filed June 16, 1915. Serial No. 34,467. (Cl. 120—101.)

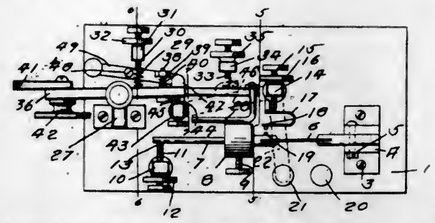


A pen holder including a staff, a sleeve fixed upon one end thereof, stop tongues carried by the sleeve and extending rearward and outward therefrom, a sleeve movable upon the fixed sleeve and being of less length than the fixed sleeve and adapted to clamp the butt of a pen point against the outer end of the pen, said movable portion being provided with an internal annular groove, said stop tongues being engageable in the groove for limiting the outward movement of the movable sleeve and being depressed by the movable sleeve when the same is moving away from the forward end of the fixed sleeve, the annular groove permitting rotary movement of the movable sleeve upon the stop tongues and upon the fixed sleeve.

1,173,702. TELEGRAPH-TRANSMITTER. CLAYTON BELL, Centralia, Mo. Filed June 21, 1915. Serial No. 35,374. (Cl. 178—82.)

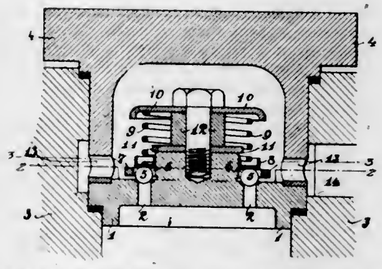
1. In a telegraph transmitter, the combination with a vibrator, of a lever having an arm thereon adapted to engage the vibrator, a second lever mounted on the pivot of the first lever and movable relative thereto, means on the second lever for engaging the first lever to cause the movement of the first lever when the second lever is moved in one direction and resilient means for opposing the movement of the second lever independently of the first lever in the other direction.

2. In a telegraph transmitter, the combination with a vibrator, of a lever for controlling the movement of the same, a second lever mounted on the pivot of the first lever and movable independently thereof, the said levers being movable together to release the vibrator and means for limiting the independent movement of the second lever with relation to the first lever.



3. In a telegraph transmitter, the combination with a vibrator, of a lever for controlling the same, a second lever mounted on the pivot of the first lever and movable independently thereof, means on the second lever for engaging the first lever to cause the movement of the latter in one direction and resilient means for opposing the independent movement of the second lever, and resilient means adapted to coact with the first mentioned resilient means to move the levers together to arrest the movement of the vibrator.

1,173,703. PUMP-VALVE. HERMANN BENKERT, Hamburg, Germany, assignor to Georg Niemeyer, Hamburg, Germany. Filed Dec. 15, 1913. Serial No. 806,901. (Cl. 103—66.)



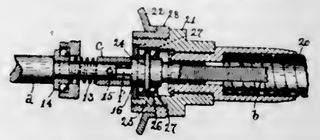
1. A valve for high speed compressors, comprising in combination, a valve body having a plurality of valve openings, balls seated over said valve openings, a plate resting commonly over said balls, resilient means for bearing said plate upon said balls, and a cage surrounding said balls so as to permit free vertical movement of the latter.

2. A valve for high speed compressors, comprising in combination, a valve body having a plurality of valve openings, balls seated over said valve openings, a member bearing equally upon all of said balls, a resilient means acting on said bearing-member to maintain said balls on their seats, and a guide-cage for preventing horizontal displacement of said balls, but permitting their free vertical movement.

3. A valve for high speed compressors, comprising in combination, a valve body having a plurality of valve openings, balls seated over said valve openings, an annular member having a face bearing equally on all of said balls, a spring bearing upon the upper face of said annular member to keep said balls seated, and a plate having recesses corresponding to said valve openings into which said balls and through which they may operate, without vertical interference, said plate preventing lateral displacement of said balls.

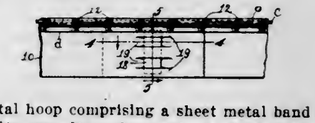
1,173,704. SHAFT-COUPLING. LEON E. BLANCHARD, Boston, Mass., assignor, by mesne assignments, to Edward T. Newton, Holyoke, Mass. Filed May 18, 1910. Serial No. 561,978. (Cl. 64—13.)

The combination with a shaft, of a second shaft, a casing in which said second shaft is revoluble, means for supporting said second shaft in said casing, means for securing said second shaft in fixed position with relation to said casing to enable said second shaft to be moved with said casing in the direction of the length of said second shaft, and a coupling for automatically connecting said shafts together by movement of said casing toward the first-mentioned shaft, said coupling comprising a sleeve member movable longitudinally on one of



said shafts and provided at one end with a longitudinally extended slot, a second member having a fixed relation to the other of said shafts and of a width greater than the inner diameter of said sleeve to enable it to engage one end of said sleeve and to enter the slot therein to couple the two members together, and a spring coöperating with the movable coupling member to effect engagement of the latter with the fixed coupling member when the latter registers with the slot in said sleeve member.

1,173,705. SHEET-METAL HOOP. EDWARD I. BRADDOCK, Winchester, Mass., assignor, by direct and mesne assignments, to Lamb & Nash Company, Kittery, Me., a Corporation of Maine. Filed Apr. 26, 1912. Serial No. 693,328. (Cl. 217—91.)



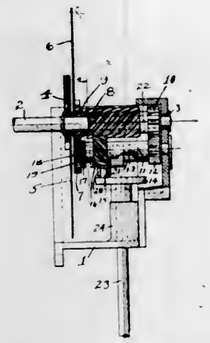
1. A metal hoop comprising a sheet metal band or strip having at its opposite ends, portions which are narrower than the intermediate portion of said strip to form on one side of the strip a projecting portion which is folded to form a hollow bead having its opposite enda removed from the opposite ends of the metal strip, to leave end portions which project beyond the ends of the hollow bead, means for securing the projecting end portions together with the ends of the hollow bead in proximity to and opposing each other and with one of the projecting end portions extended under one end of the beaded portion of the strip on the outer side of the strip and with the other projecting end portion extended under the opposite end of the beaded portion of the strip on the inner side of the latter, and a wire in said hollow bead extended from one end of the hollow bead into the opposing end of said bead, and corrugations in said bead and wire forming outwardly extended projections.

2. A metal hoop comprising a sheet metal band or strip having at its opposite ends portions which are narrower than the intermediate portion of said strip to form on one side of the strip a projecting portion which is folded to form a hollow bead having its opposite ends removed from the opposite ends of the metal strip, to leave end portions which project beyond the ends of the hollow bead, means for securing the projecting end portions together with the ends of the hollow bead in proximity to and opposing each other and with one of the projecting end portions extended under one end of the beaded portion of the strip on the outer side of the strip and with the other projecting end portion extended under the opposite end of the beaded portion of the strip on the inner side of the latter, and a wire in said hollow bead extended from one end of the hollow bead into the opposing end of said bead.

1,173,706. MOTION-PICTURE SHUTTER. WALTER E. CARLETON, Brooklyn, N. Y. Filed Apr. 22, 1915. Serial No. 22,994. (Cl. 88—19.3.)

1. In a motion picture shutter, the combination of a frame, a driving shaft having a spiral gear rotatably mounted thereon, a shutter blade carried by said driving

shaft, a shutter blade carried by said spiral gear, a counter shaft, said driving and counter shafts having intermeshing fixed gears, a spiral gear movable longitudinally upon said counter shaft but not rotatable thereon and intermeshing with the first spiral gear, and means for moving said second spiral gear upon the counter shaft for varying the angular position of the shutter blades.



2. In a motion picture shutter, the combination of a frame, a driving shaft having a spiral gear rotatably mounted thereon, a shutter blade carried by said driving shaft, a shutter blade carried by said spiral gear, a fixed gear carried by the driving shaft, a counter shaft having a fixed gear intermeshing with the first fixed gear, a spiral gear mounted upon the counter shaft and meshing with the first spiral gear, and means for moving the second spiral gear during engagement with first spiral gear transversely so as to vary the angular position of the shutter blades.

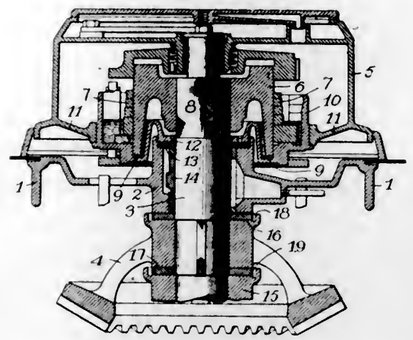
3. In a motion picture shutter, the combination of a frame, a driving shaft having a spiral gear rotatably mounted thereon, a shutter blade carried by said driving shaft, a shutter blade carried by said spiral gear, a fixed gear carried by the driving shaft, a counter shaft having a sleeve rotatably mounted thereon, a gear fixed upon the sleeve intermeshing with the first fixed gear, a spiral gear mounted upon the sleeve intermeshing with the first spiral gear, said second spiral gear being movable longitudinally upon said sleeve but not rotatable thereon, and means for shifting the position of the spiral gear upon the sleeve to vary the angular position of the shutter blades.

4. In a motion picture shutter, the combination of a frame, a driving shaft rotatably mounted therein, a spiral gear rotatably mounted upon said shaft, a shutter blade carried by said driving shaft, a shutter blade carried by said spiral gear, a counter shaft, gears fixed upon the driving and counter shafts which intermesh with each other, a spiral gear mounted upon the counter shaft and intermeshing with the first spiral gear, said second spiral gear being slidable longitudinally upon the counter shaft but not rotatable thereon, a crosshead straddling said second spiral gear, and means engaging said crosshead for moving the spiral gear longitudinally of the counter shaft whereby the angular position of the shutter blades is varied.

5. In a motion picture shutter, the combination of a frame, a driving shaft rotatably mounted therein, a spiral gear rotatably mounted upon said shaft, a counter shaft, a shutter blade carried by said driving shaft, a shutter blade carried by said spiral gear, a sleeve rotatably mounted upon the latter, gears fitted upon the driving shaft and sleeve, said gears intermeshing with each other, a spiral gear mounted upon said sleeve and intermeshing with the first spiral gear, said second spiral gear being movable longitudinally on the sleeve but not rotatably thereon, and means for moving said second spiral gear longitudinally upon the counter shaft whereby the angular position of the shutter blades is varied.

[Claims 6 and 7 not printed in the Gazette.]

1,173,707. WIRE-DRAWING BLOCK. ELBERT H. CARROLL, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 28, 1913. Serial No. 751,246. (Cl. 205—20.)



1. The combination of a table or framework having a journal bearing for a vertical shaft, a shaft journaled in said bearing, a wire drawing block inclosing the upper end of said shaft, slidable longitudinally of and connected to rotate with said shaft, and means for supporting the weight of said block upon said journal bearing.

2. The combination of a vertical shaft, a wire drawing block connected to said shaft so as to rotate therewith and capable of a vertical movement independently of said shaft, a fixed framework beneath said block, and means for supporting the weight of said block in said fixed framework.

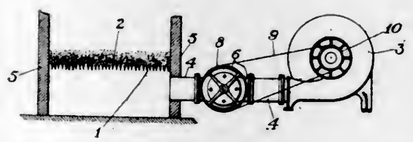
3. The combination of a vertical shaft, a wire drawing block, a clutching mechanism between said block and said shaft having a slidable mounting on said shaft and rotatably connected thereto, and means for supporting the weight of said block and said clutching mechanism independently of said shaft.

4. The combination of a shaft, a drum having a rotative connection with said shaft but capable of a longitudinal movement thereon, a cup shaped oil reservoir surrounding said drum, a clutching mechanism between said oil reservoir and said drum, a wire drawing block carried by said oil reservoir, and means for supporting said oil reservoir independently of said shaft.

5. The combination of a shaft, a drum slidable longitudinally of said shaft but connected to rotate therewith, said drum being supported independently of said shaft, a wire drawing block driven by said drum, and means for supporting said drum and wire drawing block, whereby the shaft is relieved of the weight of said drum and block.

[Claim 6 not printed in the Gazette.]

1,173,708. METHOD FOR BURNING FUEL. HENRY M. CHANCE, Philadelphia, Pa. Filed Sept. 23, 1915. Serial No. 52,193. (Cl. 110—69.)



1. An improved method for burning fuel which consists in supplying air for combustion to ignited fuel in a series of pulsations of sufficient force to agitate the particles of fuel, whereby the said particles are displaced in their position with relation to each other, in so timing said pulsations as to permit said particles to settle by the action of gravity in the time interval between said pulsations, whereby said particles become stratified in order of their size and weight, and in continuing to supply said air for combustion in pulsations during the combustion of said fuel.

2. An improved method of burning fuel which consists in supplying air for combustion to ignited fuel in a series of pulsations of sufficient force to raise the particles of fuel during the periods of pulsation, whereby the particles of fuel are suspended and floated by said air, in so timing said pulsations as to permit said particles to settle in the time interval between said pulsations, whereby said particles become stratified and arranged in order of their size, and weight, and in continuing said pulsations during the combustion of said fuel.

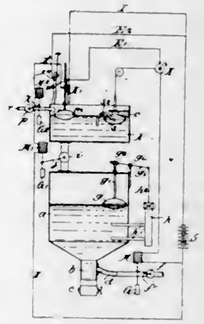
3. An improved method of burning fuel which consists in supplying air for combustion to ignited fuel in a series of pulsations of sufficient force to raise the particles of fuel during the periods of pulsation, whereby the particles of fuel are suspended and floated by said air, in so timing said pulsations as to permit said particles to settle during the time interval between said pulsations, whereby said particles are kept in motion during the cycle from pulsation to pulsation, and in continuing said pulsations during the combustion of said fuel.

4. An improved method for burning fuel which consists in supplying air for combustion to ignited fuel in a series of pulsations of sufficient force to raise the lighter particles of fuel and keep said lighter particles in a state of agitation, in so timing said pulsations as to permit said lighter particles to fall by the action of gravity in the interval between said pulsations, and in continuing said pulsations during the combustion of said fuel.

5. An improved method of burning finely divided fuel such as culm, dust or slack, which consists in supplying air for combustion to ignited fuel in a series of pulsations of sufficient force to agitate the particles of fuel, whereby the said particles are displaced in their position with relation to each other, in so timing said pulsations as to permit said particles to settle by the action of gravity in the time interval between said pulsations, whereby said particles becomes stratified in order of their size and weight, and in continuing to supply said air for combustion in pulsations during the combustion of said fuel.

[Claim 6 not printed in the Gazette.]

1,173,709. APPARATUS FOR PURIFYING WATER. ERNST CLAUSSEN, Hagen, Germany. Filed Jan. 30, 1915. Serial No. 5,295. (Cl. 126—371.)



1. In an apparatus for purifying water having an upper and a lower tank with a communication between them, means depending upon the level of the water in the upper tank by which communication between the tanks is regulated, means for regulating the outlet from the lower tank arranged to be automatically operated before the level of the water in the upper tank has reached its highest position, and a heating arrangement for the contents of the lower tank.

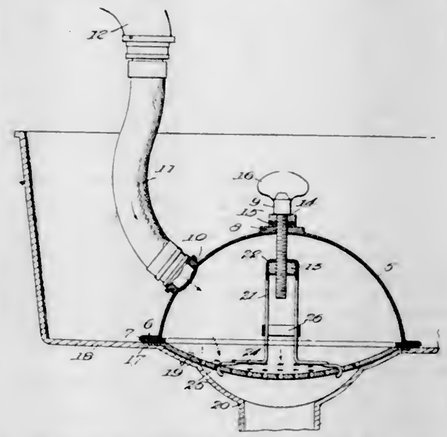
2. In an apparatus for purifying water having an upper and a lower tank with a communication between the tanks, a float regulating communication between the tanks, a float in the upper tank for regulating the outlet of the lower tank, and means arresting upward movement of the last said float before the level of the water has reached its highest position, said float having means whereby it will fill with water when arrested and be emptied when the water in the tank falls to a certain level, means for heating the water in the lower tank, and a float in the lower tank connected with means for starting and stopping the heating device.

3. In an apparatus for purifying water having an upper and a lower tank with a communication between them, a float regulating the communication between the tanks, a float in the upper tank for regulating the outlet of the lower tank, said float having an inlet in its upper part and a siphon for emptying it when sunk down, and a stop for limiting upward movement of said float.

4. In an apparatus for purifying water having an upper and a lower tank with a communication between them, a float regulating communication between the tanks and connected with the outlet of the lower tank for closing it when said float has reached its lowest position, a second float in the upper tank also connected with the outlet of the lower tank and having an inlet opening in its upper part and a siphon for emptying the second float when the water in the upper tank has sunk to a predetermined level.

5. In an apparatus for purifying water having an upper and lower tank with a communication between them, a float regulating communication between the tanks, a float in the upper tank for regulating the outlet of the lower tank said float having means for permitting it to fill and sink after having been raised to a predetermined level and means for emptying it in its lowest position, an electric battery, conductors and solenoids connected with the water regulating device, and contacts actuated by the floats for controlling circuits including the solenoids to control the operation of the water regulating devices.

1,173,710. DRAIN AND WASTE PIPE CLEANER. WILLIAM J. CROCKER, Seattle, and DE LANCE WALLACE, Walla Walla, Wash. Filed Mar. 30, 1915. Serial No. 18,003. (Cl. 4—1.)



1. A device of the class described including a dome provided with a marginal flange adapted to receive a compressible washer, said dome being further provided with a nipple adapted to be connected with a supply of water under pressure, a bolt carried by the dome and movable relatively thereto, a nut carried by the bolt within the

dome, means for preventing leakage around the bolt, and a clip provided with means for engaging the nut and with means for engaging the straining device of a fixture whereby the dome may be tightened against the floor of said fixture, substantially as described.

2. In a device of the class described, the combination of a dome adapted to be connected with a supply of water under pressure and adapted to be secured upon the floor of a fixture adjacent the waste pipe of the fixture, a nut, a clip adapted to engage the straining device of the fixture, and being provided with means for engaging the nut, and means carried by the dome and adapted to engage the nut for drawing the dome and clip toward and away from each other for respectively securing the dome in place and allowing removal of the same.

1,173,711. CIRCUIT-COUPLING. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed June 28, 1913. Serial No. 776,217. (Cl. 173—328.)

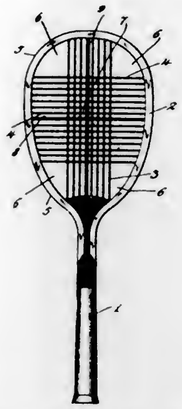


1. A circuit coupler including two coupling members carrying complemental contacts; a spring for pressing one of these contacts toward the other; means whereby the coupling members may be positioned in partially separated relation; an insulated plunger carried by one of the coupling members; and a spring structure for pressing said plunger into engagement with the other coupling member when the coupling members are in partially separated relation mechanically to hold the coupling members in substantially fixed relation when partially separated, the spring pressed contact constituting a barrel that receives the latter spring and through whose contacting end the plunger projects.

2. A circuit coupler including two coupling members carrying complemental contacts, one of these contacts upon one of the coupling members being tubular; means whereby the coupling members may be positioned in partially separated relation; and a spring pressed plunger operating in the bore of the tubular contact and engaging the coupling member complemental to that coupling member which carries the aforesaid tubular contact, when the coupling members are in partially separated relation, to hold the coupling members in substantially fixed relation when partially separated.

3. A circuit coupler including two coupling members; a spring pressed tubular element carried by one of the coupling members; another element in the form of a plug within the bore of the aforesaid element; and means whereby the coupling members may be positioned in partially separated relation, one of the aforesaid elements co-acting with the coupling member complemental to the coupling member that carries this element to hold the coupling members in substantially fixed relation when partially separated.

1,173,712. TENNIS-RACKET. HARRY D. DU BOIS, West Orange, N. J. Filed Nov. 29, 1915. Serial No. 63,915. (Cl. 46—24.)



1. A racket comprising a frame, an impact cushion within said frame and of less area than the area inclosed by the frame and means connecting said cushion with those sections of the frame which lie between the shoulders thereof, said cushion having no connection with said shoulders whereby free spaces are formed opposite the latter.

2. A racket comprising a frame, a group of strings extending parallel with each other and longitudinally of the frame, and a second group of strings extending transversely to and intersecting said first group, said strings being connected with those sections of the frame which lie between the shoulders thereof and having no connection with said shoulders whereby an impact cushion is formed within said frame and free spaces are formed opposite said shoulders.

3. A racket comprising a frame, a group of strings extending parallel with each other and longitudinally of the frame, and a second group of strings extending transversely to and intersecting said first group, said strings being interwoven at their points of intersection and connected with those portions of the frame lying between the shoulders and having no connection with said shoulders whereby a woven impact cushion is formed within said frame and free spaces are formed opposite said shoulders.

4. A racket comprising a frame, a group of strings extending parallel with each other and longitudinally of the frame, a second group of strings extending transversely to and intersecting said first group, said strings being connected with those sections of the frame which lie between the shoulders thereof and having no connection with said shoulders whereby an impact cushion is formed within said frame and free spaces are formed opposite said shoulders, and anchoring strings connected with the frame and with each string of said groups whereby the latter strings are prevented from spreading under the impact of the ball.

1,173,713. GOLF-STANDARD. WILLIAM S. FLYNN, Haverford, Pa. Filed Aug. 7, 1915. Serial No. 44,154. (Cl. 46—4.)

1. In a golf standard, a staff having a lower end portion adapted to be inserted into a support, a hollow member surrounding the upper end portion of the staff, means to hold the upper portion of said member and said staff together, and a sleeve surrounding said staff and having an outwardly and upwardly extending flange surrounding the lower portion of said member and a securing pin penetrating said staff and said sleeve.

2. In a golf standard, a staff having a lower end portion adapted to be inserted into a support, a hollow member surrounding the upper end portion of the staff and extending over the same, a screw-threaded pin secured to and extending upwardly from the upper end of said staff and through an opening in said member, and a head screwed on to said pin and clamping said member between said head and the upper end of said staff.



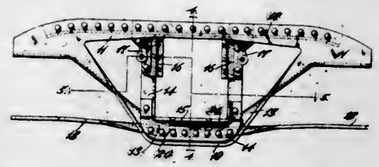
3. In a golf standard, a staff having a lower end portion adapted to be inserted into a support, a hollow member surrounding the upper end portion of the staff and extending over the same, a pin having screw threads on each end portion thereof and screwed into the upper end portion of the staff and projecting upwardly from the upper end of the staff and through an opening in said member, a ferrule surrounding the upper end portion of the staff and the pin therein, and a head screwed on to the upwardly projecting end of the pin and clamping said member between said head and the upper end of said staff.

4. In a golf standard, a hollow staff having a lower end portion adapted to be inserted into a support, a hollow member surrounding the upper end portion of the staff, a plug secured in the upper end portion of the staff, a pin having screw threads on each end portion thereof and screwed into said plug and projecting upwardly from the upper end of the staff and through an opening in said member, a ferrule surrounding the upper end portion of the staff and the plug and the pin therein, and a head screwed on to the upwardly projecting end of the pin and clamping said member between said head and the upper end of said staff.

5. In a golf standard, a staff having a lower end portion adapted to be inserted into a support, a sleeve surrounding and secured to said staff and having an outwardly and upwardly extending flange, a hollow member surrounding the upper portion of the staff and formed of interwoven wickers some of which extend around the member and others of which extend longitudinally of the member and have free end portions projecting below the wickers which extend around the member, said free end portions being inclosed within said flange, and means to hold the upper portion of said member and said staff together.

1,173,714. CAR-TRUCK SIDE FRAME. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed July 6, 1915. Serial No. 38,248. (Cl. 105—243.)

1. A car truck side frame comprising a main longitudinal frame member having its ends channel shaped, the side walls of said channel being separated along approximately horizontal lines throughout the middle portion of their length, and the bottom portion of said channel being bent downward and twisted or turned inside out into inverted channel shape in cross-section, spaced vertical members connecting the bottom portion of said frame with the top portions thereof and inclosing a space for the bolster and springs, and a longitudinal brace member connecting said top portions between their ends and the tops of the vertical members, said members being rigidly secured together and constituting a truss for supporting vertical loads and a webbed girder for resisting horizontal thrusts.



2. A car truck side frame comprising a main longitudinal frame member having its ends channel shaped, the side walls of said channel being separated along approximately horizontal lines throughout the middle portion of their length, the top portions thereof being spaced apart and the bottom portion being bent downward and twisted outward and downward into inverted channel shape in cross-section, spaced vertical members connecting the bottom portion of said frame with the top portions thereof and inclosing a space for the bolster and springs, and a longitudinal brace member connecting said top portions throughout their length, said members being rigidly secured together and constituting a truss for supporting vertical loads and a webbed girder for resisting horizontal thrusts.

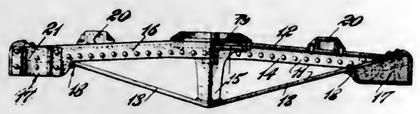
3. A car truck side frame comprising a main longitudinal frame member having its ends channel shaped, the side walls of said channel being separated along approximately horizontal lines throughout the middle portion of their length, and the bottom portion thereof being spaced below the top portions and of inverted channel shape in cross-section, said bottom portion having outwardly extending flanges along the lower edges of its side walls, spaced vertical members connecting the bottom portion of said frame with the top portions thereof and inclosing a space for the bolster and springs, and a longitudinal brace member connecting said top portions, said members being rigidly secured together.

4. A car truck side frame comprising a main longitudinal frame member having its ends channel shaped, the side walls of said channel being separated along approximately horizontal lines throughout the middle portion of their length, and the bottom portion thereof being spaced below the top portions and of inverted channel shape in cross-section, spaced vertical members connecting the bottom portion of said frame with the top portions thereof and inclosing a space for the bolster and springs, said vertical members being connected at their bottom ends by an inverted channel shape member which is fitted over and incloses the side walls of said bottom portion, and a longitudinal brace member connecting said top portions, said members being rigidly secured together.

5. A car truck side frame comprising a main longitudinal frame member having its ends channel shaped, the side walls of said channel being separated along approximately horizontal lines throughout the middle portion of their length, and the bottom portion thereof being bent downward with its edges twisted downward and outward at the middle into an inverted channel shape, spaced vertical members connecting the bottom portion of said frame with the top portions thereof and inclosing a space for the bolster and springs, and a longitudinal brace member connecting said top portions between their ends and the tops of the vertical members, said members being rigidly secured together, and a tie rod arranged below said truss for connecting the journal box pedestals, said tie rod being removably secured between the side walls of said bottom portion.

[Claims 6 to 10 not printed in the Gazette.]

1,173,715. PRESSED-STEEL BOLSTER. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed July 26, 1915. Serial No. 41,826. (Cl. 105—107.)



1. A car part having a truss member with side sections forming compression chords and a middle section forming a tension chord integrally connected at their ends, a middle brace positioned between said sides and bearing on said tension chord, and a top channel-shape member inclosing said sides and being riveted thereto from end to end, said channel member being connected at the middle to said brace.

2. A car part having a truss member with side sections forming compression chords and a middle section forming a tension chord integrally connected at their ends, a middle brace positioned between said sides and bearing on said tension chord, and a top channel-shaped member inclosing said sides and being riveted thereto from end to end, said channel member being connected at the middle to said brace, and the ends of said channel being bent down to inclose the ends of said truss member and form with the sides thereof pockets for bearing blocks at the ends of said truss member.

3. A car bolster having a truss member with side sections forming compression chords and a middle section forming a tension chord integrally connected at their ends, a middle brace positioned between said sides and bearing on said tension chord, and a top channel-shape member inclosing said sides and being riveted thereto from end to end, said channel member being connected at the middle to said brace, and a center bearing plate and side bearing plates riveted to the top of said channel member.

4. A car part having a truss member with side sections forming compression chords spaced apart farther at the middle than at the ends and a middle section forming a tension chord, said sections being integrally connected at their ends, a middle brace positioned between said sides and bearing on said tension chord and a top channel-shape member widest at the middle and growing narrower toward the ends to conform to the spacing of said side sections, said channel-member inclosing said sides and being riveted thereto from end to end, said channel-member being connected at the middle to said brace.

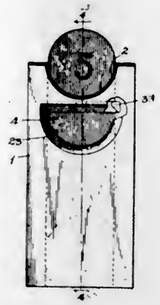
5. A car part having a truss member, a middle brace and a top channel-shape member riveted to said truss member from end to end, said channel-member being connected at the middle to said brace, and the ends of said channel being bent down to inclose the ends of said truss member.

[Claims 6 to 8 not printed in the Gazette.]

1,173,716. MAGNETIC COIN-TESTING MECHANISM FOR COIN-CONTROLLED MACHINES. ALBERT G. GROVER, New York, N. Y., assignor to Autosales Gum & Chocolate Company, a Corporation of New York. Filed May 29, 1914. Serial No. 841,743. (Cl. 194—101.)

1. In a magnetic coin-testing mechanism, a casing provided with a coin-chute, a pivoted framework having an arm adapted to be projected across said coin-chute, a magnet supported on said framework in a plane parallel with the plane of said coin-chute and having its poles substantially in alinement with said coin-chute, and means for so balancing said framework that said arm is normally out of the coin-chute, whereby a downward push on a magnetic disk adhering to the poles of said magnet overbalances said framework and causes said arm to move across the coin-chute as a positive stop for the magnetic disk.

2. In a magnetic coin-testing mechanism, a casing provided with an upright coin-chute, a pivoted framework having a horizontal arm at its upper end, a magnet supported loosely on said framework in an upright position at one side of the pivot, the poles of said magnet being substantially in alinement with said coin-chute, and means for normally balancing said framework to hold said arm out of the coin-chute, whereby a downward push on a magnetic disk adhering to the poles of said magnet overbalances said framework and causes said arm to move across the coin-chute as a positive stop for the magnetic disk.



3. In a magnetic coin-testing mechanism, a casing provided with a coin-chute, a movable framework mounted within said casing, a magnet resting loosely on said framework and movable bodily in its own plane, the poles of said magnet being substantially in alinement with said coin-chute, stationary means for guiding said magnet in its movements, an arm on said framework adapted to be projected across said coin-chute when a magnetic disk adhering to said magnet is pushed downwardly and thereby operates said framework, and means for so balancing said framework in its normal position that the free end of said arm is normally held out of the coin-chute.

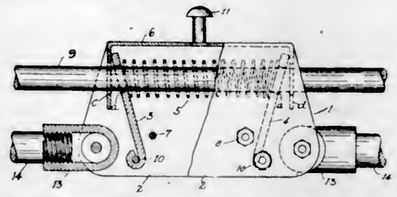
4. In a magnetic coin-testing mechanism, a casing provided with a coin-chute, a framework pivoted within said casing, a magnet supported on said framework at a point near the pivot thereof and having its poles substantially in alinement with said coin-chute, an arm carried by said framework at a greater distance from the pivot than said magnet, whereby a slight movement of said magnet when a magnetic disk is inserted in the coin-chute and pushed downwardly causes an increased movement of said arm and projects the same across the coin-chute as a stop for the magnetic disk, and means for so balancing said framework in its normal position that said arm is normally held out of the coin-chute to permit the free passage of a good coin.

5. In a magnetic coin-testing mechanism, a casing provided with a coin-chute, a balanced framework pivoted within said casing, a magnet resting loosely on said framework and movable in a plane parallel with the plane of said coin-chute, and a stop adapted to be automatically projected across said coin-chute when an inserted magnetic disk adhering to said magnet is pushed downwardly to overbalance said framework, said stop arresting further inward movement of the magnetic disk.

[Claims 6 to 11 not printed in the Gazette.]

1,173,717. STEERING APPARATUS. WILLIAM A. HALL, San Diego, Cal., assignor of one-half to Renhart R. Hering, Crosby, N. D. Filed Feb. 8, 1915. Serial No. 6,956. (Cl. 74—39.)

1. In a steering apparatus, a supporting member mounted rigidly on other supports on a vehicle, a plurality of clamping members each pivotally mounted at its one end in a casing forming part of said steering apparatus, and at the other end reciprocally mounted on said first supporting member and adapted to clamp thereon, means mounted in said casing adapted to regulate the swing of said clamping members and facilitate the reciprocation of said steering apparatus on said first named supporting member, means for holding said clamping members in clamping contact with said support, and a means for releasing said clamping members.



2. In a steering apparatus, a supporting member mounted rigidly on a vehicle, a casing reciprocally mounted on said support member and attached to and carried by the steering rod of the vehicle, a plurality of clamp members each pivotally mounted at one end in said casing and at the other end reciprocally mounted on said support, spring means mounted on said support between said clamp members adapted to force said clamp members into clamping engagement with said support, a release means reciprocally mounted on said support adapted to release said clamp members, stop means in said casing adapted to limit the swing of said clamp members, and means mounted in said casing to facilitate its connection to the means controlling the steering member of said vehicle.

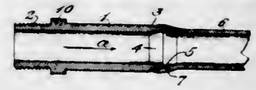
3. In a device of the character described, a plurality of clamping members each at one end pivotally mounted in a casing forming a part of said device, and the other end of each reciprocally mounted on a support rigidly mounted on the steered vehicle, means reciprocally mounted on said support to force said clamping members apart and into clamping engagement with said support, stop means mounted in said casing to regulate the swing of said clamp members, a means reciprocally mounted on said supporting member adapted to release said clamping members, and a means adapted to be connected with a power means to reciprocate said casing, clamping members, spring means and releasing member on said support, mounted on said releasing member.

4. In a device of the character described, a support rigidly mounted on the steered vehicle, a plurality of clamping members each pivotally mounted at one end in a casing forming a part of said steering apparatus and provided near the other end with a hole sufficiently large to allow it to be mounted on said support and to reciprocate freely thereon, coil spring means mounted on said support between said clamping members and in contact therewith, a U-shaped releasing member reciprocally mounted on said support, including, between its two ends, said clamping members and spring means, and adapted to release said clamping members, and with said clamping members and coil spring member to slide longitudinally on said support, a means mounted on said releasing member adapted to facilitate its reciprocation on said supporting member, and means mounted in said casing adapted to regulate the swing of said clamping members and facilitate the reciprocation of said steering apparatus on said first named supporting member.

1,173,718. SOLDER-NIPPLE. FRANKLIN G. HIRST, Philadelphia, Pa., assignor to Franklin Brass Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 23, 1915. Serial No. 35,739. (Cl. 137—75.)

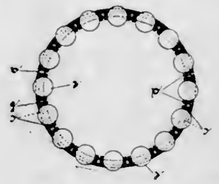
1. A solder nipple, comprising a body having means on one end for connection with a pipe and having the other end formed with oppositely extending beveled faces, whereby the end is adapted for connection interiorly or exteriorly with a pipe.

2. A solder nipple, comprising a body having one end provided with an external beveled face and an internal beveled face to form an annular edge, located approximately in the median line of the wall of the body.



3. A solder nipple, comprising a body having one end internally and externally tapered, with the tapers extending in opposite directions away from the end to form substantially a relatively thin edge.

1,173,719. ROLLER-BEARING CAGE. CARL ALBERT HIRTH, Cannstatt, near Stuttgart, Germany, assignor to Norma Compagnie G. M. B. H., Cannstatt-Stuttgart, Germany. Filed Apr. 30, 1912. Serial No. 694,048. (Cl. 64—62.)



1. A roller-bearing cage, comprising a one-piece spring-like body formed into a ring with its ends normally abutting, and holders bent up inwardly from incisioned portions in the body so as to form spring-like cheeks bent inwardly into shape conforming to the contour of the rollers, the spring-like cheeks engaging the rollers at a peripheral part thereof at the outer side of their axes, and extending inwardly from that point of engagement along the peripheral portion of the rollers to a point on the peripheral portion, at the inner side of their axes, and in proximity to the axes thereof, for embracing the same sufficiently to prevent the rollers from dropping out in inward or outward direction during the spreading of the spring-like body from normal position and its return thereto.

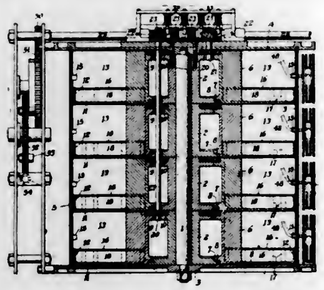
2. A roller-bearing cage, consisting of a one-piece spring-like body formed into a ring with the ends normally abutting, and holders bent up from the ring-shaped body inwardly from incisioned portions in the body, so as to form spring-like cheeks, for retaining the rollers and curved to the shape of the rollers therebetween for embracing the same sufficiently to prevent the rollers from dropping out during the spreading of the spring-like body from normal position and its return thereto, the spring-like cheeks engaging the rollers at their peripheral portion outside of their axes and extending inwardly from that portion to a point at the inside of their axes, and the spring-like body having rectangular openings for a portion of the rollers to pass therethrough.

3. A roller-bearing cage, comprising a one-piece spring-like body formed into a ring with the ends normally abutting having holders bent up inwardly from incisioned portions in the body so as to form spring-like cheeks bent into shape for retaining the rollers and curved to the shape of the rollers retained therebetween for embracing the same sufficiently to prevent the rollers from dropping out during the spreading of the spring-like body from normal position and its return thereto, the spring-like cheeks engaging the rollers at their peripheral portion outside of their axes, and extending inwardly from that portion to a point at the inside of their axes, and flanges along the ends of the ring-shaped body.

1,173,720. AUTOMATIC VENDING-MACHINE. JAMES W. HUGHES, Haddon Heights, N. J., assignor to Hughes-Lippincott Company, a Corporation of Pennsylvania. Filed Mar. 2, 1915. Serial No. 11,465. (Cl. 211—8.)

1. In a device of the character stated, a casing provided with a transparent portion having an opening

therein, a plurality of turrets mounted within said casing and independently rotated, each of said turrets being subdivided into compartments adapted to be brought respectively into juxtaposed relation with said casing opening, a main driving shaft, means to rotate said shaft, independent actuating mechanism for each turret, and means normally inoperative for connecting at will any of said actuating means to said driving shaft whereby a desired turret or turrets may be brought into operation and moved a predetermined distance.



2. In a device of the character stated, a plurality of casings arranged adjacent each other and each having a transparent portion provided with an opening, a plurality of turrets rotatably mounted in each casing, the respective turrets being each subdivided into a plurality of compartments adapted to be brought respectively into juxtaposed relation with said casing opening, a main driving shaft common to all of said casings, means to operate said shaft, independent actuating mechanism for each turret, and means normally inoperative for connecting any of said actuating means to said driving shaft whereby a desired turret or turrets may be brought into operation and moved a predetermined distance at will.

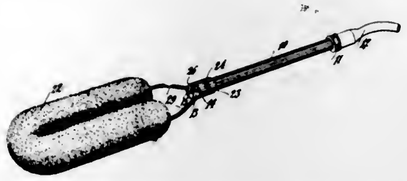
3. In a device of the character stated, a casing provided with a transparent portion having an opening therein, a plurality of turrets mounted within said casing and independently rotatable, each of said turrets being subdivided into compartments adapted to be brought respectively into juxtaposed relation with said casing opening, a main driving shaft, means to intermittently operate said shaft, independent actuating mechanism for each turret, separate means for connecting each actuating mechanism to said driving shaft, means for normally maintaining said connecting means in disconnected position, and a control device for releasing the respective maintaining means whereby any actuating means receives motion from said driving shaft to move its turret.

4. In a device of the character stated, a casing provided with a transparent portion having an opening therein, a plurality of turrets mounted within said casing and independently rotatable, each of said turrets being subdivided into compartments adapted to be brought respectively into juxtaposed relation with said casing opening, a main driving shaft, means to intermittently operate said shaft to make one revolution, independent actuating mechanism for each turret, and a control mechanism operable at will for forming a connection between said driving shaft and any actuating mechanism whereby a desired turret is moved an angular distance substantially corresponding to the width of said opening in the casing.

5. In a device of the character stated, a casing provided with a transparent portion having an opening therein, a plurality of turrets mounted within said casing and independently rotatable, each of said turrets being subdivided into compartments adapted to be brought respectively into juxtaposed relation with said casing opening, a main driving shaft, means to intermittently operate said shaft to make one revolution, independent actuating mechanism for each turret, a control mechanism operable at will for forming a connection between said driving shaft and any actuating mechanism whereby a desired turret is moved an angular distance substantially corresponding to the width of said opening in the casing, and means to automatically return said control mechanism to normal inoperative position.

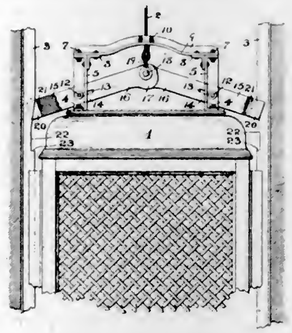
[Claims 6 to 12 not printed in the Gazette.]

1,173,721. FOUNTAIN-BRUSH. MAX HURVITZ, New York, N. Y., assignor, by direct and mesne assignments, to Excelsior Brush Co. Inc., a Corporation of New York. Filed July 30, 1915. Serial No. 42,701. (Cl. 15—53.)



A brush of the character described comprising a hollow handle adapted for connection with a water supply pipe and provided at its forward end with outlet openings, with longitudinal recesses extending backward from said forward end along opposite sides and with lateral holes at the rear ends of said longitudinal recesses, a detachable brush head provided with wire shanks fitting said longitudinal recesses and having inturned ends engaging said lateral holes, and a sliding sleeve movable on said handle and adapted to slide outward over said wire shanks in said recesses to lock said brush head to said handle and inward over said handle to release said brush head.

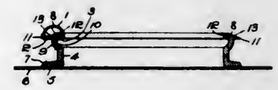
1,173,722. SAFETY ATTACHMENT FOR ELEVATORS. HERMANN KURZ, Newark, N. J., assignor of one-half to William J. Bauer, Jr., Newark, N. J. Filed July 3, 1914. Serial No. 848,722. (Cl. 187—82.)



1. In a safety-appliance for elevators, in combination with an elevator-car, standards mounted upon said car, and a tie-plate secured to and connecting the standards, pivot-bolts connected with said standards, clutch-arms having elongated slots for fulcruming said clutch-arms upon said pivot-bolts, a pivot-bolt for pivotally connecting the inner end-portion of the said clutch-arms, a means of suspension connected with said last-mentioned pivot-bolt, side-rails having stop-notches therein with which the outer ends of said clutch-arms will engage, and a resilient gripping element connected with the side-rail engaging end-portion of each clutch-arm adapted by frictional resistance when engaged with said side-rails to throw said clutch-arms in engaging position relative to said stop-notches.

2. In a safety-appliance for elevators, in combination with an elevator-car, of a supporting cable, standards mounted in pairs near each side of the car, and a tie-plate mounted upon and secured to the pairs of standards, said tie-plate being formed with a tubular hub for the pasage therethrough of a cable, pivot-bolts connected with each pair of standards, clutch-arms having elongated slots for slidably fulcruming said clutch-arms upon said pivot-bolts and between the standards, a pivot-bolt for pivotally connecting the inner end portions of said clutch-arms, a means of suspension connected with said last-mentioned pivot-bolt to which said cable is attached, side-rails having stop-notches therein with which the outer ends of said clutch arms will engage, and a resilient gripping element connected with the side-rail engaging end-portion of each clutch-arm adapted by frictional resistance when engaged with said side-rails to throw said clutch-arms in engaging position relative to said stop-notches.

1,173,723. SPINNING-RING. CHARLES D. LANNING, Boston, Mass., assignor to James K. Lanning, Fall River, Mass. Filed Dec. 16, 1915. Serial No. 67,101. (Cl. 118—59.)



1. A spinning ring having an upright body and a traveler flange, the outer surface of said body adjacent the traveler flange sloping inwardly and downwardly sufficiently to permit the outer portion of the traveler being rocked in operation without substantial contact of its outer end with such sloping portion.

2. A spinning ring having an upright body and a traveler flange, the inner wall of the body adjacent said flange sloping inwardly and downwardly to prevent substantial contact in operation of the inner end of the traveler with the inner wall of the body.

3. A spinning ring having an upright body and a traveler flange, the inner and outer walls of said body adjacent said flange sloping inwardly and downwardly sufficiently to prevent substantial contact in operation of the inner and outer ends of the traveler with said walls of the body.

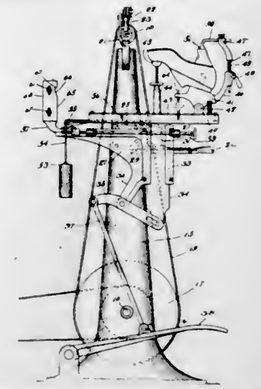
4. In combination, a traveler of open, bowed form and of substantially uniform cross section with its ends spaced apart less than the radial dimension of the traveler flange and a spinning ring, the outer wall of the body adjacent the traveler flange sloping inwardly and downwardly sufficiently to permit the outer portion of the traveler being rocked in operation without substantial contact of its outer end with such sloping portion of the body.

5. In combination, a traveler of open, bowed form and substantially uniform in cross section with its ends spaced apart less than the radial dimension of the traveler flange, and a spinning ring, the inner surface of the body thereof adjacent said flange sloping inwardly and downwardly to prevent substantial contact in operation of the inner end of the traveler with the inner wall of the body.

[Claims 6 to 10 not printed in the Gazette.]

1,173,724. HEEL-BREASTING MACHINE. CHARLES H. LITTLEFIELD, Haverhill, Mass. Filed Apr. 10, 1914, Serial No. 830,841. Renewed Oct. 16, 1915. Serial No. 56,341. (Cl. 12—47.)

1. In a heel-breasting machine, a cutter mounted to rotate about a fixed axis, a shoe support arranged to hold the breast of a heel of a shoe on said support in engagement with said cutter in such position that the axis of the cutter extends transversely of the heel, and means to move said support to carry said heel in the direction of its height, and, at the same time, transversely to said direction in a plane perpendicular to said axis while held in engagement with said cutter.



2. In a heel-breasting machine, the combination of a cutter mounted to rotate about a horizontal axis, a jack for holding a shoe in inverted position and movable in a plane at right angles to the cutter's axis to carry the breast of a heel of a shoe thereon into engagement with the cutter, and means to move said jack vertically, and, at the same time, horizontally while the cutter is in transverse engagement with the heel-breast.

3. In a heel-breasting machine, the combination of a horizontally disposed shaft having a cylindrically shaped cutter thereon adapted to extend the width of a heel, a shoe-support arranged to hold a shoe in inverted position, so that the cutter extends transversely of the breast of the heel thereof, and means to lift said support and to move it rearwardly and forwardly while the heel-breast is held in engagement with the cutter.

4. In a heel-breasting machine, the combination of a horizontally disposed shaft having a cylindrically shaped cutter thereon adapted to extend the width of a heel, a shoe-support arranged to hold a shoe in inverted position, so that the cutter extends transversely of the breast of the heel thereof, treadle-mechanism to lift said support vertically, and a stationary cam disposed to move said support horizontally to different predetermined positions relative to the cutter as it is lifted.

5. In a heel-breasting machine, the combination of a shoe-support, a horizontally disposed shaft having a cutter thereon arranged to extend axially, transversely of the heel-breast of a shoe on said support, means permitting vertical and horizontal movements of said support in a plane at right angles to the axis of the cutter, lifting means for causing vertical movement of said support, and guiding means for moving said support horizontally as it is lifted.

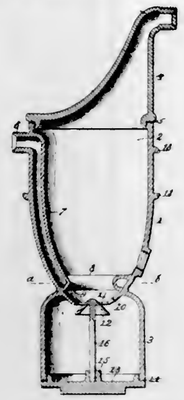
[Claims 6 to 14 not printed in the Gazette.]

1,173,725. GASOLENE-SETTLING TRAP FOR AUTOMOBILES. EDGAR F. LUDWIG and WILLIAM H. SPENCER, Cedar Rapids, Iowa. Filed Sept. 20, 1915. Serial No. 51,667. (Cl. 210—5.)

1. A gasolene settling trap comprising a vessel with a deep upper chamber converging upwardly to an outlet, and at its lower end having an annular duct with an internal, downwardly opening outlet and a contiguous outward inlet, a funnel-like cup below said duct with a central hole therein, a lower, settling chamber with a removable bottom, and a deflector with a flaring conical head below the hole in the cup, and with a stem removably seated in the bottom.

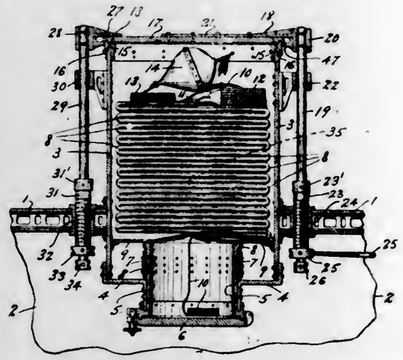
2. A gasolene settling trap, comprising a vessel with an upper receiving chamber and a lower settling chamber separated by a constricted portion or neck, an annular duct inside said neck with an outwardly opening inlet and

an inward, downwardly opening outlet, a funnel-like cup below said duct opening centrally into the lower chamber, a removable bottom for the lower chamber, a top for the upper chamber extending upwardly therefrom and converging to a narrow outlet, external ribs around the upper chamber, and a band between them adapted for attachment to a suitable support.



3. A gasolene settling trap, comprising a vessel with an upper receiving chamber and a lower settling chamber separated by a constricted portion or neck, an annular duct inside said neck with an outwardly opening inlet and an inward, downwardly opening outlet, a removable bottom for the lower chamber, a top for the upper chamber extending upwardly therefrom and converging to a narrow outlet, and means for attaching said chamber to a suitable support.

1,173,726. ESCAPE APPARATUS FOR SUBMARINE BOATS. DAVID C. MARSHALL, Newark, N. J. Filed Apr. 20, 1915. Serial No. 22,550. (Cl. 114—16.7.)



1. An escape apparatus for submarine boats comprising a well connected with the deck of said submarine boat, a hatch connected with the bottom of said well and communicating with the interior of said boat, a hatch-plate for normally closing said hatch, a collapsible tubular-body providing an escape-passage secured by its lower end to said hatch and in communication therewith, said tubular-body when collapsed being stowed in said well, a buoy normally confined in said well, flexible connecting means securing said buoy with the free end of said tubular-body, a line passing longitudinally through said tubular-body, a cover-member for normally closing said well, and means for removing said cover-member from closed relation to said well operatable from within the interior of said boat.

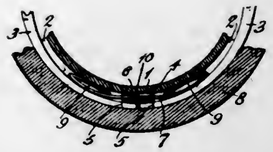
2. An escape apparatus for submarine boats comprising a hatchway formed in connection with the deck-portion of said boat, a hatch-plate for normally closing said hatchway, a collapsible tubular-body providing an escape passage secured by its lower end to said hatchway and in communication therewith, a normally closed compartment above said hatchway for stowing said tubular-body when collapsed, a buoy in said compartment, a light line connected with said buoy and stowed in said compartment above said collapsed tubular-body, a heavy cable connected with the free end of said collapsed body and stowed above the same in said compartment, said heavy cable being connected with the opposite end of said light line, a cover-member for normally closing said compartment to normally retain therein said buoy, tubular-body and interconnecting parts, mechanism for removing said cover-member from closing relation to said compartment operatable from within the interior of said submarine boat, and an elevator-member adapted to be inserted in and passed back and forth through the escape passage of said tubular-body when the latter is extended for use, said elevator-member comprising a cylindrical shell having an opening giving entrance thereto, a conical head at each end of said shell, and means connected with each head for attaching hauling cables thereto.

3. An escape apparatus for submarine boats, comprising a collapsible tubular-body connected by its lower end with said boat, a line normally extending through and stowed with said tubular-body, a normally closed hatchway between the lower end of said tubular-body and the interior of said boat, hauling lines connected with the free end of said tubular-body whereby the free end of the latter may be hauled upward to the surface of the water and as thus extended provide an escape passage therethrough in communication with the interior of said boat, a buoy connected with said hauling lines for conveying the latter to the surface of the water, a normally closed compartment for stowing said buoy, collapsed tubular-body and interconnecting hauling lines, and a removable cover-member for normally closing said compartment, means operatable from within the submarine boat for removing said cover-member to release said buoy and opening said compartment for the withdrawal and extension of said tubular-body therefrom.

4. An escape apparatus for submarine boats comprising a collapsible tubular-body connected by its lower end with said boat, a line normally extending through and stowed with said tubular-body, a normally closed hatchway between the lower end of said tubular-body and the interior of said boat, hauling lines connected with the free end of said tubular-body whereby the free end of the latter may be hauled upward to the surface of the water and as thus extended provide an escape passage therethrough in communication with the interior of said boat, a buoy connected with said hauling lines for conveying the latter to the surface of the water, a normally closed compartment for stowing said buoy, collapsed tubular-body and interconnecting hauling lines, a removable cover-member for normally closing said compartment, means operatable from within the submarine boat for removing said cover-member to release said buoy and opening said compartment for the withdrawal and extension of said tubular-body therefrom, and an elevator-member adapted to be inserted in and passed back and forth through the escape passage of said tubular-body when the latter is extended for use.

5. An escape apparatus for submarine boats comprising a collapsible tubular-body connected by its lower end with said boat, a line normally extending through and stowed with said tubular-body, a normally closed hatchway between the lower end of said tubular-body and the interior of said boat, hauling lines connected with the free end of said tubular-body whereby the free end of the latter may be hauled upward to the surface of the water and as thus extended provide an escape passage therethrough in communication with the interior of said boat, a buoy connected with said hauling lines for conveying the latter to the surface of the water, a normally closed compartment for stowing said buoy, collapsed tubular-body and interconnecting hauling lines, a removable cover-member for normally closing said compartment, means operatable from within the submarine boat for removing said cover-member to release said buoy and opening said compartment for the withdrawal and extension of said tubular-body therefrom, and an elevator-member adapted to be inserted in and passed back and forth through the escape passage of said tubular-body when the latter is extended for use, said elevator-member comprising a cylindrical shell having an opening giving entrance thereto, a conical head at each end of said shell, and means connected with each head for attaching hauling cables thereto.

1,173,727. PISTON. ALBERT J. MICKLEY, New York, N. Y. Filed Aug. 6, 1915. Serial No. 43,967. (Cl. 121—108.)



1. In a piston, a ring, a sealing member for the joint of said ring, and a resilient device, the latter being composed of a body of resilient material having a head adapted to exert pressure on said sealing member and loops on extended ends thereof, said loops being adapted to bear against the piston wall and the ring, the said body to exert its pressure on said sealing member.

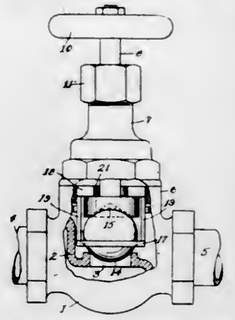
2. In a piston, a ring, a sealing member for the joint of said ring, and a resilient device, said device being composed of a body of resilient material adapted to bear against the piston wall and ring and having a head adapted to exert pressure on said sealing member.

3. In a piston, a piston head having peripheral grooves, rings in said grooves, blocks into which the terminals of said rings are fitted, the edges of opposite flanges of the groove being counterbored to slidingly receive said blocks, the outer faces of said blocks being formed with passages for said terminals, and springs in said grooves between the backs of the rings and the adjacent outer walls of said piston head, said springs having heads intermediate their ends bearing against the backs of the blocks and the adjacent walls of the counterbore and exerting pressure on said blocks and rings.

4. In a piston, a piston head having peripheral grooves, rings in said grooves, blocks into which the terminals of said rings are fitted, the edges of opposite flanges being counterbored to slidingly receive said blocks, the outer faces of said blocks being formed with passages for said terminals, and springs in said grooves between the backs of the rings and the adjacent outer walls of said piston head, said springs having heads intermediate their ends bearing against the backs of the blocks and the adjacent walls of the counterbore and exerting pressure on said blocks and rings, said springs having extended ends formed with loops to force the rings into close contact with the inner walls of the cylinder.

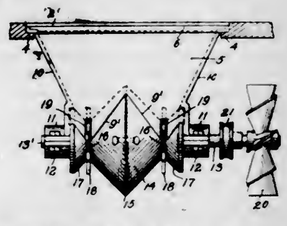
1,173,728. VALVE. RUSSELL A. MILNE, Detroit, Mich., assignor to Picard-Milne Company, a Copartnership comprising Albert C. Picard and Russell A. Milne, Detroit, Mich. Filed June 21, 1915. Serial No. 35,205. (Cl. 137—4.)

A ball-valve comprising a case having a valve seat therein, a valve stem movable toward and from said seat and having an enlarged head thereon, in the under face of which is formed an axial concavity and a radial depression, a ball for coöperating with said head and seat, a cage having a ring for carrying said ball therein, and having a U-shaped aperture for detachably receiving said valve stem above said head to loosely support said cage thereon, said head being adapted to pass over said ball



through said radial depression and to receive said ball in said axial concavity.

1,173,729. RAILWAY-CAR CUSPIDOR. JOHN J. MULDOON, Rochester, Pa., assignor of one-third to Bernardino Viapradre and one-third to Marcus A. Petrell, Rochester, Pa. Filed June 21, 1915. Serial No. 35,346. (Cl. 4—38.)



1. The combination of a railway car floor, a spittle receiving receptacle beneath the floor having a perforate top exposed in the floor, movable means operative within the receptacle for discharging the contents thereof, and a wind wheel at the exterior of the car and operatively connected to said means for actuating the same.

2. The combination of a railway car floor, a spittle receptacle mounted therein, a discharging device rotatable within the receptacle and having a spindle projecting at the exterior of the car, and a wind wheel mounted on the spindle.

3. A spittle receptacle open at the top and having downwardly converging walls, a rotatable device adapted to receive matter directed thereon by the sloping walls and discharge same from the receptacle, and a wind wheel at the exterior of the car and operatively connected to said device.

4. A spittle receptacl open at the top, a device rotatably mounted in the receptacle and having cone-like faces terminating in contracted neck portions, and outlets for said neck portions.

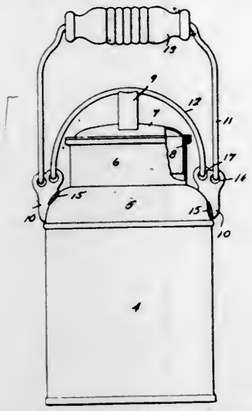
5. A spittle receptacle open at the top, a device rotatably mounted in the receptacle with portions of the device extending to the exterior thereof and with the walls of the receptacle shaped to closely fit the rotating device, and ejecting pins projecting from the device and with slots in the receptacle walls through which the pins are adapted to pass.

[Claim 6 not printed in the Gazette.]

1,173,730. COVERED KETTLE. ANDREW W. NELSON, Terre Haute, Ind., assignor to Columbian Enameling & Stamping Company, Terre Haute, Ind., a Corporation of Indiana. Filed Feb. 25, 1915. Serial No. 10,452. (Cl. 220—22.)

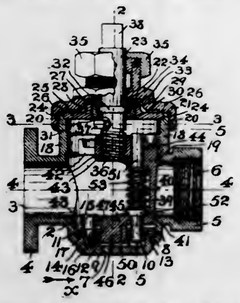
1. In a covered kettle, a body and a cover, in combination with lugs on the body disposed radially and

each having two eyes, a bail for locking the cover having its ends linked with the inner pair of eyes, and a carrying bail having its ends linked with the outer pair of eyes, whereby the carrying bail may swing without interference with the locking bail.



2. A covered kettle comprising a cylindrical body formed with a shouldered portion joining to a neck or mouth, a slip cover insertible in said neck and having an arched handle fixed thereto and provided with a central depression, upstanding lugs on said shouldered portion disposed radially and each having two eyes, a locking bail having its ends linked with the inner pair of eyes to coöperate with said depression, and a carrying bail having its ends linked with the outer pair of eyes, whereby the carrying bail may swing without interference with the locking bail.

1,173,731. VALVE. HALFDAN NORBOM, Bloomfield, N. J. Filed Apr. 17, 1915. Serial No. 21,955. (Cl. 137—7.)



1. A valve comprising a main valve-casing formed with an inlet and an outlet member, a vertically disposed web-shaped and spring-stop controlled closing gate within said valve-casing and normally located in front of said outlet member so as to fully close the same, and means coöperating with said closing gate for primarily raising said gate directly in its position in front of the said outlet member without rotation of said gate and secondarily moving said raised gate horizontally away from in front of said outlet member.

2. A valve comprising a main valve-casing formed with an inlet member and an outlet member, a vertically disposed arc-shaped and spring-stop controlled closing gate within said valve-casing and normally located in front of said outlet member so as to fully close the same, and means coöperating with said closing gate for primarily raising said gate directly in its position in front of the said outlet member without rotation of said gate and secondarily rotating said raised gate horizontally away from in front of said outlet member.

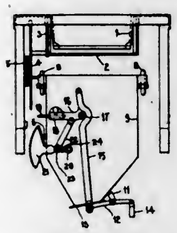
3. A valve comprising a main valve-casing formed with an inlet member and an outlet member, a vertically disposed arc-shaped and spring-stop controlled closing gate within said valve-casing and normally located in front of said outlet member so as to fully close the same, means coöperating with said closing gate for primarily raising said gate directly in its position in front of the said outlet member without rotation of said gate and secondarily rotating said raised gate horizontally away from in front of said outlet member, and a stop-lug within said valve-casing with which the said closing gate is brought into engagement to limit the rotary movement of said gate.

4. A valve comprising a main valve-casing formed with an inlet member and an outlet member, a valve-stem rotatably mounted in said casing, said stem being provided with a screw-threaded portion, a vertically disposed and spring-stop controlled closing gate within said valve-casing and normally located in front of said outlet member so as to fully close the same, and a horizontally disposed member extending from said gate, said member being provided with a screw-threaded hole with which the screw-threaded portion of said valve-stem coöperates for primarily raising said gate directly in its position in front of said outlet member without rotation of said gate and secondarily rotating said raised gate horizontally away from in front of said outlet member.

5. A valve comprising a main valve-casing formed with an inlet member and an outlet member, a valve-stem rotatably mounted in said casing, said stem being provided with a screw-threaded portion, a vertically disposed and spring-stop controlled closing gate within said valve-casing and normally located in front of said outlet member so as to fully close the same, and a horizontally disposed member extending from said gate, said member being provided with a screw-threaded hole with which the screw-threaded portion of said valve stem coöperates for primarily raising said gate directly in its position in front of said outlet member without rotation of said gate and secondarily rotating said raised gate horizontally away from in front of said outlet member and a stop-lug within said valve-casing with which the said closing gate is brought into engagement to limit the rotary movement of said gate.

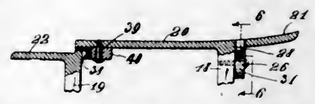
[Claims 6 to 11 not printed in the Gazette.]

1,173,732. AUTOMATIC WEIGHING-SCALE. THOMAS ST. JULIAN BABINGTON PARNALL, Smethwick, England, assignor to W. & T. Avery, Limited, Soho Foundry, Smethwick, England. Filed July 29, 1915. Serial No. 42,608. (Cl. 73—177.)



In an automatic weighing scale, the combination of a valve controlling the supply of material, a linkage controlling the operation of said valve, a lever 6 adapted to control said linkage, a weigh beam upon which is suspended a weigh hopper, a valve controlling the discharge outlet of said weigh hopper, a lever pivotally connected to said discharge valve, a bell-crank lever adapted to rock about a pivot on the weigh hopper one arm of said bell-crank lever being pivotally connected to the discharge valve lever, a cam arm pivoted on said weigh hopper for controlling the operation of the lever 6, and a lever pivoted to the cam arm and to one arm of the bell-crank lever for syncronizing the operations of the bell-crank lever and the cam arm.

1,173,733. SHOE-SUPPORT. EUGENE PEARL, Passaic, N. J. Filed Oct. 25, 1915. Serial No. 57,749. (Cl. 15—58.)



1. In a foot support, the combination with a fixed stand and a plate carried thereby, of a spur vertically operable in said plate, means for positively raising the spur above the surface of said plate, and means for normally maintaining said spur in a retracted position below the surface of the plate.

2. In a foot support, the combination with a fixed stand and a plate carried thereby having a depressed heel portion, of a spur slidable longitudinally in said plate adapted to project horizontally over the surface of the heel portion, means for sliding said spur outwardly, said means being pivoted vertically to said plate and operable laterally thereof, and means for retracting said spur, said means operating in a plane parallel with and closely adjacent to said plate.

3. In a foot support, the combination with a fixed stand and a plate carried thereby having a depressed heel portion, of a spur extensible above said plate adapted to engage with a shoe sole, means for projecting said spur, and means for retraction thereof, a spur movable parallel to and above said depressed portion, means for actuating said spur outwardly to engage with a heel and means for retracting said heel spur.

4. In a device of the class described, the combination with a rigid stand, a plate adapted to receive a shoe supported by said stand, a plurality of spurs arranged transversely in said plate, and vertically operable therein, means for raising said spurs, said means also being capable of maintaining them in a raised position and a spring for retracting said spurs, operative upon the release of said raising means.

5. In a device of the class described, a stand, a plate having an upwardly curved front end and a rear portion of reduced height, said plate being suited to the sole and heel of a shoe, of a plurality of spurs operable in the plate between the upper and lower portions thereof adapted to engage with a shoe heel, means for projecting said spurs outwardly and holding them extended, said means being operative in a plane parallel to said plate and a spring for retracting said spurs upon the release of said projecting means.

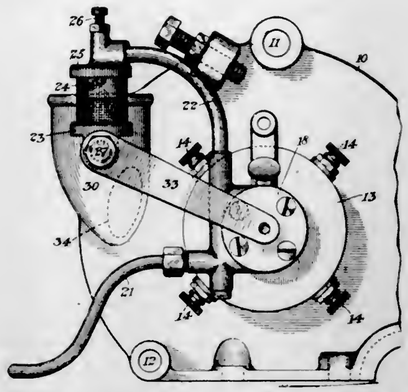
[Claim 6 not printed in the Gazette.]

1,173,734. LUBRICATING APPARATUS. JOHANNES TH. PEDERSÉN, Flushing, N. Y. Filed Apr. 8, 1915. Serial No. 19,850. (Cl. 184—6.)

1. In a gas engine and in combination with the head of the casing thereof and an ignition timer, a shaft for operating the engine valves and the timer, a pump driven by the shaft, an oil cup, a connection between the discharge of the pump and the said oil cup, and a device for securing the said oil cup in position, by which the oil is conveyed therefrom to the parts to be lubricated.

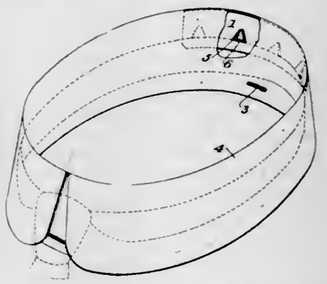
2. In a gas engine and in combination with the head of the casing thereof and an ignition timer, a cam shaft for operating the engine valves and ignition timer, an oil pump, a connection between the cam shaft and the pump shaft, whereby the pump is driven from the cam shaft, an oil cup, a connection from the pump discharge to the oil cup, and a device for securing the oil cup in position and conveying the oil therefrom to the parts to be lubricated.

3. In a gas engine and in combination with the head of the casing thereof and an ignition timer, a cam shaft for operating the engine valves and the ignition timer, an oil pump, a shaft therefor extending into the timer case, and at its end slotted therein, a nut secured on the end of the cam shaft, a pin fixed transversely in the end of the said nut and adapted to receive the slotted end of the pump shaft, an oil cup, a connection between the discharge of the pump and the said oil cup, and a device for securing the oil cup in position and conveying the oil therefrom to the parts to be lubricated.



4. In a gas engine and in combination with the head of the casing thereof and an ignition timer, a shaft for said ignition timer, an oil pump, a shaft therefor extending into the timer case, and at its end slotted therein, a nut secured on the end of the timer shaft, a pin fixed transversely in the end of the said nut and adapted to receive the slotted end of the pump shaft, an oil cup, a connection between the discharge of the pump and the said oil cup, a bolt passing through the base of the oil cup and secured in the said head of the engine casing to maintain the oil cup in position, the said bolt being provided with a circumferentially grooved section and also with a longitudinal groove, whereby the oil from the cup may be conveyed therefrom by the bolt to the parts to be lubricated, irrespective of the position assumed by the bolt when turned down to place.

1,173,735. NECKTIE-GUIDE FOR FOLDED COLLARS. GEORGE H. PERRINE, Greenburg, N. Y. Filed July 2, 1915. Serial No. 37,726. (Cl. 2—11.)



1. A necktie guide, for folded or turned-down collars, comprising a strip of suitable material adapted to be inserted between the folds of the collar and of a length sufficient to extend from the back forward along both sides of the collar, and provided with projections located between its upper and lower edges and presenting shoulders at their lower portions against which the upper edge of the necktie abuts, and by which the upward movement of the necktie between the folds of the collar is arrested, said shoulders serving also to space apart or separate the folds of the collar sufficiently to permit the necktie to be freely slipped lengthwise between the folds of the collar.

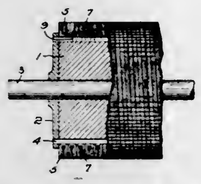
2. A necktie guide for folded collars, comprising a strip of rigid material of a length sufficient to extend from the

back of the collar forward along both sides of the collar, and having embossed projections therein located between the upper and lower edges of the strip and serving to arrest the upward movement of the necktie and to space apart or separate the folds of the collar and thereby permit free lengthwise movement of the necktie between said folds.

3. A necktie guide for folded collars, comprising a strip of rigid material of a length sufficient to extend from the back of the collar forward along both sides of the collar and having embossed projections therein located between the upper and lower edges of the strip and having well defined shoulders at their lower portions which serve to arrest the upward movement of the necktie and to space apart or separate the folds of the collar and thereby permit freedom of movement of the necktie in the direction of its length when placed between said folds and below said projections.

4. A necktie guide for folded collars, comprising an elongated strip of rigid material adapted to extend from the back of the collar forwardly toward its front and having embossed projections therein extending out from one side thereof and located between the upper and lower edges of the strip and having well defined shoulders at their lower portions and disappearing in the body of the strip above, and serving to arrest the upward movement of the necktie and to space apart or separate the folds of the collar to thereby permit the necktie to be freely slipped lengthwise between the said folds in order to adjust it for tying.

1,173,736. ROLL. EDWARD V. PHELPS, Nashua, N. H., assignor to Improved Paper Machinery Company, Nashua, N. H., a Corporation of Maine. Filed Jan. 7, 1915. Serial No. 1,035. (Cl. 92—47.)



1. A roll comprising a core and a strip of covering material wound spirally about said core, said strip having a series of transverse slits in its circumferential edge.

2. A roll comprising a core, a strip of covering material wound spirally about said core, and a binding member wound in said strip, said strip having a series of transverse slits in its circumferential edge.

3. A roll having a core, a strip of covering material wound spirally about said core, said strip having a longitudinal slit and a binding member registering with said slit, said strip having also a series of transverse slits in its circumferential edge.

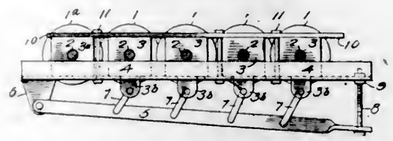
4. A roll having a core, a strip of covering material wound spirally around said core, said strip having a scoring on its under side lengthwise the same, a binding member registering with the scoring, said strip being folded about said binding member to present its edges outwardly and a series of transverse slits in the circumferential edges of said strip.

5. A roll comprising a core, a covering wrapped around said core and transverse scoring slits in the circumferential edges of said covering.

[Claims 6 to 11 not printed in the Gazette.]

1,173,737. ROTARY GRAIN-CLEANER. CORNELIUS QUESNELL, Moscow, Idaho. Filed Mar. 10, 1915. Serial No. 13,360. (Cl. 130—19.)

1. A grain cleaner comprising a series of rotary members arranged parallel and side by side, journal boxes for the shafts of the same which are adapted for adjustment horizontally and simultaneously toward and from each other, and means for effecting such adjustment, the same comprising levers pivoted beneath the rollers, rods connecting the levers with the several journal boxes of the adjustable rollers, and means for adjusting the free ends of the levers vertically, as described.

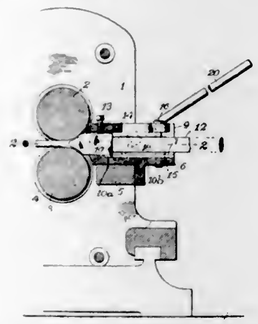


2. In a rotary grain cleaner, the combination with a series of rollers proper arranged parallel, boxes for the journals of the same, parallel horizontal channel bars in which the boxes are held slidably, the boxes being provided with lugs projecting through slots in the channel bars, and means connected with such lugs for adjusting the rollers toward or from each other simultaneously, as described.

3. In a grain cleaner of the type indicated, the combination with a series of rollers, boxes for supporting the journals of the same, gears applied to the ends of the journals, idlers meshing with each of two adjacent gears, and links pivoted on the journals and idlers pivoted in the free ends of the same, as described.

4. In a grain cleaner of the type indicated, the combination with rollers arranged parallel horizontally and having central journals, boxes in which the said journals are supported, means for supporting the boxes so that they are adapted to slide toward or from each other, means arranged below the rollers for adjusting them toward and from each other, and means for automatically connecting them rotatively, the same consisting of gears mounted on the axes of the rollers, idlers meshing with the gears of adjacent rollers, and links pivotally supporting the idlers, as described.

1,173,738. GUIDE FOR ROLLING-MILLS. EDWARD J. QUINN, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 23, 1914. Serial No. 813,903. (Cl. 80—51.)



1. In a guide for rolling mills, a fixed guide plate and adjustable guide plate, and yielding means contacting with said adjustable guide plate to retain said plate against the bar which is being rolled.

2. In a guide for rolling mills, a supporting frame, a fixed guide plate and an adjustable guide plate, each having interlocking engagement with said supporting frame, and yielding means for retaining said adjustable guide plate in operative relation to said fixed guide plate.

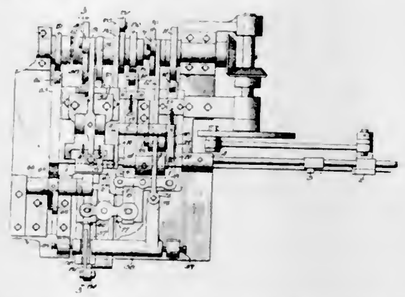
3. In a guide for rolling mills, a pair of coöperating guide plates, an adjusting member for one of said guide plates, and a resilient connection between said guide plate and said adjusting member.

4. In a guide for rolling mills, a supporting frame, a pair of coöperating guide plates carried thereby, and a member adjustably mounted in said supporting frame, at a point longitudinally offset from said guide plates, for varying the distance between said plates.

5. In a guide for rolling mills, a pair of guide plates, a lever contacting with one of said plates, and means for moving said lever against said guide plate.

[Claims 6 to 10 not printed in the Gazette.]

1,173,739. WIRE-SHAPING MACHINE. ANTHONY RHENSTROM, Kenosha, Wis. Filed Mar. 3, 1915. Serial No. 11,839. (Cl. 140—71.)



1. A wire shaping machine including two carriers that face each other; mechanism for effecting their rotation in opposite directions; a wire engaging projection bodily moved by each of these carriers; and wire engaging formation with respect to the locality of which both of said projections move and which coöperate therewith in shaping the wire.

2. A wire shaping machine including two carriers that face each other; mechanism for effecting their rotation in opposite directions; a wire engaging projection bodily moved by each of these carriers; wire engaging formation with respect to the locality of which both of said projections move and which coöperate therewith in shaping the wire; and means whereby one part of the wire is enabled to pass by one of said projections in its movement by the other said projections.

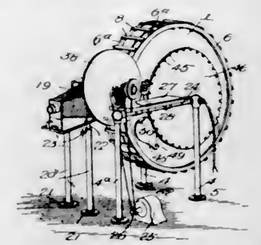
3. A wire shaping machine including two carriers that face each other; mechanism for effecting their rotation in opposite directions; a wire engaging projection bodily moved by each of these carriers; wire engaging formation with respect to the locality of which both of said projections move and which coöperate therewith in shaping the wire, and means whereby each part of the wire engaged by a projection is enabled to pass by the other projection.

4. A wire shaping machine including two carriers that face each other; mechanism for effecting their rotation in opposite directions; a wire engaging projection bodily moved by each of said carriers; two additional wire engaging projections with respect to the locality of each of which both of the aforesaid projections move; and means whereby one part of the wire is enabled to pass by one of the first aforesaid projections in its movement by the other of the first aforesaid projections.

5. A wire shaping machine including two carriers that face each other; mechanism for effecting their rotation in opposite directions; a wire engaging projection bodily moved by each of said carriers; two additional wire engaging projections with respect to the locality of each of which both of the aforesaid projections move; and means whereby the parts of the wire engaged by the first aforesaid projections are each enabled to pass by that one of the first aforesaid projections not moving it.

[Claims 6 to 15 not printed in the Gazette.]

1,173,740. LANTERN-SLIDE CARRIER. DAVID A. RITCHIE, Centralia, Ill. Filed May 12, 1915. Serial No. 27,655. (Cl. 88—27.)



In a device of the character specified, a drum consisting of two spaced parallel disks, each having a hub, grooved strips connecting the peripheries of the disks and arranged at spaced intervals, said strips being grooved on the opposite faces to receive lantern slides between them, the strips and disks being spaced to leave an aperture of the proper size to permit the picture on the slide to be projected on the screen, a hollow shaft on which the drum is journaled, a supporting frame for the shaft, an angle bracket mounted on the shaft between the hubs and counterbalanced to hold one of the portions thereof horizontal and radial to the drum, illuminating apparatus on the said horizontal portion of the angle bracket, the hollow shaft being designed to permit the passage of the controlling mechanism for the illuminating apparatus, said disks having damper controlled air inlets, and means for rotating the drum.

1,173,741. DEMOUNTABLE-RIM TOOL. AUGUST C. ROSENBROOK, Richland Center, Wis. Filed Jan. 18, 1915. Serial No. 2,802. (Cl. 157—1.)



1. A demountable rim tool for forcing the ends of a demountable rim in a lateral direction or in a longitudinal direction, comprising clamps for engaging the respective ends of the demountable rim, arms pivotally mounted on the clamps, a pin and slot pivotal connection between the arms, the pin being shiftable in the slot between distant bearing points therein to vary the effective length of the slotted arm, the arms being of substantially the same length from said pivotal connection to the clamps in the adjustment for lateral movement of the rim ends and being of unequal length in the adjustment for longitudinal movement of the rim ends.

2. A demountable rim tool for forcing the ends of a demountable rim in a lateral direction or in a longitudinal direction, comprising clamps for engaging the respective ends of the demountable rim, and arms pivotally mounted on the clamps and pivotally connected together, said pivotal connection being shiftable with respect to one of the arms to vary the effective length of said arm, the arms being of substantially the same length from said pivotal connection to the clamps in the adjustment for lateral movement of the rim ends and being of unequal length in the adjustment for longitudinal movement of the rim ends.

3. A demountable rim tool for forcing the ends of a demountable rim in a lateral direction or in a longitudinal direction, comprising clamps for engaging the respective ends of the demountable rim, arms pivotally mounted on

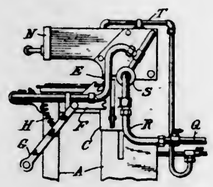
the clamps, and a pin on one arm, there being notches on the other arm distant from each other to receive the pin and forming a pivotal connection between the arms, the said pivotal connection being shiftable by changing the pin from one notch to another to vary the effective length of the notched arm, the arms being substantially the same length from said pivotal connection to the clamps in the adjustment for lateral movement of the rim ends and being of unequal length in the adjustment for longitudinal movement of the rim ends.

4. A demountable rim tool, comprising clamps for engagement with the ends of a demountable rim, arms pivotally connected with the clamps, one arm being provided with a slot having notches therein, and a pin on the other arm riding in the slot and adapted to be engaged in the notches.

5. A demountable rim tool, comprising a V-shaped arm, clamping jaws on the ends thereof adapted to engage between them one end of the demountable rim, a Y-shaped arm, clamping jaws on the forked ends thereof adapted for engagement with the other end of the demountable rim, there being a notched slot in the stem end of the Y-shaped arm, and a pin connecting the members of the V-shaped arm and contained within the slot to engage the notches thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,173,742. BROILER. PHILIP ROOS and HENRY ROOS, New York, N. Y. Filed Nov. 2, 1915. Serial No. 59,267. (Cl. 126—41.)



1. In a broiler, the combination with a supporting frame, a base portion and an upper portion movable and adjustable vertically with respect to each other, the upper portion being adapted to swing on hinges over the base portion, and heating elements contained in each portion, of a griddle arranged above the lower heating elements, whereby the upper frame portion may be turned down over the griddle so that articles of food on the latter will be exposed to the two heating elements at the same time.

2. In a broiler, the combination with a frame comprising independent upper and lower parts, vertically movable slides in the lower part to which the upper part is hinged so as to swing over the lower, a griddle placed in the lower part, and heating elements in both parts whereby articles of food on the griddle may be simultaneously exposed to both heating elements and at varying distances from the upper element.

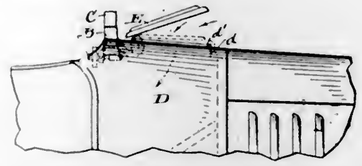
3. In a broiler, the combination with a frame comprising two independent parts movable and adjustable vertically with respect to each other, the upper part hinged at the rear and adapted to swing on hinges over the lower part, a griddle arranged above the lower part, heating elements arranged in both parts and means for turning on or off the sources of heat therefrom, controlled by the swinging movement of the upper part.

4. In a broiler, the combination with a lower stationary part of a supporting frame, of an upper part hinged to the rear thereof and capable of being swung over said stationary part, the said hinged upper part being also capable of movement vertically with respect to the stationary part, and a griddle set in the stationary part and heating elements in both parts whereby articles of food on the griddle may be simultaneously exposed to heat on both sides, the upper source of heat being adjustable with respect thereto.

5. In a broiler, the combination with a frame composed of two independent parts, the upper part hinged in the rear to the lower part, and also capable of vertical adjustment with respect to the same, of gas jets arranged in both upper and lower parts, so as to be brought on opposite sides of a griddle, a pipe for supplying gas to the jets and a valve therein controlled by the movement of the upper part about its hinges for throwing on or off the gas.

[Claims 6 to 8 not printed in the Gazette.]

1,173,743. AUTOMOBILE-VENTILATOR. LEON RUBAY, Cleveland, Ohio, assignor to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 9, 1915. Serial No. 20,141. (Cl. 21—90.)



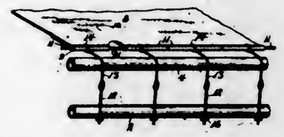
1. In an automobile, the combination with the cowl which overhangs the front part of the driver's compartment, and has a ventilating hole through it, a ventilator shutter adapted to cover said hole, U-shaped hinge arms which are fixed to said shutter adjacent to its rear edge and extend therefrom downward below the cowl and thence forward and upward,—their forward ends having pivotal connections with a part which is rigid with said cowl, and means operable from the driver's compartment for causing said hinge arms to swing about their pivotal axis.

2. In an automobile, the combination with the cowl which overhangs the front part of the driver's compartment and has a ventilating hole through it, an upstanding flange around said hole, a ventilator shutter adapted to cover said hole and having in its lower face a groove for engaging with said flange, U-shaped hinge arms which are fixed to said shutter adjacent to its rear edge and extend therefrom downward below said cowl and then forward and upward,—their forward ends having pivotal connections with a part which is rigid with said cowl, and means operable from the driver's compartment for causing said hinge arms to swing about their pivotal axis.

3. In an automobile, the combination with the cowl which overhangs the front part of the driver's compartment and has a ventilating hole through it, a transverse frame member which is secured to the under side of the rear edge of said cowl, a ventilator shutter adapted to cover said hole, U-shaped arms which are fixed to the said shutter adjacent to its rear edge and extend downwardly therefrom below said cowl and then forward and upward, bearing brackets fixed to said transverse frame member, the front ends of said hinge arms being pivoted to said brackets, and means operable from the driver's compartment simultaneously swinging said hinge arms about their said pivotal axis.

4. In an automobile, the combination with the cowl which overhangs the front part of the driver's compartment and has a ventilating hole through it, a transverse frame member which is secured to the under side of the rear edge of said cowl, a ventilator shutter adapted to cover said hole, U-shaped arms which are fixed to the said shutter adjacent to its rear edge and extend downwardly therefrom below said cowl and then forward and upward, laterally extended trunnions rigidly connected with said hinge arms, brackets fixed to said transverse frame member in which said trunnions are rotatably mounted, downwardly extended arms rigid with said trunnions, a cross bar connecting said downwardly extending arms, a rearwardly extended link pivoted to said cross bar, a bracket fixed to the transverse frame member, a shaft rotatably mounted therein, means preventing endwise movement of said shaft, a screw threaded connection between the front end of said shaft and said link, and a hand wheel on the rear end of said shaft.

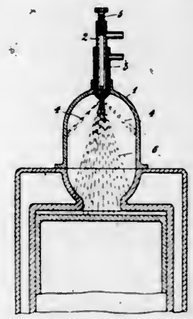
1,173,744. BED. CHARLES F. RUKES, Fresno, Cal. Filed Aug. 12, 1914. Serial No. 856,376. (Cl. 5—69.)



1. In combination, a rectangular frame, a sheet of flexible material having hems at one end, a plurality of rods in each hem in alinement with each other, flexible ties severally secured at one end to said rods, devices severally secured to the other ends of the ties and to the frame, and individual means for extending or contracting the portions of said devices between said ties and frame.

2. In combination, a rectangular frame, a bar supported above an end portion of said frame, a sheet of flexible material having a hem at the end adjacent to said bar, a plurality of rods in said hem in alinement with each other, flexible ties extending around said bar and secured at one end to the respective rods, bolts through said end of the frame and connected at one end respectively to the other ends of said flexible ties, and nuts screwed on the other ends of said bolts.

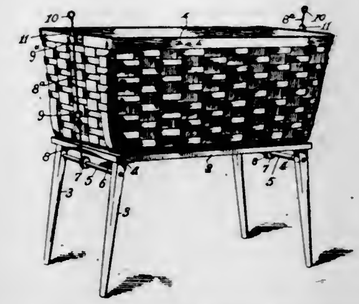
1,173,745. INTERNAL-COMBUSTION ENGINE AND THE LIKE. ERIK ANTON RUNDLÖF, Stocksund, Sweden. Filed Sept. 11, 1914. Serial No. 861,189. (Cl. 123—30.)



In an internal combustion engine, the combination with a combustion chamber having differently heated zones, of an inlet for fuel, and an inlet for air, gas or steam, said inlets being arranged and located in the combustion chamber in such relation to each other, that when fuel alone is injected into the engine it strikes one zone of the combustion chamber, but when fuel and air, gas or steam are injected simultaneously the fuel will strike another differently, heated zone of the combustion chamber, substantially as and for the purpose set forth.

1,173,746. CLOTHES-BASKET. CHARLES R. SARGENT, Grand Rapids, Mich. Filed Mar. 11, 1912. Serial No. 683,025. (Cl. 217—122.)

1. In combination with a basket, legs pivotally connected to the basket and adapted to fold beneath the same and to turn to supporting position, handles at the respective ends of the basket and vertically movable relative thereto, means for connecting the handles and legs whereby the legs are turned to supporting position by raising the handles, means for detachably holding the handles in said raised position, and means for automatically folding the legs when said handles are detached.



2. In combination with a basket, legs pivotally connected to the basket and adapted to fold beneath the same and to turn to supporting position, springs connected to the legs to automatically turn the same to folded position, handles vertically movable relative to the basket, cords connected to the handles and legs whereby the legs are turned to supporting position by moving the handles upward and means for detachably securing the handles in raised position.

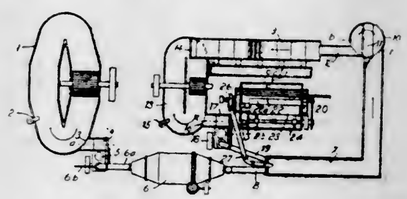
3. In combination with a basket, legs pivotally connected to the basket and adapted to fold beneath the same and to turn to supporting position, springs to automatically fold the legs, cords attached to the legs to turn the same to supporting position and vertically movable handles attached to the cords whereby the basket may be supported and the legs so turned by raising the handles.

4. In combination with a basket, a frame supporting the basket, legs pivoted to the respective ends of the frame and foldable beneath the same, springs connected to the legs to automatically fold the same, manually operated means connected to the legs to unfold the same, extending upward at the respective ends of the basket, and means for locking the legs in unfolded position.

5. In combination with a basket, legs pivotally connected to the basket and connected in pairs by rods, contractile springs connected to the rods at one end and anchord beneath the basket at the other end, a cord connected to each rod and extending upward at the respective end of the basket, a rod attached to each cord and having an eye or handle at the upper end and a stop on each rod adapted to hold the rod in elevated position with the legs in supporting position.

[Claim 6 not printed in the Gazette.]

1,173,747. PULP-REDUCING APPARATUS. CHARLES WELLS SHARTLE, Middletown, Ohio. Filed Nov. 25, 1912. Serial No. 733,267. (Cl. 92—20.)



1. A pulp reducing apparatus comprising a reducing engine adapted to reduce the coarseness of the material under treatment and comprising an open tub arranged to permit the material to overflow from it as additional material is deposited therein, and a receiver adapted to receive the overflow from said tub.

2. In a pulp reducing apparatus, a reducing engine adapted to reduce the coarseness of the material under treatment and comprising an open tub arranged to permit the material to overflow from it as additional material is deposited therein, a screen, a receiver to receive the overflow from the tub, and means for delivering the material from said receiver to said screen.

3. In a pulp reducing apparatus, a reducing engine comprising an open tub arranged to cause portions of the material under treatment therein to overflow, a screen arranged to deliver its tailings to said reducing engine, and means for transferring the pulp which has overflowed to said screen.

4. In a pulp reducing apparatus, a reducing engine comprising an open tub arranged to permit the stuff therein to overflow, a screen arranged to deliver its tailings to said beating enging and conveying mechanism, comprising a pump for transferring the stuff which has overflowed from said engine to said screen.

5. In a pulp reducing apparatus, a breaking engine comprising an open tub arranged to cause the stuff therein to overflow, a beating engine also arranged to cause the stuff to overflow, a screen arranged to deliver its tailings to said beating engine, means to transfer the stuff which has overflowed from said breaking engine to said screen, and other means for transferring the stuff which has overflowed from said beating engine to said screen, whereby said stuff is continuously and automatically acted upon to cause it to be reduced to the proper fineness and the fine pulp to be separated from the coarse.

[Claims 6 to 9 not printed in the Gazette.

1,173,748. PAPER-PULP PROCESS. CHARLES WELLS SHARTLE, Middletown, Ohio. Filed Mar. 3, 1913. Serial No. 751,710. (Cl. 92—20.)

1. The improved paper pulp process consisting in mixing the pulp with water; in treating the pulp while mixed with water to separate the fine pulp from the coarse pulp; treating the fine pulp to remove therefrom the most of the water; and then mixing such water and the entrained pulp with the pulp which has not yet been subjected to the first mentioned treatment.

2. The improved paper pulp process consisting of floating the pulp in water to remove the heavy impurities; separating the fine pulp from the coarse pulp; removing the most of the water from the fine pulp; and mixing the water thus removed and its entrained pulp with the pulp undergoing treatment at some stage of the process prior to the removal of the water from the fine pulp.

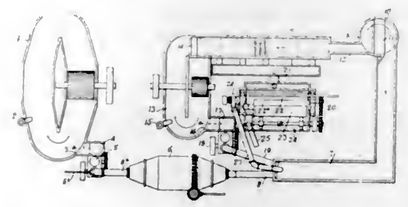
3. The improved paper pulp process consisting of floating the pulp in water to remove the heavy impurities; separating the fine pulp from the coarse pulp; removing the most of the water from the fine pulp; and mixing the water thus removed and its entrained pulp with the pulp proceeding through the first-mentioned step.

1,173,749. APPARATUS FOR REDUCING STOCK TO PULP. CHARLES WELLS SHARTLE. Middletown, Ohio. Original application filed Nov. 25, 1912, Serial No. 733,267. Divided and this application filed Apr. 13, 1914. Serial No. 831,383. (Cl. 92—20.)

1. Pulp-reducing apparatus comprising a breaking engine, a beating engine, a screen adapted to deliver its tailings to the beating engine, a digester interposed between the breaking engine and the screen, means for transferring the finer material from the breaking engine through the digester to the screen, and means for transferring the finer material from the beating engine to the screen.

2. Pulp-reducing apparatus comprising a beating engine, a digester, a screen adapted to deliver its tailings to the beating engine, means for transferring material from the digester to the screen, and means for transferring the finer material from the beating engine to the screen.

3. A pulp-reducing apparatus comprising a beating engine, a digester, a screen to deliver its tailings to the beating engine, a conduit to deliver to said screen, means for transferring the material from the digester to the conduit, and means for transferring material from the beating engine to the screen.



4. Pulp-reducing apparatus comprising a beating engine, a screen adapted to deliver its tailings to the beating engine, a settling box adapted to deliver to the head of the screen, a digester adapted to deliver to the settling box, and means for transferring the finer material from the beating engine to the settling box.

5. Pulp-reducing apparatus comprising a beating engine, a screen adapted to deliver its tailings to the beating engine, a conduit adapted to deliver to the head of the screen, means for transferring the finer material from the beating engine through said conduit to the head of the screen, and a fender disposed in said conduit and adapted to skim light impurities from the material on its way to the head of the screen.

[Claims 6 to 8 not printed in the Gazette.]

1,173,750. PROCESS FOR REDUCING PULP. CHARLES W. SHARTLE, Middletown, Ohio. Original application filed Nov. 25, 1912, Serial No. 733,267. Divided and this application filed Oct. 16, 1915. Serial No. 56,193. (Cl. 92—20.)

1. A pulp-reducing process which consists in floating the stock in water within a container having an overflow outlet, treating the stock to reduce its coarseness and causing the water and fine stock to overflow from the container through the outlet by raising the general level of the water and stock above the outlet.

2. A pulp-reducing process which consists in floating the stock in water within a container having an overflow outlet, treating the stock to reduce its coarseness, causing the water and fine stock to overflow from the container through the outlet by raising the general level of the water and stock above the outlet and conducting the stock which has overflown from said container to a point for further treatment.

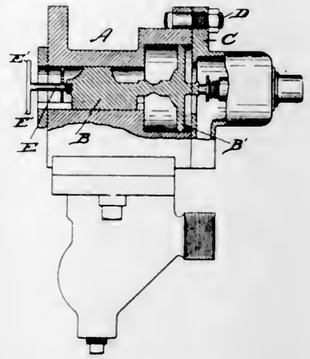
3. A pulp reducing process which consists in floating the stock in water within a container, treating the stock to reduce its coarseness, causing the water and fine stock to overflow from the container, and treating the stock which has overflowed from said container to further separate the fine stock from the coarser stock.

4. A pulp reducing process which consists in floating the stock in water within a container, treating the stock to reduce its coarseness, causing the water and fine stock to overflow from the container, treating the stock which has overflowed to separate impurities therefrom, further treating said stock to separate therefrom any stock which is not of sufficient fineness and again treating this last-mentioned stock to further reduce the same.

5. A pulp reducing process which consists in floating the stock in water within a container, treating the same to reduce its coarseness, causing water and fine stock to overflow, treating the stock which has overflowed to separate the fine stock from the coarser stock, again floating this coarser stock in water within a container and causing water and the finer stock to overflow from said container and again treat the stock which has overflowed to separate the finer stock from the coarser stock.

[Claims 6 and 7 not printed in the Gazette.]

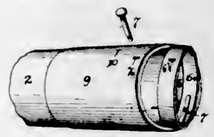
1,173,751. TRIPLE VALVE. RAY E. SHERMAN, Detroit, Mich. Filed Nov. 8, 1915. Serial No. 60,243. (Cl. 188—15.)



1. In combination with the casing of a triple valve, the valve, a T-shaped element secured to one end of the valve, the projecting arms of the element being adapted to engage the walls of the casing, whereby the valve may not be removed from one end of the valve casing.

2. In a device of the character described, a valve casing, a valve mechanism embodying a piston and a coacting slide valve, a retaining element consisting of a shank secured to the valve mechanism having a right-angle portion integral with the shank adapted to overlap the wall of the casing to provide against unauthorized withdrawal of the valve mechanism from the casing.

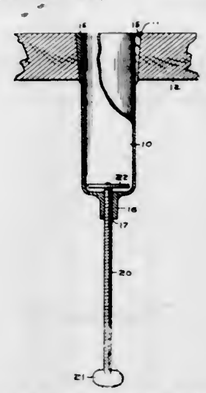
1,173,752. SHIPPING-CONTAINER. GEORGE W. SMITH, Philadelphia, Pa. Filed Feb. 16, 1914. Serial No. 818,867. (Cl. 229—43.)



1. As an improved article of manufacture, a container for transporting merchandise and permitting its ready examination during transportation, consisting of a body portion having an open end, combined with a cover formed of a transverse part outwardly flanged and said flange fitting against the inner face of the side wall portion of the container, said cover hingedly connected to said side wall portion and of shallow depth so as to be capable of being turned outward at one side for examining the contents of the body without disconnecting it, and a separate metallic fastening device extending through the side wall portion of the container and the flanged portion of the cover at a distance from the hinge part of the cover, and bent transversely against the inner face of the flange of the cover to detachably connect this portion of it to the container and normally hold it against inward and outward movement, said metallic fastening device being located wholly in a transverse plane within the outer boundary of the flange of the cover and end of the container.

2. In a shipping container, a body portion of tubular construction having its side walls formed with a plurality of apertures arranged at different distances from the end, combined with a cover slidably arranged within the container body and having integral outwardly arranged flanged portions fitting against the inner side walls of said container, and detachable metallic fastening devices extending through the apertures in the container body and the flanged portions of the cover and adapted to any of the plurality of apertures for holding the cover in detachable relation within the container body with capacity for adjustment to different depths therein.

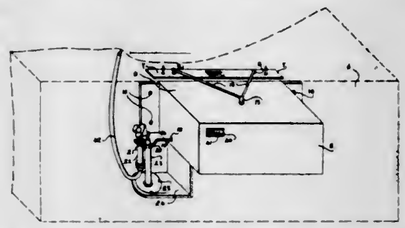
1,173,753. ANIMAL-MEDICATOR. FRANCIS M. STAFFORD, Indianapolis, Ind. Filed July 22, 1915. Serial No. 41,389. (Cl. 119—51.)



1. In combination with an animal feed-box, a dispenser comprising a hollow cylindrical medicinal-agent retaining barrel, a longitudinally extending rib on the exterior surface of said barrel adapted to engage the box and resist rotational movement of the barrel, and means for forcing the medicinal-agent toward the discharge end of the barrel.

2. In combination with an animal feed-box, a dispenser comprising a hollow cylindrical medicinal-agent retaining barrel, a threaded bar passing through a threaded aperture in the closed end of said barrel, a disk on the end of said bar for supporting the medicinal-agent, and a longitudinally extending rib on the exterior surface of said barrel adapted to engage the box and resist rotational movement of said barrel independently of said feed-box.

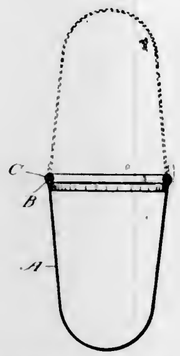
1,173,754. AUTOMATIC RECORDER FOR TELEPHONE-MESSAGES. HAROLD GORDON STALKER, Navan, Ontario, Canada. Filed Feb. 15, 1914. Serial No. 8,408. (Cl. 179—6.)



In a combination, a case, attached to a recording-instrument, said case being provided with a lever hinged at one side of said case and having arms branching off from the said lever, one of the said arms branching off and protruding through the top of the said case, said arm then so shaped as to fit over the buttons that regulate the recording-instrument, the other said arm branching off from the said lever and extending through one side of the said case, one end of said arm being hinged to said lever, the other end of said arm being fitted so as to fit under the arm of a telephone-receiver, said arm being mounted on a fulcrum inside of said case, a magnet in said case so situated as to attract one end of said lever, a circuit therefor, said lever having a spring connecting with the top of the case, said case being further

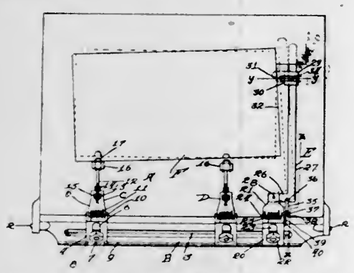
provided with a relay and an attachment plug, said plug connecting the poles of the telephone-receiver to respective wires which connect with said relays inside said case, the armature of said relay when attracted causing the closing of said electric circuit to cause the said magnet to act on said lever, said case being further provided with a shelf on which to set the telephone, and a shutter on one side connected with the relay armature and operated thereby.

1,173,755. COLLAPSIBLE DRINKING-CUP. WILLIAM O. STRAIGHT, Pullman, Wash. Filed Mar. 10, 1915. Serial No. 13,510. (Cl. 150—48.)



A reversible drinking cup consisting of a flexible body of non-porous material, and a rigid ring inclosed in a casing formed in the marginal portion of the body and fitting loosely around the ring for facilitating said body being distended in either direction from the ring to bring either surface of the body on the inside to contact with the contents of the cup, both surfaces of the body being smooth and uninterrupted.

1,173,756. SHEET-REGISTER FOR PRINTING-PRESSES. CHARLES D. TREACY and JOHN M. TREACY, St. Paul, Minn. Filed Apr. 23, 1915. Serial No. 23,416. (Cl. 101—22.)



1. In combination with a platen hinged to open and close and a gripper bar operatively connected with said platen, a side stop on said platen for registering a sheet of material to be printed, consisting of an arm hinged on said bar on an axis parallel with the axis of said platen to swing with the opening and closing movements of said platen and pivoted to turn laterally in an arc in a plane parallel to the surface of the platen, and a pitman arranged to turn said arm laterally by the closing movement of said platen and move said sheet into accurate registering position.

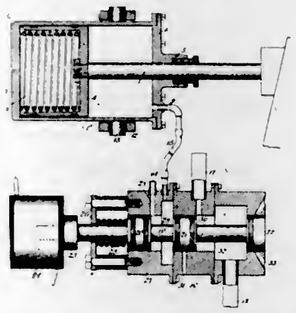
2. In combination with a platen, a gripper bar pivoted parallel to the same and about which said platen swings on an axis, a gage support secured to said bar and hinged to swing on an axis parallel with the axis of said platen, a gage arm pivoted on said support to move with the platen and to swing laterally in an arc in a plane parallel to the surface of the platen, and a pitman movably attached to said support and arm and arranged to impart said swinging movement to said arm when said platen swings.

3. In combination with a movable platen, a gripper bar pivoted parallel to the same and about which the platen swings on an axis, an end gage hinged to said bar, a side gage support secured to said bar having a freely hinged member free to turn on an axis lying parallel to the axis of said platen, a side gage arm pivoted on said freely hinged member to swing laterally in an arc lying in a plane parallel to the surface of the platen, a fixture pivoted upon said side gage support and secured to said pitman, said fixture and pitman being arranged to impart an oscillating movement to said side gage arm as said platen swings and means for holding said fixture adjusted on its pivot, whereby the length of throw of said side gage arm can be regulated.

4. The combination with a movable platen having a gripper bar hinged thereto, of a gage arm secured to said bar and adapted to swing out of the plane of the platen, and means actuated by the movements of said platen and bar with respect to each other whereby said arm receives movement in the plane of the platen.

5. The combination with a movable platen having a gripper bar hinged thereto, of a gage arm secured to said bar and adapted to swing out of the plane of the platen, and means automatically actuated by the mutual movements of said platen and bar whereby said arm receives movement in the plane of said platen.

1,173,757. EMERGENCY ENGINE-STOP MECHANISM. THEODORE W. VICKERS, Forsyth, Mont. Filed Apr. 15, 1914. Serial No. 831,987. (Cl. 246—59.)



1. An engine stop apparatus comprising a device for throwing on or off the propelling power, a piston and cylinder motor, the cylinder of the motor being movable, an engineer's controller for adjusting the position of the cylinder to control the piston, a spring tending to move the piston and thereby the device to off position, and a valve device for supplying to the cylinder fluid for actuating the piston and device to on position.

2. An engine stop apparatus comprising a device for throwing on and off the propelling power, a piston connected with the device, a movable cylinder in which the piston moves, a spring disposed in the cylinder and actuating on the piston to move the device to off position, an engineer's lever connected with the cylinder to move the same to different positions and thereby control the movement of the piston, a valve for applying fluid pressure to the piston to act in opposition to the spring for moving the device to on position, and electrical means for controlling the movement of the valve under emergency conditions.

3. A train stopping apparatus comprising a valve device controlling the setting and releasing of the brakes of the train and the throwing on and off of the propelling power, said device including a reciprocating element, a normally energized electro-magnet for controlling the said device, a normally closed trip-opened switch in circuit with the electro-magnet and adapted to automatically close after being trip-actuated, a circuit breaker in the circuit of the switch and electro-magnet and arranged to be engaged and moved open by the said element of the valve device when the electro-magnet is de-energized, and a shunt around the said circuit breaker controlled by the rate of speed of the train to reënergize the electro-magnet and restore the said valve device and circuit breaker to normal condition.

4. A train stopping apparatus comprising a valve device controlling the setting and releasing of the brakes of the train and the throwing on and off of the propelling power, said device including a reciprocating element, a normally energized electro-magnet for controlling the said device, a normally closed trip-opened switch in circuit with the electro-magnet and adapted to automatically close after being trip-actuated, a circuit breaker in the circuit of the switch and electro-magnet and arranged to be engaged and moved open by the said element of the valve device when the electro-magnet is deënergized, a normally opened shunt around the circuit breaker, and electrical means operative when the train is traveling at a predetermined speed to hold the shunt open, and adapted when the speed falls below such point to close the shunt circuit for reënergizing the electro-magnet to restore the valve device and circuit breaker to normal condition.

5. An engine stop apparatus comprising a valve device including a movable element for automatically setting or releasing the brakes of the train and throwing on and off the propelling power, a normally energized electrical means for holding the said element of the valve device in train running position, a circuit for the said means, a switch in the said circuit and including a movable and fixed contact, a movably mounted member carrying the movable contact and arranged to be operated by a striking device located along the roadway of the train, means for automatically restoring the said member to closed circuit position after the said device passes, a circuit breaker comprising normally engaged contacts in the said circuit for maintaining the circuit open by the actuation of the valve device to stop position whereby the said element engages one of the contacts and moves it away from the other, and means dependent upon the speed of the train for reënergizing the electrical means to restore the valve device and circuit breaker to normal condition.

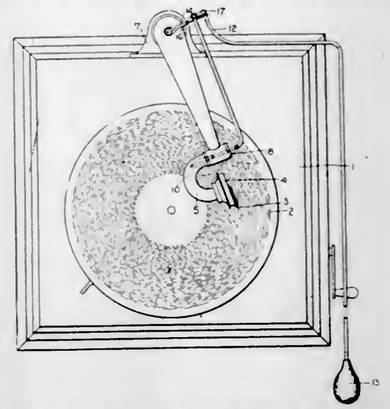
1,173,758. SOUND CONTROL FOR TALKING-MACHINES. VINCENT W. WECZERZICK, New York, N. Y. Filed Aug. 10, 1915. Serial No. 44,694. (Cl. 181—3.)

1. In a sound controlling device, the combination with a talking machine having sound tubes, of an inflatable member arranged in said sound tube, and means extending to a distance for inflating said inflatable member and thereby varying the volume of sound passing through the sound tube.

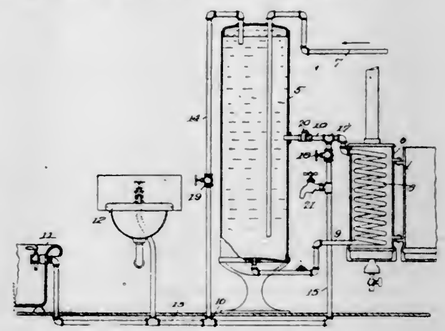
2. A sound controlling device for talking machines, comprising an expansible bulb adapted to be inserted into the sound carrying tube of a talking machine, and means arranged exteriorly of said tube for inflating and deflating said bulb whereby the volume of sound may be varied according to the desire of the operator.

3. A sound controlling device comprising an expansible bulb or bag, a tube of an appreciable length connected therewith, and a bulb connected with said tube, said last mentioned bulb being adapted to be collapsed by the hand for inflating the first mentioned bulb or bag.

4. A sound controlling device comprising an elongated inflatable bag adapted to be fitted into the gooseneck of a talking machine, said bag being of less width than the diameter of said gooseneck, a tubular member fitted into the retaining screw of the gooseneck and extending into said bag, a flexible air tube connected with said tubular member, and a hand bulb connected with said flexible tube whereby when said hand bulb is collapsed air will be forced into said bag for inflating the same, the inflation of said bag corresponding to the deflation of said hand bulb.



1,173,759. SYSTEM OF HOT-WATER DISTRIBUTION. JOHN A. WILLIAMS, Aurora, Mo., assignor of one-half to Charles G. Thompson, Aurora, Mo. Filed Dec. 9, 1914. Serial No. 876,248. (Cl. 126—362.)



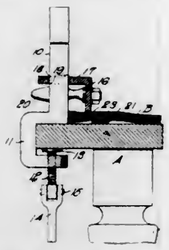
1. In a system of the class described, the combination with a tank having a feed pipe and a discharge pipe leading to fixtures, and a coil having an inlet connection with the lower portion of the tank and having a return pipe leading from the coil to the tank, of an auxiliary pipe connected at one end to the tank discharge pipe and at its opposite end to said return pipe, a control valve in the tank discharge pipe, a control valve in the auxiliary pipe, and a check valve in the return pipe between the tank and the point of connection of said return pipe and auxiliary pipe, said check valve adapted to allow flow of water through the return pipe only toward the tank, substantially as described.

2. In a system of water distribution, the combination with a tank having a discharge pipe leading to fixtures and having a return pipe leading from a point of hot water supply, of an auxiliary pipe connected at one end to said return pipe and at its opposite end to said discharge pipe, a control valve in said auxiliary pipe, a control valve in the discharge pipe, and a check valve in the return pipe between the tank and the point of connection of the return and auxiliary pipes.

3. In a system of water distribution, the combination with a tank having a discharge pipe leading to fixtures, and a heating coil having a return pipe leading to the tank and having a supply pipe leading from the tank to the coil, of an auxiliary pipe connecting the return pipe and the discharge pipe, means for controlling the

flow through the discharge pipe and auxiliary pipe at will, and means for preventing the flow through the return pipe except toward the tank.

1,173,760. DEVICE FOR CLAMPING CLOTH. NATHANIEL H. WILLIAMS, Mobile, Ala. Filed Nov. 24, 1915. Serial No. 63,253. (Cl. 164—79.)



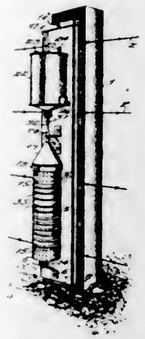
1. A cloth clamp of the class described, including standards having means at the lower ends thereof to secure the same to a table, a longitudinal clamp bar having means whereby the said bar may be secured in fixed position on the table in front of the standards, and a movable clamp bar having collars thereon at the rear side of the said clamp bar, slidably engaging the standards, the collars being adapted to be slipped onto or from the upper ends of the standards, the openings in the collars being oblique and presenting gripping edges respectively in front of the standards at the top of the collars and in the rear of the standards at the lower side of the collars, the movable bar, when lowered, being positioned adjacent to the rear edge of the fixed bar and the said fixed and movable bars having longitudinal rows of pins, the pins of the respective bars being in staggered relation.

2. A cloth clamp of the class described, including standards having means to secure the same to a table, a longitudinal clamp bar having means whereby to secure the same to a table in front of the standards and a movable clamp bar vertically slidable on the standards and rockable thereon, the said movable clamp bar having members embracing the standards and formed with means to resist upward movement thereof when the clamp bar is brought adjacent to the fixed bar, said fixed bar and movable bar having pins disposed oppositely to each other.

3. A cloth clamp of the class described, including standards having means at the lower ends thereof to secure the same to a table, a longitudinal clamp bar having means whereby the said bar may be secured in fixed position on the table in front of the standards, and a movable clamp bar having collars thereon at the rear side of the said clamp bar, slidably engaging the standards, the openings in the collars being oblique and presenting gripping edges respectively in front of the standards at the top of the collars and in the rear of the standards at the lower side of the collars, the movable bar, when lowered, being positioned adjacent to the rear edge of the fixed bar and the said fixed and movable bars having longitudinal rows of pins oppositely disposed.

1,173,761. HOG-OILER. ROBERT FRANCIS ARMSTRONG, Atchison, Kans. Filed Nov. 15, 1915. Serial No. 61,639. (Cl. 119—157.)

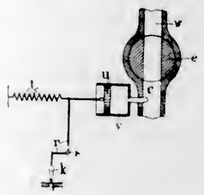
1. A hog oiler, comprising a supporting plate having means for connecting the same with a post or the like, bearing brackets on the plate, one of the said brackets being at the lower end and one intermediate the ends, a roller having journal pins engaging the brackets, the upper end of the roller being conical, and said roller having a facing of felt or the like, at each end, and having a series of annular grooves between the facings and of greater depth near the lower facing, and headed tacks for connecting the felt to the roller and providing a roughened surface at the periphery of the roller, a receptacle for oil or dip detachably connected with the upper end of the plate and having an outlet in alinement with the axis of the roller and above the same, a valve controlling the outlet, a stem connected with the valve and adapted to be engaged by the journal pin at the top of the roller when the roller is moved upward, to open the valve, said roller being movable vertically within limits, a stop on the valve stem for limiting the opening movement of the valve, said plate having an arc-shaped guard embracing the lower end of the container, and the container having a perforated lug, the plate having a hook for engagement by the lug.



2. A hog oiler, comprising a supporting plate having means for connecting the same with a post or the like, bearing brackets on the plate, one of said brackets being at the lower end one intermediate the ends, a roller having journal pins engaging the brackets, the upper end of the roller being conical, and said roller having a facing of felt or the like, at each end, and having a series of annular grooves between the facings and of greater depth near the lower facing, and headed tacks for connecting the felt to the roller and providing a roughened surface at the periphery of the roller, a receptacle for oil or dip detachably connected with the upper end of the plate and having an outlet in alinement with the axis of the roller and above the same, a valve controlling the outlet, a stem connected with the valve and adapted to be engaged by the journal pin at the top of the roller when the roller is moved upward, to open the valve, said roller being movable vertically within limits.

3. A hog oiler, comprising a supporting plate, a roller having a roughened surface and having retaining rings of absorbent material at its ends, means for mounting the roller for rotation on a vertical axis and for movement vertically, a receptacle having a valve controlled outlet above the roller, and means on the roller for controlling the valve when the roller is moved upward to permit the oil to flow.

1,173,762. CARBURETER. EMILE HENRI ARQUEMBOURG, Paris, France, assignor to Société Jules Grouvelle, H. Arquembourg & Cie., Paris, France. Filed July 9, 1912. Serial No. 708,427. (Cl. 48—155.1.)

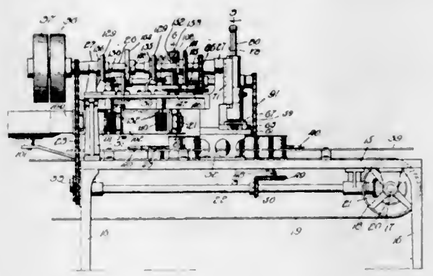


1. In a carbureter for explosion motors, in combination with a constant level tank and a spraying nozzle, a device for regulating the cross-section of outflow of the gasolene proportionally to the power of the motor, comprising an accessible cavity provided in the path of the gasolene between the constant level tank and the spraying nozzle,—a removable tubular member in said cavity provided at its upper part with a conical head perforated with a central hole for the passage of the gasolene coming from the constant level tank, and side orifices formed opposite the conduit-pipe leading to the spraying nozzle,—a coil spring pressing the conical head of said tubular member against a shoulder on the wall of the cavity containing this tubular member,—a screw-threaded plug closing said cavity and serving as a bearing for the coil spring,—a needle valve capable of being engaged to a greater or less extent into the central hole of the conical head of the tubular member,—and means for moving the needle valve and imparting to it displacements proportional to the power to be given by the motor.

2. In a carbureter, the combination with a tank, and a spraying nozzle, a cavity being arranged between the tank and nozzle, of a removable tubular member in the cavity and having an aperture in its inner end and lateral apertures, a plug closing the cavity, means for holding the apertured inner end of the member against the shoulder of the cavity, and a needle valve engaging the aperture in the inner end of the said member.

3. In a carbureter, the combination with a tank, and a spraying nozzle, a cavity being arranged between the tank and nozzle, of a removable member in the cavity and having its inner end provided with an opening through which the liquid from the tank passes to the nozzle, a closure for the cavity, means for holding the member in engagement with the shoulder at the inner end of the cavity, and a needle valve engaging the opening of the said member.

1,173,763. CAN-LINING MACHINE. LEWIS A. BAKER, Elgin, Ill. Filed July 10, 1915. Serial No. 39,037. (Cl. 93—55.)



1. A can lining machine comprising mechanism to apply a bottom lining to the can, mechanism to apply a side lining to said can and means to successively operate said mechanisms.

2. A can lining machine comprising mechanism to cut bottom linings from a web and apply them to the bottoms of the cans, mechanism to cut and form side linings and insert them into the cans, and means to operate said mechanisms.

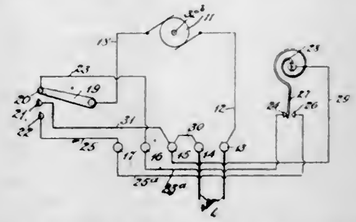
3. A can lining machine comprising mechanism to apply a bottom lining to the can, mechanism to apply a side lining to said can, means to successively operate said mechanisms and means to arrest said cans in their bottom and side lining positions, and to advance them therefrom.

4. A can lining machine comprising mechanism to apply a bottom lining to the can, mechanism to apply a side lining to said can, means to successively operate said mechanisms, a carrier to successively deliver the cans to the bottom and side lining mechanisms, and automatic means coöperating with said carrier to position said cans relatively to the bottom and side lining positions.

5. A can lining machine comprising mechanism to apply a bottom lining to the can, mechanism to apply a side lining to said can, means to successively operate said mechanisms, a carrier to successively deliver the cans to the bottom and side lining mechanisms, a can positioning device having arms arranged over the carrier to engage the cans to arrest them in their lining positions and means to intermittently actuate said positioning device.

[Claims 6 to 32 not printed in the Gazette.]

1,173,764. AUTOMATIC VALVE-OPERATING MECHANISM. ISAAC M. BALDWIN, Wellsburg, N. Y., assignor to American Thermostat Co., Elmira, N. Y. Filed Feb. 17, 1914. Serial No. 819,137. (Cl. 236—4.)



1. In an automatic valve operating mechanism, two contact points spaced apart, a thermostat for moving into electrical communication with the contact points, one at a time, three additional contact points, a switch arm for moving into electrical communication with the three additional contact points, an electrical power member for operating a valve, a conductor connecting one of the end contact points of the three additional contact points with one of the first mentioned contact points, a conductor connecting the other end contact point of the three additional contact points with the other of the first two mentioned contact points, a conductor adapted to be connected with a source of electro-motive-force and having branches connected with the thermostat and with the other of the three additional contact points, a conductor adapted to be connected with a source of electro-motive-force and connected with the electrical power member, and another conductor connecting the electrical power member with the switch arm, for completing an operating circuit through the said other of the three additional contact points, and independently of the thermostat.

2. In an automatic valve operating mechanism, two contact points spaced apart, a thermostat for moving into electrical communication with the contact points, one at a time, three additional contact points, a switch arm for moving into electrical communication with the three additional contact points, an electrical power member for operating a valve, a conductor connecting one of the end contact points of the three additional contact points with one of the first mentioned contact points, a conductor connecting the other end contact point of the three additional contact points with the other of the first two mentioned contact points, a conductor adapted to be connected with a source of electro-motive-force and having branches connected with the thermostat and with the other of the three additional contact points, a conductor adapted to be connected with a source of electro-motive-force and connected with the electrical power member, a conductor connecting the electrical power member with the switch arm for completing an operating circuit through the said other of the three additional contact points and independently of the thermostat, and meaans connecting the electrical power member with the switch arm for operating the latter.

3. In an automatic valve operating mechanism, two contact points, a thermostat having a movable member, for engaging the contact points, one at a time, an electrical power member for operating a valve, a conductor connected with the body of the thermostat, a circuit for energizing the electrical power member and independent of the thermostat, the circuit being adapted to be connected with a source of electric-motive-force, and means

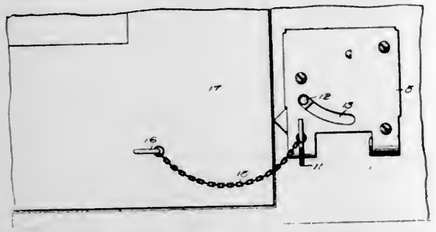
movable by the electrical power member for connecting the circuit with the contact points, one at a time for completing with the conductor a new circuit through the thermostat and the electrical power member.

4. In an automatic valve operating mechanism, an electrical power member for operating a valve, a thermostat having a movable member; a circuit independent of the thermostat for operating the electrical power member, the circuit being adapted to be connected with a source of electro-motive-force, two electrical communicating means for engagement by the movable member of the thermostat, a switch arm in the circuit for breaking the latter and for engagement with either one of the said two electrical communicating means, and an electrical communicating means connecting the body of the thermostat with the circuit for completing a circuit through the thermostat and the electrical power member, when the switch arm engages one of the said two electrical communicating means after the switch arm has been moved to break the first circuit.

5. In an automatic valve operating mechanism, an electrical power member for operating a valve, a thermostat having a movable member, a circuit independent of the thermostat for operating the electrical power member, the circuit being adapted to be connected with a source of electro-motive-force, two electrical communicating means for engagement by the movable member of the thermostat, a switch arm operable by the electrical power member, the switch arm being in the circuit for breaking the latter and for engagement with either one of the said two electrical communicating means, and an electrical communicating means connecting the body of the thermostat with the circuit for completing a circuit through the thermostat and the electrical power member, when the switch arm engages one of the said two electrical communicating means after the switch arm has been moved to break the first circuit.

[Claims 6 to 11 not printed in the Gazette.]

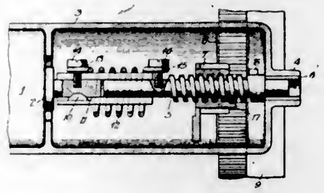
1,173,765. BURGLAR-ALARM. HARRY BASEVITZ, Chicago, Ill. Filed July 2, 1915. Serial No. 37,679. (Cl. 116—42.)



A burglar alarm of the class described comprising,—a casing, a socket on one side of the casing adjacent the corner thereof and forming a cartridge holder, said casing having a U-shaped portion at the same side adjacent the other corner in alinement with the socket, a hammer mounted to swing in the casing to and from the socket and adapted to pass into the U-shaped portion, a spring for moving the hammer toward the socket, a pin extending from the said hammer through the casing whereby the same can be moved from the socket and whereby the spring is placed under tension, a latch detachably associated with the U-shaped portion and adapted to engage the hammer whereby the spring is maintained under tension, and means associated with the latch whereby the same can be removed from the U-shaped portion, thus permitting the spring to move the hammer toward the socket.

1,173,766. ENGINE-STARTER. VINCENT BENDIX, Chicago, Ill. Filed Apr. 26, 1915. Serial No. 24,029. (Cl. 74—7.)

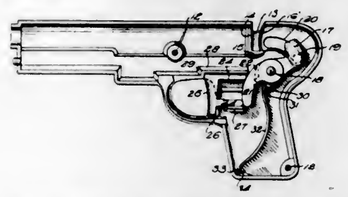
1. A starter for engines comprising a shaft having a screw-threaded portion and a cylindrical inner end, a driving device which is screw-threaded upon the shaft and adapted to travel longitudinally thereon and to engage a part of the engine to be driven, a motor having a driving shaft in axial alinement with the shaft, a sleeve fitting over the ends of both shafts, and secured to the driving shaft, and a yielding driving connection between the sleeve and screw-shaft.



2. A starter for engines comprising a shaft having a screw-threaded portion and a cylindrical inner end, a driving device which is screw-threaded upon the shaft and adapted to travel longitudinally thereon and to engage a part of the engine to be driven, a motor having a driving shaft in axial alinement with the shaft, a sleeve fitting over the ends of both shafts, and secured to the driving shaft, and a spring coiled around the sleeve with its ends anchored to the sleeve and screw-shaft respectively.

3. A starter for engines comprising a shaft having a screw-threaded portion and a cylindrical inner end, a driving device which is screw-threaded upon the shaft and adapted to travel longitudinally thereon and engage a part of the engine to be driven, a motor having a driving shaft in axial alinement with the shaft, a sleeve fitting over the ends of both shafts, and secured to the driving shaft, the adjacent ends of the two shafts being normally separated to permit of a longitudinal movement of the screw-shaft within the sleeve, and a yielding driving connection between the sleeve and screw-shaft.

1,173,767. TOY PISTOL. LEWIS SHARPS BIXLER, Kenton, Ohio. Filed July 10, 1915. Serial No. 39,092. (Cl. 42—54.)



1. In a toy pistol, a casing having an anvil, a hammer pivoted in the casing for striking against the anvil, a lug on the hammer, a pawl pivoted in the casing and having a shoulder for engaging the lug, a trigger for operating the pawl, and a spring for engaging the hammer to hold it in position.

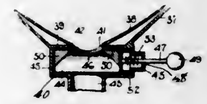
2. In a toy pistol, a casing having a guideway, and an anvil, a hammer pivoted in the casing, for striking against the anvil, a lug on the hammer, a pawl pivoted in the casing and having a shoulder for engaging the lug, a trigger slidably disposed in the guideway for operating the pawl, and resilient means for accelerating the movement of the hammer.

3. In a toy pistol, a casing having an opening through which a cap may be disposed, an anvil disposed within the casing at the opening, a pivoted hammer disposed within the casing for striking against the anvil, a lug on the hammer, a pawl pivoted in the casing and having a shoulder for engaging the lug, a trigger for operating the pawl, and a spring for engaging the hammer for the purpose specified.

4. In a toy pistol, a casing having an opening, through which a cap may be disposed, an anvil within the casing against which the cap may be exploded, lugs spaced apart at the sides of the casing in the rear of the anvil, a pivoted hammer disposed within the casing for movement between the lugs for striking the anvil, a lug extending from the hammer, a pawl pivoted in the casing having a shoulder for engagement by the last mentioned lug, a trigger for operating the pawl, and resilient means engaging the hammer for the purpose specified.

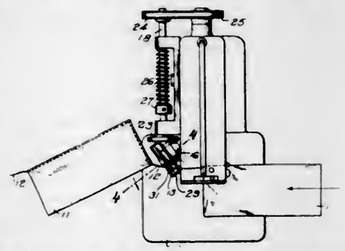
5. In a toy pistol, a casing having a slot in its side, an anvil within the casing, a pivoted hammer disposed within the casing for striking against the anvil, a lug on the hammer, a pawl pivoted in the casing and having a shoulder for engagement by the lug, a trigger for operating the pawl, a stud on the hammer projecting through the slot in the casing, and resilient means engaging the hammer for the purpose specified.

1,173,768. SUGAR-BOWL. CECIL BYERLEY, Ridgewood, N. J. Filed Nov. 21, 1914. Serial No. 873,345. (Cl. 221—106.)



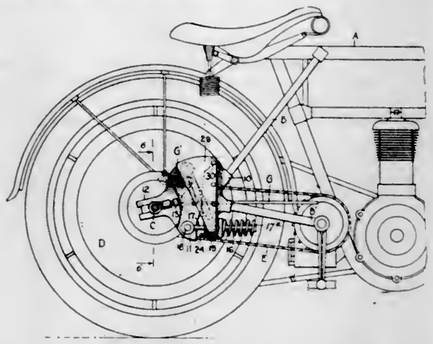
In a device of the character set forth, the combination of a receptacle having a hopper bottom with a discharge opening therein, a cylindrical receptacle having a filling opening and a discharge opening secured to the receptacle below said bottom discharge opening, one end of the cylindrical receptacle being permanently closed, a removable closure for the other end of the cylindrical receptacle, a rotary cylindrical measuring device mounted in the cylindrical receptacle substantially filling the same, said measuring device having an opening in one side adapted to register with the receptacle openings, a discharge spout leading downwardly from the cylindrical receptacle, inclined filler members secured in the ends of the measuring device adjacent the side opening thereof, a spring secured in the removable end of the receptacle, a stem secured to the end of the measuring device and extending thence through the removable end closure in axial alinement with the measuring device, said spring being connected to said stem and serving to normally hold the side opening of the measuring device in registry with the filling opening of the receptacle, and means connected to the stem to rotate the receptacle against the force of said spring to bring the measuring device opening into registry with the discharge spout.

1,173,769. THREAD-CUTTING ATTACHMENT. CHARLES WINTHROP CARMAN, Hempstead, N. Y. Filed July 2, 1915. Serial No. 37,678. (Cl. 112—33.)



An attachment for a sewing machine comprising a cutting blade disposed adjacent the needle bar of a sewing machine, said blade being disposed in angular relation to the line of feed of said machine; a transmission mechanism operatively connecting said blade and the driving mechanism of a sewing machine; a housing for said blade to protect the major portion of the cutting edge thereof, said housing being lifted to admit the passing of a thread thereunder to be cut by said blade; and a removable cover for said housing arranged to expose said blade.

1,173,770. COMBINATION RIGID AND FLEXIBLE FRAME FOR MOTOR-CYCLES. CLARENCE D. COMPTON, New York, N. Y. Filed Mar. 18, 1915. Serial No. 15,168. (Cl. 208—94.)



1. In a velocipede, a rigid frame, and a spring frame element mounted adjacent to a member of the rigid frame and rockable over the opposed surface presented by said member, said rockable element being formed with a rear fork to receive a rear wheel.

2. In a velocipede, a rigid frame, a yielding frame element provided with a rear fork, and spring means acting on the yielding element, said yielding element lying against the rigid element and adapted to have rocking movement thereon against the tension of the spring.

3. In a velocipede, a rigid frame, a spring frame element mounted adjacent to the rigid frame, said spring frame element being rockable on the opposed surface of the rigid frame and being formed with a rear fork, and means for restraining the spring frame element against displacement in the direction of its rocking movement.

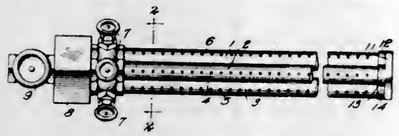
4. In a velocipede, a rigid frame formed with a depending arm, a yielding frame element having a rear fork and arranged to have rocking movement on the rigid frame, a rod pivotally connected at one end with the yielding frame element and extending through said arm, a compression spring surrounding the rod at the opposite side of the arm from the yielding element, and a seat on said rod against which the adjacent end of the spring abuts, said seat being adapted to have tilting movement on the said arm.

5. In a velocipede, a rigid frame formed with a depending arm, a yielding frame element having a rear fork and arranged to have rocking movement on the rigid frame, a rod pivotally connected at one end with the yielding frame element and extending through said arm for movement relatively to said arm, a compression spring surrounding the said rod at the opposite side of the arm from the yielding element and serving to resist movement of the yielding element, and means for restraining the yielding element against displacement in the direction of its rolling movement.

1,173,771. SPRINKLER. CARSON CAUGHEY COOK, Stockton, Cal. Filed Apr. 1, 1915. Serial No. 18,457. (Cl. 137—65.)

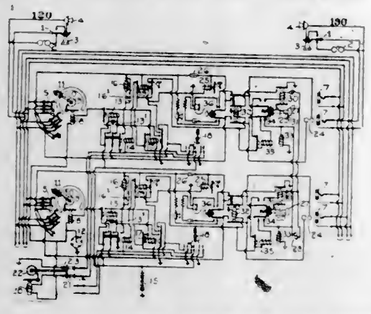
In a sprinkler of the character described, a header, an inlet member therefor, a plurality of distributing pipes connected with said header, said pipes being arranged so as to produce a triangle in cross section, the pipe forming the apex having an opening facing upwardly and the pipes forming the base of the triangle having

apertures arranged at a dihedral angle, whereby the water is distributed evenly over an appreciable area, and



means connected with each of the pipes for independently controlling the water flowing therein.

1,173,772. TELEPHONY. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois Filed Apr. 5, 1913. Serial No. 759,018. (Cl. 179—27.)



1. A telephone exchange system including telephone lines extending from telephone stations to an exchange where these telephone lines are provided with circuit controlling contacts; contacts complemental to the foregoing contacts; motor devices for changing the relation of these contacts; master switches for bringing the motor devices into operation; and mechanism governed by station apparatus of calling lines for causing the operation of the motor devices to cease upon changing the relationship of the contacts of calling lines with their complemental contacts and for thereupon causing the operation of the master switch to bring another motor device into operation.

2. A telephone exchange system including telephone lines extending from telephone stations to an exchange; switching devices for extending the line circuits; motor devices for operating the switching devices; master switches for setting the motor devices into operation; and means governed by apparatus at stations of calling lines for causing the motor devices to cease operation upon operating the switching devices to extend calling line circuits and for thereupon operating the master switch to bring an idle motor device into operation.

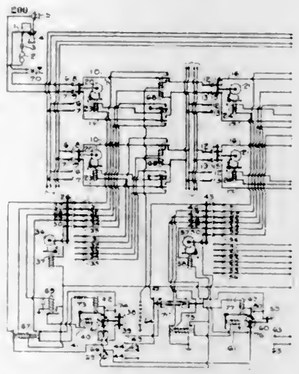
3. A telephone exchange system including telephone lines extending from telephone stations to an exchange; link connectors for uniting lines in conversation; switching devices for joining link connector with calling lines; motor devices for operating the switching devices; master switches for setting the motor devices into operation; and means governed by apparatus at stations of calling lines for causing the motor devices to cease operation upon operating the switching devices to extend calling lines into conection with link connectors and for thereupon operating the master switch to bring an idle motor device into operation.

4. A telephone exchange system including telephone lines extending from telephone stations to an exchange where these telephone lines are provided with circuit controlling contacts; contacts complemental to the foregoing contacts; motor devices for changing the relation of these contacts; master switches for bringing the motor devices into operation; mechanism governed by station apparatus of calling lines for causing the operation of the motor devices to cease upon changing the relationship of the contacts of calling lines with their complemental contacts and for thereupon causing the operation of the master switch to bring another motor device into operation; and means whereby the master switch is prevented from bringing the motors that have been arrested by calling lines again into operation while the calling lines are in circuit with calling station telephones.

5. A telephone exchange system including telephone lines extending from telephone stations to an exchange; switching devices for extending the line circuits; motor devices for operating the switching devices; master switches for setting the motor devices into operation; means governed by apparatus at stations of calling lines for causing the motor devices to cease operation upon operating the switching devices to extend calling line circuits and for thereupon operating the master switch to bring an idle motor device into operation; and means whereby the master switch is prevented from bringing the motor devices that have been arrested by calling lines again into operation while the calling lines are in circuit with calling station telephones.

[Claims 6 to 15 not printed in the Gazette.]

1,173,773. TELEPHONY. ELMER R. CORWIN, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,020. (Cl. 179—27.)



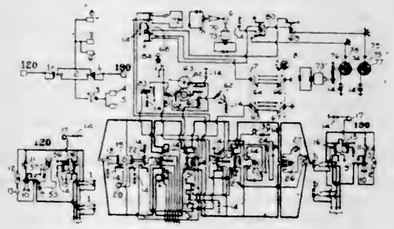
1. A telephone exchange system including telephone lines extending from substations to an exchange; a group of link connectors for effecting connection between telephone lines; electro-magnetic connector switching devices for extending said link connectors that have become connected with calling lines and individual to the link connectors of said group; a calling subscriber controlled master switching device common to and interchangeably associated with the link connectors of said group and taking part in the control of the operation of said connector switching devices; and setting up switching mechanism for selecting the connector switching devices which are to be operated.

2. A telephone exchange system including telephone lines extending from substations to an exchange; a group of link connectors for effecting connection between telephone lines; calling subscriber controlled electromagnetic connector switching devices for extending said link connectors that have become connected with calling lines and individual to the link connectors of said group; a master switching device common to and interchangeably associated with the link connectors of said group and taking part in the control of the operation of said connector switching devices; and setting up switching mechanism for selecting the connector switching devices which are to be operated.

3. A telephone exchange system including telephone lines extending from substations to an exchange: a group of link connectors for effecting connection between telephone lines; calling subscriber controlled electromagnetic connector switching devices for extending said link connectors that have become connected with calling lines and individual to the link connectors of said group; a calling subscriber controlled master switching device common to and interchangeably associated with the link connectors of said group and taking part in the control of the operation of said connector switching devices; and calling subscriber controlled setting up switching mechanism for selecting the connector switching devices which are to be operated.

[Claims 6 to 17 not printed in the Gazette.]

1,173,774. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1913. Serial No. 759,028. (Cl. 179—6.5.)



1. A telephone exchange system including telephone lines extending from substations to an exchange: means for uniting lines in conversation; an announcer for informing subscribers of the terminations of predetermined periods of service; timing mechanism for timely bringing the announcer into operative association with talking telephone lines; and operator controlled means for extending the periods of telephonic connection and placing said announcer in condition for re-operation at the terminations of the period extensions.

2. A telephone exchange system including telephone lines extending from substations to an exchange: means for uniting lines in conversation; an announcer for informing subscribers of the terminations of predetermined periods of service; timing mechanism for timely bringing the announcer into operative association with talking telephone lines; means for setting said timing mechanism into operation and jointly operated by equipment of calling and called subscribers when telephonically connected; and operator controlled means for extending the periods of telephonic connection and placing said announcer in condition for re-operation at the terminations of the period extensions.

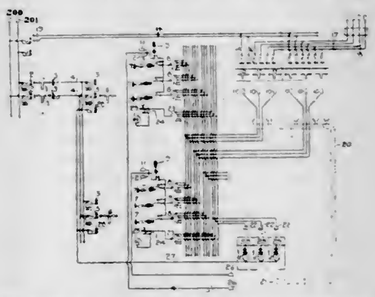
3. A telephone exchange system including telephone lines extending from substations to an exchange; means for uniting lines in conversation; an announcer for informing subscribers of the terminations of predetermined periods of service; timing mechanism for timely bringing the announcer into operative association with talking telephone lines; and subscriber controlled and operator controlled means for extending the periods of telephonic connection and placing said announcer in condition for re-operation at the terminations of the period extensions.

4. A telephone exchange system including telephone lines extending from substations to an exchange; means for uniting lines in conversation; an announcer for informing subscribers of the terminations of predetermined periods of service; timing mechanism for timely bringing the announcer into operative association with talking telephone lines; means for setting said timing mechanism into operation and jointly operated by equipment of calling and called subscribers when telephonically connected; and subscriber controlled means for extending the periods of telephonic connection and placing said announcer in condition for re-operation at the terminations of the period extensions.

5. A telephone exchange system including telephone lines extending from substations to an exchange; means for uniting lines in conversation; an announcer for informing subscribers of the terminations of predetermined periods of service; timing mechanism for timely bringing the announcer into operative association with talking telephone lines; and subscriber and operator controlled means for extending the periods of telephonic connection and placing said announcer in condition for re-operation at the terminations of the period extensions.

[Claims 6 to 36 not printed in the Gazette.]

1,173,775. TELEPHONY. MORTON L. JOHNSON, Chicago, Ill., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1913. Serial No. 779,479. (Cl. 179—49.)

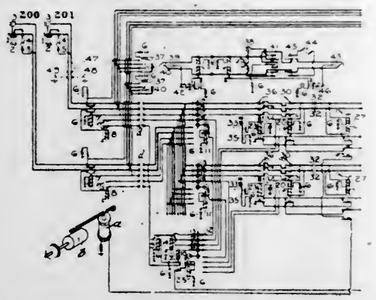


A telephone exchange system including telephone lines extending to an exchange; call receiving operator's equipment having means for associating it with calling lines; connecting opeartors' equipments to which telephone lines extend, these equipments including recording receivers; a transmitter at the call receiving operator's position for operating the recording receivers; a selector switch for selecting an idle recording receiver; and an additional recording receiver located in the presence of a third operator and operable by the transmitter of the call receiving operator.

1,173,776. TELEPHONY. ELMER R. CORWIN, Chicago, Ill., assignor to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1915. Serial No. 2,390. (Cl. 179—27.)

1. A telephone exchange system including telephone lines extending to an exchange; line extensions for interchangeable connection with the incoming ends of such lines in the normal operation of the exchange; other

telephone line extensions that are to be excluded from connection between calling and called lines in the normal operation of the system; and operator's responsive devices associated with these latter extensions and having means whereby they are unresponsive to telephone lines in normal condition and are responsive to telephone lines in abnormal condition.



2. A telephone exchange system including telephone lines extending to an exchange; line extensions for interchangeable connection with the incoming ends of such lines in the normal operation of the exchange; other telephone line extensions that are to be excluded from connection between calling and called lines in the normal operation of the system; and responsive devices associated with these latter extensions and having means whereby they are unresponsive to telephone lines in normal condition and are responsive to telephone lines in abnormal condition.

3. A telephone exchange system including telephone lines extending to an exchange; line extensions for interchangeable connection with the incoming ends of such lines in the normal operation of the exchange; other telephone line extensions that are to be excluded from connection between calling and called lines in the normal operation of the system; and operator's responsive devices, individual to the telephone lines, associated with these latter extensions and having means whereby they are unresponsive to telephone lines in normal condition and are responsive to telephone lines in abnormal condition.

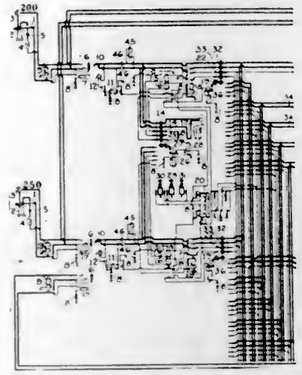
4. A telephone exchange system including telephone lines extending to an exchange; line extensions for interchangeable connection with the incoming ends of such lines in the normal operation of the exchange; other telephone line extensions that are to be excluded from connection between calling and called lines in the normal operation of the system; and responsive devices, individual to the telephone lines, associated with these latter extensions and having means whereby they are unresponsive to telephone lines in normal condition and are responsive to telephone lines in abnormal condition.

5. A telephone exchange system including telephone lines extending to an exchange; line extensions for interchangeable connection with the incoming ends of such lines in the normal operation of the exchange; other telephone line extensions that are to be excluded from connection between calling and called lines in the normal operation of the system; and operator's responsive devices associated with these latter extensions and having means whereby they are responsive to telephone lines in normal condition and are responsive to accidentally grounded telephone lines.

[Claims 6 to 31 not printed in the Gazette.]

1,173,777. TELEPHONY. ELMER R. CORWIN, Chicago, Ill., assignor to Frank B. Cook Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 7, 1915. Serial No. 19,655. (Cl. 179—27.)

1. A telephone exchange system including telephone lines; three groups of extensions for such telephone lines; two electro-magnets and means associated therewith for selectively and interchangeably associating said groups of line extensions with telephone lines, one magnet serving to effect such association of one group of line extensions, another electro-magnet serving to effect such association of another group of line extensions and the two electro-magnets together serving to effect such association of the remaining group of line extensions; three operator controlled switches respectively individual to the different groups of line extensions; and circuit connections whereby one switch controls one magnet, another switch the other magnet and the third switch both magnets.



2. A telephone exchange system including telephone lines; three groups of extensions for such telephone lines; an electro-magnetic switch, having a motor magnet, for selectively and interchangeably associating said groups of line extensions with telephone lines; a relay for governing said motor magnet; two electro-magnets and means associated therewith for determining the extent of operation of the motor magnet to associate the different groups of line extensions with the line and, after a desired selection, coöperating with the aforesaid relay then to stop the motor magnet; three operator controlled switches respectively individual to the different groups of line extensions; and circuit connections whereby one switch controls one magnet, another switch the other magnet and the third switch both magnets.

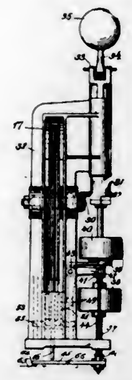
3. A telephone exchange system including telephone lines extending to an operator's position at an exchange; link connectors at this position for uniting lines in conversation; means whereby the calling line and called line sections of these link connectors may be interchangeably associated; and a master switch interchangeably associated with the calling line sections for predetermining the calling line sections for use and governed by the called line sections when operatively coupled with calling line sections.

4. A telephone exchange system including telephone lines extending to an operator's position at an exchange; link connectors at this position for uniting lines in conversation; selector switches whereby calling line and called line sections of these link connectors may be interchangeably associated; and a master switch interchangeably associated with the calling line sections for predetermining the calling line ends for use and governed by the called line sections when operatively coupled with calling line sections.

5. A telephone exchange system including telephone lines extending to an exchange; link connectors at the exchange for uniting lines in conversation; selector switches whereby calling line and called line sections of these link connectors may be interchangeably associated; and a master switch interchangeably associated with the calling line sections for predetermining the calling line ends for use and governed by the called line sections when operatively coupled with calling line sections.

[Claims 6 and 7 not printed in the Gazette.]

1,173,778. ELEVATOR-GOVERNOR. ANDREW M. COYLE, New York, N. Y., assignor to Gurney Electric Elevator Company, Honesdale, Pa., a Corporation of Pennsylvania. Filed Apr. 26, 1912. Serial No. 693,325. (Cl. 187—39.)



1. In an elevator, a car, a speed controlling device for the car, other means for stopping the movement of the car, a governor arranged to be driven at speeds proportional to those of the car, a member arranged to be moved by the governor, a device for opposing the movement of said member, said speed controlling device being connected with and arranged to be actuated by said member when it is moved by the governor against said opposing device, to retard the speed of the car, a second device acting in conjunction with the first for opposing further movement of the member, and connections between said member and the car stopping means for causing said car stopping means to be actuated when further movement is imparted to the member against the action of both the opposing devices.

2. In an elevator, a motor, a speed controlling device therefor, a car, a safety device thereon, and a governor driven by the car; said governor comprising a centrifugally controlled member, a device for opposing the action of said member, means for actuating the speed controlling device when the effect of said opposing device is overcome to retard the speed of the car, another device for materially increasing the opposition to further action of said member, and means for actuating the car safety device when said increased opposition is overcome.

3. In an elevator, a car, a speed controlling device therefor, a safety device on the car, a governor arranged to be driven at speeds proportional to those of the car, a member arranged to be raised by the governor, a weight thereon, said speed controlling device being connected with and arranged to be actuated by said member when it is moved by the governor against the effect of said weight to retard the speed of the car, a second weight supported above said first weight for opposing further movement of the member, and connections between said member and the car safety device for causing said car safety device to be actuated when further movement is imparted to the member against the effect of said second weight.

4. In combination with an elevator, an electric motor having a shunt field winding, a resistance in said shunt field winding, a switch for short circuiting said resistance, a car, a safety device thereon, and a governor driven by the car; said governor comprising a pair of pivotally supported fly-balls, a vertical rod associated therewith and arranged to be raised by the movement imparted to said balls by centrifugal force, a weight secured to said rod to oppose said upward movement, means for actuating said switch when the effect of said weight is overcome, a second weight loosely supported about said secured weight and arranged to arrest the movement of said rod at predetermined governor speeds and to be picked up by the first weight when the governor speed exceeds a certain limit, and means for actuating the car safety device when the effect of both of said devices is overcome by the centrifugal effect on said balls.

1,173,779. BRIQUET AND METHOD OF PRODUCING THE SAME. LOUIS J. CURTMAN, New York, N. Y. Filed May 20, 1913. Serial No. 768,697. (Cl. 44—1.)

1. A briquet consisting of granulated fuel mixed with a binder containing molasses and water gas tar, molded to shape and baked, substantially as specified.

2. A briquet consisting of granulated coal combined with a binder composed of molasses, concentrated and neutralized syrup of sulfite pitch, and water gas tar, molded to shape, and baked, substantially as specified.

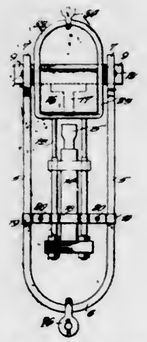
3. A briquet consisting of granulated coal combined with a binder composed of crude molasses concentrated and neutralized syrup of sulfite pitch, and water gas tar, molded to shape, and baked substantially as specified.

4. A briquet consisting of granulated coal combined with a binder composed of crude molasses (about 90 parts), concentrated and neutralized syrup of sulfite pitch (about 9 parts), and water gas tar (about 1 part) molded to shape, and baked, substantially as specified.

5. The method of forming briquets consisting in combining granulated material with a binder composed essentially of a carbo-hydrate, and water gas tar, molding the same to shape, and then baking said molded mass, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,173,780. PILE-EXTRACTING MECHANISM. ALEXANDER ROY CUTHBERTSON, Turners Falls, Mass. Filed Feb. 27, 1915. Serial No. 10,986. (Cl. 61—13.)



1. In a pile extracting mechanism, the combination of a U-shaped frame, a striking bar carried transversely of the frame at the end thereof, a head having a channel within which the striking bar rests, a hammer adapted to be arranged within the frame for imparting blows to the head, means for maintaining the hammer in place within the frame, a pair of rings having lower portions adapted to fit and engage the hammer head on opposite sides of the striking bar, means connecting the upper ends of the rings together and to which a derrick may be connected, and means connected to the frame whereby a pile may be connected to the device, substantially as described.

2. In a device of the class described, the combination of a U-shaped frame, a striking bar carried transversely thereof at one end, a hammer adapted to be disposed within the frame and having a grooved head fitting the striking bar, means for securing the hammer within the frame, a pair of rings engaging the hammer head on opposite sides of the striking bar for holding the hammer head thereagainst, means for connecting said rings together, said means adapted to serve as a connection between the device and a derrick, and means for connecting the frame to a pile, substantially as described.

3. The combination with a hammer having a channeled head, of a frame within which the hammer is disposed.

a striking bar carried by the frame and fitting within the channeled head, means for connecting the frame at one end with a pile, a pair of rings engaging the hammer head at opposite sides of the striking bar and adapted to be connected with a derrick, said rings further maintaining the hammer head in engagement with the striking bar, substantially as described.

4. In a pile extracting mechanism, the combination of a frame having a striking bar, a head fitting against the bar, a hammer arranged in the frame and adapted to deliver blows to the head, means for maintaining the head in engagement against the bar, said means serving to connect the mechanism with a lifting device, and means for connecting the frame with an object to be extracted.

5. A pile extracting mechanism including a frame having a striking bar, and adapted to be connected to an object to be extracted, a head fitting against the bar, rings engaging the head on opposite sides of the bar and adapted to be connected with a lifting device, and a hammer arranged in the frame and adapted to impart blows to the head.

1,173,781. POWDER-BRUSH. PIETRO D'ALESSANDRO, Syracuse, N. Y., assignor of one-half to Joseph A. Laury, Syracuse, N. Y. Filed May 27, 1915. Serial No. 30,858. (Cl. 137—7.)



1. In a valve for fountain brushes and the like, the combination with the substantially flat seat having a plurality of radial openings, a valve adapted to bear upon one side of said seat and to rotate for opening and closing said openings, a spider-like support disposed on the opposite side of the said seat having radial arms corresponding and attached to the arms of the said valve, a pin piercing the center of said seat and also said valve and said spider for pivotally mounting said movable parts, a plurality of push-rods reciprocatably supported by said seat and having slotted ends engaging the spider-arms for moving the said valve in one direction, and a spring for moving said valve in the opposite direction.

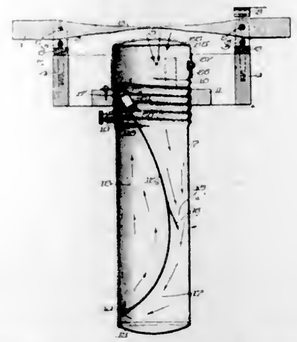
2. In a valve of the class described, a seat having a plurality of radial openings, a valve rotatable on one side of said seat for controlling said openings, a spider disposed on the opposite side of the said seat and having arms extending through the said openings and connected with the corresponding ports of the valve, means for pivoting said valve and said spider to the said seat, a plurality of push rods having forked ends which engage pins carried by said spider for rotating said valve in one direction, and a spring for operating said valve and said push rods in the opposite direction.

1,173,782. PIANO WITHOUT STRINGS. JOHN C. DEAGAN, Chicago, Ill. Filed Dec. 19, 1913. Serial No. 807,664. (Cl. 84—31.)

1. A musical instrument including a row of adjacent resonating tubes, some of the tubes having end walls with exit openings for sound issuing from the tubes, the dimensions of the openings measured longitudinally of the row of tubes being less than the dimensions of such openings measured transversely of the row of tubes.

2. A musical instrument including a row of adjacent resonating tubes, some of the tubes having end walls with exit openings for sound issuing from the tubes, the dimensions of the openings measured longitudinally of the row of tubes being less than the dimensions of such openings measured transversely of the row of tubes, some of the openings being continued transversely of the row of tubes along the walls of the tubes provided therewith.

3. A musical instrument including a row of adjacent resonating tubes, some of the tubes having end walls with exit openings for sound issuing from the tubes, the dimensions of the openings measured longitudinally of the row of tubes being less than the dimensions of such openings measured transversely of the row of tubes, some of the openings being continued transversely of the row of tubes along the walls of the tubes provided therewith, the continued openings in some of the tubes extending along but one side of each of these tubes whereby more effective reflecting surfaces are afforded opposite the continued portions of these latter openings.

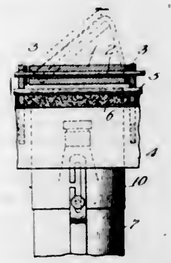


4. A musical instrument including a resonating tube having a sound inlet opening; a curved diaphragm therein extending from one side of the tube toward the other and returning toward the first side, there being an opening in said diaphragm; a collar carried by the diaphragm whose opening is alined with said opening; a cap adjustable longitudinally of the collar toward and from the diaphragm; and a thin vibrant diaphragm carried by the cap and adapted to be pressed with varying pressure against the adjacent edge of the collar according to the adjustment of the cap.

5. A musical instrument including a resonating tube having a sound inlet opening; a diaphragm therein extending from one side of the tube toward the other, there being an opening in said diaphragm; a collar carried by the diaphragm whose opening is alined with said opening; a cap adjustable longitudinally of the collar toward and from the diaphragm; and a thin vibrant diaphragm carried by the cap and adapted to be pressed with varying pressure against the adjacent edge of the collar according to the adjustment of the cap.

[Claims 6 to 9 not printed in the Gazette.]

1,173,783. PERCUSSION MUSICAL INSTRUMENT. JOHN C. DEAGAN, Chicago, Ill. Original application filed Dec. 19, 1913, Serial No. 807,663. Divided and this application filed Oct. 7, 1914. Serial No. 865,444. (Cl. 84—31.)



1. A musical instrument including a sound-producing bar; and elastic highly extensible and contractible cords threading the bar to support it and stretching to permit the bar to be tilted from its normal plane.

2. A musical instrument including a sound-producing bar and suspended elastic highly extensible and contractible cords upon which the bar is supported.

1,173,784. XYLOPHONE. JOHN C. DEAGAN, Chicago, Ill. Filed Feb. 15, 1915. Serial No. 8,156. (Cl. 84—31.)



1. A sound producing device including an elongated upright vibrating element; a support therefor adjacent a nodal line of the vibrating element; and a support engaging part upon the vibrating element adjacent said nodal line and having its support-engaging portion adjustable longitudinally of said vibrating element.

2. A sound producing device including an elongated upright vibrating element; a support therefor adjacent a nodal line of the vibrating element; and a support-engaging string upon the vibrating element adjacent said nodal line and having its support-engaging portion adjustable longitudinally of said vibrating element.

3. A sound producing device including an elongated upright vibrating element; a support therefor adjacent a nodal line of the vibrating element; and a string carried by said element adjacent said nodal line for engaging said support, there being means for lengthening and shortening the string to adjust its support engaging portion with respect to and longitudinally of said element.

4. A sound producing device including an elongated upright vibrating element; a support therefor adjacent a nodal line of the element; and means carried by the vibrating element whereby the place where the vibrating element is supported may be at differing places longitudinally of said element.

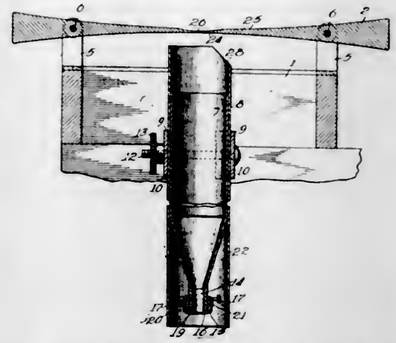
1,173,785. PERCUSSION MUSICAL INSTRUMENT. JOHN C. DEAGAN, Chicago, Ill. Original application filed Feb. 14, 1914, Serial No. 818,773. Divided and this application filed Apr. 7, 1915. Serial No. 19,627. (Cl. 84—31.)

1. A musical instrument including a plurality of sounding bars; a plurality of resonating tubes each formed in sections which are relatively adjustable longitudinally thereof, sections of said tubes being adjustable toward and from the bars; and means for holding the tube sections in adjustment.

2. A musical instrument including a plurality of sounding bars; resonating tubes to which the bars are opposed; and clamping means common to said tubes for holding them in relation to the bars and permitting independent adjustment of the tubes with respect to their bars.

3. A musical instrument including a plurality of sounding bars; resonating tubes each formed in sections that are relatively adjustable longitudinally thereof; and clamping means common to said tubes for holding them in relation to the bars and permitting adjustment of tube sections with respect to the bars.

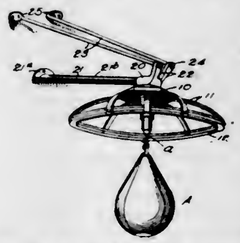
4. A musical instrument including a plurality of sounding bars; resonating tubes to which the bars are opposed; and clamping means common to said tubes for holding them in relation to the bars and permitting independent adjustment of the tubes with respect to their bars, said clamping means being in the form of two clamping members 9 having tube receiving recesses 10 and clamping bolts passing transversely through the clamping members 9 between adjacent recesses 10.



5. A musical instrument including a plurality of sounding bars; resonating tubes each formed in sections that are relatively adjustable longitudinally thereof; and clamping means common to said tubes for holding them in relation to the bars and permitting adjustment of tube sections with respect to the bars, said clamping means being in the form of two clamping members 9 having tube receiving recesses 10 and clamping bolts passing transversely through the clamping members 9 between adjacent recesses 10.

[Claim 6 not printed in the Gazette.]

1,173,786. RESILIENT PLATFORM FOR STRIKING-BAGS. ROBERT NEWELL DIEHL, Hanford, Cal. Filed July 16, 1915. Serial No. 40,205. (Cl. 46—69.)



1. A platform for striking bags, including a striking rim, a rigid portion within the rim provided with means to secure a striking bag, and arms connecting the rim with said rigid portion, said arms being in the form of plate springs having resiliency toward the outer ends.

2. A platform for striking bags, and supporting means therefor, including a bracket arm forked at its outer end, the fork members inclining outwardly and upwardly from the body of the bracket arm and diverging from each other, braces detachably connected at one end to said members, and adapted to be secured at its opposite end to a support, a platform having a striking rim, and a bolt detachably connecting said platform and bracket arm, adjacent to the said fork members.

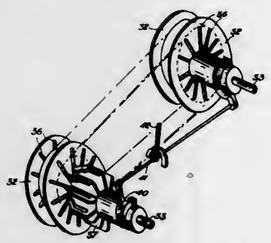
3. A platform for a striking bag, and supporting means therefor, including a bracket arm, a bolt connecting the bracket near one end with the platform above the latter, and a fitting having detachable engagement with the platform at the underside and presenting a rest accommodating the lower end of the bolt, and means carried by the said fitting to support a striking bag.

4. A platform for striking bags, including a supporting member adjacent to one face of the platform, means form-

ing a detachable connection between the supporting member and the platform, said platform having a threaded boss thereon at the opposite face from the supporting member, a fitting having threaded engagement with the said boss, and a swivel bag-securing member in said fitting.

5. A platform for striking bags, and supporting means therefor, including a supporting member adjacent to one face of the platform, a bolt fitting the said supporting member, an extension member having at one end threaded engagement with the bolt and at its opposite end bearing against said platform, the said extension member having a threaded stem extending through the platform, said platform having a boss at the underside, the boss being internally threaded to receive said stem and being externally threaded, and a nut on said stem at the underside of the boss, a fitting having threaded engagement with the external threads of the boss, and a supporting member within said fitting.

1,173,787. VARIABLE-SPEED PULLEY. WILLIAM BUYERS DUNBAR, Ashfield, near Sydney, New South Wales, Australia. Filed June 2, 1915. Serial No. 31,655. (Cl. 64—8.)



1. In a variable diameter pulley, a pair of spaced flanges, a plurality of groups of segments movable radially between said flanges, the segments of one of said groups inclosing the segments of another of said groups when said pulley is in its contracted position and forming a substantially complete cylindrical surface, said segments of the first named group being resilient and adapted to form with the segments of a second group upon radial outward movement of said groups a cylindrical surface of increased diameter, and means for moving said segments outwardly.

2. In a variable diameter pulley, a pair of spaced flanges, three or more groups of segments mounted between said flanges for radial movement, the segments of one of said groups inclosing the segments of the other of said groups when the pulley is in contracted position and forming a substantially complete cylindrical surface, the segments of each of the other groups filling the spaces between the segments of the first named group upon radial outward movement of the groups, the segments of all but one of said groups being resilient and the segments of each of said groups being adapted to engage each other upon radial outward movement thereof to form cylindrical surfaces of successively increasing diameter and means for moving said segments outwardly.

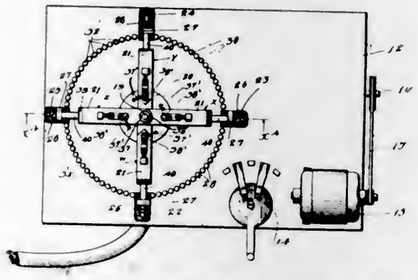
3. In a variable diameter pulley, a pair of spaced flanges, a plurality of segments mounted for radial movement between said flanges, said segments forming outermost, intermediate, and inner groups, the segments of the outermost group inclosing the segments of the other two groups and forming a substantially complete cylindrical surface when the pulley is in its contracted position, the segments of the intermediate group being adapted to engage with the segments of the outermost group at their ends thereof upon a partial outward movement of said segments to form a pulley of increased diameter, said innermost group being adapted to fill the spaces between the other two groups on a second outward movement of said segments, the segments of the outermost and intermediate group being resilient whereby they assume a curvature of increased radius at each successive outward movement thereof and means for moving said segments outwardly.

4. A variable diameter pulley comprising a pair of spaced flanges, a plurality of groups of segments comprising outer, intermediate and inner groups, said flanges having a plurality of radially disposed slots therein, said segments each having lugs passing through the slots in the flanges and being provided with stems, members having inclined surfaces engaging said stems to move said segments outwardly upon movement of said members in a direction parallel to the axis of the pulley, the segments of said outermost and intermediate group being resilient and adapted to engage each other and the segments of the inner group to form substantially complete cylindrical surfaces in each position of the pulley.

5. A variable diameter pulley comprising a pair of spaced flanges, a plurality of groups of segments comprising outer, intermediate, and inner groups, said flanges having a plurality of radially disposed slots therein, said segments each having lugs passing through the slots in the flanges and being provided with stems, members having inclined surfaces engaging said stems to move said segments outwardly upon movement of said members in a direction parallel to the axis of the pulley, the segments of said outermost and intermediate group being resilient and adapted to engage each other and the segments of the inner group to form substantially complete cylindrical surfaces in each position of the pulley, a shaft upon which said pulley is mounted, and a sliding collar on said shaft for actuating said members.

[Claim 6 not printed in the Gazette.]

1,173,788. BASE-BALL-GAME EXHIBITOR. EDWIN E. FAIRCHILD, Los Angeles, Cal., assignor to William Randolph Hearst, New York, N. Y. Filed Feb. 3, 1914. Serial No. 816,204. (Cl. 200—14.)



1. A switch comprising a series of contacts, a traveling wiper adapted to travel over said contacts, means for moving said wiper over said contacts, and means for automatically disconnecting said wiper from said contacts after it has moved a definite distance.

2. A switch comprising a series of contacts arranged in a circle, four revoluble arms, means for driving said arms, a wiper carried by each arm and adapted to travel over the contacts, and means for automatically disconnecting a wiper from the contacts at a definite point.

3. A switch comprising a series of contacts arranged in a circle, four revoluble arms, means for driving said arms, a wiper carried by each arm and adapted to travel over the contacts, and means for automatically disconnecting a wiper from the contacts at a definite point, each of said arms being independently movable with respect to said driving means.

4. A switch comprising a series of contacts arranged in a circle, four revoluble arms, means for driving said arms, a wiper carried by each arm and adapted to travel over the contacts, each wiper being pivoted on its arm, and a series of blocks with inclined lugs located ninety degrees apart in the circle of contacts corresponding in angular position to home plate, first, second and third bases, each of said blocks being movable into or out of the path of movement of the wipers, and when in the path of movement, adapted to lift the wipers out of connection with the contacts.

5. A switch comprising a series of contacts arranged in a circle, four revoluble arms, means for driving said arms, a wiper carried by each arm and adapted to travel over the contacts, each wiper being pivoted on its arm, a series of blocks with inclined lugs located ninety degrees apart in the circle of contacts corresponding in angular position to home plate, first, second and third bases, each of said blocks being movable into or out of the path of movement of the wipers, and when in the path of movement, adapted to lift the wipers out of connection with the contacts, and latch means for retaining the wipers in elevated position when lifted by said lugs.

[Claims 6 to 8 not printed in the Gazette.]

1,173,789. GAGE. EMIL GUY FOX, Kenosha, Wis. Filed Mar. 16, 1914. Serial No. 824,932. (Cl. 33—143.)

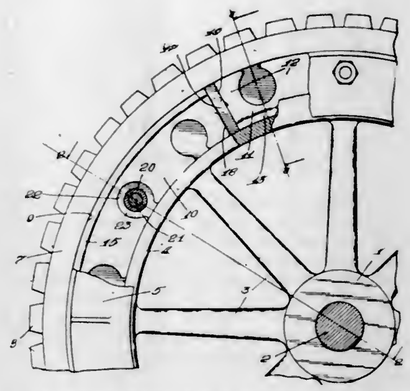


A gage for carpenters' use, comprising a straight, graduated bar and two metal indicators applied thereto, and each consisting of a sleeve fitting the bar slidably and provided with a clamp-screw and having a lateral extension in the form of a flat, graduated blade with straight and parallel upper and lower edges, said extensions being formed integrally with the sleeve and in the same plane with the front face thereof, as and for the purpose specified.

1,173,790. VEHICLE-WHEEL. FRANKLIN A. FROMMANN, Chicago, Ill., assignor to Olive Frommann, Chicago, Ill. Filed June 2, 1913. Serial No. 771,251. (Cl. 152—36.)

1. In a vehicle wheel, a hub member, a tire member floatingly mounted thereon, an inner rim carried by the hub member, an outer rim carried by the tire member, and a plurality of cushions interposed in annular formation between the said rims, the cushions comprising the said annular formation being attached alternately to the inner rim and the outer rim respectively, the ends of the adjacent cushions being separated by air spaces so as to be out of contact when the said adjacent cushions are not compressed radially of the wheel, the said air spaces enabling said cushions to be circumferentially expanded by radial pressure thereupon.

2. In a vehicle wheel, a hub member, a tire member floatingly mounted thereon, an inner rim carried by the hub member, an outer rim carried by the tire member, and a plurality of transversely channeled cushions interposed in annular formation between the said rims, the cushions comprising the said annular formation being attached alternately only to the inner and the outer rim respectively, the channels in each cushion extending radially to the rim to which the cushion is not attached, the consecutive cushions being separated at their ends by air spaces permitting circumferential expansion and movement of the cushions; and bumpers carried by one of the wheel members and each extending respectively through one of the transverse channels of one of the cushions for limiting the circumferential movement of the cushion with respect to the last named wheel member.



3. In a vehicle wheel, a hub member, a tire member floatingly mounted thereon, an inner rim carried by the hub member, an outer rim carried by the tire member, and a plurality of transversely channeled cushions interposed in annular formation between the said rims, the cushions comprising the said annular formation being attached alternately only to the inner and the outer rim respectively, the channels in each cushion extending radially to the rim to which the cushion is not attached and circumferentially narrowed adjacent to the last named rim; and a bumper carried by one of the wheel members and extending through one of the transverse channels of the said cushions.

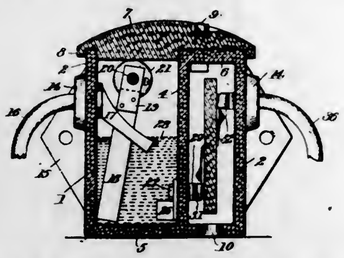
4. In a vehicle wheel, a hub member, a tire member floatingly mounted thereon, an inner rim carried by the hub member, an outer rim carried by the tire member, and a plurality of transversely channeled cushions interposed in annular formation between the said rims, the cushions comprising the said annular formation being attached alternately only to the inner and the outer rim respectively, the channels in each cushion extending radially to the rim to which the cushion is not attached; and bumpers carried by one of the wheel members, each thereof extending respectively through a channel in each of said cushions.

5. In a vehicle wheel, a hub member, a tire member floatingly mounted thereon, an inner rim carried by the hub member, an outer rim carried by the tire member, and a plurality of transversely channeled cushions interposed in annular formation between the said rims; and bumpers carried by one of the said members, each of said bumpers extending transversely of the wheel through a channel in one of the said cushions and normally out of contact with the latter.

1,173,791. COMBINED FUSE AND SWITCH BOX. EDWARD FRYE, Dorchester, Mass. Filed May 19, 1915. Serial No. 29,081. (Cl. 175—292.)

1. A combined fuse and switch box having two vertically extending compartments arranged side by side, a switch blade pivotally mounted in the upper part of one compartment, and depending therein, said compartment being open at the top only and adapted to contain oil, a contact mounted on the wall of said compartment near the bottom thereof, and arranged to be engaged by the depending portion of said switch blade below the oil level in said compartment, a pair of clips in the other compartment, one of which is connected with said contact, a fuse plug held in said clips, such other compartment being closed at the top and open at the bottom,

and means for forming exterior electrical connections with said switch blade and fuse plug.

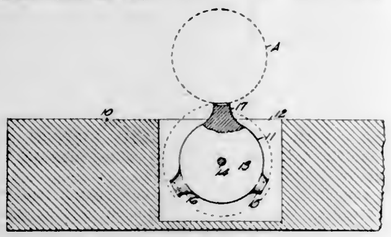


2. In a device of the character described, the combination with a receptacle having a partition wall dividing the same into two compartments, of a switch in one compartment, said compartment containing oil, and provided with a removable cover, and the other compartment having an opening through its side, a fuse plug fitting into and closing such opening, a fuse carried by said plug in said last mentioned compartment, and means for connecting said switch and fuse in a series circuit.

3. In a device of the character described, the combination with a receptacle having outer walls and a partition wall dividing the same into two compartments, of a switch blade pivotally mounted in one compartment, a contact carried by the partition wall and adapted to be engaged by said switch, a pair of clips in the other compartment, one of said clips being mounted on said partition wall and electrically connected with said contact, and the other clip being mounted on the outer wall opposite said partition wall, and a fuse plug in said last mentioned compartment, said plug having a fuse provided with terminals adapted to simultaneously engage said clips, and means for forming exterior electrical connections with said switch blade and outer clip, respectively.

4. In a device of the character described, a box comprising front and rear side walls and end walls, and a vertical partition wall parallel with said end walls dividing the box into two compartments, lugs carried by said end walls whereby the box may be secured with its rear wall against a suitable support, a switch in one compartment, and a handle for operating the switch projecting through the front side wall, and a fuse plug in the other compartment, said front side wall being provided with an opening through which said plug may be inserted and removed.

1,173,792. ADJUSTABLE GOLF-TEE BOARD. MOSE FUCHS, Baker, Oreg. Filed Oct. 9, 1915. Serial No. 55,089. (Cl. 46—4.)



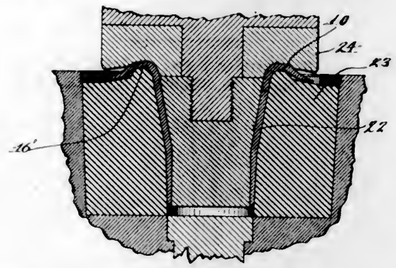
1. A golf tee mounted to turn and having seats thereon for a golf ball, the seats being disposed at different distances from the axis of the tee.

2. A golf-tee board and a tee revolubly mounted on the board and having seats for a golf ball at the edge of the tee at different distances from the axis.

3. A golf-tee board having a depression in its upper surface and a tee mounted to turn in the said depression in approximately a vertical plane, said tee having a plurality of seats at different points therearound, the surfaces of the seats being transverse to the plane of rotation of the tee and at different distances from the axis of the tee and optionally turnable with the tee, to position either seat projecting above the top of the board.

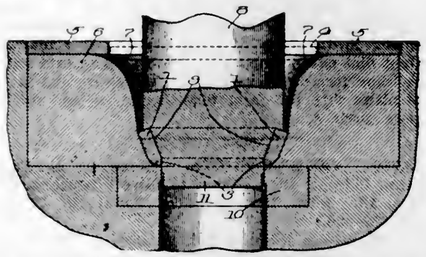
4. A golf-tee board and a tee mounted on the board to turn in a vertical plane, said tee including a plurality of radially disposed individual tees projecting at different distances from the axis.

1,173,793. METHOD OF MAKING RACEWAY-WALLS FOR BEARINGS. ISAAC A. GEORGE, Hamilton, Ohio. Filed Jan. 8, 1913. Serial No. 740,772. (Cl. 113—51.)



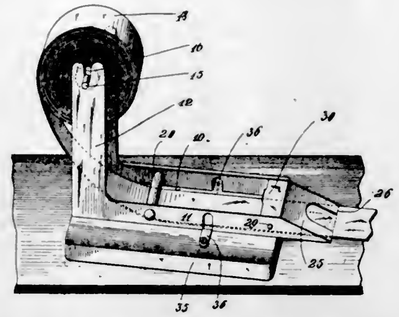
The method of making raceway walls for bearings which consists in outwardly curling the ends of a metal tube to constitute ball containers; and upsetting the metal at the base and within one of the ball containers to constitute a ball supporting ridge.

1,173,794. APPARATUS FOR MAKING RACEWAY-WALLS FOR BEARINGS. ISAAC A. GEORGE, Hamilton, Ohio. Original application filed Oct. 17, 1912, Serial No. 726,290. Divided and this application filed Sept. 20, 1913. Serial No. 790,838. (Cl. 113—51.)



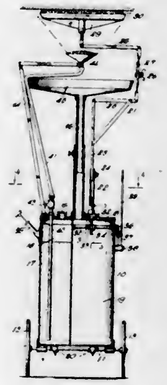
A structure for producing race-way walls for bearings including a die having a tapered bore with a surface inwardly convexed at its receiving end and shaped at its other end in substantial correspondence with the exterior of the tapering race-way wall to be produced and a punch having a tapering portion substantially corresponding with the interior of the tapering race-way wall to be produced, the punch and die being substantially co-axial, said punch also being enlarged to overhang the tapered portion thereof, the punch having a cylindrical extension that merges with the tapered portion thereof while the die is provided with a shearing portion adjacent the narrower end of the tapered bore in the die and presenting a circular cutting edge operating in conjunction with the punch to remove the bottoms of the dishes formed by the coöperation of the die and punch and affording merging cylindrical continuations of the tapered bores of the formed race-way walls, the punch continuation and the cutting edge of the shearing portion being co-axial with the tapered portion of the punch and the tapered bore of the die.

1,173,795. STRIP-TICKET MACHINE. EDMUND BOKOR and ERNEST GOLDBERGER, Chicago, Ill. Filed Apr. 3, 1915. Serial No. 18,902. (Cl. 211—32.)



In a strip ticket delivery apparatus, the combination with a fixed integral frame having vertical side walls open throughout at the top, ears formed with said frame whereby it may be secured to a support; roll supports formed with said frame at the rear end and standing thereabove, a roller revolubly mounted in said supports adapted to hold the strip adjacent to the bottom thereof, a tilting plate pivoted between the side walls at the front of said frame, said side walls and supports acting as guides throughout for the passage of the strip, and a spring combined with said plate whereby its front edge is held normally in engagement with the extreme front end of said frame.

1,173,796. MACHINE FOR CLEANING CEILINGS. SIMON GOTTLIEB, New York, N. Y., assignor of one-half to Jacob Weiner, New York, N. Y. Filed Nov. 13, 1915. Serial No. 61,345. (Cl. 15—14.)



1. The herein described machine for cleaning ceilings comprising a receptacle, means to support the receptacle movably upon a floor, said receptacle being adapted to contain a cleansing fluid, means to deliver the fluid in regulatable quantities upwardly against the ceiling above the receptacle, and means supported upon the receptacle to brush or scrape the ceiling simultaneously with the delivery of the cleansing fluid thereon.

2. In a machine for cleaning ceilings, the combination of a portable support movable along the floor, a cleansing tool, a crane supporting the cleansing tool, and means mounted upon and movable to and fro along the top of the first mentioned support to support the crane and cause the movements of the cleansing tool.

3. In a machine for cleaning ceilings, the combination of a main support, portable supporting means for the main support, a slide guided for reciprocations in a horizontal plane at the top of the main support, a vertically adjustable crane carried by and extending upwardly from the slide, a cleansing device carried by the upper end of the crane, and means mounted upon the main support to cause the reciprocations of the slide and parts supported thereon.

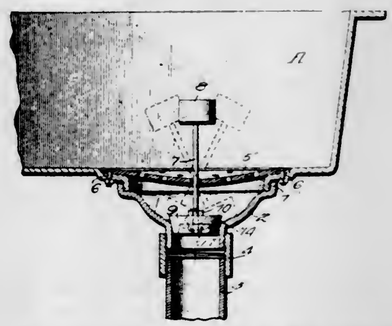
4. In a machine for cleaning ceilings, the combination of a main support having a guideway in its top, a slide mounted in said guideway and movable to and fro in a horizontal plane, said slide having a rack projecting downwardly therefrom, a vertically adjustable crane extending upwardly from the slide, a cleansing tool carried by the crane, and rack and pinion devices journaled on the main support and coöperating with the aforesaid rack to cause the reciprocations of the slide.

1,173,797. PENHOLDER. SAMUEL GRISWOLD, Camp Point, Ill. Filed Oct. 30, 1913. Serial No. 798,241. (Cl. 120—101.)



A penholder, having a removable case, the holder having an elongated reduced portion terminating a short distance from the front end of the holder, and a sheath fitting the holder at a point rearward of the said reduced portion, the holder furthermore having a head at the front end coacting with the interior surface of the front end of the sheath to retain a pen in position for writing, and having an enlargement rearward of the said head, at the forward terminal of the mentioned reduced portion, there being an annular chamber surrounding the reduced portion of the holder within the sheath adapted to accommodate a pen, and the mentioned enlarged portion rearward of the head forming a closure for said chamber, the holder at a point between the head and the enlarged portion being of less diameter than the head, and means on the holder within the annular chamber to retain a pen.

1,173,798. KITCHEN-SINK PLUG. ELLSWORTH GROOM, Portland, Oreg., assignor of one-half to Wilburn Fairchild, Tacoma, Wash. Filed Nov. 12, 1915. Serial No. 61,107. (Cl. 4—35.)



1. The combination with a sink having a drain outlet, of a drain bowl beneath the same having an annular shoulder therein forming a valve seat, a strainer plate covering the drain outlet and a plug comprising a shank extending through one of the openings in the strainer plate and having a weighted knob upon its upper end and a valve adjustably secured upon its lower end and adapted to bear against the above mentioned valve seat in

operative position, the said plug being adapted to be swung to one side and held by the weight of the said knob, so that the shank binds the openings in the strainer plate and the valve rests upon the face of the drain bowl to open the drain.

2. The combination with a sink having a drain outlet, of a drain bowl beneath the same having a valve seat formed therein, a strainer plate covering the drain outlet, a shank extending through an opening in the strainer plate, a valve on the lower end of the shank adapted to engage the above mentioned valve seat to close the drain, the said shank being adapted to be swung to one side so that the valve rests upon the face of the drain bowl to open the drain.

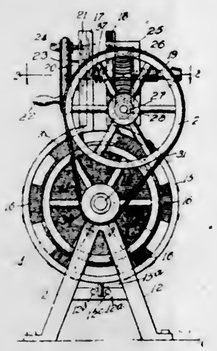
3. The combination with a sink having a drain outlet, of a drain bowl beneath the same having a valve seat formed therein, a strainer plate covering the drain outlet, a plug extending through the strainer plate and having a weighted knob on its upper end and a valve on its lower end adapted to close the drain bowl, the said plug being adapted to be swung to one side so that it binds in the opening in the strainer plate and is held in such position by the weight of the said knob to open the drain.

4. The combination with a sink having a drain outlet of a drain bowl beneath the same having a valve seat formed therein, an apertured plate covering the drain outlet, a plug extending through the said apertured plate comprising a shank having a weighted knob upon its upper end and screw threads upon its lower end, a tapering valve upon the lower end of the shank and a nut upon the same above and below the valve to hold it in adjustable position upon the shank, the said plug being adapted to be swung to one side and held by the weight of the said knob, so that the shank binds in the apertured plate and the valve rests upon the face of the drain bowl.

5. The combination with a drain pipe having a valve seat formed therein of an apertured plate covering the said drain pipe, a plug extending through the said apertured plate having a knob at its upper end and a valve at its lower end adapted to engage the above mentioned valve seat, the said plug being adapted to be swung to one side so that it binds in the said apertured plate and is held in such position by the weight of the said knob.

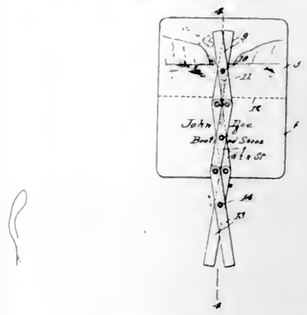
[Claim 6 not printed in the Gazette.]

1,173,799. MACHINE-BRAKE. JOHN W. HASBURG, Chicago, Ill. Filed Dec. 22, 1914. Serial No. 878,502. (Cl. 74—37.)



In a device of the character described the combination of a rotatable drum, a brake band surrounding the same, substantially parallel brake-clamping arms projecting from the ends of said band, a stem passing through openings in the projecting arms, a hand wheel on one side of said stem bearing against the outer face of one of the arms, a nut in screw-threaded engagement with said stem positioned to bear against the outer face of the other arm, means connected with the drum for rotating the nut, and means for locking the stem to prevent its rotation.

1,173,800. FAN. JESSE W. HAYES, Baltimore, Md. Filed July 1, 1915. Serial No. 37,435. (Cl. 230—33.)



1. A sheet foldable to form front and rear flaps, and a handle between the flaps, said handle being composed of pivotally connected sections, and capable of extension when the flaps are unfolded, the handle being connected to one of the flaps and extensible at one end therefrom, and at the other end across the other flap and across the joint between the flaps.

2. A sheet foldable to form front and rear flaps, and a handle connected to the inner face of one of the flaps and covered by the other flap, said handle being composed of foldable sections, and when unfolded having one end extending from the flap to which connected and the other end extending across the other flap and across the joint between the flaps.

3. A sheet foldable to form front and rear flaps, and a handle connected to the inner face of one of the flaps and composed of foldable sections, said handle lying between the flaps when folded, and when extended having one end projecting from the flap to which it is connected, and the other end extending across the other flap and across the joint between the flaps, and a sliding connection between the last-mentioned end of the handle and the second-mentioned flap.

4. A sheet foldable to form front and rear flaps, and a handle of the lazy-tongs type connected to one of the flaps and covered by the other flap when folded, the last-mentioned flap having a transverse slot, and the end bars of the lazy-tongs at one end thereof having a pivotal connection which is slidable in said slot, said end bars extending across the slotted flap when the handle is extended, and the end bars at the other end of the handle being extensible from the first-mentioned flap.

5. A sheet foldable to form front and rear flaps, and a handle of the lazy-tongs type connected to one of the flaps and covered by the other flap when folded, the flaps having slots which cross the joint therebetween, and the end bars of the lazy-tongs at one end thereof having a pivotal connection which is slidable in said slots, said bars extending across the second-mentioned flap when the handle is extended, and the end bars at the other end of the handle being extensible from the first-mentioned flap.

[Claim 6 not printed in the Gazette.]

1,173,801. AUTOMOBILE-ENGINE-EXHAUST DEFLECTOR. CHRISTIAN F. HESS, Chicago, Ill., assignor to Alexander Nelson, Chicago, Ill. Filed Jan. 19, 1916. Serial No. 72,969. (Cl. 98—22.)



In combination with an automobile having the exhaust pipe of the engine arranged underneath the body and directed rearward thereof, a guard secured on the rear end of said pipe to deflect the exhaust downward and away from the rear of the automobile, said guard consisting of a single piece of sheet metal providing a resilient split collar which receives the end of said pipe, a body section curved in cross section to form a channel on the under side thereof and disposed in position for deflecting the exhaust, a neck portion integrally uniting said collar and body section, and a screw to contract said collar on the pipe, permitting rotation of the guard on the pipe to any desired position thereof, substantially as and for the purpose set forth.

1,173,802. TOILET ARTICLE. ROBERT F. HOBBS, Great Neck, N. Y. Filed Nov. 17, 1915. Serial No. 61,946. (Cl. 15—26.)

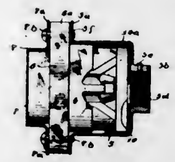


1. An article of the class described comprising a plurality of covering sides, said sides being freely permeable by water; means for pivotally connecting said sides to open bookwise; and means for locking said sides in service relation.

2. An article of the class described comprising a plurality of pivotally united open-centered spreading frames; a plurality of cover sides therefor permanently united therewith, said sides being formed from rubbing material freely permeable by water; and means for locking said frames in service relation.

3. An article of the class described comprising a plurality of open-centered hinged frames; a plurality of sponges permanently connected with said frames to form cover sides therefor; and means for holding said frames locked in service relation.

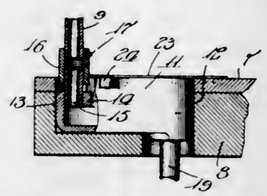
1,173,803. ELECTRIC-LIGHT SOCKET. PAUL M. HOTCHKIN, Chicago, Ill. Filed May 22, 1912. Serial No. 698,963. (Cl. 173—331.)



In a combination with an outlet box comprising a casing having laterally extending flanges, an insulating socket arranged in said casing, flanges integral with said socket alining with the flanges of said casing, a cover for the insulating socket conforming to the shape thereof, and means for clamping the cover and socket to the box.

1,173,804. OFFSET FLOOR-FITTING AND CONNECTION. PAUL M. HOTCHKIN, Chicago, Ill. Filed Nov. 23, 1914. Serial No. 873,465. (Cl. 247—5.)

1. A junction-box comprising a suitable bottom, side and end-walls, an inwardly projecting threaded boss on one of said end walls, a nipple tapped into said boss and extending past the top of said box, a threaded sleeve on said nipple and adapted to connect the same with a section of conduit, and a second section of conduit adapted to be connected to an opening in one of said walls.



2. A device of the kind specified comprising a box-like casting consisting of bottom, side and end walls, one of said end walls provided with a threaded substantially cylindrical enlargement a portion of which extends into the interior of said casting, a threaded nipple mounted on said enlargement, a sleeve removably mounted on said nipple and adapted to connect a conduit thereto, and an opening in one of the walls of said box opposite said enlargement and to which a second section of conduit is adapted to be connected.

3. A device of the kind specified comprising a box-like casting consisting of bottom, side and end walls adapted to be fitted in the floor of a show-case with the upper edges of its side and end walls flush with the upper surface of said floor, and enlargement in one of said end walls, a nipple mounted on said enlargement to which a conduit is adapted to be connected, one of said walls provided with an opening, and a cover plate overhanging and secured to said casting a portion of which fits upon the surface of said floor and is adapted to be secured thereto.

4. A device of the kind specified comprising a box-like casting consisting of bottom, side and end walls adapted to be fitted in the floor of a show case with the upper edges of its side and end walls flush with the upper surface of said floor, an enlargement in one of said end walls, a nipple mounted on said enlargement, a sleeve removably mounted on said nipple to which a conduit is adapted to be connected, one of said walls provided with an opening, and a cover plate overhanging and secured to said casting a portion of which fits upon the surface of said floor and is adapted to be secured thereto.

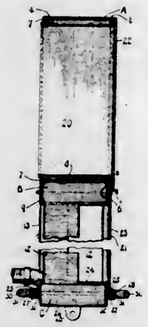
5. A device of the kind specified comprising a box-like casting consisting of bottom, side and end walls adapted to be fitted in the floor of a show case with the upper edges of its side and end walls flush with the upper surface of said floor, an enlargement in one of said walls, a nipple mounted on said enlargement, a sleeve removably mounted on said nipple, to which a conduit is adapted to be connected, one of said walls provided with an opening, and a cover plate overhanging and secured to said casting and having a cut-away portion that fits around said nipple and the remaining portion of which fits upon the surface of said floor and is adapted to be secured thereto.

1,173,805. RADIATOR FOR MOTOR-VEHICLES. JOHN JOHNSON and LUTHER G. WILLIAMS, Bonne Terre, Mo. Filed Mar. 29, 1915. Serial No. 17,711. (Cl. 257—125.)

1. A radiator comprising water conductors including a manifold having two sections, and means for uniting said sections, said means including a pair of fastening devices arranged on opposite sides of the manifold and means for connecting said fastening devices to secure them to the manifold.

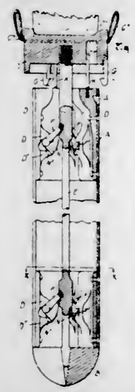
2. A radiator comprising water conductors including a manifold comprising sections each of which is provided with a pair of outturned flanges, fastening devices arranged on opposite sides of said manifold, said fastening devices being grooved to receive said flanges, and means for connecting said fastening devices to secure said manifold sections to each other.

3. A radiator comprising water conductors including a manifold comprising sections each of which is provided with a pair of outturned flanges, and means for detachably securing said sections to each other, said means including a pair of bars arranged on opposite sides of the manifold and provided with grooves for the reception of said flanges, and means for connecting said bars.



4. A radiator comprising water conductors including a manifold composed of sections each of which is provided with a pair of outturned flanges, a pair of bars arranged on opposite sides of the manifold and provided with grooves for the reception of said flanges, said bars being adapted to force said manifold sections toward each other, and bolts connecting the ends of said bars.

1,173,806. COLLAPSIBLE MANDREL PARTICULARLY ADAPTED FOR MAKING, FORMING, AND PLACING CONCRETE PILING. NATHAN C. JOHNSON, Englewood, N. J. Filed June 4, 1915. Serial No. 32,173. (Cl. 72—81.)



1. An expansible and collapsible mandrel comprising a plurality of outwardly and inwardly movable leaves, toggle mechanism for moving said leaves out and in, means for actuating such toggle mechanism and means actuated by said actuating means for relieving the toggle mechanism of pressure and for holding the leaves outward.

2. An expansible and collapsible mandrel comprising a plurality of outwardly and inwardly movable leaves, toggle mechanism for moving said leaves out and in, wedge means for relieving the toggle mechanism of pressure and for holding the leaves outward and means for actuating said toggle mechanism and wedge means.

3. An expansible and collapsible mandrel comprising a plurality of outwardly and inwardly movable leaves, toggle mechanism for moving said leaves out and in, means for actuating such toggle mechanism, and wedge means actuated by said toggle mechanism for relieving the toggle mechanism of pressure and for holding the leaves outward.

4. An expansible and collapsible mandrel comprising a plurality of outwardly and inwardly movable leaves, toggle mechanism for moving said leaves out and in, means for actuating such toggle mechanism and wedge means actuated by said actuating means for relieving the toggle mechanism of pressure and for holding the leaves outward, said wedge means comprising wedges adapted for insertion between adjacent leaf-edges.

5. An expansible and collapsible mandrel comprising a plurality of outwardly and inwardly movable leaves, toggle mechanism for moving said leaves out and in, means for actuating such toggle mechanism, and wedge means actuated by said toggle mechanism for relieving the toggle mechanism of pressure and for holding the leaves outward, said wedge means comprising wedges adapted for insertion between adjacent leaf-edges.

[Claims 6 to 13 not printed in the Gazette.]

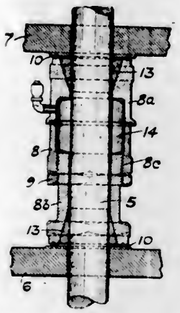
1,173,807. ART OF MAKING CAST-IN-PLACE CONCRETE PILES AND THE LIKE. NATHAN C. JOHNSON, Englewood, N. J. Filed June 4, 1915. Serial No. 32,175. (Cl. 72—81.)



1. The herein described improvement in the art of forming cast-in-place concrete piles, and the like, which comprises forming a hole, placing fluid concrete therein, and then applying heat to such concrete from the lower portion thereof progressively upward.

2. The herein described improvement in the art of forming cast-in-place concrete piles and the like, which comprises forming a hole, placing fluid concrete therein, and applying heat progressively to the exterior portion of such concrete from the lower portion upward and thereby forming quickly a hard exterior pile.

1,173,808. ROD-PACKING FOR AIR-PUMPS. JOHN P. KELLY, Yonkers, N. Y. Filed Apr. 23, 1915. Serial No. 23,326. (Cl. 137—115.)



1. In a rod packing for direct connected steam pumps, the combination of a sectional sleeve surrounding the rod between the cylinder heads and having recesses, packing rings located around the rod in said recesses and adapted to be pressed tight by fluid pressure from the respective cylinders, and means for making tight joints between the ends of said sleeve and the cylinder heads independently of said packing.

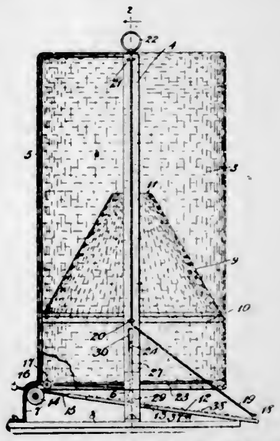
2. In a rod packing for direct connected steam pumps, the combination with a sectional sleeve surrounding the rod between the cylinder heads and having flaring recesses at its opposite ends, conical packing rings located in said recesses and adapted to be pressed tight by fluid pressure, and means for making tight joints between the ends of said sleeve and the cylinder heads independently of said packing.

3. In a rod packing for direct connected steam pumps, a sectional sleeve surrounding the rod between the cylinder heads, packing for said rod, means for extending said sections to make tight joints at its ends with the heads independently of said packing, said sleeve having an intermediate chamber for containing wicking to lubricate the rod.

4. In a rod packing for direct connected steam pumps, the combination of a collapsible sleeve surrounding the rod from one cylinder head to the other and formed in sections having screw threaded connections with each other, packing for the rod, and means for making tight joints between the ends of the sleeve and the cylinder heads independently of said packing.

5. In a rod packing for direct connected steam pumps, the combination of a collapsible sleeve surrounding the rod from one cylinder head to the other and formed in sections having screw threaded connections with each other, said sleeve having flaring recesses at its opposite ends, tapered metallic packing rings located in said recesses, and means for making tight joints between the ends of the sleeve and the cylinder heads independently of said packing.

1,173,809. INSECT-TRAP. STEPHEN KELTONIK, Conemaugh, Pa. Filed Mar. 31, 1914. Serial No. 828,500. (Cl. 43—22.)



1. An insect trap comprising a hollow body member, a throat located within said hollow body member, a vibratory member of spring wire located within said body member at a point adjacent said throat for the purpose of driving insects through said throat, and means for actuating said vibratory member.

2. In an insect trap, the combination of a body member, a throat located within said body member, a vibratory member adjacent the throat, a cord mounted through a portion of the vibratory member at a point adjacent said throat and provided with a tassel, and means for actuating said vibratory member in order to agitate the cord and its tassel and drive insects through said throat.

3. In an insect trap, the combination of a body member, a throat located within the body member, a vibratory mechanism arranged adjacent to the throat for frightening insects into the throat and including a member having a depending arm, and a plate disposed below the said mechanism and on which said arm normally rests, said plate being movable upwardly and downwardly to open and close the body member and having a notch through which said arm may drop during rising movement of the plate, whereby to actuate the said vibratory mechanism.

1,173,810. PACKING-RING. WILLIAM H. KEYS, St. Louis, Mo. Filed June 1, 1915. Serial No. 31,443. (Cl. 121—108.)



1. In a packing, the combination of a resilient open inner ring having two separate circumferential grooves formed in the periphery thereof, and two outer rings encircling said inner ring and having abutting side edges, an internal flange intermediate of the side edges of each ring engaging within one of said grooves and receiving the pressure exerted by the resiliency of said inner ring.

2. A packing, comprising an inner ring having two separate circumferential grooves, two outer rings encircling said inner ring, flanges intermediate of the side edges of said outer rings bearing against the bottom walls of said grooves and supporting said outer rings away from said inner ring and receiving pressure imparted by said inner ring to leave a space between the adjacent peripheries of said outer and inner rings, and coöperating cam surfaces on the adjacent edges of said outer rings.

3. A packing, comprising a resilient open inner ring having two separate circumferential grooves in the periphery thereof, two open resilient outer rings encircling said inner ring, flanges integral with said outer rings intermediate of the side edges thereof bearing against the bottom walls of said grooves, and receiving the pressure imparted by the expanding resiliency of said inner ring and supporting said outer rings free from said inner ring to leave a space between the adjacent peripheries of said outer and inner rings, and interlocking tongue and groove connection between said outer rings.

4. A packing, comprising a resilient open inner ring having two separate parallel circumferential grooves in the periphery thereof, two open resilient outer rings encircling said inner ring, a flange on each of said outer rings intermediate of the side edges thereof seated in one of said grooves and receiving pressure imparted by said inner ring and permitting movement of said outer rings laterally with respect to said inner ring, and means limiting relative rotation of said outer rings and said inner rings.

1,173,811. PEDAL FOR MUSICAL INSTRUMENTS. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1914. Serial No. 847,409. (Cl. 74—81.)



1. A pedal provided with a cap device comprising a base member constructed to fit the end portion of the pedal, said pedal having end portions which are disposed in different planes with relation to each other, and a cushion portion secured to said base portion above the same, and a screw passing through the pedal and into the base portion of the cap device.

2. A pedal provided with a cap device comprising a base portion adapted to fit the end portion of the pedal and having downwardly-extending flanges adapted to fit against the sides of the pedal, said flange conforming in shape to the side walls of the pedal, and a cushion portion secured to and mounted above said base portion, and means for detachably securing said cap device to the end portion of the pedal.

3. A pedal provided with a cap device comprising a base member constructed to fit the end portion of a pedal, said base portion being provided intermediate its ends with a shouldered portion, a cushion provided upon said base member, and the upper side portion of said cushion being comparatively flat.

4. A pedal provided with a cap device comprising a base member constructed to fit the end portion of a pedal, said base portion being provided intermediate its ends with a shouldered portion, a cushion provided upon said base member, and means for detachably securing said cap device to the pedal.

5. In a pedal cap in combination, a member constructed to fit the end portion of a pedal, said member having a downwardly depending flange, forming an opening in the underside of said member, said opening corresponding to the size of the pedal, and said flange being open at an end, and means for securing said cap to said pedal.

[Claims 6 to 8 not printed in the Gazette.]

1,173,812. LOCK. HAROLD KORN, New York, N. Y. Filed Dec. 7, 1915. Serial No. 65,552. (Cl. 70—17.)



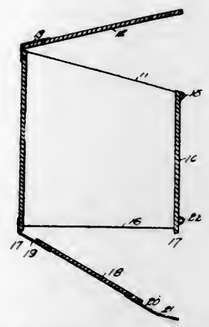
1. In a lock of the character described, a body provided with an upper and lower section, one of said sections being formed with a hollowed portion, means for clamping said sections together, a pair of bolts arranged in said hollowed portion, one of said bolts being pivotally mounted to one of said sections, means for pivotally mounting the other of said bolts to the first mentioned bolt, means for guiding said last mentioned bolt so as to cause the same to reciprocate, and a spring acting on said bolts for causing the same to be normally projected beyond the edge of said body.

2. In a lock of the character described, a body, a pair of bolts, said bolts being pivotally connected together adjacent one end, means for pivotally mounting one of said bolts on said body, means for extending the other of said bolts adjacent the outer end thereof, said last mentioned bolt being provided with a slot for accommodating said last mentioned means whereby when the first mentioned bolt is moved pivotally the second mentioned bolt will be moved longitudinally, said body being formed with a key-opening having a notch or cutaway portion for guiding the key to one side of said pivotally mounted member, whereby when said pivotally mounted member is moved by the key the same will be retracted and the reciprocating member will also be retracted, and a spring for normally holding said bolts in a projected or outer position.

3. In a lock of the character described, a body, a bolt pivotally mounted substantially centrally thereof, a spring for resiliently holding said bolt in a given position, a reciprocating bolt pivoted at one end to the pivotally mounted bolt between the end thereof and the pivotal mounting thereof, said reciprocating bolt being provided with a slot adjacent the upper end, and a pin extending through said slot and engaging the body so as to guide the reciprocating bolt in its back and forth movement.

4. In a lock of the character described, a body provided with upper and lower sections, means for clamping said sections together, one of said sections being formed with a hollow-out central portion and a plurality of openings radiating therefrom, one of said sections also being provided with a bore extending into said openings, said bore having a cutaway portion at one edge whereby a key having a laterally projecting hook may be passed through the bore, and a pair of bolts pivotally connected together near one end, one of said bolts being pivotally connected with said body so that one end will overlap almost entirely said bore whereby the projection on said key will engage the side of the bolt, the other of said bolts being provided with means for guiding the same in a longitudinal movement.

1,173,813. NEST. WILLIAM A. KUNTZ and LAMBERT M. CHRISTOPHERSON, Wolsey, S. D. Filed Sept. 17, 1915. Serial No. 51,147. (Cl. 119—45.)



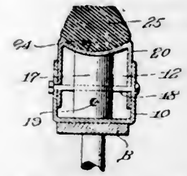
1. A hen's nest including a body open at the top and bottom and formed with a running board at the upper edge of the front at the outside of said front, a lift cover hinged at its rear edge to the body, a ventilating drop bottom of an area sufficiently less than the bottom of the body to leave free ventilating openings between the side edges of the bottom and the walls of the body, hinges connecting the rear edge of the said bottom with the back wall and extending across the adjacent opening between the back wall of the body and the bottom, a hasp hingedly secured to the said bottom at the front and extending across the opening between the front edge of the bottom and the front wall of the body, and a staple on the body at the front to engage the hasp.

2. A hen's nest including a body open at the top and bottom and formed with nest compartments, a cover on the body for closing the open top, a drop bottom hingedly connected by one edge with the body and forming a closure of all the nest compartments at the bottom thereof, and fastening means to hold the bottom in raised position, there being ventilating openings between the walls of the body and the said bottom.

3. A hen's nest including a body open at the top and bottom, a lift cover hinged at its rear edge to the body, a ventilating drop bottom of an area sufficiently smaller than the bottom of the body to leave free ventilating openings between the edges of the said bottom and the walls of the body, the front and back walls of the body extending below the end walls, hinges connecting the bottom with the lower edge of the back wall of the body, a hasp hinged to the bottom at the front and a staple on the body at the front to engage said hasp, the hinges of the bottom and the said staples serving to sustain the bottom in position above the lower edges of the back and front of the body.

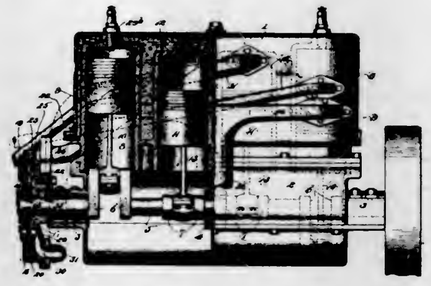
1,173,814. RESILIENT WHEEL-TIRE. JED LA PLANT, Malone, N. Y. Filed Jan. 12, 1915. Serial No. 1,842. (Cl. 152—36.)

A resilient tire for vehicle wheels comprising a sectional externally channeled inner annulus adapted to be fixed to the felly of a wheel, an internally channeled outer annulus fitted within the said inner annulus and having an external peripheral seat, a resilient tire in said seat, a plurality of resilient blocks arranged at intervals between the inner and outer annuli and concealed within the channels therein, cross pins passed through the sides of the inner annulus and also passed transversely through the blocks, a wire concentrically dis-



posed about the inner annulus and passed through the blocks, and means on the inner annulus for fastening the ends of the wire.

1,173,815. GAS-ENGINE. CHARLES LATTA, St. Louis, Mo. Filed Mar. 25, 1914. Serial No. 827,123. (Cl. 123—59.)



1. An engine, comprising a cylinder, a working piston mounted in said cylinder, a pump cylinder at the side of and parallel with said first-named cylinder, a crank shaft driven by said piston, a valve case including outer and inner walls through which said crank shaft extends, a passage for admitting gas into said case, a separate passage from said case to said pump cylinder, a separate passage from said case to said working piston cylinder, a single valve member on said shaft within said case, and means whereby said valve member will control the admission of gas into said case, the passage of the gas from said case to said pump cylinder, and the passage of the gas from said pump cylinder to said working piston cylinder through said case, substantially as described.

2. An engine, comprising a plurality of parallel working piston cylinders, a piston operating in each of said cylinders, a separate pump cylinder at the side of and parallel with each of said piston cylinders, a crank shaft driven by said pistons, a case having outer and inner walls through which said crank shaft extends, separate passages for admitting gas to said pump cylinders, respectively, separate passages for admitting gas to said piston cylinders, respectively, a valve disk mounted on said crank shaft between the walls of said case through which said crank shaft extends, and means whereby said valve disk will control the admission of gas to all of said pump cylinders through the separate passages leading thereto, and from said pump cylinders to all of said working piston cylinders through the separate passages leading to said piston cylinders, substantially as described.

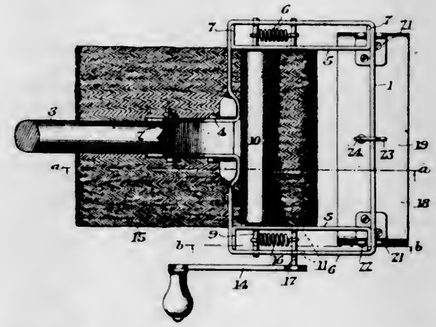
3. An engine, comprising working piston cylinders, pistons mounted in said cylinders, a crank shaft driven by said pistons, a separate pump for each of said cylinders driven by said crank shaft, a case comprising inner and outer walls through which said shaft extends, a separate passage from said case to each of said pumps, a separate passage from said case to each of said cylinders, a valve mounted on said shaft within said case between the inner and outer walls thereof, means for driving said valve by said shaft, and means whereby said valve will control the admission of gas to all of said pumps through the said passages leading thereto, and from said case to all of said cylinders through the said passages leading to said cylinders, substantially as described.

4. In an engine, the combination with a working piston cylinder, a piston mounted in said cylinder, a crank shaft case, a crank shaft journaled in said case and driven by said piston, and a pump device for forcing gas into said cylinder, of outer and inner case walls outside of said crank shaft case through which said crank shaft extends, a passage for admitting gas into said case through one of said walls, a separate passage through one of said walls to said pump device, a separate passage through one of said walls to said cylinder, all of said passages being wholly outside of said crank shaft case, a rotary valve slidably keyed on said crank shaft between said case walls, and means whereby said valve will control the passage of gas into said passages, respectively.

5. In an engine, the combination with a number of working piston cylinders, working pistons mounted in said cylinders, a pump device for each of said cylinders, and a crank shaft driven by said pistons, of a case having outer and inner walls through which said crank shaft extends, a passage from said case to each of said pump devices, a passage from said case to each of said cylinders, a passage for admitting gas into said case, and a valve disk mounted on and rotating with said crank shaft between said outer and inner walls of said case and provided with passages for controlling the admission of gas to said pump devices, and from said case to said cylinders, respectively, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,173,816. MOP AND DETACHABLE BRUSH. ORAL O. LE BLANC, Minneapolis, Minn. Filed Feb. 10, 1915. Serial No. 7,407. (Cl. 15—43.)



The herein described mop comprising a head formed of an oblong frame and a pair of bars in opposite ends of the frame and spaced from the ends thereof, said bars and the ends of the frame being provided with bearing openings and also with bearing slots spaced from said openings a pair of rollers having shafts respectively mounted in said bearing openings and bearing slots and extending across the spaces between said bars and the ends of the frame, so that one of the rollers, is movable toward and from the other, coiled retractile springs arranged in said spaces and between and connected to the shafts of said coils and serving to draw said rollers toward each other to compress a mop cloth between them, a handle attached to the rear side of said frame and a crank attached to one end of the shaft of the movable roller.

1,173,817. SEPARABLE BUTTON. EDWARD LE BRETON, Cleveland, Ohio, assignor of one-half to Volta R. Hall, Cleveland, Ohio. Filed June 1, 1914. Serial No. 842,038. (Cl. 24—107.)

1. A separable link button comprising a pair of members, each member having a pair of heads that are con-

nected and spaced apart by a neck, one of said members having a socket, and a spring-wire entering member carried by the other of said members and projecting beyond the head of same and having an enlarged portion that is adapted to be received by the socketed member.



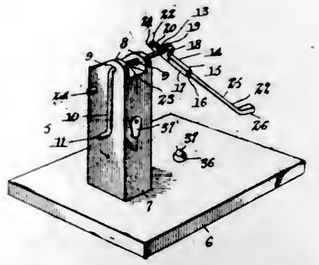
2. A separable link button comprising a pair of members each of which consists of a pair of heads that are connected and spaced apart by a neck, one of said members having a mouth and an enlarged space behind the same, and a spring-wire entering member which is carried by the other of said members and projecting beyond the head of same and having ends that overlie each other and that are curved outwardly in opposite directions and then inwardly to form an enlargement that is adapted to be contracted by the mouth and to expand into said space.

3. In a separable link button, the combination, of a receiving member which consists of a dished head, a second head that is spaced from the dished head by extensions which are formed integral with the second head, the latter head having a slot and the extensions thereof being spaced apart adjacent said slot to form, with the interior of the dished member, a socket, an entering member that is formed of spring wire and having its ends overlapped and the side portions adjacent thereto curved outwardly in opposite directions and then inwardly to form an enlargement that is adapted to occupy the aforesaid socket, and a head having its central portion perforated for the reception of the entering member and having extensions that are adapted to be pressed about the adjacent portion of the entering member whereby the entering member is securely attached thereto, the ends of said extensions being turned in opposite directions and in a common plane adjacent the end of the entering member.

4. In a separable link button, the combination of an entering member that is formed of spring wire with its ends beveled and overlapping, the branches of said member adjacent said ends being curved outwardly in opposite directions to form an enlargement, the opposite end of the entering member having applied to it a pair of heads that are connected and spaced apart by a neck, the neck and the inner head being formed of a single piece of sheet metal the central portion whereof is perforated for the reception of the branches of the entering member, the inner head having extensions that are turned over in contact with its outer surface and are pressed together about the outer end of the entering member, the extreme ends of said extension being turned outwardly in opposite directions and in a common plane, the outer head member being attached to the outturned portions of the extensions, and a receiving member that consists of a dished head that has a second head connected to it by extensions on said second head which are turned inwardly against its outer surface and then toward the dished head where they are separated and connected to the latter, the second head being slotted and the extensions being spaced apart adjacent the slot to form a socket for the reception of the enlarged portion of the entering member.

5. A separable link button comprising a pair of members each of which consists of a pair of heads that are connected and spaced apart by a neck, one of said members having a socket, and an entering member carried by the other of said button members, said entering member being formed of spring wire and consisting of a pair of substantially parallel branches that are curved outwardly and then inwardly at their free ends, the free ends overlapping and having their opposed faces cut away so that the thickness of the overlapping portion of the entering member is approximately the same as the thickness of the wire from which it is formed.

1,173,818. GAME APPARATUS. CARLE G. LINS, Norfolk, Va. Filed Oct. 16, 1915. Serial No. 56,271. (Cl. 124—1.)



1. A ball projecting apparatus embodying a support, a shaft rotatably mounted upon said support, a holder detachably mounted upon said shaft, a lug formed on said holder, and a ball projecting member engaging the lug of the holder for operatively connecting the same to said shaft.

2. In a device of the class described embodying a ball projecting apparatus comprising a support, a spring tensioned shaft rotatably mounted upon the support, an operating handle for said shaft, a ball projecting member carried by said shaft, laterally projecting means for limiting the stroke of the ball projecting member, and means for holding the operating handle against the tension of the spring.

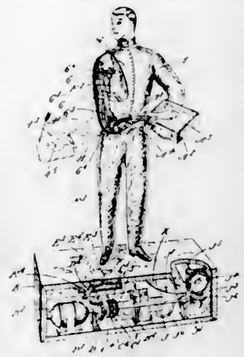
3. In a device of the class described embodying a ball projecting apparatus comprising a support, a spring tensioned shaft rotatably mounted upon the support, an operating handle for said shaft, a ball projecting member carried by said shaft, laterally projecting means for limiting the stroke of the ball projecting member, and means pivotally connected with one of the faces of the support and adapted to be swung in the path of movement of the operating handle for holding the latter against the tension of the spring.

4. In a device of the class described embodying a ball projecting apparatus comprising a support, a spring tensioned shaft rotatably mounted upon the support, an operating handle for said shaft, a ball projecting member carried by said shaft, and a stop pivotally connected to one of the faces of the support and adapted to be swung in a horizontal position for holding the ball projecting member against action of the spring.

5. In a device of the class described embodying a ball projecting apparatus comprising a support, a spring tension shaft rotatably mounted upon the support, an operating handle for said shaft, a ball projecting member carried by said shaft, and means pivotally connected to one of the faces of the support and adapted to be swung to assume a horizontal position and in obstructing relation to the path of movement of the operating handle for holding the shaft against the tension of its spring, and means laterally projecting from another face of the support for limiting the stroke of the ball projecting member.

1,173,819. MECHANISM FOR HANDLING GOODS. HUMPHREY THOMAS LOGAN, Putney, England. Filed May 3, 1915. Serial No. 25,437. (Cl. 46—40.)

1. The combination of a member for engaging and transferring goods, actuating mechanism for positively moving the member into contact with the goods, a reversing element in the train of such mechanism for positively moving the member in the opposite direction, pneumatic means for attaching the goods to the member when the latter is brought into contact with the same, and further pneumatic means controlled by the first mentioned pneumatic means for automatically operating the reversing element as soon as the goods are attached so that the member will be positively moved back by the aforesaid actuating mechanism with the goods attached thereto; substantially as described.



2. The combination of the arm and hand of a figure for engaging and transferring goods, actuating mechanism for positively moving the arm into contact with the goods, a reversing element in the train of such mechanism for positively moving the arm in the opposite direction, pneumatic means for attaching the goods to the arm when the latter is brought into contact with the same, and pneumatic means controlled by the first mentioned pneumatic means for automatically operating the reversing element as soon as the goods are attached so that the arm will be positively moved back by the aforesaid actuating mechanism with the goods attached thereto, substantially as described.

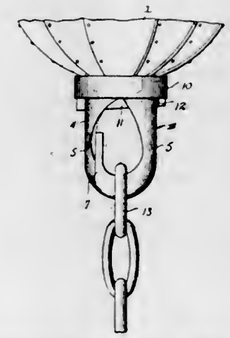
3. The combination of a member for engaging and transferring goods which is moved in a curved path, actuating mechanism for positively moving the member into contact with the goods, a reversing element in the train of such mechanism for positively moving the member in the opposite direction, pneumatic means for attaching the goods to the member when the latter is brought into contact with the same, and pneumatic means controlled by the first mentioned pneumatic means for automatically operating the reversing element as soon as the goods are attached so that the member will be positively moved back by the aforesaid actuating mechanism with the goods attached thereto; substantially as described.

4. The combination of a member for engaging and transferring goods which is moved in a curved path to first lift the goods and then transfer them to a point to one side of the point whence they are lifted, actuating mechanism for positively moving the member into contact with the goods, a reversing element in the train of such mechanism for positively moving the member in the opposite direction, pneumatic means for attaching the goods to the member when the latter is brought into contact with the same, and pneumatic means controlled by the first mentioned pneumatic means for automatically operating the reversing element as soon as the goods are attached so that the member will be positively moved back by the aforesaid actuating mechanism with the goods attached thereto; substantially as described.

5. The combination of a member for engaging and transferring goods, actuating mechanism for positively moving the member into contact with the goods, a reversing element in the train of such mechanism for positively moving the member in the opposite direction, means for engaging the goods with the said member in the form of a suction device communicating with a suction opening at the point of contact between the member and the goods, a valve-chest, a conduit extending from said chest and having an open end situated in the member for moving the goods at the point of contact of such member with the goods, a pneumatic actuator for operating the aforesaid reversing element, a valve in the said valve-chest which in one of its positions operatively connects the suction device with the pneumatic actuator, movable means controlled by the pressure existing at the open end of the valve-chest conduit so that when the pressure is decreased at said open end (by the end being covered by the goods) the valve is moved from one of its positions to the other which movement changes the connections between the pneumatic actuator and the suction device so that the reversing element is operated, and means for returning the pneumatic actuator with the reversing element after such operation; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,173,820. BUOY-COUPLING. WILLIAM H. LOGAN and JOHN NIELSON, Bandon, Oreg. Filed Sept. 1, 1915. Serial No. 48,494. (Cl. 9—8.)



1. In combination with a buoy, hooks applied to the head thereof and having overlapping bill ends one hook adapted to support the bill of the other hook.

2. In combination with a buoy, hooks applied to the head thereof, and provided with recesses, said hooks having their bill ends overlapping each other, each hook having a lug which enters the recess of the other hook.

3. In combination with a buoy, hooks applied to the head thereof and provided with recesses, said hooks having their bill ends overlapping each other, each hook having at the end of its bill a lug which enters the recess of the other hook.

4. In combination with a buoy having a circular head, hooks having semi-circular shanks applied to the said head, the bill ends of the hooks overlapping each other.

5. In combination with a buoy, hooks having shanks applied to the head thereof, the bill ends of the hooks overlapping each other, a ring surrounding the shanks of the hooks, and a bar passing through the shanks of the hooks and bearing against the ring.

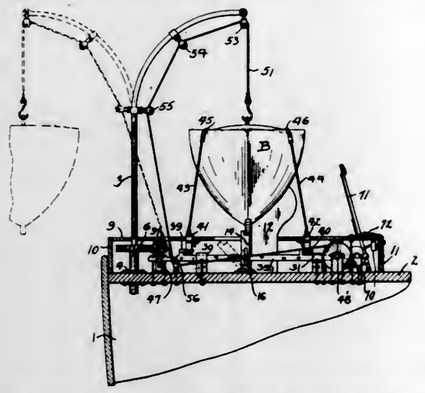
[Claim 6 not printed in the Gazette.]

1,173,821. SHIP'S DAVIT. WILLIAM LUEDER, San Francisco, Cal. Filed June 10, 1915. Serial No. 33,292. (Cl. 9—22.)

1. A life boat handling apparatus comprising the combination with a support for the boat, of lashing lines and chocks for the boat, a pair of ships' davits to which supporting cables from each end of the boat extend, a shaft extending to both of the davits, a slidable worm and a fixed worm on said shaft, a gear on each davit in mesh with said worms whereby the davits may be turned outboard, a pair of slides for holding the lashings and chocks, and a pair of pinions on the shaft for moving said bars to release the lashings and chocks.

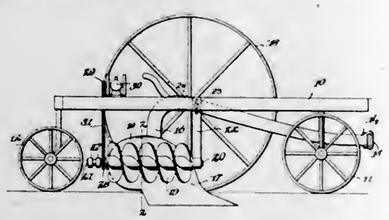
2. A life boat handling apparatus comprising the combination with a support for the boat, of lashing lines and

chocks for the boat, a pair of ships' davits to which supporting cables from each end of the boat extend, a shaft extending to both of the davits, a slidable worm and a fixed worm on said shaft, a gear on each davit in mesh with said worms whereby the davits may be turned out-



board, a pair of slides for holding the lashings and chocks, a pair of pinions on the shaft for moving said bars to release the lashings and chocks, drums over which the boat cables pass from the davits, and a manually operated brake for retarding the descent of the boat.

1,173,822. PLOW ATTACHMENT. MICHAEL J. LYONS, Wood River, Nebr. Filed Oct. 18, 1913. Serial No. 796,002. (Cl. 97—52.)



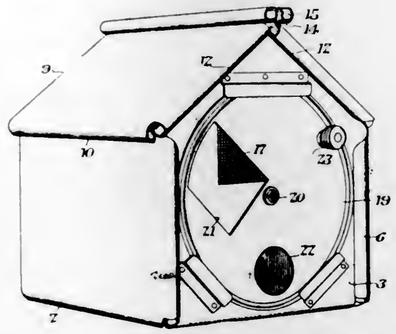
1. An agricultural implement comprising a frame, a beam, a plow-blade adjustably carried by said beam, a journal bracket carried by said plow-blade, a hanger adjustably carried by said beam and provided with a bearing at its lower end, an auger rotatably mounted in the bearings of said journal bracket and said hanger bracket and extending in spaced relation to the outer face of the mold-board of said plow-blade, and means for rotating said auger.

2. An agricultural implement comprising carrying means, digging means adjustably connected with said carrying means, rotatary earth engaging means positioned adjacent said digging means, means for rotatably supporting one end of said earth engaging means rigidly secured to said digging means, means for rotatably supporting the opposite end of said earth engaging means adjustably connected with said carrying means, and means for rotating said earth engaging means.

3. An attachment of the character described comprising a rotatable earth-engaging member, a bearing bracket for rotatably supporting one end of said rotatable earth-engaging member and adapted for rigid engagement with a digging device, a second bearing bracket for rotatably supporting the opposite end of said rotatable earth-engaging member and adapted for adjustable engagement with a support with which said digging device is adjustably connected, and means for permitting rotary motion to be transmitted to said rotatable earth-engaging element.

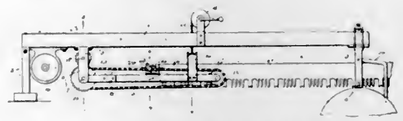
4. In a plow, a supporting structure, a digging blade adjustably carried by said supporting structure, a bearing bracket rigidly connected with said digging blade, a rotatable earth engaging element extending along said digging element and having one end portion rotatably supported by said bearing bracket, and a bearing bracket adjustably connected with said supporting structure and engaging the opposite end portion of said earth engaging element to rotatably support the same.

1,173,823. COLLAPSIBLE POULTRY-COOP. IRA C. MCDANIEL, Kansas, Ohio. Filed Mar. 16, 1915. Serial No. 14,708. (Cl. 119—19.)



A poultry coop comprising bottom, side, end and top walls, the front end wall being formed with an entrance and exit opening in the bottom portion thereof and a ventilating opening in the top portion thereof, a screen closing said ventilating opening the major portions of said openings being disposed upon relatively opposite sides of the vertical center line of said front end wall, a vertical plate in face to face contact with said front end wall, a pivot bolt passed through the center portion of said plate, and the center portion of said front end wall about which said plate may be rotated, said plate being formed with an opening movable into and out of registration with the first-mentioned openings in said front wall, and with a relatively small opening movable into and out of registration with the exit and entrance opening in said front wall, and means on said disk whereby the latter may be rotated.

1,173,824. DRAG-SAW MACHINE. FRANK A. MCKEE. Fortuna, Cal. Filed Sept. 15, 1914. Serial No. 861,857. (Cl. 143—68.)



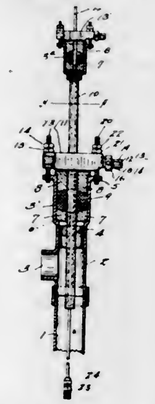
1. A sawing machine comprising a main bar, a stirrup depending therefrom adjacent one end, spaced cradle bars projecting forwardly from said stirrup and pivotally connected therewith, sprocket wheels mounted upon said stirrup and on the foremost ends of said cradle bars, endless chains movable over said sprockets, a saw pivotally mounted between the said cradle bars, a connection between the chains and saw for imparting a reciprocatory movement to the latter, and means for lowering and raising the forward ends of said cradle bars.

2. A sawing machine comprising a main bar, a stirrup depending from one end thereof, spaced cradle bars extending forwardly from the stirrup and pivotally connected therewith, sprocket wheels mounted in the stirrup and on the free ends of said cradle bars, endless chains

movable over said sprockets, means for operating said chains, a saw positioned between said cradle bars and mounted for free independent rocking movement, an element secured to one end of the saw having lateral extensions connecting the latter with both of said chains for reciprocating said saw, and means for adjustably supporting the free ends of said cradle bars.

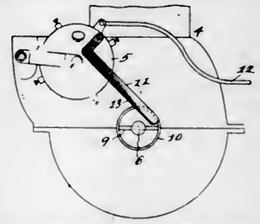
3. A sawing machine comprising a main bar, a stirrup depending from one end thereof, spaced cradle bars extending forwardly from the stirrup and pivotally connected therewith, means for adjustably supporting the free ends of said cradle bars, sprockets mounted on said stirrup and on the free ends of the cradle bars, endless chains movable over said sprockets, a saw positioned between said cradle bars and chains, and mounted for vertical rocking movement, a stirrup secured to one end of the saw, bearing blocks carried by the stirrup, a crank pin mounted between the blocks, said pins having lateral extensions connecting the saw with both of the chains as and for the purpose described.

1,173,825. TUBING AND PACKING FOR OIL-WELLS. ALBERT J. MCNALLEN, Gore, Ohio. Filed Mar. 30, 1915. Serial No. 18,038. (Cl. 137—115.)



The combination with an interiorly shouldered oil well tube provided with exterior perforated ears, a sectional packing gland in the tube, and threaded bolts in the ears, of a pair of clamping jaws having a hinge joint on one of the bolts, means for fastening the free ends of said jaws together about the second bolt, and clamping nuts on said bolts for forcing the jaws upon the gland.

1,173,826. SAFETY DEVICE FOR AUTOMOBILES. ERNEST U. MACK, Florence, S. C. Filed June 18, 1915. Serial No. 34,860. (Cl. 123—179.)

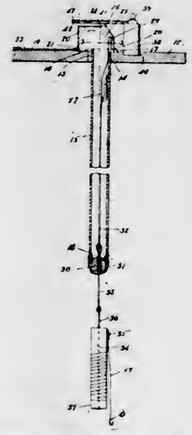


1. The combination in an internal combustion engine provided with a crank-shaft, a starting crank, and a commutator, of means carried by said commutator for preventing the operative connection of said crank and crank-shaft when said commutator is advanced from starting position, said means being rendered inoperative by the rotation of said crank, thereby moving said commutator to starting position.

2. The combination in an internal combustion engine provided with a crank-shaft, a starting crank having teeth thereon, and a commutator, of means carried by said commutator for preventing the operative connection of said crank and crank-shaft when said commutator is advanced from starting position, said means being engaged by said teeth in the rotation of said crank and moved into inoperative position thereby moving said commutator to starting position.

3. The combination in an internal combustion engine provided with a crank-shaft, a starting crank, and a commutator, of an arm rigidly secured to said commutator and projected into the path of crank movement toward the crank-shaft when said commutator is advanced from starting position, and means on said crank in its rotation for engagement with said arm to move the latter out of its operative position and thus move said commutator to starting position.

1,173,827. FISHING APPARATUS. RALPH S. MARSH, Conway, N. H. Filed Oct. 30, 1915. Serial No. 58,745. (Cl. 43—31.)



1. A fishing apparatus comprising a support, a signal connected with the support, a fish line adapted to effect the operations of the signal when a pull is exerted upon the line by a fish, and means extending below the support to prevent the formation of ice from interfering with the signal operating action of the line.

2. A fishing apparatus comprising a support, a signal connected with the support, a water-excluding member extending below the support to a distance exceeding the ordinary thickness of ice formation; a fish line below said water-excluding member, and means protected by said member for effecting the operation of the signal when a pull is exerted upon the line by a fish.

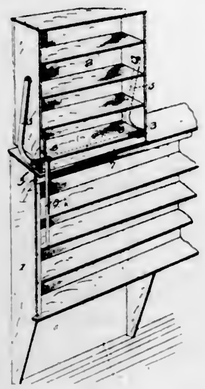
3. A fishing apparatus comprising a support, a tube extending below the support and vertically movable relatively thereto, a signal, a trigger therefor, a fish line below the tube, connections between the trigger and line extending through the tube and adapted to control the operation of the signal, and means for excluding water from the tube.

4. An apparatus for fishing through holes in ice, comprising a tube to be inserted in an ice-hole, a support for said tube, means for excluding water from the tube, and a line connected with said tube.

5. A fishing apparatus comprising a support, a signal connected therewith, a trigger for controlling the signal, a fish line, connections between said line and trigger, and means for preventing access of water to the upper part of the line.

[Claims 6 to 17 not printed in the Gazette.]

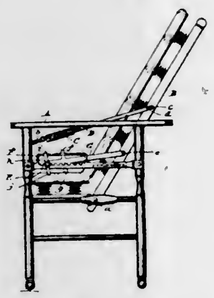
1,173,828. SHELVING. EDWARD RODNEY MASSIE, Clifton Forge, Va. Filed Apr. 20, 1915. Serial No. 22,591. (Cl. 211—27.)



1. The combination with a case, of a rock shaft mounted on the top of said case near the outer edge thereof, shelving normally resting on said case above and out of contact with said rock shaft, and an arm fulcrumed to each end of said shelving and to said rock shaft, each of said arms being of substantially right angular formation near its connection to said rock shaft to permit said shelving to swing clear of said case.

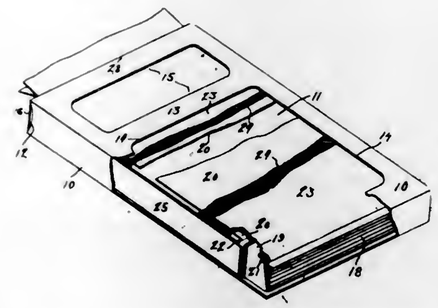
2. The combination with a case, of a rock-shaft mounted thereon, arms fulcrumed on said rock-shaft, shelving normally resting on said case and to which said arms are fulcrumed, and a spring coiled upon said shaft and tending to hold said shelving elevated.

1,173,829. CHAIR. FRANKLIN MANGAM, Saranac Lake, N. Y. Filed Jan. 2, 1912. Serial No. 668,835. (Cl. 155—27.)



The combination of a chair body, a back hinged to and movable forwardly and rearwardly on the body, a rack bar arranged at one side of and fixed to the chair body and having interdental spaces open at its upper edge and also having a guard arranged above said interdental spaces and fixed at its ends to the rack bar, and a lever pivoted to one side edge of the back and arranged to be swung vertically thereon, and having at an intermediate point in its length upwardly and downwardly extended arms, disposed and movable at the inner side of the rack bar and guard and also having on its forward portion a lateral outwardly-extending handle; the said handle being provided with upwardly and downwardly extending arms, disposed and movable at the outer side of the rack bar and guard, and being also provided, at a point between the said arms and the major portion of the lever, with a transverse portion constructed and arranged to be seated in the interdental spaces of the rack, the upwardly extending arms being carried above the guard and the downwardly extending arms being carried below the rack.

1,173,830. MANIFOLD SALES-SLIP DEVICE. CLAUDE C. MECUM, Spokane, Wash. Filed Feb. 15, 1915. Serial No. 8,318. (Cl. 11—36.)



1. A manifolding device comprising a portable box-like container open only at one end to receive a supply of entry sheets, a box-like cover therefor open at one end to telescopically receive said container and closed at its opposite end to close the open end of the container in the assembled position of the parts, said cover having a tearing edge at its open end, the entry sheets in use passing from the open end of the container over the outer surface thereof and beneath the cover to the tearing edge at the opposite end of the latter, said cover being apertured above the sheets to permit entries thereon, substantially as described.

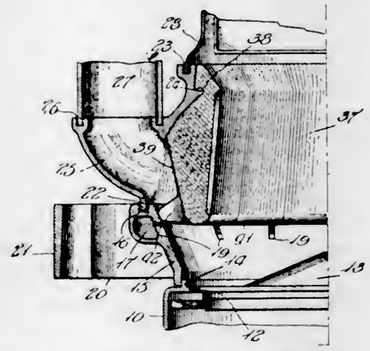
2. A manifolding device comprising a portable box-like container open at one end to receive a pile of entry and copy sheets folded zig-zag together, means on the opposite sides of the container for holding a carbon sheet arranged transversely of the latter, a box-like cover open at one end to telescopically receive said container and closed at its opposite end to close the open end of the container, said cover having a tearing edge at its open end, the sheets in use being passed one above and one below said carbon sheet and beneath said cover to the tearing edge of the latter, said cover being apertured in register with the carbon sheet to permit entries on the sheet overlying the latter.

3. A manifolding device comprising a portable box-like container open only at one end to receive a pile of entry and copy sheets folded zig-zag together, means for holding a carbon sheet on the container transversely of the latter, a box-like cover therefor open at one end to telescopically receive said container and closed at its opposite end to obstruct the open end of the container in the assembled position of the parts, said cover having a tearing edge at its open end, the sheets in use passing from the open end of the container over the outer surface thereof and beneath the cover to the tearing edge at the opposite end of the latter, one of said sheets overlying and the other underlying the transverse carbon sheet, said cover being apertured in register with the carbon sheet to permit entries on the sheet overlying the latter, said container having a bridge member adjacent its open end and beneath which the copy sheet is drawn to position beneath the transversely arranged carbon sheet.

4. A manifolding device comprising a portable box-like container open at one end to receive a pile of entry and copy sheets folded zig-zag together, means for holding a carbon sheet arranged transversely of said container, a cover open at one end to telescopically receive said container and closed at its opposite end to close the open end of the container, said cover having a tearing edge at its open end, the sheets in use being passed one above and one below said carbon sheet and beneath said cover to the tearing edge of the latter, said cover being apertured in register with the carbon sheet to permit entries on the sheet overlying the latter, said container having a bridge member adjacent its open end and beneath which the copy sheet passes to position beneath the transversely arranged carbon sheet, together with a roller arranged in advance of said bridge and over which the copy sheet passes to the bridge.

[Claims 6 to 10 not printed in the Gazette.]

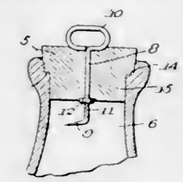
1,173,831. FURNACE. RUDOLPH W. MENK, Joliet, Ill., assignor to Arthur W. Glessner, Chicago, Ill. Original application filed Aug. 3, 1914, Serial No. 854,618. Divided and this application filed Nov. 30, 1914. Serial No. 874,671. (Cl. 126—112.)



In a heater comprising a fire compartment provided with a grate in the bottom thereof, a peripheral inwardly extending ring adjacent the upper edge of said compartment, flues leading from said compartment at a point above the grate, an air passage surrounding said compartment having openings therein communicating with said compartment at a point intermediate said grate and said flue openings, fire-brick engaging the above mentioned ring and lying adjacent the wall of said compartment above said flues, extending inwardly and downwardly from that point to a point below said flue openings but above the air passage, and radial legs extending from the lower ends of said brick contacting the wall of said chamber at a point above said last mentioned openings.

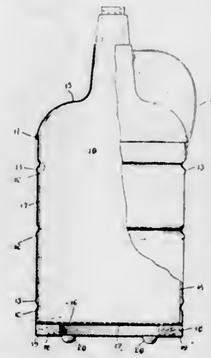
1,173,832. MILK-BOTTLE OPENER AND STOPPER. NEWBURY M. MERRITT, Norwalk, Conn. Filed May 5, 1915. Serial No. 26,056. (Cl. 215—53.)

As a new article of manufacture, a combined stopper and disk remover comprising a tapered body portion, an extracting element passed through said body and formed at one end to provide a laterally extending prong disposed below and in spaced relation to the body, the opposite end of said element forming a loop disposed above



the body, said element having a threaded portion, and a nut adjustably associated therewith to retain said loop partly embedded in said body for the purposes specified.

1,173,833. BOTTLE-COVER. GEORGE H. MERWIN, Milford, Conn. Filed Nov. 15, 1915. Serial No. 61,448. (Cl. 215—3.)



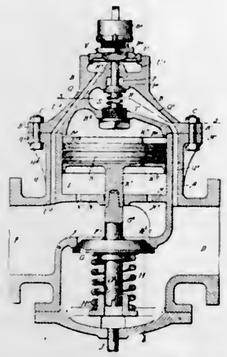
1. A bottle cover comprising a metallic body having a shoulder and extending beyond the bottom of a bottle when the bottle is inserted therein and is in engagement with the said shoulder, said cover being provided with internal circumferential ribs adapted to receive a bottle closely, leaving an air space between bottle and cover, a resilient disk adapted to contact with the bottom of a bottle, and a non-metallic ring below the disk, the parts being secured in place by turning the edge of the cover over the edge of the ring.

2. A bottle cover comprising a metallic body having a shoulder and extending beyond the bottom of a bottle when the bottle is inserted therein and is in engagement with the said shoulder, said cover being provided with circumferential ribs, for the purpose set forth, a resilient disk adapted to contact with the bottom of a bottle, a metallic disk contiguous to the resilient disk, a wooden ring contiguous to the metallic disk and rubber bosses secured to the ring, the parts being secured in place by turning the edge of the cover over the edge of the ring.

1,173,834. PRESSURE-REGULATOR. JULES P. METZGER, Carlstadt, N. J., assignor to The Leslie Company, Lyndhurst, N. J., a Corporation of New Jersey. Filed Oct. 9, 1913. Serial No. 794,258. (Cl. 50—11.)

1. A pressure regulator of the class described, comprising a casing having an inlet and an outlet, a spring pressed regulating valve between the inlet and outlet, a piston connected to the valve, a cylinder located above the valve and in which the piston works, an expansion chamber located above the cylinder and having an entrance at one side connected by a downwardly extending port with the inlet, ports leading from the top of the said expansion chamber and opening into the upper end of the piston cylinder, a valve seat formed in the roof of the expansion chamber around the ports, a vertically disposed valve controlling the said ports and seated on the said seat

within the expansion chamber, the said expansion chamber being substantially circular in form and extending around its valve and the said entrance thereto having its side walls diverging away from the said inlet port and its top and base sloping downwardly toward the said inlet port, the said base sloping downwardly from the lowest point of the expansion chamber whereby to entirely drain the same of water of condensation, and means for controlling the expansion chamber valve and in turn controlled by pressure from the outlet.



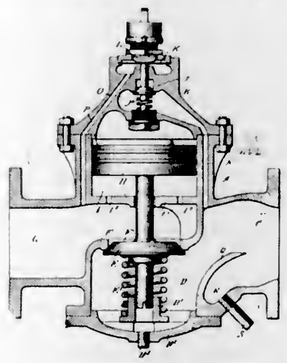
2. A pressure regulator of the class described, comprising a casing having an inlet, an outlet and a partition intermediate the said inlet and outlet, the partition having a valve seat, a spring-pressed regulating valve controlling the said valve seat, a cylinder in the upper portion of the said casing and in communication at its lower end with the said outlet, a piston in the said cylinder and connected with the regulating valve, a high pressure expansion chamber located above the said cylinder and having its bottom connected by a downwardly-extending port with the said inlet to allow fluid pressure to pass from the said inlet into the said expansion chamber and to drain the said expansion chamber of water of condensation, the roof of the said expansion chamber being provided with a valve seat, the under side of which is below the roof of the said expansion chamber, a vertically disposed controlling valve controlling the said roof valve seat of the high pressure expansion chamber, ports connecting the said valve seat with the upper end of the said cylinder, a diaphragm chamber above the said high pressure expansion chamber and connected with the said outlet, a diaphragm controlling the said controlling valve, and a pressure device bearing on the said diaphragm.

3. A pressure regulator of the class described, comprising a casing having an inlet, an outlet and a partition intermediate the said inlet and outlet, the partition having a valve seat, a spring-pressed regulating valve controlling the said valve seat, a cylinder in the upper portion of the said casing and communicating at its lower end with the said outlet, a piston in the said cylinder and connected wtih the regulating valve, a high pressure expansion chamber located above the said cylinder and having its bottom connected by a downwardly-extending port with the said inlet to allow fluid pressure to pass from the said inlet into the said expansion chamber and drain the said expansion chamber of water of condensation, the said expansion chamber being approximately circular in form and having a downwardly sloping entrance, the side walls of the entrance being diverging and merging with the side wall of the expansion chamber, the upper end of the port connected with the said inlet having a plurality of branches opening into the contracted end of the said sloping entrance, the roof of the said expansion chamber being provided with a valve seat, a vertically disposed controlling valve controlling the said roof valve seat of the high pressure expansion chamber, ports connecting the said valve seat with the upper end of the said cylinder, a diaphragm chamber above the said high pressure expansion chamber and connected with the said outlet, a diaphragm controlling the said controlling valve, and a pressure device bearing on the said diaphragm.

4. A pressure regulator of the class described, comprising a casing having an inlet, an outlet and a partition intermediate the said inlet and outlet, the partition having a valve seat, a spring-pressed regulating valve controlling the said valve seat, a cylinder in the upper portion of the said casing and in communication at its lower end with the said outlet, a piston in the said cylinder and connected with the regulating valve, a high pressure expansion chamber located above the said cylinder and having its bottom connected by a downwardly-extending port with the said inlet to allow fluid pressure to pass from the said inlet into the said expansion chamber and drain the said expansion chamber of water of condensation, the roof of said expansion chamber being provided with a valve seat, a vertically disposed controlling valve controlling the said roof valve seat of the high pressure chamber, a spring in the said expansion chamber and pressing the said controlling valve to its seat, a support in the said expansion chamber and having a seat for the said springs to rest on, the said support forming a guide for the stem of the controlling valve, a screw plug in the bottom of the said expansion chamber and a screw screwing in the said screw plug and having a pointed end extending into the expansion chamber, the said pointed end engaging the bottom of the said support, ports connecting the said valve with the upper end of the said cylinder, a diaphragm chamber above the said high pressure expansion chamber and connected with the said outlet, a diaphragm controlling the said controlling valve, and a pressure device bearing on the said diaphragm.

5. A pressure regulator of the class described, comprising a casing, having an inlet, an outlet and a partition intermediate the said inlet and outlet, the partition having a valve seat, a spring-pressed regulating valve controlling the said valve seat, a cylinder in the upper portion of the said casing and in communication at its lower end with the said outlet, a piston reciprocating in the said cylinder, controlling means controlled by pressure from the said outlet to connect the said inlet with the upper end of the said cylinder, and an emergency feed connection connected directly with the upper end of the said cylinder.

1,173,835. PRESSURE-REGULATOR. JULES P. METZGER, Carlstadt, N. J., assignor to The Leslie Company, Lyndhurst, N. J., a Corporation of New Jersey. Filed Oct. 9, 1913. Serial No. 794,259. (Cl. 50—11.)

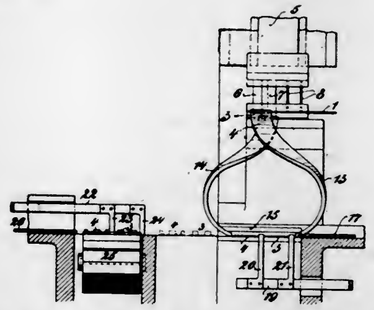


1. A pressure regulator of the class described provided with a casing having an inlet at one side and a main valve chamber at the bottom and in communication with the said inlet, a drainage pocket in the said casing in advance of the valve chamber and communicating with the said inlet and with the said valve chamber, the bottom of the valve chamber being convex and draining into the said drainage pocket, and a drainage pipe leading from the said pocket.

2. A pressure regulator of the type described provided with a casing having an inlet at one side and a main valve chamber at the bottom, the said valve chamber being closed at the bottom by a convex cap having a raised guide for the stem of the main valve, a transverse partition arranged in the said inlet and curved upwardly and forwardly to intercept incoming moist steam and water of condensation, the partition having a downward extension adjacent one side of the said main valve chamber, the lower end of the extension terminating a distance above the lower edge of the said cap, the said extension forming a drainage pocket with the opposite side of the casing, and a pipe leading from the said pocket.

3. In a pressure regulator of the character described, the combination of a casing having a valve seat between its inlet and outlet and a valve chamber below its said seat, a valve coöperating with the seat, a spring arranged beneath the valve for controlling the same, an elevated support arranged upon the base of the valve chamber and forming a valve guide and a seat for the said spring, the said base of the valve chamber sloping downwardly away from a point beneath the said support, a transverse partition arranged to cross the inlet side of the valve chamber to form a drainage pocket at one side of the chamber, and having its lower edge spaced from the base of the chamber and its upper edge extending upwardly and angularly into the inlet, and a drainage tube leading from the drainage pocket, all for the purpose described.

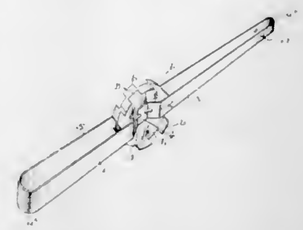
1,173,836. METHOD FOR THE PRODUCTION OF JOINTED STRAP-HINGES. GUSTAV MEYER, Cologne-Raderberg, Germany, assignor to The Firm of Meyer, Roth & Pastor Maschinenfabrik, Cologne-Raderberg, Germany. Filed July 17, 1913. Serial No. 779,484. (Cl. 29—11.)



The herein described method of producing jointed strap hinges consisting in taking a strip of hinge material of the desired dimensions, cutting said strip transversely into two parts, forming notches in an end of each said part, simultaneously forcing each half hinge into specially shaped guide sleeves by which they are brought into alinement, bending over the notched end of each half hinge, forming said bent over notched ends of each piece into an interlocking tube, fitting into said tube a hinge pin and thereafter punching screw holes in each said half hinge part.

1,173,837. REEL AND HANGER FOR BOX-STRAPPING. GEORGE C. D. MILLER, New York, N. Y., assignor to Cary Manufacturing Company, New York, N. Y., a Corporation of New York. Filed June 29, 1912. Serial No. 706,543. (Cl. 242—105.)

1. In a structure of the class described, the combination of a hanger, and a spool rotatably mounted therein, said spool consisting of a substantially flat disk and a circular rim formed by flanges extending from the periphery thereof in alternate directions, said flanges being at right angles to the faces of the disk and curved in cross section so as to produce a circular surface upon which a flat strap is adapted to be compactly coiled.



2. In a structure of the class described, the combination of a hanger, and a spool rotatably mounted therein, said spool consisting of a substantially flat disk and having a rim formed by integral flanges extending from the periphery of said disk in alternate directions and in planes substantially perpendicular to the plane of the disk.

3. A holder for coiled box strapping embodying a hanger formed by bending a single metal strap to produce side members, the middle portions of which are bent toward each other to form parallel cheeks, and a spool rotatably supported in the hanger between the cheeks thereof, said spool having a single flat web and a circular rim bent from said web, the width of said rim exceeding the space between the cheeks.

4. A holder for coiled box strapping comprising a hanger formed by bending a strap of metal to produce a plurality of side members, the end portions of said strap being positioned in overlapping relation and bent to form a cheek on one side member and the other side being bent to form a cheek disposed parallel to the first named cheek, the hanger being of less width between said cheeks than at the remaining portion thereof, a spool positioned within the hanger intermediate said cheek pieces, and means connecting the lapped end portions of the hanger strap, said connecting means operating as a journal for rotatably supporting the spool.

5. A holder for coiled box strapping embodying an elongated frame within which the coil of box strapping is adapted to be positioned, said elongated frame being provided on its side members and intermediate the ends thereof with cheeks extending inwardly from said side members and positioned in parallel relation to each other so that the space between the cheeks is less than the width of the space in the frame, and a spool embodying a single web provided with a wide rim, formed by bending said web, whereon the box strapping is coiled so as to lie between the sides of the frame, said single web of the spool being positioned intermediate the cheeks of the frame and in substantial contact therewith so as to be retained in place, and to be guided in its rotation, by said cheeks, said spool being retained against transverse movement by said cheeks of the frame.

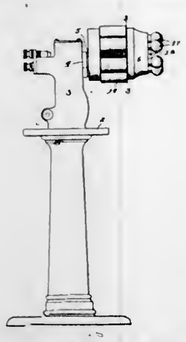
[Claims 6 to 10 not printed in the Gazette.]

1,173,838. MASSAGE DEVICE. ISRAEL MILLER, Pawtucket, R. I., assignor of one-half to James H. Taylor, Pawtucket, R. I. Filed June 23, 1915. Serial No. 35,833. (Cl. 128—16.)

1. In an applicator, an annular body, knobs rotatably mounted in one end of said body, rollers rotatably mounted in the side of said body, and means for rotating said body.

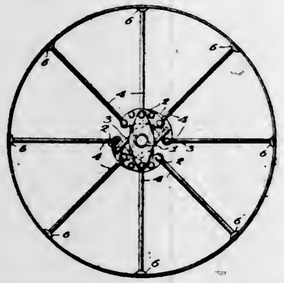
2. In an applicator, an annular body provided with an annular groove, an annular series of spaced rollers rotatably mounted in said groove, an annular series of knobs rotatably mounted in one end of said body, and means for rotating said body.

3. In an applicator, a body, rollers rotatably mounted therein and longitudinally disposed thereon, knobs rota-



tably mounted within said body and longitudinally disposed thereon, and means for rotating said body.

1,173,839. SPRING-WHEEL. ARTHUR R. MISKIN, Salt Lake City, Utah, assignor to Miskin Spring Wheel Company, Idaho Falls, Idaho, a Corporation. Filed May 18, 1912. Serial No. 698,092. (Cl. 152—29.)



1. In a spring wheel, the combination of a rim adapted to assume elliptical form under strains to which it may be subjected, spokes connected with the rim, a system of yokes pivotally supported near the center of the wheel, to which the spokes are connected in sets, and links uniting diametrically oppositely disposed yokes to cause them to be maintained in parallelism.

2. In a spring wheel, the combination of a yielding rim, yokes arranged in pairs diametrically opposite each other, that are pivotally supported near the center of the wheel, the yokes of each pair being disposed upon opposite transverse sides thereof, spokes connected with the rim at their outer ends and each connected at its inner end with one of the yokes, and links uniting the opposite yokes of the pairs and arranged to maintain them in parallelism as the rim is distorted in shape and the spokes moved.

3. In a spring wheel, the combination of a yielding rim, a hub, cross-bars secured to the hub, yokes pivoted between their ends to the said cross-bars, spokes secured at their inner ends to the said yokes near their ends, and connecting links uniting diametrically opposite yokes and maintaining them in parallelism.

4. In a spring wheel, the combination of a yielding rim, a hub, yokes supported near the center of the wheel, and spokes connected at their outer ends with the rim and at their inner ends with the said yokes, the points of connection between the spokes and the yokes being approximately the same radial distance from the center of the wheel as that of the pivots of the yokes.

5. In a spring wheel, the combination of a yielding rim, a hub, yokes pivotally supported near the center of the wheel, spokes connected at their outer ends with the rim and at their inner ends with the said yokes, the points of connection between the spokes and the yokes being approximately the same radial distance from the center of the wheel as that of the pivots of the yokes, and connecting links uniting the opposite yokes and arranged to maintain them in parallelism as the rim is distorted in shape.

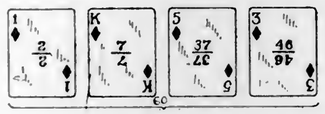
[Claim 6 not printed in the Gazette.]

1,173,840. FILLER-PROTECTOR FOR EGG-CASES. ERNEST E. MOLLENHOFF, Stanton, Iowa. Filed Dec. 31, 1914. Serial No. 879,888. (Cl. 217—35.)



A filler protector for egg cases comprising a central body, flaps formed upon said body, and extending at right angles thereto, said flaps being adapted to be bent upwardly to allow their side edges to engage each other thereby forming a protector for receiving a plurality of fillers and eggs, a hollow pad fixedly secured to the under surface of said body, packing material carried within the hollow portion of said pad for forming a cushioned pad whereby the pad will support a plurality of fillers and eggs and will deaden the impact when the casing is set upon a hard surface, thereby preventing eggs from being broken.

1,173,841. GAME. JOSEPH F. MORRIS, Derby, Conn. Filed Dec. 8, 1915. Serial No. 65,680. (Cl. 46—25.)

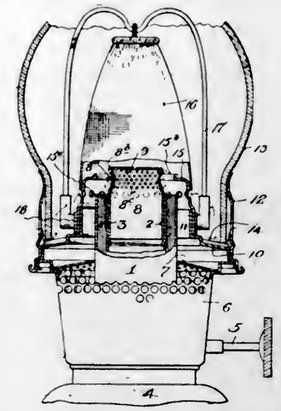


1. A game comprising a pack of cards having central numbers extending from 1 upward and including four suits each numbered from 1 to 10, a series of tickets numbered to correspond with the central numbers on the cards, and a chart having sections numbered from 1 to 10, the sections consisting of columns of series numbers arranged in pairs, the pairs being numbered to correspond with the central numbers on the cards and the tickets, and the pairs each consisting of the number of the section and a number starting one ahead of the section number and increasing one each time.

2. A game comprising a pack of cards numbered centrally from 1 upward and including four suits each numbered at the corners from 1 to 10, a series of tickets numbered to correspond with the central numbers and a chart having sections numbered from 1 to 10 and consisting of columns of series numbers arranged in pairs, the pairs being numbered to correspond with the central numbers and the tickets, and each pair consisting of the section number and a number starting one ahead of the section number and increasing one each time.

3. A game comprising a pack of fifty-two cards, forty-six of which are numbered consecutively from 1 upward and including four suits numbered at the corners from 1 to 10, a series of tickets numbered to correspond with the central numbers and a chart having sections numbered from 1 to 10 and consisting of columns of series numbers arranged in pairs, the pairs being numbered to correspond with the central numbers and the tickets, and each pair consisting of the section number and a number starting one ahead of the section number and increasing one each time.

1,173,842. BLUE-FLAME OIL-BURNER. STEPHEN B. MORSS, Rahway, N. J. Filed Dec. 13, 1915. Serial No. 66,417. (Cl. 67—38.)



1. A burner of the class described comprising inner and outer wick tubes with a wick therebetween, a perforated air spreader carried by the inner wick tube, a cone cap spaced from and surrounding the tubes and spreader providing a generating and mixing chamber therebetween, the spreader having a perforated portion within and above the cone cap, means to admit air into the chamber from below, said cone cap being provided with openings opposed to the top of the wick tubes to admit additional air from the exterior of the chamber into the latter toward the base of the generating flame within said chamber.

2. A burner of the class described, comprising inner and outer wick tubes with a wick therebetween, a perforated air spreader carried by the inner wick tube, a cone cap spaced from and surrounding the tubes and spreader providing a generating and mixing chamber therebetween, the spreader having a perforated portion within the cone cap, means to admit air into the chamber from below, said cone cap being provided with openings opposed to the top of the wick tubes to admit additional air from the exterior of the chamber into the latter toward the base of the generating flame within said chamber, said air spreader being provided at its top with a heating block.

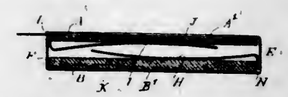
3. A burner of the class described comprising inner and outer wick tubes adapted to receive a wick therebetween, a cone cap surrounding said tubes providing a generating and mixing chamber therein, means to admit air between said tubes and cap to said chamber, said cap being provided with perforations opposed to the tops of the tubes to admit additional air to said chamber at the base of the flame, the upper edge of said cap being outwardly flared, and an air spreader.

4. A burner of the class described comprising inner and outer wick tubes adapted to receive a wick therebetween, a cone cap surrounding said tubes providing a generating and mixing chamber therein, means to admit air between said tubes and cap to said chamber, said cap being provided with perforations opposed to the tops of the tubes to admit additional air to said chamber at the base of the flame, the upper edge of said cap being outwardly flared, and an air spreader, the upper portion of the spreader being outwardly flaring.

5. A burner of the class described comprising inner and outer wick tubes adapted to receive a wick therebetween, a cone cap surrounding said tubes providing a generating and mixing chamber therein, means to admit air between said tubes and cap to said chamber, said cap being provided with perforations opposed to the tops of the tubes to admit additional air to said chamber at the base of the flame, the upper edge of said cap being outwardly flared, and an air spreader, the upper portion of the spreader being outwardly flaring, the adjacent portion of said spreader having a reduced portion, providing upwardly and downwardly flaring walls.

[Claim 6 not printed in the Gazette.]

1,173,843. TICKET-HOLDER. ALEXANDER MORTEN, New York, N. Y. Filed June 15, 1915. Serial No. 34,179. (Cl. 206—39.)

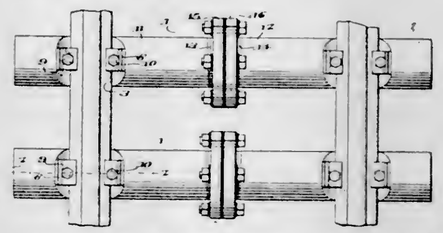


1. A ticket holder, comprising a box adapted to contain a series of superimposed tickets, the box being formed of a single piece of sheet material having one box end terminating in a resilient member extending within the box and engaging the lowermost ticket to press the tickets against the under side of the face member of the box, the said box end being spaced from the said face member to provide an exit slot in register with the uppermost of the said tickets.

2. A ticket holder, comprising a box adapted to contain a series of superimposed tickets, the box being formed of a single piece of sheet material having one box end terminating in a resilient member extending within the box and engaging the lowermost ticket to press the tickets against the under side of the face member of the box, the said box end being spaced from the said face member to provide an exit slot in register with the uppermost of the said tickets, the said face member having an opening for engaging a finger with the outermost ticket to push the said ticket through the said slot.

3. A ticket holder, comprising a box adapted to contain two sets of different tickets, the ends of the said box terminating at opposite edges in inwardly extending spring tongues forming rests for the innermost tickets of the said two sets of tickets, the edges of the ends having the tongues being spaced from the adjacent face members of the box to provide an exit slot at each end of the box, one for each set of tickets, each exit slot registering with the uppermost ticket of the corresponding set of tickets, and each face member of the box having an opening for the passage of a finger to engage the corresponding uppermost ticket and push the same outward through its registering slot.

1,173,844. RAILWAY-TIE. WILLIAM EARL MUNSLOW, Steubenville, Ohio. Filed Oct. 2, 1914. Serial No. 864,675. (Cl. 238—5.)



1. A tie comprising two tubular members having flat rail seats, flanges longitudinally movable upon the adjacent ends of the tubular members, an insulator plate between the flanges, said plate having lateral hubs which extend through openings in the flanges, washers for the hubs, bolts passing through the hubs and flanges, and nuts for the bolts.

2. A metal tie comprising two tubular members having flat portions providing rail seats, an adjustable flange upon each of the tie sections, an insulator plate between the flanges, said plate and flanges having registering openings, a hollow insulator member passing

through the openings, washers upon the outer faces of the flanges and upon the insulator members, bolts passing through the insulator members and the insulator plate, nuts for the bolts, and the said flanges having peripheral notches.

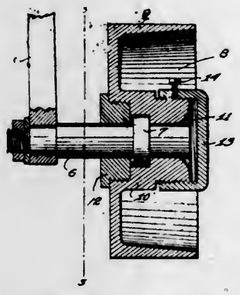
3. A tie comprising two hollow members each having a round face and round sides and a flat bottom which extends from its outer end for the major portion of its length to adjacent the inner rounded end, the rounded portions being arranged circumferentially with the rounded top and sides, the adjacent ends being threaded in opposite directions, sleeves having their bores also threaded in opposite directions engaging with the end of the tie, a washer of insulating material arranged between the sleeves and the ends of the tie sections, and removable means passing through the sleeve members for connecting the sections of the tie.

4. A tie comprising two tubular sections having its upper face depressed to provide flat rail seats, and the meeting ends of the ties being threaded in opposite directions, a threaded member engaging the threaded end of each of the tie members, transverse members passing through the said threaded members for securing the same and connecting the tie members.

5. A metal tie of tubular formation having its face, adjacent its ends, depressed to provide flat rail seats, said tie comprising two members, a plate of insulating material between the members at the meeting ends thereof, a longitudinally adjustable element upon the end of each of the tie members at the opposite side of the insulating material, and means for connecting the said elements to secure the insulating member between the members of the tie and to connect the members of the tie.

[Claim 6 not printed in the Gazette.]

1,173,845. PLOW-WHEEL. VICTOR G. MUNSON, Whitehall, Mich. Filed Apr. 21, 1914. Serial No. 833,497. (Cl. 64—26.)

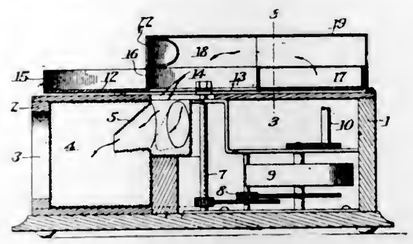


1. A wheel including an integral hub and rim, the former provided with a bore the outer end of which is flared for facilitating the application of a lubricant to the axle while the latter is mounted in the bore of the wheel.

2. A device as specified in combination with a standard having an axle detachably mounted on the outer end thereof, an annular flange formed on said axle in proximity to its outer end, a wheel revolubly mounted on said axle provided with a bore for engagement with the axle a portion of which is enlarged to receive said annular flange, a cap detachably engaged in said bore beyond said flange for locking the wheel on the axle when taking up the wear created by the friction during the rotation of the wheel, the outer terminal of said bore being flared for facilitating the application of a lubricant thereto.

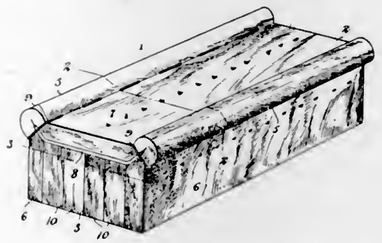
3. A wheel comprising an integral hub and rim, the latter provided with a bore, the outer terminal of which is flared to facilitate the application of a lubricant to the axle which is mounted in said bore, a lubricating cap detachably mounted on said hub for dispensing the contents thereof through said flared end, a set-screw mounted in said lubricating cap for retaining the latter in a predetermined position and preventing its accidental displacement.

1,173,846. FLY-TRAP. TETSUSHIRO NAKAMIGAWA, New York, N. Y. Filed May 21, 1915. Serial No. 29,609. (Cl. 43—32.)



A fly trap comprising a casing, a cage mounted in the casing, a disk mounted for rotation above the casing and provided with spaced flanges and having radially disposed partitions located between the flanges, the casing being provided under the disk with an opening, said disk having at its central portion an opening which registers with the opening in the casing, a hood fixed above the opening at the central portion of the disk and having a transparency, an extension provided at one side of the hood, an inflexible barrier hingedly connected at one edge to the edge of the extension and adapted to be encountered by the upper edges of the partitions successively as the disk moves under the extension, the axis upon which the barrier swings lying at a right angle to the axis upon which the disk rotates.

1,173,847. ERASER. DANIEL A. NICKEL and SVEN SWANSON, Oak Park, Ill., assignors to Beckley Cardy Company, Chicago, Ill. Filed July 2, 1915. Serial No. 37,727. (Cl. 15—65.)



1. An eraser comprising a sheet of material bent and stitched to provide a casing, a body disposed within said casing, and strands of material passing through said body to provide spaced rows of vertical and horizontally extending stitchings throughout the entire length of the eraser.

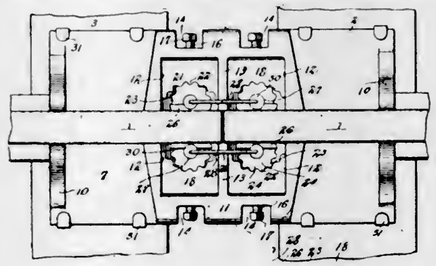
2. An eraser comprising a single sheet of material bent and stitched to provide right angularly extending side walls, strips of material interposed between the side walls to form a body, and spaced rows of stitchings extending vertically and horizontally throughout the length of the eraser whereby the side walls are caused to coöperate with the said strips of material to form an erasing surface.

3. An eraser comprising a sheet of material rolled and stitched to provide longitudinally extending beads, said beads terminating in depending side walls providing a body receiving channel, a body disposed within said channel, and a strip of material interposed between said

body and first mentioned sheet of material and extending into the beads thereon adapted to normally maintain the beads in spaced relation.

4. An eraser comprising a sheet of material stitched to provide longitudinally extending beads, side walls depending from said beads, a body located between said side walls and formed from loosely opposed vertical strips of material extending longitudinally the entire length of the side walls, and a series of spaced stitchings extending vertically downward through the top of the casing and into the body, said stitchings then extending horizontally through said body and side walls of the casing adjacent the said beads and adapted to permit portions of the said strips of material distant from the stitchings to be maintained in spaced relation while pressure is applied to said beads when the eraser is in use without imposing undue strain upon the said stitchings.

1,173,848. RAIL-JOINT. MARK NOBLE, Lansing, W. Va. Filed June 18, 1915. Serial No. 34,900. (Cl. 239—6.)



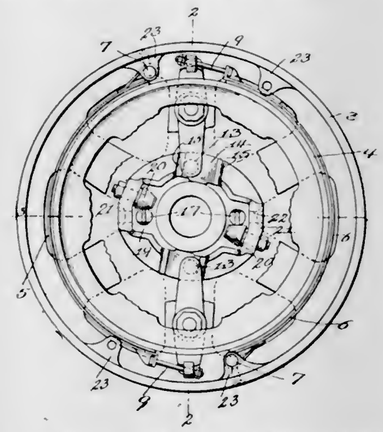
1. In a means for connecting the meeting ends of railway rails, friction members having serrated faces contacting with the webs of the rails, said friction members being provided with teeth, a follower member also provided with teeth co-engaging with the teeth of the friction member, and an adjusting member for the follower member.

2. In a means for connecting the meeting ends of railway rails, cross sectionally round friction members having one of their faces serrated, and contacting with the webs of the rails, the opposite faces of said members being formed with teeth, follower members each having one of its ends provided with a substantially semi-cylindrical depression, the periphery of the said depression being formed with teeth, said teeth co-acting with the teeth of the follower member, and means for adjusting the follower member with relation to the friction member.

3. In a means for connecting the meeting ends of rails, a chair having a rail passage within which the rails are arranged, the walls of said passage contacting with the base, the web, and underlying the heads of the rails, said chair being provided upon its upper face and upon each of its opposite sides with a pair of spaced pockets having openings which communicate with the rail receiving space of the chair, the outer wall of each of the pockets being centrally provided with a depression and having threaded openings which enter the said depressions, a threaded member within each of the openings and having its head received within the depression, a friction member within each of the pockets, a follower member within each of the pockets and contacting with the friction member, and said follower members having one end provided with an opening to receive the ends of the threaded members to permit of said threaded members contacting with the inner wall of each of said openings to force the follower into contact with the friction member and to force each of said friction members into engagement with the webs of the rails.

4. In a means for connecting the meeting ends of rails, a chair having a rail receiving passage, said chair having its sides centrally provided with pockets having openings communicating with the rails, the outer walls of the pockets being formed with vertical depressions and having lateral threaded openings which enter the pockets, a threaded member for each of the openings having its head received one within each of the depressions, a follower member contacting one with each of the side walls of the pockets adapted to be adjusted longitudinally by one of said members, each of said follower members having its inner face arcuate, and a rounded friction member within each of the pockets and engaged by each of the followers and adapted to be forced by the said followers into frictional engagement with the webs of the rails.

1,173,849. FRICTION-CLUTCH. CHARLES G. OBERLEY and ROBERT GRIGNON, Sartell, Minn. Filed June 18, 1915. Serial No. 34,901. (Cl. 192—14.)



1. In a friction clutch, in combination, driving and driven elements, one of which has a flat wall, a pair of levers pivoted at diametrically opposite points on said flat wall, a yoke arranged against said flat wall and between the same and said levers and mounted for oscillatory movement in the plane of the clutch about an axis coincident with the axis of rotation of said driving and driven elements, said yoke being operatively associated with said levers, and a pair of clutch bands having ends operatively connected to said levers and having their other ends connected at diametrically opposite points to the element to which said levers are pivoted, the other element being formed as a drum for engagement by said clutch bands.

2. In a friction clutch, in combination, driving and driven elements, one of which has a flat wall, a pair of levers pivoted at diametrically opposite points on said flat wall, a yoke arranged against said flat wall and between the same and said levers and mounted for oscillatory movement in the plane of the clutch about an axis coincident with the axis of rotation of said driving and driven elements, said yoke having oppositely located recesses and said levers having pins for operative engagement in said recesses, and a pair of clutch bands having ends operatively connected to said levers and having their other ends connected at diametrically opposite points to the element to which said levers are pivoted, the other element being formed as a drum for engagement by said clutch bands.

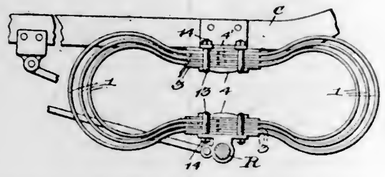
3. In a friction clutch, in combination, driving and driven elements, a pair of clutch bands for circumferential engagement with one of said elements, fixed connections between certain ends of said bands and one of said elements, said connections being located in diametrically opposite relation, an element operatively connected to the other ends of said bands and operable to engage or disengage the latter, said last-named element being mounted

for oscillatory movement in the plane of the clutch about an axis coincident with the axis of rotation of said driving and driven elements, a collar mounted for sliding movement in the direction of the axis of rotation of said driving and driven elements, and means for transmitting a movement of said collar in one direction to said oscillatory element for producing an oscillatory movement of the latter.

4. In a friction clutch, in combination, driving and driven elements, a pair of clutch bands for circumferential engagement with one of said elements, fixed connections between certain ends of said bands and one of said elements, said connections being located in diametrically opposite relation, an element operatively connected to the other ends of said bands and operable to engage or disengage the latter, said last named element being mounted for oscillatory movement in the plane of the clutch about an axis coincident with the axis of rotation of said driving and driven elements, a collar mounted for sliding movement in the direction of the axis of rotation of said driving and driven elements, and means for transmitting a movement of said collar in one direction to said oscillatory element for producing an oscillatory movement of the latter, the means comprising a pair of projections located at diametrically opposite points on said oscillatory element and a pair of pins located at diametrically opposite points on said collar and having cam ends for engagement with said projections.

5. In a friction clutch, in combination, driving and driven elements, one of which has a flat wall, a pair of levers pivoted at diametrically opposite points to said flat wall and movable in the plane of the clutch, an element mounted for oscillatory movement in the plane of the clutch upon an axis coincident with the axis of rotation of said driving and driven elements and having oppositely located recesses, the levers having pins engaging in said recesses and the recesses being substantially wider than said pins to permit of an adjustment of said oscillatory element relatively to said levers, a collar mounted for sliding movement in the direction of the axis of rotation of said driving and driven elements, pins carried by said collar for operating said oscillatory element, projections carried by said oscillatory element for engagement by said pins, said oscillatory element having crown pieces carrying said projections and of sufficient width to permit said projections to be mounted at either side of said pins in accordance with the relation of said element to said levers, and clutch bands having ends connected to said levers and having their other ends connected at opposite points to the element to which said levers are pivoted, the other element being formed as a drum for engagement by said clutch bands.

1,173,850. VEHICLE-SPRING. DOCTOR FRANKLIN OLIVER, Oakland, Cal. Filed Mar. 15, 1915. Serial No. 14,434. (Cl. 267—27.)



1. In a vehicle spring, a pair of completely independent sections each of U-shape arranged to form a full ellipse and having their free ends abutting and interengaged with each other.

2. In a vehicle spring, a pair of completely independent sections each of U-shape arranged to form a full ellipse, and interlocking means formed integral with the adjacent ends of the sections to hold the sections against relative longitudinal movement.

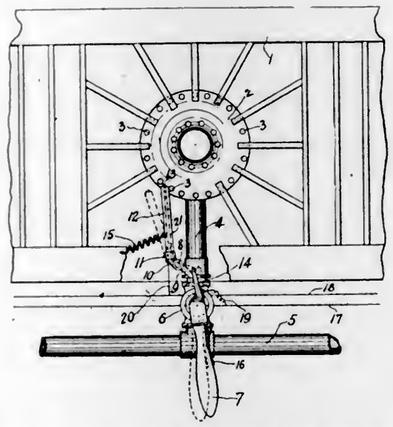
3. In a vehicle spring, a pair of completely independent sections each of U-shape arranged to form a full ellipse, and interlocking means formed integral with the adjacent ends of the sections, and comprising heads having shoulders on their opposite sides and sockets which receive the heads and shoulders on opposite sides of the sockets which abut the first named shoulders.

4. In a vehicle spring, a series of U-shaped leaves of successively increasing size, means to connect adjacent ends of adjacent leaves so as to prevent relative longitudinal movement of the adjacent leaves, and means interposed between the free ends of the leaves to provide fulcrum points about which the leaves may independently move.

5. In a vehicle spring, a full elliptic spring comprising two interchangeable sections the free ends of which abut and are interengaged with each other.

[Claims 6 to 8 not printed in the Gazette.]

1,173,851. GAS-STOVE. PERCY GERALD OWEN, Vancouver, British Columbia, Canada. Filed Feb. 1, 1915. Serial No. 5,495. (Cl. 175—115.)

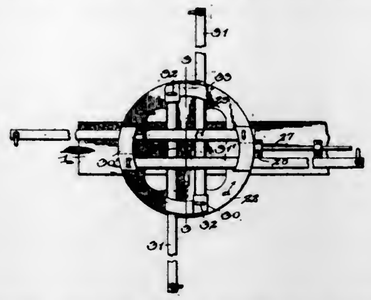


The combination with a gas stove having the usual gas ring provided with gas jets and gas inlet cock, of a normally broken electrical circuit, an igniting element disposed in said circuit swingably supported normally at a distance from said gas ring, means for swinging said igniting element into close proximity to said gas jets and for simultaneously closing said circuit to heat said element, said means being adapted to operate only when said inlet cock is moved past its normal full open position, means for returning the igniting element to its normal position when the gas inlet cock is returned to its normal full open position, and spring means for returning said inlet cock to its normal full open position.

1,173,852. HORSE-POWER DEVICE. SAMUEL BRANCH PARKS, Stockton, Kans., assignor of one-half to Mary Alice Stevens, Stockton, Kans. Filed Mar. 21, 1913. Serial No. 755,984. (Cl. 185—19.)

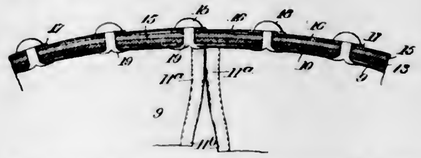
1. A device of the class described consisting of a supporting member, a vertically disposed shaft revoluble in said supporting member, an anti-friction ball race disposed upon said supporting member, an upright sleeve surrounding said shaft and having a base, anti-friction balls in said race upon which said base revolves, a revoluble platform having a hub mounted upon the base of said sleeve and surrounding the body of said sleeve, anti-friction balls mounted on top of said sleeve, means carried by said shaft coöperating with said balls to provide a bearing therefor, and a plurality of arms disposed in radial alinement upon said platform and disposed for frictional engagement with said sleeve whereby to turn the same, and means for pivotally connecting said arms upon said platform.

2. In a device as described, in combination, a support, a vertically disposed rotatable member, means for steadying said member, a platform loosely surrounding said rotatable member, diametrically opposite double brackets mounted upon said platform, each bracket including an elongated guide, a pair of arms, said guides being disposed in a higher plane than the integral bracket connected thereto, said arms projecting in opposite directions from said platform, and having one end pivoted in



the bracket formation, and its opposite end projecting through the guide opposite to this bracket, said arm being normally disposed parallel and resilient for engagement with said rotatable member, and a pair of oppositely extending arms disposed at right angles to said first named arms, said last named arms being resilient and adapted to engage said rotatable member, and means for providing bearings for said last mentioned arms, whereby to cause them to extend above the first mentioned arms.

1,173,853. TIRE-PROTECTOR. WILLIAM H. PAUL, Baltimore, Md. Filed Aug. 8, 1914. Serial No. 855,782. (Cl. 152—16.)



1. A protector for pneumatic tires comprising a canvas cover shaped to conform to the tire, a band of leather extending centrally around said canvas cover to form a tread, and a series of overlapping metal plates riveted to said band, each rivet passing through two plates, the leather band, and said canvas cover.

2. A protector for pneumatic tires comprising a canvas covering of uniform thickness cemented to the tire, and extending only substantially half way around the outer surface thereof, and a removable shoe comprising a second canvas covering wider than the first, and extending substantially around the entire outer surface of the tire, and overlying the first covering, and an armored tread band permanently secured to said outer covering.

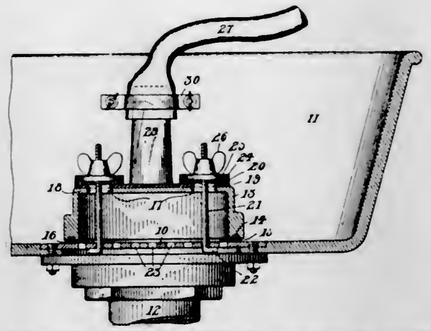
3. A protector for pneumatic tires comprising a canvas cover shaped to conform to the tire, a central band of canvas overlying said cover, a band of leather superposed upon said canvas band, a series of metallic wear plates mounted upon said leather band, and rivets passing through said bands, plates, and canvas covering, and securing all of said parts permanently together.

4. A protector for penumatic tires, an armored tread comprising a supporting band, and a series of overlapping metal plates mounted thereon, said plates being securely riveted to each other and to said band to form a flexible, inextensible belt.

5. In a protector for penumatic tires, an armored tread comprising a compound supporting band formed of an inner strip of canvas and an outer strip of leather of substantially the same width, and a series of overlapping plates of equal width mounted upon said leather strip, said plates being riveted to both said canvas and leather strips, and to each other, to form a flexible, inextensible belt.

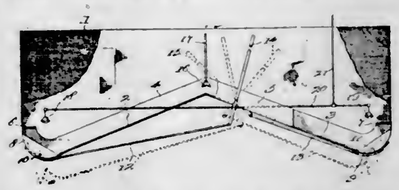
[Claim 6 not printed in the Gazette.]

1,173,854. BASIN-TRAP CLEANER AND DRAIN-PIPE-FLUSHING DEVICE. ROBERT H. PEARCH, Elmira, N. Y. Filed Apr. 24, 1915. Serial No. 23,605. (Cl. 4—1.)



A device of the class described comprising in combination with a perforated strainer plate, an inverted cup-shaped casing having an annular groove within its lower edge, and spaced radial alining slots in the top thereof, an annular flexible packing within the said casing groove and seated upon the strainer plate inclosing the perforations thereof, a resilient washer strip upon the said casing having longitudinal slots in alinement with the slots of the casing, hook bolts positioned through the said strip and casing slots and having the lower ends in hooked engagement with the strainer plate, combination washers and retaining nuts upon the upper ends of the said bolts, an inlet nozzle tapped into the top of the said casing, and a water supply pipe removably attached to the said pipe.

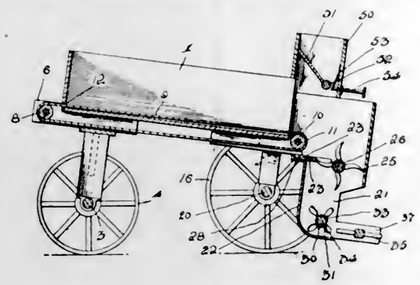
1,173,855. LOCOMOTIVE ASH-PAN. WALTER PEARSON and EDWIN P. QUATTLEBAUM, Mobile, Ala. Filed Oct. 21, 1915. Serial No. 57,107. (Cl. 110—171.)



In a locomotive ash pan of the character described, the combination of mesh side walls, a bottom including a pair of inverted V-shaped hangers, a pair of diverging inclined bottom walls supported from said hangers and terminating at their lower ends short of the lower ends of said hangers to provide spaces therebetween, beams connecting the ends of said hangers above said spaces, dump buckets, trunnions on said buckets journaled in the lower ends of said hangers and supporting said dump buckets angularly in said spaces and with their adjacent ends normally in contact with the lower ends of the bottom walls for receiving the ashes therefrom, steam jets for driving the ashes down said inclined walls and into the buckets, water sprays above said dump buckets for extinguishing the live coals and sparks therein, rods having curved outer ends conforming to the curvature of the bucket bottoms and connected to the latter, and means

connected to the opposite ends of said rods for shifting the same to revolve and dump said buckets, substantially as described.

1,173,856. CHEMICAL-TREATING MANURE MIXER, PULVERIZER, AND DISTRIBUTER. FREDERICK A. PICKETT and HURDIE B. PICKETT, Baltimore, Md. Filed Mar. 27, 1915. Serial No. 17,440. (Cl. 111—40.)



1. In a manure mixer, pulverizer and distributer, the combination, of a manure retaining body, a plurality of shredding knives carried by the rear end of said body, a chemical retaining and distributing construction carried by said body directly above said shredding knives for depositing chemicals upon the manure during shredding, and distributing means positioned beneath said shredding knives for receiving the treated manure from the shredding knives.

2. In a manure mixer, pulverizer and distributer, the combination, of a manure retaining body, a plurality of shredding knives carried by the rear end of said body, and means co-acting with said shredding knives for removing stones or other foreign articles from the manure during shredding.

3. In a manure mixer, pulverizer and distributer, the combination, of a manure retaining bed, pulverizing means carried by the rear end of said bed for cutting or shredding the manure, distributing means carried by said bed beneath said pulverizing means for distributing the fertilizer, a chemical retaining hopper carried by said bed directly above said pulverizing means, and means carried by said hopper for regulating the quantity of chemical distributed from the hopper upon the manure.

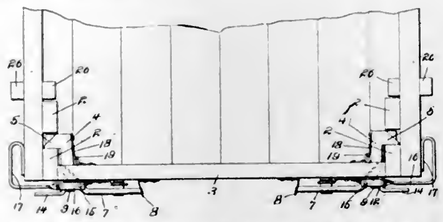
4. In a manure mixer, pulverizer and distributer, the combination, of a manure retaining body, a plurality of shredding knives carried by the rear end of said body, means co-acting with said shredding knives for removing stones or other foreign articles from the manure during shredding, and a chemical retaining and distributing construction carried by said body directly above said shredding knives for depositing chemicals upon the manure during shredding.

5. In a manure mixer, pulverizer and distributer, the combination, of a manure retaining bed, a manure pulverizing means carried by the rear end of said bed, means for feeding the manure to said pulverizing means, means for depositing chemicals upon said manure while being shredded, said shredding efficiently mixing the chemicals and the manure, and distributing means positioned beneath said shredding means for distributing the treated manure over a field.

[Claims 6 to 16 not printed in the Gazette.]

1,173,857. END-GATE FOR WAGONS. CARL POLSON, Vermillion, Kans. Filed Sept. 11, 1915. Serial No. 50,218. (Cl. 21—21.)

1. In end gate construction, the combination with the side boards of a wagon body, of pairs of strips secured to the inner surfaces of said side boards respectively adjacent to the rear ends thereof, the strips of each pair being spaced apart to form guide ways, end gate securing strips pivoted to the inner surface of said end gate adjacent to the opposite ends thereof, ribs formed on said strips respectively and engageable in said ways to hold the end gate against accidental displacement, levers connected with said strips respectively for swinging the same to move said ribs into and out of said ways, holding devices on the outer surface of said end gate adapted to engage said levers to hold the latter against movement in one direction, and means carried by said levers and adapted to engage the side boards of the wagon to reinforce the latter.



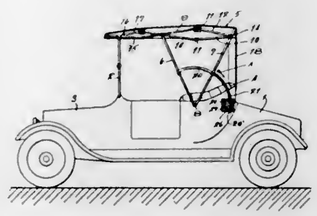
2. In end gate construction, the combination with the side boards of a wagon body, of pairs of strips secured to the inner surfaces of said side boards respectively adjacent to the rear ends thereof, the strips of each pair being spaced apart to form guide ways, end gate securing strips pivoted to the inner surface of said end gate adjacent to the opposite ends thereof, ribs formed on said strips respectively and engageable in said ways to hold the end gate against accidental displacement, detachable connections between the lower edge of said end gate and the rear edge of the bottom of the wagon box, and means holding said connections against accidental disconnection from the wagon box.

3. In end gate construction, the combination with the side boards of a wagon body, of pairs of strips secured to the inner surfaces of said side boards respectively adjacent to the rear ends thereof, the strips of each pair being spaced apart to form guide ways, end gate securing strips pivoted to the inner surface of said end gate adjacent to the opposite ends thereof, ribs formed on said strips respectively and engageable in said ways to hold the end gate against accidental displacement, detachable connections between the lower edge of said end gate and the rear edge of the bottom of the wagon box, whereby the end gate may be swung downwardly to form a scoop board, and guards carried by the end gate adjacent to the respective sides thereof and projecting upwardly therefrom to form the side walls of the scoop board.

4. In end gate contsruction, the combination with the side boards of a wagon body, of pairs of strips secured to the inner surfaces of said side boards respectively adjacent to the rear ends thereof, the strips of each pair being spaced apart to form guide ways, end gate securing strips pivoted to the inner surface of said end gate adjacent to the opposite ends thereof, ribs formed on said strips respectively and engageable in said ways to hold the end gate against accidental displacement, detachable conections between the lower edge of said end gate and the rear edge of the bottom of the wagon box, whereby the end gate may be swung downwardly to form a scoop board, guards carried by the end gate adjacent to the respective sides thereof and projecting upwardly therefrom to form the side walls of the scoop board, and means operable in the downward swinging movement of said end gate to move said guards into side wall formation.

1,173,858. AUTOMOBILE-TOP-ACTUATING MECHANISM. EDWARD P. PORCHER, Charleston, S. C. Filed Oct. 28, 1914. Serial No. 869,087. (Cl. 21—62.)

1. The combination with a motor vehicle including mechanism to be operated by a prime mover, a body, a foldable top, and a plurality of pivotally supported standards connected to said top, of a plurality of rack bars connected to said top supporting standards, a section of said rack bars being of greater length than other of said rack bars, and means operatively connecting the long and short rack bars to said mechanism for moving said rack bars for raising or lowering said top.



2. The combination with a motor vehicle including mechanism adapted to be operated by a prime mover, a body, a foldable top, and pivoted standards for supporting said top, of a plurality of rack bars connected to said top supporting standards, certain of said rack bars being of greater length than other of said rack bars, for insuring the proper folding or unfolding movement of said top, and means for restraining said short rack bars from downward movement until the standards to which said long rack bars are connected are in alinement with the standards to which said short rack bars are connected, and means operatively connecting said rack bars to said mechanism.

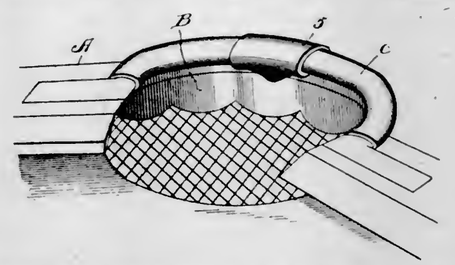
3. The combination with a motor vehicle having a body, mechanism adapted to be operated by a prime mover, a top, and pivoted standards for supporting said top, of a plurality of arcuate rack bars connected to said standards, certain of said rack bars being of greater length than other of said rack bars, said long rack bars being connected to the foremost of said top-supporting standards, said short rack bars being connected to the rearmost of said standards, pinions meshing with said rack bars, said short rack bars being provided with recesses, springs, lugs carried by said springs for seating in said recesses for restraining movement of said short rack bars, and means carried by said long rack bars for operating said spring for releasing said short rack bars for movement.

4. The combination with a motor vehicle having a body, mechanism adapted to be operated by a prime mover, a top, and pivoted standards for supporting said top, of a plurality of arcuate rack bars connected to said standards, certain of said rack bars being of greater length than other of said rack bars, said long rack bars being connected to the foremost of said top-supporting standards, said short rack bars being connected to the rearmost of said standards, pinions meshing with said rack bars, said short rack bars being provided with recesses, springs, lugs carried by said springs for seating in said recesses for restraining movement of said short rack bars, means carried by said long rack bars for operating said springs for releasing said short rack bars for movement, and a plurality of shafts and gears operatively connected to said pinion and said mechanism for operating said rack bars by movement of said mechanism.

1,173,859. BILLIARD OR POOL TABLE ATTACHMENT. WALTER D. PORTER, Forest City, Iowa. Filed Oct. 5, 1915. Serial No. 54,260. (Cl. 46—12.)

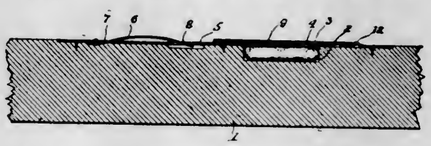
1. A device of the class described comprising a resilient section, and a resilient clip carried by the section and holding the same in shape for embracing the upper edge of the pocket in a billiard or pool table.

2. A device of the class described comprising a cushion member, and a clip carrying the same for detachably



mounting the cushion member on the top edge of a pocket in a billiard or pool table.

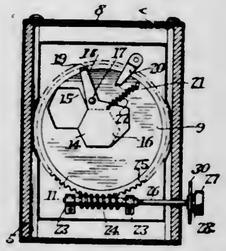
1,173,860. LEVEL. ACIE M. PRATER, Hugo, Okla. Filed Dec. 22, 1914. Serial No. 878,538. (Cl. 33—211.)



1. In a spirit level, a slotted cover plate for the spirit bulb, a guard plate slidably mounted over the cover plate and having the longitudinal edges thereof bent to form guideways, said guideways receiving the edges of said cover plate, means for holding the guard plate in inactive position, and means for limiting the movement of the guard plate when moved to active position.

2. In a spirit level, a slotted cover plate for the spirit bulb, a guard plate slidably mounted over the cover plate, said guard plate having the longitudinal edges thereof bent to form guideways for receiving the longitudinal edges of said cover plate, a leaf spring mounted in one end of said cover plate and engaging said guard plate when in inactive position, and a boss formed on the opposite end of said cover plate and serving to limit the forward movement of the guard plate when moved to active position.

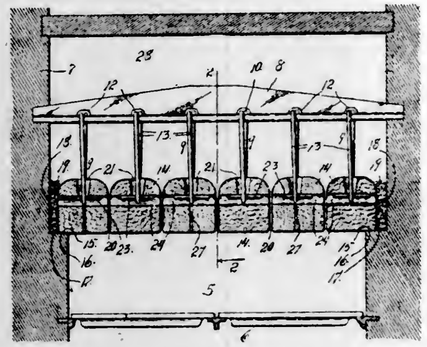
1,173,861. EXPOSURE-SHUTTER FOR CAMERAS. JAMES J. QUINN, Eddystone, Pa. Filed May 7, 1915. Serial No. 26,554. (Cl. 95—36.)



1. A shutter for a camera comprising a plate having an opening, a disk rotatable in said opening and having a center aperture and also a side aperture, a slide pivotally mounted on the disk for closing either of said apertures, means for normally holding the slide in a position to close the center aperture, and means on the plate and projecting into the path of the slide to intermittently move the same for opening the center aperture and closing the side aperture.

2. A shutter for a camera comprising a plate having an opening, a disk rotatable in said opening and having a center aperture and also a side aperture, a slide pivotally mounted on the disk for closing either of said apertures, means for normally holding the slide in a position to close the center aperture, means on the plate and projecting into the path of the slide to intermittently move the same for opening the center aperture and closing the side aperture, and means for locating the disk and adapted to be projected exteriorly of the camera.

1,173,862. SUSPENDED FURNACE-ROOF. WILLIAM J. REILLY, Denver, Colo. Filed Nov. 9, 1914. Serial No. 871,034. (Cl. 110—95.)



1. A furnace roof composed of bricks spaced from each other to permit expansion, suspension means for the bricks consisting of stationary bars, and hangers forming supports for the respective bricks, the hangers being detachably connected with the said bars, and the space between the latter being greater than the width of a single brick whereby each brick may be independently lifted upwardly between the said bars.

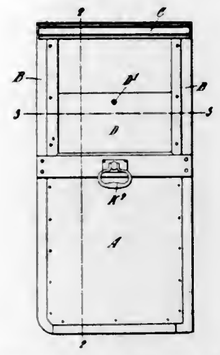
2. A furnace roof composed of a series of individual bricks, and means for suspending the said bricks comprising bars extending transversely of the furnace and supported by the side walls thereof, and hangers whose lower extremities are loosely connected with the bricks and whose upper extremities are bent to enter openings formed in the bars, the hangers of any two adjacent bricks being connected with the same bar and having their upper extremities arranged to pass through the openings in opposite directions, substantially as described.

3. A furnace roof composed of bricks and suspension means therefor, the said bricks each having communicating openings, one of which is vertically disposed while the other is transversely disposed, the vertically disposed opening increasing in size from its lower extremity, the suspension means being composed of stationary bars suitably spaced and provided with openings, and hangers whose lower extremities loosely engage the openings in the respective bricks, while their upper extremities loosely engage the openings in the stationary bars, to permit the independent removal of the individual bricks in an upward direction, substantially as described.

4. A furnace roof composed of a series of individual bricks, each brick having a vertically disposed opening increasing in size from its lower extremity, and a transversely disposed opening communicating with the vertically disposed opening, and hangers for the individual bricks, the lower portion of each hanger entering the vertical opening of one of the bricks, and provided with a perforation, and a locking pin inserted in the transverse opening of the brick and entering the perforation in the lower extremity of the hanger, and stationary bars with which the upper extremities of the hangers are detachably connected to permit independent removal of the individual bricks in an upward direction, substantially as described.

5. A furnace roof composed of bricks spaced from each other to permit expansion, suspension means for the bricks consisting of stationary bars having perforations therein, and hangers forming supports for the respective bricks, the hangers being arranged in pairs and the upper extremities of each pair adapted to be inserted in a single perforation for the purpose set forth.

1,173,863. WINDOW-SASH. MICHEL REY, Paris, France, assignor of one-half to Joseph De Wyckoff, Westminster, England. Filed Sept. 27, 1913. Serial No. 792,234. (Cl. 16—51.)



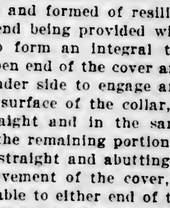
1. The combination with a normally spring-closed sliding window sash and sash frame, of vertical rods mounted to swing about horizontal pivots on the frame in a direction perpendicular to the face of the sash and thereby exert pressure upon the vertical edges thereof, transversely movable bars at the bottom of the window opening for effecting the swinging movement of the aforesaid rods, a handle, and means whereby manipulation of the handle effects reciprocation of the bars, both outward or both inward, depending upon the direction of manipulation of the handle.

2. The combination with a vertically movable window sash and a frame therefor, of spring-actuated members housed in the vertical members of the frame for exerting upon the two sides of the sash a closing force sufficient to keep it normally closed, vertical rods pivoted at their upper ends to the vertical members of the window frame in positions such that they are capable of being rocked in planes perpendicular to the face of the sash and when rocked toward the latter exerting pressure upon the vertical edges thereof, pads carried by the rods to serve as longitudinal bearing surfaces, two transversely movable bars in approximate alinement with one another, the outer ends of the bars engaging with and shaped to have a cam-like effect upon the lower ends of the pivoted rods, a disk provided with pins coöperating with the adjacent ends of the bars to effect reciprocation of the same when the disk is oscillated, a spindle to which the disk is fixed, and a handle for turning the spindle.

3. The combination with a sliding window sash and sash frame, of vertical rods mounted to swing about horizontal pivots on the frame in a direction perpendicular to the face of the sash and thereby exert pressure upon the vertical edges thereof, transversely movable bars at the bottom of the window opening for effecting the swinging movement of the aforesaid rods, a handle, and means whereby manipulation of the handle effects reciprocation of the bars, both outward or both inward, depending upon the direction of manipulation of the handle.

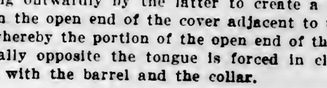
1,173,864. OVERSHOE-RETAINER. THOMAS C. RIDGE, Carthage, Ill. Filed July 13, 1912. Serial No. 709,189. (Cl. 24—265.)

A strap fastener for overshoes comprising a pair of plates, a pair of spaced interiorly threaded sleeves formed on said plates, another pair of plates having spaced openings being slitted radially to provide locking tongues, the openings in the last named plates adapted to register with the sleeves of the first named plates, and means having a recess adapted to pass through the openings of one pair of plates and within the sleeves of the other



pair of plates, for securing the former mentioned plates to the exterior surface of the overshoe and the latter mentioned plates to the interior surface of the overshoe, the locking tongues of said openings adapted to snap into the recess of said last named means for preventing any retrograde movement of the latter.

1,173,865. FOUNTAIN-PEN. FREDERICK C. RIES, Macon, Ga. Filed Aug. 11, 1914. Serial No. 856,265. (Cl. 120—42.)



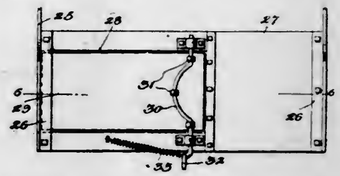
1. The combination with a fountain pen, of a circumferential collar fixed thereon and having a convex surface, and a resilient tubular cover having one end fully open and provided with an integral retaining member projecting from the said open end and provided by forming inwardly extending slots in the open end of the cover, the retaining member projecting beyond the open end of the cover to engage the convex surface of the collar, the remaining portion of the open end of the collar being straight to abut against the said collar and the openings forming the retaining member also serving as vents to admit air into the cover, the cover being applicable to either end of the pen to bear upon and project over the collar in opposite directions.

2. The combination of a fountain pen having a fixed circumferential collar on the intermediate portion of the body thereof, said collar having a convex surface, and a tubular cover completely closed at one end and fully open at the opposite end and formed of resilient material, the cover at the open end being provided with inwardly projecting openings to form an integral tongue which extends beyond the open end of the cover and formed with a depression in its under side to engage and receive a portion of the convex surface of the collar, the said tongue being normally straight and in the same plane as the body of the cover, the remaining portion of the open end of the cover being straight and abutting against the collar to limit the movement of the cover, the cover being reversible or applicable to either end of the pen body and held against accidental disengagement solely by the frictional bearing of the tongue on the collar.

3. The combination with a fountain pen having a barrel with an intermediate fixed circumferential collar having a convex surface, and a tubular cover of resilient material having one end fully closed and the other end wholly open, the open end being provided with a longitudinally extending retaining tongue formed as an integral part of the cover by slots extending longitudinally into the cover and serving as air vent openings relatively to the cover, the tongue frictionally engaging the collar and sprung outwardly by the latter to create a locking tension on the open end of the cover adjacent to the collar and whereby the portion of the open end of the cover diametrically opposite the tongue is forced in close engagement with the barrel and the collar.

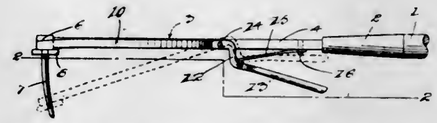
4. The combination of a fountain pen having a fixed circumferential collar provided upon the intermediate portion of its barrel and formed with a fixed surface, and a tubular cover having one end fully open and provided with an integral yielding retaining member projecting outwardly beyond the fully open end of the cover and normally in the same plane as the body of the cover to move over and frictionally engage the said collar, the remaining portion of the open end of the cover being straight and said open end provided with a yielding tongue at a point diametrically opposite the said retaining member to relieve the cover of strain when the retaining member engages the collar.

1,173,866. AUTOMATIC SHEEP-DIPPING APPARATUS. JOHN J. ROBERSON, Springville, Utah. Filed May 6, 1915. Serial No. 26,325. (Cl. 43—24.)



An automatic tripping mechanism arranged above a receptacle, comprising a shaft revolubly mounted upon a support, a pair of annular hubs secured to said shaft adjacent the extremities thereof, a plurality of arms extending radially from each of said hubs, angularly arranged floors carried by said arms and adapted to be successfully brought into horizontal position, a shaft rotatably mounted upon each of said angularly arranged floors, means coöperating with said shaft to engage the same and retain said floors in horizontal position, and a movable member disposed in the length of said floors and operatively connected with said shaft to actuate the latter and release said floors.

1,173,867. SELF-CLEANING RAKE. HERMAN F. ROEHRIG, Niagara Falls, N. Y., assignor of one-half to Albert S. Ruth, Niagara Falls, N. Y. Filed Feb. 25, 1914. Serial No. 820,878. (Cl. 55—146.)



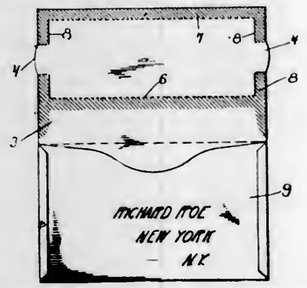
A rake and cleaner therefor comprising a handle, a U-shaped head, a shank secured to the bight portion of the head and to the forward end of the handle, a bar secured to the free ends of the head, teeth secured to the bar, a plate located on the under side of the shank, a pair of relatively spaced arms secured to the plates and projecting forwardly therefrom, and located on opposite sides of the shank, said arms extending upwardly, a pair of curved arms inclosing said U-shaped head, and provided at one of their ends with inwardly extending relatively spaced pivot lugs, their free ends being secured to the upper terminals of the arms, said pivot lugs provided with openings therethrough, a pivot bolt passing through the lugs and the shank, a handle secured to the rear edge of the plate, a stripping bar slidably mounted over the teeth and secured to the free ends of the curved arms, a flat spring secured at one end thereof to the shank at a point adjacent to its connection with the handle, its opposite end extending forwardly and resting upon the plate whereby upon upward movement of the handle of the plate the curved arms will be brought downwardly, and said stripping bar brought into operation.

1,173,868. FRUIT PICKING AND GATHERING APPARATUS. JESSE B. ROSE, Hardin, Ky. Filed May 28, 1915. Serial No. 31,041. (Cl. 56—99.)



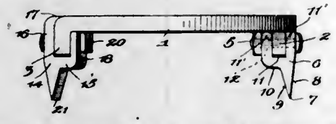
An apparatus of the character described comprising a handle portion, arms carried by said handle portion, a supporting member having trunnions engaging said arms, a collecting sack carried by said supporting member, a yoke having its ends fixed to said arms having its intermediate portion spaced from said supporting member, a fastening member journaled through the intermediate portion of said yoke, a strand of wire, embracing said fastening member, said wire forming spased gripping jaws, and a plate mounted on said fastening member to retain the ends of said wire, as and for the purpose specified.

1,173,869. SAFETY-ENVELOP. GUY J. ROUGEUX, Coudley, Pa. Filed June 23, 1915. Serial No. 35,804. (Cl. 229—73.)



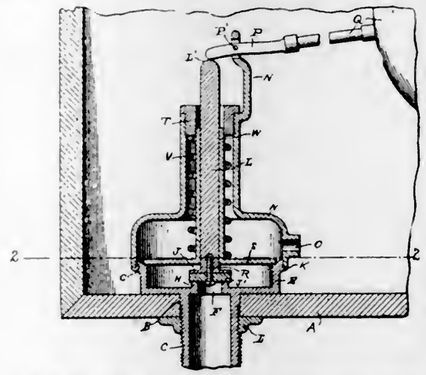
An envelop having a rear flap, a portion of which is provided with lines of perforation outlining a removable section, which section has contracted parts at the ends which are imperforate and extending slight distances beyond the ends of the flap, the inner surface of said flap adjacent to the lines of perforations being provided with an adhesive material whereby the flap, independent of the part intermediate said lines, may be sealed.

1,173,870. DETACHABLE HORSESHOE-CALK. WILLIAM P. ROULAND, Decatur, Ill., assignor of one-half to John W. Behl, Staunton, Ill. Filed May 20, 1915. Serial No. 29,379. (Cl. 168—40.)



In combination with one arm of a horseshoe, said arm having its rear end bent downwardly to form an upright calk and having its upper rear edge rounded, a one piece U-shaped calk attaching member snugly receiving said calk between its parallel arms, one arm of said member contacting with the front side of said calk and also with the under side of the arm of the shoe to prevent vertical movement of said member in one direction, the other arm of said attaching member being of greater height than the first-named arm and having its upper end decreased in thickness and bent forwardly around the aforesaid rounded corner, thus preventing vertical movement of the attaching member in the opposite direction, a bolt passing through the two arms of the attaching member and through the intervening calk, said bolt serving only to prevent lateral movement of said attaching member, and a second calk formed integrally with and depending from the lower end of said member.

1,173,871. SILENT INLET-VALVE FOR CLOSET-TANKS. WILLIAM B. ROYER, Baltimore, Md. Filed Aug. 13, 1915. Serial No. 45,351. (Cl. 137—104.)



1. A silent inlet valve for closet tanks, comprising an inlet pipe for attachment to a pipe, a chamber communicating with said pipe, a float-actuated valve regulating the communicating opening between the pipe and chamber, and a spring-pressed pressure regulating member independent of the valve.

2. A silent inlet valve for closet tanks, comprising an inlet pipe for attachment to a pipe, a chamber communicating with said pipe, a casing fitted to the wall of said chamber and having an exit opening, a float-actuated valve regulating the communicating opening between the pipe and chamber, and a spring-pressed pressure member independent of the valve and regulating the passage of water between said chamber and casing.

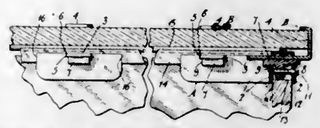
3. A silent inlet valve for closet tanks, comprising an inlet pipe for attachment to a pipe, a chamber communicating with said pipe, a casing fitted to the wall of said chamber and having an exit opening, a float-actuated valve regulating the communicating opening between the pipe and chamber, a spring-pressed pressure member adapted to seat upon the wall of said chamber and adapted to offset pressure of the water which is fed into the chamber.

4. A silent inlet valve for closet tanks, comprising an inlet pipe for attachment to a pipe, a chamber communicating with said pipe, a casing fitted to the wall of said chamber and having an exit opening, a float-actuated valve regulating the communicating opening between the pipe and chamber, a pressure disk, and a spring tension means for holding said disk against the wall of the chamber.

5. A silent inlet valve for closet tanks, comprising an inlet pipe for attachment to a pipe, a chamber communicating with said pipe, a casing fitted to the wall of said chamber and having an exit opening, a float-actuated valve regulating the communicating opening between the pipe and chamber, a pressure disk having a hollow stem movable over the stem of said valve, and an adjustable tension means bearing against said disk.

[Claims 6 and 7 not printed in the Gazette.]

1,173,872. SHOW-CASE. HARRY R. RUSE, Baltimore, Md. Filed Dec. 22, 1914. Serial No. 878,561. (Cl. 211—25.)



1. A fastening for connecting the top and vertical plates of show cases comprising a clip for engagement upon the upper edge of a vertical plate, a second clip for engagement with an outer edge of the top plate, the first clip having recesses and the second clip being slidable in said recesses transversely of the first clip, and movable wedge means operable to bind the second clip in said recesses against the first clip and to thereby fix the second clip against movement relative to the first clip or to permit movement of the second clip relative to the first clip.

2. A fastening for connecting the top and vertical plates of show cases comprising a clip for engagement upon the upper edge of a vertical plate and having its opposite walls provided with dove-tail recesses extending to their upper edges, a second clip for engagement with an outer edge of the top plate and having a base which fits conformably and slidably in said recesses and movable wedge means operable to find the second clip in said recesses and to thereby fix the second clip against movement relative to the first clip or to permit movement of the second clip relative to the first clip.

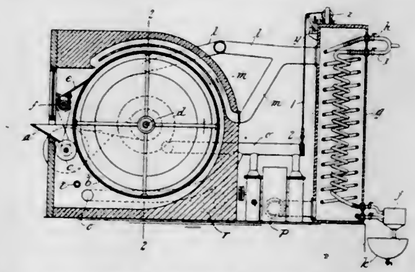
3. A fastening for connecting the top and vertical plates of show cases comprising a clip for engagement upon the upper edge of a vertical plate and having its opposite walls provided with dove-tail recesses extending to their upper edges, a second clip for engagement with an outer edge of the top plate and having a base which fits conformably and slidably in said recesses, the opposite walls of said first clip having other recesses below and communicating with said dove-tail recesses and a transversely movable wedge member fitted in said last named recesses and operable to cause the base of said second clip to bind frictionally in said dove-tail recesses or to permit said base to move freely in said dove-tail recesses.

4. A fastening for connecting the top and vertical plates of show cases comprising a clip for engagement upon the upper edge of a vertical plate and having its opposite walls provided with dove-tail recesses extending to their upper edges, a second clip for engagement with an outer edge of the top plate and having a base which fits conformably and slidably in said recesses, the opposite walls of said first clip having other recesses below and communicating with said dove-tail recesses, a transversely movable wedge member fitted in said last named recesses and operable to cause the base of said second clip to bind frictionally in said dove-tail recesses, and operating means for said wedge member comprising a lug depending from the wedge member and having a threaded opening and a screw passing loosely through an opening in one of the opposite walls of said first clip and engaging in the threaded opening of said lug.

5. A fastening for connecting the top and vertical plates of show cases comprising a clip for engagement upon the upper edge of a vertical plate and having its opposite walls provided with dove-tail recesses extending to their upper edges, a second clip for engagement with an outer edge of the top plate and having a base which fits conformably and slidably in said recesses, the opposite walls of said first clip having other recesses below and communicating with said dove-tail recesses, a transversely movable wedge member fitted in said last named recesses and operable to cause the base of said second clip to bind frictionally in said dove-tail recesses or to permit said base to move freely in said dove-tail recesses, and operating means for said wedge member comprising a lug depending from the wedge member and having a threaded opening and a screw passing loosely through an opening in the outer of the opposite walls of said first clip and engaging in the threaded opening of said lug, the wedge member having its under face inclined upwardly and outwardly and having its upper face flat.

[Claims 6 to 13 not printed in Gazette.]

1,173,873. PROCESS OF CARAMELING CHOCOLATE. EMILE LOUIS ALFRED SAVY, Courbevoie, France. Filed Apr. 30, 1913. Serial No. 764,566. (Cl. 99—11.)



1. The process of carameling chocolate, consisting in subjecting the chocolate to a high temperature by the application of hot air to the chocolate, whereby the chocolate is brought into contact with the air and the heat given to the chocolate to produce the carameling effect in a short time.

2. The process of carameling chocolate, consisting in subjecting a thin sheet of the chocolate to a uniform temperature while in contact with the air whereby the carameling effect is produced in a short time.

3. The process of carameling chocolate, consisting in subjecting a continuously-moving sheet of chocolate to an approximately constant temperature of high degree while in contact with the air.

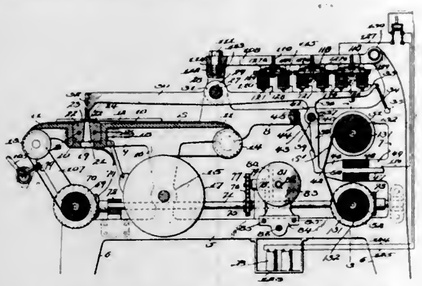
4. A process of carameling chocolate which consists in drawing out a portion of the liquid chocolate into a thin sheet and in blowing a current of heated air upon the sheet in the direction opposite to the direction of the travel of the sheet.

5. The process of carameling chocolate or the like consisting in spreading pasty or thick chocolate out in a thin layer on a suitable surface and then heating the thin layer to a temperature of from 100° to 140° C.

1,173,874. RECORD-PUNCHING MACHINE. SALVATORE SCOGNAMILLO, New York, N. Y. Filed July 10, 1914. Serial No. 850,218. (Cl. 164—115.)

1. In a machine of the class described, a plurality of oscillating punch levers and corresponding dies, a pattern sheet, electric circuit making and breaking devices in part carried by the punch levers and between which the pattern sheet has movement, a part of said devices coöperating directly with the levers to make and break the circuit relatively to the levers, the pattern sheet having the openings therein formed in a reproducing sheet which is fed between the punch levers and dies, the two sheets simultaneously moving at the same rate of speed, magnetic means attractively coöperating with portions of the punching levers to effect an oscillation of the latter, and a source of electrical generation connected to a portion of said circuit making and breaking devices and the magnetic means.

2. In a machine of the class described, a plurality of oscillating punch levers and corresponding dies, the levers having contact projections, a pattern sheet, a guide over which the pattern sheet moves and composed of a plurality of conducting heads, a plurality of conducting followers having means for movably engaging the said heads and having direct engagement with said contact projections of the punch levers, the pattern and reproducing sheets respectively having the same rate of movement simultaneously imparted thereto with relation to the pattern guide and the punching levers and dies, and electrical means connected to the said heads and also controlling the oscillation of the punch levers to form the same openings in a reproducing sheet in regular sequence as the openings in the pattern sheet.



3. In a machine of the class described, a plurality of punch levers and dies, the levers having contact projections at their rear portions, a pattern sheet, circuit making and breaking devices between which the pattern sheet has movement, electrically controlled devices in part engaging said contact projections of the levers for oscillating the punch levers, and electrical connections for and between the electrically controlled devices and the circuit making and breaking devices for causing the punch levers to operate to form the same character of openings as embodied in the pattern sheet relatively to a reproduction sheet, the pattern sheet and the reproducing sheet simultaneously moving at the same rate of speed.

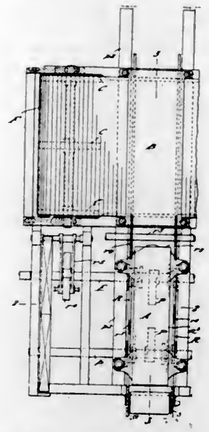
4. In a machine of the class described, a plurality of intermediately fulcrumed oscillating punch levers having means attached to their rear extremities for returning them to normal position and also provided with contact projections at their rear extremities, dies corresponding in number to and with which the punch levers coöperate, a movable pattern sheet having perforations, and electrical devices including means normally engaging the contact projections of the levers for automatically operating the said levers to reproduce the perforations of the pattern sheet in another sheet.

5. In a machine of the class described, a plurality of oscillating punch levers having contact projections and corresponding dies, a movable pattern sheet having perforations, magnetic means attractively coöperating with the upper portions of the levers, a plurality of conducting followers engaging the openings in the pattern sheet and also normally in engagement with the contact projections of the levers, and electrical connections and devices for the magnetic means and for automatically setting up a make and break action relatively to the followers.

[Claims 6 to 28 not printed in the Gazette.]

1,173,875. APPARATUS FOR THE MANUFACTURE OF INLAID LINOLEUM. CHARLES HERBERT SCOTT, Gloucester, England. Filed Nov. 28, 1914. Serial No. 874,513. (Cl. 154—24.)

1. Apparatus for the manufacture of inlaid linoleum comprising a punch adapted to simultaneously cut and space the tesseræ of one or more repeats of one color in the linoleum, a die plate coöperating with the punch adapted to receive the tesseræ and maintain them properly spaced, means for transferring said die plate to the building up machine, and means for depositing the tesseræ from said plate properly spaced upon the canvas backing.



2. Apparatus for the manufacture of inlaid linoleum comprising a flat punch plate, punches thereon corresponding in size and spacing to one or more repeats of the tesseræ of one color in the linoleum, a die plate corresponding to and coöperating with said punch plate, means for operating the punch plate to simultaneously cut and deposit one or more repeats of such tesseræ in said die plate, means for transferring said die plate to the building up machine, and means for depositing the tesseræ from said die plate properly spaced upon the canvas backing.

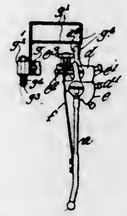
3. Apparatus for the manufacture of inlaid linoleum comprising a punch adapted to cut and space the tesseræ, transfer means adapted to receive the cut and spaced tesseræ, means adapted to deposit the spaced tesseræ upon the canvas backing and means for insuring registration of the punch, the transfer means and the canvas backing.

4. Apparatus for the manufacture of inlaid linoleum comprising a punch adapted to cut and space the tesseræ, transfer means adapted to receive the cut and spaced tesseræ, means adapted to deposit the spaced tesseræ upon the canvas backing, means for insuring registration of the punch, the transfer means and the canvas backing and means for intermittently feeding the linoleum forward in the cutting and spacing machine.

5. Apparatus for the manufacture of inlaid linoleum comprising a flat punch plate, spaced punches thereon, a flat die plate corresponding to and coöperating therewith, spring urged plungers in the matrices of said die plate and means for operating said plungers to discharge the tesseræ from the die plate and deposit them on the canvas backing.

[Claims 6 and 7 not printed in the Gazette.]

1,173,876. TYPE-WRITING MACHINE. JAMES SCOTT, Edinburgh, Scotland. Filed Feb. 11, 1915. Serial No. 7,558. (Cl. 197—75.)



1. In a typewriting machine, the combination with a type bar, of an adjustable eccentric carried by the said bar and a type head mounted on the said eccentric.

2. In a typewriting machine the combination with a type bar of an eccentric carried by the said bar, a type head mounted on the said eccentric and means for imparting an angular movement to said eccentric about a fixed axis normal to the longitudinal axis of the type bar.

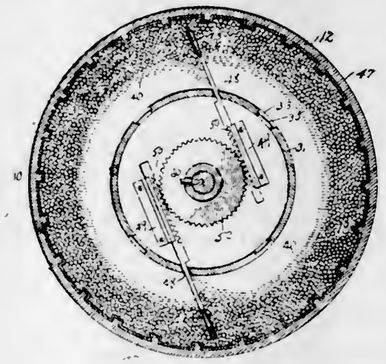
3. In a typewriting machine the combination with a type bar of a pin carried by the said bar, a collar formed eccentrically on the said pin, a type head mounted on the said eccentric collar and means for imparting an angular movement to the said eccentric collar to effect the alinement of the type.

4. In a typewriting machine the combination with a type bar of an adjustable eccentric carried by the said bar a type head mounted on the said eccentric so as to be free to turn thereon and a plurality of type characters on said type head.

5. In a typewriting machine the combination with a type bar of an adjustable eccentric carried on the said bar a type head mounted on the said eccentric so as to be free to turn thereon, a plurality of type characters on said type head and means for turning said type head on the eccentric to bring one or other of the type characters into the operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,173,877. POWER-TRANSMISSION MECHANISM. MELVIN L. SEVERY, Arlington Heights, Mass., assignor to Severy Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 18, 1912. Serial No. 737,393. (Cl. 192—18.)



1. A power transmission mechanism comprising an outer rotary driving member; an inner rotary driven member; a transmitting medium composed of free, finely divided solid material between the inner and outer members, and serving when the outer member is rotated to arrange itself in an annular layer or body upon or against the inner surface of the driving member; and means carried by the driven member for engaging said transmitting medium.

2. A power transmission mechanism comprising an outer rotary driving member; a transmitting medium composed of small solid spheres placed within said driving member; and an inner driven member concentric with the driving member, and provided with means for engaging the transmitting medium as the latter is carried forward by the driving member.

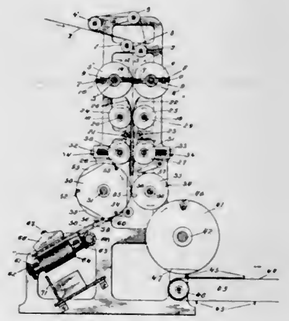
3. A power transmission mechanism comprising an outer rotary driving member; an inner rotary driven member; a transmitting medium contained in the space between the inner and outer members, and composed of small solid spheres mixed with a lubricant; and means carried by the driven member for engaging the transmitting medium as the same is carried forward by the driving member.

4. A power transmission mechanism comprising an outer rotary driving member having its inner surface ribbed or corrugated in the general direction of its axis; an inner driven member; a transmitting medium composed of a multiplicity of small solids contained in the space between the driving and driven members; and means carried by the driven member for engaging said transmitting medium to impart motion to said driven member.

5. A power transmission mechanism comprising an outer rotary driving member having a ribbed inner surface; an inner driven member; a transmitting medium composed of small solid spheres and a lubricant, contained in the space between the driving and driven members; and oppositely-disposed blades or paddles carried by the driven member for engaging the transmitting medium and effecting a driving connection or relation between the same and the driving member.

[Claims 6 to 14 not printed in the Gazette.]

1,173,878. SHEET-HANDLING MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, a Corporation of Illinois. Filed June 17, 1913. Serial No. 774,098. (Cl. 101—120.)



1. A sheet handling machine including in combination means for cutting a web into sheets of different lengths, means for directing said sheets along a path, a plurality of folding mechanisms, and means for directing sheets of one length from said pathway to one of said folding mechanisms and for directing sheets of another length to another of said folding mechanisms.

2. A sheet handling machine including in combination means for cutting a web into sheets of different lengths, means for directing said sheets along a path, a plurality of folding mechanisms, one folding mechanism being located to one side of said pathway and another folding mechanism being located to another side of said pathway, and means for directing sheets of one length from said pathway to one of said folding mechanisms and for directing sheets of another length to another of said folding mechanism.

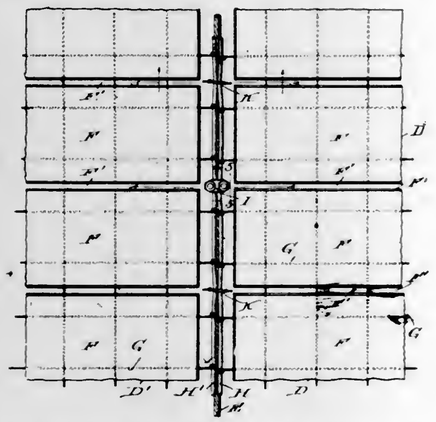
3. A sheet handling machine including in combination means for cutting a web into sheets of different lengths, means for directing said sheets along a path, a plurality of folding mechanisms, and means for directing sheets of one length from said pathway to one of said folding mechanisms and for directing sheets of another length to another of said folding mechanisms and collecting means for sheets of one of said lengths between said cutting mechanism and the folding mechanism for said sheets.

4. A sheet handling machine including in combination means for cutting a web into sheets of different lengths, means for directing said sheets along a path, a plurality of folding mechanisms, and means for directing sheets of one length from said pathway to one of said folding mechanisms and for directing sheets of another length to another of said folding mechanisms and devices for collecting either length of sheets after cutting and before folding.

5. A sheet handling machine including in combination means for cutting a web into sheets of different lengths, means for directing said sheets along a path, a plurality of folding mechanisms, and means for directing sheets of one length from said pathway to one of said folding mechanisms and for directing sheets of another length to another of said folding mechanisms, collecting means for sheets of one length between said cutting means and the folding mechanism for sheets of said length, and collecting means for sheets of another length between said cutting means and the folding mechanism for sheets of said length.

[Claims 6 to 42 not printed in the Gazette.]

1,173,879. REVETMENT. DAVID MCDOUGALD SHEARER, Greenville, Miss. Filed Dec. 30, 1914. Serial No. 879,644. (Cl. 61—30.)



1. A revetment mat consisting of a plurality of sections spaced apart to form longitudinal channels throughout the mat and having exposed bordered strands, launching strands extending between the several sections parallel with and in spaced relation thereto within said channels, and connections between the launching strands and the adjacent portions of the border strands, substantially for the purpose set forth.

2. A revetment mat consisting of a plurality of sections spaced apart to form longitudinal channels throughout the mat, each of which sections comprises a plurality of flexibly united block units and has exposed and flexible border strands at its sides, launching strands extending between the several sections thus formed parallel with and in spaced relation thereto within said channels, and connecting members for uniting the border strands at the sides of the sections to the said launching strands extending therebetween.

3. A revetment mat consisting of a plurality of sections having exposed border strands by which they may be connected to one another, connections for uniting the border strands of adjacent sections, each of the sections consisting of a plurality of similarly spaced and flexibly connected block units and a plurality of bonding members extending continuously through the blocks throughout the section whereby to flexibly connect the blocks thereof, the said bonding wires projecting beyond the sides of the section and connected to the said border strands, and continuous launching strands extending between the several sections in one direction and connected rigidly to the border strands thereof.

4. A revetment mat consisting of a plurality of sections having exposed border strands whereby they may be connected to one another in spaced relation, continuous longitudinal launching strands extending between the sections, each section consisting of a plurality of spaced flexibly connected block units, the spaces between which constitute flexure joints at right angles to the spaces between the sections in which the launching strands are disposed, and connections between the launching strands and the border strands at the sides of the sections, certain of which connections are arranged opposite the said flexure joints.

5. A revetment mat consisting of a plurality of sections having exposed border strands whereby they may be connected to one another in spaced relation, continuous longitudinal launching strands extending between the sections, each section consisting of a plurality of spaced flexibly connected block units, the spaces between which constitute flexure joints at right angles to the spaces between the sections in which the launching strands are disposed, the ends of the border strands being lapped along the launching strands, clips for connecting the said lapped ends of the border strands to the launching strands, and tie wires connecting the launching and border strands at points opposite the said flexure joints.

[Claims 6 and 7 not printed in the Gazette.]

1,173,880. REVETMENT-MOLD. DAVID MCDOUGALD SHEARER, Vicksburg, Miss. Filed Aug. 20, 1915. Serial No. 46,501. (Cl. 25—121.)



1. A revetment mold comprising a frame including spaced longitudinal and transverse members having recesses in the bottoms thereof, said longitudinal members having their inner faces beveled, a detachable device for supporting bonding wires carried by each of said transverse members and including a substantially L-shaped body portion, one edge of said device being provided with a plurality of lugs forming slots for the reception of certain of said wires.

2. A revetment mold comprising a frame including spaced longitudinal and transverse members having recesses in the bottoms thereof, a detachable device for supporting bonding wires carried by each of said transverse members and including a substantially L-shaped body, one edge of said device being provided with a plurality of lugs forming slots for the reception of certain of said wires.

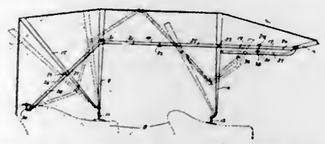
3. A revetment mold comprising an open frame consisting of spaced longitudinal and transverse members, said longitudinal members having their inner faces inclined downwardly and outwardly, and bonding wire supporting devices carried by said transverse members.

4. A revetment mold comprising a frame consisting of longitudinal and transverse members, said longitudinal members having their inner faces beveled, and bonding wire supporting devices carried by said transverse members and adjustable longitudinally thereof.

5. A revetment mold comprising a frame, and bonding wire supporting devices detachably supported upon certain members of said frame and movable longitudinally thereof whereby to detach the same from the binding wires.

[Claims 6 to 8 not printed in the Gazette.]

1,173,881. CANOPY. WILLIAM H. SHOUGH and MICHAEL T. DOBBINS, Buffalo, N. Y. Filed Nov. 19, 1913. Serial No. 801,817. (Cl. 21—62.)



1. A canopy for vehicles comprising rear and forward, vertical bows, horizontal braces pivotally connecting said rear and forward bows, a front bow rigidly attached to the forward end of the forward, horizontal brace, the rear end of said forward, horizontal brace being rigidly connected to the forward end of the next rearward, horizontal brace, an oblique main brace united at its upper end to the rear end of the rearward, horizontal brace and pivotally connecting said rear bow with the body of the vehicle, and means for automatically disengaging said forward bow from the body of the vehicle, when the bow is swung to a predetermined position.

2. A canopy for vehicles comprising rear and forward vertical bows, a forwardly horizontal brace pivotally connected with said forward bow, a front bow rigidly attached to the forward end of said horizontal brace, an intermediate horizontal brace pivotally connecting said forward and rear bows, said forward and intermediate braces being rigidly connected together and each provided with knee joints arranged to break in opposite directions, and an oblique main brace pivotally connecting said rear bow with the body of the vehicle, said oblique brace being connected with said intermediate brace by means of a partially rotatable joint and provided with a knee joint arranged to break in an opposite direction to that of said intermediate brace, whereby all parts of the canopy, when folded, will clash.

3. A canopy for vehicles comprising rear and forward, vertical bows, a forward horizontal brace pivotally connected with said forward bow, a front bow rigidly attached to the forward end of said forward, horizontal brace, brackets secured to said body, said forwnrd bow being pivotally mounted in said brackets, means for automatically disengaging said bow from said brackets when swung to a predetermined position, an intermediate horizontal brace pivotally connecting said forward and rear bows, the rear end of said forward, horizinal brace being rigidly connected to the forward end of said intermediate horizontal brace, and an oblique, main brace united at its upper end to the rear end of the rearward, horizontal brace and pivotally connecting said main bow with the body of the vehicle.

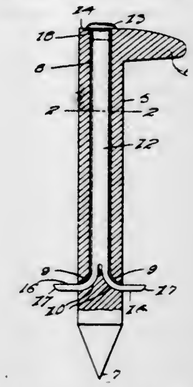
4. A canopy for vehicles comprising rear and forward vertical bows, a forward horizontal brace pivotally connected with said forward bow, a front bow rigidly attached to the forward end of said forward horizontal brace, brackets secured to said body, said forward bow being pivotally mounted in said brackets, means for automatically disengaging said bow from said brackets when swung to a predetermined position, an intermediate brace pivotally connecting said forward and rear bows, said front and intermediate braces being rigidly connected together and each provided with a knee joint arranged to break in opposite directions, and an oblique main brace pivotally connecting said rear bow with the body of the vehicle, said oblique brace being connected with said intermediate brace by means of a partially rotatable joint and provided with a knee joint arranged to break in a direction opposite to that of said intermediate brace, whereby all parts of the canopy, when folded, will clash.

5. A canopy for vehicles comprising rear and forward vertical bows, horizontal braces pivotally connecting said rear and forward bows, a front bow rigidly attached to the forward end of the forward horizontal brace, an intermediate brace pivotally connecting said forward and rear bows, an oblique main brace pivotally connecting said rear bow with the body of the vehicle, and a partially rotatable joint carried by said rear bow and connecting the upper end of said oblique brace with the rear end of said intermediate brace at the pivotal connection of said braces to said bow, whereby all parts of the canopy, when folded, will clash.

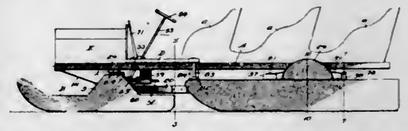
[Claims 6 to 8 not printed in the Gazette.]

1,173,882. RAILROAD-SPIKE. CLARENCE O. SMITH, Fryeburg, Me. Filed July 16, 1915. Serial No. 40,299. (Cl. 85—23.)

A spike including a shank having a longitudinal bore extending from one end to a point adjacent the opposite end thereof and terminating in a pair of curved or divergent passages, a locking element having a pair of prongs at one end adapted to engage in said divergent passages, a head at the opposite end of said locking element, and a malleable metal gasket positioned upon said locking element adapted to be moved into said bore by said head during driving of the locking element to exclude moisture from the bore of the shank and to prevent relative movement of the locking element and shank.



1,173,883. MOTOR-SLEIGH. PETER H. SMITH, Lougheed, Alberta, Canada. Filed Mar. 27, 1915. Serial No. 17,399. (Cl. 21—47.)



1. In a motor sleigh, running gear embodying a front truck bolster, a rear driving axle, traction wheels on said axle, a reach bar, hounds extending rearwardly from said reach bar and having the driving axle passed therethrough, front runners having a jointed connection with the front truck bolster, rear runners, a rear body bolster connecting the rear runners, a body bolster supported upon the front truck bolster, a body secured to the front and rear body bolsters, and a propelling motor carried by said body.

2. In a motor sleigh, running gear embodying a front truck bolster, a rear driving axle, traction wheels on said axle, a reach bar, hounds extending rearwardly from said reach bar and having the driving axle passed therethrough, front runners having a jointed connection with the front truck bolster, rear runners, a rear body bolster having a jointed connection with the rear runners to permit said runners to rock in a fore and aft direction, a body bolster supported upon the front truck bolster, a body secured to the front and rear body bolsters, and a propelling motor carried by said body.

3. In a motor sleigh, running gear embodying a front truck bolster, a rear driving axle, traction wheels on said axle, a reach bar, hounds extending rearwardly from said reach bar and having the driving axle passed therethrough, front runners having a jointed connection with the front truck bolster, rear runners, a rear body bolster connecting the rear runners, a transversely rocking body bolster supported upon the front truck bolster, a body secured to the front and rear body bolsters, and a propelling motor carried by said body.

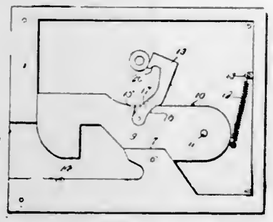
4. In a motor sleigh, running gear embodying a front truck bolster, a rear driving axle, traction wheels on said axle, a reach bar, hounds extending rearwardly from said reach bar, and having the driving axle passed therethrough, front hounds connected to the front truck bolster and having a swiveled connection with the rear

bounds, front runners having a jointed connection with the front truck bolster, rear runners, a rear body bolster connecting the rear runners, a body bolster supported upon the front truck bolster, a body secured to the front and rear body bolsters, and a propelling motor carried by said body.

5. In a motor sleigh, running gear embodying a front truck bolster, a rear driving axle, tractions wheels on said axle, a reach bar, hounds extending rearwardly from said reach bar, and having the driving axle passed therethrough, front hounds flexibly connected to the front truck bolster and having a swiveled connection with the rear hounds, front runners having a jointed connection with the front truck bolster, rear runners, a rear body bolster connecting the rear runners, a body bolster supported upon the front truck bolster, a body secured to the front and rear body bolsters, and a propelling motor carried by said body.

[Claims 6 to 13 not printed in the Gazette.]

1,173,884. SLIDING-DOOR LOCK. WILLIAM EARL SNAPP, Natoma, Kans. Filed Sept. 25, 1915. Serial No. 52,678. (Cl. 70—31.)

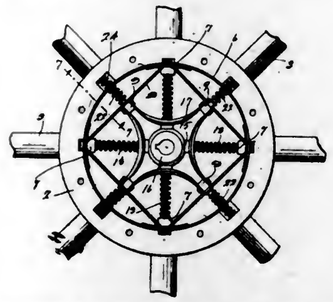


1. A bolt having one of its ends pivoted to the lock casing, said casing having an extension providing a stop for the said latch, a spring for swinging the latch against the stop, said latch having one of its ends abutting with one of the flanged walls of the casing at the opening thereof, the said end being formed with a downwardly extending hooked nose, the outer face of which being rounded, a gravity pawl pivoted to the latch, said pawl having an offset head which is kerfed, and the said head being arranged adjacent the key opening in the casing.

2. A movable element and a stationary element providing an abutment for the movable element, a hooked staple upon one of the elements and projecting over the other element, said casing having its edges flanged and one of its said flanges cut to provide an opening for the hooked end of the keeper, the lower horizontal flange having an angular extension terminating in a horizontally straight surface, a latch pivoted at one end within the casing, said latch having its lower face formed with a depression to engage with the extension of the casing, spring means for forcing the latch in such contact, the outer end of the latch contacting with the outer flange of the casing above the opening therein, and the latch being provided at the said end with a downwardly extending hooked nose to engage with the hook of the keeper, the body of the latch, at the upper edge thereof having its opposite sides depressed and the rear walls of said depression being rounded, a tumbler having a curved bifurcated end and pivotally secured in the depressions, said tumbler having its opposite end formed with an offset head which is kerfed and which is arranged in proximity to the latch opening of the casing.

1,173,885. RESILIENT WHEEL. WILLIAM A. SONNENTAG, Boyd, Wis. Filed Sept. 25, 1915. Serial No. 52,716. (Cl. 152—44.)

1. A resilient wheel of the class described including a wheel body having an inner rim, an inner member arranged centrally with relation to the rim, oppositely bowed springs centrally connected with the central member, substantially straight springs extending across the space within the inner rim and engaged at their ends with the body portion of the wheel at the said inner rim, and means including a slotted connection for connecting the said springs to permit independent movement in a direction radially of the wheel.



2. A resilient wheel including a body having an inner rim, a hub ring arranged within the inner rim, substantially parallel straight springs extending across the space within the inner rim adjacent to the hub ring, an inner central member, bowed springs centrally connected with the inner member, and means for connecting the terminals of the bowed springs with the parallel springs at the center thereof, said connection including a slot to permit relative movement of the springs in a direction radially of the wheel.

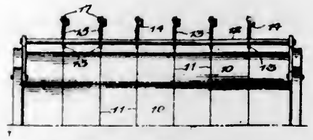
3. A resilient wheel including a body portion having an inner rim, straight springs extending across the space within the inner rim and connected at their terminals with the same, a central member, bowed springs connected between their ends with the central member and at their terminals with the straight springs between the ends thereof and coiled springs seated against the bowed springs at the centers thereof and extending therefrom and connected with the straight springs at the terminals thereof.

4. A resilient wheel including a body portion having an inner rim, a central member, bowed springs connected between their ends with the central member and connected together at their ends and radially arranged coiled springs seated against the ends of the bowed spring and interposed between the same and the inner rim.

5. A resilient wheel including a body portion having an inner rim, straight springs extending across the space within the inner rim and connected at their terminals with the same, a central member, bowed springs connected between their ends with the central member and at their terminals with the straight springs between the ends thereof, inner coiled springs extending from the bowed springs to the straight springs at the terminals thereof, and outer coiled springs interposed between the straight springs and the rim and arranged centrally of the said straight springs.

[Claim 6 not printed in the Gazette.]

1,173,886. ATTACHMENT FOR ADJUSTING GUIDE-CORDS FOR MANGLES. JOSEPH SOROKIN, Des Moines, Iowa. Filed May 25, 1914. Serial No. 840,722. (Cl. 68—9.)

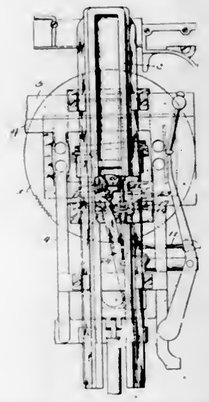


1. A cord adjuster for mangles comprising a supporting member provided with a plurality of non-circular openings extending therethrough; a shaft in each opening the upper extremity of said shaft being turned to form a bearing for a grooved wheel rotatably mounted thereon; a coil spring on said shaft, and means to retain said shaft, substantially as shown and described.

2. In a cord adjuster for mangles, a support having an opening therein, a bar slidable vertically in said opening, said bar having its upper end portion extending laterally to form a shoulder and thence extending vertically and again laterally to form a journal, a wheel on the journal, and a coil spring surrounding the bar and engaged at its ends with said shoulder and with said support.

3. In a cord adjuster for mangles, a hollow support having an opening therein and extending through opposite sides of the support to provide bearings at said sides which bearings are separated by the space interiorly of the support, a shouldered bar slidable in the opening and engaged with each of said bearings, cord engaging means on the bar, and a spring surrounding the bar and engaged with the shoulder of the bar and with the support.

1,173,887. AUTOMATIC STOPPING MECHANISM FOR LINE-CASTING MACHINES. SAMUEL E. SPERRY, Woodhaven, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed May 27, 1913, Serial No. 770,280. Renewed Aug. 17, 1915. Serial No. 46,018. (Cl. 199—7.)



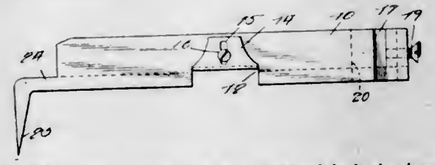
1. In a machine of the linotype class, the combination of an elevator for bringing a line of matrices and spacers to casting position, a mold-carrying member movable forwardly at intervals for casting a slug and for ejecting the cast slug, justifying mechanism operative to expand the spacers, a device actuated by the forward movement of the mold-carrying member for stopping the machine should the elevator fail to reach the casting position, and means actuated by the justifying mechanism to prevent operation of the stopping device when the mold-carrying member moves forwardly to eject the slug.

2. In a machine of the linotype class, the combination of an elevator for bringing a line of matrices and spaces to casting position, a mold-carrying member movable forwardly at intervals for casting a slug and for ejecting the cast slug, justifying mechanism operative to expand the spacers, a device actuated by the forward movement of the mold-carrying member for stopping the machine should the elevator fail to reach the casting position, and a dog controlled by the justifying mechanism for retaining the stopping device in actuated position until after the slug-ejecting operation has been performed.

3. In a machine of the linotype class, the combination of an elevator for bringing a line of matrices and spacers to casting position, a mold-carrying member movable forwardly at intervals for casting a slug and for ejecting the cast slug, justifying mechanism operative to expand the spacers, means for stopping the machine embodying a member movable into a predetermined position by the elevator when the latter reaches casting position, and a plunger actuated by the forward movement of the mold-carrying member into casting position for operating said member to stop the machine when the elevator fails to reach the casting position, and means controlled by the justifying mechanism for retaining said plunger in actuated position until after the mold-carrying member has advanced to eject the slug.

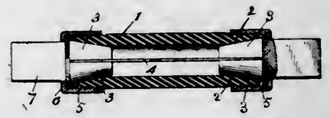
4. In a machine of the class described, the combination of an elevator movable to carry a line of matrices and spacers to casting position, a mold wheel carrying a plurality of molds and movable forwardly to carry a mold thereon into casting position against the line and also movable forwardly to eject a cast slug, justfying means for expanding the spacers, a device actuated by one of the molds on the mold wheel when the latter is moved forwardly for stopping the machine if the elevator fails to reach the casting position, and means actuated by the justifying means to prevent operation of the stopping device by one of the molds on the mold wheel when the latter moves forwardly to eject a slug.

1,173,888. SAW-TOOL. SAMUEL H. STANTON, Carbondale, Ohio. Filed Jan. 9, 1914. Serial No. 811,221. (Cl. 76—46.)



A saw jointer comprising an elongated body having a transverse recess in the side face of one end for receiving the flat side of a file, the opposite side of said end having a narrow transverse channel for receiving the edge of a file, and a pair of screws carried in the end of the body and arranged to respectively enter said recess and channel to clamp a file.

1,173,889. VENTILATING-WASHER FOR KNIFE-BLADE FUSES. JOSEPH W. STEELMAN, Philadelphia, Pa., assignor to John C. Harrigan, Camden, N. J. Filed Jan. 27, 1915. Serial No. 4,685. (Cl. 175—273.)

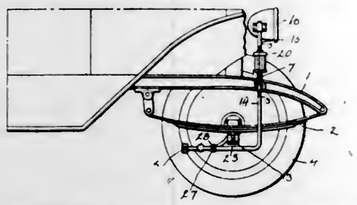


A knife blade fuse cartridge comprising a hollow cylindrical cartridge circumferentially threaded, the inner surface of which near its ends flares outwardly, conical-shaped clamping blocks engaging said flaring surfaces, a fuse clamped by said blocks, slotted caps fitted over the threaded portion of said cartridge, metallic disks having blade extensions passing through said slots, said disks being held by the caps against the ends of the conical-shaped blocks, the inner face of each disk having a circumferential groove with vent openings therein.

1,173,890. DIRIGIBLE HEADLIGHT FOR AUTOMOBILES. OTIS V. STEPHENS, Richmond, Va., assignor of one-half to R. W. Herbert, Richmond, Va. Filed Nov. 26, 1915. Serial No. 63,584. (Cl. 240—62.)

1. A dirigible headlight for automobiles comprising a bracket, a housing secured to said bracket and provided with a circular opening having flared upper edges, a lamp standard provided with a bearing thereon mounted in said housing and bearing upon the flared upper edges of the circular opening, a ping slidably mounted on said lamp

standard and detachably secured to lower end of the housing, means mounted in said housing for compensating the wear between the bearings and flared edges of the circular openings, and means for rotating said lamp standard in the direction of the wheels.



2. A dirigible headlight for automobiles comprising a bracket, a housing secured to said bracket, said housing provided with a circular opening having flared upper edges thereon, a lamp standard rotatably mounted in said housing, a bearing mounted upon said lamp standard and provided with a vertical flange thereon, a pin adapted to pass through said flange and to the lamp standard to prevent movement of the bearing upon said lamp standard when in engagement with the flared upper edges of the openings, a plug slidably mounted upon the lamp standard and detachably secured to the lower end of the housing, a second pin secured to the lamp standard within said housing, a coil spring mounted on said lamp standard within said housing and adapted to bear upon the upper edge of the housing and upon said second mentioned pin to compensate for the wear between the bearing and the flared upper edge of the circular opening of the housing, and means for rotating the lamp standard in the direction of the wheels.

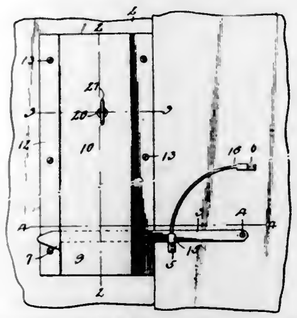
1,173,891. VEHICLE-TIRE. WILLIAM F. STEWART, Pekin, Ill. Filed July 3, 1915. Serial No. 37,919. (Cl. 152—8.)



An inner tube for vehicle tires formed of spring steel circular in cross section and having the meeting ends thereof secured together and formed with a valve opening and having the inner periphery thereof formed with a groove starting at a point at one side of the valve of the tube and terminating at a point at the opposite side of the valve of the tube and with grooves at the opposite sides of the first-mentioned groove, all of said grooves being adapted to fill out under the action of air in the tube to increase the resiliency of the tube and cause the latter to bind against the beads of the outer casing of the tire.

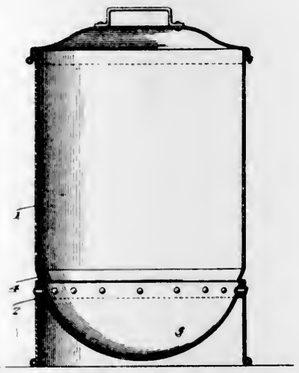
1,173,892. LOCK. EUGENE E. STUVER and CALEB R. ROBBINS, Blue Mound, Ill. Filed June 7, 1915. Serial No. 32,708. (Cl. 70—31.)

1. In combination with a sliding door and a jamb against which the door abuts, of a hook bolt pivoted at one of its ends to the door, vertical horizontal clips for sustaining the hook bolt either vertically or horizontally of the door, a casing having an opening to receive the hooked end of the bolt to permit of the said bolt dropping by gravity to engage with one of the sides of the casing, said hook bolt having a notch, a spring pressed member in the casing adapted to engage in the notch, and means for operating the member to bring the same out of said notch.



2. In combination, a stationary member and a slidable member adapted to abut with the stationary member, of a bar having one of its ends pivotally secured to one of the members, the other end of the bar being substantially V-shaped and provided upon its lower edge with a shoulder forming a hook, means upon the door for sustaining the hook member in a vertical or in a horizontal position, a casing upon the second member having openings through which the hooked end of the bar is adapted to pass, said hook adapted to swing by gravity to engage with the casing to one side of one of the said openings, said bar adjacent its hooked end having one of its edges provided with a notch, a spring pressed locking member within the casing and adapted to engage with the notch of the bar, a finger upon the bolt, a knob tumbler, an arm upon the knob tumbler adapted to co-act with the finger to elevate the lock bolt when the knob tumbler is turned in one direction.

1,173,893. GARBAGE-CAN. JOHN P. SUTCLIFFE, Brooklyn, N. Y. Filed Dec. 18, 1914. Serial No. 877,924. (Cl. 220—137.)

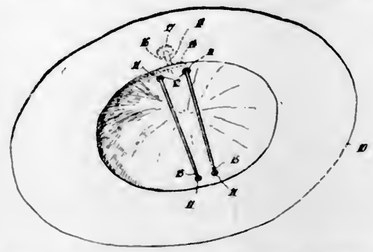


A can comprising a body, an annular ring secured in the body at a point between the ends thereof, said ring having a beveled inner surface, a concaved bottom secured to the said inner surface of the ring, said body having at the upper edge of the ring and above the edge of the said bottom an inwardly disposed annular groove the bottom of which is inclined in a downward direction above the upper edge of the ring and the said bottom.

1,173,894. HAT-FASTENER. BENJAMIN S. SUZUKI, Seattle, Wash. Filed Nov. 21, 1914. Serial No. 873,324. (Cl. 132—25.)

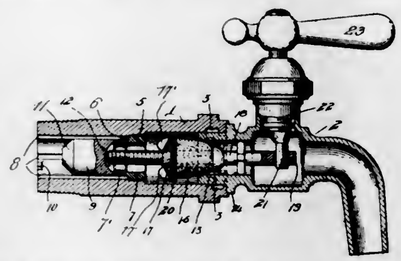
In combination, a hat having opposed pairs of openings therein with the openings in one pair spaced a greater

distance than the openings in the other pair, of a fastener comprising a single piece of spring like metal bent to form a U-shaped body having pointed ends, with its sides converging in a direction toward its pointed ends, a handle projecting from the cross portion of said U-shaped



body, said cross portion adapted to limit engagement of said body with the hat whereby the pointed ends of said sides will lie in frictional engagement in the pair of closely spaced openings, when the cross portion lies adjacent the pair of greater spaced openings.

1,173,895. FAUCET. WILLIAM T. TAGGART, Plainfield, N. J. Filed Apr. 17, 1915. Serial No. 22,009. (Cl. 137—4.)

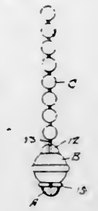


In a faucet, a tubular coupling having the bore thereof larger at one end than at the other with an annular shoulder formed at the junction of said larger and smaller portions, the smaller portion being threaded adjacent said shoulder, longitudinal corrugations formed on the inner face of the reduced portion of said bore and extending from said threaded portion rearwardly, a nipple engaged with said threaded portion and having a rearwardly projecting exteriorly reduced extension, a cylindrical valve slidable in the corrugated portion of said bore and having a truncated cone shaped rear end and a concaved inner end for receiving said nipple extension whereby a watertight connection is normally formed between them and which are so held by the impact of the inflowing water against the cone shaped end of said valve, a valve opening member extending through said nipple and entering said concaved valve end, and means for forcing said member rearwardly against said valve whereby the valve is opened against the pressure of the inflowing water.

1,173,896. CHAIN END. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 9, 1914. Serial No. 823,473. (Cl. 24—116.)

1. A device of the character described comprising a socket element adapted to receive the end ball of a chain, in combination with an enlarged gripping element sleeved upon said socket element to prevent the escape of the chain ball therefrom.

2. A device of the character described comprising a socket element laterally apertured to admit the end ball of a chain and slotted to permit its link to pass to axial position at one end of said socket element, in combination with an enlarged gripping element sleeved upon said socket and closing the lateral aperture thereof to prevent the escape of the chain ball therefrom in the assembled position of the parts.

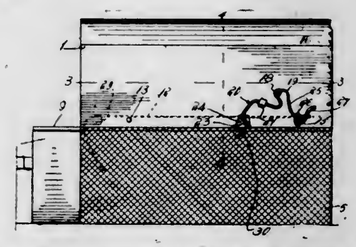


3. A device of the character described comprising a cylindrical socket element apertured to admit the end ball of a chain and slotted to permit the chain link to pass to axial position at one end of said socket element, an external shoulder on the latter, in combination with an enlarged chain terminal element sleeved upon said socket in assembled position and abutting against said shoulder on the socket element to prevent endwise separation of said parts when the chain is tensioned by pull upon said gripping element.

4. A device of the character described comprising a socket element apertured to receive the end ball of a chain and slotted to permit the chain link to pass to axial position at one end of said socket element, in combination with an enlarged ball-like gripping element axially apertured at opposite ends to pass freely over the chain during the adjustment of the end chain ball in the socket and being sleeved upon said socket in the completely assembled condition of the device, to prevent the escape of the chain ball from the socket element.

5. In a chain end device of the character described, a socket element comprising a cylindrical sheet metal body apertured to admit the end ball of a chain and longitudinally slotted to permit its link to pass to axial position at one end of said socket, together with an external shoulder on said socket to afford an abutment in combination with an enlarged gripping element sleeved upon and frictionally engaging said socket and serving to prevent the escape of the chain ball from the socket element while the parts are in assembled position, for the purpose described.

1,173,897. RAT-TRAP. MARTIN A. THOMPSON, Otho, Iowa. Filed Nov. 23, 1914. Serial No. 873,590. (Cl. 43—24.)

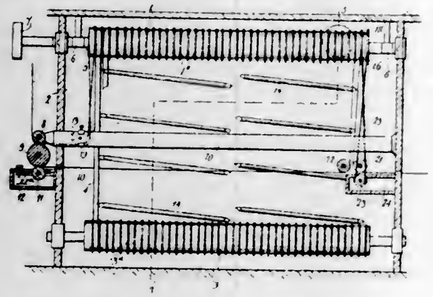


1. A rat trap comprising a rectangular casing having an open end and bottom, a false bottom consisting of a plurality of members pivotally mounted therein and normally lying in a horizontal plane, a clip on the inner end of one of the members, a lever pivotally mounted on the outside of said casing and having a hook on one end thereof arranged to engage the aforementioned clip, a loop secured to the other of the said members and engaging the said lever, a coil spring secured to the last mentioned member constructed and arranged to normally maintain the said member in a horizontal position, the said lever and loop being so arranged that when addi-

tional weight is applied to the last mentioned member the aforementioned loop will be disengaged from the clip.

2. A rat trap comprising a casing, a cage, the said casing being detachably mounted on the said cage, a false bottom in said casing consisting of a plurality of pivotally mounted members, a loop secured to one of said members at its pivotal point, a lever pivoted to the outside of said casing and having a portion thereof extending through said loop, the said lever having another portion thereof formed in hook-shape, a clip on the other of said members arranged to engage said hook-shaped portion of the said lever, a coil spring secured to the first mentioned member and to the casing to normally maintain the said member in a horizontal position.

1,173,898. METHOD OF AND APPARATUS FOR PRODUCING PHOTOGRAPHIC PRINTS. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed June 21, 1911. Serial No. 634,573. (Cl. 95—75.)



1. The method of producing photographic prints which consists in immovably securing together, relatively to one another a strip of sensitized material and an endless strip of transparent printed film strip, and moving these strips in such condition past an actinic light to print the sensitized strip through the printed film strip, said printed film strip being continuously returned to the starting point for coöperation with fresh portions of the sensitized strip.

2. The method of producing photographic prints which consists in cementing together a strip of sensitized material and an endless transparent printed film strip, moving said strips simultaneously and in printing relation past an actinic light, detaching said strips as they emerge from the influence of the light, and returning said printed film strip continuously to the starting point for coöperation with fresh portions of the sensitized strip.

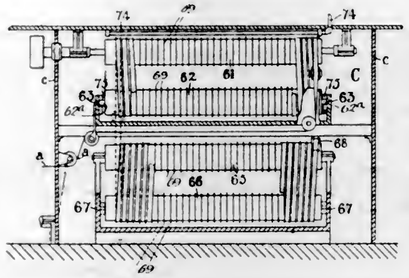
3. The method of producing photographic prints which consists in moving a strip of sensitized material and an endless transparent printed film strip simultaneously and continuously while in contact in a substantially helical course past an actinic light with the printed film strip arranged between the light and the sensitized material, and returning the film strip continuously to the starting point for coöperation with fresh portions of the sensitized material.

4. The method of producing photographic prints which consists in cementing together a strip of sensitized material and an endless transparent printed film strip, moving said strips in such condition simultaneously and continuously while in contact past an actinic light in a substantially helical course with the printed film strip arranged between the light and the sensitized material, separating said strips after they are subjected to the light, and returning the film strip continuously to the starting point for coöperation with fresh portions of the sensitized material.

5. Apparatus for producing photographic prints comprising movable guiding means upon which a strip of sensitized material may be wound in a substantially helical path, means being provided for supplying said strip continuously at one end of said path, means being provided for removing said strip continuously from the other end of said path, and means for feeding a printed film strip to travel in printing relation with said sensitized strip.

[Claims 6 and 7 not printed in the Gazette.]

1,173,899. APPARATUS FOR DEVELOPING AND WASHING PHOTOGRAPHIC PRINTS. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Original application filed June 21, 1911, Serial No. 634,573. Divided and this application filed June 16, 1913. Serial No. 774,047. (Cl. 95—90.5.)



1. Apparatus for producing photographic prints comprising a pair of rollers constituting means for passing a strip of sensitized material continuously in a substantially helical course whereby the adjacent turns of the strip are moved substantially in one plane, and means for subjecting a portion of the strip to the action of a reagent.

2. Apparatus for producing photographic prints comprising pairs of parallel rollers constituting means for moving a strip of sensitized material continuously through a succession of substantially helical courses, means for subjecting the strip while passing over one pair of rollers to the action of a reagent, and means for subjecting the strip while passing over another pair of rollers to the action of a different reagent whereby the strip is subjected continuously to a succession of protracted operations.

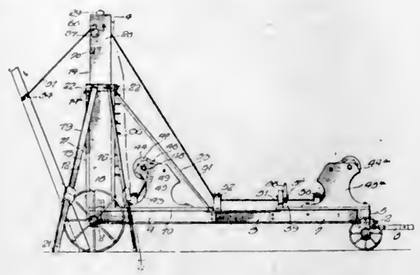
3. Apparatus for producing photographic prints having, in combination a plurality of rollers journaled with substantially parallel axes, means for guiding a continuous strip of sensitized material in a substantially helical path around said rollers, means for guiding the strip to enter continuously at one end of said path, means for guiding the strip to leave continuously at the other end of said path, and means for immersing one of said rollers in a reagent to thereby subject the film in said path to the action of a reagent.

4. Apparatus for treating a continuously moving film with liquid comprising in its construction two long parallel rollers having a series of guide flanges on each, over which the film is extended in helical form with a large portion of its surface exposed to view, and a shallow trough into which one of said rollers with the film thereon is dipped, and a spray for the liquor so that only a small quantity of liquid is required, the liquor soaking into the gelatin surface as the film travels from one roller to the other substantially as described.

1,173,900. HOISTING-MACHINE. SOLOMON TOWNSEND, Charleston, W. Va. Filed Mar. 25, 1915. Serial No. 16,945. (Cl. 254—143.)

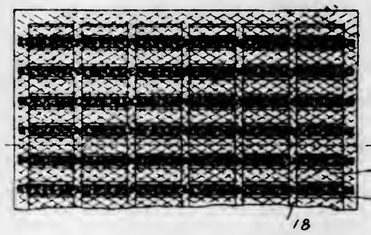
1. In a hoisting machine, an upright hoisting standard having an upright pole guiding channel in one of its sides

continuing substantially throughout its length, a guide at the upper end of said standard, and a hoisting cable passed over the guide.



2. In a hoisting machine, an upright standard including a fixed and a vertically slidable section having upright alined pole guiding channels, a guide at the upper end of the standard, and a hoisting cable passed over said guide.

1,173,901. REINFORCED CONCRETE CONSTRUCTION. CLAUDE A. P. TURNER, Minneapolis, Minn. Filed July 18, 1911. Serial No. 639,179. (Cl. 72—71.)

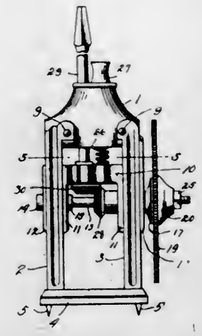


1. In a long span slab construction, the combination of a cellular flat slab of concrete with diagonal lines of reinforcement consisting of rods running in straight lines through the lower portion, the cellular formation consisting of main parallel reinforced concrete beams of the inverted type running from support to support, stiffened transversely by ribs of concrete at convenient intervals, the diagonal reinforcement extending in two directions and obliquely to the direction of the parallel beam.

2. In long span slab construction, the combination of a cellular flat slab of concrete with diagonal lines of reinforcement consisting of rods running in straight lines through the lower portion, the cellular formation consisting of main parallel reinforced concrete beams of the inverted type running from support to support, stiffened transversely by ribs of concrete at convenient intervals, said parallel beams having longitudinal reinforcement, the diagonal reinforcement extending in two directions and obliquely to the direction of the parallel beam.

1,173,902. HAND SAWING-MACHINE. PAUL A. VANCSO, Rahway, N. J. Filed Apr. 23, 1915. Serial No. 23,476. (Cl. 143—43.)

A portable circular saw machine comprising a frame, a support slidable in said frame, a shaft carried thereby and a saw thereon, a shaft at right angles to and geared to said first mentioned shaft and slidable with said support in said frame and having an end projecting beyond said frame and adapted to be engaged by a bit-stock to be rotated thereby and to be pressed thereby toward one end of said frame, a spring tending to maintain the support away from one end of the frame so that the saw shall not project beyond said end but permitting it to be thrust



beyond said end into engagement with work engaged thereby.

1,173,903. LAMP-IGNITER. LORENZO D. VAUGHN and THEODORE MILLER, Grafton, W. Va. Filed Apr. 11, 1914. Serial No. 831,176. (Cl. 67—10.1.)

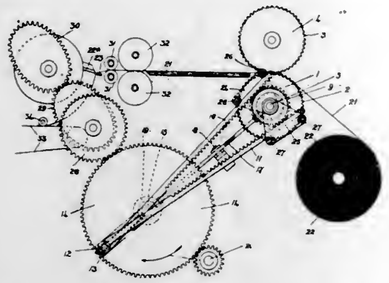
An igniter for miners' lamps including the combination with a lamp font, a wick tube extending into the lamp font, and an igniter tube extending through the lamp font, of a clip, a hook on the end of the clip arranged to engage the wick tube and be slidable thereon to hold the clip in proper position with relation to the wick, a shaft arranged to extend through the igniter tube, igniting means operatively mounted on the shaft, and a hood surrounding the shaft and the wick tube, said hood, clip, and igniter adapted to be raised above the wick tube to cause the sparks from the igniter to be directed against the wick.

1,173,904. PAPER-CUTTING MACHINE. FREDERICK WILLIAM VICKERY, London, England. Filed June 15, 1915. Serial No. 34,187. (Cl. 164—68.)

1. In a machine of the character described, a feeding roller for advancing and measuring material, and actuating mechanism connected with said roller and adjustable for causing the material to be fed at different lengths, said actuating mechanism being adapted to impart two complete forward feeding movements of said roller upon each cycle of operation of said actuating mechanism.

2. In a machine for cutting material, cutting mechanism, a feeding roller for advancing material to the cutting mechanism, actuating mechanism connected to said roller and adjustable for causing the material to be

measured at different lengths, and means cooperative with said actuating mechanism for causing two intermittent and complete forward feeding movements of the roller upon each cycle of operation of said actuating mechanism.



3. In a machine for cutting material, cutting mechanism, a feeding roller for advancing material to the cutting mechanism, actuating mechanism connected to said roller and adjustable for causing the material to be measured at different lengths, rotating means for operating said actuating mechanism, and means cooperating with said actuating mechanism for causing two intermittent and complete forward feeding movements of the roller upon each full rotation of said rotating operating means.

4. In a machine for cutting material, cutting mechanism, a feeding roller for advancing and measuring the material to be cut by said cutting mechanism, a rotating member, and means connecting said roller and rotating member for imparting two full forward feeding movements to the former upon each full rotation of the latter, said connecting means having a radially adjustable connection with said member whereby the length of the material to be cut may be varied.

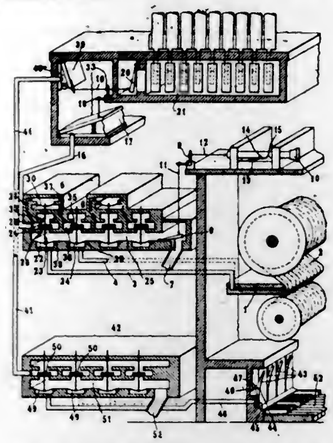
5. In a machine for cutting material, cutting mechanism, a feeding roller for advancing and measuring material to be cut, a rotating member, means connecting said roller and rotating member for imparting two full intermediate forward feeding movements to said roller upon each full rotation of said rotating member, said connecting means having a radially adjustable connection with said rotating member whereby the length of the material to be cut may be varied, and means for operating said cutting means at the intervals between each full rotation of said feeding roller.

[Claims 6 to 10 not printed in the Gazette.]

1,173,905. VARIABLE AUTOMATIC STOP-CONTROL FOR MUSICAL INSTRUMENTS. EDWIN WELTE, Freiburg, Germany, assignor to M. Welte & Sons, Inc., New York, N. Y., a Corporation of New York. Filed Jan. 19, 1911. Serial No. 603,506. (Cl. 84—246.)

1. A stop control for organs embodying a tracker-board adapted to have passed over it a perforated music sheet, valve actions automatically controlled by said tracker-board and music sheet; a stop chamber, a valve for said chamber, pneumatically actuated means connected with said valve and valve actions and manually controlled means by which the said stop chamber valve may be actuated without interfering with the operation of the said automatically operating means that control it.

2. A stop control for organs embodying a tracker-board adapted to have passed over it a perforated music sheet, valve actions automatically controlled by said tracker-board and music sheet, a stop chamber, a valve for said chamber, pneumatically actuated means connected with said valve and valve actions, manually controlled means by which the said stop chamber valve may be actuated without interfering with the operation of the said automatically operating means that control it, and means for rendering inoperative the said automatic valve actions at will.



3. A stop control for organs comprising in combination a stop chamber, a valve for said chamber, automatic valve actions for controlling the position of said valve, a tracker-board adapted to have passed over it a perforated music sheet for controlling said automatic valve actions, a manually controlled cut-off for the automatic valve actions and a manually controlled pneumatically actuated means for operating the valve of the stop chamber.

4. A stop control for organs having a stop chamber and valve therefor, comprising automatic valve actions, a tracker-board adapted to have passed over it a perforated music sheet for controlling said valve actions, pneumatically operated means connected with the valve and the automatic valve actions for moving the valve of the stop chamber and pneumatically actuated means connected with said valve and provided with manual means of control, and arranged to actuate the said valve without interfering with the operation of the said automatically operating means that control it.

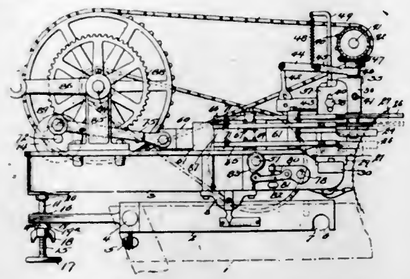
5. A stop control for organs having a stop chamber and valve therefor, comprising automatic valve actions, a tracker-board adapted to have passed over it a perforated music sheet for controlling said valve-actions, pneumatically operated means connected with the valve and the automatic valve actions for moving the valve of the stop chamber, pneumatically actuated means connected with said valve by which it may be actuated without interfering with the operation of the said automatically operating means that control it and provided with manual means of control, and means for controlling the automatically actuated valve mechanism and making it inoperative.

[Claims 6 and 7 not printed in the Gazette.]

1,173,906. GIN-SAW-FILING MACHINE. JOHN M. WESTBROOK, Atlanta, Ga. Filed Mar. 20, 1915. Serial No. 15,883. (Cl. 76—32.)

1. In a gin saw filing machine, a rotary gummer, a pair of reciprocatory flat files arranged to act on the opposite sides of the teeth and to act on each tooth subsequent to the action of the gummer thereon, and another pair of reciprocatory files working at opposite sides of each saw and arranged to act on each tooth in the notches between the same and an adjoining tooth subsequent to the action of the flat files thereon.

2. In a gin saw filing machine, a rotary gummer, a pair of reciprocatory flat files arranged to act on the opposite sides of the teeth and to act on each tooth subsequent to the action of the gummer thereon, another pair of reciprocatory files working at opposite sides of each saw and arranged to act on each tooth in the notch between the same and an adjoining tooth subsequent to the action of the flat files thereon, and a clamp arranged to act on each saw at opposite sides of each tooth thereof in advance of the action of the gummer thereon.



3. In a gin saw filing machine, a pair of reciprocatory flat files arranged to act on the opposite sides of the teeth and another pair of reciprocatory files working at opposite sides of the saw and arranged to act on each tooth in the notch between the same and an adjoining tooth subsequent to the action of the flat files thereon.

4. In a gin saw filing machine, a rotary gummer, a saw clamp including clamping jaws arranged to act on each tooth of a saw in advance of the action of the gummer thereon, a movable supporting means for the gummer, and cam controlled means for producing an operation of said clamping jaws and a simultaneous movement of the gummer supporting means to advance the gummer toward the base of the tooth upon which it operates.

5. In a gin saw filing machine, a rotary gummer, a vertical shaft carrying the gummer, an oscillatory bearing for the shaft, a spring held oscillatory lever for oscillating said bearing and a cam for effecting a positive movement of said lever against the tension of its spring and in a direction to produce an operative advance of said gummer.

[Claims 6 to 23 not printed in the Gazette.]

1,173,907. STEREOTYPE-MATRIX. GLENN S. WILLIAMSON, New York, N. Y. Filed May 27, 1912. Serial No. 700,054. (Cl. 91—68.)

1. A mat or blank for molding stereotype and similar matrices, comprising a fibrous sheet containing a plastic organic body which is hardened and rendered infusible by a chemical transformation occurring under the action of heat, and a reinforcing-agent.

2. A mat or blank for molding stereotype and similar matrices, comprising an absorptive material containing a structureless inorganic body which in the solid state is refractory in the presence of molten stereotype or linotype metal, and a plastic organic body which is hardened and rendered infusible by a chemical transformation occurring under the action of heat.

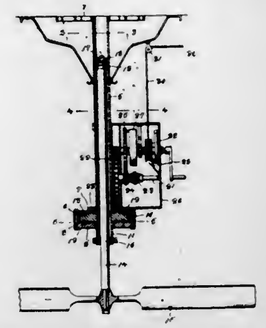
3. A mat or blank for molding stereotype and similar matrices, comprising a fibrous material impregnated with a structureless inorganic body which in the solid state is refractory in the presence of molten stereotype or linotype metal, and with a plastic phenolic condensation product which is capable of transformation by heat into an infusible product.

4. A mat or blank for molding stereotype and similar matrices, comprising fibrous material impregnated with a silicate of an alkali metal and a plastic phenolic condensation product which is capable of transformation by heat into an infusible product.

5. A matrix for metallic stereotype and similar plates, comprising fibrous material containing a structureless inorganic body which in the solid state is refractory in the presence of molten stereotype or linotype metal, and an infusible phenolic condensation product.

[Claims 6 to 10 not printed in the Gazette.]

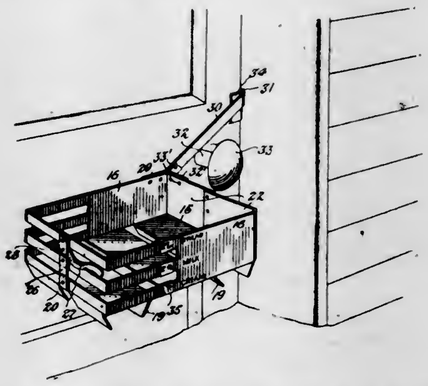
1,173,908. FAN. SILAS D. WILLS, Fort Payne, Ala. Filed Feb. 12, 1915. Serial No. 7,775. (Cl. 230—1.)



1. A fan comprising a shaft, blades radiating from one end of said shaft, a sleeve encircling said shaft, an adjustable connection between said sleeve and shaft whereby the blades may be moved toward and away from the sleeve, a disk surrounding said sleeve and fixed thereto, a flange supporting said disk, an annulus carrying said flange, anti-friction bearings between said disk and flange and annulus, means supporting said annulus, a motor carried by said last means, and driving connections between said motor and disk.

2. A ceiling fan comprising a vertical tube, a flange on the lower end of said tube projecting outwardly therefrom, an annulus depending from the marginal edge of said flange, a flange formed on the lower edge of said annulus and extending inwardly therefrom, a disk within said annulus and resting upon the flange thereon, anti-friction bearings between said last flange and annulus, a sleeve carried by said disk and depending below the second-named flange and coaxial with said tube, a shaft within said sleeve and extending into the tube, a connection between said shaft and sleeve, blades radiating from the lower end of said shaft, a motor, and driving connections between said motor and disk whereby the sleeve and shaft may be rotated.

1,173,909. MERCHANDISE-CONTAINER. AMMON S. YODER, Philadelphia, Pa. Filed Mar. 12, 1915. Serial No. 13,951. (Cl. 220—111.)

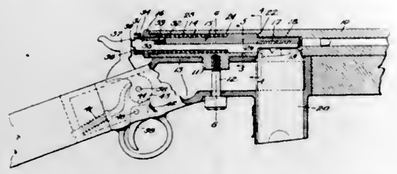


1. A merchandise container consisting of a box-like receptacle having bottom, side and end members, said receptacle being provided with a supporting arm extending obliquely from one side and beyond one end member and lying substantially in the plane of the side member from which it extends, said arm having a terminal out-

wardly extending hook lying beyond the plane of the side member from which said arm extends, said hook being adapted for engagement with the side edge of an ordinary house door, and said arm being adapted to rest on a door knob or similar projection.

2. A merchandise container provided with means whereby it may be suspended above the floor, the bottom of said container being provided with U-shaped slots, said slots forming tongues which are bent downward to produce supporting flanges, whereby a milk bottle may be suspended beneath the bottom portion of the container.

1,173,910. SEMI-AUTOMATIC FIREARM. JOHN W. C. YOUNG, Saco, Me., assignor to The J. W. C. Young Fire Arms Company, Saco, Me., a Corporation of Maine. Filed July 27, 1914. Serial No. 853,256. (Cl. 42—3.)



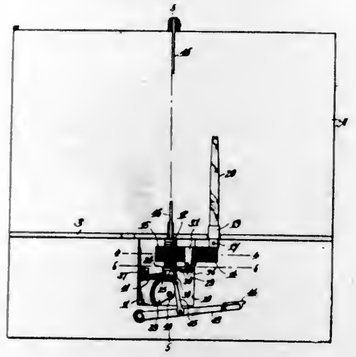
1. A firearm comprising a barrel having a breech bolt chamber and a stop shoulder, a breech bolt having an intermediate portion slidingly fitting said barrel chamber and having a forward extension and a rear portion both of which are of lesser size than the intermediate portion whereby front and rear shoulders are provided, the front shoulder being adapted to contact with said stop shoulder of the barrel to prevent premature discharge, a collar at the rear end of the barrel, the rear portion of the breech bolt extending through said collar, and a spring coiled around said rear portion of the breech bolt and confined between said collar and the rear shoulder of the breech bolt.

2. A fire arm comprising a barrel having a breech bolt chamber, a breech bolt having a larger intermediate portion directly engaging and slidingly fitting said chamber, a collar at the rear end of the barrel, the rear portion of the bolt extending through said collar, a firing pin slidingly mounted in the bolt and projecting beyond the rear end thereof, and a collar mounted on the rear end of the breech bolt having a projection in the path of a portion of the firing pin to limit rearward movement of the firing pin relatively to said bolt.

3. A firm arm having a barrel provided with a chamber for a breech bolt, the rear end of said barrel being threaded, a collar engaged with the threaded end of the barrel, a breech bolt mounted to slide in the chamber of the barrel and also through said collar, the rear of the breech bolt having a projection, a firing pin carried by said bolt, a pivoted hammer having a portion in the path of rearward movement of the breech bolt and firing pin, said hammer having a portion to interlock with the said projection of the breech bolt, and a trigger, said trigger and hammer having portions adapted to interengage when the hammer has been shifted to a point rearwardly of the position to which it is carried by the recoil of the breech bolt.

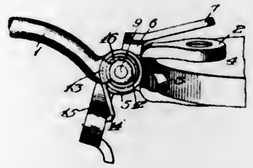
1,173,911. MUSIC-LEAF TURNER. WILLIAM C. ADAMS, Calistoga, Cal. Filed July 7, 1915. Serial No. 38,502. (Cl. 84—17.)

1. A music leaf turner comprising a base, a plurality of music leaf turning arms mounted for swinging movement relative to the base, a sector mounted for swinging movement below the arms, a trip member carried by the sector and automatically engageable with the respective arms, means in the path of movement of the said member to automatically release the same for the freeing of the music leaf turning arms, means for rotating the sector, means for returning the sector to normal position for engagement with the music leaf turning arms, and operative directly on the means for turning the same, swinging transparent leaf engaging fingers carried by the said arms, and music clamps carried by the base.



2. A music leaf turner comprising a base, a plurality of music leaf turning arms mounted for swinging movement relative to the base, a sector mounted for swinging movement below the arms, a trip member carried by the sector and automatically engageable with the respective arms, means in the path of movement of the said member to automatically release the same for the freeing of the music leaf turning arms, means for rotating the sector, means for returning the sector to normal position for engagement with the music leaf turning arms and operative directly on the means for turning the same, swinging transparent leaf engaging fingers carried by the said arms, music clamps carried by the base, and means acting upon the arms for holding the same against free swinging movement.

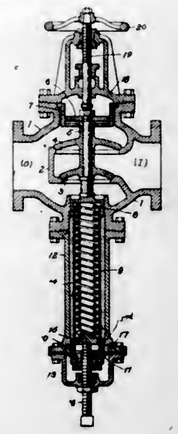
1,173,912. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Dec. 30, 1915. Serial No. 69,319. (Cl. 88—50.)



1. In a finger-piece eyeglass mounting, the combination with a support and a guard lever pivoted to turn thereon, of a centering projection rigidly carried by one of said parts in alinement with the axis of the lever and provided with a lateral abutment at its outer end and a coil spring surrounding the projection and adapted to be applied and removed over the end thereof and over the abutment, one end of the spring being provided with an axial extension interlocking with the abutment and the other being arranged to act against the other part.

2. In a finger-piece eyeglass mounting, the combination with a support and a guard lever pivoted to turn on one side thereof, of a centering projection fixed to the other side of the support in alinement with the axis of the lever and having at its outer or free end a lateral lug and a flat spiral spring surrounding the projection and adapted to be applied and removed over the free end thereof, the inner end of the spring being provided with a downward extension parallel with the centering projection and lying against the same to engage the lug, the outer end of the spring being arranged to act against the guard lever.

1,173,913. PRESSURE-REDUCING VALVE. EDWARD V. ANDERSON, Monessen, Pa., assignor of one-half to Charles E. Golden, Crafton, Pa. Filed Sept. 1, 1914. Serial No. 859,643. (Cl. 50—22.)



1. A pressure reducing valve comprising a casing having a double apertured diaphragm, two valves seating thereon and carrying on their stem a dash-pot piston and a movable cylinder, a stationary cylinder for said piston, an adjustable spring inclosed in the movable cylinder and a flexible diaphragm attached to the cylinder and exposed to the low pressure, whereby the valve may be set to close at a certain maximum of pressure on the low side, substantially as described.

2. A pressure reducing valve comprising a casing with an apertured diaphragm, a valve closing said aperture and carrying on its stem a movable tube, a supplementary casing containing said tube and closed at the bottom by the tube and a diaphragm connected thereto, a spring in the tube adapted for regulating the effective pressure on said diaphragm, and means providing a liquid seal for the diaphragm and the tube containing the spring, substantially as described.

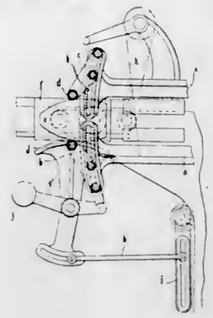
3. A pressure reducing valve comprising a casing, a valve, springs normally holding the valve open, a dashpot attached to the valve, a diaphragm arranged to overcome the spring pressure by fluid pressure on the low side of the valve casing, and a hand operated closing device for the valve.

4. In a pressure reducing valve, the combination of a casing having an apertured diaphragm, a valve and a stem carrying the valve and also a fluid tight cylinder, a supplementary casing surrounding the cylinder, a flexible diaphragm closing the supplementary chamber and fixed to the cylinder, a spring in the cylinder seated on a support independent thereof, whereby the pressure of the spring effective to open the valve is opposed to pressure on the diaphragm from the outlet side of the main valve.

5. In a pressure reducing valve, the combination of a casing having an apertured diaphragm, a balanced stem valve adapted to seat on said diaphragm, a supplementary casing, the valve stem extending into the supplementary casing and bearing on a flexible diaphragm closing said supplementary casing, a spring bearing on the valve stem and adapted to force the valve open in opposition to fluid pressure on the diaphragm from the outlet side thereof.

1,173,914. GEAR-CUTTING MACHINE. WILLIAM ANDERSON, Altrincham, and THEODORE COVENTRY, Salford, England. Filed Mar. 7, 1914. Serial No. 823,254. (Cl. 90—10.)

1. In a gear cutting machine having reciprocating cutting tools operating simultaneously on both sides of a tooth, the combination with the guide arms carrying the said cutting tools, of a dummy or former having two opposite sides of correct configuration, means for traversing the said dummy or former through adjustable distances during the reciprocation of the cutting tools and means whereby the movement of the dummy or former impart the required opening and closing movements to the said guide arms, as set forth.



2. In a gear cutting machine having reciprocating cutting tools operating simultaneously on both sides of a tooth, the combination with the guide arms carrying the said cutting tools, of a dummy or former having its opposite sides of similar configuration, means for reciprocating the said dummy or former through adjustable distances, brackets adjustably mounted in the said guide arms, and rollers carried by the said brackets which contact with the respective sides of the dummy or former, as set forth.

1,173,915. COMBINED SHADE-SUPPORT AND CURTAIN-BRACKET. LOUIS BALDACCINI, Mohawk, N. Y. Filed May 5, 1915. Serial No. 26,126. (Cl. 156—24.)

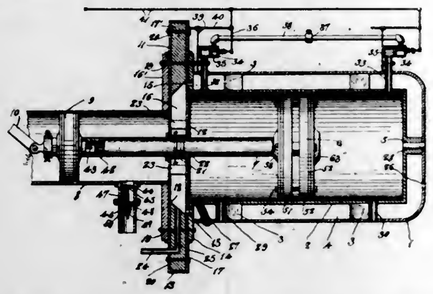


A bracket formed from a sheet of bendable material comprising a straight end plate, a side plate extending angularly and upwardly from the end plate, said side being provided with an opening and having its upper edge above the opening formed with a rounded depression, the end of the side, at the outer wall provided by the depression, being bent angularly in a line with the end plate and being arranged parallel to but above the said end plate, an upwardly projecting rounded tongue upon the last mentioned plate, and a longitudinally adjustable element associated with said flat member and disposed above the rounded depression in the side.

1,173,916. INTERNAL-COMBUSTION ENGINE. BURNEY J. BALMER, Stockton, Kans. Filed Apr. 27, 1914. Serial No. 834,793. (Cl. 184—18.)

1. In an internal combustion engine, the combination with a cylinder of lubricating means therefor, said lubricating means comprising a piston slidable in the cylinder and having an oil receiving chamber therein to distribute oil along the sides of the cylinder interiorly, a piston rod operatively connected with the piston and having an oil

passage therethrough communicating with the oil chamber in the piston, means to force oil through the piston rod into the chamber on the up stroke of the piston, an oil intake pipe communicating with the piston rod and a valve located within the piston and operatively connected with the oil intake pipe to open on the down stroke of the piston and close on the up stroke thereof whereby the supply of oil to the piston rod is alternately cut on and off.



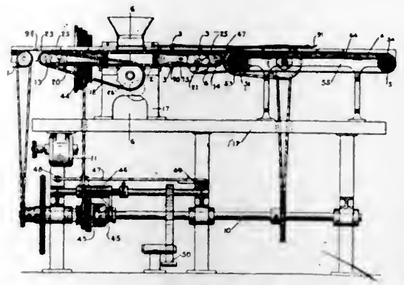
2. The combination with the cylinder of an internal combustion engine of lubricating means therefor comprising a piston slidable within the cylinder and formed with an oil chamber, a piston rod secured at one end to the piston and provided with an oil passage communicating with the oil chamber, an oil supply pipe, means to connect the oil passage with the oil supply pipe, a valve arranged within said oil supply pipe to open on the down stroke of the piston and close on the up stroke thereof, means to force oil upwardly through the oil passage in the piston on the up stroke thereof and a valve within the oil passage adjacent the end thereof that communicates with the oil chamber in the piston to open on the up stroke of the piston and close on the down stroke thereof.

3. The combination with the cylinder of an internal combustion engine of lubricating means therefor comprising a pump cylinder arranged below the main cylinder, a wall dividing the cylinders, a piston slidable within the main cylinder and formed with an oil chamber therein, a piston slidable within the pump cylinder, a piston rod slidable through said wall and common to the pistons, said piston rod having an oil passage extending therethrough and communicating at its ends with the oil chamber and pump cylinder, an oil supply pipe communicating with the pump cylinder, a valve in said oil supply pipe to open on the down stroke of the piston and close on the upstroke thereof whereby oil is permitted to flow to the pump cylinder and be forced upwardly to the oil chamber through the oil passage in the piston rod and means to prevent back flow of oil from the oil chamber.

4. In a device of the character described the combination with the cylinder of an internal combustion engine of lubricating means therefor comprising a piston slidable within the cylinder, said piston being formed of two sections spaced from each other to provide in combination with the cylinder an oil chamber, a piston rod operatively connected with the piston having an oil passage formed therethrough communicating with the oil chamber, means to force oil to the oil chamber on one stroke of the piston, and a valve to prevent back flow of oil from the chamber on the other stroke.

1,173,917. BOX-FILLING MACHINE. FRANK BARTER, Fitchburg, Mass., assignor to Brown Bag Filling Machine Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Apr. 16, 1914, Serial No. 832,332. Renewed Dec. 16, 1915. Serial No. 67,297. (Cl. 193—24.)

1. In a machine of the character described, a conveyer having projections, auxiliary mechanism to deliver boxes to said conveyer, comprising two detents, and means controlled by the conveyer to alternately operate said detents to cause boxes to be carried forward only at predetermined times.



2. In a machine of the character described, a conveyer having projections, auxiliary mechanism to deliver boxes to said conveyer, comprising detents spaced apart a distance greater than the length of the boxes, means operated by the conveyer to release one detent and operate the other, the other means operated by the conveyer to operate the first detent and release the second.

3. In a machine of the character described a conveyer having projections, frictionally operating elements to carry boxes to said conveyer, means to control the operation of said frictionally operating elements to cause boxes to be carried forward thereby only at predetermined times comprising a reciprocable member, a detent operated thereby to engage a box to prevent its forward movement, a second reciprocable member operated by said first reciprocable member, and spring-pressed in one direction relative thereto, a second detent operated thereby to engage against a different box to hold it against forward movement, means to operate said first reciprocable member consisting of a pivoted arm positioned to be engaged by successive projections of said conveyer to move said first mentioned reciprocable member in one direction, means controlled by the principal conveyer to retain said reciprocable member in such position for a predetermined period.

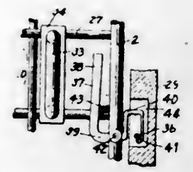
4. In a machine of the character described, parallel rails, a principal conveyer member movable longitudinally between said rails, and having stops, auxiliary means for feeding boxes to said principal conveyer comprising parallel conveyer members movable longitudinally between said rails and arranged on opposite sides of said principal conveyer and operating at a higher speed than said principal conveyer to carry boxes forward against the stops of said principal conveyer, means operating in opposition to said auxiliary means to detain said boxes in their forward movement, and at predetermined intervals to release a forward box and to hold succeeding boxes.

5. In a machine of the character described, a principal conveyer having projections, auxiliary means for feeding objects to said principal conveyer comprising friction elements operating at each side of said principal conveyer, and at a higher speed and acting jointly at each side of the objects, to carry the said objects successively to said principal conveyer and against the projections thereof, and means operating in opposition to said auxiliary means to detain said objects in their forward movement and at predetermined intervals to release one object and to hold succeeding objects.

[Claims 6 to 13 not printed in the Gazette.]

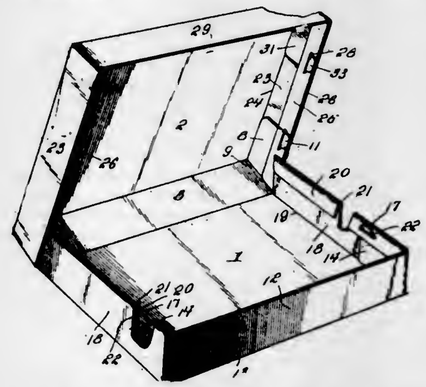
1,173,918. GATE-LATCH. RAYMOND J. BARTON, Roscoe, Iowa. Filed Dec. 11, 1912. Serial No. 736,127. (Cl. 70—28.)

In a gate latch, the combination with a post and slidably mounted gate, said post having a recess formed therein, a bolt extending transversely of the recess, a latch bar having a vertical gripping portion, the lower end of which terminates in a horizontal portion which is pivotally connected to the gate, said portion terminating in an inverted U-shaped frame, the outer end of which has its lower end formed with a loop adapted to engage under



said bolt when the frame is engaged in the recess, and a spring arranged between the gate and vertical gripping portion to hold the loop in yielding engagement with said bolt.

1,173,919. ONE-PIECE BOX. CLYDE BAUGH, St. Louis, Mo., assignor of one-half to William L. Moore, St. Louis, Mo. Filed Oct. 2, 1915. Serial No. 53,832. (Cl. 229—36.)

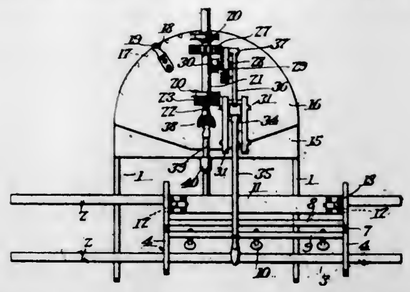


A one piece suit or packing case made from an oblong rectangular blank and comprising a bottom, a top, and a common rear wall connecting the bottom and top, said rear wall having end flaps, said bottom wall having a front wall provided with end flaps and also having side walls, said top also having a front wall provided with end flaps and also having end walls, the side walls of the top and bottom each having an inturned flap provided with slits, and the first named flaps of the back and front walls being arranged between said side walls and said inturned flaps thereof and being formed with tongues to engage the said slits.

1,173,920. SAW-SHARPENING MACHINE. JOHN BECKMAN, Yosemite, Cal. Filed June 29, 1915. Serial No. 37,013. (Cl. 76—34.)

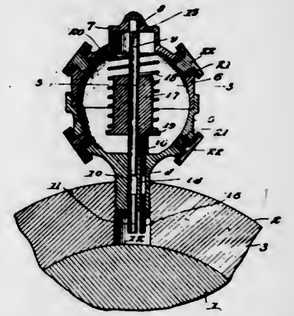
1. In a saw sharpening machine, supporting legs spaced apart in parallelism, guide tracks secured to the upper ends of said legs and spanning the space between the same and disposed parallel with each other, a carriage embodying end plates each having the lower edge thereof formed with grooves spaced apart and alining respectively with the grooves in the bottom edges of the other plate to receive said tracks, tie rods holding said side plates in proper relative positions, a saw clamp on said carriage, and filing mechanism for sharpening the teeth of the saw in said clamp.

2. In a saw sharpening machine, supporting legs spaced apart in parallelism, guide tracks secured to the upper ends of said legs and spanning the space between the same and disposed parallel with each other, a carriage embodying end plates each having the lower edge thereof formed with grooves spaced apart and alining respectively with the grooves in the bottom edge of the other plate to receive said tracks, tie rods holding said side plates in



proper relative positions, a saw clamp on said carriage, a platform carried by said legs, a turn table mounted upon said platform, and saw filing mechanism carried by said turn table to sharpen the teeth of the saw in said clamp.

1,173,921. LUBRICATOR. LEROY A. BIGGAR and RUTHERFORD H. BIGGAR, Oneida, N. Y. Filed Dec. 12, 1914. Serial No. 876,899. (Cl. 184—43.)



1. A lubricator for pulleys comprising a closed cup, and means operating within the cup and coacting therewith to successively discharge a predetermined portion of oil from the cup at each starting of the pulley and to thereafter remain inactive during the rotation of the pulley.

2. A lubricating device comprising a closed cup, means for connecting the same to a pulley, means forming a communication between the cup and the pulley shaft, and centrifugal means operating at each starting of the pulley to successively discharge predetermined portions of oil from the cup through the communicating means to the pulley shaft, said means remaining inactive thereafter.

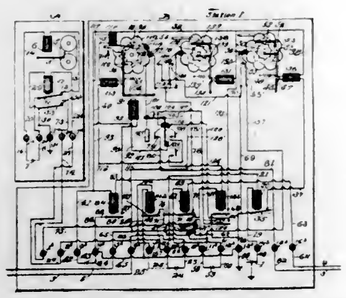
3. A lubricating device for loose pulley comprising a closed cup attached to the pulley, and means acting successively upon each starting of the pulley to discharge a predetermined portion of lubricant from the cup and thereafter remaining inactive during the revolution of the pulley.

4. A lubricator for pulleys comprising a closed cup having a lubricant outlet and an air inlet, and centrifugally controlled means operating within the cup to alternately open the air inlet and discharge lubricant from the cup and close the air inlet.

5. A lubricating device for pulleys comprising a closed cup having a lubricant outlet and an air inlet, and means operating within the cup for successively opening the air inlet and discharging a predetermined quantity of lubricant through the outlet.

[Claims 6 to 11 not printed in the Gazette.]

1,173,922. AUTOMATIC SIGNALING DEVICE. CLINTON L. BOPP, Hawkeye, Iowa. Filed June 30, 1911. Serial No. 636,170. (Cl. 246—21.)



1. In an electric system for indicating the location of railway trains, a switch and an electrically operated indicating device at certain of the stations, the indicating device at a given station relaying to another station, means connecting each switch with its respective indicating device for causing a signal to be received upon closing said switch, a signal accumulating device adapted to be located adjacent to the track, and means for causing the accumulating device to operate for receiving a signal from the indicating device when said switch is closed a second time.

2. In an electric system for indicating the location of railway trains, a switch and an electrically operated indicating device at certain of the stations, means connecting each switch with its respective indicating device for causing a signal to be received upon closing said switch, a signal accumulating device adapted to be located adjacent to the track, and means for causing the accumulating device to operate for receiving a signal from the indicating device when said switch is closed a second time before the apparatus adjacent to the switch has returned to normal.

3. In an electric system for indicating the location of railway trains, a switch and an electrically operated indicating device at certain of the stations of the system, the indicating device at a given station relaying to another station, means connecting each switch with its respective indicating device for causing a signal to be received upon closing said switch, a signal accumulating device adapted to be located adjacent to the track, means for causing the accumulating device to operate for receiving a signal from the indicating device when said switch is closed a second time, and means for again placing the accumulating device in operation for transmitting the signal thus received.

4. In an electric system for indicating the location of railway trains, a switch and an electrically operated indicating device at certain of the stations of the system, means connecting each switch with its respective indicating device for causing a signal to be received, a signal accumulating device adjacent to a given indicating device, a second accumulating device, means whereby the indicating device last mentioned controls certain of said accumulating devices, and means for controlling another indicating device from the accumulating device last mentioned.

5. In an electric system for indicating the location of railway trains, a switch and an electrically operated indicating device at certain of the stations, means connecting each switch with its respective indicating device for causing a signal to be received, a signal accumulating device adjacent to a given indicating device, a second accumulating device, means whereby the indicating device last mentioned controls certain of the accumulating devices, means for controlling another indicating device from one of said accumulating devices, and means for controlling the indicating device last mentioned from the other of said accumulating devices after the signal received by the first accumulating device has been transmitted therefrom.

[Claim 6 not printed in the Gazette.]

1,173,923. PICTURE-EXHIBITOR. NATHANIEL BRAHAM, Asbury Park, N. J. Filed May 17, 1915. Serial No. 28,600. (Cl. 46—37.)



1. In a picture exhibitor, the combination with a case provided with a sight opening, of a carriage, a reel mounted upon the carriage, a web connected to the reel and the case, and means for transmitting rectilinear rotary movement to the reel and comprising a driven shaft, a pair of drums on said shaft, and a cord secured to each of said drums and said carriage, one of said cords being unwound when the other is wound upon the drum.

2. In a picture exhibitor, the combination with a case provided with a sight opening, of a carriage, a plurality of reels mounted on the carriage, a web connected to each reel and the case, a driven shaft, a pair of drums on said shaft, and a cord for each of said drums connected to said carriage, said cords being wound in reverse direction to each other upon said drums.

3. In a picture exhibitor the combination with a case provided with a sight opening, of a carriage arranged in the case, a pair of reels mounted on the carriage, a web connected to each reel and the case, means for transmitting rectilinear movement to the carriage for rotating the reels to unwind one of the webs and wind the other.

4. In a picture exhibitor the combination with a case provided with a sight opening, of a carriage arranged in the case, a pair of reels mounted on the carriage, a web secured to each reel and adjacent portions of the case, means carried by the carriage for connecting the reels, means for transmitting rectilinear movement to the carriage for rotating the reels to unwind one of the webs and wind the other.

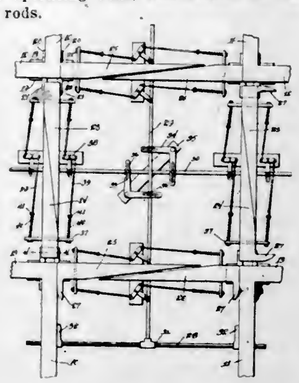
5. In a picture exhibitor the combination with a case provided with a sight opening, of a pair of reels arranged in the case, a web secured to each reel and adjacent portions of the case, a carriage for mounting the reels, gears carried by the carriage for connecting the reels, a bar moving with the carriage for covering the spaced portion of the webs leading to the reels, means for transmitting rectilinear movement to the carriage to unwind one of the webs and wind the other.

[Claims 6 to 8 not printed in the Gazette.]

1,173,924. RAILROAD-CROSSING. JAMES L. BRANHAM, Kansas City, Mo. Filed Nov. 6, 1913. Serial No. 799,559. (Cl. 104—116.)

1. A crossing, comprising a plurality of movable rail sections, means slidably mounting said rail sections in sets, operating rods extending at a right angle to each other, means for transmitting longitudinal movement from one set of operating rods to the other, rods connected with said movable rail sections, resilient means

carried by said last-mentioned rods for yieldably holding said rail sections in a normal position, pivotally mounted means connecting said last-mentioned rods with their respective operating rods, and means for moving said operating rods.



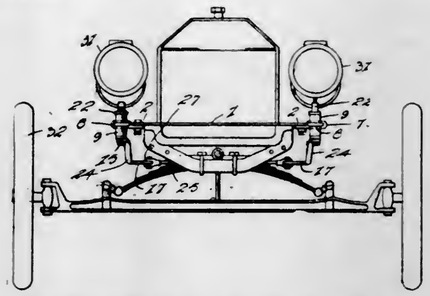
2. A track section comprising main rails positioned in crossing relation, a crossing comprising a plurality of movable rail sections, means rigidly connected with said main rails for slidably supporting said movable rails in pairs, operating rods extending between said main rails in passing and overlapping relation, means connecting said operating rods for transmitting longitudinal movement from one rod to the other, rocker shafts carried by said main rails and connected with said operating rods whereby movement of said rocker shafts will transmit longitudinal movement to said operating rods, means carried by said rocker shafts adjacent said main rails whereby said rocker shafts may be operated by a car passing along said main rails, and means connecting said operating rods with their respective movable rail sections whereby movement of either of said rods will shift the positions of said movable rail sections.

3. A track section comprising main rails meeting in crossing relation, movable crossing rails positioned in pairs between said main rails, plates positioned beneath said crossing rails, means carried by said plates for guiding the movement of said crossing rails, lips carried by said plates for engaging the outer-end portions of said crossing rails and rigidly connecting said plates with said main rails, operating means extending between said main rails, and means connecting said operating means with said crossing rails for moving said crossing into and out of engagement with said main rails when said operating means is in operation.

4. A track section comprising main rails meeting in crossing relation, slidably mounted crossing rails positioned in sets between said main rails, operating rods extending between said main rails, means for transmitting motion from one rod to the other, bars extending from crossing rails, rods slidably connected with said bars, abutments carried by said last-mentioned rods between said crossing bars and abutments whereby said crossing rails may be held tightly in engagement with said main rails, and pivotally mounted means connecting said operating rods with the said last-mentioned rods whereby movement of said operating rods will bring said crossing rails into and out of engagement with said main rails.

1,173,925. AUTOMATIC DIRIGIBLE HEADLIGHT FOR AUTOMOBILES. KINION C. BROOKS, Alexandria, La. Filed Nov. 3, 1915. Serial No. 59,399. (Cl. 240—62.)

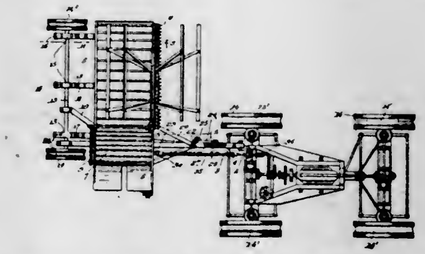
1. A dirigible headlight for automobiles including lamp brackets provided with depending pivots, means for mounting the lamp brackets at opposite sides of an automobile, arms secured to and extending rearwardly from the pivots, a transverse rod connecting the arms, said transverse rod being located above the plane of the transverse rod of the steering mechanism of the automobile, an arm depending from the transverse rod of the dirigible headlight and provided with a longitudinal slot, a sleeve mounted on the transverse rod of the steering gear and arranged in the slot of the said arm and having means for engaging the same at opposite sides thereof and means for securing the sleeve to the rod of the steering mechanism.



2. A dirigible headlight for automobiles including lamp brackets provided with depending pivots, means for mounting the lamp brackets at opposite sides of an automobile, arms secured to and extending rearwardly from the pivots, a transverse rod connecting the arms, said transverse rod being located above the plane of the transverse rod of the steering mechanism of the automobile, an arm depending from the transverse rod of the dirigible headlight and provided with a longitudinal slot, a sleeve mounted on the transverse rod of the steering gear and arranged in the slot of the arm and provided with a groove to receive the said arm, and a device for detachably securing the sleeve to the rod of the steering mechanism.

3. A dirigible headlight comprising a bracket consisting of a rod or member arranged to extend across the fron of a machine and having forwardly diverging terminal portions and rearwardly extending attaching portions, clamps secured to the terminal portions of the bracket, bearings mounted in the clamps, lamp brackets having pivots arranged in the bearings and extending below the same, arms secured to the said pivots and extending rearwardly from the bearing, a transverse rod connecting the said arm, an arm depending from the transverse rod and connecting the same with the transverse rod of the steering mechanism of the machine.

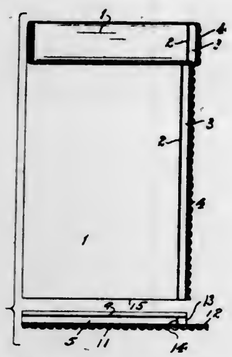
1,173,926. DRIVING MECHANISM FOR GRAIN HARVESTERS OR BINDERS. CLETUS A. BROWN, Stuttgart, Ark. Filed Mar. 27, 1914. Serial No. 827,699. (Cl. 56—33.)



A binder including a frame made up of longitudinal and transverse bars, a supporting axle, bearings carried by said bars and pivotally engaging the axle, supporting wheels journaled upon the axle, a draft bar pivotally connected with the axle, driving mechanism on the binder including a power delivery shaft, a connection between the frame and forward end of the draft bar, embodying

an element slidably engaging one of said parts, a pivotally mounted bell crank lever on the draft bar, a link connecting said lever with the frame, means for locking the lever in different positions to hold the frame at different elevations with relation to the draft bar, and means for flexibly connecting the draft bar with the frame and the said power delivery shaft with a drive shaft of a tractor.

1,173,927. EDGING FOR CURTAINS. FRANK B. BURNS, New York, and CHARLES A. BURNS, Mount Vernon, N. Y.; said Charles A. Burns assignor to said Frank B. Burns. Filed May 26, 1915. Serial No. 30,557. (Cl. 2—146.)



1. A detached edging or hem for curtain material comprising a strip of material doubled upon itself longitudinally to provide a hem-portion, the free upper edges of said strip of material being folded inwardly and tucked between the sides of said hem-portion, and longitudinally extending hem-stitches passing through the sides of said hem-portion and said inwardly folded and tucked upper edges, said hem-stitches being spaced marginally from the outer extremities of said folded and tucked upper edges to provide an intervening longitudinally extending pocket or receiving space between the latter, substantially as and for the purposes specified.

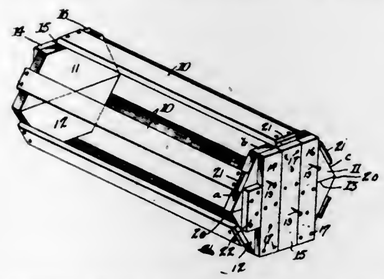
2. A detached edging or hem for curtain material comprising a strip of material doubled upon itself longitudinally to provide a hem-portion, the free upper edges of said strip of material being folded inwardly and tucked between the sides of said hem-portion, and longitudinally extending hem-stitches passing through the sides of said hem-portion and said inwardly folded and tucked upper edges, said hem-stitches being spaced marginally from the outer extremities of said folded and tucked upper edges to provide an intervening longitudinally extending pocket or receiving space between the latter, and an ornamental lace-edging secured to the lower edge of said hem-portion, substantially as and for the purposes described.

3. A detached bottom edging or hem for curtain material comprising a strip of material doubled upon itself longitudinally to provide a hem-portion, the free upper edges of said strip of material being folded inwardly and tucked between the sides of said hem-portion, and longitudinally extending hem-stitches passing through the sides of said hem-portion and said inwardly folded and tucked upper edges, said hem-stitches being spaced marginally from the outer extremities of said folded and tucked upper edges to provide an intervening longitudinally extending pocket or receiving space between the latter, and an ornamental lace-edging secured to the lower edge of said hem-portion, said lace-edging having a free end or tail projecting beyond one end of said hem-portion so that the same may be turned around and secured to said end of said hem-portion, substantially as and for the purposes set forth.

4. A detached bottom edging or hem for curtain material comprising a strip of material doubled upon itself longitudinally to provide a hem-portion, the free upper edges of said strip of material being folded inwardly and tucked between the sides of said hem-portion to provide a double edge forming an intervening pocket or receiving space therebetween, a line of longitudinally extending hemstitches passing through the sides of said hem-portion and the inner ends of said inwardly folded and tucked upper edges, and a vertical line of hem-stitches passing through said hem-portion adjacent to one end thereof, substantially as and for the purposes described.

5. A detached bottom edging or hem for curtain material comprising a strip of material doubled upon itself longitudinally to provide a hem-portion, the free upper edges of said strip of material being folded inwardly and tucked between the sides of said hem-portion to provide a double edge forming an intervening pocket or receiving space therebetween, a line of longitudinally extending hem-stitches passing through the sides of said hem-portion and the inner ends of said inwardly folded and tucked upper edges, a vertical line of hem-stitches passing through said hem-portion adjacent to one end thereof, and an ornamental lace-edging secured to the lower edge of said hem-portion, said lace-edging having a free end or tail projecting beyond one end of said hem-portion so that the same may be turned around and secured to said end of said hem-portion, substantially as and for the purposes set forth.

1,173,928. SHIPPING-CRATE. GEORGE CHAPMAN, Kearney, N. J., assignor to The Nairn Linoleum Company, Kearney, N. J., a Corporation of New Jersey. Filed May 14, 1915. Serial No. 28,082. (Cl. 217—36.)



1. A shipping crate of the character described, comprising heads, slats extending between the same and having their ends flush with the outer faces of said heads, in combination with cleats on the outer faces of said heads serving to protect the ends of the slats against impact when the crate is dropped on end or at any angle less than substantially 45° from the perpendicular.

2. A shipping crate of the character described, comprising two-part heads, slats extending between corresponding head parts at opposite ends of the crate, to form independent coöperating cradle sections, the ends of the slats having their ends flush with the outer faces of their respective head sections, in combination with cleats on the outer faces of said heads serving in the finished crate to unite said cradle sections and at the same time to protect the ends of the slats against impact when the crate is dropped on end or at any angle less than substantially 45° from the perpendicular.

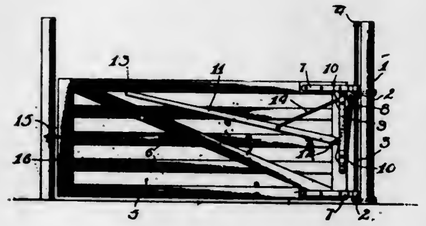
3. A shipping crate of the character described, comprising two-part heads, slats extending between corresponding head parts at opposite ends of the crate, to form independent coöperating cradle sections, the ends of the slats having their ends flush with the outer faces of their respective head sections, in combination with cleats mounted on the outer faces of the said respective head sections and overlapping and secured to the coöperating head sections in the finished crate, said cleats serving to protect the ends of the slats against impact when the crate is dropped on end or at any angle less than substantially 45° from the perpendicular.

4. A shipping crate of the character described, comprising two-part heads, slats extending between corresponding head parts at opposite ends of the crate, to form independent coöperating cradle sections, the ends of the slats having their ends flush with the outer faces of their respective head sections, in combination with interlocking cleats mounted on the outer faces of the respective head sections and overlapping, in interlocked relation, the coöperating head sections in the assembled condition of the parts, said cleats being secured to both head sections in the finished crate and serving to protect the ends of the slats against impact when the crate is dropped on end or at any angle less than substantially 45° from the perpendicular.

5. A shipping crate of the character described, comprising two-part heads, slats extending between corresponding head parts at opposite ends of the crate, to form independent coöperating cradle sections, the ends of the slats having their ends flush with the outer faces of their respective head sections, in combination with cleats mounted on the outer faces of the respective head sections and respectively overlapping and secured to the coöperating head sections in the finished crate, each of said cleats extending completely across the finished head from one margin to the opposite margin.

[Claims 6 to 8 not printed in the Gazette.]

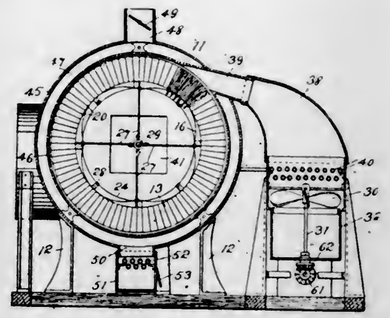
1,173,929. GATE. FRANK CHRIST, Turkey River, Iowa, assignor of one-third to E. W. Christ and one-third to L. J. Christ, Turkey River, Iowa. Filed July 6, 1915. Serial No. 38,253. (Cl. 39—14.)



The combination with a hinge bar suitably mounted parallel to a vertical support, of a substantially rectangular gate with horizontally extending rails connected by vertical uprights at either end having its rear upright adjustably hinged at the top and bottom to said bar, an adjusting lever fulcrumed at one end intermediate the ends of said rear upright and extending forwardly from the same, a bracket having an outwardly extending body portion with laterally projecting feet secured to the same side of the rear upright to which the adjusting lever is fulcrumed, a pair of pulleys mounted between the body portion of the bracket and said upright in vertical alinement, a gate supporting hook mounted on the hinge bar and spaced a short distance below the upper hinge, a cable connected at one end to the gate supporting hook and extending downwardly and under the lowermost pulley and then upwardly and over the upper pulley, said cable having its free end extending forwardly and secured to the adjusting lever adjacent the fulcrumed end of the same, and a hook arranged on the forward end of said lever adapted to engage one of the horizontally extending rails on said gate whereby upon movement of the lever to different rails, the gate is vertically adjustable to various positions.

1,173,930. METHOD AND APPARATUS FOR CURING BEANS. CHARLES A. CLARK, New York, N. Y. Filed May 1, 1908. Serial No. 430,347. (Cl. 34—5.)

1. In an apparatus of the character described, the combination with a frame, of a double casing, a wheel within said casing having radial pockets arranged at the periphery, means for rotating the wheel and a means for supplying a current or currents of chemically treated heated dry air which passes radially through the wheel, around the beans toward the axis of the wheel and finally is discharged at said axis of wheel.



2. In an apparatus of the character described, the combination of a frame, having a holder with radial pockets therein arranged for holding beans to be subjected to a current of heated and chemically treated dry air, a means for heating and chemically treating air and a means for keeping air in circulation.

3. The combination with a plurality of revolving wheels, of a means for supporting the same, each wheel being constructed so as to hold radially upon its periphery beans to be cured or treated, means for rotating the wheels, a means for supplying a continuous current or currents of heated and chemically treated dry air and a thermostatic safety device attached thereto.

4. The combination with a movable wheel having radially arranged pockets, to hold beans to be cured or treated, said pockets arranged in the aforesaid holder so that the centrifugal force of the moving wheel will maintain beans in a peripherical and radial position, means for rotatingwheel, means for maintaining a continuous circulation of heated and chemically treated dry air and a thermometrical safety device.

5. The combination with a plurality of wheels of means for supporting the same, each wheel comprising a plurality of cages and each cage provided with a plurality of individual pockets differing in size from the pockets of the other cages and adapted to hold the beans to be treated, means for rotating the wheels, means for supplying air to the wheels and maintaining a substantially uniform temperature therein, and means for removing the air as it is charged with moisture.

[Claims 6 to 25 not printed in the Gazette.]

1,173,931. PROCESS OF PRODUCING COATING COMPOSITIONS OF ACETYL CELLULOSE. LOUIS CLÉMENT, Paris, and CLÉRY RIVIÈRE, Pantin, near Paris, France, assignors to Actien Gesellschaft Fur Anilin Fabrikation, Berlin, Germany. Filed Nov. 3, 1913. Serial No. 798,999. (Cl. 134—79.)

1. In a process for producing coatings of cellulose ester the step which consists in dissolving cellulose ester in a mixture of acetylene tetrachlorid and a substance which enhances the solvent power of acetylene tetrachlorid for the ester and evaporates uniformly with the acetylene tetrachlorid.

2. In a process for producing coatings of acetyl-cellulose, the step which consists in dissolving the acetyl-cellulose in a mixture of acetylene tetrachlorid and a substance containing amyl alcohol.

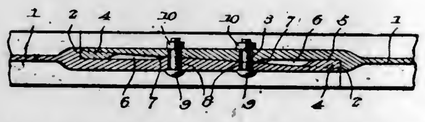
3. In a process for producing coatings of acetyl-cellulose, the step which consists in dissolving the acetyl-cellulose in a mixture of acetylene tetrachlorid and amyl alcohol.

4. In a process for producing coatings of acetyl-cellulose, the step which consists in dissolving the acetyl-cellulose in a mixture of 90 parts by weight of acetylene tetrachlorid and 10 parts by weight of amyl alcohol.

1,173,932. BREAKFAST FOOD. GRACE COCKRELL, Niagara Falls, N. Y. Filed Dec. 8, 1915. Serial No. 65,781. (Cl. 99—10.)

A cereal food consisting of about twelve parts wheat bran, five parts cornmeal, and three parts oat flour.

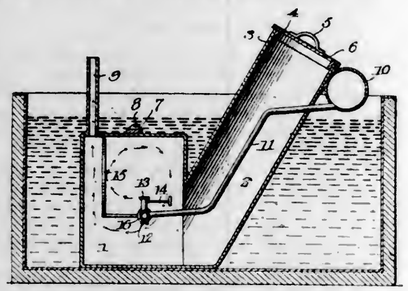
1,173,933. RAILWAY-RAIL. ADOLPH COUSINEAU, Benicia, Cal. Filed July 26, 1915. Serial No. 41,979. (Cl. 239—8.)



1. In combination with two rails, each of said rails having its head, web and base incut to provide a shoulder and being further cut or formed to provide a flat face which is arranged at an angle from the said shoulder to the end of the said rail, the said flat face, at its outer end being centrally formed with a longitudinal dove-tailed lug, said face adjacent the shoulder of the rail being centrally formed with a longitudinally extending dove-tailed slot to receive the lug of the adjacent rail, and being further formed with a longitudinally extending widened depression communicating with the slot, all as and for the purpose set forth.

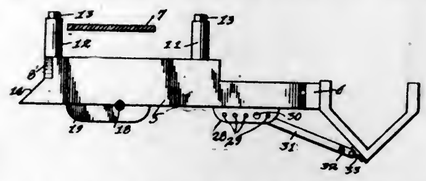
2. In combination with two rails, each of said rails having its head, web and base incut to provide a shoulder and being further cut or formed to provide a flat face which is arranged at an angle from the said shoulder to the end of said rail, the said flat face, at its outer end being centrally formed with a longitudinal dove-tailed lug, the said face adjacent the shoulder of the rail being centrally formed with a longitudinally extending dove-tailed slot to receive the lug of the adjacent rail, and being further formed with a longitudinally extending widened depression communicating with the slot, and the ends of the rails between the lugs and depressions thereof being provided with transverse openings which are adapted to aline when the rail ends are assembled, and securing elements passing through the said openings.

1,173,934. OIL-BURNING STOCK-TANK HEATER. HENRY T. DAHMS, Walcott, Iowa. Filed Apr. 25, 1914. Serial No. 834,467. (Cl. 126—360.)



In a tank heater of the class described, a body, spaced inlet and outlet pipes communicating with the interior of said body between the ends thereof, said pipes extending above the body to enable the same to be submerged, a burner pipe extending longitudinally of and within said body, and provided with spaced burners, deflectors disposed between said burners and outlet pipe, and a forked arm carried by each deflector detachably and adjustably connected with the burner pipe.

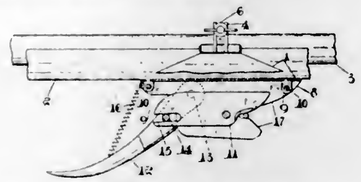
1,173,935. BELT GUIDE AND THROWER. HENRY DIGBE and JOSEPH NELSON, Toronto, S. D.; said Nelson assignor to Elmer E. Eveson, Toronto, S. D. Filed June 9, 1915. Serial No. 33,141. (Cl. 64—4.)



1. A device of the class described comprising a body member provided with a longitudinal dove-tail groove, a slide member held in the groove and comprising a relatively long section and a short section hinged thereto, guide rollers carried by each of the sections, the body being provided with an opening in its bottom communicating with the slot, a shaft journaled across said opening, a gear on the said shaft extending through the opening, and gear teeth formed on the bottom of the longer slide section.

2. A device of the class described comprising a body member, means for securing one end of the body member to a support and adjustable brace means for the intermediate portions of the body member including a longitudinal cleat thereon, a brace bar secured to the cleat and longitudinally adjustable with relation thereto, a shoe pivoted to the brace bar and means for securing said shoe to a support.

1,173,936. WIRE-CUTTING ATTACHMENT FOR FIREARMS. JAMES CALIB DOUST, Toronto, Ontario, Canada, assignor of three-fourths to James H. Lumbers, Toronto, Ontario, Canada. Filed Apr. 9, 1915. Serial No. 20,228. (Cl. 42—90.)



1. The combination with a supporting device of a wire-cutting attachment clamped thereto comprising a stationary shear blade, having a forwardly facing jaw formed therein; a movable shear blade coöperating with one side of the jaw of the stationary blade; a pivoted handle adapted to actuate the movable blade and suitably positioned that it may be actuated by a hand grasping it and the support; and a spring tending to move the handle to the position it assumes when the movable blade is closed, the two blades being shaped so that by forward pressure against a wire the movable blade will open.

2. The combination with a supporting device of a wire-cutting attachment clamped thereto comprising a stationary blade having a forwardly facing jaw formed therein with a flaring mouth; and a movable blade fulcrumed on the stationary blade back of the jaw and adapted to coöperate with one side of the jaw; an operating handle pivoted on the stationary blade forward of the rear end of the movable blade; and an operating connection between the handle and the rear end of the movable blade.

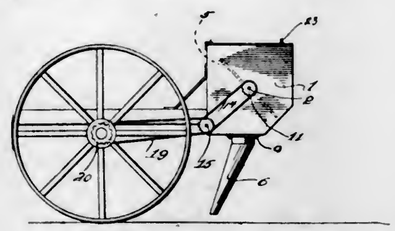
3. The combination with a supporting device of a wire-cutting attachment clamped thereto comprising a stationary blade having a forwardly facing jaw formed therein with a flaring mouth; a movable blade fulcrumed on the stationary blade back of the jaw and adapted to coöperate with one side of the jaw; an operating handle pivoted on the stationary blade forward of the rear end of the movable blade; and a pin-and-slot operating connection between the handle and the rear end of the movable blade.

4. The combination with a supporting device of a wire-cutting attachment clamped thereto comprising a stationary blade having a forwardly facing jaw formed therein with a flaring mouth; a movable blade fulcrumed on the stationary blade back of the jaw and adapted to coöperate with one side of the jaw; an operating handle pivoted on the stationary blade forward of the rear end of the movable blade; an operating connection between the handle and the rear end of the movable blade; and a spring tending to move the handle to the position it assumes when the movable blade is closed, the movable blade being shaped to coöperate with the jaw of the stationary blade so that by forward pressure against a wire the movable blade will open.

5. A wire cutting attachment for fire arms comprising detachable means for securing it to a rifle; coöperating movable and stationary blades normally spring retained in closed position, the two blades being shaped so that by forward pressure against the wire the movable blade will open; and a handle adapted to operate the movable blade positioned so that it may be actuated by a hand grasping the rifle barrel.

[Claimes 6 to 10 not printed in the Gazette.]

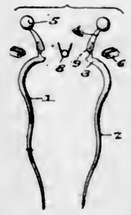
1,173,937. FERTILIZER-DISTRIBUTER. LUTHER H. DUKE, Sabanno, Tex. Filed Apr. 21, 1914. Serial No. 833,554. (Cl. 111—15.)



A fertilizer distributer comprising a front wall, means for securing said front wall to a planter, side walls formed on said front wall, an inclined rear wall secured to said side walls, a top hinged to said front wall, a bottom formed on said walls and provided with a central opening therein, a spout secured to said bottom wall in registration with the opening therein, guide ways formed on said spout, a door slidably mounted on said guide ways adapted to open and close said spout, braces secured to the side walls and provided with their lower ends bent at right angles to conform with the bottom wall and rest thereon, a shaft journaled in the upper end of said braces, and in said side walls, a plurality of arms mounted on said shaft adapted to come in close contact with the inclined rear wall so as to agitate the fertilizer within said walls and means for rotating said shaft.

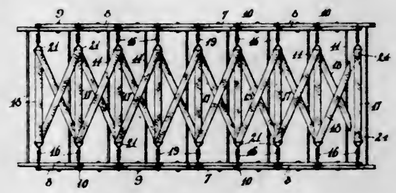
1,173,938. HAIR-PIN. FRANK EBERL, New York, N. Y. Filed Oct. 13, 1914. Serial No. 866,484. (Cl. 132—22.)

A hair pin comprising legs having pointed end portions, said legs being provided in the vicinity of their other ends with inwardly disposed arcuate shoulders having upstanding extremities, said extremities being provided at their outer sides with recesses and at their inner sides with notches and having interiorly located recesses which open into the said notches, clips applied to the extremities at the upper ends of the shoulders and lying in the recesses provided at the outer sides of the extremities, a pivot pin securing the clips together, and a spring located between the opposite side portions of the clips and coiled



about the intermediate portion of the pivot, the coil of the said spring being housed in the said notches and the ends of the spring seated in the interiorly located recesses which enter the notches.

1,173,939. FOLDING BED-SEAT. AXEL ECKBERG and GUSTAF OHRSTROM, Jamestown, N. Y. Filed Aug. 22, 1914. Serial No. 858,033. (Cl. 5—5.)



1. In a folding article of furniture, the combination of two spaced collapsible side members, a series of loops yieldingly connected to the tops of said side members, transversely-disposed stretches of webbing connecting said two series of loops in pairs, and two stretches of diagonally-disposed webbings laced through said loops and lying respectively above and beneath the ends of said transverse stretches of webbing.

2. In a folding article of furniture, the combination of two spaced collapsible side members, yielding supporting devices including loops connected to the tops of said side members, said supporting devices being arranged in two series with the devices of one series directly opposite those of the other, transverse stretches of webbing connected to the loops of opposite supporting devices, and two stretches of webbing laced through said loops and directed diagonally back and forth from one series of supporting devices to the other, said diagonally-directed stretches of webbing lying in contact with the ends of said transverse stretches of webbing above and beneath the same and crossing each other at points between said transverse stretches of webbing.

3. In a folding article of furniture, the combination of collapsible side members spaced rigidly from each other, said side members comprising pivotally connected bars, a supporting member extending from side member to side member and comprising supporting devices formed of wire coiled medially into spring-form and having the wire at one end extended from the spring to provide a U-shaped securing portion and the other end of the wire bent into loop form, said U-shaped securing portions being fastened to the upper ends of said bars to pivotally connect said ends, and stretches of webbing passed through the loops at opposite sides.

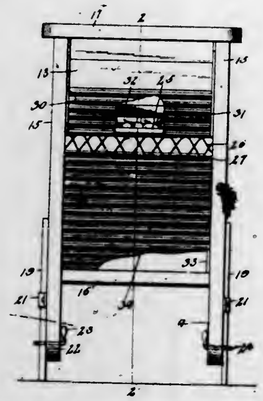
4. In a folding article of furniture, the combination of two collapsible side members spaced rigidly one from the other, said side members comprising a series of crossed bars pivotally connected together with the upper end of each bar meeting another at a common point and provided with registering openings at such points, and a supporting member extending from the upper ends of

the bars of one side member to the upper ends of those of the other, said supporting member comprising supporting devices having their outer end portions passed through the registering openings at the meeting points of said bars to serve as pivots for the same and being provided with loops at their opposite ends, and stretches of webbing connected to said loops.

5. In a folding article of furniture, the combination of collapsible side members, supporting devices secured to the tops of said side members and extending inwardly therefrom, each of said supporting devices having a loop at its inner end, transversely-disposed stretches of webbing connecting opposite loops, and two stretches of diagonally-disposed webbings passed through said loops and extending above and beneath the ends of said transversely-disposed stretches of webbing, the end of said two stretches of diagonally-disposed webbings being secured to the end stretches of transversely-disposed webbings.

[Claims 6 and 7 not printed in the Gazette.]

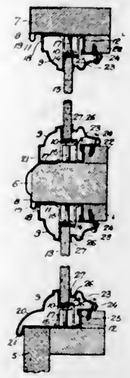
1,173,940. WASHBOARD. ELMER L. FEESE, Plevna, Kans. Filed Apr. 11, 1914. Serial No. 831,192. (Cl. 68—29.)



In a washboard, a frame having side members, a top member and a back member, a roller supported for rotation closely adjacent to the lower edge of the back member, a corrugated plate secured with its upper edge in proximity to the lower forward portion of the roller, said plate constituting a stationary rubbing surface, cleats secured on the inner faces of each of the side members above the roller, and a corrugated cover member constituting a rubbing surface guided slidably by the cleats and normally contacting with the upper forward portion of the roller, said side member, back member and cover member combining with the roller to constitute a soap receptacle, and said roller being provided with spirally disposed soap receiving grooves or indentations in the surface thereof.

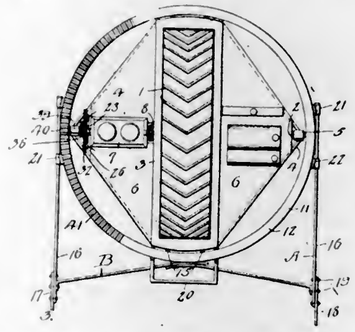
1,173,941. WINDOW-FRAME. NOAH FELLS, New York, N. Y. Filed Feb. 14, 1912. Serial No. 677,435. (Cl. 189—78.)

Means for mounting a glass in a frame comprising a strip mounted in the frame and having a portion which lies against the outer surface of the glass at the edge portion thereof, said strip also having a portion which lies opposite the edge of the glass, the strip further having a portion which lies approximately parallel with the inner surface of the glass and spaced from the same, a bridge block interposed between the body portion of the strip and the edge portion of the strip which lies opposite the edge of the glass, said bridge block having a shoulder disposed across the edge of the said edge portion of the strip and toward the edge of the glass, a securing device passing through the block and the body portion of the strip and lying at the opposite side of the said edge portion of the strip from that side thereof which is adjacent the edge of the glass, the mounting also including another strip having approximately parallel edge flanges, one of which lies against the inner surface of the glass and the



other engages the inner surface of the last mentioned portion of the first mentioned strip, and a securing device passing transversely through the last mentioned strip and entering the frame whereby the flanges of the last mentioned strip are pressed in close contact with the glass and the first mentioned strip.

1,173,942. TRACTOR. CLARENCE G. FLEMING, Phillips, Nebr. Filed Oct. 17, 1914. Serial No. 867,189. (Cl. 21—114.)

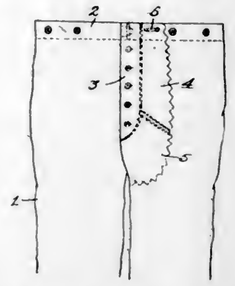


Tractor mechanism comprising a normally horizontal non-rotating circular guide frame, a horizontal axle extending diametrically of said frame, rollers at the extremities of said axle working in contact with said frame, a traction wheel located centrally of said axle and frame, a motor-supporting frame supported by said axle, rollers on the last named frame working in contact with said circular guide frame, a motor carried by said motor-supporting frame and geared to said traction wheel, and steering means for turning the last named frame, comprising a train of wheels driven by the motor and adapted to engage said guide frame in such manner as to impart a turning movement to the motor-supporting frame in either direction.

1,173,943. TROUSERS-PROTECTOR. CHARLES A. B. FLENNIKEN, Watertown, Mass. Filed July 24, 1915. Serial No. 41,652. (Cl. 2—126.)

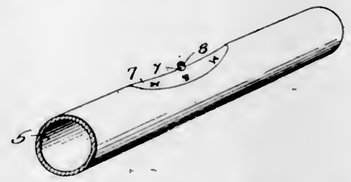
A trousers protector, comprising a body portion of textile material, and a lower curved portion of waterproof material attached to said body portion and adapted to

cover the crotch and to extend over the front wall of the trousers when its side edge is alined with the trousers



fly, and means for securing said body portion detachably to the waistband of the trousers.

1,173,944. MANDREL FOR MAKING INNER TUBES FOR TIRES. CHARLES E. FOUTTS, East Liverpool, Ohio. Filed Apr. 26, 1915. Serial No. 24,121. (Cl. 154—5.)



1. A mandrel for forming inner tubes for tires having a valve patch receiving depression therein.

2. A mandrel for forming inner tubes for tires having a valve patch receiving depression therein of such depth as to bring the outer surface of the patch applied thereto flush with the surface of the mandrel adjacent to said depression.

3. A mandrel for forming inner tubes for tires having a valve patch receiving depression therein, and a valve opening forming means projecting outwardly from the base of said depression.

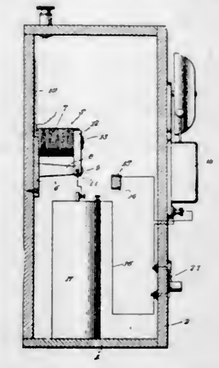
4. A mandrel for forming inner tubes for tires having a valve patch receiving depression therein, and a valve opening forming plug projecting outwardly from the center of said depression.

5. A mandrel for forming inner tubes of tires having a valve receiving patch therein, and a tubular plug projecting outwardly from the center of said depression.

[Claims 6 and 7 not printed in the Gazette.]

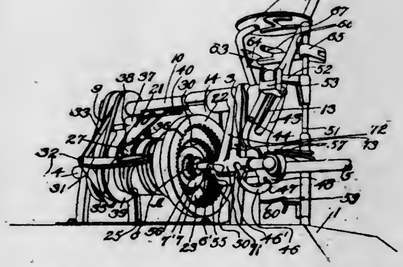
1,173,945. BURGLAR-ALARM APPARATUS. WILBUR H. GABEL, Kintyre, N. D. Filed Aug. 11, 1914. Serial No. 856,187. (Cl. 177—314.)

In burglar alarm apparatus, a box, a door closing one wall of said box, a local alarm circuit including a bell fastened to the outer surface of said door, a source of energy within said box, a stationary contact disposed in a horizontal plane, a cross bar secured to the opposite side walls of said box and carrying said contact, a base plate secured to the wall of said box opposite from said door, electro-magnets secured to said plate adjacent to the upper edges thereof and spaced apart, horizontal arms projecting outwardly from said plate adjacent to the lower edge thereof and spaced apart horizontally and having the outer ends thereof formed with alining openings, set screws threaded into said openings and having the confronting ends thereof formed with axially alining depressions, a horizontal pivot pin having the opposite ends thereof journaled in said depressions, an arm fixed upon said pin, an armature carried by said arm and adapted to be held against the pole faces of the magnets when the latter are energized to hold said arm in a vertical position, said magnets when deënergized releasing said armature whereby said arm will drop to horizontal



position to engage said stationary contact, connections between the respective terminals of said local alarm circuit and said stationary contact and arm, and a main circuit extending through the protected points and normally closed and including said magnets and adapted when opened to deënergize said magnets.

1,173,946. VARIABLE-SPEED-TRANSMISSION MECHANISM. ROY HANMORE GERARD, Berkeley, Cal. Filed Dec. 8, 1911. Serial No. 664,647. (Cl. 74—58.)



1. In variable speed gearing, the combination of a driving element, a driven member comprising change speed gears, and an operating device capable of shifting the driving element and of moving the change speed gears of the driven member whereby to effect changes of speed of the driven member.

2. In variable speed gearing, the combination of a driving gear, a driven member, operating means for coupling said driving gear directly with the driven member, a gear member composed of gears of different diameters and connected to the driven member, and means controlled by said operating means for moving said gear member to effect transition of the driving gear from one of the gears of the gear member to another of said gears.

3. In variable speed gearing, the combination of a driving gear, a driven member, operating means for coupling said driving gear directly with the driven member, a gear member composed of gears of different diameters and connected to the driven member, and means controlled by said operating means for swinging said gear member to effect transition of the driving gear from one of the gears of the gear member to another of said gears.

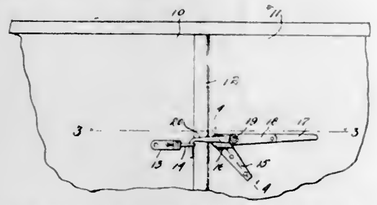
4. In variable speed gearing, the combination of a driving gear, a driven member, a gear member connected

to one of the first mentioned members and composed of gears of different diameters, a common operating device for imparting relative movement to the driving and driven gears to couple the same, and for shifting the gears of the gear member into successive engagement with the other of the first mentioned members.

5. In variable speed gearing, the combination of a driving gear, a driven element adapted to be alined with said gear, means for shifting the driving gear to couple the same directly with the driven element, a gear member carried by the driven element and composed of gears of different diameters, and means controlled by said shifting means for also shifting said gear member to effect transition of the driving gear from one to another of the gears of the gear member.

[Claims 6 to 38 not printed in the Gazette.]

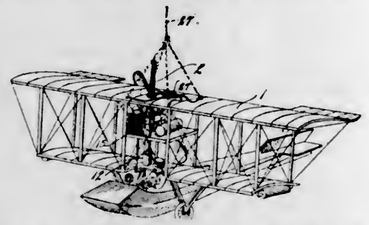
1,173,947 SLIDING-DOOR FASTENER. CLARK GIBSON, Adamstown, Md. Filed July 23, 1915. Serial No. 41,551. (Cl. 70—102.)



1. A fastener for sliding doors comprising a keeper member, a bracket mounted on the sliding door, a lever pivotally carried by the bracket, a latch member eccentrically pivoted on the lever, and a brace connected to the lever and to the pivot of the latch.

2. A fastener for a pair of sliding doors, comprising a keeper member mounted on one of the doors, a bracket having an offset portion mounted on the other door, a lever pivotally mounted in the offset portion of the bracket, a latch pivotally mounted on the lever outwardly of the pivot thereof, and a brace member connected to the lever adjacent the outer end thereof and to the pivot of the latch outwardly of said latch.

1,173,948. SAFETY APPLIANCE FOR FLYING-MACHINES. GEORGE GIEM, Palmer Lake, Colo. Filed June 29, 1915. Serial No. 37,071. (Cl. 244—21.)



1. In a safety device of the class described, the combination of a flying machine and auxiliary sustaining means normally disposed in inoperative position, discharging mechanism for rendering the sustaining means effective, means for automatically operating the discharge mechanism upon disablement of the main sustaining means of said machine, and controlling means for rendering the automatic operating means effective or ineffective at will, comprising a locking member movable into and out of contact with the operating means aforesaid.

2. In a safety device of the class described, the combination with a flying machine, of auxiliary sustaining means comprising a parachute disposed in inoperative position on said machine, discharging mechanism for rendering said parachute effective, including a hammer member, a lever arranged adjacent to the hammer member and adapted for engagement with said hammer member at one end thereof, automatic control means coacting with the other end of said lever and operable to cause disengagement of the hammer member, locking means engageable with the hammer engaging end of the lever aforesaid, and means for actuating the locking means to release the lever.

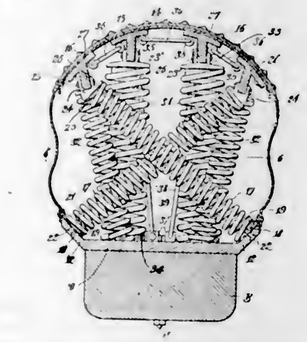
3. In a safety device of the class described, the combination with a flying machine, of auxiliary sustaining means comprising a parachute disposed in inoperative position on said machine, discharging mechanism for rendering said parachute effective, including a hammer member, a lever arranged adjacent to the hammer member and adapted for engagement with said hammer member at one end thereof, automatic control means coacting with the other end of said lever and operable to cause disengagement of the hammer member, locking means engageable with the hammer engaging end of the lever aforesaid, means for actuating the locking means to release the lever, and manual means connected to the lever for releasing the hammer independently of the automatic control.

4. In a safety appliance of the class described, the combination of a parachute, discharging mechanism for rendering said parachute effective for sustaining purposes comprising a gun, firing mechanism for said gun comprising a removable charge sustaining member, a firing hammer carried thereby, a spring actuated hammer engaging member for holding the latter in firing position, and means for releasing the spring actuated member.

5. In combination, a flying machine, a safety appliance therefor comprising a parachute, a tubular casing on said machine normally carrying the parachute in collapsible condition, said parachute surrounding the casing, an adjustable retainer surrounding the casing and engaging the ends of said parachute for retaining the same in collapsed condition, and means for discharging the parachute from said casing.

[Claims 6 to 10 not printed in the Gazette.]

1,173,949. TIRE. CHARLES S. GILLILAND, Springfield, Mo. Filed June 12, 1915. Serial No. 33,814. (Cl. 152—8.)



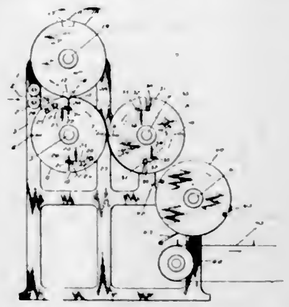
1. A tire of the class described comprising a channeled annulus adapted to be secured to the felly of a wheel, a flexible casing connected with the side flanges of the annulus and having a thickened tread, a reinforcing plate secured to the inner surface of the casing at the tread thereof, hoops fixed to the reinforcing plate and having hanger webs, washer bearings resting against the annulus, hanger bearings pivoted to the said hanger webs, and compression members connected with the said bearings and engaged with the washer bearings.

2. A tire of the class described comprising a channeled annulus adapted to be secured to the felly of a wheel, a flexible casing connected with the side flanges of the annulus and having a thickened tread, a reinforcing plate secured to the inner surface of the casing at the tread thereof, hoops fixed to the reinforcing plate and having hanger webs, washer bearings resting against the annulus, hanger bearings pivoted to the said hanger webs, compression members connected with the said bearings and engaged with the washer bearings, and links connecting the hoops to each other.

3. A tire of the class described comprising a channeled annulus adapted to be secured to the felly of a wheel, a flexible casing connected with the side flanges of the annulus and having a thickened tread, a reinforcing plate secured to the inner surface of the casing at the tread thereof, a plurality of hoops secured to the plate, hanger bearings pivoted to the hoops, and a plurality of coiled compression springs supported upon the annulus and engaged with the hanger bearings.

4. A tire of the class described comprising a channeled annulus adapted to be secured to the felly of a wheel, a flexible casing connected with the side flanges of the annulus and having a thickened tread, a reinforcing plate secured to the inner surface of the casing at the tread thereof, a plurality of hoops secured to the plate, hanger bearings pivoted to the hoops, a plurality of coiled compression springs supported upon the annulus and engaged with the hanger bearings, certain of said springs being arranged in diagonal relation and crossing each other at the center of the casing, and anchor members working in opposition to each other and connected with one of the hoops and to the annulus.

1,173,950. CUTTING AND FOLDING MACHINE. SAMUEL G. GOSS, Chicago, Ill., and RALPH C. SEYMOUR, Larchmont, N. Y., assignors to Goss Printing Press Company, a Corporation of Illinois. Filed June 10, 1914. Serial No. 844,153. (Cl. 101—120.)



1. A folding and cutting machine including in combination a traveling member carrying an obliquely positioned cutter, a compensating device, and carrying also a member of a device for folding the cut sheet, and traveling means carrying a coöperating compensating device and a coöperating folding device.

2. A folding and cutting machine including in combination a rotary member carrying an obliquely positioned cutter, a compensating device, and carrying also a member of a device for folding the cut sheet, and traveling means carrying a coöperating compensating device and a coöperating folding device.

3. A folding and cutting machine including in combination a traveling member carrying an obliquely positioned cutter, a compensating device, and carrying also a member of a device for folding the cut sheet, and rotary means carrying a coöperating compensating device and a coöperating folding device.

4. A folding and cutting machine including in combination a rotary member carrying an obliquely positioned cutter, a compensating device, and carrying also a member of a device for folding the cut sheet, and rotary means carrying a coöperating compensating device and a coöperating folding device.

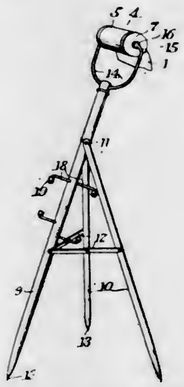
5. A folding and cutting machine including in combination a traveling member carrying an obliquely positioned cutter, a compensating device, and carrying also a member of a device for folding the cut sheet, traveling means carrying a coöperating compensating device, and traveling means carrying a coöperating folding device.

[Claims 6 to 36 not printed in the Gazette.]

1,173,951. MANUFACTURE OF SHEET SILICON ALLOY. OTTO GRAEF, Bismarckhütte, Germany, assignor to the Firm of Bismarckhütte, Bismarckhütte, Germany. Filed June 24, 1914. Serial No. 847,069. (Cl. 148—42.)

The herein described method of treating a plate or sheet of metal alloyed with silicon to increase the permeability and reduce the hysteresis loss in the plate which consists in annealing the plate, pickling the annealed plate in an acid solution, neutralizing the solution, and drying the plate.

1,173,952. BANDAGE-HOLDER. EDWARD GRAHAM, Saginaw, Mich. Filed May 4, 1915. Serial No. 25,764. (Cl. 242—60.)



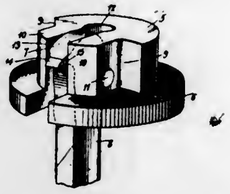
1. A device of the character described comprising a support including relatively movable spring arms provided with recessed bearing members, a casing having an outlet slit, and a bandage roll embodying a core disposed within the casing and bandage material wound in roll form upon the core and adapted to be withdrawn through said slit, the ends of said core having journals projecting through the ends of the casing and mounted to revolve in the recesses of said bearing members.

2. A device of the character described comprising a knockdown stand, a support carried by the stand and comprising relatively movable spring arms provided with recessed bearing members, a casing having an outlet slit, and a bandage roll embodying a core disposed within the casing and bandage material wound in roll form upon the core and adapted to be withdrawn through said slit, the ends of said core having journals projecting through the ends of the casing and mounted to revolve in the recesses of said bearing members.

1,173,953. CUTTING-TOOL FOR FLUES AND TUBES. FREDERICK A. GRIER, Jr., Salisbury, Md. Filed Dec. 27, 1915. Serial No. 68,903. (Cl. 81—188.)

1. In a cutting tool for flues and tubes, a substantially solid body having an integral flange at one end and a slot radially extending from the center of the block and fully through the two terminals including the flange and also outwardly in a lateral direction through the body and flange, and a cutting lever having one end snugly fulcrumed in the slot with a portion projected beyond the fulcrum

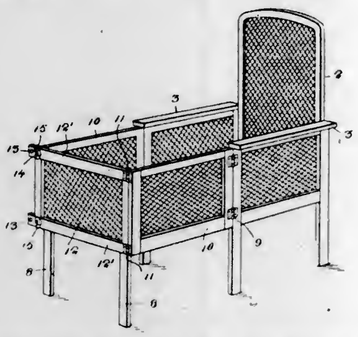
thereof and continuing at one side into an integral offset having a cutter which is movable laterally through the slot, the cutter being fixed to the offset and operating by movement of the lever to produce a free cut, the body being snugly held within the flue or tube to which it is applied.



2. In a cutting tool for flues and tubes, a substantially solid body having a slot radially extending from the center through the periphery thereof, and a cutting lever having a thickness slightly less than the width of the slot and snugly fulcrumed in the latter and provided with a free portion in the slot beyond the fulcrum thereof, the free portion of the lever within the slot beyond the fulcrum having an integral offset at one side edge terminating in a fixed cutter projecting outwardly and guided in its operation by the walls of the slot, the body snugly fitting within the flue or tube to which it is applied and the cutter operable to produce a shearing cut relatively to a flue or tube and normally positioned close to the flue or tube.

3. In a cutting tool for flues and tubes, a substantially solid body mainly circular in form and having a slot radially extending from the center through the periphery thereof, the body being recessed to form bearing lugs, a lever having one end mounted in the slot between the bearing lugs, and a fulcrum pin inserted through the lugs and lever end across the slot and having its opposite ends at a distance inwardly from the periphery of the main portion of the body, the end of the lever within the slot having an offset with a terminal cutter to produce a shearing cut relatively to a flue or tube.

1,173,954. FURNITURE. MARY V. GRIFFITH, Baltimore, Md. Filed June 23, 1915. Serial No. 35,854. (Cl. 5—58.)



1. An article of furniture, a chair, auxiliary side panels hingedly secured to the front stiles of the chair, a panel secured to one of the auxiliary side members, means for securing the said panel to the other auxiliary side member, an auxiliary seat hingedly secured to the outer end of the seat of the chair, and hinged legs upon the said auxiliary seat.

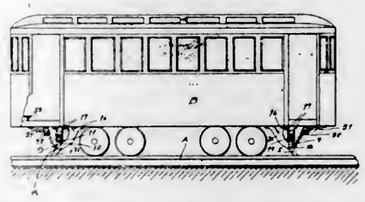
2. A convertible article of furniture, as herein described, including a chair, an auxiliary seat hingedly secured to the seat of the chair, hinged legs for the said auxiliary seat, means for sustaining the legs at right angles to the said seat when the same is swung on a line outward from the seat of the chair, the sides of the chair having arms which project laterally therefrom, auxiliary side members hinged to the front stiles of the chair and disposed beneath the arms, a panel member hingedly secured to the free end of one of the auxiliary sides, the other auxiliary side having projecting threaded studs which pass through openings in the last mentioned panel, a removable element engaging the said studs for retaining the panel upon the said last mentioned auxiliary side.

1,173,955. GLOVE-STRETCHER. HENRY GRUEBER, Stoke Newington, London, England. Filed Sept. 4, 1913. Serial No. 788,131. (Cl. 223—19.)



A glove stretcher comprising a pair of presented. counterpart plates having their opposed surfaces flat and their outer surfaces rounded, each of said plates consisting of a hand portion having a plurality of fingers and a handle extending from the hand portion and forming a complemental wrist portion, a pair of spaced, parallel, apertured lugs extending laterally from the inner face of each of said plates at the junction of said hand and handle portions, the lugs on one plate fitting closely against the lugs on the other plate and having their apertures in alinement with the apertures in the lugs on the other plate, a pin extending through said apertures for pivotally connecting said lugs, and a spring encircling said pin and having its opposite ends engaging with said handle portions to normally hold the hand portions of said plates in contact, said handle portions having their free ends diverging from one another.

1,173,956. SNOW-REMOVER. OSCAR GUGLIELMONE, New York, N. Y. Filed July 25, 1914. Serial No. 853,097. (Cl. 104—100.)



1. A snow remover for railway cars, comprising transverse supporting bars secured to the underside of a car, springs secured to said bars, a block supporting bar secured to said springs, blocks secured to said transverse supporting bar, guides secured to the block supporting bars and provided with slots in the ends thereof adapted

to receive buttons carried by said transverse supporting bars to allow vertical movement of said block supporting bar in relation with the transverse supporting bar, shoe supporting blocks secured to the block supporting bar, rail engaging shoes secured to said blocks, means for heating said shoes and means for raising and lowering said shoes into and out of engagement with a rail of a railroad.

2. A snow remover for railway cars comprising a transversely supporting bar secured to a car, a block supporting bar movably secured to said transverse supporting bar, concavo convex plates rotatably secured to said block supporting bar, blocks secured to said block supporting bar and adapted to bear upon the concavo convex plates, connecting blocks hingedly to said blocks, rail engaging shoes secured to the connecting block, means for holding said shoes in spaced relation to each other, means for heating said shoes, and means for raising and lowering said shoes into and out of engagement with the rails of a railroad.

3. A snow remover for railway cars comprising a transverse supporting bar, a block supporting bar secured to the transverse supporting bar, means for allowing vertical movement of the block supporting bar in relation to said transverse supporting bar, blocks secured to said block supporting bar, concavo convex plates secured to the block supporting bar between the blocks, hooks secured to said block supporting bar and adapted to engage the periphery of said plates connecting blocks hinged to said blocks, rail engaging shoes formed on said connecting blocks, means for heating said shoes, means for holding said shoes in spaced relation to each other and means for preventing rearward movement of the shoes when in an operative position.

4. A snow remover for railway cars comprising a block supporting bar, means for securing said block supporting bar to a car, blocks secured to said block supporting bar, connecting blocks hinged to said blocks and adapted to swing upwardly therefrom, said connecting blocks provided with a passage therein, an angular metallic body portion formed on said connecting blocks and provided with an opening in the rear face thereof, the lower end of said body portion disposed angularly to form track grooved engaging members, said angular body portion provided with a recess adjacent the opening in the rear wall thereof, an electric heating element mounted in said recess and adapted to pass through the opening and into the passage of said connecting blocks for heating the angular body portion so as to melt ice and snow from a rail, means for holding said angular body portion in spaced relation to another body portion, and means for preventing rearward movement of the track engaging members when in an operative position.

5. A snow remover for railway cars comprising a block supporting bar, means for securing said block supporting bar to a car, blocks secured to each end of said block supporting bar, connecting blocks hinged to said block, a rail engaging shoe secured to said connecting block, a brace secured to the underside of a car and extending downwardly into engagement with said blocks and connecting blocks to prevent the rear movement of the shoe when in an operative position, and means for holding said shoes in spaced relation to each other.

[Claim 6 not printed in the Gazette.]

1,173,957. WIRELESS TELEGRAPHY OR TELEPHONY. WALTER HAHNEMANN, Kiel, Germany. Filed Feb. 10, 1913. Serial No. 747,372. (Cl. 250—3.)

1. In a wireless subaqueous or ground signaling system, pairs of subaqueous or ground electrodes at the sending station between which alternating electric current of different phase and of low frequency may be passed to effect transmission of signals by means of current flux uniformly in substantially all directions, in combination with pairs of subaqueous or ground electrodes at the receiving station influenced by electrical energy in the form of current flux propagated from substantially any direction as described.

2. In a wireless subaqueous or ground signaling system, a sending station comprising at least two pairs of subaqueous or ground electrodes arranged so that straight lines passing through the members of each pair would lie at substantially right angles to each other, and between which alternating current of different phase and of low frequency may be passed, for the purpose described.



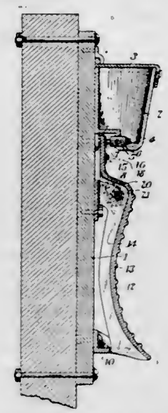
3. In a wireless subaqueous or ground signaling system, a sending station comprising at least two pairs of subaqueous or ground electrodes arranged so that straight lines passing through the members of each pair would lie at substantially right angles to each other, and between which alternating current of different phase and of low frequency may be passed, in combination with a receiving station having a similar subaqueous or ground electrodes arrangement; for the purpose described.

4. In a wireless subaqueous or ground signaling system, a sending station comprising at least two pairs of subaqueous or ground electrodes arranged so that straight lines passing through the members of each pair would lie at substantially right angles to each other, in combination with means for supplying said pairs of electrodes with alternating current of different phase and of low frequency for the purpose described.

5. In a wireless subaqueous or ground signaling system of the character described, a sending station having a plurality of pairs of subaqueous or ground electrodes arranged at substantially equal angles around a common center so that straight lines passing through the members of each pair would cut each other in the center, and means for supplying said pairs of electrodes with alternating current differing in phase and of low frequency, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,173,958. RUBBING-POST. JOHN W. HAINES, Gibson City, Ill. Filed June 22, 1915. Serial No. 35,596. (Cl. 119—157.)



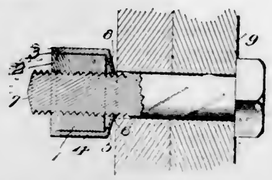
1. A rubbing post comprising a baseboard adapted to be fastened to a support, a reservoir secured to said baseboard, adjacent to the upper end thereof, and having the bottom portion thereof offset downwardly and spaced apart from the baseboard, a valve carried by

the rear wall of said offset portion and provided with a horizontal stem and normally closed, an arm pivoted between its ends upon said baseboard below said reservoir and adapted to be rubbed by the hogs and having the upper end thereof formed with an extension disposed between said valve stem and the adjacent portion of said baseboard and adapted to actuate the valve stem to open the valve in the movement of the lever under the action of the hogs.

2. A rubbing post comprising a baseboard adapted to be fastened to a support, a reservoir secured to said baseboard, adjacent to the upper end thereof, and having the bottom portion thereof offset downwardly and spaced apart from the baseboard, a valve carried by the rear wall of said offset portion and provided with a horizontal stem and normally closed, an arm pivoted between its ends upon said baseboard below said reservoir and adapted to be rubbed by the hogs and having the upper end thereof formed with an extension disposed between said valve stem and the adjacent portion of said baseboard and adapted to actuate the valve stem to open the valve in the movement of the lever under the action of the hogs, and means on said extension adjustable thereon to vary the movement of said valve.

3. A rubbing post comprising a baseboard adapted to be fastened to a support, a reservoir secured to said baseboard, adjacent to the upper end thereof, and having the bottom portion thereof offset downwardly and spaced apart from the baseboard, a valve carried by the rear wall of said offset portion and provided with a horizontal stem and normally closed, an arm pivoted between its ends upon said baseboard below said reservoir and adapted to be rubbed by the hogs and having the upper end thereof formed with an extension disposed between said valve stem and the adjacent portion of said baseboard and adapted to actuate the valve stem to open the valve in the movement of the lever under the action of the hogs, and a wedge block adjustably mounted on said extension to vary the movement of said valve.

1,173,959. NUT-LOCK. WILLIAM F. HAYES, Stroudsburg, Pa. Filed Aug. 2, 1915. Serial No. 43,221. (Cl. 151—14.)



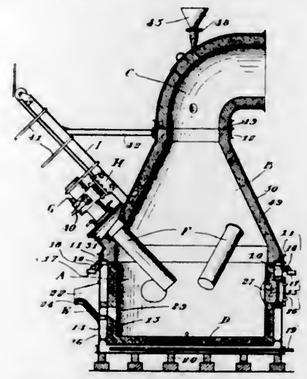
1. A locking nut comprising a nut having a body portion and a circumferential flange, and a locking cap fitting over said nut and adapted to bear at one end against said flange, said cap having thread-engaging means at its other end in line with but spaced apart from the body portion of said nut, said thread engaging means being adapted to be compressed toward said nut.

2. A locking nut comprising a nut having a body portion and a circumferential flange, a locking cap of the same configuration as the body portion of said nut inclosing the latter and adapted to bear at one end against said flange, and thread engaging means at the opposite end of said cap in line with but spaced-apart from the body portion of said nut, said thread engaging means being adapted to move relatively to said nut to lock the latter to a bolt.

3. A locking nut comprising a nut having a body portion and a circumferential flange, and a locking cap corresponding in formation to, and fitting over, said nut and adapted to bear at one end against said flange, the sides of said cap being flush with the edges of said flange, said cap having at its other end a cone-like thread-engaging portion in line with but spaced from the body portion of said nut, said cone-like portion being adapted to be compressed toward said nut to lock the latter to a bolt.

4. In a lock nut, a nut and a cap inclosing said nut, said cap having a thread engaging portion of relatively slight thickness.

1,173,960. ELECTRIC FURNACE. INGENUIN HECHENBLEIKNER, Charlotte, N. C., assignor to Southern Electro Chemical Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 2, 1914. Serial No. 869,830. (Cl. 204—64.)

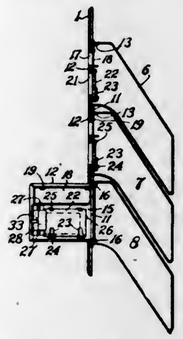


1. In an electric furnace, a track, a trolley mounted thereon, water cooled hinged clamping members depending from the trolley and adapted to engage an electrode.

2. In an electric furnace, a track, a trolley mounted thereon, water cooled hinged clamping members depending from the trolley and adapted to engage an electrode, and stirrup members mounted on the track adapted to support an electrode.

3. In an electric furnace, a track, a trolley mounted thereon, electrode supporting means depending from the trolley, and a plurality of stirrups supported independently of the trolley and adapted to temporarily support the electrode during change of electrodes.

1,173,961. MAIL-BOX. WILLIAM WEIR HENRY, Wollaston, and ALTON E. STEVENS, Atlantic, Mass., assignors to S. H. Couch Co. Inc., Atlantic, Mass. Filed Jan. 12, 1915. Serial No. 1,740. (Cl. 232—19.)



1. In a mail box, a face-plate with a plurality of openings; a plurality of separate, open-ended boxes rigidly secured against said face-plate so their open ends shall each register with one of said openings; and horizontally swinging doors, one for each of said openings and each comprising a stiff, sheet-metal frame with suitable openings, and a flexible sheet-metal veneer rigidly attached to said frame.

2. A mail box comprising a wall-plate with a plurality of openings; a plurality of individual boxes rigidly secured against the rear of said wall-plate and adapted to register with said openings; and a plurality of doors, one for each of said openings, each door comprising a frame with an opening for the insertion of mail matter into its respective box, movable means for closing the opening in said frame, ears struck up from said frame and adapted for the mounting of said movable means, and a flexible metal covering for said frame and rigidly attached thereto so as to conceal said ears from front view and to permit said insertion of mail matter.

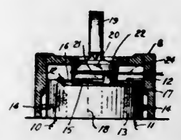
3. In a mail box, a face-plate with suitable openings; a series of individual, open-ended boxes rigidly secured against the back of said face-plate, one against each of said openings; and a series of doors adapted to close said openings, each door comprising a stiff, sheet-metal frame with suitable openings, closers for said openings in said frame, mountings for said closers fast on said frame, and a flexible, sheet-metal covering permanently and rigidly connected with said frame, said covering being adapted to conceal said mountings from front view.

4. In a mail box, a door comprising a frame with suitable openings; a transparent closer behind said frame and adapted to close one of said openings; a movable flap adapted to close the other of said openings; mountings for said closer and said flap formed fast in connection with said frame and visible therethrough; and a flexible metal sheet with openings adapted to register with said openings in said frame, said sheet being permanently and rigidly mounted on the front of said frame and adapted to conceal said mountings from front view.

5. A mail box comprising a wall-plate with a plurality of openings; a plurality of swinging doors adapted to close said openings and provided with apertures for the insertion of mail matter; and a common pintle for said doors; in combination with a plurality of individual, open-ended and inclined boxes adapted to be rigidly secured to the rear of said wall-plate, one independently over each of said openings, all of said boxes being identical in shape and outline.

[Claim 6 not printed in the Gazette.]

1,173,962. ELECTRIC FUSE. WILLIAM DAVID HENSELL, Waverley, near Sydney, New South Wales, Australia. Filed June 17, 1914. Serial No. 845,691. (Cl. 175—278.)

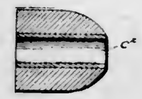


1. An electric device comprising, a rotatable fuse holder carrying a fuse, a stationary cam device, and clamps carried by the fuse holder and adapted to be successively acted upon by the cam device for clamping said fuse on said holder, said cam device being so formed as to cooperate with said clamps for preventing the rotation of the fuse holder in one direction.

2. In an electric fuse holder, a base member formed with a cam surface, a fuse holder having a rotatable movement relative to said cam surface, said holder consisting of radial arms formed with grooves in their extremities adapted to receive fuse wire, and spring contact members secured to the extremities of said arms to cooperate with said cam surface, said contact members being adapted to clamp and retain the fuse wire upon said holder when the contacts are engaging with said cam surface of the base and adapted to successively release said wire when the holder is rotated, said spring contacts coöperating with one end of said cam surface for preventing the rotatable movement of the holder in one direction.

3. An electric fuse comprising a base member formed with a cam surface thereon, a rotatable fuse holder mounted on the base, spring clamps providing contact members carried by the holder and arranged to engage with said cam surface which moves the clamps into engagement with the fuse wire of the holder, circuit terminals on the cam surface adapted to engage with said spring clamps, and a continuous supply of wire for the fuse holder, said clamps being adapted to coöperate with said cam surface for retaining the fuse wire in the holder when the latter is rotated in one direction and to successively release said fuse wire, said spring clamps cooperating with one end of said cam surface for locking the holder against movement in a reverse direction.

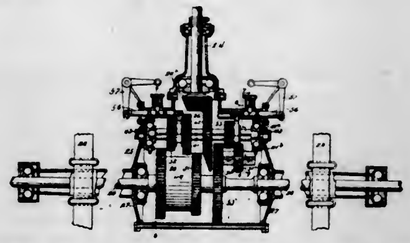
1,173,963. PIPE-BALL. REINHOLD HERMAN and SANFORD A. KNAPP, Crafton, Pa. Filed Jan. 18, 1909. Serial No. 472,988. (Cl. 78—103.)



1. A pipe ball for pipe welding operations comprising a body portion having an operating face formed of a metallic material adapted to provide an excess of fifteen passes of pipe, the operating face remaining substantially constant on a cross section of the ball throughout the passes, whereby the internal diameter of each pipe will be substantially uniform from end to end and the similar diameters of all of the pipes will be substantially constant, said body and its face being integral, the material of said face and body being steel.

2. A pipe ball for pipe welding operations comprising a body portion having an operating face formed of a metallic material adapted to provide an excess of fifteen passes of pipe, the operating face remaining substantially constant on a cross section of the ball throughout the passes, whereby the internal diameter of each pipe will be substantially uniform from end to end and the similar diameters of all of the pipes will be substantially constant, said body and its face being integral, the material of said face and body being self-hardening steel.

1,173,964. TRANSMISSION MECHANISM. REINHOLD HERMAN, Crafton, Pa. Original application filed Jan. 9, 1911, Serial No. 601,754. Divided and this application filed Apr. 25, 1911. Serial No. 623,288. (Cl. 74—48.)



A drive shaft, a driven element, spaced gears of different diameters fixed to the driven element, an intermediate shaft constituting a counter shaft fixedly spaced from the driven element, gearing connecting the counter and drive shafts, a pair of gears splined on the counter shaft and connected for simultaneous movement therealong, said pair of gears lying between the gears on the driven element when in central position and movable into engagement selectively with said gears, a third gear fixed on the driven element, a stub shaft between the driven element and counter shaft, a gear on said stub shaft meshing with the third gear on the driven element, a second gear fixed on the stub shaft, a third gear splined

on the counter shaft and movable into selective engagement with the third gear on the driven element and the second gear on the stub shaft, and means to move the last mentioned gear along the counter shaft.

1,173,965. GALVANIC BATTERY. WILHELM HICKMANN, Frankfort-on-the-Main, Germany, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed May 10, 1911. Serial No. 626,217. (Cl. 204—38.)

1. In a galvanic cell or battery of the Leclanché type, a depolarizer containing a manganite.

2. A depolarizer, for use in combination with the cathode in a Leclanché cell, comprising an acid manganite.

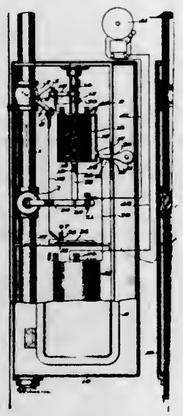
3. A depolarizer for use in combination with the cathode in a Leclanché cell comprising an acid manganite, a portion of the hydrogen of which has been replaced by an element present in a component part of the cell.

4. In a galvanic cell comprising positive and negative elements, a depolarizing mass containing a manganite.

5. A depolarizer for use in combination with the cathode in a Leclanché cell containing an acid manganite adapted to unite with bases formed in the operation of the battery but unable to liberate acid from the salts of the electrolyte.

[Claim 6 not printed in the Gazette.]

1,173,966. AUTOMATIC GAS SHUT-OFF. ELMER JNO. HINKSON, Erie, Pa. Filed July 22, 1914. Serial No. 852,517. (Cl. 67—115.)

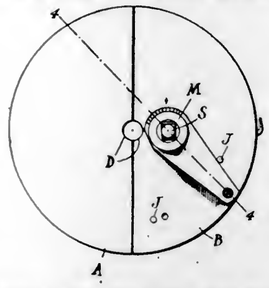


In combination with a duct, a cut off valve therefor, a normally open electric circuit, a solenoid mounted for sliding movement and included in said circuit, a gravity dog arranged in said circuit and adapted to be normally in contact with the solenoid, a circuit closing means connected with said duct and operable upon the diminution of the pressure of the gas therein to close said circuit, thereby energizing the solenoid to release the same from said dog, an arm connected with said cut off valve, and a link terminally connected with said arm and solenoid, whereby when said colenoid is released from the dog the cut off valve is drawn to a closed position.

1,173,967. SECTIONAL EXPANDING DRUM. SAMUEL L. HIRSCHEY, Castorland, N. Y. Filed Aug. 27, 1915. Serial No. 47,669. (Cl. 242—72.)

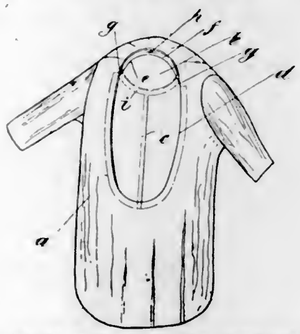
1. An expanding drum for making cylindrical fiber boxes, made up of expanding sections, the circumferences of said sections being made up of rods spaced apart, means upon one of said sections coöperating with one of said rods on the other section to clamp and hold the sheet of fiber to the cylindrical section, while the sheet winds about the drum as the latter is rotated.

2. A sectional expanding drum, the circumferences of which are formed of rods spaced apart, one of said sections having projections thereon which are apertured, a shaft journaled in said apertures, said shaft having a cam thereon adapted to engage the other section to cause the two sections to expand as the shaft is rocked, and clamping means upon said projections coöperating with a rod upon an adjacent section to hold the end of a sheet of paper while being wound about the drum.



3. A sectional expanding drum, the circumferences of which are formed of rods spaced apart, said sections having projections upon the ends thereof which slide in contact with each other to guide the sections of the drum as they are expanded and contracted, a rock shaft journaled in apertures in projections upon one section and having cams engaging the edges of apertures in the other sections, and means for rocking the shaft.

1,173,968. SHIRT. AUGUST HOLSTE, Bielefeld, Germany. Filed Oct. 14, 1911. Serial No. 654,733. (Cl. 2—89.)

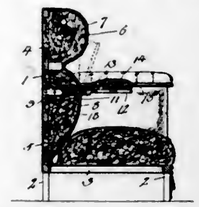


A shirt having a breast opening therein, and a neck opening in communication therewith, a removable bosom fitted in the breast opening of said shirt, a neck band section secured to the shirt at the rear of the neck opening and gradually tapering at its opposite ends and merging into the material at the edges of said breast opening at the juncture of the neck and breast openings, a neck band section secured to the removable bosom and having terminal portions fitting into the neck band section of the shirt, said neck band sections being slidable to and from each other, whereby said neck band can be adjusted to suit any sized collar.

1,173,969. CONVERTIBLE SOFA. ARTHUR HORANCE. North Bay, Ontario, Canada. Filed Dec. 31, 1913. Serial No. 809,708. (Cl. 155—26.)

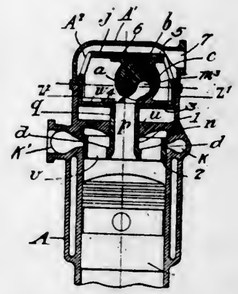
In combination, a sofa seat, a back frame, division pieces rectangular in cross section secured in a vertical position upon said frame, brackets straddling and secured to said division pieces and each being formed with a slot, an arm rest for each bracket having a knuckle pivotally arranged within the arm slot so as to have vertical

swinging adjustment, and a spring pressed plunger housed within each bracket and adapted to bear against the



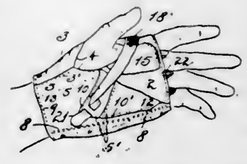
surface of the knuckle to hold the arm in various adjusted positions.

1,173,970. SLIDE-VALVE GEAR FOR FOUR-STROKE EXPLOSIVE-ENGINES. HUGO HÜCKEL, Neutitschein, Austria-Hungary. Filed May 5, 1914. Serial No. 836,513. (Cl. 123—75.)



In a slide valve gear for explosion engines, the combination with the cylinder and the stationary head thereof, of an exhaust port provided in the circumferential wall of the said cylinder, an annular piston valve adapted to move in the said cylinder and to control the said exhaust port, a central hole being provided in said cylinder head, a suction pipe slidably engaged in said hole, a plurality of arms connecting said suction pipe at its lower end with said piston valve, a slide face carried by the upper end of said suction pipe, an inlet port in said slide face, an eccentric above the said slide face, an eccentric strap for said eccentric, a basis on said eccentric strap and adapted to coöperate with said slide face, an inlet port in said basis, and an inlet duct in said eccentric, guides positioned at right angles to said slide face and rigidly connected with the latter, a transverse member (*j*), connecting the outer ends of said guides and adapted to present a slide surface, and a slide member provided on the outer side of said eccentric strap and adapted to coöperate with said transverse member, substantially as and for the purpose set forth.

1,173,971. HAND-COVERING. ERVIN C. HUNTER, Galesburg, Ill. Filed Feb. 23, 1915. Serial No. 10,019. (Cl. 2—9.)

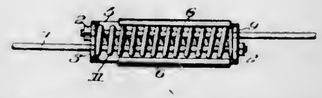


1. An article of the class described comprising elements which combine to constitute a pocket open toward the thumb and fingers, an elastic element adapted to hold the pocket yieldingly closed, and means for regulating the tension of the elastic element.

2. An article of the class described including a back, a palm proper secured thereto, a pocket-wall secured to both of said elements but a substantially triangular corner piece thereof left free, and means for holding said corner piece in yieldingly closed position.

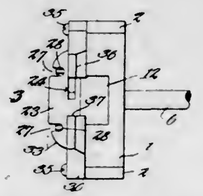
3. An article of the class described comprising a back, a palm, a pocket-wall secured to said palm but having a triangular portion left free, means for holding said triangular portion yieldingly in operative position, and a pocket secured to said palm, confronting the free edge of said wall, and overlapped thereby.

1,173,972. SILO HOOP OR BAND. JAMES G. HUNTER, Naponee, Nebr. Filed Mar. 15, 1913. Serial No. 754,411. (Cl. 217—92.)



A pair of slidably connected inner and outer metallic members bent throughout their longitudinal extent to conform to the contour of a barrel, the outer metallic member having its upper and lower longitudinal edges bent upwardly to provide guide flanges for slidably receiving the inner member, the said inner and outer members being provided with apertured angular ends, an open hoop having each end thereof slidably arranged in the apertures of the ends of said members and disposed in crossed spaced superposed parallel relation one to the other, a spring interposed between the angular ends and embracing the crossed ends of the hoop for normally separating the inner and outer members, and means adjustably mounted on the ends of the hoop and engaging with the angular end of the inner member adjacent its upper edge and with the angular end of the outer member adjacent its lower edge for normally compressing said members against the tension of the spring and preventing any binding of the inner member with the guides of the outer member.

1,173,973. SEWING-MACHINE ATTACHMENT. EDWARD A. ILLIG, Erie, Pa., assignor of one-half to Edward F. Shugart, Erie, Pa. Filed July 8, 1915. Serial No. 38,735. (Cl. 112—22.)

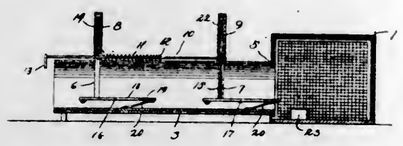


1. In a sewing machine, a spool carrier embodying a front and a back having complemental recesses defining a spool receiving chamber, the front having parallel slots therethrough adapted to receive the flanges of a spool to hold the latter against endwise movement and for rotation and to render the spool accessible for manipulation; means for detachably uniting the front and the back; and means for rotating the carrier.

2. In a sewing machine, an annular support; a spool carrier embodying a back having an outstanding flange coacting with the outer edge of the support; a ring applied to the support and provided with a race receiving the flange; a front; and means for securing the front to the back detachably; the front and the back being pro-

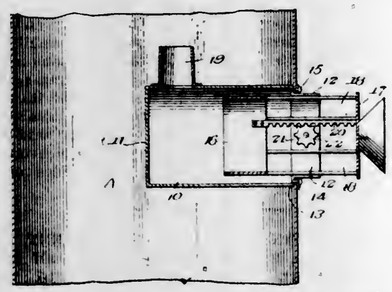
vided with complemental, spool receiving recesses, the support and the ring being provided with coöperating openings in their tops, and the front having a circumferential slot adapted to coöperate with the opening in the ring.

1,173,974. ANIMAL-TRAP. CHARLES H. JACKELS, Rosedale, Kans. Filed Apr. 23, 1915. Serial No. 23,483. (Cl. 43—26.)



An animal trap comprising a cage, a runway extending therefrom, said runway having spaced slots therein, housings secured to and extending outwardly of the runway in alinement with the slots, a rod rotatably engaged through the housings, oppositely extending gates secured to the rod within the housings, means for rotating the rod, a keeper member carried by each of the gates, and spring pressed trip members located in the runway and arranged to alternately engage and release the keeper members.

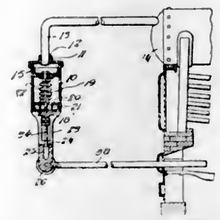
1,173,975. ADJUSTABLE AIR-DAMPER FOR STOVE-PIPES. VICTOR B. JENSEN, Cayuga, N. D. Filed Sept. 11, 1915. Serial No. 50,257. (Cl. 126—293.)



1. The combination with a stove pipe, of a damper comprising a hollow body mounted interiorly of the said pipe and having a closed inner end, an outlet nipple on the said body and within the stove pipe, a reduced extension on the outer end of the body and protruding without the stove pipe, a cylinder slidable through the reduced extension and being open at its inner end and having a damper head at its outer end to provide a closure for the outer end of the reduced extension, the said cylinder being provided with openings next to the head, and means for operating the cylinder for moving the same outwardly or inwardly relative to the body.

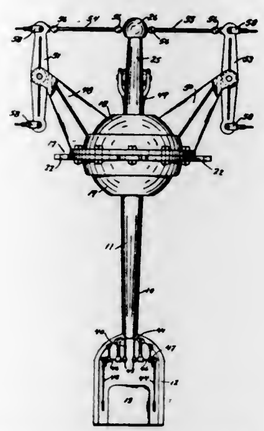
2. The combination with a stove pipe, of a damper comprising a hollow body mounted interiorly of the said pipe and having a closed inner end, an outlet nipple on the said body and within the stove pipe, a reduced extension on the outer end of the body and protruding without the stove pipe, a cylinder slidable through the reduced extension and being open at its inner end and having a damper head at its outer end to provide a closure for the outer end of the reduced extension, the said cylinder being provided with openings next to the head, a rack bar interiorly of the cylinder, a cog gear meshing with the rack bar, a shaft for operating the gear and journaled in the reduced extension, and a hand crank on the said shaft and arranged without the body and stove pipe.

1,173,976. OIL-CONTROLLER. ALBERT L. JOHNSON, Luling, Tex. Filed July 13, 1914. Serial No. 850,749. (Cl. 236—6.)



In a regulator of the class described, a cylinder, a yoke depending from the cylinder and having longitudinal slots formed in its arms, a bar slidably mounted in the slots, a fitting carried by the lower ends of the yoke arms, a guide pocket formed centrally in the fitting, means for connecting the cylinder to a boiler, a piston movable in the cylinder, a rod for the piston having its lower end slidably engaged in the pocket, a plurality of valves for controlling flow of fluid from the fitting to a burner, stems for the valves, said stems and piston rod being adjustably connected to the bar and movable therewith, and a spring for the piston, and means for regulating the tension of the spring.

1,173,977. STABILIZER. GROVER C. JOHNSON, Buffalo, N. Y. Filed Apr. 15, 1915. Serial No. 21,510. (Cl. 244—29.)



1. A stabilizer for air ships comprising, a pendulum, an operator's seat secured to the lower end of said pendulum, a stem controllable by said pendulum and extending upwardly above it, means connected with said stem for controlling the side and rear guiding means of the air ship, and means controlled by the operator for moving said stem in any desired position, whereby the path of travel of the air ship may be governed.

2. A stabilizer for air ships comprising a universal joint, a pendulum secured at its upper end to said joint, an operator's seat secured to the lower end of said pendulum, a stem controllable by said pendulum and extending upwardly above it, means connected with said stem for controlling the side and rear guiding means of the air ship, and means controlled by the operator for moving said stem in any desired position, whereby the path of travel of the air ship may be governed.

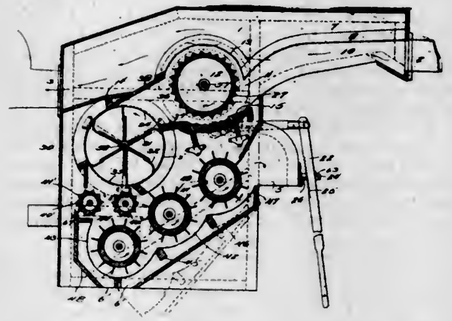
3. A stabilizer for air ships comprising, a spherical casing secured to the air ship frame, a hollow sphere movably disposed within said casing, a pendulum secured to and depending from said sphere, an operator's seat secured to the lower end of said pendulum, a stem controllable by said pendulum and extending upwardly above it, means connected with said stem for controlling the side and rear guiding means of the air ship, and means controlled by the operator for moving said stem in any desired direction, whereby the path of the air ship may be governed.

4. A stabilizer for air ships comprising, a spherical casing secured to the air ship frame, an outer hollow sphere movably disposed within said casing, a pendulum secured to and depending from said sphere, an operator's seat secured to the lower end of said pendulum, an inner, hollow sphere movably mounted within said outer sphere, a stem secured to and rising from said inner sphere, and means connected with said stem for controlling the side and rear guiding means of the air ship.

5. A stabilizer for air ships comprising, a spherical casing secured to the air ship frame, a hollow sphere movably disposed within said casing, a pendulum secured to and depending from said sphere, an operator's seat secured to the lower end of said pendulum, a stem controllable by said pendulum and extending upwardly above it, rocker arms pivotally carried by said casing, means connecting said rocker arms with said stem, and means connecting said rocker arms with the guiding means of the air ship.

[Claims 6 to 9 not printed in the Gazette.]

1,173,978. BOLL-BREAKER AND COTTON-CLEANER. THOMAS ELLIOTT JOHNSTON, Amite, La., assignor to Gullett Gin Company, New Orleans, La., a Corporation of Louisiana. Filed Nov. 13, 1915. Serial No. 61,372. (Cl. 13—12.)



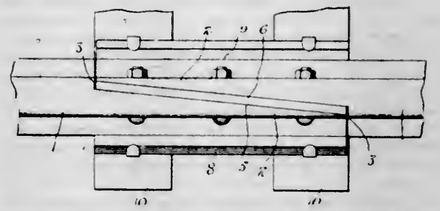
1. In a cotton boll breaker, the combination with a casing, a chamber therein having one perforated wall subjected to suction, and a rotating ribbed breaker roller within said chamber; of a corrugated breaker board underlying and spaced from the roller, springs pressing it normally upward toward said roller, pins in its extremities, a movable yoke whose arms have loops elongated in a direction parallel with that in which the board is moved by said springs, and manually operable means for adjusting the position of the yoke whereby the engagement of the loops with the pins limits the movement of the board toward the roller but permits its movement away from the roller, for the purpose set forth.

2. A boll breaker and cotton cleaner comprising a framework, a trunk across its upper portion having an inlet at one end and its other end connected with suction means, a screen in said trunk defining an inlet passage and extending over a roller chamber to which the passage leads, a rotating ribbed roller within said chamber, a corrugated breaker board yieldingly mounted beneath the roller, a circular casing having inlet and outlet, imperforate walls connecting the outlet of the chamber with the inlet of the casing, a rotary valve within the casing, and cotton picking mechanism beneath the outlet of the casing.

3. In a boll breaker and cotton cleaner, the combination with a casing having a transverse cotton trunk with cotton inlet at one end and suction means at its other end, a screen within the trunk arched over a chamber, and a ribbed breaking roller rotating within said chamber; of a corrugated breaker board underlying the roller, means for yieldingly supporting it, pins at its extremities, a pivoted yoke engaging said pins, a handle for setting the yoke to move the board from the roller, means for holding the handle in adjusted position, cotton picking mechanism, and a rotary valve between said roller and mechanism and separating the latter from the suction within the trunk.

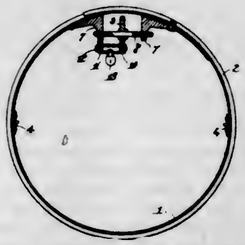
4. In a boll breaker and cotton cleaner, the combination with a casing having a transverse trunk with cotton inlet at one end and a suction fan at its other end, a screen within the trunk defining an inlet passage and arched over a chamber, and a ribbed breaking roller rotating within said chamber; of a corrugated breaker board underlying the roller, springs for yieldingly supporting it, pins at its extremities, a yoke having loops loosely engaging said pins, means for setting the yoke to move the board from the roller, cotton picking mechanism, and a rotary valve between said roller and mechanism and separating the latter from the suction within the trunk.

1,173,979. RAIL-JOINT. GEORGE F. KELLER, Lavelle, Pa. Filed Aug. 10, 1915. Serial No. 44,730. (Cl. 239—8.)



In a rail joint, two rails having their webs thickened at the ends thereof disposed flush with the sides of the head, the said ends being cut transversely, vertically and longitudinally to provide extensions, the outer faces of the extensions being flush with one of the faces of the head, the inner faces of the extensions being inclined from the ends thereof to the shoulder provided by the transverse cut, and a chair including a channeled member having a centrally arranged angularly disposed rib projecting from the channel, said rail extensions adapted to be received within the channel and to have their angular faces contacting with the opposite faces of the rib, and cut base portions engaging with the ends of said chair, transverse means for securing the extensions to the rib, and means for securing the chair to the supporting ties.

1,173,980. TIRE-HOLDER. CLARENCE LINDLEY KEYES, Peru, Ind. Filed June 15, 1915. Serial No. 34,218. (Cl. 224—29.)



A tire holder comprising a strip substantially circular in edge elevation and having overlapping ends, means for

supporting the strip, said strip being provided with means for engaging the shoulders of a tire, lugs mounted upon the strip, a screw bolt turnably mounted in the lugs for expanding and contracting the strip, a knob mounted upon the bolt and having openings, one of the lugs having an extension provided with an opening and a securing device adapted to be passed through said extension opening and one of the openings in the knob.

1,173,981. EYEGLASS-MOUNTING. CHARLES L. MERRY, Kansas City, Mo., assignor to Merry Optical Company, Kansas City, Mo., a Corporation of Missouri. Filed Dec. 14, 1914. Serial No. 877,164. (Cl. 88—47.)



1. An eye-glass or spectacle mounting comprising ears spaced to lie on opposite sides of a lens, a web located between the ears and adapted for projection into the body of a lens, and ears on said web for bracing the lens from the web.

2. An eye-glass or spectacle mounting comprising ears spaced to lie on opposite sides of a lens, a wedge-shaped web located between the ears and extending longitudinally relative thereto, and ears projecting laterally from the point of the wedge and adapted for coöperation with the wedge base to brace a lens from the web.

3. An eye-glass or spectacle mounting comprising ears spaced to lie on opposite sides of a lens, a wedge-shaped web connecting said ears, with its base facing outwardly and its point located adjacent the base portions of the ears, and ears projecting laterally from the point end of the web to coöperate with the wedge base in bracing a lens, substantially as set forth.

4. An eye-glass or spectacle mounting comprising ears spaced to receive a lens therebetween, and a web lying between the ears and having an opening, for the purpose set forth.

5. An eye-glass or spectacle mounting comprising ears spaced to receive a lens therebetween, and a web connecting the ears and having a transverse slot therein opening through its outer end.

1,173,982. EYEGLASS-MOUNTING. CHARLES L. MERRY, Kansas City, Mo., assignor to Merry Optical Company, Kansas City, Mo., a Corporation of Missouri. Filed Jan. 30, 1915. Serial No. 5,201. (Cl. 88—47.)



1. A spectacle or eye-glass mounting comprising socketed ears, and a keeper located between the ears and seated in the socketed portions thereof.

2. A spectacle or eye-glass mounting comprising socketed ears, and a keeper located between the ears and having edges shaped to the contour of and seated in the socketed portion of the ears.

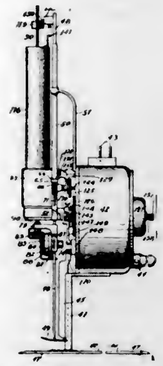
3. A spectacle or eye-glass mounting comprising lens ears having facing sockets, and a keeper member adapted to seat between the ears with its side edges located within the sockets.

4. A spectacle or eye-glass mounting comprising ears having central outstanding portions and inclined side portions on their outer faces, and corresponding indentations in their inner faces, and a keeper member located between the ears and having edges shaped to correspond to and seated within the indentations in said ears.

5. A spectacle or eye-glass mounting comprising lens straps and ears; the said ears being provided with facing sockets, a keeper member located between the ears with its side edges projected into said sockets and its base lying flat against the lens straps.

[Claims 6 and 7 not printed in the Gazette.]

1,173,983. CLOTH-CUTTING MACHINE. DAVID PERLMAN, New York, N. Y. Filed Aug. 26, 1915. Serial No. 47,396. (Cl. 164—75.)



1. A cloth cutting machine including a reciprocating knife, a rotatable grinder adapted to engage therewith and a unitary means for simultaneously rotating said grinder and advancing the same along the length of said knife.

2. A cloth cutting machine, including a knife, a grinder, a source of power, means operated thereby for rotating said grinder, and means also operated from said source of power for moving said grinder along the length of the knife during the grinding action.

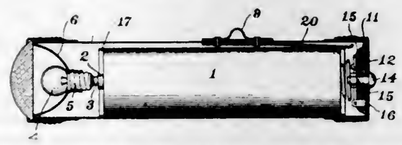
3. A cloth cutting machine including a vertically disposed cloth cutting knife, a source of power, means connected thereto for reciprocating said knife, a grinder, means operated from said source of power for moving said grinder up and down along the edge of the knife, and means automatically operated during said up and down movement for rotating said grinder independently of its engagement with the knife.

4. A cloth cutting machine including an electric motor, a knife, a pair of grinders disposed upon opposite sides of the plane of said knife, a carrier for said grinders, connections between said motor and said carrier for moving the latter in the direction of the length of the knife, and means mounted on said carrier for simultaneously rotating said grinders about horizontal axes.

5. A cloth cutting machine including a knife, a pair of grinders mounted for simultaneous engagement with the knife, a carrier therefor movable in the direction of the length of the knife, and means for adjusting said grinders on said carrier and toward and from the plane of the knife.

[Claims 6 to 77 not printed in the Gazette.]

1,173,984. PORTABLE ELECTRIC LAMP. FRANCIS M. ROSENFELD, New York, N. Y., assignor to Import Sales Company, a Corporation of New York. Filed Mar. 5, 1915. Serial No. 12,406. (Cl. 240—8.5.)



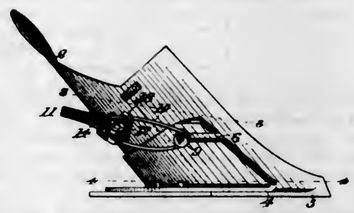
1. In a device of the character described, a metallic casing, a battery mounted therein, a lamp mounted at one end of the casing and electrically connected thereto and to one pole of the battery, a cap detachably mounted at the other end of the casing, a disk secured to and insulated from said cap and electrically connected to the other pole of the battery when the cap is in position, and a conductor slidably mounted within the casing and electrically connected therewith and adapted when operated to contact with said disk to complete the circuit through the lamp.

2. In a device of the character described, a metallic casing, a battery mounted therein, a lamp mounted at one end of the casing and electrically connected thereto and to one pole of the battery, a cap detachably mounted at the other end of the casing, a disk secured to and insulated from said cap, a spring connected to said disk and adapted to form an electric connection between said disk and the other pole of the battery when the cap is in position, and a conductor slidably mounted within the casing and electrically connected therewith and adapted when operated to contact with said disk to complete the circuit through the lamp.

3. In a device of the character described, a metallic casing, a battery mounted therein, a lamp mounted at one end of the casing and electrically connected thereto and to one pole of the battery, a cap detachably mounted at the other end of the casing, a conducting element carried by said cap and electrically connected to the other pole of the battery when the cap is in position, an insulator interposed between said element and said cap, means passing through said insulator and insulated from said element for retaining said element and said insulator in position, and a conductor slidably mounted within the casing and electrically connected therewith and adapted when operated to contact with said element to complete the circuit through the lamp.

4. In a device of the character described, a metallic casing, a battery mounted therein, a lamp mounted at one end of the casing and electrically connected thereto and to one pole of the battery, a cap detachably mounted at the other end of the casing, a conducting element carried by said cap, an insulator interposed between said element and said cap, a spring held in position by said element and electrically connected thereto and adapted to form an electrical connection between said element and the other pole of the battery when the cap is in position, and a conductor slidably mounted within the casing and electrically connected therewith and adapted when operated to contact with said element to complete the circuit through the lamp.

1,173,985. DETACHABLE PLOWSHARE. HERBERT A. SCHULZE and CARL R. WREN, Dixon, Cal. Filed Feb. 1, 1915. Serial No. 5,444. (Cl. 97—18.)



1. In a plow, a mold board, a frog secured thereto and provided in its landside with a slot closed at each end and in its laterally extending plate with a slot opening through the bottom edge thereof, a share of angular section detachably supported by the frog and provided with angularly related lugs adapted to engage in the slots of the frog, the lug which engages in the slot of the laterally extending frog plate being formed with an enlarged peripherally grooved head between which and the share the frog slidably engages, a bracket secured on the mold board, a lever pivoted to the bracket and provided with a slot extending in the direction of movement of the lever, and a wire spring link having one end slidably engaged in the slot of the lever and the opposite end adapted to receive the head of said lug and engage in the peripheral groove thereof.

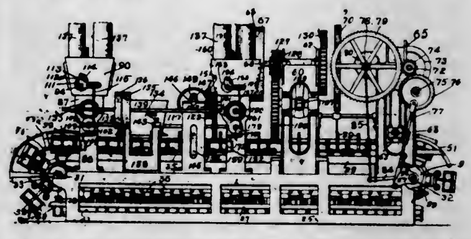
2. In a plow, a mold board, a frog secured thereto and provided in its landside with a slot closed at each end and in its laterally extending plate with a slot opening through the bottom edge thereof, a share of angular section detachably supported by the frog and provided with angularly related lugs adapted to engage in the slots of the frog, the lug which engages in the slot of the laterally extending frog plate being formed with an enlarged head between which and the share the frog slidably engages, a lever pivoted to the share and provided with a slot extending transversely to the axis of the lever pivot, and a link detachably engaging with the head of the specified lug to secure the share in position and slidably mounted in the slot of the lever to move therein beyond dead center when the link is engaged with the lug.

1,173,986. PNEUMATIC WHEEL. S. WALTER SCOTT, Troy, N. Y. Filed Oct. 3, 1913. Serial No. 793,217. (Cl. 152—10.)



In combination, a wheel, a tire receiving metallic rim carried by said wheel, integral parallel offsets formed upon said rim, a plurality of spacing sleeves extending between and engaging the inner surfaces of said offsets, an inflatable tire mounted in said rim, a solid tire seated upon said inflatable tire, said solid tire being formed with a circumferentially spaced apart series of openings in which said sleeves are disposed, an annular tread disposed around said solid tire, rightangular portions formed upon the rim offset and extending short of the opposite edges of said tread, a flexible shield bearing upon said solid tire and secured to said tread substantially throughout its width, said shield extending at right angles to the plane of said tread and seating under the right angular portions of and against said rim offset, a plurality of tie bolts passing through said sleeve and rim offsets, a pair of clamping rings supported upon said bolts and engaging said shield to clamp them against said rim offsets, a shoulder clip carried by said bolts engaging one of said rings, a hook offset upon each of said bolts engaging the opposite ring, said clip being looped upon each of said bolts, and a clamping nut upon each of said bolts for jamming said clip against said rings.

1,173,987. CONCRETE-FORMING MACHINE. FRANK R. STEHM, Des Moines, Iowa, assignor to Enamel Concrete Company, Des Moines, Iowa, a Corporation of South Dakota. Filed Aug. 22, 1907. Serial No. 389,706. (Cl. 25—100.)



1. In a device of the class described, a frame, a conveyer operatively mounted in the frame, a series of pallet bed plates in the conveyer, a pair of posts having a screw threaded and tapered lower end entering a tapered and screw threaded opening in the bed plate, which tapered end and opening together maintain the posts in a vertical position, a mold frame loosely mounted between the posts on each bed plate, a pallet mounted on the pallet bed

plate to form the bottom of the mold, means for feeding materials into the mold frames, and means for operating the conveyer.

2. In a device of the class described, a frame, a conveyer operatively mounted in the frame, a series of pallet bed plates in the conveyer, a pair of posts having a screw threaded and tapered lower end entering a tapered and screw threaded opening in the bed plate, which tapered end and opening together maintain the posts in a vertical position, a mold frame loosely mounted between the posts on each bed plate, a limiting stop on each of the posts for limiting the outer movement of the mold frames, a pallet mounted on the pallet bed plate to form the bottom of the mold, means for feeding material into the mold frames, and means for intermittently operating the conveyer.

3. In a device of the class described, a frame, a conveyer operatively mounted in the frame, a series of pallet bed plates in the conveyer, a pair of posts having a screw threaded and tapered lower end entering a tapered and screw threaded opening in the bed plate, to maintain the posts rigidly in a vertical position, a mold frame loosely mounted between the posts on each bed plate, a pallet mounted on the pallet bed plate to form the bottom of the mold, means for automatically feeding material into the mold frames, and means for operating the conveyer.

4. In a device of the class described, a conveyer, a series of mold frames having molds therein, in which articles are formed, a series of pallets mounted on the conveyer beneath the mold frames, designed to form the bottoms of the molds while the article is being formed in them, means for automatically delivering material into the molds, means for holding the article formed within the molds in contact with the pallet while the mold frame is being raised, and means for raising the mold frame so that the pallets, with the articles formed thereon, may be lifted from the conveyer at the rear of the machine.

5. In a device of the class described, a conveyer, a series of mold frames on the conveyer, a pallet having a polished and non-adhesive surface forming the bottom of each mold frame, and means for raising the mold frame while the articles formed therein are held in contact with the pallet to allow the pallet to be removed with the articles thereon.

[Claims 6 to 64 not printed in the Gazette.]

1,173,988. CHROME-LEATHER SOLE FOR BOOTS AND SHOES AND METHOD OF MAKING SAME. MARTIN SZAMATOLSKI, Bayonne, N. J., assignor to H. Bridgman Smith, New York, N. Y. Filed May 17, 1913. Serial No. 768,291. (Cl. 149—6.)

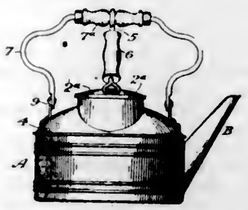
1. As a new article of manufacture, a sole for use in the manufacture of boots and shoes, consisting of a chrome leather blank the fibers whereof are impregnated with a compound consisting of substantially five parts of resin dissolved in substantially five parts of naphtha and one part of paraffin oil.

2. A compound for treating leather maintaining a liquid state at ordinary temperatures and consisting of substantially five parts of resin, five parts of naphtha, and one part of paraffin oil.

1,173,989. KETTLE-COVER AND ATTACHMENT. ANDREW J. THALMAN and ALBERT A. HART, Richmond, Cal. Filed May 17, 1915. Serial No. 28,515. (Cl. 53—9.)

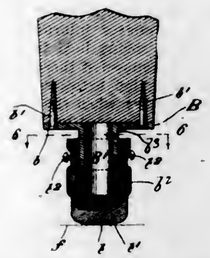
1. A kettle including a body having a filling member at one side thereof, a lid for said member, a bail hinged to the body and a link pivoted to the center of the bail and to the lid, said link and the bail center in one position thereof and when the lid is open being each disposed in a plane parallel to the bottom of the body so that both the bail center and link may serve as handles for the kettle.

2. A kettle including a body having a tubular member at one side of the center of the body, a hinged lid on said member, a bail connected to the body, and a connection between the bail and lid, said link when the lid is closed being disposed at an angle to the plane of the body bottom and in one position thereof and when the lid is open being disposed in a plane parallel to the body bottom so as to provide a handle which is supplemental to the handle that the bail provides.



3. In combination with a kettle having a top opening, a hinged lid for said opening, a bail hinged to the kettle and having a hand gripping part and a link connected to the bail and to said lid and having a hand gripping part, said hand gripping parts in one position and when the lid is open being disposed in a plane substantially parallel to the kettle bottom so that each of said hand gripping parts may be utilized in manipulating the kettle.

1,173,990. FURNITURE-TREAD. VALENTINE VON DER LIN and SIMON JULIUS VON DER LIN, New York, N. Y. Filed May 1, 1915. Serial No. 25,287. (Cl. 46—13.)

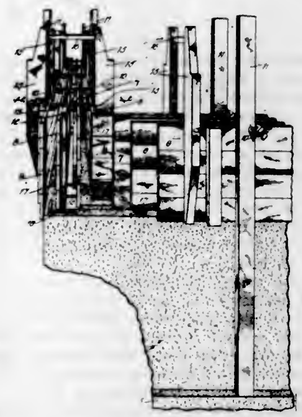


1. The furniture tread herein described, comprising a base plate, means for securing the same to a furniture leg or support, a post on said base plate formed with a screw threaded lower portion and a contracted cylindrical portion between said screw threaded portion and the base plate, an internally threaded one piece tread member U-shaped in longitudinal cross section engaging with said threaded post, the closed end of said tread member forming a central axial contact surface for the purpose set forth, and one or more set screws positioned laterally on the tread member and opposed to the reduced cylindrical portion of the said screw threaded post.

2. The furniture tread herein described comprising a base plate, means for attaching the same to a furniture leg or support, a screw threaded post on said base plate, an internally-threaded tread member U-shaped in longitudinal cross section engaging with said threaded post, the closed end of said tread member forming a central axial contact surface for the purpose set forth, and means for clamping the said tread member to said post.

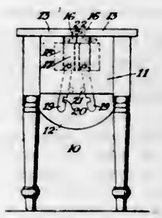
1,173,991. APPARATUS FOR ERECTING CONCRETE STRUCTURES. GILES L. VREELAND, Harbert, Mich., and POMEROY P. VREELAND, Bozeman, Mont. Filed June 18, 1913. Serial No. 774,282. (Cl. 25—131.)

1. Apparatus for molding double concrete walls of the class described, comprising in combination a pair of mold members for each wall, devices for supporting the inner mold member for the inner wall and the outer mold member for the outer wall above a previously formed section of double wall and independently of said section, devices for spacing the mold members of each pair, separate spacing devices arranged to be interposed between the inner mold member for the outer wall and the outer mold member for the inner wall and means for applying a transverse pinching stress to said mold members and spacing devices to firmly clamp the same together, whereby the weight of the inner mold member for the inner wall and the outer mold member of the outer wall, the pinching means and a major portion of the outer mold member for the inner wall and the inner mold member for the outer wall is carried above and independently of the previously formed section of double wall.



2. Apparatus for molding double concrete walls of the class described, comprising in combination a pair of mold members for each wall, timbers for supporting the outer mold member for the outer wall and the inner mold member for the inner wall above a previously formed section of double wall and independently of said section, clamps for securing the last mentioned mold member to said timbers, devices for spacing said mold members from each other, and means for applying a transverse pinching stress to said mold members and spacing devices to carry the major portion of the weight of the inner mold member for the outer wall and the outer mold member for the inner wall in suspension with the other mold members.

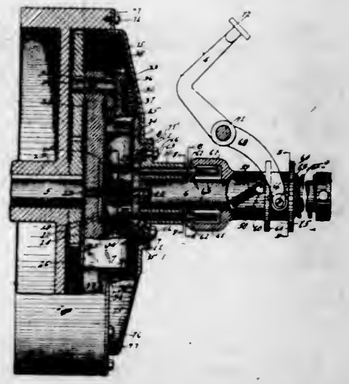
1,173,992. EXTENSION-TABLE. HERMAN WIESENFELD, West Berkeley, Cal. Filed May 4, 1915. Serial No. 25,722. (Cl. 45—9.)



1. In a table, a frame, a pair of leaves slidable on the frame, a drop leaf, a pair of vertical guides disposed at the ends of the drop leaf, a member affixed to and depending from each end of the drop leaf and receivable in the respective guides, vertical links pivoted to and depending from the lower ends of the respective members and having their lower ends extending below the frame so that the operator may grasp said lower ends of the links and raise the drop leaf, and means coacting with the links to hold the latter raised only when the drop leaf allines with the slidable leaves.

2. In a table, a frame, a pair of leaves slidable on the frame, vertical guides borne by the frame, a drop leaf slidably connected to the guides, links depending from the drop leaf and extending below the frame so that the operator may grasp said links and raise the drop leaf, and means to lock the links in raised position.

1,173,993. VARIABLE-SPEED-TRANSMISSION MECHANISM. LEON B. WISE, Los Angeles, Cal. Filed June 28, 1915. Serial No. 36,879. (Cl. 74—34.)



1. A variable speed transmission mechanism including a driving element, a driven element, gearing for operating the driven element by the driving element, and a plurality of hydraulic means arranged in pairs about a common liquid chamber and operable by said gearing, and means common to all of said hydraulic means for regulating the displacement of the liquid and the operation of said driven element.

2. A variable speed transmission mechanism including a driving element, a driven element, gearing between and for operating the driven element by the driving element, hydraulic means arranged in pairs and integrally supported about a common axis, and means common to all of said hydraulic means whereby the liquid may be displaced from one to the other of the units in said pairs and the displacement thereof regulated in the application of power to said driven element.

3. A variable speed transmission mechanism including a constantly rotating driving element, a selectively operable driven element, gearing for operably connecting the driving and driven elements, hydraulic means operable by said gearing and arranged in pairs on diametrical lines relative to and about a centrally formed liquid chamber common to all of said hydraulic means, and means common to all of said hydraulic means for regulating the displacement of the liquid in and through said chamber and the application of power to the driven element.

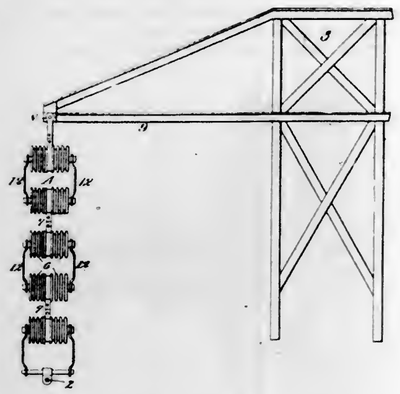
4. A variable speed transmission mechanism including a driving element, a driven element, gearing for operably connecting said elements, hydraulic elements operable by said gearing and arranged in pairs about and communicating with a common centrally formed liquid chamber, and means in said chamber common to all of said hydraulic means for regulating the displacement of the liquid and controlling the operation of said driven element.

5. A variable speed transmission mechanism including a constantly rotating driving element, a selectively operable driven element, gearing for operably connecting said elements, hydraulic elements arranged in opposite sets about the axis of said driving element and operable by

said gearing, and means common to all of said hydraulic elements for regulating the operation of said driven element.

[Claims 6 to 9 not printed in the Gazette.]

1,173,994. HIGH-TENSION INSULATOR. SVEND BARFOED, Oakland, Cal., assignor of two-fifths to Otis Gibson, San Francisco, Cal. Filed Aug. 18, 1914. Serial No. 857,315. (Cl. 173—318.)



1. In a high potential insulator, a hollow insulating member, a beam extending through the insulator, a compressible lining interposed between the beam and the interior of the insulator, and clips secured to the beam having bendable arms formed thereon to secure the beam within the insulator.

2. In a high potential insulator, a hollow insulating member, a beam extending through the insulator, an annular seat formed within the insulator, a compressible lining interposed between the beam and said seat, and clip members secured to the beam having bendable arms formed thereon engageable with the sides of the annular seat to secure the beam within the insulator.

3. In a high potential insulator, a hollow insulating member, a beam extending through the insulator, and clips secured to the beam to secure the beam within the insulator.

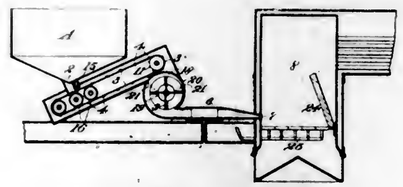
4. In a high potential insulator, a hollow insulating member, a beam extending through the insulator, an annular seat formed within the insulator, a compressible lining interposed between the beam and said seat, clip members secured to the beam having bendable arms formed thereon engageable with the sides of the annular seat to secure the beam within the insulator, and secondary arms on the clips to secure the compressible lining in position.

5. In a high potential insulator, a tubular-shaped insulator, an annular comparatively narrow seat formed interiorly of the insulator, a beam extending through the insulator, and a compressible lining interposed between the annular seat and beam.

[Claims 6 and 7 not printed in the Gazette.]

1,173,995. DEVICE FOR FEEDING POWDERED FUEL. JOHN L. BOARDMAN, Billings, Mont. Filed Apr. 17, 1915. Serial No. 22,087. (Cl. 110—104.)

1. A device for feeding powdered fuel consisting in the combination of a bin having a discharge slot in the bottom, a conveyer belt traveling beneath the discharge slot, and forming a closure therefor, a centrifugal fan to which the conveyer delivers the material, means to admit air to opposite sides of the fan, and a burner nozzle for the fan to receive the mixture of air and fuel, said conveyer delivering the material to the top of the fan and discharging it into the intakes on opposite sides of the fan, simultaneously with the air that is drawn into the fan from both sides thereof.



2. A device for feeding powdered fuel consisting of a bin having a sloped bottom with a discharge outlet therein, an inclined conveyer beneath the outlet, a spacing bar in conjunction with the outlet and adapted to regulate the depth of fuel on the conveyer, a centrifugal fan onto the top of which said conveyer is adapted to deliver the material, said fan having opposite side air inlets, and means for directing the material discharged from the conveyer into the inlets in the fan whereby the air and fuel is drawn into the fan from both sides of the latter, and a burner nozzle from the fan to receive the mixture of air and fuel.

3. A device for feeding powdered fuel to a furnace including a fan having a discharge leading to the furnace and having oppositely disposed side inlets, a source of powdered fuel supply, means to convey the fuel to the fan and simultaneously into said opposite side inlets thereof and means whereby to enable air to be drawn in with the fuel from both sides of the fan.

4. A device for feeding powdered fuel to a furnace including a fan having a housing the top of which is gabled, said housing having opposite side inlets, a casing spaced from and inclosing the fan housing and having side air inlets, means to convey the fuel on top of the gabled housing, means to direct the fuel toward the housing inlets, and means to convey the fuel and air to the furnace.

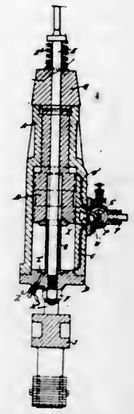
5. A device for feeding powdered fuel to a furnace, including a housing the top of which is gabled, said housing having a pair of opposite inlets in its sides, a shaft having a fan thereon which shaft extends centrally through said inlets, a casing extending over the gable and sides of said housing in spaced relation to said gable and housing sides and having side air inlets which latter register with the respective inlets of the housing, means to feed fuel in the space between the gable and casing, and wings arranged in the space between the sides of the casing and housing and converging toward the housing inlet.

[Claim 6 not printed in the Gazette.]

1,173,996. APPARATUS FOR EXTRACTING PILES. JOHN BULL, Tottenham, London, England. Filed Mar. 15, 1915. Serial No. 14,534. (Cl. 121—19.)

1. In a fluid actuated pile driver or pile extractor the combination with a cylinder having a piston therein, of a valve casing having ports connecting the cylinder to the control portion of said valve casing and leading to either side of said piston, a distributing valve having at each end two vanes for controlling the flow of motive fluid to the piston, means interposed between said vanes to produce in the valve casing a central and end chambers within which latter the vanes operate, further ports connecting the end chambers to the cylinder and means for supporting the valve and closing said end chambers.

2. In a fluid actuated pile driver or pile extracting machine, the combination with a cylinder and a reciprocating piston, of a valve casing communicating with said cylinder, a distributing valve having vanes at each end for controlling the flow of motive fluid alternately to opposite sides of the piston, means interposed between said vanes to produce a central and end chambers within which latter chambers said vanes oscillate, ports connecting the chambers to the cylinder, and packing pieces positioned at said end chambers, said valve having means coöperating with said packing pieces for supporting the valve.



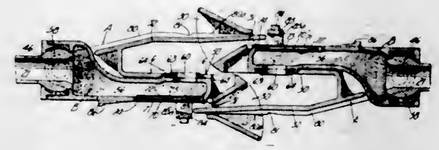
3. In a fluid actuated pile driver or pile extracting machine the combination with a cylinder and a piston working within said cylinder, of a valve casing attached to the cylinder, main ports connecting one portion of the valve casing to either end of the cylinder, a distributing valve having vanes at each end adapted to actuate the valve and thereby control the flow of motive fluid to said piston, auxiliary ports leading from the cylinder to said vanes, packing means for said valve and means for holding said packing in position.

4. In a fluid actuated pile driver or pile extracting machine the combination with a cylinder and a piston working within said cylinder, a valve casing attached to the cylinder, main and auxiliary ports connecting said valve casing with the cylinder, a balanced valve adapted to operate within said casing, vanes on said valve actuated by the fluid admitted through the auxiliary ports to oscillate the valve and direct the flow of motive fluid through the main ports, disks on said valve for isolating the vanes and producing a central and end chambers communicating with the main and auxiliary ports respectively, part cylindrical packing pieces fitting said end chambers, and covers for closing said chambers.

5. In a fluid actuated pile extracting machine, the combination with a cylinder having a piston, of a valve casing attached to the cylinder, and a balanced valve mounted in the casing comprising a central distributing chamber, for controlling the flow of fluid to the piston, actuating chambers at the ends of the valve, and a plurality of vanes at substantially the extremities of the valve and operating in the end chambers, said valve casing and cylinder being provided with main and auxiliary ports to coöperate with the valve chambers, the vanes on the valve being actuated by fluid admitted through certain of the ports to oscillate the valve and thereby vary its position relative to other ports.

1,173,997. COUPLING. JOHN L. COBB, Los Angeles, Cal., assignor to Automatic Air-Lock Train-Pipes Couplers Company, Los Angeles, Cal., a Corporation of Arizona. Continuation of application Serial No. 672,006, filed Jan. 12, 1912. This application filed Sept. 11, 1913. Serial No. 789,240. (Cl. 188—13.)

1. In a train pipe coupler, a coupling element, a joint forming member within said coupling element secured to said element by vertical pivots, a pipe secured to said joint forming member by a universal joint, and a longitudinal expansion joint in said pipe, said universal joint being substantially on the pivotal axis of the joint forming member on the coupling element.



2. In a train pipe coupler, duplicate coupler elements each comprising a frame forming a guide way having a suitable flared mouth and forming a guide tongue adapted to enter the flared mouth of the other element, a joint forming member pivoted on the frame and having a joint forming side face, a train pipe connected to the joint forming member by a ball joint, a slip joint in the train pipe, there being a passage leading from the ball joint through the joint forming member to said face, and pressure operated members on said joint forming members, said members adapted to press outwardly against the guide tongues and press the said joint forming faces together.

3. In a train pipe coupler, joint forming heads connected to the ends of the train pipes by ball joints and having joint forming surfaces on their sides, slip joints in the train pipes, frames pivotally connected to said heads and adapted to meet side face to side face on a line with the pipes, said frames forming guide ways having suitable mouths and guide tongues adapted to enter said mouths, there being passages from the pipes through said heads to the joint forming side faces of the joint heads, yokes carried by said heads for engaging the outer sides of the guide tongues, means carried by said heads for engaging the inner ends of the guide tongues so as to press the guide tongues outwardly and press the joint heads toward each other, and diaphragms extending outwardly from the joint forming heads and communicating with the pressure ports, so that when the pressure is turned on the diaphragms will press outwardly against the guide tongues and press the joint heads together.

4. In a train pipe coupler, a coupler member having a flaring mouth and a contracted throat, a parallel guide plate at one side in such a position that it will enter the throat of an opposing coupler member, a pivoted member within the coupler member having compartments therein and ports leading therefrom laterally so that the ports of opposing couplers coincide with each other, and means for bringing the contact faces of the pivoted members into intimate contact with each other.

5. In a train pipe coupler, a coupler member having a flaring mouth and a contracted throat, a parallel guide plate at one side in such a position that it will enter the throat of an opposing coupler member, the outside of the guide plate having a depression, a pivoted member within said coupling member having compartments therein and ports leading therefrom laterally so that the ports of opposing couplers register with each other, a bar on the outer side of the pivoted member provided with a tongue which is adapted to enter the depression in the guide plate of an opposing coupler member, and means for bringing the contact faces of the pivoted members of opposing couplers into contact with each other.

[Claims 6 to 33 not printed in the Gazette.]

1,173,998. BAND-HOOP. GEORGE M. DEPEW, Canandaigua, N. Y. Filed Apr. 17, 1915. Serial No. 22,018. (Cl. 217—93.)

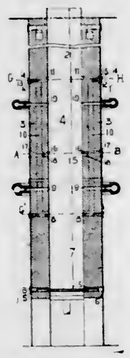
A band hoop having overlapping interfitting corrugated parts and a metal clip to be bent about the interfitting parts, the opposing faces of the clip being forced

together to exert a pressure upon the ribs of the corrugations of said interfitting parts, whereby a locked



interfitting against possibility of endwise or lateral separation is secured.

1,173,999. PROCESS OF HEAT REGENERATION. HENRY L. DOHERTY, New York. Filed Dec. 31, 1909. Serial No. 535,841. Renewed March 21, 1913. Serial No. 756,020. (Cl. 25—157.)



1. In connection with the operation of a heating or calcining chamber, the process of heat regeneration which consists in passing in contact with the heated material from the combustion zone of said chamber, a current of air, the volume of the said air being sufficient to take up, substantially, all of the sensible heat of the said heated material, whereby the said heated material is cooled and the said air-current heated, dividing the so-heated air current into two streams, at a place in said chamber adjacent to the combustion zone thereof, passing one of said air streams into the said combustion zone, the volume of said air-stream being less than that required to support the combustion taking place in the said combustion zone, conducting the other of said air-streams around the said combustion zone, subdividing the other of said air-streams into a major and a minor portion and uniting said major portion with the products of combustion from the said combustion zone, introducing the said minor portion into an intermediate region of said combustion zone to complete combustion therein, and passing the commingled stream of heated air and products of combustion in contact with the relatively cold unheated material approaching the combustion zone, whereby the said unheated material is heated and the said stream of heated air and products of combustion cooled.

2. In the operation of a heating or calcining chamber, the process of heat regeneration, which consists in transferring part of the heat of the heated material leaving the combustion zone of said chamber, to the relatively cool material approaching the combustion zone of said chamber, by means of a current of air as a vehicle, and transferring another part of the sensible heat of the heated material to the combustion zone of said chamber by means of the air supplied to said combustion zone as a vehicle, and repassing a portion of the combustion gases generated in said combustion zone through a comparatively deep bed of incandescent fuel and back to said zone.

3. The process of heat regeneration which comprises passing air in contact with the heated material in a heating chamber, whereby the said air is heated by the sensible heat of said material, the volume of said air being in excess of that required for the combustion in said chamber, dividing said air current into two streams, passing one of said streams into the combustion zone of said chamber, by-passing the other of said streams around the combustion zone of said chamber, contacting the said stream with the relatively cool unheated material approaching the combustion zone, and repassing through said combustion zone a portion of the combustion gases leaving said zone.

4. The process of heat regeneration which comprises passing air in contact with the hot heated material discharging from the combustion zone of a heating chamber, the volume of said air being in excess of that required for sustaining the combustion in the said combustion zone, whereby the said air is heated and the said calcined material cooled, dividing the so-heated air current into two main streams, passing the first of said streams into the said combustion zone, at that region of the same where the required fuel is introduced thereinto subdividing the second of said main streams into a major and a minor portion, introducing the said minor portion of said second stream into a mid region of said combustion zone, conducting the said major portion of said second air stream around the said combustion zone, uniting it with the products of combustion from the said combustion zone, and passing the commingled streams of heated air and products of combustion in contact with the relatively cool unheated material approaching the combustion zone, whereby the said uncalcined material is heated and the said stream of commingled air and products of combustion cooled.

5. The process of regenerating heat which comprises providing a moving or traveling body of material passing through a zone of combustion, passing air in heat-absorbing relationship to the hot material passing beyond the zone of combustion, transmitting a portion of the air so heated to said zone to maintain combustion therein, diverting the residue of air so heated around the zone of combustion, passing a portion of said diverted air into contact with the material advancing toward said zone, and repassing through said zone of combustion a portion of the combustion gases leaving the same.

[Claims 6 to 11 not printed in the Gazette.]

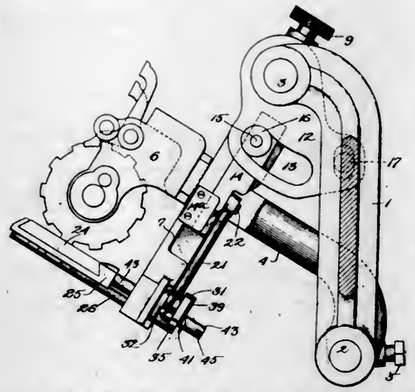
1,174,000. TAX-BILL. WILLIAM DOLGE and WELLINGTON "E." DRAPER, San Francisco, Cal. Filed Nov. 19, 1913. Serial No. 801,846. (Cl. 11—19.)



1. A tax bill comprising a sheet having an appropriately designated space reserved at the top thereof for the description of the property and the name of the party assessed, an appropriately designated space for the assessed valuation of taxable properties with extension columns showing "total tax", "first instalment", "second instalment", indicia in the assessed valuation space indicating different kinds of property, blocked spaces in alinement with said indicia, indicia in these blocked spaces filling certain of the spaces and preventing insertions from being made therein, an appropriately designated receiving stamp space for each of said instalment columns adjacent thereto, indicators in said receiving stamp spaces pointing to the respective column represented by said particular receiving stamp space, and a detachable, duplicate bill with similarly appropriately designated spacings and notations.

2. A tax bill comprising a sheet having an appropriately designated space reserved at the top for the description of the property and name of the party assessed, an appropriately designated space below for the receiving stamp, an appropriately designated space below that for the entry of the assessed value of property giving in successive horizontal extension across the entry sheet the "total tax", "first instalment", "second instalment", a memorandum in said assessed valuation space of kinds of property and of penalties, properly alined spaces in the instalment columns for noting said amounts of said property and of said penalties, indicia in these columns preventing wrongful entry of the penalties therein, a receiving stamp space below the instalment columns, and an indicator in the first mentioned receiving stamp space pointing to one of said instalment columns, a similar indicator in the lowermost receiving stamp space pointing to the other of said instalment columns, and spaces beside each of the stamp spaces for the insertion of suitable matter.

1,174,001. INKING DEVICE FOR PRINTING AND MARKING MACHINES. WILLIAM P. EGAN and JOHN J. SHEEHAN, Lynn, Mass. Filed June 28, 1913. Serial No. 776,458. (Cl. 101—71.)



1. In an apparatus of the character described, the combination with a swinging type-head of an oscillating holder, an inking pad movably mounted in said holder and adapted to ink the type for each impression, and automatic mechanism adapted to operate upon each oscillation of said holder to shift the pad to change the line of contact of the type thereon with each impression.

2. In an apparatus of the character described, the combination with a swinging type-head of an oscillating holder, an independently operating inking pad movably mounted in said holder and adapted to ink the type for each impression, and mechanism adapted to operate upon each oscillation of said holder for intermittently reciprocating said pad to change the point of contact of the type thereon with each impression.

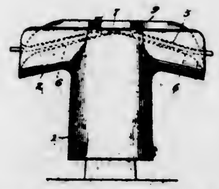
3. In an apparatus of the character described, the combination with a type-head of an oscillating holder, a swinging pad movably mounted in said holder and for inking the type for each impression, means for imparting a step movement to said pad in one direction at each oscillation of said holder, and mechanism for reversing the step movement of said pad at varied intervals thereby changing each position of contact of the type thereon.

4. In an apparatus of the character described, the combination of a type-head of an oscillating holder carrying a pad for inking the type, automatic means for shifting the position of the pad in the holder in one direction at each oscillation of said holder, and means for shifting the position of the pad in the opposite direction at predetermined intervals.

5. In an apparatus of the character described, the combination with a swinging type-head of an oscillating holder, a movable pad mounted in said holder for inking the type for each impression, and automatic means at each oscillation of said holder for changing the point of contact of the type with said pad in one direction on said pad, and for reversing the direction on said pad whereby the entire inking surface of said pad is utilized.

[Claims 6 to 8 not printed in the Gazette.]

1,174,002. INSULATOR. VICTOR P. ETTINGER, Kansas City, Mo. Filed Jan. 20, 1915. Serial No. 3,334. (Cl. 173—317.)



1. A supporting insulator comprising a body having a longitudinally extending groove formed in one face thereof, and said face, adjacent to the ends thereof, at one side of the groove, inclined downwardly toward the groove, and wings formed on said face at the ends thereof, upon the outer side of the groove, and overlying the groove and the inclined portions of the face and spaced apart from such inclined portions to form entrance ways to the groove.

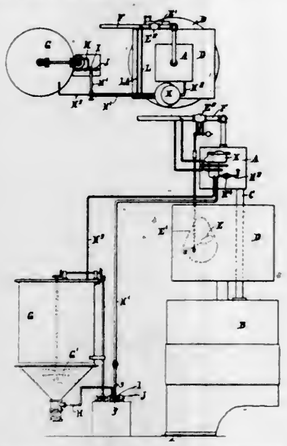
2. A supporting insulator comprising a body having a longitudinally extending groove formed in one face thereof, and said face, adjacent to the ends thereof, at one side of the groove, inclined downwardly toward the groove, wings formed on said face at the ends thereof, upon the outer side of the groove, and overlying the groove and the inclined portions of the face and spaced apart from such inclined portions to form entrance ways to the groove, and an abutment wall formed on said face between the downwardly inclined portions thereof upon the same side of the groove substantially as and for the purpose described.

3. A supporting insulator comprising a body having a longitudinally extending groove formed in one face thereof, and said face, adjacent to the ends thereof, at one side of the groove, inclined downwardly toward the groove, and wings formed on said face at the ends thereof, upon the other side of the groove, and overlying the groove and the inclined portions of the face and spaced apart from the latter to form entrance ways to the groove, the bottom wall of said groove at the extremities thereof being inclined downwardly at a sharp angle whereby rain water may drain from the groove.

1,174,003. FLOW-PROPORTIONING MEANS. GEORGE H. GIBSON, Montclair, N. J. Filed Nov. 9, 1915. Serial No. 60,622. (Cl. 210—19.)

1. In combination, a primary fluid supply conduit, a main liquid reservoir, an auxiliary reservoir having a restricted service discharge outlet, means for passing liquid from the main reservoir to the auxiliary reservoir at a rate exceeding the rate of discharge through said service outlet and for returning the excess to said main reservoir, said means comprising a supply connection to said auxiliary reservoir from said main reservoir, a return connection between said reservoirs, and a pump included in one of said connections, and means responsive to the rate

of flow through said supply conduit for regulating the difference in pressures at the opposite sides of said restricted outlet and thereby regulating the discharge through said service outlet.



2. In combination, a primary fluid supply conduit, a main liquid reservoir, an auxiliary reservoir having a restricted service discharge outlet, means for passing liquid from the main reservoir to the auxiliary reservoir at a rate exceeding the rate of discharge through said service outlet and for returning the excess to said main reservoir, said means comprising a supply connection to said auxiliary reservoir from said main reservoir, a return connection between said reservoirs, and a pump included in one of said connections, and means responsive to the rate of flow through said supply conduit for regulating the pressure in said auxiliary reservoir and thereby regulating the discharge through said service outlet.

3. In combination, a primary fluid supply conduit, a main liquid reservoir, an auxiliary reservoir having a restricted service discharge outlet, means for passing liquid from the main reservoir to the auxiliary reservoir at a rate exceeding the rate of discharge through said service outlet and for returning the excess to said main reservoir, said means comprising a supply connection to said auxiliary reservoir from said main reservoir, a return connection between said reservoirs, and a pump included in one of said connections, and means responsive to the rate of flow through said supply conduit for throttling one of said connections more or less to thereby regulate the pressure in said auxiliary reservoir and thereby the discharge through said service outlet.

4. In a water purification system, the combination of a raw water supply conduit, a chemical supply reservoir, an auxiliary reservoir having a restricted service discharge outlet, means for passing chemical from the main reservoir to the auxiliary reservoir at a rate exceeding the rate of discharge through said service outlet and for returning the excess to said main reservoir, said means comprising a supply connection to said auxiliary reservoir from said main reservoir, a return connection between said reservoirs, and a pump included in one of said connections, and means responsive to the rate of flow through said conduit for varying the difference between the pressures at the opposite sides of said restricted outlet and thereby regulating the discharge through said service outlet.

5. In a water purification system, the combination of a raw water supply pipe, a chemical supply reservoir, an auxiliary reservoir having a restricted service discharge outlet, means for passing chemical from the main reservoir to the auxiliary reservoir at a rate exceeding the rate of discharge through said service outlet and for returning the excess to said main reservoir, said means comprising a supply connection between said reservoirs, and a pump included in one of said connections, and means responsive to the rate of flow through said conduit to vary the pressure in said auxiliary reservoir and thereby regulate the discharge through said service outlet.

[Claims 6 and 7 not printed in the Gazette.]

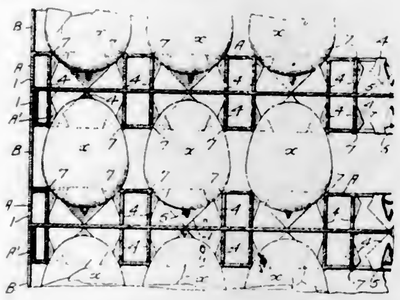
1,174,004. JEWEL-TWEEZERS. ALBERT GREENWALD, Cincinnati, Ohio. Filed June 25, 1915. Serial No. 36,369. (Cl. 81—14.)



1. In gem tweezers, the combination of a pair of metallic grasping members rigidly secured together at one end, jaws for holding a gem at the other end, a pair of smooth depressible pins, and means for freely slidably mounting them in the grasping members, whereby the spring in the said members hold them normally together, and holds the depressible pins in a normally extended position.

2. In gem tweezers, the combination of a pair of metallic grasping members rigidly secured together at one end, jaws for holding a gem at the other end, a pair of smooth depressible pins with heads therefor, and a pair of smooth tubular extensions from the apertures in the sides of the grasping members, extending inwardly therefrom, whereby the pins are freely slidably mounted in the grasping members, and whereby the spring in the said members holds them normally together, and holds the depressible pins in a normally extended position.

1,174,005. EGG HOLDER AND CARRIER. JESSE M. HARR, Washington, D. C. Filed Oct. 12, 1914. Serial No. 866,373. (Cl. 217—27.)



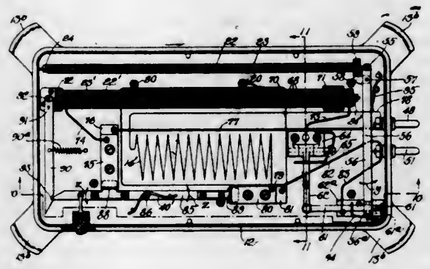
1. An egg-holder formed of a sheet of thin material having a series of egg-receiving openings and provided at the edges of said openings with integral tongues which, when adjusted vertically, constitute props for the body of the sheet, the edges of the sheet adjacent to the bases of such props being crimped and thus provided with a thickened part constituting a shoulder and cushion 7, as described.

2. An egg-holder formed of a sheet of thin material having a series of egg-receiving openings and triangular integral tongues adapted to be projected vertically from the edges of said openings, the portions of the sheet intervening the said tongues being formed as rounded inward projections 6 which are located at the corners of the openings and serve as points of bearing for an egg when placed in position in the openings.

3. An egg-holder and -carrier comprising a base support and top holder which are duplicated in construction each being formed of a sheet of thin material provided with openings for receiving the end portions of eggs, and with flexible integral tongues projecting from the edges of the openings, which, when in vertical position, serve as props and stays, and a cover provided with pendent flanges at the edge, said cover being placed over the top egg-holder and its top resting thereon out of contact with the eggs, while its flanges rest on the bottom of the base support, as shown and described.

4. In an egg-holder and -carrier, the combination with horizontal parallel division plates, of an egg support arranged on the bottom division plate, and an inverted holder arranged adjacent to the upper division plate, both the said support and holder having openings, and tongues projecting from the edges of such openings downward and upward, the same constituting egg supports and their ends abutting the division plates below and above, as described.

1,174,006. THERMOSTATIC CIRCUIT-BREAKING APPARATUS FOR ELECTRICAL HEATERS. JOHN E. HARVEY, Milton, Mass. Filed Apr. 3, 1915. Serial No. 18,906. (Cl. 219—43.)



1. In combination, an electrical heating unit; a body heated thereby; a movable carrier having circuit-breaking and closing means in circuit with said unit, said carrier being normally held in circuit-breaking position; arresting means normally adapted to hold said carrier in circuit-closing position; and thermostatic means operated by an increase of temperature of said body for making said arresting means inoperative.

2. In combination, an electrical heating unit; a body heated thereby; a movable carrier having circuit-breaking and closing means in circuit with said unit, a spring normally holding said carrier in circuit-breaking position; arresting means normally adapted to hold said carrier in circuit-closing position; and thermostatic means operated by an increase of temperature of said body for making said arresting means inoperative.

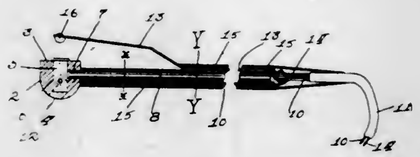
3. In combination, an electrical heating unit; a body heated thereby; a movable carrier having circuit-breaking and closing means in circuit with said unit, said carrier being normally held in circuit-breaking position; arresting means normally adapted to hold said carrier in circuit-closing position; thermostatic means operated by an increase of temperature of said body for making said arresting means inoperative; and adjusting means for regulating the action of the thermostatic means.

4. In combination, a primary heating circuit including an electrical heating unit; a body heated thereby; a secondary heating circuit including a thermostat-heating unit; a movable carrier having circuit-breaking and closing members in circuit with said units, said carrier being normally held in circuit-breaking position; arresting means normally adapted to hold said carrier in circuit-closing position; a primary thermostat arranged to be heated by said body; secondary circuit-closing means actuated by said primary thermostat; a secondary thermostat arranged to be heated by the secondary heating unit; and means operated by the secondary thermostat for making said arresting means inoperative.

5. In combination, an electrical heating unit; a body heated thereby; a movable carrier having circuit-closing and breaking means in circuit with said unit, said carrier being normally held in circuit-breaking position; arresting means normally adapted to hold said carrier in circuit-closing position; a thermostat arranged to be heated by said body; and means intermediate the thermostat and the arresting means for rendering the latter inoperative when the thermostat is expanded.

[Claims 6 to 12 not printed in the Gazette.]

1,174,007. ELECTRIC FLASHER. OTTO L. HEEGER, St. Paul, Minn. Filed Apr. 19, 1915. Serial No. 22,333. (Cl. 46—37.)



1. A flasher, comprising, in combination, a head member formed with a well, an electrical terminal removably held in said well by said head, a flexible handle member extending laterally from said head, a flexible switch arm held upon said handle with its free end adapted to make contact against said terminal, but normally urged out of contact, an electrical conductor cord having conductors connected with said switch arm and said terminal and an insulating cover holding the stationary portion of said switch arm and the conductor leading to said terminal on said handle, said cover extending back over said cord, the end of said cord adjoining said handle being spaced from the handle to permit the conductors bending freely and forming a laterally flexible joint between said cord and the handle.

2. A flasher, comprising, in combination, a head member formed with a well, an electrical terminal held in said well with its upper end exposed, a handle upon which said head is mounted, a flexible switch arm carried by said handle with its free end adapted to spring down against said terminal and normally urged out of contact with said terminal and electrical conductors connected to said switch arm and said terminal, said switch arm and terminal when closed being adapted to complete an electrical circuit passing through said conductors.

3. An electrical flasher, comprising, in combination, a holder, an electrical terminal supported by said holder, a flexible switch arm supported by said holder with its free end adapted to contact with said terminal and normally urged out of contact, said switch arm and terminal being adapted to close an electrical circuit when said holder is struck against an object and to instantly separate to break a circuit automatically immediately after said holder is struck.

1,174,008. ART OF PRESERVING EGGS. SAMUEL F. HENDERSON, Woodwardville, Md., assignor to The Yester-Laid Egg Co., Woodwardville, Md., a Corporation of Maryland. Filed Aug. 28, 1915. Serial No. 47,797. (Cl. 99—8.)

1. The method of preserving eggs consisting in treating the shells thereof with a substance consisting of a mixture of hydrocarbons, chiefly of the methane series, obtained by distilling off most of the lighter and more volatile portions from petroleum, purifying the residue so that the remaining substance is substantially colorless, oily, transparent, is without odor or taste, and not readily evaporable.

2. The method of preserving eggs consisting in treating the entire shell thereof with liquid petrolatum.

3. The method of treating eggs consisting in subjecting the eggs to a bath of liquid petrolatum, removing the eggs from the bath and permitting the surplus to flow from the shell.

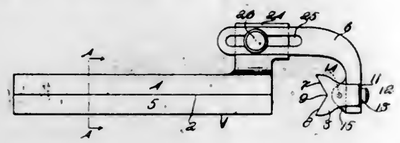
4. The method of preserving eggs consisting in treat-

ing the shell thereof with a substance having substantially the characteristics of liquid petrolatum.

5. The method of treating eggs for preserving purposes consisting in apply to the shell of the egg throughout, a substantially colorless, tasteless, transparent, nonvolatile mineral oil.

[Claims 6 to 10 not printed in the Gazette.]

1,174,009. GAGE FOR EDGED TOOLS. HENRY J. HJORTH, Cambridge, Mass. Filed Mar. 31, 1909. Serial No. 486,890. (Cl. 33—201.)



1. A gage of the character described, comprising a body having surfaces making a dihedral angle with one another and forming a tool-centering groove, said body having an extension from the tool-holding part thereof provided with a gage plate guide extending in the same direction as a plane bisecting the said dihedral angle, a gage plate lying in a plane perpendicular to such bisecting plane and parallel with the apex of the angle and having a notch of which the apex lies in such bisecting plane, said plate also having a portion engaged with said guide and held thereby so that displacement of the notch in its own plane is prevented, and means for adjusting the plate along the guide.

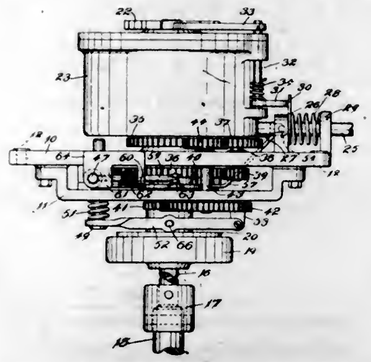
2. A gage of the character described, comprising a shank or body having a longitudinal groove formed by intersecting plane surfaces, an arm extending from beside said shank to a point in line with the end thereof, a bent plate having its central portion held against said arm, one of the ends of said plate being formed with a notch extending toward the shank and located symmetrically with respect to the groove, and an adjusting device engaged with said arm and with a part of the plate, whereby the notched end thereof may be adjusted transversely of the shank.

3. A gage of the character described, comprising a shank or body having a longitudinal groove formed by intersecting plane surfaces, an arm extending from beside said shank to a point in line with the end thereof, a plate having its ends bent over at right angles to its central part, one of such ends having a notch and the central part being engaged with said arm in such a manner that the notched end extends toward the shank in line with the groove therein, and an adjusting screw threaded into the arm and engaged with the other end of said plate.

4. A gage of the character described, comprising a shank or body having a longitudinal groove formed by intersecting plane surfaces, an arm extending from beside said shank to a point in line with the end thereof and having a guideway extending transversely with respect to said shank, a plate contained in said guideway, a screw passing adjacent to the plate into the arm, a spring between the head of said screw and plate for clamping the latter yieldingly against the arm, one end of the plate being bent over toward the shank and having a notch centrally located with respect to the groove therein, the other end of said plate being also bent over and lying beneath the arm, and an adjusting screw threaded into the arm and engaged with this end of the plate for adjusting the plate in the guideway.

5. A gage of the character described, comprising a shank or body having a longitudinal groove formed by intersecting plane surfaces, an arm extending from beside said shank to a point in line with the end thereof and being adjustable longitudinally of the shank, a plate having one end bent to extend toward the shank and provided with a notch in line with the groove, said plate being mounted adjustably on said arm, and means for adjusting the plate transversely of the arm and shank.

1,174,010. STARTER FOR INTERNAL-COMBUSTION ENGINES. FREDERIC S. BACON, Middletown, Conn., assignor of one-half to George Griswold, Middletown, Conn. Filed Jan. 5, 1911. Serial No. 600,901. (Cl. 123—187.)



1. A base having means to removably secure it in place, a rotary shaft mounted in the base and having means for connecting it with an engine shaft, a spring motor mounted on the base, means for connecting said motor with its shaft when the latter is stationary whereby the energy from the motor is imparted to the shaft to drive it, means for connecting said shaft with said motor when the shaft is active whereby energy is stored in the motor, means for disconnecting both of said connecting means and means for releasing the drum.

2. A base having means for attachment to an object and including a supporting plate secured to the base with a space between the two, a drum mounted to rotate on the base, a main spring operatively secured within the drum, a shaft mounted in the base in position for connection with the shaft of an engine, means for connecting the drum with the shaft when the latter is inactive, means including a train of gears mounted on the base and supporting plate for connecting the drum with the shaft when the latter is active, and means for releasing the drum.

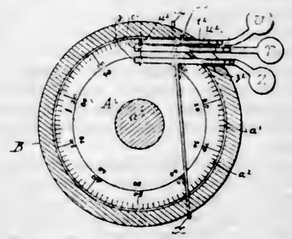
3. A base having a projection from one side thereof, a drum mounted to rotate freely upon said projection, a main spring operatively secured within said drum, a main shaft operatively mounted in the base, means for connecting the drum with the shaft when the latter is inactive, a clutch having one member secured to the shaft and the other member rotatively mounted with respect thereto, means for connecting the freely mounted clutch member with said drum, means for operating the clutch and means for releasing the drum.

4. A base having a projection from one side thereof, a shaft mounted to rotate in the base, a drum mounted to rotate on said projection, a main spring operatively located within the drum, means for connecting the drum to the shaft when the latter is inactive, a clutch including a member secured to said shaft and a member mounted to rotate independently thereof, a train of gears to connect said independently rotating clutch member to the drum, means operated by movable parts of the mechanism for operating said clutch and means for releasing the drum.

5. A base, a main shaft mounted therein, a drum rotatively mounted upon the base, a spring operatively mounted within the drum, means for connecting the drum with the shaft when the latter is inactive, a clutch member secured to said shaft, a coöperative clutch member mounted to rotate independently of said shaft, a clutch operating mechanism, a setting train of gears including a member of the winding train operatively connected with the drum and with the clutch operating mechanism to operate the latter, a winding train of gears connecting the independently rotatable clutch member and said drum and means for releasing the drum.

[Claims 6 to 39 not printed in the Gazette.]

1,174,011. DIAL FOR COMBINATION-LOCKS. WILLIAM T. BENHAM, Rising Sun, Ind., assignor to The Nydia Bank Lock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 28, 1913. Serial No. 751,248. (Cl. 70—56.)

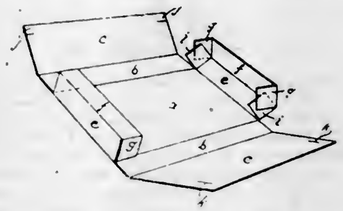


1. In a combination lock, a rotatable dial provided with graduations upon its surface arranged in concentric circles representing, respectively, single units, uniform groups of units, and a starting point in the count, and a series of indicating devices arranged in line respectively with the graduations and adapted by manipulation to project an indicating point into contact with either set of graduations at will.

2. In a combination lock, a rotatable dial provided with graduations upon its surface, arranged in concentric annular spaces, and a corresponding series of indicating devices in line respectively with said graduations, and adapted by manipulation to project an indicating point into contact with either set of graduations at the will of the operator.

3. In a combination lock, a rotatable dial having graduations on its underside, a chambered dial-seat having a correspondingly elevated rim and an indicating lever projected radially through said rim into the chamber and adapted by external manipulation to project a contact point against the graduations.

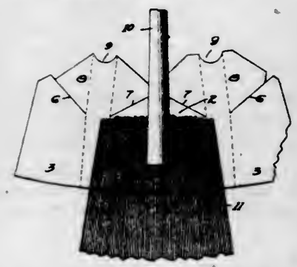
1,174,012. PAPER-BOARD BOX. HARRY R. BRISTOL and ARTHUR W. OLGER, Pontiac, Mich.; said Bristol assignor to Lewis C. Jarrendt, Pontiac, Mich. Filed Oct. 18, 1915. Serial No. 56,397. (Cl. 229—16.)



1. A paper-board box, comprising a blank scored and cut to form a base, ends at each end of the base, sides at each side of the base, stay flaps at each end of the ends, and provided with three free sides, interlocking flap carriers at the outside sides of the ends, interlocking flaps on the ends of the interlocking flap carriers, and cover flaps on the outside sides of the sides, the said ends being foldable to a perpendicular position with respect to the base and the said flaps perpendicular to the ends, the interlocking flap carriers being foldable in turn perpendicular to the ends and parallel to the base, the interlocking flaps being foldable perpendicular to the interlocking flap carriers and capable of being dropped to the side of the stay flaps, while the sides can be folded up perpendicular to the base and the cover flaps engaged together to hold the sides in position and the end structures in set up position.

2. A paper-board box, comprising a blank scored and cut to form a base *a*, sides *b*, *b*, ends *c*, *c*, stay flaps *i*, *i*, *i*, *i* secured to the ends of the ends and having three free sides, strips *f*, *f* secured to the sides of the ends, and cover flaps *c*, *c*, one secured to the outside sides of each side *b*, whereby the ends may be folded perpendicular to the base, the stay flaps perpendicular to the ends, the strips *f*, *f* perpendicular to the ends and parallel to the base *a*, and the cover flaps brought to overlap and engage to hold the sides *b*, *b* perpendicular to the base *a* and the end structures erect and in place.

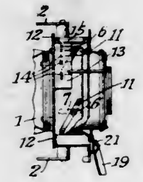
1,174,013. BROOM. THEODORE H. BROWN and HOUGHTON BROWN, Minneapolis, Minn., assignors of one-half to James R. Stewart, Minneapolis, Minn. Filed Nov. 18, 1915. Serial No. 62,139. (Cl. 15—20.)



1. A broom having a stick and a supply of broom corn having a suitable binder, a cap encircling one end of the stick and the corn and composed of a panel forming one side of the cap, and flaps adapted to be folded around the edges of the broom head and lapping by one another, said cap also having wings formed thereon fitting snugly around the broom stick and covering the head of the broom at its junction with the stick and means for securing said cap to the broom.

2. A cap for a broom having a stick, formed from a blank of suitable material having a central panel and flaps provided on each side of said panel, said blank having converging slits at one end of said panel and between it and said flaps forming a pair of wings, said panel forming one side of the broom cap and said flaps being folded around the edges of the broom to form the cap on the other side thereof and having their overlapping edges secured together, said wings being folded around the head of the broom and the stick and having means for securing their overlapping edges together.

1,174,014. FOCUSING DEVICE FOR CAMERAS. EZRA C. CLARK and JOSEPH ARRUFAT, Binghamton, N. Y., assignors to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed Mar. 13, 1915. Serial No. 14,084. (Cl. 95—45.)

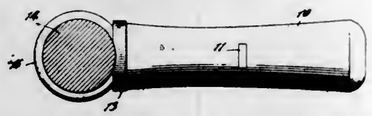


1. A focusing device for cameras comprising a diagonally slotted rotatable ring having a flange accessible from the exterior of the apparatus whereby the ring may be rotated, an index plate carried by the ring, designations on the plate, a fixed pointer coacting with said designations, an inner longitudinally movable lens bearing tube, an intermediate fixed and longitudinally slotted ring, and pins rigidly connected to the inner tube and which project through the longitudinal slots in the intermediate tube and slidably engage in the diagonal slots of the outer ring.

2. The combination in a camera of a finder and focusing devices located in rear of the finder, comprising a diagonally slotted rotatable ring having a flange accessible from the exterior of the apparatus, whereby the ring may be rotated, an index plate carried by the ring, designations on the plate, a fixed pointer, an inner longitudinally movable lens bearing tube, and means connecting the tube with the ring, whereby the tube may be longitudinally moved by rotating the ring in rear of the finder.

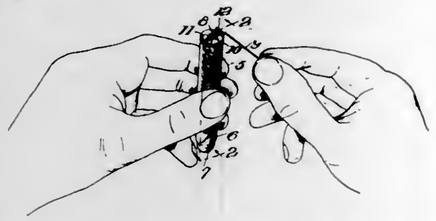
3. The combination in a camera of a finder and focusing devices located in rear of the finder comprising a diagonally slotted rotatable ring having a flange accessible from the exterior of the apparatus, whereby the ring may be rotated, an index plate carried by the ring, designations on the plate observable through the opening in the lens casing, the said opening and the observation window of the finder being adjacent to each other and having the same upward presentation, a fixed pointer, an inner longitudinally movable lens-bearing tube and means connecting the tube with the ring whereby the tube may be longitudinally moved by rotating the ring.

1,174,015. SCYTHE. HENRY W. HUTCHINS, Bellows Falls, Vt., assignor to Elisabeth M. Ball, Bellows Falls, Vt. Filed Mar. 31, 1911. Serial No. 618,093. (Cl. 56—27.)



A nib for scythes and the like containing a bore extending partly through the same, and having a recess extending transversely through one wall formed by the bore and a counter-sunk portion in the opposite wall formed by said bore, a transverse nut embedded in said recess and having a bearing in said counter-sunk portion and rigidly held therein, an initially loose ferrule on the snathe-end of said nib having an opening and a concave snathe seat upon its outer surface at right angles to the opening, and a bolt entering said bore and engaging said nut, said bolt having on its outer end an integral loop whose inner side portions converge and enter said opening in the ferrule beyond said seat.

1,174,016. DENTAL-FLOSS HOLDER. JOHNSON KENYON, New Brunswick, N. J., assignor to Johnson & Johnson, New Brunswick, N. J., a Corporation of New Jersey. Filed Aug. 14, 1915. Serial No. 45,474. (Cl. 242—146.)



1. A dental floss holder, comprising a glass container having a post and a cutting member formed integrally therewith, and having a delivery opening intermediate said post and cutting member, substantially as described.

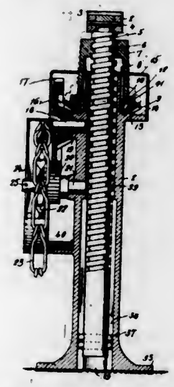
2. A dental floss holder, comprising a tubular glass container whereof one end is closed and whereof the other end is provided with a delivery opening having a boss-like extension of rounded contour, with a post or tension device and with a cutting member formed integral with the container at opposite sides of the delivery opening, substantially as described.

3. A dental floss holder, comprising a tubular glass container whereof one end is closed and whereof the other end is provided with a delivery opening, said container having formed integrally therewith at opposite sides of said opening a post or tension device and a marginal lip terminating in a knife edge, said marginal lip having a contrasting color, substantially as described.

4. A package of dental floss, comprising a glass receptacle within which the floss is sealed, one end of the receptacle having a central eye or delivery aperture through which the floss is threaded, and at opposite sides thereof a post and a cutting member, and a packing element interposed between the floss and the delivery end of the receptacle.

5. A package of dental floss, comprising a glass receptacle within which the floss is sealed, one end of the receptacle having a central eye or delivery aperture through which the ends of the floss is threaded, and having at opposite sides thereof a post and a knife edge, and a rubber disk interposed between the floss and the delivery end of the receptacle and provided with a central orifice for the passage of the floss.

1,174,017. LIFTING-JACK FOR AUTOMOBILES, &c. WALTER B. LASHAR, Bridgeport, and THOMAS C. LUCE, Stratford, Conn., assignors to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Mar. 25, 1915. Serial No. 16,875. (Cl. 254—103.)



1. In lifting jacks for automobiles and similar vehicles, a frame formed with a shaft and a cast in bearing race, a lifting screw mounted in a recess in said frame, a lifting nut having threaded engagement with said screw and having a bearing collar coöperating with said race, a series of angularly arranged alining disk bearing members cooperating with said race and bearing collar, an operating sprocket mounted on said shaft, an endless operating chain coöperating with said sprocket, a reversible guide casing inclosing said sprocket and having guide lips to guide the chain passing to and from said sprocket and revolubly mounted on said shaft to swing in any direction around said sprocket in operating the jack and reducing actuating connections between said sprocket and nut comprising a pinion connected to said sprocket and intermediate gearing coöperating with a beveled gear on said nut adjacent said bearing collar.

2. In lifting jacks for automobiles and similar vehicles, a frame, a lifting member having a lifting head and mounted in a recess in said frame, an operating sprocket mounted on said frame, an endless operating chain cooperating with said sprocket, a reversible guide casing inclosing said sprocket and having guide lips to guide the chain passing to and from said sprocket and revolubly mounted to swing in any direction around said sprocket in operating the jack and reducing actuating connections between said sprocket and lifting member comprising a pinion connected to said sprocket and a coöperating gear.

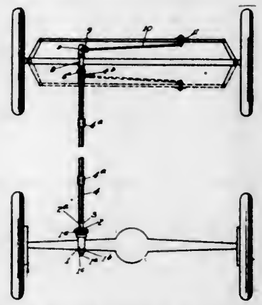
3. In lifting jacks for automobiles and similar vehicles, a frame, a lifting screw mounted on said frame, a lifting nut having threaded engagement with said screw, an operating sprocket mounted on said frame, an endless operating chain coöperating with said sprocket, a reversible guide casing inclosing said sprocket and having guide members to guide the chain passing to and from said sprocket and revolubly mounted on said shaft to swing in any direction around said sprocket in operating the jack and reducing actuating connections between said sprocket and nut.

4. In lifting jacks for automobiles and similar vehicles, a frame, a lifting member having a lifting head and mounted on said frame, an operating sprocket mounted on said frame, an endless operating chain coöperating with said sprocket, a movably mounted guide casing inclosing said sprocket to positively maintain said chain in operative engagement with said sprocket throughout a large part of its circumference and having guide members to guide the chain passing to and from said sprocket in operating the jack and reducing actuating connection between said sprocket and lifting member.

5. In lifting jacks for automobiles and similar vehicles, a cast frame formed with a cast in shaft and stud and a cast in bearing race, a lifting screw mounted in a recess in said frame to move without relative rotation of these parts, a lifting nut having threaded engagement with said screw and having a conical bearing collar coöperating with said race, a series of inclined bearing disks cooperating with said race and bearing collar, an operating wheel mounted on said shaft, an operating device cooperating with said wheel, reducing actuating connections between said wheel and nut comprising a pinion connected to said wheel, a coöperating gear mounted on said stud and having a connected beveled pinion coöperating with a beveled gear on said nut adjacent said bearing collar and a cover secured to said frame around said gearing and allowing the nut to be lifted out of engagement with said gearing for rapid manual adjustment.

[Claims 6 to 12 not printed in the Gazette.]

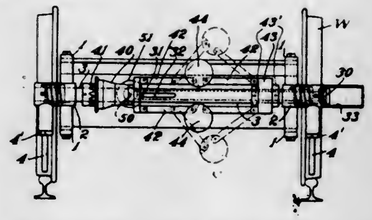
1,174,018. VEHICLE-TRAILING DEVICE. ROBERT L. MAPSON, La Mesa, Cal., assignor of one-half to Lorenzo Sperbeck, La Mesa, Cal. Filed May 16, 1914. Serial No. 839,019. (Cl. 21—137.)



1. In a vehicle trailing device, the combination of a clamp piece, a U-piece swivelly connected thereto and a yoke piece pivotally connected to said U-piece, a rod secured to said yoke, a lug piece pivotally secured to said rod, a lever provided with a plurality of holes in each of its ends, horizontally and centrally pivoted to said lug piece, a clamp piece secured to said lug piece, a rod mounted in one of the holes of said lever so as to be readily removed to the other holes therein and a clamp piece pivoted vertically at its other end adapted to clamp on the steering rod of a traveling device.

2. In a vehicle trailing device, the combination of a clamp member, a U-piece swivelly secured to said clamp member, a yoke pivotally secured to said U-piece, a pipe formed in sections secured to said yoke, a lug pivotally secured on a yoke axis to said rod, a clamp member secured to said lug, a lever provided with a plurality of holes in each of its extended ends pivoted on a vertical axis to said lug and clamp, a piece adapted to be readily pivoted in any of the holes in said lever, a rod horizontally pivoted thereto and a clamp horizontally pivoted to the other end of said rod whereby said trailing device may be readily secured to vehicles with the steering rod either in front or behind the front axle and is readily adjustable to different types and styles of vehicles.

1,174,019. AUTOMATIC BRAKE-SETTING DEVICE. HERBERT R. NEVENS, Melrose, Mass., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed June 19, 1911. Serial No. 634,010. (Cl. 246—59.)



1. In combination with a brake system a device for automatically setting air brakes by contact with a track obstacle applied to the rail tread comprising a trip mounted behind the wheel and positioned directly over the tread of the rail, said trip being operatively associated with the brake system to set the same upon contact with the track obstacle.

2. Automatic air brake mechanism for railroad trains comprising a track obstacle adapted to be applied to the rail tread and means operable by said track obstacle located over the rail and behind a wheel for causing the application of the brakes.

3. In combination with the relief valve of an air brake system, a normally inert relief mechanism in operative association therewith, a track obstacle, and a train carried tripper effective upon contact with said track obstacle to overcome the inertia of said relief mechanism, and impart to it a velocity proportionate to the velocity of the train whereby the air valve is relieved in a degree proportionate to the velocity.

4. In a device for automatically setting air brakes on a railroad train the combination of a valve for relieving the pressure on the train line pipe, a centrifugal device, operative connections between said centrifugally moving device and said valve, tripping means located behind a wheel for imparting to said centrifugally moving device a rotative tendency, a rail plate, a yielding tripper on said plate.

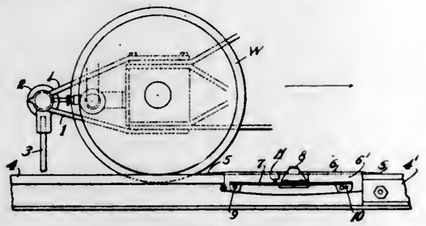
5. In a device for automatically setting air brakes on a railroad train the combination of a valve for relieving the pressure on the train line pipe, a shaft, a centrifugally moving device on said shaft, operative connections between said device and said valve, a tripping arm on said shaft and located behind a wheel for imparting to said centrifugally moving device a rotative tendency, a rail plate and a yielding tripper on said plate and adapted to engage said arm.

[Claims 6 to 13 not printed in the Gazette.]

1,174,020. AUTOMATIC BRAKE-SETTING DEVICE. HERBERT RUSSELL NEVENS, East Hartford, Conn., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed Apr. 12, 1912. Serial No. 690,447. (Cl. 246—59.)

1. A track obstacle for actuating a train carried trip located behind a wheel and over a rail comprising a portable track plate adapted to be applied to the rail trend, and a movable tripper resiliently supported on said plate

across said tread and depressible under a wheel to return in time to actuate the train carried trip located behind said wheel.



2. A device for automatically setting air brakes for railroad trains comprising a rail plate adapted to be applied to the rail tread, depending lateral flanges thereon, resilient members on said lateral flanges and a yielding tripping member supported on said resilient members.

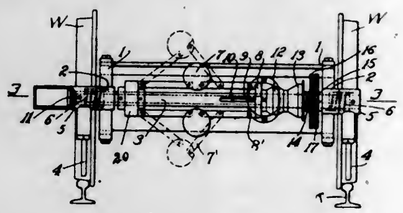
3. A track obstacle for actuating a train carried trip located behind a wheel and over a rail comprising a rail plate adapted to be applied to the rail tread, means for detachably connecting said plate in place, and resilient tripping means on said plate normally disposed above the rail tread and depressible under a wheel to return in time to actuate the train carried trip located behind said wheel.

4. A device for automatically setting air brakes for railroad trains comprising a rail plate adapted to be applied to the rail tread, said plate being centrally opened, a resilient supporting member on each side of said plate and a tripper extending across said opening and supported by said resilient members.

5. A portable device for automatically setting air brakes for railroad trains comprising a rail plate adapted to be applied to the rail tread, lateral depending flanges thereon, rail engaging dogs on said flanges and yielding tripping means on said plate.

[Claims 6 to 12 not printed in the Gazette.]

1,174,021. TRAIN-STOP DEVICE. HERBERT R. NEVENS, Hartford, Conn., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed Apr. 12, 1912. Serial No. 690,448. (Cl. 246—59.)



1. In combination with the air brake system of a railroad train, a device operatively associated therewith independently of the engineer's valve of said system and including means for opening said system to a greater or less degree, means for holding said system open when opened to a greater degree, and means for closing it when opened to the less degree.

2. In combination with the air brake system of a railroad train, means for opening said system to a greater or less degree, means for holding said system open when opened to the greater degree, means for closing it when opened to the less degree, tripping means mounted on the train for effecting said actuation located behind a wheel, and means for governing said actuation according to the speed of the train.

3. In a device for automatically setting air brakes on a railroad train the combination of a valve for relieving the pressure on the train line pipe, a cam member comprising areas for opening and closing said valve for service application and an area for opening and holding open said valve for emergency application, a centrifugal device, operative connections between said centrifugal device and said cam member for operating the latter, and means for imparting to said centrifugal device a rotative tendency.

4. In a device for automatically setting air brakes on a railroad train the combination of a valve for relieving the pressure on the train line pipe, a shaft, a centrifugal device on said shaft, a slide on said shaft having areas for opening and closing said valve when actuated to a less degree and for opening said valve and holding it open when actuated to a greater degree, and operative connections between said centrifugal device and said slide for operating the latter.

5. In a device for automatically setting air brakes on a railroad train the combination of a valve for relieving the pressure on the train line pipe, a shaft, a centrifugal device on said shaft, a slide on said shaft having means for opening and closing said valve when actuated to a less degree and for opening and holding open said valve when actuated to a gerater degree and operative connections between said centrifugal device and said slide for operating the latter, and a tripping arm on said shaft and located behind a wheel for imparting to said governor a rotative tendency.

[Claims 6 to 14 not printed in the Gazette.]

1,174,022. TRAIN-CONTROL DEVICE. HERBERT RUSSELL NEVENS, Hartford, Conn., assignor to Nevens-Wallace Train Control Co., Waltham, Mass., a Corporation of Massachusetts. Filed Oct. 30, 1912. Serial No. 728,581. (Cl. 246—59.)

1. In a device of the class described, a casing, a shaft rotatably mounted therein, a trip arm on the outer end of said shaft, a gear on said shaft, a second shaft, a gear thereon, an intermediate gear meshing with both of said gears, a sliding wedge transversely movable on said second named shaft, a bar threaded at one end and mounted transversely on said second named shaft, a nut on said threaded end, a pair of links pivoted to one end of said bar, a second pair of links connected at one end to said links first mentioned, and at their other ends to said wedge, a resilient member between said nut and said wedge, a slidable block having an inclined surface and mounted in said casing, a stem bearing against said block and adapted to receive the thrust of said transverse wedge, and a brake system relief valve vertically disposed with its stem in the path of the movement of said inclined block.

2. In a device of the class described, a casing, a shaft rotatably mounted therein, a trip arm on the outer end of said shaft, a gear on said shaft, a second shaft, a gear

thereon, an intermediate gear meshing with both of said gears, a sliding wedge transversely movable on said second named shaft, a bar threaded at one end, mounted transversely of said second named shaft, a nut on said threaded end, a pair of links pivoted to one end of said bar, a second pair of links connected at one end to said links first named, and at their other ends to said wedge, a resilient member between said nut and said wedge, a slidable block having an inclined surface and mounted in said casing, a stem bearing against said block and adapted to receive the thrust of said transverse wedge, a brake system relief valve vertically disposed with its stem in the path of the movement of said inclined block, a cylinder formed on said casing outside of said block, a piston set in said block and fitting said cylinder, and means within the control of the engineer for supplying air to said cylinder to reset said block and permit the reclosing of said valve.

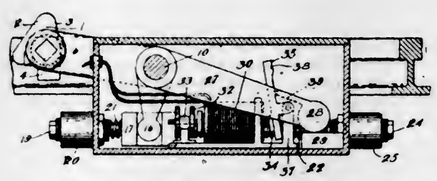
3. In a device of the class described, a casing, a shaft rotatably mounted therein, a trip arm on the outer end of said shaft, a gear on said shaft, a second shaft, a gear thereon an intermediate gear meshing with both of said gears, a sliding wedge transversely movable on said second named shaft, a centrifugal device fixed to rotate with said shaft and connect it to said wedge, a slidable block having an inclined surface and mounted in said casing, a stem bearing against said block and adapted to receive the thrust of said transverse wedge, and a brake system relief valve vertically disposed with its stem in the path of the movement of said inclined block.

4. In a device of the class described, a casing, a shaft rotatably mounted therein, a trip arm on the outer end of said shaft, a gear on said shaft, a second shaft, a gear thereon an intermediate gear meshing with both of said gears, a sliding wedge transversely movable on said second named shaft, a centrifugal device fixed to rotate with said shaft and connect it to said wedge, a slidable block having an inclined surface and mounted in said casing, a stem bearing against said block and adapted to receive the thrust of said transverse wedge, a brake system relief valve vertically disposed with its stem in the path of the movement of said inclined block, a cylinder formed on said casing outside of said block, a piston set in said block and fitting said cylinder, and means within the control of the engineer for supplying air to said cylinder to reset said block and permit the reclosing of said valve.

5. In a device of the class described, a casing, a shaft rotatably mounted therein, a trip arm on the outer end of said shaft, a sliding block in said casing and having an inclined surface thereon, a centrifugally acting device rotatable relative to said shaft and operatively connected to move said wedge, and a brake system relief valve disposed with its stem in the path of the movement of said inclined block surface.

[Claims 6 to 13 not printed in the Gazette.]

1,174,023. RAILWAY SIGNALING DEVICE. HERBERT RUSSELL NEVENS, Hartford Conn., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed Apr. 18, 1913, Serial No. 761,902. Renewed July 20, 1915. Serial No. 41,018. (Cl. 246—59.)



1. In a tripping mechanism, a tripper, a gravity operating member therefor, a gravity lock normally disposed in the path of said member in supporting relation thereto, and independent electrically controlled means having an engaging relation with said lock effective to move said lock into position to support said gravity member and having a disengaging relation with said lock effective to allow said lock to fall by gravity out of supporting position relative to said gravity operating member.

2. In train control mechanism, insulated track sections, a trip in each section normally positioned in interfering relation to the wheels of a passing train, a normally closed electrical circuit establishing communication between a trip and an adjacent track section, means included in said circuit normally effective to lock said trip in non-interfering position after contact of the first train wheel with said trip, and means to return the trip to interfering position when the circuit to said locking means has been broken by the passage of the train past said trip and into said adjacent section.

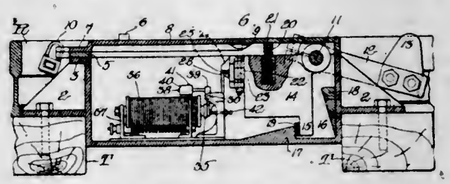
3. In a tripping mechanism, a pivoted tripper, a gravity member operatively connected with said tripper, and effective to maintain said tripper in actuating position, a pivotal support for said gravity member having a supporting and a non-supporting position and normally disposed in the path of said gravity member to support the same, an armature carried by said pivoted support, and an electro-magnet associated with said armature and having a normal engaging relation with said armature, effective to maintain said pivotal support in its supporting position relative to said gravity member and having a disengaging relation with said armature effective to allow said support to assume its non-supporting position relative to said gravity member.

4. In a tripping mechanism, a tripper, a weighted operating member therefor, a gravity lock for said member normally disposed in the path of said operating member and in supporting relation thereto, an armature movable with said lock and an electromagnet associated with said lock and having a normal engaging relation with said armature effective to maintain said lock in position to support said operating member and having a disengaging relation with said armature effective to allow said lock to fall by gravity out of supporting position relative to said operating member.

5. In a tripping mechanism, a pivoted tripper, an actuating counterweight operatively connected with said tripper and effective to maintain said tripper in actuating position, a pivotal support for said counterweight having a supporting and a non-supporting position and normally disposed in the path of said counter-weight to support the same, an armature movable with said pivotal support, and means having an engaging relation with said armature effective to move said support into its counterweight supportive position and having a disengaging relation with said armature effective to allow said pivotal support to fall by gravity into its non-supporting position relative to the counterweight.

[Claims 6 to 14 not printed in the Gazette.]

1,174,024. TRAIN-STOP MECHANISM. HERBERT RUSSELL NEVENS, Hartford, Conn., assignor to Nevens-Wallace Train Control Company, a Corporation of Massachusetts. Filed Nov. 15, 1913. Serial No. 801,217. (Cl 246—59.)



1. In a tripping mechanism for use in a train control system, a train actuated tripper, an operating mechanism therefor, a lock for said operating mechanism, means for moving said lock into interfering position and electrically controlled means effective only to move said lock out of interfering position.

2. In a tripping mechanism for use in a train control system, a train actuated tripper, a gravity operating member therefor, a gravity lock normally disposed in the path of said operating member, an electrically controlled armature operatively associated with said lock, means for moving said armature away from its field, said armature having means for moving said lock to inoperative position only.

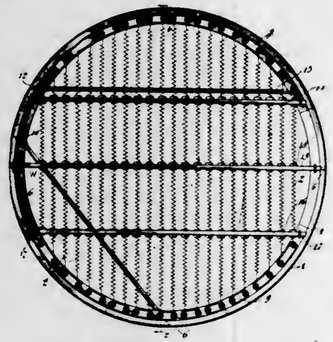
3. In a tripping mechanism for use in a train control system, a train actuated tripper, an operating mechanism therefor, a gravity lock for said operating mechanism, independent electrically controlled means positively engaging said lock in one direction but having a disengaging relation in the other.

4. In a tripping mechanism for use in a train control system, a train actuated tripper, an operating member for said tripper, a lock normally disposed in the path of said operating member, an electrically controlled armature operatively associated with said lock, means for moving said armature away from its field, said armature having means for moving said lock to inoperative position only.

5. In a tripping mechanism for use in a train control system, a train actuated tripper, a weighted operating member for said tripper, a prop member for said operating member, means for moving said prop into interfering position and electrically controlled means effective only to move said prop out of interfering position.

[Claims 6 to 16 not printed in the Gazette.]

1,174,025. HEATING UNIT FOR METERS. HORACE N. PACKARD, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 17, 1914. Serial No. 851,574. (Cl. 219—70.)



1. An electric heating unit for meters comprising an annular supporting frame of insulating material having means on the inner side thereof for supporting a resistance wire so that it is distributed uniformly over the area inclosed by the frame, said frame being provided on its outer surface with a metal hoop for supporting said frame in a conduit.

2. An electric heating unit for meters comprising an annular supporting frame of insulating material provided with a flange on the inner surface thereof having means thereon for supporting a resistance wire so that said wire is uniformly distributed over the area inclosed by the frame, said frame being provided on its outer surface with a metal hoop for supporting said frame in a conduit.

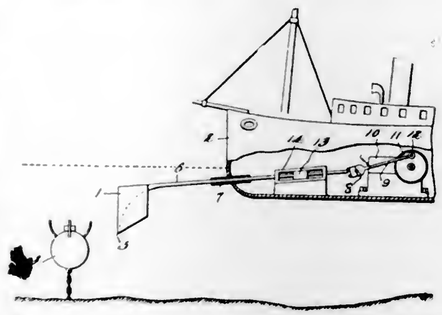
3. A heating unit comprising a circular supporting rim, a plurality of cross bars secured to said rim and having openings therein, an insulator in each of said openings and a plurality of helical resistance wires secured at the opposite ends to said rim each passing through an insulator.

4. A heating unit comprising a circular hoop of insulating material, a plurality of helical resistance coils mounted on said hoop, a terminal on said hoop adjacent to one end of the wire constituting the resistance coils, a second terminal adjacent to said first terminal and a conductor connecting said second terminal to the other end of said resistance wire, said conductor serving also to reinforce said hoop mechanically.

5. A heating unit comprising a wooden rim of T section having a circumferential recess and a metal band located in said recess by means of which said hoop may be secured within a conduit, and a plurality of spans of resistance wire uniformly disposed across the area inclosed by said hoop.

[Claims 6 to 8 not printed in the Gazette.]

1,174,026. MINE-DESTROYER. IRVIN M. RITTER, Biteley, Mich., assignor of one-third to William Ritter, Biteley, Mich. Filed Apr. 27, 1915. Serial No. 24,246. (Cl. 114—240.)



1. In a mine destroyer the combination with a vessel of a rod or member extending from the bow of the vessel, a mine exploding device or extractor carried by the rod or member and located at the front or outer end thereof, said rod or member being movable backwardly and forwardly to arrange the mine exploding device or extractor close to the vessel or in an extended operative position and mechanism for reciprocating the rod or member while the exploding device or extractor is in an extended position.

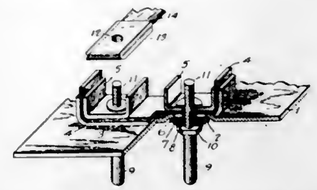
2. In a mine destroyer the combination with a vessel, of a rod or shaft slidable through the bow of the vessel and projecting ahead of the same, an extractor or exploding device carried by the shaft or rod at the front or outer end thereof, a slide carried by the inner portion of the shaft or rod, guiding means for the slide, a motor or engine and a pitman connected with the inner end of the shaft or rod and actuated by the motor or engine.

3. In a mine destroyer the combination with a vessel of a reciprocatory shaft or rod disposed longitudinally of and extending through the bow of the vessel, means carried by the front or outer end of the shaft or rod for exploding a mine, a motor engine, a pitman connected with the same and a coupling for detachably connecting the pitman to the rod or shaft and adapted to permit the same to be drawn inwardly or rearwardly to arrange the mine exploding means close to the bow of the vessel.

4. In a mine destroyer the combination with a vessel of a rod or shaft slidable through the bow of the vessel and projecting ahead of the same and a mine exploding device or extractor carried by the outer end of the shaft or rod and composed of rearwardly diverging sides or wings extending downwardly below the horizontal plane of the keel and having tapered lower portions.

1,174,027. ELECTRIC-CIRCUIT TERMINAL. JOSEF AMON, New York, N. Y. Filed Jan. 28, 1913. Serial No. 744,739. (Cl. 173—324.)

1. In a mounting for circuit terminals, a supporting element, insulation on opposite sides thereof, an eyelet passing through an opening in said plate out of contact therewith and clamping said insulation to said plate, a conductor terminal on one side of said element, and a terminal stud passing loosely through said eyelet from the opposite side of said element and having screw-threaded engagement with said conductor terminal to provide a readily detachable connection.



2. In combination, a supporting plate having a boss pressed therefrom with an opening therein, a metallic terminal guide having an opening therein which fits over said boss to locate said guide, an eyelet for clamping said guide to said plate, and means for insulating said eyelet from said plate.

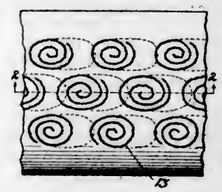
3. In a device of the character described, a supporting plate having a boss pressed therefrom with an opening therein, a metallic terminal guide having an opening therein which fits over said boss to locate said guide, an eyelet for clamping said guide to said plate, means for insulating said eyelet from said plate, a contact pin passing loosely through said eyelet, and a conductor terminal for securing said pin in position.

4. A terminal mounting comprising a supporting element having openings therein, the metal surrounding said openings being pressed outwardly to form bosses, a channel-shaped carrier having openings therein registering with the openings in said support and of a size sufficient to receive said bosses whereby said carrier is located and held in position thereby, a plurality of channel-shaped clips each having an opening registering with one of said above mentioned openings, metallic eyelets passing through said alined openings and clamping said elements to said plate, and insulation interposed between said clips and said carrier and between said eyelet and said plate.

5. In combination, a supporting plate having a pair of openings therein, the metal surrounding each opening being pressed outwardly to form bosses, a channel-shaped carrier having openings within which said bosses are received, a pair of small channel-shaped metallic clips arranged one at each side of said channel, a strip of insulation covering the inner face of said channel and arranged between said channel and said clips, insulating washers on the opposite side of said plate arranged one on the under side of each boss, a metallic washer arranged against each insulating washer, and a metallic eyelet passing through each of the openings in said plate and serving to clamp the above group of elements to said plate.

[Claims 6 and 7 not printed in the Gazette.]

1,174,028. RESILIENT VEHICLE-TIRE. WARREN B. BUCKLEY, Washington, D. C. Filed Dec. 4, 1915. Serial No. 65,105. (Cl. 152—14.)



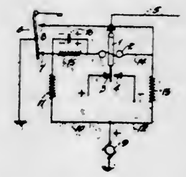
1. A vehicle tire embodying a continuous curved tread body portion of resilient material in which waves of flexure and compression may progress longitudinally of the tread surface, said tread body having incorporated therein relatively small separate layers of pliant fabric extending at one edge to the tread surface and spaced from each other both longitudinally and transversely of the tire by the resilient tread material, said layers of fabric being tangential in the plane of rotation of the tire and being free to individually and independently conform to waves of flexure and compression in the body of resilient tread material, edges exposed at the surface of the tread being arranged at different angles whereby a skid in any direction is opposed by an edge or edges substantially transverse to the direction in which skidding tends to occur.

2. A vehicle tire embodying a continuous curved tread body portion of resilient material in which waves of flexure and compression may progress longitudinally of the tread surface, said tread body having incorporated therein relatively small separate layers of pliant fabric extending at one edge to the tread surface spaced from each other and laterally surrounded by the resilient tread material, said layers of fabric being inclined at an angle to lines radial to the axis on which the tire is designed to rotate and being free to individually and independently conform to waves of flexure and compression progressing longitudinally in the tread material, edges exposed at the surface of the tread being arranged at different angles whereby a skid in any direction is opposed by an edge or edges substantially transverse to the direction in which skidding tends to occur.

3. A vehicle tire embodying a body of resilient tread material forming the wearing surface of the tire and having incorporated therein convolutes of fabric, the axis of the convolutes being at an angle to lines radiating from the axis on which the tire is designed to rotate and lying in the plane of rotation of the tire.

4. A vehicle tire embodying a body of resilient material forming the wearing surface of the tire and having incorporated therein convolutes of fabric with the convolutions spaced from each other by resilient tread material, the axis of said convolutes being inclined with respect to lines normal to the surface of the tire.

1,174,029. TELEGRAPHY. WILLIAM FINN, Bloomfield, N. J., assignor to The Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 6, 1915. Serial No. 59,892. (Cl. 178—71.)



1. A transmitting arrangement for telegraph lines comprising transmitting means having two contacts arranged to be closed alternately, a source of current supply having one pole connected to both said contacts, and a polar relay having a magnet circuit bridged across the conductors leading from said generator to said two contacts of said transmitter, such bridged circuit containing a resistance and a condenser shunted around that resistance, the arrangement being such that when one of said transmitter contacts is broken, the condenser discharges and energizes the magnet of the relay to reverse the position of the armature, such condenser recharging with current of opposite polarity when the opposite transmitter contact is closed.

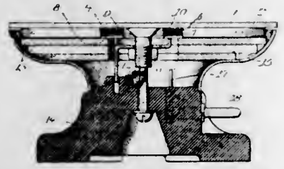
2. A transmitting arrangement for telegraph lines comprising transmitting means having two contacts arranged to be closed alternately, a polar relay, a source of current supply, a condenser, and circuits connecting said source of current supply and said condenser to mag-

net coils of said relay and to the said transmitting contacts, arranged to cause the condenser to discharge through the magnet coils of said relay, and thereby to operate said relay, when one of said transmitter contacts is broken, and in anticipation of the closing of the other transmitter contact.

3. A transmitting arrangement for telegraph lines comprising transmitting means having two contacts arranged to be closed alternately, a source of current supply having one pole connected to both said contacts, and the other pole connected to return, a polar relay having a magnet circuit bridged across the conductors leading from said generator to said two contacts of said transmitter, such bridged circuit containing a resistance and a condenser shunted around that resistance, and resistance interposed, in the circuits connecting the generator with the contacts of said transmitting means, between said generator and bridged circuit, the transmitting contacts being arranged to connect said generator to return.

4. A transmitting arrangement for telegraph lines comprising transmitting means having two contacts arranged to be closed alternately, a source of current supply having one pole connected to both said contacts, and the other pole connected to return, a polar relay having a magnet circuit bridged across the conductor leading from said generator to said two contacts of said transmitter, such bridged circuit containing a resistance, and having also another magnet circuit constituting a shunt with respect to such resistance and containing a condenser, the transmitting contacts being arranged to connect said generator to return.

1,174,030. ELECTRIC STOVE. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Jan. 28, 1913, Serial No. 744,727. Renewed Aug. 2, 1915. Serial No. 43,344. (Cl. 219—37.)



1. In an electric heater, a heating plate, a sheet metal carrier having the same outline as said plate and welded thereto, said carrier having its margin doubled over upon itself and a resistance secured by said doubled-over margin.

2. In an electric heater, a heating plate, a sheet metal carrier having the same outline as said plate and welded thereto, said carrier having its margin doubled over upon itself, a resistance secured by said doubled-over margin, said carrier having a central opening and means welded to said plate independently of said carrier for further securing said resistance.

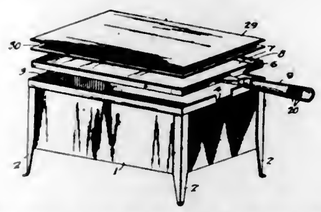
3. In combination, a metallic disk, a circular resistance carrier welded thereto, said carrier having a central opening, a screw welded by its head to said disk at the center thereof, said carrier having its entire outer periphery flanged inwardly, a resistance held against said carrier by said flanged-over portion, and a pressure plate carried by said screw for assisting in holding the central portions of said resistance against said carrier.

4. A heating device comprising a base, a metallic disk, a heating resistance, a circular sheet-metal carrier inclosing said heating resistance, said carrier being welded to the under surface of said disk, and a casing inclosing said heating element and supporting said disk upon said base.

5. A heating device comprising a base, a metallic disk, a heating resistance, a circular sheet-metal carrier inclosing said heating resistance, said carrier being welded to the under surface of said disk, a casing inclosing said heating element and supporting said disk upon said base, said disk, casing and base being held together by a screw which passes upwardly through said base and is received within a screw-threaded opening in said first screw.

[Claims 6 and 7 not printed in the Gazette.]

1,174,031. ELECTRIC STOVE. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Jan. 28, 1913. Serial No. 744,726. (Cl. 219—37.)



1. In an electric heater, a pair of heating plates and a plurality of resistance units arranged between said plates and integrally united to one of them.

2. In an electric heater, a pair of heating plates and a plurality of resistance units arranged between said plates and integrally united to one of them, said plates being united at their peripheries to form a water-tight construction.

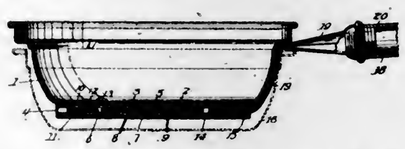
3. In an electric heater, a pair of heating plates and a plurality of resistance units arranged between said plates, said units being secured to each of said plates, whereby they serve to maintain the same in proper spaced relation regardless of expansion and contraction, due to heat variations.

4. An electric heater for a table stove comprising a flat utensil consisting of an upper and a lower heating plate, electric heating units arranged between said plates and integrally united thereto, and a flange at the periphery of said plates to form a pan thereof.

5. An electric table stove having a supporting base open at the top and a removable, reversible closure for said open top, said closure comprising an electric heater either side of which may be used as a heating surface.

[Claims 6 to 15 not printed in the Gazette.]

1,174,032. ELECTRIC HEATER. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Feb. 11, 1913, Serial No. 747,635. Renewed Aug. 2, 1915. Serial No. 43,345. (Cl. 219—44.)



1. In a device of the character described, a metallic resistance carrier, a body to be heated against which said carrier is located, and a metallic element arranged on the opposite side of said body, said element consisting of material adapted to be welded to said carrier, said metallic element and said carrier being welded together through said body.

2. In a device of the character described, a metallic container for a resistance, a body to be heated against which said container is located, a metallic plate of material adapted to be welded to said container arranged on the opposite side of said body, said plate and said container being integrally united to each other through said body, and a resistance within said container and insulated therefrom.

3. In combination, a sheet metal carrier comprising a top and a depending flange, a body to be heated beneath which said carrier is arranged, a metallic plate on the upper side of said body, said plate being welded to said carrier through said body, a resistance adapted to fit within the annular flange of said carrier, mica insulation on opposite sides of said resistance, and a cover plate beneath said resistance and insulated therefrom by said mica, said flange being bent inwardly to firmly secure said resistance in intimate heat-conducting relation with said body, whereby a compact unitary construction is provided.

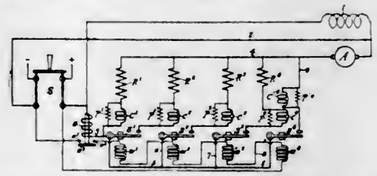
4. The combination with a cooking utensil having a depression in its base, of a metallic plate fitting within said depression, a sheet metal container conforming substantially to the outline of said plate and arranged in contact with the undersurface of said base, a cover plate fitting said container and a resistance arranged between said container and said cover plate and firmly held thereby, said container being integrally united to said metallic plate through the base of said utensil.

5. An electrically heated chafing-dish comprising a receptacle having a shallow circular depression in its base, an inverted cup-shaped sheet metal carrier arranged in contact with the under surface of said depressed portion, a metallic plate having a thickness substantially equal to the depth of said depression and fitting within the same, said carrier being welded to said plate through the base of the chafing-dish whereby it is integrally united thereto, a resistance in the form of a thin flat disk arranged within said carrier, a shallow flanged cover plate fitting within said carrier in inverted position, and mica disks arranged on opposite sides of said resistance to insulate the same from its metal support, said cover plate being welded to said carrier to provide a water-tight inclosure for said resistance.

[Claims 6 to 11 not printed in the Gazette.]

REISSUES.

14,076. ELECTRIC CONTROLLER. ARTHUR C. EASTWOOD, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 11, 1913. Serial No. 778,593. Original No. 1,013,754, dated Jan. 2, 1912. Serial No. 583,301. (Cl. 172—179.)



1. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each having an operating winding adapted to be connected in the controlled circuit, and each having a locking winding arranged to prevent the operation of the switch with which it is associated.

2. In an electric controller, a controlled circuit, a series of magnetically-operated switches, the winding of each switch arranged to be included in the controlled circuit by the closing of a preceding switch of the said series, and a locking winding associated with each switch, and arranged to prevent the closure of the switch with which it is associated.

3. In an electric controller, a controlled circuit, a series of magnetically-operated switches, the winding of each switch arranged to be included in the controlled circuit by the closing of a preceding switch of the said series, a locking winding arranged to prevent each of said switches from closing, and a switch mechanism arranged to control each locking winding.

4. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each of said switches having its operating winding arranged to be included in the controlled circuit by the closing of a preceding switch, a locking winding arranged to prevent the closing of the said switches, and a switch mechanism arranged to deënergize each locking winding.

5. In an electric controller, a controlled circuit, a series of magnetically-operated switches, each of said switches having its operating winding arranged to be included in the controlled circuit by the closing of a preceding switch, a locking winding arranged to prevent the closing of the said switches, and a master-switch to successively deënergize the said locking windings.

6. In an electric controller, a series of electro-magnetically operated switches, each of said switches having an operating winding adapted when energized to cause the closing of said switch, means for successively energizing said operating windings, a locking winding adapted when energized to prevent each switch from closing, and a switch to deënergize the said locking windings.

7. In a controller for electric motors, a motor circuit, a resistance, a pilot switch for closing the circuit through the said motor and the said resistance, a series of switches for controlling the amount of the said resistance in the motor circuit, each of said switches except the first having an operating winding included in the circuit closed at the main contacts of the switch which precedes it in operation, a locking winding for each switch normally energized for preventing the operation of the said switch, and a master switch for successively deënergizing the said locking windings.

8. In a controller for electric motors, a motor circuit, a resistance, a pilot switch for closing the circuit through the said motor and the said resistance, a series of switches for controlling the amount of the said resistance in the motor circuit, each of the switches of said series having an operating winding included in the circuit closed at the main contacts of the switch which precedes it in operation, and a locking winding for each switch of said series arranged to prevent the closing of the said switch until the effect of said locking winding is neutralized or removed.

9. In an electric controller, a controlled circuit, a series of magnetically-operated switches arranged to close in a predetermined order, each of said switches having an actuating winding included in the controlled circuit by the closure of the preceding switch, the last of the said switches having contacts for short-circuiting the actuating windings of the preceding switches.

10. In an electric controller, a controlled circuit, a series of magnetically-operated switches adapted to close in a predetermined order, each of said switches having contacts and an actuating winding adapted to be connected in the controlled circuit, the actuating winding of each switch being included in the controlled circuit by the closure of the switch which precedes it in closure, and contacts on the last of said switches to close which serve to short-circuit the actuating windings of the preceding switches when the said last switch closes.

11. In a controller for electric motors, a motor circuit, a resistance for the motor circuit, a series of switches having contacts for controlling successive sections of the said resistance, each of the said switches having an actuating winding included in the motor circuit by the closure of the switch which precedes it in operation, the contacts of the last of said switches to close being connected to short-circuit all of said resistance and also to short-circuit the actuating windings of the preceding resistance-controlling switches when said last switch is closed.

12. In a control system, a controlled circuit, a switch therefor, a winding for the switch energized by the current in the controlled circuit, a second switch for the said circuit, a winding therefor energized by the current in the said circuit, and connections whereby the first switch in closing energizes the winding of the second switch, and the second switch in closing causes the first switch to open.

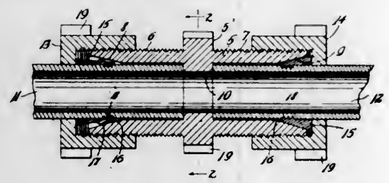
13. In a control system, a controlled circuit, resistances therefor, switches for controlling the resistances, actuating windings for the switches energized by current in the controlled circuit, main contacts for connecting the

resistances and the actuating winding of one of said switches in the said circuit, and connections whereby one switch of the series in closing energizes the winding of the next switch and said next switch in closing deënergizes the winding of said preceding switch.

14. In an electric controller, a controlled circuit, a series of magnetically-operated switches arranged to close in a predetermined order, each of said switches having an actuating winding included in the controlled circuit by closure of the preceding switch in the series, and each switch, when actuated, closing a circuit in shunt to a circuit closed by the switch which precedes it in operation.

15. In a controller for electric motors, a motor circuit, a resistance in the motor circuit, a series of switches for shunting successive sections of said resistance, each of the said switches having an actuating winding included in the motor circuit by the closure of the switch which precedes it in operation and each switch, when actuated, closing a circuit in shunt to a circuit including the switch which precedes it in operation and a section of said resistance.

14,077. PIPE-JOINT. CHESTER P. HALL, Lombard, Ill., assignor, by mesne assignments, to J. W. McFerran, Canton, Ohio. Filed July 23, 1913. Serial No. 780,793. Original No. 1,030,237, dated June 18, 1912, Serial No. 540,798. (Cl. 137—28.)



1. In a pipe joint, the combination, with a pipe having a normally non-threaded end, of a fitting to receive the pipe end, said fitting exteriorly threaded and interiorly tapered near its end, a ring of soft malleable metal adapted to surround the pipe and tapered for coaction with the tapered portion of said fitting upon the application of pressure thereto to hold the pipe, and a cap threaded for engagement with said fitting and for forcing said tapered ring into contact therewith, said pipe having cut therein at approximately the inner edge of the taper of said fitting a sharp edged groove for reception of a sharp thread of said ring to be forced thereinto upon operation of said threaded cap.

2. In a pipe joint, the combination with a pipe, having a normally non-threaded end, of a fitting to receive the pipe end, said fitting exteriorly threaded and interiorly tapered near its end, an interior shoulder against which the pipe end abuts, a ring of soft malleable metal surrounding the pipe and tapered by the application of pressure thereto to wedge between said tapered portion of the fitting and pipe, and a cap threaded for engagement with said fitting and forcing said tapered ring into contact therewith, said pipe having cut therein a groove adjacent the small edge of said tapered ring for reception of the extreme edge of said tapered malleable ring forced thereinto upon operation of said cap.

3. In a pipe joint, the combination of a pipe end having made therein, (as by a single turn of a pipe cutter) a sharp edged groove at a suitable distance from the end thereof, a fitting adapted to receive said pipe end providing a shoulder to receive in contact therewith the end of said pipe, the interior surface of said fitting providing a flaring portion extending outwardly from said groove in the pipe end and the exterior surface of said sleeve being screw-threaded, an interiorly screw-threaded cap for engagement with said screw threads of the sleeve, and a wedge ring of soft malleable metal tapering to provide on one side a pointed annular edge, said wedge ring lying with its pointed edge within the tapering space between the sleeve and pipe end, said ring being by turning of the cap, forcibly wedged into said space, and the pointed edge lying in the groove of said pipe end as, and for the purpose described.

4. In a pipe joint, the combination with a pipe end having a groove therein and a non-threaded portion adjacent said groove, of a fitting providing an interior surface for coaction along the outer surface of the pipe, and a surface flaring outwardly to overlie said non-threaded portion, whereby there is included between said flaring surface of the fitting and said non-threaded portion of the pipe an inwardly tapering space said space ending substantially at the groove in said pipe, a ring of malleable metal, and a cap adapted to be moved toward said ring to press the latter into said tapering space and groove, as described.

5. In a pipe joint, the combination, with a pipe end having a groove therein and a non-threaded portion adjacent said groove, of a fitting providing an interior surface for coaction along the outer surface of the pipe end, and a surface flaring outwardly to overlie said non-threaded portion, whereby there is included between said flaring surface of the fitting and non-threaded portion of the pipe an inwardly tapering space said space ending substantially at the groove in said pipe, a ring of malleable metal tapering toward one side to provide a pointed annular edge and having adjacent its edge an enlargement, and a cap adapted to be moved toward said ring to press the latter into said tapering space between the fitting and pipe and to press said enlargement down into said groove.

6. In a pipe joint, the combination, with a pipe end having a groove therein, of a fitting providing an interior surface for coaction along the outer surface of the pipe and a surface flaring outwardly to provide between said flaring surface and the pipe a tapering space said space ending substantially at said groove, a tapering ring having an enlargement at its smaller end, and a cap adapted to be moved against said ring to press it into said tapering space between the fitting and pipe and to press said enlargement down into said groove, as described.

7. In a coupling for cylindrical metal members, the combination, with a hard metal fitting having at its end a flaring recess adapted to receive one of said coupled members, of a ring or sleeve of strong ductile material adapted to fit closely about said coupled member and having its exterior tapered in the same direction as said recess, an integral rib surrounding said ring or sleeve adjacent to its forward end, said rib having a diameter intermediate the largest and smallest diameters of said recess, and means whereby said ring or sleeve may be forced longitudinally into said recess, whereby said rib will be pressed down toward the exterior surface of said sleeve at the point opposite said rib and the interior surface of said sleeve will be headed so as to interlock with said coupled member.

8. In a coupling for cylindrical metal members, the combination, with a hard metal fitting having a cylindrical portion adapted to embrace one of the members to be coupled and also having at its end a flaring recess, of a ring or sleeve of material whose resistance to crushing is greater than the resistance of said coupled member to withstand the constriction of said sleeve, said sleeve having a substantially cylindrical bore adapted to receive closely the end of said coupled member and having a tapered exterior, an integral rib surrounding said ring or sleeve adjacent to its forward end, and a cap adapted to be moved toward said ring or sleeve to press the same into said recess, whereby said rib will be pressed down toward the exterior surface of said ring or sleeve and the interior surface of said ring or sleeve at the point opposite said rib will be headed so as to interlock with said coupled member.

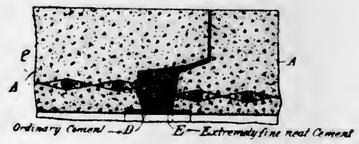
9. In a coupling for metal members, a sleeve adapted to surround and fit closely about such a member and having a tapered exterior surface and a circumferential rib intermediate the ends of said surface, a fitting having a flaring interior adapted to receive said sleeve and rib, the diameter of said rib being intermediate between the greatest and least diameters of the flaring portion of said fitting, and means for forcing said sleeve longitudinally into said fitting whereby said rib will be reduced exteriorly and the interior of said sleeve at a point opposite said rib headed to interlock with the member therewithin.

10. In a coupling, the combination, with a fitting having a flaring recess, of a sleeve of malleable metal having a cylindrical interior and a tapered exterior, said sleeve having an integral, circumferential, external rib spaced from its narrow end, an apertured member adapted to be secured to said fitting and to have a driving connection with said sleeve whereby the same can be forced into said recess and said rib transferred from the exterior to the interior of said sleeve, the aperture of said member being substantially in alinement with the interior of said sleeve.

11. In a coupling for cylindrical metal members, the combination, with a sleeve having a cylindrical surface adapted to fit closely against the cylindrical surface of such member and having an annular rib projecting from the surface opposite to said cylindrical surface, of means for exerting pressure upon said rib whereby the same may be depressed in the direction of the surface from which it projects and a bead raised on said cylindrical surface opposite thereto which shall interlock with said coupled member.

12. In a coupling for metal members, the combination, with a pair of tubular coupling members and means for adjustably connecting them, one of said coupling members being provided with a flaring entrance end, of a ring or sleeve of hard ductile metal tapered forwardly to a comparatively thin edge and having a circumferential integral rib a short distance in the rear of said edge, the normal exterior diameter of said rib being intermediate the largest and smallest diameters of said entrance end, the other of said coupling members having a driving connection with said sleeve, whereby when the coupling members are drawn close together said rib will be transferred from the exterior to the interior of said sleeve and said sleeve firmly interlocked with said coupled member.

14,078. WATER-TIGHT JOINT FOR CONCRETE WATER-PIPES. ALLAN M. HIRSH and COLEMAN MERIWETHER, Montclair, and JOHN C. MITCHELL, East Orange, N. J., assignors to Lock Joint Pipe Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 10, 1915. Serial No. 50,094. Original No. 1,143,117, dated June 15, 1915, Serial No. 814,340. (Cl. 72—51.)



1. A water tight joint for concrete water pipes and the like, formed by the combination of two abutting concrete sections having a groove or recess at the line of union, a primary filler of cement, or cement mortar, for the groove, and an interior secondary seal of fine cementitious material.

2. A water tight joint for concrete water pipes and the like, formed by the combination of two abutting concrete sections having a groove or recess at the line of union, a primary filler of cement, or cement mortar for the groove, and an interior secondary seal of finely sifted cement applied over the same.

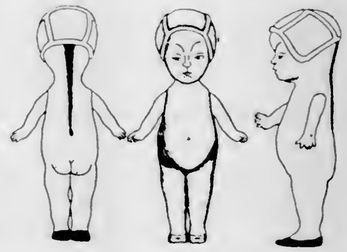
3. A water tight joint for concrete water pipes and the like, formed by the combination of two abutting sections of pipe having a main and an interior secondary recess or groove at the line of union, a primary filler of cement or cement mortar for the main groove, and a secondary filler of finely divided neat cement for the other.

4. A water tight joint for concrete water pipes and the like, formed by the combination of two abutting pipe sections having a bell and spigot union, the bell being longer than the spigot to form an annular groove at the line of union, a filler of cement, or cement mortar for such groove, and an interior secondary seal of finely sifted neat cement applied over the same.

5. A water tight joint for concrete water pipes and the like, formed by the combination of two abutting pipe sections having a bell and spigot union, the bell being longer than the spigot to form an annular groove at the line of union, and the ends of the pipe sections being shaped to form a recess over the groove, a primary filler of cement or cement mortar for the main groove, and an interior secondary seal or filler of finely sifted neat cement for the recess over the same.

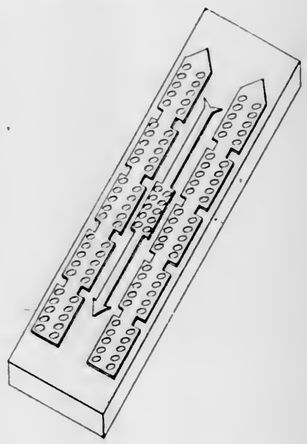
DESIGNS.

48,625. DOLL. HIKOZO ARAKI, Brooklyn, N. Y., assignor to Morimura Bros., New York, N. Y., a Firm composed of Ichizaemon Morimura, Yasukata Murai, and Sanehide Hirose. Filed Nov. 10, 1915. Serial No. 60,794. Term of patent 3½ years.



The ornamental design for a doll as shown.

48,626. CRIBBAGE-BOARD. ALMOND L. CARLOW, Providence, R. I. Filed Dec. 17, 1915. Serial No. 67,477. Term of patent 7 years.



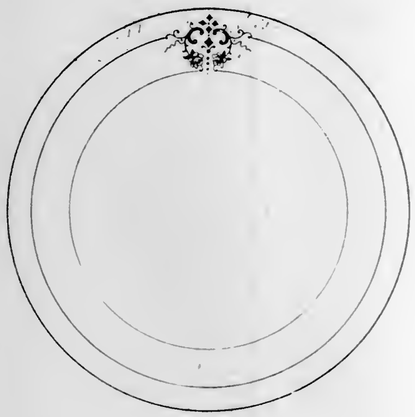
The ornamental design for a cribbage-board, as shown.

48,627. RUBBER BOOT. MYRON H. CLARK, Milford, Conn., assignor to The Goodyear's Metallic Rubber Shoe Co., a Corporation of Connecticut. Filed Oct. 31, 1914. Serial No. 869,702. Term of patent 14 years.



The ornamental design for a rubber boot as shown.

48,628. ARTICLE OF MANUFACTURE. WALTER DE VILLE, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Filed Dec. 31, 1915. Serial No. 69,676. Term of patent 7 years.



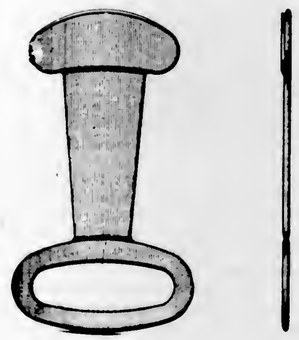
The ornamental design for an article of manufacture, as shown.

48,629. ARTICLE OF MANUFACTURE. WALTER DE VILLE, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Filed Dec. 31, 1915. Serial No. 69,677. Term of patent 7 years.



The ornamental design for an article of manufacture, as shown.

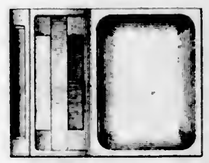
48,630. FAN-HANDLE. LEO EISEMANN, New York, N. Y. Filed Nov. 15, 1915. Serial No. 61,674. Term of patent 3½ years.



The ornamental design for fan handle, as shown.

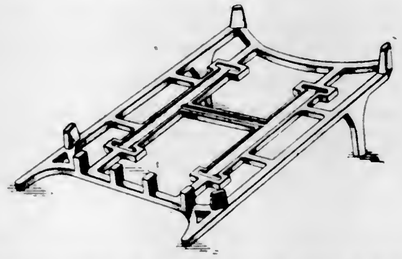
48,631. COMBINATION LEAD-SHARPENER AND PIN-TRAY. FRANK W. ETHRIDGE, Tulsa, Okla. Filed Nov. 15, 1915. Serial No. 61,695. Term of patent 7 years.





The ornamental design for a combination lead sharpener and pin tray, as shown.

48,632. FLAT-IRON STAND. JOHN WESLEY FERGUSON, Bloomfield, N. J. Filed Jan. 21, 1916. Serial No. 73,469. Term of patent 7 years.



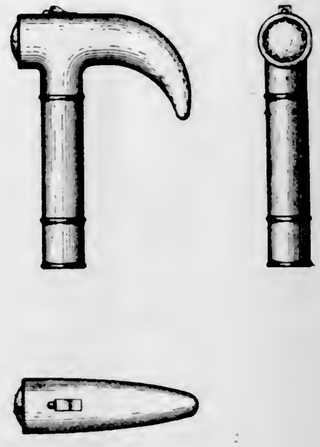
The ornamental design for a flat-iron stand as shown.

48,633. CANE OR UMBRELLA HANDLE OR SIMILAR ARTICLE. JOHN B. GLOWACKI, Chicago, Ill. Filed Oct. 3, 1914. Serial No. 864,951. Term of patent 3½ years.



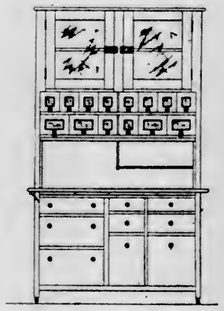
The ornamental design for a cane or umbrella handle or similar article, as shown.

48,634. CANE OR UMBRELLA HANDLE OR SIMILAR ARTICLE. JOHN B. GLOWACKI, Chicago, Ill. Filed Oct. 3, 1914. Serial No. 864,952. Term of patent 3½ years.



The ornamental design for a cane or umbrella handle or similar article, as shown.

48,635. KITCHEN-CABINET. DANIEL GRIFFITH, Giddings, Tex. Filed June 12, 1915. Serial No. 33,828. Term of patent 14 years.



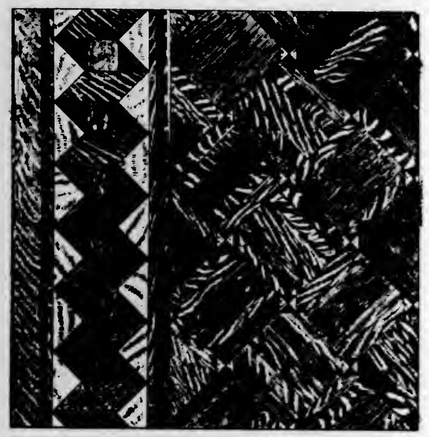
The ornamental design for a kitchen-cabinet, as shown.

48,636. PNEUMATIC TIRE. RICHARD GRIFFITH, Akron, Ohio. Filed Dec. 13, 1915. Serial No. 66,630. Term of patent 14 years.



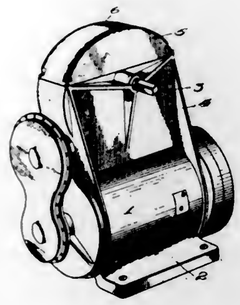
The ornamental design for a pneumatic tire as shown.

48,637. FLOOR-COVERING. EDWARD W. JEFFCOTT, Plainfield, and ROBERT C. JEFFCOTT, Somerville, N. J., assignors to The Cott-a-Lap Company, Somerville, N. J., a Corporation of New Jersey. Filed Dec. 13, 1913. Serial No. 806,638. Term of patent 7 years.



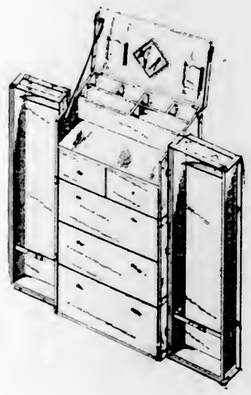
The ornamental design for a floor covering, as shown.

48,638. CASING FOR HAND-OPERATED GENERATORS FOR WIRELESS TELEGRAPHY. ALBERT H. JOHNSON, Washington, D. C., assignor to National Electrical Supply Company, Washington, D. C., a Corporation of Virginia. Filed Sept. 23, 1915. Serial No. 52,323. Term of patent 3½ years.



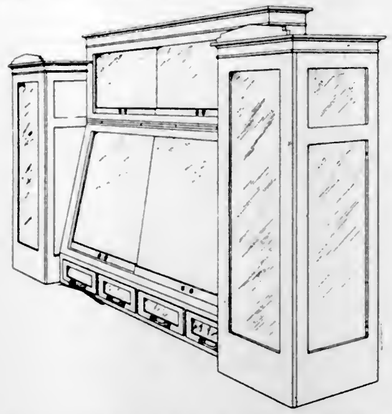
The ornamental design for a casing for hand operated generators for wireless telegraphy, as shown and described.

48,639. WARDROBE-TRUNK. FREDRICK W. JOHNSON, Washington, D. C. Filed May 1, 1915. Serial No. 25,294. Term of patent 7 years.



The ornamental design for a wardrobe trunk, as shown.

48,640. DISPLAY-CASE FOR PHARMACIES. CHARLES F. KUHZ, Cleveland, Ohio. Filed Dec. 13, 1915. Serial No. 66,631. Term of patent 7 years.



The ornamental design for a display case, as shown.

48,641. BADGE. WILLIAM W. LEWTON, Chicago, Ill. Filed Jan. 26, 1914. Serial No. 814,602. Term of patent 14 years.



The ornamental design for a badge, as shown.

48,642. BADGE OR SIMILAR ARTICLE. JAMES MCLAUGHLIN, McLaughlin, S. D. Filed Jan. 10, 1916. Serial No. 71,367. Term of patent 7 years.



The ornamental design for a badge or similar article, as shown.

48,643. PRECIOUS OR SEMIPRECIOUS OR SYNTHETIC STONE OR AN IMITATION THEREOF. WILLIAM MILLER, New York, N. Y. Filed Dec. 24, 1915. Serial No. 68,590. Term of patent 3½ years.



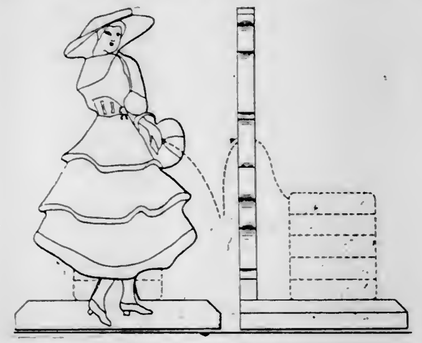
The ornamental design for a precious or semi-precious or synthetic stone or an imitation thereof, as shown.

48,644. PRECIOUS OR SEMIPRECIOUS OR SYNTHETIC STONE OR AN IMITATION THEREOF. WILLIAM MILLER, New York, N. Y. Filed Dec. 24, 1915. Serial No. 68,591. Term of patent 3½ years.



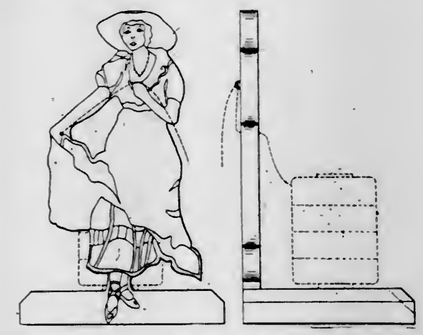
The ornamental design for a precious or semi-precious or synthetic stone or an imitation thereof, as shown.

48,645. TWINE-HOLDER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,977. Term of patent 3½ years.



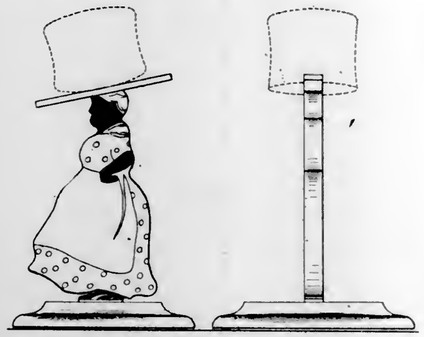
The ornamental design for a twine holder.

48,646. TWINE-HOLDER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,978. Term of patent 3½ years.



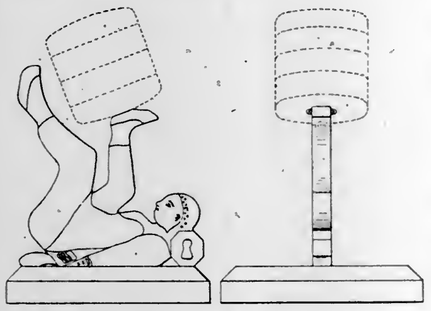
The ornamental design for a twine holder as shown.

48,647. TWINE-HOLDER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,980. Term of patent 3½ years.



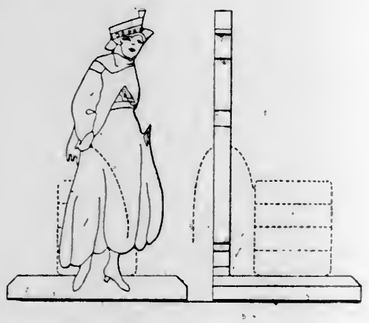
The ornamental design for a twine holder as shown.

48,648. TWINE-HOLDER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,981. Term of patent 3½ years.



The ornamental design for a twine holder as shown.

48,649. TWINE-HOLDER. MARIAN HOLMES NEVIUS, New York, N. Y. Filed Nov. 11, 1915. Serial No. 60,979. Term of patent 3½ years.



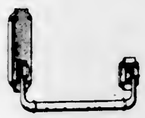
The ornamental design for a twine holder as shown.

48,650. IMAGE. LEO POTTER, New York, N. Y., assignor to Emil Potter, New York, N. Y. Filed Jan. 15, 1915. Serial No. 2,486. Term of patent 3½ years.



The ornamental design for an image, as shown.

48,651. PANIC-LOCK. CARL J. PRINZLER, Indianapolis, Ind. Filed Aug. 14, 1914. Serial No. 856,871. Term of patent 7 years.



The ornamental design for a panic lock as shown.

48,652. COFFEE-POT. ISAAC D. RICHHEIMER, Chicago, Ill. Filed Dec. 24, 1915. Serial No. 68,592. Term of patent 7 years.



The ornamental design for a coffee pot. -- shown.

48,653. JAR. FRED H. ROBERTS, Wilmington, Mass. Filed Dec. 1, 1915. Serial No. 64,595. Term of patent 7 years.



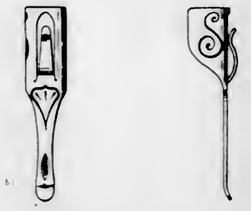
The ornamental design for a jar, as shown.

48,654. ARTICLE OF MANUFACTURE. GEORGE SCHILLER, Jersey City, N. J., assignor to The Palm Brothers Company, New York, N. Y. Filed Jan. 3, 1916. Serial No. 70,040. Term of patent 7 years.



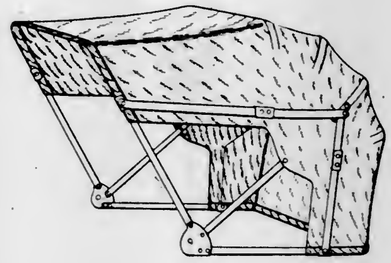
The ornamental design for an article of manufacture, as shown.

48,655. COMBINED PENCIL-CLIP AND EYEGLASS-SUPPORT. GUSTAVUS A. SCHLECHTER, Wyomissing, Pa. Filed Oct. 12, 1915. Serial No. 55,586. Term of patent 3½ years.



The ornamental design for a combined pencil clip and eye-glass support as shown.

48,656. HOOD FOR CHILDREN'S CARRIAGES. CHRISTOPHER STEELE SPOFFORD, Sturgis, Mich., assignor to Sturgis Steel Go-Cart Co., Sturgis, Mich. Filed June 15, 1914. Serial No. 845,317. Term of patent 7 years.



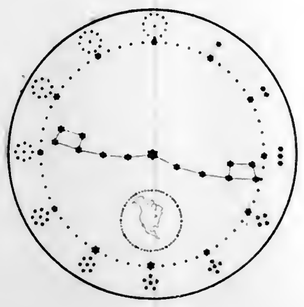
The ornamental design for a hood for children's carriages, as shown.

48,657. STATUETTE. EDNA FLORENCE STEFFENS, Cleveland Heights, Ohio. Filed Nov. 2, 1915. Serial No. 59,327. Term of patent 3½ years.



The ornamental design for statuettes as shown.

48,658. DIAL FOR TIMEPIECES. GEORGE A. VAIPAN, Windsor, Ontario, Canada. Filed Nov. 28, 1914. Serial No. 874,569. Term of patent 3½ years.



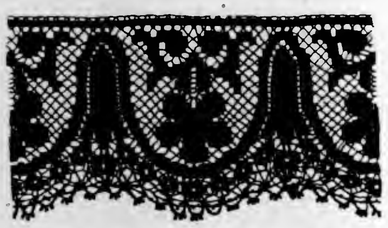
The ornamental design for a dial for time-pieces, as shown.

48,659. BUTTON, PIN, OR BROOCH. MICHEL P. VUCASSOVICH, Wellesley Hills, Mass. Filed Dec. 9, 1915. Serial No. 66,016. Term of patent 7 years.



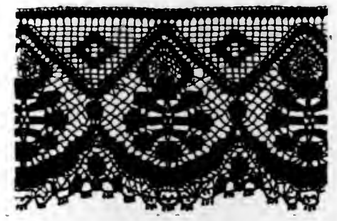
The ornamental design for a button, pin, or brooch as shown.

48,660. LACE. CHARLES J. WATTERS, Philadelphia, Pa., assignor to North American Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1915. Serial No. 66,202. Term of patent 3½ years.



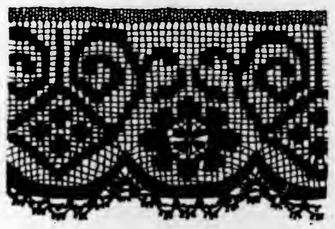
The ornamental design for a lace, substantially as shown.

48,661. LACE. CHARLES J. WATTERS, Philadelphia, Pa., assignor to North American Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1915. Serial No. 66,203. Term of patent 3½ years.



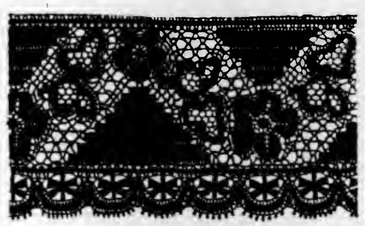
The ornamental design for a lace, substantially as shown.

48,662. LACE. CHARLES J. WATTERS, Philadelphia, Pa., assignor to North American Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1915. Serial No. 66,204. Term of patent 3½ years.



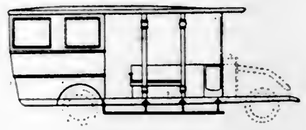
The ornamental design for a lace, substantially as shown.

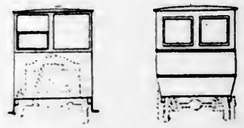
48,663. LACE. CHARLES J. WATTERS, Philadelphia, Pa., assignor to North American Lace Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 10, 1915. Serial No. 66,205. Term of patent 3½ years.



The ornamental design for a lace, substantially as shown.

48,664. AUTOMOBILE-BODY. HARRY J. LITT, San Francisco, Cal. Filed July 27, 1915. Serial No. 42,224. Term of patent 14 years.





The ornamental design for automobile body as shown.

48,665. COMBINATION-BRACKET. FRED PETERSON, Amsterdam, N. Y. Filed Nov. 20, 1915. Serial No. 62,654. Term of patent 7 years.





The ornamental design for a combination bracket, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 29, 1916.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

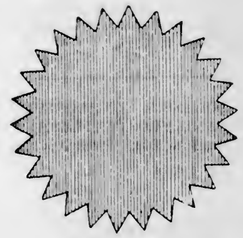
As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 80,543. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS L. LEEMING, New York, N. Y. Filed Aug. 13, 1914.

NEOLIN

Particular description of goods.—Non-Poisonous Germicides for Internal Administration.
Claims use since Aug. 1, 1914.

Ser. No. 82,492. (CLASS 15. OILS AND GREASES.) RED SEAL OIL Co., Dover, Del., and Chicago, Ill. Filed Nov. 9, 1914.



Consisting of the representation of a red seal.
Particular description of goods.—All Grades of Gasolene and Kerosene and also the Mixture of Kerosene and Gasolene Known as Kerogas, also Naphtha.
Claims use since Jan. 1, 1911.

Ser. No. 83,246. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) B. F. GUMP COMPANY, Chicago, Ill. Filed Dec. 12, 1914.

BAR-NUN

Particular description of goods.—Machinery for Comminuting Grain and other Similar Material.
Claims use since Dec. 1, 1914.

Ser. No. 83,664. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MONTGOMERY WARD & Co., INC., New York and Brooklyn, N. Y.; Chicago, Ill.; Fort Worth, Tex.; Kansas City, Mo., and Portland, Oreg. Filed Jan. 4, 1915.

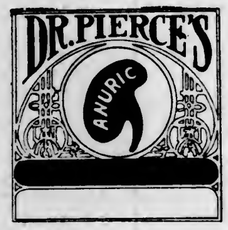


Particular description of goods.—Armure, Upholstery; Bath-Room Mats, Bed-Blankets, Bed-Comforters, Bed-Sheets, Bedspreads, Butchers' Linen; Burlap, Wall; Bobbinets, Curtain; Chenille Table-Covers, Cotton Chiffon, Silk Chiffon Cloth, Chiffon Faille, Chiffon Taffetas, Cotton and Cheviot Shirtings, Cotton and Wool Cloakings, Cotton Corduroy, Buckram, Buntings, Crash Toweling, Cotton, Silk, and Wool Crapes, Cretonne, Crib-Blankets, Crib-Quilts, Crinoline, Lace Curtains, Muslin Curtains, Curtain-Muslins, Cotton and Linen Towelings, Cable-Nets; Flannels—viz., Cotton, Wool, and Mixed Wool; Drapery Fabrics, Cotton and Silk; Dress Goods, Cotton, Silk, and Wool; Dress-Linings, Dress-Nets; Babies' Carriage-Robes, Elderdown; Elastic Truss-Webbing, Embroidered Chiffon, Embroidered Flannels, India Linons, Printed Etamine, Knitted Washcloths, Napkin-Cloth; Nets—Namely, Beaded, Dress, Illusion, La Tosca, Maline; Point d'Esprit and Wash Blond; Mosquito-Netting, Wool Nun's-Veiling, Lace Panels, Piano-Scarfs, Pillow-Tubing, Pique, Mercerized Marquisette, Babies' Shawls, Babies' Hood-Shawls, and Babies' Bootees; Flannelettes, Focusing-Cloth, French Cable-Nets, Domett Flannels, Gauze, Ginghams, Girth-Web, Halter-Web, Cotton and Wool Henriettas; Huckaback, Cfash; Indian Robes, Crape Silk Faille, Knitted Scarfs, Napkins, Lace-Curtain Goods, Outing-Flannels, Paliette Sole, Cloth Lap-Robes, Plush Lap-Robes, Pillow-Casing, Pillow-Slips, Printed Madras, Marquisette Scrim, Cotton and Silk Pongee; Cotton, Silk, and Wool Poplins; Portières, Muslins, Rein-Web, Satin, Silk and Velvet Ribbons;

Scrims—Namely, Curtain, Printed, and Fancy-Work Scrims; Rugs—Namely, Axminster, Bath, Clifton, Grass Ingrain, Jute Fiber, Oriental, Tapestry Brussels, Turkish Bath, Plush Velvet, Rag, Scotch Wool, Smyrna, Velvet, and Wool and Fiber Rugs; Sateen, Skirt-Linings, Swiss Muslins, Sheeting, Stay-Webbing; Veilings—Namely, Bridal, Barege, Face; Babies' Veils, Vehicle-Cushion Cloth; Voiles—Namely, Cotton, Cotton Printed, Curtain, and Wool Voiles; Top-Bow Lining, Women's Shawls, Cotton Blankets, Buggy-Top Mohair, Mohair Brilliantine, Cotton Moreen, Muslin Curtains, Skirt-Linings, Upholstery-Rep, Roman-Stripe Suitings, Cotton and Wool Serges, Rug-Borders, Satins, Shaker-Flannels, Silkaline, Tussah Crape, Table-Cloths; Sewing-Silk, Figured; Nun's Veils, Washcloths, Cotton Wash Fabrics, Wool Blankets, Mixed-Wool Whipcord, Wool-Skirt Patterns; Silks—Namely, Bunny, Chiffon, Charmeuse, Habutai, Faille, Jap, Peau de Soie, Moire, Seraph, Shantung, Shot, Surah, Taffetas, Tissue, Tub, Tussah, Velour, Crêpe de Chine, and Crape Meteor; Suitings—Namely, Cotton, Silk, and Wool; Canvas—Namely, Artists', Fancy Work, Hardanger, Linen, and Jute; Webbing—Namely, Harness, Non-Elastic, Elastic, Silk Elastic, Truss, and Elastic Truss; Cloth—Namely, Cambric, Batiste, Butter-Cloth, Chambrays, Cheese-Cloth, Comforter-Cloth, Calicoes, Damask, Denims, Bunting, Galateas, Diaper-Cloth, Dimities, Drill Cloth, Duck Cloth, Homespun, Eponge Ratine, Lawn Cloth, Leutina Cloth, Jean Cloth, Khaki Cloth, Nainsook, Percales, Percaline, Persian Lawn, Longcloth, Bedford Cord, Bearskin Cloth, Challis, Broadcloth, Gabardine, Elderdown, Homespun, Eolienne, Kersey Cloth, Ottoman Cloth, Panama Cloth, Persiana Cloth, Melton, Linen Cloth, Linen-Finish Cloth, Linster Cloth, Silk and Cotton Messalines, Damask, Matelasse Cloth, Mohair Cloth, Mercerized Cloth, Pique Cloth, Cotton and Wool Plaid Cloth, Plisse Cloth, Cloth Prints, Ratine Cloth, Rep Cloth, Rice Cloth, Russian-Stripe Cloth, Seersucker, Silk Cloth, Tapestry Cloth, Twilled Cotton, Texel Cloth, Ticking-Cloth, Tricot Cloth, Croatian Cloth, Focusing-Cloth, Drapery-Cloth, Linene, Covert Cloth, Sicilian Mohair, and Chinchilla Cloth; Laces—Namely, Cluny, Torchon, Curtain, Footing, Oriental, Tatting, Shadow, Valenciennes, Venise, Chantilly, and Nottingham All-Overs, Edgings, Beadings, Insertings, and Flouncings; Carpets—Namely, Brussels, Hemp, Ingrain, Tapestry Brussels, Plush, Velvet, Rag, Axminster, and Moquette Carpet; Handkerchiefs—Namely, Linen, Cotton, and Silk Handkerchiefs; Towels—Namely, Cotton, Damask, and Linen Barbers', Bath, Guest, Huck Roller, Knitted Bath and Turkish Towels.

Claims use since Jan. 31, 1914.

Ser. No. 84,126. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WORLD'S DISPENSARY MEDICAL ASSOCIATION, Buffalo, N. Y. Filed Jan. 26, 1915.



No claim is made herein to the word "Anuric" except in association with other features of the mark illustrated in the drawing.

Particular description of goods.—Remedy for Kidney Disorders and Backache.

Claims use since Nov. 15, 1914

Ser. No. 84,382. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) L. H. NELSON COMPANY, Portland, Me. Filed Feb. 8, 1915.

CHECKERNOLE

Particular description of goods.—Game-Boards.

Claims use since Feb. 5, 1915.

Ser. No. 86,000. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) EDWARD HUNTER PAGE, Covington, Va. Filed Apr. 16, 1915.



No claim is made to the words "Airships Fly" apart from the mark illustrated in the accompanying drawing.

Particular description of goods.—Airships.

Claims use since Dec. 8, 1914.

Ser. No. 86,077. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) ATLAS POWDER COMPANY, Wilmington, Del. Filed Apr. 21, 1915.



No claim being made to the words "Brand, Gelignite, Manufactured by Atlas Powder Co., Explosives, Wilmington, Del., U. S. A."

Particular description of goods.—Dynamite.

Claims use since Nov. 1, 1914.

Ser. No. 87,308. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE MIAMI CYCLE & MFG CO., Middletown, Ohio. Filed June 15, 1915.



Particular description of goods.—Bicycles, Motor-Cycles, Motor-Bicycles, Hubs, Brakes, Coaster-Brakes, Forks, and Frame Parts of Bicycles, Band Coaster-Brakes, Crank-Hangers, Sprockets, Handle-Bars, and Spring-Frames for Cycles and Motor-Cycles.

Claims use since about the year 1894.

Ser. No. 87,442. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed June 19, 1915.

MAGIC

Particular description of goods.—Fertilizers.

Claims use since about December, 1894.

Ser. No. 88,223. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE WALSER MFG. CO., Acquackanonk township, Passaic county, N. J. Filed July 26, 1915.

Setape
W. M. Co.

Comprising the word and abbreviations "Setape, W. M. Co."

Particular description of goods.—Narrow Fabrics—viz., Binding Tapes and Ribbons, Glued Cotton Tape, and Glued Fiber Bands.

Claims use since July 14, 1915.

Ser. No. 88,639. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) COLUMBIA SCHOOL SUPPLY CO., Indianapolis, Ind. Filed Aug. 16, 1915.

SaniSteel

Particular description of goods.—Surgical Dressing and Instrument Tables, Irrigator-Stands, Surgical Basin-Stands, Surgical-Instrument Cabinets, Operating Chairs and Stools, Medicinal Commodes, Hospital Wheeled Trays, Nurses' Chart-Stands, and Nurses' Chart-Files.

Claims use since Nov. 1, 1911.

Ser. No. 88,743. (CLASS 12. CONSTRUCTION MATERIALS.) GEORGE W. MCGANN, Bristol, R. I. Filed Aug. 21, 1915.

VULCAN

Particular description of goods.—A Pipe-Joint Compound.

Claims use since June 1, 1914.

Ser. No. 88,804. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. C. KNOWLTON CO., INC., SUCCESSORS TO BALDWIN, KNOWLTON & LAKE, Memphis, Tenn. Filed Aug. 25, 1915.

GOLDEN HARVEST

Particular description of goods.—Coffee, Butter, and Rice.

Claims use on coffee since 1905; on butter since Jan. 14, 1913; on rice since 1910.

Ser. No. 89,120. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Richmond, Cal. Filed Sept. 9, 1915.



Particular description of goods.—Fuel-Oil and Road-Oil.

Claims use since the 13th day of August, 1915.

Ser. No. 89,310. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHICAGO CONSOLIDATED BOTTLING COMPANY, Chicago, Ill. Filed Sept. 20, 1915.

Champanet

Particular description of goods.—Non-Alcoholic Carbonated Beverages Sold as Soft Drinks.

Claims use since Aug. 1, 1915.

Ser. No. 89,475. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BLAKEMAN COMPANY, New York, N. Y. Filed Sept. 27, 1915.

SE-SHORE

Particular description of goods.—Silk, Cotton, and Silk and Cotton Piece Goods.

Claims use since Sept. 13, 1915.

Ser. No. 89,531. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) PIRELLI & Co., Milan, Italy. Filed Sept. 29, 1915.

PIRELLI
P & C
M
STELLA

No claim is made to exclusive use of the name "Pirelli."
Particular description of goods.—Surgical Syringes.
Claims use since June 5, 1914.

Ser. No. 89,539. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) N. ERLANGER, BLUMGART & Co., New York, N. Y. Filed Sept. 30, 1915.

ILLUMINUM

Particular description of goods.—Artificial-Silk Piece Goods or Piece Goods Composed of Any Kind of Mixtures Containing Artificial Silk.
Claims use since about Aug. 30, 1915.

Ser. No. 89,545. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELEVATOR COMPANY, Brooklyn and New York, N. Y. Filed Sept. 30, 1915.

TURBINE
GENERAL ELEVATOR
COMPANY
NEW YORK

No claim being made to the exclusive use of the words "New York" and "Turbine" apart from the trade-mark illustrated in the accompanying drawing.
Particular description of goods.—Electrically-Driven Elevators, Hoists, and Gear Reductions.
Claims use since Sept. 25, 1915.

Ser. No. 89,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN Q. GRIFFITH, Philadelphia, Pa. Filed Oct. 6, 1915.

SLENDERINE



Particular description of goods.—A Preparation for Reducing Bodily Weight, Taken Internally.
Claims use since on or about July 25, 1915.

Ser. No. 89,811. (CLASS 32. FURNITURE AND UPHOLSTERY.) TWIN CITY MISSION FURNITURE COMPANY, St. Paul, Minn. Filed Oct. 11, 1915.

LIBRY-DINE

Particular description of goods.—Tables Used as Articles of Household Furniture.
Claims use since about June 2, 1915.

Ser. No. 89,873. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLOOMINGDALE BROS., New York, N. Y. Filed Oct. 16, 1915.

I-a-Dor

Comprising the letters and characters "I-a-Dor."
Particular description of goods.—Toilet Preparations—viz., Bath-Powder, Tooth-Powder, Florida Water, Face-Creams, Liquid Rouge, Nail-Enamel, Violet Ammonia, Hair-Tonic, and Toilet Water.
Claims use since Oct. 7, 1915.

Ser. No. 89,899. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EUGENE SCHENKENBERG, Racine, Wis. Filed Oct. 16, 1915.

V. T.

Particular description of goods.—Dental Supplies—Namely, Celluloid Finishing-Strips Used in Prosthetic Dentistry.
Claims use since May 15, 1915.

Ser. No. 90,184. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) GEORGE A. LAMBERT, Anderson, Ind. Filed Oct. 28, 1915.

SIMPLEX

Particular description of goods.—Short-Turn Gears for Automobile-Trailers.
Claims use since on or about the 1st of September, 1911.

Ser. No. 90,503. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DEERE & WEBBER Co., Minneapolis, Minn. Filed Nov. 8, 1915.

STAG

Particular description of goods.—Horse-Drawn Trucks.
Claims use since on or about Apr. 1, 1914.

Ser. No. 90,504. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DEERE & WEBBER Co., Minneapolis, Minn. Filed Nov. 8, 1915.

NEW FARMERS FRIEND

Particular description of goods.—Horse-Drawn Trucks.
Claims use since on or about Apr. 1, 1910.

Ser. No. 90,507. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DEERE & WEBBER Co., Minneapolis, Minn. Filed Nov. 8, 1915.

NEW CHIEF

Particular description of goods.—Horse-Drawn Trucks.
Claims use since on or about Apr. 1, 1915.

Ser. No. 90,552. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) ABERCROMBIE & FITCH COMPANY, New York, N. Y. Filed Nov. 10, 1915.

AF

Particular description of goods.—Ruck-Sacks, Duffle-Bags, Food-Bags, Carry-Alls, Alforjas, Kyacks, (Kind of Saddle-Pack or Pannier,) Valise-Packs, Fiber Panniers, Lawyers' Brief-Cases, Pack-Cloths, Carry-All Bags, Camp-Packs and Pack-Saddles, Fly-Books.
Claims use since January, 1904.

Ser. No. 90,564. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WM. E. MOFFETT, Pittsburgh, Pa. Filed Nov. 10, 1915.

Guest
Tooth
Brush

My trade-mark consists of the arbitrary expression "Guest" in plain script letters, no claim being made to the words "Tooth Brush."
Particular description of goods.—Tooth-Brushes.
Claims use since Sept. 6, 1915.

Ser. No. 90,567. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHECHTER & Co., New York, N. Y. Filed Nov. 10, 1915.



SCHECHTER'S
FACIAL CREAM

The portrait being that of Samuel Schechter, no claim being made to the words "Facial Cream."
Particular description of goods.—Facial Cream Used for Sunburn, Freckles, Black-Heads, Yellow Spots, and Pimples.
Claims use since June 3, 1906.

Ser. No. 90,576. (CLASS 7. CORDAGE.) COLONIAL CORDAGE Co., Chicago, Ill. Filed Nov. 11, 1915.

SECURITY

Particular description of goods.—Twine and Cordage Made from Cotton, Jute, Hemp, Sisal, Flax, or Manila Fibers.
Claims use since January, 1911.

Ser. No. 90,693. (CLASS 12. CONSTRUCTION MATERIALS.) GEORGE G. BABICH, New York, N. Y. Filed Nov. 17, 1915.

GGB

Consists of the letters "G G B" arranged, as shown in the accompanying drawing, within a circle.
Particular description of goods.—Burial-Vaults.
Claims use since Sept. 1, 1915.

Ser. No. 90,709. (CLASS 12. CONSTRUCTION MATERIALS.) PIONEER PAPER CO., Los Angeles, Cal. Filed Nov. 17, 1915.

Pioneer

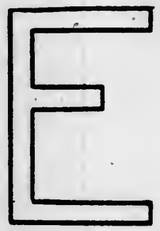
Particular description of goods.—Roofing Paper and Felt and Prepared Roofing.
Claims use since Apr. 1, 1903.

Ser. No. 90,719. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) E. B. ESTES & SONS, New York, N. Y. Filed Nov. 18, 1915. Under ten-year proviso.

ONEIDA

Particular description of goods.—Wooden Clothes-Pins.
Claims use since July 1, 1894.

Ser. No. 90,736. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAS. F. ROTHENHOEFER, Frederick, Md. Filed Nov. 18, 1915.



Particular description of goods.—Fresh Bottled Milk and Cream.
Claims use since Feb. 28, 1889.

Ser. No. 90,794. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE LAKE TORPEDO BOAT COMPANY OF MAINE, Bridgeport, Conn. Filed Nov. 20, 1915.

LAKSCO

Particular description of goods.—Fuel-Pumps and Air-Compressors.
Claims use since Aug. 12, 1915.

Ser. No. 90,804. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE EAGLE WOODENWARE MANUFACTURING COMPANY, Hamilton, Ohio. Filed Nov. 20, 1915.

PHOENIX

Particular description of goods.—Laundry-Washing Machinery.
Claims use since Sept. 30, 1915.

Ser. No. 90,805. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE EAGLE WOODENWARE MANUFACTURING COMPANY, Hamilton, Ohio. Filed Nov. 20, 1915.

Noxall

Particular description of goods.—Laundry-Washing Machines.
Claims use since Sept. 30, 1915.

Ser. No. 90,806. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE EAGLE WOODENWARE MANUFACTURING COMPANY, Hamilton, Ohio. Filed Nov. 20, 1915.

ATLAS

Particular description of goods.—Laundry-Washing Machinery.
Claims use since Sept. 30, 1915.

Ser. No. 90,857. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) UNITED DRUG COMPANY, Boston, Mass. Filed Nov. 22, 1915.



No claim is made to the wording on the drawing, save the word "Signet," apart from the mark shown in the drawing.

Particular description of goods.—Rubber Goods—Namely, Water-Bottles, Syringe-Bags, Ice-Bags, Atomizers, Nipples, Air-Pump Atomizers, Operating-Gloves, Douches, Inhalers, Hard-Rubber Pipes and Soft-Rubber Tubing Peculiarly Adapted to Use with Dental, Medical, and Surgical Appliances, Air-Cushions for Surgical Use, Air and Water Cushions for Invalid Use, Bulb-Syringes, Nasal and Ear Syringes, Breast-Pumps, Nipple-Shields, Bath-Sprays, Invalid-Rings, Face-Bottles, Combination Attachment Sets for Use in Converting a Hot-Water Bottle Into a Fountain-Syringe, Medicine-Droppers, and Baby-Comforters.
Claims use since prior to July 1, 1915.

Ser. No. 90,966. (CLASS 12. CONSTRUCTION MATERIALS.) ARKANSAS SOFT PINE BUREAU, Little Rock, Ark. Filed Nov. 27, 1915.



Particular description of goods.—Rough Lumber, Common Lumber Dressed on One Side Only, and Dressed Lumber.
Claims use since Oct. 31, 1915.

Ser. No. 90,970. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHICAGO WHOLESALE SADDLERY & MFG. CO., Chicago, Ill. Filed Nov. 27, 1915.



SEAL BRAND

No claim being made to the words "Seal Brand" apart from the mark shown in the drawing.

Particular description of goods.—Carriage-Robes, Lap-Robes, and Steamer-Rugs of Textile Fabric.
Claims use since about Oct. 1, 1910.

Ser. No. 90,975. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) NEWTON BROOM COMPANY, Newton, Ill. Filed Nov. 27, 1915.



Particular description of goods.—Brooms.
Claims use since June 21, 1915.

Ser. No. 91,117. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ALBERT WARREN TILLINGHAST, Philadelphia, Pa. Filed Dec. 3, 1915.



No claim being made to the word "Links" apart from the mark shown in the drawing.

Particular description of goods.—Miniature Golf-Courses, a Game.
Claims use since May 1, 1915.

Ser. No. 91,222, (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHARLES E. HIRES COMPANY, Philadelphia, Pa. Filed Dec. 6, 1915.



Comprising the word "Ritz."
Particular description of goods.—Ginger-Ale.
Claims use since May 1, 1915.

Ser. No. 91,245. (CLASS 39. CLOTHING.) S. SHAPIRSKY & CO., Louisville, Ky. Filed Dec. 6, 1915.



No claim being made to the words "Shirt" or "Guaranteed."

Particular description of goods.—Men's Negligée Shirts, Work-Shirts, Pajamas, and Night-Shirts.
Claims use since Feb. 1, 1906.

Ser. No. 91,325. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WILHELM OELSCHLÄGEL, New York, N. Y. Filed Dec. 8, 1915.



Particular description of goods.—Skates.
Claims use since about Nov. 25, 1915.

Ser. No. 91,360. (CLASS 39. CLOTHING.) WOV BONE CORSET CO., Newark, N. J. Filed Dec. 9, 1915.

WOV BONE

No claim being made to the word "Bone" aside from the mark shown in the drawing.

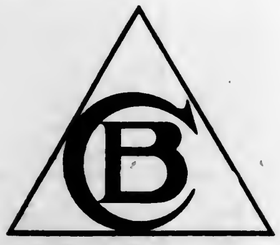
Particular description of goods.—Corsets, Corset-Waists, Corset-Stays, Brassières, Bust-Confiners, Waists, Hosiery, Underwear Comprising Drawers and Union Suits of Textile Fabric, Outer Skirts, Underskirts.
Claims use since July, 1914.

Ser. No. 91,443. (CLASS 37. PAPER AND STATIONERY.) THADDEUS A. NOLAN, Cincinnati, Ohio. Filed Dec. 13, 1915.

NONSKID

Particular description of goods.—Toilet-Paper.
Claims use since Dec. 4, 1915.

Ser. No. 91,498. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CUMINGS BROTHERS, Flint, Mich. Filed Dec. 15, 1915.



Particular description of goods.—Front License-Brackets for Automobiles, Brake-Linings for Automobiles, Bumpers for Automobiles, Rear License-Brackets for Automobiles, License-Tag Clips, Tire-Holders, Shock-Absorbers, Rubber Bumpers, Foot-Rails, Trunk-Racks for Automobiles, and Oil-Can Holders for Automobiles.
Claims use since Jan. 1, 1915.

Ser. No. 91,509. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE AUSTIN COMPANY, Providence, R. I. Filed Dec. 16, 1915.

MINIAFONE

The trade-mark consists of the coined word "Miniafone."
Particular description of goods.—Talking-Machines.
Claims use since June 29, 1915.

Ser. No. 91,522. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES W. MOODY, Red Lion, Pa. Filed Dec. 16, 1915.

Peptomorol

Particular description of goods.—Extract of Cod-Liver Oil.
Claims use since Sept. 15, 1912.

Ser. No. 91,571. (CLASS 39. CLOTHING.) HART SCHAFFNER & MARX, Chicago, Ill. Filed Dec. 18, 1915.

Silver Fox

Particular description of goods.—Men's and Boys' Overcoats and Rain-Coats.
Claims use since the 20th day of November, 1915.

Ser. No. 91,593. (CLASS 12. CONSTRUCTION MATERIALS.) THE JOHN D. EMACK CO., Philadelphia, Pa. Filed Dec. 20, 1915.

COLONIAL

Particular description of goods.—Slate.
Claims use since May 1, 1914.

Ser. No. 91,618. (CLASS 37. PAPER AND STATIONERY.) OSBORN PAPER COMPANY, Marion, Ind. Filed Dec. 20, 1915.

TRUTONE

Particular description of goods.—Paper Tablets.
Claims use since 1909.

Ser. No. 91,641. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. HELLER & BRO., New York, N. Y. Filed Dec. 21, 1915.



Particular description of goods.—Handkerchiefs.
Claims use since 1915.

Ser. No. 91,661. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RUBY KID COMPANY, Camden, N. J. Filed Dec. 21, 1915.

Ruby

Particular description of goods.—Kid and Glazed Kid.
Claims use since Jan. 1, 1907.

Ser. No. 91,666. (CLASS 39. CLOTHING.) J. P. SMITH SHOE CO., Chicago, Ill. Filed Dec. 21, 1915.

CHICAGOAN

The word "Chicagoan" is disclaimed except as a part of the mark shown in the drawing.
Particular description of goods.—Leather Shoes, Shoes of Canvas and Leather, Shoes of Canvas and Rubber, and Shoes of Leather and Rubber.
Claims use since Jan. 21, 1914.

Ser. No. 91,678. (CLASS 37. PAPER AND STATIONERY.) UNITED DRUG COMPANY, Boston, Mass. Filed Dec. 22, 1915.

USTACO
LINEN

The word "Linen" is disclaimed.
Particular description of goods.—Writing-Paper and Envelops.
Claims use since prior to June, 1910.

Ser. No. 91,687. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) FREDERICK W. LORD, New York, N. Y. Filed Dec. 22, 1915.

TRADE NATIONAL TENNIS TAPES MARK

The words "Tennis Tapes, Trade Mark" being disclaimed except in relation to this mark.
Particular description of goods.—Sporting Goods—Namely, Tennis-Tapes.
Claims use since Dec. 1, 1915.

Ser. No. 91,696. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. HENRY SMYTHE, Jr., Philadelphia, Pa. Filed Dec. 22, 1915.

Victrola-Vic, "THE PHONOGRAPH DOG"

Particular description of goods.—Dolls and Stuffed Toys.
Claims use since about Dec. 18, 1915.

Ser. No. 91,697. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. HENRY SMYTHE, Jr., Philadelphia, Pa. Filed Dec. 22, 1915.

Victor, "HIS MASTER'S VOICE"

Particular description of goods.—Dolls and Stuffed Toys.
Claims use since about Dec. 19, 1915.

Ser. No. 91,731. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NATIONAL MACHINERY CO., Tiffin, Ohio. Filed Dec. 23, 1915.

NATIONAL

Particular description of goods.—Bolt and Nut and Rivet Forging Machines and Wire-Nail Machinery.
Claims use since 1880.

Ser. No. 91,741. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNARD ZUCKERMAN, New York, N. Y. Filed Dec. 23, 1915.



Particular description of goods.—Liniment-Oils.
Claims use since about Nov. 15, 1915.

Ser. No. 91,754. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE STROBEL & WILKEN COMPANY, Cincinnati, Ohio, and New York, N. Y. Filed Dec. 24, 1915.

MINIAFONE

Particular description of goods.—Phonographs.
Claims use since about August, 1915.

Ser. No. 91,784. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Dec. 27, 1915.

PARAMOUNT

Consisting of the word "Paramount."
Particular description of goods.—Hosiery.
Claims use since Jan. 20, 1894.

Ser. No. 91,791. (CLASS 37. PAPER AND STATIONERY.) UNITED WALL PAPER STORES COMPANY, Chicago, Ill. Filed Dec. 27, 1915.



No claim being made to the exclusive use of the words "Wall Papers" or "United Wall Paper Stores Co." apart from the mark as shown in the drawing.
Particular description of goods.—Wall-Papers.
Claims use since Nov. 11, 1915.

Ser. No. 91,797. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAE HEALTH LABORATORIES, Detroit, Mich. Filed Dec. 28, 1915.

SALTRATES

Particular description of goods.—A Preparation for Internal and External Use, Specifically Intended for Intestinal and Cutaneous Affections.
Claims use since Dec. 1, 1915.

Ser. No. 91,818. (CLASS 17. TOBACCO PRODUCTS.) MARTINS, LIMITED, London, England. Filed Dec. 29, 1915.



Particular description of goods.—Cigarettes and Smoking-Tobacco.
Claims use since Mar. 2, 1915.

Ser. No. 91,823. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. H. THOMPSON, San Antonio, Tex. Filed Dec. 29, 1915.

Stramo-Enquentracine

Wm. H. Thompson

The signature shown being that of the applicant.
Particular description of goods.—A Medicinal Remedy for Treatment of Asthma and Bronchitis.
Claims use since May, 1915.

Ser. No. 91,830. (CLASS 12. CONSTRUCTION MATERIALS.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Dec. 30, 1915.

NOVERM

Particular description of goods.—Sheathing for Building Purposes.
Claims use since Nov. 1, 1915.

Ser. No. 91,833. (CLASS 39. CLOTHING.) FOWNES BROTHERS & Co., London, England, and New York, N. Y. Filed Dec. 30, 1915.

Filosette

Particular description of goods.—Gloves.
Claims use since about Nov. 17, 1915.

Ser. No. 91,859. (CLASS 12. CONSTRUCTION MATERIALS.) APCO ASPHALT ROOFING CO., New York, N. Y. Filed Jan. 3, 1916.

VACO

Particular description of goods.—Asphalt Roofing.
Claims use since on or about September, 1914.

Ser. No. 91,860. (CLASS 12. CONSTRUCTION MATERIALS.) APCO ASPHALT ROOFING CO., New York, N. Y. Filed Jan. 3, 1916.

APCO

Particular description of goods.—Asphalt Roofing.
Claims use since on or about September, 1914.

Ser. No. 91,861. (CLASS 12. CONSTRUCTION MATERIALS.) APCO ASPHALT ROOFING CO., New York, N. Y. Filed Jan. 3, 1916.

VEN ALT

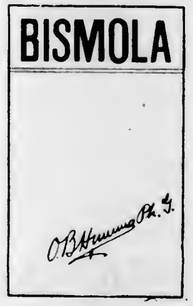
Particular description of goods.—Asphalt Roofing.
Claims use since on or about September, 1914.

Ser. No. 91,863. (CLASS 39. CLOTHING.) BROWN SHOE CO., INC., St. Louis, Mo. Filed Jan. 3, 1916.

Brownie Buster

Comprising the phrase "Brownie Buster."
Particular description of goods.—Leather Shoes.
Claims use since Nov. 24, 1915.

Ser. No. 91,875. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OSMOND B. HUMMA, Sheldon, Ill. Filed Jan. 3, 1916.



The signature shown being facsimile of the applicant.
Particular description of goods.—A Dry Powdered Preparation for the Treatment of Diseases of the Stomach.
Claims use since Oct. 26, 1915.

Ser. No. 91,891. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) NEW YORK MILLS CORPORATION, New York Mills, N. Y. Filed Jan. 3, 1916.



TUB CORDUROY

No claim being made to the exclusive right to the use of the words "Trade-Mark," "Wide," "White," "Washable," and "Tub Corduroy" apart from the mark shown in the drawing, the picture being fanciful.
Particular description of goods.—Corduroy.
Claims use since Dec. 21, 1915.

Ser. No. 91,934. (CLASS 37. PAPER AND STATIONERY.) JAMES P. HEFFERNAN PAPER CO. INC., New York, N. Y. Filed Jan. 5, 1916.

HEF-TELA

Particular description of goods.—Wrapping-Paper.
Claims use since September, 1912.

Ser. No. 91,963. (CLASS 39. CLOTHING.) THE HOWENSTINE-KRAMER COMPANY, Massillon, Ohio. Filed Jan. 6, 1916.

oH-Ka

Particular description of goods.—Petticoats.
Claims use since Dec. 1, 1913.

Ser. No. 91,965. (CLASS 39. CLOTHING.) INNOVATION HEADGEAR CO., New York, N. Y. Filed Jan. 6, 1916.

SEALPACKERCAP

The word "Sealpackercap."
Particular description of goods.—Infants' and Children's Headwear.
Claims use since Dec. 20, 1915.

Ser. No. 91,978. (CLASS 39. CLOTHING.) THE PRE-MODE CLOAK COMPANY, Toledo, Ohio. Filed Jan. 6, 1916.

PRE-MODE

Particular description of goods.—Cloaks.
Claims use since Oct. 27, 1914.

Ser. No. 91,979. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Jan. 6, 1916. Under ten-year proviso.

PARAMOUNT KNITTING CO.

Particular description of goods.—Hosiery.
Claims use since Jan. 20, 1894.

Ser. No. 91,993. (CLASS 2. RECEPTACLES.) BLANCHE IRENE FONTAINE, St. Paul, Minn. Filed Jan. 7, 1916.

Meidee Vanitee

Particular description of goods.—Toilet-Cases.
Claims use since Dec. 15, 1915.

Ser. No. 92,011. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EARLEY W. ADAMS, Philadelphia, Pa. Filed Jan. 8, 1916.

WAUHATCHIE

Particular description of goods.—Ginger-Ale, Lemon-Soda, and Sarsaparilla-Soda.
Claims use since July 1, 1915.

Ser. No. 92,013. (CLASS 39. CLOTHING.) CROWN EMBROIDERY WORKS, New York, N. Y. Filed Jan. 8, 1916.

La Patrova

Comprising the words "La Patrova."
Particular description of goods.—Blouses.
Claims use since Dec. 19, 1915.

Ser. No. 92,063. (CLASS 2. RECEPTACLES.) THE HARTLEY STEEL CRATED BOX CO., Saginaw, Mich. Filed Jan. 11, 1916.

VELVETVISE



No claim being made to the representation of the goods apart from the mark shown in the drawing.
Particular description of goods.—Cartons Adapted to the Shipping of Eggs or other Articles and for Egg-Containers or Fillers for Containing Individual Eggs or other Fragile Articles.
Claims use since Dec. 23, 1915.

Ser. No. 92,111. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ROXYLITE COMPANY, West Elizabeth, N. J. Filed Jan. 13, 1916.

ROXYLITE

Particular description of goods.—Prepared Fabrics and Imitation Leather.
Claims use since the month of January, 1915.

Ser. No. 92,259. (CLASS 12. CONSTRUCTION MATERIALS.) THE WESTERN ELATERITE ROOFING COMPANY, Denver, Colo. Filed Jan. 19, 1916. Under ten-year proviso.

Elaterite

Particular description of goods.—Roofing Materials, Consisting of Roofing-Paper, Asphalt Felt, Prepared and Composition Roofings, Such as Burlaps, Felts, and Papers, Fabrics, Saturated Felts and Fabrics, Bituminous Cements, Solid and Liquid Cements of Asphalts, Asphaltums, Bituminous Materials, Solid or Liquid Cements for Waterproofing Coatings, Building-Papers, Sheathing and Insulating Papers.
Claims use since June, 1894.

Ser. No. 92,369. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed Jan. 24, 1916.

CHEROKEE

Particular description of goods.—Hosiery.
Claims use since Nov. 1, 1910.

Ser. No. 92,370. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed Jan. 24, 1916.

KISSIMMEE

Particular description of goods.—Hosiery.
Claims use since Nov. 1, 1910.

Ser. No. 92,371. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed Jan. 24, 1916.

MINNEHAHA

Particular description of goods.—Hosiery.
Claims use since Nov. 1, 1910.

Ser. No. 92,373. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed Jan. 24, 1916.

TOP NOTCHER

Particular description of goods.—Hosiery.
Claims use since Nov. 15, 1906.

Ser. No. 92,407. (CLASS 39. CLOTHING.) J. & M. COHN, New York, N. Y. Filed Jan. 26, 1916.

DOMIN-O

Particular description of goods.—Shirt-Waists and Collars.
Claims use since Nov. 25, 1915.

Ser. No. 92,423. (CLASS 12. CONSTRUCTION MATERIALS.) ED. SIEVENS, Everett, Wash. Filed Jan. 26, 1916.



Particular description of goods.—Lumber and Shingles.
Claims use since Jan. 1, 1916.

Ser. No. 92,448. (CLASS 39. CLOTHING.) CHAS. A. MCLOUGHLIN CORSET CO. INC., New York, N. Y. Filed Jan. 27, 1916.

Camlin

Comprising the word "Camlin."
Particular description of goods.—Corsets.
Claims use since Dec. 31, 1915.

Ser. No. 92,527. (CLASS 12. CONSTRUCTION MATERIALS.) THE R. T. JONES LUMBER COMPANY, North Tonawanda, N. Y. Filed Jan. 31, 1916.

TRI CENTURY 300

Particular description of goods.—White-Pine Bevel Siding, Moldings, Casing, Base, and Flooring.
Claims use since Mar. 1, 1915.

TRADE-MARK REGISTRATIONS GRANTED

FEBRUARY 29, 1916.

108,760. GAS-ENGINES. AEROTHRUST ENGINE COMPANY, Chicago, Ill.
Filed August 13, 1915. Serial No. 88,586. PUBLISHED DECEMBER 14, 1915.

108,761. COAL AND COKE. AMERICAN COAL EXPORTING CO., New York, N. Y., and Norfolk, Va.
Filed November 2, 1915. Serial No. 90,300. PUBLISHED DECEMBER 14, 1915.

108,762. WOOD-STAIN. AMERICAN FUMING COMPANY, Knoxville, Tenn.
Filed October 28, 1915. Serial No. 90,166. PUBLISHED DECEMBER 7, 1915.

108,763. DEHORNING-CLIPPERS. AMERICAN METAL PRODUCTS COMPANY, Chicago, Ill.
Filed July 21, 1915. Serial No. 88,063. PUBLISHED DECEMBER 7, 1915.

108,764. COTTON PIECE GOODS AND BLANKETS. AMORY, BROWNE & CO., Boston, Mass.
Filed November 26, 1915. Serial No. 90,922. PUBLISHED DECEMBER 21, 1915.

108,765. COTTON PIECE GOODS AND BLANKETS. AMORY, BROWNE & CO., Boston, Mass.
Filed November 26, 1915. Serial No. 90,923. PUBLISHED DECEMBER 21, 1915.

108,766. WRITING-PAPER, ENVELOPS, AND CORRESPONDENCE-CARDS. BAIRD-NORTH CO., Providence, R. I.
Filed October 11, 1915. Serial No. 89,786. PUBLISHED NOVEMBER 30, 1915.

108,767. FRESH LETTUCE, POTATOES, CABBAGE, RADISHES, PEAS. BEAUFORT TRUCK GROWERS ASSOCIATION, Beaufort, S. C.
Filed April 19, 1915. Serial No. 86,029. PUBLISHED DECEMBER 7, 1915.

108,768. DUPLICATORS, COMPRISING APPARATUS FOR PRODUCING FACSIMILES OF MANUSCRIPTS, TYPE-WRITING, AND PARTS OF SUCH APPARATUS. THE BECK DUPLICATOR COMPANY, New York, N. Y.
Filed October 7, 1915. Serial No. 89,702. PUBLISHED DECEMBER 14, 1915.

108,769. SILK, FLAX, COTTON, WOOLEN, AND MIXED MATERIALS IN THE PIECE. BIANCHINI, FERIER, Lyon, France.
Filed July 29, 1914. Serial No. 80,148. PUBLISHED DECEMBER 21, 1915.

108,770. SILK, FLAX, COTTON, WOOLEN, AND MIXED MATERIALS IN THE PIECE. BIANCHINI, FERIER, Lyon, France.
Filed July 29, 1914. Serial No. 80,149. PUBLISHED DECEMBER 21, 1915.

108,771. STRAIGHT OLD TOM GIN. BOOTH'S DISTILLERY, LIMITED, London, England.
Filed November 26, 1915. Serial No. 90,925. PUBLISHED DECEMBER 21, 1915.

108,772. LACE CURTAINS. CAMDEN CURTAIN & EMBROIDERY COMPANY, Camden, N. J.
Filed November 9, 1915. Serial No. 90,538. PUBLISHED DECEMBER 21, 1915.

108,773. KNITTED UNDERWEAR. CEDARBROOK KNITTING COMPANY, Philadelphia, Pa.
Filed October 27, 1915. Serial No. 90,137. PUBLISHED NOVEMBER 23, 1915.

108,774. WOOD-POLISH. THE CENTRAL OIL & CHEMICAL COMPANY, Chicago, Ill.
Filed October 15, 1915. Serial No. 89,857. PUBLISHED DECEMBER 14, 1915.

108,775. LEATHER BOOTS AND SHOES. EDWIN CLAPP & SON, INC., East Weymouth, Mass.
Filed August 14, 1915. Serial No. 88,612. PUBLISHED DECEMBER 21, 1915.

108,776. LATHES. THE CLEVELAND MACHINERY & SUPPLY CO., Cleveland, Ohio.
Filed November 1, 1915. Serial No. 90,256. PUBLISHED DECEMBER 14, 1915.

108,777. PUBLICATION ISSUED ANNUALLY AND DEVOTED TO THE MANUFACTURING INDUSTRIES OF THE UNITED STATES. COMMERCIAL NEWSPAPER COMPANY, New York, N. Y.
Filed September 22, 1915. Serial No. 89,371. PUBLISHED DECEMBER 7, 1915.

108,778. POLISH FOR USE ON PIANOS, AUTOMOBILES, FURNITURE, AND OTHER SIMILAR SURFACES. JUDSON ROGERS DE NOYELLES., Detroit, Mich.
Filed November 1, 1915. Serial No. 90,259. PUBLISHED DECEMBER 14, 1915.

108,779. LINIMENT FOR THE TREATMENT OF RHEUMATISM. DAVAD DIGHERI, Brooklyn, N. Y.
Filed August 12, 1915. Serial No. 88,561. PUBLISHED DECEMBER 14, 1915.

108,780. BRACELETS FOR WRIST-WATCHES, MADE OF CERTAIN MATERIALS. DUBOIS WATCH CASE COMPANY, New York, N. Y.
Filed September 9, 1915. Serial No. 89,111. PUBLISHED NOVEMBER 30, 1915.

108,781. STERLING SILVER, FLAT AND HOLLOW WARE. WILLIAM B. DURGIN CO., Concord, N. H.
Filed September 18, 1915. Serial No. 89,288. PUBLISHED DECEMBER 7, 1915.

108,782. CORNMEAL, CREAM-MEAL, AND PEARL-GRITS. ENGELKE & FEINER MLG. CO., St. Louis, Mo.
Filed July 6, 1915. Serial No. 87,770. PUBLISHED SEPTEMBER 21, 1915.

108,783. MOVING-PICTURE FILMS. ESSANAY FILM MANUFACTURING CO., Chicago, Ill.
Filed November 8, 1915. Serial No. 90,508. PUBLISHED DECEMBER 21, 1915.

108,784. COTTON DRESS GOODS. FEARING, WHITON & CO., INC., Boston, Mass.
Filed July 20, 1915. Serial No. 88,040. PUBLISHED DECEMBER 21, 1915.

108,785. LEATHER BOOTS AND SHOES. FEDERAL SHOE CO., Lowell, Mass.
Filed November 26, 1915. Serial No. 90,932. PUBLISHED DECEMBER 21, 1915.

108,786. SEAM-CLEATS. ALBERT C. FISCHER, Omaha, Nebr.
Filed November 8, 1915. Serial No. 90,510. PUBLISHED DECEMBER 14, 1915.

108,787. WEEKLY, SEMIMONTHLY, MONTHLY, AND ANNUAL PERIODICALS. FORD MOTOR COMPANY, Highland Park, Mich.
Filed May 28, 1915. Serial No. 86,957. PUBLISHED DECEMBER 7, 1915.

108,788. BAKING-POWDER. THE GEIGER-FISHBACK CO., Indianapolis, Ind.
Filed September 20, 1915. Serial No. 89,313. PUBLISHED DECEMBER 14, 1915.

108,789. ELECTRIC RAILWAY SIGNALING APPARATUS. GENERAL RAILWAY SIGNAL COMPANY, Gates, N. Y.
Filed October 29, 1915. Serial No. 90,201. PUBLISHED DECEMBER 14, 1915.

108,790. HAIR-RESTORER. EDWARD W. GOLDEN, East Boston, Mass.
Filed November 15, 1915. Serial No. 90,649. PUBLISHED DECEMBER 14, 1915.

108,791. MECHANICAL CHECK-PROTECTORS. HEDMAN MANUFACTURING COMPANY, Chicago, Ill.
Filed October 25, 1915. Serial No. 90,084. PUBLISHED DECEMBER 21, 1915.

108,792. COLORS FOR FOODS. B. HELLER & Co., Chicago, Ill.
Filed February 7, 1914. Serial No. 75,759. PUBLISHED DECEMBER 14, 1915.

108,793. TOILET-PAPER, PAPER TOWELING, PAPER NAPKINS, WAXED TISSUE-PAPER, AND TISSUE-PAPER NOT WAXED. THE JOHN HOBERG CO., Green Bay, Wis.
Filed October 22, 1915. Serial No. 90,029. PUBLISHED DECEMBER 7, 1915.

108,794. PUBLICATIONS OF ADVERTISING OR INFORMATION SHEETS SINGLE OR GROUPED PUBLISHED FROM TIME TO TIME. INTERSTATE FREIGHT RATE PUBLISHING COMPANY, New York, N. Y.
Filed September 7, 1915. Serial No. 89,064. PUBLISHED DECEMBER 7, 1915.

108,795. TOBACCO-PIPES. ADOLPH J. KLOIBER, Baldwin, N. Y.
Filed September 1, 1915. Serial No. 88,960. PUBLISHED DECEMBER 14, 1915.

108,796. BAKING-POWDER. P. C. KNOWLTON CO., INC., Memphis, Tenn.
Filed November 3, 1915. Serial No. 90,386. PUBLISHED DECEMBER 14, 1915.

108,797. DRESS-WAISTS, SHIRT-WAISTS, AND DRESS-BLOUSES. L. & D. WAIST CO., INC., New York, N. Y.
Filed November 11, 1915. Serial No. 90,583. PUBLISHED DECEMBER 21, 1915.

108,798. WRITING-PAPERS. GEORGE F. LASHER, Philadelphia, Pa.
Filed October 9, 1915. Serial No. 89,764. PUBLISHED NOVEMBER 30, 1915.

108,799. LINOLEUM FLOOR-CLOTHS AND OIL-CLOTH. THE LINOLEUM MANUFACTURING COMPANY LIMITED, London, England.
Filed April 6, 1915. Serial No. 85,733. PUBLISHED DECEMBER 21, 1915.

108,800. RUBBER AND RUBBER AND CANVAS BOOTS AND SHOES. WILLIAM F. MAYO Co., Boston, Mass.
Filed November 26, 1915. Serial No. 90,947. PUBLISHED DECEMBER 21, 1915.

108,801. MALT BEVERAGE. MCAVOY BREWING COMPANY, Chicago, Ill.
Filed November 5, 1915. Serial No. 90,439. PUBLISHED DECEMBER 14, 1915.

108,802. SHIRTINGS. EDWARD MCCONNELL & COMPANY, New York, N. Y.
Filed July 8, 1915. Serial No. 87,828. PUBLISHED DECEMBER 7, 1915.

108,803. MEDICINAL PREPARATION USED AS A LAXATIVE. RICHARD MERZ, Chicago, Ill.
Filed September 16, 1915. Serial No. 89,243. PUBLISHED DECEMBER 14, 1915.

108,804. RUBBER TIRES. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed July 29, 1915. Serial No. 88,280. PUBLISHED OCTOBER 26, 1915.

108,805. COTTON, WORSTED, AND MERINO YARN. NASHAWENA MILLS, New Bedford, Mass.
Filed November 18, 1915. Serial No. 90,731. PUBLISHED DECEMBER 21, 1915.

108,806. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF. THE NATIONAL-ACME MANUFACTURING COMPANY, Cleveland, Ohio.
Filed October 21, 1915. Serial No. 89,990. PUBLISHED DECEMBER 21, 1915.

108,807. CERTAIN NAMED DIES, TOOLS AND MACHINES, AND LATHES. THE NATIONAL-ACME MANUFACTURING COMPANY, Cleveland, Ohio.
Filed October 21, 1915. Serial No. 89,993. PUBLISHED DECEMBER 21, 1915.

108,808. VINEGAR. NATIONAL DISTILLING COMPANY, Milwaukee and Cudahy, Wis.
Filed August 25, 1915. Serial No. 88,831. PUBLISHED DECEMBER 14, 1915.

108,809. COTTON PIECE GOODS, SHEETS, AND PILLOW-CASES. NAUMKEAG STEAM COTTON CO., Salem, Mass.
Filed November 6, 1915. Serial No. 90,485. PUBLISHED DECEMBER 7, 1915.

108,810. BUST-FORMS, PUFFS, RUFFLES, AND BUST-EXTENDERS AND COMBINED BUST-FORMS AND CORSET-COVERS. MARY D. NEILSON, Minneapolis, Minn.
Filed September 11, 1915. Serial No. 89,151. PUBLISHED DECEMBER 14, 1915.

108,811. WOVEN COTTON PIECE GOODS. NEUSS, HESSLEIN & Co., New York, N. Y.
Filed June 17, 1915. Serial No. 87,368. PUBLISHED AUGUST 10, 1915.

108,812. WOVEN COTTON PIECE GOODS. NEUSS, HESSLEIN & Co., New York, N. Y.
Filed September 28, 1915. Serial No. 89,521. PUBLISHED NOVEMBER 9, 1915.

108,813. COATED FABRICS. DELBERT W. NORTHROP, Boston, Mass.
Filed June 25, 1915. Serial No. 87,592. PUBLISHED SEPTEMBER 7, 1915.

108,814. HEADLIGHT DIMMERS. THE O-U-LITE COMPANY, Racine, Wis.
Filed October 30, 1915. Serial No. 90,239. PUBLISHED DECEMBER 14, 1915.

108,815. GLASS BOWLS, PLATES, PITCHERS, JARS, VASES, NAPPIES, AND PLATTERS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed September 11, 1915. Serial No. 89,150. PUBLISHED DECEMBER 7, 1915.

108,816. CERTAIN NAMED PENS, PENCILS, KNIVES, ERASERS AND LETTER-OPENERS. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.
Filed September 11, 1915. Serial No. 89,157. PUBLISHED DECEMBER 7, 1915.

108,817. THREAD. ONTARIO THREAD COMPANY, New York, N. Y.
Filed November 4, 1915. Serial No. 90,414. PUBLISHED DECEMBER 21, 1915.

108,818. CANNED FRUITS AND CANNED VEGETABLES. PACIFIC COAST CANNING CO., Oakland, Cal.
Filed July 30, 1915. Serial No. 88,311. PUBLISHED DECEMBER 14, 1915.

108,819. WASHING-SODA. PAINESVILLE PACKING COMPANY, Painesville, Ohio.
Filed April 10, 1915. Serial No. 85,870. PUBLISHED MAY 25, 1915.

108,820. STEAM-GENERATORS AND VALVES ESPECIALLY ADAPTED FOR USE WITH HOT-WATER HEATING SYSTEMS. THE PHELPS HEATING SPECIALTY CO., INC., New York, N. Y.
Filed April 10, 1915. Serial No. 85,867. PUBLISHED DECEMBER 7, 1915.

108,821. CIGARS, CIGARETTES, AND SMOKING-TOBACCO. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed October 23, 1915. Serial No. 90,062. PUBLISHED DECEMBER 14, 1915.

108,822. EVAPORATED MILK, CANNED SOUPS, COFFEE, TEA, CATSUP, SALAD-DRESSING, AND CANNED PORK AND BEANS. THE PRICE MERCHANTS SYNDICATE, Minneapolis, Minn.
Filed September 21, 1915. Serial No. 89,355. PUBLISHED DECEMBER 14, 1915.

108,823. SETS OF CHILDREN'S CLOTHING, COMPRISING BATH-ROBE, SOCKS, AND BLANKET. QUAKER ROPE COMPANY, Philadelphia, Pa.
Filed November 3, 1915. Serial No. 90,389. PUBLISHED DECEMBER 21, 1915.

108,824. SMOKING MIXTURE AND CIGARETTES. JAMES B. REGAN, New York, N. Y.
Filed October 4, 1915. Serial No. 89,642. PUBLISHED DECEMBER 14, 1915.

108,825. RUBBER HORSESHOE-PADS. REVERE RUBBER COMPANY, Providence, R. I., and Chelsea, Mass.
Filed September 29, 1915. Serial No. 89,532. PUBLISHED DECEMBER 7, 1915.

108,826. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,215. PUBLISHED DECEMBER 21, 1915.

108,827. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,216. PUBLISHED DECEMBER 21, 1915.

108,828. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,217. PUBLISHED DECEMBER 21, 1915.

108,829. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,218. PUBLISHED DECEMBER 21, 1915.

108,830. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,219. PUBLISHED DECEMBER 21, 1915.

108,831. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,220. PUBLISHED DECEMBER 21, 1915.

108,832. ROUTING-CUTTERS. JOHN ROYLE & SONS, Paterson, N. J.
Filed September 15, 1915. Serial No. 89,221. PUBLISHED DECEMBER 21, 1915.

108,833. TOOL-STEEL. JOSEPH T. RYERSON & SON, Chicago, Ill.
Filed October 29, 1915. Serial No. 90,213. PUBLISHED DECEMBER 14, 1915.

108,834. TOOL-STEEL. JOSEPH T. RYERSON & SON, Chicago, Ill.
Filed November 1, 1915. Serial No. 90,286. PUBLISHED DECEMBER 14, 1915.

108,835. MEDICINAL TABLETS FOR CERTAIN NAMED AILMENTS. THECKLA SEIFERT, Philadelphia, Pa.
Filed August 2, 1915. Serial No. 88,373. PUBLISHED DECEMBER 14, 1915.

108,836. PRINTING AND WRITING PAPER, WRAPPING-PAPER, TOILET-PAPER, AND TISSUE-PAPER. THE SELBERT PAPER CO., Cincinnati, Ohio.
Filed April 2, 1915. Serial No. 85,652. PUBLISHED JUNE 1, 1915.

108,837. TOOTH-PASTE. THE SENTANEL REMEDIES COMPANY, INC., Cincinnati, Ohio, and Covington, Ky.
Filed November 2, 1915. Serial No. 90,368. PUBLISHED DECEMBER 14, 1915.

108,838. CORN-PLASTERS. HERBERT V. SHEPPARD, Worcester, Mass.
Filed August 16, 1915. Serial No. 88,653. PUBLISHED DECEMBER 14, 1915.

108,839. LAXATIVE CANDY. AARON SINGER, New York, N. Y.
Filed August 6, 1915. Serial No. 88,408. PUBLISHED DECEMBER 14, 1915.

108,840. CANNED FISH. SOUTHERN CALIFORNIA FISH COMPANY, Los Angeles, Cal.
Filed August 11, 1915. Serial No. 88,551. PUBLISHED NOVEMBER 30, 1915.

108,841. FELT SHOES, BOOTS, AND SLIPPERS. STANDARD FELT COMPANY, West Alhambra, Cal.
Filed September 20, 1915. Serial No. 89,327. PUBLISHED DECEMBER 7, 1915.

108,842. LUBRICATING-OIL. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed November 12, 1915. Serial No. 90,617. PUBLISHED DECEMBER 21, 1915.

108,843. WALL-PAPERS. STAR PEERLESS WALL PAPER MILLS, Joliet, Ill.
Filed October 23, 1915. Serial No. 90,007. PUBLISHED DECEMBER 14, 1915.

108,844. MOUTH-WASH, AN ANTISEPTIC, PROPHYLACTIC ASTRINGENT FOR CERTAIN NAMED DISEASES. TAYLOR O. TIMBERLAKE, Washington, D. C.
Filed November 10, 1915. Serial No. 90,570. PUBLISHED DECEMBER 14, 1915.

108,845. BOND-PAPER AND COVER-PAPER, AS TERMED IN THE TRADE. STRATHMORE PAPER COMPANY, West Springfield, Me.
Filed September 8, 1915. Serial No. 89,107. PUBLISHED DECEMBER 7, 1915.

108,846. CERTAIN NAMED FOODS. H. TEN BRUIN & SONS, Chicago, Ill.
Filed October 15, 1915. Serial No. 89,868. PUBLISHED DECEMBER 14, 1915.

108,847. STEEL PENS. SAMUEL WARD MANUFACTURING CO., Boston, Mass.
Filed September 23, 1915. Serial No. 89,423. PUBLISHED DECEMBER 14, 1915.

108,848. NATURAL MINERAL WATERS. HARRIS W. WHITE, Los Angeles, Cal.
Filed May 10, 1915. Serial No. 86,533. PUBLISHED AUGUST 3, 1915.

108,849. BOOTS AND SHOES MADE OF LEATHER. J. H. WINCHELL & CO. INC., Haverhill, Mass.
Filed March 24, 1915. Serial No. 85,384. PUBLISHED DECEMBER 14, 1915.

108,850. CARBONATED NON-ALCOHOLIC BEVERAGE AND SYRUP FOR MAKING SAME. APOLLO SODA WATER CO., Pittsburgh, Pa.
Filed September 22, 1915. Serial No. 89,366. PUBLISHED DECEMBER 21, 1915.

108,851. PERIODICALS PUBLISHED MONTHLY. BROTHERHOOD OF PAINTERS, DECORATORS AND PAPER-HANGERS OF AMERICA, La Fayette, Ind.
Filed October 1, 1915. Serial No. 89,570. PUBLISHED DECEMBER 7, 1915.

108,852. MOTOR-VEHICLES. BUICK MOTOR COMPANY, Flint, Mich.
Filed June 3, 1915. Serial No. 87,064. PUBLISHED DECEMBER 21, 1915.

108,853. COFFEE. G. E. BURSLEY & Co., Fort Wayne, Ind.
Filed July 27, 1915. Serial No. 88,228. PUBLISHED NOVEMBER 30, 1915.

108,854. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,455. PUBLISHED DECEMBER 21, 1915.

108,855. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,456. PUBLISHED DECEMBER 21, 1915.

108,856. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,457. PUBLISHED DECEMBER 21, 1915.

108,857. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,458. PUBLISHED DECEMBER 21, 1915.

108,858. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,459. PUBLISHED DECEMBER 21, 1915.

108,859. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,461. PUBLISHED DECEMBER 21, 1915.

108,860. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,462. PUBLISHED DECEMBER 21, 1915.

108,861. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,463. PUBLISHED DECEMBER 21, 1915.

108,862. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,466. PUBLISHED DECEMBER 21, 1915.

108,863. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 6, 1915. Serial No. 90,467. PUBLISHED DECEMBER 21, 1915.

108,864. PAPER BAGS. COLUMBIA PAPER BAG COMPANY, Baltimore, Md.
Filed November 8, 1915. Serial No. 90,498. PUBLISHED DECEMBER 21, 1915.

108,865. THE ALLOYS AND ALLOYING METALS USED IN THE MANUFACTURE OF SPECIAL STEELS. ELECTRO METALLURGICAL COMPANY, Glen Ferris, W. Va., and Niagara Falls, N. Y.
Filed July 17, 1915. Serial No. 87,985. PUBLISHED DECEMBER 21, 1915.

108,866. CERTAIN NAMED CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. A. B. FARQUHAR COMPANY, LIMITED, York, Pa.
Filed November 22, 1915. Serial No. 90,829. PUBLISHED DECEMBER 28, 1915.

108,867. FERTILIZER-DISTRIBUTERS, INCLUDING LIME-SPREADERS. HENCH & DROMGOLD COMPANY, York, Pa.
Filed August 30, 1915. Serial No. 88,877. PUBLISHED DECEMBER 28, 1915.

108,868. FURNITURE-POLISH. WILLIAM E. HERRERA, Chicago, Ill.
Filed October 28, 1915. Serial No. 90,173. PUBLISHED DECEMBER 21, 1915.

108,869. DIAPERS AND MATERNITY-PADS. LEAVITT-MINK MFG. CO., Brooklyn, N. Y.
Filed March 24, 1915. Serial No. 85,375. PUBLISHED DECEMBER 21, 1915.

108,870. LADIES' KNITTED UNION SUITS AND KNITTED PANTS AND KNITTED VESTS FOR LADIES AND MISSES. JOHN H. LEICH CO., New York, N. Y.
Filed June 12, 1914. Serial No. 79,037. PUBLISHED AUGUST 10, 1915.

108,871. PICTURE-ALBUMS. JESSE L. LOEB, Chicago, Ill.
Filed October 18, 1915. Serial No. 89,918. PUBLISHED DECEMBER 14, 1915.

108,872. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. SAMSTAG & HILDEB BROS., New York, N. Y.
Filed November 12, 1915. Serial No. 90,619. PUBLISHED DECEMBER 21, 1915.

108,873. BRACELETS MADE OF OR PLATED WITH PRECIOUS METAL. SHUTTLES BROS. & LEWIS, Dallas, Tex.
Filed August 19, 1915. Serial No. 88,693. PUBLISHED DECEMBER 7, 1915.

108,874. ELECTRIC WIRE AND CABLES, INSULATED WIRE, AND WOVEN COVERED WIRE AND CABLES FOR ELECTRICAL USE. SIMPLEX WIRE & CABLE COMPANY, Boston, Mass.
Filed November 9, 1915. Serial No. 90,540. PUBLISHED DECEMBER 21, 1915.

108,875. PREPARATION FOR THE TREATMENT OF POISON-OAK AND OTHER SKIN ERUPTIONS. CHARLES E. STANLEY, Glendale, Cal.
Filed September 30, 1915. Serial No. 89,552. PUBLISHED DECEMBER 7, 1915.

108,876. NON-ALCOHOLIC BEVERAGE MADE OF MALT, HOPS, AND CEREALS. THE TEM-PO MFG. CO., Baltimore, Md.
Filed October 28, 1915. Serial No. 90,195. PUBLISHED DECEMBER 21, 1915.

108,877. WRAPPING-PAPER. WAUSAU SULPHATE FIBRE CO., Wausau and Mosinee, Wis.
Filed November 1, 1915. Serial No. 90,297. PUBLISHED DECEMBER 21, 1915.

108,878. UNDERWEAR, BOTH WOVEN AND KNIT, HOSIERY, GLOVES, DRESSES, WAISTS, COLLARS, CUFFS, CHEMISES, VESTS. WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.
Filed August 17, 1915. Serial No. 88,668. PUBLISHED DECEMBER 21, 1915.

108,879. ARTIFICIAL FISH-BAIT. WISE SPORTSMAN'S SUPPLY CO., Chicago, Ill.
Filed September 15, 1915. Serial No. 89,227. PUBLISHED DECEMBER 7, 1915.

TRADE-MARK REGISTRATIONS CANCELED.

105,838. BY-PRODUCT OBTAINED IN PRODUCING SILICON CARBID, USED FOR REFRACTORY PURPOSES. THE EXOLON COMPANY, Cambridge, Mass.
Registered August 24, 1915. Canceled February 7, 1916.

107,739. FINGER-RINGS. FLINT, BLOOD & CO., INC., Providence, R. I.
Registered December 28, 1915. Canceled February 7, 1916.

LABELS

REGISTERED FEBRUARY 29, 1916.

19,075.—*Title:* "AQUA NOVA VITA." (For Internal Remedies.) THE AQUA NOVA VITA CO., New York, N. Y. Filed May 24, 1915.

19,076.—*Title:* "THE SAFE SOX." (For Hosiery.) THE BEEBE-HOWES COMPANY, INC., New York, N. Y. Filed December 30, 1915.

19,077.—*Title:* "YOUTHFUL CLUB." (For Wines.) KEYSTONE BOTTLERS SUPPLY COMPANY, New York, N. Y. Filed January 28, 1916.

19,078.—*Title:* "IMPERIAL SENTRY." (For Wines.) KEYSTONE BOTTLERS SUPPLY COMPANY, New York, N. Y. Filed January 28, 1916.

19,079.—*Title:* "MAID IN AMERICA POLISHING POWDER." (For a Polishing-Powder.) LEON A. ULMAN, Philadelphia, Pa. Filed November 10, 1915.

19,080.—*Title:* "PROF. J. WARNESSON'S EUCALYPTUS COLD CREAM." (For Cold-Cream.) JULES WARNESSON, Chicago, Ill. Filed September 21, 1915.

19,081.—*Title:* "ELECTRIC LIP ROUGE." (For Lip-Rouge.) JULES WARNESSON, Chicago, Ill. Filed September 21, 1915.

19,082.—*Title:* "WARNESSON'S THEATRE ROUGE." (For Theater-Rouge.) JULES WARNESSON, Chicago, Ill. Filed September 21, 1915.

19,083.—*Title:* "EUCALYPTUS PAINTS." (For Paints.) JULES WARNESSON, Chicago, Ill. Filed September 21, 1915.

19,084.—*Title:* "SPANISH THEATRE ROUGE." (For Theater-Rouge.) JULES WARNESSON, Chicago, Ill. Filed September 21, 1915.

PRINTS

REGISTERED FEBRUARY 29, 1916.

4,223.—*Title:* "OLYMPIAN CHOCOLATES FOR." (For Candy.) AUGUSTINE & KYER, Seattle, Wash. Filed September 4, 1915.

4,224.—*Title:* "TALES OF GRIPPERTOWN." (For SHOES.) E. W. BURT & COMPANY, INCORPORATED, Boston and Lynn, Mass. Filed January 29, 1916.

4,225.—*Title:* "JITNEY." (For Cigars.) ALFRED C. DAVIS, Woodward, Okla. Filed January 3, 1916.

4,226.—*Title:* "'CLEARS THE HEAD' BROMO-SELTZER FOR HEADACHE." (For Headache Remedies.) EMERSON DRUG CO., Baltimore, Md. Filed February 4, 1916.

4,227.—*Title:* "PRIZE CRACKER JACK." (For Popcorn.) RUECKHEIM BROS. & ECKSTEIN, Chicago, Ill. Filed February 8, 1916.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

AUFIERO *v.* EWING, COMMISSIONER OF PATENTS.

Decided January 3, 1916.

1. MANDAMUS—WILL NOT CONTROL DISCRETION—DISSOLUTION OF INTERFERENCE.

A holding of the Commissioner that the dissolution of an interference on the ground that one party is barred by prior patents does not justify an award of priority to the other party, is a holding within the purview of his sound discretion, and he will not be compelled by mandamus to rule otherwise.

2. SAME—SAME.

The court has no supervisory power over the head of the Patent Office.

3. RIGHT OF APPEAL—NECESSARY EFFECT OF DECISION BELOW CONTROL.

If a decision of the Commissioner's had the necessary legal effect of a final award of priority and he refused, upon request, to make a formal award for purposes of appeal, (*Cosper* v. *Gold and Gold*, 151 O. G., 194; 34 App. D. C., 194,) the court would look to the substance rather than the form and entertain an appeal without the formal award.

Mr. G. Thos. Dunlop and *Mr. Reeve Lewis* for the appellant.

Mr. R. F. Whitehead for the appellee.

ROBB, *J.*:

This is an appeal from a decree in the Supreme Court of the District dismissing appellant's bill for a temporary restraining order and an injunction *pendente lite* against the issuance by the Commissioner of Patents of a patent to one Hutchison, with whom appellant has been in interference in the Patent Office, and a mandatory injunction directing the Commissioner to enter a final award of priority in said interference proceeding.

The facts are clearly and succinctly stated by the learned trial justice as follows:

Hutchison filed his application on October 26, 1909, for an improvement in diaphragm horns. The plaintiff obtained a patent on April 4, 1911, and another patent on April 25, 1911. On August 24, 1911, he filed an application and on May 11, 1912, another application, claiming to be a division of the former. In the original application by Auflero the Patent Office suggested to him two claims at that time appearing in the Hutchison application in interference, the first of which claims afterward became the issue of interference No. 34,824, and the second of which claims became issue of companion interference No. 34,823. Such proceedings were had in No. 34,824 that the same came before the defendant in person upon an appeal by the plaintiff from an adverse decision by lower tribunals of the Patent Office denying a motion by the plaintiff to add certain claims to the issue of the interference, and thereupon the defendant affirmed the action of the lower tribunal and in addition to such affirmance adjudicated the issue in the interference to be not patentable to the plaintiff over the latter's prior patents because no invention was shown over the disclosures of those patents, and the Commissioner directed a dissolution of the interference on that ground. The Commissioner did not award priority to Hutchison nor did he decide that the plaintiff had no right to make the claims. He held that Hutchison showed invention, thereby overruling the decision of the Examiners-in-Chief.

The preliminary statement of the plaintiff filed under the declaration of the interference shows earlier dates than does Hutchison's statement.

The plaintiff requested the Commissioner to withdraw his order of dissolution and to direct the fixing of a time for taking testimony and for final hearing before the Examiner of Interferences on the question of priority in fact, and in the event that this should not be done then to extend or change the form of the order of dissolution so as to make it in form a final adjudication of priority. These requests were denied.

Upon the dissolution of the temporary restraining order by the trial court, a patent was regularly issued to Hutchison, so that the sole question here is whether appellant is entitled to an order requiring the Commissioner to enter a formal award of priority in favor of Hutchison in said interference proceeding. In the first place, it must be borne in mind that Congress has constituted the Patent Office a special tribunal with judicial function for the administration of the patent laws. The court has no general supervisory power over the head of that Office. If he errs in his final decisions, his errors may be corrected upon appeal to this court. But that is quite a different matter from attempting, by mandamus, to control his judgment and discretion. (*Riverside Oil Co.* v. *Hitchcock*, 190 U. S., 316.) In the present case, it was the deliberate judgment of the Commissioner that his ruling, that the issue in the interference was not patentable to the appellant because he had shown no invention over the disclosures of his prior patents, did not amount to an award of priority to Hutchison, the other party to the interference. Being of that view, the Commissioner very naturally declined to enter a decision awarding priority to Hutchison. The question was one calling for judgment and discretion, and the decision reached was a possible one, at least, and hence may not be controlled by mandamus. (*U. S., ex rel. T. C. Steel Co.*, v. *Ewing*, 42 App. D. C., 179; *United States, ex rel. Ness*, v. *Fisher*, 223 U. S., 683.)

We do not wish to be understood as holding that the appellant was without redress for, having requested the Commissioner to enter a final award of

priority, he had done all he could, and had that been the necessary effect of the Commissioner's decision the court would have taken jurisdiction of the case on appeal, since—

to determine what the decision is from which an appeal is prosecuted, the court will look to its substance, its necessary legal effect and operation, rather than to its mere form. *Cosper* v. *Gold*, 36 App. D. C., 302; *Moore* v. *Heany*, 34 App. D. C., 31; *re Selden*, 36 App. D. C., 428; *Mann* v. *Brown*, 43 App. D. C., 457, 460.

The decree must be affirmed, with costs.

Affirmed.

Supreme Court of the District of Columbia.

AUFIERO *v.* EWING, COMMISSIONER OF PATENTS.

Decided April 13, 1915.

MANDAMUS — INTERFERENCE — PRIORITY NOT AWARDED WHERE THERE IS A BAR TO ONE PARTY.

The Commissioner having dissolved an interference on the ground that the issue was unpatentable to A. in view of certain patents not effective against his opponent, *Held* that the decision is not final nor in effect a decision on priority giving the right of appeal to the court of appeals, and that a mandamus would therefore not issue to compel a formal award of priority by the Commissioner instead of the dissolution.

Mr. G. Thomas Dunlop and *Mr. Reeve Lewis* for the plaintiff.

Mr. R. F. Whitehead for the defendant.

McCOY, *J.*:

The plaintiff by his bill asked for a temporary restraining order and an injunction *pendente lite* against the issuance by the Commissioner of Patents of a patent to one Hutchison, and as final relief a mandatory injunction directing the Commissioner to make an order which in form shall be an adjudication of priority, the plaintiff claiming that the order actually entered was in effect an adjudication of priority, but that under decisions by the court of appeals, especially those in *Cosper* v. *Gold* (34 App. D. C., 194) and *Cosper* v. *Gold*, (36 App. D. C., 302,) an appeal from the order of the Commissioner unless in form an award of priority will not be entertained by that court and that where the effect of the order is such the Commissioner can be compelled to make it so *in form*. A temporary restraining order was issued and an injunction *pendente lite* granted and the matter is now to be decided after a final hearing.

Hutchison filed his application on October 26, 1909, for a patent for an improvement in diaphragm-horns. The plaintiff obtained a patent on April 4, 1911, and another patent on April 25, 1911. On August 24, 1911, he filed an application and on May 11, 1912, another application, claiming to be a division of the former. In the original application by Aufiero the Patent Office suggested to him two claims at that time appearing in the Hutchison application in interference, the first of which claims afterward became the issue of interference No. 34,824, and the second of which claims became issue of companion interference No. 34,823. Such proceedings were had in No. 34,824, that the same came before the defendant in person upon an appeal by the plaintiff from an adverse decision by lower tribunals of the Patent Office denying a motion by the plaintiff to add certain claims to the issue of the interference, and thereupon the defendant affirmed the action of the lower tribunal and in addition to such affirmance adjudicated the issue in the interference to be not patentable to the plaintiff over the latter's prior patents because no invention was shown over the disclosures of those patents, and the Commissioner directed a dissolution of the interference on that ground. The Commissioner did not award priority to Hutchison nor did he decide that the plaintiff had no right to make the claims. He held that Hutchison showed invention, thereby overruling the decision of the Examiners-in-Chief.

The preliminary statement of the plaintiff filed under the declaration of the interference shows earlier dates than does Hutchison's statement.

The plaintiff requested the Commissioner to withdraw his order of dissolution and to direct the fixing of a time for taking testimony and for final hearing before the Examiner of Interferences on the question of priority in fact and in the event that this should not be done then to extend or change the form of the order of dissolution so as to make it in form a final adjudication of priority. These requests were denied. As stated in *Cosper* v. *Gold*, (36 App. D. C., 302 at 307,) the right of the parties to make the claims of the issue was formerly held not to be a question in the interference that could be brought up on appeal; but this rule was reversed in *Podlesak* v. *McInnerney*, (26 App. D. C., 399,) and the court there decided that it would—

take jurisdiction of the question of the right to make the claim as an ancillary question to be considered on appeal from an award of priority of invention.

In *Cosper* v. *Gold* (34 App. D. C., 194) the court held that an order dissolving an interference on the ground that one of the parties had no right to make the claims of the issue being interlocutory was not appealable to that court independently of a final decision putting an end to the litigation by an award of priority to the other party, but that when such an award has been made the interlocutory order may be reviewed on an appeal from the final order and decided that the appellant must go back to the Patent Office, there to await a final decision of the Commissioner of the question of priority. This course was taken and the Commissioner entered an order to the effect that the appellant was *not* the prior inventor of the subject-matter of the issue; whereupon an appeal was taken which was entertained by the court of appeals and decided, (36 App. D. C., 302.)

In *Podlesak* v. *McInnerney* (26 App. D. C., 399) the court says at page 404:

The Commissioner of Patents, having found there was an interference in fact, and that McInnerney had the right to make the claim could come to no other conclusion upon the proofs and the law applicable thereto than the one he did, and consequently his award of priority is correct if the remaining questions can be decided in McInnerney's favor.

This brings us to the only serious questions in the case. They are those set out in the second and third assignments of errors, and respectively present for consideration appellants' contention that there is no interference in fact between the inventions of the interferants; and that the appellee has not the right to make the claim which is the subject matter of the issue. * * * In an *ex parte* case the decision of a Primary Examiner that

a party has a right to make a claim is final unless for good cause shown the Commissioner under his supervisory powers takes jurisdiction to review the question. It is generally left to courts in a suit brought after the issue of the patent for infringement of a claim thus allowed to determine whether the patentee ever had a right to make the claim. If, however, an interference involving such claim be instituted, the rules of the Patent Office provide for an examination by the Primary Examiner of the question of the right of either party to make the claim. If his decision be in the affirmative, the rules do not provide for an appeal to the Examiners-in-Chief. In *Allen* v. *United States*, *ante*, (p. 8,) this court held that, where such a decision was rendered by the Primary Examiner on a motion to dissolve, no appeal would lie. It was there said that the court had reviewed other ancillary questions when they properly came before it on appeal from final judgments awarding priority of invention. The question of the right of a party to make a claim goes to the very foundation of an interference, for, if a party has not such right, the interference fails. If it be incorrectly held that such party has a right to make the claim, priority may be awarded to him, and his adversary be deprived of a substantial right in that he is not given a claim where he necessarily is the prior inventor, his adversary never having made the invention. Manifestly that question should not be finally determined by the Primary Examiner who originally declared the interference. We therefore take the jurisdiction to determine that question in this case as an ancillary question to be considered in awarding priority of invention.

In *re Fullagar* (32 App. D. C., 228) the court reiterates its conclusions in the Podlesak case but distinguishes the case then under consideration. As briefly stated by the court of appeals interferences were declared between reissue applications of Fullagar and original applications of Emmett, in which motions to dissolve were made by each party. One ground of Emmett's motion was the insufficiency of Fullagar's oath to excuse the delay between the grant of his original patents and the date upon which he filed the respective reissue applications. The Examiners-in-Chief affirmed the granting of the motion on the ground that Fullagar's showing of inadvertence, accident, or mistake was insufficient and failed to excuse his long delay of more than two years in each case, and the Commissioner sustained this ruling. The court of appeals speaking of the Commissioner's decisions says:

He also stated, it is true, that Fullagar had no right to make the claims; but this remark is evidently as a result of the conclusion that Fullagar had failed to show that he had come within the requirements for a reissue. Had he held that Fullagar had made a sufficient showing for reissue and then decided that he had no right to make the claims of the interference because not disclosed in his application he would necessarily have awarded priority to Emmett. * * * If the Commissioner had decided that Fullagar was not entitled to make the claim under his application and had in consequence awarded priority to Emmett, Fullagar would have the right to appeal, bringing Emmett up for a final adjudication of the question of priority in this court. Instead of so deciding, the effect of his decision was to set aside the allowance of Fullagar's application as an entirety and dissolve the interference. No award of priority was made in favor of Emmett.

The court having denied Emmett's motion to appeal then took up the question of Fullagar's right to appeal *ex parte*, holding that he had no such right as the proceeding was not a regular *ex parte* proceeding, and speaking of Fullagar's application says:

It came before the Commissioner in that interference and the right to appeal is founded on the character and effect of his decision therein.

Fullagar's appeal was dismissed.

Explaining the Fullagar case the court says in *Cosper* v. *Gold*, (36 App. D. C., 302 at 307:)

That was a case of interference between Fullagar's reissue application and the first application of his opponent. The final decision in the case was not that Fullagar had no right to make the claims; but that his showing was not sufficient to warrant the grant of a reissue of his patent; in other words, that his application was not allowable. This was the decision, and there was no award of priority to his opponent. It was held that he could only take an *ex parte* appeal in the ordinary way.

The court stated that upon the return of the case to the Patent Office Fullagar would be entitled to have his application remanded for reëxamination, and if again rejected he would be entitled to successive appeals in due course.

The effect of the decisions above quoted is that where an interference proceeding has been terminated by a decision on the right to make the claim it is final and in effect an award of priority and if made so in form, would permit an appeal to the court of appeals; where, however, the interference has been dissolved on the ground that as to one of the parties there exists a statutory bar the decision is not final nor in effect a decision on priority and therefore that the court of appeals has no power to entertain an appeal from such a decision.

The plaintiff contends that this case is controlled by *United States, ex rel. Scott*, v. *Moore*, (39 App. D. C., 36 at 41,) which was an appeal from a judgment of the Supreme Court of the District of Columbia dismissing a petition for a writ of mandamus, which was sought for the purpose of compelling the Commissioner to cause an interference to be set down for hearing before the Examiner of Interferences. The facts in that case were that Scott had filed his application and subsequently one Bechman obtained his patent and more than two years thereafter Scott filed an application which he claimed to be divisional of his prior application, claiming that the original application disclosed the issue, but the Commissioner of Patents held otherwise and dissolved the interference. Scott did not attempt to have the order of the Commissioner take the form of an award of priority but petitioned for a writ of mandamus, which was denied, and on the appeal the court affirmed the decision of the court below, saying:

Bechman moved to dissolve the interference on the ground that petitioners had no right to make the claims. A stipulation in the record recites that the right to make the claims depends on the disclosure of the earlier application, and that the same is indirectly involved in the interference. Petitioners thereby became the senior parties. The motion was sustained by the several tribunals of the Office in succession. The decision of the Commissioner dissolving the interference was rendered July 13, 1911.

After this decision the petitioners moved the Examiner of Interferences to set the case down for hearing, and to take testimony for use at such hearing. This was denied, and on regular appeal to the Commissioner he affirmed the action of the tribunals below, on the ground that the interference had been dissolved, without an award of priority. Claiming that it was the plain, imperative duty of the Commissioner to cause the interference to be set down for hearing before the Examiner of Interferences, and that they have no other remedy, petitioners pray a writ of mandamus to compel the performance of that duty.

The effect of the Commissioner's decision sustaining the motion to dissolve the interference put an end to it. There was no longer an issue between the parties upon which testimony could be taken.

Grant that petitioners had no appeal to this court from the order as entered, because there was no award of priority, (*Cosper* v. *Gold*, 34 App. D. C., 194–198;) yet, as stated in the Commissioner's decision, on September 26, 1911, had the petitioners requested that the former decision be extended to a formal award of priority, that order would have been entered, as had been done in *Cosper* v. *Gold*, *supra*, after the dismissal of the appeal from the former decision holding that the appellant Cosper had no right to make the claims of the interference. Had the petitioners pursued that course, an appeal could have been taken from the final award of

priority, bringing up for review all the grounds upon which the award was founded. (*Cosper* v. *Gold*, 36 App. D. C., 302–307.)

Having failed to take this action, and obtain a review of the exercise of the Commissioner's judicial discretion in the manner provided therefor by law, the petitioners now seek a review of his decision by means of mandamus. Mandamus cannot be made to operate as an appeal or writ of error.

The plaintiff argues on the basis of the proceedings in the Patent Office that the interference was dissolved because of a statutory bar and therefore that the court of appeals in the paragraph just quoted decided that where an interference is dissolved on that ground the person adversely affected is entitled to have the decision recorded in form as one of priority and that an appeal will lie. The decision of the Commissioner finally dissolving the interference reads in part as follows:

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner dissolving the interference on the ground that Scott and Scott have no right to make the claims in issue, and that the counts have different meanings when applied to the structure shown in the applications here involved. * * * The substantial question now raised is whether the claims in issue can properly be read upon this earlier application. While this would ordinarily be a question relating merely to the burden of proof, it goes in this instance to the very foundation of the interference, for unless the claims can properly be predicated on the structure shown in the earlier application, the later one will be of no value in this proceeding, since it was filed more than three years after the grant of the patent to Bechman here involved. * * * The claims in issue were first made in the Bechman application and were copied from his patent by Scott after the issuance thereof. * * * This idea of the longitudinal arrangement seems to be the very gist of the Bechman invention so far as the claims herein involved are concerned. * * * It is urged on behalf of Scott that his arrangement is clearly the equivalent of Bechman's arrangement and that there is no patentable difference. * * * The patentability of the idea involved in the present issue is a question not now before me. Whatever Scott may think of the merits of these limitations it appears that they express the very point of the invention covered by the counts, and that they cannot properly be predicated upon Scott's earlier case. The allowance of the claims in the second application being barred by the Bechman patent, as above noted, the interference was properly dissolved.

The case again came before the Assistant Commissioner on appeal from the Examiner of Interferences, denying a motion to take testimony and the motion to consolidate. There was also a motion of Bechman that the appeal be dismissed on the ground that it had no standing since the interference was dissolved under the decision in which quotations have just been made. The Commissioner stated:

The record shows that after the declaration of this interference a motion was filed by Bechman to dissolve the interference on the ground *inter alia* that the earlier application of Scott and Scott, of which the application specifically involved herein was regarded as a division, did not disclose the issue, and that the later application was filed more than two years after the grant of the Bechman patent. This motion was granted by the Examiner and his decision was affirmed on appeal by the Examiners-in-Chief and by the Commissioner. * * * It is pointed out that in the present case the Commissioner made no award of priority, and that if Scott and Scott have a right to make the claims, the question of priority cannot be determined without taking testimony. * * *

This contention is believed to be without force. The question which was presented upon the motion for dissolution involved the right of Scott and Scott to make in the earlier application the claims in issue and this was decided adversely to them. This ruling was in effect a decision upon the question of priority adverse to Scott and Scott, and had they desired to appeal from this holding to the Court of Appeals of the District of Columbia, it would have been proper for them to present a motion that formal judgment of priority be entered, as was done in the case of *Cosper* v. *Gold and Gold*, (168 O. G., 787.)

It is true that one ground of the motion to dissolve was that the latter application was filed more than two years after the grant to Bechman and also that the Commissioner in his decision affirming the order of dissolution stated that the allowance of the claims in the second application being barred by the Bechman patent "as above noted," the interference was properly dissolved, but what he did note in regard to the Bechman patent was merely that the later application of Scott would—

be of no value unless the claims of it were supported by the disclosure in the earlier application,

the reason why it would be of no value being that no right to make the claims being shown the application would not be granted as it would be practically an original application and Bechman's patent would stand in the way. It cannot be contended successfully, then, that the Commissioner—

held the patent to Bechman, issued more than two years prior to the filing of Scott's alleged divisional application, to be a two years' publication bar against Scott on the interference issue

as urged by the plaintiff. The point decided was that the application was not divisional. However that may be the court of appeals, as clearly indicated by the above quotation from its opinion in the mandamus appeal, construed the action of the Office as a dissolution of the interference on the ground of the right to make the claims.

Assuming that by mandatory injunction the Commissioner of Patents might be compelled to enter an order formally as one of priorty on proof of facts like those in the cases of *Cosper* v. *Gold* for the reason that otherwise a party would be deprived of his right to appeal on the question of priority such a decree cannot be made here in view of the numerous decisions by the court of appeals not to consider questions of patentability until they are finally adjudicated in the Patent Office and that interference proceedings involve only the question of priority and not that of patentability. If the court had ever meant to determine otherwise it would have said in the Fullagar case what it said in *Cosper* v. *Gold* when that case was first before it; namely, that the appellant must—

go back to the Patent Office there to await a final decision of the Commissioner of the question of priority.

The bill is dismissed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Cook patent, No. 685,820, for an expansion-shield for screws and screw-bolts, *Held* not infringed. *Diamond Expansion Bolt Co.* v. *Parker Supply Co.*, 228 F., 205.

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FEBRUARY, 1916.

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DIGEST

OF THE

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APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

See Jurisdiction of the Supreme Court of the District of Columbia: Mandamus: Supervisory Authority of the Court of Appeals of the District of Columbia.

BAR TO PATENT.

See Mandamus.

COMMERCIAL SUCCESS.

See Priority of Invention.

CONCEPTION OF INVENTION.

See Priority of Invention.

CONSTRUCTION OF CLAIMS.

1. PATENTABILITY.
The appealed claims compared with the references and *Held* to differ from applicant's prior patent only in an obvious change that might be classed as needing no suggestion by other known devices. [*Ex parte* Gasau, 289.

2. INTERFERENCE—RIGHT TO MAKE THE CLAIMS.
Where the counts of the issue called for a car end of sheet metal having a V-shaped stiffening-rib, *Held* that an X-shaped rib, though in a sense composed of two V-shaped ribs, would not satisfy the issue in view of the described function and effect of the V-shaped rib. [*Rohlfing *v.* Murphy, 290.

3. PATENTABILITY—PAVEMENT.
Claims for a pavement composed of concrete with a bituminous coating found to cover the same alleged invention as in the Groves case (200 O. G., 856; 41 App. D. C., 316) and to be devoid of patentability for like reasons. [**In re* Schutte, 1378.

CONSTRUCTION OF RULES.

INTERFERENCE—RULES 122 AND 130.
Rules 122 and 130 *Held* consistent with law, reasonable, and salutary. [*Hopkins *v.* Peters and Gubelmann, 649.

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See Mandamus; Right of Appeal.

DELAY IN PROSECUTION OF APPLICATION.

See Priority of Invention.

DILIGENCE.

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FUNCTION.

See Construction of Claims, 2

INJUNCTION.

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INOPERATIVENESS.

See Interference, 4.

INTERFERENCE.

See Construction of Claims, 1, 2; Construction of Rules; Jurisdiction of the Supreme Court of the District of Columbia; Mandamus, 1; Right of Appeal; Right to Make Claims.

1. DEFINITENESS OF ISSUE.
Where an independent inventor copies a claim from a patent, the patentee may not rely upon a difference of structure not recited in the claim to escape a judgment of priority. [Fend *v.* Miggett, 649.

2. PATENTEE—INCONSISTENT POSITIONS.
A patentee in interference cannot be heard to contend for the non-patentability of his claims, because that would give him a right of opposition based upon a patent *pro tanto* void. [Id

3. SAME—ESCAPING JUDGMENT.
A patentee may escape judgment in an interference by filing a disclaimer or by filing an application for reissue containing properly-limited claims only. [Id.

4. PIECEMEAL PROSECUTION.
Where a party under order to show cause why judgment on the record should not be rendered against him prosecuted unsuccessfully a motion to dissolve on the ground of inoperativeness of his opponent's machine and thereafter attempted to attack its operativeness on other grounds, *Held* that the Office properly refused to consider the second contention of inoperativeness. [*Hopkins *v.* Peters and Gubelmann, 649.

INVENTION.

See Construction of Claims, 1, 3.

JUDGMENT ON THE RECORD.

See Interference, 1, 3, 4.

JURISDICTION OF THE COMMISSIONER OF PATENTS.

See Jurisdiction of the Supreme Court of the District of Columbia.

JURISDICTION OF THE SUPREME COURT OF THE DISTRICT OF COLUMBIA.

EQUITY—INJUNCTION—COURTS—PATENTS.

The Supreme Court of the District of Columbia, sitting as an equity court, has no jurisdiction to entertain a suit against former employees of the plaintiff to enjoin them from divulging the secrets of the plaintiff's invention acquired by them while in his employ, and for which he has filed an application for a patent, and from prosecuting an application which they have filed for a patent for the same invention, as the Commissioner of Patents is vested with full jurisdiction under the patent law to determine in an interference proceeding the questions involved—namely, who were the real inventors of the invention in question and whether the defendants were the employees of the plaintiff for the purpose of carrying out his instructions in regard to the construction of the devices embodying the invention—and as an appeal will lie to this court from the decision of the Commissioner in such an interference, (citing *in re Frasch*, 100 O. G., 1977; 20 App. D. C., 298; *Moore* v. *Hany*, 149 O. G., 488; 34 App. D. C., 31, and *Billings* v. *Field*, 163 O. G., 232; 36 App. D. C., 16.)

[*Burlingame v. Manchester, 1375

LIMITATION OF CLAIMS.

See Interference, 3.

MANDAMUS.

1. INTERFERENCE—PRIORITY NOT AWARDED WHERE THERE IS A BAR TO ONE PARTY.

The Commissioner having dissolved an interference on the ground that the issue was unpatentable to A, in view of certain patents not effective against his opponent, *Held* that the decision is not final nor in effect a decision on priority giving the right of appeal to the court of appeals, and that a mandamus would therefore not issue to compel a formal award of priority by the Commissioner instead of the dissolution.

[* Auflero *v.* Ewing, Commissioner of Patents, 1718.

2. WILL NOT CONTROL DISCRETION—DISSOLUTION OF INTERFERENCE.

A holding of the Commissioner that the dissolution of an interference on the ground that one party is barred by prior patents does not justify an award of priority to the other party is a holding within the purview of his sound discretion, and he will not be compelled by mandamus to rule otherwise.

[*Auflero *v.* Ewing, Commissioner of Patents, 1717.

MECHANICAL SKILL.

See Construction of Claims, 1.

MOTION TO DISSOLVE INTERFERENCE.

See Interference, 4.

OPPOSITION TO REGISTRATION OF TRADE-MARKS.

CHANGE IN GOODS.

The prior right of the opposer to the use of the trade-mark for flour *Held* not vitiated by a change in the goods from soft-wheat flour to hard-wheat flour during the course of its use.

[*The Royal Milling Company *v.* The J. F. Imbs Milling Company, 290.

PATENTABILITY.

See Construction of Claims, 1, 3; Interference, 2; Jurisdiction of the Supreme Court of the District of Columbia; Mandamus, 1.

PIECEMEAL PROSECUTION OF INTERFERENCE.

See Interference, 4.

PRIOR PATENTS.

See Construction of Claims, 1; Mandamus, 2.

PRIORITY OF INVENTION.

See Interference, 1; Jurisdiction of the Supreme Court of the District of Columbia; Mandamus; Right of Appeal; Right to Make Claims.

DILIGENCE.

Where S. claims conception November 25, 1911, and filed his application on January 27 following, and D. executed his application June 17, 1911, and filed it March 27, 1912, and between these dates installed commercial systems embodying the broader counts of the issue which have been awarded to him, though not the particular counts here on appeal, *Held* that the circumstances preclude a finding of lack of diligence by D. as to the subject-matter of the appealed counts.

[*Deakin *v.* Schwartz, 651.

REFERENCES.

See Construction of Claims, 1.

REISSUE.

See Interference, 3.

RIGHT OF APPEAL.

See Mandamus.

NECESSARY EFFECT OF DECISION BELOW.

If a decision of the Commissioner's had the necessary legal effect of a final award of priority and he refused, upon request, to make a formal award for purposes of appeal (*Cosper* v. *Gold and Gold*, 151 O. G., 194; 34 App. D. C., 194,) the court would look to the substance rather than the form and entertain an appeal without the formal award.

[*Auflero *v.* Ewing, Commissioner of Patents, 1717.

RIGHT TO MAKE CLAIMS.

See Construction of Claims, 2.

INTERFERENCE.

The right of a party to make the claims goes to the foundation of the interference and will be considered on appeal on priority, (citing *Podlesak* v. *McInnerney*, etc.)

[*Rohifing *v.* Murphy, 290.

RIGHT TO USE OF TRADE-MARK.

See Opposition to Registration of Trade-Marks.

SUPERVISORY AUTHORITY OF THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

MANDAMUS—DISCRETION OF COMMISSIONER OF PATENTS.

The court has no supervisory power over the head of the Patent Office.

[*Auflero *v.* Ewing, Commissioner of Patents, 1717.

TRADE-MARKS.

See Opposition to Registration of Trade-Marks.

VOID PATENTS.

See Interference, 2

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

A. Garrison Foundry Company. (See Shaw, Henry C., assignor.)

A. G. Spalding & Bros. (See Pierce, George L., assignor.)

A. G. Spalding & Bros. (See Welch, Robert L., assignor.)

A. G. Spalding & Bros. Mfg. Co. (See Pierce, George L., assignor.)

A. J. Lindemann & Hoverson Co. (See Lindemann and Camp, assignors.)

Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,173,632; Feb. 29; Gaz. vol. 223; p. 1550.

Aaronson, Robert M. B., Paris, France. Bottle-cap. No. 1,173,473; Feb. 29; Gaz. vol. 223; p. 1492.

Abbey, Simeon A. (See Buxton and Abbey.)

Abbott, Charles M., Watertown, assignor to Samuel Cabot, Inc., Boston, Mass. Insulating material. No. 1,172,244; Feb. 22; Gaz. vol. 223; p. 1011.

Abbott Coin Counter Company. (See Bisland, Presley E., assignor.)

Abbott, Lawrence A., Chicago, Ill. Automatic closing device for sliding doors. No. 1,169,755; Feb. 1; Gaz. vol. 223; p. 3.

Abernethy, Clifford E., Hickory, N. C. Electric train bulletin-board. No. 1,171,915; Feb. 15; Gaz. vol. 223; p. 836.

Ablon, Dave, Dallas, Tex. Liquid-level electrical indicator. No. 1,171,405; Feb. 15; Gaz. vol. 223; p. 655.

Abraham, Gabriel. (See Grahau, Hans E., assignor.)

Abramson, Solomon, New York, N. Y. Trousers-kneelifting device. No. 1,173,139; Feb. 22; Gaz. vol. 223; p. 1333.

Abramson, William G., R. J. Kennedy, and E. M. McMillan, Oakland, Cal. Adjustable stand attachment for beds. No. 1,171,826; Feb. 15; Gaz. vol. 223; p. 802.

Abtmeyer, Theodore. (See Conrad and Abtmeyer.)

Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,171,576; Feb. 15; Gaz. vol. 223; p. 714.

Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,171,577; Feb. 15; Gaz. vol. 223; p. 715.

Achershaug, Halvor, New York, N. Y. Game device. No. 1,170,948; Feb. 8; Gaz. vol. 223; p. 450.

Ackerman, Edward L., assignor to Jos. N. Smith & Company, Detroit, Mich. Automobile-door latch. No. 1,170,863; Feb. 8; Gaz. vol. 223; p. 422.

Ackermann, Fritz, Berlin-Friedenau, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Disazo dye. No. 1,173,077; Feb. 22; Gaz. vol. 223; p. 1311.

Actien Gesellschaft für Anilin Fabrikation. (See Ackermann, Fritz, assignor.)

Actien Gesellschaft fur Anilin Fabrikation. (See Clément and Rivière, assignors.)

Adair, Alfred, Troyeville, Johannesburg, Transvaal, South Africa. Photographic apparatus. No. 1,172,922; Feb. 22; Gaz. vol. 223; p. 1258.

Adams, Charles S. (See Rice and Adams.)

Adams, Malcolm G., Hamlet, N. C. Seat-spring. No. 1,171,297; Feb. 8; Gaz. vol. 223; p. 575.

Adams, Walter S., assignor to The J. G. Brill Company, Philadelphia, Pa. Bolster-guide. No. 1,170,595; Feb. 8; Gaz. vol. 223; p. 328.

Adams, William C., Boston, Mass. Magnifying device for threading needles. No. 1,171,687; Feb. 15; Gaz. vol. 223; p. 753.

Adams, William C., Calistoga, Cal. Music-leaf turner. No. 1,173,911; Feb. 29; Gaz. vol. 223; p. 1646.

Adams, William H., Kenyon, R. I. Electrical connector. No. 1,170,034; Feb. 1; Gaz. vol. 223; p. 99.

Addington, Frank W., Richmond, Ind. Pneumatic wheel. No. 1,173,156; Feb. 29; Gaz. vol. 223; p. 1381.

Addleman, Frank P., Austin, Colo. Beet-harvesting machine. No. 1,172,098; Feb. 15; Gaz. vol. 223; p. 902.

Adler, Rudolf, assignor to Naamlooze Vennootschap "Hollandsche Proteine Maatschappij," Amsterdam, Netherlands. Making plastic compositions. No. 1,169,756; Feb. 1; Gaz. vol. 223; p. 3.

Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,173,912; Feb. 29; Gaz. vol. 223; p. 1646.

Aermotor Company. (See Noyes, La Verne W., assignor.)

Ahlbom, Oscar W., Garfield, Utah. Sled. No. 1,171,079; Feb. 8; Gaz. vol. 223; p. 497.

Aiken, Edward L. (See Aylsworth and Aiken.)

Air Utilities Company. (See Wood, William A., assignor.)

Airey, John, Ann Arbor, Mich. Area-meter. No. 1,170,721; Feb. 8; Gaz. vol. 223; p. 374.

Akeley Camera. (See Akeley, Carl E., assignor.)

Akeley, Carl E., assignor to Akeley Camera, Inc., New York, N. Y. Camera-stand. No. 1,173,401; Feb. 29; Gaz. vol. 223; p. 1469.

Akins, Stephen A., Kansas City, Mo. Game. No. 1,171,916; Feb. 15; Gaz. vol. 223; p. 836.

Aktiebolaget Stockholm-Stelefon. (See Wincrantz, Nilson, and Pettersson, assignors.)

Aktiebolaget Svenska Kullagerfabriken. (See Sörensen, Carl A. T., assignor.)

Aktiengesellschaft Brown Boveri & Cie. (See Christlein and Brown, assignors.)

Aktieselskabet Dans Svovlsyre & Superphosphat-Fabrik. (See Jensen-Valdal, Ernst, assignor.)

Alberger Pump and Condenser Company. (See Ray, Frederick, assignor.)

Albrecht, Henry C., Terre Haute, Ind. Hydrocarbon-lamp. No. 1,170,722; Feb. 8; Gaz. vol. 223; p. 374.

Albrecht, John F., Glencoe, Minn. Convertible dump-cart. No. 1,171,578; Feb. 15; Gaz. vol. 223; p. 715.

Alday, Adolph L., Cleveland, Ohio. Flying-machine. No. 1,171,162; Feb. 8; Gaz. vol. 223; p. 528.

Alemite Metals Company. (See Goldberg, John S., assignor.)

Alexander, Clinton B., Washington, D. C. Paper-punch. No. 1,170,133; Feb. 1; Gaz. vol. 223; p. 122.

Alexander, George H., Birmingham, England. Machine and appliance for cutting or forming screw-threads. No. 1,173,078; Feb. 22; Gaz. vol. 223; p. 1311.

Alexander, Scott W., Long Beach, Cal. Elevator cable and rope lock. No. 1,173,140; Feb. 22; Gaz. vol. 223; p. 1333.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Split-phase system. No. 1,170,211; Feb. 1; Gaz. vol. 223; p. 161.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Selective tuning system. No. 1,173,079; Feb. 22; Gaz. vol. 223; p. 1312.

Allan, Edward T., Cincinnati, Ohio. Stapling-machine. No. 1,173,697; Feb. 29; Gaz. vol. 223; p. 1571.

Allan, James M., assignor of one-half to Cammell Laird and Company Limited, Sheffield, England. Cap for armor-piercing projectiles. No. 1,172,511; Feb. 22; Gaz. vol. 223; p. 1110.

Allen, Achilles, assignor of one-third to T. C. Frazier and one-third to O. E. Smith, Milton, Oreg. Amalgamator. No. 1,172,099; Feb. 15; Gaz. vol. 223; p. 903.

Allen, Anson W. (See Thomas and Allen.)

Allen, Ernest L., Elrosa, Minn. Ticket-holder. No. 1,171,688; Feb. 15; Gaz. vol. 223; p. 753.

Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, Boston, Mass. Stamp-applying and envelop-sealing machine. No. 1,170,949; Feb. 8; Gaz. vol. 223; p. 451.

Allen, George B., and V. S. Westcott, Pawtucket, R. I. Winding-machine. No. 1,170,212; Feb. 1; Gaz. vol. 223; p. 162.

Allen, Harry L., Alliance Ohio, assignor to American Steel Foundries, New York, N. Y. Car-truck. No. 1,173,402; Feb. 29; Gaz. vol. 223; p. 1469.

Allen, Herbert W., Coalinga, Cal. Mixing device for use with explosion-engines. No. 1,173,157; Feb. 29; Gaz. vol. 223; p. 1381.

Allen, Joseph G., Racine, Wis. Hose-supporter. No. 1,169,757; Feb. 1; Gaz. vol. 223; p. 3.

Allen, Le Roy D., assignor of one-half to A. W. Heat' Chicago, Ill. Attachment for telephone desk se' No. 1,172,658; Feb. 22; Gaz. vol. 223; p. 1162.

INVENTION.

See Construction of Claims, 1, 3.

JUDGMENT ON THE RECORD.

See Interference, 1, 3, 4.

JURISDICTION OF THE COMMISSIONER OF PATENTS.

See Jurisdiction of the Supreme Court of the District of Columbia.

JURISDICTION OF THE SUPREME COURT OF THE DISTRICT OF COLUMBIA.

EQUITY—INJUNCTION—COURTS—PATENTS.

The Supreme Court of the District of Columbia, sitting as an equity court, has no jurisdiction to entertain a suit against former employees of the plaintiff to enjoin them from divulging the secrets of the plaintiff's invention acquired by them while in his employ, and for which he has filed an application for a patent, and from prosecuting an application which they have filed for a patent for the same invention, as the Commissioner of Patents is vested with full jurisdiction under the patent law to determine in an interference proceeding the questions involved—namely, who were the real inventors of the invention in question and whether the defendants were the employees of the plaintiff for the purpose of carrying out his instructions in regard to the construction of the devices embodying the invention—and as an appeal will lie to this court from the decision of the Commissioner in such an interference, (citing *in re Frasch*, 100 O. G., 1977; 29 App. D. C., 298; *Moore* v. *Heany*, 149 O. G., 488; 34 App. D. C., 31, and *Billings* v. *Field*, 163 O. G., 232; 36 App. D. C., 16.)

[*Burlingame v. Manchester, 1375

LIMITATION OF CLAIMS.

See Interference, 3.

MANDAMUS.

1. INTERFERENCE—PRIORITY NOT AWARDED WHERE THERE IS A BAR TO ONE PARTY.

The Commissioner having dissolved an interference on the ground that the issue was unpatentable to A. in view of certain patents not effective against his opponent, *Held* that the decision is not final nor in effect a decision on priority giving the right of appeal to the court of appeals, and that a mandamus would therefore not issue to compel a formal award of priority by the Commissioner instead of the dissolution.

[* Auflero *v.* Ewing, Commissioner of Patents, 1718.

2. WILL NOT CONTROL DISCRETION—DISSOLUTION OF INTERFERENCE.

A holding of the Commissioner that the dissolution of an interference on the ground that one party is barred by prior patents does not justify an award of priority to the other party is a holding within the purview of his sound discretion, and he will not be compelled by mandamus to rule otherwise.

[*Auflero *v.* Ewing, Commissioner of Patents, 1717.

MECHANICAL SKILL.

See Construction of Claims, 1.

MOTION TO DISSOLVE INTERFERENCE.

See Interference, 4.

OPPOSITION TO REGISTRATION OF TRADE-MARKS.

CHANGE IN GOODS.

The prior right of the opposer to the use of the trade-mark for flour *Held* not vitiated by a change in the goods from soft-wheat flour to hard-wheat flour during the course of its use.

[*The Royal Milling Company *v.* The J. F. Imbs Milling Company, 290.

PATENTABILITY.

See Construction of Claims, 1, 3; Interference, 2; Jurisdiction of the Supreme Court of the District of Columbia; Mandamus, 1.

PIECEMEAL PROSECUTION OF INTERFERENCE.

See Interference, 4.

PRIOR PATENTS.

See Construction of Claims, 1; Mandamus, 2.

PRIORITY OF INVENTION.

See Interference, 1; Jurisdiction of the Supreme Court of the District of Columbia; Mandamus; Right of Appeal; Right to Make Claims.

DILIGENCE.

Where S. claims conception November 25, 1911, and filed his application on January 27 following, and D. executed his application June 17, 1911, and filed it March 27, 1912, and between these dates installed commercial systems embodying the broader counts of the issue which have been awarded to him, though not the particular counts here on appeal, *Held* that the circumstances preclude a finding of lack of diligence by D. as to the subject-matter of the appealed counts.

[*Deakin *v.* Schwartz, 651.

REFERENCES.

See Construction of Claims, 1.

REISSUE.

See Interference, 3.

RIGHT OF APPEAL.

See Mandamus.

NECESSARY EFFECT OF DECISION BELOW.

If a decision of the Commissioner's had the necessary legal effect of a final award of priority and he refused, upon request, to make a formal award for purposes of appeal (*Cosper* v. *Gold and Gold*, 151 O. G., 194; 34 App. D. C., 194,) the court would look to the substance rather than the form and entertain an appeal without the formal award.

[*Auflero *v.* Ewing, Commissioner of Patents, 1717.

RIGHT TO MAKE CLAIMS.

See Construction of Claims, 2.

INTERFERENCE.

The right of a party to make the claims goes to the foundation of the interference and will be considered on appeal on priority, (citing *Podlesak* v. *McInnerney*, etc.)

[*Rohlfing *v.* Murphy, 290.

RIGHT TO USE OF TRADE-MARK.

See Opposition to Registration of Trade-Marks.

SUPERVISORY AUTHORITY OF THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

MANDAMUS—DISCRETION OF COMMISSIONER OF PATENTS.

The court has no supervisory power over the head of the Patent Office. [*Auflero *v.* Ewing, Commissioner of Patents, 1717.

TRADE-MARKS.

See Opposition to Registration of Trade-Marks.

VOID PATENTS.

See Interference, 2

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

A. Garrison Foundry Company. (See Shaw, Henry C., assignor.)

A. G. Spalding & Bros. (See Pierce, George L., assignor.)

A. G. Spalding & Bros. (See Welch, Robert L., assignor.)

A. G. Spalding & Bros. Mfg. Co. (See Pierce, George L., assignor.)

A. J. Lindemann & Hoverson Co. (See Lindemann and Camp, assignors.)

Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupter. No. 1,173,632; Feb. 29; Gaz. vol. 223; p. 1550.

Aaronson, Robert M. B., Paris, France. Bottle-cap. No. 1,173,473; Feb. 29; Gaz. vol. 223; p. 1492.

Abbey, Simeon A. (See Buxton and Abbey.)

Abbott, Charles M., Watertown, assignor to Samuel Cabot, Inc., Boston, Mass. Insulating material. No. 1,172,244; Feb. 22; Gaz. vol. 223; p. 1011.

Abbott Coin Counter Company. (See Bisland, Presley E., assignor.)

Abbott, Lawrence A., Chicago, Ill. Automatic closing device for sliding doors. No. 1,169,755; Feb. 1; Gaz. vol. 223; p. 3.

Abernethy, Clifford E., Hickory, N. C. Electric train bulletin-board. No. 1,171,915; Feb. 15; Gaz. vol. 223; p. 836.

Ablon, Dave, Dallas, Tex. Liquid-level electrical indicator. No. 1,171,405; Feb. 15; Gaz. vol. 223; p. 655.

Abraham, Gabriel. (See Grahau, Hans E., assignor.)

Abramson, Solomon, New York, N. Y. Trousers-knee-lifting device. No. 1,173,139; Feb. 22; Gaz. vol. 223; p. 1333.

Abramson, William G., R. J. Kennedy, and E. M. McMillan, Oakland, Cal. Adjustable stand attachment for beds. No. 1,171,826; Feb. 15; Gaz. vol. 223; p. 802.

Abtmeyer, Theodore. (See Conrad and Abtmeyer.)

Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,171,576; Feb. 15; Gaz. vol. 223; p. 714.

Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,171,577; Feb. 15; Gaz. vol. 223; p. 715.

Achershaug, Halvor, New York, N. Y. Game device. No. 1,170,948; Feb. 8; Gaz. vol. 223; p. 450.

Ackerman, Edward L., assignor to Jos. N. Smith & Company, Detroit, Mich. Automobile-door latch. No. 1,170,863; Feb. 8; Gaz. vol. 223; p. 422.

Ackermann, Fritz, Berlin-Friedenau, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Disazo dye. No. 1,173,077; Feb. 22; Gaz. vol. 223; p. 1311.

Actien Gesellschaft für Anilin Fabrikation. (See Ackermann, Fritz, assignor.)

Actien Gesellschaft für Anilin Fabrikation. (See Clément and Rivière, assignors.)

Adair, Alfred, Troyeville, Johannesburg, Transvaal, South Africa. Photographic apparatus. No. 1,172,922; Feb. 22; Gaz. vol. 223; p. 1258.

Adams, Charles S. (See Rice and Adams.)

Adams, Malcolm G., Hamlet, N. C. Seat-spring. No. 1,171,297; Feb. 8; Gaz. vol. 223; p. 575.

Adams, Walter S., assignor to The J. G. Brill Company, Philadelphia, Pa. Bolster-guide. No. 1,170,595; Feb. 8; Gaz. vol. 223; p. 328.

Adams, William C., Boston, Mass. Magnifying device for threading needles. No. 1,171,687; Feb. 15; Gaz. vol. 223; p. 753.

Adams, William C., Calistoga, Cal. Music-leaf turner. No. 1,173,911; Feb. 29; Gaz. vol. 223; p. 1646.

Adams, William H., Kenyon, R. I. Electrical connector. No. 1,170,034; Feb. 1; Gaz. vol. 223; p. 99.

Addington, Frank W., Richmond, Ind. Pneumatic wheel. No. 1,173,156; Feb. 29; Gaz. vol. 223; p. 1381.

Addleman, Frank P., Austin, Colo. Beet-harvesting machine. No. 1,172,098; Feb. 15; Gaz. vol. 223; p. 902.

Adler, Rudolf, assignor to Naamlooze Vennootschap "Hollandsche Proteïne Maatschappij," Amsterdam, Netherlands. Making plastic compositions. No. 1,169,756; Feb. 1; Gaz. vol. 223; p. 3.

Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,173,912; Feb. 29; Gaz. vol. 223; p. 1646.

Aermotor Company. (See Noyes, La Verne W., assignor.)

Ahlbom, Oscar W., Garfield, Utah. Sled. No. 1,171,079; Feb. 8; Gaz. vol. 223; p. 497.

Aiken, Edward L. (See Aylsworth and Aiken.)

Air Utilities Company. (See Wood, William A., assignor.)

Airey, John, Ann Arbor, Mich. Area-meter. No. 1,170,721; Feb. 8; Gaz. vol. 223; p. 374.

Akeley Camera. (See Akeley, Carl E., assignor.)

Akeley, Carl E., assignor to Akeley Camera, Inc., New York, N. Y. Camera-stand. No. 1,173,401; Feb. 29; Gaz. vol. 223; p. 1469.

Akins, Stephen A., Kansas City, Mo. Game. No. 1,171,916; Feb. 15; Gaz. vol. 223; p. 836.

Aktiebolaget Stockholm-Stelefon. (See Wincrantz, Nilson, and Pettersson, assignors.)

Aktiebolaget Svenska Kullagerfabriken. (See Sörensen, Carl A. T., assignor.)

Aktiengesellschaft Brown Boveri & Cie. (See Christlein and Brown, assignors.)

Aktieselskabet Dans Svovlsyre & Superphosphat-Fabrik. (See Jensen-Valdal, Ernst, assignor.)

Alberger Pump and Condenser Company. (See Ray, Frederick, assignor.)

Albrecht, Henry C., Terre Haute, Ind. Hydrocarbon-lamp. No. 1,170,722; Feb. 8; Gaz. vol. 223; p. 374.

Albrecht, John F., Glencoe, Minn. Convertible dump-cart. No. 1,171,578; Feb. 15; Gaz. vol. 223; p. 715.

Alday, Adolph L., Cleveland, Ohio. Flying-machine. No. 1,171,162; Feb. 8; Gaz. vol. 223; p. 528.

Alemite Metals Company. (See Goldberg, John S., assignor.)

Alexander, Clinton B., Washington, D. C. Paper-punch. No. 1,170,133; Feb. 1; Gaz. vol. 223; p. 132.

Alexander, George H., Birmingham, England. Machine and appliance for cutting or forming screw-threads. No. 1,173,078; Feb. 22; Gaz. vol. 223; p. 1311.

Alexander, Scott W., Long Beach, Cal. Elevator cable and rope lock. No. 1,173,140; Feb. 22; Gaz. vol. 223; p. 1333.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Split-phase system. No. 1,170,211; Feb. 1; Gaz. vol. 223; p. 161.

Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Selective tuning system. No. 1,173,079; Feb. 22; Gaz. vol. 223; p. 1312.

Allan, Edward T., Cincinnati, Ohio. Stapling-machine. No. 1,173,697; Feb. 29; Gaz. vol. 223; p. 1571.

Allan, James M., assignor of one-half to Cammell Laird and Company Limited, Sheffield, England. Cap for armor-piercing projectiles. No. 1,172,511; Feb. 22; Gaz. vol. 223; p. 1110.

Allen, Achilles, assignor of one-third to T. C. Frazier and one-third to O. E. Smith, Milton, Oreg. Amalgamator. No. 1,172,099; Feb. 15; Gaz. vol. 223; p. 903.

Allen, Anson W. (See Thomas and Allen.)

Allen, Ernest L., Elrosa, Minn. Ticket-holder. No. 1,171,688; Feb. 15; Gaz. vol. 223; p. 753.

Allen, Fred R., Providence, R. I., assignor, by mesne assignments, to National Envelope Sealing and Stamping Manufacturing Company, Boston, Mass. Stamp-applying and envelop-sealing machine. No. 1,170,949; Feb. 8; Gaz. vol. 223; p. 451.

Allen, George B., and V. S. Westcott, Pawtucket, R. I. Winding-machine. No. 1,170,212; Feb. 1; Gaz. vol. 223; p. 162.

Allen, Harry L., Alliance Ohio, assignor to American Steel Foundries, New York, N. Y. Car-truck. No. 1,173,402; Feb. 29; Gaz. vol. 223; p. 1469.

Allen, Herbert W., Coalinga, Cal. Mixing device for use with explosion-engines. No. 1,173,157; Feb. 29; Gaz. vol. 223; p. 1381.

Allen, Joseph G., Racine, Wis. Hose-supporter. No. 1,169,757; Feb. 1; Gaz. vol. 223; p. 3.

Allen, Le Roy D., assignor of one-half to A. W. Heath, Chicago, Ill. Attachment for telephone desk sets. No. 1,172,658; Feb. 22; Gaz. vol. 223; p. 1162.

Allen, Leroy W., Berkeley, Cal. Cornet-mute. No. 1,171,163; Feb. 8; Gaz. vol. 223; p. 529.
Allen, Lorin E., Endicott, N. Y. Power-transmission device. No. 1,171,763; Feb. 15; Gaz. vol. 223; p. 779.
Allen, Nathaniel D., San Francisco, Cal. Shoe. No. 1,171,689; Feb. 15; Gaz. vol. 223; p. 754.
Allen, Orren. (See Isbell, John F., assignor.)
Allen, Sherman T., Los Angeles, Cal., assignor of one-half to J. C. Hasbrouck, Jr., North Grafton, Mass. Valve for engines. No. 1,170,471; Feb. 1; Gaz. vol. 223; p. 248.
Allen, Thomas B., assignor to The Carborundum Company, Niagara Falls, N. Y. Silicon-carbid article. No. 1,172,659; Feb. 22; Gaz. vol. 223; p. 1163.
Allen, Thomas E., Andover, Mass. Method and means for lubricating bearings. No. 1,170,213; Feb. 1; Gaz. vol. 223; p. 162.
Allen, William P., Chicago, Ill. Power-transmission and speed-controlling device. (Reissue.) No. 14,073; Feb. 15; Gaz. vol. 223; p. 957.
Allenou, Charles M. V., Nantes, France. Fountain-pen. No. 1,172,100; Feb. 15; Gaz. vol. 223; p. 903.
Allerding, Cletus N., assignor to The Ohio Brass Company, Mansfield, Ohio. Strain-insulator. No. 1,170,723; Feb. 8; Gaz. vol. 223; p. 374.
Allis-Chalmers Manufacturing Company. (See Brown, John W., assignor.)
Allis-Chalmers Manufacturing Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Manufacturing Company. (See Newhouse, Ray C., assignor.)
Allis-Chalmers Manufacturing Company. (See Stull, Emmett W., assignor.)
Allis-Chalmers Manufacturing Company. (See Wilkinson, Nathan, assignor.)
Allis, Dexter W., Whitman, and J. B. Millet, assignors to Boston Talking Machine Company, Boston, Mass. Phonograph. No. 1,170,134; Feb. 1; Gaz. vol. 223; p. 133.
Allith-Prouty Company. (See Moyer, Jesse E., assignor.)
Allmand, John T., assignor to Fisher Closed Body Company, Detroit, Mich. Latch-operating device. No. 1,171,690; Feb. 15; Gaz. vol. 223; p. 754.
Allred, John. (See Covington and Allred.)
Allyn, Louis E., Pekin, Ill., assignor to American Car and Foundry Co., New York, N. Y. Tank-car. No. 1,170,864; Feb. 8; Gaz. vol. 223; p. 422.
Altorfer, Alpheus W., Roanoke, assignor to Power Washing Machine Co., Peoria, Ill. Driving mechanism. No. 1,170,792; Feb. 8; Gaz. vol. 223; p. 397.
Aluminum Company of America. (See Hoopes, William, assignor.)
Amberton, Richard, London, England. Electrical control apparatus. No. 1,173,334; Feb. 29; Gaz. vol. 223; p. 1445.
Ambicky, John, Perth Amboy, N. J. File or rasp. No. 1,170,950; Feb. 8; Gaz. vol. 223; p. 451.
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Threading and other tool. No. 1,171,164; Feb. 8; Gaz. vol. 223; p. 529.
American Addressabak Company. (See Hazel, George W., assignor.)
American Arch Company. (See Stevens, Enoch P., assignor.)
American Bakers Machinery Company. (See Kirchhoff, William G., assignor.)
American Bank Note Company. (See Muller, Ernest J. W., assignor.)
American Brake Shoe & Foundry Company. (See Jones, Harry, assignor.)
American Can Company. (See Eberhart, Felix, assignor.)
American Can Company. (See Ford, Ben K., assignor.)
American Can Company. (See Nelson, Charles J., assignor.)
American Can Company. (See Phelan, William A., assignor.)
American Can Company. (See Trudeau, Louis N., assignor.)
American Car and Foundry Co. (See Allyn, Louis E., assignor.)
American Car and Foundry Company. (See Gibbs, Frederick H., assignor.)
American Car and Foundry Company. (See Lawler, James G., assignor.)
American Car and Foundry Company. (See McKnight, John F., assignor.)
American Car and Foundry Company. (See Paul, John T. H., assignor.)
American Car and Foundry Company. (See Rohlfing, John M., assignor.)
American Car and Foundry Company. (See Sparks, Levi C., assignor.)
American Car and Foundry Company. (See Weisbrod, Jacob H., assignor.)
American Car and Foundry Company. (See Willoughby, Victor, assignor.)
American Chain Company. (See Lashar and Luce, assignors.)
American Electrical Heater Company. (See Kuhn, Frank, assignor.)
American Electrical Heater Company. (See Kuhn and Shallor, assignors.)
American Engineering Company. (See Williamson, John D., Jr., assignor.)
American Gasaccumulator Company. (See Medén, Elof H., assignor.)
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Hardware Corporation, The. (See Coney, William, assignor.)
American Hardware Corporation, The. (See Gérard, John, assignor.)
American Hardware Corporation, The. (See Peterson, John, assignor.)
American Key Can Company. (See McColl, Francis P., assignor.)
American Lacing Hook Co. (See Havener, Arthur R., assignor.)
American Manganese Steel Company. (See McKee, Nichols, and Exton, assignors.)
American Metal Form Company. (See Cunningham, William P., assignor.)
American Multigraph Company, The. (See Gammeter, Harry C., assignor.)
American Optical Company. (See Day, George H., assignor.)
American Optical Company. (See McKinstry and Day, assignors.)
American Optical Company. (See Styll and Parsons, assignors.)
American Pad & Textile Company, The. (See Edmonson, Ellis G., assignor.)
American Paper Goods Company, The. (See Cooley, Henry B., assignor.)
American Piano Company. (See Shale, Joseph H., assignor.)
American Radiator Company. (See Courtot, Louis, assignor.)
American Radium Company, The. (See Junghans, Arthur, assignor.)
American Sales Book Company. (See Bovier, Archie M., assignor.)
American Steam Gauge & Valve Manufacturing Company. (See Hopkins, Frank H., assignor.)
American Steam Gauge and Valve Manufacturing Company. (See Manning, Coleman J., assignor.)
American Steel Foundries. (See Allen, Harry L., assignor.)
American Steel Foundries. (See Floyd, George G., assignor.)
American Steel Foundries. (See Geddert, William J., assignor.)
American Steel Foundries. (See Hedgcock, William C., assignor.)
American Steel Foundries. (See Janney and Kinne, assignors.)
American Steel Foundries. (See Kinne, Edmund P., assignor.)
American Steel Foundries. (See MacPherson, Malcolm T., assignor.)
American Steel Foundries. (See Peycke, Armand H., assignor.)
American Steel Foundries. (See Trowbridge, William S., assignor.)
American Steel Frame & Band Iron Company. (See Goldwag, Juda, assignor.)
American Steel & Wire Company of New Jersey. (See Hindmarsh, Percy J., assignor.)
American Stove Company. (See Dangler and Hilton, assignors.)
American Stove Company. (See Possons, Minard A., assignor.)
American Telephone and Telegraph Company. (See Bascom, Henry M., assignor.)
American Telephone and Telegraph Company. (See Fay, Shaw, and Pilliod, assignors.)
American Thermostat Co. (See Baldwin, Isaac M., assignor.)
American Tool Works Company, The. (See Sosa, Augustus M., assignor.)
American Voting Machine Company. (See Butler, James A., assignor.)
American Well Works, The. (See Chapman, Matthew T., assignor.)
American Well Works, The. (See Chapman, Matthew T. and M. C., assignors.)
American Well Works, The. (See Sperry, John B., assignor.)
Amling, Henry. (See Simmons and Amling.)
Ammann, Henry A., Spokane, Wash. Individual-towel device. No. 1,172,245; Feb. 22; Gaz. vol. 223; p. 1011.
Ammann, John. (See Essex, David, assignor.)
Amon, Josef, New York, N. Y. Electric-circuit terminal. No. 1,174,027; Feb. 29; Gaz. vol. 223; p. 1684.
Amsden, George A., Littleton, and C. P. Hidden, Brookline, assignors to The Lamson Company, Boston, Mass. Chute-type station for cable-carrier apparatus. No. 1,170,035; Feb. 1; Gaz. vol. 223; p. 99.
Ananson, Richard D., Stirling, N. J. Attachment for type-writing machines. No. 1,170,385; Feb. 1; Gaz. vol. 223; p. 220.
Anders, Charles F. P., Hoboken, N. J., assignor to E. L. Greenewald, Washington, D. C. Vacuum-bottle. No. 1,172,247; Feb. 22; Gaz. vol. 223; p. 1012.
Anders, Charles F. P., Hoboken, N. J., assignor to E. L. Greenewald, Washington, D. C. Vacuum-bottle. No. 1,172,248; Feb. 22; Gaz. vol. 223; p. 1012.
Anders, Hanns R., and M. E. U. Schoedler, Perth Amboy, N. J., assignors to The Roessler & Hasslacher Chemical Company, New York, N. Y. Apparatus for bleaching. No. 1,173,474; Feb. 29; Gaz. vol. 223; p. 1492.

Andersen, Lauritz W., Waterbury, Conn. Screwless electric-shade holder. No. 1,171,013; Feb. 8; Gaz. vol. 223; p. 474.
Andersen, Lauritz W., assignor to Plume and Atwood Manufacturing Company, Waterbury, Conn. Reflector connection. No. 1,170,596; Feb. 8; Gaz. vol. 223; p. 329.
Andersen, Sidney W., Chicago, Ill. Check-protector. No. 1,171,828; Feb. 15; Gaz. vol. 223; p. 803.
Anderson, Albert D., *et al.* (See Anderson, Frank B., assignor. (Reissue.)
Anderson-Barngrover Mfg. Co. (See Thompson, Albert R., assignor.)
Anderson, Charles O., *et al.* (See Anderson, Frank B., assignor.) (Reissue.)
Anderson, Charles P., Seattle, Wash. Combined measuring and locking device for valves. No. 1,160,906; Feb. 1; Gaz. vol. 223; p. 55.
Anderson, Charles P., Seattle, Wash. Valve. No. 1,171,080; Feb. 8; Gaz. vol. 223; p. 497.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Pressure-regulating valve. No. 1,173,633; Feb. 29; Gaz. vol. 223; p. 1550.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Steam-trap. No. 1,173,634; Feb. 29; Gaz. vol. 223; p. 1551.
Anderson, Edward V., Monessen, assignor of one-half to C. E. Golden, Crafton, Pa. Pressure-reducing valve. No. 1,173,913; Feb. 29; Gaz. vol. 223; p. 1647.
Anderson, Frank B., assignor of one-third to C. O. Anderson and one-third to A. D. Anderson, Cleveland, Ohio. Centrifugal drier. (Reissue.) No. 14,061; Feb. 15; Gaz. vol. 223; p. 950.
Anderson, Harold B. (See Winton and Anderson.)
Anderson, Harry J., assignor to Newman Bros. Co., Chicago, Ill. Mechanical musical instrument. No. 1,171,827; Feb. 15; Gaz. vol. 223; p. 802.
Anderson, Jens, assignor to Enterprise Railway Equipment Company, Chicago, Ill. Interchangeable ballast gondola plow-car. No. 1,172,246; Feb. 22; Gaz. vol. 223; p. 1011.
Anderson, John, Philadelphia, Pa. Can-opener. No. 1,170,386; Feb. 1; Gaz. vol. 223; p. 220.
Anderson, John, Mount Vernon, Me., assignor to Westinghouse Electric & Manufacturing Company. Cover-locking device. No. 1,170,951; Feb. 8; Gaz. vol. 223; p. 451.
Anderson, Joseph L., Texas, Md. Heater and muffler. No. 1,173,403; Feb. 29; Gaz. vol. 223; p. 1469.
Anderson, Lewis C., Ehrlich, Wash. Means for regulating the water-supply of boilers. No. 1,173,475; Feb. 29; Gaz. vol. 223; p. 1493.
Anderson, Matthew A., Dallas, Wis. Automobile-radiator heater. No. 1,173,476; Feb. 29; Gaz. vol. 223; p. 1493.
Anderson, Nils H., East Hampton, assignor to Fenn Manufacturing Co., Hartford, Conn. Tapping-machine. No. 1,172,336; Feb. 22; Gaz. vol. 223; p. 1044.
Anderson, Norman, Duluth, Minn. Meter-actuated cut-off device. No. 1,173,080; Feb. 22; Gaz. vol. 223; p. 1312.
Anderson, William, Altrincham, and T. Coventry, Salford, England. Gear-cutting machine. No. 1,173,914; Feb. 29; Gaz. vol. 223; p. 1647.
Anderson, William B., assignor to Haggard and Marcusson Company, Chicago, Ill. Mounting for bed-bottoms. No. 1,170,865; Feb. 8; Gaz. vol. 223; p. 422.
Andreu, Rafael M., Habana, Cuba. Penholder. No. 1,173,701; Feb. 29; Gaz. vol. 223; p. 1572.
Andrews, Harold C., London, England. Photographic daylight developing apparatus. No. 1,170,952; Feb. 8; Gaz. vol. 223; p. 451.
Andrews, Richard, assignor of one-fourth to O. M. Darlington, one-fourth to D. S. Hughes, one-fourth to G. E. Diehl, and one-fourth to F. B. Hooff, Charles Town, W. Va. Device for cutting crooked screw-threads. No. 1,170,135; Feb. 1; Gaz. vol. 223; p. 133.
Andrews, Roger W., Pittsburgh, assignor, by mesne assignments, to Erie Pump & Equipment Company, Erie, Pa. Boiler feed-water regulator. No. 1,172,243; Feb. 15; Gaz. vol. 223; p. 950.
Andrews, William V., assignor of one-half to W. S. Harris, Nashville, Tenn. Retainer for disinfectants. No. 1,170,387; Feb. 1; Gaz. vol. 223; p. 220.
Angelo, A. Heath. (See Angelo and Russi.)
Angelo, Wallace P. and A. H., Alameda, and F. B. Russi, San Francisco, Cal. Shipping-container. No. 1,173,335; Feb. 29; Gaz. vol. 223; p. 1446.
Angelovich, Joseph R., San Francisco, Cal. Non-projecting hinge. No. 1,172,512; Feb. 22; Gaz. vol. 223; p. 1110.
Anger, Edward W., and H. H. Hornsby, Chicago, Ill. Safety means for preventing and removing ice and other obstructions in fluid-pressure systems. No. 1,171,014; Feb. 8; Gaz. vol. 223; p. 475.
Anger, Gottlieb, McKees Rocks, Pa. Tire. No. 1,171,298; Feb. 8; Gaz. vol. 223; p. 575.
Anschütz-Kaempfe, Hermann, Neumühlen, near Kiel, Germany. Electrical contact. No. 1,170,388; Feb. 1; Gaz. vol. 223; p. 221.
Anschütz-Kaempfe, Hermann, Kiel, Germany. Gyroscopic apparatus. No. 1,173,241; Feb. 29; Gaz. vol. 223; p. 1410.
Ansco Company. (See Clark and Arrufat, assignors.)
Ansco Company. (See Cositt and Castor, assignors.)
Apfeld, Bernard V., Spokane, Wash. Nut-lock. No. 1,170,866; Feb. 8; Gaz. vol. 223; p. 423.
App, Oliver O., New York, N. Y. Rock-breaker. No. 1,169,907; Feb. 1; Gaz. vol. 223; p. 56.
Arbib, Alexander. (See Kaufman, Charles L., assignor.)
Arcade Manufacturing Company. (See Perkins, Floyd N., assignor.)
Archer, Charles L., Council Bluffs, Iowa. Pneumatic tire. No. 1,170,597; Feb. 8; Gaz. vol. 223; p. 329.
Archibald, Robert A., Oakland, Cal. Leucocytic extract and making the same. No. 1,171,299; Feb. 8; Gaz. vol. 223; p. 576.
Arden, Harry B., New York, N. Y. Tunnel-boring machine for earth. No. 1,173,158; Feb. 29; Gaz. vol. 223; p. 1382.
Arend, Henry J., Quincy, Ill. Wheel-rim. No. 1,169,908; Feb. 1; Gaz. vol. 223; p. 56.
Arlitz, Oscar C., New York, N. Y., assignor to Lovell-McConnell Manufacturing Company. Mechanical horn. No. 1,173,635; Feb. 29; Gaz. vol. 223; p. 1551.
Armbruster, Charles E. H., Denver, Colo. System for the treatment of diseases of the human body by vacuum or air pressure. No. 1,172,660; Feb. 22; Gaz. vol. 223; p. 1163.
Armbruster, Charles E. H., Denver, Colo. Mechanism for controlling the flow of fluid to and from an air-tight chamber. No. 1,172,661; Feb. 22; Gaz. vol. 223; p. 1163.
Armbruster, Charles E. H., Denver, Colo. Casing for producing an air-tight chamber over or around a portion of the human body. No. 1,172,662; Feb. 22; Gaz. vol. 223; p. 1164.
Armistead, David W. (See Robinson, Frank A., assignor.)
Armstrong, Linus D., Providence, R. I. Cotton-picker. No. 1,170,389; Feb. 1; Gaz. vol. 223; p. 221.
Armstrong, Robert F., Atchison, Kans. Hog-oiler. No. 1,173,761; Feb. 29; Gaz. vol. 223; p. 1594.
Armstrong, William F., and F. S. Ford, Chicago, Ill. Safety car-ladder. No. 1,170,390; Feb. 1; Gaz. vol. 223; p. 221.
Armstrong, William H., Oakland, Cal. Valve. No. 1,172,101; Feb. 15; Gaz. vol. 223; p. 904.
Arnold, Alexander. (See Arnold, George, Jr., assignor.)
Arnold, Ernest H., assignor to The Osborn-Crew Manufacturing Company, Cleveland, Ohio. Pulley. No. 1,170,867; Feb. 8; Gaz. vol. 223; p. 423.
Arnold, George, Jr., Cleveland, assignor to A. Arnold, Toledo, Ohio. Horseshoe-calk-sharpening machine. No. 1,173,636; Feb. 29; Gaz. vol. 223; p. 1551.
Arnt, Alfred, Bainbridge township, Berrien county, assignor of one-half to E. Hendricks, Benton Harbor, Mich. Extensible car-step. No. 1,172,188; Feb. 15; Gaz. vol. 223; p. 931.
Arquembourg, Emile H., assignor to Société Jules Grouvelle, H. Arquembourg & Cie., Paris, France. Carbureter. No. 1,173,762; Feb. 29; Gaz. vol. 223; p. 1594.
Arrufat, Joseph. (See Clark and Arrufat.)
Art Metal Construction Company. (See Bauer, Edward W., assignor.)
Art Metal Construction Company. (See Look, Warren B., assignor.)
Arter, Thomas W., Bellaire, Ohio. Clothes-prop. No. 1,171,300; Feb. 8; Gaz. vol. 223; p. 576.
Arthur, Albert L., assignor of one-half to W. D. L. Held, Uklah, Cal. Train-pipe coupling. No. 1,171,380; Feb. 8; Gaz. vol. 223; p. 604.
Arthur, C. D., *et al.* (See McKendree, Creed H., assignor.)
Arthur, Henry L. (See Ingram, Keller, and Arthur.)
Artz, Frank E., Chicago, Ill. Film-feeding mechanism. No. 1,169,758; Feb. 1; Gaz. vol. 223; p. 4.
Aschburner, Frederick C., assignor of one-half to J. D. Pollard, Chicago, Ill. Knife-sharpener. No. 1,172,860; Feb. 22; Gaz. vol. 223; p. 1236.
Aseptic Service Company. (See Rees, Warren C., assignor.)
Ashbaugh, James W., Bremen, Ohio. Combination gas-valve. No. 1,171,691; Feb. 15; Gaz. vol. 223; p. 755.
Ashworth, Fred, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,169,909; Feb. 1; Gaz. vol. 223; p. 56.
Ashworth, Fred, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,169,910; Feb. 1; Gaz. vol. 223; p. 57.
Asleson, Albert, Redwood Falls, Minn. Detachable mainspring for clocks. No. 1,173,081; Feb. 22; Gaz. vol. 223; p. 1312.
Aters, William D. (See Millsaps, Ed, assignor.)
Atterbury, Grosvenor, New York, N. Y. Apparatus for molding or casting. No. 1,171,579; Feb. 15; Gaz. vol. 223; p. 715.
Atterbury, Grosvenor, New York, N. Y. Lifting device for hollow blocks. No. 1,171,580; Feb. 15; Gaz. vol. 223; p. 716.
Atwood, William S., Montreal, Quebec, Canada. Brake-chain drum. No. 1,172,249; Feb. 22; Gaz. vol. 223; p. 1013.
August Goertz & Co. (See Vom Eigen, Benno, assignor.)
Aultman & Taylor Machinery Company, The. (See Huddle, William, assignor.)
Aurora Automatic Machinery Company. (See Levedahl, Axel, assignor.)
Aurora Automatic Machinery Company. (See Norling, Reinhold A., assignor.)

Austin, Albert A., assignor of one-fourth to M. W. Hulsey and one-fourth to W. O. Hulsey, Dallas, Tex. Speed-recording instrument. No. 1,170,724; Feb. 8; Gaz. vol. 223; p. 375.

Austin, Arthur O., Barberton, assignor to The Ohio Brass Company, Mansfield, Ohio. Wire-clamp. No. 1,170,725; Feb. 8; Gaz. vol. 223; p. 375.

Austin, Basil G. (See Austin, John T. and B. G.)

Austin, Frederick C. (See Bager, Frederic E., assignor.)

Austin, Frederick C. (See Bunnell, Morton G., assignor.)

Austin, Frederick C. (See Rosendahl, Nils M., assignor.)

Austin, James E., Portland, Oreg. Cloth-holder. No. 1,173,545; Feb. 29; Gaz. vol. 223; p. 1518.

Austin, John T., assignor to Austin Organ Company, Hartford, Conn. Organ-shutter-operating mechanism. No. 1,173,405; Feb. 29; Gaz. vol. 223; p. 1470.

Austin, John T. and B. G., assignors to Austin Organ Company, Hartford, Conn. Air-chest. No. 1,173,404; Feb. 29; Gaz. vol. 223; p. 1470.

Austin Organ Company. (See Austin, John T., assignor.)

Austin Organ Company. (See Austin, John T. and B. G., assignors.)

Auto Pneumatic Action Company. (See Danquard, Thomas, assignor.)

Auto Specialties Manufacturing Co. (See Bair, Clarence L., assignor.)

Auto Strop Company. (See Galsman, Henry J., assignor.)

Automatic Air-Lock Train-Pipes Couplers Company. (See Cobb, John L., assignor.)

Automatic Electric Company. (See Kirby, Omer, assignor.)

Automatic Electric Company. (See Stephenson, Charles E., assignor.)

Automatic Electric Washer Co., The. (See Woodrow, Oliver B., assignor.)

Automatic Recording Safe Company, The. (See Fisher, Charles, assignor.)

Autosales Gum & Chocolate Company. (See Grover, Albert D., assignor.)

Aveling, Thomas C., Birmingham, England. Weather-screen for vehicles. No. 1,169,911; Feb. 1; Gaz. vol. 223; p. 57.

Avery Company. (See Springer, William N., assignor.)

Avery, William, Foxboro, Mass. Lathe-dog. No. 1,171,406; Feb. 15; Gaz. vol. 223; p. 655.

Avery, W. & T. (See Parnall, Thomas S. B., assignor.)

Avery, William G., Painesville, Ohio. Metallic barrel. No. 1,170,036; Feb. 1; Gaz. vol. 223; p. 100.

Avis, Samuel W., assignor to The Merrow Machine Company, Hartford, Conn. Self-threading take-up. No. 1,173,242; Feb. 29; Gaz. vol. 223; p. 1411.

Axelstrom, John, Chicago, Ill. Machine for stringing tags. No. 1,170,214; Feb. 1; Gaz. vol. 223; p. 162.

Axford, Charles M., Chicago, Ill., assignor to General Electric Company. Illuminating apparatus. No. 1,171,917; Feb. 15; Gaz. vol. 223; p. 837.

Aycock, Nathaniel M., Houston, Tex. Lubricating device. No. 1,170,726; Feb. 8; Gaz. vol. 223; p. 375.

Aycock, Thomas J. (See Aycock, William E., assignor.)

Aycock, William E., assignor of one-half to T. J. Aycock, Aycock, Fla. Weather-boarding. No. 1,171,081; Feb. 8; Gaz. vol. 223; p. 497.

Ayer, William T., assignor to McKiernan-Terry Drill Company, Dover, N. J. Spring-muzzle for rock-drilling engines. No. 1,170,501; Feb. 8; Gaz. vol. 223; p. 295.

Ayers, Val C., Altoona, Pa. Window shade and curtain support. No. 1,173,082; Feb. 22; Gaz. vol. 223; p. 1313.

Aylsworth, Jonas W., East Orange, and E. L. Aiken, Orange, assignors to New Jersey Patent Company, West Orange, N. J. Forming sound-records and other objects. No. 1,170,391; Feb. 1; Gaz. vol. 223; p. 222.

B. F. Avery & Sons. (See Ray, Charles T., assignor.)

B. F. Goodrich Company, The. (See Gammeter, John R., assignor.)

B. F. Goodrich Company, The. (See Raymond, Harry K., assignor.)

Bachler, Frederick R., assignor to Kieselguhr Company of America, Los Angeles, Cal. Purifying liquids. No. 1,170,868; Feb. 8; Gaz. vol. 223; p. 424.

Bachman, Frank W. (See Osgood and Bachman.)

Backus, John C., Smethport, Pa. Sash-lock. No. 1,172,663; Feb. 22; Gaz. vol. 223; p. 1104.

Bacon, Charles J. (See Brassert and Bacon.)

Bacon, Frank, Cleveland, Ohio. Toy jumping-jack. No. 1,172,756; Feb. 22; Gaz. vol. 223; p. 1199.

Bacon, Frederic S., assignor of one-half to G. Griswold, Middletown, Conn. Starter for internal-combustion engines. No. 1,174,010; Feb. 29; Gaz. vol. 223; p. 1678.

Badger Brass Mfg. Co., The. (See Welles, Richard H., assignor.)

Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)

Badische Anilin & Soda Fabrik. (See Mittasch, Alwin, assignor.)

Baer, Berthold A., Philadelphia, Pa. Sound recording and reproducing machine. No. 1,171,082; Feb. 8; Gaz. vol. 223; p. 498.

Baer, Gustav, New York, N. Y. Maternity-skirt. No. 1,172,102; Feb. 15; Gaz. vol. 223; p. 904.

Bager, Frederic E., Winthrop Harbor, assignor to F. C. Austin, Chicago, Ill. Excavator-bucket cleaner. No. 1,171,015; Feb. 8; Gaz. vol. 223; p. 475.

Bailey, Alfred O., assignor to Gold Car Heating and Lighting Company, New York, N. Y. Electric heater. No. 1,172,757; Feb. 22; Gaz. vol. 223; p. 1199.

Bailey, Benjamin F., Minneapolis, Minn., assignor of one-half to L. A. Cree, Chicago, Ill. Egg-box. No. 1,171,083; Feb. 8; Gaz. vol. 223; p. 498.

Bailey, Edwin E., Rochester, N. Y. Chalk-line spool. No. 1,170,392; Feb. 1; Gaz. vol. 223; p. 222.

Bailey, Reginald A., New Castle, Pa. Automobile-heater. No. 1,173,637; Feb. 29; Gaz. vol. 223; p. 1552.

Bailey, Samuel R., Amesbury, Mass. Lock-joint for automobile wind-shields. No. 1,171,829; Feb. 15; Gaz. vol. 223; p. 803.

Bainton, Harry, New York, N. Y. Pneumatic action. No. 1,172,250; Feb. 22; Gaz. vol. 223; p. 1013.

Bair, Clarence L., Chicago, Ill., assignor to Auto Specialties Manufacturing Co., San Francisco, Cal. Full-joint hinge bow-top. No. 1,171,918; Feb. 15; Gaz. vol. 223; p. 837.

Bair, Clarence L., Chicago, Ill., assignor to Auto Specialties Manufacturing Co., San Francisco, Cal. Vehicle-top-bow holder. No. 1,171,919; Feb. 15; Gaz. vol. 223; p. 838.

Baird, William J., Detroit, Mich. Molding-machine. No. 1,171,301; Feb. 8; Gaz. vol. 223; p. 576.

Bakelaar, Katherine K., Passaic, N. J. Refillable powder-puff. No. 1,171,302; Feb. 8; Gaz. vol. 223; p. 577.

Baker, Edward A., and S. W. and L. H. Johnston, Mansfield, Ohio. Pneumatic bumper. No. 1,172,001; Feb. 15; Gaz. vol. 223; p. 868.

Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Vehicle-wheel. No. 1,173,243; Feb. 29; Gaz. vol. 223; p. 1411.

Baker, James T., Bustleton, Pa. Bottle-closure. No. 1,170,393; Feb. 1; Gaz. vol. 223; p. 222.

Baker, John W., assignor to M. C. Baker, Stamford, Conn. Bulletin-board. No. 1,171,830; Feb. 15; Gaz. vol. 223; p. 804.

Baker, Lewis A., Elgin, Ill. Can-lining machine. No. 1,173,763; Feb. 29; Gaz. vol. 223; p. 1595.

Baker, Mabel C. (See Baker, John W., assignor.)

Baker, Robert E., Cleveland, Ohio, assignor to A. G. McKee. Apparatus for regulating the temperature of furnaces and the like. No. 1,170,727; Feb. 8; Gaz. vol. 223; p. 376.

Baker R & L Company, The. (See Cookingham and Hertner, assignors.)

Baker R & L Company, The. (See Hertner, John H., assignor.)

Baker, Thomas T. (See Heyl and Baker.)

Baker, Willard L. (See Savage and Baker.)

Baldaccini, Louis, Mohawk, N. Y. Combined shade-support and curtain-bracket. No. 1,173,915; Feb. 29; Gaz. vol. 223; p. 1647.

Baldwin, Arthur J., assignor to Mississippi Wire Glass Company, New York, N. Y. Single-strand-wire-glass machine. No. 1,169,759; Feb. 1; Gaz. vol. 223; p. 4.

Baldwin Company, The. (See Gally, Robert A., assignor.)

Baldwin Company, The. (See Knagge, Joseph, assignor.)

Baldwin, Isaac M., Wellsburg, assignor to American Thermostat Co., Elmira, N. Y. Automatic valve-operating mechanism. No. 1,173,764; Feb. 29; Gaz. vol. 223; p. 1595.

Baldwin Locomotive Works, The. (See Rushton, Kenneth, assignor.)

Baldwin Locomotive Works, The. (See Vauclain, Samuel M., assignor.)

Ball, Bert C., and L. E. Younie, Portland, Oreg. Friction-clutch mechanism. No. 1,172,923; Feb. 22; Gaz. vol. 223; p. 1259.

Ball, Elisabeth M. (See Hutchins, Henry W., assignor.)

Ballantine, Noten D., Chicago, Ill. Temporary holder for car-report blanks and the like. No. 1,170,793; Feb. 8; Gaz. vol. 223; p. 398.

Ballard, George L. (See Wildman and Ballard.)

Ballenberg, Adolph, New York, N. Y. Caster. No. 1,170,502; Feb. 8; Gaz. vol. 223; p. 295.

Ballenberg, Adolph, New York, N. Y. Caster. No. 1,170,503; Feb. 8; Gaz. vol. 223; p. 296.

Balmer, Burney J., Stockton, Kans. Internal-combustion engine. No. 1,173,916; Feb. 29; Gaz. vol. 223; p. 1647.

Balough, Charles, assignor to The Kelly-Springfield Motor Truck Company, Springfield, Ohio. Magneto-coupling. No. 1,173,406; Feb. 29; Gaz. vol. 223; p. 1471.

Balough, Charles, assignor to The Kelly-Springfield Motor Truck Company, Springfield, O. Radius-rod for motor-vehicles. No. 1,173,407; Feb. 29; Gaz. vol. 223; p. 1471.

Baltimore Gas Appliance and Manufacturing Company, The. (See Longfellow, Martin W., assignor.)

Bancroft, Edwin R., *et al.* (See Markussen, Henry W. E., assignor.)

Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Galley mechanism for type-composing machines. No. 1,172,251; Feb. 22; Gaz. vol. 223; p. 1013.

Banes, Walter D., Philadelphia, Pa., assignor to General Pressed Metal Company. Channel structure for hangers. No. 1,172,664; Feb. 22; Gaz. vol. 223; p. 1165.

Baninger, John H., Detroit, Mich. Hub for vehicle-wheels. No. 1,173,638; Feb. 29; Gaz. vol. 223; p. 1552.

Banks, Ernest V., Toronto, Ontario, Canada. Camera. No. 1,173,083; Feb. 22; Gaz. vol. 223; p. 1313.

Banks, John D., Philadelphia, Pa. Lathe-chuck. No. 1,173,159; Feb. 29; Gaz. vol. 223; p. 1382.

Banks, Reginald M., New York, N. Y. Hydrogen-sulfid generator. No. 1,170,953; Feb. 8; Gaz. vol. 223; p. 452.

Bar-Lock Typewriter Company, The. (See Etheridge, Herbert, assignor.)

Baran, John. (See Czerepienski and Baran.)

Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet cutting and folding machine. No. 1,170,136; Feb. 1; Gaz. vol. 223; p. 134.

Barber, Howard M., Stonington, Conn., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y. Sheet-folding machine. No. 1,171,920; Feb. 15; Gaz. vol. 223; p. 838.

Barber, John W., Newton, Mass. Fastener for shoes, &c. No. 1,170,472; Feb. 1; Gaz. vol. 223; p. 248.

Barbour, Charles S., Jr., Meriden, Conn. Button-form. No. 1,169,912; Feb. 1; Gaz. vol. 223; p. 58.

Barclay, William R., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Heel-compressing machine. No. 1,171,407; Feb. 15; Gaz. vol. 223; p. 655.

Barden, Clifford A. (See Barden, Henry B. and C. A.)

Barden, Henry B. and C. A., Wallingford, Vt. Making tools. No. 1,171,764; Feb. 15; Gaz. vol. 223; p. 780.

Barenscheer, William J. (See Titus and Barenscheer.)

Barfoed, Svend, Oakland, assignor of two-fifths to O. Gilson, San Francisco, Cal. High-tension insulator. No. 1,173,994; Feb. 29; Gaz. vol. 223; p. 1672.

Barger, William F., Norwood, Ohio. Sash-lock. No. 1,171,016; Feb. 8; Gaz. vol. 223; p. 475.

Barker, England J., Chicago, Ill. Type-writer attachment. No. 1,172,758; Feb. 22; Gaz. vol. 223; p. 1200.

Barker, England J., Chicago, Ill. Type-writing machine. No. 1,172,759; Feb. 22; Gaz. vol. 223; p. 1200.

Barker, Noah, Seevers, Iowa. Army first-aid packet. No. 1,169,913; Feb. 1; Gaz. vol. 223; p. 58.

Barker, Samuel, Providence, R. I. Bleaching-machine. No. 1,173,160; Feb. 29; Gaz. vol. 223; p. 1382.

Barker, William H. (See Coulombe, Joseph C., assignor.)

Barner, John S., Albany, N. Y. Fluid-compressor. No. 1,171,017; Feb. 8; Gaz. vol. 223; p. 476.

Barnes, John S., Detroit, Mich. Closing means for fence-gates. No. 1,173,408; Feb. 29; Gaz. vol. 223; p. 1471.

Barnes, Robert, and O. M. Drake, Davenport, Iowa. Loss-preventing device. No. 1,171,381; Feb. 8; Gaz. vol. 223; p. 605.

Barnes, Walter H., Buffalo, N. Y. Poultry-run. No. 1,170,794; Feb. 8; Gaz. vol. 223; p. 398.

Barnes, Wilfred, Jr., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Speed-changing gearing. No. 1,173,639; Feb. 29; Gaz. vol. 223; p. 1552.

Barnes, William O., assignor to M. E. Johnson, trustee, Fitchburg, Mass. Automatic pistol. No. 1,173,161; Feb. 29; Gaz. vol. 223; p. 1383.

Barnes, Winfield S. (See Benson, Harrison T., assignor.)

Barnett, Morrisson J., San Francisco, Cal., assignor to A. Grimes, trustee. Automatic shutter-release for cameras. No. 1,170,473; Feb. 1; Gaz. vol. 223; p. 249.

Barnett, Otto R. (See Laas, Edward, assignor.)

Barnett, Otto R. (See Sponenburg, Hiram H., assignor.)

Barnett, Ralph M., Lenoir City, Tenn. Grate. No. 1,172,002; Feb. 15; Gaz. vol. 223; p. 868.

Barnett, Thomas. (See Jorgenson, John, assignor.)

Barney and Smith Car Company, The. (See Heater, Jacob D., assignor.)

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Circuit-controller. No. 1,170,728; Feb. 8; Gaz. vol. 223; p. 376.

Baron, Charles S., Tiffin, Ohio. Sanitary pitcher or the like. No. 1,173,546; Feb. 29; Gaz. vol. 223; p. 1519.

Barratt, William T., Bennington, Vt. Stop-motion mechanism. No. 1,173,244; Feb. 29; Gaz. vol. 223; p. 1412.

Barrett Adding Machine Co. (See Barrett, Glenn J., assignor.)

Barrett, Edmund H., Butte, Mont. Tie-plate. No. 1,171,581; Feb. 15; Gaz. vol. 223; p. 716.

Barrett, Edward E., Spokane, Wash. Road-grader. No. 1,171,084; Feb. 8; Gaz. vol. 223; p. 498.

Barrett, George L., Springfield, Ohio. Cut-out for electric signals. No. 1,171,494; Feb. 15; Gaz. vol. 223; p. 686.

Barrett, Glenn J., Grand Rapids, Mich., assignor to Barrett Adding Machine Co., Philadelphia, Pa. Auxiliary keyboard for calculating-machines. No. 1,173,640; Feb. 29; Gaz. vol. 223; p. 1553.

Barrett, Halsey M., *et al.*, receivers. (See Fessenden, Reginald A., assignor.)

Barrett, Harvey N. (See Newberry and Barrett.)

Barrett, John J., Brooklyn, N. Y. Fire-escape. No. 1,169,760; Feb. 1; Gaz. vol. 223; p. 4.

Barrett, John J., Maspeth, N. Y. Turning-signal for automobiles. No. 1,173,641; Feb. 29; Gaz. vol. 223; p. 1553.

Barry, Herbert, and A. Hindglass, assignors of one-fourth to B. Wood, Huntsville, Tex., and one-fourth to W. Hall, Herreid, S. D. Gate-valve. No. 1,172,924; Feb. 22; Gaz. vol. 223; p. 1259.

Barry-Wehmiller Machinery Company. (See Dawson, Joseph W., assignor.)

Barstow, Edwin O., assignor of one-half to T. Griswold, Jr., Midland, Mich. Extraction process. No. 1,171,408; Feb. 15; Gaz. vol. 223; p. 656.

Bartels, Amandus, Harburg-on-the-Elbe, Germany. Nozzle of presses for molding plastic materials. No. 1,171,382; Feb. 8; Gaz. vol. 223; p. 605.

Bartels, Carl. (See Mosler and Bartels.)

Barter, Frank, assignor to Brown Bag Filling Machine Company, Fitchburg, Mass. Box-filling machine. No. 1,173,917; Feb. 29; Gaz. vol. 223; p. 1648.

Barth, Kurt E., Charlottenburg, assignor to Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft, Berlin, Germany. Producing hydrogen or illuminating and heating gas. No. 1,172,925; Feb. 22; Gaz. vol. 223; p. 1260.

Bartholomae, William, assignor of one-half to H. Zimmerman, New York, N. Y. Sounding toy. No. 1,173,141; Feb. 22; Gaz. vol. 223; p. 1334.

Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Ball-bearing for washing-machines. No. 1,171,303; Feb. 8; Gaz. vol. 223; p. 577.

Bartholomew, William, assignor to The Troy Laundry Machinery Company, Limited, Chicago, Ill. Reversing mechanism. No. 1,171,304; Feb. 8; Gaz. vol. 223; p. 577.

Bartlebaugh, Benjamin C., Wheeling, W. Va. Burner. No. 1,173,547; Feb. 29; Gaz. vol. 223; p. 1519.

Bartlett Haywood Company, The. (See Bruce, Howard, assignor.)

Barton, Louis E. (See Rossi and Barton.)

Barton, Raymond J., Roscoe, Iowa. Gate-latch. No. 1,173,918; Feb. 29; Gaz. vol. 223; p. 1648.

Bascom, Henry M., Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. System of call distribution. No. 1,172,760; Feb. 22; Gaz. vol. 223; p. 1201.

Basevitz, Harry, Chicago, Ill. Burglar-alarm. No. 1,173,765; Feb. 29; Gaz. vol. 223; p. 1596.

Bassett, Elmer C., Milton, assignor to The Reece Button Hole Machine Company, Boston, Mass. Stop-motion. No. 1,173,162; Feb. 29; Gaz. vol. 223; p. 1383.

Bassett, Harry P., Catonsville, assignor to The Spar Chemical Company, Baltimore, Md. Treating feldspathic and phosphate rock. No. 1,172,420; Feb. 22; Gaz. vol. 223; p. 1074.

Bassford, Lowell C., assignor to General Railway Supply Co., Chicago, Ill. Insulating substance. No. 1,172,926; Feb. 22; Gaz. vol. 223; p. 1260.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Wire-tying and packaging bags. No. 1,170,037; Feb. 1; Gaz. vol. 223; p. 100.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Transportation system. No. 1,173,245; Feb. 29; Gaz. vol. 223; p. 1412.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for treating leather and similar materials. No. 1,170,504; Feb. 8; Gaz. vol. 223; p. 296.

Bates, Franklin P., Indianapolis, Ind. Forging-machine. No. 1,169,914; Feb. 1; Gaz. vol. 223; p. 58.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Batty, Joseph F., Baltimore, Md. Piston and packing relief-valve. No. 1,172,337; Feb. 22; Gaz. vol. 223; p. 1044.

Bauer, Edward W., assignor to Art Metal Construction Company, Jamestown, N. Y. Drawer-head. No. 1,172,189; Feb. 15; Gaz. vol. 223; p. 931.

Bauer, William J., Jr. (See Kurz, Hermann, assignor.)

Bauer, William M., Chicago, Ill. Piano. No. 1,171,921; Feb. 15; Gaz. vol. 223; p. 838.

Baugh, Clyde, assignor of one-half to W. L. Moore, St. Louis, Mo. One-piece box. No. 1,173,919; Feb. 29; Gaz. vol. 223; p. 1649.

Baugh, Joseph H., Wilmington, N. C. Letter-file. No. 1,172,190; Feb. 15; Gaz. vol. 223; p. 932.

Baumgarten, Josef, Arlington, N. J. Necktie. No. 1,172,252; Feb. 22; Gaz. vol. 223; p. 1014.

Bausch, Edward, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Lens-supporting structure. No. 1,169,761; Feb. 1; Gaz. vol. 223; p. 5.

Bausch & Lomb Optical Company. (See Bausch, Edward, assignor.)

Baxter, Charles F., Los Angeles, Cal., assignor, by mesne assignments, of two-thirds to W. H. Starkey and one-third to D. C. Beard. Wire-forming machine. No. 1,173,477; Feb. 29; Gaz. vol. 223; p. 1494.

Baxter, William C., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-jack. No. 1,171,383; Feb. 8; Gaz. vol. 223; p. 605.

Bay State Pump Co. (See Vedoe, Anton M., assignor.)

Beacon Miniature Electric Co. (See Kaplan, Morduch L., assignor.)

Beadle, George W., New York, N. Y. Machine for crimping paper bottle-caps. No. 1,170,598; Feb. 8; Gaz. vol. 223; p. 329.

Beadles, Charles H., Southampton, England. Method and means for taking energy from a source of natural or waste heat. No. 1,171,305; Feb. 8; Gaz. vol. 223; p. 578.

Beahan, John, Clearfield, Pa. Window-screen. No. 1,173,548; Feb. 29; Gaz. vol. 223; p. 1520.

Beamish, Byron C. (See Beamish, Imer E., assignor.)

Beamish, Imer E., assignor of one-half to B. C. Beamish, North Vancouver, British Columbia, Canada. Power plowing-machine. No. 1,170,394; Feb. 1; Gaz. vol. 223; p. 222.

Beard, Daniel C., *et al.* (See Baxter, Charles F., assignor.)

Beardshaw, Joseph H., Sheffield, England. Epicyclic gearing. No. 1,173,478; Feb. 29; Gaz. vol. 223; p. 1494.

Beatty, David, Berkeley, Cal., assignor to himself, trustee. Composition for use in bread-making. No. 1,170,474; Feb. 1; Gaz. vol. 223; p. 249.

Beatty, William G., Fergus, Ontario, Canada. Extension-ladder. No. 1,170,395; Feb. 1; Gaz. vol. 223; p. 223.

Bech, Peter A., Brooklyn, N. Y. Knee-rest. No. 1,170,396; Feb. 1; Gaz. vol. 223; p. 223.

Beck, John L., Springfield, Mass. Flushometer. No. 1,171,085; Feb. 8; Gaz. vol. 223; p. 499.

Beck, John L., assignor to The Sterling Valve Company, Springfield, Mass. Flushing-valve. No. 1,172,421; Feb. 22; Gaz. vol. 223; p. 1074.

Becker, Margaret M., *et al.* (See Becker and Montgomery, assignors.)

Becker, William, and D. H. Montgomery, assignors to C. L. Montgomery and M. M. Becker, Virginia, Minn. Dealcoholizing beer. No. 1,171,306; Feb. 8; Gaz. vol. 223; p. 578.

Beckley Cardy Company. (See Nickel and Swanson, assignors.)

Beckman, John, Yosemite, Cal. Saw-sharpening machine. No. 1,173,920; Feb. 29; Gaz. vol. 223; p. 1649.

Beckman, John E., Chicago, Ill. Combined spring and shock-absorbing means for vehicles. No. 1,171,307; Feb. 8; Gaz. vol. 223; p. 579.

Beckstrom, Nels H., Chicago, Ill. Egg box or carrier. No. 1,170,729; Feb. 8; Gaz. vol. 223; p. 377.

Beckwith, Arthur K., assignor to Estate of P. D. Beckwith, Incorporated, Dowagiac, Mich. Stove-leg. No. 1,171,165; Feb. 8; Gaz. vol. 223; p. 529.

Beebe, Norman H., and W. A. Thomas, assignors to Globe Machine Company, Wichita, Kans. Threshing-harvester. No. 1,172,665; Feb. 22; Gaz. vol. 223; p. 1165.

Beebe, William W., and E. E. Davis, Los Angeles, Cal. Plastic composition. No. 1,170,038; Feb. 1; Gaz. vol. 223; p. 100.

Beecher, Henry W., Makanda, Ill. Motor-car protector. No. 1,173,084; Feb. 22; Gaz. vol. 223; p. 1313.

Beeching, David G., New York, N. Y. Moistening device. No. 1,173,085; Feb. 22; Gaz. vol. 223; p. 1313.

Beechlyn, John T. (See Halvorsen and Beechlyn.)

Beechnut Packing Company. (See Forté, Harry P., assignor.)

Beehler, James F., St. Louis, Mo. Box-fastener. No. 1,172,003; Feb. 15; Gaz. vol. 223; p. 869.

Behl, John W. (See Rouland, William P., assignor.)

Behrmann, Gustav A., New York, N. Y. Sash-holder. No. 1,173,163; Feb. 29; Gaz. vol. 223; p. 1384.

Beidler, George C., Rochester, N. Y. Photographic and developing apparatus. No. 1,171,495; Feb. 15; Gaz. vol. 223; p. 687.

Beidler, George C., Rochester, N. Y. Photographing and developing apparatus. No. 1,171,496; Feb. 15; Gaz. vol. 223; p. 687.

Beler, Bruno, Boonton, N. J. Flying-machine. No. 1,172,338; Feb. 22; Gaz. vol. 223; p. 1045.

Beirl, Louis. (See Maurseth, Thorsten H., assignor.)

Belanger, Albert P. D. and J. D., Chicago, Ill. Film-back for cameras. No. 1,170,039; Feb. 1; Gaz. vol. 223; p. 100.

Belanger, John D. (See Belanger, Albert P. D. and J. D.)

Belcher & Taylor Agricultural Tool Company. (See Rutterfield, Lewis A., assignor.)

Belcher, Wallace E., Washington, D. C. Equalizer-yoke. No. 1,173,642; Feb. 29; Gaz. vol. 223; p. 1553.

Belcher, Warren J., Hartford, Conn. Micrometer-gage. No. 1,160,762; Feb. 1; Gaz. vol. 223; p. 5.

Beldam, George W., Ealing, England. Engine or machine packing. No. 1,173,086; Feb. 22; Gaz. vol. 223; p. 1314.

Belknap, Edwin D., East Orange, N. J. Selective device for card-handling apparatus. No. 1,172,862; Feb. 22; Gaz. vol. 223; p. 1237.

Bell, Clayton, Centralia, Mo. Telegraph-transmitter. No. 1,173,702; Feb. 29; Gaz. vol. 223; p. 1572.

Bell, John E., New York, N. Y. Regenerative furnace. No. 1,170,397; Feb. 1; Gaz. vol. 223; p. 223.

Bell, John E., New York, N. Y. Gas-producer. No. 1,170,496; Feb. 1; Gaz. vol. 223; p. 257.

Bell, Walter. (See Robinson and Bell.)

Belmont Casket Manufacturing Company. (See Neff, Harry A., assignor.)

Belmont, Eleanor R. (See Delano and Belmont.)

Belot, Emile, Paris, France. Cigar-dummy machine. No. 1,173,087; Feb. 22; Gaz. vol. 223; p. 1314.

Bemisderfer, Otto. (See Pfeil and Bemisderfer.)

Bender, Oscar, Potsdam, Germany. Producing nitrogen compounds. No. 1,172,863; Feb. 22; Gaz. vol. 223; p. 1237.

Bendix, Vincent, Chicago, Ill. Starter for engines. No. 1,172,864; Feb. 22; Gaz. vol. 223; p. 1238.

Bendix, Vincent, Chicago, Ill. Engine-starter. No. 1,173,766; Feb. 29; Gaz. vol. 223; p. 1596.

Benham, William T., Rising Sun, Ind., assignor to The Nydia Bank Lock Company, Cincinnati, Ohio. Dial for combination-locks. No. 1,174,011; Feb. 29; Gaz. vol. 223; p. 1679.

Benigar, Samuel B., Greenfield, Ohio. Gate-opener. No. 1,171,692; Feb. 15; Gaz. vol. 223; p. 755.

Benjamin, Clarence F., Milford, Conn. Combined carpenter's square and miter-gage. No. 1,171,765; Feb. 15; Gaz. vol. 223; p. 780.

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin Electric Manufacturing Company. (See Dean, William W., assignor.)

Benjamin, George H., New York, N. Y. Drying apparatus. No. 1,172,576; Feb. 22; Gaz. vol. 223; p. 1134.

Benjamin, Isaac N., and C. Lynch, St. Paul, Minn. Automatic temperature-regulator for explosion-engines. No. 1,170,730; Feb. 8; Gaz. vol. 223; p. 377.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Pendant-switch. No. 1,107,599; Feb. 8; Gaz. vol. 223; p. 330.

Benjamin, Reuben B., assignor to Benjamin-Sellar Mfg. Co., Chicago, Ill. Fishing-reel. No. 1,172,422; Feb. 22; Gaz. vol. 223; p. 1074.

Benjamin-Sellar Mfg. Co. (See Benjamin, Reuben B., assignor.)

Benkert, Hermann, assignor to G. Niemeyer, Hamburg, Germany. Pump-valve. No. 1,173,703; Feb. 29; Gaz. vol. 223; p. 1573.

Benner, Adolph L., *et al.* (See Lennards, Frank H., assignor.)

Benner, Angie L. (See Taylor, George T. and J. L., assignors.)

Bennett, Henry E., Williamsburg, Va. Desk. No. 1,171,308; Feb. 8; Gaz. vol. 223; p. 579.

Bennett, Howard D., Baltimore, Md. Seat-guard. No. 1,172,103; Feb. 15; Gaz. vol. 223; p. 904.

Bennison, William E. (See Parker and Bennison.)

Benson, Edgar W., Richmond, assignor of one-half to G. X. Fleming, Sacramento, Cal. Plow. No. 1,173,643; Feb. 29; Gaz. vol. 223; p. 1554.

Benson, Edwin A. (See Tate, Charles G., assignor.)

Benson, Harrison T., Denver, Colo., assignor of one-half to W. S. Barnes, Philadelphia, Pa. Ore-roasting apparatus. No. 1,171,583; Feb. 15; Gaz. vol. 223; p. 717.

Benson, Lawrence, Norwich, Conn. Cranking device. No. 1,171,309; Feb. 8; Gaz. vol. 223; p. 580.

Benton, Lewis D., Hamden, and C. E. Wirth, Waterbury, Conn. Picture-frame. No. 1,170,137; Feb. 1; Gaz. vol. 223; p. 134.

Beran, Rudolph F., Moulton, Tex. Cotton-picking device. No. 1,169,915; Feb. 1; Gaz. vol. 223; p. 58.

Berenstein, Frank, Chelsea, Mass. Friction-plug rubber heel. No. 1,173,088; Feb. 22; Gaz. vol. 223; p. 1314.

Bergen Point Iron Works. (See Smith, Augustus, assignor.)

Berger, Nathan I., New York, N. Y. Adjustable electric fixture. No. 1,171,831; Feb. 15; Gaz. vol. 223; p. 804.

Berglund, Gustaf H. F., Stockholm, Sweden, and H. A. H. Lindencrona, deceased; H. M. U. Lindencrona, widow and heiress. Automatic car-coupling. No. 1,173,644; Feb. 29; Gaz. vol. 223; p. 1544.

Bergman, Sven R., Lynn, Mass., assignor to General Electric Company. Dynamo-electric machine. No. 1,173,089; Feb. 22; Gaz. vol. 223; p. 1315.

Bergman, Sven R., Lynn, Mass., assignor to General Electric Company. Dynamo-electric machine. No. 1,173,090; Feb. 22; Gaz. vol. 223; p. 1315.

Bergougnan, Mathieu, Paris, assignor to Societe Generale des Etablissements Bergougnan, Clermont-Ferrand, France. Apparatus for the vulcanization of pneumatic tires with non-skid leather treads. No. 1,170,600; Feb. 8; Gaz. vol. 223; p. 330.

Berkey, Benn L., Portland, Oreg. Lubricating device. No. 1,171,693; Feb. 15; Gaz. vol. 223; p. 755.

Berkman, William, Cleveland, Ohio. File-holder. No. 1,173,164; Feb. 29; Gaz. vol. 223; p. 1384.

Berkstresser, Robert H., York, Pa. Apparatus for removing a wheel, pulley, or the like from a shaft, axle, or the like. No. 1,172,761; Feb. 22; Gaz. vol. 223; p. 1201.

Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft. (See Barth, Kurt E., assignor.)

Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft. (See Schaefer, Karl, assignor.)

Berlin Machine Works, The. (See Thurlow, Ira M., assignor.)

Bernard, Andrew J., assignor of four-tenths to E. M. Loeb, New Orleans, La. Film-mender. No. 1,173,142; Feb. 22; Gaz. vol. 223; p. 1334.

Bernett, Willis J., assignor to W. B. Thayer, Kansas City, Mo. Impact-tool head. No. 1,169,763; Feb. 1; Gaz. vol. 223; p. 5.

Berry, Charles V., Mansfield, Ohio. Door check and closer. No. 1,171,497; Feb. 15; Gaz. vol. 223; p. 687.

Berry, James W., Iowa City, Iowa. Flush-tank siphon. No. 1,172,253; Feb. 22; Gaz. vol. 223; p. 1014.

Berry, William C. (See McCabe and Berry.)

Bertona, Salvatore, Bay Pond, N. Y. Shoe-lace cover. No. 1,171,582; Feb. 15; Gaz. vol. 223; p. 716.

Besler, Charles L., Winfield, Kans. Water regulation for automobile-radiators. No. 1,170,475; Feb. 1; Gaz. vol. 223; p. 249.

Best, James W., Westfield, Ill. Fence-post. No. 1,172,577; Feb. 22; Gaz. vol. 223; p. 1134.

Bethune, Harry F. (See O'Neill and Bethune.)

Betker, Edward T., Kansas City, Mo. Alternate rotary driving mechanism. No. 1,172,004; Feb. 15; Gaz. vol. 223; p. 869.

Beutell, Huss M., Norcross, Ga. Ground-root cutter. No. 1,170,795; Feb. 8; Gaz. vol. 223; p. 398.

Beverage Machine & Bottle Company. (See Saulson, Philip J., assignor.)

Beverly, Nathan E., Baden, Va. Corn-planter. No. 1,172,191; Feb. 15; Gaz. vol. 223; p. 932.

Bey, Peter A. (See Peters and Bey.)

Beyrle, Andrew, Los Angeles, Cal. Metal-covered door. No. 1,173,091; Feb. 22; Gaz. vol. 223; p. 1316.

Bezner, Albert, Ravensburg, Germany. Machine for barking tree-trunks. No. 1,172,762; Feb. 22; Gaz. vol. 223; p. 1202.

Bickerton, Spencer, Honolulu, Hawaii. Stamp-receptacle. No. 1,173,092; Feb. 22; Gaz. vol. 223; p. 1316.

Bierbaum, Christopher H. (See Molyneux, Barton S., assignor.)

Biggar, Leroy A. and R. H., Oneida, N. Y. Lubricator. No. 1,173,921; Feb. 29; Gaz. vol. 223; p. 1649.

Biggar, Rutherford H. (See Biggar, Leroy A. and R. H.)

Bigsby Rotary Manufacturing Company, The. (See Sherbondy, William E., assignor.)

Billings-Chapin Company, The. (See Roberts, Daniel W., assignor.)

Binder Company, The. (See Tompkins, Robert F., assignor.)

Birkland, Lawrence E., Graettinger, Iowa. Post-hole auger. No. 1,171,086; Feb. 8; Gaz. vol. 223; p. 500.

Bisbee, Ned, Glencove, Wash. Front sight. No. 1,171,310; Feb. 8; Gaz. vol. 223; p. 580.

Bischoff, August J., Chico, Cal. Hydrocarbon-burner. No. 1,169,916; Feb. 1; Gaz. vol. 223; p. 59.

Bishop, Charles T., Fayetteville, Tenn. Lawn-mower. No. 1,170,505; Feb. 8; Gaz. vol. 223; p. 296.

Bishop, Frederic L., Pittsburgh, Pa. Treating metals. No. 1,171,832; Feb. 15; Gaz. vol. 223; p. 804.

Bisland, Presley E., Bronxville, assignor to Abbott Coin Counter Company, New York, N. Y. Packaging coins. No. 1,171,409; Feb. 15; Gaz. vol. 223; p. 656.

Bismarckhütte. (See Graef, Otto, assignor.)

Bixler, Lewis S., Kenton, Ohio. Toy pistol. No. 1,173,767; Feb. 29; Gaz. vol. 223; p. 1596.

Bizzoni, Humbert, assignor to T. Reinshagen, Chicago, Ill. Projecting-machine. No. 1,172,865; Feb. 22; Gaz. vol. 223; p. 1238.

Black, Edward S., Chicago, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me. Mill-pinion. No. 1,171,498; Feb. 15; Gaz. vol. 223; p. 688.

Black, Wilbert, New Orleans, La. Signal for vehicles. No. 1,172,104; Feb. 15; Gaz. vol. 223; p. 904.

Blackstone, Edward C., F. and E. Carter, Stamford, England. Apparatus for mixing atomized fuel with the air in internal-combustion engines. No. 1,171,018; Feb. 8; Gaz. vol. 223; p. 476.

Blackstone, John K., Crown Point, Ind. Hay-fork. No. 1,169,917; Feb. 1; Gaz. vol. 223; p. 59.

Blackwood, Sparrow G., and V. E. Bradley, Raleigh, N. C. Expansible pipe-coupling. No. 1,171,311; Feb. 8; Gaz. vol. 223; p. 580.

Blaha, Josef, Cleveland, Ohio. Wall construction for buildings. No. 1,170,215; Feb. 1; Gaz. vol. 223; p. 163.

Blair, Robert S., South Orange, N. J. Advertising apparatus. No. 1,171,019; Feb. 8; Gaz. vol. 223; p. 476.

Blair, Robert S., New Rochelle, N. Y. Sharpening device. No. 1,173,549; Feb. 29; Gaz. vol. 223; p. 1520.

Blakely, Frederick E., Douglas, Ariz. Windmill or motor. No. 1,171,584; Feb. 15; Gaz. vol. 223; p. 717.

Blakeslee, Talbert W., Erie, Pa. Syringe. No. 1,173,093; Feb. 22; Gaz. vol. 223; p. 1316.

Blanch, Charles C., Providence, R. I. Brake mechanism. No. 1,170,216; Feb. 1; Gaz. vol. 223; p. 163.

Blanchard, Leon E., Boston, assignor, by mesne assignments, to E. T. Newton, Holyoke, Mass. Shaft-coupling. No. 1,173,704; Feb. 29; Gaz. vol. 223; p. 1573.

Blaw Steel Construction Company. (See McArthur, Charles D., assignor.)

Blaw Steel Construction Company. (See Venable, William M., assignor.)

Blazék, Stephan, assignor of one-third to S. Sherman, New York, N. Y. Permutation-lock. No. 1,170,398; Feb. 1; Gaz. vol. 223; p. 223.

Blevins, Stphen S., assignor of one-half to E. J. McMahon, Houston, Tex. Running-gear for motor-vehicles. No. 1,172,866; Feb. 22; Gaz. vol. 223; p. 1239.

Blicmeister, John C., Buffalo, N. Y. Badge and pencil-holder. No. 1,170,601; Feb. 8; Gaz. vol. 223; p. 331.

Bliss, Donald M., assignor to T. A. Edison, Incorporated, West Orange, N. J. Alternating-current motor. (Reissue.) No. 14,062; Feb. 15; Gaz. vol. 223; p. 951.

Bloch, Florence A., New York, N. Y. Bathing-cap. No. 1,172,927; Feb. 22; Gaz. vol. 223; p. 1260.

Block, John W., Joliet, Ill. Coagulant for filtering. No. 1,173,698; Feb. 29; Gaz. vol. 223; p. 1572.

Blodgett, Charles F., Buchanan, Mich. Motor-vehicle driving-gear. No. 1,170,399; Feb. 1; Gaz. vol. 223; p. 224.

Blondel, Jules, and A. Chopin, Rueil, France. Producing films or pellicles detachably secured to a paper backing or the like. No. 1,170,506; Feb. 8; Gaz. vol. 223; p. 297.

Bloomer Bros. Company *et al.* (See Inman and Bloomer, assignors.)

Bloomer, Charles T. (See Inman and Bloomer.)

Blount, Nelson, New York, N. Y. Stocking-holder. No. 1,173,645; Feb. 29; Gaz. vol. 223; p. 1555.

Blue, Wilbert F, Montezuma, Ind. Extension-table. No. 1,173,646; Feb. 29; Gaz. vol. 223; p. 1555.

Blum, Charles, Philadelphia, Pa. Advertising display-rack. No. 1,170,507; Feb. 8; Gaz. vol. 223; p. 297.

Blum & Koch. (See Blum, Samuel H., assignor.)

Blum, Samuel H., deceased; J. Van Raalte and M. Dammann, executors, assignors to Blum & Koch, Inc., New York, N. Y. Straw hat. No. 1,171,312; Feb. 8; Gaz. vol. 223; p. 580.

Blume, Louis F., Pittsfield, Mass., assignor to General Electric Company. Tertiary winding. No. 1,173,094; Feb. 22; Gaz. vol. 223; p. 1316.

Boardman, John L., Billings, Mont. Device for feeding powdered fuel. No. 1,173,995; Feb. 29; Gaz. vol. 223; p. 1672.

Boeckh, Emil C., Toronto, Ontario, Canada. Broom. No. 1,170,040; Feb. 1; Gaz. vol. 223; p. 101.

Boehme, Frank, New York, N. Y. Animal-muzzle. No. 1,170,400; Feb. 1; Gaz. vol. 223; p. 224.

Boettcher, Arthur H., assignor to Stromberg Motor Devices Company, Chicago, Ill. Carbureter. No. 1,173,246; Feb. 29; Gaz. vol. 223; p. 1413.

Bogan, Walter T., assignor of one-half to W. W. Porter, Philadelphia, Pa. Tire. No. 1,170,497; Feb. 1; Gaz. vol. 223; p. 257.

Bogard, John H., San Saba, Tex. Adjustable head-gate. No. 1,172,423; Feb. 22; Gaz. vol. 223; p. 1075.

Bogerd, Frank, Ottawa, Ill. Trace-holder for whiffletrees. No. 1,171,499; Feb. 15; Gaz. vol. 223; p. 688.

Bohan, William J., St. Paul, Minn., and W. E. Johnston, Sacramento, Cal. Voting-machine. No. 1,170,731; Feb. 8; Gaz. vol. 223; p. 377.

Bohl, Joseph A. (See Carpenter and Bohl.)

Bohne, Guy F., and C. Renburg, Mount Pleasant, Utah. Hydrant-wrench. No. 1,170,138; Feb. 1; Gaz. vol. 223; p. 134.

Boiler Scalers Limited. (See Brindley, Harry S. B., assignor.)

Bokor, Edmund, and E. Goldberger, Chicago, Ill. Strip-ticket machine. No. 1,173,795; Feb. 29; Gaz. vol. 223; p. 1607.

Bokum, William F. (See Hill and Bokum.)

Boland, John V., St. Louis, Mo. Mold. No. 1,170,732; Feb. 8; Gaz. vol. 223; p. 378.

Boldt, Hugo, Durant, Iowa. Roof-gutter bracket. No. 1,170,869; Feb. 8; Gaz. vol. 223; p. 424.

Boley, Benjamin, Brooklyn, N. Y. Bottle-protector. No. 1,170,401; Feb. 1; Gaz. vol. 223; p. 224.

Bolger, Thomas P., Gloucester, Mass. Flower-box. No. 1,170,402; Feb. 1; Gaz. vol. 223; p. 224.

Boling, William J., Montgomery, W. Va. Wrench. No. 1,172,192; Feb. 15; Gaz. vol. 223; p. 933.

Bonham, William O., Highland Home, Ala. Shotgun cartridge-case. No. 1,171,313; Feb. 8; Gaz. vol. 223; p. 581.

Bonner, William T., Washington, N. C., assignor of one-half to K. P. McElroy and R. F. Steward, Washington, D. C., and M. C. Massie, New York, N. Y. Plastics and making same. No. 1,173,336; Feb. 29; Gaz. vol. 223; p. 1446.

Bonner, William T., Trenton, N. J., assignor of one-half to K. P. McElroy and R. F. Steward, Washington, D. C., and M. C. Massie, New York, N. Y. Plastics and producing same. No. 1,173,337; Feb. 29; Gaz. vol. 223; p. 1446.

Bonnevie, Harald, Rjukan, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Electrical flame-arc furnace for oxidizing the nitrogen of the air. No. 1,173,699; Feb. 29; Gaz. vol. 223; p. 1572.

Bono, Michelangelo, New York, N. Y. Brake attachment for sewing-machines. No. 1,171,410; Feb. 15; Gaz. vol. 223; p. 656.

Booth, Joseph B. S., Sidcup, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Strip-perforating mechanism for composing-machines. No. 1,172,254; Feb. 22; Gaz. vol. 223; p. 1014.

Bopp, Clinton L., Hawkeye, Iowa. Automatic signaling device. No. 1,173,922; Feb. 29; Gaz. vol. 223; p. 1650.

Borbély, Antal, Dubois, Pa. Agricultural machine. No. 1,170,870; Feb. 8; Gaz. vol. 223; p. 424.

Borden's Condensed Milk Company. (See Hausheer, Bernard, assignor.)

Borden's Condensed Milk Company. (See Young, John H., assignor.)

Bordwell, Lavern, New York, N. Y. Mixer. No. 1,171,922; Feb. 15; Gaz. vol. 223; p. 839.

Bordwell, Lavern, New York, N. Y. Mixer. No. 1,171,923; Feb. 15; Gaz. vol. 223; p. 839.

Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Manufacture of urea. No. 1,173,550; Feb. 29; Gaz. vol. 223; p. 1520.

Boston Talking Machine Company. (See Allis and Millet, assignors.)

Both, Tonjes A. C., New York, N. Y., assignor, by mesne assignments, to R. A. Schoenberg, Branchport, N. J. Electric switch. No. 1,172,928; Feb. 22; Gaz. vol. 223; p. 1261.

Both, Tonjes A. C., Fairhaven, Mass., assignor to R. A. Schoenberg, New York, N. Y. Electric switch. No. 1,172,929; Feb. 22; Gaz. vol. 223; p. 1261.

Boucher, Thomas, Manchester, N. H., assignor to Draper Company, Hopedale, Mass. Loom-shuttle. No. 1,171,766; Feb. 15; Gaz. vol. 223; p. 780.

Boulter, Royal L., Los Angeles, Cal. Electromagnetic telegraph-key. No. 1,170,796; Feb. 8; Gaz. vol. 223; p. 398.

Bourret-Kirkwood Co. (See Ross, John C., assignor.)

Bovier, Archie M., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding device. No. 1,173,551; Feb. 29; Gaz. vol. 223; p. 1520.

Bowen, George W., Auburn, N. Y. Lubricating device. No. 1,172,867; Feb. 22; Gaz. vol. 223; p. 1239.

Bower, Abram L., Boyertown, Pa. Train-controlling device. No. 1,173,552; Feb. 29; Gaz. vol. 223; p. 1521.

Bower, Robert F., assignor to Bower Roller Bearing Company, Detroit, Mich. Roller-bearing. No. 1,170,733; Feb. 8; Gaz. vol. 223; p. 378.

Bower Roller Bearing Company. (See Bower, Robert F., assignor.)

Bowers, Benjamin S., Lapraírie, Minn., assignor to J. Closz, St. Ansgar, Iowa. Testing-case for pneumatic tubes. No. 1,169,918; Feb. 1; Gaz. vol. 223; p. 59.

Bowman, William J. (See Stroud, Charles M., assignor.)

Bowser, Allen A., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Pump-operating mechanism. No. 1,170,734; Feb. 8; Gaz. vol. 223; p. 378.

Boyce, John E., Peekskill, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Elevator. No. 1,170,403; Feb. 1; Gaz. vol. 223; p. 225.

Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Safety-pin. No. 1,170,508; Feb. 8; Gaz. vol. 223; p. 297.

Boye Needle Company, The. (See Boye, James H., assignor.)

Boyle, Harry S., North Platte, Nebr. Milk-pail. No. 1,171,833; Feb. 15; Gaz. vol. 223; p. 805.

Boyne, John J., Buffalo, N. Y. Water-closet. No. 1,171,694; Feb. 15; Gaz. vol. 223; p. 756.

Brach, Leon S., New York, N. Y. Lightning-arrester. No. 1,171,166; Feb. 8; Gaz. vol. 223; p. 529.

Brach, Leon S., New York, N. Y. Lightning-arrester. No. 1,173,165; Feb. 29; Gaz. vol. 223; p. 1384.

Bradbury, Z. H., *et al.* (See Reynolds, Frank C., assignor.)

Braddock, Edward I., Winchester, Mass., assignor to Lamb & Nash Company, Kittery, Me. Sheet-metal hoop. No. 1,173,705; Feb. 29; Gaz. vol. 223; p. 1573.

Bradley, Van E. (See Blackwood and Bradley.)

Brady, Edward J., assignor to The United Gas Improvement Company, Philadelphia, Pa. Sign. No. 1,171,397; Feb. 8; Gaz. vol. 223; p. 611.

Brady, Joseph H., Kansas City, Mo. Vacuum air-line governor. No. 1,171,695; Feb. 15; Gaz. vol. 223; p. 756.

Braham, Nathaniel, Asbury Park, N. J. Picture-exhibitor. No. 1,173,923; Feb. 29; Gaz. vol. 223; p. 1650.

Brandenburg, Edward A. (See Pepper and Brandenburg.)

Branham, James L., Kansas City, Mo. Railway-crossing. No. 1,173,924; Feb. 29; Gaz. vol. 223; p. 1650.

Brassert, Hermann A., Chicago, Ill. Gas-washing. No. 1,169,764; Feb. 1; Gaz. vol. 223; p. 6.

Brassert, Hermann A., Chicago, Ill. Gas-washer. No. 1,169,766; Feb. 1; Gaz. vol. 223; p. 6.

Brassert, Hermann A., Chicago, Ill. Apparatus for drying gas. No. 1,169,919; Feb. 1; Gaz. vol. 223; p. 60.

Brassert, Hermann A., and C. J. Bacon, Chicago, Ill. Gas-washer tower. No. 1,169,765; Feb. 1; Gaz. vol. 223; p. 6.

Brassert, Hermann A., and C. J. Bacon, Chicago, Ill. Method of and apparatus for gas-washing. No. 1,172,930; Feb. 22; Gaz. vol. 223; p. 1261.

Brassert, Hermann A., and W. Mathesius, Chicago, Ill. Method of and apparatus for recovering sludge. No. 1,171,696; Feb. 15; Gaz. vol. 223; p. 756.

Brecht, Charles. (See Worth and Brecht.)

Bremer, William D., Cedar Falls, Iowa. Abrader for disk-harrow blades. No. 1,172,763; Feb. 22; Gaz. vol. 223; p. 1202.

Brennan, John S., Milwaukee, Wis. Valve. No. 1,170,602; Feb. 8; Gaz. vol. 223; p. 331.

Brennan, William J., Dayton, Ohio. Drilling and tapping attachment. No. 1,170,041; Feb. 1; Gaz. vol. 223; p. 101.

Brenner, George P., Milwaukee, Wis. Holder and spreader for mucilaginous material. No. 1,170,735; Feb. 8; Gaz. vol. 223; p. 379.

Bresnan, De Boise, East Orange, N. J. Paper-feeding attachment for printing-presses. No. 1,169,767; Feb. 1; Gaz. vol. 223; p. 7.

Brewer, John H., and J. Charles, Hagerstown, Md. Mechanical movement. No. 1,170,871; Feb. 8; Gaz. vol. 223; p. 424.

Brewster, Ethelbert J., Fresno, Cal. Vehicle-spring. No. 1,171,585; Feb. 15; Gaz. vol. 223; p. 717.

Briau, Gabriel P., assignor to La Société dite G. Briau et A. Soudée, Tours, France. Combined suction and force pump. No. 1,170,139; Feb. 1; Gaz. vol. 223; p. 135.

Brigham, Arthur A., Brookline, assignor to W. H. Butler, trustee, Danvers, Mass. Cord. No. 1,172,339; Feb. 22; Gaz. vol. 223; p. 1045.

Brindley, Harry S. B., assignor to Boiler Scalers Limited, Westminster, London, England. Pneumatic hammer or like percussion-tool. No. 1,173,247; Feb. 29; Gaz. vol. 223; p. 1413.

Brinkman, Sebastian G., Fords, N. J. Float-valve mechanism for carbureters. No. 1,172,578; Feb. 22; Gaz. vol. 223; p. 1135.

Bristol, Harry R., and A. W. Olger; said Bristol assignor to L. C. Jarrendt, Pontiac, Mich. Paper-board box. No. 1,174,012; Feb. 29; Gaz. vol. 223; p. 1679.

Britt, A. D., *et al.* (See Burks, Jesse A., assignor.)

Britt, George A., Centerton, Ark. Fruit-drier. No. 1,172,105; Feb. 15; Gaz. vol. 223; p. 905.

Britton, Willis N., Rochester, N. Y. Mold. No. 1,173,166; Feb. 29; Gaz. vol. 223; p. 1384.

Brock, Matthias, Boston, and L. M. Brown, Beverly, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Forming uppers of boots and shoes. No. 1,170,404; Feb. 1; Gaz. vol. 223; p. 226.

Brock, Matthias, Roxbury, and L. M. Brown, Beverly, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Machine for forming uppers of boots and shoes. No. 1,170,405; Feb. 1; Gaz. vol. 223; p. 226.

Brockman, Oscar, Louisville, Ky. Breeching. No. 1,173,248; Feb. 29; Gaz. vol. 223; p. 1413.

Broderick, Thomas F. (See Dana and Broderick.)

Brooks, Edward J., East Orange, N. J. Snap-seal. No. 1,170,140; Feb. 1; Gaz. vol. 223; p. 135.

Brooks, Frank L., New York, N. Y. Hand-rail support for trolley-cars. No. 1,170,406; Feb. 1; Gaz. vol. 223; p. 226.

Brooks, Kinion C., Alexandria, La. Automatic dirigible headlight for automobiles. No. 1,173,925; Feb. 29; Gaz. vol. 223; p. 1651.

Brooks, William H., Philadelphia, Pa., assignor to William F. Murphy's Sons Co. Loose-sheet binder. No. 1,171,167; Feb. 8; Gaz. vol. 223; p. 530.

Broschek, Albert, Hamburg, Germany. Intaglio-printing machine. No. 1,171,314; Feb. 8; Gaz. vol. 223; p. 581.

Brower, Edward S., Ridgewood, N. J. Internal-combustion engine. No. 1,171,834; Feb. 15; Gaz. vol. 223; p. 805.

Brown, Alvin D., Norwich, N. Y. Collapsible crate or receptacle. No. 1,171,924; Feb. 15; Gaz. vol. 223; p. 840.

Brown Bag Filling Machine Company. (See Barter, Frank, assignor.)

Brown, Charles F., New York, N. Y., assignor, by mesne assignments, of one-half to A. D. Dickerson, Freehold, N. J. Liquid dispensing and measuring apparatus. No. 1,170,872; Feb. 8; Gaz. vol. 223; p. 425.

Brown, Charles F., assignor to Universal Liquid Register Company, New York, N. Y. Pump. No. 1,170,873; Feb. 8; Gaz. vol. 223; p. 425.

Brown, Cletus A., Stuttgart, Ark. Driving mechanism for grain harvesters or binders. No. 1,173,926; Feb. 29; Gaz. vol. 223; p. 1651.

Brown, Daniel V., Philadelphia, Pa. Spring for finger-piece eyeglass-mountings. No. 1,170,042; Feb. 1; Gaz. vol. 223; p. 101.

Brown, Eric. (See Christlein and Brown.)

Brown, George F., Chicago, Ill. Film-storage safe. No. 1,170,043; Feb. 1; Gaz. vol. 223; p. 101.

Brown, Harold W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Meter-switch. No. 1,171,586; Feb. 15; Gaz. vol. 223; p. 718.

Brown, Harold W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Switch for meters. No. 1,171,587; Feb. 15; Gaz. vol. 223; p. 718.

Brown, Harold W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Metering-switch. No. 1,171,588; Feb. 15; Gaz. vol. 223; p. 719.

Brown, Henry C., Brooklyn, N. Y. Removable taper attachment for lathes. No. 1,171,767; Feb. 15; Gaz. vol. 223; p. 781.

Brown, Houghton. (See Brown, Theodore H. and H.)

Brown, Howell C., Morning Sun, Iowa. Support for silo-ladders. No. 1,171,697; Feb. 15; Gaz. vol. 223; p. 756.

Brown, Hugh C., Fremont, Nebr. Hay-sweep. No. 1,170,736; Feb. 8; Gaz. vol. 223; p. 379.

Brown, Hugh E., Browns Station, Mo. Attachment for adding-machines. No. 1,172,931; Feb. 22; Gaz. vol. 223; p. 1262.

Brown, John L., Momence, Ill. Aeroplane-stabilizer. No. 1,171,698; Feb. 15; Gaz. vol. 223; p. 757.

Brown, John W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Brake-operating means. No. 1,169,920; Feb. 1; Gaz. vol. 223; p. 60.

Brown, Louis M. (See Brock and Brown.)

Brown, Newton N. (See Rasmussen and Brown.)

Brown, Perry, Coraopolis, Pa. Journal-box. No. 1,171,087; Feb. 8; Gaz. vol. 223; p. 500.

Brown & Sharpe Manufacturing Company. (See Parker, John, assignor.)

Brown, Theodore H. and H., assignors of one-half to J. R. Stewart, Minneapolis, Minn. Broom. No. 1,174,013; Feb. 29; Gaz. vol. 223; p. 1679.

Brown, Thomas J. W., Washington, D. C. Marker for golf-courses. No. 1,171,699; Feb. 15; Gaz. vol. 223; p. 757.

Brown, William H., Minneapolis, Minn. Furnace attachment. No. 1,172,868; Feb. 22; Gaz. vol. 223; p. 1240.

Brown, William M., Johnstown, Pa. Crucible-furnace. No. 1,171,500; Feb. 15; Gaz. vol. 223; p. 688.

Brown, Willis, Oglesby, Ill. Testing device for spark-plugs. No. 1,170,407; Feb. 1; Gaz. vol. 223; p. 227.

Browne, Alexander P., trustee. (See Bussey, Everett E., assignor.)

Brownfield, James A., Covington, Ky. Joint. No. 1,171,589; Feb. 15; Gaz. vol. 223; p. 719.

Browning, Edna F., New York, N. Y. Scrubbing and mopping device. No. 1,171,768; Feb. 15; Gaz. vol. 223; p. 781.

Broyer, Herman H., G. Cambeilh, and J. Papale, San Francisco, Cal. Direction-indicator for vehicles. No. 1,170,954; Feb. 8; Gaz. vol. 223; p. 452.

Bruce, Howard, assignor to The Bartlett Haywood Company, Baltimore, Md. Sealing-bell for retort stand-pipes. No. 1,171,384; Feb. 8; Gaz. vol. 223; p. 606.

Bruchhauser, William E., New York, N. Y. Display-stand. No. 1,173,167; Feb. 29; Gaz. vol. 223; p. 1385.

Bruen, Henry L., New York, N. Y. Fly-killing device. No. 1,170,408; Feb. 1; Gaz. vol. 223; p. 227.

Bruhn, Wilhelm G., Berlin-Wilmersdorf, Germany. Recording device for vehicles. No. 1,172,666; Feb. 22; Gaz. vol. 223; p. 1165.

Brumbaugh, Edward E., Imler, Pa. House mail-box. No. 1,172,513; Feb. 22; Gaz. vol. 223; p. 1111.

Brumby, Clarence P., East Point, assignor of one-half to S. R. Jacobs, Atlanta, Ga. Combination locking-valve. No. 1,172,106; Feb. 15; Gaz. vol. 223; p. 905.

Brummel, Joseph S., *et al.* (See Fulbright, Thomas M., assignor.)

Brunner, John. (See McDonnell, Brunner, and Thompson.)

Brunner, John, Evanston, Ill. Track-spike. No. 1,170,603; Feb. 8; Gaz. vol. 223; p. 332.

Brunswick-Balke-Collender Co. (See Hobbs, Frank C., assignor.)

Brunswick-Balke-Collender Company, The. (See Moehle, Hugo M., assignor.)

Brunton, Earl W., St. Louis, Mo. Measuring instrument. No. 1,172,340; Feb. 22; Gaz. vol. 223; p. 1045.

Bryan, Edgar J., assignor of one-half to W. Thompson, Riverside, Cal. Measuring-tank. No. 1,172,424; Feb. 22; Gaz. vol. 223; p. 1076.

Bryant, Albert, Moulton, Ala. Grapple. No. 1,171,315; Feb. 8; Gaz. vol. 223; p. 581.

Bryant Electric Company, The. (See Burton, Frank V., assignor.)

Bryant Electric Company, The. (See Goodridge and Thomas, assignors.)

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Rim for vehicle-wheels. No. 1,172,425; Feb. 22; Gaz. vol. 223; p. 1076.

Bryce, James W., Brooklyn, assignor to International Time Recording Company of New York, Endicott, N. Y. System for operating time-recorders or time-indicators. No. 1,173,338; Feb. 29; Gaz. vol. 223; p. 1447.

Bryson, Kenneth D., Madison, N. H. Fountain-pen blotter. No. 1,170,955; Feb. 8; Gaz. vol. 223; p. 453.

Buch, Max A., Birmingham, England, assignor to H. E. Edwards, Jackson, Mich. Vehicle-top. No. 1,170,604; Feb. 8; Gaz. vol. 223; p. 332.

Buck, Charles B., Washington, D. C. Steam hoist and dump for autotrucks. No. 1,172,255; Feb. 22; Gaz. vol. 223; p. 1015.

Buck, Fred, assignor to The Lufkin Rule Company, Saginaw, Mich. Tape-measure. No. 1,170,956; Feb. 8; Gaz. vol. 223; p. 453.

Buckeye Traction Ditcher Company, The. (See Krupp, Leo A., assignor.)

Buckeye Traction Ditcher Company, The. (See Yocum, Charles F., assignor.)

Buckham, George T. (See Dawson and Buckham.)

Bucklus, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Journal-box. No. 1,171,020; Feb. 8; Gaz. vol. 223; p. 477.

Buckley, John J., Chester, assignor to Fuel Economy Engineering Company, Lansdowne, Pa. Feed-water regulator. No. 1,170,044; Feb. 1; Gaz. vol. 223; p. 102.

Buckley, Warren B., Washington, D. C. Resilient vehicle-tire. No. 1,174,028; Feb. 29; Gaz. vol. 223; p. 1685.

Buckman, Charles R., Louisville, Ky. Coupling. No. 1,173,479; Feb. 29; Gaz. vol. 223; p. 1495.

Bucknam, Worthy C., Jersey City, N. J., assignor to Davis-Bournonville Company, New York, N. Y. Electrolytic cell. No. 1,172,932; Feb. 22; Gaz. vol. 223; p. 1262.

Bucknam, Worthy C., assignor to Davis-Bournonville Company, Jersey City, N. J. Apparatus for trimming flanges. No. 1,172,933; Feb. 22; Gaz. vol. 223; p. 1263.

Buckwalter, Tracy V., Altoona, Pa. Truck. No. 1,169,768; Feb. 1; Gaz. vol. 223; p. 7.

Budd, Edward G., assignor to Hale and Kilburn Company, Philadelphia, Pa. Window. No. 1,170,874; Feb. 8; Gaz. vol. 223; p. 426.

Budd, Thomas D., La Crosse, Wis. Bee-section. No. 1,171,501; Feb. 15; Gaz. vol. 223; p. 689.

Buffalo Forge Company. (See Carrier, Willis H., assignor.)

Buffalo Sled Company, The. (See Orcutt, Charles D., assignor.)

Buffington, Calvin A., Berkshire, N. Y. Tire-saving jack. No. 1,172,934; Feb. 22; Gaz. vol. 223; p. 1263.

Buffum, Frank W., and M. A. Culling, assignors to Buffum Tool Company, Louisiana, Mo. Type-writing machine. No. 1,170,217; Feb. 1; Gaz. vol. 223; p. 164.

Buffum Tool Company. (See Buffum and Culling, assignors.)

Builders Iron Foundry. (See Walpole, Benjamin M., assignor.)

Bulik, Michael, assignor of one-third to S. Trohanovsky and one-third to T. Medveczky, Conemaugh, Pa. Combined camp chair and table. No. 1,173,480; Feb. 29; Gaz. vol. 223; p. 1495.

Bull, Arleigh L., Westfield, Pa. Funnel. No. 1,170,476; Feb. 1; Gaz. vol. 223; p. 249.

Bull, Arthur A., Detroit, Mich. Tool for truing, cleansing, and grinding valves and valve-seats. No. 1,170,045; Feb. 1; Gaz. vol. 223; p. 102.

Bull, John, Tottenham, London, England. Apparatus for extracting piles. No. 1,173,996; Feb. 29; Gaz. vol. 223; p. 1672.

Bullard, Edward P., Jr., assignor to The Bullard Machine Tool Co., Bridgeport, Conn. Speed-changing mechanism. No. 1,172,341; Feb. 22; Gaz. vol. 223; p. 1045.

Bullard Machine Tool Co., The. (See Bullard, Edward P., Jr., assignor.)

Bullock, Raymond G., Jamestown, N. Y. Lock-box. No. 1,172,193; Feb. 15; Gaz. vol. 223; p. 933.

Bunn, Joseph T., Washington, D. C. Heating device for gas stoves and ranges. No. 1,171,700; Feb. 15; Gaz. vol. 223; p. 757.

Bunnell, John C., Boise, Idaho. Cone-holder. No. 1,172,667; Feb. 22; Gaz. vol. 223; p. 1166.

Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Excavator. No. 1,172,579; Feb. 22; Gaz. vol. 223; p. 1135.

Burdick, Austin F., and W. E. Miller, Lansing, Mich. Sanitary milk-bottle closure. No. 1,173,553; Feb. 29; Gaz. vol. 223; p. 1521.

Burdick, Charles L., London, England. Packeting-machine for coins and other articles. No. 1,171,411; Feb. 15; Gaz. vol. 223; p. 657.

Burditt, William F., Jr., Lyons Farms, N. J., assignor to Loy and Nawrath Company. Apparatus for making square tubing. No. 1,173,168; Feb. 29; Gaz. vol. 223; p. 1385.

Burditt, William F., Jr., Lyons Farms, N. J., assignor to Loy and Nawrath Company. Apparatus for making square tubing. No. 1,173,169; Feb. 29; Gaz. vol. 223; p. 1386.

Burgeson, Otto A., Cantaur, Saskatchewan, Canada, assignor to Burgeson Powerless Grain Cleaner Company, Nanson, N. D. Grain-separator. No. 1,173,249; Feb. 29; Gaz. vol. 223; p. 1414.

Burgeson Powerless Grain Cleaner Company. (See Burgeson, Otto A., assignor.)

Burgess, Andrew O., Newark, N. J. Writing implement. No. 1,172,342; Feb. 22; Gaz. vol. 223; p. 1046.

Burgess, William L., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Vehicle-tire rim. No. 1,171,502; Feb. 15; Gaz. vol. 223; p. 689.

Burhorn, Edwin, Hoboken, N. J. Cooling-tower. No. 1,171,412; Feb. 15; Gaz. vol. 223; p. 657.

Burk, Charles H., Orizaba, Mexico, assignor of one-half to H. C. Pierce, St. Louis, Mo., trustee. Oil-burning apparatus. No. 1,171,413; Feb. 15; Gaz. vol. 223; p. 658.

Burke, Gordon H., Plymouth, N. H. Spring-heel for horseshoes. No. 1,170,218; Feb. 1; Gaz. vol. 223; p. 164.

Burket, Delmer, South Bend, Ind. Insect-exterminating attachment for cultivators. No. 1,172,935; Feb. 22; Gaz. vol. 223; p. 1263.

Burkhart, Daniel S., Spokane, Wash. Alarm system for fire-escapes. No. 1,171,088; Feb. 8; Gaz. vol. 223; p. 501.

Burks, Jesse A., Ezra, assignor of one-fifth to A. D. Britt, Freedom, one-fifth to W. S. Fisher, one-fifth to H. M. Jones, and one-fifth to J. P. Jones, Ezra, Ky. Folding hay-rake. No. 1,170,605; Feb. 8; Gaz. vol. 223; p. 332.

Burn, Lewis, Manchester, England. Reversing and variable-speed gear. No. 1,172,936; Feb. 22; Gaz. vol. 223; p. 1264.

Burnett, Richard W. (See Vaughan and Burnett.)

Burnett, Richard W., Montreal, Quebec, Canada. Roof. No. 1,170,219; Feb. 1; Gaz. vol. 223; p. 164.

Burnham, Arthur M., Gardiner, Me. Gas-burner. No. 1,170,509; Feb. 8; Gaz. vol. 223; p. 297.

Burns, Charles A. (See Burns, Frank B. and C. A.)

Burns, Frank B., New York, and C. A. Burns, Mount Vernon, N. Y.; said C. A. Burns assignor to said Frank B. Burns. Edging for curtains. No. 1,173,927; Feb. 29; Gaz. vol. 223; p. 1652.

Burns, Louise M., Wichita, Kans. Weeding implement. No. 1,169,921; Feb. 1; Gaz. vol. 223; p. 60.

Burpee, John H. (See Hoskins and Burpee.)

Burr, Mae S. G., Commack, N. Y. Milk-bottle cap. No. 1,170,409; Feb. 1; Gaz. vol. 223; p. 227.

Burroughs Adding Machine Company. (See Chapin, John J., assignor.)

Burroughs Adding Machine Company. (See Main, Fred F., assignor.)

Burroughs Adding Machine Company. (See Rinsche, Frank C., assignor.)

Burroughs, Sylvester H., Calgary, Alberta, Canada. Garbage-can. No. 1,170,797; Feb. 8; Gaz. vol. 223; p. 399.

Burry, Leonard, Neoga, Ill. Nut-lock. No. 1,172,580; Feb. 22; Gaz. vol. 223; p. 1135.

Burson, Wilson W., Rockford, Ill. Stop-motion for knitting-machines. No. 1,172,764; Feb. 22; Gaz. vol. 223; p. 1203.

Burt, Andrew B., San Francisco, Cal. Tire. No. 1,170,957; Feb. 8; Gaz. vol. 223; p. 453.
Burton, Frank V., assignor to The Bryant Electric Company, Bridgeport, Conn. Advertising-display. No. 1,172,107; Feb. 15; Gaz. vol. 223; p. 905.
Busch-Sulzer Bros.-Diesel Engine Company. (See Cochand, Jules, assignor.)
Busch-Sulzer Bros.-Diesel Engine Company. (See Reuter, Theodor, assignor.)
Busch-Sulzer Bros.-Diesel Engine Company. (See Schmidt, Arnold von, assignor.)
Bushnell, John B., Minneapolis, Minn. Grain-drill. No. 1,171,925; Feb. 15; Gaz. vol. 223; p. 840.
Bussey, Everett E., Malden, assignor to A. P. Browne, trustee, Cambridge, Mass. Dispenser for liquid soap and the like. No. 1,173,481; Feb. 29; Gaz. vol. 223; p. 1495.
Butcher, Mary E., Cambridge, Mass. Article-hanger. No. 1,172,937; Feb. 22; Gaz. vol. 223; p. 1264.
Butler, Fergus A., Danvers, Mass. Transfusion apparatus. No. 1,170,958; Feb. 8; Gaz. vol. 223; p. 454.
Butler, H. S. (See Shedenhelm, Robert, assignor.)
Butler, Harry J., and L. P. Casper, Louisville, Ky. Spark-plug. No. 1,172,194; Feb. 15; Gaz. vol. 223; p. 933.
Butler, James A., Winthrop, assignor to American Voting Machine Company, Boston, Mass. Controlling device for voting-machines. No. 1,172,668; Feb. 22; Gaz. vol. 223; p. 1166.
Butler, Warren H., trustee. (See Brigham, Arthur A., assignor.)
Butterfield, Lewis A., Chicopee, assignor to Belcher & Taylor Agricultural Tool Company, Chicopee Falls, Mass. Fertilizer-sower. No. 1,172,005; Feb. 15; Gaz. vol. 223; p. 870.
Buttonlath Manufacturing Company. (See La Casse, Henry, assignor.)
Butz, Grover. (See Legere, Amos, assignor.)
Buxton, Gustavus T., and S. A. Abbey, Charlotte, N. C. Fluid system. No. 1,172,938; Feb. 22; Gaz. vol. 223; p. 1264.
Buyer, Samuel, New York, N. Y. Hose-supporter. No. 1,170,875; Feb. 8; Gaz. vol. 223; p. 426.
Byerley, Cecil, Ridgewood, N. J. Sugar-bowl. No. 1,173,768; Feb. 29; Gaz. vol. 223; p. 1597.
Byrnes, Clarence P., Sewickley, Pa. Wind-shield. No. 1,171,835; Feb. 15; Gaz. vol. 223; p. 806.
Byron Jackson Iron Works. (See Paulsmeier, Albert C., assignor.)
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
C. B. Dolge Company. (See Ochs, Henry R., assignor.)
Cable Company, The. (See Klugh, Paul B., assignor.)
Cable Excavator Company. (See Hadsel, Alvah D., assignor.)
Cahill, Charles T., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon the bottoms of boots and shoes. No. 1,170,410; Feb. 1; Gaz. vol. 223; p. 227.
Cahill, Mortimer, Kansas City, Mo. Automatic valve. No. 1,173,554; Feb. 29; Gaz. vol. 223; p. 1521.
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)
Cairns, Joseph W. (See Cairns, Robert and J. W.)
Cairns, Robert and J. W., Watertown, Wis. Circuit-reversing drum for signal mechanism. No. 1,172,006; Feb. 15; Gaz. vol. 223; p. 870.
Caldwell, Clinton H., Johnsonburg, Pa. Rail-joint. No. 1,171,701; Feb. 15; Gaz. vol. 223; p. 758.
Caldwell, Eugene W., New York, N. Y. Illuminating and storing apparatus. No. 1,172,426; Feb. 22; Gaz. vol. 223, p. 1077.
Caldwell, Frank R., South Knoxville, Tenn. Nut-lock. No. 1,172,669; Feb. 22; Gaz. vol. 223; p. 1167.
Caldwell, Wilfred F., Detroit, Mich. Draft-preventing device. No. 1,173,555; Feb. 29; Gaz. vol. 223; p. 1522.
Calhoun, Curtis S., Decatur, Ill. Hand-truck. No. 1,170,876; Feb. 8; Gaz. vol. 223; p. 426.
Callender, Ward G., Mansfield, Ohio. Shoe-cleaning device. No. 1,170,411; Feb. 1; Gaz. vol. 223; p. 228.
Cambellh, George. (See Broyer, Cambellh, and Papale.)
Camblin, Arthur E., Stella, Nebr. Collapsible core for concrete culverts. No. 1,171,316; Feb. 8; Gaz. vol. 223; p. 582.
Camden, Bernard H., Parkersburg, W. Va. Money-changing machine. No. 1,172,108; Feb. 15; Gaz. vol. 223; p. 906.
Camel Company. (See Waitt, Arthur M. and W. H., assignors.)
Cameron, Robert C., Goldfield, Nev. Device for removing stuck drills. No. 1,171,317; Feb. 8; Gaz. vol. 223; p. 582.
Cameron, William, Chicago, Ill. Machine for double-seaming cans. No. 1,170,798; Feb. 8; Gaz. vol. 223; p. 399.
Cammack, Horace D., assignor of one-half to C. T. Sims, Crossett, Ark. Tooth-brush with detachable handle. No. 1,172,109; Feb. 15; Gaz. vol. 223; p. 906.
Cammell Laird and Company Limited. (See Allan, James M., assignor.)
Camp, Key D. (See Lindemann and Camp.)
Campbell, Alphonso S., Medford, Mass. Marine lamp and electric connection. No. 1,170,959; Feb. 8; Gaz. vol. 223; p. 454.
Campbell, Charles E., Lynn, Mass. X-ray apparatus. No. 1,173,409; Feb. 29; Gaz. vol. 223; p. 1472.
Campbell, Ernest P., assignor of one-half to J. E. Goodman, Stockton, Cal. Bearing-puller. No. 1,171,590; Feb. 15; Gaz. vol. 223; p. 719.
Campbell, Harry E., New York, N. Y. Sash-suspension device. No. 1,171,168; Feb. 8; Gaz. vol. 223; p. 530.
Campbell, Harmon M. (See Graves, George H., assignor.)
Campbell, James W. (See Smith and Campbell.)
Campbell, Lawrence S., Los Angeles, and J. Grant, Florence, Cal. Combination bit and rotary underreamer. No. 1,169,922; Feb. 1; Gaz. vol. 223; p. 60.
Campbell, William A., Maricopa, Cal. Valve for tires. No. 1,170,412; Feb. 1; Gaz. vol. 223; p. 228.
Campbell, William N., Pendleton, Oreg. Loss-preventing device. No. 1,171,836; Feb. 15; Gaz. vol. 223; p. 806.
Canadian Independent Telephone Company. (See Hulfish, David S., assignor.)
Canfield, Frank, and F. O. Permin, Portland, Oreg.; said Canfield assignor, by mesne assignments, to The Loxit Manufacturing Company. Milk-bottle lock. No. 1,171,385; Feb. 8; Gaz. vol. 223; p. 606.
Cannon, Willie E. (See Cottom, William F., assignor.)
Canterbury, Ellison R., Redlands, Cal. Fruit-gathering sleeve and receptacle therefor. No. 1,170,960; Feb. 8; Gaz. vol. 223; p. 454.
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,171,021; Feb. 8; Gaz. vol. 223; p. 477.
Capstick, Buford S., Pine Lawn, Mo. Cue-tip. No. 1,170,961; Feb. 8; Gaz. vol. 223; p. 455.
Carborundum Company, The. (See Allen, Thomas B., assignor.)
Cardy, Fred E., Chicago, Ill. Loose-leaf binder. No. 1,172,869; Feb. 22; Gaz. vol. 223; p. 1240.
Carl G. Westlund Company. (See Westlund, Carl G., assignor.)
Carlborg, August, and G. Nyman, Tykö, Finland, Russia. Shaft and axle bearing. No. 1,172,514; Feb. 22; Gaz. vol. 223; p. 1111.
Carleton, Guy, Rockport, Me. Valve for fluid-conduits. No. 1,170,046; Feb. 1; Gaz. vol. 223; p. 103.
Carleton, Walter E., Brooklyn, N. Y. Motion-picture shutter. No. 1,173,706; Feb. 29; Gaz. vol. 223; p. 1573.
Carling, Albert G., New York, N. Y. Liquid-soap dispenser. No. 1,171,318; Feb. 8; Gaz. vol. 223; p. 583.
Carlson, Adolph G., Chicago, Ill. Sack-cleaning device. No. 1,173,250; Feb. 29; Gaz. vol. 223; p. 1414.
Carlson, Carl O., Manor, Tex. Life-preserver. No. 1,173,482; Feb. 29; Gaz. vol. 223; p. 1496.
Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Forming a sheet-metal nut. No. 1,171,702; Feb. 15; Gaz. vol. 223; p. 758.
Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Nut. No. 1,172,427; Feb. 22; Gaz. vol. 223; p. 1078.
Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Making the female member of a union coupling. No. 1,172,428; Feb. 22; Gaz. vol. 223; p. 1078.
Carlund Manufacturing Company *et al.* (See Lund, Carl O., assignor.)
Carman, Charles W., Hempstead, N. Y. Thread-cutting attachment. No. 1,173,769; Feb. 29; Gaz. vol. 223; p. 1597.
Carmine, William J., Jacksonville, Fla. Portable stand. No. 1,172,939; Feb. 22; Gaz. vol. 223; p. 1265.
Carmody, Henry J., Rome, N. Y. Bed-corner. No. 1,173,647; Feb. 29; Gaz. vol. 223; p. 1555.
Carpenter, Carroll P., and J. A. Bohl, Plainfield, N. J. Automobile-signal. No. 1,171,319; Feb. 8; Gaz. vol. 223; p. 583.
Carpenter, Henry A., Sewickley, assignor to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Gas-scrubber. No. 1,170,510; Feb. 8; Gaz. vol. 223; p. 298.
Carpenter, Henry A., Sewickley, Pa., assignor to General Electric Company. Motor-driven gas-compressor. No. 1,171,926; Feb. 15; Gaz. vol. 223; p. 840.
Carpenter, Henry A., R. L. Hibbard, and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Apparatus for charging and discharging gas-retorts. No. 1,171,398; Feb. 8; Gaz. vol. 223; p. 611.
Carpenter, Henry A., R. L. Hibbard, and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Charging and discharging apparatus. No. 1,171,414; Feb. 15; Gaz. vol. 223; p. 658.
Carper, Albert A., assignor to The Crown Cork & Seal Company of Baltimore City, Baltimore, Md. Combined filling and crowning mechanism. No. 1,172,256; Feb. 22, Gaz. vol. 223; p. 1015.
Carr, Charles F. (See Smith and Carr.)
Carragher, Henry N., Fall River, Mass. Demountable rim for vehicle-wheels. No. 1,171,503; Feb. 15; Gaz. vol. 223; p. 689.
Carrier, Willis H., assignor to Buffalo Forge Company, Buffalo, N. Y. Dehumidifying and cooling air. No. 1,172,429; Feb. 22; Gaz. vol. 223; p. 1078.
Carroll, Elbert H., assignor to Morgan Construction Company, Worcester, Mass. Wire-drawing block. No. 1,173,707; Feb. 29; Gaz. vol. 223; p. 1574.
Carroll, George P. (See Roehrich, Frank N., assignor.)

Carroll, George P., Bridgeport, Conn., and F. N. Roehrich, Jersey City, N. J.; said Roehrich assignor to said Carroll. Check-valve mechanism. No. 1,172,765; Feb. 22; Gaz. vol. 223; p. 1203.
Carroll, Patrick H., assignor of one-half to M. Gardner, White Creek, N. Y. Can-washer. No. 1,172,430; Feb. 22; Gaz. vol. 223; p. 1079.
Carroll, Wilbur J., Youngwood, Pa. Pawl-and-ratchet device. No. 1,173,483; Feb. 29; Gaz. vol. 223; p. 1496.
Carson, Frank H., Loano, Wis. Rotary engine. No. 1,171,769; Feb. 15; Gaz. vol. 223; p. 781.
Carter, Adrian E. (See Eden and Carter.)
Carter, Alva J., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Party-line key. No. 1,173,095; Feb. 22; Gaz. vol. 223; p. 1317.
Carter, Edward E., and E. Lightfoot, assignors of three-eighths to C. F. Holland, Los Angeles, Cal. Electrically-operated cash-register and money-changing device. No. 1,172,195; Feb. 15; Gaz. vol. 223; p. 933.
Carter, Eversbed. (See Blackstone and Carter.)
Carter, Frank. (See Blackstone and Carter.)
Carter, George B., Detroit, assignor to Rudy Furnace Co., Dowagiac, Mich. Hot-air furnace. No. 1,169,769; Feb. 1; Gaz. vol. 223; p. 8.
Carter, John L., Brooklyn, N. Y. Heat distributer and equalizer for cooking-stoves. No. 1,173,556; Feb. 29; Gaz. vol. 223; p. 1522.
Carter, Ralph B., assignor of one-half to T. J. Louden, Bloomington, Ind. Signal apparatus. No. 1,171,770; Feb. 15; Gaz. vol. 223; p. 782.
Carter, Russell S., Hewlett, N. Y. Shock-absorber. No. 1,171,169; Feb. 8; Gaz. vol. 223; p. 530.
Carter, William H., assignor to The William Carter Company, Needham Heights, Mass. Stitch-finger for shell-stitch machines. No. 1,172,670; Feb. 22; Gaz. vol. 223; p. 1167.
Cartlidge, Frank, Terre Haute, Ind. Mining-machine. No. 1,173,170; Feb. 29; Gaz. vol. 223; p. 1386.
Cartmell, Robert J., Soap Lake, assignor of one-half to J. W. Kahle, Seattle, Wash. Pump-jack. No. 1,169,923; Feb. 1; Gaz. vol. 223; p. 61.
Cary Manufacturing Company. (See Cary and Weeks, assignors.)
Cary Manufacturing Company. (See Miller, George C. D., assignor.)
Cary, Spencer C., and C. S. Weeks; said Weeks assignor to Cary Manufacturing Company, New York, N. Y. Machine for making corrugated fasteners. No. 1,172,257; Feb. 22; Gaz. vol. 223; p. 1016.
Casale, Antonio, Scranton, Pa. Train-control system. No. 1,172,431; Feb. 22; Gaz. vol. 223; p. 1079.
Case, Ernest L., Minneapolis, Minn. Valve-lifter. No. 1,171,089; Feb. 8; Gaz. vol. 223; p. 501.
Case, Frank E., assignor to The Harvard Company, Canton, Ohio. Dental chair. No. 1,173,557; Feb. 29; Gaz. vol. 223; p. 1522.
Case, Willis W., Jr. (See Muckle, Theodore W., assignor.)
Casey, Henry F. (See De Coteau and Casey.)
Casey, Thomas L., and T. Cox, Oakland, Cal. Drying apparatus. No. 1,173,171; Feb. 29; Gaz. vol. 223; p. 1387.
Casgrain, Louis A., Beverly, Mass. Starting device for internal-combustion motors. No. 1,171,170; Feb. 8; Gaz. vol. 223; p. 531.
Casler, Herman, Canastota, N. Y., assignor to The General Pump Appliance Company. Device for refacing valve-seats. No. 1,170,511; Feb. 8; Gaz. vol. 223; p. 298.
Casper, Ervin J., *et al.* (See Johnson, Peter, assignor.)
Casper, Louis P. (See Butler and Casper.)
Cassella Color Company. (See Schille, Rudolf, assignor.)
Cassidy, Fred O. (See Smith and Cassidy.)
Castor, Lewis D. (See Cositt and Castor.)
Cather, Charles E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Envelop. No. 1,171,703; Feb. 15; Gaz. vol. 223; p. 758.
Cave, William, Newell, Iowa. Surface-cultivator. No. 1,171,927; Feb. 15; Gaz. vol. 223; p. 841.
Ceeder, Levi, Chicago, Ill. Parachute. No. 1,171,837; Feb. 15; Gaz. vol. 223; p. 807.
Cement Gun Construction Company. (See Weber, Carl, assignor.)
Central Railway Signal Company. (See Pfeil and Bemisderfer, assignors.)
Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)
Chadwick, Lee S., East Cleveland, assignor to The Cleveland Foundry Company, Cleveland, Ohio. Oil-stove. No. 1,170,606; Feb. 8; Gaz. vol. 223; p. 332.
Chadwick & Sykes. (See Wallace, Philip B., assignor.)
Chalmers Motor Company. (See Simonsen, Johan C., assignor.)
Chalmers Motor Company. (See Utz, John G., assignor.)
Chambers, Edgar V., T. C. Hammond, and G. G. Jarmain, Huddersfield, England. Concentration of wool-scouring and like liquors and the recovery of grease and alkaline substances therefrom. No. 1,170,962; Feb. 8; Gaz. vol. 223; p. 455.
Chambers, Frank G. (See Sweet, Winter, and Chambers.)
Chambers, William L., Brookville, Ind. Hog-ring. No. 1,170,413; Feb. 1; Gaz. vol. 223; p. 228.
Champion Register Company, The. (See Miller, Joseph, assignor.)
Champion Spark Plug Company. (See Postel, Carl H., assignor.)
Chance, Henry M., Philadelphia, Pa. Burning fuel. No. 1,173,708; Feb. 29; Gaz. vol. 223; p. 1574.
Chandler, Ralph D., Spiceland, Ind. Adjustable electric lamp. No. 1,171,171; Feb. 8; Gaz. vol. 223; p. 531.
Chapin, Frederick A., Toledo, Ohio. Needle-setter. No. 1,173,251; Feb. 29; Gaz. vol. 223; p. 1415.
Chapin, John J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Type-writing machine. No. 1,169,770; Feb. 1; Gaz. vol. 223; p. 8.
Chapman, Charles H., Winchester, Mass., assignor to Chapman Detachable Rubber Heel Company. Detachable rubber heel for boots and shoes. No. 1,172,671; Feb. 22; Gaz. vol. 223; p. 1168.
Chapman Detachable Rubber Heel Company. (See Chapman, Charles H., assignor.)
Chapman, Frank S., assignor to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,173,096; Feb. 22; Gaz. vol. 223; p. 1317.
Chapman, George, assignor to The Nairn Linoleum Company, Kearney, N. J. Shipping-crate. No. 1,173,928; Feb. 29; Gaz. vol. 223; p. 1652.
Chapman, Harriet J., Pasadena, Cal. Figure toy. No. 1,169,771; Feb. 1; Gaz. vol. 223; p. 8.
Chapman, John H., Middleport, N. Y., assignor to Richardson Aeroplane Company, Inc., New Orleans, La. Hydroaeroplane. No. 1,172,196; Feb. 15; Gaz. vol. 223; p. 934.
Chapman, Mark C. (See Chapman, Matthew T. and M. C.)
Chapman, Matthew T., assignor to The American Well Works, Aurora, Ill. Pump. No. 1,170,512; Feb. 8; Gaz. vol. 223; p. 298.
Chapman, Matthew T. and M. C., assignors to The American Well Works, Aurora, Ill. Pumping machinery. No. 1,169,772; Feb. 1; Gaz. vol. 223; p. 9.
Chappel, William, Barrie, Ontario, Canada. Binder. No. 1,170,799; Feb. 8; Gaz. vol. 223; p. 400.
Charles, John. (See Brewer and Charles.)
Charles, Walter T., Chicago, Ill. Fire-extinguisher. No. 1,170,513; Feb. 8; Gaz. vol. 223; p. 299.
Charlton, George, Detroit, Mich. Retouching-machine. No. 1,173,410; Feb. 29; Gaz. vol. 223; p. 1472.
Cheek, Roy D., Olney, Ill. Wheat-separator. No. 1,172,110; Feb. 15; Gaz. vol. 223; p. 907.
Chein, Julius, Montclair, N. J. Toy cannon. No. 1,172,766; Feb. 22; Gaz. vol. 223; p. 1203.
Chemische Fabrik Griesheim-Elektron. (See Hickmann, Wilhelm, assignor.)
Cheney, Forest, Jamestown, N. Y., assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Sound resonator and amplifier. No. 1,170,800; Feb. 8; Gaz. vol. 223; p. 400.
Cheney, Forest, assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Sound-reproducing machine. No. 1,170,801; Feb. 8; Gaz. vol. 223; p. 400.
Cheney, Forest, assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Sound-reproducing machine. No. 1,170,802; Feb. 8; Gaz. vol. 223; p. 401.
Cheney, Forest, assignor, by mesne assignments, to Cheney Talking Machine Company, Chicago, Ill. Sound-reproducing apparatus. No. 1,170,803; Feb. 8; Gaz. vol. 223; p. 401.
Cheney, Herbert W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Motor-driven compressor. No. 1,172,581; Feb. 22; Gaz. vol. 223; p. 1136.
Cheney Talking Machine Company. (See Cheney, Forest, assignor.)
Chetmack, Abel E., Providence, R. I. Tire-guard. No. 1,170,477; Feb. 1; Gaz. vol. 223; p. 250.
Chevrolet Motor Company of New York. (See Mason and Sturt, assignors.)
Chew, Harry L., and W. S. Sergeant, Washington, D. C., assignors to Hub Shock Absorber Wheel Company, Lancaster, Pa. Resilient wheel. No. 1,169,924; Feb. 1; Gaz. vol. 223; p. 61.
Chicago-Cleveland Car Roofing Company. (See Russell, Thomas N., assignor.)
Chicago Reinforced Concrete Pipe Company. (See Whitman, Nathan D., assignor.)
Chidester, Walter S. (See Martin and Chidester.)
Chittenden, George L., Cleveland, Ohio. Hanger for wall-radiators. No. 1,172,582; Feb. 22; Gaz. vol. 223; p. 1136.
Chollet, Louis, Paris, France, assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company. Diaphragm-horn. No. 1,173,559; Feb. 29; Gaz. vol. 223; p. 1523.
Chopin, Alexis. (See Blondel and Chopin.)
Choralcelo Company. (See Severy and Sinclair, assignors.)
Chostner, James E., Benton, Mo. Shock-absorber. No. 1,172,672; Feb. 22; Gaz. vol. 223; p. 1168.
Christ, E. W., *et al.* (See Christ, Frank, assignor.)
Christ, Frank, assignor of one-third to E. W. Christ and one-third to L. J. Christ, Turkey River, Iowa. Gate. No. 1,173,929; Feb. 29; Gaz. vol. 223; p. 1653.
Christ, L. J., *et al.* (See Christ, Frank, assignor.)
Christensen, Edward, *et al.* (See Miller, Andrew B., assignor.)
Christensen, George H., Chicago, Ill. Receptacle-holder. No. 1,170,414; Feb. 1; Gaz. vol. 223; p. 228.

Christensen, Peter A., Christiania, assignor to A. Hanneborg, Haugrim, Norway. Excavating-machine. No. 1,171,771; Feb. 15; Gaz. vol. 223; p. 782.

Christiansen, Christian, Sioux Falls, S. D. Axle-truss. No. 1,172,111; Feb. 15; Gaz. vol. 223; p. 907.

Christlein, Paul, Baden, and E. Brown, Bahnhofweg, assignors to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Turbine-blade. No. 1,173,097; Feb. 22; Gaz. vol. 223; p. 1317.

Christman, Mathias, St. Paul, Minn. Curing smoked or dried beef. No. 1,173,411; Feb. 29; Gaz. vol. 223; p. 1472.

Christopherson, Lambert M. (See Kuntz and Christopherson.)

Chroninger, Jerry F., Delphos, Kans. Pitman-spreader. No. 1,171,320; Feb. 8; Gaz. vol. 223; p. 583.

Chubb, Lewis W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric measuring instrument for iron-loss testing. No. 1,170,607; Feb. 8; Gaz. vol. 223; p. 333.

Chubb, Lewis W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Method of and means for testing electrical apparatus. No. 1,170,608; Feb. 8; Gaz. vol. 223; p. 333.

Chubb, Lewis W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical system. No. 1,171,399; Feb. 8; Gaz. vol. 223; p. 611.

Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Coil for electrical apparatus. No. 1,171,501; Feb. 15; Gaz. vol. 223; p. 719.

Church, Edmund S., assignor to The National Cash Register Company, Dayton, Ohio. Cash and credit register. No. 1,169,773; Feb. 1; Gaz. vol. 223; p. 9.

Ciletti, Stanislao, Newark, N. J. Percolator. No. 1,171,022; Feb. 8; Gaz. vol. 223; p. 477.

Cincinnati Planer Company, The. (See Hayden, George D., assignor.)

Cincinnati Pulley Machinery Company, The. (See Hey, John G., assignor.)

Clapper, Leland, Two Harbors, Minn. Self-clearing ore-pocket. No. 1,172,007; Feb. 15; Gaz. vol. 223; p. 870.

Claremont, Ernest A. (See Stratton and Claremont.)

Clark, Albert C., Chicago, Ill. Anesthetic apparatus. No. 1,173,172; Feb. 29; Gaz. vol. 223; p. 1387.

Clark Brothers Wireless Selection and Control Company. (See Clark, Lee B. and R. A., assignors.)

Clark, Charles A., New York, N. Y. Method and apparatus for curing beans. No. 1,173,930; Feb. 29; Gaz. vol. 223; p. 1633.

Clark, Cyrus C., Marshall, Wis. Agricultural implement. No. 1,171,023; Feb. 8; Gaz. vol. 223; p. 478.

Clark, Edward C. (See Relboldt and Clark.)

Clark, Edward W., 3d, executor. (See Taylor, Frederick W.)

Clark, Edwin W., Chicago, Ill. Pump-cylinder. No. 1,170,737; Feb. 8; Gaz. vol. 223; p. 379.

Clark, Elmer A., Joliet, Ill. Dough-molding machine. No. 1,171,704; Feb. 15; Gaz. vol. 223; p. 759.

Clark, Ezra C., and J. Arrufat, assignors to Ansco Company, Binghamton, N. Y. Focusing device for cameras. No. 1,174,014; Feb. 29; Gaz. vol. 223; p. 1679.

Clark, John L., Lockport, assignor of one-fifth to E. F. Mandell, Chicago, Ill. Rotary internal-combustion engine. No. 1,170,415; Feb. 1; Gaz. vol. 223; p. 229.

Clark, Lee B. and R. A., Mutual, Okla., assignors, by mesne assignments, to Clark Brothers Wireless Selection and Control Company, Phoenix, Ariz. Distant selection and control by means of electromagnetic waves. No. 1,172,515; Feb. 22; Gaz. vol. 223; p. 1111.

Clark, Melville, assignor to Melville Clark Piano Company, Chicago, Ill. Securing means for striker-pneumatics. No. 1,173,252; Feb. 29; Gaz. vol. 223; p. 1415.

Clark, Raymond A. (See Clark, Lee B. and R. A.)

Clark, Robert G., New York, N. Y. Automatic feeding mechanism. No. 1,169,925; Feb. 1; Gaz. vol. 223; p. 62.

Clark, Robert M. (See Rasmussen and Clark.)

Clark, Roswell M., Kansas City, Mo. Spring-wheel. No. 1,172,870; Feb. 22; Gaz. vol. 223; p. 1240.

Clark, Stuart J., assignor of one-fourth to E. Faust, Auburn, Ill., and one-fourth to J. Dodot, McCook, Nebr. Crib. No. 1,171,024; Feb. 8; Gaz. vol. 223; p. 478.

Clark, William R., Spokane, Wash. Carbureter. No. 1,172,432; Feb. 22; Gaz. vol. 223; p. 1080.

Clarke, John T. (See Hillman and Ward, assignors.)

Clarke, John T. (See Hillman, Henry G., assignor.)

Claudel, Charles H., Levallois-Perret, France. Carbureter. No. 1,170,416; Feb. 1; Gaz. vol. 223; p. 229.

Claudel, Charles H., Levallois-Perret, France. Carbureter. No. 1,170,417; Feb. 1; Gaz. vol. 223; p. 230.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Semi-automatic telephone-exchange system. No. 1,173,560; Feb. 29; Gaz. vol. 223; p. 1524.

Claussen, Ernst, Hagen, Germany. Apparatus for purifying water. No. 1,173,709; Feb. 29; Gaz. vol. 223; p. 1575.

Clay, Albert B., Scranton, Pa. Hot-water-service apparatus. No. 1,173,484; Feb. 29; Gaz. vol. 223; p. 1496.

Clayton, Howard D. (See Garner and Clayton.)

Clearwater, Harley M., Troy, N. Y., assignor, by mesne assignments, to Reece Folding Machine Company, Boston, Mass. Blank-folding machine. No. 1,172,348; Feb. 22; Gaz. vol. 223; p. 1046.

Cleaveland, Rollin E. (See Jeffery, John A., assignor.)

Cleaver, Howard C., London, England. Internal-combustion engine. No. 1,172,940; Feb. 22; Gaz. vol. 223; p. 1265.

Clément, Louis, Paris, and C. Rivière, Pantin, near Paris, France, assignors to Actien Gesellschaft fur Anilin Fabrikation, Berlin, Germany. Producing coating compositions of acetyl cellulose. No. 1,173,931; Feb. 29; Gaz. vol. 223; p. 1653.

Clemments, Thomas W., assignor to Haysler Manufacturing Company, Fredonia, Kans. Washboard. No. 1,172,941; Feb. 22; Gaz. vol. 223; p. 1266.

Cleveland, Erastus L., Elyria, Ohio. Drill-jar. No. 1,172,942; Feb. 22; Gaz. vol. 223; p. 1266.

Cleveland Folding Machine Company, The. (See Kimball, Robert E., assignor.)

Cleveland Foundry Company, The. (See Chadwick, Lee S., assignor.)

Cleveland Foundry Company, The. (See Roth, Emil, assignor.)

Cleveland, George E., Fairmount, Ind., assignor to Cleveland Machine Company. Glass severing and pressing mechanism. No. 1,171,928; Feb. 15; Gaz. vol. 223; p. 841.

Cleveland Machine Company. (See Cleveland, George E., assignor.)

Closmann, Edward A., Vienna, Austria-Hungary. Buttoning device. No. 1,172,516; Feb. 22; Gaz. vol. 223; p. 1112.

Closz, Jacob. (See Bowers, Benjamin S., assignor.)

Clow, William E. (See Cochran and Clow.)

Cluett, Peabody & Co. (See Hurd, Hubbard F., assignor.)

Cobb, George L., Glade, Kans. Valve mechanism for internal-combustion engines. No. 1,172,871; Feb. 22; Gaz. vol. 223; p. 1240.

Cobb, John L., assignor to Automatic Air-Lock Train-Pipes Couplers Company, Los Angeles, Cal. Coupling. No. 1,173,997; Feb. 29; Gaz. vol. 223; p. 1673.

Cochand, Jules, Zurich, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Engine construction. No. 1,173,412; Feb. 29; Gaz. vol. 223; p. 1472.

Cochran, Smith H., and W. E. Clow, Chicago, Ill. Reversing mechanism. No. 1,169,774; Feb. 1; Gaz. vol. 223; p. 9.

Cockburn, David, and D. MacNicoll, Cardonald, near Glasgow, Scotland. Safety-valve. No. 1,169,926; Feb. 1; Gaz. vol. 223; p. 62.

Cockrell, Grace, Niagara Falls, N. Y. Breakfast food. No. 1,173,932; Feb. 29; Gaz. vol. 223; p. 1654.

Cocks, Edgar, Los Angeles, Cal. Door-bed. No. 1,170,478; Feb. 1; Gaz. vol. 223; p. 250.

Coffee, James A., Lawrenceville, N. J. Supporting apparatus for furnace hoes or poker-bars. No. 1,171,504; Feb. 15; Gaz. vol. 223; p. 690.

Colt, Albert M., Chicago, Ill. Mailing-folder. No. 1,171,592; Feb. 15; Gaz. vol. 223; p. 720.

Colby, Frederick W., Boston, Mass. Telephone-index. No. 1,171,838; Feb. 15; Gaz. vol. 223; p. 807.

Coldwell, Harry T., Newburgh, N. Y. Stationary knife-bar for lawn-mowers. No. 1,171,593; Feb. 15; Gaz. vol. 223; p. 720.

Coldwell, William H., Newburgh, N. Y. Lawn mowing and sweeping machine, &c. No. 1,173,485; Feb. 29; Gaz. vol. 223; p. 1497.

Cole, Alonzo R. (See Harker, John, assignor.)

Cole, David, Tucson, Ariz. Grinding-mill. No. 1,172,673; Feb. 22; Gaz. vol. 223; p. 1168.

Cole, George K., Hollister, Cal. Traction-engine drive. No. 1,173,486; Feb. 29; Gaz. vol. 223; p. 1498.

Colebourn, William J., assignor to Kentucky Wagon Manufacturing Company, Louisville, Ky. Dumping-wagon. No. 1,173,413; Feb. 29; Gaz. vol. 223; p. 1473.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Gem-polishing machine. No. 1,173,173; Feb. 29; Gaz. vol. 223; p. 1387.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Gem-polishing machine. No. 1,173,174; Feb. 29; Gaz. vol. 223; p. 1388.

Coleman, Clyde J., New Rochelle, N. Y., assignor, by mesne assignments, to Stern-Coleman Diamond Machine Company, Inc. Gem-polishing machine. No. 1,173,175; Feb. 29; Gaz. vol. 223; p. 1388.

Coleman, Frederick A., Gates Mills, D. S. Hawkins, and A. J. Farrell, assignors to The Coleman Foundry Equipment Company, Cleveland, Ohio. Controlling device for sand-blast apparatus. No. 1,172,008; Feb. 15; Gaz. vol. 223; p. 871.

Coleman Foundry Equipment Company, The. (See Coleman, Hawkins, and Farrell, assignors.)

Coleman, James E., San Francisco, Cal. Coin-detector. No. 1,172,872; Feb. 22; Gaz. vol. 223; p. 1241.

Collapso Products Company. (See Smith, Carleton W., assignor.)

Collier, Benjamin P., New Decatur, Ala. Spring and roller attachment for automobile-curtains. No. 1,169,927; Feb. 1; Gaz. vol. 223; p. 63.

Collier, William H., Nashville, Tenn. Starter and light control for motors. No. 1,172,583; Feb. 22; Gaz. vol. 223; p. 1136.

Collignon, William C. P., Chicago, assignor to Schiller Piano Company, Oregon, Ill. Sheet-controlling mechanism. No. 1,172,433; Feb. 22; Gaz. vol. 223; p. 1080.

Collins, Charles C., Sioux City, Iowa. Copy-holder. No. 1,172,943; Feb. 22; Gaz. vol. 223; p. 1266.

Collins, Edgar F., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,172,944; Feb. 22; Gaz. vol. 223; p. 1267.

Collins, Jeffrey N., Jackson, Mich. Vehicle side curtain. No. 1,171,025; Feb. 8; Gaz. vol. 223; p. 479.

Collins, Roy A., Gerster, Mo. Automatic baling-machine. No. 1,170,141; Feb. 1; Gaz. vol. 223; p. 135.

Colonial Trust Company, The, trustee. (See Flanders, Warren B., assignor.) (Reissue.)

Columbia-Knickerbocker Trust Company, trustee. (See Seward and Von Kügelgen, assignors.) (Reissue.)

Columbia-Knickerbocker Trust Company. (See Von Kügelgen and Seward, assignors.) (Reissue.)

Columbian Enameling & Stamping Company. (See Nelson, Andrew W., assignor.)

Colwell, Alvah J., and A. T. Kenney, Norfolk, Nebr. Steering and transmission mechanism for traction-vehicles. No. 1,170,877; Feb. 8; Gaz. vol. 223; p. 426.

Combusto Devices Corporation. (See Shore, William E., assignor.)

Commons, William C., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I. Movable sine-bar. No. 1,169,928; Feb. 1; Gaz. vol. 223; p. 63.

Commonwealth Trust Company, executor. (See Jones, Joshua W.)

Compagnie Generale Des Etablissements Pathe Freres, Phonographe Et Cinematographe. (See Marette, Jacques, assignor.)

Compton, Clarence D., New York, N. Y. Combination rigid and flexible frame for motor-cycles. No. 1,173,770; Feb. 29; Gaz. vol. 223; p. 1597.

Compton, Henry P., Florence, Tex. Pneumatic knee-pad. No. 1,173,487; Feb. 29; Gaz. vol. 223; p. 1498.

Compton, Lewis R., East Orange, N. J., assignor to The Hatfield Rail-Joint Manufacturing Company, Macon, Ga. Rail-joint. No. 1,172,009; Feb. 15; Gaz. vol. 223; p. 871.

Con. P. Curran Printing Company. (See Hart, Alphonse S., assignor.)

Concrete Flooring Company, The. (See Evers, William H., assignor.)

Concrete Piling Company. (See Jones, Harry T., assignor.)

Coney, William, assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,170,481; Feb. 1; Gaz. vol. 223; p. 251.

Conklin Pen Manufacturing Company, The. (See Mooney, Frank H., assignor.)

Conley Electric Furnace Company, The. (See Hampton, William H., assignor.)

Conlie, Henry F., Centralia, Ill. Kraut-cutter. No. 1,170,963; Feb. 8; Gaz. vol. 223; p. 455.

Connecticut Dynamo & Motor Co. (See McDermid, Donald, assignor.)

Connelly, Eugene P., Boston, Mass. Refrigerating apparatus. No. 1,172,873; Feb. 22; Gaz. vol. 223; p. 1241.

Conner, Clement L. (See Conner, Okey J. and C. L.)

Conner, Okey J. and C. L., Covington, Okla. Wire-screen rack. No. 1,173,339; Feb. 29; Gaz. vol. 223; p. 1447.

Connington, Thomas W., Clarksburg, W. Va. Glass-furnace. No. 1,172,674; Feb. 22; Gaz. vol. 223; p. 1169.

Conrad, Ezra M., Seville, Ohio. Vehicle spring-tire. No. 1,172,434; Feb. 22; Gaz. vol. 223; p. 1080.

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Spark-advancer. No. 1,171,594; Feb. 15; Gaz. vol. 223; p. 721.

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vehicle-lighting system. No. 1,171,595; Feb. 15; Gaz. vol. 223; p. 721.

Conrad, Frank, Pittsburgh, and T. Abtmeyer, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,171,596; Feb. 15; Gaz. vol. 223; p. 721.

Conrad, Fred C. (See Weckwerth and Conrad.)

Conrad, John B., Nicolaus, Cal. Watering-trough. No. 1,172,584; Feb. 22; Gaz. vol. 223; p. 1137.

Consolidated Car-Heating Company. (See McElroy, James F., assignor.)

Continental Can Company. (See Robinson and Coyle, assignors.)

Continental & Commercial Trust & Savings Bank, trustee. (See Michie, Robert, assignor.)

Convery, John J., Akron, Ohio. Shock-absorbing spring suspension device. No. 1,171,839; Feb. 15; Gaz. vol. 223; p. 807.

Conway, George M., Jersey City, N. J., assignor to The Torsion Balance Company, New York, N. Y. Torsion-balance scale. No. 1,169,929; Feb. 1; Gaz. vol. 223; p. 63.

Conway, Nannie D., Portland, Oreg. Hook. No. 1,170,047; Feb. 1; Gaz. vol. 223; p. 103.

Cook, Carson C., Stockton, Cal. Sprinkler. No. 1,173,771; Feb. 29; Gaz. vol. 223; p. 1597.

Cook, Charles M., Tacoma, Wash. Carboy-hat fastener. No. 1,172,874; Feb. 22; Gaz. vol. 223; p. 1242.

Cook, Charles P., Marshalltown, Iowa. Hot-water bag. No. 1,172,197; Feb. 15; Gaz. vol. 223; p. 935.

Cook, George H., Poplar, London, England. Stuffing-box packing. No. 1,171,090; Feb. 8; Gaz. vol. 223; p. 501.

Cook, George W. (See Edgell and Cook.)

Cook, John G., Brooklyn, N. Y. Cigar-lighter and the like. No. 1,172,875; Feb. 22; Gaz. vol. 223; p. 1242.

Cook, John W., assignor of one-third to G. A. Waldeck, Miami, Fla. Tunneling-machine. No. 1,172,876; Feb. 22; Gaz. vol. 223; p. 1242.

Cook, Judson, Leominster, Mass. Brake-shoe. No. 1,173,700; Feb. 29; Gaz. vol. 223; p. 1572.

Cook, Willard B., Newark, N. J. Cabinet. No. 1,172,945; Feb. 22; Gaz. vol. 223; p. 1267.

Cook, William E., St. George, and J. W. Musgrove, Stapleton, N. Y. Vehicle-tire. No. 1,171,091; Feb. 8; Gaz. vol. 223; p. 501.

Cooke, William A., Jr., New York, N. Y. Loose-leaf book. No. 1,172,010; Feb. 15; Gaz. vol. 223; p. 872.

Cockingham, De Witt C., and J. H. Hertner, assignors to The Baker R & L Company, Cleveland, Ohio. Driving mechanism for motor-vehicles. No. 1,173,340; Feb. 29; Gaz. vol. 223; p. 1447.

Cooksey, Nathaniel H., Costelow, Ky. Plow attachment. No. 1,172,946; Feb. 22; Gaz. vol. 223; p. 1268.

Coolbaugh, Melville F., and E. H. Quinney, Rapid City, S. D. Producing soluble salts of aluminum. No. 1,170,418; Feb. 1; Gaz. vol. 223; p. 230.

Cooley, Henry B., assignor to The American Paper Goods Company, Kensington, Conn. Dispensing-machine. No. 1,173,648; Feb. 29; Gaz. vol. 223; p. 1556.

Coombs, Milton C., New York, N. Y. Nursing-bottle. No. 1,173,176; Feb. 29; Gaz. vol. 223; p. 1389.

Coombs, Milton C., New York, N. Y. Nursing-bottle. No. 1,173,177; Feb. 29; Gaz. vol. 223; p. 1389.

Coon, Arthur B., Little Rock, Ark., and A. Van de Sandt, Portland, Oreg. Building construction. No. 1,170,419; Feb. 1; Gaz. vol. 223; p. 231.

Cooper, Charles F., Cleveland, Ohio. Composition of matter for finishing wood. No. 1,169,930; Feb. 1; Gaz. vol. 223; p. 64.

Cooper, Charles F., Cleveland, Ohio. Composition of matter for coating metals. No. 1,169,931; Feb. 1; Gaz. vol. 223; p. 64.

Cooper, Ellis W., Bloomfield, N. J., assignor to R. Hoe and Co., New York, N. Y. Inking mechanism. No. 1,173,488; Feb. 29; Gaz. vol. 223; p. 1498.

Cooper, Joel S., Santa Barbara, Cal. Threshing and cleaning machine. No. 1,172,011; Feb. 15; Gaz. vol. 223; p. 872.

Cooper, Leslie A., deceased; W. V. James, administrator, assignor of one-half to G. W. Kimball, Springfield, Mass. Sanitary drinking-fountain. No. 1,170,878; Feb. 8; Gaz. vol. 223; p. 427.

Cooper, William F., Norwalk, Ohio. Piano-action-operating mechanism for mechanical musical instruments. No. 1,170,514; Feb. 8; Gaz. vol. 223; p. 299.

Cooper, William F., Norwalk, Ohio. Sheet-winding indicator. No. 1,170,515; Feb. 8; Gaz. vol. 223; p. 300.

Cooper, William F., Norwalk, Ohio. Upright-piano action. No. 1,170,516; Feb. 8; Gaz. vol. 223; p. 300.

Coppage, Benjamin D., Wilmington, Del. Suction-box for paper-making machines. No. 1,170,142; Feb. 1; Gaz. vol. 223; p. 136.

Coppage, Benjamin D., Wilmington, Del. Balanced roll for paper-making machines. No. 1,171,172; Feb. 8; Gaz. vol. 223; p. 531.

Coppage, Benjamin D., Wilmington, Del. Friction-clutch. No. 1,171,173; Feb. 8; Gaz. vol. 223; p. 531.

Coppage, Benjamin D., Wilmington, Del. Felt-tightener for paper-making machines. No. 1,172,435; Feb. 22; Gaz. vol. 223; p. 1081.

Coppage, Benjamin D., Wilmington, Del. Balanced roll for paper-making machines. No. 1,172,947; Feb. 22; Gaz. vol. 223; p. 1268.

Coppus Engineering and Equipment Company. (See Coppus, Frans H. C., assignor.)

Coppus, Frans H. C., assignor to Coppus Engineering and Equipment Company, Worcester, Mass. Steam-turbine No. 1,172,436; Feb. 22; Gaz. vol. 223; p. 1081.

Corcoran, Cornelius B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,171,026; Feb. 8; Gaz. vol. 223; p. 479.

Corey, Charles W., Malden, assignor of one-half to I. S. Hall, West Medford, Mass. Telephone-book rest. No. 1,170,479; Feb. 1; Gaz. vol. 223; p. 250.

Cornell, Archer, Emoyeni, Zululand. Means for raising and lowering agricultural and other machines. No. 1,171,705; Feb. 15; Gaz. vol. 223; p. 759.

Cornell, Charles W., Jr., assignor of one-half to W. N. McCaw, San Francisco, Cal. Aeronautical device. No. 1,172,198; Feb. 15; Gaz. vol. 223; p. 935.

Cornwall, George R., Rye, N. Y. Exposing-table. No. 1,171,772; Feb. 15; Gaz. vol. 223; p. 783.

Cornwall, Harold D., Lowville, N. Y. Capping device. No. 1,169,775; Feb. 1; Gaz. vol. 223; p. 10.

Corry, Thomas A., Arequipa, Peru. Parabolic-mirror-grinding machine. No. 1,171,174; Feb. 8; Gaz. vol. 223; p. 532.

Corwin, Elmer R., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,772; Feb. 29; Gaz. vol. 223; p. 1598.

Corwin, Elmer R., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,773; Feb. 29; Gaz. vol. 223; p. 1598.

Corwin, Elmer R., assignor to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,776; Feb. 29; Gaz. vol. 223; p. 1599.

Corwin, Elmer R., assignor to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,777; Feb. 29; Gaz. vol. 223; p. 1600.

Cosgrove, John W. (See Erickson and Cosgrove.)

Cositt, Franklin M., and L. D. Castor, assignors to Ansco Company, Binghamton, N. Y. Apparatus for coating and drying photographic papers, photographic-film support and similar manufactures. No. 1,171,321; Feb. 8; Gaz. vol. 223; p. 583.

Cosmen, Lewis C., Niles, and W. J. Daum, Norwood Park, Ill. Packing-case. No. 1,173,558; Feb. 29; Gaz. vol. 223; p. 1523.

Cossman, Joseph H., New York, N. Y. Machine for grinding the edges of lenses. No. 1,171,028; Feb. 8; Gaz. vol. 223; p. 480.

Cossman, Joseph H., Irvington, N. J., assignor, by mesne assignments, to Cossman Manufacturing Company. Machine for grinding the edges of lenses and the like. No. 1,171,027; Feb. 8; Gaz. vol. 223; p. 479.

Cossman Manufacturing Company. (See Cossman, Joseph H., assignor.)

Cothran, William, and H. E. Tanner, Burlison, Tenn. Vehicle-brake. No. 1,172,949; Feb. 22; Gaz. vol. 223; p. 1268.

Cottom, William F., assignor of one-half to W. E. Cannon, De Ridder, La. T-square. No. 1,173,341; Feb. 29, Gaz. vol. 223; p. 1448.

Cotton, Frederick W., deceased, Boston; W. L. Williams, Holden, Mass., executor. Heel-machine. No. 1,173,098; Feb. 22; Gaz. vol. 223; p. 1318.

Cottrell, Edgar H., Westerly, R. I. Producing printed products. No. 1,170,609; Feb. 8; Gaz. vol. 223; p. 334.

Cottrell, Edgar H., Westerly, R. I. Machine for producing printed products. No. 1,170,610; Feb. 8; Gaz. vol. 223; p. 334.

Cottrell, Edgar H., Westerly, R. I. Machine for producing printed products. No. 1,171,092; Feb. 8; Gaz. vol. 223; p. 502.

Cottrell, Edgar H., Westerly, R. I. Producing printed products. No. 1,171,093; Feb. 8; Gaz. vol. 223; p. 503.

Coulbourn, Isaac W., Coldwater, Va. Feeding device for sawmills. No. 1,170,611; Feb. 8; Gaz. vol. 223; p. 335.

Coulombe, Joseph C., Northfield, Vt., assignor of one-half to W. H. Barker, New York, N. Y. Carbureting mechanism for gas-engines. No. 1,172,258; Feb. 22; Gaz. vol. 223; p. 1016.

Coupiln, Levi S., South Greenfield, Mo. Fly-trap. No. 1,172,767; Feb. 22; Gaz. vol. 223; p. 1203.

Courson, John F. (See Gulland, Charles, assignor.)

Courtot, Louis, Paris, France, assignor to American Radiator Company, Chicago, Ill. Combined stove and hot-water heater. No. 1,172,768; Feb. 22; Gaz. vol. 223; p. 1204.

Courtright, Clarence V., Miami, Fla. Bed-pan. No. 1,171,094; Feb. 8; Gaz. vol. 223; p. 503.

Cousineau, Adolph, Benicia, Cal. Railway-rail. No. 1,173,933; Feb. 29; Gaz. vol. 223; p. 1654.

Couture, Joseph D., Stratford, Conn. Safety appliance for elevators. No. 1,172,675; Feb. 22; Gaz. vol. 223; p. 1169.

Coventry, Theodore. (See Anderson and Coventry.)

Covey, Harry A., assignor of one-half to F. C. Eberly, Akron, Ohio. Tire remover and replacer. No. 1,170,612; Feb. 8; Gaz. vol. 223; p. 335.

Covington, Norris C., and J. Allred, Rockingham, N. C.; said Allred assignor to said Covington. Support. No. 1,173,143; Feb. 22; Gaz. vol. 223; p. 1334.

Cowley, James T., North Scituate, assignor to The Lamson Company, Boston, Mass. Distributing system. No. 1,170,048; Feb. 1; Gaz. vol. 223; p. 103.

Cox, Alfred. (See Frees and Cox.)

Cox, Thomas. (See Casey and Cox.)

Coyle, Andrew M., New York, N. Y., assignor to Gurney Electric Elevator Company, Honesdale, Pa. Ultimate-limit stop for elevators. No. 1,171,095; Feb. 8; Gaz. vol. 223; p. 503.

Coyle, Andrew M., New York, N. Y., assignor to Gurney Electric Elevator Company, Honesdale, Pa. Elevator-governor. No. 1,173,778; Feb. 29; Gaz. vol. 223; p. 1601.

Coyle, John. (See Robinson and Coyle.)

Coyle, Joseph A., Baltimore, Md. Rubber for removing marks from paper. No. 1,170,220; Feb. 1; Gaz. vol. 223; p. 164.

Coyne, Hooper, Baltimore, Md. Safety-razor. No. 1,171,175; Feb. 8; Gaz. vol. 223; p. 533.

Crabtree, Elihu F., Baltimore, Md. Outlet-fitting for tanks. No. 1,171,706; Feb. 15; Gaz. vol. 223; p. 759.

Craig, Clyde L., Washington Court-House, Ohio. Collapsible form for cisterns. No. 1,171,176; Feb. 8; Gaz. vol. 223; p. 533.

Craine, William, Brookfield, N. Y. Silo. No. 1,172,112; Feb. 15; Gaz. vol. 223; p. 907.

Crandall, Nathan W., assignor to M. M. Lide, Los Angeles, Cal. Bracket for automobile-buffers. No. 1,172,676; Feb. 22; Gaz. vol. 223; p. 1170.

Crane, Harry W., Philadelphia, Pa., assignor to International Window Manufacturing Company. Sash-pivot construction. No. 1,171,773; Feb. 15; Gaz. vol. 223; p. 783.

Cranston, Patterson E., Richland Center, Wis. Milk-cooler. No. 1,172,877; Feb. 22; Gaz. vol. 223; p. 1243.

Craven, Aaron S., Philadelphia, Pa. Expanding drill. No. 1,170,221; Feb. 1; Gaz. vol. 223; p. 165.

Crawford, Amos H., Liverpool, N. Y. Work-basket. No. 1,169,776; Feb. 1; Gaz. vol. 223; p. 10.

Crawford, Carl H., Spokane, Wash. Combined cultivator and weeder. No. 1,170,879; Feb. 8; Gaz. vol. 223; p. 427.

Crawford, Frank, Sr., assignor to The Crawford Manufacturing Company, New Brunswick, N. J. Thread-guide and guard for stop-motions. No. 1,172,950; Feb. 22; Gaz. vol. 223; p. 1269.

Crawford Manufacturing Company, The. (See Crawford, Frank, Sr., assignor.)

Cree, Lizzie A. (See Bailey, Benjamin F., assignor.)

Creedon, John J., and J. T. Miles, assignors of one-half to H. W. Cooper Saddlery Hardware Mfg. Company, Moline, Ill. Molding-machine. No. 1,173,414; Feb. 29; Gaz. vol. 223; p. 1473.

Crescent Stove Works. (See Dietrich, Henry C., assignor.)

Cressey, Steve E., San Pedro, Cal. Electric-fixture attachment. No. 1,169,932; Feb. 1; Gaz. vol. 223; p. 64.

Cressler, Edward P., Peabody, Kans. Artificial tooth. No. 1,172,878; Feb. 22; Gaz. vol. 223; p. 1243.

Crist, John H., Oakmont, Pa. Window-bracket. No. 1,172,259; Feb. 22; Gaz. vol. 223; p. 1017.

Crist, John H., Oakmont, Pa. Window-bracket. No. 1,172,260; Feb. 22; Gaz. vol. 223; p. 1017.

Croasdale, John P., Berwyn, assignor to Pioneer Suspender Company, Philadelphia, Pa. Packaging garters. No. 1,170,222; Feb. 1; Gaz. vol. 223; p. 165.

Crocker, Ralph R., Lincoln, Nebr. Automatic greaser for live stock. No. 1,170,964; Feb. 8; Gaz. vol. 223; p. 455.

Crocker, William J., Seattle, and D. Wallace, Walla Walla, Wash. Drain and waste pipe cleaner. No. 1,173,710; Feb. 29; Gaz. vol. 223; p. 1575.

Crooker, Edwin R., Los Angeles, Cal. Bath-mat. No. 1,173,561; Feb. 29; Gaz. vol. 223; p. 1524.

Crooker, John L., Boise, Idaho. Dirigible headlight. No. 1,173,649; Feb. 29; Gaz. vol. 223; p. 1556.

Crosby, Gorham, New York, N. Y. Signaling system. No. 1,170,613; Feb. 8; Gaz. vol. 223; p. 336.

Crosby Steam Gage & Valve Company. (See Phillips, Arthur P., assignor.)

Cross, Henry A., Bicknell, Ind. Forge. No. 1,173,650; Feb. 29; Gaz. vol. 223; p. 1556.

Crothers, Russell P., Cincinnati, Ohio. Search-light. No. 1,172,437; Feb. 22; Gaz. vol. 223; p. 1081.

Crotto, Frank E., assignor of one-half to S. Freshman, Dallas, Tex. Automatic air-controlling device. No. 1,172,438; Feb. 22; Gaz. vol. 223; p. 1082.

Crouch, Albert W., assignor to Milwaukee Yacht & Boat Company, Milwaukee, Wis. Wind-shield. No. 1,170,880; Feb. 8; Gaz. vol. 223; p. 428.

Crouse-Hinds Company. (See Olley, Raymond H., assignor.)

Crouse-Hinds Company. (See Skeel, Frederick F., assignor.)

Crowdus, Walter A., assignor to J. P. Mentzer, Chicago, Ill. Storage battery. No. 1,173,651; Feb. 29; Gaz. vol. 223; p. 1557.

Crowley, Charles, Perth, Western Australia, Australia. Pneumatic non-sinkable shield for boats. No. 1,170,420; Feb. 1; Gaz. vol. 223; p. 231.

Crown Cork & Seal Company of Baltimore City, The. (See Carper, Albert A., assignor.)

Crozier, Elizabeth, San Francisco, Cal. Camp-stool. No. 1,172,439; Feb. 22; Gaz. vol. 223; p. 1082.

Crutchley, Arthur, Brooklyn, N. Y. Carriage-spring connection. No. 1,171,386; Feb. 8; Gaz. vol. 223; p. 606.

Cubbison, Paul J., and R. G. McFarland, New Castle, Pa. Shock-absorber. No. 1,171,096; Feb. 8; Gaz. vol. 223; p. 504.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Water-heater. No. 1,171,929; Feb. 15; Gaz. vol. 223; p. 842.

Culling, Merritt A. (See Buffum and Culling.)

Cummings, Henry H., Newton, assignor to National Binding Machine Co., Boston, Mass. Strip-serving apparatus. No. 1,171,097; Feb. 8; Gaz. vol. 223; p. 504.

Cunningham Piano Company. (See Guarniery, Robert A., assignor.)

Cunningham, William P., Waukegan, assignor to American Metal Form Company, Chicago, Ill. Form for concrete structures. No. 1,170,049; Feb. 1; Gaz. vol. 223; p. 104.

Curley, John A., *et al.* (See La Moy, John H., assignor.)

Curtis, John D., assignor to Richardson Manufacturing Company, Worcester, Mass. Road-sanding machine. No. 1,172,012; Feb. 15; Gaz. vol. 223; p. 872.

Curtis Olive Corporation. (See Keebler and Sibley, assignors.)

Curtis, Roy D., San Diego, Cal. Brush. No. 1,171,505; Feb. 15; Gaz. vol. 223; p. 690.

Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Hydroaeroplane. No. 1,170,965; Feb. 8; Gaz. vol. 223; p. 456.

Curtiss Motor Company, The. (See Curtiss, Glenn H., assignor.)

Curtman, Louis J., New York, N. Y. Briquet and producing the same. No. 1,173,779; Feb. 29; Gaz. vol. 223; p. 1601.

Cuthbertson, Alexander R., Turners Falls, Mass. Pile-extracting mechanism. No. 1,173,780; Feb. 29; Gaz. vol. 223; p. 1601.

Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)

Cutler-Hammer Mfg. Co., The. (See Denhard, Harry W., assignor.)

Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)

Cutler-Hammer Mfg. Company, The. (See Klein, Charles J., assignor.)

Cutler-Hammer Mfg. Co., The. (See Packard, Horace N., assignor.)

Cutler, Henry H., and F. S. Wilhoit, Milwaukee, Wis. Circuit-controller. No. 1,170,738; Feb. 8; Gaz. vol. 223; p. 380.

Czerepienski, Alexander, and J. Baran, Buffalo, N. Y. Hydraulic fan. No. 1,171,322; Feb. 8; Gaz. vol. 223; p. 584.

D'Agostino, Antonio, Utica, N. Y., assignor of one-half to N. Gentile, Lawrence, Mass. Safety-envelop. No. 1,171,323; Feb. 8; Gaz. vol. 223; p. 584.

D'Alessandro, Pietro, assignor of one-half to J. A. Laury, Syracuse, N. Y. Powder-brush. No. 1,173,781; Feb. 29; Gaz. vol. 223; p. 1602.

D'Apice, Alfonzo, Chicago Heights, Ill. Bedclothes-holder. No. 1,171,840; Feb. 15; Gaz. vol. 223; p. 808.

D'Arcy, Frank P., Kalamazoo, Mich. Cushion structure. No. 1,172,344; Feb. 22; Gaz. vol. 223; p. 1047.

D'Arcy, William A., and W. S. Robertson, Rochester, N. Y. Safety mechanism for punch-presses. No. 1,172,709; Feb. 22; Gaz. vol. 223; p. 1204.

D'Huart, Emile, Luxemburg. Preparing hides and skins for tanning processes. No. 1,170,426; Feb. 1; Gaz. vol. 223; p. 233.

D'Oench, George A., New York, N. Y. Figure-toy attachment for disk phonographs. No. 1,170,427; Feb. 1; Gaz. vol. 223; p. 233.

Dachert, Alfred, Strassburg, and C. Heitz, Schiltigheim, Germany. Coloring medium for concentrated viscous sugar. No. 1,172,113; Feb. 15; Gaz. vol. 223; p. 907.

Daenitz, Max H., Hammond, Ind. Door-spring. No. 1,172,013; Feb. 15; Gaz. vol. 223; p. 872.

Dahlgren, Johan H., Stockholm, Sweden. Machine for producing blanks for nails, hook-nails, hooks, or the like. No. 1,171,506; Feb. 15; Gaz. vol. 223; p. 690.

Dahlstrom Metallic Door Company. (See Larson, Carl W., assignor.)

Dahlstrom Metallic Door Company. (See Larson and Olofson, assignors.)

Dahms, Henry T., Walcott, Iowa. Oil-burning stock-tank heater. No. 1,173,934; Feb. 29; Gaz. vol. 223; p. 1654.

Dale, Frank M., assignor to Motoring Clock Manufacturing Company, Sullivan, Ind. Timepiece attachment for automobiles. No. 1,170,223; Feb. 1; Gaz. vol. 223; p. 165.

Dallis, James H., Philadelphia, Miss. Saw-clamp. No. 1,172,951; Feb. 22; Gaz. vol. 223; p. 1269.

Dalton Adding Machine Company, The. (See Raber, Joseph, assignor.)

Dalton, Thomas F., assignor of one-half to W. J. Sheehy, Chicago, Ill. Patch-bolt. No. 1,171,098; Feb. 8; Gaz. vol. 223; p. 505.

Damerell, Henry. (See Roberts, Edgar E., assignor.)

Dammann, Milton, *et al.*, executors. (See Blum, Samuel H.)

Dana, William H., and T. F. Broderick, Lawrence, Mass. Alarm apparatus. No. 1,172,199; Feb. 15; Gaz. vol. 223; p. 935.

Dangler, Clifford S., and G. E. Hilton, Cleveland, Ohio, assignors to American Stove Company, St. Louis, Mo. Gas-stove. No. 1,172,952; Feb. 22; Gaz. vol. 223; p. 1269.

Daniels, Herbert F., Seattle, Wash. Regulating-valve. No. 1,170,050; Feb. 1; Gaz. vol. 223; p. 104.

Danielson, Oscar A., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting system. No. 1,171,415; Feb. 15; Gaz. vol. 223; p. 658.

Danquard, Thomas, assignor to Auto Pneumatic Action Company, New York, N. Y. Attachment for tracker-bars. No. 1,173,652; Feb. 29; Gaz. vol. 223; p. 1557.

Darby, Thomas S. (See Stineman and Darby.)

Darlington, Oscar M., *et al.* (See Andrews, Richard, assignor.)

Darnell, George C., Medford, N. J. Sectional weeder. No. 1,173,342; Feb. 29; Gaz. vol. 223; p. 1448.

Darnell, Silon A. (See Smith and Darnell.)

Darr, George E., Ontario, Oreg. Fruit-picker. No. 1,171,324; Feb. 8; Gaz. vol. 223; p. 584.

Darrow, George E., and G. C. Tudder, Eugene, Oreg. Extension step-ladder. No. 1,172,440; Feb. 22; Gaz. vol. 223; p. 1083.

Darwin, Horace, and C. C. Mason, Cambridge, England, assignors to Taylor Instrument Companies, Rochester, N. Y. Apparatus for regulating the temperature of fluids. No. 1,170,614; Feb. 8; Gaz. vol. 223; p. 336.

Daudelin, Felix E., Chicago, Ill. Ironing-board. No. 1,170,517; Feb. 8; Gaz. vol. 223; p. 300.

Daum, William J. (See Cosmen and Daum.)

David Lupton's Sons Company. (See Wilkinson, Eleazar T., assignor.)

Davidson, Frank E., New York, N. Y. Piston-ring. No. 1,172,677; Feb. 22; Gaz. vol. 223; p. 1170.

Davidson, Frank E., New York, N. Y. Piston-ring. No. 1,172,678; Feb. 22; Gaz. vol. 223; p. 1170.

Davies, Charles W. T., New York, N. Y. Necktie. No. 1,171,930; Feb. 15; Gaz. vol. 223; p. 842.

Davies, Charles W. T., New York, N. Y. Retainer-necktie. No. 1,172,261; Feb. 22; Gaz. vol. 223; p. 1017.

Davies, David P., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Traction-wheel. No. 1,170,051; Feb. 1; Gaz. vol. 223; p. 105.

Davis, Arthur D. (See Smith and Darnell, assignors.)

Davis, Bethuel M., assignor to C. C. Travis, Chicago, Ill. Vending-machine. No. 1,173,489; Feb. 29; Gaz. vol. 223; p. 1499.

Davis-Bournonville Company. (See Bucknam, Worthy C., assignor.)

Davis-Bournonville Company. (See Halter, George, assignor.)

Davis, Edwin E. (See Beebe and Davis.)

Davis, Henry M., Portsmouth, Va. Automatic releasing-hook. No. 1,173,053; Feb. 29; Gaz. vol. 223; p. 1557.

Davis, Jasper N., Denver, Colo. Storage-battery separator. No. 1,171,597; Feb. 15; Gaz. vol. 223; p. 722.

Davis, John, Bloomington, Ill. Test-connector. No. 1,173,099; Feb. 22; Gaz. vol. 223; p. 1318.

Davis Milk Machinery Company. (See Wilkinson, Stanley W., assignor.)

Davis, Robert H., London, England. Apparatus for administering oxygen to persons in a state of collapse by asphyxiation or other causes. No. 1,172,879; Feb. 22; Gaz. vol. 223; p. 1243.

Davis, Thomas J., San Francisco, Cal. Milk-can container and server. No. 1,169,933; Feb. 1; Gaz. vol. 223; p. 64.

Davison, G. Lanza. (See Hamilton, Edwin C., assignor.)

Dawes, John L., Pittsburgh, Pa. Sand-blast machine. No. 1,173,178; Feb. 29; Gaz. vol. 223; p. 1389.

Dawson, Arthur T., and G. T. Buckham, assignors to Vickers Limited, Westminster, London, England. Trunnion-blocks of gun-mountings. No. 1,171,099; Feb. 8; Gaz. vol. 223; p. 505.

Dawson, Joseph W., St. Louis, Mo., assignor to Barry-Wehmiller Machinery Company. Bottle-washing machine. No. 1,171,100; Feb. 8; Gaz. vol. 223; p. 505.

Day, Alfred B., Knoxville, Tenn. Mining-car wheel. No. 1,173,179; Feb. 29; Gaz. vol. 223; p. 1390.

Day, Charles, and G. E. Windeler, Hazel Grove, near Stockport, England, assignors to General Electric Company, Engine. No. 1,173,415; Feb. 29; Gaz. vol. 223; p. 1474.

Day, George H. (See McKinstry and Day.)

Day, George H., assignor to American Optical Company, Southbridge, Mass. Lens-clip. No. 1,173,253; Feb. 29; Gaz. vol. 223; p. 1415.

Day, Herbert W., Wollaston, assignor to The Spray Engineering Company, Boston, Mass. Tool for applying coating. No. 1,172,233; Feb. 15; Gaz. vol. 223; p. 946.

Day, Percy C. (See Falk and Day.)

Daykin, Ralph W. (See Gilchrist and Daykin.)

Dayton Engineering Laboratories Co. (See Kettering, Charles F., assignor.)

Dayton Engineering Laboratories Co., The. (See MacNab, Forrest B., assignor.)

De l'Eau, John P., Betteravia, Cal. Dental-floss holder. No. 1,171,177; Feb. 8; Gaz. vol. 223; p. 533.

De La Vergne Machine Co. (See Nonnenbruch, Otto H., assignor.)

De Bellis, Gennaro, Philadelphia, Pa. Musical chart. No. 1,172,442; Feb. 22; Gaz. vol. 223; p. 1083.

De Coteau, Elzear A., and H. F. Casey, Milford, Mass. Safety-fender for traction-cars. No. 1,171,101; Feb. 8; Gaz. vol. 223; p. 506.

De Fontaine, Wade H., New York, N. Y. Carbureter for kerosene and the like. No. 1,172,263; Feb. 22; Gaz. vol. 223; p. 1018.

De Forest, Lee, New York, N. Y. Automatic switching device for telephone systems. No. 1,170,882; Feb. 8; Gaz. vol. 223; p. 428.

De Forest, Lee, New York, N. Y., assignor, by mesne assignments, to Radio Telephone & Telegraph Company. Spark-gap for radiotone wireless-telegraph systems. No. 1,171,598; Feb. 15; Gaz. vol. 223; p. 722.

De Forest, Lee, and C. Logwood, New York, N. Y., assignors to Radio Telephone & Telegraph Company. Wireless receiving system. No. 1,170,881; Feb. 8; Gaz. vol. 223; p. 428.

De Khotinsky, Achilles, Chicago, Ill. Microscopic-slide drier. No. 1,170,739; Feb. 8; Gaz. vol. 223; p. 380.

De Laval Steam Turbine Company. (See Kennedy, Frank W., assignor.)

De Lee, Edward G., Jamestown, N. Y. Coil-spring vehicle-tire. No. 1,171,507; Feb. 15; Gaz. vol. 223; p. 690.

De Lukacsevics, Charles, West Nutley, N. J., assignor to G. W. Morgan, New York, N. Y. Internal-combustion engine. No. 1,173,100; Feb. 22; Gaz. vol. 223; p. 1319.

De Vaughn, Okey H., Parkersburg, W. Va. Saddle-spring for drills. No. 1,172,679; Feb. 22; Gaz. vol. 223; p. 1171.

De Voe, John M., Chicago, Ill., assignor to Weyman-Bruton Company, New York, N. Y. Tin-sheet-paraffining machine. No. 1,173,181; Feb. 29; Gaz. vol. 223; p. 1390.

De Wyckoff, Joseph. (See Rey, Michel, assignor.)

Deacon, George B., assignor to F. A. Rutherford, Battle Creek, Mich. Roller-skate attachment. No. 1,173,343; Feb. 29; Gaz. vol. 223; p. 1448.

Deagan, John C., Chicago, Ill. Piano without strings. No. 1,173,782; Feb. 29; Gaz. vol. 223; p. 1602.

Deagan, John C., Chicago, Ill. Percussion musical instrument. No. 1,173,783; Feb. 29; Gaz. vol. 223; p. 1602.

Deagan, John C., Chicago, Ill. Xylophone. No. 1,173,784; Feb. 29; Gaz. vol. 223; p. 1603.

Deagan, John C., Chicago, Ill. Percussion musical instrument. No. 1,173,785; Feb. 29; Gaz. vol. 223; p. 1603.

Dean, Carl W., and R. Hunt, Node, Wyo.; said Hunt assignor to said Dean. Track-lining jack. No. 1,171,931; Feb. 15; Gaz. vol. 223; p. 842.
Dean, William W., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill. Safety manipulating device for machinery. No. 1,170,615; Feb. 8; Gaz. vol. 223; p. 337.
Dearborn, Charles A., New York, N. Y. Work holding and feeding means for sewing-machines. No. 1,169,934; Feb. 1; Gaz. vol. 223; p. 65.
Deaver, Van Taylor, Canton, N. C. Chair-seat. No. 1,172,441; Feb. 22; Gaz. vol. 223; p. 1083.
Debaker, Louis, Luxembourg, Wis. Cutting attachment for grain-separators. No. 1,172,114; Feb. 15; Gaz. vol. 223; p. 907.
Debay, George C., assignor of one-half to G. A. Koehler, Cheswick, Pa. Glass-manipulating apparatus. No. 1,172,262; Feb. 22; Gaz. vol. 223; p. 1018.
Dechant, Frederick H., Reading, and W. R. Rohrbach, Sunbury, Pa. Gate-valve. No. 1,171,841; Feb. 15; Gaz. vol. 223; p. 808.
Dechant, Frederick H., Reading, and W. R. Rohrbach, Sunbury, Pa. Horizontal gate-valve. No. 1,171,842; Feb. 15; Gaz. vol. 223; p. 808.
Deffert, Richart R., Manville, N. J. Controlling-valve for steam-turbines. No. 1,173,180; Feb. 29; Gaz. vol. 223; p. 1390.
Delano, William A., New York, and E. R. Belmont, Hempstead, N. Y. Receiver-holding attachment for telephones. No. 1,170,421; Feb. 1; Gaz. vol. 223; p. 231.
Delmez, Célestin, Antwerp, Belgium. Portable machine for grinding rails. No. 1,171,325; Feb. 8; Gaz. vol. 223; p. 585.
Demarchi, Joseph F., East Orange, N. J. Roller-bearing. No. 1,171,102; Feb. 8; Gaz. vol. 223; p. 506.
Demarchi, Joseph F., East Orange, N. J. Transmission-gearing. No. 1,171,103; Feb. 8; Gaz. vol. 223; p. 506.
Demmer, Joseph, Dyersville, Iowa. Corn-planter harrow attachment. No. 1,171,178; Feb. 8; Gaz. vol. 223; p. 534.
Demoville, James L., San Francisco, Cal. Fan. No. 1,171,179; Feb. 8; Gaz. vol. 223; p. 534.
Dempster, John T. H., Schenectady, N. Y., assignor to General Electric Company. Adapter. No. 1,172,953; Feb. 22; Gaz. vol. 223; p. 1269.
Denhard, Harry W., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric heater. No. 1,171,104; Feb. 8; Gaz. vol. 223; p. 507.
Denio, William L., Rochester, N. Y. Thermostat. No. 1,172,880; Feb. 22; Gaz. vol. 223; p. 1244.
Denman, Ralph H., Ithaca, N. Y. Camera and instrument support. No. 1,170,422; Feb. 1; Gaz. vol. 223; p. 231.
Denman, Walter R., Akron, Ohio, assignor to Miller Rubber Company. Collapsible core. No. 1,170,423; Feb. 1; Gaz. vol. 223; p. 232.
Denman, Walter R., assignor to Miller Rubber Company, Akron, Ohio. Collapsible core. No. 1,170,424; Feb. 1; Gaz. vol. 223; p. 232.
Denman, Walter R., Akron, Ohio, assignor to Miller Rubber Company. Making tire-casings. No. 1,172,115; Feb. 15; Gaz. vol. 223; p. 908.
Dennis, Adolphus S., Lakewood, Ohio, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,171,326; Feb. 8; Gaz. vol. 223; p. 585.
Dennison, Gilbert, Handsworth, Birmingham, England. Watch-face protector. No. 1,169,935; Feb. 1; Gaz. vol. 223; p. 65.
Denny-Renton Clay and Coal Co. (See Keenan, John F., assignor.)
Dent Hardware Company, The. (See Schrader, Thomas O., assignor.)
Dental Cement Company. (See Miller, George S., assignor.)
Dental Manufacturing Company Limited. (See Shaw, David M., assignor.)
Depew, George M., Canandaigua, N. Y. Band-hoop. No. 1,173,998; Feb. 29; Gaz. vol. 223; p. 1673.
Depollier, Charles L. (See Jaques and Depollier.)
Depollier, Charles L., New York, N. Y. Watchcase, &c. No. 1,169,777; Feb. 1; Gaz. vol. 223; p. 11.
Derr, Charles E., assignor to Packard Motor Car Company, Detroit, Mich. Gear-cutting machine. No. 1,170,425; Feb. 1; Gaz. vol. 223; p. 233.
Derrenberger, Adam, Rochester, Wash. Shoestring-fastener. No. 1,172,954; Feb. 22; Gaz. vol. 223; p. 1270.
Derringer, Stephen, Philadelphia, Pa., assignor to Dietz Machine Works. Clenching device. No. 1,172,955; Feb. 22; Gaz. vol. 223; p. 1270.
Despard, Victor R., Chicago, Ill. Electric-lamp socket. No. 1,171,180; Feb. 8; Gaz. vol. 223; p. 534.
Detroit Can Company. (See Harbeck, Jervis R., assignor.)
Detroit Lubricator Company. (See Hodges, Frederick W., assignor.)
Deuchler, John C., Tiffin, Ohio. Lock-nut. No. 1,171,105; Feb. 8; Gaz. vol. 223; p. 507.
Deutsch, Max, New York, N. Y. Maternity-shoe. No. 1,172,770; Feb. 22; Gaz. vol. 223; p. 1205.
Deutsche Waffen- und Munitionsfabriken. (See Hanus, Ewald, assignor.)
Devericks, Filmore C., Clarksburg, W. Va. Drain for pipe-lines. No. 1,172,116; Feb. 15; Gaz. vol. 223; p. 908.
Device Testing Company, The. (See Canton, Allen A., assignor.)
Dewey, Ruel E., Grand Rapids, Mich. Triplicate vacuum and air trap. No. 1,171,599; Feb. 15; Gaz. vol. 223; p. 722.
Dexter, Thomas F., New Preston, Conn. Automatic relief device for steam-radiators. No. 1,171,181; Feb. 8; Gaz. vol. 223; p. 534.
Di Terlizzi, Tomaso, Somerville, Mass. Envelop-attaching clip. No. 1,171,707; Feb. 15; Gaz. vol. 223; p. 760.
Dibble, Frank C., Harney county, Oreg. Axle-housing. No. 1,171,182; Feb. 8; Gaz. vol. 223; p. 535.
Dick, Burns. (See Fynn and Dick.)
Dick, Burns, and V. A. Fynn, assignors to Wagner Electric Manufacturing Company, St. Louis, Mo. Ignition system. No. 1,172,771; Feb. 22; Gaz. vol. 223; p. 1205.
Dickard, Regan B., Austin, Tex. Brake-applying mechanism. No. 1,172,956; Feb. 22; Gaz. vol. 223; p. 1270.
Dickerson, Arthur D. (See Brown, Charles F., assignor.)
Dickerson, Charles L., Duchesne, Utah. Air-cushioned wheel. No. 1,169,936; Feb. 1; Gaz. vol. 223; p. 65.
Dickinson, Clinton W., La Crosse, Wis. Disk furrow-opener. No. 1,170,740; Feb. 8; Gaz. vol. 223; p. 380.
Dickinson, Fairleigh S., Rutherford, N. J. Thermometer. No. 1,172,117; Feb. 15; Gaz. vol. 223; p. 908.
Dickson, George F., Chicago, Ill, assignor to J. G. Cherry Company, Cedar Rapids, Iowa. Air-cooling apparatus. No. 1,171,387; Feb. 8; Gaz. vol. 223; p. 607.
Dickson, Robert G., Toronto, Ontario, Canada. Window-ventilator. No. 1,173,101; Feb. 22; Gaz. vol. 223; p. 1319.
Diebold, Frank, Muskegon, Mich. Floating cutter and holder. No. 1,170,224; Feb. 1; Gaz. vol. 223; p. 166.
Diehl, George E., *et al.* (See Andrews, Richard, assignor.)
Diehl, Philip, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Gear-mounting. No. 1,171,327; Feb. 8; Gaz. vol. 223; p. 585.
Diehl, Robert N., Hanford, Cal. Resilient platform for striking-bags. No. 1,173,786; Feb. 29; Gaz. vol. 223; p. 1603.
Diener, Magdalena, and C. F. Urban, Milwaukee, Wis. Ventilated hat. No. 1,170,052; Feb. 1; Gaz. vol. 223; p. 105.
Dietrich, Henry C., assignor to Crescent Stove Works, Evansville, Ind. Baffle-plate. No. 1,172,345; Feb. 22; Gaz. vol. 223; p. 1047.
Dietz Machine Works. (See Derringer, Stephen, assignor.)
Digre, Henry, and J. Nelson; said Nelson assignor to E. E. Eveson, Toronto, S. D. Belt guide and thrower. No. 1,173,935; Feb. 29; Gaz. vol. 223; p. 1654.
Dikeman, Myron J., Detroit, Mich. Electrical device for changing the direction of rotation of shafts. No. 1,169,937; Feb. 1; Gaz. vol. 223; p. 65.
Dilks, Charles W., Plainfield, N. J. Piston-packing. No. 1,172,518; Feb. 22; Gaz. vol. 223; p. 1112.
Dill, Charles F., Glenarm, Ill. Tatting-shuttle. No. 1,173,102; Feb. 22; Gaz. vol. 223; p. 1319.
Dillmore, Richard C., Philadelphia, Pa. Resilient tire. No. 1,170,225; Feb. 1; Gaz. vol. 223; p. 166.
Dillon, Oval L., Bloomington, assignor of one-third to A. C. Funk and one-third to L. F. Funk, Shirley, Ill. Wrench. No. 1,171,328; Feb. 8; Gaz. vol. 223; p. 586.
Dingee, Isaac, Charlestown, and E. T. Smith, Boston, Mass. Hat-machine. No. 1,171,106; Feb. 8; Gaz. vol. 223; p. 507.
Dintaman, Abel, Alto, Mich. Bean and pea lifter and cleaner. No. 1,170,616; Feb. 8; Gaz. vol. 223; p. 337.
Ditcham, William T., Twickenham, England. Radiotelephone transmitting system. No. 1,173,562; Feb. 29; Gaz. vol. 223; p. 1524.
Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Switch-selector. No. 1,173,254; Feb. 29; Gaz. vol. 223; p. 1415.
Djuberg, Adolph F., Consul, Saskatchewan, Canada. Beet-harvester. No. 1,172,118; Feb. 15; Gaz. vol. 223; p. 909.
Dobbin, Henry F., New York, N. Y., assigner, by mesne assignments, to Western Electric Company, Incorporated. Selector-switch. No. 1,172,585; Feb. 22; Gaz. vol. 223; p. 1138.
Dobbins, Michael T. (See Shough and Dobbins.)
Doble, William A., and L. M. Karnasch, assignors to The Pelton Water Wheel Company, San Francisco, Cal. Hydraulic motor. No. 1,173,416; Feb. 29; Gaz. vol. 223; p. 1474.
Doble, William H., *et al.* (See Field, Samuel B., assignor.)
Dodd, Frank W., Blackheath Park, England. Automobile torpedo. No. 1,173,563; Feb. 29; Gaz. vol. 223; p. 1525.
Dodge Brothers. (See Dodge, John F. and H. E., assignors.)
Dodge, Horace E. (See Dodge, John F. and H. E.)
Dodge, Howard A., Los Angeles, Cal. Drawer-stop device. No. 1,172,200; Feb. 15; Gaz. vol. 223; p. 935.
Dodge, John F., Detroit, and H. E. Dodge, Grosse Pointe, assignors to Dodge Brothers, Detroit, Mich. Gear-shifting mechanism. No. 1,172,881; Feb. 22; Gaz. vol. 223; p. 1244.
Dodot, John, *et al.* (See Clark, Stuart J., assignor.)
Doehler, Augustine. (See Matthews, George S., assignor.)
Doherty, George P., Chicago, Ill. Copy-holder. No. 1,172,681; Feb. 22; Gaz. vol. 223; p. 1171.

Doherty, Henry L., New York, N. Y. Carbonizing coal. No. 1,172,682; Feb. 22; Gaz. vol. 223; p. 1172.
Doherty, Henry L., New York, N. Y. Heat regeneration. No. 1,173,999; Feb. 29; Gaz. vol. 223; p. 1674.
Dolan, John L., Etna, Pa. Car-replacer. No. 1,172,014; Feb. 15; Gaz. vol. 223; p. 873.
Dolge, William, and W. "E." Draper, San Francisco, Cal. Tax-bill. No. 1,174,000; Feb. 29; Gaz. vol. 223; p. 1674.
Donnellon, Andrew J., Cincinnati, Ohio. Automatic flush-valve. No. 1,172,957; Feb. 22; Gaz. vol. 223; p. 1271.
Donning, George W., Stamford, Conn. Engine. No. 1,170,966; Feb. 8; Gaz. vol. 223; p. 456.
Donning, George W., Stamford, Conn. Machine for treating trees. No. 1,170,967; Feb. 8; Gaz. vol. 223; p. 457.
Donohue, James S., assignor of one-half to M. V. Moran, Washington, D. C. Clean-out service connection. No. 1,172,958; Feb. 22; Gaz. vol. 223; p. 1271.
Dorau, John P., Jefferson, Wis. Gearing for washing-machines. No. 1,172,264; Feb. 22; Gaz. vol. 223; p. 1018.
Dorau, John P., Jefferson, Wis. Clothes-pounder. No. 1,172,680; Feb. 22; Gaz. vol. 223; p. 1171.
Dorey, George R., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Door. No. 1,169,778; Feb. 1; Gaz. vol. 223; p. 11.
Dormon, Green H., Bastrop, La. Non-freezing hydrant. No. 1,172,959; Feb. 22; Gaz. vol. 223; p. 1272.
Dornbach, Mathias, Philadelphia, Pa. Grain-elevator. No. 1,173,344; Feb. 29; Gaz. vol. 223; p. 1449.
Dorricott, Charles W. (See Smith and Dorricott.)
Dorricott, Charles W., assignor to Electrelle Company, Philadelphia, Pa. Controlling mechanism for phrasing-bars. No. 1,170,617; Feb. 8; Gaz. vol. 223; p. 337.
Doty, Walter G., Dayton, Ohio. Perforated-music-sheet cutter. No. 1,171,932; Feb. 15; Gaz. vol. 223; p. 842.
Dougan, Kennedy, Minneapolis, Minn. Type-writer. No. 1,171,774; Feb. 15; Gaz. vol. 223; p. 783.
Dougherty, Frank H. (See Riesberg, Van Vechton, assignor.)
Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Circuit-coupling. No. 1,173,711; Feb. 29; Gaz. vol. 223; p. 1576.
Douglas & Rudd Manufacturing Company. (See Douglas, Harry A., assignor.)
Doust, James C., assignor of three-fourths to J. H. Lumbers, Toronto, Ontario, Canada. Wire-cutting attachment for firearms. No. 1,173,936; Feb. 29; Gaz. vol. 223; p. 1654.
Dover Stamping and Manufacturing Company. (See Whitney, Horace E., assignor.)
Dow Wire & Iron Works. (See Gotthardt, Henry R., assignor.)
Downey, William H. J., Delaware City, Del. Attachment for barbers' chairs. No. 1,171,107; Feb. 8; Gaz. vol. 223; p. 508.
Downing, Ira S., Cleveland, Ohio. Window-latching device. No. 1,171,775; Feb. 15; Gaz. vol. 223; p. 784.
Downing, Otto P., Pecos, Tex., assignor to Downing Pneumatic Wheel Company. Vehicle-wheel. No. 1,173,490; Feb. 29; Gaz. vol. 223; p. 1499.
Downing, Otto P., Houston, Tex., assignor to Downing Pneumatic Wheel Company. Vehicle-wheel. No. 1,173,491; Feb. 29; Gaz. vol. 223; p. 1500.
Downing Pneumatic Wheel Company. (See Downing, Otto P., assignor.)
Downing Pneumatic Wheel Company. (See Kettler, Martin F., assignor.)
Doxey, John A., Chicago, Ill. Shock-absorber. No. 1,170,226; Feb. 1; Gaz. vol. 223; p. 166.
Drahonovsky, John B., Milwaukee, Wis. Resilient wheel. No. 1,169,779; Feb. 1; Gaz. vol. 223; p. 11.
Drahonovsky, John B., assignor to J. B. D. Holding Company, Milwaukee, Wis. Resilient wheel. No. 1,172,234; Feb. 15; Gaz. vol. 223; p. 946.
Drake, Orley M. (See Barnes and Drake.)
Draper Company. (See Boucher, Thomas, assignor.)
Draper Company. (See Riley, William, assignor.)
Draper Company. (See Smith, Charles A., assignor.)
Draper Company. (See Stansfield, Charles, assignor.)
Draper Company. (See Stimpson, Edward S., assignor.)
Draper, Wellington "E." (See Dolge and Draper.)
Dresher, Raymond. (See Heebner, Felver, and Dresher.)
Dresler, Ernst, Berlin-Neukölln, assignor to Ehrich & Graetz, Berlin, Germany. Gas-lamp. No. 1,172,683; Feb. 22; Gaz. vol. 223; p. 1172.
Dressler, Conrad, Chelsea, London, England. Oven suitable for use in the manufacture of tiles, bricks, pottery, and analogous ware, for annealing, and for other purposes. No. 1,170,428; Feb. 1; Gaz. vol. 223; p. 234.
Driskill, Frederick E., Berwick, La. Direction-indicator. No. 1,172,960; Feb. 22; Gaz. vol. 223; p. 1272.
Droitcour, Michael A., Delphos, Ohio. Sheet-advancing mechanism. No. 1,170,053; Feb. 1; Gaz. vol. 223; p. 105.
Droitcour, Michael A., Delphos, Ohio. Bed and cylinder drive for printing-presses. No. 1,171,843; Feb. 15; Gaz. vol. 223; p. 809.
Dronsfield, James, Oldham, England. Machine for wiring grooved rollers. No. 1,173,492; Feb. 29; Gaz. vol. 223; p. 1500.
Druley, Charles C., Middletown, Ind. Necktie-holder. No. 1,172,119; Feb. 15; Gaz. vol. 223; p. 909.
Drury, John, and F. J. Gray, London, England. Speed-changing mechanism. No. 1,173,493; Feb. 29; Gaz. vol. 223; p. 1501.
Du Bois, Harry D., West Orange, N. J. Tennis-racket. No. 1,173,712; Feb. 29; Gaz. vol. 223; p. 1576.
Duckham, Arthur M., Ashstead, England. Vertical retort. No. 1,171,183; Feb. 8; Gaz. vol. 223; p. 585.
Duden, Paul, and G. Peters, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Preparing acetaldehyde from acetylene. (Reissue.) No. 14,063; Feb. 15; Gaz. vol. 223; p. 952.
Duden, Paul, and G. Peters, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Preparing acetaldehyde from acetylene. (Reissue.) No. 14,064; Feb. 15; Gaz. vol. 223; p. 952.
Dudgeon, James W. (See Peters and Dudgeon.)
Dudley, Adolphus M., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Induction-motor. No. 1,170,618; Feb. 8; Gaz. vol. 223; p. 338.
Duffie, John J., San Francisco, Cal. Cash-register. No. 1,170,480; Feb. 1; Gaz. vol. 223; p. 251.
Duke, Luther H., Sabanno, Tex. Fertilizer-distributer. No. 1,173,937; Feb. 29; Gaz. vol. 223; p. 1655.
Dulac, Alfred, Gardiner, Me. Railway signaling system. No. 1,170,143; Feb. 1; Gaz. vol. 223; p. 136.
Dumartin, Horace. (See Menard, Moutier, and Dumartin.)
Dunbar, William B., Ashfield, near Sydney, New South Wales, Australia. Variable-speed pulley. No. 1,173,787; Feb. 29; Gaz. vol. 223; p. 1604.
Duncan, Craven R., Kansas City, Kans. Apparatus for purifying middlings. No. 1,171,108; Feb. 8; Gaz. vol. 223; p. 508.
Duncan, William G., Jr. (See Vinson, James G., assignor.)
Dunford, John W., Atlanta, Ga. Paint composition. No. 1,170,883; Feb. 8; Gaz. vol. 223; p. 429.
Dunham, William J., Johnstown, N. Y. Feed-regulator for concrete-mixing machines. No. 1,170,804; Feb. 8; Gaz. vol. 223; p. 401.
Dunlap, Joseph B., Tulsa, Okla. Slip-joint for sucker and pull rods. No. 1,170,429; Feb. 1; Gaz. vol. 223; p. 234.
Dunn, Leon P., assignor of one-half to J. M. Martin, Terre Haute, Ind. Concrete-burial-vault form. No. 1,170,430; Feb. 1; Gaz. vol. 223; p. 234.
Dunning, Luther T., Aulander, N. C. Fifth-wheel for vehicles. No. 1,171,708; Feb. 15; Gaz. vol. 223; p. 760.
Dunnock, John L., Baltimore, Md. Bottle-closure. No. 1,169,938; Feb. 1; Gaz. vol. 223; p. 66.
Duplex Metallic Company. (See Page and Tassin, assignors.)
Duplex Printing Press Company. (See Parker and Bennison, assignors.)
Dupré, Wilfred, Worcester, Mass. Dust-pan with automatic device. No. 1,169,939; Feb. 1; Gaz. vol. 223; p. 66.
Duquette, Jean B., Ste. Monique, Quebec, Canada. Rail-joint. No. 1,169,780; Feb. 1; Gaz. vol. 223; p. 12.
Durgin, Edgar R., and W. S. Searles, assignors to New Jersey Optical Co., Newark, N. J. Eyeglass and spectacle mounting. No. 1,173,151; Feb. 22; Gaz. vol. 223; p. 1338.
Durio, Giacomo, Turin, Italy. Tanning of hides and skins. No. 1,173,182; Feb. 29; Gaz. vol. 223; p. 1391.
Durocher, Louis, Watervliet, assignor of one-half to F. Turner, Troy, N. Y. Non-refillable bottle. No. 1,171,844; Feb. 15; Gaz. vol. 223; p. 809.
Dushman, Saul, Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,172,961; Feb. 22; Gaz. vol. 223; p. 1272.
Dust, William C., St. Louis, Mo. Car-controlling apparatus. No. 1,171,109; Feb. 8; Gaz. vol. 223; p. 508.
Dustman, Frederick A., Holdenville, Okla. Heater. No. 1,172,684; Feb. 22; Gaz. vol. 223; p. 1173.
Dutour, Felix, Elie, Manitoba, Canada. Folding cot for children. No. 1,171,029; Feb. 8; Gaz. vol. 223; p. 480.
Dwiggins Wire Fence Company. (See Swank and Van Deventer, assignors.)
Dyer, John B., Racine, Wis., assignor to Westinghouse Electric and Manufacturing Company. Interrupter. No. 1,172,015; Feb. 15; Gaz. vol. 223; p. 873.
Dyson, Alfred H., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Operator's calling device. No. 1,173,564; Feb. 29; Gaz. vol. 223; p. 1525.
E. A. McMillin Company, The. (See McMillin, Edward A., assignor.)
E. C. Stearns & Company. (See Papworth, Walter A., assignor.)
E. J. Manville Machine Company, The. (See Smith, Henry L., assignor.)
Eagle Square Manufacturing Company. (See Harris, Henry E., assignor.)
Earle, Edward S., Danville, Ill. Coupling for mining-cars. No. 1,173,494; Feb. 29; Gaz. vol. 223; p. 1501.
Early, Earl J., Philadelphia, Pa. Drafting appliance. No. 1,171,329; Feb. 8; Gaz. vol. 223; p. 586.
Easley, Carlos. (See Reynolds, Richard J., assignor.)
Eason, John F. H., assignor of one-fifth to G. L. Tinkle, one-sixth to H. C. Pittman, one-sixth to J. E. McKee, and one-twelfth to G. M. Gann, Tyler, Tex. Composition of matter for use in killing trees and other vegetable growths. No. 1,172,685; Feb. 22; Gaz. vol. 223; p. 1173.
East Hoquiam Shingle Company. (See Hansen, Henry C., assignor.)

East, James W., Teague, Tex. Storage battery. No. 1,172,586; Feb. 22; Gaz. vol. 223; p. 1138.
Eastman, George W., Lynn, Mass. Apparatus for introducing liquid into veins. No. 1,170,805; Feb. 8; Gaz. vol. 223; p. 402.
Eastman, J. Peter. (See Muehlberg, Karl O., assignor.)
Eastman Kodak Company. (See Gray, Frank W., assignor.)
Eastman Kodak Company. (See Robertson, John A., assignor.)
Eastman Kodak Company. (See Speidel, Charles F., assignor.)
Eastwood, Arthur C., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Electric controller. (Reissue.) No. 14,076; Feb. 29; Gaz. vol. 223; p. 1687.
Eaton, Albert N., Omaha, Nebr. Tank-heater. No. 1,170,518; Feb. 8; Gaz. vol. 223; p. 301.
Eaton, Charles B., Belfast, Me. Combined chair-swing and hammock. No. 1,173,054; Feb. 29; Gaz. vol. 223; p. 1558.
Eaton, George M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric locomotive. No. 1,171,600; Feb. 15; Gaz. vol. 223; p. 723.
Eaton, Harrison H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Metal-bending machine. No. 1,170,227; Feb. 1; Gaz. vol. 223; p. 167.
Eaton, John, Schenectady, N. Y., assignor to General Electric Company. Electromagnetic switch. No. 1,172,962; Feb. 22; Gaz. vol. 223; p. 1273.
Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Making non-circular paper box-bodies. No. 1,170,806; Feb. 8; Gaz. vol. 223; p. 402.
Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Container-washing machine. No. 1,173,255; Feb. 29; Gaz. vol. 223; p. 1416.
Eberl, Frank, New York, N. Y. Hair-pin. No. 1,173,938; Feb. 29; Gaz. vol. 223; p. 1655.
Eberly, Frank C. (See Covey, Harry A., assignor.)
Ebinger, David A., Columbus, Ohio. Seat structure for latrines. No. 1,170,741; Feb. 8; Gaz. vol. 223; p. 381.
Ebner, Joseph L., *et al.* (See Elder, Fred, assignor.)
Eckart, Charles F., and G. Giacometti, Olaa, Hawaii. Spraying-sled. No. 1,172,686; Feb. 22; Gaz. vol. 223; p. 1173.
Eckberg, Axel, and G. Obrstrom, Jamestown, N. Y. Folding bed-seat. No. 1,173,939; Feb. 29; Gaz. vol. 223; p. 1655.
Eckman, Elder R., Council Grove, Kans. Combined weed knife and puller. No. 1,172,687; Feb. 22; Gaz. vol. 223; p. 1172.
Eden, Christopher G., and A. E. Carter, assignors to H. Renold Limited, Manchester, England. Multiple-strand bush-roller chain. No. 1,170,431; Feb. 1; Gaz. vol. 223; p. 235.
Eden, Harold W., Chicago, Ill. Clothes-drum-door construction. No. 1,169,781; Feb. 1; Gaz. vol. 223; p. 12.
Eden, Harold W., Chicago, Ill. Clothes-drum construction. No. 1,169,782; Feb. 1; Gaz. vol. 223; p. 12.
Edgar Allen American Manganese Steel Company. (See Black, Edward S., assignor.)
Edgar Allen American Manganese Steel Company. (See Nichols, Wesley G., assignor.)
Edgar, James, deceased, Brooklyn; J. F. and J. R. Pierson, executors, New York, N. Y. Currycomb. No. 1,172,688; Feb 22; Gaz. vol. 223; p. 1174.
Edgar, William D., Trenton, N. D. Animal-trap. No. 1,173,495; Feb. 29; Gaz. vol. 223; p. 1501.
Edge, Horace L., New York, N. Y. Key-cutting machine. No. 1,172,265; Feb. 22; Gaz. vol. 223; p. 1019.
Edgell, John L., and G. W. Cook, Oceana, W. Va. Foot-warming stirrup. No. 1,172,266; Feb. 22; Gaz. vol. 223; p. 1019.
Edison, Thomas A. (See Bliss, Donald M., assignor.) (Reissue.)
Edmonds, Ralph L., Kansas City, assignor of one-fourth to F. C. McInteer, Raytown, Mo. Adjustable headlight. No. 1,169,940; Feb. 1; Gaz. vol. 223; p. 66.
Edmonson, Ellis G., assignor to The American Pad & Textile Company, Greenfield, Ohio. Sack-turning mechanism. No. 1,172,443; Feb. 22; Gaz. vol. 223; p. 1084.
Edward Katzinger Company. (See Katzinger, Edward, assignor.)
Edwards, Case, *et al.* (See Stoffel, Fernand, assignor.)
Edwards, Charles E., New York, N. Y. Cigar-band. No. 1,173,103; Feb. 22; Gaz. vol. 223; p. 1319.
Edwards, Henry E. (See Buch, Max A., assignor.)
Edwards, Josten R., and M. C. Laywell, Columbus, Ohio. Signal-lamp. No. 1,169,941; Feb. 1; Gaz. vol. 223; p. 66.
Edwards, Samuel H., assignor of one-fourth to Tide Water Oil Company, Bayonne, N. J. Oil-distilling apparatus. No. 1,170,884; Feb. 8; Gaz. vol. 223; p. 429.
Edwards, Victor E. (See George and Edwards.)
Edwards, Wesley H., *et al.* (See Stoffel, Fernand, assignor.)
Egan, Eugene, Kingston, N. Y. Compressed-air-exhaust muffler. No. 1,170,807; Feb. 8; Gaz. vol. 223; p. 402.
Egan, William P., and J. J. Sheehan, Lynn, Mass. Inking device for printing and marking machines. No. 1,174,001; Feb. 29; Gaz. vol. 223; p. 1675.
Egbert, Nelson, Valois, N. Y. Dish-washing machine. No. 1,172,201; Feb. 15; Gaz. vol. 223; p. 936.
Eggleston, Launcelot G., and E. Ollvant, London, Ontario, Canada. Railway-crossing gate. No. 1,171,110; Feb. 8; Gaz. vol. 223; p. 509.
Egly, Georg, Treptow, near Berlin, assignor to Gebruder Siemens & Co., Lichtenberg, near Berlin, Germany. Arc-light electrode. No. 1,169,942; Feb. 1; Gaz. vol. 223; p. 66.
Ehrich & Graetz. (See Dresler, Ernst, assignor.)
Ehrlich, John B., Indianapolis, Ind. Combination stove and gas-range. No. 1,172,235; Feb. 15; Gaz. vol. 223; p. 946.
Eickenberg, Philip, Minneapolis, Minn. Box-hinge. No. 1,171,601; Feb. 15; Gaz. vol. 223; p. 723.
Eisenschenk, Michael, Cold Spring, Minn. Plow-depressing means. No. 1,171,776; Feb. 15; Gaz. vol. 223; p. 784.
Eisner, Samuel M., assignor to Self-Raising Seat Appliance Company, Newark, N. J. Spring-hinge. No. 1,172,267; Feb. 22; Gaz. vol. 223; p. 1019.
Ekern, Helmer O. and W. L., Flandreau, N. D. Portable-garage grease-gun. No. 1,170,432; Feb. 1; Gaz. vol. 223; p. 235.
Ekern, William L. (See Ekern, Helmer O. and W. L.)
Elder, Edward H., Chicopee Falls, assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,170,054; Feb. 1; Gaz. vol. 223; p. 105.
Elder, Fred, assignor of one-fourth to J. L. Ebner and C. B. Wissing, Vincennes, Ind. Apparatus for evaporating liquids. No. 1,172,120; Feb. 15; Gaz. vol. 223; p. 909.
Electrelle Company. (See Dorricott, Charles W., assignor.)
Electrelle Company. (See Smith and Dorricott, assignors.)
Electric Bank Protection Company. (See Williams, John P., assignor.)
Electric Boat Company. (See Grieshaber, Hugo E., assignor.)
Electric Compositor Company. (See Petri-Palmedo, David, assignor.)
Electric Compositor Company. (See Petri-Palmedo and Goddard, assignors.)
Electric Controller and Manufacturing Company, The. (See Eastwood, Arthur C., assignor.) (Reissue.)
Electric Railway Improvement Company, The. (See Herrick, Albert B., assignor.)
Electric Time Recorder Company. (See Straub and Radtke, assignors.)
Electro-Chemical Engraving Company. (See Jacobus, Nelson L., assignor.)
Electro-Chemical Products Company. (See Hoofnagle, William T., assignor.)
Electro Metallurgical Company. (See Harrison, Herbert C., assignor.)
Elevator Supply & Repair Company. (See Kenny, Paul T., assignor.)
Elgin American Manufacturing Co. (See Hathaway, Thomas F., assignor.)
Elgin, William H., Excelsior Springs, Mo. Metal door and window casing and base-cap. No. 1,170,968; Feb. 8; Gaz. vol. 223; p. 458.
Elkins, David H., Amesbury, assignor to Gray & Davis, Inc., Boston, Mass. Lamp. No. 1,170,519; Feb. 8; Gaz. vol. 223; p. 301.
Elkinton, William T. (See Wheeler, James A., assignor.)
Ellebrecht, Louis, Cincinnati, Ohio. Razor. No. 1,170,433; Feb. 1; Gaz. vol. 223; p. 235.
Ellerman, Jan. (See Van Calcar, Ellerman, and Martijn.)
Elley, Gustav. (See Mueller, Hermann W., assignor.)
Elliott, Charles H., Philadelphia, Pa., assignor to H. W. Butterworth & Sons Company. Cloth-feeding device for textile machinery. No. 1,170,228; Feb. 1; Gaz. vol. 223; p. 167.
Elliott, Claud B. (See Napier and Elliott.)
Elliott-Fisher Company. (See Laganke and Smith, assignors.)
Elliott, Richard C., London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Line-measuring mechanism for composing-machines. No. 1,172,268; Feb. 22; Gaz. vol. 223; p. 1020.
Elliott, William S., Pittsburgh, Pa. Strainer or filter. No. 1,172,689; Feb. 22; Gaz. vol. 223; p. 1174.
Ellis, Carleton, Montclair, N. J. Colloidal manganese dioxid depolarizer. No. 1,169,943; Feb. 1; Gaz. vol. 223; p. 67.
Ellis, Carleton, Montclair, N. J. Explosion-arrester. No. 1,170,055; Feb. 1; Gaz. vol. 223; p. 106.
Ellis, Carleton, Montclair, N. J. Flatting finish composition and making same. No. 1,173,183; Feb. 29; Gaz. vol. 223; p. 1391.
Ellis, Carleton, Montclair, N. J. Hydrogen generation. No. 1,173,417; Feb. 29; Gaz. vol. 223; p. 1474.
Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company. Finish-remover. No. 1,169,783; Feb. 1; Gaz. vol. 223; p. 12.
Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 1,172,772; Feb. 22; Gaz. vol. 223; p. 1205.

Ellis, Carleton, Montclair, N. J., assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 1,172,773; Feb. 22; Gaz. vol. 223; p. 1206.
Ellis, Frederick A., Jr., Birmingham, England. Wheel. No. 1,169,944; Feb. 1; Gaz. vol. 223; p. 67.
Ells, Frederick W., Milwaukee, Wis. Automatic pressure-controlled valve mechanism. No. 1,172,774; Feb. 22; Gaz. vol. 223; p. 1206.
Elvin, Albert G. (See Martin, Frederick W., assignor.)
Elvin, Albert G., Somerville, N. J., and F. W. Martin, New York, N. Y., assignors to Franklin Railway Supply Company, Wilmington, Del. Swivel pipe-joint. No. 1,171,416; Feb. 15; Gaz. vol. 223; p. 659.
Elzay, Earl N., Findlay, Ohio. Pipe-cutter. No. 1,173,496; Feb. 29; Gaz. vol. 223; p. 1502.
Embrey, Laurence, Stoke-upon-Trent, England. Dough-working apparatus. No. 1,171,330; Feb. 8; Gaz. vol. 223; p. 586.
Embrey, Laurence, Fenton, England. Apparatus for stretching dough and like glutenous material. No. 1,171,331; Feb. 8; Gaz. vol. 223; p. 587.
Embry, William W. (See Roten and Embry.)
Emerick, George S., Philadelphia, Pa. Grinding-mill. No. 1,172,882; Feb. 22; Gaz. vol. 223; p. 1244.
Emerick, George S., Nazareth, assignor, by mesne assignments, to J. W. Keely, Philadelphia, Pa. Grinding-mill. No. 1,171,933; Feb. 15; Gaz. vol. 223; p. 843.
Emerson-Brantingham Company. (See Squier, Walter C., assignor.)
Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)
Emerson, Edgar. (See Graves, Clarence E., assignor.)
Emerson, George H., St. Paul, Minn. Spark-extinguisher. No. 1,171,934; Feb. 15; Gaz. vol. 223; p. 843.
Emery, Frederick L. (See Warren, Charles V., assignor.)
Emery, Plato G., Chicago, Ill. Fixture for window-shades. No. 1,170,742; Feb. 8; Gaz. vol. 223; p. 381.
Emory, Francis F., Fitchburg, Mass. Engine-valve. No. 1,172,121; Feb. 15; Gaz. vol. 223; p. 910.
Empire Paper Tube & Box Co. *et al.* (See Inman and Bloomer, assignors.)
Enamel Concrete Company. (See Stehm, Frank R., assignor.)
Enders, Charles J. (See Enders, John E. and C. J.)
Enders, John E. and C. J., Berryville, Va. Combination double and single deck for stock-cars. No. 1,171,777; Feb. 15; Gaz. vol. 223; p. 784.
Engbrecht, Jacob J., Rothlemay, Mont. Shingling-gage. No. 1,172,775; Feb. 22; Gaz. vol. 223; p. 1206.
Engel, Albert W., Chicago, Ill. Addressing and indexing device. No. 1,170,434; Feb. 1; Gaz. vol. 223; p. 235.
Engelhardt, August J., New Orleans, La. Insulator. No. 1,172,963; Feb. 22; Gaz. vol. 223; p. 1273.
Engelmann, Max, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Therapeutic preparation. No. 1,170,056; Feb. 1; Gaz. vol. 223; p. 106.
Engler, Emil A. G., Red Wing, Minn. Rotary cutter-head. No. 1,172,776; Feb. 22; Gaz. vol. 223; p. 1206.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,173,104; Feb. 22; Gaz. vol. 223; p. 1320.
Englund, Godfred T., Miami, Ariz. Measuring attachment for can-covers. No. 1,172,122; Feb. 15; Gaz. vol. 223; p. 910.
Enslin, Herbert E., Malden, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Knot-tying mechanism. No. 1,170,885; Feb. 8; Gaz. vol. 223; p. 429.
Enterprise Railway Equipment Company. (See Anderson, Jens, assignor.)
Erb, Edmund M., Jersey City, N. J. Grease-cup. No. 1,170,435; Feb. 1; Gaz. vol. 223; p. 236.
Erdmann, William, Milwaukee, Wis., assignor to Gem Hammock and Fly Net Company. Fly-net. No. 1,171,508; Feb. 15; Gaz. vol. 223; p. 691.
Erickson, Charles F., New York, N. Y. Vehicle-wheel. No. 1,172,123; Feb. 15; Gaz. vol. 223; p. 910.
Erickson, Christian, York, N. D. Ventilator. No. 1,170,436; Feb. 1; Gaz. vol. 223; p. 236.
Erickson, Edward, Beverly, and J. W. Cosgrove, Medford, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Cementing-machine. No. 1,170,520; Feb. 8; Gaz. vol. 223; p. 302.
Erickson, Peter E., Port Chester, N. Y. Hose-clamp. No. 1,172,690; Feb. 22; Gaz. vol. 223; p. 1175.
Erickson, Seth S., New York, N. Y. Internal-combustion engine. No. 1,172,124; Feb. 15; Gaz. vol. 223; p. 911.
Erie Pump & Equipment Company. (See Andrews, Roger W., assignor.)
Ermbter, Jacob H., Neuss-on-the-Rhine, assignor to Firm of P. Klug, Special Manufacture of Finishing Machines, Crimmitschau, Germany. Device for driving the teazeling-rolls of cylinder teazeling-machines. No. 1,173,565; Feb. 29; Gaz. vol. 223; p. 1525.
Ernst, Albin, assignor to Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Locking device for the needles of circular-knitting frames. No. 1,172,691; Feb. 22; Gaz. vol. 223; p. 1175.
Esenko, Jak, Mill Creek, British Columbia, Canada. Expansible shaft. No. 1,171,417; Feb. 15; Gaz. vol. 223; p. 659.
Espen-Lucas Machine Works. (See Lucas, William H., assignor.)
Essex, David, Kearney, assignor of one-half to J. Ammann, Jersey City, N. J. Scarf or necktie. No. 1,170,437; Feb. 1; Gaz. vol. 223; p. 236.
Essich, Eugen, Stuttgart, Germany. Electric-lighting device. No. 1,171,509; Feb. 15; Gaz. vol. 223; p. 691.
Estate of P. D. Beckwith. (See Beckwith, Arthur K., assignor.)
Estel, Theodor S., Platte Center, Nebr. Coop. No. 1,172,777; Feb. 22; Gaz. vol. 223; p. 1207.
Estey Organ Company. (See Haskell, William E., assignor.)
Etheridge, Herbert, Wimbledon Park, assignor to The Bar-Lock Typewriter Company, Limited, London, England. Platen-carriage holder for type-writers. No. 1,172,016; Feb. 15; Gaz. vol. 223; p. 874.
Ette, Charles G., assignor to St. Louis Malleable Casting Company, St. Louis, Mo. Pole cross-arm. No. 1,173,418; Feb. 29; Gaz. vol. 223; p. 1475.
Ettinger, Victor P., Kansas City, Mo. Insulator. No. 1,174,002; Feb. 29; Gaz. vol. 223; p. 1675.
Eubank, Porter B. (See Lemley, Edwin, assignor.)
Evans, Charles L., Jr., Dallas, Tex. Carbon-gripper and margin-indicator for writing-machines. No. 1,173,345; Feb. 29; Gaz. vol. 223; p. 1449.
Evans, Mary C. (See Wilson, Jesse P., assignor.)
Evans, William J., Linnburg, Iowa. Universal joint. No. 1,172,964; Feb. 22; Gaz. vol. 223; p. 1273.
Evers, William H., Lakewood, assignor to The Concrete Flooring Company, Cleveland, Ohio. Building construction. No. 1,170,743; Feb. 8; Gaz. vol. 223; p. 382.
Everson, Edwin, Alma, Nebr. Grain-drill. No. 1,169,945; Feb. 1; Gaz. vol. 223; p. 67.
Eveson, Elmer E. (See Digre and Nelson, assignors.)
Evins, James F., Joplin, Mo., assignor of one-half to C. L. Smyer, Springdale, Ark. Nut-lock. No. 1,170,144; Feb. 1; Gaz. vol. 223; p. 136.
Evjen, Louis M., New York, N. Y. Rope-clamp. No. 1,172,125; Feb. 15; Gaz. vol. 223; p. 911.
Ewart, Arthur F., assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Intermediate conveyer for sugar-cane mills. No. 1,169,946; Feb. 1; Gaz. vol. 223; p. 67.
Ewart, Arthur F., assignor to Honolulu Iron Works Company, Honolulu, Hawaii. Intermediate conveyer for sugar-cane mills. No. 1,170,619; Feb. 8; Gaz. vol. 223; p. 338.
Ewing, Orville W., Derry, N. H. Flexible roll for boots and shoes. No. 1,171,935; Feb. 15; Gaz. vol. 223; p. 843.
Excelsall Products Company. (See Goetzke, Otto, assignor.)
Excelsior Brush Co. (See Hurvitz, Max, assignor.)
Excelsior Stove & Mfg. Co. (See Ohnemus, Anton, assignor.)
Exton, Alfred H. (See McKee, Nichols, and Exton.)
F. A. Hardy & Company. (See Troppman, Charles J., assignor.)
F. A. Whitney Carriage Co. (See Shaw, Frank J., assignor.)
F. E. Myers and Brother. (See Myers, Philip A., assignor.)
F. N. Burt Company, The. (See Holly, Carlos, assignor.)
F. W. Wakefield Brass Company, The. (See Wakefield, Frederick W., assignor.)
Faccioli, Giuseppe, Pittsfield, Mass., assignor to General Electric Company. Means for preventing corona losses. No. 1,171,936; Feb. 15; Gaz. vol. 223; p. 844.
Faerber, Albert. (See Gresens and Faerber.)
Fahrney, Callo D., Milwaukee, Wis. Apparatus for separating dust and foreign matter from air. No. 1,170,438; Feb. 1; Gaz. vol. 223; p. 237.
Fairchild, Edwin E., Los Angeles, Cal., assignor to W. R. Hearst, New York, N. Y. Base-ball-game exhibitor. No. 1,173,788; Feb. 29; Gaz. vol. 223; p. 1604.
Fairchild, Wilburn. (See Groom, Ellsworth, assignor.)
Falson, Sherwood B., Cincinnati, Ohio. Laying roofing material. No. 1,170,521; Feb. 8; Gaz. vol. 223; p. 302.
Faldi, Rowland E., New York, N. Y. Sound-controller for phonographs. No. 1,172,346; Feb. 22; Gaz. vol. 223; p. 1047.
Falk Company, The. (See Falk and Day, assignors.)
Falk Company. (See Rothberg, Mathew E., assignor.)
Falk, Herman W., and P. C. Day, Milwaukee, assignors to The Falk Company, Wauwatosa, Wis. Angular spacing and feeding mechanism for dividing-engines and machine-tools. No. 1,172,778; Feb. 22; Gaz. vol. 223; p. 1207.
Falls Machine Company. (See Joecken, Peter J., assignor.)
Fanning, Peter J., Providence, R. I. Power mechanism. No. 1,172,692; Feb. 22; Gaz. vol. 223; p. 1175.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Engelmann, Max, assignor.)
Farber, William, Long Prairie, Minn. Furnace baffle-plate. No. 1,169,784; Feb. 1; Gaz. vol. 223; p. 13.
Farbwerke vorm. Meister Lucius & Brüning. (See Duden and Peters, assignors.) (Reissue.)
Fargo, Lyman, Duluth, Minn. Collapsible egg-case. No. 1,172,779; Feb. 22; Gaz. vol. 223; p. 1207.
Farley, John, Liscard, England. Air cooling, filtering, purifying, aromatizing, or the like apparatus. No. 1,173,497; Feb. 29; Gaz. vol. 223; p. 1502.
Farmer, Herbert J., Richmond, Ind. Lawn-mower. No. 1,172,444; Feb. 22; Gaz. vol. 223; p. 1084.

Farnsworth, Sidney W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vapor-rectifier. No. 1,170,620; Feb. 8; Gaz. vol. 223; p. 338.
Farnum, William C., assignor of one-half to W. M. Whitney, Winchendon, Mass. Centrifugal lubricating-gear. No. 1,170,057; Feb. 1; Gaz. vol. 223; p. 106.
Farrand, Oliver M., New York, N. Y. Keyless lock. No. 1,173,256; Feb. 29; Gaz. vol. 223; p. 1416.
Farrell, Albert J. (See Coleman, Hawkins, and Farrell.)
Fassett, Riley D., assignor to The Gold-Dust Concentration Company, Denver, Colo. Ore-separating apparatus. No. 1,173,498; Feb. 29; Gaz. vol. 223; p. 1502.
Fauber, Joseph E., Lynchburg, Va. Convertible cooling-board and ambulance-basket. No. 1,170,439; Feb. 1; Gaz. vol. 223; p. 237.
Faust, Earl *et al.* (See Clark, Stuart J., assignor.)
Fay, Alpheus, Louisville, Ky. Variable-speed mechanism. No. 1,170,058; Feb. 1; Gaz. vol. 223; p. 106.
Fay, Frank H., Brooklyn, N. Y., T. Shaw, Hackensack, N. J., and J. J. Philled, Chicago, Ill., assignors to American Telephone and Telegraph Company. Phantom circuit. No. 1,173,655; Feb. 29; Gaz. vol. 223; p. 1558.
Fearon, James J., assignor of one-half to C. J. Fox, Philadelphia, Pa. Yarn-dyeing apparatus. No. 1,170,440; Feb. 1; Gaz. vol. 223; p. 237.
Feese, Elmer L., Pleyna, Kans. Washboard. No. 1,173,940; Feb. 29; Gaz. vol. 223; p. 1656.
Feicks, William, Bloomfield, N. J. Coking and gas-generating oven. No. 1,171,418; Feb. 15; Gaz. vol. 223; p. 660.
Felerabend, John A., Swissvale, Pa. Metal frame for window-screens. No. 1,171,184; Feb. 8; Gaz. vol. 223; p. 536.
Felst, Charles M., Sioux City, Iowa. Bearing for wheels. No. 1,172,965; Feb. 22; Gaz. vol. 223; p. 1274.
Fekete, Stephen I., assignor to Hudson Motor Car Company, Detroit, Mich. Internal-combustion engine. No. 1,173,105; Feb. 22; Gaz. vol. 223; p. 1320.
Feldman, Bernard. (See Grinberg and Feldman.)
Fells, Noah, New York, N. Y. Window-frame. No. 1,173,941; Feb. 29; Gaz. vol. 223; p. 1656.
Feltenstein, Isaac, St. Joseph, Mo. Masking device for cameras. No. 1,170,522; Feb. 8; Gaz. vol. 223; p. 302.
Felver, John B. (See Heebner, Felver, and Dresher.)
Fenn Manufacturing Co. (See Anderson, Nils H., assignor.)
Fenstermacher, Franklin J., New York, N. Y., assignor to Southworth Machine Company, Portland, Me. Brace-former. (Reissue.) No. 14,065; Feb. 15; Gaz. vol. 223; p. 952.
Ferguson, Arthur M., Burlington, Kans., assignor to Gold Medal Camp Furniture Manufacturing Co., Racine, Wis. Folding cot. No. 1,170,229; Feb. 1; Gaz. vol. 223; p. 168.
Ferguson, Peter L., and J. W. Wheelwright, Ogden, Utah. Sign. No. 1,170,441; Feb. 1; Gaz. vol. 223; p. 238.
Ferguson, Roy E., Harlan, Iowa. Corn-husking implement. No. 1,172,966; Feb. 22; Gaz. vol. 223; p. 1274.
Ferguson, William F. (See Poplin and Ferguson.)
Fernald, Adelbert, Boston, Mass. Right-angle nerve-extractor. No. 1,170,523; Feb. 8; Gaz. vol. 223; p. 303.
Fernald, Adelbert, Boston, Mass. Dental handpiece. No. 1,170,524; Feb. 8; Gaz. vol. 223; p. 303.
Ferrall, John J. (See Mackay and Ferrall.)
Ferree, John W., Kansas City, Mo. Combined fish hook and trap. No. 1,172,780; Feb. 22; Gaz. vol. 223; p. 1208.
Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Animal-stall. No. 1,172,236; Feb. 15; Gaz. vol. 223; p. 947.
Ferris, William P. (See Noetzel and Ferris.) (Reissue.)
Fesler, Joel B., assignor to Fesler Sales Company, New York, N. Y. Fountain-brush. No. 1,170,744; Feb. 8; Gaz. vol. 223; p. 382.
Fesler Sales Company. (See Fesler, Joel B., assignor.)
Fessenden, Reginald A., Brant Rock, Mass., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Means of transmitting intelligence. No. 1,170,969; Feb. 8; Gaz. vol. 223; p. 458.
Fessenden, Reginald A., Washington, D. C., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, receivers, Bloomfield, N. J. Transmitting energy by electromagnetic waves. No. 1,172,017; Feb. 15; Gaz. vol. 223; p. 875.
Fessenden, Reginald A., Brant Rock, Mass., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, receivers, Bloomfield, N. J. Electromagnetic indicator. No. 1,172,018; Feb. 15; Gaz. vol. 223; p. 875.
Fiala, Adolf. (See Leschka and Fiala.)
Field, Millard F., Boston, Mass. Warp-drawing machine. No. 1,171,388; Feb. 8; Gaz. vol. 223; p. 607.
Field, Millard F., Winthrop, Mass. Warp-drawing machine. No. 1,171,389; Feb. 8; Gaz. vol. 223; p. 608.
Field, Samuel B., Holbrook, assignor of one-fourth to Pneumatic Scale Corporation, Limited, and three-fourths to W. H. Doble, Quincy, Mass. Folding metallic box. No. 1,172,445; Feb. 22; Gaz. vol. 223; p. 1084.
Field, Wallace L., West De Pere, Wis. Horseshoe-calk-making machine. No. 1,169,785; Feb. 1; Gaz. vol. 223; p. 13.
Finberg, Joseph, assignor to Finberg Manufacturing Company, Attleboro, Mass. Finger-ring. No. 1,171,030; Feb. 8; Gaz. vol. 223; p. 481.
Finberg Manufacturing Company. (See Finberg, Joseph, assignor.)
Finette, Charles, Aurora, Ill. Anchor-bracket. No. 1,172,126; Feb. 15; Gaz. vol. 223; p. 911.
Finigan, Thomas. (See Yount, Jesse M., assignor.)
Fink, Edward J., Sycamore, Ill. Fused bifocal lens. No. 1,171,419; Feb. 15; Gaz. vol. 223; p. 660.
Finn, William, Bloomfield, N. J., assignor to The Western Union Telegraph Company, New York, N. Y. Telegraphy. No. 1,174,029; Feb. 29; Gaz. vol. 223; p. 1685.
Finseth, Andrew, Oslo, Minn. Lock-stitch sewing-machine. No. 1,170,442; Feb. 1; Gaz. vol. 223; p. 238.
Firestone Tire & Rubber Company, The. (See Burgess, William L., assignor.)
Firestone Tire & Rubber Company, The. (See Stevens, William C., assignor.)
Firm, Joseph L., Berwyn, assignor to The Goss Printing Press Company, Chicago, Ill. Printing-press. No. 1,169,786; Feb. 1; Gaz. vol. 223; p. 14.
Fisher, Charles, Milwaukee, Wis., assignor to The Automatic Recording Safe Company, Chicago, Ill. Savings-bank. No. 1,170,525; Feb. 8; Gaz. vol. 223; p. 304.
Fisher, Clarence G., Rochester, N. Y. Paper-fastener. No. 1,172,967; Feb. 22; Gaz. vol. 223; p. 1274.
Fisher Closed Body Company. (See Allmand, John T., assignor.)
Fisher Closed Body Company. (See Swan, Thomas, assignor.)
Fisher, Frederick J., assignor of nine-tenths to O. Muller, San Francisco, Cal. Molding-machine. No. 1,171,937; Feb. 15; Gaz. vol. 223; p. 844.
Fisher, James, Watertown, Mass. Lamp-shade. No. 1,171,031; Feb. 8; Gaz. vol. 223; p. 481.
Fisher, Samuel J., Asheville, N. C. Coating-machine. No. 1,172,693; Feb. 22; Gaz. vol. 223; p. 1176.
Fisher, W. S., *et al.* (See Burks, Jesse A., assignor.)
Fisk Rubber Company. (See Normine, William H., assignor.)
Fitchburg Machine Works. (See Reynolds, William, assignor.)
Fitz Gibbon & Crisp. (See Woodward, Lion L., assignor.)
Fitzpatrick, Kirby, Oklahoma, Okla. Voting-machine. No. 1,171,778; Feb. 15; Gaz. vol. 223; p. 784.
Flamand, Jean C., Celina, Ohio. Wage-computer. No. 1,170,886; Feb. 8; Gaz. vol. 223; p. 430.
Flanders, Warren B., Habana, Cuba, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Low-pressure turbine. (Reissue.) No. 14,066; Feb. 15; Gaz. vol. 223; p. 952.
Flanigan, Archibald, Seattle, Wash. Lubricating apparatus. No. 1,173,656; Feb. 29; Gaz. vol. 223; p. 1558.
Flannery, Matthew J., Matteson, Ill. Means for opening doors. No. 1,171,032; Feb. 8; Gaz. vol. 223; p. 481.
Flarida, Quincy L., Dayton, Ohio. Metallic fence-post. No. 1,170,230; Feb. 1; Gaz. vol. 223; p. 168.
Fleck, Peter J., New York, N. Y. Foot-rest for radiators. No. 1,171,779; Feb. 15; Gaz. vol. 223; p. 785.
Fleischmann, Franz, Klagenfurt, Austria-Hungary. Temporary clamp for artificial slates or tiles. No. 1,173,499; Feb. 29; Gaz., vol. 223; p. 1503.
Fleischmann, Lionel, Berlin, Germany, assignor to General Electric Company. Synchronous dynamo-electric machine. No. 1,172,968; Feb. 22; Gaz. vol. 223; p. 1275.
Fleischmann, Lionell, Berlin, Germany, assignor to General Electric Company. Alternating-current system. No. 1,173,657; Feb. 29; Gaz. vol. 223; p. 1559.
Fleming, Clarence G., Phillips, Nebr. Tractor. No. 1,173,942; Feb. 29; Gaz. vol. 223; p. 1656.
Fleming, Everet A., Chicago, Ill. Pass or ticket for railways and the like. No. 1,171,420; Feb. 15; Gaz. vol. 223; p. 660.
Fleming, George X. (See Benson, Edgar W., assignor.)
Flemming, Julius R., Yoakum, Tex. Pad for horse-collars. No. 1,171,709; Feb. 15; Gaz. vol. 223; p. 760.
Flenniken, Charles A. B., Watertown, Mass. Trousers-protector. No. 1,173,943; Feb. 29; Gaz. vol. 223; p. 1656.
FlexiFile Company, The. (See McKnight, Richard, assignor.)
Flicek, Edward. (See Wittemann and Flicek.)
Flint, Andrew L., East Weymouth, Mass. Multiple connector. No. 1,172,694; Feb. 22; Gaz. vol. 223; p. 1176.
Flint, Bradford B., Saranac Lake, N. Y. Tooth-brush holder. No. 1,170,231; Feb. 1; Gaz. vol. 223; p. 168.
Flood, James N., Denver, Colo. Dental amalgamator. No. 1,172,202; Feb. 15; Gaz. vol. 223; p. 936.
Floyd, George G., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Brake-head. No. 1,169,787; Feb. 1; Gaz. vol. 223; p. 14.
Floyd, George G., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Coupling-pocket. No. 1,173,419; Feb. 29; Gaz. vol. 223; p. 1475.
Flynn, William S., Haverford, Pa. Golf-standard. No. 1,173,713; Feb. 29; Gaz. vol. 223; p. 1576.
Fobes, Oliver, New Castle, Pa. Motor-cycle starter. No. 1,172,969; Feb. 22; Gaz. vol. 223; p. 1275.
Fogal, John E. W., assignor to Quincy Elevator Gate Co., Quincy, Ill. Valve-lubricating device. No. 1,172,446; Feb. 22; Gaz. vol. 223; p. 1085.

Folger, Harry S., and C. L. Redfield, Chicago, Ill.; said Redfield assignor to said Folger. Self-inking hand-stamp. No. 1,172,237; Feb. 15; Gaz. vol. 223; p. 947.
Folse, Eddie L., and S. E. Robichaux, Raceland, La. Motor-vehicle. No. 1,170,887; Feb. 8; Gaz. vol. 223; p. 430.
Foote, Walter F. (See Lecy and Foote.)
Forcier, Joseph, Bremerton, Wash. Life-boat attachment. No. 1,171,602; Feb. 15; Gaz. vol. 223; p. 723.
Ford, Ben K., Oak Park, Ill., assignor to American Can Company, New York, N. Y. Shellac-package. No. 1,173,257; Feb. 29; Gaz. vol. 223; p. 1417.
Ford, Bruce, Philadelphia, Pa. Secondary or storage battery. No. 1,169,788; Feb. 1; Gaz. vol. 223; p. 14.
Ford, Bruce, Philadelphia, Pa. Holddown for storage batteries. No. 1,172,347; Feb. 22; Gaz. vol. 223; p. 1048.
Ford, Frederick S. (See Armstrong and Ford.)
Ford, Silas M., St. Paul, Minn. Plaster-board. No. 1,171,421; Feb. 15; Gaz. vol. 223; p. 661.
Foreman, Amos L., Baltimore, Md. Bottle-filling machine. No. 1,170,232; Feb. 1; Gaz. vol. 223; p. 169.
Forged Steel Wheel Company. (See Hausen, John M., assignor.)
Forrest, Charles N. (See Wilson and Forrest.)
Forse, James M., Pittsburgh, Pa. Boat. No. 1,169,947; Feb. 1; Gaz. vol. 223; p. 68.
Forst, Samuel G., Toronto, Ontario, Canada. Oil and gas burner. No. 1,172,269; Feb. 22; Gaz. vol. 223; p. 1020.
Forster, John C., Pittsburgh, Pa. Vegetable-slicer. No. 1,172,695; Feb. 22; Gaz. vol. 223; p. 1176.
Forsyth, Alexander, Standish, Mich. Combined awning and house construction. No. 1,171,510; Feb. 15; Gaz. vol. 223; p. 691.
Forsyth, Alexander, and F. Zeleny, Aurora, Ill. Boring-bar. No. 1,172,781; Feb. 22; Gaz. vol. 223; p. 1208.
Forsyth, William D. (See Sheldon, Harry E., assignor.)
Forsyth, William D., Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y. Car-truck side frame. No. 1,173,714; Feb. 29; Gaz. vol. 223; p. 1577.
Forsyth, William D., Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y. Pressed-steel bolster. No. 1,173,715; Feb. 29; Gaz. vol. 223; p. 1578.
Forte, Frank G., Oakleigh, near Melbourne, Victoria, Australia. Alarm-clock. No. 1,171,511; Feb. 15; Gaz. vol. 223; p. 692.
Forté, Harry P., assignor to Beechnut Packing Company, Canajoharie, N. Y. Capping-machine. No. 1,172,447; Feb. 22; Gaz. vol. 223; p. 1085.
Fortuna-Werke, Specialmaschinenfabrik, G. m. b. H. (See Loose, Johannes, assignor.)
Fortuna-Werke, Specialmaschinenfabrik, G. m. b. H. (See Rausch, Carl A., assignor.)
Fossel, Joseph, Grafton, Mass. Mechanism for grinding flats in carding-engines. No. 1,169,789; Feb. 1; Gaz. vol. 223; p. 15.
Foster, James H., Tuscaloosa, Ala. Ink-well. No. 1,170,233; Feb. 1; Gaz. vol. 223; p. 169.
Fouke, George W., Sacramento, assignor, by mesne assignments, to National Manufacturing Company, San Francisco, Cal. Rotary valve for internal-combustion engines. No. 1,172,782; Feb. 22; Gaz. vol. 223; p. 1209.
Foulds, Edward. (See Foulds, Powys A. L. and E.)
Foulds, Powys A. L. and E., Boston, Mass. Color-changing attachment for light-projectors. No. 1,170,621; Feb. 8; Gaz. vol. 223; p 339.
Foust, James A., Humboldt, Kans. Fly-trap for screen-doors. No. 1,170,234; Feb. 1; Gaz. vol. 223; p. 170.
Fouts, Lewis C., Peoria, Ill. Gate. No. 1,170,443; Feb. 1; Gaz. vol. 223; p. 238.
Foutts, Charles E., East Liverpool, Ohio. Mandrel for making inner tubes for tires. No. 1,173,944; Feb. 29; Gaz. vol. 223; p. 1657.
Foutz, Horace S., Modesto, Cal. Bean-cutter. No. 1,171,603; Feb. 15; Gaz. vol. 223; p. 724.
Fowler Car Company, The. (See Fowler, William E., Sr., assignor.)
Fowler, Charles W., Chicago, Ill. Padlock. No. 1,172,970; Feb. 22; Gaz. vol. 223; p. 1275.
Fowler, William E., Sr., assignor to The Fowler Car Company, Chicago, Ill. Dump-car. No. 1,169,790; Feb. 1; Gaz. vol. 223; p. 15.
Fox, Ansley H., assignor to Fox Pneumatic Shock-Absorber Co., Philadelphia, Pa. Shock-absorber. No. 1,172,588; Feb. 22; Gaz. vol. 223; p. 1138.
Fox, Charles H. (See Underwood, Henry M., assignor.)
Fox, Charles J. (See Fearon, James J., assignor.)
Fox, Edward and R. S., York, Pa. Coin-tray and lock mechanism. No. 1,171,185; Feb. 8; Gaz. vol. 223; p. 536.
Fox, Emil G., Kenosha, Wis. Gage. No. 1,173,789; Feb. 29; Gaz. vol. 223; p. 1605.
Fox, Frank A., Philadelphia, Pa. Adjustable lamp-support. No. 1,170,235; Feb. 1; Gaz. vol. 223; p. 170.
Fox Pneumatic Shock-Absorber Co. (See Fox, Ansley H., assignor.)
Fox, Roy S. (See Fox, Edward and R. S.)
Fox, Wellington H., Philadelphia, Pa. Scissors-grinder. No. 1,170,236; Feb. 1; Gaz. vol. 223; p. 171.
Frackman, Joseph, New York, N. Y. Setting for precious stones. No. 1,171,186; Feb. 8; Gaz. vol. 223; p. 536.
Fraenkell, Eugene J. (See Politzer, Max, assignor.)
Frank B. Cook Company.' (See Corwin, Elmer R., assignor.)
Frank B. Cook Company. (See Johnson, Morton L., assignor.)
Frank, Carl S., Wichita, Kans. Internal-combustion heater. No. 1,172,348; Feb. 22; Gaz. vol. 223; p. 1048.
Frank, Daniel W. L., Sr., Chicago, Ill. Level. No. 1,172,971; Feb. 22; Gaz. vol. 223; p. 1275.
Frank, George, Titonka, Iowa. Earth-auger. No. 1,173,500; Feb. 29; Gaz. vol. 223; p. 1503.
Frank, John J., Pittsfield, Mass., assignor to General Electric Company. Protective device. No. 1,172,972; Feb. 22; Gaz. vol. 223; p. 1276.
Frank and Lambert. (See Loomis, Harry T., assignor.)
Frank, Simon M., St. Louis, Mo. Neckwear. No. 1,171,111; Feb. 8; Gaz. vol. 223; p. 510.
Franklin Brass Manufacturing Company. (See Hirst, Franklin G., assignor.)
Franklin Railway Supply Company. (See Elvin and Martin, assignors.)
Franklin Railway Supply Company. (See Rosenfelt, Samuel D., assignor.)
Franzle, Mozes, The Hague, Netherlands. Desiccating a fermented cereal product. No. 1,172,270; Feb. 22; Gaz. vol. 223; p. 1021.
Frappier, Louis S., Brooklyn, assignor to The Precision Machine Company, New York, N. Y. Reel. No. 1,172,349; Feb. 22; Gaz. vol. 223; p. 1048.
Fraser, Douglas F., Bombay, India. Boiler-circulator. No. 1,172,973; Feb. 22; Gaz. vol. 223; p. 1276.
Frasier, Warren, Philadelphia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-leveling machine. No. 1,171,780; Feb. 15; Gaz. vol. 223; p. 785.
Frayser, Robin A., Richmond, Va. Attachment for canoes. No. 1,172,974; Feb. 22; Gaz. vol. 223; p. 1277.
Frazer, George N., Eugene, Oreg. Hydrant. No. 1,172,975; Feb. 22; Gaz. vol. 223; p. 1277.
Frazer, William A., Los Angeles, Cal. Pivoted steering-wheel for automobiles. No. 1,172,696; Feb. 22; Gaz. vol. 223; p. 1177.
Frazier, Thomas C., *et al.* (See Allen, Achilles, assignor.)
Frederick F. Ingram Company. (See Ingram, Frederick F., assignor.)
Frederick Mfg. Co. (See Hurt, Frederick L., assignor.)
Frederick Post Company. (See Klitsche, Amandus, assignor.)
Frederickson, Clayton E., Berkeley, Cal. Four-cycle internal-combustion engine. No. 1,172,976; Feb. 22; Gaz. vol. 223; p. 1278.
Fredlund, Per O., Pasadena, Cal. Internal-combustion engine. No. 1,170,059; Feb. 1; Gaz. vol. 223; p. 107.
Freeble, Thomas M., Rochester, Pa. Train signaling and control system. No. 1,171,332; Feb. 8; Gaz. vol. 223; p. 587.
Freeble, Thomas M., Rochester, Pa. Safety apparatus for railways. No. 1,171,333; Feb. 8; Gaz. vol. 223; p. 587.
Freeman, Benjamin F., Long Island City, N. Y. Coin-deposit receptacle. No. 1,172,697; Feb. 22; Gaz. vol. 223; p. 1177.
Freeman, Floyd, Newark, Ohio. Conveyer. No. 1,169,948; Feb. 1; Gaz. vol. 223; p. 68.
Freeman, Victor E., *et al.* (See Kreipe, Theodore, assignor.)
Freer, Burr B., Oil City, Pa. Steam-boiler stay-bolt plug. No. 1,172,350; Feb. 22; Gaz. vol. 223; p. 1049.
Frees, Adolph, Thornwood, and A. Coz, Hawthorne, N. Y. Automatic stop and speed control for railway-trains and the like. No. 1,171,112; Feb. 8; Gaz. vol. 223; p. 510.
Freidag, William F., assignor to Stover Engine Works, Freeport, Ill. Bearing. No. 1,170,145; Feb. 1; Gaz. vol. 223; p. 137.
Freisinn, Otto L., Santa Rosa, Cal. Universal planter. No. 1,170,237; Feb. 1; Gaz. vol. 223; p. 171.
Freixas, Melchor H., New York, N. Y. Attaching device for connecting electric lamps to current-carrying conductors. No. 1,171,710; Feb. 15; Gaz. vol. 223; p. 760.
French, Alfred W., Piqua, Ohio. Expressing press. No. 1,172,783; Feb. 22; Gaz. vol. 223; p. 1209.
French, Charles L., Cambridge, Mass. Safety filling-trap. No. 1,169,791; Feb. 1; Gaz. vol. 223; p. 16.
French, Charles L., Cambridge, Mass. Suction foot-valve. No. 1,169,792; Feb. 1; Gaz. vol. 223; p. 16.
Frenier, Albert B., assignor to Rock Island Plow Company, Rock Island, Ill. Gearing. No. 1,170,808; Feb. 8; Gaz. vol. 223; p. 402.
Freshman, Samuel. (See Crotto, Frank E., assignor.)
Frey, Oscar. (See Raftery and Frey.)
Fried. Krupp Aktiengesellschaft. (See Rausenberger, Fritz, assignor.)
Fried. Krupp Aktiengesellschaft. (See Schmitz, Otto, assignor.)
Fried. Krupp Aktiengesellschaft, Germaniawerft. (See Herkt, Ernst, assignor.)
Friedrich, Isaac, Philadelphia, Pa. Artificial-leaf stemming and finishing machine. No. 1,170,622; Feb. 8; Gaz. vol. 223; p. 339.
Fritch, Eugene, Schenectady, N. Y. Trimming-board. No. 1,172,127; Feb. 15; Gaz. vol. 223; p. 911.
Fritz, Gustav E., Chicago, assignor to The Universal Interchangeable Tooth Co., Peoria, Ill. Ready-made adaptable backing for teeth. No. 1,173,106; Feb. 22; Gaz. vol. 223; p. 1321.
Frohlich, George W., Chicago, Ill. Draw-bench. No. 1,172,448; Feb. 22; Gaz. vol. 223; p. 1085.

Frohne, William, Cincinnati, Ohio. Mop-wringer. No. 1,170,623; Feb. 8; Gaz. vol. 223; p. 340.

Frommann, Franklin A., assignor to O. Frommann, Chicago, Ill. Vehicle-wheel. No. 1,173,790; Feb. 29; Gaz. vol. 223; p. 1605.

Frommann, Olive. (See Frommann, Franklin A., assignor.)

Frost, Walter E., assignor to F. O. Watson, Auburn, Me. Fuel-economizer. No. 1,172,128; Feb. 15; Gaz. vol. 223; p. 912.

Frost, Walter E., assignor to F. O. Watson, Auburn, Me. Fuel-economizer. No. 1,172,129; Feb. 15; Gaz. vol. 223; p. 912.

Frost, Walter E., assignor to F. O. Watson, Auburn, Me. Heat-conserver and smoke-consumer. No. 1,172,130; Feb. 15; Gaz. vol. 223; p. 912.

Frost, William H., Etiwanda, Cal. Storm-curtain for automobiles. No. 1,171,781; Feb. 15; Gaz. vol. 223; p. 785.

Frye, Edward, Dorchester, Mass. Combined fuse and switch box. No. 1,173,791; Feb. 29; Gaz. vol. 223; p. 1605.

Fuchs, Maximilian J., Stamford, Conn. Metal-reducing machine. No. 1,170,888; Feb. 8; Gaz. vol. 223; p. 430.

Fuchs, Mose, Baker, Oreg. Adjustable golf-tee board. No. 1,173,792; Feb. 29; Gaz. vol. 223; p. 1606.

Fuchs, Scott F., Union township, Shelby county, Ind. Gradual-shifting draft-hitch. No. 1,170,238; Feb. 1; Gaz. vol. 223; p. 171.

Fuel Economy Engineering Company. (See Buckley, John J., assignor.)

Fulbright, Thomas M., Rentiesville, Okla., assignor of one-third to J. S. Brummel and one-third to F. Williams. Machine for topping and comminuting stalks. No. 1,169,793; Feb. 1; Gaz. vol. 223; p. 16.

Fuller, Anderson, Amsterdam, assignor of one-half to W. J. Keary, Schenectady, N. Y. Folding step for vehicles. No. 1,169,794; Feb. 1; Gaz. vol. 223; p. 16.

Fuller, Charles E. (See Hatz, George J., assignor.)

Fuller, George P., Niagara Falls, N. Y., assignor to The National Electrolytic Company. Composition of matter for the production of formaldehyde solutions. No. 1,170,624; Feb. 8; Gaz. vol. 223; p. 340.

Fuller, James E., assignor to New York Knife Company, New York, N. Y. Pocket-knife punch. No. 1,171,422; Feb. 15; Gaz. vol. 223; p. 661.

Fuller, Percy W., Boston, assignor to A. B. Tenney, Lexington, Mass. Magnetic lock. No. 1,172,203; Feb. 15; Gaz. vol. 223; p. 936.

Fuller, Russell B., Evansville, Ind. Folding crate. No. 1,172,271; Feb. 22; Gaz. vol. 223; p. 1021.

Fuller, Willis S., assignor to Morse Twist Drill & Machine Company, New Bedford, Mass. Reamer. No. 1,172,589; Feb. 22; Gaz. vol. 223; p. 1139.

Fullerton, E. E., *et al.* (See Wilson, Samuel T., assignor.)

Fulton Company, The. (See Fulton, Weston M., assignor.)

Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Radiator. No. 1,170,625; Feb. 8; Gaz. vol. 223; p. 340.

Funk, Arthur C., *et al.* (See Dillon, Oval L., assignor.)

Funk, Lawrence F., *et al.* (See Dillon, Oval L., assignor.)

Funsten, David, Washington, D. C. Cinder-guard. No. 1,171,033; Feb. 8; Gaz. vol. 223; p. 481.

Fynn, Valère A. (See Dick and Fynn.)

Fynn, Valère A., and B. Dick, assignors to Wagner Electric Manufacturing Company, St. Louis, Mo. Ignition apparatus for combustion-engines. No. 1,172,698; Feb. 22; Gaz. vol. 223; p. 1178.

G. E. Prentice Manufacturing Company, The. (See Prentice, George E., assignor.)

G. W. J. Murphy Company. (See Murphy, George W. J., assignor.)

Gabel, Wilbur H., Kintyre, N. D. Burglar-alarm apparatus. No. 1,173,945; Feb. 29; Gaz. vol. 223; p. 1657.

Gaboury, Edouard, Quebec, Quebec, Canada. Rail-joint. No. 1,171,423; Feb. 15; Gaz. vol. 223; p. 661.

Gabriel, Charles F. (See Phillips and Gabriel.)

Gaetje, John H., Chicago, Ill. Secret latch. No. 1,171,938; Feb. 15; Gaz. vol. 223; p. 845.

Gaffney, Charles H., Medford, Mass. Combination fixture-insulator. No. 1,171,334; Feb. 8; Gaz. vol. 223; p. 588.

Gaffney, Louis V., Gaffney, S. C. Device for removing or placing transformer fuse-plugs. No. 1,172,131; Feb. 15; Gaz. vol. 223; p. 913.

Gagnon, Peter J., Jr., South Lowell, assignor of one-half to R. A. Wilson, Lowell, Mass. Bag-turning machine. No. 1,171,034; Feb. 8; Gaz. vol. 223; p. 482.

Gail, John F., and O. Rudd, assignors to The Simmons Manufacturing Company, Kenosha, Wis. Tube and process and apparatus for manufacturing same. No. 1,172,699; Feb. 22; Gaz. vol. 223; p. 1178.

Gail, John F., and O. Rudd, assignors to The Simmons Manufacturing Company, Kenosha, Wis. Process and apparatus for making metal tubes. No. 1,172,700; Feb. 22; Gaz. vol. 223; p. 1178.

Gair, Katherine M. (See Matson, Irving L., assignor.)

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,171,604; Feb. 15; Gaz. vol. 223; p. 724.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Razor. No. 1,171,605; Feb. 15; Gaz. vol. 223; p. 724.

Gaither, Wallace H., Pittsburgh, Pa. Apparatus for purifying air. No. 1,170,526; Feb. 8; Gaz. vol. 223; p. 304.

Gallagher, Richard D., Jr., New York, N. Y. Friction-spring. No. 1,170,146; Feb. 1; Gaz. vol. 223; p. 137.

Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Tube-coupling in multiple units. No. 1,172,590; Feb. 22; Gaz. vol. 223; p. 1139.

Gamble, Austin A. (See Watkins and Gamble.)

Gamble, Joseph W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Measuring apparatus for liquids. No. 1,170,239; Feb. 1; Gaz. vol. 223; p. 172.

Gamble, Joseph W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Water-measuring apparatus. No. 1,171,025; Feb. 8; Gaz. vol. 223; p. 482.

Gamble, Joseph W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Valve. No. 1,172,272; Feb. 22; Gaz. vol. 223; p. 1021.

Gamble, Joseph W., Philadelphia, Pa., assignor to Harrison Safety Boiler Works. Flow-measuring apparatus. No. 1,172,351; Feb. 22; Gaz. vol. 223; p. 1049.

Gamewell, Robert L., Birmingham, Ala. Hollow-tile silo. No. 1,171,036; Feb. 8; Gaz. vol. 223; p. 483.

Gammeter, Harry C., Bratenahl, assignor to The American Multigraph Company, Cleveland, Ohio. Printing-surface. No. 1,172,273; Feb. 22; Gaz. vol. 223; p. 1022.

Gammeter, John R., Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y. Ring-core-revolving machine. No. 1,172,883; Feb. 22; Gaz. vol. 223; p. 1245.

Gandy, Rodney S., Vineland, N. J. Metallic railway-tie and fastener. No. 1,173,658; Feb. 29; Gaz. vol. 223; p. 1559.

Gann, Granville M., *et al.* (See Eason, John F. H., assignor.)

Garand, Joseph, Woburn, Quebec, Canada. Hasp-lock. No. 1,171,037; Feb. 8; Gaz. vol. 223; p. 483.

Garber, Ernest C., Waterloo, Iowa. Penholder. No. 1,170,626; Feb. 8; Gaz. vol. 223; p. 341.

Garbutt, Frank A. (See Griffith and Garbutt.)

Gard, Truman D., Kokomo, Ind. Gasolene-vulcanizer. No. 1,171,038; Feb. 8; Gaz. vol. 223; p. 483.

Gardner Carburetor & Brass Works. (See Gardner, Levi S., assignor.)

Gardner, Levi S., assignor to Gardner Carburetor & Brass Works, Shreveport, La. Carbureter. No. 1,172,701; Feb. 22; Gaz. vol. 223; p. 1179.

Gardner, Marshall. (See Carroll, Patrick H., assignor.)

Gargan, Charles L., Rochester, N. Y. Grinding-machine. No. 1,172,274; Feb. 22; Gaz. vol. 223; p. 1022.

Garl, Manlous, Akron, Ohio. Wind musical instrument. No. 1,170,627; Feb. 8; Gaz. vol. 223; p. 341.

Garner, James B., and H. D. Clayton, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y. Utilization of sulfur dioxid. No. 1,173,566; Feb. 29; Gaz. vol. 223; p. 1526.

Garner, Vernon, assignor to United Printing Machinery Company, Boston, Mass. Paper-feeding machine. No. 1,170,746; Feb. 8; Gaz. vol. 223; p. 382.

Garrison, Floyd A., Chicago, Ill. Periodical-holder. No. 1,170,628; Feb. 8; Gaz. vol. 223; p. 341.

Garrity, George F., Scranton, Pa. Leaf-spring oiler. No. 1,172,591; Feb. 22; Gaz. vol. 223; p. 1140.

Gary, Emerson L., Anamoose, N. D. Dumping-machine. No. 1,170,240; Feb. 1; Gaz. vol. 223; p. 172.

Gaston, Elsberry, Ottumwa, Iowa. Wire-bending machine. No. 1,171,711; Feb. 15; Gaz. vol. 223; p. 761.

Gates, Bernard W., Washington, D. C. Candle construction. No. 1,169,949; Feb. 1; Gaz. vol. 223; p. 68.

Gathmann, Emil, Baltimore, Md. Ingot-mold. No. 1,170,629; Feb. 8; Gaz. vol. 223; p. 342.

Gatlal, George, Tarentum, Pa. Thread-cutter. No. 1,172,784; Feb. 22; Gaz. vol. 223; p. 1210.

Gaynor, John J., and P. C. Lieber, assignors to Progress Machine Company, Indianapolis, Ind. Bottle-capping machine. No. 1,170,241; Feb. 1; Gaz. vol. 223; p. 172.

Gazzolo, Victor, Stockton, Cal. Grease-cup. No. 1,171,606; Feb. 15; Gaz. vol. 223; p. 725.

Gebhardt, George F., assignor to Gebhardt Meter Company, Chicago, Ill. Differential-pressure gage. No. 1,169,795; Feb. 1; Gaz. vol. 223; p. 17.

Gebhardt Meter Company. (See Gebhardt, George F., assignor.)

Gebhart, Henry, Dayton, Ohio. Fare-box. No. 1,173,258; Feb. 29; Gaz. vol. 223; p. 1417.

Geddert, William J., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Car-coupling. No. 1,169,796; Feb. 1; Gaz. vol. 223; p. 17.

Geer, Edmund S., New York, N. Y. Sound-reproducer. No. 1,173,501; Feb. 29; Gaz. vol. 223; p. 1503.

Geer, Harry R., Johnstown, Pa. Lubricator. No. 1,169,797; Feb. 1; Gaz. vol. 223; p. 18.

Geisendorfer, John F., Weimar, Cal. Armor for automobile-tires. No. 1,173,502; Feb. 29; Gaz. vol. 223; p. 1504.

Gem Carbureter and Auto Specialty Company. (See Purcell, John M., assignor.)

Gem Hammock and Fly Net Company. (See Erdmann, William, assignor.)

Gemmell, John, Calumet, Mich. Mine-shaft roller. No. 1,171,039; Feb. 8; Gaz. vol. 223; p. 484.

General Bakelite Company. (See Jones, Whitney B., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Axford, Charles M., assignor.)

General Electric Company. (See Bergman, Sven R., assignor.)

General Electric Company. (See Blume, Louis F., assignor.)

General Electric Company. (See Carpenter, Henry A., assignor.)

General Electric Company. (See Collins, Edgar F., assignor.)

General Electric Company. (See Cubitt, Archibald S., assignor.)

General Electric Company. (See Day and Windeler, assignors.)

General Electric Company. (See Dempster, John T. H., assignor.)

General Electric Company. (See Dushman, Saul, assignor.)

General Electric Company. (See Eaton, John, assignor.)

General Electric Company. (See Faccioli, Giuseppe, assignor.)

General Electric Company. (See Fleischmann, Lionel, assignor.)

General Electric Company. (See Frank, John J., assignor.)

General Electric Company. (See Hall, John L., assignor.)

General Electric Company. (See Halvorsen and Beechlyn, assignors.)

General Electric Company. (See Hawkins, Laurence A., assignor.)

General Electric Company. (See Kieser, Walter, assignor.)

General Electric Company. (See Köchling, Wilhelm, assignor.)

General Electric Company. (See Krämer, Bernhard, assignor.)

General Electric Company. (See Krueger, Carl R., assignor.)

General Electric Company. (See Langmuir, Irving, assignor.)

General Electric Company. (See Lasche, Oskar, assignor.)

General Electric Company. (See Macloskie, George, assignor.)

General Electric Company. (See Merriam, Ezra B., assignor.)

General Electric Company. (See Osnos, Mendel, assignor.)

General Electric Company. (See Peek, Frank W., Jr., assignor.)

General Electric Company. (See Pentz, Albert D., assignor.)

General Electric Company. (See Persson, Otto F., assignor.)

General Electric Company. (See Sargent, Howard R., assignor.)

General Electric Company. (See Schneider, Stephan, assignor.)

General Electric Company. (See Sheldon, Lucian A., assignor.)

General Electric Company. (See Standerwick, Reginald G., assignor.)

General Electric Company. (See Stern, Georg, assignor.)

General Electric Company. (See Stevens, George E., assignor.)

General Electric Company. (See Summerhayes, Henry R., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Tuttle, James N., assignor.)

General Electric Company. (See Ver Planck, William E., assignor.)

General Electric Company. (See Weed, James M., assignor.)

General Electric Company. (See Wilkinson, James, assignor.)

General Electric Company. (See Wright, Gilbert, assignor.)

General Optical Company. (See Opitz, Gustav W., assignor.)

General Pressed Metal Company. (See Banes, Walter D., assignor.)

General Pump Appliance Company. (See Casler, Herman, assignor.)

General Railway Signal Company. (See Henry, William S., assignor.)

General Railway Signal Company. (See Ross and Taylor, assignors.)

General Railway Signal Company. (See Wuerpel, Morris, assignor.)

General Railway Supply Co. (See Bassford, Lowell C., assignor.)

General Utilities Company. (See Graves, McDowell, assignor.)

Gentile, Nicholas. (See D'Agostino, Antonio, assignor.)

George, Frank, Orrville, Ohio. Animal-trap. No. 1,169,950; Feb. 1; Gaz. vol. 223; p. 68.

George H. Frothingham Co. (See Prescott, Arthur T., assignor.)

George, Isaac A., Hamilton, Ohio. Making raceway-walls for bearings. No. 1,173,793; Feb. 29; Gaz. vol. 223; p. 1606.

George, Isaac A., Hamilton, Ohio. Apparatus for making raceway-walls for bearings. No. 1,173,794; Feb. 29; Gaz. vol. 223; p. 1606.

George, Jerome R., and V. E. Edwards, assignors to Morgan Construction Company, Worcester, Mass. Rod-straightening machine. No. 1,170,242; Feb. 1; Gaz. vol. 223; p. 173.

George P. Bent Company. (See Weiser, Frank J. W., assignor.)

George, Ross F., and W. H. Gordon, Seattle, Wash. Lettering-pen. No. 1,172,785; Feb. 22; Gaz. vol. 223; p. 1210.

George W. Plumly Company. (See Graeber, Frank, assignor.)

George, William B., Chicago, Ill. Calipers and similar tool. No. 1,171,040; Feb. 8; Gaz. vol. 223; p. 484.

Georgie, Lizzie J., Denver, Colo. Clothes-basket. No. 1,172,352; Feb. 22; Gaz. vol. 223; p. 1050.

Gérard, John, assignor to The American Hardware Corporation, New Britain, Conn. Door check and closer. No. 1,170,482; Feb. 1; Gaz. vol. 223; p. 252.

Gerard, Roy H., Berkeley, Cal. Variable-speed-transmission mechanism. No. 1,173,946; Feb. 29; Gaz. vol. 223; p. 1657.

Gerber, Ralph, Raymond, Wash. Power-transmission mechanism. No. 1,173,567; Feb. 29; Gaz. vol. 223; p. 1526.

Gerhardstein, Clement J., San Francisco, Cal. Lunch-wrapper. No. 1,172,204; Feb. 15; Gaz. vol. 223; p. 936.

Germless Paper Cup Company, The. (See Rike and Klin, assignors.)

Gervais, Wainwright B., assignor to Variety Manufacturing Company, Chicago, Ill. Door. No. 1,171,424; Feb. 15; Gaz. vol. 223; p. 661.

Gesellschaft Fuer Drahtlose Telegraphie m. b. H. (See Meissner, Alexander, assignor.)

Ghrames, William J., Amarkro, Okla. Cuspidor cleaner and carrier. No. 1,172,592; Feb. 22; Gaz. vol. 223; p. 1140.

Giacometti, Guido. (See Eckart and Giacometti.)

Giardino, Liborio G., Campello, Mass. Lock. No. 1,171,425; Feb. 15; Gaz. vol. 223; p. 662.

Gibbs, Arthur E., Wayne, Pa. Manufacture of chlorates and perchlorates of alkali metals. No. 1,173,346; Feb. 29; Gaz. vol. 223; p. 1450.

Gibbs, Benedict T., Jr., Chicago Heights, assignor to Morden Frog & Crossing Works, Chicago, Ill. Guard-rail. No. 1,173,420; Feb. 29; Gaz. vol. 223; p. 1475.

Gibbs, Bert F. (See Lewis and Gibbs.)

Gibbs, Frederick H., New York, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo. Car construction. No. 1,170,527; Feb. 8; Gaz. vol. 223; p. 304.

Gibbs, Henry, assignor to W. D. Allen Manufacturing Company, Chicago, Ill. Valved nozzle. No. 1,170,809; Feb. 8; Gaz. vol. 223; p. 403.

Gibson, Clark, Adamstown, Md. Sliding-door fastener. No. 1,173,947; Feb. 29; Gaz. vol. 223; p. 1658.

Gibson, George H., Montclair, N. J. Flow-proportioning means. No. 1,174,003; Feb. 29; Gaz. vol. 223; p. 1675.

Gibson, Otis. (See Barfoed, Svend, assignor.)

Gibson, William S., Ossining, N. Y. Invalid-rest for beds. No. 1,171,712; Feb. 15; Gaz. vol. 223; p. 761.

Giem, George, Palmer Lake, Colo. Safety appliance for flying-machines. No. 1,173,948; Feb. 29; Gaz. vol. 223; p. 1658.

Gierding, Charles E., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-base. No. 1,172,780; Feb. 22; Gaz. vol. 223; p. 1210.

Gilbert and Barker Manufacturing Company. (See Meegan, Frank W., assignor.)

Gilchrist, William, and R. W. Daykin; said Daykin assignor of one-tenth to M. R. House, Cleveland, Ohio. Heater. No. 1,171,512; Feb. 15; Gaz. vol. 223; p. 692.

Gilday, William A., Philadelphia, Pa. Attachment for steering-gears. No. 1,172,275; Feb. 22; Gaz. vol. 223; p. 1022.

Gilkerson, John K., Los Angeles, Cal. Chiropractic table. No. 1,171,713; Feb. 15; Gaz. vol. 223; p. 761.

Gillen, Joseph, New York, N. Y. Cut-off for conduits. No. 1,172,977; Feb. 22; Gaz. vol. 223; p. 1278.

Gillen, U. E. (See Rutherford, Frederick A., assignor.)

Gillentine, Sanford E., Anguilla, Miss. Door-opener. No. 1,172,205; Feb. 15; Gaz. vol. 223; p. 937.

Gillies, Ewen M., Dorchester, Mass. Iron-molder's tool. No. 1,172,978; Feb. 22; Gaz. vol. 223; p. 1278.

Gilliland, Charles S., Springfield, Mo. Tire. No. 1,173,949; Feb. 29; Gaz. vol. 223; p. 1658.

Gillis & Geoghegan. (See Rutan, William, assignor.)

Gilman, George H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Pressure-fluid-actuated tool. No. 1,171,113; Feb. 8; Gaz. vol. 223; p. 510.

Gilman, George H., and W. C. Michael, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Pressure-fed tool. No. 1,172,238; Feb. 15; Gaz. vol. 223; p. 948.

Gilstrap, Robert L. (See Schroder and Gilstrap.)

Gingras, Octave. (See Painchaud, Pierre A., assignor.) (Reissue.)

Ginsburg, Michael I., Philadelphia, Pa. Wrench. No. 1,171,939; Feb. 15; Gaz. vol. 223; p. 845.

Girardelli, Riccardo, Rome, Italy. Apparatus for adjusting the directions of guns. No. 1,172,979; Feb. 22; Gaz. vol. 223; p. 1278.

Gladding, Louis A., and J. H. Sullivan, Newport, R. I. Train-stop system. No. 1,171,426; Feb. 15; Gaz. vol. 223; p. 662.
Glaxon, Samuel, New York, N. Y. Collar. No. 1,170,243; Feb. 1; Gaz. vol. 223; p. 173.
Glendale Elastic Fabrics Company. (See Seidel, Gotthelf M., assignor.)
Glenn, Thomas F., Ardmore, Pa., assignor to The S. S. White Dental Manufacturing Company. Artificial tooth. No. 1,170,630; Feb. 8; Gaz. vol. 223; p. 342.
Glessner, Arthur W. (See Menk, Rudolph W., assignor.)
Glidden, Alfred A., Watertown, Mass., assignor to Hood Rubber Co. Preparing a rubber substitute. No. 1,171,187; Feb. 8; Gaz. vol. 223; p. 536.
Globe Machine Company. (See Beebe and Thomas, assignors.)
Gloekler, Charles A., and C. Ziefel, Pittsburgh, Pa. Bin. No. 1,170,631; Feb. 8; Gaz. vol. 223; p. 342.
Glucksmann, Touro, New Orleans, La. Combined windshield and match-box. No. 1,172,276; Feb. 22; Gaz. vol. 223; p. 1023.
Gobatti, Edmond. (See Vescovi and Gobatti.)
Goble, Charles. (See Scherffius, William H., assignor.)
Goddard, Edward F. (See Petri-Palmedo and Goddard.)
Goddard, John W., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Sole-sewing machine. No. 1,171,714; Feb. 15; Gaz. vol. 223; p. 762.
Goeller, Robert A., New York, N. Y. Lug. No. 1,169,798; Feb. 1; Gaz. vol. 223; p. 18.
Goelz, George F., West New York, N. J. Garment-hanger. No. 1,173,421; Feb. 29; Gaz. vol. 223; p. 1476.
Goessling, Frederick W., St. Louis, Mo. Seal-lock for boxes. No. 1,173,347; Feb. 29; Gaz. vol. 223; p. 1450.
Goetzke, Otto, Jersey City, N. J., assignor to Excellall Products Company, New York, N. Y. Container-top. No. 1,173,503; Feb. 29; Gaz. vol. 223; p. 1504.
Gold Car Heating and Lighting Company. (See Bailey, Alfred O., assignor.)
Gold-Dust Concentration Company, The. (See Fassett, Riley D., assignor.)
Gold, Egbert H. (See Schreiber, Edward A., assignor.)
Gold Medal Camp Furniture Manufacturing Co. (See Ferguson, Arthur M., assignor.)
Gold Medal Camp Furniture Manufacturing Co. (See Rasmussen and Brown, assignors.)
Goldberg, John S., assignor to Alemite Metals Company, Chicago, Ill. Grease-cup. No. 1,173,659; Feb. 29; Gaz. vol. 223; p. 1559.
Goldberger, Ernest. (See Bokor and Goldberger.)
Golden, Charles E. (See Anderson, Edward V., assignor.)
Goldenberg, Harry, New York, N. Y. Tuck-loop-securing device. No. 1,171,513; Feb. 15; Gaz. vol. 223; p. 692.
Goldston, William, London, England. Child's vehicle, &c. No. 1,171,940; Feb. 15; Gaz. vol. 223; p. 845.
Goldwag, Juda, New York, N. Y., assignor to American Steel Frame & Band Iron Company, Inc. Fastener member for suitcases and the like. No. 1,169,951; Feb. 1; Gaz. vol. 223; p. 69.
Gollos, Anatol, Chicago, Ill., assignor to Gollos Railway Signal Company of America. Track system for controlling trains. No. 1,170,483; Feb. 1; Gaz. vol. 223; p. 252.
Gollos Railway Signal Company of America. (See Gollos, Anatol, assignor.)
Gonware, Daniel F., Chicago, Ill. Journal-box wear-plate. No. 1,173,660; Feb. 29; Gaz. vol. 223; p. 1559.
Gooch, Oswald S., Cedarville, Cal. Work abutment or stop for work-benches. No. 1,170,970; Feb. 8; Gaz. vol. 223; p. 458.
Good, John, Brooklyn, N. Y. Control mechanism. No. 1,170,747; Feb. 8; Gaz. vol. 223; p. 383.
Good, John, Brooklyn, N. Y. Internal-combustion engine. No. 1,171,427; Feb. 15; Gaz. vol. 223; p. 662.
Good, John, Brooklyn, N. Y. Internal-combustion engine. No. 1,171,428; Feb. 15; Gaz. vol. 223; p. 663.
Goodell-Pratt Company. (See Hapgood, Oscar D., assignor.)
Goodman, Joseph E. (See Campbell, Ernst P., assignor.)
Goodrich, Robert R., Tucson, Ariz. Hydro-electrolytic treatment of ores. No. 1,171,782; Feb. 15; Gaz. vol. 223; p. 786.
Goodridge, Gilbert W., and G. B. Thomas, assignors to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 1,172,980; Feb. 22; Gaz. vol. 223; p. 1279.
Goodrum, Charles L. (See Lattig and Goodrum.)
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine-switching telephone-exchange system. No. 1,169,799; Feb. 1; Gaz. vol. 223; p. 18.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Machine-switching telephone-exchange system. No. 1,169,800; Feb. 1; Gaz. vol. 223; p. 19.
Goodrum, Charles L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,171,429; Feb. 15; Gaz. vol. 223; p. 663.
Goodwin, William B., Columbus, Ohio. Vehicle. No. 1,171,941; Feb. 15; Gaz. vol. 223; p. 846.
Goodwin, William B., Columbus, Ohio. Vehicle. No. 1,171,942; Feb. 15; Gaz. vol. 223; p. 846.
Gordon, William H. (See George and Gordon.)
Gorman, Edward R., West Haven, Conn. Sanitary mouthpiece-protector for telephones. No. 1,172,277; Feb. 22; Gaz. vol. 223; p. 1023.
Gorman, William A., New York, N. Y. Lawn-scarifier. No. 1,172,981; Feb. 22; Gaz. vol. 223; p. 1279.
Gornicec, Emil, Youngstown, Ohio. Combination-lock. No. 1,173,348; Feb. 29; Gaz. vol. 223; p. 1451.
Gorton, George, Racine, Wis. Metal-working lathe and the like. No. 1,170,890; Feb. 8; Gaz. vol. 223; p. 430.
Gorton, George, Racine, Wis. Rotary metal-cutting-off device. No. 1,171,430; Feb. 15; Gaz. vol. 223; p. 664.
Gorton, Robert, West Newton, Mass. Drinking-cup. No. 1,171,431; Feb. 15; Gaz. vol. 223; p. 664.
Goss Printing Press Company, The. (See Firm, Joseph L., assignor.)
Goss Printing Press Company. (See Goss and Seymour, assignors.)
Goss Printing Press Company. (See Seymour, Ralph C., assignor.)
Goss, Samuel F., Mosier, Oreg. Mirror-lock. No. 1,171,188; Feb. 8; Gaz. vol. 223; p. 537.
Goss, Samuel G., Chicago, Ill., and R. C. Seymour, Larchmont, N. Y., assignors to Goss Printing Press Company. Cutting and folding machine. No. 1,173,950; Feb. 29; Gaz. vol. 223; p. 1659.
Gotautas, Anton, Brainerd, Minn. Hand-power boat-propelling means. No. 1,169,952; Feb. 1; Gaz. vol. 223; p. 69.
Gotthardt, Henry R., assignor to Dow Wire & Iron Works, Louisville, Ky. Cup for conveyers. No. 1,172,702; Feb. 22; Gaz. vol. 223; p. 1179.
Gottlieb, Simon, assignor of one-half to J. Weiner, New York, N. Y. Machine for cleaning ceilings. No. 1,173,796; Feb. 29; Gaz. vol. 223; p. 1607.
Gottschalk, Albert, New York, N. Y., assignor to National Pneumatic Company, Chicago, Ill. Door-operating mechanism. No. 1,172,519; Feb. 22; Gaz. vol. 223; p. 1113.
Gottschalk & Co. (See Gottschalk, Hugo, assignor.)
Gottschalk, Hugo, Burnham, assignor to Gottschalk & Co., Inc., Reedsville, Pa. Apparatus for mixing dough. No. 1,172,353; Feb. 22; Gaz. vol. 223; p. 1050.
Gould Coupler Company. (See Richards, Willard F., assignor.)
Gould, William H. G. (See Ingram, Keller, and Arthur, assignors.)
Government of the United States. (See Strauss and Halsey, assignors.)
Grabau, Hans E., assignor to G. Abraham, New York, N. Y. Clasp. No. 1,170,245; Feb. 1; Gaz. vol. 223; p. 173.
Grace, John V., Portland, Oreg. Self-closing faucet. No. 1,171,514; Feb. 15; Gaz. vol. 223; p. 693.
Gradenigo, Giuseppe. (See Stefanini and Gradenigo.)
Graeber, Frank, Norristown, assignor to George W. Plumly Company, Philadelphia, Pa. Pill-box-making machine. No. 1,171,515; Feb. 15; Gaz. vol. 223; p.693.
Graef, Otto, assignor to Firm of Bismarckhütte, Bismarckhütte, Germany. Manufacture of sheet silicon alloy. No. 1,173,951; Feb. 29; Gaz. vol. 223; p. 1659.
Graf, Henry T., Briarcliff Manor, N. Y. Golf-bag support. No. 1,170,891; Feb. 8; Gaz. vol. 223; p. 431.
Graham, Edward, Saginaw, Mich. Bandage-holder. No. 1,173,952; Feb. 29; Gaz. vol. 223; p. 1659.
Graham, Otis G., Portland, Oreg. Filter-funnel. No. 1,170,892; Feb. 8; Gaz. vol. 223; p. 431.
Graham, Otis G., Portland, Oreg. Flour-sifter. No. 1,170,893; Feb. 8; Gaz. vol. 223; p. 431.
Graham, William S., assignor to Parlin & Orendorff Company, Canton, Ill. Clutch mechanism. No. 1,171,114; Feb. 8; Gaz. vol. 223; p. 511.
Grand Rapids Brass Company. (See Tower, Daniel W., assignor.)
Grandi, Alfredo, Bologna, Italy. Cock. No. 1,171,189; Feb. 8; Gaz. vol. 223; p. 537.
Granger, Frank B., assignor to Hall-Borchert Dress Form Company, New York, N. Y. Sectional dress-form. No. 1,173,184; Feb. 29; Gaz. vol. 223; p. 1391.
Grannis, William, Kewaunee, Wis. Milk-can body and removable top. No. 1,173,422; Feb. 29; Gaz. vol. 223; p. 1476.
Grant, John. (See Campbell and Grant.)
Grant, John P., Grandy, Minn. Stable-cleaning apparatus. No. 1,171,607; Feb. 15; Gaz. vol. 223; p. 725.
Grant, Thomas F., Guelph, Ontario, Canada. Adjustable tightening and locking device for bed-springs and other suchlike articles. No. 1,171,041; Feb. 8; Gaz. vol. 223; p. 484.
Graves, Clarence E., assignor of one-half to E. Emerson, Wellsville, N. Y. Heating means for mineral oils. No. 1,173,107; Feb. 22; Gaz. vol. 223; p. 1321.
Graves, George H., assignor of one-half to H. M. Campbell, Chicago, Ill. Fan. No. 1,171,190; Feb. 8; Gaz. vol. 223; p. 537.
Graves, McDowell, assignor to General Utilities Company, Los Angeles, Cal. Vending-machine. No. 1,170,632; Feb. 8; Gaz. vol. 223; p. 343.
Graves, Orley B., Coffeyville, Kans. Wheelwright-machine. No. 1,172,449; Feb. 22; Gaz. vol. 223; p. 1086.
Gravill, Harold, Hull, England. Lady's hat-fastener. No. 1,170,894; Feb. 8; Gaz. vol. 223; p. 432.
Gray, Albert H., Grand Rapids, Mich. Laundry appliance. No. 1,169,801; Feb. 1; Gaz. vol. 223; p. 19.
Gray, Arthur W., Ellensburg, Wash. Silo-packer. No. 1,171,783; Feb. 15; Gaz. vol. 223; p. 786.

Gray & Davis. (See Elkins, David H., assignor.)
Gray, Frank J. (See Drury and Gray.)
Gray, Frank W., Detroit, Mich., assignor to Eastman Kodak Company, Rochester, N. Y. Vignetter. No. 1,169,802; Feb. 1; Gaz. vol. 223; p. 19.
Gray, Macomb B., Billings, Mont. Apparatus for testing the quality of germination in seeds. No. 1,172,787; Feb. 22; Gaz. vol. 223; p. 1211.
Gray, Thomas L., Seattle, assignor of one-half to G. A. Kent, King county, Wash. Wheel-locking device. No. 1,171,335; Feb. 8; Gaz. vol. 223; p. 588.
Gray, William E., Boise, Idaho. Letter-indicating mechanism. No. 1,172,132; Feb. 15; Gaz. vol. 223; p. 913.
Greely, Clarence E., St. Paul, Ind. Conveyer-bucket. No. 1,171,516; Feb. 15; Gaz. vol. 223; p. 694.
Green, Charles, Berkeley, Cal. Rail fish-plates. No. 1,172,788; Feb. 22; Gaz. vol. 223; p. 1211.
Green, George T., Hailsham, England. Machine for the manufacture of mats and the like. No. 1,173,661; Feb. 29; Gaz. vol. 223; p. 1560.
Green & Hopson. (See Mason, George L., assignor.)
Green, John O., Lost Lake, Alberta, Canada. Music-leaf turner. No. 1,170,060; Feb. 1; Gaz. vol. 223; p. 107.
Green, Mahlon D., Portland, Oreg. Dispensing sugar-bowl. No. 1,170,246; Feb. 1; Gaz. vol. 223; p. 173.
Green, Samuel K., Paris, Ill. Plant-protector. No. 1,172,983; Feb. 22; Gaz. vol. 223; p. 1280.
Green, Thomas L., Indianapolis, Ind. Machine for cutting articles from plastic material. No. 1,172,520; Feb. 22; Gaz. vol. 223; p. 1113.
Green, Thomas L., Indianapolis, Ind. Sheeting and bar machine. No. 1,172,521; Feb. 22; Gaz. vol. 223; p. 1113.
Green, William R., Folsom, N. Mex. Wire-stretcher. No. 1,171,784; Feb. 15; Gaz. vol. 223; p. 786.
Greenberg, Maurice, Philadelphia, Pa. Take-up device. No. 1,169,803; Feb. 1; Gaz. vol. 223; p. 20.
Greene, Frank R., Springfield, Mass. Spike. No. 1,171,336; Feb. 8; Gaz. vol. 223; p. 588.
Greene, Selah E., Ogden, Utah. Punch. No. 1,171,608; Feb. 15; Gaz. vol. 223; p. 725.
Greenewald, Eugene L. (See Anders, Charles F. P., assignor.)
Greenlaw Manufacturing Company, The. (See Greenlaw and Ryan, assignors.)
Greenlaw, Warren A., Melrose Highlands, and C. F. Ryan, Beachmont, assignors to The Greenlaw Manufacturing Company, Boston, Mass. Reduction-valve. No. 1,173,259; Feb. 29; Gaz. vol. 223; p. 1417.
Greenwald, Albert, Cincinnati, Ohio. Jewel-tweezers. No. 1,174,004; Feb. 29; Gaz. vol. 223; p. 1676.
Greenway, Robert B., San Bernardino, Cal. Grease-cup. No. 1,172,020; Feb. 15; Gaz. vol. 223; p. 875.
Greer, George T., Roanoke, Va. Tobacco-tin. No. 1,170,147; Feb. 1; Gaz. vol. 223; p. 137.
Gregg, Jerry E., Cloudcroft, N. Mex. Pump. No. 1,172,789; Feb. 22; Gaz. vol. 223; p. 1211.
Gregory, Ell E., assignor of one-half to W. A. MacDonald, Central City, Ky. Non-refillable bottle. No. 1,172,982; Feb. 22; Gaz. vol. 223; p. 1280.
Gregory, Thomas M., Akron, Ohio. Toy balloon. No. 1,169,804; Feb. 1; Gaz. vol. 223; p. 20.
Greifenhagen, John, Randolph, S. D. Trace-carrier. No. 1,170,528; Feb. 8; Gaz. vol. 223; p. 305.
Greig, Harry B., Galion, Ohio. Safety controlling mechanism for electrically-propelled vehicles. No. 1,171,785; Feb. 15; Gaz. vol. 223; p. 786.
Gresens, Edward A., and A. Faerber, Rush, N. Y. Speed-indicator. No. 1,172,984; Feb. 22; Gaz. vol. 223; p. 1280.
Grevemberg, Louis C., Calumet, La. Apparatus for use in the sulfuration of liquids. No. 1,172,133; Feb. 15; Gaz. vol. 223; p. 913.
Grey, Charles M., East Orange, N. J. Vending-machine. No. 1,170,895; Feb. 8; Gaz. vol. 223; p. 432.
Greytak, John J., Great Falls, Mont. Alarm. No. 1,171,042; Feb. 8; Gaz. vol. 223; p. 485.
Grier, Frederick A., Jr., Salisbury, Md. Cutting-tool for flues and tubes. No. 1,173,953; Feb. 29; Gaz. vol. 223; p. 1659.
Grieshaber, Hugo E., New London, Conn., assignor to Electric Boat Company, New York, N. Y. Submarine boat. No. 1,170,529; Feb. 8; Gaz. vol. 223; p. 305.
Griffin, George B., Edgewood, Pa., assignor to Westinghouse Electric and Manufacturing Company. Fan. No. 1,173,568; Feb. 29; Gaz. vol. 223; p. 1526.
Griffin Wheel Company. (See Vial, Frederick K., assignor.)
Griffin, William T., assignor of one-third to A. A. Hancock, Washington, D. C. Pneumatic cleaner. No. 1,172,450; Feb. 22; Gaz. vol. 223; p. 1086.
Griffith, Bence D., Mason City, Iowa. Paraffin-machine. No. 1,172,790; Feb. 22; Gaz. vol. 223; p. 1212.
Griffith, George, Parsons, Kans. Electric switch. No. 1,173,260; Feb. 29; Gaz. vol. 223; p. 1418.
Griffith, Jesse C., Madison, N. C. Car-coupling. No. 1,170,061; Feb. 1; Gaz. vol. 223; p. 108.
Griffith, Leigh M., and F. A. Garbutt, Los Angeles, Cal. Score-board. No. 1,171,715; Feb. 15; Gaz. vol. 223; p. 762.
Griffith, Mary V., Baltimore, Md. Furniture. No. 1,173,954; Feb. 29; Gaz. vol. 223; p. 1660.
Griggs, Alonzo, Charleston, S. C. Air-hammer. No. 1,172,206; Feb. 15; Gaz. vol. 223; p. 937.
Grignon, Robert. (See Oberley and Grignon.)
Grimes, Alonzo, trustee. (See Barnett, Morrisson J., assignor.)
Grinberg, Adolf J., New York, N. Y., and B. Feldman, Plymouth, Mass. Propagating plants. No. 1,172,021; Feb. 15; Gaz. vol. 223; p. 876.
Griswold, Andrew E., Seattle, Wash. Safety-switch panel. No. 1,172,019; Feb. 15; Gaz. vol. 223; p. 875.
Griswold, George. (See Baron, Frederic S., assignor.)
Griswold, Samuel, Camp Point, Ill. Penholder. No. 1,173,797; Feb. 29; Gaz. vol. 223; p. 1607.
Griswold, Thomas, Jr. (See Barstow, Edwin O., assignor.)
Groene, William F. (See Le Blond and Groene.)
Grogan, David H., Gadsden, Ala. Bicycle attachment. No. 1,170,148; Feb. 1; Gaz. vol. 223; p. 138.
Grohn, Henry P. (See Kenney and Grohn.)
Gronert, William J., and W. C. Reid, Elkhart, Ind. Building-block. No. 1,171,191; Feb. 8; Gaz. vol. 223; p. 538.
Groom, Ellsworth, Portland, Oreg., assignor of one-half to W. Fairchild, Tacoma, Wash. Kitchen-sink plug. No. 1,173,798; Feb. 29; Gaz. vol. 223; p. 1607.
Grooms, Reister R., Washington, D. C. Separable fastener. No. 1,172,703; Feb. 22; Gaz. vol. 223; p. 1180.
Gross, Auge L., *et al.* (See Zaitz, Frank, assignor.)
Grote, William E., New York, N. Y. Portable lamp. No. 1,172,354; Feb. 22; Gaz. vol. 223; p. 1050.
Grotenhuis, William J., assignor, by mesne assignments, to Kinney-Rome Company, Chicago, Ill. Bed construction. No. 1,171,115; Feb. 8; Gaz. vol. 223; p. 511.
Grover, Albert D., New York, N. Y., assignor to Autosales Gum & Chocolate Company. Magnetic coin-testing mechanism for coin-controlled machines. No. 1,173,716; Feb. 29; Gaz. vol. 223; p. 1578.
Grube, George F., Evanston, and J. V. Meyering, Chicago, Ill. Trunk-locking mechanism. No. 1,172,791; Feb. 22; Gaz. vol. 223; p. 1212.
Grueber, Henry, Stoke Newington, London, England. Glove-stretcher. No. 1,173,955; Feb. 29; Gaz. vol. 223; p. 1660.
Gruendler, Gustav J., St. Louis, Mo. Refrigerator. No. 1,173,261; Feb. 29; Gaz. vol. 223; p. 1418.
Gruenfeldt, Emil, Cleveland, Ohio. Regulating sound-box reproduction. No. 1,170,530; Feb. 8; Gaz. vol. 223; p. 306.
Gscheidlen, Wilhelm, Berlin-Schmargendorf, assignor to Siemens-Schuckertwerke G. m. b. H., Berlin, Germany. Cooling device for dynamos. No. 1,170,444; Feb. 1; Gaz. vol. 223; p. 238.
Guarniery, Robert A., assignor to Cunningham Piano Company, Philadelphia, Pa. Truck. No. 1,170,748; Feb. 8; Gaz. vol. 223; p. 383.
Guest, James S., Oakland, Cal. Scaffold. No. 1,172,355; Feb. 22; Gaz. vol. 223; p. 1050.
Guglielmone, Oscar, New York, N. Y. Snow-remover. No. 1,173,956; Feb. 29; Gaz. vol. 223; p. 1660.
Guinand, Gustavius B., Los Angeles, Cal. Defect-indicator for steering mechanisms. No. 1,170,633; Feb. 8; Gaz. vol. 223; p. 343.
Gulf Refining Company. (See Henderson, Herbert, assignor.)
Gulland, Charles, Pittsburgh, assignor of one-half to J. F. Courson, Pitcairn, Pa. Steam-trap. No. 1,170,896; Feb. 8; Gaz. vol. 223; p. 432.
Gullett Gin Company. (See Johnston, Thomas E., assignor.)
Gunzburg, Robert, Kensington, England. Apparatus for use in practising the game of golf. No. 1,173,262; Feb. 29; Gaz. vol. 223; p. 1419.
Gumpp, Albert F., and W. J. Johnson, Smethport, Pa. Glass-shaping apparatus. No. 1,169,953; Feb. 1; Gaz. vol. 223; p. 69.
Gundelach, Max, Gehlberg, Germany. Anticathode for Röntgen-ray tubes. No. 1,170,247; Feb. 1; Gaz. vol. 223; p. 174.
Gunderson, George, Grand Forks, N. D. Music-hook holder. No. 1,171,943; Feb. 15; Gaz. vol. 223; p. 846.
Gundlach-Manhattan Optical Company. (See Turner and Schidakovitch, assignors.)
Güngerich, Paul, Berlin-Steglitz, assignor to Martini & Hüneke Maschinenbau-Aktien-Gesellschaft, Berlin, Germany. Means for safeguarding closed vessels against fire and explosion. No. 1,172,884; Feb. 22; Gaz. vol. 223; p. 1245.
Gurney Electric Elevator Company. (See Coyle, Andrew M., assignor.)
Gustafson, Adolph P., assignor to M. Schulz Co., Chicago, Ill. Pneumatic action. No. 1,170,531; Feb. 8; Gaz. vol. 223; p. 306.
Gustafson, Adolph P., assignor to M. Schulz Co., Chicago, Ill. Rewind mechanism. No. 1,173,185; Feb. 29; Gaz. vol. 223; p. 1391.
Gustafson, Axel R., Chicago, Ill. Ironing-machine. No. 1,170,532; Feb. 8; Gaz. vol. 223; p. 306.
Gustafson, Axel R., Chicago, Ill., assignor to Horton Manufacturing Company, Fort Wayne, Ind. Ironing-machine. (Reissue.) No. 14,074; Feb. 22; Gaz. vol. 223; p. 1340.
Gustafson, Carl, Chicago, Ill. Combination telescoping and folding buffet-bed. No. 1,170,149; Feb. 1; Gaz. vol. 223; p. 138.
Gustafson, Hans C., Arlington, Iowa. Truck. No. 1,170,248; Feb. 1; Gaz. vol. 223; p. 174.
Gutenkunst, William, Milwaukee, Wis. Portable milk stool. No. 1,169,805; Feb. 1; Gaz. vol. 223; p. 20.

Guth, Edwin F., and R. V. Owen, assignors to Luminous Unit Company, St. Louis, Mo. Lamp holder and reflector. No. 1,172,522; Feb. 22; Gaz. vol. 223; p. 1114.
Guyer, Ralph T., Elkhart, Ind. Engine valve mechanism. No. 1,170,249; Feb. 1; Gaz. vol. 223; p. 174.
H. D. Smith & Company, The. (See Thomson, William S., assignor.)
H. F. Krantz Manufacturing Company. (See Krantz, Hubert F., assignor.)
H. H. Franklin Manufacturing Company. (See Wilkinson, John, assignor.)
H. W. Butterworth & Sons Company. (See Elliott, Charles H., assignor.)
H. W. Cooper Saddlery Hardware Mfg. Company. (See Creedon and Miles, assignors.)
Haar, Gustav E., Anacostia, D. C., assignor to J. H. Stephens, Vernon, Tex. Pump. No. 1,172,022; Feb. 15; Gaz. vol. 223; p. 876.
Haar, John H. A., Chicago, Ill. Autotruck. No. 1,171,043; Feb. 8; Gaz. vol. 223; p. 485.
Haas, Charles T., Tucumcari, N. M. Explosion-indicator for internal-combustion engines. No. 1,171,192; Feb. 8; Gaz. vol. 223; p. 538.
Haas, Ferdinand G. (See Hackney and Haas.)
Haas, Victor E., assignor of one-half to S. E. Starr, Toledo, Ohio. Carbureter. No. 1,171,716; Feb. 15; Gaz. vol. 223; p. 763.
Hackney, Leslie S., and F. G. Haas, St. Paul, Minn.; said Haas assignor to said Hackney. Tractor-tread for wheels. No. 1,171,044; Feb. 8; Gaz. vol. 223; p. 485.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric stove. No. 1,174,030; Feb. 29; Gaz. vol. 223; p. 1686.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric stove. No. 1,174,031; Feb. 29; Gaz. vol. 223; p. 1686.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric heater. No. 1,174,032; Feb. 29; Gaz. vol. 223; p. 1686.
Haddock, Joseph F., St. Louis, Mo. Railway-marker. No. 1,172,523; Feb. 22; Gaz. vol. 223; p. 1114.
Haddox, John W., Parkersburg, W. Va. Knockdown mantel. No. 1,171,717; Feb. 15; Gaz. vol. 223; p. 763.
Hadfield, Robert A., Sheffield, England. Armor-piercing projectile and cap therefor. No. 1,172,278; Feb. 22; Gaz. vol. 223; p. 1023.
Hadfield, Robert A., Westminster, England. Apparatus for applying air-blast to ingots. No. 1,172,279; Feb. 22; Gaz. vol. 223; p. 1024.
Hadlock, Walter L., Wray, Colo. Pawl-and-ratchet mechanism. No. 1,172,280; Feb. 22; Gaz. vol. 223; p. 1024.
Hadsel, Alvah D., assignor to Cable Excavator Company, Philadelphia, Pa. Cable excavator. No. 1,170,484; Feb. 1; Gaz. vol. 223; p. 253.
Haefely, Emil, Basel, Switzerland, assignor to Westinghouse Electric and Manufacturing Company. Apparatus for manufacturing insulation. No. 1,171,609; Feb. 15; Gaz. vol. 223; p. 726.
Haeseler, Charles H., Philadelphia, Pa. Self-closing valve. No. 1,171,116; Feb. 8; Gaz. vol. 223; p. 512.
Hagelstein, Christian H. T., assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine driving mechanism. No. 1,173,423; Feb. 29; Gaz. vol. 223; p. 1476.
Hager, Michael J., Denmark, Wis. Feed-rack for calves. No. 1,172,985; Feb. 22; Gaz. vol. 223; p. 1280.
Haggard and Marcusson Company. (See Anderson, William B., assignor.)
Hagstrom, Emanuel. (See Hagstrom, Gustaf A. and E.)
Hagstrom, Gustaf A., Kansas City, Mo., and E. Hagstrom, Chicago, Ill.; said E. Hagstrom assignor to said Gustaf A. Hagstrom. Detachable tire-tread. No. 1,173,424; Feb. 29; Gaz. vol. 223; p. 1477.
Hahnemann, Walter, Kiel, Germany. Wireless telegraphy or telephony. No. 1,173,957; Feb. 29; Gaz. vol. 223; p. 1661.
Haines, Charles B., Indianapolis, Ind. Direction-indicator hanger for vehicles. No. 1,170,062; Feb. 1; Gaz. vol. 223; p. 108.
Haines, John W., Gibson City, Ill. Rubbing-post. No. 1,173,958; Feb. 29; Gaz. vol. 223; p. 1661.
Hale, Arthur, Rowlandsville, Md. Street-crossing. No. 1,173,505; Feb. 29; Gaz. vol. 223; p. 1505.
Hale and Kilburn Company. (See Budd, Edward G., assignor.)
Hall, Alfred, Los Gatos, Cal., assignor of one-third to W. M. Whitten, Dorchester, Mass. Stamp-affixing device. No. 1,171,786; Feb. 15; Gaz. vol. 223; p. 787.
Hall, Arthur J. (See Simmon and Hall.)
Hall-Borchert Dress Form Company. (See Granger, Frank B., assignor.)
Hall, Chester P., Lombard, Ill., assignor, by mesne assignments, to J. W. McFerran, Canton, Ohio. Pipe-joint. (Reissue.) No. 14,077; Feb. 29; Gaz. vol. 223; p. 1688.
Hall, Claës G., Washington, D. C. Uterine support. No. 1,170,250; Feb. 1; Gaz. vol. 223; p. 175.
Hall, Dwight K., assignor to F. A. Hall, Montclair, N. J. Bed or the like. No. 1,171,944; Feb. 15; Gaz. vol. 223; p. 847.
Hall, Frank A. (See Hall, Dwight K., assignor.)
Hall, Isaac S. (See Corey, Charles W., assignor.)
Hall, John L., Schenectady, N. Y., assignor to General Electric Company. Regulating mechanism for arc-lamps. No. 1,171,945; Feb. 15; Gaz. vol. 223; p. 847.
Hall, Louis J., Freeport, assignor to Morris-Hall Mail Closer Company, New York, N. Y. Machine for sealing and stamping mail-matter. No. 1,173,263; Feb. 29; Gaz. vol. 223; p. 1419.
Hall, Louis J., Freeport, assignor to The Morris-Hall Mail Closer Company, Rochester, N. Y. Machine for sealing mail-matter. No. 1,173,264; Feb. 29; Gaz. vol. 223; p. 1419.
Hall, Owen S., Red Lodge, Mont. Mold. No. 1,172,451; Feb. 22; Gaz. vol. 223; p. 1087.
Hall, Thomas, Montreal, Quebec, Canada. Cable-grip. No. 1,172,986; Feb. 22; Gaz. vol. 223; p. 1281.
Hall, Volta R. (See Le Breton, Edward, assignor.)
Hall, Wilber J., Philadelphia, Pa. Vending-tray. No. 1,173,506; Feb. 29; Gaz. vol. 223; p. 1506.
Hall, William A., San Diego, Cal., assignor of one-half to R. R. Hering, Crosby, N. D. Steering apparatus. No. 1,173,717; Feb. 29; Gaz. vol. 223; p. 1578.
Hall, Wilton, *et al.* (See Barry and Hindglass, assignors.)
Halliburton, George M., and S. L. McBurney, assignors of one-third to L. S. Madlem, Port Arthur, Tex. Brake-controlling mechanism for railway-cars. No. 1,172,593; Feb. 22; Gaz. vol. 223; p. 1140.
Halliday, Marion B., Wallkill, N. Y. Clothes-drying machine. No. 1,169,954; Feb. 1; Gaz. vol. 223; p. 70.
Halloran, John J., Daly City, Cal. Resilient wheel. No. 1,170,897; Feb. 8; Gaz. vol. 223; p. 433.
Hallstrom, Carl S., Mankato, Minn. Brush. No. 1,173,265; Feb. 29; Gaz. vol. 223; p. 1420.
Halsey, Arthur S. (See Strauss and Halsey.)
Halter, George, assignor to Davis-Bournonville Company, New York, N. Y. Apparatus for the production of oxygen and hydrogen gases. No. 1,172,885; Feb. 22; Gaz. vol. 223; p. 1246.
Halter, George, assignor to Davis-Bournonville Company, New York, N. Y. Pressure-regulator. No. 1,172,886; Feb. 22; Gaz. vol. 223; p. 1246.
Halter, George, assignor to Davis-Bournonville Company, New York, N. Y. Electrolytic plant. No. 1,172,887; Feb. 22; Gaz. vol. 223; p. 1247.
Halvorsen, Cromwell A. B., Jr., Saugus, and J. T. Beechlyn, Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 1,171,193; Feb. 8; Gaz. vol. 223; p. 538.
Halvorsen, Eigil J. S., Woburn, Mass. Protractor. No. 1,172,281; Feb. 22; Gaz. vol. 223; p. 1025.
Hamel, Leo A., Brooklyn, N. Y. Tooth-brush. No. 1,172,792; Feb. 22; Gaz. vol. 223; p. 1213.
Hamel Shoe Machinery Company. (See Pettengill, George M., assignor.)
Hamel Shoe Machinery Company. (See Valois, Felix E., assignor.)
Hamel Shoe Machinery Company. (See Webster, Edwin A., assignor.)
Hamilton, Edwin C., Somerville, assignor to G. L. Davison, Winthrop, Mass. Drop-hammer. No. 1,171,718; Feb. 15; Gaz. vol. 223; p. 763.
Hamilton, James E. (See Smith, Martin V., assignor.)
Hamilton, Robert, Birmingham, Ala. Impulse coal-washing machine. No. 1,169,806; Feb. 1; Gaz. vol. 223; p. 20.
Hamilton, Thomas S. (See Schleicher, Hamilton, and Moore.)
Hamm, Wesley, and A. Hotaling, Philmont, N. Y. Extensible car-step. No. 1,172,987; Feb. 22; Gaz. vol. 223; p. 1281.
Hammetter, August H. (See Pfefferkorn, Schloerb, and Hammetter.)
Hammond, George H., Minneapolis, Minn. Valve-pick-up tool. No. 1,169,955; Feb. 1; Gaz. vol. 223; p. 70.
Hammond-Knowlton, Clarence A., New York, N. Y. Thread-holder. No. 1,171,194; Feb. 8; Gaz. vol. 223; p. 539.
Hammond-Knowlton, Clarence A., New York, N. Y. Waxing silk thread. No. 1,171,195; Feb. 8; Gaz. vol. 223; p. 539.
Hammond, Thomas C. (See Chambers, Hammond, and Jarmain.)
Hampton, William H., New York, N. Y., assignor to The Conley Electric Furnace Company, Incorporated, Wilmington, Del. Process and apparatus for the electric firing of materials and ores. No. 1,171,117; Feb. 8; Gaz. vol. 223; p. 512.
Hanchett, George T., New York, N. Y. Torque-tube construction. No. 1,172,524; Feb. 22; Gaz. vol. 223; p. 1115.
Hanchett, George T., New York, N. Y. Clutch. No. 1,172,525; Feb. 22; Gaz. vol. 223; p. 1115.
Hanchett Swage Works. (See Hedstrom, John P., assignor.)
Hancock, Andrew A. (See Griffin, William T., assignor.)
Hancock, James E., Cedaredge, Colo. Knife-sharpener. No. 1,170,898; Feb. 8; Gaz. vol. 223; p. 433.
Hancock, John, Philadelphia, Pa. Couch-spring construction. No. 1,172,504; Feb. 22; Gaz. vol. 223; p. 1141.
Handell, Louis H., Aurora, Ill. Top. No. 1,171,196; Feb. 8; Gaz. vol. 223; p. 540.
Handley, Walter, and O. M. Nickerson, Madison, Me. Protector for fusible conductors. No. 1,172,282; Feb. 22; Gaz. vol. 223; p. 1025.
Hanes, Charles, Stirling, Cal. Envelop-sealing device. No. 1,172,283; Feb. 22; Gaz. vol. 223; p. 1025.

Haney, William M., Elmwood Place, Ohio. Motor-vehicle steering device. No. 1,172,356; Feb. 22; Gaz. vol. 223; p. 1051.
Hanks, Frederick W., Cleveland, Ohio. Water-meter. No. 1,172,452; Feb. 22; Gaz. vol. 223; p. 1087.
Hanneburg, Aurora. (See Christensen, Peter A., assignor.)
Hansen, Henry C., assignor to East Hoquiam Shingle Company, Hoquiam, Wash. Band-saw mill. No. 1,169,807; Feb. 1; Gaz. vol. 223; p. 21.
Hansen, John M., assignor to Forged Steel Wheel Company, Pittsburgh, Pa. Manufacture of car-wheels. No. 1,170,533; Feb. 8; Gaz. vol. 223; p. 307.
Hanson, Louis, Wilmington, N. C. Recovering oil and other products which are formed during the destructive distillation of wood. No. 1,169,956; Feb. 1; Gaz. vol. 223; p. 70.
Hanus, Ewald, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Cage for antifriction-bearings. No. 1,170,899; Feb. 8; Gaz. vol. 223; p. 434.
Hapgood, Oscar D., Orange, assignor to Goodell-Pratt Company, Greenfield, Mass. Revolution-counter. No. 1,172,793; Feb. 22; Gaz. vol. 223; p. 1213.
Happensack, Edward F., assignor to The O. P. Schriver Company, Cincinnati, Ohio. Shaft-bearing for bucket pumps. No. 1,171,946; Feb. 15; Gaz. vol. 223; p. 847.
Harbeck, Jervis R., assignor to Detroit Can Company, Detroit, Mich. Manufacturing proofed paper tubes. No. 1,173,266; Feb. 29; Gaz. vol. 223; p. 1420.
Harbeck, Jervis R., assignor to Detroit Can Company, Detroit, Mich. Waterproofed paper tube or can-body. No. 1,173,267; Feb. 29; Gaz. vol. 223; p. 1420.
Harbeck, Jervis R., assignor to Detroit Can Company, Detroit, Mich. Manufacturing proofed paper bodies. No. 1,173,268; Feb. 29; Gaz. vol. 223; p. 1421.
Harding, Sherren B. D., London, England. Internal-combustion engine of the two-cycle type. No. 1,170,900; Feb. 8; Gaz. vol. 223; p. 434.
Hardman, Peck & Co. (See Schwarz, Justin O., assignor.)
Hardy, Edward J., Coventry, England. Flexible coupling. No. 1,172,988; Feb. 22; Gaz. vol. 223; p.1282.
Harker, John, assignor of one-third to A. R. Cole, Kendallville, Ind. Spreader. No. 1,173,149; Feb. 22; Gaz. vol. 223; p. 1337.
Harlow, John B., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selective signaling system. No. 1,172,526; Feb. 22; Gaz. vol. 223; p. 1115.
Harmon, Nolan B., Jr., Gulfport, Miss. Toy gun. No. 1,171,197; Feb. 8; Gaz. vol. 223; p. 540.
Harmon, Willis E., Portland, assignor to Horace Purinton Co., Waterville, Me. Brick-machine. No. 1,169,808; Feb. 1; Gaz. vol. 223; p. 21.
Harnly, Albert K., Reading, Pa. Interlocking chain-link. No. 1,171,947; Feb. 15; Gaz. vol. 223; p. 848.
Harold, William H., Walla Walla, Wash. Sad-iron-cord support. No. 1,172,134; Feb. 15; Gaz. vol. 223; p. 914.
Harr, Jesse M., Washington, D. C. Egg holder and carrier. No. 1,174,005; Feb. 29; Gaz. vol. 223; p. 1676.
Harragin, Hugh C., Montreal, Quebec, Canada. Brake-beam hanger. No. 1,170,749; Feb. 8; Gaz. vol. 223; p. 383.
Harrigan, John C. (See Steelman, Joseph W., assignor.)
Harrild, Henry, Spokane, Wash. Combination ironing-board and step-ladder. No. 1,172,135; Feb. 15; Gaz. vol. 223; p. 914.
Harris, Anna G., Spokane, Wash. Wheel-flange oiler. No. 1,170,901; Feb. 8; Gaz. vol. 223; p. 434.
Harris, Ford W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of distribution. No. 1,173,569; Feb. 29; Gaz. vol. 223; p. 1527.
Harris, Frank W., assignor of one-half to J. Pfieging, Brooklyn, N. Y. Holder for records and the like. No. 1,171,118; Feb. 8; Gaz. vol. 223; p. 513.
Harris, Henry E., assignor to Eagle Square Manufacturing Company, South Shaftsbury, Vt. Linear counter-scale. No. 1,170,634; Feb. 8; Gaz. vol. 223; p. 343.
Harris, James F. (See Whitlock, Thomas M., assignor.)
Harris, Leonard B., Watertown, N. Y. Atomizer for internal-combustion engines. No. 1,171,787; Feb. 15; Gaz. vol. 223; p. 787.
Harris, Leonard B., Haddon Heights, N. J., assignor to Harris Patents Company, New York, N. Y. Compressor. No. 1,171,788; Feb. 15; Gaz. vol. 223; p. 788.
Harris, Oliver E., Abingdon, Ill. Rotary churn. No. 1,170,251; Feb. 1; Gaz. vol. 223; p. 175.
Harris Patents Company. (See Harris, Leonard B., assignor.)
Harris, Samuel F., Smyrna, Tenn. Gate-operator. No. 1,171,119; Feb. 8; Gaz. vol. 223; p. 513.
Harris, William S. (See Andrews, William V., assignor.)
Harrison, Albert D. Wolverhampton, England. Apparatus for the transmission or exchange of heat between fluids. No. 1,170,902; Feb. 8; Gaz. vol. 223; p. 435.
Harrison, Frank B., Toledo, Ohio. Dust-guard. No. 1,171,045; Feb. 8; Gaz. vol. 223; p. 486.
Harrison, Frederick J. (See Knox and Harrison.)
Harrison, Herbert C., assignor to Harrison Manufacturing Company Inc., Lockport, N. Y. Radiator-cell structure. (Reissue.) No. 14,072; Feb. 15; Gaz. vol. 223; p. 956.
Harrison, Herbert C., assignor to Electro Metallurgical Company, Niagara Falls, N. Y. Producing ferrosilicon. No. 1,171,719; Feb. 15; Gaz. vol. 223; p. 764.
Harrison, Herman, Harrisburg, Ill. Latch. No. 1,170,252; Feb. 1; Gaz. vol. 223; p. 175.
Harrison, Isaac A., assignor of one-half to J. C. Howard, Baltimore, Md. Coupling-head. No. 1,172,989; Feb. 22; Gaz. vol. 223; p. 1282.
Harrison Manufacturing Company Inc. (See Harrison, Herbert C., assignor.) (Reissue.)
Harrison Safety Boiler Works. (See Gamble, Joseph W., assignor.)
Hart, Albert A. (See Thalman and Hart.)
Hart, Alponse S., assignor to Con. P. Curran Printing Company, St. Louis, Mo. Car-record book. No. 1,172,284; Feb. 22; Gaz. vol. 223; p. 1026.
Hart, Frederick A., Hartford, Conn., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Clutch. No. 1,171,403; Feb. 8; Gaz. vol. 223; p. 613.
Hart Grain Weigher Co. (See Hartley, Arthur J., assignor.)
Hart & Hegeman Manufacturing Company, The. (See Strout, Theodore C., assignor.)
Harter, Gustav A., Chicago, Ill. Socket for incandescent electric lamps. No. 1,172,704; Feb. 22; Gaz. vol. 223; p. 1180.
Hartford, Edward V., Deal, and L. Mastrangel, Hoboken, N. J.; said Mastrangel assignor to said Hartford. Shock-absorber. No. 1,172,453; Feb. 22; Gaz. vol. 223; p. 1087.
Hartley, Arthur J., assignor to Hart Grain Weigher Co., Peoria, Ill. Elevator. No. 1,170,445; Feb. 1; Gaz. vol. 223; p. 239.
Hartley, James J. (See Mead, Howard G., assignor.)
Harton, Pembroke D., Philadelphia, Pa. Cake-coating machine. No. 1,172,357; Feb. 22; Gaz. vol. 223; p. 1051.
Harvard Company, The. (See Case, Frank E., assignor.)
Harvey, Edward J., Racine, Wis. Bolster-spring. No. 1,170,253; Feb. 1; Gaz. vol. 223; p. 175.
Harvey, John E., Milton, Mass. Thermostatic circuit-breaking apparatus for electrical heaters. No. 1,174,006; Feb. 29; Gaz. vol. 223; p. 1677.
Hasbrouck, John C., Jr. (See Allen, Sherman T., assignor.)
Hasburg, John W., Chicago, Ill. Machine-brake. No. 1,173,709; Feb. 29; Gaz. vol. 223; p. 1608.
Haskell, William E., assignor to Estey Organ Company, Brattleboro, Vt. Harp-stop for pipe-organs. No. 1,173,507; Feb. 29; Gaz. vol. 223; p. 1506.
Hassler, Robert H., assignor to Nordyke & Marmon Company, Indianapolis, Ind. Self-starter for engines. No. 1,171,948; Feb. 15; Gaz. vol. 223; p. 848.
Hastings, Alonzo L., Chicago, Ill. Truck for railway-cars. No. 1,170,810; Feb. 8; Gaz. vol. 223; p. 403.
Hastings, Lynewood M., and R. W. Leutwiler, Chicago, Ill. Steam-trap. No. 1,170,150; Feb. 1; Gaz. vol. 223; p. 138.
Hatashita, Shozo, Detroit, Mich. Signal device for automobiles or other vehicles. No. 1,172,794; Feb. 22; Gaz. vol. 223; p. 1213.
Hatch, Edwin G. (See Parker and Hatch.)
Hatfield, Andrew L., Newark, N. J., assignor to Hyfield Manufacturing Company. Blade-holder. No. 1,171,390; Feb. 8; Gaz. vol. 223; p. 608.
Hatfield, Henry S., Brunswick, Germany. Electrolytic measuring instrument. No. 1,173,570; Feb. 29; Gaz. vol. 223; p. 1527.
Hatfield Rail-Joint Manufacturing Company, The. (See Compton, Lewis R., assignor.)
Hathaway, Thomas F., assignor to Elgin American Manufacturing Co., Elgin, Ill. Belt-buckle. No. 1,170,151; Feb. 1; Gaz. vol. 223; p. 139.
Hatz, George J., assignor of one-half to C. E. Fuller, Omaha, Nebr. Valve. No. 1,171,120; Feb. 8; Gaz. vol. 223; p. 513.
Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Automatic valve. No. 1,171,610; Feb. 15; Gaz. vol. 223; p. 726.
Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Strainer. No. 1,171,611; Feb. 15; Gaz. vol. 223; p. 727.
Haug, Anton J., assignor to Improved Paper Machinery Company, Nashua, N. H. Pulp-screen. No. 1,172,239; Feb. 15; Gaz. vol. 223; p. 948.
Hauk, Joseph, Jr., Waukegan, assignor to Twentieth Century Machinery Company, Chicago, Ill. Bottle soaking and washing machine. No. 1,169,809; Feb. 1; Gaz. vol. 223; p. 21.
Hauschild, Adelbert. (See Hennig, Hugo, assignor.)
Hauschildt, Jacob, Cologne, Germany. Reflector. No. 1,170,903; Feb. 8; Gaz. vol. 223; p. 435.
Hausheer, Bernard, Norwich, assignor to Borden's Condensed Milk Company, New York, N. Y. Cap-soldering machine. No. 1,170,971; Feb. 8; Gaz. vol. 223; p. 458.
Hauss, David J., Aurora, Ind. Musical instrument. No. 1,170,750; Feb. 8; Gaz. vol. 223; p. 384.
Hauss, Hermann, Munich, Germany. Construction of ferroconcrete floors having a level undersurface. No. 1,172,285; Feb. 22; Gaz. vol. 223; p. 1026.
Havemeyer, John F., Ardsley-on-Hudson, N. Y. Corner-bar. No. 1,169,810; Feb. 1; Gaz. vol. 223; p. 22.
Havemeyer, John F., Ardsley-on-Hudson, N. Y. Reinforcing-bar for concrete. No. 1,169,811; Feb. 1; Gaz. vol. 223; p. 22.

Havener, Arthur R., Waltham, Mass., assignor to American Lacing Hook Co. Lacing-hook double-set machine. No. 1,169,812; Feb. 1; Gaz. vol. 223; p. 22.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g Co. Rivet and cap setting machine. No. 1,173,571; Feb. 29; Gaz. vol. 223; p. 1527.

Hawe, William F. M., Pittsburgh, Pa. Lamp-shade. No. 1,173,572; Feb. 29; Gaz. vol. 223; p. 1528.

Hawkins, David S. (See Coleman, Hawkins, and Farrell.)

Hawkins, Edgar M., and C. R. Seymour, assignors to M. D. Knowlton Company, Rochester, N. Y. Stay-applying machine. No. 1,171,949; Feb. 15; Gaz. vol. 223; p. 849.

Hawkins, J. C. Newton, Iowa. Paper-fastening device. No. 1,173,425; Feb. 29; Gaz. vol. 223; p. 1477.

Hawkins, John W., Munfordville, Ky. Pocket-clasp. No. 1,173,349; Feb. 29; Gaz. vol. 223; p. 1451.

Hawkins, Laurence A., Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,172,930; Feb. 22; Gaz. vol. 223; p. 1282.

Hawks, Moses L., New York, N. Y. Pool-game attachment for billiard-tables. No. 1,173,186; Feb. 29; Gaz. vol. 223; p. 1391.

Haws, Luther T., Berkeley, Cal. Sanitary drinking-fountain. No. 1,171,517; Feb. 15; Gaz. vol. 223; p. 694.

Hay, Charles E., Ilford, and H. W. Sullivan, London, England. Electrical resistance. No. 1,170,811; Feb. 8; Gaz. vol. 223; p. 404.

Hayden, George D., Oakley, Ohio. Machine-tool. No. 1,173,573; Feb. 29; Gaz. vol. 223; p. 1528.

Hayden, George D., Oakley, assignor to The Cincinnati Planer Company, Cincinnati, Ohio. Automatic screw-machine. No. 1,173,574; Feb. 29; Gaz. vol. 223; p. 1529.

Hayes, Jesse W., Baltimore, Md. Fan. No. 1,173,800; Feb. 29; Gaz. vol. 223; p. 1608.

Hayes, William F., Stroudsburg, Pa. Nut-lock. No. 1,173,959; Feb. 29; Gaz. vol. 223; p. 1662.

Hayne, Edward G., Ottawa, Ill. Key-operating attachment for electric-light sockets. No. 1,172,286; Feb. 22; Gaz. vol. 223; p. 1027.

Haynes, Lloyd C., Los Angeles, Cal. Collar-fastening clip. No. 1,171,950; Feb. 15; Gaz. vol. 223; p. 849.

Haysler Manufacturing Company. (See Clemments, Thomas W., assignor.)

Hayward Company, The. (See Morris, Charles A., assignor.)

Hayward, Melville P., Quincy, Mass. Grave-vase. No. 1,171,337; Feb. 8; Gaz. vol. 223; p. 589.

Hayward, Melville P., Quincy, Mass. Frying-pan. No. 1,173,662; Feb. 29; Gaz. vol. 223; p. 1560.

Hazel, George W., Camden, N. J., assignor to American Addressabak Company. Manifold-copying device. No. 1,169,813; Feb. 1; Gaz. vol. 223; p. 23.

Heald, Margaret L. (See Roby, Edward B., assignor.)

Health Games Company. (See Taylor, Lyman B., assignor.)

Hearst, William R. (See Fairchild, Edwin E., assignor.)

Heartwell, Oscar F., Jr., Hastings, Nebr. Ironing-board. No. 1,173,508; Feb. 29; Gaz. vol. 223; p. 1507.

Heaslet, James G., Detroit, Mich., assignor to The Studebaker Corporation. Foot-pedal control. No. 1,171,845; Feb. 15; Gaz. vol. 223; p. 809.

Heater, Jacob D., assignor to The Barney and Smith Car Company, Dayton, Ohio. Shield for vestibule-curtains. No. 1,169,814; Feb. 1; Gaz. vol. 223; p. 23.

Heath, Arthur W. (See Allen, Le Roy D., assignor.)

Heath, Forrest A., Jersey City, N. J., and W. O. Taylor, New York, N. Y.; said Taylor assignor to New Jersey Carbureter Company, Jersey City, N. J. Carbureter. No. 1,172,595; Feb. 22; Gaz. vol. 223; p. 1141.

Heath Self-Opening Stopper Company. (See Heath, William E., assignor.)

Heath, William E., Minneapolis, Minn., assignor to Heath Self-Opening Stopper Company, Baltimore, Md. Closure-cap and the like. No. 1,170,152; Feb. 1; Gaz. vol. 223; p. 139.

Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Packing-block for absorption-towers. No. 1,173,187; Feb. 29; Gaz. vol. 223; p. 1392.

Hechenbleikner, Ingenuin, Charlotte, N. C., assignor to Southern Electro-Chemical Company, New York, N. Y. Electric furnace. No. 1,173,960; Feb. 29; Gaz. vol. 223; p. 1662.

Heckman, Edwin, Vallejo, Cal. Collar-retainer. No. 1,170,904; Feb. 8; Gaz. vol. 223; p. 435.

Heckman, Jasper F., Henryville, Pa. Broom. No. 1,169,815; Feb. 1; Gaz. vol. 223; p. 24.

Heckman, Joseph C., Avalon borough, Pa. Purification of water. No. 1,171,046; Feb. 8; Gaz. vol. 223; p. 486.

Hecla Iron Works. (See Stilling, William J., assignor.)

Hedgcock, William C., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Side frame. No. 1,169,816; Feb. 1; Gaz. vol. 223; p. 24.

Hedstrom, John P., assignor to Hanchett Swage Works, Big Rapids, Mich. Swage. No. 1,173,509; Feb. 29; Gaz. vol. 223; p. 1507.

Heebner-Felver Motor Co., The. (See Heebner, Felver, and Dresher, assignors.)

Heebner, Robert S., J. B. Felver, and R. Dresher, assignors to The Heebner-Felver Motor Co., Lansdale, Pa. Transmission mechanism for automobiles. No. 1,171,846; Feb. 15; Gaz. vol. 223; p. 810.

Heeger, Otto L., St. Paul, Minn. Electric flasher. No. 1,174,007; Feb. 29; Gaz. vol. 223; p. 1677.

Heency, Henry J., Roxbury, assignor to Holtzer-Cabot Electric Company, Brookline, Mass. Circuit-closer. No. 1,170,063; Feb. 1; Gaz. vol. 223; p. 108.

Heidbreder, Fred, Quincy, Ill. Aeroplane-propelling mechanism. No. 1,172,991; Feb. 22; Gaz. vol. 223; p. 1282.

Heidemann, Christian, St. Louis, Mo. Signaling device. No. 1,173,269. Feb. 29; Gaz. vol. 223; p. 1421.

Heilmann, Jean J., Paris, France. Direct-acting explosion-turbine. No. 1,171,121; Feb. 8; Gaz. vol. 223; p. 513.

Hein, Paul, New York, N. Y. Sash-cord attachment. No. 1,172,136; Feb. 15; Gaz. vol. 223; p. 914.

Heinss, Christian F., Huntington, Ind. Motor-plow. No. 1,170,635; Feb. 8; Gaz. vol. 223; p. 344.

Heithecker, August, Brooklyn, N. Y. Valve for fluid-pressure regulators. No. 1,172,596; Feb. 22; Gaz. vol. 223; p. 1141.

Heitz, Charles. (See Dachert and Heitz.)

Hejl, James. (See Pistek and Hejl.)

Held, W. D. L. (See Arthur, Albert L., assignor.)

Helfenstein, Alois, Vienna, Austria-Hungary. Carrying out gas reactions in an electric furnace. No. 1,169,817; Feb. 1; Gaz. vol. 223; p. 24.

Helfer, Charles A., Los Angeles, Cal. Automatic railway-crossing. No. 1,172,795; Feb. 22; Gaz. vol. 223; p. 1213.

Hellberg, Henry, San Francisco, Cal. Sanitary hook. No. 1,171,198; Feb. 8; Gaz. vol. 223; p. 540.

Hembree, Charles O., Asher, Okla. Starting device for motor-vehicle engines. No. 1,170,812; Feb. 8; Gaz. vol. 223; p. 404.

Hemm, Frank J., Piqua, Ohio. Clutch. No. 1,171,789; Feb. 15; Gaz. vol. 223; p. 789.

Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Metal-rolling machinery. No. 1,170,153; Feb. 1; Gaz. vol. 223; p. 143.

Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,172,705; Feb. 22; Gaz. vol. 223; p. 1180.

Henderson, Herbert, Port Arthur, Tex., assignor to Gulf Refining Company, Pittsburgh, Pa. Still and still-setting. No. 1,171,720; Feb. 15; Gaz. vol. 223; p. 764.

Henderson, John S., assignor of forty-nine one-hundredths to G. W. Lee, Los Angeles, Cal. Flange-oiling device. No. 1,169,818; Feb. 1; Gaz. vol. 223; p. 24.

Henderson, Robert H., East Orange, N. J., assignor to Westinghouse Lamp Company. Preparing metallic filaments. No. 1,169,819; Feb. 1; Gaz. vol. 223; p. 25.

Henderson, Samuel F., assignor to The Yester-Laid Egg Co., Woodwardville, Md. Preserving eggs. No. 1,174,008; Feb. 29; Gaz. vol. 223; p. 1677.

Henderson, Shelby F., Henderson, Cal. Fish-spear. No. 1,171,432; Feb. 15; Gaz. vol. 223; p. 664.

Hendricks, Edward. (See Arnt, Alfred, assignor.)

Hendrickson, Jacob, Butte, Mont., assignor of one-half to I. W. Johnson, Rossland, British Columbia, Canada. Permutation-lock for suitcases, grips, &c. No. 1,172,454; Feb. 22; Gaz. vol. 223; p. 1088.

Hendrickson, Martin, Globe, Ariz. Pump. No. 1,170,254; Feb. 1; Gaz. vol. 223; p. 176.

Hengesbach, Albert. (See Saunders and Hengesbach.)

Hennessey, John J., Milwaukee, Wis. Side bearing for railway-cars. No. 1,169,820; Feb. 1; Gaz. vol. 223; p. 25.

Hennessey, John J., Milwaukee, Wis. Side bearing for railway-cars. No. 1,171,433; Feb. 15; Gaz. vol. 223; p. 665.

Hennessy, Patrick W., Joplin, Mo. Check-valve structure. No. 1,170,813; Feb. 8; Gaz. vol. 223; p. 404.

Hennig, Hugo, Akron, assignor of one-half to A. Hauschild, East Palestine, Ohio. Making tire-casings. No. 1,170,154; Feb. 1; Gaz. vol. 223; p. 140.

Henry, William S., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Circuit-controller. No. 1,169,957; Feb. 1; Gaz. vol. 223; p. 71.

Henry, William W., Wollaston, and A. E. Stevens, assignors to S. H. Couch Co. Inc., Atlantic, Mass. Mail-box. No. 1,173,961; Feb. 29; Gaz. vol. 223; p. 1662.

Hensell, William D., Waverley, near Sydney, New South Wales, Australia. Electric fuse. No. 1,173,962; Feb. 29; Gaz. vol. 223; p. 1663.

Hentschel, Andrew J., Schulenburg, Tex. Bridle. No. 1,172,207; Feb. 15; Gaz. vol. 223; p. 937.

Heppe, Ernest H., Montclair, N. J. Display-box. No. 1,170,636; Feb. 8; Gaz. vol. 223; p. 344.

Herbert, R. W. (See Stephens, Otis V., assignor.)

Hereng, Victor H. J., Ixelles-Brussels, Belgium. Manufacture of artificial lithographic stones. No. 1,172,796; Feb. 22; Gaz. vol. 223; p. 1214.

Hering, Reinhart R. (See Hall, William A., assignor.)

Herington, Thomas E., Mallard, Iowa. Chair. No. 1,173,351; Feb. 29; Gaz. vol. 223; p. 1452.

Herkt, Ernst, assignor to Fried. Krupp Aktiengesellschaft, Germaniawerft, Kiel-Gaarden, Germany. Valve-gear. No. 1,172,358; Feb. 22; Gaz. vol. 223; p. 1052.

Herman, Edward B., East Watertown, Mass. Rubber-working machine. No. 1,173,426; Feb. 29; Gaz. vol. 223; p. 1477.

Herman, Reinhold, Crafton, Pa. Transmission mechanism. No. 1,173,964; Feb. 29; Gaz. vol. 223; p. 1663.

Herman, Reinhold, and S. A. Knapp, Crafton, Pa. Pipe-ball. No. 1,173,963; Feb. 29; Gaz. vol. 223; p. 1663.

Hermann Aukam & Co. (See Leathem, James, assignor.)

Hermansen, Herman, assignor to Sandusky Portland Cement Company, Bayb'ridge, Ohio. Apparatus for drying fuel. No. 1,173,510; Feb. 29; Gaz. vol. 223; p. 1507.

Héroult, Paul L. T., New York, N. Y. Producing dephosphorized high-grade pig-iron. No. 1,172,597; Feb. 22; Gaz. vol. 223; p. 1141.

Herrick, Albert B., New York, N. Y., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Rail-bond. No. 1,170,751; Feb. 8; Gaz. vol. 223; p. 384.

Herrmann Aukam & Co. (See Jensen, Karl F., assignor.)

Hertner, John H. (See Cookingham and Hertner.)

Hertner, John H., assignor to The Baker R & L Company, Cleveland, Ohio. Driving mechanism for automobiles. No. 1,173,350; Feb. 29; Gaz. vol. 223; p. 1451.

Herzog, Joseph L., New York, N. Y. Forming cuff-buttons. No. 1,170,064; Feb. 1; Gaz. vol. 223; p. 109.

Hess, Charles V., Sonora, Cal. Automatic spark-controller for engines. No. 1,173,511; Feb. 29; Gaz. vol. 223; p. 1508.

Hess, Christian F., assignor to A. Nelson, Chicago, Ill. Automobile-engine-exhaust deflector. No. 1,173,801; Feb. 29; Gaz. vol. 223; p. 1608.

Hess, Henry, Philadelphia, Pa. Gage. No. 1,170,255; Feb. 1; Gaz. vol. 223; p. 176.

Hess, Henry, Philadelphia, Pa. Caliper-gage. No. 1,172,359; Feb. 22; Gaz. vol. 223; p. 1052.

Hetherington, Frederick A., Indianapolis, Ind. Drier. No. 1,173,188; Feb. 29; Gaz. vol. 223; p. 1392.

Hetlesaeter, Olaf, Chicago, Ill. Excavating-machine. No. 1,170,905; Feb. 8; Gaz. vol. 223; p. 435.

Hewitt, Henry J., Chicago, Ill. Fountain rubbing-block. No. 1,170,155; Feb. 1; Gaz. vol. 223; p. 140.

Hey, David M., assignor to Vacuum Dyeing Machine Company, Chattanooga, Tenn. Dyeing apparatus. No. 1,172,240; Feb. 15; Gaz. vol. 223; p. 949.

Hey, John G., assignor to The Cincinnati Pulley Machinery Company, Cincinnati, Ohio. Belt-gearing. No. 1,173,189; Feb. 29; Gaz. vol. 223; p. 1393.

Heyl, George E., and T. T. Baker, London, England. Liquid fuel for internal-combustion engines. No. 1,171,434; Feb. 15; Gaz. vol. 223; p. 665.

Heyman, Oscar, New York, N. Y. Jointed jewelry and making same. No. 1,173,427; Feb. 29; Gaz. vol. 223; p. 1478.

Heys, John J. (See McClure and Heys.)

Hibbard, Robert L. (See Carpenter, Hibbard, and Warner.)

Hickmann, Wilhelm, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Galvanic battery. No. 1,173,965; Feb. 29; Gaz. vol. 223; p. 1664.

Hicks, Irl R., Hallsville, Mo. Piston-ring. No. 1,171,199; Feb. 8; Gaz. vol. 223; p. 541.

Hidden, Charles P. (See Amsden and Hidden.)

Hidlebaugh, William H., Gould, Okla. Air-hose coupling for railway-cars. No. 1,170,534; Feb. 8; Gaz. vol. 223; p. 307.

Higdon, Andy, Nevada, Iowa. Wagon-cover. No. 1,173,352; Feb. 29; Gaz. vol. 223; p. 1452.

Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Removable-gauze screen. No. 1,171,951; Feb. 15; Gaz. vol. 223; p. 849.

Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Knockdown window-screen. No. 1,171,952; Feb. 15; Gaz. vol. 223; p. 850.

Higgin Manufacturing Company, The. (See Higgin, Henry, assignor.)

Higgins, Arthur H., assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Ore concentration. No. 1,170,637; Feb. 8; Gaz. vol. 223; p. 344.

Higgins, Eric B., Wallasey, England. Reduction of organic compounds. No. 1,170,814; Feb. 8; Gaz. vol. 223; p. 405.

Higgins, Eric B., Wallasey, England. Mixing-machine. No. 1,170,815; Feb. 8; Gaz. vol. 223; p. 405.

Higley, Christina J. (See Price and Sanderson, assignors.)

Higley, Christina J. (See Price, Vincent, assignor.)

Hil-Ko Rim Lock Company. (See Hiller, Frank D., Jr., assignor.)

Hild, Frederic W., Portland, Oreg. Automatic means for correcting the registration of meters. No. 1,172,706; Feb. 22; Gaz. vol. 223; p. 1181.

Hildburgh, Walter L., Westminster, London, England. Advertising machinery. No. 1,172,360; Feb. 22; Gaz. vol. 223; p. 1052.

Hildburgh, Walter L., Westminster, London, England. Advertising machinery. No. 1,172,455; Feb. 22; Gaz. vol. 223; p. 1088.

Hill, Arthur A., New York, N. Y. Bread-toaster. No. 1,171,122; Feb. 8; Gaz. vol. 223; p. 514.

Hill, Edgar C., Columbus, Ohio. Jar-closure. No. 1,170,906; Feb. 8; Gaz. vol. 223; p. 436.

Hill, Fred T., Chicago, Ill. Garter. No. 1,170,535; Feb. 8; Gaz. vol. 223; p. 307.

Hill, Harriet, New York, N. Y. Vending-machine for sanitary drinking-cups. No. 1,172,208; Feb. 15; Gaz. vol. 223; p. 937.

Hill, Herbert E., South St. Joseph, Mo., assignor to Morris & Company, Chicago, Ill. Valve structure. No. 1,172,527; Feb. 22; Gaz. vol. 223; p. 1116.

Hill, John F., Griffin, Ga. Signal apparatus. No. 1,173,663; Feb. 29; Gaz. vol. 223; p. 1561.

Hill, John R., Knoxville, Tenn. Automatic dirigible lamp for automobiles. No. 1,172,023; Feb. 15; Gaz. vol. 223; p. 876.

Hill, Melvin E., Los Angeles, Cal. Shoe-cleaner. No. 1,172,707; Feb. 22; Gaz. vol. 223; p. 1181.

Hill, Mortimer F., East St. Louis, Ill. Shovel and brush scraper attachment. No. 1,173,512; Feb. 29; Gaz. vol. 223; p. 1508.

Hill Powder Company. (See Hill, Wilford A., assignor.)

Hill, Robert J., Camden, N. J., and W. F. Bokum, Philadelphia, Pa. Feeding device for carding-machines. No. 1,172,888; Feb. 22; Gaz. vol. 223; p. 1247.

Hill, Wilford A., Waltham, assignor to Hill Powder Company, Boston, Mass. Powder-folding machine. No. 1,172,209; Feb. 15; Gaz. vol. 223; p. 937.

Hillebrand, Henry, Brooklyn, N. Y. Protective liquid-dispensing system. No. 1,170,907; Feb. 8; Gaz. vol. 223; p. 436.

Hiller, Frank D., Jr., Webster Groves, assignor to Hil-Ko Rim Lock Company, St. Louis, Mo. Locking device for demountable automobile-wheel rims and the like. No. 1,172,287; Feb. 22; Gaz. vol. 223; p. 1027.

Hillman, Henry G., assignor to J. T. Clarke, New York, N. Y. Safety device. No. 1,171,338; Feb. 8; Gaz. vol. 223; p. 580.

Hillman, Henry G., Morris Park, and S. M. Ward, Jr., assignors to J. T. Clarke, New York, N. Y. Safety control system for elevator-cars. No. 1,171,518; Feb. 15; Gaz. vol. 223; p. 694.

Hillpot, Grear, Philadelphia, Pa. Fore grip for guns. No. 1,170,256; Feb. 1; Gaz. vol. 223; p. 176.

Hills, John H. (See Mason, Joseph M., assignor.)

Hilton, George E. (See Dangler and Hilton.)

Himmel, Solomon. (See Hormes, William T., assignor.)

Himmelright, Raleigh J., Indianapolis, Ind. Mechanical stoking apparatus. No. 1,173,270; Feb. 29; Gaz. vol. 223; p. 1421.

Himoff, Max, New York, N. Y. Drill-press. No. 1,171,123; Feb. 8; Gaz. vol. 223; p. 515.

Hinchliffe, George H., Boston, Mass. Internal-combustion engine. No. 1,171,435; Feb. 15; Gaz. vol. 223; p. 665.

Hinckley, Henry D., assignor, by mesne assignments, to The R. & H. Manufacturing Company, Hartford, Conn. Vending-machine. No. 1,171,953; Feb. 15; Gaz. vol. 223; p. 850.

Hincz, Hipolit M., Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me. Reinforced concrete construction. No. 1,173,152; Feb. 22; Gaz. vol. 223; p. 1338.

Hindglass, Allen. (See Barry and Hindglass.)

Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Fence-post. No. 1,169,821; Feb. 1; Gaz. vol. 223; p. 25.

Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Fence-post. No. 1,169,822; Feb. 1; Gaz. vol. 223; p. 25.

Hindmarsh, Percy J., Lincoln, Nebr., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Fence-post. No. 1,169,823; Feb. 1; Gaz. vol. 223; p. 26.

Hines, Martin, Brooklyn, N. Y. Puzzle. No. 1,173,271; Feb. 29; Gaz. vol. 223; p. 1422.

Hinkson, Elmer J., Erie, Pa. Automatic gas shut-off. No. 1,173,966; Feb. 29; Gaz. vol. 223; p. 1664.

Hirsch, Arthur. (See Schlieckert, Charles C., assignor.)

Hirschey, Samuel L., Castorland, N. Y. Sectional expanding drum. No. 1,173,967; Feb. 29; Gaz. vol. 223; p. 1664.

Hirschman, William F., Buffalo, N. Y. Shoe-polishing cabinet. No. 1,170,065; Feb. 1; Gaz. vol. 223; p. 109.

Hirsh, Allan M., C. Meriwether, Montclair, and J. C. Mitchell, East Orange, N. J., assignors to Lock Joint Pipe Company, New York, N. Y. Water-tight joint for concrete water-pipes. (Reissue.) No. 14,078; Feb. 29; Gaz. vol. 223; p. 1689.

Hirst, Franklin G., assignor to Franklin Brass Manufacturing Company, Philadelphia, Pa. Solder-nipple. No. 1,173,718; Feb. 29; Gaz. vol. 223; p. 1579.

Hirth, Carl A., Cannstatt, near Stuttgart, assignor to Norma Campagnie, G. m. b. H., Cannstatt-Stuttgart, Germany. Roller-bearing cage. No. 1,173,719; Feb. 29; Gaz. vol. 223; p. 1579.

Hitchcock, Halbert K., Tarentum, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Apparatus for drawing and handling glass cylinders. No. 1,170,257; Feb. 1; Gaz. vol. 223; p. 176.

Hjorth, Henry J., Cambridge, Mass. Gage for edged tools. No. 1,174,009; Feb. 29; Gaz. vol. 223; p. 1678.

Hoadley, Alfred H., Providence, R. I. Motor driving-wheel. No. 1,172,456; Feb. 22; Gaz. vol. 223; p. 1089.

Hoar, Allen, Long Beach, assignor to A. R. Neff, Los Angeles, Cal. Submarine. No. 1,172,992; Feb. 22; Gaz. vol. 223; p. 1283.

Hoard, Frederick R., Providence, R. I. Hand-bag and the like. No. 1,172,708; Feb. 22; Gaz. vol. 223; p. 1182.

Hobart Manufacturing Company, The. (See Johnston, Herbert L., assignor.)

Hobbs, Clarence W., Worcester, Mass. Fly-leafing machine. No. 1,171,436; Feb. 15; Gaz. vol. 223; p. 666.

Hobbs, Frank C., Muskegon, Mich., assignor to Brunswick-Balke-Collender Co. Pocket-iron for billiard-tables and the like. No. 1,172,457; Feb. 22; Gaz. vol. 223; p. 1089.

Hobbs Manufacturing Company. (See Hobbs, Samuel T., assignor.)

Hobbs, Robert F., Great Neck, N. Y. Toilet article. No. 1,173,802; Feb. 29; Gaz. vol. 223; p. 1609.

Hobbs, Samuel T., assignor to Hobbs Manufacturing Company, Worcester, Mass. Paper-box-covering machine. No. 1,171,954; Feb. 15; Gaz. vol. 223; p. 851.

Hodges, Frederick W., assignor to Detroit Lubricator Company, Detroit, Mich. Device for lubricating car or locomotive wheels. No. 1,170,752; Feb. 8; Gaz. vol. 223; p. 385.

Hodges, Jesse E., Cincinnati, Ohio. Adjustable column-form. No. 1,170,753; Feb. 8; Gaz. vol. 223; p. 385.

Hodgkinson, Francis, Edgewood Park, Pa., assignor to Westinghouse Machine Company. Reducing-valve. No. 1,171,519; Feb. 15; Gaz. vol. 223; p. 695.

Hodgkinson, Percy W., Rochester, N. Y. Wrench. No. 1,172,797; Feb. 22; Gaz. vol. 223; p. 1214.

Hodson, Frank S. (See White, Herbert J., assignor.)

Hoecker, August, New York, N. Y. Station-signaling apparatus. No. 1,173,513; Feb. 29; Gaz. vol. 223; p. 1508.

Hoen, Cornelius 't, Maywood, Ill. Sterilizing device. No. 1,170,536; Feb. 8; Gaz. vol. 223; p. 307.

Hoeschen, Henry A., assignor to Hoeschen Manufacturing Company, Omaha, Nebr. Railway signal mechanism. No. 1,170,156; Feb. 1; Gaz. vol. 223; p. 141.

Hoeschen, Henry A., assignor to Hoeschen Manufacturing Company, Omaha, Nebr. Railway-signal. No. 1,171,124; Feb. 8; Gaz. vol. 223; p. 515.

Hoeschen Manufacturing Company. (See Hoeschen, Henry A., assignor.)

Hoffman, Alfred H., *et al.* (See Miottel, Emile R., assignor.)

Hoffman, Edward F., *et al.* (See Miottel, Emile R., assignor.)

Hoffman, Ellsworth. (See Hoffman, George W. and E.)

Hoffman, George W., Millville, and E. Hoffman, Leesburg, N. J. Headlight-operating mechanism. No. 1,172,361; Feb. 22; Gaz. vol. 223; p. 1053.

Hoffman, Harry F., *et al.* (See Miottel, Emile R., assignor.)

Hoffmann, Hilda. (See Jacobs, John W., assignor.)

Hofmann, Alfred, Union Hill, N. J. Embroidery-frame. No. 1,171,612; Feb. 15; Gaz. vol. 223; p. 727.

Hofstrand, Henry P., St. Louis Park, Minn. Loading apparatus. No. 1,170,638; Feb. 8; Gaz. vol. 223; p. 345.

Hogan, Sidney J., Chattanoogn, Tenn. Furniture-drawer guide. No. 1,171,437; Feb. 15; Gaz. vol. 223; p. 666.

Hoge, Edward A. C., Elmhurst, assignor to Keystone Fireproofing Company, New York, N. Y. Building construction. No. 1,171,400; Feb. 8; Gaz. vol. 223; p. 612.

Hogg, Archibald, Newcastle-upon-Tyne, England. Hatch-cover for ships. No. 1,171,721; Feb. 15; Gaz. vol. 223; p. 765.

Holbrook, Merrill and Stetson. (See Thomas, Charles O., Jr., assignor.)

Holcomb, Henry S., Bath, N. Y. Sanitary and economical paste-cup for cigar-makers. No. 1,172,993; Feb. 22; Gaz. vol. 223; p. 1283.

Holden, Charles M., San Francisco, Cal. Dyeing-comb. No. 1,172,889; Feb. 22; Gaz. vol. 223; p. 1248.

Holden, Delos, East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Phonograph or talking-machine. No. 1,170,258; Feb. 1; Gaz. vol. 223; p. 177.

Holdermann, Albert, *et al.* (See Lehotzky, Lorentz, assignor.)

Holdermann, Oscar, *et al.* (See Lehotzky, Lorentz, assignor.)

Holland, C. F. (See Carter and Lightfoot, assignors.)

Holland, Edward M., *et al.* (See Putney, William W., assignor.)

Holland Furnace Company. (See Landwehr, August H., assignor.)

Holley, George M., Detroit, Mich. Carbureter. No. 1,171,200; Feb. 8; Gaz. vol. 223; p. 541.

Hollingshead, William B., Mount Vernon, assignor of one-half to W. G. Morse, Yonkers, N. Y. Resonator for sound-reproducing devices. No. 1,173,272; Feb. 29; Gaz. vol. 223; p. 1422.

Hollstrom, George W. (See Moon and Hollstrom.)

Holly, Carlos, Lockport, assignor to The F. N. Burt Company, Limited, Buffalo, N. Y. Apparatus for treating webs. No. 1,173,575; Feb. 29; Gaz. vol. 223; p. 1529.

Holmes, Edward C., Norwood, Ohio. Bumping-post for railways. No. 1,170,639; Feb. 8; Gaz. vol. 223; p. 345.

Holmes, Oscar J., St. Louis, Mo. Gas-exhauster for oil-tanks. No. 1,173,108; Feb. 22; Gaz. vol. 223; p. 1321.

Holmes, Walter W., Waterbury, Conn. Educational device. No. 1,170,537; Feb. 8; Gaz. vol. 223; p. 308.

Holmquist, Nels P., Fairmont, Minn. Adjustable wagon-hound. No. 1,171,201; Feb. 8; Gaz. vol. 223; p. 541.

Holroyd, Newton, assignor of one-half to H. N. Metzger, Spokane, Wash. Cabinet-lock. No. 1,173,514; Feb. 29; Gaz. vol. 223; p. 1508.

Holste, August, Bielefeld, Germany. Shirt. No. 1,173,968; Feb. 29; Gaz. vol. 223; p. 1664.

Holt, Harold E. S., Farnborough, county of Hants, England. Aerial illuminating device for use in connection with aircraft. No. 1,173,515; Feb. 29; Gaz. vol. 223; p. 1509.

Holtzer-Cabot Electric Company. (See Heeney, Henry J., assignor.)

Holtzman, John, and M. Kover, New York, N. Y. Combined safety-razor and razor-blade sharpener. No. 1,170,754; Feb. 8; Gaz. vol. 223; p. 385.

Holz, John W., Detroit, Mich. Combination-lock. No. 1,171,202; Feb. 8; Gaz. vol. 223; p. 541.

Holzinger, John F. (See Mullin, John R., assignor.)

Holzscheiter, Johann F., Zurich, Switzerland. Die-stock. No. 1,170,066; Feb. 1; Gaz. vol. 223; p. 110.

Holzscheiter, Johann F., Zurich, Switzerland. Screw-stock and other cutting-tool provided with lubricating means. No. 1,173,516; Feb. 29; Gaz. vol. 223; p. 1509.

Homan, John G., Steubenville, Ohio, assignor to Scientific Products Company, New Cumberland, W. Va. Electrically-heated laundry-iron and like apparatus. No. 1,172,024; Feb. 15; Gaz. vol. 223; p. 877.

Homan, John G., Steubenville, Ohio, assignor to Scientific Products Company, New Cumberland, W. Va. Electric heating device. No. 1,172,025; Feb. 15; Gaz. vol. 223; p. 877.

Honeywell Heating Specialty Company. (See Honeywell, Mark C., assignor.)

Honeywell, Mark C., assignor to Honeywell Heating Specialty Company, Wabash, Ind. Automatic thermostat control. No. 1,171,955; Feb. 15; Gaz. vol. 223; p. 851.

Honolulu Iron Works Company. (See Ewart, Arthur F., assignor.)

Hood Rubber Co. (See Glidden, Alfred A., assignor.)

Hooff, Fontain B., *et al.* (See Andrews, Richard, assignor.)

Hoofnagle, William T., Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y. Apparatus for electrically treating air. No. 1,169,824; Feb. 1; Gaz. vol. 223; p. 26.

Hoofnagle, William T., Glen Ridge, N. J., assignor to Electro-Chemical Products Company, New York, N. Y. Method and apparatus for making ozone. No. 1,169,825; Feb. 1; Gaz. vol. 223; p. 27.

Hooper, James P., Baltimore, Md. Pocket for cartridge-belts. No. 1,170,259; Feb. 1; Gaz. vol. 223; p. 177.

Hoopes, William, Pittsburgh, Pa. Condenser-tube-cleaning apparatus. No. 1,172,798; Feb. 22; Gaz. vol. 223; p. 1215.

Hoopes, William, assignor to Aluminum Company of America, Pittsburgh, Pa. Composite conductor-cable and making the same. No. 1,173,190; Feb. 29; Gaz. vol. 223; p. 1393.

Hoovens, Amasa G., Goshen, Ind. Lightning-rod. No. 1,170,260; Feb. 1; Gaz. vol. 223; p. 177.

Hopkins, Charles R., Dobbin, assignor to B. Wilson, Mill Creek, W. Va. Shifting mechanism. No. 1,173,576; Feb. 29; Gaz. vol. 223; p. 1530.

Hopkins, Frank H., Somerville, assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass. Thermostatic arch flow-regulator. No. 1,172,709; Feb. 22; Gaz. vol. 223; p. 1182.

Horace Purinton Co. (See Harmon, Willis E., assignor.)

Horan, Thomas J., Syracuse, N. Y. Gasolene-filter. No. 1,169,826; Feb. 1; Gaz. vol. 223; p. 27.

Horance, Arthur, North Bay, Ontario, Canada. Convertible sofa. No. 1,173,969; Feb. 29; Gaz. vol. 223; p. 1664.

Hormes, William T., Govans, assignor to S. Himmel, Baltimore, Md. Display-rack. No. 1,172,799; Feb. 22; Gaz. vol. 223; p. 1215.

Hornagy, John, Cleveland, Ohio. Car-door fastener. No. 1,171,047; Feb. 8; Gaz. vol. 223; p. 486.

Hornsby, Harry H. (See Anger and Hornsby.)

Horst, Samuel W., Lemoyne, assignor of one-half to W. Mertz, Lebanon, Pa. Window construction. No. 1,170,816; Feb. 8; Gaz. vol. 223; p. 405.

Horton, Aaron and S., Coleman, Mich. Dish-washing apparatus. No. 1,170,261; Feb. 1; Gaz. vol. 223; p. 178.

Horton Manufacturing Company. (See Gustafson, Axel R., assignor.) (Reissue.)

Horton Manufacturing Company. (See Strite, Charles P., assignor.)

Horton, Salyer. (See Horton, Aaron and S.)

Hosick, Jennie M., Louisville, Ky. Chair attachment. No. 1,173,517; Feb. 29; Gaz. vol. 223; p. 1509.

Hoskins, Eugene T., Seattle, and J. H. Burpee, Bellingham, Wash. Steam-cooker. No. 1,171,339; Feb. 8; Gaz. vol. 223; p. 589.

Hoskins, Frederick A., Dubuque, Iowa. Mine-ventilating system. No. 1,171,340; Feb. 8; Gaz. vol. 223; p. 590.

Hotaling, Alanson. (See Hamm and Hotaling.)

Hotchkin, Paul M., Chicago, Ill. Electric-light socket. No. 1,173,803; Feb. 29; Gaz. vol. 223; p. 1609.

Hotchkin, Paul M., Chicago, Ill. Offset floor-fitting and connection. No. 1,173,804; Feb. 29; Gaz. vol. 223; p. 1609.

Hough, Edgar J., Washington, D. C. Shock-absorber. No. 1,171,722; Feb. 15; Gaz. vol. 223; p. 765.

Hough, Herbert D., Cranston, assignor to Wightman & Hough Company, Providence, R. I. Cigarette-case. No. 1,170,067; Feb. 1; Gaz. vol. 223; p. 110.

Hough, Wallace P., Pittsburgh, Pa. Connecting-brace for the legs of curtain-stretching and other frames. No. 1,172,241; Feb. 15; Gaz. vol. 223; p. 949.

Hough, William B., Chicago, Ill., assignor to Patented Devices Company, Portland, Me. Reinforcement for concrete construction. No. 1,172,026; Feb. 15; Gaz. vol. 223; p. 878.

Hough, William B., Chicago, Ill., assignor, by mesne assignments, to Patented Devices Company, Portland, Me. Reinforced concrete construction. No. 1,173,109; Feb. 22; Gaz. vol. 223; p. 1321.

Hougham, Henry, Manhattan, Kans. Screen-hinge. No. 1,170,262; Feb. 1; Gaz. vol. 223; p. 178.

Houghton, Frederic D., Worcester, Mass. Device for use for spraying purposes. No. 1,170,908; Feb. 8; Gaz. vol. 223; p. 436.

Houghton, Lewis T., Worcester, Mass. Fastening device for ring-holders. No. 1,170,446; Feb. 1; Gaz. vol. 223; p. 239.

House, Martha R. (See Gilchrist and Daykin, assignors.)

Houseknecht, Howard, Freeland, Pa. Safety apparatus for mine-cars and the like. No. 1,170,263. Feb. 1; Gaz. vol. 223; p. 178.

Hovland, Henry, East Orange, N. J., assignor by mesne assignments, to Western Electric Company, Incorporated. Calling device. No. 1,171,520; Feb. 15; Gaz. vol. 223; p. 695.

Howard, Henry, Brookline, Mass. Process and apparatus for calcining chemical products. No. 1,173,428; Feb. 29; Gaz. vol. 223; p. 1478.

Howard, Joseph C. (See Harrison, Isaac A., assignor.)

Howe, Florence D., administratrix. (See Howe, John E.)

Howe, John E., deceased, New York, N. Y.; F. D. Howe, administratrix. Insulating-block for building purposes. No. 1,172,710; Feb. 22; Gaz. vol. 223; p. 1182.

Howell, Albert S., Chicago, Ill., assignor to Sanitary Package Company, Kalamazoo, Mich. Box-making machine. No. 1,171,613; Feb. 15; Gaz. vol. 223; p. 728.

Howell, Elizabeth E., Denver, Colo. Automobile. No. 1,171,438; Feb. 15; Gaz. vol. 223; p. 666.

Howerton, Oliver N., Peoria, Ill. Pump. No. 1,171,048; Feb. 8; Gaz. vol. 223; p. 486.

Hoxsie, Ben L., Nevada City, Cal. Automatic pressure-reducing valve. No. 1,173,518; Feb. 29; Gaz. vol. 223; p. 1510.

Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Roller for window-shades, sash-balances, and the like. No. 1,170,068; Feb. 1; Gaz. vol. 223; p. 110.

Hren, Joseph, Kingston, N. Y. Slicing and wrapping machine. No. 1,171,439; Feb. 15; Gaz. vol. 223; p. 667.

Hrnich, Milan, Conemaugh, Pa. Railway-tie. No. 1,170,264; Feb. 1; Gaz. vol. 223; p. 178.

Hub Shock Absorber Wheel Company. (See Chew and Sergeant, assignors.)

Hubbard, George C., Los Angeles, Cal. Toy. No. 1,173,150; Feb. 22; Gaz. vol. 223; p. 1337.

Hubbard, William H., Jr., Newark, N. J., assignor to The Ohio & Colorado Smelting & Refining Co., Denver, Colo. Cooling ores. No. 1,173,273; Feb. 29; Gaz. vol. 223; p. 1423.

Huckel, Hugo, Neutitschein, Austria-Hungary. Slide-valve gear for four-stroke explosive-engines. No. 1,173,970; Feb. 29; Gaz. vol. 223; p. 1665.

Huddle, William, assignor to The Aultman & Taylor Machinery Company, Mansfield, Ohio. Pulley. No. 1,170,755; Feb. 8; Gaz. vol. 223; p. 386.

Hudry, John, Hazleton, Pa. Go-cart. No. 1,170,265; Feb. 1; Gaz. vol. 223; p. 179.

Hudson, Annie, administratrix. (See Hudson, Frederick F.)

Hudson, Frederick F., deceased; A. Hudson, administratrix, assignor to Recording Safety Device Company, Memphis, Tenn. Circuit-breaker. No. 1,172,137; Feb. 15; Gaz. vol. 223; p. 915.

Hudson Motor Car Company. (See Fekete, Stephen I., assignor.)

Huebner-Bleistein Patents Company. (See Huebner, William C., assignor.)

Huebner, William C., assignor to Huebner-Bleistein Patents Company, Buffalo, N. Y. Adjustment indicator and controller. No. 1,170,157; Feb. 1; Gaz. vol. 223; p. 141.

Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Clutch mechanism. No. 1,171,341; Feb. 8; Gaz. vol. 223; p. 590.

Huff, William D., La Fayette, La. Automatically-controlled pumping-station. No. 1,172,994; Feb. 22; Gaz. vol. 223; p. 1283.

Huff, William D., La Fayette, assignor of three-fourths to L. G. Moss, New Iberia, La. Apparatus for operating sulfur-wells. No. 1,170,266; Feb. 1; Gaz. vol. 223; p. 179.

Hughes, Daniel S., *et al.* (See Andrews, Richard, assignor.)

Hughes Electric Heating Company. (See Hughes, George A., assignor.)

Hughes Electric Heating Company. (See Ruckle, Edward H., assignor.)

Hughes, George A., assignor to Hughes Electric Heating Company, Chicago, Ill. Electrical stove. No. 1,169,827; Feb. 1; Gaz. vol. 223; p. 27.

Hughes, James W., Narberth, Pa. Record-holder. No. 1,170,447; Feb. 1; Gaz. vol. 223; p. 240.

Hughes, James W., Haddon Heights, N. J., assignor to Hughes-Lippincott Company. Automatic vending-machine. No. 1,173,720; Feb. 29; Gaz. vol. 223; p. 1579.

Hughes-Lippincott Company. (See Hughes, James W., assignor.)

Hughes, William G., Pittsburgh, Pa. Dental-amalgam mixer. No. 1,173,519; Feb. 29; Gaz. vol. 223; p. 1510.

Hulfish, David S., assignor to Canadian Independent Telephone Company, Limited, Toronto, Ontario, Canada. Automatic telephone system. No. 1,170,909; Feb. 8; Gaz. vol. 223; p. 437.

Hull, Herbert H., assignor to The Perfection Cap & Can Company, Cleveland, Ohio. Closure for bottles and jars and affixing same. No. 1,169,828; Feb. 1; Gaz. vol. 223; p. 28.

Hulsey, M. W., *et al.* (See Austin, Albert A., assignor.)

Hulsey, W. O., *et al.* (See Austin, Albert A., assignor.)

Humason, Granville A., Shreveport, La., assignor to Rotary Expansion Bit Company, Los Angeles, Cal. Combined underreamer and bit. No. 1,171,790; Feb. 15; Gaz. vol. 223; p. 789.

Hungerford, Charles, Soldier, Kans. Ditching-machine. No. 1,171,203; Feb. 8; Gaz. vol. 223; p. 542.

Hunter, David J., Saegertown, Pa. Ventilator for toilet bowls or hoppers. No. 1,173,520; Feb. 29; Gaz. vol. 223; p. 1510.

Hunter, Ervin C., Galesburg, Ill. Hand-covering. No. 1,173,971; Feb. 29; Gaz. vol. 223; p. 1665.

Hunt, Frederick S. (See Wittemann and Flicek, assignors.)

Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)

Hunt, Ransom. (See Dean and Hunt.)

Hunter, Charles J., Newport News, Va. Side car for motor-cycles. No. 1,172,995; Feb. 22; Gaz. vol. 223; p. 1284.

Hunter, David E., assignor to The Shaw Walker Company, Muskegon, Mich. Cabinet drawer and case. No. 1,172,711; Feb. 22; Gaz. vol. 223; p. 1183.

Hunter, James G., Naponee, Nebr. Silo hoop or band. No. 1,173,972; Feb. 29; Gaz. vol. 223; p. 1665.

Hunter, Thomas H., New York, N. Y. Producing motion-pictures. No. 1,173,521; Feb. 29; Gaz. vol. 223; p. 1511.

Huntington Aircraft Company. (See Huntington, Howard, assignor.)

Huntington, Howard, Princeton, N. J., assignor to Huntington Aircraft Company, Inc., Garden City, N. Y. Aeroplane. No. 1,173,191; Feb. 29; Gaz. vol. 223; p. 1393.

Hupp, Albert, Washington, D. C. Automatic mail-exchange system. No. 1,170,267; Feb. 1; Gaz. vol. 223; p. 180.

Hupp, Albert, Washington, D. C. Railway mail-exchange system. No. 1,170,040; Feb. 8; Gaz. vol. 223; p. 345.

Hupp Motor Car Corporation. (See Nelson, Emil A., assignor.)

Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Fold-collar. No. 1,171,614; Feb. 15; Gaz. vol. 223; p. 728.

Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Soft fold-collar. No. 1,171,956; Feb. 15; Gaz. vol. 223; p. 851.

Hurley, Joseph A., New York, N. Y. Bookbinder's truck and table. No. 1,170,268; Feb. 1; Gaz. vol. 223; p. 180.

Hurt, Frederick L., assignor to Frederick Mfg. Co., Chicago, Ill. Oil-mop. No. 1,169,958; Feb. 1; Gaz. vol. 223; p. 71.

Hurvitz, Max, New York, N. Y., assignor to Excelsior Brush Co., Inc. Fountain-brush. No. 1,173,721; Feb. 29; Gaz. vol. 223; p. 1580.

Hutchins Car Roofing Company. (See Pape, Charles F., assignor.)

Hutchins, Henry W., assignor to E. M. Ball, Bellows Falls, Vt. Scythe. No. 1,174,015; Feb. 29; Gaz. vol. 223; p. 1680.

Hutchison, Miller R., Deal Beach, N. J., assignor to Lovell-McConnell Manufacturing Company. Alarm and signaling device. No. 1,173,577; Feb. 29; Gaz. vol. 223; p. 1530.

Hutchison, Miller R., New York, N. Y., assignor to Lovell-McConnell Manufacturing Company. Mechanically-actuated horn or alarm. No. 1,170,158; Feb. 1; Gaz. vol. 223; p. 142.

Hutchison, Miller R., West Orange, N. J., assignor to Lovell-McConnell Manufacturing Company. Diaphragm-horn. No. 1,172,712; Feb. 22; Gaz. vol. 223; p. 1183.

Hutchison, Miller R., Orange, N. J., assignor to Lovell-McConnell Manufacturing Company. Signaling-horn. No. 1,172,713; Feb. 22; Gaz. vol. 223; p. 1183.

Huttelmaier, Gustave E., Scottdale, Pa. Rotary car-dumping mechanism. No. 1,171,521; Feb. 15; Gaz. vol. 223; p. 695.

Hyde, Elmer A., Villisca, Iowa. Road-grading machine. No. 1,170,269; Feb. 1; Gaz. vol. 223; p. 180.

Hyfield Manufacturing Company. (See Hatfield, Andrew L., assignor.)

Hygienic Fleeced Underwear Company. (See Smith, Charles F., assignor.)

Hyman, Samuel F., New York, N. Y., assignor to U. S. Stamp Distributing and Sales Corporation. Vending-machine. No. 1,172,138; Feb. 15; Gaz. vol. 223; p. 915.

Hynard and Jung Co. (See Hynard, William C., assignor.)

Hynard, William C., assignor to Hynard and Jung Co., New York, N. Y. Waist. No. 1,172,996; Feb. 22; Gaz. vol. 223; p. 1284.

Ide, Harry L., Springfield, Ill. Photographic camera. No. 1,170,538; Feb. 8; Gaz. vol. 223; p. 308.
Igou, Dale C. (See Igou, Dennis T. and D. C.)
Igou, Dennis T. and D. C., assignors to The Igou Manufacturing Company, Springfield, Ohio. Wrapping-machine. No. 1,173,274; Feb. 29; Gaz. vol. 223; p. 1423.
Igou, Dennis T. and D. C., assignors to The Igou Manufacturing Company, Springfield, Ohio. Candy-machine. No. 1,173,275; Feb. 29; Gaz. vol. 223; p. 1424.
Igou, Dennis T. and D. C., assignors to The Igou Manufacturing Company, Springfield, Ohio. Paper-feeding device for wrapping-machines. No. 1,173,276; Feb. 29; Gaz. vol. 223; p. 1424.
Igou Manufacturing Company, The. (See Igou, Dennis T. and D. C., assignors.)
Ihrig, John, Rochester, N. Y. Cooling device. No. 1,170,641; Feb. 8; Gaz. vol. 223; p. 346.
Ihrig, Orland L., Sunnyvale, Cal., assignor to M. Rumely Company, Laporte, Ind. Means for supplying air and water to carbureters. No. 1,170,069; Feb. 1; Gaz. vol. 223; p. 111.
Illig, Edward A., assignor of one-half to E. F. Shugart, Erie, Pa. Sewing-machine attachment. No. 1,173,973; Feb. 29; Gaz. vol. 223; p. 1665.
Ilten, George H. (See Leonard and Ilten.)
Immell, Omer F., Blair, Wis. Grapple for catching fish. No. 1,171,440; Feb. 15; Gaz. vol. 223; p. 667.
Imperial Brass Manufacturing Company, The. (See Pettis, John G., assignor.)
Import Sales Company. (See Rosenfeld, Francis M., assignor.)
Improved Paper Machinery Company. (See Haug, Anton J., assignor.)
Improved Paper Machinery Company. (See Phelps, Edward V., assignor.)
Inco, Francis S., Los Angeles, Cal. Twin bed. No. 1,173,353; Feb. 29; Gaz. vol. 223; p. 1452.
Indahl, Mauritz C. (See Bancroft and Indahl.)
Ingersoll-Rand Company. (See Peck, Caid H., assignor.)
Ingram, Frederick F., assignor to Frederick F. Ingram Company, Detroit, Mich. Packet. No. 1,170,159; Feb. 1; Gaz. vol. 223; p. 142.
Ingram, James E., Baltimore, Md., A. K. Keller, Philadelphia, Pa., and H. L. Arthur, Aberdeen, Md., assignors, by mesne assignments, to W. H. G. Gould, Philadelphia, Pa. Combined bottle-closure and coupon-disk. No. 1,170,160; Feb. 1; Gaz. vol. 223; p. 143.
Inman, Harry A., Amsterdam, N. Y. Box-blank-conveyer mechanism. No. 1,173,664; Feb. 29; Gaz. vol. 223; p. 1561.
Inman, Harry A., Amsterdam, and C. T. Bloomer, assignors of one-third to said Inman, one-third to Bloomer Bros. Company, Newark, and one-third to Empire Paper Tube & Box Co., New York, N. Y. Receptacle. No. 1,172,997; Feb. 22; Gaz. vol. 223; p. 1285.
Innes, Harry C., Cincinnati, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Rail-filler. No. 1,171,441; Feb. 15; Gaz. vol. 223; p. 667.
International Couplers Company. (See White, Walter C., assignor.)
International Harvester Company of New Jersey. (See McIntire, Richard E., assignor.)
International Harvester Company of New Jersey. (See Pearson, Charles, assignor.)
International Harvester Company of New Jersey. (See Schutt, Duny A., assignor.)
International Signal Co., The. (See Webb, Jean F. S. and J. F., Jr., assignors.)
International Time Recording Company of New York. (See Bryce, James W., assignor.)
International Typesetting Machine Company. (See Sperry, Samuel E., assignor.)
International Window Manufacturing Company. (See Crane, Harry W., assignor.)
Ironclad Silo Company. (See Oberer, Fredolien J., assignor.)
Isbell, John F., Los Angeles, Cal., assignor to O. Allen, Denver, Colo. Concentrator. No. 1,169,959; Feb. 1; Gaz. vol. 223; p. 71.
Isham, Harry S., Belmar, N. J. Coffee-pot. No. 1,170,539; Feb. 8; Gaz. vol. 223; p. 308.
Ives, Frederic E., Woodcliffe-on-Hudson, N. J. Color photograph or film and producing same. No. 1,170,540; Feb. 8; Gaz. vol. 223; p. 309.
Ives, Frederic E., Woodcliffe-on-Hudson, N. J. Color photography. No. 1,173,429; Feb. 29; Gaz. vol. 223; p. 1478.
J. B. D. Holding Company. (See Drahonovsky, John B., assignor.)
J. G. Brill Company, The. (See Adams, Walter S., assignor.)
J. G. Cherry Company. (See Dickson, George F., assignor.)
J. H. White Manufacturing Company. (See Kahns, Walter R., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
J. I. Case Plow Works. (See Sobey, William, assignor.)
J. I. Case Threshing Machine Company. (See Davies, David P., assignor.)
J. W. C. Young Fire Arms Company, The. (See Young, John W. C., assignor.)
Jackels, Charles H., Rosedale, Kans. Animal-trap. No. 1,173,974; Feb. 29; Gaz. vol. 223; p. 1666.
Jackson, John F. (See Wilson and Jackson.)
Jackson, Lucian C., Buffalo, N. Y. Gas-engine. No. 1,172,362; Feb. 22; Gaz. vol. 223; p. 1053.
Jackson, Warren O., Ogden, Utah. Chalk-holder. No. 1,172,210; Feb. 15; Gaz. vol. 223; p. 938.
Jackson, William W., New York, N. Y. Damper. No. 1,170,642; Feb. 8; Gaz. vol. 223; p. 346.
Jacobs, Henry W. (See Levy and Jacobs.)
Jacobs, Henry W., Topeka, Kans. Boat. No. 1,173,431; Feb. 29; Gaz. vol. 223; p. 1479.
Jacobs, Henry W., Topeka, Kans. Boat. No. 1,173,432; Feb. 29; Gaz. vol. 223; p. 1479.
Jacobs, Henry W., and H. H. Lanning, Topeka, Kans. Acetylene-generating apparatus. No. 1,173,430; Feb. 29; Gaz. vol. 223; p. 1479.
Jacobs, John W., New York, assignor of one-third to H. Hoffmann, Far Rockaway, N. Y. Retainer for hat-protectors. No. 1,171,204; Feb. 8; Gaz. vol. 223; p. 542.
Jacobs, Louis, San Francisco, Cal. Fly-trap. No. 1,172,211; Feb. 15; Gaz. vol. 223; p. 938.
Jacobs, Stonewall R. (See Brumby, Clarence P., assignor.)
Jacobson, Gillert P., Lanse, Pa. Device for mounting electric wires. No. 1,169,960; Feb. 1; Gaz. vol. 223; p. 72.
Jacobus, Martin R., Ridgefield, N. J. Poultry-nest. No. 1,170,817; Feb. 8; Gaz. vol. 223; p. 405.
Jacobus, Nelson L., West Orange, N. J., assignor to Electro-Chemical Engraving Co. Memorandum-holder. No. 1,170,541; Feb. 8; Gaz. vol. 223; p. 309.
Jacoby, Benjamin. (See King and Jacoby.)
Jacques, John S., Hingham, Mass. Pneumatic-despatch-tube apparatus. No. 1,172,598; Feb. 22; Gaz. vol. 223; p. 1141.
Jadin, Ferdinand A., San Francisco, Cal. Nipple-making device for die-stocks. No. 1,169,961; Feb. 1; Gaz. vol. 223; p. 72.
Jaeger, Michael, Darmstadt, Germany. Automatic trap for mice and other vermin. No. 1,172,599; Feb. 22; Gaz. vol. 223; p. 1142.
Jaenichen, Louis, assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Scale. No. 1,171,522; Feb. 15; Gaz. vol. 223; p. 696.
Jaenichen, Louis, assignor to Standard Computing Scale Company, Limited, Detroit, Mich. Spring-scale. No. 1,172,458; Feb. 22; Gaz. vol. 223; p. 1089.
Jagenberg, Emil, Dusseldorf, Germany. Labeling-machine. No. 1,173,578; Feb. 29; Gaz. vol. 223; p. 1530.
Jagger, Peter B., London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Collapsible core for making hollow concrete posts and the like. No. 1,172,600; Feb. 22; Gaz. vol. 223; p. 1142.
Jakab, Johan, Aurora, Ill. Collapsible stand. No. 1,173,665; Feb. 29; Gaz. vol. 223; p. 1561.
Jalowetz, Eduard, E. Richter, and A. Schückher, Vienna, Austria-Hungary. Improving water for brewing and malting purposes. No. 1,172,528; Feb. 22; Gaz. vol. 223; p. 1117.
Jalowetz, Eduard, E. Richter, and A. Schueckher, Vienna, Austria-Hungary. Improving water for brewing and malting purposes. No. 1,172,998; Feb. 22; Gaz. vol. 223; p. 1285.
James, Wayland V., administrator. (See Cooper, Leslie A.)
Janney, Reynold, New York, N. Y., and H. D. Williams, Wallingford, assignors to The Waterbury Tool Company, New Britain, Conn. Fluid-operable mechanism. No. 1,172,288; Feb. 22; Gaz. vol. 223; p. 1027.
Janney, Robert E. L., Chicago, Ill., and E. P. Kinne, Alliance, Ohio, assignors to American Steel Foundries, New York, N. Y. Uncoupling device. No. 1,169,829; Feb. 1; Gaz. vol. 223; p. 28.
Jaques, Auguste, Chaux de Fonds, Switzerland, and C. L. Depollier, New York, N. Y. Watch. No. 1,172,601; Feb. 22; Gaz. vol. 223; p. 1142.
Jaquith, Adelbert S., Boston, Mass., assignor to M. H. Swift, Hartford, Conn. Automatic self-driven fillet-machine for applying metallic leaf. No. 1,169,830; Feb. 1; Gaz. vol. 223; p. 29.
Jarmain, Geoffrey G. (See Chambers, Hammond, and Jarmain.)
Jarrendt, Lewis C. (See Bristol and Olger, assignors.)
Jarvis, Harold, Toronto, Ontario, Canada. Thermostatic controller for gas water-heaters. No. 1,172,459; Feb. 22; Gaz. vol. 223; p. 1090.
Jeavons, William R., Cleveland, Ohio. Broiling device. No. 1,169,831; Feb. 1; Gaz. vol. 223; p. 30.
Jefferies, Ebenezer A. W., assignor to Morgan Construction Company, Worcester, Mass. Steam-blower for gas-producers. No. 1,170,070; Feb. 1; Gaz. vol. 223; p. 111.
Jeffery, Benjamin A. (See Jeffery, Joseph A. and B. A.)
Jeffery, John A., assignor of one-half to R. E. Cleaveland, Canton, N. Y. Truck for raising automobiles. No. 1,171,049; Feb. 8; Gaz. vol. 223; p. 487.
Jeffery, Joseph A. and B. A., Newark, N. J. Manufacturing porcelain articles. No. 1,171,205; Feb. 8; Gaz. vol. 223; p. 542.
Jeffery, Thomas B. (See Symmonds, Robert, Jr., assignor.)
Jeffrey Manufacturing Company, The. (See Levin, Nils D., assignor.)
Jeffrey Manufacturing Company, The. (See Liggett, William K., assignor.)

Jelsema, Willem, Worthing, S. D. Check-row attachment for planters. No. 1,171,206; Feb. 8; Gaz. vol. 223; p. 543.
Jenkins, Charles F., Washington, D. C. Device for aerial warfare. No. 1,173,522; Feb. 29; Gaz. vol. 223; p. 1511.
Jenkins, Charles H., Belleville, N. J., assignor to Newman Clock Co., New York, N. Y. Carrying-pouch for watchmen's time-registers. No. 1,172,460; Feb. 22; Gaz. vol. 223; p. 1090.
Jenkins, Nathaniel E., Goldfield, Nev., assignor of one-half to W. J. Mitchell, Spokane, Wash. Swelled coupling and bit used in diamond-drilling. No. 1,172,139; Feb. 15; Gaz. vol. 223; p. 915.
Jenkins, Nathaniel E., Goldfield, Nev., assignor of one-half to W. J. Mitchell, Spokane, Wash. Return water connection. No. 1,172,140; Feb. 15; Gaz. vol. 223; p. 916.
Jenkins, Samuel E., Richmond, Va. Apparatus for storing and discharging refuse. No. 1,172,141; Feb. 15; Gaz. vol. 223; p. 916.
Jennings, Chester S., assignor to The Lamson Company, Boston, Mass. Intercommunicating pick-up system. No. 1,171,207; Feb. 8; Gaz. vol. 223; p. 543.
Jennings, Emerson P., Jr., Lehighton, Pa. Printing-press. No. 1,173,579; Feb. 29; Gaz. vol. 223; p. 1531.
Jennings, Emerson P., Jr., Lehighton, Pa. Paper-cutting device. No. 1,173,580; Feb. 29; Gaz. vol. 223; p. 1531.
Jennings, Victor H., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Woven receptacle and producing the same. No. 1,170,448; Feb. 1; Gaz. vol. 223; p. 240.
Jensen, Karl F., South River, N. J., assignor to Herrmann Aukam & Co., New York, N. Y. Spanning-frame. No. 1,171,847; Feb. 15; Gaz. vol. 223; p. 810.
Jensen-Valdal, Ernst, assignor to Aktieselskabet Dansk Svovlsyre- & Superphosphat-Fabrik, Copenhagen, Denmark. Water-cooled hollow shaft for ore-roasting furnaces. No. 1,173,354; Feb. 29; Gaz. vol. 223; p. 1453.
Jensen, Victor B., Cayuga, N. D. Adjustable air-damper for stovepipes. No. 1,173,975; Feb. 29; Gaz. vol. 223; p. 1666.
Jessup, George K. (See Murray and Jessup.)
Joecken, Peter J., assignor to Falls Machine Company, Sheboygan Falls, Wis. Feeder for planers. No. 1,171,957; Feb. 15; Gaz. vol. 223; p. 852.
Joerns Motor Manufacturing Co. (See Strand, Andrew, assignor.)
Johnson, Albert, New York, N. Y. Piano felt damper. No. 1,169,832; Feb. 1; Gaz. vol. 223; p. 30.
Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Insole-lip-sewing machine. No. 1,171,723; Feb. 15; Gaz. vol. 223; p. 765.
Johnson, Albert L., Luling, Tex. Oil-controller. No. 1,173,876; Feb. 29; Gaz. vol. 223; p. 1666.
Johnson, Carl A., Escanaba, Mich. Attachment for base-burning coal-stoves. No. 1,173,581; Feb. 29; Gaz. vol. 223; p. 1532.
Johnson, Charles E., Muskegon, Mich. Piston-ring construction. No. 1,172,461; Feb. 22; Gaz. vol. 223; p. 1091.
Johnson, Charles S., Marcy, N. Y. Washing-machine. No. 1,172,462; Feb. 22; Gaz. vol. 223; p. 1091.
Johnson, Christian A., and H. Thissenius, Laramie, Wyo. Sander. No. 1,172,212; Feb. 15; Gaz. vol. 223; p. 938.
Johnson, Edward, Sagamore, Pa. Window-screen. No. 1,172,800; Feb. 22; Gaz. vol. 223; p. 1216.
Johnson, Edward M., Jersey City, and J. J. Quilligan, Grantwood, assignors to Mead Johnson & Co., Jersey City, N. J. Infant food. No. 1,171,724; Feb. 15; Gaz. vol. 223; p. 766.
Johnson, Frank A., Inwood, Iowa. Corn-harvester. No. 1,172,289; Feb. 22; Gaz. vol. 223; p. 1028.
Johnson, Grover C., Buffalo, N. Y. Stabilizer. No. 1,173,977; Feb. 29; Gaz. vol. 223; p. 1666.
Johnson, Henry A. (See Johnson, John S. and H. A.)
Johnson, Isak W. (See Hendrickson, Jacob, assignor.)
Johnson, John, and L. G. Williams, Bonne Terre, Mo. Radiator for motor-vehicles. No. 1,173,805; Feb. 29; Gaz. vol. 223; p. 1609.
Johnson, John A., Seattle, Wash. Tape attachment. No. 1,172,463; Feb. 22; Gaz. vol. 223; p. 1091.
Johnson, John E., Ronceverte, W. Va. Hat, coat, or baggage check. No. 1,172,602; Feb. 22; Gaz. vol. 223; p. 1143.
Johnson & Johnson. (See Kenyon, Johnson, assignor.)
Johnson, John G., Tacoma, Wash. Motor-driven tire-pump. No. 1,173,434; Feb. 29; Gaz. vol. 223; p. 1480.
Johnson, John J., St. Paul, Minn. Form-lock extension. No. 1,172,213; Feb. 15; Gaz. vol. 223; p. 939.
Johnson, John S. and H. A., Chicago, Ill. Car-brake. No. 1,171,050; Feb. 8; Gaz. vol. 223; p. 487.
Johnson, Mary E., trustee. (See Barnes, William O., assignor.)
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,774; Feb. 29; Gaz. vol. 223; p. 1599.
Johnson, Morton L., assignor, by mesne assignments, to Frank B. Cook Company, Chicago, Ill. Telephony. No. 1,173,775; Feb. 29; Gaz. vol. 223; p. 1599.
Johnson, Naema J., Red Wing, Minn. Hand-press for surgical dressings. No. 1,172,801; Feb. 22; Gaz. vol. 223; p. 1216.
Johnson, Nathan C., Englewood, N. J. Collapsible mandrel particularly adapted for making, forming, and placing concrete piling. No. 1,173,806; Feb. 29; Gaz. vol. 223; p. 1610.
Johnson, Nathan C., Englewood, N. J. Making cast-in-place concrete piles and the like. No. 1,173,807; Feb. 29; Gaz. vol. 223; p. 1610.
Johnson, Nelson P., South Pasadena, assignor to Thoro Powdered Toilet Soap Company, Los Angeles, Cal. Measuring and dispensing device. No. 1,172,603; Feb. 22; Gaz. vol. 223; p. 1143.
Johnson, Oliver J., Wheeling, W. Va. Can-body-soldering machine. No. 1,170,161; Feb. 1; Gaz. vol. 223; p. 143.
Johnson, Peter, assignor of one-third to O. Sari, one-third to G. Newman, and one-third to E. J. Casper, San Francisco, Cal. Hasp-lock. No. 1,171,051; Feb. 8; Gaz. vol. 223; p. 487.
Johnson, Philip C., Larue, Ohio. Gear-shifting lever. No. 1,171,342; Feb. 8; Gaz. vol. 223; p. 591.
Johnson, Rasmus, *et al.* (See Miller, Andrew B., assignor.)
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,172,714; Feb. 22; Gaz. vol. 223; p. 1184.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Military shoulder-arm. No. 1,173,582; Feb. 29; Gaz. vol. 223; p. 1532.
Johnson, Tomlinson F., Jr., Atlanta, Ga. Snap clamp or grip for electrical conductors. No. 1,172,604; Feb. 22; Gaz. vol. 223; p. 1143.
Johnson, William J. (See Gumpp and Johnson.)
Johnston, Harry F., assignor to Keystone Driller Company, Beaver Falls, Pa. Demountable hand-wheel. No. 1,171,848; Feb. 15; Gaz. vol. 223; p. 811.
Johnston, Herbert L., assignor to The Hobart Manufacturing Company, Troy, Ohio. Making gear-blanks and the like. No. 1,173,433; Feb. 29; Gaz. vol. 223; p. 1480.
Johnston, James S. and M. L., Utica, assignors to C. O. Jones, New Hartford, N. Y. Muffler. No. 1,173,583; Feb. 29; Gaz. vol. 223; p. 1532.
Johnston, John, New York, N. Y. Motor-truck. No. 1,170,270; Feb. 1; Gaz. vol. 223; p. 181.
Johnston, Leslie H. (See Baker and Johnston.)
Johnston, Llewellyn H. (See Lewis and Johnston.)
Johnston, Millard L. (See Johnston, James S. and M. L.)
Johnston, Samuel W. (See Baker and Johnston.)
Johnston, Thomas E., Amite, assignor to Gullett Gin Company, New Orleans, La. Roll-breaker and cotton-cleaner. No. 1,173,978; Feb. 29; Gaz. vol. 223; p. 1667.
Johnston, Wayburn E. (See Rohan and Johnston.)
Joly, Charles L. (See Schnaars and Joly.)
Jones, Albert, assignor to A. F. Lee, Somerville, Mass. Advertising device. No. 1,171,125; Feb. 8; Gaz. vol. 223; p. 515.
Jones, Albert E., Fiume, Austria-Hungary. Gyroscopic steering device for torpedoes. No. 1,173,435; Feb. 29; Gaz. vol. 223; p. 1480.
Jones, Charles C., Duluth, Minn. Spring-mounting for vehicles. No. 1,172,529; Feb. 22; Gaz. vol. 223; p. 1117.
Jones, Charles O. (See Johnston, James S. and M. L., assignors.)
Jones Company. (See Jones, Joshua W., assignor.)
Jones, Daniel A., Durand, Mich. Journal-bearing. No. 1,170,271; Feb. 1; Gaz. vol. 223; p. 181.
Jones, Edward M., Macon, Ga. Crematory. No. 1,170,818; Feb. 8; Gaz. vol. 223; p. 406.
Jones, Edwin B., assignor of one-third to E. B. Kreason, Hornell, N. Y. Internal-combustion engine. No. 1,171,052; Feb. 8; Gaz. vol. 223; p. 488.
Jones, H. M., *et al.* (See Burks, Jesse A., assignor.)
Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Mold for brake-shoes. No. 1,172,363; Feb. 22; Gaz. vol. 223; p. 1054.
Jones, Harry T., Seward, Nebr., assignor, by mesne assignments, to Concrete Piling Company. Sinking piles. No. 1,173,355; Feb. 29; Gaz. vol. 223; p. 1453.
Jones, Henry D., assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio. Clutch. No. 1,170,643; Feb. 8; Gaz. vol. 223; p. 346.
Jones, Henry D., assignor to The Kelly-Springfield Road Roller Company, Springfield, Ohio. Driving mechanism. No. 1,170,644; Feb. 8; Gaz. vol. 223; p. 346.
Jones, J. P., *et al.* (See Burks, Jesse A., assignor.)
Jones, Joseph W., New York, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company. Mechanically-actuated diaphragm-horn. No. 1,173,584; Feb. 29; Gaz. vol. 223; p. 1532.
Jones, Joshua W., deceased; Commonwealth Trust Company, executor, assignor to Jones Company, Harrisburg, Pa. Coin-holder or change-maker. No. 1,172,605; Feb. 22; Gaz. vol. 223; p. 1143.
Jones, Joshua W., deceased; Commonwealth Trust Company, executor, assignor to Jones Company, Harrisburg, Pa. Paper-weight, letter-clip, and calendar-pad holder. No. 1,172,606; Feb. 22; Gaz. vol. 223; p. 1144.
Jones, Joshua W., deceased; Commonwealth Trust Company, executor, assignor to Jones Company, Harrisburg, Pa. Coin-holder or change-maker. No. 1,172,607; Feb. 22; Gaz. vol. 223; p. 1144.
Jones, Lee B., Kansas City, Mo. Voltage regulation. No. 1,171,208; Feb. 8; Gaz. vol. 223; p. 544.

Jones, Luther S., Utica, N. Y. Railway-spike. No. 1,173,606; Feb. 29; Gaz. vol. 223; p. 1561.
Jones, Raymond H., Marysville, Cal. Seal. No. 1,172,530; Feb. 22; Gaz. vol. 223; p. 1117.
Jones, Seaborn W., and A. W. Postlethwaite, San Antonio, Tex. Automatic cake-rack. No. 1,171,442; Feb. 15; Gaz. vol. 223; p. 668.
Jones, Whitney B., Perth Amboy, N. J., assignor to General Bakelite Company, New York, N. Y. Coated article. No. 1,171,725; Feb. 15; Gaz. vol. 223; p. 766.
Jones, William K., Wichita, Kans. Union garment. No. 1,170,272; Feb. 1; Gaz. vol. 223; p. 181.
Jordan, Jason W., Jr., Lexington, Miss. Card-holder binding device. No. 1,171,209; Feb. 8; Gaz. vol. 223; p. 544.
Jorgensen, Hakop, Copenhagen, Denmark. Taking finger impressions. No. 1,170,273; Feb. 1; Gaz. vol. 223; p. 182.
Jorgenson, John, San Francisco, assignor of one-half to T. Barnett, Oakland, Cal. Sash-lock. No. 1,172,531; Feb. 22; Gaz. vol. 223; p. 1117.
Jos. N. Smith & Company. (See Ackerman, Edward L., assignor.)
Joseph, Carl. (See Pease, Orville E., assignor.)
Joseph, Carl, Bayonne, N. J. Fastener. No. 1,170,542; Feb. 8; Gaz. vol. 223; p. 309.
Josephs, Henry, assignor to The Paper Novelty Co., Green Bay, Wis. Crape-paper machine. No. 1,172,532; Feb. 22; Gaz. vol. 223; p. 1118.
Joy, Charles A., Bordeaux, Wash. Overhead logging system. No. 1,170,645; Feb. 8; Gaz. vol. 223; p. 346.
Juch, Julius. (See Stapelmann and Juch.)
Judson L. Thomson M'f'g Co. (See Havener, Arthur R., assignor.)
Jüllicher, Peter, Flushing, N. Y. Hair-waving implement. No. 1,173,436; Feb. 29; Gaz. vol. 223; p. 1481.
Jungbans, Arthur, Schramberg, Germany, assignor to The American Radium Company. Utilizing the luminous power of radioactive compounds. No. 1,173,110; Feb. 22; Gaz. vol. 223; p. 1322.
Junke, Herman, Seattle, Wash. Turbine. No. 1,171,791; Feb. 15; Gaz. vol. 223; p. 789.
K. D. Cabinet Company, The. (See Russell, Robert C., assignor.)
Kaan, Ralph. (See Pool and Kaan.)
Kafka, Oscar, New York, N. Y. Collar. No. 1,170,972; Feb. 8; Gaz. vol. 223; p. 459.
Kahle, John W. (See Cartmell, Robert J., assignor.)
Kahn, Adolph. (See Misroch and Kahn.)
Kahns, Walter R., Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Combined adjustable bowl-hanger and lamp-socket support for lighting-fixtures. No. 1,171,958; Feb. 15; Gaz. vol. 223; p. 852.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Combination lighting and ignition switch. No. 1,172,364; Feb. 22; Gaz. vol. 223; p. 1054.
Kalish, Harry L., New York, N. Y. Display-card. No. 1,172,142; Feb. 15; Gaz. vol. 223; p. 916.
Kallander, Oscar. (See Sprinchorn and Kallander.)
Kalota, John, West Allis, Wis. Expansible horseshoe. No. 1,169,962; Feb. 1; Gaz. vol. 223; p. 72.
Kamp, William J. (See Woodard and Kamp.)
Kanavel, Lyman M., Killbuck, Ohio. Combination wrench and wire-stretcher. No. 1,169,833; Feb. 1; Gaz. vol. 223; p. 30.
Kane, Thomas H., Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Armor-plate-setting device. No. 1,169,834; Feb. 1; Gaz. vol. 223; p. 31.
Kane, Thomas L., Kane, Pa. Pitch-ascertaining attachment for sound-reproducing records. No. 1,172,533; Feb. 22; Gaz. vol. 223; p. 1118.
Kanizsai, Paul, Cleveland, Ohio. Dirt-receptacle. No. 1,172,534; Feb. 22; Gaz. vol. 223; p. 1119.
Kaplan, Morduch L., Brooklyn, assignor to Beacon Miniature Electric Co., Inc., New York, N. Y. Galvanic cell. No. 1,170,819; Feb. 8; Gaz. vol. 223; p. 406.
Kappeler, Jean, Mellingen, Switzerland. Braiding-machine. No. 1,170,973; Feb. 8; Gaz. vol. 223; p. 459.
Kappes, Joseph, Baltimore, Md. Trousers stretcher and hanger. No. 1,172,099; Feb. 22; Gaz. vol. 223; p. 1285.
Karl, Ernest, Litchfield, Conn. Tympan-gage. No. 1,170,274; Feb. 1; Gaz. vol. 223; p. 182.
Karnasch, Leopold M. (See Doble and Karnasch.)
Karnasch, Leopold M., assignor to The Pelton Water Wheel Company, San Francisco, Cal. Governor. No. 1,173,437; Feb. 29; Gaz. vol. 223; p. 1481.
Karrow, William F., Seymour, Wis. Clevis. No. 1,173,000; Feb. 22; Gaz. vol. 223; p. 1285.
Kassel, Morris B. (See Ohrbach and Ziverling, assignors.)
Katz, Aron, Charlottenburg, assignor to Siemens & Halske, A. G., Berlin, Germany. Automatic telephone-exchange. No. 1,172,365; Feb. 22; Gaz. vol. 223; p. 1054.
Katzinger, Edward, assignor to Edward Katzinger Company, Chicago, Ill. Automatic clutch-release. No. 1,170,543; Feb. 8; Gaz. vol. 223; p. 310.
Kauffman, Samuel, St. Louis, Mo. Radiator-shield. No. 1,170,544; Feb. 8; Gaz. vol. 223; p. 310.
Kaufman, Charles L., Englewood, N. J., assignor to A. Arbib, New York, N. Y. Apparatus for making feather boas and the like. No. 1,170,820; Feb. 8; Gaz. vol. 223; p. 406.
Kaufman, Frank M. (See Kaufman, Harry and F. M.)
Kaufman, Harry and F. M., Philadelphia, Pa. Woven pile fabric. No. 1,169,835; Feb. 1; Gaz. vol. 223; p. 31.
Kaufman, Wolff, Paterson, N. J. Operating mechanism for potato-cutters. No. 1,172,214; Feb. 15; Gaz. vol. 223; p. 939.
Kaufmann, Raymond M., Pittsburgh, Pa. Train-control apparatus. No. 1,172,608; Feb. 22; Gaz. vol. 223; p. 1145.
Keagy, Jacob, Coshocton, Ohio. Condenser-coil. No. 1,170,071; Feb. 1; Gaz. vol. 223; p. 111.
Kearnes, Cornelius, Soldier, Iowa. Air-heating device for gas-engines. No. 1,172,143; Feb. 15; Gaz. vol. 223; p. 917.
Kean, James E., Woburn, Mass. Sectional water-gage glass. No. 1,170,910; Feb. 8; Gaz. vol. 223; p. 437.
Keary, William J. (See Fuller, Anderson, assignor.)
Keebler, John C., Bloomington, and R. I. Sibley, Gardena, assignors to Curtis Olive Corporation, Bloomington, Cal. Adjusting mechanism for fruit and nut sizers. No. 1,170,449; Feb. 1; Gaz. vol. 223; p. 240.
Keefer, Samuel H., Plainfield, assignor to Niles-Bement-Pond Company, Jersey City, N. J. System of motor control. No. 1,170,974; Feb. 8; Gaz. vol. 223; p. 460.
Keegan, Albert P., Providence, R. I. Chain-holding hook. No. 1,173,001; Feb. 22; Gaz. vol. 223; p. 1286.
Keely, J. Walter. (See Emerick, George S., assignor.)
Keenan, John F., Taylor, assignor to Denny-Renton Clay and Coal Co., Seattle, Wash. Pipe-turner. No. 1,169,963; Feb. 1; Gaz. vol. 223; p. 73.
Keenan, John J., assignor to M. A. Keenan, New York, N. Y. Signaling device for apparatus for stopping vehicles. No. 1,170,545; Feb. 8; Gaz. vol. 223; p. 311.
Keenan, Margaret A. (See Keenan, John J., assignor.)
Keene, Archibald T., Chicago, Ill., assignor to Keene Hydraulic Transmission Company. Hydraulic power transmission. No. 1,172,802; Feb. 22; Gaz. vol. 223; p. 1216.
Keene Hydraulic Transmission Company. (See Keene, Archibald T., assignor.)
Keffer, Clarence C., Union City, Ind. Holder for medicine-bottles and absorbent rolls. No. 1,171,210; Feb. 8; Gaz. vol. 223; p. 544.
Kehoe, Thomas J., Toledo, Ohio. Clamping means for vehicle-tops. No. 1,173,277; Feb. 29; Gaz. vol. 223; p. 1425.
Keiner, Henry A., and E. Plançon, New York, N. Y.; said Plançon assignor to said Keiner. Closure for containers. No. 1,170,546; Feb. 8; Gaz. vol. 223; p. 311.
Keiper, Henry B., Lancaster, Pa. Ball-retainer. No. 1,170,072; Feb. 1; Gaz. vol. 223; p. 111.
Keiper, Henry B., Lancaster, Pa. Internal-combustion engine. No. 1,171,211; Feb. 8; Gaz. vol. 223; p. 545.
Keith, Alexander E., Hinsdale, Ill. Gas-compressing or gas-circulating system and apparatus for use therein. No. 1,171,959; Feb. 15; Gaz. vol. 223; p. 852.
Keith, Alexander E., Hinsdale, Ill. Gas compressing or circulating system and apparatus for use therein. No. 1,172,535; Feb. 22; Gaz. vol. 223; p. 1119.
Keith, Eldon B. (See Sunden, Otto F., assignor.)
Kellar, Chambers. (See Pelham, George, assignor.)
Keller, Albert K. (See Ingram, Keller, and Arthur.)
Keller, George F., Lavelle, Pa. Rail-joint. No. 1,173,979; Feb. 29; Gaz. vol. 223; p. 1667.
Keller, Orlando R., Portsmouth, Ohio. Game. No. 1,170,821; Feb. 8; Gaz. vol. 223; p. 407.
Kelley, Harry H., Atlanta, Ga. Pick-motion for looms. No. 1,172,144; Feb. 15; Gaz. vol. 223; p. 917.
Kelley, John M., Rochester, N. Y. Pump. No. 1,170,756; Feb. 8; Gaz. vol. 223; p. 386.
Kelley, Thomas A., Pittsburgh, Pa. Feeding device for breast-drills. No. 1,173,356; Feb. 29; Gaz. vol. 223; p. 1453.
Kelley, William N., and J. C. Porter, Pittsburgh, Pa. Inner-tube protector for pneumatic tires. No. 1,169,964; Feb. 1; Gaz. vol. 223; p. 73.
Kelley, William R., San Francisco, Cal. Airship. No. 1,172,609; Feb. 22; Gaz. vol. 223; p. 1145.
Kellogg, Andrew J., Los Angeles, Cal. Steering-wheel lock. No. 1,169,965; Feb. 1; Gaz. vol. 223; p. 73.
Kellogg, Carl A., Battle Creek, Mich. Web-printing machine. No. 1,173,278; Feb. 29; Gaz. vol. 223; p. 1425.
Kellogg, Edwin M., Moline, Ill. Grain-shocker for harvesting-machines. No. 1,170,822; Feb. 8; Gaz. vol. 223; p. 407.
Kellogg, Edwin M., Moline, Ill. Grain-shocker. No. 1,170,823; Feb. 8; Gaz. vol. 223; p. 408.
Kellogg, John L., Battle Creek, Mich. Manufacture of shredded cereal food. No. 1,170,162; Feb. 1; Gaz. vol. 223; p. 143.
Kellogg Switchboard and Supply Company. (See Carter, Alva J., assignor.)
Kellogg Switchboard and Supply Company. (See Dyson, Alfred H., assignor.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Webster, Harry G., assignor.)
Kellum, Charles S., assignor to The Lavigne Manufacturing Company, Detroit, Mich. Valve. No. 1,172,464; Feb. 22; Gaz. vol. 223; p. 1092.
Kelly, Charles H., assignor to Muncie Oil Engine Company, Muncie, Ind. Internal-combustion engine. No. 1,173,111; Feb. 22; Gaz. vol. 223; p. 1322.

Kelly, Charles R., Cambridge Springs, Pa. Fertilizer-distributer. No. 1,171,960; Feb. 15; Gaz. vol. 223; p. 853.
Kelly, John P., Yonkers, N. Y. Rod-packing for air-pumps. No. 1,173,808; Feb. 29; Gaz. vol. 223; p. 1610.
Kelly-Springfield Motor Truck Company, The. (See Balough, Charles, assignor.)
Kelly Springfield Road Roller Company, The. (See Jones, Henry D., assignor.)
Kelly, William J., Jamaica, assignor to T. Mooney, Douglaston, N. Y. Door-check and open-door-locking device. No. 1,171,053; Feb. 8; Gaz. vol. 223; p. 488.
Keltonik, Stephen, Conemaugh, Pa. Insect-trap. No. 1,173,809; Feb. 29; Gaz. vol. 223; p. 1611.
Kenealy, John T., and W. A. Naylon, Rochester, N. Y. Restaurant-chair. No. 1,170,073; Feb. 1; Gaz. vol. 223; p. 112.
Kennedy, Frank W., Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y. Elastic-fluid turbine. No. 1,170,547; Feb. 8; Gaz. vol. 223; p. 311.
Kennedy, Royal J. (See Abramson, Kennedy, and McMillan.)
Kennedy, William J., St. Louis, Mo. File-box. No. 1,173,002; Feb. 22; Gaz. vol. 223; p. 1286.
Kenney, Albert T. (See Colwell and Kenney.)
Kenney, William J., assignor to Underfeed Stoker Company of America, Chicago, Ill. Furnace. No. 1,172,290; Feb. 22; Gaz. vol. 223; p. 1028.
Kenney, William J., Wilmette, assignor to Underfeed Stoker Company of America, Chicago, Ill. Drying plant. No. 1,172,291; Feb. 22; Gaz. vol. 223; p. 1028.
Kenney, William J., Wilmette, and Henry P. Grohn, assignors to Under-Feed Company of America, Chicago, Ill. Self-feeding stoker. No. 1,172,292; Feb. 22; Gaz. vol. 223; p. 1029.
Kenny, Paul T., New York, N. Y., assignor to Elevator Supply & Repair Company. Elevator signaling apparatus. No. 1,173,192; Feb. 29; Gaz. vol. 223; p. 1393.
Kenstowicz, Waclaw, Chicago, Ill. Target. No. 1,169,966; Feb. 1; Gaz. vol. 223; p. 74.
Kent, Everett E. (See Weston, Albert M., assignor.)
Kent, George G., London, England. Crochet cotton or wool holding device. No. 1,169,967; Feb. 1; Gaz. vol. 223; p. 74.
Kent, Gilbert A. (See Gray, Thomas L., assignor.)
Kentucky Wagon Manufacturing Company. (See Colebourn, William J., assignor.)
Kenyon, Howard, Houston, Tex. Lifting and moving device. No. 1,170,757; Feb. 8; Gaz. vol. 223; p. 386.
Kenyon, Johnson, assignor to Johnson & Johnson, New Brunswick, N. J. Dental-floss holder. No. 1,174,016; Feb. 29; Gaz. vol. 223; p. 1680.
Keppeler, Adolph, Butte, Mont. Mixing apparatus. No. 1,171,054; Feb. 8; Gaz. vol. 223; p. 488.
Kerstein, Hans. (See Meyer and Kerstein.)
Kesten, Paul, Nuremberg, and H. Osborne, Charlottenburg, assignors to Siemens-Schuckert-Werke G. m. b. H., Berlin, Germany. Automatic brake for elevators. No. 1,173,438; Feb. 29; Gaz. vol. 223; p. 1481.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,170,275; Feb. 1; Gaz. vol. 223; p. 182.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Engine starting, lighting, and ignition system. No. 1,171,055; Feb. 8; Gaz. vol. 223; p. 488.
Kettler, Gustave, *et al.* (See Lennards, Frank H., assignor.)
Kettler, Martin F., assignor to Downing Pneumatic Wheel Company, Houston, Tex. Resilient wheel. No. 1,172,610; Feb. 22; Gaz. vol. 223; p. 1146.
Kettler, Martin F., assignor to Downing Pneumatic Wheel Company, Houston, Tex. Vehicle-wheel buffer. No. 1,173,439; Feb. 29; Gaz. vol. 223; p. 1482.
Keyes, Clarence L., Peru, Ind. Tire-holder. No. 1,173,980; Feb. 29; Gaz. vol. 223; p. 1607.
Keys, William H., St. Louis, Mo. Packing-ring. No. 1,173,810; Feb. 29; Gaz. vol. 223; p. 1611.
Keystone Driller Company. (See Johnston, Harry F., assignor.)
Keystone Fireproofing Company. (See Hoge, Edward A. C., assignor.)
Kidder, Wellington P., Boston, Mass., and C. W. Sponsel, Hartford, assignors, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,171,961; Feb. 15; Gaz. vol. 223; p. 853.
Kiesel, William F., Jr., Altoona, Pa. Brake-rigging. No. 1,169,968; Feb. 1; Gaz. vol. 223; p. 74.
Kieselguhr Company of America. (See Bachler, Frederick R., assignor.)
Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Automatic starting device for boiler feed-pumps. No. 1,170,163; Feb. 1; Gaz. vol. 223; p. 143.
Kilbourn, Washington H., Greenfield, Mass. Trolley-stand. No. 1,172,536; Feb. 22; Gaz. vol. 223; p. 1119.
Kilbride, Samuel M. (See Williams and Kilbride.)
Kilgour, Dwight F., Lexington, Mass. Elevator-lock. No. 1,170,759; Feb. 8; Gaz. vol. 223; p. 387.
Kilgour, Dwight F., assignor to Knojah Shock Absorber Company, Lexington, Mass. Shock-absorber. No. 1,170,758; Feb. 8; Gaz. vol. 223; p. 387.
Kimball, George W. (See Cooper, Leslie A., assignor.)
Kimball, Robert E., assignor to The Cleveland Folding Machine Company, Cleveland, Ohio. Folding-plate for paper-folding machines. No. 1,173,193; Feb. 29; Gaz. vol. 223; p. 1394.
Kimbell, William A., Birmingham, Ala. Draft-spring. No. 1,172,803; Feb. 22; Gaz. vol. 223; p. 1217.
Kinan, John, Seattle, Wash. Rotary wire brush. No. 1,171,962; Feb. 15; Gaz. vol. 223; p. 853.
Kineto Machine Company. (See Steinberg, Abraham, assignor.)
King, Charles B., and B. Jacoby, assignors to The Marion Steam Shovel Company, Marion, Ohio. Swinging mechanism for booms of excavating-machines. No. 1,169,836; Feb. 1; Gaz. vol. 223; p. 31.
King, Joseph H., San Diego, Cal. Watering device for grindstones. No. 1,171,726; Feb. 15; Gaz. vol. 223; p. 766.
King, Robert O., North Tonawanda, N. Y. Construction of horticultural buildings. No. 1,170,911; Feb. 8; Gaz. vol. 223; p. 438.
Kinne, Edmund P. (See Janney and Kinne.)
Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Coupling knuckle and lug. No. 1,173,440; Feb. 29; Gaz. vol. 223; p. 1482.
Kinne, Ina D., Portland, Oreg. Pan-scraping device. No. 1,171,212; Feb. 8; Gaz. vol. 223; p. 545.
Kinnear, Alexander, Toledo, Ohio. Combined annealing and muffle furnace. No. 1,170,164; Feb. 1; Gaz. vol. 223; p. 144.
Kinney, George F., New York, N. Y. Reminding device. No. 1,173,585; Feb. 29; Gaz. vol. 223; p. 1533.
Kinney, Justus R., Dorchester, assignor to The Kinney Manufacturing Company, Boston, Mass. Sprinkler-nozzle. No. 1,173,279; Feb. 29; Gaz. vol. 223; p. 1426.
Kinney Manufacturing Company, The. (See Kinney, Justus R., assignor.)
Kinney-Rome Company. (See Grotenhuis, William J., assignor.)
Kintner, Samuel M., *et al.*, receivers. (See Fessenden, Reginald A., assignor.)
Kiorboe, George. (See Smith, Harald, assignor.)
Kiraly, Andrew, Kingston, N. Y. Folding washstand. No. 1,172,804; Feb. 22; Gaz. vol. 223; p. 1217.
Kirby, Omer, assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone-exchange system. No. 1,172,366; Feb. 22; Gaz. vol. 223; p. 1055.
Kirchhoff, William G., assignor to American Bakers Machinery Company, St. Louis, Mo. Dough-mixer. No. 1,171,963; Feb. 15; Gaz. vol. 223; p. 854.
Kirk, Walter I., assignor to Lyon & Healy, Chicago, Ill. Pedal for musical instruments. No. 1,173,811; Feb. 29; Gaz. vol. 223; p. 1611.
Kissinger, James K., Reading Pa. Supplemental spring. No. 1,171,849; Feb. 15; Gaz. vol. 223; p. 811.
Kitsee, Isidor, Philadelphia, Pa. Destroying insects harmful to plant life. No. 1,172,367; Feb. 22; Gaz. vol. 223; p. 1055.
Kittrell, Dodger L., Nashville, Tenn. Check-controlled apparatus. No. 1,173,003; Feb. 22; Gaz. vol. 223; p. 1286.
Klamm, Carl E., Cleveland, Ohio. Fixture for window-shades. No. 1,172,715; Feb. 22; Gaz. vol. 223; p. 1184.
Klee, Alfred P., Indianapolis, Ind. Bottle filling and measuring machine. No. 1,171,792; Feb. 15; Gaz. vol. 223; p. 790.
Klein, Adolph S., Cleveland, Ohio. Refrigerator. No. 1,170,824; Feb. 8; Gaz. vol. 223; p. 408.
Klein, Andrew L., San Francisco, Cal. Sanitary closet-seat. No. 1,170,498; Feb. 1; Gaz. vol. 223; p. 257.
Klein, Charles J., Milwaukee, Wis. Attachment-plug for electrical conductors. No. 1,171,851; Feb. 15; Gaz. vol. 223; p. 812.
Klein, Charles J., Milwaukee, Wis. Attachment-plug. No. 1,171,852; Feb. 15; Gaz. vol. 223; p. 812.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Company, Milwaukee, Wis. Electric switch. No. 1,171,850; Feb. 15; Gaz. vol. 223; p. 811.
Klein, Edward H., Brooklyn, N. Y. Hat-fastener. No. 1,172,215; Feb. 15; Gaz. vol. 223; p. 939.
Klein, N. W., *et al.* (See Wilson, Samuel T., assignor.)
Klin, John R. (See Rike and Klin.)
Kline, Harmon J., Alpena, Mich. Internal-combustion engine. No. 1,170,276; Feb. 1; Gaz. vol. 223; p. 183.
Klitsche, Amandus, assignor to Frederick Post Company, Chicago, Ill. Vertical-filing cabinet. No. 1,170,975; Feb. 8; Gaz. vol. 223; p. 460.
Klok, Carl R., Chicago, Ill. Table-wagon. No. 1,171,343; Feb. 8; Gaz. vol. 223; p. 591.
Klug, Special Manufacture of Finishing Machines, Paul. (See Ermbter, Jacob H., assignor.)
Kluge, Max, Billings, Mont. Adjustable drainboard for sinks. No. 1,170,277; Feb. 1; Gaz. vol. 223; p. 183.
Kluge, Valentin M., New York, N. Y. Revolving hand-fan. No. 1,171,727; Feb. 15; Gaz. vol. 223; p. 766.
Klugh, Paul B., assignor to The Cable Company, Chicago, Ill. Musical-instrument player. No. 1,172,805; Feb. 22; Gaz. vol. 223; p. 1217.
Klunk, Albert J., Orange, Cal. Camper's stove. No. 1,173,145; Feb. 22; Gaz. vol. 223; p. 1335.
Knagge, Joseph, Chicago Heights, Ill., assignor to The Baldwin Company, Cincinnati, Ohio. Pneumatic diaphragm. No. 1,172,716; Feb. 22; Gaz. vol. 223; p. 1184.

Knapp, Thompson P., Highland Park, Mich. Motor-cycle support. No. 1,172,465; Feb. 22; Gaz. vol. 223; p. 1092.

Knapp, Sanford A. (See Herman and Knapp.)

Knauff, George C., Chicago, Ill. Focusing-lamp socket. No. 1,173,280; Feb. 29; Gaz. vol. 223; p. 1426.

Knechtel, Mary G., Hanover, Ontario, Canada. Needle-threader. No. 1,170,278; Feb. 1; Gaz. vol. 223; p. 184.

Kneeland, Ernest S., Malden, Mass. Tape-moistening device. No. 1,171,056; Feb. 8; Gaz. vol. 223; p. 489.

Knight, Frank H., assignor of one-half to W. B Rush, Lancaster, Pa. Lock. No. 1,173,112; Feb. 22; Gaz. vol. 223; p. 1322.

Knipp, James H., assignor of one-half to W. B. Whitt, McGlone, Ky. Cane-stripper. No. 1,172,216; Feb. 15; Gaz. vol. 223; p. 940.

Knoedler, Elmer L., assignor to Welsbach Light Company, Gloucester City, N. J. Apparatus for burning and hardening incandescent mantels. No. 1,172,611; Feb. 22; Gaz. vol. 223; p. 1146.

Knojah Shock Absorber Company. (See Kilgour, Dwight F., assignor.)

Knopf, Oscar, Flint, Mich. Automobile-door lock. No. 1,173,441; Feb. 29; Gaz. vol. 223; p. 1482.

Knopp, Otto A., Oakland, Cal. Electrical instrument. No. 1,171,213; Feb. 8; Gaz. vol. 223; p. 545.

Knourek, Franz, Bohemia, Austria-Hungary. Packing for rotary shafts. No. 1,170,279; Feb. 1; Gaz. vol. 223; p. 184.

Knowles, Francis E. (See Luther, Charles J., assignor.)

Knox, William J., and F. J. Harrison, Dubois, Pa. Armrest. No. 1,173,357; Feb. 29; Gaz. vol. 223; p. 1453.

Knudsen, Karsten, Grand Rapids, Mich. Storage-battery indicator. No. 1,172,890; Feb. 22; Gaz. vol. 223; p. 1248.

Koch, Bernard F., Chicago, Ill. Horn. No. 1,169,837; Feb. 1; Gaz. vol. 223; p. 31.

Köchling, Wilhelm, Reinickendorf-Ost, Germany, assignor to General Electric Company. Electrical apparatus. No. 1,173,004; Feb. 22; Gaz. vol. 223; p. 1287.

Kodama, Jisaku, Coronado, Cal. Gaming and amusement device. No. 1,171,728; Feb. 15; Gaz. vol. 223; p. 767.

Koehler, George A. (See Debay, George C., assignor.)

Koenig, Joseph, Springfield, Mo. Device for raising and supporting automobiles. No. 1,170,280; Feb. 1; Gaz. vol. 223; p. 184.

Kohl, Edward, Cleveland, Ohio. Handle-supporting attachment for wheels. No. 1,171,853; Feb. 15; Gaz. vol. 223; p. 813.

Kohl, Ferdinand, and W. Severns, Chicago, Ill. Fountain-mop. No. 1,173,194; Feb. 29; Gaz. vol. 223; p. 1394.

Kohler, Charles H., Oakdale, N. Y. Wheel-puller. No. 1,170,281; Feb. 1; Gaz. vol. 223; p. 184.

Kohlhepp, Rudolf, Jersey City, N. J. Container for toilet powder. No. 1,172,293; Feb. 22; Gaz. vol. 223; p. 1029.

Kohnle, Frederick, Dayton, Ohio. Ticketing-machine. No. 1,171,729; Feb. 15; Gaz. vol. 223; p. 767.

Kohnle, Frederick, Dayton, Ohio. Inking device for ticketing-machines. No. 1,171,730; Feb. 15; Gaz. vol. 223; p. 768.

Kolibas, John, McKeesport, Pa. Military weapon. No. 1,169,838; Feb. 1; Gaz. vol. 223; p. 32.

König, Albert, assignor to Firm of C. Zeiss, Jena, Germany. Lookout-telescope. No. 1,170,912; Feb. 8; Gaz. vol. 223; p. 438.

König, John, Cleveland, Ohio. Collapsible table. No. 1,170,977; Feb. 8; Gaz. vol. 223; p. 461.

Konz, Joseph W. (See Pool, Arnold A., assignor.)

Koperski, Frank, assignor of one-half to K. E. Niedzielski, Bay City, Mich. Spring-motor. No. 1,170,760; Feb. 8; Gaz. vol. 223; p. 387.

Köpke, Ernst, Honolulu, Hawaii. Flue-scraper. No. 1,172,368; Feb. 22; Gaz. vol. 223; p. 1055.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,170,282; Feb. 1; Gaz. vol. 223; p. 185.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,170,283; Feb. 1; Gaz. vol. 223; p. 185.

Korn, Harold, New York, N. Y. Lock. No. 1,173,812; Feb. 29; Gaz. vol. 223; p. 1612.

Kottusch, Emil, Chicago, assignor to A. E. Stenzel, Congress Park, Ill. Piston-ring. No. 1,172,369; Feb. 22; Gaz. vol. 223; p. 1056.

Kovar, Joseph J., Dodge Center, Minn. Spring-toothed harrow. No. 1,170,761; Feb. 8; Gaz. vol. 223; p. 388.

Kover, Morris. (See Holtzman and Kover.)

Kozlawski, Wladyslaw, Warsaw, Russia. Thread stop-motion for twisting and spinning machines. No. 1,172,806; Feb. 22; Gaz. vol. 223; p. 1218.

Kraemer, Frank, Buffalo, N. Y., assignor, by mesne assignments, of one-half to The United States Labeling Machine Company. Labeling-machine. No. 1,170,913; Feb. 8; Gaz. vol. 223; p. 438.

Kraker, Joseph A., assignor to Kraker Pen Co., Kansas City, Mo. Fountain-pen. No. 1,170,825; Feb. 8; Gaz. vol. 223; p. 408.

Kraker Pen Co. (See Kraker, Joseph A., assignor.)

Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Engine. No. 1,171,854; Feb. 15; Gaz. vol. 223; p. 813.

Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Internal-combustion engine. No. 1,171,855; Feb. 15; Gaz. vol. 223; p. 813.

Kramm, Erhard, Jr., Peoria, Ill. Automatic stop mechanism for sound-reproducing machines. No. 1,172,370; Feb. 22; Gaz. vol. 223; p. 1056.

Krantz, Edward, Chicago, Ill. Cleaning device. No. 1,170,074; Feb. 1; Gaz. vol. 223; p. 112.

Krantz, Edward, Chicago, Ill. Wheel-mounting. No. 1,170,075; Feb. 1; Gaz. vol. 223; p. 113.

Krantz, Hubert F., New York, assignor to H. F. Krants Manufacturing Company, Brooklyn, N. Y. Switchboard. No. 1,172,371; Feb. 22; Gaz. vol. 223; p. 1056.

Kratzer, Guy E. (See Miller and Kratzer.)

Krauss, John H. A., Boston, Mass. Key-bolt. No. 1,170,914; Feb. 8; Gaz. vol. 223; p. 439.

Kravitz, Max, Philadelphia, Pa. Multicolor-printing press. No. 1,172,807; Feb. 22; Gaz. vol. 223; p. 1218.

Krbavac, Gabriel J., Melcher, Iowa. Extension-ladder. No. 1,171,793; Feb. 15; Gaz. vol. 223; p. 790.

Kreason, E. B. (See Jones, Edwin B., assignor.)

Kreidl, Ignatz, Vienna, Austria-Hungary. Loaded silk and loading the silk. No. 1,173,195; Feb. 29; Gaz. vol. 223; p. 1395.

Kreidl, Ignatz, Vienna, Austria-Hungary. Loaded silk and loading the silk. No. 1,173,196; Feb. 29; Gaz. vol. 223; p. 1395.

Krelpe, Theodore, Floral Park, assignor to V. E. Freeman and L. P. Whitaker, New York, N. Y. Apparatus for removing seed, &c., from flax-plants and the like. No. 1,170,646; Feb. 8; Gaz. vol. 223; p. 347.

Kremer, John A., Aurora, Ill. Internal-combustion engine. No. 1,172,612; Feb. 22; Gaz. vol. 223; p. 1147.

Kresser, Leo, Passaic, N. J. Unloading-machine. No. 1,170,826; Feb. 8; Gaz. vol. 223; p. 409.

Kreutzberg Meter Company. (See Kreutzberg, Otto A., assignor.)

Kreutzberg, Otto A., Lake Bluff, assignor to Kreutzberg Meter Company, Chicago, Ill. Heater for motor-fluids. No. 1,170,976; Feb. 8; Gaz. vol. 223; p. 460.

Kroyer, John M., Stockton, Cal. Air-humidifier for explosive-motors. No. 1,170,827; Feb. 8; Gaz. vol. 223; p. 409.

Krueger, Carl R., Schenectady, N. Y., assignor to General Electric Company. Electrode. No. 1,173,005; Feb. 22; Gaz. vol. 223; p. 1287.

Krum, Charles L., assignor to Morkrum Company, Chicago, Ill. Relay. No. 1,172,294; Feb. 22; Gaz. vol. 223; p. 1029.

Krupp, Leo A., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Gear-segment for cutting-wheels. No. 1,173,281; Feb. 29; Gaz. vol. 223; p. 1427.

Kubina, Peter, Star Junction, Pa. Coupling. No. 1,172,217; Feb. 15; Gaz. vol. 223; p. 940.

Kuehn, Frederick W., St. Louis, Mo. Apparatus for graining and the like. No. 1,173,523; Feb. 29; Gaz. vol. 223; p. 1511.

Kuehns, Alexander. (See Meyer and Kuehns.)

Kuhlman, Henry J., Colesburg, assignor to Kuhlman & Holscher Manufacturing Company, Waterloo, Iowa. Means for shifting gang-frames of cultivators. No. 1,169,839; Feb. 1; Gaz. vol. 223; p. 32.

Kuhlman, Henry J., Colesburg, assignor to Kuhlman & Holscher Manufacturing Company, Waterloo, Iowa. Adjustable gang-frame for cultivators. No. 1,169,840; Feb. 1; Gaz. vol. 223; p. 32.

Kuhlman & Holscher Manufacturing Company. (See Kuhlman, Henry J., assignor.)

Kuhn, Frank, Detroit, Mich. Electrical heating unit. No. 1,170,166; Feb. 1; Gaz. vol. 223; p. 145.

Kuhn, Frank, Detroit, Mich. Terminal contact-plug. No. 1,170,167; Feb. 1; Gaz. vol. 223; p. 145.

Kuhn, Frank, assignor to American Electrical Heater Company, Detroit, Mich. Electrical heating unit. No. 1,170,165; Feb. 1; Gaz. vol. 223; p. 144.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Connector for electrically-heated instruments. No. 1,170,168; Feb. 1; Gaz. vol. 223; p. 145.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electrical food-warmer. No. 1,170,169; Feb. 1; Gaz. vol. 223; p. 145.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electrically-heated glue-pot. No. 1,170,170; Feb. 1; Gaz. vol. 223; p. 146.

Kuhn, Harry S., Waynesboro, Pa. Drawing-table. No. 1,171,523; Feb. 15; Gaz. vol. 223; p. 696.

Kuhn, Paul, New York, N. Y. Composition of matter for artificial stone. No. 1,170,499; Feb. 1; Gaz. vol. 223; p. 258.

Kuhn, William O., Weber, Wash. Locking device for differential gears. No. 1,173,442; Feb. 29; Gaz. vol. 223; p. 1482.

Kulp, Wallace B., Philadelphia, Pa. Cloth-piler. No. 1,173,586; Feb. 29; Gaz. vol. 223; p. 1533.

Kuntz, William A., and L. M. Christopherson, Wolsey, S. D. Nest. No. 1,173,813; Feb. 29; Gaz. vol. 223; p. 1612.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,170,978; Feb. 8; Gaz. vol. 223; p. 461.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,172,537; Feb. 22; Gaz. vol. 223; p. 1120.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,172,538; Feb. 22; Gaz. vol. 223; p. 1120.

Kurtzhals, Lester O., Colgate, Wis. Power device. No. 1,173,667; Feb. 29; Gaz. vol. 223; p. 1561.

Kurz, Hermann, assignor of one-half to W. J. Bauer, Jr., Newark, N. J. Safety attachment for elevators. No. 1,173,722; Feb. 29; Gaz. vol. 223; p. 1580.

L. Wolff Manufacturing Company. (See Lindsay, William, assignor.)

L. Wolff Manufacturing Company. (See McGuire, John M., assignor.)

La Barre, Judson, Chicago, Ill. Multiroute railway-ticket. No. 1,173,197; Feb. 29; Gaz. vol. 223; p. 1395.

La Bounty, Edward P., Hoopeston, Ill. Device for facilitating the removal and replacing of tire-valves. No. 1,170,284; Feb. 1; Gaz. vol. 223; p. 186.

La Casse, Henry, assignor to Buttonlath Manufacturing Company, Los Angeles, Cal. Mixing-machine. No. 1,173,358; Feb. 29; Gaz. vol. 223; p. 1454.

La Cour, Jens L., Vesterås, Sweden. Stator for alternating-electric-current machines. No. 1,172,517; Feb. 22; Gaz. vol. 223; p. 1112.

La Moy, John H., assignor of one-fourth to J. A. Curley and one-fourth to B. W. Sprague, Glens Falls, N. Y. Burner for linotype-machines. No. 1,172,295; Feb. 22; Gaz. vol. 223; p. 1030.

La Plant, Jed, Malone, N. Y. Resilient wheel-tire. No. 1,173,814; Feb. 29; Gaz. vol. 223; p. 1612.

La Société dite G. Briau et A. Soudée. (See Briau, Gabriel P., assignor.)

Laas, Edward, assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,170,500; Feb. 1; Gaz. vol. 223; p. 258.

Lacerda, Harry A., Schenectady, N. Y. Stay-bolt. No. 1,172,145; Feb. 15; Gaz. vol. 223; p. 918.

Lachmann, Robert A., assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill. Bearing for rollers. No. 1,170,285; Feb. 1; Gaz. vol. 223; p. 186.

Lachmann, Robert A., assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill. Roller and bearing for same. No. 1,170,450; Feb. 1; Gaz. vol. 223; p. 241.

Lackey, Robert A., Oak Park, assignor to The Payson Manufacturing Company, Chicago, Ill. Sash-operating mechanism. No. 1,173,113; Feb. 22; Gaz. vol. 223; p. 1323.

Lackman, Alexander, New York, N. Y. Apparatus for distilling mineral oils. No. 1,171,524; Feb. 15; Gaz. vol. 223; p. 697.

Laganke, Charles F., and J. A. Smith, Harrisburg, Pa., assignors to Elliott-Fisher Company, New York, N. Y. Computing mechanism. No. 1,172,891; Feb. 22; Gaz. vol. 223; p. 1248.

Lagonda Manufacturing Company, The. (See Hauer, Elmer E., assignor.)

Laher, Frank J., Portland, Oreg. Means for attaching springs to the axles of vehicles. No. 1,170,076; Feb. 1; Gaz. vol. 223; p. 113.

Lake, Simon, Milford, Conn. Internal-combustion engine. No. 1,169,969; Feb. 1; Gaz. vol. 223; p. 75.

Lake, Simon, Milford, Conn. Submarine boat. No. 1,169,970; Feb. 1; Gaz. vol. 223; p. 75.

Lamb & Nash Company. (See Braddock, Edward I., assignor.)

Lamb, Sidney R., New York, N. Y. Game apparatus. No. 1,170,828; Feb. 8; Gaz. vol. 223; p. 409.

Lambert, Henry M., assignor to Lambert Multiplus Company, Portland, Oreg. Spring-tire. No. 1,171,214; Feb. 8; Gaz. vol. 223; p. 546.

Lambert Multiplus Company. (See Lambert, Henry M., assignor.)

Lampert, Henry H., Chicago, Ill. Rod-clamp. No. 1,171,525; Feb. 15; Gaz. vol. 223; p. 697.

Lamson Company, The. (See Amsden and Hidden, assignors.)

Lamson Company, The. (See Cowley, James T., assignor.)

Lamson Company, The. (See Jennings, Chester S., assignor.)

Lancia, Vincenzo, Turin, Italy. Brake. No. 1,171,526; Feb. 15; Gaz. vol. 223; p. 697.

Land, Edmund, Jacksonville, Fla. Cable-protector. No. 1,172,466; Feb. 22; Gaz. vol. 223; p. 1092.

Land, Gordon, assignor to L. H. Smith, Seattle, Wash. Launder-classifier. No. 1,170,286; Feb. 1; Gaz. vol. 223; p. 186.

Landis, Walter S., Niagara Falls, N. Y., assignor to F. S. Washburn, Nashville, Tenn. Making sulfuric acid. No. 1,173,524; Feb. 29; Gaz. vol. 223; p. 1512.

Landro Manufacturing Company. (See Roberts, Edgar, assignor.)

Landwehr, August H., assignor to Holland Furnace Company, Holland, Mich. Furnace. No. 1,173,198; Feb. 29; Gaz. vol. 223; p. 1395.

Lane, Alfred M., St. Louis, Mo. Portable drilling and tapping machine. No. 1,170,171; Feb. 1; Gaz. vol. 223; p. 146.

Lane, Charles E., assignor to H. J. Thompson, New York, N. Y. Shipping-case. No. 1,173,114; Feb. 22; Gaz. vol. 223; p. 1323.

Lane, David A., Austin, Tex. Shade-roller. No. 1,171,215; Feb. 8; Gaz. vol. 223; p. 546.

Lane, Elmer E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stacking device. No. 1,173,115; Feb. 22; Gaz. vol. 223; p. 1323.

Lane, Elmer E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Leather-skiving machine. No. 1,173,359; Feb. 29; Gaz. vol. 223; p. 1454.

Lane, F. P., *et al.* (See McKendree, Creed H., assignor.)

Lang, Augustus B. D., Gerard's Cross, Buckingham, and J. A. Powell, assignors to Telenews (1914) Limited, London, England. Apparatus for displaying announcements, advertisements, and the like. No. 1,173,360; Feb. 29; Gaz. vol. 223; p. 1454.

Lang, Hamilton. (See Smith, Charles E., assignor.)

Lang, James S., Boston, Mass. Aeroplane. No. 1,171,615; Feb. 15; Gaz. vol. 223; p. 728.

Langmuir, Irving, Schenectady, N. Y., assignor to General Electric Company. Making compound metallic articles. No. 1,171,856; Feb. 15; Gaz. vol. 223; p. 814.

Langsnaw, William E., Olney, Pa. Electric brooder. No. 1,172,372; Feb. 22; Gaz. vol. 223; p. 1057.

Langstaff, Del Roy, Los Angeles, Cal. Non-refillable bottle. No. 1,172,218; Feb. 15; Gaz. vol. 223; p. 940.

Lanning, Charles D., Boston, assignor to J. K. Lanning, Fall River, Mass. Spinning-ring. No. 1,173,723; Feb. 29; Gaz. vol. 223; p. 1581.

Lanning, Howard H. (See Jacobs and Lanning.)

Lanning, James K. (See Lanning, Charles D., assignor.)

Lannoye, Joseph G., Detroit, Mich. Key-retainer. No. 1,173,587; Feb. 29; Gaz. vol. 223; p. 1533.

Lansing, Edmund H. (See Madden, Albert F., assignor.)

Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)

Lanston Monotype Machine Company. (See Booth, Joseph B. S., assignor.)

Lanston Monotype Machine Company. (See Elliott, Richard C., assignor.)

Lapp, John S., assignor to Locke Insulator Mfg. Co., Victor, N. Y. Making insulators. No. 1,170,287; Feb. 1; Gaz. vol. 223; p. 187.

Larner, Chester W., Cleveland, Ohio. Load-sustaining device for vertical water-wheels. No. 1,171,857; Feb. 15; Gaz. vol. 223; p. 814.

Larocque, Eli E., Attleboro, Mass. Tennis-racket. No. 1,173,588; Feb. 29; Gaz. vol. 223; p. 1534.

Larribe, Antoine, assignor to R. Pignols, Paris, France. Bicycle-brake. No. 1,169,971; Feb. 1; Gaz. vol. 223; p. 76.

Larsen, Julius, Copenhagen, Denmark. Sewing-machine. No. 1,172,373; Feb. 22; Gaz. vol. 223; p. 1057.

Larsen, Peder C. T., Chicago, Ill. Shoe construction. No. 1,172,613; Feb. 22; Gaz. vol. 223; p. 1147.

Larson, Axel R., Bridgeport, Conn. Triple-needle sewing-machine. No. 1,169,972; Feb. 1; Gaz. vol. 223; p. 76.

Larson, Carl W., and C. Olofson, assignors to Dahlstrom Metallic Door Company, Jamestown, N. Y. Metallic door and the like. No. 1,171,443; Feb. 15; Gaz. vol. 223; p. 668.

Larson, Carl W., and C. Olofson, assignors to Dahlstrom Metallic Door Company, Jamestown, N. Y. Metallic door and the like. No. 1,171,444; Feb. 15; Gaz. vol. 223; p. 668.

Larson, Carl W., assignor to Dahlstrom Metallic Door Company, Jamestown, N. Y. Metallic door or the like. No. 1,171,445; Feb. 15; Gaz. vol. 223; p. 669.

Larson, Oscar, Stowe, Vt. Cattle-stanchion. No. 1,171,446; Feb. 15; Gaz. vol. 223; p. 669.

Lasche, Oskar, Charlottenburg, Germany, assignor to General Electric Company. Steam-turbine. No. 1,171,216; Feb. 8; Gaz. vol. 223; p. 547.

Lashar, Walter B., Bridgeport, and T. C. Lure, Stratford, assignors to American Chain Company, Incorporated, Bridgeport, Conn. Lifting-jack for automobiles, &c. No. 1,174,017; Feb. 29; Gaz. vol. 223; p. 1680.

Latham Automatic Registering Company. (See Loethem, Frank C., assignor.)

Lathrop, Harry D., and W. H. Paulson, Chicago, Ill. Milk-can-washing machine. No. 1,172,808; Feb. 22; Gaz. vol. 223; p. 1219.

Latinville, Frank H., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,172,467; Feb. 22; Gaz. vol. 223; p. 1093.

Latta, Charles, St. Louis, Mo. Gas-engine. No. 1,173,815; Gaz. vol. 223; p. 1613.

Latta, Emmit G., Syracuse, N. Y. Type-writing machine. No. 1,173,589; Feb. 29; Gaz. vol. 223; p. 1534.

Latta, John L., Hickory, N. C. Pump. No. 1,170,647; Feb. 8; Gaz. vol. 223; p. 347.

Lattig, Jacob W., Glenside, Pa., and C. L. Goodrum, New York, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated. Electrically-controlled meter system. No. 1,172,539; Feb. 22; Gaz. vol. 223; p. 1121.

Laub, George M. (See Rnzsicska and Laub.)

Lauderman, Frank C., and L. Y. Williams, Toledo, Ohio. Disk stopper for bottles, &c. No. 1,172,027; Feb. 15; Gaz. vol 223; p. 878.

Laurencich, Arthur, Washington, D. C., assignor of three-fourths to W. F. Yates, New York, N. Y. Graphophone. No. 1,172,717; Feb. 22; Gaz. vol. 223; p. 1185.

Laury, Joseph A. (See D'Alessandro, Pietro, assignor.)

Lavalley, John E., Portland, Oreg. Telephone-lock. No. 1,172,614; Feb. 22; Gaz. vol. 223; p. 1147.

Lavigne Manufacturing Company, The. (See Kellum, Charles S., assignor.)

Lawhead, James W., Wilmington, Ohio. Apparatus for feeding batter to a baking-machine. No. 1,171,447; Feb. 15; Gaz. vol. 223; p. 669.

Lawler, James G., St. Charles, assignor to American Car and Foundry Company, St. Louis, Mo. Upper buffing device for vestibule face-plates. No. 1,170,548; Feb. 8; Gaz. vol. 223; p. 312.

Lawrence, Edward M., Lubec, Me. Canning sardines. No. 1,170,762; Feb. 8; Gaz. vol. 223; p. 388.

Lawrence, Henrietta W., Baltimore, and H. J. Lebherz, Frederick, Md. Reversible broiler. No. 1,170,829; Feb. 8; Gaz. vol. 223; p. 410.

Lawry, Raymond G., assignor to Roberts & Schaefer Company, Chicago, Ill. Car-loading apparatus. No. 1,170,077; Feb. 1; Gaz. vol. 223; p. 113.

Lawson, John F., Oshawa, Ontario, Canada. Rotary punch and press. No. 1,171,794; Feb. 15; Gaz. vol. 223; p. 790.

Lawson, Lindley S., assignor to Lawson Manufacturing Company, Homestead, Pa. Water-heater. No. 1,172,028; Feb. 15; Gaz. vol. 223; p. 878.

Lawson Manufacturing Company. (See Lawson, Lindley S., assignor.)

Layton, William P., Chicago, Ill. Child's carriage. No. 1,170,485; Feb. 1; Gaz. vol. 223; p. 253.

Laywell, Milton C. (See Edwards and Laywell.)

Le Blanc, Oral O., Minneapolis, Minn. Mop and detachable brush. No. 1,173,816; Feb. 29; Gaz. vol. 223; p. 1613.

Le Blond, Richard K., and W. F. Groene, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Variable-speed mechanism. No. 1,170,830; Feb. 8; Gaz. vol. 223; p. 410.

Le Breton, Edward, assignor of one-half to V. R. Hall, Cleveland, Ohio. Separable button. No. 1,173,817; Feb. 29; Gaz. vol. 223; p. 1613.

Lea, Harry, Thompsonville, Conn. Pattern duplicating and reversing machine. No. 1,170,078; Feb. 1; Gaz. vol. 223; p. 113.

Leach, Harry A. (See Murray and Leach.)

Leager, Samuel F., Spotswood, N. J. Non-refillable bottle. No. 1,173,008; Feb. 29; Gaz. vol. 223; p. 1562.

Leake, John S., Louisville, Ky. Flexible pipe-joint. No. 1,170,979; Feb. 8; Gaz. vol. 223; p. 462.

Lean, Clement, London, England. Publicity device. No. 1,173,361; Feb. 29; Gaz. vol. 223; p. 1455.

Leary, Robert D., Worcester, Mass. Celluloid receptacle. No. 1,173,282; Feb. 29; Gaz. vol. 223; p. 1427.

Leathem, James, Lebanon, Pa., assignor to Hermann Aukam & Co., New York, N. Y. Take-up mechanism for sewing-machines. No. 1,171,858; Feb. 15; Gaz. vol. 223; p. 814.

Lebherz, Harry J. (See Lawrence and Lebherz.)

Leckinger, Philip H., Rochester, N. Y. Riveting-hammer. No. 1,173,525; Feb. 29; Gaz. vol. 223; p. 1512.

Lecy, Oscar, and W. F. Foote, Port Edwards, Wis. Control-locking mechanism. No. 1,173,006; Feb. 22; Gaz. vol. 223; p. 1287.

Lee, Alexander F. (See Jones, Albert, assignor.)

Lee, George W. (See Henderson, John S., assignor.)

Lee, Gilbert. (See Splitek, John J., assignor.)

Lee, Harry W. (See Sims and Lee.)

Leedy Manufacturing Company. (See Wanamaker, Charles B., assignor.)

Leethem, Frank C., Middletown, N. Y., assignor to Latham Automatic Registering Company. Form-truck. No. 1,173,283; Feb. 29; Gaz. vol. 223; p. 1427.

Legate, William H., Hartford, Conn. Making radiators. No. 1,170,915; Feb. 8; Gaz. vol. 223; p. 439.

Léger, Zoël M., Moncton, New Brunswick, Canada. Eyeglasses and spectacles. No. 1,171,795; Feb. 15; Gaz. vol. 223; p. 791.

Legere, Amos, South Bethlehem, assignor of one-half to G. Butz, Bethlehem, Pa. Apparatus for concentric punching. No. 1,171,344; Feb. 8; Gaz. vol. 223; p. 591.

Leggett, Ross M., assignor to The Neal-Armstrong Company, Akron, Ohio. Apparatus for sterilizing water. No. 1,172,468; Feb. 22; Gaz. vol. 223; p. 1093.

Lehotzky, Lorentz, Bridgeport, Ohio, assignor of one-third to A. Holdermann and one-third to O. Holdermann, Benwood, W. Va. Horseshoe. No. 1,170,079; Feb. 1; Gaz. vol. 223; p. 114.

Leiman, Henry, Tampa, Fla. Box. No. 1,173,284; Feb. 29; Gaz. vol. 223; p. 1428.

Leimer, Walter A., Denver, Colo. Key ring or holder. No. 1,172,374; Feb. 22; Gaz. vol. 223; p. 1058.

Lelansky, George F., Canton, Ohio. Garment attachment. No. 1,172,615; Feb. 22; Gaz. vol. 223; p. 1147.

Lennards, Frank H., assignor of one-fourth to A. L. Benner, twenty-nine one hundredths to G. Kettler, and twenty-one one hundredths to E. F. Nelson, Chicago, Ill. Eyeglass-cleaner. No. 1,172,718; Feb. 22; Gaz. vol. 223; p. 1185.

Leno, Harry, Los Angeles, Cal. Jewelry-calendar. No. 1,172,809; Feb. 22; Gaz. vol. 223; p. 1219.

Leonard, Charles B., Philadelphia, Pa. Leather-stretcher dropping device. No. 1,169,973; Feb. 1; Gaz. vol. 223; p. 77.

Leonard, Joseph E., and G. H. Ilten, Cedar Rapids, Iowa. Stove and range. No. 1,171,781; Feb. 15; Gaz. vol. 223; p. 768.

Leonard, Ries E., Winthrop, Mass. Portable knockdown stove. No. 1,171,859; Feb. 15; Gaz. vol. 223; p. 815.

Lerro, Angelo R., Philadelphia, Pa. Propelling device for vessels. No. 1,172,892; Feb. 22; Gaz. vol. 223; p. 1249.

Leschka, Alfred, and A. Fiala, New York, N. Y. Door-check. No. 1,169,841; Feb. 1; Gaz. vol. 223; p. 33.

Leslie Company, The. (See Metzger, Jules P., assignor.)

Leslie, John F., Madison, Wis. Seam for metal receptacles. No. 1,170,288; Feb. 1; Gaz. vol. 223; p. 187.

Lester, James F., assignor to R. Merrifield, New York, N. Y. Washing-machine. No. 1,172,206; Feb. 22; Gaz. vol. 223; p. 1030.

Letchworth, Thomas J. (See Schnee, William G., assignor.)

Lethern, Albert A., London, England, assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Cartridge-carrier. No. 1,170,486; Feb. 1; Gaz. vol. 223; p. 254.

Letts, Ellsworth M., Waverly, N. Y. Door-bolt-operating mechanism. No. 1,171,217; Feb. 8; Gaz. vol. 223; p. 547.

Lemley, Edwin, assignor of one-half to P. B. Eubank, Huntsville, Mo. Lock. No. 1,173,007; Feb. 22; Gaz. vol. 223; p. 1288.

Leutwiler, Richard W. (See Hastings and Leutwiler.)

Levedahl, Axel, Aurora, assignor to Aurora Automatic Machinery Company, Chicago, Ill. Transmission-gear and clutch. No. 1,170,980; Feb. 8; Gaz. vol. 223; p. 462.

Leverich, Sylvester P., Marion, Iowa. Fence-wire clamp. No. 1,173,199; Feb. 29; Gaz. vol. 223; p. 1396.

Levin, Nils D., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Mining-machine. No. 1,169,842; Feb. 1; Gaz. vol. 223; p. 33.

Levin, Nils D., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Mining-machine and truck. No. 1,170,763; Feb. 8; Gaz. vol. 223; p. 388.

Levine, Lionel M., New York, N. Y. Vending-machine or the like. No. 1,171,616; Feb. 15; Gaz. vol. 223; p. 729.

Levy, Charles S. (See Mayer and Levy.)

Levy, Edward D., Springfield, Mo., and H. W. Jacobs, Topeka, Kan. Tank-car. No. 1,173,443; Feb. 29; Gaz. vol. 223; p. 1483.

Levy, Firm of Henry. (See Tscherne, Alois, assignor.)

Levy, Max, New York, N. Y. Combination muff and scarf. No. 1,173,285; Feb. 29; Gaz. vol. 223; p. 1428.

Levy, Samuel, Paterson, N. J. Railway-switch thrower. No. 1,170,289; Feb. 1; Gaz. vol. 223; p. 187.

Lewandowski, Anthony J., Buffalo, N. Y. Gage. No. 1,172,810; Feb. 22; Gaz. vol. 223; p. 1219.

Lewis, Arthur J., and L. H. Johnston, Sovereign, Saskatchewan, Canada. School furniture. No. 1,170,764; Feb. 8; Gaz. vol. 223; p. 389.

Lewis, Benjamin A., Philadelphia, Pa. Support for weak feet and raising fallen arches thereof. No. 1,172,811; Feb. 22; Gaz. vol. 223; p. 1219.

Lewis, Elsworth, Shreve, Ohio. Automatic gas cut-off. No. 1,170,831; Feb. 8; Gaz. vol. 223; p. 410.

Lewis, George D., Genesee, Pa. Pressure-regulator for pneumatic tires. No. 1,173,008; Feb. 22; Gaz. vol. 223; p. 1288.

Lewis, Harry H., Portland, Oreg. Audible speed-indicator for rotating mechanism. No. 1,170,451; Feb. 1; Gaz. vol. 223; p. 241.

Lewis, John G., St. Louis, Mo. Blindstitch sewing-machine. No. 1,172,812; Feb. 22; Gaz. vol. 223; p. 1220.

Lewis, Roy E., and B. F. Gibbs, San Francisco, Cal. Transmission-lock. No. 1,169,974; Feb. 1; Gaz. vol. 223; p. 77.

Leyer, Amand, Dutch Flat, Cal. Auriphone. No. 1,173,286; Feb. 29; Gaz. vol. 223; p. 1428.

Lichter, John J., assignor to St. Louis Frog & Switch Company, St. Louis, Mo. Heat-treating apparatus. No. 1,173,590; Feb. 29; Gaz. vol. 223; p. 1534.

Lide, Mary M. (See Crandall, Nathan W., assignor.)

Lidell, Alexander N. (See Sletten and Lidell.)

Lieber, Peter C. (See Gaynor and Lieber.)

Liggett, William K., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Vibrating screen. No. 1,171,058; Feb. 8; Gaz. vol. 223; p. 489.

Lindencrona, Haldan A. H. (See Berglund and Lindencrona.)

Lindencrona, Hulda M. U., widow and heiress. (See Berglund and Lindencrona.)

Lindström, Charles A., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Car construction. No. 1,173,526; Feb. 29; Gaz. vol. 223; p. 1512.

Light, Leo C., Rome, N. Y. Cotter-pin. No. 1,171,617; Feb. 15; Gaz. vol. 223; p. 729.

Lightfoot, Ernest. (See Carter and Lightfoot.)

Liljegren, Gunnar O., St. Louis, Mo. Automatic fire-extinguisher. No. 1,172,469; Feb. 22; Gaz. vol. 223; p. 1094.

Lindemann, Walter C., and K. D. Camp, assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Mixer for fluid-fuel burners. No. 1,170,765; Feb. 8; Gaz. vol. 223; p. 389.

Lindgren, Alexus C., and G. G. Mandt, Moline, Ill., assignors to Moline Plow Company. Intermittently-operating driving mechanism. No. 1,170,832; Feb. 8; Gaz. vol. 223; p. 411.

Lindholm, Anders P. (See Lindholm, John G. S., assignor.)

Lindholm, Anders P. (See Lindholm, John G. S. and A. P.)

Lindholm, Charles J., Milwaukee, Wis. Animal-releasing device. No. 1,171,448; Feb. 15; Gaz. vol. 223; p. 670.

Lindholm, John G. S., assignor to A. P. Lindholm, Chicago, Ill. Metallic cross-arm pin. No. 1,171,127; Feb. 8; Gaz. vol. 223; p. 516.

Lindholm, John G. S. and A. P., Chicago, Ill.; said John G. S. Lindholm assignor to said A. P. Lindholm. Insulator-pin. No. 1,171,126; Feb. 8; Gaz. vol. 223; p. 516.

Lindner, Frank H. (See Ross, Axel B., assignor.)

Lindsay, William, assignor to L. Wolff Manufacturing Company, Chicago, Ill. Enameling-powder sifter or dredger. No. 1,171,618; Feb. 15; Gaz. vol. 223; p. 729.

Lindsay, William C., Newport, Vt. Measuring device for tanks. No. 1,170,290; Feb. 1; Gaz. vol. 223; p. 187.

Lindstaedt, Frank F., New Orleans, La. Trousers-stretcher. No. 1,173,009; Feb. 22; Gaz. vol. 223; p. 1288.

Lindström, Charles A., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Floor construction for cars. No. 1,169,975; Feb. 1; Gaz. vol. 223; p. 77.

Lindstrom, Nils O., Nutley, N. J., assignor to A. B. See, Brooklyn, N. Y. Electric motor. No. 1,171,964; Feb. 15; Gaz. vol. 223; p. 854.

Linfoot, Benjamin E., Philadelphia, Pa. Carrier and conveyer for bottles. No. 1,171,128; Feb. 8; Gaz. vol. 223; p. 517.

Lininger, Clarence R., Chicago, Ill. High-tension switch. No. 1,172,470; Feb. 22; Gaz. vol. 223; p. 1094.

Link, William H., Salisbury, N. C. Mail-receptacle. No. 1,170,291; Feb. 1; Gaz. vol. 223; p. 188.

Linkletter, Robert, assignor of one-third to himself, one-third to G. W. Muttart, Jersey City, N. J., and one-third to A. C. Muttart, New York, N. Y. Composite board. No. 1,173,302; Feb. 29; Gaz. vol. 223; p. 1455.

Lins, Carle G., Norfolk, Va. Game apparatus. No. 1,173,818; Feb. 29; Gaz. vol. 223; p. 1614.

Linstromberg, Frank W., Bourbon, Mo. Lamp-chimney holder. No. 1,171,796; Feb. 15; Gaz. vol. 223; p. 791.

Lipp, Joseph F., Denver, Colo. Templet for concrete gutters. No. 1,170,452; Feb. 1; Gaz. vol. 223; p. 242.

Lippen, Cornelius C., Philadelphia, Pa. Grass-trimmer. No. 1,170,292; Feb. 1; Gaz. vol. 223; p. 188.

Lippincott, Orlie F., Kenesaw, Nebr. Starting device for explosive-engines. No. 1,172,893; Feb. 22; Gaz. vol. 223; p. 1249.

Littlefield, Edgar C., Waterloo, Iowa. Composite metal axle. No. 1,170,172; Feb. 1; Gaz. vol. 223; p. 147.

Littlefield, Arlon, assignor to New England Butt Company, Providence, R. I. Carrier for braiding-machines. No. 1,172,719; Feb. 22; Gaz. vol. 223; p. 1185.

Littlefield, Charles H., Haverhill, Mass. Heel-breasting machine. No. 1,173,724; Feb. 29; Gaz. vol. 223; p. 1581.

Lizer, William F. (See Smith and Lizer.)

Loadometer Company, The. (See Troll, Frederick J., assignor.)

Lock Joint Pipe Company. (See Hirsh, Meriwether, and Mitchell, assignors.) (Reissue.)

Locke Insulator Mfg. Co. (See Lapp, John S., assignor.)

Locomotive Superheater Company. (See McKee, Neal T., assignor.)

Lodge, John H. F. (See Woolard and Lodge.)

Loeb, Ernest M. (See Bernard, Andrew J., assignor.)

Lofton, Herbert M., Chattanooga, Tenn. Meter-box. No. 1,169,976; Feb. 1; Gaz. vol. 223; p. 77.

Logan, Humphrey T., Putney, England. Mechanism for handling goods. No. 1,173,819; Feb. 29; Gaz. vol. 223; p. 1614.

Logan, William H., and J. Nielson, Bandon, Oreg. Buoy-coupling. No. 1,173,820; Feb. 29; Gaz. vol. 223; p. 1615.

Loguin, Alexander J., Petrograd, Russia. Resistance unit for electrical apparatus. No. 1,171,059; Feb. 8; Gaz. vol. 223; p. 490.

Logwood, Charles. (See De Forest and Logwood.)

Lohr, James M., Ithaca, N. Y. Handling device. No. 1,173,444; Feb. 29; Gaz. vol. 223; p. 1483.

Lohr, James M., Ithaca, N. Y. Handling device. No. 1,173,445; Feb. 29; Gaz. vol. 223; p. 1484.

Long, George W., Mannington, W. Va. Household utensil. No. 1,170,833; Feb. 8; Gaz. vol. 223; p. 411.

Longenbaugh, George M., Cortez, Colo. Animal-trap. No. 1,173,069; Feb. 29; Gaz. vol. 223; p. 1562.

Longfellow, Martin W., assignor to The Baltimore Gas Appliance and Manufacturing Company, Baltimore, Md. Top for gas-ranges. No. 1,170,766; Feb. 8; Gaz. vol. 223; p. 389.

Look, Fannie B., *et al.*, trustees. (See Melcher, George S., assignor.)

Look, Warren B., assignor to Art Metal Construction Company, Jamestown, N. Y. Library-stack construction. No. 1,172,219; Feb. 15; Gaz. vol. 223; p. 941.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,171,527; Feb. 15; Gaz. vol. 223; p. 698.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Clutch. No. 1,172,146; Feb. 15; Gaz. vol. 223; p. 918.

Loomis, Harry T., Brooklyn, assignor to Frank and Lambert, Inc., New York, N. Y. Burial-garment. No. 1,170,293; Feb. 1; Gaz. vol. 223; p. 189.

Loose, Johannes, assignor to Fortuna-Werke, Specialmaschinenfabrik, G. m. b. H., Stuttgart-Cannstatt, Germany. Pulling-over machine. No. 1,172,616; Feb. 22; Gaz. vol. 223; p. 1147.

Lott, Andrew H., St. Louis, Mo. Bracelet. No. 1,170,767; Feb. 8; Gaz. vol. 223; p. 390.

Loud, George D., Boston, Mass. Pumping unit. No. 1,171,797; Feb. 15; Gaz. vol. 223; p. 791.

Louden, Theodore J. (See Carter, Ralph B., assignor.)

Louden, William, Fairfield, Iowa. Window-ventilator. No. 1,170,648; Feb. 8; Gaz. vol. 223; p. 348.

Louden, William J., Kittanning, Pa. Casing-spear. No. 1,170,294; Feb. 1; Gaz. vol. 223; p. 189.

Loughridge, Matthew H., New York, N. Y. Protecting device for electric conductors. No. 1,172,147; Feb. 15; Gaz. vol. 223; p. 918.

Lovekin, Luther D., Philadelphia, Pa. Thermostatic valve mechanism. No. 1,170,834; Feb. 8; Gaz. vol. 223; p. 412.

Lovell-McConnell Manufacturing Company. (See Arlitz, Oscar C., assignor.)

Lovell-McConnell Manufacturing Company. (See Cholet, Louis, assignor.)

Lovell-McConnell Manufacturing Company. (See Hutchison, Miller R., assignor.)

Lovell-McConnell Manufacturing Company. (See Jones, Joseph W., assignor.)

Lovell-McConnell Manufacturing Company. (See Sendall, Charles F., assignor.)

Loven, Carl N., Aberdeen, Wash. Safety-envelop. No. 1,173,446; Feb. 29; Gaz. vol. 223; p. 1484.

Löw, Wilhelm, Heidelberg, Germany. Apparatus for cinematographically taking film-negatives of succeeding sections through an object. No. 1,169,843; Feb. 1; Gaz. vol. 223; p. 34.

Lowrance, Harvey C., Kansas City, Mo. Animal-trap. No. 1,170,649; Feb. 8; Gaz. vol. 223; p. 348.

Lowry, Frank, assignor to The Ohio Grease Company, Loudonville, Ohio. Drop-feed lubricator. No. 1,170,295; Feb. 1; Gaz. vol. 223; p. 189.

Lowy, Adolph, New York, N. Y. Bag-handle. No. 1,171,528; Feb. 15; Gaz. vol. 223; p. 698.

Lowy, Emil M., New York, N. Y. Separator-cage for ball-bearings. No. 1,170,916; Feb. 8; Gaz. vol. 223; p. 439.

Loxit Manufacturing Company, The. (See Canfield and Permin, assignors.)

Loy and Nawrath Company. (See Burditt, William F., Jr., assignor.)

Loy, Michael, Brooklyn, N. Y. Awning attachment. No. 1,170,835; Feb. 8; Gaz. vol. 223; p. 412.

Lucas, Charles O., Dayton, Ohio. Driving connecting means. No. 1,169,844; Feb. 1; Gaz. vol. 223; p. 34.

Lucas, Edward W., and C. J. Saunders, Garden City, N. Y. Shoe-lacing. No. 1,170,296; Feb. 1; Gaz. vol. 223; p. 190.

Lucas, John E., Brockton, assignor to F. R. Woodward, Waban, Mass. Rubber welt for shoes. No. 1,173,287; Feb. 29; Gaz. vol. 223; p. 1429.

Lucas, William H., assignor to Espen-Lucas Machine Works, Philadelphia, Pa. Metal-sawing machine. No. 1,170,297; Feb. 1; Gaz. vol. 223; p. 190.

Luce, Thomas C. (See Lashar and Luce.)

Luchtenberg, William E., New York, N. Y. Fountain-brush. No. 1,169,977; Feb. 1; Gaz. vol. 223; p. 78.

Luckey, Bert C., assignor of one-twentieth to P. F. Schwandt, Liberty, Tex. Cultivator. No. 1,172,148; Feb. 15; Gaz. vol. 223; p. 919.

Ludeman, Edwin H., New York, N. Y. Valve-operating mechanism. No. 1,173,591; Feb. 29; Gaz. vol. 223; p. 1535.

Ludwig, Edgar F., and W. H. Spencer, Cedar Rapids, Iowa. Gasolene-settling trap for automobiles. No. 1,173,725; Feb. 29; Gaz. vol. 223; p. 1581.

Lueder, William, San Francisco, Cal. Ship's davit. No. 1,173,821; Feb. 29; Gaz. vol. 223; p. 1615.

Lufkin Rule Company, The. (See Buck, Fred, assignor.)

Lukszenski, Kazimierz. (See Wisniewski, Stanislaw, assignor.)

Lumbers, James H. (See Doust, James C., assignor.)

Luminous Unit Company. (See Guth and Owen, assignors.)

Lund, Carl O., Brooklyn, assignor of one-half to Carlund Manufacturing Company, New York, N. Y., and one-half to W. D. Allen Mfg. Company, Chicago, Ill. Hose-rack. No. 1,170,173; Feb. 1; Gaz. vol. 223; p. 147.

Lund, Ebbert J., assignor of one-half to H. M. Lund, Jamestown, N. Y. Metallic window or screen frame. No. 1,170,917; Feb. 8; Gaz. vol. 223; p. 440.

Lund, Henry M. (See Lund, Ebbert J., assignor.)

Lund, Thomas, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Compressing-machine. No. 1,172,471; Feb. 22; Gaz. vol. 223; p. 1094.

Lundy, Charles, Reno, Nev. Valve structure. No. 1,170,918; Feb. 8; Gaz. vol. 223; p. 440.

Lundy, Joseph G., Evergreen, Ala. Laundry-registering device. No. 1,170,298; Feb. 1; Gaz. vol. 223; p. 190.

Lupke, Bernard H., Dolores, Colo. Beehive. No. 1,170,299; Feb. 1; Gaz. vol. 223; p. 191.

Lurz, Charles, New York, N. Y. Sewing-machine supporting and driving device. No. 1,170,080; Feb. 1; Gaz. vol. 223; p. 114.
Luther, Charles J., Elizabeth, assignor of one-half to F. E. Knowles, South Orange, N. J. Drive-chain. No. 1,173,670; Feb. 29; Gaz. vol. 223; p. 1562.
Lutz, Hobart F. (See Vernson and Lutz.)
Lycan, Albert E., Kooskia, Idaho. Spoon. No. 1,173,010; Feb. 22; Gaz. vol. 223; p. 1289.
Lyle, Noah A., Bancroft, Idaho. Traction-engine. No. 1,171,732; Feb. 15; Gaz. vol. 223; p. 768.
Lynch, Charles. (See Benjamin and Lynch.)
Lyon, Fred A., Bley, Nev. Collapsible washbasin. No. 1,169,978; Feb. 1; Gaz. vol. 223; p. 78.
Lyon & Healy. (See Kirk, Walter L., assignor.)
Lyon, Howard, assignor to Welsbach Light Company, Gloucester City, N. J. Inverted incandescent lamp. No. 1,172,617; Feb. 22; Gaz. vol. 223; p. 1148.
Lyon Metallic Manufacturing Company. (See O'Connor, John B., assignor.)
Lyons, Michael J., Wood River, Nebr. Plow attachment. No. 1,173,822; Feb. 29; Gaz. vol. 223; p. 1616.
M. Rumely Company. (See Ihrig, Orland L., assignor.)
M. Schulz Co. (See Gustafson, Adolph P., assignor.)
M. Welte & Sons. (See Welte, Edwin, assignor.)
M. D. Knowlton Company. (See Hawkins and Seymour, assignors.)
MacDonald, William A. (See Gregory, Eli E., assignor.)
MacFarland, Helen B., Chicago, Ill. Muffler for locomotives and the like. No. 1,173,447; Feb. 29; Gaz. vol. 223; p. 1484.
MacNab, Forrest B., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. System of electrical distribution and control. No. 1,172,221; Feb. 15; Gaz. vol. 223; p. 941.
MacNicoll, Donald. (See Cockburn and MacNicoll.)
MacPherson, Malcolm T., Beloit, Ohio, assignor to American Steel Foundries, New York, N. Y. Device for fastening journal-box lids. No. 1,169,847; Feb. 1; Gaz. vol. 223; p. 35.
MacPherson, Malcolm T., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Coupling-pocket. No. 1,169,848; Feb. 1; Gaz. vol. 223; p. 35.
Macallen Company, The. (See Prouty, Gardner W., assignor.)
Macaulay, Walter B., Marysville, Cal., assignor to The Yuba Construction Company. Tractor-chain. No. 1,170,836; Feb. 8; Gaz. vol. 223; p. 412.
Mack, Ernest U., Florence, S. C. Safety device for automobiles. No. 1,173,826; Feb. 29; Gaz. vol. 223; p. 1617.
Mackay, Edmund, and J. J. Ferrall, New York, N. Y., assignors to National Biscuit Company. Storage and display receptacle. No. 1,171,404; Feb. 8; Gaz. vol. 223; p. 614.
Mackey, Paul, Minor, Kans. Device for preventing the spreading of rails. No. 1,173,595; Feb. 29; Gaz. vol. 223; p. 1537.
Mackrill, William D., Fresno, Cal. Grading or separating machine. No. 1,173,366; Feb. 29; Gaz. vol. 223; p. 1457.
Macleod, Albert A., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting apparatus. No. 1,173,292; Feb. 29; Gaz. vol. 223; p. 1430.
Macleod, Eldon, *et al.*, trustees. (See Melcher, George S., assignor.)
Macloskie, George, Schenectady, N. Y., assignor to General Electric Company. Valve. No. 1,173,672; Feb. 29; Gaz. vol. 223; p. 1563.
Macloskie, George, Schenectady, N. Y., assignor to General Electric Company. Electropneumatic air-brake system. No. 1,173,673; Feb. 29; Gaz. vol. 223; p. 1563.
Madden, Albert F., Newark, N. J., assignor to E. H. Lansing, Boston, Mass. Speed-regulator for phonographs and the like. No. 1,172,380; Feb. 22; Gaz. vol. 223; p. 1060.
Mader, Nichols P., Beaumont, Cal. Valve. No. 1,170,453; Feb. 1; Gaz. vol. 223; p. 242.
Madigan Manufacturing Company. (See Madigan, Thomas J., assignor.)
Madigan, Thomas J., assignor to Madigan Manufacturing Company, Inc., New York, N. Y. Valve. No. 1,172,474; Feb. 22; Gaz. vol. 223; p. 1096.
Madigan, Thomas V., Brooklyn, N. Y. Disinfecting device. No. 1,171,737; Feb. 15; Gaz. vol. 223; p. 770.
Madlem, Leo S. (See Halliburton and McBurney, assignors.)
Magerkurth, Charles, assignor of one-half to E. Magerkurth, Los Angeles, Cal. Portable metal planing and finishing machine. No. 1,170,454; Feb. 1; Gaz. vol. 223; p. 242.
Magerkurth, Emeline. (See Magerkurth, Charles, assignor.)
Maguin, Alfred, Charmes, near La Fère, France. Feed device for root-cutters provided with drums. No. 1,169,981; Feb. 1; Gaz. vol. 223; p. 79.
Maguire, Peter J., Hutchinson, Kans. Egg-poacher. No. 1,170,922; Feb. 8; Gaz. vol. 223; p. 441.
Maiello, Michael, Washington, Pa. Cleansing apparatus. No. 1,172,150; Feb. 15; Gaz. vol. 223; p. 919.
Maimin, Hyman, New York, N. Y. Cloth-cutting machine. No. 1,170,652; Feb. 8; Gaz. vol. 223; p. 349.
Maimin, Hyman, New York, N. Y. Standard-support for cloth-cutting machines. No. 1,172,381; Feb. 22; Gaz. vol. 223; p. 1060.
Main, Fred F., Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,173,293; Feb. 29; Gaz. vol. 223; p. 1430.
Maire, Edward J., Lima, Ohio. Pipe-coupling. No. 1,171,219; Feb. 8; Gaz. vol. 223; p. 548.
Malcor, Marcel M. G., L'Ariana, Tunis. Apparatus for digging the ground. No. 1,171,798; Feb. 15; Gaz. vol. 223; p. 792.
Malkin, Charles, San Francisco, Cal. Fountain shaving-brush. No. 1,170,923; Feb. 8; Gaz. vol. 223; p. 441.
Mallet, François, Paris, France. Scraper. No. 1,171,738; Feb. 15; Gaz. vol. 223; p. 770.
Maloney, Frank P., Detroit, Mich. Apparatus for filling lard in pails or cartons. No. 1,173,294; Feb. 29; Gaz. vol. 223; p. 1431.
Maltby, George B., Cleveland, Ohio. Track construction. No. 1,173,596; Feb. 29; Gaz. vol. 223; p. 1537.
Maltby, Lewis C., Washington, D. C. Automatic machine for making spirally-wound tubes. No. 1,172,151; Feb. 15; Gaz. vol. 223; p. 920.
Malz, Ludwig, New York, N. Y., assignor, by mesne assignments, to Wallace Addressing Machine Company, Inc. Platen attachment for stencilling type-writers. No. 1,172,896; Feb. 22; Gaz. vol. 223; p. 1250.
Mancha, Raymond, St. Louis, Mo. Cover for automobile running-boards. No. 1,171,863; Feb. 15; Gaz. vol. 223; p. 816.
Mancini, Victor, Granville, N. Y. Macaroni-maker. No. 1,170,304; Feb. 1; Gaz. vol. 223; p. 192.
Mandel, Louis. (See Mandel, Mandel and L.)
Mandel, Mandel and L., Chicago, Ill. Camera. No. 1,170,768; Feb. 8; Gaz. vol. 223; p. 390.
Mandelick, Charles E. (See Williamson and Mandelick.)
Mandell, Edwin F. (See Clark, John L., assignor.)
Mandt, Gunder G. (See Lindgren and Mandt.)
Mangam, Franklin, Saranac Lake, N. Y. Chair. No. 1,173,829; Feb. 29; Gaz. vol. 223; p. 1618.
Mangan, Neil. (See Thurmond, Hosea R., assignor.)
Mangels, William F., New York, N. Y. Carousel. No. 1,171,220; Feb. 8; Gaz. vol. 223; p. 548.
Manning, Coleman J., Medford, assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass. Pressure-gage. No. 1,169,982; Feb. 1; Gaz. vol. 223; p. 79.
Mansbach, Conrad E., assignor of one-half to F. L. Price, Brockton, Mass. Mold for making innersoles. No. 1,173,449; Feb. 29; Gaz. vol. 223; p. 1485.
Mapes, Clarence T., Crafton, and F. C. Yanda, assignors to Oil Well Supply Company, Pittsburgh, Pa. Clamp for well-drilling cables. No. 1,169,849; Feb. 1; Gaz. vol. 223; p. 36.
Mapson, Robert L., assignor of one-half to L. Sperbeck, La Mesa, Cal. Vehicle-trailing device. No. 1,174,018; Feb. 29; Gaz. vol. 223; p. 1681.
Marchant Calculating Machine Company. (See Marchant, Rodney H., assignor.)
Marchant, Rodney H., assignor to Marchant Calculating Machine Company, Oakland, Cal. Calculating-machine. No. 1,172,817; Feb. 22; Gaz. vol. 223; p. 1222.
Marconi Wireless Telegraph Company of America. (See Shoemaker, Harry, assignor.)
Marcus, Hermann, Cologne, Germany. Apparatus for the simultaneous conveying and grading of materials. No. 1,173,597; Feb. 29; Gaz. vol. 223; p. 1537.
Marcuse, Moses M., assignor to West Disinfecting Company, New York, N. Y. Drinking-fountain. No. 1,172,818; Feb. 22; Gaz. vol. 223; p. 1222.
Marette, Jacques, Vincennes, assignor to Compagnie Generale Des Etablissements Pathe Freres, Phonographe Et Cinematographe, Paris, France. Reversing-clutch. No. 1,170,653; Feb. 8; Gaz. vol. 223; p. 349.
Marion, Charles E., Franklin, N. H. Combination-tool. No. 1,171,221; Feb. 8; Gaz. vol. 223; p. 549.
Marion Steam Shovel Company, The. (See King and Jacoby, assignors.)
Marker, Henry H., Mount Clemens, assignor to Pull-More Motor Truck Company, Detroit, Mich. Motor-actuated steering mechanism. No. 1,172,152; Feb. 15; Gaz. vol. 223; p. 920.
Markussen, Henry W. E., Flemington, N. J., assignor of one third to E. R. Bancroft, Hadley, N. Y., and one-third to F. E. Reasoner, Flemington, N. J. Metal-working machine. No. 1,173,295; Feb. 29; Gaz. vol. 223; p. 1431.
Marresford, William F., Brooklyn, N. Y. Sheet-gathering machine. No. 1,173,203; Feb. 29; Gaz. vol. 223; p. 1396.
Marsden, Mark W., assignor to Sugar Cane By-Products Co., Philadelphia, Pa. Treating bagasse and product thereof. No. 1,170,487; Feb. 1; Gaz. vol. 223; p. 254.
Marsden, Mark W., assignor to Sugar Cane By-Products Co., Philadelphia, Pa. Packing or obturating material. No. 1,170,488; Feb. 1; Gaz. vol. 223; p. 254.
Marsh, Howard L., Philadelphia, Pa. Introducing iron into foods, drugs, and beverages. No. 1,171,739; Feb. 15; Gaz. vol. 223; p. 771.
Marsh, Ralph S., Conway, N. H. Fishing apparatus. No. 1,173,827; Feb. 29; Gaz. vol. 223; p. 1617.
Marshall, David C., Newark, N. J. Escape apparatus for submarine boats. No. 1,173,726; Feb. 29; Gaz. vol. 223; p. 1582.
Marshall, George, Fremont, Nebr. Reinforced-concrete cross-tie. No. 1,172,029; Feb. 15; Gaz. vol. 223; p. 879.

Marshall, Maria M., Front Royal, Va. Window-balcony. No. 1,170,305; Feb. 1; Gaz. vol. 223; p. 192.
Marshall, Porto Rico, Horton, Kans. Tape-applying device. No. 1,170,083; Feb. 1; Gaz. vol. 223; p. 115.
Marshall, Robert D., Sevierville, Tenn. Axle-lubricating device. No. 1,169,983; Feb. 1; Gaz. vol. 223; p. 80.
Martijo, Hendrikus J. (See Van Calcar, Ellerman, and Martijn.)
Martin, Charles E., Mansfield, Ohio. Silo-roof. No. 1,172,721; Feb. 22; Gaz. vol. 223; p. 1186.
Martin, Clement S., Rockville, Md. Cushioning means for vehicle-wheels. No. 1,172,153; Feb. 15; Gaz. vol. 223; p. 920.
Martin, Edward C., and W. S. Chidester, Columbus, Ohio. Shoe-stand. No. 1,169,850; Feb. 1; Gaz. vol. 223; p. 36.
Martin, Frederick W. (See Elvin and Martin.)
Martin, Frederick W., New York, N. Y., assignor to A. G. Elvin, Somerville, N. J. Fire-door apparatus. No. 1,171,451; Feb. 15; Gaz. vol. 223; p. 670.
Martin, George V., Cleveland, Ohio, assignor to The National Malleable Castings Company. Engine-coupling. No. 1,170,982; Feb. 8; Gaz. vol. 223; p. 463.
Martin, Horace E., Athens, Ga. Axle. No. 1,173,528; Feb. 29; Gaz. vol. 223; p. 1513.
Martin, John B., Cincinnati, Ohio. Pavement-sweeper. No. 1,171,222; Feb. 8; Gaz. vol. 223; p. 549.
Martin, John B., Cincinnati, Ohio. Bed-spring. No. 1,172,154; Feb. 15; Gaz. vol. 223; p. 921.
Martin, John M. (See Dunn, Leon P., assignor.)
Martin, Mathias, Luxemburg, Luxemburg. Railway signaling system. No. 1,173,011; Feb. 22; Gaz. vol. 223; p. 1289.
Martin, Mike, Rankin, Pa. Rail-joint. No. 1,173,529; Feb. 29; Gaz. vol. 223; p. 1513.
Martin, Samuel H., Chicago, Ill. Synchronous converter. No. 1,171,130; Feb. 8; Gaz. vol. 223; p. 518.
Martin, Thomas, Minneapolis, Minn. Shock-loader. No. 1,170,654; Feb. 8; Gaz. vol. 223; p. 350.
Martineau, Clarence R. (See Martineau, William C. and C. R.)
Martineau, William C. and C. R., Albany, N. Y. Device for treating strips of card or paper. No. 1,170,655; Feb. 8; Gaz. vol. 223; p. 350.
Martineau, William C. and C. R., Albany, N. Y. Car-door device. No. 1,170,656; Feb. 8; Gaz. vol. 223; p. 350.
Martini & Hüneke Maschinenbau-Aktien-Gesellschaft. (See Gungerich, Paul, assignor.)
Martini, Rudolph, St. Louis, Mo. Automobile-oiler. No. 1,171,223; Feb. 8; Gaz. vol. 223; p. 550.
Martus, Martin L., *et al.* (See Ostrander, Allen E., assignor.)
Martus, Martin L., assignor of one-half to C. B. Schoenmehl, Waterbury, Conn. Cotter-pin. No. 1,171,740; Feb. 15; Gaz. vol. 223; p. 771.
Marty, John M., Cleveland, Ohio. Ventilating apparatus. No. 1,170,551; Feb. 8; Gaz. vol. 223; p. 313.
Marwick, David B., assignor to E. A. Moore, New Britain, Conn. Scrap-bundling machine. No. 1,170,983; Feb. 8; Gaz. vol. 223; p. 463.
Marx, Robert J., London, England. Pulp-beating apparatus. No. 1,173,530; Feb. 29; Gaz. vol. 223; p. 1513.
Marx, Robert J., London, England. Beating-engine. No. 1,173,531; Feb. 29; Gaz. vol. 223; p. 1514.
Mason, Arthur C., and A. T. Sturt, Flint, Mich., assignors to Chevrolet Motor Company of New York, Inc., New York, N. Y. Steering-gear. No. 1,171,131; Feb. 8; Gaz. vol. 223; p. 518.
Mason, Cecil C. (See Darwin and Mason.)
Mason, George L., Warehouse Point, Conn., assignor to Green & Hopson, Springfield, Mass. Bobbin-winding machine. No. 1,172,475; Feb. 22; Gaz. vol. 223; p. 1096.
Mason, Joseph M., assignor of one-half to J. H. Hills, Philadelphia, Pa. Punching-machine. No. 1,170,455; Feb. 1; Gaz. vol. 223; p. 242.
Massie, Edward R., Clifton Forge, Va. Shelving. No. 1,173,828; Feb. 29; Gaz. vol. 223; p. 1618.
Massie, Mitford C., *et al.* (See Bonner, William T., assignor.)
Massingill, W. A., *et al.* (See McKendree, Creed H., assignor.)
Mastin, Charles I. E., Midland Park, N. J. Piston-rod packing and making same. No. 1,172,543; Feb. 22; Gaz. vol. 223; p. 1122.
Mastrangel, Louis. (See Hartford and Mastrangel.)
Matheny, Charles A., Kingston, Tenn. Trousers stretcher and creaser. No. 1,170,651; Feb. 8; Gaz. vol. 223; p. 349.
Mathers, George C., assignor of one-half to R. Protheroe, Chicago, Ill. Shade-roller. No. 1,172,819; Feb. 22; Gaz. vol. 223; p. 1223.
Mathesius, Walther. (See Brassert and Mathesius.)
Mathews, Louis T., San Antonio, Tex. Copy-holding pointograph. No. 1,173,450; Feb. 29; Gaz. vol. 223; p. 1485.
Matlock, Charles H., Emden, Ill. Stack-shaping machine. No. 1,173,674; Feb. 29; Gaz. vol. 223; p. 1563.
Matson, Irving L., Marshfield, assignor to K. M. Gair, Boston, Mass. Master-controlled system of electric-light wiring. No. 1,170,924; Feb. 8; Gaz. vol. 223; p. 442.
Matson, Jeptha L., Dunbarton, Wis. Drawing instrument. No. 1,170,174; Feb. 1; Gaz. vol. 223; p. 147.
Matsui, Tashiro, Wenatchee, Wash. Foot-rest. No. 1,173,675; Feb. 29; Gaz. vol. 223; p. 1564.
Matthews, Fred C., Orangeville, Ohio. Distributer for feed-spouts. No. 1,173,451; Feb. 29; Gaz. vol. 223; p. 1486.
Matthews, George S., assignor of one-half to A. Duehler, Kansas City, Mo. Suspension device. No. 1,170,084; Feb. 1; Gaz. vol. 223; p. 115.
Matthews, John W., Difficult, Tenn. Railway-crossing device. No. 1,171,621; Feb. 15; Gaz. vol. 223; p. 731.
Mattson, Matt E., Rossburg, Minn. Rail-joint. No. 1,170,306; Feb. 1; Gaz. vol. 223; p. 193.
Matz, George W., Conshohocken, Pa. Tire-holder for automobiles and similar vehicles. No. 1,171,968; Feb. 15; Gaz. vol. 223; p. 855.
Maul, Henry C., assignor to The Michigan Stove Company, Detroit, Mich. Valve. No. 1,171,622; Feb. 15; Gaz. vol. 223; p. 731.
Maurseth, Thorsten H., assignor of one-half to L. Beirl, Seattle, Wash. Clutch-feeding mechanism. No. 1,170,085; Feb. 1; Gaz. vol. 223; p. 116.
Maxfield, Fred E. (See Ware, Charles L., assignor.)
May, Joseph, Frankfort-on-the-Main, Germany. Arch-support for hollow and flat feet. No. 1,172,620; Feb. 22; Gaz. vol. 223; p. 1149.
Mayda, Paul, Ranchester, Wyo. Rail clamp and holder. No. 1,173,204; Feb. 29; Gaz. vol. 223; p. 1397.
Mayer, William, and C. S. Levy, San Francisco, Cal. Condiment-holder. No. 1,172,155; Feb. 15; Gaz. vol. 223; p. 921.
Mayfield, Champion, Kansas City, Mo. Internal-combustion engine. No. 1,170,769; Feb. 8; Gaz. vol. 223; p. 390.
Mayzes, Arthur E., Calgary, Alberta, Canada. Fender for automobiles, &c. No. 1,170,307; Feb. 1; Gaz. vol. 223; p. 193.
Mazer, Jacob, Pittsburgh, Pa. Acoustic-controlling apparatus. No. 1,172,379; Feb. 22; Gaz. vol. 223; p. 1059.
McAllaster, George R., Rochester, N. Y. Display-tray. No. 1,169,845; Feb. 1; Gaz. vol. 223; p. 34.
McAllister, John E. (See Ohmer and McAllister.)
McArthur, Charles D., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Wall-mold. No. 1,171,733; Feb. 15; Gaz. vol. 223; p. 769.
McArthur, Charles D., Pittsburgh, assignor to Blaw Steel Construction Company, Hoboken, Pa. Wall and culvert mold. No. 1,171,734; Feb. 15; Gaz. vol. 223; p. 769.
McArthur, George, Bayonne, N. J. Rivet jam-dolly. No. 1,172,894; Feb. 22; Gaz. vol. 223; p. 1249.
McBurney, Samuel L. (See Halliburton and McBurney.)
McCabe, James H., and W. C. Berry, St. Louis, Mo. Vehicle-body. No. 1,173,144; Feb. 22; Gaz. vol. 223; p. 1335.
McCabe, Laurence E., Visalia, Cal. Machine for making concrete pipe. No. 1,172,375; Feb. 22; Gaz. vol. 223; p. 1058.
McCabe, Peter I., Hartford, Conn., assignor to United States Envelope Company, Springfield, Mass. Coin-mailing envelop. No. 1,171,735; Feb. 15; Gaz. vol. 223; p. 770.
McCallum, Lewis M., assignor to Parker Wire Goods Company, Worcester, Mass. Bird-cage hook. No. 1,170,919; Feb. 8; Gaz. vol. 223; p. 440.
McCanna, John F., assignor to McCord & Company, Chicago, Ill. Lubricator. No. 1,172,540; Feb. 22; Gaz. vol. 223; p. 1121.
McCargo, James M., Keysville, Va. Stump-puller. No. 1,169,846; Feb. 1; Gaz. vol. 223; p. 35.
McCarroll, Walker W., Arlington, N. J. Curving-machine. No. 1,173,363; Feb. 29; Gaz. vol. 223; p. 1455.
McCarthy, James J., Nashville, Tenn. Locomotive-headlight. No. 1,170,300; Feb. 1; Gaz. vol. 223; p. 191.
McCarthy, Joseph, Franklin, Ohio. Valve. No. 1,172,895; Feb. 22; Gaz. vol. 223; p. 1250.
McCarthy, Louis, Boston, Mass. Insulating-joint. No. 1,170,920; Feb. 8; Gaz. vol. 223; p. 441.
McCarthy, Louis, Boston, Mass. Making insulating-joints. No. 1,171,860; Feb. 15; Gaz. vol. 223; p. 815.
McCarthy, Patrick J., Providence, R. I. Craping fabrics. No. 1,170,981; Feb. 8; Gaz. vol. 223; p. 462.
McCaskey Register Company, The. (See Moseley, Emerson B., assignor.)
McCaskey Register Company, The. (See Peterson, Fredolf J., assignor.)
McCauley, William F., Elkins, W. Va. Compound tool. No. 1,171,965; Feb. 15; Gaz. vol. 223; p. 854.
McCaw, William N. (See Cornell, Charles W., Jr., assignor.)
McCay, William R., New Castle, Pa. Ticket-holder. No. 1,170,081; Feb. 1; Gaz. vol. 223; p. 115.
McClanahan, William H., Crothersville, Ind. Saab-lock. No. 1,171,736; Feb. 15; Gaz. vol. 223; p. 770.
McClure, Harry T., Boston, and J. J. Heys, Lynn, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Welt-indenting machine. No. 1,173,364; Feb. 29; Gaz. vol. 223; p. 1456.
McColl, Francis P., St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill. Decorated can. No. 1,171,966; Feb. 15; Gaz. vol. 223; p. 855.
McColl, Francis P., St. Andrews, New Brunswick, Canada, assignor to American Key Can Company, Chicago, Ill. Packing device. No. 1,171,967; Feb. 15; Gaz. vol. 223; p. 855.

McComb, James B. (See McComb, Samuel and J. B.)
McComb, Samuel and J. B., New York, N. Y. Carpet-renovating compound. No. 1,172,297; Feb. 22; Gaz. vol. 223; p. 1031.
McComb, William E., Cameron, Mo. Means for dissolving and supplying boiler compounds to boilers. No. 1,173,365; Feb. 29; Gaz. vol. 223; p. 1456.
McConnel, Charles W., *et al.*, trustees. (See Melcher, George S., assignor.)
McConnell, Duncan A., Arlington, N. J. Horn cut-out and motor-control alarm for motor-vehicles. No. 1,173,592; Feb. 29; Gaz. vol. 223; p. 1535.
McConway & Torley Company, The. (See McConway, William, Jr., assignor.)
McConway, William, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft appliance for railway-vehicles. No. 1,171,861; Feb. 15; Gaz. vol. 223; p. 815.
McCool, Edward F., assignor to The McCool Mfg. & Trading Co., Victor, Colo. Gearing. No. 1,169,979; Feb. 1; Gaz. vol. 223; p. 78.
McCool Mfg. & Trading Co., The. (See McCool, Edward F., assignor.)
McCord & Company. (See McCanna, John F., assignor.)
McCornack, Herbert, West Chester, Pa. Internal-combustion engine. No. 1,172,472; Feb. 22; Gaz. vol. 223; p. 1095.
McCornack, Herbert, West Chester, Pa. Internal-combustion engine. No. 1,172,473; Feb. 22; Gaz. vol. 223; p. 1095.
McCoy, Mason C., Waitsburg, Wash. Nut-lock. No. 1,172,813; Feb. 22; Gaz. vol. 223; p. 1220.
McCraith, Benjamin F., Lark, N. D. Wrench of the alligator type. No. 1,173,200; Feb. 29; Gaz. vol. 223; p. 1396.
McCreary, James A., Connellsville, Pa. Coke-oven door. No. 1,170,650; Feb. 8; Gaz. vol. 223; p. 348.
McCreery, Hugh W., Seattle, Wash. Oil-burner. No. 1,172,814; Feb. 22; Gaz. vol. 223; p. 1220.
McDaniel, Ira C., Kansas, Ohio. Collapsible poultry-coop. No. 1,173,823; Feb. 29; Gaz. vol. 223; p. 1616.
McDermand, Frank R., Kansas City, Mo. Hog-oiler. No. 1,173,201; Feb. 29; Gaz. vol. 223; p. 1396.
McDermid, Donald, assignor to Connecticut Dynamo & Motor Co., Irvington, N. J. Machine for polishing plugs. No. 1,173,288; Feb. 29; Gaz. vol. 223; p. 1429.
McDermott, Charles H. (See Roberts, Henry P., assignor.)
McDonald, Adams M., Davis, W. Va. Hose-clamp. No. 1,170,921; Feb. 8; Gaz. vol. 223; p. 441.
McDonald, Duncan, Montreal, Quebec, Canada, assignor to Pay-As-You-Enter Car Corporation, New York, N. Y. Passenger-car. No. 1,172,815; Feb. 22; Gaz. vol. 223; p. 1221.
McDonald, Louis N., Youngstown, Ohio. Valve mechanism for regenerative furnaces. No. 1,170,301; Feb. 1; Gaz. vol. 223; p. 191.
McDonell, William E., assignor to Rochester Spectacle Co., Rochester, N. Y. Eyeglasses and spectacles. No. 1,170,302; Feb. 1; Gaz. vol. 223; p. 191.
McDonnell, Patrick F., J. Brunner, and T. Thompson, Cleveland, Ohio. Tank-sounder. No. 1,172,541; Feb. 22; Gaz. vol. 223; p. 1121.
McDougall, John A., Wilmington, N. C. Mold for brake-shoes. No. 1,170,549; Feb. 8; Gaz. vol. 223; p. 312.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Steam-heating system. No. 1,172,376; Feb. 22; Gaz. vol. 223; p. 1058.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Car-door signal system. No. 1,172,377; Feb. 22; Gaz. vol. 223; p. 1059.
McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Trolley-operated contact. No. 1,173,593; Feb. 29; Gaz. vol. 223; p. 1536.
McElroy, K. P., *et al.* (See Bonner, William T., assignor.)
McElroy, Susie H., executrix. (See McElroy, James F.)
McFarland, Robert G. (See Cubbison and McFarland.)
McFarland, William J., Griffith, Ind. Form for concrete tanks. No. 1,172,378; Feb. 22; Gaz. vol. 223; p. 1059.
McFell, Judson, Chicago, Ill. Fire-alarm signal system. No. 1,171,129; Feb. 8; Gaz. vol. 223; p. 517.
McFerran, J. W. (See Hall, Chester P., assignor.) (Reissue.)
McGary, Eugene, K[illegible]k, Ky. Silo-ladder. No. 1,172,720; Feb. 22; Gaz. vol. 223; p. 1186.
McGlehan, Cornelius D., Jersey City, N. J. Retreading old auto-tires. No. 1,171,449; Feb. 15; Gaz. vol. 223; p. 670.
McGlashan, Charles F. (See McGlashan, Ximena M., L. G., and C. F.)
McGlashan, Leonora G. (See McGlashan, Ximena M., L. G., and C. F.)
McGlashan, Ximena M., L. G., and C. F., Truckee, Cal. Spreading-board for entomological specimens. No. 1,172,816; Feb. 22; Gaz. vol. 223; p. 1221.
McGrail, Hugh J., Flint, Mich. Backstay-fastener. No. 1,173,116; Feb. 22; Gaz. vol. 223; p. 1324.
McGuire, John F. (See Peteler, Adolph J., assignor.)
McGuire, John M., assignor to L. Wolff Manufacturing Company, Chicago, Ill. Refill device for water-closet bowls. No. 1,171,619; Feb. 15; Gaz. vol. 223; p. 730.
McInteer, F. C. (See Edmonds, Ralph L., assignor.)
McIntire, Richard E., Chicago, Ill., assignor to International Harvester Company of New Jersey. Power-transmission mechanism. No. 1,170,082; Feb. 1; Gaz. vol. 223; p. 115.
McIntyre, John A., Denver, Colo. Internal-combustion pressure-pump. No. 1,171,620; Feb. 15; Gaz. vol. 223; p. 730.
McIntyre, Malcolm W., Newport, Ky. Knee-rest. No. 1,171,450; Feb. 15; Gaz. vol. 223; p. 670.
McKee, Arthur G. (See Baker, Robert E., assignor.)
McKee, Frank A., Fortuna, Cal. Drag-saw machine. No. 1,173,824; Feb. 29; Gaz. vol. 223; p. 1616.
McKee, Jesse E., *et al.* (See Eason, John F. H., assignor.)
McKee, Neal T., Dobbs Ferry, assignor to Locomotive Superheater Company, New York, N. Y. Method and machine for welding pipe-bends. No. 1,173,202; Feb. 29; Gaz. vol. 223; p. 1396.
McKee, Walter S., Chicago, and W. G. Nichols and A. H. Exton, Chicago Heights, Ill., assignors to American Manganese Steel Company, Augusta, Me. Mill-pinion. No. 1,173,289; Feb. 29; Gaz. vol. 223; p. 1429.
McKendree, Creed H., assignor of one-tenth to E. H. Smith, one-tenth to F. P. Lane, one-tenth to W. A. Massingill, one-tenth to C. D. Arthur, and one-tenth to M. Sanders, Lakeview, Oreg. Demountable rim. No. 1,172,242; Feb. 15; Gaz. vol. 223; p. 949.
McKenney, Emerson, Bangor, Me. Pruning-shears. No. 1,173,527; Feb. 29; Gaz. vol. 223; p. 1512.
McKennon, Floyd, La Grande, Oreg. Cleaning means for harrows. No. 1,172,149; Feb. 15; Gaz. vol. 223; p. 919.
McKerahan, Charles A., Wilmerding, Pa. Churn. No. 1,172,618; Feb. 22; Gaz. vol. 223; p. 1149.
McKiernan-Terry Drill Company. (See Ayer, William T., assignor.)
McKinlay, John A., Newaygo, Mich. Rotary separator. No. 1,173,671; Feb. 29; Gaz. vol. 223; p. 1563.
McKinney, James P., Jr. (See Painter and McKinney.)
McKinstry, George W., and G. H. Day, assignors to American Optical Company, Southbridge, Mass. Reel-case. No. 1,172,220; Feb. 15; Gaz. vol. 223; p. 941.
McKnight, John F., assignor to American Car and Foundry Company, St. Louis, Mo. Car-roof. No. 1,170,550; Feb. 8; Gaz. vol. 223; p. 312.
McKnight, Richard, Chicago, Ill., assignor, by mesne assignments, to The Flexi-File Company. Filing device. No. 1,171,529; Feb. 15; Gaz. vol. 223; p. 698.
McKnight, Robert, Sarnia, Ontario, Canada. Time-controlled automatic switch. No. 1,173,448; Feb. 29; Gaz. vol. 223; p. 1485.
McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,171,391; Feb. 8; Gaz. vol. 223; p. 608.
McLeod, Kenneth K., St. Paul, Minn. Exhaust-pump for milking-machines. No. 1,169,980; Feb. 1; Gaz. vol. 223; p. 79.
McMahon, Edward J. (See Blevins, Stphen S., assignor.)
McMahon, Ellen E. (See McMahon, Joseph, assignor.)
McMahon, Joseph, assignor of one-half to E. E. McMahon, Chicago, Ill. Car-bumper. No. 1,171,218; Feb. 8; Gaz. vol. 223; p. 547.
McMillan, Ephraim M. (See Abramson, Kennedy, and McMillan.)
McMillan, Paul P., New York, N. Y. Perpetual calendar. No. 1,171,862; Feb. 15; Gaz. vol. 223; p. 816.
McMillin, Edward A., North Adams, Mass., assignor to The E. A. McMillin Company, Philmont, N. Y. Cloth-board. No. 1,173,290; Feb. 29; Gaz. vol. 223; p. 1430.
McMullen, Joseph B., Baltimore, Md. Bombs and means for holding and discharging them. No. 1,172,542; Feb. 22; Gaz. vol. 223; p. 1122.
McNabb, John G., Chico, Cal. Mail-box. No. 1,172,619; Feb. 22; Gaz. vol. 223; p. 1149.
McNallen, Albert J., Gore, Ohio. Tubing and packing for oil-wells. No. 1,173,825; Feb. 29; Gaz. vol. 223; p. 1617.
McNell, Chester, assignor to Union Special Machine Company, Chicago, Ill. Filled-bag-sewing apparatus. No. 1,170,303; Feb. 1; Gaz. vol. 223; p. 192.
McVicker, Walter J., assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn. Frame for traction-engines. No. 1,173,594; Feb. 29; Gaz. vol. 223; p. 1536.
McWilliams, Joseph E., Hitchcock, Okla. Corn-cutter. No. 1,173,291; Feb. 29; Gaz. vol. 223; p. 1430.
Meacham, William M., Seattle, Wash. Apparatus for preventing salt water from working up streams. No. 1,173,367; Feb. 29; Gaz. vol. 223; p. 1457.
Mead, Howard G., Shrewsbury Park, assignor of one-half to J. J. Hartley, St. Louis, Mo. Gas lighter and extinguisher. No. 1,169,851; Feb. 1; Gaz. vol. 223; p. 36.
Mead Johnson & Co. (See Johnson and Quilligan, assignors.)
Mead, Warren J., Madison, Wis. Geologist's calculating device. No. 1,171,741; Feb. 15; Gaz. vol. 223; p. 771.
Means, John F., Oil City, Pa. Steering-wheel of motor-vehicles. No. 1,171,224; Feb. 8; Gaz. vol. 223; p. 550.
Mecum, Claude C., Spokane, Wash. Manifold sales-slip device. No. 1,173,830; Feb. 29; Gaz. vol. 223; p. 1618.
Medén, Elof H., assignor to American Gasaccumulator Company, Philadelphia, Pa. Marine lantern. No. 1,170,086; Feb. 1; Gaz. vol. 223; p. 117.
Medveczky, Thomas, *et al.* (See Bullk, Michael, assignor.)

Meegan, Frank W., New York, N. Y., assignor to Gilbert and Barker Manufacturing Company, Springfield, Mass. Measuring-pump. No. 1,172,820; Feb. 22; Gaz. vol. 223; p. 1223.
Megow, Charles F., Detroit, Mich. Two-speed wheel. No. 1,169,852; Feb. 1; Gaz. vol. 223; p. 37.
Meier, Adolphus G., St. Louis, Mo. Chewing-gum and making the same. No. 1,171,392; Feb. 8; Gaz. vol. 223; p. 609.
Meirowsky, Max, Porz-on-the-Rhine, Germany. Electric condenser and making the same. No. 1,173,452; Feb. 29; Gaz. vol. 223; p. 1486.
Meissner, Alexander, assignor to Gesellschaft Fuer Drahtlose Telegraphie m. b. H., Berlin, Germany. Means for producing alternating current by cathode-ray tubes. No. 1,170,552; Feb. 8; Gaz. vol. 223; p. 313.
Meissner, John F., Milwaukee, Wis. Collapsible tube. No. 1,171,345; Feb. 8; Gaz. vol. 223; p. 592.
Melcher, George S., Sharon, assignor to C. W. McConnel, Boston, E. Macleod, Westwood, and F. B. Look, Northampton, Mass, trustees. Feed-pressure regulator. No. 1,172,476; Feb. 22; Gaz. vol. 223; p. 1097.
Mello, Thomas T. (See Tosta, Joao, assignor.)
Mellor, Lester O., Evanston, Ill. Fuse device. No. 1,173,598; Feb. 29; Gaz. vol. 223; p. 1538.
Melville Clark Piano Company. (See Clark, Melville, assignor.)
Mendheim, Firm of Georg. (See Nagelschmitz, Franz, assignor.)
Mengel Box Company. (See Schleicher, Hamilton, and Moore, assignors.)
Menk, Rudolph W., Joliet, assignor to A. W. Glessner, Chicago, Ill. Furnace. No. 1,173,831; Feb. 29; Gaz. vol. 223; p. 1619.
Menssen, Siebold R., Platte Center, Nebr. Adjustable shade. No. 1,169,853; Feb. 1; Gaz. vol. 223; p. 37.
Mentzer, John P. (See Crowdus, Walter A., assignor.)
Menzel, Paul, Vienna, Austria-Hungary. Tube-making machine. No. 1,170,837; Feb. 8; Gaz. vol. 223; p. 413.
Meriwether, Coleman. (See Hirsh, Meriwether, and Mitchell.) (Reissue.)
Merriam, Ezra B., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,171,864; Feb. 15; Gaz. vol. 223; p. 816.
Merrick, Frank W., assignor to Power Numbering Machine Company, Boston, Mass. Marking or numbering machine. No. 1,172,897; Feb. 22; Gaz. vol. 223; p. 1250.
Merrifield, Richard. (See Lester, James F., assignor.)
Merriman, Frederick A., Los Angeles, Cal. Stub for binding loose leaves. No. 1,170,175; Feb. 1; Gaz. vol. 223; p. 148.
Merritt, Edward T., assignor of one-half to F. Parsons, Jr., Capeville, Va. Belt-gearing. No. 1,169,854; Feb. 1; Gaz. vol. 223; p. 38.
Merritt, Henry C., Jr., Tuckahoe, N. Y. Telephone attachment. No. 1,172,382; Feb. 22; Gaz. vol. 223; p. 1060.
Merritt, Newbury M., Norwalk, Conn. Milk-bottle opener and stopper. No. 1,173,832; Feb. 29; Gaz. vol. 223; p. 1619.
Merritt, Thomas Z., assignor of forty-nine one-hundredths to J. E. Wakefield, Omaha, Nebr. Floor or wall screed. No. 1,171,452; Feb. 15; Gaz. vol. 223; p. 671.
Merrow, Joseph M., assignor to The Merrow Machine Company, Hartford, Conn. Thread-controlling device for sewing-machines. No. 1,173,296; Feb. 29; Gaz. vol. 223; p. 1431.
Merrow Machine Company, The. (See Avis, Samuel W., assignor.)
Merrow Machine Company, The. (See Merrow, Joseph M., assignor.)
Merrow Machine Company, The. (See Stedman, William H., assignor.)
Merry, Charles L., assignor to Merry Optical Company, Kansas City, Mo. Eyeglass-mounting. No. 1,173,981; Feb. 29; Gaz. vol. 223; p. 1668.
Merry, Charles L., assignor to Merry Optical Company, Kansas City, Mo. Eyeglass-mounting. No. 1,173,982; Feb. 29; Gaz. vol. 223; p. 1668.
Merry Optical Company. (See Merry, Charles L., assignor.)
Mershon, Ralph D., New York, N. Y. Electrolytic rectifier. No. 1,171,969; Feb. 15; Gaz. vol. 223; p. 856.
Mertens, Louis R., assignor to C. J. Miller, Philadelphia, Pa. Mangle. No. 1,171,970; Feb. 15; Gaz. vol. 223; p. 856.
Mertz, Victor E., New York, N. Y. Air-circulating system. No. 1,170,308; Feb. 1; Gaz. vol. 223; p. 193.
Mertz, Walter. (See Horst, Samuel W., assignor.)
Merwin, George H., Milford, Conn. Bottle-cover. No. 1,173,833; Feb. 29; Gaz. vol. 223; p. 1619.
Mesinger, Frederick, New York, N. Y. Shock-absorber. No. 1,173,205; Feb. 29; Gaz. vol. 223; p. 1397.
Messina, Joseph, Benld, Ill. Kitchen utensil. No. 1,172,156; Feb. 15; Gaz. vol. 223; p. 921.
Metals Research Company. (See Garner and Clayton, assignors.)
Mettler, Caspar, New Haven, Conn., assignor to Nashua Card, Gummed & Coated Paper Company, Nashua, N. H. Collapsible drinking-cup. No. 1,170,553; Feb. 8; Gaz. vol. 223; p. 313.
Mettler, Max, Leipzig, Germany. Elastic wheel-tire. No. 1,169,984; Feb. 1; Gaz. vol. 223; p. 80.
Metz, Fredrick C., Succasunna, N. J. Self-weighing balance-scale. No. 1,170,838; Feb. 8; Gaz. vol. 223; p. 413.
Metzger, Henry R. (See Holroyd, Newton, assignor.)
Metzger, Jules P., Carlstadt, assignor to The Leslie Company, Lyndhurst, N. J. Pressure-regulator. No. 1,173,834; Feb. 29; Gaz. vol. 223; p. 1619.
Metzger, Jules P., Carlstadt, assignor to The Leslie Company, Lyndhurst, N. J. Pressure-regulator. No. 1,173,835; Feb. 29; Gaz. vol. 223; p. 1620.
Metzner, Ernst, Racine, Wis. Brush. No. 1,172,544; Feb. 22; Gaz. vol. 223; p. 1122.
Meyenburg, Konrad V. von, assignor to Motoculture Limited, Basel, Switzerland. Tilling-machine. No. 1,171,010; Feb. 8; Gaz. vol. 223; p. 473.
Meyer, Alfred F., Morton, Ill. Feed-grinder and feeding-machine. No. 1,171,742; Feb. 15; Gaz. vol. 223; p. 772.
Meyer, Friedrich, and H. Kerstein, Berlin, Germany. Reduction of chlorids. No. 1,173,012; Feb. 22; Gaz. vol. 223; p. 1289.
Meyer, Friedrich W., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Alternating-current commutator-motor. No. 1,170,657; Feb. 8; Gaz. vol. 223; p. 351.
Meyer, Georg, Berlin, and A. Kuehns, Schöneberg, near Berlin, assignors to Siemens Schuckert Werke, G. m. b. H., Berlin, Germany. Method of running and apparatus for protecting electrical machines. No. 1,172,821; Feb. 22; Gaz. vol. 223; p. 1224.
Meyer, Gustav, assignor to Meyer, Roth & Pastor Maschinenfabrik, Cologne-Raderberg, Germany. Production of jointed strap-hinges. No. 1,173,836; Feb. 29; Gaz. vol. 223; p. 1621.
Meyer, Roth & Pastor Maschinenfabrik. (See Meyer, Gustav, assignor.)
Meyering, Julius V. (See Grube and Meyering.)
Meyers, Michael H., Wausau, Wis. Drier sheet-steel for paper-machines. No. 1,170,309; Feb. 1; Gaz. vol. 223; p. 194.
Michael, William C. (See Gilman and Michael.)
Michaels, William C., Judson, N. D. Spark-arrester. No. 1,171,530; Feb. 15; Gaz. vol. 223; p. 698.
Michaud, Onesime E., St. Louis, Mo. Valve-operating mechanism for internal-combustion engines. No. 1,170,987; Feb. 1; Gaz. vol. 223; p. 117.
Michaud, Samuel, Saltese, Mont. Wheel. No. 1,171,225; Feb. 8; Gaz. vol. 223; p. 550.
Michigan Stove Company, The. (See Maul, Henry C., assignor.)
Mickelson, Arthur M., North Crystal Lake, Ill. Constructing building-blocks. No. 1,169,985; Feb. 1; Gaz. vol. 223; p. 80.
Mickley, Albert J., New York, N. Y. Piston. No. 1,173,727; Feb. 29; Gaz. vol. 223; p. 1583.
Middaugh, Horace, Seattle, Wash. Rotary gravel-screen. No. 1,169,986; Feb. 1; Gaz. vol. 223; p. 80.
Miehle, Robert, assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Mechanical movement. No. 1,170,176; Feb. 1; Gaz. vol. 223; p. 148.
Milburn, Ada, Kansas City, Kans. Label. No. 1,172,157; Feb. 15; Gaz. vol. 223; p. 922.
Miles, John T. (See Creedon and Miles.)
Miles, Richard B., Chicago, Ill. Soldering-iron. No. 1,172,545; Feb. 22; Gaz. vol. 223; p. 1123.
Miles, William J., Denver, Colo. Automobile-lock. No. 1,170,310; Feb. 1; Gaz. vol. 223; p. 194.
Milks, John H., assignor of one-half to C. C. Schmand, Grays River, Wash. Billard-cue chalker. No. 1,170,984; Feb. 8; Gaz. vol. 223; p. 463.
Mill, Butler. (See Reynolds, John, assignor.)
Millard, William R., Cleburne, Tex. Nut-lock. No. 1,172,722; Feb. 22; Gaz. vol. 223; p. 1186.
Millea, Francis J., Springfield, Mass. Spring. No. 1,172,948; Feb. 22; Gaz. vol. 223; p. 1268.
Miller, Andrew B., assignor of one-fourth to R. Johnson, one-fourth to H. C. Nelson, and one-fourth to E. Christensen, Baldwin, Wis. Dry-cleaning machine. No. 1,170,088; Feb. 1; Gaz. vol. 223; p. 118.
Miller, Andrew J., Jr., Broxton, Ga. Wire-stretcher. No. 1,173,368; Feb. 29; Gaz. vol. 223; p. 1458.
Miller, Calvin C., Summit Hill, Pa. Toy. No. 1,170,311; Feb. 1; Gaz. vol. 223; p. 194.
Miller, Charles J. (See Mertens, Louis R., assignor.)
Miller, Dorr, Chicago, Ill., assignor to Miller Transmission Company. Fluid-clutch. No. 1,173,599; Feb. 29; Gaz. vol. 223; p. 1538.
Miller, Edward W. (See Rice, George W., assignor.)
Miller, Enoch, Export, Pa. Brush. No. 1,173,453; Feb. 29; Gaz. vol. 223; p. 1486.
Miller, Frank J., Fostoria, Ohio. Valve-lock. No. 1,171,453; Feb. 15; Gaz. vol. 223; p. 671.
Miller, Frederick, Oakland, Cal. Lubricating grease-cup. No. 1,172,383; Feb. 22; Gaz. vol. 223; p. 1061.
Miller, Frederick C., Hillsboro, Oreg. Folding oar-lock. No. 1,171,060; Feb. 8; Gaz. vol. 223; p. 490.
Miller, Frederic C., U. S. Army. Trap-nest. No. 1,171,226; Feb. 8; Gaz. vol. 223; p. 550.
Miller, George C. D., assignor to Cary Manufacturing Company, New York, N. Y. Reel and hanger for box-strapping. No. 1,173,837; Feb. 29; Gaz. vol. 223; p. 1621.

Miller, George S., assignor to Dental Cement Company, Ltd., Chicago, Ill. Making dental cements. No. 1,172,723; Feb. 22; Gaz. vol. 223; p. 1186.

Miller, Herbert F., Jr., Williamsport, Pa. Regenerator-chamber. No. 1,173,297; Feb. 29; Gaz. vol. 223; p. 1432.

Miller, Howard G., Mansfield, Ohio. Direction-indicator. No. 1,170,770; Feb. 8; Gaz. vol. 223; p. 390.

Miller, Isrnel, assignor of one-half to J. H. Taylor, Pawtucket, R. I. Massage device. No. 1,173,838; Feb. 29; Gaz. vol. 223; p. 1621.

Miller, Joseph, assignor to The Champion Register Company, Cleveland, Ohio. Index. No. 1,173,600; Feb. 29; Gaz. vol. 223; p. 1539.

Miller Rubber Company. (See Denman, Walter R., assignor.)

Miller, Stanley P., Minto, N. D. Lubricating means for disk colters. No. 1,170,771; Feb. 8; Gaz. vol. 223; p. 390.

Miller, Theodore. (See Vaughn and Miller.)

Miller Transmission Company. (See Miller, Dorr, assignor.)

Miller, William E. (See Burdick and Miller.)

Miller, William H., and G. E. Kratzer, Chico, Cal. Concentrator. No. 1,170,925; Feb. 8; Gaz. vol. 223; p. 442.

Miller, William S., assignor to Utility Shock Absorber Company, Philadelphia, Pa. Shock-absorber. No. 1,171,132; Feb. 8; Gaz. vol. 223; p. 519.

Millet, Josiah B. (See Allis and Millet.)

Millin, John J., Brooklyn, N. Y. Flying-machine. No. 1,171,865; Feb. 15; Gaz. vol. 223; p. 816.

Mills, Herbert S., Chicago, Ill. Coin-operated weighing-scale. No. 1,171,866; Feb. 15; Gaz. vol. 223; p. 817.

Mills, Joseph T., East St. Louis, Ill. Oil-stove burner. No. 1,172,546; Feb. 22; Gaz. vol. 223; p. 1123.

Mills, Kelsey L., Denver, Colo. Billiard-cue tip and holder. No. 1,171,227; Feb. 8; Gaz. vol. 223; p. 551.

Mills Machine Company. (See Whittier, Claude M., assignor.)

Mills, Thomas A., Clapham, London, England. Production of cinematographic effects in color. No. 1,172,621; Feb. 22; Gaz. vol. 223; p. 1150.

Mills Woven Cartridge Belt Company. (See Jennings, Victor H., assignor.)

Mills Woven Cartridge Belt Company. (See Lethern, Albert A., assignor.)

Millsaps, Ed, La Fayette, assignor of one-half to W. D. Aters, Rock Spring, Ga. Centrifugal brake for spring-motors. No. 1,173,601; Feb. 29; Gaz. vol. 223; p. 1539.

Milne, Russell A., assignor to Snyder Manufacturing Company, Detroit, Mich. Automatic force-feed lubricator. No. 1,170,089; Feb. 1; Gaz. vol. 223; p. 118.

Milne, Russell A., assignor to Picard-Milne Company, Detroit, Mich. Valve. No. 1,173,728; Feb. 29; Gaz. vol. 223; p. 1583.

Miltenberger, Charles R., Albia, Iowa. Fan attachment. No. 1,172,822; Feb. 22; Gaz. vol. 223; p. 1224.

Milwaukee Yacht & Boat Company. (See Crouch, Albert W., assignor.)

Mims, William J., Ashville, Ala. Mechanism for churns. No. 1,173,013; Feb. 22; Gaz. vol. 223; p. 1289.

Miner, William H. (See Schwartzenberg, Harry F., assignor.)

Minerals Separation American Syndicate (1913) Limited. (See Higgins, Arthur H., assignor.)

Minerals Separation American Syndicate (1913) Limited. (See Nutter, Edward H., assignor.)

Minkos, Oskar, Thalheim, Germany. Stocking. No. 1,172,622; Feb. 22; Gaz. vol. 223; p. 1151.

Minneapolis Steel & Machinery Company. (See McVicker, Walter J., assignor.)

Minnich, Martin, Covington, Ohio. Railway-tie. No. 1,171,743; Feb. 15; Gaz. vol. 223; p. 772.

Miottel, Emile R., Detroit, Mich., assignor of seventeen one-hundredths to E. F. Hoffman, sixteen one-hundredths to H. F. Hoffman, and sixteen one-hundredths to A. H. Hoffman. Socket-wrench. No. 1,169,987; Feb. 1; Gaz. vol. 223; p. 81.

Miskin, Arthur R., Salt Lake City, Utah, assignor to Miskin Spring Wheel Company, Idaho Falls, Idaho. Spring-wheel. No. 1,173,839; Feb. 29; Gaz. vol. 223; p. 1622.

Miskin Spring Wheel Company. (See Miskin, Arthur R., assignor.)

Misroch, Abraham, and A. Kahn, New York, N. Y. Folding packing-box. No. 1,171,228; Feb. 8; Gaz. vol. 223; p. 551.

Mississippi Wire Glass Company. (See Baldwin, Arthur J., assignor.)

Mitchel, Myron J., Philadelphia, Pa. Meat-tenderer. No. 1,170,772; Feb. 8; Gaz. vol. 223; p. 391.

Mitchell, John C. (See Hirsh, Meriwether, and Mitchell.)

Mitchell, Joseph B., Detroit, Mich. Air cooling and purifying apparatus. No. 1,170,658; Feb. 8; Gaz. vol. 223; p. 351.

Mitchell, Mary P., Eaton, Ohio. Electric engine-starter. No. 1,171,867; Feb. 15; Gaz. vol. 223; p. 817.

Mitchell, Mary P., Eaton, Ohio. Transmission mechanism. No. 1,171,868; Feb. 15; Gaz. vol. 223; p. 817.

Mitchell, William J. (See Jenkins, Nathaniel E., assignor.)

Mittasch, Alwin, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Catalytic agents and making them. No. 1,173,532; Feb. 29; Gaz. vol. 223; p. 1514.

Mix, Henry D., assignor to Wightman & Hough Company, Providence, R. I. Cigarette-holder. No. 1,170,090; Feb. 1; Gaz. vol. 223; p. 119.

Mizener, George, Decorah, Iowa. Safety-valve for pneumatic tires. No. 1,172,477; Feb. 22; Gaz. vol. 223; p. 1098.

Moberg, August. (See Sjostrom and Moberg.)

Modrall, Don A., Sweetwater, Tex. Stalk-cutter. No. 1,169,988; Feb. 1; Gaz. vol. 223; p. 81.

Moehle, Hugo M., Los Angeles, Cal., assignor to The Brunswick-Balke-Collender Company, New York, N. Y. Ball-returnway for bowling-alleys. No. 1,169,855; Feb. 1; Gaz. vol. 223; p. 38.

Moench, Frederick, Rushville, Ill. Restoring rubber. No. 1,172,158; Feb. 15; Gaz. vol. 223; p. 922.

Moench, Frederick, Rushville, Ill. Spark-plug. No. 1,172,159; Feb. 15; Gaz. vol. 223; p. 922.

Moench, Frederick, Rushville, Ill. Aluminum-plating process. No. 1,172,160; Feb. 15; Gaz. vol. 223; p. 922.

Moench, Frederick, Rushville, Ill. Soldering-iron. No. 1,172,161; Feb. 15; Gaz. vol. 223; p. 923.

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,172,162; Feb. 15; Gaz. vol. 223; p. 923.

Moffat Stove Company of Weston, The. (See Swoboda, Hans O., assignor.)

Moffitt, Frank A., Chicago, Ill. Railway-joint. No. 1,170,985; Feb. 8; Gaz. vol. 223; p. 464.

Mohr, Theodore P., New Orleans, La. Tire for automobiles. No. 1,172,030; Feb. 15; Gaz. vol. 223; p. 879.

Moline Plow Company. (See Lindgren and Mandt, assignors.)

Mollenhoff, Ernest E., Stanton, Iowa. Filler-protector for egg-cases. No. 1,173,840; Feb. 29; Gaz. vol. 223; p. 1622.

Molloy, John J., Stockton, Cal. Barley or rice huller. No. 1,170,839; Feb. 8; Gaz. vol. 223; p. 413.

Molyneux, Barton S., assignor, by mesne assignments, to C. H. Bierbaum, Buffalo, N. Y. Mail-distributing machine. No. 1,170,091; Feb. 1; Gaz. vol. 223; p. 119.

Monaghan, David J., Rochester, N. Y. Garment-pattern. No. 1,171,623; Feb. 15; Gaz. vol. 223; p. 732.

Monard, Alfred, E. A. Moutier, and H. Dumartin, Paris, France. System of controlling railway points and signals. No. 1,173,206; Feb. 29; Gaz. vol. 223; p. 1398.

Monroe, Andrew J. (See Monroe, Nathaniel S., A. J., and G. W.)

Monroe, George W. (See Monroe, Nathaniel S., A. J., and G. W.)

Monroe, Nathaniel S., Arthur, Ill. Road-working machine. No. 1,173,014; Feb. 22; Gaz. vol. 223; p. 1290.

Monroe, Nathaniel S., Arthur, Ill. Road-machine. No. 1,173,015; Feb. 22; Gaz. vol. 223; p. 1290.

Monroe, Nathaniel S., A. J., and G. W., Arthur, Ill. Road-working machine. No. 1,173,016; Feb. 22; Gaz. vol. 223; p. 1290.

Montessori, Maria, Rome, Italy. Cut-out geometrical figure for didactical purposes. No. 1,173,298; Feb. 29; Gaz. vol. 223; p. 1432.

Montgomery, Clara L., *et al.* (See Becker and Montgomery, assignors.)

Montgomery, Daniel H. (See Becker and Montgomery.)

Montine, Joseph F., Nevinville, Iowa. Collection and delivery apparatus. No. 1,171,799; Feb. 15; Gaz. vol. 223; p. 792.

Moon-Hopkins Billing Machine Company. (See Thieme, Otto, assignor.)

Moon, Thomas M., and G. W. Hollstrom, Fort Worth, Tex. Operating means for reverse-gears. No. 1,172,547; Feb. 22; Gaz. vol. 223; p. 1123.

Mooney, Frank H., Hinsdale, Ill., assignor to The Conklin Pen Manufacturing Company, Toledo, Ohio. Fountain-pen clip. No. 1,171,624; Feb. 15; Gaz. vol. 223; p. 732.

Mooney, Thomas. (See Kelly, William J., assignor.)

Moore, Charles C., Jr., Lexington, Ky. Voting-machine. No. 1,172,548; Feb. 22; Gaz. vol. 223; p. 1124.

Moore, Edmund C. (See Rogers, Leo L., assignor.)

Moore, Ethelbert A. (See Marwick, David B., assignor.)

Moore, George H., New Castle, Pa. Poultry-feeder. No. 1,170,773; Feb. 8; Gaz. vol. 223; p. 391.

Moore, Jared H., Gilson, Ill. Grading and filling machine. No. 1,169,856; Feb. 1; Gaz. vol. 223; p. 39.

Moore, John A. (See Schleicher, Hamilton, and Moore.)

Moore, Otto N., Indianapolis, Ind., assignor to Ohmer Fare Register Company, Rochester, N. Y. Fare-register. No. 1,171,625; Feb. 15; Gaz. vol. 223; p. 733.

Moore, Philip W., Evanston, assignor to The P & M Company, Chicago, Ill. Anticreeper. No. 1,170,926; Feb. 8; Gaz. vol. 223; p. 442.

Moore, Richard H., Wakita, Okla. Gripper-disk for binders. No. 1,169,989; Feb. 1; Gaz. vol. 223; p. 81.

Moore, Risdon Dent, Ardmore, Okla. Blinder. No. 1,173,602; Feb. 29; Gaz. vol. 223; p. 1539.

Moore, Roswell A., assignor to Waterbury Buckle Company, Waterbury, Conn. Web-tip. No. 1,172,478; Feb. 22; Gaz. vol. 223; p. 1098.

Moore, Samuel E., Williamsville, Ill. Jack. No. 1,171,626; Feb. 15; Gaz. vol. 223; p. 733.

Moore, Thomas F., New York, N. Y. Making barrels. No. 1,170,927; Feb. 8; Gaz. vol. 223; p. 442.

Moore and White Company. (See White, Joseph A., assignor.)

Moore, William J. P., New York, N. Y. Wheel. No. 1,172,623; Feb. 22; Gaz. vol. 223; p. 1151.

Moore, William J. P., New York, N. Y. Wheel. No. 1,172,624; Feb. 22; Gaz. vol. 223; p. 1151.

Moore, William E., Pittsburgh, Pa. Thrust-bearing. No. 1,173,369; Feb. 29; Gaz. vol. 223; p. 1458.

Moore, William L. (See Baugh, Clyde, assignor.)

Morand, Edmund E., Westfield, Mass. Carbureter. No. 1,172,031; Feb. 15; Gaz. vol. 223; p. 879.

Moran, Michael V. (See Donohue, James S., assignor.)

Morath, Oscar, St. Louis county, Mo. Centrifugal separator. No. 1,170,554; Feb. 8; Gaz. vol. 223; p. 313.

Morden Frog & Crossing Works. (See Gibbs, Benedict T., Jr., assignor.)

Morfoot, George A., Chicago, Ill. Vehicle-wheel. No. 1,172,625; Feb. 22; Gaz. vol. 223; p. 1152.

Morgan Construction Company. (See Carroll, Elbert H., assignor.)

Morgan Construction Company. (See George and Edwards, assignors.)

Morgan Construction Company. (See Jefferies, Ebenezer A. W., assignor.)

Morgan Construction Company. (See Quinn, Edward J., assignor.)

Morgan, George W. (See De Lukacsevics, Charles, assignor.)

Morkrum Company. (See Krum, Charles L., assignor.)

Morris, Abraham, St. Louis, Mo. Stringed musical instrument. No. 1,173,017; Feb. 22; Gaz. vol. 223; p. 1291.

Morris, Charles A., Montclair, N. J., assignor to The Hayward Company. Hoisting and conveying mechanism. No. 1,170,774; Feb. 8; Gaz. vol. 223; p. 391.

Morris, Charles A., deceased, Montclair, N. J.; C. R. Morris, executrix, assignor to The Hayward Company, New York, N. Y. Excavating apparatus. No. 1,171,393; Feb. 8; Gaz. vol. 223; p. 609.

Morris, Clara R., executrix. (See Morris, Charles A.)

Morris & Company. (See Hill, Herbert E., assignor.)

Morris, Edmund, assignor to Wilmarth Show Case Company, Grand Rapids, Mich. Removably setting glass plates. No. 1,170,659; Feb. 8; Gaz. vol. 223; p. 352.

Morris, Edmund, assignor to Wilmarth Show Case Company, Grand Rapids, Mich. Detachable dust-guard. No. 1,170,660; Feb. 8; Gaz. vol. 223; p. 352.

Morris-Hall Mail Closer Company. (See Hall, Louis J., assignor.)

Morris, Joseph F., Derby, Conn. Game. No. 1,173,841; Feb. 29; Gaz. vol. 223; p. 1622.

Morris, William L., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind. Combined valve and pipe-coupling. No. 1,172,298; Feb. 22; Gaz. vol. 223; p. 1031.

Morrison, Joseph P., Mount Carmel, Pa. Artificial tooth and backing. No. 1,170,555; Feb. 8; Gaz. vol. 223; p. 314.

Morriss, Edward T., South Hampstead, England. Perambulator, mail-cart, and the like. No. 1,171,061; Feb. 8; Gaz. vol. 223; p. 491.

Morse, Albert A., New York, N. Y. Safety control device for elevators. No. 1,172,549; Feb. 22; Gaz. vol. 223; p. 1124.

Morse, Amelia, New York, N. Y. Nursery-rattle. No. 1,171,229; Feb. 8; Gaz. vol. 223; p. 551.

Morse Chain Company. (See Morse, Frank L., assignor.)

Morse, Frank L., assignor to Morse Chain Company, Ithaca, N. Y. Adjustable bearing and coupling for pulleys. No. 1,171,347; Feb. 8; Gaz. vol. 223; p. 592.

Morse Twist Drill & Machine Company. (See Fuller, Willis S., assignor.)

Morse, Waldo G. (See Hollingshead, William B., assignor.)

Morse, Willis S., Philadelphia, Pa. Tension-regulating mechanism for printing-presses and the like. No. 1,170,840; Feb. 8; Gaz. vol. 223; p. 413.

Morss, Stephen B., Rahway, N. J. Blue-flame oil-burner. No. 1,173,842; Feb. 29; Gaz. vol. 223; p. 1623.

Morten, Alexander, New York, N. Y. Ticket-holder. No. 1,173,843; Feb. 29; Gaz. vol. 223; p. 1623.

Morton, George D., Key West, Fla. Crude-oil burner. No. 1,172,032; Feb. 15; Gaz. vol. 223; p. 880.

Morton, Rudolph B., Cleveland, Ohio. Clutch. No. 1,171,230; Feb. 8; Gaz. vol. 223; p. 551.

Moseley, Emerson B., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,170,312; Feb. 1; Gaz. vol. 223; p. 195.

Moseley, Emerson B., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,170,775; Feb. 8; Gaz. vol. 223; p. 392.

Moseley, George B., Camden, Ark. Covering for railway bridges and trestles. No. 1,171,062; Feb. 8; Gaz. vol. 223; p. 491.

Mosher, Charles D. (See Ostergren and Mosher.)

Mosler, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Safe or vault door. No. 1,171,348; Feb. 8; Gaz. vol. 223; p. 593.

Mosler Safe Company, The. (See Mosler and Bartels, assignors.)

Moss, Louise G. (See Huff, William D., assignor.)

Motoculture Limited. (See Meyenburg, Konrad V. von, assignor.)

Motoring Clock Manufacturing Company. (See Dale, Frank M., assignor.)

Motsago, William S., Broad Mountain, Pa. Sleigh-cycle. No. 1,173,676; Feb. 29; Gaz. vol. 223; p. 1564.

Mott, William R., Lakewood, Ohio, assignor to National Carbon Company. Arc-light electrode. No. 1,173,370; Feb. 29; Gaz. vol. 223; p. 1458.

Motter, Mary A. (See Motter, William H., assignor.)

Motter, William H., Denver, Colo., assignor to M. A. Motter. Ore-roasting furnace. No. 1,172,479; Feb. 22; Gaz. vol. 223; p. 1098.

Moulton, Dexter E., Pierre, S. D. Timer and distributer. No. 1,172,384; Feb. 22; Gaz. vol. 223; p. 1061.

Moussette, Oliver J., Brooklyn, N. Y. Crusher. No. 1,172,626; Feb. 22; Gaz. vol. 223; p. 1152.

Moutier, Ernest A. (See Monard, Moutier, and Dumartin.)

Mowlds, Thomas D., Bala, Pa. Feed for stone-channeling machines. No. 1,170,986; Feb. 8; Gaz. vol. 223; p. 464.

Moyer, Jesse E., assignor to Allith-Prouty Company, Danville, Ill. Door-hanger track. No. 1,173,299; Feb. 29; Gaz. vol. 223; p. 1432.

Muckle, Theodore W., assignor to W. W. Case, Jr., Denver, Colo. Metallurgical furnace and furnace parts. No. 1,172,222; Feb. 15; Gaz. vol. 223; p. 942.

Muckle, Theodore W., assignor to W. W. Case, Jr., Denver, Colo. Furnace part. No. 1,172,223; Feb. 15; Gaz. vol. 223; p. 942.

Mudd, Joseph A. (See Mudd, Raymond F., assignor.)

Mudd, Raymond F., assignor of one-half to J. A. Mudd, Chicago, Ill. Lock for automobiles. No. 1,170,987; Feb. 8; Gaz. vol. 223; p. 464.

Muehlberg, Karl O., assignor of forty-eight one-hundredths to J. P. Eastman, Manitowoc, Wis. Hose connection. No. 1,172,299; Feb. 22; Gaz. vol. 223; p. 1031.

Mueller, Hermann W., Von Ormy, assignor of one-half to G. Eller, Seguin, Tex. Attachment for mowers. No. 1,172,033; Feb. 15; Gaz. vol. 223; p. 880.

Muldoon, John J., assignor of one-third to B. Viapradre and one-third to M. A. Petrell, Rochester, Pa. Railway-car cuspidor. No. 1,173,729; Feb. 29; Gaz. vol. 223; p. 1583.

Mullen, Michael W., Baltimore, Md. Mailing and display package. No. 1,171,231; Feb. 8; Gaz. vol. 223; p. 552.

Müller, Carl A., Witzenhausen, Germany. Lock. No. 1,173,677; Feb. 29; Gaz. vol. 223; p. 1564.

Muller, Charles M., New York, N. Y. Bronzing-machine. No. 1,171,627; Feb. 15; Gaz. vol. 223; p. 734.

Muller, Ernest J. W., New York, N. Y., assignor to American Bank Note Company. Rotary multicolor-printing machine. No. 1,170,841; Feb. 8; Gaz. vol. 223; p. 414.

Müller, Géza, New York, N. Y. Soldering-iron. No. 1,171,232; Feb. 8; Gaz. vol. 223; p. 552.

Müller, Johannes A., Hamburg, Germany. Sole-sewing machine. No. 1,173,300; Feb. 29; Gaz. vol. 223; p. 1433.

Müller, Karl, Schlieren, Switzerland. Vessel for inflammable liquids. No. 1,171,800; Feb. 15; Gaz. vol. 223; p. 792.

Muller, Otto. (See Fisher, Frederick J., assignor.)

Müller, Paul, New York, N. Y. Toy building-block. No. 1,172,385; Feb. 22; Gaz. vol. 223; p. 1061.

Mulligan, Thomas F., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Quantity-setting clutch mechanism. No. 1,171,628; Feb. 15; Gaz. vol. 223; p. 734.

Mullin, John R., assignor of one-half to J. F. Holzinger, Rome, N. Y. Non-refillable bottle. No. 1,172,034; Feb. 15; Gaz. vol. 223; p. 881.

Muma, Michael A., *et al.* (See Putney, William W., assignor.)

Mumford, Edgar H., deceased; R. S. Mumford, executrix, Plainfield, N. J. Jolt ramming-machine. No. 1,171,869; Feb. 15; Gaz. vol. 223; p. 818.

Mumford, Rose S., executrix. (See Mumford, Edgar H.)

Muncie Oil Engine Company. (See Kelly, Charles H., assignor.)

Mundhenk, Clement L. V., Dayton, Ohio. Self-heating smoothing-iron. No. 1,171,349; Feb. 8; Gaz. vol. 223; p. 593.

Mundt, Albert, Manitowoc, Wis. Feed-cutting machine. No. 1,169,858; Feb. 1; Gaz. vol. 223; p. 39.

Mundy, George P., Washington, D. C. Telephone attachment. No. 1,171,745; Feb. 15; Gaz. vol. 223; p. 773.

Munro, James H., Newark, N. J. Covering. No. 1,173,678; Feb. 29; Gaz. vol. 223; p. 1565.

Munslow, William E., Steubenville, Ohio. Railway-tie. No. 1,176,844; Feb. 29; Gaz. vol. 223; p. 1623.

Munson, Victor G., Whitehall, Mich. Plow-wheel. No. 1,173,845; Feb. 29; Gaz. vol. 223; p. 1624.

Murch, Alfred, West Fitchburg, Mass. Automobile-fender. No. 1,171,744; Feb. 15; Gaz. vol. 223; p. 772.

Murn, Rudolf, Lakewood, Ohio. Ice-creeping attachment. No. 1,169,857; Feb. 1; Gaz. vol. 223; p. 39.

Murphy, George W. J., assignor to G. W. J. Murphy Company, Merrimac, Mass. Curtain-fastener. No. 1,170,092; Feb. 1; Gaz. vol. 223; p. 120.

Murphy, Mary C. and M. C., Jr., Haverhill, Mass. Chart for use in cutting garments. No. 1,173,301; Feb. 29; Gaz. vol. 223; p. 1433.

Murphy Wall Bed Company. (See Murphy, William L., assignor.)
Murphy, William L., San Francisco, Cal., assignor to Murphy Wall Bed Company. Folding bed. No. 1,171,971; Feb. 15; Gaz. vol. 223; p. 856.
Murray, Donald, London, England, assignor to The Western Union Telegraph Company, New York, N. Y. Keyboard-apparatus. No. 1,170,556; Feb. 8; Gaz. vol. 223; p. 314.
Murray, Joseph B., Brooklyn, N. Y. Folding stand for portable heaters. No. 1,173,207; Feb. 29; Gaz. vol. 223; p. 1398.
Murray, Thomas E., New York, N. Y. Dish-washing machine. No. 1,172,300; Feb. 22; Gaz. vol. 223; p. 1031.
Murray, Thomas E., New York, N. Y. Electrical welding. No. 1,172,302; Feb. 22; Gaz. vol. 223; p. 1032.
Murray, Thomas E., New York, N. Y. Dish-washing machine. No. 1,173,208; Feb. 29; Gaz. vol. 223; p. 1398.
Murray, Thomas E., and H. R. Woodrow, New York, N. Y.; said Woodrow assignor to said Murray. Electrical welding. No. 1,172,301; Feb. 22; Gaz. vol. 223; p. 1032.
Murray, Thomas E., and G. K. Jessup, New York, N. Y.; said Jessup assignor to said Murray. Seal-fastening. No. 1,173,603; Feb. 29; Gaz. vol. 223; p. 1539.
Murray, William A., and W. A., Jr., assignors to The William A. Murray Spring Company, Cincinnati, Ohio. Spring-seat. No. 1,172,724; Feb. 22; Gaz. vol. 223; p. 1187.
Murray, Willis G., San Francisco, Cal. Detachable movable cable-fastening. No. 1,171,233; Feb. 8; Gaz. vol. 223; p. 552.
Murray, Wylie E., and H. A. Leach, St. Louis, Mo. Locking-valve. No. 1,172,823; Feb. 22; Gaz. vol. 223; p. 1224.
Musgrove, James W. (See Cook and Musgrove.)
Musser, William J., Zephyrhills, Fla. Autotruck. No. 1,172,725; Feb. 22; Gaz. vol. 223; p. 1187.
Muther, John C., San Diego, Cal. Bed to be used in vehicles. No. 1,171,531; Feb. 15; Gaz. vol. 223; p. 699.
Muttart, Alder C., *et al.* (See Linkletter, Robert, assignor.)
Muttart, George W., *et al.* (See Linkletter, Robert, assignor.)
Myerburg, Solomon J., Baltimore, Md. Machine for removing buttons from shoes. No. 1,171,133; Feb. 8; Gaz. vol. 223; p. 519.
Myers, Louis, Brooklyn, N. Y., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn. Pencil-sharpening machine. No. 1,170,093; Feb. 1; Gaz. vol. 223; p. 120.
Myers, Louis, New York, N. Y., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn. Pencil-sharpening machine. No. 1,171,350; Feb. 8; Gaz. vol. 223; p. 593.
Myers, Louis E., Chicago, Ill. Magnetic means for moving miniature boats. No. 1,171,972; Feb. 15; Gaz. vol. 223; p. 857.
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pump. No. 1,170,661; Feb. 8; Gaz. vol. 223; p. 352.
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Working head for pumps. No. 1,170,662; Feb. 8; Gaz. vol. 223; p. 353.
Myers, Samuel, Tower, Mich. Circuit-closer. No. 1,171,629; Feb. 15; Gaz. vol. 223; p. 734.
Naamlooze Vennootschap "Hollandsche Proteïne Maatschappij." (See Adler, Rudolf, assignor.)
Nagel, Henry, Ritzville, Wash. Weed-destroyer. No. 1,173,504; Feb. 29; Gaz. vol. 223; p. 1505.
Nagelschmitz, Franz, assignor to Firm of G. Mendheim, Munich, Germany. Burning carbon electrodes. No. 1,170,313; Feb. 1; Gaz. vol. 223; p. 195.
Nagle, John P., Rochester, N. Y. Egg carrying and delivering device. No. 1,170,776; Feb. 8; Gaz. vol. 223; p. 392.
Nairn Linoleum Company, The. (See Chapman, George, assignor.)
Nakamigawa, Tetsushiro, New York, N. Y. Fly-trap. No. 1,173,846; Feb. 29; Gaz. vol. 223; p. 1624.
Nakamizo, Meiji, Los Angeles, Cal. Container and heating can. No. 1,173,454; Feb. 29; Gaz. vol. 223; p. 1486.
Napier, William S., Houston, and C. B. Elliott, Hempstead, Tex. Pawl-and-ratchet mechanism. No. 1,172,480; Feb. 22; Gaz. vol. 223; p. 1099.
Nashua Card, Gummed & Coated Paper Company. (See Mettler, Caspar, assignor.)
Nathan Manufacturing Company, The. (See Wood, Robert, assignor.)
Nathaniel, Walter R., Houston, Tex. Track sweeping and oiling device. No. 1,171,454; Feb. 15; Gaz. vol. 223; p. 671.
National Binding Machine Company. (See Cummings, Henry H., assignor.)
National Biscuit Company. (See Mackay and Ferrall, assignors.)
National Blank Book Company. (See Elder, Edward H., assignor.)
National Blank Book Company. (See Schade, John, Jr., assignor.)
National Carbon Company. (See Mott, William R., assignor.)
National Carbon Company. (See Naydor, John, assignor.)
National Cash Register Company, The. (See Church, Edmund S., assignor.)
National Dump Car Company. (See Dorey, George B., assignor.)
National Dump Car Company. (See Yost, Winfield H., assignor.)
National Electric Specialty Company, The. (See Chapman, Frank S., assignor.)
National Electrolytic Company, The. (See Fuller, George P., assignor.)
National Envelope Sealing and Stamping Manufacturing Company. (See Allen, Fred R., assignor.)
National Lock Washer Company, The. (See Hoyt, Daniel, assignor.)
National Malleable Castings Company, The. (See Buckius, Albert O., Jr., assignor.)
National Malleable Castings Company, The. (See Martin, George V., assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Manufacturing Company. (See Fouke, George W., assignor.)
National Pneumatic Company. (See Gottschalk, Albert, assignor.)
National Pneumatic Company. (See Rowntree, Harold, assignor.)
National Supply Company, The. (See Wright, Clyde S., assignor.)
National Tube Company. (See Speller, Frank N., assignor.)
Naydor, John, Lakewood, Ohio, assignor to National Carbon Company. Brush connection. No. 1,171,630; Feb. 15; Gaz. vol. 223; p. 735.
Naylon, Walter A. (See Kenealy and Naylon.)
Naylor, James, Jr., Arlington, N. J. Sugar-making. No. 1,172,303; Feb. 22; Gaz. vol. 223; p. 1032.
Neafie, Andrew J., Mountain Lake, N. J. Track-spray apparatus. No. 1,169,990; Feb. 1; Gaz. vol. 223; p. 82.
Neahr, Will C., Denver, Colo., assignor to The Protective Signal Manufacturing Company. Electric signaling system. No. 1,169,991; Feb. 1; Gaz. vol. 223; p. 82.
Neahr, Will C., Denver, Colo., assignor to The Protective Signal Manufacturing Company. Circuit-controlling instrument. No. 1,169,992; Feb. 1; Gaz. vol. 223; p. 83.
Neal-Armstrong Company, The. (See Leggett, Ross M., assignor.)
Neal, Rolland H., Lake City, Minn. Aeroplane. No. 1,170,777; Feb. 8; Gaz. vol. 223; p. 392.
Nealy, John E., New York, N. Y. Vending-machine. No. 1,171,455; Feb. 15; Gaz. vol. 223; p. 671.
Nealy, John E., New York, N. Y. Coin-controlled mechanism. No. 1,171,456; Feb. 15; Gaz. vol. 223; p. 672.
Neff, Abner R. (See Hoar, Allen, assignor.)
Neff, Harry A., Bellaire, assignor to Belmont Casket Manufacturing Company, Shadyside, Ohio. Clamp for casket-covers. No. 1,170,094; Feb. 1; Gaz. vol. 223; p. 120.
Neiswanger, Jesse, Clarksburg, W. Va. Force-pump. No. 1,170,177; Feb. 1; Gaz. vol. 223; p. 148.
Nelson, Alexander. (See Hess, Christian F., assignor.)
Nelson, Andrew W., assignor to Columbian Enameling & Stamping Company, Terre Haute, Ind. Covered kettle. No. 1,173,730; Feb. 29; Gaz. vol. 223; p. 1583.
Nelson, Charles J., Maywood, Ill., assignor to American Can Company, New York, N. Y. Mechanism for operating on can-bodies. No. 1,173,302; Feb. 29; Gaz. vol. 223; p. 1433.
Nelson, Edward F., *et al.* (See Lennards, Frank H., assignor.)
Nelson, Emil A., Ronville, Mich. Crank-case and bearing for engines. No. 1,170,663; Feb. 8; Gaz. vol. 223; p. 353.
Nelson, Emil A., Detroit, Mich., assignor, by mesne assignments, to Hupp Motor Car Corporation, Richmond, Va. Engine-lubricator. No. 1,173,209; Feb. 29; Gaz. vol. 223; p. 1399.
Nelson, Horace C., *et al.* (See Miller, Andrew B., assignor.)
Nelson, James D., Cincinnati, Ohio, assignor to The Ohio Messenger and Telegraph Company. Flow-indicating means for distribution systems. No. 1,170,489; Feb. 1; Gaz. vol. 223; p. 254.
Nelson, John, Bay City, Mich. Jar-wrench. No. 1,170,928. Feb. 8; Gaz. vol. 223; p. 443.
Nelson, John, Selah, Wash. Fruit-grading machine. No. 1,171,746; Feb. 15; Gaz. vol. 223; p. 773.
Nelson, Joseph. (See Digre and Nelson.)
Nelson, Oscar C., Westbrook, Minn. Combined chair and ironing-table. No. 1,170,604; Feb. 8; Gaz. vol. 223; p. 353.
Neppach, Fritz, Stuttgart-Cannstatt, Germany. Clamp. No. 1,173,455; Feb. 29; Gaz. vol. 223; p. 1487.
Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,170,178; Feb. 1; Gaz. vol. 223; p. 149.
Nesbitt, William J., Los Angeles, Cal. Heel-clamping means. No. 1,170,179; Feb. 1; Gaz. vol. 223; p. 149.
Neuberger, David M. (See Taylor, Edwin, assignor.)
Neuland, Alfons H., Bergenfield, N. J. Dynamo-electric machine. No. 1,171,134; Feb. 8; Gaz. vol. 223; p. 519.
Neuland, Alfons H., San Francisco, Cal., assignor to Neuland Electrical Company, Inc. Apparatus for transmitting power. No. 1,171,351; Feb. 8; Gaz. vol. 223; p. 594.

Neuland, Alfons H., San Francisco, Cal., assignor to Neuland Electrical Company, Inc. Dynamo-electric machine. No. 1,171,352; Feb. 8; Gaz. vol. 223; p. 594.
Neuland Electrical Company. (See Neuland, Alfons H., assignor.)
Neumann, Adam L. L., Occidental, Cal. Whip-holder. No. 1,173,533; Feb. 29; Gaz. vol. 223; p. 1514.
Neumann, Jakob S., Great Falls, Mont. Insubmergible ship. No. 1,170,095; Feb. 1; Gaz. vol. 223; p. 121.
Neumann, John F., Anamosa, Iowa. Target. No. 1,173,456; Feb. 29; Gaz. vol. 223; p. 1487.
Nevens, Herbert R., Hartford, Conn., assignor to Nevens-Wallace Train Control Company. Train-stop device. No. 1,173,371; Feb. 29; Gaz. vol. 223; p. 1458.
Nevens, Herbert R., Melrose, Mass., assignor to Nevens-Wallace Train Control Company. Automatic brake-setting device. No. 1,174,019; Feb. 29; Gaz. vol. 223; p. 1681.
Nevens, Herbert R., East Hartford, Conn., assignor to Nevens-Wallace Train Control Company. Automatic brake-setting device. No. 1,174,020; Feb. 29; Gaz. vol. 223; p. 1681.
Nevens, Herbert R., Hartford, Conn., assignor to Nevens-Wallace Train Control Company. Train-stop device. No. 1,174,021; Feb. 29; Gaz. vol. 223; p. 1682.
Nevens, Herbert R., Hartford, Conn., assignor to Nevens-Wallace Train Control Co., Waltham, Mass. Train-control device. No. 1,174,022; Feb. 29; Gaz. vol. 223; p. 1682.
Nevens, Herbert R., Hartford, Conn., assignor to Nevens-Wallace Train Control Company. Railway signaling device. No. 1,174,023; Feb. 29; Gaz. vol. 223; p. 1683.
Nevens, Herbert R., Hartford, Conn., assignor to Nevens-Wallace Train Control Company. Train-stop mechanism. No. 1,174,024; Feb. 29; Gaz. vol. 223; p. 1683.
Nevens-Wallace Train Control Company. (See Nevens, Herbert R., assignor.)
New Departure Manufacturing Company, The. (See Rockwell, Albert F., assignor.)
New England Butt Company. (See Littlefield, Arlon, assignor.)
New England Electro-Chemical Metals Company. (See Titus and Barenscheer, assignors.)
New Jersey Carbureter Company. (See Heath and Taylor, assignors.)
New Jersey Optical Co. (See Durgin and Searles, assignors.)
New Jersey Patent Company. (See Aylsworth and Aiken, assignors.)
New Jersey Patent Company. (See Holden, Delos, assignor.)
New York Couch Bed Company. (See Sisbower and Pittoni, assignors.)
New York Knife Company. (See Fuller, James E., assignor.)
Newberry, Spencer B., and H. N. Barrett, Baybridge, Ohio. Making fertilizers. No. 1,173,303; Feb. 29; Gaz. vol. 223; p. 1434.
Newhouse, Ray C., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Sampling device. No. 1,170,842; Feb. 8; Gaz. vol. 223; p. 414.
Newhouse, Ray C., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Pulverizer. No. 1,171,747; Feb. 15; Gaz. vol. 223; p. 774.
Newman Bros. Co. (See Anderson, Harry J., assignor.)
Newman Clock Co. (See Jenkins, Charles H., assignor.)
Newman, George, *et al.* (See Johnson, Peter, assignor.)
Newman, Joseph S., Cleveland, Ohio. Toy telegraph-sounder. No. 1,170,557; Feb. 8; Gaz. vol. 223; p. 314.
Newman, Victor W., Springfield, Mass. Machine for inserting mail-matter. No. 1,172,824; Feb. 22; Gaz. vol. 223; p. 1224.
Newton, Charles, Buffalo, N. Y. Projectile. No. 1,172,035; Feb. 15; Gaz. vol. 223; p. 881.
Newton, Edward T. (See Blanchard, Leon E., assignor.)
Nibourel, Alexandre V., Paris, France, assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,170,988; Feb. 8; Gaz. vol. 223; p. 465.
Niccum, Jesse B., Liberty, Ind. Hog-oiler. No. 1,171,870; Feb. 15; Gaz. vol. 223; p. 818.
Nichols, Wesley G. (See McKee, Nichols, and Exton.)
Nichols, Wesley G., Chicago Heights, Ill., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me. Mill-pinion. No. 1,171,532; Feb. 15; Gaz. vol. 223; p. 699.
Nicholson, James M., Chicago, Ill. Tripod. No. 1,170,096; Feb. 1; Gaz. vol. 223; p. 121.
Nickel, Daniel A., and S. Swanson, Oak Park, assignors to Beckley Cardy Company, Chicago, Ill. Eraser. No. 1,173,847; Feb. 29; Gaz. vol. 223; p. 1624.
Nickerson, Oscar M. (See Handley and Nickerson.)
Nicolai, Henry, Milwaukee, Wis. Cherry-seeding machine. No. 1,173,372; Feb. 29; Gaz. vol. 223; p. 1459.
Nicolson, John H., Birmingham, Ala. Automatic air-coupling. No. 1,172,036; Feb. 15; Gaz. vol. 223; p. 881.
Niedzielski, Kasimar E. (See Koperski, Frank, assignor.)
Nielsen, Axel S. (See Specht and Nielsen.)
Nielsen, Iver, New Rochelle, N. Y. Safety-fastening for jewelry. No. 1,170,778; Feb. 8; Gaz. vol. 223; p. 393.
Nielson, John. (See Logan and Nielson.)
Niemann, William L., Mount Olive, Ill. Pen-wiper. No. 1,170,314; Feb. 1; Gaz. vol. 223; p. 195.
Niemeyer, Georg. (See Benkert, Hermann, assignor.)
Nigborowicz, Wladyslaw, Gallitzin, Pa. Multiple-socket wrench. No. 1,171,063; Feb. 8; Gaz. vol. 223; p. 491.
Niles-Bement-Pond Company. (See Keefer, Samuel H., assignor.)
Nilsen, Olaf, Hoboken, N. J. Davit for life-boats. No. 1,170,315; Feb. 1; Gaz. vol. 223; p. 196.
Nilson, Carl E. J. (See Wincrantz, Nilson, and Pettersson.)
Nistle, George W., deceased; W. C. Nistle, Muskegon, Mich., administrator. Trap. No. 1,173,373; Feb. 29; Gaz. vol. 223; p. 1459.
Nistle, Windsor C., administrator. (See Nistle, George W.)
Nitardy, Ferdinand W., and H. C. Schaefer, Denver, Colo. Bottle. No. 1,172,627; Feb. 22; Gaz. vol. 223; p. 1152.
Noble, Mark, Lansing, W. Va. Rail-joint. No. 1,173,848; Feb. 29; Gaz. vol. 223; p. 1625.
Noetzel, Gustav A., and W. P. Ferris, Waukesha, Wis., assignors to Precision Metal Workers, Chicago, Ill. Nail. (Reissue.) No. 14,075; Feb. 22; Gaz. vol. 223; p. 1340.
Noiseless Typewriter Company, The. (See Kidder and Sponsel, assignors.)
Noiseless Typewriter Company, The. (See Ronchetti, Joseph A., assignor.)
Nolan, James A., Bowerston, Ohio. Automatic car-cager. No. 1,170,316; Feb. 1; Gaz. vol. 223; p. 196.
Nolan, James J. (See Osborn and Nolan.)
Nolda, August, Berlin, Germany. Strainer for drinking vessels. No. 1,173,374; Feb. 29; Gaz. vol. 223; p. 1460.
Nonnenbruch, Otto H., New Rochelle, N. Y., assignor to De La Vergne Machine Co. Separation of liquids. No. 1,170,558; Feb. 8; Gaz. vol. 223; p. 315.
Norbom, Halfdan, Bloomfield, N. J. Valve. No. 1,173,731; Feb. 29; Gaz. vol. 223; p. 1584.
Norden, Carl S., Wakefield, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon soles. No. 1,173,375; Feb. 29; Gaz. vol. 223; p. 1460.
Nordvall, Iljalmar, and M. Peterson, Dalton, Mich. Fastening device. No. 1,169,859; Feb. 1; Gaz. vol. 223; p. 39.
Nordyke & Marmon Company. (See Hassler, Robert H., assignor.)
Norling, Reinhold A., Aurora, assignor to Aurora Automatic Machinery Company, Chicago, Ill. Handle-locking device for pneumatic tools. No. 1,170,779; Feb. 8; Gaz. vol. 223; p. 393.
Norma Campagnie, G. m. b. H. (See Hirth, Carl A., assignor.)
Norman, Ludwig, assignor of one-half to J. Wolke, Brooklyn, N. Y. Means for automatically stopping the motors of talking-machines. No. 1,172,304; Feb. 22; Gaz. vol. 223; p. 1032.
Normine, William H., assignor to Fisk Rubber Company, Chicopee Falls, Mass. Trolley-track switch device. No. 1,171,748; Feb. 15; Gaz. vol. 223; p. 774.
Norsk Hydro-Elektrisk Kvælstofaktieselskab. (See Bonnevie, Harald, assignor.)
North, Oliver D., Chelsea, London, England. Spring for use on vehicles. No. 1,173,457; Feb. 29; Gaz. vol. 223; p. 1487.
Noye, Joseph V. M., Lowell, Mass. Automatic-gun holster. No. 1,173,376; Feb. 29; Gaz. vol. 223; p. 1460.
Noyes, La Verne W., assignor to Aermotor Company, Chicago, Ill. Windmill. No. 1,171,631; Feb. 15; Gaz. vol. 223; p. 735.
Nuesell, Gerard, assignor of one-half to F. Vermeulen, New York, N. Y. Gasolene-tank indicator. No. 1,171,632; Feb. 15; Gaz. vol. 223; p. 735.
Nungesser, Philip P., Cleveland, Ohio. Machine for filling dry batteries. No. 1,170,456; Feb. 1; Gaz. vol. 223; p. 243.
Nusser, John, Mallanaur, Pa. Adjustable support for embroidery-hoops. No. 1,171,871; Feb. 15; Gaz. vol. 223; p. 818.
Nute, Myron B., Chicago, Ill. Window-ventilator. No. 1,170,559; Feb. 8; Gaz. vol. 223; p. 315.
Nutter, Edward H., San Francisco, Cal., assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Concentration of ore. No. 1,170,665; Feb. 8; Gaz. vol. 223; p. 354.
Nydia Bank Lock Company, The. (See Benham, William T., assignor.)
Nye, James M., Kansas City, Kans. Water-grate. No. 1,170,317; Feb. 1; Gaz. vol. 223; p. 196.
Nylander, Joseph L., Seattle, Wash. Bed-lifter. No. 1,170,929; Feb. 8; Gaz. vol. 223; p. 443.
Nyman, Gunnar. (See Carlborg and Nyman.)
Nystrom, Oscar P., Holland, Mich. Molding-machine. No. 1,172,898; Feb. 22; Gaz. vol. 223; p. 1251.
O. P. Schriver Company, The. (See Happensack, Edward F., assignor.)
O'Brien, Edwin K., Alexandria, Va. Hydraulic-ram dredge. No. 1,170,930; Feb. 8; Gaz. vol. 223; p. 444.
O'Brien, John O. (See Thornton, John E., assignor.)
O'Connor, John B., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill. Shelving. No. 1,171,064; Feb. 8; Gaz. vol. 223; p. 492.
O'Donnell, William F., Trenton, N. J. Spring-hose coupling. No. 1,178,211; Feb. 29; Gaz. vol. 223; p. 1400.

O'Dowd, Henry W., Peekskill, assignor to William M. Crane Company, New York, N. Y. Casting. No. 1,170,180; Feb. 1; Gaz. vol. 223; p. 149.
O'Hara, Edward P., New York, N. Y. Bill-folder. No. 1,171,234; Feb. 8; Gaz. vol. 223; p. 553.
O'Kane, Walter C., Durham, N. H. Paste-spreading device. No. 1,170,181; Feb. 1; Gaz. vol. 223; p. 150.
O'Keenan, Charles E., Paris, France. Driving means for clocks. No. 1,171,533; Feb. 15; Gaz. vol. 223; p. 699.
O'Neill, Richard J., and H. F. Bethune, Denver, Colo. Railway-car. No. 1,173,118; Feb. 22; Gaz. vol. 223; p. 1324.
Oberer, Fredolien J., assignor to Ironclad Silo Company, Portland, Oreg. Combined door hinge and fastening. No. 1,172,550; Feb. 22; Gaz. vol. 223; p. 1125.
Oberley, Charles G., and R. Grignon, Sartell, Minn. Friction-clutch. No. 1,173,849; Feb. 29; Gaz. vol. 223; p. 1625.
Obermann, Frederick H., Redlands, Cal. Gage. No. 1,173,117; Feb. 22; Gaz. vol. 223; p. 1324.
Obertop, Earl H., Goldfield, Nev. Drill-testing apparatus. No. 1,172,163; Feb. 15; Gaz. vol. 223; p. 923.
Ochs, Henry R., assignor to C. B. Dolge Company, Westport, Conn. Fumigator or disinfecting-lamp. No. 1,173,210; Feb. 29; Gaz. vol. 223; p. 1399.
Oeschger, Walter L., Detroit, Mich. Gasolene-gage. No. 1,172,481; Feb. 22; Gaz. vol. 223; p. 1099.
Ogden, Ashley G., Baltimore, Md. Printing device. No. 1,172,386; Feb. 22; Gaz. vol. 223; p. 1002.
Ohio Brass Company, The. (See Allerding, Cletus N., assignor.)
Ohio Brass Company, The. (See Austin, Arthur O., assignor.)
Ohio Brass Company, The. (See Gierding, Charles E., assignor.)
Ohio & Colorado Smelting & Refining Co., The. (See Hubbard, William H., Jr., assignor.)
Ohio & Colorado Smelting & Refining Co., The. (See Weeks, Francis D., assignor.)
Ohio Grease Company, The. (See Lowry, Frank, assignor.)
Ohio Messenger and Telegraph Company, The. (See Nelson, James D., assignor.)
Ohmer Fare Register Company. (See Moore, Otto N., assignor.)
Ohmer, Wilfred I., and J. E. McAllister, assignors to The Recording and Computing Machines Company, Dayton, Ohio. Computing and recording machine. No. 1,169,860; Feb. 1; Gaz. vol. 223; p. 39.
Ohnemus, Anton, assignor to Excelsior Stove & Mfg. Co., Quincy, Ill. Closet-door for stoves. No. 1,173,018; Feb. 22; Gaz. vol. 223; p. 1291.
Ohrbach, Benjamin, Brooklyn, and C. H. Zwerling, assignors to M. B. Kassel, New York, N. Y. Fork or knife receptacle. No. 1,170,318; Feb. 1; Gaz. vol. 223; p. 196.
Ohrstrom, Gustaf. (See Eckberg and Ohrstrom.)
Oil Well Supply Company. (See Mapes and Yanda, assignors.)
Old, William B., Denison, Tex. Automobile-headlight. No. 1,171,135; Feb. 8; Gaz. vol. 223; p. 520.
Oldham, Robert, Salt Lake City, Utah. Book-fumigator. No. 1,169,993; Feb. 1; Gaz. vol. 223; p. 83.
Oldham, William H., Elkton, Ky. Air-controller for explosive-engines. No. 1,171,457; Feb. 15; Gaz. vol. 223; p. 672.
Oldroyd, Thomas F., New London, Conn. Self-locking bolt or stud. No. 1,172,825; Feb. 22; Gaz. vol. 223; p. 1225.
Olger, Arthur W. (See Bristol and Olger.)
Olivant, Edward. (See Eggleston and Olivant.)
Oliver, Doctor F., Oakland, Cal. Door-buffer. No. 1,172,037; Feb. 15; Gaz. vol. 223; p. 882.
Oliver, Doctor F., Oakland, Cal. Vehicle-spring. No. 1,173,850; Feb. 20; Gaz. vol. 223; p. 1626.
Oliver, Edd C., Detroit, Mich. Flexible shaft. No. 1,171,534; Feb. 15; Gaz. vol. 223; p. 700.
Oliver, Edd C., Detroit, Mich. Mechanical counter. No. 1,171,535; Feb. 15; Gaz. vol. 223; p. 700.
Oliver, Ellis S., Newark, N. J. Adapter-stylus for phonographs. No. 1,169,861; Feb. 1; Gaz. vol. 223; p. 40.
Olley, Raymond H., assignor to Crouse-Hinds Company, Syracuse, N. Y. Panel-board cabinet. No. 1,172,826; Feb. 22; Gaz. vol. 223; p. 1225.
Olofson, Carl. (See Larson and Olofson.)
Olsen, Charles D., Denver, Colo. Carbureter. No. 1,171,235; Feb. 8; Gaz. vol. 223; p. 553.
Omoto, Bunnosuke, Granger, Wyo. Wrench. No. 1,173,458; Feb. 29; Gaz. vol. 223; p. 1487.
Opitz, Gustav W., New York, N. Y., assignor to General Optical Company, Inc. Ophthalmoscope. No. 1,172,827; Feb. 22; Gaz. vol. 223; p. 1226.
Orcutt, Charles D., assignor to The Buffalo Sled Company, North Tonawanda, N. Y. Sled. No. 1,173,604; Feb. 29; Gaz. vol. 223; p. 1540.
Orness, John L., La Moure, N. D. Self-closing door. No. 1,172,038; Feb. 15; Gaz. vol. 223; p. 882.
Orr & Lockett Hardware Company. (See Swanson, James, assignor.)
Orton, Ingomar F., Galveston, Tex. Exterminating grasses, weeds, or plants. No. 1,173,019; Feb. 22; Gaz. vol. 223; p. 1291.
Orvis, Orland D., assignor, by mesne assignments, to United Furnace Corporation, New York, N. Y. Smoke-consuming furnace. No. 1,170,989; Feb. 8; Gaz. vol. 223; p. 465.
Osborn-Crew Manufacturing Company, The. (See Arnold, Ernest H., assignor.)
Osborn, Edward, and J. J. Nolan, Albany, N. Y. Sound-absorbing device. No. 1,171,633; Feb. 15; Gaz. vol. 223; p. 735.
Osborne, Heinrich. (See Kesten and Osborne.)
Oscar Barnett Foundry Company. (See Reiboldt and Clark, assignors.)
Osgood, Joseph G., and F. W. Bachman, Cincinnati, Ohio, assignors to said Osgood, trustee. Power-plane. No. 1,172,828; Feb. 22; Gaz. vol. 223; p. 1226.
Osnos, Mendel, Berlin, Germany, assignor to General Electric Company. System for producing high-frequency oscillations. No. 1,173,679; Feb. 29; Gaz. vol. 223; p. 1565.
Ostergren, Oscar P., Brooklyn, and C. D. Mosher, New York, N. Y. Steam apparatus. No. 1,171,634; Feb. 15; Gaz. vol. 223; p. 736.
Osterhout, Herrick W., Valley Falls, N. Y. Bumper for litter-carriers. No. 1,171,801; Feb. 15; Gaz. vol. 223; p. 793.
Ostrander, Allen E., Ridgewood, N. J., assignor of one-half to M. L. Martus and one-half to C. B. Schoenmehl, Waterbury, Conn. Cotter-pin. No. 1,171,536; Feb. 15; Gaz. vol. 223; p. 700.
Otis Elevator Company. (See Boyce, John E., assignor.)
Otis Elevator Company. (See Reno, Jesse W., assignor.)
Ottesen, Fredrik, Pittsburgh, Pa. Sight-feed oiler. No. 1,172,039; Feb. 15; Gaz. vol. 223; p. 882.
Otto, William A., Milwaukee, Wis. Wheel-truck and brake-gearing. No. 1,172,164; Feb. 15; Gaz. vol. 223; p. 924.
Overton, Charles A., Coeur d'Alene, Idaho. Roof-joint. No. 1,170,931; Feb. 8; Gaz. vol. 223; p. 444.
Owen, Alden B., Ridgway, Pa. Starting synchronous electric machines. No. 1,171,635; Feb. 15; Gaz. vol. 223; p. 736.
Owen, Percy G., Vancouver, British Columbia, Canada. Gas-stove. No. 1,173,851; Feb. 29; Gaz. vol. 223; p. 1626.
Owen, Raymond V. (See Guth and Owen.)
Owens, Ellis W., Granville, N. Y. Adjustable bed. No. 1,172,165; Feb. 15; Gaz. vol. 223; p. 924.
Owens, Jasper C., assignor of one-half to S. T. Velie, Bridgeport, Conn. Carpet-sewing machine. No. 1,171,636; Feb. 15; Gaz. vol. 223; p. 737.
P & M Company, The. (See Moore, Philip W., assignor.)
Packard, Horace N., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Heating unit for meters. No. 1,174,025; Feb. 29; Gaz. vol. 223; p. 1084.
Packard Motor Car Company. (See Derr, Charles E., assignor.)
Packard Motor Car Company. (See Huff, Russell, assignor.)
Packard Motor Car Company. (See Loomis, Allen, assignor.)
Page Check Protector Company. (See Page, Marshall H., assignor.)
Page, James R., El Paso, Tex. Manufacture of vinegar. No. 1,171,065; Feb. 8; Gaz. vol. 223; p. 492.
Page, Marshall H., assignor to Page Check Protector Company, San Francisco, Cal. Check-protector. No. 1,173,020; Feb. 22; Gaz. vol. 223; p. 1291.
Page, William M., Chester, Pa. Uniting copper to ferrous metals. No. 1,171,066; Feb. 8; Gaz. vol. 223; p. 492.
Page, William M., Philadelphia, and W. Tassin, Chester Pa., assignors, by mesne assignments, to Duplex Metallic Company. Working clad metals. No. 1,171,637; Feb. 15; Gaz. vol. 223; p. 737.
Paige, Park G., Austin, Nebr. Snow-plow. No. 1,172,305; Feb. 22; Gaz. vol. 223; p. 1033.
Painchaud, Pierre A., Plessisville, Quebec, assignor to O. Gingras, Quebec, Canada. Quick-detachable elastic tire. (Reissue.) No. 14,057; Feb. 1; Gaz. vol. 223; p. 258.
Paine, George L., North Attleboro, Mass. Bracelet. No. 1,172,726; Feb. 22; Gaz. vol. 223; p. 1187.
Painter, Charles A., Jr., and J. P. McKinney, Jr., Pittsburgh, Pa. Door-latch. No. 1,172,899; Feb. 22; Gaz. vol. 223; p. 1251.
Pallas Vergaser G. m. b. H. (See Schüttler, Paul, assignor.)
Palmer, Lottie M., Wyoming, Del. Stretcher. No. 1,173,459; Feb. 29; Gaz. vol. 223; p. 1487.
Palmgren, Carl A., Chicago, Ill. Electric switch. No. 1,173,460; Feb. 29; Gaz. vol. 223; p. 1488.
Papale, Joseph. (See Broyer, Cambelli, and Papale.)
Pape, Charles F., Vandergrift, Pa., assignor to Hutchins Car Roofing Company, Detroit, Mich. Bung for metallic barrels. No. 1,170,182; Feb. 1; Gaz. vol. 223; p. 150.
Paper Novelty Co., The. (See Josephs, Henry, assignor.)
Papworth, Walter A., assignor to E. C. Stearns & Company, Syracuse, N. Y. Floor-scraper. No. 1,170,319; Feb. 1; Gaz. vol. 223; p. 197.
Paquette, Samuel, Chicopee, Mass. Wood-turning machine. No. 1,172,040; Feb. 15; Gaz. vol. 223; p. 883.
Paquin, Charles E., Taunton, Mass. Splicing-yarn clamp and cutter device. No. 1,173,377; Feb. 29; Gaz. vol. 223; p. 1461.
Parker, Herschel C., Brooklyn, N. Y., and E. G. Hatch, Hoboken, N. J., assignors of two-thirds to said Parker and one-third to said Hatch. Apparatus for detecting and destroying submarines, mines, and the like. No. 1,172,306; Feb. 22; Gaz. vol. 223; p. 1033.

Parker, Isaac B., Dallas, Tex. Attachment for moving-picture machines. No. 1,173,212; Feb. 29; Gaz. vol. 223; p. 1400.
Parker, James, Oswego, N. Y. Steam-trap. No. 1,172,727; Feb. 22; Gaz. vol. 223; p. 1187.
Parker, John, assignor to Brown & Sharpe Manufacturing Company, Providence, R. I. Speed changing and reversing mechanism. No. 1,170,097; Feb. 1; Gaz. vol. 223; p. 122.
Parker, Joseph T., Washington, D. C. Vessel screw-propeller pumping apparatus. No. 1,172,829; Feb. 22; Gaz. vol. 223; p. 1227.
Parker, Knight K., Seattle, Wash. Shock-absorber. No. 1,170,457; Feb. 1; Gaz. vol. 223; p. 243.
Parker, Pearl E., Winchester, Kans. Wagon-tongue support. No. 1,170,098; Feb. 1; Gaz. vol. 223; p. 122.
Parker, Thomas R. G., and W. E. Bennison, Broadheath, England, assignors to Duplex Printing Press Company, Battle Creek, Mich. Machine for boring and trimming tubular stereotype-plates. No. 1,173,213; Feb. 29; Gaz. vol. 223; p. 1400.
Parker Wire Goods Company. (See McCallum, Lewis M., assignor.)
Parkes, Bertrand A., assignor to The Philadelphia Drying Machinery Company, Philadelphia, Pa. Singeing-machine. No. 1,170,183; Feb. 1; Gaz. vol. 223; p. 151.
Parkes, William N., Brooklyn, N. Y. Combination thread-drawing and hemstitch sewing-machine. No. 1,170,666; Feb. 8; Gaz. vol. 223; p. 354.
Parkhurst, Edward B., Woburn, assignor to Power Numbering Machine Company, Boston, Mass. Stamping, marking, or numbering machine. No. 1,170,490; Feb. 1; Gaz. vol. 223; p. 255.
Parks, Alfred M., Mapleton Depot, Pa. Nut-lock. No. 1,173,021; Feb. 22; Gaz. vol. 223; p. 1292.
Parks, Fred B., Grand Rapids, Mich. Chain construction. No. 1,170,780; Feb. 8; Gaz. vol. 223; p. 393.
Parks, Samuel B., assignor of one-half to M. A. Stevens, Stockton, Kans. Horse-power device. No. 1,173,852; Feb. 29; Gaz. vol. 223; p. 1626.
Parlin & Orendorff Company. (See Graham, William S., assignor.)
Parnall, Thomas S. B., Smethwick, assignor to W. & T. Avery, Limited, Soho Foundry, Smethwick, England. Automatic weighing-scale. No. 1,173,732; Feb. 29; Gaz. vol. 223; p. 1584.
Parsons, Frank, Jr. (See Merritt, Edward T., assignor.)
Parsons, Harold K. (See Styll and Parsons.)
Parsons, Mary, Wichita, Kans. Coffee-pot. No. 1,172,041; Feb. 15; Gaz. vol. 223; p. 883.
Partington, Charles H., Cincinnati, Ohio. Dissolving apparatus for stereopticons. No. 1,172,628; Feb. 22; Gaz. vol. 223; p. 1153.
Patent Button Company, The. (See White, Franklin R., assignor.)
Patented Devices Company. (See Hincz, Hipolit M., assignor.)
Patented Devices Company. (See Hough, William B., assignor.)
Paterson, Edward A., North Tonawanda, N. Y. Road-making composition. No. 1,171,236; Feb. 8; Gaz. vol. 223; p. 553.
Patterson, Benjamin G., Oklahoma, Okla. Rain-gage. No. 1,173,022; Feb. 22; Gaz. vol. 223; p. 1292.
Patterson, John W., New York, N. Y. Sanitary appliance. No. 1,171,973; Feb. 15; Gaz. vol. 223; p. 857.
Patterson, William D., Jr., Marysville, Kans. Automobile-jack. No. 1,170,320; Feb. 1; Gaz. vol. 223; p. 197.
Paul, John T. H., Chicago, Ill., assignor, by mesne assignments, to American Car and Foundry Company, St. Louis, Mo. Tank-car. No. 1,170,560; Feb. 8; Gaz. vol. 223; p. 315.
Paul, William H., Baltimore, Md. Tire-protector. No. 1,173,853; Feb. 29; Gaz. vol. 223; p. 1627.
Paulsmeier, Albert C., Alameda, assignor to Byron Jackson Iron Works, San Francisco, Cal. Deep-well-pump-oiling system. No. 1,169,904; Feb. 1; Gaz. vol. 223; p. 83.
Paulson, Walter H. (See Lathrop and Paulson.)
Pawol, Anton. (See Stubbs, William W., assignor.)
Pawsat, Ewald F., assignor to Wald Manufacturing Company, Sheboygan, Wis. Bicycle-stand. No. 1,170,099; Feb. 1; Gaz. vol. 223; p. 122.
Pay-As-You-Enter Car Corporation. (See McDonald, Duncan, assignor.)
Payne, John B., Denver, Colo. Oyster-opener. No. 1,173,023; Feb. 22; Gaz. vol. 223; p. 1292.
Payne, Rosco, Macedonia, Ill. Apparatus for packing ensilage in silos. No. 1,173,024; Feb. 22; Gaz. vol. 223; p. 1293.
Payne, Thomas F., Pittsburgh, Pa. Faucet-valve. No. 1,172,900; Feb. 22; Gaz. vol. 223; p. 1252.
Payson Manufacturing Company, The. (See Lackey, Robert A., assignor.)
Payton, Arthur L., Chicago, Ill. Carbureter. No. 1,173,378; Feb. 29; Gaz. vol. 223; p. 1461.
Peacock, Edward L., Wallsend-on-Tyne, England. Escape for submarines. No. 1,173,379; Feb. 29; Gaz. vol. 223; p. 1461.
Peake, Harry G., San Francisco, Cal. Casing-jack. No. 1,170,843; Feb. 8; Gaz. vol. 223; p. 415.
Pearce, Peter D., Grand Rapids, Mich. Crate. No. 1,172,307; Feb. 22; Gaz. vol. 223; p. 1033.
Pearch, Robert H., Elmira, N. Y. Basin-trap cleaner and drain-pipe-flushing device. No. 1,173,854; Feb. 29; Gaz. vol. 223; p. 1627.
Pearl, Eugene, Passaic, N. J. Shoe-support. No. 1,173,733; Feb. 29; Gaz. vol. 223; p. 1585.
Pearson, Charles, Chicago, Ill., assignor to International Harvester Company of New Jersey. Tandem draft connection for harvesters. No. 1,170,100; Feb. 1; Gaz. vol. 223; p. 122.
Pearson, Walter, and E. P. Quattlebaum, Mobile, Ala. Locomotive ash-pan. No. 1,173,855; Feb. 29; Gaz. vol. 223; p. 1627.
Pease, Orville E., Baldwin, N. Y., assignor to C. Joseph, Bayonne, N. J. Vehicle-top. No. 1,173,380; Feb. 29; Gaz. vol. 223; p. 1462.
Peck, Caid H., Athens, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Fluid-operated drill. No. 1,172,901; Feb. 22; Gaz. vol. 223; p. 1252.
Pedersen, Johannes T., Flushing, N. Y. Lubricating apparatus. No. 1,173,734; Feb. 29; Gaz. vol. 223; p. 1585.
Pedrick, Joseph S., Westmont, N. J. Water-heater. No. 1,173,304; Feb. 29; Gaz. vol. 223; p. 1434.
Peek, Frank W., Jr., Schenectady, N. Y., assignor to General Electric Company. Separation of liquid suspensions. No. 1,170,184; Feb. 1; Gaz. vol. 223; p. 151.
Peerman, V. Homer, et al. (See Zaitz, Frank, assignor.)
Pegues, Cornelius K., Cheraw, S. C. Corn and pea planter. No. 1,172,308; Feb. 22; Gaz. vol. 223; p. 1034.
Peirce, Joseph M. (See Wilkinson and Peirce.)
Pelham, George, assignor of one-half to C. Kellar, Lead, S. D. Automobile-headlight. No. 1,171,237; Feb. 8; Gaz. vol. 223; p. 553.
Pelton, Myron S., Folsom, Cal. Extensible support. No. 1,171,974; Feb. 15; Gaz. vol. 223; p. 857.
Pelton Water Wheel Company, The. (See Doble and Karnasch, assignors.)
Pelton Water Wheel Company, The. (See Karnasch, Leopold M., assignor.)
Penn Bros. Suspender Company. (See Penn, Holmes E., assignor.)
Penn, Holmes E., assignor to Penn Bros. Suspender Company, Inc., Madison, N. C. Garter. No. 1,170,781; Feb. 8; Gaz. vol. 223; p. 394.
Pennington-Hayward, Harry J., Birmingham, England. Signaling device. No. 1,171,638; Feb. 15; Gaz. vol. 223; p. 737.
Pennsylvania Wire Glass Company. (See Shuman, Arno, assignor.)
Pentz, Albert D., Lynn, Mass., assignor to General Electric Company. Machine for making paper tubes. No. 1,171,872; Feb. 15; Gaz. vol. 223; p. 819.
Pepper, Frederick V., and E. A. Brandenburg, Los Angeles, Cal. Paper-fastening device. No. 1,173,119; Feb. 22; Gaz. vol. 223; p. 1324.
Perfect, Charles A., Sunbury, Ohio. Storage structure. No. 1,173,535; Feb. 29; Gaz. vol. 223; p. 1515.
Perfect Safety Paper Co. (See Weis, Joseph B., assignor.)
Perfection Cap & Can Company, The. (See Hull, Herbert H., assignor.)
Perkins, Floyd N., assignor to Arcade Manufacturing Company, Freeport, Ill. Latch. No. 1,171,975; Feb. 15; Gaz. vol. 223; p. 858.
Perkins, Herbert W., Lynn, Mass. Filter. No. 1,172,728; Feb. 22; Gaz. vol. 223; p. 1187.
Perkins, Joseph G., Cincinnati, Ohio, assignor, by mesne assignments, to Perkins-Skinner Valve Co. Flushing-valve. (Reissue.) No. 14,067; Feb. 15; Gaz. vol. 223; p. 953.
Perkins, Richard E., Atlanta, Ga. Locking device. No. 1,172,482; Feb. 22; Gaz. vol. 223; p. 1099.
Perkins-Skinner Valve Co. (See Perkins, Joseph G., assignor.) (Reissue.)
Perlman, David, New York, N. Y. Cloth-cutting machine. No. 1,173,983; Feb. 29; Gaz. vol. 223; p. 1668.
Permin, Fred O. (See Canfield and Permin.)
Perrine, George H., Greenburg, N. Y. Necktie-guide for folded collars. No. 1,173,735; Feb. 29; Gaz. vol. 223; p. 1585.
Perrine, George H., Greensburg, N. Y., assignor to Scovill Manufacturing Company, Waterbury, Conn. Spring-connector for suspenders and the like. No. 1,171,873; Feb. 15; Gaz. vol. 223; p. 819.
Perry, Frederick H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lip-turning machine. No. 1,173,381; Feb. 29; Gaz. vol. 223; p. 1462.
Persson, Otto F., Erie, Pa., assignor to General Electric Company. Internal-combustion engine and compressor therefor. No. 1,173,025; Feb. 22; Gaz. vol. 223; p. 1293.
Peteler, Adolph J., Yonkers, assignor to J. F. McGuire, New York, N. Y. Vehicle shock-absorber. No. 1,172,887; Feb. 22; Gaz. vol. 223; p. 1062.
Peterman, James A., Franklin, La. Machine for lowering lumber. No. 1,172,042; Feb. 15; Gaz. vol. 223; p. 883.
Petermann, Charles H., Natalbany, La. Box-strap tightener. No. 1,173,026; Feb. 22; Gaz. vol. 223; p. 1294.
Peters, Gustav. (See Duden and Peters.) (Reissue.)
Peters, Jakob H. (See Peters and Bey.)
Peters, James F., Latrobe, and J. W. Dudgeon, Pittsburgh, Pa. Shoe. No. 1,173,605; Feb. 29; Gaz. vol. 223; p. 1540.

Peters, Le Roy E. and R. C., Chicago, Ill. Differential-gear lock. No. 1,170,561; Feb. 8; Gaz. vol. 223; p. 316.

Peters, Paul and J. H., and P. A. Bey, Hamburg, Germany. Helm-signal. No. 1,173,680; Feb. 29; Gaz. vol. 223; p. 1566.

Peters, Raymond C. (See Peters, Le Roy E. and R. C.)

Petersen, William F., Chicago, Ill. Baker's oven. No. 1,171,874; Feb. 15; Gaz. vol. 223; p. 819.

Peterson, Fredolf J., Salem, assignor to The McCaskey Register Company, Alliance, Ohio. Cash and credit recorder. No. 1,171,875; Feb. 15; Gaz. vol. 223; p. 820.

Peterson, John, assignor to The American Hardware Corporation, New Britain, Conn. Hold-open device for doors. No. 1,170,491; Feb. 1; Gaz. vol. 223; p. 255.

Peterson, Jonathan, Brooklyn, assignor to Weyman Bruton Company, New York, N. Y. Vending apparatus. No. 1,170,667; Feb. 8; Gaz. vol. 223; p. 354.

Peterson, Manuel. (See Nordvall and Peterson.)

Peterson, Peter L., Manti, Utah. Shoe-heel device. No. 1,171,749; Feb. 15; Gaz. vol. 223; p. 775.

Peterson, Victor H., Cambridge, Mass. Air-pump for automobiles and the like. No. 1,170,458; Feb. 1; Gaz. vol. 223; p. 244.

Petrell, Marcus A., *et al.* (See Muldoon, John J., assignor.)

Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Typographic machine. No. 1,171,136; Feb. 8; Gaz. vol. 223; p. 520.

Petri-Palmedo, David, Bridgeport, and E. F. Goddard, Stratford, Conn., assignors to Electric Compositor Company, New York, N. Y. Multiple-magazine typographic machine. No. 1,171,537; Feb. 15; Gaz. vol. 223; p. 700.

Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Line-separating mechanism for line-casting machines. No. 1,172,309; Feb. 22; Gaz. vol. 223; p. 1034.

Petrie, Corydon J., Geneva, Ohio. Gas-stove. No. 1,172,629; Feb. 22; Gaz. vol. 223; p. 1153.

Pett, Fred W. (See Smith and Lizer, assignors.)

Pettengill, George M., Haverhill, assignor, by mesne assignments, to Hamel Shoe Machinery Company, Lynn, Mass. Heeling-machine. No. 1,170,321; Feb. 1; Gaz. vol. 223; p. 197.

Pettersson, Carl F. (See Wingrantz, Nilson, and Pettersson.)

Pettes, Mary L., Lakota, N. D. Mattress-handle. No. 1,170,844; Feb. 8; Gaz. vol. 223; p. 415.

Pettis, John G., assignor to The Imperial Brass Manufacturing Company, Chicago, Ill. Mixing-head for gas-torches. No. 1,172,729; Feb. 22; Gaz. vol. 223; p. 1188.

Pettis, John G., assignor to The Imperial Brass Manufacturing Company, Chicago, Ill. Tip for combined welding and cutting torches. No. 1,172,730; Feb. 22; Gaz. vol. 223; p. 1188.

Peycke, Armand H., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Spring-dampener. No. 1,169,862; Feb. 1; Gaz. vol. 223; p. 40.

Peycke, Armand H., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Truck-spring dampener. No. 1,169,863; Feb. 1; Gaz. vol. 223; p. 40.

Peyton, William T., Weiser, Idaho. Spring-tire. No. 1,170,322; Feb. 1; Gaz. vol. 223; p. 198.

Pfefferkorn, William L., A. P. Schloerb, and A. H. Hammetter, Milwaukee, Wis. Extension-table. No. 1,170,562; Feb. 8; Gaz. vol. 223; p. 316.

Pfefferkorn, William L., A. P. Schloerb, and A. H. Hammetter, Milwaukee, Wis. Banquet-top for extension-tables. No. 1,170,563; Feb. 8; Gaz. vol. 223; p. 316.

Pfeil, Elmer C., and O. Bemisderfer, Hammond, Ind., assignors to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,171,876; Feb. 15; Gaz. vol. 223; p. 820.

Pfleging, John. (See Harris, Frank W., assignor.)

Phelan, William A., Newark, N. J., assignor to American Can Company, New York, N. Y. Dispensing-can. No. 1,173,305; Feb. 29; Gaz. vol. 223; p. 1434.

Phelps, Edward V., assignor to Improved Paper Machinery Company, Nashua, N. H. Roll. No. 1,173,736; Feb. 29; Gaz. vol. 223; p. 1586.

Philadelphia Drying Machinery Company, The. (See Parkes, Bertrand A., assignor.)

Philip Carey Manufacturing Company, The. (See Innes, Harry C., assignor.)

Phillips, Arthur P., Haverhill, Mass., assignor to Crosby Steam Gage & Valve Company. Check-valve. No. 1,173,536; Feb. 29; Gaz. vol. 223; p. 1515.

Phillips, Charles E., Indianapolis, Ind. Face-plate for concrete-block machines. No. 1,172,731; Feb. 22; Gaz. vol. 223; p. 1189.

Phillips, Clarence A., Washington, D. C. Camera-shifting mechanism for moving-picture cameras. No. 1,171,877; Feb. 15; Gaz. vol. 223; p. 821.

Phillips, Elwood C., assignor of one-half to C. F. Gabriel, Chicago, Ill. Bung-hole closure for barrels and the like. No. 1,173,606; Feb. 29; Gaz. vol. 223; p. 1540.

Phillips, Frank E., Wells, Me. Telephone-signal-operating device. No. 1,170,323; Feb. 1; Gaz. vol. 223; p. 198.

Phillips, Herman A. (See Spanovic, Ninko, assignor.)

Phillips, Karen M., New York, N. Y. Astrological clock. No. 1,171,458; Feb. 15; Gaz. vol. 223; p. 673.

Phillips, Marshall, Silver Creek, Ga. Washing-machine. No. 1,173,027; Feb. 22; Gaz. vol. 223; p. 1294.

Picard-Milne Company. (See Milne, Russell A., assignor.)

Picher Lead Company, The. (See Schaeffer, John A., assignor.)

Pick, Thomas P., Chicago, Ill. Bottle-stopper. No. 1,171,976; Feb. 15; Gaz. vol. 223; p. 858.

Pickett, Frederick A. and H. B., Baltimore, Md. Chemical-treating manure mixer, pulverizer, and distributer. No. 1,173,850; Feb. 29; Gaz. vol. 223; p. 1628.

Pickett, Hurdle B. (See Pickett, Frederick A. and H. B.)

Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)

Pieper, Oscar H. and A. F., Rochester, N. Y. Rotary converter. No. 1,172,630; Feb. 22; Gaz. vol. 223; p. 1153.

Pierce, Clarence E., Starkville, Miss. Cotton-cultivator. No. 1,170,459; Feb. 1; Gaz. vol. 223; p. 244.

Pierce, George F., Chicago, Ill. System of supplying hydrogen gas to furnaces. No. 1,172,551; Feb. 22; Gaz. vol. 223; p. 1125.

Pierce, George L., Brooklyn, N. Y., assignor to A. G. Spalding & Bros. Mfg. Co., Jersey City, N. J. Athletic ball. No. 1,171,238; Feb. 8; Gaz. vol. 223; p. 554.

Pierce, George L., Brooklyn, assignor to A. G. Spalding & Bros., New York, N. Y. Thigh-guard. No. 1,172,552; Feb. 22; Gaz. vol. 223; p. 1126.

Pierce, H. C., trustee. (See Burk, Charles H., assignor.)

Pierce, Roldon E., Brimfield, Ill. Planter attachment for cultivators. No. 1,171,239; Feb. 8; Gaz. vol. 223; p. 554.

Pierce, Solomon B., assignor of one-fourth to H. H. Preston, Gashland, Mo. Convertible cattle chute and dehorning apparatus. No. 1,171,878; Feb. 15; Gaz. vol. 223, p. 821.

Pierson, James R., *et al.*, executors. (See Edgar, James.)

Pierson, John F., *et al.*, executors. (See Edgar, James.)

Piggott, Enoch D., Parkersburg, W. Va. Lock-nut. No. 1,169,864; Feb. 1; Gaz. vol. 223; p. 41.

Pignois, René. (See Larribe, Antoine, assignor.)

Pike, George J., Grand Rapids, Mich. Holder for tumblers. No. 1,171,538; Feb. 15; Gaz. vol. 223; p. 701.

Pile, John R., Owensboro, Ky. Road grading and ditching machine. No. 1,173,681; Feb. 29; Gaz. vol. 223; p. 1566.

Pilliod, James J. (See Fay, Shaw, and Pilliod.)

Pioneer Suspender Company. (See Croasdale, John P., assignor.)

Piper, George A., Omaha, Nebr. Lifting-jack. No. 1,171,240; Feb. 8; Gaz. vol. 223; p. 554.

Pipon, Emile, Paris, France. Photographic apparatus for taking multiple stereoscopic views across a vertically-unwinding film. No. 1,171,639; Feb. 15; Gaz. vol. 223; p. 737.

Pirdun, Lewis, Tulsa, Okla. Burner. No. 1,171,137; Feb. 8; Gaz. vol. 223; p. 521.

Pistek, Frank, and J. Iiejl, Ovid, Mich. Plow-cultivator. No. 1,172,553; Feb. 22; Gaz. vol. 223; p. 1126.

Pittman, Herbert C., *et al.* (See Eason, John F. H., assignor.)

Pittoni, Louis E. (See Sisbower and Pittoni.)

Pittsburgh Gage and Supply Company. (See Wappat, Fred W., assignor.)

Pittsburgh Plate Glass Company. (See Hitchcock, Halbert K., assignor.)

Plançon, Emile. (See Keiner and Plançon.)

Plaut, Thomas G., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. No. 1,172,902; Feb. 22; Gaz. vol. 223; p. 1252.

Plastic Products Company. (See Weakley, Raymond D., assignor.)

Platt, Clarence D., Bridgeport, Conn. Inclosed switch construction. No. 1,170,990; Feb. 8; Gaz. vol. 223; p. 465.

Plum, John B., North Yakima, Wash. Boiler. No. 1,172,043; Feb. 15; Gaz. vol. 223; p. 884.

Plume and Atwood Manufacturing Company. (See Andersen, Lauritz W., assignor.)

Plumley, Marion S., assignor to Superior Oxygen Company, Pittsburgh, Pa. Cutting-torch or blowpipe. No. 1,172,903; Feb. 22; Gaz. vol. 223; p. 1253.

Plumley, Marion S., assignor to Superior Oxygen Company, Pittsburgh, Pa. Welding-torch. No. 1,173,461; Feb. 29; Gaz. vol. 223; p. 1488.

Plympton, Frederic K., Wellesley, assignor to Plympton Manufacturing Company, Boston, Mass. Machine for making closure disks or caps. No. 1,172,830; Feb. 22; Gaz. vol. 223; p. 1227.

Plympton Manufacturing Company. (See Plympton, Frederic K., assignor.)

Pneumatic Scale Corporation *et al.* (See Field, Samuel B., assignor.)

Politzer, Max, assignor to E. J. Fraenkell, New York, N. Y. Doll. No. 1,171,977; Feb. 15; Gaz. vol. 223; p. 858.

Pollard, John D. (See Aschburner, Fredrick C., assignor.)

Pollock, A. V., *et al.* (See Wilson, Samuel T., assignor.)

Polson, Carl, Vermillion, Kans. End-gate for wagons. No. 1,173,857; Feb. 29; Gaz. vol. 223; p. 1628.

Pomerene, Myron B., Berlin, Ohio. Dilating-forceps. No. 1,170,324; Feb. 1; Gaz. vol. 223; p. 198.

Pool, Andrew, and R. Knan, Indiana Harbor, Ind. Smoke and dust consumer. No. 1,171,750; Feb. 15; Gaz. vol. 223; p. 775.

Pool, Arnold A., assignor of one-half to J. W. Konz. Toledo, Ohio. Spinal adjusting and stretching apparatus. No. 1,173,306; Feb. 29; Gaz. vol. 223; p. 1486.

Pope, Joseph H., Hamilton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Cuttingdie. No. 1,171,459; Feb. 15; Gaz. vol. 223; p. 673.

Pope, Marion J., Boswell, Okla. Cotton-picking sack. No. 1,172,044; Feb. 15; Gaz. vol. 223; p. 884.

Poplin, Robert T., and W. F. Ferguson, Butterfield, Mo. Automatic train-stop. No. 1,171,539; Feb. 15; Gaz. vol. 223; p. 701.

Poposkey, Archie B., New York, N. Y. Attachment for musical instruments. No. 1,170,325; Feb. 1; Gaz. vol. 223; p. 198.

Porcher, Edward P., Charleston, S. C. Automobile-top-actuating mechanism. No. 1,173,858; Feb. 29; Gaz. vol. 223; p. 1628.

Porter, Ansley S., Fitchburg, Mass. Metal-cutting machine. No. 1,172,831; Feb. 22; Gaz. vol. 223; p. 1227.

Porter, Joseph C. (See Kelley and Porter.)

Porter, Stephen C., New York, N. Y. Telephone-transmitter. No. 1,171,460; Feb. 15; Gaz. vol. 223; p. 673.

Porter, Walter D., Forest City, Iowa. Billiard or pool table attachment. No. 1,173,859; Feb. 29; Gaz. vol. 223; p. 1629.

Porter, William W. (See Bogan, Walter T., assignor.)

Portune, George, Cincinnati, Ohio. Book-cover protector. No. 1,172,045; Feb. 15; Gaz. vol. 223; p. 884.

Posivak, Andrew A., South Bethlehem, Pa. Adjustable book rack and stand. No. 1,170,326; Feb. 1; Gaz. vol. 223; p. 199.

Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-range. (Reissue.) No. 14,068; Feb. 15; Gaz. vol. 223; p. 954.

Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Metallic strengthening and finishing binding. No. 1,173,028; Feb. 22; Gaz. vol. 223; p. 1294.

Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Making handles. No. 1,173,029; Feb. 22; Gaz. vol. 223; p. 1294.

Postel, Carl H., assignor to Champion Spark Plug Company, Toledo, Ohio. Spark-plug-assembling machine. No. 1,173,214; Feb. 29; Gaz. vol. 223; p. 1400.

Postlethwaite, Alonzo W. (See Jones and Postlethwaite.)

Potter, Duane L., Scranton, Pa. Tool for dressing fish, &c. No. 1,171,241; Feb. 8; Gaz. vol. 223; p. 555.

Potter, William H., Cleghorn, Iowa. Combined breech-loading shotgun and rifle. No. 1,170,327; Feb. 1; Gaz. vol. 223; p. 199.

Potts, Gifford L., Elkton, Md. Twine-holder. No. 1,173,030; Feb. 22; Gaz. vol. 223; p. 1295.

Powell, Harry E., Kokomo, Ind. Cream-separator. No. 1,170,328; Feb. 1; Gaz. vol. 223; p. 199.

Powell, John A. (See Lang and Powell.)

Power Numbering Machine Company. (See Merrick, Frank W., assignor.)

Power Numbering Machine Company. (See Parkhurst, Edward B., assignor.)

Power Washing Machine Co. (See Altorfer, Alpheus W., assignor.)

Prater, Acie M., Hugo, Okla. Level. No. 1,173,860; Feb. 29; Gaz. vol. 223; p. 1629.

Prather, Andrew T., Rodeo, N. Mex. Attaching means for gun-silencers. No. 1,171,242; Feb. 8; Gaz. vol. 223; p. 555.

Prather, Asa P., Georgetown, Ky. Demountable wheel. No. 1,170,668; Feb. 8; Gaz. vol. 223; p. 355.

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,173,120; Feb. 22; Gaz. vol. 223; p. 1325.

Precision Machine Company, The. (See Frappler, Louis S., assignor.)

Precision Metal Workers. (See Noetzel and Ferris, assignors.) (Reissue.)

Precision Thermometer and Instrument Company. (See Smith, Robert A., assignor.)

Prentice, Emma F., executrix. (See Prentice, George W.)

Prentice, George E., assignor to The G. E. Prentice Manufacturing Company, New Britain, Conn. Hose-supporter stud and loop. No. 1,170,782; Feb. 8; Gaz. vol. 223; p. 394.

Prentice, George W., deceased, Providence, R. I.; E. F. Prentice, executrix. Combined button and fastener. No. 1,171,640; Feb. 15; Gaz. vol. 223; p. 738.

Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Sole for spring-heel shoes. No. 1,171,879; Feb. 15; Gaz. vol. 223; p. 821.

Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Co., New York, N. Y. Mooring-winch. No. 1,171,540; Feb. 15; Gaz. vol. 223; p. 702.

Prescott, Sydney L., Brooklyn, N. Y. Carbureter. No. 1,172,388; Feb. 22; Gaz. vol. 223; p. 1063.

Pressed Steel Car Company. (See Lindström, Charles A., assignor.)

Preston, Hugh H. (See Pierce, Solomon B., assignor.)

Preston, Percy, Denison, Tex. Reed-board. No. 1,171,802; Feb. 15; Gaz. vol. 223; p. 793.

Price, Frank L. (See Mansbach, Conrad B., assignor.)

Price, Henry F., Riverside, assignor to The Putnam Trust Company, Greenwich, Conn. Certificate of deposit. No. 1,172,554; Feb. 22; Gaz. vol. 223; p. 1126.

Price, Vincent, assignor to C. J. Higley, New York, N. Y. Safety-pin. No. 1,170,186; Feb. 1; Gaz. vol. 223; p. 152.

Price, Vincent, New York, and J. H. Sanderson, Babylon, assignors to C. J. Higley, New York, N. Y. Button. No. 1,170,185; Feb. 1; Gaz. vol. 223; p. 152.

Pries, Amelia, executrix. (See Pries, Herman.)

Pries, Herman, deceased, Michigan City, Ind.; A. Pries, executrix. Brake-shaft. No. 1,172,904; Feb. 22; Gaz. vol. 223; p. 1253.

Priest, George W., Newton, Mass. Contracting core for cement-lined pipes. No. 1,171,641; Feb. 15; Gaz. vol. 223; p. 738.

Primrose, John, Dongan Hills, N. Y. Steam-superheater. No. 1,171,353; Feb. 8; Gaz. vol. 223; p. 594.

Prindle, Roscoe S., New York, N. Y. Producing artificial respiration. No. 1,169,995; Feb. 1; Gaz. vol. 223; p. 84.

Prindle, Roscoe S., New York, N. Y. Apparatus for producing artificial respiration. No. 1,169,996; Feb. 1; Gaz. vol. 223; p. 84.

Pritchard, George T., Norfolk, Va. Tag-addressing machine. No. 1,170,932; Feb. 8; Gaz. vol. 223; p. 444.

Progress Machine Company. (See Gaynor and Lieber, assignors.)

Prokop, Prokop J., New York, N. Y. Elevator safety device. No. 1,171,243; Feb. 8; Gaz. vol. 223; p. 556.

Proksa, John, Chicago, Ill. Film-feeding mechanism. No. 1,170,991; Feb. 8; Gaz. vol. 223; p. 466.

Protective Signal Manufacturing Company, The. (See Neahr, Will C., assignor.)

Protheroe, Robert. (See Mathers, George C., assignors.)

Prout, Ervin L., Albion, Ill. Rule. No. 1,172,631; Feb. 22; Gaz. vol. 223; p. 1153.

Prouty, Gardner W., Littleton, assignor to The Macallen Company, Boston, Mass. Hickey. No. 1,171,880; Feb. 15; Gaz. vol. 223; p. 822.

Pruitt, James H., Fort Myers, Fla. Syringe. No. 1,173,031; Feb. 22; Gaz. vol. 223; p. 1295.

Psenicik, Henry, Ballinger, Tex. Plow. No. 1,172,046; Feb. 15; Gaz. vol. 223; p. 885.

Publishers Utilities Company. (See Williamson and Mandelick, assignors.)

Pugh, Harry H., Topeka, Kans. Silo and tank construction. No. 1,171,881; Feb. 15; Gaz. vol. 223; p. 822.

Pugh, John V., Coventry, England. Detachable wheels and fitting vehicles therewith. No. 1,171,244; Feb. 8; Gaz. vol. 223; p. 556.

Pull-More Motor Truck Company. (See Marker, Henry H., assignor.)

Pullets, George, assignor of one-half to P. Raia, New York, N. Y. Window-frame. No. 1,170,101; Feb. 1; Gaz. vol. 223; p. 123.

Pulliam, Oswald S., Pittsburgh, Pa. Car-body-underframe construction. No. 1,172,732; Feb. 22; Gaz. vol. 223; p. 1189.

Purcell, John M., Venice, assignor to Gem Carbureter and Auto Specialty Company, Oakland, Cal. Carbureter. No. 1,171,401; Feb. 8; Gaz. vol. 223; p. 612.

Purdy, Martin K., assignor of one-half to J. H. Spence, Easton, Pa. Lifting-jack. No. 1,170,992; Feb. 8; Gaz. vol. 223; p. 466.

Putnam, Oliver K., Orange, Cal. Ladder. No. 1,170,933. Feb. 8; Gaz. vol. 223; p. 445.

Putnam Trust Company, The. (See Price, Henry F., assignor.)

Putney, William W., Kent City, assignor of one-fourth to M. A. Muma and one-fourth to E. M. Holland, Grand Rapids, Mich. Chamfer, croze, and equalizing knife for stave-machines. No. 1,170,187; Feb. 1; Gaz. vol. 223; p. 152.

Pysz, Frank, Taunton, Mass. Saw-filing machine. No. 1,169,997; Feb. 1; Gaz. vol. 223; p. 85.

Quagliano, Vito A., East Boston, Mass. Window-screen. No. 1,171,138; Feb. 8; Gaz. vol. 223; p. 521.

Quam, James P., assignor to The Richardson-Phenix Co., Milwaukee, Wis. Lubricator. No. 1,173,382; Feb. 29; Gaz. vol. 223; p. 1462.

Quattlebaum, Edwin P. (See Pearson and Quattlebaum.)

Quebec Savings and Trust Company. (See Jagger, Peter B., assignor.)

Quesnell, Cornelius, Moscow, Idaho. Rotary grain-cleaner. No. 1,173,737; Feb. 29; Gaz. vol. 223; p. 1586.

Quilligan, James J. (See Johnson and Quilligan.)

Quincy Elevator Gate Co. (See Fogal, John E. W., assignor.)

Quinn, Edward J., assignor to Morgan Construction Company, Worcester, Mass. Guide for rolling-mills. No. 1,173,738; Feb. 29; Gaz. vol. 223; p. 1586.

Quinn, James J., Eddystone, Pa. Exposure-shutter for cameras. No. 1,173,861; Feb. 29; Gaz. vol. 223; p. 1629.

Quinney, Elwyn H. (See Coolbaugh and Quinney.)

R. & H. Manufacturing Company, The. (See Hinckley, Henry D., assignor.)

R. Hoe and Co. (See Cooper, Ellis W., assignor.)

R. Hoe and Co. (See Taylor, Arthur K., assignor.)

R. Williamson & Co. (See Williamson, James, assignor.)

R. K. Le Blond Machine Tool Company, The. (See Le Blond and Groene, assignors.)

R. K. M. Mfg. Company. (See Rosenman, Leo, assignor.)

R. L. Griffith & Son Company, The. (See Vaughan, Albert F., assignor.)

Raber, Joseph, Poplar Bluff, Mo., assignor, by mesne assignments, to The Dalton Adding Machine Company, Cincinnati, Ohio. Type-writing and recording machine. No. 1,172,733; Feb. 22; Gaz. vol. 223; p. 1190.

Rabey, Edward K., Deanes, Va. Spring-wheel. No. 1,172,224; Feb. 15; Gaz. vol. 223; p. 942.

Rack, Alexander, Philadelphia, Pa. Sewing-machine brake. No. 1,172,166; Feb. 15; Gaz. vol. 223; p. 924.

Rack, Alexander, Philadelphia, Pa. Swing. No. 1,172,167; Feb. 15; Gaz. vol. 223; p. 924.

Rademaker, William E. R., Hoboken, N. J. Ball-rolling contact for rain-signals, &c. No. 1,172,047; Feb. 15; Gaz. vol. 223; p. 885.

Radiguer, Charles, assignor to The Societe Anonyme des Etablissements Delaunay-Belleville, St.-Denis, France. Combined lubricating and cooling system for internal-combustion engines. No. 1,173,537; Feb. 29; Gaz. vol. 223; p. 1515.

Radio Telephone & Telegraph Company. (See De Forest, Lee, assignor.)

Radio Telephone & Telegraph Company. (See De Forest and Logwood, assignors.)

Radtke, Albert A. (See Straub and Radtke.)

Raftery, Matthew A., and O. Frey, New York, N. Y. Attachment for the promotion of ease and speed in writing. No. 1,173,607; Feb. 29; Gaz. vol. 223; p. 1541.

Raia, Paul. (See Pullets, George, assignor.)

Rail Joint Company, The. (See Wolhaupter, Benjamin, assignor.)

Railroad Supply Company, The. (See Vogel, Eugene W., assignor.)

Railway Products Corporation. (See Forsyth, William D., assignor.)

Rainey, Boyd E., St. Louis, Mo. Hot-air furnace. No. 1,171,245; Feb. 8; Gaz. vol. 223; p. 556.

Ralston Steel Car Company, The. (See Weaver, Robert R., assignor.)

Ramsey, Stanley M., Cincinnati, Ohio. Wrapping-paper for loaves of bread and the like. No. 1,171,461; Feb. 15; Gaz. vol. 223; p. 673.

Rangnow, Otto, Philadelphia, Pa. Trunk. No. 1,171,978; Feb. 15; Gaz. vol. 223; p. 859.

Ransom, Willard G., Davenport, Iowa. Lever hand-brake for railway-cars. No. 1,171,642; Feb. 15; Gaz. vol. 223; p. 738.

Ransomer, John W., Batesville, Ark. Intermittent operating mechanism. No. 1,172,310; Feb. 22; Gaz. vol. 223; p. 1034.

Ranson, Charles, Paris, France. Manufacturing dehydrated zinc sulfid. No. 1,171,246; Feb. 8; Gaz. vol. 223; p. 556.

Raschig, Fritz, Ludwigshafen-on-the-Rhine, Germany. Elastic artificial cork and producing same. No. 1,170,102; Feb. 1; Gaz. vol. 223; p. 123.

Rasmussen, Chester A., and R. M. Clark, Yenangyaung, Upper Burmah, India. Tool-fishing socket. No. 1,170,329; Feb. 1; Gaz. vol. 223; p. 200.

Rasmussen, Martin, and N. N. Brown, assignors to Gold Medal Camp Furniture Manufacturing Co., Racine, Wis. Folding frame for portable buildings. No. 1,170,188; Feb. 1; Gaz. vol. 223; p. 152.

Raubolt, Fred A. (See Soulliere, Leon, assignor.)

Rausch, Carl A., Leipzig-Gohlis, assignor to Fortuna-Werke, Specialmaschinenfabrik, G. m. b. H., Stuttgart-Cannstatt, Germany. Hide-carrier for boarding-machines. No. 1,172,632; Feb. 22; Gaz. vol. 223; p. 1154.

Rausenberger, Fritz, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Training-gear for mobile artillery. No. 1,173,215; Feb. 29; Gaz. vol. 223; p. 1401.

Rauskolb, Fred W., Medford, Mass. Feeding attachment for metallic-leaf-stamping machines. No. 1,170,189; Feb. 1; Gaz. vol. 223; p. 153.

Ravlin, Frederick J., Chicago, Ill. Electric switch. No. 1,170,190; Feb. 1; Gaz. vol. 223; p. 153.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky., Planter. No. 1,171,882; Feb. 15; Gaz. vol. 223; p. 822.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky., Planter. No. 1,171,883; Feb. 15; Gaz. vol. 223; p. 823.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky., Planter. No. 1,171,884; Feb. 15; Gaz. vol. 223; p. 823.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky., Planter or the like. No. 1,171,885; Feb. 15; Gaz. vol. 223; p. 824.

Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky., Planter or the like. No. 1,171,886; Feb. 15; Gaz. vol. 223; p. 824.

Ray, Frederick, Short Hills, N. J., assignor to Alberger Pump and Condenser Company, New York, N. Y. Centrifugal, turbine, or similar pump. No. 1,172,555; Feb. 22; Gaz. vol. 223; p. 1127.

Ray, Frederick L., Louisville, Ky. Feed-water regulator. No. 1,171,643; Feb. 15; Gaz. vol. 223; p. 738.

Raydure, Charles F., West Philadelphia, Pa. Contact-shoe for third-rail electric cars. No. 1,169,865; Feb. 1; Gaz. vol. 223; p. 41.

Raymond Brothers Impact Pulverizer Company. (See Lachmann, Robert A., assignor.)

Raymond, Harry K., Akron, Ohio, assignor, by mesne assignments, to The B. F. Goodrich Company. Thread or cord. No. 1,171,247; Feb. 8; Gaz. vol. 223; p. 557.

Raymond, Harvey, New York, N. Y. Dental gage for bridgework. No. 1,173,383; Feb. 29; Gaz. vol. 223; p. 1463.

Raymond, Henry S., Waterloo, Iowa. Adjustable knock-down socket. No. 1,172,734; Feb. 22; Gaz. vol. 223; p. 1190.

Rayner, Charles W., Aurora, Ill. Self-setting rat-trap. No. 1,173,462; Feb. 29; Gaz. vol. 223; p. 1488.

Rayner, George F., Acton, England. Motor-cycle, tri-car, cycle-car, and like motor-vehicle. No. 1,170,845; Feb. 8; Gaz. vol. 223; p. 415.

Read, Fred A., Lynn, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-stitching machine. No. 1,170,330; Feb. 1; Gaz. vol. 223; p. 200.

Read, Fred A., Lynn, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-stitching machine. No. 1,170,331; Feb. 1; Gaz. vol. 223; p. 201.

Read, George B., Bloomington, Ill. Gearing. No. 1,170,460; Feb. 1; Gaz. vol. 223; p. 245.

Reagan, James, Philadelphia, Pa. Boiler and other furnace. No. 1,171,803; Feb. 15; Gaz. vol. 223; p. 793.

Reasoner, Frank E., *et al.* (See Markussen, Henry W. E., assignor.)

Recording and Computing Machines Company, The. (See Ohmer and McAllister, assignors.)

Recording Safety Device Company. (See Hudson, Frederick F., assignor.)

Redfield, Casper L. (See Folger and Redfield.)

Reece Button Hole Machine Company. (See Bassett, Elmer C., assignor.)

Reece Button Hole Machine Company, The. (See Hagelstein, Christian H. T., assignor.)

Reece Button Hole Machine Company, The. (See Read, Fred A., assignor.)

Reece Folding Machine Company. (See Clearwater, Harley M., assignor.)

Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)

Reed, Oliver A., Plainfield, N. J. Engine-valve. No. 1,172,556; Feb. 22; Gaz. vol. 223; p. 1127.

Rees, George A., Chicago, Ill. Putter. No. 1,173,384; Feb. 29; Gaz. vol. 223; p. 1463.

Rees, Jesse W., St. Paul, Minn. Jack. No. 1,172,832; Feb. 22; Gaz. vol. 223; p. 1228.

Rees, Warren C., Somerville, assignor to Aseptic Service Company, Boston, Mass. Water-closet seat. No. 1,171,644; Feb. 15; Gaz. vol. 223; p. 739.

Reese, Louis C., assignor to Werner & Pfleiderer Co., Saginaw, Mich. Oven. No. 1,171,887; Feb. 15; Gaz. vol. 223; p. 825.

Regnier, Ireland G., Humphrey, Ark. Washing-machine. No. 1,170,103; Feb. 1; Gaz. vol. 223; p. 123.

Reiboldt, William P., Newark, and E. C. Clark, Nutley, N. J., assignors to Oscar Barnett Foundry Company, Chain-grate stoker. No. 1,173,307; Feb. 29; Gaz. vol. 223; p. 1435.

Reichardt, Peter. (See Tannenbaum and Reichardt.)

Reiche, Hermann, Bellemead, N. J. Internal-combustion engine. No. 1,172,048; Feb. 15; Gaz. vol. 223; p. 885.

Reiche, Hermann, Millstone, N. J. Tooth-brush. No. 1,173,032; Feb. 22; Gaz. vol. 223; p. 1295.

Reichert, John, Racine, Wis. Breast-strap snap-hook and the like. No. 1,170,846; Feb. 8; Gaz. vol. 223; p. 416.

Reid, William C. (See Gronert and Reid.)

Reifsnyder, James D., and H. G. Schwerdtle, Philadelphia, assignors to Stokes & Smith Company, Summerdale, Pa. Throw-out mechanism for printing-presses. No. 1,171,804; Feb. 15; Gaz. vol. 223; p. 794.

Reilly, Michael J., Chicago, Ill. Ironing-machine. No. 1,171,248; Feb. 8; Gaz. vol. 223; p. 557.

Reilly, William J., Denver, Colo. Suspended furnace-roof. No. 1,173,862; Feb. 29; Gaz. vol. 223; p. 1630.

Reinert, John, Millvale, Pa. Sash-holder. No. 1,171,645; Feb. 15; Gaz. vol. 223; p. 739.

Reinke, Eugene A., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Electromagnetic relay. No. 1,170,670; Feb. 8; Gaz. vol. 223; p. 255.

Reinshagen, Theresa. (See Bizzoni, Humbert, assignor.)

Remington, Alfred A., Birmingham, England. Means of connection between cantaliver-springs of vehicles and the axles thereof. No. 1,172,557; Feb. 22; Gaz. vol. 223; p. 1128.

Remy Electric Co. (See Reuter, Irving J., assignor.)

Renburg, Charles. (See Bohne and Renburg.)

Reno, Jesse W., New York, N. Y. Submarine-destroyer. No. 1,173,463; Feb. 29; Gaz. vol. 223; p. 1488.

Reno, Jesse W., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Truck-conveyer. No. 1,170,332; Feb. 1; Gaz. vol. 223; p. 201.

Renold Limited, Hans. (See Eden and Carter, assignors.)

Rensch, Georg, Berlin, Germany. Coupling device for flexible shafts. No. 1,173,682; Feb. 29; Gaz. vol. 223; p. 1566.

Repenning, Heinrich, Aix-la-Chapelle, Germany. Raising-gig for longitudinal and transverse teazeling. No. 1,173,608; Feb. 29; Gaz. vol. 223; p. 1541.

Replogle, James B., Chicago, Ill. Measuring instrument. No. 1,171,646; Feb. 15; Gaz. vol. 223; p. 740.

Ressler, George, New York, N. Y. Polypointed-pencil case. No. 1,170,671; Feb. 8; Gaz. vol. 223; p. 356.

Reuter, Irving J., assignor to Remy Electric Co., Anderson, Ind. System for supplying electricity. No. 1,169,866; Feb. 1; Gaz. vol. 223; p. 41.

Reuter, Theodor, Winterthur, Switzerland, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Starting two-stroke internal-combustion engines. No. 1,172,389; Feb. 22; Gaz. vol. 223; p. 1063.

Rey, Michel, Paris, France, assignor of one-half to J. De Wyckoff, Westminster, England. Window-sash. No. 1,173,863; Feb. 29; Gaz. vol. 223; p. 1630.

Reyer, Edward, Scranton, Pa. Mouth-extender. No. 1,170,333; Feb. 1; Gaz. vol. 223; p. 201.

Reynolds, Frank C., assignor of one-half to F. Ziegler and one-half to Z. H. Bradbury, Columbus, Ohio. Controlling means for automobile-tops. No. 1,172,735; Feb. 22; Gaz. vol. 223; p. 1191.

Reynolds, John, assignor to B. Mill, New Bedford, Mass. Apparatus for producing openwork fabrics. No. 1,171,249; Feb. 8; Gaz. vol. 223; p. 557.

Reynolds, Richard J., assignor of one-half to C. Easley, Taylor, Tex. Machine for crushing cotton-bolls. No. 1,170,847; Feb. 8; Gaz. vol. 223; p. 416.

Reynolds, William, Paterson, N. J., assignor to Fitchburg Machine Works, Fitchburg, Mass. Metal-working machine. No. 1,169,867; Feb. 1; Gaz. vol. 223; p. 42.

Reynolds, William F., Dayton, Ohio. Tuning-slide for clarinets. No. 1,171,647; Feb. 15; Gaz. vol. 223; p. 740.

Rhenstrom, Anthony, Kenosha, Wis. Wire-shaping machine. No. 1,173,739; Feb. 29; Gaz. vol. 223; p. 1587.

Rhoades, Irvin M., Racine, Ohio. Mud and scale collector. No. 1,173,033; Feb. 22; Gaz. vol. 223; p. 1295.

Rhoades, John F., Millinocket, Me. Absorbing, condensing, and purifying apparatus. No. 1,171,648; Feb. 15; Gaz. vol. 223; p. 740.

Rhodes, Francis J., Malton, England. Dentifrice. No. 1,169,998; Feb. 1; Gaz. vol. 223; p. 85.

Rhodin, John G. A., London, England. Bleaching sand. No. 1,173,385; Feb. 29; Gaz. vol. 223; p. 1463.

Rice, Albert J., and C. S. Adams, Buffalo, N. Y. Bottle-filling valve. No. 1,170,672; Feb. 8; Gaz. vol. 223; p. 356.

Rice, Charles E., Round Mountain, Nev. Internal-combustion engine. No. 1,170,104; Feb. 1; Gaz. vol. 223; p. 123.

Rice, Fred B., Dover, Mass., assignor to Rice & Hutchins, Incorporated, Portland, Me. Display-form for boots and shoes. No. 1,172,736; Feb. 22; Gaz. vol. 223; p. 1191.

Rice, George W., assignor of one-half to E. W. Miller, Manistique, Mich. Motor-vehicle steering mechanism. No. 1,173,034; Feb. 22; Gaz. vol. 223; p. 1296.

Rice & Hutchins. (See Rice, Fred B., assignor.)

Rice, Joseph, Chicago, Ill. Sanitary container and opener. No. 1,171,462; Feb. 15; Gaz. vol. 223; p. 673.

Rice, Lewis D., Kansas City, Mo. Straw-spreader. No. 1,170,673; Feb. 8; Gaz. vol. 223; p. 357.

Rich, Edwin N., Santa Fe, N. Mex. Digging and ditch-cleaning device. No. 1,173,035; Feb. 22; Gaz. vol. 223; p. 1296.

Richards, Darius P., St. Louis, Mo. Bracelet and the like. No. 1,169,999; Feb. 1; Gaz. vol. 223; p. 85.

Richards, Ernst R., assignor to Sears, Roebuck and Company, Chicago, Ill. Bookbinding. No. 1,169,868; Feb. 1; Gaz. vol. 223; p. 42.

Richards, Robert H., Boston, Mass. Apparatus for and process of classifying minerals. No. 1,170,848; Feb. 8; Gaz. vol. 223; p. 416.

Richards, Stephen H., New York, N. Y. Book-stand. No. 1,169,869; Feb. 1; Gaz. vol. 223; p. 42.

Richards, Willard F., Buffalo, N. Y., assignor to Gould Coupler Company. Dynamo suspension. No. 1,171,649; Feb. 15; Gaz. vol. 223; p. 741.

Richardson Aeroplane Company. (See Chapman, John H., assignor.)

Richardson, Francis N. (See Schade and Richardson.)

Richardson, Henry, Chicago, Ill. Wire fabric. No. 1,171,650; Feb. 15; Gaz. vol. 223; p. 741.

Richardson, James C. (See Robert, Pierre, assignor.)

Richardson, Joseph L., Blacksbear, Ga. Mud tread or shoe. No. 1,173,683; Feb. 29; Gaz. vol. 223; p. 1567.

Richardson Manufacturing Company. (See Curtis, John D., assignor.)

Richardson-Phenix Co., The. (See Quam, James P., assignor.)

Richardson, Robert A., Madison, Ga. Agricultural implement. No. 1,171,651; Feb. 15; Gaz. vol. 223; p. 741.

Richheimer, Isaac D., Chicago, Ill. Coffee-infuser. No. 1,172,390; Feb. 22; Gaz. vol. 223; p. 1063.

Richter, Emil. (See Jalowetz, Richter, and Schickher.)

Richter, Max, Chicago, Ill. Burglar-curtain for display-windows. No. 1,173,311; Feb. 22; Gaz. vol. 223; p. 1035.

Ricker, Harry E., Conneaut, Ohio. Valve. No. 1,172,833; Feb. 22; Gaz. vol. 223; p. 1228.

Rickert, August A., assignor to Rickert-Shafer Company, Erie, Pa. Ice-cutter. No. 1,172,558; Feb. 22; Gaz. vol. 223; p. 1128.

Rickert-Shafer Company. (See Rickert, August A., assignor.)

Ricketts, John B., Kansas City, Mo. Vault-light. No. 1,172,906; Feb. 22; Gaz. vol. 223; p. 1253.

Ridge, Thomas C., Carthage, Ill. Overshoe-retainer. No. 1,173,864; Feb. 29; Gaz. vol. 223; p. 1630.

Ridgely, Charles T., Springfield, Ohio. Demountable wheel. No. 1,173,216; Feb. 29; Gaz. vol. 223; p. 1401.

Ridgely, Charles T., Springfield, Ohio. Demountable hub. No. 1,173,217; Feb. 29; Gaz. vol. 223; p. 1402.

Ridgley, John, New Orleans, La. Attachment for water-closets. No. 1,170,669; Feb. 8; Gaz. vol. 223; p. 355.

Riedel, Ernst, Paterson, N. J. Shuttle-box. No. 1,170,934; Feb. 8; Gaz. vol. 223; p. 445.

Riegler, Louis J., Ben Avon, Pa. Anticreeper for rails. No. 1,170,105; Feb. 1; Gaz. vol. 223; p. 124.

Rielly, George, Santa Rosa, Cal. Cushion for railway-rails. No. 1,171,250; Feb. 8; Gaz. vol. 223; p. 558.

Rierdan, James E., *et al.* (See Stoffel, Fernand, assignor.)

Ries, Frederick C., Macon, Ga. Fountain-pen. No. 1,173,865; Feb. 29; Gaz. vol. 223; p. 1631.

Riesberg, Van Vechton, assignor of one-half to F. H. Dougherty, Philadelphia, Pa. Fountain-pen. No. 1,171,652; Feb. 15; Gaz. vol. 223; p. 742.

Riewe, Fridrick, Pottsville, Tex. Boll-weevil exterminator. No. 1,172,312; Feb. 22; Gaz. vol. 223; p. 1035.

Riexinger, George, Buffalo, N. Y. Wrench. No. 1,169,870; Feb. 1; Gaz. vol. 223; p. 43.

Rigby, Thomas, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Utilization of peat. No. 1,170,849; Feb. 8; Gaz. vol. 223; p. 417.

Riggs, Chester A., assignor of one-half to W. A. Riggs, Banner, Kans. Railway-tie and fastener. No. 1,171,653; Feb. 15; Gaz. vol. 223; p. 742.

Riggs, Frank H., Rochester, N. Y. Pliers. No. 1,170,334; Feb. 1; Gaz. vol. 223; p. 202.

Riggs, William A. (See Riggs, Chester A., assignor.)

Rike, Berton L., and J. R. Klin, assignors to The Germless Paper Cup Company, Dayton, Ohio. Folding paper vessel. No. 1,172,483; Feb. 22; Gaz. vol. 223; p. 1099.

Riley, William, Reading, Pa., assignor to Draper Company, Hopedale, Mass. Filling-detecting mechanism for looms. No. 1,172,834; Feb. 22; Gaz. vol. 223; p. 1228.

Rinsche, Frank C., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,172,484; Feb. 22; Gaz. vol. 223; p. 1100.

Rinsche, Frank C., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,172,485; Feb. 22; Gaz. vol. 223; p. 1100.

Risdon, Grant, Jersey City, N. J. Automobile-lock. No. 1,170,335; Feb. 1; Gaz. vol. 223; p. 202.

Ritchie, David A., Centralia, Ill. Lantern-slide carrier. No. 1,173,740; Feb. 29; Gaz. vol. 223; p. 1587.

Riter-Conley Manufacturing Company. (See Carpenter, Henry A., assignor.)

Riter-Conley Manufacturing Company. (See Carpenter, Hibbard, and Warner, assignors.)

Ritter, Irvin M., assignor of one-third to W. Ritter, Biteley, Mich. Mine-destroyer. No. 1,174,026; Feb. 29; Gaz. vol. 223; p. 1684.

Ritter, William. (See Ritter, Irvin M., assignor.)

Ritz, Robert R., Milwaukee, Wis. Receptacle-nozzle. No. 1,171,654; Feb. 15; Gaz. vol. 223; p. 742.

Rivière, Cléry. (See Clément and Rivière.)

Rixson, Oscar C., New York, N. Y. Device for operating transoms and casements. No. 1,171,979; Feb. 15; Gaz. vol. 223; p. 859.

Roach, Benjamin P., Berkeley, Cal. Wave-motor for generating power and propelling ships. No. 1,172,737; Feb. 22; Gaz. vol. 223; p. 1191.

Roach, William W., Philadelphia, Pa. Automobile-brake. No. 1,171,655; Feb. 15; Gaz. vol. 223; p. 742.

Robb, John O., Hillsboro, Oreg. Safeguard or protector for sleeping-berths. No. 1,172,638; Feb. 22; Gaz. vol. 223; p. 1154.

Robben, Clemens A., Norton, Kans. Combined grain barge and stacker. No. 1,171,656; Feb. 15; Gaz. vol. 223; p. 743.

Robbins, Caleb R. (See Stuver and Robbins.)

Roberson, James N., Wadley, Ga. Safety-handhold. No. 1,170,336; Feb. 1; Gaz. vol. 223; p. 203.

Roberson, John J., Springville, Utah. Automatic sheep-dipping apparatus. No. 1,173,866; Feb. 29; Gaz. vol. 223; p. 1631.

Robert N. Bassett Company, The. (See Ross, Friend A., assignor.)

Robert, Pierre, Garnett, assignor of one-half to J. C. Richardson, Robertsville, S. C. Artificial-stone composition. No. 1,172,225; Feb. 15; Gaz. vol. 223; p. 943.

Roberts Brass Manufacturing Company, The. (See Roberts, William H., assignor.)

Roberts, Daniel W., assignor to The Billings-Chapin Company, Cleveland, Ohio. Can for paints, varnishes, or similar substances. No. 1,171,139; Feb. 8; Gaz. vol. 223; p. 522.

Roberts, Edgar, assignor to Landro Manufacturing Company, St. Louis, Mo. Machine for predigesting and sterilizing stock foods. No. 1,170,191; Feb. 1; Gaz. vol. 223; p. 154.

Roberts, Edgar E., Jackson, Tenn., assignor of one-half to H. Damerell, Detroit, Mich. Tie-plate. No. 1,172,391; Feb. 22; Gaz. vol. 223; p. 1064.

Roberts, Henry P., Boston, assignor to C. H. McDermott, Winthrop, Mass. Bottle-stopper. No. 1,171,251; Feb. 8; Gaz. vol. 223; p. 558.

Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Automatic type-writer actuator. No. 1,171,354; Feb. 8; Gaz. vol. 223; p. 595.

Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Automatic type-writer operator. No. 1,171,888; Feb. 15; Gaz. vol. 223; p. 826.

Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,173,538; Feb. 29; Gaz. vol. 223; p. 1516.

Roberts & Schaefer Company. (See Lawry, Raymond G., assignor.)

Roberts, William H., assignor to The Roberts Brass Manufacturing Company, Detroit, Mich. Priming-cup for V-type engines. No. 1,170,993; Feb. 8; Gaz. vol. 223; p. 467.

Robertson, John A., assignor to Eastman Kodak Company, Rochester, N. Y. Film-cartridge. No. 1,170,674; Feb. 8; Gaz. vol. 223; p. 357.

Robertson, John P., San Francisco, Cal. Hydrocarbon-burner. No. 1,171,140; Feb. 8; Gaz. vol. 223; p. 522.

Robertson, Roy H., Herrin, Ill. Animal-trap. No. 1,171,057; Feb. 15; Gaz. vol. 223; p. 743.

Robertson, William S. (See D'Arcy and Robertson.)

Robichaux, Stanilaus E. (See Folse and Robichaux.)

Robidoux, Vincent B., Slater, Colo. Camp-stove. No. 1,173,036; Feb. 22; Gaz. vol. 223; p. 1297.

Robinson, Charles, Dunoon, Scotland. Electrically-actuated taximeter for cabs and like vehicles. No. 1,171,889; Feb. 15; Gaz. vol. 223; p. 826.

Robinson, Daniel P., and J. Coyle, Baltimore, Md., assignors to Continental Can Company, Incorporated, Syracuse, N. Y. End coating and curling machine. No. 1,172,049; Feb. 15; Gaz. vol. 223; p. 886.

Robinson, Daniel P., and J. Coyle, Baltimore, Md., assignors, by mesne assignments, to Continental Can Company, Inc. End-seam-soldering machine. No. 1,172,906; Feb. 22; Gaz. vol. 223; p. 1254.

Robinson, Frank A., Auburn, assignor to D. W. Armistead, Aurora, N. Y. Insulating-enamel. No. 1,170,000; Feb. 1; Gaz. vol. 223; p. 85.

Robinson, Frederick L., and W. Bell, Cheyenne, Wyo. Air-heater for carbureters. No. 1,170,337; Feb. 1; Gaz. vol. 223; p. 203.

Robinson, Holt, Bradford, England. Clothes-line hook and fastener. No. 1,172,835; Feb. 22; Gaz. vol. 223; p. 1229.

Robinson, Hugh G., Oakland, Cal. Cushion heel-plate. No. 1,172,392; Feb. 22; Gaz. vol. 223; p. 1064.

Robinson, John J., New York, N. Y. Non-refillable bottle. No. 1,171,141; Feb. 8; Gaz. vol. 223; p. 522.

Robinson, Lawrence E., Coffeyville, Kans. Auto-brace. No. 1,173,386; Feb. 29; Gaz. vol. 223; p. 1464.

Robinson, Lawrence E., Coffeyville, Kans. Packer. No. 1,173,387; Feb. 29; Gaz. vol. 223; p. 1464.

Roby, Edward B., Troy, assignor to M. L. Heald, Colonie, N. Y. Automatic feeding-machine. No. 1,170,492; Feb. 1; Gaz. vol. 223; p. 255.

Roby, James J., Cleveland, Ohio. Mine-car wheel and bearing. No. 1,173,218; Feb. 29; Gaz. vol. 223; p. 1402.

Roche, Francis J., Sommesville, Mass. Trolley-catcher. No. 1,173,684; Feb. 29; Gaz. vol. 223; p. 1567.

Rochester Spectacle Co. (See McDonell, William E., assignor.)

Rock Island Plow Company. (See Frenier, Albert B., assignor.)

Rock Island Plow Company. (See Tedell, John, assignor.)

Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Antifriction-bearing. No. 1,172,738; Feb. 22; Gaz. vol. 223; p. 1192.

Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Hopper. No. 1,173,308; Feb. 29; Gaz. vol. 223; p. 1435.

Rockwell, Byrd C., Camden, Ark. Door-hinge. No. 1,170,106; Feb. 1; Gaz. vol. 223; p. 124.

Rockwell, Edward D., Bristol, Conn. Wrench. No. 1,170,107; Feb. 1; Gaz. vol. 223; p. 124.

Rockwood Sprinkler Company of Massachusetts. (See Carlson, Iljalmar G., assignor.)

Rodeck, Walter, New Durham, N. J. Combination measuring instrument. No. 1,172,050; Feb. 15; Gaz. vol. 223; p. 886.

Rodenbur, John P., Duluth, Minn. Extension car-step. No. 1,170,338; Feb. 1; Gaz. vol. 223; p. 203.

Roder, Frederick. (See Schoepboerster and Roder.)

Roderick Lean Manufacturing Company. (See Warne, Frederick C., assignor.)

Roehrich, Frank N. (See Carroll and Roehrich.)

Roehrich, Frank N., Jersey City, N. J., assignor to G. P. Carroll, Bridgeport, Conn. Condenser water-valve. No. 1,172,739; Feb. 22; Gaz. vol. 223; p. 1192.

Roehrich, Frank N., Jersey City, N. J., assignor to G. P. Carroll, Bridgeport, Conn. Refrigerator-thermostat. No. 1,172,740; Feb. 22; Gaz. vol. 223; p. 1193.

Roehrig, Herman F., assignor of one-half to A. S. Ruth, Niagara Falls, N. Y. Self-cleaning rake. No. 1,173,807; Feb. 29; Gaz. vol. 223; p. 1631.

Roesch, Frank P., Douglas, Ariz. Gear changing and locking device. No. 1,171,252; Feb. 8; Gaz. vol. 223; p. 558.

Roessler & Hasslacher Chemical Company, The. (See Anders and Schoedler, assignors.)

Rogers, Charles E., Covington, Va. Legging. No. 1,172,051; Feb. 15; Gaz. vol. 223; p. 887.

Rogers, Edwin W., Chicago, Ill. Valve. No. 1,171,980; Feb. 15; Gaz. vol. 223; p. 859.

Rogers, George S., Pana, Ill. Non-refillable bottle. No. 1,170,108; Feb. 1; Gaz. vol. 223; p. 125.

Rogers, Grace C., New York, N. Y. Corset-cover. No. 1,171,355; Feb. 8; Gaz. vol. 223; p. 595.

Rogers, John F., Atlantic City, N. J. Checker. No. 1,170,109; Feb. 1; Gaz. vol. 223; p. 125.

Rogers, Leo L., Boston, Mass., assignor to E. C. Moore, New York, N. Y. Pocket-firearm. No. 1,173,464; Feb. 29; Gaz. vol. 223; p. 1489.

Rogers, Lewis L., Orange, Mass. Sheet-gage for printing-presses. No. 1,170,994; Feb. 8; Gaz. vol. 223; p. 467.

Rogers, Thomas S., La Grange, Ind. Road-machine. No. 1,173,539; Feb. 29; Gaz. vol. 223; p. 1516.

Rohifing, John M., St. Louis, Mo. Nailing-strip mount for freight-cars. No. 1,171,402; Feb. 8; Gaz. vol. 223; p. 613.

Rohifing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Upper buffing device for vestibule face-plates. No. 1,170,564; Feb. 8; Gaz. vol. 223; p. 317.

Rohrbach, William R. (See Dechant and Rohrbach.)

Rome Metallic Bedstead Company. (See Rosenburgh, Ernest L., assignor.)

Rommel, William H., Carlisle, Pa. Heel-retainer. No. 1,171,541; Feb. 15; Gaz. vol. 223; p. 702.

Romfinder, Hermann, Mishawnka, Ind. Bowling-pin. No. 1,170,339; Feb. 1; Gaz. vol. 223; p. 204.

Ronchetti, Joseph A., Woonsocket, R. I., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,170,995; Feb. 8; Gaz. vol. 223; p. 467.

Rooney, William H., New York, N. Y. Locking device. No. 1,171,981; Feb. 15; Gaz. vol. 223; p. 860.

Roos, Henry. (See Roos, Philip and H.)

Roos, Philip and H., New York, N. Y. Broiler. No. 1,173,742; Feb. 29; Gaz. vol. 223; p. 1588.

Root, Claude E., Cambridge Springs, Pa. Manure-spreader. No. 1,173,037; Feb. 22; Gaz. vol. 223; p. 1297.

Rosanoff, Martin A., Worcester, Mass. Process of and apparatus for fractionation. No. 1,171,464; Feb. 15; Gaz. vol. 223; p. 674.

Roschanek, Otto, Vienna, Austria-Hungary. Apparatus for measuring, indicating, and registering differences of pressure. No. 1,173,038; Feb. 22; Gaz. vol. 223; p. 1297.

Rose, Henry J. F., Chesham, England. Open-air shelter. No. 1,171,346; Feb. 8; Gaz. vol. 223; p. 592.

Rose, Jesse B., Hardin, Ky. Fruit picking and gathering apparatus. No. 1,173,868; Feb. 29; Gaz. vol. 223; p. 1632.

Rose Strauss Company. (See Strauss, Julius L., assignor.)

Rosegrant, H. J. (See Zerga, Lallie, assignor.)

Rosell, Axel J., New York, N. Y. Safety device for elevators. No. 1,171,253; Feb. 8; Gaz. vol. 223; p. 559.

Rosen, Abraham, assignor to Silberstein-Rosen and Sons, New York, N. Y. Sewing-machine attachment. No. 1,172,393; Feb. 22; Gaz. vol. 223; p. 1064.

Rosen, David, Philadelphia, Pa. Ground connection for electrical conductors. No. 1,171,142; Feb. 8; Gaz. vol. 223; p. 522.

Rosen, Isaac, New York, N. Y. Garment-fastener. No. 1,170,340; Feb. 1; Gaz. vol. 223; p. 204.

Rosenberg, William, Chicago, Ill. Card and other case. No. 1,173,388; Feb. 29; Gaz. vol. 223; p. 1464.

Rosenbluth, Edwin M., Philadelphia, Pa. Vehicle signaling device. No. 1,173,121; Feb. 22; Gaz. vol. 223; p. 1325.

Rosenbluth, Edwin M., Philadelphia, Pa. Acetylene-gas generator. No. 1,173,122; Feb. 22; Gaz. vol. 223; p. 1326.

Rosenbluth, Edwin M., Philadelphia, Pa. Automobile. No. 1,173,123; Feb. 22; Gaz. vol. 223; p. 1327.

Rosenbrook, August C., Richland Center, Wis. Demountable-rim tool. No. 1,173,741; Feb. 29; Gaz. vol. 223; p. 1587.

Rosenburgh, Ernest L., assignor to Rome Metallic Bedstead Company, Rome, N. Y. Metallic bedstead. No. 1,170,850; Feb. 8; Gaz. vol. 223; p. 417.

Rosendahl, Nils M., assignor to F. C. Austin, Chicago, Ill. Mixing-machine. No. 1,172,550; Feb. 22; Gaz. vol. 223; p. 1128.

Rosenfeld, Francis M., New York, N. Y., assignor to Import Sales Company. Portable electric lamp. No. 1,173,984; Feb. 29; Gaz. vol. 223; p. 1668.

Rosenfelt, Samuel D., Chicago, Ill., assignor to Franklin Railway Supply Company, Wilmington, Del. Fire-door device. No. 1,171,403; Feb. 15; Gaz. vol. 223; p. 674.

Rosenfield Manufacturing Company. (See Rosenfield, William W., assignor.)

Rosenfield, William W., New York, N. Y., assignor to Rosenfield Manufacturing Company. Weighing-machine. No. 1,173,309; Feb. 29; Gaz. vol. 223; p. 1436.

Rosenheim, Ida S. (See Schoenberg, Ralph, assignor.)

Rosenman, Leo, Brooklyn, N. Y., assignor to R. K. M. Mfg. Company. Garment-fastener holder. No. 1,171,982; Feb. 15; Gaz. vol. 223; p. 860.

Rosenman, Leo, Newark, N. J., assignor to R. K. M. Mfg. Company. Garment-fastener holder. No. 1,171,988; Feb. 15; Gaz. vol. 223; p. 861.

Rosenthal, August, West Allis, Wis. Centrifugal clutch. No. 1,169,871; Feb. 1; Gaz. vol. 223; p. 43.

Roser, George F., Louisville, Ky. Waste-pipe connection. No. 1,172,836; Feb. 22; Gaz. vol. 223; p. 1229.

Ross, Axel B., Port Richmond, N. Y., assignor of one-half to F. H. Lindner, Bloomfield, N. J. Tool and part of a tool. No. 1,172,837; Feb. 22; Gaz. vol. 223; p. 1229.

Ross, Charles P., Seattle, Wash. Antiskid device for automobiles. No. 1,171,658; Feb. 15; Gaz. vol. 223; p. 744.

Ross, John C., assignor of one-half to Bourret-Kirkwood Co., Seattle, Wash. Laundry-mangle. No. 1,171,659; Feb. 15; Gaz. vol. 223; p. 744.

Ross, Oscar A., and H. B. Taylor, Rochester, assignors to General Railway Signal Company, Gates, N. Y. Retaining mechanism. No. 1,170,996; Feb. 8; Gaz. vol. 223; p. 468.

Ross, Thomas C., Crooksville, Ohio. Street-car fender. No. 1,173,389; Feb. 29; Gaz. vol. 223; p. 1465.

Rossi, Auguste J., and L. E. Barton, Niagara Falls, assignors to The Titanium Alloy Manufacturing Company, New York, N. Y. Titanic-oxid-concentrate product, and obtaining the same. No. 1,171,542; Feb. 15; Gaz. vol. 223; p. 703.

Rossi, Giacinto, Philadelphia, Pa. Vehicle. No. 1,170,461; Feb. 1; Gaz. vol. 223; p. 245.

Rossi, Marco, Barcelona, Spain. Manufacture of fuel. No. 1,171,660; Feb. 15; Gaz. vol. 223; p. 744.

Rotary Expansion Bit Company. (See Humason, Granville A., assignor.)

Roten, Henry G., and W. W. Embry, Ballinger, Tex. Antifriction-bearing for cutting apparatus. No. 1,170,341; Feb. 1; Gaz. vol. 223; p. 204.

Roth, Emil, assignor to The Cleveland Foundry Company, Cleveland, Ohio. Safety attachment. No. 1,172,394; Feb. 22; Gaz. vol. 223; p. 1064.

Roth, Gustav, Olmütz, Austria-Hungary. Manufacture of yeast from molasses. No. 1,170,110; Feb. 1; Gaz. vol. 223; p. 125.

Roth, Harry, New York, N. Y. Manufacture of box-covers. No. 1,172,560; Feb. 22; Gaz. vol. 223; p. 1129.

Roth, William F., Nevada, Ohio. Roofing-tool. No. 1,171,067; Feb. 8; Gaz. vol. 223; p. 493.

Rothberg, Mathew E., Crafton, assignor to Falk Company, Pittsburgh, Pa. Recovery of metals from waste oils. No. 1,170,342; Feb. 1; Gaz. vol. 223; p. 204.

Rothe, Lee, Linneus, Mo. Puzzle. No. 1,170,111; Feb. 1; Gaz. vol. 223; p. 126.

Rougeux, Guy J., Coudley, Pa. Safety-envelop. No. 1,173,869; Feb. 29; Gaz. vol. 223; p. 1632.

Rouland, William P., Decatur, assignor of one-half to J. W. Behl, Staunton, Ill. Detachable horseshoe-calk. No. 1,173,870; Feb. 29; Gaz. vol. 223; p. 1632.

Rowley, James F., Chicago, Ill. Artificial hand. No. 1,173,219; Feb. 29; Gaz. vol. 223; p. 1403.

Rowntree, Harold, Kenilworth, Ill., assignor to National Pneumatic Company, New York, N. Y. Disappearing and reversible seat for cars. No. 1,170,343; Feb. 1; Gaz. vol. 223; p. 205.

Rowntree, Harold, assignor to National Pneumatic Company, Chicago, Ill. Door-operating mechanism. No. 1,172,561; Feb. 22; Gaz. vol. 223; p. 1129.

Rowntree, Harold, assignor to National Pneumatic Company, Chicago, Ill. Operating mechanism for elevator-hatchway doors. No. 1,172,562; Feb. 22; Gaz. vol. 223; p. 1129.

Rowntree, Harold, Kenilworth, assignor to National Pneumatic Company, Chicago, Ill. Passenger-car. No. 1,172,563; Feb. 22; Gaz. vol. 223; p. 1130.

Royal, Belford G., Camden, N. J., assignor to Victor Talking Machine Company. Spring-barrel for talking-machine motors. No. 1,170,675; Feb. 8; Gaz. vol. 223; p. 357.

Royce, Wilfred E., Lead, S. D. Portable acetylene-lighting apparatus. No. 1,170,935; Feb. 8; Gaz. vol. 223; p. 445.

Royer, William B., Baltimore, Md. Silent inlet-valve for closet-tanks. No. 1,173,871; Feb. 29; Gaz. vol. 223; p. 1632.

Royse, Grover C., Tacoma, Wash. Flue structure. No. 1,170,936; Feb. 8; Gaz. vol. 223; p. 446.

Rubay, Leon, assignor to The White Company, Cleveland, Ohio. Automobile-ventilator. No. 1,173,743; Feb. 29; Gaz. vol. 223; p. 1588.

Ruckle, Edward H., assignor to Hughes Electric Heating Company, Chicago, Ill. Temperature-regulating system. No. 1,171,254; Feb. 8; Gaz. vol. 223; p. 560.

Rudd, Otto. (See Gall and Rudd.)

Ruddick, John J., Newton, Mass. Contractor. No. 1,171,890; Feb. 15; Gaz. vol. 223; p. 827.

Rüdenberg, Reinhold, Charlottenburg, and A. Zehrung, Berlin-Wilmersdorf, assignors to Siemens Schuckert Werke G. m. b. H., Berlin, Germany. Cooling dynamos. No. 1,170,192; Feb. 1; Gaz. vol. 223; p. 154.

Rudolph, Otto C., Aldwych, London, England, assignor to O. Stalmann, Salt Lake City, Utah. Treatment of ores. No. 1,171,255; Feb. 8; Gaz. vol. 223; p. 560.

Rudolphs, John R. C., Nacka, and A. G. Thisell, Stockholm, Sweden. Effecting chemical reactions between solid matters and gases or gas mixtures. No. 1,173,390; Feb. 29; Gaz. vol. 223; p. 1465.

Rudy Furnace Co. (See Carter, George B., assignor.)

Rudy, Raymond B., Niagara Falls, N. Y. Electric signal for automobiles. No. 1,172,395; Feb. 22; Gaz. vol. 223; p. 1065.

Ruggles, William B., Bayonne, N. J. Drier. No. 1,171,143; Feb. 8; Gaz. vol. 223; p. 523.

Ruggles, William B., Bayonne, N. J. Portable drier. No. 1,171,144; Feb. 8; Gaz. vol. 223; p. 523.

Rukes, Charles F., Fresno, Cal. Bed. No. 1,173,744; Feb. 29; Gaz. vol. 223; p. 1589.

Rundle, Edward H., Longmont, Colo. Automobile-wheel. No. 1,170,937; Feb. 8; Gaz. vol. 223; p. 446.

Rundlöf, Erik A., Stocksund, Sweden. Internal-combustion engine and the like. No. 1,173,745; Feb. 29; Gaz. vol. 223; p. 1589.

Rusby, John M., assignor to The United Gas Improvement Company, Philadelphia, Pa. Manufacture of gas. No. 1,172,226; Feb. 15; Gaz. vol. 223; p. 943.

Ruse, Harry R., Baltimore, Md. Show-case. No. 1,173,872; Feb. 29; Gaz. vol. 223; p. 1633.

Rush, Turner C., Lexington, Ky. Device for measuring woven wire. No. 1,172,052; Feb. 15; Gaz. vol. 223; p. 887.

Rush, W. B. (See Knight, Frank H., assignor.)

Rushton, Kenneth, assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Drifting-valve. No. 1,172,053; Feb. 15; Gaz. vol. 223; p. 887.

Russ, Friend A., Greenwich, assignor to The Robert N. Bassett Company, Shelton, Conn. Garment-supporter. No. 1,171,805; Feb. 15; Gaz. vol. 223; p. 794.

Russell, Arthur L., Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper mechanism for pulling-over machines. No. 1,169,872; Feb. 1; Gaz. vol. 223; p. 43.

Russell, Calvin, assignor to C. H. Russell, Penn Yan, N. Y. Roofing. (Reissue.) No. 14,058; Feb. 8; Gaz. vol. 223; p. 614.

Russell, Carrie H. (See Russell, Calvin, assignor.) (Reissue.)

Russell, George, Melbourne, Victoria, Australia. Means for adjustably securing metallic members. No. 1,172,054; Feb. 15; Gaz. vol. 223; p. 888.

Russell, Robert C., assignor to The K. D. Cabinet Company, Richmond, Ind. Folding cabinet. No. 1,173,310; Feb. 29; Gaz. vol. 223; p. 1436.

Russell, Thomas N., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Railway-car. No. 1,171,661; Feb. 15; Gaz. vol. 223; p. 744.

Russell, Thomas N., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Railway-car. No. 1,171,662; Feb. 15; Gaz. vol. 223; p. 745.

Russell, Thomas N., assignor to Chicago-Cleveland Car Roofing Company, Chicago, Ill. Railway-car. No. 1,171,663; Feb. 15; Gaz. vol. 223; p. 745.

Russell, Thomas N., Chicago, Ill., assignor to Chicago-Cleveland Car Roofing Company. Car-roof. No. 1,173,220; Feb. 29; Gaz. vol. 223; p. 1403.

Russell, William P., Chicago, Ill. Ventilating apparatus for sleeping-cars. No. 1,172,313; Feb. 22; Gaz. vol. 223; p. 1035.

Russi, Francis B. (See Angelo and Russi.)

Rust, Mortimer R., Fulton, N. Y. Roll-head. No. 1,172,907; Feb. 22; Gaz. vol. 223; p. 1254.

Rutan, Alexander, Blacklington, Mass. Clamp for dental flasks. No. 1,172,564; Feb. 22; Gaz. vol. 223; p. 1130.

Rutan, William, assignor to Gillis & Geoghegan, New York, N. Y. Mechanism for operating holstway-doors. No. 1,170,193; Feb. 1; Gaz. vol. 223; p. 155.

Ruth, Albert S. (See Roehrig, Herman F., assignor.)

Rutherford, Frederick A. (See Deacon, George B., assignor.)

Rutherford, Frederick A., Battle Creek, Mich., assignor of one-half to U. E. Gillen, Chicago, Ill. Seal. No. 1,173,146; Feb. 22; Gaz. vol. 223; p. 1335.

Ruzsicska, Otto, and G. M. Laub, Newark, N. J. Coin-controlled vending-machine. No. 1,171,543; Feb. 15; Gaz. vol. 223; p. 703.

Ryan, Bartle, Northcote, Victoria, Australia. Apparatus for irrigating and fertilizing soil. No. 1,173,534; Feb. 29; Gaz. vol. 223; p. 1514.

Ryan, Charles F. (See Greenlaw and Ryan.)

Ryan, Martin J., New York, N. Y. Sash-lock. No. 1,170,344; Feb. 1; Gaz. vol. 223; p. 205.

Ryden, Claes, Cranston, R. I. Wire-winding device. No. 1,172,565; Feb. 22; Gaz. vol. 223; p. 1130.

Ryden, Claes, Providence, R. I., assignor to Universal Winding Company, Portland, Me. Winding-machine. No. 1,171,544; Feb. 15; Gaz. vol. 223; p. 703.

Rystedt, Ingemar, Dayton, Ohio. Cleaner for toothed implements. No. 1,170,345; Feb. 1; Gaz. vol. 223; p. 205.

S. F. Bowser & Company. (See Bowser, Allen A., assignor.)

S. F. Bowser & Co. (See Morris, William L., assignor.)

S. F. Bowser & Company. (See Mulligan, Thomas F., assignor.)

S. H. Couch Co. (See Henry and Stevens, assignors.)

S. S. White Dental Manufacturing Company, The. (See Glenn, Thomas F., assignor.)

Saalfeld, Georg von, Munich-Harlaching, Germany. Gear for attaining a compensation between driving power and load. No. 1,172,412; Feb. 22; Gaz. vol. 223; p. 1071.

Sabatino, John, New York, N. Y. Massage apparatus. No. 1,173,039; Feb. 22; Gaz. vol. 223; p. 1298.

Sabine, Wallace C., Boston, Mass. Device for preventing the transmission of sound. No. 1,172,838; Feb. 22; Gaz. vol. 223; p. 1229.

Sabo, Paul, Racine, Wis. Automobile-elevating jack. No. 1,172,839; Feb. 22; Gaz. vol. 223; p. 1229.

Sachs, Joseph, Hartford, Conn. Service and meter testing and connection block. No. 1,170,112; Feb. 1; Gaz. vol. 223; p. 126.

Sachs, Joseph, Hartford, Conn. Electric-meter-testing switch. No. 1,170,113; Feb. 1; Gaz. vol. 223; p. 126.

Sachs, Joseph, Hartford, Conn. Carbureter. No. 1,171,145; Feb. 8; Gaz. vol. 223; p. 523.

Safford, Clarence E., Detroit, Mich. Machine for making wire staples. No. 1,170,676; Feb. 8; Gaz. vol. 223; p. 358.

Sage, Ralph V., Westmont borough, Pa. Car-door-operating mechanism. No. 1,170,677; Feb. 8; Gaz. vol. 223; p. 358.

Sage, Ralph V., Westmont borough, Pa. Car-door rigging. No. 1,170,678; Feb. 8; Gaz. vol. 223; p. 359.

Sailer, Joseph, Oxnard, Cal. Automatic centrifugal discharging machine. No. 1,170,001; Feb. 1; Gaz. vol. 223; p. 86.

Sailer, Joseph, Oxnard, Cal. Separator. No. 1,171,891; Feb. 15; Gaz. vol. 223; p. 827.

Sailns, Howard D., Chicago, Ill. Fence-post. No. 1,170,194; Feb. 1; Gaz. vol. 223; p. 155.

Salisbury, Levi E., Providence, R. I. Textile-loom shuttle of the non-reciprocating type. No. 1,170,679; Feb. 8; Gaz. vol. 223; p. 359.

Salisbury, Orange J., Salt Lake City, Utah. Cleaning filter mediums. No. 1,171,892; Feb. 15; Gaz. vol. 223; p. 827.

Samples, William P. (See Vaughan and Samples.)

Samuel Cabot, Inc. (See Abbott, Charles M., assignor.)

Samuel L. Moore & Sons Corporation. (See Simons, John, assignor.)

Sanborn, George W., Utica, N. Y. Clothes-pressing machine. No. 1,169,873; Feb. 1; Gaz. vol. 223; p. 44.

Sanborn, William E., Detroit, Mich. Strength-reinforcement for tooth-fillings. No. 1,172,486; Feb. 22; Gaz. vol. 223; p. 1101.

Sanders, Herman M., Farmington, Minn. Hay-rack fastener. No. 1,172,487; Feb. 22; Gaz. vol. 223; p. 1101.

Sanders, Manuel, *et al.* (See McKendree, Creed H., assignor.)

Sanderson, Joseph H. (See Price and Sanderson.)

Sands, Thomas J., Providence, R. I., assignor to Universal Winding Company, Portland, Me. Reel or runner. No. 1,171,545; Feb. 15; Gaz. vol. 223; p. 704.

Sands, Walter E., Fanwood, N. J. Means for securing junction-boxes in ceilings and walls. No. 1,171,751; Feb. 15; Gaz. vol. 223; p. 775.

Sands, W. W. (See Walker, Horace C., assignor.)

Sandusky Portland Cement Company. (See Hermansen, Herman, assignor.)

Sanifacient Humidor Company. (See Subert, Charles, assignor.)

Sanitary Package Company. (See Howell, Albert S., assignor.)

Sanitary Screen & Shade Company. (See Soule, Arthur C., assignor.)

Sanitary Stove Top Company. (See Smith, William W., assignor.)

Santo Manufacturing Company. (See Templin, Joseph H., assignor.)

Santo Manufacturing Company. (See Wiedemann and Templin, assignors.)

Sargent, Charles R., Grand Rapids, Mich. Clothes-basket. No. 1,173,746; Feb. 29; Gaz. vol. 223; p. 1589.

Sargent & Company. (See Shaw, John H., assignor.)

Sargent, Frederick G., Westford, Mass. Selective wireless-telegraph apparatus. No. 1,170,680; Feb. 8; Gaz. vol. 223; p. 359.

Sargent, George H., Chicago, Ill. Rerailer. No. 1,169,874; Feb. 1; Gaz. vol. 223; p. 44.

Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Switch-mounting and the like. No. 1,173,040; Feb. 22; Gaz. vol. 223; p. 1298.

Sarl, Otto, *et al.* (See Johnson, Peter, assignor.)

Sato, Ryuji, and T. Tanaka, New York, N. Y. Garment-fastener. No. 1,170,346; Feb. 1; Gaz. vol. 223; p. 206.

Sauerman, Henry B., Chicago, Ill., assignor of one-half to J. A. Shearer, Indianapolis, Ind. Drag-line excavator. No. 1,171,893; Feb. 15; Gaz. vol. 223; p. 828.

Saulson, Philip J., New York, N. Y., assignor to Beverage Machine & Bottle Company Inc. Filling-machine. No. 1,171,356; Feb. 8; Gaz. vol. 223; p. 595.

Saunders, Albert L., and A. Hengesbach, Weyburn, Saskatchewan, Canada. Sharpening device for disks of disk harrows. No. 1,170,114; Feb. 1; Gaz. vol. 223; p. 127.

Saunders, Charles J. (See Lucas and Saunders.)

Saurer, Firm of Adolph. (See Stamm, Hans, assignor.)

Savage, George M., Los Angeles, Cal. Well shut-off. No. 1,170,851; Feb. 8; Gaz. vol. 223; p. 417.

Savage, Harry, and W. L. Baker, San Antonio, Tex. Electric switch for automatic passenger-fare-registering mechanism. No. 1,173,609; Feb. 29; Gaz. vol. 223; p. 1542.

Savage, Herbert W., Cambridge, Mass. Hydraulic disintegrating apparatus. No. 1,172,634; Feb. 22; Gaz. vol. 223; p. 1154.

Savy, Emile L. A., Courbevoie, France. Carameling chocolate. No. 1,173,873; Feb. 29; Gaz. vol. 223; p. 1633.

Sawtell, Albert H., Winthrop, Mass. Warp stop-motion for looms. No. 1,170,681; Feb. 8; Gaz. vol. 223; p. 360.

Sawyer, Franklin M., Kansas City, Mo. Outing-commode. No. 1,172,566; Feb. 22; Gaz. vol. 223; p. 1131.

Sawyer, Harry, Muskegon, Mich. Double-whip crane. No. 1,172,840; Feb. 22; Gaz. vol. 223; p. 1230.

Sayer, Robert C. Redland, Bristol, England. Aerostat. No. 1,172,055; Feb. 15; Gaz. vol. 223; p. 888.

Saylor, Charles R., Charleston, S. C. Combination pipe wrench and cutter. No. 1,173,041; Feb. 22; Gaz. vol. 223; p. 1299.

Saynisch, Yole, New York, N. Y. Washable corset. No. 1,171,256; Feb. 8; Gaz. vol. 223; p. 560.

Sayres, John H., Brooklyn, N. Y. Sash-balance connection. No. 1,171,257; Feb. 8; Gaz. vol. 223; p. 561.

Scalbom, Oscar L., Glen View, Ill. Stop mechanism for graphophones. No. 1,170,997; Feb. 8; Gaz. vol. 223; p. 468.

Schacht, William F., Huntington, Ind. Valve-disk. No. 1,171,664; Feb. 15; Gaz. vol. 223; p. 746.

Schade, Edmund A., assignor to The Stanley Rule & Level Company, New Britain, Conn. Roof-bracket. No. 1,172,227; Feb. 15; Gaz. vol. 223; p. 943.

Schade, Harry A., East Cleveland, and F. N. Richardson, Cleveland, Ohio. Electric-spark-disclosing means for internal-combustion engines. No. 1,172,168; Feb. 15; Gaz. vol. 223; p. 925.

Schade, John, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,170,115; Feb. 1; Gaz. vol. 223; p. 127.

Schaefer, Ferdinand A., assignor to G. G. Schroeder, Washington, D. C. Barrel-tapping device. No. 1,173,311; Feb. 29; Gaz. vol. 223; p. 1437.

Schaefer, Herbert C. (See Nitardy and Schaefer.)

Schaefer, Karl, Charlottenburg, assignor to Berlin-Anhaltische Maschinenbau-Aktien-Gesellschaft, Berlin, Germany. Manufacture of hydrogen. No. 1,172,908; Feb. 22; Gaz. vol. 223; p. 1254.

Schaeffer, John A., assignor to The Picher Lead Company, Joplin, Mo. Manufacture of lead arsenate. No. 1,172,741; Feb. 22; Gaz. vol. 223; p. 1193.

Schaller, Anton, New York, N. Y. Adjustable headlight for automobiles. No. 1,172,488; Feb. 22; Gaz. vol. 223; p. 1101.

Schanman, Joseph, Pittsburgh, Pa. Coal-car wheel and axle. No. 1,170,682; Feb. 8; Gaz. vol. 223; p. 360.

Scharf, Gregory H., Ypsilanti, Mich. Steam-jet for draft-regulators. No. 1,170,493; Feb. 1; Gaz. vol. 223; p. 256.

Scharf, Gregory H., assignor to The Scharf Smoke Preventer Company, Ypsilanti, Mich. Draft-regulator for furnaces. No. 1,170,683; Feb. 8; Gaz. vol. 223; p. 361.

Scharf Smoke Preventer Company, The. (See Scharf, Gregory H., assignor.)

Schaser, Henry, Sierra Madre, Cal. Tide and wave power mechanism. No. 1,170,938; Feb. 8; Gaz. vol. 223; p. 447.

Scheetz, Edward J., Montrose, Colo. Beet-harvester. No. 1,173,042; Feb. 22; Gaz. vol. 223; p. 1299.

Schellenbach, William, Wyoming, Ohio. Projectile-turner. No. 1,171,665; Feb. 15; Gaz. vol. 223; p. 746.

Schellenbach, William L., Hartwell, Ohio. Length-stop. No. 1,171,666; Feb. 15; Gaz. vol. 223; p. 746.

Schellinger, Grant M., Downing, Wis. Gambrel. No. 1,172,489; Feb. 22; Gaz. vol. 223; p. 1102.

Schenfield, George F., Clarkston, Mont. Landing-net frame. No. 1,172,056; Feb. 15; Gaz. vol. 223; p. 889.

Schenk, Nicholas, St. Louis, Mo. Split rim for vehicle-wheels. No. 1,173,221; Feb. 29; Gaz. vol. 223; p. 1403.

Schenk, Nicholas, St. Louis, Mo. Demountable rim for vehicle-wheels. No. 1,173,222; Feb. 29; Gaz. vol. 223; p. 1404.

Scherffius, William H., assignor of one-half to C. Goble, Muskogee, Okla. Biscuit-cutter. No. 1,172,057; Feb. 15; Gaz. vol. 223; p. 889.

Schettler, Gustav A., Leicester, England. Machine for marking the superficial area of leather and like materials. No. 1,173,312; Feb. 29; Gaz. vol. 223; p. 1437.

Scheyer, Emanuel, New York, N. Y. Automatically-controlled mechanism. No. 1,172,058; Feb. 15; Gaz. vol. 223; p. 889.

Scheyer, Emanuel, New York, N. Y. Automatically-controlled mechanism. No. 1,172,059; Feb. 15; Gaz. vol. 223; p. 890.

Schickel, Norbert H., Stamford, Conn. Internal-combustion engine. No. 1,172,314; Feb. 22; Gaz. vol. 223; p. 1036.

Schidakovitch, Simon. (See Turner and Schidakovitch.)

Schlenke, Max A., Bay Shore, N. Y. Lawn-sprinkler. No. 1,171,068; Feb. 8; Gaz. vol. 223; p. 493.

Schiller Piano Company. (See Collignon, William C. P., assignor.)

Schleicher, Edward G., Stamford, Conn. Vehicle-wheel. No. 1,173,124; Feb. 22; Gaz. vol. 223; p. 1328.

Schleicher, Robert, T. S. Hamilton, and J. A. Moore, assignors to Mengel Box Company, Louisville, Ky. Box-stitching machine. No. 1,170,002; Feb. 1; Gaz. vol. 223; p. 86.

Schlieckert, Charles C., assignor of one-half to A. Hirsch, Chicago, Ill. Violin-supporting attachment for music-stands. No. 1,170,684; Feb. 8; Gaz. vol. 223; p. 361.

Schlieder, Augustus E., Detroit, Mich. Valve. No. 1,172,396; Feb. 22; Gaz. vol. 223; p. 1065.

Schloerb, Albert P. (See Pfefferkorn, Schloerb, and Hammetter.)

Schmand, Charles C. (See Milks, John H., assignor.)

Schmid-Roost, Jakob, Oerlikon, Switzerland. Ball-bearing for car-axles. No. 1,173,391; Feb. 29; Gaz. vol. 223; p. 1465.

Schmidt, Arnold von, Munich, Germany, assignor to Busch-Sulzer Bros.-Diesel Engine Company, St. Louis, Mo. Two-cycle internal-combustion engine. No. 1,169,891; Feb. 1; Gaz. vol. 223; p. 50.

Schmidt, Charles, Milwaukee, Wis. Lantern-chimney. No. 1,169,875; Feb. 1; Gaz. vol. 223; p. 44.

Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Uncoupling mechanism for car-couplings. No. 1,170,998; Feb. 8; Gaz. vol. 223; p. 469.

Schmidt, Ida, Los Angeles, Cal. Burial-casket. No. 1,171,069; Feb. 8; Gaz. vol. 223; p. 493.

Schmidt, Ludwig, St. Louis, Mo. Friction brake and ratchet. No. 1,171,357; Feb. 8; Gaz. vol. 223; p. 596.

Schmidt'sche Heissdampf-Gesellschaft m. b. H. (See Thomsen, Peter, assignor.)

Schmit, John P., Lewistown, Mont. Tractor. No. 1,173,313; Feb. 29; Gaz. vol. 223; p. 1438.

Schmitt, Edward D., Baltimore, Md. Machine for plaiting paper. No. 1,173,610; Feb. 29; Gaz. vol. 223; p. 1542.

Schmitz, Otto, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Device for determining the required sight adjustment for indirect firing. No. 1,171,465; Feb. 15; Gaz. vol. 223; p. 675.

Schmutte, Jacob A. (See Williams, Benjamin L., assignor.)

Schnaars, Albert D., Jersey City, N. J., and C. L. Joly, New York, N. Y. Traffic-signal for vehicles. No. 1,172,060; Feb. 15; Gaz. vol. 223; p. 890.

Schnee, William G., assignor of fifty-one one-hundredths to T. J. Letchworth, Kansas City, Mo. Seeder. No. 1,171,546; Feb. 15; Gaz. vol. 223; p. 704.

Schneider, Eberhard, New York, N. Y. Combined dissolving-view apparatus and moving-picture machine. No. 1,172,567; Feb. 22; Gaz. vol. 223; p. 1131.

Schneider, Eugène, Paris, France. Apparatus for the semi-automatic working of the breech mechanism of guns of large caliber. No. 1,172,490; Feb. 22; Gaz. vol. 223; p. 1102.

Schneider, Franklin, assignor to The Van Dorn & Dutton Company, Cleveland, Ohio. Electrically-operated tool. No. 1,172,169; Feb. 15; Gaz. vol. 223; p. 925.

Schneider, Stephan, Berlin-Niederschönhausen, Germany, assignor to General Electric Company. Electric heater. No. 1,171,258; Feb. 8; Gaz. vol. 223; p. 561.

Schnur, Nicholaus, Elizabeth, N. J. Machine for sharpening and similar operations. No. 1,170,116; Feb. 1; Gaz. vol. 223; p. 127.

Schoch, Floyd W., Jersey City, N. J. Oil-separator. No. 1,173,314; Feb. 29; Gaz. vol. 223; p. 1438.

Schoedler, Maximilian E. W. (See Anders and Schoedler.)

Schoenberg, Ralph A. (See Both, Tonjes A. C., assignor.)

Schoenberg, Ralph A., assignor to I. S. Rosenheim, New York, N. Y. Means for operating switch mechanisms. No. 1,170,347; Feb. 1; Gaz. vol. 223; p. 206.

Schoenberg, Ralph A., New York, N. Y. Lock for socket-shells. No. 1,172,635; Feb. 22; Gaz. vol. 228; p. 1155.

Schoenky, August R., Somerville, assignor to The Reece Shoe Machinery Company, Boston, Mass. Sewing-machine. No. 1,171,466; Feb. 15; Gaz. vol. 223; p. 675.

Schoenmehl, Charles B. (See Martus, Martin L., assignor.)

Schoenmehl, Charles B., *et al.* (See Ostrander, Allen E., assignor.)

Schoephoerster, Henry E., and F. Roder, Sumner, Iowa. Milk-can washer. No. 1,171,070; Feb. 8; Gaz. vol. 223; p. 493.

Scholin, Axel R., Chicago, Ill. Package-wrapping machine. No. 1,171,358; Feb. 8; Gaz. vol. 223; p. 596.

Schrader, Thomas O., Allentown, assignor to The Dent Hardware Company, Fullerton, Pa. Safety lock-latch for refrigerator-doors. No. 1,170,685; Feb. 8; Gaz. vol. 223; p. 361.

Schram, Alexander L., Hillsboro, Ill., assignor to Schram Glass Manufacturing Company, St. Louis, Mo. Feeding attachment to punch and die presses. No. 1,171,359; Feb. 8; Gaz. vol. 223; p. 597.

Schram Glass Manufacturing Company. (See Schram, Alexander L., assignor.)

Schreiber, Edward A., assignor to E. H. Gold, Chicago, Ill. Vestibule-diaphragm for railway-cars. No. 1,171,259; Feb. 8; Gaz. vol. 223; p. 562.

Schreiber, Edward A., assignor to E. H. Gold, Chicago, Ill. Locking device for stove-doors. No. 1,171,260; Feb. 8; Gaz. vol. 223; p. 562.

Schreiber, Edward A., assignor to E. H. Gold, Chicago, Ill. Vestibule-diaphragm for railway-cars. No. 1,171,261; Feb. 8; Gaz. vol. 223; p. 562.

Schroder, William J., and R. L. Gilstrap, Walhalla, S. C. Windlass. No. 1,170,003; Feb. 1; Gaz. vol. 223; p. 86.

Schroeder, Alwin, Brookline, Mass. Interpretative musical notation. No. 1,171,467; Feb. 15; Gaz. vol. 223; p. 676.

Schroeder, Anthony J., Donaldsonville, La. Fan attachment for rocking-chairs. No. 1,173,043; Feb. 22; Gaz. vol. 223; p. 1299.

Schroeder, George G. (See Schaefer, Ferdinand A., assignor.)

Schroeder, William J. H., San Pedro, Cal. Cap construction. No. 1,170,462; Feb. 1; Gaz. vol. 223; p. 245.

Schröter, Fritz, Berlin-Wilmersdorf, Germany. Method of and apparatus for securing constancy in the light of vacuum-tubes. No. 1,172,568; Feb. 22; Gaz. vol. 223; p. 1131.

Schroth, Hugo C. H., Sacramento, Cal. Supporting-bracket. No. 1,171,667; Feb. 15; Gaz. vol. 223; p. 747.

Schubert & Salzer Maschinenfabrik Aktiengesellschaft. (See Ernst, Albin, assignor.)

Schucker, Daniel G., Selinsgrove, Pa. Attachment for bed-springs. No. 1,170,852; Feb. 8; Gaz. vol. 223; p. 418.

Schückher, Albert. (See Jalowetz, Richter, and Schückher.)

Schueckher, Albert. (See Jalowetz, Richter, and Schueckher.)

Schüle, Rudolf, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company. Fast yellow dyes and making same. No. 1,172,061; Feb. 15; Gaz. vol. 223; p. 891.

Schulte, William H., Trenton, N. J. Flush-valve-operating mechanism. No. 1,171,468; Feb. 15; Gaz. vol. 223; p. 676.

Schultz, William J. F., Chicago, Ill. Bridge for stringed instruments. No. 1,170,999; Feb. 8; Gaz. vol. 223; p. 469.

Schulz, Carl F., New York, N. Y. Carbureter. No. 1,172,397; Feb. 22; Gaz. vol. 223; p. 1066.

Schulze, Herbert A., and C. R. Wren, Dixon, Cal. Detachable plowshare. No. 1,173,985; Feb. 29; Gaz. vol. 223; p. 1669.

Schumacher, Henry S., Bloomington, Ill. Grip. No. 1,171,071; Feb. 8; Gaz. vol. 223; p. 494.

Schutt, Duny A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Drag-bar attachment. No. 1,170,117; Feb. 1; Gaz. vol. 223; p. 128.

Schüttler, Paul, Charlottenburg, assignor to Pallas Vergaser, G. m. b. H., Berlin-Charlottenburg, Germany. Starting and idle-running device for jet-carbureters. No. 1,170,348; Feb. 1; Gaz. vol. 223; p. 206.

Schwahn, Heinrich F. D., Belleville, Ill. Production of aluminum. No. 1,171,360; Feb. 8; Gaz. vol. 223; p. 597.

Schwandt, Paul F. (See Luckey, Bert C., assignor.)

Schwarcman, Alexander, assignor to Spencer Kellogg and Sons, Inc., Buffalo, N. Y. Catalyst and preparing same. No. 1,172,062; Feb. 15; Gaz. vol. 223; p. 891.

Schwartz, Henry J., assignor of one-half to W. T. Schwartz, Plainville, Ill. Tongue-truck. No. 1,173,147; Feb. 22; Gaz. vol. 223; p. 1336.

Schwartz, Hermann, Neuköln, near Berlin, Germany. Filing mechanism for letter-files. No. 1,169,876; Feb. 1; Gaz. vol. 223; p. 45.

Schwartz, William T. (See Schwartz, Henry J., assignor.)

Schwartzenberg, Harry F., assignor to W. H. Miner, Chicago, Ill. Draft-yoke for railway-car draft-rigging. No. 1,172,742; Feb. 22; Gaz. vol. 223; p. 1193.

Schwarz, Justin O., assignor to Hardman, Peck & Co., New York, N. Y. Grand-piano action. No. 1,173,815; Feb. 29; Gaz. vol. 223; p. 1439.

Schweinert, Maximilian C., West Hoboken, N. J. Tire-valve. No. 1,171,147; Feb. 8; Gaz. vol. 223; p. 524.

Schweinert, Maximilian C., West Hoboken, N. J. Sounding-lead. No. 1,172,491; Feb. 22; Gaz. vol. 223; p. 1102.

Schwerdtle, Henry G. (See Reifsnyder and Schwerdtle.)

Scientific Products Company. (See Homan, John G., assignor.)

Scognamillo, Salvatore, New York, N. Y. Warning-signal for automobiles and the like. No. 1,173,044; Feb. 22; Gaz. vol. 223; p. 1300.

Scognamillo, Salvatore, New York, N. Y. Record-punching machine. No. 1,173,874; Feb. 29; Gaz. vol. 223; p. 1633.

Scott, Archibald D., assignor to Varley Duplex Magnet Company, Jersey City, N. J. System for autovehicles. No. 1,172,909; Feb. 22; Gaz. vol. 223; p. 1254.

Scott, Archibald D., assignor to Varley Duplex Magnet Co., Jersey City, N. J. Mandrel for winding coils. No. 1,172,910; Feb. 22; Gaz. vol. 223; p. 1255.

Scott, Charles H., Gloucester, England. Apparatus for the manufacture of inlaid linoleum. No. 1,173,875; Feb. 29; Gaz. vol. 223; p. 1634.

Scott, Edwin H. W., Beckenham, England. Golf-club. No. 1,171,806; Feb. 15; Gaz. vol. 223; p. 795.

Scott, George W., Troy, Ohio. Storm-front for vehicles. No. 1,170,118; Feb. 1; Gaz. vol. 223; p. 128.

Scott, Henry D. (See Winski, Anton, assignor.)

Scott, James, Edinburgh, Scotland. Type-writing machine. No. 1,173,876; Feb. 29; Gaz. vol. 223; p. 1634.

Scott, S. Walter, Troy, N. Y. Pneumatic wheel. No. 1,173,986; Feb. 29; Gaz. vol. 223; p. 1669.

Scovill Manufacturing Company. (See Perrine, George H., assignor.)

Scoville, Frank F., Schenectady, N. Y. Locomotive-cylinder. No. 1,172,841; Feb. 22; Gaz. vol. 223; p. 1230.

Scribner, Irvin A., San Diego, Cal. Burnishing-tool. No. 1,171,146; Feb. 8; Gaz. vol. 223; p. 524.

Seago, John B., Pee Dee, N. C. Gage-cock. No. 1,171,072; Feb. 8; Gaz. vol. 223; p. 494.

Seaman, David S., Providence, R. I. Apparatus for spinning mechanism. No. 1,171,547; Feb. 15; Gaz. vol. 223; p. 704.

Seaman, Delbert O., assignor of one-half to C. T. Smith, Des Moines, Iowa. Moving-picture machine. No. 1,172,492; Feb. 22; Gaz. vol. 223; p. 1103.

Searles, Wayne S. (See Durgin and Searles.)

Sears, Roebuck and Company. (See Richards, Ernst R., assignor.)
See, Alonso B. (See Lindstrom, Niles O., assignor.)
Seeley, James E., assignor to Vulcan Coil Company, Los Angeles, Cal. Portable electrotherapeutic apparatus. No. 1,173,540; Feb. 29; Gaz. vol. 223; p. 1516.
Sefton, Frederick W., Davenport, Iowa. Chiropractic adjusting-table. No. 1,170,119; Feb. 1; Gaz. vol. 223; p. 129.
Segal, Samuel, New York, N. Y. Handle for winding phonograph spring-motors. No. 1,173,316; Feb. 29; Gaz. vol. 223; p. 1439.
Seidel, Gotthelf M., assignor to Glendale Elastic Fabrics Company, Eastbampton, Mass. Cartridge-carrier. No. 1,173,125; Feb. 22; Gaz. vol. 223; p. 1328.
Seidell, Atherton, Washington, D. C. Solid combination of vitamins and making same. No. 1,173,317; Feb.29; Gaz. vol. 223; p. 1440.
Self-Raising Seat Appliance Company. (See Eisner, Samuel M., assignor.)
Selleck, Theodore G., Milwaukee, Wis. Furnace. No. 1,172,398; Feb. 22; Gaz. vol. 223; p. 1066.
Selmier, Frank M., Indianapolis, Ind. Safety towel-holder. No. 1,172,170; Feb. 15; Gaz. vol. 223; p. 925.
Seltzer, Hyman, New York, N. Y. Swimming device. No. 1,171,752; Feb. 15; Gaz. vol. 223; p. 776.
Semple, John B., Sewickley, Pa. Projectile. No. 1,172,636; Feb. 22; Gaz. vol. 223; p. 1155.
Semple, John B., Sewickley, Pa. Projectile. No. 1,172,637; Feb. 22; Gaz. vol. 223; p. 1155.
Sendall, Charles F., Brooklyn, N. Y., assignor, by mesne assignments, to Lovell-McConnell Manufacturing Company. Mechanical signal. No. 1,172,743; Feb. 22; Gaz. vol. 223; p. 1194.
Sénégas, Jean, New York, N. Y. Sanitary holder for toilet articles, &c. No. 1,171,262; Feb. 8; Gaz. vol. 223; p. 563.
Senior, Philip H., New York, N. Y. Spring-separator. No. 1,170,565; Feb. 8; Gaz. vol. 223; p. 317.
Senn, Karl, Alameda, Cal. Pan-motion amalgamator. No. 1,172,171; Feb. 15; Gaz. vol. 223; p. 926.
Senna, Samuel N., assignor of one-half to C. E. Torrance, Holyoke, Mass. Tensile-strength tester. No. 1,173,611; Feb. 29; Gaz. vol. 223; p. 1542.
Senna, Samuel N., assignor of one-half to C. E. Torrance, Holyoke, Mass. Tensile-strength tester. No. 1,173,612; Feb. 29; Gaz. vol. 223; p. 1542.
Sergeant, Walter S. (See Chew and Sergeant.)
Serrell, William C., Buffalo, N. Y., assignor of one-half to J. H. Smith, East Orange, N. J. Time-computer. No. 1,171,753; Feb. 15; Gaz. vol. 223; p. 776.
Service, William F., Jersey City, N. J., assignor to W. F. Sterling, Mifflinburg, Pa. Shock-absorber. No. 1,172,315. Feb. 22; Gaz. vol. 223; p. 1036.
Sessions, Albert L., Bristol, Conn. Turn-table truck. No. 1,172,399; Feb. 22; Gaz. vol. 223; p. 1067.
Sessions, Albert L., Bristol, Conn. Washing-machine. No. 1,172,744; Feb. 22; Gaz. vol. 223; p. 1194.
Severns, William. (See Kohl and Severns.)
Severns, William, Chicago, Ill. Floor-mop. No. 1,173,223; Feb. 29; Gaz. vol. 223; p. 1404.
Severy Manufacturing Company. (See Severy, Melvin L., assignor.)
Severy, Melvin L., Arlington Heights, Mass., and G. B. Sinclair, Georgetown, Me., assignors to Choralcelo Company, Boston, Mass. Pianoforte control. No. 1,171,668; Feb. 15; Gaz. vol. 223; p. 747.
Severy, Melvin L., Arlington Heights, assignor to Severy Manufacturing Company, Boston, Mass. Power-transmission mechanism. No. 1,173,877; Feb. 29; Gaz. vol. 223; p. 1635.
Seward, George O. (See Von Kügelgen and Seward.) (Reissue.)
Seward, George O., Jersey City, N. J., and F. Von Kügelgen, deceased, Holcombs Rock, Va., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee. Detuning. (Reissue.) No. 14,071; Feb. 15; Gaz. vol. 223; p. 950.
Seymour, Charles R. (See Hawkins and Seymour.)
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Chain-severing mechanism for sewing-machines. No. 1,170,349; Feb. 1; Gaz. vol. 223; p. 207.
Seymour, Dudley S., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,172,911; Feb. 22; Gaz. vol. 223; p. 1255.
Seymour, Francis O., Keokuk, Iowa. Machine for setting plants. No. 1,171,263; Feb. 8; Gaz. vol. 223; p. 563.
Seymour, Ralph C. (See Goss and Seymour.)
Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company. Sheet-handling machine. No. 1,173,878; Feb. 29; Gaz. vol. 223; p. 1635.
Shadbolt, William O., New York, N. Y. Truck. No. 1,170,004; Feb. 1; Gaz. vol. 223; p. 87.
Shaft, Willis S., Faribault, Minn. Making stitch-down shoes. No. 1,170,686; Feb. 8; Gaz. vol. 223; p. 362.
Shallor, Frank E. (See Kuhn and Shallor.)
Shale, Joseph H., New Rochelle, assignor to American Piano Company, New York, N. Y. Perforated note-sheet. No. 1,172,228; Feb. 15; Gaz. vol. 223; p. 944.
Shannon, Michael, Muncie, Ind. Wire-drawing safety device. No. 1,171,984; Feb. 15; Gaz. vol. 223; p. 861.
Sharman, James, Stratford, Ontario, Canada. Burial-receptacle. No. 1,173,818; Feb. 29; Gaz. vol. 223; p. 1440.
Sharps, John A., Bablin, W. Va. Sash-balance. No. 1,172,063; Feb. 15; Gaz. vol. 223; p. 891.
Shartle, Charles W., Middletown, Ohio. Pulp-reducing apparatus. No. 1,173,747; Feb. 29; Gaz. vol. 223; p. 1589.
Shartle, Charles W., Middletown, Ohio. Paper-pulp process. No. 1,173,748; Feb. 29; Gaz. vol. 223; p. 1590.
Shartle, Charles W., Middletown, Ohio. Apparatus for reducing stock to pulp. No. 1,173,749; Feb. 29; Gaz. vol. 223; p. 1590.
Shartle, Charles W., Middletown, Ohio. Reducing pulp. No. 1,173,750; Feb. 29; Gaz. vol. 223; p. 1590.
Shaw, David M., Eltham, assignor to Dental Manufacturing Company Limited, London, England. Dental articulator. No. 1,173,045; Feb. 22; Gaz. vol. 223; p. 1300.
Shaw, David M., Eltham, assignor to The Dental Manufacturing Company Limited, London, England. Dental articulator. No. 1,173,046; Feb. 22; Gaz. vol. 223; p. 1301.
Shaw, Frank J., assignor to F. A. Whitney Carriage Co., Leominster, Mass. Child's carriage. No. 1,170,687; Feb. 8; Gaz. vol. 223; p. 362.
Shaw, George E., administrator. (See Shaw, Henry C.)
Shaw, Henry C., deceased, Sewickley; G. E. Shaw, administrator, assignor to A. Garrison Foundry Company, Pittsburgh, Pa. Grinding-machine. No. 1,171,894; Feb. 15; Gaz. vol. 223; p. 828.
Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,171,264; Feb. 8; Gaz. vol. 223; p. 563.
Shaw, Thomas. (See Fay, Shaw, and Pilliod.)
Shaw Walker Company, The. (See Hunter, David E., assignor.)
Sheafor, Francis M., Richland Center, Wis. Sharpening device. No. 1,172,569; Feb. 22; Gaz. vol. 223; p. 1132.
Shearer, David M., Greenville, Miss. Revetment. No. 1,173,879; Feb. 29; Gaz. vol. 223; p. 1636.
Shearer, David M., Vicksburg, Miss. Revetment-mold. No. 1,173,880; Feb. 29; Gaz. vol. 223; p. 1636.
Shearer, Jesse A. See Sauerman, Henry B., assignor.)
Shedaker, Charles A., Philadelphia, Pa. Combination-underwear. No. 1,170,350; Feb. 1; Gaz. vol. 223; p. 207.
Shedenhelm, Robert, Ladora, Iowa, assignor, by mesne assignments, of six-tenths to himself and four-tenths to H. S. Butler. Intermittent-grip device for manure-spreaders and the like. No. 1,170,005; Feb. 1; Gaz. vol. 223; p. 87.
Sheehan, John J. (See Egan and Sheehan.)
Sheehy, William J. (See Dalton, Thomas F., assignor.)
Sheets, Jesse T., Covington, Ky. Ambulance stretcher-support. No. 1,170,688; Feb. 8; Gaz. vol. 223; p. 362.
Sheldon, Harry E., Pittsburgh, Pa., assignor of one-half to W. D. Forsyth, Youngstown, Ohio. Base-plate. No. 1,170,351; Feb. 1; Gaz. vol. 223; p. 208.
Sheldon, Lucian A., Schenectady, N. Y., assignor to General Electric Company. Flow-meter. No. 1,170,195; Feb. 1; Gaz. vol. 223; p. 155.
Shepard, Oscar F., Jr., Cincinnati, Ohio. Brake. No. 1,173,685; Feb. 29; Gaz. vol. 223; p. 1567.
Shepherd Automatic Switch Company. (See Shepherd, Marshall L., assignor.)
Shepherd, Marshall L., assignor to Shepherd Automatic Switch Company, Inc., Montgomery, Ala. Railway-switch mechanism. No. 1,172,172; Feb. 15; Gaz. vol. 223; p. 926.
Shepherd, William E., Terre Haute, Ind. Ironing-table. No. 1,172,064; Feb. 15; Gaz. vol. 223; p. 891.
Sherbondy, William E., assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio. Spark-plug. No. 1,173,541; Feb. 29; Gaz. vol. 223; p. 1517.
Sherman, Ray E., Detroit, Mich. Triple valve. No. 1,173,751; Feb. 29; Gaz. vol. 223; p. 1591.
Sherman, Samuel. (See Blazék, Stephan, assignor.)
Sherrick, Harvey O., Elida, Ohio. Hen's nest. No. 1,172,638; Feb. 22; Gaz. vol. 223; p. 1156.
Sheward, Hubert E., Winchmore Hill, England. Electric lamp and its fittings. No. 1,170,352; Feb. 1; Gaz. vol. 223; p. 208.
Shields, Edward B., and L. L. Tyler, Tacoma, Wash. Cable conveying system. No. 1,170,006; Feb. 1; Gaz. vol. 223; p. 88.
Shields, Edward B., and L. L. Tyler, Tacoma, Wash. Conveying-cable grip. No. 1,170,007; Feb. 1; Gaz. vol. 223; p. 88.
Shiland, Arthur D., Cleveland, Ohio. Chart for determining exposures. No. 1,171,548; Feb. 15; Gaz. vol. 223; p. 705.
Shindel, Harry F., Glenside, assignor to T. A. Willson & Co., Inc., Reading, Pa. Spectacle-temple pivot-butt. No. 1,171,895; Feb. 15; Gaz. vol. 223; p. 829.
Shoemaker, Harry, Jersey City, N. J., assignor to Marconi Wireless Telegraph Company of America. Signaling apparatus. No. 1,170,853; Feb. 8; Gaz. vol. 223; p. 418.
Shore, William E., New York, N. Y., assignor to Combusto Devices Corporation. Device for improving fuel combustion in stoves. No. 1,173,047; Feb. 22; Gaz. vol. 223; p. 1301.
Short, George W., Sharon, Pa. Apparatus for feeding pulverized fuel. No. 1,172,745; Feb. 22; Gaz. vol. 223; p. 1194.

Short, William, Denison, Iowa. Machine for dressing chickens. No. 1,171,669; Feb. 15; Gaz. vol. 223; p. 747.
Shough, William H., and M. T. Dobbins, Buffalo, N. Y. Canopy. No. 1,173,881; Feb. 29; Gaz. vol. 223; p. 1636.
Shraud, George A., Chicago, Ill. Attachment for corn-planters. No. 1,171,265; Feb. 8; Gaz. vol. 223; p. 564.
Shryock, Thomas B., Lawrenceburg, Ky. Timer for internal-combustion engines. No. 1,172,173; Feb. 15; Gaz. vol. 223; p. 927.
Shugart, Edward F. (See Illig, Edward A., assignor.)
Shuman, Arno, Connellsville, Pa., assignor, by mesne assignments, to Pennsylvania Wire Glass Company. Machine for making wire-glass. No. 1,170,008; Feb. 1; Gaz. vol. 223; p. 88.
Shurloc Elevator Safety Co. (See Williamson, Glenn S., assignor.)
Siberell, Harvey P., Glendale, Cal. Wheel-truck. No. 1,171,807; Feb. 15; Gaz. vol. 223; p. 795.
Siberell, Harvey P., Glendale, Cal. Wheel-truck. No. 1,171,808; Feb. 15; Gaz. vol. 223; p. 795.
Sibley, Roy I. (See Keebler and Sibley.)
Sieben, Henry, Kansas City, Mo. Fluid-controlling apparatus. No. 1,169,877; Feb. 1; Gaz. vol. 223; p. 45.
Siecke, Werner. (See Siemen and Siecke.)
Siemen, Otto, Berlin-Siemensstadt, and W. Siecke, assignors to Siemens-Schuckertwerke, G. m. b. H., Berlin, Germany. Rotary pump or blower. No. 1,172,842; Feb. 22; Gaz. vol. 223; p. 1231.
Siemens & Co., Gebruder. (See Egly, Georg, assignor.)
Siemens & Halske, A. G. (See Katz, Aron, assignor.)
Siemens & Halske, A. G. (See Voigt, Hermann, assignor.)
Siemens-Schuckertwerke G. m. b. H. (See Gscheidlen, Wilhelm, assignor.)
Siemens-Schuckert-Werke G. m. b. H. (See Kesten and Osborne, assignors.)
Siemens Schuckert Werke, G. m. b. H. (See Meyer and Kuehns, assignors.)
Siemens Schuckert Werke G. m. b. H. (See Rüdenberg and Zehrung, assignors.)
Siemens-Schuckertwerke, G. m. b. H. (See Siemen and Siecke, assignors.)
Silberstein-Rosen and Sons. (See Rosen, Abraham, assignor.)
Silvear, Thomas E., Aptos, Cal. Fruit-clipper. No. 1,170,353; Feb. 1; Gaz. vol. 223; p. 208.
Silver, Joseph A., Salt Lake City, Utah. Railway-tie. No. 1,170,854; Feb. 8; Gaz. vol. 223; p. 418.
Silverstein, Jacob, Wilkes-Barre, Pa. Rust-preventive device for gun-barrels. No. 1,172,740; Feb. 22; Gaz. vol. 223; p. 1195.
Simmon, Karl A., and A. J. Hall, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Control apparatus. No. 1,169,878; Feb. 1; Gaz. vol. 223; p. 46.
Simmons, Jesse W., Nevada, Tex. Door-securer. No. 1,171,206; Feb. 8; Gaz. vol. 223; p. 564.
Simmons Manufacturing Company, The. (See Gail and Rudd, assignors.)
Simmons, Sheridan D., and H. Amling, New York, N. Y.; said Simmons assignor to said Amling. Spring-hub construction for vehicle-wheels. No. 1,173,048; Feb. 22; Gaz. vol. 223; p. 1301.
Simons, John, assignor to Samuel L. Moore & Sons Corporation, Elizabeth, N. J. Explosive-engine nozzle. No. 1,171,469; Feb. 15; Gaz. vol. 223; p. 677.
Simonsen, Johan C., assignor to Chalmers Motor Company, Detroit, Mich. Forming armature-coils. No. 1,171,148; Feb. 8; Gaz. vol. 223; p. 524.
Simpson, Myron N., Glastonbury, Conn. Carpenter's tool-bag. No. 1,171,896; Feb. 15; Gaz. vol. 223; p. 829.
Sims, Charles M., and H. W. Lee, Anniston, Ala. Collapsible core-bar. No. 1,172,316; Feb. 22; Gaz. vol. 223; p. 1037.
Sims, Clarence T. (See Cammack, Horace D., assignor.)
Sinclair, George B. (See Severy and Sinclair.)
Singer Manufacturing Company, The. (See Diehl, Philip, assignor.)
Sinnott, Joseph W. (See Van Orden, Howard E., assignor.)
Sipher, Edmund F., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rectifier-anode. No. 1,170,689; Feb. 8; Gaz. vol. 223; p. 363.
Sisbower, George F., East Orange, and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Folding bed. No. 1,172,912; Feb. 22; Gaz. vol. 223; p. 1256.
Sisk, Ira E., East St. Louis, Ill. Bit-stock. No. 1,171,670; Feb. 15; Gaz. vol. 223; p. 748.
Sitta, Method F., Chicago, Ill. Window. No. 1,173,049; Feb. 22; Gaz. vol. 223; p. 1302.
Sjostrom, Peter, and A. Moberg, Maplewood, Mass. Channeling-tool. No. 1,171,985; Feb. 15; Gaz. vol. 223; p. 862.
Skeel, Frederick F., Chicago, Ill., assignor to Crouse-Hinds Company, Syracuse, N. Y. Panel-board. No. 1,170,566; Feb. 8; Gaz. vol. 223; p. 317.
Skeel, Frederick F., Chicago, Ill., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electric-conduit fitting. No. 1,170,690; Feb. 8; Gaz. vol. 223; p. 363.
Skidmore, William D., Pelham, N. Y. Dumping-car. No. 1,171,470; Feb. 15; Gaz. vol. 223; p. 677.
Skillman, Earl A. R., Detroit, Mich. Mop. No. 1,171,000; Feb. 8; Gaz. vol. 223; p. 469.
Skipworth, Walter, assignor of one-half to C. R. Wells, Racine, Wis. Portable building construction. No. 1,170,691; Feb. 8; Gaz. vol. 223; p. 364.
Skogland, Frank T., Minneapolis, Minn. Door-fastener. No. 1,171,671; Feb. 15; Gaz. vol. 223; p. 748.
Skydel, Jacob, New York, N. Y. Nipple for nursing-bottles. No. 1,170,354; Feb. 1; Gaz. vol. 223; p. 208.
Sladek, Edward, Chicago, Ill. Pencil-holder. No. 1,173,050; Feb. 22; Gaz. vol. 223; p. 1302.
Slater, Harry, Indiana, Pa. Poultry trough or feeder. No. 1,172,913; Feb. 22; Gaz. vol. 223; p. 1256.
Slattery, John, Chrome, N. J. Process of and apparatus for forming compound ingots. No. 1,172,747; Feb. 22; Gaz. vol. 223; p. 1195.
Sletten, Henry, and A. N. Lidell, Minneapolis, Minn. Device for sinking foundation-tubes. No. 1,172,065; Feb. 15; Gaz. vol. 223; p. 891.
Slick, Edwin E., Westmont borough, Pa. Friction-spring draft-rigging. No. 1,171,809; Feb. 15; Gaz. vol. 223; p. 796.
Slick, Edwin E., Westmont borough, Pa. Car-axle. No. 1,171,897; Feb. 15; Gaz. vol. 223; p. 829.
Slonaker, Frank D., Pennsburg, Pa. Portable chain mortising-machine. No. 1,170,120; Feb. 1; Gaz. vol. 223; p. 129.
Small, Frederick E., Needham, Mass. Piston-packing. No. 1,173,319; Feb. 29; Gaz. vol. 223; p. 1440.
Smart, Walter J., New York, N. Y. Producing ornamental surfaces. No. 1,170,567; Feb. 8; Gaz. vol. 223; p. 318.
Smelser, Chase D., Rushville, Ind. Transmission-clutch lockout. No. 1,170,121; Feb. 1; Gaz. vol. 223; p. 129.
Smith, Arthur W., Ithaca, N. Y. Stack-seaming mandrel. No. 1,170,355; Feb. 1; Gaz. vol. 223; p. 209.
Smith, Asa, and C. F. Carr, Antwerp, Ohio. Harvester. No. 1,170,692; Feb. 8; Gaz. vol. 223; p. 364.
Smith, Augustus, North Plainfield, assignor to Bergen Point Iron Works, Bayonne, N. J. Hoisting machinery for operating grab-buckets. No. 1,170,463; Feb. 1; Gaz. vol. 223; p. 245.
Smith, Bernard E., Pond Creek, Okla. Lifting device. No. 1,170,855; Feb. 8; Gaz. vol. 223; p. 419.
Smith, C. T. (See Seaman, Delbert O., assignor.)
Smith, Carleton W., assignor to Collapso Products Company, Inc., New York, N. Y. Folding stand. No. 1,173,051; Feb. 22; Gaz. vol. 223; p. 1303.
Smith, Charles A., assignor to Draper Company, Hopedale, Mass. Bobbin-driving means for rotatable spindles. No. 1,173,542; Feb. 29; Gaz. vol. 223; p. 1517.
Smith, Charles E., Redondo Beach, Cal. Convertible bath-spray. No. 1,171,149; Feb. 8; Gaz. vol. 223; p. 525.
Smith, Charles E., Oak Lawn, R. I. Machine for depositing gold-leaf upon book-covers or the like. No. 1,173,126; Feb. 22; Gaz. vol. 223; p. 1329.
Smith, Charles E., Oak Lawn, R. I. Dividing metallic leaf attached to a supporting-strip. No. 1,173,127; Feb. 22; Gaz. vol. 223; p. 1329.
Smith, Charles E., assignor of one-half to H. Lang, Vernon, British Columbia, Canada. Ignition means for gas-burners. No. 1,173,052; Feb. 22; Gaz. vol. 223; p. 1303.
Smith, Charles F., assignor to Hygienic Fleeced Underwear Company, Philadelphia, Pa. Cloth-guide for sewing-machines. No. 1,170,009; Feb. 1; Gaz. vol. 223; p. 89.
Smith, Clarence O., Fryeburg, Me. Railway-spike. No. 1,173,882; Feb. 29; Gaz. vol. 223; p. 1637.
Smith, E. H., *et al.* (See McKendree, Creed H., assignor.)
Smith, Edward T. (See Dingee and Smith.)
Smith, George R., Arlington, Md. Insulator for electrically-charged wires. No. 1,171,267; Feb. 8; Gaz. vol. 223; p. 564.
Smith, George W., Philadelphia, Pa. Shipping-container. No. 1,173,752; Feb. 29; Gaz. vol. 223; p. 1591.
Smith, H. Bridgman. (See Szamatolski, Martin, assignor.)
Smith, Harald, assignor to G. Kiorboe, Copenhagen, Denmark. Telephonic apparatus. No. 1,170,356; Feb. 1; Gaz. vol. 223; p. 209.
Smith, Henry L., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Blank-holding spindle for wood-screw machines. No. 1,170,693; Feb. 8; Gaz. vol. 223; p. 364.
Smith, Henry L., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Lead mechanism for wood-screw machines. No. 1,170,694; Feb. 8; Gaz. vol. 223; p. 364.
Smith, Hinsdale, assignor to The Springfield Body Company, Springfield, Mass. Convertible automobile-body. No. 1,170,568; Feb. 8; Gaz. vol. 223; p. 318.
Smith, Hinsdale, assignor to The Springfield Body Company, Springfield, Mass. Hinge for convertible automobile-bodies. No. 1,170,569; Feb. 8; Gaz. vol. 223; p 319.
Smith, Hinsdale, assignor to The Springfield Body Company, Springfield, Mass. Folding top for automobiles. No. 1,170,570; Feb. 8; Gaz. vol. 223; p. 319.
Smith, Hinsdale, assignor to The Springfield Body Company, Springfield, Mass. Convertible vehicle-body. No. 1,170,571; Feb. 8; Gaz. vol. 223; p. 320.

Smith, Irving B., and C. W. Dorricott, Philadelphia, assignors to Electrelle Company, Summerdale, Philadelphia, Pa. Music-holder for self-playing musical instruments. No. 1,170,572; Feb. 8; Gaz. vol. 223; p. 320.

Smith, John A. (See Laganke and Smith.)

Smith, John C., and S. A. Darnell, assignors of one-third to A. D. Davis, Mobile, Ala. Sausage-machine. No. 1,171,549; Feb. 15; Gaz. vol. 223; p. 705.

Smith, John H. (See Serrell, William C., assignor.)

Smith, John J., and F. O. Cassidy, Owego, N. Y. Ironing-board standard. No. 1,171,754; Feb. 15; Gaz. vol. 223; p. 776.

Smith, John L., Savannah, Mo. Brake for platform-trucks. No. 1,171,268; Feb. 8; Gaz. vol. 223; p. 564.

Smith, John L., Noland, Ark. One-horse cultivator. No. 1,171,672; Feb. 15; Gaz. vol. 223; p. 748.

Smith, Leighton H. (See Land, Gordon, assignor.)

Smith, Martin V., Hartford, assignor to J. E. Hamilton, Simsbury, Conn. Incandescent-lamp socket. No. 1,171,471; Feb. 15; Gaz. vol. 223; p. 677.

Smith, Milton A., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I. Automatic metal-shaping machine. No. 1,170,010; Feb. 1; Gaz. vol. 223; p. 89.

Smith, Norman J., and W. F. Lizer, assignors of one-half to said Smith and one-half to F. W. Pett, Waterloo, Iowa. Hose-nozzle brush. No. 1,171,755; Feb. 15; Gaz. vol. 223; p. 777.

Smith, Ora E., *et al.* (See Allen, Achilles, assignor.)

Smith, Peter H., Lougheed, Alberta, Canada. Motor-sleigh. No. 1,173,883; Feb. 29; Gaz. vol. 223; p. 1637.

Smith, Philester, Rochester, N. Y. Mop-wringer. No. 1,171,150; Feb. 8; Gaz. vol. 223; p. 525.

Smith, Robert, West Stanley, England. Locking means for nuts and bolts. No. 1,171,001; Feb. 8; Gaz. vol. 223; p. 470.

Smith, Robert A., Ridley Park, assignor to Precision Thermometer and Instrument Company, Philadelphia, Pa. Means for firing automatically smudge-pots in orchards. No. 1,170,011; Feb. 1; Gaz. vol. 223; p. 90.

Smith, Roe M. (See Whitehart and Smith.)

Smith, Roland L., Everett, Mass. Portable electric searchlight. No. 1,170,012; Feb. 1; Gaz. vol. 223; p. 90.

Smith, Samuel O., and J. W. Campbell, Falco, Ala.; said Campbell assignor to said Smith. Plow. No. 1,169,879; Feb. 1; Gaz. vol. 223; p. 46.

Smith, Singleton, assignor to The Wallace & Smith Co., Milwaukee, Wis. Ring-guard for straps. No. 1,171,898; Feb. 15; Gaz. vol. 223; p. 829.

Smith, Thomas W., Scranton, Pa. Lubricator. No. 1,171,361; Feb. 8; Gaz. vol. 223; p. 597.

Smith, W. E., *et al.* (See Wilson, Samuel T., assignor.)

Smith, William F., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Wire-straightener. No. 1,173,613; Feb. 29; Gaz. vol. 223; p. 1543.

Smith, William W., Trenton, N. J., assignor to Sanitary Stove Top Company. Gas-stove top. No. 1,171,269; Feb. 8; Gaz. vol. 223; p. 564.

Smucker, Ira J., Chicago, Ill. Computing and measuring machine. No. 1,172,843; Feb. 22; Gaz. vol. 223; p. 1231.

Smyer, Charles L. (See Evius, James F., assignor.)

Snapp, William E., Natoma, Kans. Sliding-door lock. No. 1,173,884; Feb. 29; Gaz. vol. 223; p. 1638.

Snyder, Lionel E. (See Welker and Snyder.)

Snyder Manufacturing Company. (See Milne, Russell A., assignor.)

Snyder, Martin L., Torrington, Wyo. Nail holding and delivering device. No. 1,170,939; Feb. 8; Gaz. vol. 223; p. 447.

Sobey, William, assignor to J. I. Case Plow Works, Racine, Wis. Wheeled plow. No. 1,173,392; Feb. 29; Gaz. vol. 223; p. 1466.

Societe Anonyme Des Etablissements Delaunay-Belleville, The. (See Radiguer, Charles, assignor.)

Societe Generale des Etablissements Bergougnan. (See Bergougnan, Mathieu, assignor.)

Société Jules Grouvelle, H. Arquembourg & Cie. (See Arquembourg, Emile H., assignor.)

Soehnlein, George A., Brooklyn, N. Y. Electric hand-lamp. No. 1,171,002; Feb. 8; Gaz. vol. 223; p. 470.

Sohmer & Company. (See Werolin, Edwin S., assignor.)

Solomon, Saunders B., Rochester, N. Y. Coat. No. 1,172,317; Feb. 22; Gaz. vol. 223; p. 1037.

Sommer, Louis C., Jersey City, N. J. Comb. No. 1,173,053; Feb. 22; Gaz. vol. 223; p. 1303.

Sommer, William H., Peoria, Ill. Annealing fence-wire. No. 1,171,673; Feb. 15; Gaz. vol. 223; p. 748.

Sonnentag, William A., Boyd, Wis. Resilient wheel. No. 1,173,885; Feb. 29; Gaz. vol. 223; p. 1638.

Sörensen, Carl A. T., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-retainer for thrust-bearings. No. 1,169,880; Feb. 1; Gaz. vol. 223; p. 46.

Sörensen, Carl A. T., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-retainer for thrust ball-bearings. No. 1,169,881; Feb. 1; Gaz. vol. 223; p. 47.

Sorensen, Peter, New York, N. Y. Quick-break switch. No. 1,171,151; Feb. 8; Gaz. vol. 223; p. 525.

Sorge, Kurt, New York, N. Y. Automatic switch for controlling the operation of pumps. No. 1,171,270; Feb. 8; Gaz. vol. 223; p. 565.

Sorokin, Joseph, Des Moines, Iowa. Attachment for adjusting guide-cords for mangles. No. 1,173,886; Feb. 29; Gaz. vol. 223; p. 1638.

Sortore, Harman H., Friendship, N. Y. Window-screen. No. 1,173,686; Feb. 29; Gaz. vol. 223; p. 1568.

Sosa, Augustus M., assignor to The American Tool Works Company, Cincinnati, Ohio. Reversing mechanism for machine-tools. No. 1,171,003; Feb. 8; Gaz. vol. 223; p. 470.

Soule, Arthur C., San Francisco, Cal., assignor to Sanitary Screen & Shade Company. Window-screen. No. 1,172,174; Feb. 15; Gaz. vol. 223; p. 927.

Soulis, Harold A., assignor of one-half to W. T. Soulis, New York, N. Y. Locking mechanism for vehicle-tires. No. 1,170,695; Feb. 8; Gaz. vol. 223; p. 365.

Soulis, Wilbur T. (See Soulis, Harold A., assignor.)

Soulliere, Leon, Detroit, assignor of one-half to F. A. Raubolt, Wyandotte, Mich. Lock circuit-closer. No. 1,171,756; Feb. 15; Gaz. vol. 223; p. 777.

South, John T., Rice, Tex. Track-switch. No. 1,171,674; Feb. 15; Gaz. vol. 223; p. 749.

Southern Electro-Chemical Company. (See Hechenbleikner, Ingenuin, assignor.)

Southworth Machine Company. (See Feustermacher, Franklin J., assignor.) (Reissue.)

Spada, Carlo, Milan, Italy. Sparking plug for internal-combustion engines. No. 1,173,393; Feb. 29; Gaz. vol. 223; p. 1466.

Spangler, William I., Tarlton, Ohio. Target-trap. No. 1,172,493; Feb. 22; Gaz. vol. 223; p. 1103.

Spanovic, Ninko, Pittsburgh, Pa., assignor to H. A. Phillips, Washington, D. C. Pencil-sharpener. No. 1,172,066; Feb. 15; Gaz. vol. 223; p. 892.

Spar Chemical Company, The. (See Bassett, Harry P., assignor.)

Sparber, Harry A., Lethbridge, Alberta, Canada. Coffee-filter. No. 1,171,675; Feb. 15; Gaz. vol. 223; p. 749.

Sparks, Levi C., Maplewood, assignor to American Car and Foundry Company, St. Louis, Mo. Upper buffing device for vestibule face-plates. No. 1,170,573; Feb. 8; Gaz. vol. 223; p. 321.

Sparling, Raymond W., Los Angeles, Cal. Controlling mechanism for hydraulic jacks. No. 1,172,748; Feb. 22; Gaz. vol. 223; p. 1196.

Spear, Harry B., Seattle, Wash. Boiler for producing superheated steam. No. 1,170,013; Feb. 1; Gaz. vol. 223; p. 90.

Specht, Richard C., and A. S. Nielsen, San Francisco, Cal. Support for a press. No. 1,172,400; Feb. 22; Gaz. vol. 223; p. 1067.

Specialty Manufacturing Company. (See Winkelmeyer, John, assignor.)

Speidel, Charles F., assignor to Eastman Kodak Company, Rochester, N. Y. Film-winding key for photographic cameras. No. 1,169,882; Feb. 1; Gaz. vol. 223; p. 47.

Speller, Frank N., assignor to National Tube Company, Pittsburgh, Pa. Finishing welded pipes. No. 1,171,757; Feb. 15; Gaz. vol. 223; p. 777.

Spence, John H. (See Purdy, Martin K., assignor.)

Spencer Kellogg and Sons. (See Schwarcman, Alexander, assignor.)

Spencer, William H. (See Ludwig and Spencer.)

Sperbeck, Lorenzo. (See Mapson, Robert L., assignor.)

Sperry, John B., assignor to The American Well Works, Aurora, Ill. Pumping apparatus. No. 1,170,574; Feb. 8; Gaz. vol. 223; p. 321.

Sperry, Samuel E., Woodhaven, assignor to International Typesetting Machine Company, New York, N. Y. Automatic stopping mechanism for line-casting machines. No. 1,173,887; Feb. 29; Gaz. vol. 223; p. 1639.

Spiegel, Alexander S., Chicago, Ill. Making shingles. No. 1,172,067; Feb. 15; Gaz. vol. 223; p. 892.

Spiegel, Alexander S., Chicago, Ill. Manufacture of shingles. No. 1,172,068; Feb. 15; Gaz. vol. 223; p. 892.

Spinasse, Arthur E., Mount Vernon, Ohio. Bait for glass-drawing machines. No. 1,170,464; Feb. 1; Gaz. vol. 223; p. 246.

Spitzer, Charles S., Shaniko, Oreg. Weed-cutting machine. No. 1,172,175; Feb. 15; Gaz. vol. 223; p. 927.

Splawn, Joshua W., Temple, Okla. Wheel-strengthener. No. 1,173,128; Feb. 22; Gaz. vol. 223; p. 1329.

Splitdorf Electrical Company. (See Swift, Walter G., assignor.) (Reissue.)

Splitek, John J., assignor of one-half to G. Lee, Faith, S. D. Hen's nest. No. 1,172,494; Feb. 22; Gaz. vol. 223; p. 1104.

Sponenburg, Hiram H., Gurnee, assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 1,170,940; Feb. 8; Gaz. vol. 223; p. 447.

Sponsel, Charles W. (See Kidder and Sponsel.)

Sponsel, Ira M., Goodland, Kans. Automatic cut-off device. No. 1,173,614; Feb. 29; Gaz. vol. 223; p. 1543.

Sprague, Beecher W., *et al.* (See La Moy, John H., assignor.)

Sprague, Charles B., Penn Yan, N. Y. Measuring and dispensing device. No. 1,171,550; Feb. 15; Gaz. vol. 223; p. 706.

Sprague, Fred A., Concord, N. H. Surgical device for use in setting broken bones. No. 1,170,494; Feb. 1; Gaz. vol. 223; p. 256.

Spray Engineering Company, The. (See Day, Herbert W., assignor.)

Sprinchorn, Ulrich, and O. Kallander, Jamestown, N. Y. Window-shade fixture. No. 1,171,362; Feb. 8; Gaz. vol. 223; p. 598.

Springer, William N., Peoria, Ill., assignor to Avery Company. Excavator. No. 1,172,495; Feb. 22; Gaz. vol. 223; p. 1104.

Springfield Body Company, The. (See Smith, Hinsdale, assignor.)

Squier, Walter C., assignor to Emerson-Brantingham Company, Rockford, Ill. Disk drill. No. 1,170,696; Feb. 8; Gaz. vol. 223; p. 365.

St. Clair, Augustus A., Indianapolis, Ind. Automatic speed-varying transmission mechanism. No. 1,171,472; Feb. 15; Gaz. vol. 223; p. 678.

St. Jacques, Delphis E., Springfield, Mass. Automobile-signal. No. 1,171,305; Feb. 8; Gaz. vol. 223; p. 599.

St. Louis Frog & Switch Company. (See Lichter, John J., assignor.)

St. Louis Malleable Casting Company. (See Ette, Charles G., assignor.)

Stafford, Francis M., Indianapolis, Ind. Animal-medicator. No. 1,173,753; Feb. 29; Gaz. vol. 223; p. 1591.

Ståhlnacke, Karl A., Österås, Bergvik, Sweden. Machine for removing the bark from logs. No. 1,173,615; Feb. 29; Gaz. vol. 223; p. 1544.

Stalec, Paul J., Seattle, Wash. Hydraulic irrigating-machine. No. 1,171,758; Feb. 15; Gaz. vol. 223; p. 777.

Stalker, Harold G., Navan, Ontario, Canada. Automatic recorder for telephone-messages. No. 1,173,754; Feb. 29; Gaz. vol. 223; p. 1591.

Stallings, Wilford E., Beaver Creek, Md. Shutter-fastener. No. 1,170,697; Feb. 8; Gaz. vol. 223; p. 366.

Stalmann, Otto. (See Rudolph, Otto C., assignor.)

Stamm, Hans, St. Gallen, assignor to Firm of A. Saurer, Arbon, Switzerland. Cartridge-case extractor for firearms. No. 1,170,014; Feb. 1; Gaz. vol. 223; p. 90.

Stamm, Hans, St. Gallen, assignor to Firm of A. Saurer, Arbon, Switzerland. Short straight-pull breech-action for military hand-firearms. No. 1,172,069; Feb. 15; Gaz. vol. 223; p. 892.

Standard Computing Scale Company. (See Jaenichen, Louis, assignor.)

Standard Welding Company, The. (See Bryant, Richard S., assignor.)

Standerwick, Reginald G., Lynn, Mass., assignor to General Electric Company. Arc-lamp clutch. No. 1,171,271; Feb. 8; Gaz. vol. 223; p. 565.

Stanley Rule & Level Company, The. (See Schade, Edmund A., assignor.)

Stanley, William, Chicago, Ill. Motor attachment. No. 1,172,176; Feb. 15; Gaz. vol. 223; p. 928.

Stansfield, Charles, Jamestown, N. Y., assignor to Draper Company, Hopedale, Mass. Twister stop-motion. No. 1,171,363; Feb. 8; Gaz. vol. 223; p. 598.

Stanton, John J., New York, N. Y. Whistling musical instrument. No. 1,173,054; Feb. 22; Gaz. vol. 223; p. 1304.

Stanton, Samuel H., Carbondale, Ohio. Saw-tool. No. 1,173,888; Feb. 29; Gaz. vol. 223; p. 1639.

Stapelmann, Herman, and J. Juch, Newark, Ohio. Vitreous furnace. No. 1,170,575; Feb. 8; Gaz. vol. 223; p. 322.

Staples, Stogdell S., White Haven, Pa. Shuttle-check. No. 1,170,357; Feb. 1; Gaz. vol. 223; p. 210.

Star Seal Company. (See Stone, William F., assignor.)

Stark, Andrew, Chicago, Ill. Rail-anchor. No. 1,172,496; Feb. 22; Gaz. vol. 223; p. 1105.

Starkey, W. H., *et al.* (See Baxter, Charles F., assignor.)

Starr, Samuel E. (See Haas, Victor E., assignor.)

Stedman, Leonard B., Victoria, British Columbia, Canada. Internal-combustion engine. No. 1,170,783; Feb. 8; Gaz. vol. 223; p. 394.

Stedman, William H., assignor to The Merrow Machine Company, Hartford, Conn. Take-up. No. 1,173,320; Feb. 29; Gaz. vol. 223; p. 1440.

Steel, Donald, Palo Alto, Cal. Dredge sluice-jig. No. 1,173,465; Feb. 29; Gaz. vol. 223; p. 1489.

Steelman, Joseph W., Philadelphia, Pa., assignor to J. C. Harrigan, Camden, N. J. Ventilating-washer for knife-blade fuses. No. 1,173,889; Feb. 29; Gaz. vol. 223; p. 1639.

Steelman, Lewis, Millville, N. J. Twyer structure for gas-producers. No. 1,172,070; Feb. 15; Gaz. vol. 223; p. 893.

Stefanini Annibale, Pisa, and G. Gradenigo, Turin, Italy. Inhaler. No. 1,171,364; Feb. 8; Gaz. vol. 223; p. 598.

Steffens, Fred, St. Joseph, Mo. Car-truck. No. 1,172,497; Feb. 22; Gaz. vol. 223; p. 1105.

Stehm, Frank R., assignor to Enamel Concrete Company, Des Moines, Iowa. Concrete-forming machine. No. 1,173,987; Feb. 29; Gaz. vol. 223; p. 1669.

Steiert, Herman A., Sharon Hill, Pa. Machine for holding and feeding brush-backs. No. 1,171,473; Feb. 15; Gaz. vol. 223; p. 678.

Steifel, Frank H., Jersey City Heights, N. J. Linotype-slug. No. 1,172,914; Feb. 22; Gaz. vol. 223; p. 1256.

Stein, Charles S., Hillsboro, Iowa. Agricultural implement. No. 1,170,698; Feb. 8; Gaz. vol. 223; p. 366.

Steinberg, Abraham, Chicago, Ill., assignor to Kineto Machine Company. Stereopticon advertising-clock. No. 1,172,844; Feb. 22; Gaz. vol. 223; p. 1231.

Steiner, Adolf, Berlin, assignor to Titania Schreibmaschinen Ges. M. B. H., Berlin, Germany. Power-operated type-writer. No. 1,173,321; Feb. 29; Gaz. vol. 223; p. 1441.

Steinmetz, Joseph A., Philadelphia, Pa. Capturing or destroying aircraft. No. 1,171,152; Feb. 8; Gaz. vol. 223; p. 526.

Steinmetz, Joseph A., Philadelphia, Pa. Mine and torpedo guard. No 1,171,153; Feb. 8; Gaz. vol. 223; p. 526.

Stennett, Edward A., Red Oak, Iowa. Adjustable wheel, felly, and tires. No. 1,172,639; Feb. 22; Gaz. vol. 223; p. 1156.

Stenzel, Arthur E. (See Kottusch, Emil, assignor.)

Stenzel, Gus, Idria, Cal. Vehicle repair-clip. No. 1,172,499; Feb. 22; Gaz. vol. 223; p. 1106.

Stephens, Harry H., Philadelphia, Pa. Sludge-reducing machine. No. 1,172,861; Feb. 22; Gaz. vol. 223; p. 1236.

Stephens, John H., Vernon, Tex. Hose-coupling. No. 1,171,551; Feb. 15; Gaz. vol. 223; p. 706.

Stephens, John H. (See Haar, Gustav E., assignor.)

Stephens, Otis V., assignor of one-half to R. W. Herbert, Richmond, Va. Dirigible headlight for automobiles. No. 1,173,890; Feb. 29; Gaz. vol. 223; p. 1639.

Stephens, Roscoe W., Los Angeles, Cal. Combination drilling-rig. No. 1,170,015; Feb. 1; Gaz. vol. 223; p. 91.

Stephenson, Charles E., Sioux City, Iowa, assignor to Automatic Electric Company, Chicago, Ill. Telephone trunking system. No. 1,172,402; Feb. 22; Gaz. vol. 223; p. 1068.

Stephenson, William A., Estelline, Tex. Rail-joint. No. 1,172,177; Feb. 15; Gaz. vol. 223; p. 928.

Stephenson, William M., Dallas, Tex. Well-pumping system. No. 1,171,986; Feb. 15; Gaz. vol. 223; p. 862.

Sterling Valve Company, The. (See Beck, John L., assignor.)

Sterling, William F. (See Service, William F., assignor.)

Stern, Arnold, Hollis, N. Y. Transfer-mount for embroidery. No. 1,171,154; Feb. 8; Gaz. vol. 223; p. 526.

Stern-Coleman Diamond Machine Company. (See Coleman, Clyde J., assignor.)

Stern, Georg, Berlin, Germany, assignor to General Electric Company. Oil-switch. No. 1,171,272; Feb. 8; Gaz. vol. 223; p. 566.

Stern, Morris B., New York, N. Y. Protecting-belt for babies. No. 1,173,055; Feb. 22; Gaz. vol. 223; p. 1304.

Stevens, Alton E. (See Henry and Stevens.)

Stevens, Charles B., New York, N. Y. Coupling device for brake-chains. No. 1,172,915; Feb. 22; Gaz. vol. 223; p. 1256.

Stevens, Charles B., New York, N. Y. Coupling device for brake-chains. No. 1,172,916; Feb. 22; Gaz. vol. 223; p. 1256.

Stevens, Enoch P., Chicago, Ill., assignor, by mesne assignments, to American Arch Company, New York, N. Y. Baffle means for fire-boxes. No. 1,172,318; Feb. 22; Gaz. vol. 223; p. 1037.

Stevens, George E., Lynn, Mass., assignor to General Electric Company. Controlling mechanism for automobile starting-motors and lighting-generators. No. 1,170,196; Feb. 1; Gaz. vol. 223; p. 156.

Stevens, Mary A. (See Parks, Samuel B., assignor.)

Stevens, William C., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Cushion-tire-drilling machine. No. 1,171,552; Feb. 15; Gaz. vol. 223; p. 706.

Stevenson, James E., Puyallup, Wash. Wrecking-tool. No. 1,170,016; Feb. 1; Gaz. vol. 223; p. 91.

Steward, Roy F., *et al.* (See Bonner, William T., assignor.)

Stewart, James R. (See Brown, Theodore H. and H., assignors.)

Stewart, James S., New York, N. Y. Rotary snap-switch. No. 1,171,987; Feb. 15; Gaz. vol. 223; p. 863.

Stewart, William F., Pekin, Ill. Vehicle-tire. No. 1,173,891; Feb. 29; Gaz. vol. 223; p. 1640.

Stickley, Marcus A., Strasburg, Va. Wire stretching and splicing device. No. 1,172,071; Feb. 15; Gaz. vol. 223; p. 893.

Still, Ernest H., London, England. Grenade. No. 1,172,498; Feb. 22; Gaz. vol. 223; p. 1105.

Still, William J., Southall, England. Manufacture of gilled tubular apparatus. No. 1,171,899; Feb. 15; Gaz. vol. 223; p. 830.

Still, William J., West Ealing, England. Tubular heat-interchanging apparatus. No. 1,171,900; Feb. 15; Gaz. vol. 223; p. 830.

Stilling, William J., Elmhurst, assignor to Hecla Iron Works, Brooklyn, N. Y. Operating device for sliding doors. No. 1,171,004; Feb. 8; Gaz. vol. 223; p. 471.

Stillman, Howard, Berkeley, Cal. Diaphragm for non-vestibule passenger-train cars. No. 1,172,740; Feb. 22; Gaz. vol. 223; p. 1197.

Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Filling-positioning device for looms. No. 1,172,750; Feb. 22; Gaz. vol. 223; p. 1197.

Stineman, Ralph P., and T. S. Darby, San Diego, Cal. Moving-picture-film holder. No. 1,170,576; Feb. 8; Gaz. vol. 223; p. 322.

Stoddard, James T., Portland, Oreg. Wood-refuse incinerator. No. 1,171,005; Feb. 8; Gaz. vol. 223; p. 471.

Stoeser, Alexander J., Chicago, Ill. Bucket for handling plastic material. No. 1,173,322; Feb. 29; Gaz. vol. 223; p. 1441.

Stoffel, Fernand, Paris, France, assignor to W. H. and C. Edwards and J. E. Rierdan, New York, N. Y. Applying a layer of adhesive material to fabrics. No. 1,170,699; Feb. 8; Gaz. vol. 223; p. 366.
Stokes, Harlow T., Newark, N. J. Aeroplane. No. 1,169,883; Feb. 1; Gaz. vol. 223; p. 47.
Stokes & Smith Company. (See Reifsnyder and Schwerdtle, assignors.)
Stoller, Hugh M., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Fault-locator for electric cables. No. 1,170,017; Feb. 1; Gaz. vol. 223; p. 92.
Stone, John S., Kansas City, Mo. Baptismal font. No. 1,171,901; Feb. 15; Gaz. vol. 223; p. 830.
Stone, Marshall L., Newton, assignor to W. P. Stone, Boston, Mass. Storage-battery carrier. No. 1,173,616; Feb. 29; Gaz. vol. 223; p. 1544.
Stone, Porter E., Chicago, Ill. Wind-shield. No. 1,170,700; Feb. 8; Gaz. vol. 223; p. 367.
Stone, Spencer A., Chillicothe, Mo. Pump. No. 1,171,273; Feb. 8; Gaz. vol. 223; p. 566.
Stone, William F., Woodbury, N. J., assignor to Star Seal Company, New York, N. Y. Machine for packaging liquids. No. 1,173,148; Feb. 22; Gaz. vol. 223; p. 1337.
Stone, William P. (See Stone, Marshall L., assignor.)
Stoney, John T., Cleveland, Ohio. Moiding-machine. (Reissue.) No. 14,059; Feb. 8; Gaz. vol. 223; p. 615.
Storey, Paul, Taft, British Columbia, Canada. Seal-lock. No. 1,173,056; Feb. 22; Gaz. vol. 223; p. 1304.
Stott, Edward B., New York, N. Y. Light-proof retainer for films, plates, or sensitized photographic material. No. 1,172,072; Feb. 15; Gaz. vol. 223; p. 893.
Stout, John H., North Yakima, Wash. Rake. No. 1,170,701; Feb. 8; Gaz. vol. 223; p. 367.
Stover Engine Works. (See Freidag, William F., assignor.)
Struck, Henry C., Owego, N. Y. Rotary engine. No. 1,169,884; Feb. 1; Gaz. vol. 223; p. 48.
Straight Line Engine Company. (See Sweet, Winter, and Chambers, assignors.)
Straight, William O., Pullman, Wash. Collapsible drinking-cup. No. 1,173,755; Feb. 29; Gaz. vol. 223; p. 1592.
Straud, Andrew, assignor to Joerns Motor Manufacturing Co., St. Paul, Minn. Valve-operating mechanism for gas-engines. No. 1,172,040; Feb. 22; Gaz. vol. 223; p. 1156.
Stratton, Frederic B., Bombay, India. Cotton-gin roller. No. 1,173,323; Feb. 29; Gaz. vol. 223; p. 1442.
Stratton, John, and E. A. Claremont, county of Chester, England. Glazing-bar. No. 1,171,073; Feb. 8; Gaz. vol. 223; p. 495.
Straub, William F., and A. A. Radtke; said Straub assignor to Electric Time Recorder Company, Chicago, Ill. Motor. No. 1,171,366; Feb. 8; Gaz. vol. 223; p. 599.
Strause, Aaron W., Berkeley, Cal. Copy-holder. No. 1,170,941; Feb. 8; Gaz. vol. 223; p. 448.
Strauss, Joseph, and A. S. Halsey, Washington, D. C., assignors to the Government of the United States. Housing for guns. No. 1,170,577; Feb. 8; Gaz. vol. 223; p. 322.
Strauss, Joseph B., Chicago, Ill. Bridge. No. 1,170,702; Feb. 8; Gaz. vol. 223; p. 367.
Strauss, Joseph B., Chicago, Ill. Double-deck bascule-bridge. No. 1,170,703; Feb. 8; Gaz. vol. 223; p. 368.
Strauss, Joseph B., Chicago, Ill. Window. No. 1,170,704; Feb. 8; Gaz. vol. 223; p. 368.
Strauss, Joseph B., Chicago, Ill. Bridge. No. 1,171,553; Feb. 15; Gaz. vol. 223; p. 707.
Strauss, Julius L., assignor to Rose Strauss Co., New York, N. Y. Portable electric lamp. No. 1,171,274; Feb. 8; Gaz. vol. 223; p. 566.
Strite, Charles P., assignor, by mesne assignments, to Horton Manufacturing Company, Minneapolis, Minn. Driving mechanism for printing-presses. No. 1,171,554; Feb. 15; Gaz. vol. 223; p. 707.
Strober, Lewis W., Waukee, Iowa. Horse-collar. No. 1,172,641; Feb. 22; Gaz. vol. 223; p. 1157.
Stromberg-Carlson Telephone Manufacturing Company. (See Reinke, Eugene A., assignor.)
Stromberg Motor Devices Company. (See Boettcher, Arthur H., assignor.)
Strong, Archie H., West Brighton, N. Y. Tobacco-pipe. No. 1,170,465; Feb. 1; Gaz. vol. 223; p. 246.
Stroud, Charles M., assignor of one-half to W. J. Bowman, Minneapolis, Minn. Carbureter. No. 1,171,074; Feb. 8; Gaz. vol. 223; p. 495.
Strout, Theodore C., Waterbury, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Switch for electrollers. No. 1,172,178; Feb. 15; Gaz. vol. 223; p. 928.
Struthers, Joshua A., Jersey City, N. J., assignor to The Tri-Unit Electrical Co. Gearing for starting mechanism. No. 1,172,845; Feb. 22; Gaz. vol. 223; p. 1231.
Stuart, William F., Cleveland, Ohio. Weeding-tool. No. 1,170,122; Feb. 1; Gaz. vol. 223; p. 129.
Stubbs, William W., Council Bluffs, Iowa, assignor to A. Pawol, Omaha, Nebr. Thermostatic control for steam-traps. No. 1,172,751; Feb. 22; Gaz. vol. 223; p. 1197.
Studdert, Hugh S., Seattle, Wash. Steam-boiler. No. 1,172,401; Feb. 22; Gaz. vol. 223; p. 1067.
Studebaker Corporation, The. (See Heaslet, James G., assignor.)
Stull, Emmett W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Dynamo-electric machine. No. 1,173,153; Feb. 22; Gaz. vol. 223; p. 1339.
Sturt, Alfred T. (See Mason and Sturt.)
Sturtevant Mill Company. (See Sturtevant, Thomas J., assignor.)
Sturtevant, Thomas J., Wellesley, Mass., assignor to Sturtevant Mill Company. Bag-holder. No. 1,173,224; Feb. 29; Gaz. vol. 223; p. 1404.
Stuver, Eugene E., and C. R. Robbins, Blue Mound, Ill. Lock. No. 1,173,892; Feb. 29; Gaz. vol. 223; p. 1640.
Styli, Harry H., and H. K. Parsons, assignors to American Optical Company, Southbridge, Mass. Cement-mold. No. 1,170,197; Feb. 1; Gaz. vol. 223; p. 156.
Subert, Charles, Chicago, Ill., assignor to Sanifacient Humidor Company. Humidifier. No. 1,172,642; Feb. 22; Gaz. vol. 223; p. 1157.
Sugar Cane By-Products Co. (See Marsden, Mark W., assignor.)
Suit, Harry F., Washington, D. C. Bottle-closure. No. 1,173,057; Feb. 22; Gaz. vol. 223; p. 1305.
Sullivan, Clark E., Grand Rapids, Mich. Wrench. No. 1,172,319; Feb. 22; Gaz. vol. 223; p. 1038.
Sullivan, Herbert W. (See Hay and Sullivan.)
Sullivan, James H. (See Giadding and Sullivan.)
Sullivan, John F., New York, N. Y. Vehicle-signal. No. 1,169,885; Feb. 1; Gaz. vol. 223; p. 48.
Sullivan, Joseph M., Dallas, Tex. Pneumatic-cushion support for automobile-bodies. No. 1,170,942; Feb. 8; Gaz. vol. 223; p. 448.
Sullivan Machinery Company. (See Gilman, George H., assignor.)
Sullivan Machinery Company. (See Gilman and Michael, assignors.)
Sullivan, Sylvester J., Hot Springs, Ark. Sash-weight mold. No. 1,171,275; Feb. 8; Gaz. vol. 223; p. 567.
Sulsona, Joseph D., assignor to Taximeter Control Company, New York, N. Y. Control device for vehicles. No. 1,172,403; Feb. 22; Gaz. vol. 223; p. 1068.
Sultzbach, Frederick G., Lancaster, Pa. Game apparatus. No. 1,169,886; Feb. 1; Gaz. vol. 223; p. 48.
Sulzberger, Nathan, New York, N. Y. Soluble catalytic agents and making the same. No. 1,171,902; Feb. 15; Gaz. vol. 223; p. 831.
Summerhayes, Henry R., Schenectady, N. Y., assignor to General Electric Company. Remote control of dynamo-electric machines. No. 1,173,058; Feb. 22; Gaz. vol. 223; p. 1305.
Summerfield, Emanuel P. (See Taylor, Aiken C., assignor.)
Summers, George L., Huntington, W. Va. Window-bead fastener. No. 1,171,276; Feb. 8; Gaz. vol. 223; p. 567.
Sunday, William. (See Weiss, Otto, assignor.)
Sundeen, Alfred D., assignor of one-third to E. Sundeen, Philadelphia, Pa. Transmission-gearing. No. 1,173,059; Feb. 22; Gaz. vol. 223; p. 1305.
Sundeen, Emanuel. (See Sundeen, Alfred D., assignor.)
Sunden, Otto F., assignor of one-half to E. B. Keith, Brockton, Mass. Clutch. No. 1,170,784; Feb. 8; Gaz. vol. 223; p. 394.
Sunderland, Leo, Westminster, London, England. Joining or bonding the junctions of metallic sheathing or armoring of electric conductors. No. 1,173,394; Feb. 29; Gaz. vol. 223; p. 1466.
Superior Oxygen Company. (See Plumley, Marion S., assignor.)
Sutcliffe, Edgar R., Leigh, England. Treatment of slag for the manufacture of bricks and for other purposes. No. 1,171,676; Feb. 15; Gaz. vol. 223; p. 749.
Sutcliffe, John P., Brooklyn, N. Y. Garbage-can. No. 1,173,893; Feb. 29; Gaz. vol. 223; p. 1640.
Sutterle, Frederick W., Jr., Shanghai, China. Attachment for type-writers. No. 1,169,887; Feb. 1; Gaz. vol. 223; p. 49.
Suzuki, Benjamin S., Seattle, Wash. Hat-fastener. No. 1,173,894; Feb. 29; Gaz. vol. 223; p. 1640.
Swallow, Jacob, Los Angeles, Cal. Wick adjustment for oil-burners. No. 1,170,018; Feb. 1; Gaz. vol. 223; p. 92.
Swan, Thomas, Cleveland, Ohio, assignor to Fisher Closed Body Company, Detroit, Mich. Vehicle-top. No. 1,173,154; Feb. 22; Gaz. vol. 223; p. 1339.
Swank, Lafe, and J. E. Van Deventer, assignors to Dwiggins Wire Fence Company, Anderson, Ind. Gate. No. 1,171,903; Feb. 15; Gaz. vol. 223; p. 831.
Swanson, Edward, Hallock, Minn. Walking-tractor. No. 1,171,474; Feb. 15; Gaz. vol. 223; p. 679.
Swanson, James, assignor to Orr & Lockett Hardware Company, Chicago, Ill. Casement-window adjuster. No. 1,171,555; Feb. 15; Gaz. vol. 223; p. 708.
Swanson, John A., Bantry, N. D. Drill attachment. No. 1,171,556; Feb. 15; Gaz. vol. 223; p. 708.
Swanson, Olof F., Chicago, Ill. Door-lock. No. 1,172,846; Feb. 22; Gaz. vol. 223; p. 1232.
Swanson, Sven. (See Nickel and Swanson.)
Sweeney, Daniel M., San Francisco, Cal. Spark-gap mechanism. No. 1,173,324; Feb. 29; Gaz. vol. 223; p. 1442.
Sweet, Byron, Poplar Grove, Ill. Grinding-machine. No. 1,173,225; Feb. 29; Gaz. vol. 223; p. 1404.

Sweet, John E., A. Winter, and F. G. Chambers, Syracuse, N. Y., assignors to Straight Line Engine Company. Sand-blast device. No. 1,170,198; Feb. 1; Gaz. vol. 223; p. 156.
Sweeting, Harry W., Rochester, N. Y. Combined kitchen utensil. No. 1,170,358; Feb. 1; Gaz. vol. 223; p. 210.
Swendeman, Joseph E., Providence, R. I. Valve. No. 1,171,475; Feb. 15; Gaz. vol. 223; p. 679.
Swift, Matthew H. (See Jaquith, Adelbert S., assignor.)
Swift, Walter G., Providence, R. I., assignor to Splitdorf Electrical Company, Newark, N. J. Attachment for installing magnetos on gas-engines. (Reissue.) (No. 14,060; Feb. 8; Gaz. vol. 223; p. 616.
Swift, Willard E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Dispensing-cabinet for collapsible drinking-cups or the like. No. 1,170,705; Feb. 8; Gaz. vol. 223; p. 368.
Switzer, Andrew, Los Angeles, Cal. Grade-indicator. No. 1,170,466; Feb. 1; Gaz. vol. 223; p. 246.
Swoboda, Hans O., Edgewood borough, Pa., assignor to The Moffat Stove Company of Weston, Limited, Weston, Ontario, Canada. Electric heating element. No. 1,170,943; Feb. 8; Gaz. vol. 223; p. 448.
Swortzel, Marquis E., Waynesboro, Va. Electrically-operated pump. No. 1,170,359; Feb. 1; Gaz. vol. 223; p. 210.
Sylvester, Walter, Tunstall, Stoke-upon-Trent, England. Pawl-and-ratchet mechanism. No. 1,173,325; Feb. 29; Gaz. vol. 223; p. 1442.
Symington, Thomas H., Rochester, N. Y. End construction. (Reissue.) No. 14,069; Feb. 15; Gaz. vol. 223; p. 955.
Symington, Thomas H., Rochester, N. Y. Draft-support. No. 1,171,557; Feb. 15; Gaz. vol. 223; p. 708.
Symmonds, Robert, Jr., assignor to T. B. Jeffery, Kenosha, Wis. Automobile-controlling mechanism. No. 1,173,617; Feb. 29; Gaz. vol. 223; p. 1545.
Szamatolski, Martin, Bayonne, N. J., assignor to H. B. Smith, New York, N. Y. Chrome-leather sole for boots and shoes and making same. No. 1,173,988; Feb. 29; Gaz. vol. 223; p. 1670.
Szoták, John, Elizabeth, N. J. Heater. No. 1,172,404; Feb. 22; Gaz. vol. 223; p. 1068.
Szoták, John, Elizabeth, N. J. Heater for curling-irons. No. 1,172,405; Feb. 22; Gaz. vol. 223; p. 1008.
T. A. Willson & Co. (See Shindel, Harry F., assignor.)
Taber, John E., South Bend, Ind. Automobile-top. No. 1,173,618; Feb. 29; Gaz. vol. 223; p. 1545.
Taft-Peirce Manufacturing Company, The. (See Commons, William C., assignor.)
Taft-Peirce Manufacturing Company, The. (See Smith, Milton A., assignor.)
Taft-Peirce Manufacturing Company, The. (See Winter, William, assignor.)
Taggart, William T., Plainfield, N. J. Faucet. No. 1,173,895; Feb. 29; Gaz. vol. 223; p. 1641.
Talbott, Lee N., Dundas, Minn. Self-lubricating axle. No. 1,173,060; Feb. 22; Gaz. vol. 223; p. 1306.
Taliaferro, Ernest C., Springfield, Mass. Sash-lock. No. 1,173,129; Feb. 22; Gaz. vol. 223; p. 1329.
Tanaka, Tanehisa. (See Sato and Tanaka.)
Tannenbaum, Robert, and P. Reichardt, Cincinnati, Ohio. Toilet device. No. 1,171,155; Feb. 8; Gaz. vol. 223; p. 526.
Tanner, Henry E. (See Cothran and Tanner.)
Tanner, Ned V., Tonopah, Nev. Apparatus for measuring liquids. No. 1,171,476; Feb. 15; Gaz. vol. 223; p. 680.
Tassin, Wirt. (See Page and Tassin.)
Tate, Charles G., assignor, by mesne assignments, to E. A. Benson, Chicago, Ill. Construction of wheels. No. 1,170,706; Feb. 8; Gaz. vol. 223; p. 368.
Tate, Thomas A., Lowell, Ariz. Folding automobile-seat. No. 1,170,123; Feb. 1; Gaz. vol. 223; p. 129.
Taximeter Control Company. (See Sulsona, Joseph D., assignor.)
Taylor, Aiken C., Richmond, assignor to E. P. Summerfield, Norfolk, Va. Window. No. 1,171,367; Feb. 8; Gaz. vol. 223; p. 600.
Taylor, Arthur K., Baltimore, Md., assign... Hoe & Co., New York, N. Y. Printing-machine. No. 1,172,752; Feb. 22; Gaz. vol. 223; p. 1198.
Taylor, Charles H., Montreal, Quebec, Canada. Meter. No. 1,173,395; Feb. 29; Gaz. vol. 223; p. 1466.
Taylor, Edwin, Farmingdale, assignor to D. M. Neuberger, New York, N. Y. Flying-machine. No. 1,171,075; Feb. 8; Gaz. vol. 223; p. 495.
Taylor, Frederick W., deceased, Philadelphia, Pa.; E. W. Clark, 3d, executor. Plant-growing apparatus. No. 1,171,558; Feb. 15; Gaz. vol. 223; p. 709.
Taylor, Frederick W., deceased, Philadelphia, Pa.; E. W. Clark, 3d, executor. Bed for growing grass and other vegetation. No. 1,171,559; Feb. 15; Gaz. vol. 223; p. 709.
Taylor, Frederick W., deceased; E. W. Clark, 3d, Philadelphia, Pa., executor. Grass-growing apparatus and making the same. No. 1,171,560; Feb. 15; Gaz. vol. 223; p. 709.
Taylor, George T. and J. L., assignors to A. L. Benner, Sterling, Ill. Air-operated tool. No. 1,173,326; Feb. 29; Gaz. vol. 223; p. 1442.
Taylor, Herbert B. (See Ross and Taylor.)
Taylor, Hiram H., Worcester, Mass. Pattern-drafting device. No. 1,173,226; Feb. 29; Gaz. vol. 223; p. 1405.
Taylor Instrument Companies. (See Darwin and Mason, assignors.)
Taylor, James H. (See Miller, Israel, assignor.)
Taylor, James H., Sr., and J. B., Toledo, Ohio. Gear. No. 1,170,707; Feb. 8; Gaz. vol. 223; p. 369.
Taylor, John D., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,170,361; Feb. 1; Gaz. vol. 223; p. 211.
Taylor, John D., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-signal. No. 1,170,362; Feb. 1; Gaz. vol. 223; p. 211.
Taylor, John D., deceased, Wilkinsburg, Pa.; M. E. Taylor, executrix, Chillicothe, Ohio, assignor to The Union Switch & Signal Company, Swissvale, Pa. Holding device. No. 1,170,360; Feb. 1; Gaz. vol. 223; p. 211.
Taylor, John L. (See Taylor, George T. and J. L.)
Taylor, John M., Bridgeport, Pa. Plastic composition and making it. No. 1,172,073; Feb. 15; Gaz. vol. 223; p. 894.
Taylor, Julius B. (See Taylor, James H., Sr., and J. B.)
Taylor, Leslie B., Birmingham, England. Drop-down breech-loading small-arm. No. 1,170,363; Feb. 1; Gaz. vol. 223; p. 212.
Taylor, Lyman B., Lynnfield, Mass., assignor to Health Games Company. Exercising apparatus. No. 1,170,467; Feb. 1; Gaz. vol. 223; p. 246.
Taylor, Mary E., executrix. (See Taylor, John D.)
Taylor, Thomas B., Stratford, Conn. Hollow sheet-metal bolt. No. 1,172,406; Feb. 22; Gaz. vol. 223; p. 1069.
Taylor, Thomas G., Leaksville, N. C. Curtain-holder for buggies. No. 1,172,179; Feb. 15; Gaz. vol. 223; p. 928.
Taylor, William O. (See Heath and Taylor.)
Taylor, William R., Racine, Wis. Detachable hinge. No. 1,172,500; Feb. 22; Gaz. vol. 223; p. 1106.
Teague, Charles, Fresno, Cal. Composition of matter to be used as a confection. No. 1,173,619; Feb. 29; Gaz. vol. 223; p. 1545.
Teczo, Jan, Passaic, N. J. Aeroplane. No. 1,173,548; Feb. 29; Gaz. vol. 223; p. 1518.
Tedell, John, Moline, assignor to Rock Island Plow Company, Rock Island, Ill. Corn-planter clutch mechanism. No. 1,170,785; Feb. 8; Gaz. vol. 223; p. 395.
Telenews (1914) Limited. (See Lang and Powell, assignors.)
Templin, Joseph H. (See Wiedemann and Templin.)
Templin, Joseph H., assignor, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa. Double-acting diaphragm-pump. No. 1,171,561; Feb. 15; Gaz. vol. 223; p. 710.
Tenney, Albert B. (See Fuller, Percy W., assignor.)
Terry, Philip, New York, N. Y. Concealed skirt-band fastening. No. 1,171,810; Feb. 15; Gaz. vol. 223; p. 796.
Teske, Charles, Wildrose, N. D. Winding-index for indicator mechanism for timepieces, musical and other mechanisms. No. 1,173,466; Feb. 29; Gaz. vol. 223; p. 1490.
Thalman, Andrew J., and A. A. Hart, Richmond, Cal. Kettle-cover and attachment. No. 1,173,989; Feb. 29; Gaz. vol. 223; p. 1670.
Thayer, Heman D., Conneaut, Ohio. Apparatus for treating the soil. No. 1,171,277; Feb. 8; Gaz. vol. 223; p. 568.
Thayer, William B. (See Bernett, Willis J., assignor.)
Thieme, Otto, assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo. Platen for writing-machines. No. 1,170,708; Feb. 8; Gaz. vol. 223; p. 369.
Thisell, Anders G. (See Rudolphs and Thisell.)
Thissenius, Hans. (See Johnson and Thissenius.)
Tholstrup, Martin, Northfield, Minn. Storm-sash and screen fastener. No. 1,172,320; Feb. 22; Gaz. vol. 223; p. 1038.
Thom, William, Marion, Ind. Post-molding machine. No. 1,170,019; Feb. 1; Gaz. vol. 223; p. 92.
Thoma, Charles, Jr., and W., Carlstadt, N. J. Camera. No. 1,170,364; Feb. 1; Gaz. vol. 223; p. 212.
Thoma, Charles, Jr., and W., Carlstadt, N. J. Camera. No. 1,170,365; Feb. 1; Gaz. vol. 223; p. 213.
Thoma, Walter. (See Thoma, Charles, Jr., and W.)
Thomas, Charles O., Jr., U. S. Army, assignor to Holbrook, Merrill and Stetson. Field cooking outfit. No. 1,173,396; Feb. 29; Gaz. vol. 223; p. 1467.
Thomas, Charles P., Ludlow, Ky. Freezer. No. 1,170,786; Feb. 8; Gaz. vol. 223; p. 395.
Thomas, George B. (See Goodridge and Thomas.)
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Chain end. No. 1,173,896; Feb. 29; Gaz. vol. 223; p. 1641.
Thomas, Margaret M., San Francisco, Cal. Shield. No. 1,172,847; Feb. 22; Gaz. vol. 223; p. 1232.
Thomas, Nelson, and A. W. Allen, Birmingham, Ala. Apparatus for burning gas. No. 1,171,677; Feb. 15; Gaz. vol. 223; p. 749.
Thomas, Thomas W., Ashtabula, Ohio. Brake. No. 1,172,917; Feb. 22; Gaz. vol. 223; p. 1257.
Thomas, William A. (See Beebe and Thomas.)
Thompson, Albert R., assignor to Anderson-Barngrover Mfg. Co., San Jose, Cal. Cooker. No. 1,172,501; Feb. 22; Gaz. vol. 223; p. 1106.
Thompson, Charles G. (See Williams, John A., assignor.)
Thompson, Eugene W., New London, Conn. Firearm. No. 1,173,687; Feb. 29; Gaz. vol. 223; p. 1568.
Thompson, Harry J. (See Lane, Charles E., assignor.)

Thompson, Martin A., Otho, Iowa. Rat-trap. No. 1,173,897; Feb. 29; Gaz. vol. 223; p. 1641.
Thompson, Nathan R., Davenport, Iowa. Valve device. No. 1,173,620; Feb. 29; Gaz. vol. 223; p. 1545.
Thompson, Oliver C., Phoenix, Ariz. Compound rail. No. 1,171,278; Feb. 8; Gaz. vol. 223; p. 568.
Thompson, Samuel P., assignor of one-half to R. A. Walton, Los Angeles, Cal. Autovehicle and maintaining such vehicle in good working condition. No. 1,171,759; Feb. 15; Gaz. vol. 223; p. 778.
Thompson, Thomas. (See McDonnell, Brunner, and Thompson.)
Thompson, William. (See Bryan, Edgar J., assignor.)
Thomsen, Peter, assignor to Schmidt'sche Heissdampf-Gesellschaft m. b. H., Cassel-Wilhelmshöhe, Germany. Cooling arrangement for flue-tube superheater elements. No. 1,172,407; Feb. 22; Gaz. vol. 223; p. 1069.
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Making a vitreous body of variable composition. No. 1,173,688; Feb. 29; Gaz. vol. 223; p. 1569.
Thomson, William S., assignor to The H. D. Smith & Company, Plantsville, Conn. Screw-driver and similar tool. No. 1,170,709; Feb. 8; Gaz. vol. 223; p. 370.
Thoreson, Lauritz M., Twin Valley, Minn. Ignition device. No. 1,172,408; Feb. 22; Gaz. vol. 223; p. 1069.
Thormahlen, Adolph, New York, N. Y. Drink-mixer. No. 1,171,477; Feb. 15; Gaz. vol. 223; p. 680.
Thornley, Clarence W., Electra, Tex. Table attachment for beds. No. 1,173,227; Feb. 29; Gaz. vol. 223; p. 1405.
Thornton, Eloise M., Los Angeles, Cal. Burial-casket. No. 1,170,020; Feb. 1; Gaz. vol. 223; p. 93.
Thornton, Frank, Jr., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Terminal connector for curling-irons and the like. No. 1,173,621; Feb. 29; Gaz. vol. 223; p. 1546.
Thornton, George B., Belleville, N. J. Rolling flexible partition or curtain. No. 1,170,856; Feb. 8; Gaz. vol. 223; p. 419.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Method of and apparatus for producing photographic prints. No. 1,173,898; Feb. 29; Gaz. vol. 223; p. 1642.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Apparatus for developing and washing photographic prints. No. 1,173,899; Feb. 29; Gaz. vol. 223; p. 1642.
Thoro Powdered Toilet Soap Company. (See Johnson, Nelson P., assignor.)
Thorp, Charles J., Detroit, Mich. Artificial tooth-crown. No. 1,172,918; Feb. 22; Gaz. vol. 223; p. 1257.
Throckmorton, Carl, Montebello, and R. Throckmorton, El Monte, Cal. Wave-power mechanism. No. 1,173,130; Feb. 22; Gaz. vol. 223; p. 1330.
Throckmorton, Ray. (See Throckmorton, Carl and R.)
Thunell, John F., Salt Lake City, Utah. Hand-plane. No. 1,171,076; Feb. 8; Gaz. vol. 223; p. 496.
Thurlow, Ira M., assignor to The Berlin Machine Works, Beloit, Wis. Self-centering and gage-sawing device. No. 1,171,156; Feb. 8; Gaz. vol. 223; p. 527.
Thurmond, Hosea R., assignor of three-eighths to N. Mangan, Atlanta, Ga. Rotary engine. No. 1,173,327; Feb. 29; Gaz. vol. 223; p. 1443.
Tide Water Oil Company. (See Edwards, Samuel H., assignor.)
Tietge, John H., Kansas City, Mo. Beet-harvester. No. 1,170,944; Feb. 8; Gaz. vol. 223; p. 449.
Timberlake, Daniel T., St. Louis, Mo. Pulley. No. 1,171,562; Feb. 15; Gaz. vol. 223; p. 710.
Timm, Friedrich C. W., Hamburg, Germany. Recovering zinc from zinkiferous materials. No. 1,172,321; Feb. 22; Gaz. vol. 223; p. 1039.
Tindall, Joseph S., Cedar Springs, Mich. Mold. No. 1,171,563; Feb. 15; Gaz. vol. 223; p. 710.
Tinkle, George L., *et al.* (See Eason, John F. H., assignor.)
Tintera, William J., Stapleton, N. Y. Vending-machine. No. 1,171,478; Feb. 15; Gaz. vol. 223; p. 681.
Tischer, Frank V., Dayton, Ohio. Veneering process. No. 1,170,021; Feb. 1; Gaz. vol. 223; p. 93.
Titania Schreibmaschinen Ges. M. B. H. (See Steiner, Adolf, assignor.)
Titanium Alloy Manufacturing Company, The. (See Rossi and Barton, assignors.)
Titanium Alloy Manufacturing Company, The. (See Vickers, Charles, assignor.)
Titchener, Charles E., Binghamton, N. Y. Vehicle-top. No. 1,172,643; Feb. 22; Gaz. vol. 223; p. 1157.
Titus, Court C., and W. J. Barenscheer, Helena, Mont., assignors to New England Electro-Chemical Metals Company, Boston, Mass. Treating zinc ores. No. 1,173,467; Feb. 29; Gaz. vol. 223; p. 1490.
Todd, George W., Omaha, Nebr. Dental bridge. No. 1,171,368; Feb. 8; Gaz. vol. 223; p. 600.
Toelle, William E., New York, N. Y. Toy bowling-alley. No. 1,172,570; Feb. 22; Gaz. vol. 223; p. 1132.
Tombaugh, Ray E., Roann, Ind. Tractor-wheel. No. 1,171,988; Feb. 15; Gaz. vol. 223; p. 863.
Tomczak, John, Kansas City, Kans. Combination-lock. No. 1,171,904; Feb. 15; Gaz. vol. 223; p. 832.
Tompkins, Robert F., New York, N. Y., assignor to The Binder Company. Cohering or binding composition and making the same. No. 1,171,905; Feb. 15; Gaz. vol. 223; p. 832.
Tompkins, Willis M., Lonoak, Cal. Transmission mechanism. No. 1,173,622; Feb. 29; Gaz. vol. 223; p. 1546.
Tone, Fred I., Indianapolis, Ind. Automobile-clutch. No. 1,172,502; Feb. 22; Gaz. vol. 223; p. 1107.
Topham, Laurence E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,170,022; Feb. 1; Gaz. vol. 223; p. 93.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Feeding mechanism for sewing-machines. No. 1,170,023; Feb. 1; Gaz. vol. 223; p. 94.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine. No. 1,170,024; Feb. 1; Gaz. vol. 223; p. 95.
Topham, Laurence E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Presser-foot mechanism. No. 1,170,025; Feb. 1; Gaz. vol. 223; p. 95.
Topping, George W., Point Richmond, Cal. Faucet. No. 1,171,369; Feb. 8; Gaz. vol. 223; p. 600.
Torchio, Philip, New York, N. Y. Protective device for electric-cable joints. No. 1,172,322; Feb. 22; Gaz. vol. 223; p. 1039.
Torelle, Bernard C., Indianapolis, Ind. Broom. No. 1,170,710; Feb. 8; Gaz. vol. 223; p. 370.
Torgerson, Carl O., Houston, Minn. Vehicle-stake holder. No. 1,170,366; Feb. 1; Gaz. vol. 223; p. 213.
Torrance, Charles E. (See Senna, Samuel N., assignor.)
Torsion Balance Company, The. (See Conway, George M., assignor.)
Tosta, Joao, assignor of one-half to T. T. Mello, Lowell, Mass. Package-tie. No. 1,171,906; Feb. 15; Gaz. vol. 223; p. 832.
Tower, Daniel W., assignor to Grand Rapids Brass Company, Grand Rapids, Mich. Latch and lock. No. 1,172,323; Feb. 22; Gaz. vol. 223; p. 1039.
Townes, Charles C., Portland, Oreg. Photoprint-developing machine. No. 1,172,074; Feb. 15; Gaz. vol. 223; p. 894.
Townsend, Roy C., Beloit, Wis. Gas traction-engine. No. 1,172,075; Feb. 15; Gaz. vol. 223; p. 894.
Townsend, Solomon, Charleston, W. Va. Hoisting-machine. No. 1,173,900; Feb. 29; Gaz. vol. 223; p. 1642.
Toy, Hugh T., Sidney, Ohio. Plow. No. 1,170,578; Feb. 8; Gaz. vol. 223; p. 323.
Tracy, James J., Cleveland, Ohio. Tractor-plow. No. 1,171,479; Feb. 15; Gaz. vol. 223; p. 681.
Trafton, Frank J., Jefferson, Iowa. Slop-jar attachment. No. 1,173,468; Feb. 29; Gaz. vol. 223; p. 1490.
Traut & Hine Manufacturing Company, The. (See Myers, Louis, assignor.)
Travers, Charles J., Oak Park, Ill. Revolving chair. No. 1,173,328; Feb. 29; Gaz. vol. 223; p. 1443.
Travis, Clarence C. (See Davis, Bethuel M., assignor.)
Treacy, Charles D. and J. M., St. Paul, Minn. Sheet-register for printing-presses. No. 1,173,756; Feb. 29; Gaz. vol. 223; p. 1592.
Treacy, John M. (See Treacy, Charles D. and J. M.)
Tregloune, Norman, Hancock, Mich. Fire-hose coupling. No. 1,173,061; Feb. 22; Gaz. vol. 223; p. 1306.
Trenchard, Henry, Jr., New York, N. Y. Envelop. No. 1,171,006; Feb. 8; Gaz. vol. 223; p. 472.
Trent, Harold E., Wilkinsburg, Pa. Electrical measuring instrument. No. 1,171,907; Feb. 15; Gaz. vol. 223; p. 832.
Trester, Morton O., Lincoln, Nebr. Repair-plug. No. 1,172,644; Feb. 22; Gaz. vol. 223; p. 1158.
Trevino, Ignacio, Alice, Tex. Fishing-tool. No. 1,172,180; Feb. 15; Gaz. vol. 223; p. 928.
Tri-Unit Electrical Co., The. (See Struthers, Joshua A., assignor.)
Tribe, Thomas, Colorado Springs, Colo. Cigarette-former. No. 1,172,181; Feb. 15; Gaz. vol. 223; p. 929.
Trinks, Franz, Brunswick, Germany. Calculating-machine. No. 1,173,062; Feb. 22; Gaz. vol. 223; p. 1306.
Trohanovsky, Samuel, *et al.* (See Bulik, Michael, assignor.)
Troll, Frederick J., assignor to The Loadometer Company, Baltimore, Md. Electrical fluid-pressure indicator. No. 1,171,480; Feb. 15; Gaz. vol. 223; p. 681.
Trombley, August C., Chicago, Ill. Serving-wagon. No. 1,170,711; Feb. 8; Gaz. vol. 223; p. 370.
Trombley, August C., Chicago, Ill. Serving-wagon. No. 1,170,712; Feb. 8; Gaz. vol. 223; p. 370.
Troppman, Charles J., assignor to F. A. Hardy & Company, Chicago, Ill. Lens-testing instrument. No. 1,170,579; Feb. 8; Gaz. vol. 223; p. 323.
Trotter, Guildford D., Stayton, Oreg. Suitcase attachment. No. 1,171,678; Feb. 15; Gaz. vol. 223; p. 750.
Trowbridge, William S., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Spring-dampener and wear-plate for car-trucks. No. 1,173,397; Feb. 29; Gaz. vol. 223; p. 1467.
Troxler, Leon, New Orleans, La. Measuring instrument. No. 1,172,645; Feb. 22; Gaz. vol. 223; p. 1158.
Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)
Trudeau, Louis N., Detroit, Mich., assignor to American Can Company, New York, N. Y. Can-crimping machine. No. 1,173,329; Feb. 29; Gaz. vol. 223; p. 1444.
True, Amos T., Allens Mills, Me. Machine for finishing skewers, blanks, and the like. No. 1,173,063; Feb. 22; Gaz. vol. 223; p. 1307.

Trufant, Walter E., Whitman, Mass. Friction-gearing for automobiles. No. 1,172,503; Feb. 22; Gaz. vol. 223; p. 1107.
Trussed Concrete Steel Company. (See Kane, Thomas H., assignor.)
Tscherne, Alois, assignor to Firm of H. Levy, Rorschach, Switzerland. Apparatus for cutting embroidery background along an embroidered edge. No. 1,171,811; Feb. 15; Gaz. vol. 223; p. 796.
Tuck, Gustave, London, England. Painting-book. No. 1,171,481; Feb. 15; Gaz. vol. 223; p. 682.
Tucker, Inman, Yuba City, Cal. Machine for cleaning raisins. No. 1,170,026; Feb. 1; Gaz. vol. 223; p. 96.
Tudder, Grover C. (See Darow and Tudder.)
Tufts, Harry W., North Attleboro, assignor to C. N. Wood, Quincy, Mass. Trolley-tender. No. 1,173,623; Feb. 29; Gaz. vol. 223; p. 1546.
Tufts, Robert B., Norfolk, Va. Reinforced concrete structure. No. 1,171,482; Feb. 15; Gaz. vol. 223; p. 682.
Tull, William L., Gridley, assignor of one-half to A. A. Whitney, Stockton, Cal. Adjustable fruit-jar holder. No. 1,171,370; Feb. 8; Gaz. vol. 223; p. 601.
Tulloch, John S., Cashmere, Christchurch, New Zealand. Shield for cycles. No. 1,169,888; Feb. 1; Gaz. vol. 223; p. 49.
Turkin, Nicolai W., Moscow, Russia. Fast light-proof coloring-matters or dyes and making same. No. 1,173,350; Feb. 29; Gaz. vol. 223; p. 1444.
Turnage, Alfred A., San Jose, Cal. Jeweler's tool. No. 1,172,571; Feb. 22; Gaz. vol. 223; p. 1132.
Turnbull Engineering Company. (See Turnbull, Joseph G., assignor.)
Turnbull, Joseph G., New York, N. Y., assignor to Turnbull Engineering Company, Inc. Electric fixture. No. 1,172,229; Feb. 15; Gaz. vol. 223; p. 944.
Turner, Claude A. P., Minneapolis, Minn. Reinforced concrete construction. No. 1,173,901; Feb. 29; Gaz. vol. 223; p. 1643.
Turner, Fred. (See Durocher, Louis, assignor.)
Turner, Henry H., and S. Schidlakovitch, assignors to Gundlach-Manhattan Optical Company, Rochester, N. Y. Camera. No. 1,171,483; Feb. 15; Gaz. vol. 223; p. 682.
Turner, Hubert S., San Diego, Cal. Thermally-operated means for automatically disrupting electric alarm-circuits, &c. No. 1,171,504; Feb. 15; Gaz. vol. 223; p. 711.
Tuttle, Daniel M., assignor to S. S. Tuttle, Canastota, N. Y. Two-cycle internal-combustion engine. No. 1,172,324; Feb. 22; Gaz. vol. 223; p. 1040.
Tuttle, James N., Harwichport, Mass., assignor to General Electric Company. Electrolytic meter. No. 1,171,279; Feb. 8; Gaz. vol. 223; p. 568.
Tuttle, Stella S. (See Tuttle, Daniel M., assignor.)
Twentieth Century Machinery Company. (See Hauk, Joseph, Jr., assignor.)
Twiford, John T., Oshkosh, Nebr. Tractor attachment for motor-vehicles. No. 1,173,064; Feb. 22; Gaz. vol. 223; p. 1307.
Twitchell, Ernst, Wyoming, Ohio. Sulfo-fatty-aromatic acid salt. No. 1,170,468; Feb. 1; Gaz. vol. 223; p. 247.
Twomby, Willard I., New York, N. Y. Spring suspension for vehicles. No. 1,171,007; Feb. 8; Gaz. vol. 223; p. 472.
Tyler, Lewis L. (See Shields and Tyler.)
U. S. Stamp Distributing and Sales Corporation. (See Hyman, Samuel F., assignor.)
Uffert, Walter B., Hempstead, N. Y. Electric window-closing device. No. 1,172,409; Feb. 22; Gaz. vol. 223; p. 1069.
Ugarph, Peter O., Rockford, Ill. Safety-razor. No. 1,169,802; Feb. 1; Gaz. vol. 223; p. 50.
Under-Feed Company of America. (See Kenney and Grohn, assignors.)
Underfeed Stoker Company of America. (See Kenney, William J., assignor.)
Underwood, Charles W., Crowley, La. Car-door lock. No. 1,171,989; Feb. 15; Gaz. vol. 223; p. 863.
Underwood Computing Machine Company. (See Hart, Frederick A. assignor.)
Underwood, Henry M., assignor of one-half to C. H. Fox, Waukegan, Ill. Attachment for automobiles for preventing rattle and wear. No. 1,173,228; Feb. 29; Gaz. vol. 223; p. 1405.
Underwood Typewriter Company. (See Corcoran, Cornelius R., assignor.)
Underwood Typewriter Company. (See Dennis, Adolphus S., assignor.)
Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)
Underwood Typewriter Company. (See McLaughlin, John C., assignor.)
Underwood Typewriter Company. (See Nibourel, Alexandre V., assignor.)
Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)
Underwood Typewriter Company. (See Wernery, Lester A., assignor.)
Union Sanitary Rack Manufacturing Co. (See Warner, Bruce M., assignor.)
Union Special Machine Company. (See McNeil, Chester, assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Special Machine Company. (See Seymour, Dudley S., assignor.)
Union Switch & Signal Company, The. (See Taylor, John D., assignor.)
United Furnace Corporation. (See Orvis, Orland D., assignor.)
United Gas Improvement Company, The. (See Brady, Edward J., assignor.)
United Gas Improvement Company, The. (See Busby, John M., assignor.)
United Printing Machinery Company. (See Garner, Vernon, assignor.)
United Shoe Machinery Company. (See Ashworth, Fred, assignor.)
United Shoe Machinery Company. (See Barclay, William R., assignor.)
United Shoe Machinery Company. (See Bates, Arthur, assignor.)
United Shoe Machinery Company. (See Baxter, William C., assignor.)
United Shoe Machinery Company. (See Brock and Brown, assignors.)
United Shoe Machinery Company. (See Cahill, Charles T., assignor.)
United Shoe Machinery Company. (See Eaton, Harrison H., assignor.)
United Shoe Machinery Company. (See Enslin, Herbert E., assignor.)
United Shoe Machinery Company. (See Erickson and Cosgrove, assignors.)
United Shoe Machinery Company. (See Frasier, Warren, assignor.)
United Shoe Machinery Company. (See Goddard, John W., assignor.)
United Shoe Machinery Company. (See Johnson, Albert E., assignor.)
United Shoe Machinery Company. (See Lane, Elmer E., assignor.)
United Shoe Machinery Company. (See Latinville, Frank H., assignor.)
United Shoe Machinery Company. (See Lund, Thomas, assignor.)
United Shoe Machinery Company. (See Macleod, Albert A., assignor.)
United Shoe Machinery Company. (See McClure and Heys, assignors.)
United Shoe Machinery Company. (See Norden, Carl S., assignor.)
United Shoe Machinery Company. (See Perry, Frederick H., assignor.)
United Shoe Machinery Company. (See Plant, Thomas G., assignor.)
United Shoe Machinery Company. (See Pope, Joseph H., assignor.)
United Shoe Machinery Company. (See Preble, Edwin N., assignor.)
United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)
United Shoe Machinery Company. (See Russell, Arthur L., assignor.)
United Shoe Machinery Company. (See Topham, Laurence E., assignor.)
United States Envelope Company. (See Cather, Charles E., assignor.)
United States Envelope Company. (See McCabe, Peter I., assignor.)
United States Envelope Company. (See Swift, Willard E., assignor.)
United States Labeling Machine Company, The. (See Kraemer, Frank, assignor.)
Universal Interchangeable Tooth Co., The. (See Fritz, Gustav E., assignor.)
Universal Liquid Register Company. (See Brown, Charles F., assignor.)
Universal Rim Company. (See Baker, Erle K., assignor.)
Universal Winding Company. (See Ryden, Claes, assignor.)
Universal Winding Company. (See Sands, Thomas J., assignor.)
Updegrave, William M. (See Williams and Updegrave.)
Urban, Charles F. (See Diener and Urban.)
Urban, Charles F., Milwaukee, Wis. Truing-tool for lathe-work. No. 1,171,565; Feb. 15; Gaz. vol. 223; p. 711.
Usui, Katsusaburo, Nemuromachi, Hokkaido, Japan. Canning crabs, lobsters, and the like. No. 1,172,076; Feb. 15; Gaz. vol. 223; p. 894.
Utility Shock Absorber Company. (See Miller, William S., assignor.)
Utz, John G., assignor to Chalmers Motor Company, Detroit, Mich. Friction-clutch. No. 1,171,008; Feb. 8; Gaz. vol. 223; p. 472.
Vacuum Dyeing Machine Company. (See Hey, David M., assignor.)
Valentine, May, New York, N. Y. Instructive game. No. 1,172,848; Feb. 22; Gaz. vol. 223; p. 1232.
Valois, Felix E., Haverhill, assignor to Hamel Shoe Machinery Company, Lynn, Mass. Jack for shoe-machines. No. 1,173,131; Feb. 22; Gaz. vol. 223; p. 1330.
Van Alstyn, Albert T., New York, N. Y. Clasp for sanitary belts. No. 1,172,504; Feb. 22; Gaz. vol. 223; p. 1107.
Van Berkel, Johannes C., Copenhagen, Denmark. Meat-holder for meat-cutting machines. No. 1,171,680; Feb. 15; Gaz. vol. 223; p. 750.
Van Buren, Jafew S., Albany, N. Y. Stove-top. No. 1,170,857; Feb. 8; Gaz. vol. 223; p. 419.

Van Buren, Jafew S., Albany, N. Y. Oven-door. No. 1,170,858; Feb. 8; Gaz. vol. 223; p. 420.
Van Culcar, Reinder P., Oegstgeest, J. Ellerman and H. J. Martijn, The Hague, Netherlands. Apparatus for drying and sterilizing air. No. 1,170,469; Feb. 1; Gaz. vol. 223; p. 247.
Van Cauwenbergh, Frank, Rockford, Ill. Rotary pump. No. 1,172,505; Feb. 22; Gaz. vol. 223; p. 1108.
Van de Sandt, Alfred. (See Coon and Van de Sandt.)
Van Deventer, James E. (See Swank and Van Deventer.)
Van Dorn & Dutton Company, The. (See Schneider, Franklin, assignor.)
Van Duzer, Lafayette C., National Soldiers Home, Hampton, Va. Airship. No. 1,170,367; Feb. 1; Gaz. vol. 223; p. 214.
Van Guilder, Will H., New Rochelle, N. Y. Molding-machine. No. 1,173,229; Feb. 29; Gaz. vol. 223; p. 1406.
Van Hoesen, William F., Schenectady, N. Y. Power-transmitting device. No. 1,172,077; Feb. 15; Gaz. vol. 223; p. 894.
Van Hoy, John W., Concord, N. C. Autoharp. No. 1,171,484; Feb. 15; Gaz. vol. 223; p. 685.
Van Keuren, Henry P. T., Lansing, Mich. Engine. No. 1,173,132; Feb. 22; Gaz. vol. 223; p. 1330.
Van Matre, James C., Iowa Falls, Iowa. Portable or removable stall for barns, stables, and the like. No. 1,173,680; Feb. 29; Gaz. vol. 223; p. 1569.
Van Orden, Howard E., East Orange, N. J., assignor of one-half to J. W. Sinnott, New York, N. Y. Means for attaching devices to walls. No. 1,173,398; Feb. 29; Gaz. vol. 223; p. 1468.
Van Orden, Howard E., East Orange, N. J., assignor of one-half to J. W. Sinnott, Brooklyn, N. Y. Sliding door. No. 1,173,399; Feb. 29; Gaz. vol. 223; p. 1468.
Van Paemel, Achilles H., Chicago, Ill. Concrete building construction. No. 1,171,282; Feb. 8; Gaz. vol. 223; p. 570.
Van Raalte, Jacob, *et al.*, executors. (See Blum, Samuel H.)
Van Selver, Abraham H., Providence, R. I. Oyster-dredge. No. 1,172,325; Feb. 22; Gaz. vol. 223; p. 1040.
Vance, Harvey G., St. Louis, Mo. Lubricating-pulley. No. 1,171,280; Feb. 8; Gaz. vol. 223; p. 569.
Vanese, Paul A., Rahway, N. J. Hand sawing-machine. No. 1,173,902; Feb. 29; Gaz. vol. 223; p. 1643.
Vande, Gerard, Los Angeles, Cal. Vibrator. No. 1,173,065; Feb. 22; Gaz. vol. 223; p. 1307.
Vandegrift, Harry H., Clarksburg, W. Va. Mold for molding concrete stairs. No. 1,173,066; Feb. 22; Gaz. vol. 223; p. 1308.
Vandevort, Frank F., Germantown, Pa. Interlocking sheet-piling. No. 1,171,281; Feb. 8; Gaz. vol. 223; p. 569.
Vanmeer, George C., Burk's Falls, Ontario, Canada. Moving-picture machine. No. 1,171,485; Feb. 15; Gaz. vol. 223; p. 683.
Variety Manufacturing Company. (See Gervais, Wainwright B., assignor.)
Varley Duplex Magnet Company. (See Scott, Archibald D., assignor.)
Vauclain, Samuel M., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Locomotive. No. 1,171,283; Feb. 8; Gaz. vol. 223; p. 570.
Vaudreuil, Edward J., Eau Claire, Wis. Apparatus for treating thin-skinned products for canning. No. 1,173,230; Feb. 29; Gaz. vol. 223; p. 1406.
Vaughan, Albert F., Warwick, assignor to The R. L. Griffith & Son Company, Providence, R. I. Making fingerrings. No. 1,170,124; Feb. 1; Gaz. vol. 223; p. 130.
Vaughan, Henry H., Westmount, and R. W. Burnett, Montreal, Quebec, Canada, Carline. No. 1,173,133; Feb. 22; Gaz. vol. 223; p. 1331.
Vaughan, Lorenzo D., and W. P. Samples, Grafton, W. Va. Combined fish-plate, bond, and protector. No. 1,172,078; Feb. 15; Gaz. vol. 223; p. 895.
Vaughn, Lorenzo D., and T. Miller, Grafton, W. Va. Lamp-igniter. No. 1,173,903; Feb. 29; Gaz. vol. 223; p. 1643.
Vaught, James C. H., Detroit, Mich. Chuck for rock-drills. No. 1,171,009; Feb. 8; Gaz. vol. 223; p. 473.
Vedoe, Anton M., Everett, assignor to Bay State Pump Co., Boston, Mass. Packing for pistons and the like. No. 1,172,646; Feb. 22; Gaz. vol. 223; p. 1159.
Velie, Silas T. (See Owens, Jasper C., assignor.)
Veil, Galen W. L., Wenatchee, Wash. Toothpick-holder. No. 1,172,079; Feb. 15; Gaz. vol. 223; p. 895.
Veilguth, Clarence W. E., San Francisco, Cal. Carbureter. 1,171,679; Feb. 15; Gaz. vol. 223; p. 750.
Venable, William M., assignor to Blaw Steel Construction Company, Pittsburgh, Pa. Beam and girder mold. No. 1,171,760; Feb. 15; Gaz. vol. 223; p. 778.
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Governing mechanism for internal-combustion engines. No. 1,170,199; Feb. 1; Gaz. vol. 223; p. 157.
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Controlling mechanism for high-compression internal-combustion engines. No. 1,170,200; Feb. 1; Gaz. vol. 223; p. 157.
Vermeulen, Frank. (See Nuesell, Gerard, assignor.)
Vermillion, Lewis C., Parlier, Cal. Hydrocarbon-burner. No. 1,169,889; Feb. 1; Gaz. vol. 223; p. 49.
Vernson, Harry W., Blue Rapids, and H. F. Lutz, Lawrence, Kans. Street-indicator. No. 1,171,284; Feb. 8; Gaz. vol. 223; p. 570.
Vescovi, Peter, and E. Gobatti, Pueblo, Colo. Fire-escape. No. 1,172,753; Feb. 22; Gaz. vol. 223; p. 1198.
Vial, Frederick K., Chicago, Ill., assignor, by mesne assignments, to Griffin Wheel Company, Boston, Mass. Grinder. No. 1,171,812; Feb. 15; Gaz. vol. 223; p. 797.
Vialet-Chabrand, Lucien, La Clotat, France. Raft lifeboat. No. 1,173,544; Feb. 29; Gaz. vol. 223; p. 1518.
Viapradre, Bernardino, *et al.* (See Muldoon, John J., assignor.)
Viberg, Ernest R., Montreal, Quebec, Canada. Brake-lever. No. 1,173,067; Feb. 22; Gaz. vol. 223; p. 1308.
Vickers, Charles, Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Means for casting metals, including their alloys. No. 1,172,506; Feb. 22; Gaz. vol. 223; p. 1108.
Vickers Limited. (See Dawson and Buckham, assignors.)
Vickers, Theodore W., Forsyth, Mont. Emergency engine-stop mechanism. No. 1,173,757; Feb. 29; Gaz. vol. 223; p. 1592.
Vickery, Frederick W., London, England. Paper-cutting machine. No. 1,173,904; Feb. 29; Gaz. vol. 223; p. 1643.
Vickman, Frank J., Walsh, Wis. Lever locking and releasing means. No. 1,171,990; Feb. 15; Gaz. vol. 223; p. 864.
Victor Talking Machine Company. (See English, John C., assignor.)
Victor Talking Machine Company. (See Royal, Belford G., assignor.)
Villard, Walter J., Bloomington, Ill. Bench dog or clamp. No. 1,170,125; Feb. 1; Gaz. vol. 223; p. 130.
Villinger, William E., Williamsport, Pa. Clutch-controlling means. No. 1,172,410; Feb. 22; Gaz. vol. 223; p. 1070.
Vinson, James G., Graham, assignor of one-half to W. G. Duncan, Jr., Greenville, Ky. Claw-bar. No. 1,171,285; Feb. 8; Gaz. vol. 223; p. 571.
Vinson, William H., Jonesboro, Ark. Extensible car-step. No. 1,170,368; Feb. 1; Gaz. vol. 223; p. 214.
Viragh, Stephen, Swissvale, Pa. Reversible window-sash. No. 1,173,231; Feb. 29; Gaz. vol. 223; p. 1407.
Voetsch, Charles. (See Voetsch, George and C.)
Voetsch, George and C., Turners Falls, Mass. Die-stock. No. 1,173,690; Feb. 29; Gaz. vol. 223; p. 1569.
Vogel, Eugene W., assignor to The Railroad Supply Company, Chicago, Ill. Locking system for railway-switches. No. 1,171,991; Feb. 15; Gaz. vol. 223; p. 864.
Volges, Paul, Brooklyn, N. Y. Hydrometer. No. 1,172,647; Feb. 22; Gaz. vol. 223; p. 1159.
Voigt, Hermann, Nonnendamm, near Berlin, assignor to Siemens & Halske, A. G., Berlin, Germany. Means for closing and opening electric circuits. No. 1,172,080; Feb. 15; Gaz. vol. 223; p. 895.
Vom Eigen, Benno, Newark, N. J., assignor to August Goertz & Co. Bag-frame fastener. No. 1,173,691; Feb. 29; Gaz. vol. 223; p. 1569.
Von der Lin, Simon J. (See Von der Lin, Valentine and S. J.)
Von der Lin, Valentine and S. J., New York, N. Y. Furniture-tread. No. 1,173,990; Feb. 29; Gaz. vol. 223; p. 1670.
Von Kaenel, Edmond A., Chicago, Ill. Ash-receiver. No. 1,172,411; Feb. 22; Gaz. vol. 223; p. 1070.
Von Kügelgen, Franz. (See Seward and Von Kügelgen.)
Von Kügelgen, Franz, Holcombs Rock, Va., and G. O. Seward, East Orange, N. J., assignors, by mesne assignments, to Columbia-Knickerbocker Trust Company, trustee. Defluning. (Reissue.) No. 14,070; Feb. 15; Gaz. vol. 223; p. 956.
Von Nagy, Ladislaus, Plainfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selector-switch. No. 1,169,890; Feb. 1; Gaz. vol. 223; p. 49.
Von Philp, Hjalmar C., Bethlehem, Pa. Locking mechanism for safe or vault doors. No. 1,173,068; Feb. 22; Gaz. vol. 223; p. 1309.
Von Wolfersdorf, Hans, Detroit, Mich. Refrigerator. No. 1,171,566; Feb. 15; Gaz. vol. 223; p. 711.
Vore, Phineas A. and V. W., Long Beach, Cal. Liquid-fuel burner. No. 1,172,849; Feb. 22; Gaz. vol. 223; p. 1233.
Vore, Vernon W. (See Vore, Phineas A. and V. W.)
Vorraber, Josef, Munich-Trudering, Germany. Self-adjusting antifriction-bearing. No. 1,172,648; Feb. 22; Gaz. vol. 223; p. 1159.
Vreeland Apparatus Company. (See Vreeland, Frederick K., assignor.)
Vreeland, Frederick K., Montclair, N. J., assignor to Vreeland Apparatus Company, Inc., New York, N. Y. Multiplex telegraphy. No. 1,171,813; Feb. 15; Gaz. vol. 223; p. 797.
Vreeland, Frederick K., Montclair, N. J., assignor to Vreeland Apparatus Company, Inc., New York, N. Y. Multiplex telegraphy. No. 1,171,814; Feb. 15; Gaz. vol. 223; p. 797.
Vreeland, Giles L., Harbert, Mich., and P. P. Vreeland, Bozeman, Mont. Apparatus for erecting concrete structures. No. 1,173,991; Feb. 29; Gaz. vol. 223; p. 1670.
Vreeland, Pomeroy P. (See Vreeland, Giles L. and P. P.)

Vulcan Coil Company. (See Seeley, James E., assignor.)
Vyvial, Frank, Louise, Tex. Currycomb and brush. No. 1,171,815; Feb. 15; Gaz. vol. 223; p. 798.
W. D. Allen Manufacturing Company. (See Gibbs, Henry, assignor.)
W. D. Allen Mfg. Company *et al.* (See Lund, Carl O., assignor.)
Wachendorf, John A., Mukwonago, Wis. Trap-nest. No. 1,170,126; Feb. 1; Gaz. vol. 223; p. 130.
Wade, Lucius N., Mayview, Wash. Cultivator. No. 1,172,572; Feb. 22; Gaz. vol. 223; p. 1133.
Wade, Robert W., Baltimore, Md. Sash-cord fastener. No. 1,172,850; Feb. 22; Gaz. vol. 223; p. 1233.
Wadsworth, Howard L., Cleveland, Ohio. Sand-blast machine. No. 1,171,286; Feb. 8; Gaz. vol. 223; p. 571.
Wagner, Albert, Lincoln, Nebr. Dirigible headlight for automobiles. No. 1,172,081; Feb. 15; Gaz. vol. 223; p. 896.
Wagner, Charles B., Jr., Burlington, Wis. Tail-clip for animals. No. 1,170,369; Feb. 1; Gaz. vol. 223; p. 214.
Wagner Electric Manufacturing Company. (See Dick and Fynn, assignors.)
Wagner Electric Manufacturing Company. (See Fynn and Dick, assignors.)
Wagner, Francis A., Dayton, Ohio. Structural toy. No. 1,171,816; Feb. 15; Gaz. vol. 223; p. 798.
Wagner, Henry H., Milwaukee, Wis. Reinforced pocket. No. 1,172,851; Feb. 22; Gaz. vol. 223; p. 1233.
Wagner, Otto A., Ensign, Kans. Rear spring-frame for motor-cycles. No. 1,171,371; Feb. 8; Gaz. vol. 223; p. 601.
Wagner, Walter A., Sheboygan, Wis. Hame. No. 1,170,713; Feb. 8; Gaz. vol. 223; p. 371.
Waitt, Arthur M., Sharon, Conn., and W. H. Waitt, New York, N. Y., assignors to Camel Company, Chicago, Ill. Car-door. No. 1,170,787; Feb. 8; Gaz. vol. 223; p. 396.
Waitt & Bond Inc. (See Waterman, William E., assignor.)
Waitt, Weymer H. (See Waitt, Arthur M. and W. H.)
Wakefield, Almond J., Faulkton, S. D. Gang-plow. No. 1,172,082; Feb. 15; Gaz. vol. 223; p. 897.
Wakefield, Frederick W., assignor to The F. W. Wakefield Brass Company, Vermillion, Ohio. Lighting-fixture. No. 1,172,649; Feb. 22; Gaz. vol. 223; p. 1159.
Wakefield, John E. (See Merritt, Thomas Z., assignor.)
Walch, William, Rockwell, Iowa. Mixing device. No. 1,170,788; Feb. 8; Gaz. vol. 223; p. 396.
Wald, Frank A., East Berlin, Conn. Crusher. No. 1,170,370; Feb. 1; Gaz. vol. 223; p. 215.
Waid Manufacturing Company. (See Pawsat, Ewald F., assignor.)
Waldeck, George A. (See Cook, John W., assignor.)
Waldemarson, William, Erie, Pa. Supporting-rack. No. 1,170,580; Feb. 8; Gaz. vol. 223; p. 323.
Walker, Henry R., Nome, Alaska. Sweeping-dredge. No. 1,170,581; Feb. 8; Gaz. vol. 223; p. 324.
Walker, Horace C., assignor of one-half to W. W. Sands, Kingsville, Tex. Match-delivering machine. No. 1,173,669; Feb. 22; Gaz. vol. 223; p. 1309.
Walker, James J., London, England. Tune-sheet for automatic musical instruments. No. 1,173,232; Feb. 29; Gaz. vol. 223; p. 1407.
Walker, Luther G., Pueblo, Colo. Power mowing-machine. No. 1,172,326; Feb. 22; Gaz. vol. 223; p. 1041.
Walker, William R., Arlington, Tex. Scissors-hanger. No. 1,170,859; Feb. 8; Gaz. vol. 223; p. 420.
Wall, Judson G., New York, N. Y. Bank-check. No. 1,170,860; Feb. 8; Gaz. vol. 223; p. 420.
Wallace Addressing Machine Company. (See Malz, Ludwig, assignor.)
Wallace, De Lance. (See Crocker and Wallace.)
Wallace, Philip B., assignor to Chadwick & Sykes, Inc., San Francisco, Cal. Dumping device for ropeways. No. 1,170,861; Feb. 8; Gaz. vol. 223; p. 421.
Wallace & Smith Co., The. (See Smith, Singleton, assignor.)
Wallace, William T., Boyles, Ala. Car-coupling. No. 1,171,817; Feb. 15; Gaz. vol. 223; p. 799.
Walpole, Benjamin M., assignor to Builders Iron Foundry, Providence, R. I. Forming jigs or fixtures. No. 1,171,818; Feb. 15; Gaz. vol. 223; p. 799.
Walrath, Otis M., Hanover, Ohio. Automatic crossing-gate. No. 1,172,327; Feb. 22; Gaz. vol. 223; p. 1041.
Walser, Havelock, New York, N. Y. Three-wheeled truck. No. 1,171,992; Feb. 15; Gaz. vol. 223; p. 864.
Walsh Harness Company. (See Walsh, James M., assignor.)
Walsh, James M., assignor to Walsh Harness Company, Stockbridge, Wis. Hames. No. 1,171,567; Feb. 15; Gaz. vol. 223; p. 711.
Walter, Max C., Talmage, Nebr. Aluminum billiard-cue. No. 1,173,070; Feb. 22; Gaz. vol. 223; p. 1309.
Walton, Allyn B., Lorain, Ohio. Water-level-indicating system and apparatus. No. 1,172,650; Feb. 22; Gaz. vol. 223; p. 1160.
Walton, Robert A. (See Thompson, Samuel P., assignor.)
Wanamaker, Charles B., assignor to Leedy Manufacturing Company, Indianapolis, Ind. Collapsible stand. No. 1,171,568; Feb. 15; Gaz. vol. 223; p. 712.
Wanamaker, Harry F., Philadelphia, Pa. Window-platform. No. 1,173,331; Feb. 29; Gaz. vol. 223; p. 1445.
Wanda, Frank W., Madison, Me. Caster. No. 1,171,569; Feb. 15; Gaz. vol. 223; p. 712.
Wanee, George M., Oakland, Cal. Flying-machine. No. 1,172,182; Feb. 15; Gaz. vol. 223; p. 929.
Wappat, Fred W., assignor to Pittsburgh Gage and Supply Company, Pittsburgh, Pa. Reversing mechanism. No. 1,170,371; Feb. 1; Gaz. vol. 223; p. 215.
Ward, Isaac E., Andale, Kans. Hay-baler. No. 1,170,470; Feb. 1; Gaz. vol. 223; p. 247.
Ward, Samuel M., Jr. (See Hillman and Ward.)
Wardwell Braiding Machine Company. (See Wardwell, Simon W., assignor.)
Wardwell, Frank W., Jr., Cleveland, Ohio. Machine for sharpening planer-blades. No. 1,172,183; Feb. 15; Gaz. vol. 223; p. 929.
Wardwell, Simon W., Providence, R. I. Manufacturing facings. No. 1,172,328; Feb. 22; Gaz. vol. 223; p. 1041.
Wardwell, Simon W., Providence, R. I., assignor to Wardwell Braiding Machine Company, Portland, Me. Stop-motion for braiding-machines. No. 1,172,329; Feb. 22; Gaz. vol. 223; p. 1041.
Wardy, Harry A., Kalamazoo, Mich. Filing device. No. 1,170,582; Feb. 8; Gaz. vol. 223; p. 324.
Ware, Charles L., assignor of one-half to F. E. Maxfield, Holyoke, Mass. Roll-bar for paper-pulp engines. No. 1,170,495; Feb. 1; Gaz. vol. 223; p. 256.
Ware, William T., Jackson, Tenn. Sash-fastener. No. 1,171,908; Feb. 15; Gaz. vol. 223; p. 833.
Waring, Arthur B., New York, N. Y. Hat-brushing machine. No. 1,170,027; Feb. 1; Gaz. vol. 223; p. 96.
Warne, Frederick C., assignor to Roderick Lean Manufacturing Company, Mansfield, Ohio. Disk-sharpener. No. 1,172,413; Feb. 22; Gaz. vol. 223; p. 1072.
Warner, Arthur W. (See Carpenter, Hibbard, and Warner.)
Warner, Bruce M., assignor to Union Sanitary Rack Manufacturing Co., Albion, Mich. Cooling and draining cabinet. No. 1,171,486; Feb. 15; Gaz. vol. 223; p. 683.
Warner, Thomas D., Jonesboro, Ark. Warning-signal means for garages. No. 1,172,083; Feb. 15; Gaz. vol. 223; p. 897.
Warner, Thomas D., Jonesboro, Ark. Electrically-operated warning-signal means for garages. No. 1,172,084; Feb. 15; Gaz. vol. 223; p. 897.
Warren, Arthur R., Chicago, Ill. Making electroplates. No. 1,171,819; Feb. 15; Gaz. vol. 223; p. 799.
Warren, Charles V., Cambridge, assignor to F. L. Emery, Lexington, Mass. Lubricator for elevator guide-rails. No. 1,171,157; Feb. 8; Gaz. vol. 223; p. 527.
Warsen, August W., New York, N. Y. Clutch. No. 1,170,372; Feb. 1; Gaz. vol. 223; p. 215.
Waschau, Paul W., Maywood, Ill. Indicator for doors. No. 1,171,287; Feb. 8; Gaz. vol. 223; p. 572.
Washburn, Frank S. (See Landis, Walter S., assignor.)
Washburn, William H., Portland, Oreg. Steering mechanism for tractors. No. 1,171,570; Feb. 15; Gaz. vol. 223; p. 712.
Waterbury Buckle Company. (See Moore, Roswell A., assignor.)
Waterbury Tool Company, The. (See Janney and Williams, assignors.)
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Draft-equalizer. No. 1,170,583; Feb. 8; Gaz. vol. 223; p. 324.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Two-row cultivator. No. 1,170,584; Feb. 8; Gaz. vol. 223; p. 325.
Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Plow. No. 1,170,585; Feb. 8; Gaz. vol. 223; p. 325.
Waterman, William E., Boston, assignor to Waitt & Bond Inc., Roxbury, Boston, Mass. Machine for marking cigars. No. 1,172,184; Feb. 15; Gaz. vol. 223; p. 930.
Waters, William, West Rutland, Vt. Milk-bottle closure. No. 1,171,487; Feb. 15; Gaz. vol. 223; p. 683.
Watkins, Charles D., New York, N. Y. Shoe-polisher. No. 1,173,692; Feb. 29; Gaz. vol. 223; p. 1570.
Watkins, William A., and A. A. Gamble, Riverside, Cal. Lamp. No. 1,171,820; Feb. 15; Gaz. vol. 223; p. 800.
Watson, Fred O. (See Frost, Walter E., assignor.)
Watson, John R., Baltimore, Md. Apparatus for use in producing synthetic and chemical substances. No. 1,169,893; Feb. 1; Gaz. vol. 223; p. 51.
Watts, George W., Hot Springs, Ark. Resilient wheel. No. 1,173,071; Feb. 22; Gaz. vol. 223; p. 1309.
Weakley, David M., East Lake, Ala. Padded key for wind instruments. No. 1,171,821; Feb. 15; Gaz. vol. 223; p. 800.
Weakley, Raymond D., assignor to Plastic Products Company, St. Louis, Mo. Key-base for side walls and ceilings. No. 1,172,085; Feb. 15; Gaz. vol. 223; p. 898.
Weathers, Julious L., Shelby, N. C. Electric fire-alarm. No. 1,172,852; Feb. 22; Gaz. vol. 223; p. 1233.
Weaver, Cartter, assignor to Weaver Products Manufacturing Company, Pittsburgh, Pa. Elastic armband. No. 1,171,993; Feb. 15; Gaz. vol. 223; p. 865.
Weaver Products Manufacturing Company. (See Weaver, Cartter, assignor.)
Weaver, Robert R., assignor to The Ralston Steel Car Company, Columbus, Ohio. Dumping-car. No. 1,170,127; Feb. 1; Gaz. vol. 223; p. 130.
Weaver, Robert R., assignor to The Ralston Steel Car Company, Columbus, Ohio. Drop-door-operating mechanism. No. 1,170,128; Feb. 1; Gaz. vol. 223; p. 131.

Weaver, Robert R., assignor to The Ralston Steel Car Company, Columbus, Ohio. Car-underframe. No. 1,170,129; Feb. 1; Gaz. vol. 223; p. 131.

Weaver, Robert R., assignor to The Ralston Steel Car Company, Columbus, Ohio. Drop-door-operating mechanism for cars. No. 1,170,130; Feb. 1; Gaz. vol. 223; p. 131.

Webb, Jean F., Sr., and J. F., Jr., assignors to The International Signal Co., New York, N. Y. Train-stopping apparatus. No. 1,170,789; Feb. 8; Gaz. vol. 223; p. 396.

Weber, Anthony V., St. Libory, Ill. Rotary engine. No. 1,170,373; Feb. 1; Gaz. vol. 223; p. 216.

Weber, Carl, assignor to Cement Gun Construction Company, Chicago, Ill. Method of concrete construction. No. 1,171,909; Feb. 15; Gaz. vol. 223; p. 833.

Weber, Chris, Havana, N. D. Tatting-shuttle-winding device. No. 1,170,586; Feb. 8; Gaz. vol. 223; p. 326.

Weber, Henry C., Port Jefferson, N. Y. Manufacture of rubber heels. No. 1,172,919; Feb. 22; Gaz. vol. 223; p. 1257.

Webster, Edwin A., Haverhill, assignor, by mesne assignments, to Hamel Shoe Machinery Company, Lynn, Mass. Heel-breasting machine. No. 1,170,374; Feb. 1; Gaz. vol. 223; p. 216.

Webster, Harry G., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Automatic telephone system. No. 1,169,804; Feb. 1; Gaz. vol. 223; p. 51.

Webster, John E., Chicago, Ill. Photographic apparatus. No. 1,170,928; Feb. 1; Gaz. vol. 223; p. 96.

Weckwerth, William, and F. C. Conrad, Hoquiam, Wash. Lubricator. No. 1,171,681; Feb. 15; Gaz. vol. 223; p. 751.

Weczerzick, Vincent W., New York, N. Y. Sound control for talking-machines. No. 1,173,758; Feb. 29; Gaz. vol. 223; p. 1593.

Wedge, Utley, Ardmore, Pa. Treating ores. No. 1,170,375; Feb. 1; Gaz. vol. 223; p. 216.

Wedge, Utley, Ardmore, Pa. Metallurgical furnace. No. 1,170,376; Feb. 1; Gaz. vol. 223; p. 217.

Weed, Clyde E., Victoria, Mich. Device for starting and stopping pumps and the like. No. 1,170,377; Feb. 1; Gaz. vol. 223; p. 217.

Weed, James M., Pittsfield, Mass., assignor to General Electric Company. Transformer. No. 1,170,201; Feb. 1; Gaz. vol. 223; p. 158.

Weeks, Charles S. (See Cary and Weeks.)

Weeks, Francis D., Salida, assignor to The Ohio & Colorado Smelting & Refining Co., Denver, Colo. Power-transmitting device. No. 1,170,945; Feb. 8; Gaz. vol. 223; p. 449.

Wehbley, Charles E., Harrisburg, Pa. Rope-awning. No. 1,171,571; Feb. 15; Gaz. vol. 223; p. 713.

Weidner, George W., Cadillac, Mich. Engine. No. 1,171,572; Feb. 15; Gaz. vol. 223; p. 713.

Weiner, Jacob. (See Gottlieb, Simon, assignor.)

Weis, Frank N. and W. C., assignors to The Weis-Van Wormer Company, Monroe, Mich. Gluing-machine for paper bottles. No. 1,170,029; Feb. 1; Gaz. vol. 223; p. 97.

Weis, Joseph B., assignor to Perfect Safety Paper Co., Holyoke, Mass. Making safety-paper for checks and similar devices and the safety-paper itself. No. 1,172,414; Feb. 22; Gaz. vol. 223; p. 1072.

Weis-Van Wormer Company, The. (See Weis, Frank N. and W. C., assignors.)

Weis, William C. (See Weis, Frank N. and W. C.)

Welsbrod, Jacob H., assignor to American Car and Foundry Company, St. Louis, Mo. Upper buffing device for vestibule face-plates. No. 1,170,587; Feb. 8; Gaz. vol. 223; p. 326.

Welser, Frank J. W., assignor to George P. Bent Company, Chicago, Ill. Music-bench. No. 1,172,415; Feb. 22; Gaz. vol. 223; p. 1072.

Weiss, George C., Oakland, Cal. Music-leaf turner. No. 1,173,624; Feb. 29; Gaz. vol. 223; p. 1547.

Weiss, Otto, assignor of one-half to W. Sunday, Salt Lake City, Utah. Electric rat and animal trap. No. 1,170,946; Feb. 8; Gaz. vol. 223; p. 450.

Welsshaar, Gustav A., Brazil, Ind. Copy-holder. No. 1,172,080; Feb. 15; Gaz. vol. 223; p. 898.

Welch, Robert L., Chicago, Ill., assignor to A. G. Spalding & Bros. Mask. No. 1,172,330; Feb. 22; Gaz. vol. 223; p. 1042.

Welker, Alvin D., and L. E. Snyder, Wadsworth, Ohio. Potato-planter. No. 1,171,682; Feb. 15; Gaz. vol. 223; p. 751.

Welles, Richard H., assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Lamp. No. 1,170,378; Feb. 1; Gaz. vol. 223; p. 218.

Welles, Richard H., assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Electric search-lamp. No. 1,171,488; Feb. 15; Gaz. vol. 223; p. 684.

Wells, Charles R. (See Skipworth, Walter, assignor.)

Wells, Harry J., Portland, Oreg. Glass-tube cutter. No. 1,170,588; Feb. 8; Gaz. vol. 223; p. 326.

Wells, Ralph M., Short Creek, W. Va. Brake mechanism. No. 1,172,410; Feb. 22; Gaz. vol. 223; p. 1072.

Welsbach Light Company. (See Knoedler, Elmer L., assignor.)

Welsbach Light Company. (See Lyon, Howard, assignor.)

Welte, Edwin, Freiburg, Germany, assignor to M. Welte & Sons, Inc., New York, N. Y. Variable automatic stop control for musical instruments. No. 1,173,905; Feb. 29; Gaz. vol. 223; p. 1644.

Welton, Katharine H. (See Welton, Park E., assignor.)

Welton, Park E., assignor to K. B. Welton, Cuyahoga Falls, Ohio. Feed mechanism for mixing-mills. No. 1,173,625; Feb. 29; Gaz. vol. 223; p. 1547.

Welton, Park E., assignor to K. B. Welton, Cuyahoga Falls, Ohio. Feed mechanism for mixing-mills. No. 1,173,626; Feb. 29; Gaz. vol. 223; p. 1548.

Wendler, Alexander, Charlottenburg, Germany. Manufacture of reinforced paper, pasteboard, and the like. No. 1,169,895; Feb. 1; Gaz. vol. 223; p. 52.

Werner, Ernest E., Indianapolis, Ind. Colored molasses and producing same. No. 1,172,507; Feb. 22; Gaz. vol. 223; p. 1109.

Werner & Pfleiderer Co. (See Reese, Louis C., assignor.)

Wernery, Lester A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,172,853; Feb. 22; Gaz. vol. 223; p. 1234.

Wernery, Lester A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,172,854; Feb. 22; Gaz. vol. 223; p. 1234.

Werolin, Edwin S., Brooklyn, assignor to Sohmer & Company, New York, N. Y. Vacuum-controlling device for player-pianos. No. 1,169,896; Feb. 1; Gaz. vol. 223; p. 52.

West Disinfecting Company. (See Marcuse, Moses M., assignor.)

West, William B., Philadelphia, Pa. Convertible vehicle-body. No. 1,170,714; Feb. 8; Gaz. vol. 223; p. 371.

Westbrook, John M., Atlanta, Ga. Gin-saw-filing machine. No. 1,173,906; Feb. 29; Gaz. vol. 223; p. 1644.

Westburg, Albert J., Springfield, Ill. Emergency-tire. No. 1,172,573; Feb. 22; Gaz. vol. 223; p. 1133.

Westcott, Henry P., Erie, Pa. Gas-volume-measuring apparatus. No. 1,172,087; Feb. 15; Gaz. vol. 223; p. 899.

Westcott, Valorus S. (See Allen and Westcott.)

Western Electric Company. (See Clausen, Henry P., assignor.)

Western Electric Company. (See Danielson, Oscar A., assignor.)

Western Electric Company. (See Dixon, Amos F., assignor.)

Western Electric Company. (See Dobbin, Henry F., assignor.)

Western Electric Company. (See Goodrum, Charles L., assignor.)

Western Electric Company. (See Harlow, John B., assignor.)

Western Electric Company. (See Hovland, Henry, assignor.)

Western Electric Company. (See Lattig and Goodrum, assignors.)

Western Electric Company. (See Smith, William F., assignor.)

Western Electric Company. (See Stoller, Hugh M., assignor.)

Western Electric Company. (See Von Nagy, Ladislaus, assignor.)

Western Union Telegraph Company, The. (See Finn, William, assignor.)

Western Union Telegraph Company, The. (See Murray, Donald, assignor.)

Westgate, Harvey E., Los Angeles, Cal. Automatic umpire. No. 1,170,715; Feb. 8; Gaz. vol. 223; p. 371.

Westinghouse Electric and Manufacturing Company. (See Aalborg, Christian, assignor.)

Westinghouse Electric and Manufacturing Company. (See Abtmeyer, Theodore, assignor.)

Westinghouse Electric & Manufacturing Company. (See Anderson, John, assignor.)

Westinghouse Electric and Manufacturing Company. (See Barnes, Wilfred, Jr., assignor.)

Westinghouse Electric and Manufacturing Company. (See Brown, Harold W., assignor.)

Westinghouse Electric and Manufacturing Company. (See Chubb, Lewis W., assignor.)

Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)

Westinghouse Electric and Manufacturing Company. (See Conrad and Abtmeyer, assignors.)

Westinghouse Electric and Manufacturing Company. (See Dudley, Adolphus M., assignor.)

Westinghouse Electric and Manufacturing Company. (See Dyer, John B., assignor.)

Westinghouse Electric and Manufacturing Company. (See Eaton, George M., assignor.)

Westinghouse Electric and Manufacturing Company. (See Farnsworth, Sidney W., assignor.)

Westinghouse Electric and Manufacturing Company. (See Griffin, George B., assignor.)

Westinghouse Electric and Manufacturing Company. (See Haefely, Emil, assignor.)

Westinghouse Electric and Manufacturing Company. (See Harris, Ford W., assignor.)

Westinghouse Electric and Manufacturing Company. (See Meyer, Friedrich W., assignor.)

Westinghouse Electric and Manufacturing Company. (See Simmon and Hall, assignors.)

Westinghouse Electric and Manufacturing Company. (See Sipher, Edmund F., assignor.)

Westinghouse Electric and Manufacturing Company. (See Thornton, Frank, Jr., assignor.)

Westinghouse Electric and Manufacturing Company. (See Wilson, Charles E., assignor.)

Westinghouse Lamp Company. (See Henderson, Robert H., assignor.)

Westinghouse Machine Company. (See Hodgkinson, Francis, assignor.)

Westlund, Carl G., assignor to Carl G. Westlund Company, Worcester, Mass. Friction-clutch. No. 1,171,094; Feb. 15; Gaz. vol. 223; p. 805.

Weston, Albert M., Boston, assignor to E. E. Kent, Newton, Mass. Serving device for eating-houses. No. 1,170,780; Feb. 8; Gaz. vol. 223; p. 397.

Wetcarbonizing Limited. (See Rigby, Thomas, assignor.)

Weyman-Bruton Company. (See De Voe, John M., assignor.)

Weyman Bruton Company. (See Peterson, Jonathan, assignor.)

Whalen, Michael H., New York, N. Y. Non-refillable bottle. No. 1,173,233; Feb. 29; Gaz. vol. 223; p. 1407.

Wheary, George H., Racine, Wis. Trunk shoe-box. No. 1,171,394; Feb. 8; Gaz. vol. 223; p. 609.

Wheary, George H., Racine, Wis. Removable wardrobe-trunk tray. No. 1,171,395; Feb. 8; Gaz. vol. 223; p. 610.

Wheary, George H., Racine, Wis. Trunk shoe-box-securing means. No. 1,172,230; Feb. 15; Gaz. vol. 223; p. 945.

Wheary, George H., Racine, Wis. Automatic trunk-lock. No. 1,172,231; Feb. 15; Gaz. vol. 223; p. 945.

Wheary, George H., Racine, Wis. Wardrobe-trunk. No. 1,172,232; Feb. 15; Gaz. vol. 223; p. 945.

Wheeler, Arthur S., Biltmore, N. C. Adjustable measure. No. 1,172,508; Feb. 22; Gaz. vol. 223; p. 1109.

Wheeler, Frank C., Montreal, Quebec, Canada. Life-preserver. No. 1,171,288; Feb. 8; Gaz. vol. 223; p. 572.

Wheeler, James A., Somerset county, N. J., assignor to W. T. Elkinton, Philadelphia, Pa. Fireproof door. No. 1,171,158; Feb. 8; Gaz. vol. 223; p. 527.

Wheeler, Seth, Castleton, N. Y. Paper-roll. No. 1,170,589; Feb. 8; Gaz. vol. 223; p. 327.

Wheeler, Seth, Castleton, N. Y. Paper-roll. No. 1,170,590; Feb. 8; Gaz. vol. 223; p. 327.

Wheelwright, Joseph W. (See Ferguson and Wheelwright.)

Wheless, Thomas H., New York, N. Y. Cushioning vehicle-body frames. No. 1,171,077; Feb. 8; Gaz. vol. 223; p. 496.

Whitehart, John, and R. M. Smith, Zanesville, Ohio. Heater. No. 1,171,372; Feb. 8; Gaz. vol. 223; p. 601.

Whisler, Ezra L., Centralia, Wash. Clothes-washing apparatus. No. 1,172,051; Feb. 22; Gaz. vol. 223; p. 1160.

Whitaker, Louis P., *et al.* (See Kreipe, Theodore, assignor.)

Whitcomb, Alonzo W., Worcester, Mass. Gearing for lathes. No. 1,171,995; Feb. 15; Gaz. vol. 223; p. 865.

Whitcomb, William H., Newton, Mass. Sharpening device for knives and the like. No. 1,173,027; Feb. 29; Gaz. vol. 223; p. 1548.

White, Charles E., San Francisco, Cal. Carbureter. No. 1,173,469; Feb. 29; Gaz. vol. 223; p. 1491.

White, Clarence G. (See White, Rollin H. and C. G.)

White Company, The. (See Rubay, Leon, assignor.)

White, Elliott L., Suffolk, Va. Combination-tool. No. 1,170,591; Feb. 8; Gaz. vol. 223; p. 327.

White, Franklin R., assignor to The Patent Button Company, Waterbury, Conn. Connecting-rod. No. 1,172,574; Feb. 22; Gaz. vol. 223; p. 1133.

White, Herbert J., assignor to F. S. Hodson, Philadelphia, Pa. Fuse. No. 1,172,331; Feb. 22; Gaz. vol. 223; p. 1042.

White, John S., Woodlynne, N. J. Ship-window. No. 1,171,573; Feb. 15; Gaz. vol. 223; p. 713.

White, Joseph A., assignor to The Moore and White Company, Philadelphia, Pa. Layboy. No. 1,172,088; Feb. 15; Gaz. vol. 223; p. 899.

White, Rollin H., Cleveland Heights Village, Ohio, and C. G. White, Hilo, Hawaii. Agricultural machine. No. 1,170,202; Feb. 1; Gaz. vol. 223; p. 158.

White, Walter C., assignor to International Couplers Company, Los Angeles, Cal. Connection for train-pipe and coupling-heads. No. 1,172,855; Feb. 22; Gaz. vol. 223; p. 1235.

Whiteside, Thomas H., Youngstown, Ohio. Tooth-crown. No. 1,172,652; Feb. 22; Gaz. vol. 223; p. 1161.

Whiting, Herman E., Palmyra, N. Y. Primer for gas-engines. No. 1,171,150; Feb. 8; Gaz. vol. 223; p. 527.

Whiting, Maria E. (See Whiting, Phineas S., assignor.)

Whiting, Phineas S., Akron, Ohio, assignor to M. E. Whiting, Wayne county, Mich. Demountable rim. No. 1,171,873; Feb. 8; Gaz. vol. 223; p. 602.

Whitlock, Thomas M., Oakwood, assignor of one-half to J. F. Harris, Hannibal, Mo. Wagon-scale. No. 1,172,185; Feb. 15; Gaz. vol. 223; p. 930.

Whitman, Nathan D., assignor to Chicago Reinforced Concrete Pipe Company, Chicago, Ill. Sectional conduit. No. 1,173,234; Feb. 29; Gaz. vol. 223; p. 1468.

Whitmer, Elmer, Glendive, Mont. Means for extracting wheels of power-driven vehicles from holes. No. 1,171,910; Feb. 15; Gaz. vol. 223; p. 833.

Whitney, Albert A. (See Tull, William L., assignor.)

Whitney, Horace E., Cambridge, Mass., assignor to Dover Stamping and Manufacturing Company, Portland, Me. Sink-pail. No. 1,173,134; Feb. 22; Gaz. vol. 223; p. 1331.

Whitney, Robert F., Winchester, Mass. Helical tool. No. 1,173,155; Feb. 22; Gaz. vol. 223; p. 1339.

Whitney, William M. (See Farnum, William C., assignor.)

Whitt, William B. (See Knipp, James H., assignor.)

Whitten, William M. (See Hall, Alfred, assignor.)

Whittier, Claude M., Methuen, assignor to Mills Machine Company, Lawrence, Mass. Wiper attachment for shearing-machines. No. 1,171,289; Feb. 8; Gaz. vol. 223; p. 572.

Wiaut, Charles A., Wellington, Kans. Machine for making roofing-strip. No. 1,173,470; Feb. 29; Gaz. vol. 223; p. 1491.

Widegren, Emil H. and K. A., Alby, Sweden. Autographic telegraphy. No. 1,171,822; Feb. 15; Gaz. vol. 223; p. 800.

Widegren, Klas A. (See Widegren, Emil H. and K. A.)

Wiedemann, Theodore, and J. H. Templin, assignors, by mesne assignments, to Santo Manufacturing Company, Philadelphia, Pa. Air-pump for vacuum-cleaners. No. 1,170,203; Feb. 1; Gaz. vol. 223; p. 159.

Wiegel, Joseph B., Magnolia, Minn. Hood fastener and lock. No. 1,171,911; Feb. 15; Gaz. vol. 223; p. 833.

Wiesenberg, Samuel, New York, N. Y. Horseshoe. No. 1,171,823; Feb. 15; Gaz. vol. 223; p. 801.

Wiesener, William J., Sydney, New South Wales, Australia. Automatic zero and angle setting attachment for theodolites and the like. No. 1,169,897; Feb. 1; Gaz. vol. 223; p. 52.

Wiesenfeld, Herman, West Berkeley, Cal. Extension-table. No. 1,173,992; Feb. 29; Gaz. vol. 223; p. 1671.

Wightman & Hough Company. (See Hough, Herbert D., assignor.)

Wightman & Hough Company. (See Mix, Henry D., assignor.)

Wilcox, Frank E., Mechanicsburg, Pa. Vehicle-gear. No. 1,171,761; Feb. 15; Gaz. vol. 223; p. 779.

Wilcox, George, South Norwich, Ontario, Canada. Rural-mail-box outfit. No. 1,170,030; Feb. 1; Gaz. vol. 223; p. 97.

Wilcox, Heman A., Minneapolis, Minn. Machine for forming concrete blocks. No. 1,173,135; Feb. 22; Gaz. vol. 223; p. 1331.

Wilcox, Roscoe, Lombard, Ill. Dirigible lamp. No. 1,169,898; Feb. 1; Gaz. vol. 223; p. 53.

Wild, Rudolf, Los Angeles, Cal. Knife-blade. No. 1,172,089; Feb. 15; Gaz. vol. 223; p. 899.

Wild, Thomas, Moseley, Birmingham, England. Safety-razor. No. 1,171,290; Feb. 8; Gaz. vol. 223; p. 573.

Wilder, Thearon C., Cattaraugus, N. Y. Rubber-foot-wear retainer. No. 1,172,509; Feb. 22; Gaz. vol. 223; p. 1109.

Wildman, Frank B., and G. L. Ballard, Norristown, Pa., assignors to Wildman Mfg. Co. Pattern mechanism for knitting-machines. No. 1,172,090; Feb. 15; Gaz. vol. 223; p. 900.

Wildman Mfg. Co. (See Wildman and Ballard, assignors.)

Wilfong, John W., Joliet, Ill. Stump-burner. No. 1,171,824; Feb. 15; Gaz. vol. 223; p. 801.

Wilholt, Frederic S. (See Cutler and Wilholt.)

Wilkinson, Eleazar T., assignor to David Lupton's Sons Company, Philadelphia, Pa. Fastener for window-panes. No. 1,171,762; Feb. 15; Gaz. vol. 223; p. 779.

Wilkinson, James, Boston, Mass., assignor to General Electric Company. Indicating and recording flow-meter. No. 1,170,204; Feb. 1; Gaz. vol. 223; p. 159.

Wilkinson, James, Schenectady, N. Y., assignor to General Electric Company. Flow-meter for marine purposes. No. 1,170,205; Feb. 1; Gaz. vol. 223; p. 160.

Wilkinson, John, assignor to H. H. Franklin Manufacturing Company, Syracuse, N. Y. Air-cooling system for internal-combustion engines. No. 1,170,716; Feb. 8; Gaz. vol. 223; p. 372.

Wilkinson, Leander E., and J. M. Peirce, Fitchburg, Mass. Phonograph-disk holder. No. 1,172,754; Feb. 22; Gaz. vol. 223; p. 1198.

Wilkinson, Nathan, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Coil-press. No. 1,173,471; Feb. 29; Gaz. vol. 223; p. 1492.

Wilkinson, Stanley W., assignor to Davis Milk Machinery Company, North Chicago, Ill. Bottle-capping machine. No. 1,171,096; Feb. 15; Gaz. vol. 223; p. 866.

Wilkinson, William Z., Baton Rouge, La. Automatic fire-alarm system. No. 1,173,072; Feb. 22; Gaz. vol. 223; p. 1310.

William A. Murray Spring Company, The. (See Murray, William A. and W. A., Jr., assignors.)

William Carter Company, The. (See Carter, William H., assignor.)

William F. Murphy's Sons Co. (See Brooks, William H., assignor.)

William M. Crane Company. (See O'Dowd, Henry W., assignor.)

Williams, Albert, and S. M. Kilbride, Logan, Mont. Journal-box. No. 1,173,472; Feb. 29; Gaz. vol. 223; p. 1402.

Williams, Albert W., St. Louis, Mo. Necktie and ribbon pressing device. No. 1,170,379; Feb. 1; Gaz. vol. 223; p. 218.

Williams, Appleton P. (See Winder, Samuel E., assignor.)
Williams, Archey E., Los Angeles, Cal. Two-cycle internal-combustion engine. No. 1,169,800; Feb. 1; Gaz. vol. 223; p. 53.
Williams, Archie, Climax, Minn. Transmission system. No. 1,172,091; Feb. 15; Gaz. vol. 223; p. 900.
Williams, Benjamin L., assignor of one-fourth to J. A. Schmutte, Corning, Mo. Pneumatic conveyer. No. 1,173,073; Feb. 22; Gaz. vol. 223; p. 1310.
Williams, De Forest C., Pittsburgh, and W. M. Updegrave, Johnstown, Pa. Coin-controlled scale. No. 1,171,912; Feb. 15; Gaz. vol. 223; p. 834.
Williams, Edward F., Grain Valley, Mo. Entrance for stock-yard pens. No. 1,172,653; Feb. 22; Gaz. vol. 223; p. 1161.
Williams, Frank, *et al.* (See Fulbright, Thomas M., assignor.)
Williams, Fredrick W., Summit, S. D. Silo construction. No. 1,173,074; Feb. 22; Gaz. vol. 223; p. 1310.
Williams, Harvey D. (See Janney and Williams.)
Williams, John A., Richmond Hill, assignor to The Williams-Purchas Manufacturing Co., Morris Park, N. Y. Needle-holder. No. 1,172,850; Feb. 22; Gaz. vol. 223; p. 1235.
Williams, John A., assignor of one-half to C. G. Thompson, Aurora, Mo. System of hot-water distribution. No. 1,173,759; Feb. 29; Gaz. vol. 223; p. 1503.
Williams, John P., New York, N. Y., assignor to Electric Bank Protection Company. Electric burglar-alarm system. No. 1,171,997; Feb. 15; Gaz. vol. 223; p. 860.
Williams, Lacey Y. (See Lauderman and Williams.)
Williams, Luther G. (See Johnson and Williams.)
Williams, Marcellus J., Portland, Oreg. Traction-engine. No. 1,170,031; Feb. 1; Gaz. vol. 223; p. 98.
Williams, Marcus W., Atlanta, Ga. Axle-arm adjuster. No. 1,172,332; Feb. 22; Gaz. vol. 223; p. 1042.
Williams, Nathaniel H., Mobile, Ala. Device for clamping cloth. No. 1,173,700; Feb. 29; Gaz. vol. 223; p. 1594.
Williams, Nezza N., Kansas City, Mo. Combined fifth-wheel and axle drive. No. 1,170,717; Feb. 8; Gaz. vol. 223; p. 372.
Williams-Purchas Manufacturing Co. (See Williams, John A., assignor.)
Williams, Samuel B., St. Paul, Minn. Fork. No. 1,172,333; Feb. 22; Gaz. vol. 223; p. 1043.
Williams, Waterman L., executor. (See Cotton, Frederick W.)
Williams, Wiley J., Rockwall, Tex. Internal-combustion engine. No. 1,173,136; Feb. 22; Gaz. vol. 223; p. 1311.
Williams, William A., Barton, Ohio. Lock for the gates of elevator-shafts. No. 1,170,032; Feb. 1; Gaz. vol. 223; p. 98.
Williams, William R., Owensboro, Ky. Road-grading machine and ditcher. No. 1,170,592; Feb. 8; Gaz. vol. 223; p. 327.
Williamson, Bertram H., Peterborough, Ontario, Canada. Bevel-joint detailer particularly adaptable for structural steelwork. No. 1,172,510; Feb. 22; Gaz. vol. 223; p. 1110.
Williamson, Elweard T., Pittsburg, Kans. Adjustable chair. No. 1,173,075; Feb. 22; Gaz. vol. 223; p. 1311.
Williamson, Glenn S., New York, N. Y. Stereotype-matrix. No. 1,173,907; Feb. 29; Gaz. vol. 223; p. 1645.
Williamson, Glenn S., New York, N. Y., assignor to Shurloc Elevator Safety Co., Inc. Elevator safety system. No. 1,173,235; Feb. 29; Gaz. vol. 223; p. 1408.
Williamson, Glenn S., New York, N. Y., and C. E. Mandelick, Ridgefield Park, N. J., assignors to Publishers Utilities Company. Margin-regulating mechanism for web-rolls. No. 1,171,300; Feb. 8; Gaz. vol. 223, p. 610.
Williamson, James, Newport News, Va. Machine for binding turbines. No. 1,172,334; Feb. 22; Gaz. vol. 223; p. 1043.
Williamson, James, Newport News, Va. Machine for binding turbine-rotors. No. 1,172,335; Feb. 22; Gaz. vol. 223; p. 1043.
Williamson, James, assignor to R. Williamson & Co., Chicago, Ill. Ceiling-light hanger. No. 1,170,718; Feb. 8; Gaz. vol. 223; p. 373.
Williamson, John D., Jr., assignor to American Engineering Company, Philadelphia, Pa. System of remote control. No. 1,171,291; Feb. 8; Gaz. vol. 223; p. 573.
Willin, Herman, New York, N. Y. Steering and propelling device. No. 1,172,092; Feb. 15; Gaz. vol. 223; p. 900.
Willoughby, Victor, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo. Mail-pouch rack with expansible grip. No. 1,170,593; Feb. 8; Gaz. vol. 223; p. 328.
Wills, Silas D., Fort Payne, Ala. Fan. No. 1,173,908; Feb. 29; Gaz. vol. 223; p. 1645.
Willson, Russell A., Spokane, Wash. Suspension-clamp. No. 1,173,400; Feb. 29; Gaz. vol. 223; p. 1468.
Wilmarth Show Case Company. (See Morris, Edmund, assignor.)
Wilson, Burton. (See Hopkins, Charles R., assignor.)
Wilson, Caesar L., Dassel, Minn. Automobile attachment. No. 1,170,719; Feb. 8; Gaz. vol. 223; p. 373.
Wilson, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting mechanism for automobiles. No. 1,171,374; Feb. 8; Gaz. vol. 223; p. 602.
Wilson, Charles E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Starting mechanism for automobiles. No. 1,171,375; Feb. 8; Gaz. vol. 223; p. 602.
Wilson, Jesse P., Duncan, Okla., assignor of one-half to M. C. Evans. Attachment for sewing-machines. No. 1,172,417; Feb. 22; Gaz. vol. 223; p. 1073.
Wilson, John M., Montclair, N. J., and C. N. Forrest, Brooklyn, N. Y., assignors, by mesne assignments, to Wilson Remover Company, Newark, N. J. Paint and varnish remover. No. 1,173,628; Feb. 29; Gaz. vol. 223; p. 1548.
Wilson, John P., and J. F. Jackson, Sydney, New South Wales, Australia. Valve for internal-combustion engines. No. 1,172,093; Feb. 15; Gaz. vol. 223; p. 901.
Wilson, Ralph A. (See Gagnon, Peter J., Jr., assignor.)
Wilson Remover Company. (See Wilson and Forrest, assignors.)
Wilson, Robert, Hobart, Tasmania, Australia. Wall-mold. No. 1,172,857; Feb. 22; Gaz. vol. 223; p. 1235.
Wilson, Samuel T., Charleston, W. Va., assignor of one-half to A. V. Pollock, W. E. Smith, E. E. Fullerton, and N. W. Klein, Greenup, Ky. Railway-tie. No. 1,173,236; Feb. 29; Gaz. vol. 223; p. 1408.
Wilson, William E., Mason City, Iowa. Fireproof building-wall. No. 1,171,913; Feb. 15; Gaz. vol. 223; p. 835.
Wilson, William W., Los Angeles, Cal. Oil-burner. No. 1,172,755; Feb. 22; Gaz. vol. 223; p. 1198.
Winchester, Ray E., Viuita, Okla. Flushing-valve. No. 1,171,160; Feb. 8; Gaz. vol. 223; p. 528.
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Winerantz, Karl F., C. E. J. Nilson, and C. F. Petterson, assignors to Aktiebolaget Stockholm-Stelefon, Stockholm, Sweden. Telephone-cable box. No. 1,173,332; Feb. 29; Gaz. vol. 223; p. 1445.
Windeler, George E. (See Day and Windeler.)
Winder, Samuel E., Chicago, Ill., assignor to A. P. Williams, West Upton, Mass. Charging and delivering mechanism for cone-baking machines. No. 1,170,720; Feb. 8; Gaz. vol. 223; p. 373.
Wine, William E., Wilmington, N. C. Train-stop. No. 1,170,862; Feb. 8; Gaz. vol. 223; p. 421.
Wingen, Jean, Liege, Belgium. Grate for gas-producers. No. 1,173,693; Feb. 29; Gaz. vol. 223; p. 1570.
Wingender, George, New York, N. Y. Mop-holder. No. 1,171,161; Feb. 8; Gaz. vol. 223; p. 528.
Winkelmeyer, John, assignor to Specialty Manufacturing Company, Greenfield, Ind. Coin-controlled apparatus. No. 1,172,920; Feb. 22; Gaz. vol. 223; p. 1257.
Winkler, Franz, Schweinfurt, Germany. Ball-retainer. No. 1,172,858; Feb. 22; Gaz. vol. 223; p. 1230.
Winski, Anton, assignor of one-half to H. D. Scott, Kool, Wyo. Conveyer attachment. No. 1,173,070; Feb. 22; Gaz. vol. 223; p. 1311.
Winslow, Marion H., Terre Haute, Ind. Platform-scale. No. 1,171,998; Feb. 15; Gaz. vol. 223; p. 867.
Winter, Anthony. (See Sweet, Winter, and Chambers.)
Winter, Antoinette M., Butte, Mont. Darner. No. 1,172,186; Feb. 15; Gaz. vol. 223; p. 931.
Winter, Courtney P., Washington, D. C. Paper-dispensing cabinet. No. 1,170,380; Feb. 1; Gaz. vol. 223; p. 218.
Winter, William, assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I. Sine-bar. No. 1,169,900; Feb. 1; Gaz. vol. 223; p. 54.
Winton, Alexander, and H. B. Anderson, Cleveland, Ohio. Self-starter for explosion-engines. No. 1,171,202; Feb. 8; Gaz. vol. 223; p. 573.
Winwood, George M., Jr., Springfield, Ohio. Drill for grain or fertilizer. No. 1,172,094; Feb. 15; Gaz. vol. 223; p. 901.
Wirt, Reuben D., Philadelphia, Pa. Note-paper holder. No. 1,171,078; Feb. 8; Gaz. vol. 223; p. 490.
Wirth, Charles E. (See Benton and Wirth.)
Wirth, William M., St. Louis, Mo. Closure for barrels and similar containers. No. 1,171,376; Feb. 8; Gaz. vol. 223; p. 603.
Wise, Leon B., Los Angeles, Cal. Variable-speed-transmission mechanism. No. 1,173,003; Feb. 29; Gaz. vol. 223; p. 1671.
Wisniewski, Stanislaw, assignor of one-fourth to K. Lukaszenski, Erie, Pa. Runner attachment for vehicles. No. 1,170,381; Feb. 1; Gaz. vol. 223; p. 219.
Wissing, Clement B., *et al.* (See Elder, Fred, assignor.)
Witham, George S., Sr. (See Witham, Isaac J., assignor.)
Witham, Isaac J., assignor of one-half to G. S. Witham, Sr., Hudson Falls, N. Y. Suction-box for paper-making machines. No. 1,171,099; Feb. 15; Gaz. vol. 223; p. 867.
Wittemann, John, Milwaukee, and E. Flicek, Hartford, assignors of two-thirds to said Wittemann and one-third to F. S. Hunt, Milwaukee, Wis. Universal joint. No. 1,169,901; Feb. 1; Gaz. vol. 223; p. 54.
Witty, John A., Whitehall, Mich. Artificial bait. No. 1,173,694; Feb. 29; Gaz. vol. 223; p. 1570.
Wolf, Aaron, New York, N. Y. Corner-post fastener. No. 1,170,382; Feb. 1; Gaz. vol. 223; p. 219.
Wolfe, Samuel C., Angola, Ind. Wind-shield cleaner. No. 1,171,377; Feb. 8; Gaz. vol. 223; p. 603.
Wolfe, Truemann E., Miami, N. Mex. Cable-guide. No. 1,172,418; Feb. 22; Gaz. vol. 223; p. 1073.
Wolhaupter, Benjamin, New Rochelle, assignor to The Rail Joint Company, New York, N. Y. Making rail-joint bars. No. 1,172,654; Feb. 22; Gaz. vol. 223; p. 1161.

Wolhaupter, Benjamin, New Rochelle, assignor to The Rail Joint Company, New York, N. Y. Making cambered rail-joint bars. No. 1,172,655; Feb. 22; Gaz. vol. 223; p. 1161.
Wolke, Jacob. (See Norman, Ludwig, assignor.)
Wollensak, Andrew, assignor to Wollensak Optical Company, Rochester, N. Y. Focusing device. No. 1,170,206; Feb. 1; Gaz. vol. 223; p. 160.
Wollensak, Andrew, assignor to Wollensak Optical Company, Rochester, N. Y. Photographic shutter. No. 1,170,207; Feb. 1; Gaz. vol. 223; p. 160.
Wollensak, Andrew, assignor to Wollensak Optical Company, Rochester, N. Y. Photographic shutter. No. 1,170,208; Feb. 1; Gaz. vol. 223; p. 161.
Wollensak Optical Company. (See Wollensak, Andrew, assignor.)
Wood, Albert J., Clarkston, Wash. Hand-weeder. No. 1,173,137; Feb. 22; Gaz. vol. 223; p. 1332.
Wood, Alfred, Uxbridge, England. Spreading-machine for coating fabric with rubber or other like plastic materials. No. 1,170,383; Feb. 1; Gaz. vol. 223; p. 219.
Wood, Beverly, *et al.* (See Barry and Hindglass, assignors.)
Wood, Charles N. (See Tufts, Harry W., assignor.)
Wood, Harry, Nutley, N. J. Non-refillable bottle. No. 1,171,378; Feb. 8; Gaz. vol. 223; p. 604.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Paper-lubricating device for printing-presses. No. 1,170,209; Feb. 1; Gaz. vol. 223; p. 161.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Feeding paper. No. 1,170,210; Feb. 1; Gaz. vol. 223; p. 161.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Paper-pin holding and adjusting device. No. 1,171,489; Feb. 15; Gaz. vol. 223; p. 684.
Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Bearing device for printing-couples. No. 1,171,490; Feb. 15; Gaz. vol. 223; p. 685.
Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)
Wood, Robert, Brooklyn, assignor to The Nathan Manufacturing Company, New York, N. Y. Lubricator. No. 1,171,825; Feb. 15; Gaz. vol. 223; p. 802.
Wood, William A., Dunellen, N. J., assignor, by mesne assignments, to Air Utilities Company, New York, N. Y. Dehydrating apparatus. No. 1,172,575; Feb. 22; Gaz. vol. 223; p. 1133.
Woodard, Frank, and W. J. Kamp, Golden Eagle, Ill. Wagon-rack bracket. No. 1,171,684; Feb. 15; Gaz. vol. 223; p. 752.
Woodrow, Harry R. (See Murray and Woodrow.)
Woodrow, Oliver B., assignor to The Automatic Electric Washer Co., Newton, Iowa. Gearing device for wringers. No. 1,169,902; Feb. 1; Gaz. vol. 223; p. 54.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Combined speed-governor and speedometer for talking-machines. No. 1,171,683; Feb. 15; Gaz. vol. 223; p. 752.
Woods, David L., Meadville, Pa. Post-mold. No. 1,171,491; Feb. 15; Gaz. vol. 223; p. 685.
Woods, William W., Jr., Huntington, N. Y. Vehicle-skein. No. 1,171,293; Feb. 8; Gaz. vol. 223; p. 573.
Woodward, Frederick R. (See Lucas, John E., assignor.)
Woodward, Lion L., assignor to Fitz Gibbon & Crisp, Trenton, N. J. Dumping-wagon. No. 1,169,903; Feb. 1; Gaz. vol. 223; p. 55.
Woolard, Herbert, Stevenage, and J. H. F. Lodge, New Barnet, England. Sliding and folding partition and door. No. 1,169,904; Feb. 1; Gaz. vol. 223; p. 55.
Wooley, John W., Spokane, Wash. Leveling device for pool and billiard tables. No. 1,173,695; Feb. 29; Gaz. vol. 223; p. 1571.
Worcester, William W., Canton, Ohio. Rat-trap. No. 1,173,629; Feb. 29; Gaz. vol. 223; p. 1549.
Worth, John S., and C. Brecht, assignors to J. S. and W. P. Worth, Contesville, Pa. Railway-car. No. 1,172,095; Feb. 15; Gaz. vol. 223; p. 901.
Worth, John S., and C. Brecht, assignors to J. S. and W. P. Worth, Contesville, Pa. Car end. No. 1,172,096; Feb. 15; Gaz. vol. 223; p. 902.
Worth, William P. (See Worth and Brecht, assignors.)
Wren, Carl R. (See Schulze and Wren.)
Wright, Clyde S., assignor to The National Supply Company, Toledo, Ohio. Bull-wheel for drilling apparatus. No. 1,170,131; Feb. 1; Gaz. vol. 223; p. 132.
Wright, Gilbert, Pittsfield, Mass., assignor, by mesne assignments, to General Electric Company. Receptacle and plug. No. 1,171,914; Feb. 15; Gaz. vol. 223; p. 835.
Wright, John E., Pittsburgh, Pa. Printing-telegraph receiver. No. 1,171,379; Feb. 8; Gaz. vol. 223; p. 604.
Wuerpel, Morris, Rochester, assignor to General Railway Signal Company, Gates, N. Y. Circuit-controller. No. 1,170,033; Feb. 1; Gaz. vol. 223; p. 98.
Yager, Harvey J., Seattle, Wash. Nut-lock. No. 1,171,204; Feb. 8; Gaz. vol. 223; p. 574.
Yamashita, Tomi, Oakland, Cal. Abdominal supporter. No. 1,172,859; Feb. 22; Gaz. vol. 223; p. 1236.
Yanda, Ferdinand C. (See Mapes and Yanda.)
Yarde, Frank W., Rock Falls, Ill. Cranking device. No. 1,171,574; Feb. 15; Gaz. vol. 223; p. 714.
Yardley, Horace R., Chicago, Ill. Socket-cover and shade-holder. No. 1,171,492; Feb. 15; Gaz. vol. 223; p. 685.
Yates, William F. (See Laurencich, Arthur, assignor.)
Yeager, Paul L., Roaring Creek, Pa. Brake-shoe holder. No. 1,172,187; Feb. 15; Gaz. vol. 223; p. 931.
Yester-Laid Egg Co., The. (See Henderson, Samuel F., assignor.)
Yocum, Charles F., assignor to The Buckeye Traction Ditcher Company, Findlay, Ohio. Chain-slack control. No. 1,172,419; Feb. 22; Gaz. vol. 223; p. 1073.
Yoder, Ammon S., Philadelphia, Pa. Merchandise-container. No. 1,173,909; Feb. 29; Gaz. vol. 223; p. 1645.
Yokom, Charles L., Mount Vernon, Oreg. Power-transmitting mechanism. No. 1,171,493; Feb. 15; Gaz. vol. 223; p. 686.
Yorgensen, Paul L. L., Hartford, Conn. Wrench-holder. No. 1,172,656; Feb. 22; Gaz. vol. 223; p. 1162.
York, Henry W., San Francisco, Cal. Nailing-machine. No. 1,171,685; Feb. 15; Gaz. vol. 223; p. 752.
Yost, George W., Palisade Park, N. J. Automatic counting-machine. No. 1,172,921; Feb. 22; Gaz. vol. 223; p. 1258.
Yost, Winfield H., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 1,173,237; Feb. 29; Gaz. vol. 223; p. 1409.
Youmans, George P., Galesburg, Mich. Rotary cutter. No. 1,173,238; Feb. 29; Gaz. vol. 223; p. 1409.
Young, Charles D., Altoona, Pa. Damper for boilers. No. 1,172,000; Feb. 15; Gaz. vol. 223; p. 867.
Young, Edward, Pony Lake, Nebr. Stoker. No. 1,172,657; Feb. 22; Gaz. vol. 223; p. 1162.
Young, Jacob C., Longview, Tex. Cotton-sweep. No. 1,170,947; Feb. 8; Gaz. vol. 223; p. 450.
Young, John H., Randolph, assignor to Borden's Condensed Milk Company, New York, N. Y. Sheet feeding and cutting machine. No. 1,171,011; Feb. 8; Gaz. vol. 223; p. 473.
Young, John W. C., assignor to The J. W. C. Young Fire Arms Company, Saco, Me. Semi-automatic fire-arm. No. 1,173,910; Feb. 29; Gaz. vol. 223; p. 1646.
Young, William A., New York, N. Y. Grommet. No. 1,171,295; Feb. 8; Gaz. vol. 223; p. 574.
Young, William H., Thomson, Ga. Combination child's play-chair and commode. No. 1,170,594; Feb. 8; Gaz. vol. 223; p. 328.
Younie, Lewis E. (See Ball and Younie.)
Younie, Richard H., Hawarden, Iowa. Railway-tie. No. 1,169,905; Feb. 1; Gaz. vol. 223; p. 55.
Yount, Jesse M., assignor of one-half to T. Finigan, San Francisco, Cal. Welded rail-bond and fish-plate. No. 1,170,132; Feb. 1; Gaz. vol. 223; p. 132.
Yuba Construction Company, The. (See Macaulay, Walter B., assignor.)
Zagelmeyer, Frank, Bay City, Mich. Making concrete blocks. No. 1,170,791; Feb. 8; Gaz. vol. 223; p. 397.
Zaitz, Frank, assignor of one-third to V. H. Peerman and one-third to A. L. Gross, Leadville, Colo. Feeding or loading apparatus. No. 1,171,686; Feb. 15; Gaz. vol. 223; p. 753.
Zehrung, Albert. (See Rüdenberg and Zehrung.)
Zeidler, William A., New York, N. Y. Edge-ironing machine. No. 1,171,012; Feb. 8; Gaz. vol. 223; p. 474.
Zeiss, Firm of Carl. (See König, Albert, assignor.)
Zeleny, Frank. (See Forsyth and Zeleny.)
Zerck, Otto C., Los Angeles, Cal. Callipers. No. 1,170,384; Feb. 1; Gaz. vol. 223; p. 220.
Zergn, Lallie, assignor of one-half to H. J. Rosegrant, Philadelphia, Pa. Health-shoe. No. 1,173,690; Feb. 29; Gaz. vol. 223; p. 1571.
Ziefel, Charles. (See Gloekler and Ziefel.)
Ziegler, Alfred A., Boston, Mass. Railway signal-lantern. No. 1,173,230; Feb. 29; Gaz. vol. 223; p. 1410.
Ziegler, Alfred A., Boston, Mass. Electromagnet. No. 1,173,240; Feb. 29; Gaz. vol. 223; p. 1410.
Ziegler, Frank, *et al.* (See Reynolds, Frank C., assignor.)
Zierath, Augustus C., Los Angeles, Cal. Rotary drilling-machine. No. 1,173,138; Feb. 22; Gaz. vol. 223; p. 1333.
Zifferer, Lothar R., New York, N. Y. Ice-pick and the like. No. 1,171,296; Feb. 8; Gaz. vol. 223; p. 574.
Zimmerman, Clarence I., deceased, Madison; J. G. Zimmerman, administrator, Milwaukee, Wis. Method and means for the production and control of current-impulses. No. 1,173,630; Feb. 29; Gaz. vol. 223; p. 1549.
Zimmerman, Harry. (See Bartholomae, William, assignor.)
Zimmerman, James G., administrator. (See Zimmerman, Clarence I.)
Zsidakovitz, Louis, Newark, N. J. Salt-shaker. No. 1,171,575; Feb. 15; Gaz. vol. 223; p. 714.
Zilbin, Eduard, Strassburg, Germany. Closing arrangement for discharging the exit-orifices of silos and the like which are closed by means of a curtain. No. 1,173,333; Feb. 29; Gaz. vol. 223; p. 1445.
Zuckerman, William, New York, N. Y. Envelop. No. 1,172,097; Feb. 15; Gaz. vol. 223; p. 902.
Zwerling, Charles H. (See Ohrbach and Zwerling.)
Zwermann, Carl H., Kalamazoo, Mich. Closet-tank and connections. No. 1,173,631; Feb. 29; Gaz. vol. 223; p. 1549.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. C. Williams Company, The. (See Thompson, Henry G., assignor.)

Abel, John, Jersey City, N. J., assignor to Mersereau Metal Bed Company. Cap or vase for metal bed-frames. No. 48,577; Feb. 22; Gaz. vol. 223; p. 1341.

Albrecht, Nicholas, assignor to Fred Pearson & Co., Philadelphia, Pa. Cut pile fabric. Nos. 48,578–9; Feb. 22; Gaz. vol. 223; p. 1341.

American Optical Company. (See Pedlar, Louis C., assignor.)

American Wonderland Co., The. (See Horswell and Millikan, assignors.)

Ansorge, Percy L., Brooklyn, N. Y. Lighting-fixture part. No. 48,481; Feb. 1; Gaz. vol. 223; p. 260.

Araki, Hikozo, Brooklyn, assignor to Morimura Bros., New York, N. Y. Doll. No. 48,625; Feb. 29; Gaz. vol. 223; p. 1689.

Baker, Frederick C., Portland, Oreg. Electric-light wall-bracket fixture. No. 48,513; Feb. 8; Gaz. vol. 223; p. 617.

Baker, Samuel H., Pasadena, and C. S. Ford, Santa Monica, Cal. Lamp. No. 48,514; Feb. 8; Gaz. vol. 223; p. 618.

Baker, Stephen D., New York, N. Y. Soap-dish. No. 48,482; Feb. 1; Gaz. vol. 223; p. 260.

Bencom, Arthur J., Omaha, Nebr. Ring. No. 48,483; Feb. 1; Gaz. vol. 223; p. 260.

Benjamin, Dorothy P., New York, N. Y. Yarn-ball holder. No. 48,542; Feb. 15; Gaz. vol. 223; p. 959.

Bigelow-Hartford Carpet Co., The. (See Pegel, Julius G., assignor.)

Blesch, Charles, Newport, Ky., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio. Burial-casket plate. Nos. 48,580–3; Feb. 22; Gaz. vol. 223; pp. 1341–2.

Blom, Victor E., New York, N. Y. Vest or similar article. No. 48,511; Feb. 1; Gaz. vol. 223; p. 265.

Booth, Kraft, assignor to Gillinder & Sons, Inc., Philadelphia, Pa. Lamp-shade. No. 48,484; Feb. 1; Gaz. vol. 223; p. 260.

Brown, Albert T. (See Eustis and Brown.)

Carlow, Almond L., Providence, R. I. Cribbage-board. No. 48,626; Feb. 29; Gaz. vol. 223; p. 1689.

Casey, John P., Flemington, N. J. Combined sugar and creamer. No. 48,540; Feb. 8; Gaz. vol. 223; p. 622.

Christy, James, Cleveland, assignor to The Portage Rubber Company, Barberton, Ohio. Vehicle-tire. No. 48,485; Feb. 1; Gaz. vol. 223; p. 260.

Clark, Myron H., Milford, Conn., assignor to The Goodyear's Metallic Rubber Shoe Co. Rubber boot. No. 48,627; Feb. 29; Gaz. vol. 223; p. 1690.

Cohn & Rosenberger. (See Rosenberger, Carl, assignor.)

Cott-A-Lap Company, The. (See Jeffcott, Edward W. and R. C., assignors.)

Crane & Breed Manufacturing Company, The. (See Blesch, Charles, assignor.)

Crane & Breed Manufacturing Company, The. (See Lueders, Henry F., assignor.)

Crompton, Joseph, assignor to The Meyercord Company, Chicago, Ill. Article of manufacture. No. 48,486; Feb. 1; Gaz. vol. 223; p. 261.

De Ville, Walter, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Article of manufacture. Nos. 48,584–5; Feb. 22; Gaz. vol. 223; p. 1342.

De Ville, Walter, East Liverpool, Ohio, assignor to The Palm Brothers Company, New York, N. Y. Article of manufacture. Nos. 48,628–9; Feb. 29; Gaz. vol. 223; p. 1690.

Dorr, Frederick E., Everett, Mass. Game-board. Nos. 48,487–8; Feb. 1; Gaz. vol. 223; p. 261.

Dougherty, George, Tiffin, Ohio, assignor to United States Glass Company, Pittsburgh, Pa. Glass vessel. No. 48,515; Feb. 8; Gaz. vol. 223; p. 618.

Eastman, Clevenger A., Columbia, S. C. Tea-tray. No. 48,543; Feb. 15; Gaz. vol. 223; p. 959.

Eberhardt, Rudolph, New York, N. Y., assignor to Remiller Co., Inc. Bottle. No. 48,489; Feb. 1; Gaz. vol. 223; p. 261.

Eick, Otto, St. Louis, Mo. Rubber brush. No. 48,586; Feb. 22; Gaz. vol. 223; p. 1342.

Eisemann, Leo, New York, N. Y. Fan-handle. No. 48,630; Feb. 29; Gaz. vol. 223; p. 1690.

Electro-Chemical Engraving Co. (See Jacobus, Nelson L., assignor.)

Elgh, Charles A., assignor to Long Manufacturing Company, Detroit, Mich. Radiator for automobiles. No. 48,490; Feb. 1; Gaz. vol. 223; p. 261.

Ethridge, Frank W., Tulsa, Okla. Combination lead-sharpener and pin-tray. No. 48,631; Feb. 29; Gaz. vol. 223; p. 1691.

Eustis, John P., Newton, and A. T. Brown, Arlington, assignors to J. P. Eustis Manufacturing Company, Boston, Mass. Dish-stand. No. 48,516; Feb. 8; Gaz. vol. 223; p. 618.

F. B. Chamberlain Company. (See Silver, Bayard P., assignor.)

Farles Manufacturing Co. (See Grady, William J., assignor.)

Fenton, John A., Oakland, Cal. Chair. No. 48,587; Feb. 22; Gaz. vol. 223; p. 1342.

Ferguson, John W., Bloomfield, N. J. Flat-iron stand. No. 48,632; Feb. 29; Gaz. vol. 223; p. 1691.

Ford, Carrie S. (See Baker and Ford.)

Frantz Premier Company, The. (See Noble, Warren, assignor.)

Frary, Ihna T., Hudson, assignor to The Hocking Glass Company, Lancaster, Ohio. Lighting-fixture. No. 48,544; Feb. 15; Gaz. vol. 223; p. 959.

Frary, Ihna T., Hudson, assignor to The Hocking Glass Company, Lancaster, Ohio. Lighting-fixture. No. 48,589; Feb. 22; Gaz. vol. 223; p. 1343.

Fred Pearson & Co. (See Albrecht, Nicholas, assignor.)

G. & J. Tire Company. (See Null, Ralph G., assignor.)

Gillinder & Sons. (See Booth, Kraft, assignor.)

Glyenns, Walter W., Newark, N. J. Picture-frame. No. 48,545; Feb. 15; Gaz. vol. 223; p. 959.

Glowacki, John B., Chicago, Ill. Cane or umbrella handle or similar article. No. 48,512; Feb. 1; Gaz. vol. 223; p. 265.

Glowacki, John B., Chicago, Ill. Cane or umbrella handle or similar article. Nos. 48,633–4; Feb. 29; Gaz. vol. 223; p. 1691.

Goddard, Joseph, assignor to Seneca Camera Manufacturing Company, Rochester, N. Y. Folding camera. No. 48,522; Feb. 22; Gaz. vol. 223; p. 1349.

Goodyear's Metallic Rubber Shoe Co., The. (See Clark, Myron H., assignor.)

Grady, William J., assignor to Farles Manufacturing Co., Decatur, Ill. Hanger for light-reflecting bowls. No. 48,517; Feb. 8; Gaz. vol. 223; p. 618.

Graeser, Albert, Knoxville borough, Pa. Electric-lamp globe. No. 48,491; Feb. 1; Gaz. vol. 223; p. 262.

Graham, George W., Edmore, N. D. Telephone or telegraph cup. No. 48,590; Feb. 22; Gaz. vol. 223; p. 1343.

Greene, Harry B., Hasbrouck Heights, N. J. Grille. Nos. 48,546–9; Feb. 15; Gaz. vol. 223; p. 960.

Griffin, Robert B., New York, N. Y. Wall-covering. No. 48,518; Feb. 8; Gaz. vol. 223; p. 618.

Griffith, Daniel, Giddings, Tex. Kitchen-cabinet. No. 48,635; Feb. 29; Gaz. vol. 223; p. 1691.

Griffith, Richard, Akron, Ohio. Pneumatic tire. No. 48,636; Feb. 29; Gaz. vol. 223; p. 1692.

Grupe, William F., Jersey City, N. J., assignor, by mesne assignments, to Van-O-Phone Company, New York, N. Y. Casing for phonographs or talking-machines. No. 48,591; Feb. 22; Gaz. vol. 223; p. 1343.

Haase, Leo G., Pasadena, Cal. Bench. No. 48,623; Feb. 22; Gaz. vol. 223; p. 1349.

Hansen, Henry R., Jersey City, N. J. Emblem. No. 48,519; Feb. 8; Gaz. vol. 223; p. 619.

Heisey, A. H., & Co. (See Sanford, Andrew J., assignor.)

Herskovitz, Max, Chicago, Ill. Lighting-fixture. No. 48,492; Feb. 1; Gaz. vol. 223; p. 262.

Hettrich, Archibald L., San Rafael, Cal. Lamp-shade. No. 48,520; Feb. 8; Gaz. vol. 223; p. 619.

Highland Body Mfg. Co., The. (See Morrison, James, assignor.)

Hocking Glass Company, The. (See Frary, Ihna T., assignor.)

Horswell, Percy A., Cleveland, and W. H. Millikan, Lakewood, assignors to The American Wonderland Co., Cleveland, Ohio. Toy or miniature talking-machine. No. 48,592; Feb. 22; Gaz. vol. 223; p. 1343.

Hunt, Albert, London, England. Board for playing a game. No. 48,593; Feb. 22; Gaz. vol. 223; p. 1343.

Huss, William C., Cincinnati, Ohio. Kitchen-cabinet. No. 48,493; Feb. 1; Gaz. vol. 223; p. 262.

Hydraulic Press Brick Company. (See Varney, William P., assignor.)

Irving, James A., New York, N. Y. Fan. No. 48,494; Feb. 1; Gaz. vol. 223; p. 262.

J. H. White Manufacturing Company. (See White, Edwin L., assignor.)

J. P. Eustis Manufacturing Company. (See Eustis and Brown, assignors.)

Jacobus, Nelson L., West Orange, N. J., assignor to Electro-Chemical Engraving Co. Bottle-cap remover. No. 48,550; Feb. 15; Gaz. vol. 223; p. 960.

Japan Import and Export Commission Co. (See Twyeffort, Arthur D., assignor.)

Jeffcott, Edward W., Plainfield, and R. C. Jeffcott, assignors to The Cott-A-Lap Company, Somerville, N. J. Floor-covering. No. 48,637; Feb. 29; Gaz. vol. 223; p. 1692.

Jeffcott, Robert C. (See Jeffcott, Edward W. and R. C.)

Johnson, Albert H., assignor to National Electrical Supply Company, Washington, D. C. Casing for hand-operated generators for wireless telegraphy. No. 48,638; Feb. 29; Gaz. vol. 223; p. 1692.

Johnson, Fredrick W., Washington, D. C. Wardrobe-trunk. No. 48,639; Feb. 29; Gaz. vol. 223; p. 1692.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers or brackets. Nos. 48,521–2; Feb. 8; Gaz. vol. 223; p. 619.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Canopy extension for supporting chain fixtures. No. 48,523; Feb. 8; Gaz. vol. 223; p. 619.

Klaus, Max, Montclair, N. J. Manicure instrument. No. 48,495; Feb. 1; Gaz. vol. 223; p. 262.

Koken Barbers' Supply Company. (See Koken, Walter F., assignor.)

Koken, Walter F., assignor to Koken Barbers' Supply Company, St. Louis, Mo. Bottle. No. 48,551; Feb. 15; Gaz. vol. 223; p. 960.

Kovác, George, Detroit, Mich. Knife. No. 48,496; Feb. 1; Gaz. vol. 223; p. 262.

Kurz, Charles F., Cleveland, Ohio. Display-case for pharmacies. No. 48,640; Feb. 29; Gaz. vol. 223; p. 1693.

Lander, Dorothy M., Chicago, Ill. Hand-bag. No. 48,497; Feb. 1; Gaz. vol. 223; p. 263.

Lehman, Max R., Quincy, assignor to Orbon Stove and Range Company, Belleville, Ill. Stove. Nos. 48,552–5; Feb. 15; Gaz. vol. 223; p. 961.

Lehman, Max R., Quincy, Ill., assignor to The Globe Stove & Range Company, Kokomo, Ind. Heating-stove. Nos. 48,556–7; Feb. 15; Gaz. vol. 223; pp. 961–2.

Lehmberg, William, Philadelphia, Pa. Badge or insignia. No. 48,558; Feb. 15; Gaz. vol. 223; p. 962.

Lewton, William W., Chicago, Ill. Badge. No. 48,641; Feb. 29; Gaz. vol. 223; p. 1693.

Limoges China Company, The. (See Lockett, Frank, assignor.)

Lines, Lee S., assignor to The Russ Company, Cleveland, Ohio. Dispensing-urn. No. 48,594; Feb. 22; Gaz. vol. 223; p. 1344.

Litt, Harry J., San Francisco, Cal. Automobile-body. No. 48,664; Feb. 29; Gaz. vol. 223; p. 1697.

Lockett, Frank, East Liverpool, assignor to The Limoges China Company, Sebring, Ohio. Plate. No. 48,595; Feb. 22; Gaz. vol. 223; p. 1344.

Lockett, Frank, East Liverpool, assignor to The Limoges China Company, Sebring, Ohio. Cup. No. 48,596; Feb. 22; Gaz. vol. 223; p. 1344.

Lockett, Frank, East Liverpool, assignor to The Limoges China Company, Sebring, Ohio. Pitcher. No. 48,597; Feb. 22; Gaz. vol. 223; p. 1344.

Lockett, Frank, East Liverpool, assignor to the Limoges China Company, Sebring, Ohio. Sugar-bowl or similar article. No. 48,598; Feb. 22; Gaz. vol. 223; p. 1344.

Lockett, Frank, East Liverpool, assignor to the Limoges China Company, Sebring, Ohio. Saucer. No. 48,599; Feb. 22; Gaz. vol. 223; p. 1344.

Long Manufacturing Company. (See Eligh, Charles A., assignor.)

Lueders, Henry F., assignor to The Crane & Breed Manufacturing Company, Cincinnati, Ohio. Corner-piece for burial-caskets. Nos. 48,600–1; Feb. 22; Gaz. vol. 223; p. 1345.

Luttringhaus, Walter, Maywood, Ill. Percolator. Nos. 48,558–60; Feb. 15; Gaz. vol. 223; p. 962.

Lyon, Edward F., Chicago, Ill. Tire. No. 48,524; Feb. 8; Gaz. vol. 223; p. 619.

Mallekson, Philip S., Philadelphia, Pa. Tread-surface for tires. No. 48,561; Feb. 15; Gaz. vol. 223; p. 963.

Major, Walter C., New York, N. Y., assignor to Russell Playing Card Company, Millltown, N. J. Playing-card. Nos. 48,525–6; Feb. 8; Gaz. vol. 223; pp. 619–20.

Marble, Webster L., Gladstone, Mich. Blade of a hunting-knife. No. 48,624; Feb. 22; Gaz. vol. 223; p. 1349.

McCarthy, Louis, Boston, Mass. Insulating-joint. No. 48,602; Feb. 22; Gaz. vol. 223; p. 1345.

McCloskey, James F., Woonsocket, R. I. Grave-marker. No. 48,562; Feb. 15; Gaz. vol. 223; p. 963.

McFaddin, Harrison D., East Orange, N. J. Lamp shade, globe, or reflector. Nos. 48,527–8; Feb. 8; Gaz. vol. 223; p. 620.

McFaddin, Harrison D., East Orange, N. J. Shell for lighting-fixtures and analogous devices. Nos. 48,563–4; Feb. 15; Gaz. vol. 223; p. 963.

McFaddin, Harrison D., East Orange, N. J. Portable lamp. No. 48,565; Feb. 15; Gaz. vol. 223; p. 963.

McLaughlin, James, McLaughlin, S. D. Badge or similar article. No. 48,642; Feb. 29; Gaz. vol. 223; p. 1693.

McLean, John C., Lakewood, Ohio. Tire. No. 48,541; Feb. 8; Gaz. vol. 223; p. 622.

Mersereau Metal Bed Company. (See Abel, John, assignor.)

Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)

Meyercord Company, The. (See Crompton, Joseph, assignor.)

Miller, William, New York, N. Y. Precious or semi-precious or synthetic stone or an imitation thereof. Nos. 48,643–4; Feb. 29; Gaz. vol. 223; p. 1693.

Millikan, William H. (See Horswell and Millikan.)

Morimura Bros. (See Araki, Hikozo, assignor.)

Morrison, James, Cincinnati, assignor to The Highland Body Mfg. Company, Elmwood Place, Ohio. Automobile-body. No. 48,603; Feb. 22; Gaz. vol. 223; p. 1345.

National Electrical Supply Company. (See Johnson, Albert H., assignor.)

National Metal Spinning & Stamping Company. (See Tepfer, George M., assignor.)

Nevius, Marian H., New York, N. Y. Door-porter. Nos. 48,566–7; Feb. 15; Gaz. vol. 223; pp. 963–4.

Nevius, Marian H., New York, N. Y. Twine-holder. Nos. 48,645–9; Feb. 29; Gaz. vol. 223; pp. 1693–4.

Nicholson, William M., Ashland, Ky. Display-stand. No. 48,568; Feb. 15; Gaz. vol. 223; p. 964.

Noble, Warren, assignor to The Frantz Premier Company, Cleveland, Ohio. Fan-motor casing. No. 48,569; Feb. 15; Gaz. vol. 223; p. 964.

Noble, Warren, assignor to The Frantz Premier Company, Cleveland, Ohio. Casing and stand for electric fans. No. 48,570; Feb. 15; Gaz. vol. 223; p. 964.

North American Lace Company. (See Watters, Charles J., assignor.)

Null, Ralph G., Indianapolis, Ind., assignor to G. & J. Tire Company. Pneumatic vehicle-tire. No. 48,571; Feb. 15; Gaz. vol. 223; p. 964.

Oberholtzer, Charlie D., Marseilles, Ill. Lock. No. 48,604; Feb. 22; Gaz. vol. 223; p. 1345.

Orbon Stove and Range Company. (See Lehman, Max R., assignor.)

Palm Brothers Company, The. (See De Ville, Walter, assignor.)

Palm Brothers Company, The. (See Schiller, George, assignor.)

Pedlar, Louis C., New York, N. Y., assignor to American Optical Company, Southbridge, Mass. Shield. No. 48,605; Feb. 22; Gaz. vol. 223; p. 1345.

Pegel, Julius G., assignor to The Hlgelow-Hartford Carpet Co., Thompsonville, Conn. Carpet or rug. No. 48,606; Feb. 22; Gaz. vol. 223; p. 1346.

Peterson, Fred, Amsterdam, N. Y. Combination-bracket. No. 48,665; Feb. 29; Gaz. vol. 223; p. 1697.

Portage Rubber Company, The. (See Christy, James, assignor.)

Potter, Emil. (See Potter, Leo, assignor.)

Potter, Leo, assignor to E. Potter, New York, N. Y. Image. No. 48,650; Feb. 29; Gaz. vol. 223; p. 1694.

Prinzler, Carl J., Indianapolis, Ind. Panic-lock. No. 48,651; Feb. 29; Gaz. vol. 223; p. 1694.

Reliance Metal Spinning Company. (See Schwartzman, Benjamin, assignor.)

Remiller Co. Inc. (See Eberhardt, Rudolph, assignor.)

Retherford Bros. Co. (See Retherford, Reubin M., assignor.)

Retherford, Reubin M., assignor to Retherford Bros. Co., Muncie, Ind. Chandelier-body. No. 48,607; Feb. 22; Gaz. vol. 223; p. 1346.

Richheimer, Isaac D., Chicago, Ill. Coffee-pot. No. 48,652; Feb. 29; Gaz. vol. 223; p. 1694.

Robbins, Meyer L., New York, N. Y. Precious or semi-precious or synthetic stone or an imitation thereof. Nos. 48,498–9; Feb. 1; Gaz. vol. 223; p. 263.

Roberts, Fred H., Wilmington, Mass. Jar. No. 48,653; Feb. 29; Gaz. vol. 223; p. 1695.

Rosenberger, Carl, assignor to Cohn & Rosenberger, Inc., New York, N. Y. Ring. No. 48,608; Feb. 22; Gaz. vol. 223; p. 1346.

Rosenthal, Moses, Chicago, Ill. Rug. Nos. 48,500–1; Feb. 1; Gaz. vol. 223; p. 263.

Rotter, William, New York, N. Y. Talking-machine cabinet. No. 48,609; Feb. 22; Gaz. vol. 223; p. 1346.

Rourk, William C., Goldsboro, N. C. Key-ring holder. No. 48,610; Feb. 22; Gaz. vol. 223; p. 1346.

Russ Company, The. (See Lines, Lee S., assignor.)

Russell Playing Card Company. (See Major, Walter C., assignor.)

Ryan, William F., Chicago, Ill. Badge, medal, or similar article. No. 48,502; Feb. 1; Gaz. vol. 223; p. 263.

Safety Car Heating & Lighting Company, The. (See Schepmoes, Lindsley, assignor.)

Samples, William P., and P. Selvey, Grafton, W. Va. Grave-marker. No. 48,503; Feb. 1; Gaz. vol. 223; p. 264.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Nappy. No. 48,520; Feb. 8; Gaz. vol. 223; p. 620.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Vase. No. 48,572; Feb. 15; Gaz. vol. 223; p. 964.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Display-rack for shoes, &c. No. 48,611; Feb. 22; Gaz. vol. 223; p. 1347.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Dish. No. 48,612; Feb. 22; Gaz. vol. 223; p. 1347.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Vase. No. 48,613; Feb. 22; Gaz. vol. 223; p. 1347.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Dish. No. 48,614; Feb. 22; Gaz. vol. 223; p. 1347.

Schepmoes, Lindsley, Hasbrouck Heights, N. J., assignor to The Safety Car Heating & Lighting Company. Lamp-shade. No. 48,504; Feb. 1; Gaz. vol. 223; p. 264.

Schiller, George, Jersey City, N. J., assignor to The Palm Brothers Company, New York, N. Y. Article of manufacture. No. 48,654; Feb. 29; Gaz. vol. 223; p. 1695.

Schlechter, Gustavus A., Wyomissing, Pa. Combined pencil-clip and eyeglass-support. No. 48,655; Feb. 29; Gaz. vol. 223; p. 1695.

Scholle, Frank, Philadelphia, Pa. Hat. No. 48,505; Feb. 1; Gaz. vol. 223; p. 264.

Schwartzman, Benjamin, assignor to Reliance Metal Spinning Company, New York, N. Y. Socket-cover and globe for electric-light fixtures. No. 48,530; Feb. 8; Gaz. vol. 223; p. 620.

Schwartzman, Benjamin, assignor to Reliance Metal Spinning Company, New York, N. Y. Canopy for electric-light fixtures. No. 48,531; Feb. 8; Gaz. vol. 223; p. 620.

Schwartzman, Benjamin, assignor to Reliance Metal Spinning Company, New York, N. Y. Electric-light casing. No. 48,532; Feb. 8; Gaz. vol. 223; p. 621.

Schwartzman, Benjamin, assignor to Reliance Metal Spinning Company, New York, N. Y. Oval back for electric-light fixtures. No. 48,533; Feb. 8; Gaz. vol. 223; p. 621.

Schwinn, Frederick, Attleboro, Mass. Emblem, brooch, button, fob, or similar article. No. 48,573; Feb. 15; Gaz. vol. 223; p. 965.

Sebring, Frank A., Sebring, Ohio. Plate or similar article. Nos. 48,615–16; Feb. 22; Gaz. vol. 223; pp. 1347–8.

Selvey, Parker. (See Samples and Selvey.)

Seneca Camera Manufacturing Company. (See Goddard, Joseph, assignor.)

Silver, Bayard P., St. Louis, Mo., assignor to F. B. Chamberlain Company. Folding picture-card. No. 48,506; Feb. 1; Gaz. vol. 223; p. 264.

Sochn, Michael Z., Joliet, Ill. Hand-sprinkler. No. 48,617; Feb. 22; Gaz. vol. 223; p. 1348.

Sodemann, Christian W. G., St. Louis, Mo. Radiator-shield. No. 48,507; Feb. 1; Gaz. vol. 223; p. 264.

Spofford, Christopher S., assignor to Sturgis Steel Go-Cart Co., Sturgis, Mich. Hood for children's carriages. No. 48,656; Feb. 29; Gaz. vol. 223; p. 1695.

Steffens, Edna F., Cleveland Heights, Ohio. Statuette. No. 48,657; Feb. 29; Gaz. vol. 223; p. 1695.

Stimpson, Edwin B., Brooklyn, N. Y. Gromet. Nos. 48,618–19; Feb. 22; Gaz. vol. 223; p. 1348.

Sturgis Steel Go-Cart Co. (See Spofford, Christopher S., assignor.)

Tepfer, George M., assignor to National Metal Spinning & Stamping Company, New York, N. Y. Shell for lighting-fixtures. No. 48,534; Feb. 8; Gaz. vol. 223; p. 621.

Thompson, Henry G., Cleveland, assignor of one-half to The A. C. Williams Company, Ravenna, Ohio. Toy bank. No. 48,620; Feb. 22; Gaz. vol. 223; p. 1348.

Traeger, Otto A., West Hoboken, N. J. Holder for electric lamps. No. 48,588; Feb. 22; Gaz. vol. 223; p. 1343.

Twyeffort, Arthur D., Newark, N. J., assignor to Japan Import and Export Commission Co., New York, N. Y. Toy. No. 48,535; Feb. 8; Gaz. vol. 223; p. 621.

United States Glass Company. (See Dougherty, George, assignor.)

Valpan, George A., Windsor, Ontario, Canada. Dial for timepieces. No. 48,658; Feb. 29; Gaz. vol. 223; p. 1696.

Van-O-Phone Company. (See Grupe, William F., assignor.)

Van Raalte, Zealie, New York, N. Y. Border for net veilings. No. 48,508; Feb. 1; Gaz. vol. 223; p. 265.

Varney, William P., Chicago, Ill., assignor to Hydraulic Press Brick Company, St. Louis, Mo. Brick or similar article. No. 48,536; Feb. 8; Gaz. vol. 223; p. 621.

Vucussovich, Michel P., Wellesley Hills, Mass. Button, pin, or brooch. No. 48,659; Feb. 29; Gaz. vol. 223; p. 1696.

Watters, Charles J., assignor to North American Lace Company, Philadelphia, Pa. Lace. Nos. 48,660–3; Feb. 29; Gaz. vol. 223; p. 1696.

Werner, Paul E., Kansas City, Mo. Elastic vehicle-tire. No. 48,509; Feb. 1; Gaz. vol. 223; p. 265.

White, Edwin L., New York, assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Hanger for light-reflecting bowls. No. 48,537; Feb. 8; Gaz. vol. 223; p. 621.

Will & Baumer Co., The. (See Will, Harold H., assignor.)

Will, Harold H., assignor to The Will & Baumer Co., Syracuse, N. Y. Candle. No. 48,538; Feb. 8; Gaz. vol. 223; p. 622.

Williams, Peter, Ingallston, Mich. Weapon. No. 48,510; Feb. 1; Gaz. vol. 223; p. 265.

Winde, Constance, New York, N. Y. Book-rack. No. 48,574; Feb. 15; Gaz. vol. 223; p. 965.

Winget, Nell F., Minneapolis, Minn. Cap or bonnet. No. 48,575; Feb. 15; Gaz. vol. 223; p. 965.

Wolculn, Michael, Wilmington, Del. Combination implement. No. 48,539; Feb. 8; Gaz. vol. 223; p. 622.

Woodfin, Howard F., Rutland, Vt. Button. No. 48,576; Feb. 15; Gaz. vol. 223; p. 965.

Woodhend, Daniel, Chicago, Ill. Lighting-fixture. No. 48,621; Feb. 22; Gaz. vol. 223; p. 1349.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co., Inc., New York, N. Y. Toilet powder. No. 108,383; Feb. 8; Gaz. vol. 223; p. 643.

A. Bourjois & Co., Inc., New York, N. Y. Toilet powder. No. 108,631; Feb. 22; Gaz. vol. 223; p. 1369.

A. Grosscubach Co., Milwaukee, Wis. Cheese. No 108,431; Feb. 8; Gaz. vol. 223; p. 644.

A. Stein & Company, Chicago, Ill. Garters. No. 108,499; Feb. 8; Gaz. vol. 223; p. 646.

A. B. Farquhar Company, Limited, York, Pa. Certain named cutlery, machinery, and tools, and parts thereof. No. 108,866; Feb. 29; Gaz. vol. 223; p. 1714.

A. C. Nowland Co., Philadelphia, Pa. Edible cotton-seed oil. No. 108,442; Feb. 8; Gaz. vol. 223; p. 645.

Acme Milling Company, Talbott, Tenn. Wheat-flour. No. 108,376; Feb. 8; Gaz. vol. 223; p. 643.

Adams & Elting Company, Chicago, Ill. Liquid wall-coating capable of being washed. No. 108,411; Feb. 8; Gaz. vol. 223; p. 644.

Addiline Medicine Co., The, Columbus, Ohio. Medicine for the treatment of tuberculosis. No. 108,458; Feb. 8; Gaz. vol. 223; p. 645.

Admiralty Trading Co., Seattle, Wash. Canned salmon. No. 108,627; Feb. 22; Gaz. vol. 223; p. 1369.

Aerothrust Engine Company, Chicago, Ill. Gas-engines. No. 108,760; Feb. 29; Gaz. vol. 223; p. 1711.

Aktiebolaget Novator, Stockholm, Sweden. Refrigerators, refrigerating-machines, milk-coolers, &c. No. 108,377; Feb. 8; Gaz. vol. 223; p. 643.

Alaska Sanitary Packing Co., Seattle, Wash. Canned salmon. No. 108,355; Feb. 1; Gaz. vol. 223; p. 286.

Allen & Lewis, Portland, Oreg. Baking-powder and cream tartar. No. 108,378; Feb. 8; Gaz. vol. 223; p. 643.

Allen Red Tame Cherry Company, The, Toledo, Ohio. Fruit flavoring-syrup for non-alcoholic beverages. No. 108,459; Feb. 8; Gaz. vol. 223; p. 645.

American Agricultural Chemical Co., New York, N. Y. Ammonia carbonate. No. 108,733; Feb. 22; Gaz. vol. 223; 1372.

American Coal Exporting Co., New York, N. Y., and Norfolk, Va. Coal and coke. No. 108,761; Feb. 29; Gaz. vol. 223; p. 1711.

American Fuming Company, Knoxville, Tenn. Wood-stain. No. 108,762; Feb. 29; Gaz. vol. 223; p. 1711.

American Metal Products Company, Chicago, Ill. Deborning-clippers. No. 108,763; Feb. 29; Gaz. vol. 223; p. 1711.

American Tar Products Company, Chicago, Ill. Roofing and paving materials. No. 108,356; Feb. 1; Gaz. vol. 223; p. 286.

Amory, Browne & Co., Boston, Mass. Cotton piece goods and blankets. Nos. 108,764–5; Feb. 29; Gaz. vol. 223; p. 1711.

Anderson, J. A., Omaha, Nebr. Compounds for removing carbonaceous deposits from cylinders of internal-combustion engines. No. 108,460; Feb. 8; Gaz. vol. 223; p. 645.

Anglo Mexican Petroleum Products Company, Limited, London, England, and New York, N. Y. Bitumen and asphalt. No. 108,628; Feb. 22; Gaz. vol. 223; p. 1369.

Ansbacher Insecticide Co., Inc., New York, N. Y. Insecticides. No. 108,357; Feb. 1; Gaz. vol. 223; p. 286.

Ansted & Burk Co., The, Springfield, Ohio. Poultry food. No. 108,629; Feb. 22; Gaz. vol. 223; p. 1369.

Apollo Soda Water Co., Pittsburgh, Pa. Carbonated non-alcoholic beverage and syrup for making same. No. 108,850; Feb. 29; Gaz. vol. 223; p. 1713.

Arbuckle Brothers, New York, N. Y., and Chicago, Ill. Tea, coffee, pepper, flavoring extracts for foods. No. 108,678; Feb. 22; Gaz. vol. 223; 1370.

Arco Company, The, Cleveland, Ohio. Plastic compound for waterproofing surfaces. No. 108,734; Feb. 22; Gaz. vol. 223; p. 1372.

Arnold, Joseph A., Providence, R. I. Certain named dental, medical, and surgical appliances. No. 108,502; Feb. 15; Gaz. vol. 223; p. 987.

Associated 5 and 10 Cent Stores, Inc., New York, N. Y. Neckties, suspenders, garters, belts, &c. No. 108,322; Feb. 1; Gaz. vol. 223; p. 285.

Atkinson, William M., Minneapolis, Minn. Wheat-flour. No. 108,630; Feb. 22; Gaz. vol. 223; p. 1369.

Atlas Powder Company, Wilmington, Del. Powder and dynamite. No. 108,461; Feb. 8; Gaz. vol. 223; p. 645.

Auto Device Mfg. Co., Milwaukee, Wis. Automobile accessories. No. 108,584; Feb. 15; Gaz. vol. 223; p. 989.

Aycock Wood Brick Veneer Co., Aycock, Fla. Weatherboarding. No. 108,585; Feb. 15; Gaz. vol. 223; p. 989.

Babcock Printing Press Manufacturing Company, The, New London, Conn. Printing-presses. No. 108,323; Feb. 1; Gaz. vol. 223; p. 285.

Baby Outfitters, The, New York, N. Y. Certain named clothing. No. 108,079; Feb. 22; Gaz. vol. 223; p. 1370.

Baird-North Co., Providence, R. I. Writing-paper, envelops, and correspondence-cards. No. 108,766; Feb. 29; Gaz. vol. 223; p. 1711.

Baker Importing Co., Minneapolis, Minn., and New York, N. Y. Coffee. No. 108,358; Feb. 1; Gaz. vol. 223; p. 286.

Baker, John W., Stamford, Conn. Shooting-target. No. 108,680; Feb. 22; Gaz. vol. 223; p. 1370.

Barrett Manufacturing Company, The, New York, N. Y. Prepared roofing. Nos. 108,381–2; Feb. 8; Gaz. vol. 223; p. 643.

Baumgardner, Harry D., Frederick, Md. Cured hams and bacon. No. 108,412; Feb. 8; Gaz. vol. 223; p. 644.

Beard, Oscar C., Los Angeles, Cal. Certain named foods. No. 108,681; Feb. 22; Gaz. vol. 223; p. 1370.

Beatrice Creamery Company, Chicago, Ill. Cream-separators. No. 108,586; Feb. 15; Gaz. vol. 223; p. 988.

Beattie Manufacturing Co., Little Falls, N. J., and New York, N. Y. Tapestry rugs. No. 108,736; Feb. 22; Gaz. vol. 223; p. 1372.

Beaufort Truck Growers Association, Beaufort, S. C. Fresh lettuce, potatoes, cabbage, radishes, peas. No. 108,767; Feb. 29; Gaz. vol. 223; p. 1711.

Beck Duplicator Company, The, New York, N. Y. Duplicators and parts of same. No. 108,768; Feb. 29; Gaz. vol. 223; p. 1711.

Beck Shoe Company, The, Brooklyn, N. Y. Leather boots and shoes. No. 108,587; Feb. 15; Gaz. vol. 223; p. 989.

Bemmels Milling Company, Lisbon, N. D. Wheat-flour. No. 108,414; Feb. 8; Gaz. vol. 223; p. 644.

Best, Richard, New York, N. Y. Lead-pencils. No. 108,324; Feb. 1; Gaz. vol. 223; p. 285.

Bianchini, Ferier, Lyon, France. Silk, flax, cotton, woolen, and mixed materials in the piece. No. 108,769; Feb. 29; Gaz. vol. 223; p. 1711.

Bianchini, Ferier, Lyon, France. Silk, wool, linen, and cotton piece goods. No. 108,770; Feb. 29; Gaz. vol. 223; p. 1711.

Bickett Coal and Coke Company, Chicago, Ill. Coal. No. 108,737; Feb. 22; Gaz. vol. 223; p. 1372.

Biolliuo, Daniele, New York, N. Y. Balsam compound for cuts, burns, boils, &c. No. 108,462; Feb. 8; Gaz. vol. 223; p. 645.

Bishop Gutta-Percha Company, New York, N. Y. Insulated electrical conductors and cables. No. 108,503; Feb. 15; Gaz. vol. 223; p. 987.

Black Horn Sales Co., Scranton, Pa. Chamois-leather. No. 108,415; Feb. 8; Gaz. vol. 223; p. 644.

Blacko Medicine Co., The, Charleston, W. Va. Preparation for the stomach, liver, and bowels. No. 108,416; Feb. 8; Gaz. vol. 223; p. 644.

Blanc & L. Delery, J. E., New York, N. Y. Olive-oil. No. 108,463; Feb. 8; Gaz. vol. 223; p. 645.

Bless & Drake, Newark, N. J. Sad-irons. No. 108,544; Feb. 15; Gaz. vol. 223; p. 988.

Bludwine Company, Athens, Ga. Fruit and herb elixir. No. 108,738; Feb. 22; Gaz. vol. 223; p. 1372.

Boonville Creamery & Cold Storage Co. (See McLeod & Ormsbee, assignors.)

Booth's Distillery, Limited, London, England. Straight old Tom gin. No. 108,771; Feb. 29; Gaz. vol. 223; p. 1711.

Boro Salicine Co., Philadelphia, Pa. Candy mints to sweeten the breath and aid digestion. No. 108,682; Feb. 22; Gaz. vol. 223; p. 1370.

Bowers Bros., Inc., Richmond, Va. Coffee. Nos. 108,384–5; Feb. 8; Gaz. vol. 223; p. 643.

Bowers'-Seltzer Mead Co., Philadelphia, Pa. Soft drinks. No. 108,683; Feb. 22; Gaz. vol. 223; p. 1370.

Boyd, A. W., Chattanooga, Tenn. Vegetable alterative and tonic. No. 108,632; Feb. 22; Gaz. vol. 223; p. 1369.

Boyd Company, The, Brooklyn, N. Y. Hair wash and tonic. No. 108,545; Feb. 15; Gaz. vol. 223; p. 988.

Brame Drug Company, Northwilkesboro, N. C. Salve for croup, pneumonia, &c. No. 108,359; Feb. 1; Gaz. vol. 223; p. 286.

Brawn Willard Co., Portland, Me. Sardines. No. 108,417; Feb. 8; Gaz. vol. 223; p. 644.

Breck, John H., Springfield, Mass. Preparations for dandruff, falling hair, &c. No. 108,386; Feb. 8; Gaz. vol. 223; p. 643.

Brotherhood of Painters, Decorators and Paperhangers of America, La Fayette, Ind. Monthly periodicals. No. 108,851; Feb. 29; Gaz. vol. 223; p. 1713.

Brown Durrell Co., Boston, Mass. Hosiery. No. 108,739; Feb. 22; Gaz. vol. 223; p. 1372.

Bryant Electric Company, The, Bridgeport, Conn. Attachment-plugs, receptacles, and connectors. No. 108,326; Feb. 1; Gaz. vol. 223; p. 285.

Bubb & Sons, Geo., Williamsport, Pa. Certain named foods. No. 108,633; Feb. 22; Gaz. vol. 223; p. 1369.
Buckley-Newhall Company, The, New York and Brooklyn, N. Y. Gas, vapor, and oil lamps. No. 108,684; Feb. 22; Gaz. vol. 224; p. 1370.
Buckley-Newhall Company, The, New York and Brooklyn, N. Y. Clothes-wringers and washing-machines. No. 22; Gaz. vol. 222; p. 1370.
Buffalo Specialty Company, Buffalo, N. Y. Tire fluid. No. 108,634; Feb. 22; Gaz. vol. 223; p. 1369.
Buick Motor Company, Flint, Mich. Motor-vehicles. No. 108,852; Feb. 29; Gaz. vol. 223; p. 1713.
Bunte Brothers, Chicago, Ill. Chocolates. No. 108,418; Feb. 8; Gaz. vol. 223; p. 644.
Burnee Corporation, New York, N. Y. Popcorn, peanuts, and candies. No. 108,387; Feb. 8; Gaz. vol. 223; p. 643.
Burnside, Bernard, Seattle, Wash. Hats and caps. No. 108,546; Feb. 15; Gaz. vol. 223; p. 988.
By-Lo Stores Company, The, Chicago, Ill. Certain named hardware and plumbing supplies. No. 108,635; Feb. 22; Gaz. vol. 223; p. 1369.
C. A. Gambrill Mfg. Co., Baltimore, Md. Prepared cake-flour. No. 108,428; Feb. 8; Gaz. vol. 223; p. 644.
California Glove Company, San Francisco, Cal. Leather gloves. No. 108,588; Feb. 15; Gaz. vol. 223; p. 989.
Camden Curtain & Embroidery Company, Camden, N. J. Lace curtains. No. 108,772; Feb. 29; Gaz. vol. 223; p. 1711.
Cameron, Donald J., Syracuse, N. Y. Boots and shoes of leather and canvas. Nos. 108,327–8; Feb. 1; Gaz. vol. 223; p. 285.
Cameron, Donald J., Syracuse, N. Y. Boots and shoes. No. 108,504; Feb. 15; Gaz. vol. 223; p. 987.
Caravetta, Louis, Chicago, Ill. Olive-oil. No. 108,388; Feb. 8; Gaz. vol. 223; p. 643.
Carroll, John B., St. Louis, Mo. Preparation in powder and tablet form for treating certain named ailments. No. 108,505; Feb. 15; Gaz. vol. 223; p. 987.
Carson, Pirie, Scott & Co., Chicago, Ill. Crochet-cotton. No. 108,419; Feb. 8; Gaz. vol. 223; p. 644.
Carson, Pirie, Scott & Co., Chicago, Ill. Ladies' shirt-waists and dresses, children's dresses, &c. No. 108,420; Feb. 8; Gaz. vol. 223; p. 644.
Cedarbrook Knitting Company, Philadelphia, Pa. Knitted underwear. No. 108,773; Feb. 29; Gaz. vol. 223; p. 1711.
Central Consumers Company, Louisville, Ky. Carbonated non-alcoholic beverages. No. 108,465; Feb. 8; Gaz. vol. 223; p. 645.
Central Lake Canning Co., Central Lake, Mich. Canned vegetables. No. 108,389; Feb. 8; Gaz. vol. 223; p. 643.
Central Oil & Chemical Company, The, Chicago, Ill. Wood-polish. No. 108,774; Feb. 29; Gaz. vol. 223; p. 1711.
Chapin & Company, Incorporated, Hammond, Ind. Mixed feeds for horses, cattle, and farm stock. No. 108,636; Feb. 22; Gaz. vol. 223; p. 1369.
Charles B. Perkins Company, Boston, Mass. Cigarettes and pipe-tobacco. No. 108,719; Feb. 22; Gaz. vol. 223; p. 1371.
Charles E. Cormier Rice Co. Ltd., New Orleans, La. Rice. No. 108,506; Feb. 15; Gaz. vol. 223; p. 987.
Chatham Shirt Co., New York, N. Y. Union-suit overalls, overalls, coats, shirts, &c. No. 108,467; Feb. 8; Gaz. vol. 223; p. 645.
Chicago Steel Post Company, Chicago, Ill. Metallic fence-posts. No. 108,468; Feb. 8; Gaz. vol. 223; p. 645.
Christman, Albert R., Philadelphia, Pa. Shock-absorbers. No. 108,680; Feb. 22; Gaz. vol. 223; p. 1370.
Christman, Louis F., Jackson, Tenn. Tooth-paste. No. 108,329; Feb. 1; Gaz. vol. 223; p. 285.
Cleveland Machinery & Supply Co., The, Cleveland, Ohio. Lathes. No. 108,776; Feb. 29; Gaz. vol. 223; p. 1714.
Coen, Pearl A., Columbus, Ohio. Coal. No. 108,740; Feb. 22; Gaz. vol. 223; p. 1372.
Columbia Paper Bag Company, Baltimore, Md. Paper bags. Nos. 108,854–64; Feb. 29; Gaz. vol. 223; p. 1714.
Combusto Devices Corporation. (See Franey, Shore & Co., assignors.)
Commercial Milling Co., The, Detroit, Mich. Wheat-flour. No. 108,390; Feb. 8; Gaz. vol. 223; p. 643.
Commercial Newspaper Company, New York, N. Y. Publication issued annually. No. 108,777; Feb. 29; Gaz. vol. 223; p. 1711.
Condurier, Fructus & Descher, Lyon, France, and New York, N. Y. Wool and silk piece goods. No. 108,741; Feb. 22; Gaz. vol. 223; p. 1372.
Crampton-Farley Brass Co., Kansas City, Mo. Floor drains and traps. No. 108,548; Feb. 15; Gaz. vol. 223; p. 988.
Crane, Clarence A., Cleveland, Ohio. Chewing-gum and mint-flavored confection. No. 108,421; Feb. 8; Gaz. vol. 223; p. 644.
Crisi & Cecchione, New York, N. Y. Olive-oil. No. 108,360; Feb. 1; Gaz. vol. 223; p. 286.
Culbertson & Sons, John, Philadelphia, Pa. Belts of woven fabric manufactured from wool, cotton, &c. No. 108,549; Feb. 15; Gaz. vol. 223; p. 988.
Daggett & Ramsdell, New York, N. Y. Face-powder. No. 108,687; Feb. 22; Gaz. vol. 223; p. 1370.
Dalton, James H., New York, N. Y. Wines. No. 108,688; Feb. 22; Gaz. vol. 223; p. 1370.
Davenport, Frank W., Providence, R. I. Fireless cookers. No. 108,330; Feb. 1; Gaz. vol. 223; p. 285.
De La Vergne Machine Co., New York, N. Y. Chemicals for the separation and purification of mixtures containing oils. No. 108,391; Feb. 8; Gaz. vol. 223; p. 643.
De Noyelles, Judson R., Detroit, Mich. Polish for pianos, automobiles, furniture, &c. No. 108,778; Feb. 29; Gaz. vol. 223; p. 1711.
Dick & Bros. Quincy Brewing Co., Quincy, Ill. Non-intoxicating malt beverage. No. 108,392; Feb. 8; Gaz. vol. 223; p. 643.
Digheri, Davad, Brooklyn, N. Y. Liniment for rheumatism. No. 108,779; Feb. 29; Gaz. vol. 223; p. 1711.
Dilichay Bros., New Decatur, Ala. Liver-toule. No. 108,393; Feb. 8; Gaz. vol. 223; p. 643.
Dodge, M. Hartley, New York, N. Y. Lubricating-oils and rust-preventives. Nos. 108,422–3; Feb. 8; Gaz. vol. 223; p. 644.
Draper, William M., Sullivan, Ind. Non-alcoholic carbonated beverages sold as soft drinks. No. 108,692; Feb. 22; Gaz. vol. 223; p. 1371.
Dubois Watch Case Company, New York, N. Y. Bracelets for wrist-watches made of certain materials. No. 108,780; Feb. 29; Gaz. vol. 223; p. 1711.
Dupion Silk Company, New York, N. Y. Broad-silk piece goods. No. 108,590; Feb. 15; Gaz. vol. 223; p. 989.
E. C. Atkins and Company, Indianapolis, Ind. Certain named saws. No. 108,735; Feb. 22; Gaz. vol. 223; p. 1372.
Eagle Woodenware Manufacturing Company, The, Hamilton, Ohio. Washing-machines. No. 108,331; Feb. 1; Gaz. vol. 223; p. 285.
Eastman Kodak Co., Rochester, N. Y. Photographic film. No. 108,591; Feb. 15; Gaz. vol. 223; p. 989.
Eclipse Manufacturing Company, Indianapolis, Ind. Spark-plugs. No. 108,592; Feb. 15; Gaz. vol. 223; p. 989.
Edward M. Raphel & Co. Inc., New York, N. Y. Certain named foods. No. 108,532; Feb. 15; Gaz. vol. 223; p. 988.
Edwin Clapp & Son, Inc., East Weymouth, Mass. Leather boots and shoes. No. 108,775; Feb. 29; Gaz. vol. 223; p. 1711.
Electric Auxiliaries Co., Chicago, Ill. Lamp-dimmers. No. 108,593; Feb. 15; Gaz. vol. 223; p. 989.
Electro Metallurgical Company, Glen Ferris, W. Va., and Niagara Falls, N. Y. Alloys and alloying metals used in the manufacture of special steels. No. 108,865; Feb. 29; Gaz. vol. 223; p. 1714.
Elk Soap Co., El Paso, Tex. Soap. No. 108,500; Feb. 15; Gaz. vol. 223; p. 987.
Engelke & Feiner Mfg. Co., St. Louis, Mo. Cornmeal, cream-meal, and pearl-grits. No. 108,782; Feb. 29; Gaz. vol. 223; p. 1711.
Essanay Film Manufacturing Co., Chicago, Ill. Moving-picture films. No. 108,783; Feb. 29; Gaz. vol. 223; p. 1711.
F. B. Chamberlain Co., St. Louis, Mo. Chick and hen feed. No. 108,466; Feb. 8; Gaz. vol. 223; p. 645.
F. L. Bosworth Co., Minneapolis, Minn. Tableware of precious metal or plated with same. No. 108,325; Feb. 1; Gaz. vol. 223; p. 285.
Fabrique de Machines "Mikron" S. A., Madretsch, near Biel, Switzerland. Certain named dental, medical, and surgical appliances. No. 108,551; Feb. 15; Gaz. vol. 223; p. 988.
Fearing, Whiton & Co., Inc., Boston, Mass. Cotton dress goods. No. 108,784; Feb. 29; Gaz. vol. 223; p. 1711.
Federal Shoe Co., Lowell, Mass. Leather boots and shoes. No. 108,785; Feb. 29; Gaz. vol. 223; p. 1711.
Ferdinand Guttmann & Co., New York, N. Y. Bottle-seals. No. 108,395; Feb. 8; Gaz. vol. 223; p. 643.
Fischer, Albert C., Omaha, Nebr. Seam-cleats. No. 108,786; Feb. 29; Gaz. vol. 223; p. 1711.
Flexible Steel Lacing Company, Chicago, Ill. Lamp guards for electric lamps. No. 108,594; Feb. 15; Gaz. vol. 223; p. 989.
Florida Cotton Oil Company, Jacksonville, Fla. Lard compound. No. 108,637; Feb. 22; Gaz. vol. 223; p. 1369.
Foley & Tucker Company, Mohawk, Mich. Skin toilet lotion. No. 108,638; Feb. 22; Gaz. vol. 223; p. 1369.
Ford Motor Company, Highland Park, Mich. Periodicals. No. 108,787; Feb. 29; Gaz. vol. 223; p. 1711.
Foster Rubber Company, Kennebunk, Me., and Boston, Mass. Rubber heels. Nos. 108,742–4; Feb. 22; Gaz. vol. 223; p. 1372.
Fox River Butter Company, The, Chicago, Ill. Butter. No. 108,469; Feb. 8; Gaz. vol. 223; p. 645.
Franey, Shore & Co., assignors to Combusto Devices Corporation, New York, N. Y. Heating appliance in the nature of a fuel-economizer. No. 108,426; Feb. 8; Gaz. vol. 223; p. 644.
Franklin Brewing Company, Brooklyn, N. Y. Beer. No. 108,745; Feb. 22; Gaz. vol. 223; p. 1372.
Fred Harvey, Inc., Kansas City, Mo. Extract perfume, toilet cream and water, powders, and rouge. No. 108,748; Feb. 22; Gaz. vol. 223; p. 1372.
Friedlaender, Paul N., New York, N. Y. Solidified-alcohol fuel. No. 108,426; Feb. 8; Gaz. vol. 223; p. 644.
Fulton & Co., J. L., Chicago, Ill. Asphalt felts, fabrics, walls, floors, and pavements. No. 108,552; Feb. 15; Gaz. vol. 223; p. 988.
Funk & Wagnalls Company, New York, N. Y. Dictionary. No. 108,693; Feb. 22; Gaz. vol. 223; p. 1371.
G. E. Bursley & Co., Fort Wayne, Ind. Coffee. No. 108,853; Feb. 29; Gaz. vol. 223; p. 1713.

Gagnon Shoe Co., Webster, Wis. Leather shoes. No. 108,553; Feb. 15; Gaz. vol. 223; p. 988.
Gallanis Bros., Chicago, Ill. Cocoa. No. 108,427; Feb. 8; Gaz. vol. 223; p. 644.
Garcia, Juan R., Pola de Siero, Spain. Sausages. No. 108,746; Feb. 22; Gaz. vol. 223; p. 1372.
Garrish, John G., Philadelphia, Pa., and New York, N. Y. Sparkling wines and champagne. No. 108,429; Feb. 8; Gaz. vol. 223; p. 644.
Geiger-Fishback Co., The, Indianapolis, Ind. Baking-powder. No. 108,788; Feb. 29; Gaz. vol. 223; p. 1712.
General Colonial Company, Inc., New York, N. Y. Baked goods. No. 108,430; Feb. 8; Gaz. vol. 223; p. 644.
General Purification Co., Phoenix, Ariz., and Madison, Wis. Sterilizers, disinfectants, and purifiers. No. 108,332; Feb. 1; Gaz. vol. 223; p. 285.
General Railway Signal Company, Gates, N. Y. Mechanical railway signaling apparatus. No. 108,333; Feb. 1; Gaz. vol. 223; p. 285.
General Railway Signal Company, Gates, N. Y. Electric railway signaling apparatus. No. 108,780; Feb. 29; Gaz. vol. 223; p. 1712.
George Inlet Packing Co., Inc., Ketchikan, Alaska, and Portland, Oreg. Canned salmon. No. 108,362; Feb. 1; Gaz. vol. 223; p. 286.
George Inlet Packing Co., Inc., Portland, Oreg. Canned salmon. No. 108,363; Feb. 1; Gaz. vol. 223; p. 286.
Gerhard Mennen Chemical Co., Newark, N. J. Cream deodorant. No. 108,713; Feb. 22; Gaz. vol. 223; p. 1371.
Gill, Phil S., New York, N. Y. Dresses. No. 108,639; Feb. 22; Gaz. vol. 223; p. 1369.
Gilpin, Langdon & Company, Incorporated, Baltimore, Md. Pepper. No. 108,640; Feb. 22; Gaz. vol. 223; p. 1369.
Gilpin, Langdon & Company, Incorporated, Baltimore, Md. Black pepper. No. 108,641; Feb. 22; Gaz. vol. 223; p. 1369.
Girard Manufacturing Company, The, Philadelphia, Pa. Certain named art-needlework articles. No. 108,554; Feb. 15; Gaz. vol. 223; p. 988.
Glaser & Co., Sol, Philadelphia, Pa. Certain named clothing for men, women, and children. No. 108,694; Feb. 22; Gaz. vol. 223; p. 1371.
Glazo Company, The, Fort Wayne, Ind. Nail enamel and beautifier. No. 108,394; Feb. 8; Gaz. vol. 223; p. 643.
Glendale Elastic Fabrics Co., Easthampton, Mass. Suspenders. No. 108,695; Feb. 22; Gaz. vol. 223; p. 1371.
Goldberg, Bowen & Co., San Francisco, Cal. Certain named foods. No. 108,510; Feb. 15; Gaz. vol. 223; p. 987.
Golden, Edward W., East Boston, Mass. Hair-restorer. No. 108,790; Feb. 29; Gaz. vol. 223; p. 1712.
Goodall Worsted Co., Sanford, Me., and New York, N. Y. Woolen, mohair, &c., piece goods. No. 108,511; Feb. 15; Gaz. vol. 223; p. 987.
Goode & Dunkle, Covington, Ky. Wheat-flour. No. 108,642; Feb. 22; Gaz. vol. 223; p. 1369.
Goodman Brothers, Columbus, Ohio. Watches. No. 108,334; Feb. 1; Gaz. vol. 223; p. 285.
Goodyear Rubber Company, Middletown, Conn. Rubber boots and shoes. No. 108,555; Feb. 15; Gaz. vol. 223; p. 988.
Goodyear's India Rubber Glove Mfg. Co., New York, N. Y., and Naugatuck, Conn. Water-bottles, syringes, combination water-bottle and fountain-syringe. No. 108,470; Feb. 8; Gaz. vol. 223; p. 645.
Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. Massage-mitts. No. 108,696; Feb. 22; Gaz. vol. 223; p. 1371.
Gordon, John H., New York, N. Y. Natural and distilled water and non-alcoholic carbonated beverages. No. 108,556; Feb. 15; Gaz. vol. 223; p. 988.
Gowan-Lenning-Brown Co., Duluth, Minn. Certain named foods. No. 108,364; Feb. 1; Gaz. vol. 223; p. 286.
Graffam, W. S., Northampton, Mass. Crank and license-number holders and antirattlers. No. 108,597; Feb. 15; Gaz. vol. 223; p. 990.
Green, Harry B., Woodbury, N. J. Antiseptic solution. No. 108,557; Feb. 15; Gaz. vol. 223; p. 988.
Griffith, David W., Los Angeles, Cal. Motion-picture films. No. 108,471; Feb. 8; Gaz. vol. 223; p. 645.
Gültermann & Co., Gutach-Breisgau, Germany. Threads and yarns. No. 108,697; Feb. 22; Gaz. vol. 223; p. 1371.
H. G. Saal Company, Chicago, Ill. Polish and polishing-oils for furniture and wood. No. 108,349; Feb. 1; Gaz. vol. 223; p. 285.
H. K. Toy and Novelty Co., Indianapolis, Ind. Toy building-blocks. No. 108,698; Feb. 22; Gaz. vol. 223; p. 1371.
H. R. Hall Company, Chicago, Ill. Coffee. No. 108,396; Feb. 8; Gaz. vol. 223; p. 643.
Hafner, Louis S., New Hampton, Iowa. Sausages. No. 108,598; Feb. 15; Gaz. vol. 223; p. 990.
Halma Company, The, Portland, Me. Gaming sets. No. 108,747; Feb. 22; Gaz. vol. 223; p. 1372.
Hannibal Lime Company, Hannibal, Mo. Lime. No. 108,643; Feb. 22; Gaz. vol. 223; p. 1369.
Harlem Furniture Company, New York, N. Y. Certain named furniture and upholstery. No. 108,699; Feb. 22; Gaz. vol. 223; p. 1371.
Harrah & Stewart Manufacturing Company, Des Moines, Iowa. Soap in paste form. No. 108,644; Feb. 22; Gaz. vol. 223; p. 1369.
Hart Sales Company, Inc., New York, N. Y. Preparation for cleansing and softening the skin. No. 108,512; Feb. 15; Gaz. vol. 223; p. 987.
Hart Schaffner & Marx, Chicago, Ill. Coats, vests, trousers, over and rain coats. No. 108,397; Feb. 8; Gaz. vol. 223; p. 643.
Hart Schaffner & Marx, Chicago, Ill. Coats, vests, trousers, over and rain coats. No. 108,513; Feb. 15; Gaz. vol. 223; p. 987.
Haughton, Richard, Paoli, Pa. Wheat, rice, barley, oats, and cornmeal. No. 108,599; Feb. 15; Gaz. vol. 223; p. 990.
Haupt & Burgi, New York, N. Y. Cheese. No. 108,600; Feb. 15; Gaz. vol. 223; p. 990.
Heilman Manufacturing Company, Chicago, Ill. Mechanical check-protectors. No. 108,791; Feb. 29; Gaz. vol. 223; p. 1712.
Heller & Company, B., Chicago, Ill. Certain named pharmaceutical preparations. No. 108,433; Feb. 8; Gaz. vol. 223; p. 644.
Heller & Co., B., Chicago, Ill. Waste-pipe cleanser. No. 108,514; Feb. 15; Gaz. vol. 223; p. 987.
Heller & Co., B., Chicago, Ill. Scale-solvent. No. 108,515; Feb. 15; Gaz. vol. 223; p. 987.
Heller & Co., B., Chicago, Ill. Colors for foods. No. 108,792; Feb. 29; Gaz. vol. 223; p. 1712.
Hench & Dromgold Company, York, Pa. Fertilizer-distributers, including lime-spreaders. No. 108,867; Feb. 29; Gaz. vol. 223; p. 1714.
Henry Disston & Sons Incorporated, Philadelphia, Pa. Saws. No. 108,550; Feb. 15; Gaz. vol. 223; p. 988.
Henry Disston & Sons Incorporated, Philadelphia, Pa. Certain named cutlery, machinery, and tools, and parts thereof. No. 108,690; Feb. 22; Gaz. vol. 223; p. 1371.
Henry Disston & Sons Incorporated, Philadelphia, Pa. Certain named measuring and scientific appliances. No. 108,691; Feb. 22; Gaz. vol. 223; p. 1371.
Herr & Company, Lancaster, Pa. Door-hinges and enameled ware. No. 108,601; Feb. 15; Gaz. vol. 223; p. 990.
Herrera, William E., Chicago, Ill. Furniture-polish. No. 108,868; Feb. 29; Gaz. vol. 223; p. 1714.
Hickey, Ellen, Los Angeles, Cal. Kidney and bladder remedy. No. 108,645; Feb. 22; Gaz. vol. 223; p. 1369.
Hodges Fibre Carpet Company, Springfield, Mass., and New York, N. Y. Textile rugs, mattings, and carpets. No. 108,558; Feb. 15; Gaz. vol. 223; p. 988.
Hood River Apple & Storage Company, Van Horn, Hood River county, Oreg. Fresh apples. No. 108,602; Feb. 15; Gaz. vol. 223; p. 990.
Hoopie & Alderson, New York, N. Y. Certain pharmaceutical preparation for toilet purposes. No. 108,472; Feb. 8; Gaz. vol. 223; p. 646.
Hoyer, Isaiah W., Philadelphia, Pa. Certain named chemical for waterproofing textile fabrics. No. 108,559; Feb. 15; Gaz. vol. 223; p. 988.
Huben Mfg. Co., New York, N. Y. Soap. No. 108,517; Feb. 15; Gaz. vol. 223; p. 988.
I. M. Jacobson & Sons Co., Detroit, Mich. Babbitt metal. No. 108,703; Feb. 22; Gaz. vol. 223; p. 1371.
Indestructo Specialties Co., New York, N. Y. Dolls. No. 108,646; Feb. 22; Gaz. vol. 223; p. 1369.
Indexical Soap Company, Portland, Me., and Malden, Mass. Toilet soap. No. 108,518; Feb. 15; Gaz. vol. 223; p. 987.
International Color & Chemical Co., Inc., Detroit, Mich. Insect-exterminators. No. 108,700; Feb. 22; Gaz. vol. 223; p. 1371.
International Shoe Company, St. Louis, Mo. Leather, canvas, and other fabric shoes. No. 108,647; Feb. 22; Gaz. vol. 223; p. 1369.
Interstate Freight Rate Publishing Company, New York, N. Y. Advertising publications. No. 108,794; Feb. 29; Gaz. vol. 223; p. 1712.
Ishiyama, Risaku, Seattle, Wash. Seasoning preparations. No. 108,701; Feb. 22; Gaz. vol. 223; p. 1371.
J. H. Vavasseur & Co. Ltd., London, England. Vegetable fibers used in the manufacture of artificial hair for upholstering and mattress-making. No. 108,729; Feb. 22; Gaz. vol. 223; p. 1372.
J. H. Winchell & Co. Inc., Haverhill, Mass. Leather boots and shoes. No. 108,849; Feb. 29; Gaz. vol. 223; p. 1713.
J. S. Bell Confectionery Co., Cambridgeport, Mass. Candy. No. 108,413; Feb. 8; Gaz. vol. 223; p. 644.
Jacobs Pharmacy Company, The, Atlanta, Ga. Non-alcoholic beverages as a soft drink. No. 108,702; Feb. 22; Gaz. vol. 223; p. 1371.
James G. Gill Co., Inc., The, Norfolk, Va. Coffee, tea, spices, rice, and peanuts. No. 108,595; Feb. 15; Gaz. vol. 223; p. 989.
James H. Watson Company, The, Bradley, Ill. Tanks. No. 108,455; Feb. 8; Gaz. vol. 223; p. 645.
James Lees and Sons Company, Bridgeport, Pa. Worsted and woolen yarn. No. 108,650; Feb. 22; Gaz. vol. 223; p. 1369.
James P. Galligan Co., Taunton, Mass. Certain named foods. No. 108,361; Feb. 1; Gaz. vol. 223; p. 286.
Jeffrey Manufacturing Company, The, Columbus, Ohio. Grinding and crushing machinery for rock, &c. No. 108,603; Feb. 15; Gaz. vol. 223; p. 990.
John Deere Plow Co. of Omaha, Omaha, Nebr. Wagons, farm-trucks, and wagon running-gears. No. 108,507; Feb. 15; Gaz. vol. 223; p. 987.
John Deere Wagon Company, Moline, Ill. Wagon boxes and seats. No. 108,508; Feb. 15; Gaz. vol. 223; p. 987.

John H. Leich Co., New York, N. Y. Ladies' knitted union suits and pants, knitted vests. No. 108,870; Feb. 29; Gaz. vol. 223; p. 1714.

John Hoberg Co., The, Green Bay, Wis. Toilet-paper, paper toweling and napkins, &c. No. 108,793; Feb. 29; Gaz. vol. 223; p. 1712.

John Maddock & Sons, Trenton, N. J. Water-closet tanks, water-closets, urinals, &c. No. 108,563; Feb. 15; Gaz. vol. 223; p. 989.

John Royle & Sons, Paterson, N. J. Routing-cutters. No. 108,619; Feb. 15; Gaz. vol. 223; p. 990.

John Royle & Sons, Paterson, N. J. Routing-cutters. Nos. 108,826–32; Feb. 29; Gaz. vol. 223; p. 1713.

John T. Stanley Co., Inc., New York, N. Y. Soap. No. 108,530; Feb. 15; Gaz. vol. 223; p. 988.

John W. Masury & Son, Brooklyn, N. Y. Ready-made paste paints in white and colors. No. 108,652; Feb. 22; Gaz. vol. 223; p. 1369.

Johnson-Enderle-Pauley Drug Co., St. Louis, Mo. Mouth, throat, and tooth wash. No. 108,604; Feb. 15; Gaz. vol. 223; p. 990.

Johnson-Enderle-Pauley Drug Co., St. Louis, Mo. Digestive tablets. No. 108,605; Feb. 15; Gaz. vol. 223; p. 990.

Johnson, William H., Sapulpa, Okla. Tonic for chills, fever, jaundice, &c. No. 108,560; Feb. 15; Gaz. vol. 223; p. 988.

Joseph T. Ryerson & Son, Chicago, Ill. Tool-steel. Nos. 108,833–4; Feb. 29; Gaz. vol. 223; p. 1713.

Judson Grocer Company, Grand Rapids, Mich. Tea. No. 108,434; Feb. 8; Gaz. vol. 223; p. 644.

Kasohler-Chatfield Shellac Co., New York, N. Y. Liquid shellac used in stiffening hats. Nos. 108,473–4; Feb. 8; Gaz. vol. 223; p. 646.

Kenny, John S., New York, N. Y. Ointment. No. 108,521; Feb. 15; Gaz. vol. 223; p. 987.

Keyes, Sam'l J., Easton, Pa. Remedy for catarrh, croup, hay-fever, &c. No. 108,475; Feb. 8; Gaz. vol. 223; p. 646.

Kimball Shoe Co., Alfred, Lawrence, Mass. Leather boots and shoes. No. 108,606; Feb. 15; Gaz. vol. 223; p. 990.

Kingsbury, William M., Cleveland, Ohio. Hot-blast heaters. No. 108,335; Feb. 1; Gaz. vol. 223; p. 285.

Kittredge, William A., Tunkhannock, Pa. Concentrated flavoring extracts for foods. No. 108,648; Feb. 22; Gaz. vol. 223; p. 1369.

Kloiber, Adolph J., Baldwin, N. Y. Tobacco-pipes. No. 108,795; Feb. 29; Gaz. vol. 223; p. 1712.

Knorr-Schlandt Notion Co., The, Hutchinson, Kans. Certain named clothing for men. No. 108,649; Feb. 22; Gaz. vol. 223; p. 1369.

Kohn, Alfred A., New York, N. Y. Boots, shoes, slippers, overgaiters, leggings. No. 108,435; Feb. 8; Gaz. vol. 223; p. 644.

Kolb, Henry M., Philadelphia, Pa. Ratchet-wrenches and tool-holders therefor. No. 108,561; Feb. 15; Gaz. vol. 223; p. 988.

Korinek Veterinary Remedy Company, Medford, Oreg. Tonic for diseases of poultry. No. 108,522; Feb. 15; Gaz. vol. 223; p. 987.

Kosher Products Co., Chattanooga, Tenn. Cooking-fats. No. 108,476; Feb. 8; Gaz. vol. 223; p. 646.

L. Adler Bros. & Co., Rochester, N. Y. Men's coats and overcoats. No. 108,321; Feb. 1; Gaz. vol. 223; p. 285.

L. & D. Waist Co., Inc., New York, N. Y. Dress waists and blouses, shirt-waists. No. 108,797; Feb. 29; Gaz. vol. 223; p. 1712.

L. P. Halladay Company, Streator, Ill. Suspension mechanism for road-vehicles. No. 108,432; Feb. 8; Gaz. vol. 223; p. 644.

La Roche Montgomery, New York, N. Y. Tooth-powder, mouth washes and lotions. No. 108,749; Feb. 22; Gaz. vol. 223; p. 1372.

Lasher, George F., Philadelphia, Pa. Writing-papers. No. 108,798; Feb. 29; Gaz. vol. 223; p. 1712.

Laughlin Fruit Refining Co., Los Angeles, Cal. Lotion for cleansing, softening, and protecting the skin and scalp. No. 108,704; Feb. 22; Gaz. vol. 223; p. 1371.

Lawther Grain Company, Dallas, Tex. Poultry feed. No. 108,750; Feb. 22; Gaz. vol. 223; p. 1372.

Leader Evaporator Co., The, Burlington, Vt. Certain named receptacles for use in the maple-sugar industry. No. 108,562; Feb. 15; Gaz. vol. 223; p. 988.

Leadoil Company, Inc., Brooklyn, N. Y. Chemical composition or liquid comprising mineral and vegetable turpentine. No. 108,607; Feb. 15; Gaz. vol. 223; p. 990.

Leavitt-Mink Mfg. Co., Brooklyn, N. Y. Diapers and maternity-pads. No. 108,809; Feb. 29; Gaz. vol. 223; p. 1714.

Leiter, Marietta D., Syracuse, N. Y. Hair-tonic. No. 108,478; Feb. 8; Gaz. vol. 223; p. 646.

Les Boulevards Publishing Co., Inc., New York, N. Y. Monthly publication. No. 108,705; Feb. 22; Gaz. vol. 223; p. 1371.

Lesher, Whitman & Co., Inc., New York, N. Y. Cotton-warp fabrics with wool, mohair, or alpaca fillings. No. 108,479; Feb. 8; Gaz. vol. 223; p. 646.

Lesher, Whitman & Co., Inc., New York, N. Y. Cotton-warp worsted lining. No. 108,523; Feb. 15; Gaz. vol. 223; p. 987.

Lesher, Whitman & Co., Inc., New York, N. Y. Piece goods and dress fabrics. No. 108,524; Feb. 15; Gaz. vol. 223; p. 987.

Leterman, Harold S., New York, N. Y. Under and night shirts, pajamas, and athletic underwear. No. 108,608; Feb. 15; Gaz. vol. 223; p. 990.

Levi Strauss & Company, San Francisco, Cal. Outer one-piece garments or suits for children. No. 108,404; Feb. 8; Gaz. vol. 223; p. 643.

Liggett & Myers Tobacco Company, New York, N. Y. Smoking and chewing tobacco, and particularly tobacco cartridges. No. 108,706; Feb. 22; Gaz. vol. 223; p. 1371.

Lindner Gesellschaft mit beschränkter Haftung, Adolph, Berlin, Germany. Bandaging material. No. 108,525; Feb. 15; Gaz. vol. 223; p. 987.

Linoline Company, Saco, Me., and Everett and Boston, Mass. Liquid preservative preparation in the nature of a varnish. No. 108,651; Feb. 22; Gaz. vol. 223; p. 1369.

Linoleum Manufacturing Company Limited, The, London, England. Linoleum floor-cloths and oil-cloth. No. 108,799; Feb. 29; Gaz. vol. 223; p. 1712.

Lipton, Thomas J., London, England, and New York, N. Y. Tea, coffee, cocoa, and jelly-tablets. No. 108,480; Feb. 8; Gaz. vol. 223; p. 646.

Lipton, Thomas J., London, England, and New York, N. Y. Tea. No. 108,481; Feb. 8; Gaz. vol. 223; p. 646.

Lipton, Thomas J., London, England, and New York, N. Y. Tea, coffee, cocoa, and jelly-tablets. No. 108,482; Feb. 8; Gaz. vol. 223; p. 646.

Lipton, Thomas J., London, England, and New York, N. Y. Tea. No. 108,483; Feb. 8; Gaz. vol. 223; p. 646.

Loeb, Jesse L., Chicago, Ill. Picture-albums. No. 108,871; Feb. 29; Gaz. vol. 223; p. 1714.

Lott, William F., Washington, D. C. Hair-tonic and face-cream. No. 108,526; Feb. 15; Gaz. vol. 223; p. 987.

Louis Pfaelzer & Sons, Chicago, Ill. Certain named foods. No. 108,658; Feb. 22; Gaz. vol. 223; p. 1370.

Lund, Ulrik R. T., North Catasauqua, Pa. Ribbons. Nos. 108,336–7; Feb. 1; Gaz. vol. 223; p. 285.

Luyties, Herman C. G., St. Louis, Mo. Perfume, toilet water, face and talcum powders. No. 108,707; Feb. 22; Gaz. vol. 223; p. 1371.

Lytle, Edward C., Baltimore, Md. Corn remedies. No. 108,484; Feb. 8; Gaz. vol. 223; p. 646.

M. Reischmann & Sons, Inc., New York, N. Y. Furniture. No. 108,661; Feb. 22; Gaz. vol. 223; p. 1370.

Macey Company, The, Grand Rapids, Mich. Certain named library furniture. No. 108,436; Feb. 8; Gaz. vol. 223; p. 644.

Madame Irène, New York, N. Y. Rust-supporters and brassières. No. 108,708; Feb. 22; Gaz. vol. 223; p. 1371.

Magnesite Products Company, San Francisco, Cal. Magnesite stucco, flooring, and plaster. No. 108,709; Feb. 22; Gaz. vol. 223; p. 1371.

Mandracchia, Charles, Corona, N. Y. Preparation for dandruff. No. 108,338; Feb. 1; Gaz. vol. 223; p. 285.

Manspeaker, Harry M., Oklahoma, Okla. Treatment for throat, lung, liver, kidney diseases, &c. No. 108,564; Feb. 15; Gaz. vol. 223; p. 989.

Marinkas, Louis, South Akron, Ohio. Blood-purifier. No. 108,365; Feb. 1; Gaz. vol. 223; p. 286.

Marshall Field & Co., Chicago, Ill. Handkerchiefs. No. 108,424; Feb. 8; Gaz. vol. 223; p. 644.

Mason, Cassity E., Tarrytown, N. Y. Bread. No. 108,609; Feb. 15; Gaz. vol. 223; p. 990.

May Company, Cleveland, Ohio. Knitted underwear. No. 108,485; Feb. 8; Gaz. vol. 223; p. 646.

Mayer, C. L., Rosebud, Tex. Non-alcoholic carbonated tonic beverages sold as soft drinks. No. 108,710; Feb. 22; Gaz. vol. 223; p. 1371.

McAvoy Brewing Company, Chicago, Ill. Malt beverage. No. 108,801; Feb. 29; Gaz. vol. 223; p. 1712.

McClelland-Ward Co., Decatur, Ill. Certain named foods. No. 108,366; Feb. 1; Gaz. vol. 223; p. 286.

McConnell & Company, Edward, New York, N. Y. Shirtings. No. 108,802; Feb. 29; Gaz. vol. 223; p. 1712.

McCord-Stewart Company, Atlanta, Ga. Coffee. No. 108,486; Feb. 8; Gaz. vol. 223; p. 646.

McCord-Stewart Company, Atlanta, Ga. Self-raising wheat-flour. No. 108,653; Feb. 22; Gaz. vol. 223; p. 1369.

McLeod & Ormsbee, Utica, N. Y., assignors to Boonville Creamery & Cold Storage Co., Boonville, N. Y. Cheese. No. 108,367; Feb. 1; Gaz. vol. 223; p. 286.

McMurtrie, Frederick J., Detroit, Mich. Food-flavoring extracts. No. 108,711; Feb. 22; Gaz. vol. 223; p. 1371.

Mechanical Rubber Company, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Friction-tape. No. 108,487; Feb. 8; Gaz. vol. 223; p. 646.

Medvene & Bro., J., Philadelphia, Pa. Tea. No. 108,712; Feb. 22; Gaz. vol. 223; p. 1371.

Merchants Coffee Co. of New Orleans Ltd., New Orleans, La. Coffee and chicory compound. No. 108,368; Feb. 1; Gaz. vol. 223; p. 286.

Merck & Co., New York, N. Y. Certain named pharmaceutical preparations. No. 108,565; Feb. 15; Gaz. vol. 223; p. 989.

Merck & Co., New York, N. Y. Certain named chemicals, medicines, and pharmaceutical preparations. No. 108,566; Feb. 15; Gaz. vol. 223; p. 989.

Merz, Richard, Chicago, Ill. Medicinal preparation used as a laxative. No. 108,803; Feb. 29; Gaz. vol. 223; p. 1712.

Michigan Salt Works, Marine City, Mich. Salt. No. 108,339; Feb. 1; Gaz. vol. 223; p. 285.

Miller Lock Company, Philadelphia, Pa. Locks. No. 108,567; Feb. 15; Gaz. vol. 223; p. 989.

Miller Rubber Company, The, Akron, Ohio. Rubber tires. No. 108,804; Feb. 29; Gaz. vol. 223; p. 1712.

Million, Chas., Los Angeles, Cal. Composition for preventing and sealing punctures in pneumatic tires. No. 108,654; Feb. 22; Gaz. vol. 223; p. 1369.

Mirrolike Mfg. Co. (See Sandhop, Karl A., assignor.)

Mississippi Creamery Association, Jackson, Miss. Creamery-butter. No. 108,610; Feb. 15; Gaz. vol. 223; p. 990.

Model Mill Company, Johnson City, Tenn. Wheat-flour. No. 108,655; Feb. 22; Gaz. vol. 223; p. 1369.

Modern Remedy Co., Overton, Tex. Tree-dendener. No. 108,437; Feb. 8; Gaz. vol. 223; p. 644.

Montgomery Ward & Co., Inc., New York and Brooklyn, N. Y.; Chicago, Ill.; Fort Worth, Tex.; Kansas City, Mo., and Portland, Oreg. Certain named clothing for men, women, boys, girls, and babies. No. 108,527; Feb. 15; Gaz. vol. 223; p. 987.

Moon Motor Car Company, St. Louis, Mo. Automobiles. No. 108,714; Feb. 22; Gaz. vol. 223; p. 1371.

Moos, Isodore, New York, N. Y. Caviar. No. 108,715; Feb. 22; Gaz. vol. 223; p. 1371.

Morgan Kennels, G. Dan, Denton, N. C. Dog-soap. No. 108,340; Feb. 1; Gaz. vol. 223; p. 285.

Morrell & Co., John, Ottumwa, Iowa; Sioux Falls, S. D.; Mobile, Ala., and Memphis, Tenn. Cheese. No. 108,438; Feb. 8; Gaz. vol. 223; p. 644.

Murphy, Matthew J., Philadelphia, Pa. Shirts, pajamas, shirt-waists, blouses, and underwear. No. 108,488; Feb. 8; Gaz. vol. 223; p. 646.

Mutual Coffee Co., Montgomery, Ala. Coffee. No. 108,611; Feb. 15; Gaz. vol. 223; p. 990.

Naamloozs Vennootschap: Lak-En Verffabriek "Premier," Dordrecht, Netherlands. Organic and inorganic paints, lacquers, and varnishes. No. 108,716; Feb. 22; Gaz. vol. 223; p. 1371.

Nashawena Mills, New Bedford, Mass. Cotton, worsted, and merino yarn. No. 108,805; Feb. 29; Gaz. vol. 223; p. 1712.

National-Acme Manufacturing Company, The, Cleveland, Ohio. Certain named cutlery, machinery, and tools, and parts thereof. No. 108,806; Feb. 29; Gaz. vol. 223; p. 1712.

National-Acme Manufacturing Company, The, Cleveland, Ohio. Certain named dies, tools, and machines, and lathes. No. 108,807; Feb. 29; Gaz. vol. 223; p. 1712.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 108,489; Feb. 8; Gaz. vol. 223; p. 646.

National Distilling Company, Milwaukee and Cudahy, Wis. Vinegar. No. 108,808; Feb. 29; Gaz. vol. 223; p. 1712.

National Hog Fattener Co., Chicago, Ill. Hog-fattener. No. 108,439; Feb. 8; Gaz. vol. 223; p. 645.

National Regulator Company, Chicago, Ill. Diaphragm-valves. No. 108,341; Feb. 1; Gaz. vol. 223; p. 285.

National Trunk Company, Kansas City, Mo. Trunks. No. 108,751; Feb. 22; Gaz. vol. 223; p. 1372.

Naumkeag Steam Cotton Co., Salem, Mass. Cotton piece goods, sheets, and pillow-cases. No. 108,809; Feb. 29, Gaz. vol. 223; p. 1712.

Nelson, Mary D., Minneapolis, Minn. Bust-forms, puffs, ruffles, &c. No. 108,810; Feb. 29; Gaz. vol. 223; p. 1712.

Nelson & Hall Company, Montgomery and Montgomery Center, Vt. Packing-cases. No. 108,342; Feb. 1; Gaz. vol. 223; p. 285.

Neuss, Hesslein & Co., New York, N. Y. Woven cotton piece goods. Nos. 108,811–12; Feb. 29; Gaz. vol. 223; p. 1712.

New Orleans Coffee Co., Ltd., New Orleans, La. Cane and maple syrup, molasses, and sorghums. No. 108,398; Feb. 8; Gaz. vol. 223; p. 643.

Nichols, John S., Bellevue, Tex. Remedy for sciatic and all other forms of rheumatic troubles. No. 108,490; Feb. 8; Gaz. vol. 223; p. 646.

Nielsen, Jos. Leesburg, Va. Collapsible wardrobes. No. 108,717; Feb. 22; Gaz. vol. 223; p. 1371.

Nitsche & Günther Optische Werke, Rathenow, Germany. Certain named measuring and scientific appliances. No. 108,440; Feb. 8; Gaz. vol. 223; p. 645.

Nogorski, Anton, Milford, Conn. Preparation for the treatment of certain named diseases. No. 108,491; Feb. 8; Gaz. vol. 223; p. 646.

Northern Insulating Company, St. Paul, Minn. Felted vegetable-fiber heat-insulating material. No. 108,441; Feb. 8; Gaz. vol. 223; p. 645.

Northern Wisconsin Produce Co., Manitowoc, Wis. Butter, cheese, and eggs. No. 108,656; Feb. 22; Gaz. vol. 223; p. 1370.

Northrop, Herbert W., Boston, Mass. Coated fabrics. No. 108,813; Feb. 29; Gaz. vol. 223; p. 1712.

Novo Manufacturing Co., Inc., New York, N. Y. Electric batteries and casings therefor. No. 108,343; Feb. 1; Gaz. vol. 223; p. 285.

O-U Lite Company, The, Racine, Wis. Headlight-dimmers. No. 108,814; Feb. 29; Gaz. vol. 223; p. 1712.

O'Neill Brothers, Brighton, Mass. Garbage-receptacles. No. 108,344; Feb. 1; Gaz. vol. 223; p. 285.

O'Rourke, Edward, New York, N. Y. Compound for polishing varnished surfaces. No. 108,443; Feb. 8; Gaz. vol. 223; p. 645.

O'Sullivan Rubber Co., Portland, Me., and New York, N. Y. Rubber heels for boots and shoes. No. 108,345; Feb. 1; Gaz. vol. 223; p. 285.

Oliver Johnson Company, Inc., Providence, R. I. Ready-mixed paint. Nos. 108,519–20; Feb. 15; Gaz. vol. 223; p. 987.

Oneida Community, Limited, Oneida, N. Y. Plates, cups, saucers, bowls, &c. No. 108,402; Feb. 8; Gaz. vol. 223; p. 646.

Oneida Community, Limited, Oneida, N. Y. Glass bowls, plates, pitchers, &c. No. 108,815; Feb. 29; Gaz. vol. 223; p. 1712.

Oneida Community, Limited, Oneida, N. Y. Certain named pens, pencils, knives, erasers, and letter-openers. No. 108,816; Feb. 29; Gaz. vol. 223; p. 1712.

Oneida Knitting Company, Philadelphia, Pa. Hosiery. No. 108,612; Feb. 15; Gaz. vol. 223; p. 990.

Ontario Thread Company, New York, N. Y. Thread. No. 108,817; Feb. 29; Gaz. vol. 223; p. 1712.

Orlsto Chemical Co., Grand Rapids, Minn. Dentifrice and mouth-wash. No. 108,568; Feb. 15; Gaz. vol. 223; p. 989.

Ostrander & Company, Inc., New York, N. Y. Cotton piece goods. No. 108,444; Feb. 8; Gaz. vol. 223; p. 645.

Ostrander & Company, Inc., New York, N. Y. Ginghams. No. 108,445; Feb. 8; Gaz. vol. 223; p. 645.

Oxweld Acetylene Company, Chicago, Ill. Welding-rods. No. 108,613; Feb. 15; Gaz. vol. 223; p. 990.

P. C. Knowlton Co., Inc., Memphis, Tenn. Baking-powder. No. 108,700; Feb. 29; Gaz. vol. 223; p. 1712.

Pacific Coast Canning Co., Oakland, Cal. Canned fruits and vegetables. No. 108,818; Feb. 29; Gaz. vol. 223; p. 1712.

Package Confectionery Company, Boston, Mass. Candy. No. 108,493; Feb. 8; Gaz. vol. 223; p. 646.

Palmesville Packing Company, Palmesville, Ohio. Washing-soda. No. 108,819; Feb. 29; Gaz. vol. 223; p. 1712.

Paraffine Paint Company, The, San Francisco, Cal. Water and weather proof building and roofing material. No. 108,657; Feb. 22; Gaz. vol. 223; p. 1370.

Park Grant and Morris, Fargo, N. D. Canned fruits and vegetables, catsup. No. 108,614; Feb. 15; Gaz. vol. 223; p. 990.

Parker Hosiery Mill & Dye Works, Inc., Portsmouth, Va. Hosiery for children. No. 108,615; Feb. 15; Gaz. vol. 223; p. 990.

Pathé Frères, Jersey City, N. J. Cinematograph-films. Nos. 108,569–70; Feb. 15; Gaz. vol. 223; p. 989.

Pathe Freres, Jersey City, N. J. Cinematograph-films. No. 108,616; Feb. 15; Gaz. vol. 223; p. 990.

Pearce, S. W., Kansas City, Mo. Medicinal preparations for the treatment of gonorrhea and piles. No. 108,617; Feb. 15; Gaz. vol. 223; p. 990.

Peckham, Richard T., New York, N. Y. Certain named knit articles of wearing-apparel. No. 108,718; Feb. 22; Gaz. vol. 223; p. 1371.

Penick & Ford, Ltd., New Orleans, La. Molasses. No. 108,446; Feb. 8; Gaz. vol. 223; p. 645.

Peter Hill Co., Atlanta, Ga. Union suits, shirts, drawers, and hosiery. No. 108,516; Feb. 15; Gaz. vol. 223; p. 987.

Phelps Heating Specialty Co., Inc., The, New York, N. Y. Steam-generators and valves for hot-water heating systems. No. 108,820; Feb. 29; Gaz. vol. 223; p. 1713.

Pitman-Moore Co., Indianapolis, Ind. Calcium salt. No. 108,528; Feb. 15; Gaz. vol. 223; p. 987.

Posner, Jacob D., New York, N. Y. Certain named ladies' garments. No. 108,752; Feb. 22; Gaz. vol. 223; p. 1372.

Pountney, Thomas T., New York, N. Y. Lotion for exterminating insects and curing their stings, &c. No. 108,369; Feb. 1; Gaz. vol. 223; p. 286.

Powell, Eva J., Findlay, Ohio. Remedy for venereal diseases. No. 108,618; Feb. 15; Gaz. vol. 223; p. 990.

Price, John H., Columbus, Ohio. Leather and rubber shoes for men and women. No. 108,346; Feb. 1; Gaz. vol. 223; p. 285.

Price Merchants Syndicate, The, Minneapolis, Minn. Evaporated milk, canned soups, coffee, tea, &c. No. 108,822; Feb. 29; Gaz. vol. 223; p. 1713.

Products Manufacturing Company, Oklahoma, Okla. White floating soap. No. 108,347; Feb. 1; Gaz. vol. 223; p. 285.

"Progress" Maschinen Industrie Kommandit Ges., Munich, Germany. Igniters and pyrophoric material therefor. Nos. 108,529–30; Feb. 15; Gaz. vol. 223; pp. 987–8.

Purdue, Frederick N., East Orange, N. J. Preparation of castor-oil. No. 108,447; Feb. 8; Gaz. vol. 223; p. 645.

Pyoferlo Pharmacal Co., The, Chicago, Ill. Remedy for pyorrhea or Rigg's disease. No. 108,659; Feb. 22; Gaz. vol. 223; p. 1370.

Quaker Robe Company, Philadelphia, Pa. Sets of children's clothing comprising bath-robe, socks, and blanket. No. 108,823; Feb. 29; Gaz. vol. 223; p. 1713.

R. A. Carmichael & Co., Detroit, Mich. Certain named pharmaceutical preparations for toilet purposes. No. 108,464; Feb. 8; Gaz. vol. 223; p. 645.

R. A. Carmichael & Co., Detroit, Mich. Tooth pastes and washes. No. 108,547; Feb. 15; Gaz. vol. 223; p. 988.

R. F. F. Co., Liberty, Mo. Composition for treating roup and as a conditioner for fowls. No. 108,531; Feb. 15; Gaz. vol. 223; p. 988.

Ralston Purina Company, St. Louis, Mo. Stock, dairy, and poultry feed. No. 108,494; Feb. 8; Gaz. vol. 223; p. 646.

Randolph Milling Co., Baldwin, Ill. Wheat-flour. No. 108,660; Feb. 22; Gaz. vol. 223; p. 1370.

Rauel, Annie E., Washington, D. C. Dentifrice. No. 108,533; Feb. 15; Gaz. vol. 223; p. 988.

Raymond, John D., Chicago, Ill. Electric-light fixtures. No. 108,753; Feb. 22; Gaz. vol. 223; p. 1372.

Red Star Drug Co., Baltimore, Md. Laxative headache-powders. No. 108,495; Feb. 8; Gaz. vol. 223; p. 646.

Regan, James B., New York, N. Y. Smoking mixture and cigarettes. No. 108,824; Feb. 29; Gaz. vol. 223; p. 1713.

Reid Bros., Seattle, Wash. Sheet material used as a covering for surgical dressings. No. 108,399; Feb. 8; Gaz. vol. 223; p. 643.

Revere Rubber Company, Providence, R. I., and Chelsea, Mass. Rubber horseshoe-pads. No. 108,825; Feb. 29; Gaz. vol. 223; p. 1713.

Reymer & Brothers, Incorporated, Pittsburgh, Pa. Candy. No. 108,400; Feb. 8; Gaz. vol. 223; p. 643.

Reymer & Brothers, Incorporated, Pittsburgh, Pa. Candy. No. 108,720; Feb. 22; Gaz. vol. 223; p. 1371.

Rhumtox Co., Holland, Mich. Blood tonic and purifier. No. 108,571; Feb. 15; Gaz. vol. 223; p. 989.

Rice, Marcus A., Citra, Fla. Citrus fruits. No. 108,448; Feb. 8; Gaz. vol. 223; p. 645.

Richmond Hardware Co., Richmond, Va. Shovels, food-choppers, and churns. No. 108,602; Feb. 22; Gaz. vol. 223; p. 1370.

Riverside Oil Company, Pittsburgh, Pa. Petroleum, kerosene, gasolene, benzin, and naphtha. No. 108,754; Feb. 22; Gaz. vol. 223; p. 1372.

Roberti Bros., Los Angeles, Cal. Mattresses. No. 108,348; Feb. 1; Gaz. vol. 223; p. 285.

Robin Hood Mills, Limited, Calgary, Alberta, and Moose Jaw, Saskatchewan, Canada. Farina, rolled oats, and oatmeal. No. 108,370; Feb. 1; Gaz. vol. 223; p. 286.

Roseclor Cigarette Co., New York, N. Y. Cigarettes. No. 108,721; Feb. 22; Gaz. vol. 223; p. 1371.

Rowland Company, The, Athens, Ga. Wheat-flour. No. 108,534; Feb. 15; Gaz. vol. 223; p. 988.

Roxbury Carpet Company, Boston, Mass. Carpets. No. 108,496; Feb. 8; Gaz. vol. 223; p. 646.

Rubber Products Company, The, Barberton, Ohio. Elastic vehicle-tires. No. 108,755; Feb. 22; Gaz. vol. 223; p. 1372.

Russo, Andrea, Chicago, Ill. Olive-oil and macaroni. No. 108,535; Feb. 15; Gaz. vol. 223; p. 988.

Samson Iron Works, Stockton, Cal. Gas, gasolene, oil, and steam tractors, not including the engines. No. 108,663; Feb. 22; Gaz. vol. 223; p. 1370.

Samstag & Hilder Bros., New York, N. Y. Certain named dental, medical, and surgical appliances. No. 108,872; Feb. 29; Gaz. vol. 223; p. 1714.

Samuel Ward Manufacturing Co., Boston, Mass. Steel pens. No. 108,847; Feb. 29; Gaz. vol. 223; p. 1713.

Sandbo Starter Company, Rock Island, Ill. Mechanical starting devices for automobile and truck engines. No. 108,664; Feb. 22; Gaz. vol. 223; p. 1370.

Sandhop, Karl A., assignor to Mirrorlike Mfg. Co., New York, N. Y. Furniture, floor, and automobile polish. No. 108,722; Feb. 22; Gaz. vol. 223; p. 1371.

Scheinman, Israel L., Detroit, Mich. Dusting and metal-polishing cloths. No. 108,620; Feb. 15; Gaz. vol. 223; p. 990.

Schilder, Carl, Fort Worth, Tex. Nutritious tonic food beverage. No. 108,350; Feb. 1; Gaz. vol. 223; p. 286.

Schlosser Brothers, Plymouth, Ind., and Chicago, Ill. Butter and eggs. No. 108,665; Feb. 22; Gaz. vol. 223; p. 1370.

Schmidt, Otto, New York, N. Y. Waxy composition used in the process of embossing. No. 108,497; Feb. 8; Gaz. vol. 223; p. 646.

Schwahn-Serlberth Saddlery Co., Eau Claire, Wis. Horse-collars. No. 108,572; Feb. 15; Gaz. vol. 223; p. 989.

Scott County Milling Company, The, Sikeston, Mo. Wheat-flour. Nos. 108,723–4; Feb. 22; Gaz. vol. 223; p. 1372.

Seabury & Johnson, East Orange, N. J., and New York, N. Y. Certain named surgical dressings. Nos. 108,371–2; Feb. 1; Gaz. vol. 223; p. 286.

Sears & Nichols Co., The, Chillicothe, Ohio. Canned salmon and evaporated milk. No. 108,756; Feb. 22; Gaz. vol. 223; p. 1373.

Seifert, Theckla, Philadelphia, Pa. Medicinal tablets for certain named ailments. No. 108,835; Feb. 29; Gaz. vol. 223; p. 1713.

Seinsheimer, Henry A., Cincinnati, Ohio. Young men's coats, vests, trousers, and overcoats. No. 108,573; Feb. 15; Gaz. vol. 223; p. 989.

Selbert Paper Co., The, Cincinnati, Ohio. Printing, writing, wrapping, toilet, and tissue paper. No. 108,836; Feb. 29; Gaz. vol. 223; p. 1713.

Sentanol Remedies Company, Inc., The, Cincinnati, Ohio, and Covington, Ky. Tooth-paste. No. 108,837; Feb. 29; Gaz. vol. 223; p. 1713.

Shaw & Co., Alex D., New York, N. Y. Port and other wines. No. 108,725; Feb. 22; Gaz. vol. 223; p. 1372.

Shelby Candy & Coffee Co., Memphis, Tenn. Candy and coffee. No. 108,621; Feb. 15; Gaz. vol. 223; p. 990.

Sheppard, Herbert V., Worcester, Mass. Corn-plasters. No. 108,838; Feb. 29; Gaz. vol. 223; p. 1713.

Sherman, Homer M., Council Bluffs, Iowa. Candles. No. 108,666; Feb. 22; Gaz. vol. 223; p. 1370.

Shoemaker Company, The, Oakwood, N. Y. Baled hay. No. 108,536; Feb. 15; Gaz. vol. 223; p. 988.

Shuttles Bros. & Lewis, Dallas, Tex. Bracelets made of or plated with precious metal. No. 108,873; Feb. 29; Gaz. vol. 223; p. 1714.

Simmons, Bessie A., Oklahoma, Okla. Dolls. No. 108,607; Feb. 22; Gaz. vol. 223; p. 1370.

Simon, Archie M., Chicago, Ill. Men's and boys' coats, vests, and trousers. No. 108,373; Feb. 1; Gaz. vol. 223; p. 286.

Simon Ventilighter Co., Inc., New York, N. Y. Ventilating-shades for controlling the entry of light and air into buildings. No. 108,440; Feb. 8; Gaz. vol. 223; p. 645.

Simplex Wire & Cable Company, Boston, Mass. Electric and woven covered wire and cables and insulated wire. No. 108,874; Feb. 29; Gaz. vol. 223; p. 1714.

Simpson, Philip, New York, N. Y. Electric-light fixtures. No. 108,668; Feb. 22; Gaz. vol. 223; p. 1370.

Singer, Aaron, New York, N. Y. Laxative candy. No. 108,839; Feb. 29; Gaz. vol. 223; p. 1713.

Sitting Bull Corporation, New York, N. Y. Pipes. No. 108,401; Feb. 8; Gaz. vol. 223; p. 643.

Siatum Mfg. Co., Kansas City, Mo. Waterproofing solution. No. 108,537; Feb. 15; Gaz. vol. 223; p. 988.

Snellenburg Clothing Company, The, Philadelphia, Pa. Men's and boys' coats and trousers. No. 108,450; Feb. 8; Gaz. vol. 223; p. 645.

Sol-U-Met Mfg. Co., The, Atlanta, Ga. Preparation for treatment of the scalp. No. 108,538; Feb. 15; Gaz. vol. 223; p. 988.

Sonnenberg, Ferdinand, Detroit, Mich. Liniment for allaying inflammation of the joints and muscles. No. 108,451; Feb. 8; Gaz. vol. 223; p. 645.

South Bend Bait Co., South Bend, Ind. Artificial minnows, fish-baits, and lures. No. 108,622; Feb. 15; Gaz. vol. 223; p. 990.

Southern California Fish Company, Los Angeles, Cal. Canned fish. No. 108,840; Feb. 29; Gaz. vol. 223; p. 1713.

Spagnuolo, Frank, Youngstown, Ohio. Preparation for skin diseases and pimples. No. 108,402; Feb. 8; Gaz. vol. 223; p. 643.

Specialty Baking Company, New York, N. Y. Bread. No. 108,498; Feb. 8; Gaz. vol. 223; p. 646.

Speer Carbon Company, St. Marys, Pa. Carbons for projectors and similar purposes. No. 108,574; Feb. 15; Gaz. vol. 223; p. 989.

Sphinx Underwear Co., Philadelphia, Pa. Certain named men's underwear. No. 108,351; Feb. 1; Gaz. vol. 223; p. 286.

St. Louis Brass Manufacturing Company, St. Louis, Mo. Fixtures for electric lights. No. 108,726; Feb. 22; Gaz. vol. 223; p. 1372.

Standard Felt Company, West Alhambra, Cal. Felt shoes, boots, and slippers. No. 108,841; Feb. 29; Gaz. vol. 223; p. 1713.

Standard Oil Company, Richmond, Cal. Liquid petrolatum, also known as white oil, for a laxative, &c. No. 108,575; Feb. 15; Gaz. vol. 223; p. 989.

Standard Oil Company, Richmond, Cal. Asphaltum. No. 108,576; Feb. 15; Gaz. vol. 223; p. 989.

Standard Oil Company of New York, New York, N. Y. Lubricating-oil. No. 108,842; Feb. 29; Gaz. vol. 223; p. 1713.

Standard Paint Company, Boundbrook, N. J., and New York, N. Y. Roofing and waterproofing cement. No. 108,403; Feb. 8; Gaz. vol. 223; p. 643.

Standard Portland Cement Corporation, San Francisco, Cal. Portland cement. No. 108,669; Feb. 22; Gaz. vol. 223; p. 1370.

Stanley, Charles E., Glendale, Cal. Preparation for poison-oak and other skin eruptions. No. 108,875; Feb. 29; Gaz. vol. 223; p. 1714.

Star Peerless Wall Paper Mills, Joliet, Ill. Wall-papers. No. 108,843; Feb. 29; Gaz. vol. 223; p. 1713.

Steele-Wedeles Company, Chicago, Ill. Certain named foods. No. 108,623; Feb. 15; Gaz. vol. 223; p. 990.

Stephen F. Whitman & Son, Incorporated, Philadelphia, Pa. Candy. No. 108,583; Feb. 15; Gaz. vol. 223; p. 989.

Strathmore Paper Company, West Springfield, Me. Bond and cover paper. No. 108,845; Feb. 29; Gaz. vol. 223; p. 1713.

Stromberg-Carlson Telephone Manufacturing Co., Rochester, N. Y. Wire. No. 108,624; Feb. 15; Gaz. vol. 223; p. 990.

Sulzbach Clothing Co., The, New York, N. Y. Men's outer suits. No. 108,500; Feb. 8; Gaz. vol. 223; p. 646.

Sunderland Brothers Company, Omaha, Nebr. Asphalt shingles. No. 108,577; Feb. 15; Gaz. vol. 223; p. 989.

Sussman, Wormser & Co., San Francisco, Cal. Canned fruits, vegetables, oysters, and fish, table-syrups, &c. No. 108,452; Feb. 8; Gaz. vol. 223; p. 645.

Sydney Ross Co., The, New York, N. Y. Tonic medicinal preparation for certain named diseases. No. 108,578; Feb. 15; Gaz. vol. 223; p. 989.

Syracuse Smelting Works, Brooklyn, N. Y. Babbitt metal. No. 108,579; Feb. 15; Gaz. vol. 223; p. 989.

Taliani, Giuseppe, West Everett, Mass. Liniment for rheumatism. No. 108,670; Feb. 22; Gaz. vol. 223; p. 1370.

Tem-Po Mfg. Co., The, Baltimore, Md. Non-alcoholic beverage. No. 108,870; Feb. 29; Gaz. vol. 223; p. 1714.

Ten Bruin & Sons, H., Chicago, Ill. Certain named foods. No. 108,846; Feb. 29; Gaz. vol. 223; p. 1713.

Terra Cela Citrus Growers Assn., Terra Cela, Fla. Citrus fruits. No. 108,374; Feb. 1; Gaz. vol. 223; p. 286.

Tetlow Co., Henry, Philadelphia, Pa. Face-powder. No. 108,727; Feb. 22; Gaz. vol. 223; p. 1372.

Thanhouser Film Corporation, New Rochelle, N. Y. Motion-picture films. No. 108,408; Feb. 8; Gaz. vol. 223; p. 644.

Thayer & Co., Inc., New York, N. Y. Vehicle-gears. No. 108,625; Feb. 15; Gaz. vol. 223; p. 990.

Thew, Hooker & Gilbey, Limited, London, England. Malted milk. No. 108,501; Feb. 8; Gaz. vol. 223; p. 646.

Thlinket Packing Company, Portland, Oreg. Canned salmon. No. 108,453; Feb. 8; Gaz. vol. 223; p. 645.

Thomas G. Plant Company, Boston, Mass. Cigars, cigarettes, and smoking-tobacco. No. 108,821; Feb. 29; Gaz. vol. 223; p. 1713.

Tim, Jacob, New York, N. Y. Pineapple beverage. No. 108,540; Feb. 15; Gaz. vol. 223; p. 988.

Timberlake, Taylor O., Washington, D. C. Mouth-wash, antiseptic, prophylactic astringent for pyorrhea, &c. No. 108,844; Feb. 29; Gaz. vol. 223; p. 1713.

Tire Store, The, Greensburg, Pa. Motor-vehicle and bicycle tires, inner tubes, and outer shoes for motor-vehicles, &c. No. 108,580; Feb. 15; Gaz. vol. 223; p. 989.

Traveller Tire and Tube Co. Inc., New York, N. Y. Certain named belting, hose, and non-metallic tires. No. 108,581; Feb. 15; Gaz. vol. 223; p. 989.

Trenton Potteries Company, Trenton, N. J. Laundry-tubs. No. 108,405; Feb. 8; Gaz. vol. 223; p. 644.

Tri-State Fruit Co., Lewiston, Idaho. Fresh apples. No. 108,541; Feb. 15; Gaz. vol. 223; p. 988.

Tropical Pharmacal Co., The, New York, N. Y. Iron tablet to be used as a tonic. No. 108,406; Feb. 8; Gaz. vol. 223; p. 644.

Tropical Pharmacal Co., The, New York, N. Y. Tooth-paste. No. 108,407; Feb. 8; Gaz. vol. 223; p. 644.

Tuerka, William A., Baltimore, Md. Trunks, suitcases, traveling-bags, &c. No. 108,728; Feb. 22; Gaz. vol. 223; p. 1372.

Turpin, Henry E., Oakland, Cal. Oil-burning wicks, especially chemically-treated ones. No. 108,671; Feb. 22; Gaz. vol. 223; p. 1370.

United States Bedding Co., The, St. Paul, Minn. Certain named furniture and upholstery. No. 108,672; Feb. 22; Gaz. vol. 223; p. 1370.

Valentine & Bentley Silk Co., The, Newton, N. J., and New York, N. Y. Silk piece goods. No. 108,757; Feb. 22; Gaz. vol. 223; p. 1373.

Vick Chemical Co., The, Greensboro, N. C. Salve for all congestion and inflammation of the throat, muscles, &c. No. 108,758; Feb. 22; Gaz. vol. 223; p. 1373.

Viking Pump Company, Cedar Falls, Iowa. Rotary pumps and motors. No. 108,409; Feb. 8; Gaz. vol. 223; p. 644.

Vionana Company, The, Dayton, Ohio. Certain named foods. No. 108,352; Feb. 1; Gaz. vol. 223; p. 286.

Vulcanized Rubber Co. of New York, The, New York, N. Y. Toilet-combs of rubber or composition. No. 108,730; Feb. 22; Gaz. vol. 223; p. 1372.

W. R. Grace & Co., New Orleans, La. Wheat-flour. No. 108,596; Feb. 15; Gaz. vol. 223; p. 989.

W. W. Lawrence & Company, Pittsburgh, Pa. Flat paint. No. 108,477; Feb. 8; Gaz. vol. 223; p. 646.

Wahnetah Silk Company, New York, N. Y. Silk piece goods. No. 108,542; Feb. 15; Gaz. vol. 223; p. 988.

Waite, Ralph B., Springville, N. Y. Liquid and other antiseptic, vaccin, and germicide preparations. No. 108,353; Feb. 1; Gaz. vol. 223; p. 286.

Warnesson, Jules, Chicago, Ill. Lip-rouge. No. 108,354; Feb. 1; Gaz. vol. 223; p. 286.

Warnesson, Jules, Chicago, Ill. Certain pharmaceutical preparations for toilet purposes. No. 108,582; Feb. 15; Gaz. vol. 223; p. 989.

Washburn Bros. Company, Glasco, N. Y. Bricks. No. 108,410; Feb. 8; Gaz. vol. 223; p. 644.

Watertown Canning Company, Watertown, Wis. Canned peas. No. 108,454; Feb. 8; Gaz. vol. 223; p. 645.

Wausau Sulphate Fibre Co., Wausau and Mosinee, Wis. Wrapping-paper. No. 108,877; Feb. 29; Gaz. vol. 223; p. 1714.

Weismann, Augustus W., New York, N. Y. Medicinal compound or decoction of herbs to be used as a tonic. No. 108,375; Feb. 1; Gaz. vol. 223; p. 286.

Wenatchee North Central Fruit Distributors, Wenatchee, Wash. Fresh and green fruits. No. 108,673; Feb. 22; Gaz. vol. 223; p. 1370.

Western Lime & Cement Co., Milwaukee, Wis. Hydrated lime. No. 108,456; Feb. 8; Gaz. vol. 223; p. 645.

White, Harrie W., Los Angeles, Cal. Natural mineral waters. No. 108,848; Feb. 29; Gaz. vol. 223; p. 1713.

Whittaker, Fred R., Somerville, Mass. Syrups to be used in mixed drinks for bars, hotels, and cafés. No. 108,543; Feb. 15; Gaz. vol. 223; p. 988.

Wiederholdt, E. F., St. Louis, Mo. Silos. No. 108,731; Feb. 22; Gaz. vol. 223; p. 1372.

Wilcox & Gibbs Sewing Machine Co., New York, N. Y. Underwear, hosiery, gloves, dresses, &c. No. 108,878; Feb. 29; Gaz. vol. 223; p. 1714.

William Andrews, Incorporated, New York, N. Y. Oil-filters. No. 108,379; Feb. 1; Gaz. vol. 223; p. 643.

William Andrews, Incorporated, New York, N. Y. Oil-filtering materials. No. 108,380; Feb. 8; Gaz. vol. 223; p. 643.

William B. Durgin Co., Concord, N. H. Sterling silver, flat and hollow ware. No. 108,781; Feb. 29; Gaz. vol. 223; p. 1711.

William Carter Company, Needham Heights, Mass. Infants' and children's knitted shirts, drawers, and union suits. No. 108,589; Feb. 15; Gaz. vol. 223; p. 989.

William Demuth & Company, New York, N. Y. Certain named pipes and parts of same. No. 108,689; Feb. 22; Gaz. vol. 223; p. 1370.

William F. Mayo Co., Boston, Mass. Rubber and rubber and canvas boots and shoes. No. 108,800; Feb. 29; Gaz. vol. 223; p. 1712.

Wilson-Randles Chemical Co., West Lafayette, Ohio. Salves. No. 108,732; Feb. 22; Gaz. vol. 223; p. 1372.

Wilmarth Show Case Company, Grand Rapids, Mich. Display-cases. No. 108,457; Feb. 8; Gaz. vol. 223; p. 645.

Winsted Hosiery Company, The, Winsted, Conn. Knit underwear and half-hose. No. 108,626; Feb. 15; Gaz. vol. 223; p. 990.

Wise Sportsman's Supply Co., Chicago, Ill. Artificial fish-bait. No. 108,879; Feb. 29; Gaz. vol. 223; p. 1714.

Wittemann, Rudolph A., Buffalo, N. Y. Prepared animal foods. No. 108,674; Feb. 22; Gaz. vol. 223; p. 1370.

Wright & Ditson, Jersey City, N. J., and Boston, Mass. Certain named articles of clothing. No. 108,675; Feb. 22; Gaz. vol. 223; p. 1370.

Zatarain, Emile A., New Orleans, La. Certain named foods. No. 108,750; Feb. 22; Gaz. vol. 223; p. 1373.

Ziebold, George W., Waterloo, Ill. Cake and pastry wheat-flour. No. 108,676; Feb. 22; Gaz. vol. 223; p. 1370.

Ziebold, George W., Waterloo, Ill. Wheat-flour. No. 108,677; Feb. 22; Gaz. vol. 223; p. 1370.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Aqua Nova Vita Co., The, New York, N. Y. "Aqua Nova Vita." (For Internal Remedies.) No. 19,075; Feb. 29; Gaz. vol. 223; p. 1715.

Atlas Underwear Co., The, Piqua, Ohio. "Richmond." (For Undergarments.) No. 19,011; Feb. 1; Gaz. vol. 223; p. 287.

Beckett, C. E., Los Angeles, Cal. "Pimento." (For Cottage-Cheese.) No. 19,052; Feb. 22; Gaz. vol. 223; p. 1374.

Beebe-Howes Company, The, Inc., New York, N. Y. "The Safe Sox." (For Hosiery.) No. 19,876; Feb. 29; Gaz. vol. 223; p. 1715.

Busch, John T., Potter Valley, Cal. "Busch Medical Water." (For Mineral Water.) No. 19,012; Feb. 1; Gaz. vol. 223; p. 287.

Cohen & Lang, New York, N. Y. "The American Boy's Suit." (For Boys' Clothing.) No. 19,053; Feb. 22; Gaz. vol. 223; p. 1374.

Collis, Henry J., Taunton, Mass. "Collis 20th Century Padded Skate Strap." (For Skate-Straps.) No. 19,023; Feb. 8; Gaz. vol. 223; p. 647.

Colombo, Grennaro, Brooklyn, N. Y. "American Candles." (For Candles.) No. 19,054; Feb. 22, Gaz. vol. 223; p. 1374.

Condit, Harry H., Indianapolis, Ind. "Ko-Zy Union Suit." (For Union Suits.) No. 19,024; Feb. 8; Gaz. vol. 223; p. 647.

Continental Distributors, Incorporated, Chicago, Ill. "The Rost Fyerout Automatic Chemical Fire Extinguisher." (For Fire-Extinguishers.) No. 19,025; Feb. 8; Gaz. vol. 223; p. 647.

Coryzine Manufacturing Company, Baltimore, Md. "Coryzine." (For a Deodorant and Antiseptic.) No. 19,026; Feb. 8; Gaz. vol. 223; p. 647.

Cremo Vesco Company, Brooklyn, N. Y. "Cremo-Vesco." (For Increasing the Body of Thin Cream.) No. 19,027; Feb. 8; Gaz. vol. 223; p. 647.

Danbury Company, The, Danbury, Conn. "Belgian Hare Felt." (For Fur Hats.) No. 19,028; Feb. 8; Gaz. vol. 223; p. 647.

Earl Cowan Company, Los Angeles, Cal. "Life." (For Coffee.) No. 19,055; Feb. 22; Gaz. vol. 223; p. 1374.

Elliott Grocery Company, Logansport, Ind. "Index." (For Flavoring Extracts.) No. 19,029; Feb. 8; Gaz. vol. 223; p. 647.

Embossing Company, The, Albany, N. Y. "The Embossing Co's Stabuilt Blocks." (For Stabuilt Blocks.) No. 19,013; Feb. 1; Gaz. vol. 223; p. 287.

Embossing Company, The, Albany, N. Y. "The Embossing Co's Burnt Wood Spelling Blocks. (For Spelling-Blocks.) No. 19,014; Feb. 1; Gaz. vol. 223; p. 287.

F. H. Bennett Biscuit Company, New York, N. Y. "Wheatsworth Biscuit Individual Service Package." (For Graham Biscuits.) No. 19,021; Feb. 8; Gaz. vol. 223; p. 647.

F. H. Bennett Biscuit Company, New York, N. Y. "Wheatsworth Cracker Meal." (For Cracker-Meal.) No. 19,022; Feb. 8; Gaz. vol. 223; p. 647.

Fialla & Eppler, Inc., New York, N. Y. "Prince Eitel." (For Kümmel.) No. 19,015; Feb. 1; Gaz. vol. 223; p. 287.

Frederick & Nelson, Inc., Seattle, Wash. "Frederick & Nelson Furniture Polish." (For Furniture-Polish.) No. 19,057; Feb. 22; Gaz. vol. 223; p. 1374.

Frost & Adams Co., Boston, Mass. "Cornhill." (For Blue-Print-Paper Rolls.) No. 19,030; Feb. 8; Gaz. vol. 223; p. 647.

Geo. R. Eldridge Co., Detroit, Mich. "Sunbonnet." (For Eggs.) No. 19,056; Feb. 22; Gaz. vol. 223; p. 1374.

Golden, David, Chicago, Ill. "P. Pollack's Last Edition Stogies." (For Stogies.) No. 19,031; Feb. 8; Gaz. vol. 223; p. 647.

H. C. Tack Company, The, Cleveland, Ohio. "Arrow Clinch Nails." (For Nails.) No. 19,040; Feb. 8; Gaz. vol. 223; p. 647.

H. C. Tack Company, The, Cleveland, Ohio. "XX Iron Clinching Nails." (For Nails.) No. 19,041; Feb. 8; Gaz. vol. 223; p. 647.

H. W. Johns-Manville Company, New York, N. Y. "J-M Service Roofing." (For Prepared Roofing.) No. 19,060; Feb. 22; Gaz. vol. 223; p. 1374.

H. W. Johns-Manville Company, New York, N. Y. "J-M Slatekote Roofing." ((For Prepared Roofing.) No. 19,061; Feb. 22; Gaz. vol. 223; p. 1374.

H. W. Johns-Manville Company, New York, N. Y. "J-M Gilsonite Paving Cement." (For Paving-Cement.) No. 19,062; Feb. 22; Gaz. vol. 223; p. 1374.

Harms Bros. Mfg. Co., Baltimore, Md. "Harms Bros. Eagle Brand Chewing Gum." (For Chewing-Gum.) No. 19,058; Feb. 22; Gaz. vol. 223; p. 1374.

Hartman, James F., East Boston, Mass. "Hartman's Preparation For Pneumonia, Coughs, Colds, Croup, Sore Throat, and Rheumatic Pains." (For a Preparation.) No. 19,044; Feb. 15; Gaz. vol. 223; p. 991.

Heffron, William A., Michigan, N. D. "Myown." (For a Hair-Tonic.) No. 19,032; Feb. 8; Gaz. vol. 223; p. 647.

Henry Lochte Co., Ltd., The, New Orleans, La. "Sum Good." (For Coffee and Chicory.) No. 19,063; Feb. 22; Gaz. vol. 223; p. 1374.

Henry Lochte Co., Ltd., The, New Orleans, La. "Sure-Good." (For Coffee and Chickory.) No. 19,064; Feb. 22; Gaz. vol. 223; p. 1374.

Henry Lochte Co., Ltd., The, New Orleans, La. "Bon Café." (For Coffee and Chicory.) No. 19,065; Feb. 22; Gaz. vol. 223; p. 1374.

Independence Coffee & Spice Co., The, Denver, Colo. "Dry Climate." (For Coffee.) No. 19,059; Feb. 22; Gaz. vol. 223; p. 1374.

Johnson and Winn Manufacturing Co., Covington, Ky. "Reno." (For a Hair Dressing or Tonic.) No. 19,016; Feb. 1; Gaz. vol. 223; p. 287.

Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich. "Good Health." (For Bread.) No. 19,033; Feb. 8; Gaz. vol. 223; p. 647.

Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich. "Good Taste." (For Bread.) No. 19,034; Feb. 8; Gaz. vol. 223; p. 647.

Kaufman Bros. Co., Jacksonville, Fla. "Pure 100 Special." (For Whisky.) No. 19,045; Feb. 15; Gaz. vol. 223; p. 991.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. "Kellogg's Toasted Rice Flakes." (For Rice Preparations.) No. 19,046; Feb. 15; Gaz. vol. 223; p. 991.

Keystone Bottlers Supply Company, New York, N. Y. "Youthful Club." (For Wines.) No. 19,077; Feb. 29; Gaz. vol. 223; p. 1715.

Keystone Bottlers Supply Company, New York, N. Y. "Imperial Sentry." (For Wines.) No. 19,078; Feb. 29; Gaz. vol. 223; p. 1715.

Labate, Fortunato, Brooklyn, N. Y. "North Star Brand Macaroni." (For Macaroni.) No. 19,017; Feb. 1; Gaz. vol. 223; p. 287.

Lion Brewing Company, Wilkes-Barre, Pa. "Gold Label." (For Bottled Goods.) No. 19,035; Feb. 8; Gaz. vol. 223; p. 647.

Moore, Della O., Atlanta, Ga. "Shincoll." (For Oil Polish.) No. 19,066; Feb. 22; Gaz. vol. 223; p. 1374.

National Independent Fisheries Co., Seattle, Wash. "Old Scout." (For Canned Salmon.) No. 19,067; Feb. 22; Gaz. vol. 223; p. 1374.

Nelson Knitting Company, Rockford, Ill. "The Old Original Rockford Sock 701." (For Hosiery.) No. 19,036; Feb. 8; Gaz. vol. 223; p. 647.

Nelson Knitting Company, Rockford, Ill. "The Old Original Rockford Sock 551." (For Hosiery.) No. 19,037; Feb. 8; Gaz. vol. 223; p. 647.

Palazzolo, Joseph, New York, N. Y. "La Tosca." (For Razors.) No. 19,047; Feb. 15; Gaz. vol. 223; p. 991.

Potter & Wrightington, Boston, Mass. "Rye-Lax." (For Rye Cereal Food.) No. 19,068; Feb. 22; Gaz. vol. 223; p. 1374.

Prairie State Canning Co., El Paso, Ill. "Spring Maid." (For Canned Corn.) No. 19,018; Feb. 1; Gaz. vol. 223; p. 287.

R. M. Rose Company, Chattanooga, Tenn. "Success." (For Whisky.) No. 19,071; Feb. 22; Gaz. vol. 223; p. 1374.

Resetar, Peter M., Watsonville, Cal. "Square Deal." (For Fresh Apples.) No. 19,069; Feb. 22; Gaz. vol. 223; p. 1374.

Robertson Paper Company, Bellows Falls, Vt. "Milk Bread." (For Bread.) No. 19,070; Feb. 22; Gaz. vol. 223; p. 1374.

Rother, Edward J., San Diego, Cal. "Don-Edmardo Pure Lemon Juice." (For Lemon-Juice.) No. 19,072; Feb. 22; Gaz. vol. 223; p. 1374.

Smith Bros. Inc., New Bedford, Mass. "Belmont Lager." (For Beer.) No. 19,073; Feb. 22; Gaz. vol. 223; p. 1374.

Smith & Hemenway Company, Incorporated, New York, N. Y. "Indian." (For Glass-Cutters.) No. 19,038; Feb. 8; Gaz. vol. 223; p. 647.

Smith & Hemenway Company, Incorporated, New York, N. Y. "Red Devil." (For Tools.) No. 19,039; Feb. 8; Gaz. vol. 223; p. 647.

Thimble, Frederick N., New York, N. Y. "Thimble's Phosphor Roach Paste." (For Rat and Roach Poison.) No. 19,048; Feb. 15; Gaz. vol. 223; p. 991.

Tyler, Frank H., San Francisco, Cal. "Jewel City." (For Coffee.) No. 19,074; Feb. 22; Gaz. vol. 223; p. 1374.

Ulman, Leon A., Philadelphia, Pa. "Maid In America Polishing Powder." (For a Polishing-Powder.) No. 19,079; Feb. 29; Gaz. vol. 223; p. 1715.

Usit Manufacturing Company of America, Inc., Buffalo, N. Y. "Usit Face Powder De Lux." (For Face-Powder.) No. 19,042; Feb. 8; Gaz. vol. 223; p. 647.

Wagner, Henry, *et al.*, executors. (See Weinhard, Henry.)

Warnesson, Jules, Chicago, Ill. "Prof. J. Warnesson's Eucalyptus Cold Cream." (For Cold-Cream.) No. 19,080; Feb. 29; Gaz. vol. 223; p. 1715.

Warnesson, Jules, Chicago, Ill. "Electric Lip Rouge." (For Lip Rouge.) No. 19,081; Feb. 29; Gaz. vol. 223; p. 1715.

Warnesson, Jules, Chicago, Ill. "Warnesson's Theatre Rouge." (For Theater-Rouge.) No. 19,082; Feb. 29; Gaz. vol. 223; p. 1715.

Warnesson, Jules, Chicago, Ill. "Eucalyptus Paints." (For Paints.) No. 19,083; Feb. 29; Gaz. vol. 223; p. 1715.

Warnesson, Jules, Chicago, Ill. "Spanish Theatre Rouge." (For Theater-Rouge.) No. 19,084; Feb. 29; Gaz. vol. 223; p. 1715.

Weiler, Anthony S., Milwaukee, Wis. "Interest." (For Cigars.) No. 19,049; Feb. 15; Gaz. vol. 223; p. 991.

Weinhard, Henry, Estate; L. Weinhard and A. Wessinger, executrices; P. Wessinger and H. Wagner, executors. "Golden Nectar." (For a Beverage.) No. 19,019; Feb. 1; Gaz. vol. 223; p. 287.

Weinhard, Henry, Estate; L. Weinhard and A. Wessinger, executrices; P. Wessinger and H. Wagner, executors. "Amber Nectar." (For a Beverage.) No. 19,020; Feb. 1; Gaz. vol. 223; p. 287.

Weinhard, Louise, *et al.*, executrices. (See Weinhard, Henry.)

Wertman, Al. L., Auburn, Ind. "Hy-Flyer." (For Cigars.) No. 19,050; Feb. 15; Gaz. vol. 223; p. 991.

Wessinger, Anna, *et al.*, executrices. (See Weinhard, Henry.)

Wessinger, Paul, *et al.*, executors. (See Weinhard, Henry.)

White King Squab Products Co., Vineland, N. J. "The Home Of The White King Squab." (For a Food Product Prepared from Squabs.) No. 19,051; Feb. 15; Gaz. vol. 223; p. 991.

Zetterlund, A. O., New York, N. Y. "Punch Elite." (For Swedish Punch.) No. 19,043; Feb. 8; Gaz. vol. 223; p. 647.

PRINTS.

Atlas Underwear Co., The, Piqua, Ohio. "Richmond." (For Union Undergarments.) No. 4,220; Feb. 22; Gaz. vol. 223; p. 1374.

Augustine & Kyer, Seattle, Wash. "Olympian Chocolates for." (For Candy.) No. 4,223; Feb. 29; Gaz. vol. 223; p. 1715.

Bilsh Milling Company, Seymour, Ind. "Hermes." (For Flour.) No. 4,213; Feb. 15; Gaz. vol. 223; p. 991.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Watt's House." (For Electric Equipment.) No. 4,214; Feb. 15; Gaz. vol. 223; p. 991.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Unwired House." (For Electric Equipment.) No. 4,215; Feb. 15; Gaz. vol. 223; p. 991.

Cream of Wheat Co., Minneapolis, Minn. "He Sho' Thinks He's Hidin'." (For Wheat Breakfast Food.) No. 4,196; Feb. 8; Gaz. vol. 223; p. 648.

Davis, Alfred C., Woodward, Okla. "Jitney." (For Cigars.) No. 4,225; Feb. 29; Gaz. vol. 223; p. 1715.

E. W. Burt & Company, Inc., Boston and Lynn, Mass. "Tales of Grippertown." (For Shoes.) No. 4,224; Feb. 29; Gaz. vol. 223; p. 1715.

Emerson Drug Co., Baltimore, Md. "'Clears The Head' Bromo-Seltzer for Headache." (For Headache Remedies.) No. 4,226; Feb. 29; Gaz. vol. 223; p. 1715.

F. B. Chamberlain Co., St. Louis, Mo. "Watch Us Grow." (For Chick Feed.) No. 4,221; Feb. 23; Gaz. vol. 223; p. 1374.

Fallis Toy Shop, The, Denver, Colo. "Candoit." (For Toys.) No. 4,216; Feb. 15; Gaz. vol. 223; p. 991.

Grammes, Harry A., Allentown, Pa. "Security." (For Key Hook and Rings Combined.) No. 4,197; Feb. 8; Gaz. vol. 223; p. 648.

Harrah & Stewart Manufacturing Company, Des Moines, Iowa. "Little Polly." (For Brooms.) No. 4,198; Feb. 8; Gaz. vol. 223; p. 648.

Johnson, Edward E., St. Paul, Minn. "Johnson Well Screen." (For Well-Screens and Pump-Rod Couplings.) No. 4,199; Feb. 8; Gaz. vol. 223; p. 648.

Klein, L., Chicago, Ill. "Wednesday—Luxury Day." (For Advertising Dry Goods.) No. 4,200; Feb. 8; Gaz. vol. 223; p. 648.

L. Frank & Son Co., Milwaukee, Wis. "Frank's Meat-Treats." (For Meat Treats.) No. 4,192; Feb. 1; Gaz. vol. 223; p. 287.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "Velvet Smokarols." (For Smoking-Tobacco and Pipe.) No. 4,201; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo., "Some Real 'Commonsense' That Every Pipe Smoker Will Understand." (For Smoking-Tobacco.) No. 4,202; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "The Making of Velvet Tobacco Is an Open Secret." (For Smoking-Tobacco.) No. 4,203; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "Velvet, the Smoothest Smoking Tobacco." (For Smoking-Tobacco.) No. 4,204; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "Velvet Smokarols." (For Smoking-Tobacco and Pipe.) Nos. 4,205–6; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "Velvet Is matured by Nature's own Method." (For Smoking-Tobacco.) No. 4,207; Feb. 8; Gaz. vol. 223; p. 648.

Liggett & Myers Tobacco Company, Jersey City, N. J., and St. Louis, Mo. "'Condition' Your Own Tobacco." (For Smoking-Tobacco.) No. 4,208; Feb. 8; Gaz. vol 223; p. 648.

Margerum Provision Co., Trenton, N. J. "Duroc." (For Pork Sausage.) No. 4,193; Feb. 1; Gaz. vol. 223; p. 287.

Martin, Gus. G., Chicago, Ill. "Home Trade Stamp." (For a Trading-Stamp.) No. 4,217; Feb. 15; Gaz. vol. 223; p. 991.

Merchants Service Agency, Chicago, Ill. "Big Tag Sale." (For House-Furnishings.) No. 4,209. Feb. 8; Gaz. vol. 223; p. 648.

Moseley & Motley Milling Co., Rochester, N. Y. "It's Always Good." (For Flour.) No. 4,194; Feb. 1; Gaz. vol. 223; p. 287.

Pepsodent Company, The, Chicago, Ill. "Alkaline Dentifrices Blamed For Increase In Dental Caries And Oral Sepsis." (For Dental Preparations.) No. 4,222; Feb. 22; Gaz. vol. 223; p. 1374.

Red Raven Corporation, Red Raven, Pa. "Red Raven Splits." (For Aperient Waters.) No. 4,218; Feb. 15; Gaz. vol. 223; p. 991.

Rudy Furnace Company, Dowagiac, Mich. "Rudy's Customers Profit Sharing Schedule." (For Furnaces.) No. 4,210; Feb. 8; Gaz. vol. 223; p. 648.

Rueckheim Bros. & Eckstein, Chicago, Ill. "Prize Cracker Jack." (For Popcorn.) No. 4,227; Feb. 29; Gaz. vol. 223; p. 1715.

Saginaw Creamery Company, Saginaw, Mich. "Saginaw Creamery Co., Saginaw, Mich." (For Butter-Fat.) No. 4,211; Feb. 8; Gaz. vol. 223; p. 648.

Stewart & Bro., U. S., Baltimore, Md. "Fish and Oyster Fanciful Design." (For Fish and Oysters.) No. 4,195; Feb. 1; Gaz. vol. 223; p. 287.

Vezina, Raoul J. B., Springfield, Mass. "R. J. V. Roach and Rat Last Meal." (For Roach and Rat Poison.) No. 4,219; Feb. 15; Gaz. vol. 223; p. 991.

Whitaker Paper Company, The, Cincinnati, Ohio. "Speedy Service—Sterling Quality." (For Paper.) No. 4,212; Feb. 8; Gaz. vol. 223; p. 648.

DISCLAIMER.

Wright, James, Hamilton, Ohio; disclaimer filed by patentee. Safety-guard for power-presses. No. 1,135,480; disclaimer filed Feb. 14, 1916; Gaz. vol. 223; p. 1379.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1916.

[Abbreviations: "Gaz."—Official Gazette.]

Abdominal supporter. T. Yamashita. No. 1,172,859; Feb. 22; Gaz. vol. 223; p. 1236.

Absorbing, condensing, and purifying apparatus. J. F. Rhoades. No. 1,171,648; Feb. 15; Gaz. vol. 223; p. 740.

Acetaldehyde from acetylene, Preparing. P. Duden and G. Peters. (Reissue.) No. 14,063; Feb. 15; Gaz. vol. 223; p. 952.

Acetaldehyde from acetylene, Preparing. P. Duden and G. Peters. (Reissue.) No. 14,064; Feb. 15; Gaz. vol. 223; p. 952.

Acetylene-generating apparatus. H. W. Jacobs and H. H. Lanning. No. 1,173,430; Feb. 29; Gaz. vol. 223; p. 1479.

Acid, Making sulfuric. W. S. Landis. No. 1,173,524; Feb. 29; Gaz. vol. 223; p. 1512.

Acoustic-controlling apparatus. J. Mazer. No. 1,172,379; Feb. 22; Gaz. vol. 223; p. 1059.

Adapter. J. T. H. Dempster. No. 1,172,953; Feb. 22; Gaz. vol. 223; p. 1269.

Adding and listing machine. F. F. Main. No. 1,173,293; Feb. 29; Gaz. vol. 223; p. 1430.

Adding and listing machine. F. C. Rinsche. No. 1,172,484; Feb. 22; Gaz. vol. 223; p. 1100.

Adding-machine. F. C. Rinsche. No. 1,172,485; Feb. 22; Gaz. vol. 223; p. 1100.

Adding-machine attachment. H. E. Brown. No. 1,172,931; Feb. 22; Gaz. vol. 223; p. 1262.

Addressing and indexing device. A. W. Engel. No. 1,170,434; Feb. 1; Gaz. vol. 223; p. 235.

Addressing machine, Tag-. G. T. Pritchard. No. 1,170,932; Feb. 8; Gaz. vol. 223; p. 444.

Adhesive material to fabrics, Applying a layer of. F. Stoffel. No. 1,170,699; Feb. 8; Gaz. vol. 223; p. 366.

Adjustable chair. E. T. Williamson. No. 1,173,075; Feb. 22; Gaz. vol. 223; p. 1311.

Adjustable wheel, felly, and tires. E. A. Stennett. No. 1,172,639; Feb. 22; Gaz. vol. 223; p. 1156.

Adjustment indicator and controller. W. C. Huebner. No. 1,170,157; Feb. 1; Gaz. vol. 223; p. 141.

Advertising apparatus. R. S. Blair. No. 1,171,019; Feb. 8; Gaz. vol. 223; p. 476.

Advertising device. A. Jones. No. 1,171,125; Feb. 8; Gaz. vol. 223; p. 515.

Advertising machinery. W. L. Hildburgh. No. 1,172,360; Feb. 22; Gaz. vol. 223; p. 1052.

Advertising machinery. W. L. Hildburgh. No. 1,172,455; Feb. 22; Gaz. vol. 223; p. 1088.

Aerial illuminating device for use in connection with aircraft. H. E. S. Holt. No. 1,173,515; Feb. 29; Gaz. vol. 223; p. 1509.

Aerial warfare, Device for. C. F. Jenkins. No. 1,173,522; Feb. 29; Gaz. vol. 223; p. 1511.

Aeronautical device. C. W. Cornell, Jr. No. 1,172,198; Feb. 15; Gaz. vol. 223; p. 935.

Aeroplane. H. Huntington. No. 1,173,191; Feb. 29; Gaz. vol. 223; p. 1393.

Aeroplane. J. S. Lang. No. 1,171,615; Feb. 15; Gaz. vol. 223; p. 728.

Aeroplane. R. H. Neal. No. 1,170,777; Feb. 8; Gaz. vol. 223; p. 392.

Aeroplane. H. T. Stokes. No. 1,169,883; Feb. 1; Gaz. vol. 223; p. 47.

Aeroplane. J. Teczo. No. 1,173,543; Feb. 29; Gaz. vol. 223; p. 1518.

Aeroplane-propelling mechanism. F. Heidbreder. No. 1,172,991; Feb. 22; Gaz. vol. 223; p. 1282.

Aeroplane-stabilizer. J. L. Brown. No. 1,171,698; Feb. 15; Gaz. vol. 223; p. 757.

Aerostat. R. C. Sayer. No. 1,172,055; Feb. 15; Gaz. vol. 223; p. 888.

Agricultural and other machines, Means for raising and lowering. A. Cornell. No. 1,171,705; Feb. 15; Gaz. vol. 223; p. 759.

Agricultural implement. C. C. Clark. No. 1,171,023; Feb. 8; Gaz. vol. 223; p. 478.

Agricultural implement. R. A. Richardson. No. 1,171,651; Feb. 15; Gaz. vol. 223; p. 741.

Agricultural implement. C. S. Stein. No. 1,170,698; Feb. 8; Gaz. vol. 223; p. 366.

Agricultural machine. A. Borbély. No. 1,170,870; Feb. 8; Gaz. vol. 223; p. 424.

Agricultural machine. R. H. and C. G. White. No. 1,170,202; Feb. 1; Gaz. vol. 223; p. 158.

Air, Apparatus for electrically treating. W. T. Hoofnagle. No. 1,169,824; Feb. 1; Gaz. vol. 223; p. 26.

Air, Apparatus for separating dust and foreign matter from. C. D. Fahrney. No. 1,170,438; Feb. 1; Gaz. vol. 223; p. 237.

Air-brake system, Electropneumatic. G. Macloskie. No. 1,173,673; Feb. 29; Gaz. vol. 223; p. 1563.

Air-chest. J. T. and B. G. Austin. No. 1,173,404; Feb. 29; Gaz. vol. 223; p. 1470.

Air-circulating system. V. E. Mertz. No. 1,170,308; Feb. 1; Gaz. vol. 223; p. 193.

Air-controlling device, Automatic. F. E. Crotto. No. 1,172,438; Feb. 22; Gaz. vol. 223; p. 1082.

Air cooling and purifying apparatus. J. B. Mitchell. No. 1,170,658; Feb. 8; Gaz. vol. 223; p. 351.

Air-cooling apparatus. G. F. Dickson. No. 1,171,387; Feb. 8; Gaz. vol. 223; p. 607.

Air cooling, filtering, purifying, aromatizing, or the like apparatus. J. Farley. No. 1,173,497; Feb. 29; Gaz. vol. 223; p. 1502.

Air-coupling, Automatic. J. H. Nicolson. No. 1,172,030; Feb. 15; Gaz. vol. 223; p. 881.

Air-cushioned wheel. C. I. Dickerson. No. 1,169,936; Feb. 1; Gaz. vol. 223; p. 65.

Air, Dehumidifying and cooling. W. H. Carrier. No. 1,172,429; Feb. 22; Gaz. vol. 223; p. 1078.

Air drying and sterilizing apparatus. R. P. Van Calcar, J. Ellerman, and H. J. Martijn. No. 1,170,469; Feb. 1; Gaz. vol. 223; p. 247.

Air-purifying apparatus. W. H. Gaither. No. 1,170,526; Feb. 8; Gaz. vol. 223; p. 304.

Air-tight chamber over or around a portion of the human body, Casing for producing an. C. E. H. Armbruster. No. 1,172,662; Feb. 22; Gaz. vol. 223; p. 1164.

Aircraft, Capturing or destroying. J. A. Steinmetz. No. 1,171,152; Feb. 8; Gaz. vol. 223; p. 526.

Airship. W. R. Kelley. No. 1,172,609; Feb. 22; Gaz. vol. 223; p. 1145.

Airship. L. C. Van Duzer. No. 1,170,367; Feb. 1; Gaz. vol. 223; p. 214.

Alarm: *See*—
Burglar-alarm.
Fire-alarm.

Alarm. J. J. Greytak. No. 1,171,042; Feb. 8; Gaz. vol. 223; p. 485.

Alarm and signaling device. M. R. Hutchison. No. 1,173,577; Feb. 29; Gaz. vol. 223; p. 1530.

Alarm apparatus. W. H. Dana and T. F. Broderick. No. 1,172,199; Feb. 15; Gaz. vol. 223; p. 935.

Alarm-circuits, &c., Thermally-operated means for automatically disrupting electric. H. S. Turner. No. 1,171,564; Feb. 15; Gaz. vol. 223; p. 711.

Alligator-wrench. B. F. McCraith. No. 1,173,200; Feb. 29; Gaz. vol. 223; p. 1396.

Alloy, Manufacture of sheet silicon. O. Graef. No. 1,173,951; Feb. 29; Gaz. vol. 223; p. 1659.

Aluminum-plating process. F. Moench. No. 1,172,160; Feb. 15; Gaz. vol. 223; p. 922.

Aluminum, Production of. H. F. D. Schwahn. No. 1,171,360; Feb. 8; Gaz. vol. 223; p. 597.

Amalgamator. A. Allen. No. 1,172,099; Feb. 15; Gaz. vol. 223; p. 903.

Amalgamator, Pan-motion. K. Senn. No. 1,172,171; Feb. 15; Gaz. vol. 223; p. 926.

Ambulance stretcher-support. J. T. Sheets. No. 1,170,688; Feb. 8; Gaz. vol. 223; p. 362.

Anchor-bracket. C. Finette. No. 1,172,126; Feb. 15; Gaz. vol. 223; p. 911.

Anesthetic apparatus. A. C. Clark. No. 1,173,172; Feb. 29; Gaz. vol. 223; p. 1387.

Animal-releasing device. C. J. Lindholm. No. 1,171,448; Feb. 15; Gaz. vol. 223; p. 670.

Animal tail-clip. C. B. Wagner, Jr. No. 1,170,369; Feb. 1; Gaz. vol. 223; p. 214.

Animal-trap. W. D. Edgar. No. 1,173,495; Feb. 29; Gaz. vol. 223; p. 1501.

Animal-trap. F. George. No. 1,169,950; Feb. 1; Gaz. vol. 223; p. 68.

Animal-trap. C. H. Jackels. No. 1,173,974; Feb. 29; Gaz. vol. 223; p. 1666.

Animal-trap. G. M. Longenbaugh. No. 1,173,669; Feb. 29; Gaz. vol. 223; p. 1502.
Animal-trap. H. C. Lowrance. No. 1,170,649; Feb. 8; Gaz. vol. 223; p. 348.
Animal-trap. R. H. Robertson. No. 1,171,657; Feb. 15; Gaz. vol. 223; p. 743.
Annealing and muffle furnace, Combined. A. Kinnear. No. 1,170,164; Feb. 1; Gaz. vol. 223; p. 144.
Annealing fence-wire. W. H. Sommer. No. 1,171,673; Feb. 15; Gaz. vol. 223; p. 748.
Anode, Rectifier-. E. F. Sipher. No. 1,170,689; Feb. 8; Gaz. vol. 223; p. 363.
Anticathode for Röntgen-ray tubes. M. Gundelach. No. 1,170,247; Feb. 1; Gaz. vol. 223; p. 174.
Antitreeper. P. W. Moore. No. 1,170,926; Feb. 8; Gaz. vol. 223; p. 442.
Antiskid device, Automobile. C. P. Ross. No. 1,171,658; Feb. 15; Gaz. vol. 223; p. 744.
Arch-support for hollow and flat feet. J. May. No. 1,172,620; Feb. 22; Gaz. vol. 223; p. 1140.
Area-meter. J. Airey. No. 1,170,721; Feb. 8; Gaz. vol. 223; p. 374.
Arm-rest. W. J. Knox and F. J. Harrison. No. 1,173,357; Feb. 29; Gaz. vol. 223; p. 1453.
Armature-coils, Forming. J. C. Simonsen. No. 1,171,148; Feb. 8; Gaz. vol. 223; p. 524.
Armband, Elastic. C. Weaver. No. 1,171,903; Feb. 15; Gaz. vol. 223; p. 865.
Armor-plate-setting device. T. H. Kane. No. 1,169,834; Feb. 1; Gaz. vol. 223; p. 31.
Army first-aid packet. N. Barker. No. 1,169,913; Feb. 1; Gaz. vol. 223; p. 58.
Article-hanger. M. E. Butcher. No. 1,172,937; Feb. 22; Gaz. vol. 223; p. 1264.
Artillery, Training-gear for mobile. F. Ransenberger. No. 1,173,215; Feb. 29; Gaz. vol. 223; p. 1401.
Ash-receiver. E. A. Von Kaenel. No. 1,172,411; Feb. 22; Gaz. vol. 223; p. 1070.
Athletic ball. G. L. Pierce. No. 1,171,238; Feb. 8; Gaz. vol. 223; p. 554.
Auger, Earth-. G. Frank. No. 1,173,500; Feb. 29; Gaz. vol. 223; p. 1503.
Anger, Post-hole. L. E. Birkland. No. 1,171,086; Feb. 8; Gaz. vol. 223; p. 500.
Auriphone. A. Leyer. No. 1,173,286; Feb. 20; Gaz. vol. 223; p. 1428.
Auto-brace. L. E. Robinson. No. 1,173,386; Feb. 29; Gaz. vol. 223; p. 1464.
Autoharp. J. W. Van Iloy. No. 1,171,484; Feb. 15; Gaz. vol. 223; p. 683.
Automatic switch, Time-controlled. R. McKnight. No. 1,173,448; Feb. 29; Gaz. vol. 223; p. 1485.
Automatic trap for mice and other vermin. M. Jaeger. No. 1,172,599; Feb. 22; Gaz. vol. 223; p. 1142.
Automobile. E. E. Howell. No. 1,171,438; Feb. 15; Gaz. vol. 223; p. 666.
Automobile. E. M. Rosenbluth. No. 1,173,123; Feb. 22; Gaz. vol. 223; p. 1327.
Automobile and the like warning-signal. S. Scognamillo. No. 1,173,044; Feb. 22; Gaz. vol. 223; p. 1300.
Automobile attachment. C. L. Wilson. No. 1,170,719; Feb. 8; Gaz. vol. 223; p. 373.
Automobile-bodies, Pneumatic-cushion support for. J. M. Sullivan. No. 1,170,942; Feb. 8; Gaz. vol. 223; p. 448.
Automobile-body, Convertible. H. Smith. No. 1,170,568; Feb. 8; Gaz. vol. 223; p. 318.
Automobile-brake. W. W. Roach. No. 1,171,655; Feb. 15; Gaz. vol. 223; p. 742.
Automobile-buffer bracket. N. W. Crandall. No. 1,172,676; Feb. 22; Gaz. vol. 223; p. 1170.
Automobile-controlling mechanism. R. Symmonds, Jr. No. 1,173,617; Feb. 29; Gaz. vol. 223; p. 1545.
Automobile-curtains, Spring and roller attachment for. B. P. Collier. No. 1,169,927; Feb. 1; Gaz. vol. 223; p. 63.
Automobile-door lock. O. Knopf. No. 1,173,441; Feb. 29; Gaz. vol. 223; p. 1482.
Automobile driving mechanism. J. H. Hertner. No. 1,173,350; Feb. 29; Gaz. vol. 223; p. 1451.
Automobile electric signal. R. B. Rudy. No. 1,172,305; Feb. 22; Gaz. vol. 223; p. 1065.
Automobile-elevating jack. P. Sabo. No. 1,172,830; Feb. 22; Gaz. vol. 223; p. 1229.
Automobile, &c., fender. A. E. Mayzes. No. 1,170,307; Feb. 1; Gaz. vol. 223; p. 193.
Automobile-fender. A. Murch. No. 1,171,744; Feb. 15; Gaz. vol. 223; p. 772.
Automobile folding top. H. Smith. No. 1,170,570; Feb. 8; Gaz. vol. 223; p. 319.
Automobile-heater. R. A. Bailey. No. 1,173,637; Feb. 29; Gaz. vol. 223; p. 1552.
Automobile-jack. W. D. Patterson, Jr. No. 1,170,320; Feb. 1; Gaz. vol. 223; p. 107.
Automobile-lock. W. J. Miles. No. 1,170,310; Feb. 1; Gaz. vol. 223; p. 104.
Automobile-lock. R. F. Mudd. No. 1,170,987; Feb. 8; Gaz. vol. 223; p. 404.
Automobile-lock. G. Risdon. No. 1,170,335; Feb. 1; Gaz. vol. 223; p. 202.
Automobile-radiator heater. M. A. Anderson. No. 1,173,476; Feb. 29; Gaz. vol. 223; p. 1493.
Automobile-radiators, Water regulation for. C. L. Besler. No. 1,170,475; Feb. 1; Gaz. vol. 223; p. 249.
Automobile running-boards, Cover for. R. Mancha. No. 1,171,863; Feb. 15; Gaz. vol. 223; p. 816.
Automobile safety device. E. U. Mack. No. 1,173,826; Feb. 29; Gaz. vol. 223; p. 1617.
Automobile-seat, Folding. T. A. Tate. No. 1,170,123; Feb. 1; Gaz. vol. 223; p. 129.
Automobile-signal. C. P. Carpenter and J. A. Bohl. No. 1,171,319; Feb. 8; Gaz. vol. 223; p. 583.
Automobile-signal. D. E. St. Jacques. No. 1,171,365; Feb. 8; Gaz. vol. 223; p. 599.
Automobile-starting mechanism. C. E. Wilson. No. 1,171,375; Feb. 8; Gaz. vol. 223; p. 602.
Automobile storm-curtain. W. H. Frost. No. 1,171,781; Feb. 15; Gaz. vol. 223; p. 785.
Automobile-top. J. E. Taber. No. 1,173,618; Feb. 29; Gaz. vol. 223; p. 1545.
Automobile-top-actuating mechanism. E. P. Porcher. No. 1,173,858; Feb. 29; Gaz. vol. 223; p. 1628.
Automobile-tops, Controlling means for. F. C. Reynolds. No. 1,172,735; Feb. 22; Gaz. vol. 223; p. 1191.
Automobile transmission mechanism. R. S. Heebner, J. B. Felver, and R. Dresher. No. 1,171,846; Feb. 15; Gaz. vol. 223; p. 810.
Automobile-turning signal. J. J. Barrett. No. 1,173,041; Feb. 29; Gaz. vol. 223; p. 1553.
Automobile-ventilator. L. Rubay. No. 1,173,743; Feb. 29; Gaz. vol. 223; p. 1588.
Automobile-wheel. E. H. Rundle. No. 1,170,927; Feb. 8; Gaz. vol. 223; p. 440.
Automobile wind-shields, Lock-joint for. S. R. Bailey. No. 1,171,829; Feb. 15; Gaz. vol. 223; p. 803.
Automobiles, Device for raising and supporting. J. Koenig. No. 1,170,280; Feb. 1; Gaz. vol. 223; p. 184.
Automobiles for preventing rattle and wear, Attachment for. H. M. Underwood. No. 1,173,228; Feb. 29; Gaz. vol. 223; p. 1405.
Automobiles, Friction-gearing for. W. E. Trufant. No. 1,172,503; Feb. 22; Gaz. vol. 223; p. 1107.
Automobiles, Gasolene-settling trap for. E. F. Ludwig and W. H. Spencer. No. 1,173,725; Feb. 29; Gaz. vol. 223; p. 1581.
Automobiles, Pivoted steering-wheel for. W. A. Frazer. No. 1,172,690; Feb. 22; Gaz. vol. 223; p. 1177.
Automobiles, Starting mechanism for. C. E. Wilson. No. 1,171,374; Feb. 8; Gaz. vol. 223; p. 602.
Automobiles, Timepiece attachment for. F. M. Dale. No. 1,170,223; Feb. 1; Gaz. vol. 223; p. 165.
Autotruck. J. H. A. Haar. No. 1,171,043; Feb. 8; Gaz. vol. 223; p. 485.
Autotruck. W. J. Musser. No. 1,172,725; Feb. 22; Gaz. vol. 223; p. 1187.
Autovehicle and maintaining such vehicles in good working condition. S. P. Thompson. No. 1,171,759; Feb. 15; Gaz. vol. 223; p. 778.
Autovehicle system. A. D. Scott. No. 1,172,909; Feb. 22; Gaz. vol. 223; p. 1254.
Awning and house construction, Combined. A. Forsyth. No. 1,171,510; Feb. 15; Gaz. vol. 223; p. 691.
Awning attachment. M. Loy. No. 1,170,835; Feb. 8; Gaz. vol. 223; p. 412.
Awning, Rope-. C. E. Welbley. No. 1,171,571; Feb. 15; Gaz. vol. 223; p. 713.
Axle. H. E. Martin. No. 1,173,528; Feb. 29; Gaz. vol. 223; p. 1513.
Axle-arm adjuster. M. W. Williams. No. 1,172,332; Feb. 22; Gaz. vol. 223; p. 1042.
Axle, Car-. E. E. Slick. No. 1,171,897; Feb. 15; Gaz. vol. 223; p. 829.
Axle, Composite metal. E. C. Litchfield. No. 1,170,172; Feb. 1; Gaz. vol. 223; p. 147.
Axle-housing. F. C. Dibble. No. 1,171,182; Feb. 8; Gaz. vol. 223; p. 535.
Axle-lubricating device. R. D. Marshall. No. 1,169,983; Feb. 1; Gaz. vol. 223; p. 80.
Axle, Self-lubricating. L. N. Talbott. No. 1,173,060; Feb. 22; Gaz. vol. 223; p. 1306.
Axle-truss. C. Christiansen. No. 1,172,111; Feb. 15; Gaz. vol. 223; p. 907.
Badge and pencil holder. J. C. Bliemeister. No. 1,170,601; Feb. 8; Gaz. vol. 223; p. 331.
Baffle-plate. H. C. Dietrich. No. 1,172,345; Feb. 22; Gaz. vol. 223; p. 1047.
Bag: *See*—
Hand-bag. Tool-bag.
Hot-water bag.
Bag-frame fastener. B. Vom Elgen. No. 1,173,691; Feb. 29; Gaz. vol. 223; p. 1560.
Bag-handle. A. Lowy. No. 1,171,528; Feb. 15; Gaz. vol. 223; p. 698.
Bag-holder. T. J. Sturtevant. No. 1,173,224; Feb. 29; Gaz. vol. 223; p. 1404.
Bag-turning machine. P. J. Gagnon, Jr. No. 1,171,034; Feb. 8; Gaz. vol. 223; p. 482.
Bags, Wire-tying and packaging. A. M. Bates. No. 1,170,037; Feb. 1; Gaz. vol. 223; p. 100.
Bagasse and product thereof, Treating. M. W. Marsden. No. 1,170,487; Feb. 1; Gaz. vol. 223; p. 254.
Bait, Artificial. J. A. Witty. No. 1,173,694; Feb. 29; Gaz. vol. 223; p. 1570.
Baking-machine, Apparatus for feeding batter to a. J. W. Lawhead. No. 1,171,447; Feb. 15; Gaz. vol. 223; p. 669.
Baking machines, Charging and delivering mechanism for cone-. S. E. Winder. No. 1,170,720; Feb. 8; Gaz. vol. 223; p. 373.
Baler, Hay-. I. E. Ward. No. 1,170,470; Feb. 1; Gaz. vol. 223; p. 247.

Baling-machine, Automatic. R. A. Collins. No. 1,170,141; Feb. 1; Gaz. vol. 223; p. 135.
Ball: *See*—
Athletic ball. Pipe-ball.
Ball-retainer. H. B. Kelper. No. 1,170,072; Feb. 1; Gaz. vol. 223; p. 111.
Ball-retainer. F. Winkler. No. 1,172,858; Feb. 22; Gaz. vol. 223; p. 1236.
Band-hoop. G. M. Depew. No. 1,173,908; Feb. 29; Gaz. vol. 223; p. 1673.
Bandage-holder. E. Graham. No. 1,173,052; Feb. 29; Gaz. vol. 223; p. 1659.
Bank, Savings-. C. Fisher. No. 1,170,525; Feb. 8; Gaz. vol. 223; p. 304.
Bar: *See*—
Boring-bar. Corner-bar.
Claw-bar. Glazing-bar.
Concrete-reinforcing bar. Sine-bar.
Core-bar.
Bark from logs, Machine for removing. K. A. Stählnacke. No. 1,173,615; Feb. 29; Gaz. vol. 223; p. 1544.
Barking tree-trunks, Machine for. A. Bezner. No. 1,172,762; Feb. 22; Gaz. vol. 223; p. 1202.
Barley or rice huller. J. J. Molloy. No. 1,170,839; Feb. 8; Gaz. vol. 223; p. 413.
Barrel, Metallic. W. G. Avery. No. 1,170,036; Feb. 1; Gaz. vol. 223; p. 100.
Barrel-tapping device. F. A. Schaefer. No. 1,173,311; Feb. 29; Gaz. vol. 223; p. 1437.
Barrels and similar containers, Closure for. W. M. Wirth. No. 1,171,376; Feb. 8; Gaz. vol. 223; p. 603.
Barrels, Making. T. F. Moore. No. 1,170,927; Feb. 8; Gaz. vol. 223; p. 442.
Base-plate. H. E. Sheldon. No. 1,170,351; Feb. 1; Gaz. vol. 223; p. 208.
Basin-trap cleaner and drain-pipe-flushing device. R. H. Pearch. No. 1,173,854; Feb. 29; Gaz. vol. 223; p. 1627.
Basket, Clothes-. L. J. Georgie. No. 1,172,352; Feb. 22; Gaz. vol. 223; p. 1050.
Basket, Clothes-. C. R. Sargent. No. 1,173,746; Feb. 29; Gaz. vol. 223; p. 1589.
Basket, Work-. A. H. Crawford. No. 1,169,776; Feb. 1; Gaz. vol. 223; p. 10.
Bath-mat. E. R. Crooker. No. 1,173,561; Feb. 29; Gaz. vol. 223; p. 1524.
Bath-spray, Convertible. C. E. Smith. No. 1,171,149; Feb. 8; Gaz. vol. 223; p. 525.
Batteries, Holddown for storage. B. Ford. No. 1,172,347; Feb. 22; Gaz. vol. 223; p. 1048.
Batteries, Machine for filling dry. P. P. Nungesser. No. 1,170,456; Feb. 1; Gaz. vol. 223; p. 243.
Battery: *See*—
Galvanic battery. Storage battery.
Secondary or storage battery.
Battery carrier, Storage-. M. I. Stone. No. 1,173,616; Feb. 29; Gaz. vol. 223; p. 1544.
Battery indicator, Storage-. K. Knudsen. No. 1,172,800; Feb. 22; Gaz. vol. 223; p. 1248.
Battery separator, Storage-. J. N. Davis. No. 1,171,597; Feb. 15; Gaz. vol. 223; p. 722.
Beam and girder mold. W. M. Venable. No. 1,171,700; Feb. 15; Gaz. vol. 223; p. 778.
Bean and pea lifter and cleaner. A. Dintaman. No. 1,170,616; Feb. 8; Gaz. vol. 223; p. 337.
Bean-cutter. H. S. Foutz. No. 1,171,603; Feb. 15; Gaz. vol. 223; p. 724.
Beans, Method and apparatus for curing. C. A. Clark. No. 1,173,930; Feb. 29; Gaz. vol. 223; p. 1653.
Bearing. W. F. Freidag. No. 1,170,145; Feb. 1; Gaz. vol. 223; p. 137.
Bearing, Antifriction-. A. F. Rockwell. No. 1,172,738; Feb. 22; Gaz. vol. 223; p. 1192.
Bearing cage, Roller-. C. A. Hirth. No. 1,173,719; Feb. 29; Gaz. vol. 223; p. 1579.
Bearing for car-axles, Ball-. J. Schmid-Roost. No. 1,173,391; Feb. 29; Gaz. vol. 223; p. 1405.
Bearing for cutting apparatus, Antifriction-. H. G. Roten and W. W. Embry. No. 1,170,341; Feb. 1; Gaz. vol. 223; p. 204.
Bearing for rollers. R. A. Lachmann. No. 1,170,285; Feb. 1; Gaz. vol. 223; p. 186.
Bearing for wheels. C. M. Feist. No. 1,172,065; Feb. 22; Gaz. vol. 223; p. 1274.
Bearing-puller. E. P. Campbell. No. 1,171,590; Feb. 15; Gaz. vol. 223; p. 719.
Bearing, Roller-. R. F. Bower. No. 1,170,733; Feb. 8; Gaz. vol. 223; p. 378.
Bearing, Roller-. J. F. Demarchi. No. 1,171,102; Feb. 8; Gaz. vol. 223; p. 506.
Bearing, Self-adjusting antifriction-. J. Vorraber. No. 1,172,648; Feb. 22; Gaz. vol. 223; p. 1150.
Bearing, Shaft and axle. A. Carlborg and G. Nyman. No. 1,172,514; Feb. 22; Gaz. vol. 223; p. 1111.
Bearing, Thrust-. W. E. Moore. No. 1,173,360; Feb. 29; Gaz. vol. 223; p. 1458.
Bearings, Apparatus for making raceway-walls for. I. A. George. No. 1,173,704; Feb. 29; Gaz. vol. 223; p. 1606.
Bearings, Ball-retainer for thrust-. C. A. T. Sörensen. No. 1,169,880; Feb. 1; Gaz. vol. 223; p. 46.
Bearings, Ball-retainer for thrust ball-. C. A. T. Sörensen. No. 1,169,881; Feb. 1; Gaz. vol. 223; p. 47.
Bearings, Cage for antifriction-. E. Hanus. No. 1,170,899; Feb. 8; Gaz. vol. 223; p. 434.
Bearings, Making raceway-walls for. I. A. George. No. 1,173,703; Feb. 29; Gaz. vol. 223; p. 1606.
Bearings, Method and means for lubricating. T. E. Allen. No. 1,170,213; Feb. 1; Gaz. vol. 223; p. 162.
Bearings, Separator-cage for ball-. E. M. Lowy. No. 1,170,916; Feb. 8; Gaz. vol. 223; p. 439.
Beating-engine. R. J. Marx. No. 1,173,531; Feb. 29; Gaz. vol. 223; p. 1514.
Bed. C. F. Rukes. No. 1,173,744; Feb. 29; Gaz. vol. 223; p. 1589.
Bed, Adjustable. E. W. Owens. No. 1,172,165; Feb. 15; Gaz. vol. 223; p. 924.
Bed-bottom mounting. W. B. Anderson. No. 1,170,605; Feb. 8; Gaz. vol. 223; p. 422.
Bedclothes-holder. A. D'Apice. No. 1,171,840; Feb. 15; Gaz. vol. 223; p. 808.
Bed, Combination telescoping and folding buffet-. C. Gustafson. No. 1,170,149; Feb. 1; Gaz. vol. 223; p. 138.
Bed construction. W. J. Grotenbuis. No. 1,171,115; Feb. 8; Gaz. vol. 223; p. 511.
Bed-corner. H. J. Carmody. No. 1,173,647; Feb. 29; Gaz. vol. 223; p. 1555.
Bed, Door-. E. Cocks. No. 1,170,478; Feb. 1; Gaz. vol. 223; p. 250.
Bed, Folding. W. L. Murphy. No. 1,171,971; Feb. 15; Gaz. vol. 223; p. 856.
Bed, Folding. G. F. Sisbower and L. E. Pittoni. No. 1,172,912; Feb. 22; Gaz. vol. 223; p. 1256.
Bed-lifter. J. L. Nylander. No. 1,170,929; Feb. 8; Gaz. vol. 223; p. 443.
Bed or the like. D. K. Hall. No. 1,171,944; Feb. 15; Gaz. vol. 223; p. 847.
Bed-pan. C. V. Courtright. No. 1,171,094; Feb. 8; Gaz. vol. 223; p. 503.
Bed-seat, Folding. A. Eckberg and G. Ohrstrom. No. 1,173,939; Feb. 29; Gaz. vol. 223; p. 1655.
Bed-spring. J. B. Martin. No. 1,172,154; Feb. 15; Gaz. vol. 223; p. 921.
Bed-spring attachment. D. G. Schucker. No. 1,170,852; Feb. 8; Gaz. vol. 223; p. 418.
Bed-springs and other suchlike articles, Adjustable tightening and locking device for. T. F. Grant. No. 1,171,041; Feb. 8; Gaz. vol. 223; p. 484.
Bed to be used in vehicles. J. C. Muther. No. 1,171,531; Feb. 15; Gaz. vol. 223; p. 699.
Bed, Twin. F. S. Inco. No. 1,173,353; Feb. 29; Gaz. vol. 223; p. 1452.
Beds, Adjustable stand attachment for. W. G. Abramson, R. J. Kennedy, and E. M. McMillan. No. 1,171,826; Feb. 15; Gaz. vol. 223; p. 802.
Beds, Invalid-rest for. W. S. Gibson. No. 1,171,712; Feb. 15; Gaz. vol. 223; p. 761.
Beds, Table attachment for. C. W. Thornley. No. 1,173,227; Feb. 29; Gaz. vol. 223; p. 1405.
Bedstead, Metallic. E. L. Rosenburgh. No. 1,170,850; Feb. 8; Gaz. vol. 223; p. 417.
Bee-section. T. D. Budd. No. 1,171,501; Feb. 15; Gaz. vol. 223; p. 689.
Beef, Curing smoked or dried. M. Christman. No. 1,173,411; Feb. 29; Gaz. vol. 223; p. 1472.
Beehive. B. H. Lupke. No. 1,170,299; Feb. 1; Gaz. vol. 223; p. 191.
Beer, Dealcoholizing. W. Becker and D. H. Montgomery. No. 1,171,306; Feb. 8; Gaz. vol. 223; p. 578.
Belt clasp, Sanitary-. A. T. Van Alstyn. No. 1,172,504; Feb. 22; Gaz. vol. 223; p. 1107.
Belt for babies, Protecting-. M. B. Stern. No. 1,173,055; Feb. 22; Gaz. vol. 223; p. 1304.
Belt guide and thrower. H. Digre and J. Nelson. No. 1,173,935; Feb. 29; Gaz. vol. 223; p. 1654.
Bench: *See*—
Draw-bench. Music-bench.
Bench dog or clamp. W. J. Villard. No. 1,170,125; Feb. 1; Gaz. vol. 223; p. 130.
Berths, Safeguard or protector for sleeping-. J. O. Robb. No. 1,172,633; Feb. 22; Gaz. vol. 223; p. 1154.
Bicycle attachment. D. H. Grogan. No. 1,170,148; Feb. 1; Gaz. vol. 223; p. 138.
Bicycle-brake. A. Larribe. No. 1,169,971; Feb. 1; Gaz. vol. 223; p. 76.
Bicycle-stand. E. F. Pawsat. No. 1,170,009; Feb. 1; Gaz. vol. 223; p. 122.
Bill-folder. E. P. O'Hara. No. 1,171,234; Feb. 8; Gaz. vol. 223; p. 553.
Billiard-cue, Aluminum. M. C. Walter. No. 1,173,070; Feb. 22; Gaz. vol. 223; p. 1309.
Billiard-cue chalker. J. H. Milks. No. 1,170,984; Feb. 8; Gaz. vol. 223; p. 463.
Billiard-cue tip and holder. K. L. Mills. No. 1,171,227; Feb. 8; Gaz. vol. 223; p. 551.
Billiard or pool table attachment. W. D. Porter. No. 1,173,850; Feb. 29; Gaz. vol. 223; p. 1629.
Billiard-tables and the like, Pocket-iron for. F. C. Hobbs. No. 1,172,457; Feb. 22; Gaz. vol. 223; p. 1089.
Billiard-tables, Pool-game attachment for. M. L. Hawks. No. 1,173,186; Feb. 29; Gaz. vol. 223; p. 1391.
Bin. C. A. Gloekler and C. Ziefel. No. 1,170,631; Feb. 8; Gaz. vol. 223; p. 342.
Binder. W. Chappel. No. 1,170,799; Feb. 8; Gaz. vol. 223; p. 400.
Binder, Loose-leaf. F. E. Cardy. No. 1,172,869; Feb. 22; Gaz. vol. 223; p. 1240.

Binder, Loose-leaf. E. H. Elder. No. 1,170,054; Feb. 1; Gaz. vol. 223; p. 105.
Binder, Loose-leaf. J. Schade, Jr. No. 1,170,115; Feb. 1; Gaz. vol. 223; p. 127.
Binder, Loose-sheet. W. H. Brooks. No. 1,171,167; Feb. 8; Gaz. vol. 223; p. 530.
Binders, Gripper-disk for. R. H. Moore. No. 1,169,989; Feb. 1; Gaz. vol. 223; p. 81.
Binding loose leaves, Stub for. F. A. Merriman. No. 1,170,175; Feb. 1; Gaz. vol. 223; p. 148.
Binding, Metallic strengthening and finishing. M. A. Possons. No. 1,173,028; Feb. 22; Gaz. vol. 223; p. 1294.
Biscuit-cutter. W. H. Scherffius. No. 1,172,057; Feb. 15; Gaz. vol. 223; p. 889.
Bit and rotary undercreaser, Combination. L. S. Campbell and J. Grant. No. 1,169,922; Feb. 1; Gaz. vol. 223; p. 60.
Bit-stock. I. E. Sisk. No. 1,171,670; Feb. 15; Gaz. vol. 223; p. 748.
Blade-holder. A. L. Hatfield. No. 1,171,390; Feb. 8; Gaz. vol. 223; p. 608.
Blank-folding machine. H. M. Clearwater. No. 1,172,343; Feb. 22; Gaz. vol. 223; p. 1046.
Bleaching apparatus. H. R. Anders and M. E. U. Schoeller. No. 1,173,474; Feb. 29; Gaz. vol. 223; p. 1492.
Bleaching-machine. S. Barker. No. 1,173,160; Feb. 29; Gaz. vol. 223; p. 1382.
Blinder. R. D. Moore. No. 1,173,602; Feb. 29; Gaz. vol. 223; p. 1539.
Block: *See*—
- Building-block.
- Insulating-block.
- Packing-block.
- Rubbing-block.
- Service and meter testing and connecting block.
- Toy building-block.
- Wire-drawing block.

Blotter, Fountain-pen. K. D. Bryson. No. 1,170,955; Feb. 8; Gaz. vol. 223; p. 453.
Blower for gas-producers, Steam-. E. A. W. Jefferies. No. 1,170,070; Feb. 1; Gaz. vol. 223; p. 111.
Board: *See*—
- Bulletin-board.
- Cloth-board.
- Composite board.
- Cooling-board.
- Golf-tee board.
- Ironing-board.
- Panel-board.
- Plaster-board.
- Reed-board.
- Score-board.
- Trimming-board.
- Washboard.

Boat. J. M. Forse. No. 1,169,947; Feb. 1; Gaz. vol. 223; p. 68.
Boat. H. W. Jacobs. No. 1,173,431; Feb. 29; Gaz. vol. 223; p. 1479.
Boat. H. W. Jacobs. No. 1,173,432; Feb. 29; Gaz. vol. 223; p. 1479.
Boat attachment, Life-. J. Forcier. No. 1,171,602; Feb. 15; Gaz. vol. 223; p. 723.
Boat, Raft life-. L. Vialet-Chabrand. No. 1,173,544; Feb. 29; Gaz. vol. 223; p. 1518.
Boat, Submarine. H. E. Grieshaber. No. 1,170,529; Feb. 8; Gaz. vol. 223; p. 305.
Boat, Submarine. S. Lake. No. 1,169,970; Feb. 1; Gaz. vol. 223; p. 75.
Boats, Escape apparatus for submarine. D. C. Marshall. No. 1,173,726; Feb. 29; Gaz. vol. 223; p. 1582.
Boats, Magnetic means for moving miniature. L. E. Myers. No. 1,171,572; Feb. 15; Gaz. vol. 223; p. 857.
Boats, Pneumatic non-sinkable shield for. C. Crowley. No. 1,170,420; Feb. 1; Gaz. vol. 223; p. 231.
Bobbin-winding machine. G. L. Mason. No. 1,172,475; Feb. 22; Gaz. vol. 223; p. 1096.
Boiler: *See*—
- Steam-boiler.

Boiler. J. B. Plum. No. 1,172,043; Feb. 15; Gaz. vol. 223; p. 884.
Boiler and other furnace. J. Reagan. No. 1,171,803; Feb. 15; Gaz. vol. 223; p. 793.
Boiler-circulator. D. F. Fraser. No. 1,172,973; Feb. 22; Gaz. vol. 223; p. 1276.
Boiler compounds to Boilers, Means for dissolving and supplying. W. E. McComb. No. 1,173,365; Feb. 29; Gaz. vol. 223; p. 1456.
Boiler for producing superheated steam. H. B. Spear. No. 1,170,013; Feb. 1; Gaz. vol. 223; p. 90.
Boiler stay-bolt plug, Steam-. B. B. Freer. No. 1,172,350; Feb. 22; Gaz. vol. 223; p. 1049.
Boilers, Means for regulating the water-supply of. L. C. Anderson. No. 1,173,475; Feb. 29; Gaz. vol. 223; p. 1493.
Boll-breaker and cotton-cleaner. T. E. Johnston. No. 1,173,978; Feb. 29; Gaz. vol. 223; p. 1667.
Boll-weevil exterminator. F. Riewe. No. 1,172,312; Feb. 22; Gaz. vol. 223; p. 1035.
Bolster-guide. W. S. Adams. No. 1,170,595; Feb. 8; Gaz. vol. 223; p. 328.
Bolster, Pressed-steel. W. D. Forsyth. No. 1,173,715; Feb. 29; Gaz. vol. 223; p. 1578.
Bolster-spring. E. J. Harvey. No. 1,170,253; Feb. 1; Gaz. vol. 223; p. 175.
Bolt: *See*—
- Key-bolt.
- Patch-bolt.
- Self-locking bolt.
- Sheet-metal bolt.
- Stay-bolt.

Bombs and means for holding and discharging them. J. B. McMullen. No. 1,172,542; Feb. 22; Gaz. vol. 223; p. 1122.
Book, Car-record. A. S. Hart. No. 1,172,284; Feb. 22; Gaz. vol. 223; p. 1026.
Book-cover protector. G. Portune. No. 1,172,045; Feb. 15; Gaz. vol. 223; p. 884.
Book, Loose-leaf. W. A. Cooke, Jr. No. 1,172,010; Feb. 15; Gaz. vol. 223; p. 872.
Book, Painting-. G. Tuck. No. 1,171,481; Feb. 15; Gaz. vol. 223; p. 682.
Book rack and stand, Adjustable. A. A. Posivak. No. 1,170,326; Feb. 1; Gaz. vol. 223; p. 199.
Book-stand. S. H. Richards. No. 1,169,869; Feb. 1; Gaz. vol. 223; p. 42.
Bookbinding. E. R. Richards. No. 1,169,868; Feb. 1; Gaz. vol. 223; p. 42.
Boot and shoe uppers, Forming. M. Brock and L. M. Brown. No. 1,170,404; Feb. 1; Gaz. vol. 223; p. 226.
Boot and shoe uppers, Machine for forming. M. Brock and L. M. Brown. No. 1,170,405; Feb. 1; Gaz. vol. 223; p. 226.
Boots and shoes, Flexible roll for. O. W. Ewing. No. 1,171,935; Feb. 15; Gaz. vol. 223; p. 843.
Boots and shoes, Machine for operating upon the bottoms of. C. T. Cahill. No. 1,170,410; Feb. 1; Gaz. vol. 223; p. 227.
Boring-bar. A. Forsyth and F. Zeleny. No. 1,172,781; Feb. 22; Gaz. vol. 223; p. 1208.
Bottle. F. W. Kitardy and H. C. Schaefer. No. 1,172,627; Feb. 22; Gaz. vol. 223; p. 1152.
Bottle-cap. R. M. B. Aarousen. No. 1,173,473; Feb. 29; Gaz. vol. 223; p. 1492.
Bottle cap, Milk-. M. S. G. Burr. No. 1,170,409; Feb. 1; Gaz. vol. 223; p. 227.
Bottle-capping machine. J. J. Gaynor and P. C. Lieber. No. 1,170,211; Feb. 1; Gaz. vol. 223; p. 172.
Bottle-capping machine. S. W. Wilkinson. No. 1,171,996; Feb. 15; Gaz. vol. 223; p. 866.
Bottle carrier and conveyer. B. E. Linfoot. No. 1,171,128; Feb. 8; Gaz. vol. 223; p. 517.
Bottle-closure. J. T. Baker. No. 1,170,393; Feb. 1; Gaz. vol. 223; p. 222.
Bottle-closure. J. L. Dunnock. No. 1,169,938; Feb. 1; Gaz. vol. 223; p. 66.
Bottle-closure. H. F. Suit. No. 1,178,057; Feb. 22; Gaz. vol. 223; p. 1305.
Bottle-closure and coupon-disk, Combined. J. E. Ingram, A. K. Keller, and H. L. Arthur. No. 1,170,160; Feb. 1; Gaz. vol. 223; p. 143.
Bottle closure, Milk-. W. Waters. No. 1,171,487; Feb. 15; Gaz. vol. 223; p. 683.
Bottle closure, Sanitary milk-. A. F. Burdick and W. E. Miller. No. 1,173,553; Feb. 29; Gaz. vol. 223; p. 1521.
Bottle-cover. G. H. Merwin. No. 1,173,833; Feb. 29; Gaz. vol. 223; p. 1619.
Bottle filling and measuring machine. A. P. Klee. No. 1,171,792; Feb. 15; Gaz. vol. 223; p. 790.
Bottle-filling machine. A. L. Foreman. No. 1,170,232; Feb. 1; Gaz. vol. 223; p. 169.
Bottle lock, Milk-. F. Canfield and F. O. Permin. No. 1,171,385; Feb. 8; Gaz. vol. 223; p. 606.
Bottle, Non-refillable. L. Durocher. No. 1,171,844; Feb. 15; Gaz. vol. 223; p. 809.
Bottle, Non-refillable. E. E. Gregory. No. 1,172,982; Feb. 22; Gaz. vol. 223; p. 1280.
Bottle, Non-refillable. D. Langstaff. No. 1,172,218; Feb. 15; Gaz. vol. 223; p. 940.
Bottle, Non-refillable. S. F. Leager. No. 1,173,668; Feb. 29; Gaz. vol. 223; p. 1562.
Bottle, Non-refillable. J. R. Mullin. No. 1,172,034; Feb. 15; Gaz. vol. 223; p. 881.
Bottle, Non-refillable. J. J. Robinson. No. 1,171,141; Feb. 8; Gaz. vol. 223; p. 522.
Bottle, Non-refillable. G. S. Rogers. No. 1,170,108; Feb. 1; Gaz. vol. 223; p. 125.
Bottle, Non-refillable. M. H. Whalen. No. 1,173,233; Feb. 29; Gaz. vol. 223; p. 1407.
Bottle, Non-refillable. H. Wood. No. 1,171,378; Feb. 8; Gaz. vol. 223; p. 604.
Bottle, Nursing-. M. C. Coombs. No. 1,173,176; Feb. 29; Gaz. vol. 223; p. 1389.
Bottle, Nursing-. M. C. Coombs. No. 1,173,177; Feb. 29; Gaz. vol. 223; p. 1389.
Bottle opener and stopper, Milk-. N. M. Merritt. No. 1,173,832; Feb. 29; Gaz. vol. 223; p. 1619.
Bottle-protector. B. Boley. No. 1,170,401; Feb. 1; Gaz. vol. 223; p. 224.
Bottle soaking and washing machine. J. Hauk, Jr. No. 1,169,809; Feb. 1; Gaz. vol. 223; p. 21.
Bottle-stopper. T. P. Pick. No. 1,171,976; Feb. 15; Gaz. vol. 223; p. 858.
Bottle-stopper. H. P. Roberts. No. 1,171,251; Feb. 8; Gaz. vol. 223; p. 558.
Bottle-washing machine. J. W. Dawson. No. 1,171,100; Feb. 8; Gaz. vol. 223; p. 505.
Bottles and absorbent rolls, Holder for medicine-. C. C. Keffer. No. 1,171,210; Feb. 8; Gaz. vol. 223; p. 544.
Bottles and jars and affixing the same, Closure for. H. H. Hull. No. 1,169,828; Feb. 1; Gaz. vol. 223; p. 28.
Bow-top, Full-joint hinge. C. L. Bair. No. 1,171,918; Feb. 15; Gaz. vol. 223; p. 837.
Bowling-alleys, Ball-returnway for. H. M. Moeble. No. 1,169,855; Feb. 1; Gaz. vol. 223; p. 38.
Bowling-pin. H. Romünder. No. 1,170,339; Feb. 1; Gaz. vol. 223; p. 204.

Box: *See*—
- Display-box.
- Egg-box.
- Fare-box.
- File-box.
- Flower-box.
- Folding metallic box.
- Journal-box.
- Lock-box.
- Mail-box.
- Meter-box.
- One-piece box.
- Packing-box.
- Paper-board box.
- Shuttle-box.
- Telephone-cable box.
- Trunk shoe-box.

Box. H. Leiman. No. 1,173,284; Feb. 29; Gaz. vol. 223; p. 1428.
Box-blank-conveyer mechanism. H. A. Inman. No. 1,173,664; Feb. 29; Gaz. vol. 223; p. 1561.
Box-covers, Manufacture of. H. Roth. No. 1,172,560; Feb. 22; Gaz. vol. 223; p. 1129.
Box-fastener. J. F. Beebler. No. 1,172,003; Feb. 15; Gaz. vol. 223; p. 869.
Box-filling machine. F. Barter. No. 1,173,917; Feb. 29; Gaz. vol. 223; p. 1648.
Box-making machine. A. S. Howell. No. 1,171,613; Feb. 15; Gaz. vol. 223; p. 728.
Box-strap tightener. C. H. Petermann. No. 1,173,026; Feb. 22; Gaz. vol. 223; p. 1294.
Box-strapping reel and hanger. G. C. D. Miller. No. 1,173,837; Feb. 29; Gaz. vol. 223; p. 1621.
Brace: *See*—
- Auto-brace.

Brace-former. F. J. Fenstermacher. (Reissue.) No. 14,065; Feb. 15; Gaz. vol. 223; p. 952.
Bracelet. A. H. Lott. No. 1,170,767; Feb. 8; Gaz. vol. 223; p. 390.
Bracelet. G. L. Paine. No. 1,172,726; Feb. 22; Gaz. vol. 223; p. 1187.
Bracelet and the like. D. P. Richards. No. 1,169,999; Feb. 1; Gaz. vol. 223; p. 85.
Bracket: *See*—
- Anchor-bracket.
- Automobile buffer-bracket.
- Roof-bracket.
- Roof-gutter bracket.
- Supporting-bracket.
- Wagon-rack bracket.
- Window-bracket.

Braiding-machine. J. Kappeler. No. 1,170,973; Feb. 8; Gaz. vol. 223; p. 459.
Braiding-machine carrier. A. Littlefield. No. 1,172,719; Feb. 22; Gaz. vol. 223; p. 1185.
Braiding-machine stop-motion. S. W. Wardwell. No. 1,172,320; Feb. 22; Gaz. vol. 223; p. 1041.
Brake: *See*—
- Automobile-brake.
- Bicycle-brake.
- Car-brake.
- Elevator automatic brake.
- Friction-brake.
- Machine-brake.
- Sewing-machine brake.
- Truck-brake.
- Vehicle-brake.

Brake. V. Lancia. No. 1,171,520; Feb. 15; Gaz. vol. 223; p. 697.
Brake. O. F. Shepard, Jr. No. 1,173,685; Feb. 29; Gaz. vol. 223; p. 1567.
Brake. T. W. Thomas. No. 1,172,917; Feb. 22; Gaz. vol. 223; p. 1257.
Brake-applying mechanism. R. B. Dickard. No. 1,172,956; Feb. 22; Gaz. vol. 223; p. 1270.
Brake-beam hanger. H. C. Harragin. No. 1,170,749; Feb. 8; Gaz. vol. 223; p. 383.
Brake-chain-coupling device. C. R. Stevens. No. 1,172,915; Feb. 22; Gaz. vol. 223; p. 1256.
Brake-chain-coupling device. C. R. Stevens. No. 1,172,916; Feb. 22; Gaz. vol. 223; p. 1256.
Brake-bend. G. G. Floyd. No. 1,169,787; Feb. 1; Gaz. vol. 223; p. 14.
Brake lever. E. R. Viberg. No. 1,173,067; Feb. 22; Gaz. vol. 223; p. 1308.
Brake mechanism. C. C. Blanch. No. 1,170,216; Feb. 1; Gaz. vol. 223; p. 163.
Brake mechanism. R. M. Wells. No. 1,173,416; Feb. 22; Gaz. vol. 223; p. 1072.
Brake-operating means. J. W. Brown. No. 1,169,920; Feb. 1; Gaz. vol. 223; p. 60.
Brake-rigging. W. F. Kiesel, Jr. No. 1,169,968; Feb. 1; Gaz. vol. 223; p. 74.
Brake-setting device, Automatic. H. R. Nevens. No. 1,174,019; Feb. 29; Gaz. vol. 223; p. 1681.
Brake-setting device, Automatic. H. R. Nevens. No. 1,174,020; Feb. 29; Gaz. vol. 223; p. 1681.
Brake-shaft. H. Pries. No. 1,172,904; Feb. 22; Gaz. vol. 223; p. 1253.
Brake-shoe. J. Cook. No. 1,173,700; Feb. 29; Gaz. vol. 223; p. 1572.
Brake-shoe holder. P. L. Yeager. No. 1,172,187; Feb. 15; Gaz. vol. 223; p. 991.
Brake-shoe mold. H. Jones. No. 1,172,363; Feb. 22; Gaz. vol. 223; p. 1054.
Brake-shoe mold. J. A. McDougall. No. 1,170,549; Feb. 8; Gaz. vol. 223; p. 312.
Bread-making composition. D. Beatty. No. 1,170,474; Feb. 1; Gaz. vol. 223; p. 249.
Breast-strap snap-hook and the like. J. Reichert. No. 1,170,846; Feb. 8; Gaz. vol. 223; p. 416.
Breeching. O. Brockman. No. 1,173,248; Feb. 29; Gaz. vol. 223; p. 1413.
Brick-machine. W. E. Harmon. No. 1,169,808; Feb. 1; Gaz. vol. 223; p. 21.
Bridge. J. B. Strauss. No. 1,170,702; Feb. 8; Gaz. vol. 223; p. 367.
Bridge. J. B. Strauss. No. 1,171,553; Feb. 15; Gaz. vol. 223; p. 707.
Bridge, Double-deck bascule-. J. B. Strauss. No. 1,170,703; Feb. 8; Gaz. vol. 223; p. 368.
Bridle. A. J. Hentschel. No. 1,172,207; Feb. 15; Gaz. vol. 223; p. 937.
Briquet and producing the same. L. J. Curtman. No. 1,173,779; Feb. 29; Gaz. vol. 223; p. 1601.
Broiler. P. and H. Roos. No. 1,173,742; Feb. 29; Gaz. vol. 223; p. 1588.
Broiler, Reversible. H. W. Lawrence and H. J. Lebherz. No. 1,170,829; Feb. 8; Gaz. vol. 223; p. 410.
Broiling device. W. R. Jeavons. No. 1,169,831; Feb. 1; Gaz. vol. 223; p. 30.
Bronzing-machine. C. M. Muller. No. 1,171,627; Feb. 15; Gaz. vol. 223; p. 734.
Brooder, Electric. W. E. Langshaw. No. 1,172,372; Feb. 22; Gaz. vol. 223; p. 1057.
Broom. E. C. Boeckh. No. 1,170,040; Feb. 1; Gaz. vol. 223; p. 101.
Broom. T. H. and H. Brown. No. 1,174,013; Feb. 29; Gaz. vol. 223; p. 1679.
Broom. J. F. Heckman. No. 1,169,815; Feb. 1; Gaz. vol. 223; p. 24.
Broom. B. C. Torelle. No. 1,170,710; Feb. 8; Gaz. vol. 223; p. 370.
Brush. R. D. Curtis. No. 1,171,505; Feb. 15; Gaz. vol. 223; p. 690.
Brush. C. S. Hallstrom. No. 1,173,265; Feb. 29; Gaz. vol. 223; p. 1420.
Brush. E. Metzner. No. 1,172,544; Feb. 22; Gaz. vol. 223; p. 1122.
Brush. E. Miller. No. 1,173,453; Feb. 29; Gaz. vol. 223; p. 1486.
Brush-backs, Machine for holding and feeding. H. A. Siefert. No. 1,171,473; Feb. 15; Gaz. vol. 223; p. 678.
Brush connection. J. Naydor. No. 1,171,630; Feb. 15; Gaz. vol. 223; p. 735.
Brush, Fountain-. J. B. Fesler. No. 1,170,744; Feb. 8; Gaz. vol. 223; p. 382.
Brush, Fountain-. M. Hurvitz. No. 1,173,721; Feb. 29; Gaz. vol. 223; p. 1580.
Brush, Fountain-. W. E. Luchtenberg. No. 1,169,977; Feb. 1; Gaz. vol. 223; p. 78.
Brush, Fountain shaving-. C. Malkin. No. 1,170,923; Feb. 8; Gaz. vol. 223; p. 441.
Brush holder, Tooth-. H. B. Flint. No. 1,170,231; Feb. 1; Gaz. vol. 223; p. 168.
Brush, Hose-nozzle. N. J. Smith and W. F. Lizer. No. 1,171,755; Feb. 15; Gaz. vol. 223; p. 771.
Brush, Powder-. P. D'Alessandro. No. 1,173,781; Feb. 29; Gaz. vol. 223; p. 1602.
Brush, Rotary wire. J. Kinan. No. 1,171,962; Feb. 15; Gaz. vol. 223; p. 853.
Brush, Tooth-. L. A. Hamel. No. 1,172,792; Feb. 22; Gaz. vol. 223; p. 1213.
Brush, Tooth-. H. Reiche. No. 1,173,032; Feb. 22; Gaz. vol. 223; p. 1295.
Brush with detachable handle, Tooth-. H. D. Cammack. No. 1,172,109; Feb. 15; Gaz. vol. 223; p. 906.
Brushing machine, Hat-. A. B. Warlng. No. 1,170,027; Feb. 1; Gaz. vol. 223; p. 96.
Bucket cleaner, Excavator-. F. E. Bager. No. 1,171,015; Feb. 8; Gaz. vol. 223; p. 475.
Bucket, Conveyer-. C. E. Greeley. No. 1,171,516; Feb. 15; Gaz. vol. 223; p. 694.
Bucket for handling plastic material. A. J. Stoeser. No. 1,173,322; Feb. 29; Gaz. vol. 223; p. 1441.
Buckle, Belt-. T. F. Hathaway. No. 1,170,151; Feb. 1; Gaz. vol. 223; p. 139.
Building-block. W. J. Gronert and W. C. Reid. No. 1,171,191; Feb. 8; Gaz. vol. 223; p. 538.
Building-blocks, Constructing. A. M. Mickelson. No. 1,169,985; Feb. 1; Gaz. vol. 223; p. 80.
Building construction. A. B. Coon and A. Van de Sandt. No. 1,170,419; Feb. 1; Gaz. vol. 223; p. 231.
Building construction. W. H. Evers. No. 1,170,743; Feb. 8; Gaz. vol. 223; p. 382.
Building construction. E. A. C. Hoge. No. 1,171,400; Feb. 8; Gaz. vol. 223; p. 612.
Building construction, Portable. W. Skipworth. No. 1,170,691; Feb. 8; Gaz. vol. 223; p. 364.
Buildings, Construction of horticultural. R. O. King. No. 1,170,911; Feb. 8; Gaz. vol. 223; p. 438.
Buildings, Folding frame for portable. M. Rasmussen and N. N. Brown. No. 1,170,188; Feb. 1; Gaz. vol. 223; p. 152.
Bull-wheel for drilling apparatus. C. S. Wright. No. 1,170,131; Feb. 1; Gaz. vol. 223; p. 132.
Bulletin-board. J. W. Baker. No. 1,171,830; Feb. 15; Gaz. vol. 223; p. 804.
Bulletin-board, Electric train. C. E. Abernethy. No. 1,171,915; Feb. 15; Gaz. vol. 223; p. 836.
Bumper, Pneumatic. E. A. Baker and S. W. and L. H. Johnston. No. 1,172,001; Feb. 15; Gaz. vol. 223; p. 868.
Bung for metallic barrels. C. F. Pape. No. 1,170,182; Feb. 1; Gaz. vol. 223; p. 150.
Bung-hole closure for barrels and the like. E. C. Phillips. No. 1,173,606; Feb. 29; Gaz. vol. 223; p. 1540.
Buoy-coupling. W. H. Logan and J. Nielson. No. 1,173,820; Feb. 29; Gaz. vol. 223; p. 1615.
Burglar-alarm. H. Basevitz. No. 1,173,765; Feb. 29; Gaz. vol. 223; p. 1596.
Burglar-alarm apparatus. W. H. Gabel. No. 1,173,945; Feb. 29; Gaz. vol. 223; p. 1657.

Burglar-alarm system, Electric. J. P. Williams. No. 1,171,997; Feb. 15; Gaz. vol. 223; p. 866.
Burial-receptacle. J. Sharman. No. 1,173,318; Feb. 29; Gaz. vol. 223; p. 1440.
Burner: *See*—
Gas-burner.
Hydrocarbon-burner.
Linotype-machine burner.
Liquid-fuel burner.
Oil-burner.
Oil and gas burner.
Stove-burner.
Stump-burner.
Burner. B. C. Bartlebaugh. No. 1,173,547; Feb. 29; Gaz. vol. 223; p. 1519.
Burner. L. Pirdun. No. 1,171,137; Feb. 8; Gaz. vol. 223; p. 521.
Burners. Wick adjustment for oil-. J. Swallow. No. 1,170,018; Feb. 1; Gaz. vol. 223; p. 92.
Burnishing-tool. I. A. Scribner. No. 1,171,146; Feb. 8; Gaz. vol. 223; p. 524.
Button. V. Price and J. H. Sanderson. No. 1,170,185; Feb. 1; Gaz. vol. 223; p. 152.
Button and fastener, Combined. G. W. Prentice. No. 1,171,640; Feb. 15; Gaz. vol. 223; p. 738.
Button-form. C. S. Barbour, Jr. No. 1,169,912; Feb. 1; Gaz. vol. 223; p. 58.
Button, Separable. E. Le Breton. No. 1,173,817; Feb. 29; Gaz. vol. 223; p. 1613.
Buttons, Forming cuff-. J. L. Herzog. No. 1,170,064; Feb. 1; Gaz. vol. 223; p. 109.
Buttoning device. E. A. Clossmann. No. 1,172,510; Feb. 22; Gaz. vol. 223; p. 1112.
Cabinet. W. B. Cook. No. 1,172,945; Feb. 22; Gaz. vol. 223; p. 1267.
Cabinet, Cooling and draining. B. M. Warner. No. 1,171,486; Feb. 15; Gaz. vol. 223; p. 683.
Cabinet, Folding. R. C. Russell. No. 1,173,310; Feb. 29; Gaz. vol. 223; p. 1436.
Cabinet for collapsible drinking-cups or the like, Dispensing-. W. E. Swift. No. 1,170,705; Feb. 8; Gaz. vol. 223; p. 368.
Cabinet-lock. N. Holroyd. No. 1,173,514; Feb. 29; Gaz. vol. 223; p. 1508.
Cabinet, Panel-board. R. H. Olley. No. 1,172,826; Feb. 22; Gaz. vol. 223; p. 1225.
Cabinet, Paper-dispensing. C. P. Winter. No. 1,170,380; Feb. 1; Gaz. vol. 223; p. 218.
Cabinet, Shoe-polishing. W. F. Hirschman. No. 1,170,065; Feb. 1; Gaz. vol. 223; p. 109.
Cabinet, Vertical filing-. A. Kiltsche. No. 1,170,975; Feb. 8; Gaz. vol. 223; p. 460.
Cable and making the same, Composite conductor-. W. Hoopes. No. 1,173,190; Feb. 29; Gaz. vol. 223; p. 1393.
Cable-carrier apparatus, Chute-type station for. G. A. Amsden and C. P. Hidden. No. 1,170,035; Feb. 1; Gaz. vol. 223; p. 99.
Cable clamp, Well-drilling-. C. T. Mapes and F. C. Yanda. No. 1,169,849; Feb. 1; Gaz. vol. 223; p. 36.
Cable construction. B. W. Gates. No. 1,169,940; Feb. 1; Gaz. vol. 223; p. 68.
Cable conveying system. E. B. Shields and L. L. Tyler. No. 1,170,006; Feb. 1; Gaz. vol. 223; p. 88.
Cable-fastening, Detachable movable. W. G. Murray. No. 1,171,233; Feb. 8; Gaz. vol. 223; p. 552.
Cable-grip. T. Hall. No. 1,172,980; Feb. 22; Gaz. vol. 223; p. 1281.
Cable grip, Conveying-. E. B. Shields and L. L. Tyler. No. 1,170,007; Feb. 1; Gaz. vol. 223; p. 88.
Cable-guide. T. E. Wolfe. No. 1,172,418; Feb. 22; Gaz. vol. 223; p. 1073.
Cable-protector. E. Land. No. 1,172,460; Feb. 22; Gaz. vol. 223; p. 1092.
Cage hook, Bird-. L. M. McCallum. No. 1,170,019; Feb. 8; Gaz. vol. 223; p. 440.
Cake-coating machine. P. D. Harton. No. 1,172,357; Feb. 22; Gaz. vol. 223; p. 1051.
Cake-rack, Automatic. S. W. Jones and A. W. Postlethwaite. No. 1,171,442; Feb. 15; Gaz. vol. 223; p. 668.
Calcining chemical products, Process and apparatus for. H. Howard. No. 1,173,428; Feb. 29; Gaz. vol. 223; p. 1478.
Calculating device, Geologist's. W. J. Mead. No. 1,171,741; Feb. 15; Gaz. vol. 223; p. 771.
Calculating-machine. R. H. Marchant. No. 1,172,817; Feb. 22; Gaz. vol. 223; p. 1222.
Calculating-machine. F. Trinks. No. 1,173,062; Feb. 22; Gaz. vol. 223; p. 1306.
Calculating-machines, Auxiliary keyboard for. G. J. Barrett. No. 1,173,640; Feb. 29; Gaz. vol. 223; p. 1563.
Calendar, Perpetual. P. P. McMillan. No. 1,171,862; Feb. 15; Gaz. vol. 223; p. 816.
Caliper-gage. H. Hess. No. 1,172,359; Feb. 22; Gaz. vol. 223; p. 1052.
Calipers. O. C. Zerck. No. 1,170,384; Feb. 1; Gaz. vol. 223; p. 220.
Calipers and similar tool. W. B. George. No. 1,171,040; Feb. 8; Gaz. vol. 223; p. 484.
Call-distribution system. H. M. Bascom. No. 1,172,700; Feb. 22; Gaz. vol. 223; p. 1201.
Calling device. H. Hovland. No. 1,171,520; Feb. 15; Gaz. vol. 223; p. 695.
Calling device, Operator's. A. H. Dyson. No. 1,173,504; Feb. 29; Gaz. vol. 223; p. 1525.
Camera. E. V. Banks. No. 1,173,083; Feb. 22; Gaz. vol. 223; p. 1313.
Camera. M. and L. Mandel. No. 1,170,768; Feb. 8; Gaz. vol. 223; p. 390.
Camera. C., Jr., and W. Thoma. No. 1,170,364; Feb. 1; Gaz. vol. 223; p. 212.
Camera. C., Jr., and W. Thoma. No. 1,170,365; Feb. 1; Gaz. vol. 223; p. 213.
Camera. H. H. Turner and S. Schidakovitch. No. 1,171,483; Feb. 15; Gaz. vol. 223; p. 682.
Camera and instrument support. R. H. Denman. No. 1,170,422; Feb. 1; Gaz. vol. 223; p. 231.
Camera-focusing device. E. C. Clark and J. Arrufat. No. 1,174,014; Feb. 29; Gaz. vol. 223; p. 1679.
Camera, Photographic. H. L. Ide. No. 1,170,538; Feb. 8; Gaz. vol. 223; p. 308.
Camera-shifting mechanism for moving-picture cameras. C. A. Phillips. No. 1,171,877; Feb. 15; Gaz. vol. 223; p. 821.
Camera shutter-release, Automatic. M. J. Barnett. No. 1,170,473; Feb. 1; Gaz. vol. 223; p. 249.
Camera-stand. C. E. Akeley. No. 1,173,401; Feb. 29; Gaz. vol. 223; p. 1469.
Cameras, Exposure-shutter for. J. J. Quinn. No. 1,173,861; Feb. 29; Gaz. vol. 223; p. 1629.
Cameras, Film-back for. A. P. D. and J. D. Belanger. No. 1,170,039; Feb. 1; Gaz. vol. 223; p. 100.
Cameras, Film-winding key for photographic. C. F. Speidel. No. 1,169,882; Feb. 1; Gaz. vol. 223; p. 47.
Cameras, Masking device for. I. Feltenstein. No. 1,170,522; Feb. 8; Gaz. vol. 223; p. 302.
Camp chair and table, Combined. M. Bulik. No. 1,173,480; Feb. 29; Gaz. vol. 223; p. 1495.
Can: *See*—
Decorated can.
Dispensing-can.
Garbage-can.
Can-bodies, Mechanism for operating on. C. J. Nelson. No. 1,173,302; Feb. 29; Gaz. vol. 223; p. 1433.
Can body and removable top, Milk-. W. Grannis. No. 1,173,422; Feb. 29; Gaz. vol. 223; p. 1476.
Can container and server, Milk-. T. J. Davis. No. 1,169,933; Feb. 1; Gaz. vol. 223; p. 64.
Can-crimping machine. L. N. Trudeau. No. 1,173,329; Feb. 29; Gaz. vol. 223; p. 1444.
Can-double-seaming machine. W. Cameron. No. 1,170,798; Feb. 8; Gaz. vol. 223; p. 399.
Can for paints, varnishes, or similar substances. D. W. Roberts. No. 1,171,130; Feb. 8; Gaz. vol. 223; p. 522.
Can-lining machine. L. A. Baker. No. 1,173,763; Feb. 29; Gaz. vol. 223; p. 1595.
Can-opener. J. Anderson. No. 1,170,386; Feb. 1; Gaz. vol. 223; p. 220.
Can-washer. P. H. Carroll. No. 1,172,430; Feb. 22; Gaz. vol. 223; p. 1079.
Can washer, Milk-. H. E. Shoephoerster and F. Roder. No. 1,171,070; Feb. 8; Gaz. vol. 223; p. 493.
Can-washing machine, Milk-. H. D. Lathrop and W. H. Paulson. No. 1,172,808; Feb. 22; Gaz. vol. 223; p. 1219.
Canning. Apparatus for treating thin-skinned products for. E. J. Vandreuil. No. 1,173,230; Feb. 29; Gaz. vol. 223; p. 1406.
Canning crabs, lobsters, and the like. K. Usui. No. 1,172,076; Feb. 15; Gaz. vol. 223; p. 894.
Canning sardines. E. M. Lawrence. No. 1,170,762; Feb. 8; Gaz. vol. 223; p. 388.
Candy-machine. D. T. and D. C. Igou. No. 1,173,275; Feb. 29; Gaz. vol. 223; p. 1424.
Cane mills, Intermediate conveyer for sugar-. A. F. Ewart. 1,169,946; Feb. 1; Gaz. vol. 223; p. 67.
Cane mills, Intermediate conveyer for sugar-. A. F. Ewart. No. 1,170,619; Feb. 8; Gaz. vol. 223; p. 338.
Cane-stripper. J. H. Knipp. No. 1,172,210; Feb. 15; Gaz. vol. 223; p. 940.
Canoe attachment. R. A. Frayser. No. 1,172,974; Feb. 22; Gaz. vol. 223; p. 1277.
Canopy. W. H. Shough and M. T. Dobbins. No. 1,173,881; Feb. 29; Gaz. vol. 223; p. 1636.
Cap. Bathing-. F. A. Bloch. No. 1,172,027; Feb. 22; Gaz. vol. 223; p. 1260.
Cap construction. W. J. H. Schroeder. No. 1,170,462; Feb. 1; Gaz. vol. 223; p. 245.
Capping device. H. D. Cornwall. No. 1,169,775; Feb. 1; Gaz. vol. 223; p. 10.
Capping-machine. H. P. Forté. No. 1,172,447; Feb. 22; Gaz. vol. 223; p. 1085.
Car-body underframe construction. O. S. Pulliam. No. 1,172,732; Feb. 22; Gaz. vol. 223; p. 1189.
Car-brake. J. S. and H. A. Johnson. No. 1,171,050; Feb. 8; Gaz. vol. 223; p. 487.
Car-brake-controlling mechanism, Railway-. G. M. Halliburton and S. L. McBurney. No. 1,173,593; Feb. 22; Gaz. vol. 223; p. 1140.
Car-bumper. J. McMahon. No. 1,171,218; Feb. 8; Gaz. vol. 223; p. 547.
Car-coger, Automatic. J. A. Nolan. No. 1,170,316; Feb. 1; Gaz. vol. 223; p. 196.
Car construction. F. H. Gibbs. No. 1,170,527; Feb. 8; Gaz. vol. 223; p. 304.
Car construction. C. A. Lindström. No. 1,173,526; Feb. 29; Gaz. vol. 223; p. 1512.
Car-controlling apparatus. W. C. Dust. No. 1,171,109; Feb. 8; Gaz. vol. 223; p. 508.
Car-coupling. W. J. Geddert. No. 1,169,796; Feb. 1; Gaz. vol. 223; p. 17.
Car-coupling. J. C. Griffith. No. 1,170,061; Feb. 1; Gaz. vol. 223; p. 108.
Car-coupling. W. T. Wallace. No. 1,171,817; Feb. 15; Gaz. vol. 223; p. 799.

Car-coupling, Automatic. G. H. F. Berglund and H. A. H. Lindencrona. No. 1,173,644; Feb. 29; Gaz. vol. 223; p. 1554.
Car coupling, Mining-. E. S. Earls. No. 1,173,494; Feb. 29; Gaz. vol. 223; p. 1501.
Car-couplings, Uncoupling mechanism for. E. H. Schmidt. No. 1,170,098; Feb. 8; Gaz. vol. 223; p. 469.
Car-door. A. M. and W. H. Waltt. No. 1,170,787; Feb. 8; Gaz. vol. 223; p. 396.
Car-door device. W. C. and C. R. Martineau. No. 1,170,656; Feb. 8; Gaz. vol. 223; p. 350.
Car-door fastener. J. Hornagy. No. 1,171,047; Feb. 8; Gaz. vol. 223; p. 486.
Car-door lock. C. W. Underwood. No. 1,171,989; Feb. 15; Gaz. vol. 223; p. 863.
Car-door-operating mechanism. R. V. Sage. No. 1,170,677; Feb. 8; Gaz. vol. 223; p. 358.
Car-door rigging. R. V. Sage. No. 1,170,678; Feb. 8; Gaz. vol. 223; p. 359.
Car draft-rigging, Draft-yoke for railway-. H. F. Schwartzenberg. No. 1,172,742; Feb. 22; Gaz. vol. 223; p. 1193.
Car drop-door-operating mechanism. R. R. Weaver. No. 1,170,130; Feb. 1; Gaz. vol. 223; p. 131.
Car, Dump-. W. E. Fowler, Sr. No. 1,169,790; Feb. 1; Gaz. vol. 223; p. 15.
Car, Dump-. W. H. Yost. No. 1,173,237; Feb. 29; Gaz. vol. 223; p. 1409.
Car, Dumping-. W. D. Skidmore. No. 1,171,470; Feb. 15; Gaz. vol. 223; p. 677.
Car, Dumping-. R. R. Weaver. No. 1,170,127; Feb. 1; Gaz. vol. 223; p. 130.
Car-dumping mechanism, Rotary. G. E. Huttelmaier. No. 1,171,521; Feb. 15; Gaz. vol. 223; p. 695.
Car end. J. S. Worth and C. Brecht. No. 1,172,096; Feb. 15; Gaz. vol. 223; p. 902.
Car fender, Street-. T. C. Ross. No. 1,173,389; Feb. 29; Gaz. vol. 223; p. 1465.
Car-floor construction. C. A. Lindström. No. 1,169,975; Feb. 1; Gaz. vol. 223; p. 77.
Car, Interchangeable ballast gondola plow-. J. Anderson. No. 1,172,246; Feb. 22; Gaz. vol. 223; p. 1011.
Car-loading apparatus. R. G. Lawry. No. 1,170,077; Feb. 1; Gaz. vol. 223; p. 113.
Car or locomotive wheels, Device for lubricating. F. W. Hodges. No. 1,170,752; Feb. 8; Gaz. vol. 223; p. 385.
Car, Passenger-. D. McDonald. No. 1,172,815; Feb. 22; Gaz. vol. 223; p. 1221.
Car, Passenger-. H. Rowntree. No. 1,172,563; Feb. 22; Gaz. vol. 223; p. 1130.
Car protector, Motor-. H. W. Beecher. No. 1,173,084; Feb. 22; Gaz. vol. 223; p. 1313.
Car, Railway-. R. J. O'Neill and H. F. Bethune. No. 1,173,118; Feb. 22; Gaz. vol. 223; p. 1324.
Car, Railway-. T. N. Russell. No. 1,171,661; Feb. 15; Gaz. vol. 223; p. 744.
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Car, Railway-. T. N. Russell. No. 1,171,663; Feb. 15; Gaz. vol. 223; p. 745.
Car, Railway-. J. S. Worth and C. Brecht. No. 1,172,095; Feb. 15; Gaz. vol. 223; p. 901.
Car-replacer. J. L. Dolan. No. 1,172,014; Feb. 15; Gaz. vol. 223; p. 873.
Car-report blanks and the like, Temporary holder for. N. D. Ballantine. No. 1,170,793; Feb. 8; Gaz. vol. 223; p. 398.
Car-roof. J. F. McKnight. No. 1,170,550; Feb. 8; Gaz. vol. 223; p. 312.
Car-roof. T. N. Russell. No. 1,173,220; Feb. 29; Gaz. vol. 223; p. 1403.
Car safety-fender, Traction-. E. A. De Coteau and H. F. Casey. No. 1,171,101; Feb. 8; Gaz. vol. 223; p. 500.
Car-seat, Disappearing and reversible. H. Rowntree. No. 1,170,343; Feb. 1; Gaz. vol. 223; p. 205.
Car side bearing, Railway-. J. J. Hennessey. No. 1,169,820; Feb. 1; Gaz. vol. 223; p. 25.
Car side bearing, Railway-. J. J. Hennessey. No. 1,171,433; Feb. 15; Gaz. vol. 223; p. 665.
Car-step, Extensible. A. Arnt. No. 1,172,188; Feb. 15; Gaz. vol. 223; p. 931.
Car-step, Extensible. W. Hamm and A. Hotaling. No. 1,172,987; Feb. 22; Gaz. vol. 223; p. 1281.
Car-step, Extensible. W. H. Vinson. No. 1,170,308; Feb. 1; Gaz. vol. 223; p. 214.
Car-step, Extension. J. P. Rodenbur. No. 1,170,338; Feb. 1; Gaz. vol. 223; p. 203.
Car, Tank-. L. E. Allyn. No. 1,170,804; Feb. 8; Gaz. vol. 223; p. 422.
Car, Tank-. E. D. Levy and H. W. Jacobs. No. 1,173,443; Feb. 29; Gaz. vol. 223; p. 1483.
Car, Tank-. J. T. H. Paul. No. 1,170,560; Feb. 8; Gaz. vol. 223; p. 315.
Car-underframe. R. R. Weaver. No. 1,170,129; Feb. 1; Gaz. vol. 223; p. 131.
Car-ventilating apparatus, Sleeping-. W. P. Russell. No. 1,172,313; Feb. 22; Gaz. vol. 223; p. 1035.
Car vestibule-diaphragm, Railway-. E. A. Schreiber. No. 1,171,259; Feb. 8; Gaz. vol. 223; p. 502.
Car vestibule-diaphragm, Railway-. E. A. Schreiber. No. 1,171,261; Feb. 8; Gaz. vol. 223; p. 502.
Car wheel and axle, Coal-. J. Schanman. No. 1,170,682; Feb. 8; Gaz. vol. 223; p. 360.
Car wheel and bearing, Mine-. J. J. Roby. No. 1,173,218; Feb. 29; Gaz. vol. 223; p. 1402.
Car wheel, Mining-. A. B. Day. No. 1,173,179; Feb. 29; Gaz. vol. 223; p. 1390.
Car-wheels, Manufacture of. J. M. Hansen. No. 1,170,533; Feb. 8; Gaz. vol. 223; p. 397.
Cars and the like, Safety apparatus for. H. Houseknecht. No. 1,170,263; Feb. 1; Gaz. vol. 223; p. 178.
Cars, Combination double and single deck for stock-. J. E. and C. J. Enders. No. 1,171,777; Feb. 15; Gaz. vol. 223; p. 784.
Cars, Contact-shoe for third-rail electric. C. F. Raydure. No. 1,169,865; Feb. 1; Gaz. vol. 223; p. 41.
Cars, Diaphragm for non-vestibule passenger-train. H. Stillman. No. 1,172,749; Feb. 22; Gaz. vol. 223; p. 1197.
Cars, Hand-rail support for trolley-. F. L. Brooks. No. 1,170,406; Feb. 1; Gaz. vol. 223; p. 226.
Cars, Lever hand-brake for railway-. W. G. Ransom. No. 1,171,642; Feb. 15; Gaz. vol. 223; p. 738.
Cars, Nailing-strip mount for freight-. J. M. Rohling. No. 1,171,402; Feb. 8; Gaz. vol. 223; p. 613.
Carburetor. E. H. Arquembourg. No. 1,173,702; Feb. 29; Gaz. vol. 223; p. 1594.
Carburetor. A. H. Boettcher. No. 1,173,246; Feb. 29; Gaz. vol. 223; p. 1413.
Carburetor. W. R. Clark. No. 1,172,432; Feb. 22; Gaz. vol. 223; p. 1080.
Carburetor. C. H. Claudel. No. 1,170,416; Feb. 1; Gaz. vol. 223; p. 229.
Carburetor. C. H. Claudel. No. 1,170,417; Feb. 1; Gaz. vol. 223; p. 230.
Carburetor. L. S. Gardner. No. 1,172,701; Feb. 22; Gaz. vol. 223; p. 1179.
Carburetor. V. E. Haas. No. 1,171,716; Feb. 15; Gaz. vol. 223; p. 763.
Carburetor. F. A. Heath and W. O. Taylor. No. 1,172,595; Feb. 22; Gaz. vol. 223; p. 1141.
Carburetor. G. M. Holley. No. 1,171,200; Feb. 8; Gaz. vol. 223; p. 541.
Carburetor. E. E. Morand. No. 1,172,031; Feb. 15; Gaz. vol. 223; p. 879.
Carburetor. C. D. Olsen. No. 1,171,235; Feb. 8; Gaz. vol. 223; p. 553.
Carburetor. A. L. Payton. No. 1,173,378; Feb. 29; Gaz. vol. 223; p. 1461.
Carburetor. S. I. Prescott. No. 1,172,388; Feb. 22; Gaz. vol. 223; p. 1063.
Carburetor. J. M. Purcell. No. 1,171,401; Feb. 8; Gaz. vol. 223; p. 612.
Carburetor. J. Sachs. No. 1,171,145; Feb. 8; Gaz. vol. 223; p. 523.
Carburetor. C. F. Schulz. No. 1,172,397; Feb. 22; Gaz. vol. 223; p. 1066.
Carburetor. C. M. Stroud. No. 1,171,074; Feb. 8; Gaz. vol. 223; p. 495.
Carburetor. C. W. E. Vellguth. No. 1,171,679; Feb. 15; Gaz. vol. 223; p. 750.
Carburetor. C. E. White. No. 1,173,469; Feb. 29; Gaz. vol. 223; p. 1491.
Carburetor for kerosene and the like. W. H. De Fontaine. No. 1,172,263; Feb. 22; Gaz. vol. 223; p. 1018.
Carburetors, Air-heater for. F. L. Robinson and W. Bell. No. 1,170,337; Feb. 1; Gaz. vol. 223; p. 203.
Carburetors, Float-valve mechanism for. S. G. Brinkman. No. 1,172,578; Feb. 22; Gaz. vol. 223; p. 1135.
Carburetors, Means for supplying air and water to. O. L. Ihrig. No. 1,170,060; Feb. 1; Gaz. vol. 223; p. 111.
Carburetors, Starting and idle-running device for jet-. P. Schüttler. No. 1,170,348; Feb. 1; Gaz. vol. 223; p. 206.
Carbureting mechanism for gas-engines. J. C. Coulombe. No. 1,172,258; Feb. 22; Gaz. vol. 223; p. 1016.
Card and other case. W. Rosenberg. No. 1,173,388; Feb. 29; Gaz. vol. 223; p. 1464.
Card-handling apparatus, Selective device for. M. D. Belknap. No. 1,172,802; Feb. 22; Gaz. vol. 223; p. 1201.
Card-holder binding device. J. W. Jordan, Jr. No. 1,171,209; Feb. 8; Gaz. vol. 223; p. 544.
Card or paper strips, Device for treating. W. C. and C. R. Martineau. No. 1,170,655; Feb. 8; Gaz. vol. 223; p. 350.
Carding-engines, Mechanism for grinding flats in. J. Possel. No. 1,169,780; Feb. 1; Gaz. vol. 223; p. 15.
Carding-machine feeding device. R. J. Hill and W. F. Bokum. No. 1,172,888; Feb. 22; Gaz. vol. 223; p. 1247.
Carline. H. H. Vaughan and R. W. Burnett. No. 1,173,133; Feb. 22; Gaz. vol. 223; p. 1331.
Carousel. W. F. Mangels. No. 1,171,220; Feb. 8; Gaz. vol. 223; p. 548.
Carpet-renovating compound. S. and J. B. McComb. No. 1,172,297; Feb. 22; Gaz. vol. 223; p. 1031.
Carriage, Child's. W. P. Layton. No. 1,170,485; Feb. 1; Gaz. vol. 223; p. 253.
Carriage, Child's. F. J. Shaw. No. 1,170,687; Feb. 8; Gaz. vol. 223; p. 362.
Carriage-spring connection. A. Crutchley. No. 1,171,386; Feb. 8; Gaz. vol. 223; p. 606.
Carrier: *See*—
Battery-carrier.
Bottle-carrier.
Cartridge-carrier.
Hide-carrier.
Lantern-slide carrier.
Trace-carrier.

Cart, Convertible dump-. J. F. Albrecht. No. 1,171,578; Feb. 15; Gaz. vol. 223; p. 715.
Cartridge-belts, Pocket for. J. P. Hooper. No. 1,170,259; Feb. 1; Gaz. vol. 223; p. 177.
Cartridge-carrier. A. A. Lethern. No. 1,170,486; Feb. 1; Gaz. vol. 223; p. 254.
Cartridge-carrier. G. M. Seidel. No. 1,173,125; Feb. 22; Gaz. vol. 223; p. 1328.
Cartridge-case, Shotgun. W. O. Bonham. No. 1,171,313; Feb. 8; Gaz. vol. 223; p. 581.
Case: *See*—
Card and other case.
Cartridge-case.
Cigarette-case.
Egg-case.
Engine crank-case.
Packing-case.
Pencil-case.
Reel-case.
Shipping-case.
Show-case.
Watchcase.
Cash and credit recorder. F. J. Peterson. No. 1,171,875; Feb. 15; Gaz. vol. 223; p. 820.
Cash and credit register. E. S. Church. No. 1,169,773; Feb. 1; Gaz. vol. 223; p. 9.
Cash-register. J. J. Duffie. No. 1,170,480; Feb. 1; Gaz. vol. 223; p. 251.
Cash-register and money-changing device, Electrically-operated. E. E. Carter and E. Lightfoot. No. 1,172,195; Feb. 15; Gaz. vol. 223; p. 933.
Casing-jack. H. G. Peake. No. 1,170,843; Feb. 8; Gaz. vol. 223; p. 415.
Casing-spear. W. J. Louden. No. 1,170,294; Feb. 1; Gaz. vol. 223; p. 189.
Casket, Burial-. I. Schmidt. No. 1,171,069; Feb. 8; Gaz. vol. 223; p. 493.
Casket, Burial-. E. M. Thornton. No. 1,170,020; Feb. 1; Gaz. vol. 223; p. 93.
Casket-cover clamp. H. A. Neff. No. 1,170,094; Feb. 1; Gaz. vol. 223; p. 120.
Caster. A. Ballenberg. No. 1,170,502; Feb. 8; Gaz. vol. 223; p. 295.
Caster. A. Ballenberg. No. 1,170,503; Feb. 8; Gaz. vol. 223; p. 296.
Caster. F. W. Wanda. No. 1,171,569; Feb. 15; Gaz. vol. 223; p. 712.
Casting. H. W. O'Dowd. No. 1,170,180; Feb. 1; Gaz. vol. 223; p. 149.
Casting metals, Including their alloys, Means for. C. Vickers. No. 1,172,506; Feb. 22; Gaz. vol. 223; p. 1108.
Catalyst and preparing same. A. Schwarcman. No. 1,172,062; Feb. 15; Gaz. vol. 223; p. 891.
Catalytic agents and making the same, Soluble. N. Sulzberger. No. 1,171,902; Feb. 15; Gaz. vol. 223; p. 831.
Catalytic agents and making them. A. Mittasch. No. 1,173,532; Feb. 29; Gaz. vol. 223; p. 1514.
Ceiling-cleaning machine. S. Gottlieb. No. 1,173,796; Feb. 29; Gaz. vol. 223; p. 1607.
Celluloid receptacle. R. D. Leary. No. 1,173,282; Feb. 29; Gaz. vol. 223; p. 1427.
Cement-mold. H. H. Styll and H. K. Parsons. No. 1,170,197; Feb. 1; Gaz. vol. 223; p. 156.
Cementing-machine. E. Erickson and J. W. Cosgrove. No. 1,170,520; Feb. 8; Gaz. vol. 223; p. 302.
Centering and gage-sawing device, Self-. I. M. Thurlow. No. 1,171,156; Feb. 8; Gaz. vol. 223; p. 527.
Centrifugal drier. F. B. Anderson. (Reissue.) No. 14,061; Feb. 15; Gaz. vol. 223; p. 950.
Centrifugal separator. O. Morath. No. 1,170,554; Feb. 8; Gaz. vol. 223; p. 313.
Cereal product, Desiccating a fermented. M. Franzle. No. 1,172,270; Feb. 22; Gaz. vol. 223; p. 1021.
Certificate of deposit. H. F. Price. No. 1,172,554; Feb. 22; Gaz. vol. 223; p. 1126.
Chain construction. F. B. Parks. No. 1,170,780; Feb. 8; Gaz. vol. 223; p. 393.
Chain, Drive-. C. J. Luther. No. 1,173,670; Feb. 29; Gaz. vol. 223; p. 1562.
Chain end. G. B. Thomas. No. 1,173,896; Feb. 29; Gaz. vol. 223; p. 1641.
Chain-holding hook. A. P. Keegan. No. 1,173,001; Feb. 22; Gaz. vol. 223; p. 1286.
Chain-link, Interlocking. A. K. Harnly. No. 1,171,947; Feb. 15; Gaz. vol. 223; p. 848.
Chain, Multiple-strand bush-roller. C. G. Eden and A. E. Carter. No. 1,170,431; Feb. 1; Gaz. vol. 223; p. 235.
Chain-slack control. C. F. Yocum. No. 1,172,419; Feb. 22; Gaz. vol. 223; p. 1073.
Chain, Tractor-. W. B. Macaulay. No. 1,170,836; Feb. 8; Gaz. vol. 223; p. 412.
Chair: *See*—
Adjustable chair.
Camp-chair.
Dental chair.
Play-chair.
Restaurant-chair.
Revolving chair.
Chair. T. E. Herington. No. 1,173,351; Feb. 29; Gaz. vol. 223; p. 1452.
Chair. F. Mangam. No. 1,173,829; Feb. 29; Gaz. vol. 223; p. 1618.
Chair and Ironing-table, Combined. O. C. Nelson. No. 1,170,664; Feb. 8; Gaz. vol. 223; p. 353.
Chair attachment. J. M. Hosick. No. 1,173,517; Feb. 29; Gaz. vol. 223; p. 1509.
Chair attachment, Barber's-. W. H. J. Downey. No. 1,171,107; Feb. 8; Gaz. vol. 223; p. 508.
Chair fan attachment, Rocking-. A. J. Schroeder. No. 1,173,043; Feb. 22; Gaz. vol. 223; p. 1299.
Chair-seat. V. Deaver. No. 1,172,441; Feb. 22; Gaz. vol. 223; p. 1083.
Chalk-holder. W. O. Jackson. No. 1,172,210; Feb. 15; Gaz. vol. 223; p. 938.
Channeling-tool. P. Sjostrom and A. Moberg. No. 1,171,985; Feb. 15; Gaz. vol. 223; p. 862.
Charging and discharging apparatus. H. A. Carpenter, R. L. Hibbard, and A. W. Warner. No. 1,171,414; Feb. 15; Gaz. vol. 223; p. 658.
Chart for cutting garments. M. C. and M. C. Murphy, Jr. No. 1,173,301; Feb. 29; Gaz. vol. 223; p. 1433.
Chart for determining exposures. A. D. Shiland. No. 1,171,548; Feb. 15; Gaz. vol. 223; p. 705.
Check, Bank-. J. G. Wall. No. 1,170,860; Feb. 8; Gaz. vol. 223; p. 420.
Check-controlled apparatus. D. L. Kittrell. No. 1,173,003; Feb. 22; Gaz. vol. 223; p. 1286.
Check, Hat, coat, or baggage. J. E. Johnson. No. 1,172,602; Feb. 22; Gaz. vol. 223; p. 1143.
Check-protector. S. W. Andersen. No. 1,171,828; Feb. 15; Gaz. vol. 223; p. 803.
Check-protector. M. H. Page. No. 1,173,020; Feb. 22; Gaz. vol. 223; p. 1291.
Checker. J. F. Rogers. No. 1,170,109; Feb. 1; Gaz. vol. 223; p. 125.
Chemical reactions between solid matters and gases or gas mixtures, Effecting. J. R. C. Rudolphs and A. G. Thisell. No. 1,173,390; Feb. 29; Gaz. vol. 223; p. 1405.
Cherry-seeding machine. H. Nicolai. No. 1,173,372; Feb. 29; Gaz. vol. 223; p. 1459.
Chest-handling machine. R. C. Seymour. No. 1,173,878; Feb. 29; Gaz. vol. 223; p. 1635.
Chicken-dressing machine. W. Short. No. 1,171,069; Feb. 15; Gaz. vol. 223; p. 747.
Chiropractic adjusting-table. F. W. Sefton. No. 1,170,119; Feb. 1; Gaz. vol. 223; p. 129.
Chiropractic table. J. K. Gilkerson. No. 1,171,713; Feb. 15; Gaz. vol. 223; p. 761.
Chlorates and perchlorates of alkali metals, Manufacture of. A. E. Gibbs. No. 1,173,340; Feb. 29; Gaz. vol. 223; p. 1450.
Chlorids, Reduction of. F. Meyer and H. Kerstein. No. 1,173,012; Feb. 22; Gaz. vol. 223; p. 1289.
Chocolate, Carameling. E. L. A. Savy. No. 1,173,873; Feb. 29; Gaz. vol. 223; p. 1633.
Chuck for rock-drills. J. C. H. Vaught. No. 1,171,009; Feb. 8; Gaz. vol. 223; p. 473.
Chuck, Lathe-. J. D. Banks. No. 1,173,159; Feb. 29; Gaz. vol. 223; p. 1382.
Churn. C. A. McKeahan. No. 1,172,618; Feb. 22; Gaz. 223; p. 1149.
Churn mechanism. W. J. Mims. No. 1,173,013; Feb. 22; Gaz. vol. 223; p. 1289.
Churn, Rotary. O. E. Harris. No. 1,170,251; Feb. 1; Gaz. vol. 223; p. 175.
Chute and deborning apparatus, Convertible cattle. S. B. Pierce. No. 1,171,878; Feb. 15; Gaz. vol. 223; p. 821.
Cigar-band. C. E. Edwards. No. 1,173,103; Feb. 22; Gaz. vol. 223; p. 1319.
Cigar-dummy machine. E. Belot. No. 1,173,087; Feb. 22; Gaz. vol. 223; p. 1314.
Cigar-lighter and the like. J. G. Cook. No. 1,172,875; Feb. 22; Gaz. vol. 223; p. 1242.
Cigar-makers, Sanitary and economical paste-cup for. H. S. Holcomb. No. 1,172,993; Feb. 22; Gaz. vol. 223; p. 1283.
Cigar-marking machine. W. E. Waterman. No. 1,172,184; Feb. 15; Gaz. vol. 223; p. 930.
Cigarette-case. H. D. Hough. No. 1,170,067; Feb. 1; Gaz. vol. 223; p. 110.
Cigarette-former. T. Tribe. No. 1,172,181; Feb. 15; Gaz. vol. 223; p. 929.
Cigarette-holder. H. D. Mix. No. 1,170,090; Feb. 1; Gaz. vol. 223; p. 119.
Cinder-guard. D. Funsten. No. 1,171,033; Feb. 8; Gaz. vol. 223; p. 481.
Cinematographic effects in color, Production of. T. A. Mills. No. 1,172,621; Feb. 22; Gaz. vol. 223; p. 1150.
Cinematographically-taking film-negatives of succeeding sections through an object, Apparatus for. W. Löw. No. 1,169,843; Feb. 1; Gaz. vol. 223; p. 34.
Circuit-breaker. F. F. Hudson. No. 1,172,137; Feb. 15; Gaz. vol. 223; p. 915.
Circuit-closer. H. J. Heeney. No. 1,170,063; Feb. 1; Gaz. vol. 223; p. 108.
Circuit-closer. S. Myers. No. 1,171,629; Feb. 15; Gaz. vol. 223; p. 734.
Circuit-closer, Lock. L. Soulliere. No. 1,171,756; Feb. 15; Gaz. vol. 223; p. 777.
Circuit-controller. T. E. Barnum. No. 1,170,728; Feb. 8; Gaz. vol. 223; p. 376.
Circuit-controller. H. H. Cutler and F. S. Wilholt. No. 1,170,738; Feb. 8; Gaz. vol. 223; p. 380.
Circuit-controller. W. S. Henry. No. 1,169,957; Feb. 1; Gaz. vol. 223; p. 71.
Circuit-controller. M. Wuerpel. No. 1,170,033; Feb. 1; Gaz. vol. 223; p. 98.
Circuit-controlling instrument. W. C. Neahr. No. 1,169,992; Feb. 1; Gaz. vol. 223; p. 83.
Circuit-coupling. H. A. Douglas. No. 1,173,711; Feb. 29; Gaz. vol. 223; p. 1576.
Circuit-interrupter. C. Aalborg. No. 1,173,632; Feb. 29; Gaz. vol. 223; p. 1550.
Cisterns, Collapsible form for. C. L. Craig. No. 1,171,176; Feb. 8; Gaz. vol. 223; p. 533.

Clamp: *See*—
Cable-clamp.
Casket-cover clamp.
Dental-flask clamp.
Fence-wire clamp.
Hose-clamp.
Rail-clamp.
Rod-clamp.
Rope-clamp.
Saw-clamp.
Suspension-clamp.
Wire-clamp.
Yarn-clamp.
Clamp. F. Neppach. No. 1,173,455; Feb. 29; Gaz. vol. 223; p. 1487.
Clarinets, Tuning-slide for. W. F. Reynolds. No. 1,171,647; Feb. 15; Gaz. vol. 223; p. 740.
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Belt-clasp.
Pocket-clasp.
Clasp. H. E. Grabau. No. 1,170,245; Feb. 1; Gaz. vol. 223; p. 173.
Claw-bar. J. G. Vinson. No. 1,171,285; Feb. 8; Gaz. vol. 223; p. 571.
Clean-out service connection. J. S. Donohue. No. 1,172,958; Feb. 22; Gaz. vol. 223; p. 1271.
Cleaner: *See*—
Basin-trap cleaner.
Bucket-cleaner.
Cuspidor-cleaner.
Eyeglass-cleaner.
Grain-cleaner.
Implement-cleaner.
Pipe-cleaner.
Pneumatic cleaner.
Shoe-cleaner.
Wind-shield cleaner.
Cleaning device. E. Krantz. No. 1,170,074; Feb. 1; Gaz. vol. 223; p. 112.
Cleaning machine, Dry-. A. B. Miller. No. 1,170,088; Feb. 1; Gaz. vol. 223; p. 118.
Cleansing apparatus. M. Maiello. No. 1,172,150; Feb. 15; Gaz. vol. 223; p. 919.
Clenching device. S. Derringer. No. 1,172,955; Feb. 22; Gaz. vol. 223; p. 1270.
Clevis. W. F. Karrow. No. 1,173,000; Feb. 22; Gaz. vol. 223; p. 1285.
Clip: *See*—
Animal tail-clip.
Collar-fastening clip.
Envelop-attaching clip.
Lens-clip.
Pen-clip.
Vehicle-repair clip.
Clock, Astrological. K. M. Phillips. No. 1,171,458; Feb. 15; Gaz. vol. 223; p. 673.
Clock, Alarm-. F. G. Forte. No. 1,171,511; Feb. 15; Gaz. vol. 223; p. 692.
Clock, Stereopticon advertising-. A. Steinberg. No. 1,172,844; Feb. 22; Gaz. vol. 223; p. 1231.
Clocks, Detachable mainspring for. A. Asleson. No. 1,173,081; Feb. 22; Gaz. vol. 223; p. 1312.
Clocks, Driving means for. C. E. O'Keenan. No. 1,171,533; Feb. 15; Gaz. vol. 223; p. 699.
Closet: *See*—
Water-closet.
Closet-seat, Sanitary. A. L. Klein. No. 1,170,498; Feb. 1; Gaz. vol. 223; p. 257.
Closet-tank and connections. C. H. Zwermann. No. 1,173,631; Feb. 29; Gaz. vol. 223; p. 1549.
Closet-tanks, Silent inlet-valve for. W. B. Royer. No. 1,173,871; Feb. 29; Gaz. vol. 223; p. 1632.
Closure-cap and the like. W. E. Heath. No. 1,170,152; Feb. 1; Gaz. vol. 223; p. 139.
Closure disks or caps, Machine for making. F. K. Plympton. No. 1,172,830; Feb. 22; Gaz. vol. 223; p. 1227.
Cloth-board. E. A. McMillin. No. 1,173,290; Feb. 29; Gaz. vol. 223; p. 1430.
Cloth-clamping device. N. H. Williams. No. 1,173,760; Feb. 29; Gaz. vol. 223; p. 1594.
Cloth-cutting machine. H. Malmin. No. 1,170,652; Feb. 8; Gaz. vol. 223; p. 349.
Cloth-cutting machine. D. Perlman. No. 1,173,983; Feb. 29; Gaz. vol. 223; p. 1668.
Cloth-cutting machines, Standard-support for. H. Malmin. No. 1,172,381; Feb. 22; Gaz. vol. 223; p. 1060.
Cloth-holder. J. A. Austin. No. 1,173,545; Feb. 29; Gaz. vol. 223; p. 1518.
Cloth-plier. W. B. Kulp. No. 1,173,586; Feb. 29; Gaz. vol. 223; p. 1533.
Clothes-drum construction. H. W. Eden. No. 1,169,782; Feb. 1; Gaz. vol. 223; p. 12.
Clothes-drum-door construction. H. W. Eden. No. 1,169,781; Feb. 1; Gaz. vol. 223; p. 82.
Clothes-drying machine. M. B. Halliday. No. 1,169,954; Feb. 1; Gaz. vol. 223; p. 70.
Clothes-line hook and fastener. H. Robinson. No. 1,172,835; Feb. 22; Gaz. vol. 223; p. 1229.
Clothes-pounder. J. P. Dorau. No. 1,172,680; Feb. 22; Gaz. vol. 223; p. 1171.
Clothes-pressing machine. G. W. Sanborn. No. 1,169,873; Feb. 1; Gaz. vol. 223; p. 44.
Clothes-prop. T. W. Arter. No. 1,171,300; Feb. 8; Gaz. vol. 223; p. 576.
Clutch. G. T. Hanchett. No. 1,172,525; Feb. 22; Gaz. vol. 223; p. 1115.
Clutch. F. A. Hart. No. 1,171,403; Feb. 8; Gaz. vol. 223; p. 613.
Clutch. F. J. Hemm. No. 1,171,789; Feb. 15; Gaz. vol. 223; p. 789.
Clutch. H. D. Jones. No. 1,170,643; Feb. 8; Gaz. vol. 223; p. 346.
Clutch. A. Loomis. No. 1,172,140; Feb. 15; Gaz. vol. 223; p. 918.
Clutch. R. B. Morton. No. 1,171,230; Feb. 8; Gaz. vol. 223; p. 551.
Clutch. O. F. Sunden. No. 1,170,784; Feb. 8; Gaz. vol. 223; p. 394.
Clutch. A. W. Warsen. No. 1,170,372; Feb. 1; Gaz. vol. 223; p. 215.
Clutch, Automobile-. F. I. Tone. No. 1,172,502; Feb. 22; Gaz. vol. 223; p. 1107.
Clutch, Centrifugal. A. Rosenthal. No. 1,169,871; Feb. 1; Gaz. vol. 223; p. 43.
Clutch-controlling means. W. E. Villinger. No. 1,172,410; Feb. 22; Gaz. vol. 223; p. 1070.
Clutch-feeding mechanism. T. H. Maurseth. No. 1,170,085; Feb. 1; Gaz. vol. 223; p. 116.
Clutch, Fluid-. D. Miller. No. 1,173,599; Feb. 29; Gaz. vol. 223; p. 1538.
Clutch, Friction-. B. D. Coppage. No. 1,171,173; Feb. 8; Gaz. vol. 223; p. 531.
Clutch, Friction-. C. G. Oberley and R. Grignon. No. 1,173,849; Feb. 29; Gaz. vol. 223; p. 1625.
Clutch, Friction-. J. G. Utz. No. 1,171,008; Feb. 8; Gaz. vol. 223; p. 472.
Clutch, Friction-. C. G. Westlund. No. 1,171,994; Feb. 15; Gaz. vol. 223; p. 865.
Clutch lockout, Transmission-. C. D. Smelser. No. 1,170,121; Feb. 1; Gaz. vol. 223; p. 129.
Clutch mechanism. W. S. Graham. No. 1,171,114; Feb. 8; Gaz. vol. 223; p. 511.
Clutch mechanism. R. Huff. No. 1,171,341; Feb. 8; Gaz. vol. 223; p. 590.
Clutch mechanism, Friction-. B. C. Ball and L. E. Younle. No. 1,172,923; Feb. 22; Gaz. vol. 223; p. 1259.
Clutch mechanism, Quantity-setting. T. F. Mulligan. No. 1,171,628; Feb. 15; Gaz. vol. 223; p. 734.
Clutch-release, Automatic. E. Katzinger. No. 1,170,543; Feb. 8; Gaz. vol. 223; p. 310.
Clutch, Reversing-. J. Marette. No. 1,170,653; Feb. 8; Gaz. vol. 223; p. 349.
Coal, Carbonizing. H. L. Doherty. No. 1,172,682; Feb. 22; Gaz. vol. 223; p. 1172.
Coal-washing machine, Impulse. R. Hamilton. No. 1,169,806; Feb. 1; Gaz. vol. 223; p. 20.
Coat. S. R. Solomon. No. 1,172,317; Feb. 22; Gaz. vol. 223; p. 1037.
Coated article. W. B. Jones. No. 1,171,725; Feb. 15; Gaz. vol. 223; p. 766.
Coating and curling machine, End. D. P. Robinson and J. Coyle. No. 1,172,049; Feb. 15; Gaz. vol. 223; p. 886.
Coating-applying tool. H. W. Day. No. 1,172,233; Feb. 15; Gaz. vol. 223; p. 946.
Coating fabrics with rubber or other like plastic materials, Spreading-machine for. A. Wood. No. 1,170,383; Feb. 1; Gaz. vol. 223; p. 219.
Coating compositions of acetyl cellulose, Producing. L. Clément and C. Rivière. No. 1,173,931; Feb. 29; Gaz. vol. 223; p. 1653.
Coating-machine. S. J. Fisher. No. 1,172,693; Feb. 22; Gaz. vol. 223; p. 1176.
Coating metals, Composition of matter for. C. F. Cooper. No. 1,169,931; Feb. 1; Gaz. vol. 223; p. 64.
Cock. A. Grandi. No. 1,171,189; Feb. 8; Gaz. vol. 223; p. 537.
Cock, Gage-. J. B. Sengo. No. 1,171,072; Feb. 8; Gaz. vol. 223; p. 494.
Coffee-infuser. I. D. Richheimer. No. 1,172,390; Feb. 22; Gaz. vol. 223; p. 1063.
Coffee-pot. H. S. Isham. No. 1,170,539; Feb. 8; Gaz. vol. 223; p. 308.
Coffee-pot. M. Parsons. No. 1,172,041; Feb. 15; Gaz. vol. 223; p. 883.
Coil-press. N. Wilkinson. No. 1,173,471; Feb. 29; Gaz. vol. 223; p. 1492.
Coin-controlled apparatus. J. Winkelmeyer. No. 1,172,920; Feb. 22; Gaz. vol. 223; p. 1257.
Coin-controlled mechanism. J. E. Nealy. No. 1,171,456; Feb. 15; Gaz. vol. 223; p. 672.
Coin-deposit receptacle. H. F. Freeman. No. 1,172,697; Feb. 22; Gaz. vol. 223; p. 1177.
Coin-detector. J. E. Coleman. No. 1,172,872; Feb. 22; Gaz. vol. 223; p. 1241.
Coin-holder or change-maker. J. W. Jones. No. 1,172,605; Feb. 22; Gaz. vol. 223; p. 1143.
Coin-holder or change-maker. J. W. Jones. No. 1,172,607; Feb. 22; Gaz. vol. 223; p. 1144.
Coin-testing mechanism for coin-controlled machines, Magnetic. A. D. Grover. No. 1,173,716; Feb. 29; Gaz. vol. 223; p. 1578.
Coins and other articles, Packeting-machine for. C. L. Burdick. No. 1,171,411; Feb. 15; Gaz. vol. 223; p. 657.
Coins, Packaging. P. E. Bisland. No. 1,171,409; Feb. 15; Gaz. vol. 223; p. 656.
Coke-oven door. J. A. McCreary. No. 1,170,650; Feb. 8; Gaz. vol. 223; p. 348.
Coking and gas-generating oven. W. Feicks. No. 1,171,418; Feb. 15; Gaz. vol. 223; p. 660.
Collapsible stand. J. Jakab. No. 1,173,665; Feb. 29; Gaz. vol. 223; p. 1561.
Collapsible stand. C. B. Wanamaker. No. 1,171,568; Feb. 15; Gaz. vol. 223; p. 712.
Collapsible table. J. König. No. 1,170,977; Feb. 8; Gaz. vol. 223; p. 461.
Collapsible tube. J. F. Meissner. No. 1,171,345; Feb. 8; Gaz. vol. 223; p. 592.
Collar. S. Glaxon. No. 1,170,243; Feb. 1; Gaz. vol. 223; p. 173.
Collar. O. Kafka. No. 1,170,972; Feb. 8; Gaz. vol. 223; p. 459.
Collar-fastening clip. L. C. Haynes. No. 1,171,950; Feb. 15; Gaz. vol. 223; p. 849.
Collar, Fold-. H. F. Hurd. No. 1,171,614; Feb. 15; Gaz. vol. 223; p. 728.

Collar, Horse-. L. W. Strober. No. 1,172,641; Feb. 22; Gaz. vol. 223; p. 1157.
Collar pad, Horse-. J. R. Flemming. No. 1,171,709; Feb. 15; Gaz. vol. 223; p. 760.
Collar-retainer. E. Heckman. No. 1,170,904; Feb. 8; Gaz. vol. 223; p. 435.
Collar, Soft fold-. H. F. Hurd. No. 1,171,956; Feb. 15; Gaz. vol. 223; p. 851.
Collection and delivery apparatus. J. F. Montine. No. 1,171,799; Feb. 15; Gaz. vol. 223; p. 792.
Coloring-matters or dyes and making same, Fast light-proof. N. W. Turkin. No. 1,173,330; Feb. 29; Gaz. vol. 223; p. 1444.
Colters, Lubricating means for disk. S. P. Miller. No. 1,170,771; Feb. 8; Gaz. vol. 223; p. 390.
Column-form, Adjustable. J. E. Hodges. No. 1,170,753; Feb. 8; Gaz. vol. 223; p. 385.
Comb: See—
Currycomb. Dyeing-comb.
Comb. L. C. Sommer. No. 1,173,053; Feb. 22; Gaz. vol. 223; p. 1303.
Combination-lock. E. Gornicec. No. 1,173,348; Feb. 29; Gaz. vol. 223; p. 1451.
Combination-lock. J. W. Holz. No. 1,171,202; Feb. 8; Gaz. vol. 223; p. 541.
Combination-lock. J. Tomczak. No. 1,171,904; Feb. 15; Gaz. vol. 223; p. 832.
Commode, Outing-. F. M. Sawyer. No. 1,172,566; Feb. 22; Gaz. vol. 223; p. 1131.
Commutator-motor, Alternating-current. F. W. Meyer. No. 1,170,657; Feb. 8; Gaz. vol. 223; p. 351.
Composing-machines, Line-measuring mechanism for. R. C. Elliott. No. 1,172,268; Feb. 22; Gaz. vol. 223; p. 1020.
Composing-machines, Strip-perforating mechanism for. J. B. S. Booth. No. 1,172,254; Feb. 22; Gaz. vol. 223; p. 1014.
Composite board. R. Linkletter. No. 1,173,362; Feb. 29; Gaz. vol. 223; p. 1455.
Composition and making the same, Covering or binding. R. F. Tompkins. No. 1,171,905; Feb. 15; Gaz. vol. 223; p. 832.
Composition of matter for use in killing trees and other vegetable growths. J. F. H. Eason. No. 1,172,685; Feb. 22; Gaz. vol. 223; p. 1173.
Compressing-machine. T. Lund. No. 1,172,471; Feb. 22; Gaz. vol. 223; p. 1094.
Compressor. L. B. Harris. No. 1,171,788; Feb. 15; Gaz. vol. 223; p. 788.
Compressor, Motor-driven. H. W. Cheney. No. 1,172,581; Feb. 22; Gaz. vol. 223; p. 1136.
Computer, Wage-. J. C. Flamand. No. 1,170,886; Feb. 8; Gaz. vol. 223; p. 430.
Computing and measuring machine. I. J. Smucker. No. 1,172,843; Feb. 22; Gaz. vol. 223; p. 1231.
Computing and recording machine. W. I. Ohmer and J. E. McAllister. No. 1,169,860; Feb. 1; Gaz. vol. 223; p. 39.
Computing mechanism. C. F. Laganke and J. A. Smith. No. 1,172,891; Feb. 22; Gaz. vol. 223; p. 1248.
Concentrator. J. F. Isbell. No. 1,169,959; Feb. 1; Gaz. vol. 223; p. 71.
Concentrator. W. H. Miller and G. E. Kratzer. No. 1,170,925; Feb. 8; Gaz. vol. 223; p. 442.
Concrete-block-forming machine. H. A. Wilcox. No. 1,173,135; Feb. 22; Gaz. vol. 223; p. 1331.
Concrete-block machines, Face-plate for. C. E. Phillips. No. 1,172,731; Feb. 22; Gaz. vol. 223; p. 1189.
Concrete blocks, Making. F. Zagelmeyer. No. 1,170,791; Feb. 8; Gaz. vol. 223; p. 397.
Concrete building construction. A. H. Van Paemel. No. 1,171,282; Feb. 8; Gaz. vol. 223; p. 570.
Concrete-burial-vault form. L. P. Dunn. No. 1,170,430; Feb. 1; Gaz. vol. 223; p. 234.
Concrete construction, Method of. C. Weber. No. 1,171,909; Feb. 15; Gaz. vol. 223; p. 833.
Concrete construction, Reinforced. H. M. Hincz. No. 1,173,152; Feb. 22; Gaz. vol. 223; p. 1338.
Concrete construction, Reinforced. W. B. Hough. No. 1,173,100; Feb. 22; Gaz. vol. 223; p. 1321.
Concrete construction, Reinforced. C. A. P. Turner. No. 1,173,001; Feb. 29; Gaz. vol. 223; p. 1443.
Concrete-construction reinforcement. W. B. Hough. No. 1,172,020; Feb. 15; Gaz. vol. 223; p. 878.
Concrete cross-tie, Reinforced-. G. Marshall. No. 1,172,029; Feb. 15; Gaz. vol. 223; p. 879.
Concrete culverts, Collapsible core for. A. E. Camblin. No. 1,171,316; Feb. 8; Gaz. vol. 223; p. 582.
Concrete-forming machine. F. R. Stehm. No. 1,173,987; Feb. 29; Gaz. vol. 223; p. 1469.
Concrete gutters, Templet for. J. F. Lipp. No. 1,170,452; Feb. 1; Gaz. vol. 223; p. 242.
Concrete-mixing machines, Feed-regulator for. W. J. Dunham. No. 1,170,804; Feb. 8; Gaz. vol. 223; p. 401.
Concrete piles and the like, Making cast-in-place. N. C. Johnson. No. 1,173,807; Feb. 29; Gaz. vol. 223; p. 1610.
Concrete-pipe-making machine. L. E. McCabe. No. 1,172,375; Feb. 22; Gaz. vol. 223; p. 1058.
Concrete posts and the like, Collapsible core for making hollow. P. B. Jagger. No. 1,172,000; Feb. 22; Gaz. vol. 223; p. 1142.
Concrete-reinforcing bar. J. F. Havemeyer. No. 1,169,811; Feb. 1; Gaz. vol. 223; p. 22.
Concrete-stair mold. H. H. Vandegrift. No. 1,173,066; Feb. 22; Gaz. vol. 223; p. 1308.
Concrete structure, Reinforced. R. B. Tufts. No. 1,171,482; Feb. 15; Gaz. vol. 223; p. 682.
Concrete structures, Apparatus for erecting. G. L. and P. P. Vreeland. No. 1,173,991; Feb. 29; Gaz. vol. 223; p. 1670.
Concrete structures, Form for. W. P. Cunningham. No. 1,170,049; Feb. 1; Gaz. vol. 223; p. 104.
Concrete-tank form. W. J. McFarland. No. 1,172,378; Feb. 22; Gaz. vol. 223; p. 1059.
Concrete water-pipes, Water-tight joint for. A. M. Hirsh, C. Merlwether, and J. C. Mitchell. (Reissue.) No. 14,078; Feb. 29; Gaz. vol. 223; p. 1689.
Condenser-coil. J. Kesgy. No. 1,170,071; Feb. 1; Gaz. vol. 223; p. 111.
Condiment-holder. W. Mayer and C. S. Levy. No. 1,172,155; Feb. 15; Gaz. vol. 223; p. 921.
Conduit, Sectional. N. D. Whitman. No. 1,173,234; Feb. 29; Gaz. vol. 223; p. 1408.
Conduits, Cut-off for. J. Gillen. No. 1,172,977; Feb. 22; Gaz. vol. 223; p. 1278.
Cone-holder. J. C. Bunnell. No. 1,172,667; Feb. 22; Gaz. vol. 223; p. 1166.
Confection, Composition of matter to be used as a. C. Teague. No. 1,173,619; Feb. 29; Gaz. vol. 223; p. 1545.
Connecting-rod. F. R. White. No. 1,172,574; Feb. 22; Gaz. vol. 223; p. 1133.
Connector, Multiple. A. L. Flint. No. 1,172,694; Feb. 22; Gaz. vol. 223; p. 1176.
Contact, Trolley-operated. J. F. McElroy. No. 1,173,593; Feb. 29; Gaz. vol. 223; p. 1536.
Contactor. J. J. Ruddick. No. 1,171,890; Feb. 15; Gaz. vol. 223; p. 827.
Container and heating can. M. Nakamizo. No. 1,173,454; Feb. 29; Gaz. vol. 223; p. 1486.
Container and opener, Sanitary. J. Rice. No. 1,171,462; Feb. 15; Gaz. vol. 223; p. 673.
Container-closure. H. A. Kleiner and E. Plançon. No. 1,170,546; Feb. 8; Gaz. vol. 223; p. 311.
Container-top. O. Goetzke. No. 1,173,503; Feb. 29; Gaz. vol. 223; p. 1504.
Control apparatus. K. A. Simmon and A. J. Hall. No. 1,169,878; Feb. 1; Gaz. vol. 223; p. 46.
Control-locking mechanism. O. Lecy and W. F. Foote. No. 1,173,006; Feb. 22; Gaz. vol. 223; p. 1287.
Control mechanism. J. Good. No. 1,170,747; Feb. 8; Gaz. vol. 223; p. 383.
Control, System of remote. J. D. Williamson, Jr. No. 1,171,201; Feb. 8; Gaz. vol. 223; p. 573.
Converter, Rotary. O. H. and A. F. Pieper. No. 1,172,630; Feb. 22; Gaz. vol. 223; p. 1153.
Converter, Synchronous. S. H. Martin. No. 1,171,130; Feb. 8; Gaz. vol. 223; p. 518.
Conveyer. F. Freeman. No. 1,169,948; Feb. 1; Gaz. vol. 223; p. 68.
Conveyer attachment. A. Winski. No. 1,173,076; Feb. 22; Gaz. vol. 223; p. 1311.
Conveyer-cup. H. R. Gotthardt. No. 1,172,702; Feb. 22; Gaz. vol. 223; p. 1179.
Conveyer, Pneumatic. R. L. Williams. No. 1,173,073; Feb. 22; Gaz. vol. 223; p. 1310.
Conveying and grading of materials, Apparatus for the simultaneous. H. Marcus. No. 1,173,597; Feb. 29; Gaz. vol. 223; p. 1537.
Cooker. A. R. Thompson. No. 1,172,501; Feb. 22; Gaz. vol. 223; p. 1106.
Cooker, Steam-. E. T. Hoskins and J. H. Burpee. No. 1,171,339; Feb. 8; Gaz. vol. 223; p. 589.
Cooking outfit, Field. C. O. Thomas, Jr. No. 1,173,396; Feb. 29; Gaz. vol. 223; p. 1467.
Cooler: See—
Milk-cooler.
Cooling-board and ambulance-basket, Convertible. J. F. Fauber. No. 1,170,439; Feb. 1; Gaz. vol. 223; p. 237.
Cooling device. J. Ihrig. No. 1,170,641; Feb. 8; Gaz. vol. 223; p. 346.
Cooling-tower. E. Burhorn. No. 1,171,412; Feb. 15; Gaz. vol. 223; p. 657.
Coop. T. S. Estel. No. 1,172,777; Feb. 22; Gaz. vol. 223; p. 1207.
Coop, Collapsible poultry-. I. C. McDaniel. No. 1,173,823; Feb. 29; Gaz. vol. 223; p. 1616.
Copper to ferrous metals, Uniting. W. M. Page. No. 1,171,066; Feb. 8; Gaz. vol. 223; p. 492.
Copy-holder. C. C. Collins. No. 1,172,043; Feb. 22; Gaz. vol. 223; p. 1266.
Copy-holder. G. P. Doherty. No. 1,172,681; Feb. 22; Gaz. vol. 223; p. 1171.
Copy-holder. A. W. Strause. No. 1,170,941; Feb. 8; Gaz. vol. 223; p. 448.
Copy-holder. G. A. Weisshaar. No. 1,172,086; Feb. 15; Gaz. vol. 223; p. 898.
Copying device, Manifold-. G. W. Hazel. No. 1,169,813; Feb. 1; Gaz. vol. 223; p. 23.
Cord. A. A. Brigham. No. 1,172,339; Feb. 22; Gaz. vol. 223; p. 1045.
Core-bar, Collapsible. C. M. Sims and H. W. Lee. No. 1,172,316; Feb. 22; Gaz. vol. 223; p. 1037.
Core, Collapsible. W. R. Denman. No. 1,170,423; Feb. 1; Gaz. vol. 223; p. 232.
Core, Collapsible. W. R. Denman. No. 1,170,424; Feb. 1; Gaz. vol. 223; p. 232.

Cork and producing same, Elastic artificial. F. Raschig. No. 1,170,102; Feb. 1; Gaz. vol. 223; p. 123.
Corn-cutter. J. E. McWilliams. No. 1,173,291; Feb. 29; Gaz. vol. 223; p. 1430.
Corn-husking implement. R. E. Ferguson. No. 1,172,966; Feb. 22; Gaz. vol. 223; p. 1274.
Corner-bar. J. F. Havemeyer. No. 1,169,810; Feb. 1; Gaz. vol. 223; p. 22.
Corner-post fastener. A. Wolf. No. 1,170,382; Feb. 1; Gaz. vol. 223; p. 219.
Cornet-mute. L. W. Allen. No. 1,171,163; Feb. 8; Gaz. vol. 223; p. 529.
Coronn Josses, Means for preventing. G. Faccioli. No. 1,171,936; Feb. 15; Gaz. vol. 223; p. 844.
Corset, Apparel-. D. Kops. No. 1,170,282; Feb. 1; Gaz. vol. 223; p. 185.
Corset, Apparel-. D. Kops. No. 1,170,283; Feb. 1; Gaz. vol. 223; p. 185.
Corset-cover. G. C. Rogers. No. 1,171,355; Feb. 8; Gaz. vol. 223; p. 595.
Corset, Washable. Y. Saynisch. No. 1,171,256; Feb. 8; Gaz. vol. 223; p. 560.
Cot, Folding. A. M. Ferguson. No. 1,170,229; Feb. 1; Gaz. vol. 223; p. 168.
Cot for children, Folding. F. Dutour. No. 1,171,029; Feb. 8; Gaz. vol. 223; p. 480.
Cotter-pin. L. C. Light. No. 1,171,617; Feb. 15; Gaz. vol. 223; p. 720.
Cotter-pin. M. L. Martus. No. 1,171,740; Feb. 15; Gaz. vol. 223; p. 771.
Cotter-pin. A. E. Ostrander. No. 1,171,536; Feb. 15; Gaz. vol. 223; p. 700.
Cotton-bolls, Machine for crushing. R. J. Reynolds. No. 1,170,847; Feb. 8; Gaz. vol. 223; p. 416.
Cotton-gin roller. F. B. Stratton. No. 1,173,323; Feb. 29; Gaz. vol. 223; p. 1442.
Cotton-picker. L. D. Armstrong. No. 1,170,389; Feb. 1; Gaz. vol. 223; p. 221.
Cotton-picking device. R. F. Beran. No. 1,169,915; Feb. 1; Gaz. vol. 223; p. 58.
Cotton-picking sack. M. J. Pope. No. 1,172,044; Feb. 15; Gaz. vol. 223; p. 884.
Cotton-sweep. J. C. Young. No. 1,170,947; Feb. 8; Gaz. vol. 223; p. 450.
Counter, Mechanical. E. C. Oliver. No. 1,171,535; Feb. 15; Gaz. vol. 223; p. 700.
Counter, Revolution-. O. D. Hapgood. No. 1,172,793; Feb. 22; Gaz. vol. 223; p. 1213.
Counter-scale, Linear. H. E. Harris. No. 1,170,634; Feb. 8; Gaz. vol. 223; p. 343.
Counting-machine, Automatic. G. W. Yost. No. 1,172,021; Feb. 22; Gaz. vol. 223; p. 1258.
Coupling: See—
Air-coupling. Hose-coupling.
Buoy-coupling. Magneto-coupling.
Car-coupling. Pipe-coupling.
Circuit-coupling. Shaft-coupling.
Engine-coupling. Swelled coupling.
Fire-hose coupling. Tube-coupling.
Flexible coupling.
Coupling. C. R. Buckman. No. 1,173,479; Feb. 29; Gaz. vol. 223; p. 1495.
Coupling. J. L. Cobb. No. 1,173,997; Feb. 29; Gaz. vol. 223; p. 1673.
Coupling. P. Kubina. No. 1,172,217; Feb. 15; Gaz. vol. 223; p. 940.
Coupling-head. I. A. Harrison. No. 1,172,989; Feb. 22; Gaz. vol. 223; p. 1282.
Coupling, Making the female member of a union-. H. G. Carlson. No. 1,172,428; Feb. 22; Gaz. vol. 223; p. 1078.
Coupling-pocket. G. G. Floyd. No. 1,173,419; Feb. 29; Gaz. vol. 223; p. 1475.
Coupling-pocket. M. T. MacPherson. No. 1,169,848; Feb. 1; Gaz. vol. 223; p. 35.
Cover-locking device. J. Anderson. No. 1,170,951; Feb. 8; Gaz. vol. 223; p. 451.
Covering. J. H. Munro. No. 1,173,078; Feb. 29; Gaz. vol. 223; p. 1565.
Crane, Double-whip. H. Sawyer. No. 1,172,840; Feb. 22; Gaz. vol. 223; p. 1230.
Cranking device. L. Benson. No. 1,171,309; Feb. 8; Gaz. vol. 223; p. 580.
Cranking device. P. W. Yarde. No. 1,171,574; Feb. 15; Gaz. vol. 223; p. 714.
Crate. P. D. Pearce. No. 1,172,307; Feb. 22; Gaz. vol. 223; p. 1033.
Crate, Folding. R. B. Fuller. No. 1,172,271; Feb. 22; Gaz. vol. 223; p. 1021.
Crate or receptacle, Collapsible. A. D. Brown. No. 1,171,924; Feb. 15; Gaz. vol. 223; p. 840.
Crate, Shipping. G. Chapman. No. 1,173,928; Feb. 29; Gaz. vol. 223; p. 1652.
Cream-separator. H. E. Powell. No. 1,170,328; Feb. 1; Gaz. vol. 223; p. 199.
Crematory. E. M. Jones. No. 1,170,818; Feb. 8; Gaz. vol. 223; p. 406.
Crib. S. J. Clark. No. 1,171,024; Feb. 8; Gaz. vol. 223; p. 478.
Crochet cotton or wool holding device. G. G. Kent. No. 1,169,967; Feb. 1; Gaz. vol. 223; p. 74.
Cross-arm pin, Metallic. J. G. S. Lindholm. No. 1,171,127; Feb. 8; Gaz. vol. 223; p. 516.
Crossing-gate, Automatic. O. M. Walrath. No. 1,172,327; Feb. 22; Gaz. vol. 223; p. 1041.
Crucible-furnace. W. M. Brown. No. 1,171,500; Feb. 15; Gaz. vol. 223; p. 688.
Crusher. O. J. Moussette. No. 1,172,626; Feb. 22; Gaz. vol. 223; p. 1152.
Crusher. F. A. Wald. No. 1,170,370; Feb. 1; Gaz. vol. 223; p. 215.
Cue-tip. B. S. Capstick. No. 1,170,961; Feb. 8; Gaz. vol. 223; p. 455.
Cultivator. B. C. Luckey. No. 1,172,148; Feb. 15; Gaz. vol. 223; p. 919.
Cultivator. L. N. Wade. No. 1,172,572; Feb. 22; Gaz. vol. 223; p. 1133.
Cultivator and weeder, Combined. C. H. Crawford. No. 1,170,879; Feb. 8; Gaz. vol. 223; p. 427.
Cultivator, Cotton-. C. E. Pierce. No. 1,170,459; Feb. 1; Gaz. vol. 223; p. 244.
Cultivator, One-horse. J. L. Smith. No. 1,171,672; Feb. 15; Gaz. vol. 223; p. 748.
Cultivator planter attachment. R. E. Pierce. No. 1,171,239; Feb. 8; Gaz. vol. 223; p. 554.
Cultivator, Plow-. F. Pistek and J. Hejl. No. 1,172,553; Feb. 22; Gaz. vol. 223; p. 1126.
Cultivator, Surface-. W. Cave. No. 1,171,927; Feb. 15; Gaz. vol. 223; p. 841.
Cultivator, Two-row. L. E. Waterman. No. 1,170,584; Feb. 8; Gaz. vol. 223; p. 325.
Cultivators, Adjustable gang-frame for. H. J. Kuhlman. No. 1,169,840; Feb. 1; Gaz. vol. 223; p. 32.
Cultivators, Insect-exterminating attachment for. D. Burket. No. 1,172,935; Feb. 22; Gaz. vol. 223; p. 1263.
Cultivators, Means for shifting gang-frames of. H. J. Kuhlman. No. 1,169,839; Feb. 1; Gaz. vol. 223; p. 32.
Cup: See—
Conveyer-cup. Grease-cup.
Drinking-cup.
Curling-iron heater. J. Szotak. No. 1,172,405; Feb. 22; Gaz. vol. 223; p. 1068.
Curling-irons and the like, Terminal connector for. T. Thornton, Jr. No. 1,173,021; Feb. 29; Gaz. vol. 223; p. 1546.
Current by cathode-ray tubes, Means for producing alternating. A. Meissner. No. 1,170,552; Feb. 8; Gaz. vol. 223; p. 313.
Current impulses, Method and means for the production and control of. C. I. Zimmerman. No. 1,173,630; Feb. 29; Gaz. vol. 223; p. 1549.
Current motor, Alternating-. D. M. Bliss. (Reissue.) No. 14,062; Feb. 15; Gaz. vol. 223; p. 951.
Current system, Alternating-. L. Fleischmann. No. 1,173,657; Feb. 29; Gaz. vol. 223; p. 1559.
Currycomb. J. Edgar. No. 1,172,688; Feb. 22; Gaz. vol. 223; p. 1174.
Currycomb and brush. F. L. Vyvial. No. 1,171,815; Feb. 15; Gaz. vol. 223; p. 708.
Curtain-edging. F. B. and C. A. Burns. No. 1,173,927; Feb. 29; Gaz. vol. 223; p. 1652.
Curtain-fastener. G. W. J. Murphy. No. 1,170,002; Feb. 1; Gaz. vol. 223; p. 120.
Curtain for display-windows, Burglar-. M. Richter. No. 1,172,311; Feb. 22; Gaz. vol. 223; p. 1035.
Curtain-holder for buggies. T. G. Taylor. No. 1,172,179; Feb. 15; Gaz. vol. 223; p. 928.
Curtain shield, Vestibule-. J. D. Heater. No. 1,169,814; Feb. 1; Gaz. vol. 223; p. 23.
Curtain-stretching and other frames, Connecting brace for the legs of. W. P. Hough. No. 1,172,241; Feb. 15; Gaz. vol. 223; p. 940.
Curving-machine. W. W. McCarroll. No. 1,173,303; Feb. 29; Gaz. vol. 223; p. 1455.
Cushion: See—
Railway-rail cushion.
Cushion structure. F. P. D'Arcy. No. 1,172,344; Feb. 22; Gaz. vol. 223; p. 1047.
Cuspidor cleaner and carrier. W. J. Ghrames. No. 1,172,592; Feb. 22; Gaz. vol. 223; p. 1140.
Cuspidor, Railway-car. J. J. Muldoon. No. 1,173,720; Feb. 29; Gaz. vol. 223; p. 1583.
Cut-off device, Automatic. I. M. Sponsel. No. 1,173,014; Feb. 29; Gaz. vol. 223; p. 1543.
Cut-off device, Meter-actuated. N. Anderson. No. 1,173,080; Feb. 22; Gaz. vol. 223; p. 1312.
Cut-out geometrical figure for didactical purposes. M. Montessori. No. 1,173,298; Feb. 29; Gaz. vol. 223; p. 1432.
Cutter: See—
Bean-cutter. Music-sheet cutter.
Biscuit-cutter. Pipe-cutter.
Corn-cutter. Root-cutter.
Flouting cutter. Rotary cutter.
Glass-tube cutter. Stalk-cutter.
Ice-cutter. Thread-cutter.
Kraut-cutter.
Cutter-head, Rotary. E. A. G. Engler. No. 1,172,776; Feb. 22; Gaz. vol. 223; p. 1206.
Cutting and folding machine. S. G. Goss and R. C. Seymour. No. 1,173,950; Feb. 29; Gaz. vol. 223; p. 1659.
Cutting-die. J. H. Pope. No. 1,171,459; Feb. 15; Gaz. vol. 223; p. 673.
Cycle-shield. J. S. Tulloch. No. 1,169,888; Feb. 1; Gaz. vol. 223; p. 49.
Cycle, Sleigh-. W. S. Motsago. No. 1,173,070; Feb. 29; Gaz. vol. 223; p. 1564.
Cycle starter, Motor-. O. Fobes. No. 1,172,969; Feb. 22; Gaz. vol. 223; p. 1275.

Cycle support, Motor-. T. P. Knapp. No. 1,172,465. Feb. 22; Gaz. vol. 223; p. 1092.
Cycle, tricar, cycle-car, and like motor-vehicle, Motor-. G. F. Rayner. No. 1,170,845; Feb. 8; Gaz. vol. 223; p. 415.
Cycles, Combination rigid and flexible frame for motor-. C. D. Compton. No. 1,173,770; Feb. 29; Gaz. vol. 223; p. 1597.
Cycles, Rear spring-frame for motor-. O. A. Wagner. No. 1,171,371; Feb. 8; Gaz. vol. 223; p. 601.
Cycles, Side car for motor-. C. J. Hunter. No. 1,172,995; Feb. 22; Gaz. vol. 223; p. 1284.
Damper. W. W. Jackson. No. 1,170,642; Feb. 8; Gaz. vol. 223; p. 346.
Damper for boilers. C. D. Young. No. 1,172,000; Feb. 15; Gaz. vol. 223; p. 867.
Damper for stovepipes, Adjustable air-. V. B. Jensen. No. 1,173,975; Feb. 29; Gaz. vol. 223; p. 1666.
Darner. A. M. Winter. No. 1,172,186; Feb. 15; Gaz. vol. 223; p. 931.
Davit for life-boats. O. Nilsen. No. 1,170,315; Feb. 1; Gaz. vol. 223; p. 196.
Davit, Ship's. W. Lueder. No. 1,173,821; Feb. 29; Gaz. vol. 223; p. 1615.
Decorated can. F. P. McColl. No. 1,171,966; Feb. 15; Gaz. vol. 223; p. 855.
Dehydrating apparatus. W. A. Wood. No. 1,172,575; Feb. 22; Gaz. vol. 223; p. 1133.
Demountable band-wheel. H. F. Johnston. No. 1,171,848; Feb. 15; Gaz. vol. 223; p. 811.
Demountable wheel. A. P. Prather. No. 1,170,668; Feb. 8; Gaz. vol. 223; p. 355.
Demountable wheel. C. T. Ridgely. No. 1,173,216; Feb. 29; Gaz. vol. 223; p. 1401.
Dental-amalgam mixer. W. G. Hughes. No. 1,173,519; Feb. 29; Gaz. vol. 223; p. 1510.
Dental amalgamator. J. N. Flood. No. 1,172,202; Feb. 15; Gaz. vol. 223; p. 936.
Dental articulator. D. M. Shaw. No. 1,173,045; Feb. 22; Gaz. vol. 223; p. 1300.
Dental articulator. D. M. Shaw. No. 1,173,046; Feb. 22; Gaz. vol. 223; p. 1301.
Dental bridge. G. W. Todd. No. 1,171,368; Feb. 8; Gaz. vol. 223; p. 600.
Dental cements, Making. G. S. Miller. No. 1,172,723; Feb. 22; Gaz. vol. 223; p. 1180.
Dental chair. F. E. Case. No. 1,173,557; Feb. 29; Gaz. vol. 223; p. 1522.
Dental-flask clamp. A. Rutan. No. 1,172,564; Feb. 22; Gaz. vol. 223; p. 1130.
Dental-floss holder. J. P. De l'Eau. No. 1,171,177; Feb. 8; Gaz. vol. 223; p. 533.
Dental-floss holder. J. Kenyon. No. 1,174,016; Feb. 29; Gaz. vol. 223; p. 1680.
Dental gage for bridgework. H. Raymond. No. 1,173,383; Feb. 29; Gaz. vol. 223; p. 1463.
Dental hand-piece. A. Fernald. No. 1,170,524; Feb. 8; Gaz. vol. 223; p. 303.
Dentifrice. F. J. Rhodes. No. 1,169,908; Feb. 1; Gaz. vol. 223; p. 85.
Depolarizer, Colloidal-manganese-dioxid. C. Ellis. No. 1,169,943; Feb. 1; Gaz. vol. 223; p. 67.
Desk. H. E. Bennett. No. 1,171,308; Feb. 8; Gaz. vol. 223; p. 579.
Detachable wheels and fitting vehicles therewith. J. V. Pugh. No. 1,171,244; Feb. 8; Gaz. vol. 223; p. 556.
Detinning. G. O. Seward and F. von Kügelgen. (Reissue.) No. 14,071; Feb. 15; Gaz. vol. 223; p. 956.
Detinning. F. von Kügelgen and G. O. Seward. (Reissue.) No. 14,070; Feb. 15; Gaz. vol. 223; p. 956.
Diaphragm, Pneumatic. J. Knagge. No. 1,172,716; Feb. 22; Gaz. vol. 223; p. 1184.
Die: *See*—
Cutting-die.
Die-stock. J. F. Holzscheiter. No. 1,170,066; Feb. 1; Gaz. vol. 223; p. 110.
Die-stock. G. and C. Voetsch. No. 1,173,690; Feb. 29; Gaz. vol. 223; p. 1569.
Die-stocks, Nipple-making device for. F. A. Jadin. No. 1,169,961; Feb. 1; Gaz. vol. 223; p. 72.
Digging and ditch-cleaning device. E. N. Rich. No. 1,173,035; Feb. 22; Gaz. vol. 223; p. 1296.
Digging the ground, Apparatus for. M. M. G. Malcor. No. 1,171,798; Feb. 15; Gaz. vol. 223; p. 792.
Direction-indicator. F. E. Driskill. No. 1,172,960; Feb. 22; Gaz. vol. 223; p. 1272.
Direction-indicator. H. G. Miller. No. 1,170,770; Feb. 8; Gaz. vol. 223; p. 390.
Dirt-receptacle. P. Kunizsai. No. 1,172,534; Feb. 22; Gaz. vol. 223; p. 1119.
Discharging-machine, Automatic centrifugal. J. Sailer. No. 1,170,001; Feb. 1; Gaz. vol. 223; p. 86.
Dish-washing apparatus. A. and S. Horton. No. 1,170,261; Feb. 1; Gaz. vol. 223; p. 178.
Dish-washing machine. N. Egbert. No. 1,172,201; Feb. 15; Gaz. vol. 223; p. 936.
Dish-washing machine. T. E. Murray. No. 1,172,300; Feb. 22; Gaz. vol. 223; p. 1031.
Dish-washing machine. T. E. Murray. No. 1,173,208; Feb. 29; Gaz. vol. 223; p. 1398.
Disinfectant-retainer. W. V. Andrews. No. 1,170,387; Feb. 1; Gaz. vol. 223; p. 220.
Disinfecting device. T. V. Madigan. No. 1,171,737; Feb. 15; Gaz. vol. 223; p. 770.
Disintegrating apparatus, Hydraulic. H. W. Savage. No. 1,172,634; Feb. 22; Gaz. vol. 223; p. 1154.
Disk drill. W. C. Squire. No. 1,170,690; Feb. 8; Gaz. vol. 223; p. 365.
Disk stopper for bottles, &c. F. C. Lauderman and L. Y. Williams. No. 1,172,027; Feb. 15; Gaz. vol. 223; p. 878.
Dispensing-can. W. A. Phelan. No. 1,173,305; Feb. 29; Gaz. vol. 223; p. 1434.
Dispensing-machine. H. B. Cooley. No. 1,173,648; Feb. 29; Gaz. vol. 223; p. 1556.
Display, Advertising-. F. V. Burton. No. 1,172,107; Feb. 15; Gaz. vol. 223; p. 905.
Display-box. E. H. Heppe. No. 1,170,636; Feb. 8; Gaz. vol. 223; p. 344.
Display-card. H. L. Kalish. No. 1,172,142; Feb. 15; Gaz. vol. 223; p. 916.
Display-form for boots and shoes. F. B. Rice. No. 1,172,736; Feb. 22; Gaz. vol. 223; p. 1191.
Display-rack. W. T. Hormes. No. 1,172,799; Feb. 22; Gaz. vol. 223; p. 1215.
Display-rack, Advertising. C. Blum. No. 1,170,507; Feb. 8; Gaz. vol. 223; p. 297.
Display-stand. W. E. Bruchhauser. No. 1,173,167; Feb. 29; Gaz. vol. 223; p. 1385.
Display-tray. G. R. McAllaster. No. 1,169,845; Feb. 1; Gaz. vol. 223; p. 34.
Displaying announcements, advertisements, and the like, Apparatus for. A. B. D. Lang and J. A. Powell. No. 1,173,360; Feb. 29; Gaz. vol. 223; p. 1454.
Dissolving-view apparatus and moving-picture machine, Combined. E. Schneider. No. 1,172,567; Feb. 22; Gaz. vol. 223; p. 1131.
Distillation of wood, Recovering oil and other products which are formed during the destructive. L. Hanson. No. 1,169,956; Feb. 1; Gaz. vol. 223; p. 70.
Distilling apparatus, Oil-. S. H. Edwards. No. 1,170,884; Feb. 8; Gaz. vol. 223; p. 429.
Distilling mineral oils, Apparatus for. A. Lackman. No. 1,171,524; Feb. 15; Gaz. vol. 223; p. 697.
Distributing system. J. T. Cowley. No. 1,170,048; Feb. 1; Gaz. vol. 223; p. 103.
Distribution system. F. W. Harris. No. 1,173,569; Feb. 29; Gaz. vol. 223; p. 1527.
Ditching-machine. C. Hungerford. No. 1,171,203; Feb. 8; Gaz. vol. 223; p. 542.
Doll. M. Politzer. No. 1,171,977; Feb. 15; Gaz. vol. 223; p. 858.
Door. G. B. Dorey. No. 1,169,778; Feb. 1; Gaz. vol. 223; p. 11.
Door. W. B. Gervais. No. 1,171,424; Feb. 15; Gaz. vol. 223; p. 661.
Door and the like, Metallic. C. W. Larson and C. Olofson. No. 1,171,443; Feb. 15; Gaz. vol. 223; p. 668.
Door and the like, Metallic. C. W. Larson and C. Olofson. No. 1,171,444; Feb. 15; Gaz. vol. 223; p. 668.
Door and window casing and base-cap, Metal. W. H. Elgin. No. 1,170,968; Feb. 8; Gaz. vol. 223; p. 458.
Door-bolt-operating mechanism. E. M. Letts. No. 1,171,217; Feb. 8; Gaz. vol. 223; p. 547.
Door-buffer. D. F. Oliver. No. 1,172,037; Feb. 15; Gaz. vol. 223; p. 882.
Door-check. A. Leschka and A. Fiala. No. 1,169,841; Feb. 1; Gaz. vol. 223; p. 33.
Door check and closer. C. V. Berry. No. 1,171,497; Feb. 15; Gaz. vol. 223; p. 687.
Door check and closer. J. Gérard. No. 1,170,482; Feb. 1; Gaz. vol. 223; p. 252.
Door-check and open-door-locking device. W. J. Kelly. No. 1,171,053; Feb. 8; Gaz. vol. 223; p. 488.
Door-fastener. F. T. Skoglund. No. 1,171,671; Feb. 15; Gaz. vol. 223; p. 748.
Door fastener, Sliding-. C. Gibson. No. 1,173,047; Feb. 29; Gaz. vol. 223; p. 1658.
Door-hanger track. J. E. Moyer. No. 1,173,209; Feb. 29; Gaz. vol. 223; p. 1432.
Door-indicator. P. W. Waschau. No. 1,171,287; Feb. 8; Gaz. vol. 223; p. 572.
Door-lock. O. F. Swanson. No. 1,172,840; Feb. 22; Gaz. vol. 223; p. 1232.
Door lock, Sliding-. W. E. Snapp. No. 1,173,884; Feb. 29; Gaz. vol. 223; p. 1638.
Door, Metal-covered. A. Beyrle. No. 1,173,091; Feb. 22; Gaz. vol. 223; p. 1316.
Door-opener. S. E. Gillentine. No. 1,172,205; Feb. 15; Gaz. vol. 223; p. 937.
Door-opening means. M. J. Flannery. No. 1,171,032; Feb. 8; Gaz. vol. 223; p. 481.
Door-operating device, Sliding-. W. J. Stilling. No. 1,171,004; Feb. 8; Gaz. vol. 223; p. 471.
Door-operating mechanism. A. Gottschalk. No. 1,172,519; Feb. 22; Gaz. vol. 223; p. 1113.
Door-operating mechanism. H. Rowntree. No. 1,172,561; Feb. 22; Gaz. vol. 223; p. 1129.
Door-operating mechanism, Drop-. R. R. Weaver. No. 1,170,128; Feb. 1; Gaz. vol. 223; p. 131.
Door-operating mechanism, Holstway-. W. Rutan. No. 1,170,193; Feb. 1; Gaz. vol. 223; p. 155.
Door or the like, Metallic. C. W. Larson. No. 1,171,445; Feb. 15; Gaz. vol. 223; p. 669.
Door-securer. J. W. Simmons. No. 1,171,206; Feb. 8; Gaz. vol. 223; p. 504.
Door, Self-closing. J. L. Orness. No. 1,172,038; Feb. 15; Gaz. vol. 223; p. 882.

Door, Sliding. H. E. Van Orden. No. 1,173,399; Feb. 29; Gaz. vol. 223; p. 1468.
Door-spring. M. H. Daenitz. No. 1,172,013; Feb. 15; Gaz. vol. 223; p. 872.
Doors, Automatic closing device for sliding. L. A. Abbott. No. 1,169,755; Feb. 1; Gaz. vol. 223; p. 3.
Doors, Hold-open device for. J. Peterson. No. 1,170,491; Feb. 1; Gaz. vol. 223; p. 255.
Dough and like glutenous material, Apparatus for stretching. L. Embrey. No. 1,171,331; Feb. 8; Gaz. vol. 223; p. 587.
Dough-mixer. W. G. Kirchhoff. No. 1,171,963; Feb. 15; Gaz. vol. 223; p. 854.
Dough-mixing apparatus. H. Gottschalk. No. 1,172,353; Feb. 22; Gaz. vol. 223; p. 1050.
Dough-molding machine. E. A. Clark. No. 1,171,704; Feb. 15; Gaz. vol. 223; p. 759.
Dough-working apparatus. L. Embrey. No. 1,171,330; Feb. 8; Gaz. vol. 223; p. 586.
Draft-equalizer. L. E. Waterman. No. 1,170,583; Feb. 8; Gaz. vol. 223; p. 324.
Draft-preventing device. W. F. Caldwell. No. 1,173,555; Feb. 29; Gaz. vol. 223; p. 1522.
Draft-regulators, Steam-jet for. G. H. Scharf. No. 1,170,493; Feb. 1; Gaz. vol. 223; p. 256.
Draft-rigging, Friction-spring. E. E. Slick. No. 1,171,809; Feb. 15; Gaz. vol. 223; p. 796.
Draft-spring. W. A. Kimbell. No. 1,172,803; Feb. 22; Gaz. vol. 223; p. 1217.
Draft-support. T. H. Symington. No. 1,171,557; Feb. 15; Gaz. vol. 223; p. 708.
Drafting appliance. E. J. Early. No. 1,171,329; Feb. 8; Gaz. vol. 223; p. 586.
Drag-bar attachment. I. A. Schutt. No. 1,170,117; Feb. 1; Gaz. vol. 223; p. 128.
Draw-bench. G. W. Frohlich. No. 1,172,448; Feb. 22; Gaz. vol. 223; p. 1085.
Drawer and case, Cabinet. D. E. Hunter. No. 1,172,711; Feb. 22; Gaz. vol. 223; p. 1183.
Drawer guide, Furniture-. S. J. Hogan. No. 1,171,437; Feb. 15; Gaz. vol. 223; p. 666.
Drawer-head. E. W. Bauer. No. 1,172,189; Feb. 15; Gaz. vol. 223; p. 931.
Drawer-stop device. H. A. Dodge. No. 1,172,200; Feb. 15; Gaz. vol. 223; p. 935.
Drawing instrument. J. L. Matson. No. 1,170,174; Feb. 1; Gaz. vol. 223; p. 147.
Drawing-table. H. S. Kuhn. No. 1,171,523; Feb. 15; Gaz. vol. 223; p. 696.
Dredge, Hydraulic-ram. E. K. O'Brien. No. 1,170,030; Feb. 8; Gaz. vol. 223; p. 444.
Dredge sluice-jig. D. Steel. No. 1,173,465; Feb. 29; Gaz. vol. 223; p. 1489.
Dredge, Sweeping-. H. R. Walker. No. 1,170,581; Feb. 8; Gaz. vol. 223; p. 324.
Drier: *See*—
Centrifugal drier.
Fruit-drier.
Microscopic-slide drier.
Portable drier.
Drier. F. A. Hetherington. No. 1,173,188; Feb. 29; Gaz. vol. 223; p. 1392.
Drier. W. R. Ruggles. No. 1,171,143; Feb. 8; Gaz. vol. 223; p. 523.
Drying apparatus. G. H. Benjamin. No. 1,172,576; Feb. 22; Gaz. vol. 223; p. 1134.
Drying apparatus. T. I. Casey and T. Cox. No. 1,173,171; Feb. 29; Gaz. vol. 223; p. 1387.
Drying plant. W. J. Kenney. No. 1,172,291; Feb. 22; Gaz. vol. 223; p. 1028.
Drill: *See*—
Disk drill.
Expanding drill.
Fluid-operated drill.
Grain-drill.
Grain or fertilizer drill.
Drill attachment. J. A. Swanson. No. 1,171,556; Feb. 15; Gaz. vol. 223; p. 708.
Drill-feeding device, Breast-. T. A. Kelley. No. 1,173,356; Feb. 29; Gaz. vol. 223; p. 1453.
Drill-jar. E. L. Cleveland. No. 1,172,942; Feb. 22; Gaz. vol. 223; p. 1266.
Drill-press. M. Himoff. No. 1,171,123; Feb. 8; Gaz. vol. 223; p. 515.
Drill-testing apparatus. E. H. Obertop. No. 1,172,163; Feb. 15; Gaz. vol. 223; p. 923.
Drills, Device for removing stuck. R. C. Cameron. No. 1,171,317; Feb. 8; Gaz. vol. 223; p. 582.
Drills, Saddle-spring for. O. H. De Vaughn. No. 1,172,079; Feb. 22; Gaz. vol. 223; p. 1171.
Drilling and tapping attachment. W. J. Brennan. No. 1,170,041; Feb. 1; Gaz. vol. 223; p. 101.
Drilling and tapping machine, Portable. A. M. Lane. No. 1,170,171; Feb. 1; Gaz. vol. 223; p. 146.
Drilling-machine, Rotary. A. C. Zieratb. No. 1,173,138; Feb. 22; Gaz. vol. 223; p. 1333.
Drilling-rig, Combination. R. W. Stephens. No. 1,170,015; Feb. 1; Gaz. vol. 223; p. 91.
Drink-mixer. A. Thormahlen. No. 1,171,477; Feb. 15; Gaz. vol. 223; p. 680.
Drinking-cup. R. Corton. No. 1,171,431; Feb. 15; Gaz. vol. 223; p. 664.
Drinking-cup, Collapsible. C. Mettler. No. 1,170,553; Feb. 8; Gaz. vol. 223; p. 313.
Drinking-cup, Collapsible. W. O. Straight. No. 1,173,755; Feb. 29; Gaz. vol. 223; p. 1592.
Drinking-fountain. M. M. Marcuse. No. 1,172,818; Feb. 22; Gaz. vol. 223; p. 1222.
Drinking-fountain, Sanitary. L. A. Cooper. No. 1,170,878; Feb. 8; Gaz. vol. 223; p. 427.
Drinking-fountain, Sanitary. L. T. Haws. No. 1,171,517; Feb. 15; Gaz. vol. 223; p. 694.
Driving connecting means. C. O. Lucas. No. 1,169,844; Feb. 1; Gaz. vol. 223; p. 34.
Driving mechanism. A. W. Altorfer. No. 1,170,792; Feb. 8; Gaz. vol. 223; p. 397.
Driving mechanism. H. D. Jones. No. 1,170,644; Feb. 8; Gaz. vol. 223; p. 346.
Driving mechanism, Alternate rotary. E. T. Betker. No. 1,172,004; Feb. 15; Gaz. vol. 223; p. 869.
Driving mechanism, Intermittently-operating. A. C. Lindgren and G. G. Mandt. No. 1,170,832; Feb. 8; Gaz. vol. 223; p. 411.
Driving power and load, Gear for attaining a compensation between. G. von Saalfeld. No. 1,172,412; Feb. 22; Gaz. vol. 223; p. 1071.
Drop-feed lubricator. F. Lowry. No. 1,170,295; Feb. 1; Gaz. vol. 223; p. 189.
Drum, Brake-chain. W. S. Atwood. No. 1,172,249; Feb. 22; Gaz. vol. 223; p. 1013.
Drum, Sectional expanding. S. L. Hirschey. No. 1,173,967; Feb. 29; Gaz. vol. 223; p. 1664.
Dumping-machine. E. L. Gary. No. 1,170,240; Feb. 1; Gaz. vol. 223; p. 172.
Dust-guard. F. B. Harrison. No. 1,171,045; Feb. 8; Gaz. vol. 223; p. 486.
Dust-guard, Detachable. E. Morris. No. 1,170,660; Feb. 8; Gaz. vol. 223; p. 352.
Dust-pan with automatic device. W. Dupré. No. 1,169,939; Feb. 1; Gaz. vol. 223; p. 66.
Dye, Disazo. F. Ackermann. No. 1,173,077; Feb. 22; Gaz. vol. 223; p. 1311.
Dyes and making same, Fast yellow. R. Schüle. No. 1,172,061; Feb. 15; Gaz. vol. 223; p. 891.
Dyeing apparatus. D. M. Iley. No. 1,172,240; Feb. 15; Gaz. vol. 223; p. 949.
Dyeing apparatus, Yarn-. J. J. Fearon. No. 1,170,440; Feb. 1; Gaz. vol. 223; p. 237.
Dyeing-comb. C. M. Holden. No. 1,172,889; Feb. 22; Gaz. vol. 223; p. 1248.
Dynamo-cooling device. W. Gscheidlen. No. 1,170,444; Feb. 1; Gaz. vol. 223; p. 238.
Dynamo suspension. W. F. Richards. No. 1,171,649; Feb. 15; Gaz. vol. 223; p. 741.
Dynamos, Cooling. R. Rüdenberg and A. Zebrung. No. 1,170,192; Feb. 1; Gaz. vol. 223; p. 154.
Educational device. W. W. Holmes. No. 1,170,537; Feb. 8; Gaz. vol. 223; p. 308.
Egg-box. B. F. Bailey. No. 1,171,083; Feb. 8; Gaz. vol. 223; p. 498.
Egg box or carrier. N. H. Beckstrom. No. 1,170,729; Feb. 8; Gaz. vol. 223; p. 377.
Egg carrying and delivering device. J. P. Nagle. No. 1,170,776; Feb. 8; Gaz. vol. 223; p. 392.
Egg-case, Collapsible. L. Fargo. No. 1,172,779; Feb. 22; Gaz. vol. 223; p. 1207.
Egg-case filler and protector. E. E. Mollenhoff. No. 1,173,840; Feb. 29; Gaz. vol. 223; p. 1622.
Egg holder and carrier. J. M. Harr. No. 1,174,005; Feb. 29; Gaz. vol. 223; p. 1676.
Egg-poacher. P. J. Maguire. No. 1,170,922; Feb. 8; Gaz. vol. 223; p. 441.
Eggs, Preserving. S. F. Henderson. No. 1,174,008; Feb. 29; Gaz. vol. 223; p. 1677.
Electric-cable joints, Protective device for. P. Thorchio. No. 1,172,322; Feb. 22; Gaz. vol. 223; p. 1039.
Electric cables, Fault-locator for. H. M. Stoller. No. 1,170,017; Feb. 1; Gaz. vol. 223; p. 92.
Electric-circuit terminal. J. Amon. No. 1,174,027; Feb. 29; Gaz. vol. 223; p. 1684.
Electric circuits, Means for closing and opening. H. Voigt. No. 1,172,080; Feb. 15; Gaz. vol. 223; p. 895.
Electric condenser and making the same. E. Meirowsky. No. 1,173,452; Feb. 29; Gaz. vol. 223; p. 1486.
Electric conductors, Joining or bonding the junctions of metallic sheathing or armoring of. L. Sunderland. No. 1,173,304; Feb. 29; Gaz. vol. 223; p. 1460.
Electric conductors, Protecting device for. M. H. Loughridge. No. 1,172,147; Feb. 15; Gaz. vol. 223; p. 918.
Electric-conduit fitting. F. F. Skeel. No. 1,170,690; Feb. 8; Gaz. vol. 223; p. 366.
Electric controller. A. C. Eastwood. (Reissue.) No. 14,076; Feb. 29; Gaz. vol. 223; p. 1687.
Electric-current machines, Stator for alternating-. J. L. La Cour. No. 1,172,517; Feb. 22; Gaz. vol. 223; p. 1112.
Electric firing of materials and ores, Process and apparatus for the. W. H. Hampton. No. 1,171,117; Feb. 8; Gaz. vol. 223; p. 512.
Electric fixture. J. G. Turnbull. No. 1,172,220; Feb. 15; Gaz. vol. 223; p. 944.
Electric fixture, Adjustable. N. I. Berger. No. 1,171,831; Feb. 15; Gaz. vol. 223; p. 804.
Electric-fixture attachment. S. E. Cressey. No. 1,169,932; Feb. 1; Gaz. vol. 223; p. 64.
Electric flasher. O. L. Heeger. No. 1,174,007; Feb. 29; Gaz. vol. 223; p. 1677.
Electric furnace. I. Hochenbleikner. No. 1,173,960; Feb. 29; Gaz. vol. 223; p. 1662.
Electric heater. A. O. Bailey. No. 1,172,757; Feb. 22; Gaz. vol. 223; p. 1199.
Electric heater. H. W. Denhard. No. 1,171,104; Feb. 8; Gaz. vol. 223; p. 507.

Electric heater. W. S. Hadaway, Jr. No. 1,174,032; Feb. 29; Gaz. vol. 223; p. 1686.
Electric heater. S. Schneider. No. 1,171,258; Feb. 8; Gaz. vol. 223; p. 561.
Electric-light socket. P. M. Hotchkin. No. 1,173,803; Feb. 29; Gaz. vol. 223; p. 1669.
Electric-light sockets, Key-operating attachment for. E. G. Hayne. No. 1,172,286; Feb. 22; Gaz. vol. 223; p. 1027.
Electric-light wiring, Master-controlled system of. I. L. Matson. No. 1,170,824; Feb. 8; Gaz. vol. 223; p. 442.
Electric-lighting device. E. Essich. No. 1,171,509; Feb. 15; Gaz. vol. 223; p. 691.
Electric machine, Dynamo-. S. R. Bergman. No. 1,173,089; Feb. 22; Gaz. vol. 223; p. 1015.
Electric machine, Dynamo-. S. R. Bergman. No. 1,173,090; Feb. 22; Gaz. vol. 223; p. 1315.
Electric machine, Dynamo-. E. F. Collins. No. 1,172,944; Feb. 22; Gaz. vol. 223; p. 1267.
Electric machine, Dynamo-. A. H. Neuland. No. 1,171,134; Feb. 8; Gaz. vol. 223; p. 519.
Electric machine, Dynamo-. A. H. Neuland. No. 1,171,352; Feb. 8; Gaz. vol. 223; p. 594.
Electric machine, Dynamo-. E. W. Stull. No. 1,173,153; Feb. 22; Gaz. vol. 223; p. 1339.
Electric machine, Synchronous dynamo-. L. Fleischmann. No. 1,172,968; Feb. 22; Gaz. vol. 223; p. 1275.
Electric machines, Remote control of dynamo-. H. R. Summerhayes. No. 1,173,058; Feb. 22; Gaz. vol. 223; p. 1305.
Electric machines, Starting synchronous. A. B. Owen. No. 1,171,635; Feb. 15; Gaz. vol. 223; p. 730.
Electric-meter-testing switch. J. Sachs. No. 1,170,113; Feb. 1; Gaz. vol. 223; p. 126.
Electric motor. N. O. Lindstrom. No. 1,171,964; Feb. 15; Gaz. vol. 223; p. 854.
Electric switch. T. A. C. Both. No. 1,172,928; Feb. 22; Gaz. vol. 223; p. 1261.
Electric switch. T. A. C. Both. No. 1,172,929; Feb. 22; Gaz. vol. 223; p. 1261.
Electric switch. G. Griffith. No. 1,173,200; Feb. 29; Gaz. vol. 223; p. 1418.
Electric switch. C. J. Klein. No. 1,171,850; Feb. 15; Gaz. vol. 223; p. 811.
Electric switch. E. R. Merriam. No. 1,171,864; Feb. 15; Gaz. vol. 223; p. 816.
Electric switch. C. A. Palmgren. No. 1,173,460; Feb. 29; Gaz. vol. 223; p. 1488.
Electric switch. F. J. Ravlin. No. 1,170,190; Feb. 1; Gaz. vol. 223; p. 153.
Electric-wire-mounting device. G. P. Jacobson. No. 1,169,960; Feb. 1; Gaz. vol. 223; p. 72.
Electrical apparatus. W. Küchling. No. 1,173,004; Feb. 22; Gaz. vol. 223; p. 1287.
Electrical apparatus, Coil for. L. W. Chubb. No. 1,171,501; Feb. 15; Gaz. vol. 223; p. 719.
Electrical apparatus, Method of and means for testing. L. W. Chubb. No. 1,170,608; Feb. 8; Gaz. vol. 223; p. 333.
Electrical apparatus, Resistance unit for. A. J. Loguin. No. 1,171,059; Feb. 8; Gaz. vol. 223; p. 490.
Electrical conductors, Attachment-plug for. C. J. Klein. No. 1,171,851; Feb. 15; Gaz. vol. 223; p. 812.
Electrical conductors, Ground connection for. D. Rosen. No. 1,171,142; Feb. 8; Gaz. vol. 223; p. 522.
Electrical conductors, Snap clump or grip for. T. F. Johnson, Jr. No. 1,172,604; Feb. 22; Gaz. vol. 223; p. 1143.
Electrical connector. W. H. Adams. No. 1,170,034; Feb. 1; Gaz. vol. 223; p. 99.
Electrical contact. H. Anschütz-Kaempfe. No. 1,170,388; Feb. 1; Gaz. vol. 223; p. 221.
Electrical control apparatus. R. Amberton. No. 1,173,334; Feb. 29; Gaz. vol. 223; p. 1445.
Electrical distribution and control, System of. F. B. MacNab. No. 1,171,221; Feb. 15; Gaz. vol. 223; p. 941.
Electrical flame-arc furnace for oxidizing the nitrogen of the air. H. Bonnerie. No. 1,173,699; Feb. 29; Gaz. vol. 223; p. 1572.
Electrical heaters, Thermostatic circuit-breaking apparatus for. J. E. Harvey. No. 1,174,006; Feb. 29; Gaz. vol. 223; p. 1677.
Electrical instrument. O. A. Knopp. No. 1,171,213; Feb. 8; Gaz. vol. 223; p. 545.
Electrical machines, Method of running and apparatus for protecting. G. Meyer and A. Kuehns. No. 1,172,821; Feb. 22; Gaz. vol. 223; p. 1224.
Electrical resistance. C. E. Hay and H. W. Sullivan. No. 1,170,811; Feb. 8; Gaz. vol. 223; p. 404.
Electrical system. L. W. Chubb. No. 1,171,390; Feb. 8; Gaz. vol. 223; p. 611.
Electrically-heated instruments, Connector for. F. Kuhn and F. E. Shallor. No. 1,170,168; Feb. 1; Gaz. vol. 223; p. 145.
Electricity, System for supplying. I. J. Reuter. No. 1,169,866; Feb. 1; Gaz. vol. 223; p. 41.
Electrode. C. R. Krueger. No. 1,173,005; Feb. 22; Gaz. vol. 223; p. 1287.
Electrode, Arc-light. G. Egly. No. 1,169,942; Feb. 1; Gaz. vol. 223; p. 66.
Electrode, Arc-light. W. R. Mott. No. 1,173,370; Feb. 29; Gaz. vol. 223; p. 1458.
Electrodes, Burning carbon. F. Nagelschmitz. No. 1,170,313; Feb. 1; Gaz. vol. 223; p. 195.
Electroller-switch. T. C. Strout. No. 1,172,178; Feb. 15; Gaz. vol. 223; p. 928.
Electrolytic cell. W. C. Bucknam. No. 1,172,932; Feb. 22; Gaz. vol. 223; p. 1262.
Electrolytic meter. J. N. Tuttle. No. 1,171,279; Feb. 8; Gaz. vol. 223; p. 568.
Electrolytic plant. G. Halter. No. 1,172,887; Feb. 22; Gaz. vol. 223; p. 1247.
Electrolytic rectifier. R. D. Mershon. No. 1,171,909; Feb. 15; Gaz. vol. 223; p. 850.
Electromagnet. A. A. Ziegler. No. 1,173,240; Feb. 29; Gaz. vol. 223; p. 1410.
Electromagnetic indicator. R. A. Fessenden. No. 1,172,018; Feb. 15; Gaz. vol. 223; p. 875.
Electromagnetic switch. J. Eaton. No. 1,172,962; Feb. 22; Gaz. vol. 223; p. 1273.
Electromagnetic waves, System of distant selection and control by means of. L. B. and R. A. Clark. No. 1,172,515; Feb. 22; Gaz. vol. 223; p. 1111.
Electroplates, Making. A. R. Warren. No. 1,171,819; Feb. 15; Gaz. vol. 223; p. 799.
Electrotherapeutic apparatus, Portable. J. E. Seeley. No. 1,173,540; Feb. 29; Gaz. vol. 223; p. 1516.
Elevator: *See*—
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Elevator. J. E. Boyce. No. 1,170,403; Feb. 1; Gaz. vol. 223; p. 225.
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Elevator automatic brake. P. Kesten and H. Osborne. No. 1,173,438; Feb. 29; Gaz. vol. 223; p. 1481.
Elevator cable and rope lock. S. W. Alexander. No. 1,173,140; Feb. 22; Gaz. vol. 223; p. 1333.
Elevator-cars, Safety control system for. H. G. Hillman and S. M. Ward, Jr. No. 1,171,518; Feb. 15; Gaz. vol. 223; p. 694.
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Elevator-guide-rail lubricator. C. V. Warren. No. 1,171,157; Feb. 8; Gaz. vol. 223; p. 527.
Elevator-hatchway-door-operating mechanism. H. Rowntree. No. 1,172,562; Feb. 22; Gaz. vol. 223; p. 1129.
Elevator-lock. D. F. Kilgour. No. 1,170,759; Feb. 8; Gaz. vol. 223; p. 387.
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Elevator safety control device. A. A. Morse. No. 1,172,549; Feb. 22; Gaz. vol. 223; p. 1124.
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Elevator safety device. A. J. Rosell. No. 1,171,253; Feb. 8; Gaz. vol. 223; p. 559.
Elevator safety system. G. S. Williamson. No. 1,173,235; Feb. 29; Gaz. vol. 223; p. 1408.
Elevator-shaft-gate lock. W. A. Williams. No. 1,170,032; Feb. 1; Gaz. vol. 223; p. 98.
Elevator signaling apparatus. P. T. Kenny. No. 1,173,192; Feb. 29; Gaz. vol. 223; p. 1393.
Elevators, Ultimate-limit stop for. A. M. Coyle. No. 1,171,095; Feb. 8; Gaz. vol. 223; p. 503.
Embroidery background along an embroidered edge, Apparatus for cutting. A. Tscherne. No. 1,171,811; Feb. 15; Gaz. vol. 223; p. 796.
Embroidery-frame. A. Hofmann. No. 1,171,612; Feb. 15; Gaz. vol. 223; p. 727.
Embroidery-hoops, Adjustable support for. J. Nusser. No. 1,171,871; Feb. 15; Gaz. vol. 223; p. 818.
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End construction. T. H. Symington. (Reissue.) No. 14,069; Feb. 15; Gaz. vol. 223; p. 955.
End gate, Wagon. C. Polson. No. 1,173,857; Feb. 29; Gaz. vol. 223; p. 1628.
Energy by electromagnetic waves, Transmitting. R. A. Fessenden. No. 1,172,017; Feb. 15; Gaz. vol. 223; p. 875.
Energy from a source of natural or waste heat, Method and means for taking. C. H. Beadle. No. 1,171,305; Feb. 8; Gaz. vol. 223; p. 578.
Engine: *See*—
Heating-engine.
Gas-engine.
Gas traction-engine.
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Rotary engine.
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Engine. C. Day and G. E. Windeler. No. 1,173,415; Feb. 29; Gaz. vol. 223; p. 1474.
Engine. G. W. Denning. No. 1,170,966; Feb. 8; Gaz. vol. 223; p. 456.
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Engine construction. J. Cochand. No. 1,173,412; Feb. 29; Gaz. vol. 223; p. 1472.
Engine-controlling mechanism, High-compression internal-combustion. W. E. Ver Planck. No. 1,170,200; Feb. 1; Gaz. vol. 223; p. 157.
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Engine crank-case and bearing. E. A. Nelson. No. 1,170,663; Feb. 8; Gaz. vol. 223; p. 353.

Engine drive, Traction-. G. K. Cole. No. 1,173,480; Feb. 29; Gaz. vol. 223; p. 1408.
Engine-exhaust deflector, Automobile-. C. F. Hess. No. 1,173,801; Feb. 29; Gaz. vol. 223; p. 1608.
Engine frame, Traction-. W. J. McVicker. No. 1,173,594; Feb. 29; Gaz. vol. 223; p. 1536.
Engine-lubricator. E. A. Nelson. No. 1,173,209; Feb. 29; Gaz. vol. 223; p. 1399.
Engine primer, Gas-. H. E. Whiting. No. 1,171,159; Feb. 8; Gaz. vol. 223; p. 527.
Engine self-starter. R. H. Hassler. No. 1,171,948; Feb. 15; Gaz. vol. 223; p. 848.
Engine self-starter, Explosion-. A. Winton and H. B. Anderson. No. 1,171,292; Feb. 8; Gaz. vol. 223; p. 573.
Engine-starter. V. Bendix. No. 1,172,864; Feb. 22; Gaz. vol. 223; p. 1238.
Engine-starter. V. Bendix. No. 1,173,766; Feb. 29; Gaz. vol. 223; p. 1590.
Engine-starter, Electric. M. P. Mitchell. No. 1,171,867; Feb. 15; Gaz. vol. 223; p. 817.
Engine starter, Internal-combustion-. F. S. Bacon. No. 1,174,010; Feb. 29; Gaz. vol. 223; p. 1678.
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Engine-starting device, Motor-vehicle-. C. O. Hembree. No. 1,170,812; Feb. 8; Gaz. vol. 223; p. 404.
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Engine timer, Internal-combustion-. T. B. Shryock. No. 1,172,173; Feb. 15; Gaz. vol. 223; p. 927.
Engines, Air-controller for explosive-. W. H. Oldham. No. 1,171,457; Feb. 15; Gaz. vol. 223; p. 672.
Engines, Air-cooling system for internal-combustion. J. Wilkinson. No. 1,170,716; Feb. 8; Gaz. vol. 223; p. 372.
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Engines and machine-tools, Angular spacing and feeding mechanism for dividing. H. W. Falk and P. C. Day. No. 1,172,778; Feb. 22; Gaz. vol. 223; p. 1207.
Engines, Apparatus for mixing atomized fuel with the air in internal-combustion. E. C. Blackstone, F. and E. Carter. No. 1,171,018; Feb. 8; Gaz. vol. 223; p. 476.
Engines, Atomizer for internal-combustion. L. B. Harris. No. 1,171,787; Feb. 15; Gaz. vol. 223; p. 787.
Engines, Attachment for installing magnetos on gas-. W. G. Swift. (Reissue.) No. 14,060; Feb. 8; Gaz. vol. 223; p. 616.
Engines, Automatic spark-controller for. C. V. Hess. No. 1,173,511; Feb. 29; Gaz. vol. 223; p. 1508.
Engines, Automatic temperature-regulator for explosion-. I. N. Benjamin and C. Lynch. No. 1,170,730; Feb. 8; Gaz. vol. 223; p. 377.
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Engines, Mixing device for use with explosion-. H. W. Allen. No. 1,173,157; Feb. 29; Gaz. vol. 223; p. 1381.
Engines, Priming-cup for V-type. W. H. Roberts. No. 1,170,993; Feb. 8; Gaz. vol. 223; p. 407.
Engines, Sparking plug for internal-combustion. C. Spada. No. 1,173,393; Feb. 29; Gaz. vol. 223; p. 1466.
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Entomological specimens, Spreading-board for. X. M., L. G., and C. F. McGlashan. No. 1,172,816; Feb. 22; Gaz. vol. 223; p. 1221.
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Envelop. H. Trenchard, Jr. No. 1,171,006; Feb. 8; Gaz. vol. 223; p. 472.
Envelop. W. Zuckerman. No. 1,172,097; Feb. 15; Gaz. vol. 223; p. 902.
Envelop-attaching clip. T. Di Terlizzi. No. 1,171,707; Feb. 15; Gaz. vol. 223; p. 760.
Envelop, Coin-mailing. P. I. McCabe. No. 1,171,735; Feb. 15; Gaz. vol. 223; p. 770.
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Envelop, Safety-. G. J. Rougeux. No. 1,173,869; Feb. 29; Gaz. vol. 223; p. 1632.
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Excavating-machine. O. Hetlesaeter. No. 1,170,905; Feb. 8; Gaz. vol. 223; p. 435.
Excavating-machines, Swinging mechanism for booms of. C. B. King and B. Jacoby. No. 1,169,836; Feb. 1; Gaz. vol. 223; p. 31.
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Explosion-arrester. C. Ellis. No. 1,170,055; Feb. 1; Gaz. vol. 223; p. 106.
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Expressing-press. A. W. French. No. 1,172,783; Feb. 22; Gaz. vol. 223; p. 1209.
Extension-table. W. F. Blue. No. 1,173,040; Feb. 29; Gaz. vol. 223; p. 1555.
Extension-table. W. L. Pfefferkorn, A. P. Schloerb, and A. H. Hammetter. No. 1,170,562; Feb. 8; Gaz. vol. 223; p. 316.
Extension-table. H. Wiesenfeld. No. 1,173,992; Feb. 29; Gaz. vol. 223; p. 1671.
Extraction process. E. O. Barstow. No. 1,171,408; Feb. 15; Gaz. vol. 223; p. 650.
Extractor: *See*—
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Eyeglass and spectacle mounting. E. R. Durgin and W. S. Searles. No. 1,173,151; Feb. 22; Gaz. vol. 223; p. 1338.
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Eyeglass-mounting. L. F. Adt. No. 1,173,912; Feb. 29; Gaz. vol. 223; p. 1646.
Eyeglass-mounting. C. L. Merry. No. 1,173,981; Feb. 29; Gaz. vol. 223; p. 1668.
Eyeglass-mounting. C. L. Merry. No. 1,173,982; Feb. 29; Gaz. vol. 223; p. 1668.
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Fabric: *See*—
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Fan. G. H. Graves. No. 1,171,190; Feb. 8; Gaz. vol. 223; p. 537.
Fan. G. B. Griffin. No. 1,173,568; Feb. 29; Gaz. vol. 223; p. 1526.
Fan. J. W. Hayes. No. 1,173,800; Feb. 29; Gaz. vol. 223; p. 1608.
Fan. S. D. Wills. No. 1,173,908; Feb. 29; Gaz. vol. 223; p. 1645.
Fan attachment. C. R. Miltenberger. No. 1,172,822; Feb. 22; Gaz. vol. 223; p. 1224.
Fan, Hydraulic. A. Czereplenski and J. Baran. No. 1,171,322; Feb. 8; Gaz. vol. 223; p. 584.
Fan, Revolving hand-. V. M. Kluge. No. 1,171,727; Feb. 15; Gaz. vol. 223; p. 766.
Fare-box. H. Gebhart. No. 1,173,258; Feb. 29; Gaz. vol. 223; p. 1417.
Fare-register. O. N. Moore. No. 1,171,625; Feb. 15; Gaz. vol. 223; p. 733.
Fare-registering mechanism, Electric switch for automatic passenger-. H. Savage and W. L. Baker. No. 1,173,609; Feb. 29; Gaz. vol. 223; p. 1542.
Fastener. C. Joseph. No. 1,170,542; Feb. 8; Gaz. vol. 223; p. 309.
Fastener, Buckstay-. H. J. McGrail. No. 1,173,116; Feb. 22; Gaz. vol. 223; p. 1324.
Fastener, Separable. R. R. Grooms. No. 1,172,703; Feb. 22; Gaz. vol. 223; p. 1180.
Fasteners, Machine for making corrugated. S. C. Cary and C. S. Weeks. No. 1,172,257; Feb. 22; Gaz. vol. 223; p. 1016.
Fastening device. H. Nordvall and M. Peterson. No. 1,169,859; Feb. 1; Gaz. vol. 223; p. 39.
Faucet. W. T. Taggart. No. 1,173,895; Feb. 29; Gaz. vol. 223; p. 1641.
Faucet. G. W. Topping. No. 1,171,369; Feb. 8; Gaz. vol. 223; p. 600.
Faucet, Self-closing. J. V. Grace. No. 1,171,514; Feb. 15; Gaz. vol. 223; p. 693.
Faucet-valve. T. F. Payne. No. 1,172,900; Feb. 22; Gaz. vol. 223; p. 1252.

Feather boas and the like, Apparatus for making. C. L. Kaufman. No. 1,170,820; Feb. 8; Gaz. vol. 223; p. 406.

Feed-cutting machine. A. Mundt. No. 1,169,858; Feb. 1; Gaz. vol. 223; p. 39.

Feed-rack for calves. M. J. Hager. No. 1,172,985; Feb. 22; Gaz. vol. 223; p. 1280.

Feed-water regulator. J. J. Buckley. No. 1,170,044; Feb. 1; Gaz. vol. 223; p. 102.

Feed-water regulator. F. L. Ray. No. 1,171,643; Feb. 15; Gaz. vol. 223; p. 738.

Feed-water regulator, Boiler. R. W. Andrews. No. 1,172,243; Feb. 15; Gaz. vol. 223; p. 950.

Feeder, Poultry-. G. H. Moore. No. 1,170,773; Feb. 8; Gaz. vol. 223; p. 391.

Feeding-machine, Automatic. E. B. Roby. No. 1,170,492; Feb. 1; Gaz. vol. 223; p. 255.

Feeding mechanism, Automatic. R. G. Clark. No. 1,169,925; Feb. 1; Gaz. vol. 223; p. 62.

Feeding or loading apparatus. F. Zaltz. No. 1,171,686; Feb. 15; Gaz. vol. 223; p. 753.

Feet and raising the falling arches thereof, Support for weak. B. A. Lewis. No. 1,172,811; Feb. 22; Gaz. vol. 223; p. 1219.

Feldspathic and phosphate rock, Treating. H. P. Bassett. No. 1,172,420; Feb. 22; Gaz. vol. 223; p. 1074.

Fence-post. J. W. Best. No. 1,172,577; Feb. 22; Gaz. vol. 223; p. 1134.

Fence-post. P. J. Hindmarsh. No. 1,169,821; Feb. 1; Gaz. vol. 223; p. 25.

Fence-post. P. J. Hindmarsh. No. 1,169,822; Feb. 1; Gaz. vol. 223; p. 25.

Fence-post. P. J. Hindmarsh. No. 1,169,823; Feb. 1; Gaz. vol. 223; p. 26.

Fence-post. H. D. Salins. No. 1,170,194; Feb. 1; Gaz. vol. 223; p. 155.

Fence-post, Metallic. Q. L. Flarida. No. 1,170,230; Feb. 1; Gaz. vol. 223; p. 168.

Fence-wire clamp. S. P. Leverich. No. 1,173,199; Feb. 29; Gaz. vol. 223; p. 1396.

Fender: *See*—
Automobile, &c., fender. Car safety-fender.
Car-fender.

Ferroconcrete floors having a level undersurface, Construction of. H. Hauss. No. 1,172,285; Feb. 22; Gaz. vol. 223; p. 1026.

Ferrosilicon, Producing. H. C. Harrison. No. 1,171,719; Feb. 15; Gaz. vol. 223; p. 764.

Fertilizer-distributer. L. H. Duke. No. 1,173,937; Feb. 29; Gaz. vol. 223; p. 1655.

Fertilizer-distributer. C. R. Kelly. No. 1,171,960; Feb. 15; Gaz. vol. 223; p. 853.

Fertilizers, Making. S. B. Newberry and H. N. Barrett. No. 1,173,303; Feb. 29; Gaz. vol. 223; p. 1434.

Fifth-wheel and axle drive, Combined. N. N. Williams. No. 1,170,717; Feb. 8; Gaz. vol. 223; p. 372.

Fifth-wheel, Vehicle. L. T. Dunning. No. 1,171,708; Feb. 15; Gaz. vol. 223; p. 760.

Filaments, Preparing metallic. R. H. Henderson. No. 1,169,819; Feb. 1; Gaz. vol. 223; p. 25.

File-box. W. J. Kennedy. No. 1,173,002; Feb. 22; Gaz. vol. 223; p. 1286.

File-holder. W. Berkman. No. 1,173,164; Feb. 29; Gaz. vol. 223; p. 1384.

File, Letter-. J. H. Baugh. No. 1,172,190; Feb. 15; Gaz. vol. 223; p. 932.

File or rasp. J. Ambicky. No. 1,170,950; Feb. 8; Gaz. vol. 223; p. 451.

Filing appliance. E. B. Moseley. No. 1,170,312; Feb. 1; Gaz. vol. 223; p. 195.

Filing appliance. E. B. Moseley. No. 1,170,775; Feb. 8; Gaz. vol. 223; p. 392.

Filing device. R. McKnight. No. 1,171,529; Feb. 15; Gaz. vol. 223; p. 698.

Filing device. H. A. Wardy. No. 1,170,582; Feb. 8; Gaz. vol. 223; p. 324.

Filing mechanism for letter-files. H. Schwartz. No. 1,169,876; Feb. 1; Gaz. vol. 223; p. 45.

Fillet-machine for applying metallic leaf, Automatic self-driven. A. S. Jaquith. No. 1,169,830; Feb. 1; Gaz. vol. 223; p. 29.

Filling and crowning mechanism, Combined. A. A. Carper. No. 1,172,256; Feb. 22; Gaz. vol. 223; p. 1015.

Filling-machine. P. J. Saulson. No. 1,171,356; Feb. 8; Gaz. vol. 223; p. 595.

Film-cartridge. J. A. Robertson. No. 1,170,674; Feb. 8; Gaz. vol. 223; p. 357.

Film-feeding mechanism. F. E. Artz. No. 1,169,758; Feb. 1; Gaz. vol. 223; p. 4.

Film-feeding mechanism. J. Proksa. No. 1,170,991; Feb. 8; Gaz. vol. 223; p. 466.

Film-mender. A. J. Bernard. No. 1,173,142; Feb. 22; Gaz. vol. 223; p. 1334.

Film-storage safe. G. F. Brown. No. 1,170,043; Feb. 1; Gaz. vol. 223; p. 101.

Films or pellicles detachably secured to a paper backing or the like, Producing. J. Blondel and A. Chopin. No. 1,170,506; Feb. 8; Gaz. vol. 223; p. 297.

Films, plates, or sensitized photographic material, Light-proof retainer for. E. Stott. No. 1,172,072; Feb. 15; Gaz. vol. 223; p. 893.

Filter. H. W. Perkins. No. 1,172,728; Feb. 22; Gaz. vol. 223; p. 1187.

Filter, Coffee-. H. A. Sparber. No. 1,171,675; Feb. 15; Gaz. vol. 223; p. 749.

Filter, Gasolene-. T. J. Horan. No. 1,169,826; Feb. 1; Gaz. vol. 223; p. 27.

Filter mediums, Cleaning. G. J. Salisbury. No. 1,171,892; Feb. 15; Gaz. vol. 223; p. 827.

Filtering, Coagulant for. J. W. Block. No. 1,173,698; Feb. 29; Gaz. vol. 223; p. 1572.

Finger impressions, Taking. H. Jorgensen. No. 1,170,273; Feb. 1; Gaz. vol. 223; p. 182.

Finger-ring. J. Finberg. No. 1,171,030; Feb. 8; Gaz. vol. 223; p. 481.

Finish-remover. C. Ellis. No. 1,169,783; Feb. 1; Gaz. vol. 223; p. 12.

Finish-remover. C. Ellis. No. 1,172,772; Feb. 22; Gaz. vol. 223; p. 1205.

Finish-remover. C. Ellis. No. 1,172,773; Feb. 22; Gaz. vol. 223; p. 1206.

Fire-alarm, Electric. J. L. Weathers. No. 1,172,852; Feb. 22; Gaz. vol. 223; p. 1233.

Fire-alarm signal system. J. McFell. No. 1,171,129; Feb. 8; Gaz. vol. 222; p. 517.

Fire-alarm system, Automatic. W. Z. Wilkinson. No. 1,173,072; Feb. 22; Gaz. vol. 223; p. 1310.

Fire and explosion, Means for safeguarding closed vessels against. P. Gingerich. No. 1,172,884; Feb. 22; Gaz. vol. 223; p. 1245.

Fire-boxes, Baffle means for. E. P. Stevens. No. 1,172,318; Feb. 22; Gaz. vol. 223; p. 1037.

Fire-door apparatus. F. W. Martin. No. 1,171,451; Feb. 15; Gaz. vol. 223; p. 670.

Fire-door device. S. D. Rosenfelt. No. 1,171,463; Feb. 15; Gaz. vol. 223; p. 674.

Fire-escape. J. J. Barrett. No. 1,169,760; Feb. 1; Gaz. vol. 223; p. 4.

Fire-escape. P. Vescovi and E. Gobatti. No. 1,172,753; Feb. 22; Gaz. vol. 223; p. 1198.

Fire-escapes, Alarm system for. D. S. Burkhart. No. 1,171,088; Feb. 8; Gaz. vol. 223; p. 501.

Fire-extinguisher. W. T. Charles. No. 1,170,513; Feb. 8; Gaz. vol. 223; p. 299.

Fire-extinguisher, Automatic. G. O. Liljegren. No. 1,172,469; Feb. 22; Gaz. vol. 223; p. 1094.

Fire-hose coupling. N. Tregloune. No. 1,173,061; Feb. 22; Gaz. vol. 223; p. 1306.

Firearm. E. W. Thompson. No. 1,173,687; Feb. 29; Gaz. vol. 223; p. 1568.

Firearm, Pocket-. L. L. Rogers. No. 1,173,464; Feb. 29; Gaz. vol. 223; p. 1489.

Firearm, Semi-automatic. J. W. C. Young. No. 1,173,910; Feb. 29; Gaz. vol. 223; p. 1646.

Firearms, Cartridge-case extractor for. H. Stamm. No. 1,170,014; Feb. 1; Gaz. vol. 223; p. 90.

Firearms, Short straight-pull breech-action for military hand-. H. Stamm. No. 1,172,969; Feb. 15; Gaz. vol. 223; p. 892.

Firearms, Wire-cutting attachment for. J. C. Doust. No. 1,173,936; Feb. 29; Gaz. vol. 223; p. 1654.

Fireproof building-wall. W. E. Wilson. No. 1,171,913; Feb. 15; Gaz. vol. 223; p. 835.

Fireproof door. J. A. Wheeler. No. 1,171,158; Feb. 8; Gaz. vol. 223; p. 527.

Firing automatically smudge-pots in orchards, Means for. R. A. Smith. No. 1,170,011; Feb. 1; Gaz. vol. 223; p. 90.

Fish-catching grapple. O. F. Immell. No. 1,171,440; Feb. 15; Gaz. vol. 223; p. 667.

Fish-hook and trap, Combined. J. W. Ferree. No. 1,172,780; Feb. 22; Gaz. vol. 223; p. 1208.

Fish-plate, bond, and protector, Combined. L. D. Vaughan and W. P. Samples. No. 1,172,078; Feb. 15; Gaz. vol. 223; p. 895.

Fish-spear. S. F. Henderson. No. 1,171,432; Feb. 15; Gaz. vol. 223; p. 664.

Fish, &c., Tool for dressing. D. L. Potter. No. 1,171,241; Feb. 8; Gaz. vol. 223; p. 555.

Fishing apparatus. R. S. Marsh. No. 1,173,827; Feb. 29; Gaz. vol. 223; p. 1617.

Fishing-reel. R. B. Benjamin. No. 1,172,422; Feb. 22; Gaz. vol. 223; p. 1074.

Fishing-tool. I. Trevino. No. 1,172,180; Feb. 15; Gaz. vol. 223; p. 928.

Flange-trimming apparatus. W. C. Bucknam. No. 1,172,933; Feb. 22; Gaz. vol. 223; p. 1263.

Flatting finish composition and making same. C. Ellis. No. 1,173,183; Feb. 29; Gaz. vol. 223; p. 1391.

Flexible coupling. E. J. Hardy. No. 1,172,988; Feb. 22; Gaz. vol. 223; p. 1282.

Floating cutter and holder. F. Diebold. No. 1,170,224; Feb. 1; Gaz. vol. 223; p. 166.

Floor-fitting and connection, Offset. P. M. Hotchkin. No. 1,173,804; Feb. 29; Gaz. vol. 223; p. 1669.

Floor or wall screed. T. Z. Merritt. No. 1,171,452; Feb. 15; Gaz. vol. 223; p. 671.

Floor-scraper. W. A. Papworth. No. 1,170,319; Feb. 1; Gaz. vol. 223; p. 197.

Flow-indicating means for distribution systems. J. D. Nelson. No. 1,170,489; Feb. 1; Gaz. vol. 223; p. 254.

Flow-measuring apparatus. J. W. Gumble. No. 1,172,351; Feb. 22; Gaz. vol. 223; p. 1049.

Flow-meter. L. A. Sheldon. No. 1,170,195; Feb. 1; Gaz. vol. 223; p. 155.

Flow-meter for marine purposes. J. Wilkinson. No. 1,170,205; Feb. 1; Gaz. vol. 223; p. 160.

Flow-meter, Indicating and recording. J. Wilkinson. No. 1,170,204; Feb. 1; Gaz. vol. 223; p. 159.

Flow of fluid to and from an air-tight chamber, Mechanism for controlling the. C. E. H. Armbruster. No. 1,172,661; Feb. 22; Gaz. vol. 223; p. 1163.

Flow-proportioning means. G. H. Gibson. No. 1,174,003; Feb. 29; Gaz. vol. 223; p. 1675.

Flow-regulator, Thermostatic arch. F. H. Hopkins. No. 1,172,709; Feb. 22; Gaz. vol. 223; p. 1182.

Flower-box. T. P. Bolger. No. 1,170,402; Feb. 1; Gaz. vol. 223; p. 224.

Flue-scraper. E. Köpke. No. 1,172,308; Feb. 22; Gaz. vol. 223; p. 1055.

Flue structure. G. C. Royse. No. 1,170,936; Feb. 8; Gaz. vol. 223; p. 446.

Flue-tube superheater elements, Cooling arrangement for. P. Thomsen. No. 1,172,407; Feb. 22; Gaz. vol. 223; p. 1069.

Flues and tubes, Cutting-tool for. F. A. Grier, Jr. No. 1,173,953; Feb. 29; Gaz. vol. 223; p. 1659.

Fluid-compressor. J. S. Barner. No. 1,171,017; Feb. 8; Gaz. vol. 223; p. 476.

Fluid-controlling apparatus. H. Sieben. No. 1,169,877; Feb. 1; Gaz. vol. 223; p. 45.

Fluid-fuel-burner mixer. W. C. Lindemann and K. D. Camp. No. 1,170,765; Feb. 8; Gaz. vol. 223; p. 389.

Fluid heater, Motor-. O. A. Kreutzberg. No. 1,170,976; Feb. 8; Gaz. vol. 223; p. 460.

Fluid-operable mechanism. R. Janney and H. D. Williams. No. 1,172,288; Feb. 22; Gaz. vol. 223; p. 1027.

Fluid-operated drill. C. H. Peck. No. 1,172,901; Feb. 22; Gaz. vol. 223; p. 1252.

Fluid-pressure indicator, Electrical. F. J. Troll. No. 1,171,480; Feb. 15; Gaz. vol. 223; p. 681.

Fluid system. G. T. Buxton and S. A. Abbey. No. 1,172,938; Feb. 22; Gaz. vol. 223; p. 1264.

Fluids, Apparatus for regulating the temperature of. H. Darwin and C. C. Mason. No. 1,170,614; Feb. 8; Gaz. vol. 223; p. 336.

Flushometer. J. L. Beck. No. 1,171,085; Feb. 8; Gaz. vol. 223; p. 499.

Fly-killing device. H. L. Bruen. No. 1,170,408; Feb. 1; Gaz. vol. 223; p. 227.

Fly-leafing machine. C. W. Hobbs. No. 1,171,436; Feb. 15; Gaz. vol. 223; p. 666.

Fly-net. W. Erdmann. No. 1,171,508; Feb. 15; Gaz. vol. 223; p. 691.

Fly-trap. L. S. Couplin. No. 1,172,767; Feb. 22; Gaz. vol. 223; p. 1203.

Fly-trap. L. Jacobs. No. 1,172,211; Feb. 15; Gaz. vol. 223; p. 938.

Fly-trap. T. Nakamigawa. No. 1,173,846; Feb. 29; Gaz. vol. 223; p. 1624.

Fly-trap for screen-doors. J. A. Foust. No. 1,170,234; Feb. 1; Gaz. vol. 223; p. 170.

Flying-machine. A. L. Alday. No. 1,171,102; Feb. 8; Gaz. vol. 223; p. 528.

Flying-machine. B. Beier. No. 1,172,338; Feb. 22; Gaz. vol. 223; p. 1045.

Flying-machine. J. J. Millin. No. 1,171,865; Feb. 15; Gaz. vol. 223; p. 816.

Flying-machine. E. Taylor. No. 1,171,075; Feb. 8; Gaz. vol. 223; p. 495.

Flying-machine. G. M. Wanee. No. 1,172,182; Feb. 15; Gaz. vol. 223; p. 929.

Flying-machine safety appliance. G. Glem. No. 1,173,948; Feb. 29; Gaz. vol. 223; p. 1658.

Focusing device. A. Wollensak. No. 1,170,206; Feb. 1; Gaz. vol. 223; p. 160.

Folding metallic box. S. B. Field. No. 1,172,445; Feb. 22; Gaz. vol. 223; p. 1084.

Folding stand. C. W. Smith. No. 1,173,051; Feb. 22; Gaz. vol. 223; p. 1303.

Font, Baptismal. J. S. Stone. No. 1,171,901; Feb. 15; Gaz. vol. 223; p. 830.

Food, Breakfast. G. Cockrell. No. 1,173,932; Feb. 29; Gaz. vol. 223; p. 1654.

Food, Infant. E. M. Johnson and J. J. Quilligan. No. 1,171,724; Feb. 15; Gaz. vol. 223; p. 766.

Food, Manufacture of shredded cereal. J. L. Kellogg. No. 1,170,102; Feb. 1; Gaz. vol. 223; p. 143.

Food-warmer, Electrical. F. Kuhn and F. E. Shallor. No. 1,170,169; Feb. 1; Gaz. vol. 223; p. 145.

Foods, Machine for predigesting and sterilizing stock. E. Roberts. No. 1,170,191; Feb. 1; Gaz. vol. 223; p. 154.

Foot-rest. T. Matsui. No. 1,173,675; Feb. 29; Gaz. vol. 223; p. 1564.

Force-feed lubricator, Automatic. R. A. Milne. No. 1,170,089; Feb. 1; Gaz. vol. 223; p. 118.

Forceps, Dilating-. M. B. Pomerene. No. 1,170,324; Feb. 1; Gaz. vol. 223; p. 198.

Forge. H. A. Cross. No. 1,173,650; Feb. 29; Gaz. vol. 223; p. 1556.

Forging-machine. F. P. Bates. No. 1,169,914; Feb. 1; Gaz. vol. 223; p. 58.

Fork: *See*—
Hay-fork.

Fork. S. B. Williams. No. 1,172,333; Feb. 22; Gaz. vol. 223; p. 1043.

Fork or knife receptacle. B. Ohrbach and C. H. Zwerling. No. 1,170,318; Feb. 1; Gaz. vol. 223; p. 196.

Form-lock extension. J. J. Johnson. No. 1,172,213; Feb. 15; Gaz. vol. 223; p. 939.

Form, Sectional dress-. F. B. Granger. No. 1,173,184; Feb. 29; Gaz. vol. 223; p. 1391.

Formaldehyde solutions, Composition of matter for the production of. G. P. Fuller. No. 1,170,624; Feb. 8; Gaz. vol. 223; p. 340.

Fountain: *See*—
Drinking-fountain.

Fractionation, Process of and apparatus for. M. A. Rosanoff. No. 1,171,464; Feb. 15; Gaz. vol. 223; p. 674.

Frame: *See*—

Embroidery-frame.	Spanning-frame.
Engine-frame.	Truck side frame.
Landing-net frame.	Vehicle-body frame.
Picture-frame.	Window-frame.
Side frame.	Window or screen frame.

Freezer. C. P. Thomas. No. 1,170,786; Feb. 8; Gaz. vol. 223; p. 395.

Friction brake and ratchet. L. Schmidt. No. 1,171,357; Feb. 8; Gaz. vol. 223; p. 596.

Friction-spring. R. D. Gallagher, Jr. No. 1,170,146; Feb. 1; Gaz. vol. 223; p. 137.

Front sight. N. Bisbee. No. 1,171,310; Feb. 8; Gaz. vol. 223; p. 580.

Fruit and nut sizers, Adjusting mechanism for. J. C. Kechler and R. I. Sibley. No. 1,170,449; Feb. 1; Gaz. vol. 223; p. 240.

Fruit-clipper. T. E. Silvear. No. 1,170,353; Feb. 1; Gaz. vol. 223; p. 208.

Fruit-drier. G. A. Britt. No. 1,172,105; Feb. 15; Gaz. vol. 223; p. 905.

Fruit-gathering sleeve and receptacle therefor. E. R. Canterbury. No. 1,170,960; Feb. 8; Gaz. vol. 223; p. 454.

Fruit-grading machine. J. Nelson. No. 1,171,746; Feb. 15; Gaz. vol. 223; p. 773.

Fruit-picker. G. E. Darr. No. 1,171,324; Feb. 8; Gaz. vol. 223; p. 584.

Fruit picking and gathering apparatus. J. B. Rose. No. 1,173,868; Feb. 29; Gaz. vol. 223; p. 1632.

Frying-pan. M. P. Hayward. No. 1,173,662; Feb. 29; Gaz. vol. 223; p. 1560.

Fuel-drying apparatus. H. Hermansen. No. 1,173,510; Feb. 29; Gaz. vol. 223; p. 1507.

Fuel-economizer. W. E. Frost. No. 1,172,128; Feb. 15; Gaz. vol. 223; p. 912.

Fuel-economizer. W. E. Frost. No. 1,172,129; Feb. 15; Gaz. vol. 223; p. 912.

Fuel-feeding apparatus, Pulverized. G. W. Short. No. 1,172,745; Feb. 22; Gaz. vol. 223; p. 1194.

Fuel-feeding device, Powdered-. J. L. Boardman. No. 1,173,995; Feb. 29; Gaz. vol. 223; p. 1672.

Fuel, Manufacture of. M. Rossi. No. 1,171,660; Feb. 15; Gaz. vol. 223; p. 744.

Fuel, Method of burning. H. M. Chance. No. 1,173,708; Feb. 29; Gaz. vol. 223; p. 1574.

Fumigator, Book-. R. Oldham. No. 1,169,993; Feb. 1; Gaz. vol. 223; p. 83.

Fumigator or disinfecting-lamp. H. R. Ochs. No. 1,173,210; Feb. 29; Gaz. vol. 223; p. 1399.

Funnel. A. L. Bull. No. 1,170,476; Feb. 1; Gaz. vol. 223; p. 249.

Funnel, Filter-. O. G. Graham. No. 1,170,892; Feb. 8; Gaz. vol. 223; p. 431.

Furnace: *See*—

Boiler and other furnace.	Metallurgical furnace.
Crucible-furnace.	Ore-roasting furnace.
Electric furnace.	Regenerative furnace.
Glass-furnace.	Smoke-consuming furnace.
Hot-air furnace.	Vitreous furnace.

Furnace. W. J. Kenney. No. 1,172,290; Feb. 22; Gaz. vol. 223; p. 1028.

Furnace. A. H. Landwehr. No. 1,173,198; Feb. 29; Gaz. vol. 223; p. 1395.

Furnace. R. W. Menk. No. 1,173,831; Feb. 29; Gaz. vol. 223; p. 1619.

Furnace. T. G. Selleck. No. 1,172,398; Feb. 22; Gaz. vol. 223; p. 1066.

Furnace attachment. W. H. Brown. No. 1,172,868; Feb. 22; Gaz. vol. 223; p. 1240.

Furnace baffle-plate. W. Farber. No. 1,169,784; Feb. 1; Gaz. vol. 223; p. 13.

Furnace, Carrying out gas reactions in an electric. A. Helfenstein. No. 1,169,817; Feb. 1; Gaz. vol. 223; p. 24.

Furnace draft-regulator. G. H. Scharf. No. 1,170,683; Feb. 8; Gaz. vol. 223; p. 361.

Furnace hoes or poker-bars, Supporting apparatus for. J. A. Coffee. No. 1,171,504; Feb. 15; Gaz. vol. 223; p. 690.

Furnace part. T. W. Muckle. No. 1,171,223; Feb. 15; Gaz. vol. 223; p. 942.

Furnace-roof, Suspended. W. J. Reilly. No. 1,173,862; Feb. 29; Gaz. vol. 223; p. 1630.

Furnaces and the like, Apparatus for regulating the temperature of. R. E. Baker. No. 1,170,727; Feb. 8; Gaz. vol. 223; p. 376.

Furnaces, System of supplying hydrogen gas to. G. F. Pierce. No. 1,172,551; Feb. 22; Gaz. vol. 223; p. 1125.

Furniture. M. V. Griffith. No. 1,173,954; Feb. 29; Gaz. vol. 223; p. 1660.

Furniture, School-. A. J. Lewis and L. H. Johnston. No. 1,170,764; Feb. 8; Gaz. vol. 223; p. 389.

Furniture-tread. V. and S. J. Von der Lin. No. 1,173,990; Feb. 29; Gaz. vol. 223; p. 1670.

Furrow-opener, Disk. C. W. Dickinson. No. 1,170,740; Feb. 8; Gaz. vol. 223; p. 380.
Fuse. H. J. White. No. 1,172,331; Feb. 22; Gaz. vol. 223; p. 1042.
Fuse and switch-box, Combined. E. Frye. No. 1,173,701; Feb. 29; Gaz. vol. 223; p. 1605.
Fuse device. L. O. Mellor. No. 1,173,598; Feb. 29; Gaz. vol. 223; p. 1538.
Fuse, Electric. W. D. Hensell. No. 1,173,962; Feb. 29; Gaz. vol. 223; p. 1663.
Fuse-plugs, Device for removing or placing transformer. L. V. Gaffney. No. 1,172,131; Feb. 15; Gaz. vol. 223; p. 913.
Fusible conductors, Protector for. W. Handley and O. M. Nickerson. No. 1,172,282; Feb. 22; Gaz. vol. 223; p. 1025.
Gage: *See*—
Caliper-gage.
Dental gage.
Gasolene-gage.
Micrometer-gage.
Pressure-gage.
Printing-press sheet-gage.
Rain-gage.
Shingling-gage.
Tool-gage.
Tympan-gage.
Gage. E. G. Fox. No. 1,173,789; Feb. 29; Gaz. vol. 223; p. 1605.
Gage. H. Hess. No. 1,170,255; Feb. 1; Gaz. vol. 223; p. 176.
Gage. A. J. Lewandowski. No. 1,172,810; Feb. 22; Gaz. vol. 223; p. 1219.
Gage. F. H. Obermann. No. 1,173,117; Feb. 22; Gaz. vol. 223; p. 1324.
Galvanic battery. W. Hickmann. No. 1,173,005; Feb. 29; Gaz. vol. 223; p. 1664.
Galvanic cell. M. L. Kaplan. No. 1,170,819; Feb. 8; Gaz. vol. 223; p. 406.
Gambrel. G. M. Schellinger. No. 1,172,489; Feb. 22; Gaz. vol. 223; p. 1102.
Game. S. A. Akins. No. 1,171,916; Feb. 15; Gaz. vol. 223; p. 836.
Game. O. R. Keller. No. 1,170,821; Feb. 8; Gaz. vol. 223; p. 407.
Game. J. F. Morris. No. 1,173,841; Feb. 29; Gaz. vol. 223; p. 1622.
Game apparatus. S. R. Lamb. No. 1,170,828; Feb. 8; Gaz. vol. 223; p. 409.
Game apparatus. C. G. Lins. No. 1,173,818; Feb. 29; Gaz. vol. 223; p. 1614.
Game apparatus. F. G. Sultzbach. No. 1,169,886; Feb. 1; Gaz. vol. 223; p. 48.
Game device. H. Achershaug. No. 1,170,048; Feb. 8; Gaz. vol. 223; p. 450.
Game exhibitor, Base-ball-. E. E. Fairchild. No. 1,173,788; Feb. 29; Gaz. vol. 223; p. 1604.
Game, Instructive. M. Valentine. No. 1,172,848; Feb. 22; Gaz. vol. 223; p. 1232.
Gaming and amusement device. J. Kodama. No. 1,171,728; Feb. 15; Gaz. vol. 223; p. 767.
Garbage-can. S. H. Burroughs. No. 1,170,707; Feb. 8; Gaz. vol. 223; p. 399.
Garbage-can. J. P. Sutcliffe. No. 1,173,803; Feb. 29; Gaz. vol. 223; p. 1640.
Garment attachment. C. F. Lelansky. No. 1,172,615; Feb. 22; Gaz. vol. 223; p. 1147.
Garment, Burial-. H. T. Loomis. No. 1,170,293; Feb. 1; Gaz. vol. 223; p. 189.
Garment-fastener. I. Rosen. No. 1,170,340; Feb. 1; Gaz. vol. 223; p. 204.
Garment-fastener. R. Sato and T. Tanaka. No. 1,170,340; Feb. 1; Gaz. vol. 223; p. 206.
Garment-fastener holder. L. Rosenman. No. 1,171,982; Feb. 15; Gaz. vol. 223; p. 860.
Garment-fastener holder. L. Rosenman. No. 1,171,983; Feb. 15; Gaz. vol. 223; p. 861.
Garment-hanger. G. F. Goelz. No. 1,173,421; Feb. 29; Gaz. vol. 223; p. 1476.
Garment-pattern. D. J. Monaghan. No. 1,171,623; Feb. 15; Gaz. vol. 223; p. 732.
Garment-supporter. F. A. Russ. No. 1,171,805; Feb. 15; Gaz. vol. 223; p. 794.
Garter. F. T. Hill. No. 1,170,535; Feb. 8; Gaz. vol. 223; p. 307.
Garter. H. E. Penn. No. 1,170,781; Feb. 8; Gaz. vol. 223; p. 394.
Garters, Packaging. J. P. Croasdale. No. 1,170,222; Feb. 1; Gaz. vol. 223; p. 165.
Gas-burner. A. M. Burnham. No. 1,170,509; Feb. 8; Gaz. vol. 223; p. 107.
Gas-burners, Ignition means for. C. E. Smith. No. 1,173,952; Feb. 22; Gaz. vol. 223; p. 1303.
Gas-burning apparatus. N. Thomas and A. W. Allen. No. 1,171,677; Feb. 15; Gaz. vol. 223; p. 749.
Gas compressing or circulating system and apparatus for use therein. A. E. Keith. No. 1,172,535; Feb. 22; Gaz. vol. 223; p. 1119.
Gas-compressing or gas-circulating system and apparatus for use therein. A. E. Keith. No. 1,171,959; Feb. 15; Gaz. vol. 223; p. 852.
Gas-compressor, Motor-driven. H. A. Carpenter. No. 1,171,926; Feb. 15; Gaz. vol. 223; p. 840.
Gas cut-off, Automatic. E. Lewis. No. 1,170,831; Feb. 8; Gaz. vol. 223; p. 410.
Gas-drying apparatus. H. A. Brassert. No. 1,169,919; Feb. 1; Gaz. vol. 223; p. 60.
Gas-engine. L. C. Jackson. No. 1,172,362; Feb. 22; Gaz. vol. 223; p. 1053.
Gas-engine. C. Latta. No. 1,173,615; Feb. 29; Gaz. vol. 223; p. 1613.
Gas-exhauster for oil-tanks. O. J. Holmes. No. 1,173,108; Feb. 22; Gaz. vol. 223; p. 1321.
Gas generator, Acetylene-. E. M. Rosenbluth. No. 1,173,122; Feb. 22; Gaz. vol. 223; p. 1326.
Gas lighter and extinguisher. H. G. Mead. No. 1,169,851; Feb. 1; Gaz. vol. 223; p. 36.
Gas, Manufacture of. J. M. Rusby. No. 1,172,226; Feb. 15; Gaz. vol. 223; p. 943.
Gas-producer. J. E. Bell. No. 1,170,490; Feb. 1; Gaz. vol. 223; p. 257.
Gas-producers, Grate for. J. Wingen. No. 1,173,603; Feb. 29; Gaz. vol. 223; p. 1570.
Gas-producers, Twyer structure for. L. Steelman. No. 1,172,070; Feb. 15; Gaz. vol. 223; p. 893.
Gas, Producing hydrogen or illuminating and heating. K. E. Barth. No. 1,172,925; Feb. 22; Gaz. vol. 223; p. 1260.
Gas-retort charging and discharging apparatus. H. A. Carpenter, R. L. Hibbard, and A. W. Warner. No. 1,171,398; Feb. 8; Gaz. vol. 223; p. 611.
Gas-scrubber. H. A. Carpenter. No. 1,170,510; Feb. 8; Gaz. vol. 223; p. 298.
Gas shut-off, Automatic. E. J. Hinkson. No. 1,173,966; Feb. 29; Gaz. vol. 223; p. 1604.
Gas traction-engine. R. C. Townsend. No. 1,172,075; Feb. 15; Gaz. vol. 223; p. 894.
Gas-washer. H. A. Brassert. No. 1,169,766; Feb. 1; Gaz. vol. 223; p. 6.
Gas-washer tower. H. A. Brassert and C. J. Bacon. No. 1,169,765; Feb. 1; Gaz. vol. 223; p. 6.
Gas-washing. H. A. Brassert. No. 1,169,764; Feb. 1; Gaz. vol. 223; p. 6.
Gas-washing method and apparatus. H. A. Brassert and C. J. Bacon. No. 1,172,930; Feb. 22; Gaz. vol. 223; p. 1261.
Gases, Apparatus for the production of oxygen and hydrogen. G. Halter. No. 1,172,885; Feb. 22; Gaz. vol. 223; p. 1246.
Gasolene-gage. W. I. Oeschger. No. 1,172,481; Feb. 22; Gaz. vol. 223; p. 1099.
Gasolene-vulcanizer. T. D. Gard. No. 1,171,038; Feb. 8; Gaz. vol. 223; p. 483.
Gate: *See*—
Gate: *See*—
Crossing-gate.
End-gate.
Head-gate.
Railway-crossing gate.
Gate. F. Christ. No. 1,173,020; Feb. 29; Gaz. vol. 223; p. 1653.
Gate. L. C. Fouts. No. 1,170,443; Feb. 1; Gaz. vol. 223; p. 238.
Gate. L. Swank and J. E. Van Deventer. No. 1,171,903; Feb. 15; Gaz. vol. 223; p. 831.
Gate-closing means, Fence-. J. S. Barnes. No. 1,173,408; Feb. 29; Gaz. vol. 223; p. 1471.
Gate-opener. S. B. Bentgar. No. 1,171,092; Feb. 15; Gaz. vol. 223; p. 755.
Gate-operator. S. F. Harris. No. 1,171,110; Feb. 8; Gaz. vol. 223; p. 513.
Gauze screen, Removable. H. Higgin. No. 1,171,051; Feb. 15; Gaz. vol. 223; p. 840.
Gear. J. H., Sr., and J. H. Taylor. No. 1,170,707; Feb. 8; Gaz. vol. 223; p. 369.
Gear and clutch, Transmission-. A. Levedahl. No. 1,170,980; Feb. 8; Gaz. vol. 223; p. 462.
Gear-blanks and the like, Making. H. L. Johnston. No. 1,173,433; Feb. 29; Gaz. vol. 223; p. 1480.
Gear changing and locking device. F. P. Roesch. No. 1,171,252; Feb. 8; Gaz. vol. 223; p. 558.
Gear-cutting machine. W. Anderson and T. Coventry. No. 1,173,914; Feb. 29; Gaz. vol. 223; p. 1647.
Gear-cutting machine. C. E. Derr. No. 1,170,425; Feb. 1; Gaz. vol. 223; p. 233.
Gear lock, Differential-. L. E. and R. C. Peters. No. 1,170,561; Feb. 8; Gaz. vol. 223; p. 316.
Gear-mounting. P. Diehl. No. 1,171,327; Feb. 8; Gaz. vol. 223; p. 585.
Gear, Reversing and variable-speed. L. Burn. No. 1,172,936; Feb. 22; Gaz. vol. 223; p. 1264.
Gear-shifting mechanism. J. F. and H. E. Dodge. No. 1,172,881; Feb. 22; Gaz. vol. 223; p. 1244.
Gears, Locking device for differential. W. O. Kuhn. No. 1,173,442; Feb. 29; Gaz. vol. 223; p. 1482.
Gears, Operating means for reverse-. T. M. Moon and G. W. Hallstrom. No. 1,172,547; Feb. 22; Gaz. vol. 223; p. 1123.
Gearing. A. B. Frenier. No. 1,170,808; Feb. 8; Gaz. vol. 223; p. 402.
Gearing. E. F. McCool. No. 1,169,979; Feb. 1; Gaz. vol. 223; p. 78.
Gearing. G. B. Read. No. 1,170,460; Feb. 1; Gaz. vol. 223; p. 245.
Gearing, Belt-. J. G. Hey. No. 1,173,180; Feb. 29; Gaz. vol. 223; p. 1393.
Gearing, Belt-. E. T. Merritt. No. 1,169,854; Feb. 1; Gaz. vol. 223; p. 38.
Gearing, Epicyclic. J. H. Beardshaw. No. 1,173,478; Feb. 29; Gaz. vol. 223; p. 1494.
Gearing for starting mechanism. J. A. Struthers. No. 1,172,845; Feb. 22; Gaz. vol. 223; p. 1231.
Gearing, Speed-changing. W. Barnes, Jr. No. 1,173,639; Feb. 29; Gaz. vol. 223; p. 1552.

Gearing, Transmission-. J. F. Demarchi. No. 1,171,103; Feb. 8; Gaz. vol. 223; p. 506.
Gearing, Transmission-. A. D. Sundeen. No. 1,173,050; Feb. 22; Gaz. vol. 223; p. 1305.
Gem-polishing machine. C. J. Coleman. No. 1,173,173; Feb. 29; Gaz. vol. 223; p. 1387.
Gem-polishing machine. C. J. Coleman. No. 1,173,174; Feb. 29; Gaz. vol. 223; p. 1388.
Gem-polishing machine. C. J. Coleman. No. 1,173,175; Feb. 29; Gaz. vol. 223; p. 1388.
Generator: *See*—
Acetylene-generator.
Hydrogen-sulfid generator.
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Glass cylinders, Apparatus for drawing and handling. H. K. Hitchcock. No. 1,170,257; Feb. 1; Gaz. vol. 223; p. 176.
Glass drawing-machine bait. A. E. Spinasse. No. 1,170,464; Feb. 1; Gaz. vol. 223; p. 246.
Glass-furnace. T. W. Cunnington. No. 1,172,074; Feb. 22; Gaz. vol. 223; p. 1169.
Glass machine, Single-strand-wire-. A. J. Baldwin. No. 1,169,759; Feb. 1; Gaz. vol. 223; p. 4.
Glass-making machine, Wire-. A. Shuman. No. 1,170,008; Feb. 1; Gaz. vol. 223; p. 88.
Glass-manipulating apparatus. G. C. Debay. No. 1,172,262; Feb. 22; Gaz. vol. 223; p. 1018.
Glass plates, Removably setting. E. Morris. No. 1,170,659; Feb. 8; Gaz. vol. 223; p. 352.
Glass severing and pressing machine. G. E. Cleveland. No. 1,171,928; Feb. 15; Gaz. vol. 223; p. 841.
Glass-shaping apparatus. A. F. Gumpp and W. J. Johnson. No. 1,169,953; Feb. 1; Gaz. vol. 223; p. 69.
Glass-tube cutter. H. J. Wells. No. 1,170,588; Feb. 8; Gaz. vol. 223; p. 326.
Glazing-bar. J. Stratton and E. A. Claremont. No. 1,171,073; Feb. 8; Gaz. vol. 223; p. 495.
Glove-stretcher. H. Grueber. No. 1,173,055; Feb. 29; Gaz. vol. 223; p. 1660.
Glue-pot, Electrically-heated. F. Kuhn and F. E. Shailor. No. 1,170,170; Feb. 1; Gaz. vol. 223; p. 146.
Go-cart. J. Hudry. No. 1,170,265; Feb. 1; Gaz. vol. 223; p. 179.
Gold-leaf upon book-covers or the like, Machine for depositing. C. E. Smith. No. 1,173,120; Feb. 22; Gaz. vol. 223; p. 1329.
Golf, Apparatus for use in practising the game of. R. Gunzburg. No. 1,173,262; Feb. 29; Gaz. vol. 223; p. 1419.
Golf-bag support. H. T. Graf. No. 1,170,801; Feb. 8; Gaz. vol. 223; p. 431.
Golf-club. E. H. W. Scott. No. 1,171,806; Feb. 15; Gaz. vol. 223; p. 795.
Golf-courses, Marker for. T. J. W. Brown. No. 1,171,699; Feb. 15; Gaz. vol. 223; p. 757.
Golf-standard. W. S. Flynn. No. 1,173,713; Feb. 29; Gaz. vol. 223; p. 1576.
Golf-tee board, Adjustable. M. Fuchs. No. 1,173,792; Feb. 29; Gaz. vol. 223; p. 1606.
Governing mechanism for internal-combustion engines. W. E. Ver Planck. No. 1,170,199; Feb. 1; Gaz. vol. 223; p. 157.
Governor. L. M. Karnasch. No. 1,173,437; Feb. 29; Gaz. vol. 223; p. 1481.
Grade-indicator. A. Surtzer. No. 1,170,466; Feb. 1; Gaz. vol. 223; p. 246.
Grader, Road-. E. E. Barrett. No. 1,171,084; Feb. 8; Gaz. vol. 223; p. 498.
Grading and ditching machine, Road. J. R. Pile. No. 1,173,681; Feb. 29; Gaz. vol. 223; p. 1566.
Grading and filling machine. J. H. Moore. No. 1,169,850; Feb. 1; Gaz. vol. 223; p. 39.
Grading machine and ditcher, Road-. W. R. Williams. No. 1,170,592; Feb. 8; Gaz. vol. 223; p. 327.
Grading machine, Road-. E. A. Hyde. No. 1,170,269; Feb. 1; Gaz. vol. 223; p. 180.
Grading or separating machine. W. D. Mackrill. No. 1,173,366; Feb. 29; Gaz. vol. 223; p. 1457.
Grain barge and stacker, Combined. C. A. Rolfsen. No. 1,171,656; Feb. 15; Gaz. vol. 223; p. 743.
Grain-cleaner, Rotary. C. Quesnell. No. 1,173,737; Feb. 29; Gaz. vol. 223; p. 1586.
Grain-drill. J. B. Bushnell. No. 1,171,925; Feb. 15; Gaz. vol. 223; p. 840.
Grain-drill. E. Everson. No. 1,169,945; Feb. 1; Gaz. vol. 223; p. 67.
Grain-elevator. M. Dornbach. No. 1,173,344; Feb. 29; Gaz. vol. 223; p. 1449.
Grain or fertilizer drill. G. M. Winwood, Jr. No. 1,172,094; Feb. 15; Gaz. vol. 223; p. 901.
Grain-separator. O. A. Burgeson. No. 1,173,249; Feb. 29; Gaz. vol. 223; p. 1414.
Grain-separators, Cutting attachment for. L. Debaker. No. 1,172,114; Feb. 15; Gaz. vol. 223; p. 907.
Grain-shocker. E. M. Kellogg. No. 1,170,823; Feb. 8; Gaz. vol. 223; p. 408.
Grain-shocker for harvesting-machines. E. M. Kellogg. No. 1,170,822; Feb. 8; Gaz. vol. 223; p. 407.
Graining and the like apparatus. F. W. Kuehn. No. 1,173,523; Feb. 29; Gaz. vol. 223; p. 1511.
Graphophone. A. Laurencich. No. 1,172,717; Feb. 22; Gaz. vol. 223; p. 1185.
Graphophone stop mechanism. O. L. Scalbom. No. 1,170,997; Feb. 8; Gaz. vol. 223; p. 468.
Grapple. A. Bryant. No. 1,171,315; Feb. 8; Gaz. vol. 223; p. 581.
Grass and other vegetation, Bed for growing. F. W. Taylor. No. 1,171,559; Feb. 15; Gaz. vol. 223; p. 709.
Grass-growing apparatus and making the same. F. W. Taylor. No. 1,171,560; Feb. 15; Gaz. vol. 223; p. 709.
Grass-trimmer. C. C. Lippen. No. 1,170,292; Feb. 1; Gaz. vol. 223; p. 188.
Grasses, weeds, or plants, Exterminating. I. F. Orton. No. 1,173,019; Feb. 22; Gaz. vol. 223; p. 1201.
Grate. R. M. Barnett. No. 1,172,002; Feb. 15; Gaz. vol. 223; p. 868.
Grate, Water-. J. M. Nye. No. 1,170,317; Feb. 1; Gaz. vol. 223; p. 196.
Gravel-screen, Rotary. H. Middaugh. No. 1,169,986; Feb. 1; Gaz. vol. 223; p. 80.
Grease-cup. E. M. Erb. No. 1,170,435; Feb. 1; Gaz. vol. 223; p. 230.
Grease-cup. V. Gazzolo. No. 1,171,600; Feb. 15; Gaz. vol. 223; p. 725.
Grease-cup. J. S. Goldberg. No. 1,173,650; Feb. 29; Gaz. vol. 223; p. 1559.
Grease-cup. R. B. Greenway. No. 1,172,020; Feb. 15; Gaz. vol. 223; p. 876.
Grease-cup, Lubricating. F. Miller. No. 1,172,383; Feb. 22; Gaz. vol. 223; p. 1061.
Grease-gun, Portable garage. H. O. and W. L. Ekern. No. 1,170,432; Feb. 1; Gaz. vol. 223; p. 235.
Greaser for live stock, Automatic. R. R. Crocker. No. 1,170,964; Feb. 8; Gaz. vol. 223; p. 455.
Grenade. E. H. Still. No. 1,172,498; Feb. 22; Gaz. vol. 223; p. 1105.
Grinder. F. K. Vial. No. 1,171,812; Feb. 15; Gaz. vol. 223; p. 797.
Grinder and feeding-machine, Feed-. A. F. Meyer. No. 1,171,742; Feb. 15; Gaz. vol. 223; p. 772.
Grinder, Scissors-. W. H. Fox. No. 1,170,236; Feb. 1; Gaz. vol. 223; p. 171.
Grinding-machine. C. L. Gargan. No. 1,172,274; Feb. 22; Gaz. vol. 223; p. 1022.
Grinding-machine. H. C. Shaw. No. 1,171,894; Feb. 15; Gaz. vol. 223; p. 828.
Grinding-machine. B. Sweet. No. 1,173,225; Feb. 29; Gaz. vol. 223; p. 1404.
Grinding-mill. H. Cole. No. 1,172,673; Feb. 22; Gaz. vol. 223; p. 1168.
Grinding-mill. G. S. Emerick. No. 1,171,033; Feb. 15; Gaz. vol. 223; p. 843.
Grinding-mill. G. S. Emerick. No. 1,172,882; Feb. 22; Gaz. vol. 223; p. 1244.
Grinding rails, Portable machine for. C. Delmes. No. 1,171,325; Feb. 8; Gaz. vol. 223; p. 585.
Grinding the edges of lenses and the like, Machine for. J. H. Cossman. No. 1,171,027; Feb. 8; Gaz. vol. 223; p. 479.
Grinding the edges of lenses, Machine for. J. H. Cossman. No. 1,171,028; Feb. 8; Gaz. vol. 223; p. 480.
Grindstones, Watering device for. J. H. King. No. 1,171,726; Feb. 15; Gaz. vol. 223; p. 766.
Grip. H. S. Schumacher. No. 1,171,071; Feb. 8; Gaz. vol. 223; p. 494.
Gromet. W. A. Young. No. 1,171,295; Feb. 8; Gaz. vol. 223; p. 574.
Gum and making the same, Chewing-. A. G. Meier. No. 1,171,392; Feb. 8; Gaz. vol. 223; p. 609.
Gun-barrels, Rust-preventive device for. J. Silverstein. No. 1,172,746; Feb. 22; Gaz. vol. 223; p. 1195.
Gun-mountings, Trunnion-blocks of. A. T. Dawson and G. T. Buckham. No. 1,171,099; Feb. 8; Gaz. vol. 223; p. 505.
Gun-silencers, Attaching means for. A. T. Prather. No. 1,171,242; Feb. 8; Gaz. vol. 223; p. 555.
Guns, Apparatus for adjusting the directions of. R. Girardelli. No. 1,172,979; Feb. 22; Gaz. vol. 223; p. 1278.
Guns, Fore grip for. G. Hillpot. No. 1,170,256; Feb. 1; Gaz. vol. 223; p. 176.
Guns, Housing for. J. Stranss and A. S. Halsey. No. 1,170,577; Feb. 8; Gaz. vol. 223; p. 322.
Guns of large caliber, Apparatus for the semi-automatic working of the breech mechanism of. E. Schneider. No. 1,172,490; Feb. 22; Gaz. vol. 223; p. 1102.
Gyroscopic apparatus. H. Anschütz-Kaempfe. No. 1,173,241; Feb. 29; Gaz. vol. 223; p. 1410.
Hair-pin. F. Eberl. No. 1,173,938; Feb. 29; Gaz. vol. 223; p. 1655.
Hair-waving implement. P. Jüllicher. No. 1,173,436; Feb. 29; Gaz. vol. 223; p. 1481.
Hame. W. A. Wagner. No. 1,170,713; Feb. 8; Gaz. vol. 223; p. 371.
Hames. J. M. Walsh. No. 1,171,567; Feb. 15; Gaz. vol. 223; p. 711.
Hammer, Air-. A. Griggs. No. 1,172,200; Feb. 15; Gaz. vol. 223; p. 937.
Hammer, Drop-. E. C. Hamilton. No. 1,171,718; Feb. 15; Gaz. vol. 223; p. 763.
Hammer or like percussion-tool, Pneumatic. H. S. R. Brindley. No. 1,173,247; Feb. 29; Gaz. vol. 223; p. 1413.
Hammer, Riveting-. P. H. Lecklinger. No. 1,173,525; Feb. 29; Gaz. vol. 223; p. 1512.
Hand, Artificial. J. F. Rowley. No. 1,173,219; Feb. 29; Gaz. vol. 223; p. 1403.

Hand-bag and the like. F. R. Hoard. No. 1,172,708; Feb. 22; Gaz. vol. 223; p. 1182.
Hand-covering. E. C. Hunter. No. 1,173,071; Feb. 29; Gaz. vol. 223; p. 1665.
Handhold, Safety-. J. N. Roberson. No. 1,170,336; Feb. 1; Gaz. vol. 223; p. 203.
Handle; *See*—
Bag-handle. Mattress-handle.
Handles, Making. M. A. Possons. No. 1,173,029; Feb. 22; Gaz. vol. 223; p. 1294.
Handling device. J. M. Lohr. No. 1,173,444; Feb. 29; Gaz. vol. 223; p. 1483.
Handling device. J. M. Lohr. No. 1,173,445; Feb. 29; Gaz. vol. 223; p. 1484.
Handling goods, Mechanism for. H. T. Logan. No. 1,173,819; Feb. 29; Gaz. vol. 223; p. 1614.
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Article-hanger. Light-hanger.
Brake-beam hanger. Radiator-hanger.
Garment-hanger. Scissors-hanger.
Hangers, Channel structure for. W. D. Banes. No. 1,172,664; Feb. 22; Gaz. vol. 223; p. 1165.
Harrow blades, Abrader for disk-. W. D. Bremer. No. 1,172,763; Feb. 22; Gaz. vol. 223; p. 1202.
Harrow-cleaning means. F. McKennon. No. 1,172,149; Feb. 15; Gaz. vol. 223; p. 919.
Harrow, Spring-toothed. J. J. Kovar. No. 1,170,761; Feb. 8; Gaz. vol. 223; p. 388.
Harvester. A. Smith and C. F. Carr. No. 1,170,692; Feb. 8; Gaz. vol. 223; p. 364.
Harvester, Beet-. A. F. Djuberg. No. 1,172,118; Feb. 15; Gaz. vol. 223; p. 909.
Harvester, Beet-. E. J. Scheetz. No. 1,173,042; Feb. 22; Gaz. vol. 223; p. 1299.
Harvester, Beet-. J. H. Tietge. No. 1,170,944; Feb. 8; Gaz. vol. 223; p. 440.
Harvester, Corn-. F. A. Johnson. No. 1,172,289; Feb. 22; Gaz. vol. 223; p. 1028.
Harvester, Threshing-. N. H. Beebee and W. A. Thomas. No. 1,172,665; Feb. 22; Gaz. vol. 223; p. 1165.
Harvesters or binders, Driving mechanism for grain. C. A. Brown. No. 1,173,926; Feb. 29; Gaz. vol. 223; p. 1651.
Harvesters, Tandem draft connection for. C. Pearson. No. 1,170,100; Feb. 1; Gaz. vol. 223; p. 122.
Harvesting machine, Beet-. F. P. Addleman. No. 1,172,098; Feb. 15; Gaz. vol. 223; p. 902.
Hasp-lock. J. Garand. No. 1,171,037; Feb. 8; Gaz. vol. 223; p. 483.
Hasp-lock. P. Johnson. No. 1,171,051; Feb. 8; Gaz. vol. 223; p. 487.
Hat-fastener. E. H. Klein. No. 1,172,215; Feb. 15; Gaz. vol. 223; p. 939.
Hat-fastener. B. S. Suzuki. No. 1,173,894; Feb. 29; Gaz. vol. 223; p. 1640.
Hat fastener, Carboy-. C. M. Cook. No. 1,172,874; Feb. 22; Gaz. vol. 223; p. 1242.
Hat-fastener, Lady's. H. Gravill. No. 1,170,874; Feb. 8; Gaz. vol. 223; p. 432.
Hat-machine. I. Dingee and E. T. Smith. No. 1,171,106; Feb. 8; Gaz. vol. 223; p. 507.
Hat-protector retainer. J. W. Jacobs. No. 1,171,204; Feb. 8; Gaz. vol. 223; p. 542.
Hat, Straw. S. H. Blum. No. 1,171,312; Feb. 8; Gaz. vol. 223; p. 580.
Hat, Ventilated. M. Diener and C. F. Urban. No. 1,170,052; Feb. 1; Gaz. vol. 223; p. 105.
Hay-fork. J. K. Blackston. No. 1,169,917; Feb. 1; Gaz. vol. 223; p. 59.
Hay-rack fastener. H. M. Sanders. No. 1,172,487; Feb. 22; Gaz. vol. 223; p. 1101.
Hay-rake, Folding. J. A. Burks. No. 1,170,605; Feb. 8; Gaz. vol. 223; p. 332.
Hay-sweep. H. C. Brown. No. 1,170,736; Feb. 8; Gaz. vol. 223; p. 379.
Head-gate, Adjustable. J. H. Rogard. No. 1,172,423; Feb. 22; Gaz. vol. 223; p. 1075.
Headlight, Adjustable. R. L. Edmonds. No. 1,169,940; Feb. 1; Gaz. vol. 223; p. 66.
Headlight, Automobile-. W. B. Old. No. 1,171,135; Feb. 8; Gaz. vol. 224; p. 520.
Headlight, Automobile-. G. Pelham. No. 1,171,237; Feb. 8; Gaz. vol. 223; p. 553.
Headlight, Dirigible. J. L. Crooker. No. 1,173,049; Feb. 29; Gaz. vol. 223; p. 1556.
Headlight for automobiles, Adjustable. A. Schaller. No. 1,172,488; Feb. 22; Gaz. vol. 223; p. 1101.
Headlight for automobiles, Automatic dirigible. K. C. Brooks. No. 1,173,925; Feb. 29; Gaz. vol. 223; p. 1651.
Headlight for automobiles, Dirigible. O. V. Stephens. No. 1,173,890; Feb. 29; Gaz. vol. 223; p. 1639.
Headlight for automobiles, Dirigible. A. Wagner. No. 1,172,081; Feb. 15; Gaz. vol. 223; p. 896.
Headlight, Locomotive-. J. J. McCarthy. No. 1,170,300; Feb. 1; Gaz. vol. 223; p. 191.
Headlight-operating mechanism. G. W. and E. Hoffman. No. 1,172,361; Feb. 22; Gaz. vol. 223; p. 1053.
Heat between fluids, Apparatus for the transmission or exchange of. A. D. Harrison. No. 1,170,902; Feb. 8; Gaz. vol. 223; p. 435.
Heat-conserver and smoke-consumer. W. E. Frost. No. 1,172,130; Feb. 15; Gaz. vol. 223; p. 912.
Heat-interchanging apparatus, Tubular. W. J. Still. No. 1,171,900; Feb. 15; Gaz. vol. 223; p. 830.
Heat regeneration. H. L. Doherty. No. 1,173,999; Feb. 29; Gaz. vol. 223; p. 1674.
Heat-treating apparatus. J. J. Lichter. No. 1,173,590; Feb. 29; Gaz. vol. 223; p. 1534.
Heater; *See*—
Automobile-heater. Fluid-heater.
Automobile-radiator heater. Internal-combustion heater.
Curling-iron heater. Tank-heater.
Electric heater. Water-heater.
Heater. F. A. Dustman. No. 1,172,684; Feb. 22; Gaz. vol. 223; p. 1173.
Heater. W. Gilchrist and R. W. Daykin. No. 1,171,512; Feb. 15; Gaz. vol. 223; p. 692.
Heater. J. Szotak. No. 1,172,404; Feb. 22; Gaz. vol. 223; p. 1068.
Heater. J. Whitehart and R. M. Smith. No. 1,171,372; Feb. 8; Gaz. vol. 223; p. 601.
Heater and muffler. J. L. Anderson. No. 1,173,403; Feb. 29; Gaz. vol. 223; p. 1469.
Heaters, Folding stand for portable. J. B. Murray. No. 1,173,207; Feb. 29; Gaz. vol. 223; p. 1398.
Heating device, Electric. J. G. Homan. No. 1,172,025; Feb. 15; Gaz. vol. 223; p. 877.
Heating element, Electric. H. O. Swoboda. No. 1,170,943; Feb. 8; Gaz. vol. 223; p. 448.
Heating system, Steam-. J. F. McElroy. No. 1,172,376; Feb. 22; Gaz. vol. 223; p. 1058.
Heating unit, Electrical. F. Kuhn. No. 1,170,165; Feb. 1; Gaz. vol. 223; p. 144.
Heating unit, Electrical. F. Kuhn. No. 1,170,166; Feb. 1; Gaz. vol. 223; p. 145.
Heel-breasting machine. C. H. Littlefield. No. 1,173,724; Feb. 29; Gaz. vol. 223; p. 1581.
Heel-breasting machine. T. G. Plant. No. 1,172,902; Feb. 22; Gaz. vol. 223; p. 1252.
Heel-breasting machine. E. A. Webster. No. 1,170,374; Feb. 1; Gaz. vol. 223; p. 216.
Heel-clamping means. W. J. Nesbitt. No. 1,170,170; Feb. 1; Gaz. vol. 223; p. 149.
Heel-compressing machine. W. R. Barclay. No. 1,171,407; Feb. 15; Gaz. vol. 223; p. 655.
Heel-cutting apparatus. W. J. Nesbitt. No. 1,170,178; Feb. 1; Gaz. vol. 223; p. 149.
Heel device, Shoe-. P. L. Peterson. No. 1,171,749; Feb. 15; Gaz. vol. 223; p. 775.
Heel-machine. F. W. Cotton. No. 1,173,098; Feb. 22; Gaz. vol. 223; p. 1318.
Heel-plate, Cushion. H. G. Robinson. No. 1,172,392; Feb. 22; Gaz. vol. 223; p. 1064.
Heel-retainer. W. H. Rommel. No. 1,171,541; Feb. 15; Gaz. vol. 223; p. 702.
Heeling-machine. G. M. Pettengill. No. 1,170,321; Feb. 1; Gaz. vol. 223; p. 197.
Helical tool. R. F. Whitney. No. 1,173,155; Feb. 22; Gaz. vol. 223; p. 1339.
Helm-signal. P. and J. H. Peters and P. A. Bey. No. 1,173,680; Feb. 29; Gaz. vol. 223; p. 1566.
Hickey. G. W. Prouty. No. 1,171,880; Feb. 15; Gaz. vol. 223; p. 822.
Hide-carrier for boarding-machines. C. A. Rausch. No. 1,172,632; Feb. 22; Gaz. vol. 223; p. 1154.
High-tension switch. C. R. Lininger. No. 1,172,470; Feb. 22; Gaz. vol. 223; p. 1094.
Hinge and fastening, Combined door. F. J. Oberer. No. 1,172,550; Feb. 22; Gaz. vol. 223; p. 1125.
Hinge, Box-. P. Elckenberg. No. 1,171,601; Feb. 15; Gaz. vol. 223; p. 723.
Hinge, Detachable. W. R. Taylor. No. 1,172,500; Feb. 22; Gaz. vol. 223; p. 1100.
Hinge, Door-. B. C. Rockwell. No. 1,170,106; Feb. 1; Gaz. vol. 223; p. 124.
Hinge for convertible automobile-bodies. H. Smith. No. 1,170,569; Feb. 8; Gaz. vol. 223; p. 319.
Hinge, Non-projecting. J. R. Angelovich. No. 1,172,512; Feb. 22; Gaz. vol. 223; p. 1110.
Hinge, Screen-. H. Hougham. No. 1,170,262; Feb. 1; Gaz. vol. 223; p. 178.
Hinge, Spring-. S. M. Elsner. No. 1,172,267; Feb. 22; Gaz. vol. 223; p. 1019.
Hinges, Production of jointed strap-. G. Meyer. No. 1,173,836; Feb. 29; Gaz. vol. 223; p. 1621.
Hitch, Gradual-shifting draft-. S. F. Fuchs. No. 1,170,238; Feb. 1; Gaz. vol. 223; p. 171.
Hog-ring. W. L. Chambers. No. 1,170,413; Feb. 1; Gaz. vol. 223; p. 228.
Hoist and dump for autotrucks, Steam. C. B. Buck. No. 1,172,255; Feb. 22; Gaz. vol. 223; p. 1015.
Hoisting and conveying mechanism. C. A. Mooris. No. 1,170,774; Feb. 8; Gaz. vol. 223; p. 391.
Hoisting-machine. S. Townsend. No. 1,173,900; Feb. 29; Gaz. vol. 223; p. 1642.
Hoisting machinery for operating grab-buckets. A. Smith. No. 1,170,463; Feb. 1; Gaz. vol. 223; p. 245.
Holding device. J. D. Taylor. No. 1,170,360; Feb. 1; Gaz. vol. 223; p. 211.
Holster, Automatic-gun. J. V. M. Noye. No. 1,173,376; Feb. 29; Gaz. vol. 223; p. 1460.
Hood fastener and lock. J. B. Wiegel. No. 1,171,911; Feb. 15; Gaz. vol. 223; p. 833.
Hook; *See*—
Cage-hook. Fish-hook.
Chain-holding hook. Releasing-hook.
Clothes-line hook. Sanitary hook.

Hook. N. D. Conway. No. 1,170,047; Feb. 1; Gaz. vol. 223; p. 103.
Hoop; *See*—
Band-hoop. Silo-hoop.
Sheet-metal hoop.
Hopper. A. F. Rockwell. No. 1,173,308; Feb. 29; Gaz. vol. 223; p. 1435.
Horn. B. F. Koch. No. 1,169,837; Feb. 1; Gaz. vol. 223; p. 31.
Horn, Diaphragm-. L. Chollet. No. 1,173,559; Feb. 29; Gaz. vol. 223; p. 1523.
Horn, Diaphragm-. M. R. Hutchison. No. 1,172,712; Feb. 22; Gaz. vol. 223; p. 1183.
Horn, Mechanical. O. C. Arlitz. No. 1,173,635; Feb. 29; Gaz. vol. 223; p. 1551.
Horn, Mechanically-actuated diaphragm-. J. W. Jones. No. 1,173,584; Feb. 29; Gaz. vol. 223; p. 1532.
Horn or alarm, Mechanically-actuated. M. R. Hutchison. No. 1,170,158; Feb. 1; Gaz. vol. 223; p. 142.
Horn, Signaling-. M. R. Hutchison. No. 1,172,713; Feb. 22; Gaz. vol. 223; p. 1183.
Horse-power device. S. B. Parks. No. 1,173,852; Feb. 29; Gaz. vol. 223; p. 1626.
Horseshoe. L. Lebotzky. No. 1,170,079; Feb. 1; Gaz. vol. 223; p. 114.
Horseshoe. S. Wiesenberg. No. 1,171,823; Feb. 15; Gaz. vol. 223; p. 801.
Horseshoe-calk, Detachable. W. P. Rouland. No. 1,173,870; Feb. 29; Gaz. vol. 223; p. 1632.
Horseshoe-calk-making machine. W. L. Field. No. 1,169,785; Feb. 1; Gaz. vol. 223; p. 13.
Horseshoe-calk-sharpening machine. G. Arnold, Jr. No. 1,173,636; Feb. 29; Gaz. vol. 223; p. 1551.
Horseshoe, Expansible. J. Kalota. No. 1,169,962; Feb. 1; Gaz. vol. 223; p. 72.
Horseshoes, Spring-heel for. G. H. Burke. No. 1,170,218; Feb. 1; Gaz. vol. 223; p. 164.
Hose-clamp. P. E. Erickson. No. 1,172,690; Feb. 22; Gaz. vol. 223; p. 1175.
Hose-clamp. A. M. McDonald. No. 1,170,921; Feb. 8; Gaz. vol. 223; p. 441.
Hose connection. K. O. Muehlberg. No. 1,172,299; Feb. 22; Gaz. vol. 223; p. 1031.
Hose-coupling. J. H. Stephens. No. 1,171,551; Feb. 15; Gaz. vol. 223; p. 706.
Hose coupling for railway-cars, Air-. W. H. Hildebaugh. No. 1,170,534; Feb. 8; Gaz. vol. 223; p. 307.
Hose-coupling, Spring. W. F. O'Donnell. No. 1,173,211; Feb. 29; Gaz. vol. 223; p. 1490.
Hose-rack. C. O. Lund. No. 1,170,173; Feb. 1; Gaz. vol. 223; p. 147.
Hose-supporter. J. G. Allen. No. 1,169,757; Feb. 1; Gaz. vol. 223; p. 3.
Hose-supporter. S. Buyer. No. 1,170,875; Feb. 8; Gaz. vol. 223; p. 426.
Hose-supporter stud and loop. G. E. Prentice. No. 1,170,782; Feb. 8; Gaz. vol. 223; p. 394.
Hot-air furnace. G. B. Carter. No. 1,169,769; Feb. 1; Gaz. vol. 223; p. 8.
Hot-air furnace. B. E. Rainey. No. 1,171,245; Feb. 8; Gaz. vol. 223; p. 556.
Hot-water bag. C. P. Cook. No. 1,172,197; Feb. 15; Gaz. vol. 223; p. 935.
Hot-water-distribution system. J. A. Williams. No. 1,173,759; Feb. 29; Gaz. vol. 223; p. 1593.
Hot-water-service apparatus. A. B. Clay. No. 1,173,484; Feb. 29; Gaz. vol. 223; p. 1496.
Hub construction for vehicle-wheels, Spring-. S. D. Simmons and H. Amling. No. 1,173,048; Feb. 22; Gaz. vol. 223; p. 1301.
Hub, Demountable. C. T. Ridgely. No. 1,173,217; Feb. 29; Gaz. vol. 223; p. 1402.
Hub, Vehicle-wheel. J. H. Baninger. No. 1,173,638; Feb. 29; Gaz. vol. 223; p. 1552.
Huller; *See*—
Barley and rice huller.
Humidifier. C. Subert. No. 1,172,642; Feb. 22; Gaz. vol. 223; p. 1157.
Hydrant. G. N. Frazer. No. 1,172,975; Feb. 22; Gaz. vol. 223; p. 1277.
Hydrant, Non-freezing. G. H. Dormon. No. 1,172,959; Feb. 22; Gaz. vol. 223; p. 1272.
Hydrant-wrench. G. F. Bohne and C. Renburg. No. 1,170,138; Feb. 1; Gaz. vol. 223; p. 134.
Hydraulic jacks, Controlling mechanism for. R. W. Sparling. No. 1,172,748; Feb. 22; Gaz. vol. 223; p. 1196.
Hydraulic meter. W. A. Doble and L. M. Karnasch. No. 1,173,416; Feb. 29; Gaz. vol. 223; p. 1474.
Hydroaeroplane. J. H. Chapman. No. 1,172,196; Feb. 15; Gaz. vol. 223; p. 934.
Hydroaeroplane. G. H. Curtiss. No. 1,170,965; Feb. 8; Gaz. vol. 223; p. 456.
Hydrocarbon-burner. A. J. Bischoff. No. 1,169,916; Feb. 1; Gaz. vol. 223; p. 59.
Hydrocarbon-burner. J. P. Robertson. No. 1,171,140; Feb. 8; Gaz. vol. 223; p. 522.
Hydrocarbon-burner. L. C. Vermillion. No. 1,169,889; Feb. 1; Gaz. vol. 223; p. 49.
Hydrogen generation. C. Ellis. No. 1,173,417; Feb. 29; Gaz. vol. 223; p. 1474.
Hydrogen, Manufacture of. K. Schaefer. No. 1,172,908; Feb. 22; Gaz. vol. 223; p. 1254.
Hydrogen-sulfid generator. R. M. Banks. No. 1,170,953; Feb. 8; Gaz. vol. 223; p. 452.
Hydrometer. P. Volges. No. 1,172,647; Feb. 22; Gaz. vol. 223; p. 1159.
Ice and other obstructions in fluid-pressure systems, Safety means for preventing and removing. E. W. Anger and H. H. Hornsby. No. 1,171,014; Feb. 8; Gaz. vol. 223; p. 475.
Ice-creeping attachment. R. Murn. No. 1,169,857; Feb. 1; Gaz. vol. 223; p. 39.
Ice-cutter. A. A. Rickert. No. 1,172,558; Feb. 22; Gaz. vol. 223; p. 1128.
Ice-pick and the like. L. R. Zifferer. No. 1,171,296; Feb. 8; Gaz. vol. 223; p. 574.
Ignition device. L. M. Thoreson. No. 1,172,408; Feb. 22; Gaz. vol. 223; p. 1069.
Ignition system. H. Dick and V. A. Fynn. No. 1,172,771; Feb. 22; Gaz. vol. 223; p. 1205.
Ignition system. C. F. Kettering. No. 1,170,275; Feb. 1; Gaz. vol. 223; p. 182.
Illuminating and storing apparatus. E. W. Caldwell. No. 1,172,420; Feb. 22; Gaz. vol. 223; p. 1077.
Illuminating apparatus. C. M. Axford. No. 1,171,917; Feb. 15; Gaz. vol. 223; p. 837.
Implement cleaner, Toothed-. I. Rystedt. No. 1,170,345; Feb. 1; Gaz. vol. 223; p. 205.
Incandescent mantles, Apparatus for burning and hardening. E. L. Knoedler. No. 1,172,611; Feb. 22; Gaz. vol. 223; p. 1140.
Index. J. Miller. No. 1,173,600; Feb. 29; Gaz. vol. 223; p. 1539.
Indicator; *See*—
Adjustment-indicator. Sheet-winding indicator.
Battery-indicator. Speed-indicator.
Direction-indicator. Street-indicator.
Door-indicator. Tank-indicator.
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Induction-motor. A. M. Dudley. No. 1,170,618; Feb. 8; Gaz. vol. 223; p. 338.
Ingot-mold. E. Gathmann. No. 1,170,629; Feb. 8; Gaz. vol. 223; p. 342.
Ingots, Apparatus for applying air-blast to. R. A. Hadfield. No. 1,172,279; Feb. 22; Gaz. vol. 223; p. 1024.
Ingots, Process of and apparatus for forming compound. J. Slattery. No. 1,172,747; Feb. 22; Gaz. vol. 223; p. 1195.
Inhaler. A. Stefanini and G. Gradenigo. No. 1,171,364; Feb. 8; Gaz. vol. 223; p. 598.
Ink-well. J. H. Foster. No. 1,170,233; Feb. 1; Gaz. vol. 223; p. 169.
Inking mechanism. E. W. Cooper. No. 1,173,488; Feb. 29; Gaz. vol. 223; p. 1498.
Insensoles, Mold for making. C. B. Mansbach. No. 1,173,449; Feb. 29; Gaz. vol. 223; p. 1485.
Insect-trap. S. Keltonik. No. 1,173,809; Feb. 29; Gaz. vol. 223; p. 1611.
Insects harmful to plant life, Destroying. I. Kitsee. No. 1,172,367; Feb. 22; Gaz. vol. 223; p. 1055.
Insulating-block for building purposes. J. E. Howe. No. 1,172,710; Feb. 22; Gaz. vol. 223; p. 1182.
Insulating-enamel. F. A. Robinson. No. 1,170,000; Feb. 1; Gaz. vol. 223; p. 85.
Insulating-joint. L. McCarthy. No. 1,170,920; Feb. 8; Gaz. vol. 223; p. 441.
Insulating-joints, Making. L. McCarthy. No. 1,171,860; Feb. 15; Gaz. vol. 223; p. 815.
Insulating material. C. M. Abbott. No. 1,172,244; Feb. 22; Gaz. vol. 223; p. 1011.
Insulating substance. L. C. Bassford. No. 1,172,926; Feb. 22; Gaz. vol. 223; p. 1260.
Insulation, Apparatus for manufacturing. E. Haefely. No. 1,171,609; Feb. 15; Gaz. vol. 223; p. 726.
Insulator. A. J. Engelhardt. No. 1,172,963; Feb. 22; Gaz. vol. 223; p. 1273.
Insulator. V. P. Ettinger. No. 1,174,002; Feb. 29; Gaz. vol. 223; p. 1675.
Insulator, Combination fixture-. C. H. Gaffney. No. 1,171,334; Feb. 8; Gaz. vol. 223; p. 588.
Insulator for electrically-charged wires. G. R. Smith. No. 1,171,237; Feb. 8; Gaz. vol. 223; p. 564.
Insulator, High-tension. S. Burfoed. No. 1,173,994; Feb. 29; Gaz. vol. 223; p. 1672.
Insulator-pin. J. G. S. and A. P. Lindholm. No. 1,171,126; Feb. 8; Gaz. vol. 223; p. 516.
Insulator, Strain-. C. N. Allerding. No. 1,170,723; Feb. 8; Gaz. vol. 223; p. 374.
Insulators, Making. J. S. Lapp. No. 1,170,287; Feb. 1; Gaz. vol. 223; p. 187.
Intermittent operating mechanism. J. W. Ransomer. No. 1,172,310; Feb. 22; Gaz. vol. 223; p. 1034.
Internal-combustion engine. H. J. Balmer. No. 1,173,916; Feb. 29; Gaz. vol. 223; p. 1647.
Internal-combustion engine. E. S. Brower. No. 1,171,834; Feb. 15; Gaz. vol. 223; p. 805.
Internal-combustion engine. H. C. Cleaver. No. 1,172,940; Feb. 22; Gaz. vol. 223; p. 1265.
Internal-combustion engine. C. De Lukacsercs. No. 1,173,100; Feb. 22; Gaz. vol. 223; p. 1319.
Internal-combustion engine. S. S. Erickson. No. 1,172,124; Feb. 15; Gaz. vol. 223; p. 911.
Internal-combustion engine. S. I. Fekete. No. 1,173,105; Feb. 22; Gaz. vol. 223; p. 1320.
Internal-combustion engine. P. O. Fredlund. No. 1,170,059; Feb. 1; Gaz. vol. 223; p. 107.

Internal-combustion engine. J. Good. No. 1,171,427; Feb. 15; Gaz. vol. 223; p. 662.
Internal-combustion engine. J. Good. No. 1,171,428; Feb. 15; Gaz. vol. 223; p. 663.
Internal-combustion engine. G. H. Hinchliffe. No. 1,171,435; Feb. 15; Gaz. vol. 223; p. 665.
Internal-combustion engine. E. B. Jones. No. 1,171,052; Feb. 8; Gaz. vol. 223; p. 488.
Internal-combustion engine. H. B. Kelper. No. 1,171,211; Feb. 8; Gaz. vol. 223; p. 545.
Internal-combustion engine. C. H. Kelly. No. 1,173,111; Feb. 22; Gaz. vol. 223; p. 1322.
Internal-combustion engine. H. J. Kline. No. 1,170,276; Feb. 1; Gaz. vol. 223; p. 183.
Internal-combustion engine. B. Krilmer. No. 1,171,855; Feb. 15; Gaz. vol. 223; p. 813.
Internal-combustion engine. J. A. Kremer. No. 1,172,612; Feb. 22; Gaz. vol. 223; p. 1147.
Internal-combustion engine. S. Lake. No. 1,169,969; Feb. 1; Gaz. vol. 223; p. 75.
Internal-combustion engine. C. Mayfield. No. 1,170,769; Feb. 8; Gaz. vol. 223; p. 390.
Internal-combustion engine. H. McCornack. No. 1,172,472; Feb. 22; Gaz. vol. 223; p. 1095.
Internal-combustion engine. H. McCornack. No. 1,172,473; Feb. 22; Gaz. vol. 223; p. 1095.
Internal-combustion engine. H. Reiche. No. 1,172,048; Feb. 15; Gaz. vol. 223; p. 885.
Internal-combustion engine. C. E. Rice. No. 1,170,104; Feb. 1; Gaz. vol. 223; p. 123.
Internal-combustion engine. N. H. Schickel. No. 1,172,314; Feb. 22; Gaz. vol. 223; p. 1030.
Internal-combustion engine. L. B. Stedman. No. 1,170,783; Feb. 8; Gaz. vol. 223; p. 394.
Internal-combustion engine. W. J. Williams. No. 1,173,136; Feb. 22; Gaz. vol. 223; p. 1331.
Internal-combustion engine and compressor therefor. O. F. Persson. No. 1,173,025; Feb. 22; Gaz. vol. 223; p. 1293.
Internal-combustion engine and the like. E. A. Rundlöf. No. 1,173,745; Feb. 29; Gaz. vol. 223; p. 1589.
Internal-combustion engine, Four-cycle. C. E. Frederickson. No. 1,172,976; Feb. 22; Gaz. vol. 223; p. 1278.
Internal-combustion engine of the two-cycle type. S. B. D. Harding. No. 1,170,000; Feb. 8; Gaz. vol. 223; p. 434.
Internal-combustion engine, Two-cycle. D. M. Tuttle. No. 1,172,324; Feb. 22; Gaz. vol. 223; p. 1040.
Internal-combustion engine, Two-cycle. A. von Schmidt. No. 1,169,891; Feb. 1; Gaz. vol. 223; p. 50.
Internal-combustion engine, Two-cycle. A. E. Williams. No. 1,169,899; Feb. 1; Gaz. vol. 223; p. 53.
Internal-combustion heater. C. S. Frank. No. 1,172,348; Feb. 22; Gaz. vol. 223; p. 1048.
Interrupter. T. Abtmeyer. No. 1,171,576; Feb. 15; Gaz. vol. 223; p. 714.
Interrupter. T. Abtmeyer. No. 1,171,577; Feb. 15; Gaz. vol. 223; p. 715.
Interrupter. F. Conrad and T. Abtmeyer. No. 1,171,596; Feb. 15; Gaz. vol. 223; p. 721.
Interrupter. J. B. Dyer. No. 1,172,015; Feb. 15; Gaz. vol. 223; p. 873.
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Laundry-iron. Soldering-iron.
Smoothing-iron.
Iron into foods, drugs, and beverages, Introducing. H. L. Marsh. No. 1,171,739; Feb. 15; Gaz. vol. 223; p. 771.
Iron-molder's tool. E. M. Gillies. No. 1,172,978; Feb. 22; Gaz. vol. 223; p. 1278.
Iron, Producing dephosphorized high-grade pig-. P. L. T. Héroult. No. 1,172,597; Feb. 22; Gaz. vol. 223; p. 1141.
Ironing-board. F. E. Dandelin. No. 1,170,517; Feb. 8; Gaz. vol. 223; p. 300.
Ironing-board. O. F. Heartwell, Jr. No. 1,173,508; Feb. 29; Gaz. vol. 223; p. 1507.
Ironing-board and step-ladder, Combination. H. Harrild. No. 1,172,135; Feb. 15; Gaz. vol. 223; p. 914.
Ironing-board standard. J. J. Smith and E. O. Cassidy. No. 1,171,754; Feb. 15; Gaz. vol. 223; p. 776.
Ironing-machine. A. R. Gustafson. (Reissue.) No. 14,074; Feb. 22; Gaz. vol. 223; p. 1340.
Ironing-machine. A. R. Gustafson. No. 1,170,532; Feb. 8; Gaz. vol. 223; p. 306.
Ironing-machine. M. J. Reilly. No. 1,171,248; Feb. 8; Gaz. vol. 223; p. 557.
Ironing machine, Edge-. W. A. Zeidler. No. 1,171,012; Feb. 8; Gaz. vol. 223; p. 474.
Ironing-table. W. E. Shepherd. No. 1,172,064; Feb. 15; Gaz. vol. 223; p. 891.
Irrigating and fertilizing soil, Apparatus for. B. Ryan. No. 1,173,534; Feb. 29; Gaz. vol. 223; p. 1514.
Irrigating-machine, Hydraulic. P. J. Stalec. No. 1,171,758; Feb. 15; Gaz. vol. 223; p. 777.
Jack: *See*—
Automobile-elevating jack. Shoe-jack.
Automobile-jack. Shoe-machine jack.
Casing-jack. Tire-saving jack.
Lifting jack. Toy jumping-jack.
Pump-jack. Track-lining jack.
Jack. S. E. Moore. No. 1,171,626; Feb. 15; Gaz. vol. 223; p. 733.
Jack. J. W. Rees. No. 1,172,832; Feb. 22; Gaz. vol. 223; p. 1228.
Jar: *See*—
Drill-jar.
Jar attachment, Slop-. F. J. Trafton. No. 1,173,408; Feb. 29; Gaz. vol. 223; p. 1490.
Jar-closure. E. C. Hill. No. 1,170,006; Feb. 8; Gaz. vol. 223; p. 436.
Jar holder, Adjustable fruit-. W. L. Tull. No. 1,171,370; Feb. 8; Gaz. vol. 223; p. 601.
Jar-wrench. J. Nelson. No. 1,170,928; Feb. 8; Gaz. vol. 223; p. 443.
Jewel-tweezers, A. Greenwald. No. 1,174,004; Feb. 29; Gaz. vol. 223; p. 1676.
Jeweler's tool. A. A. Turnage. No. 1,172,571; Feb. 22; Gaz. vol. 223; p. 1132.
Jewelry and making same, Jointed. O. Heyman. No. 1,173,427; Feb. 29; Gaz. vol. 223; p. 1478.
Jewelry-calendar. H. Leno. No. 1,172,809; Feb. 22; Gaz. vol. 223; p. 1219.
Jewelry, Safety-fastening for. I. Nielsen. No. 1,170,778; Feb. 8; Gaz. vol. 223; p. 393.
Jigs or fixtures, Forming. B. M. Walpole. No. 1,171,818; Feb. 15; Gaz. vol. 223; p. 799.
Joint: *See*—
Insulating-joint. Railway-joint.
Insulator-joint. Roof-joint.
Pipe-joint. Slip-joint.
Rail-joint. Universal joint.
Joint. J. A. Brownfield. No. 1,171,589; Feb. 15; Gaz. vol. 223; p. 719.
Jolt ramming-machine. E. H. Mumford. No. 1,171,869; Feb. 15; Gaz. vol. 223; p. 818.
Journal-bearing. D. A. Jones. No. 1,170,271; Feb. 1; Gaz. vol. 223; p. 181.
Journal-box. P. Brown. No. 1,171,087; Feb. 8; Gaz. vol. 223; p. 500.
Journal-box. A. O. Bucklus, Jr. No. 1,171,020; Feb. 8; Gaz. vol. 224; p. 477.
Journal-box. A. Williams and S. M. Kilbride. No. 1,173,472; Feb. 29; Gaz. vol. 223; p. 1492.
Journal-box lids, Device for fastening. M. T. MacPherson. No. 1,169,847; Feb. 1; Gaz. vol. 223; p. 35.
Journal-box wear-plate. D. F. Conware. No. 1,173,660; Feb. 29; Gaz. vol. 223; p. 1559.
Junction-boxes in ceilings and walls, Means for securing. W. E. Sands. No. 1,171,751; Feb. 15; Gaz. vol. 223; p. 775.
Kettle-cover and attachment. A. J. Thalman and A. A. Hart. No. 1,173,989; Feb. 29; Gaz. vol. 223; p. 1670.
Kettle, Covered. A. W. Nelson. No. 1,173,730; Feb. 29; Gaz. vol. 223; p. 1583.
Key: *See*—
Party-line key. Telegraph-key.
Key-bolt. J. H. A. Krauss. No. 1,170,914; Feb. 8; Gaz. vol. 223; p. 439.
Key-cutting machine. H. L. Edge. No. 1,172,205; Feb. 22; Gaz. vol. 223; p. 1019.
Key-retainer. J. G. Lannoye. No. 1,173,587; Feb. 29; Gaz. vol. 223; p. 1533.
Key ring or holder. W. A. Leimer. No. 1,172,374; Feb. 22; Gaz. vol. 223; p. 1058.
Keyboard apparatus. D. Murray. No. 1,170,556; Feb. 8; Gaz. vol. 223; p. 314.
Keyless lock. O. M. Farrand. No. 1,173,256; Feb. 29; Gaz. vol. 228; p. 1416.
Kitchen utensil. J. Messina. No. 1,172,156; Feb. 15; Gaz. vol. 223; p. 921.
Kitchen utensil, Combined. H. W. Sweeting. No. 1,170,358; Feb. 1; Gaz. vol. 223; p. 210.
Knee-pads, Pneumatic. H. P. Compton. No. 1,173,487; Feb. 29; Gaz. vol. 223; p. 1498.
Knee-rest. P. A. Bech. No. 1,170,396; Feb. 1; Gaz. vol. 223; p. 223.
Knee-rest. M. W. McIntyre. No. 1,171,450; Feb. 15; Gaz. vol. 223; p. 670.
Knife: *See*—
Weed-knife.
Knife-blade. R. Wild. No. 1,172,089; Feb. 15; Gaz. vol. 223; p. 899.
Knife-blade fuses, Ventilating-washer for. J. W. Steelman. No. 1,173,889; Feb. 29; Gaz. vol. 223; p. 1639.
Knitting frames, Locking device for the needles of circular-. A. Ernst. No. 1,172,691; Feb. 22; Gaz. vol. 223; p. 1175.
Knitting-machine pattern mechanism. F. B. Wildman and G. L. Ballard. No. 1,172,090; Feb. 15; Gaz. vol. 223; p. 900.
Knitting-machine stop-motion. W. W. Burson. No. 1,172,764; Feb. 22; Gaz. vol. 223; p. 1203.
Knot-tying mechanism. H. E. Enslin. No. 1,170,885; Feb. 8; Gaz. vol. 223; p. 429.
Knuckle and ing, Coupling. E. P. Kinne. No. 1,173,440; Feb. 29; Gaz. vol. 223; p. 1482.
Kraut-cutter. H. F. Conlie. No. 1,170,963; Feb. 8; Gaz. vol. 223; p. 455.
Label. A. Milburn. No. 1,172,157; Feb. 15; Gaz. vol. 223; p. 922.
Labeling-machine. E. Jagenberg. No. 1,173,578; Feb. 29; Gaz. vol. 223; p. 1530.
Labeling-machine. F. Kraemer. No. 1,170,913; Feb. 8; Gaz. vol. 224; p. 438.
Lace cover, Shoe-. S. Bertona. No. 1,171,582; Feb. 15; Gaz. vol. 223; p. 716.
Lacing-hook double-set machine. A. R. Havener. No. 1,169,812; Feb. 1; Gaz. vol. 223; p. 22.

Lacing, Shoe-. E. W. Lucas and C. J. Saunders. No. 1,170,296; Feb. 1; Gaz. vol. 223; p. 190.
Lacings, Manufacturing. S. W. Wardwell. No. 1,172,328; Feb. 22; Gaz. vol. 223; p. 1041.
Ladder. O. K. Putnam. No. 1,170,033; Feb. 8; Gaz. vol. 223; p. 445.
Ladder, Extension-. W. G. Beatty. No. 1,170,395; Feb. 1; Gaz. vol. 223; p. 223.
Ladder, Extension-. G. J. Krbavac. No. 1,171,703; Feb. 15; Gaz. vol. 223; p. 790.
Ladder, Extension step-. G. E. Darrow and G. C. Tudder. No. 1,172,440; Feb. 22; Gaz. vol. 223; p. 1083.
Ladder, Safety car-. W. F. Armstrong and F. S. Ford. No. 1,170,390; Feb. 1; Gaz. vol. 223; p. 221.
Ladder, Silo-. E. McGary. No. 1,172,720; Feb. 22; Gaz. vol. 223; p. 1186.
Ladder support, Silo-. H. C. Brown. No. 1,171,697; Feb. 15; Gaz. vol. 223; p. 756.
Lamp. D. H. Elkins. No. 1,170,519; Feb. 8; Gaz. vol. 223; p. 301.
Lamp. W. A. Watkins and A. A. Gamble. No. 1,171,820; Feb. 15; Gaz. vol. 223; p. 800.
Lamp. R. H. Welles. No. 1,170,378; Feb. 1; Gaz. vol. 223; p. 218.
Lamp, Adjustable electric. R. D. Chandler. No. 1,171,171; Feb. 8; Gaz. vol. 223; p. 531.
Lamp and electric connection, Marine. A. S. Campbell. No. 1,170,959; Feb. 8; Gaz. vol. 223; p. 454.
Lamp and its fittings, Electric. H. E. Sheward. No. 1,170,352; Feb. 1; Gaz. vol. 223; p. 208.
Lamp, Arc-. C. A. B. Halvorsen, Jr., and J. T. Beechlyn. No. 1,171,193; Feb. 8; Gaz. vol. 223; p. 538.
Lamp-chimney holder. F. W. Ellstromberg. No. 1,171,796; Feb. 15; Gaz. vol. 223; p. 791.
Lamp clutch, Arc-. R. G. Standerwick. No. 1,171,271; Feb. 8; Gaz. vol. 223; p. 565.
Lamp, Dirigible. R. Wilcox. No. 1,169,898; Feb. 1; Gaz. vol. 223; p. 53.
Lamp, Electric hand-. G. A. Soehnlein. No. 1,171,002; Feb. 8; Gaz. vol. 223; p. 470.
Lamp, Electric search-. R. H. Welles. No. 1,171,488; Feb. 15; Gaz. vol. 223; p. 684.
Lamp for automobiles, Automatic dirigible. J. R. Hill. No. 1,172,023; Feb. 15; Gaz. vol. 223; p. 876.
Lamp, Gas-. E. Dresler. No. 1,172,083; Feb. 22; Gaz. vol. 223; p. 1172.
Lamp holder and reflector. E. F. Guth and R. V. Owen. No. 1,172,522; Feb. 22; Gaz. vol. 223; p. 1114.
Lamp, Hydrocarbon-. H. C. Albrecht. No. 1,170,722; Feb. 8; Gaz. vol. 223; p. 374.
Lamp-igniter. L. D. Vaughn and T. Miller. No. 1,173,903; Feb. 29; Gaz. vol. 223; p. 1643.
Lamp, Inverted incandescent. H. Lyon. No. 1,172,617; Feb. 22; Gaz. vol. 223; p. 1148.
Lamp, Portable. W. E. Grote. No. 1,172,354; Feb. 22; Gaz. vol. 223; p. 1050.
Lamp, Portable electric. F. M. Rosenfeld. No. 1,173,984; Feb. 29; Gaz. vol. 223; p. 1668.
Lamp, Portable electric. J. L. Strauss. No. 1,171,274; Feb. 8; Gaz. vol. 223; p. 566.
Lamp-regulating mechanism, Arc-. J. L. Hall. No. 1,171,945; Feb. 15; Gaz. vol. 223; p. 847.
Lamp-shade. J. Fisher. No. 1,171,031; Feb. 8; Gaz. vol. 223; p. 481.
Lamp-shade. W. F. M. Hawe. No. 1,173,572; Feb. 29; Gaz. vol. 223; p. 1528.
Lamp, Signal-. J. R. Edwards and M. C. Laywell. No. 1,169,941; Feb. 1; Gaz. vol. 223; p. 66.
Lamp socket, Electric-. V. R. Despard. No. 1,171,180; Feb. 8; Gaz. vol. 223; p. 534.
Lamp socket, Electric-. G. W. Goodridge and G. B. Thomas. No. 1,172,080; Feb. 22; Gaz. vol. 223; p. 1279.
Lamp-socket, Focusing. G. C. Knauff. No. 1,173,280; Feb. 29; Gaz. vol. 223; p. 1426.
Lamp socket, Incandescent-. M. V. Smith. No. 1,171,471; Feb. 15; Gaz. vol. 223; p. 677.
Lamps, Socket for incandescent electric. G. A. Harter No. 1,172,704; Feb. 22; Gaz. vol. 223; p. 1180.
Lamp-support, Adjustable. F. A. Fox. No. 1,170,235; Feb. 1; Gaz. vol. 223; p. 170.
Lamps to current-carrying conductors, Attaching device for connecting electric. M. H. Frelxas. No. 1,171,710; Feb. 15; Gaz. vol. 223; p. 760.
Landing-net frame. G. F. Schenfield. No. 1,172,050; Feb. 15; Gaz. vol. 223; p. 889.
Lantern-chimney. C. Schmidt. No. 1,169,875; Feb. 1; Gaz. vol. 223; p. 44.
Lantern, Marine. E. H. Medén. No. 1,170,086; Feb. 1; Gaz. vol. 223; p. 117.
Lantern, Railway signal-. A. A. Ziegler. No. 1,173,230; Feb. 29; Gaz. vol. 223; p. 1410.
Lantern-slide carrier. D. A. Ritchie. No. 1,173,740; Feb. 29; Gaz. vol. 223; p. 1587.
Lard in pails or cartons, Apparatus for filling. F. P. Maloney. No. 1,173,204; Feb. 29; Gaz. vol. 223; p. 1431.
Lasting apparatus. A. A. Macleod. No. 1,173,292; Feb. 29; Gaz. vol. 223; p. 1430.
Latch. H. Harrison. No. 1,170,252; Feb. 1; Gaz. vol. 223; p. 175.
Latch. F. N. Perkins. No. 1,171,975; Feb. 15; Gaz. vol. 223; p. 858.
Latch and lock. D. W. Tower. No. 1,172,323; Feb. 22; Gaz. vol. 223; p. 1039.
Latch, Automobile-door. E. L. Ackerman. No. 1,170,803; Feb. 8; Gaz. vol. 223; p. 422.
Latch, Door-. C. A. Painter, Jr., and J. P. McKinney, Jr. No. 1,172,899; Feb. 22; Gaz. vol. 223; p. 1251.
Latch for refrigerator-doors, Safety lock-. T. O. Schrader. No. 1,170,685; Feb. 8; Gaz. vol. 223; p. 361.
Latch, Gate-. R. J. Barton. No. 1,173,918; Feb. 29; Gaz. vol. 223; p. 1648.
Latch-operating device. J. T. Allmand. No. 1,171,690; Feb. 15; Gaz. vol. 223; p. 754.
Latch, Secret. J. H. Gaetje. No. 1,171,938; Feb. 15; Gaz. vol. 223; p. 845.
Latching device, Window-. I. S. Downing. No. 1,171,775; Feb. 15; Gaz. vol. 223; p. 784.
Lathe and the like, Metal-working. G. Gorton. No. 1,170,890; Feb. 8; Gaz. vol. 223; p. 430.
Lathe-dog. W. Avery. No. 1,171,400; Feb. 15; Gaz. vol. 223; p. 655.
Lathe work, Truing-tool for. C. F. Urban. No. 1,171,565; Feb. 15; Gaz. vol. 223; p. 711.
Lathes, Gearing for. A. W. Whitcomb. No. 1,171,995; Feb. 15; Gaz. vol. 223; p. 865.
Lathes, Removable taper attachment for. H. C. Brown. No. 1,171,767; Feb. 15; Gaz. vol. 223; p. 781.
Latrines, Seat structure for. D. A. Ebinger. No. 1,170,741; Feb. 8; Gaz. vol. 223; p. 381.
Launder-classifier. G. Land. No. 1,170,286; Feb. 1; Gaz. vol. 223; p. 186.
Laundry appliance. A. H. Gray. No. 1,169,801; Feb. 1; Gaz. vol. 223; p. 19.
Laundry-iron and like apparatus, Electrically-heated. J. G. Homan. No. 1,172,024; Feb. 15; Gaz. vol. 223; p. 877.
Laundry-mangle. J. C. Ross. No. 1,171,659; Feb. 15; Gaz. vol. 223; p. 744.
Laundry-registering device. J. G. Lundy. No. 1,170,298; Feb. 1; Gaz. vol. 223; p. 190.
Lawn-scarifier. W. A. Gorman. No. 1,172,981; Feb. 22; Gaz. vol. 223; p. 1279.
Lawn-sprinkler. M. A. Schlenke. No. 1,171,068; Feb. 8; Gaz. vol. 223; p. 493.
Layboy. J. A. White. No. 1,172,088; Feb. 15; Gaz. vol. 223; p. 899.
Lead arsenate, Manufacture of. J. A. Schaeffer. No. 1,172,741; Feb. 22; Gaz. vol. 223; p. 1193.
Lead, Sounding-. M. C. Schwelnert. No. 1,172,491; Feb. 22; Gaz. vol. 223; p. 1102.
Leaf stemming and finishing machine, Artificial-. I. Friedrich. No. 1,170,622; Feb. 8; Gaz. vol. 223; p. 339.
Leather and similar materials, Machine for treating. A. Bates. No. 1,170,504; Feb. 8; Gaz. vol. 223; p. 296.
Leather-skiving machine. E. E. Lane. No. 1,173,359; Feb. 29; Gaz. vol. 223; p. 1454.
Leather-stretcher dropping device. C. B. Leonard. No. 1,169,973; Feb. 1; Gaz. vol. 223; p. 77.
Legging. C. E. Rogers. No. 1,172,051; Feb. 15; Gaz. vol. 223; p. 887.
Length-stop. W. L. Schellenbach. No. 1,171,000; Feb. 15; Gaz. vol. 223; p. 746.
Lens-clip. G. H. Day. No. 1,173,253; Feb. 29; Gaz. vol. 223; p. 1415.
Lens, Fused bifocal. E. J. Fink. No. 1,171,419; Feb. 15; Gaz. vol. 223; p. 660.
Lens-supporting structure. E. Bausch. No. 1,169,761; Feb. 1; Gaz. vol. 223; p. 5.
Lens-testing instrument. C. J. Troppman. No. 1,170,579; Feb. 8; Gaz. vol. 223; p. 323.
Letter-indicating mechanism. W. E. Gray. No. 1,172,132; Feb. 15; Gaz. vol. 223; p. 913.
Leucocytic extract and making the same. R. A. Archibald. No. 1,171,299; Feb. 8; Gaz. vol. 223; p. 576.
Level. D. W. L. Frank, Sr. No. 1,172,971; Feb. 22; Gaz. vol. 223; p. 1275.
Level. A. M. Prater. No. 1,173,860; Feb. 29; Gaz. vol. 223; p. 1629.
Lever, Gear-shifting. P. C. Johnson. No. 1,171,342; Feb. 8; Gaz. vol. 223; p. 591.
Lever locking and releasing means. F. J. Vickman. No. 1,171,990; Feb. 15; Gaz. vol. 223; p. 864.
Library-stack construction. W. B. Look. No. 1,172,219; Feb. 15; Gaz. vol. 223; p. 941.
Life-preserver. C. O. Carlson. No. 1,173,482; Feb. 29; Gaz. vol. 223; p. 1496.
Life-preserver. F. C. Wheeler. No. 1,171,288; Feb. 8; Gaz. vol. 223; p. 572.
Lifter: *See*—
Bean and pea lifter. Valve-lifter.
Bed-lifter.
Lifting and moving device. H. Kenyon. No. 1,170,757; Feb. 8; Gaz. vol. 223; p. 386.
Lifting device. B. E. Smith. No. 1,170,855; Feb. 8; Gaz. vol. 223; p. 419.
Lifting device for hollow blocks. G. Atterbury. No. 1,171,580; Feb. 15; Gaz. vol. 223; p. 716.
Lifting-jack. G. A. Piper. No. 1,171,240; Feb. 8; Gaz. vol. 223; p. 554.
Lifting-jack. M. K. Purdy. No. 1,170,992; Feb. 8; Gaz. vol. 223; p. 466.
Lifting-jack for automobiles, &c. W. B. Lasher and T. C. Luce. No. 1,174,017; Feb. 29; Gaz. vol. 223; p. 1640.
Light: *See*—
Search-light. Vault-light.
Light hanger, Ceiling-. J. Williamson. No. 1,170,718; Feb. 8; Gaz. vol. 223; p. 373.

Light of vacuum-tubes, Method of and apparatus for securing constancy in the. F. Schröter. No. 1,172,568; Feb. 22; Gaz. vol. 223; p. 1131.
Light-projectors, Color-changing attachment for. P. A. L. and E. Foulds. No. 1,170,621; Feb. 8; Gaz. vol. 223; p. 339.
Lighting and ignition switch, Combination. W. Kaisling. No. 1,172,364; Feb. 22; Gaz. vol. 223; p. 1054.
Lighting apparatus, Portable acetylene-. W. E. Royce. No. 1,170,935; Feb. 8; Gaz. vol. 223; p. 445.
Lighting-fixture. F. W. Wakefield. No. 1,172,649; Feb. 22; Gaz. vol. 223; p. 1159.
Lighting-fixtures, Combined adjustable bowl-hanger and lamp-socket support for. W. R. Kahns. No. 1,171,958; Feb. 15; Gaz. vol. 223; p. 852.
Lightning-arrester. L. S. Brach. No. 1,171,166; Feb. 8; Gaz. vol. 223; p. 529.
Lightning-arrester. L. S. Brach. No. 1,173,165; Feb. 29; Gaz. vol. 223; p. 1384.
Lightning-arrester. F. S. Chapman. No. 1,173,096; Feb. 22; Gaz. vol. 223; p. 1317.
Lightning-rod. A. G. Hoovens. No. 1,170,260; Feb. 1; Gaz. vol. 223; p. 177.
Line-casting machines, Automatic stopping mechanism for. S. E. Sperry. No. 1,173,887; Feb. 29; Gaz. vol. 223; p. 1639.
Line-casting machines, Line-separating mechanism for. D. Petri-Palmedo. No. 1,172,309; Feb. 22; Gaz. vol. 223; p. 1034.
Linoleum, Apparatus for the manufacture of inlaid. C. H. Scott. No. 1,173,875; Feb. 29; Gaz. vol. 223; p. 1634.
Linotype-machine burner. J. H. La Moy. No. 1,172,295; Feb. 22; Gaz. vol. 223; p. 1030.
Linotype-slug. F. H. Stelfel. No. 1,172,914; Feb. 22; Gaz. vol. 223; p. 1256.
Lip-turning machine. F. H. Perry. No. 1,173,381; Feb. 29; Gaz. vol. 223; p. 1462.
Liquid dispensing and measuring apparatus. C. F. Brown. No. 1,170,872; Feb. 8; Gaz. vol. 223; p. 425.
Liquid-dispensing system, Protective. H. Hillebrand. No. 1,170,907; Feb. 8; Gaz. vol. 223; p. 436.
Liquid-evaporating apparatus. F. Elder. No. 1,172,120; Feb. 15; Gaz. vol. 223; p. 909.
Liquid-fuel burner. P. A. and V. W. Vore. No. 1,172,849; Feb. 22; Gaz. vol. 223; p. 1233.
Liquid fuel for internal-combustion engines. G. E. Heyl and T. T. Baker. No. 1,171,434; Feb. 15; Gaz. vol. 223; p. 665.
Liquid into veins, Apparatus for introducing. G. W. Eastman. No. 1,170,805; Feb. 8; Gaz. vol. 223; p. 402.
Liquid-level electrical indicator. D. Ablon. No. 1,171,405; Feb. 15; Gaz. vol. 223; p. 655.
Liquid-packaging machine. W. F. Stone. No. 1,173,148; Feb. 22; Gaz. vol. 223; p. 1337.
Liquids, Purifying. F. R. Bachler. No. 1,170,868; Feb. 8; Gaz. vol. 223; p. 424.
Liquids, Separation of. O. H. Nonnenbruch. No. 1,170,558; Feb. 8; Gaz. vol. 223; p. 315.
Liquids, Vessel for inflammable. K. Müller. No. 1,171,800; Feb. 15; Gaz. vol. 223; p. 792.
Lithographic stones, Manufacture of artificial. V. H. J. Hereng. No. 1,172,796; Feb. 22; Gaz. vol. 223; p. 1214.
Litter-carriers, Bumper for. H. W. Osterhout. No. 1,171,801; Feb. 15; Gaz. vol. 223; p. 793.
Loading apparatus. H. P. Hofstrand. No. 1,170,638; Feb. 8; Gaz. vol. 223; p. 345.
Lock: *See*—
Automobile-lock.
Automobile-door lock.
Bottle-lock.
Cabinet-lock.
Car-door lock.
Combination-lock.
Door-lock.
Elevator-lock.
Elevator-shaft-gate lock.
Gear-lock.
Hasp-lock.
Keyless lock.
Magnetic lock.
Mirror-lock.
Nut-lock.
Oar-lock.
Permutation-lock.
Sash-lock.
Seal-lock.
Socket-shell lock.
Telephone-lock.
Transmission-lock.
Trunk-lock.
Valve-lock.
Wheel-lock.
Lock. W. Coney. No. 1,170,481; Feb. 1; Gaz. vol. 223; p. 251.
Lock. L. G. Giardino. No. 1,171,425; Feb. 15; Gaz. vol. 223; p. 662.
Lock. F. H. Knight. No. 1,173,112; Feb. 22; Gaz. vol. 223; p. 1322.
Lock. H. Korn. No. 1,173,812; Feb. 29; Gaz. vol. 223; p. 1612.
Lock. E. Lensley. No. 1,173,007; Feb. 22; Gaz. vol. 223; p. 1288.
Lock. C. A. Müller. No. 1,173,677; Feb. 29; Gaz. vol. 223; p. 1564.
Lock. J. H. Shaw. No. 1,171,264; Feb. 8; Gaz. vol. 223; p. 563.
Lock. E. E. Stuver and C. R. Robbins. No. 1,173,892; Feb. 29; Gaz. vol. 223; p. 1640.
Lock-box. R. G. Bullock. No. 1,172,193; Feb. 15; Gaz. vol. 223; p. 933.
Lock dial, Combination-. W. T. Benham. No. 1,174,011; Feb. 29; Gaz. vol. 223; p. 1679.
Locking device. R. E. Perkins. No. 1,172,482; Feb. 22; Gaz. vol. 223; p. 1099.
Locking device. W. H. Rooney. No. 1,171,981; Feb. 15; Gaz. vol. 223; p. 860.
Locomotive. S. M. Vauclain. No. 1,171,283; Feb. 8; Gaz. vol. 223; p. 570.
Locomotive ash-pan. W. Pearson and E. P. Quattlebaum. No. 1,173,855; Feb. 29; Gaz. vol. 223; p. 1627.
Locomotive-cylinder. F. F. Scoville. No. 1,172,841; Feb. 22; Gaz. vol. 223; p. 1230.
Locomotive, Electric. G. M. Eaton. No. 1,171,600; Feb. 15; Gaz. vol. 223; p. 723.
Locomotives and the like, Muffler for. H. R. MacFarland. No. 1,173,447; Feb. 29; Gaz. vol. 223; p. 1484.
Logging system, Overhead. C. A. Joy. No. 1,170,645; Feb. 8; Gaz. vol. 223; p. 346.
Loom filling-detecting mechanism. W. Riley. No. 1,172,834; Feb. 22; Gaz. vol. 223; p. 1228.
Loom pick-motion. H. H. Kelley. No. 1,172,144; Feb. 15; Gaz. vol. 223; p. 917.
Loom-shuttle. T. Boucher. No. 1,171,766; Feb. 15; Gaz. vol. 223; p. 780.
Loom shuttle of the non-reciprocating type, Textile-. L. E. Sallsbury. No. 1,170,679; Feb. 8; Gaz. vol. 223; p. 359.
Loom warp stop-motion. A. H. Sawtell. No. 1,170,681; Feb. 8; Gaz. vol. 223; p. 360.
Looms, Filling-positioning device for. E. S. Stimpson. No. 1,172,750; Feb. 22; Gaz. vol. 223; p. 1197.
Loss-preventing device. R. Barnes and O. M. Drake. No. 1,171,381; Feb. 8; Gaz. vol. 223; p. 605.
Loss-preventing device. W. N. Campbell. No. 1,171,836; Feb. 15; Gaz. vol. 223; p. 806.
Lubricating apparatus. A. Flanigan. No. 1,173,656; Feb. 29; Gaz. vol. 223; p. 1558.
Lubricating apparatus. J. T. Pedersen. No. 1,173,734; Feb. 29; Gaz. vol. 223; p. 1585.
Lubricating device. N. M. Aycock. No. 1,170,726; Feb. 8; Gaz. vol. 223; p. 375.
Lubricating device. B. L. Berkey. No. 1,171,693; Feb. 15; Gaz. vol. 223; p. 755.
Lubricating device. G. W. Bowen. No. 1,172,867; Feb. 22; Gaz. vol. 223; p. 1239.
Lubricating gear, Centrifugal-. W. C. Farnum. No. 1,170,057; Feb. 1; Gaz. vol. 223; p. 106.
Lubricator: *See*—
Drop-feed lubricator.
Elevator-guide-rail lubricator.
Engine-lubricator.
Force-feed lubricator.
Lubricator. L. A. and R. H. Biggar. No. 1,173,921; Feb. 29; Gaz. vol. 223; p. 1649.
Lubricator. H. R. Geer. No. 1,169,797; Feb. 1; Gaz. vol. 223; p. 18.
Lubricator. J. F. McCanna. No. 1,172,540; Feb. 22; Gaz. vol. 223; p. 1121.
Lubricator. J. P. Quam. No. 1,173,382; Feb. 29; Gaz. vol. 223; p. 1462.
Lubricator. T. W. Smith. No. 1,171,361; Feb. 8; Gaz. vol. 223; p. 597.
Lubricator. W. Weckwerth and F. C. Conrad. No. 1,171,681; Feb. 15; Gaz. vol. 223; p. 751.
Lubricator. R. Wood. No. 1,171,825; Feb. 15; Gaz. vol. 223; p. 802.
Lug. R. A. Goeller. No. 1,169,798; Feb. 1; Gaz. vol. 223; p. 18.
Lumber-lowering machine. J. A. Peterman. No. 1,172,042; Feb. 15; Gaz. vol. 223; p. 883.
Lunch-wrapper. C. J. Gerhardstein. No. 1,172,204; Feb. 15; Gaz. vol. 223; p. 936.
Macaroni-maker. V. Mancini. No. 1,170,304; Feb. 1; Gaz. vol. 223; p. 192.
Machine-brake. J. W. Hasburg. No. 1,173,799; Feb. 29; Gaz. vol. 223; p. 1608.
Machine-tools, Reversing mechanism for. A. M. Sosa. No. 1,171,003; Feb. 8; Gaz. vol. 223; p. 470.
Machinery, Safety manipulating device for. W. W. Dean. No. 1,170,615; Feb. 8; Gaz. vol. 223; p. 337.
Magnetic lock. P. W. Fuller. No. 1,172,203; Feb. 15; Gaz. vol. 223; p. 936.
Magneto-coupling. C. Balough. No. 1,173,406; Feb. 29; Gaz. vol. 223; p. 1471.
Mail-box. W. W. Henry and A. E. Stevens. No. 1,173,961; Feb. 29; Gaz. vol. 223; p. 1662.
Mail-box. J. G. McNabb. No. 1,172,619; Feb. 22; Gaz. vol. 223; p. 1149.
Mail-box, House. E. E. Brumbaugh. No. 1,172,513; Feb. 22; Gaz. vol. 223; p. 1111.
Mail-box outfit, Rural-. G. Wilcox. No. 1,170,030; Feb. 1; Gaz. vol. 223; p. 97.
Mail-distributing machine. R. S. Molyneux. No. 1,170,091; Feb. 1; Gaz. vol. 223; p. 119.
Mail-exchange system, Automatic. A. Hupp. No. 1,170,267; Feb. 1; Gaz. vol. 223; p. 180.
Mail-exchange system, Railway. A. Hupp. No. 1,170,640; Feb. 8; Gaz. vol. 223; p. 345.
Mail-matter-inserting machine. V. W. Newman. No. 1,172,824; Feb. 22; Gaz. vol. 223; p. 1224.
Mail-pouch rack with expansible grip. V. Willoughby. No. 1,170,593; Feb. 8; Gaz. vol. 223; p. 328.
Mail-receptacle. W. H. Link. No. 1,170,291; Feb. 1; Gaz. vol. 223; p. 188.
Mailing and display package. M. W. Mullen. No. 1,171,231; Feb. 8; Gaz. vol. 223; p. 552.
Mailing-folder. A. M. Colt. No. 1,171,592; Feb. 15; Gaz. vol. 223; p. 720.

Mandrel for making inner tubes for tires. C. E. Foutts. No. 1,173,944; Feb. 29; Gaz. vol. 223; p. 1657.
Mandrel for winding coils. A. D. Scott. No. 1,172,910; Feb. 22; Gaz. vol. 223; p. 1255.
Mandrel particularly adapted for making, forming, and placing concrete piling, Collapsible. N. C. Johnson. No. 1,173,806; Feb. 29; Gaz. vol. 223; p. 1610.
Mandrel, Stack-seaming. A. W. Smith. No. 1,170,355; Feb. 1; Gaz. vol. 223; p. 209.
Mangle. L. R. Mertens. No. 1,171,970; Feb. 15; Gaz. vol. 223; p. 856.
Mangles, Attachment for adjusting guide-cords for. J. Sorokin. No. 1,173,886; Feb. 29; Gaz. vol. 223; p. 1638.
Manifolding device. A. M. Bovier. No. 1,173,551; Feb. 29; Gaz. vol. 223; p. 1520.
Mantel, Knockdown. J. W. Haddox. No. 1,171,717; Feb. 15; Gaz. vol. 223; p. 763.
Manure mixer, pulverizer, and distributer, Chemical-treating. F. A. and H. R. Pickett. No. 1,173,856; Feb. 29; Gaz. vol. 223; p. 1628.
Manure-spreader. C. E. Root. No. 1,173,037; Feb. 22; Gaz. vol. 223; p. 1297.
Manure-spreaders and the like, Intermittent-grip device for. R. Shedenhelm. No. 1,170,005; Feb. 1; Gaz. vol. 223; p. 87.
Marking or numbering machine. F. W. Merrick. No. 1,172,897; Feb. 22; Gaz. vol. 223; p. 1250.
Marking the superficial area of leather and like materials, Machine for. G. A. Schettler. No. 1,173,312; Feb. 29; Gaz. vol. 223; p. 1437.
Mask. R. L. Welch. No. 1,172,330; Feb. 22; Gaz. vol. 223; p. 1042.
Massage apparatus. J. Sabatino. No. 1,173,039; Feb. 22; Gaz. vol. 223; p. 1298.
Massage device. I. Miller. No. 1,173,838; Feb. 29; Gaz. vol. 223; p. 1621.
Mat: *See*—
Bath-mat.
Mats and the like, Machine for the manufacture of. G. T. Green. No. 1,173,661; Feb. 29; Gaz. vol. 223; p. 1560.
Match-delivering machine. H. C. Walker. No. 1,173,069; Feb. 22; Gaz. vol. 223; p. 1309.
Mattress-handle. M. L. Pettes. No. 1,170,844; Feb. 8; Gaz. vol. 223; p. 415.
Measure, Adjustable. A. S. Wheeler. No. 1,172,508; Feb. 22; Gaz. vol. 223; p. 1109.
Measure, Tape-. F. Buck. No. 1,170,956; Feb. 8; Gaz. vol. 223; p. 453.
Measuring and dispensing device. N. P. Johnson. No. 1,172,603; Feb. 22; Gaz. vol. 223; p. 1143.
Measuring and dispensing device. C. B. Sprague. No. 1,171,550; Feb. 15; Gaz. vol. 223; p. 706.
Measuring and locking device for valves, Combined. C. P. Anderson. No. 1,169,906; Feb. 1; Gaz. vol. 223; p. 55.
Measuring apparatus for liquids. J. W. Gamble. No. 1,170,239; Feb. 1; Gaz. vol. 223; p. 172.
Measuring apparatus, Gas-volume-. H. P. Westcott. No. 1,172,087; Feb. 15; Gaz. vol. 223; p. 899.
Measuring apparatus, Water-. J. W. Gamble. No. 1,171,035; Feb. 8; Gaz. vol. 223; p. 482.
Measuring attachment for can-covers. G. T. Englund. No. 1,172,122; Feb. 15; Gaz. vol. 223; p. 910.
Measuring device for tanks. W. C. Lindsay. No. 1,170,290; Feb. 1; Gaz. vol. 223; p. 187.
Measuring, Indicating, and registering differences of pressure, Apparatus for. O. Roschanek. No. 1,173,038; Feb. 22; Gaz. vol. 223; p. 1297.
Measuring instrument. E. W. Brunton. No. 1,172,340; Feb. 22; Gaz. vol. 223; p. 1045.
Measuring instrument. J. B. Replogle. No. 1,171,646; Feb. 15; Gaz. vol. 223; p. 740.
Measuring instrument. L. Troxler. No. 1,172,645; Feb. 22; Gaz. vol. 223; p. 1158.
Measuring instrument, Combination. W. Rodeck. No. 1,172,950; Feb. 15; Gaz. vol. 223; p. 886.
Measuring instrument, Electrical. H. E. Trent. No. 1,171,907; Feb. 15; Gaz. vol. 223; p. 832.
Measuring instrument, Electrolytic. H. S. Hatfield. No. 1,173,570; Feb. 29; Gaz. vol. 223; p. 1527.
Measuring instrument for iron-loss testing, Electric. L. W. Chubb. No. 1,170,607; Feb. 8; Gaz. vol. 223; p. 333.
Measuring liquids, Apparatus for. N. V. Tanner. No. 1,171,476; Feb. 15; Gaz. vol. 223; p. 680.
Measuring-tank. E. J. Bryan. No. 1,172,424; Feb. 22; Gaz. vol. 223; p. 1076.
Measuring woven wire, Device for. T. C. Rush. No. 1,172,052; Feb. 15; Gaz. vol. 223; p. 887.
Meat-holder for meat-cutting machines. J. C. Van Berkel. No. 1,171,680; Feb. 15; Gaz. vol. 223; p. 750.
Meat-tenderer. M. J. Mitchel. No. 1,170,772; Feb. 8; Gaz. vol. 223; p. 391.
Mechanical movement. J. H. Brewer and J. Charles. No. 1,170,871; Feb. 8; Gaz. vol. 223; p. 424.
Mechanical movement. R. Miehle. No. 1,170,176; Feb. 1; Gaz. vol. 223; p. 148.
Mechanical signal. C. F. Sendall. No. 1,172,743; Feb. 22; Gaz. vol. 223; p. 1194.
Mechanism, Automatically-controlled. E. Scheyer. No. 1,172,058; Feb. 15; Gaz. vol. 223; p. 889.
Mechanism, Automatically-controlled. E. Scheyer. No. 1,172,059; Feb. 15; Gaz. vol. 223; p. 890.
Mediator, Animal-. F. M. Stafford. No. 1,173,753; Feb. 29; Gaz. vol. 223; p. 1591.
Memorandum-holder. N. L. Jacobus. No. 1,170,541; Feb. 8; Gaz. vol. 223; p. 309.
Merchandise-container. A. S. Yoder. No. 1,173,909; Feb. 29; Gaz. vol. 223; p. 1645.
Metal-bending machine. H. H. Eaton. No. 1,170,227; Feb. 1; Gaz. vol. 223; p. 167.
Metal-cutting machine. A. S. Porter. No. 1,172,831; Feb. 22; Gaz. vol. 223; p. 1227.
Metal-cutting-off device, Rotary. G. Gorton. No. 1,171,430; Feb. 15; Gaz. vol. 223; p. 664.
Metal receptacles, Seam for. J. F. Leslie. No. 1,170,288; Feb. 1; Gaz. vol. 223; p. 187.
Metal-reducing machine. M. J. Fuchs. No. 1,170,868; Feb. 8; Gaz. vol. 223; p. 430.
Metal-sawing machine. W. H. Lucas. No. 1,170,297; Feb. 1; Gaz. vol. 223; p. 190.
Metal-shaping machine, Automatic. M. A. Smith. No. 1,170,010; Feb. 1; Gaz. vol. 223; p. 89.
Metal-working machine. H. W. E. Markussen. No. 1,173,295; Feb. 29; Gaz. vol. 223; p. 1431.
Metal-working machine. W. Reynolds. No. 1,169,867; Feb. 1; Gaz. vol. 223; p. 42.
Metals from waste oils, Recovery of. M. E. Rothberg. No. 1,170,342; Feb. 1; Gaz. vol. 223; p. 204.
Metals, Treating. F. L. Bishop. No. 1,171,832; Feb. 15; Gaz. vol. 223; p. 804.
Metals, Working clad. W. M. Page and W. Tassin. No. 1,171,637; Feb. 15; Gaz. vol. 223; p. 737.
Metallic articles, Making compound. I. Langmuir. No. 1,171,856; Feb. 15; Gaz. vol. 223; p. 814.
Metallic leaf attached to a supporting-strip, Dividing. C. E. Smith. No. 1,173,127; Feb. 22; Gaz. vol. 223; p. 1329.
Metallic members, Means for adjustably securing. G. Russell. No. 1,172,054; Feb. 15; Gaz. vol. 223; p. 888.
Metallurgical furnace. U. Wedge. No. 1,170,376; Feb. 1; Gaz. vol. 223; p. 217.
Metallurgical furnace and furnace parts. T. W. Muckle. No. 1,171,222; Feb. 15; Gaz. vol. 223; p. 942.
Meter: *See*—
Area-meter.
Electrolytic meter.
Flow-meter.
Water-meter.
Meter. C. H. Taylor. No. 1,173,395; Feb. 29; Gaz. vol. 223; p. 1466
Meter-box. H. M. Lofton. No. 1,169,976; Feb. 1; Gaz. vol 223; p. 77.
Meter-switch. H. W. Brown. No. 1,171,586; Feb. 15; Gaz. vol. 223; p. 718.
Meter-switch. H. W. Brown. No. 1,171,587; Feb. 15; Gaz. vol. 223; p. 718.
Meter system, Electrically-controlled. J. W. Lattig and C. L. Goodrum. No. 1,172,539; Feb. 22; Gaz. vol. 223; p. 1121.
Meters, Automatic means for correcting the registration of. F. W. Illid. No. 1,172,706; Feb. 22; Gaz. vol. 223; p. 1181.
Meters, Venting unit for. H. N. Packard. No. 1,174,025; Feb. 29; Gaz. vol. 223; p. 1684.
Metering-switch. H. W. Brown. No. 1,171,588; Feb. 15; Gaz. vol. 223; p. 719.
Micrometer-gage. W. J. Belcher. No. 1,169,762; Feb. 1; Gaz. vol. 223; p. 5.
Microscopic-slide drier. A. De Khotinsky. No. 1,170,739; Feb. 8; Gaz. vol. 223; p. 380.
Middlings-purifying apparatus. C. R. Duncan. No. 1,171,108; Feb. 8; Gaz. vol. 223; p. 508.
Military shoulder-arm. T. C. Johnson. No. 1,172,714; Feb. 22; Gaz. vol. 223; p. 1184.
Military shoulder-arm. T. C. Johnson. No. 1,173,582; Feb. 29; Gaz. vol. 223; p. 1532.
Military weapon. J. Kolibas. No. 1,169,838; Feb. 1; Gaz. vol. 223; p. 32.
Milk-cooler. P. E. Cranston. No. 1,172,877; Feb. 22; Gaz. vol. 223; p. 1243.
Mill: *See*—
Grinding-mill.
Sawmill.
Windmill.
Mill-pinion. E. S. Black. No. 1,171,498; Feb. 15; Gaz. vol. 223; p. 688.
Mill-pinion. W. S. McKee, W. G. Nichols, and A. H. Exton. No. 1,173,289; Feb. 29; Gaz. vol. 223; p. 1429.
Mill-pinion. W. G. Nichols. No. 1,171,532; Feb. 15; Gaz. vol. 223; p. 699.
Mine and torpedo guard. J. A. Steinmetz. No. 1,171,153; Feb. 8; Gaz. vol. 223; p. 526.
Mine-destroyer. I. M. Ritter. No. 1,174,026; Feb. 29; Gaz. vol. 223; p. 1684.
Mine-shaft roller. J. Gemmell. No. 1,171,039; Feb. 8; Gaz. vol. 223; p. 484.
Minerals, Apparatus for and process of classifying. R. H. Richards. No. 1,170,848; Feb. 8; Gaz. vol. 223; p. 416.
Mining-machine. F. Cartlidge. No. 1,173,170; Feb. 29; Gaz. vol. 223; p. 1386.
Mining-machine. N. D. Levin. No. 1,169,842; Feb. 1; Gaz. vol. 223; p. 33.
Mining-machine and truck. N. D. Levin. No. 1,170,763; Feb. 8; Gaz. vol. 223; p. 388.
Mirror-grinding machine, Parabolic-. T. A. Corry. No. 171,174; Feb. 8; Gaz. vol. 223; p. 532.
Mirror-lock. S. F. Goss. No. 1,171,188; Feb. 8; Gaz. vol. 223; p. 537.
Mixer: *See*—
Dough-mixer.
Drink-mixer.
Fluid-fuel-burner mixer.
Manure-mixer.

Mixer. L. Bordwell. No. 1,171,922; Feb. 15; Gaz. vol. 223; p. 839.

Mixer. L. Bordwell. No. 1,171,923; Feb. 15; Gaz. vol. 223; p. 839.

Mixing apparatus. A. Keppeler. No. 1,171,054; Feb. 8; Gaz. vol. 223; p. 488.

Mixing device. W. Walch. No. 1,170,788; Feb. 8; Gaz. vol. 223; p. 396.

Mixing-machine. H. La Casse. No. 1,173,358; Feb. 29; Gaz. vol. 223; p. 1454.

Mixing-machine. E. B. Higgins. No. 1,170,815; Feb. 8; Gaz. vol. 223; p. 405.

Mixing-machine. N. M. Rosendahl. No. 1,172,559; Feb. 22; Gaz. vol. 223; p. 1128.

Mixing-mill feed mechanism. P. E. Welton. No. 1,173,625; Feb. 29; Gaz. vol. 223; p. 1547.

Mixing-mill feed mechanism. P. E. Welton. No. 1,173,626; Feb. 29; Gaz. vol. 223; p. 1548.

Moistening device. D. G. Beeching. No. 1,173,085; Feb. 22; Gaz. vol. 223; p. 1313.

Moistening device, Tape-. E. S. Kneeland. No. 1,171,056; Feb. 8; Gaz. vol. 223; p. 489.

Molasses and producing same, Colored. E. E. Werner. No. 1,172,507; Feb. 22; Gaz. vol. 223; p. 1109.

Mold: *See*—

Beam and girder mold.	Post-mold.
Brake-shoe mold.	Revetment-mold.
Cement-mold.	Sash-weight mold.
Concrete-stair mold.	Wall-mold.
Ingot-mold.	Wall and culvert mold.

Mold. J. V. Boland. No. 1,170,732; Feb. 8; Gaz. vol. 223; p. 378.

Mold. W. N. Britton. No. 1,173,166; Feb. 29; Gaz. vol. 223; p. 1384.

Mold. O. S. Hall. No. 1,172,451; Feb. 22; Gaz. vol. 223; p. 1087.

Mold. J. S. Tindall. No. 1,171,563; Feb. 15; Gaz. vol. 223; p. 710.

Molding-machine. W. J. Baird. No. 1,171,301; Feb. 8; Gaz. vol. 223; p. 576.

Molding-machine. J. J. Creedon and J. T. Miles. No. 1,173,414; Feb. 29; Gaz. vol. 223; p. 1473.

Molding-machine. F. J. Fisher. No. 1,171,937; Feb. 15; Gaz. vol. 223; p. 844.

Molding-machine. O. P. Nystrom. No. 1,172,898; Feb. 22; Gaz. vol. 223; p. 1251.

Molding-machine. J. T. Stoney. (Reissue.) No. 14,059; Feb. 8; Gaz. vol. 223; p. 615.

Molding-machine. W. H. Van Gulder. No. 1,173,229; Feb. 29; Gaz. vol. 223; p. 1406.

Molding or casting apparatus. G. Atterbury. No. 1,171,579; Feb. 15; Gaz. vol. 223; p. 715.

Money-changing machine. B. H. Camden. No. 1,172,108; Feb. 15; Gaz. vol. 223; p. 906.

Mooring-winch. A. T. Prescott. No. 1,171,540; Feb. 15; Gaz. vol. 223; p. 702.

Mop. E. A. R. Skillman. No. 1,171,000; Feb. 8; Gaz. vol. 223; p. 469.

Mop and detachable brush. O. O. Le Blanc. No. 1,173,816; Feb. 29; Gaz. vol. 223; p. 1613.

Mop, Floor-. W. Severns. No. 1,173,223; Feb. 29; Gaz. vol. 223; p. 1404.

Mop, Fountain-. F. Kohl and W. Severns. No. 1,173,194; Feb. 29; Gaz. vol. 223; p. 1394.

Mop-holder. G. Wingender. No. 1,171,161; Feb. 8; Gaz. vol. 223; p. 528.

Mop, Oil-. F. L. Hurt. No. 1,169,958; Feb. 1; Gaz. vol. 223; p. 71.

Mop-wringer. W. Frohne. No. 1,170,623; Feb. 8; Gaz. vol. 223; p. 340.

Mop-wringer. P. Smith. No. 1,171,150; Feb. 8; Gaz. vol. 223; p. 525.

Morticing-machine, Portable chain. F. D. Slonaker. No. 1,170,120; Feb. 1; Gaz. vol. 223; p. 129.

Motor: *See*—

Current-motor.	Induction-motor.
Electric motor.	Spring-motor.
Hydraulic motor.	Wave-motor.

Motor. W. F. Straub and A. A. Radtke. No. 1,171,366; Feb. 8; Gaz. vol. 223; p. 599.

Motor attachment. W. Stanley. No. 1,172,176; Feb. 15; Gaz. vol. 223; p. 928.

Motor-control system. S. H. Keefer. No. 1,170,974; Feb. 8; Gaz. vol. 223; p. 460.

Motor-controller. C. T. Henderson. No. 1,172,705; Feb. 22; Gaz. vol. 223; p. 1180.

Motor driving-wheel. A. H. Hoadley. No. 1,172,456; Feb. 22; Gaz. vol. 223; p. 1089.

Motor starters and light control. W. H. Collier. No. 1,172,583; Feb. 22; Gaz. vol. 223; p. 1136.

Motor-starting device, Internal-combustion-. L. A. Casgrain. No. 1,171,170; Feb. 8; Gaz. vol. 223; p. 531.

Motors, Air-humidifier for explosive-. J. M. Kroyer. No. 1,170,827; Feb. 8; Gaz. vol. 223; p. 409.

Motors and lighting-generators, Controlling mechanism for automobile starting-. G. E. Stevens. No. 1,170,196; Feb. 1; Gaz. vol. 223; p. 156.

Motors, Centrifugal brake for spring-. E. Millsaps. No. 1,173,601; Feb. 29; Gaz. vol. 223; p. 1539.

Mouth-extender. E. Reyer. No. 1,170,333; Feb. 1; Gaz. vol. 223; p. 201.

Mower attachment. H. W. Mueller. No. 1,172,033; Feb. 15; Gaz. vol. 223; p. 880.

Mower, Lawn-. C. T. Bishop. No. 1,170,505; Feb. 8; Gaz. vol. 223; p. 296.

Mower, Lawn-. H. J. Farmer. No. 1,172,444; Feb. 22; Gaz. vol. 223; p. 1084.

Mowers, Stationary knife-bar for lawn-. H. T. Coldwell. No. 1,171,593; Feb. 15; Gaz. vol. 223; p. 720.

Mowing and sweeping machine, &c., Lawn. W. H. Coldwell. No. 1,173,485; Feb. 29; Gaz. vol. 223; p. 1497.

Mowing-machine, Power. L. G. Walker. No. 1,172,326; Feb. 22; Gaz. vol. 223; p. 1041.

Mucilaginous material, Holder and spreader for. G. P. Brenner. No. 1,170,735; Feb. 8; Gaz. vol. 223; p. 379.

Mud and scale collector. I. M. Rhoades. No. 1,173,033; Feb. 22; Gaz. vol. 223; p. 1295.

Muff and scarf, Combination. M. Levy. No. 1,173,285; Feb. 29; Gaz. vol. 223; p. 1428.

Muller. J. S. and M. L. Johnston. No. 1,173,583; Feb. 29; Gaz. vol. 223; p. 1532.

Muller, Compressed-air-exhaust. E. Egan. No. 1,170,807; Feb. 8; Gaz. vol. 223; p. 402.

Multiple-socket wrench. W. Nigborowicz. No. 1,171,003; Feb. 8; Gaz. vol. 223; p. 491.

Music-bench. F. J. W. Welser. No. 1,172,415; Feb. 22; Gaz. vol. 223; p. 1072.

Music-book holder. G. Gunderson. No. 1,171,943; Feb. 15; Gaz. vol. 223; p. 846.

Music-leaf turner. W. C. Adams. No. 1,173,911; Feb. 29; Gaz. vol. 223; p. 1646.

Music-leaf turner. J. O. Green. No. 1,170,060; Feb. 1; Gaz. vol. 223; p. 107.

Music-leaf turner. G. C. Weiss. No. 1,173,624; Feb. 29; Gaz. vol. 223; p. 1547.

Music-sheet cutter. Perforated-. W. G. Doty. No. 1,171,932; Feb. 15; Gaz. vol. 223; p. 842.

Music-stands, Violin-supporting attachment for. C. C. Schlieckert. No. 1,170,684; Feb. 8; Gaz. vol. 223; p. 361.

Musical chart. G. De Bellis. No. 1,172,442; Feb. 22; Gaz. vol. 223; p. 1083.

Musical instrument. D. J. Hauss. No. 1,170,750; Feb. 8; Gaz. vol. 223; p. 384.

Musical-instrument attachment. A. B. Poposkey. No. 1,170,325; Feb. 1; Gaz. vol. 223; p. 198.

Musical instrument, Mechanical. H. J. Anderson. No. 1,171,827; Feb. 15; Gaz. vol. 223; p. 802.

Musical-instrument pedal. W. I. Kirk. No. 1,173,811; Feb. 29; Gaz. vol. 223; p. 1611.

Musical instrument, Percussion. J. C. Deagan. No. 1,173,783; Feb. 29; Gaz. vol. 223; p. 1602.

Musical instrument, Percussion. J. C. Deagan. No. 1,173,785; Feb. 29; Gaz. vol. 223; p. 1603.

Musical-instrument player. P. B. Klugh. No. 1,172,805; Feb. 22; Gaz. vol. 223; p. 1217.

Musical instrument, Stringed. A. Morris. No. 1,173,017; Feb. 22; Gaz. vol. 223; p. 1291.

Musical instrument, Whistling. J. J. Stanton. No. 1,173,054; Feb. 22; Gaz. vol. 223; p. 1304.

Musical instrument, Wind. M. Garl. No. 1,170,627; Feb. 8; Gaz. vol. 223; p. 341.

Musical instruments, Music-holder for self-playing. I. B. Smith and C. W. Dorricott. No. 1,170,572; Feb. 8; Gaz. vol. 223; p. 320.

Musical instruments, Tune-sheet for automatic. J. J. Walker. No. 1,173,232; Feb. 29; Gaz. vol. 223; p. 1407.

Musical instruments, Variable automatic stop control for. E. Welte. No. 1,173,905; Feb. 29; Gaz. vol. 223; p. 1644.

Musical notation, Interpretative. A. Schroeder. No. 1,171,467; Feb. 15; Gaz. vol. 223; p. 676.

Muzzle, Animal-. F. Boehme. No. 1,170,400; Feb. 1; Gaz. vol. 223; p. 224.

Nail. G. A. Noetzel and W. P. Ferris. (Reissue.) No. 14,075; Feb. 22; Gaz. vol. 223; p. 1340.

Nail holding and delivering device. M. L. Snyder. No. 1,170,939; Feb. 8; Gaz. vol. 223; p. 447.

Nails, hook-nails, hooks, or the like, Machine for producing blanks for. J. H. Dahlgren. No. 1,171,500; Feb. 15; Gaz. vol. 223; p. 690.

Nailing-machine. H. W. York. No. 1,171,685; Feb. 15; Gaz. vol. 223; p. 752.

Necktie. J. Baumgarten. No. 1,172,252; Feb. 22; Gaz. vol. 223; p. 1014.

Necktie. C. W. T. Davies. No. 1,171,930; Feb. 15; Gaz. vol. 223; p. 842.

Necktie and ribbon pressing device. A. W. Williams. No. 1,170,379; Feb. 1; Gaz. vol. 223; p. 218.

Necktie-guide for folded collars. G. H. Perrine. No. 1,173,735; Feb. 29; Gaz. vol. 223; p. 1585.

Necktie-holder. C. C. Druley. No. 1,172,119; Feb. 15; Gaz. vol. 223; p. 909.

Necktie, Retainer-. C. W. T. Davies. No. 1,172,261; Feb. 22; Gaz. vol. 223 p. 1017.

Neckwear. S. M. Frank. No. 1,171,111; Feb. 8; Gaz. vol. 223; p. 510.

Needle-holder. J. A. Williams. No. 1,172,856; Feb. 22; Gaz. vol. 223; p. 1235.

Needle-setter. F. A. Chapin. No. 1,173,251; Feb. 29; Gaz. vol. 223; p. 1415.

Needle-threader. M. G. Knechtel. No. 1,170,278; Feb. 1; Gaz. vol. 223; p. 184.

Needles, Magnifying device for threading. W. C. Adams. No. 1,171,687; Feb. 15; Gaz. vol. 223; p. 753.

Nerve-extractor, Right-angle. A. Fernald. No. 1,170,523; Feb. 8; Gaz. vol. 223; p. 303.

Nest. W. A. Kuntz and L. M. Christopherson. No. 1,173,813; Feb. 29; Gaz. vol. 223; p. 1612.

Nest, Hen's. H. O. Sherrick. No. 1,172,638; Feb. 22; Gaz. vol. 223; p. 1156.

Nest, Hen's. J. J. Splitek. No. 1,172,494; Feb. 22; Gaz. vol. 223; p. 1104.

Nest, Poultry-. M. R. Jacobus. No. 1,170,817; Feb. 8; Gaz. vol. 223; p. 405.

Nest, Trap-. F. C. Miller. No. 1,171,226; Feb. 8; Gaz. vol. 223; p. 530.

Nest, Trap-. J. A. Wachendorf. No. 1,170,126; Feb. 1; Gaz. vol. 223; p. 130.

Nipple for nursing-bottles. J. Skydel. No. 1,170,354; Feb. 1; Gaz. vol. 223; p. 208.

Nipple, Solder-. F. G. Hirst. No. 1,173,718; Feb. 29; Gaz. vol. 223; p. 1579.

Nitrogen compounds, Producing. O. Bender. No. 1,172,803; Feb. 22; Gaz. vol. 223; p. 1237.

Note-sheet, Perforated. J. H. Shale. No. 1,172,228; Feb. 15; Gaz. vol. 223; p. 944.

Nozzle, Explosive-engine. J. Simons. No. 1,171,469; Feb. 15; Gaz. vol. 223; p. 677.

Nozzle of presses for molding plastic materials. A. Bartels. No. 1,171,382; Feb. 8; Gaz. vol. 223; p. 605.

Nozzle, Receptacle-. R. R. Ritz. No. 1,171,654; Feb. 15; Gaz. vol. 223; p. 742.

Nozzle, Sprinkler-. J. R. Kinney. No. 1,173,279; Feb. 29; Gaz. vol. 223; p. 1426.

Nozzle, Valve-. H. Gibbs. No. 1,170,809; Feb. 8; Gaz. vol. 223; p. 403.

Nut. H. G. Carlson. No. 1,172,427; Feb. 22; Gaz. vol. 223; p. 1078.

Nut, Forming a sheet-metal. H. G. Carlson. No. 1,171,702; Feb. 15; Gaz. vol. 223; p. 758.

Nut, Lock-. J. C. Deuchler. No. 1,171,105; Feb. 8; Gaz. vol. 223; p. 507.

Nut, Lock-. E. D. Piggott. No. 1,169,864; Feb. 1; Gaz. vol. 223; p. 41.

Nut-lock. B. V. Apfeld. No. 1,170,866; Feb. 8; Gaz. vol. 223; p. 423.

Nut-lock. L. Burry. No. 1,172,580; Feb. 22; Gaz. vol. 223; p. 1135.

Nut-lock. F. R. Caldwell. No. 1,172,669; Feb. 22; Gaz. vol. 223; p. 1167.

Nut-lock. J. F. Evins. No. 1,170,144; Feb. 1; Gaz. vol. 223; p. 136.

Nut-lock. W. F. Hayes. No. 1,173,959; Feb. 29; Gaz. vol. 223; p. 1662.

Nut-lock. M. C. McCoy. No. 1,172,813; Feb. 22; Gaz. vol. 223; p. 1220.

Nut-lock. W. R. Millard. No. 1,172,722; Feb. 22; Gaz. vol. 223; p. 1186.

Nut-lock. A. M. Parks. No. 1,173,021; Feb. 22; Gaz. vol. 223; p. 1292.

Nut-lock. H. J. Yager. No. 1,171,294; Feb. 8; Gaz. vol. 223; p. 574.

Nuts and bolts, Locking means for. R. Smith. No. 1,171,001; Feb. 8; Gaz. vol. 223; p. 470.

Oar-lock, Folding. F. C. Miller. No. 1,171,060; Feb. 8; Gaz. vol. 223; p. 490.

Oil and gas burner. S. G. Forst. No. 1,172,269; Feb. 22; Gaz. vol. 223; p. 1020.

Oil-burner. H. W. McCreery. No. 1,172,814; Feb. 22; Gaz. vol. 223; p. 1220.

Oil burner. W. W. Wilson. No. 1,172,755; Feb. 22; Gaz. vol. 223; p. 1198.

Oil burner, Blue-flame. S. B. Morss. No. 1,173,842; Feb. 29; Gaz. vol. 223; p. 1623.

Oil burner, Crude-. G. D. Morton. No. 1,172,032; Feb. 15; Gaz. vol. 223; p. 880.

Oil burning apparatus. C. H. Burk. No. 1,171,413; Feb. 15; Gaz. vol. 223; p. 658.

Oil-controller. A. L. Johnson. No. 1,173,976; Feb. 29; Gaz. vol. 223; p. 1666.

Oil-separator. F. W. Schoch. No. 1,173,314; Feb. 29; Gaz. vol. 223; p. 1438.

Oil-switch. G. Stern. No. 1,171,272; Feb. 8; Gaz. vol. 223; p. 566.

Oils, Heating means for mineral. C. E. Graves. No. 1,173,107; Feb. 22; Gaz. vol. 223; p. 1321.

Oiler, Automobile-. R. Martini. No. 1,171,223; Feb. 8; Gaz. vol. 223; p. 550.

Oiler, Hog-. R. F. Armstrong. No. 1,173,761; Feb. 29; Gaz. vol. 223; p. 1594.

Oiler, Hog-. F. R. McDermand. No. 1,173,201; Feb. 29; Gaz. vol. 223; p. 1396.

Oiler, Hog-. J. B. Niecum. No. 1,171,870; Feb. 15; Gaz. vol. 223; p. 818.

Oiler, Leaf-spring. G. F. Garrity. No. 1,172,591; Feb. 22; Gaz. vol. 223; p. 1140.

Oiler, Sight-feed. F. Ottesen. No. 1,172,039; Feb. 15; Gaz. vol. 223; p. 882.

Oiler, Wheel-flange. A. G. Harris. No. 1,170,001; Feb. 8; Gaz. vol. 223; p. 434.

Oiling device, Flange-. J. S. Henderson. No. 1,169,818; Feb. 1; Gaz. vol. 223; p. 24.

Oiling system, Deep-well-pump-. A. C. Paulsmeier. No. 1,169,994; Feb. 1; Gaz. vol. 223; p. 83.

One-piece box. C. Baugh. No. 1,173,919; Feb. 29; Gaz. vol. 223; p. 1649.

Ophthalmoscope. G. W. Opitz. No. 1,172,827; Feb. 22; Gaz. vol. 223; p. 1226.

Ore concentration. A. H. Higgins. No. 1,170,637; Feb. 8; Gaz. vol. 223; p. 344.

Ore-pocket, Self-clearing. L. Clapper. No. 1,172,007; Feb. 15; Gaz. vol. 223; p. 870.

Ore-roasting apparatus. H. T. Benson. No. 1,171,583; Feb. 15; Gaz. vol. 223; p. 717.

Ore-roasting furnace. W. H. Motter. No. 1,172,479; Feb. 22; Gaz. vol. 223; p. 1098.

Ore-roasting furnaces, Water-cooled hollow shaft for. E. Jensen-Valdal. No. 1,173,354; Feb. 29; Gaz. vol. 223; p. 1453.

Ore-separating apparatus. R. D. Fassett. No. 1,173,498; Feb. 29; Gaz. vol. 223; p. 1502.

Ores, Concentration of. E. H. Nutter. No. 1,170,665; Feb. 8; Gaz. vol. 223; p. 354.

Ores, Cooling. W. H. Hubbard, Jr. No. 1,173,273; Feb. 29; Gaz. vol. 223; p. 1423.

Ores, Hydro-electrolytic treatment of. R. R. Goodrich. No. 1,171,782; Feb. 15; Gaz. vol. 223; p. 786.

Ores, Treating. U. Wedge. No. 1,170,375; Feb. 1; Gaz. vol. 223; p. 216.

Ores, Treatment of. O. C. Rudolph. No. 1,171,255; Feb. 8; Gaz. vol. 223; p. 560.

Organ-shutter-operating mechanism. J. T. Austin. No. 1,173,405; Feb. 29; Gaz. vol. 223; p. 1470.

Organs, Harp-stop for pipe-. W. E. Haskell. No. 1,173,507; Feb. 29; Gaz. vol. 223; p. 1506.

Organic compounds, Reduction of. E. B. Higgins. No. 1,170,814; Feb. 8; Gaz. vol. 223; p. 405.

Ornamental surfaces, Producing. W. J. Smart. No. 1,170,567; Feb. 8; Gaz. vol. 223; p. 318.

Oscillations, System for producing high-frequency. M. Osnos. No. 1,173,679; Feb. 29; Gaz. vol. 223; p. 1565.

Oven. L. C. Reese. No. 1,171,887; Feb. 15; Gaz. vol. 223; p. 825.

Oven, Baker's. W. F. Petersen. No. 1,171,874; Feb. 15; Gaz. vol. 223; p. 819.

Oven-door. J. S. Van Buren. No. 1,170,858; Feb. 8; Gaz. vol. 223; p. 420.

Oven suitable for use in the manufacture of tiles, bricks, pottery, and analogous ware, for annealing, and for other purposes. C. Dressler. No. 1,170,428; Feb. 1; Gaz. vol. 223; p. 234.

Overshoe-retainer. T. C. Ridge. No. 1,173,864; Feb. 29; Gaz. vol. 223; p. 1630.

Oxygen to persons in a state of collapse by asphyxiation or other causes, Apparatus for administering. R. H. Davis. No. 1,173,879; Feb. 22; Gaz. vol. 223; p. 1243.

Oyster-dredge. A. H. Van Selver. No. 1,172,325; Feb. 22; Gaz. vol. 223; p. 1040.

Oyster-opener. J. B. Payne. No. 1,173,023; Feb. 22; Gaz. vol. 223; p. 1292.

Ozone-making method and apparatus. W. T. Hoofnagle. No. 1,169,825; Feb. 1; Gaz. vol. 223; p. 27.

Package-tie. J. Tosta. No. 1,171,006; Feb. 15; Gaz. vol. 223; p. 832.

Packer. L. E. Robinson. No. 1,173,387; Feb. 20; Gaz. vol. 223; p. 1464.

Packet. F. F. Ingram. No. 1,170,159; Feb. 1; Gaz. vol. 223; p. 142.

Packing and making the same, Piston-rod. C. I. E. Mastin. No. 1,172,543; Feb. 22; Gaz. vol. 223; p. 1122.

Packing-block for absorption-towers. I. Hechenbleikner. No. 1,173,187; Feb. 29; Gaz. vol. 223; p. 1392.

Packing-box, Folding. A. Misrach and A. Kahn. No. 1,171,228; Feb. 8; Gaz. vol. 223; p. 551.

Packing-case. L. C. Cosmen and W. J. Daum. No. 1,173,558; Feb. 29; Gaz. vol. 223; p. 1523.

Packing device. F. P. McColl. No. 1,171,967; Feb. 15; Gaz. vol. 223; p. 855.

Packing, Engine or machine. G. W. Behlam. No. 1,173,080; Feb. 22; Gaz. vol. 223; p. 1314.

Packing for pistons and the like. A. M. Veloe. No. 1,172,646; Feb. 22; Gaz. vol. 223; p. 1159.

Packing for rotary shafts. F. Knourek. No. 1,170,279; Feb. 1; Gaz. vol. 223; p. 184.

Packing or obturating material. M. W. Marsden. No. 1,170,488; Feb. 1; Gaz. vol. 223; p. 251.

Packing, Piston-. C. W. Dilks. No. 1,172,518; Feb. 22; Gaz. vol. 223; p. 1112.

Packing, Piston-. F. E. Small. No. 1,173,319; Feb. 29; Gaz. vol. 223; p. 1440.

Packing-ring. W. H. Keys. No. 1,173,810; Feb. 29; Gaz. vol. 223; p. 1611.

Packing, Stuffing-box. G. H. Cook. No. 1,171,090; Feb. 8; Gaz. vol. 223; p. 501.

Pad: *See*—

Collar-pad.	Knee-pad.

Padlock. C. W. Fowler. No. 1,172,970; Feb. 22; Gaz. vol. 223; p. 1275.

Pail, Milk-. H. S. Boyle. No. 1,171,833; Feb. 15; Gaz. vol. 223; p. 805.

Pail, Sink-. H. E. Whitney. No. 1,173,134; Feb. 22; Gaz. vol. 223; p. 1331.

Paint and varnish remover. J. M. Wilson and C. N. Forrest. No. 1,173,628; Feb. 29; Gaz. vol. 223; p. 1548.

Paint composition. J. W. Dunford. No. 1,170,883; Feb. 8; Gaz. vol. 223; p. 429.

Pan: *See*—

Bed-pan.	Locomotive ash-pan.
Frying-pan.	

Pan-scraping device. I. D. Kinne. No. 1,171,212; Feb. 8; Gaz. vol. 223; p. 545.

Panel-board. F. F. Skeel. No. 1,170,566; Feb. 8; Gaz. vol. 223; p. 317.

Paper-board box. H. R. Bristol and A. W. Olger. No. 1,174,012; Feb. 29; Gaz. vol. 223; p. 1679.

Paper bodies, Manufacturing proofed. J. R. Harbeck. No. 1,173,268; Feb. 29; Gaz. vol. 223; p. 1421.

Paper bottle-caps, Machine for crimping. G. W. Beadle. No. 1,170,598; Feb. 8; Gaz. vol. 223; p. 329.
Paper-bottle-gluing machine. F. N. and W. C. Wels. No. 1,170,029; Feb. 1; Gaz. vol. 223; p. 97.
Paper box-bodies, Making non-circular. F. Eberhart. No. 1,170,806; Feb. 8; Gaz. vol. 223; p. 402.
Paper-box-covering machine. S. T. Hobbs. No. 1,171,954; Feb. 15; Gaz. vol. 223; p. 851.
Paper-cutting device. E. P. Jennings, Jr. No. 1,173,580; Feb. 29; Gaz. vol. 223; p. 1531.
Paper-cutting machine. F. W. Vickery. No. 1,173,904; Feb. 29; Gaz. vol. 223; p. 1643.
Paper-fastener. C. G. Fisher. No. 1,172,967; Feb. 22; Gaz. vol. 223; p. 1274.
Paper-fastening device. J. C. Hawkins. No. 1,173,425; Feb. 29; Gaz. vol. 223; p. 1477.
Paper-fastening device. F. V. Pepper and E. A. Brandenburg. No. 1,173,119; Feb. 22; Gaz. vol. 223; p. 1324.
Paper, Feeding. H. A. W. Wood. No. 1,170,210; Feb. 1; Gaz. vol. 223; p. 101.
Paper-feeding machine. V. Garner. No. 1,170,746; Feb. 8; Gaz. vol. 223; p. 382.
Paper-folding machines, Folding-plate for. R. E. Kimball. No. 1,173,193; Feb. 29; Gaz. vol. 223; p. 1394.
Paper for checks and similar devices and the paper itself, Making safety-. J. B. Wels. No. 1,172,414; Feb. 22; Gaz. vol. 223; p. 1072.
Paper holder, Note-. R. D. Wirt. No. 1,171,078; Feb. 8; Gaz. vol. 223; p. 496.
Paper machine, Crape-. H. Josephs. No. 1,172,532; Feb. 22; Gaz. vol. 223; p. 1118.
Paper-machines, Drier sheet-steel for. M. H. Meyers. No. 1,170,309; Feb. 1; Gaz. vol. 223; p. 104.
Paper-making machines, Balanced roll for. B. D. Coppage. No. 1,171,172; Feb. 8; Gaz. vol. 223; p. 531.
Paper-making machines, Balanced roll for. B. D. Coppage. No. 1,172,947; Feb. 22; Gaz. vol. 223; p. 1268.
Paper-making machines, Felt-tightener for. B. D. Coppage. No. 1,172,435; Feb. 22; Gaz. vol. 223; p. 1081.
Paper-making machines, Suction-box for. B. D. Coppage. No. 1,170,142; Feb. 1; Gaz. vol. 223; p. 136.
Paper-making machines, Suction-box for. I. J. Witham. No. 1,171,999; Feb. 15; Gaz. vol. 223; p. 867.
Paper, pasteboard, and the like, Manufacture of reinforced. A. Wendler. No. 1,169,895; Feb. 1; Gaz. vol. 223; p. 52.
Paper-pin holding and adjusting device. H. A. W. Wood. No. 1,171,489; Feb. 15; Gaz. vol. 223; p. 684.
Paper-plaiting machine. E. D. Schmitt. No. 1,173,610; Feb. 29; Gaz. vol. 223; p. 1542.
Paper-pulp engines, Roll-bar for. C. I. Ware. No. 1,169,495; Feb. 1; Gaz. vol. 223; p. 256.
Paper-pulp process. C. W. Shartle. No. 1,173,748; Feb. 29; Gaz. vol. 223; p. 1590.
Paper-roll. S. Wheeler. No. 1,170,589; Feb. 8; Gaz. vol. 223; p. 327.
Paper-roll. S. Wheeler. No. 1,170,590; Feb. 8; Gaz. vol. 223; p. 327.
Paper-tube-making machine. A. D. Pentz. No. 1,171,872; Feb. 15; Gaz. vol. 223; p. 819.
Paper tube or can-body, Waterproofed. J. R. Harbeck. No. 1,173,267; Feb. 29; Gaz. vol. 223; p. 1420.
Paper tubes, Manufacturing proofed. J. R. Harbeck. No. 1,173,268; Feb. 29; Gaz. vol. 223; p. 1420.
Paper vessel, Folding. B. I. Rike and J. R. Klin. No. 1,172,483; Feb. 22; Gaz. vol. 223; p. 1099.
Paper-weight, letter-clip, and calendar-pad holder. J. W. Jones. No. 1,172,606; Feb. 22; Gaz. vol. 223; p. 1144.
Parachute. L. Ceeder. No. 1,171,837; Feb. 15; Gaz. vol. 223; p. 807.
Paraffin-machine. B. D. Griffith. No. 1,172,790; Feb. 22; Gaz. vol. 223; p. 1212.
Paraffining machine, Tin-sheet-. J. M. De Voe. No. 1,173,181; Feb. 29; Gaz. vol. 223; p. 1390.
Partition and door, Sliding and folding. H. Woolard and J. H. F. Lodge. No. 1,169,904; Feb. 1; Gaz. vol. 223; p. 55.
Partition or curtain, Rolling flexible. G. B. Thornton. No. 1,170,856; Feb. 8; Gaz. vol. 223; p. 419.
Party-line key. A. J. Carter. No. 1,173,095; Feb. 22; Gaz. vol. 223; p. 1317.
Pass or ticket for railways and the like. E. A. Fleming. No. 1,171,420; Feb. 15; Gaz. vol. 223; p. 660.
Paste-spreading device. W. C. O'Kane. No. 1,170,181; Feb. 1; Gaz. vol. 223; p. 150.
Patch-bolt. T. F. Dalton. No. 1,171,098; Feb. 8; Gaz. vol. 223; p. 505.
Pattern: *See*—
Garment-pattern.
Pattern-drafting device. H. H. Taylor. No. 1,173,226; Feb. 29; Gaz. vol. 223; p. 1405.
Pattern duplicating and reversing machine. H. Lea. No. 1,170,078; Feb. 1; Gaz. vol. 223; p. 113.
Pavement-sweeper. J. B. Martin. No. 1,171,222; Feb. 8; Gaz. vol. 223; p. 549.
Pawl-and-ratchet device. W. J. Carroll. No. 1,173,483; Feb. 29; Gaz. vol. 223; p. 1496.
Pawl-and-ratchet mechanism. W. L. Hadlock. No. 1,172,280; Feb. 22; Gaz. vol. 223; p. 1024.
Pawl-and-ratchet mechanism. W. S. Napier and C. B. Elliott. No. 1,172,480; Feb. 22; Gaz. vol. 223; p. 1099.
Pawl-and-ratchet mechanism. W. Sylvester. No. 1,173,325; Feb. 29; Gaz. vol. 223; p. 1442.
Pent, Utilization of. T. Rigby. No. 1,170,849; Feb. 8; Gaz. vol. 223; p. 417.
Pedal control, Foot-. J. G. Heaslet. No. 1,171,845; Feb. 15; Gaz. vol. 223; p. 809.
Pen clip, Fountain-. F. H. Mooney. No. 1,171,024; Feb. 15; Gaz. vol. 223; p. 732.
Pen, Fountain-. C. M. V. Allenou. No. 1,172,100; Feb. 15; Gaz. vol. 223; p. 903.
Pen, Fountain-. J. A. Kraker. No. 1,170,825; Feb. 8; Gaz. vol. 223; p. 408.
Pen, Fountain-. F. C. Ries. No. 1,173,865; Feb. 29; Gaz. vol. 223; p. 1631.
Pen, Fountain-. V. Riesberg. No. 1,171,652; Feb. 15; Gaz. vol. 223; p. 742.
Pen, Lettering-. R. F. George and W. H. Gordon. No. 1,172,785; Feb. 22; Gaz. vol. 223; p. 1210.
Pen-wiper. W. L. Niemann. No. 1,170,314; Feb. 1; Gaz. vol. 223; p. 195.
Pens, Entrance for stock-yard. E. F. Williams. No. 1,172,653; Feb. 22; Gaz. vol. 223; p. 1161.
Pencil case, Polypointed-. G. Ressler. No. 1,170,671; Feb. 8; Gaz. vol. 223; p. 356.
Pencil-holder. E. Sladek. No. 1,173,050; Feb. 22; Gaz. vol. 223; p. 1302.
Pencil-sharpener. N. Spanovic. No. 1,172,066; Feb. 15; Gaz. vol. 223; p. 892.
Pencil-sharpening machine. L. Myers. No. 1,170,093; Feb. 1; Gaz. vol. 223; p. 120.
Pencil-sharpening machine. L. Myers. No. 1,171,350; Feb. 8; Gaz. vol. 223; p. 593.
Pendant-switch. R. B. Benjamin. No. 1,170,599; Feb. 8; Gaz. vol. 223; p. 330.
Penholder. R. M. Andreu. No. 1,173,701; Feb. 29; Gaz. vol. 223; p. 1572.
Penholder. E. C. Garber. No. 1,170,626; Feb. 8; Gaz. vol. 223; p. 341.
Penholder. S. Griswold. No. 1,173,797; Feb. 29; Gaz. vol. 223; p. 1607.
Perambulator, mail-cart, and the like. E. T. Morriss. No. 1,171,061; Feb. 8; Gaz. vol. 223; p. 491.
Percolator. S. Ciletti. No. 1,171,022; Feb. 8; Gaz. vol. 223; p. 477.
Periodical-holder. F. A. Garrison. No. 1,170,628; Feb. 8; Gaz. vol. 223; p. 341.
Permutation-lock. S. Blazék. No. 1,170,398; Feb. 1; Gaz. vol. 223; p. 223.
Permutation-lock for suitcases, grips, &c. J. Hendrickson. No. 1,172,454; Feb. 22; Gaz. vol. 223; p. 1088.
Phantom circuit. F. H. Fay, T. Shaw, and J. J. Pilliod. No. 1,173,655; Feb. 29; Gaz. vol. 223; p. 1558.
Phonograph. D. W. Allis and J. B. Millet. No. 1,170,134; Feb. 1; Gaz. vol. 223; p. 133.
Phonograph-disk holder. L. E. Wilkinson and J. M. Petree. No. 1,172,754; Feb. 22; Gaz. vol. 223; p. 1198.
Phonograph or talking-machine. D. Holden. No. 1,170,258; Feb. 1; Gaz. vol. 223; p. 177.
Phonograph sound-controller. R. E. Faldi. No. 1,172,346; Feb. 22; Gaz. vol. 223; p. 1047.
Phonograph spring-motors, Handle for winding. S. Segal. No. 1,173,316; Feb. 29; Gaz. vol. 223; p. 1439.
Phonographs, Adapter-stylus for. E. S. Oliver. No. 1,169,861; Feb. 1; Gaz. vol. 223; p. 40.
Phonographs, &c., Speed-regulator for. A. F. Madden. No. 1,172,380; Feb. 22; Gaz. vol. 223; p. 1060.
Photograph or film and producing same, Color. F. E. Ives. No. 1,170,540; Feb. 8; Gaz. vol. 223; p. 309.
Photographic and developing apparatus. G. C. Beidler. No. 1,171,495; Feb. 15; Gaz. vol. 223; p. 687.
Photographic apparatus. A. Adair. No. 1,172,922; Feb. 22; Gaz. vol. 223; p. 1258.
Photographic apparatus. J. E. Webster. No. 1,170,028; Feb. 1; Gaz. vol. 223; p. 90.
Photographic apparatus for taking multiple stereoscopic views across a vertically-unwinding film. E. Pipon. No. 1,171,639; Feb. 15; Gaz. vol. 223; p. 737.
Photographic daylight developing apparatus. H. C. Andrews. No. 1,170,952; Feb. 8; Gaz. vol. 223; p. 451.
Photographic papers, photographic-film support and similar manufactures, Apparatus for coating and drying. F. M. Cositt and L. D. Castor. No. 1,171,321; Feb. 8; Gaz. vol. 223; p. 583.
Photographic-print developing and washing apparatus. J. E. Thornton. No. 1,173,899; Feb. 29; Gaz. vol. 223; p. 1642.
Photographic prints, Method of and apparatus for producing. J. E. Thornton. No. 1,173,898; Feb. 29; Gaz. vol. 223; p. 1642.
Photographic shutter. A. Wollensak. No. 1,170,207; Feb. 1; Gaz. vol. 223; p. 160.
Photographic shutter. A. Wollensak. No. 1,170,208; Feb. 1; Gaz. vol. 223; p. 161.
Photographing and developing apparatus. G. C. Beidler. No. 1,171,496; Feb. 15; Gaz. vol. 223; p. 687.
Photography, Color. F. E. Ives. No. 1,173,429; Feb. 29; Gaz. vol. 223; p. 1478.
Photoprint-developing machine. C. C. Townes. No. 1,172,074; Feb. 15; Gaz. vol. 223; p. 894.
Phrasing-bars, Controlling mechanism for. C. W. Dorricott. No. 1,170,617; Feb. 8; Gaz. vol. 223; p. 337.
Piano. W. M. Bauer. No. 1,171,921; Feb. 15; Gaz. vol. 223; p. 838.
Piano action, Grand-. J. O. Schwarz. No. 1,173,315; Feb. 29; Gaz. vol. 223; p. 1439.
Piano-action-operating mechanism for mechanical musical instruments. W. F. Cooper. No. 1,170,514; Feb. 8; Gaz. vol. 223; p. 299.

Piano action, Upright-. W. F. Cooper. No. 1,170,516; Feb. 8; Gaz. vol. 223; p. 300.
Piano-felt damper. A. Johnson. No. 1,169,832; Feb. 1; Gaz. vol. 223; p. 30.
Piano without strings. J. C. Deagan. No. 1,173,782; Feb. 29; Gaz. vol. 223; p. 1602.
Pianos, Vacuum-controlling device for player-. E. S. Werolin. No. 1,169,896; Feb. 1; Gaz. vol. 223; p. 52.
Pianoforte control. M. L. Savery and G. B. Sinclair. No. 1,171,668; Feb. 15; Gaz. vol. 223; p. 747.
Pick-up system, Intercommunicating. C. S. Jennings. No. 1,171,207; Feb. 8; Gaz. vol. 223; p. 543.
Picker: *See*—
Cotton-picker. Fruit-picker.
Picture-exhibitor. N. Braham. No. 1,173,923; Feb. 29; Gaz. vol. 223; p. 1650.
Picture-film holder, Moving-. R. P. Stineman and T. S. Darby. No. 1,170,576; Feb. 8; Gaz. vol. 223; p. 322.
Picture frame. L. D. Benton and C. E. Wirth. No. 1,170,137; Feb. 1; Gaz. vol. 223; p. 134.
Picture-machine attachment, Moving-. I. B. Parker. No. 1,173,212; Feb. 29; Gaz. vol. 223; p. 1400.
Picture machine, Moving-. D. O. Seaman. No. 1,172,402; Feb. 22; Gaz. vol. 223; p. 1103.
Picture machine, Moving-. G. C. Vanmeer. No. 1,171,485; Feb. 15; Gaz. vol. 223; p. 683.
Picture shutter, Motion-. W. E. Carleton. No. 1,173,706; Feb. 29; Gaz. vol. 223; p. 1573.
Pictures, Producing motion-. T. H. Hunter. No. 1,173,521; Feb. 29; Gaz. vol. 223; p. 1511.
Pile-extracting apparatus. J. Bull. No. 1,173,996; Feb. 29; Gaz. vol. 223; p. 1672.
Pile-extracting mechanism. A. R. Cuthbertson. No. 1,173,780; Feb. 29; Gaz. vol. 223; p. 1601.
Pile fabric, Woven. H. and F. M. Kaufman. No. 1,169,855; Feb. 1; Gaz. vol. 223; p. 31.
Piles, Sinking. H. T. Jones. No. 1,173,355; Feb. 29; Gaz. vol. 223; p. 1453.
Piling, Interlocking sheet-. F. F. Vandevort. No. 1,171,281; Feb. 8; Gaz. vol. 223; p. 569.
Pill-box-making machine. F. Graeber. No. 1,171,515; Feb. 15; Gaz. vol. 223; p. 693.
Pin: *See*—
Bowling pin. Hair-pin.
Cotter-pin. Insulator-pin.
Cross-arm pin. Safety-pin.
Pipe: *See*—
Tobacco-pipe.
Pipe and coupling-heads, Connection for train-. W. C. White. No. 1,172,855; Feb. 22; Gaz. vol. 223; p. 1235.
Pipe-ball. R. Herman and S. A. Knapp. No. 1,173,963; Feb. 29; Gaz. vol. 223; p. 1663.
Pipe cleaner, Drain and waste. W. J. Crocker and D. Wallace. No. 1,173,710; Feb. 29; Gaz. vol. 223; p. 1575.
Pipe connection, Waste-. G. F. Roser. No. 1,172,836; Feb. 22; Gaz. vol. 223; p. 1229.
Pipe-coupling. E. J. Maire. No. 1,171,219; Feb. 8; Gaz. vol. 223; p. 548.
Pipe coupling, Expansible-. S. G. Blackwood and V. E. Bradley. No. 1,171,311; Feb. 8; Gaz. vol. 223; p. 580.
Pipe coupling, Train-. A. L. Arthur. No. 1,171,380; Feb. 8; Gaz. vol. 223; p. 604.
Pipe-cutter. E. N. Elzay. No. 1,173,496; Feb. 29; Gaz. vol. 223; p. 1502.
Pipe-joint. C. P. Hall. (Reissue.) No. 14,077; Feb. 29; Gaz. vol. 223; p. 1688.
Pipe-joint, Flexible. J. S. Leake. No. 1,170,979; Feb. 8; Gaz. vol. 223; p. 462.
Pipe-joint, Swivel. A. G. Elvin and F. W. Martin. No. 1,171,416; Feb. 15; Gaz. vol. 223; p. 659.
Pipe-lines, Drain for. F. C. Devericks. No. 1,172,116; Feb. 15; Gaz. vol. 223; p. 908.
Pipe-turner. J. F. Keenan. No. 1,169,963; Feb. 1; Gaz. vol. 223; p. 73.
Pipe wrench and cutter, Combination. C. R. Saylor. No. 1,173,041; Feb. 22; Gaz. vol. 223; p. 1299.
Pipes, Contracting core for cement-lined. G. W. Priest. No. 1,171,641; Feb. 15; Gaz. vol. 223; p. 738.
Pipes, Finishing welded. F. N. Speller. No. 1,171,757; Feb. 15; Gaz. vol. 223; p. 777.
Pipes, Sealing-bell for retort stand-. H. Bruce. No. 1,171,384; Feb. 8; Gaz. vol. 223; p. 606.
Pistol, Automatic. W. O. Barnes. No. 1,173,161; Feb. 29; Gaz. vol. 223; p. 1383.
Piston. A. J. Mickley. No. 1,173,727; Feb. 29; Gaz. vol. 223; p. 1583.
Piston-ring. F. E. Davidson. No. 1,172,677; Feb. 22; Gaz. vol. 223; p. 1170.
Piston-ring. F. E. Davidson. No. 1,172,678; Feb. 22; Gaz. vol. 223; p. 1170.
Piston-ring. I. R. Hicks. No. 1,171,199; Feb. 8; Gaz. vol. 223; p. 541.
Piston-ring. E. Kottusch. No. 1,172,369; Feb. 22; Gaz. vol. 223; p. 1056.
Piston-ring construction. C. E. Johnson. No. 1,172,461; Feb. 22; Gaz. vol. 223; p. 1091.
Pitcher or the like, Sanitary. C. S. Baron. No. 1,173,540; Feb. 29; Gaz. vol. 223; p. 1519.
Pitman-spreader. J. F. Chroninger. No. 1,171,320; Feb. 8; Gaz. vol. 223; p. 583.
Plane, Hand-. J. F. Thunell. No. 1,171,076; Feb. 8; Gaz. vol. 223; p. 496.
Plane, Power-. J. G. Osgood and F. W. Bachman. No. 1,172,828; Feb. 22; Gaz. vol. 223; p. 1226.
Planer-feeder. P. J. Joecken. No. 1,171,957; Feb. 15; Gaz. vol. 223; p. 852.
Planing and finishing machine, Portable metal. C. Magerkurth. No. 1,170,454; Feb. 1; Gaz. vol. 223; p. 242.
Plant-growing apparatus. F. W. Taylor. No. 1,171,558; Feb. 15; Gaz. vol. 223; p. 709.
Plant-protector. S. K. Green. No. 1,172,983; Feb. 22; Gaz. vol. 223; p. 1280.
Plant-setting machine. F. O. Seymour. No. 1,171,263; Feb. 8; Gaz. vol. 223; p. 563.
Planter. C. T. Ray. No. 1,171,882; Feb. 15; Gaz. vol. 223; p. 822.
Planter. C. T. Ray. No. 1,171,883; Feb. 15; Gaz. vol. 223; p. 823.
Planter. C. T. Ray. No. 1,171,884; Feb. 15; Gaz. vol. 223; p. 823.
Planter attachment, Corn-. G. A. Shraud. No. 1,171,265; Feb. 8; Gaz. vol. 223; p. 564.
Planter check-row attachment. W. Jelsema. No. 1,171,206; Feb. 8; Gaz. vol. 223; p. 543.
Planter clutch mechanism, Corn-. J. Tedell. No. 1,170,785; Feb. 8; Gaz. vol. 223; p. 395.
Planter, Corn-. N. E. Beverly. No. 1,172,101; Feb. 15; Gaz. vol. 223; p. 932.
Planter, Corn and pea. C. K. Pegues. No. 1,172,308; Feb. 22; Gaz. vol. 223; p. 1034.
Planter harrow attachment, Corn-. J. Demmer. No. 1,171,178; Feb. 8; Gaz. vol. 223; p. 534.
Planter or the like. C. T. Ray. No. 1,171,885; Feb. 15; Gaz. vol. 223; p. 824.
Planter or the like. C. T. Ray. No. 1,171,886; Feb. 15; Gaz. vol. 223; p. 824.
Planter, Potato-. A. D. Welker and L. E. Snyder. No. 1,171,682; Feb. 15; Gaz. vol. 223; p. 751.
Planter, Universal. O. L. Freisinn. No. 1,170,237; Feb. 1; Gaz. vol. 223; p. 171.
Plaster-board. S. M. Ford. No. 1,171,421; Feb. 15; Gaz. vol. 223; p. 661.
Plastic composition. W. W. Beebe and E. E. Davis. No. 1,170,038; Feb. 1; Gaz. vol. 223; p. 100.
Plastic composition and making it. J. M. Taylor. No. 1,172,073; Feb. 15; Gaz. vol. 223; p. 894.
Plastic compositions, Making. R. Adler. No. 1,169,756; Feb. 1; Gaz. vol. 223; p. 3.
Plastic material, Machine for cutting articles from. T. L. Green. No. 1,172,520; Feb. 22; Gaz. vol. 223; p. 1113.
Plastics and making same. W. T. Bonner. No. 1,173,336; Feb. 29; Gaz. vol. 223; p. 1446.
Plastics and producing same. W. T. Bonner. No. 1,173,337; Feb. 29; Gaz. vol. 223; p. 1446.
Play-chair and commode, Combination child's. W. H. Young. No. 1,170,594; Feb. 8; Gaz. vol. 223; p. 328.
Pliers. F. H. Riggs. No. 1,170,334; Feb. 1; Gaz. vol. 223; p. 202.
Plow. E. W. Benson. No. 1,173,643; Feb. 29; Gaz. vol. 223; p. 1554.
Plow. H. Psencik. No. 1,172,046; Feb. 15; Gaz. vol. 223; p. 885.
Plow. S. O. Smith and J. W. Campbell. No. 1,169,879; Feb. 1; Gaz. vol. 223; p. 46.
Plow. H. T. Toy. No. 1,170,578; Feb. 8; Gaz. vol. 223; p. 323.
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Plow attachment. N. H. Cooksey. No. 1,172,946; Feb. 22; Gaz. vol. 223; p. 1268.
Plow attachment. M. J. Lyons. No. 1,173,822; Feb. 29; Gaz. vol. 223; p. 1616.
Plow-depressing means. M. Eisenschenk. No. 1,171,776; Feb. 15; Gaz. vol. 223; p. 784.
Plow, Gang-. A. J. Wakefield. No. 1,172,082; Feb. 15; Gaz. vol. 223; p. 897.
Plow, Motor-. C. F. Heinss. No. 1,170,635; Feb. 8; Gaz. vol. 223; p. 344.
Plow, Tractor-. J. J. Tracy. No. 1,171,479; Feb. 15; Gaz. vol. 223; p. 681.
Plow-wheel. V. G. Munson. No. 1,173,845; Feb. 29; Gaz. vol. 223; p. 1624.
Plow, Wheeled. W. Sobey. No. 1,173,302; Feb. 29; Gaz. vol. 223; p. 1466.
Plowing-machine, Power. I. E. Beamish. No. 1,170,394; Feb. 1; Gaz. vol. 223; p. 222.
Plowshare, Detachable. H. A. Schulze and C. R. Wren. No. 1,173,985; Feb. 29; Gaz. vol. 223; p. 1669.
Plug, Attachment-. C. J. Klein. No. 1,171,852; Feb. 15; Gaz. vol. 223; p. 812.
Plug-polishing machine. D. McDermid. No. 1,173,288; Feb. 29; Gaz. vol. 223; p. 1429.
Plug, Repair-. M. O. Trester. No. 1,172,644; Feb. 22; Gaz. vol. 223; p. 1158.
Pneumatic action. H. Hainton. No. 1,172,250; Feb. 22; Gaz. vol. 223; p. 1013.
Pneumatic action. A. P. Gustafson. No. 1,170,531; Feb. 8; Gaz. vol. 223; p. 306.
Pneumatic cleaner. W. T. Griffin. No. 1,172,450; Feb. 22; Gaz. vol. 223; p. 1086.
Pneumatic-despatch-tube apparatus. J. S. Jacques. No. 1,172,598; Feb. 22; Gaz. vol. 223; p. 1141.
Pneumatic tubes, Testing-case for. B. S. Bowers. No. 1,169,918; Feb. 1; Gaz. vol. 223; p. 59.

Pneumatic wheel. F. W. Addington. No. 1,173,156; Feb. 29; Gaz. vol. 223; p. 1381.
Pneumatic wheel. S. W. Scott. No. 1,173,986; Feb. 29; Gaz. vol. 223; p. 1669.
Pneumatics, Securing means for striker-. M. Clark. No. 1,173,252; Feb. 29; Gaz. vol. 223; p. 1415.
Pocket-clasp. J. W. Hawkins. No. 1,173,349; Feb. 29; Gaz. vol. 223; p. 1451.
Pocket, Reinforced. H. H. Wagner. No. 1,172,851; Feb. 22; Gaz. vol. 223; p. 1233.
Pointograph, Copy-holding. L. T. Mathews. No. 1,173,450; Feb. 29; Gaz. vol. 223; p. 1485.
Pole cross-arm. C. G. Ette. No. 1,173,418; Feb. 29; Gaz. vol. 223; p. 1475.
Pool and billiard tables, Leveling device for. J. W. Wooley. No. 1,173,695; Feb. 29; Gaz. vol. 223; p. 1571.
Porcelain articles, Manufacturing. J. A. and B. A. Jeffery. No. 1,171,205; Feb. 8; Gaz. vol. 223; p. 542.
Portable drier. W. B. Ruggles. No. 1,171,144; Feb. 8; Gaz. vol. 223; p. 523.
Portable stand. W. J. Carmine. No. 1,172,939; Feb. 22; Gaz. vol. 223; p. 1265.
Post: *See*—
Fence-post. Rubbing-post.
Port-mold. D. L. Woods. No. 1,171,491; Feb. 15; Gaz. vol. 223; p. 685.
Post-molding machine. W. Thom. No. 1,170,019; Feb. 1; Gaz. vol. 223; p. 92.
Pot: *See*—
Coffee-pot. Glue-pot.
Potato-cutter-operating mechanism. W. Kaufman. No. 1,172,214; Feb. 15; Gaz. vol. 223; p. 939.
Poultry-run. W. H. Barnes. No. 1,170,794; Feb. 8; Gaz. vol. 223; p. 398.
Poultry trough or feeder. H. Slater. No. 1,172,913; Feb. 22; Gaz. vol. 223; p. 1256.
Powder container, Toilet-. R. Kohlhepp. No. 1,172,293; Feb. 22; Gaz. vol. 223; p. 1029.
Powder-folding machine. W. A. Hill. No. 1,172,209; Feb. 15; Gaz. vol. 223; p. 937.
Powder-puff, Refillable. K. K. Bakelaar. No. 1,171,302; Feb. 8; Gaz. vol. 223; p. 577.
Power device. L. O. Kurtzhals. No. 1,173,667; Feb. 29; Gaz. vol. 223; p. 1561.
Power mechanism. P. J. Fanning. No. 1,172,692; Feb. 22; Gaz. vol. 223; p. 1175.
Power-transmission and speed-controlling device. W. P. Allen. (Reissue.) No. 14,073; Feb. 15; Gaz. vol. 223; p. 957.
Power-transmission device. L. E. Allen. No. 1,171,763; Feb. 15; Gaz. vol. 223; p. 779.
Power transmission, Hydraulic. A. T. Keene. No. 1,172,862; Feb. 22; Gaz. vol. 223; p. 1216.
Power-transmission mechanism. R. Gerber. No. 1,173,507; Feb. 29; Gaz. vol. 223; p. 1526.
Power-transmission mechanism. R. E. McIntire. No. 1,170,082; Feb. 1; Gaz. vol. 223; p. 115.
Power-transmission mechanism. M. L. Severy. No. 1,173,877; Feb. 29; Gaz. vol. 223; p. 1635.
Power-transmitting apparatus. A. H. Neuland. No. 1,171,351; Feb. 8; Gaz. vol. 223; p. 594.
Power-transmitting device. W. F. Van Hoesen. No. 1,172,077; Feb. 15; Gaz. vol. 223; p. 894.
Power-transmitting device. F. D. Weeks. No. 1,170,945; Feb. 8; Gaz. vol. 223; p. 449.
Power-transmitting mechanism. C. L. Yokom. No. 1,171,493; Feb. 15; Gaz. vol. 223; p. 686.
Precious stones, Setting for. J. Frackman. No. 1,171,186; Feb. 8; Gaz. vol. 223; p. 530.
Press: *See*—
Coil-press. Expressing-press.
Drill-press. Printing-press.
Press-support. R. C. Specht and A. S. Nielsen. No. 1,172,400; Feb. 22; Gaz. vol. 223; p. 1067.
Presser-foot mechanism. L. E. Topham. No. 1,170,025; Feb. 1; Gaz. vol. 223; p. 95.
Pressure-gage. C. J. Manning. No. 1,169,982; Feb. 1; Gaz. vol. 223; p. 79.
Pressure gage, Differential-. G. F. Gebhardt. No. 1,169,795; Feb. 1; Gaz. vol. 223; p. 17.
Pressure-regulator. G. Halter. No. 1,172,880; Feb. 22; Gaz. vol. 223; p. 1240.
Pressure-regulator. J. P. Metzger. No. 1,173,834; Feb. 29; Gaz. vol. 223; p. 1619.
Pressure-regulator. J. P. Metzger. No. 1,174,835; Feb. 29; Gaz. vol. 223; p. 1620.
Pressure regulator, Feed-. G. S. Melcher. No. 1,172,470; Feb. 22; Gaz. vol. 223; p. 1097.
Printed products, Machine for producing. E. H. Cottrell. No. 1,170,610; Feb. 8; Gaz. vol. 223; p. 334.
Printed products, Machine for producing. E. H. Cottrell. No. 1,171,092; Feb. 8; Gaz. vol. 223; p. 502.
Printed products, Producing. E. H. Cottrell. No. 1,170,609; Feb. 8; Gaz. vol. 223; p. 334.
Printed products, Producing. E. H. Cottrell. No. 1,171,093; Feb. 8; Gaz. vol. 223; p. 503.
Printing and marking machine inking device. W. P. Egan and J. J. Sheehan. No. 1,174,001; Feb. 29; Gaz. vol. 223; p. 1675.
Printing-couples, Bearing device for. H. A. W. Wood. No. 1,171,490; Feb. 15; Gaz. vol. 223; p. 685.
Printing device. A. G. Ogden. No. 1,172,380; Feb. 22; Gaz. vol. 223; p. 1062.
Printing-machine. A. K. Taylor. No. 1,172,752; Feb. 22; Gaz. vol. 223; p. 1198.
Printing machine, Intaglio-. A. Broschek. No. 1,171,314; Feb. 8; Gaz. vol. 223; p. 581.
Printing machine, Rotary multicolor-. E. J. W. Muller. No. 1,170,841; Feb. 8; Gaz. vol. 223; p. 414.
Printing machine, Web-. C. A. Kellogg. No. 1,173,278; Feb. 29; Gaz. vol. 223; p. 1425.
Printing-press. J. L. Firm. No. 1,169,786; Feb. 1; Gaz. vol. 223; p. 14.
Printing-press. E. P. Jennings, Jr. No. 1,173,579; Feb. 29; Gaz. vol. 223; p. 1531.
Printing press bed and cylinder drive. M. A. Droitcour. No. 1,171,843; Feb. 15; Gaz. vol. 223; p. 809.
Printing-press driving mechanism. C. P. Strite. No. 1,171,554; Feb. 15; Gaz. vol. 223; p. 707.
Printing press, Multicolor-. M. Kravitz. No. 1,172,807; Feb. 22; Gaz. vol. 223; p. 1218.
Printing-press paper-lubricating device. H. A. W. Wood. No. 1,170,209; Feb. 1; Gaz. vol. 223; p. 161.
Printing-press sheet-gage. L. L. Rogers. No. 1,170,994; Feb. 8; Gaz. vol. 223; p. 467.
Printing-press sheet-register. C. D. and J. M. Treacy. No. 1,173,756; Feb. 29; Gaz. vol. 223; p. 1592.
Printing press throw-out mechanism. G. D. Reifsnyder and H. G. Schwerdtle. No. 1,171,804; Feb. 15; Gaz. vol. 223; p. 794.
Printing-presses and the like, Tension-regulating mechanism for. W. S. Morse. No. 1,170,840; Feb. 8; Gaz. vol. 223; p. 413.
Printing-presses, Paper-feeding attachment for. D. Bresnan. No. 1,169,767; Feb. 1; Gaz. vol. 223; p. 7.
Printing-surface. H. C. Gammeter. No. 1,172,273; Feb. 22; Gaz. vol. 223; p. 1022.
Projectile. C. Newton. No. 1,172,035; Feb. 15; Gaz. vol. 223; p. 881.
Projectile. J. B. Semple. No. 1,172,636; Feb. 22; Gaz. vol. 223; p. 1155.
Projectile. J. B. Semple. No. 1,172,637; Feb. 22; Gaz. vol. 223; p. 1155.
Projectile and cap therefor, Armor-piercing. R. A. Hadfield. No. 1,172,278; Feb. 22; Gaz. vol. 223; p. 1023.
Projectile-turner. W. Schellenbach. No. 1,171,605; Feb. 15; Gaz. vol. 223; p. 746.
Projectiles, Cap for armor-piercing. J. M. Allan. No. 1,172,511; Feb. 22; Gaz. vol. 223; p. 1110.
Projecting-machine. H. Blizzonl. No. 1,172,805; Feb. 22; Gaz. vol. 223; p. 1238.
Propagating plants. A. J. Grinberg and B. Feldman. No. 1,172,021; Feb. 15; Gaz. vol. 223; p. 870.
Propelling device for vessels. A. R. Lerro. No. 1,172,892; Feb. 22; Gaz. vol. 223; p. 1249.
Propelling means, Hand-power boat-. A. Gotautas. No. 1,169,952; Feb. 1; Gaz. vol. 223; p. 69.
Protective device. S. Dushman. No. 1,172,961; Feb. 22; Gaz. vol. 223; p. 1272.
Protective device. J. J. Frank. No. 1,172,972; Feb. 22; Gaz. vol. 223; p. 1276.
Protective device. L. A. Hawkins. No. 1,172,990; Feb. 22; Gaz. vol. 223; p. 1282.
Protractor. E. J. S. Halvorsen. No. 1,172,281; Feb. 22; Gaz. vol. 223; p. 1025.
Pruning-shears. E. McKenney. No. 1,173,527; Feb. 29; Gaz. vol. 223; p. 1512.
Publicity device. C. Lean. No. 1,173,361; Feb. 29; Gaz. vol. 223; p. 1455.
Puller: *See*—
Bearing-puller. Wheel-puller.
Stump-puller.
Pulley. E. H. Arnold. No. 1,170,807; Feb. 8; Gaz. vol. 223; p. 423.
Pulley. W. Huddle. No. 1,170,755; Feb. 8; Gaz. vol. 223; p. 386.
Pulley. D. T. Timberlake. No. 1,171,562; Feb. 15; Gaz. vol. 223; p. 710.
Pulley, Lubricating-. H. G. Vance. No. 1,171,280; Feb. 8; Gaz. vol. 223; p. 569.
Pulley, Variable-speed. W. B. Dunbar. No. 1,173,787; Feb. 29; Gaz. vol. 223; p. 1604.
Pulleys, Adjustable bearing and coupling for. F. L. Morse. No. 1,171,347; Feb. 8; Gaz. vol. 223; p. 592.
Pulling-over machine. J. Loose. No. 1,172,610; Feb. 22; Gaz. vol. 223; p. 1147.
Pulling-over machines, Gripper mechanism for. A. L. Russell. No. 1,169,872; Feb. 1; Gaz. vol. 223; p. 43.
Pulp-beating apparatus. R. J. Marx. No. 1,173,530; Feb. 29; Gaz. vol. 223; p. 1513.
Pulp, Reducing. C. W. Shartle. No. 1,173,750; Feb. 29; Gaz. vol. 223; p. 1590.
Pulp-reducing apparatus. C. W. Shartle. No. 1,173,747; Feb. 29; Gaz. vol. 223; p. 1589.
Pulp-screen. A. J. Haug. No. 1,172,230; Feb. 15; Gaz. vol. 223; p. 948.
Pulverizer. R. C. Newhouse. No. 1,171,747; Feb. 15; Gaz. vol. 223; p. 774.
Pump. C. F. Brown. No. 1,170,873; Feb. 8; Gaz. vol. 223; p. 425.
Pump. M. T. Chapman. No. 1,170,512; Feb. 8; Gaz. vol. 223; p. 298.
Pump. J. E. Gregg. No. 1,172,780; Feb. 22; Gaz. vol. 223; p. 1211.
Pump. G. E. Haar. No. 1,172,022; Feb. 15; Gaz. vol. 223; p. 870.
Pump. M. Hendrickson. No. 1,170,254; Feb. 1; Gaz. vol. 223; p. 176.

Pump. O. N. Howerton. No. 1,171,048; Feb. 8; Gaz. vol. 223; p. 486.
Pump. J. M. Kelley. No. 1,170,756; Feb. 8; Gaz. vol. 223; p. 386.
Pump. J. L. Latta. No. 1,170,647; Feb. 8; Gaz. vol. 223; p. 347.
Pump. P. A. Myers. No. 1,170,661; Feb. 8; Gaz. vol. 223; p. 352.
Pump. S. A. Stone. No. 1,171,273; Feb. 8; Gaz. vol. 223; p. 566.
Pump, Centrifugal, turbine, or similar. F. Ray. No. 1,172,555; Feb. 22; Gaz. vol. 223; p. 1127.
Pump, Combined suction and force. G. P. Brinu. No. 1,170,139; Feb. 1; Gaz. vol. 223; p. 135.
Pump-cylinder. E. W. Clark. No. 1,170,737; Feb. 8; Gaz. vol. 223; p. 379.
Pump, Double-acting diaphragm-. J. H. Templin. No. 1,171,561; Feb. 15; Gaz. vol. 223; p. 710.
Pump, Electrically-operated. M. E. Swortzel. No. 1,170,359; Feb. 1; Gaz. vol. 223; p. 210.
Pump for automobiles and the like, Air-. V. H. Peterson. No. 1,170,458; Feb. 1; Gaz. vol. 223; p. 244.
Pump for milking-machines, Exhaust-. K. K. McLeod. No. 1,169,980; Feb. 1; Gaz. vol. 223; p. 79.
Pump for vacuum-cleaners, Air-. T. Wiedemann and J. H. Templin. No. 1,170,203; Feb. 1; Gaz. vol. 223; p. 159.
Pump, Force-. J. Nelswanger. No. 1,170,177; Feb. 1; Gaz. vol. 223; p. 148.
Pump, Internal-combustion pressure-. J. A. McIntyre. No. 1,171,620; Feb. 15; Gaz. vol. 223; p. 730.
Pump-jack. R. J. Cartmell. No. 1,169,923; Feb. 1; Gaz. vol. 223; p. 61.
Pump, Measuring-. F. W. Meegan. No. 1,172,820; Feb. 22; Gaz. vol. 223; p. 1223.
Pump, Motor-driven fire-. J. G. Johnson. No. 1,173,434; Feb. 29; Gaz. vol. 223; p. 1480.
Pump-operating mechanism. A. A. Bowser. No. 1,170,734; Feb. 8; Gaz. vol. 223; p. 378.
Pump or blower, Rotary. O. Siemon and W. Siecke. No. 1,172,842; Feb. 22; Gaz. vol. 223; p. 1231.
Pump, Rotary. F. Van Cauwenbergh. No. 1,172,505; Feb. 22; Gaz. vol. 223; p. 1108.
Pump-valve. H. Benkert. No. 1,173,703; Feb. 29; Gaz. vol. 223; p. 1573.
Pumps and the like, Device for starting and stopping. C. E. Weed. No. 1,170,377; Feb. 1; Gaz. vol. 223; p. 217.
Pumps, Automatic starting device for boiler feed-. W. Kieser. No. 1,170,163; Feb. 1; Gaz. vol. 223; p. 143.
Pumps, Automatic switch for controlling the operation of. K. Sorge. No. 1,171,270; Feb. 8; Gaz. vol. 223; p. 565.
Pumps, Rod-packing for air-. J. P. Kelly. No. 1,173,808; Feb. 29; Gaz. vol. 223; p. 1610.
Pumps, Shaft-bearing for bucket-. E. F. Happensack. No. 1,171,940; Feb. 15; Gaz. vol. 223; p. 847.
Pumps, Working head for. P. A. Myers. No. 1,170,662; Feb. 8; Gaz. vol. 223; p. 353.
Pumping apparatus. J. B. Sperry. No. 1,170,574; Feb. 8; Gaz. vol. 223; p. 321.
Pumping apparatus, Vessel screw-propeller. J. T. Parker. No. 1,172,829; Feb. 22; Gaz. vol. 223; p. 1227.
Pumping machinery. M. T. and M. C. Chapman. No. 1,169,772; Feb. 1; Gaz. vol. 223; p. 9.
Pumping-station, Automatically-controlled. W. D. Huff. No. 1,172,994; Feb. 22; Gaz. vol. 223; p. 1283.
Pumping system, Well-. W. M. Stephenson. No. 1,171,986; Feb. 15; Gaz. vol. 223; p. 862.
Pumping unit. G. D. Loud. No. 1,171,797; Feb. 15; Gaz. vol. 223; p. 791.
Punch. S. E. Greene. No. 1,171,608; Feb. 15; Gaz. vol. 223; p. 725.
Punch and die presses, Feeding attachment to. A. L. Schram. No. 1,171,359; Feb. 8; Gaz. vol. 223; p. 597.
Punch and press, Rotary. J. F. Lawson. No. 1,171,704; Feb. 15; Gaz. vol. 223; p. 790.
Punch, Paper-. C. B. Alexander. No. 1,170,133; Feb. 1; Gaz. vol. 223; p. 132.
Punch, Pocket-knife. J. E. Fuller. No. 1,171,422; Feb. 15; Gaz. vol. 223; p. 661.
Punch-presses, Safety mechanism for. W. A. D'Arcy and W. S. Robertson. No. 1,172,769; Feb. 22; Gaz. vol. 223; p. 1204.
Punching, Apparatus for concentric. A. Legere. No. 1,171,344; Feb. 8; Gaz. vol. 223; p. 591.
Punching-machine. J. M. Mason. No. 1,170,455; Feb. 1; Gaz. vol. 223; p. 242.
Punching machine, Record-. S. Scognamillo. No. 1,173,874; Feb. 29; Gaz. vol. 223; p. 1633.
Putter. G. A. Rees. No. 1,173,384; Feb. 29; Gaz. vol. 223; p. 1463.
Puzzle. M. Hines. No. 1,173,271; Feb. 29; Gaz. vol. 223; p. 1422.
Puzzle. L. Rothe. No. 1,170,111; Feb. 1; Gaz. vol. 223; p. 126.
Quick-break switch. P. Sounsen. No. 1,171,151; Feb. 8; Gaz. vol. 223; p. 525.
Rack: *See*—
Book-rack. Hose-rack.
Cake-rack. Mail-pouch rack.
Display-rack. Screen-rack.
Feed-rack Supporting-rack.
Radiator. W. M. Fulton. No. 1,170,625; Feb. 8; Gaz. vol. 223; p. 340.
Radiator-cell structure. H. C. Harrison. (Reissue.) No. 14,072; Feb. 15; Gaz. vol. 223; p. 956.
Radiator hanger, Wall-. G. I. Chittenden. No. 1,172,582; Feb. 22; Gaz. vol. 223; p. 1136.
Radiator-shield. S. Kauffman. No. 1,170,544; Feb. 8; Gaz. vol. 223; p. 316.
Radiators, Automatic relief device for steam-. T. F. Dexter. No. 1,171,181; Feb. 8; Gaz. vol. 223; p. 534.
Radiators, Foot-rest for. P. J. Fleck. No. 1,171,779; Feb. 15; Gaz. vol. 223; p. 785.
Radiators, Making. W. H. Legate. No. 1,170,915; Feb. 8; Gaz. vol. 223; p. 439.
Radioactive compounds, Utilizing the luminous power of. A. Junghans. No. 1,173,110; Feb. 22; Gaz. vol. 223; p. 1322.
Radiotelephone transmitting system. W. T. Ditcham. No. 1,173,562; Feb. 29; Gaz. vol. 223; p. 1524.
Radius-rod for motor-vehicles. C. Balough. No. 1,173,407; Feb. 29; Gaz. vol. 223; p. 1471.
Rail-anchor. E. Laus. No. 1,170,500; Feb. 1; Gaz. vol. 223; p. 258.
Rail-anchor. H. H. Sponenburg. No. 1,170,940; Feb. 8; Gaz. vol. 223; p. 447.
Rail-anchor. A. Stark. No. 1,172,496; Feb. 22; Gaz. vol. 223; p. 1105.
Rail-anticreeper. L. J. Riegler. No. 1,170,105; Feb. 1; Gaz. vol. 223; p. 124.
Rail-bond. A. B. Herrick. No. 1,170,751; Feb. 8; Gaz. vol. 223; p. 384.
Rail-bond and fish-plate, Welded. J. M. Yount. No. 1,170,132; Feb. 1; Gaz. vol. 223; p. 132.
Rail clamp and holder. P. Mayda. No. 1,173,204; Feb. 29; Gaz. vol. 223; p. 1397.
Rail, Compound. O. C. Thompson. No. 1,171,278; Feb. 8; Gaz. vol. 223; p. 568.
Rail-filler. H. C. Innes. No. 1,171,441; Feb. 15; Gaz. vol. 223; p. 667.
Rail fish-plates. C. Green. No. 1,172,788; Feb. 22; Gaz. vol. 223; p. 1211.
Rail, Guard-. B. T. Gibbs, Jr. No. 1,173,420; Feb. 29; Gaz. vol. 223; p. 1475.
Rail-joint. C. H. Caldwell. No. 1,171,701; Feb. 15; Gaz. vol. 223; p. 758.
Rail-joint. L. R. Compton. No. 1,172,009; Feb. 15; Gaz. vol. 223; p. 871.
Rail-joint. J. B. Duquette. No. 1,169,780; Feb. 1; Gaz. vol. 223; p. 12.
Rail-joint. E. Gaboury. No. 1,171,423; Feb. 15; Gaz. vol. 223; p. 661.
Rail-joint. G. F. Keller. No. 1,173,079; Feb. 29; Gaz. vol. 223; p. 1667.
Rail-joint. M. Martin. No. 1,173,520; Feb. 29; Gaz. vol. 223; p. 1513.
Rail-joint. M. E. Mattson. No. 1,170,306; Feb. 1; Gaz. vol. 223; p. 193.
Rail-joint. M. Noble. No. 1,173,848; Feb. 29; Gaz. vol. 223; p. 1625.
Rail-joint. W. A. Stephenson. No. 1,172,177; Feb. 15; Gaz. vol. 223; p. 928.
Rail-joint bars, Making. B. Wolhaupter. No. 1,172,654; Feb. 22; Gaz. vol. 223; p. 1161.
Rail-joint bars, Making cambered. B. Wolhaupter. No. 1,172,655; Feb. 22; Gaz. vol. 223; p. 1161.
Rails, Device for preventing the spreading of. P. Mackey. No. 1,173,595; Feb. 29; Gaz. vol. 223; p. 1537.
Railway bridges and trestles, Covering for. G. H. Moseley. No. 1,171,062; Feb. 8; Gaz. vol. 223; p. 491.
Railway-crossing. J. L. Brunham. No. 1,173,924; Feb. 29; Gaz. vol. 223; p. 1650.
Railway-crossing, Automatic. C. A. Helfer. No. 1,172,795; Feb. 22; Gaz. vol. 223; p. 1213.
Railway-crossing device. J. W. Matthews. No. 1,171,621; Feb. 15; Gaz. vol. 223; p. 731.
Railway-crossing gate. L. G. Eggleston and E. Ollvant. No. 1,171,110; Feb. 8; Gaz. vol. 223; p. 509.
Railway-joint. F. A. Moffitt. No. 1,170,985; Feb. 8; Gaz. vol. 223; p. 464.
Railway-marker. I. F. Haddock. No. 1,172,523; Feb. 22; Gaz. vol. 223; p. 1114.
Railway points and signals, System of controlling. A. Monard, E. A. Moutier, and H. Dumartin. No. 1,173,206; Feb. 29; Gaz. vol. 223; p. 1398.
Railway-rail. A. Cousineau. No. 1,173,933; Feb. 29; Gaz. vol. 223; p. 1654.
Railway-rail cushion. G. Rielly. No. 1,171,250; Feb. 8; Gaz. vol. 223; p. 558.
Railway safety apparatus. T. M. Freeble. No. 1,171,333; Feb. 8; Gaz. vol. 223; p. 587.
Railway-signal. H. A. Hoeschen. No. 1,171,124; Feb. 8; Gaz. vol. 223; p. 515.
Railway-signal. J. D. Taylor. No. 1,170,361; Feb. 1; Gaz. vol. 223; p. 211.
Railway-signal. J. D. Taylor. No. 1,170,362; Feb. 1; Gaz. vol. 223; p. 211.
Railway signal mechanism. H. A. Hoeschen. No. 1,170,156; Feb. 1; Gaz. vol. 223; p. 141.
Railway signaling device. H. Nevens. No. 1,174,023; Feb. 29; Gaz. vol. 223; p. 1683.
Railway signaling system. A. Dulac. No. 1,170,143; Feb. 1; Gaz. vol. 223; p. 136.
Railway signaling system. M. Martin. No. 1,173,011; Feb. 22; Gaz. vol. 223; p. 1289.
Railway-spike. L. S. Jones. No. 1,173,066; Feb. 29; Gaz. vol. 223; p. 1561.

Railway-spike. C. O. Smith. No. 1,173,882; Feb. 29; Gaz. vol. 223; p. 1637.
Railway-switch-locking system. E. W. Vogel. No. 1,171,991; Feb. 15; Gaz. vol. 223; p. 864.
Railway-switch mechanism. M. L. Shepherd. No. 1,172,172; Feb. 15; Gaz. vol. 223; p. 926.
Railway-switch thrower. S. Levy. No. 1,170,289; Feb. 1; Gaz. vol. 223; p. 187.
Railway-tie. M. Hrnich. No. 1,170,264; Feb. 1; Gaz. vol. 223; p. 178.
Railway-tie. M. Minnich. No. 1,171,743; Feb. 15; Gaz. vol. 223; p. 772.
Railway-tie. W. E. Munslow. No. 1,173,844; Feb. 29; Gaz. vol. 223; p. 1623.
Railway-tie. J. A. Silver. No. 1,170,854; Feb. 8; Gaz. vol. 223; p. 418.
Railway-tie. S. T. Wilson. No. 1,173,236; Feb. 29; Gaz. vol. 223; p. 1408.
Railway-tie. R. H. Younle. No. 1,169,905; Feb. 1; Gaz. vol. 223; p. 55.
Railway-tie and fastener. C. A. Riggs. No. 1,171,653; Feb. 15; Gaz. vol. 223; p. 742.
Railway-tie and fastener, Metallic. R. S. Gandy. No. 1,173,658; Feb. 29; Gaz. vol. 223; p. 1559.
Railway-trains and the like, Automatic stop and speed control for. A. Frees and A. Cox. No. 1,171,112; Feb. 8; Gaz. vol. 223; p. 510.
Railway-vehicles, Draft appliance for. W. McConway, Jr. No. 1,171,861; Feb. 15; Gaz. vol. 223; p. 815.
Railways, Bumping-post for. E. C. Holmes. No. 1,170,639; Feb. 8; Gaz. vol. 223; p. 345.
Rain-gage. B. G. Patterson. No. 1,173,022; Feb. 22; Gaz. vol. 223; p. 1292.
Rain-signals, &c. Ball-rolling contact for. W. E. R. Rademaker. No. 1,172,047; Feb. 15; Gaz. vol. 223; p. 885.
Raisin-cleaning machine. I. Tucker. No. 1,170,026; Feb. 1; Gaz. vol. 223; p. 96.
Rake: *See*—
Hay-rake.
Rake. J. H. Stout. No. 1,170,701; Feb. 8; Gaz. vol. 223; p. 367.
Range, Gas-. M. A. Possons. (Reissue.) No. 14,068; Feb. 15; Gaz. vol. 223; p. 954.
Range top, Gas-. M. W. Longfellow. No. 1,170,766; Feb. 8; Gaz. vol. 223; p. 389.
Rat and animal trap, Electric. O. Weiss. No. 1,170,940; Feb. 8; Gaz. vol. 223; p. 450.
Rat-trap. M. A. Thompson. No. 1,173,897; Feb. 29; Gaz. vol. 223; p. 1641.
Rat-trap. W. W. Worcester. No. 1,173,029; Feb. 29; Gaz. vol. 223; p. 1549.
Rat-trap, Self-setting. C. W. Rayner. No. 1,173,462; Feb. 29; Gaz. vol. 223; p. 1488.
Rattle, Nursery-. A. Morse. No. 1,171,229; Feb. 8; Gaz. vol. 223; p. 551.
Razor. L. Ellebrecht. No. 1,170,433; Feb. 1; Gaz. vol. 223; p. 235.
Razor. H. J. Galsman. No. 1,171,605; Feb. 15; Gaz. vol. 223; p. 724.
Razor and razor-blade sharpener, Combined safety-. J. Holtzman and M. Kover. No. 1,170,754; Feb. 8; Gaz. vol. 223; p. 385.
Razor, Safety-. H. Coyne. No. 1,171,175; Feb. 8; Gaz. vol. 223; p. 533.
Razor, Safety-. H. J. Galsman. No. 1,171,604; Feb. 15; Gaz. vol. 223; p. 724.
Razor, Safety-. P. O. Ugarph. No. 1,169,802; Feb. 1; Gaz. vol. 223; p. 50.
Razor, Safety-. T. Wild. No. 1,171,290; Feb. 8; Gaz. vol. 223; p. 573.
Reamer. W. S. Fuller. No. 1,172,589; Feb. 22; Gaz. vol. 223; p. 1139.
Receptacle. H. A. Inman and C. T. Bloomer. No. 1,172,997; Feb. 22; Gaz. vol. 223; p. 1285.
Receptacle and plug. G. Wright. No. 1,171,014; Feb. 15; Gaz. vol. 223; p. 835.
Receptacle-holder. G. H. Christensen. No. 1,170,414; Feb. 1; Gaz. vol. 223; p. 228.
Receptacle, Storage and supply. M. Mackay and J. J. Ferrall. No. 1,171,404; Feb. 8; Gaz. vol. 223; p. 614.
Record-holder. J. W. Hughes. No. 1,170,447; Feb. 1; Gaz. vol. 223; p. 240.
Records and the like, Holder for. F. W. Harris. No. 1,171,118; Feb. 8; Gaz. vol. 223; p. 513.
Recorder: *See*—
Cash and credit recorder.
Reed-board. P. Preston. No. 1,171,802; Feb. 15; Gaz. vol. 223; p. 793.
Reel: *See*—
Box-strapping reel. Fishing-reel.
Reel. L. S. Frappler. No. 1,172,340; Feb. 22; Gaz. vol. 223; p. 1048.
Reel-case. G. W. McKinstry and G. H. Day. No. 1,172,220; Feb. 15; Gaz. vol. 223; p. 941.
Reel or runner. T. J. Sands. No. 1,171,545; Feb. 15; Gaz. vol. 223; p. 704.
Reflector. J. Hauschildt. No. 1,170,903; Feb. 8; Gaz. vol. 223; p. 435.
Reflector connection. L. W. Andersen. No. 1,170,596; Feb. 8; Gaz. vol. 223; p. 329.
Refrigerating apparatus. E. P. Connelly. No. 1,172,873; Feb. 22; Gaz. vol. 223; p. 1241.
Refrigerator. G. J. Gruendler. No. 1,173,261; Feb. 29; Gaz. vol. 223; p. 1418.
Refrigerator. A. S. Klein. No. 1,170,824; Feb. 8; Gaz. vol. 223; p. 408.
Refrigerator. H. Von Wolforsdorf. No. 1,171,566; Feb. 15; Gaz. vol. 223; p. 711.
Refrigerator-thermostat. F. N. Roehrich. No. 1,172,740; Feb. 22; Gaz. vol. 223; p. 1193.
Refuse storing and discharging apparatus. S. E. Jenkins. No. 1,172,141; Feb. 15; Gaz. vol. 223; p. 916.
Regenerative furnace. J. E. Bell. No. 1,170,397; Feb. 1; Gaz. vol. 223; p. 223.
Regenerator-chamber. H. F. Miller, Jr. No. 1,173,297; Feb. 29; Gaz. vol. 223; p. 1432.
Register: *See*—
Cash and credit register. Printing-press sheet-register.
Cash-register.
Fare-register.
Regulator: *See*—
Feed-water regulator. Furnace draft-regulator.
Flow-regulator. Pressure-regulator.
Relay. C. L. Krum. No. 1,172,204; Feb. 22; Gaz. vol. 223; p. 1029.
Relay, Electromagnetic. E. A. Reinke. No. 1,170,670. Feb. 8; Gaz. vol. 223; p. 355.
Releasing-hook, Automatic. H. M. Davis. No. 1,173,653; Feb. 29; Gaz. vol. 223; p. 1557.
Reminding device. G. F. Kinney. No. 1,173,585; Feb. 29; Gaz. vol. 223; p. 1533.
Reroller. G. H. Sargent. No. 1,169,874; Feb. 1; Gaz. vol. 223; p. 44.
Resilient wheel. H. I. Chew and W. S. Sergeant. No. 1,169,924; Feb. 1; Gaz. vol. 223; p. 61.
Resilient wheel. J. B. Drahonovsky. No. 1,169,779; Feb. 1; Gaz. vol. 223; p. 11.
Resilient wheel. J. B. Drahonovsky. No. 1,172,234; Feb. 15; Gaz. vol. 223; p. 946.
Resilient wheel. J. J. Halloran. No. 1,170,807; Feb. 8; Gaz. vol. 223; p. 433.
Resilient wheel. M. F. Kettler. No. 1,172,010; Feb. 22; Gaz. vol. 223; p. 1146.
Resilient wheel. W. A. Sonnentag. No. 1,173,885; Feb. 29; Gaz. vol. 223; p. 1638.
Resilient wheel. G. W. Watts. No. 1,173,071; Feb. 22; Gaz. vol. 223; p. 1309.
Respiration, Apparatus for producing artificial. R. S. Prindle. No. 1,169,996; Feb. 1; Gaz. vol. 223; p. 84.
Respiration, Producing artificial. R. S. Prindle. No. 1,169,995; Feb. 1; Gaz. vol. 223; p. 84.
Restaurant-chair. J. T. Kenealy and W. A. Naylon. No. 1,170,073; Feb. 1; Gaz. vol. 223; p. 112.
Retaining mechanism. O. A. Ross and H. B. Taylor. No. 1,170,996; Feb. 8; Gaz. vol. 223; p. 468.
Retort, Vertical. A. M. Duckham. No. 1,171,183; Feb. 8; Gaz. vol. 223; p. 535.
Retouching-machine. G. Charlton. No. 1,173,410; Feb. 29; Gaz. vol. 223; p. 1472.
Reversing mechanism. W. Bartholomew. No. 1,171,304; Feb. 8; Gaz. vol. 223; p. 577.
Reversing mechanism. S. H. Cochran and W. E. Clow. No. 1,169,774; Feb. 1; Gaz. vol. 223; p. 9.
Reversing mechanism. F. W. Wappat. No. 1,170,371; Feb. 1; Gaz. vol. 223; p. 215.
Revetment. D. M. Shearer. No. 1,173,879; Feb. 29; Gaz. vol. 223; p. 1636.
Revetment-mold. D. M. Shearer. No. 1,173,880; Feb. 29; Gaz. vol. 223; p. 1636.
Revolving chair. C. J. Travers. No. 1,173,328; Feb. 29; Gaz. vol. 223; p. 1443.
Rewind mechanism. A. P. Gustafson. No. 1,173,185; Feb. 29; Gaz. vol. 223; p. 1391.
Rim, Demountable. C. H. McKendree. No. 1,172,242; Feb. 15; Gaz. vol. 223; p. 949.
Rim tool, Demountable-. A. C. Rosenbrook. No. 1,173,741; Feb. 29; Gaz. vol. 223; p. 1587.
Rim, Demountable. P. S. Whiting. No. 1,171,373; Feb. 8; Gaz. vol. 223; p. 602.
Ring: *See*—
Finger-ring. Packing-ring.
Hog-ring. Piston-ring.
Key-ring. Spinning-ring.
Ring-core-revolving machine. J. R. Gammeter. No. 1,172,883; Feb. 22; Gaz. vol. 223; p. 1245.
Ring-guard for straps. S. Smith. No. 1,171,898; Feb. 15; Gaz. vol. 223; p. 829.
Ring-holders, Fastening device for. L. T. Houghton. No. 1,170,446; Feb. 1; Gaz. vol. 223; p. 239.
Rings, Making finger-. A. F. Vaughan. No. 1,170,124; Feb. 1; Gaz. vol. 223; p. 130.
Rivet and cap setting machine. A. R. Havener. No. 1,173,571; Feb. 29; Gaz. vol. 223; p. 1527.
Rivet jam-dolly. G. McArthur. No. 1,172,894; Feb. 22; Gaz. vol. 223; p. 1249.
Road-machine. N. S. Monroe. No. 1,173,015; Feb. 22; Gaz. vol. 223; p. 1290.
Road-machine. T. S. Rogers. No. 1,173,539; Feb. 29; Gaz. vol. 223; p. 1516.
Road-making composition. E. A. Paterson. No. 1,171,246; Feb. 8; Gaz. vol. 223; p. 553.
Road-sanding machine. J. D. Curtis. No. 1,172,012; Feb. 15; Gaz. vol. 223; p. 872.
Road-working machine. N. S. Monroe. No. 1,173,014; Feb. 22; Gaz. vol. 223; p. 1290.
Road-working machine. N. S., A. J., and G. W. Monroe. No. 1,173,016; Feb. 22; Gaz. vol. 223; p. 1290.
Rock-breaker. O. O. App. No. 1,169,907; Feb. 1; Gaz. vol. 223; p. 56.

Rod: *See*—
Connecting-rod. Radius-rod.
Lightning-rod.
Rod-clamp. H. H. Lampert. No. 1,171,525; Feb. 15; Gaz. vol. 223; p. 697.
Rod-straightening machine. J. R. George and V. E. Edwards. No. 1,170,242; Feb. 1; Gaz. vol. 223; p. 173.
Roll. E. V. Phelps. No. 1,173,736; Feb. 29; Gaz. vol. 223; p. 1586.
Roll-head. M. R. Rust. No. 1,172,907; Feb. 22; Gaz. vol. 223; p. 1254.
Roller: *See*—
Cotton-gin roller. Shade-roller.
Mine-shaft roller.
Roller and bearing for same. R. A. Lachmann. No. 1,170,450; Feb. 1; Gaz. vol. 223; p. 241.
Rollers, Machine for wiring grooved. J. Dronsfield. No. 1,173,492; Feb. 29; Gaz. vol. 223; p. 1500.
Rolling machinery, Metal-. C. T. Henderson. No. 1,170,153; Feb. 1; Gaz. vol. 223; p. 140.
Rolling-mill guide. E. J. Quinn. No. 1,173,738; Feb. 29; Gaz. vol. 223; p. 1586.
Roof. R. W. Burnett. No. 1,170,219; Feb. 1; Gaz. vol. 223; p. 164.
Roof-bracket. E. A. Schade. No. 1,172,227; Feb. 15; Gaz. vol. 223; p. 943.
Roof-gutter bracket. H. Boldt. No. 1,170,869; Feb. 8; Gaz. vol. 223; p. 424.
Roof-joint. C. A. Overton. No. 1,170,931; Feb. 8; Gaz. vol. 223; p. 444.
Roofing. C. Russell. (Reissue.) No. 14,058; Feb. 8; Gaz. vol. 223; p. 614.
Roofing material, Laying. S. B. Faison. No. 1,170,521; Feb. 8; Gaz. vol. 223; p. 502.
Roofing-strip, Machine for making. C. A. Want. No. 1,173,470; Feb. 29; Gaz. vol. 223; p. 1491.
Roofing-tool. W. F. Roth. No. 1,171,007; Feb. 8; Gaz. vol. 223; p. 493.
Root cutter, Ground-. H. M. Beutell. No. 1,170,795; Feb. 8; Gaz. vol. 223; p. 398.
Root-cutters provided with drums, Feed device for. A. Maguin. No. 1,169,981; Feb. 1; Gaz. vol. 223; p. 79.
Rope-clamp. L. M. Evjen. No. 1,172,125; Feb. 15; Gaz. vol. 223; p. 911.
Ropeways, Dumping device for. P. B. Wallace. No. 1,170,861; Feb. 8; Gaz. vol. 223; p. 421.
Rotary cutter. G. P. Youmans. No. 1,173,238; Feb. 29; Gaz. vol. 223; p. 1409.
Rotary engine. F. H. Carson. No. 1,171,769; Feb. 15; Gaz. vol. 223; p. 781.
Rotary engine. H. C. Strack. No. 1,169,884; Feb. 1; Gaz. vol. 223; p. 48.
Rotary engine. H. R. Thurmond. No. 1,173,327; Feb. 29; Gaz. vol. 223; p. 1443.
Rotary engine. A. V. Weber. No. 1,170,373; Feb. 1; Gaz. vol. 223; p. 216.
Rotary internal-combustion engine. J. L. Clark. No. 1,170,415; Feb. 1; Gaz. vol. 223; p. 229.
Rotary separator. J. A. McKinlay. No. 1,173,671; Feb. 29; Gaz. vol. 223; p. 1563.
Rubber-footwear retainer. T. C. Wilder. No. 1,172,509; Feb. 22; Gaz. vol. 223; p. 1109.
Rubber for removing marks from paper. J. A. Coyle. No. 1,170,220; Feb. 1; Gaz. vol. 223; p. 164.
Rubber heel for boots or shoes, Detachable. C. H. Chapman. No. 1,172,071; Feb. 22; Gaz. vol. 223; p. 1168.
Rubber heel, Friction-plug. F. Berenstein. No. 1,173,088; Feb. 22; Gaz. vol. 223; p. 1314.
Rubber heels, Manufacture of. H. C. Weber. No. 1,172,019; Feb. 22; Gaz. vol. 223; p. 1257.
Rubber, Restoring. F. Moench. No. 1,172,158; Feb. 15; Gaz. vol. 223; p. 922.
Rubber substitute, Preparing a. A. A. Glidden. No. 1,171,187; Feb. 8; Gaz. vol. 223; p. 530.
Rubber-working machine. E. B. Herman. No. 1,173,426; Feb. 29; Gaz. vol. 223; p. 1477.
Rubbing-block, Fountain. H. J. Hewitt. No. 1,170,155; Feb. 1; Gaz. vol. 223; p. 140.
Rubbing-post. J. W. Haines. No. 1,173,958; Feb. 29; Gaz. vol. 223; p. 1661.
Rule. E. L. Prout. No. 1,172,631; Feb. 22; Gaz. vol. 223; p. 1153.
Sack-cleaning device. A. G. Carlson. No. 1,173,250; Feb. 29; Gaz. vol. 223; p. 1414.
Sack-turning mechanism. E. G. Edmonson. No. 1,172,443; Feb. 22; Gaz. vol. 223; p. 1084.
Sad-iron-cord support. W. H. Harold. No. 1,172,134; Feb. 15; Gaz. vol. 223; p. 914.
Safe or vault door. M. Mosler and C. Bartels. No. 1,171,348; Feb. 8; Gaz. vol. 223; p. 593.
Safe or vault door locking mechanism. H. C. Von Philp. No. 1,173,068; Feb. 22; Gaz. vol. 223; p. 1309.
Safety attachment. E. Roth. No. 1,172,394; Feb. 22; Gaz. vol. 223; p. 1064.
Safety device. H. G. Hillman. No. 1,171,338; Feb. 8; Gaz. vol. 223; p. 589.
Safety filling cap. C. L. French. No. 1,169,791; Feb. 1; Gaz. vol. 223; p. 16.
Safety-pin. J. H. Boye. No. 1,170,508; Feb. 8; Gaz. vol. 223; p. 297.
Safety-pin. V. Price. No. 1,170,186; Feb. 1; Gaz. vol. 223; p. 152.
Sales-slip device, Manifold. C. C. Mecum. No. 1,173,830; Feb. 29; Gaz. vol. 223; p. 1618.
Salt-shaker. L. Zsidakovitz. No. 1,171,575; Feb. 15; Gaz. vol. 223; p. 714.
Salt, Sulfo-fatty-aromatic acid. E. Twitchell. No. 1,170,468; Feb. 1; Gaz. vol. 223; p. 247.
Salt water from working up streams, Apparatus for preventing. W. M. Meacham. No. 1,173,307; Feb. 29; Gaz. vol. 223; p. 1457.
Salts of aluminum, Producing soluble. M. F. Coolbaugh and E. H. Quinney. No. 1,170,418; Feb. 1; Gaz. vol. 223; p. 230.
Sampling device. R. C. Newhouse. No. 1,170,842; Feb. 8; Gaz. vol. 223; p. 414.
Sand-blast apparatus-controlling device. F. A. Coleman, D. S. Hawkins, and A. J. Farrell. No. 1,172,008; Feb. 15; Gaz. vol. 223; p. 871.
Sand-blast device. J. E. Sweet, A. Winter, and F. G. Chambers. No. 1,170,198; Feb. 1; Gaz. vol. 223; p. 156.
Sand-blast machine. J. L. Dawes. No. 1,173,178; Feb. 29; Gaz. vol. 223; p. 1389.
Sand-blast machine. H. L. Wadsworth. No. 1,171,286; Feb. 8; Gaz. vol. 223; p. 571.
Sand, Bleaching. J. G. A. Rhodin. No. 1,173,385; Feb. 29; Gaz. vol. 223; p. 1463.
Sander. C. A. Johnson and H. Thissenius. No. 1,172,212; Feb. 15; Gaz. vol. 223; p. 938.
Sanitary appliance. J. W. Patterson. No. 1,171,973; Feb. 15; Gaz. vol. 223; p. 857.
Sanitary hook. H. Hellberg. No. 1,171,198; Feb. 8; Gaz. vol. 223; p. 540.
Sash and screen fastener, Storm-. M. Tholstrup. No. 1,172,320; Feb. 22; Gaz. vol. 223; p. 1038.
Sash-balance. J. A. Sharps. No. 1,172,063; Feb. 15; Gaz. vol. 223; p. 891.
Sash-balance connection. J. H. Sayres. No. 1,171,257; Feb. 8; Gaz. vol. 223; p. 561.
Sash-cord attachment. P. Hein. No. 1,172,136; Feb. 15; Gaz. vol. 223; p. 914.
Sash-cord fastener. R. W. Wade. No. 1,172,850; Feb. 22; Gaz. vol. 223; p. 1233.
Sash-fastener. W. T. Ware. No. 1,171,908; Feb. 15; Gaz. vol. 223; p. 833.
Sash-holder. G. A. Behrmann. No. 1,173,163; Feb. 29; Gaz. vol. 223; p. 1384.
Sash-holder. J. Reibert. No. 1,171,645; Feb. 15; Gaz. vol. 223; p. 739.
Sash-lock. J. C. Backus. No. 1,172,663; Feb. 22; Gaz. vol. 223; p. 1164.
Sash-lock. W. F. Barger. No. 1,171,016; Feb. 8; Gaz. vol. 223; p. 475.
Sash-lock. J. Jorgenson. No. 1,172,531; Feb. 22; Gaz. vol. 223; p. 1117.
Sash-lock. W. H. McClanahan. No. 1,171,736; Feb. 15; Gaz. vol. 223; p. 770.
Sash-lock. M. J. Ryan. No. 1,170,344; Feb. 1; Gaz. vol. 223; p. 205.
Sash-lock. E. C. Tallaferro. No. 1,173,129; Feb. 22; Gaz. vol. 223; p. 1329.
Sash-operating mechanism. R. A. Lackey. No. 1,173,113; Feb. 22; Gaz. vol. 223; p. 1323.
Sash-pivot construction. H. W. Crane. No. 1,171,773; Feb. 15; Gaz. vol. 223; p. 783.
Sash, Reversible window-. S. Viragh. No. 1,173,231; Feb. 29; Gaz. vol. 223; p. 1407.
Sash-suspension device. H. E. Campbell. No. 1,171,168; Feb. 8; Gaz. vol. 223; p. 530.
Sash-weight mold. S. J. Sullivan. No. 1,171,275; Feb. 8; Gaz. vol. 223; p. 567.
Sash, Window-. M. Rey. No. 1,173,863; Feb. 29; Gaz. vol. 223; p. 1630.
Sausage-machine. J. C. Smith and S. A. Darnell. No. 1,171,549; Feb. 15; Gaz. vol. 223; p. 705.
Saw-clamp. J. H. Dallis. No. 1,172,951; Feb. 22; Gaz. vol. 223; p. 1269.
Saw-filing machine. F. Pysz. No. 1,169,997; Feb. 1; Gaz. vol. 223; p. 85.
Saw-filing machine, Gin-. J. M. Westbrook. No. 1,173,906; Feb. 29; Gaz. vol. 223; p. 1644.
Saw machine, Drag-. F. A. McKee. No. 1,173,824; Feb. 29; Gaz. vol. 223; p. 1616.
Saw mill, Band-. H. C. Hansen. No. 1,169,807; Feb. 1; Gaz. vol. 223; p. 21.
Saw-tool. S. H. Stanton. No. 1,173,888; Feb. 29; Gaz. vol. 223; p. 1639.
Sawing-machine, Hand. P. A. Vanoso. No. 1,173,902; Feb. 29; Gaz. vol. 223; p. 1643.
Sawmill feeding device. I. W. Coulbourn. No. 1,170,611; Feb. 8; Gaz. vol. 223; p. 335.
Scaffold. J. S. Guest. No. 1,172,355; Feb. 22; Gaz. vol. 223; p. 1050.
Scale. L. Jaenichen. No. 1,171,522; Feb. 15; Gaz. vol. 223; p. 696.
Scale, Automatic weighing-. T. S. B. Parnall. No. 1,173,732; Feb. 29; Gaz. vol. 223; p. 1584.
Scale, Coin-controlled. D. C. Williams and W. M. Updegrave. No. 1,171,912; Feb. 15; Gaz. vol. 223; p. 834.
Scale, Coin-operated weighing-. H. S. Mills. No. 1,171,836; Feb. 15; Gaz. vol. 223; p. 817.
Scale, Platform-. M. H. Winslow. No. 1,171,998; Feb. 15; Gaz. vol. 223; p. 867.
Scale, Self-weighing balance-. F. C. Metz. No. 1,170,838; Feb. 8; Gaz. vol. 223; p. 413.
Scale, Spring-. L. Jaenichen. No. 1,172,458; Feb. 22; Gaz. vol. 223; p. 1089.
Scale, Torsion-balance. G. M. Conway. No. 1,169,929; Feb. 1; Gaz. vol. 223; p. 63.

Scale, Weighing-. T. M. Whitlock. No. 1,172,185; Feb. 15; Gaz. vol. 223; p. 930.
Scarf or necktie. D. Essex. No. 1,170,437; Feb. 1; Gaz. vol. 223; p. 236.
Scissors-hanger. W. R. Walker. No. 1,170,850; Feb. 8; Gaz. vol. 223; p. 420.
Score-board. L. M. Griffith and F. A. Garbutt. No. 1,171,715; Feb. 15; Gaz. vol. 223; p. 762.
Scrap-bundling machine. D. B. Marwick. No. 1,170,983; Feb. 8; Gaz. vol. 223; p. 463.
Scraper. F. Mallet. No. 1,171,738; Feb. 15; Gaz. vol. 223; p. 770.
Screen: *See*—
Gauze screen. Vehicle weather-screen.
Gravel-screen. Vibrating screen.
Pulp-screen. Window-screen.
Screen rack. Wire-. O. J. and C. L. Conner. No. 1,173,339; Feb. 29; Gaz. vol. 223; p. 1447.
Screw-driver and similar tool. W. S. Thomson. No. 1,170,709; Feb. 8; Gaz. vol. 223; p. 370.
Screw-machine. Automatic. G. D. Hayden. No. 1,173,574; Feb. 29; Gaz. vol. 223; p. 1529.
Screw machines, Blank-holding spindle for wood-. H. L. Smith. No. 1,170,695; Feb. 8; Gaz. vol. 223; p. 364.
Screw machines, Lead mechanism for wood-. H. L. Smith. No. 1,170,694; Feb. 8; Gaz. vol. 223; p. 364.
Screw-stock and other cutting-tool provided with lubricating means. J. F. Holzschelter. No. 1,173,516; Feb. 29; Gaz. vol. 223; p. 1509.
Screw-threads, Device for cutting crooked. R. Andrews. No. 1,170,135; Feb. 1; Gaz. vol. 223; p. 133.
Screw-threads, Machine and appliance for cutting or forming. G. H. Alexander. No. 1,173,078; Feb. 22; Gaz. vol. 223; p. 1311.
Scrubbing and mopping device. E. F. Browning. No. 1,171,768; Feb. 15; Gaz. vol. 223; p. 781.
Scythe. H. W. Hutchins. No. 1,174,015; Feb. 29; Gaz. vol. 223; p. 1680.
Seal. R. H. Jones. No. 1,172,530; Feb. 22; Gaz. vol. 223; p. 1117.
Seal. F. A. Rutherford. No. 1,173,146; Feb. 22; Gaz. vol. 223; p. 1335.
Seal-fastening. T. E. Murray and G. K. Jessup. No. 1,173,603; Feb. 29; Gaz. vol. 223; p. 1539.
Seal-lock. P. Storey. No. 1,173,056; Feb. 22; Gaz. vol. 223; p. 1304.
Seal-lock for boxes. F. W. Goessling. No. 1,173,347; Feb. 29; Gaz. vol. 223; p. 1450.
Seal, Snap-. E. J. Brooks. No. 1,170,140; Feb. 1; Gaz. vol. 223; p. 135.
Sealing and stamping mail-matter, Machine for. L. J. Hall. No. 1,173,263; Feb. 29; Gaz. vol. 223; p. 1419.
Sealing device, Envelop-. C. Hanes. No. 1,172,283; Feb. 22; Gaz. vol. 223; p. 1025.
Sealing mail-matter, Machine for. L. J. Hall. No. 1,173,264; Feb. 29; Gaz. vol. 223; p. 1419.
Search-light. R. P. Crothers. No. 1,172,437; Feb. 22; Gaz. vol. 223; p. 1081.
Search-light, Portable electric. R. L. Smith. No. 1,170,012; Feb. 1; Gaz. vol. 223; p. 90.
Seat: *See*—
Automobile-seat. Closet-seat.
Bed-seat. Spring-seat.
Car-seat. Water-closet seat.
Chair-seat.
Seat-guard. H. D. Bennett. No. 1,172,103; Feb. 15; Gaz. vol. 223; p. 904.
Seat-spring. M. G. Adams. No. 1,171,297; Feb. 8; Gaz. vol. 223; p. 575.
Secondary or storage battery. B. Ford. No. 1,169,788; Feb. 1; Gaz. vol. 223; p. 14.
Seed, &c., from flax-plants and the like, Apparatus for removing. T. Krelpe. No. 1,170,646; Feb. 8; Gaz. vol. 223; p. 347.
Seeds, Apparatus for testing the quality of germination in. M. H. Gray. No. 1,172,787; Feb. 22; Gaz. vol. 223; p. 1211.
Seeder. W. G. Schnee. No. 1,171,540; Feb. 15; Gaz. vol. 223; p. 704.
Selecting system. O. A. Danielson. No. 1,171,415; Feb. 15; Gaz. vol. 223; p. 658.
Selector-switch. H. F. Dobbin. No. 1,172,585; Feb. 22; Gaz. vol. 223; p. 1138.
Selector-switch. L. Von Nagy. No. 1,169,890; Feb. 1; Gaz. vol. 223; p. 49.
Self-cleaning rake. H. F. Roehrig. No. 1,173,867; Feb. 29; Gaz. vol. 223; p. 1631.
Self-locking bolt or stud. T. F. Oldroyd. No. 1,172,825; Feb. 22; Gaz. vol. 223; p. 1225.
Separation of liquid suspensions. F. W. Peek, Jr. No. 1,170,184; Feb. 1; Gaz. vol. 223; p. 151.
Separator: *See*—
Battery-separator. Oil-separator.
Centrifugal separator. Rotary separator.
Cream-separator. Spring-separator.
Grain-separator. Wheat-separator.
Separator. J. Sailer. No. 1,171,891; Feb. 15; Gaz. vol. 223; p. 827.
Service and meter testing and connection block. J. Sachs. No. 1,170,112; Feb. 1; Gaz. vol. 223; p. 126.
Serving device for eating-houses. A. M. Weston. No. 1,170,790; Feb. 8; Gaz. vol. 223; p. 397.
Sewing apparatus, Filled-bag-. C. McNeil. No. 1,170,303; Feb. 1; Gaz. vol. 223; p. 192.
Sewing-machine. F. Ashworth. No. 1,169,909; Feb. 1; Gaz. vol. 223; p. 56.
Sewing-machine. F. Ashworth. No. 1,169,910; Feb. 1; Gaz. vol. 223; p. 57.
Sewing-machine. J. Larsen. No. 1,172,373; Feb. 22; Gaz. vol. 223; p. 1057.
Sewing-machine. J. R. Moffatt. No. 1,172,162; Feb. 15; Gaz. vol. 223; p. 923.
Sewing-machine. A. R. Schoenky. No. 1,171,466; Feb. 15; Gaz. vol. 223; p. 675.
Sewing-machine. D. S. Seymour. No. 1,172,911; Feb. 22; Gaz. vol. 223; p. 1255.
Sewing-machine. L. E. Topham. No. 1,170,022; Feb. 1; Gaz. vol. 223; p. 93.
Sewing-machine. L. E. Topham. No. 1,170,024; Feb. 1; Gaz. vol. 223; p. 95.
Sewing-machine attachment. E. A. Illig. No. 1,173,973; Feb. 29; Gaz. vol. 223; p. 1665.
Sewing-machine attachment. A. Rosen. No. 1,172,393; Feb. 22; Gaz. vol. 223; p. 1064.
Sewing-machine attachment. J. P. Wilson. No. 1,172,417; Feb. 22; Gaz. vol. 223; p. 1073.
Sewing-machine, Blindstitch. J. G. Lewis. No. 1,172,812; Feb. 22; Gaz. vol. 223; p. 1220.
Sewing-machine brake. A. Rack. No. 1,172,166; Feb. 15; Gaz. vol. 223; p. 924.
Sewing-machine brake attachment. M. Bono. No. 1,171,410; Feb. 15; Gaz. vol. 223; p. 650.
Sewing machine, Carpet-. J. C. Owens. No. 1,171,636; Feb. 15; Gaz. vol. 223; p. 737.
Sewing-machine chain-severing mechanism. D. S. Seymour. No. 1,170,349; Feb. 1; Gaz. vol. 223; p. 207.
Sewing-machine cloth-guide. C. F. Smith. No. 1,170,009; Feb. 1; Gaz. vol. 223; p. 89.
Sewing-machine, Combination thread-drawing and hemstitch. W. N. Parkes. No. 1,170,666; Feb. 8; Gaz. vol. 223; p. 354.
Sewing-machine driving mechanism. C. H. T. Hagelstein. No. 1,173,423; Feb. 29; Gaz. vol. 223; p. 1476.
Sewing-machine feeding mechanism. L. E. Topham. No. 1,170,023; Feb. 1; Gaz. vol. 223; p. 94.
Sewing machine, Insole-lip-. A. E. Johnson. No. 1,171,723; Feb. 15; Gaz. vol. 223; p. 765.
Sewing-machine, Lock-stitch. A. Finseth. No. 1,170,442; Feb. 1; Gaz. vol. 223; p. 238.
Sewing machine, Sole-. J. W. Goddard. No. 1,171,714; Feb. 15; Gaz. vol. 223; p. 762.
Sewing machine, Sole-. J. A. Müller. No. 1,173,300; Feb. 29; Gaz. vol. 223; p. 1433.
Sewing-machine supporting and driving device. C. Lurz. No. 1,170,080; Feb. 1; Gaz. vol. 223; p. 114.
Sewing-machine take-up mechanism. J. Leathem. No. 1,171,858; Feb. 15; Gaz. vol. 223; p. 814.
Sewing-machine thread-controlling device. J. M. Merrow. No. 1,173,296; Feb. 29; Gaz. vol. 223; p. 1431.
Sewing-machine, Triple-needle. A. R. Larson. No. 1,169,972; Feb. 1; Gaz. vol. 223; p. 76.
Sewing-machine work holding and feeding means. C. A. Dearborn. No. 1,169,934; Feb. 1; Gaz. vol. 223; p. 65.
Shade, Adjustable. S. R. Menssen. No. 1,169,853; Feb. 1; Gaz. vol. 223; p. 37.
Shade and curtain support, Window. V. C. Ayers. No. 1,173,082; Feb. 22; Gaz. vol. 223; p. 1313.
Shade fixture, Window-. P. G. Emery. No. 1,170,742; Feb. 8; Gaz. vol. 223; p. 381.
Shade fixture, Window-. C. E. Klamm. No. 1,172,715; Feb. 22; Gaz. vol. 223; p. 1184.
Shade fixture, Window-. U. Sprinchorn and O. Kallander. No. 1,171,362; Feb. 8; Gaz. vol. 223; p. 598.
Shade holder, Screwless electric-. L. W. Andersen. No. 1,171,013; Feb. 8; Gaz. vol. 223; p. 474.
Shade-roller. D. A. Lane. No. 1,171,215; Feb. 8; Gaz. vol. 223; p. 546.
Shade-roller. G. C. Mathers. No. 1,172,819; Feb. 22; Gaz. vol. 223; p. 1223.
Shade-support and curtain-bracket, Combined. L. Baldacchi. No. 1,173,915; Feb. 29; Gaz. vol. 223; p. 1647.
Shades, sash-balances, and the like, Roller for window. D. Hoyt. No. 1,170,068; Feb. 1; Gaz. vol. 223; p. 110.
Shaft-coupling. L. E. Blanchard. No. 1,173,704; Feb. 29; Gaz. vol. 223; p. 1573.
Shaft-coupling device, Flexible-. G. Rensch. No. 1,173,682; Feb. 29; Gaz. vol. 223; p. 1566.
Shaft, Expansible. J. Esenko. No. 1,171,417; Feb. 15; Gaz. vol. 223; p. 659.
Shaft, Flexible. E. C. Oliver. No. 1,171,534; Feb. 15; Gaz. vol. 223; p. 700.
Shafts, Electrical device for changing the direction of rotation of. M. J. Dikeman. No. 1,169,937; Feb. 1; Gaz. vol. 223; p. 65.
Sharpener, Disk-. F. C. Warne. No. 1,172,413; Feb. 22; Gaz. vol. 223; p. 1072.
Sharpener, Knife-. F. C. Aschburner. No. 1,172,860; Feb. 22; Gaz. vol. 223; p. 1236.
Sharpener, Knife-. J. B. Hancock. No. 1,170,808; Feb. 8; Gaz. vol. 223; p. 433.
Sharpening and similar operations, Machine for. N. Schnur. No. 1,170,116; Feb. 1; Gaz. vol. 223; p. 127.
Sharpening device. R. S. Blair. No. 1,173,549; Feb. 29; Gaz. vol. 223; p. 1520.
Sharpening device. F. M. Sheafor. No. 1,172,569; Feb. 22; Gaz. vol. 223; p. 1132.

Sharpening device for disks of disk harrows. A. L. Saunders and A. Hengesbach. No. 1,170,114; Feb. 1; Gaz. vol. 223; p. 127.
Sharpening device for knives and the like. W. H. Whitcomb. No. 1,173,627; Feb. 29; Gaz. vol. 223; p. 1548.
Sharpening machine, Saw-. J. Beckman. No. 1,173,920; Feb. 29; Gaz. vol. 223; p. 1649.
Sharpening planer-blades, Machine for. F. W. Wardwell, Jr. No. 1,172,183; Feb. 15; Gaz. vol. 223; p. 929.
Shearing-machine wiper attachment. C. M. Whittier. No. 1,171,289; Feb. 8; Gaz. vol. 223; p. 572.
Shears: *See*—
Pruning-shears.
Sheep-dipping apparatus, Automatic. J. J. Roberson. No. 1,173,866; Feb. 29; Gaz. vol. 223; p. 1631.
Sheet-advancing mechanism. M. A. Droitcour. No. 1,170,053; Feb. 1; Gaz. vol. 223; p. 105.
Sheet-controlling mechanism. W. C. P. Collignon. No. 1,172,433; Feb. 22; Gaz. vol. 223; p. 1080.
Sheet cutting and folding machine. H. M. Barber. No. 1,170,136; Feb. 1; Gaz. vol. 223; p. 134.
Sheet feeding and cutting machine. J. H. Young. No. 1,171,011; Feb. 8; Gaz. vol. 223; p. 473.
Sheet-folding machine. H. M. Barber. No. 1,171,920; Feb. 15; Gaz. vol. 223; p. 838.
Sheet-gathering machine. W. F. Marresford. No. 1,173,203; Feb. 29; Gaz. vol. 223; p. 1596.
Sheet-metal bolt, Hollow. T. B. Taylor. No. 1,172,400; Feb. 22; Gaz. vol. 223; p. 1069.
Sheet-metal hoop. E. I. Braddock. No. 1,173,705; Feb. 29; Gaz. vol. 223; p. 1573.
Sheet-winding indicator. W. F. Cooper. No. 1,170,515; Feb. 8; Gaz. vol. 223; p. 300.
Shirring and bar machine. T. L. Green. No. 1,172,521; Feb. 22; Gaz. vol. 223; p. 1113.
Shellac-package. B. K. Ford. No. 1,173,257; Feb. 29; Gaz. vol. 223; p. 1417.
Shelter, Open-air. H. J. F. Rose. No. 1,171,346; Feb. 8; Gaz. vol. 223; p. 592.
Shelving. E. R. Massie. No. 1,173,828; Feb. 29; Gaz. vol. 223; p. 1618.
Shelving. J. B. O'Connor. No. 1,171,004; Feb. 8; Gaz. vol. 223; p. 492.
Shield. M. M. Thomas. No. 1,172,847; Feb. 22; Gaz. vol. 223; p. 1232.
Shifting mechanism. C. R. Hopkins. No. 1,173,576; Feb. 29; Gaz. vol. 223; p. 1530.
Shingles, Making. A. S. Spiegel. No. 1,172,067; Feb. 15; Gaz. vol. 223; p. 892.
Shingles, Manufacture of. A. S. Spiegel. No. 1,172,068; Feb. 15; Gaz. vol. 223; p. 892.
Shingling-gage. J. J. Englbrecht. No. 1,172,775; Feb. 22; Gaz. vol. 223; p. 1206.
Ship, Insubmergible. J. S. Neumann. No. 1,170,095; Feb. 1; Gaz. vol. 223; p. 121.
Ships, Hatch-cover for. A. Hogg. No. 1,171,721; Feb. 15; Gaz. vol. 223; p. 765.
Shipping-case. C. E. Lane. No. 1,173,114; Feb. 22; Gaz. vol. 223; p. 1323.
Shipping-container. W. P. and A. H. Angelo and F. R. Russi. No. 1,173,335; Feb. 29; Gaz. vol. 223; p. 1446.
Shipping-container. G. W. Smith. No. 1,173,752; Feb. 29; Gaz. vol. 223; p. 1591.
Shirt. A. Haiste. No. 1,173,968; Feb. 29; Gaz. vol. 223; p. 1664.
Shock-absorber. R. S. Carter. No. 1,171,109; Feb. 8; Gaz. vol. 223; p. 530.
Shock-absorber. J. E. Chostner. No. 1,172,672; Feb. 22; Gaz. vol. 223; p. 1168.
Shock-absorber. P. J. Cubbison and R. G. McFarland. No. 1,171,090; Feb. 8; Gaz. vol. 223; p. 504.
Shock-absorber. J. A. Doxey. No. 1,170,226; Feb. 1; Gaz. vol. 223; p. 166.
Shock-absorber. A. H. Fox. No. 1,172,588; Feb. 22; Gaz. vol. 223; p. 1138.
Shock-absorber. E. V. Hartford and L. Mastrangel. No. 1,172,453; Feb. 22; Gaz. vol. 223; p. 1087.
Shock-absorber. E. J. Hough. No. 1,171,722; Feb. 15; Gaz. vol. 223; p. 765.
Shock-absorber. D. F. Kilgour. No. 1,170,758; Feb. 8; Gaz. vol. 223; p. 387.
Shock-absorber. F. Mesinger. No. 1,173,205; Feb. 29; Gaz. vol. 223; p. 1397.
Shock-absorber. W. S. Miller. No. 1,171,132; Feb. 8; Gaz. vol. 223; p. 519.
Shock-absorber. K. K. Parker. No. 1,170,457; Feb. 1; Gaz. vol. 223; p. 243.
Shock-absorber. W. F. Service. No. 1,172,315; Feb. 22; Gaz. vol. 223; p. 1036.
Shock-absorber, Vehicle. A. J. Peteler. No. 1,172,387; Feb. 22; Gaz. vol. 223; p. 1062.
Shock-absorbing spring suspension device. J. J. Convery. No. 1,171,839; Feb. 15; Gaz. vol. 223; p. 807.
Shock-loader. T. Martin. No. 1,170,654; Feb. 8; Gaz. vol. 223; p. 350.
Shoe. N. D. Allen. No. 1,171,089; Feb. 15; Gaz. vol. 223; p. 754.
Shoe. F. H. Latinville. No. 1,172,467; Feb. 22; Gaz. vol 223; p. 1093.
Shoe. J. F. Peters and J. W. Dudgeon. No. 1,173,605; Feb. 29; Gaz. vol. 223; p. 1540.
Shoe-cleaner. M. E. Hill. No. 1,172,707; Feb. 22; Gaz. vol. 223; p. 1181.
Shoe-cleaning device. W. G. Callender. No. 1,170,411; Feb. 1; Gaz. vol. 223; p. 228.
Shoe construction. P. C. T. Larsen. No. 1,172,613; Feb. 22; Gaz. vol. 223; p. 1147.
Shoe, Health-. L. Zerga. No. 1,173,696; Feb. 29; Gaz. vol. 223; p. 1571.
Shoe-jack. W. C. Baxter. No. 1,171,383; Feb. 8; Gaz. vol. 223; p. 605.
Shoe-machine jack. F. E. Valois. No. 1,173,131; Feb. 22; Gaz. vol. 223; p. 1330.
Shoe, Maternity-. M. Deutsch. No. 1,172,770; Feb. 22; Gaz. vol. 223; p. 1205.
Shoe-polisher. C. D. Watkins. No. 1,173,692; Feb. 29; Gaz. vol. 223; p. 1570.
Shoe-stand. E. C. Martin and W. S. Childester. No. 1,169,850; Feb. 1; Gaz. vol. 223; p. 36.
Shoe-support. E. Pearl. No. 1,173,733; Feb. 29; Gaz. vol. 223; p. 1585.
Shoes, &c., Fastener for. J. W. Barber. No. 1,170,472; Feb. 1; Gaz. vol. 223; p. 248.
Shoes, Machine for removing buttons from. S. J. Myerburg. No. 1,171,133; Feb. 8; Gaz. vol. 223; p. 519.
Shoes, Making stitch-down. W. S. Shaft. No. 1,170,686; Feb. 8; Gaz. vol. 223; p. 362.
Shoes, Rubber welt for. J. E. Lucas. No. 1,173,287; Feb. 29; Gaz. vol. 223; p. 1429.
Shoestring-fastener. A. Derrenberger. No. 1,172,954; Feb. 22; Gaz. vol. 223; p. 1270.
Shotgun and rifle, Combined breech-loading. W. H. Potter. No. 1,170,327; Feb. 1; Gaz. vol. 223; p. 199.
Shovel and brush scraper attachment. M. F. Hill. No. 1,173,512; Feb. 29; Gaz. vol. 223; p. 1508.
Show-case. H. R. Ruse. No. 1,173,872; Feb. 29; Gaz. vol. 223; p. 1633.
Shutter-fastener. W. E. Stallings. No. 1,170,697; Feb. 8; Gaz. vol. 223; p. 366.
Shuttle-box. E. Riedel. No. 1,170,934; Feb. 8; Gaz. vol. 223; p. 445.
Shuttle-check. S. S. Staples. No. 1,170,357; Feb. 1; Gaz. vol. 223; p. 210.
Side frame. W. C. Hedgcock. No. 1,169,816; Feb. 1; Gaz. vol. 223; p. 24.
Sifter, Flour-. O. G. Graham. No. 1,170,893; Feb. 8; Gaz. vol. 223; p. 431.
Sifter or dredger, Enameling-powder. W. Lindsay. No. 1,171,618; Feb. 15; Gaz. vol. 223; p. 729.
Sight adjustment for indirect firing, Device for determining the required. O. Schmitz. No. 1,171,465; Feb. 15; Gaz. vol. 223; p. 675.
Sign. E. J. Brady. No. 1,171,397; Feb. 8; Gaz. vol. 223; p. 611.
Sign. P. L. Ferguson and J. W. Wheelwright. No. 1,170,441; Feb. 1; Gaz. vol. 223; p. 238.
Signal: *See*—
Automobile-signal. Helm-signal.
Automobile and like warning-signal. Mechanical signal.
Automobile electric signal. Railway-signal.
Automobile-turning signal. Vehicle-signal.
Vehicle traffic-signal.
Signal apparatus. R. H. Carter. No. 1,171,770; Feb. 15; Gaz. vol. 223; p. 782.
Signal apparatus. J. F. Hill. No. 1,173,003; Feb. 29; Gaz. vol. 223; p. 1561.
Signal. Cut-out for an electric. G. L. Barrett. No. 1,171,494; Feb. 15; Gaz. vol. 223; p. 686.
Signal device for automobiles or other vehicles. S. Hatashita. No. 1,172,794; Feb. 22; Gaz. vol. 223; p. 1213.
Signal means for garages, Electrically-operated warning-. T. D. Warner. No. 1,172,084; Feb. 15; Gaz. vol. 223; p. 897.
Signal means for garages, Warning-. T. D. Warner. No. 1,172,083; Feb. 15; Gaz. vol. 223; p. 897.
Signal mechanism, Circuit-reversing drum for. R. and J. W. Cairns. No. 1,172,006; Feb. 15; Gaz. vol. 223; p. 870.
Signal system, Car-door. J. F. McElroy. No. 1,172,377; Feb. 22; Gaz. vol. 223; p. 1059.
Signaling apparatus. H. Shoemaker. No. 1,170,853; Feb. 8; Gaz. vol. 223; p. 418.
Signaling apparatus, Station-. A. Hoecker. No. 1,173,513; Feb. 29; Gaz. vol. 223; p. 1508.
Signaling device. C. Heidemann. No. 1,173,269; Feb. 29; Gaz. vol. 223; p. 1421.
Signaling device. H. J. Pennington-Hayward. No. 1,171,638; Feb. 15; Gaz. vol. 223; p. 737.
Signaling device, Automatic. C. L. Bopp. No. 1,173,022; Feb. 29; Gaz. vol. 223; p. 1650.
Signaling device, Vehicle. E. M. Rosenbluth. No. 1,173,121; Feb. 22; Gaz. vol. 223; p. 1325.
Signaling system. G. Crosby. No. 1,170,613; Feb. 8; Gaz. vol. 223; p. 336.
Signaling system, Electric. W. C. Neahr. No. 1,169,991; Feb. 1; Gaz. vol. 223; p. 82.
Signaling system, Selective. J. B. Harlow. No. 1,172,520; Feb. 22; Gaz. vol. 223; p. 1115.
Silicon-carbid article. T. B. Allen. No. 1,172,659; Feb. 22; Gaz. vol. 223; p. 1163.
Silk and loading the silk, Loaded. I. Kreidl. No. 1,173,195; Feb. 29; Gaz. vol. 223; p. 1395.
Silk and loading the silk, Loaded. I. Kreidl. No. 1,173,196; Feb. 29; Gaz. vol. 223; p. 1395.
Silo. W. Craine. No. 1,172,112; Feb. 15; Gaz. vol. 223; p. 907.

Silo and tank construction. H. H. Pugh. No. 1,171,881; Feb. 15; Gaz. vol. 223; p. 822.
Silo construction. F. W. Williams. No. 1,173,074; Feb. 22; Gaz. vol. 223; p. 1310.
Silo, Hollow-tile. R. L. Gamewell. No. 1,171,036; Feb. 8; Gaz. vol. 223; p. 483.
Silo hoop or band. J. G. Hunter. No. 1,173,972; Feb. 29; Gaz. vol. 223; p. 1665.
Silo-packer. A. W. Gray. No. 1,171,783; Feb. 15; Gaz. vol. 223; p. 786.
Silo-roof. C. E. Martin. No. 1,172,721; Feb. 22; Gaz. vol. 223; p. 1186.
Silos and the like which are closed by means of a curtain, Closing arrangement for discharging the exit-orifices of. E. Zöblin. No. 1,173,333; Feb. 29; Gaz. vol. 223; p. 1445.
Silos, Apparatus for packing ensilage in. R. Payne. No. 1,173,024; Feb. 22; Gaz. vol. 223; p. 1293.
Sine-bar. W. Winter. No. 1,169,900; Feb. 1; Gaz. vol. 223; p. 54.
Sine-bar, Movable. W. C. Commons. No. 1,169,928; Feb. 1; Gaz. vol. 223; p. 63.
Singeing-machine. B. A. Parkes. No. 1,170,183; Feb. 1; Gaz. vol. 223; p. 151.
Sink plug, Kitchen-. E. Groom. No. 1,173,798; Feb. 29; Gaz. vol. 223; p. 1607.
Sinks, Adjustable drainboard for. M. Kluge. No. 1,170,277; Feb. 1; Gaz. vol. 223; p. 183.
Siphon, Flush-tank. J. W. Berry. No. 1,172,253; Feb. 22; Gaz. vol. 223; p. 1014.
Skate attachment, Roller-. G. B. Deacon. No. 1,173,343; Feb. 29; Gaz. vol. 223; p. 1448.
Skewer-blanks and the like, Machine for finishing. A. T. True. No. 1,173,063; Feb. 22; Gaz. vol. 223; p. 1307.
Skirt-band fastening, Concealed. P. Terry. No. 1,171,810; Feb. 15; Gaz. vol. 223; p. 796.
Skirt, Maternity-. G. Baer. No. 1,172,102; Feb. 15; Gaz. vol. 223; p. 904.
Slag for the manufacture of bricks and for other purposes, Treatment of. E. R. Sutcliffe. No. 1,171,676; Feb. 15; Gaz. vol. 223; p. 749.
Slates or tiles, Temporary clamp for artificial. F. Fleischmann. No. 1,173,490; Feb. 29; Gaz. vol. 223; p. 1503.
Sled. O. W. Ahlbom. No. 1,171,079; Feb. 8; Gaz. vol. 223; p. 497.
Sled. C. D. Orcutt. No. 1,173,604; Feb. 29; Gaz. vol. 223; p. 1540.
Sleigh, Motor-. P. H. Smith. No. 1,173,883; Feb. 29; Gaz. vol. 223; p. 1637.
Slicer, Vegetable-. J. C. Forster. No. 1,172,695; Feb. 22; Gaz. vol. 223; p. 1176.
Slicing and wrapping machine. J. Hren. No. 1,171,439; Feb. 15; Gaz. vol. 223; p. 667.
Slip-joint for sucker and pull rods. J. B. Dunlap. No. 1,170,429; Feb. 1; Gaz. vol. 223; p. 234.
Sludge, Method of and apparatus for recovering. H. A. Brassert and W. Matheslus. No. 1,171,696; Feb. 15; Gaz. vol. 223; p. 756.
Sludge-reducing machine. H. H. Stephens. No. 1,172,861; Feb. 22; Gaz. vol. 223; p. 1236.
Small-arm, Drop-down breech-loading. L. B. Taylor. No. 1,170,363; Feb. 1; Gaz. vol. 223; p. 212.
Smoke and dust consumer. A. Pool and R. Kaan. No. 1,171,750; Feb. 15; Gaz. vol. 223; p. 775.
Smoke-consuming furnace. O. D. Orvis. No. 1,170,089; Feb. 8; Gaz. vol. 223; p. 465.
Smoothing-iron, Self-heating. C. L. V. Mundhenk. No. 1,171,349; Feb. 8; Gaz. vol. 223; p. 593.
Snap-switch, Rotary. J. S. Stewart. No. 1,171,987; Feb. 15; Gaz. vol. 223; p. 863.
Snow-plow. P. G. Paige. No. 1,172,305; Feb. 22; Gaz. vol. 223; p. 1033.
Snow-remover. O. Guglielmone. No. 1,173,956; Feb. 29; Gaz. vol. 223; p. 1660.
Soap and the like dispenser, Liquid-. E. E. Bussey. No. 1,173,481; Feb. 29; Gaz. vol. 223; p. 1495.
Soap dispenser, Liquid-. A. G. Carling. No. 1,171,318; Feb. 8; Gaz. vol. 223; p. 583.
Socket, Adjustable knockdown. H. S. Raymond. No. 1,172,734; Feb. 22; Gaz. vol. 223; p. 1190.
Socket-cover and shade-holder. H. R. Yardley. No. 1,171,492; Feb. 15; Gaz. vol. 223; p. 685.
Socket-shell lock. R. A. Schoenberg. No. 1,172,635; Feb. 22; Gaz. vol. 223; p. 1155.
Socket-wrench. E. R. Miottel. No. 1,169,987; Feb. 1; Gaz. vol. 223; p. 81.
Sofa, Convertible. A. Horance. No. 1,173,969; Feb. 29; Gaz. vol. 223; p. 1664.
Soil-treating apparatus. H. D. Thayer. No. 1,171,277; Feb. 8; Gaz. vol. 223; p. 568.
Soldering-iron. R. B. Miles. No. 1,172,545; Feb. 22; Gaz. vol. 223; p. 1123.
Soldering-iron. F. Moench. No. 1,172,161; Feb. 15; Gaz. vol. 223; p. 923.
Soldering-iron. G. Müller. No. 1,171,232; Feb. 8; Gaz. vol. 223; p. 552.
Soldering machine, Can-body-. O. J. Johnson. No. 1,170,161; Feb. 1; Gaz. vol. 223; p. 143.
Soldering machine, Cap-. B. Hausbeer. No. 1,170,971; Feb. 8; Gaz. vol. 223; p. 458.
Soldering machine, End-seam-. D. P. Robinson and J. Coyle. No. 1,172,906; Feb. 22; Gaz. vol. 223; p. 1254.
Sole for boots and shoes and making same, Chrome-leather. M. Szmatolski. No. 1,173,988; Feb. 29; Gaz. vol. 223; p. 1670.
Sole for spring-heel shoes. A. H. Prenzel. No. 1,171,879; Feb. 15; Gaz. vol. 223; p. 821.
Sole-leveling machine. W. Frasier. No. 1,171,780; Feb. 15; Gaz. vol. 223; p. 785.
Sole-pressing machine. E. N. Preble. No. 1,173,120; Feb. 22; Gaz. vol. 223; p. 1325.
Soles, Machine for operating upon. C. S. Norden. No. 1,173,375; Feb. 29; Gaz. vol. 223; p. 1460.
Sound-absorbing device. E. Osborn and J. J. Nolan. No. 1,171,633; Feb. 15; Gaz. vol. 223; p. 735.
Sound-box reproduction, Regulating. E. Gruenfeldt. No. 1,170,530; Feb. 8; Gaz. vol. 223; p. 306.
Sound, Device for preventing the transmission of. W. C. Sabine. No. 1,172,838; Feb. 22; Gaz. vol. 223; p. 1229.
Sound recording and reproducing machine. B. A. Baer. No. 1,171,082; Feb. 8; Gaz. vol. 223; p. 498.
Sound-records and other objects, Forming. J. W. Aylsworth and E. L. Aiken. No. 1,170,391; Feb. 1; Gaz. vol. 223; p. 222.
Sound-reproducer. E. S. Geer. No. 1,173,501; Feb. 29; Gaz. vol. 223; p. 1503.
Sound-reproducing apparatus. F. Cheney. No. 1,170,803; Feb. 8; Gaz. vol. 223; p. 401.
Sound-reproducing devices, Resonator for. W. B. Hollingshead. No. 1,173,272; Feb. 29; Gaz. vol. 223; p. 1422.
Sound-reproducing machine. F. Cheney. No. 1,170,801; Feb. 8; Gaz. vol. 223; p. 400.
Sound-reproducing machine. F. Cheney. No. 1,170,802; Feb. 8; Gaz. vol. 223; p. 401.
Sound-reproducing machines, Automatic stop mechanism for. E. Kramm, Jr. No. 1,172,370; Feb. 22; Gaz. vol. 223; p. 1056.
Sound-reproducing records, Pitch-ascertaining attachment for. T. L. Kane. No. 1,172,533; Feb. 22; Gaz. vol. 223; p. 1118.
Sound resonator and amplifier. F. Cheney. No. 1,170,800; Feb. 8; Gaz. vol. 223; p. 400.
Sower, Fertilizer-. L. A. Butterfield. No. 1,172,005; Feb. 15; Gaz. vol. 223; p. 870.
Spanning-frame. K. F. Jensen. No. 1,171,847; Feb. 15; Gaz. vol. 223; p. 810.
Spark-advancer. F. Conrad. No. 1,171,594; Feb. 15; Gaz. vol. 223; p. 721.
Spark-arrester. W. C. Michaels. No. 1,171,530; Feb. 15; Gaz. vol. 223; p. 698.
Spark-extinguisher. G. H. Emerson. No. 1,171,934; Feb. 15; Gaz. vol. 223; p. 843.
Spark-gap mechanism. D. M. Sweeney. No. 1,173,324; Feb. 29; Gaz. vol. 223; p. 1442.
Spark-plug. H. J. Butler and L. P. Casper. No. 1,172,194; Feb. 15; Gaz. vol. 223; p. 933.
Spark-plug. F. Moench. No. 1,172,159; Feb. 15; Gaz. vol. 223; p. 922.
Spark-plug. W. E. Sherbondy. No. 1,173,541; Feb. 29; Gaz. vol. 223; p. 1517.
Spark-plug-assembling machine. C. H. Postel. No. 1,173,214; Feb. 29; Gaz. vol. 223; p. 1400.
Spark-plug-testing device. W. Brown. No. 1,170,407; Feb. 1; Gaz. vol. 223; p. 227.
Spectacle-temple pivot-butt. H. F. Shindel. No. 1,171,895; Feb. 15; Gaz. vol. 223; p. 829.
Speed changing and reversing mechanism. J. Parker. No. 1,170,097; Feb. 1; Gaz. vol. 223; p. 122.
Speed-changing mechanism. E. P. Bullard, Jr. No. 1,172,341; Feb. 22; Gaz. vol. 223; p. 1045.
Speed-changing mechanism. J. Drury and F. J. Gray. No. 1,173,493; Feb. 29; Gaz. vol. 223; p. 1501.
Speed-indentor. E. A. Gresens and A. Faerber. No. 1,172,984; Feb. 22; Gaz. vol. 223; p. 1280.
Speed-indicator for rotating mechanism, Audible. H. H. Lewis. No. 1,170,451; Feb. 1; Gaz. vol. 223; p. 241.
Speed mechanism, Variable-. A. Fay. No. 1,170,958; Feb. 1; Gaz. vol. 223; p. 106.
Speed mechanism, Variable-. R. K. Le Blond and W. F. Greene. No. 1,170,830; Feb. 8; Gaz. vol. 223; p. 410.
Speed-recording instrument. A. A. Austin. No. 1,170,724; Feb. 8; Gaz. vol. 223; p. 375.
Speed-transmission mechanism, Variable-. R. H. Gerard. No. 1,173,946; Feb. 29; Gaz. vol. 223; p. 1657.
Speed-transmission mechanism, Variable-. L. R. Wise. No. 1,173,993; Feb. 29; Gaz. vol. 223; p. 1671.
Speedometer. A. A. Canton. No. 1,171,021; Feb. 8; Gaz. vol. 223; p. 477.
Spike. F. R. Greene. No. 1,171,336; Feb. 8; Gaz. vol. 223; p. 588.
Spinal adjusting and stretching apparatus. A. A. Pool. No. 1,173,306; Feb. 29; Gaz. vol. 223; p. 1435.
Spindles, Bobbin-driving means for rotatable. C. A. Smith. No. 1,173,542; Feb. 29; Gaz. vol. 223; p. 1517.
Spinning mechanism, Apparatus for. D. S. Seaman. No. 1,171,547; Feb. 15; Gaz. vol. 223; p. 704.
Spinning-ring. C. D. Lanning. No. 1,173,723; Feb. 29; Gaz. vol. 223; p. 1581.
Split-phase system. E. F. W. Alexanderson. No. 1,170,211; Feb. 1; Gaz. vol. 223; p. 161.
Spool, Chalk-line. E. E. Bailey. No. 1,170,392; Feb. 1; Gaz. vol. 223; p. 222.
Spoon. A. E. Lycan. No. 1,173,010; Feb. 22; Gaz. vol. 223; p. 1289.
Spout distributer, Feed-. F. C. Matthews. No. 1,173,451; Feb. 29; Gaz. vol. 223; p. 1486.
Spray apparatus, Track-. A. J. Neafie. No. 1,169,990; Feb. 1; Gaz. vol. 223; p. 82.

Spraying device. F. D. Houghton. No. 1,170,908; Feb. 8; Gaz. vol. 223; p. 436.
Spraying-sled. C. F. Eckart and G. Giacometti. No. 1,172,686; Feb. 22; Gaz. vol. 223; p. 1173.
Spreader. J. Harker. No. 1,173,149; Feb. 22; Gaz. vol. 223; p. 1337.
Spring: See—
Bed-spring. Friction-spring.
Bolster-spring. Seat-spring.
Door-spring. Supplemental spring.
Draft-spring. Vehicle-spring.
Spring. F. J. Millea. No. 1,172,948; Feb. 22; Gaz. vol. 223; p. 1268.
Spring construction, Couch-. J. Hancock. No. 1,172,594; Feb. 22; Gaz. vol. 223; p. 1141.
Spring-dampener. A. H. Peycke. No. 1,169,862; Feb. 1; Gaz. vol. 223; p. 40.
Spring dampener, Truck-. A. H. Peycke. No. 1,169,863; Feb. 1; Gaz. vol. 223; p. 40.
Spring-motor. F. Koperski. No. 1,170,760; Feb. 8; Gaz. vol. 223; p. 387.
Spring-seat. W. A. and W. A. Murray, Jr. No. 1,172,724; Feb. 22; Gaz. vol. 223; p. 1187.
Spring-separator. P. H. Senior. No. 1,170,565; Feb. 8; Gaz. vol. 223; p. 317.
Spring-wheel. R. M. Clark. No. 1,172,870; Feb. 22; Gaz. vol. 223; p. 1240.
Spring-wheel. A. R. Miskin. No. 1,173,839; Feb. 29; Gaz. vol. 223; p. 1622.
Spring-wheel. E. K. Rabey. No. 1,171,224; Feb. 15; Gaz. vol. 223; p. 942.
Springs of vehicles and the axles thereof, Means of connection between cantaliver-. A. A. Remington. No. 1,172,557; Feb. 22; Gaz. vol. 223; p. 1128.
Sprinkler: See—
Lawn-sprinkler.
Sprinkler. C. C. Cook. No. 1,173,771; Feb. 29; Gaz. vol. 223; p. 1597.
Square and miter-gage, Combined carpenter's. C. F. Benjamin. No. 1,171,765; Feb. 15; Gaz. vol. 223; p. 780.
Square, T-. W. F. Cottom. No. 1,173,341; Feb. 29; Gaz. vol. 23; p. 1448.
Stabilizer. G. C. Johnson. No. 1,173,977; Feb. 29; Gaz. vol. 223; p. 1666.
Stable-cleaning apparatus. J. P. Grant. No. 1,171,607; Feb. 15; Gaz. vol. 223; p. 725.
Stack-shaping machine. C. H. Matlock. No. 1,173,674; Feb. 29; Gaz. vol. 223; p. 1563.
Stacking device. E. E. Lane. No. 1,173,115; Feb. 22; Gaz. vol. 223; p. 1323.
Stalk-cutter. D. A. Modrall. No. 1,169,988; Feb. 1; Gaz. vol. 223; p. 81.
Stalk topping and comminuting machine. T. M. Fulbright. No. 1,169,793; Feb. 1; Gaz. vol. 223; p. 16.
Stall, Animal-. H. L. Ferris. No. 1,172,230; Feb. 15; Gaz. vol. 223; p. 947.
Stall for barns, stables, and the like, Portable or removable. J. C. Van Matre. No. 1,173,689; Feb. 29; Gaz. vol 223; p. 1569.
Stamp-affixing device. A. Hall. No. 1,171,780; Feb. 15; Gaz. vol. 223; p. 787.
Stamp-applying and envelop-sealing machine. F. R. Allen. No. 1,170,949; Feb. 8; Gaz. vol. 223; p. 451.
Stamp-receptacle. S. Bickerton. No. 1,173,092; Feb. 22; Gaz. vol. 223; p. 1316.
Stamp, Self-inking hand-. H. S. Folger and C. L. Redfield. No. 1,172,237; Feb. 15; Gaz. vol. 223; p. 947.
Stamping machines, Feeding attachment for metallic-leaf-. F. W. Rauskolb. No. 1,170,189; Feb. 1; Gaz. vol. 223; p. 153.
Stamping, marking, or numbering machine. E. B. Parkhurst. No. 1,170,490; Feb. 1; Gaz. vol. 223; p. 255.
Stanchion, Cattle-. O. Larson. No. 1,171,446; Feb. 15; Gaz. vol. 223; p. 669.
Stand: See—
Bicycle-stand. Folding stand.
Book-stand. Portable stand.
Camera-stand. Shoe-stand.
Collapsible stand. Trolley-stand.
Display-stand.
Stapling-machine. E. T. Allan. No. 1,173,697; Feb. 29; Gaz. vol. 223; p. 1571.
Stave-machines, Chamfer, croze, and equalizing knife for. W. W. Putney. No. 1,170,187; Feb. 1; Gaz. vol. 223; p. 152.
Stay-applying machine. E. M. Hawkins and C. R. Seymour. No. 1,171,949; Feb. 15; Gaz. vol. 223; p. 849.
Stay-bolt. H. A. Lacerda. No. 1,172,145; Feb. 15; Gaz. vol. 223; p. 918.
Steam apparatus. O. P. Ostergren and C. D. Mosher. No. 1,171,634; Feb. 15; Gaz. vol. 223; p. 736.
Steam-boiler. H. S. Studdert. No. 1,172,401; Feb. 22; Gaz. vol. 223; p. 1067.
Steam-trap. E. V. Anderson. No. 1,173,634; Feb. 29; Gaz. vol. 223; p. 1551.
Steam-trap. C. Gulland. No. 1,170,896; Feb. 8; Gaz. vol. 223; p. 432.
Steam-trap. L. M. Hastings and R. W. Leutwiler. No. 1,170,150; Feb. 1; Gaz. vol. 223; p. 138.
Steam-trap. J. Parker. No. 1,172,727; Feb. 22; Gaz. vol. 223; p. 1187.
Steam-traps, Thermostatic control for. W. W. Stubbs. No. 1,172,751; Feb. 22; Gaz. vol. 223; p. 1197.
Steelwork, Bevel-joint detailer particularly adaptable for structural. R. H. Williamson. No. 1,172,510; Feb. 22; Gaz. vol. 223; p. 1110.
Steering and propelling device. H. Willin. No. 1,172,092; Feb. 15; Gaz. vol. 223; p. 900.
Steering apparatus. W. A. Hall. No. 1,173,717; Feb. 29; Gaz. vol. 223; p. 1578.
Steering-gear. A. C. Mason and A. T. Sturt. No. 1,171,131; Feb. 8; Gaz. vol. 223; p. 518.
Steering-gear attachment. W. A. Gilday. No. 1,172,275; Feb. 22; Gaz. vol. 223; p. 1022.
Steering mechanism, Motor-actuated. H. H. Marker. No. 1,172,152; Feb. 15; Gaz. vol. 223; p. 920.
Steering mechanisms, Defect-indicator for. G. B. Guinand. No. 1,170,633; Feb. 8; Gaz. vol. 223; p. 343.
Stereopticons, Dissolving apparatus for. C. H. Partington. No. 1,172,628; Feb. 22; Gaz. vol. 223; p. 1153.
Stereotype-matrix. G. S. Williamson. No. 1,173,907; Feb. 29; Gaz. vol. 223; p. 1645.
Stereotype-plates, Machine for boring and trimming. T. R. G. Parker and W. E. Bennison. No. 1,173,213; Feb. 29; Gaz. vol. 223; p. 1400.
Sterilizing device. C. 't Hoen. No. 1,170,536; Feb. 8; Gaz. vol. 223; p. 307.
Still and still-setting. H. Henderson. No. 1,171,720; Feb. 15; Gaz. vol. 223; p. 764.
Stirrup, Foot-warming. J. L. Edgell and G. W. Cook. No. 1,172,266; Feb. 22; Gaz. vol. 223; p. 1019.
Stitch machines, Stitch-finger for shell-. W. H. Carter. No. 1,172,670; Feb. 22; Gaz. vol. 223; p. 1167.
Stitching machine, Box-. R. Schleicher, T. S. Hamilton, and J. A. Moore. No. 1,170,002; Feb. 1; Gaz. vol. 223; p. 86.
Stitching machine, Buttonhole-. F. A. Read. No. 1,170,330; Feb. 1; Gaz. vol. 223; p. 200.
Stitching machine, Buttonhole-. F. A. Read. No. 1,170,331; Feb. 1; Gaz. vol. 223; p. 201.
Stock to pulp, Apparatus for reducing. C. W. Shartle. No. 1,173,749; Feb. 29; Gaz. vol. 223; p. 1590.
Stocking, O. Minkos. No. 1,172,622; Feb. 22; Gaz. vol. 223; p. 1151.
Stocking-holder. N. Blount. No. 1,173,645; Feb. 29; Gaz. vol. 223; p. 1555.
Stoker. E. Young. No. 1,172,657; Feb. 22; Gaz. vol. 223; p. 1162.
Stoker, Chain-grate. W. P. Relboldt and E. C. Clark. No. 1,173,307; Feb. 29; Gaz. vol. 223; p. 1435.
Stoker, Self-cleaning. W. J. Kenney and H. P. Grohn. No. 1,172,292; Feb. 22; Gaz. vol. 223; p. 1029.
Stoking apparatus, Mechanical. R. J. Illumelright. No. 1,173,270; Feb. 29; Gaz. vol. 223; p. 1421.
Stone-channeling machines, Feed for. T. D. Mowlds. No. 1,170,986; Feb. 8; Gaz. vol. 223; p. 464.
Stone composition, Artificial-. P. Robert. No. 1,171,225; Feb. 15; Gaz. vol. 223; p. 943.
Stone, Composition of matter for artificial. P. Kuhn. No. 1,170,499; Feb. 1; Gaz. vol. 223; p. 258.
Stool, Camp-. E. Crozier. No. 1,172,430; Feb. 22; Gaz. vol. 223; p. 1082.
Stool, Portable milk-. W. Gutenkunst. No. 1,169,805; Feb. 1; Gaz. vol. 223; p. 20.
Stop-motion. E. C. Bassett. No. 1,173,162; Feb. 29; Gaz. vol. 223; p. 1383.
Stop-motion mechanism. W. T. Barratt. No. 1,173,244; Feb. 29; Gaz. vol. 223; p. 1412.
Stop-motion, Twister. C. Stansfield. No. 1,171,363; Feb. 8; Gaz. vol. 223; p. 598.
Stop-motions, Thread-guide and guard for. F. Crawford, Sr. No. 1,172,950; Feb. 22; Gaz. vol. 223; p. 1269.
Stopper: See—
Bottle-stopper. Disk stopper.
Storage battery. W. A. Crowdus. No. 1,173,651; Feb. 29; Gaz. vol. 223; p. 1557.
Storage battery. J. W. East. No. 1,172,586; Feb. 22; Gaz. vol. 223; p. 1138.
Storage structure. C. A. Perfect. No. 1,173,535; Feb. 29; Gaz. vol. 223; p. 1515.
Stove and gas-range, Combination. J. B. Ehrlich. No. 1,172,235; Feb. 15; Gaz. vol. 223; p. 946.
Stove and hot-water heater, Combined. L. Courtot. No. 1,172,768; Feb. 22; Gaz. vol. 223; p. 1204.
Stove and range. J. E. Leonard and G. H. Hiten. No. 1,171,731; Feb. 15; Gaz. vol. 223; p. 768.
Stove attachment, Base-burning-coal-. C. A. Johnson. No. 1,173,581; Feb. 29; Gaz. vol. 223; p. 1532.
Stove burner, Oil-. J. T. Mills. No. 1,172,546; Feb. 22; Gaz. vol. 223; p. 1123.
Stove, Camp-. V. B. Robidoux. No. 1,173,036; Feb. 22; Gaz. vol. 223; p. 1297.
Stove, Camper's. A. J. Klunk. No. 1,173,145; Feb. 22; Gaz. vol. 223; p. 1335.
Stove-door-locking device. E. A. Schreiber. No. 1,171,260; Feb. 8; Gaz. vol. 223; p. 562.
Stove, Electric. W. S. Hadaway, Jr. No. 1,174,030; Feb. 29; Gaz. vol. 223; p. 1686.
Stove, Electric. W. S. Hadaway, Jr. No. 1,174,031; Feb. 29; Gaz. vol. 223; p. 1686.
Stove, Electrical. G. A. Hughes. No. 1,169,827; Feb. 1; Gaz. vol. 223; p. 27.
Stove, Gas-. C. S. Dangler and G. E. Hilton. No. 1,172,952; Feb. 22; Gaz. vol. 223; p. 1269.
Stove, Gas-. P. G. Owen. No. 1,173,851; Feb. 29; Gaz. vol. 223; p. 1626.
Stove, Gas-. C. J. Petrie. No. 1,172,629; Feb. 22; Gaz. vol. 223; p. 1153.

Stove-leg. A. K. Beckwith. No. 1,171,165; Feb. 8; Gaz. vol. 223; p. 529.
Stove, Oil-. L. S. Chadwick. No. 1,170,606; Feb. 8; Gaz. vol. 223; p. 332.
Stove, Portable knockdown. R. E. Leonard. No. 1,171,859; Feb. 15; Gaz. vol. 223; p. 815.
Stove-top. J. S. Van Buren. No. 1,170,857; Feb. 8; Gaz. vol. 223; p. 419.
Stove top, Gas-. W. W. Smith. No. 1,171,269; Feb. 8; Gaz. vol. 223; p. 564.
Stoves and ranges, Heating device for gas. J. T. Bunn. No. 1,171,700; Feb. 15; Gaz. vol. 223; p. 757.
Stoves, Closet-door for. A. Ohnemus. No. 1,173,018; Feb. 22; Gaz. vol. 223; p. 1291.
Stoves, Device for improving fuel combustion in. W. E. Shore. No. 1,173,047; Feb. 22; Gaz. vol. 223; p. 1301.
Stoves, Heat distributer and equalizer for cooking-. J. L. Carter. No. 1,173,556; Feb. 29; Gaz. vol. 223; p. 1522.
Strainer. E. E. Hauer. No. 1,171,611; Feb. 15; Gaz. vol. 223; p. 727.
Strainer for drinking vessels. A. Nolda. No. 1,173,374; Feb. 29; Gaz. vol. 223; p. 1460.
Strainer or filter. W. S. Elliott. No. 1,172,089; Feb. 22; Gaz. vol. 223; p. 1174.
Straw-spreader. L. D. Rice. No. 1,170,673; Feb. 8; Gaz. vol. 223; p. 357.
Street-crossing. A. Hale. No. 1,173,505; Feb. 29; Gaz. vol. 223; p. 1505.
Street-indicator. H. W. Vernson and H. F. Lutz. No. 1,171,284; Feb. 8; Gaz. vol. 223; p. 570.
Strength tester, Tensile-. S. N. Senna. No. 1,173,611; Feb. 29; Gaz. vol. 223; p. 1542.
Strength tester, Tensile-. S. N. Senna. No. 1,173,612; Feb. 29; Gaz. vol. 223; p. 1542.
Stretcher. L. M. Palmer. No. 1,173,459; Feb. 29; Gaz. vol. 223; p. 1487.
Striking-bags, Resilient platform for. R. N. Diehl. No. 1,173,786; Feb. 29; Gaz. vol. 223; p. 1603.
Stringed-instrument bridge. W. J. F. Schultz. No. 1,170,999; Feb. 8; Gaz. vol. 223; p. 469.
Strip-serving apparatus. H. G. Cummings. No. 1,171,097; Feb. 8; Gaz. vol. 223; p. 504.
Stump-burner. J. W. Wilfong. No. 1,171,824; Feb. 15; Gaz. vol. 223; p. 801.
Stump-puller. J. M. McCargo. No. 1,169,840; Feb. 1; Gaz. vol. 223; p. 35.
Submarine. A. Hoar. No. 1,172,992; Feb. 22; Gaz. vol. 223; p. 1283.
Submarine-destroyer. J. W. Reno. No. 1,173,463; Feb. 29; Gaz. vol. 223; p. 1488.
Submarines, Escape for. E. L. Peacock. No. 1,173,379; Feb. 29; Gaz. vol. 223; p. 1461.
Submarines, mines, and the like, Apparatus for detecting and destroying. H. C. Parker and E. G. Hatch. No. 1,172,306; Feb. 22; Gaz. vol. 223; p. 1033.
Sugar-bowl. C. Byerley. No. 1,173,768; Feb. 29; Gaz. vol. 223; p. 1597.
Sugar-bowl, Dispensing. M. D. Green. No. 1,170,246; Feb. 1; Gaz. vol. 223; p. 173.
Sugar, Coloring medium for concentrated viscous. A. Dachert and C. Heltz. No. 1,172,113; Feb. 15; Gaz. vol. 223; p. 907.
Sugar-making. J. Naylor, Jr. No. 1,172,303; Feb. 22; Gaz. vol. 223; p. 1032.
Suitcase attachment. G. D. Trotter. No. 1,171,678; Feb. 15; Gaz. vol. 223; p. 750.
Suitcases and the like, Fastener member for. J. Goldwag. No. 1,169,951; Feb. 1; Gaz. vol. 223; p. 69.
Sulfur dioxid, Utilization of. J. B. Garner and H. D. Clayton. No. 1,173,566; Feb. 29; Gaz. vol. 223; p. 1526.
Sulfuration of liquids, Apparatus for use in the. L. C. Greenberg. No. 1,172,133; Feb. 15; Gaz. vol. 223; p. 913.
Superheater, Steam-. J. Primrose. No. 1,171,353; Feb. 8; Gaz. vol. 223; p. 594.
Supplemental spring. J. K. Kissinger. No. 1,171,849; Feb. 15; Gaz. vol. 223; p. 811.
Support. N. C. Covington and J. Allred. No. 1,173,143; Feb. 22; Gaz. vol. 223; p. 1334.
Support, Extensible. M. S. Pelton. No. 1,171,974; Feb. 15; Gaz. vol. 223; p. 857.
Supporting-bracket. H. C. H. Schroth. No. 1,171,667; Feb. 15; Gaz. vol. 223; p. 747.
Supporting-rack. W. Waldemarson. No. 1,170,580; Feb. 8; Gaz. vol. 223; p. 323.
Surgical device for use in setting broken bones. F. A. Sprague. No. 1,170,494; Feb. 1; Gaz. vol. 223; p. 256.
Surgical dressings, Hand-press for. N. J. Johnson. No. 1,172,801; Feb. 22; Gaz. vol. 223; p. 1216.
Suspenders and the like, Spring-connector for. G. H. Perrine. No. 1,171,873; Feb. 15; Gaz. vol. 223; p. 819.
Suspension-clamp. R. A. Willson. No. 1,173,400; Feb. 29; Gaz. vol. 223; p. 1468.
Suspension device. G. S. Matthews. No. 1,170,084; Feb. 1; Gaz. vol. 223; p. 115.
Swage. J. P. Hedstrom. No. 1,173,509; Feb. 29; Gaz. vol. 223; p. 1507.
Swelled coupling and bit used in diamond-drilling. N. E. Jenkins. No. 1,172,130; Feb. 15; Gaz. vol. 223; p. 915.
Swimming device. H. Seltzer. No. 1,171,752; Feb. 15; Gaz. vol. 223; p. 776.
Swing. A. Rack. No. 1,172,167; Feb. 15; Gaz. vol. 223; p. 924.
Swing and hammock, Combined chair-. C. B. Eaton. No. 1,173,654; Feb. 29; Gaz. vol. 223; p. 1558.
Switch: *See*—
Automatic switch.
Electric switch.
Electroller-switch.
Electromagnetic switch.
High-tension switch.
Lighting and ignition switch.
Meter-switch.
Metering-switch.
Oil-switch.
Pendant switch.
Quick-break switch.
Selector-switch.
Snap-switch.
Track-switch.
Switch construction, Inclosed. C. D. Platt. No. 1,170,990; Feb. 8; Gaz. vol. 223; p. 405.
Switch-mechanism-operating means. R. A. Schoenberg. No. 1,170,347; Feb. 1; Gaz. vol. 223; p. 206.
Switch-mounting and the like. H. R. Sargent. No. 1,173,040; Feb. 22; Gaz. vol. 223; p. 1298.
Switch-panel, Safety. A. E. Griswold. No. 1,172,019; Feb. 15; Gaz. vol. 223; p. 875.
Switch-selector. A. F. Dixon. No. 1,173,254; Feb. 29; Gaz. vol. 223; p. 1415.
Switchboard. H. F. Krantz. No. 1,172,371; Feb. 22; Gaz. vol. 223; p. 1056.
Synthetic and chemical substances, Apparatus for use in producing. J. R. Watson. No. 1,169,803; Feb. 1; Gaz. vol. 223; p. 51.
Syringe. T. W. Blakeslee. No. 1,173,093; Feb. 22; Gaz. vol. 223; p. 1316.
Syringe. J. H. Prultt. No. 1,173,031; Feb. 22; Gaz. vol. 223; p. 1295.
Table: *See*—
Chiropractic table.
Chiropractic adjusting-table.
Collapsible table.
Drawing-table.
Exposing-table.
Extension-table.
Ironing-table.
Table-wagon. C. R. Klok. No. 1,171,343; Feb. 8; Gaz. vol. 223; p. 591.
Tables, Banquet-top for extension-. W. L. Pfefferkorn, A. P. Schloerb, and A. H. Hammetter. No. 1,170,563; Feb. 8; Gaz. vol. 223; p. 316.
Tag-stringing machine. J. Axelstrom. No. 1,170,214; Feb. 1; Gaz. vol. 223; p. 162.
Take-up. W. H. Stedman. No. 1,173,320; Feb. 29; Gaz. vol. 223; p. 1440.
Take-up device. M. Greenberg. No. 1,169,803; Feb. 1; Gaz. vol. 223; p. 20.
Take-up, Self-threading. S. W. Avis. No. 1,173,242; Feb. 29; Gaz. vol. 223; p. 1411.
Talking-machine. J. C. English. No. 1,173,104; Feb. 22; Gaz. vol. 223; p. 1320.
Talking-machine motors, Spring-barrel for. B. G. Royal. No. 1,170,675; Feb. 8; Gaz. vol. 223; p. 357.
Talking-machine sound control. V. W. Weezerzick. No. 1,173,758; Feb. 29; Gaz. vol. 223; p. 1593.
Talking-machine speed-governor and speedometer combined. C. E. Woods. No. 1,171,683; Feb. 15; Gaz. vol. 223; p. 752.
Talking-machines, Means for automatically stopping the motors of. L. Norman. No. 1,172,304; Feb. 22; Gaz. vol. 223; p. 1032.
Tank: *See*—
Closet-tank.
Measuring-tank.
Tank-heater. A. N. Eaton. No. 1,170,518; Feb. 8; Gaz. vol. 223; p. 301.
Tank heater, Oil-burning stock-. H. T. Dahms. No. 1,173,934; Feb. 29; Gaz. vol. 223; p. 1654.
Tank indicator, Gasolene-. G. Nuesell. No. 1,171,632; Feb. 15; Gaz. vol. 223; p. 735.
Tank-sounder. P. F. McDonnell, J. Brunner, and T. Thompson. No. 1,172,541; Feb. 22; Gaz. vol. 223; p. 1121.
Tanks, Outlet-fitting for. E. F. Crabtree. No. 1,171,706; Feb. 15; Gaz. vol. 223; p. 759.
Tanning of hides and skins. G. Durio. No. 1,173,182; Feb. 29; Gaz. vol. 223; p. 1391.
Tanning, Preparing hides and skins for. E. D. Huart. No. 1,170,426; Feb. 1; Gaz. vol. 223; p. 233.
Tape-applying device. P. Marshall. No. 1,170,083; Feb. 1; Gaz. vol. 223; p. 115.
Tape attachment. J. A. Johnson. No. 1,172,463; Feb. 22; Gaz. vol. 223; p. 1091.
Tapping-machine. N. H. Anderson. No. 1,172,336; Feb. 22; Gaz. vol. 223; p. 1044.
Target. W. Kenstowicz. No. 1,169,906; Feb. 1; Gaz. vol. 223; p. 74.
Target. J. F. Neumann. No. 1,173,456; Feb. 29; Gaz. vol. 223; p. 1487.
Target-trap. W. I. Spangler. No. 1,172,493; Feb. 22; Gaz. vol. 223; p. 1103.
Tatting-shuttle. C. F. Dill. No. 1,173,102; Feb. 22; Gaz. vol. 223; p. 1319.
Tatting-shuttle-winding device. C. Weber. No. 1,170,586; Feb. 8; Gaz. vol. 223; p. 326.
Tax-bill. W. Dolge and W. "E." Draper. No. 1,174,000; Feb. 29; Gaz. vol. 223; p. 1674.
Taximeter for cabs and like vehicles, Electrically-actuated. C. Robinson. No. 1,171,880; Feb. 15; Gaz. vol. 223; p. 826.
Tenzeling, Raising-gig for longitudinal and transverse. H. Repenning. No. 1,173,008; Feb. 29; Gaz. vol. 223; p. 1541.

Teazeling-rolls of cylinder teazeling-machines, Device for driving the. J. H. Ermbter. No. 1,173,565; Feb. 29; Gaz. vol. 223; p. 1525.
Teeth, Ready-made adaptable backing for. G. E. Fritz. No. 1,173,106; Feb. 22; Gaz. vol. 223; p. 1321.
Telegraph apparatus, Selective wireless-. F. G. Sargent. No. 1,170,680; Feb. 8; Gaz. vol. 223; p. 359.
Telegraph-key, Electromagnetic. R. L. Boulter. No. 1,170,796; Feb. 8; Gaz. vol. 223; p. 398.
Telegraph receiver, Printing-. J. E. Wright. No. 1,171,379; Feb. 8; Gaz. vol. 223; p. 604.
Telegraph systems, Spark-gap for radiotone wireless-. L. De Forest. No. 1,171,598; Feb. 15; Gaz. vol. 223; p. 722.
Telegraph-transmitter. C. Bell. No. 1,173,702; Feb. 29; Gaz. vol. 223; p. 1572.
Telegraphy. W. Finn. 1,174,029; Feb. 29; Gaz. vol. 223; p. 1685.
Telegraphy, Autographic. E. H. and K. A. Widegren. No. 1,171,822; Feb. 15; Gaz. vol. 223; p. 800.
Telegraphy, Multiplex. F. K. Vreeland. No. 1,171,813; Feb. 15; Gaz. vol. 223; p. 797.
Telegraphy, Multiplex. F. K. Vreeland. No. 1,171,814; Feb. 15; Gaz. vol. 223; p. 797.
Telegraphy or telephony, Wireless. W. Hahnemann. No. 1,173,957; Feb. 29; Gaz. vol. 223; p. 1661.
Telephone attachment. H. C. Merritt, Jr. No. 1,172,382; Feb. 22; Gaz. vol. 223; p. 1060.
Telephone attachment. G. P. Mundy. No. 1,171,745; Feb. 15; Gaz. vol. 223; p. 773.
Telephone-hook rest. C. W. Corey. No. 1,170,479; Feb. 1; Gaz. vol. 223; p. 250.
Telephone-cable box. K. F. Wincrantz, C. E. J. Nilson, and C. F. Pettersson. No. 1,173,332; Feb. 29; Gaz. vol. 223; p. 1445.
Telephone desk sets, Attachment for. L. D. Allen. No. 1,172,658; Feb. 22; Gaz. vol. 223; p. 1162.
Telephone-exchange, Automatic. A. Katz. No. 1,172,305; Feb. 22; Gaz. vol. 223; p. 1054.
Telephone-exchange system. C. L. Goodrum. No. 1,171,429; Feb. 15; Gaz. vol. 223; p. 663.
Telephone-exchange system, Automatic. O. Kirby. No. 1,172,366; Feb. 22; Gaz. vol. 223; p. 1055.
Telephone-exchange system, Machine-switching. C. L. Goodrum. No. 1,169,799; Feb. 1; Gaz. vol. 223; p. 18.
Telephone-exchange system, Machine-switching. C. L. Goodrum. No. 1,169,800; Feb. 1; Gaz. vol. 223; p. 19.
Telephone-exchange system, Semi-automatic. H. P. Clausen. No. 1,173,560; Feb. 29; Gaz. vol. 223; p. 1524.
Telephone-index. F. W. Colby. No. 1,171,838; Feb. 15; Gaz. vol. 223; p. 807.
Telephone-lock. J. E. Lavalley. No. 1,172,014; Feb. 22; Gaz. vol. 223; p. 1147.
Telephone-message recorder, Automatic. H. G. Stalker. No. 1,173,754; Feb. 29; Gaz. vol. 223; p. 1591.
Telephone-receiver-holding attachment. W. A. Delano and E. R. Belmont. No. 1,170,421; Feb. 1; Gaz. vol. 223; p. 231.
Telephone-signal-operating device. F. E. Phillips. No. 1,170,328; Feb. 1; Gaz. vol. 223; p. 198.
Telephone system, Automatic. D. S. Hulfish. No. 1,170,909; Feb. 8; Gaz. vol. 223; p. 437.
Telephone system, Automatic. H. G. Webster. No. 1,169,894; Feb. 1; Gaz. vol. 223; p. 51.
Telephone systems, Automatic switching device for. L. De Forest. No. 1,170,882; Feb. 8; Gaz. vol. 223; p. 428.
Telephone-transmitter. S. C. Porter. No. 1,171,460; Feb. 15; Gaz. vol. 223; p. 673.
Telephone trunking system. C. E. Stephenson. No. 1,172,402; Feb. 22; Gaz. vol. 223; p. 1068.
Telephones, Sanitary mouthpiece-protector for. E. R. Gorman. No. 1,172,277; Feb. 22; Gaz. vol. 223; p. 1023.
Telephonic apparatus. H. Smith. No. 1,170,350; Feb. 1; Gaz. vol. 223; p. 209.
Telephony. E. R. Corwin. No. 1,173,772; Feb. 29; Gaz. vol. 223; p. 1598.
Telephony. E. R. Corwin. No. 1,173,773; Feb. 29; Gaz. vol. 223; p. 1598.
Telephony. E. R. Corwin. No. 1,173,776; Feb. 29; Gaz. vol. 223; p. 1599.
Telephony. E. R. Corwin. No. 1,173,777; Feb. 29; Gaz. vol. 223; p. 1600.
Telephony. M. L. Johnson. No. 1,173,774; Feb. 29; Gaz. vol. 223; p. 1599.
Telephony. M. L. Johnson. No. 1,173,775; Feb. 29; Gaz. vol. 223; p. 1599.
Telescope, Lookout-. A. König. No. 1,170,912; Feb. 8; Gaz. vol. 223; p. 438.
Temperature-regulating system. E. H. Ruckle. No. 1,171,254; Feb. 8; Gaz. vol. 223; p. 560.
Tennis-racket. H. D. Du Bois. No. 1,173,712; Feb. 29; Gaz. vol. 223; p. 1576.
Tennis-racket. E. E. Larocque. No. 1,173,588; Feb. 29; Gaz. vol. 223; p. 1534.
Terminal contact-ping. F. Kuhn. No. 1,170,167; Feb. 1; Gaz. vol. 223; p. 145.
Test-connector. J. Davis. No. 1,173,099; Feb. 22; Gaz. vol. 223; p. 1318.
Textile machinery, Cloth-feeding device for. C. H. Elliott. No. 1,170,228; Feb. 1; Gaz. vol. 223; p. 167.
Theodolites and the like, Automatic zero and angle setting attachment for. W. G. Wiesener. No. 1,169,807; Feb. 1; Gaz. vol. 223; p. 52.
Therapeutic preparation. M. Engelmann. No. 1,170,056; Feb. 1; Gaz. vol. 223; p. 106.
Thermometer. F. S. Dickinson. No. 1,172,117; Feb. 15; Gaz. vol. 223; p. 908.
Thermostat. W. L. Denio. No. 1,172,880; Feb. 22; Gaz. vol. 223; p. 1244.
Thermostat control, Automatic. M. C. Honeywell. No. 1,171,955; Feb. 15; Gaz. vol. 223; p. 851.
Thigh-guard. G. L. Pierce. No. 1,172,552; Feb. 22; Gaz. vol. 223; p. 1126.
Thread-cutter. G. Gatlal. No. 1,172,784; Feb. 22; Gaz. vol. 223; p. 1210.
Thread-cutting attachment. C. W. Carman. No. 1,173,769; Feb. 29; Gaz. vol. 223; p. 1597.
Thread-holder. C. A. Hammond-Knowlton. No. 1,171,194; Feb. 8; Gaz. vol. 223; p. 539.
Thread or cord. H. K. Raymond. No. 1,171,247; Feb. 8; Gaz. vol. 223; p. 557.
Threshing and cleaning machine. J. S. Cooper. No. 1,172,011; Feb. 15; Gaz. vol. 223; p. 872.
Ticket-holder. E. L. Allen. No. 1,171,688; Feb. 15; Gaz. vol. 223; p. 753.
Ticket-holder. W. R. McCay. No. 1,170,081; Feb. 1; Gaz. vol. 223; p. 115.
Ticket-holder. A. Morten. No. 1,173,843; Feb. 29; Gaz. vol. 223; p. 1623.
Ticket machine, Strip-. E. Boker and E. Goldberger. No. 1,173,795; Feb. 29; Gaz. vol. 223; p. 1607.
Ticket, Multiroute railway-. J. La Barre. No. 1,173,197; Feb. 29; Gaz. vol. 223; p. 1395.
Ticketing-machine. F. Kohnle. No. 1,171,729; Feb. 15; Gaz. vol. 223; p. 767.
Ticketing-machines, Inking device for. F. Kohnle. No. 1,171,730; Feb. 15; Gaz. vol. 223; p. 768.
Tide and wave power mechanism. H. Schaser. No. 1,170,938; Feb. 8; Gaz. vol. 223; p. 447.
Tie: *See*—
Concrete cross-tie.
Package-tie.
Railway-tie.
Tie-plate. E. H. Barrett. No. 1,171,581; Feb. 15; Gaz. vol. 223; p. 716.
Tie-plate. E. E. Roberts. No. 1,172,391; Feb. 22; Gaz. vol. 223; p. 1064.
Tilling-machine. K. V. von Meyenburg. No. 1,171,010; Feb. 8; Gaz. vol. 223; p. 473.
Time-computer. W. C. Serrell. No. 1,171,753; Feb. 15; Gaz. vol. 223; p. 776.
Time-recorders or time-indicators, System for operating. J. W. Bryce. No. 1,173,338; Feb. 29; Gaz. vol. 223; p. 1447.
Time-registers, Carrying-pouch for watchmen's. C. H. Jenkins. No. 1,172,460; Feb. 22; Gaz. vol. 223; p. 1090.
Timer and distributer. D. E. Moulton. No. 1,172,384; Feb. 22; Gaz. vol. 223; p. 1061.
Tire. G. Anger. No. 1,171,298; Feb. 8; Gaz. vol. 223; p. 575.
Tire. W. T. Bogan. No. 1,170,497; Feb. 1; Gaz. vol. 223; p. 257.
Tire. A. B. Burt. No. 1,170,957; Feb. 8; Gaz. vol. 223; p. 453.
Tire. C. S. Gilliland. No. 1,173,949; Feb. 29; Gaz. vol. 223; p. 1658.
Tire, Automobile-. T. P. Mohr. No. 1,172,030; Feb. 15; Gaz. vol. 223; p. 879.
Tire-casings, Making. W. R. Denman. No. 1,172,115; Feb. 15; Gaz. vol. 223; p. 908.
Tire-casings, Making. H. Hennig. No. 1,170,154; Feb. 1; Gaz. vol. 223; p. 140.
Tire Coil-spring vehicle. E. G. De Loe. No. 1,171,507; Feb. 15; Gaz. vol. 223; p. 690.
Tire-drilling machine, Cushion-. W. C. Stevens. No. 1,171,552; Feb. 15; Gaz. vol. 223; p. 706.
Tire, Elastic wheel-. M. Mettler. No. 1,169,984; Feb. 1; Gaz. vol. 223; p. 80.
Tire, Emergency-. A. J. Westburg. No. 1,172,573; Feb. 22; Gaz. vol. 223; p. 1133.
Tire-guard. A. E. Chernack. No. 1,170,477; Feb. 1; Gaz. vol. 223; p. 250.
Tire-holder. C. L. Keyes. No. 1,173,980; Feb. 29; Gaz. vol. 223; p. 1667.
Tire-holder for automobiles and similar vehicles. G. W. Matz. No. 1,171,968; Feb. 15; Gaz. vol. 223; p. 855.
Tire-locking mechanism, Vehicle-. H. A. Soulis. No. 1,170,695; Feb. 8; Gaz. vol. 223; p. 365.
Tire, Pneumatic. C. L. Archer. No. 1,170,597; Feb. 8; Gaz. vol. 223; p. 329.
Tire-protector. W. H. Paul. No. 1,173,853; Feb. 29; Gaz. vol. 223; p. 1627.
Tire, Quick-detachable elastic. P. A. Painchaud. (Reissue.) No. 14,057; Feb. 1; Gaz. vol. 223; p. 258.
Tire remover and replacer. H. A. Covey. No. 1,170,612; Feb. 8; Gaz. vol. 223; p. 335.
Tire, Resilient. R. C. Dillmore. No. 1,170,225; Feb. 1; Gaz. vol. 223; p. 166.
Tire, Resilient vehicle-. W. B. Buckley. No. 1,174,028; Feb. 29; Gaz. vol. 223; p. 1685.
Tire, Resilient wheel-. J. La Plant. No. 1,173,814; Feb. 29; Gaz. vol. 223; p. 1612.
Tire rim, Vehicle-. W. L. Burgess. No. 1,171,502; Feb. 15; Gaz. vol. 223; p. 689.
Tire-saving jack. C. A. Buffington. No. 1,172,934; Feb. 22; Gaz. vol. 223; p. 1263.
Tire, Spring-. H. M. Lambert. No. 1,171,214; Feb. 8; Gaz. vol. 223; p. 540.

Tire, Spring-. W. T. Peyton. No. 1,170,322; Feb. 1; Gaz. vol. 223; p. 198.
Tire-tread, Detachable. G. A. and E. Hagstrom. No. 1,173,424; Feb. 29; Gaz. vol. 223; p. 1477.
Tire-valve. W. A. Campbell. No. 1,170,412; Feb. 1; Gaz. vol. 223; p. 228.
Tire-valve. M. C. Schweinert. No. 1,171,147; Feb. 8; Gaz. vol. 223; p. 524.
Tire-valves, Device for facilitating the removal and replacing of. E. P. La Bounty. No. 1,170,284; Feb. 1; Gaz. vol. 223; p. 186.
Tire, Vehicle-. W. E. Cook and J. W. Musgrove. No. 1,171,091; Feb. 8; Gaz. vol. 223; p. 501.
Tire, Vehicle-. W. F. Stewart. No. 1,173,891; Feb. 29; Gaz. vol. 223; p. 1640.
Tire, Vehicle spring-. E. M. Conrad. No. 1,172,434; Feb. 22; Gaz. vol. 223; p. 1080.
Tires, Armor for automobile-. J. F. Geisendorfer. No. 1,173,502; Feb. 29; Gaz. vol. 223; p. 1504.
Tires, Inner-tube protector for pneumatic. W. N. Kelley and J. C. Porter. No. 1,169,964; Feb. 1; Gaz. vol. 223; p. 73.
Tires, Pressure-regulator for pneumatic. G. D. Lewis. No. 1,173,008; Feb. 22; Gaz. vol. 223; p. 1288.
Tires, Retreading old auto-. C. D. McGlehan. No. 1,171,449; Feb. 15; Gaz. vol. 223; p. 670.
Tires, Safety-valve for pneumatic. G. Mizener. No. 1,172,477; Feb. 22; Gaz. vol. 223; p. 1098.
Tires with non-skid leather tread, Apparatus for the vulcanization of pneumatic. M. Bergougnan. No. 1,170,600; Feb. 8; Gaz. vol. 223; p. 330.
Titanic-oxid-concentrate product and obtaining the same. A. J. Rossi and L. E. Barton. No. 1,171,542; Feb. 15; Gaz. vol. 223; p. 703.
Toaster, Bread-. A. A. Hill. No. 1,171,122; Feb. 8; Gaz. vol. 223; p. 514.
Tobacco-pipe. A. H. Strong. No. 1,170,465; Feb. 1; Gaz. vol. 223; p. 246.
Tobacco-tin. G. T. Greer. No. 1,170,147; Feb. 1; Gaz. vol. 223; p. 137.
Toilet article. R. F. Hobbs. No. 1,173,802; Feb. 29; Gaz. vol. 223; p. 1609.
Toilet articles, &c., Sanitary holder for. J. Sénégas. No. 1,171,262; Feb. 8; Gaz. vol. 223; p. 563.
Toilet bowl or hopper ventilator. D. J. Hunter. No. 1,173,520; Feb. 29; Gaz. vol. 223; p. 1510.
Toilet device. R. Tannenbaum and P. Reichardt. No. 1,171,155; Feb. 8; Gaz. vol. 223; p. 526.
Tongue support, Wagon-. P. E. Parker. No. 1,170,098; Feb. 1; Gaz. vol. 223; p. 122.
Tool, Air-operated. G. T. and J. L. Taylor. No. 1,173,326; Feb. 29; Gaz. vol. 223; p. 1442.
Tool and part of a tool. A. B. Ross. No. 1,172,837; Feb. 22; Gaz. vol. 223; p. 1229.
Tool-bag, Carpenter's. M. N. Simpson. No. 1,171,896; Feb. 15; Gaz. vol. 223; p. 829.
Tool, Combination-. C. E. Marion. No. 1,171,221; Feb. 8; Gaz. vol. 223; p. 549.
Tool, Combination-. E. L. White. No. 1,170,591; Feb. 8; Gaz. vol. 223; p. 327.
Tool, Compound. W. F. McCauley. No. 1,171,965; Feb. 15; Gaz. vol. 223; p. 854.
Tool, Electrically-operated. F. Schneider. No. 1,172,169; Feb. 15; Gaz. vol. 223; p. 925.
Tool-fishing socket. C. A. Rasmussen and R. M. Clark. No. 1,170,329; Feb. 1; Gaz. vol. 223; p. 200.
Tool gage, Edged-. H. J. Ilgorth. No. 1,174,009; Feb. 29; Gaz. vol. 223; p. 1678.
Tool-handle-locking device, Pneumatic-. R. A. Norling. No. 1,170,779; Feb. 8; Gaz. vol. 223; p. 393.
Tool head, Impact-. W. J. Bernett. No. 1,169,763; Feb. 1; Gaz. vol. 223; p. 5.
Tool, Machine-. G. D. Hayden. No. 1,173,573; Feb. 29; Gaz. vol. 223; p. 1528.
Tool, Pressure-fed. G. H. Gilman and W. C. Michael. No. 1,172,238; Feb. 15; Gaz. vol. 223; p. 948.
Tool, Pressure-fluid-actuated. G. H. Gilman. No. 1,171,113; Feb. 8; Gaz. vol. 223; p. 510.
Tool, Threading and other. G. Amborn. No. 1,171,164; Feb. 8; Gaz. vol. 223; p. 529.
Tools, Making. H. B. and C. A. Barden. No. 1,171,764; Feb. 15; Gaz. vol. 223; p. 780.
Tooth and backing, Artificial. J. P. Morrison. No. 1,170,555; Feb. 8; Gaz. vol. 223; p. 314.
Tooth, Artificial. E. P. Cressler. No. 1,172,878; Feb. 22; Gaz. vol. 223; p. 1243.
Tooth, Artificial. T. F. Glenn. No. 1,170,630; Feb. 8; Gaz. vol. 223; p. 342.
Tooth-crown. T. H. Whiteside. No. 1,172,652; Feb. 22; Gaz. vol. 223; p. 1161.
Tooth-crown, Artificial. C. J. Thorp. No. 1,172,918; Feb. 22; Gaz. vol. 223; p. 1257.
Tooth-fillings, Strength-reinforcement for. W. E. Sanborn. No. 1,172,486; Feb. 22; Gaz. vol. 223; p. 1101.
Toothpick-holder. G. W. L. Veil. No. 1,172,079; Feb. 15; Gaz. vol. 223; p. 895.
Top. L. H. Blandell. No. 1,171,196; Feb. 8; Gaz. vol. 223; p. 540.
Torch or blowpipe, Cutting-. M. S. Plumley. No. 1,172,903; Feb. 22; Gaz. vol. 223; p. 1253.
Torch, Welding-. M. S. Plumley. No. 1,173,461; Feb. 29; Gaz. vol. 223; p. 1488.
Torches, Mixing-head for gas-. J. G. Pettis. No. 1,172,729; Feb. 22; Gaz. vol. 223; p. 1188.
Torches, Tip for combined welding and cutting. J. G. Pettis. No. 1,172,730; Feb. 22; Gaz. vol. 223; p. 1188.
Torpedo, Automobile. F. W. Dodd. No. 1,173,563; Feb. 29; Gaz. vol. 223; p. 1525.
Torpedo, Railway signal-. E. C. Pfeil and O. Bemisderfer. No. 1,171,876; Feb. 15; Gaz. vol. 223; p. 820.
Torpedoes, Gyroscopic steering device for. A. E. Jones. No. 1,173,435; Feb. 29; Gaz. vol. 223; p. 1480.
Torque-tube construction. G. T. Hanchett. No. 1,172,524; Feb. 22; Gaz. vol. 223; p. 1115.
Towel device, Individual-. H. A. Ammann. No. 1,172,245; Feb. 22; Gaz. vol. 223; p. 1011.
Towel-holder, Safety. F. M. Selmier. No. 1,172,170; Feb. 15; Gaz. vol. 223; p. 925.
Toy. G. C. Hubbard. No. 1,173,150; Feb. 22; Gaz. vol. 223; p. 1337.
Toy. C. C. Miller. No. 1,170,311; Feb. 1; Gaz. vol. 223; p. 194.
Toy attachment for disk phonographs, Figure-. G. A. D'Oench. No. 1,170,427; Feb. 1; Gaz. vol. 223; p. 233.
Toy balloon. T. M. Gregory. No. 1,169,804; Feb. 1; Gaz. vol. 223; p. 20.
Toy bowling-alley. W. E. Taelle. No. 1,172,570; Feb. 22; Gaz. vol. 223; p. 1132.
Toy building-block. P. Müller. No. 1,172,385; Feb. 22; Gaz. vol. 223; p. 1061.
Toy cannon. J. Chein. No. 1,172,766; Feb. 22; Gaz. vol. 223; p. 1203.
Toy, Figure. H. J. Chapman. No. 1,169,771; Feb. 1; Gaz. vol. 223; p. 8.
Toy gun. N. B. Harmon, Jr. No. 1,171,197; Feb. 8; Gaz. vol. 223; p. 540.
Toy jumping-jack. F. Bacon. No. 1,172,756; Feb. 22; Gaz. vol. 223; p. 1199.
Toy pistol. L. S. Bixler. No. 1,173,767; Feb. 29; Gaz. vol. 223; p. 1596.
Toy, Sounding. W. Bartholomae. No. 1,173,141; Feb. 22; Gaz. vol. 223; p. 1334.
Toy, Structural. F. A. Wagner. No. 1,171,816; Feb. 15; Gaz. vol. 223; p. 798.
Toy telegraph-sounder. J. S. Newman. No. 1,170,557; Feb. 8; Gaz. vol. 223; p. 314.
Trace-carrier. J. Greifenhagen. No. 1,170,528; Feb. 8; Gaz. vol. 223; p. 305.
Trace-holder for whiffletrees. F. Bogerd. No. 1,171,499; Feb. 15; Gaz. vol. 223; p. 688.
Track construction. G. B. Maltby. No. 1,173,596; Feb. 29; Gaz. vol. 223; p. 1537.
Track-lining jack. C. W. Dean and R. Hunt. No. 1,171,931; Feb. 15; Gaz. vol. 223; p. 842.
Track-spike. J. Brunner. No. 1,170,603; Feb. 8; Gaz. vol. 223; p. 332.
Track sweeping and oiling device. W. R. Nathaniel. No. 1,171,454; Feb. 15; Gaz. vol. 223; p. 671.
Track-switch. J. T. South. No. 1,171,674; Feb. 15; Gaz. vol. 223; p. 749.
Track system for controlling trains. A. Gollos. No. 1,170,483; Feb. 1; Gaz. vol. 223; p. 252.
Tracker-bar attachment. T. Danguard. No. 1,173,052; Feb. 29; Gaz. vol. 223; p. 1557.
Traction-engine. N. A. Lyle. No. 1,171,732; Feb. 15; Gaz. vol. 223; p. 768.
Traction-engine. M. J. Williams. No. 1,170,031; Feb. 1; Gaz. vol. 223; p. 98.
Traction-wheel. D. P. Davies. No. 1,170,051; Feb. 1; Gaz. vol. 223; p. 105.
Tractor. C. G. Fleming. No. 1,173,942; Feb. 29; Gaz. vol. 223; p. 1656.
Tractor. J. P. Schmit. No. 1,173,313; Feb. 29; Gaz. vol. 223; p. 1438.
Tractor steering mechanism. W. H. Washburn. No. 1,171,570; Feb. 15; Gaz. vol. 223; p. 712.
Tractor, Walking-. E. Swanson. No. 1,171,474; Feb. 15; Gaz. vol. 223; p. 679.
Tractor-wheel. R. E. Tombaugh. No. 1,171,988; Feb. 15; Gaz. vol. 223; p. 863.
Train-control apparatus. R. M. Kaufmann. No. 1,172,608; Feb. 22; Gaz. vol. 223; p. 1145.
Train-control device. H. R. Nevens. No. 1,174,022; Feb. 29; Gaz. vol. 223; p. 1682.
Train-control system. A. Casale. No. 1,172,431; Feb. 22; Gaz. vol. 223; p. 1079.
Train-controlling device. A. L. Bower. No. 1,173,552; Feb. 29; Gaz. vol. 223; p. 1521.
Train signaling and control system. T. M. Freeble. No. 1,171,332; Feb. 8; Gaz. vol. 223; p. 587.
Train-stop. W. E. Wine. No. 1,170,862; Feb. 8; Gaz. vol. 223; p. 421.
Train-stop, Automatic. R. T. Poplin and W. F. Ferguson. No. 1,171,539; Feb. 15; Gaz. vol. 223; p. 701.
Train-stop device. H. R. Nevens. No. 1,173,371; Feb. 29; Gaz. vol. 223; p. 1458.
Train-stop device. H. R. Nevens. No. 1,174,021; Feb. 29; Gaz. vol. 223; p. 1682.
Train-stop mechanism. H. R. Nevens. No. 1,174,024; Feb. 29; Gaz. vol. 223; p. 1683.
Train-stop system. L. A. Gladding and J. H. Sullivan. No. 1,171,426; Feb. 15; Gaz. vol. 223; p. 662.
Train-stopping device. J. F., Sr., and J. F. Webb, Jr. No. 1,170,789; Feb. 8; Gaz. vol. 223; p. 396.
Transformer. J. M. Weed. No. 1,170,201; Feb. 1; Gaz. vol. 223; p. 158.
Transfusion apparatus. F. A. Butler. No. 1,170,058; Feb. 8; Gaz. vol. 223; p. 454.

Transmission-lock. R. E. Lewis and B. F. Gibbs. No. 1,169,974; Feb. 1; Gaz. vol. 223; p. 77.
Transmission mechanism. R. Herman. No. 1,173,904; Feb. 29; Gaz. vol. 223; p. 1663.
Transmission mechanism. M. P. Mitchell. No. 1,171,868; Feb. 15; Gaz. vol. 223; p. 817.
Transmission mechanism. W. M. Tompkins. No. 1,173,622; Feb. 29; Gaz. vol. 223; p. 1546.
Transmission mechanism, Automatic speed-varying. A. A. St. Clair. No. 1,171,472; Feb. 15; Gaz. vol. 223; p. 678.
Transmission system. A. Williams. No. 1,172,091; Feb. 15; Gaz. vol. 223; p. 900.
Transmitting intelligence, Means for. R. A. Fessenden. No. 1,170,969; Feb. 8; Gaz. vol. 223; p. 458.
Transoms and casements, Device for operating. O. C. Rixson. No. 1,171,979; Feb. 15; Gaz. vol. 223; p. 859.
Transportation system. A. M. Bates. No. 1,173,245; Feb. 29; Gaz. vol. 223; p. 1412.
Trap: *See*—
Animal trap.
Automatic trap.
Fly-trap.
Insect-trap.
Rat-trap.
Rat and animal trap.
Safety filling-trap.
Steam-trap.
Target-trap.
Trap. G. W. Nistle. No. 1,173,373; Feb. 29; Gaz. vol. 223; p. 1459.
Tray and lock mechanism, Coin-. E. and R. S. Fox. No. 1,171,185; Feb. 8; Gaz. vol. 223; p. 536.
Tray, Vending-. W. J. Hall. No. 1,173,506; Feb. 29; Gaz. vol. 223; p. 1506.
Tread or shoe, Mud. J. L. Richardson. No. 1,173,683; Feb. 29; Gaz. vol. 223; p. 1567.
Trees, Machine for treating. G. W. Donning. No. 1,170,967; Feb. 8; Gaz. vol. 223; p. 457.
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Grass-trimmer.
Trimming-board. E. Fritch. No. 1,172,127; Feb. 15; Gaz. vol. 223; p. 911.
Tripod. J. M. Nicholson. No. 1,170,096; Feb. 1; Gaz. vol. 223; p. 121.
Trolley-base. C. E. Glerding. No. 1,172,780; Feb. 22; Gaz. vol. 223; p. 1210.
Trolley-catcher. F. J. Roche. No. 1,173,684; Feb. 29; Gaz. vol. 223; p. 1567.
Trolley-stand. W. H. Kilbourn. No. 1,172,536; Feb. 22; Gaz. vol. 223; p. 1119.
Trolley-tender. H. W. Tufts. No. 1,173,623; Feb. 29; Gaz. vol. 223; p. 1546.
Trolley-track switch device. W. H. Normine. No. 1,171,748; Feb. 15; Gaz. vol. 223; p. 774.
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Trousers-knee-lifting device. S. Abramson. No. 1,173,139; Feb. 22; Gaz. vol. 223; p. 1333.
Trousers-protector. C. A. B. Flenniken. No. 1,173,943; Feb. 29; Gaz. vol. 223; p. 1656.
Trousers-stretcher. F. F. Lindstaedt. No. 1,173,009; Feb. 22; Gaz. vol. 223; p. 1288.
Trousers stretcher and creaser. C. A. Matheny. No. 1,170,651; Feb. 8; Gaz. vol. 223; p. 349.
Trousers stretcher and hanger. J. Kappes. No. 1,172,999; Feb. 22; Gaz. vol. 223; p. 1285.
Truck. T. V. Buckwalter. No. 1,169,768; Feb. 1; Gaz. vol. 223; p. 7.
Truck. R. A. Guarnlery. No. 1,170,748; Feb. 8; Gaz. vol. 223; p. 383.
Truck. H. C. Gustafson. No. 1,170,248; Feb. 1; Gaz. vol. 223; p. 174.
Truck. W. O. Shadbolt. No. 1,170,004; Feb. 1; Gaz. vol. 223; p. 87.
Truck and brake-gearing, Wheel-. W. A. Otto. No. 1,172,164; Feb. 15; Gaz. vol. 223; p. 924.
Truck and table, Bookbinder's. J. A. Hurley. No. 1,170,268; Feb. 1; Gaz. vol. 223; p. 180.
Truck brake, Platform-. J. L. Smith. No. 1,171,268; Feb. 8; Gaz. vol. 223; p. 564.
Truck, Car-. H. L. Allen. No. 1,173,402; Feb. 29; Gaz. vol. 223; p. 1469.
Truck, Car-. F. Steffens. No. 1,172,497; Feb. 22; Gaz. vol. 223; p. 1105.
Truck-conveyer. J. W. Reno. No. 1,170,332; Feb. 1; Gaz. vol. 223; p. 201.
Truck for raising automobiles. J. A. Jeffery. No. 1,171,049; Feb. 8; Gaz. vol. 223; p. 487.
Truck, Form-. F. C. Leetthem. No. 1,173,283; Feb. 29; Gaz. vol. 223; p. 1427.
Truck, Hand-. C. S. Calhoun. No. 1,170,870; Feb. 8; Gaz. vol. 223; p. 426.
Truck, Motor-. J. Johnston. No. 1,170,270; Feb. 1; Gaz. vol. 223; p. 181.
Truck, Railway-car. A. L. Hastings. No. 1,170,810; Feb. 8; Gaz. vol. 223; p. 403.
Truck side frame, Car-. W. D. Forsyth. No. 1,173,714; Feb. 29; Gaz. vol. 223; p. 1577.
Truck, Three-wheeled. H. Walser. No. 1,171,992; Feb. 15; Gaz. vol. 223; p. 864.
Truck, Tongue-. H. J. Schwartz. No. 1,173,147; Feb. 22; Gaz. vol. 223; p. 1336.
Truck, Turn-table. A. L. Sessions. No. 1,172,399; Feb. 22; Gaz. vol. 223; p. 1067.
Truck, Wheel-. H. P. Siberell. No. 1,171,807; Feb. 15; Gaz. vol. 223; p. 795.
Truck, Wheel-. H. P. Siberell. No. 1,171,808; Feb. 15; Gaz. vol. 223; p. 795.
Trucks, Spring-dampener and wear-plate for car-. W. S. Trowbridge. No. 1,173,397; Feb. 29; Gaz. vol. 223; p. 1467.
Trunk. O. Rangnow. No. 1,171,978; Feb. 15; Gaz. vol. 223; p. 859.
Trunk-lock, Automatic. G. H. Wheary. No. 1,172,231; Feb. 15; Gaz. vol. 223; p. 945.
Trunk-locking mechanism. G. F. Grube and J. V. Meyerling. No. 1,172,791; Feb. 22; Gaz. vol. 223; p. 1212.
Trunk shoe-box. G. H. Wheary. No. 1,171,394; Feb. 8; Gaz. vol. 223; p. 609.
Trunk shoe-box-securing means. G. H. Wheary. No. 1,172,230; Feb. 15; Gaz. vol. 223; p. 945.
Trunk tray, Removable wardrobe-. G. H. Wheary. No. 1,171,395; Feb. 8; Gaz. vol. 223; p. 610.
Trunk, Wardrobe-. G. H. Wheary. No. 1,172,232; Feb. 15; Gaz. vol. 223; p. 945.
Tube: *See*—
Collapsible tube.
Tube and process and apparatus for manufacturing same. J. F. Gall and O. Rudd. No. 1,172,699; Feb. 22; Gaz. vol. 223; p. 1178.
Tube-cleaning apparatus, Condenser-. W. Hoopes. No. 1,172,798; Feb. 22; Gaz. vol. 223; p. 1215.
Tube-coupling in multiple units. R. A. Gally. No. 1,172,590; Feb. 22; Gaz. vol. 223; p. 1139.
Tube-making machine. P. Menzel. No. 1,170,837; Feb. 8; Gaz. vol. 223; p. 413.
Tubes, Automatic machine for making spirally-wound. L. C. Maltby. No. 1,172,151; Feb. 15; Gaz. vol. 223; p. 920.
Tubes, Device for sinking foundation-. H. Sletten and A. N. Lidell. No. 1,172,065; Feb. 15; Gaz. vol. 223; p. 891.
Tubes, Process and apparatus for making metal. J. F. Gall and O. Rudd. No. 1,172,700; Feb. 22; Gaz. vol. 223; p. 1178.
Tubing, Apparatus for making square. W. F. Burditt, Jr. No. 1,173,168; Feb. 29; Gaz. vol. 223; p. 1385.
Tubing, Apparatus for making square. W. F. Burditt, Jr. No. 1,173,169; Feb. 29; Gaz. vol. 223; p. 1386.
Tubular apparatus, Manufacture of gilled. W. J. Still. No. 1,171,899; Feb. 15; Gaz. vol. 223; p. 830.
Tuck-loop-securing device. H. Goldenberg. No. 1,171,513; Feb. 15; Gaz. vol. 223; p. 692.
Tumbler-holder. G. J. Pike. No. 1,171,538; Feb. 15; Gaz. vol. 223; p. 701.
Tuning system, Selective. E. F. W. Alexanderson. No. 1,173,079; Feb. 22; Gaz. vol. 223; p. 1312.
Tunnel-boring machine for earth. H. B. Arden. No. 1,173,158; Feb. 29; Gaz. vol. 223; p. 1382.
Tunneling-machine. J. W. Cook. No. 1,172,876; Feb. 22; Gaz. vol. 223; p. 1242.
Turbine. H. Junke. No. 1,171,791; Feb. 15; Gaz. vol. 223; p. 789.
Turbine-blade. P. Christlein and E. Brown. No. 1,173,097; Feb. 22; Gaz. vol. 223; p. 1317.
Turbine-blading machine. J. Williamson. No. 1,172,334; Feb. 22; Gaz. vol. 223; p. 1043.
Turbine, Direct-acting explosion-. J. J. Hellmann. No. 1,171,121; Feb. 8; Gaz. vol. 223; p. 513.
Turbine, Elastic-fluid. F. W. Kennedy. No. 1,170,547; Feb. 8; Gaz. vol. 223; p. 311.
Turbine, Low-pressure. W. B. Flanders. (Reissue.) No. 14,066; Feb. 15; Gaz. vol. 223; p. 952.
Turbine-rotors, Machine for blading. J. Williamson. No. 1,172,335; Feb. 22; Gaz. vol. 223; p. 1043.
Turbine, Steam-. F. H. C. Coppus. No. 1,172,436; Feb. 22; Gaz. vol. 223; p. 1081.
Turbine, Steam-. O. Lasche. No. 1,171,216; Feb. 8; Gaz. vol. 223; p. 547.
Turning machine, Wood-. S. Paquette. No. 1,172,040; Feb. 15; Gaz. vol. 223; p. 883.
Twine-holder. G. L. Potts. No. 1,173,030; Feb. 22; Gaz. vol. 223; p. 1295.
Twisting and spinning machines, Thread stop-motion for. W. Kozlawski. No. 1,172,806; Feb. 22; Gaz. vol. 223; p. 1218.
Two-speed wheel. C. F. Megow. No. 1,169,852; Feb. 1; Gaz. vol. 223; p. 37.
Tympan-gage. E. Karl. No. 1,170,274; Feb. 1; Gaz. vol. 223; p. 182.
Type-composing machines, Galley mechanism for. J. S. Bancroft and M. C. Indahl. No. 1,172,251; Feb. 22; Gaz. vol. 223; p. 1013.
Type-writer. K. Dougan. No. 1,171,774; Feb. 15; Gaz vol. 223; p. 783.
Type-writer actuator, Automatic. L. R. Roberts. No 1,171,354; Feb. 8; Gaz. vol. 223; p. 595.
Type-writer attachment. E. J. Barker. No. 1,172,758 Feb. 22; Gaz. vol. 223; p. 1200.
Type-writer attachment. F. W. Sutterle, Jr. No 1,169,887; Feb. 1; Gaz. vol. 223; p. 49.
Type-writer operator, Automatic. L. R. Roberts. No 1,171,888; Feb. 15; Gaz. vol. 223; p. 826.
Type-writer, Power-operated. A. Steiner. No. 1,173,321, Feb. 29; Gaz. vol. 223; p. 1441.
Type-writers, Platen attachment for stencilling. L. Malz. No. 1,172,896; Feb. 22; Gaz. vol. 223; p. 1250.
Type-writers, Platen-carriage holder for. H. Etheridge. No. 1,172,016; Feb. 15; Gaz. vol. 223; p. 874.
Type-writing and recording machine. J. Raber. No. 1,172,733; Feb. 22; Gaz. vol. 223; p. 1190.
Type-writing machine. E. J. Barker. No. 1,172,759; Feb. 22; Gaz. vol. 223; p. 1200.

Type-writing machine. F. W. Buffum and M. A. Culling. No. 1,170,217; Feb. 1; Gaz. vol. 223; p. 164.
Type-writing machine. J. J. Chapin. No. 1,169,770; Feb. 1; Gaz. vol. 223; p. 8.
Type-writing machine. C. B. Corcoran. No. 1,171,026; Feb. 8; Gaz. vol. 223; p. 479.
Type-writing machine. A. S. Dennis. No. 1,171,326; Feb. 8; Gaz. vol. 223; p. 585.
Type-writing machine. W. P. Kidder and C. W. Sponsel. No. 1,171,961; Feb. 15; Gaz. vol. 223; p. 853.
Type-writing machine. A. G. F. Kurowski. No. 1,170,978; Feb. 8; Gaz. vol. 223; p. 461.
Type-writing machine. A. G. F. Kurowski. No. 1,172,537; Feb. 22; Gaz. vol. 223; p. 1120.
Type-writing machine. A. G. F. Kurowski. No. 1,172,538; Feb. 22; Gaz. vol. 223; p. 1120.
Type-writing machine. E. G. Latta. No. 1,173,589; Feb. 29; Gaz. vol. 223; p. 1534.
Type-writing machine. J. C. McLaughlin. No. 1,171,391; Feb. 8; Gaz. vol. 223; p. 608.
Type-writing machine. A. V. Nibourel. No. 1,170,988; Feb. 8; Gaz. vol. 223; p. 465.
Type-writing machine. L. R. Roberts. No. 1,173,538; Feb. 29; Gaz. vol. 223; p. 1516.
Type-writing machine. J. A. Ronchetti. No. 1,170,995; Feb. 8; Gaz. vol. 223; p. 467.
Type-writing machine. J. Scott. No. 1,173,876; Feb. 29; Gaz. vol. 223; p. 1634.
Type-writing machine. L. A. Wernery. No. 1,172,853; Feb. 22; Gaz. vol. 223; p. 1234.
Type-writing machine. L. A. Wernery. No. 1,172,854; Feb. 22; Gaz. vol. 223; p. 1234.
Type-writing-machine attachment. R. D. Ananson. No. 1,170,385; Feb. 1; Gaz. vol. 223; p. 220.
Typographic machine. D. Petri-Palmedo. No. 1,171,136; Feb. 8; Gaz. vol. 223; p. 520.
Typographic machine. Multiple-magazine. D. Petri-Palmedo and E. F. Goddard. No. 1,171,537; Feb. 15; Gaz. vol. 223; p. 700.
Umpire, Automatic. H. E. Westgate. No. 1,170,715; Feb. 8; Gaz. vol. 223; p. 371.
Uncoupling device. R. E. L. Janney and E. P. Kinne. No. 1,169,829; Feb. 1; Gaz. vol. 223; p. 28.
Underreamer and bit, Combined. G. A. Humason. No. 1,171,790; Feb. 15; Gaz. vol. 223; p. 789.
Underwear, Combination-. C. A. Shedaker. No. 1,170,350; Feb. 1; Gaz. vol. 223; p. 207.
Union garment. W. K. Jones. No. 1,170,272; Feb. 1; Gaz. vol. 223; p. 181.
Universal joint. W. J. Evans. No. 1,172,964; Feb. 22; Gaz. vol. 223; p. 1273.
Universal joint. J. Wittemann and E. Flicek. No. 1,169,901; Feb. 1; Gaz. vol. 223; p. 54.
Unloading-machine. L. Kresser. No. 1,170,826; Feb. 8; Gaz. vol. 223; p. 499.
Urea, Manufacture of. C. Bosch. No. 1,173,550; Feb. 29; Gaz. vol. 223; p. 1520.
Utensil, Household. G. W. Long. No. 1,170,833; Feb. 8; Gaz. vol. 223; p. 411.
Uterine support. C. G. Hall. No. 1,170,250; Feb. 1; Gaz. vol. 223; p. 175.
Vacuum-air-line governor. J. H. Brady. No. 1,171,695; Feb. 15; Gaz. vol. 223; p. 756.
Vacuum and air trap, Triplicate. R. E. Dewey. No. 1,171,599; Feb. 15; Gaz. vol. 223; p. 722.
Vacuum-bottle. C. F. P. Anders. No. 1,172,247; Feb. 22; Gaz. vol. 223; p. 1012.
Vacuum-bottle. C. F. P. Anders. No. 1,172,248; Feb. 22; Gaz. vol. 223; p. 1012.
Vacuum or air-pressure, System for the treatment of diseases of the human body by. C. E. H. Armbruster. No. 1,172,660; Feb. 22; Gaz. vol. 223; p. 1163.
Valve. C. P. Anderson. No. 1,171,080; Feb. 8; Gaz. vol. 223; p. 497.
Valve. W. H. Armstrong. No. 1,172,101; Feb. 15; Gaz. vol. 223; p. 904.
Valve. J. S. Brennan. No. 1,170,602; Feb. 8; Gaz. vol. 223; p. 331.
Valve. J. W. Gamble. No. 1,172,272; Feb. 22; Gaz. vol. 223; p. 1021.
Valve. G. J. Hatz. No. 1,171,120; Feb. 8; Gaz. vol. 223; p. 513.
Valve. C. S. Kellum. No. 1,172,464; Feb. 22; Gaz. vol. 223; p. 1092.
Valve. G. Macloskie. No. 1,173,672; Feb. 29; Gaz. vol. 223; p. 1563.
Valve. N. P. Mader. No. 1,170,453; Feb. 1; Gaz. vol. 223; p. 242.
Valve. T. J. Madigan. No. 1,172,474; Feb. 22; Gaz. vol. 223; p. 1096.
Valve. H. C. Maul. No. 1,171,622; Feb. 15; Gaz. vol. 223; p. 731.
Valve. J. McCarthy. No. 1,172,895; Feb. 22; Gaz. vol. 223; p. 1250.
Valve. R. A. Milne. No. 1,173,728; Feb. 29; Gaz. vol. 223; p. 1583.
Valve. H. Norbom. No. 1,173,731; Feb. 29; Gaz. vol. 223; p. 1584.
Valve. H. E. Ricker. No. 1,172,833; Feb. 22; Gaz. vol. 223; p. 1228.
Valve. E. W. Rogers. No. 1,171,980; Feb. 15; Gaz. vol. 223; p. 859.
Valve. A. E. Schlieder. No. 1,172,396; Feb. 22; Gaz. vol. 223; p. 1065.
Valve. J. E. Swendeman. No. 1,171,475; Feb. 15; Gaz. vol. 223; p. 679.
Valve and pipe-coupling, Combined. W. L. Morris. No. 1,172,298; Feb. 22; Gaz. vol. 223; p. 1031.
Valve, Automatic. E. E. Bauer. No. 1,171,610; Feb. 15; Gaz. vol. 223; p. 726.
Valve, Automatic. M. Cahill. No. 1,173,554; Feb. 29; Gaz. vol. 223; p. 1521.
Valve, Automatic flush-. A. J. Donnellon. No. 1,172,957; Feb. 22; Gaz. vol. 223; p. 1271.
Valve, Automatic pressure-reducing. B. I. Hoxsie. No. 1,173,518; Feb. 29; Gaz. vol. 223; p. 1510.
Valve, Bottle-filling. A. J. Rice and C. S. Adams. No. 1,170,072; Feb. 8; Gaz. vol. 223; p. 356.
Valve, Check-. A. P. Phillips. No. 1,173,536; Feb. 29; Gaz. vol. 223; p. 1515.
Valve, Combination gas-. J. W. Ashbaugh. No. 1,171,691; Feb. 15; Gaz. vol. 223; p. 755.
Valve, Combination locking-. C. P. Brumby. No. 1,172,106; Feb. 15; Gaz. vol. 223; p. 905.
Valve, Condenser water-. F. N. Roehrich. No. 1,172,739; Feb. 22; Gaz. vol. 223; p. 1192.
Valve device. N. R. Thompson. No. 1,173,620; Feb. 29; Gaz. vol. 223; p. 1545.
Valve-disk. W. F. Schacht. No. 1,171,664; Feb. 15; Gaz. vol. 223; p. 746.
Valve, Drifting-. K. Rushton. No. 1,172,053; Feb. 15; Gaz. vol. 223; p. 887.
Valve, Engine-. S. T. Allen. No. 1,170,471; Feb. 1; Gaz. vol. 223; p. 248.
Valve, Engine-. F. F. Emory. No. 1,172,121; Feb. 15; Gaz. vol. 223; p. 910.
Valve, Engine-. O. A. Reed. No. 1,172,556; Feb. 22; Gaz. vol. 223; p. 1127.
Valve, Flushing-. J. L. Beck. No. 1,172,421; Feb. 22; Gaz. vol. 223; p. 1074.
Valve, Flushing-. J. G. Perkins. (Reissue.) No. 14,067; Feb. 15; Gaz. vol. 223; p. 953.
Valve, Flushing-. R. E. Winchester. No. 1,171,160; Feb. 8; Gaz. vol. 223; p. 528.
Valve for fluid-conduits. G. Carleton. No. 1,170,046; Feb. 1; Gaz. vol. 223; p. 103.
Valve for fluid-pressure regulators. A. Heltbrecker. No. 1,172,596; Feb. 22; Gaz. vol. 223; p. 1141.
Valve for internal-combustion engines. J. P. Wilson and J. F. Jackson. No. 1,172,093; Feb. 15; Gaz. vol. 223; p. 901.
Valve for internal-combustion engines, Rotary. G. W. Fouke. No. 1,172,782; Feb. 22; Gaz. vol. 223; p. 1209.
Valve for steam-turbines, Controlling-. R. R. Deffert. No. 1,173,180; Feb. 29; Gaz. vol. 223; p. 1390.
Valve, Gate-. H. Barry and A. Hindglass. No. 1,172,924; Feb. 22; Gaz. vol. 223; p. 1259.
Valve, Gate-. F. H. Dechant and W. R. Rohrbach. No. 1,171,841; Feb. 15; Gaz. vol. 223; p. 808.
Valve-gear. E. Herkt. No. 1,172,358; Feb. 22; Gaz. vol. 223; p. 1052.
Valve gear for four-stroke explosive-engines, Slide-. H. Hilckel. No. 1,173,970; Feb. 29; Gaz. vol. 223; p. 1665.
Valve, Horizontal gate-. F. H. Dechant and W. R. Rohrbach. No. 1,171,842; Feb. 15; Gaz. vol. 223; p. 808.
Valve-lifter. E. L. Case. No. 1,171,089; Feb. 8; Gaz. vol. 223; p. 501.
Valve-lock. F. J. Miller. No. 1,171,453; Feb. 15; Gaz. vol. 223; p. 671.
Valve, Locking-. W. E. Murray and H. A. Leach. No. 1,172,823; Feb. 22; Gaz. vol. 223; p. 1224.
Valve-lubricating device. J. E. W. Fogal. No. 1,172,446; Feb. 22; Gaz. vol. 223; p. 1085.
Valve mechanism, Automatic pressure-controlled. F. W. Ells. No. 1,172,774; Feb. 22; Gaz. vol. 223; p. 1206.
Valve mechanism, Check-. G. P. Carroll and F. N. Roehrich. No. 1,172,765; Feb. 22; Gaz. vol. 223; p. 1203.
Valve mechanism, Engine. R. T. Guyer. No. 1,170,249; Feb. 1; Gaz. vol. 223; p. 174.
Valve mechanism for internal-combustion engines. G. L. Cobb. No. 1,172,871; Feb. 22; Gaz. vol. 223; p. 1240.
Valve mechanism for regenerative furnaces. L. N. McDonald. No. 1,170,301; Feb. 1; Gaz. vol. 223; p. 191.
Valve mechanism, Thermostatic. L. D. Loveklu. No. 1,170,834; Feb. 8; Gaz. vol. 223; p. 412.
Valve-operating mechanism. E. H. Ludeman. No. 1,173,591; Feb. 29; Gaz. vol. 223; p. 1535.
Valve-operating mechanism, Automatic. I. M. Baldwin. No. 1,173,764; Feb. 29; Gaz. vol. 223; p. 1595.
Valve-operating mechanism, Flush-. W. H. Schulte. No. 1,171,468; Feb. 15; Gaz. vol. 223; p. 676.
Valve-operating mechanism for gas-engines. A. Strand. No. 1,172,640; Feb. 22; Gaz. vol. 223; p. 1156.
Valve-operating mechanism for internal-combustion engines. O. E. Miehand. No. 1,170,087; Feb. 1; Gaz. vol. 223; p. 117.
Valve-pick-up tool. G. H. Hammond. No. 1,169,955; Feb. 1; Gaz. vol. 223; p. 70.
Valve, Piston and packing relief-. J. F. Batty. No. 1,172,337; Feb. 22; Gaz. vol. 223; p. 1044.
Valve, Pressure-reducing. E. V. Anderson. No. 1,173,913; Feb. 29; Gaz. vol. 223; p. 1647.
Valve, Pressure-regulating. E. V. Anderson. No. 1,173,633; Feb. 29; Gaz. vol. 223; p. 1550.
Valve, Reducing-. F. Hodgkinson. No. 1,171,510; Feb. 15; Gaz. vol. 223; p. 695.

Valve, Reduction-. W. A. Greenlaw and C. F. Ryan. No. 1,173,259; Feb. 29; Gaz. vol. 223; p. 1417.
Valve, Regulating-. H. P. Daniels. No. 1,170,050; Feb. 1; Gaz. vol. 223; p. 104.
Valve, Safety-. D. Cockburn and D. MacNicoll. No. 1,169,926; Feb. 1; Gaz. vol. 223; p. 62.
Valve-seats, Device for refacing. H. Casler. No. 1,170,511; Feb. 8; Gaz. vol. 223; p. 298.
Valve, Self-closing. C. H. Haeseler. No. 1,171,110; Feb. 8; Gaz. vol. 223; p. 512.
Valve structure. H. E. Hill. No. 1,172,527; Feb. 22; Gaz. vol. 223; p. 1116.
Valve structure. C. Lundy. No. 1,170,918; Feb. 8; Gaz. vol. 223; p. 440.
Valve structure, Check-. P. W. Hennessy. No. 1,170,813; Feb. 8; Gaz. vol. 223; p. 404.
Valve, Suction foot-. C. L. French. No. 1,169,792; Feb. 1; Gaz. vol. 223; p. 16.
Valve, Triple. R. E. Sherman. No. 1,173,751; Feb. 29; Gaz. vol. 223; p. 1591.
Valves and valve-seats, Machine for truing, cleansing, and grinding. A. A. Bull. No. 1,170,045; Feb. 1; Gaz. vol. 223; p. 102.
Vapor-rectifier. S. W. Farnsworth. No. 1,170,620; Feb. 8; Gaz. vol. 223; p. 338.
Vase, Grave-. M. P. Hayward. No. 1,171,337; Feb. 8; Gaz. vol. 223; p. 589.
Vault-light. J. B. Ricketts. No. 1,172,905; Feb. 22; Gaz. vol. 223; p. 1253.
Vehicle. W. B. Goodwin. No. 1,171,941; Feb. 15; Gaz. vol. 223; p. 846.
Vehicle. W. B. Goodwin. No. 1,171,942; Feb. 15; Gaz. vol. 223; p. 846.
Vehicle. G. Rossi. No. 1,170,461; Feb. 1; Gaz. vol. 223; p. 245.
Vehicle-axles, Means for attaching springs to. F. J. Laher. No. 1,170,076; Feb. 1; Gaz. vol. 223; p. 113.
Vehicle-body. J. H. McCabe and W. C. Berry. No. 1,173,144; Feb. 22; Gaz. vol. 223; p. 1335.
Vehicle-body, Convertible. H. Smith. No. 1,170,571; Feb. 8; Gaz. vol. 223; p. 320.
Vehicle-body, Convertible. W. B. West. No. 1,170,714; Feb. 8; Gaz. vol. 223; p. 371.
Vehicle-body frames, Cushioning. T. H. Wheless. No. 1,171,077; Feb. 8; Gaz. vol. 223; p. 496.
Vehicle-brake. W. Cothran and H. E. Tanner. No. 1,172,949; Feb. 22; Gaz. vol. 223; p. 1268.
Vehicle, &c., Child's. W. Goldston. No. 1,171,940; Feb. 15; Gaz. vol. 223; p. 845.
Vehicle control device. J. D. Sulsona. No. 1,172,403; Feb. 22; Gaz. vol. 223; p. 1068.
Vehicle direction-indicator. H. H. Broyer, G. Cambelh, and J. Papale. No. 1,170,954; Feb. 8; Gaz. vol. 223; p. 452.
Vehicle driving-gear, Motor-. C. F. Blodgett. No. 1,170,399; Feb. 1; Gaz. vol. 223; p. 224.
Vehicle driving mechanism, Motor-. D. C. Cookingham and J. H. Hertner. No. 1,173,340; Feb. 29; Gaz. vol. 223; p. 1447.
Vehicle folding step. A. Fuller. No. 1,169,794; Feb. 1; Gaz. vol. 223; p. 16.
Vehicle-gear. F. E. Wilcox. No. 1,171,761; Feb. 15; Gaz. vol. 223; p. 779.
Vehicle-lighting system. F. Conrad. No. 1,171,595; Feb. 15; Gaz. vol. 223; p. 721.
Vehicle, Motor-. E. L. Folse and S. E. Robichaux. No. 1,170,887; Feb. 8; Gaz. vol. 223; p. 430.
Vehicle, Motor-. A. Loomis. No. 1,171,527; Feb. 15; Gaz. vol. 223; p. 698.
Vehicle recording device. W. G. Bruhn. No. 1,172,666; Feb. 22; Gaz. vol. 223; p. 1165.
Vehicle-repair clip. G. Stenzel. No. 1,172,499; Feb. 22; Gaz. vol. 223; p. 1106.
Vehicle runner attachment. S. Wisniewski. No. 1,170,381; Feb. 1; Gaz. vol. 223; p. 219.
Vehicle running-gear, Motor-. S. S. Blevins. No. 1,172,866; Feb. 22; Gaz. vol. 223; p. 1239.
Vehicle side curtain. J. N. Collins. No. 1,171,025; Feb. 8; Gaz. vol. 223; p. 479.
Vehicle-signal. W. Black. No. 1,172,104; Feb. 15; Gaz. vol. 223; p. 904.
Vehicle-signal. J. E. Sullivan. No. 1,169,885; Feb. 1; Gaz. vol. 223; p. 48.
Vehicle-skein. W. W. Wood, Jr. No. 1,171,293; Feb. 8; Gaz. vol. 223; p. 573.
Vehicle-spring. E. J. Brewster. No. 1,171,585; Feb. 15; Gaz. vol. 223; p. 717.
Vehicle-spring. O. D. North. No. 1,173,457; Feb. 29; Gaz. vol. 223; p. 1487.
Vehicle-spring. D. F. Oliver. No. 1,173,850; Feb. 29; Gaz. vol. 223; p. 1626.
Vehicle spring-mounting. C. C. Jones. No. 1,172,520; Feb. 22; Gaz. vol. 223; p. 1117.
Vehicle spring suspension. W. I. Twombly. No. 1,171,007; Feb. 8; Gaz. vol. 223; p. 472.
Vehicle-stake holder. C. O. Torgerson. No. 1,170,366; Feb. 1; Gaz. vol. 223; p. 213.
Vehicle steering and transmission mechanism, Traction-. A. J. Colwell and A. T. Kenney. No. 1,170,877; Feb. 8; Gaz. vol. 223; p. 426.
Vehicle steering device, Motor-. W. M. Haney. No. 1,172,356; Feb. 22; Gaz. vol. 223; p. 1051.
Vehicle steering mechanism, Motor-. G. W. Rice. No. 1,173,034; Feb. 22; Gaz. vol. 223; p. 1296.
Vehicle steering-wheel, Motor-. J. F. Means. No. 1,171,224; Feb. 8; Gaz. vol. 223; p. 550.
Vehicle storm-front. G. W. Scott. No. 1,170,118; Feb. 1; Gaz. vol. 223; p. 128.
Vehicle-top. M. A. Buch. No. 1,170,604; Feb. 8; Gaz. vol. 223; p. 332.
Vehicle-top. O. E. Pease. No. 1,173,380; Feb. 29; Gaz. vol. 223; p. 1462.
Vehicle-top. T. Swan. No. 1,173,154; Feb. 22; Gaz. vol. 223; p. 1339.
Vehicle-top. C. E. Titchener. No. 1,172,643; Feb. 22; Gaz. vol. 223; p. 1157.
Vehicle top-bow holder. C. L. Bair. No. 1,171,910; Feb. 15; Gaz. vol. 223; p. 838.
Vehicle-top-clamping means. T. J. Kehoe. No. 1,173,277; Feb. 29; Gaz. vol. 223; p. 1425.
Vehicle traffic-signal. A. D. Schnaars and C. L. Joly. No. 1,172,060; Feb. 15; Gaz. vol. 223; p. 890.
Vehicle-trailing device. R. L. Mapson. No. 1,174,018; Feb. 29; Gaz. vol. 223; p. 1681.
Vehicle weather-screen. T. C. Aveling. No. 1,169,911; Feb. 1; Gaz. vol. 223; p. 57.
Vehicle-wheel. E. K. Baker. No. 1,173,243; Feb. 29; Gaz. vol. 223; p. 1411.
Vehicle-wheel. O. P. Downing. No. 1,173,490; Feb. 29; Gaz. vol. 223; p. 1499.
Vehicle-wheel. O. P. Downing. No. 1,173,491; Feb. 29; Gaz. vol. 223; p. 1500.
Vehicle-wheel. C. F. Erickson. No. 1,172,123; Feb. 15; Gaz. vol. 223; p. 910.
Vehicle-wheel. F. A. Frommann. No. 1,173,790; Feb. 29; Gaz. vol. 223; p. 1605.
Vehicle-wheel. G. A. Morfoot. No. 1,172,625; Feb. 22; Gaz. vol. 223; p. 1152.
Vehicle-wheel. E. G. Schleicher. No. 1,173,124; Feb. 22; Gaz. vol. 223; p. 1328.
Vehicles, Combined spring and shock-absorbing means for. J. E. Beckman. No. 1,171,307; Feb. 8; Gaz. vol. 223; p. 579.
Vehicles, Direction-indicator hanger for. C. B. Haines. No. 1,170,062; Feb. 1; Gaz. vol. 223; p. 108.
Vehicles, Horn cut-out and motor-control alarm for motor-. D. A. McConnell. No. 1,173,592; Feb. 29; Gaz. vol. 223; p. 1535.
Vehicles, Radiator for motor-. J. Johnson and L. G. Williams. No. 1,173,805; Feb. 29; Gaz. vol. 223; p. 1609.
Vehicles, Safety controlling mechanism for electrically-propelled. H. B. Greig. No. 1,171,785; Feb. 15; Gaz. vol. 223; p. 786.
Vehicles, Signaling device or apparatus for stopping. J. J. Keenan. No. 1,170,545; Feb. 8; Gaz. vol. 223; p. 311.
Vehicles, Tractor attachment for motor-. J. T. Twiford. No. 1,173,064; Feb. 22; Gaz. vol. 223; p. 1307.
Vending apparatus. J. Peterson. No. 1,170,667; Feb. 8; Gaz. vol. 223; p. 354.
Vending-machine. B. M. Davis. No. 1,173,489; Feb. 29; Gaz. vol. 223; p. 1499.
Vending-machine. M. Graves. No. 1,170,632; Feb. 8; Gaz. vol. 223; p. 343.
Vending-machine. C. M. Grey. No. 1,170,895; Feb. 8; Gaz. vol. 223; p. 432.
Vending-machine. H. D. Hinckley. No. 1,171,053; Feb. 15; Gaz. vol. 223; p. 850.
Vending-machine. S. F. Hyman. No. 1,172,138; Feb. 15; Gaz. vol. 223; p. 915.
Vending-machine. J. E. Nenly. No. 1,171,455; Feb. 15; Gaz. vol. 223; p. 671.
Vending-machine. W. J. Tintera. No. 1,171,478; Feb. 15; Gaz. vol. 223; p. 681.
Vending-machine, Automatic. J. W. Hughes. No. 1,173,720; Feb. 29; Gaz. vol. 223; p. 1579.
Vending-machine, Coin-controlled. O. Ruzsloska and G. M. Laub. No. 1,171,543; Feb. 15; Gaz. vol. 223; p. 703.
Vending-machine for sanitary drinking-cups. H. Hill. No. 1,172,208; Feb. 15; Gaz. vol. 223; p. 937.
Vending machine or the like. L. M. Levine. No. 1,171,616; Feb. 15; Gaz. vol. 223; p. 729.
Veneering process. F. V. Tischer. No. 1,170,021; Feb. 1; Gaz. vol. 223; p. 93.
Ventilating apparatus. J. M. Marty. No. 1,170,551; Feb. 8; Gaz. vol. 223; p. 313.
Ventilating system, Mine-. F. A. Hoskins. No. 1,171,340; Feb. 8; Gaz. vol. 223; p. 590.
Ventilator; *See*—
Automobile-ventilator. Window-ventilator.
Toilet bowl or hopper ventilator.
Ventilator. C. Erickson. No. 1,170,436; Feb. 1; Gaz. vol. 223; p. 236.
Vestibule face-plates, Upper buffing device for. J. G. Lawler. No. 1,170,548; Feb. 8; Gaz. vol. 223; p. 312.
Vestibule face-plates, Upper buffing device for. J. M. Rohlding. No. 1,170,564; Feb. 8; Gaz. vol. 223; p. 317.
Vestibule face-plates, Upper buffing device for. L. C. Sparks. No. 1,170,573; Feb. 8; Gaz. vol. 223; p. 321.
Vestibule face-plates, Upper buffing device for. J. D. Welshrod. No. 1,170,587; Feb. 8; Gaz. vol. 223; p. 326.
Vibrating screen. W. K. Liggett. No. 1,171,058; Feb. 8, Gaz. vol. 223; p. 489.
Vibrator. G. Vande. No. 1,173,065; Feb. 22; Gaz. vol. 223; p. 1307.
Vignetter. F. W. Gray. No. 1,169,802; Feb. 1; Gaz. vol. 223; p. 19.

Vinegar, Manufacture of. J. B. Page. No. 1,171,065; Feb. 8; Gaz. vol. 223; p. 492.
Vitamins and making same, Solid combination of. A. Seidell. No. 1,173,317; Feb. 29; Gaz. vol. 223; p. 1440.
Vitreous body of variable composition, Making a. E. Thomson. No. 1,173,688; Feb. 29; Gaz. vol. 223; p. 1569.
Vitreous furnace. H. Stapelmann and J. Juck. No. 1,170,575; Feb. 8; Gaz. vol. 223; p. 322.
Voltage regulation. L. B. Jones. No. 1,171,208; Feb. 8; Gaz. vol. 223; p. 544.
Voting-machine. W. J. Bohan and W. E. Johnston. No. 1,170,731; Feb. 8; Gaz. vol. 223; p. 377.
Voting-machine. K. Fitzpatrick. No. 1,171,778; Feb. 15; Gaz. vol. 223; p. 784.
Voting-machine. C. C. Moore, Jr. No. 1,172,548; Feb. 22; Gaz. vol. 223; p. 1124.
Voting-machine-controlling device. J. A. Butler. No. 1,172,668; Feb. 22; Gaz. vol. 223; p. 1166.
Wagon-cover. A. Higdon. No. 1,173,352; Feb. 29; Gaz. vol. 223; p. 1452.
Wagon, Dumping-. W. J. Colebourn. No. 1,173,413; Feb. 29; Gaz. vol. 223; p. 1473.
Wagon, Dumping-. L. L. Woodward. No. 1,169,903; Feb. 1; Gaz. vol. 223; p. 55.
Wagon-hound, Adjustable. N. P. Holmquist. No. 1,171,201; Feb. 8; Gaz. vol. 223; p. 541.
Wagon-rack bracket. F. Woodard and W. J. Kamp. No. 1,171,684; Feb. 15; Gaz. vol. 223; p. 752.
Wagon, Serving-. A. C. Trombley. No. 1,170,711; Feb. 8; Gaz. vol. 223; p. 370.
Wagon, Serving-. A. C. Trombley. No. 1,170,712; Feb. 8; Gaz. vol. 223; p. 370.
Walst. W. C. Hynard. No. 1,172,996; Feb. 22; Gaz. vol 223; p. 1284.
Wall and culvert mold. C. D. McArthur. No. 1,171,734; Feb. 15; Gaz. vol. 223; p. 769.
Wall construction for buildings. J. Blaha. No. 1,170,215; Feb. 1; Gaz. vol. 223; p. 163.
Wall-mold. C. D. McArthur. No. 1,171,733; Feb. 15; Gaz. vol. 223; p. 769.
Wall-mold. R. Wilson. No. 1,172,857; Feb. 22; Gaz. vol. 223; p. 1235.
Walls and ceilings, Key-base for side. R. D. Weakley. No. 1,172,085; Feb. 15; Gaz. vol. 223; p. 898.
Walls, Means for attaching devices to. H. E. Van Orden. No. 1,173,398; Feb. 29; Gaz. vol. 223; p. 1468.
Warp-drawing machine. M. F. Field. No. 1,171,388; Feb. 8; Gaz. vol. 223; p. 607.
Warp-drawing machine. M. F. Field. No. 1,171,389; Feb. 8; Gaz. vol. 223; p. 608.
Washbasin, Collapsible. F. A. Lyon. No. 1,169,978; Feb. 1; Gaz. vol. 223; p. 78.
Washboard. T. W. Clemments. No. 1,172,941; Feb. 22; Gaz. vol. 223; p. 1266.
Washboard. E. L. Feese. No. 1,173,940; Feb. 29; Gaz. vol. 223; p. 1656.
Washer: *See*—
Can-washer. Gas-washer.
Washing apparatus, Clothes-. E. L. Whisler. No. 1,172,651; Feb. 22; Gaz. vol. 223; p. 1160.
Washing-machine. C. S. Johnson. No. 1,172,462; Feb. 22; Gaz. vol. 223; p. 1091.
Washing-machine. J. F. Lester. No. 1,172,296; Feb. 22; Gaz. vol. 223; p. 1030.
Washing-machine. M. Phillips. No. 1,173,027; Feb. 22; Gaz. vol. 223; p. 1294.
Washing-machine. I. G. Regnier. No. 1,170,103; Feb. 1; Gaz. vol. 223; p. 123.
Washing-machine. A. L. Sessions. No. 1,172,744; Feb. 22; Gaz. vol. 223; p. 1194.
Washing-machine, Ball-bearing. W. Bartholomew. No. 1,171,303; Feb. 8; Gaz. vol. 223; p. 577.
Washing machine, Container-. F. Eberhart. No. 1,173,255; Feb. 29; Gaz. vol. 223; p. 1416.
Washing-machine gearing. J. P. Dorau. No. 1,172,264; Feb. 22; Gaz. vol. 223; p. 1018.
Washstand, Folding. A. Kiraly. No. 1,172,804; Feb. 22; Gaz. vol. 223; p. 1217.
Watch. A. Jaques and C. L. Depollier. No. 1,172,601; Feb. 22; Gaz. vol. 223; p. 1142.
Watchcase, &c. C. L. Depollier. No. 1,169,777; Feb. 1; Gaz. vol. 223; p. 11.
Watch-face protector. G. Dennison. No. 1,169,935; Feb. 1; Gaz. vol. 223; p. 65.
Water-closet. J. J. Boyne. No. 1,171,694; Feb. 15; Gaz. vol. 223; p. 750.
Water-closet attachment. J. Ridgley. No. 1,170,669; Feb. 8; Gaz. vol. 223; p. 355.
Water-closet bowls, Refill device for. J. M. McGuire. No. 1,171,619; Feb. 15; Gaz. vol. 223; p. 730.
Water-closet seat. W. C. Rees. No. 1,171,644; Feb. 15; Gaz. vol. 223; p. 739.
Water connection, Return. N. E. Jenkins. No. 1,172,140; Feb. 15; Gaz. vol. 223; p. 914.
Water for brewing and malting purposes, Improving. E. Jalowetz, E. Richter, and A. Schückher. No. 1,172,528; Feb. 22; Gaz. vol. 223; p. 1117.
Water for brewing and malting purposes, Improving. E. Jalowetz, E. Richter, and A. Schueckher. No. 1,172,098; Feb. 22; Gaz. vol. 223; p. 1285.
Water-gage glass, Sectional. J. E. Kenn. No. 1,170,910; Feb. 8; Gaz. vol. 223; p. 437.
Water-heater. A. S. Cubitt. No. 1,171,929; Feb. 15; Gaz. vol. 223; p. 842.
Water heater. L. S. Lawson. No. 1,172,028; Feb. 15; Gaz. vol. 223; p. 878.
Water-heater. J. S. Pedrick. No. 1,173,304; Feb. 29; Gaz. vol. 223; p. 1434.
Water-heaters, Thermostatic controller for gas. H. Jarvis. No. 1,172,459; Feb. 22; Gaz. vol. 223; p. 1090.
Water-level-indicating system and apparatus. A. B. Walton. No. 1,172,650; Feb. 22; Gaz. vol. 223; p. 1160.
Water-meter. F. W. Hanks. No. 1,172,452; Feb. 22; Gaz. vol. 223; p. 1087.
Water, Purification of. J. C. Heckman. No. 1,171,046; Feb. 8; Gaz. vol. 223; p. 486.
Water-purifying apparatus. E. Clausaen. No. 1,173,709; Feb. 29; Gaz. vol. 223; p. 1575.
Water-sterilizing apparatus. R. M. Leggett. No. 1,172,468; Feb. 22; Gaz. vol. 223; p. 1093.
Water-wheels, Load-sustaining device for vertical. C. W. Larner. No. 1,171,857; Feb. 15; Gaz. vol. 223; p. 814.
Watering-trough. J. B. Conrad. No. 1,172,584; Feb. 22; Gaz. vol. 223; p. 1137.
Wave-motor for generating power and propelling ships. B. P. Roach. No. 1,172,737; Feb. 22; Gaz. vol. 223; p. 1191.
Wave-power mechanism. C. and R. Throckmorton. No. 1,173,130; Feb. 22; Gaz. vol. 223; p. 1330.
Waxing silk thread. C. A. Hammond-Knowlton. No. 1,171,195; Feb. 8; Gaz. vol. 223; p. 539.
Weather-boarding. W. E. Aycock. No. 1,171,081; Feb. 8; Gaz. vol. 223; p. 497.
Web-rolls, Margin-regulating mechanism for. G. S. Williamson and C. E. Mandelick. No. 1,171,396; Feb. 8; Gaz. vol. 223; p. 610.
Web-tip. R. A. Moore. No. 1,172,478; Feb. 22; Gaz. vol. 223; p. 1098.
Web-treating apparatus. C. Holly. No. 1,173,575; Feb. 29; Gaz. vol. 223; p. 1529.
Weed-cutting machine. C. S. Spitzer. No. 1,172,175; Feb. 15; Gaz. vol. 223; p. 927.
Weed-destroyer. H. Nagel. No. 1,173,504; Feb. 29; Gaz. vol. 223; p. 1505.
Weed knife and puller, Combined. E. R. Eckman. No. 1,172,687; Feb. 22; Gaz. vol. 223; p. 1173.
Weeder, Hand-. A. J. Wood. No. 1,173,137; Feb. 22; Gaz. vol. 223; p. 1332.
Weeder, Sectional. G. C. Darnell. No. 1,173,342; Feb. 29; Gaz. vol. 223; p. 1448.
Weeding implement. L. M. Burns. No. 1,169,921; Feb. 1; Gaz. vol. 223; p. 60.
Weeding-tool. W. F. Stuart. No. 1,170,122; Feb. 1; Gaz. vol. 223; p. 129.
Weighing-machine. W. W. Rosenfield. No. 1,173,309; Feb. 29; Gaz. vol. 223; p. 1436.
Welding, Electrical. T. E. Murray. No. 1,172,302; Feb. 22; Gaz. vol. 223; p. 1032.
Welding, Electrical. T. E. Murray and H. R. Woodrow. No. 1,172,301; Feb. 22; Gaz. vol. 223; p. 1032.
Welding pipe-bends, Method and machine for. N. T. McKee. No. 1,173,202; Feb. 29; Gaz. vol. 223; p. 1396.
Well shut-off. G. M. Savage. No. 1,170,851; Feb. 8; Gaz. vol. 223; p. 417.
Well tubing and packing, Oil-. A. J. McNallen. No. 1,173,825; Feb. 29; Gaz. vol. 223; p. 1617.
Wells, Apparatus for operating sulfur-. W. D. Huff. No. 1,170,266; Feb. 1; Gaz. vol. 223; p. 179.
Welt-indenting machine. H. T. McClure and J. J. Heys. No. 1,173,364; Feb. 29; Gaz. vol. 223; p. 1456.
Wheat-separator. R. D. Cheek. No. 1,172,110; Feb. 15; Gaz. vol. 223; p. 907.
Wheel: *See*—
Air-cushioned wheel. Plow-wheel.
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Demountable band-wheel. Tractor-wheel.
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Wheel. F. A. Ellis, Jr. No. 1,169,944; Feb. 1; Gaz. vol. 223; p. 67.
Wheel. S. Michaud. No. 1,171,225; Feb. 8; Gaz. vol. 223; p. 550.
Wheel. W. J. P. Moore. No. 1,172,623; Feb. 22; Gaz. vol. 223; p. 1151.
Wheel. W. J. P. Moore. No. 1,172,624; Feb. 22; Gaz. vol. 223; p. 1151.
Wheel buffer, Vehicle-. M. F. Kettler. No. 1,173,439; Feb. 29; Gaz. vol. 223; p. 1482.
Wheel cushioning means, Vehicle-. C. S. Martin. No. 1,172,153; Feb. 15; Gaz. vol. 223; p. 920.
Wheel demountable rim, Vehicle-. H. N. Carragher. No. 1,171,503; Feb. 15; Gaz. vol. 223; p. 689.
Wheel lock, Steering-. A. J. Kellogg. No. 1,169,965; Feb. 1; Gaz. vol. 223; p. 73.

Wheel-locking device. T. L. Gray. No. 1,171,335; Feb. 8; Gaz. vol. 223; p. 588.
Wheel-mounting. E. Krantz. No. 1,170,075; Feb. 1; Gaz. vol. 223; p. 113.
Wheel-puller. C. H. Kohler. No. 1,170,281; Feb. 1; Gaz. vol. 223; p. 184.
Wheel, pulley, or the like from a shaft, axle, or the like, Apparatus for removing a. R. H. Berkstresser. No. 1,172,761; Feb. 22; Gaz. vol. 223; p. 1201.
Wheel-rim. H. J. Arend. No. 1,169,908; Feb. 1; Gaz. vol. 223; p. 56.
Wheel rim, Vehicle-. R. S. Bryant. No. 1,172,425; Feb. 22; Gaz. vol. 223; p. 1076.
Wheel rims and the like, Locking device for demountable automobile-. F. D. Hiller, Jr. No. 1,172,287; Feb. 22; Gaz. vol. 223; p. 1027.
Wheel-strengthener. J. W. Splawn. No. 1,173,128; Feb. 22; Gaz. vol. 223; p. 1329.
Wheels, Construction of. C. G. Tate. No. 1,170,706; Feb. 8; Gaz. vol. 223; p. 368.
Wheels, Demountable rim for vehicle-. N. Schenk. No. 1,173,222; Feb. 29; Gaz. vol. 223; p. 1404.
Wheels, Gear-segment for cutting-. L. A. Krupp. No. 1,173,281; Feb. 29; Gaz. vol. 223; p. 1427.
Wheels, Handle-supporting attachment for. E. Kohl. No. 1,171,853; Feb. 15; Gaz. vol. 223; p. 813.
Wheels of power-driven vehicles from holes, Means for extracting. E. Whitmer. No. 1,171,910; Feb. 15; Gaz. vol. 223; p. 833.
Wheels, Split rim for vehicle-. N. Schenk. No. 1,173,221; Feb. 29; Gaz. vol. 223; p. 1403.
Wheels, Tractor-tread for. L. S. Hackney and F. G. Haas. No. 1,171,044; Feb. 8; Gaz. vol. 223; p. 485.
Wheelwright-machine. O. B. Graves. No. 1,172,449; Feb. 22; Gaz. vol. 223; p. 1086.
Whip-holder. A. L. L. Neumann. No. 1,173,533; Feb. 29; Gaz. vol. 223; p. 1514.
Wind instruments, Padded key for. D. M. Weakley. No. 1,171,821; Feb. 15; Gaz. vol. 223; p. 800.
Wind-shield. C. P. Byrnes. No. 1,171,835; Feb. 15; Gaz. vol. 223; p. 806.
Wind-shield. A. W. Crouch. No. 1,170,880; Feb. 8; Gaz. vol. 223; p. 428.
Wind-shield. P. E. Stone. No. 1,170,700; Feb. 8; Gaz. vol. 223; p. 367.
Wind-shield and match-box, Combined. T. Glucksmann. No. 1,172,276; Feb. 22; Gaz. vol. 223; p. 1023.
Wind-shield cleaner. S. C. Wolfe. No. 1,171,377; Feb. 8; Gaz. vol. 223; p. 603.
Winding-index for indicator mechanism for timepieces, musical and other mechanisms. C. Teske. No 1,173,460; Feb. 29; Gaz. vol. 223; p. 1490.
Winding-machine. G. B. Allen and V. S. Westcott. No. 1,170,212; Feb. 1; Gaz. vol. 223; p. 162.
Winding-machine. C. Ryden. No. 1,171,544; Feb. 15; Gaz. vol. 223; p. 703.
Winding, Tertiary. L. F. Blume. No. 1,173,094; Feb. 22; Gaz. vol. 223; p. 1316.
Windlass. W. J. Scarader and R. L. Gilstrap. No. 1,170,903; Feb. 1; Gaz. vol. 223; p. 86.
Windmill. L. W. Noyes. No. 1,171,631; Feb. 15; Gaz. vol. 223; p. 735.
Windmill or motor. F. E. Blakely. No. 1,171,584; Feb. 15; Gaz. vol. 223; p. 717.
Window. E. G. Budd. No. 1,170,874; Feb. 8; Gaz. vol. 223; p. 426.
Window. M. F. Sitta. No. 1,173,040; Feb. 22; Gaz. vol. 223; p. 1302.
Window. J. B. Strauss. No. 1,170,704; Feb. 8; Gaz. vol. 223; p. 368.
Window. A. C. Taylor. No. 1,171,367; Feb. 8; Gaz. vol. 223; p. 600.
Window adjuster, Casement-. J. Swanson. No. 1,171,555; Feb. 15; Gaz. vol. 223; p. 708.
Window-balcony. M. M. Marshall. No. 1,170,305; Feb. 1; Gaz. vol. 223; p. 192.
Window-bead fastener. G. L. Summers. No. 1,171,276; Feb. 8; Gaz. vol. 223; p. 567.
Window-bracket. J. H. Crist. No. 1,172,259; Feb. 22; Gaz. vol. 223; p. 1017.
Window-bracket. J. H. Crist. No. 1,172,260; Feb. 22; Gaz. vol. 223; p. 1017.
Window-closing device, Electric. W. R. Uffert. No. 1,172,409; Feb. 22; Gaz. vol. 223; p. 1069.
Window construction. S. W. Horst. No. 1,170,816; Feb. 8; Gaz. vol. 223; p. 405.
Window-frame. N. Fells. No. 1,173,941; Feb. 29; Gaz. vol. 223; p. 1656.
Window-frame. G. Pullets. No. 1,170,101; Feb. 1; Gaz. vol. 223; p. 123.
Window or screen frame, Metallic. E. J. Lund. No. 1,170,917; Feb. 8; Gaz. vol. 223; p. 440.
Window pane fastener. E. T. Wilkinson. No. 1,171,762; Feb. 15; Gaz. vol. 223; p. 779.
Window platform. H. F. Wanamaker. No. 1,173,331; Feb. 29; Gaz. vol. 223; p. 1445.
Window-screen. J. Benhan. No. 1,173,548; Feb. 29; Gaz. vol. 223; p. 1520.
Window-screen. E. Johnson. No. 1,172,800; Feb. 22; Gaz. vol. 223; p. 1216.
Window-screen. V. A. Quagliano. No. 1,171,138; Feb. 8; Gaz. vol. 223; p. 521.
Window-screen. H. H. Sortore. No. 1,173,686; Feb. 29; Gaz. vol. 223; p. 1568.
Window-screen. A. C. Soule. No. 1,172,174; Feb. 15; Gaz. vol. 223; p. 927.
Window-screen, Knockdown. H. Higgin. No. 1,171,952; Feb. 15; Gaz. vol. 223; p. 850.
Window-screens, Metal frame for. J. A. Felerabend. No. 1,171,184; Feb. 8; Gaz. vol. 223; p. 536.
Window, Ship-. J. S. White. No. 1,171,573; Feb. 15; Gaz. vol. 223; p. 713.
Window-ventilator. R. G. Dickson. No. 1,173,101; Feb. 22; Gaz. vol. 223; p. 1319.
Window-ventilator. W. Louden. No. 1,170,648; Feb. 8; Gaz. vol. 223; p. 348.
Window-ventilator. M. B. Nute. No. 1,170,559; Feb. 8; Gaz. vol. 223; p. 315.
Wire-bending machine. E. Gaston. No. 1,171,711; Feb. 15; Gaz. vol. 223; p. 761.
Wire-clamp. A. O. Austin. No. 1,170,725; Feb. 8; Gaz. vol. 223; p. 375.
Wire-drawing block. E. H. Carroll. No. 1,173,707; Feb. 29; Gaz. vol. 223; p. 1574.
Wire-drawing safety device. M. Shannon. No. 1,171,984; Feb. 15; Gaz. vol. 223; p. 861.
Wire fabric. H. Richardson. No. 1,171,650; Feb. 15; Gaz. vol. 223; p. 741.
Wire-forming machine. C. F. Baxter. No. 1,173,477; Feb. 29; Gaz. vol. 223; p. 1494.
Wire-shaping machine. A. Rhenstrom. No. 1,173,739; Feb. 29; Gaz. vol. 223; p. 1587.
Wire-staple-making machine. C. E. Safford. No. 1,170,676; Feb. 8; Gaz. vol. 223; p. 358.
Wire-straightener. W. F. Smith. No. 1,173,613; Feb 29; Gaz. vol. 223; p. 1543.
Wire-stretcher. W. R. Green. No. 1,171,784; Feb. 15; Gaz. vol. 223; p. 786.
Wire-stretcher. A. J. Miller, Jr. No. 1,173,368; Feb. 29; Gaz. vol. 223; p. 1458.
Wire stretching and splicing device. M. A. Stickley. No. 1,172,071; Feb. 15; Gaz. vol. 223; p. 893.
Wire-winding device. C. Ryden. No. 1,172,565; Feb. 22; Gaz. vol. 223; p. 1130.
Wireless receiving system. L. De Forest and C. Logwood. No. 1,170,881; Feb. 8; Gaz. vol. 223; p. 428.
Wood, Composition of matter for finishing. C. F. Cooper. No. 1,169,930; Feb. 1; Gaz. vol. 223; p. 64.
Wood-refuse incinerator. J. T. Stoddard. No. 1,171,005; Feb. 8; Gaz. vol. 223; p. 471.
Wool-scouring and like liquors and the recovery of grease and alkaline substances therefrom, Concentration of. E. V. Chambers, T. C. Hammond, and G. G. Jarmain. No. 1,170,962; Feb. 8; Gaz. vol. 223; p. 455.
Work-benches, Work abutment or stop for. O. S. Gooch. No. 1,170,970; Feb. 8; Gaz. vol. 223; p. 458.
Woven receptacle and producing the same. V. H. Jennings. No. 1,170,448; Feb. 1; Gaz. vol. 223; p. 240.
Wrapping-machine. D. T. and D. C. Igou. No. 1,173,274; Feb. 29; Gaz. vol. 223; p. 1423.
Wrapping machine, Package-. A. R. Scholin. No. 1,171,358; Feb. 8; Gaz. vol. 223; p. 596.
Wrapping-machines, Paper-feeding device for. D. T. and D. C. Igou. No. 1,173,276; Feb. 29; Gaz. vol. 223; p. 1424.
Wrapping-paper for loaves of bread and the like. S. M. Ramsey. No. 1,171,461; Feb. 15; Gaz. vol. 223; p. 673.
Wrecking-tool. J. E. Stevenson. No. 1,170,016; Feb. 1; Gaz. vol. 223; p. 91.
Wrench: *See*—
Alligator-wrench. Multiple-socket wrench.
Hydrant-wrench. Pipe-wrench.
Jar-wrench. Socket-wrench.
Wrench. W. J. Boling. No. 1,172,192; Feb. 15; Gaz. vol. 223; p. 933.
Wrench. O. L. Dillon. No. 1,171,328; Feb. 8; Gaz. vol. 223; p. 586.
Wrench. M. I. Ginsburg. No. 1,171,939; Feb. 15; Gaz. vol. 223; p. 845.
Wrench. P. W. Hodgkinson. No. 1,172,797; Feb. 22; Gaz. vol. 223; p. 1214.
Wrench. B. Omoto. No. 1,173,458; Feb. 29; Gaz. vol. 223; p. 1487.
Wrench. G. Riexinger. No. 1,169,870; Feb. 1; Gaz. vol. 223; p. 43.
Wrench. E. D. Rockwell. No. 1,170,107; Feb. 1; Gaz. vol. 223; p. 124.
Wrench. C. E. Sullivan. No. 1,172,319; Feb. 22; Gaz. vol. 223; p. 1038.
Wrench and wire-stretcher, Combination. L. M. Kanavel. No. 1,169,833; Feb. 1; Gaz. vol. 223; p. 30.
Wrench-holder. P. L. L. Yorgensen. No. 1,172,656; Feb. 22; Gaz. vol. 223; p. 1162.
Wringer: *See*—
Mop-wringer.
Wringers, Gearing device for. O. B. Woodrow. No. 1,169,902; Feb. 1; Gaz. vol. 223; p. 54.
Writing, Attachment for the promotion of ease and speed in. M. A. Raftery and O. Frey. No. 1,173,607; Feb. 29; Gaz. vol. 223; p. 1541.
Writing implement. A. O. Burgess. No. 1,172,342; Feb. 22; Gaz. vol. 223; p. 1046.
Writing-machine. Platen. O. Thieme. No. 1,170,708; Feb. 8; Gaz. vol. 223; p. 369.
Writing-machines, Carbon-gripper and margin-indicator for. C. I. Evans, Jr. No. 1,173,345; Feb. 29; Gaz. vol. 223; p. 1449.

X-ray apparatus. C. E. Campbell. No. 1,173,409; Feb. 29; Gaz. vol. 223; p. 1472.
Xylophone. J. C. Deagan. No. 1,173,784; Feb. 29; Gaz. vol. 223; p. 1603.
Yarn clamp and cutter device, Splicing-. C. S. Paquin. No. 1,173,377; Feb. 29; Gaz. vol. 223; p. 1461.
Yeast from molasses, Manufacture of. G. Roth. No. 1,170,110; Feb. 1; Gaz. vol. 223; p. 125.
Yoke, Equalizer-. W. E. Belcher. No. 1,173,642; Feb. 29; Gaz. vol. 223; p. 1553.
Zinc from zinkiferous materials, Recovering. F. C. W. Timm. No. 1,172,321; Feb. 22; Gaz. vol. 223; p. 1039.
Zinc ores, Treating. C. C. Titus and W. J. Barenscheer. No. 1,173,467; Feb. 29; Gaz vol. 223; p. 1490.
Zinc sulfid, Manufacturing dehydrated. C. Ranson. No. 1,171,246; Feb. 8; Gaz. vol. 223; p. 556.

ALPHABETICAL LIST OF DESIGNS.

Article of manufacture. J. Crompton. No. 48,486; Feb. 1; Gaz. vol. 223; p. 261.
Article of manufacture. W. De Ville. Nos. 48,584–5; Feb. 22; Gaz. vol. 223; p. 1342.
Article of manufacture. W. De Ville. Nos. 48,628–9; Feb. 29; Gaz. vol. 223; p. 1690.
Article of manufacture. G. Schiller. No. 48,654; Feb. 29; Gaz. vol. 223, p. 1695.
Automobile-body. H. J. Litt. No. 48,664; Feb. 29; Gaz. vol. 223; p. 1697.
Automobile-body. J. Morrison. No. 48,603; Feb. 22; Gaz. vol. 223; p. 1345.
Automobile-radiator. C. A. Eligh. No. 48,490; Feb. 1; Gaz. vol. 223; p. 261.
Badge. W. W. Lawton. No. 48,641; Feb. 29; Gaz. vol. 223; p. 1693.
Badge, medal, or similar article. W. F. Ryan. No. 48,502; Feb. 1; Gaz. vol. 223; p. 263.
Badge or insignia. W. Lehmberg. No. 48,558; Feb. 15; Gaz. vol. 223; p. 962.
Badge or similar article. J. McLaughlin. No. 48,642; Feb. 29; Gaz. vol. 223; p. 1693.
Bag, Hand-. D. M. Lander. No. 48,497; Feb. 1; Gaz. vol. 223; p. 263.
Bed-frames, Cap or vase for metal. J. Abel. No. 48,577; Feb. 22; Gaz. vol. 223; p. 1341.
Bench. L. G. Haase. No. 48,623; Feb. 22; Gaz. vol. 223; p. 1349.
Book-rack. C. Winde. No. 48,574; Feb. 15; Gaz. vol. 223; p. 965.
Boot, Rubber. M. H. Clark. No. 48,627; Feb. 29; Gaz. vol. 223; p. 1690.
Bottle. R. Ebernardt. No. 48,489; Feb. 1; Gaz. vol. 223; p. 261.
Bottle. W. F. Koken. No. 48,551; Feb. 15; Gaz. vol. 223; p. 960.
Bottle-cap remover. N. L. Jacobus. No. 48,550; Feb. 15; Gaz. vol. 223; p. 960.
Bowl or similar article, Sugar-. F. Lockett. No. 48,598; Feb. 22; Gaz. vol. 223; p. 1344.
Bracket, Combination-. F. Peterson. No. 48,665; Feb. 29; Gaz. vol. 223; p. 1697.
Brick or similar article. W. P. Varney. No. 48,536; Feb. 8; Gaz. vol. 223; p. 621.
Button. H. F. Wooddin. No. 48,576; Feb. 15; Gaz. vol. 223; p. 965.
Button, pin, or brooch. M. Vucassovich. No. 48,659; Feb. 29; Gaz. vol. 223; p. 1696.
Cabinet, Kitchen-. D. Griffith. No. 48,635; Feb. 29; Gaz. vol. 223; p. 1691.
Cabinet, Kitchen-. W. C. Huss. No. 48,493; Feb. 1; Gaz. vol. 223; p. 262.
Camera, Folding. J. Goddard. No. 48,622; Feb. 22; Gaz. vol. 223; p. 1349.
Candle. H. H. Will. No. 48,538; Feb. 8; Gaz. vol. 223; p. 622.
Cane or umbrella handle or similar article. J. B. Glowacki. No. 48,512; Feb. 1; Gaz. vol. 223; p. 265.
Cane or umbrella handle or similar article. J. B. Glowacki. Nos. 48,633–4; Feb. 29; Gaz. vol. 223; p. 1691.
Cap or bonnet. N. F. Winget. No. 48,575; Feb. 15; Gaz. vol. 223; p. 965.
Card, Playing-. W. C. Major. Nos. 48,525–6; Feb. 8; Gaz. vol. 223; pp. 619–20.
Carpet or rug. J. G. Pegel. No. 48,606; Feb. 22; Gaz. vol. 223; p. 1346.
Carriage hood, Child's-. C. S. Spofford. No. 48,656; Feb. 29; Gaz. vol. 223; p. 1695.
Casket plate, Burial-. C. Bleech. Nos. 48,580–3; Feb. 22; Gaz. vol. 223; pp. 1341–2.
Caskets, Corner-piece for burial-. H. F. Lueders. Nos. 48,600–1; Feb. 22; Gaz. vol. 223; p. 1345.
Chain fixtures, Canopy extension for supporting. C. E. Jones. No. 48,523; Feb. 8; Gaz. vol. 223; p. 619.
Chair. J. A. Fenton. No. 48,587; Feb. 22; Gaz. vol. 223; p. 1342.
Chandelier-body. R. M. Retherford. No. 48,607; Feb. 22; Gaz. vol. 223; p. 1346.
Chandeliers or brackets, Arm for. C. E. Jones. Nos. 48,521–2; Feb. 8; Gaz. vol. 223; p. 619.
Coffee-pot. I. D. Richheimer. No. 48,652; Feb. 29; Gaz. vol. 223; p. 1694.
Cribbage-board. A. L. Carlow. No. 48,626; Feb. 29; Gaz. vol. 223; p. 1689.
Cup. F. Lockett. No. 48,596; Feb. 22; Gaz. vol. 223; p. 1344.
Dial for timepieces. G. A. Valpan. No. 48,658; Feb. 29; Gaz. vol. 223; p. 1696.
Dish. A. J. Sanford. No. 48,612; Feb. 22; Gaz. vol. 223; p. 1347.
Dish. A. J. Sanford. No. 48,614; Feb. 22; Gaz. vol. 223; p. 1347.
Dish-stand. J. P. Eustis and A. T. Brown. No. 48,516; Feb. 8; Gaz. vol. 223; p. 618.
Display-case for pharmacies. C. F. Kurz. No. 48,640; Feb. 29; Gaz. vol. 223; p. 1693.
Display-rack for shoes, &c. A. J. Sanford. No. 48,611; Feb. 22; Gaz. vol. 223; p. 1347.
Display-stand. W. M. Nicholson. No. 48,568; Feb. 15; Gaz. vol. 223; p. 964.
Doll. H. Araki. No. 48,625; Feb. 29; Gaz. vol. 223; p. 1689.
Door-porter. M. H. Nevins. Nos. 48,566–7; Feb. 15; Gaz. vol. 223; pp. 963–4.
Electric-light casing. B. Schwartzman. No. 48,532; Feb. 8; Gaz. vol. 223; p. 621.
Electric-light fixture, canopy. B. Schwartzman. No. 48,531; Feb. 8; Gaz. vol. 223; p. 620.
Electric-light fixtures, Oval back for. B. Schwartzman. No. 48,533; Feb. 8; Gaz. vol. 223; p. 621.
Electric-light fixtures, Socket-cover and globe for. B. Schwartzman. No. 48,530; Feb. 8; Gaz. vol. 223; p. 620.
Electric-light wall-bracket fixture. F. C. Baker. No. 48,513; Feb. 8; Gaz. vol. 223; p. 617.
Emblem. H. R. Hansen. No. 48,519; Feb. 8; Gaz. vol. 223; p. 619.
Emblem, brooch, button, fob, or similar article. F. Schwinn. No. 48,573; Feb. 15; Gaz. vol. 223; p. 965.
Fabric, Cut pile. N. Albrecht. Nos. 48,578–9; Feb. 22; Gaz. vol. 223; p. 1341.
Fan. J. A. Irving. No. 48,494; Feb. 1; Gaz. vol. 223; p. 262.
Fan-handle. L. Elsemann. No. 48,630; Feb. 29; Gaz. vol. 223; p. 1690.
Fans, Casing and stand for electric. W. Noble. No. 48,570; Feb. 15; Gaz. vol. 223; p. 964.
Flat-iron stand. J. W. Ferguson. No. 48,632; Feb. 29; Gaz. vol. 223; p. 1691.
Floor-covering. E. W. and R. C. Jeffcott. No. 48,637; Feb. 29; Gaz. vol. 223; p. 1692.
Game-board. F. E. Dorr. Nos. 48,487–8; Feb. 1; Gaz. vol. 223; p. 261.
Game, Board for playing a. A. Hunt. No. 48,593; Feb. 22; Gaz. vol. 223; p. 1343.
Glass vessel. G. Dougherty. No. 48,515; Feb. 8; Gaz. vol. 223; p. 618.
Grave-marker. J. F. McCloskey. No. 48,562; Feb. 15; Gaz. vol. 223; p. 963.
Grave-marker. W. F. Samples and P. Selvey. No. 48,503; Feb. 1; Gaz. vol. 223; p. 264.
Grille. H. B. Greene. Nos. 48,546–9; Feb. 15; Gaz. vol. 223; p. 960.
Grommet. E. B. Stimpson. Nos. 48,618–19; Feb. 22; Gaz. vol. 223; p. 1348.
Hat. F. Schnoble. No. 48,506; Feb. 1; Gaz. vol. 223; p. 264.
Image. L. Potter. No. 48,650; Feb. 29; Gaz. vol. 223; p. 1694.
Implement, Combination. M. Woisula. No. 48,539; Feb. 8; Gaz. vol. 223; p. 622.
Insulating-joint. L. McCarthy. No. 48,602; Feb. 22; Gaz. vol. 223; p. 1345.
Jar. F. H. Roberts. No. 48,653; Feb. 29; Gaz. vol. 223; p. 1695.
Key-ring holder. W. C. Rourk. No. 48,610; Feb. 22; Gaz. vol. 223; p. 1346.
Knife. G. Kovác. No. 48,496; Feb. 1; Gaz. vol. 223; p. 262.
Knife blade, Hunting-. W. L. Marble. No. 48,624; Feb. 22; Gaz. vol. 223; p. 1349.
Lace. C. J. Watters. Nos. 48,660–3; Feb. 29; Gaz. vol. 223; p. 1696.
Lamp. S. H. Baker. No. 48,514; Feb. 8; Gaz. vol. 223; p. 618.
Lamp globe, Electric-. A. Graeser. No. 48,491; Feb. 1; Gaz. vol. 223; p. 262.
Lamp holder, Electric-. O. A. Traeger. No. 48,588; Feb. 22; Gaz. vol. 223; p. 1343.
Lamp, Portable. H. D. McFaddin. No. 48,565; Feb. 15; Gaz. vol. 223; p. 963.
Lamp-shade. K. Booth. No. 48,484; Feb. 1; Gaz. vol. 223; p. 260
Lamp-shade. A. L. Hettrich. No. 48,520; Feb. 8; Gaz. vol. 223; p. 619
Lamp-shade. L. Schepmoes. No. 48,504; Feb. 1; Gaz. vol. 223; p. 264.

Lamp shade, globe, or reflector. H. D. McFaddin. Nos. 48,527–8; Feb. 8; Gaz. vol. 223; p. 620.

Lead-sharpener and pin-tray, Combination. F. W. Ethridge. No. 48,631; Feb. 29; Gaz. vol. 223; p. 1691.

Light-reflecting-bowl hanger. W. J. Grady. No. 48,517; Feb. 8; Gaz. vol. 223; p. 618.

Light-reflecting hanger. E. L. White. No. 48,537; Feb. 8; Gaz. vol. 223; p. 621.

Lighting-fixture. I. T. Frary. No. 48,544; Feb. 15; Gaz. vol. 223; p. 959.

Lighting-fixture. I. T. Frary. No. 48,589; Feb. 22; Gaz. vol. 223; p. 1343.

Lighting-fixture. M. Herskovitz. No. 48,492; Feb. 1; Gaz. vol. 223; p. 262.

Lighting-fixture. D. Woodhead. No. 48,621; Feb. 22; Gaz. vol. 223; p. 1349.

Lighting-fixture part. P. I. Ansorge. No. 48,481; Feb. 1; Gaz. vol. 223; p. 260.

Lighting-fixture shell. G. M. Tepfer. No. 48,534; Feb. 8; Gaz. vol. 223; p. 621.

Lighting-fixtures and analogous devices, Shell for. H. D. McFaddin. Nos. 48,563–4; Feb. 15; Gaz. vol. 223; p. 963.

Lock. C. D. Oberholtzer. No. 48,604; Feb. 22; Gaz. vol. 223; p. 1345.

Manicure instrument. M. Klaas. No. 48,495; Feb. 1; Gaz. vol. 223; p. 262.

Motor casing, Fan-. W. Noble. No. 48,569; Feb. 15; Gaz. vol. 223; p. 964.

Nappy. A. J. Sanford. No. 48,529; Feb. 8; Gaz. vol. 223; p. 620.

Panic-lock. C. J. Prinzler. No. 48,651; Feb. 29; Gaz. vol. 223; p. 1694.

Pencil-clip and eyeglass-support, Combined. G. A. Schlechter. No. 48,655; Feb. 29; Gaz. vol. 223; p 1695.

Percolator. W. Luttringhaus. Nos. 48,559–60; Feb. 15; Gaz. vol. 223; p. 962.

Phonographs or talking-machines, Casing for. W. F. Grupe. No. 48,591; Feb. 22; Gaz. vol. 223; p. 1343.

Picture-card, Folding. B. P. Silver. No. 48,506; Feb. 1; Gaz. vol. 223; p. 264.

Picture-frame. W. W. Giveans. No. 48,545; Feb. 15; Gaz. vol. 223; p. 959.

Pitcher. F. Lockett. No. 48,597; Feb. 22; Gaz. vol. 223; p. 1344.

Plate. F. Lockett. No. 48,595; Feb. 22; Gaz. vol. 223; p. 1344.

Plate or similar article. F. A. Sebring. Nos. 48,015–16; Feb. 22; Gaz. vol. 223; pp. 1347–8.

Precious or semiprecious or synthetic stone or an imitation thereof. W. Miller. Nos. 48,643–4; Feb. 29; Gaz. vol. 223; p. 1693.

Radiator-shield. C. W. G. Sodemann. No. 48,507; Feb. 1; Gaz. vol. 223; p. 264.

Ring. A. J. Beacom. No. 48,483; Feb. 1; Gaz. vol. 223; p. 260.

Ring. C. Rosenberger. No. 48,608; Feb. 22; Gaz. vol. 223; p. 1346.

Rubber brush. O. Elck. No. 48,586; Feb. 22; Gaz. vol. 223; p. 1342.

Rug. M. Rosenthal. Nos. 48,500–1; Feb. 1; Gaz. vol. 223; p. 263.

Saucer. F. Lockett. No. 48,599; Feb. 22; Gaz. vol. 223; p. 1344.

Shield. L. C. Pedlar. No. 48,605; Feb. 22; Gaz. vol. 223; p. 1345.

Soap-dish. S. D. Baker. No. 48,482; Feb. 1; Gaz. vol. 223; p. 260.

Sprinkler, Hand-. M. Z. Socha. No. 48,617; Feb. 22; Gaz. vol. 223; p. 1348.

Statuette. E. F. Steffens. No. 48,657; Feb. 29; Gaz. vol. 223; p. 1695.

Stone or an imitation thereof, Precious or semiprecious or synthetic. M. L. Robbins. Nos. 48,498–9; Feb. 1; Gaz. vol. 223; p. 263.

Stove. M. R. Lehman. Nos. 48,552–5; Feb. 15; Gaz. vol. 223; p. 961.

Stove, Heating-. M. R. Lehman. Nos. 48,556–7; Feb. 15; Gaz. vol. 223; pp. 961–2.

Sugar and creamer, Combined. J. P. Casey. No. 48,540; Feb. 8; Gaz. vol. 223; p. 622.

Talking-machine cabinet. W. Rotter. No. 48,609; Feb. 22; Gaz. vol. 223; p. 1346.

Telegraphy, Casing for hand-operated generators for wireless. A. H. Johnson. No. 48,638; Feb. 29; Gaz. vol. 223; p. 1692.

Telephone or telegraph cup. G. W. Graham. No. 48,590; Feb. 22; Gaz. vol. 223; p. 1343.

Tire. E. F. Lyon. No. 48,524; Feb. 8; Gaz. vol. 223; p. 619.

Tire. J. C. McLean. No. 48,541; Feb. 8; Gaz. vol. 223; p. 622.

Tire, Elastic vehicle-. P. E. Werner. No. 48,509; Feb. 1; Gaz. vol. 223; p. 265.

Tire, Pneumatic. R. Griffith. No. 48,636; Feb. 29; Gaz. vol. 223; p. 1692.

Tire, Pneumatic vehicle-. R. G. Null. No. 48,571; Feb. 15; Gaz. vol. 223; p. 964.

Tire tread-surface. P. S. Mallekson. No. 48,561; Feb. 15; Gaz. vol. 223; p. 963.

Tire, Vehicle-. J. Christy. No. 48,485; Feb. 1; Gaz. vol. 223; p. 260.

Toy. A. D. Twyeffort. No. 48,535; Feb. 8; Gaz. vol. 223; p. 621.

Toy bank. H. G. Thompson. No. 48,620; Feb. 22; Gaz. vol. 223; p. 1348.

Toy or miniature talking-machine. P. A. Horswell and W. H. Millikan. No. 48,592; Feb. 22; Gaz. vol. 223; p. 1343.

Tray, Tea-. C. A. Eastman. No. 48,543; Feb. 15; Gaz. vol. 223; p. 959.

Trunk, Wardrobe-. F. W. Johnson. No. 48,639; Feb. 29; Gaz. vol. 223; p. 1692.

Twine-holder. M. H. Nevius. Nos. 48,645—9; Feb. 29; Gaz. vol. 223; pp. 1693–4.

Urn, Dispensing-. L. S. Lines. No. 48,594; Feb. 22; Gaz. vol. 223; p. 1344.

Vase. A. J. Sanford. No. 48,572; Feb. 15; Gaz. vol. 223; p. 964.

Vase. A. J. Sanford. No. 48,613; Feb. 22; Gaz. vol. 223; p. 1347.

Veilings, Border for net. Z. Van Raalte. No. 48,508; Feb. 1; Gaz. vol. 223; p. 265.

Vest or similar article. V. E. Blom. No. 48,511; Feb. 1; Gaz. vol. 223; p. 265.

Wall-covering. R. B. Griffin. No. 48,518; Feb. 8; Gaz. vol. 223; p. 618.

Weapon. P. Williams. No. 48,510; Feb. 1; Gaz. vol. 223; p. 265.

Yarn-ball holder. D. P. Benjamin. No. 48,542; Feb. 15; Gaz. vol. 223; p. 959.

ALPHABETICAL LIST OF TRADE-MARKS.

Albums, Picture-. J. L. Loeb. No. 108,871; Feb. 29; Gaz. vol. 223; p. 1714.

Alcohol fuel, Solidified-. P. N. Friedlaender. No. 108,426; Feb. 8; Gaz. vol. 223; p. 644.

Alloys and alloying metals used in the manufacture of special steels. Electro Metallurgical Company. No. 108,865; Feb. 29; Gaz. vol. 223; p. 1714.

Alterative and tonic, Vegetable. A. W. Boyd. No. 108,632; Feb. 22; Gaz. vol. 223; p. 1369.

Ammonia carbonate. American Agricultural Chemical Co. No. 108,733; Feb. 22; Gaz. vol. 223; p. 1372.

Antiseptic solution. H. B. Green. No. 108,557; Feb. 15; Gaz. vol. 223; p. 988.

Antiseptic, vaccin, and germicide preparations, Liquid, &c. R. B. Waite. No. 108,353; Feb. 1; Gaz. vol. 223; p. 286.

Apples, Fresh. Hood River Apple & Storage Company. No. 108,602; Feb. 15; Gaz. vol. 223; p. 990.

Apples, Fresh. Tri-State Fruit Co. No. 108,541; Feb. 15; Gaz. vol. 223; p. 988.

Asphalt felts, fabrics, walls, floors, and pavements. J. L. Fulton & Co. No. 108,552; Feb. 15; Gaz. vol. 223; p. 988.

Asphaltum. Standard Oil Company. No. 108,576; Feb. 15; Gaz. vol. 223; p. 989.

Automobile accessories. Auto Device Mfg. Co. No. 108,584; Feb. 15; Gaz. vol. 223; p. 989.

Automobile and truck engine starting devices. Sandbo Starter Company. No. 108,664; Feb. 22; Gaz. vol. 223; p. 1370.

Automobiles. Moon Motor Car Company. No. 108,714; Feb. 22; Gaz. vol. 223; p. 1371.

Babbitt metal. I. M. Jacobson & Sons Co. No. 108,703; Feb. 22; Gaz. vol. 223; p. 1371.

Babbitt metal. Syracuse Smelting Works. No. 108,579; Feb. 15; Gaz. vol. 223; p. 989.

Baked goods. General Colonial Company. No. 108,430; Feb. 8; Gaz. vol 223; p. 644.

Baking-powder. The Geiger-Fishback Co. No. 108,788; Feb. 29; Gaz. vol. 223; p. 1712.

Baking-powder. P. C. Knowlton Co. No. 108,796; Feb. 29; Gaz. vol. 223; p. 1712.

Baking-powder and cream tartar. Allen & Lewis. No. 108,378; Feb. 8; Gaz. vol. 223; p. 643.

Balsam compound for cuts, burns, boils, &c. D. Biollino. No. 108,462; Feb. 8; Gaz. vol. 223; p. 645.

Bandaging material. A. Lindner Gesellschaft mit beschränkter Haftung. No. 108,525; Feb. 15; Gaz. vol. 223; p. 987.

Batteries and casings therefor, Electric. Novo Manufacturing Co. No. 108,343; Feb. 1; Gaz. vol. 223; p. 285.

Beer. Franklin Brewing Company. No. 108,745; Feb. 22; Gaz. vol. 223; p. 1372.

Belting, hose, and non-metallic tires, Certain named. Traveller Tire and Tube Co. No. 108,581; Feb. 15; Gaz. vol. 223; p. 989.

Beverage and syrup for making same, Carbonated non-alcoholic. Apollo Soda Water Co. No. 108,850; Feb. 29; Gaz. vol. 223; p. 1713.

Beverage, Malt. McAvoy Brewing Company. No. 108,801; Feb. 29; Gaz. vol. 223; p. 1712.

Beverage, Non-alcoholic. The Tem-Po Mfg. Co. No. 108,876; Feb. 29; Gaz. vol. 223; p. 1714.

Beverage, Non-intoxicating malt. Dick & Bros. Quincy Brewery Co. No. 108,392; Feb. 8; Gaz. vol. 223; p. 643.

Beverage, Nutritious tonic food. C. Schilder. No. 108,350; Feb. 1; Gaz. vol. 223; p. 286.

Beverage, Pineapple. J. Tim. No. 108,540; Feb. 15; Gaz. vol. 223; p. 988.

Beverages as a soft drink, Non-alcoholic. The Jacobs Pharmacy Company. No. 108,702; Feb. 22; Gaz. vol. 223; p. 1371.

Beverages, Carbonated non-alcoholic. Central Consumers Company. No. 108,465; Feb. 8; Gaz. vol. 223; p. 645.

Beverages, Non-alcoholic carbonated. W. M. Draper. No. 108 692; Feb. 22; Gaz. vol. 223; p. 1371.

Beverages, Non-alcoholic carbonated tonic. G. L. Mayer. No. 108,710; Feb. 22; Gaz. vol. 223; p. 1371.

Biscuit. National Biscuit Company. No. 108,489; Feb. 8; Gaz. vol. 223; p. 646.

Bitumen and asphalt. Anglo Mexican Petroleum Products Company. No. 108,628; Feb. 22; Gaz. vol. 223; p. 1369.

Blood-purifier. L. Marinkás. No. 108,365; Feb. 1; Gaz. vol. 223; p. 286.

Boots and shoes. D. J. Cameron. Nos. 108,327–8; Feb. 1; Gaz. vol. 223; p. 285.

Boots and shoes. D. J. Cameron. No. 108,504; Feb. 15; Gaz. vol. 223; p. 987.

Boots and shoes, Leather. The Beck Shoe Company. No. 108,587; Feb. 15; Gaz. vol. 223; p. 989.

Boots and shoes, Leather. Edwin Clapp & Son. No. 108,775; Feb. 29; Gaz. vol. 223; p. 1711.

Boots and shoes, Leather. Federal Shoe Co. No. 108,785; Feb. 29; Gaz. vol. 223; p. 1711.

Boots and shoes, Leather. A. Kimball Shoe Co. No. 108,606; Feb. 15; Gaz. vol. 223; p. 990.

Boots and shoes, Leather. J. H. Winchell & Co. No. 108,849; Feb. 29; Gaz. vol. 223; p. 1713.

Boots, shoes, slippers, overgaiters, leggings. A. A. Kohn. No. 108,435; Feb. 8; Gaz. vol. 223; p. 644.

Bottle-seals. Ferdinand Gutmann & Co. No. 108,395; Feb. 8; Gaz. vol. 223; p. 643.

Bottles, syringes, &c., Water-. Goodyear's India Rubber Glove Mfg. Co. No. 108,470; Feb. 8; Gaz. vol. 223; p. 645.

Bracelets for wrist-watches. Dubois Watch Case Company. No. 108,780; Feb. 29; Gaz. vol. 223; p. 1711.

Bracelets, Precious-metal or plated. Shuttles Bros. & Lewis. No. 108,873; Feb. 29; Gaz. vol. 223; p. 1714.

Bread. C. E. Mason. No. 108,609; Feb. 15; Gaz. vol. 223; p. 990.

Bread. Specialty Baking Company. No. 108,498; Feb. 8; Gaz. vol. 223; p. 646.

Bricks. Washburn Bros. Company. No. 108,410; Feb. 8; Gaz. vol. 223; p. 644.

Building and roofing material, Water and weather proof. The Paraffine Paint Company. No. 108,657; Feb. 22; Gaz. vol. 223; p. 1370.

Bust-forms, puffs, ruffles, &c. M. D. Neilson. No. 108,810; Feb. 29; Gaz. vol. 223; p. 1712.

Bust-supporters and brassières. Madame Irène. No. 108,708; Gaz. vol. 223; p. 1371.

Butter. The Fox River Butter Company. No. 108,469; Feb. 8; Gaz. vol. 223; p. 645.

Butter and eggs. Schlosser Brothers. No. 108,665; Feb. 22; Gaz. vol. 223; p. 1370.

Butter, cheese, and eggs. Northern Wisconsin Produce Co. No. 108,650; Feb. 22; Gaz. vol. 223; p. 1370.

Butter, Creamery-. Mississippi Creamery Association. No. 108,610; Feb. 15; Gaz. vol 223; p. 990.

Calcium salt or salts. Pitman-Moore Co. No. 108,528; Feb. 15; Gaz. vol. 223; p. 987.

Candles. H. M. Sherman. No. 108,666; Feb. 22; Gaz. vol. 223; p. 1370.

Candy. J. S. Bell Confectionery Co. No. 108,413; Feb. 8; Gaz. vol. 223; p. 644.

Candy. Package Confectionery Company. No. 108,493; Feb. 8; Gaz. vol. 223; p. 646.

Candy. Reymer & Brothers. No. 108,400; Feb. 8; Gaz. vol. 223; p. 643.

Candy. Reymer & Brothers. No. 108,720; Feb. 22; Gaz. vol. 223; p. 1371.

Candy. Stephen F. Whitman & Son. No. 108,583; Feb. 15; Gaz. vol. 223; p. 989.

Candy and coffee. Shelby Candy & Coffee Co. No. 108,621; Feb. 15; Gaz. vol. 223; p. 990.

Candy, Laxative. A. Singer. No. 108,839; Feb. 29; Gaz. vol. 223; p. 1713.

Candy mints to sweeten the breath and aid digestion. Boro Salicine Co. No. 108,682; Feb. 22; Gaz. vol. 223; p. 1370.

Canned fish. Southern California Fish Company. No. 108,840; Feb. 29; Gaz. vol. 223; p. 1713.

Canned fruits and vegetables. Pacific Coast Canning Co. No. 108,818; Feb. 29; Gaz. vol. 223; p. 1712.

Canned fruits and vegetables and catsup. Park Grant and Morris. No. 108,614; Feb. 15; Gaz. vol. 223; p. 990.

Canned fruits, vegetables, oysters, &c. Sussman, Wormser & Co. No. 108,452; Feb. 8; Gaz. vol. 223; p. 645.

Canned peas. Watertown Canning Company. No. 108,454; Feb. 8; Gaz. vol. 223; p. 645.

Canned salmon. Admiralty Trading Co. No. 108,627; Feb. 22; Gaz. vol. 223; p. 1369.

Canned salmon. Alaska Sanitary Packing Co. No. 108,355; Feb. 1; Gaz. vol. 223; p. 286.

Canned salmon. George Inlet Packing Co. Nos. 108,362–3; Feb. 1; Gaz. vol. 223; p. 286.

Canned salmon. Thlinket Packing Company. No. 108,453; Feb. 8; Gaz. vol. 223; p. 645.

Canned salmon and evaporated milk. The Sears & Nichols Co. No. 108,756; Feb. 22; Gaz. vol. 223; p. 1373.

Canned vegetables. Central Lake Canning Co. No. 108,389; Feb. 8; Gaz. vol. 223; p. 643.

Carbons for projectors, &c. Speer Carbon Company. No. 108,574; Feb. 15; Gaz. vol. 223; p. 989.

Carpets. Roxbury Carpet Company. No. 108,496; Feb. 8; Gaz. vol. 223; p. 646.

Caviar. I. Moos. No. 108,715; Feb. 22; Gaz. vol. 223; p. 1371.

Cement, Portland. Standard Portland Cement Corporation. No. 108,669; Feb. 22; Gaz. vol. 223; p. 1370.
Cement, Roofing and waterproofing. Standard Paint Company. No. 108,403; Feb. 8; Gaz. vol. 223; p. 643.
Chamois-leather. Black Horn Sales Co. No. 108,415; Feb. 8; Gaz. vol 223; p. 644.
Check-protectors, Mechanical. Hedman Manufacturing Company. No. 108,791; Feb. 29; Gaz. vol. 223; p. 1712.
Cheese. A. Grossenbach Co. No. 108,431; Feb. 8; Gaz. vol. 223; p. 644.
Cheese. Haupt & Burgi. No. 108,600; Feb. 15; Gaz. vol. 223; p. 990.
Cheese. McLeod & Ormsbee. No. 108,367; Feb. 1; Gaz. vol. 223; p. 286.
Cheese. J. Morrell & Co. No. 108,438; Feb. 8; Gaz. vol. 223; p. 644.
Chemicals, medicines, and pharmaceutical preparations, Certain named. Merck & Co. No. 108,566; Feb. 15; Gaz. vol. 223; p. 989.
Chocolates. Hunte Brothers. No. 108,418; Feb. 8; Gaz. vol. 223; p. 644.
Cigarettes. Roseclor Cigarette Co. No. 108,721; Feb. 22; Gaz. vol. 223; p. 1371.
Cigarettes and pipe-tobacco. Charles R. Perkins Company. No. 108,719; Feb. 22; Gaz. vol. 223; p. 1371.
Cigars, cigarettes, and smoking-tobacco. Thomas G. Plant Company. No. 108,821; Feb. 29; Gaz. vol. 223; p. 1713.
Cinematograph-films. Pathé Frères. Nos. 108,509–70; Feb. 15; Gaz. vol. 223; p. 989.
Cinematograph-films. Pathé Frères. No. 108,610; Feb. 15; Gaz. vol. 223; p. 990.
Cleats, Seam-. A. C. Fischer. No. 108,786; Feb. 29; Gaz. vol. 223; p. 1711.
Clippers, Deborning-. American Metal Products Company. No. 108,763; Feb. 29; Gaz. vol. 223; p. 1711.
Closet tanks, water-closets, urinals, &c., Water-. John Maddock & Sons. No. 108,503; Feb. 15; Gaz. vol. 223; p. 980.
Clothing, Certain named. The Baby Outfitters. No. 108,670; Feb. 22; Gaz. vol. 223; p. 1370.
Clothing, Certain named. S. Glaser & Co. No. 108,694; Feb. 22; Gaz. vol. 223; p. 1371.
Clothing, Certain named. Montgomery Ward & Co. No. 108,527; Feb. 15; Gaz. vol. 223; p. 987.
Clothing, Certain named articles of. Wright & Ditson. No. 108,675; Feb. 22; Gaz. vol. 223; p. 1370.
Clothing for men, Certain named. The Knorr-Schlaudt Notion Co. No. 108,649; Feb. 22; Gaz. vol. 223; p. 1369.
Clothing sets comprising bath-robe, socks, and blanket, Children's. Quaker Robe Company. No. 108,823; Feb. 29; Gaz. vol. 223; p. 1713.
Coal. Bickett Coal and Coke Company. No. 108,737; Feb. 22; Gaz. vol. 223; p. 1372.
Coal. P. A. Coen. No. 108,740; Feb. 22; Gaz. vol. 223; p. 1372.
Coal and coke. American Coal Exporting Co. No. 108,761; Feb. 29; Gaz. vol. 223; p. 1711.
Coats and overcoats, Men's. L. Adler, Bros. & Co. No. 108,321; Feb. 1; Gaz. vol. 223; p. 285.
Coats and trousers. The Snellenburg Clothing Company. No. 108,450; Feb. 8; Gaz. vol. 223; p. 645.
Coats, vests, and trousers, Men's and boys'. A. M. Simon. No. 108,373; Feb. 1; Gaz. vol. 223; p. 286.
Coats, vests, trousers, and overcoats, Young men's. H. A. Selinsheimer. No. 108,573; Feb. 15; Gaz. vol. 223; p. 989.
Coats, vests, trousers, overcoats, and rain-coats. Hart Schaffner & Marx. No. 108,397; Feb. 8; Gaz. vol. 223; p. 643.
Coats, vests, trousers, overcoats, and rain-coats. Hart Schaffner & Marx. No. 108,513; Feb. 15; Gaz. vol. 223; p. 987.
Cocoa. Gallunis Bros. No. 108,427; Feb. 8; Gaz. vol. 223; p. 644.
Coffee. Baker Importing Co. No. 108,358; Feb. 1; Gaz. vol. 223; p. 286.
Coffee. Bowers Bros. Nos. 108,384–5; Feb. 8; Gaz. vol. 223; p. 643.
Coffee. G. E. Bursley & Co. No. 108,853; Feb. 29; Gaz. vol. 223; p. 1713.
Coffee. H. R. Hall Company. No. 108,396; Feb. 8; Gaz. vol. 223; p. 643.
Coffee. McCord-Stewart Company. No. 108,480; Feb. 8; Gaz. vol. 223; p. 646.
Coffee. Mutual Coffee Co. No. 108,611; Feb. 15; Gaz. vol. 223; p. 990.
Coffee and chicory compound. Merchants Coffee Co. of New Orleans. No. 108,368; Feb. 1; Gaz. vol. 223; p. 286.
Coffee, tea, spices, rice, and peanuts. The James G. Gill Co. No. 108,595; Feb. 15; Gaz. vol. 223; p. 989.
Colors, Food-. B. Heller & Co. No. 108,792; Feb. 29; Gaz. vol. 223; p. 1712.
Combs made of rubber or composition, Toilet-. The Vulcanized Rubber Co. of New York. No. 108,730; Feb. 22; Gaz. vol. 223; p. 1372.
Cookers, Fireless. F. W. Davenport. No. 108,330; Feb. 1; Gaz. vol. 223; p. 285.
Corn-plasters. H. V. Sheppard. No. 108,838; Feb. 29; Gaz. vol. 223; p. 1713.
Cornmeal, cream and yellow meals, &c. Engelke & Feiner Mfg. Co. No. 108,782; Feb. 29; Gaz. vol. 223; p. 1711.
Cotton, Crochet-. Carson, Pirie, Scott & Co. No. 108,419; Feb. 8; Gaz. vol. 223; p. 644.
Cotton dress goods. Fearing, Whiton & Co. No. 108,784; Feb. 29; Gaz. vol. 223; p. 1711.
Cotton piece goods. Ostrander & Company. No. 108,444; Feb. 8; Gaz. vol. 223; p. 645.
Cotton piece goods and blankets. Amory, Browne & Co. Nos. 108,764–5; Feb. 29; Gaz. vol. 223; p. 1711.
Cotton piece goods, sheets, and pillow-cases. Naumkeag Steam Cotton Co. No. 108,809; Feb. 29; Gaz. vol. 223; p. 1712.
Cotton piece goods, Woven. Neuss, Hesslein & Co. Nos. 108,811–12; Feb. 29; Gaz. vol. 223; p. 1712.
Cotton-warp fabrics with wool, mohair, or alpaca fillings. Lesher Whitman & Co. No. 108,479; Feb. 8; Gaz. vol. 223; p. 646.
Crank and license-number holders and antirattlers. W. S. Graffam. No. 108,597; Feb. 15; Gaz. vol. 223; p. 597.
Cream-separators. Beatrice Creamery Company. No. 108,586; Feb. 15; Gaz. vol. 223; p. 989.
Curtains, Lace. Camden Curtain & Embroidery Company. No. 108,772; Feb. 29; Gaz. vol. 223; p. 1711.
Cutlery, machinery, and tools and parts thereof, Certain named. Henry Disston & Sons Incorporated. No. 108,690; Feb. 22; Gaz. vol. 223; p. 1371.
Cutlery, machinery, and tools, and parts thereof, Certain named. The National-Acme Manufacturing Company. No. 108,806; Feb. 29; Gaz. vol. 223; p. 1712.
Cutters, Routing-. John Royle & Sons. Nos. 108,826–32; Feb. 29; Gaz. vol. 223; p. 1713.
Dental, medical, and surgical appliances, Certain named. J. A. Arnold. No. 108,502; Feb. 15; Gaz. vol. 223; p. 987.
Dental, medical, and surgical appliances, Certain named. Fabrique de Machines "Mikron" S. A. No. 108,551; Feb. 15; Gaz. vol. 223; p. 988.
Dentifrice. A. E. Rauel. No. 108,533; Feb. 15; Gaz. vol. 223; p. 988.
Dentifrice and mouth-wash. Oristo Chemical Co. No. 108,508; Feb. 15; Gaz. vol. 223; p. 989.
Deodorant, Cream. Gerhard Meunen Chemical Co. No. 108,713; Feb. 22; Gaz. vol. 223; p. 1371.
Diapers and maternity-pads. Leavitt-Mink Mfg. Co. No. 108,869; Feb. 29; Gaz. vol. 223; p. 1714.
Dictionary. Funk & Wagnalls Company. No. 108,693; Feb. 22; Gaz. vol. 223; p. 1371.
Dies, metal-working tools, &c. The National-Acme Manufacturing Company. No. 108,807; Feb. 29; Gaz. vol. 223; p. 1712.
Display-cases. Wilmarth Show Case Company. No. 108,457; Feb. 8; Gaz. vol. 223; p. 645.
Dolls. Indestructo Specialties Co. No. 108,646; Feb. 22; Gaz. vol. 223; p. 1369.
Dolls. B. A. Simmons. No. 108,667; Feb. 22; Gaz. vol. 223; p. 1370.
Drains and traps, Floor. Crampton-Farley Brass Co. No. 108,548; Feb. 15; Gaz. vol. 223; p. 988.
Dresses. P. S. Gill. No. 108,639; Feb. 22; Gaz. vol. 223; p. 1369.
Drinks, Soft. Bowers'-Seltzer Mead Co. No. 108,683; Feb. 22; Gaz. vol. 223; p. 1370.
Duplicators and parts of same. The Beck Duplicator Company. No. 108,768; Feb. 29; Gaz. vol. 223; p. 1711.
Dusting and metal-polishing cloths. I. L. Schelnman. No. 108,620; Feb. 15; Gaz. vol. 223; p. 990.
Electric-light fixtures. J. D. Raymond. No. 108,753; Feb. 22; Gaz. vol. 223; p. 1372.
Electric-light fixtures. P. Simpson. No. 108,668; Feb. 22; Gaz. vol. 223; p. 1370.
Electric-light fixtures. St. Louis Brass Manufacturing Company. No. 108,726; Feb. 22; Gaz. vol. 223; p. 1372.
Electrical conductors and cables, Insulated. Bishop Gutta-Percha Company. No. 108,503; Feb. 15; Gaz. vol. 223; p. 987.
Elixir and syrup and carbonated beverage made therefrom, Fruit and herb. Bludwine Company. No. 108,738; Feb. 22; Gaz. vol. 223; p. 1372.
Embossing, Waxy composition used in process of. O. Schmidt. No. 108,497; Feb. 8; Gaz. vol. 223; p. 646.
Engine-cylinders, Compounds for removing carbonaceous deposits from. J. A. Anderson. No. 108,400; Feb. 8; Gaz. vol. 223; p. 645.
Engines, Gas-. Aerothrust Engine Company. No. 108,760; Feb. 29; Gaz. vol. 223; p. 1711.
Fabrics, Coated. D. W. Northrop. No. 108,813; Feb. 29; Gaz. vol. 223; p. 1712.
Farina, rolled oats, and oatmeal. Robin Hood Mills. No. 108,370; Feb. 1; Gaz. vol. 223; p. 286.
Fats, Cooking-. Kosher Products Co. No. 108,476; Feb. 8; Gaz. vol. 223; p. 646.
Feed, Chick and hen. F. B. Chamberlain Co. No. 108,466; Feb. 8; Gaz. vol. 223; p. 645.
Feed, Poultry. Lawther Grain Company. No. 108,750; Feb. 22; Gaz. vol. 223; p. 1372.
Feed, Stock, dairy, and poultry. Ralston Purina Company. No. 108,494; Feb. 8; Gaz. vol. 223; p. 646.
Feeds for horses, cattle, and farm stock, Mixed. Chapin & Company. No. 108,636; Feb. 22; Gaz. vol. 223; p. 1369.
Fence-posts, Metallic. Chicago Steel Post Company. No. 108,468; Feb. 8; Gaz. vol. 223; p. 645.

Fertilizer-distributers, including lime-spreaders. Hench & Dromgold Company. No. 108,807; Feb. 29; Gaz. vol. 223; p. 1714.
Filtering materials, Oil-. William Andrews, Incorporated. No. 108,380; Feb. 8; Gaz. vol. 223; p. 643.
Filters, Oil-. William Andrews, Incorporated. No. 108,379; Feb. 8; Gaz. vol. 223; p. 643.
Fish-bait, Artificial. Wise Sportsman's Supply Co. No. 108,879; Feb. 29; Gaz. vol. 223; p. 1714.
Flavoring extracts, Food-. F. J. McMurtrie. No. 108,711; Feb. 22; Gaz. vol. 223; p. 1371.
Flavoring extracts for foods. W. A. Kittredge. No. 108,648; Feb. 22; Gaz. vol. 223; p. 1369.
Flour, Cake and pastry wheat-. G. W. Ziebold. No. 108,676; Feb. 22; Gaz. vol. 223; p. 1370.
Flour, Prepared Cake-. C. A. Gambrill Mfg. Co. No. 108,428; Feb. 8; Gaz. vol. 223; p. 644.
Flour, Self-rising wheat-. McCord-Stewart Company. No. 108,653; Feb. 22; Gaz. vol. 223; p. 1369.
Flour, Wheat-. Acme Milling Company. No. 108,376; Feb. 8; Gaz. vol. 223; p. 643.
Flour, Wheat-. W. M. Atkinson. No. 108,630; Feb. 22; Gaz. vol. 223; p. 1369.
Flour, Wheat-. Bemmels Milling Company. No. 108,414; Feb. 8; Gaz vol. 223; p. 644.
Flour, Wheat-. The Commercial Milling Co. No. 108,390; Feb. 8; Gaz. vol. 223; p. 643.
Flour, Wheat-. Goode & Dunkle. No. 108,642; Feb. 22; Gaz. vol. 223; p. 1369.
Flour, Wheat-. W. R. Grace & Co. No. 108,506; Feb. 15; Gaz. vol. 223; p. 989.
Flour, Wheat-. Model Mill Company. No. 108,655; Feb. 22; Gaz. vol. 223; p. 1369.
Flour, Wheat-. Randolph Milling Co. No. 108,660; Feb. 22; Gaz. vol. 223; p. 1370.
Flour, Wheat-. The Rowland Company. No. 108,534; Feb. 15; Gaz. vol. 223; p. 988.
Flour, Wheat-. The Scott County Milling Company. Nos. 108,723–4; Feb. 22; Gaz. vol. 223; p. 1372.
Flour, Wheat-. G. W. Ziebold. No. 108,677; Feb. 22; Gaz. vol. 223; p. 1370.
Food, Poultry. The Ansted & Burk Co. No. 108,629; Feb. 22; Gaz. vol. 223; p. 1369.
Foods, Certain named. O. C. Beard. No. 108,681; Feb. 22; Gaz. vol. 223; p. 1370.
Foods, Certain named. Edward M. Raphel & Co. No. 108,532; Feb. 15; Gaz. vol. 223; p. 988.
Foods, Certain named. J. P. Galligan Co. No. 108,361; Feb. 1; Gaz. vol. 223; p. 286.
Foods, Certain named. Geo. Rubb & Sons. No. 108,633; Feb. 22; Gaz. vol. 223; p. 1369.
Foods, Certain named. Goldberg, Bowen & Co. No. 108,510; Feb. 15; Gaz. vol. 223; p. 987.
Foods, Certain named. Gowan-Lenning-Brown Co. No. 108,364; Feb. 1; Gaz. vol. 223; p. 286.
Foods, Certain named. Louis Pfaelzer & Sons. No. 108,658; Feb. 22; Gaz. vol. 223; p. 1370.
Foods, Certain named. McClelland-Ward Co. No. 108,366; Feb. 1; Gaz. vol. 223; p. 286.
Foods, Certain named. Steele-Wedeles Company. No. 108,623; Feb. 15; Gaz. vol. 223; p. 990.
Foods, Certain named. The Vionana Company. No. 108,352; Feb. 1; Gaz. vol. 223; p. 286.
Foods, Certain named. E. A. Zatarain. No. 108,759; Feb. 22; Gaz. vol. 223; p. 1373.
Foods, Prepared animal. R. A. Wittemann. No. 108,674; Feb. 22; Gaz. vol. 223; p. 1370.
Friction-tape. The Mechanical Rubber Company. No. 108,487; Feb. 8; Gaz. vol. 223; p. 646.
Fruits, Citrus. M. A. Rice. No. 108,448; Feb. 8; Gaz. vol. 223; p. 645.
Fruits, Citrus. Terra Cela Citrus Growers Assn. No. 108,374; Feb. 1; Gaz. vol. 223; p. 286.
Fruits, Fresh and green. Wenatchee North Central Fruit Distributors. No. 108,673; Feb. 22; Gaz. vol. 223; p. 1370.
Fuel-economizer. Franey, Shore & Co. No. 108,425; Feb. 8; Gaz. vol. 223; p. 644.
Furniture. M. Reischmann & Sons. No. 108,661; Feb. 22; Gaz. vol. 223; p. 1370.
Furniture and upholstery, Certain named. Harlem Furniture Company. No. 108,699; Feb. 22; Gaz. vol. 223; p. 1371.
Furniture and upholstery, Certain named. The United States Bedding Co. No. 108,672; Feb. 22; Gaz. vol. 223; p. 1370.
Furniture and wood polish and polishing-oils. H. G. Saal Company. No. 108,349; Feb. 1; Gaz. vol. 223; p. 285.
Furniture, Floor, and automobile polish. K. A. Sandhop. No. 108,722; Feb. 22; Gaz. vol. 223; p. 1371.
Furniture, Library. The Macey Company. No. 108,436; Feb. 8; Gaz. vol. 223; p. 644.
Furniture-polish. W. B. Herrera. No. 108,868; Feb. 29; Gaz. vol. 223; p. 1714.
Gaming sets. The Halma Company. No. 108,747; Feb. 22; Gaz. vol. 223; p. 1372.
Garbage-receptacles. O'Neill Brothers. No. 108,344; Feb. 1; Gaz. vol. 223; p. 285.
Garments, Certain named ladies'. J. D. Posner. No. 108,752; Feb. 22; Gaz. vol. 223; p. 1372.
Garments or suits for children, Outer one-piece. Levi Strauss & Company. No. 108,404; Feb. 8; Gaz. vol. 223; p. 643.
Garters. A. Stein & Company. No. 108,490; Feb. 8; Gaz. vol. 223; p. 646.
Gin, Straight Old Tom. Booth's Distillery, Limited. No. 108,771; Feb. 29; Gaz. vol. 223; p. 1711.
Ginghams. Ostrander & Company. No. 108,445; Feb. 8; Gaz. vol. 223; p. 645.
Glass bowls, plates, pitchers, &c. Oneida Community. No. 108,815; Feb. 29; Gaz. vol. 223; p. 1712.
Gloves, Leather. California Glove Company. No. 108,588; Feb. 15; Gaz. vol. 223; p. 989.
Grinding and crushing machinery. The Jeffrey Manufacturing Company. No. 108,603; Feb. 15; Gaz. vol. 223; p. 990.
Gum and confection, Chewing-. C. A. Crane. No. 108,421; Feb. 8; Gaz. vol. 223; p. 644.
Hair for upholstering, &c., Vegetable fibers used in the manufacture of artificial. J. H. Vavasseur & Co. No. 108,729; Feb. 22; Gaz. vol. 223; p. 1372.
Hair-restorer. E. W. Golden. No. 108,790; Feb. 29; Gaz. vol. 223; p. 1712.
Hair-tonic. M. D. Leiter. No. 108,478; Feb. 8; Gaz. vol. 223; p. 646.
Hair-tonic and face-cream. W. F. Lott. No. 108,526; Feb. 15; Gaz. vol. 223; p. 987.
Hair wash and tonic. The Boyd Company. No. 108,545; Feb. 15; Gaz. vol. 223; p. 988.
Hams and bacon, Cured. H. D. Baumgardner. No. 108,412; Feb. 8; Gaz. vol. 223; p. 644.
Handkerchiefs. Marshall Field & Co. No. 108,424; Feb. 8; Gaz. vol. 223; p. 644.
Hardware and plumbing supplies, Certain named. The By-Lo Stores Company. No. 108,635; Feb. 22; Gaz. vol. 223; p. 1369.
Hats and caps. B. Burnside. No. 108,546; Feb. 15; Gaz. vol. 223; p. 988.
Hay, Baled. The Shoemaker Company. No. 108,536; Feb. 15; Gaz. vol. 223; p. 988.
Headlight-dimmers. The O-U-Lite Company. No. 108,814; Feb. 29; Gaz. vol. 223; p. 1712.
Heat-insulating material. Northern Insulating Company. No. 108,441; Feb. 8; Gaz. vol. 223; p. 645.
Heaters, Hot-blast. W. M. Kingsbury. No. 108,335; Feb. 1; Gaz. vol. 223; p. 285.
Heating-system steam-generators and valves, Hot-water-. The Phelps Heating Specialty Co. No. 108,820; Feb. 29; Gaz. vol. 223; p. 1713.
Hinges and connected ware, Door-. Herr & Company. No. 108,601; Feb. 15; Gaz. vol. 223; p. 990.
Hog-fattener. National Hog Fattener Co. No. 108,439; Feb. 8; Gaz. vol. 223; p. 645.
Horse-collars. Schwahn-Seyberth Saddlery Co. No. 108,572; Feb. 15; Gaz. vol. 223; p. 989.
Hosiery. Brown Durrell Co. No. 108,739; Feb. 22; Gaz. vol. 223; p. 1372.
Hosiery. Oneida Knitting Company. No. 108,612; Feb. 15; Gaz. vol. 223; p. 990.
Hosiery, Children's. Parker Hosiery Mill & Dye Works. No. 108,615; Feb. 15; Gaz. vol. 223; p. 990.
Igniters and pyrophoric material therefor. "Progress" Maschinen Industrie Kommandit Ges. Nos. 108,529–30; Feb. 15; Gaz. vol. 223; pp. 987–8.
Insect-exterminators. International Color & Chemical Co. No. 108,700; Feb. 22; Gaz. vol. 223; p. 1371.
Insecticides. Ansbacher Insecticide Co. No. 108,357; Feb. 1; Gaz. vol. 223; p. 286.
Knit articles of wearing-apparel, Certain named. R. T. Peckham. No. 108,718; Feb. 22; Gaz. vol. 223; p. 1371.
Knit underwear and half-hose. The Wayne Hosiery Company. No. 108,626; Feb. 15; Gaz. vol. 223; p. 990.
Knitted underwear. Cedarbrook Knitting Company. No. 108,773; Feb. 29; Gaz. vol. 223; p. 1711.
Knitted underwear. The May Company. No. 108,485; Feb. 8; Gaz. vol. 223; p. 646.
Knitted underwear, Infants' and children's. The William Carter Company. No. 108,589; Feb. 15; Gaz. vol. 223; p. 989.
Knitted union suits and pants, knitted vests, Ladies'. John H. Leich Co. No. 108,870; Feb. 29; Gaz. vol. 223; p. 1714.
Lamp-dimmers. Electric Auxiliaries Co. No. 108,593; Feb. 15; Gaz. vol. 223; p. 989.
Lamp guards, Electric-. Flexible Steel Lacing Company. No. 108,594; Feb. 15; Gaz. vol. 223; p. 989.
Lamps, Gas, vapor, and oil. The Buckley-Newhall Company. No. 108,684; Feb. 22; Gaz. vol. 223; p. 1370.
Lard compound. Florida Cotton Oil Company. No. 108,637; Feb. 22; Gaz. vol. 223; p. 1369.
Lathes. The Cleveland Machinery & Supply Co. No. 108,776; Feb. 29; Gaz. vol. 223; p. 1711.
Lettuce, potatoes, cabbage, radishes, peas, Fresh. Beaufort Truck Growers Association. No. 108,767; Feb. 29; Gaz. vol. 223; p. 1711.
Lime. Hannibal Lime Company. No. 108,643; Feb. 22; Gaz. vol. 223; p. 1369.
Lime, Hydrated. Western Lime & Cement Co. No. 108,456; Feb. 8; Gaz. vol. 223; p. 645.
Liniment for allaying inflammation of the joints and muscles. F. Sonnenberg. No. 108,451; Feb. 8; Gaz. vol. 223; p. 645.
Liniment for rheumatism. D. Digheri. No. 108,770; Feb. 29; Gaz. vol. 223; p. 1711.
Liniment for rheumatism. G. Taliani. No. 108,678; Feb. 22; Gaz. vol. 223; p. 1370.

Linings, Cotton-warp worsted. Lesher, Whitman & Co. No. 108,523; Feb. 15; Gaz. vol. 223; p. 987.
Linoleum floor and oil cloths. The Linoleum Manufacturing Company Limited. No. 108,799; Feb. 29; Gaz. vol. 223; p. 1712.
Locks. Miller Lock Company. No. 108,567; Feb. 15; Gaz. vol. 223; p. 989.
Lotion for exterminating insects, &c. T. T. Pountney. No. 108,369; Feb. 1; Gaz. vol. 223; p. 286.
Lotion, Skin and scalp. Laughlin Fruit Refining Co. No. 108,704; Feb. 22; Gaz. vol. 223; p. 1371.
Lotion, Skin toilet. Foley & Tucker Company. No. 108,638; Feb. 22; Gaz. vol. 223, p. 1369.
Massage-mitts. The Goodyear's Metallic Rubber Shoe Co. No. 108,696; Feb. 22; Gaz. vol. 223; p. 1371.
Mattresses. Roberti Bros. No. 108,348; Feb. 1; Gaz. vol. 223; p. 285.
Measuring and scientific appliances, Certain named. Nitsche & Günther Optische Werke. No. 108,440; Feb. 8; Gaz. vol. 223; p. 645.
Medicinal preparation for anemia, neurasthenia, &c., Tonic. The Sydney Ross Co. No. 108,578; Feb. 15; Gaz. vol. 223; p. 989.
Medicinal preparations for gonorrhea and piles. S. W. Pearce. No. 108,617; Feb. 15; Gaz. vol. 223; p. 995.
Medicinal preparation used as a laxative. R. Merz. No. 108,803; Feb. 29; Gaz. vol. 223; p. 1712.
Medicinal tonic, Herb. A. W. Welsmann. No. 108,375; Feb. 1; Gaz. vol. 223; p. 286.
Medicine for tuberculosis. The Addiline Medicine Co. No. 108,458; Feb. 8; Gaz. vol. 223; p. 645.
Milk, canned soups, coffee, tea, &c., Evaporated. The Price Merchants Syndicate. No. 108,822; Feb. 29; Gaz. vol. 223; p. 1713.
Milk, Malted. Thew, Hooker & Gilbey. No. 108,501; Feb. 8; Gaz. vol. 223; p. 646.
Minnows, fish-baits, and lures, Artificial. South Bend Bait Co. No. 108,622; Feb. 15; Gaz. vol. 223; p. 990.
Molasses. Penick & Ford. No. 108,446; Feb. 8; Gaz. vol. 223; p. 645.
Mouth, throat, and tooth wash. Johnson-Enderle-Pauley Drug Co. No. 108,604; Feb. 15; Gaz. vol. 223; p. 990.
Mouth-wash, antiseptic, &c. T. O. Timberlake. No. 108,844; Feb. 29; Gaz. vol. 223; p. 1713.
Mustard, horse-radish, honey, &c., Prepared. H. Ten Brulin & Sons. No. 108,840; Feb. 29; Gaz. vol. 223; p. 1713.
Nail enamel and beautifier. The Glazo Company. No. 108,394; Feb. 8; Gaz. vol. 223; p. 643.
Neckties, suspenders, garters, belts, &c. Associated 5 and 10 Cent Stores. No. 108,322; Feb. 1; Gaz. vol. 223; p. 285.
Needlework articles, Art-. The Girard Manufacturing Company. No. 108,554; Feb. 15; Gaz. vol. 223; p. 988.
Oil and macaroni, Olive-. A. Russo. No. 108,535; Feb. 15; Gaz. vol. 223; p. 988.
Oil-containing mixtures, Chemicals for the separation and purification of. De La Vergne Machine Co. No. 108,391; Feb. 8; Gaz. vol. 223; p. 643.
Oil, Edible cotton-seed. A. C. Nowland Co. No. 108,442; Feb. 8; Gaz. vol. 223; p. 645.
Oil, Lubricating-. Standard Oil Company of New York. No. 108,842; Feb. 29; Gaz. vol. 223; p. 1713.
Oil, Olive-. J. E. Blanc & L. Delery. No. 108,463; Feb. 8; Gaz. vol. 223; p. 645.
Oil, Olive-. L. Caravetta. No. 108,388; Feb. 8; Gaz. vol. 223; p. 643.
Oil, Olive-. Crist & Cerchione. No. 108,360; Feb. 1; Gaz. vol. 223; p. 286.
Oil preparation, Castor-. F. N. Purdue. No. 108,447; Feb. 8; Gaz. vol. 223; p. 645.
Oils and rust-preventives, Lubricating-. M. H. Dodge. Nos. 108,422–3; Feb. 8; Gaz. vol. 223; p. 644.
Ointment. J. S. Kenny. No. 108,521; Feb. 15; Gaz. vol. 223; p. 987.
Overalls, coats, shirts, rompers, and blouses. Chatham Shirt Co. No. 108,407; Feb. 8; Gaz. vol. 223; p. 645.
Packing-cases. Nelson & Hall Company. No. 108,342; Feb. 1; Gaz. vol. 223; p. 285.
Paint, Flat. W. W. Lawrence & Company. No. 108,477; Feb. 8; Gaz. vol. 223; p. 646.
Paint, Ready-mixed. Oliver Johnson & Company. Nos. 108,519–20; Feb. 15; Gaz. vol. 223; p. 987.
Paints in white and colors, Ready-made paste. J. W. Masury & Son. No. 108,652; Feb. 22; Gaz. vol. 223; p. 1369.
Paints, lacquers, and varnishes, Organic and inorganic. Naamlooze Vennootschap: Lak-en Verffabriek "Premier." No. 108,716; Feb. 22; Gaz. vol. 223; p. 1371.
Paper. The Selbert Paper Co. No. 108,836; Feb. 29; Gaz. vol. 223; p. 1713.
Paper bags. Columbia Paper Bag Company. Nos. 108,854–64; Feb. 29; Gaz. vol. 223; p. 1714.
Paper, Bond and cover. Strathmore Paper Company. No. 108,845; Feb. 29; Gaz. vol. 223; p. 1713.
Paper, envelops, and correspondence-cards, Writing-. Baird-North Co. No. 108,766; Feb. 29; Gaz. vol. 223; p. 1711.
Paper, paper toweling and napkins, &c., Toilet-. The John Hoberg Co. No. 108,793; Feb. 29; Gaz. vol. 223; p. 1712.
Paper, Wrapping-. Wausau Sulphate Fibre Company. No. 108,877; Feb. 29; Gaz. vol. 223; p. 1714.
Papers, Wall-. Star Peerless Wall Paper Mills. No. 108,843; Feb. 29; Gaz. vol. 223; p. 1713.
Papers, Writing-. G. F. Lasher. No. 108,798; Feb. 29; Gaz. vol. 223; p. 1712.
Pencils, Lead-. R. Best. No. 108,324; Feb. 1; Gaz. vol. 223; p. 285.
Pens, pencils, knives, &c., Certain named. Oneida Community. No. 108,816; Feb. 29; Gaz. vol. 223; p. 1712.
Pens, Steel. Samuel Ward Manufacturing Company. No. 108,847; Feb. 29; Gaz. vol. 223; p. 1713.
Pepper. Gilpin, Langdon & Company. No. 108,640; Feb. 22; Gaz. vol. 223; p. 1369.
Pepper, Black. Gilpin, Langdon & Company. No. 108,641; Feb. 22; Gaz. vol. 223; p. 1369.
Perfume, toilet cream and water, powders, and rouge. Fred Harvey, Inc. No. 108,748; Feb. 22; Gaz. vol. 223; p. 1372.
Perfume, toilet water, face and talcum powders. H. C. G. Luyties. No. 108,707; Feb. 22; Gaz. vol. 223; p. 1371.
Perfumes, toilet waters, bay-rum, &c. R. A. Carmichael & Co. No. 108,464; Feb. 8; Gaz. vol. 223; p. 645.
Periodicals. Ford Motor Company. No. 108,487; Feb. 29; Gaz. vol. 223; p. 1711.
Periodicals, Monthly. Brotherhood of Painters, Decorators and Paperhangers of America. No. 108,851; Feb. 29; Gaz. vol. 223; p. 1713.
Petroleum, kerosene, gasolene, &c. Riverside Oil Company. No. 108,754; Feb. 22; Gaz. vol. 223; p. 1372.
Petrolatum or white oil for a laxative. Standard Oil Company. No. 108,575; Feb. 15; Gaz. vol. 223, p. 989.
Pharmaceutical preparations, Certain named. B. Heller & Company. No. 108,433; Feb. 8; Gaz. vol. 223; p. 644.
Pharmaceutical preparations, Certain named. Merck & Co. No. 108,565; Feb. 15; Gaz. vol. 223; p. 989.
Pharmaceutical preparations for toilet purposes, Certain. Hoopie & Alderson. No. 108,472; Feb. 8; Gaz. vol. 223; p. 646.
Pharmaceutical preparations for toilet purposes, Certain. J. Warulsson. No. 108,582; Feb. 15; Gaz. vol. 223; p. 989.
Photographic film. Eastman Kodak Co. No. 108,591; Feb. 15; Gaz. vol. 223; p. 989.
Piano, automobile, and furniture polish. J. R. De Noyelles. No. 108,778; Feb. 29; Gaz. vol. 223; p. 1711.
Picture films, Motion-. D. W. Griffith. No. 108,471; Feb. 8; Gaz. vol. 223; p. 645.
Picture films, Motion-. Thanhouser Film Corporation. No. 108,408; Feb. 8; Gaz. vol. 223; p. 644.
Picture films, Moving-. Essanay Film Manufacturing Co. No. 108,783; Feb. 29; Gaz. vol. 223; p. 1711.
Piece goods and dress fabrics. Lesher, Whitman & Co. No. 108,524; Feb. 15; Gaz. vol. 223; p. 987.
Pipe cleanser, Waste-. B. Heller & Co. No. 108,514; Feb. 15; Gaz. vol. 223; p. 987.
Pipes. Sitting Bull Corporation. No. 108,401; Feb. 8; Gaz. vol. 223; p. 643.
Pipes and parts of pipes, Certain named. William Demuth & Company. No. 108,689; Feb. 22; Gaz. vol. 223; p. 1370.
Pipes, Tobacco-. A. J. Kiolber. No. 108,795; Feb. 29; Gaz. vol. 223; p. 1712.
Plates, cups, saucers, bowls, &c. Oneida Community. No. 108,492; Feb. 8; Gaz. vol. 223; p. 646.
Plows, plow-stocks, hay-presses, &c. A. B. Farquhar Company. No. 108,866; Feb. 29; Gaz. vol. 223; p. 1714.
Plugs, receptacles, and connectors, Attachment-. The Bryant Electric Company. No. 108,326; Feb. 1; Gaz. vol. 223; p. 285.
Polishing compound for varnished surfaces. E. O'Rourke. No. 108,443; Feb. 8; Gaz. vol. 223; p. 645.
Popcorn, peanuts, and candies. Burnee Corporation. No. 108,387; Feb. 8; Gaz. vol. 223; p. 643.
Powder and dynamite. Atlas Powder Company. No. 108,461; Feb. 8; Gaz. vol. 223; p. 645.
Powder, Face-. Daggett & Ramsdell. No. 108,687; Feb. 22; Gaz. vol. 223; p. 1370.
Powder, Face-. H. Tetlow Co. No. 108,727; Feb. 22; Gaz. vol. 223; p. 1372.
Powder, mouth washes and lotions, Tooth-. M. La Roche. No. 108,749; Feb. 22; Gaz. vol. 223; p. 1372.
Powder, Toilet. A. Bourjois & Co. No. 108,383; Feb. 8; Gaz. vol. 223; p. 643.
Powder, Toilet. A. Bourjois & Co. No. 108,631; Feb. 22; Gaz. vol. 223; p. 1369.
Powders, Laxative headache-. Red Star Drug Co. No. 108,495; Feb. 8; Gaz. vol. 223; p. 646.
Precious-metal or plated tableware. F. L. Bosworth Co. No. 108,325; Feb. 1; Gaz. vol. 223; p. 285.
Preparation for cleansing and softening the skin. Hart Sales Company. No. 108,512; Feb. 15; Gaz. vol. 223; p. 987.
Preparation for poison-oak and other skin eruptions. C. E. Stanley. No. 108,875; Feb. 29; Gaz. vol. 223; p. 1714.
Preparation for skin diseases and pimples. F. Spagnuolo. No. 108,402; Feb. 8; Gaz. vol. 223; p. 643.
Preparation for the scalp. The Sol-U-Met Mfg. Co. No. 108,538; Feb. 15; Gaz. vol. 223; p. 988.
Preparation for the stomach, liver, and bowels. The Blacko Medicine Co. No. 108,416; Feb. 8; Gaz. vol. 223; p. 644.
Preparation for the treatment of certain named diseases. J. B. Carroll. No. 108,505; Feb. 15; Gaz. vol. 223; p. 987.

Preparation for the treatment of certain named diseases. A. Nogorski. No. 108,491; Feb. 8; Gaz. vol. 223; p. 646.
Preparation for treatment of dandruff. C. Mandracchia. No. 108,338; Feb. 1; Gaz. vol. 223; p. 285.
Preparations for dandruff, falling hair, &c. J. H. Breck. No. 108,380; Feb. 8; Gaz. vol. 223; p. 643.
Printing-presses. The Babcock Printing Press Manufacturing Company. No. 108,323; Feb. 1; Gaz. vol. 223; p. 285.
Publication, Annual. Commercial Newspaper Company. No. 108,777; Feb. 29; Gaz. vol. 223; p. 1711.
Publication, Monthly. Les Boulevards Publishing Co. No. 108,705; Feb. 22; Gaz. vol. 223; p. 1371.
Publications, Advertising. Interstate Freight Rate Publishing Company. No. 108,704; Feb. 29; Gaz. vol. 223; p. 1712.
Pumps and motors, Rotary. Viking Pump Company. No. 108,409; Feb. 8; Gaz. vol. 223; p. 644.
Railway signaling apparatus, Electric. General Railway Signal Company. No. 108,789; Feb. 29; Gaz. vol. 223; p. 1712.
Railway signaling apparatus, Mechanical. General Railway Signal Company. No. 108,333; Feb. 1; Gaz. vol. 223; p. 285.
Receptacles for use in the maple-sugar industry. The Leader Evaporator Co. No. 108,562; Feb. 15; Gaz. vol. 223; p. 988.
Refrigerators, refrigerating-machines, milk-coolers, &c. Aktiebolaget Novator. No. 108,377; Feb. 8; Gaz. vol. 223; p. 643.
Remedies, Corn. E. C. Lytle. No. 108,484; Feb. 8; Gaz. vol. 223; p. 646.
Remedy for catarrh, croup, hay-fever, &c. S. J. Keyes. No. 108,475; Feb. 8; Gaz. vol. 223; p. 646.
Remedy for pyorrhea or Rigg's disease. The Pyoferio Pharmacal Co. No. 108,659; Feb. 22; Gaz. vol. 223; p. 1370.
Remedy for sciatic and all other forms of rheumatic troubles. J. S. Nichols. No. 108,490; Feb. 8; Gaz. vol. 223; p. 646.
Remedy for venereal diseases. E. J. Powell. No. 108,618; Feb. 15; Gaz. vol. 223; p. 990.
Remedy, Kidney and bladder. E. Hickey. No. 108,645; Feb. 22; Gaz. vol. 223; p. 1369.
Ribbons. U. R. T. Lund. Nos. 108,336–7; Feb. 1; Gaz. vol. 223; p. 285.
Rice. Charles E. Cormier Rice Co. No. 108,506; Feb. 15; Gaz. vol. 223; p. 987.
Roofing and paving materials. American Tar Products Company. No. 108,356; Feb. 1; Gaz. vol. 223; p. 286.
Roofing, Prepared. Barrett Manufacturing Company. Nos. 108,381–2; Feb. 8; Gaz. vol. 223; p. 643.
Rouge, Lip-. J. Warnesson. No. 108,354; Feb. 1; Gaz. vol. 223; p. 286.
Roup and as a conditioner for fowls, Composition for treating. R. F. F. Co. No. 108,531; Feb. 15; Gaz. vol. 223; p. 988.
Routing-cutters. John Royle & Sons. No. 108,619; Feb. 15; Gaz. vol. 223; p. 990.
Rubber and rubber and canvas boots and shoes. William F. Mayo Co. No. 108,800; Feb. 29; Gaz. vol. 223; p. 1712.
Rubber boots and shoes. Goodyear Rubber Company. No. 108,555; Feb. 15; Gaz. vol. 223; p. 988.
Rubber heels. Foster Rubber Company. Nos. 108,742–4; Feb. 22; Gaz. vol. 223; p. 1372.
Rubber heels. O'Sullivan Rubber Co. No. 108,345; Feb. 1; Gaz. vol. 223; p. 285.
Rubber horseshoe-pads. Revere Rubber Company. No. 108,825; Feb. 29; Gaz. vol. 223; p. 1713.
Rugs, mattings, and carpets, Textile. Hodges Fibre Carpet Company. No. 108,558; Feb. 15; Gaz. vol. 223; p. 988.
Rugs, Tapestry. Beattie Manufacturing Company. No. 108,736; Feb. 22; Gaz. vol. 223; p. 1372.
Sad-irons. Bliss & Drake. No. 108,544; Feb. 15; Gaz. vol. 223; p. 988.
Salt. Michigan Salt Works. No. 108,330; Feb. 1; Gaz. vol. 223; p. 285.
Salve for all congestion and inflammation of certain named organs. The Vick Chemical Co. No. 108,758; Feb. 22; Gaz. vol. 223; p. 1373.
Salve for croup, pneumonia, &c. Brame Drug Company. No. 108,359; Feb. 1; Gaz. vol. 223; p. 286.
Salves. Wilson-Randles Chemical Co. No. 108,732; Feb. 22; Gaz. vol. 223; p. 1372.
Sardines. Brawn Willard Co. No. 108,417; Feb. 8; Gaz. vol. 223; p. 644.
Sausages. J. R. Garcia. No. 108,746; Feb. 22; Gaz. vol. 223; p. 1372.
Sausages. L. S. Hafner. No. 108,598; Feb. 15; Gaz. vol. 223; p. 990.
Saws. Henry Disston & Sons. No. 108,550; Feb. 15; Gaz. vol. 223; p. 988.
Saws and saw-fitting tools, Certain named. E. C. Atkins and Company. No. 108,735; Feb. 22; Gaz. vol. 223; p. 1372.
Scale-solvent. B. Heller & Co. No. 108,515; Feb. 15; Gaz. vol. 223; p. 987.
Seasoning preparations. R. Ishiyama. No. 108,701; Feb. 22; Gaz. vol. 222; p. 1371.
Shades for controlling the entry of light and air into buildings, Ventilating-. Simon Ventilighter Co. No. 108,449; Feb. 8; Gaz. vol. 223; p. 645.
Shellac for stiffening hats, Liquid. Kaschler-Chatfield Shellac Co. Nos. 108,473–4; Feb. 8; Gaz. vol. 223; p. 646.
Shingles, Asphalt. Sunderland Brothers Company. No. 108,577; Feb. 15; Gaz. vol. 223; p. 989.
Shirt-waists, dresses, &c., Ladies'. Carson, Pirie, Scott & Co. No. 108,420; Feb. 8; Gaz. vol. 223; p. 644.
Shirts, pajamas, ladies' shirt-waists, &c. M. J. Murphy. No. 108,488; Feb. 8; Gaz. vol. 223; p. 646.
Shirtings. E. McConnell & Company. No. 108,802; Feb. 29; Gaz. vol. 223; p. 1712.
Shock-absorbers. A. R. Christman. No. 108,636; Feb. 22; Gaz. vol. 223; p. 1370.
Shoes. International Shoe Company. No. 108,647; Feb. 22; Gaz. vol. 223; p. 1369.
Shoes, boots, and slippers, Felt. Standard Felt Company. No. 108,841; Feb. 29; Gaz. vol. 223; p. 1713.
Shoes, Leather. Gagnon Shoe Co. No. 108,353; Feb. 15; Gaz. vol. 223; p. 988.
Shoes, Leather and rubber. J. H. Price. No. 108,346; Feb. 1; Gaz. vol. 223; p. 285.
Shovels, food-choppers, and churns. Richmond Hardware Co. No. 108,462; Feb. 22; Gaz. vol. 223; p. 1370.
Silk piece goods. The Valentine & Bentley Silk Co. No. 108,757; Feb. 22; Gaz. vol. 223; p. 1373.
Silk piece goods. Walmetah Silk Company. No. 108,542; Feb. 15; Gaz. vol. 223; p. 988.
Silk piece goods, Brocade-. Duplan Silk Company. No. 108,590; Feb. 15; Gaz. vol. 223; p. 989.
Silk, wool, linen, and cotton piece goods. Bianchini, Ferier. Nos. 108,769–70; Feb. 29; Gaz. vol. 223; p. 1711.
Silos. E. F. Wiederboldt. No. 108,731; Feb. 22; Gaz. vol. 223; p. 1372.
Silver, flat and hollow ware, Sterling. William B. Durgin Co. No. 108,781; Feb. 29; Gaz. vol. 223; p. 1711.
Smoking mixture and cigarettes. J. R. Regan. No. 108,824; Feb. 29; Gaz. vol. 223; p. 1713.
Soap. Elk Soap Co. No. 108,509; Feb. 15; Gaz. vol. 223; p. 987.
Soap. Hubon Mfg. Co. No. 108,517; Feb. 15; Gaz. vol. 223; p. 987.
Soap. John T. Stanley Co. No. 108,539; Feb. 15; Gaz. vol. 223; p. 988.
Soap, Dog-. G. D. Morgan Kennels. No. 108,340; Feb. 1; Gaz. vol. 223; p. 285.
Soap in paste form. Harrah & Stewart Manufacturing Company. No. 108,644; Feb. 22; Gaz. vol. 223; p. 1369.
Soap, Toilet. Indexical Soap Company. No. 108,518; Feb. 15; Gaz. vol. 223; p. 987.
Soap, White floating. Products Manufacturing Company. No. 108,347; Feb. 1; Gaz. vol. 223; p. 285.
Spark-plugs. Eclipse Manufacturing Company. No. 108,592; Feb. 15; Gaz. vol. 223; p. 989.
Squares, bevels, levels, &c. Henry Disston & Sons Incorporated. No. 108,691; Feb. 22; Gaz. vol. 223; p. 1371.
Stain, Wood-. American Fuming Company. No. 108,762; Feb. 29; Gaz. vol. 223; p. 1711.
Steel, Tool-. Joseph T. Ryerson & Son. Nos. 108,833–4; Feb. 29; Gaz. vol. 223; p. 1713.
Sterilizers, disinfectants, and purifiers. General Purification Co No. 108,332; Feb. 1; Gaz. vol. 223; p. 285.
Stucco, flooring and plaster, Magnesite. Magnesite Products Company. No. 108,709; Feb. 22; Gaz. vol. 223; p. 1371.
Suits, Men's outer. The Sultzbach Clothing Co. No. 108,500; Feb. 8; Gaz. vol. 223; p. 646.
Suits, shirts, drawers, and hosiery, Union. Peter Hill Co. No. 108,516; Feb. 15; Gaz. vol. 223; p. 987.
Surgical-dressing covering. Reid Bros. No. 108,399; Feb. 8; Gaz. vol. 223; p. 643.
Surgical dressings, Certain named. Seabury & Johnson. Nos. 108,371–2; Feb. 1; Gaz. vol. 223; p. 286.
Suspenders. Glendale Elastic Fabrics Co. No. 108,695; Feb. 22; Gaz. vol. 223; p. 1371.
Syrup for non-alcoholic beverages, Flavoring-. The Allen Red Tame Cherry Company. No. 108,459; Feb. 8; Gaz. vol. 223; p. 645.
Syrup, molasses, and sorghums, Cane and maple. New Orleans Coffee Co. No. 108,398; Feb. 8; Gaz. vol. 223; p. 643.
Syrups to be used in mixed drinks for bars, hotels, and cafés. F. R. Whittaker. No. 108,543; Feb. 15; Gaz. vol. 223; p. 988.
Tablet to be used as a tonic, Iron. The Tropical Pharmacal Co. No. 108,406; Feb. 8; Gaz. vol. 223; p. 644.
Tablets, Digestive. Johnson-Enderle-Pauley Drug Co. No. 108,605; Feb. 15; Gaz. vol. 223; p. 990.
Tablets for certain named diseases, Medicinal. T. Seifert. No. 108,835; Feb. 29; Gaz. vol. 223; p. 1713.
Tanks. The James H. Watson Company. No. 108,455; Feb. 8; Gaz. vol. 223; p. 645.
Target, Shooting-. J. W. Baker. No. 108,680; Feb. 22; Gaz. vol. 223; p. 1370.
Tea. Judson Grocer Company. No. 108,434; Feb. 8; Gaz. vol. 223; p. 644.
Tea. T. J. Lipton. No. 108,481; Feb. 8; Gaz. vol. 223; p. 646.
Tea. T. J. Lipton. No. 108,483; Feb. 8; Gaz. vol. 223; p. 646.
Tea. J. Medvene & Bro. No. 108,712; Feb. 22; Gaz. vol. 223; p. 1371.
Tea, coffee, cocoa, and jelly-tablets. T. J. Lipton. No. 108,480; Feb. 8; Gaz. vol. 223; p. 646.

Tea, coffee, cocoa, and jelly-tablets. T. J. Lipton. No. 108,482; Feb. 8; Gaz. vol. 223; p. 646.
Tea, coffee, pepper, and flavoring extracts. Arbuckle Brothers. No. 108,678; Feb. 22; Gaz. vol. 223; p. 1370.
Thread. Ontario Thread Company. No. 108,817; Feb. 29; Gaz. vol. 223; p. 1712.
Threads and yarns. Glitermann & Co. No. 108,697; Feb. 22; Gaz. vol. 223; p. 1371.
Throat, lung, liver, and kidney diseases, &c., Treatment for. H. M. Manspeaker. No. 108,564; Feb. 15; Gaz. vol. 223; p. 989.
Tire fluid. Buffalo Specialty Company. No. 108,634; Feb. 22; Gaz. vol. 223; p. 1369.
Tires, Composition for preventing and sealing punctures in pneumatic. C. Milton. No. 108,654; Feb. 22; Gaz. vol. 223; p. 1369.
Tires, Elastic vehicle-. The Rubber Products Company. No. 108,755; Feb. 22; Gaz. vol. 223; p. 1372.
Tires, &c., Motor-vehicle and bicycle. The Tire Store. No. 108,580; Feb. 15; Gaz. vol. 223; p. 989.
Tires, Rubber. The Miller Rubber Company. No. 108,804; Feb. 29; Gaz. vol. 223; p. 1712.
Tobacco, and particularly tobacco cartridges. Liggett & Myers Tobacco Company. No. 108,706; Feb. 22; Gaz. vol. 223; p. 1371.
Tonic and purifier, Blood. Rhumtox Co. No. 108,571; Feb. 15; Gaz. vol. 223; p. 989.
Tonic for chills, fever, &c. W. H. Johnson. No. 108,560. Feb. 15; Gaz. vol. 223; p. 988.
Tonic for treatment of poultry diseases. Korinek Veterinary Remedy Co. No. 108,522; Feb. 15; Gaz. vol. 223; p. 987.
Tonic, Liver-. Dillehay Bros. No. 108,393; Feb. 8; Gaz. vol. 223; p. 643.
Tooth-paste. L. F. Christman. No. 108,329; Feb. 1; Gaz. vol 223; p. 285.
Tooth paste. The Sentanel Remedies Company. No. 108,837; Feb. 29; Gaz. vol. 223; p. 1713.
Tooth-paste. The Tropical Pharmacal Co. No. 108,407; Feb. 8; Gaz. vol. 223; p. 644.
Tooth pastes and washes. R. A. Carmichael & Co. No. 108,547; Feb. 15; Gaz. vol. 223; p. 988.
Toy building-blocks. The H-K Toy and Novelty Co. No. 108,698; Feb. 22; Gaz. vol. 223; p. 1371.
Tractors, Gas, gasolene, oil, and steam. Samson Iron Works. No. 108,663; Feb. 22; Gaz. vol. 223; p. 1370.
Tree-deadener. Modern Remedy Co. No. 108,437; Feb. 8; Gaz. vol. 223; p. 644.
Trunks. National Trunk Company. No. 108,751; Feb. 22; Gaz. vol. 223; p. 1372.
Trunks, suitcases, travelling-bags, &c. W. A. Tuerke. No. 108,728; Feb. 22; Gaz. vol. 223; p. 1372.
Tubs, Laundry-. The Trenton Potteries Company. No. 108,405; Feb. 8; Gaz. vol. 223; p. 644.
Turpentine, Mineral and vegetable. Leadoil Company. No. 108,607; Feb. 15; Gaz. vol. 223; p. 990.
Tweezers, orange-wood sticks, nail boards and cleaners, &c. Saussing & Hillder Bros. No. 108,872; Feb. 29; Gaz. vol. 223; p. 1714.
Undershirts, night-shirts, pajamas, and athletic underwear. H. S. Letterman. No. 108,608; Feb. 15; Gaz. vol. 223; p. 990.
Underwear, Certain named men's. Sphinx Underwear Co. No. 108,351; Feb. 1; Gaz. vol. 223; p. 286.
Underwear, hosiery, gloves, dresses, &c. Willcox & Gibbs Sewing Machine Co. No. 108,878; Feb. 29; Gaz. vol. 223; p. 1714.
Valves, Diaphragm-. National Regulator Company. No 108,341; Feb. 1; Gaz. vol. 223; p. 285.
Varnish. Linolde Company. No. 108,651; Feb. 22; Gaz. vol. 223; p. 1369.
Vehicle-gears. Thayer & Co. No. 108,625; Feb. 15; Gaz. vol. 223; p. 990.
Vehicle suspension mechanism, Road-. L. P. Halladay Company. No. 108,432; Feb. 8; Gaz. vol. 223; p. 644.
Vehicles, Motor-. Buick Motor Company. No. 108,852; Feb. 29; Gaz. vol. 223; p. 1713.
Vinegar. National Distilling Company. No. 108,808; Feb. 29; Gaz. vol. 223; p. 1712.
Wagon boxes and seats. John Deere Wagon Company. No. 108,508; Feb. 15; Gaz. vol. 223; p. 987.
Wagons, farm-trucks, and wagon running-gears. John Deere Plow Company of Omaha. No. 108,507; Feb. 15; Gaz. vol. 223; p. 987.
Waists and blouses, shirt-waists, Dress. L. & D. Waist Co. No. 108,797; Feb. 29; Gaz. vol. 223; p. 1712.
Wall-coating, Liquid washable. Adams & Elting Company. No. 108,411; Feb. 8; Gaz. vol. 223; p. 644.
Wardrobes, Collapsible. J. Nielsen. No. 108,717; Feb. 22; Gaz. vol. 223; p. 1371.
Washing-machines. The Eagle Woodenware Manufacturing Company. No. 108,331; Feb. 1; Gaz. vol. 223; p. 285.
Washing-soda. Palmesville Packing Company. No. 108,819; Feb. 29; Gaz. vol. 223; p. 1712.
Watches. Goodman Brothers. No. 108,334; Feb. 1; Gaz. vol 223; p. 285.
Water and non-alcoholic carbonated beverages, Natural and distilled. J. H. Gordon. No. 108,556; Feb. 15; Gaz. vol. 223; p. 988.
Waters, Natural mineral. H. W. White. No. 108,848; Feb. 29; Gaz. vol. 223; p. 1713.
Waterproofing solution. Statum Mfg. Co. No. 108,537; Feb. 15; Gaz. vol. 223; p. 988.
Waterproofing surfaces, Plastic compound for. The Arco Company. No. 108,734; Feb. 22; Gaz. vol. 223; p. 1372.
Waterproofing textiles, Certain named chemical for. I. W. Hoyer. No. 108,559; Feb. 15; Gaz. vol. 223; p. 988.
Weather-boarding. Aycock Wood Brick Veneer Co. No. 108,585; Feb. 15; Gaz. vol. 223; p. 989.
Welding-rods. Oxweld Acetylene Company. No. 108,613; Feb. 15; Gaz. vol. 223; p. 990.
Wheat, rice, barley, &c. R. Haughton. No. 108,599; Feb. 15; Gaz. vol. 223; p. 990.
Wicks, Oil-burning. H. E. Turpin. No. 108,671. Feb. 22; Gaz. vol. 223; p. 1370.
Wines. J. H. Dalton. No. 108,688; Feb. 22; Gaz. vol. 223; p. 1370.
Wines and champagne, Sparkling. J. G. Garrish. No. 108,429; Feb. 8; Gaz. vol. 223; p. 644.
Wines, Port, &c. A. D. Shaw & Co. No. 108,725; Feb. 22; Gaz. vol. 223; p. 1372.
Wire. Stromberg-Carlson Telephone Manufacturing Co. No. 108,624; Feb. 15; Gaz. vol. 223; p. 990.
Wire and cables and insulated wire, Electric and woven covered. Simplex Wire & Cable Company. No. 108,874; Feb. 29; Gaz. vol. 223; p. 1714.
Wood-polish. The Central Oil & Chemical Company. No. 108,774; Feb. 29; Gaz. vol. 223; p. 1711.
Wool and silk piece goods. Coudurier Fructus & Descher. No. 108,741; Feb. 22; Gaz. vol. 223; p. 1372.
Woolen, mohair, &c., piece goods. Goodall Worsted Co. No. 108,511; Feb. 15; Gaz. vol. 223; p. 987.
Woven fabric manufactured from wool, cotton, &c., Bolts of. J. Culbertson & Sons. No. 108,549; Feb. 15; Gaz. vol. 223; p. 988.
Wrenches and tool-holders therefor, Ratchet-. H. M. Kolb. No. 108,561; Feb. 15; Gaz. vol. 223; p. 988.
Wringers and washing-machines, Clothes-. The Buckley-Newhall Company. No. 108,685; Feb. 22; Gaz. vol. 223; p. 1370.
Yarn, Cotton, worsted, and merino. Nashawena Mills. No. 108,805; Feb. 29; Gaz. vol. 223; p. 1712.
Yarn, Worsted and woolen. James Lees and Sons Company. No. 108,650; Feb. 22; Gaz. vol. 223; p. 1369.

ALPHABETICAL LIST OF LABELS.

"Amber Nectar." (For a Beverage.) H. Weinhard Estate. No. 19,020; Feb. 1; Gaz. vol. 223; p. 287.
"American Candles." (For Candles.) G. Colombo. No. 19,054; Feb. 22; Gaz. vol. 223; p. 1374.
"Aqua Nova Vita." (For Internal Remedies.) The Aqua Nova Vita Co. No. 19,075; Feb. 29; Gaz. vol. 223; p. 1715.
"Arrow Clinch Nails." (For Nails.) The H. C. Tack Company. No. 19,040; Feb. 8; Gaz. vol. 223; p. 647.
"Belgian Hare Felt." (For Fur Hats.) The Danbury Company. No. 19,028; Feb. 8; Gaz. vol. 223; p. 647.
"Belmont Lager." (For Beer.) Smith Bros. No. 19,073; Feb. 22; Gaz. vol. 223; p. 1374.
"Bon Café." (For Coffee and Chicory.) The Henry Lochte Co. No. 19,065; Feb. 22; Gaz. vol. 223; p. 1374.
"Busch Medical Water." (For Mineral Water.) J. T. Busch. No. 19,012; Feb. 1; Gaz. vol. 223; p. 287.
"Collis 20th Century Padded Skate Strap." (For Skate-Straps.) H. J. Collis. No. 19,023; Feb. 8; Gaz. vol. 223; p. 647.
"Cornhill." (For Blue-Print-Paper Rolls.) Frost & Adams Co. No. 19,030; Feb. 8; Gaz. vol. 223; p. 647.
"Coryzine." (For a Deodorant and Antiseptic.) Coryzine Manufacturing Company. No. 19,026; Feb. 8; Gaz. vol. 223; p. 647.
"Cremo-Vesco." (For Increasing the Body of Thin Cream.) Cremo-Vesco Company. No. 19,027; Feb. 8; Gaz. vol. 223; p. 647.
"Don-Eduardo Pure Lemon Juice." (For Lemon-Juice.) E. J. Rother. No. 19,072; Feb. 22; Gaz. vol. 223; p. 1374.
"Dry Climate." (For Coffee.) The Independence Coffee & Spice Co. No. 19,059; Feb. 22; Gaz. vol. 223; p. 1374.
"Electric Lip Rouge." (For Lip-Rouge.) J. Warnesson. No. 19,081; Feb. 29; Gaz. vol. 223; p. 1715.
"Eucalyptus Paints." (For Paints.) J. Warnesson. No. 19,083; Feb. 29; Gaz. vol. 223; p. 1715.
"Frederick & Nelson Furniture Polish." (For Furniture-Polish.) Frederick & Nelson. No. 19,057; Feb. 22; Gaz. vol. 223; p. 1374.
"Gold Label." (For Bottled Goods.) Lion Brewing Company. No. 19,035; Feb. 8; Gaz. vol. 223; p. 647
"Golden Nectar." (For a Beverage.) H. Weinhard Estate. No. 19,079; Feb. 1; Gaz. vol. 223; p. 287.
"Good Health." (For Bread.) Kalamazoo Vegetable Parchment Co. No. 19,033; Feb. 8; Gaz. vol. 223; p. 647.
"Good Taste." (For Bread.) Kalamazoo Vegetable Parchment Co. No. 19,034; Feb. 8; Gaz. vol. 223; p. 647.
"Harms Bros. Eagle Brand Chewing Gum." (For Chewing-Gum.) Harms Bros. Mfg. Co. No. 19,058; Feb. 22; Gaz. vol. 223; p. 1374.
"Hartman's Preparation For Pneumonia, Coughs, Colds, Croup, Sore Throat and Rheumatic Pains." (For a Preparation.) James F. Hartman. No. 19,044; Feb. 15; Gaz. vol. 223; p. 991.
"Ily-Flyer." (For Cigars.) A. L. Wertman. No. 19,050; Feb. 15; Gaz. vol. 223; p. 991.
"Imperial Sentry." (For Wines.) Keystone Bottlers Supply Company. No. 19,078; Feb. 29; Gaz. vol. 223; p. 1715.
"Index." (For Flavoring Extracts.) Elliott Grocery Company. No. 19,029; Feb. 8; Gaz. vol. 223; p. 647.
"Indian." (For Glass-Cutters.) Smith & Hemenway Company. No. 19,038; Feb. 8; Gaz. vol. 223; p. 647
"Interest." (For Cigars.) A. S. Weller. No. 19,049; Feb. 15; Gaz. vol. 223; p. 991.
"J-M Gilsonite Paving Cement." (For Paving-Cement.) H. W. Johns-Manville Company. No. 19,062; Feb. 22; Gaz. vol. 223; p. 1374.
"J-M Service Roofing." (For Prepared Roofing.) H. W. Johns-Manville Company. No. 19,060; Feb. 22; Gaz. vol. 223; p. 1374.
"J-M Slatekote Roofing." (For Prepared Roofing.) H. W. Johns-Manville Company. No. 19,061; Feb. 22; Gaz. vol. 223; p. 1374.
"Jewel City." (For Coffee.) F. H. Tyler. No. 19,074; Feb. 22; Gaz. vol. 223; p. 1374.
"Kellogg's Toasted Rice Flakes." (For Rice Preparations.) Kellogg Toasted Corn Flake Company. No. 19,046; Feb. 15; Gaz. vol. 223; p. 991.
"Ko-Zy Union Suit." (For Union Suits.) H. H. Condit No. 19,024; Feb. 8; Gaz. vol. 223; p. 647.
"La Tosca." (For Razors.) J. Palazzolo. No. 19,047; Feb. 15; Gaz. vol. 223; p. 991.
"Life." (For Coffee.) Earl Cowan Company. No. 19,055; Feb. 22; Gaz. vol. 223; p. 1374.
"Maid In America Polishing Powder." (For a Polishing-Powder.) L. A. Ulman. No. 19,070; Feb. 29; Gaz. vol. 223; p. 1715.
"Milk Bread." (For Bread.) Robertson Paper Company. No. 19,070; Feb. 22; Gaz. vol. 223; p. 1374.
"Myown." (For a Hair-Tonic.) W. A. Heffron. No. 19,032; Feb. 8; Gaz. vol. 223; p. 647.
"North Star Brand Macaroni." (For Macaroni.) F. Labate. No. 19,017; Feb. 1; Gaz. vol. 223; p. 287.
"Old Scout." (For Canned Salmon.) National Independent Fisheries Co. No. 19,067; Feb. 22; Gaz. vol. 223; p. 1374.
"P. Pollack's Last Edition Stogies." (For Stogies.) D. Golden. No. 19,031; Feb. 8; Gaz. vol. 223; p. 647.
"Pimento." (For Cottage-Cheese.) C. E. Beckett. No. 19,052; Feb. 22; Gaz. vol. 223; p. 1374.
"Prof. J. Warnesson's Eucalyptus Cold Cream." (For Cold-Cream.) J. Warnesson. No. 19,080; Feb. 29; Gaz. vol. 223; p. 1715.
"Prince Eitel." (For Kümmel.) Fiälla & Eppler. No. 19,015; Feb. 1; Gaz. vol. 223; p. 287.
"Punch Elite." (For Swedish Punch.) A. O. Zetterlund. No. 19,043; Feb. 8; Gaz. vol. 223; p. 647.
"Pure 100 Special." (For Whisky.) Kaufmann Bros. Co. No. 19,045; Feb. 15; Gaz. vol. 223; p. 991.
"Red Devil." (For Tools.) Smith & Hemenway Company. No. 19,039; Feb. 8; Gaz. vol. 223; p. 647.
"Reno." (For a Hair Dressing or Tonic.) Johnson and Winn Manufacturing Co. No. 19,016; Feb. 1; Gaz. vol. 223; p. 287.
"Richmond." (For Undergarments.) The Atlas Underwear Co. No. 19,011; Feb. 1; Gaz. vol. 223; p. 287.
"Rye-Lax." (For Rye Cereal Food.) Potter & Wrightington. No. 19,068; Feb. 22; Gaz. vol. 223; p. 1374.
"Shinoil." (For Oil Polish.) D. O. Moore. No. 19,060; Feb. 22; Gaz. vol. 223; p. 1374.
"Spanish Theatre Rouge." (For Theater-Rouge.) J. Warnesson. No. 19,084; Feb. 29; Gaz. vol. 223; p. 1715.
"Spring Maid." (For Canned Corn.) Prairie State Canning Co. No. 19,018; Feb. 1; Gaz. vol. 223; p. 287.
"Square Deal." (For Fresh Apples.) P. M. Resetar. No. 19,009; Feb. 22; Gaz. vol. 223; p. 1374.
"Success." (For Whisky.) R. M. Rose Company. No. 19,071; Feb. 22; Gaz. vol. 223; p. 1374.
"Sum Good." (For Coffee and Chicory.) The Henry Lochte Co. No. 19,063; Feb. 22; Gaz. vol. 223; p. 1374.
"Sunbonnet." (For Eggs.) Geo. R. Eldridge Co. No. 19,056; Feb. 22; Gaz. vol. 223; p. 1374.
"Sure-Good." (For Coffee and Chicory.) The Henry Lochte Co. No. 19,064; Feb. 22; Gaz. vol. 223; p. 1374.
"The American Boy's Suit." (For Boys' Clothing.) Cohen & Lang. No. 19,053; Feb. 22; Gaz. vol. 223; p. 1374.
"The Embossing Co's Burnt Wood Spelling Blocks." (For Spelling-Blocks.) The Embossing Company. No. 19,014; Feb. 1; Gaz. vol. 223; p. 287.
"The Embossing Co's Stabuilt Blocks." (For Stabuilt Blocks.) The Embossing Company. No. 19,013; Feb. 1; Gaz. vol. 223; p. 287.
"The Home Of The White King Squab." (For a Food Product Prepared from Squabs.) White King Squab Products Co. No. 19,051; Feb. 15; Gaz. vol. 223; p. 991.
"The Old Original Rockford Sock 551." (For Hosiery.) Nelson Knitting Company. No. 19,037; Feb. 8; Gaz. vol. 223; p. 647.
"The Old Original Rockford Sock 701." (For Hosiery.) Nelson Knitting Company. No. 19,036; Feb. 8; Gaz. vol. 223; p. 647.
"The Rost Fyrout Automatic Chemical Fire Extinguisher." (For Fire-Extinguishers.) Continental Distributors. No. 19,025; Feb. 8; Gaz. vol. 223; p. 647.
"The Safe Sox." (For Hosiery.) The Beebe-Howes Company. No. 19,076; Feb. 29; Gaz. vol. 223; p. 1715.
"Thimble's Phosphor Roach Paste." (For Rat and Roach Poison.) F. N. Thimble. No. 19,048; Feb. 15; Gaz. vol. 223; p. 991.
"Usit Face Powder De Lux." (For Face-Powder.) Usit Manufacturing Company of America. No. 19,042; Feb. 8; Gaz. vol. 223; p. 647.
"Warnesson's Theatre Rouge." (For Theater-Rouge.) J. Warnesson. No. 19,082; Feb. 29; Gaz. vol. 223; p. 1715.
"Wheatsworth Biscuit Individual Service Package." (For Graham Biscuit.) F. H. Bennett Biscuit Company. No. 19,021; Feb. 8; Gaz. vol. 223; p. 647.
"Wheatsworth Cracker Meal." (For Cracker-Meal.) F. H. Bennett Biscuit Company. No. 19,022; Feb. 8; Gaz. vol. 223; p. 647.
"XX Iron Clinching Nails." (For Nails.) The H. C. Tack Company. No. 19,041; Feb. 8; Gaz. vol. 223; p. 647.
"Youthful Club." (For Wines.) Keystone Bottlers Supply Company. No. 19,077; Feb. 29; Gaz. vol. 223; p. 1715.

PRINTS.

"Alkaline Dentifrices Blamed For Increase In Dental Caries And Oral Sepsis." (For Dental Preparations.) The Pepsodent Company. No. 4,222; Feb. 22; Gaz. vol. 223; p. 1374.

"Big Tag Sale." (For House-Furnishings.) Merchants Service Agency. No. 4,209; Feb. 8; Gaz. vol. 223; p. 648.

"Cantoni." (For Toys.) The Fallis Toy Shop. No. 4,216; Feb. 15; Gaz. vol. 223; p. 991.

"'Clears The Head' Bromo-Seltzer for Headache." (For Headache Remedies.) Emerson Drug Co. No. 4,226; Feb. 29; Gaz. vol. 223; p. 1715.

"'Condition' Your Own Tobacco." (For Smoking-Tobacco.) Liggett & Myers Tobacco Company. No. 4,208; Feb. 8; Gaz. vol. 223; p. 648.

"Duroc." (For Pork Sausage.) Margerum Provision Co. No. 4,193; Feb. 1; Gaz. vol. 223; p. 287.

"Fish and Oyster Fanciful Design." (For Fish and Oysters.) W. S. Stewart & Bro. No. 4,195; Feb. 1; Gaz. vol. 223; p. 287.

"Frank's Meat Treats." (For Meat Treats.) L. Frank & Son Co. No. 4,192; Feb. 1; Gaz. vol. 223; p. 287.

"He Sho' Thinks He's Hiddn." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,196; Feb. 8; Gaz. vol. 223; p. 648.

"Hermes." (For Flour.) Bush Milling Co. No. 4,213; Feb. 15; Gaz. vol. 223; p. 991.

"Home Trade Stamp." (For a Trading-Stamp.) G. G. Martin. No. 4,217; Feb. 15; Gaz. vol. 223; p. 991.

"It's Always Good." (For Flour.) Moseley & Motley Milling Co. No. 4,194; Feb. 1; Gaz. vol. 223; p. 287.

"Jitney." (For Cigars.) A. C. Davis. No. 4,225; Feb. 29; Gaz. vol. 223; p. 1715.

"Johnson Well Screen." (For Well-Screens and Pump-Rod Couplings.) E. E. Johnson. No. 4,199; Feb. 8; Gaz. vol. 223; p. 648.

"Little Polly." (For Brooms.) Harrah & Stewart Manufacturing Company. No. 4,198; Feb. 8; Gaz. vol. 223; p. 648.

"Olympian Chocolates for." (For Candy.) Augustine & Kyer. No. 4,223; Feb. 29; Gaz. vol. 223; p. 1715.

"Prize Cracker Jack." (For Popcorn.) Rueckheim Bros. & Eckstein. No. 4,227; Feb. 29; Gaz. vol. 223; p. 1715.

"R. J. V. Roach and Rat Last Meal." (For Roach and Rat Poison.) R. J. B. Vezina. No. 4,219; Feb. 15; Gaz. vol. 223; p. 991.

"Red Raven Splits." (For Aperient Waters.) Red Raven Corporation. No. 4,218; Feb. 15; Gaz. vol. 223; p. 991.

"Richmond." (For Union Undergarments.) The Atlas Underwear Co. No. 4,220; Feb. 22; Gaz. vol. 223; p. 1374.

"Rudy's Customers Profit Sharing Schedule." (For Furnaces.) Rudy Furnace Company. No. 4,210; Feb. 8; Gaz. vol. 223; p. 648.

"Saginaw Creamery Co., Saginaw, Mich." (For Butter-Fat.) Saginaw Creamery Company. No. 4,211; Feb. 8; Gaz. vol. 223; p. 648.

"Security." (For Key Hook and Rings Combined.) H. A. Grammas. No 4,197; Feb. 8; Gaz. vol. 223; p. 648.

"Some Real 'Commonsense' That Every Pipe Smoker Will Understand." (For Smoking-Tobacco.) Liggett & Myers Tobacco Company. No. 4,202; Feb. 8; Gaz. vol. 223; p. 648.

"Speedy Service—Sterling Quality." (For Paper.) The Whitaker Paper Company. No. 4,212; Feb. 8; Gaz. vol. 223; p. 648.

"Tales of Grippertown." (For Shoes.) E. W. Burt & Company. No. 4,224; Feb. 29; Gaz. vol. 223; p. 1715.

"The Making of Velvet Tobacco is an Open Secret." (For Smoking-Tobacco.) Liggett & Myers Tobacco Company. No. 4,203; Feb. 8; Gaz. vol. 223; p. 648.

"Unwired House." (For Electric Equipment.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,215; Feb. 15; Gaz. vol. 223; p. 991.

"Velvet, the Smoothest Smoking Tobacco." (For Smoking-Tobacco.) Liggett & Myers Tobacco Company. No. 4,204; Feb. 8; Gaz. vol. 223; p. 648.

"Velvet is matured by Nature's own Method." (For Smoking-Tobacco.) Liggett & Myers Tobacco Company. No. 4,207; Feb. 8; Gaz. vol. 223; p. 648.

"Velvet Smokarols." (For Smoking-Tobacco and Pipe.) Liggett & Myers Tobacco Company.) No. 4,201; Feb. 8; Gaz. vol. 223; p. 648.

"Velvet Smokarols." (For Smoking-Tobacco and Pipe.) Liggett & Myers Tobacco Company. Nos. 4,205–6; Feb. 8; Gaz. vol. 223; p. 648.

"Watch Us Grow." (For Chick Feed.) F. B. Chamberlain Co. No. 4,221; Feb. 22; Gaz. vol. 223; p. 1374.

"Watt's House." (For Electric Equipment.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,214; Feb. 15; Gaz. vol. 223; p. 991.

"Wednesday—Luxury Day." (For Advertising Dry Goods.) L. Klein. No. 4,200; Feb. 8; Gaz. vol. 223; p. 648.

DISCLAIMER.

Power-press safety-guard. J. Wright. No. 1,135,480; date of patent Apr. 13, 1915; disclaimer filed Feb. 14, 1916; Gaz. vol. 223; p. 1379.

CLASSIFICATION OF PATENTS

FEBRUARY, 1916.

NOTE.—First number=class, second number=subclass, third number=patent number.

1— 2: 1,172,955
6: 1,170,939
1,171,685
15: 1,170,002
35: 1,170,321
49: 1,173,697
2— 9: 1,173,971
11: 1,171,111
1,171,930
1,172,252
1,172,261
1,173,735
23: 1,172,622
41: 1,171,355
42: 1,172,102
58: 1,171,982
1,171,983
62: 1,172,317
66: 1,173,285
69: 1,170,243
1,171,956
71: 1,170,972
1,171,614
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